

To: David Thomas From: Andrew Sorci

Pacific Gas and Electric Company Stantec Consulting, Inc.

File: Fulton-Fitch Mountain Reconductoring Date: June 27, 2018

Project

Reference: Fulton-Fitch Mountain Reconductoring Project: Seasonal Watercourse Avoidance and

Crossing Plan

INTRODUCTION

Pacific Gas and Electric (PG&E) is conducting the Fulton-Fitch Mountain Reconductoring Project (Project) to reinforce the electric transmission and distribution system in Sonoma County by replacing the existing conductor (reconductoring) on two power lines pursuant to California Public Utilities Commission (CPUC) General Order (GO) 131-D, Section III.B. PG&E is replacing the conductor on a 9.8-mile-long section of the Fulton-Hopland 60 kilovolt (kV) Power Line (Fulton-Hopland line or 60kV line) between Fulton Substation and Fitch Mountain Substation. PG&E is also replacing poles along 8 miles of the Fulton-Hopland line and making modifications to the Fitch Mountain Substation (Figure 1). The project consists of two segments: the Southern Segment, which extends from Fulton Substation to Shiloh Ranch Regional Park, and the Northern Segment, which extends between Shiloh Ranch Regional Park and the Fitch Mountain #1 Tap 60kV Power Line (Fitch Mountain #1 Tap).

Mitigation Measure (MM) Hydrology - 4 of the Initial Study/Mitigated Negative Declaration (IS/MND) issued by the CPUC for the project requires the preparation of a Seasonal Watercourse Avoidance and Crossing Plan that defines specific methods for completely avoiding impacts to wetlands and streams or specific minimization measures that would be implemented at each crossing location that cannot be completely avoided.

In accordance with MM Hydrology - 4, PG&E has prepared this Seasonal Watercourse Avoidance and Crossing Plan for wetlands and waters within 50 feet of project impact areas, which includes the following:

- Available methods for complete avoidance (i.e., fencing, flagging, or alternative routes) or an explanation of why complete avoidance is not feasible.
- Proposed crossing methods.
- Anticipated impacts that cannot be avoided and anticipated permitting requirements for those impacts, with an explanation of why alternate crossing methods are not feasible.
- Methods that would be implemented to reduce water quality impacts, avoid inadvertent impacts on aquatic resources, and avoid direct impacts on potentially suitable aquatic habitat for California red-legged frog (CRLF) and foothill yellow-legged frog (FYLF) (refer to MM Biology-3). Methods could include restricting crossings to dry periods; installing temporary bridges; or placing fiber-glass mats, steel plates, or wooden beams to protect the feature.



METHODS

Prior to visiting the project site, Stantec biologists reviewed the following reports:

- Fulton-Fitch Reconductoring Project, Water Crossing Mapping. Garcia and Associates. January 15, 2016.
- Aquatic Resources Assessment for the Fulton-Fitch Mountain Reconductoring Project in Sonoma County, California. Garcia and Associates. May 23, 2017
- Delineation of Waters of the United States for Pacific Gas and Electric Company's Fulton-Fitch Mountain Reconductoring Project, Sonoma County, California. TRC. May 2015.
- DRAFT Delineation of Waters of the United States for Pacific Gas and Electric Company's Fulton-Fitch Mountain Reconductoring Project, Sonoma County, California." Version 1. TRC. April 2016
- DRAFT Delineation of Waters of the United States for Pacific Gas and Electric Company's Fulton-Fitch Mountain Reconductoring Project, Sonoma County, California." Version 2. TRC. October 2016
- PG&E Fulton-Fitch Reconductoring Project SW3 at Pole 62, SW1 at Mount Weske Drive. TRC. June 9, 2017
- Fulton-Fitch Mountain Reconductoring Project Final IS/MND, Section 3.9 Hydrology and Water Quality and Appendix F (Hydrology and Water Quality Supporting Information). Panorama Environmental, Inc. October 2017

Following this review, biologists Margaret Finch and Alan Roseto conducted field surveys on March 19, 20, 21, 22, and 23, 2018. Biologist Sheryl Creer conducted a follow-up survey on May 2, 2018. Ms. Finch, Ms. Creer, and Mr. Roseto were approved by the CPUC as Qualified Biologists for the Project. Biologists visited each pre-established watercourse crossing and photographed each watercourse crossing they encountered. In addition, all project impact areas, including access roads, were visited to identify additional watercourse crossings.

RESULTS

A list of proposed watercourse crossings that cannot be avoided and specific methods to be implemented at each crossing are shown in Table 1. Table 1 includes features identified in the IS/MND (labeled "FFX"), as well as new features (labeled "WC") identified after the publication of that document. Table 1 and Figure 2 also include watercourses that will be crossed using existing culverts. Photos of each proposed watercourse crossing listed in Table 1 are included in Attachment A.

Table 2 provides a list of wetlands and waters located within 50 feet of impact areas (defined as "proximity points") and avoidance methods to be implemented for these features, as required by MM Hydrology – 4.

Figure 2 shows the locations of all features listed in Tables 1 and 2 on a mapset that includes all project features.

Per MM Biology – 11, impacts to waters of the US and state shall be minimized using Best Management Practices (BMPs) during construction. In addition to flagging and avoiding the features, erosion and sediment control BMPs, such as straw wattles, hay bales, and drain inlet controls, will be installed to keep sediment and debris from entering jurisdictional waters. MM Biology – 11 also states that temporary bridges, such as steel plates (as included in Table 1), shall be designed and installed such that the water flow (velocity and low-flow channel width) is not impaired. In accordance with this MM, a biological monitor will be on site during project construction to monitor the integrity of wetlands and other waters while major earthmoving activities are underway. Implementation of standard erosion control BMPs is also required per the following Field Protocol (FP) Measures in PG&E's Bay Area Habitat



Conservation Plan (Bay Area HCP) Field Protocol: FP-11 and FP12. See Table 5-1 in the Bay Area HCP for further details.

A Stormwater Pollution Prevention Plan (SWPPP) has been prepared for the project and was approved by CPUC on June 11, 2018. The SWPPP addresses procedures and standards required for project activities including, but not limited to, BMPs for erosion and sedimentation control; dewatering; hazardous materials identification, handling, storage, and disposal; and emergency response and cleanup. All necessary erosion and sediment control BMPs will be installed prior to conducting grading or vegetation-clearing activities during the wet season and before the onset of any anticipated storm events. Temporary BMPs such as silt fences or wattles, which are intended to minimize sediment transport from temporarily disturbed areas, shall remain in place until disturbed areas have stabilized. SWPPP monitoring will be conducted on a weekly basis, in accordance with MM Hydrology – 2. MM Hydrology – 3 outlines a dewatering procedure to be implemented to ensure that any groundwater encountered during project activities will not come into contact with surface waters. The water features listed in Table 2 will be flagged/signed prior to the commencement of construction activities as needed and avoided where feasible. Flagging/signage will remain intact throughout construction within a given work area.



Table 1: Proposed Watercourse Crossings

| ISMND Crossing Number | SWACP Crossing Number | Crossed by | Nearest Project Impact Areas | Water Feature to be Crossed | Proposed Avoidance and Minimization Method |
|--------------------------|-----------------------------|--|---------------------------------|--------------------------------|--|
| FFX1 | N/A | Access road 15 | Pole 42 | Seasonal watercourse (SEW44) | Existing culvert |
| FFX2 | N/A | Access road 31 | Pole 58 | Seasonal wetland (SW1/MW0-01) | Existing culvert |
| FFX3 | N/A | Access road 31 | Pole 58 | Seasonal watercourse (SEW7/C1) | Steel plate |
| FFX4 | N/A | Access road 31 | Pole 58 | Seasonal watercourse (SEW 7) | Existing culvert |
| FFX7 | N/A | Access road abandoned by project | Pole 68 | Seasonal watercourse (SEW4) | N/A |
| FFX8 | N/A | Access road 36 | Pole 66 | Seasonal watercourse (SEW 3) | Existing culvert/steel plate |
| FFX9 | N/A | Project does not cross feature; See Table 2 below | Pole 66 | Seasonal watercourse (SEW3) | Flag and avoid, implement BMPs |
| FFX10 | N/A | Access road 36 | Pole 66 | Seasonal watercourse (SEW 3) | Steel plate |
| FFX11 | N/A | Access road 35 | Pole 66 | Seasonal watercourse (SEW 2) | Steel plate |
| FFX12 | N/A | Access road 39 | Pole 70 | Seasonal watercourse (SEW56) | Steel plate |
| FFX13 | N/A | Access road 41 | Landing Zone-5 | Seasonal watercourse (SEW61) | Existing culvert |
| FFX14 | N/A | Access road 46 | Pole 75 | Seasonal watercourse (SEW 8a) | Steel plate |
| FFX15 | N/A | Access road 46b | Pole 74 | Seasonal watercourse (SEW 8a) | Steel plate |
| FFX16 | N/A | Access road 46 | Pole 74 | Seasonal watercourse (SEW8a) | Steel plate |
| FFX17 | N/A | Access road abandoned by project | Pole 77 | Seasonal watercourse (D5) | N/A |
| FFX18 | N/A | Access road abandoned by project | Pole 77 | Seasonal watercourse (SEW46) | |



| FFX19 | N/A | Access road abandoned by project | Pole 77 | Seasonal watercourse (SEW54) | N/A |
|-------|-----|--|---------|------------------------------|-------------|
| FFX20 | N/A | Access road 54 | Pole 87 | Seasonal watercourse (SEW 6) | Steel plate |
| FFX21 | N/A | Access road 54 | Pole 86 | Seasonal watercourse (SEW 5) | Steel plate |
| FFX22 | N/A | Access road abandoned by project | Pole 85 | Seasonal watercourse (SEW5) | N/A |
| FFX23 | N/A | Access road abandoned by project | Pole 85 | Seasonal watercourse (SEW13) | N/A |
| FFX24 | N/A | Access road abandoned by project | LZ-2 | Seasonal watercourse (SEW9a) | N/A |
| FFX25 | N/A | Access road abandoned by project | Pole 70 | Seasonal watercourse (SEW56) | N/A |
| FFX26 | N/A | Access road abandoned by project | Pole 66 | Seasonal watercourse (SEW2) | N/A |
| FFX27 | N/A | Access road abandoned by project | Pole 66 | Seasonal watercourse (SEW3a) | N/A |
| FFX28 | N/A | Access road abandoned by project | Pole 87 | Seasonal watercourse (SEW5a) | N/A |
| FFX29 | N/A | Access road abandoned by project | Pole 77 | Seasonal watercourse (SEW51) | N/A |
| FFX30 | N/A | Project Does Not Cross Feature | Pole 29 | Seasonal watercourse (SEW57) | N/A |
| FFX31 | N/A | Access road abandoned by project | Pole 81 | Seasonal watercourse (SEW60) | N/A |



| FFX32 | N/A | Project does not cross feature; See Table 2 below | Pole 67 | Drainage Ditch (D6) | Flag and avoid, implement BMPs |
|-------|------|---|---------------------|---|-----------------------------------|
| FFX33 | N/A | Access point abandoned, new access to TAP Staging Area | TAP Staging Area | Seasonal watercourse (C3) | N/A |
| N/A | WC-1 | New Access Route to LZ-3 | LZ-3 | Seasonal watercourse (C2) | Existing culvert |
| N/A | WC-2 | New Access Route to LZ-3 | LZ-3 | Seasonal watercourse (C2) | Existing culvert |
| N/A | WC-3 | Access road B01 | Pull Site-2, Pole 5 | Drainage ditch (D1) | Existing culvert |
| N/A | WC-4 | Access road 39 | Pole 70 | N/A | Existing culvert |
| N/A | WC-5 | Access road 39 | Pole 70 | N/A | Existing culvert |
| N/A | WC-6 | Access road 39 | Pole 70 | Seasonal watercourse 32 (SEW32) | Steel plate |
| N/A | WC-7 | Access road 44a | Landing Zone-5 | Seasonal watercourse (SEW 33) | Existing culvert |
| N/A | WC-8 | Access road 44a | Pole 74 | Seasonal watercourse (SEW 34) Steel plate | |
| N/A | WC-9 | New TAP AR | TAP Staging Area | Seasonal watercourse (C3) Steel plate | |

FFX5 and FFX6 are shown on Figure 2; they were removed from this table because it was determined that the features they crossed did not meet the criteria for a wetland and the features were removed from the survey data (Panorama Environmental 2017).



Table 2: Wetlands and Water Features within 50 Feet of Project Impact Areas

| ISMND Feature ID Number | Project Impact Area | Water Feature within 50-feet | Water Feature Type | Avoidance Method |
|----------------------------|-----------------------------------|------------------------------|--|---|
| FFW1, FFW2 | PS-4 Pole 20 | SEW 41 D-4 | Seasonal watercourse | Flag and avoid, implement BMPs |
| FFW3, FFW4, FFW5 | PS-5 Pole 21 AR-B06 LZ-2 | SEW 9a | Seasonal watercourse | Flag and avoid, implement BMPs |
| FFW6 FFW7 | PS-6 Pole 23 AR-A01 | SEW 1 | Seasonal watercourse | Flag and avoid, implement BMPs |
| FFW8 | Pole 25 AR-A03 | SEW 9 | Seasonal watercourse | Flag and avoid, implement BMPs |
| FFW9 | Pole 28 AR-A06 | RIWO 2 | Riparian woodland associated with feature | Flag and avoid, implement BMPs |
| FFW10 | Pole 46 | SEW 16 | Seasonal watercourse | Flag and avoid, implement BMPs |
| FFW11 | N/A | SEW19 | Seasonal watercourse | N/A; Not within 50 feet of current project design |
| FFW12 | Pole 54 AR-A25 | SEW 22 | Seasonal watercourse | Flag and avoid, implement BMPs |
| FFW13 | Pole 57 | SEW 24 | Seasonal watercourse | Flag and avoid, implement BMPs |
| FFW16 | N/A | Windsor Creek | Seasonal watercourse | N/A; No longer using nearby staging area |
| FFW17, FFW24 | Pole 67 AR-A37 | SEW 3c SEW 3 | Seasonal watercourse | Flag and avoid, implement BMPs |
| FFW18 | Pole 71 AR-A41 | RIWO 10 (SEW61 in ISMND) | Riparian woodland associated with featurue | Flag and avoid, implement BMPs |
| FFW19 | AR-A45 Pole 75 | SEW 35 | Seasonal watercourse | Flag and avoid, implement BMPs |



| FFW20 | AR-A52 Pole 84 | SEW 40 | Seasonal watercourse | Flag and avoid, implement BMPs |
|-------------|--|-------------------|---|--------------------------------|
| FFW21 | Pole 83 | SW 12 | Seasonal wetland | Flag and avoid, implement BMPs |
| FFW22 | AR-A50 Pole 82 | SW 11 | Seasonal wetland | Flag and avoid, implement BMPs |
| FFW23 | AR-A55 Pole 87 | SW 16 | Seasonal wetland | Flag and avoid, implement BMPs |
| FFX32, FFX9 | AR-A36 | D6, SEW3 | Drainage ditch and seasonal watercourse | Flag and avoid, implement BMPs |
| N/A | Pole 66 | SEW 30 | Seasonal watercourse | Flag and avoid, implement BMPs |
| N/A | Pole 79 Pole 80 | RIWO 12 SEW 60 | Riparian woodland | Flag and avoid, implement BMPs |
| N/A | TAP | C-3 | Seasonal watercourse | Flag and avoid, implement BMPs |
| N/A | Pull Site (PS)-1 Pole/Tower Work Area (Pole) 2 | D-1 | Drainage Ditch | Flag and avoid, implement BMPs |
| N/A | Pole 4 | D-1 | Drainage Ditch | Flag and avoid, implement BMPs |
| N/A | PS-2 Pole 5 | D-1, D-2, D-3 | Drainage Ditches | Flag and avoid, implement BMPs |
| N/A | PS-3 Landing Zone (LZ)-1 | SEW 43 | Drainage Ditch | Flag and avoid, implement BMPs |
| N/A | Pole 13 Access road (AR) – B04 | RIWO 13 | Riparian Woodland associated with feature | Flag and avoid, implement BMPs |
| N/A | LZ-2 | SEW 9a | Seasonal watercourse | Flag and avoid, implement BMPs |





CONCLUSIONS

Twenty-one watercourses will be crossed by the proposed project using the methods listed in Table 1. Water features listed in Table 2 will be flagged prior to construction activities as needed and avoided. In addition, BMPs will be implemented across the project site to minimize impacts to these features. With implementation of the methods described above and listed in Tables 1 and 2, impacts to jurisdictional water features will be avoided and permitting requirements are not anticipated.

At a minimum, PG&E will notify the California Department of Fish and Wildlife in accordance with the requirements of Fish and Game Code Section 1602 prior to:

- Substantially diverting or obstructing the natural flow of any river, stream or lake;
- Substantially changing or using any material from the bed, channel or bank of any river, stream, or lake; or
- Depositing debris, waste or other materials that could pass into any river, stream or lake.

According to Fish and Game Code Section 1602, "river, stream or lake" includes those waters that are dry for periods of time as well as those that are perennial. This includes ephemeral streams, washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the floodplain of a body of water. If conditions change and permits may be required, PG&E will notify CPUC immediately and then consult with the applicable agencies to obtain the necessary permits prior to conducting activities for which the permits would be required.

REFERENCES

Ahtna Government Services Corporation. 2018. Stormwater Pollution Prevention Plan, Fulton Fitch Mountain Reconductoring 60 kV Project. Application ID#: 494849.

Panorama Environmental, Inc. 2017. Fulton-Fitch Mountain Reconductoring Project Final Initial Study/Mitigated Negative Declaration. State Clearinghouse No. 2017072049.

