

ATTACHMENT 1A
Round 1 Grant Applications

APPLICATION PACKET CHECKLIST

Please check below to ensure you have a complete application. Once complete, email the following documents, in pdf format with the text "Application for Remediation Grant Program Funding" in the subject line to mrichardson@co.humboldt.ca.us.

- X Signed Application Submission Form
- X Project Description – Summary of the Project, up to 2 pages.
- X Plot Plan
- X Plot Plan Checklist – Attached
- X Cross sections of proposed work including topographic elevations
- X Scope of Work – Detailed Description of Work
- X Schedule for Completion – Identify Milestones
- X Erosion Control Plan and Monitoring Plan
- X Budget – Be as specific as possible – sample attached
- X Project Maps and Figures
- Letter(s) of Support (optional)

APPLICATION FORM - Commercial Cannabis Land Use Ordinance Mitigation and Remediation Fund Program

Project Title: Serendipity Road Improvements Date of Application: October 29, 2021

Applicant Name: Serendipity Associates, Inc. Project APN: 218-091-007

Contact Person Name and Title: Tina Gordon, CEO

Contact Phone: (415) 710-3018 Contact Email: serendipitycollective@gmail.com

Contact Address: P.O. Box 5, Garberville, CA 95542

Amount Requested: \$99,426.00 Total Budget: \$132,049.00

Project Timeline: Start Date: July 1, 2022 End Date: September 1, 2022

Signature of Applicant: _____



Serendipity Road Improvements
Applicant: Serenity Associates, Inc., Tina Gordon
APN 218-091-007

Project Description

The project is located at 671 South Face Road (APN 218-091-007). The commercial cannabis operation consists of approximately 13,600 sf of permitted cultivation.

The field assessment completed by Stillwater Sciences (Erosion Remediation plan dated May 6, 2019), identified several stream crossing sites on the parcel that require upgrading to hydrologically disconnect the road system from the watercourses that drain south into Chamise Creek toward the Eel River. The remediation plan is intended to decrease existing and potential future sediment delivery into these unnamed intermittent and non-fishbearing perennial tributaries.






















The project involves the upgrade of four culverts and decommissioning of one crossing on the property. The project proposes to replace undersized culverts with ones designed to pass 100-year return interval flows, and armor crossing fills. It is critical that culverts are properly sized so that 100-year flows do not exceed the drainage structure capacity, which could lead to erosion of the adjacent outboard edge of the road.

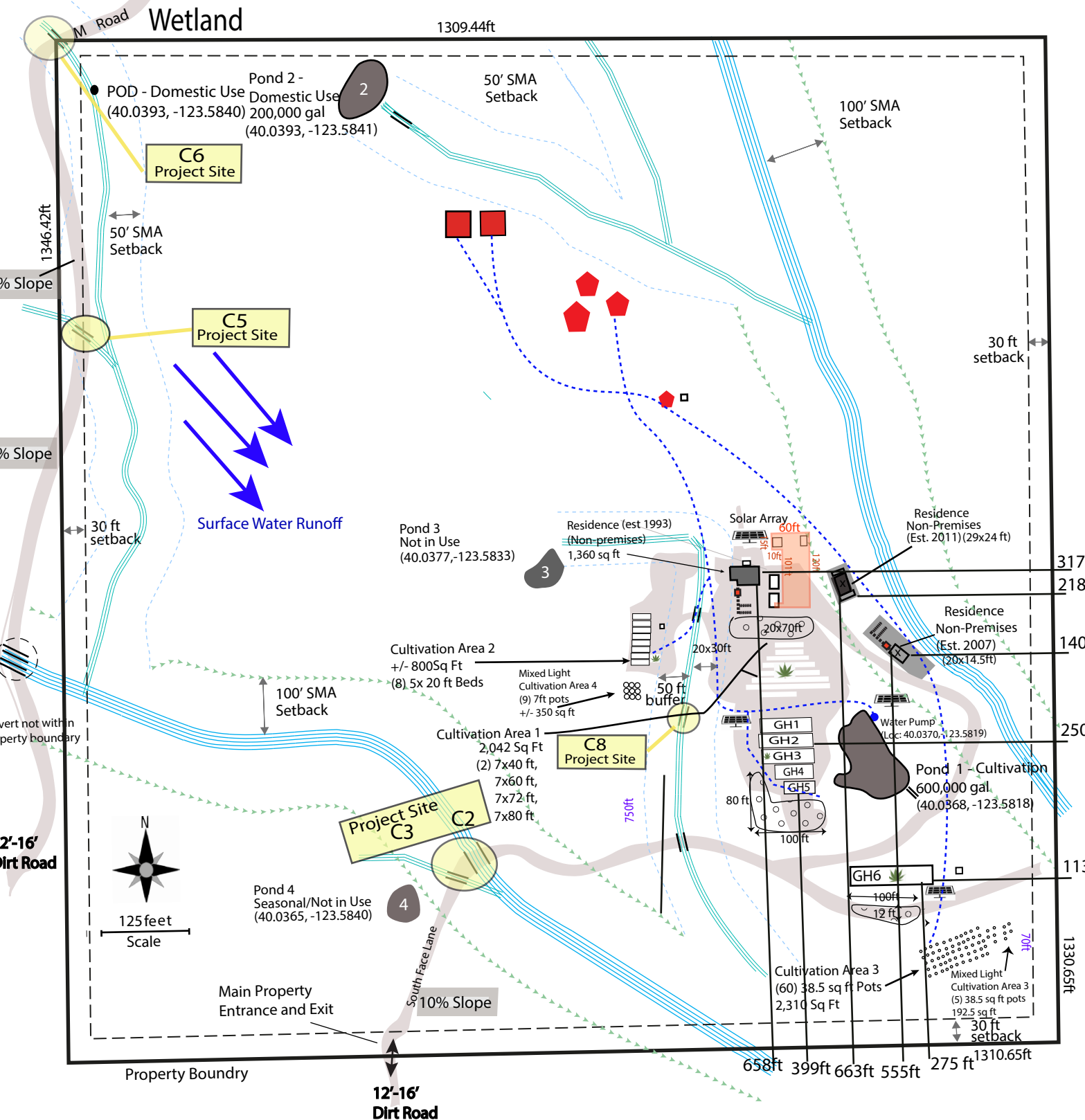
These upgraded watercourse crossings will achieve 100-year flood requirements and reduce sediment deposits into the streams that are connected to the Eel River.

GIS indicates that the parcel is in an area of high slope instability. The parcel is not located in a flood zone, nor is it in earthquake hazard zone. The subject property is surrounded by other rural improved parcels. No impact is anticipated on these surrounding parcels.

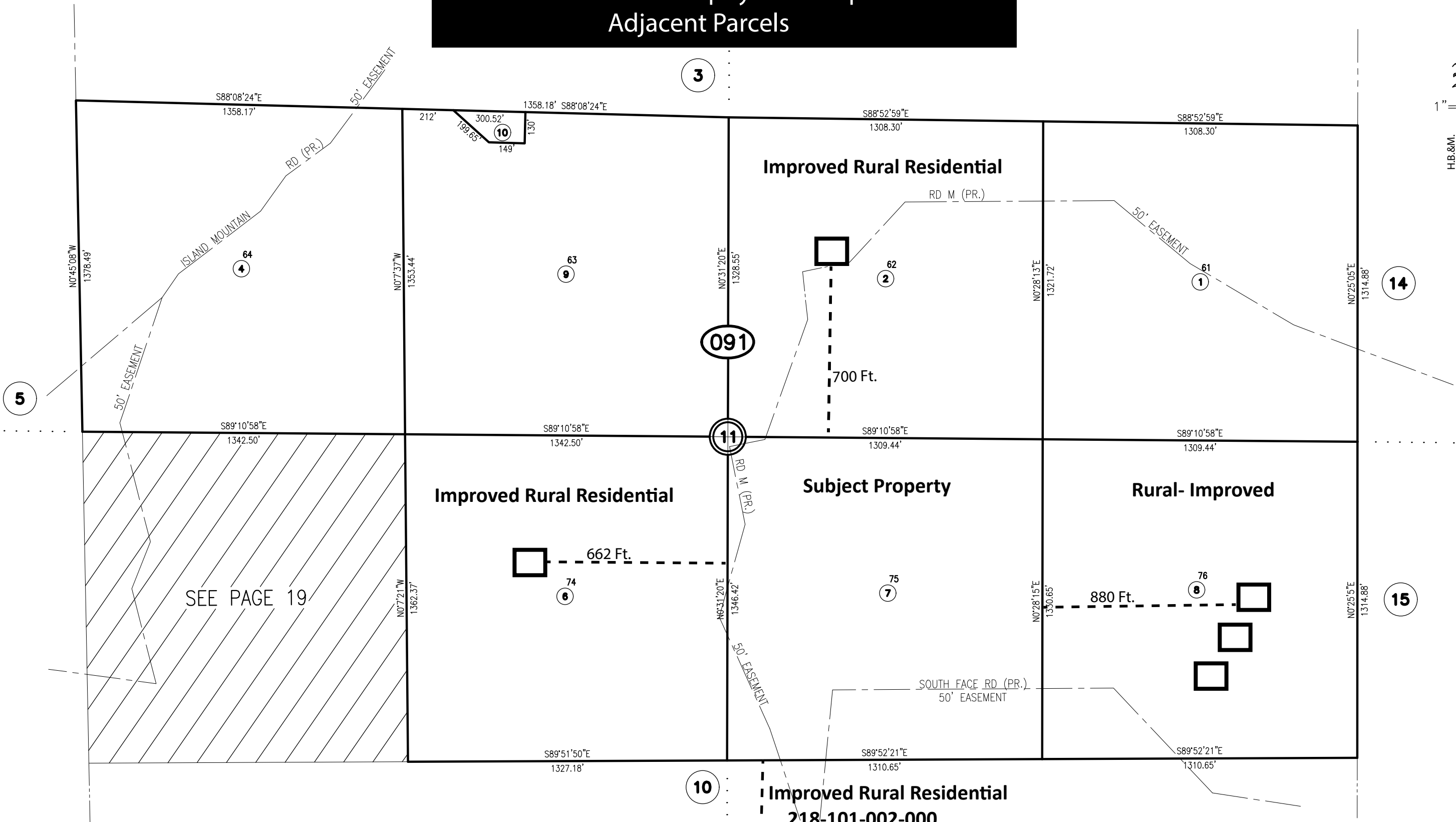
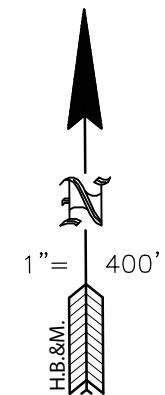
Serendipity Associates Plot Plan - APN: 218-091-007

LEGEND

 Cultivation Area	 Solar	 Gravel Roads, Graded Areas
 Poly Water Storage Tanks	 <P> Proposed Structures	 Class II Watercourse
 Poly Water Bladder Storage	 Ag Structures	 Class III Watercourse
 Pond	 Common Area	 Propagation Area
 Septic System	 Residence	 Irrigation Lines
 Water Pump	 Culverts	 Non-Premises
 100' Setback	 50' Setback	 30' Setback



**Tina Gordon- Serendipity Road Improvement
Adjacent Parcels**



SEE PAGE 19

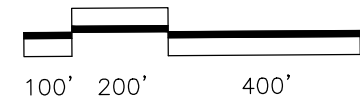
**Improved Rural Residential
218-101-002-000**

ASSESSOR'S PARCEL MAP

1. THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY.
2. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN.
3. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.

RS. BK. 24, SURVEYS PG. 124
PM 58 BK.1 OF PARCEL MAPS, PG 81
(RANCHO PALO VERDE)

NOTE - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles.



PLOT PLAN AND TENTATIVE MAP CHECKLIST

The following information must be shown on your plot plan or tentative map. Please check the box to the left of the items shown on the plot plan or tentative map. If any item is not on your site to your knowledge, write "N/A" next to the box. Plot plans shall be drawn on a minimum size sheet of 8-1/2" x 11", and tentative subdivision maps on a minimum size sheet of 18" x 26". **Note: This Checklist must be completed by the applicant and submitted with your application.**

Applicant's Name APN -

FOR ALL PROJECTS	
<input type="checkbox"/>	1. Name of applicant(s)
<input type="checkbox"/>	2. Location or vicinity map (on or attached to the plot plan)
<input type="checkbox"/>	3. The subject parcel (show entire parcel with dimensions)
<input type="checkbox"/>	4. Date, north arrow and scale
<input type="checkbox"/>	5. Name, County road numbers, and width of all existing and proposed access roadways adjacent to or within the subject parcel (indicate width of traveled way, grade (in % slope), and surface)
<input type="checkbox"/>	6. Existing <u>and</u> proposed improvements (label as "existing" and "proposed" with dimensions and distance to nearest two (2) property lines)
	<input type="checkbox"/> a. Structures and buildings (include floor area, height and proposed use)
	<input type="checkbox"/> b. Driveways and turnaround areas (indicate width, grade (in % slope) and surface)
<input type="checkbox"/> A	<input type="checkbox"/> c. Utility lines (electric, gas, telephone, sewer, water, and cable TV)
<input type="checkbox"/>	<input type="checkbox"/> d. Septic tanks and leachfields (label primary/reserve areas and test holes)
<input type="checkbox"/> A	<input type="checkbox"/> e. Wells
<input type="checkbox"/> A	<input type="checkbox"/> f. Parking and loading areas (show individual parking spaces, including handicapped parking and ramps)
<input type="checkbox"/> A	<input type="checkbox"/> g. Storm drains, curbs and gutters
<input type="checkbox"/> A	<input type="checkbox"/> h. Emergency water storage tanks and fire hydrants
<input type="checkbox"/> A	<input type="checkbox"/> i. Landscaped areas (include proposed exterior lighting)
<input type="checkbox"/> A	<input type="checkbox"/> j. Major vegetation (identify mature trees (12" dbh or larger) to be removed)
<input type="checkbox"/> A	<input type="checkbox"/> k. Diked areas
<input type="checkbox"/> A	<input type="checkbox"/> l. Proposed grading and fill (estimate volume)
<input type="checkbox"/> A	<input type="checkbox"/> m. Signs (indicate size, illuminated, and design (e.g., monument, pylon, etc.))
<input type="checkbox"/> A	<input type="checkbox"/> n. Other - specify _____
<input type="checkbox"/>	7. Direction of surface water runoff
<input type="checkbox"/>	8. Location and width of all existing and proposed easements of record
<input type="checkbox"/>	9. Hazardous areas (indicate on map if on the project site <u>or</u> within 400 feet of the project site):
<input type="checkbox"/> A	<input type="checkbox"/> a. Areas subject to inundation or flooding
<input type="checkbox"/>	<input type="checkbox"/> b. Steep or unstable slopes
<input type="checkbox"/> A	<input type="checkbox"/> c. Expansive (clay) soils
<input type="checkbox"/> A	<input type="checkbox"/> d. Earthquake faults
<input type="checkbox"/> A	<input type="checkbox"/> e. Hazardous waste or substance sites
<input type="checkbox"/> A	<input type="checkbox"/> f. Other - specify _____
<input type="checkbox"/>	10. Sensitive habitat areas (indicate on map if on project site <u>or</u> within 400 feet of the project site):
	<input type="checkbox"/> a. Creeks, rivers, sloughs and other drainage courses
	<input type="checkbox"/> b. Lakes, ponds, marshes, or "wet" meadows
<input type="checkbox"/> A	<input type="checkbox"/> c. Beaches
<input type="checkbox"/> A	<input type="checkbox"/> d. Sand dunes
<input type="checkbox"/> A	<input type="checkbox"/> e. Other - specify _____
<input type="checkbox"/>	11. Historical buildings or known archaeological or paleontological resources
<input type="checkbox"/>	12. Land use and buildings on adjacent parcels, and approximate distances to closest property lines
FOR LOT LINE ADJUSTMENT PLOT PLANS ONLY	
<input type="checkbox"/>	13. Proposed new lines and lines to be eliminated (show lines to be eliminated as dashed)
<input type="checkbox"/>	14. Areas (in square footage or acreage) of the initial and resulting parcels

FOR TENTATIVE SUBDIVISION MAPS ONLY	
<input type="checkbox"/>	16. Approximate dimensions and areas of all proposed lots
<input type="checkbox"/>	17. A statement that "All easements of record are shown on the tentative map and will appear on the recorded subdivision map"
<input type="checkbox"/>	18. Contour lines (at _____ intervals)
<input type="checkbox"/>	19. For major subdivisions (5 or more parcels): proposed drainage improvements, details of any grading to be performed, approximate radii of all roadway curves, areas for public use, and typical sections of all streets, highways, ways and alleys
<input type="checkbox"/>	20. Names and assessor's parcel numbers of all contiguous ownerships

NOTE: THE SUBMITTAL OF INCOMPLETE OR ILLEGIBLE PLOT PLANS OR TENTATIVE MAPS WILL CAUSE DELAYS IN THE PROCESSING OF YOUR APPLICATION

Mitigation and Remediation Fund
Serendipity Road Improvements
Applicant: Serendipity Associates, Inc. Tina Gordon
APN 218-091-007

Scope of Work

The project will be completed by Lewis Land Development, Contractors State License Board #1012107. The project will be completed during the dry season between June 1 and October 15, 2022. The project bid is good for sixty days from October 15, 2021. Culvert prices have been increasing approximately 5-10% on a regular basis.

Crossing #2: The crossing is located on a cobble/gravel-bedded Class II watercourse that flows through a 60-ft long, 36 inch corrugated plastic pipe that is in good condition. The pipe is set nearly at grade (3 ft drop to channel) and has an armored inlet and unarmored outlet. There are approximately 500 cubic yards of fill in the crossing road prism. The stream channel is 5 feet wide. The channel immediately upstream of the culvert is lined with concrete. The existing pipe needs to be replaced with a 60 foot long, 72 inch corrugated metal pipe that is set at grade. (See attached CAD plan) The approaches to the crossing (40 feet on each side) shall be rocked.

Crossing #3: The crossing is located on a cobble/gravel-bedded Class III watercourse that also receives overflow water from a pond on the property. The culvert at this site is a 20 foot long, 12 inch corrugated metal pipe with a shotgun outlet and has failed due to excessive rust. The pipe has an unarmored inlet and outlet. There are approximately 13 cubic yards of fill in the crossing road prism. The stream channel is 1.5 feet wide. The pipe will be replaced with a 30 foot long 24 inch corrugated metal pipe, set at grade and will have armoring at the inlet and outlet according to general culvert upgrade specifications (Attached).

Crossing #5: The crossing is located on a gravel-bedded Class III watercourse. The culvert is a 40 foot long, 18 inch corrugated metal pipe on a Class III watercourse that has failed due to having a crushed inlet and a horizontally-angled downspout. The horizontal alignment of the downspout has resulted in erosion of road fill. It has an unarmored inlet and outlet and is set at grade. There are approximately 130 cubic yards of fill in the crossing road prism. The channel upstream of the corrugated metal pipe is approximately 2 feet wide.

The existing corrugated metal pipe needs to be replaced with a 50 foot long, 36 inch corrugated metal pipe that is set at grade, aligned to the channel, and have the inlet and outlet armored. The approaches to the crossing shall be rocked according to general culvert upgrade specifications (Attached).

Crossing #6: This crossing is located on a cobble/gravel-bedded Class II watercourse. The culvert is a 30 foot long, 36 inch corrugated metal pipe in fair condition. The pipe has a shotgun outlet that is sitting above two previously failed culverts. There is approximately 180 cubic yards

of fill in the crossing road prism. There is erosion occurring along the near-vertical right (looking downstream) bank. The crossing is located on a steep segment of road and has significant diversion potential. The channel upstream of the pipe is approximately 5 feet wide.

It is recommended that a 60 foot long, 60 inch corrugated metal pipe replace the existing one. The pipe should be set at grade and have the inlet and outlet armored. The uphill approach to the crossing shall be rocked and outsloped to drain onto the hillslope. The road at this location is too steep for installation of a critical dip to eliminate the diversion potential. Therefore, the road shall be rocked (70 feet on each side) such that there is a 1-2 percent outslope, which will allow for any diverted water to sheet off into the channel. The outboard berm on the downhill side of the crossing will be removed and the slope below the road will be covered with 1 to 2 foot rock to minimize erosion. (See attached CAD plan)

Crossing #8: Decommission 18-inch culvert. Each side of the decommissioned crossing will be sloped back to a 2:1 (horizontal: vertical) slope, channel stabilized with rock, and revegetated with the native vegetation that are located in the immediate vicinity.

Serendipity Road Improvements
Applicant: Serendipity Associates, Inc., Tina Gordon
APN 218-091-007
Schedule for Completion

Milestone	Start Date	End Date
Detailed Project Scoping	March 1, 2022	March 30, 2022
Bidding and Contracting	April 1, 2022	April 30, 2022
Project Ground-Breaking	July 1, 2022	
Project Completion		September 1, 2022
Monitoring	July 1, 2022	Ongoing

Five-Year Erosion Control Plan

Project Management

Before and during the project best practices will be applied to ensure minimal disturbance to the waterway and local habitat.

- Work will be completed prior to the start of any rain that causes overland flow across or along the disturbed surface.
- Within 100 feet of a watercourse or lake, the traveled surface of roads will be treated to prevent waterborne transport of sediment and concentration of runoff that results from operations.
- The treatment for disturbed areas within 100 feet of a watercourse including (1) areas exceeding 100 contiguous square feet where operations have exposed bare soil, (2) road cut banks and fills, and (3) any other area of disturbed soil that threatens to discharge sediment into waters in amounts that will negatively affect the quality and beneficial uses of water, shall be grass seeded and mulched with straw.
 - Grass seed shall be applied at a rate exceeding 100 pounds per acre.
 - Straw mulch shall be applied in amounts sufficient to provide at least 2-4 inch depth of straw with minimum 90% coverage.
 - Slash may be substituted for straw mulch provided the depth, texture, and ground contact are equivalent to at least 2-4 inches of straw mulch.
 - Any treated area that has been subject to reuse or has less than 90% surface cover shall be treated again prior to the end of operations.
- Care will be taken not to unnecessarily disturb the native channel outside of the identified areas.
- Fill to be permanently removed will be stored in designated locations with no risk of sediment delivery.
- All disturbed areas where sediment delivery from surface erosion processes is feasible will be seeded and mulched to reduce surface erosion and transport processes.
- All disturbance associated with this project will be limited to the road and immediately adjacent channel reaches as necessary to improve road drainage, stormproof the crossings, and prevent sediment delivery to watercourses.
- Any spoils generated during construction will be used for road treatments, such as shaping, or stored in a stable location and mulched to prevent surface erosion.
- The stream crossing will be treated according to standards provided in the “Handbook for Forest, Ranch and Rural Roads” (Weaver, Weppener and Hagans, 2015) and the California Salmonid Stream Habitat Manual, Part X (Weaver, Hagans and Weppner, 2006).

Roads

- Sidecast or fill material extending more than 20 feet in slope distance from the outside edge of a roadbed, which has access to a watercourse or lake, shall be treated with slope stabilization measures.

- All roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following operations and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within 100 feet of a watercourse, or (2) any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning or a flash flood watch.

Streamside Management Area

- Within 100 feet of a watercourse, where the undisturbed natural ground cover cannot effectively protect beneficial uses of water from sediment introduction, the ground shall be treated with slope stabilization measures and timed as above.
- Except for culvert repairs and maintenance, no driving or operating of vehicles or equipment will occur within the riparian setbacks or within waters of the state unless authorized.

Maintenance

- Work will only occur during the period of June 15 through October 15 (or first significant rainfall) to limit and avoid impacts to aquatic habitat and salmonids.
- Vegetation will only be removed from sites where it is growing on anthropogenically placed fill material, where erosion is likely to deliver to active watercourses, or where necessary for the implementation of effective storm-proofing treatments.
- All disturbed areas capable of delivering sediment to a watercourse will be seeded with barley or wheat based erosion control seed not containing Annual or Perennial Ryegrass and mulched with weed free straw at a rate no less than 50 lb/acre of seed and 4,000 lb/acre of straw.

Monitoring

To avoid risk of future stream diversions and erosion, monitoring will be implemented to reduce the risk of stream crossing failures caused by excessive flow, culvert plugging, overtopping, washout and stream diversion.

- Regular, periodic, and storm inspections and maintenance, including removal of debris.
- Ongoing monitoring for proper drainage during the rainy season.
- Installation of debris barriers.
- Monitor culverts for rusting, leaking, separated or other signs of impending failure.
- Look for evidence of plugging and overtopping, such as depositional terraces or a delta of sediment upstream of the pipe inlet.
- Look for ponding, damage to inlets, including crushed or ripped inlets.
- Monitor crossing for slope failure from one or both sides of the channel.

Serendipity Road Improvements
 Applicant: Serendipity Associates, Inc., Tina Gordon
 APN 218-091-007
 Project Budget

Budget Item	Grant	Other Funds
Permit Fees		
401 Certification	\$2,066.00	
LSAA		\$12,623.00 Serendipity Associates
Consultant and Professional Fees	\$14,500.00	\$20,000.00 Serendipity Associates
Materials	\$34,800.00	
Equipment	\$38,060.00	
Labor	\$10,000.00	
Total	\$99,426.00	\$32,623.00
Total Requested	\$99,426.00	

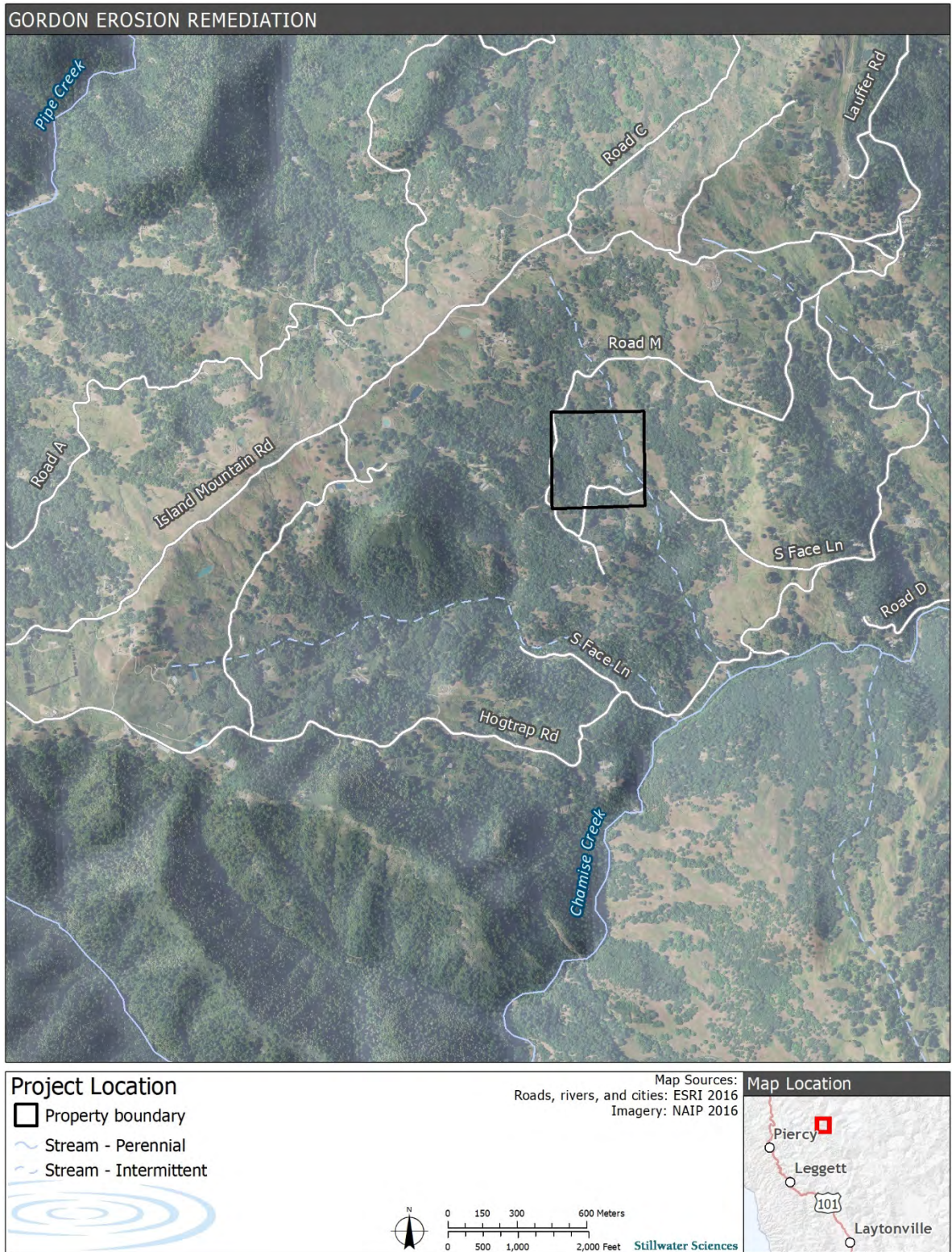


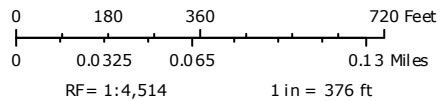
Figure 1. Project location map for APN 218-091-007.



Gordon Topo Map

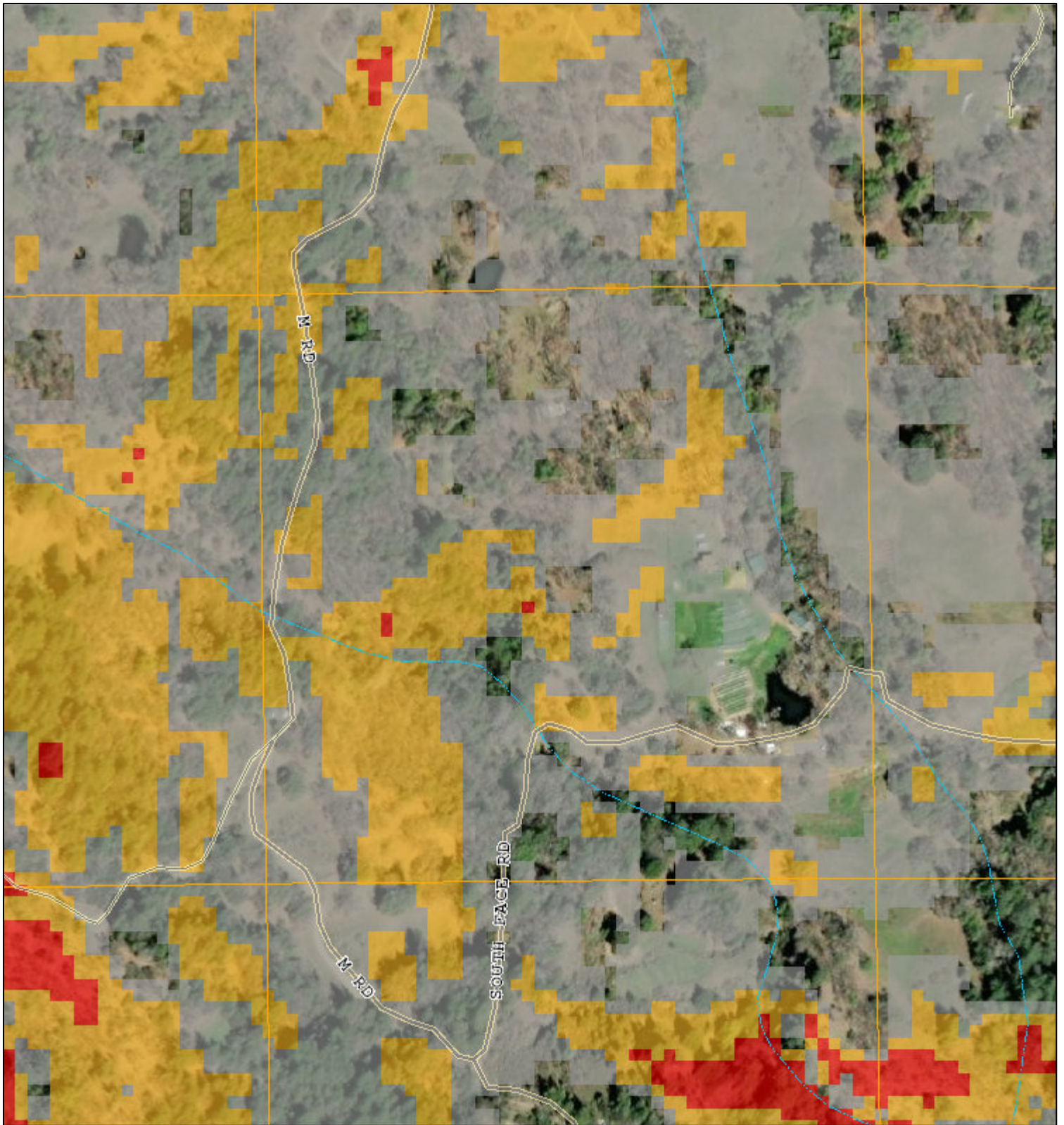
Humboldt County Planning and Building Department

- | | | | |
|---------------------------|---------------------------|----------------------------------|------------------|
| Highways and Roads | — Private or Unclassified | — Subsurface | — Major Interval |
| — Principal Arterials | — Major River or Stream | - - - City Boundary | |
| - - - Minor Arterials | Blue Line Streams | — Counties | |
| — Major Collectors | — Perennial 1-3 | — Parcels (no APN labels) | |
| — Minor Collectors | — Perennial >4 | Topographic Contours 40ft | |
| — Local Roads | — Intermittent | — Minor Interval | |



Printed: October 11, 2021 Web AppBuilder 2.0 for ArcGIS
 Map Disclaimer:
 While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.
 Source: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Humboldt County GIS, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, FRAP, FEMA, USGS, ESA, CGS

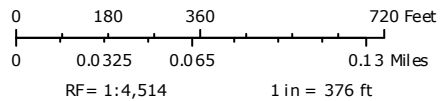
Figure □ □ □ □ □ M □ □



Gordon Slope Map

Humboldt County Planning and Building Department

- | | | |
|---------------------------|---------------------------|---------------------------|
| Highways and Roads | — Private or Unclassified | — Intermittent |
| Principal Arterials | — Major River or Stream | — Subsurface |
| Minor Arterials | Blue Line Streams | — City Boundary |
| Major Collectors | — Perennial 1-3 | — Counties |
| Minor Collectors | — Perennial >4 | — Parcels (no APN labels) |
| Local Roads | | — Awareness Floodplain |



Printed: October 11, 2021

Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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Source: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Humboldt County GIS, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, FRAP, FEMA, USGS, ESA, CGS

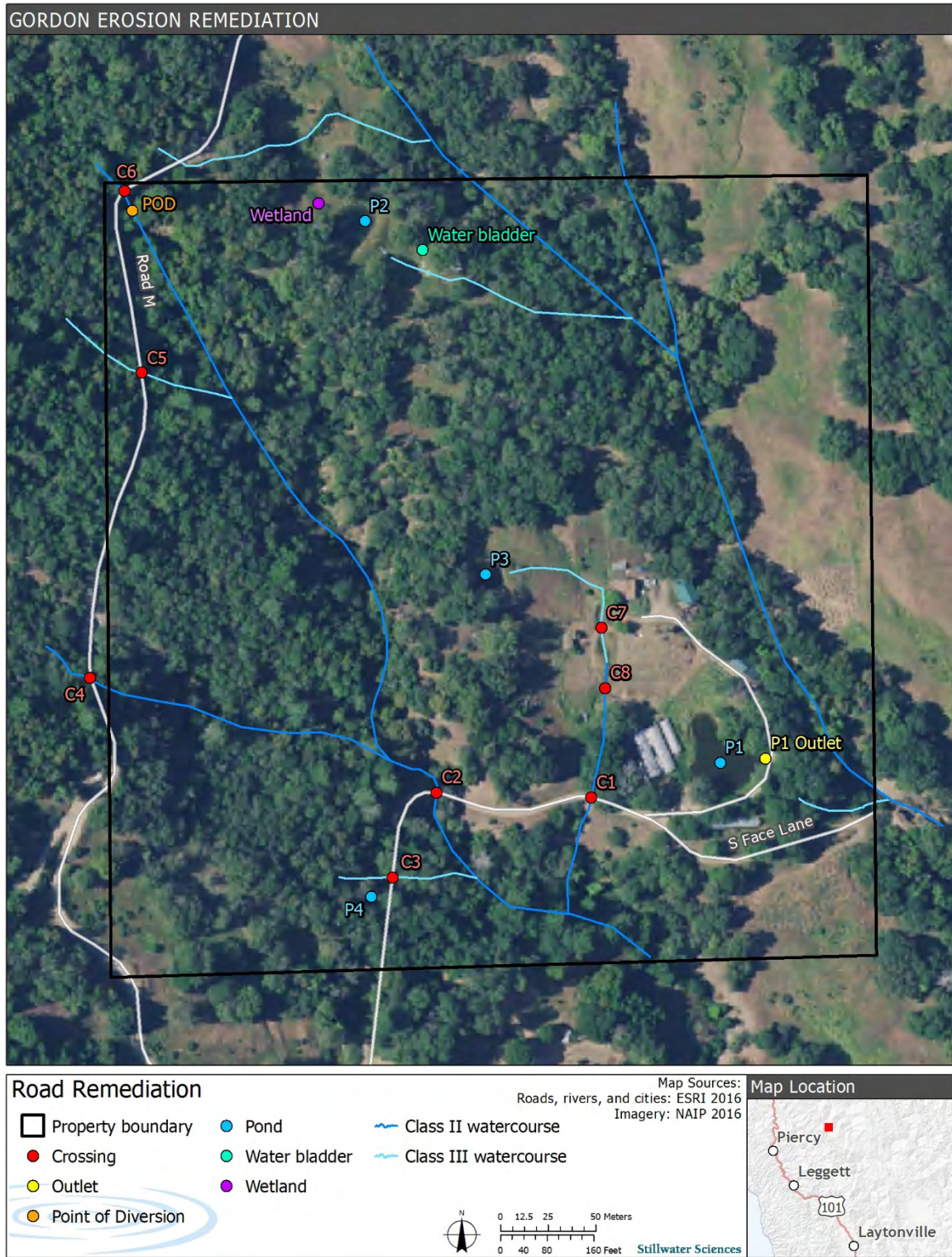


Figure 2. Parcel and road remediation locations.

Figure 000re00 0r000g0M00



Photo A-3. C2 inlet.



Photo A-4. C2 outlet.



Photo A-5. C3 inlet.



Photo A-6. C3 outlet.



Photo A-7. C5 inlet.



Photo A-8. C5 outlet.



Photo A-9. C6 inlet.



Photo A-10. C6 outlet.



Photo A-13. C8 inlet.

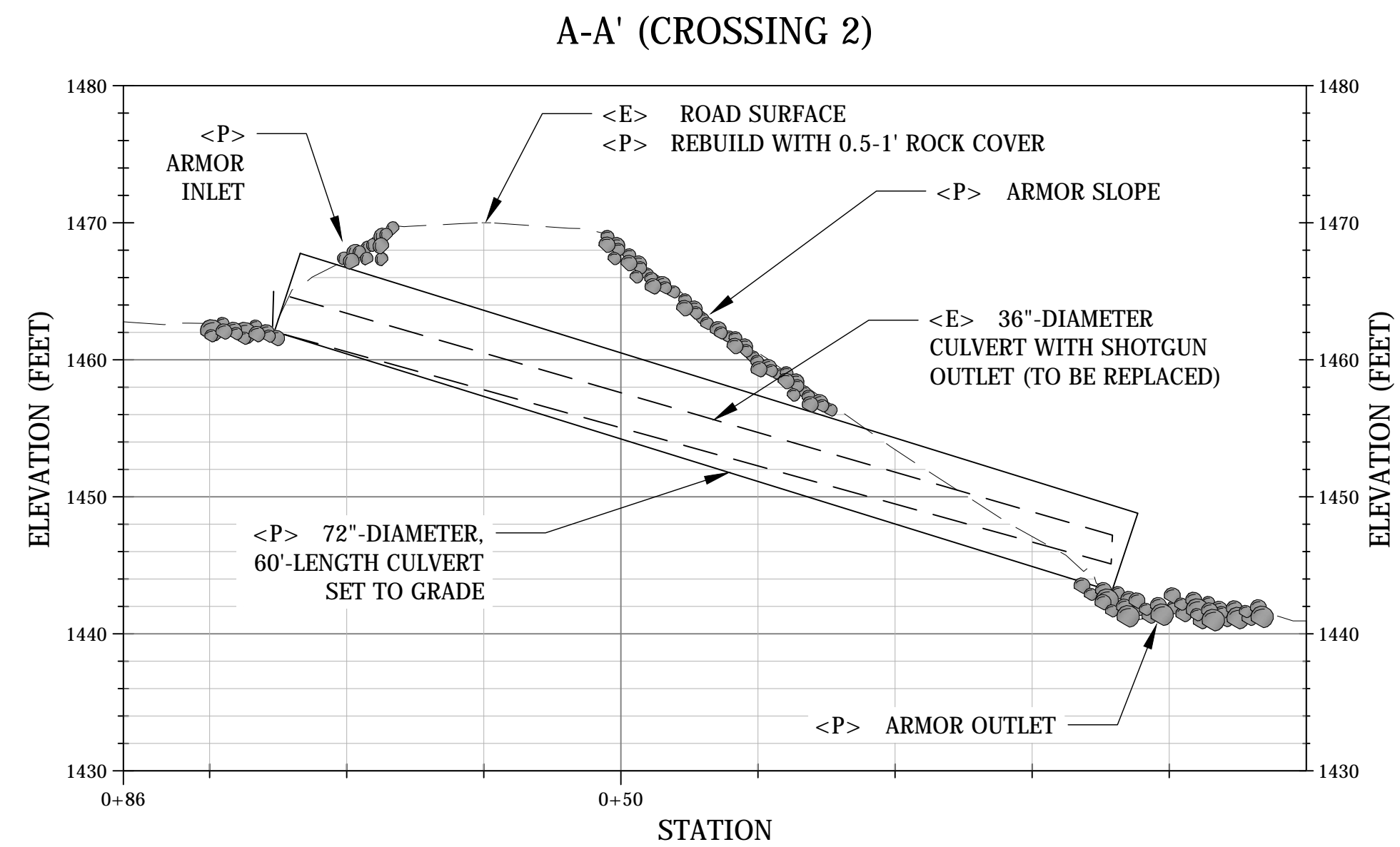
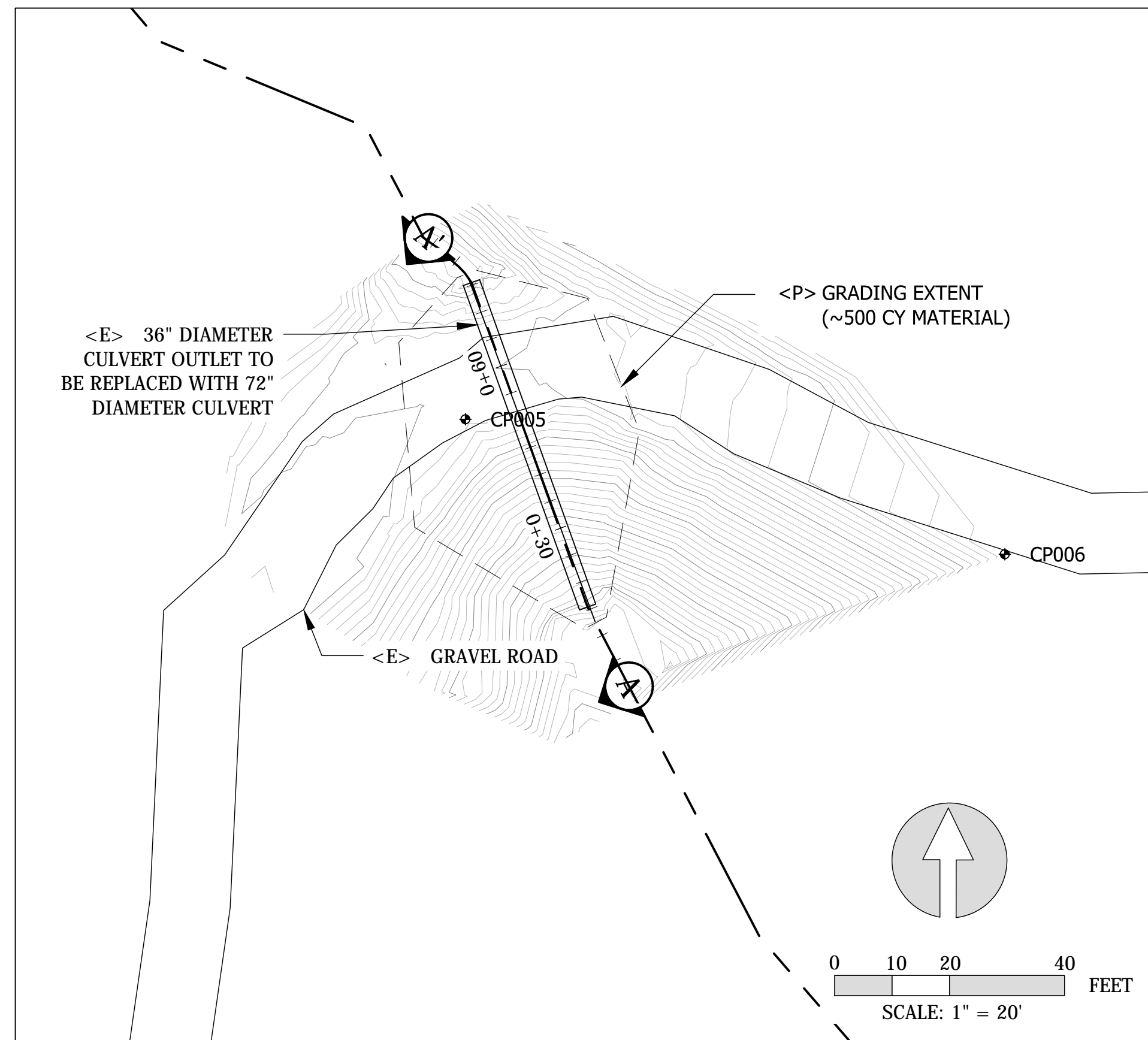


Photo A-14. C8 outlet.



Photo A-15. Pond 1.

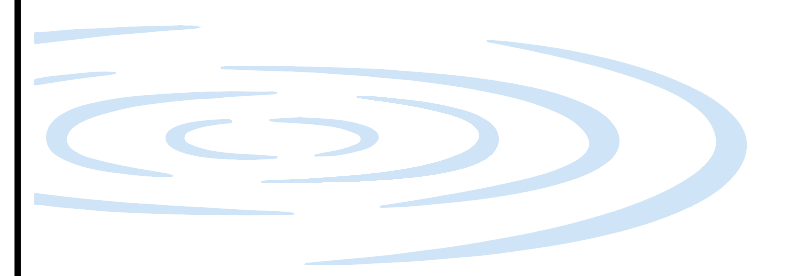
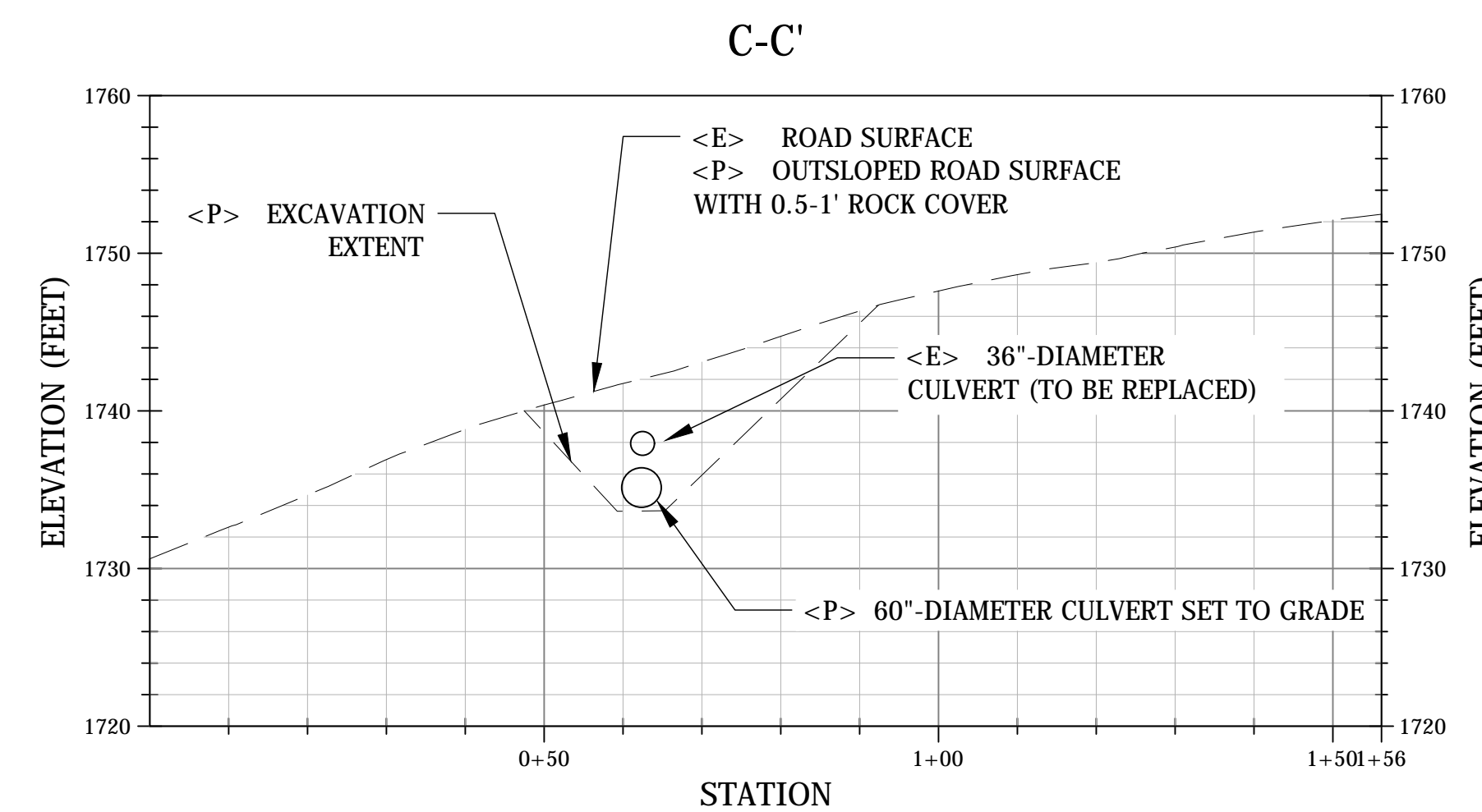
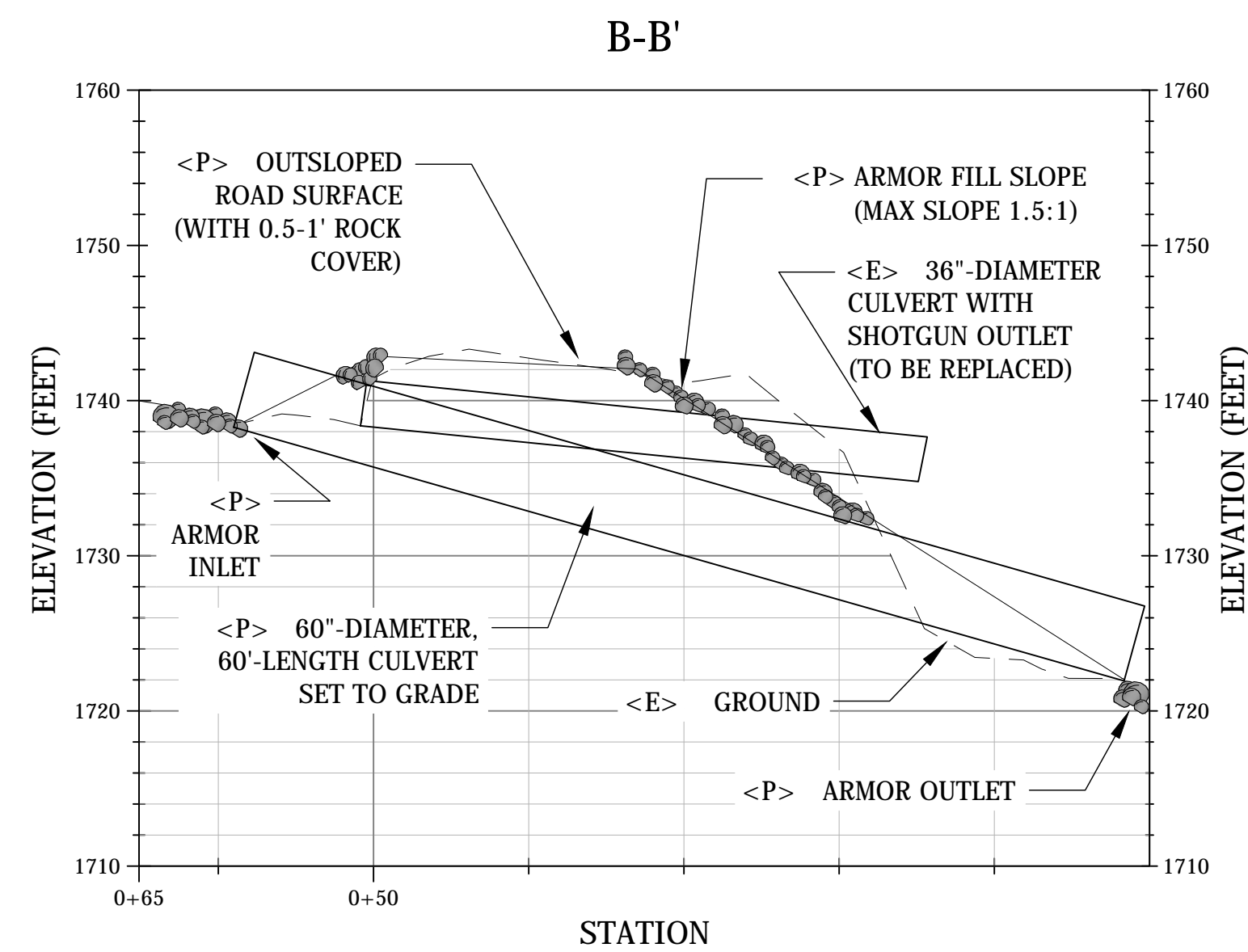
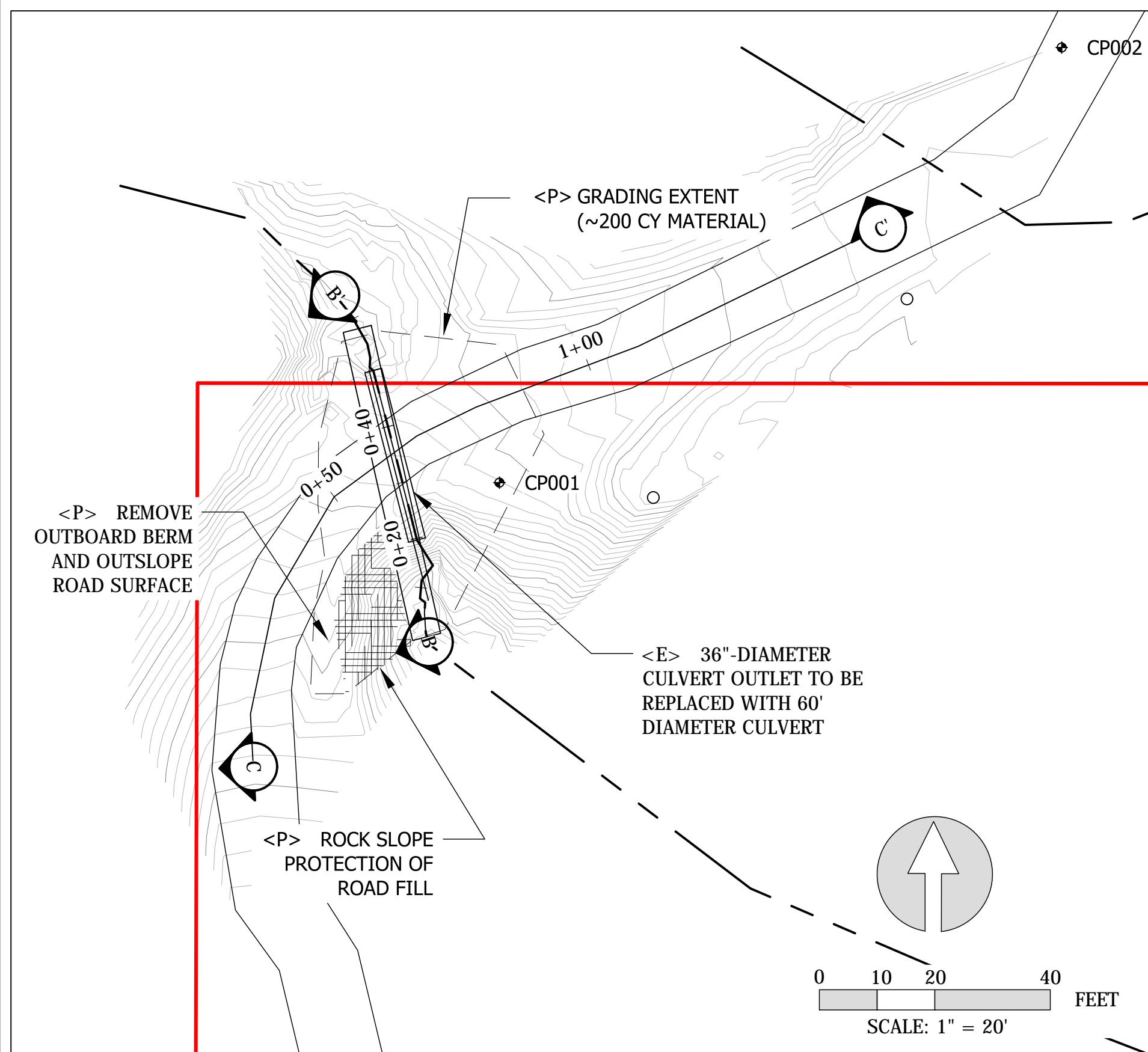
CROSSING 2 CULVERT REPLACEMENT



LEGEND

- EXISTING MAJOR CONTOUR (5')
- EXISTING MINOR CONTOUR (1')
- PARCEL BOUNDARY
- EXISTING ROAD
- CLASS II WATERCOURSE
- CLASS III WATERCOURSE

CROSSING 6 CULVERT REPLACEMENT



PROJECT NUMBER: 656.08

SCALE: AS NOTED

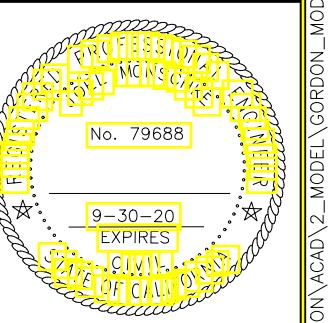
DATE: 4/10/19

DESIGN: JM

DRAWN: RT

CHECKED: X

APPROVED: X



CROSSINGS 2 & 6

SHEET 2 OF 3

P:\656.08 - HOLLIE - HALL LISA\656.08 GORDON\A\A2.MXD MICHEL GORDON, MODELING
 LAST SAVED: 4/15/2019 11:52:53 AM
 PLOT DATE: 4/15/2019 11:52:53 AM
 PLOT STYLE:

GORDON PROPERTY IMPROVEMENTS

HUMBOLDT COUNTY, CA

Stillwater Sciences

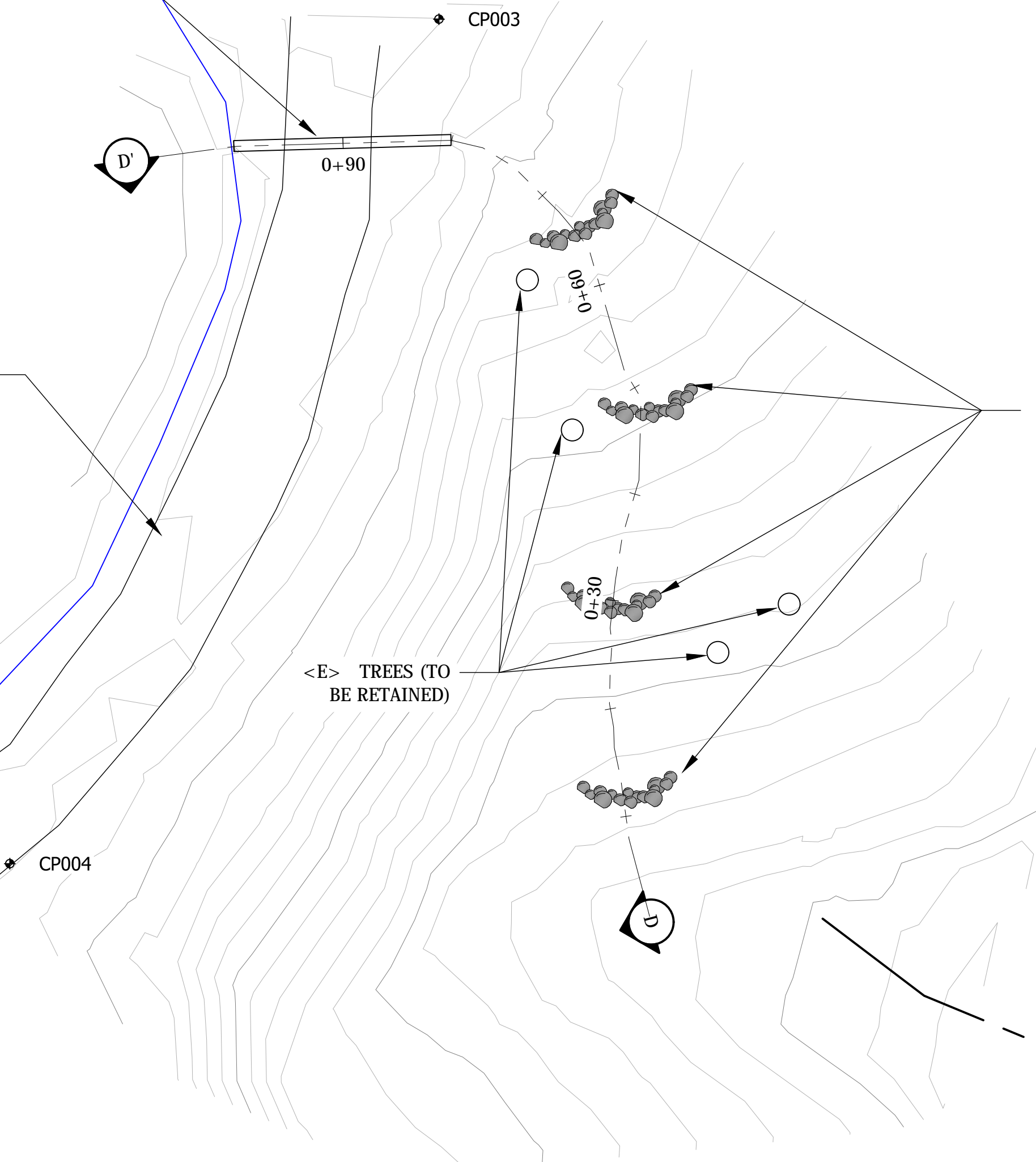
850 G STREET SUITE K
ARCATA, CA 95521 P: (707) 822-9607

<E> 1" DIAMETER CULVERT
OUTLET TO BE REPLACED
WITH 18"-DIAMETER
CULVERT

<P> ELEVATE AND ROCK
ROAD SURFACE

<P> ARMORED
PERCOLATION
BASINS

<E> TREES (TO
BE RETAINED)



D-D'

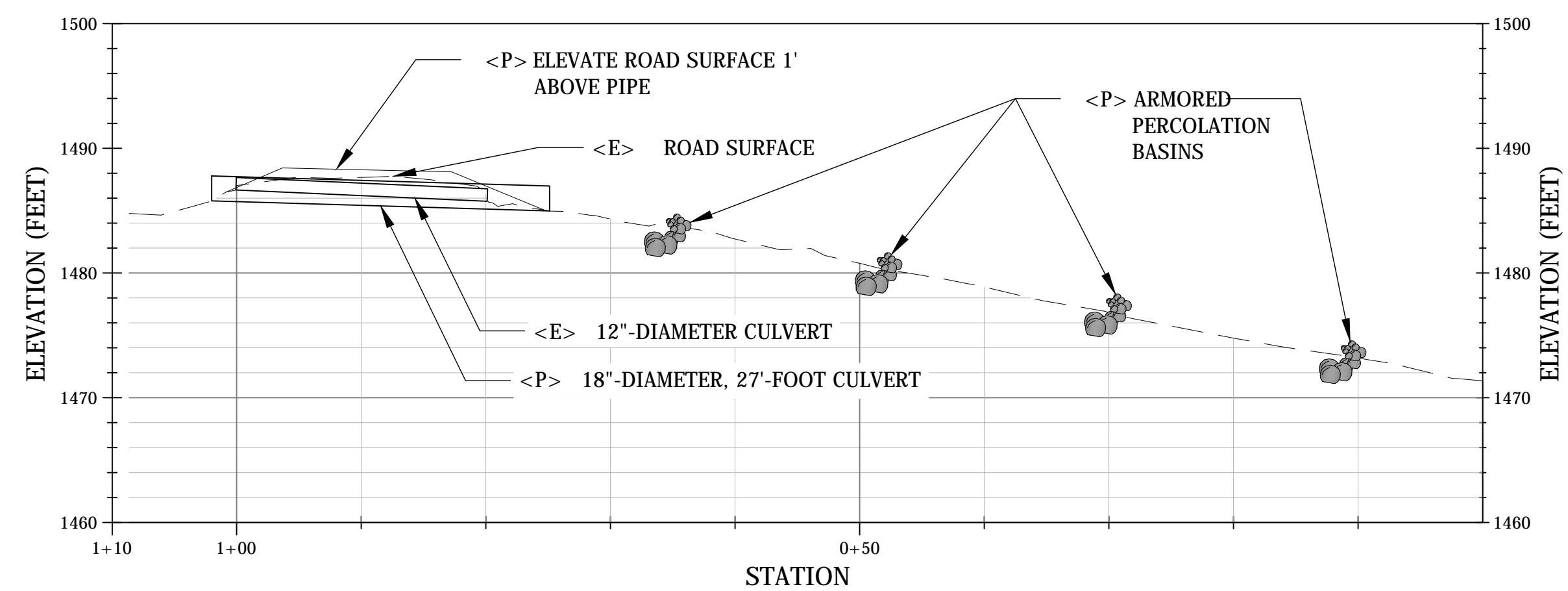
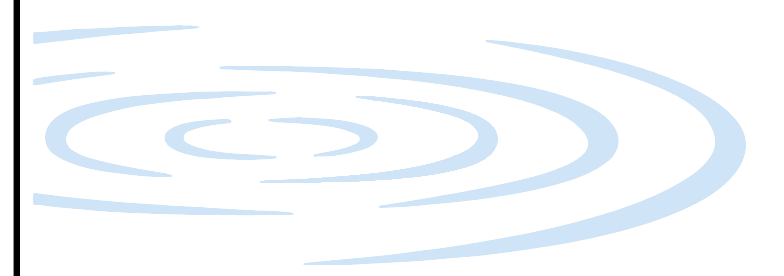


Figure □

LEGEND	
	EXISTING MAJOR CONTOUR (5')
	EXISTING MINOR CONTOUR (1')
	PARCEL BOUNDARY
	EXISTING ROAD
	CLASS II WATERCOURSE
	CLASS III WATERCOURSE



PROJECT NUMBER: 656.08

SCALE: AS NOTED

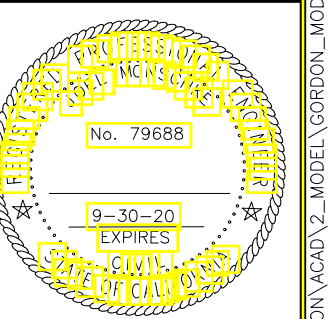
DATE: 4/10/19

DESIGN: JM

DRAWN: RT

CHECKED: X

APPROVED: X



POND 1

SHEET 3 OF 3

P:\656.XX_HOLLIE_HALL_LISA\656.08_GORDON\ACAD\2_MICHEL_GORDON_MODEL.DWG | PLOT DATE: 4/15/2019 | PLOT STYLE: | LAST SAVED: 4/15/2019 | IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE - ADJUST ACCORDINGLY

4.1.8 Site C8

C8 is located on a Class II watercourse that contains wetland plants (e.g. Juncus). The culvert is a 20-ft long, 18-in CPP that is set below grade (based upon sediment deposits in pipe) and has an unarmored inlet and outlet. There are approximately 11 yd³ of the fill in the crossing. The channel upstream of the crossing is approximately 2.5 ft wide.

The seasonal road containing the culvert is not used for the operations. Therefore, the crossing will be decommissioned. Each side of the decommissioned crossing will be sloped back to a 2:1 (horizontal:vertical) slope, channel stabilized with rock, and revegetated with the native wetland plants that are located in the immediate vicinity.

Table 3. Summary of rock needed for each culvert crossing needing a LSAA.