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Attachment: Figure 1: Project Vicinity

Figure 2: Proposed Watercourse Crossings

Attachment A: Photographs of Proposed Watercourse Crossings

Figure 1: Project Vicinity

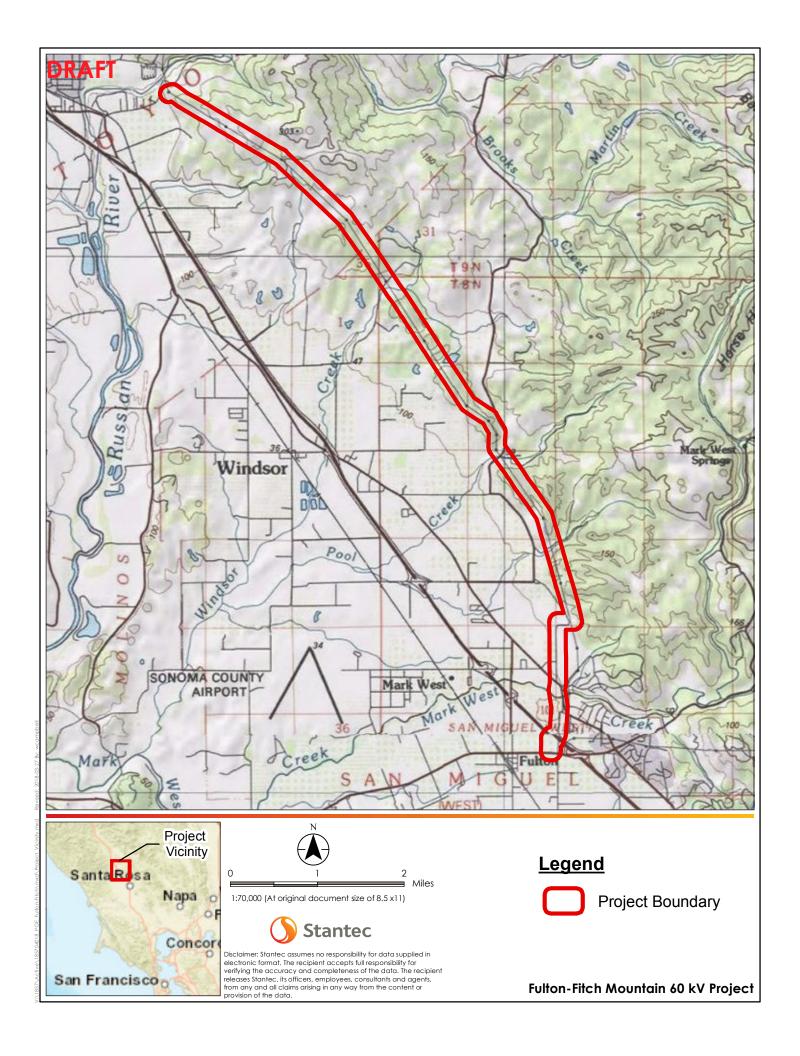
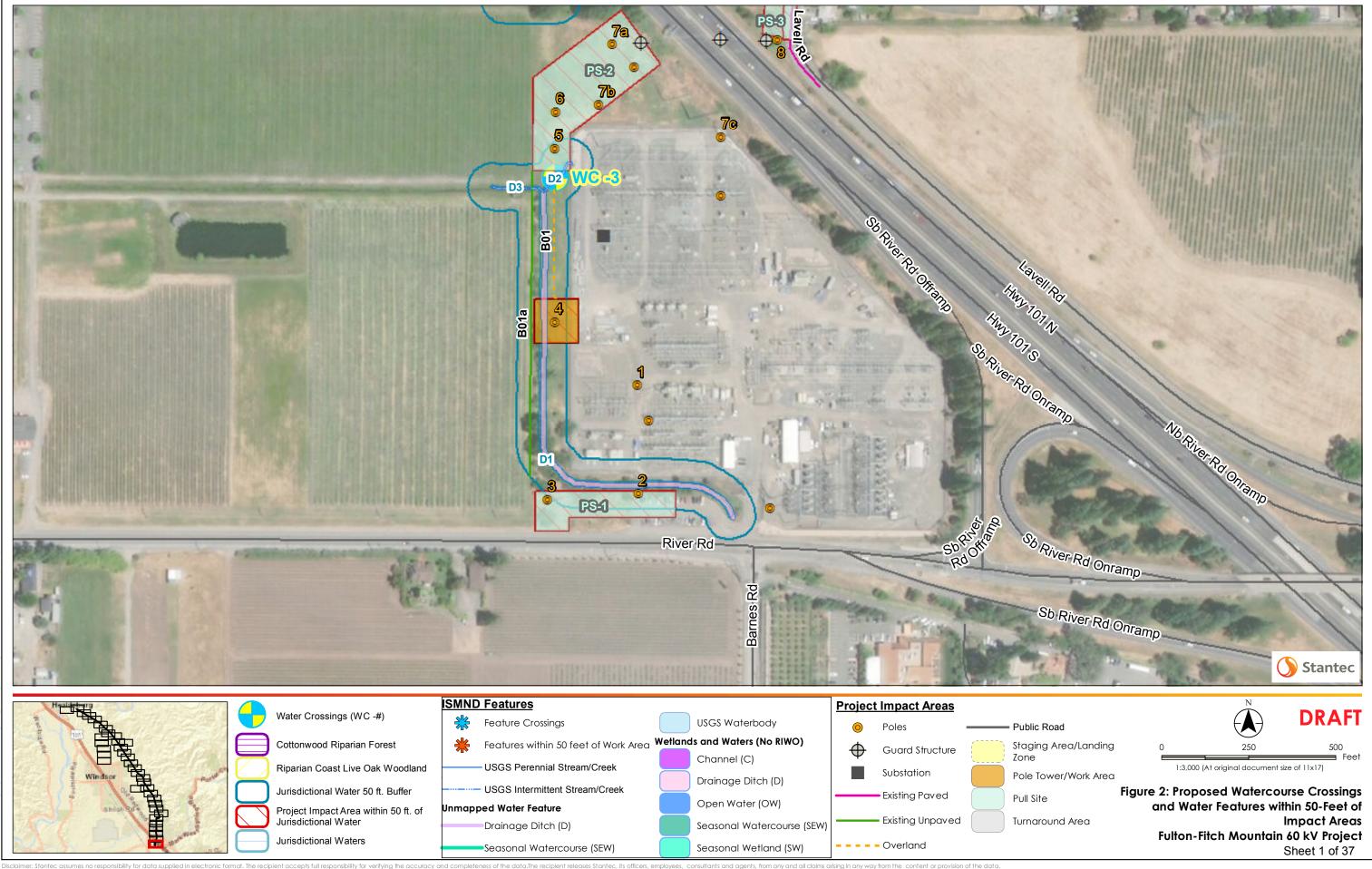
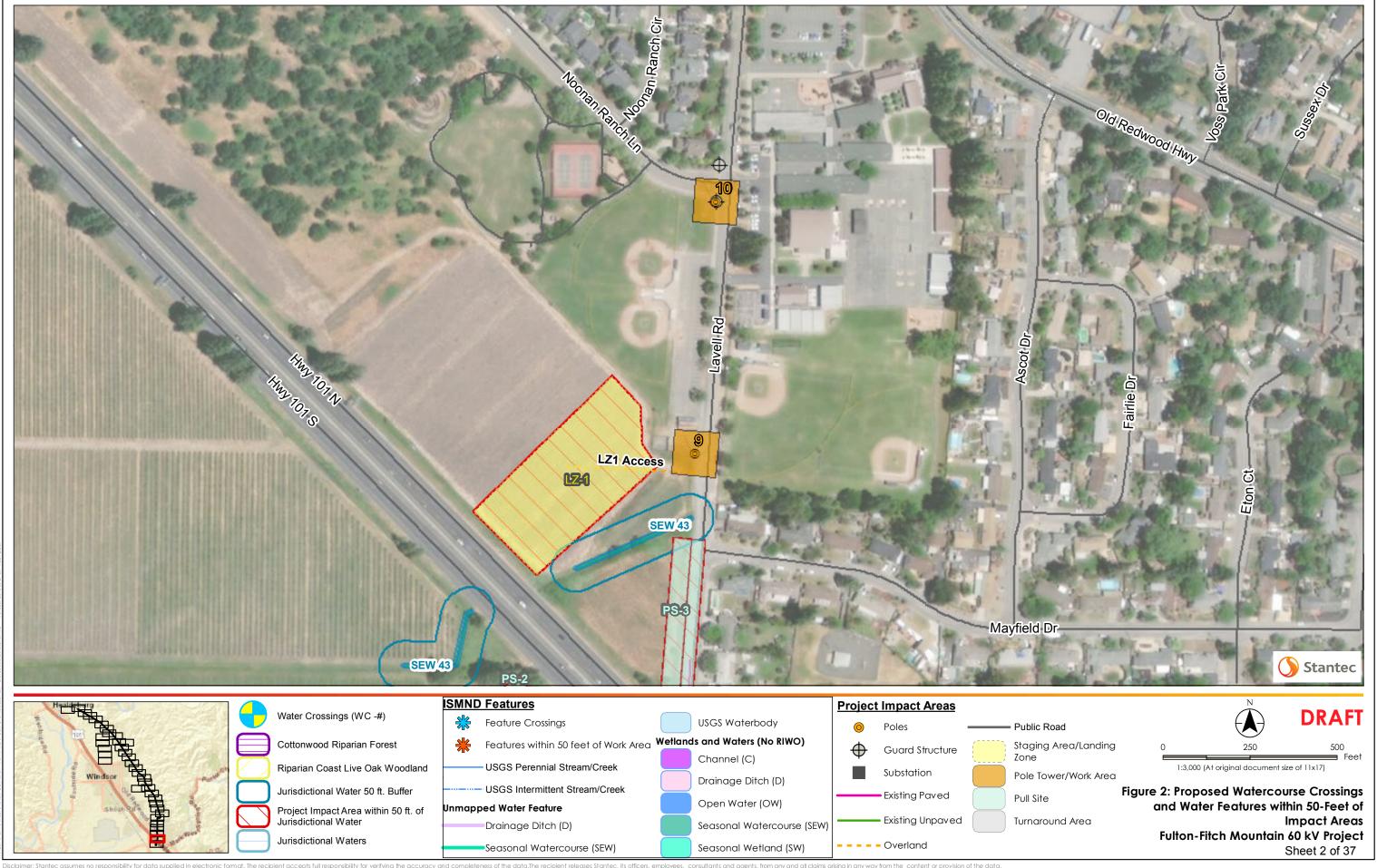


Figure 2: Proposed Watercourse Crossings

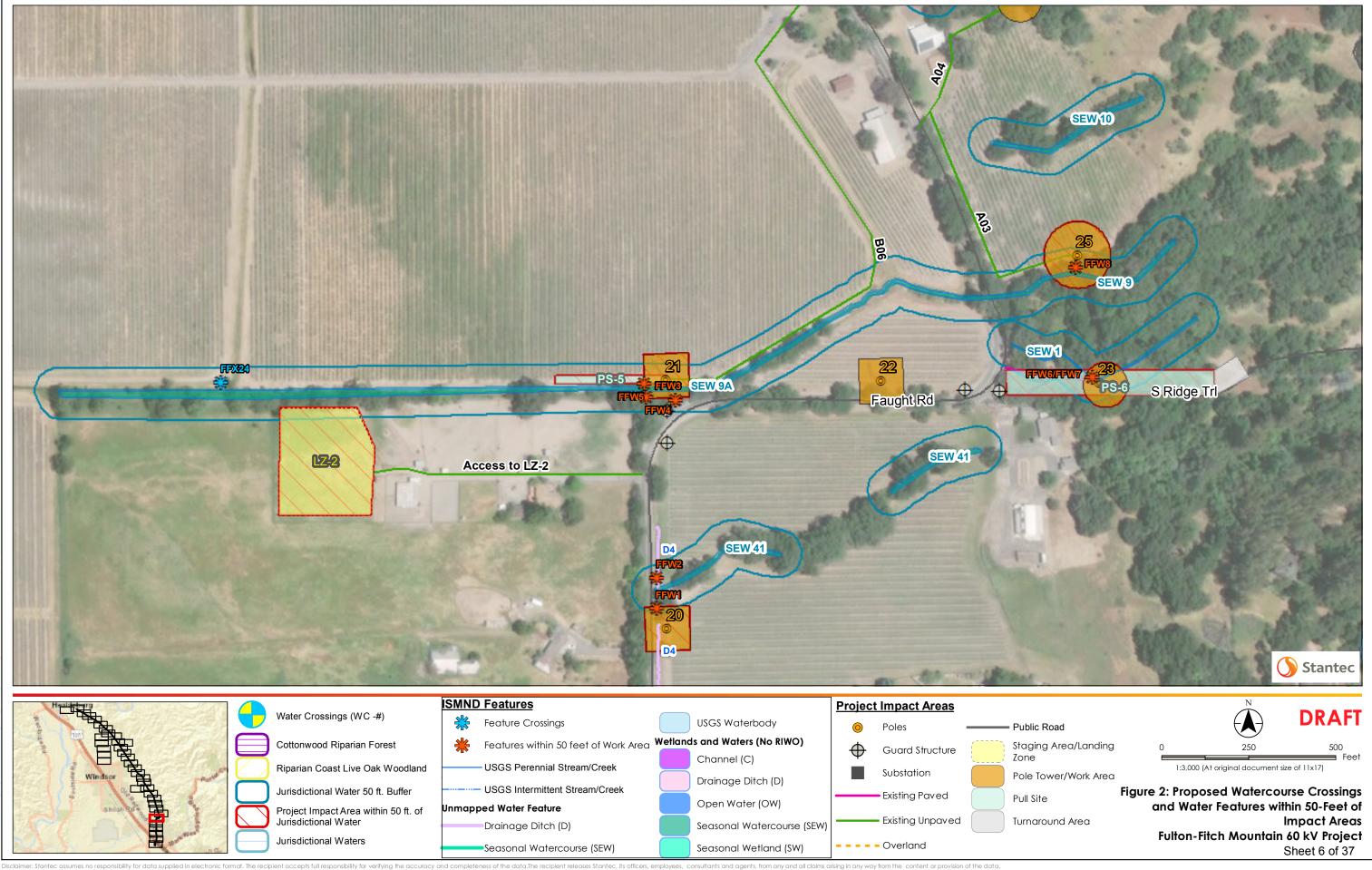


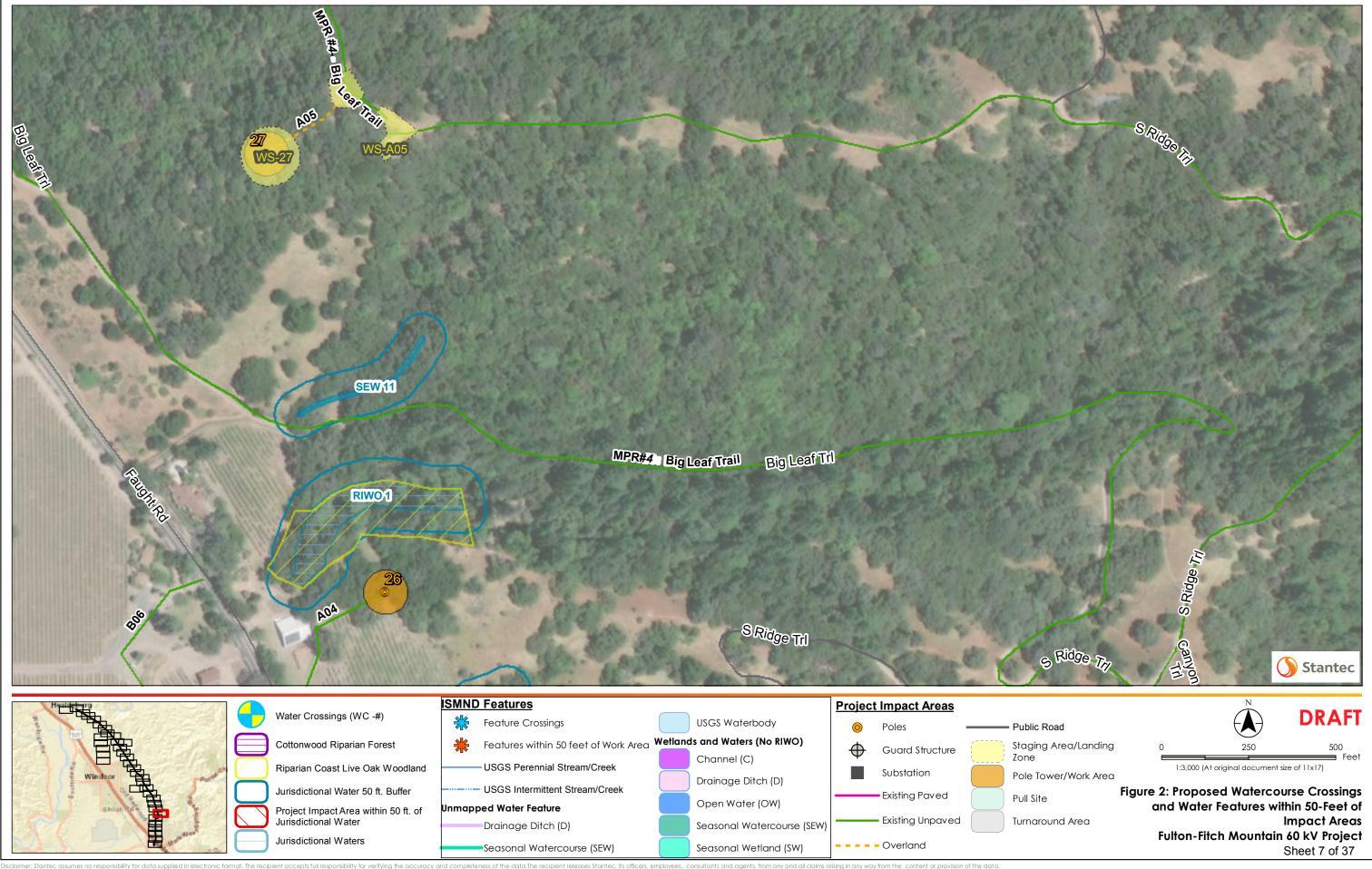


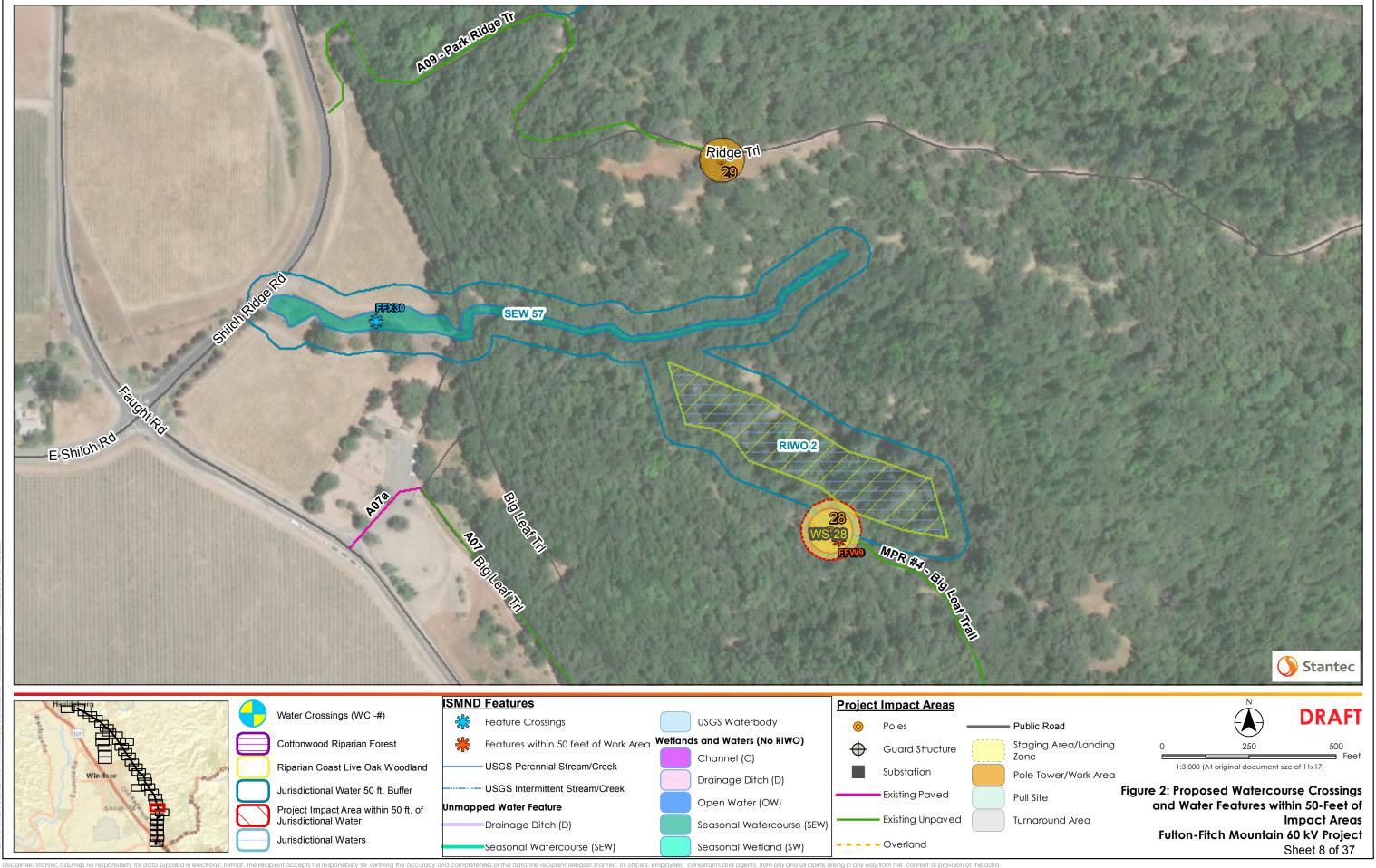


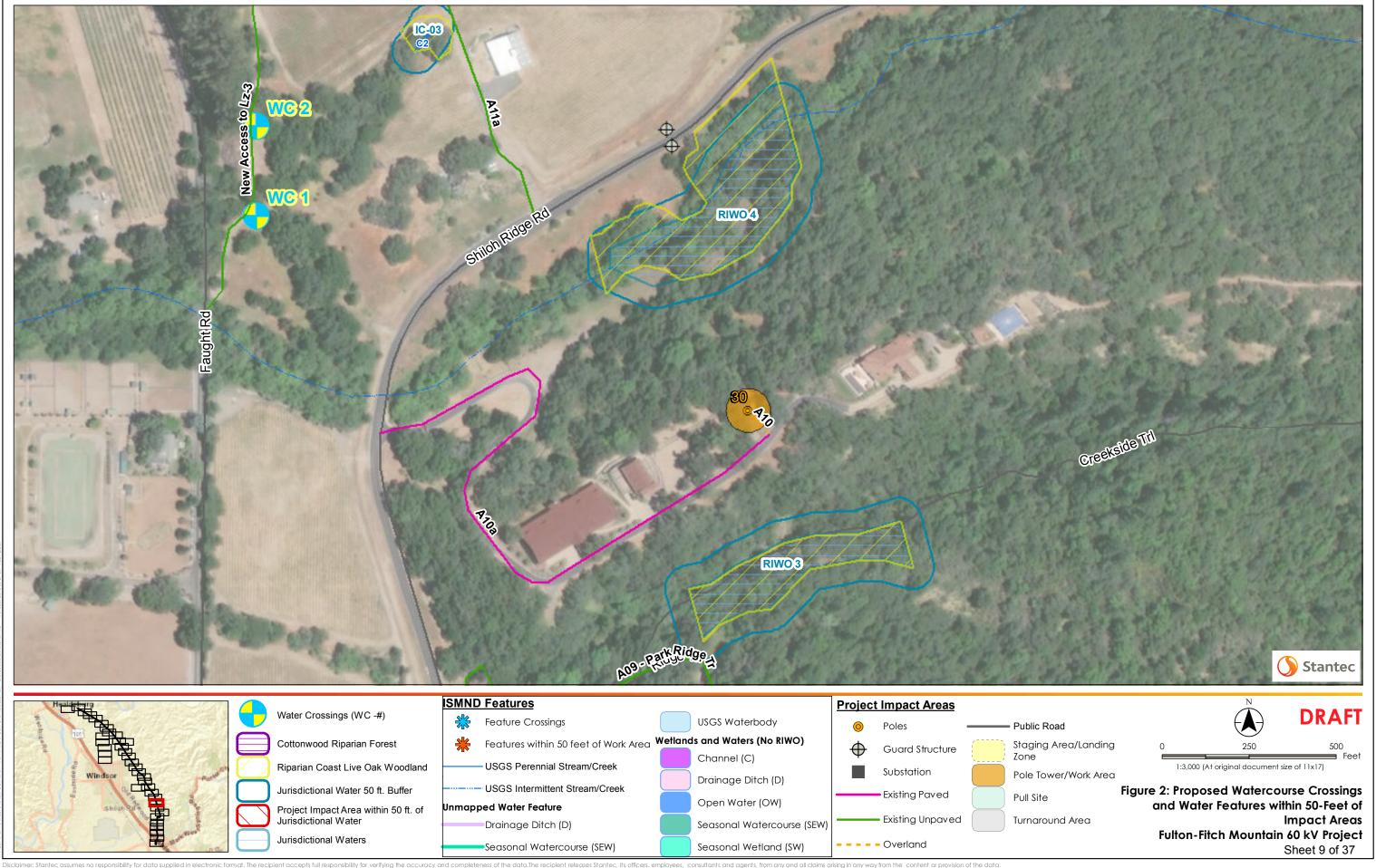


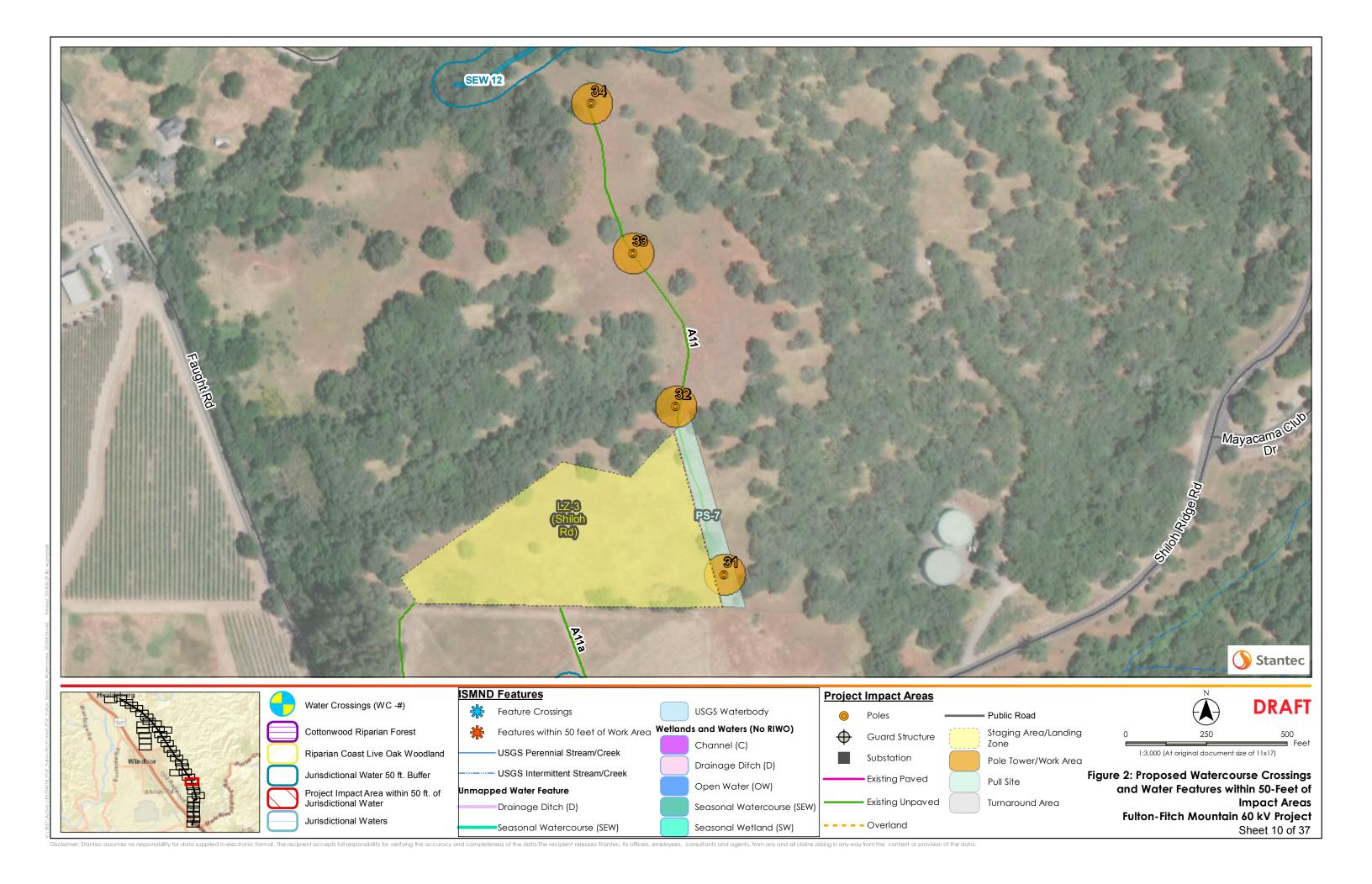


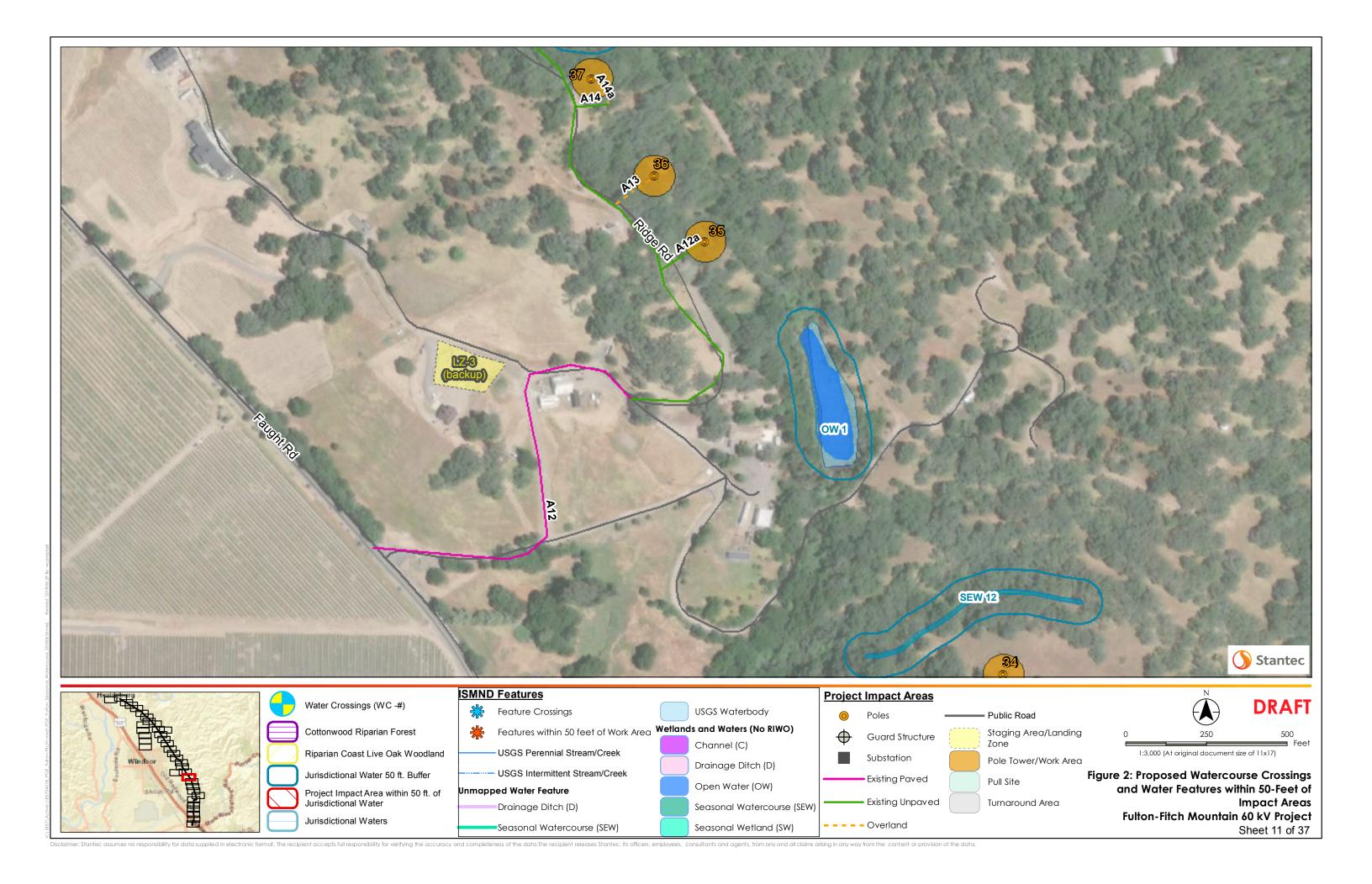


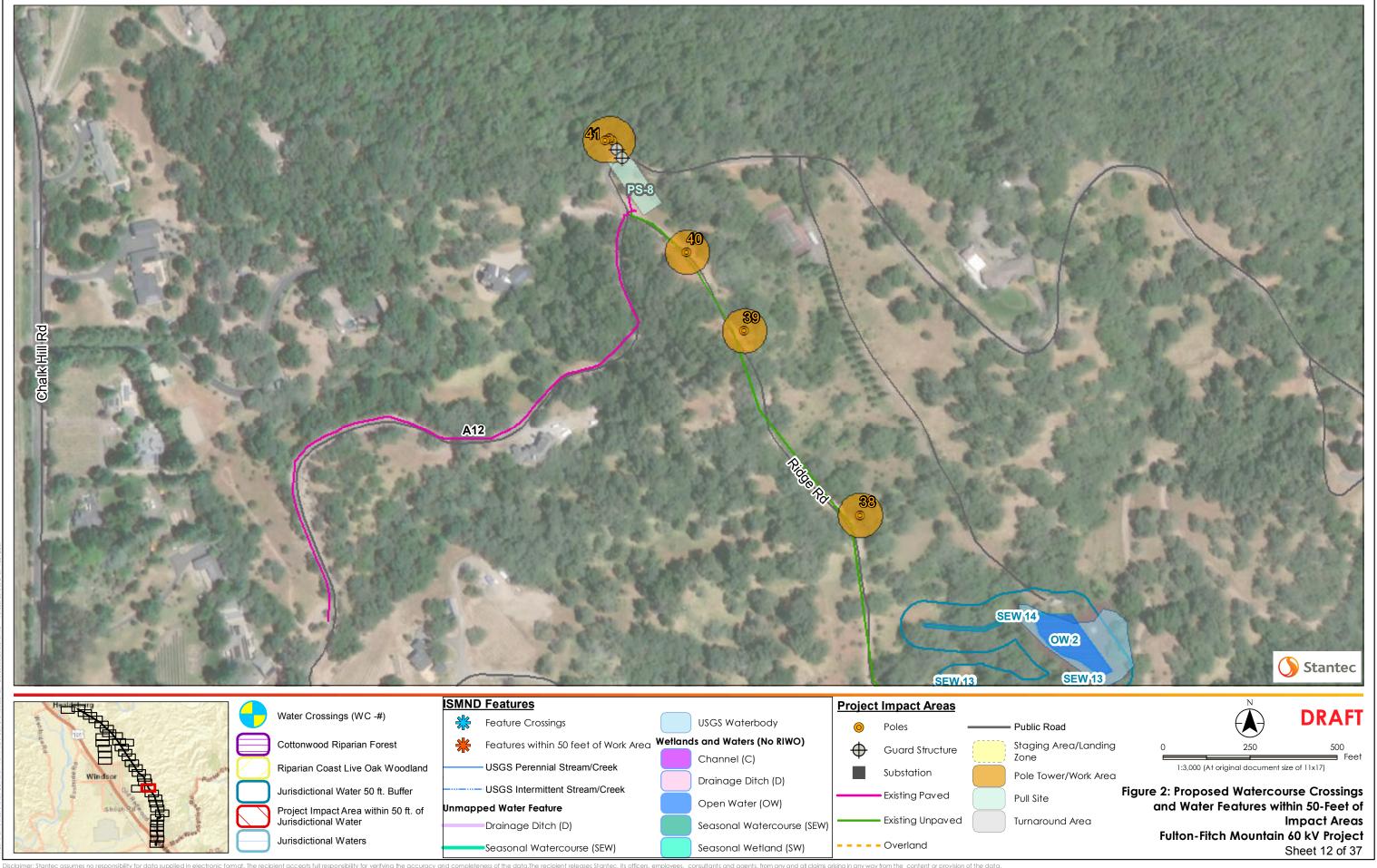


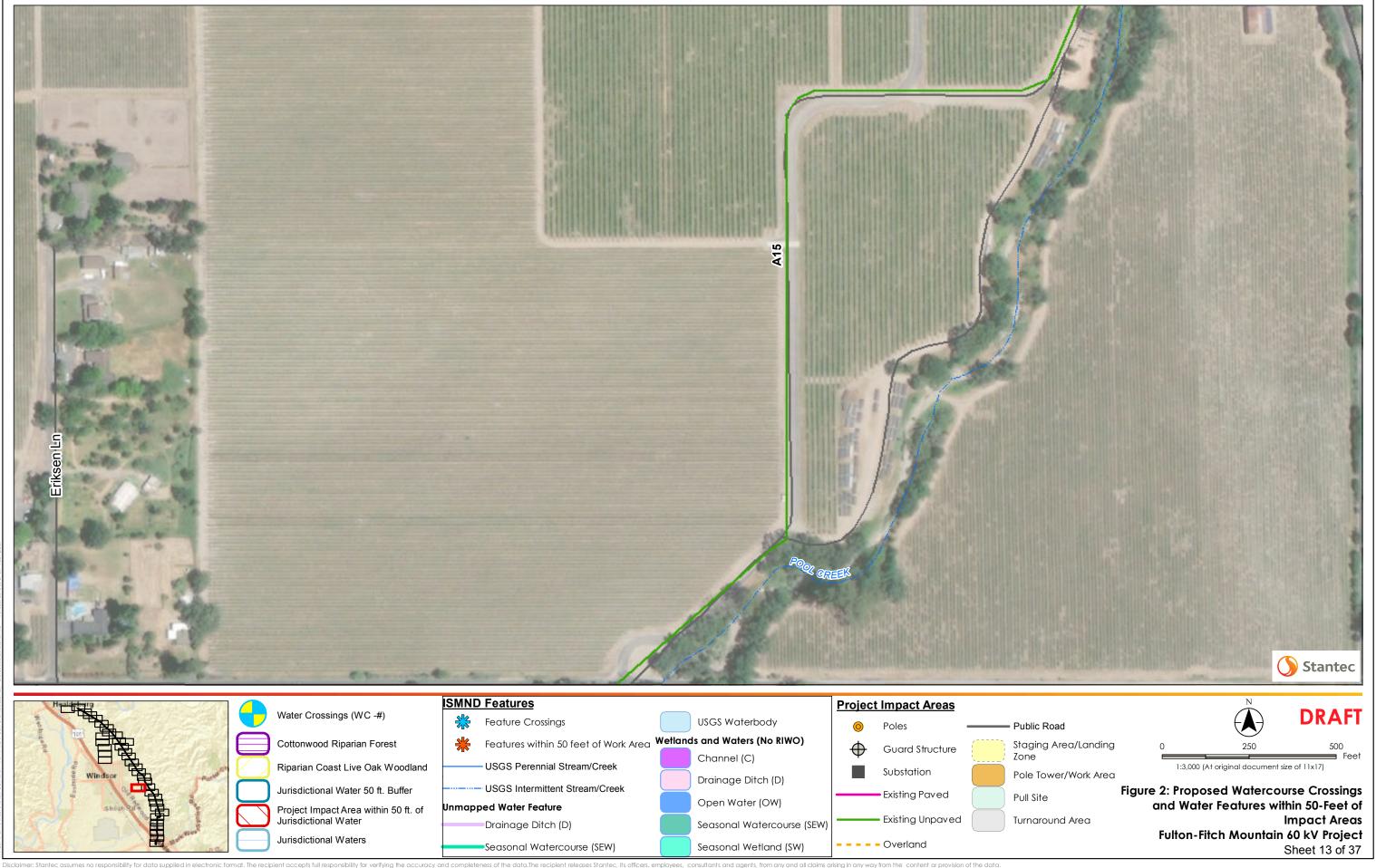


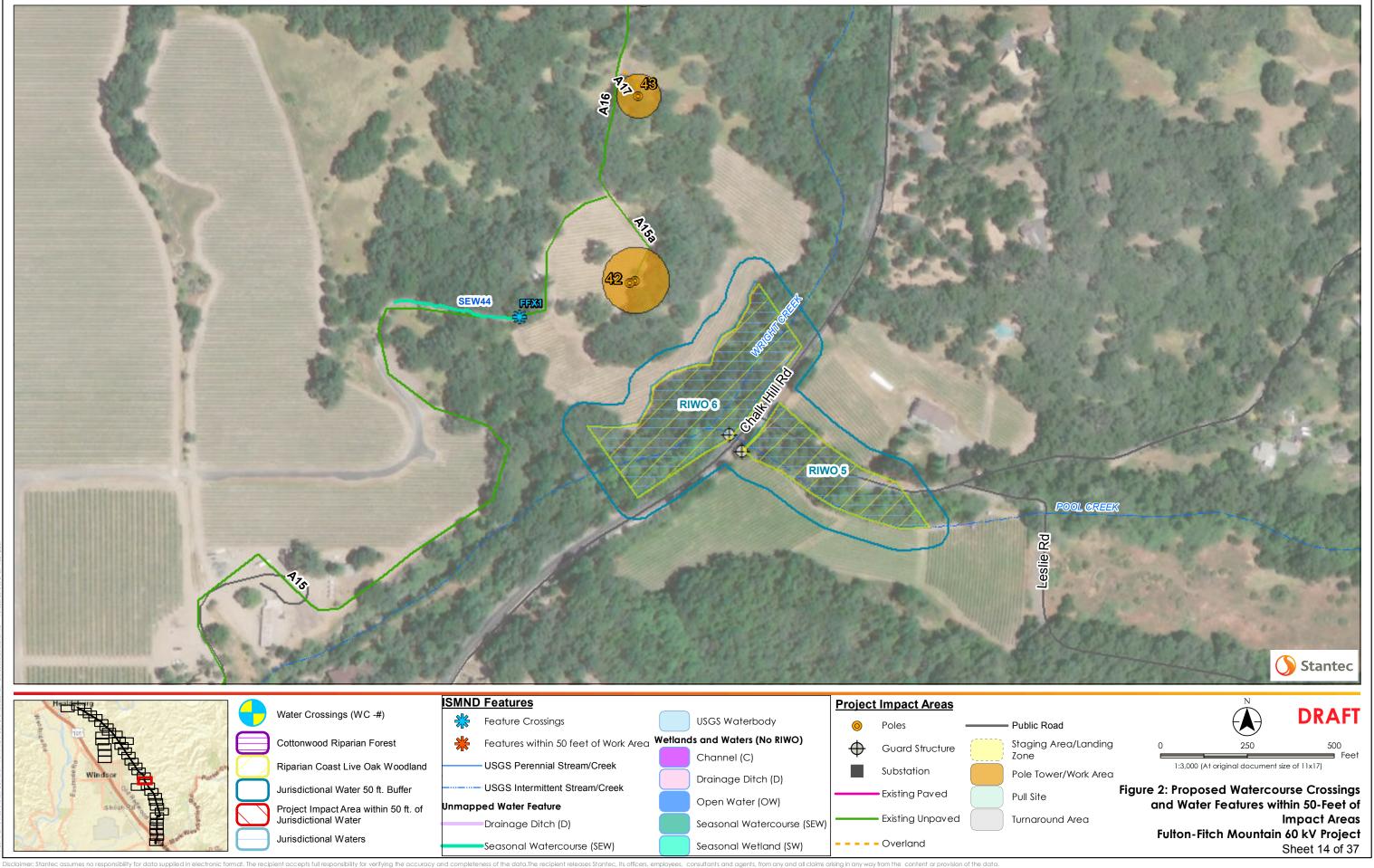


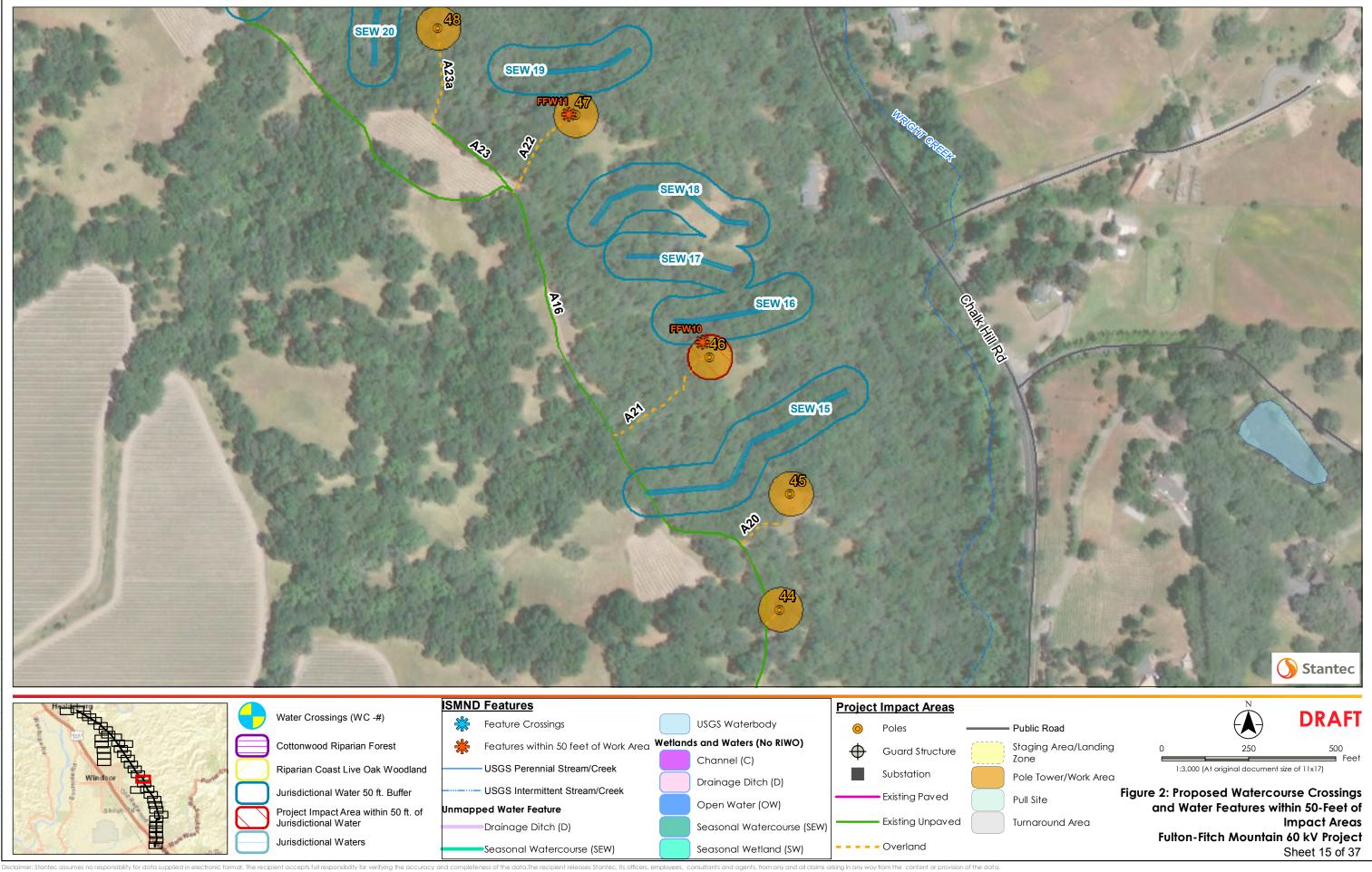


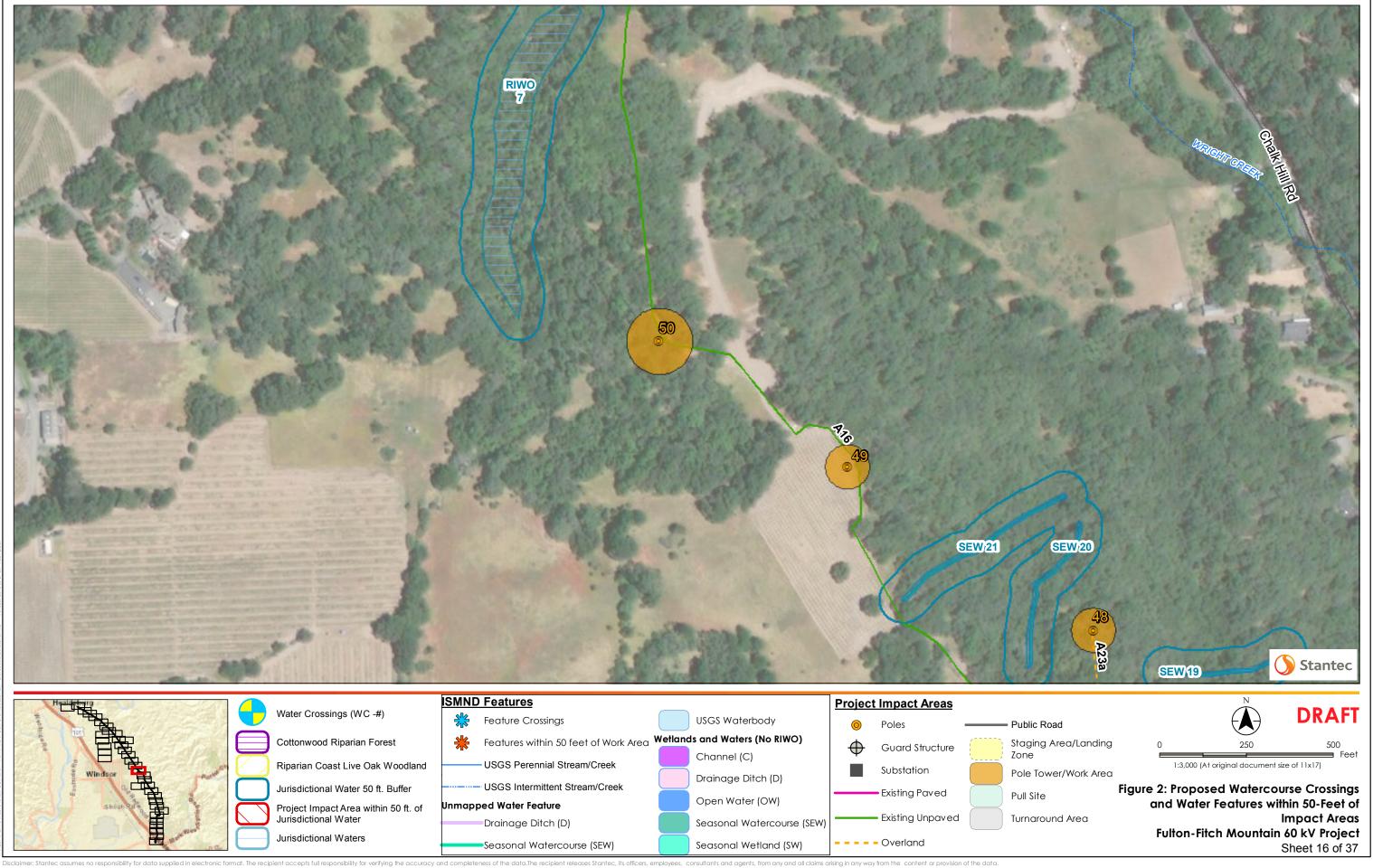


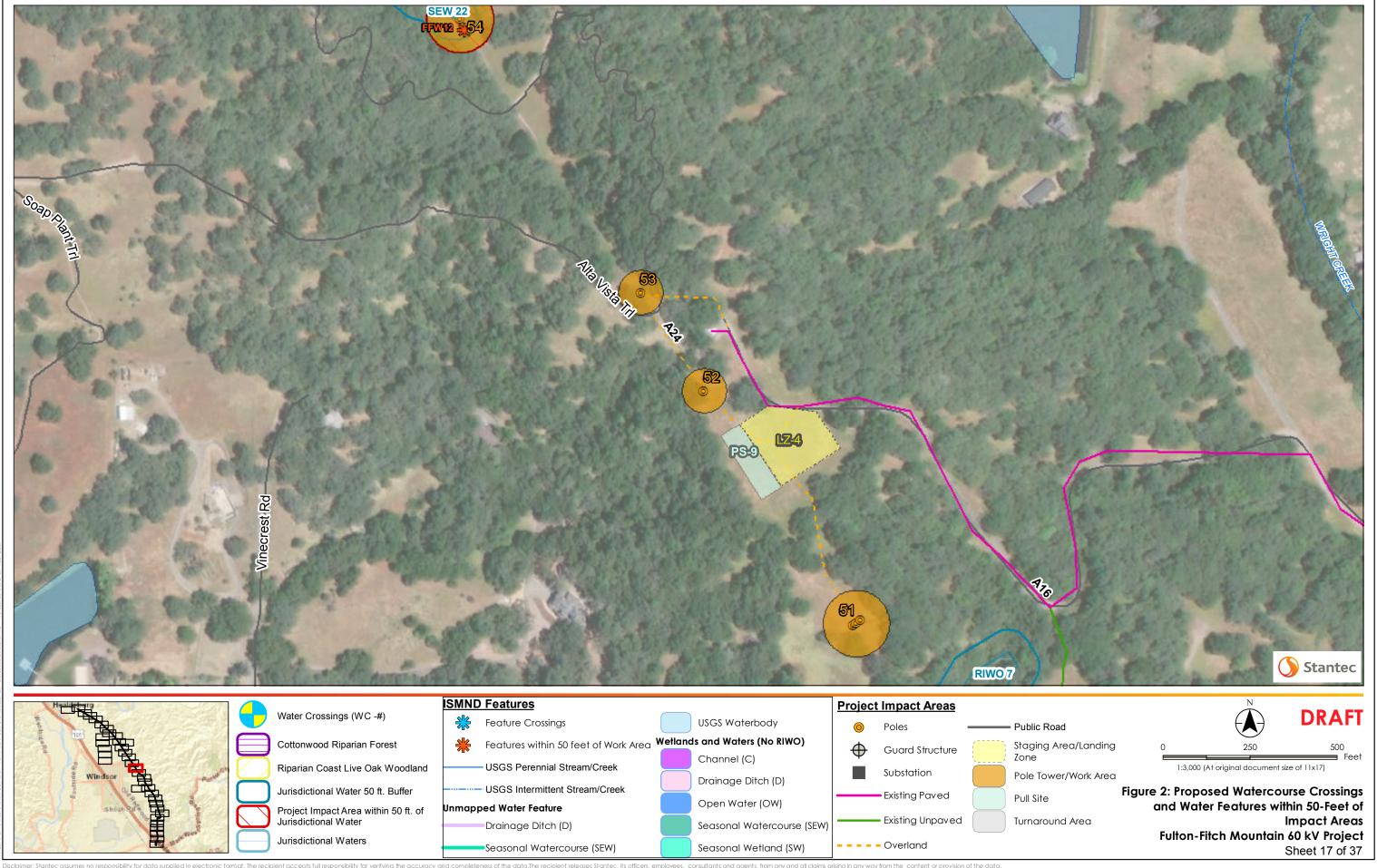