Site ID	Outlet / inlet armor rock size range (ft)*	Total outlet / inlet rock needed (cubic yards)	Road surface rock size*	Total road surface rock needed (cubic yards)	Total rock volume (cubic yards)
C2	1 to 2	30	4-inch minus	30	60
C3	1 to 2	5	4-inch minus	10	15
C5	1 to 2	8	4-inch minus	15	23
C6	1 to 2	21	4-inch minus	50	71
C8	0.5 to 1	2	4-inch minus	0	2

* Approximate rock size to weight conversion:

- 4-in minus rock (1 cy = 1.5 tons)
- 1- to 2-ft rock = 0.25 to 0.5 ton

4.2 General Culvert Upgrade Specifications

The following specifications should be followed when constructing the culverts:

- The heavy equipment operator should separate out inlet and outlet armoring and road surface rock from other fill during excavation operations for those crossings that will be reusing existing material.
- Remove existing culvert (if applicable) and excavate a trench at the original channel gradient to place the culvert. Note that on steep channels (as seen on this project), culverts may be installed at a more gentle slope with extensive rock armoring placed under the outlet for channel armoring and energy dissipation as shown in Figure 6.
- If extensive rock armoring is necessary downstream of the culvert, the rock should be placed prior to the installation of the culvert to allow for best equipment access. Begin to place rock from the downstream extent of the culvert’s spillway, with the first row of rock firmly keyed into the bench at the bottom of the spillway.
- Upon completion of the spillway near to the elevation of the culvert outlet, finalize the trench where the culvert will be placed. The base of the trench should be well compacted (minimum 90% relative compaction [RC]) and constructed at an even gradient, with a minimum width of 4 feet greater than the culvert diameter to allow for compaction along the sides of the culvert.
- Place culvert in the trench. Compaction around the culvert should occur in 6-in to 1-ft lifts using a Wacker or other approved method. Soils should be wetted or dried for maximum compaction (minimum 90% RC).

- After culvert is covered with fill, begin rebuilding road prism in 1-ft lifts. Compaction should occur with a Sheepsfoot or other approved method.
- Place final rock armoring around culvert outlet, culvert inlet, and upstream channel as described in Figure 6 and any available site-specific specifications. A critical dip will be constructed over new fill or at a location identified in attached designs. The dip will be constructed of rock armoring that extends from the top of the culvert to the road surface.
- Ensure that road surface drainage is controlled with rolling dips upslope of the crossing and armored inboard ditches as necessary.
- Place a minimum of 6 in of 4-in minus road rock on all disturbed areas adjacent to the crossing.
- All sites are subject to changes based on field conditions and/or as directed by engineer or watershed scientist.

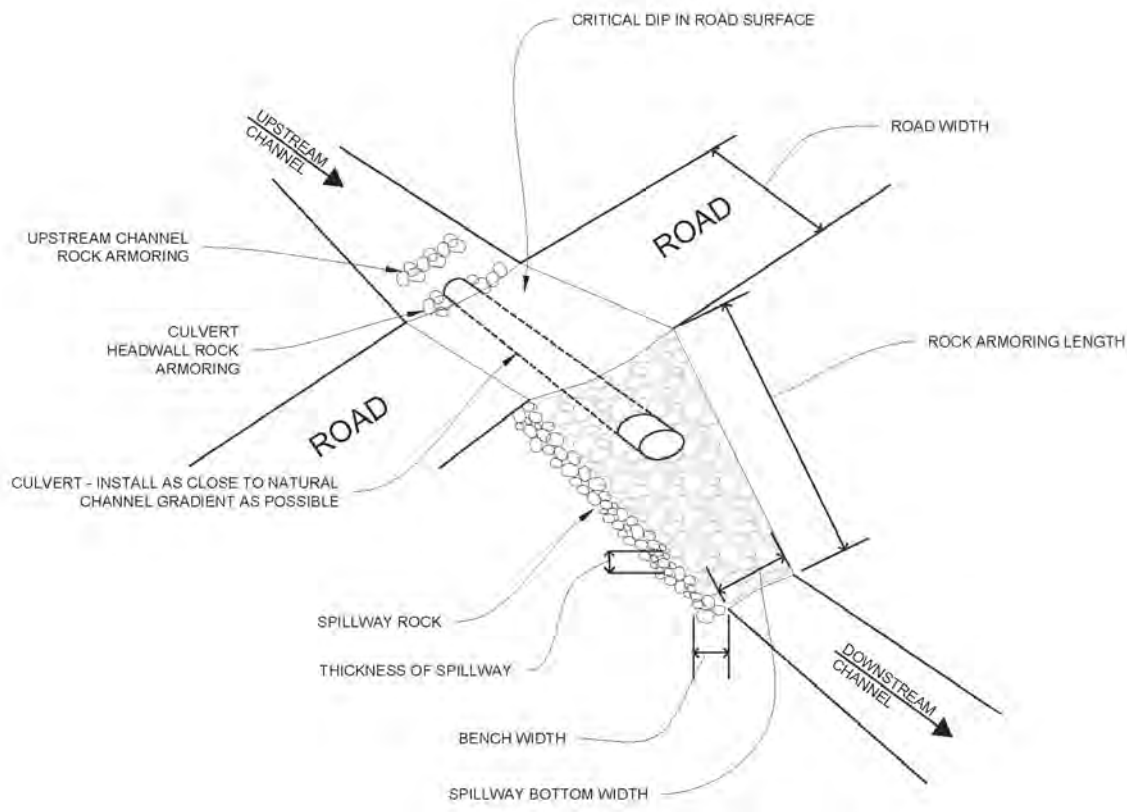


Figure 6. Culvert installation schematic.

5 WATER USE AND STORAGE

5.1 Pond 1

Pond 1 is located in the southwest portion of the property and has been in place since at least 1993, according to Google Earth imagery (Figures 2 and 3). It has a surface area of approximately 0.12 acres, is about 15 ft deep at the center, and is not connected to waters of the State. The pond

From: [Jessica](#)
To: [Adler, Elanah](#); [Richardson, Michael](#); [Margro Advisors](#)
Subject: Serendipity Associates, Inc. - Mitigation and Remediation Grant Fund Proposal
Date: Friday, October 29, 2021 1:26:51 PM
Attachments: [Mitigation Fund Application - Serendipity Gordon.pdf](#)
[Gordon Grant Maps & Figures.pdf](#)

Dear Michael and Elanah,

I am pleased to present the attached grant proposal on behalf of Tina Gordon, Serendipity Associates, Inc.

Please feel free to reach out to me with questions or comments.

Thank you,

Jessica

--

Jessica
Project Manager
Margro Advisors

1-707-500-2420

Project Description

Stream Crossing-1: An existing 36-inch diameter by 40-foot-long CMP culvert on a watercourse. The crossing is undersized for the 100-year flow. This crossing shall be upgraded to a minimum 72-inch diameter culvert set to grade of the watercourse with a length extending past the fill prism of the road per the attached culvert installation specifications. The upgrading of this crossing requires the removal and displacement of approximately 142 cubic yards of fill and 480 ft² of overall disturbance (40-feet long by 8-feet deep by 12-feet wide). The upgrading of the crossing shall require the permanent placement of less than 60 cubic yards of rock armoring with a mean rock diameter of 3.3-feet and 216 ft² of overall disturbance (18-feet long by 7.5-feet deep by 12-feet wide) per the attached culvert installation specifications. The upgrading of this crossing may require the loss of native grasses, forbs, and ferns.

Stream Crossing-2: An existing 12-inch diameter by 20-foot-long CMP culvert on a watercourse. The crossing is too short, shot-gunned, not-to-grade, eroding the road fill slope at the outlet, and undersized for the 100-year flow. This crossing shall be upgraded to a minimum 24-inch diameter culvert set to grade of the watercourse with a length extending past the fill prism of the road per the attached culvert installation specifications. The upgrading of this crossing requires the removal and displacement of approximately 10 to 15 cubic yards of fill and 80 ft² of overall disturbance (20-feet long by 4-feet deep by 4-feet wide). The upgrading of the crossing shall require the permanent placement of less than 2 cubic yards of rock armoring with a mean rock diameter of 1.3-feet and 24 ft² of overall disturbance (6-feet long by 2-feet deep by 4-feet wide) per the attached culvert installation specifications. The upgrading of this crossing may require the loss of native grasses, forbs, and ferns.

Stream Crossing-3: An existing 18-inch diameter by 30-foot-long CMP culvert on a watercourse. The crossing is not-to-grade, eroding the road fill slope at the outlet, and undersized for the 100-year flow. This crossing shall be upgraded to a minimum 36-inch diameter culvert set to grade of the watercourse with a length extending past the fill prism of the road per the attached culvert installation specifications. The upgrading of this crossing requires the removal and displacement of approximately 33 cubic yards of fill and 180 ft² of overall disturbance (30-feet long by 5-feet deep by 6-feet wide). The upgrading of the crossing shall require the permanent placement of less than 4 cubic yards of rock armoring with a mean rock diameter of 1.3-feet and 54 ft² of overall disturbance (9-feet long by 2-feet deep by 6-feet wide) per the attached culvert installation specifications. The upgrading of this crossing may require the loss of native grasses, forbs, and ferns.

Stream Crossing-6: An existing 36-inch diameter by 40-foot-long CMP culvert on a watercourse. The crossing is too short, shot-gunned, not-to-grade, eroding the road fill slope at the outlet, and undersized for the 100-year flow. This crossing shall be upgraded to a minimum 60-inch diameter culvert set to grade of the watercourse with a length extending past the fill prism of the road per the attached culvert installation specifications. The upgrading of this crossing requires the removal and displacement of approximately

105 cubic yards of fill and 400 ft² of overall disturbance (40-feet long by 7-feet deep by 10-feet wide). The upgrading of the crossing shall require the permanent placement of less than 3 cubic yards of rock armoring with a mean rock diameter of 2-feet and 150 ft² of overall disturbance (15-feet long by 3-feet deep by 10-feet wide) per the attached culvert installation specifications. The upgrading of this crossing may require the loss of native grasses, forbs, and ferns.

Stream Crossing-8: An existing 24(LSA 18")-inch diameter by 20-foot-long double walled plastic culvert crossing on a watercourse on section of driveway that is no longer used. This crossing will be decommissioned per the attached specifications. The decommissioning of this crossing requires the removal of approximately 18 cubic yards of fill and 120 ft² of overall disturbance (20-feet long by 4 feet deep by 6 feet wide). The decommissioning of this crossing may require the loss of native grasses, forbs, and ferns.

Pond decommissioning: An on-stream pond located at the head of a Class III watercourse that will be decommissioned by removing the impoundment and culverted spillway. The decommissioning of this pond spillway requires the removal of approximately 28 cubic yards of fill and 300 ft² of overall disturbance (10-feet long by average of 2.5-feet deep (deepest depth of 5-feet) by 30-feet wide). There is no distinct watercourse channel located upslope of the pond on the property but there is bed bank and channel located downslope of the pond spillway. The embankment that will be removed in order to decommission the pond is 10-feet long by 30-feet wide by 5-feet deep. The newly established channel where the embankment currently is will be 2-feet wide at the narrowest with a 3:1 slope to ensure a stable slope. The newly established channel will be approximately 10 feet long and will reconnect the head of the Class-III watercourse to the native stream channel. The dimensions of the pond are 75-feet by 40-feet by 5 feet deep. The decommissioning of this pond may require the loss of native grasses, forbs, and ferns.



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

December 13, 2022

Regulatory Division

Subject: File Number SPN-2022-00367

Ms. Tina Gordon
P.O. Box 5
Garberville, California 95542
tina@moonmadefarms.com

Dear Ms. Gordon:

This correspondence is in reference to your submittal of October 10, 2022, concerning Department of the Army (DA) authorization to upgrade 4 watercourse crossings, decommission an existing crossing, and decommission an instream pond which are located along several unnamed tributaries to Chamise Creek tributary to the Eel River, and the Pacific Ocean. The project is located off South Face Lane in the town of Garberville, in Humboldt County, California; Latitude 40.03709582°, Longitude -123.5826457°.

Work within U.S. Army Corps of Engineers (Corps) jurisdiction will include upgrading several stream crossings by replacing four culverts with adequately sized culverts and installing rock slope protection (RSP) to the inlets and outlets. Work also includes decommissioning one culverted crossing and an instream pond. Road crossing work will result in the permanent installation of 69 cubic yards (CY) of RSP within approximately 0.02 acre of stream channels. All work shall be completed in accordance with the plans and drawings titled "Gordon Stream Project Description", in 2 pages, provided as enclosure 1.

Section 404 of the Clean Water Act (CWA) generally regulates the discharge of dredged or fill material below the plane of ordinary high water in non-tidal waters of the United States, below the high tide line in tidal waters of the United States, and within the lateral extent of wetlands adjacent to these waters. Section 10 of the Rivers and Harbors Act (RHA) generally regulates construction of structures and work, including excavation, dredging, and discharges of dredged or fill material occurring below the plane of mean high water in tidal waters of the United States; in former diked baylands currently below mean high water; outside the limits of mean high water but affecting the navigable capacity of tidal waters; or below the plane of ordinary high water in non-tidal waters designated as navigable waters of the United States. Navigable waters of the United States generally include all waters subject to the ebb and flow of the tide; and/or all waters presently used, or have been used in the past, or may be susceptible for future use to transport interstate or foreign commerce.

Based on a review of the information in your submittal, the project qualifies for authorization under Department of the Army Nationwide Permit (NWP) 3 Maintenance (86 Fed. Reg. 2744, January 13, 2021), pursuant to Section 404 of the CWA of 1972, as amended (33 U.S.C. § 1344

et seq.). The project must be in compliance with the terms of the NWP, the general conditions of the Nationwide Permit Program, and the San Francisco District regional conditions cited on our website (www.spn.usace.army.mil/Missions/Regulatory/Permitting/Nationwide/). You must also be in compliance with any special conditions specified in this letter for the NWP authorization to remain valid. Non-compliance with any term or condition could result in the revocation of the NWP authorization for your project, thereby requiring you to obtain an Individual Permit from the Corps. This NWP authorization does not obviate the need to obtain other State or local approvals required by law.

This verification will remain valid until March 14, 2026, unless the NWP authorization is modified, suspended, or revoked. Activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon a NWP will remain authorized provided the activity is completed within 12 months of the date of a NWP expiration, modification, or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 C.F.R. § 330.4(e) and 33 C.F.R. § 330.5(c) or (d). This verification will remain valid if, during the time period between now and March 14, 2026, the activity complies with any subsequent modification of the NWP authorization. The Chief of Engineers will periodically review NWPs and their conditions and will decide to modify, reissue, or revoke the permits. If a NWP is not modified or reissued within five years of its effective date, it automatically expires and becomes null and void. It is incumbent upon you to remain informed of any changes to the NWPs. Changes to the NWPs would be announced by Public Notice posted on our website (www.spn.usace.army.mil/Missions/Regulatory/Public-Notices.aspx). Upon completion of the project and all associated mitigation requirements, you shall sign and return the Certification of Compliance, enclosure 2, verifying that you have complied with the terms and conditions of the permit.

The State Water Resource Control Board (SWRCB) issued Section 401 water quality certification for 15 NWPs, subject to conditions and notification requirements (www.waterboards.ca.gov/water_issues/programs/cwa401/generalorders.html#yr_2021). If your project qualifies to be authorized under one of these pre-certified NWPs, the activities authorized are exempt from California Environmental Quality Act (CEQA) review since the activities should not have a significant effect on the environment, either individually or cumulatively. Applicants for the 2021 certified Nationwide Permits (NWPs) are required to submit notification and any applicable fees to the SWRCB and RWQCB on the 2021 Certified Nationwide Permit Notification Form (www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2022/corps-nationwide-permit-project-attachment-a-noi-form.docx). The signed notification must be received by the appropriate Regional Water Board, with a copy to the State Water Board, not less than 45 days before any activity which may result in a discharge is commenced.

In order to ensure compliance with this NWP authorization, the following special conditions shall be implemented:

1. To the extent practicable, excavation equipment shall work from an upland site (e.g., from the top of the bank, from the road) to minimize adding fill into waters of the U.S.
2. All staging, maintenance, and storage of heavy machinery shall be conducted in such a location and manner that no fuel, oil, or other petroleum products may run off or be washed by rainfall into the water.
3. A post construction report shall be submitted 45 days after the conclusion of construction activities. The report shall document construction activities and contain as-built drawings (if different from drawings submitted with application) and include before and after photos.

You may refer any questions on this matter to F. Kelly Finn by telephone at (707) 443-0855 or by e-mail at fairfax.k.finn@usace.army.mil. All correspondence should be addressed to the Regulatory Division, North Branch, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. The Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website: www.spn.usace.army.mil/Missions/Regulatory.

Sincerely,

William M. Connor
North Branch Chief
Regulatory Division

Enclosures

cc:

Timberland Resource Consultants (carroll@timberlandresource.com)
NCRWQCB (Ermias.Berhe@waterboards.ca.gov)

Serendipity Road Improvements

Applicant: Serendipity Associates, Inc., Tina Gordon

APN 218-091-007

REVISED Project Budget

Budget Item	Grant	Other Funds
Permit Fees		
401 Certification		\$6,500.00 (includes WB Fee) Serendipity Associates
LSAA		\$12,623.00 Serendipity Associates
Consultant and Professional Fees	\$22,111.00	\$20,000.00 Serendipity Associates
Mobilization	\$3,000.00	
Rock 25 loads @\$300/load	\$7,500.00	
Trucking 56 hours @ \$275/hr	\$9,240.00	
Excavator 56 hours @ \$275/hr	\$15,400.00	
Dozer 40 hours @ \$250/hr	\$10,000.00	
Labor 40 hours @ \$50/hr	\$2,000.00	
Jumping Jack 5 days @ \$140/day	\$700.00	
Compactor 20 hours @ \$150/hr	\$3,000.00	
Haul Culverts 18 hours @ \$180/hr	\$3,240.00	
Materials - Culverts	\$38,053.00	
Total Materials Equipment & Labor	\$92,133.00	\$39,123.00 Serendipity Associates
Total Requested	\$114,244.00	

Mitigation and Remediation Fund
Serendipity Road Improvements
Applicant: Serendipity Associates, Inc. Tina Gordon
APN 218-091-007

Scope of Work

The project will be completed by Lewis Land Development, Contractors State License Board #1012107. The project will be completed during the dry season between May 1 and October 15, 2023. Culvert prices have been increasing approximately 5-10% on a regular basis.

Crossing #2: The crossing is located on a cobble/gravel-bedded Class II watercourse that flows through a 60-ft long, 36 inch corrugated plastic pipe that is in good condition. The pipe is set nearly at grade (3 ft drop to channel) and has an armored inlet and unarmored outlet. There are approximately 500 cubic yards of fill in the crossing road prism. The stream channel is 5 feet wide. The channel immediately upstream of the culvert is lined with concrete. The existing pipe needs to be replaced with a 60 foot long, 72 inch corrugated metal pipe that is set at grade. (See attached CAD plan) The approaches to the crossing (40 feet on each side) shall be rocked.

Crossing #3: The crossing is located on a cobble/gravel-bedded Class III watercourse that also receives overflow water from a pond on the property. The culvert at this site is a 20 foot long, 12 inch corrugated metal pipe with a shotgun outlet and has failed due to excessive rust. The pipe has an unarmored inlet and outlet. There are approximately 13 cubic yards of fill in the crossing road prism. The stream channel is 1.5 feet wide. The pipe will be replaced with a 30 foot long 24 inch corrugated metal pipe, set at grade and will have armoring at the inlet and outlet according to general culvert upgrade specifications (Attached).

Crossing #5: The crossing is located on a gravel-bedded Class III watercourse. The culvert is a 40 foot long, 18 inch corrugated metal pipe on a Class III watercourse that has failed due to having a crushed inlet and a horizontally-angled downspout. The horizontal alignment of the downspout has resulted in erosion of road fill. It has an unarmored inlet and outlet and is set at grade. There are approximately 130 cubic yards of fill in the crossing road prism. The channel upstream of the corrugated metal pipe is approximately 2 feet wide.

The existing corrugated metal pipe needs to be replaced with a 50 foot long, 36 inch corrugated metal pipe that is set at grade, aligned to the channel, and have the inlet and outlet armored. The approaches to the crossing shall be rocked according to general culvert upgrade specifications (Attached).

Crossing #6: This crossing is located on a cobble/gravel-bedded Class II watercourse. The culvert is a 30 foot long, 36 inch corrugated metal pipe in fair condition. The pipe has a shotgun outlet that is sitting above two previously failed culverts. There is approximately 180 cubic yards of fill in the crossing road prism. There is erosion occurring along the near-vertical right (looking

downstream) bank. The crossing is located on a steep segment of road and has significant diversion potential. The channel upstream of the pipe is approximately 5 feet wide.

It is recommended that a 60 foot long, 60 inch corrugated metal pipe replace the existing one. The pipe should be set at grade and have the inlet and outlet armored. The uphill approach to the crossing shall be rocked and outsloped to drain onto the hillslope. The road at this location is too steep for installation of a critical dip to eliminate the diversion potential. Therefore, the road shall be rocked (70 feet on each side) such that there is a 1-2 percent outslope, which will allow for any diverted water to sheet off into the channel. The outboard berm on the downhill side of the crossing will be removed and the slope below the road will be covered with 1 to 2 foot rock to minimize erosion. (See attached CAD plan)

Crossing #8: Decommission 18-inch culvert. Each side of the decommissioned crossing will be sloped back to a 2:1 (horizontal: vertical) slope, channel stabilized with rock, and revegetated with the native vegetation that are located in the immediate vicinity.

The entire project will consist of the following contractor activities:

Mobilization

25 loads of rock

56 hours of trucking

56 hours of excavation

40 hours bulldozer

40 hours of labor

5 days of jumping jack

20 hours of compactor

18 hours of hauling culverts

The estimate for cost of the culverts is \$38,052.61

Serendipity Associates Updated Bid

On 1/30/2023 9:19 AM, Brian Paula wrote:

Hi Jessica,

Here is a breakdown of what this project will cost. Prevailing wage and equipment rates was a bit of a learning curve for me, but I think I have it figured out. Although wage and equipment rates update in March and could go up also. This estimate includes Sites C2, 3, 5, 6, 8, pond 1, pond 3, and site prep work on the road going into the property. We have figured in 10 loads of rock and 8 hours of equipment work for the road to get it in better shape to be able to haul on it, but it could really use as much rock as we wanted to put on it. So if there is extra money to put toward that, we could give a price for additional rock on the road. This estimate is also based on a semi-current price for culverts, which are changing weekly. Culverts will likely be more when we actually get to work on this project.

Materials	\$59,399.51
Labor	\$52,098.94
Equipment	\$42,240.58
Total	\$153,739.03

Let me know if you have any questions or if you need it broken down by site.
Cinnamon

**Site Management Plan for:
WDID: 1_12CC419267
APN: 218-091-007**

Prepared for:
State Water Resources Control Board (SWRCB)
North Coast Regional Water Quality Control Board (NCRWQCB)

Prepared by:
Margro Advisors
230 4th St, Eureka CA, 95501

Date of Completion: 04/08/2019
Updated: 01/09/2023

Introduction

This Site Management Plan (SMP) is for a Cannabis Cultivation Project by Serendipity Associates located in the Harris area, street address 671 S Face Lane, in Humboldt County. This SMP was prepared for Tina Gordon by Margro Advisors; parcel number 218-091-007 as required by the SWRCB Order WQ 2019-0001-DWQ¹. The purpose of this order is to provide a regulatory structure for cannabis cultivation that reduces contributions to existing water quality issues and prevents additional adverse impacts to water resources throughout California. The purpose of the SMP is to identify conditions present on a parcel that may pose a threat to water quality and resources and establish a plan to meet or surpass requirements set forth in the order, as well as to describe how the cultivator is implementing the best practical treatment or control (BPTC) measures listed in Attachment A of the Cannabis General Order. Refer to Attachment D of the General Order for further technical report guidance.

Margro Advisors made an initial assessment of this parcel through field work as well as through a variety of county, state, and private websites (e.g. USDA web soil survey, Google Earth, and Humboldt County Web GIS). The parcel boundaries are approximate and obtained from the Boundary Survey Exhibit from Kolstad Land Surveyors dated February 8, 2019.

Site Characteristics

This project is associated with Humboldt County Application #11940, and has been granted two state cultivation licenses: one for up to 5,000 ft² of Outdoor cultivation (CDFA License # CCL18-0002625); and one for up to 10,000 ft² of Mixed Light cultivation (CDFA License # CCL18-0002619). Processing will be performed on-site. The site has a solar array supported by

¹Order entitled "STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2019-001-DWQ GENERAL WASTE DISCHARGE REQUIREMENTS AND WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF WASTE ASSOCIATED WITH CANNABIS CULTIVATION ACTIVITIES"

battery storage. For backup power the site has a generator. The generator, rated over 60 decibels, is used in a trailer enclosure to meet perimeter noise restrictions.

Elevation within this parcel ranges from 1,400 to 1,700 feet. Mean annual precipitation is 49 to 90 inches. Mean annual air temperature is 52 to 59 degrees Fahrenheit. The frost free period is 240 to 280 days. Average slope is approximately 17.5°.

Attached at the end of this document is a site map as well as directions. The site map includes features such as: access roads, vehicle parking areas, streams, stream crossings, cultivation site(s), buildings, and other relevant site features.





































Soil Description

Below is a soil map of the parcel. The soils within the area are primarily the Burgsblock-Coolyork-Tannin complex (Map Unit 451, 62.3% of parcel) and the Coolyork-Yorknorth complex (Map Unit 671, 37.7% of parcel). Minor Components are also found in both Map Units.

Serendipity Associates (218-091-007) Soil Map



MAP LEGEND

Area of Interest (AOI)		 Spoil Area	
 Area of Interest (AOI)		 Stony Spot	
Soils		 Very Stony Spot	
 Soil Map Unit Polygons		 Wet Spot	
 Soil Map Unit Lines		 Other	
 Soil Map Unit Points		 Special Line Features	
Special Point Features		Water Features	
 Blowout		 Streams and Canals	
 Borrow Pit		Transportation	
 Clay Spot		 Rails	
 Closed Depression		 Interstate Highways	
 Gravel Pit		 US Routes	
 Gravelly Spot		 Major Roads	
 Landfill		 Local Roads	
 Lava Flow		Background	
 Marsh or swamp		 Aerial Photography	
 Mine or Quarry			
 Miscellaneous Water			
 Perennial Water			
 Rock Outcrop			
 Saline Spot			
 Sandy Spot			
 Severely Eroded Spot			
 Sinkhole			
 Slide or Slip			
 Sodic Spot			

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, South Part, California
 Survey Area Data: Version 7, Sep 13, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2014—Nov 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit 451

The parent rock of the Burgsblock unit (35% of Map Unit) is colluvium derived from sedimentary rock and/or residuum weathered from sedimentary rock. The unit ranges from 15 to 30 percent slopes. The depth to a restrictive feature is more than 80 inches. The natural drainage class is well drained. The capacity of the most limiting layer to transmit water (Ksat) is moderately high to high (0.20 to 2.00 in/hr). The depth to the water table is more than 80 inches. The frequency of flooding is none. The frequency of ponding is none. The available water storage in profile is moderate (about 6.6 inches). The hydrologic soil group is B.

The parent rock of the Coolyork unit (30% of Map Unit) is colluvium derived from mudstone and/or colluvium derived from sandstone and/or residuum weathered from schist. The unit ranges from 30 to 50 percent slopes. The depth to a restrictive feature is more than 80 inches. The natural drainage class is moderately well drained. The capacity of the most limiting layer to transmit water (Ksat) is moderately low to moderately high (0.06 to 0.20 inches per hour). The depth to the water table is about 20 to 39 inches. The frequency of flooding is none. The frequency of ponding is none. The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm). The available water storage in profile is high (about 9.6 inches). The hydrologic soil group is D.

The parent rock of the Tannin unit (20% of Map Unit) is colluvium derived from mudstone and/or colluvium derived from sandstone . The unit ranges from 15 to 30 percent slopes. The depth to a restrictive feature is more than 80 inches. The natural drainage class is well drained. The capacity of the most limiting layer to transmit water (Ksat) is moderately high to high (0.20 to 2.00 inches per hour). The depth to the water table is more than 80 inches. The frequency of flooding is none. The frequency of ponding is none. The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm). The available water storage in profile is high (about 10.8 inches). The hydrologic soil group is B.

Minor Components include Rockyglen (5% of Map Unit), the Wohly Unit (4% of Map Unit), the Chalkmountain Unit (3% of Map Unit), the Yorknoth Unit (2% of Map Unit), and rock outcrop (1% of Map Unit).

Map Unit 671

The parent rock of the Coolyork unit (45% of Map Unit) is colluvium derived from mudstone and/or colluvium derived from sandstone and/or residuum weathered from schist. The unit ranges from 30 to 50 percent slopes. The depth to a restrictive feature is more than 80 inches. The natural drainage class is moderately well drained. The capacity of the most limiting layer to transmit water (Ksat) is moderately low to moderately high (0.06 to 0.20 inches per hour). The depth to the water table is about 20 to 39 inches. The frequency of flooding is none. The frequency of ponding is none. The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm). The available water storage in profile is high (about 9.6 inches). The hydrologic soil group is D.

The parent rock of the Yorknorth unit (40% of Map Unit) is colluvium derived from sandstone and/or earthflow deposits derived from schist. The unit ranges from 5 to 30 percent slopes. The depth to a restrictive feature is more than 80 inches. The natural drainage class is moderately well drained. The capacity of the most limiting layer to transmit water (Ksat) is moderately low to moderately high (0.06 to 0.60 inches per hour). The depth to the water table is about 20 to 39 inches. The frequency of flooding is none. The frequency of ponding is none. The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm). The available water storage in profile is high (about 10.7 inches). The hydrologic soil group is C.

Minor Components include Witherell (5% of Map Unit), Dryfield (4% of Map Unit), Burgsblock (3% of Map Unit), Tannin (2% of Map Unit), and rock outcrop (1% of Map Unit).

Water Storage, Use, and Irrigation Runoff

Irrigation water is sourced from rain catchment captured into an onsite pond. Expected annual catchment is approximately 508,900 gallons per year. The site has the capacity to store 611,000 gallons of water for irrigation. The property owner estimates 270,000 gallons of water are required annually. A summary of water use (in gallons) by month is shown below in Table 1.

Jan	Feb	Mar	Apr	May	June
0	0	2,200	10,800	35,100	43,400

July	Aug	Sept	Oct	Nov	Dec
39,800	51,800	41,000	14,300	1,200	0

Table 1: Summary of water use (in gallons) by month.

The property features 876,500 gallons of storage in ponds, tanks, and bladders. A summary of water storage for irrigation is shown below in Table 2.

Water Storage Type	Size (Gallons)	Number	Total (Gallons)
Tank	2,500	2	5,000
Tank	3,000	2	6,000
Pond 1	600,000	1	600,000
	Total		611,000

Table 2: Summary of water storage for irrigation on the parcel.

A summary of water storage for Domestic use is shown below in Table 3.

Water Storage Type	Size (Gallons)	Number	Total (Gallons)
Tank	1,500	2	3,000
Tank	2,500	3	7,500
Tank	3,000	5	15,000
Bladder	20,000	2	40,000
Pond 2	200,000	1	200,000
Pond 3	Not in Use		
Pond 4	Not in Use		
	Total		265,500

Table 3: Summary of water storage for Domestic use on the parcel.

The tanks are easily accessible, installed to manufacturer’s specifications, fitted with float valves, placed on soil free of rocks/sharp objects, and set in an area that is capable of bearing the weight when filled. Tanks are not located on a floodplain or next to generators or other heat emitting equipment. The bladders for domestic storage are installed to manufacturer’s specifications, placed on soil free of rocks/sharp objects, set in an area that is capable of bearing the weight when filled, and fenced to protect them from local wildlife.

Operations will be conducted in a manner that uses irrigation primarily from a rain catchment pond along with drip irrigation, to minimize runoff and enhance water conservation. Cultivation areas are surrounded by abundant vegetation to improve water retention and avoid runoff.

Water flow is metered and will be regularly recorded and reported with the end of the year monitoring report. Tanks, lines, and connections will be checked periodically for wear, damage, and leaks. Repairs are done immediately or mitigated until replacement parts are obtained.

Sediment Discharge

Access Roads

There is very little vehicle traffic, about two cars per day. There are currently no road maintenance activities. Generally, out-sloping is used to optimize drainage to stable areas. Access road stormwater drainage structures do not discharge onto unstable slopes, earthen fills, or directly to a waterbody. All required permits and approvals are obtained prior to the construction of any access roads.

Stream Crossings

There are eight stream crossings on or alongside the property, many of which must be remediated. Plans for improvements are described in more detail in the Remediation section of this document. An overview of stream crossings of concern is shown below in Table 4.

Label	Size (inches)	Type	Watercourse Class	Condition
C1	36”	Corrugated Metal Pipe	Class III	Undersized
C2	12”	Corrugated Metal Pipe	Class II	Undersized
C3	18”	Corrugated Metal Pipe	Class III	Undersized
C6	36”	Corrugated Metal Pipe	Class III	Undersized
C8	18”	Corrugated Plastic Pipe	Class III	Fair

Table 4: Overview of stream crossings on the property.

All stream crossings will be designed by a qualified professional and will be capable of accommodating the estimated 100-year flood flow, including debris and sediment loads. Watercourse crossings will allow migration of aquatic life during all life stages supported or potentially supported by that stream reach. Stream crossings are maintained and inspected for blockage with regular monitoring detailed in the Monitoring section of this plan. Culverts will be installed parallel to the watercourse alignment to the extent possible, will be of sufficient length to extend beyond stabilized fill/sidecast material, and will be embedded or installed at the same level and gradient of the streambed in which it is being placed to prevent erosion.

Erosion Prevention

BPTC measures being implemented to prevent or limit erosion include placement of straw mulch on exposed soil, rock-armored culvert outlets, and vegetation of all flat areas with native plants so there is no dust producing sediment-laden runoff. In addition, nobody is driving or operating vehicles or equipment within the riparian setbacks or within waters of the state unless authorized.

Sediment Control

There are currently no BPTC measures being implemented to capture sediment that has been eroded, but the property owner may construct a retaining wall to provide slope stability which will be designed by a qualified professional if needed.

Monitoring

The access road, stream crossing, erosion prevention, and sediment control BPTC measures listed above will be monitored and maintained to confirm effectiveness and protect water quality by conducting an inspection:

- Quarterly.
- Before and after any significant alteration or upgrade to a given stream crossing, road segment, or other controllable sediment discharge site.
- Prior to October 15th and December 15th to evaluate site preparedness for storm events and stormwater runoff.
- During and after each storm event.

Captured sediment will be stabilized in place or excavated and stabilized on-site.

Fertilizer, Pesticide, Herbicide, Fungicide, and Rodenticide

An overview of annual chemical product use is shown below in Table 4.

Product Name	Chemical Type	N-P-K or Active Ingredient
Gardening Sulfur	Fertilizer	Sulfur
Neem Oil	Insecticide	Azadirachtin

Table 4: Overview of annual chemical product usage.

Products which are not consumed during the growing season are safely stored to prevent discharge over the Winter season.

Bulk fertilizers and chemical concentrates are stored, mixed, and applied per packaging instructions and/or at proper agronomic rates. Empty containers are disposed of in on-site trash cans. Application rates will be tracked and reported with the end of the year monitoring.

Petroleum Products

An overview of annual petroleum usage is shown below in Table 5.

Product	Chemical Type	Annual Use (lb or gal)
Diesel	Petroleum	50 gal

Table 5: Overview of annual petroleum usage.

Products which are not consumed during the growing season are stored within secondary containment to prevent discharge over the Winter season.

Vehicles or equipment are only refueled outside of riparian setbacks.

Petroleum, petroleum products, and similar fluids are stored in a manner that provides chemical compatibility, provides secondary containment, and protection from accidental ignition, the sun, wind, and rain. Fuels, lubricants, and other petroleum products are stored and applied per packaging instructions. Empty containers are disposed of in closed-lid, wildlife-proof, non-permeable garbage cans before they are hauled off.

Spill cleanup and containment kits will be kept on site.

Trash/Refuse and Domestic Wastewater

Human waste, domestic wastewater, packaging, and spent growth media will be generated at this site. Trash is kept in wildlife-proof garbage cans equipped with lids which are kept to prevent leaching and transport of foreign materials to groundwater and are located outside of riparian setbacks. Trash is taken weekly to the Eel River Resource Recovery Station. Recyclables are taken on a monthly basis, or more frequently as needed.

On an average day, there are about two employees, visitors, and/or residents at the site.

The premises has two onsite septic systems, each connected to a bathroom. Wastewater is disposed of with proper leechfields and 1,500 gallon septic tanks.

As per the CCR, Title 8, § 3457, which addresses field sanitation standards, the cultivation site is required to provide access to waste facilities within one-quarter (1/4) mile or a five (5) minute

walk, whichever is shorter.

Where the septic system is not within this accessibility threshold, a portable facility will be provided in lieu of septic to support waste activities. The standards for portable waste facilities will be followed for toilets, wastewater, and chemical tanks.

Toilet facilities will always be operational, maintained in a clean and sanitary condition, and kept in good repair. Records of service and maintenance shall be retained for two years.

Chemical toilet wastewater tanks will always be constructed of durable, easily cleanable material and have a minimum tank capacity of forty (40) gallons. Construction shall prevent splashing on the occupant, field, or road.

When chemical tanks are used, contents shall be disposed of by draining or pumping into a sanitary sewer, an approved septic tank of sufficient capacity, a suitably sized and constructed holding tank, or any other method approved by the local health department.

Winterization

BPTC measures will be performed to winterize the site and prevent discharges of waste. The property owners do not operate heavy equipment of any kind at the cannabis cultivation site during the winter period unless authorized for emergency repairs contained in an enforcement order issued by the State Water Board, Regional Water Board, or other agency having jurisdiction. In addition, if there is construction, all construction entrances and exits are stabilized to control erosion and sediment discharges from land disturbance. All loose stockpiled construction materials (e.g. soil, spoils, aggregate, etc.) that are not scheduled for use within 48 hours are covered and bermed. Erosion repair and control measures to the bare ground (e.g. cultivation area, access paths, etc.) are applied to prevent discharge of sediment to waters of the state.

Drainage culverts and trenches are maintained throughout winter to prevent debris and soil blockages from drainage and sediment capture features and ensure adequate capacity exists.

Native vegetation will be planted on all bare, exposed soil prior to the beginning of the precipitation season.

If any BPTC measure cannot be completed before the onset of the winter period, the property owner will contact the Regional Water Board to establish a compliance schedule.

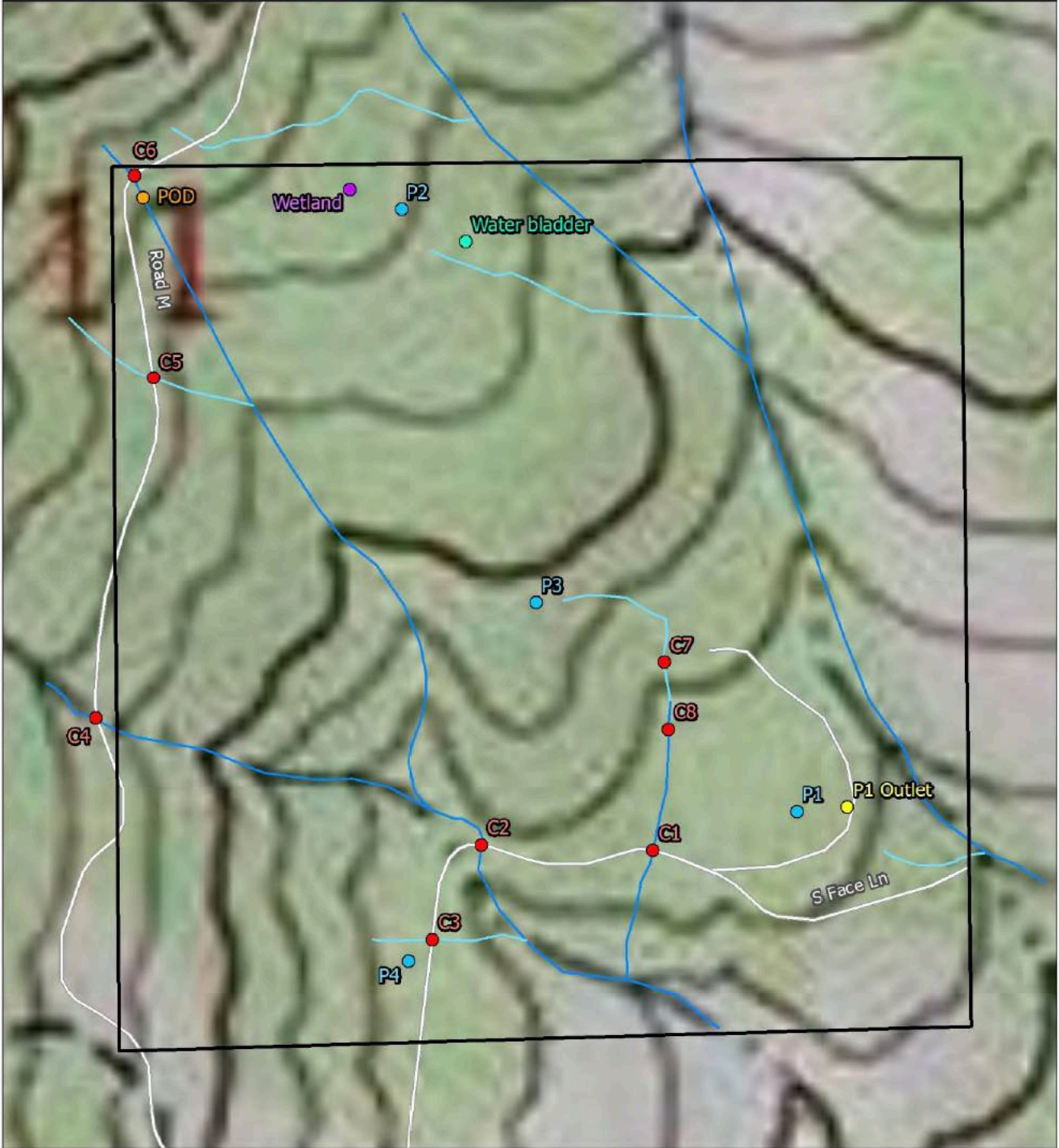
Remediations

The California Department of Fish & Wildlife has identified the following items for repair or remediation:

1. C1 will be replaced with a 72-inch culvert and the inlet and outlet will be reinforced with rock armor.

2. C2 will be replaced with a 24-inch culvert and the inlet and outlet will be reinforced with rock armor.
3. C3 will be replaced with a 36-inch culvert and the inlet and outlet will be reinforced with rock armor.
4. C6 will be replaced with a 60-inch culvert and the inlet and outlet will be reinforced with rock armor.
5. C8 will be decommissioned. The culvert will be removed and the waterway restored with natural vegetation.
6. The culvert outlet at Pond 1 is undersized and will be replaced with a larger culvert leading to a bioswale.

GORDON EROSION REMEDIATION

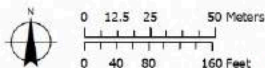


Road Remediation

- | | | |
|--------------------|---------------|-----------------------|
| Property boundary | Pond | Class II watercourse |
| Crossing | Water bladder | Class III watercourse |
| Outlet | Wetland | |
| Point of Diversion | | |

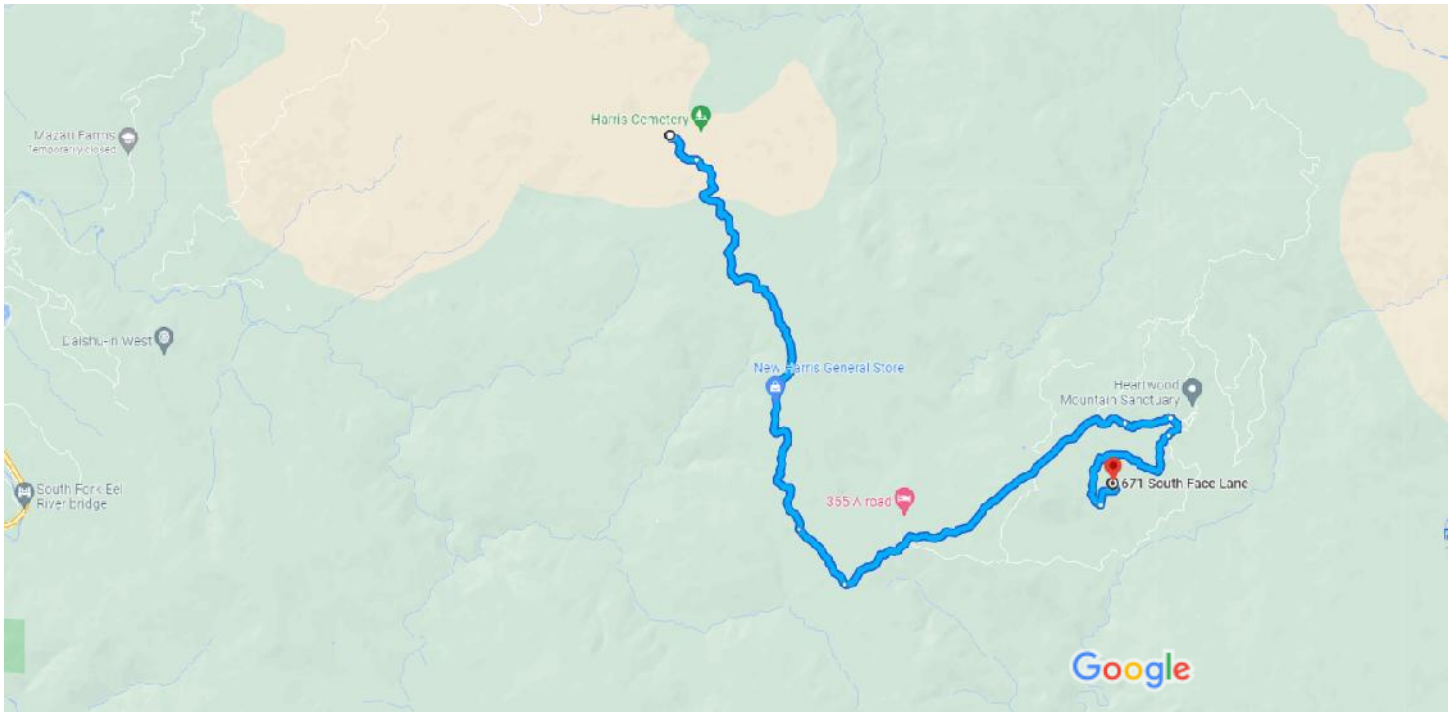
Map Sources:
Roads and cities: ESRI 2016
Topography: NatGeo TOPO!

Map Location



Stillwater Sciences

Figure 3. Topographic map of parcel and road remediation locations.



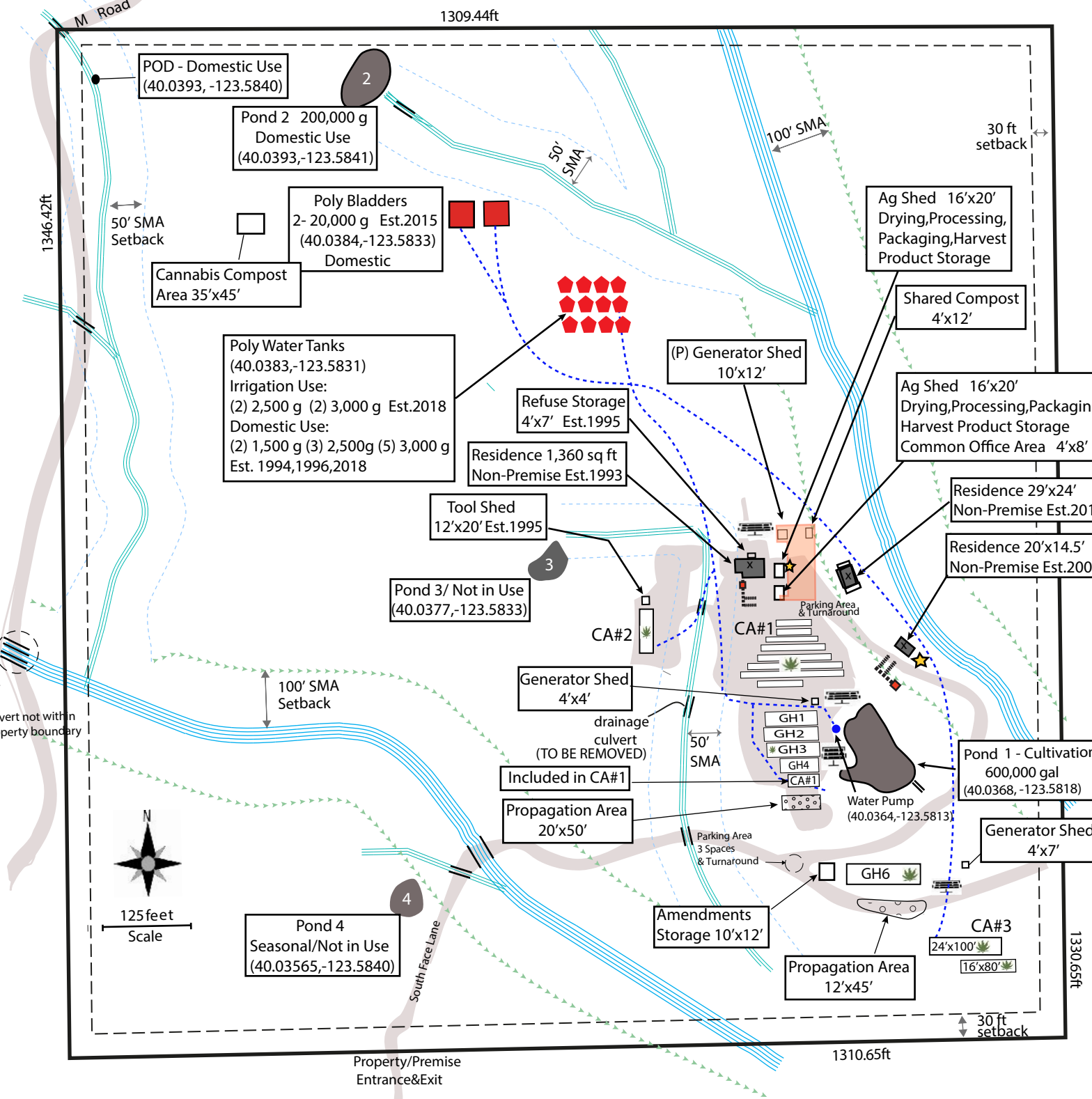
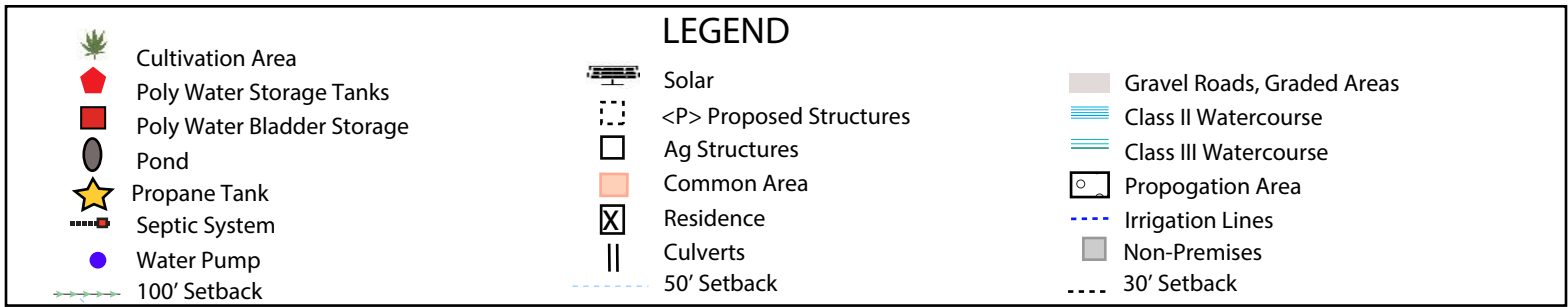
Map data ©2023 1 mi

Harris
California 95542

- ↑ 1. Head southeast on Bell Springs Rd toward Harris Rd
_____ 0.4 mi
- ↘ 2. Turn right to stay on Bell Springs Rd
_____ 4.7 mi
- ↙ 3. Slight left to stay on Bell Springs Rd
_____ 0.7 mi
- ↙ 4. Keep left to continue on Island Mountain Rd
_____ 3.4 mi
- ↘ 5. Keep right to stay on Island Mountain Rd
_____ 0.5 mi
- ↗ 6. Slight right to stay on Island Mountain Rd
_____ 0.2 mi
- ↘ 7. Turn right onto Rd M
_____ 1.6 mi
- ↙ 8. Turn left onto S Face Ln
_____ 0.3 mi

671 S Face Ln
Garberville, CA 95542

Serendipity Associates Property Diagram - APN: 218-091-007



Outdoor		
CA#1 = 4,394 sq ft		CA#2 = 1,200 sq ft
7'x40'	7'x94'	20'x60'
7'x40'	7'x106'	CA#3 = 3,680 sq ft
7'x60'	7'x50'	
7'x72'	15'x40'	
7'x80'		

TOTAL OUTDOOR= 9,874 sq ft

Mixed-Light
GH1 20'x70'
GH2 20'x76'
GH3 20'x72'
GH4 20'x55'
GH6 20'x80'

TOTAL MIXED LIGHT= 7,060 sq ft

Propagation
20'x50'
12'x45'
TOTAL= 1,540 sq ft

APPLICATION PACKET CHECKLIST

Please check below to ensure you have a complete application. Once complete, email the following documents, in pdf format with the text "Application for Remediation Grant Program Funding" in the subject line to mrichardson@co.humboldt.ca.us.

- X Signed Application Submission Form
- X Project Description – Summary of the Project, up to 2 pages.
- X Plot Plan
- X Plot Plan Checklist – Attached
- X Cross sections of proposed work including topographic elevations
- X Scope of Work – Detailed Description of Work
- X Schedule for Completion – Identify Milestones
- X Erosion Control Plan and Monitoring Plan
- X Budget – Be as specific as possible – sample attached
- X Project Maps and Figures
- Letter(s) of Support (optional)

APPLICATION FORM - Commercial Cannabis Land Use Ordinance Mitigation and Remediation Fund Program

Project Title: Walker Ridge Road Improvements Date of Application: 10/31/2021

Applicant Name: Walker Ridge Family Farm, LLC Project APN: 216-073-006

Contact Person Name and Title: Wesley Stoff

Contact Phone: (707) 223-1424 Contact Email: susanandwesley@gmail.com

Contact Address: P.O. Box 368, Redway, CA 95560

Amount Requested: \$67,486.00 Total Budget: \$77,486.00

Project Timeline: Start Date: June 1, 2022 End Date: August 1, 2022

Signature of Applicant:  _____

Walker Ridge Road Improvements
Wesley Stoff
APN: 216-073-006
Project Description

The project is located on Humboldt County APN 216-073-006 near Harris, California. The subject parcel is located off of Bellus Road in the Tom Long Creek Watershed. The property contains several unnamed Class III tributaries to Tom Long Creek.

The project proposes the upgrade of culverts at seven stream crossings and the installation of armored fill at one other stream crossing on the property as required by the applicant's Lake and Streambed Alteration Agreement with the California Department of Fish & Wildlife.

GIS indicates the parcel is in an area of high slope instability. It is not within a flood hazard zone, nor in an earthquake hazard zone. The parcel is surrounded by rural improved properties. No impact to these other parcels is expected.

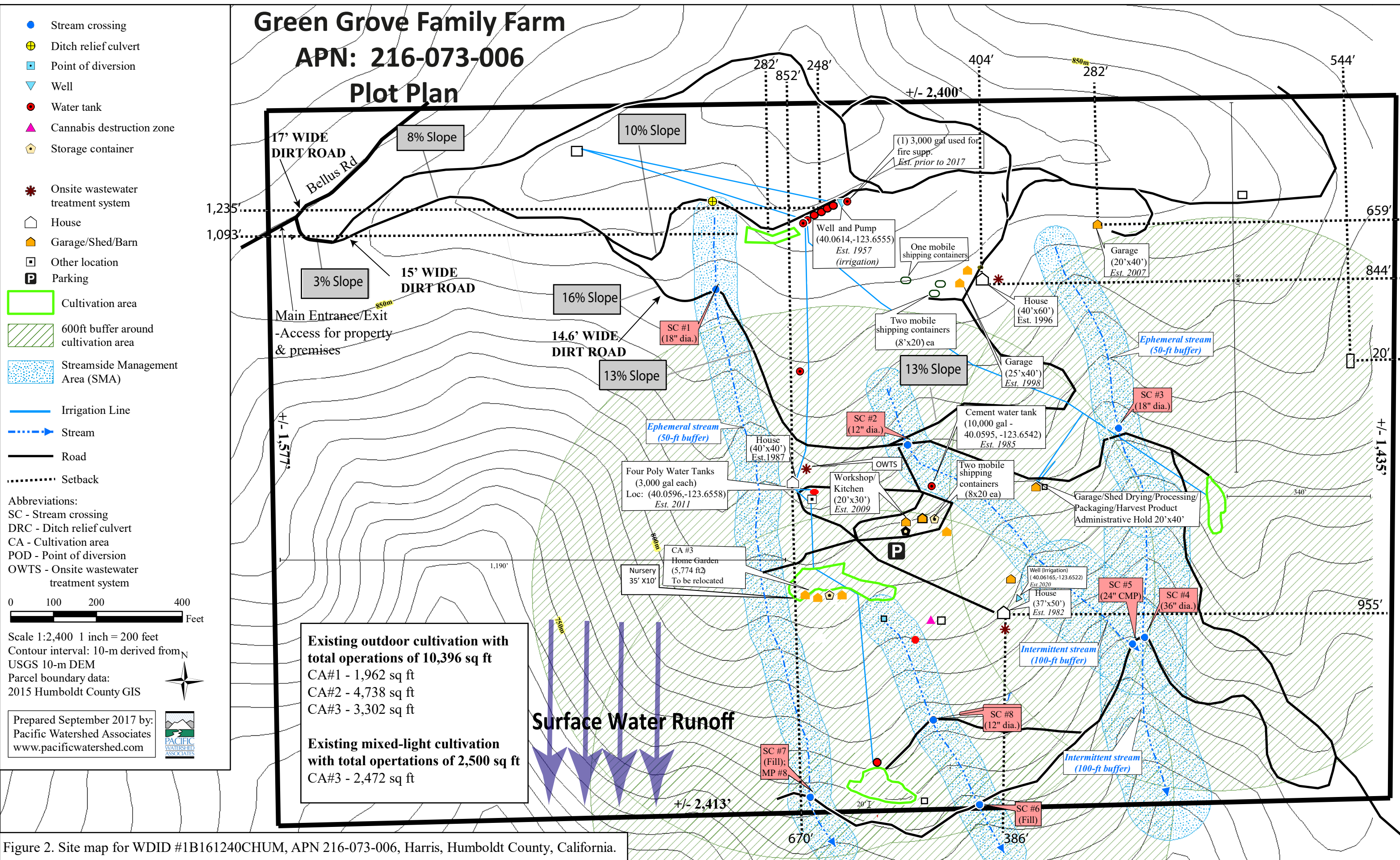
This project would stormproof stream crossings and reduce road-related sediment delivery to the Tom Long Creek Watershed. All of the crossing upgrades will be constructed according to standards provided in the "Handbook for Forest, Ranch and Rural Roads" (Weaver, Weppner and Hagans, 2015), and the California Salmonid Stream Habitat Manual, Part X (Weaver, Hagans and Weppner, 2006). Permanent impacts to existing native channel bed, channel, watercourse banks, and associated riparian habitat will be negligible and avoided. Incidental destruction of small areas of riparian habitat growing on existing road fill or in disturbed channel areas is expected at the proposed sites during remediation.

These upgraded watercourse crossings will achieve 100-year flood requirements and reduce sediment deposits into the streams that are connected to Tom Long Creek and flow to the East Branch of the Southfork of the Eel River, protecting water quality and aquatic ecosystems and limiting impact on downstream resources.

Green Grove Family Farm

APN: 216-073-006

Plot Plan



Existing outdoor cultivation with total operations of 10,396 sq ft
 CA#1 - 1,962 sq ft
 CA#2 - 4,738 sq ft
 CA#3 - 3,302 sq ft

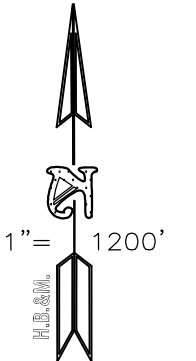
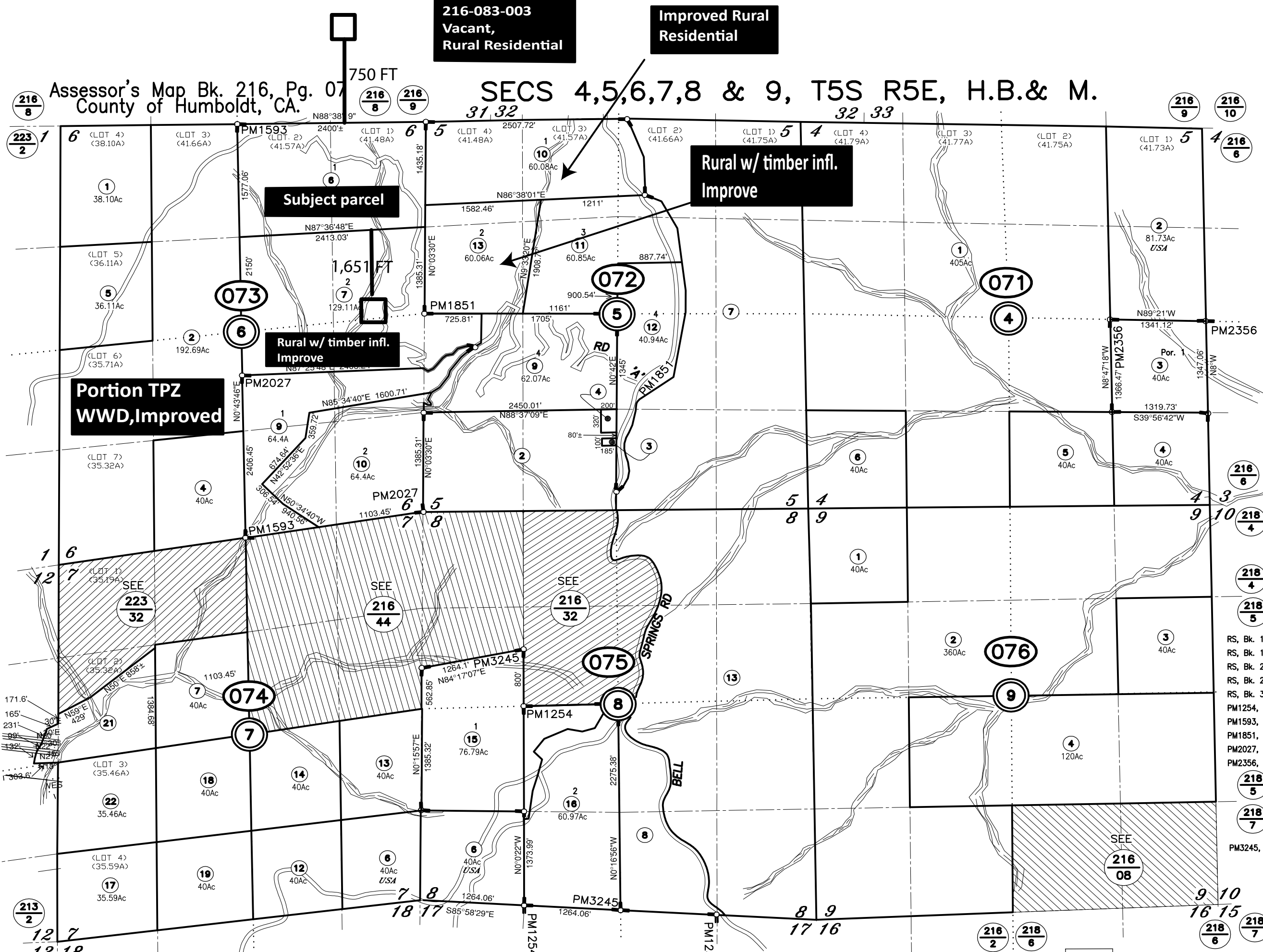
Existing mixed-light cultivation with total operations of 2,500 sq ft
 CA#3 - 2,472 sq ft

Figure 2. Site map for WDID #1B161240CHUM, APN 216-073-006, Harris, Humboldt County, California.

216-083-003
Vacant,
Rural Residential

Improved Rural
Residential

SECS 4,5,6,7,8 & 9, T5S R5E, H.B.& M.



Wesley Stoft
Walker Ridge Road Improvement
Adjacent Parcels

- RS, Bk. 14 of Surveys, Pg. 113
- RS, Bk. 15 of Surveys, Pgs. 64-65
- RS, Bk. 25 of Surveys, Pg. 60
- RS, Bk. 29 of Surveys, Pg. 113
- RS, Bk. 30 of Surveys, Pg. 35-37
- PM1254, Bk. 11 of Parcel Maps, Pg. 31
- PM1593, Bk. 14 of Parcel Maps, Pg. 7
- PM1851, Bk. 16 of Parcel Maps, Pgs. 55-
- PM2027, Bk. 18 of Parcel Maps, Pgs. 2-3
- PM2356, Bk. 20 of Parcel Maps, Pgs. 143-
- PM3245, Bk. 30 of Parcel Maps, Pgs. 115

EC Apr 28, 20
ERIN CEARLE

ASSESSOR'S PARCEL
1. THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY.
2. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA.
3. ASSESSOR'S PARCELS MAY COMPLY WITH LOCAL LOT-OR-BUILDING SITE ORDINANCES.

NOTE - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Small Circles



PLOT PLAN AND TENTATIVE MAP CHECKLIST

The following information must be shown on your plot plan or tentative map. Please check the box to the left of the items shown on the plot plan or tentative map. If any item is not on your site to your knowledge, write "N/A" next to the box. Plot plans shall be drawn on a minimum size sheet of 8-1/2" x 11", and tentative subdivision maps on a minimum size sheet of 18" x 26". **Note: This Checklist must be completed by the applicant and submitted with your application.**

Applicant's Name esley Stoft, al er Ridge Road prove ents APN 21 -- -

FOR ALL PROJECTS	
<input type="checkbox"/>	1. Name of applicant(s)
<input type="checkbox"/>	2. Location or vicinity map (on or attached to the plot plan)
<input type="checkbox"/>	3. The subject parcel (show entire parcel with dimensions)
<input type="checkbox"/>	4. Date, north arrow and scale
<input type="checkbox"/>	5. Name, County road numbers, and width of all existing and proposed access roadways adjacent to or within the subject parcel (indicate width of traveled way, grade (in % slope), and surface)
<input type="checkbox"/>	6. Existing <u>and</u> proposed improvements (label as "existing" and "proposed" with dimensions and distance to nearest two (2) property lines)
<input type="checkbox"/>	<input type="checkbox"/> a. Structures and buildings (include floor area, height and proposed use)
<input type="checkbox"/>	<input type="checkbox"/> b. Driveways and turnaround areas (indicate width, grade (in % slope) and surface)
<input type="checkbox"/>	<input type="checkbox"/> c. Utility lines (electric, gas, telephone, sewer, water, and cable TV)
<input type="checkbox"/>	<input type="checkbox"/> d. Septic tanks and leachfields (label primary/reserve areas and test holes)
<input type="checkbox"/>	<input type="checkbox"/> e. Wells
<input type="checkbox"/>	<input type="checkbox"/> f. Parking and loading areas (show individual parking spaces, including handicapped parking and ramps)
<input type="checkbox"/>	<input type="checkbox"/> g. Storm drains, curbs and gutters
<input type="checkbox"/>	<input type="checkbox"/> h. Emergency water storage tanks and fire hydrants
<input type="checkbox"/>	<input type="checkbox"/> i. Landscaped areas (include proposed exterior lighting)
<input type="checkbox"/>	<input type="checkbox"/> j. Major vegetation (identify mature trees (12" dbh or larger) to be removed)
<input type="checkbox"/>	<input type="checkbox"/> k. Diked areas
<input type="checkbox"/>	<input type="checkbox"/> l. Proposed grading and fill (estimate volume)
<input type="checkbox"/>	<input type="checkbox"/> m. Signs (indicate size, illuminated, and design (e.g., monument, pylon, etc.))
<input type="checkbox"/>	<input type="checkbox"/> n. Other - specify _____
<input type="checkbox"/>	7. Direction of surface water runoff
<input type="checkbox"/>	<input type="checkbox"/> 8. Location and width of all existing and proposed easements of record
<input type="checkbox"/>	9. Hazardous areas (indicate on map if on the project site <u>or</u> within 400 feet of the project site):
<input type="checkbox"/>	<input type="checkbox"/> a. Areas subject to inundation or flooding
<input type="checkbox"/>	<input type="checkbox"/> b. Steep or unstable slopes
<input type="checkbox"/>	<input type="checkbox"/> c. Expansive (clay) soils
<input type="checkbox"/>	<input type="checkbox"/> d. Earthquake faults
<input type="checkbox"/>	<input type="checkbox"/> e. Hazardous waste or substance sites
<input type="checkbox"/>	<input type="checkbox"/> f. Other - specify _____
<input type="checkbox"/>	10. Sensitive habitat areas (indicate on map if on project site <u>or</u> within 400 feet of the project site):
<input type="checkbox"/>	<input type="checkbox"/> a. Creeks, rivers, sloughs and other drainage courses
<input type="checkbox"/>	<input type="checkbox"/> b. Lakes, ponds, marshes, or "wet" meadows
<input type="checkbox"/>	<input type="checkbox"/> c. Beaches
<input type="checkbox"/>	<input type="checkbox"/> d. Sand dunes
<input type="checkbox"/>	<input type="checkbox"/> e. Other - specify _____
<input type="checkbox"/>	11. Historical buildings or known archaeological or paleontological resources
<input type="checkbox"/>	12. Land use and buildings on adjacent parcels, and approximate distances to closest property lines
FOR LOT LINE ADJUSTMENT PLOT PLANS ONLY	
<input type="checkbox"/>	13. Proposed new lines and lines to be eliminated (show lines to be eliminated as dashed)
<input type="checkbox"/>	14. Areas (in square footage or acreage) of the initial and resulting parcels

FOR TENTATIVE SUBDIVISION MAPS ONLY	
<input type="checkbox"/>	16. Approximate dimensions and areas of all proposed lots
<input type="checkbox"/>	17. A statement that "All easements of record are shown on the tentative map and will appear on the recorded subdivision map"
<input type="checkbox"/>	18. Contour lines (at _____ intervals)
<input type="checkbox"/>	19. For major subdivisions (5 or more parcels): proposed drainage improvements, details of any grading to be performed, approximate radii of all roadway curves, areas for public use, and typical sections of all streets, highways, ways and alleys
<input type="checkbox"/>	20. Names and assessor's parcel numbers of all contiguous ownerships

NOTE: THE SUBMITTAL OF INCOMPLETE OR ILLEGIBLE PLOT PLANS OR TENTATIVE MAPS WILL CAUSE DELAYS IN THE PROCESSING OF YOUR APPLICATION

Walker Ridge Road Improvements
Applicant: Wesley Stoff
APN: 216-073-006
Mitigation and Remediation Fund
Scope of Work

The work will be completed by MS Excavation.