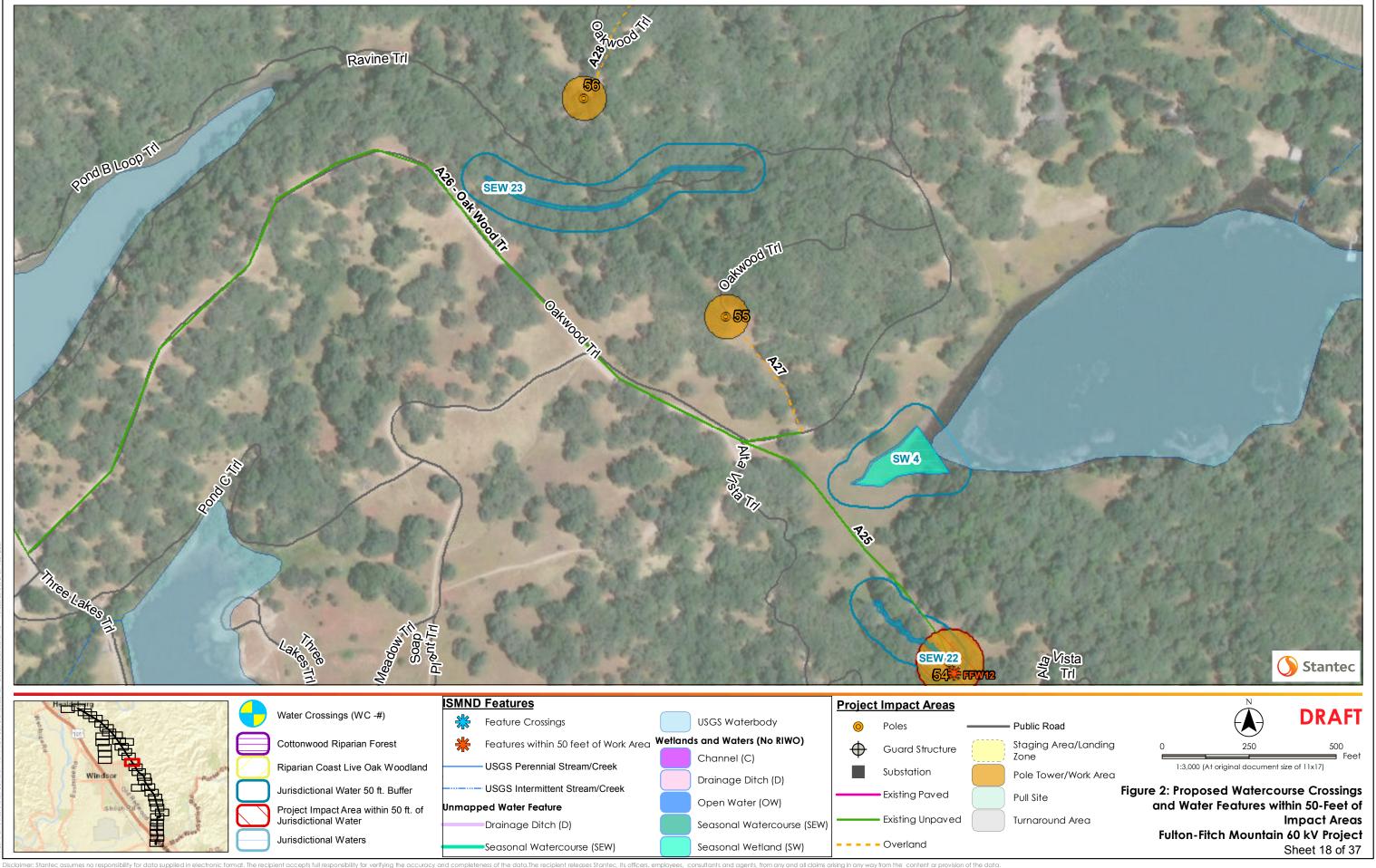


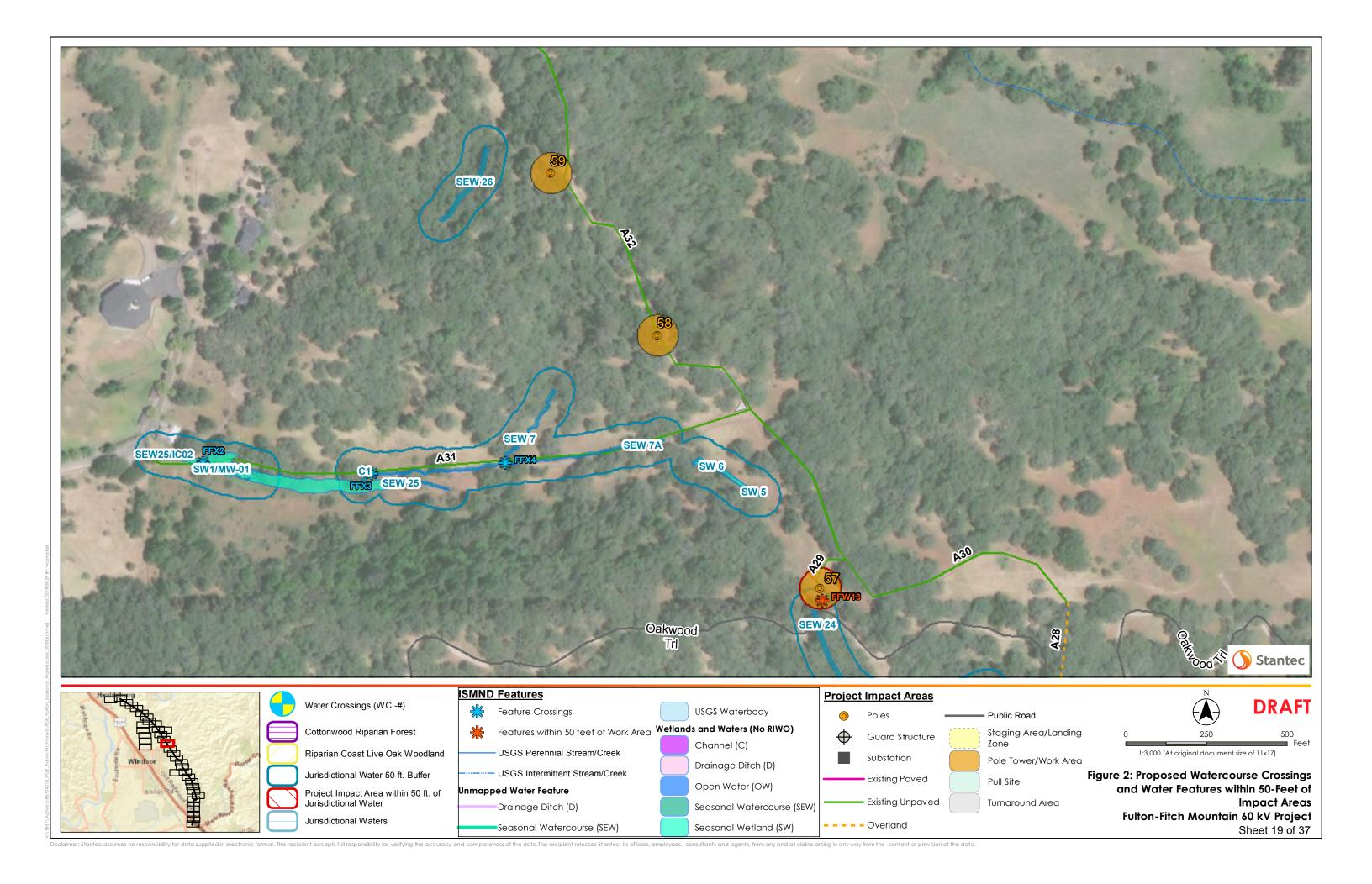


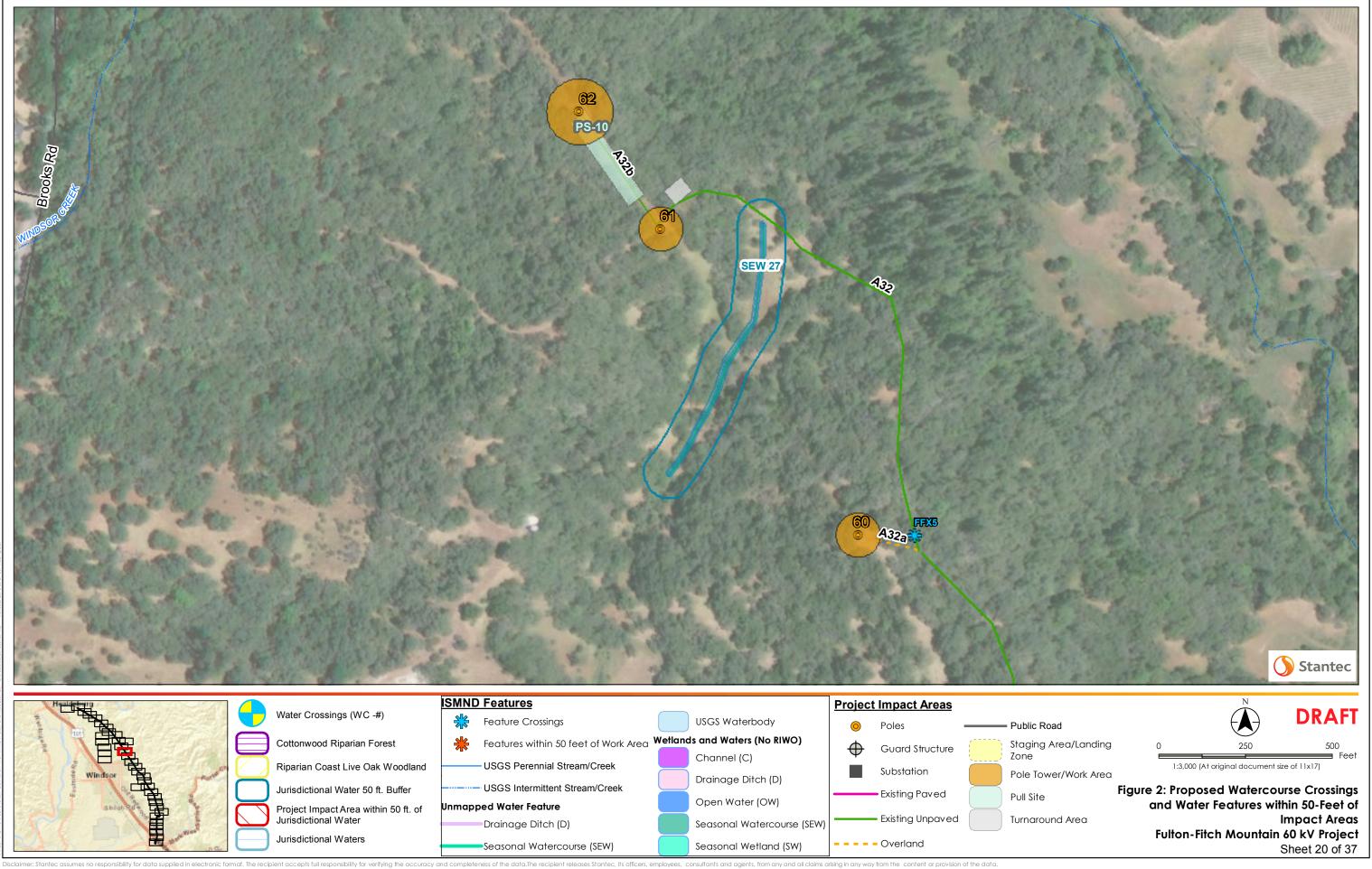


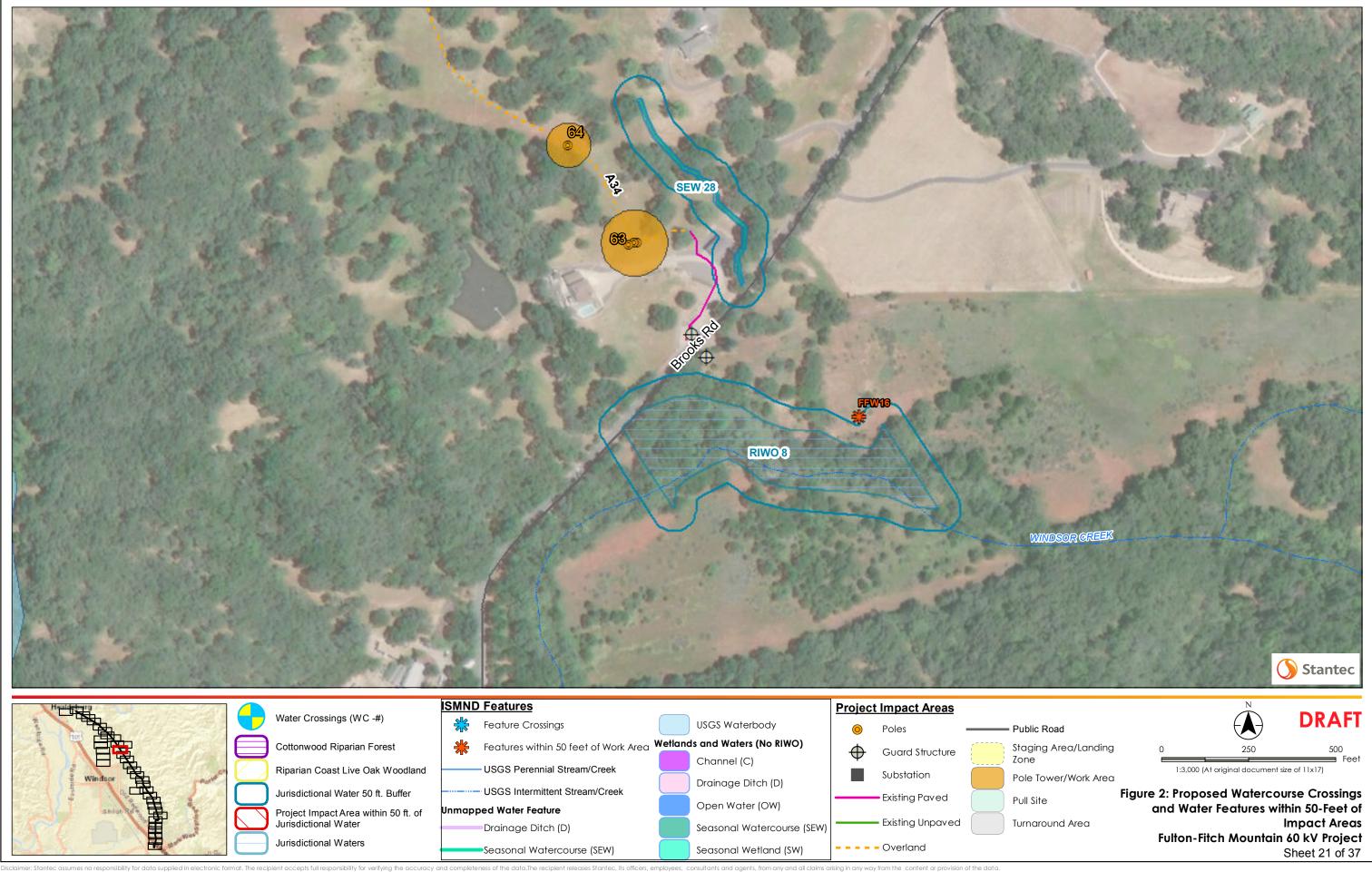


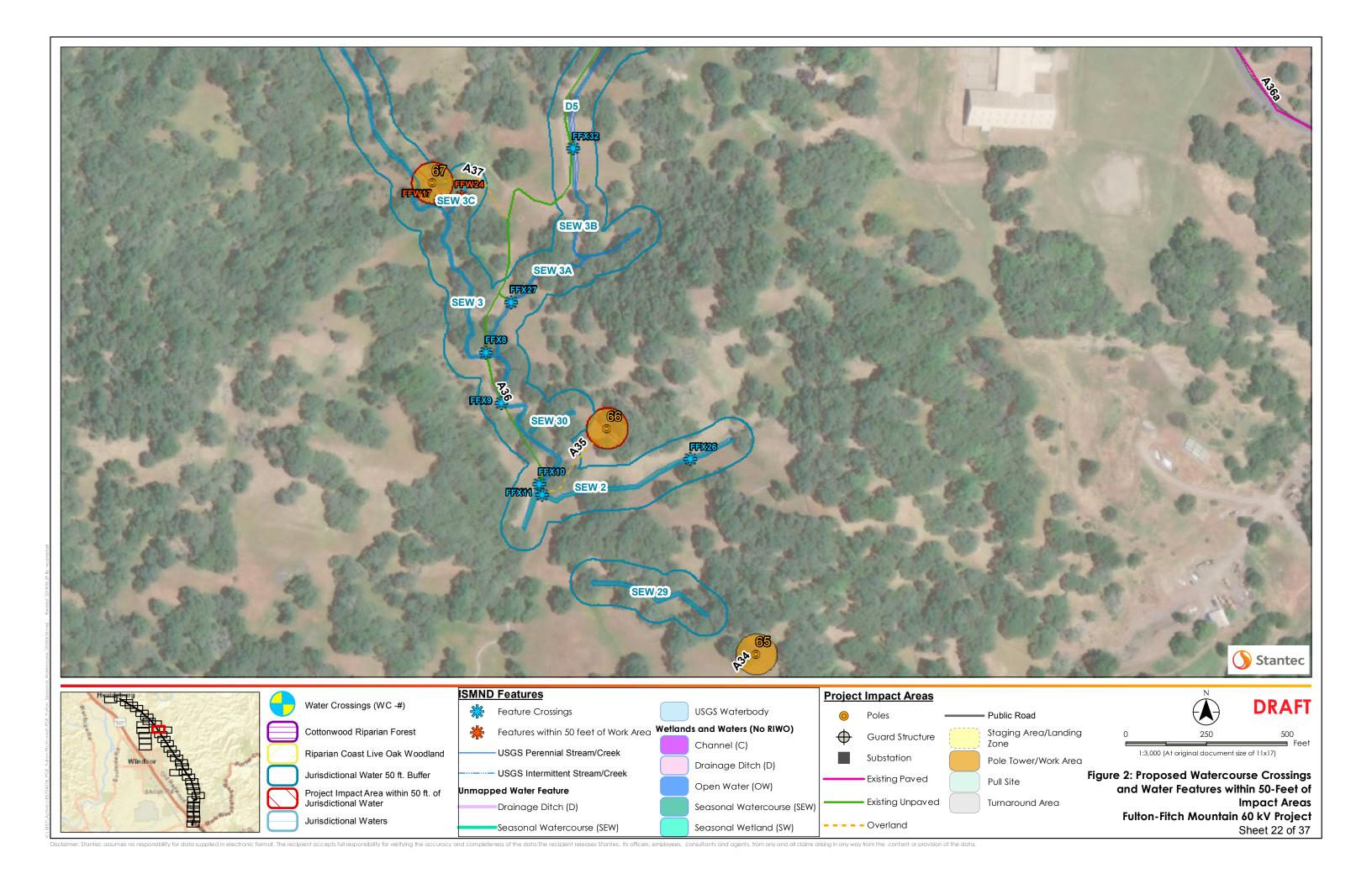


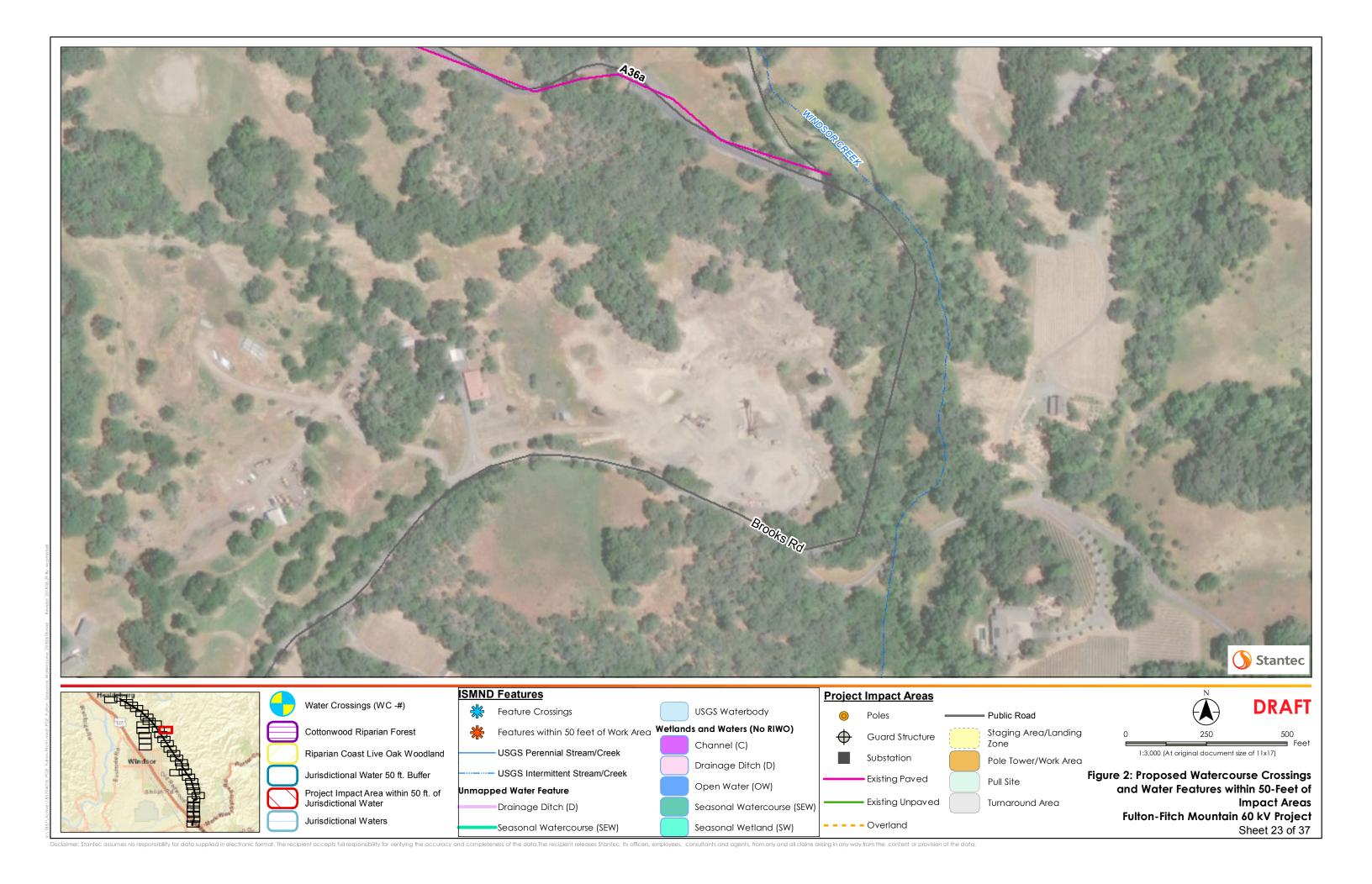


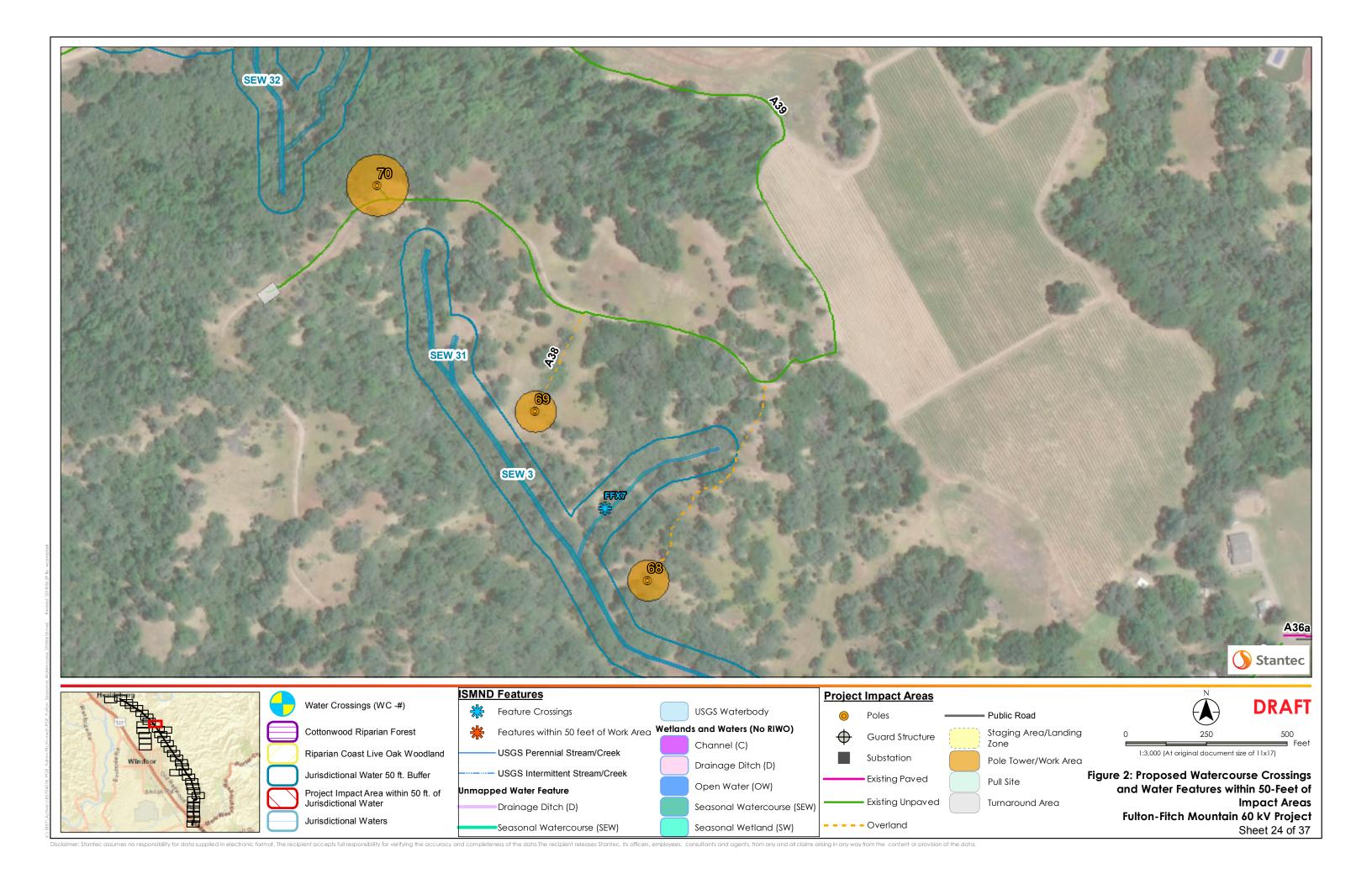


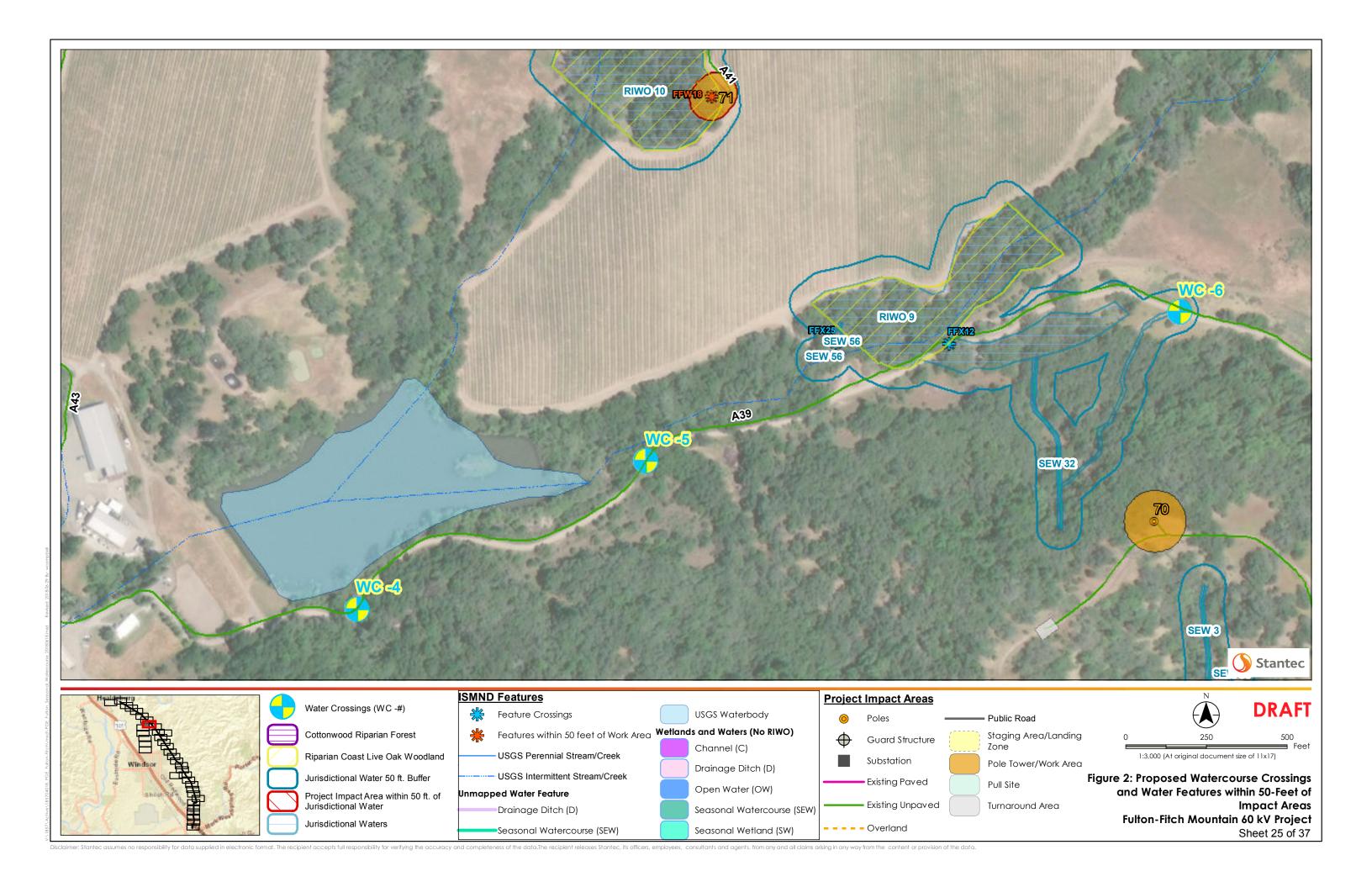


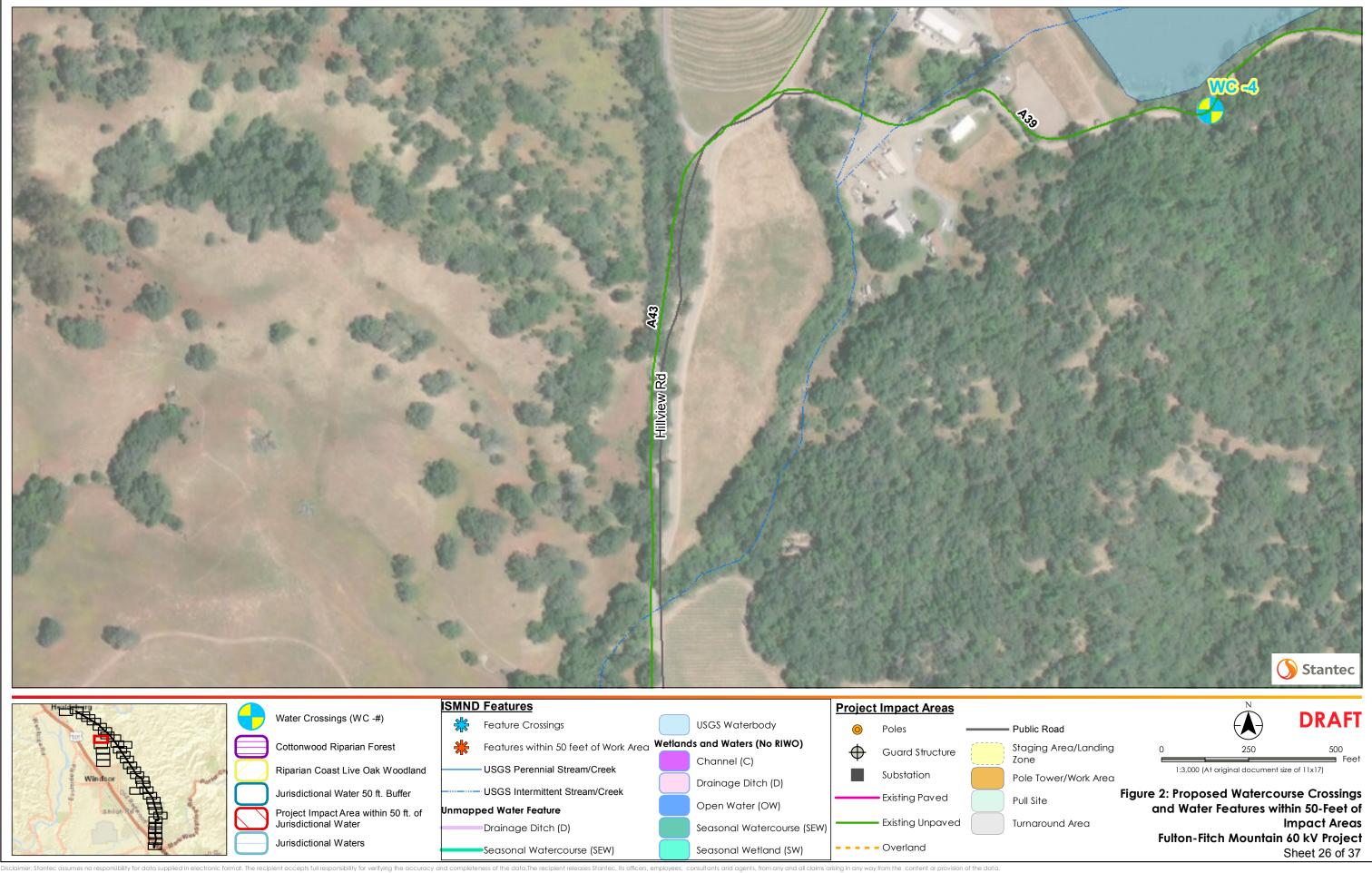


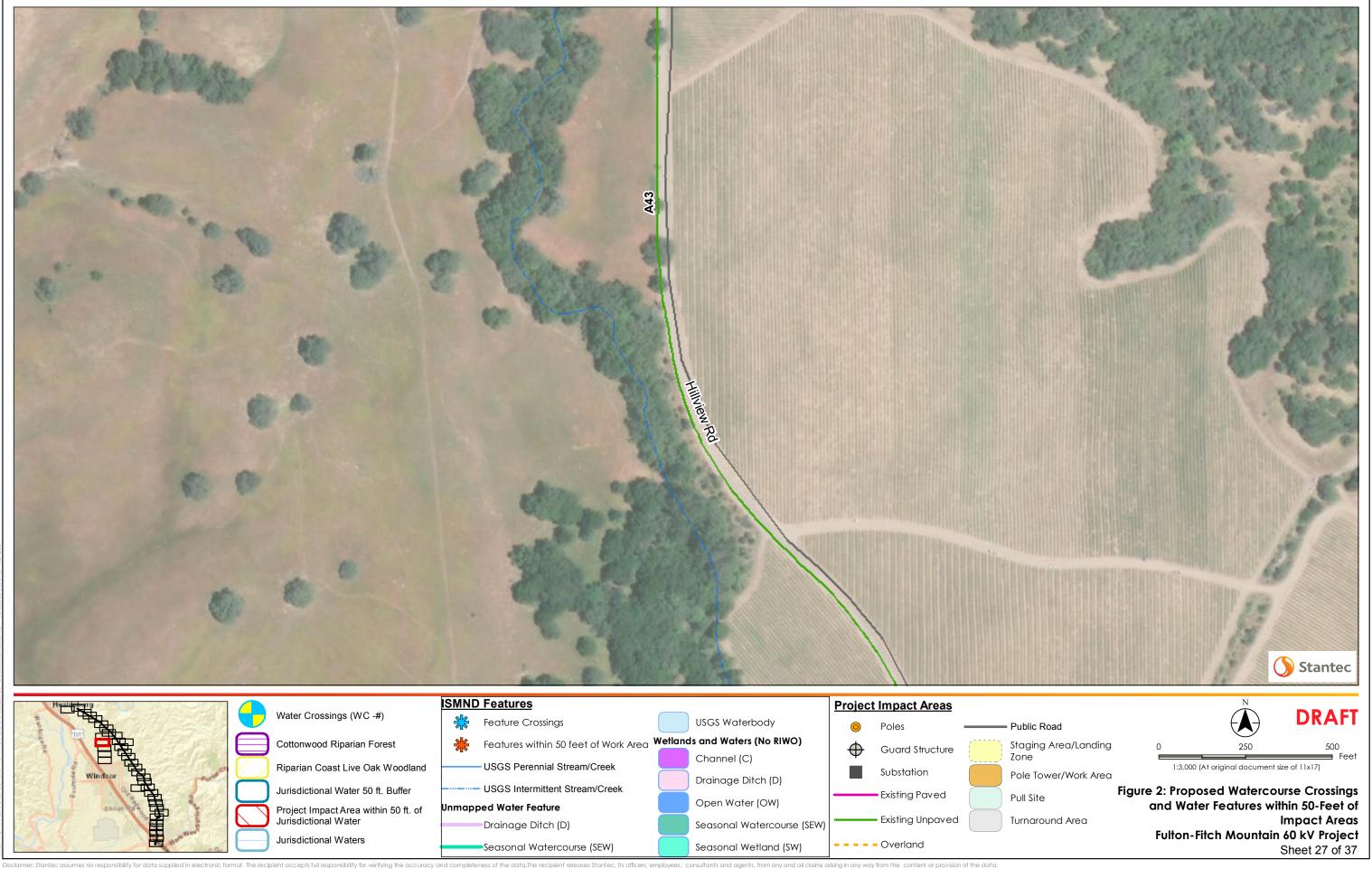


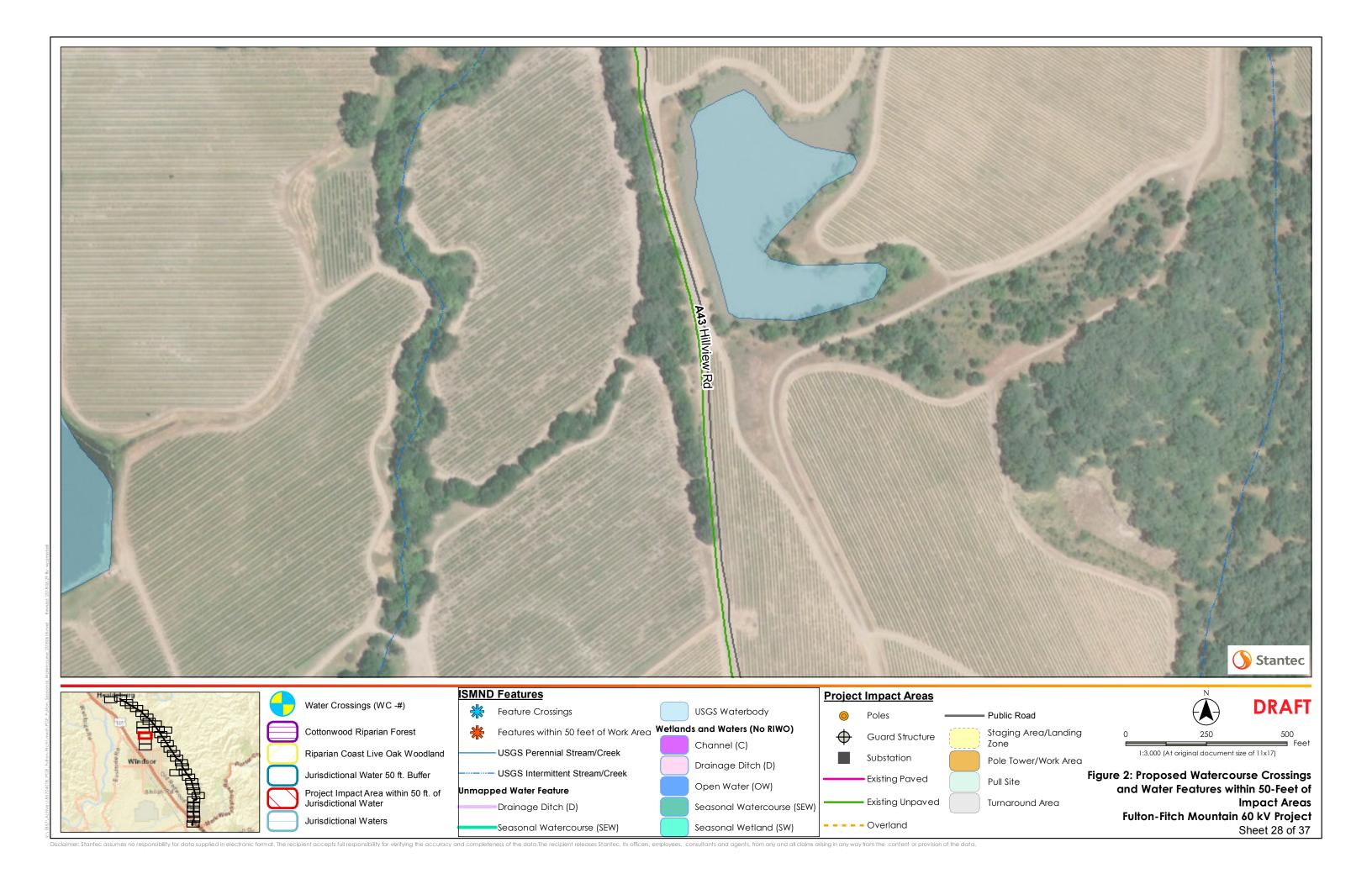


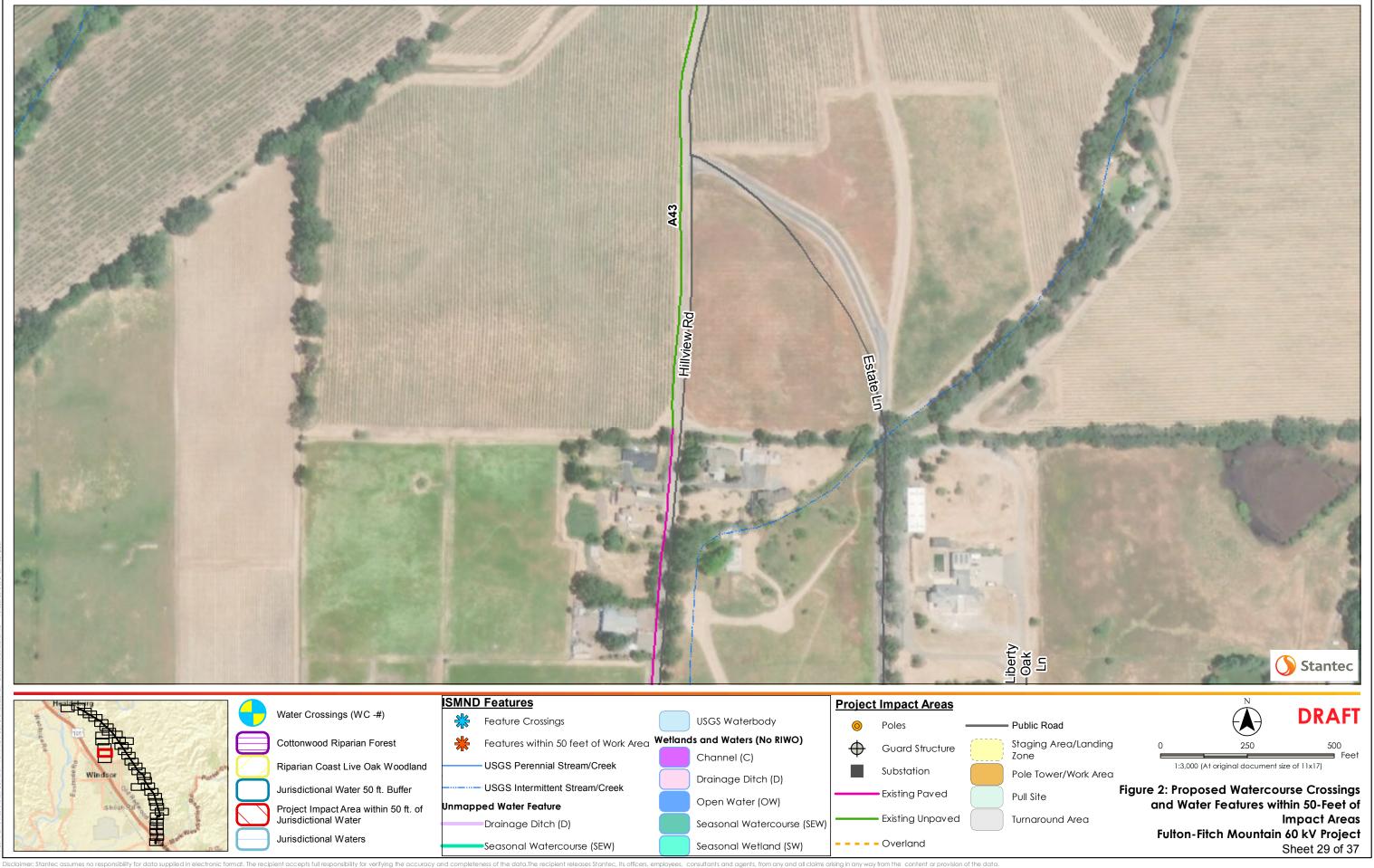


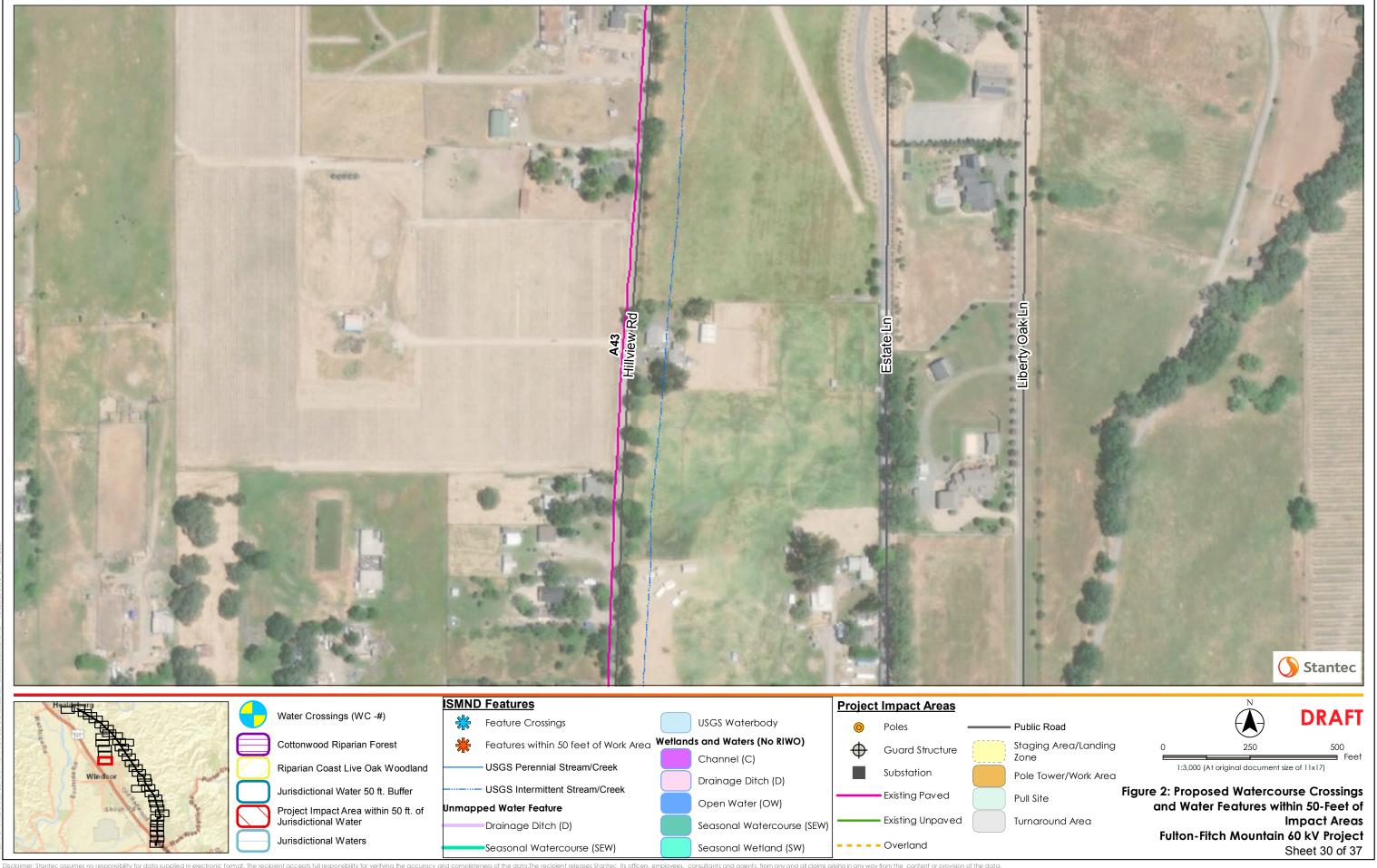