Crossing #1 - removal and replacement of an 18-inch culvert with a 50 foot, 24-inch culvert on a near origin Class III watercourse. The culvert was installed high and short in the fill, causing ponding at the inlet and a 3 foot plunge at the outlet. The crossing has a functional critical dip on the left hingeline and an insloped right road approach, which conveys road runoff to the culvert inlet through the inboard ditch.

The stream crossing will be replaced with a 24-inch diameter by 50 foot long culvert set at the base of the fill and in line with the natural channel. The lower $\frac{3}{4}$ of the outboard fillslope will be armored with 15 cubic yards of .5-1.5 foot diameter riprap to minimize erosion of the road fill. The crossing will be rebuilt with a critical dip on the left hingeline, to prevent diversion in the event the culvert plugs or its capacity is exceeded.

Crossing #2 - removal and replacement of a 12-inch diameter culvert with a 24-inch diameter culvert on a near origin Class III watercourse. The culvert is installed short and high in the fill, with diversion potential down the left road.

The stream crossing will be replaced with a 24-inch diameter by 50 foot long culvert set at the base of fill and in line with the natural channel. The road prism will need to be raised 1.5 feet with approximately 15 cubic yards of locally generated fill to accommodate the new, larger pipe. The crossing will be rebuilt with a critical dip on the left hingeline, to prevent diversion in the event the culvert plugs or its capacity is exceeded.

Crossing #2b - a near origin, Class III watercourse with no formal drainage structure. This road alignment is located upstream of Stream Crossing #2 (approximately 50') and is a seasonally used quad trail. There is diversion potential down the right road at this site.

An armored fill will be installed at this location to route flow across the roadbed in a way that prevents the diversion of streamflow out of the stream channel and protects the road fill from erosion by creating a broad dip through the road prism and excavating a small keyway in the outboard fill. Dimensions for the keyway will be approximately 10 feet wide at the top, 4 feet wide at the base, 1 foot deep, and 15 feet long. The keyway will be armored with 10 cubic yards of .5-1.5 diameter riprap to accommodate for seasonal stream flow.

Crossing #3 - an undersized, 18-inch diameter culvert on a Class III watercourse. The culvert was installed high and short in the fill and diversion potential exists down the left road.

The stream crossing will be replaced with a 36-inch diameter by 30 foot long culvert set at the base of fill and in line with the natural channel. The entire inboard and outboard fillslopes will be armored with 5 and 15 cubic yards of .5-1.5 foot diameter riprap, respectively. To prevent diversion potential, the crossing will have a critical dip installed on the left hingeline.

Crossing #5 - A 24-inch diameter plastic culvert on a Class III watercourse, installed at the base of fill, and in-line with the natural channel. The culvert is slightly undersized for the 100 year peak streamflow and associated debris.

The stream crossing will be replaced with a 30-inch diameter by 40 foot long culvert set at the base of fill and in line with the natural channel. The lower $\frac{1}{4}$ of the inboard and outboard fillslopes will be armored with 2 and 5 cubic yards of .5-1.5 foot diameter riprap, respectively, to protect the road fill from erosion.

Crossing #7 - a Class III watercourse crossing with no formal drainage structure. This crossing is just within the landowner's property boundary, as delineated by the recent parcel boundary survey flags, and is only used seasonally by the neighbors on the adjacent parcel.

The stream crossing will be replaced with a 30-inch diameter by 40 foot long culvert set at the base of fill and in line with the natural channel. The lower $\frac{1}{4}$ of the inboard and outboard fillslopes will be armored with 2 and 5 cubic yards of .5-1.5 foot diameter riprap, respectively, to protect the road fill from erosion.

Crossing #8 - a partially plugged, 12-inch diameter culvert on a Class III watercourse. The culvert was installed high and short in the fill.

The stream crossing will be replaced with a 24-inch diameter by 20 foot long culvert set at the base of the fill and in line with the natural channel. The lower $\frac{3}{4}$ of the outboard fillslope will be armored with 5 cubic yards of .5-1.0 foot diameter riprap to protect the road fill from erosion.

Crossing #9 - A 36-inch diameter plastic culvert on a Class III watercourse. The culvert is slightly undersized for the 100 year peak streamflow and associated debris, is installed at the base of fill, and in-line with the natural channel.

The stream crossing will be replaced with a 48-inch diameter by 50 foot long culvert set at the base of fill and in line with the natural channel. The lower $\frac{3}{4}$ of the inboard and outboard fillslopes will be armored with 10 and 15 cubic yards of .5-2 foot diameter riprap, respectively.

During the project, care will be taken not to unnecessarily disturb the native channel outside of the identified areas. Fill to be permanently removed will be stored in designated locations with no risk of sediment delivery. All disturbed areas where sediment delivery from surface erosion processes is feasible will be seeded and mulched to reduce surface erosion and transport processes.

The proposed crossing upgrades will occur on in-use roads. All disturbance associated with this project will be limited to the road and immediately adjacent channel reaches as necessary to improve road drainage, stormproof the crossings, and prevent sediment delivery to watercourses. All stream crossings will be dry at time of construction. Work will only occur during the period of June 15 through October 15 (or first significant rainfall) to limit and avoid impacts to aquatic habitat and salmonids. Vegetation will only be removed from sites where it is growing on anthropogenically placed fill material, where erosion is likely to deliver to active watercourses, or where necessary for the implementation of effective storm-proofing treatments.

Walker Ridge Road Improvements
Applicant: Wesley Stoff
APN: 216-073-006
Mitigation and Remediation Fund
Schedule for Completion

Milestone	Start Date	End Date
Detailed Project Scoping	March 1, 2022	March 30, 2022
Bidding and Contracting	March 1, 2022	March 30, 2022
Project Ground-Breaking	June 1, 2022	
Project Completion		August 1, 2022
Monitoring	June 1, 2022	Ongoing

Five-Year Erosion Control Plan

Project Management

Before and during the project best practices will be applied to ensure minimal disturbance to the waterway and local habitat.

- Work will be completed prior to the start of any rain that causes overland flow across or along the disturbed surface.
- Within 100 feet of a watercourse or lake, the traveled surface of roads will be treated to prevent waterborne transport of sediment and concentration of runoff that results from operations.
- The treatment for disturbed areas within 100 feet of a watercourse including (1) areas exceeding 100 contiguous square feet where operations have exposed bare soil, (2) road cut banks and fills, and (3) any other area of disturbed soil that threatens to discharge sediment into waters in amounts that will negatively affect the quality and beneficial uses of water, shall be grass seeded and mulched with straw.
 - Grass seed shall be applied at a rate exceeding 100 pounds per acre.
 - Straw mulch shall be applied in amounts sufficient to provide at least 2-4 inch depth of straw with minimum 90% coverage.
 - Slash may be substituted for straw mulch provided the depth, texture, and ground contact are equivalent to at least 2-4 inches of straw mulch.
 - Any treated area that has been subject to reuse or has less than 90% surface cover shall be treated again prior to the end of operations.
- Care will be taken not to unnecessarily disturb the native channel outside of the identified areas.
- Fill to be permanently removed will be stored in designated locations with no risk of sediment delivery.
- All disturbed areas where sediment delivery from surface erosion processes is feasible will be seeded and mulched to reduce surface erosion and transport processes.
- All disturbance associated with this project will be limited to the road and immediately adjacent channel reaches as necessary to improve road drainage, stormproof the crossings, and prevent sediment delivery to watercourses.
- Any spoils generated during construction will be used for road treatments, such as shaping, or stored in a stable location and mulched to prevent surface erosion.
- The stream crossing will be treated according to standards provided in the “Handbook for Forest, Ranch and Rural Roads” (Weaver, Weppener and Hagans, 2015) and the California Salmonid Stream Habitat Manual, Part X (Weaver, Hagans and Weppner, 2006).

Roads

- Sidecast or fill material extending more than 20 feet in slope distance from the outside edge of a roadbed, which has access to a watercourse or lake, shall be treated with slope stabilization measures.

- All roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following operations and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within 100 feet of a watercourse, or (2) any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning or a flash flood watch.

Streamside Management Area

- Within 100 feet of a watercourse, where the undisturbed natural ground cover cannot effectively protect beneficial uses of water from sediment introduction, the ground shall be treated with slope stabilization measures and timed as above.
- Except for culvert repairs and maintenance, no driving or operating of vehicles or equipment will occur within the riparian setbacks or within waters of the state unless authorized.

Maintenance

- Work will only occur during the period of June 15 through October 15 (or first significant rainfall) to limit and avoid impacts to aquatic habitat and salmonids.
- Vegetation will only be removed from sites where it is growing on anthropogenically placed fill material, where erosion is likely to deliver to active watercourses, or where necessary for the implementation of effective storm-proofing treatments.
- All disturbed areas capable of delivering sediment to a watercourse will be seeded with barley or wheat based erosion control seed not containing Annual or Perennial Ryegrass and mulched with weed free straw at a rate no less than 50 lb/acre of seed and 4,000 lb/acre of straw.

Monitoring

To avoid risk of future stream diversions and erosion, monitoring will be implemented to reduce the risk of stream crossing failures caused by excessive flow, culvert plugging, overtopping, washout and stream diversion.

- Regular, periodic, and storm inspections and maintenance, including removal of debris.
- Ongoing monitoring for proper drainage during the rainy season.
- Installation of debris barriers.
- Monitor culverts for rusting, leaking, separated or other signs of impending failure.
- Look for evidence of plugging and overtopping, such as depositional terraces or a delta of sediment upstream of the pipe inlet.
- Look for ponding, damage to inlets, including crushed or ripped inlets.
- Monitor crossing for slope failure from one or both sides of the channel.

Walker Ridge Road Improvements
Applicant: Wesley Stoff
APN 216-073-006
Project Budget

Budget Item	Grant	Other Funds
Permit Fees		
401 Certification	\$2,066.00	
Consultant and Professional Fees	\$11,500.00	
Materials	\$ 30,100.00	
Equipment	\$ 26,320.00	
Labor	\$ 7,500.00	
Total	\$77,486.00	Trellis Equity \$10,000.00
Total Requested	\$67,486.00	

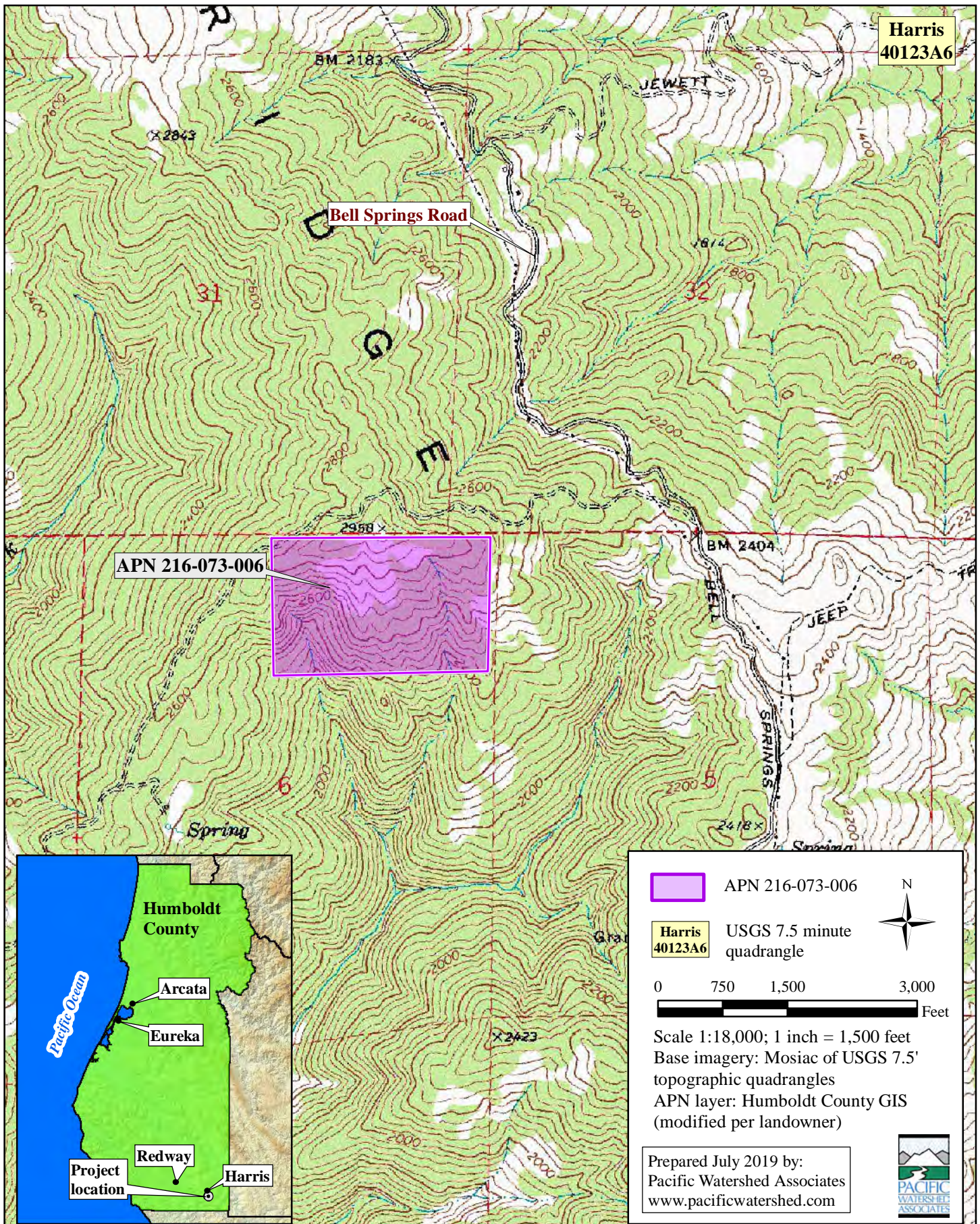


Figure 1. Location map for W. Stoft Lake or Streambed Alteration Agreement, APN 216-073-006, Harris, Humboldt County, California.



Stoft Topo Map

Humboldt County Planning and Building Department

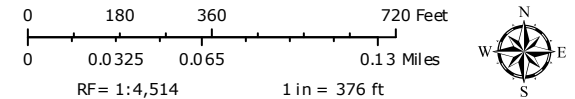
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Map Disclaimer:

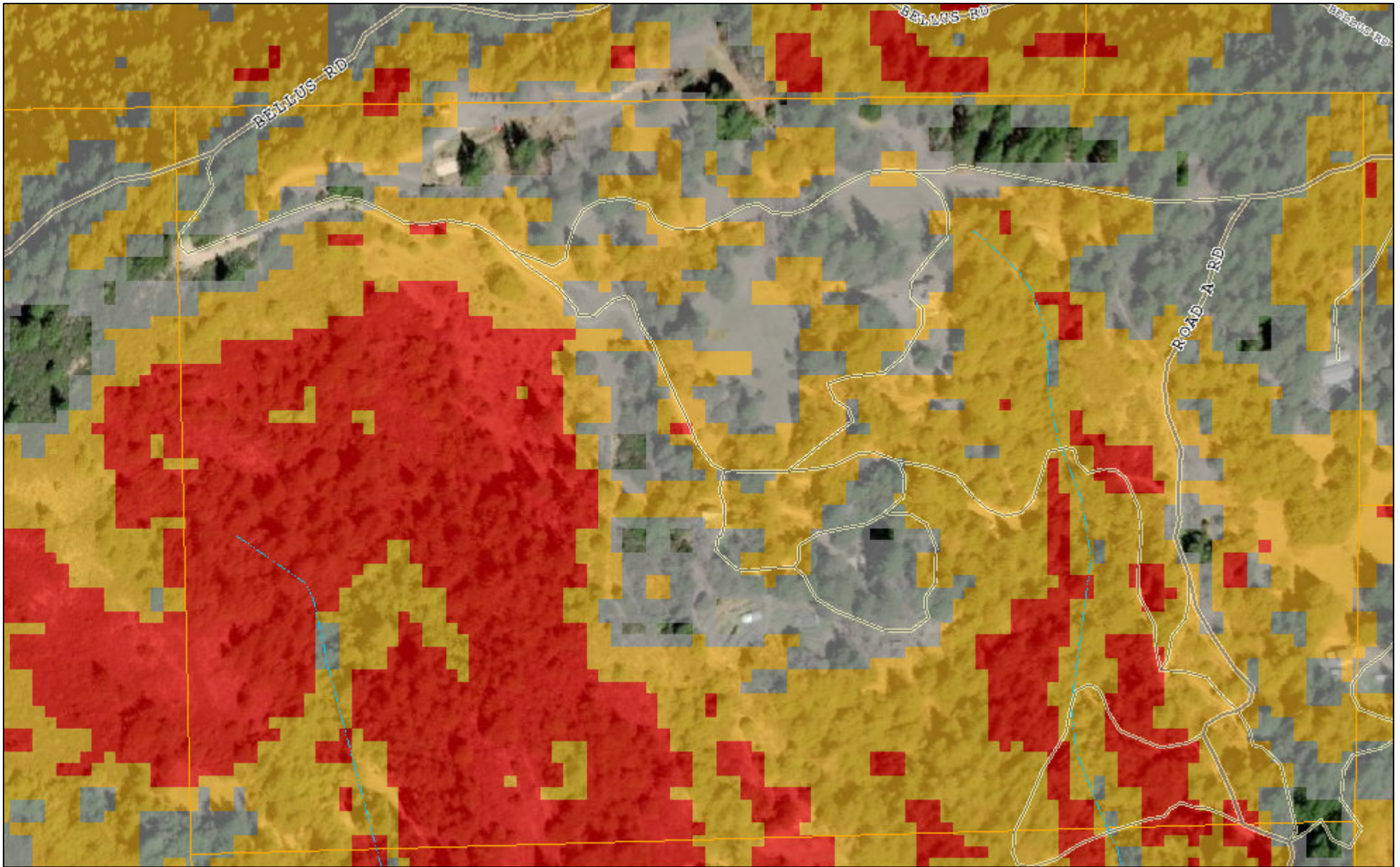
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- | | | | |
|---------------------------|---------------------------|----------------------------------|------------------|
| Highways and Roads | — Private or Unclassified | — Subsurface | — Major Interval |
| — Principal Arterials | — Major River or Stream | — City Boundary | |
| — Minor Arterials | | — Counties | |
| — Major Collectors | Blue Line Streams | — Parcels (no APN labels) | |
| — Minor Collectors | — Perennial 1-3 | Topographic Contours 40ft | |
| — Local Roads | — Perennial >4 | — Minor Interval | |
| | — Intermittent | | |



Sources: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
 Humboldt County GIS
 Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
 FRAP, FEMA, USGS, ESA, CGS

Figure 2 - Topographic Map



Stoft Slope Map

Humboldt County Planning and Building Department

Printed: October 11, 2021

Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:

While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.

Highways and Roads

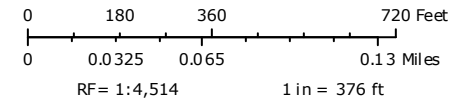
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads

- Private or Unclassified
- Major River or Stream
- Perennial 1-3
- Perennial >4

Blue Line Streams

- Perennial 1-3
- Perennial >4

- Intermittent
- Subsurface
- City Boundary
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Sources: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
 Humboldt County GIS
 Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
 FRAP, FEMA, USGS, ESA, CGS

Figure 3 - Slope Map

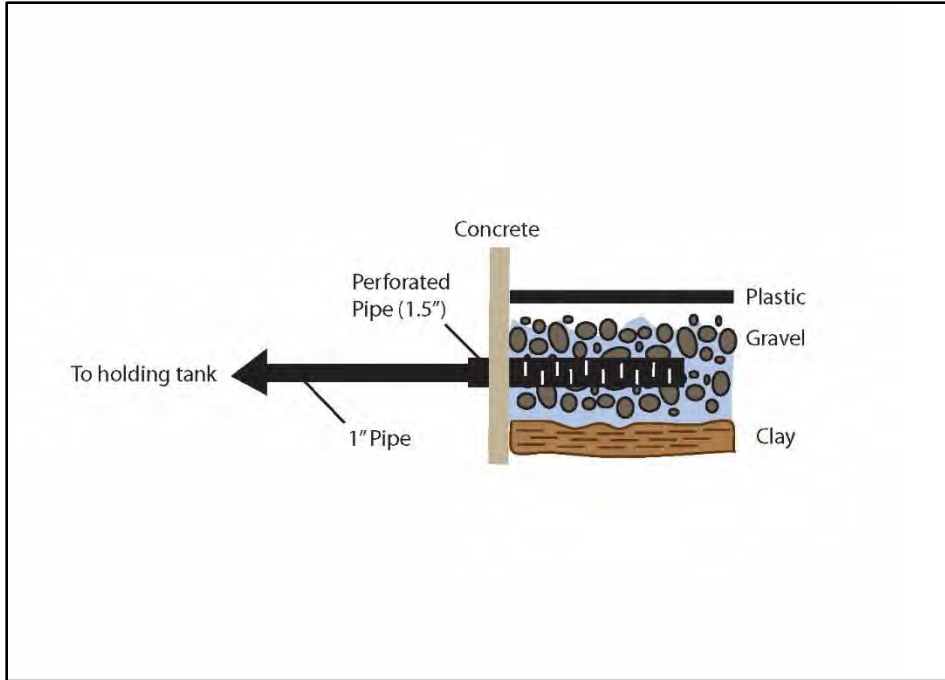


Photo 3 – Project #1, description of the POD #1 domestic diversion structure.

Stream Crossings



Photo 4 – Project #2, View of Stream Crossing (SC) #1 looking downstream towards the culvert inlet.



Photo 5 – Project #2, View of SC #1 from the right road approach. Note the culvert outlet (arrow) set high in the outboard fill face.



Photo 6 – Project #3, View of the inlet of SC #2 from the right road inboard ditch, which is actively delivering fine sediment to the crossing.



Photo 7 – Project #3, View looking upstream from the outlet of SC #2.



Photo 8 – Project #4, View of the fill crossing, SC #2B from the right road. Note the flow direction depicted by the arrow. This crossing is on a quad trail used seasonally by the applicant to get to House #2 from House #1.



Photo 9 – Project #5, View looking downstream at SC #3 culvert inlet.



Photo 10 – Project #5, View from the right road looking at the SC #3 culvert outlet set high and short in the fill.



Photo 11 – Project #6, View looking upstream of SC #5 culvert inlet (arrow).



Photo 12 – Project #6, View from right road looking at SC #5 (lower arrow) culvert outlet, set at the base of fill. Note the upper arrow shows disclosure point SC #4 culvert outlet, also set at the base of fill.



Photo 13 – Project #7, View from the right road looking at SC #7. Note the flow direction depicted by the arrow, and the pink property boundary flag in the foreground.



Photo 14 – Project #7, View from the base of fill at SC #7 looking upslope at the outboard fill face.



Photo 15 – Project #8, View looking downstream at SC #8 plugged culvert inlet.



Photo 16 – Project #8, View looking downstream at SC #8 culvert outlet.



Photo 17 – Project #9, View looking downstream at SC #9 culvert inlet.



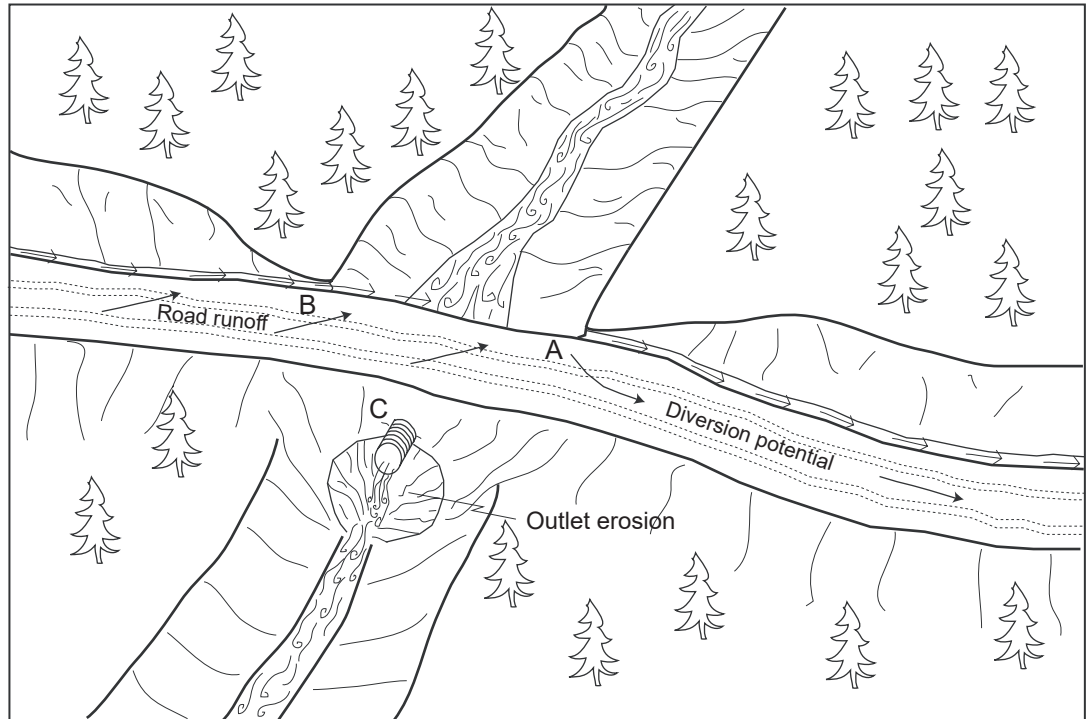
Photo 18 – Project #9, View looking upstream at SC #9 culvert outlet, set at the base of fill.

Figure 4H - Photographs

Typical Problems and Applied Treatments for a Non-fish Bearing Upgraded Stream Crossing

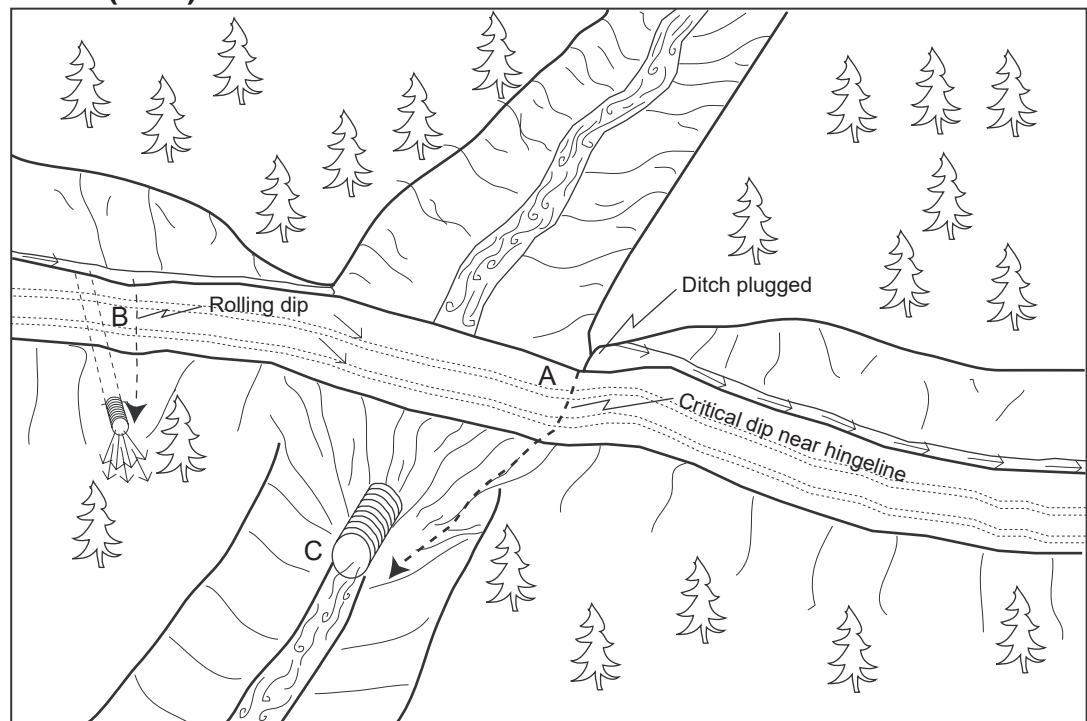
Problem condition (before)

- A - Diversion potential
- B - Road surface and ditch drain to stream
- C - Undersized culvert high in fill with outlet erosion



Treatment standards (after)

- A - No diversion potential with critical dip installed near hingeline
- B - Road surface and ditch disconnected from stream by rolling dip and ditch relief culvert
- C - 10-year culvert set at base of fill



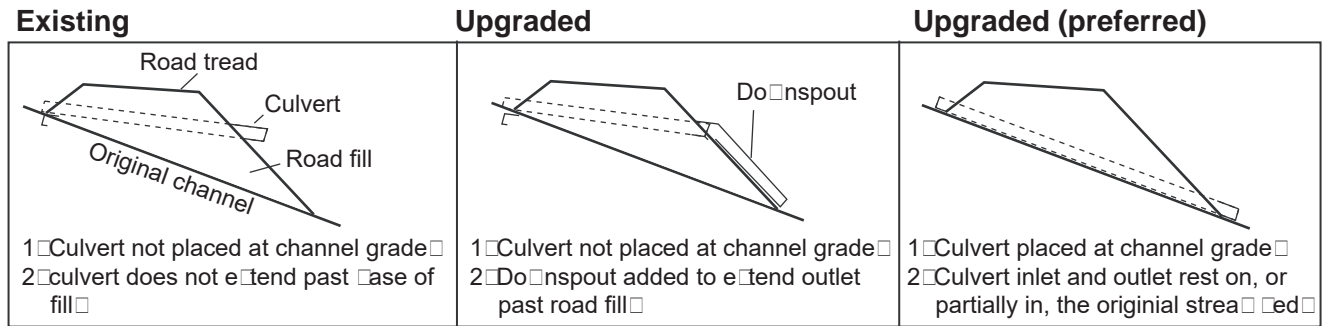
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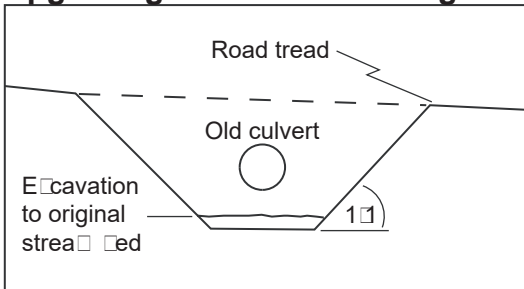
PWA Typical Drawing #1a

Figure 5A - Culvert Specifications

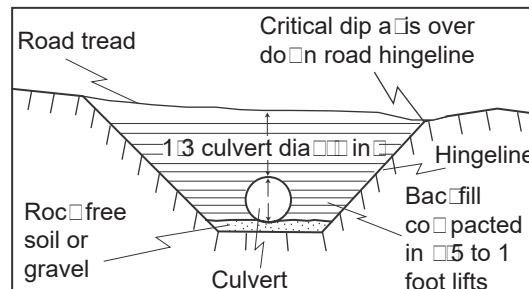
Typical Design of a Non-fish Bearing Culverted Stream Crossing



Excavation in preparation for upgrading culverted crossing



Upgraded stream crossing culvert installation



Note

Road upgrading tasks typically include upgrading stream crossings by installing larger culverts and inlet protection (trash carriers) to prevent plugging. Culvert sizing for the 100-year peak storm flow should be determined by both field observation and calculations using a procedure such as the Rational Formula.

Stream crossing culvert Installation

- Culverts shall be aligned with natural stream channels to ensure proper function, and prevent bank erosion and plugging by debris.
- Culverts shall be placed at the base of the fill and the grade of the original stream bed, or dropspouted past the base of the fill.
- Culverts shall be set slightly below the original stream grade so that the water drops several inches as it enters the pipe.
- To allow for sagging after burial, a camber shall be set between 1.5 to 3 inches per 100 feet culvert pipe length.
- Backfill material shall be free of rocks, lumps or other debris that could dent or puncture the pipe or allow water to seep around pipe.
- First one end then the other end of the culvert shall be covered and secured. The center is covered last.
- Backfill material shall be tamped and compacted throughout the entire process.
 - Base and side wall material will be compacted before the pipe is placed in its bed.
 - Backfill compacting will be done in 5 - 1 foot lifts until 1/3 of the diameter of the culvert has been covered. A gas powered tamper can be used for this work.
- Inlets and outlets shall be armored with rock or mulched and seeded with grass as needed.
- Trash protectors shall be installed just upstream from the culvert where there is a hazard of floating debris plugging the culvert.
- Layers of fill will be pushed over the crossing until the final designed road grade is achieved, at a minimum of 1.3 to 1.2 the culvert diameter.

Erosion control measures for culvert replacement

Both mechanical and vegetative measures will be employed to minimize accelerated erosion from stream crossing and ditch relief culvert upgrading. Erosion control measures implemented will be evaluated on a site by site basis. Erosion control measures include but are not limited to:

- Minimizing soil exposure by limiting excavation areas and heavy equipment disturbance.
- Installing filter drains of slash at the base of the road fill to minimize the movement of eroded soil to downslope areas and stream channels.
- Retaining rooted trees and shrubs at the base of the fill as anchor for the fill and filter drains.
- Bare slopes created by construction operations will be protected until vegetation can stabilize the surface. Surface erosion on exposed cuts and fills will be minimized by mulching, seeding, planting, compacting, arroyoing, and/or benching prior to the first rains.
- Excess or unusable soil will be stored in long term spoil disposal locations that are not limited by factors such as excessive moisture, steep slopes greater than 1:1, archeology potential, or proximity to a watercourse.
 - On running streams, water will be pumped or diverted past the crossing and into the downstream channel during the construction process.
 - Straw bales and/or silt fencing will be employed where necessary to control runoff within the construction zone.

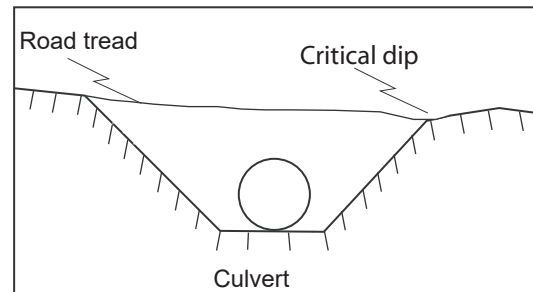
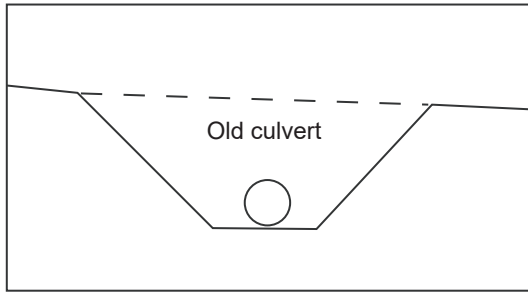
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Typical Drawing #2

Figure 5B - Culvert Specifications

Typical Design of Upgraded Stream Crossings



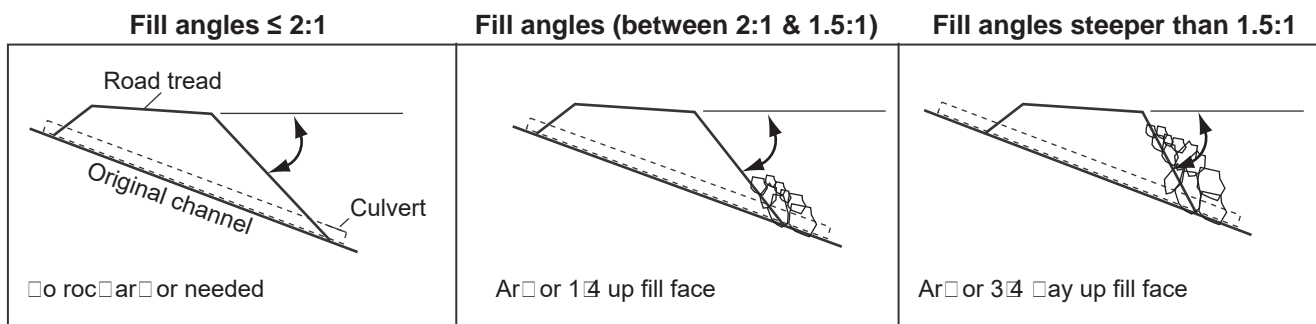
Stream crossing culvert Installation

1. Culverts shall be aligned with natural stream channels to ensure proper function, and prevent channel erosion and plugging by debris.
2. Culverts shall be placed at the base of the fill and the grade of the original stream bed or downstream past the base of the fill.
3. Culverts shall be set slightly below the original stream grade so that the water drops several inches as it enters the pipe.
5. To allow for sagging after burial, a camber shall be set between 1/5 to 3 inches per 100 feet culvert pipe length.
- Backfill material shall be free of rocks, lumps or other debris that could dent or puncture the pipe or allow water to seep around pipe.
- First one end and then the other end of the culvert shall be covered and secured. The center is covered last.
- Backfill material shall be tamped and compacted throughout the entire process.
 - Base and side wall material will be compacted before the pipe is placed in its bed.
 - Backfill compacting will be done in 5 - 1 foot lifts until 1/3 of the diameter of the culvert has been covered. A gas powered tamper can be used for this purpose.
- Inlets and outlets shall be armored with rock or mulched and seeded with grass as needed.
1. Trash protectors shall be installed just upstream from the culvert where there is a hazard of floating debris plugging the culvert.
11. Layers of fill will be pushed over the crossing until the final designed road grade is achieved, at a minimum of 1/3 to 1/2 the culvert diameter.

Note

Road upgrading tasks typically include upgrading stream crossings by installing larger culverts and inlet protection trash carriers to prevent plugging. Culvert sizing for the 100-year peak storage flow should be determined by both field observation and calculations using a procedure such as the Rational Formula.

Armoring fill faces



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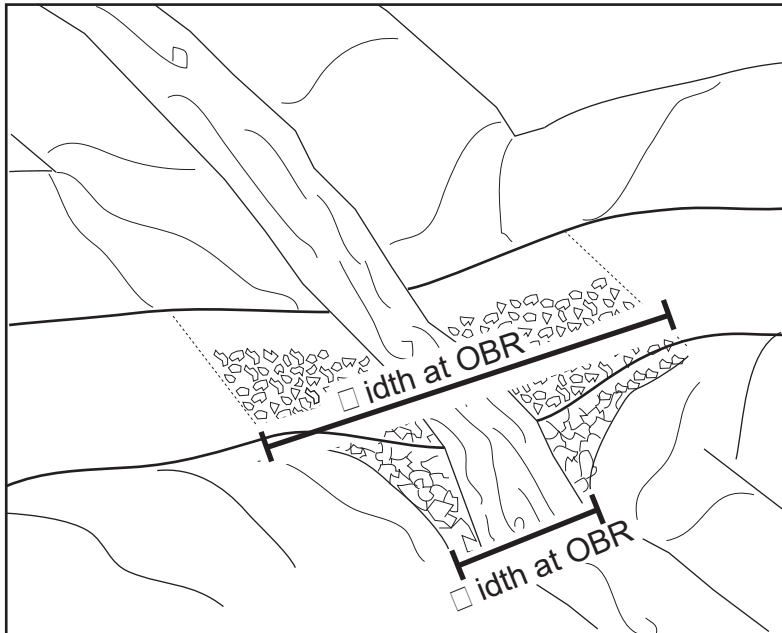
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PWA Typical Drawing #4

Figure 5C - Culvert Specifications

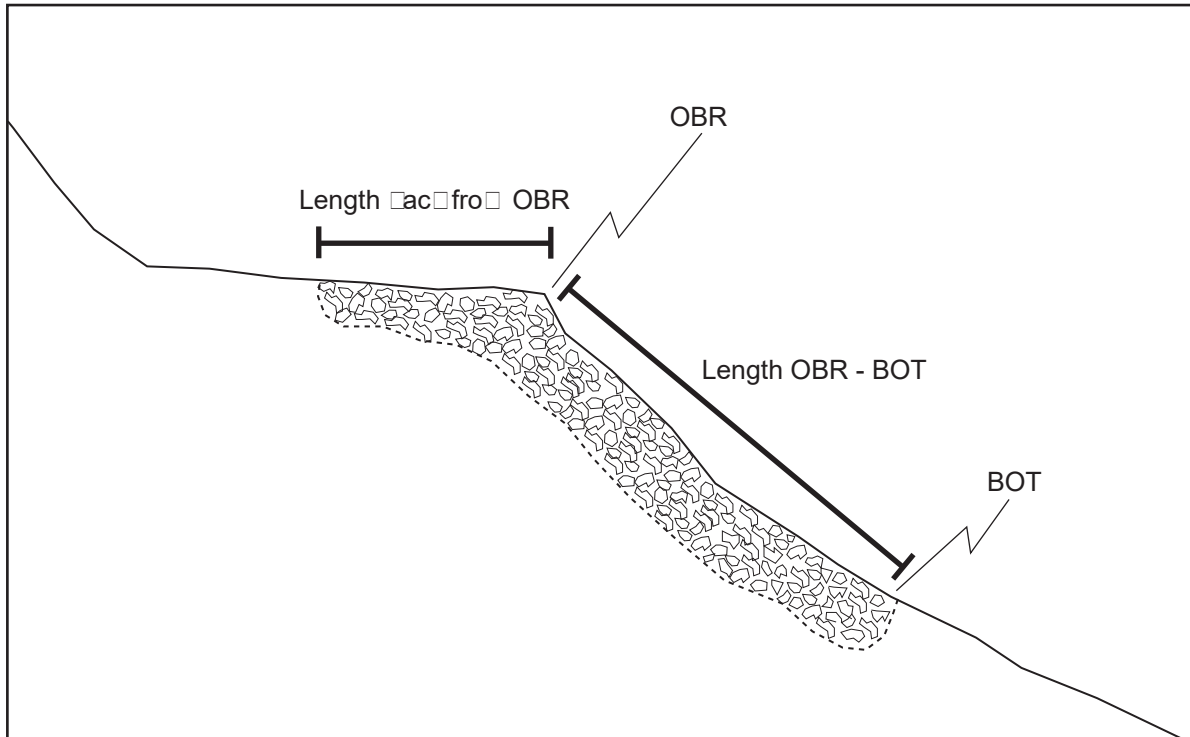
Typical Dimensions Referred to for Armored Fill Crossings

Widths in oblique view



OBR - Outboard edge of road

Lengths in profile view



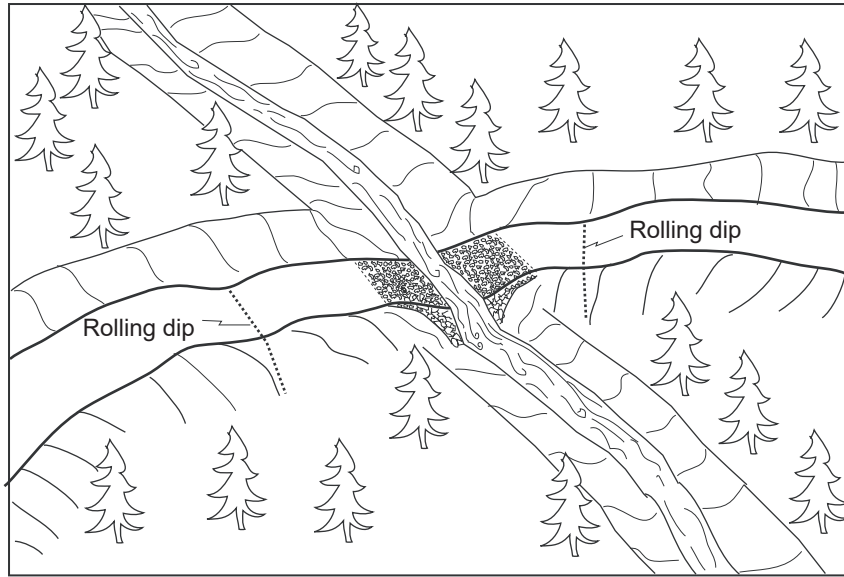
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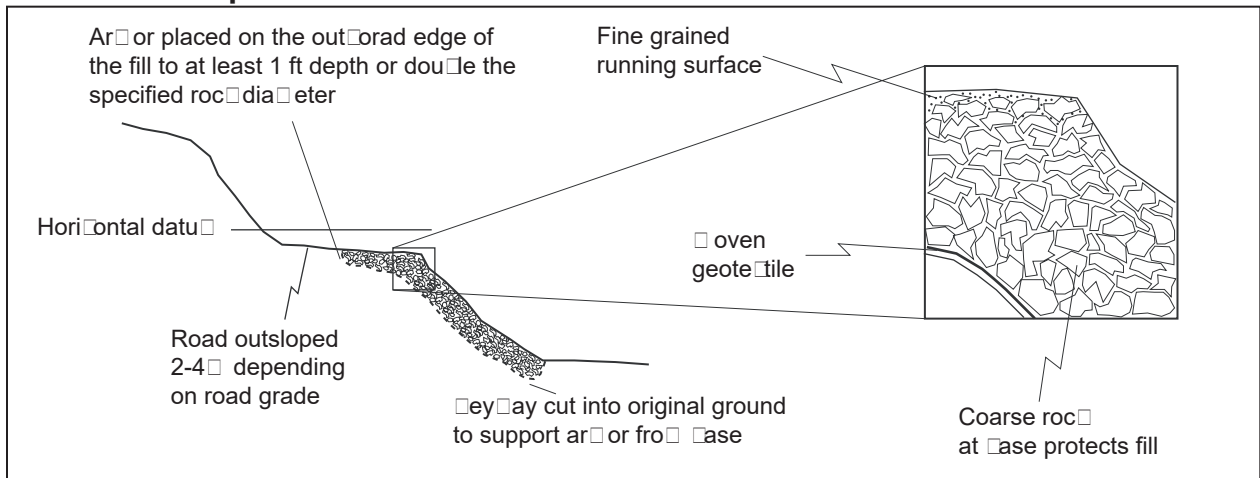
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Figure 5D - Culvert Specifications

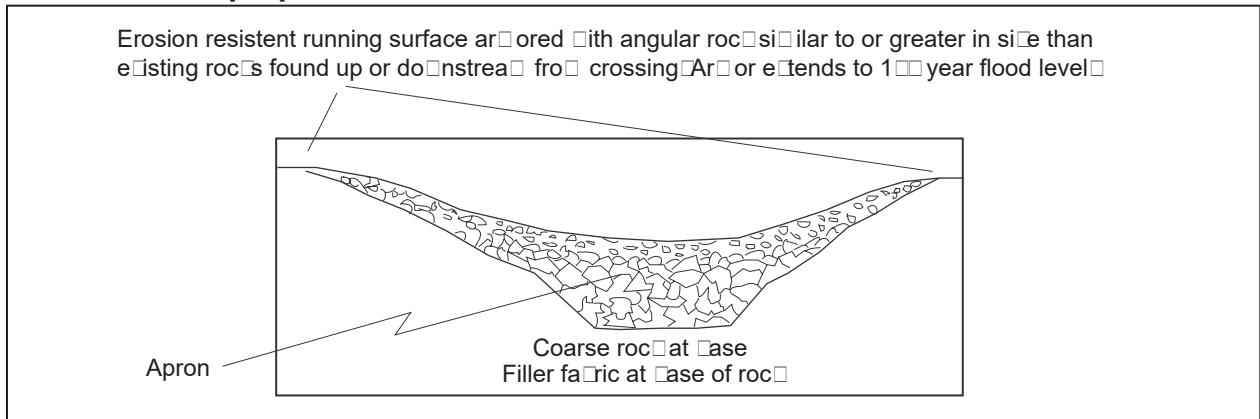
Typical Armored Fill Crossing Installation



Cross section parallel to watercourse



Cross section perpendicular to watercourse



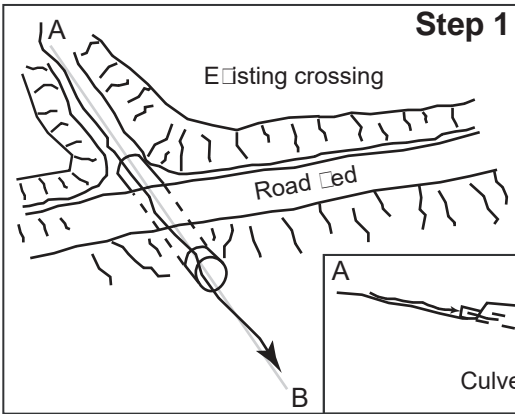
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Typical Drawing #6

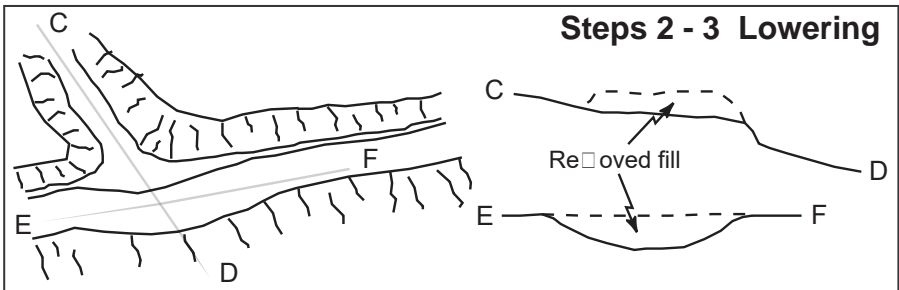
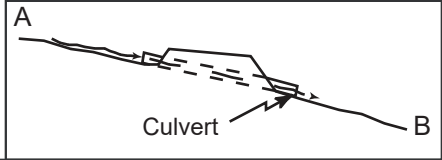
Figure 5E - Culvert Specifications

Ten Steps for Constructing a Typical Armored Fill Stream Crossing



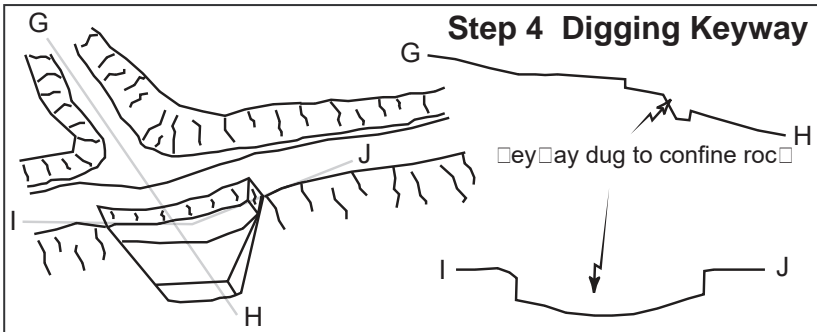
Step 1

- The two most important points are
 - A** The rock must be placed in a "U" shape across the channel to confine flow within the armored area. Flooding around the rock armor or will gully the remaining fill. Proper shape of surrounding road fill and good rock placement will reduce the likelihood of crossing failure.
 - B** The largest rocks must be used to buttress the rest of the armor in two locations:
 - The base of the armored fill where the fill meets natural channel. This will buttress the armor placed on the outward fill face and reduce the likelihood of it washing down slope.
 - The area in slope from the road tread to the outer fill face. This will buttress the fill placed on the outer road tread and will determine the base level of the creek as it crosses the road surface.



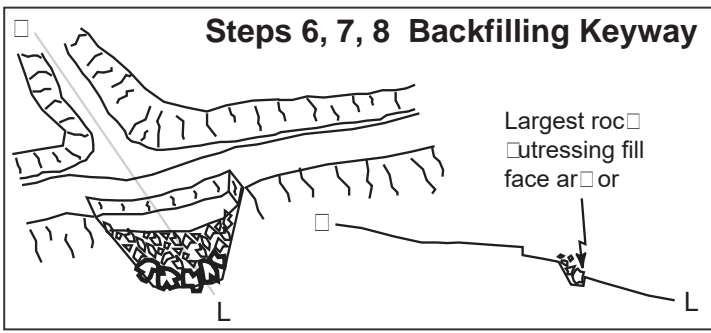
Steps 2 - 3 Lowering

- Remove any existing drainage structures including culverts and household logs.
- Construct a dip centered at the crossing that is large enough to accommodate the 1-year flood event and prevent diversion (C-D, E-F).



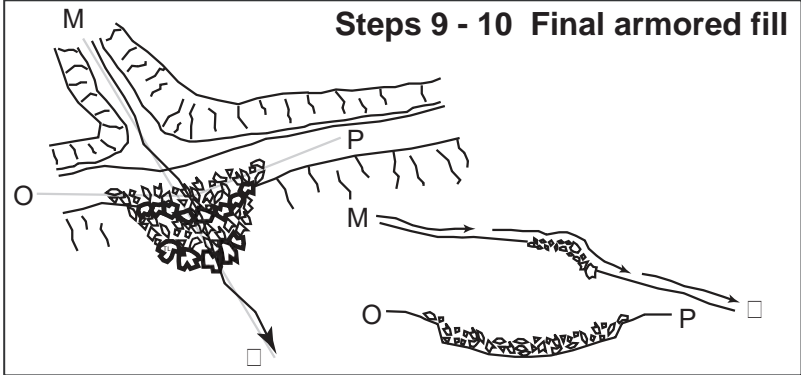
Step 4 Digging Keyway

- Dig a keyway to place rock in that extends from the outer 1/3 of the road tread down the outward road fill to the point where outward fill meets natural channel up to 3 feet into the channel bed depending on site specifics (G-H, I-J).
- Install geofabric (optional) within keyway to support rock in wet areas and to prevent pinning of the crossing at low flows.



Steps 6, 7, 8 Backfilling Keyway

- Put aside the largest rock armor to create 2 buttresses in the next step.
- Create a buttress using the largest rock as described in the site treatment specifications at the base of fill. This should have a U-shape to it and will define the outlet of the armored fill.
- Backfill the fill face with remaining rock armor or making sure the final armored area has a U-shape that will accommodate the largest expected flow (K-L).

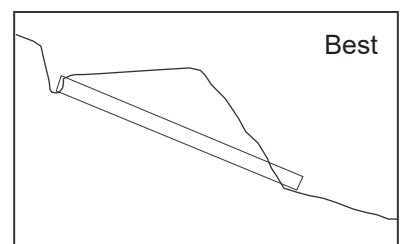
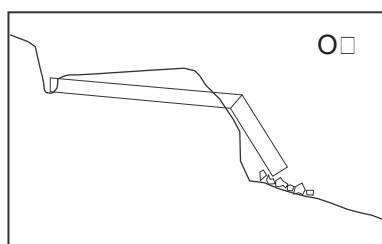
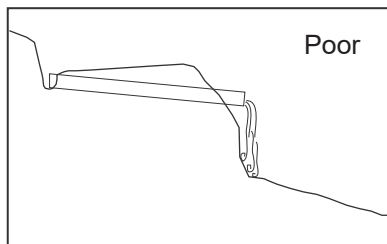
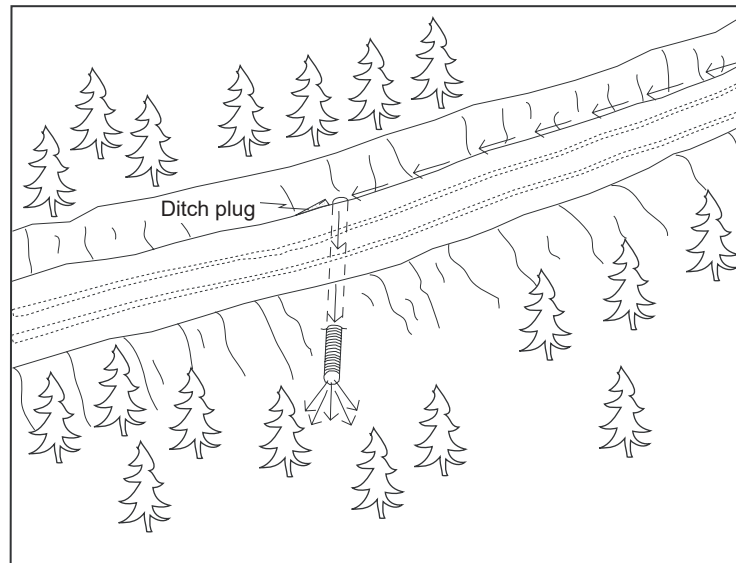


Steps 9 - 10 Final armored fill

- Install a second buttress at the area in slope between the outward road and the outward fill face. This should define the base level of the stream and determine how deep the stream will backfill after construction (M-O).
- Back fill the rest of the keyway with the unsorted rock armor or making sure the final armored area has a U-shape that will accommodate the largest expected flow (O-P).

Figure 5F - Culvert Specifications

Typical Ditch Relief Culvert Installation



Ditch relief culvert installation

- 1 The same basic steps followed for stream crossing installation shall be employed
- 2 Culverts shall be installed at a 3 degree angle to the ditch to lessen the chance of inlet erosion and plugging
- 3 Culverts shall be seated on the natural slope or at a minimum depth of 5 feet at the outside edge of the road, whichever is less
- 4 At a minimum, culverts shall be installed at a slope of 2 to 4 percent steeper than the approaching ditch grade, or at least 5 inches every 10 feet
- 5 Backfill shall be compacted from the bed to a depth of 1 foot or 1/3 of the culvert diameter, whichever ever is greater, over the top of the culvert
- 6 Culvert outlets shall extend beyond the base of the road fill or a flume discharge will be used
- 7 Culverts will be seated on the natural slope or at a depth of 5 feet at the outside edge of the road, whichever is less

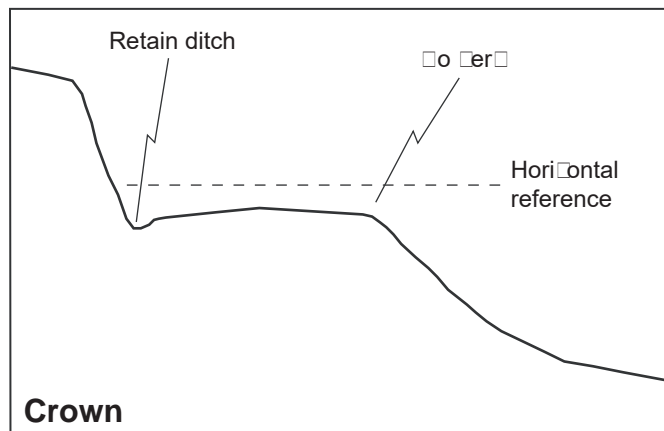
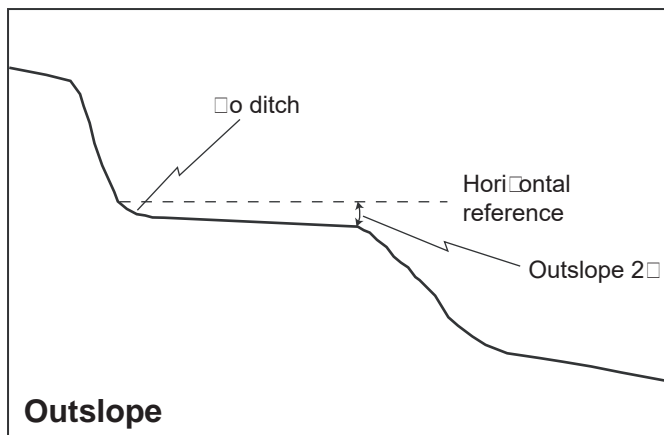
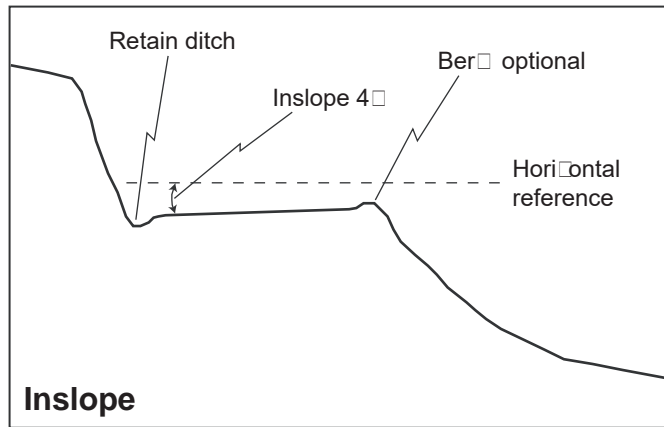
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Typical Drawing #8

Figure 5G - Culvert Specifications

Typical Designs for Using Road Shape to Control Road Runoff



Outsloping Pitch for Roads Up to 8% Grade		
Road grade	Unsurfaced roads	Surfaced roads
4% or less	3/4" per foot	1/2" per foot
5%	1 1/2" per foot	5/8" per foot
6%	5/8" per foot	3/4" per foot
7%	3/4" per foot	1/2" per foot
8% or more	1" per foot	1 1/4" per foot

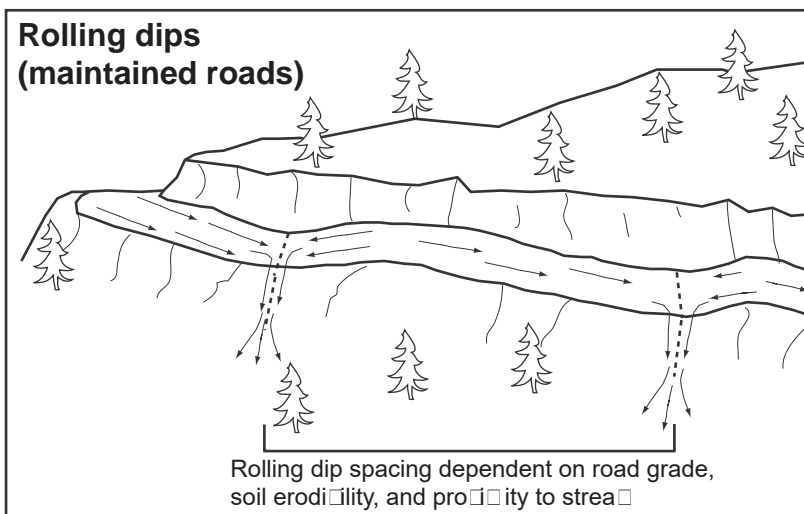
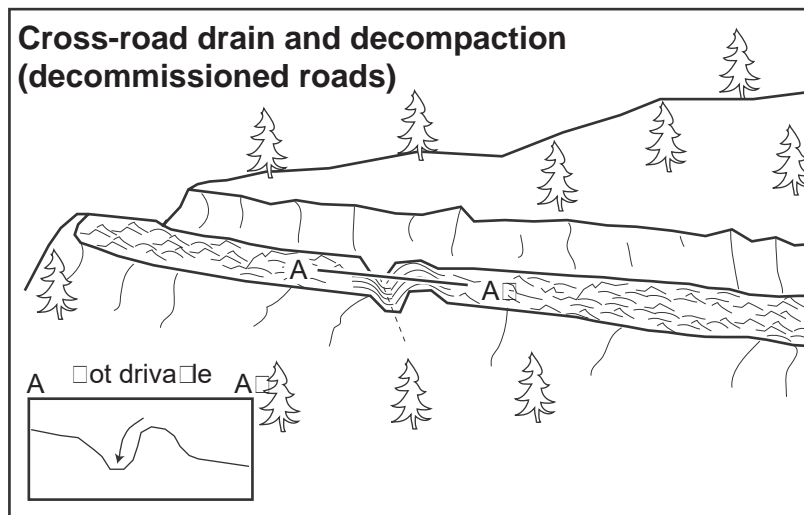
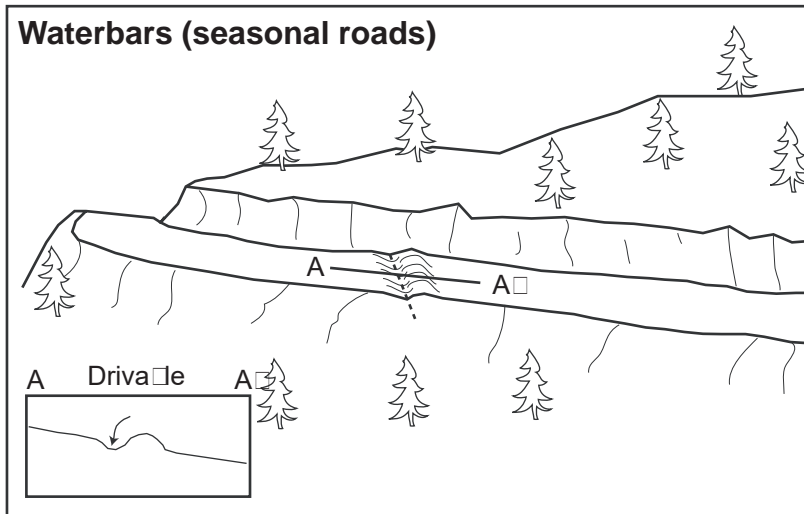
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Typical Drawing #9

Figure 5H - Culvert Specifications

Typical Methods for Dispersing Road Surface Runoff with Waterbars, Cross-road Drains, and Rolling Dips



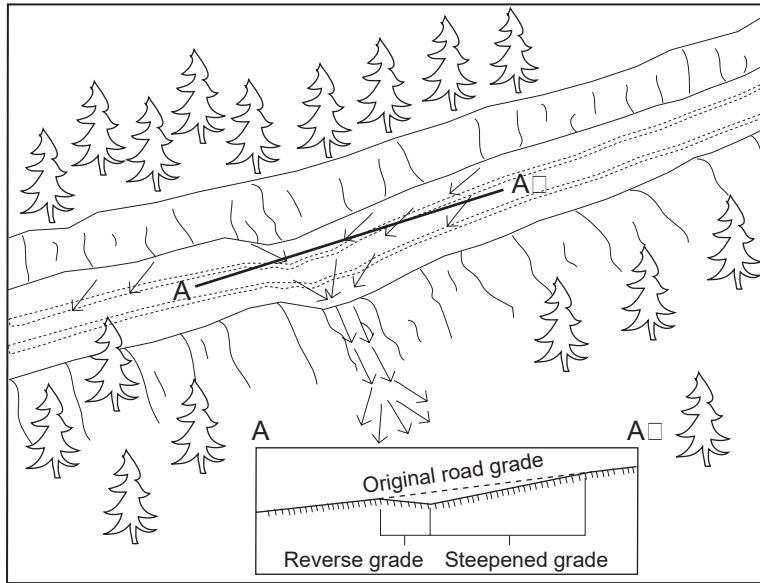
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Typical Drawing #10

Figure 5l - Culvert Specifications

Typical Road Surface Drainage by Rolling Dips



Rolling dip installation:

- 1 Rolling dips will be installed in the roadbed as needed to drain the road surface
- 2 Rolling dips will be sloped either into the ditch or to the outside of the road edge as required to properly drain the road
- 3 Rolling dips are usually built at 3 to 45 degree angles to the road alignment with cross road grade of at least 1% greater than the grade of the road
- 4 Excavation for the dips will be done with a medium-size bulldozer or similar equipment
- 5 Excavation of the dips will begin 5 to 10 feet up road from where the axis of the dip is planned as per guidelines established in the rolling dip dimensions table
 - Material will be progressively excavated from the roadbed, steepening the grade until the axis is reached
 - The depth of the dip will be determined by the grade of the road (see table below)
 - On the down road side of the rolling dip axis, a grade change will be installed to prevent the runoff from continuing down the road (see figure above)
 - The rise in the reverse grade will be carried for about 1 to 2 feet and then return to the original slope
- 10 The transition from axis to bottom, through rising grade to falling grade, will be in a road distance of at least 15 to 30 feet

Table of rolling dip dimensions by road grade

Road grade %	Upslope approach distance from up road start to trough ft	Reverse grade distance from trough to crest ft	Depth at trough outlet below average road grade ft	Depth at trough inlet below average road grade ft
0	55	15 - 20	0	3
5	5	15 - 20	1	2
10	5	15 - 20	1	1
12	5	20 - 25	1	1
12	10	20 - 25	1	1

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From: [Jessica](#)
To: [Adler, Elanah](#); [Richardson, Michael](#); [Margro Advisors](#)
Subject: Wesley Stoft - Mitigation and Remediation Grant Fund Proposal
Date: Friday, October 29, 2021 1:24:05 PM
Attachments: [Mitigation Fund Application - Walker Ridge Stoft.pdf](#)
[Stoft Grant Maps Figures.pdf](#)

Dear Michael and Elanah,

I am pleased to present the attached grant proposal on behalf of Wesley Stoft, Walker Ridge Family Farm, LLC.

Please feel free to reach out to me with questions or comments.

Thank you,

Jessica

--

Jessica
Project Manager
Margro Advisors

1-707-500-2420

Walker Ridge Road Improvements
Applicant: Wesley Stoff
APN: 216-073-006
Mitigation and Remediation Fund
Scope of Work

The stream crossing work will be completed by Alpha Pacific Engineering, contractors state license board license #982973. Applicant expects the work to take 15 days and will commence upon grant funding.

Crossing #1 - removal and replacement of an 18-inch culvert with a 50 foot, 24-inch culvert on a near origin Class III watercourse. The culvert was installed high and short in the fill, causing ponding at the inlet and a 3 foot plunge at the outlet. The crossing has a functional critical dip on the left hingeline and an insloped right road approach, which conveys road runoff to the culvert inlet through the inboard ditch.

The stream crossing will be replaced with a 24-inch diameter by 50 foot long culvert set at the base of the fill and in line with the natural channel. The lower $\frac{3}{4}$ of the outboard fillslope will be armored with 15 cubic yards of .5-1.5 foot diameter riprap to minimize erosion of the road fill. The crossing will be rebuilt with a critical dip on the left hingeline, to prevent diversion in the event the culvert plugs or its capacity is exceeded.

Crossing #2 - removal and replacement of a 12-inch diameter culvert with a 24-inch diameter culvert on a near origin Class III watercourse. The culvert is installed short and high in the fill, with diversion potential down the left road.

The stream crossing will be replaced with a 24-inch diameter by 50 foot long culvert set at the base of fill and in line with the natural channel. The road prism will need to be raised 1.5 feet with approximately 15 cubic yards of locally generated fill to accommodate the new, larger pipe. The crossing will be rebuilt with a critical dip on the left hingeline, to prevent diversion in the event the culvert plugs or its capacity is exceeded.

Crossing #2b - a near origin, Class III watercourse with no formal drainage structure. This road alignment is located upstream of Stream Crossing #2 (approximately 50') and is a seasonally used quad trail. There is diversion potential down the right road at this site.

An armored fill will be installed at this location to route flow across the roadbed in a way that prevents the diversion of streamflow out of the stream channel and protects the road fill from erosion by creating a broad dip through the road prism and excavating a small keyway in the outboard fill. Dimensions for the keyway will be approximately 10 feet wide at the top, 4 feet wide at the base, 1 foot deep, and 15 feet long. The keyway will be armored with 10 cubic yards of .5-1.5 diameter riprap to accommodate for seasonal stream flow.

Crossing #3 - an undersized, 18-inch diameter culvert on a Class III watercourse. The culvert was installed high and short in the fill and diversion potential exists down the left road.

The stream crossing will be replaced with a 36-inch diameter by 30 foot long culvert set at the base of fill and in line with the natural channel. The entire inboard and outboard fillslopes will be armored with 5 and 15 cubic yards of .5-1.5 foot diameter riprap, respectively. To prevent diversion potential, the crossing will have a critical dip installed on the left hingeline.

Crossing #5 - A 24-inch diameter plastic culvert on a Class III watercourse, installed at the base of fill, and in-line with the natural channel. The culvert is slightly undersized for the 100 year peak streamflow and associated debris.

The stream crossing will be replaced with a 30-inch diameter by 40 foot long culvert set at the base of fill and in line with the natural channel. The lower $\frac{1}{4}$ of the inboard and outboard fillslopes will be armored with 2 and 5 cubic yards of .5-1.5 foot diameter riprap, respectively, to protect the road fill from erosion.

Crossing #7 - a Class III watercourse crossing with no formal drainage structure. This crossing is just within the landowner's property boundary, as delineated by the recent parcel boundary survey flags, and is only used seasonally by the neighbors on the adjacent parcel.

The stream crossing will be replaced with a 30-inch diameter by 40 foot long culvert set at the base of fill and in line with the natural channel. The lower $\frac{1}{4}$ of the inboard and outboard fillslopes will be armored with 2 and 5 cubic yards of .5-1.5 foot diameter riprap, respectively, to protect the road fill from erosion.

Crossing #8 - a partially plugged, 12-inch diameter culvert on a Class III watercourse. The culvert was installed high and short in the fill.

The stream crossing will be replaced with a 24-inch diameter by 20 foot long culvert set at the base of the fill and in line with the natural channel. The lower $\frac{3}{4}$ of the outboard fillslope will be armored with 5 cubic yards of .5-1.0 foot diameter riprap to protect the road fill from erosion.

Crossing #9 - A 36-inch diameter plastic culvert on a Class III watercourse. The culvert is slightly undersized for the 100 year peak streamflow and associated debris, is installed at the base of fill, and in-line with the natural channel.

The stream crossing will be replaced with a 48-inch diameter by 50 foot long culvert set at the base of fill and in line with the natural channel. The lower $\frac{3}{4}$ of the inboard and outboard fillslopes will be armored with 10 and 15 cubic yards of .5-2 foot diameter riprap, respectively.

During the project, care will be taken not to unnecessarily disturb the native channel outside of the identified areas. Fill to be permanently removed will be stored in designated locations with no risk of sediment delivery. All disturbed areas where sediment delivery from surface erosion

processes is feasible will be seeded and mulched to reduce surface erosion and transport processes.

The proposed crossing upgrades will occur on in-use roads. All disturbance associated with this project will be limited to the road and immediately adjacent channel reaches as necessary to improve road drainage, stormproof the crossings, and prevent sediment delivery to watercourses. All stream crossings will be dry at time of construction. Work will only occur during the period of June 15 through October 15, 2023 (or first significant rainfall) to limit and avoid impacts to aquatic habitat and salmonids. Vegetation will only be removed from sites where it is growing on anthropogenically placed fill material, where erosion is likely to deliver to active watercourses, or where necessary for the implementation of effective storm-proofing treatments.

The applicant has secured a SWRCB 401 certification for this project through Pacific Watershed Associates.

Margro Advisors will work with the applicant on maintaining compliance with local and state regulations, and provide support for the project's grant administration and reporting, as needed.

**Site Management Plan for:
WDID: 1_12CC417921
APN: 216-073-006**

Prepared for:
State Water Resources Control Board (SWRCB)
North Coast Regional Water Quality Control Board (NCRWQCB)

Prepared by:
Margro Advisors
230 4th St, Eureka CA, 95501

Date of Completion:
04/08/2019
Revised: 4/30/2021

Introduction

This Site Management Plan (SMP) is for a Cannabis Cultivation Project by Green Grove Family Farm located in the Harris area, street address 2705 Bell Springs Road, in Humboldt County. This SMP was prepared for Wesley Stoff, parcel number 216-073-006; as required by the SWRCB Order WQ 2017-0023-DWQ¹. The purpose of this order is to provide a regulatory structure for cannabis cultivation that reduces contributions to existing water quality issues and prevents additional adverse impacts to water resources throughout California. The purpose of the SMP is to identify conditions present on a parcel that may pose a threat to water quality and resources and establish a plan to meet or surpass requirements set forth in the order, as well as to describe how the cultivator is implementing the best practical treatment or control (BPTC) measures listed in Attachment A of the Cannabis General Order. Refer to Attachment D of the General Order for further technical report guidance.

Margro Advisors has made an initial assessment of this parcel through field work as well as through a variety of county, state, and private websites (e.g. USDA web soil survey, Google Earth, and Humboldt County Web GIS). The parcel boundaries are approximate and obtained from Humboldt County.

Site Characteristics

This project is associated with Humboldt County Application #13029, and has been granted a provisional license by the state for up to 10,000 ft² of outdoor cultivation and up to 5,000 sq ft of mixed-light cultivation, CDFR License # CCL18-0002985 and CCL18-0002986.

¹Order entitled "STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2017-0023-DWQ GENERAL WASTE DISCHARGE REQUIREMENTS AND WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF WASTE ASSOCIATED WITH CANNABIS CULTIVATION ACTIVITIES"

Drying will take place with clean conditions on work surfaces and equipment. The property owner has double checks on labeling and inventories. Product is kept in a locked shipping container. The property owner uses spreadsheets to keep track of varieties and weights and marks and double checks everything. The building has good airflow with fans and dehumidifiers in place. The property owner will provide access to face masks and gloves as needed. Phone numbers of law enforcement and neighbors are posted and evacuation plans are in place. Plants will be taken off site for processing.

Elevation within this parcel ranges from 2,400 to 2,800 feet. Mean annual precipitation is 50 to 70 inches. Mean annual air temperature is 48 to 52 degrees Fahrenheit. The frost free period is 150 to 250 days. Average slope is approximately 20°.

Attached is a site map as well as directions. The site map includes features such as: access roads, vehicle parking areas, streams, stream crossings, cultivation site(s), buildings, and other relevant site features.

Soil Description

Attached is a soil map of the parcel. The soils within the area are primarily Tannin-Wohly-Rockyglen complex, 30 to 50 percent slopes (Map Unit 405, 40.2% of parcel), Tannin-Wohly-Rockyglen complex, 50 to 75 percent slopes (Map Unit 402, 24.8% of parcel), Coolyork-Yorknorth complex (Map Unit 673, 20.0% of parcel), and Tannin-Wohly complex (Map Unit 407, 15.1% of parcel).

Tannin

The parent rock of the Tannin is colluvium derived from mudstone and/or colluvium derived from sandstone. The unit ranges from 30 to 50 percent slope. The natural drainage class is well drained. The capacity of the most limiting layer to transmit water (Ksat) is moderately high to high (0.20 to 2.00 in/hr). The depth to the water table is more than 80 inches. The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm). The frequency of flooding is none. The frequency of ponding is none. The available water storage in profile is high (about 9.7 inches). The hydrologic soil group is B.

Wohly

The parent rock of the Wohly is residuum weathered from sandstone and shale. The unit ranges from 9 to 30 percent slope. The natural drainage class is well drained. The capacity of the most limiting layer to transmit water (Ksat) is moderately high to high (0.20 to 2.00 in/hr). The depth to the water table is more than 80 inches. The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm). The frequency of flooding is none. The frequency of ponding is none. The available water storage in profile is high (about 10.9 inches). The hydrologic soil group is B.

Rockyglen

The parent rock of the Rockyglen is colluvium derived from mudstone and/or residuum weathered from sandstone. The unit ranges from 50 to 75 percent slope. The natural drainage class is well drained. The capacity of the most limiting layer to transmit water (Ksat) is moderately high to high (0.60 to 2.00 in/hr). The depth to a restrictive feature is more than 80 inches. The depth to the water table is more than 80 inches. The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm). The frequency of flooding is none. The frequency of ponding is none. The available water storage in profile is moderate (about 6.1 inches). The hydrologic soil group is B.

Coolyork

The parent rock of the Coolyork is colluvium derived from mudstone and/or colluvium derived from sandstone and/or residuum weathered from schist. The unit ranges from 30 to 50 percent slopes. The natural drainage class is moderately well drained. The capacity of the most limiting layer to transmit water (Ksat) is moderately low to moderately high (0.06 to 0.20 in/hr). The depth to the water table is about 20 to 39 inches. The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm). The frequency of flooding is none. The frequency of ponding is none. The available water storage in profile is high (9.6 inches). The hydrologic soil group is D.

Yorknorth

The parent rock of the Yorknorth is colluvium derived from sandstone and/or earthflow deposits derived from schist. The unit ranges from 15 to 30 percent slopes. The natural drainage class is moderately well drained. The capacity of the most limiting layer to transmit water (Ksat) is moderately low to moderately high (0.06 to 0.20 in/hr). The depth to the water table is about 20 to 39 inches. The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm). The frequency of flooding is none. The frequency of ponding is none. The available water storage in profile is high (about 9.1 inches). The hydrologic soil group is D.

Water Storage, Use, and Irrigation Runoff

Water source is two groundwater wells. Water storage is comprised of 115,700 gallons, 60,000 gallons of which is stored in two bladders which are in the process of being replaced by hard plastic tanks. A summary of water storage is shown below in Table 1.

Water Storage Type	Size (Gallons)	Number	Total (Gallons)
Bladder	50,000	1	50,000
Bladder	10,000	1	10,000
Tank	700	1	700
Tank	3,000	15	45,000
Cement Water Tank	10,000	1	10,000

	Total	115,700
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Table 1: Summary of water storage on the parcel.

Irrigation water is used at rates to minimize overwatering cannabis plants so there is no irrigation runoff. Cannabis plants will be watered at agronomic rates every other day or less during the growing season. Irrigation is applied by a traditional drip irrigation and by hand-watering. Watering is done in the morning/early evening to reduce evaporative loss. Ground cover and weed mulch is used to minimize weed growth, which reduces water loss during watering. Raised beds and natural soil amendments are used to aid in soil moisture retention as part of the irrigation plan. A summary of water use (in gallons) by month is shown below in Table 2.

Jan	Feb	Mar	Apr	May	June
0	0	0	3,500	8,360	20,640

July	Aug	Sept	Oct	Nov	Dec
29,560	33,572	31,708	12,578	0	0

Table 2: Summary of water use (in gallons) by month.

Water flow is metered and will be regularly recorded and reported with the end of the year monitoring report. Tanks, lines, and connections will be checked periodically for wear, damage, and leaks. Repairs are done immediately or mitigated until replacement parts are obtained.

Sediment Discharge

Access Roads

The access roads are in good condition and do not show evidence of erosion (e.g. surface rutting or gullyng). There is very little vehicle traffic (about 5 cars per day), there are paved asphalt/rocked/bare ground/concrete surfaces, and there are currently no road maintenance activities. Storm water is drained from the access road via use of road crowns/out-sloping/armored ditches/culverts/rolling dips. Access road stormwater drainage structures do not discharge onto unstable slopes, earthen fills, or directly to a waterbody. All required permits and approvals are obtained prior to the construction of any access roads.

Stream Crossings

There are a total of nine road crossings of Class III streams on the property; 8 culverts and one rolling dip crossing. Existing 12 and 18-inch culverts on a Class III watercourses will be replaced with a minimum 24-inch diameter culvert able to pass a 100-year flood event. Rip rap will be installed along the outflow of both culverts as part of the project. The 24 inch will be upgraded to 30 inches, and the 36 inch will be upgraded to 42 inches. The dirt ford crossings will be

upgraded to a 24 inch culvert as well. These measures are intended to promote drainage and to minimize erosion and sediment. An overview of stream crossings is shown below in Table 3.

Label	Size (inches)	Type	Watercourse Class	Condition
STX1	18	Culvert	Class III	Needs Upgrade
STX2	12	Culvert	Class III	Needs Upgrade
STX3	18	Culvert	Class III	Needs Upgrade
STX4	36	Culvert	Class III	Good Condition
STX5	24	Culvert	Class III	Needs Upgrade
STX6	-	Informal crossing	Class III	Good Condition
STX7	-	Informal crossing	Class III	Needs Upgrade
STX8	12	Culvert	Class III	Needs Upgrade
STX9	36	Culvert	Class III	Needs Upgrade

Table 3: Overview of stream crossings on the property.

All stream crossings upgrades will be designed by a qualified professional to be capable of accommodating an estimated 100-year flood flow, including debris and sediment loads. All watercourse crossings will allow migration of aquatic life during all life stages supported or potentially supported by that stream reach. All stream crossings will be maintained and inspected for blockage with regular monitoring detailed in the Monitoring section of this plan. All culverts upgrades will be installed parallel to the watercourse alignment to the extent possible, of sufficient length to extend beyond stabilized fill/sidecast material, and embedded at the same level and gradient of the streambed in which they have been placed to prevent erosion.

Erosion Prevention

BPTC measures being implemented to prevent or limit erosion include topping soil with straw mulch, grass seed, or cover crop. When exposed surfaces or bare slopes appear, topsoil is covered with straw for temporary erosion control to minimize sediment, and stabilize the surface in the event of heavy rainfall. In addition, nobody is driving or operating vehicles or equipment within the riparian setbacks or within waters of the state unless authorized. Minimal grading work has been done in and around the cultivation sites and the majority of erosion control on the property is focused on the stream crossings and roads. Rip rap and rock along outflows will be installed to reinforce stream crossings and further minimize runoff.

Sediment Control

Placement of gravel, straw wattles, and silt screens are examples of additional mitigation measures which will also be taken to ensure erosion control.

Monitoring

The access road, stream crossing, erosion prevention, and sediment control BPTC measures listed above will be monitored and maintained to confirm effectiveness and protect water quality by conducting an inspection:

- Quarterly.
- Before and after any significant alteration or upgrade to a given stream crossing, road segment, or other controllable sediment discharge site.
- Prior to October 15th and December 15th to evaluate site preparedness for storm events and stormwater runoff.
- During and after each storm event.

Captured sediment will be stabilized in place/excavated and stabilized on-site/removed from the site.

Fertilizer, Pesticide, Herbicide, Fungicide, and Rodenticide

An overview of annual chemical product use is shown below in Table 4.

Product Name	Chemical Type	N-P-K or Active Ingredient
Stutzman's Chicken Manure	Fertilizer	4-3-3
C-PAL	Fertilizer	6-3-3
C-PAL	Fertilizer	2-10-10
EB Stone Worm Worm Castings	Fertilizer	Worm Castings
Buckaroo Worm Castings	Fertilizer	Worm Castings
Dr. Earth	Fertilizer	4-4-4
Dr. Earth	Fertilizer	4-10-7
Trace Minerals	Fertilizer	0-0-0.2
Insect Frass	Fertilizer	2-2-2
Gypsum	Fertilizer	Calcium Sulfate
Oyster Shells	Fertilizer	Calcium Carbonate

Bone Meal	Fertilizer	3-15-0
Organocide	Pesticide	Propylene Glycol
Grandevo	Pesticide	Chromobacterium Subtsugae Strain PRAA4-1
Venerate	Pesticide	Heat Killed Burkholderia sp. Strain A396
Plant Therapy	Pesticide	Soybean Oil, Isopropyl Alcohol, Citric Acid, Peppermint Oil
Neem Oil	Pesticide	Azadirachtin

Table 4: Overview of annual chemical product usage.

Products which are not consumed during the growing season are kept to prevent discharge over the Winter season.

Bulk fertilizers and chemical concentrates are stored, mixed, and applied per packaging instructions and/or at proper agronomic rates. Empty containers are disposed of in secure trash storage. Application rates will be tracked and reported with the end of the year monitoring.

Petroleum Products

An overview of annual petroleum usage is shown below in Table 5.

Product	Chemical Type	Annual Use (lb or gal)
Gasoline	Petroleum	Small Quantity
Oil	Petroleum	Small Quantity

Table 5: Overview of annual petroleum usage.

There is a small quantity of gas and oil stored in non-permeable plastic totes in the garden shed which has a solid roof to prevent discharge, including over the Winter season. Fuels are handled in compliance with local laws in a way that no spillage occurs. These are used for a roto-tiller, chipper, weed whip, etc.

Vehicles or equipment are only refueled outside of riparian setbacks.

Petroleum, petroleum products, and similar fluids are stored in a manner that provides chemical compatibility, provides secondary containment, and protection from accidental ignition, the sun,

wind, and rain. Fuels, lubricants, and other petroleum products are stored, mixed, and applied per packaging instructions. Empty containers are disposed of in secure trash storage.

Spill cleanup and containment kits will be kept on site.

Trash/Refuse and Domestic Wastewater

Human waste, domestic wastewater, packaging, organic materials, plastic, paper, glass, clay, and spent growth media will be generated at this site. Any used soil kept for reuse will be stored in greenhouses and soil beds or will be properly stored off-ground on a tarp or in secure containers with proper covering. During the off-season reusable cultivation materials are collected and stored where they will not enter a waterway or create a nuisance. All packaging from tools, amendments, soils, and fertilizers will be kept in secure trash storage and properly discarded. Garbage will be transported to the Redway Transfer Station on a weekly basis. Recycling will be transported to Redway Transfer Station on a monthly basis or more frequently as needed.

On an average day, there are about two workers, visitors, and/or residents at the site.

The premises has an onsite septic system connected to a bathroom and kitchen. Wastewater is disposed of with a proper leach field and septic tank. Secondary containment includes chemical toilets for field sanitation.

As per the CCR, Title 8, § 3457, which addresses field sanitation standards, the cultivation site is required to provide access to waste facilities within one-quarter (1/4) mile or a five (5) minute walk, whichever is shorter.

Where the septic system is not within this accessibility threshold, a portable facility will be provided in lieu of septic to support waste activities. The standards for portable waste facilities will be followed for toilets, wastewater, and chemical tanks.

Toilet facilities will always be operational, maintained in a clean and sanitary condition, and kept in good repair. Records of service and maintenance shall be retained for two years.

Chemical toilet wastewater tank will always be constructed of durable, easily cleanable material and have a minimum tank capacity of forty (40) gallons. Construction shall prevent splashing on the occupant, field, or road.

When chemical tanks are used, contents shall be disposed of by draining or pumping into a sanitary sewer, an approved septic tank of sufficient capacity, a suitably sized and constructed holding tank, or any other method approved by the local health department.

Winterization

BPTC measures will be performed to winterize the site and prevent discharges of waste. The property owners do not operate heavy equipment of any kind at the cannabis cultivation site

during the winter period unless authorized for emergency repairs contained in an enforcement order issued by the State Water Board, Regional Water Board, or other agency having jurisdiction. In addition, if there is construction, all construction entrances and exits are stabilized to control erosion and sediment discharges from land disturbance. All loose stockpiled construction materials (e.g. soil, spoils, aggregate, etc.) that are not scheduled for use within 48 hours are covered and bermed. Erosion repair and control measures to the bare ground (e.g. cultivation area, access paths, etc.) are applied to prevent discharge of sediment to waters of the state.

Drainage culverts/drainage trenches/settling ponds are maintained throughout winter to prevent debris and soil blockages from drainage and sediment capture features and ensure adequate capacity exists.

Native vegetation will be planted on all bare, exposed soil prior to the beginning of the precipitation season.

If any BPTC measure cannot be completed before the onset of the winter period, the property owner will contact the Regional Water Board to establish a compliance schedule.

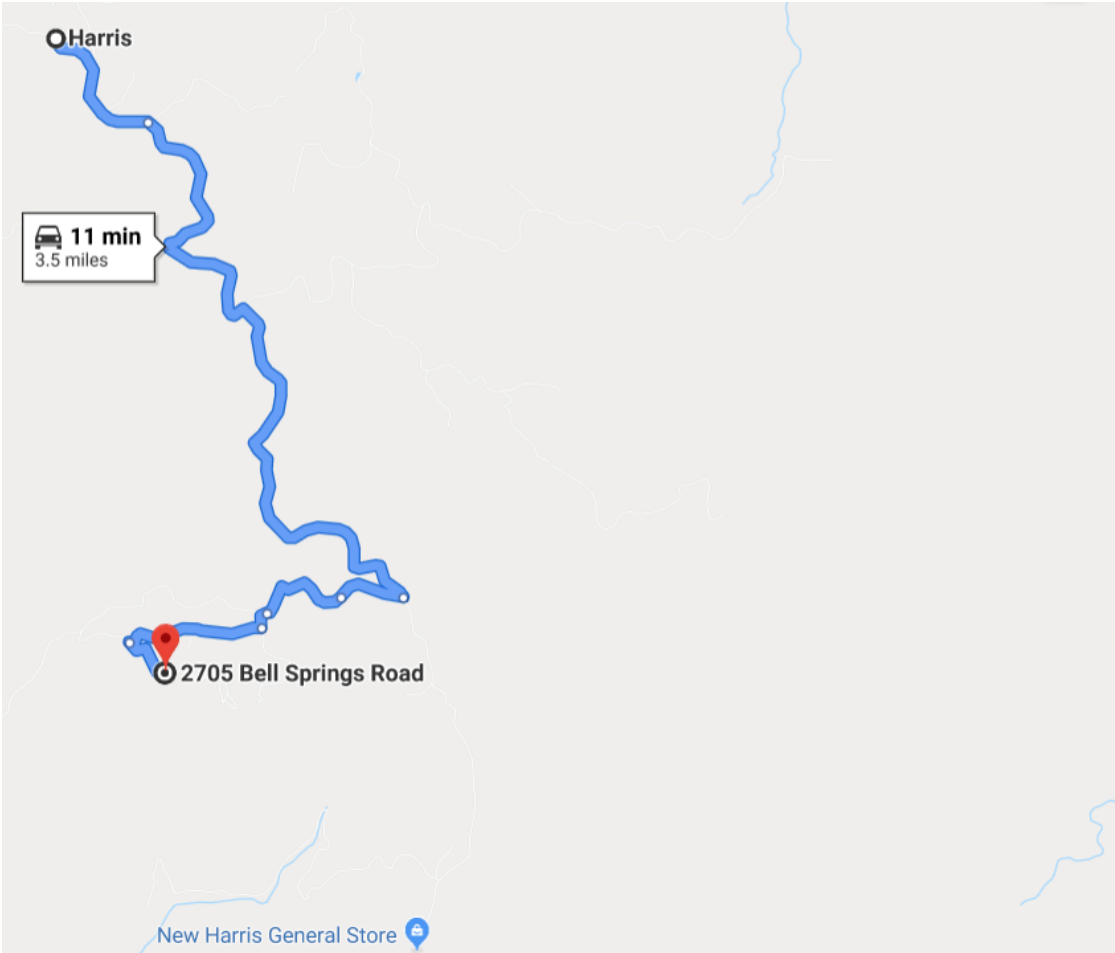
Improvement Plan/ Remediation

The following items have been identified for required improvements, including repairs related to the site’s Lake and Stream Alteration Agreement with CDFW (1600-2019-0576-R1).

Scheduled Date	Standard Condition Type	Corrective Actions	Planned Completion/ Status
Oct 31,2019	Erosion control and Maintenance	>Installment of permanent road drainage structures which shape the road surface where feasible to hydrologically disconnect road segments from the surface erosion. > Clean and unplug DRC #1	Completed Done Annually
Oct 31,2020	Culvert Repairs	>Upgrade SC#1,SC#2,SC#3, SC#8 to a 24 inch culvert Upgrade SC#6, SC#7, to 30 and 42 inch culverts	August 2022
Facilities moved	Removal and	> All cultivation areas and	Awaiting approval to

by May 1,2019 Revegetate by Oct 31,2019	Remediation	associated facilities must be removed from water course buffer areas. > Set back the planted boxes and the greenhouse at least 50 ft from POD #1 > Remove outhouse and water tank.	relocate.
March 1,2019	Water storage and use	Implement a water monitoring plan to document timing and volume of the water diversion, storage, and use.	Completed
March 1, 2019	Water use	Water diversion and water storage requires valid water rights documentation.Need to maintain water rights renewal. File a Lake and Streambed Alteration Agreement with CDFW for the two spring diversions. Permit and register existing well Submit annual water diversions	Maintained annually
December 15,2018	Fertilizer and Amendment use	Unused soil should be covered properly to prevent nutrient leaching or delivery of surface waters.	Completed every season
Dec 15, 2018	Pesticides and herbicides	The chemicals should be stored within enclosed buildings in such a way they cannot enter or be released into surface or groundwater.	Completed and stored in garden shed on property
Dec 15,2018	Petroleum products and other chemicals	Place all fuel cans, generators, diesel tanks gasoline powered gardening equipment and any other items in a adequate secondary containment basins Obtain a spill prevention cleanup kits onsite and easily	Completed in 2019

		accessible at all times to help clean up small spills when needed.	
Dec 15,2018	Cultivation related wastes	During the wet season cover all stockpiles of any material to prevent nutrient runoff or leaching groundwater. Provide photos to confirm that during the winter time all piles are properly maintained.	Completed annually During the wet season.
Jan 1, 2019	Refuse and Human Waste	<p>Close outhouses and decommission them unless they are approved by the county. Bring in one or more portable toilets that are regularly serviced. Keep records for inspections.</p> <p>Obtain two or more retroactive permitted OWTS (septic system)</p> <p>Make sure refuse and garbage is both secured properly and periodically hauled off site to be disposed of at a waste disposal facility so it does not accumulate.</p>	Will complete by July 2021



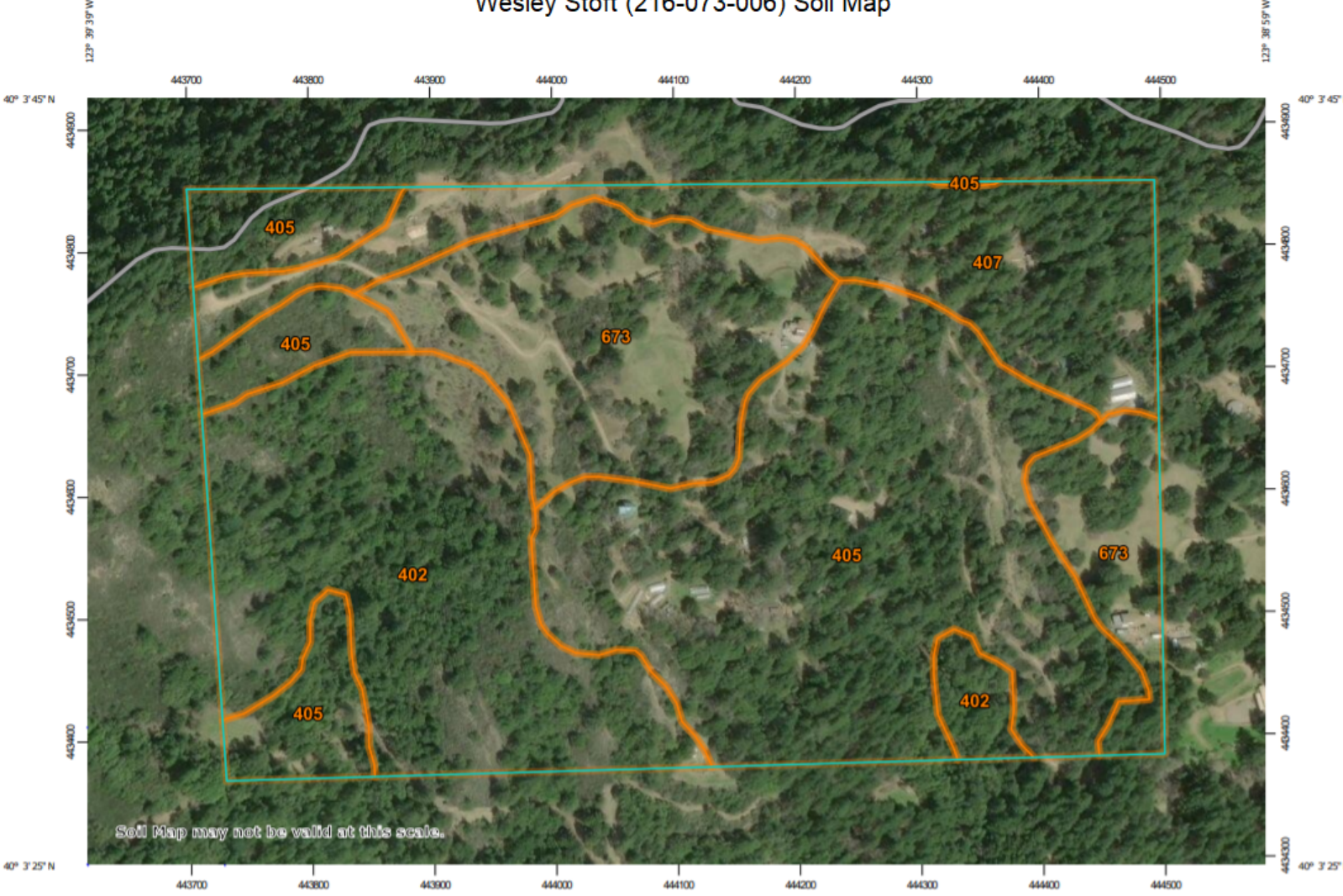
Map data ©2019 Google 2000 ft

Harris
California 95542

- ↑ 1. Head southeast on Bell Springs Rd toward Harris Rd
0.4 mi
- 2. Turn right to stay on Bell Springs Rd
2.1 mi
- 3. Turn right
0.2 mi
- ↑ 4. Continue straight
0.3 mi
- ↶ 5. Keep left
282 ft
- 6. Turn right
0.4 mi
- ↶ 7. Sharp left
Destination will be on the left
0.2 mi

2705 Bell Springs Rd
Garberville, CA 95542





































Wesley Stoff (216-073-006) Soil Map



Map Scale: 1:4,420 if printed on A landscape (11" x 8.5") sheet.
0 50 100 200 300 Meters
0 200 400 800 1200 Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



MAP LEGEND

- Area of Interest (AOI)**
-  Area of Interest (AOI)
- Soils**
-  Soil Map Unit Polygons
-  Soil Map Unit Lines
-  Soil Map Unit Points
- Special Point Features**
-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features
- Water Features**
-  Streams and Canals
- Transportation**
-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads
- Background**
-  Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, South Part, California
 Survey Area Data: Version 7, Sep 13, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2014—Nov 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
402	Tannin-Wohly-Rockyglen complex, 50 to 75 percent slopes	23.0	24.8%
405	Tannin-Wohly-Rockyglen complex, 30 to 50 percent slopes	37.2	40.2%
407	Tannin-Wohly complex, 9 to 30 percent slopes	14.0	15.1%
673	Coolyork-Yorknorth complex, 30 to 50 percent slopes	18.5	20.0%
Totals for Area of Interest		92.6	100.0%

Green Grove Family Farm

APN: 216-073-006


- Stream crossing
- ⊕ Ditch relief culvert
- ◻ Point of diversion
- ▽ Well
- Water tank
- ▲ Cannabis destruction zone
- ◻ Storage container
- ✱ Onsite wastewater treatment system
- ◻ House
- ◻ Garage/Shed/Barn
- ◻ Other location
- P Parking
- Cultivation area
- 600ft buffer around cultivation area
- Streamside Management Area (SMA)
- Irrigation Line
- - - Stream
- Road
- ↔ Setback

Abbreviations:
 SC - Stream crossing
 DRC - Ditch relief culvert
 CA - Cultivation area
 POD - Point of diversion
 OWTS - Onsite wastewater treatment system

0 100 200 400 Feet

Scale 1:2,400 1 inch = 200 feet
 Contour interval: 10-m derived from N
 USGS 10-m DEM
 Parcel boundary data:
 2015 Humboldt County GIS

Prepared September 2017 by:
 Pacific Watershed Associates
 www.pacificwatershed.com



Existing outdoor cultivation with total operations of 10,396 sq ft
 CA#1 - 1,962 sq ft
 CA#2 - 4,738 sq ft
 CA#3 - 3,302 sq ft

Existing mixed-light cultivation with total operations of 2,500 sq ft
 CA#3 - 2,472 sq ft

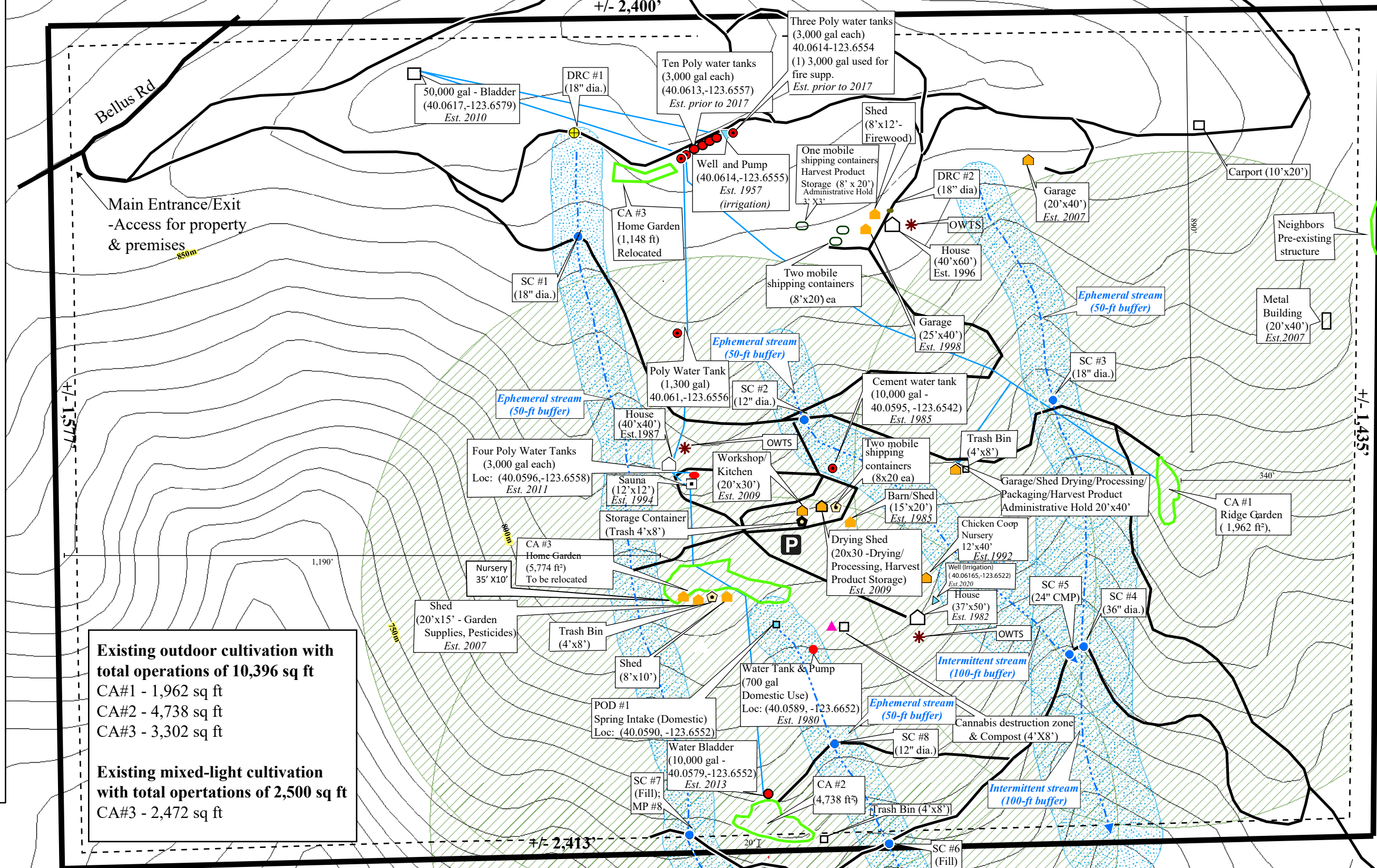


Figure 2. Site map for WDID #1B161240CHUM, APN 216-073-006, Harris, Humboldt County, California.

Project: Walker Ridge Road Improvements

Applicant: Walker Ridge Family Farm LLC

Contact: Wesley Stoff

APN: 216-073-006

Grant Funding Requested: \$68,171.00

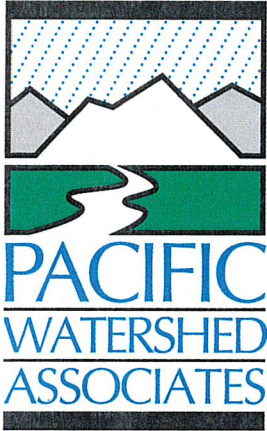
Total Budget: \$146,625.75

Project Budget

Item	Grant Funds	Other Funds (Source)
<i>Permit Fees</i>		
CDFW LSA Agreement		\$8,551.75 (Applicant)
SWRCB 401 Certification		\$2,417.00 (Applicant)
<i>Consultant and Professional Fees</i>		
Pacific Watershed Associates		\$5,445.00 (Round 1)
Margro Advisors	\$7,477.00	
<i>Materials, Equipment and Labor*</i>		
Alpha Pacific Engineering	\$60,694.00	\$62,041.00 (Round 1)
Totals	\$68,171.00	\$78,454.75

*See attached bid for the latest estimate of the project.

NOTE: These requested funds in Round 2 are to be supplemented by the funds tentatively approved on June 14, 2022, by the Board of Supervisors in Round 1. Together they will enable implementation of the complete project.



Invoice Transmittal Memo

A.P. Number: 216-073-006
PWA Invoice Number: 53140-22-1
Invoice Date: August 26, 2022
Billing Dates: 01/30/19 through 07/15/22

TO: Wesley Stoft
P.O. Box 190
Garberville, CA 95560

FROM: Pacific Watershed Associates, Inc.
P.O. Box 4433
Arcata, CA 95518
Fed ID #43-2036432
Attn: Austin Landowski

PROJECT: Lake or Streambed Alteration Agreement (LSAA) for APN: 216-073-006 located near Harris, Humboldt County, California

INVOICE #1 AMOUNT REQUESTED: \$7,078.15

DESCRIPTION OF WORK PERFORMED: This invoice includes the site visit and client meeting conducted by PWA staff on January 30th, 2019. It also includes: 1) client and consultant communication; 2) administrative tasks; 3) agency communication, map production and other tasks necessary to prepare and obtain the California Department of Fish and Wildlife (CDFW) Final Lake and Streambed Alteration Agreement (LSAA) including payment of the associated fees; 4) preparation of a Letter of Engagement regarding the development of the LSAA; and 5) map production and preparation of a Clean Water Act Section 401 Water Quality Certification Program Application for the North Coast Regional Water Quality Control Board (NCRWQCB).

Cost Breakdown:

LSAA Notification and related tasks

- Personnel Services: \$4,391.25
- Operating Expenses (mileage, supplies and fees to CDFW): \$8,644.45
- Indirect Expenses: \$658.69
 - **Total LSAA Personnel, Operating and Indirect Expenses: \$13,694.39**

Section 401 Water Quality Certification Application and related tasks

- Personnel Services: \$4,653.75

- Operating Expenses (mileage and supplies): \$92.70
- Indirect Expenses: \$698.06
 - **Total Section 401 Water Quality Certification Personnel, Operating and Indirect Expenses: \$5,444.51**

Deposit amount:

- Total Deposit on account: \$12,060.75

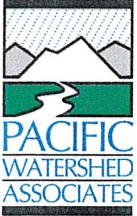
Total Cost (Personnel, Operating and Indirect expenses after deposit): \$7,078.15

Thank you for your prompt payment of this invoice.

Sincerely,



Austin Landowski
Account Manager



P.O. Box 4433
 Arcata, CA 95518-4433
 Phone: 707-839-5130
 Fax: 707-839-8168
 pwa@pacificwatershed.com
 EIN: 43-2036432

Invoice

Date	Invoice #
8/26/2022	53410-22-1

Terms	Due Date
Net 30	9/25/2022

Bill to:

Wesley Stoft
 P.O. Box 190
 Garberville, CA 95560

P.O./ Contract
APN: 216-073-006

Project			
53140 Stoft-2 - Wesley Stoft - LSAA			
Quantity	Description	Rate	Amount
	PERSONNEL SERVICES 01/30/19 THROUGH 07/15/22		
2.25	Senior Scientist	115.00	258.75
29.5	Staff Scientist	95.00	2,802.50
65.5	Physical Science Technician	80.00	5,240.00
9.25	GIS/Graphics/Database/Draftsperson	75.00	693.75
1	Clerical Staff	50.00	50.00
	TOTAL PERSONNEL SERVICES		9,045.00
	OPERATING EXPENSES 01/30/19 THROUGH 07/15/22		
186	Mileage (186 miles @ \$0.65/mile)	0.65	120.90
107.5	Field, Office & Reporting Supplies	0.60	64.50
	LSAA Notification Fee	5,364.00	5,364.00
	CDFW Remediation Fee	3,187.75	3,187.75
	TOTAL OPERATING EXPENSES		8,737.15
	SUBTOTAL INVOICE #53410-22-1		17,782.15
9,045	Indirect Expenses 15% of Personnel	0.15	1,356.75
	TOTAL INDIRECT EXPENSES		1,356.75
	TOTAL INVOICE #53410-22-1		19,138.90
	Deposit on Account 01/30/19	-3,500.00	-3,500.00
	Deposit on Account 07/04/19	-8,560.75	-8,560.75

Payments/Credits	\$0.00
Balance Due	\$7,078.15

DIAMOND SKY FARM

(831)818-9928
propgirlsheltercove@gmail.com

PO box 616
Whitethorn,CA
95589

October 26, 2021

Moriah Appel
Diamond sky farm
7050 Crooked Prairie Road
Redway , CA 95560

Dear Michael,

My name is Moriah Appel. My property is located at 7050 Crooked Prairie Road, APN 221-221-009, in the Briceland area of Southern Humboldt. I am seeking financial assistance with remediation plan, erosion control related to my driveway that enters from Crooked Prairie Road. The driveway is approximately .2 miles long. The remediation will be to reshape the driveway and eliminate the inboard ditch. The driveway will be out sloped at 3%-5% and placement of 2 rolling dips will hydrologically disconnect driveway runoff into the nearby watercourse. At completion of the reshaping of the driveway, 1 1/2" road base at a depth of 4" will be placed.

The project is limited to two encroachments (Table 1). One encroachment is to upgrade a misaligned and undersized culvert. Work for this encroachment will include excavation, removal of the undersized/misaligned Culver, replacement with a new properly sized and placed culvert, backfilling and compaction of fill, a rock armoring as necessary to minimize erosion. One encroachment is to remove a culvert road stream crossing and install an armored fill crossing. Work for the encroachment includes excavation, removal of the existing culvert, recontouring, and rock armoring as necessary to minimize erosion.

Two contractors have been out to do a site visit. Currently I am still waiting to get those quotes in writing. Verbally they have quoted the work at \$22,000-\$25,000 to complete all necessary steps to minimize erosion. Work will be done in dry season starting April 15, 2022 and completed by October 15, 2022.

Project Trellis has provided a grant for \$10,000. I am seeking \$15,000 to complete this project.

Thank You for your consideration

Sincerely, Moriah Appel

APPLICATION PACKET CHECKLIST

Please check below to ensure you have a complete application. Once complete, email the following documents, in pdf format with the text "Application for Remediation Grant Program Funding" in the subject line to mrichardson@co.humboldt.ca.us.

- Signed Application Submission Form
- Project Description – Summary of the Project, up to 2 pages.
- Plot Plan
- Plot Plan Checklist – Attached
- Cross sections of proposed work including topographic elevations
- Scope of Work – Detailed Description of Work
- Schedule for Completion – Identify Milestones
- Erosion Control Plan and Monitoring Plan
- Budget – Be as specific as possible – sample attached
- Project Maps and Figures
- Letter(s) of Support (optional)

APPLICATION FORM - Commercial Cannabis Land Use Ordinance Mitigation and Remediation Fund Program

Project Title: DIAMOND SKY FARM

Date of Application: 10.26.21

Applicant Name: Mariah Appel

Project APN: 221-221-009

Contact Person Name and Title: Mariah Appel

Contact Phone: (531) 818-9928 Contact Email: propgidshelter.cove@gmail

Contact Address: P.O. Box 616 Whitethorn CA 95589

Amount Requested: \$15,000

Total Budget: \$25,000

Project Timeline: Start Date: 4.15.22

End Date: 10.15.22

Signature of Applicant: Mariah Appel

Sample Schedule for Completion

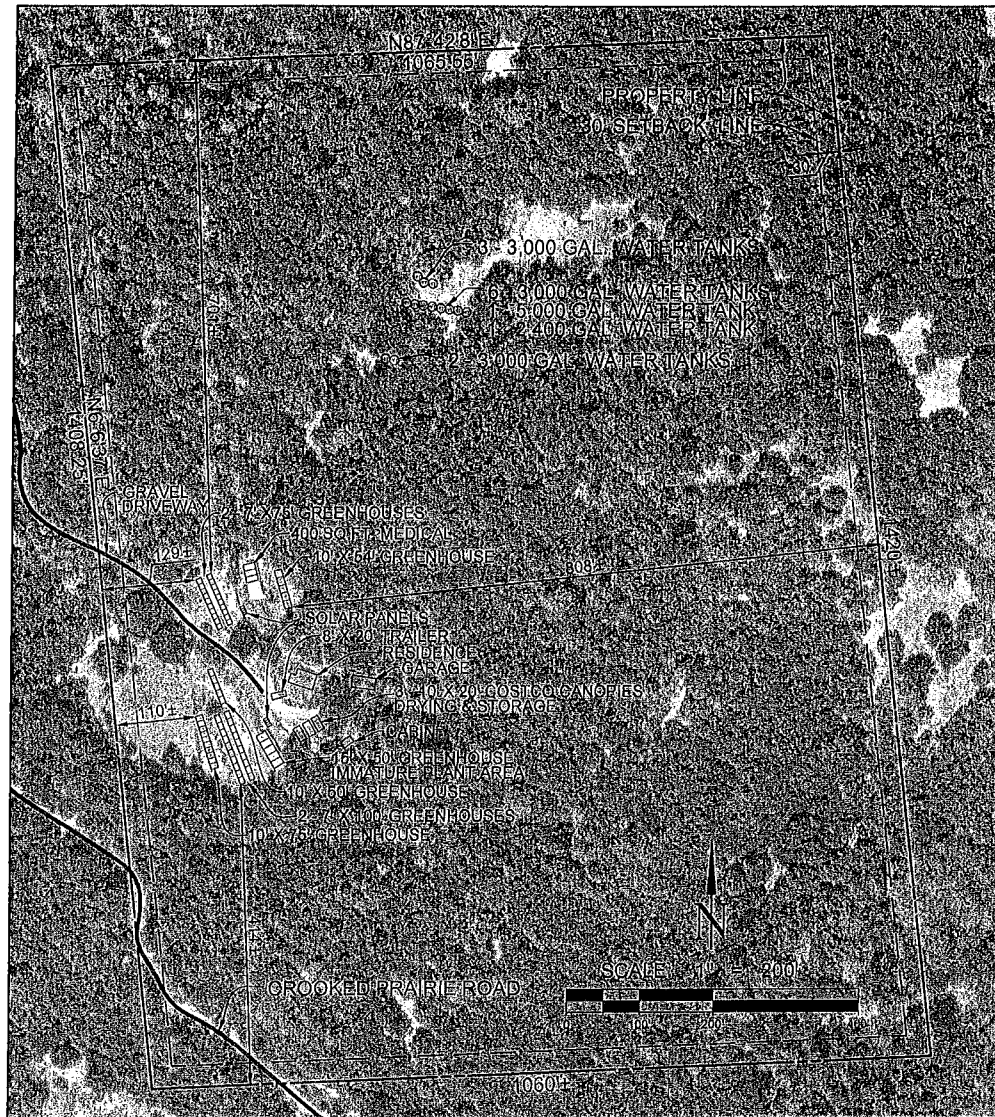
Milestone	Start Date	End Date
Detailed Project Scoping	4/10/20	
Bidding and Contracting	11/1/21	
Project Ground-Breaking	4/15/22	
Inspections by _____		
Project Completion	10/15/22	
Monitoring		

Sample Budget

Budget Item	Grant	Other Funds
Permit Fees (specify)		
Consultant and professional fees		
Materials		
Equipment		
Other (specify)		
TOTAL		

Note: 80% of program funds are required to be spent on physical improvements.

SITE PLAN



PROJECT INFORMATION:

Applicant: Moriah Appel

Site Address:
7050 Crooked Prairie Road
Whitethorn, CA 95589
APN: 221-221-009-000

Land Owner:
Moriah Appel
PO Box 616
Whitethorn, CA 95589

Agent:
Clearwater Ag Services
446 Maple Lane
Garberville, CA 95542

Trees to be Removed: none
Outdoor Cultivation Area: 4240 Sq.Ft.
Immature Plant Area: 750 Sq.Ft.
Earthwork Quantities: none
Water: Rainwater Catchment
Sewer: Portable Toilet
Power: Solar
Parcel Size: 38.74
Zoning: U
General Plan Designation: RA40

GENERAL NOTES:

1. DRAWING SCALE AS NOTED. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
2. THIS IS NOT A BOUNDARY SURVEY. BOUNDARY INFORMATION DEPICTED HAS BEEN OBTAINED FROM HUMBOLDT COUNTY 2015 GIS DATA. APPLICANT HAS NOT VERIFIED THIS PROPERTY BOUNDARY.
3. THERE ARE NO NEARBY SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, PUBLIC PARKS OR TRIBAL RESOURCES WITHIN 600 FEET OF THE CULTIVATION AREA.
4. THERE ARE NO RESIDENCES ON ADJOINING PARCELS WITHIN 300 FEET OF THE CULTIVATION AREAS.
5. ANY EXISTING DEVELOPMENT CONSTRUCTED WITHOUT THE BENEFIT OF COUNTY REVIEW WILL BE SUBJECT TO THE HUMBOLDT COUNTY BUILDING DEPARTMENT UPON APPROVAL OF THE ZONING CLEARANCE CERTIFICATE.

DIRECTIONS TO SITE:

From Highway 101, Take Exit 642 for Redway/Redwood Drive
Continue 2 miles, turn right onto Briceland Road.
Continue 7.2 miles to Blue Slide Creek Road, on right.
Continue 4.5 miles to Crooked Prairie Road, on right
Project site driveway is .1 mile down Crooked Prairie Road



707-923-2767

This map is provided without warranty on any kind. Spatial data is approximate. Parcel positions are estimates only. Reasonable effort has been made to ensure the accuracy of the map and data provided, however errors and omissions may still exist. The positional accuracy of the data is approximate and is not intended to represent surveyed information. Do not use this map to determine property boundaries.

10/21/21

Site Management Plan



Moriah Appel
APN 221-221-009

Site Management Plan

Introduction

This Site Management Plan was prepared to fulfill the requirements of the State Water Resources Control Board order WQ 2019-0001-DWQ. The order requires Tier 1 and Tier 2 cannabis cultivators to submit and implement a Site Management Plan and submit it to the Water Board within 90 days of Notice of Receipt, describing how the Discharger is complying with the BPTC measures listed in Attachment A. Dischargers that are landowners of the cultivation site in North Coast Regional Water Board jurisdiction are required to submit and implement Site Management Plans that describes how the BPTC measures are implemented Property-wide, including BPTC measures implemented to address dischargers from legacy activities. The Site Management Plan may include a schedule to achieve compliance, but all work must be completed by the onset of winter period each year.

The following resources were consulted in the preparation of this plan:

State Water Resources Control Board Order WQ 2019-0001-DWQ General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities, Attachment A, Definitions and Requirements for Cannabis Cultivation.

Handbook for Forest Ranch and Rural Roads, A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining, and Closing Wildland Roads. Prepared by William Weaver, PhD Eileen Weppner, P.G. Danny Hagans, CPESC Pacific Watershed Associates, Ca.

1. Sediment Discharge BPTC Measures

Site Information

Applicant: Mariah Appel

Owner: Moriah Appel

Address: 7050 Crooked Prairie Road

PO Box 616

Whitethorn Ca. 95589

APN 221-221-009

County: Humboldt

Zoning: U

Field Visit: 12/22/2019 1500

1.1 Site Characteristics

This parcel is located at 7050 Crooked Prairie Road in the Briceland area of Southern Humboldt County. The parcel is accessed by a gravel driveway off of Crooked Prairie Road. The driveway is approximately .2 miles long. The parcel is a western aspect with a residence and several outbuildings all in good condition. Elevation ranges from 800' to 1360'. The parcel is 38.74 acres. Slopes of the parcel range from 5% to 40% as it slopes toward the West Southwest. Vegetation varies from mixed oak woodland with brush and alder along the riparian buffer. The driveway and parking areas are all graveled.

Prior to our site visit, aerial photos USGS topo maps were examined for water courses, developed sites, roads and driveways, slope instabilities and erosional features such as gullies and slides.

The property is served by a rain catchment system which catches rain from the rain gutters of the residence and pipes it to rigid plastic holding tanks. Total water storage is approx. 90,000 gallons in 33 separate rigid plastic tanks of various sizes.

The outdoor cultivation sites are in two locations and total 4,260 sq ft of cannabis cultivation. The first is an area of historic cultivation with existing garden beds. This area also has vegetable garden area, fruit trees, ornamental trees and chicken pen. The wood framed garden beds are covered during the winter with plastic tarps. This helps to eliminate potential run off from the cannabis garden during rainy season. The area is a small flat.

The second cultivation area is below the residence. Slopes are less approximately 30% at this location. Small terraces are used for the cultivation areas. A natural vegetation buffer exists between all cultivation and any nearby watercourses.

1.1.1

Maps. See attached documents.

1.1.2 Access Road Conditions

Access road is an existing gravel road which is approximately 4.5 miles from the County maintained Briceland Thorn Road. Road assessment revealed proper design and function with some erosion present during site visit. This erosion can be mitigated by maintenance practices. Slopes of the driveway is from 5% to up to 20%. Estimated vehicle traffic is 1-2 cars per day and no increase of traffic is expected due to the cannabis cultivation project. Property owner addresses any discharge issues during rainy season by monitoring the road and associated 18" existing culvert which there is one. There were signs of some erosion and sediment discharge observed on our site visit. To address these issues a road design and maintenance plan will be provided in this document.

1.1.3 Vehicle Crossings

There is one 18" steel culvert located on the driveway in a class 3 water course near the gate at the entrance of the property. This culvert appears to be functioning correctly and meets the 100 year flood event calculations. It is recommended to place 6 cu yds. of rip-rap at the outlet of the culvert to dissipate water flow and reduce erosion. Removal of debris and maintenance of the inlet is required for optimum performance of the culvert.

An additional 18" culvert is to be removed from what is a non-water course. The treatment will be a rock armor crossing.

1.1.3.1 Legacy Discharge

No legacy waste discharge issues were located on this parcel.

1.2 Sediment Erosion Prevention and Sediment Capture

The property was inspected for indications of instability including weak soil layers, geologic bedding parallel to slope surface, bulging soil at the base of slope, and groundwater discharge from slope. No unstable areas were located on the property. Applicant will perform monthly inspections for signs of instability throughout the winter period and after any significant storm event. In the case the site becomes unstable, a qualified professional will be contracted to stabilize the area. Unstable sites will be monitored after any significant rain fall event and before the onset of the winter period to ensure that these areas remain stable and do not lead to discharge to nearby watercourses. Storm water runoff from the cultivation areas remains dispersed and does not runoff into any nearby watercourse.

1.2.1 Erosion Prevention BPTC Measures

Cover crops or tarps are used to cover cultivation beds during the rainy season to prevent soil or nutrient runoff due to rainfall. Plant waste and soil waste are to be stored in different contained piles. At this time Applicant does not generate soil waste as all the soil is reconditioned with natural nutrients for continued use. A compost pile is fully contained near the garden area. This compost will be used for future garden compost.

Slopes adjacent to the cultivation areas have established natural vegetation that prevents erosion and prevents exposure of soils to rainfall.

After any land disturbance activities, weed free straw will be applied at a rate of two tons per acre of exposed soil and if warranted by conditions will be secured to the ground by the use of jute cloth. These stabilization measures will be implemented within seven days of any land disturbance activity.

1.2.2 Sediment Control BPTC Measures

The cultivation areas remain hydrologically disconnected from any nearby watercourses. The small footprint of the cultivation areas generates a minimal amount of runoff which is disbursed into the natural vegetation. Sediment capture measures will be implemented as part of the

winterization procedure for any disturbed sites including measures such as check dams, fiber rolls, straw bale barriers, properly installed silt fences and sediment settling basins or bio-swales.

1.2.3 Maintenance Activities

Moriah Appel will perform self-inspections of all facilities, erosion control and sediment control BPTC measures at the beginning of the grow season and following any significant rainfall event (see Facility Status Self Survey). She will also inspect the site and implement any applicable BPTC measures before the onset of the winter period (see Winterization Checklist).

Monitoring of the site includes visual inspection and photographic documentation of each feature of interest listed on the site map, with new photographic documentation with any notable changes to the feature of interest. At a minimum, all site features must be monitored annually.

Additionally, sites shall be monitored at the following times to ensure timely identification of changed site conditions and to determine whether implementation of additional management measures are necessary to prevent, minimize and mitigate discharges of waste to surface water: Prior to October 15th to evaluate site preparedness for storm events and storm water runoff, Following any rainfall event with an intensity of 3" in 24 hours. Precipitation data can be obtained from the National Weather Service Forecast Office (by entering the zip code of the parcel location at <http://www.srh.noaa.gov/forecast>).

2. Fertilizer, Pesticide, Herbicide and Rodenticide BPTC Measures

Moriah Appel uses permaculture techniques which greatly reduce the need for soil additives. Nutrients are stored inside and existing garden shed with secondary containment. At the time of inspection, soil additives and nutrients were stored appropriately.

Fertilizers will be stored for long term storage inside the shed with secondary containment as well. This will eliminate the possible exposure to the elements and potential runoff to the nearby water sheds.

The garden shed provides cover from rain and the elements and is secure from wildlife.

Moriah Appel applies nutrients at or below agronomic rates. They do not use any registered pesticides, fungicides or rodenticides on this property. As part of the permaculture techniques, companion planting and other integrated pest management. See attachment for specific Fertilizers and Nutrients used.

2.2 Site Map

Storage areas of nutrient and fertilizers are identified on site map as Garden Shed.

2.3 Bulk Fertilizer and Chemical Storage

See site plan.

2.4 Spill Prevention and Clean Up Procedures

Spill kits will be kept on site with absorbent materials, proper personal protective equipment and proper disposal containers. Storage and handling will be done with extreme care to prevent any spills or discharges. Adequate secondary containment will be provided where necessary.

All mandatory action will be taken in accordance with the Cal OES Hazardous Materials Spill/Release Notification Guide. If the source of the spill can be safely shut off, personnel will attempt to do so. If the spill or discharge can be safely cleaned up by the facility owner using the available spill supplies, they will do so. The Owner/Operator will determine if the spill/discharge poses a threat to health, safety, property and or the environment and will immediately notify the necessary agencies. If the spill/discharge threatens to leave the property, personnel will attempt to place sorbents in the path, if it can be done safely. The facility personnel's Hazardous Waste Contractor will be contacted in a cleanup if necessary. All collected spill residues will be properly disposed as a hazardous waste.

3. Petroleum Product BPTC Measures

There are no petroleum products used as part of this cultivation project. Owners use gasoline powered weed-eater, lawn mowers and other small hand tools for gardening. Small gasoline engine fuel is stored in approved 5-gallon containers in the garage.

4. Trash/Refuse and domestic wastewater BPTC Measures

Refuse will be cleared and disposed of off site to prevent contamination of the environment and access by wildlife. Trash/Refuse will be stored in appropriate containers and regularly hauled to the Eel River Resource Recovery Center in Redway Ca. on a bi-monthly basis.

4.1 Trash/Refuse Containment and Disposal

All Trash/Refuse generated will be kept covered to mitigate potential discharge and access by wildlife. The use of covered trash cans in a contained area will help to eliminate the possible contamination of the property of any type of trash. All Trash/Refuse will be hauled to a proper treatment facility.

4.1.1 Site Map

See site map for location of Solid Waste Storage Area.

4.2 Employees, Visitors or Residents

This project requires no employees. There are no visitors to the site on a regular basis. The home on the parcel is the full-time residence of the owners.

4.2.2 Disposal of Domestic Waste Water

The residence has an unpermitted waste water treatment septic system. There will be no additional effluents associated with this cannabis cultivation project, therefore the existing septic system is adequate for this parcel. A porta potti will be rented and maintained from a local vendor for use during the growing season until a permitted septic system can be installed.

5. Winterization BPTC Measures

5.1 Winterization Actions

Sediment capture measures will be implemented as part of the winterization procedures for all disturbed areas, including the implementation of measures such as check dams, fiber rolls, straw bale barriers, properly installed silt fences, and sediment settling basins as necessary. Culverts and storm drains will be cleared from debris prior to the onset of winter period.

5.2 Maintenance Activities

Culverts and storm drain inlets and outlets will be cleared from debris prior to the onset of the winter period. All drainage or sediment capture features will be monitored and the removal of debris and soil blockages will commence when necessary to ensure the existence of adequate capacity.

5.3 Revegetation Activities

All BPTC measures will be followed and actions will be taken in accordance with best winterization techniques. Any and all exposed soils will be covered with natural vegetation, the garden beds will be cover cropped or tarped when not in use for cultivation.

5.4 Compliance Schedule

If any BPTC measures cannot be completed before the onset of winter, the owner/operator will contact the SWRCB to establish a compliance schedule.

5.5 Steps to Address Legacy Discharge Issues

At the time of inspection there were no legacy discharge issues found.

6. Identified Sites Requiring Remediation

At the time of inspection there were several sites requiring remediation identified. See attached photos and remediation plan.

Remediation Plan for APN 221-221-009

7050 Crooked Prairie Road

Whitethorn, Ca. 95589

CP-1. This is an 18" serviceable CMP. Place 6 cu. Yds of Class 3 Quarry Rip Rap at the outlet of this culvert to dissipate the outflow of water to help eliminate erosion.

CP-2. This 18" CMP is not in a watercourse. Remove this CMP as it is not in a water course and installed improperly. Use 10 cu. Yds of 4" fractured quarry rock to create an armored crossing, extending 10' each side of where the old culvert was removed.

RA-1. Driveway between Crooked Prairie Road and the first switchback has erosion occurring along the inboard ditch. Remediation will be to reshape the driveway and eliminate the inboard ditch. The driveway will be out-sloped at 3%-5% and placement of 2 rolling dips will hydrologically disconnect driveway runoff into the nearby watercourse. At the completion of the reshaping of the driveway, place 1 1/2" road base at a depth of 4".

Winterization Checklist

To be completed before the onset of the winter period.

1. Have all applicable erosion control and soil disposal and spoils management requirements been filled?

Yes No N/A

Comments:

2. Have all seasonal and temporary access roads been blocked or otherwise closed to motor vehicles?

Yes No N/A

Comments:

3. Can you confirm that no heavy equipment of any kind will be operated at the cannabis cultivation site during the winter period, unless authorized for emergency repairs contained in an enforcement order issued by the state water board, regional water board, or other agency having jurisdiction?

Yes No N/A

Comments:

4. Have linear sediment controls been applied (e.g., silt fences, wattles, ect.) along the toe of the slope, and at the grade breaks of exposed slopes to comply with the sheet flow length at the frequency specified below?

Slope (percent)	Sheet Flow Length Not to Exceed (feet)
0 - 25	20
25 - 50	15
>50	10

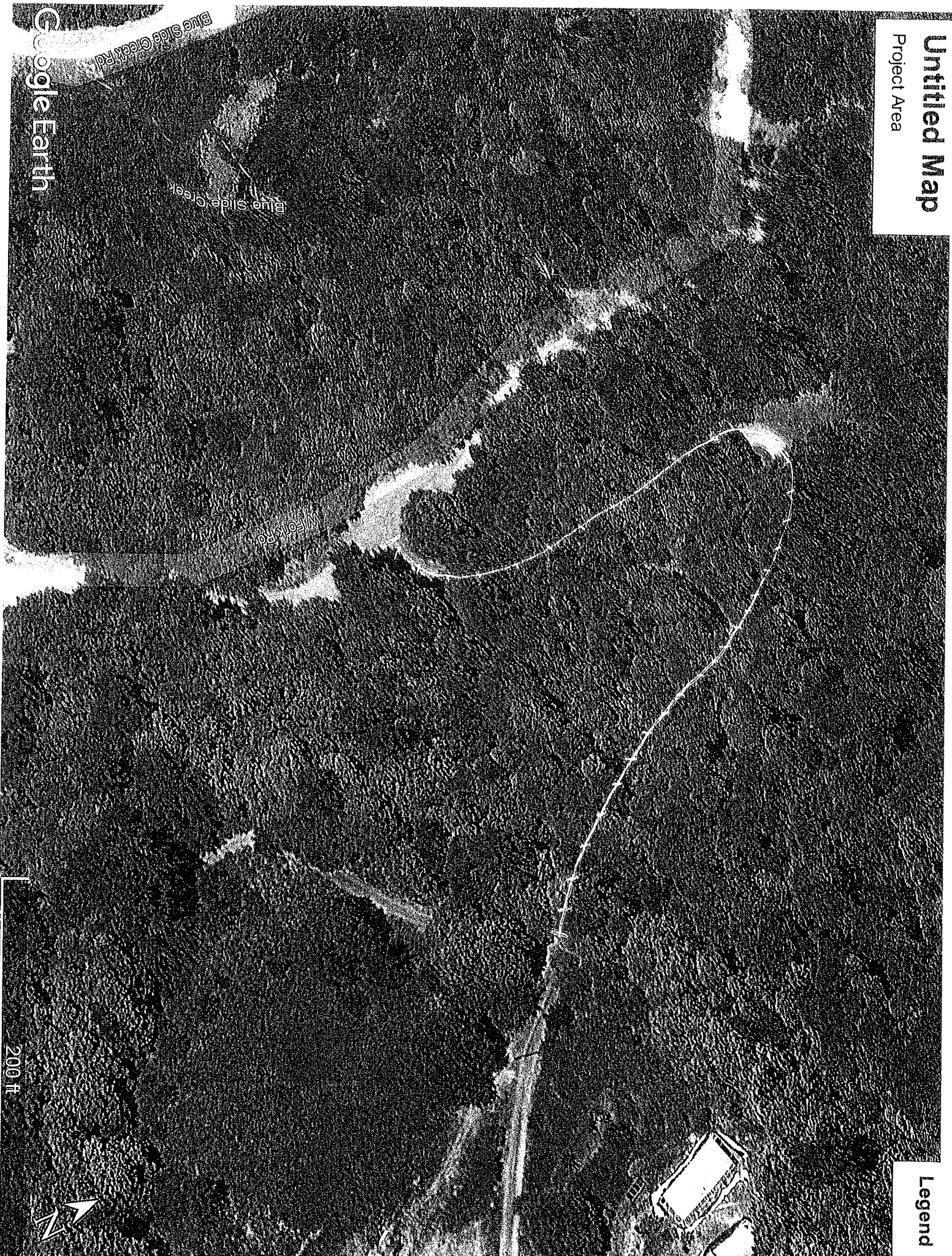
Yes No N/A

Comments:

Untitled Map

Project Area

Legend



Blue Slide Creek Rd

Blue Slide Creek

Meadow

Google Earth

200 ft



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
REGION 1 -- NORTHERN REGION
619 2nd Street
Eureka, CA 95501

RECEIVED

JUN 09 2020

CDFW - EUREKA



STREAMBED ALTERATION AGREEMENT

NOTIFICATION NO. 1600-2020-0053-R1

Unnamed Tributaries to Blue Slide Creek, Tributary to the Mattole River
and the Pacific Ocean

Moriah Appel
Appel Stream Crossings Project
2 Encroachments

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and Moriah Appel (Permittee).