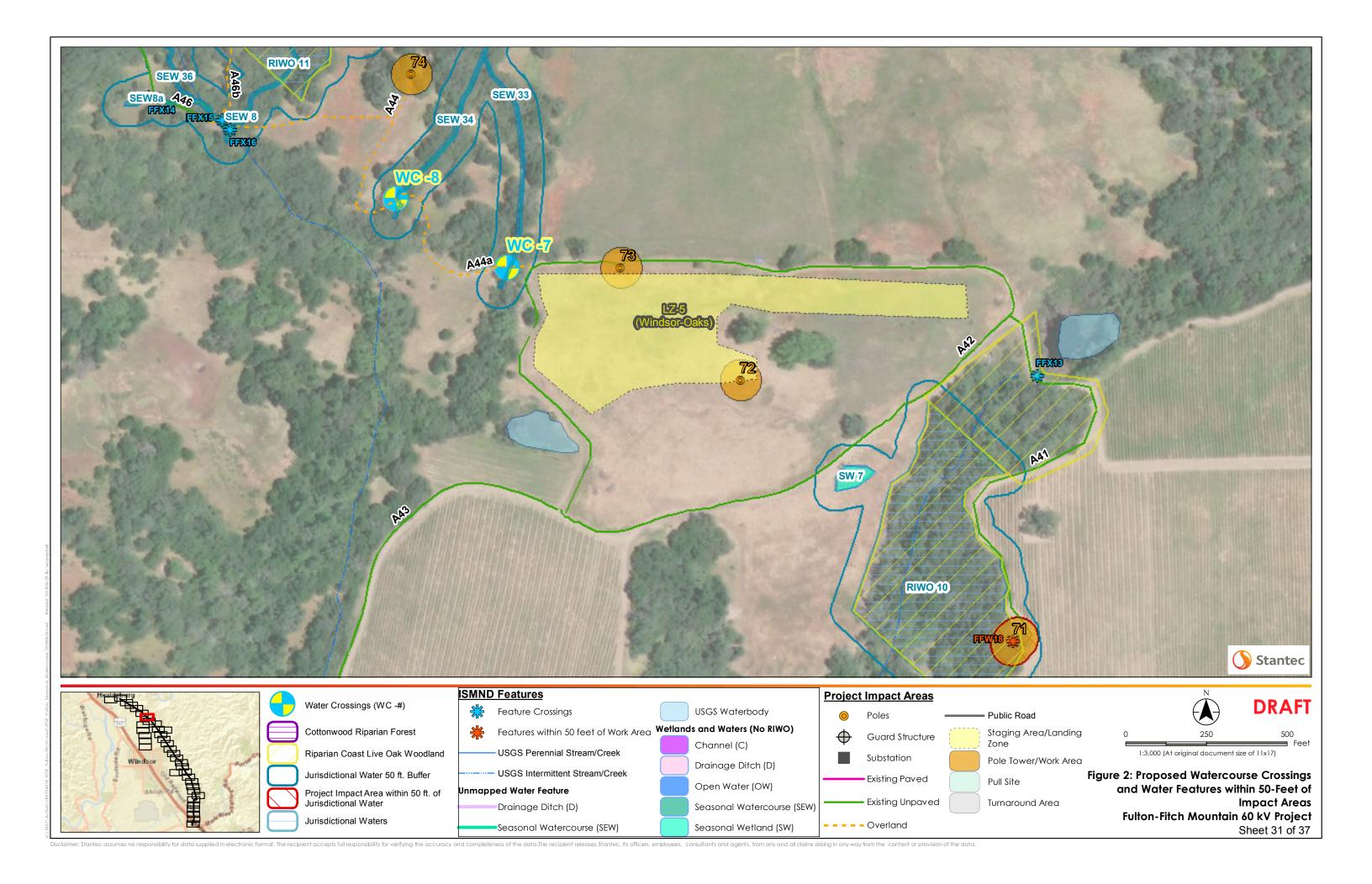


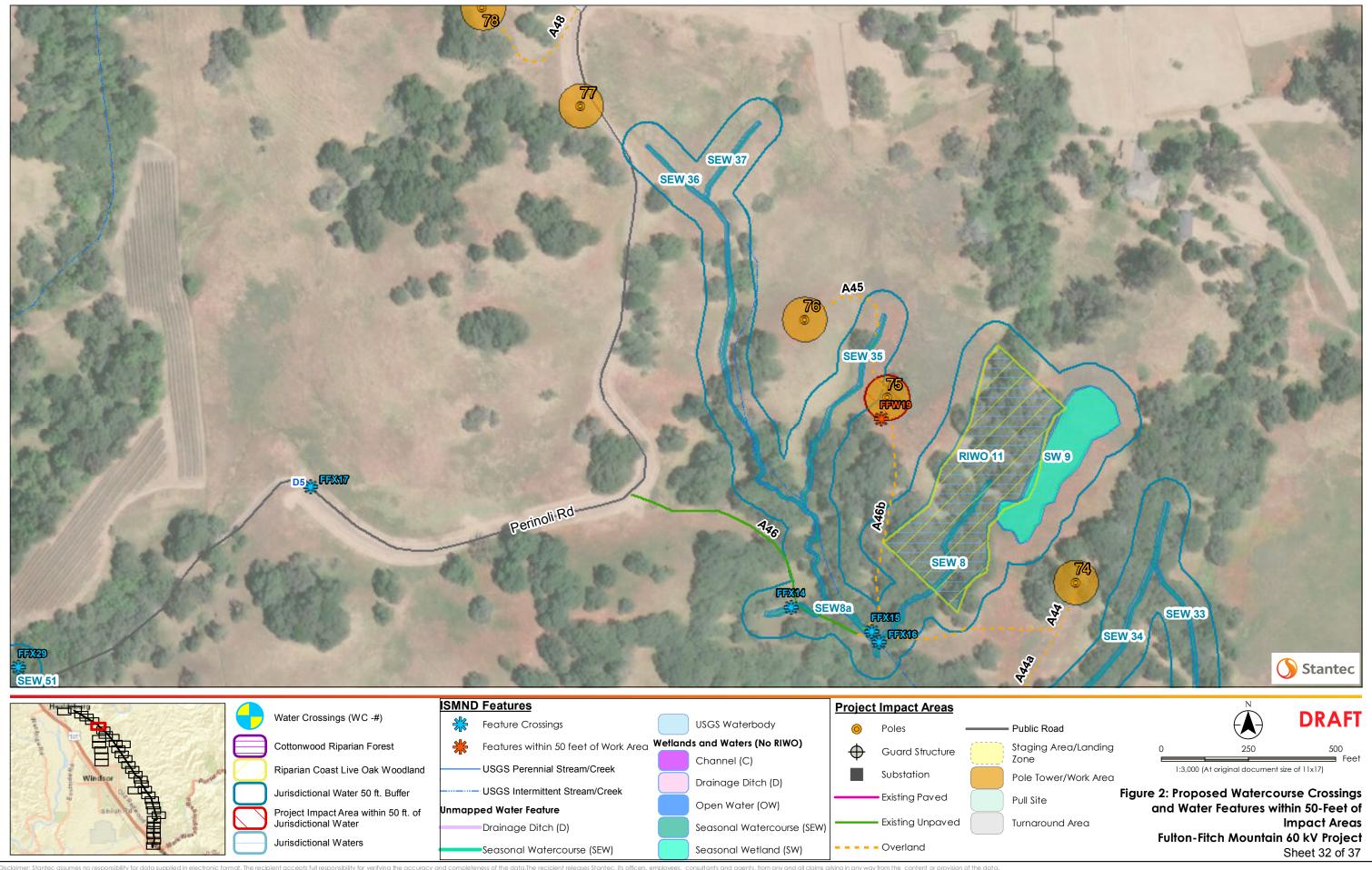


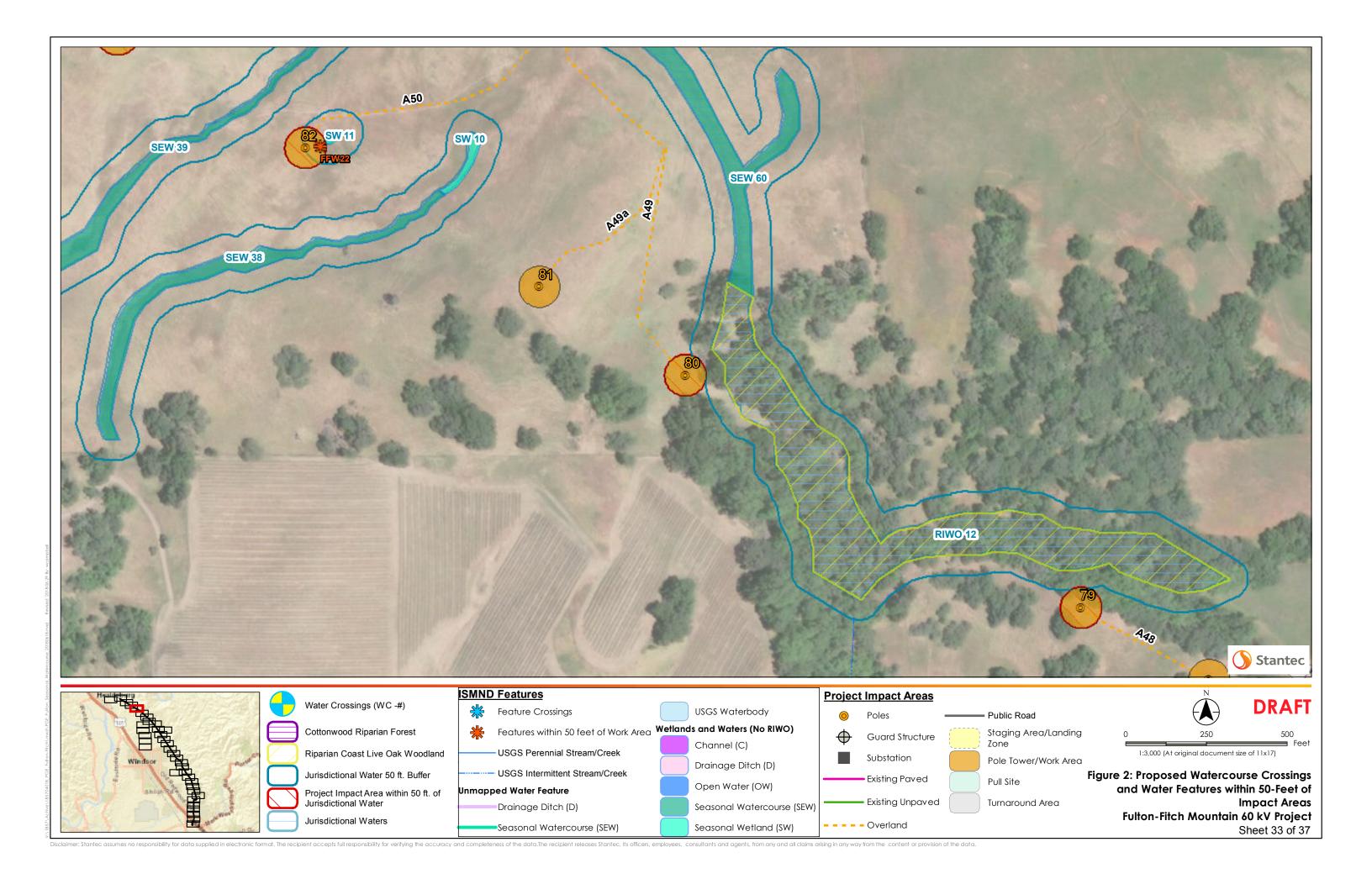


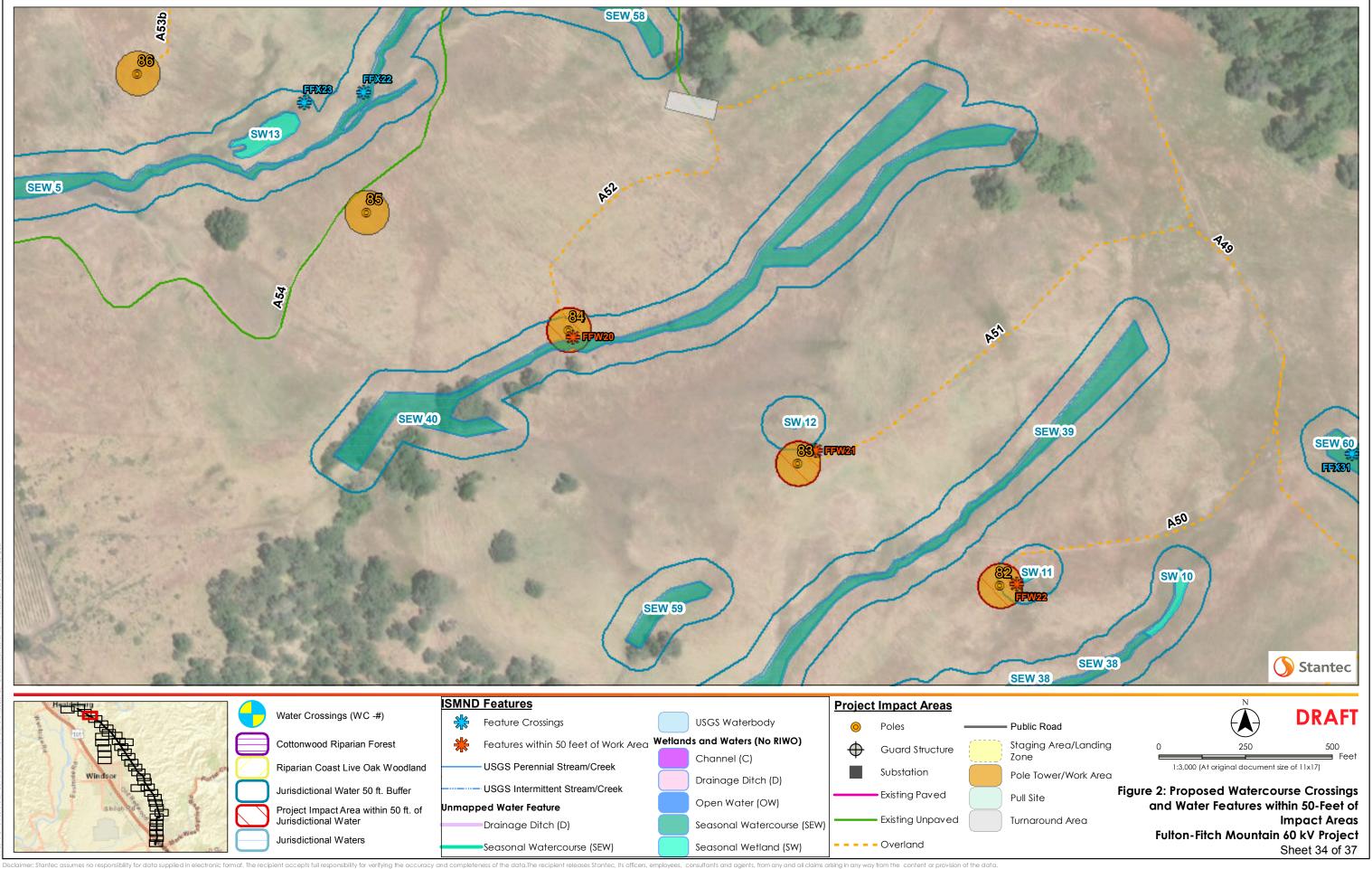


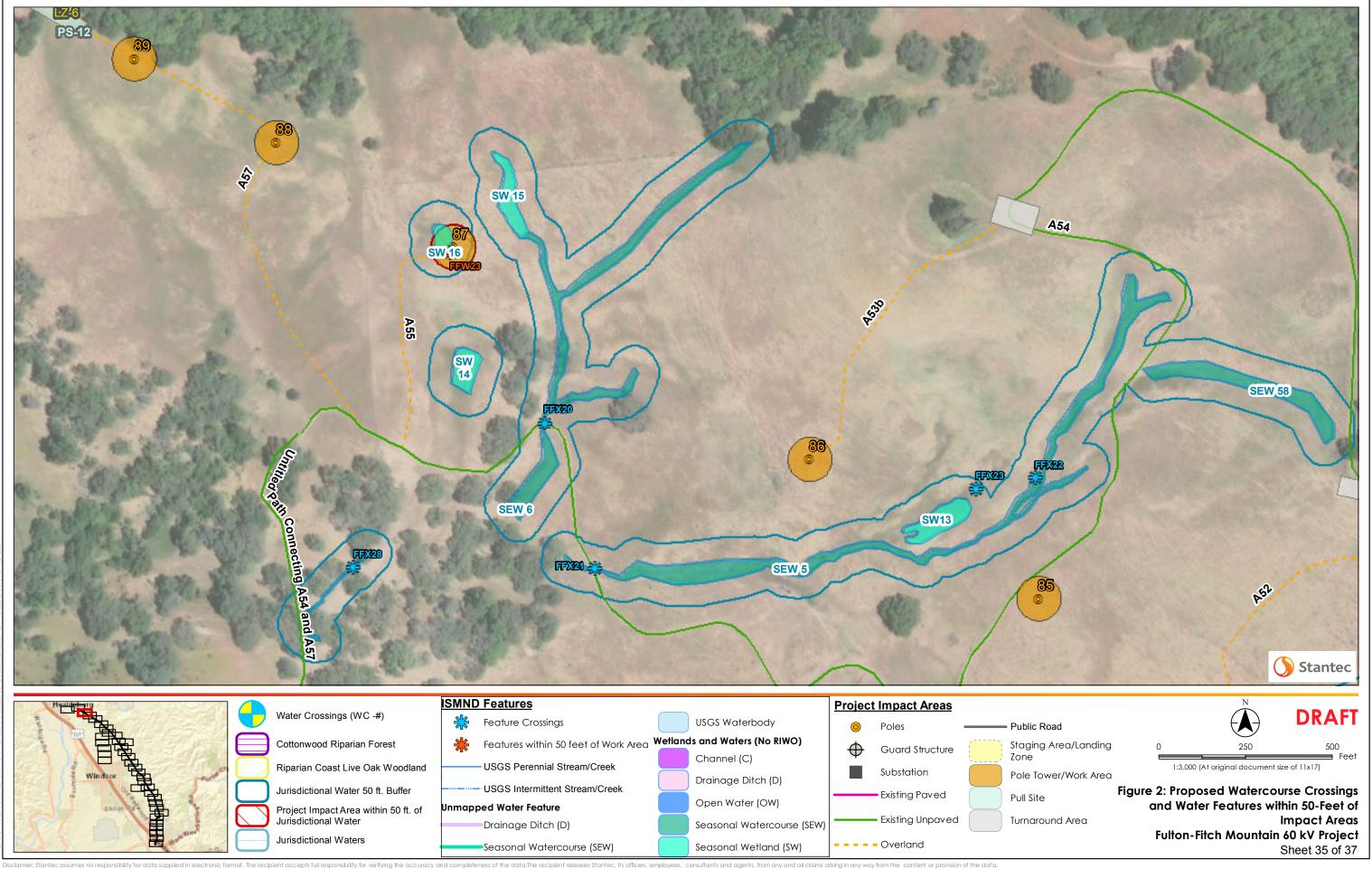


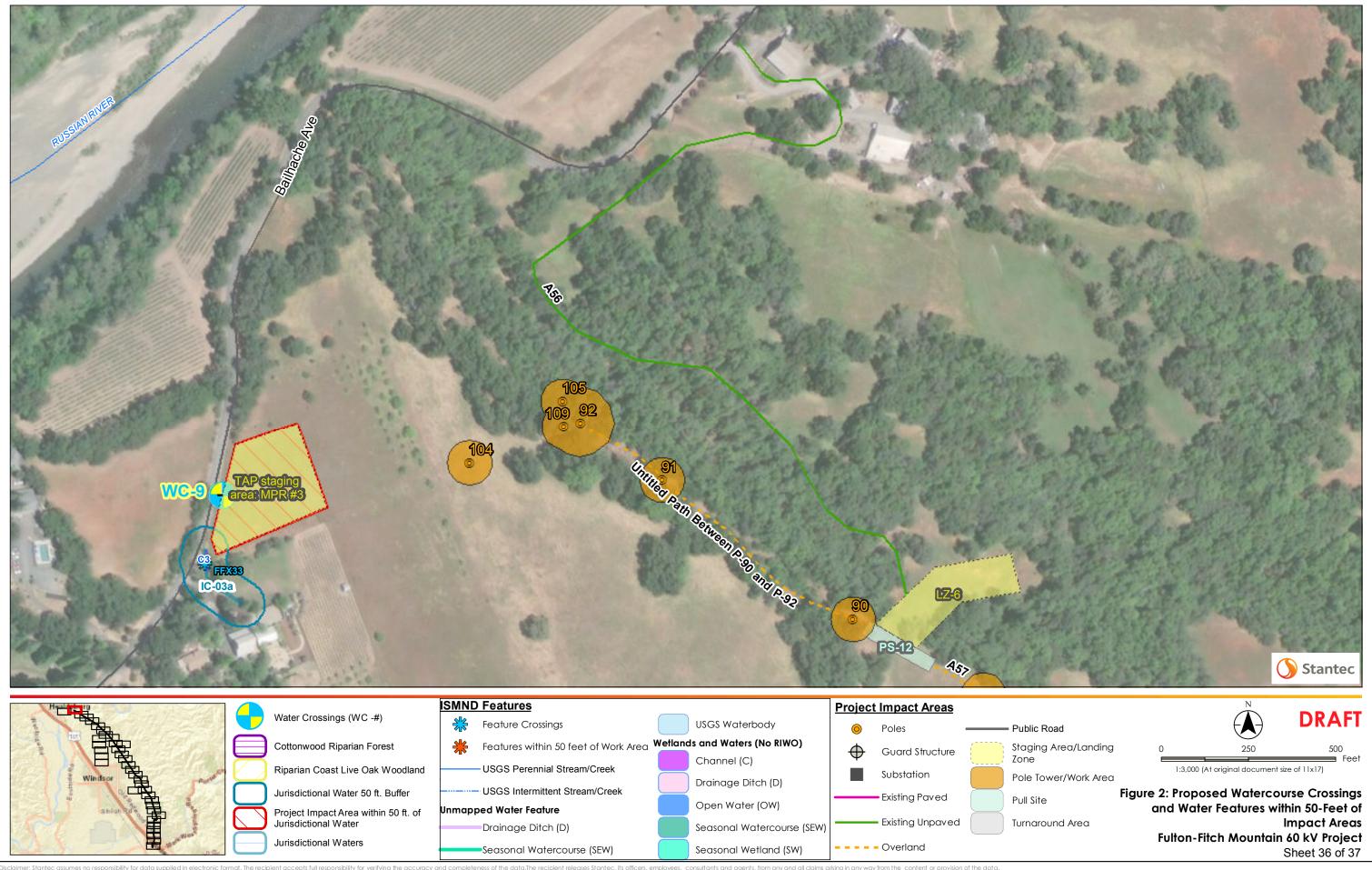
















Photograph 1. FFX1 at SEW44 on Access Road A15.



Photograph 3. FFX3 at SEW 7/C1 on Access Road 31.



Photograph 5. FFX8 at SEW 3 on Access Road 36.



Photograph 2. FFX2 at SW1/MW0-01 on Access Road 31.



Photograph 4. FFX4 at SEW 7/C1 on Access Road 31.