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, the Permittee initially notified CDFW on February 06, 2020, the Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, CDFW has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, the Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, the Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project to be completed is located within the Mattole River watershed, approximately 3.8 miles northwest of the town of Briceland, County of Humboldt, State of California. The project is located in Section 9, T4S, R2E, Humboldt Base and Meridian; in the Briceland U.S. Geological Survey 7.5-minute quadrangle; Assessor's Parcel Number 221-221-009; latitude 40.1343 N and longitude -123.9608 W at the Parcel Centroid.

PROJECT DESCRIPTION

This Agreement relies on the Notification materials and a CDFW site inspection by Environmental Scientist Kalyn Bocast on March 12, 2020.

The project is limited to two encroachments (Table 1). One encroachment is to upgrade a misaligned and undersized culvert. Work for this encroachment will include excavation, removal of the undersized/misaligned culvert, replacement with a new properly sized and placed culvert, backfilling and compaction of fill, and rock armoring as necessary to minimize erosion. One encroachment is to remove a culvert road stream crossing and install an armored fill crossing. Work for this encroachment includes excavation, removal of the existing culvert, recontouring, and rock armoring as necessary to minimize erosion.

Table 1. Project Encroachments with Description

ID	Latitude/Longitude	Description
Crossing-1	40.1344, -123.9626	Replace undersized 18" diameter culvert with minimum 24" diameter by 30' long corrugated metal pipe culvert.
Crossing-2	40.1347, -123.9629	Replace an 18" diameter culvert with a rocked ford.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include Coho Salmon (*O. kisutch*), Steelhead Trout (*O. mykiss*), Pacific Lamprey (*Entosphenus tridentatus*), Foothill Yellow-legged Frog (*Rana boylei*), Pacific Giant Salamander (*Dicamptodon tenebrosus*), Southern Torrent Salamander (*Rhyacotriton variegatus*), Red-bellied Newt (*Taricha rivularis*), Northern Red-legged Frog (*Rana aurora*), and amphibians, reptiles, aquatic invertebrates, mammals, birds, and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include:

Impacts to water quality:

temporary increase in fine sediment transport;

Impacts to natural flow and effects on habitat structure and process:

direct and/or incidental take;

indirect impacts;

water quality degradation; and

damage to aquatic habitat and function.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

The Permittee shall meet each administrative requirement described below.

- 1.1 Documentation at Project Site. The Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification

materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to CDFW personnel, or personnel from another state, federal, or local agency upon request.

- 1.2 **Providing Agreement to Persons at Project Site.** The Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of the Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 **Adherence to Existing Authorizations.** All water diversion facilities that the Permittee owns, operates, or controls shall be operated and maintained in accordance with current law and applicable water rights.
- 1.4 **Change of Conditions and Need to Cease Operations.** If conditions arise, or change, in such a manner as to be considered deleterious by CDFW to the stream or wildlife, operations shall cease until corrective measures approved by CDFW are taken. This includes new information becoming available that indicates that the bypass flows and diversion rates provided in this agreement are not providing adequate protection to keep aquatic life downstream in good condition or to avoid "take" or "incidental take" of federal or State listed species.
- 1.5 **Notification of Conflicting Provisions.** The Permittee shall notify CDFW if the Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall contact the Permittee to resolve any conflict.
- 1.6 **Project Site Entry.** The Permittee agrees to allow CDFW employees access to any property it owns and/or manages for the purpose of inspecting and/or monitoring the activities covered by this Agreement.
- 1.7 **CDFW Notification of Work Initiation and Completion.** The Permittee shall contact CDFW within the seven-day period preceding the beginning of work permitted by this Agreement. Information to be disclosed shall include Agreement number, and the anticipated start date. Subsequently, the Permittee shall notify CDFW no later than seven (7) days after the project is fully completed.
- 1.8 **Agreement Compliance.** The proposed work shall comply with all measures included in this Agreement. **Failure to comply with these measures shall result in suspension or revocation of this Agreement.**

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, the Permittee shall implement each measure listed below.

- 2.1 Permitted Project Activities. Except where otherwise stipulated in this Agreement, all work shall be in accordance with the Permittee Notification received on February 06, 2020, together with all maps, BMP's, photographs, drawings, and other supporting documents submitted with the Notification.
- 2.2 Incidental Take. This Agreement does not allow for the take, or incidental take of any state or federal listed threatened or endangered listed species.

Project Timing

- 2.3 Work Period. All work shall be confined to the period **June 15 through October 15** of each year. Work within the active channel of a stream shall be restricted to periods of **dry weather**. Precipitation forecasts and potential increases in stream flow shall be considered when planning construction activities. Construction activities shall cease, and all necessary erosion control measures shall be implemented prior to the onset of precipitation.
- 2.4 Work Completion. The proposed work shall be completed by no later than **October 15, 2022. Failure to complete work by this date shall result in suspension or revocation of this Agreement.** A notice of completed work, including photographs of each site, shall be submitted to CDFW within seven (7) days of project completion.
- 2.5 Extension of the Work Period. If weather conditions permit, and the Permittee wishes to extend the work period after October 15, a written request shall be made to CDFW at least 5-working days before the proposed work period variance. Written approval (letter or e-mail) for the proposed time extension must be received from CDFW prior to activities continuing past October 15.

Vegetation Management

- 2.6 Minimum Vegetation Removal. No native riparian vegetation shall be removed from the bank of the stream, except where authorized by CDFW. Permittee shall limit the disturbance or removal of native vegetation to the minimum necessary to achieve design guidelines and standards for the Authorized Activity. Permittee shall take precautions to avoid damage to vegetation outside the work area.
- 2.7 Vegetation Management. Permittee shall limit vegetation management (e.g., trimming, pruning, or limbing) and removal for the purpose of stream crossing placement/maintenance to the use of hand tools. Vegetation management shall not include treatment with herbicides.

Water Storage

- 2.8 Water Storage. All water storage facilities (WSFs) (e.g., reservoirs, storage tanks, mix tanks, and bladders tanks) must be located outside the active 100-year

floodplain and outside the top of bank of a stream. Covers/lids shall be securely affixed to water tanks at all times to prevent potential entry by wildlife.

Equipment and Vehicles

- 2.9 **Clean Equipment Prior to Work.** All heavy equipment that will be working within 150 feet of a stream shall be cleaned daily, to remove materials deleterious to aquatic and terrestrial life or riparian habitat including non-native species, oil, grease, hydraulic fluid, soil, and other debris. Cleaning of equipment shall take place a minimum of 150 feet from top of bank or edge of the riparian zone, whichever results in a greater stream buffer.
- 2.10 **Operating Equipment and Vehicle Leaks.** Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat.
- 2.11 **Staging and Storage Areas.** Short-term staging and storage areas for equipment, materials, fuels, lubricants, and solvents shall be located more than 150 feet from the top of bank or edge of the riparian zone, whichever results in a greater stream buffer. All equipment and fuel stored on site shall be bermed to contain any spilled material and shall be protected from rain. Berms shall consist of plastic covered dirt or sandbags. All materials shall be promptly removed following the completion of project work.
- 2.12 **Equipment Maintenance.** Refueling of machinery or heavy equipment, or adding or draining oil, lubricants, coolants or hydraulic fluids shall not take place within 150 feet of the stream bed, channel and bank. All such fluids and containers shall be disposed of properly off-site. Heavy equipment used or stored within stream bed, channel and bank shall use drip pans or other devices (e.g., absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.
- 2.13 **Hazardous Spills.** Any material, which could be hazardous or toxic to aquatic life and enters a stream (i.e. a piece of equipment tipping-over in a stream and dumping oil, fuel or hydraulic fluid), the Permittee shall immediately notify the California Emergency Management Agency State Warning Center at 1-800-852-7550, and immediately initiate clean-up activities. CDFW shall be notified by the Permittee within 24 hours at 707-445-6493 and consulted regarding clean-up procedures.

Stream Crossings

- 2.14 **Stream Protection.** No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other deleterious material from project activities shall be allowed to enter into or be placed where it

may be washed by rainfall or runoff into the stream. All project materials and debris shall be removed from the project site and properly disposed of off-site upon project completion.

- 2.15 Excavated Fill. Excavated fill material shall be placed in upland locations where it cannot deliver to a watercourse. To minimize the potential for material to enter the watercourse during the winter period, all excavated and relocated fill material shall be tractor contoured (to drain water) and tractor compacted to effectively incorporate and stabilize loose material into existing road and/or landing features.
- 2.16 Runoff from Steep Areas. The Permittee shall make preparations so that runoff from steep, erodible surfaces will be diverted into stable areas with little erosion potential or contained behind erosion control structures. Erosion control structures such as straw bales and/or siltation control fencing shall be placed and maintained until the threat of erosion ceases. Frequent water checks shall be placed on dirt roads, cat tracks, or other work trails to control erosion.
- 2.17 Culvert Installation.
- 2.17.1 The project is located in a moderate to very high Fire Hazard Severity Zone as designated by CAL FIRE. CDFW recommends corrugated metal pipe (CMP) for use in culvert installation and/or replacement.
- 2.17.2 Existing fill material in the crossing shall be excavated down vertically to the approximate original channel and outwards horizontally to the approximate crossing hinge points (transition between naturally occurring soil and remnant temporary crossing fill material) to remove any potential unstable debris and voids in the older fill prism.
- 2.17.3 Culvert shall be installed to grade (not perched or suspended), aligned with the natural stream channel, and extend lengthwise completely beyond the toe of fill. If culvert cannot be set to grade, it shall be oriented in the lower third of the fill face, and a downspout or energy dissipator (such as boulders, rip-rap, or rocks) shall be installed above or below the outfall as needed to effectively control stream bed, channel, or bank erosion (scouring, headcutting, or downcutting). The Permittee shall ensure basins are not constructed and channels are not be widened at culvert inlets.
- 2.17.4 Culvert bed shall be composed of either compacted rock-free soil or crushed gravel. Bedding beneath the culvert shall provide for even distribution of the load over the length of the pipe, and allow for natural settling and compaction to help the pipe settle into a straight profile. The crossing backfill materials shall be free of rocks, limbs, or other debris that could allow water to seep around the pipe, and shall be compacted.
- 2.17.5 Culvert inlet, outlet (including the outfall area), and fill faces shall be

armored where stream flow, road runoff, or rainfall energy is likely to erode fill material and the outfall area.

- 2.17.6 Permanent culverts shall be sized to accommodate the estimated 100-year flood flow [i.e. ≥ 1.0 times the width of the bankfull channel width or the 100-year flood size, whichever is greater], including debris, culvert embedding, and sediment loads.

2.18 Crossing Maintenance

- 2.18.1 The placement of armoring shall be confined to the work period when the stream is dry or at its lowest flow
- 2.18.2 No heavy equipment shall enter the wetted stream channel.
- 2.18.3 No fill material, other than clean rock, shall be placed in the stream channel.
- 2.18.4 Rock shall be sized to withstand washout from high stream flows and extend above the ordinary high-water level.
- 2.18.5 Rock armoring shall not constrict the natural stream channel width and shall be keyed into a footing trench with a depth sufficient to prevent instability.

2.19 Fords, Armored Fill and Vented Crossings.

- 2.19.1 Fords, armored and vented crossings are considered permanent watercourse encroachments and shall accommodate the 100-year flood flow plus associated sediment and debris.
- 2.19.2 Hydrologically-connected road approaches to fords, armored and vented crossings shall be rocked and maintained to avoid delivery of fine sediment to the watercourse below.
- 2.19.3 Fords, armored and vented crossings shall be sufficiently outsloped to minimize aggradation of suspended sediments at the crossing.
- 2.19.4 The lowest point of fords, armored and vented crossings shall be constructed within or directly over the original stream channel, to the extent feasible, in order to contain high flows up to twice bank-full and to avoid diversion potential.
- 2.19.5 Armor material shall be comprised of durable angular screened quarry rock of sufficient size and placement to minimize mobilization during a 100-year storm event. Wood may be used for armoring if sound, tight-grained, redwood is applied and sufficiently keyed into the fillslope to resist

movement during a 100-year storm event.

2.19.6 If maximum fill heights exceed 15 feet or fills exceed 500 cubic yards of fill, rock sizing, armoring thickness, chute width and chute depth shall be calculated and sized using the nomograph provided in Figure 23 of Cafferata et al (2017).

2.19.7 Stream crossing spillway fill slopes shall be armored from roadbed to the natural channel in a manner sufficient to prevent significant scour or removal of armor during high flows. Scour is expected through road surface rock cap.

2.20 Road Approaches. The Permittee shall treat road approaches to new or re-constructed permanent crossings *on Class I and II watercourses* to minimize erosion and sediment delivery to the watercourse. Permittee shall ensure road approaches are hydrologically disconnected to the maximum extent feasible to prevent sediment from entering the crossing site, including when a Stream Crossing is being constructed or reconstructed. Road approaches shall be armored from the crossing for a minimum of 50 feet in both directions, or to the nearest effective water bar or point where road drainage does not drain to the crossing, with durable rock, compacted grindings, pavement, or chip-seal.

Erosion Control and Pollution

2.21 Erosion Control. Permittee shall use erosion control measures throughout all work phases where sediment runoff threatens to enter the stream.

2.22 Seed and Mulch. Upon completion of construction operations and/or the onset of wet weather, Permittee shall restore all exposed or disturbed areas and access points within the stream and riparian zone by applying locally native, weed-free, grass seeds (use of Humboldt grass seed mix prohibited). Locally native wildflower and/or shrub seeds may also be included in the seed mix. Permittee shall mulch restored areas using at least two inches of weed-free clean straw or similar biodegradable mulch over the seeded area. Alternately, Permittee may cover seeding with jute netting, coconut fiber blanket, or similar non-synthetic monofilament netting erosion control blanket.

2.23 Erosion and Sediment Barriers. Permittee shall monitor and maintain all erosion and sediment barriers in good operating condition throughout the work period and the following rainy season, defined herein to mean October 15 through June 15. Maintenance includes, but is not limited to, removal of accumulated sediment and/or replacement of damaged sediment fencing, coir logs, coir rolls, and/or straw bale dikes. If the sediment barrier fails to retain sediment, Permittee shall employ corrective measures, and notify the department immediately.

- 2.24 Prohibition on Use of Monofilament Netting. To minimize the risk of ensnaring and strangling wildlife, Permittee shall not use any erosion control materials that contain synthetic (e.g., plastic or nylon) monofilament netting, including photo- or biodegradable plastic netting. Geotextiles, fiber rolls, and other erosion control measures shall be made of loose-weave mesh, such as jute, hemp, coconut (coir) fiber, or other products without welded weaves.
- 2.25 Site Maintenance. Permittee shall be responsible for site maintenance including, but not limited to, re-establishing erosion control to minimize surface erosion and ensuring drainage structures and altered streambeds and banks remain sufficiently armored and/or stable.
- 2.26 Cover Spoil Piles. Permittee shall have readily available erosion control materials such as wattles, natural fiber mats, or plastic sheeting, to cover and contain exposed spoil piles and exposed areas in order to prevent sediment from moving into the stream. Permittee shall apply and secure these materials prior to rain events to prevent loose soils from entering the stream.
- 2.27 No Dumping. Permittee shall not deposit, permit to pass into, or place where it can pass into a stream, lake, or other Waters of the State any material deleterious to fish and wildlife, or abandon, dispose of, or throw away within 150 feet of a stream, lake, or other Waters of the State any cans, bottles, garbage, motor vehicle or parts thereof, rubbish, litter, refuse, waste, debris, or the viscera or carcass of any dead mammal, or the carcass of any dead bird.

Project Inspection

- 2.28 Project Inspection. The Project shall be inspected by Clearwater Ag Services or an experienced and qualified professional to ensure that the Project (all work proposed) was implemented as designed. A copy of the inspection report, including photographs of each site, shall be submitted to CDFW within 90 days of completion of this project.

3. Reporting Measures

- 3.1 Work Completion. The proposed work shall be completed by no later than **October 15, 2022. Failure to complete work by this date shall result in suspension or revocation of this Agreement.** A notice of completed work (condition 2.4), with supplemental photos, shall be submitted to CDFW **within seven (7) days** of project completion.
- 3.2 Project Inspection. The Permittee shall submit the **Project Inspection Report** (condition 2.28) to CDFW, LSA Program at 619 2nd Street, Eureka, CA 95501.

CONTACT INFORMATION

Written communication that the Permittee or CDFW submits to the other shall be delivered to the address below unless the Permittee or CDFW specifies otherwise.

To Permittee:

Moriah Appel
P.O. Box 616
Whitethorn, CA 95589
831-818-9928
propgirlsheltercove@gmail.com

To CDFW:

Department of Fish and Wildlife
Northern Region
619 2nd Street
Eureka, CA 95501
Attn: Lake and Streambed Alteration Program
Notification #1600-2020-0053-R1

LIABILITY

The Permittee shall be solely liable for any violation of the Agreement, whether committed by the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of, or require the Permittee to proceed with the project. The decision to proceed with the project is the Permittee's alone.

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety this Agreement if it determines that the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before CDFW suspends or revokes the Agreement, it shall provide the Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide the Permittee an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to the Permittee, if necessary, including but not

limited to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes CDFW from pursuing an enforcement action against the Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 *et seq.* (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

CDFW may amend the Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

The Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and the Permittee. To request an amendment, the Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by the Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, the Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), the Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, the Permittee shall submit to CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). CDFW shall process the extension request in accordance with FGC 1605(b) through (e).

If the Permittee fails to submit a request to extend the Agreement prior to its expiration, the Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (FGC section 1605(f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after the Permittee signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.wildlife.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall **expire five years** from date of execution, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. The Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of the Permittee, the signatory hereby acknowledges that he or she is doing so on the Permittee's behalf and represents and warrants that he or she has the authority to legally bind the Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the project described herein. If the Permittee begins or completes a project different from the project the Agreement authorizes, the Permittee may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR MORIAH APPEL

Moriah Appel

Moriah Appel

6-1-2020

Date

FOR DEPARTMENT OF FISH AND WILDLIFE

Scott Bauer

Scott Bauer

Senior Environmental Scientist Supervisor

6/11/2020

Date



PLANNING DIVISION
PLANNING AND BUILDING DEPARTMENT
COUNTY OF HUMBOLDT

3015 H Street, Eureka, CA 95501
Phone (707) 445-7541 • Fax (707) 268-3792
<http://www.humboldt.gov.org/156>

Applicant

Moriah Appel
PO Box 616
Whitethorn, CA 95589

Owner

Moriah Appel
PO Box 616
Whitethorn, CA 95589

Agent

Clearwater Ag Services
Diana Totten
446 Maple Ln.
Garberville, CA 95542

**Notice of Administrative Decision
Provisional Zoning Clearance Certificate**

Date January 19, 2021
Assessor Parcel No. 221-221-009
Permit PLN-2019-16115
Contact Elizabeth Moreno - 268-3713

Description

A Zoning Clearance Certificate to authorize 4,260 square feet of existing outdoor cultivation.

Decision

The project was provisionally approved by Administrative Review on January 13, 2021.

PACKET INCLUDES:

On-Going Terms and Responsibilities

Please review the List of Measures in the Cannabis Compliance Agreement. All activity-specific and general terms and responsibilities shall be satisfied for the term of the clearance. The provisions of Exhibit A shall be completed within 12 months of the issuance date unless otherwise specified in the agreement. Please review these provisions carefully. Note: Other permits or approvals may be required from other state or local agencies before the project commences. An annual inspection will be conducted to verify compliance with the provisions of the zoning clearance certificate.

Cannabis Compliance Agreement

Refer to Exhibit A for the List of Measures to Achieve Compliance.

Effective Date

The effective date is January 13, 2021.

Expiration Date

The zoning clearance will expire after one (1) year from the date of issuance, and on the anniversary date of such issuance each year thereafter, unless an annual compliance inspection has been conducted and the permitted site has been found to comply with all requirements of the CMMLUO and the submitted application, including, but not limited to, the approved site plan, operations plan, and processing plan.

Extensions

If the terms of provisional approval for your project set forth in Exhibit B cannot be met before the expiration date, you may apply for an extension with the Planning Division. Extension applications must be submitted before the expiration date with the appropriate fees and must state the reason for the requested extension and provide a revised schedule for completion of the unmet items in Exhibit B. If the provisional zoning clearance certificate expires, a new application must be filed and accompanied by applicable fees. The new zoning clearance certificate may be subject to different processing requirements and standards. Contact your assigned planner if you have any questions about extensions.

Changes or Modifications to Project

If your project needs minor changes or major modifications, review and approval of the project by the Planning Division is required. Applications for changes or modifications must be filed and accompanied by applicable fees. Contact your assigned planner if you think your project needs to be changed or modified.

Zoning Clearances are Not Transferrable

The rights and privileges to conduct medical marijuana activities on a specific parcel do not attach to title to the property and are not conveyed with the lease or sale of the property. Accordingly, Zoning Clearance Certificates may not be sold, assigned, leased or otherwise conveyed or transferred by the person or entity holding the Zoning Clearance Certificate to any third party not named on the application without a modification of the clearance. Contact your assigned planner if you have any questions about this transfer limitation.



PLANNING AND BUILDING DEPARTMENT
PLANNING DIVISION
COUNTY OF HUMBOLDT

3015 H Street, Eureka, CA 95501
Phone (707) 445-7541 • Fax (707) 268-3792

Planning Division Decision Packet

The following packet of information includes your Planning Division permit results. **Please review the enclosed permit packet carefully.** The packet contains important information such as appeal periods, permit conditions, and the expiration date for your permit(s). Please take particular note of the following:

1. **Your permit does not require an appeal period.** It is effective immediately.
2. **All permit conditions must be completed prior to the expiration date.** Your permit(s) may also include conditions from other state or local agencies. If you have questions or need assistance, please contact the specific agency or department that issued the conditions.
3. **Proof of completion is required for most permit conditions.** For efficient staff review of condition completion, please consolidate proof of completion for all conditions into one package.
4. **You are responsible for tracking the expiration date of your permit(s).** An extension process is available if you need more time.
5. **Additional federal, state or local regulatory requirements may apply to your project.** These requirements may be administered by agencies other than the Planning Division, including any mitigation monitoring. It is your responsibility to obtain all necessary approvals before starting your project.
6. **Call your assigned planner if you have any questions.** Your assigned planner's contact information is provided below.

Elizabeth Moreno, Planner II
Voice: 707-268-3713
Fax: 707-268-3792
emoreno@co.humboldt.ca.us



COUNTY OF HUMBOLDT
PLANNING AND BUILDING DEPARTMENT
CURRENT PLANNING DIVISION

3015 H Street Eureka CA 95501 Fax: (707) 268-3792 Phone: (707) 445-7541
<http://www.co.humboldt.ca.us/planning/>

ZONING CLEARANCE CERTIFICATE

Project: A Zoning Clearance Certificate to authorize 4,260 square feet of existing outdoor cultivation.

Project Location: This project is located in Humboldt County, in the Whitethorn area, on the east side of Crooked Prairie Road, approximately 2,300 feet southeast from the intersection of Crooked Prairie Road and China Creek Road, on the property known as 7050 Crooked Prairie Road.

Present Plan Designations: Residential Agriculture: 40 acres (RA40), Density: 40 acres per unit, 2017 General Plan, Slope Stability: Moderate Instability (2).

Present Zoning: Unclassified.

Record Number: PLN-2019-16115.

Assessor Parcel Number: 221-221-009.

Applicant

Moriah Appel
PO Box 616
Whitethorn, CA 95589

Owner

Moriah Appel
PO Box 616
Whitethorn, CA 95589

Agent

Clearwater Ag Services
Diana Totten
446 Maple Ln.
Garberville, CA 95542

Environmental Review: An Addendum to a previously adopted Environmental Impact Report has been prepared for consideration per §15164 of CEQA Guidelines.

Findings

Pursuant to Humboldt County Code Section 312-2.4, a Zoning Clearance Certificate shall be approved and issued by the Planning Director if, based on the submitted information provided by the applicant, it is found that:

1. The proposed development conforms with all requirements of the Humboldt County Zoning Regulations; and
2. The proposed development complies with the terms and conditions of any applicable permit and/or subdivision map that was previously approved for such development; and
3. The proposed development is not located on the same lot where conditions or activities are being conducted which are a part of the proposed development and in violation of the Humboldt County Code, unless the zoning clearance is necessary for the abatement of the existing violation

Facts

An application has been submitted to the Planning Division for a Zoning Clearance Certificate for 4,260 square feet (SF) of existing outdoor commercial cannabis cultivation. This commercial cannabis activity is authorized by Section 314-55.4.6.1.2 of the Commercial Cannabis Land Use Ordinance No. 2599 (CCLUO). The application meets the requirements of zoning, siting criteria (55.4.6.4.1, 55.4.6.4.2, 55.4.6.4.3), setbacks, and listed incompatible uses (e.g., schools), and is accompanied by the documentation, plans, descriptions, and agency clearances set forth in the CCLUO.

The applicant is seeking approval for a Zoning Clearance Certificate for 4,260 square feet (30x66.5' hoop house) pre-existing outdoor commercial cannabis cultivation.

The water for irrigation if sourced from rainwater catchment collected from the roof of the cabin. Rainwater will be collected from the roof of three existing storage area rooftops and stored in ten 5,000-gallon hard tanks, for a total of 50,000 gallons.

Estimated annual water use for the cultivation operation is 50,000 gallons. A metering device shall be installed and maintained at or near the outlet of all water storage facilities utilized for irrigation. The applicant shall maintain a weekly record of all water used in irrigation of permitted cultivation areas.

The applicant is to submit a Site Management Plan. Applicant is required to adhere to and implement the requirements contained in the SWRCB's Cannabis Cultivation Policy, the General Order and the Notice of Applicability. A copy of the reporting form portion of the Mitigation and Reporting Program (MRP) shall be submitted annually to the Planning and Building Department concurrent with the submittal to the SWRCB.

Monofilament netting for all uses will be prohibited. Geotextiles, fiber rolls, and other erosion control measure materials will be made of loose-weave mesh, such as jute, hemp, coconut (coir) fiber, or other products without welded weaves to minimize the risk of ensnaring and strangling wildlife. Wildlife will be left unharmed. If any wildlife is encountered during the Authorized Activity, Permittee will not disturb the wildlife and will allow wildlife to leave the work site unharmed. All refuse will be contained in wildlife proof storage containers, at all times, and disposed of at an authorized waste management facility.

Pursuant to section 5.4.6.3.1 of the CCLUO, the energy source, must be exclusively provided by a renewable energy source. The applicant proposes to use solar power to power fans. The applicant shall submit a noise study that states that the ambient levels, prior to starting operations. The applicant will conduct another study after the operations are permitted and submit it to the Planning Department. Noise from cultivation and related activities shall not result in an increase of more than three decibels of continuous noise above existing ambient noise levels at any property line of the site.

The project was referred to the Division of Environmental Health and recommended approval. However, the applicant will not process onsite and will not have any employees onsite.

The project was referred to the Bear River Band of the Rohnerville Rancheria, who recommended inadvertent discovery requirements. Additionally, the applicant will meet all Cal FIRE SRA Fire Safe Regulations.

The parcel is accessed of Briceland Throne Road onto Blue Slide Road onto Crooked Prairie Road. The applicant submitted a Road Evaluation self-certifying that the access road is an equivalent to a road Category 4 standard. The Department of Public Works has commented and recommended approval with the condition that the applicant pave the surface at the location of the access road which is Briceland Throne Road, the access road shall be paved for a minimum width of 20 feet and a length of 50 feet where it intersects the County road. This condition shall be completed to the satisfaction of the Department of Public Works prior to commencing operations, final sign-off for a building permit, or Public Works approval for a business license. The project is conditioned as such. Within one year, of issuance of this permit, the applicant is to join or start a Road Maintenance Association and provide evidence to the Planning Department.

The project was referred to the Bear River Band of the Rohnerville Rancheria, who recommended inadvertent discovery requirements. Additionally, the applicant will meet all Cal FIRE SRA Fire Safe Regulations.

The subject parcel has been determined to be one legal parcel as described in Creation Deed 1910-015612.

Determination

It is the determination of the Planning Division that:

- A Zoning Clearance Certificate is approved. The terms and responsibilities set forth in the CCLUO shall be satisfied by the Permittee for the life of this clearance.
- A Provisional Zoning Clearance Certificate is approved subject to the terms of the attached Compliance Agreement. The terms and responsibilities set forth in the CCLUO shall also be satisfied by the Permittee for the life of this clearance.
- The Zoning Clearance Certificate application is denied. The reasons for this denial are set forth in the analysis above.

Issued By: _____


John H. Ford
Director, Planning and Building Department

Date: _____

11/13/2024

**ATTACHEMENT 1
CEQA Addendum**

**CEQA ADDENDUM TO THE
FINAL ENVIRONMENTAL IMPACT REPORT FOR THE COMMERCIAL CANNABIS LAND USE
ORDINANCE**

***Commercial Cannabis Land Use Ordinance Final Environmental Impact Report (EIR)
(State Clearinghouse # 2017042022), January 2018***

APNs 221-221-009, 7050 Crooked Prairie Road, Whitethorn, County of Humboldt

**Prepared By
Humboldt County Planning and Building Department
3015 H Street, Eureka, CA 95501**

December 2020

Background

Modified Project Description and Project History –

The Commercial Cannabis Land Use Ordinance (CCLUO) updated the County's existing Commercial Medical Marijuana Land Use Ordinance (Section 313-55.4 and 314-55.4 of Chapter 3 of Division 1 of Title III of the County Code) as well as repeal of the Medical Cannabis Testing and Research Laboratories provisions and on-site consumption prohibition found in Sections 313-55.3.15, 314-55.3.15, 313-55.3.11.7, and 314-55.3.11.7 of Division 1 of Title III of the County Code, respectively. These regulations establish land use regulations for the commercial cultivation, processing, manufacturing, distribution, testing, and sale of cannabis within the County. These regulations were developed in concert with the Final Environmental Impact Report (EIR) that was adopted for the ordinance in order to implement the mitigation measures of the EIR. The EIR addressed the broad environmental impacts that could be expected to occur from the adoption and implementation of the ordinance. The EIR specified that the regulations established in the CCLUO would mitigate the impacts of existing cannabis operations by establishing regulations for an existing unregulated land use to help prevent and reduce environmental impacts that are known to result from unpermitted baseline cultivation operations. The EIR prepared for the CCLUO also established local land use regulations to allow for continued commercial cannabis operations in the unincorporated area of the County that ensure the health and safety of residents, employees, County visitors, neighboring property owners and end users of cannabis. The proposed project is consistent with all regulations within the CCLUO and all mitigation measures of the EIR. New commercial cannabis cultivation on parcels zoned Unclassified was included in the environmental baseline for the EIR. The current project was contemplated by the EIR and compliance with the provisions of the CCLUO will fully mitigate all environmental impacts of the project to a less than significant level.

The modified project is for application has been submitted to the Planning Division for a Zoning Clearance Certificate for 4, 260 square feet of existing outdoor commercial cannabis cultivation. This commercial cannabis activity is authorized by Section 314-55.4.6.1.2 of the Commercial Cannabis Land Use Ordinance No. 2599 (CCLUO). The application meets the requirements of zoning, siting criteria (55.4.6.4.1, 55.4.6.4.2, 55.4.6.4.3), setbacks, and listed incompatible uses (e.g., schools), and is accompanied by the documentation, plans, descriptions, and agency clearances set forth in the CCLUO.

The water for irrigation if sourced from rainwater catchment collected from the roof of the cabin. Rainwater will be collected from the roof of three existing storage area rooftops and stored in ten 5,000-gallon hard tanks, for a total of 50,000 gallons.

Estimated annual water use for the cultivation operation is 50,000 gallons. A metering device shall be installed and maintained at or near the outlet of all water storage facilities utilized for irrigation. The applicant shall maintain a weekly record of all water used in irrigation of permitted cultivation areas.

The applicant is to submit a Site Management Plan. Applicant is required to adhere to and implement the requirements contained in the SWRCB's Cannabis Cultivation Policy, the General Order and the Notice of Applicability. A copy of the reporting form portion of the Mitigation and Reporting Program (MRP) shall be submitted annually to the Planning and Building Department concurrent with the submittal to the SWRCB.

Monofilament netting for all uses will be prohibited. Geotextiles, fiber rolls, and other erosion

control measure materials will be made of loose-weave mesh, such as jute, hemp, coconut (coir) fiber, or other products without welded weaves to minimize the risk of ensnaring and strangling wildlife. Wildlife will be left unharmed. If any wildlife is encountered during the Authorized Activity, Permittee will not disturb the wildlife and will allow wildlife to leave the work site unharmed. All refuse will be contained in wildlife proof storage containers, at all times, and disposed of at an authorized waste management facility.

Pursuant to section 5.4.6.3.1 of the CCLUO, the energy source, must be exclusively provided by a renewable energy source. The applicant proposes to use solar power to power fans. The applicant shall submit a noise study that states that the ambient levels, prior to starting operations. The applicant will conduct another study after the operations are permitted and submit it to the Planning Department. Noise from cultivation and related activities shall not result in an increase of more than three decibels of continuous noise above existing ambient noise levels at any property line of the site.

The project was referred to the Division of Environmental Health and recommended approval. However, the applicant will not process onsite and will not have any employees onsite.

The parcel is accessed of Briceland Throne Road onto Blue Slide Road onto Crooked Prairie Road. The applicant submitted a Road Evaluation self-certifying that the access road is an equivalent to a road Category 4 standard. The Department of Public Works has commented and recommended approval with the condition that the applicant pave the surface at the location of the access road which is Briceland Throne Road, the access road shall be paved for a minimum width of 20 feet and a length of 50 feet where it intersects the County road. This condition shall be completed to the satisfaction of the Department of Public Works prior to commencing operations, final sign-off for a building permit, or Public Works approval for a business license. The project is conditioned as such. Within one year, of issuance of this permit, the applicant is to join or start a Road Maintenance Association and provide evidence to the Planning Department.

The project was referred to the Bear River Band of the Rohnerville Rancheria, who recommended inadvertent discovery requirements. Additionally, the applicant will meet all Cal FIRE SRA Fire Safe Regulations.

The project will comply with the provision of the CCLUO intended to eliminate impacts to sensitive species from noise and light. Compliance with these and other measures of the CCLUO ensure consistency with the EIR.

Purpose - Section 15164 of the California Environmental Quality Act (CEQA) provides that the lead agency shall prepare an addendum to a previously certified Final Environmental Impact Report (EIR) if some changes or additions are necessary but none of the conditions described in Section 15162 calling for a subsequent EIR or Negative Declaration have occurred. Section 15162 states that when an EIR has been certified for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

1. Substantial changes are proposed in the project which require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the Final EIR was certified as complete, shows any of the following: A) the project will have one or more significant effects not discussed in the previous Final EIR; B) significant effect previously examined will be substantially more severe than shown in the Final EIR; C) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or D) mitigation measures or alternatives which are considerably different from those analyzed in the Final EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Summary of Significant Project Effects and Mitigation Recommended

No changes are proposed for the Final EIR recommended mitigations. The proposal to authorize the project in compliance with the CCLUO is fully consistent with the impacts identified and adequately mitigated in the Final EIR. The project as conditioned to implement responsible agency recommendations, results in no significantly adverse environmental effects beyond those identified in the Final EIR.

Other CEQA Considerations

Staff suggests no changes for the revised project.

EXPLANATION OF DECISION NOT TO PREPARE A SUPPLEMENTAL MITIGATED NEGATIVE DECLARATION OR ENVIRONMENTAL IMPACT REPORT

See Purpose statement above.

In every impact category analyzed in this review, the projected consequences of the current project proposal are either the same or less than significantly increased than the initial project for which the EIR was adopted. Based upon this review, the following findings are supported:

FINDINGS

1. The proposed project will permit an existing cannabis operation and bring the operation into compliance with county and state requirements intended to adequately mitigate environmental impacts.
2. The circumstances under which the project was approved have not changed substantially. There are no new significant environmental effects and no substantial increases in the severity of previously identified effects.
3. For the current proposed project, there has been no new information of substantial importance, which was not known and could not have been known with the

exercise of reasonable diligence at the time the previous EIR was adopted as complete.

CONCLUSION

Based on these findings it is concluded that an Addendum to the previous Final EIR is appropriate to address the requirements under CEQA for the current project proposal. All of the findings, mitigation requirements, and mitigation and monitoring program of the EIR, remain in full force and effect on the original project.

**ATTACHMENT 2
CANNABIS COMPLIANCE AGREEMENT**

This Agreement is entered into this 13th day of January, 2021, by and between the County of Humboldt ("County"), Moriah Appel ("Applicant"), and ("Owner"), regarding property located at 7050 Crooked Prairie Road, Whitethorn CA. Assessor's Parcel Number (APN) 221-221-009.

RECITALS

WHEREAS, on January 20, 2016, the Board of Supervisors of Humboldt County adopted Humboldt County Code ("HCC") Sections 313-55.4.11 and 314-55.4.11, allowing a property owner, under limited circumstances, to obtain a building permit or zoning clearance certificate to conduct commercial cannabis activity (Commercial Cannabis Permit) even though violations of the HCC, statute, and/or applicable regulation related to the commercial cannabis activity exist on the property, provided property owner and applicant execute an agreement with the County to cure the violations; and

WHEREAS, the County is utilizing this Compliance Agreement ("Agreement") to allow Applicant to secure permits to perform certain work associated with the Zoning Clearance Certificate for 4,260 square feet of cannabis cultivation (Record No. PLN-2019-16115); and

WHEREAS, pursuant to the authority provided in HCC Section 312-2.4.1.3, County will issue a Zoning Clearance Certificate or a Building Permit on the subject property and, in exchange, Applicant and Owner guarantee that the existing violations on the land will be cured within a prescribed period of time, stated below; and

WHEREAS, Applicant and Owner acknowledge that there are existing violations of the HCC, statute, or applicable regulation related to the commercial cannabis activity exist on the property, to wit, the unpermitted structures that have a nexus with the cultivation; and

WHEREAS, Applicant and Owner agree that a code enforcement action pursuant to HCC Sections 351-1 et seq., 2131-1 et seq., 2121-1 et seq., and any other applicable county or state law or regulation shall become active if the terms of this agreement are not fulfilled.

NOW, THEREFORE, in consideration of the faithful performance of the terms, conditions, and promises set forth in this Agreement, the Parties agree as follows:

1. **Acknowledgment of Violations.** Applicant, Owner, and County acknowledge and agree that there are existing violations of the HCC, statute, and/or applicable regulation on the property located in Humboldt County, at 7050 Crooked Prairie Road, Whitethorn CA. Assessor's Parcel Number (APN) 221-221-009, the violations consist of the, unpermitted structures and grading that have a nexus with the cultivation.
2. **Remedy for the Violations.** The Parties agree that to cure the violations on the property owner and Applicant must undertake the activities and schedule described in Exhibit A:

3. Issuance of Permit. The Parties agree that the provisional approval of the clearance or permit and issuance of any Commercial Cannabis Permit(s) is being made solely upon the representation by the Owner and Applicant in this Agreement that the violations on the property will be cured within the time frame in this Agreement. Any and all failures by the Owner and Applicant to cure the violations on the property within the prescribed time set forth in paragraph 5, below, shall be grounds for revocation of the approval pursuant to HCC Section 312-14.1.
4. Consent to Inspection. Owner and Applicant consent to all inspections of the property as needed, at any time during business hours from Monday to Friday, while this Agreement is in effect, by the Code Enforcement Unit, Division of Environmental Health, Planning and Building, and any other agencies or departments that may need to inspect the property to determine that the terms of this Agreement are being fulfilled.
5. Time Limit to Cure the Violations. The Parties agree that the Owner and Applicant will cure the existing violations at the earliest feasible date, but in no event no more than two (2) years of issuance of a provisional clearance or permit. Furthermore, Owner and Applicant must provide plans for curing such violations to the Planning and Building Department within one (1) year of issuance of the provisional clearance or permit. The time to cure the violations may only be extended upon request by Owner and Applicant if approved in writing after due consideration and a finding of good cause by the Director.
6. Failure to Cure the Violations. The Parties agree that if the Owner and Applicant fail to cure the violations on the property within the prescribed time limit, and no extension is granted by the Director, then a code enforcement file will become active, and the County shall pursue all legal and administrative remedies against the Owner and Applicant, as allowed by local and state law, to ensure that the violations on the property are cured.
7. Termination. The Parties agree that once Owner and Applicant have cured the violations on the property and the County, after inspecting the property, agrees in writing that all violations on the property are cured, then this Agreement shall terminate.
8. Lawful Construction. All repair, construction and reconstruction on the property shall be done in accordance with all applicable County and state codes, laws, and regulations. Owner and Applicant agree that they shall obtain the necessary permits PRIOR to any repair, construction or reconstruction of the property.
9. Waiver. The failure of the County to proceed against the Property Owners in an enforcement action, whether administrative, civil or criminal, for any violation of the applicable ordinance, this Agreement and/or state or local law or regulation shall not constitute or be deemed a waiver of the County's right to proceed against Owner and/or Applicant for any subsequent violation. Nothing in this Agreement shall limit in any manner the authority of the County to apply and/or enforce any provisions of the County's code or state law or regulation to the Owner and Applicant and activities occurring on the property.
10. Notices. All notices required by this Agreement shall be sent, at a minimum, via first class United States Mail with postage prepared to the Parties as follows:

To County:
Director, Planning and Building Department
3015 H Street
Eureka, CA 95501

To Property Owners:
Moriah Appel
PO Box 616
Whitethorn, CA 95589

To Applicant:
Moriah Appel
PO Box 616
Whitethorn, CA 95589

Notices shall be deemed served upon deposit in the United States mail.

11. Indemnification. Owner and Applicant shall indemnify, defend and hold harmless the County, its officers, agents and employees from and against any and all claims or suits for damages or injury arising from the issuance of a Commercial Cannabis Permit or other permits for the property located 7050 Crooked Prairie Road, Whitethorn CA. Assessor's Parcel Number (APN) 221-221-009 compliance with or failure to abide by the Commercial Cannabis Permit or the terms of this Agreement, and against and from all costs, attorney's fees, expenses and liabilities related to any claim or any action or proceeding brought within the scope of this indemnification.
12. Binding on Successors. This Agreement is binding on the heirs, successors and assigns of the Parties. In the event of a permit transfer, a new compliance agreement must be executed. In the event of property transfer, the Seller and Applicant have an affirmative duty to inform the Buyer of this Compliance Agreement. Seller and Applicant must also provide written proof of Buyer notification to the County.
13. Amendment. This Agreement may be amended, modified or changed by the Parties provided that said amendment, modification or change is in writing and approved by all Parties.
14. Entire Agreement. This Agreement contains the entire compliance agreement between the Parties and all prior or contemporaneous agreements, understandings, representations and statements, oral or written, regarding Sections 313-55.4.11(a) and 314-55.4.11(a) of the HCC are superseded by this Agreement.
15. Annual Inspection This Agreement is incorporated as a condition of approval for the provisional clearance or permit for commercial cannabis activity. Completion of the agreement shall be reviewed during the annual inspection process.
16. Severability. If any term, provision, promise or condition of this Agreement is held by a court with jurisdiction to decide on the matter to be invalid, void or unenforceable, the remaining provisions of this Agreement shall continue in full force and effect, unless the rights and obligations of the parties have been materially altered or abridged by such invalidation, voiding or unenforceability.

Edwards Excavation & Restoration

P.O. Box 245
 Whitethorn, Ca 95589
 Phone (707)496-3353
 edwardsexcavation@hotmail.com
 General Engineering Contractor Lic.#971935

Estimate

Date	Estimate #
10/27/2021	4

Moriah Apple
 831-818-9928

Description	Qty	Rate	Total
Job Location: 7050 Crooked Prairie -Notification		0.00	0.00
#1600-2020-0053-R1 Streambed Alteration Agreement			
Job Description: Crossing #1-Replacing undersized misalignment culvert with 24"x 50' culvert. Crossing #2-replcing culvert with rocked ford.		0.00	0.00
Mobilization & Demobilization	1	1,740.00	1,740.00
Equipment	1	3,000.00	3,000.00
Materials	1	11,400.00	11,400.00
Labor	1	1,200.00	1,200.00
Trucking	1	6,000.00	6,000.00
		Total	\$23,340.00



FOR DEPARTMENT USE ONLY				
Date Received	Amount Received	Amount Due	Date Complete	Notification No.
	\$	\$		
Assigned to:				

NOTIFICATION OF LAKE OR STREAMBED ALTERATION

Complete EACH field, unless otherwise indicated, following the instructions and submit ALL required enclosures, attachments, and fee(s) to the CDFW regional office that serves the area where the project will occur. Attach additional pages to notification, if necessary.

1. APPLICANT PROPOSING PROJECT

Name	Moriah Appel
Business/Agency	N/A
Mailing Address	PO Box 616
City, State, Zip	Whitethorn Calif. 95589
Phone Number	831-818-9928
Email	propgirlsheltercove@gmail.com

2. CONTACT PERSON *(Complete only if different from applicant.)*

Name	Diana Totten
Business/Agency	Clearwater Ag Services
Mailing Address	446 Maple Lane
City, State, Zip	Garberville Cal 95542
Phone Number	707-923-2767
Email	clearwateragservices@gmail.com

While an applicant is legally responsible for complying with Fish and Game Code section 1602 et seq., an applicant may designate and authorize an agent (e.g., lawyer, consultant, or other individual) to act as a Designated Representative. The Designated Representative is authorized to sign the notification and any agreement on behalf of the Applicant.

Do you authorize the Contact Person above to represent you as your Authorized Designated Representative?

Yes, I authorize. No, I do not authorize.

3. PROPERTY OWNER *(Complete only if different from applicant)*

Name	
Mailing Address	
City, State, Zip	
Phone Number	
Email	



4. PROJECT NAME AND AGREEMENT TERM

A. Project Name		Maggie			
B. Agreement Term Requested		<input checked="" type="checkbox"/> Regular (5 years or less) <input type="checkbox"/> Long-term (greater than 5 years)			
C. Project Term		Beginning (year)	2020	Ending (year)	2025
D. Seasonal Work Period					
Season(s)*	Start Date (month/day)	End Date (month/day)		E. Number of Work Days	
1	04/01	10/31		210	
2					
3					
4					
5					

* Continue on additional page(s) if necessary

5. AGREEMENT TYPE

Check the applicable box. If boxes B – F are checked, complete the specified attachment.

A.	<input checked="" type="checkbox"/> Standard (Most construction projects, excluding the categories listed below)
B.	<input type="checkbox"/> Gravel/Sand/Rock Extraction (Attachment A) Mine I.D. Number: _____
C.	<input type="checkbox"/> Timber Harvesting (Attachment B) THP Number: _____
D.	<input type="checkbox"/> Water Diversion/Extraction/Impoundment (Attachment C) SWRCB Number: _____
E.	<input type="checkbox"/> Routine Maintenance (Attachment D)
F.	<input checked="" type="checkbox"/> Cannabis Cultivation (Attachment E)
G.	<input type="checkbox"/> CDFW Grant Programs Agreement Number: _____
H.	<input type="checkbox"/> Master
I.	<input type="checkbox"/> Master Timber Operations



6. FEES

See the current fee schedule to determine the appropriate notification fee. Itemize each project's estimated cost and corresponding fee. **Note: CDFW may not process this notification until the correct fee has been received.**

A. Project Name		B. Project Cost	C. Project Fee
1	Maggie Watercourse Crossing Culvert	\$500	\$609.25
2	Removal of culvert for armored crossing	\$1,200	\$609.25
3			
4			
5			
6			
7			
8			
9			
10			
		D. Base Fee (if applicable)	
		E. TOTAL FEE*	\$1,218.50

* Check, money order, and Visa or MasterCard (select Environmental Fees from Menu) payments are accepted.

7. PRIOR NOTIFICATION AND ORDERS

A. Has a notification previously been submitted to, or a Lake or Streambed Alteration Agreement previously been issued by, CDFW for the project described in this notification?

Yes (Provide the information below) No

Applicant	Notification Number	Date

B. Is this notification being submitted in response to a court or administrative order or notice, or a notice of violation (NOV) issued by CDFW?

Yes No (Enclose a copy of the order, notice, or NOV. If the applicant was directed to notify CDFW verbally rather than in writing, identify the person who directed the applicant to submit this notification, the agency he or she represents, and describe the circumstances relating to the order.)

Name of person who directed notification	Agency

Describe circumstances relating to order

Continued on additional page(s)



8. PROJECT LOCATION

A. Address or description of project location.

(Include a map that marks the location of the project with a reference to the nearest city or town, and provide driving directions from a major road or highway.)

This project is in the Crooked Prairie area of Briceland. Take 101 South to exit 642 to Redwood Dr.. Proceed to Redway and take the Briceland Thorn Road approx. 7 miles West to China Creek Road. Follow China Creek Road 4.5 miles to Crooked Prairie Road and proceed .1 mile to driveway on the left at 7050 Crooked Prairie Road.

Continued on additional page(s)

B. River, stream, or lake affected by the project. Blue Slide Creek

C. What water body is the river, stream, or lake tributary to? Mattole River

D. Is the river or stream segment affected by the project listed in the state or federal Wild and Scenic Rivers Acts? Yes No Unknown

E. County Humboldt

F. USGS 7.5 Minute Quad Map Name	G. Township	H. Range	I. Section	J. ¼ Section
Briceland	4S	2E	9	NW

Continued on additional page(s)

K. Meridian (check one) Humboldt Mt. Diablo San Bernardino

L. Assessor's Parcel Number(s)

221-221-009

Continued on additional page(s)

M. Geographic coordinates *(Provide the latitude and longitude coordinates for the property where the project(s) will take place. CDFW utilizes decimal degrees and WGS 84 datum. Access [Google Maps Help](#) if you need assistance in finding your coordinates.)*

Latitude/Longitude	Latitude: 40.1344	Longitude: 123.9631
	Latitude:	Longitude:
	Latitude:	Longitude:
	Latitude:	Longitude:
	Latitude:	Longitude:



9. PROJECT CATEGORY

WORK TYPE	NEW CONSTRUCTION	REPLACE EXISTING STRUCTURE	REPAIR-MAINTAIN-OPERATE EXISTING STRUCTURE
Bank stabilization – bioengineering/recontouring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bank stabilization – rip-rap/retaining wall/gabion	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Boat dock/pier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boat ramp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bridge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Channel clearing/vegetation management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culvert	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Debris basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filling of wetland, river, stream, or lake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geotechnical survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat enhancement – revegetation/mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Levee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low water crossing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road/trail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sediment removal: pond, stream, or marina	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
flood control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm drain outfall structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temporary stream crossing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utility crossing: horizontal directional drilling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
jack/bore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
open trench	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water diversion without facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water diversion with facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



10. PROJECT DESCRIPTION

- A. Describe the project in detail. Include photographs of the project location and immediate surrounding area.
- Written description of all project activities with detailed step-by-step description of project implementation.
 - Include any structures (e.g., rip-rap, culverts) that will be placed or modified in or near the stream, river, or lake, and any channel clearing.
 - Specify volume, and dimensions of all materials and features (e.g., rip rap fields) that will be used or installed.
 - If water will be diverted or drafted, specify the purpose or use and include Attachment C.
 - Enclose diagrams, drawings, design plans, construction specifications, and maps that provide all of the following: site specific construction details; dimensions of each structure and/or extent of each activity in the bed, channel, bank or floodplain; overview of the entire project area (i.e., "bird's-eye view") showing the location of each structure and/or activity, significant area features, stockpile areas, areas of temporary disturbance, and where the equipment/machinery will access the project area.
 - A helpful resource to assist in the development of quality PDF maps in Google Earth. See Using Google Earth to Map your Property (PDF).

There are 2 projects on this parcel.

The first project is for one water course crossing on the driveway to the residence and cultivation area. The culvert is an existing 18"x 20' CMP. The drainage area is approximately 4.4 acres. This culvert is in good working order and meets the 100 year flood event sizing. The stream is a class 3 and photos show the watercourse as approximately 12-16 inches in width and 6 inches in dept at the erosion marks of banks of the watercourse. The rust line is approximately 2" of bottom of the culvert. The outlet is shotgunned and drops approximately 5'6".

Recommend placement of 6 cu. yds. of 12"-18" rip-rap to dissipate the outflow of the culvert to reduce erosion and sediment discharge.
 Clear inlet of material and debris.

The second project is to remove an existing 18" culvert in what appears to be a class 4 watercourse but has no evidence of a defined channel or watercourse.

Recommend removing culvert and installing an armored crossing. After removing culvert, shape a rolling dip armored crossing using 5 cu. yds. of 4"-6" fractured rock to line the crossing using guidelines from the Handbook for Forest, Ranch and Rural Roads.

Cultivation irrigation water comes from rain catchment from roof of residence.

Continued on additional page(s)

B. Specify the equipment and machinery that will be used to complete the project.

Mini Excavator
 Dump Truck
 Hand Tools such as shovels and rakes

Continued on additional page(s)

C. Will water be present during the proposed work period (specified in box 4.D) in the stream, river, or lake (specified in box 8.B). Yes No (Skip to box 11)

D. Will the project require work in the wetted portion of the channel? Yes (Enclose a plan to divert water around work site) No



11. PROJECT IMPACTS

A. Describe impacts to the bed, channel, and bank of the river, stream, or lake, and the associated riparian habitat. Specify the dimensions of the modifications in length (linear feet) and area (square feet or acres) and the type and volume of material (cubic yards) that will be moved, displaced, or otherwise disturbed, if applicable.

Potential impacts will be to local fish and wildlife such as Steelhead, Coho Salmon, Chinook Salmon, Southern Torrent Salamander, Foothill Yellow-legged Frog, Red-bellied Newt. and other fish, wildlife, birds, amphibians, plants and reptiles.
 All work will be done in the dry season with no water present. Increased water quality will be enhanced by the completion of the project.

Continued on additional page(s)

B. Will the project affect any vegetation?

Yes (Complete the tables below) No (Include aerial photo with date supporting this determination)

Vegetation Type	Temporary Impact	Permanent Impact
	Linear feet: _____ Total area: _____	Linear feet: _____ Total area: _____
	Linear feet: _____ Total area: _____	Linear feet: _____ Total area: _____

Tree Species	Number of Trees to be Removed	Trunk Diameter (range)

Continued on additional page(s)

C. Are any special status animal or plant species, or habitat that could support such species, known to be present on or near the project site?

Yes (List each species and/or describe the habitat below) No Unknown

Continued on additional page(s)

D. Identify the source(s) of information that supports a "yes" or "no" answer above in Box 11.C.

CNDDB

Continued on additional page(s)

E. Has a biological study been completed for the project site?

Yes (Enclose the biological study) No

Note: A biological assessment or study may be required to evaluate potential project impacts on biological resources.



F. Has one or more technical studies (e.g., engineering, hydrologic, geological, or geomorphological) been completed for the project or project site?

Yes (Enclose the study(ies)) No

Note: One or more technical studies may be required to evaluate potential project impacts to a lake or streambed.

G. Have fish or wildlife resources or waters of the state been mapped or delineated on the project site?

Yes (Enclose the mapped results) No

Note: Check "yes" if fish and wildlife resources or waters of the state on the project site have been mapped or delineated. "Wildlife" means and includes all wild animals, birds, plants, fish, amphibians, reptiles and related ecological communities, including the habitat upon which the wildlife depends." (Fish & G. Code, § 89.5.) If "yes" is checked, submit the mapping or delineation. If the mapping or delineation is in digital format (e.g., GIS shape files or KMZ), you must submit the information in this format for CDFW to deem your notification complete. If "no" is checked, or the resolution of the mapping or delineation is insufficient, CDFW may request mapping or delineation (in digital or non-digital format), or higher resolution mapping or delineation for CDFW to deem the notification complete.

12. MEASURES TO PROTECT FISH, WILDLIFE, AND PLANT RESOURCES

A. Describe the techniques that will be used to prevent sediment, hazardous, or other deleterious materials from entering watercourses during and after construction.

Projects will take place during the dry season May 15 through Oct. 15. There will be no water present during work. No equipment will be used in stream or watercourse. Placement of the rip-rap will be done with a mini excavator from the road surface. The use of wattles or seed and straw to cover any exposed soil will prevent erosion.

Continued on additional page(s)

B. Describe project avoidance and/or minimization measures to protect fish, wildlife, and plant resources.

All work will be done during dry season. No vegetation will be removed. Natural riparian buffers will help to keep water temperatures low and reduce the possible potential of erosion. Any exposed soil will be seeded and strawed with native plant mix for erosion control.

Continued on additional page(s)

C. Describe any project mitigation and/or compensation measures to protect fish, wildlife, and plant resources.

By rip-rapping the outlet of the existing culvert, the potential for the water quality to improve downstream which will enhance fish populations in nearby Blue Slide Creek. --
The armored crossing in place of a culvert on project 2 will also reduce the possible sediment discharge from the driveway.
Any exposed or disturbed earth will be seeded and strawed to minimize potential erosion.

Continued on additional page(s)



13. PERMITS

List any local, State, and federal permits required for the project and check the corresponding box(es). Enclose a copy of each permit that has been issued.

A.	Humboldt County Cannabis Cultivation Permit	<input checked="" type="checkbox"/> Applied	<input type="checkbox"/> Issued
B.	SWQCB enrollment	<input checked="" type="checkbox"/> Applied	<input type="checkbox"/> Issued
C.		<input type="checkbox"/> Applied	<input type="checkbox"/> Issued
D. Unknown whether <input type="checkbox"/> local, <input checked="" type="checkbox"/> State, or <input type="checkbox"/> federal permit is needed for the project. (Check each box that applies)			
<input checked="" type="checkbox"/> Continued on additional page(s)			

14. ENVIRONMENTAL REVIEW

A. Has a <u>CEQA</u> lead agency been determined?		<input checked="" type="checkbox"/> Yes (Complete boxes B, C, D, E, and F)		<input type="checkbox"/> No (Skip to box 14.G)	
B. CEQA Lead Agency		Humboldt County Planning Dept.			
C. Contact Person		Steve Lazar		D. Phone Number	
				707-445-7245	
E. Has a draft or final document been prepared for the project pursuant to CEQA and/or NEPA?					
<input type="checkbox"/> Yes (Check the box below for each CEQA or NEPA document that has been prepared and enclose a copy of each.)					
<input type="checkbox"/> No (Check the box below for each CEQA or NEPA document listed below that will be or is being prepared.)					
<input type="checkbox"/> Notice of Exemption		<input type="checkbox"/> Mitigated Negative Declaration		<input type="checkbox"/> NEPA document (type): _____	
<input type="checkbox"/> Initial Study		<input checked="" type="checkbox"/> Environmental Impact Report			
<input type="checkbox"/> Negative Declaration		<input type="checkbox"/> Notice of Determination (Enclose)			
<input type="checkbox"/> THP/ NTMP		<input type="checkbox"/> Mitigation, Monitoring, & Reporting Plan			
F. State Clearinghouse Number (if applicable)					
G. If the project described in this notification is not the "whole project" or action pursuant to CEQA, briefly describe the entire project (Cal. Code Regs., tit. 14 § 15378).					
<input type="checkbox"/> Continued on additional page(s)					



H. Has a CEQA filing fee been paid pursuant to Fish and Game Code section 711.4?

- Yes (Enclose proof of payment) No (Briefly explain below the reason a CEQA filing fee has not been paid)

Note: The CEQA filing fee is in addition to the notification fee. If a CEQA filing fee is required, the Lake or Streambed Alteration Agreement may not be finalized until paid.

15. SITE INSPECTION

Check one box only.

- In the event CDFW determines that a site inspection is necessary, I hereby authorize a CDFW representative to enter the property where the project described in this notification will take place at any reasonable time, and hereby certify that I am authorized to grant CDFW such entry.
- I request CDFW to first contact (insert name) Moriah Appel at (insert phone number or email address) 831-818-9928 to schedule a date and time to enter the property where the project described in this notification will take place. I understand that this may delay CDFW's determination as to whether a Lake or Streambed Alteration Agreement is required and/or CDFW's issuance of a draft agreement pursuant to this notification.

16. DIGITAL FORMAT

Is any of the information included as part of the notification available in digital format (i.e., CD, DVD, etc.)?

- Yes (Please enclose the information via digital media with the completed notification form.)
 No

17. SIGNATURE

I hereby certify that to the best of my knowledge the information in this notification is true and correct and that I am authorized to sign this notification as, or on behalf of, the applicant. I understand that if any information in this notification is found to be untrue or incorrect, CDFW may suspend processing this notification or suspend or revoke any draft or final Lake or Streambed Alteration Agreement issued pursuant to this notification. I understand also that if any information in this notification is found to be untrue or incorrect and the project described in this notification has already begun, I and/or the applicant may be subject to civil or criminal prosecution. I understand that this notification applies only to the project(s) described herein and that I and/or the applicant may be subject to civil or criminal prosecution for undertaking any project not described herein unless CDFW has been separately notified of that project in accordance with Fish and Game Code section 1602 or 1611.

 Signature of Applicant or Applicant's Authorized Representative 01/07/2020

 Date

Diana Totten

 Print Name



Applicant Name: Moriah Appel

Project Name: Maggie

ATTACHMENT E

Commercial Cannabis Cultivation

Complete this attachment *if* the project includes commercial cannabis cultivation and you are seeking a standard Lake or Streambed Alteration Agreement or if activities include remediation of a cannabis cultivation site.

“Cultivation” means any activity involving the planting, growing, harvesting, drying, curing, grading, or trimming of cannabis (Business and Professions Code, section 26000 et seq.). *Please note that if you are seeking authorization under the General Agreement for Cannabis Cultivation you must notify online at the California Department of Fish and Wildlife (CDFW) website: <https://www.wildlife.ca.gov/Conservation/LSA/Notify-CDFW>.*

Complete Sections I through V and VII for all Agreement types.

Complete Section VI *if* any aspect of the project includes remediation. “Remediation” means to perform work that reduces or eliminates the direct and indirect adverse impacts on fish and wildlife resources associated with past or existing cannabis activities subject to Fish and Game Code 1602.

Submit Attachment E with the Notification form (DFW 2023) and applicable fees.

I. LOCAL JURISDICTION AUTHORIZATION – Complete this section for all Agreement types.

Does the town, city, or county where cultivation will occur have a rule, ordinance, or other regulation or law that governs the cultivation of cannabis?		
<input type="checkbox"/> Yes: Town/City	<input checked="" type="checkbox"/> Yes: County	<input type="checkbox"/> No
Are you required to have written authorization (permit) from the city/town and/or county to cultivate cannabis within the city/town and/or county?		
<input checked="" type="checkbox"/> Yes. <i>Enclose written authorization and/or completed application(s).</i>		<input type="checkbox"/> No

II. PROPERTY DIAGRAM – Complete this section for all Agreement types.

Enclose the cultivation Property Diagram that has been, or will be, submitted to the California Department of Food and Agriculture (CDFA) (California Code of Regulations, title 3, section 8105). For Property Diagram requirements, refer to http://calcannabis.cdfa.ca.gov/ , or CDFA’s Reference Guide for the Cultivation Plan .	
Cultivation Property Diagram enclosed?	
<input checked="" type="checkbox"/> Yes <i>Enclose the property diagram required by CDFA (Cal. Code Regs., tit. 3, § 8105).</i>	<input type="checkbox"/> No <i>If “no” is checked, enclose a brief description explaining why the property diagram is not enclosed.</i>



III. CULTIVATION OPERATION – Complete this section for all Agreement types.

Provide information regarding any pending cultivation license application or annual license CDFA has issued to the Entity, or that the Entity has applied or will apply for.

Type of Operation:

- Proposed new cannabis cultivation operation
 Existing cannabis cultivation operation

Premises APN(s):

*The Premises is the designated structure(s) and land specified in the CDFA application that are in possession of and used by the applicant to conduct the commercial cannabis activity. **Include ALL APNs associated with your CDFA application.***

221-221-009		

CDFA Annual or Provisional License # (if applicable): pending

CDFA Annual Application # (if license has not yet been issued): pending

State Water Resources Control Board – Cannabis Cultivation General Order

Water Discharge Identification (WDID) number: pending

Your WDID number can be found on the Notice of Applicability (NOA) issued to you by the Regional Water Quality Control Board.

IV. WATER SUPPLY – Complete this section for all Agreement types. Add additional pages as necessary.

How will or how is water supplied to the cannabis cultivation site(s)?

- *For geographic coordinates, provide the latitude and longitude coordinates for the water supply (if applicable). CDFW utilizes decimal degrees and WGS 84 datum. Access [Google Maps Help](#) if you need assistance in finding your coordinates.*

Diversion, Obstruction, Extraction, or Impoundment of a River, Stream, or Lake

- Yes No

*If yes is checked, you **must** also complete Attachment C.*

Provide geographic coordinates for **each** diversion, obstruction, extraction, or impoundment:

Latitude:	Longitude:
-----------	------------

Spring(s)

- Yes No

*If yes is checked, you **must** also complete Attachment C.*

Number of Springs _____

Provide geographic coordinates for **each** spring:

Latitude:	Longitude:
-----------	------------



Private Well(s)

Yes No

Provide geographic coordinates for each well:

Latitude:	Longitude:
-----------	------------

If a private well is being utilized, provide a copy of the well log/well completion report filed with the Department of Water Resources (DWR) pursuant to Section 13751 of Water Code. If no well log is available, provide evidence from DWR indicating that DWR does not have a record of the well log. See DWR's Groundwater Management page for more information at: <https://water.ca.gov/Programs/Groundwater-Management/Wells>

Public Water System

Yes No

Name of public water system: _____

If Yes, provide the most recent copy of water service bill or will-serve letter from the water service provider.

Water Hauling

Yes No

Name of water hauler: _____

Other Source

Specify: Rain Catchment

V. CALIFORNIA LICENSED PROFESSIONAL OR QUALIFIED ENVIRONMENTAL CONSULTANT/BIOLOGIST –
 Complete this section for all Agreement types.

Have you consulted with or retained a California licensed professional or qualified environmental consultant/biologist to address your cannabis cultivation?

Yes (Provide the information below) No

Name of Company	Name of Professional or Consultant/Biologist	Business Telephone
Clearwater Ag Services	Diana Totten	707-923-2767



VI. REMEDIATION – Complete this section if *any* aspect of the project includes remediation.

Remediation reduces or eliminates direct and indirect adverse effects on fish and wildlife resources associated with a past or existing project or activity that supports or relates to cannabis cultivation, whether on or off a cultivation site. Remediation projects typically include modification, repair, removal, restoration, construction, or reconstruction activities. Examples of remediation projects include, but are not limited to:

- Repairing a stream crossing used to access a cultivation site;
- Removing a staging area on a stream bank; and
- Repairing a water diversion structure used to irrigate a cultivation site.

A. Order or Notice. Are you required to perform remediation work described in this notification pursuant to a court or administrative agency notice or order?

Yes (*Enclose a copy of the order or notice*) No

Did you receive a notice of violation (NOV) from CDFW that relates to the remediation work described in this notification?

Yes (*Enclose a copy of the NOV*) No

B. Remediation Area. What is the amount of area requiring remediation?

Remediation area in total: _____ square feet

C. Remediation Plan. Has a plan to remediate the area been prepared?

Yes (*Enclose the plan*) No

Note: If "yes" is checked, submit the remediation plan with the Notification. If "no" is checked, your Notification may be incomplete and CDFW may request you have a California licensed professional or qualified environmental consultant/biologist amend the plan or submit a new plan for your Notification.

VII. REMEDIATION FEES – Entity must pay the fee(s) at time of Notification.

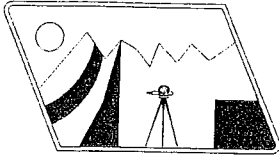
The current fee schedule is available at <https://www.wildlife.ca.gov/Conservation/LSA> and specified in Section 699.5, subdivision (b) of the California Code of Regulations, title 14. Remediation fees, if applicable, are specified in Section 699.5, subdivision (i) of the California Code of Regulations, title 14. The remediation fee is in addition to the notification fee and must be submitted by **separate** check or other method of payment.

You may pay by credit card at CDFW's Online License Sales and Services page at: <https://www.wildlife.ca.gov/Licensing>. Attach copy of sales receipt to the notification. A handling charge will be applied (Fish and G. Code, § 1055.1, subd. (d)) to the credit card transaction.

Remediation Fee Included (if applicable)?

Total remediation area identified in Section VI (B) above is less than or equal to 1,000 square feet

Total remediation area identified in Section VI (B) above is greater than 1,000 square feet



A.M. BAIRD

ENGINEERING & SURVEYING, INC.

1257 Main Street • P.O. Box 396 • Fortuna, CA. 95540 • (707) 725-5182 • Fax (707) 725-5581

CONSULTING - LAND DEVELOPMENT - DESIGN - SURVEYING

SOILS ENGINEERING

Geologic R-2

SOILS REPORT

PREPARED FOR

Moriah Appel

**APN: 221-221-009
7050 Crooked Prairie Rd.**



WHITETHORN, HUMBOLDT COUNTY, CA

PREPARED BY:

ALLAN M. BAIRD, RCE 23681

6/8/2020
Job# 20-4888

June 8, 2020

Building Official
County of Humboldt Building Department
3015 H Street
Eureka, California 95501

Humboldt County R2 Report: AP# 221-221-009
7050 Crooked Prairie Rd.
Whitethorn, CA
Client: Moriah Appel

INTRODUCTION

A.M. Baird Engineering has reviewed the above referenced lot near Whitethorn, California for a soils suitability report. This report is furnished to satisfy the soils criteria as required by Humboldt County for an "R2" Geological Report as pertaining to graded fill. Observations of this inspection regarding the site soils and topography are the contents of this report. A construction plan has not been reviewed by this office.

SITE LOCATION AND DESCRIPTION

Whitethorn is located between Redway and Shelter Cove on the Pacific Ocean some fifty-two air miles south-southeast of Eureka, and approximately sixteen road miles west-southwest of Redway. The site is on the westerly slopes of the Coast Range Mountains approximately 900 feet in elevation above the Pacific Ocean. The parcel is designated as APN 221-221-009 and is approximately 38.74 acres. Access to the parcel is provided via West Fork Road. This lot slopes south-southwest towards the Pacific Ocean from 10-40% in the vicinity of the graded area. See Enclosed Site Map.

SOIL CONDITIONS

Soil sampling within the excavation site on the parcel, labeled as TH1, revealed no discernable topsoil over at least 6-foot-thick subsoil. The subsoil is a dark brown Loam (Munsell color 10 YR 3/3), consisting of approximately 71% coarse weight. There is no indication in the surrounding area of any slumps, faults, or springs that would be detrimental to the building site.

GROUNDWATER

No groundwater or soil mottling was encountered during this soils investigation.

SLOPE STABILITY AND SURFACE DRAINAGE HAZARDS

The nature of the entire property appears to be stable and should remain stable provided the recommendations given in this report are followed. Areas disturbed during construction activities should be re-vegetated prior to the rainy season. Impermeable surfaces such as driveways and rooftops should be designed to uniformly diffuse runoff away from structures, and significant quantities of concentrated runoff should not be discharged over slopes greater than 20%.

GEOLOGICAL HAZARDS

This area of California is seismically very active and is subject to earthquakes of large magnitude, which can produce significant ground shaking. This moderate to very high level of risk of seismic hazard is typical for the northern coastal and inland areas.

This parcel is located within 2 miles of the Bricland Fault and within 8 miles of the Type A San Andreas Fault (north coast). In general, there are many sources of large magnitude earthquakes that could potentially affect this project area. These sources include but are not limited to the Garberville Fault, the Briceland Fault, the Lake Mountain Fault, the complex northwesterly oriented fault systems surrounding the Humboldt Bay area (including the Little Salmon, Mad River, Freshwater, and Gorda Fault Zones), and the Cascadia Subduction Zone near Cape Mendocino.

The San Andreas Fault has produced major earthquakes in this area at intervals of approximately 75-150 years. Earthquakes with average magnitudes of 5.8 occur on average every 10-15 years at varying locations in or near Humboldt County, and geological evidence suggests that the San Andreas Fault is capable of generating magnitudes much higher (7+). This high to very high level of risk of seismic hazard is typical for Northern California, and residents assume this risk when they choose to build in this area. Earthquakes capable of causing intense ground shaking and structural damage can be expected to occur within the design life of the proposed structure (40+ years). Residents should be aware of this inherent risk, and should understand that these risks cannot be fully eliminated with engineered design. As required, all structural design should be in conformance with the 2019 CBC Seismic Design Category (SDC) E (Section 1613A, 2019 CBC). Latitude and Longitude values were taken from the Humboldt County Web GIS website (County of Humboldt, 2019). Site-specific soil parameters were calculated using the USGS Ground Motion Parameter Calculator (Table 1) (USGS, 2019):

Latitude	40.1336
Longitude	-124.9623
Occupancy Category	II (normal buildings)
Importance Factor, I	1.0
Site Class	D (stiff soil) (default)
Site Coefficients	$F_a=1.0$
	$F_v=1.5$

Mapped Spectral Response Acceleration Parameters	$S_s = 1.773$ g (0.2-second spectral response)
	$S_1 = 0.898$ g (1-second spectral response)
Design Spectral Response Acceleration Parameters	$S_{MS} = 1.773$ g (0.2-second period)
	$S_{M1} = \text{null}$ - see section 11.4.8
Design Spectral Response Acceleration Parameters (five-percent damped design spectral response)	$S_{DS} = 1.182$ g (0.2-second period)
	$S_{D1} = \text{null}$ - see section 11.4.8
Seismic Design Category (SDC)	E ($S_1 > 0.75$ g)
Peak Ground Acceleration ($S_s/2.5$)	0.709

FLOOD HAZARDS

The site is not considered to be within a flood prone area. The hazard for flooding is considered low. It shall be noted however, that it is possible, though very unlikely that extreme flood events can alter stream courses enough to compromise nearby foundations and structures. This is considered a very low risk location.

EXISTING GRADING (CUT/FILL)

No evidence of other fill was apparent on the property during this site inspection, or is of sufficient age to be unrecognizable. The sub-soils are competent for foundation loads.

EARTHQUAKE MOTION HAZARDS

Slope instability, liquefaction, and surface rupture due exclusively to faulting or lateral spreading are not considered consequential as to require specific analysis. Peak ground acceleration for design purposes shall be $S_s/2.5$ according to ASCE 7-16 Section 11.8.3 unless additional site-specific analysis is provided beyond the scope contained herein.

RECOMMENDATIONS

No expansive soils were encountered during this investigation that require specific recommendations. The undisturbed soil on this lot can support a load of 1,500 pounds per square foot (psf). The soil is suitable for grading uses for this site, and settlement is not anticipated to be detrimental provided considerations are given to the recommendations presented herein:

Monitoring and Inspection

Sites will be monitored daily during wet weather by contractor and/or owner(s). Contractor and/or owner(s) are responsible for reporting any hazardous situations to the engineer. Upon completion of the permitted grading work and at the final completion of the work for "engineered grading" or when professional inspection is performed for regular grading a final report shall be submitted by the engineer if required. The permit applicant/owner(s) shall notify the building official when the grading operation is ready for final inspection.

Cut Slopes

1. **Cut Slope.** The slope of cut surfaces shall be no steeper than is safe for the intended use and shall be no steeper than one-unit vertical in two-units horizontal (50% slope)
 - 1.1.1. **Exemptions:** cut surface shall be remitted to a max slope of one and a half units horizontal to one-unit vertical (67%) slope if all the following are met
 - 1.1.2. It is not intended to support structures or surcharges
 - 1.1.3. It is adequately protected against erosion
 - 1.1.4. It is no more than eight feet in height
 - 1.1.5. It is approved by the building code office
 - 1.1.6. Groundwater is not encountered
 - 1.1.7. A cut surface in bedrock shall be permitted to be at a slope of one unit horizontal to one unit vertical

Fill Slope and Preparation

1. **Preparation of Ground.** Fill slopes shall not be constructed on natural slopes steeper than one-unit vertical in two-units horizontal (50% slope). The ground surface shall be prepared to receive fill by removing vegetation, non-complying fill, topsoil and other unsuitable materials scarifying to provide a bond with the new fill and, where slopes are steeper than one-unit vertical in five-units horizontal (20% slope) and the height is greater than five-feet (1.52 m), by benching unless specified in a report from this office. The bench under the toe of a fill on a slope steeper than one-unit vertical in five-units horizontal (20% slope) shall be at least ten-feet (3.05 m) wide. The area beyond the toe of fill shall be sloped for sheet overflow or a paved drain shall be provided. When fill is to be placed over a cut, the bench under the toe of fill shall be at least ten feet (3.05 m) wide but the cut shall be made before placing the fill.
2. **Fill Material.** Amounts of organic material detrimental to structural integrity shall not be permitted in fills. Except as permitted by the building official, no rock or similar irreducible material with a maximum dimension greater than 12 inches (0.31 m) shall be buried or placed in fills

3. **Compaction.** All fills shall be compacted to achieve an equivalent minimum of 90 percent of maximum dry density with enough testing for documentation of compliance with this standard. Fill slops shall be placed in max 8-12" lifts and compacted. If the graded areas are attended for permanent structures requiring foundations, fill should be placed in lifts and compacted to 95% with testing.
4. **Slope.** The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes shall be no steeper than one-unit vertical in two-units horizontal (50% slope).

Setbacks

1. **General.** Cut and fill slopes shall be set back from site boundaries in accordance with this section. Setback dimensions shall be horizontal distances measured perpendicular to the site boundary.
2. **Top of Cut Slope.** The top of cut slopes shall not be made nearer to a site boundary line than one fifth of the vertical height of cut with a minimum of two feet (0.61 m) and a maximum of ten feet (3.05 m). The setback may need to be increased for any required interceptor drains.
3. **Toe of Fill Slope.** The toe of fill slope shall be made not nearer to the site boundary line than one half the height of the slope with a minimum of two feet (0.6 m) and a maximum of 20 feet (6.1 m). Where a fill slope is to be located near the site boundary and the adjacent offsite property is developed, special precautions shall be incorporated in the work as the building official deems necessary to protect the adjoining property from damage as a result of such grading. These precautions may include but are not limited to: (1) Additional setbacks. (2) Provision for retaining, or slough walls. (3) Mechanical or chemical treatment of the fill slope surface to minimize erosion. (4) Provisions for the control of surface waters.

Drainage and Terracing for Slopes Steeper Than 33%

1. **General.** Unless otherwise indicated on the approved grading plan, drainage facilities and terracing shall conform to the provisions of this section for cut or fill slopes steeper than one-unit vertical in three-units horizontal (33.3% slope).
 - a. Hill Terrace. Terraces at least six feet (1.83 m) in width shall be established at not more than 30-foot (9.14 m) vertical intervals on all cut or fill slopes to control surface drainage and debris except that where only one terrace is required, it shall be at mid-height. For cut or fill slopes greater than 60 feet (18.29 m) and up to 120 feet (36.58 m) in vertical height, one terrace at approximately mid-height shall be 12 feet (3.66 m) in width. Terrace widths and spacing for cut and fill slopes greater than 120 feet (36.58 m) in height shall be designed by the civil engineer and approved by the building official. Suitable access shall be provided to permit proper cleaning and maintenance. Swales or ditches on terraces shall have a minimum gradient of five percent and must be paved with reinforced concrete not less than three inches (76 mm) in thickness or an approved equal paving as approved by the building official. They shall have a minimum depth at the deepest point of 12 inches (305 mm) and a minimum paved width of five feet (1.52 m). A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (1254.2 m²) (projected) without discharging into a down drain. Unless otherwise noted
2. **Drainage Across Property Line.** Drainage across property lines shall not exceed that which existed prior to grading. Excess or concentrated drainage shall be contained on site or directed to an approved drainage facility. Erosion of the ground

in the area of discharge shall be contained onsite or directed to an approved drainage facility. Erosion of the ground in the area of discharge shall be prevented by installation of non-erosive down drains or other devices.

3. **Subsurface Drainage.** Cut and fill slopes shall be provided with subsurface drainage as necessary for stability.
4. **Surface Drainage Disposal.** All drainage facilities shall be designed to carry waters to the nearest practicable drainageway approved by the building official or other appropriate jurisdiction as a safe place to deposit such waters. Erosion of ground in the area of discharge shall be prevented by installation of non-erosive down drains or other devices. Building pads shall have a drainage gradient of two percent toward approved drainage facilities, unless waived by the building official. The gradient from the building pad may be one percent if all the following conditions exist throughout the permit area: (1) No proposed fills are greater than 10 feet (3.05 m) in maximum depth. (2) No proposed finished cut or fill slope faces have a vertical height in excess of 10 feet (3.05 m). B - 14 (3) No existing slope faces, which have a slope face steeper than one-unit vertical in ten-units horizontal (10% slope), have a vertical height in excess of ten feet (3.05 m).

Interceptor Drains.

1. Interceptor drains shall be installed along the top of cut slopes receiving drainage from a tributary width greater than 40 feet. The 40 feet should be measured horizontally, they shall have a minimum depth of one foot and a minimum width of three feet.
2. Paved interceptor drains shall be installed along the top of all cut slopes where the tributary drainage area above slopes toward the cut and has a drainage path greater than 40 feet (12.19 m) measured horizontally. Interceptor drains shall be paved with a minimum of three inches (76 mm) of concrete or gunite and reinforced. They shall have a minimum depth of 12 inches (305 mm) and a minimum paved width of 30 inches (762 mm) measured horizontally across the drain. The slope of drain shall be approved by the building official.

Erosion and Sedimentation Control.

1. **General** These standards shall be incorporated into the project design and shall be adhered to during project construction:
2. Minimize soil exposure during the rainy season by proper timing of grading and construction.
3. Retain trees and natural vegetation to stabilize hillsides, retain moisture, reduce erosion, minimize siltation and nutrient runoff and preserve scenic qualities.
4. Vegetate and mulch denuded areas to protect them from winter rains.
5. Divert runoff away from steep, denuded slopes or other critical areas with barriers, berms, ditches or other facilities.
6. Design grading to be compatible with adjacent areas and result in minimal disturbance of the terrain and natural land features.
7. Limit construction, clearing of vegetation and disturbance of the soil to areas of proven stability. Mitigate geologic hazards and adverse soil conditions when they are encountered. Reduce sediment transport off the site to the maximum extent feasible using Best Management Practices (BMPs).

8. Propose a new or modified erosion and sediment control technique if the technique is preferred and meets the intent of these regulations. Obtain approval from the County prior to implementation.
9. If construction is to occur between October 15th and April 15th site inspections will be conducted by the contractor and/or owner(s) prior to a forecasted storm, after a rain even, weekly throughout the rainy season, and every two weeks throughout construction
10. Conduct frequent site inspections to ensure that control measures are working properly and to correct problems as needed.

Sediment Control

1. Use sediment basins, silt traps, or similar measure to retain sediment transported by runoff water onsite.
2. Collect and direct surface runoff at non-erosive velocities to the common natural watercourse of the drainage area.
3. Avoid concentrating surface water anywhere except swales or watercourses.
4. Prevent mud from being tracked onto the public roadway by traveling over a temporary gravel construction entrance or washing off vehicle tires before entering a public or private driveway.

Slope Construction

1. Minimize length and steepness of slopes by benching, terracing or constructing diversion structures.
2. Preserve, match, or blend cuts and fills with the natural contours and undulations of the land.
3. Round sharp angles at the top and sides of cut and fill slopes.
4. Maintain cut and fill slopes at less than two-to-one (2V:1H,) slope unless a geological and engineering analysis indicates that steeper slopes are safe, and erosion and sediment control measures can successfully prevent erosion.
5. Where a cut or fill slope occurs between two lots, make the slope a part of the downhill lot if possible.

Protection of Watercourses and Drainage Inlets

1. Prepare drainageways to handle concentrated or increased runoff from disturbed areas by using appropriate lining materials or energy absorbing devices to reduce the velocity of runoff water.
2. Trap sediment-laden runoff in basins to allow soil particles to settle out before flows are released to receiving waters, storm drains, streets or adjacent property. This standard is not mandatory for grading conducted between April 15 and October 15 and when the site is fully winterized and stabilized prior to October 15. Remove trapped sediment to a suitable location on-site or at a disposal site approved by the County.
3. Do not grade or drive equipment in a Streamside Management or Other Wet Areas except as allowed through the County Streamside Management Area Ordinance.
4. Deposit or store excavated materials away from watercourses.
5. Protect all existing or newly installed storm drainage structures from sediment clogging.

6. Use straw bales, filter fabric wraps and drainage inlet protections in a manner that does not cause additional erosion or flooding of a roadway.

Dust Control

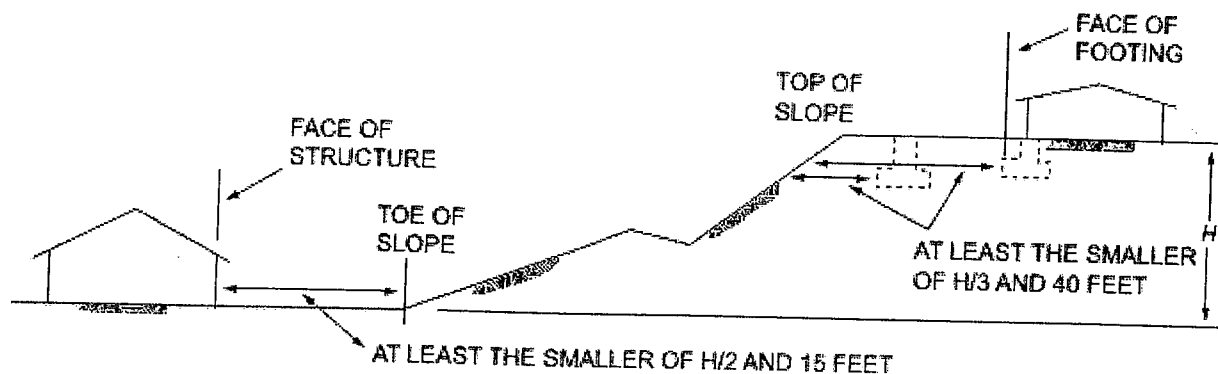
1. All construction areas, including disposal sites, shall be treated and maintained as necessary to minimize the emission of dust. Maintenance shall be conducted as necessary to prevent a nuisance to offsite properties.
2. All construction sites, including driveways, shall be maintained as necessary to minimize the emission of dust and prevent the creation of a nuisance to adjacent properties.

Revegetation

1. Apply temporary seeding and mulching to denuded areas prior to October 15 unless the project is conditioned otherwise.
2. Establish a permanent vegetative cover on denuded areas not otherwise stabilized. Permanent vegetation ground cover must control soil erosion satisfactorily and survive severe weather conditions.
3. Retain a vegetative barrier whenever possible around property boundaries.
4. Use self-sustaining, non-invasive plants that require little or no maintenance and do not create an extreme fire hazard.
5. Use native plant species whenever feasible.

FOUNDATION RECOMMENDATIONS

- 1) Foundations for any residence should be reinforced and be contained in firm, undisturbed native soil. If the foundation is going to be set into fill, the fill must be compacted to 95% compaction rating verified by testing. The fill must be laid in 0.5' lifts and each lift must be tested for the required compaction percentage. The subsoil seen at 1.6 feet is the target load bearing subsoil. The foundation should be extended into the load bearing soil a minimum one foot for a single story, one and a half feet for a two-story, and two feet for three-story structure. Spread footings and foundation walls should be reinforced and be at minimum 15" wide for one-story structures, 18" wide for two-story structures, and 24" for three-story structures. Foundation walls should be a minimum of seven and a half inches thick for single-story structures, a minimum of eight inches for two-story structures, and a minimum of ten inches for three-story structures. Foundation footings shall be setback a minimum of 25 feet from any slopes dropping over 50%. Foundation footings shall be setback a minimum distance of four feet from bottom of footing as measured horizontally to daylight from slopes dropping over 30%. Foundation footing setbacks to slope breaks shall comply with specifications in Section 1808.7 and Figure 1808.7.1 (shown below) of the 2019 CBC (as specified in recommendation #1).



- 2) All surface runoff from developed or paved areas of the lot should be controlled to flow and drain away or be routed in such a manner as to not affect slope stability or the integrity of the foundation soil. Erosion control dissipation devices shall be installed at all locations where water is discharged over slopes greater than 20%.
- 3) All excavation shall be completed in conformance with Section 1804 of the 2019 CBC. Additionally, earthwork grading/excavation shall be conducted during the dry season, unless constructed in conformance with a grading and erosion control plan and with Humboldt County codes and the recommendations in this report.
- 4) All existing and proposed fill and cut slopes are to be re-vegetated to prevent erosion. This is to be done to the satisfaction of local building officials. Existing vegetation beyond the construction area should be left undisturbed if feasible.
- 5) If cutting or grading is to be done at a depth greater than 5 feet, it is recommended that this office be contacted for specific comments and recommendations. Cut and fill under 5 feet should be limited to 2V:1H max slope.
- 6) Gutters are to extend along all rooflines and lead to down spouts. In turn, down spouts should lead to pipes carrying roof runoff away from the building site, as well as any fill or foundations that may adversely affect the site soil or adjacent slopes.
- 7) Floor slabs should be reinforced by #3 reinforcing bars at 18" o.c. or #4 reinforcing bars at 24" o.c. each way and be underlain by at least 4" of class 2 aggregate bases with limited fines to act as a capillary moisture break and a vapor barrier. The vapor barrier shall be in direct contact with concrete. Contractor and owner are responsible for determining the extent of waterproofing methods necessary and implementing the appropriate measures as described in recommendation #9 and shall be aware of the current recommendations and guidelines for slabs below grade according to the American Concrete Institute.
- 8) All foundation design and construction shall be in conformance with Chapter 18 of the 2019 CBC. All footings are to meet local requirements for seismic criteria, as required by the 2019 CBC. Seismic design parameters have been included in this report based on latitude and longitude values taken from the Humboldt County Web GIS website (County of Humboldt, 2020).

- 9) Any floor space at or below existing grade level that will be used as inhabitable areas or for storage shall be appropriately dampproofed or waterproofed as described in Section 1805 of the 2019 CBC. These appropriate measures at minimum will constitute installation of 6-mil vapor barrier or equivalent against the foundation or retaining wall, along with drain rock a minimum of 12" thick to the bottom of the footing and made to drain by four inch perforated pipe tight-lines to daylight away from the foundation soils. It is recommended that slabs below grade used for living space be underlain with a minimum of six inches of open graded aggregate instead of four inches as described in recommendation #7 for an increased protection from capillary water infiltration. Additional or superior measures may include installation of sub-slab drainage pipes or geo-textile membranes and should be installed according to current standards of practice.

CLOSURE

Based upon the review conducted by this office of the site and surrounding terrain no further geological evaluation is required; therefore, no geotechnical engineer consultation is warranted. This office shall be contacted if subsurface conditions differ significantly from those stated in this report, or if further investigation or inspection is requested by involved agencies.

It has been assumed that observed soils are representative of the entire subsurface conditions on the property in question. If it is found during construction that subsoil conditions differ from those described, the conclusions and recommendations of this report should be considered invalid unless the changes are reviewed and the conclusions and recommendations are modified or approved in writing. This analysis was conducted in accordance with the standards maintained by professionals in the engineering field, and the findings presented herein are reasonably representative of site conditions and probable site behavior based on this investigation. Due to the inexact nature of many engineering analyses, including those employed during the preparation of this report, there is no guarantee or warranty expressed or implied. Enclosed in this report are site maps, Assessor's Parcel Maps, and geologic maps as referenced.

If you have any questions regarding this report, or to schedule an inspection, please feel free to contact this office at (707) 725-5182.

Sincerely,


Allan M. Baird
Principal, RCE# 23681



References

- American Society of Civil Engineering (ASCE). (2016). *Minimum Design Loads for Buildings and Other Structures*. ASCE/SEI 7-10.
- California Department of Conservation, Division of Mines and Geology. (1998). *Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada*. International Conference of Building Officials. Whittier, CA.
- County of Humboldt. (2020). *Humboldt County Web GIS Planning and Building Mapping*. Available Online
[<http://gis.co.humboldt.ca.us/Freeance/Client/PublicAccess1/index.html?appconfig=podgis>]
- Part 2. California Building Code (2019) Volume 2 (Chapters 16-34):
https://codes.iccsafe.org/content/document/1007?site_type=public
- United States Geological Survey (USGS). (2020). *U.S. Seismic Design Maps*. Available Online [<https://earthquake.usgs.gov/designmaps/us/application.php?>].
- Title III, Land Use and Development Division 3. Building Regulations Section 331-12. Grading, Excavation, and Erosion Control and Sedimentation Ordinance (Humboldt County). (2020).
- "U.S. Seismic Design Maps." U.S. Seismic Design Maps, SEAOC/OSHPD, 2020, seismicmaps.org/.



OSHPD

Latitude, Longitude: 40.1336, -123.9623



Blue Slide Creek Rd

Map data ©2020

Google

Date	6/5/2020, 3:56:15 PM
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.773	MCE_R ground motion. (for 0.2 second period)
S_1	0.898	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.773	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	1.182	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.797	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.877	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
S_{sRT}	2.253	Probabilistic risk-targeted ground motion. (0.2 second)
S_{sUH}	2.486	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
S_{sD}	1.773	Factored deterministic acceleration value. (0.2 second)
S_{1RT}	0.947	Probabilistic risk-targeted ground motion. (1.0 second)
S_{1UH}	1.058	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S_{1D}	0.898	Factored deterministic acceleration value. (1.0 second)
PGA_d	0.797	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.906	Mapped value of the risk coefficient at short periods
C_{R1}	0.895	Mapped value of the risk coefficient at a period of 1 s

40.1336, -123.9623

Show search results for 40.1336, -12...



Redwood State Park

Myers Flat

RIDGE

85

KING RANGE

APN: 221-221-009

KING RANGE THRUST ZONE

King Range National Conservation Area

88

WHALE GULCH F

87

1906

GARBERVILLE FAULT

79

FLT. Redwood

Garberville

GIBSON RIDGE

Richardson Grove State Park

HUMBOLDT MENDOCINO

4mi

-123.772 40.147 Degrees

Project: Appel
 Hole #: 1

Logged by: MN Jn# 19-4888
 Date: 10/15/2019 Excavation: Hand

SUBSURFACE PROFILE LOGS

Description & Remarks	Depth (ft)	Sample	Classification
0-2 ft	-		
Gradual boundary (2-10')	-		
Munsell color 10 YR 3/3 dark brown	-		
Very gravelly: (35-65%), Birds Eye - 1.5"	-		
Structure: Single grain, granular	- 1 -		
Consistence:	-		
moist: very friable	-		ZONE 2
wet: slightly sticky	-		Sandy Loam
No roots	- 2 -		
Pores:	-		
Common: fine (10-50), medium (1-5)	-		
NO MOTTLING	-		
NO GROUNDWATER OBSERVED	- 3 -		
End of excavation	-		
	-		
	-		
	- 4 -		
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	- 5 -		
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	- 6 -		
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	- 7 -		
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	- 8 -		
	-		
	-		
	- 9 -		
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	- 10 -		
	-		
	-		
	- 11 -		

PROFILES LOGS SHOW SUBSURFACE CONDITIONS BY OBSERVATIONS AT THE DATES AND LOCATIONS INDICATED AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



A.M. BAIRD

ENGINEERING & SURVEYING, INC.

1257 Main Street • P.O. Box 396 • Fortuna, CA. 95540 • (707) 725-5182 • Fax (707) 725-5581

CONSULTING - LAND DEVELOPMENT - DESIGN - SURVEYING

Project: Appel

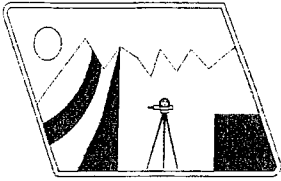
by: BIV

AP#: 221-221-009

Lab Test Date: 6/8/2020

1	SAMPLE NUMBER
1	TEST HOLE
2+	Depth (ft)
864	TOTAL SAMPLE WEIGHT (gm)
614	Coarse Weight (gm)
75	A. Owendry Weight (gm)
8:18	B. Starting Time (hr:min:sec)
68.3	C. Temp @ 40 sec. (°F)
35	D. Hydrometer Reading @ 40 sec. (gm/l)
-6.44	E. Composite Correction (gm/l)
28.56	F. True Density @ 40sec. (gm/l), (D-E)
68.7	G. Temp @ 2 hrs. (°F)
21	H. Hydrometer Reading @ 2hrs. (gm/l)
-6.36	I. Composite Correction (gm/l)
14.64	J. True Density @ 2 hrs. (gm/l), (H-I)
61.9	K. % Sand = $100 - [(F/A) \times 100]$
19.5	L. % Clay = $(J/A) \times 100$
18.6	M. % Silt = $100 - (K + L)$
Sandy Loam	N. USDA Texture
2	O. Soil Percolation Suitability Chart Zone
38.1	P. Combined % Silt and Clay
71.1	Q. Coarse % by weight
11.2	R. % Coarse Adjustment*

* [(.2)(.00003Q³+ .0006Q²+ .5968Q-.0941)]



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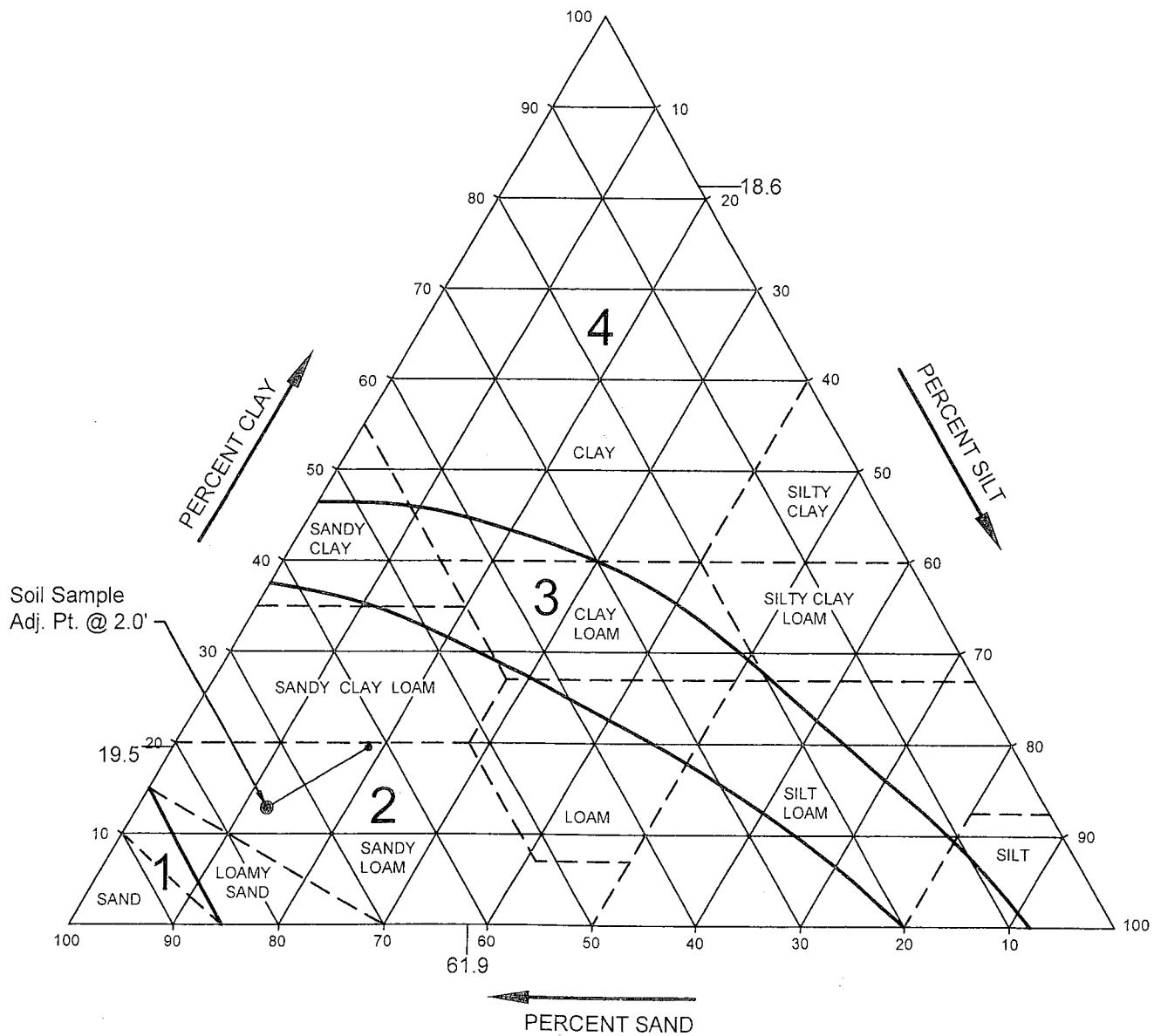
CONSULTING - LAND DEVELOPMENT - DESIGN - SURVEYING

CLIENT: Appel

DATE: 6/9/2020

APN: 221-221-009

BLOCK/LOT: NA



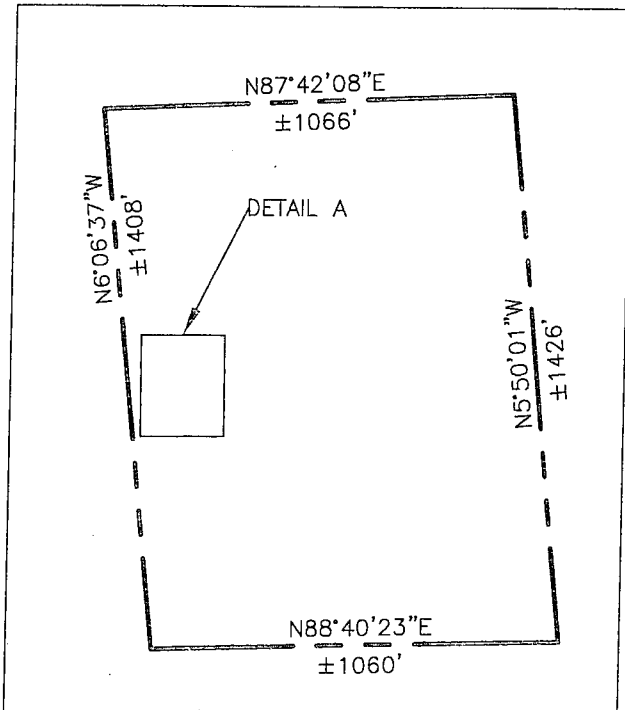
1. COARSE ADJUSTMENT: Soil Sample @ 2" = 11.2%

GRADING NOTES:

1. NO KNOWN EASEMENTS.
2. NO TREES TO BE REMOVED
3. APPROXIMATELY 500 CU. YDS. OF EXCAVATION OCCURRED INCREMENTALLY OVER SEVERAL YEAR:
4. GRADING OF THIS PROJECT IS NOT GREATER THAN 500 CU. YDS. AND SHALL BE DESIGNATED "MINOR GRADING"
5. ALL FILL MATERIAL SHALL NOT CONTAIN ANY IR MATERIAL (ROCK) GREATER THAN 12" DIAMETER CONTAIN AMOUNTS OF ORGANIC MATERIAL DETR THE STRUCTURAL INTEGRITY OF THE FILL
6. THE EEL RIVER IS LOCATED SOUTH OF THE SOU PROPERTY BOUNDARY, APPROX. 700 FEET SOUT OF THE FILL LOCATION.
7. NO KNOWN HAZARDOUS OR SENSITIVE AREAS. N HISTORICAL BUILDINGS OR ARCHAEOLOGICAL OR PALEONTOLOGICAL RESOURCES

DIRECTIONS TO SITE:

FROM EUREKA, TRAVEL 60 MILES SOUTH ON HWY. 101 TO REDWOOD DR. TRAVEL 2 MILES TO BRICELAND RD. ON RIGHT. TRAVEL 12.4 MILES TO ETTERSBURG RD. ON RIGHT, THEN AFTER 1 MILE TAKE SHARP LEFT TO BLUE SLIDE CREEK RD. AFTER 1.4 MILES, TURN RIGHT ON CROOKED PRAIRIE RD. DRIVEWAY IS 0.3 MILES ON LEFT.



PARCEL OUTLINE

1"=500'

FEET
60



PROJECT INFORMATION

AS-BUILT GRADING
GRADING & EROSION PLAN

OWNER:

MORIAH APPEL
P.O. BOX 616
WHITETHORN, CA 95589

SITE ADDRESS:

7050 CROOKED PRAIRIE RD.
WHITETHORN, CA

TOTAL AREA: 38.74 ACRES

PARCEL:

PARCEL NUMBER:
221-221-009

KEY LEGEND

- PROPERTY BOUNDARY
- EDGE OF ROADWAY
- ROAD CENTERLINE
- 2' CONTOUR LINES
- FIBER ROLL

MAPPING INFORMATION PROVIDED IS FOR SITE DESIGN PURPOSES ONLY. THIS SITE PLAN REFLECTS MANY MAPPING DETAILS THAT ARE USEFUL TO ASSURE THAT THE SITE FACILITIES ARE LOCATED APPROPRIATE TO THE SURROUNDINGS. HOWEVER, NONE OF THE INFORMATION SHOWN IS IMPLIED TO SUGGEST OR SUBSTITUTE FOR A CONTRACTED ACTUAL LAND SURVEY. A. M. BAIRD, ENGINEERING AND SURVEYING, INC. ASSUMES NO RESPONSIBILITY ARISING FROM THE USE OF INFORMATION PROVIDED, OTHER THAN WHAT HAS BEEN SPECIFICALLY INTENDED FOR THE SITE DESIGN.

NO.	DATE	DESCRIPTION	BY

A.M. Baird
Engineering & Surveying
1257 Main St., P.O. Box 396, Fortuna, CA 95540, (707)725-5182

SCALE	AS SHOWN
DRAWN BY	MLR
CHKD	A.M.B.
DATE	6/1/2020

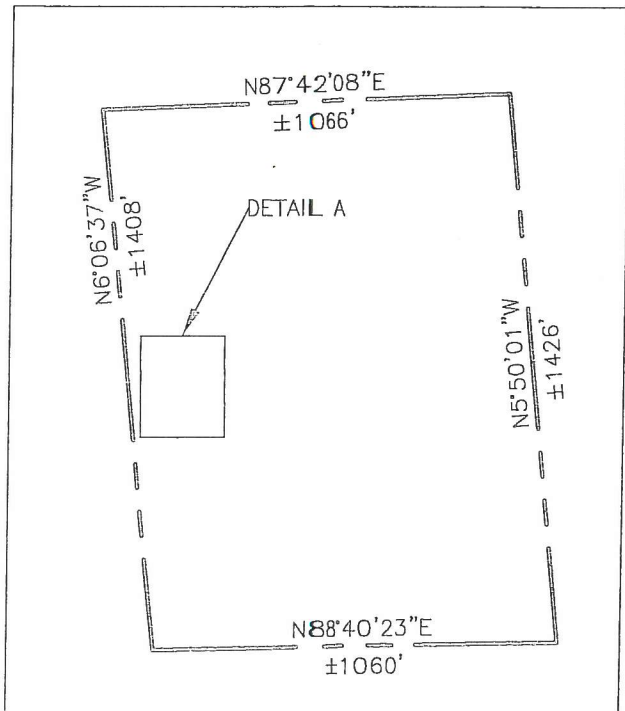
MORIAH APPEL
AP # 221-221-009
7050 CROOKED PRAIRIE RD, WHITETHORN, CA
AS-BUILT GRADING
SITE PLAN

GRADING NOTES:

1. NO KNOWN EASEMENTS.
2. NO TREES TO BE REMOVED
3. APPROXIMATELY 500 CU. YDS. OF EXCAVATION OCCURRED INCREMENTALLY OVER SEVERAL YEAR:
4. GRADING OF THIS PROJECT IS NOT GREATER THAN 500 CU. YDS. AND SHALL BE DESIGNATED "MINOR GRADING"
5. ALL FILL MATERIAL SHALL NOT CONTAIN ANY IR MATERIAL (ROCK) GREATER THAN 12" DIAMETER CONTAIN AMOUNTS OF ORGANIC MATERIAL DETR THE STRUCTURAL INTEGRITY OF THE FILL
6. THE EEL RIVER IS LOCATED SOUTH OF THE SOU PROPERTY BOUNDARY, APPROX. 700 FEET SOUT OF THE FILL LOCATION.
7. NO KNOWN HAZARDOUS OR SENSITIVE AREAS. N HISTORICAL BUILDINGS OR ARCHAEOLOGICAL OR PALEONTOLOGICAL RESOURCES

DIRECTIONS TO SITE:

FROM EUREKA, TRAVEL 60 MILES SOUTH ON HWY. 101 TO REDWOOD DR. TRAVEL 2 MILES TO BRICELAND RD. ON RIGHT. TRAVEL 12.4 MILES TO ETTERSBURG RD. ON RIGHT, THEN AFTER 1 MILE TAKE SHARP LEFT TO BLUE SLIDE CREEK RD. AFTER 1.4 MILES, TURN RIGHT ON CROOKED PRAIRIE RD. DRIVEWAY IS 0.3 MILES ON LEFT.



PARCEL OUTLINE

1" = 500'

PROJECT INFORMATION

AS-BUILT GRADING
GRADING & EROSION PLAN

OWNER:
MORIAH APPEL
P.O. BOX 616
WHITETHORN, CA 95589

SITE ADDRESS:
7050 CROOKED PRAIRIE RD.
WHITETHORN, CA

TOTAL AREA: 38.74 ACRES

PARCEL:
PARCEL NUMBER:
221-221-009

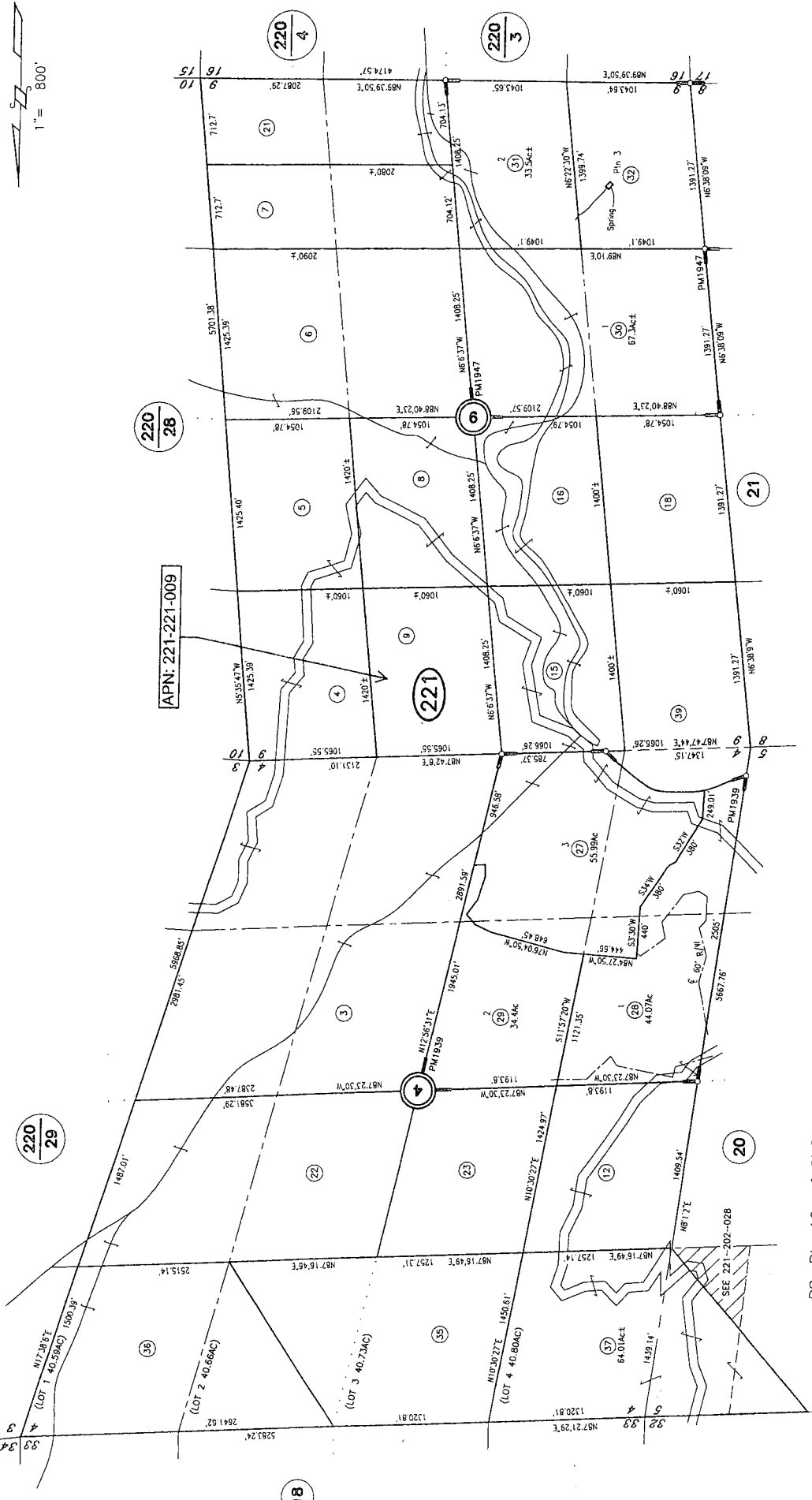
NE LEGEND

- PROPERTY BOUNDARY
- EDGE OF ROADWAY
- ROAD CENTERLINE
- 2' CONTOUR LINES
- FR FIBER ROLL

MAPPING INFORMATION PROVIDED IS FOR SITE DESIGN PURPOSES ONLY. THIS SITE PLAN REFLECTS MANY MAPPING DETAILS THAT ARE USEFUL TO ASSURE THAT THE SITE FACILITIES ARE LOCATED APPROPRIATE TO THE SURROUNDINGS. HOWEVER, NONE OF THE INFORMATION SHOWN IS IMPLIED TO SUGGEST OR SUBSTITUTE FOR A CONTRACTED ACTUAL LAND SURVEY. A. M. BAIRD, ENGINEERING AND SURVEYING, INC. ASSUMES NO RESPONSIBILITY ARISING FROM THE USE OF INFORMATION PROVIDED, OTHER THAN WHAT HAS BEEN SPECIFICALLY INTENDED FOR THE SITE DESIGN.



BY	
REVISIONS	DESCRIPTION
NO.	DATE
A.M. Baird Engineering & Surveying 1257 Main St., P.O. Box 398, Fortuna, CA 95540, (707)725-5182	
SCALE	AS SHOWN
DRAWN BY	ESJ
CHKD	ALB
DATE	01/20/20
MORIAH APPEL AP# 221-221-009 7050 CROOKED PRAIRIE RD, WHITETHORN, CA AS-BUILT GRADING SITE PLAN	
JOB NO.	20-488B
SHEET NO.	1 OF 1



- RS, Bk. 10, of SURVEYS Pg. 83
- RS, Bk. 22, of SURVEYS Pgs. 66-69
- RS, Bk. 22, of SURVEYS Pg. 74
- RS, Bk. 22, of SURVEYS Pgs. 121-124
- RS, Bk. 23, of SURVEYS Pg. 1
- RS, Bk. 23, of SURVEYS Pg. 21
- RS, Bk. 23, of SURVEYS Pg. 31
- RS, Bk. 23, of SURVEYS Pg. 93
- RS, Bk. 24, of SURVEYS Pgs. 9-10
- RS, Bk. 24, of SURVEYS Pg. 84
- RS, Bk. 26, of SURVEYS Pg. 11
- PM62, Bk. 1 of PM Pg. 91
- PM1939, Bk. 17 of PM Pg. 33
- PM1947, Bk. 17 of PM Pgs. 42-43 (PTN.)

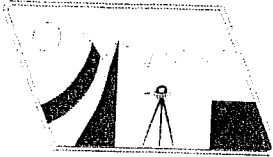
ASSESSOR'S PARCEL MAP

1. THIS MAP WAS PREPARED FOR AN ASSESSMENT PURPOSES ONLY.
2. NO LIABILITY IS ASSUMED FOR ERRORS OR OMISSIONS.
3. ASSESSOR'S PARCELS ARE SHOWN IN ACCORDANCE WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.

RD
Jan 2, 2019
RUSSELL DUTRA

200' 400' 800'

NOTE - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles.



A.M. BAIRD

ENGINEERING & SURVEYING, INC.

1257 Main Street • P.O. Box 396 • Fortuna, CA. 95540 • (707) 725-5182 • Fax (707) 725-5581

CONSULTING - LAND DEVELOPMENT - DESIGN - SURVEYING

GRADING & EROSION CONTROL PLAN

AS-BUILT GRADING

PREPARED FOR

Moriah Appel
7050 CROOKED PRAIRIE RD
APN:221-221-009

WHITETHORN, HUMBOLDT COUNTY, CA



PREPARED BY:

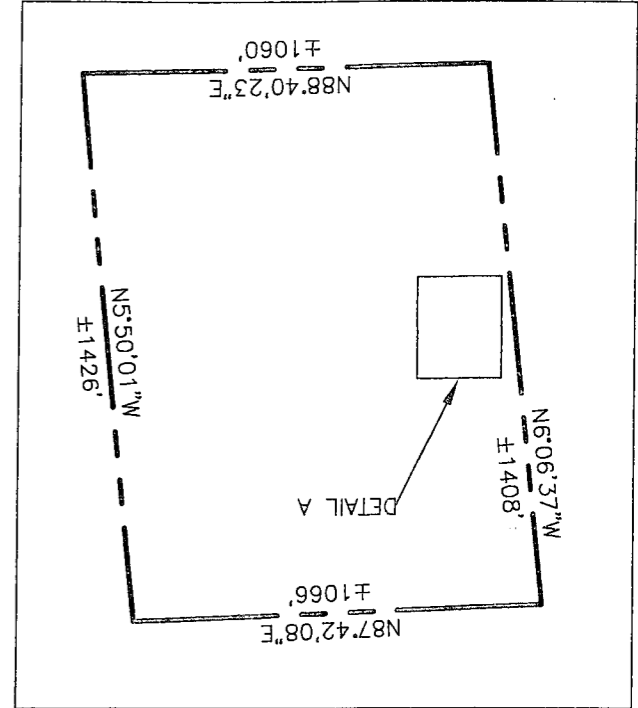
ALLAN M. BAIRD, RCE 23681

June 1, 2020
Job#20-4888

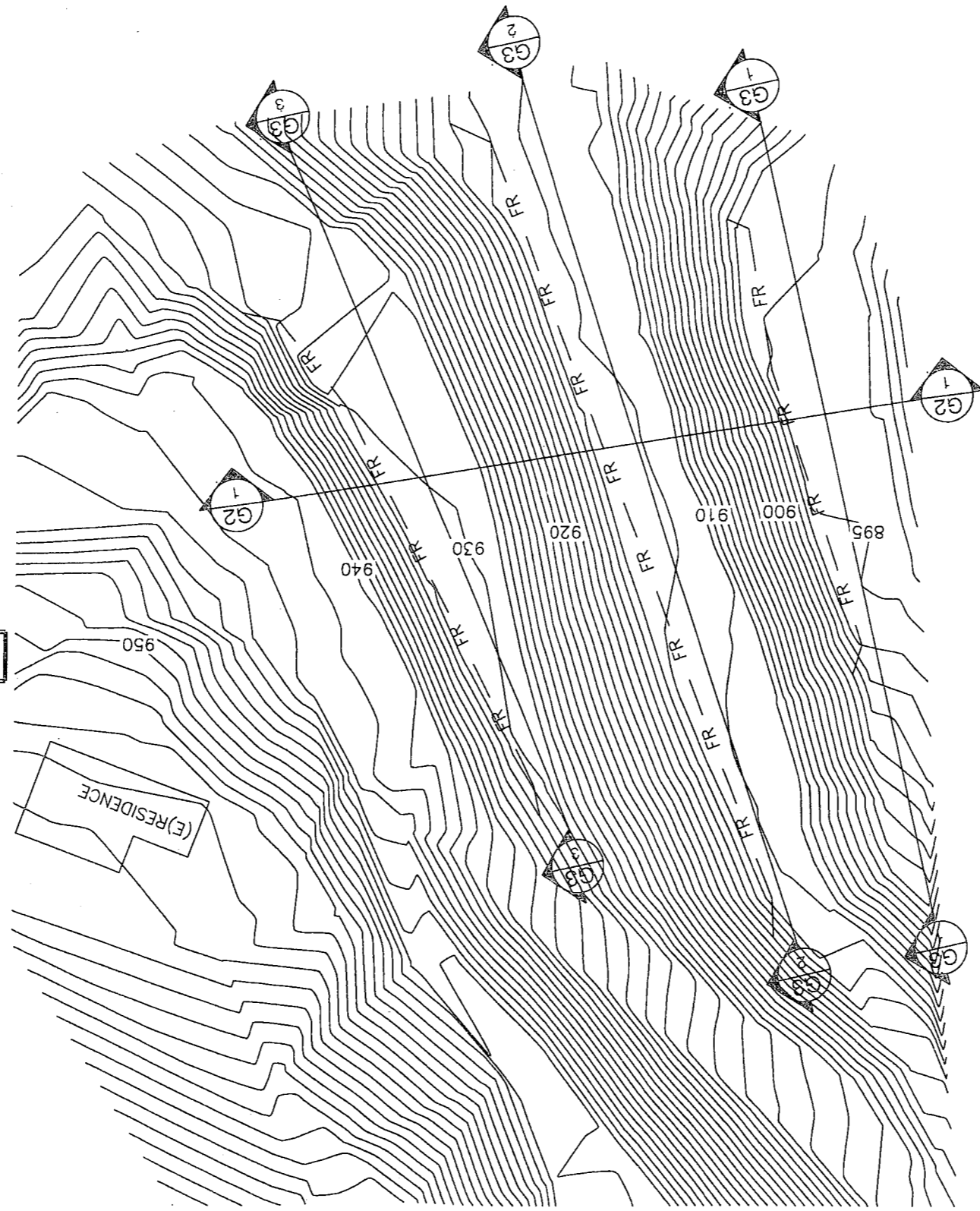
GRADING NOTES:

1. NO KNOWN EASEMENTS.
2. NO TREES TO BE REMOVED.
3. APPROXIMATELY 500 CU. YDS. OF EXCAVATION OCCURRED INCREMENTALLY OVER SEVERAL YEARS.
4. GRADING OF THIS PROJECT IS NOT GREATER THAN 500 CU. YDS. AND SHALL BE DESIGNATED "MINOR GRADING"
5. ALL FILL MATERIAL SHALL NOT CONTAIN ANY IRREDUCIBLE MATERIAL (ROCK) GREATER THAN 12" DIAMETER OR CONTAIN AMOUNTS OF ORGANIC MATERIAL DETRIMENTAL TO THE STRUCTURAL INTEGRITY OF THE FILL.
6. THE EEL RIVER IS LOCATED SOUTH OF THE SOUTHERN PROPERTY BOUNDARY, APPROX. 700 FEET SOUTH OF THE FILL LOCATION.
7. NO KNOWN HAZARDOUS OR SENSITIVE AREAS, NO KNOWN HISTORICAL BUILDINGS OR ARCHAEOLOGICAL OR PALEONTOLOGICAL RESOURCES.

DIRECTIONS TO SITE:
 FROM EUREKA, TRAVEL 60 MILES SOUTH ON HWY. 101 TO REDWOOD DR. TRAVEL 2 MILES TO BRICELAND RD. ON RIGHT, TRAVEL 12.4 MILES TO ETTERSBURG RD. ON RIGHT, THEN AFTER 1 MILE TAKE SHARP LEFT TO BLUE SLIDE CREEK RD. AFTER 1.4 MILES, TURN RIGHT ON CROOKED PRAIRIE RD. DRIVEWAY IS 0.3 MILES ON LEFT.



PARCEL OUTLINE
 1"=500'



GRADING SITE PLAN (500 CY)

DETAIL A

SCALE: 1" = 30 FEET
 0 15 30 60



LINE LEGEND

- FR ——— FIBER ROLL
- 2' CONTOUR LINES
- - - - - ROAD CENTERLINE
- - - - - EDGE OF ROADWAY
- - - - - PROPERTY BOUNDARY

PROJECT INFORMATION

AS-BUILT GRADING & EROSION PLAN

OWNER: MORIAH APPEL
 P.O. BOX 616
 WHITTHORN, CA 95589

SITE ADDRESS: 7050 CROOKED PRAIRIE RD.
 WHITTHORN, CA

TOTAL AREA: 38.74 ACRES

PARCEL: 221-221-009
 PARCEL NUMBER:

A.M. Baird
 Engineering & Surveying
 1257 Main St., P.O. Box 306, Fortuna, CA 95540, (707)725-5182

SCALE	AS SHOWN
DRAWN BY	LAN
CHKD	ALA
DATE	8/1/2009

MORIAH APPEL
 AP# 221-221-009
 7050 CROOKED PRAIRIE RD, WHITTHORN, CA
 AS-BUILT GRADING
 SITE PLAN

DISCLAIMER:
 MAPPING INFORMATION PROVIDED IS FOR SITE DESIGN PURPOSES ONLY. THIS SITE PLAN REFLECTS MANY MAPPING DETAILS THAT ARE USEFUL TO ASSURE THAT THE SITE FACILITIES ARE LOCATED APPROPRIATE TO THE SURROUNDINGS. HOWEVER, NONE OF THE INFORMATION SHOWN IS IMPLIED TO SUGGEST OR SUBSTITUTE FOR A CONTRACTED ACTUAL LAND SURVEY. A. M. BAIRD, ENGINEERING AND SURVEYING, INC. ASSUMES NO RESPONSIBILITY ARISING FROM THE USE OF INFORMATION PROVIDED, OTHER THAN WHAT HAS BEEN SPECIFICALLY INTENDED FOR THE SITE DESIGN.

EROSION AND SEDIMENT CONTROL PLAN-IMPLEMENTATION MEASURES

GENERAL:

SEDIMENT CONTROL, SLOPE CONSTRUCTION, & PROTECTION OF WATER COURSES:

11. DIRECT RUNOFF FROM SPOUTS WILL DISCHARGE TO SPLASH BLOCKS & FLOW AWAY FROM THE FOUNDATION &/OR FILL. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURE AS PER CURRENT BUILDING CODE.
12. ALL EXPOSED, DISTURBED GROUND SHALL BE TEMPORARILY COVERED W/ TWO INCHES OF STRAW MULCH IMMEDIATELY FOLLOWING GRADING.
13. IF APPLICABLE, CUT &/OR FILL AREAS SHALL BE COVERED W/ NATIVE GRASSES, COVERED W/ STRAW MULCH, & KEPT MOIST UNTIL GRASSES ESTABLISH.
14. DRIVEWAY SHALL BE PAVED OR COVERED BY 4-INCHES BASE ROCK TO PREVENT VEHICLE TRACKING OF MUD ONTO PUBLIC ROADWAYS DURING CONSTRUCTION.
15. FIBER ROLLS SHALL BE CONSTRUCTED ON CONTOURS DOWN SLOPE OF DISTURBED AREAS, DETAILS ON SHEET THREE 3.
16. FIBER ROLL LOCATION(S), OTHER EROSION, & SEDIMENT CONTROL MEASURES WERE SPECIFICALLY PLACED BASED ON TOPOGRAPHY OF ENCLOSED MAP. MINOR CHANGES TO THE PROPOSED DEVELOPMENT THAT WOULD CHANGE THE ASSUMED DIRECTION OF SURFACE FLOWS SHOULD APPROPRIATELY CHANGE THE LOCATION OF FIBER ROLLS STATED IN NOTE 15.

DISPOSAL OF EXCAVATED MATERIALS:

17. APPROXIMATELY 500 CU. YDS. OF MATERIAL WILL BE IMPORTED ON SITE. NO SOIL TO BE REMOVED FROM SITE.
18. CUT & FILL SLOPES ARE NOT TO EXCEED 2:1 OR LESS AS PER PLANS; RUNOFF FROM ROOF/DRIVEWAY SHALL BE DIRECTED AWAY FORM CUT & FILL AREAS.
19. EROSION OF EXPOSED EXCAVATED MATERIALS WILL BE PREVENTED BY COMPACTING TO 85% BY TRACKING W/ HEAVY EQUIPMENT IN EIGHT INCH LIFTS. MULCHING, & RE-SEEDING IMMEDIATELY FOLLOWING PLACEMENT, IF APPLICABLE.
20. FILL PRISMS INTENDED FOR PARKING SHALL HAVE A RELATIVE COMPACTION OF 90% AND 95% RELATIVE COMPACTION FOR THE SUPPORT OF STRUCTURES.

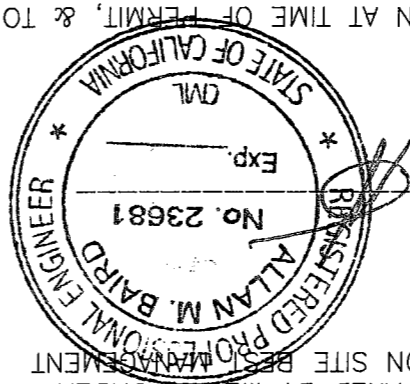
REMOVAL OF VEGETATION & REVEGETATION:

21. EXISTING VEGETATION SHALL BE PROTECTED BY ESTABLISHING THE CONSTRUCTION BOUNDARY PRIOR TO COMMENCEMENT OF SOIL-DISTURBING ACTIVITIES.
22. EXISTING VEGETATION TO BE DISTURBED BY GRADING ACTIVITIES SHALL BE REPLACE W/ NATIVE GRASSES.
23. ALL EXPOSED CUT &/OR FILL SLOPES SHOULD BE RE-VEGETATED TO MATCH EXISTING VEGETATION IN SURROUNDING AREA.
24. CUT &/OR FILL SLOPES ARE LESS THAN NATURALLY OCCURRING SLOPES THAT SUPPORT PERMANENT VEGETATION.
25. SITE WILL BE MONITORED ON A DAILY BASIS DURING PERIODS OF HEAVY RAIN OR WIND. REAPPLICATION OF STRAW MULCH OR RE-SEEDING SHOULD BE COMPLETED AS NECESSARY.

OWNER(S): MORIAH APPEL
 ORGANIZERS: A.M. BAIRD ENGINEERING & SURVEYING, INC.
 PROJECT LOCATION: 7050 CROOKED PRAIRIE RD. WHITEHORNS, CA
 ACTIVITY: CONSTRUCTION OF FILL PRISM ENGINEER'S DECLARATION:
 THIS EROSION & SEDIMENT CONTROL PLAN WAS PREPARED BY ME OR UNDER MY DIRECTION & IS BASED UPON THE CALTRANS CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (BMP)S MANUAL MARCH 2003.

ALLAN M. BAIRD R.C.E. 23,681

DATED 6/10/20



2. GRADING & EROSION CONTROL MEASURES TO BE TAKEN AT TIME OF PERMIT, & TO CONTINUE THROUGHOUT CONSTRUCTION PROCESS.
3. OWNER(S) INTEND TO BEGIN CONSTRUCTION AS SOON AS PERMIT IS ISSUED.
4. IF CONSTRUCTION IS TO OCCUR BETWEEN OCTOBER 15 & APRIL 15, SITE INSPECTIONS WILL BE CONDUCTED BY THE CONTRACTOR &/OR OWNER(S): PRIOR TO A FORECASTED STORM, AFTER A RAIN EVENT, WEEKLY THROUGHOUT THE RAINY SEASON, AND EVERY TWO WEEKS THROUGHOUT CONSTRUCTION
5. SITE WILL BE MONITORED DAILY DURING WET WEATHER BY CONTRACTOR &/OR OWNER(S). CONTRACTOR &/OR OWNER(S) ARE RESPONSIBLE FOR REPORTING ANY HAZARDOUS SITUATIONS TO THE ENGINEER.
6. IN THE EVENT THAT ANY ASPECT OF THIS PLAN FAILS, THE OWNER(S) IS/ARE RESPONSIBLE FOR IMMEDIATELY CONTACTING THE ENGINEER FOR RECOMMENDATION(S) AND A PROFESSIONAL CONTRACTOR SHALL FOLLOW RECOMMENDATION(S)
7. IF A FOOTING REVIEW IS REQUIRED, SITE MUST BE EVALUATED BY AN ENGINEER, & IF NECESSARY, ADDITIONAL EROSION CONTROL MEASURES WILL BE TAKEN.
8. UPON COMPLETION OF THE PERMITTED ROUGH GRADING WORK & AT THE FINAL COMPLETION OF THE WORK FOR "ENGINEERED GRADING", OR WHEN PROFESSIONAL INSPECTION IS PERFORMED FOR REGULAR GRADING; A FINAL REPORT SHALL BE SUBMITTED BY THE ENGINEER, IF REQUIRED.
9. THE PERMIT APPLICANT/OWNER(S) SHALL NOTIFY THE BUILDING OFFICIAL WHEN THE GRADING OPERATION IS READY FOR FINAL INSPECTION, AS REQUIRED.
10. IF REQUIRED BY NOTE NINE (9.) ABOVE, A FINAL REPORT SHALL BE PREPARED BY THE ENGINEER AND SUBMITTED TO THE HUMBOLDT COUNTY BUILDING DEPARTMENT BEFORE THE FINAL INSPECTION TO ENSURE THE SITE IS IN ACCORDANCE WITH THIS EROSION CONTROL PLAN & HUMBOLDT COUNTY CODE 331-17.

SHEET # 65 OF 5 JOB # 20-4888	MORIAH APPEL AP#221-221-009 7050 CROOKED PRAIRIE RD. WHITEHORNS, CA AS-BUILT GRADING
GEC NOTES	
SCALE: N/A DRAWN BY: MWN DATE: 6/1/2020	A.M. Baird Engineering & Surveying, Inc. 1257 Main Street, P.O. Box 396, Fortuna, CA 95540, (707) 725-5182
NO. DATE REVISIONS	DESCRIPTION

Edwards Excavation & Restoration

P.O. Box 245
 Whitethorn, Ca 95589
 Phone (707)496-3353
 edwardsexcavation@hotmail.com
 General Engineering Contractor Lic.#971935

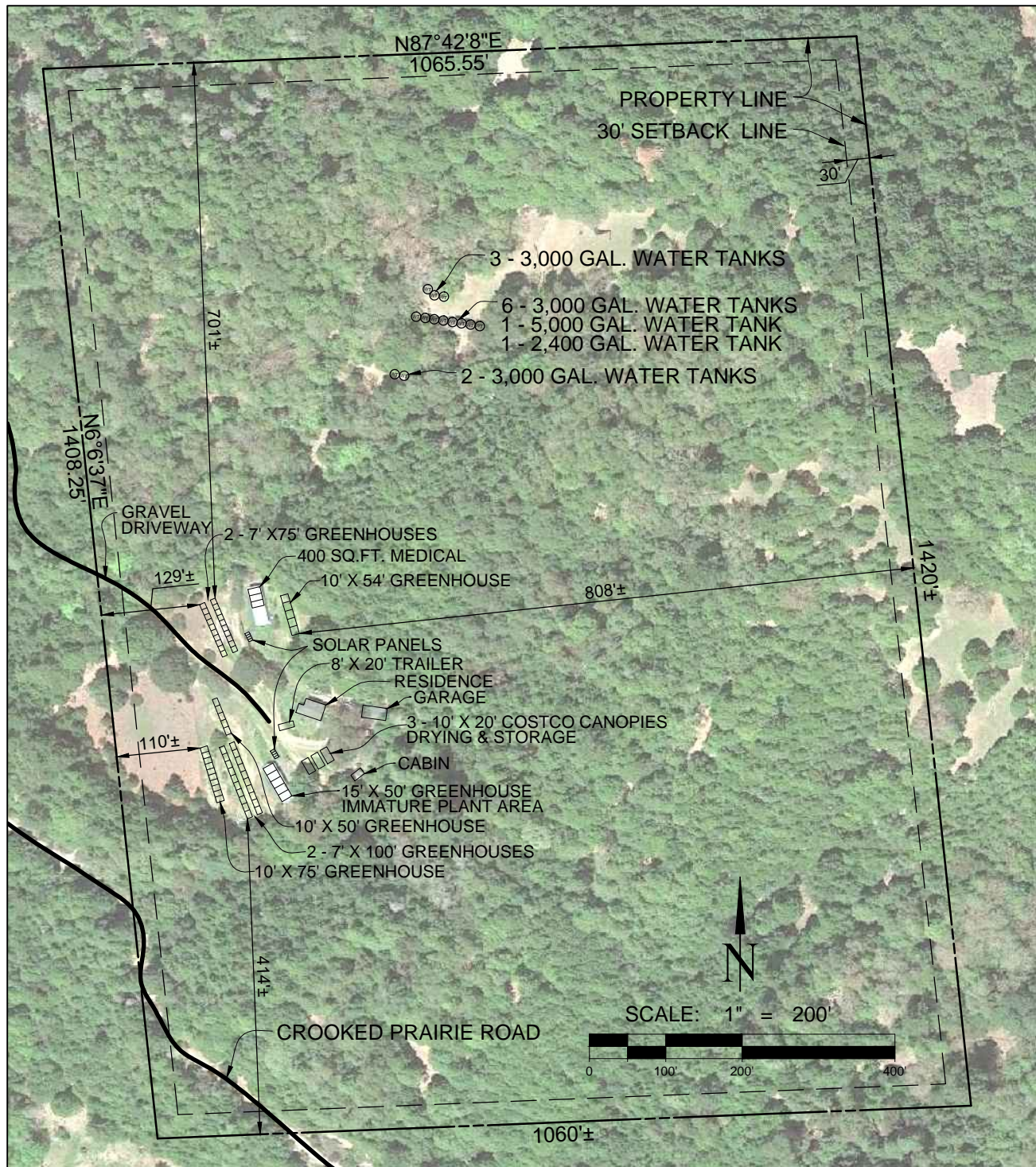
Estimate

Date	Estimate #
10/27/2021	4

Moriah Apple
 831-818-9928

Description	Qty	Rate	Total
Job Location: 7050 Crooked Prairie -Notification		0.00	0.00
#1600-2020-0053-R1 Streambed Alteration Agreement			
Job Description: Crossing #1-Replacing undersized misalignment culvert with 24"x 50' culvert. Crossing #2-replcing culvert with rocked ford.		0.00	0.00
Mobilization & Demobilization	1	1,740.00	1,740.00
Equipment	1	3,000.00	3,000.00
Materials	1	11,400.00	11,400.00
Labor	1	1,200.00	1,200.00
Trucking	1	6,000.00	6,000.00
		Total	\$23,340.00

SITE PLAN



PROJECT INFORMATION:

Applicant: Moriah Appel

Site Address:
7050 Crooked Prairie Road
Whithorn, CA 95589
APN: 221-221-009-000

Land Owner:
Moriah Appel
PO Box 616
Whithorn, CA 95589

Agent:
Clearwater Ag Services
446 Maple Lane
Garberville, CA 95542

Trees to be Removed: none
Outdoor Cultivation Area: 4240 Sq.Ft.
Immature Plant Area: 750 Sq.Ft.
Earthwork Quantities: none
Water: Rainwater Catchment
Sewer: Portable Toilet
Power: Solar
Parcel Size: 38.74
Zoning: U
General Plan Designation: RA40

GENERAL NOTES:

1. DRAWING SCALE AS NOTED. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
2. THIS IS NOT A BOUNDARY SURVEY. BOUNDARY INFORMATION DEPICTED HAS BEEN OBTAINED FROM HUMBOLDT COUNTY 2015 GIS DATA. APPLICANT HAS NOT VERIFIED THIS PROPERTY BOUNDARY.
3. THERE ARE NO NEARBY SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, PUBLIC PARKS OR TRIBAL RESOURCES WITHIN 600 FEET OF THE CULTIVATION AREA.
4. THERE ARE NO RESIDENCES ON ADJOINING PARCELS WITHIN 300 FEET OF THE CULTIVATION AREAS.
5. ANY EXISTING DEVELOPMENT CONSTRUCTED WITHOUT THE BENEFIT OF COUNTY REVIEW WILL BE SUBJECT TO THE HUMBOLDT COUNTY BUILDING DEPARTMENT UPON APPROVAL OF THE ZONING CLEARANCE CERTIFICATE.