Photograph 6. FFX10 at SEW 3 on Access Road 36.

PG&E Fulton-Fitch Mountain Reconductoring Project Attachment B: Photographs of Preconstruction Trail Conditions -Foothill Regional Park



Photograph 7. FFX11 at SEW 2 on Access Road 35.



Photograph 9. FFX13 at SEW61 on Access Road 41.



Photograph 11. FFX15 at SEW 8a on Access Road 46b.



Photograph 8. FFX12 at SEW 56 on Access Road 39.



Photograph 10. FFX14 at SEW 8a on Access Road 46.



Photograph 12. FFX16 at SEW8A on Access Road 46.

PG&E Fulton-Fitch Mountain Reconductoring Project Attachment B: Photographs of Preconstruction Trail Conditions -Foothill Regional Park Pre-Project Trail Condition Report



Photograph 13. FFX20 at SEW 6 on Access Road 54.



Photograph 15. WC-1 at unnamed seasonal watercourse on new access road to LZ-3.



Photograph 17. WC-3 at D1 on Access Road B-01.



Photograph 14. FFX21 at SEW 5 on Access Road 54.



Photograph 16. WC-2 at unnamed seasonal watercourse on new access road to LZ-3.



Photograph 18. WC-4 at unnamed seasonal watercourse on Access Road 39.

PG&E Fulton-Fitch Mountain Reconductoring Project Attachment B: Photographs of Preconstruction Trail Conditions -Foothill Regional Park Pre-Project Trail Condition Report



Photograph 19. WC-5 at unnamed seasonal watercourse on Access Road 39.



Photograph 21. WC-7 at SEW 33 on Access Road 44a.



Photograph 23. WC-9 at C3 on new access to TAP staging area.



Photograph 20. WC-6 at SEW 32 on Access Road 39.



Photograph 22. WC-8 at SEW 34 on Access Road 44a.

Photograph.

PG&E Fulton-Fitch Mountain Reconductoring Project Attachment B: Photographs of Preconstruction Trail Conditions -Foothill Regional Park