DIRECTIONS TO SITE:

From Highway 101, Take Exit 642 for Redway/Redwood Drive
Continue 2 miles, turn right onto Briceland Road.
Continue 7.2 miles to Blue Slide Creek Road, on right.
Continue 4.5 miles to Crooked Prairie Road, on right
Project site driveway is .1 mile down Crooked Prairie Road



707-923-2767

This map is provided without warranty on any kind. Spatial data is approximate. Parcel positions are estimates only. Reasonable effort has been made to ensure the accuracy of the map and data provided, however errors and omissions may still exist. The positional accuracy of the data is approximate and is not intended to represent surveyed information. Do not use this map to determine property boundaries.

10/21/21

From: [moriah.appel](#)
To: [PLBL Grants](#)
Subject: DIAMOND SKY FARM
Date: Wednesday, May 10, 2023 12:57:42 PM
Attachments: [Diamond Sky farm LOI.docx](#)

Caution: This email was sent from an EXTERNAL source. Please take care when clicking links or opening attachments.

I have reached out to Clearwater Ag Services, Edwards excavation and North Point. All necessary permits will be in place prior to any road work and culvert replacement. We found that the LSA costs are not accurate and we are working to get that resolved. I had two contractors visit the site and both estimates came in at \$23,340. Please let me know if Clearwater Ag can supply you with any additional information.
Thank You for your consideration
Sincerely, Moriah Appel

Sent from my iPhone

From: [moriah appel](#)
To: [Meynell, Karen](#)
Subject: Re: Grant question
Date: Wednesday, May 10, 2023 2:13:25 PM

Caution: This email was sent from an EXTERNAL source. Please take care when clicking links or opening attachments.

I sent over a letter from Clearwater Ag. Checking to see if you received that and if they can provide you with any more info? Contractor has stated estimate to be the same as 2021.

Thank you
Moriah Appel

Sent from my iPhone

> On May 9, 2023, at 1:50 PM, Meynell, Karen <KMeynell@co.humboldt.ca.us> wrote:

>

> The costs on the LSA do not match the costs provided by your contractor on page 45. I think that is where the problem lies.

>

> -----Original Message-----

> From: moriah appel <propgirlsheltercove@gmail.com>

> Sent: Tuesday, May 9, 2023 11:41 AM

> To: Meynell, Karen <KMeynell@co.humboldt.ca.us>

> Subject: Re: Grant question

>

> Caution: This email was sent from an EXTERNAL source. Please take care when clicking links or opening attachments.

>

>

> Hi,

> I was able to review my application pdf. It appears that the cost estimate on page 48 is not accurate. Is this where the problem lies?

> Thank you again for your patience! I'm just trying to get this aligned and resolved.

> Moriah Appel

>

> Sent from my iPhone

>

>> On May 9, 2023, at 11:24 AM, moriah appel <propgirlsheltercove@gmail.com> wrote:

>>

>> Hello,

>> I have contacted North Point Consulting and Edwards Excavation & Restoration. I will see if they can send you an email stating I have reached out to them and will get 401 and any grading permits required before work is performed. I did not receive a copy of my application packet that refers to page 45. If you could send me that page you are referring to, that would be great.

>> Thank you for your time,

>> Moriah Appel

>>

>> Sent from my iPhone

>>

>>> On May 9, 2023, at 8:23 AM, Meynell, Karen <KMeynell@co.humboldt.ca.us> wrote:

>>>

>>> Hi Moriah,

>>> I received your site map, thank you.

>>>

>>> If the project estimate hasn't changed then you don't need to submit anything additional. But if the costs have gone up you may want to submit a revised estimate. The estimate to perform the work outlined in the grant application should match the estimate to do the same work for the LSAA. There is an estimate in your application packet on page 45 of the attached packet.

>>>

>>> Regarding the 401, I would attempt to contact them (or have your consultant do the same) to show your intentions. I must admit I don't know what is involved with filing for a 401 so I cannot really advise you here.

>>>

>>> Thank you for offering a conference call with North Point Consulting. At this time, I don't have any questions. We will be reviewing the recent submittals and referring them to the CDFW and Waterboards. If any questions arise, I will let you know.

>>>

>>>

>>> Thank you,

>>>

>>>

>>> Karen Meynell

>>>

>>> Code Enforcement Manager

>>>

>>> Planning and Building Department

>>>

>>>

>>>

>>> 3015 H Street | Eureka, CA 95501

>>> Phone: 707-268-3747

>>> Email: kmeynell@co.humboldt.ca.us

>>>

>>>

>>>

>>>

>>>

>>> -----Original Message-----

>>> From: moriah appel <propgirlsheltercove@gmail.com>

>>> Sent: Monday, May 8, 2023 2:26 PM

>>> To: Meynell, Karen <KMeynell@co.humboldt.ca.us>

>>> Subject: Grant question

>>>

>>> Caution: This email was sent from an EXTERNAL source. Please take care when clicking links or opening attachments.

>>>

>>>

>>> Hello,

>>> I sent over a copy of my site map. I have been working with ClearwaterAg Consulting and Logan Excavation & Restoration. They both have worked with the 401 but have not filed them. Dianna Totten suggested I reach out to North Point Consulting. Also, I have been trying to get updated estimates from Logan and another contractor about road estimates. I'm not sure what other documents they could supply me with to support there estimates? Both Logan and Justin French estimated scope of project to be around \$23,000. I am trying hard to get the documents you need but not sure who can file the 401 application at this late time. In addition, what other documents could Logan supply you with to support the estimate?

>>> Thank You,

>>> Moriah Appel

>>>

>>> Sent from my iPhone

APPLICATION PACKET CHECKLIST

Please check below to ensure you have a complete application. Once complete, email the following documents, in pdf format with the text "Application for Remediation Grant Program Funding" in the subject line to mrichardson@co.humboldt.ca.us.

- X Signed Application Submission Form
- X Project Description – Summary of the Project, up to 2 pages.
- X Plot Plan
- X Plot Plan Checklist – Attached
- X Cross sections of proposed work including topographic elevations
- X Scope of Work – Detailed Description of Work
- X Schedule for Completion – Identify Milestones
- X Erosion Control Plan and Monitoring Plan
- X Budget – Be as specific as possible – sample attached
- X Project Maps and Figures
- Letter(s) of Support (optional)

APPLICATION FORM - Commercial Cannabis Land Use Ordinance Mitigation and Remediation Fund Program

Project Title: Nooning Creek Road Improvements Date of Application: 10/31/2021

Applicant Name: Jennifer Markman Project APN: 108-161-033

Contact Person Name and Title: Jennifer Markman, Owner

Contact Phone: (707) 499-2883 Contact Email: infiniteblessings@asis.com

Contact Address: P.O. Box 369, Garberville, CA 95542

Amount Requested: \$51,816.00 Total Budget: \$51,816.00

Project Timeline: Start Date: July 30, 2022 End Date: August 30, 2022

Signature of Applicant: *Jennifer Markman*

Nooning Creek Improvements
Jennifer Markman

Project Description

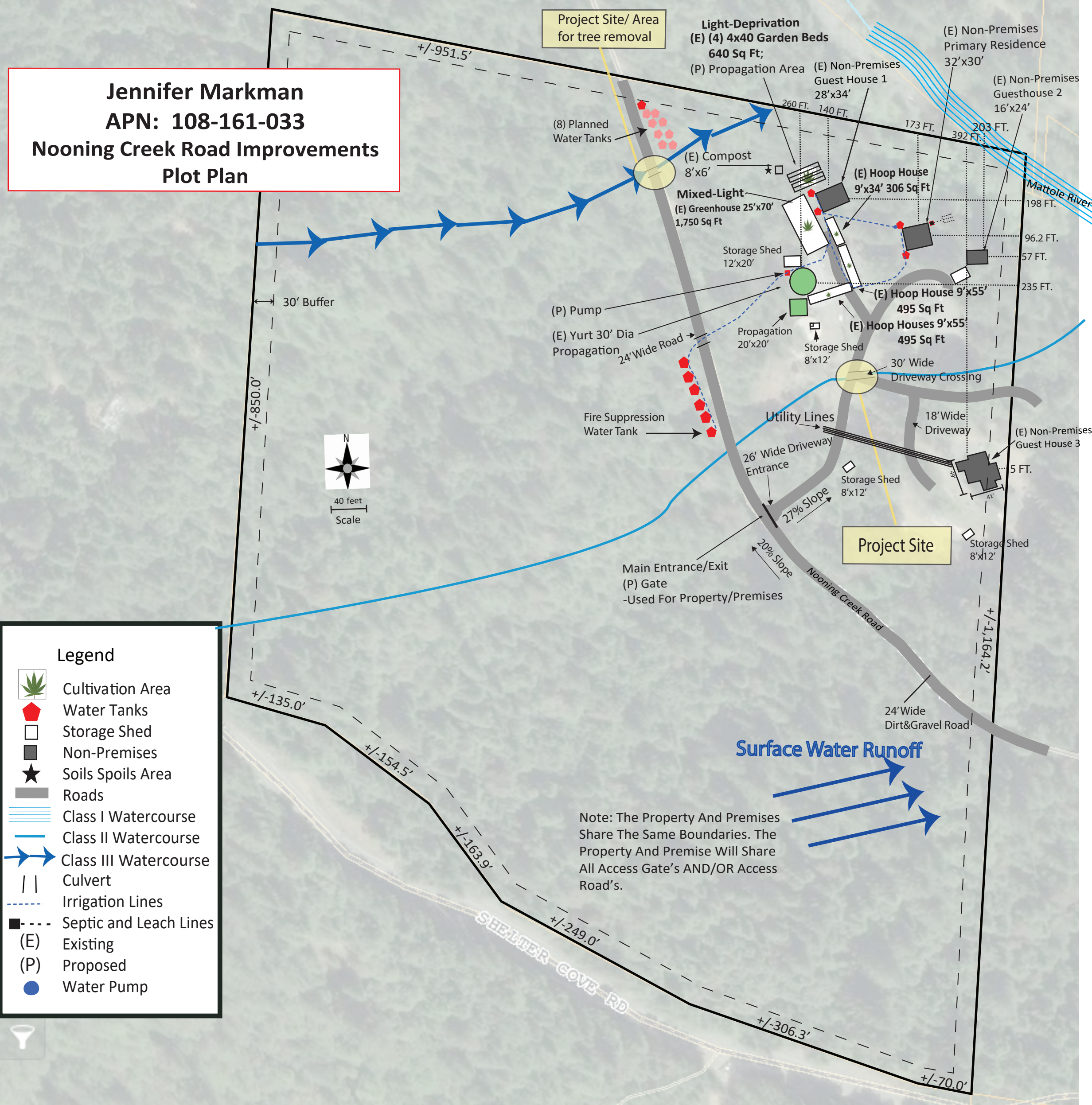
The project is located at 1301 Shelter Cove Road (APN 108-161-033). The commercial cannabis operation consists of 3,000 sf of permitted outdoor cultivation. The property is located in the Headwaters Mattole River subwatershed, a refuge watershed. The road is accessed by several other private parcels.

The project involves one existing 24-inch culvert that requires rock armoring (Crossing #2) and one 18 inch diameter culvert (Crossing #3) that needs to be replaced with 80 feet of 36-inch diameter culvert pursuant to the applicant's Lake and Streambed Alteration Notification dated September 27, 2019. The culvert is approximately 12' deep.

GIS indicates that the parcel is in an area of low to moderate slope instability. The area around the Mattole River is in a 100 year flood zone. The property is not in an earthquake hazard zone. The subject parcel is heavily forested and the residences and cultivation site are confined to the northeast corner of the parcel. The culvert replacement project is located on Nooning Creek Road, above the residence and cultivation area to the west. Nooning Creek Road is not maintained by a road maintenance association. The subject property is surrounded by other rural improved parcels. No impact on these surrounding properties is anticipated.

These upgraded watercourse crossings will bring the property into compliance with State Water Resources Control Board Order WQ 2019-0001-DWQ, will achieve 100-year flood requirements and reduce sediment deposits into the streams that are connected to the Mattole River, protecting water quality and aquatic ecosystems and limiting impact on downstream resources.

Jennifer Markman
APN: 108-161-033
Nooning Creek Road Improvements
Plot Plan



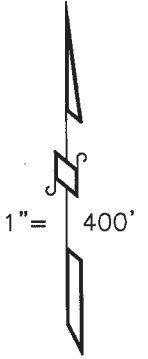
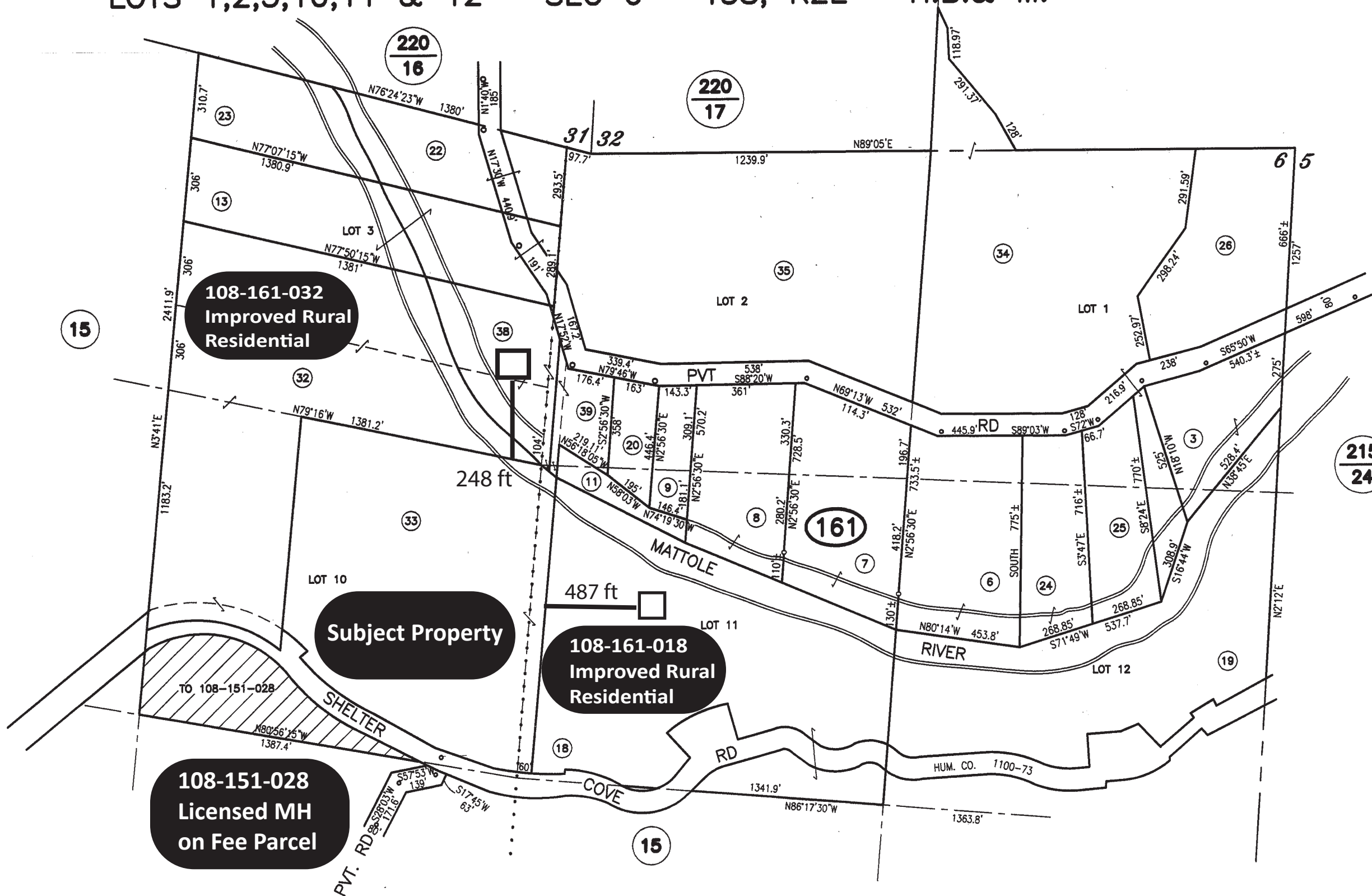
Legend

- Cultivation Area
- Water Tanks
- Storage Shed
- Non-Premises
- Soils Spoils Area
- Roads
- Class I Watercourse
- Class II Watercourse
- Class III Watercourse
- Culvert
- Irrigation Lines
- Septic and Leach Lines
- Existing
- Proposed
- Water Pump

Note: The Property And Premises Share The Same Boundaries. The Property And Premise Will Share All Access Gate's AND/OR Access Road's.

Surface Water Runoff





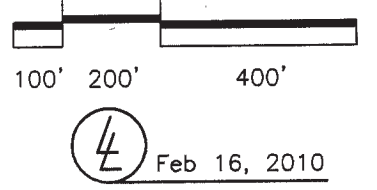
ASSESSOR'S PARCEL MAP

1. THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY.
2. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN.
3. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.

LS, Bk 21 of surveys, Pg 96
 LS, Bk 22 of surveys, Pgs 29,30,38 & 64
 LS, Bk 30 of surveys, Pg 69
 RS, Bk 53 of surveys, Pg 5
 RS, Bk 56 of surveys, Pgs 135-136
 RS, Bk 57 of surveys, Pg 26

Jennifer Markman
Nooning Creek Road Improvement
Adjacent Parcels

NOTE - See Index map of book 108 for township and section orientation.
 NOTE - Assessor's Block Numbers Shown in Ellipses
 Assessor's Parcel Numbers Shown in Circles.
Assessor's Map Bk.108, Pg.16
County of Humboldt, CA.



PLOT PLAN AND TENTATIVE MAP CHECKLIST

The following information must be shown on your plot plan or tentative map. Please check the box to the left of the items shown on the plot plan or tentative map. If any item is not on your site to your knowledge, write "N/A" next to the box. Plot plans shall be drawn on a minimum size sheet of 8-1/2" x 11", and tentative subdivision maps on a minimum size sheet of 18" x 26". **Note: This Checklist must be completed by the applicant and submitted with your application.**

Applicant's Name Enni er Mar an APN 000-06000 -

FOR ALL PROJECTS

- 1. Name of applicant(s)
- 2. Location or vicinity map (on or attached to the plot plan)
- 3. The subject parcel (show entire parcel with dimensions)
- 4. Date, north arrow and scale
- 5. Name, County road numbers, and width of all existing and proposed access roadways adjacent to or within the subject parcel (indicate width of traveled way, grade (in % slope), and surface)
- 6. Existing and proposed improvements (label as "existing" and "proposed" with dimensions and distance to nearest two (2) property lines)
 - a. Structures and buildings (include floor area, height and proposed use)
 - b. Driveways and turnaround areas (indicate width, grade (in % slope) and surface)
 - c. Utility lines (electric, gas, telephone, sewer, water, and cable TV)
 - d. Septic tanks and leachfields (label primary/reserve areas and test holes)
 - e. Wells
 - f. Parking and loading areas (show individual parking spaces, including handicapped parking and ramps)
 - g. Storm drains, curbs and gutters
 - h. Emergency water storage tanks and fire hydrants
 - i. Landscaped areas (include proposed exterior lighting)
 - j. Major vegetation (identify mature trees (12" dbh or larger) to be removed)
 - k. Diked areas
 - l. Proposed grading and fill (estimate volume)
 - m. Signs (indicate size, illuminated, and design (e.g., monument, pylon, etc.))
 - n. Other - specify _____
- 7. Direction of surface water runoff
- 8. Location and width of all existing and proposed easements of record
- 9. Hazardous areas (indicate on map if on the project site or within 400 feet of the project site):
 - a. Areas subject to inundation or flooding
 - b. Steep or unstable slopes
 - c. Expansive (clay) soils
 - d. Earthquake faults
 - e. Hazardous waste or substance sites
 - f. Other - specify _____
- 10. Sensitive habitat areas (indicate on map if on project site or within 400 feet of the project site):
 - a. Creeks, rivers, sloughs and other drainage courses
 - b. Lakes, ponds, marshes, or "wet" meadows
 - c. Beaches
 - d. Sand dunes
 - e. Other - specify _____
- 11. Historical buildings or known archaeological or paleontological resources
- 12. Land use and buildings on adjacent parcels, and approximate distances to closest property lines

FOR LOT LINE ADJUSTMENT PLOT PLANS ONLY

- 13. Proposed new lines and lines to be eliminated (show lines to be eliminated as dashed)
- 14. Areas (in square footage or acreage) of the initial and resulting parcels

FOR TENTATIVE SUBDIVISION MAPS ONLY

- 16. Approximate dimensions and areas of all proposed lots
- 17. A statement that "All easements of record are shown on the tentative map and will appear on the recorded subdivision map"
- 18. Contour lines (at _____ intervals)
- 19. For major subdivisions (5 or more parcels): proposed drainage improvements, details of any grading to be performed, approximate radii of all roadway curves, areas for public use, and typical sections of all streets, highways, ways and alleys
- 20. Names and assessor's parcel numbers of all contiguous ownerships

NOTE: THE SUBMITTAL OF INCOMPLETE OR ILLEGIBLE PLOT PLANS OR TENTATIVE MAPS WILL CAUSE DELAYS IN THE PROCESSING OF YOUR APPLICATION

Nooning Creek Improvements
APN 108-161-033
Jennifer Markman
Scope of Work

The work will be completed by Ray Wilcox, Wilcox GR Enterprises Inc., Contractors State License Board #665454 between June 15 and October 1, 2022. The work will take approximately two weeks.

Crossing #2: Existing 24-inch diameter culvert comprised of .5 inch thick iron on a Class II watercourse. The culvert is adequately sized but not to grade and slightly shot-gunned. Rock armor the inlet and outlet per engineering specifications. Will require approximately 5-10 yards of rip-rap, ranging in size from 1/16 to ¼ ton, to be placed at the inlet and outlet. The total disturbed area for purposes of quantifying remediation area is approximately 100 square feet.

Crossing #3: Existing 18-inch diameter culvert located on Nooning Creek Road on a Class III watercourse. The culvert is undersized for the 100-year storm and is rusted. The crossing shall be removed and replaced with a 36-inch diameter culvert long enough that it extends lengthwise completely beyond the toe of the fill. The culvert shall be installed per engineering specifications. The culvert upgrade will result in the loss of a 15 dbh tanoak, a 10 inch dbh Douglas fir, a 21 inch dbh Douglas fir, and local forbs and grasses.

All work will be completed according to general specifications provided by Timberland Resource Consultants (attached). An excavator, dump truck, tractor and grader may be used during the project. The project will require a 401 Certification from the Regional Water Quality Control Board.

Nooning Creek Road Improvements
APN 108-161-033
Applicant: Jennifer Markman
Schedule for Completion

Milestone	Start Date	End Date
401 Certification	March 15, 2022	May 1, 2022
Detailed Project Scoping	May 15, 2022	May 30, 2022
Bidding and Contracting	June 1, 2022	June 15, 2022
Project Ground-Breaking	July 30, 2022	
Project Completion		August 30, 2022
Monitoring	July 30, 2022	Ongoing

Five-Year Erosion Control Plan

Project Management

Before and during the project best practices will be applied to ensure minimal disturbance to the waterway and local habitat.

- Work will be completed prior to the start of any rain that causes overland flow across or along the disturbed surface.
- Within 100 feet of a watercourse or lake, the traveled surface of roads will be treated to prevent waterborne transport of sediment and concentration of runoff that results from operations.
- The treatment for disturbed areas within 100 feet of a watercourse including (1) areas exceeding 100 contiguous square feet where operations have exposed bare soil, (2) road cut banks and fills, and (3) any other area of disturbed soil that threatens to discharge sediment into waters in amounts that will negatively affect the quality and beneficial uses of water, shall be grass seeded and mulched with straw.
 - Grass seed shall be applied at a rate exceeding 100 pounds per acre.
 - Straw mulch shall be applied in amounts sufficient to provide at least 2-4 inch depth of straw with minimum 90% coverage.
 - Slash may be substituted for straw mulch provided the depth, texture, and ground contact are equivalent to at least 2-4 inches of straw mulch.
 - Any treated area that has been subject to reuse or has less than 90% surface cover shall be treated again prior to the end of operations.
- Care will be taken not to unnecessarily disturb the native channel outside of the identified areas.
- Fill to be permanently removed will be stored in designated locations with no risk of sediment delivery.
- All disturbed areas where sediment delivery from surface erosion processes is feasible will be seeded and mulched to reduce surface erosion and transport processes.
- All disturbance associated with this project will be limited to the road and immediately adjacent channel reaches as necessary to improve road drainage, stormproof the crossings, and prevent sediment delivery to watercourses.
- Any spoils generated during construction will be used for road treatments, such as shaping, or stored in a stable location and mulched to prevent surface erosion.
- The stream crossing will be treated according to standards provided in the “Handbook for Forest, Ranch and Rural Roads” (Weaver, Weppener and Hagans, 2015) and the California Salmonid Stream Habitat Manual, Part X (Weaver, Hagans and Weppner, 2006).

Roads

- Sidecast or fill material extending more than 20 feet in slope distance from the outside edge of a roadbed, which has access to a watercourse or lake, shall be treated with slope stabilization measures.

- All roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following operations and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within 100 feet of a watercourse, or (2) any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning or a flash flood watch.

Streamside Management Area

- Within 100 feet of a watercourse, where the undisturbed natural ground cover cannot effectively protect beneficial uses of water from sediment introduction, the ground shall be treated with slope stabilization measures and timed as above.
- Except for culvert repairs and maintenance, no driving or operating of vehicles or equipment will occur within the riparian setbacks or within waters of the state unless authorized.

Maintenance

- Work will only occur during the period of June 15 through October 15 (or first significant rainfall) to limit and avoid impacts to aquatic habitat and salmonids.
- Vegetation will only be removed from sites where it is growing on anthropogenically placed fill material, where erosion is likely to deliver to active watercourses, or where necessary for the implementation of effective storm-proofing treatments.
- All disturbed areas capable of delivering sediment to a watercourse will be seeded with barley or wheat based erosion control seed not containing Annual or Perennial Ryegrass and mulched with weed free straw at a rate no less than 50 lb/acre of seed and 4,000 lb/acre of straw.

Monitoring

To avoid risk of future stream diversions and erosion, monitoring will be implemented to reduce the risk of stream crossing failures caused by excessive flow, culvert plugging, overtopping, washout and stream diversion.

- Regular, periodic, and storm inspections and maintenance, including removal of debris.
- Ongoing monitoring for proper drainage during the rainy season.
- Installation of debris barriers.
- Monitor culverts for rusting, leaking, separated or other signs of impending failure.
- Look for evidence of plugging and overtopping, such as depositional terraces or a delta of sediment upstream of the pipe inlet.
- Look for ponding, damage to inlets, including crushed or ripped inlets.
- Monitor crossing for slope failure from one or both sides of the channel.

Nooning Creek Road Improvements
APN 108-161-033
Project Budget

Budget Item	Grant	Other Funds
Permit Fees		
401 Certification	\$ 2,066.00	
Consultant and Professional Fees	\$ 7,000.00	
Materials	\$ 17,150.00	
Equipment	\$ 20,600.00	
Labor	\$ 5,000.00	
Total	\$ 51,816.00	

APN 108-161-033

Location Map

 Property Boundary

Map Scale 1" = 2,000'

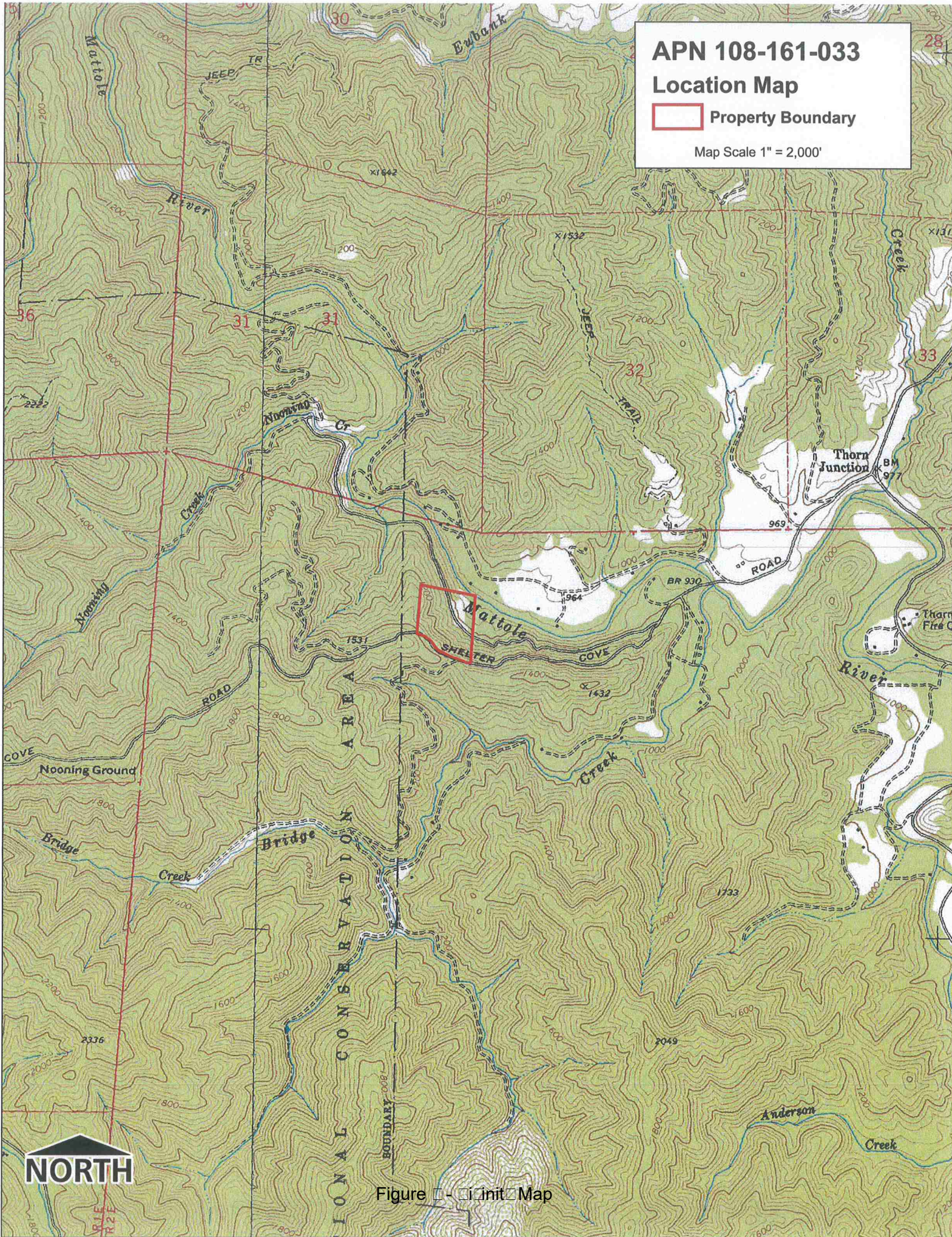


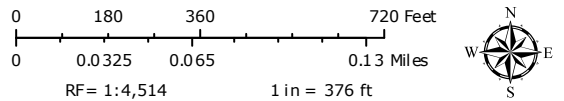
Figure 1 - Initial Map



Markman Topo Map

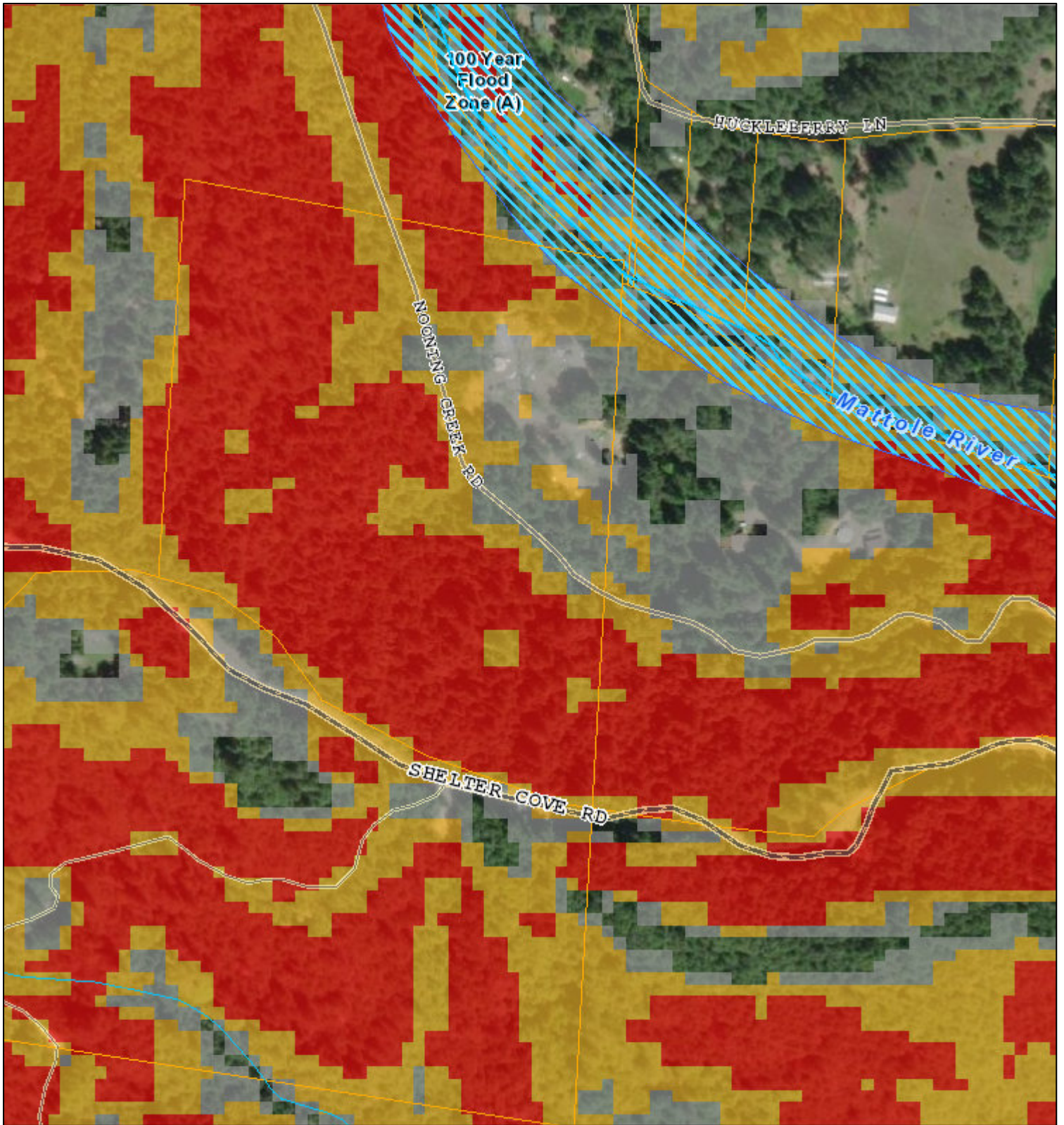
Humboldt County Planning and Building Department

- | | | | |
|---------------------------|---------------------------|-----------------------------------|----------------------------|
| Highways and Roads | — Private or Unclassified | — Subsurface | 30 - 50% |
| Principal Arterials | — Major River or Stream | - - - City Boundary | +50% |
| Minor Arterials | Blue Line Streams | — Counties | Slope less than 15% |
| Major Collectors | — Perennial 1-3 | — Parcels (no APN labels) | <15% |
| Minor Collectors | — Perennial >4 | Slope LIDAR - Elk/Fresh... | |
| Local Roads | — Intermittent | — 15-30% | |



Printed: October 11, 2021 Web AppBuilder 2.0 for ArcGIS
 Map Disclaimer:
 While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.
 Source: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Humboldt County GIS, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, FRAP, FEMA, USGS, ESA, CGS

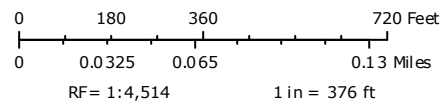
Figure 1 Topo with Slope < 5%



Markman Slope/Flood Map

Humboldt County Planning and Building Department

- | | | |
|---------------------------|---------------------------|---------------------------|
| Highways and Roads | — Private or Unclassified | — Intermittent |
| Principal Arterials | — Major River or Stream | — Subsurface |
| Minor Arterials | Blue Line Streams | — City Boundary |
| Major Collectors | — Perennial 1-3 | — Counties |
| Minor Collectors | — Perennial >4 | — Parcels (no APN labels) |
| Local Roads | | — Awareness Floodplain |



Printed: October 11, 2021

Web AppBuilder 2.0 for ArcGIS















Map Disclaimer:
While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.

Source: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Humboldt County GIS, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, FRAP, FEMA, USGS, ESA, CGS

Figure □ - Slope and Flood Map

APN 108-161-033

CDFW 1600 Map

-  Property Boundary
-  Cultivation Site
-  Water Tanks
-  Point of Diversion
-  Dwelling
-  Yurt
-  Watercourse Crossing
-  Class III Watercourse
-  Storm-Water Runoff from DRC on Shelter Cove Road
-  Class II Watercourse
-  Class I Watercourse
-  Nooning Creek Road
-  ATV = Foot Trail
-  Permanent Rocked Road

Map Scale 1" = 100'
Section 6, T2S, R5E, HB&M

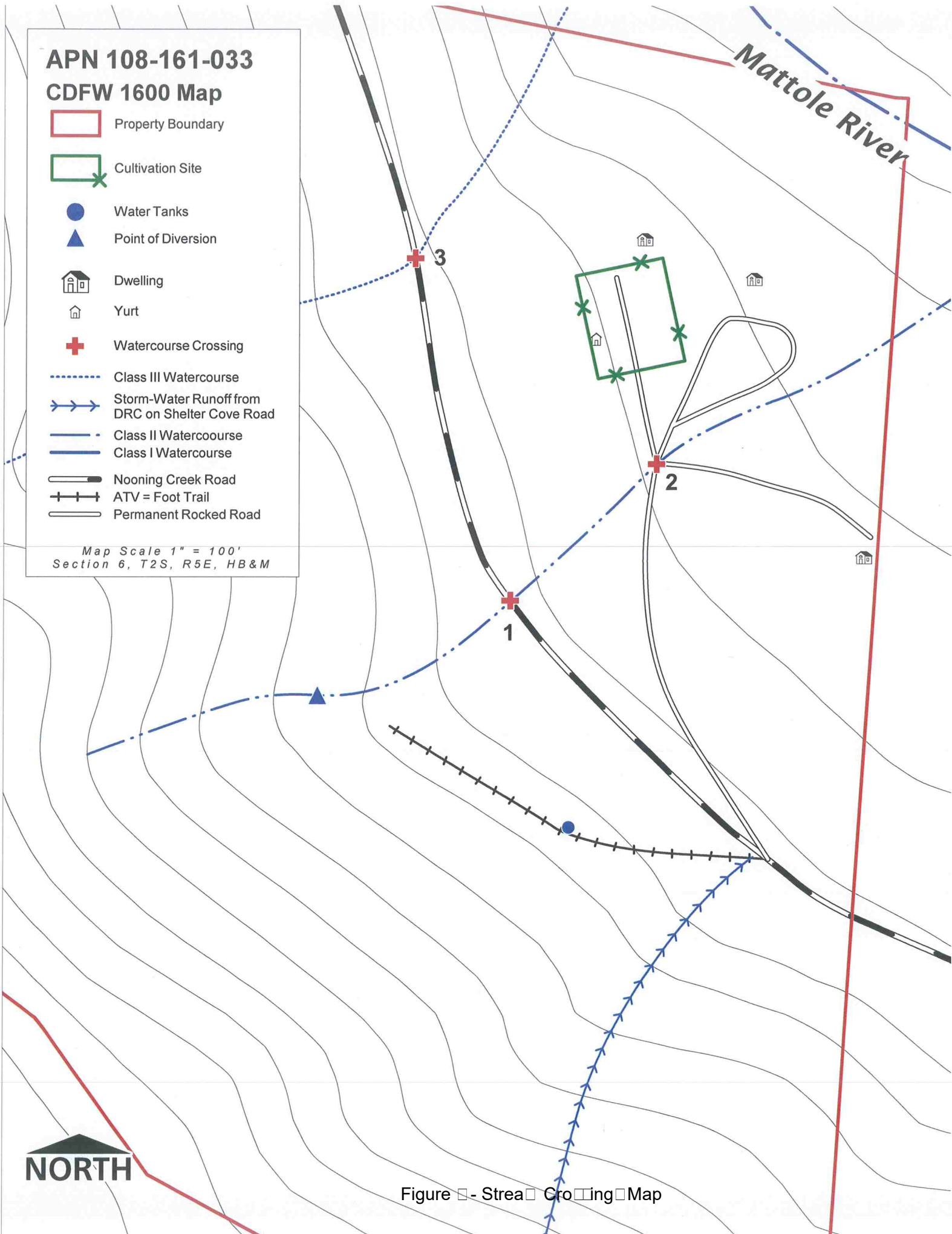


Figure 1 - Stream Crossing Map

Addendum 10 – Pictures



Picture 7: Inlet of Crossing #2. Photo date 8-13-2019

Addendum 10 – Pictures



Picture 8: Outlet of Crossing #2. Photo date 8-13-2019

Addendum 10 – Pictures (Cont.)



Picture 9: Inlet of Crossing #3. Photo date 8-13-2019

Addendum 10 – Pictures (Cont.)



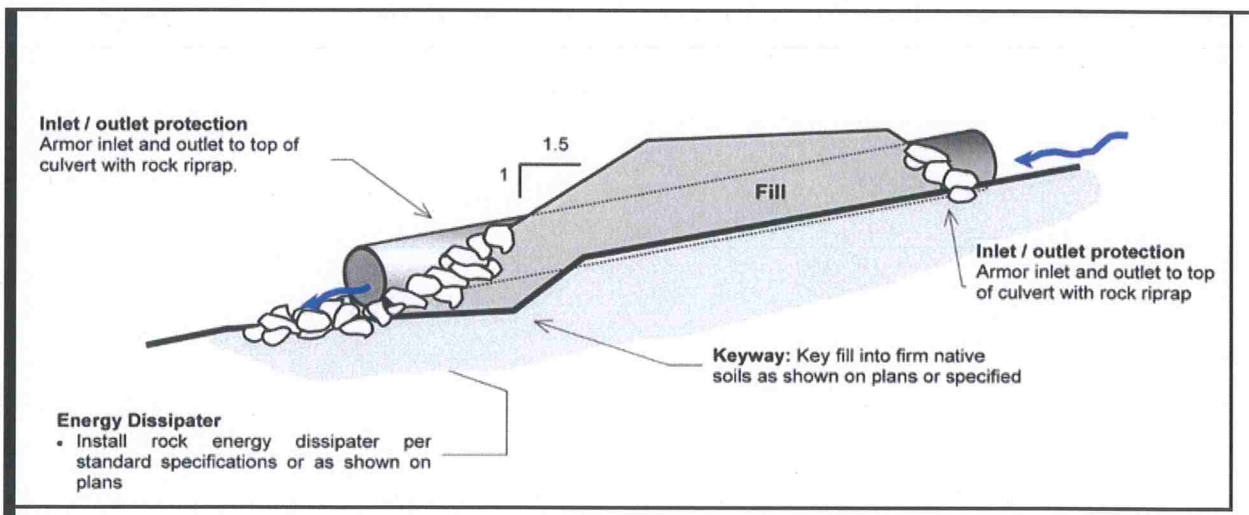
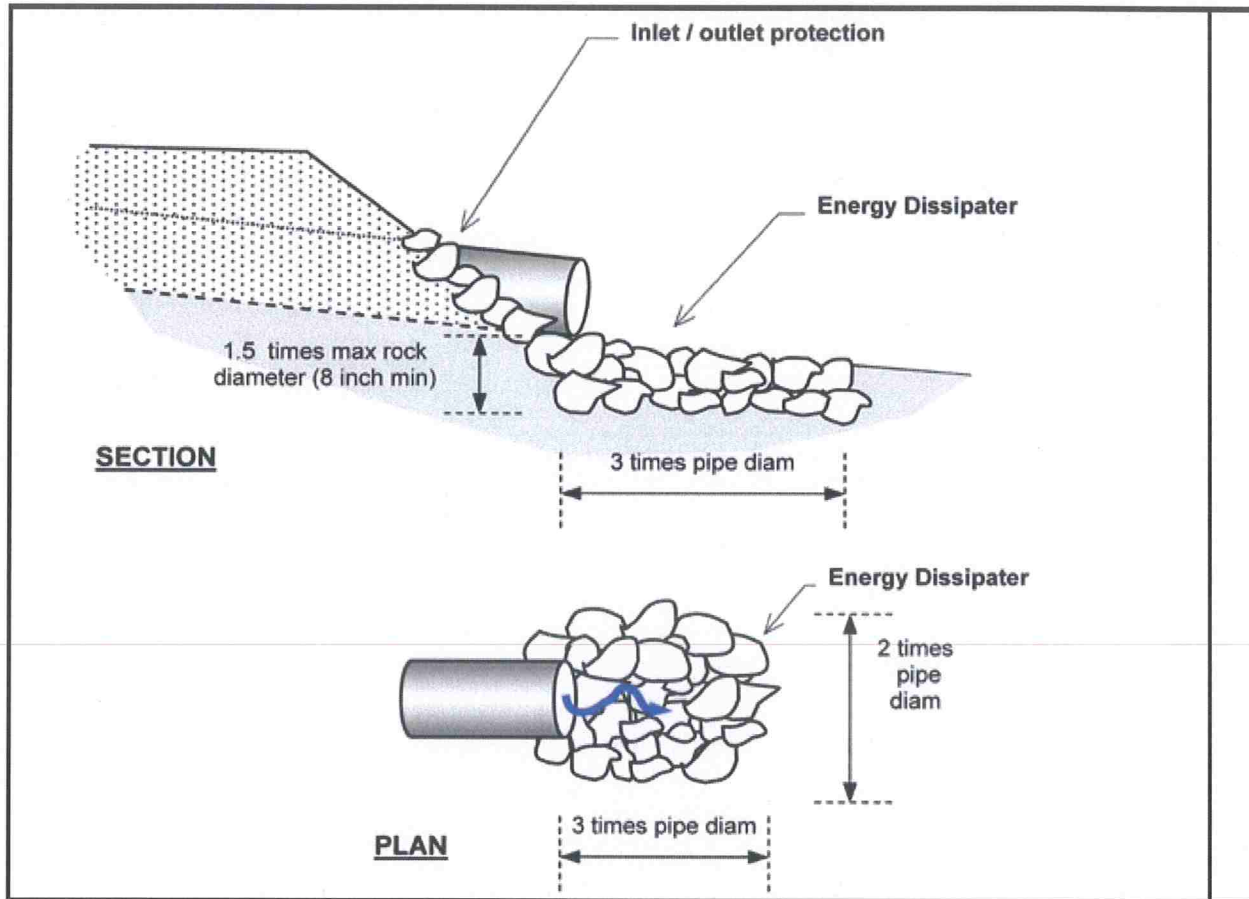
Picture 10: Inlet of Crossing #3. Photo date 8-13-2019

Addendum 10 – Pictures (Cont.)



Picture 11: Outlet of Crossing #3. Photo date 8-13-2019

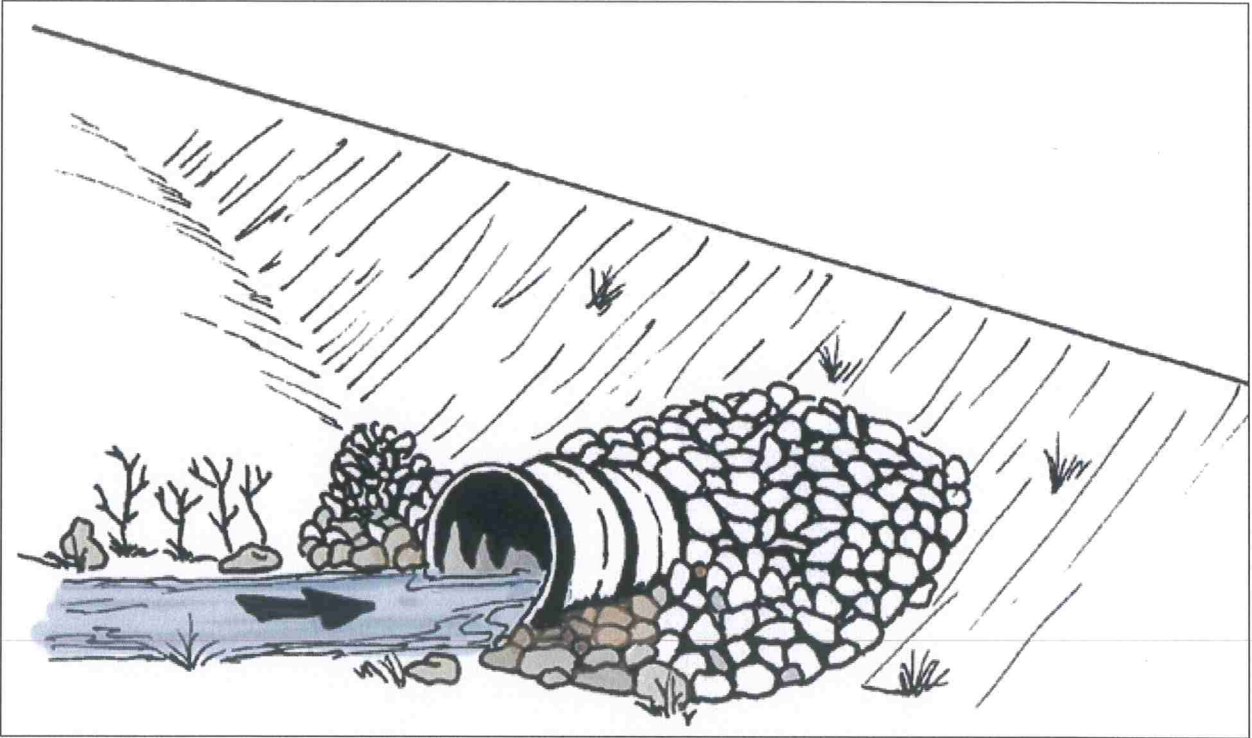
Culvert Installation Specifications



Riprap installed to protect the inlet and outlet of a stream crossing culvert from erosion or for energy dissipation should be keyed into the natural channel bed and banks to an approximate depth of about 1.5x the maximum rock thickness. Riprap should be placed at least up to the top of the culvert at both the inlet and outlet to protect them from splash erosion and to trap any sediment eroded from the newly constructed fill slope above.

Figure 6A

Culvert Installation Specifications



Rock armor used for inlet and outlet protection (i.e., not as energy dissipation) does not have to be sized to protect against high velocity scour. If the culvert is properly sized and its length is adequate, it should be able to transmit flood flows without scouring the inlet or eroding the outlet around the culvert. Armor shown here is designed to protect the culvert outlet and basal fill from splash erosion and from occasional submergence and currents within standing water (at the inlet) when the culvert plugs. Importantly, inlet and outlet armor also serve to trap sediment that has been eroded or slides down the new constructed fill face in its first several years, until the slope becomes well vegetated.

Figure 6B

From: [Jessica](#)
To: [Adler, Elanah](#); [Richardson, Michael](#)
Cc: [Margro Advisors](#)
Subject: Jennifer Markman - Mitigation and Remediation Grant Fund Proposal
Date: Friday, October 29, 2021 1:20:41 PM
Attachments: [Mitigation Fund Application - Noonong Creek Markman.pdf](#)
[Markman Maps Figures.pdf](#)

Dear Michael and Elanah,

I am pleased to present the attached grant proposal on behalf of Jennifer Markman.

Please feel free to reach out to me with questions or comments.

Thank you,

Jessica

--

Jessica
Project Manager
Margro Advisors

1-707-500-2420



165 South Fortuna Boulevard, Fortuna, CA 95540
707-725-1897 • fax 707-725-0972
trc@timberlandresource.com

01000000

To: All Interested Parties

Timberland Resource Consultants has been retained to prepare and submit a Resource Conservation Application and SACE Permit Application for Jenner Marsh and within APN 010-06-0000. The documents will be prepared and on a separate. Please contact Timberland Resource Consultants with any questions or concerns.

Sincerely,



Chris Carroll RPF 0106
Timberland Resource Consultants

**Site Management Plan for:
WDID: 1B171382CHUM
APN: 108-161-033**

Prepared for:
State Water Resources Control Board (SWRCB)
North Coast Regional Water Quality Control Board (NCRWQCB)

Prepared by:
Margro Advisors
230 4th St, Eureka CA, 95501

Date of Completion:
06/21/2019

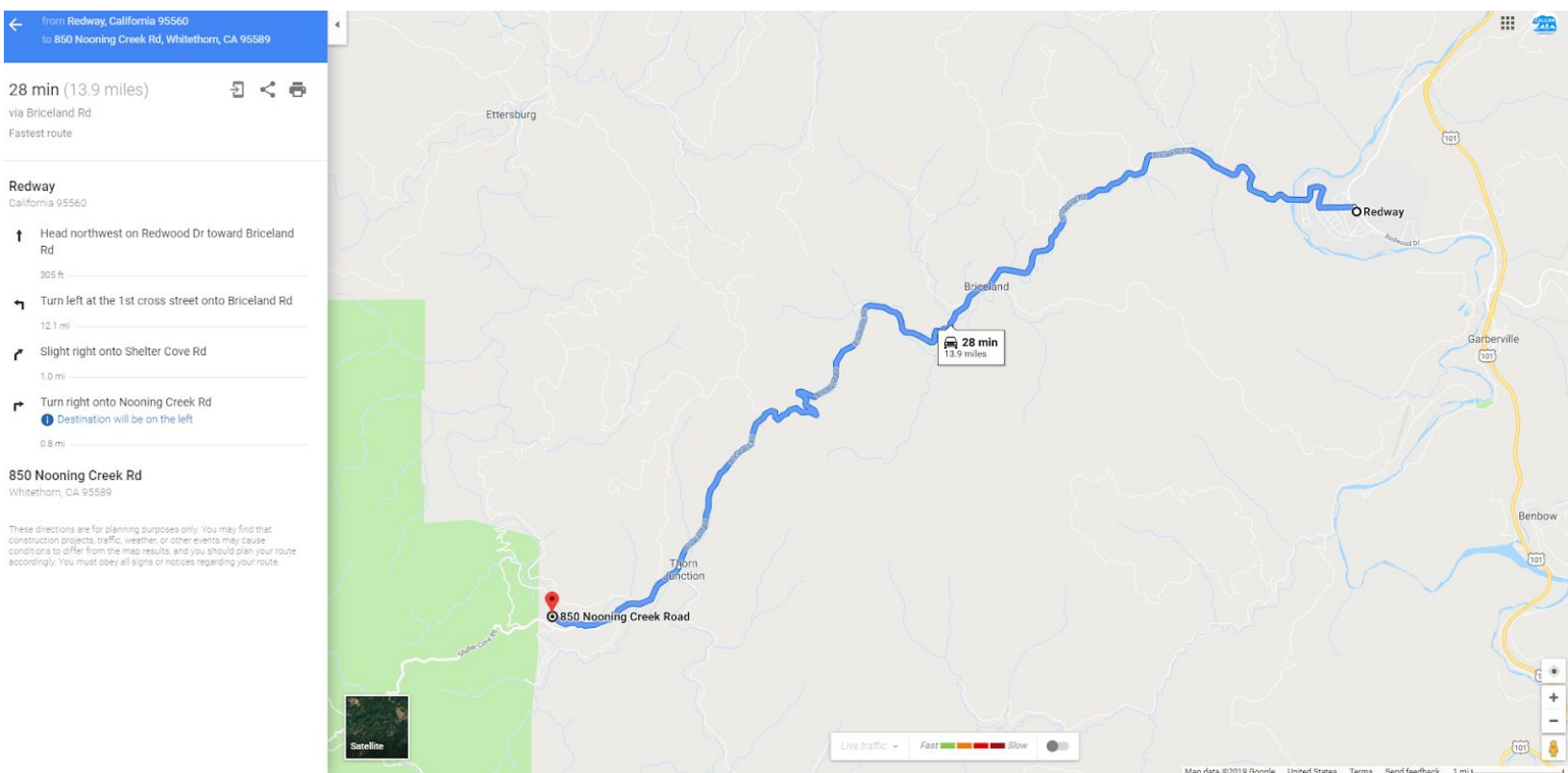
Introduction

This Site Management Plan (SMP) as required by the State's General Order¹, is for a cannabis cultivation site operated by Jennifer Markman, located in the Whitethorn area, street address 850 Nooning Creek Road, in Humboldt County. The site is located in watershed HUC 12-180101070202. The purpose of this order is to provide a regulatory structure for cannabis cultivation that reduces contributions to existing water quality issues and prevents additional adverse impacts to water resources throughout California. The purpose of the SMP is to identify conditions present on a parcel that may pose a threat to water quality and resources, and establish a plan to meet or surpass requirements set forth in the order, as well as to describe how the cultivator is implementing the best practical treatment or control (BPTC) measures listed in Attachment A of the Cannabis General Order. Refer to Attachment D of the General Order for further technical report guidance.

Margro Advisors has made an initial assessment of this parcel through field work as well as through a variety of county, state, and private websites (e.g. USDA web soil survey, Google Earth, and Humboldt County Web GIS). The parcel boundaries are approximate and obtained from Humboldt County.

Attached is a map of directions to the site from Google Maps.

¹ Order entitled "STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2017-0023-DWQ GENERAL WASTE DISCHARGE REQUIREMENTS AND WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF WASTE ASSOCIATED WITH CANNABIS CULTIVATION ACTIVITIES"



Site Characteristics

This site is locally approved with Humboldt County Permit # 13018-ZCC, for 3,000 ft² of outdoor cultivation, and a state CDFA License # TML18-0011596.

Elevation within this parcel ranges from 880 to 1,400 feet. Mean annual precipitation is 59 to 100 inches. Mean annual air temperature is 48 to 55 degrees Fahrenheit. The frost free period is 240 to 300 days.

Processing

As plants are harvested in the field, they are processed with a trim machine then gathered and set in storage for drying. The final cannabis product will then be packaged and stored in a secure location.

Power

The site uses municipal electricity and a Honda EU2000 generator for backup. Usage is on average 104kWh per day, depending on the stage of grow, duration of sunlight, ventilation, and use of farming equipment. As the generator is rated by the manufacturer at less than 60dB, it meets perimeter noise restrictions required by environmental regulations.

Attached at the end of this document is a site map. The site map includes features such as: access roads, vehicle parking areas, streams, stream crossings, cultivation site(s), disturbed areas, buildings, and other relevant site features.





































Soil Description

Attached is a soil map of the parcel. The soils within the area are primarily Canoecreek-Sproulish-Redwohly complex (Map Unit 575, 98.0% of parcel) and Sproulish-Canoecreek-Redwohly complex (Map Unit 574, 2.0% of parcel).²



² Descriptions and estimates from US Department of Agriculture, Natural Resource Conservation Service, Web Soil Survey

MAP LEGEND

- Area of Interest (AOI)**
 Area of Interest (AOI)
- Soils**
 Soil Map Unit Polygons
 Soil Map Unit Lines
 Soil Map Unit Points
- Special Point Features**
 Blowout
 Borrow Pit
 Clay Spot
 Closed Depression
 Gravel Pit
 Gravelly Spot
 Landfill
 Lava Flow
 Marsh or swamp
 Mine or Quarry
 Miscellaneous Water
 Perennial Water
 Rock Outcrop
 Saline Spot
 Sandy Spot
 Severely Eroded Spot
 Sinkhole
 Slide or Slip
 Sodic Spot
-  Spoil Area
 Stony Spot
 Very Stony Spot
 Wet Spot
 Other
 Special Line Features
- Water Features**
 Streams and Canals
- Transportation**
 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads
- Background**
 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

 Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, South Part, California
 Survey Area Data: Version 7, Sep 13, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Nov 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
574	Sproulish-Canoecreek-Redwohly complex, 30 to 50 percent slopes, warm	0.4	2.0%
575	Canoecreek-Sproulish-Redwohly complex, 50 to 75 percent slopes, warm	21.8	98.0%
Totals for Area of Interest		22.3	100.0%

Canoecreek

The parent rock of the Canoecreek is colluvium and residuum derived from sandstone, mudstone, and conglomerate. The capacity of the most limiting layer to transmit water (Ksat) is moderately high to high (0.60 to 2.00 in/hr). The depth to a restrictive feature is more than 80 inches. The frequency of flooding is none. The frequency of ponding is none. The available water storage in profile is moderate (about 7.4 inches).

Sproulish

The parent rock of the Sproulish is colluvium derived from mudstone and/or sandstone and/or residuum weathered from mudstone and/or sandstone. The capacity of the most limiting layer to transmit water (Ksat) is moderately high to high (0.20 to 2.00 in/hr). The depth to a restrictive feature is more than 80 inches. The frequency of flooding is none. The frequency of ponding is none. The available water storage in profile is high (about 10.1 inches). The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm).

Redwohly

The parent rock of the Redwohly is residuum weathered from sandstone and/or mudstone. The capacity of the most limiting layer to transmit water (Ksat) is moderately low to moderately high (0.14 to 1.42 in/hr). In terms of depth to a restrictive feature, there are 20 to 39 inches to strongly contrasting textural stratification. The frequency of flooding is none. The frequency of ponding is none. The available water storage in profile is low (about 3.7 inches). The maximum salinity in profile is non-saline to very slightly saline (0.0 to 2.0 mmhos/cm).

Water Storage, Use, and Irrigation Runoff

Water used for cannabis cultivation is sourced from rain catchment to onsite water tanks. The property owner has submitted a California Department of Fish & Wildlife Lake & Streamside Alteration Agreement waiver application. The site relies on the tanks capacity to store approximately 24,000 gallons of water for irrigation. A summary of water storage is shown below in Table 1.

Water Storage Type	Size (Gallons)	Number	Total (Gallons)
Tank	1,000	3	3,000
Tank	3,000	6	18,000
Total			24,000

Table 1: Summary of water storage on the parcel.

The amount of water used for the cultivation of cannabis will vary throughout the year, from 0 to 50 gallons per day. Gravity directs water from the irrigation tanks and distributes water flow to the cultivation site. All irrigation is dispersed using timed emitters. During the beginning of the grow season, clones are watered about 15 minutes per day. Minimal watering then varies from 4 to 15 minutes depending on need. Drip irrigation occurs at agronomic rates to enclosed soil beds, along with surrounding vegetation to prevent runoff. A summary of estimated water use for irrigation in gallons by month for irrigation is shown below in Table 2.

Jan	Feb	Mar	Apr	May	June
700	700	700	700	1,400	1,400

July	Aug	Sept	Oct	Nov	Dec
1,400	1,400	1,400	700	700	700

Table 2: Summary of estimated water use for irrigation in gallons by month for irrigation.

Water flow is metered and will be regularly recorded and reported with the end of the year monitoring report. Tanks, lines, and connections will be checked periodically for wear, damage, and leaks. Repairs are done immediately or mitigated until replacement parts are obtained.

Sediment Discharge

Access Roads

The access roads are in good condition and do not show evidence of erosion. There is very little vehicle traffic (about 3 cars go in and out of the property per day). There are graveled ground surfaces, and there are currently no road maintenance activities. Storm water is drained from the access road via use of roadside ditches. Access road stormwater drainage structures do not discharge onto unstable slopes, earthen fills, or directly to a waterbody.

Stream Crossings

There are two stream crossing culverts on the parcel. An overview is shown below in Table 3.

Label	Size (inches)	Type	Watercourse Class	Condition
Culvert 1	24	Corrugated Plastic Pipe	Class III	Good
Culvert 2	32	Corrugated Metal Pipe	Class III	Good

Table 3: Overview of stream crossings on the property.

The culverts are believed to be capable of accommodating the estimated 100-year flood flow, including debris and sediment loads. The culverts will be maintained and inspected for blockage with regular monitoring detailed in the Monitoring section of this plan. The culverts appear to have been installed parallel to the watercourse alignment to the extent possible, of sufficient length to extend beyond stabilized fill/sidecast material.

Sediment Erosion Prevention and Sediment Capture

Erosion Prevention

BPTC measures being implemented to ensure erosion prevention include topping soil with straw mulch, grass seed, or cover crop. When exposed surfaces or bare slopes appear, topsoil is covered with straw for temporary erosion control to minimize sediment, and stabilize the surface in the event of heavy rainfall. In addition, there is no driving or operating of vehicles or equipment within the riparian setbacks or within waters of the state unless authorized.

Sediment Control

Hay is placed around cultivation areas to capture sediment that has been eroded. BPTC measures that may be implemented to capture sediment that has been eroded include placement of gravel, straw wattles, and silt screens when necessary.

Monitoring

The access road, stream crossing, erosion prevention, and sediment control BPTC measures listed above will be monitored and maintained to confirm effectiveness and protect water quality by conducting inspections:

- Quarterly.
- Before and after any significant alteration or upgrade to a given stream crossing, road segment, or other controllable sediment discharge site.
- Prior to October 15th and December 15th to evaluate site preparedness for storm events and stormwater runoff.

Captured sediment will be stabilized in place.

Fertilizer, Pesticide, Herbicide, Fungicide, and Rodenticide

An overview of estimated annual chemical product use is shown below in Table 4.

Product Name	Chemical Type	N-P-K or Primary Active Ingredient(s)	Annual Use (lb or gal)
Molasses	Fertilizer	Molasses	40 gal
Malibu Compost	Fertilizer	Compost	500 lb
Grow Pro	Fertilizer	19-4-10	20 lb
Kelp Meal	Fertilizer	1-0-2	50 gal
Bat Guano	Fertilizer	9-3-1	20 lb
Bat Guano Bloom	Fertilizer	0-5-0	50 lb
Dr Earth Bloom Top Dress	Fertilizer	3-9-4	400 lb
Cal Mag	Fertilizer	2-0-0	20 gal
Plant Therapy	Pesticide	Soy Oil, Peppermint Oil, Citric Acid	10 gal

Table 4: Overview of estimated annual chemical product usage.

Products are delivered to the site as needed. Appropriate Safety Data Sheets (SDS) are kept on-site as a component of the cultivator's Site Management Plan. A dedicated locked and secure indoor storage area is used for the storage of all amendments. All hazardous materials are secured in secondary containment. Products which are not consumed during the growing season are kept in this secure indoor storage area to prevent discharge, including over the winter season. Bulk fertilizers and chemical concentrates are stored, mixed, and applied per packaging instructions and/or at proper agronomic rates. Empty containers are contained and stored in covered bins. Application rates will be tracked and reported with the end of the year monitoring. EPA registered pesticide use will be reported by the 10th of the month following its use, to the Department of Pesticide Regulations as required.

Petroleum Products

An overview of estimated annual petroleum usage is shown below in Table 5.

Product	Chemical Type	Stored (gal)	Annual Use (gal)
Gasoline	Petroleum	Up to 5	5
Propane	Petroleum	Up to 500	500

Table 5: Overview of estimated annual petroleum usage.

Petroleum products are delivered to the site as needed. Products which are not consumed during the growing season are kept in proper containers enclosed with secondary containment to prevent discharge, including during the winter season. Petroleum, petroleum products, and similar fluids are stored in a manner that provides chemical compatibility, provides secondary containment, and protection from accidental ignition, the sun, wind, and rain. Fuels, lubricants, and other petroleum products are stored and applied per packaging instructions. Vehicles or equipment are only refueled outside of riparian setbacks. Maintenance is done offsite. A Spill Prevention, Countermeasures, and Cleanup (SPCC) kit is kept with fuel storage. As a safety measure, SPCC kits provide a supply of clean-up materials for spill containment in the event of an accidental spill of fertilizers, petroleum products, or other hazardous materials.

Trash/Refuse and Domestic Wastewater

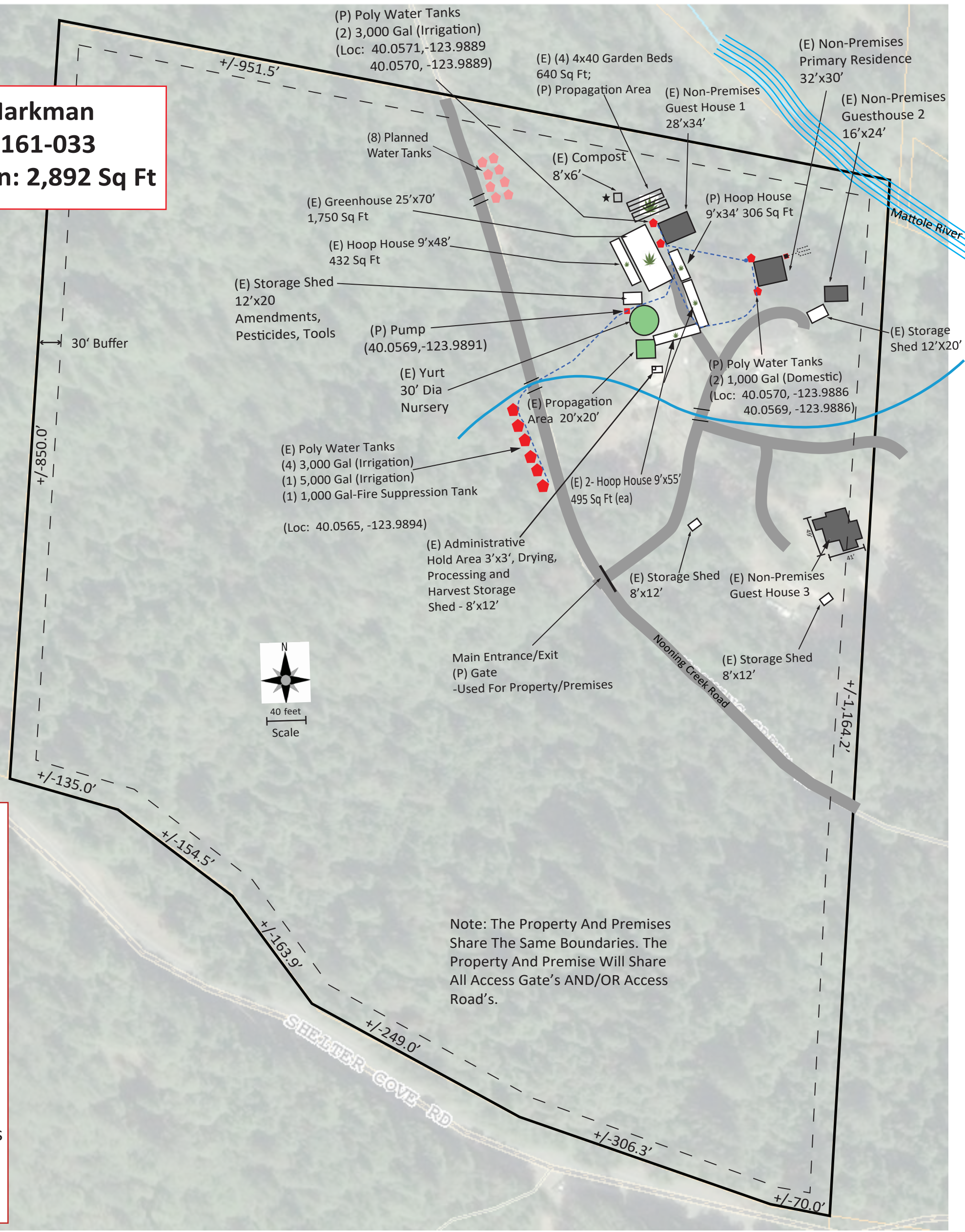
On an average day, there are about five employees, visitors, and/or residents at the site. Non-reusable plant waste and packaging materials of approximately 60 gallons per week, with 30 gallons paper, glass, and plastic recyclable materials per month will be generated at this site. Trash is kept in secure trash storage to prevent leaching and transport of foreign materials to groundwater and are located outside of riparian setbacks. Trash bins are transported by the property owner once a week to the Redway Transfer Station. Recycling is transported by the property owner once a month to the Redway Transfer Station.

The premises has an onsite septic system connected to a bathroom and kitchen. Wastewater is disposed of with a proper leach field and 1,200-gallon septic tank. Toilet facilities will always be operational, maintained in a clean and sanitary condition, and kept in good repair. Records of service and maintenance shall be retained for a minimum of two years.

Winterization

The property owner keeps a copy of Winterization Protocols for Statewide Cannabis Order (North Coast Region) onsite. BPTC measures outlined in this document will be performed to winterize the site and prevent discharges of waste. The property owners do not operate heavy equipment of any kind at the cannabis cultivation site during the winter period unless authorized for emergency repairs contained in an enforcement order issued by the State Water Board, Regional Water Board, or other agency having jurisdiction. In addition, if there is construction, all construction entrances and exits are stabilized to control erosion and sediment discharges from land disturbance. All loose stockpiled construction materials (e.g. soil, spoils, aggregate, etc.) that are not scheduled for use within 48 hours are covered and bermed. Erosion repair and control measures to the bare ground (e.g. cultivation area, access paths, etc.) are applied to prevent discharge of sediment to waters of the state. If any BPTC measure cannot be completed before the onset of the winter period, the property owner will contact the Regional Water Board to establish a compliance schedule.

Jennifer Markman
APN: 108-161-033
Total Cultivation: 2,892 Sq Ft



Legend

- Cultivation Area
- Water Tanks
- Storage Shed
- Non-Premises
- Soils Spoils Area
- Roads
- Class I Watercourse
- Class II Watercourse
- Class III Watercourse
- Culvert
- Irrigation Lines
- Septic and Leach Lines
- (E) Existing
- (P) Proposed
- Water Pump

Note: The Property And Premises Share The Same Boundaries. The Property And Premise Will Share All Access Gate's AND/OR Access Road's.

Subject: Re: Jennifer Markman Bid
From: Ray Wilcox <rwilcoxtimber@gmail.com>
Date: 1/2/2023, 11:38 AM
To: Jessica <jessica@margroadvisors.com>

Thanks Jessica

The crossing 2 does'nt require any labor its just a rock disipator
Thanks and Happy New Year

Ray

On Thu, Dec 1, 2022, 3:35 PM Jessica <jessica@margroadvisors.com> wrote:

Hi Ray,

I hope you are well. I was reviewing your quote for the Markman project, below, and I noticed you left out labor for Crossing #2. Was that intentional, or would you like to add your labor to Crossing #2?

Thanks, Happy Winter!

Jessica

On 8/29/2022 6:26 AM, Ray Wilcox wrote:

Good morning Jessica here is the revised bid for Jennifer's project

Crossing #2
Material. \$5175
Equipment \$5175
Total. \$10350

Crossing #. 3
Material. \$17.940
Labor. \$ 4.025
Equipment \$ 37.950
Total. \$59.915

Ray Wilcox

On Fri, Jun 24, 2022, 1:23 PM Jessica <jessica@margroadvisors.com> wrote:

Hi Ray,

You bid culvert #2 at \$7,500 and culvert #3 at \$32,900.

It would help if we could break it down further into labor, materials, and equipment.

Thank you!

Jessica

--

Jessica
Project Manager
Margro Advisors

1-707-500-2420

--

Jessica
Project Manager
Margro Advisors

1-707-500-2420

Nooning Creek Improvements
APN 108-161-033
Jennifer Markman
Scope of Work

The work will be completed by Ray Wilcox, Wilcox GR Enterprises Inc., Contractors State License Board #665454 between June 15 and October 1, 2023. The work will take approximately two weeks.

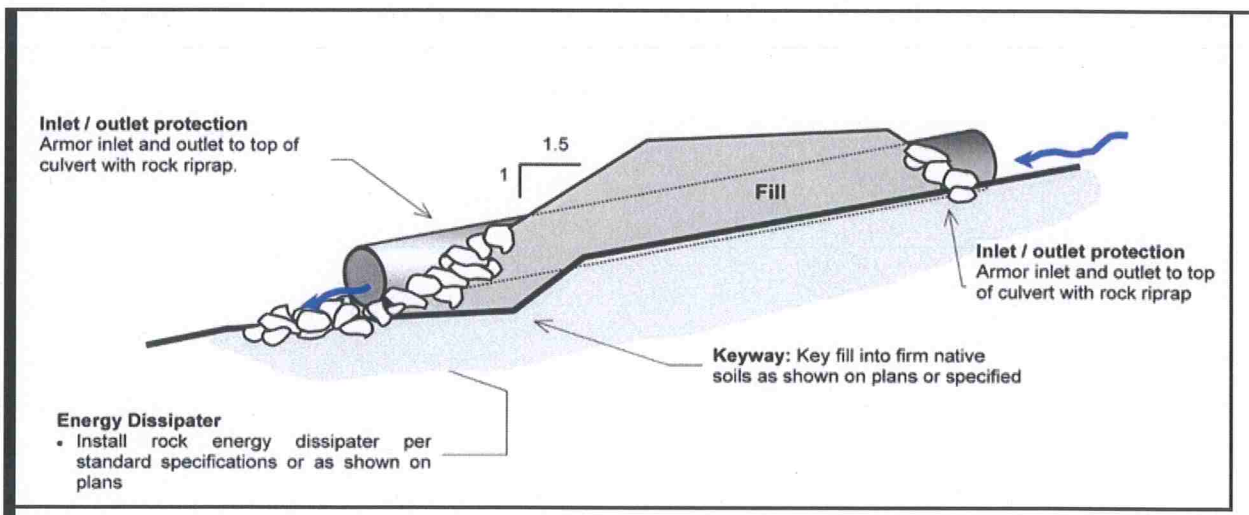
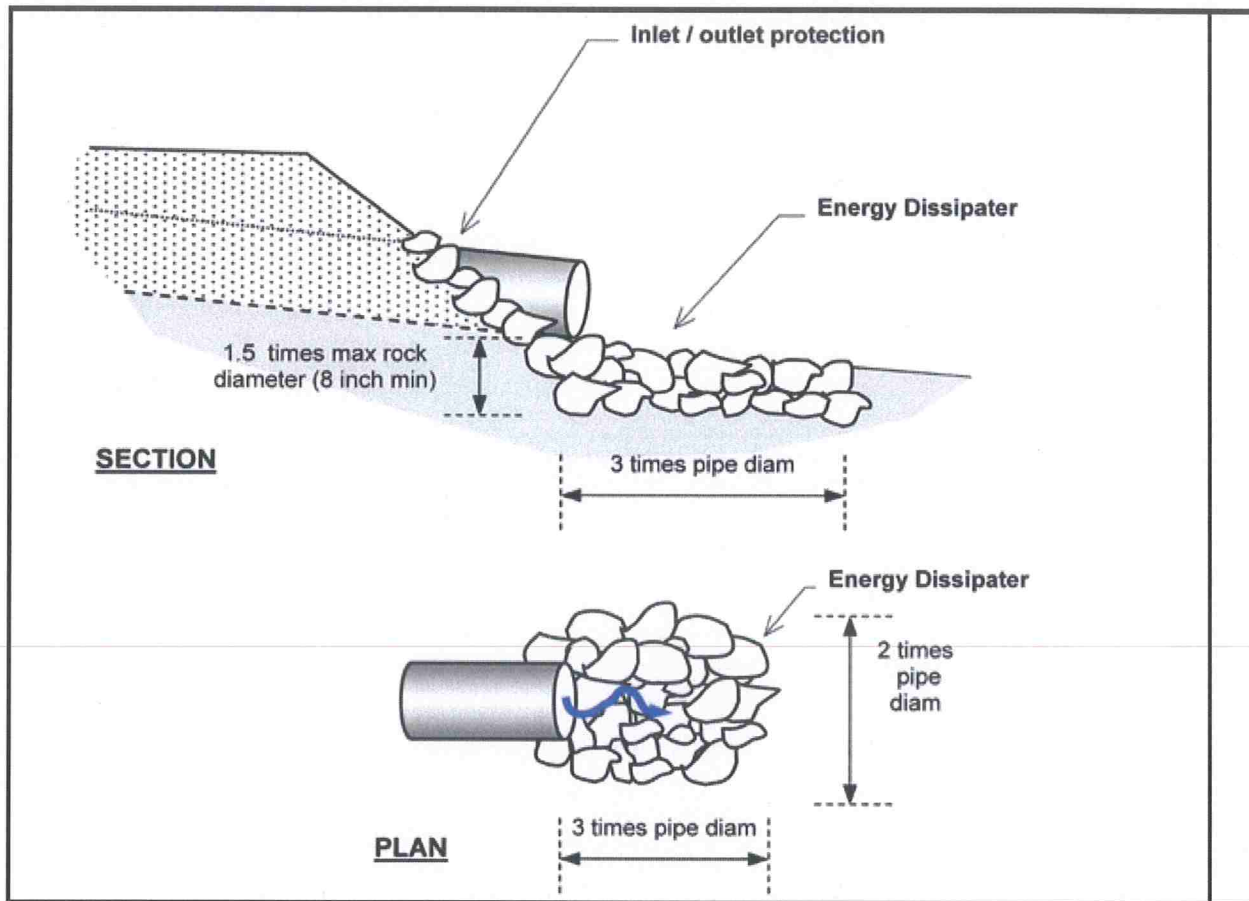
Crossing #2: Existing 24-inch diameter culvert comprised of .5 inch thick iron on a Class II watercourse. The culvert is adequately sized but not to grade and slightly shot-gunned. Rock armor the inlet and outlet per engineering specifications. Will require approximately 5-10 yards of rip-rap, ranging in size from 1/16 to 1/4 ton, to be placed at the inlet and outlet. The total disturbed area for purposes of quantifying remediation area is approximately 100 square feet.

Crossing #3: Existing 18-inch diameter culvert located on Nooning Creek Road on a Class III watercourse. The culvert is undersized for the 100-year storm and is rusted. The crossing shall be removed and replaced with a 36-inch diameter culvert long enough that it extends lengthwise completely beyond the toe of the fill. The culvert shall be installed per engineering specifications. The culvert upgrade will result in the loss of a 15 dbh tanoak, a 10 inch dbh Douglas fir, a 21 inch dbh Douglas fir, and local forbs and grasses.

All work will be completed according to general specifications provided by Timberland Resource Consultants (attached). An excavator, dump truck, tractor and grader may be used during the project. The project will require a 401 Certification from the Regional Water Quality Control Board.

Margro Advisors will work with the applicant on maintaining compliance with local and state regulations, and provide support for the project's grant administration and reporting, as needed.

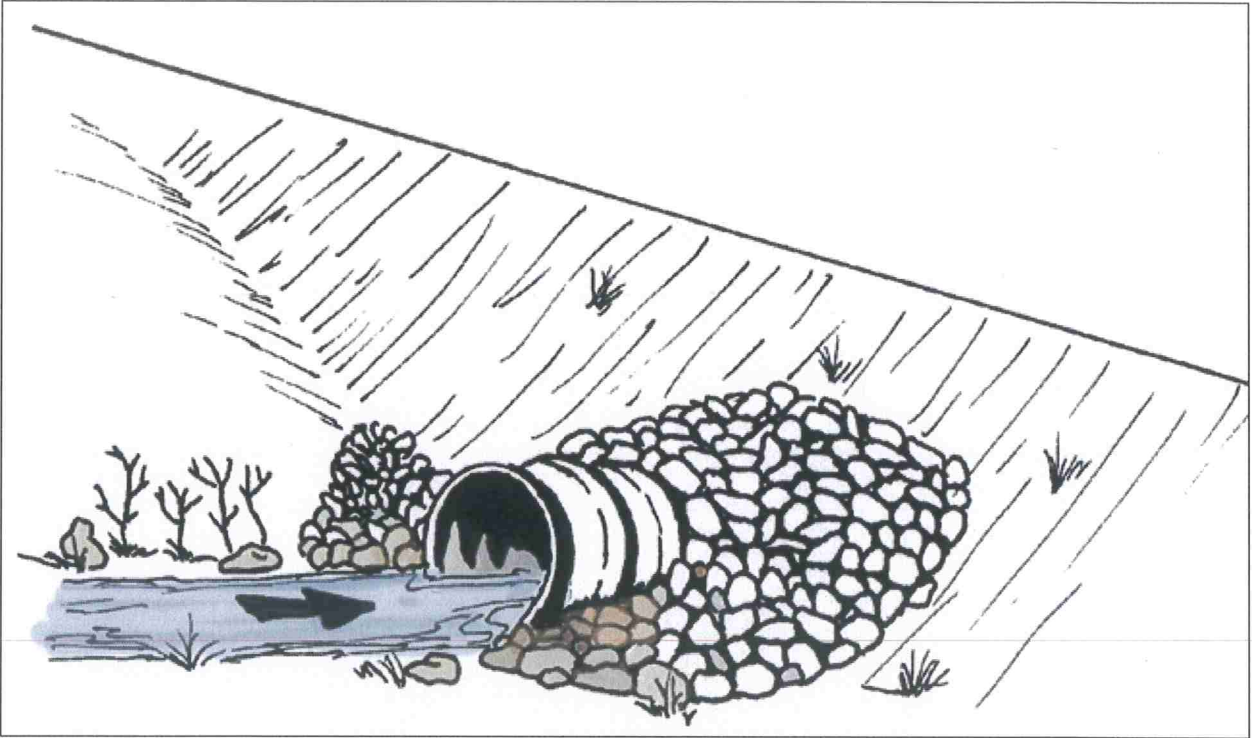
Culvert Installation Specifications



Riprap installed to protect the inlet and outlet of a stream crossing culvert from erosion or for energy dissipation should be keyed into the natural channel bed and banks to an approximate depth of about 1.5x the maximum rock thickness. Riprap should be placed at least up to the top of the culvert at both the inlet and outlet to protect them from splash erosion and to trap any sediment eroded from the newly constructed fill slope above.

Figure 6A

Culvert Installation Specifications



Rock armor used for inlet and outlet protection (i.e., not as energy dissipation) does not have to be sized to protect against high velocity scour. If the culvert is properly sized and its length is adequate, it should be able to transmit flood flows without scouring the inlet or eroding the outlet around the culvert. Armor shown here is designed to protect the culvert outlet and basal fill from splash erosion and from occasional submergence and currents within standing water (at the inlet) when the culvert plugs. Importantly, inlet and outlet armor also serve to trap sediment that has been eroded or slides down the new constructed fill face in its first several years, until the slope becomes well vegetated.

Figure 6B

Nooning Creek Road Improvements
APN 108-161-033
REVISED Project Budget

Budget Item	Grant	Other Funds
Permit Fees		
401 Certification	\$ 6,500.00 (Includes WB fee)	
Consultant and Professional Fees	\$11,066.00	
Materials	\$ 23,115.00	
Equipment	\$ 43,125.00	
Labor	\$ 4,025.00	
Total	\$ 87,831.00	

APPLICATION PACKET CHECKLIST

Please check below to ensure you have a complete application. Once complete, email the following documents, in pdf format with the text "Application for Remediation Grant Program Funding" in the subject line to

- Signed Application Submission Form
- Project Description – Summary of the Project, up to 2 pages.
- Plot Plan & Location Plan
- Plot Plan Checklist – Attached
- N/A Cross sections of proposed work including topographic elevations
- Scope of Work – Detailed Description of Work
- Schedule for Completion – Identify Milestones
- Erosion Control Plan and Monitoring Plan
- Budget – Be as specific as possible – sample attached
- Project Maps and Figures
- Letter(s) of Support (optional)

APPLICATION FORM - Commercial Cannabis Land Use Ordinance Mitigation and Remediation Fund Program

Project Title: Bamboo Farms Remediation Date of Application: 04/29/2021

Applicant Name: Deborah O'Brien Project APN: 219-061-001

Contact Person Name and Title: Deborah O'Brien

Contact Phone: (707) 483-7342 Contact Email: dobrien325@gmail.com

Contact Address: P.O. Box 736, Miranda, CA 95553

Amount Requested: _____ Total Budget: 25,679.02

Project Timeline: Start Date: finished End Date: finished

Signature of Applicant: Deborah O'Brien

**Bamboo Farms Remediation
APN 219-061-001
3546 Lower Thomas Rd, Miranda. CA**

SCOPE OF WORK

The culvert replacements were done along the driveway for 3546 Lower Thomas Rd by Brian Paula & Sons of Briceland, CA. Final inspection by CDFW is pending.

The culverts were installed to grade, aligned with the natural stream channel and extended lengthwise beyond the toe of slope. The culvert inlets and outlets were reinforced with rip-rap. New road gravel was placed over all three culverts. The culvert replacement was performed during the dry season and no water was present during the work. All work was done in compliance with the CDFW requirements.

**Bamboo Farms Remediation
APN 219-061-001
3546 Lower Thomas Rd, Miranda. CA**

EROSION CONTROL PLAN & MONITORING PLAN

EROSION CONTROL PLAN

The driveway surface will be maintained with adequate surfacing and drainage features to avoid developing ruts, gullies or surface erosion that results in sediment delivery to surface waters. This includes water bars, rolling dips, roadside drainage ditches and adding road gravel as needed, or at least annually.

Culvert inlets and outlets will be inspected regularly to ensure that they are free of any obstructions. Drainage ditches that carry water to the culverts will be kept free of any obstructions.

MONITORING PLAN

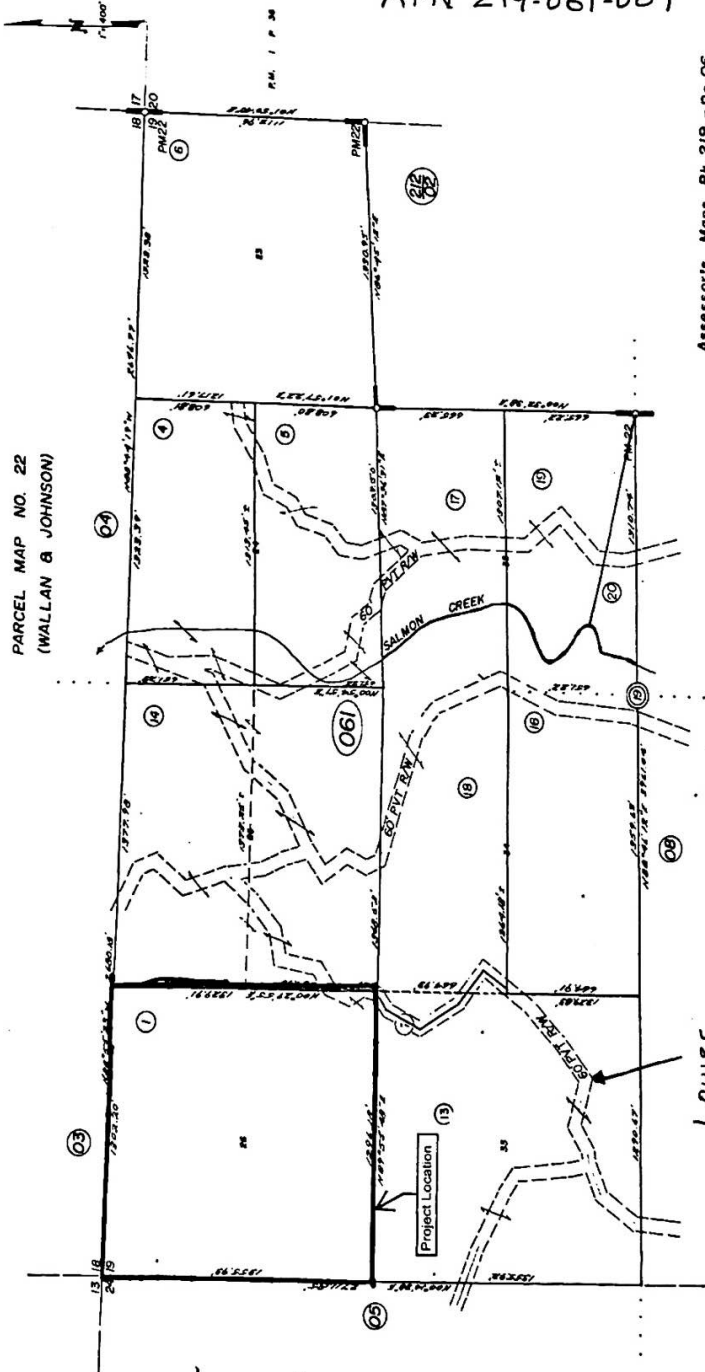
As the applicant is also the resident on this parcel, the culverts will be monitored almost daily during trips to and from the parcel. Detailed monitoring will occur monthly by physical inspection and correction of any obstruction or defect.

Deborah O'Brien
APN 219-061-001

219-06

FOR N 1/2 SEC 19, T3S R3E

PARCEL MAP NO. 22
(WALLAN & JOHNSON)



Assessor's Maps Bk. 219 - Pg. 06
County of Humboldt, Calif.

NOTE - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

Lower
Thomas Rd

Location Map

Page 1 of 1

PLOT PLAN AND TENTATIVE MAP CHECKLIST

The following information must be shown on your plot plan or tentative map. Please check the box to the left of the items shown on the plot plan or tentative map. If any item is not on your site to your knowledge, write "N/A" next to the box. Plot plans shall be drawn on a minimum size sheet of 8-1/2" x 11", and tentative subdivision maps on a minimum size sheet of 18" x 26". **Note: This Checklist must be completed by the applicant and submitted with your application.**

Applicant's Name Deborah O'Brien APN 219-061-001

FOR ALL PROJECTS	
<input checked="" type="checkbox"/>	1. Name of applicant(s)
<input checked="" type="checkbox"/>	2. Location or vicinity map (on or attached to the plot plan)
<input checked="" type="checkbox"/>	3. The subject parcel (show entire parcel with dimensions)
<input checked="" type="checkbox"/>	4. Date, north arrow and scale
<input checked="" type="checkbox"/>	5. Name, County road numbers, and width of all existing and proposed access roadways adjacent to or within the subject parcel (indicate width of traveled way, grade (in % slope), and surface)
<input checked="" type="checkbox"/>	6. Existing and proposed improvements (label as "existing" and "proposed" with dimensions and distance to nearest two (2) property lines)
<input checked="" type="checkbox"/>	a. Structures and buildings (include floor area, height and proposed use)
<input checked="" type="checkbox"/>	b. Driveways and turnaround areas (indicate width, grade (in % slope) and surface)
<input checked="" type="checkbox"/>	c. Utility lines (electric, gas, telephone, sewer, water, and cable TV)
<input checked="" type="checkbox"/>	d. Septic tanks and leachfields (label primary/reserve areas and test holes)
<input checked="" type="checkbox"/>	e. Wells
<input checked="" type="checkbox"/>	f. Parking and loading areas (show individual parking spaces, including handicapped parking and ramps)
<input type="checkbox"/>	g. Storm drains, curbs and gutters
<input type="checkbox"/>	h. Emergency water storage tanks and fire hydrants
<input type="checkbox"/>	i. Landscaped areas (include proposed exterior lighting)
<input type="checkbox"/>	j. Major vegetation (identify mature trees (12" dbh or larger) to be removed)
<input type="checkbox"/>	k. Diked areas
<input type="checkbox"/>	l. Proposed grading and fill (estimate volume)
<input type="checkbox"/>	m. Signs (indicate size, illuminated, and design (e.g., monument, pylon, etc.))
<input type="checkbox"/>	n. Other - specify _____
<input checked="" type="checkbox"/>	7. Direction of surface water runoff
<input checked="" type="checkbox"/>	8. Location and width of all existing and proposed easements of record
<input type="checkbox"/>	9. Hazardous areas (indicate on map if on the project site or within 400 feet of the project site):
<input type="checkbox"/>	a. Areas subject to inundation or flooding
<input type="checkbox"/>	b. Steep or unstable slopes
<input type="checkbox"/>	c. Expansive (clay) soils
<input type="checkbox"/>	d. Earthquake faults
<input type="checkbox"/>	e. Hazardous waste or substance sites
<input type="checkbox"/>	f. Other - specify _____
<input type="checkbox"/>	10. Sensitive habitat areas (indicate on map if on project site or within 400 feet of the project site):
<input type="checkbox"/>	a. Creeks, rivers, sloughs and other drainage courses
<input type="checkbox"/>	b. Lakes, ponds, marshes, or "wet" meadows
<input type="checkbox"/>	c. Beaches
<input type="checkbox"/>	d. Sand dunes
<input type="checkbox"/>	e. Other - specify _____
<input type="checkbox"/>	11. Historical buildings or known archaeological or paleontological resources
<input type="checkbox"/>	12. Land use and buildings on adjacent parcels, and approximate distances to closest property lines
FOR LOT LINE ADJUSTMENT PLOT PLANS ONLY	
<input type="checkbox"/>	13. Proposed new lines and lines to be eliminated (show lines to be eliminated as dashed)
<input type="checkbox"/>	14. Areas (in square footage or acreage) of the initial and resulting parcels

FOR TENTATIVE SUBDIVISION MAPS ONLY	
<input type="checkbox"/>	16. Approximate dimensions and areas of all proposed lots
<input type="checkbox"/>	17. A statement that "All easements of record are shown on the tentative map and will appear on the recorded subdivision map"
<input type="checkbox"/>	18. Contour lines (at _____ intervals)
<input type="checkbox"/>	19. For major subdivisions (5 or more parcels): proposed drainage improvements, details of any grading to be performed, approximate radii of all roadway curves, areas for public use, and typical sections of all streets, highways, ways and alleys
<input type="checkbox"/>	20. Names and assessor's parcel numbers of all contiguous ownerships

NOTE: THE SUBMITTAL OF INCOMPLETE OR ILLEGIBLE PLOT PLANS OR TENTATIVE MAPS WILL CAUSE DELAYS IN THE PROCESSING OF YOUR APPLICATION

Sample Schedule for Completion

Milestone	Start Date	End Date
Detailed Project Scoping	7/14/2019	7/22/2019
Bidding and Contracting	n/a	n/a
Project Ground-Breaking	7/16/2019	7/22/2019
Inspections by <u>Fish & Game</u>	not yet	not yet
Project Completion	1/22/2019	7/22/2019
Monitoring	7/22/2019	10/31/2019

Sample Budget

Budget Item	Grant	Other Funds
Permit Fees (specify)	4,317	4,317
Consultant and professional fees	same	same
Materials	17,045.02	17,045.02
Equipment		"
Other (specify)		"
TOTAL	21,362.02	21,362.02

Note: 80% of program funds are required to be spent on physical improvements.

STATE OF CALIFORNIA—THE RESOURCES AGENCY
 DEPARTMENT OF FISH AND GAME
 LICENSE SALES RECEIPT

No. 00051 - 18

Customer Name: Deborah O'Brien

Date: 12-1-17

Quantity	Description	Inventory Number(s)	Price Each	Extended Price
	<u>Manhard</u>			
2	LSA	219-0161-001	561 ⁰⁰	1122 ⁰⁰
1	Remediation	6 liters	300 ⁰⁰	—
	23747415917	122 ⁰⁰		
	23747415928	1000 ⁰⁰		
	23747415930	1000 ⁰⁰		
	23747415952	1000 ⁰⁰		
	23747415906	1000 ⁰⁰		

no 422⁰⁰

Total 4122⁰⁰

Cash Check Charge

Clerk's Signature [Signature]

Clerk ID DM DFG Office ELKAY

Invoice



Date	Invoice #
10/25/2018	931

1821 Buttermilk Lane
Arcata, CA 95521

Bill To
Bamboo Farms

Project Description
Engineering Consultation

Description	Amount
North Coast Regional Water Quality Control Board - Monitoring and Reporting Program Compliance Assistance	415.72
North Coast Regional Water Quality Control Board - Water Resources Protection Plan	2,430.19
State Water Resources Control Board - Small Domestic Use Registration Assistance	668.33
State Water Resources Control Board - Phase II - Supplemental Statement	350.18
California Department of Fish and Wildlife - Lakeside Streambed Alteration Agreement Finalization	195.00

Total	\$4,059.42
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Make all checks payable to: OUREVOLUTION ENGINEERING, INC.
Payment is due within 10 days of receipt of invoice.
If you have any questions concerning this invoice, contact Andy, 707-633-4210,
andy@ourevolution.com

Paula and Sons Earthworks

PO Box 2088
CA 95560

Invoice

Date	Invoice #
7/22/2019	6052023

Bill To

Account #	Project

Description	Qty	Rate	Amount
7/17 Rock 13.08		241.98	241.98
7/19 Rock 14.17		495.95	495.95
7/16 Rock 12.64		442.40	442.40
Sales Tax		18.55	18.55
Sales Tax		13.88	13.88
Sales Tax		21.02	21.02
Sales Tax		19.05	19.05
Sales Tax		18.87	18.87
Sales Tax		19.03	19.03
Sales Tax		18.94	18.94
Sales Tax		38.44	38.44
Sales Tax		19.23	19.23
Sales Tax		18.75	18.75
Sales Tax		34.29	34.29
Total Reimbursable Expenses			3,337.37
Sales Tax		92.65	92.65
20' 24" Culvert		430.00	430.00
40' 18" Culvert		660.00	660.00
Total Reimbursable Expenses			1,182.65

Total		\$17,045.02
Payments/Credits		\$0.00
Balance Due		\$17,045.02

From: Debbie O'Brien <dobrien325@gmail.com>
Sent: Sunday, October 31, 2021 4:24 PM
To: Richardson, Michael <MRichardson@co.humboldt.ca.us>
Cc: Deb O'Brien <dobrien325@gmail.com>
Subject: Bamboo Farms Remediation grant application

Sent from my iPhone

Wylie, Brady

From: Meynell, Karen
Sent: Thursday, May 11, 2023 8:13 AM
To: Wylie, Brady
Subject: FW: DEADLINE for submissions: FOER Mitigation and Remediation Grant Program

This is a submittal for Bamboo Farms. Please add to the submittals.

From: Debbie O'Brien <dobrien325@gmail.com>
Sent: Wednesday, May 10, 2023 5:22 PM
To: Meynell, Karen <KMeynell@co.humboldt.ca.us>
Subject: Re: DEADLINE for submissions: FOER Mitigation and Remediation Grant Program

Caution: This email was sent from an EXTERNAL source. Please take care when clicking links or opening attachments.

Hello Karen

I was hoping to have some written reply from cdfw by now but still waiting. I did have an inspection with them in the fall and they seem pleased. My LSAA is in good standing. The receipt for work done required by my LSAA I'll attach.

Paula and Sons Earthworks
 PO Box 2088
 CA 95560

Invoice

Date	Invoice #
7/22/2019	6052023

Bill To

Description	Qty	Rate	Amount	Account #	Project
7/17 Rock 13.08		241.98	241.98		
7/19 Rock 14.17		495.95	495.95		
7/16 Rock 12.64		442.40	442.40		
Sales Tax		18.55	18.55		
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Sales Tax		21.02	21.02		
Sales Tax		19.05	19.05		
Sales Tax		18.87	18.87		
Sales Tax		19.03	19.03		
Sales Tax		18.94	18.94		
Sales Tax		38.44	38.44		
Sales Tax		19.23	19.23		
Sales Tax		18.75	18.75		
Sales Tax		34.29	34.29		
Total Reimbursable Expenses			3,337.37		
Sales Tax		92.65	92.65		
20' 24" Culvert		430.00	430.00		
40' 18" Culvert		660.00	660.00		
Total Reimbursable Expenses			1,182.65		
Total			\$17,045.02		
Payments/Credits			\$0.00		
Balance Due			\$17,045.02		

Sent from my iPhone

On Apr 20, 2023, at 11:55 AM, Debbie O'Brien <dobrien325@gmail.com> wrote:

Thankyou.... I thought it was not going to be covered since the project had been completed. Not sure how to go about moving forward.

Sent from my iPhone

On Apr 20, 2023, at 10:16 AM, Meynell, Karen <KMeynell@co.humboldt.ca.us> wrote:

Hello-
 I am reaching out to you as an applicant with a conditionally approved project for Round 1 funding from the FOER Mitigation and Remediation Grant Program. On 6/14/22 the Board of Supervisors tentatively approved your application for road improvements

“subject to CDFW and RWQCB approval; after all permits are obtained, and the cost estimates are correlated with the LSAA agreements and the old cost estimates are updated. The LSAA agreement cost estimate shall be consistent with the amount of the grant.”

The deadline to make additional submissions is May 10, 2023. After the deadline, the applications will be reviewed and brought to the Board of Supervisors for approval or denial. This meeting is anticipated to take place July 11th.

Please send your submissions to pblgrants@co.humboldt.ca.us. Questions can be directed to 707-267-9408.

Thank you,

<image001.png>

Karen Meynell

[Planning and Building Department](#)

3015 H Street | Eureka, CA 95501

Phone: 707-268-3747

Email: kmeynell@co.humboldt.ca.us

APPLICATION PACKET CHECKLIST

Please check below to ensure you have a complete application. Once complete, email the following documents, in pdf format with the text "Application for Remediation Grant Program Funding" in the subject line to mrichardson@co.humboldt.ca.us.

- Signed Application Submission Form
- Project Description – Summary of the Project, up to 2 pages.
- Plot Plan
- Plot Plan Checklist – Attached
- Cross sections of proposed work including topographic elevations
- Scope of Work – Detailed Description of Work
- Schedule for Completion – Identify Milestones
- Erosion Control Plan and Monitoring Plan
- Budget – Be as specific as possible – sample attached
- Project Maps and Figures
- Letter(s) of Support (optional)

APPLICATION FORM - Commercial Cannabis Land Use Ordinance Mitigation and Remediation Fund Program

Project Title: **Armstrong Sediment Reduction and Road Improvement Project**

Date of Application: **October 29, 2021**

Applicant Name: **April Armstrong**

Project APN: **316-086-017, 316-086-011, and 316-086-023**

Contact Person Name and Title: **April Armstrong**

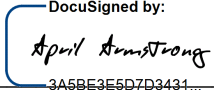
Contact Phone: **707-616-4404**

Contact Email: **aprilalison@gmail.com**

Contact Address: **600 F Street Ste #3 PMB #521**

Amount Requested: **\$230,000** Total Budget: **\$261,000**

Project Timeline: Start Date: **June 15, 2022** End Date: **October 15, 2022**

Signature of Applicant:  10/30/2021
3A5BE3E5D7D3431...

PLOT PLAN AND TENTATIVE MAP CHECKLIST

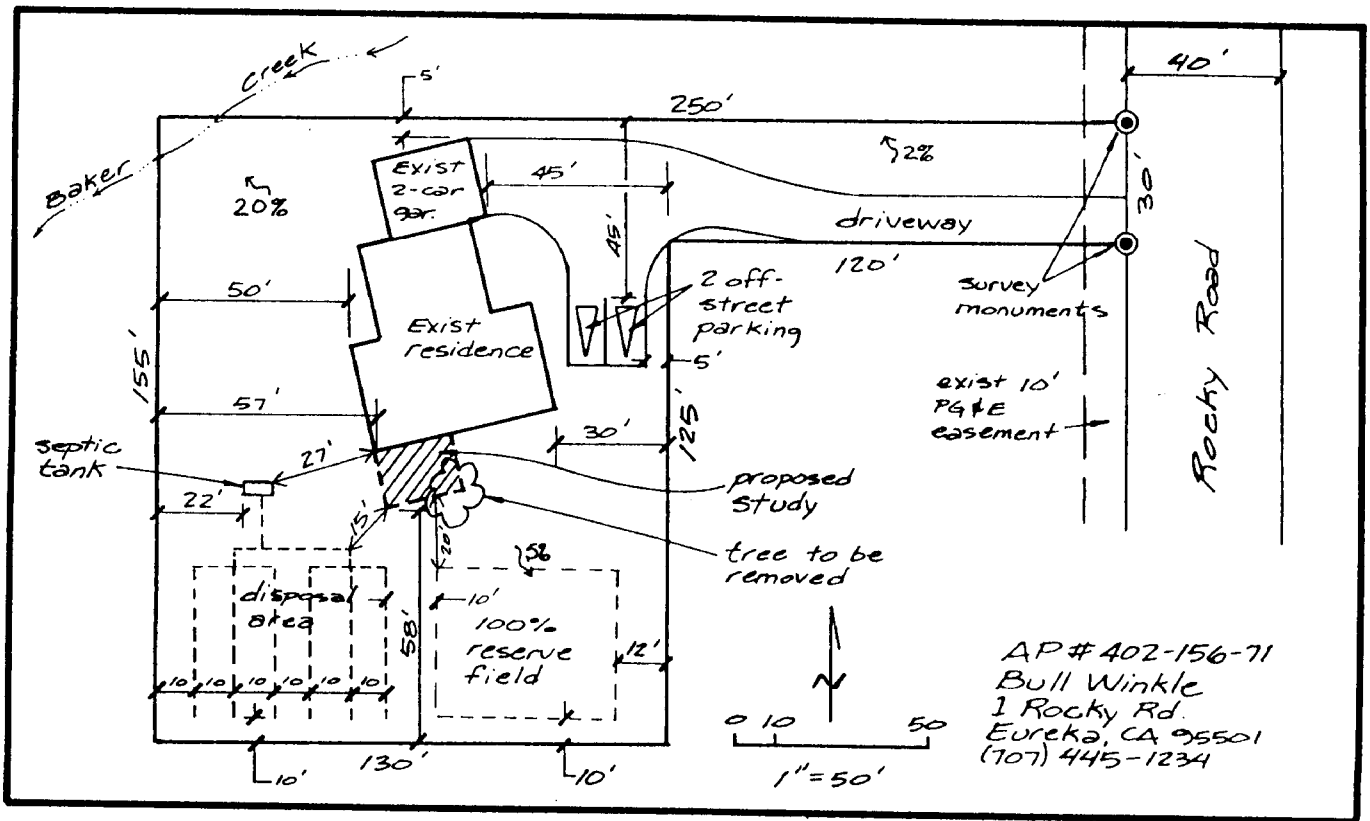
The following information must be shown on your plot plan or tentative map. Please check ✓ the box to the left of the items shown on the plot plan or tentative map. If any item is not on your site to your knowledge, write "N/A" next to the box. Plot plans shall be drawn on a minimum size sheet of 8-1/2" x 11", and tentative subdivision maps on a minimum size sheet of 18" x 26". **Note: This Checklist must be completed by the applicant and submitted with your application.**

Applicant's Name April Armstrong APN 316-086-017, 316-086-011, 316-086-023

FOR ALL PROJECTS	
<input checked="" type="checkbox"/>	1. Name of applicant(s)
<input checked="" type="checkbox"/>	2. Location or vicinity map (on or attached to the plot plan)
<input checked="" type="checkbox"/>	3. The subject parcel (show entire parcel with dimensions)
<input checked="" type="checkbox"/>	4. Date, north arrow and scale
<input checked="" type="checkbox"/>	5. Name, County road numbers, and width of all existing and proposed access roadways adjacent to or within the subject parcel (indicate width of traveled way, grade (in % slope), and surface)
<input checked="" type="checkbox"/>	6. Existing <u>and</u> proposed improvements (label as "existing" and "proposed" with dimensions and distance to nearest two (2) property lines)
<input type="checkbox"/>	a. Structures and buildings (include floor area, height and proposed use)
<input checked="" type="checkbox"/>	b. Driveways and turnaround areas (indicate width, grade (in % slope) and surface)
<input type="checkbox"/>	c. Utility lines (electric, gas, telephone, sewer, water, and cable TV)
<input checked="" type="checkbox"/>	d. Septic tanks and leachfields (label primary/reserve areas and test holes)
<input checked="" type="checkbox"/>	e. Wells
<input checked="" type="checkbox"/>	f. Parking and loading areas (show individual parking spaces, including handicapped parking and ramps)
<input checked="" type="checkbox"/>	g. Storm drains, curbs and gutters
<input type="checkbox"/>	h. Emergency water storage tanks and fire hydrants
<input type="checkbox"/>	i. Landscaped areas (include proposed exterior lighting)
<input type="checkbox"/>	j. Major vegetation (identify mature trees (12" dbh or larger) to be removed)
<input type="checkbox"/>	k. Diked areas
<input type="checkbox"/>	l. Proposed grading and fill (estimate volume)
<input type="checkbox"/>	m. Signs (indicate size, illuminated, and design (e.g., monument, pylon, etc.))
<input type="checkbox"/>	n. Other - specify _____
<input checked="" type="checkbox"/>	7. Direction of surface water runoff
<input checked="" type="checkbox"/>	8. Location and width of all existing and proposed easements of record
<input type="checkbox"/>	9. Hazardous areas (indicate on map if on the project site <u>or</u> within 400 feet of the project site):
<input type="checkbox"/>	a. Areas subject to inundation or flooding
<input type="checkbox"/>	b. Steep or unstable slopes
<input type="checkbox"/>	c. Expansive (clay) soils
<input type="checkbox"/>	d. Earthquake faults
<input type="checkbox"/>	e. Hazardous waste or substance sites
<input type="checkbox"/>	f. Other - specify _____
<input checked="" type="checkbox"/>	10. Sensitive habitat areas (indicate on map if on project site <u>or</u> within 400 feet of the project site):
<input checked="" type="checkbox"/>	a. Creeks, rivers, sloughs and other drainage courses
<input checked="" type="checkbox"/>	b. Lakes, ponds, marshes, or "wet" meadows
<input type="checkbox"/>	c. Beaches
<input type="checkbox"/>	d. Sand dunes
<input type="checkbox"/>	e. Other - specify _____
<input type="checkbox"/>	11. Historical buildings or known archaeological or paleontological resources
<input type="checkbox"/>	12. Land use and buildings on adjacent parcels, and approximate distances to closest property lines
FOR LOT LINE ADJUSTMENT PLOT PLANS ONLY	
<input type="checkbox"/>	13. Proposed new lines and lines to be eliminated (show lines to be eliminated as dashed)
<input type="checkbox"/>	14. Areas (in square footage or acreage) of the initial and resulting parcels

FOR TENTATIVE SUBDIVISION MAPS ONLY	
<input type="checkbox"/>	16. Approximate dimensions and areas of all proposed lots
<input type="checkbox"/>	17. A statement that "All easements of record are shown on the tentative map and will appear on the recorded subdivision map"
<input type="checkbox"/>	18. Contour lines (at _____ intervals)
<input type="checkbox"/>	19. For major subdivisions (5 or more parcels): proposed drainage improvements, details of any grading to be performed, approximate radii of all roadway curves, areas for public use, and typical sections of all streets, highways, ways and alleys
<input type="checkbox"/>	20. Names and assessor's parcel numbers of all contiguous ownerships

NOTE: THE SUBMITTAL OF INCOMPLETE OR ILLEGIBLE PLOT PLANS OR TENTATIVE MAPS WILL CAUSE DELAYS IN THE PROCESSING OF YOUR APPLICATION

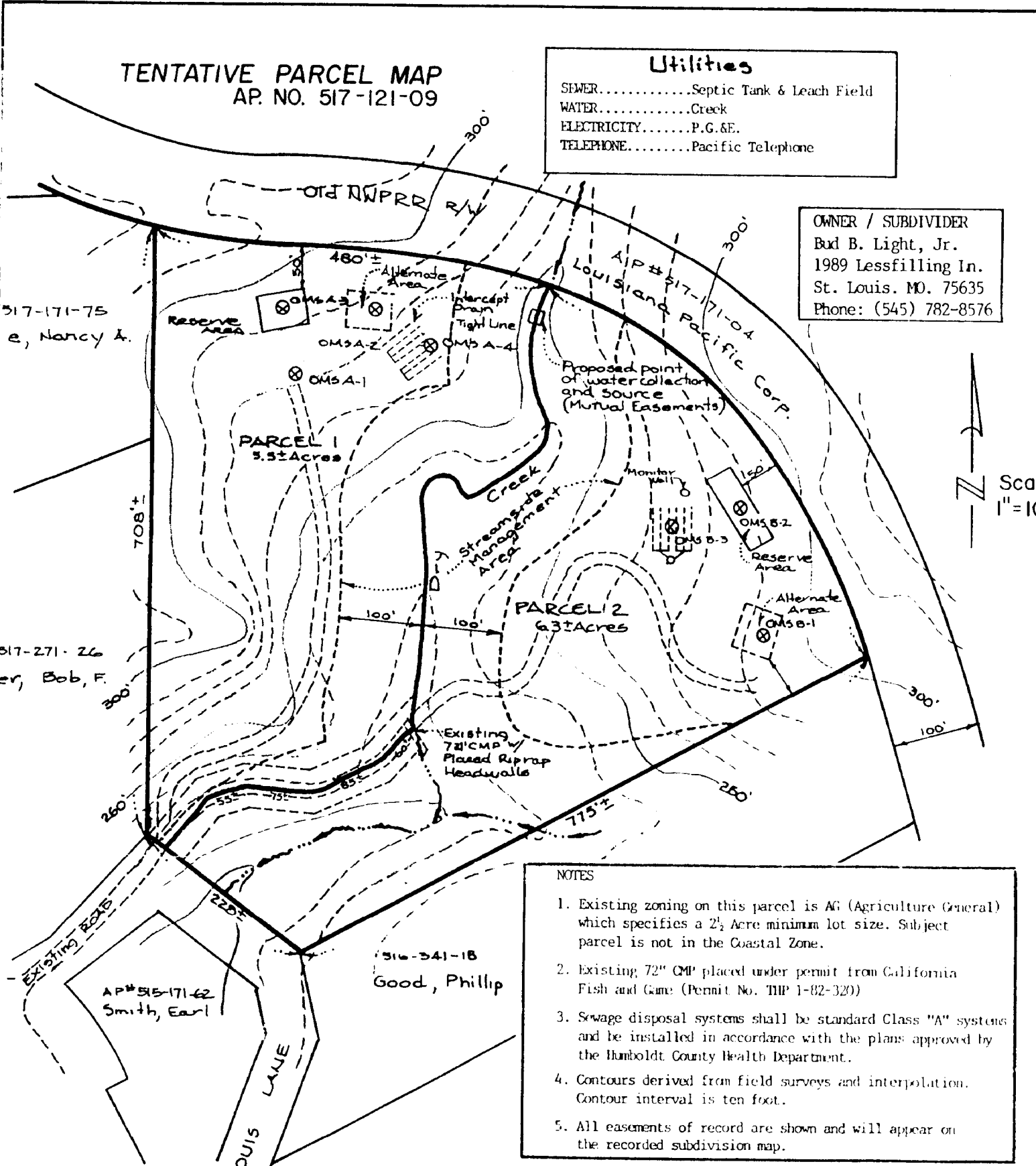


TENTATIVE PARCEL MAP
AP. NO. 517-121-09

Utilities

SEWER.....Septic Tank & Leach Field
 WATER.....Creek
 ELECTRICITY.....P.G.&E.
 TELEPHONE.....Pacific Telephone

OWNER / SUBDIVIDER
 Bud B. Light, Jr.
 1989 Lessfilling Ln.
 St. Louis, MO. 75635
 Phone: (545) 782-8576



- NOTES**
- Existing zoning on this parcel is AG (Agriculture General) which specifies a 2½ Acre minimum lot size. Subject parcel is not in the Coastal Zone.
 - Existing 72" CMP placed under permit from California Fish and Game (Permit No. THP 1-82-320)
 - Sewage disposal systems shall be standard Class "A" systems and be installed in accordance with the plans approved by the Humboldt County Health Department.
 - Contours derived from field surveys and interpolation. Contour interval is ten feet.
 - All easements of record are shown and will appear on the recorded subdivision map.

Commercial Cannabis Land Use Ordinance Mitigation and Remediation Fund Grant Application

Armstrong Road Improvement
and
Sediment Reduction Project

APNs: 316-086-017, 316-086-011, and 316-086-023

October 2021

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Figure 2. Plot Plan APN 316-086-017

Figure 3. Plot Plan APN 316-086-011

Figure 4. Plot Plan APN 316-086-023

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Appendix B. Project Photos

Appendix C. Project Budget

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1 PROJECT DESCRIPTION

The project area is located in the Redwood Creek watershed and the Minor Creek sub watershed in Humboldt County approximately 10 miles east of Blue Lake, California. The project area is located downslope of Highway 299 at 30000 and 30500 Old Highway 299 Blue Lake, California, on Humboldt County Assessor Parcel Numbers (APN) 316-086-017, 316-086-011, and 316-08-023.

The Armstrong Road Improvement and Sediment Reduction Project will improve approximately 2.3 miles of privately owned accessed road in the upper Redwood Creek Watershed, roughly 1.3 miles of access road consists of Old Highway 299 which is the primary access road on the property. Based on historical air photos, the road was constructed before 1958 and abandoned sometime after 1962 by Caltrans and it was never remediated. The landowner is committed to improving the land and preserving the natural resources. Implementation of the proposed stream crossing improvements would improve water quality and prevent approximately 2,100 cubic yards of sediment from entering the Redwood Creek watershed.

The purpose of this project is to reduce erosion potential and sediment discharge to surface waters within the Redwood Creek watershed by reducing hydrologic connectivity through appropriately sizing culverted stream crossings to accommodate 100-year stream flow and debris, decommissioning stream crossings with no intended future use, and storm-proofing the road network.

This application includes a total of fourteen (14) projects: decommissioning/removal of three (3) stream crossings; and upgrade/replacement of eleven (11) culverted stream crossings. Implementation of the project will also disconnect hydrologically connected road reaches to the greatest degree feasible through the installation of rolling dips and waterbars. A detailed scope of work and description of each project is provided in Appendix A Table 1. All stream crossings and road treatments have been designed by qualified professionals at Mother Earth Engineering (MEE) and Pacific Watershed Associates (PWA) and will allow for the unrestricted passage of water and shall be designed to accommodate the 100-year stream flow and associated debris (See Appendix A Table 3 for culvert sizing recommendations and methods). Typical drawings and design specifications for project sites and road treatments are provided in Appendix D of this application.

Additionally, stream crossing upgrades will be constructed according to standards provided in the "Handbook for Forest, Ranch and Rural Roads," (Weaver, Weppner and Hagans, 2015), and the California Salmonid Stream Habitat Manual, Part X (Weaver, Hagans and Weppner, 2006). MEE will provide construction layout, oversight, and support. Additionally, the landowner and MEE are in the process of collecting bids from experienced and licensed contractors to implement the project as designed.

A project map of the project area displaying roads, watercourses, project locations, and proposed road drainage treatments is attached to this application (Figure 1). Photo documentation of all projects is attached to this application (Appendix B).

All stream crossings will be dry during construction and all disturbed areas capable of delivering sediment to a watercourse will be seeded with native seed and mulched with weed free straw. Any spoils generated during construction will be stored in a stable location and mulched to prevent surface erosion.

Work will only occur during the period of June 15 through October 15 (or first significant rainfall) to limit and avoid impacts to aquatic habitat and salmonids. Vegetation will only be removed from sites where it is growing on anthropogenically placed fill material, where erosion is likely to deliver to active watercourses, or where necessary for the implementation of storm-proofing treatments.

The project will serve to make the road more accessible, reduce sediment delivery to surface waters, and bring the broader cultivation business into compliance with both the State Water Resources Control Board (SWRCB) and the

California Department of Fish and Wildlife (CDFW). The project parcels are enrolled in the State Water Board Cannabis General Order (WDID 1_12CC417682) which requires compliance with environmental regulations intended to minimize detrimental impacts by implementing best management practices. No trees will be removed during project construction and permanent impacts to existing native channel bed, channel, watercourse banks, and associated riparian habitat will be negligible and avoided. Incidental destruction of small areas of riparian vegetation growing on existing road fill or in disturbed channel areas is expected at the stream crossing upgrades during remediation.

The costs of the proposed road improvement project remain a challenge. Funding for this project is a crucial element for achieving and maintaining compliance but also serves as a critical point connected to the implementation and success of a sustainable cannabis cultivation business.

If approved, the funds will go directly towards improving the road network and the construction of stream crossing improvements and stream restoration. Funding the road improvements will help achieve environmental compliance with CDFW and SWRCB and support a fully operational, woman-owned business that will contribute to the tax base of the community, provide employment, and protect water quality in the Redwood Creek watershed.

2 SCHEDULE FOR COMPLETION

All work shall be confined to the work period between June 15 and October 15. SWRCB approval is required before project initiation, if approval is not granted on the date noted in the table below, then the project start date may change and construction will begin once approval is granted. A Lake or Streambed Alteration Agreement (LSAA) has been issued for APNs 316-086-017 and 316-086-011. A separate LSAA was submitted on August 27, 2021, for APN 316-08-023 and is pending approval. Once approval is granted, the project typically must be completed within 5 years of the executed LSAA. MEE will collaborate directly with the contractor to go over the project design prior to project implementation. MEE will also provide construction oversight during project construction to ensure the plans are implanted as proposed. Project monitoring shall occur twice annually at the start of the winter period (November 15) and at the end (April 1) or if conditions change on the project site. Project monitoring will focus on the effectiveness of erosion and sediment control measures to determine if any additional treatments are required. Both CDFW and SWRCB require Project Completion Reports after the project is complete, these reports are typically required within 30 days of project completion.

Proposed Schedule for Completion		
Milestone	Start Date	End Date
Contractor Bidding and Contracting	In progress	5/1/2022
CDFW LSAA Project Approval	In progress	TBD
SWRCB 401 Water Quality Certification Permit Application Submission	In progress	3/1/2022
Project Layout and Initiation	6/1/2022	6/15/2022
Project Implementation	6/15/2022	10/15/2022 (or first significant rainfall)
Post Construction Monitoring	10/15/2022 (or upon project completion)	11/15/2022 (start of winter period)
Project Completion Report for CDFW and SWRCB	10/15/2022	11/15/2022
Annual Monitoring	November 15 of each year	April 1 of each year

3 EROSION CONTROL AND MONITORING PLAN

Erosion control measures shall be implemented upon completion of construction operations and before the winter period (November 15). The goal of implementing winterization and erosion control measures is to limit erosion or sediment transport during rainfall events. Erosion control measures may include and shall not be limited to the following:

- 1) Disturbed areas will be treated with native seed and weed-free straw mulch. Native seed will be applied at a rate no less than 50 pounds per acre. Seeded areas shall be covered with weed-free straw mulch at a rate of two tons per acre and provide 100% ground cover. Straw mulch will be evenly distributed on the ground surface.
- 2) All stockpiled materials (i.e., spoils) must either be properly disposed of or fully contained and weatherproofed before the winter period. All spoil areas shall be seeded and mulched following the guidelines mentioned above.
- 3) Any seasonal roads shall be blocked off and no heavy equipment will be used during the winter period. All disturbed areas must be stabilized, and erosion control measures must be applied to the ground surface to prevent sediment discharge.

Post-construction monitoring will begin when the project is complete. Upon which time all project sites including roads and stockpiled materials will be assessed for adequate erosion and sediment control application. If additional erosion and sediment control measures are required, then they shall be installed prior to the onset of the winter period (November 15). Following project implementation, all project sites will be monitored twice per

year (November 15 or shortly after, and April 1) by a qualified professional to ensure proper installation and determine if any additional erosion or sediment control measures are needed.

4 REFERENCES

Google Earth. (1993). Image U.S. Geological Survey Image NASA.

SWRCB (State Water Resources Control Board). (2019). Order WQ 2019-0001-DWQ. General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities.

SWRCB (State Water Resources Control Board). (2019). Order WQ 2019-0001-DWQ. General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities. Attachment A: Cannabis Cultivation Policy Attachment A.

SWRCB (State Water Resources Control Board). (2019). Order WQ 2019-0001-DWQ. General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities. Attachment B: Monitoring and Reporting Program.

USGS. (1973). Lord-Ellis Summit, CA. 7.5 Minute Series Quadrangle Map.

Weaver, W.E., Weppner, E.M. and Hagans, D.K. (2015). Handbook for Forest, Ranch and Rural Roads: A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining and Closing Wildland Roads (Rev. 1st ed.), Mendocino County Resource Conservation District, Ukiah, California.

Appendix

A



MOTHER EARTH
ENGINEERING

Project Scope and Description

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-2 Big Oak (BO) APN 316-086-023	1 and 4	1-3	40.8993	-123.7838	A Class III watercourse with an 18-inch diameter plastic culvert. The culvert is not sized for 100-year flows and debris. The culvert is installed at channel grade but is not in line with the natural channel.	<ol style="list-style-type: none"> 1. Replace the existing culvert and install a 30-inch diameter x 30-foot-long metal culvert sized for 100-year stream flows and debris. The new culvert shall be installed in line with the natural stream channel, at channel grade and at the base of fill. 2. Raise the road to accommodate a new culvert, with the required minimum 12-inches of fill over the culvert inlet to safely withstand vehicular loading. 3. Reuse any large woody debris (LWD) to protect bare soil areas. 4. Seed and mulch any bare soil areas to prevent surface erosion. 5. Install one rolling dip 75 feet up the right road approach to reduce runoff and sediment delivery. 6. Rock the immediate road approaches to the stream crossing to the nearest drainage structure (i.e., rolling dip). 7. Any excess material (spoils) generated during construction will be end hauled to a stable location far from surface waters. To prevent surface erosion, spoil locations will be covered with native seed at a rate no less than 50 lbs./acre of seed. Seeded areas will be covered with weed-free straw mulch at a rate of two tons per acre and provide 100% ground cover. Straw mulch will be evenly distributed on the ground surface. 	<ol style="list-style-type: none"> 1. 30" dia. X 30' long CMP 2. Road rock 3. Native seed and straw mulch

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-3 BO APN 316-086-023	1 and 4	4-5	40.9004	-123.7819	A Class III watercourse with a 15-inch diameter steel culvert. The culvert is not sized for 100-year flows and debris. The culvert inlet is 50% plugged with sediment and installed off center from the natural stream channel. The crossing is located on a paved road which is an abandoned section of Old Highway 299. The pavement is cracked and failing in several locations along the outboard road.	<ol style="list-style-type: none"> 1. Decommission the stream crossing. This will require the removal of pavement- extending to SC-4. 2. Remove pavement and dispose of off-site at the appropriate waste disposal facility. 3. The road surface will be ripped 16 to 24 inches deep to increase road surface infiltration rates, de-compact the road surface, prevent concentrated runoff, and allow vegetation to reestablish and recover. 4. Remove the old culvert and excavate the crossing from the inlet to outlet. 5. Establish a minimum 3-foot-wide stream channel with 2:1 side slopes. 6. Seed and mulch all bare soil areas. 7. Any excess material (spoils) generated during construction will be spoiled locally at the base of cutbank and used to outslope the road surface to mimic the natural topography. To prevent surface erosion, spoil locations will be covered with native seed at a rate no less than 50 lbs./acre of seed. Seeded areas will be covered with weed-free straw mulch at a rate of two tons per acre and provide 100% ground cover. Straw mulch will be evenly distributed on the ground surface. 	<ol style="list-style-type: none"> 1. Native seed and straw mulch

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-4 BO APN 316-086-023	1 and 4	6-7	40.9000	-123.7808	A Class II watercourse with no formal drainage structure. The road is actively failing at the crossing and the road has been completely washed out east of the crossing due to a large landslide. The crossing is located at the terminus of a paved road which is an abandoned section of Old Highway 299.	<ol style="list-style-type: none"> 1. Decommission the stream crossing. This will require the removal of pavement. 2. Remove pavement and dispose of off-site at the appropriate waste disposal facility. 3. The road surface will be ripped 16 to 24 inches deep to increase road surface infiltration rates, de-compact the road surface, prevent concentrated runoff, and allow vegetation to reestablish and recover. 3. Establish a minimum 4-foot-wide stream channel with 2:1 side slopes. 4. Seed and mulch all bare soil areas. 5. Any excess material (spoils) generated during construction will be spoiled locally to the west of the crossing at the base of cutbank and used to outslope the road surface to mimic the natural topography. To prevent surface erosion, spoil locations will be covered with native seed at a rate no less than 50 lbs./acre of seed. Seeded areas will be covered with weed-free straw mulch at a rate of two tons per acre and provide 100% ground cover. Straw mulch will be evenly distributed on the ground surface. 	<ol style="list-style-type: none"> 1. Native seed and straw mulch

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-1 RTR APN 316-086-017	1 and 2	8-10	40.911488	-123.791791	A Class III watercourse with a 36-inch diameter metal culvert on a paved section of Old Highway 299. The culvert is adequately sized for 100-year stream flows and associated debris; however, the 10-inch rust line suggests that the culvert is near the end of service life and should be replaced. The culvert lacks adequate barrel extension at the outlet, however erosion at the outlet is minimal. The culvert is installed at channel grade but is not in-line with the natural channel. Additionally, in the event the culvert becomes plugged or fails, diversion potential exists.	<ol style="list-style-type: none"> 1. The existing culvert will be replaced with a 36-inch dia. x 40-foot-long culvert sized for 100-year stream flows and associated debris. The new culvert shall be installed in line with the natural stream channel, at channel grade, at the base of fill, and will allow for the passage of aquatic organisms. The road surface is paved at this location and may require repaving. 2. A flared inlet will be installed to reduce plugging and diversion potential. 3. The lower 75% of the outboard fillslope will be armored with 5 yd³ of ½ -2-foot diameter riprap to provide slope protection. 4. If pavement is removed then, a critical dip may need to be installed after construction if diversion potential is present. In which case, the critical dip shall be installed on the down gradient side of the stream crossing and offset from the culvert and the centerline of the stream crossing. The critical dip will be approximately 20 feet wide and extend from the outboard road to the inboard ditch, 1 foot high to achieve reverse road grade, 40 feet long (linear road length), and will be constructed with earthen road fill material. The critical dip should convey flow over the crossing and back into the natural stream channel. 5. Any excess material (spoils) generated during construction will be endhauled to a stable location far from surface waters (See Figure 1 for spoil locations). To prevent surface erosion, spoil locations will be covered with native seed at a rate no less than 50 lbs/acre of seed. Seeded areas will be covered with weed-free straw mulch at a rate of two tons per acre and provide 100% ground cover. Straw mulch will be evenly distributed on the ground surface. 	<ol style="list-style-type: none"> 1. 36"x 40' long CMP with a flared inlet 2. 5yd³ of ½ -2-foot diameter riprap 3. Native seed and straw mulch

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-2 RTR APN 316-086-017	1 and 2	11-12	40.910481	-123.790495	A Class III watercourse with a 15-inch diameter steel culvert on a paved section of Old Highway 299. The culvert is installed at the base of fill and approximately 5 feet askew from the natural stream channel. The culvert outlet is rusted through the bottom, increasing erosion potential. The culvert is undersized for 100-year stream flows and associated debris and does not allow for the passage of aquatic organisms.	<ol style="list-style-type: none"> 1. The existing culvert will be replaced with a 42-inch dia. x 60-foot-long culvert sized for 100-year stream flows and associated debris. The new culvert shall be installed in line with the natural stream channel, at channel grade, at the base of fill, and will allow for the passage of aquatic organisms. 2. The road will also be lowered as well as narrowed to reduce the volume of fill in the crossing, and the lower 75% of the outboard fillslope will be armored with 30 yd³ of ½ -2-foot diameter riprap. 3. If pavement is removed then, a critical dip shall be installed after construction if diversion potential is present. In which case, the critical dip shall be installed on the down gradient side of the stream crossing and offset from the culvert and the centerline of the stream crossing. The critical dip will be approximately 20 feet wide and extend from the outboard road to the inboard ditch, 1 foot high to achieve reverse road grade, 40 feet long (linear road length), and will be constructed with earthen road fill material. The critical dip should convey flow over the crossing and back into the natural stream channel. 4. To hydrologically disconnect the road, the inboard ditch will be enhanced as well as the installation of a ditch relief culvert (DRC) up the road. 5. Any excess material (spoils) generated during construction will be endhauled to a stable location far from surface waters (See Figure 1 for spoil locations). To prevent surface erosion, spoil locations will be covered with native seed at a rate no less than 50 lbs/acre of seed. Seeded areas will be covered with weed-free straw mulch at a rate of two tons per acre and provide 100% ground cover. Straw mulch will be evenly distributed on the ground surface. 	<ol style="list-style-type: none"> 1. 42" dia. X 60' CMP 2. 30yd³ of ½ -2-foot diameter riprap 3. Native seed and straw mulch

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-4 RTR APN 316-086-017	1 and 2	13-14	40.909206	-123.789853	A Class III watercourse with a 24-inch diameter steel culvert located on a short spur road with no intended future use. The culvert is undersized for the 100-year peak streamflow and associated debris but does allow for the passage of aquatic organisms. The culvert has a 3-inch rust line and lacks adequate barrel extension to prevent outlet erosion.	<ol style="list-style-type: none"> 1. Remove the existing culvert and dispose of at the appropriate waste disposal facility 2. Decommission the stream crossing, establish a minimum 4-foot-wide stream channel, restore the stream channel to the natural channel grade, and lay back the stream side slopes to a stable 2:1 (50%) side slopes. 3. All bare soils will be seeded and mulched. Any bare soils within the riparian buffer of the watercourse will also be planted with native riparian species. 4. Any excess material (spoils) generated during construction will be endhauled to a stable location far from surface waters (See Figure 1 for spoil locations). To prevent surface erosion, spoil locations will be covered with native seed at a rate no less than 50 lbs/acre of seed. Seeded areas will be covered with weed-free straw mulch at a rate of two tons per acre and provide 100% ground cover. Straw mulch will be evenly distributed on the ground surface. 	1. Native seed and straw mulch

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-5 APN 316-086-017	1 and 2	15-16	40.909478	-123.789250	A near origin Class III watercourse with a 12-inch diameter steel culvert on a paved section of Old Highway 299. The culvert is undersized for the 100-year peak streamflow and associated debris. The culvert is rusted, installed high in the fill with a 2 1/2 -foot plunge at the outlet increasing erosion potential, and does not allow for the passage of aquatic organisms. Additionally, in the event the culvert becomes plugged or fails diversion potential exists to the right	<ol style="list-style-type: none"> 1. The existing culvert will be replaced with a 24-inch dia. x 70-foot-long culvert sized for 100-year stream flows and associated debris. The new culvert shall be installed in line with the natural stream channel, at channel grade, at the base of fill, and will allow for the passage of aquatic organisms. 2. A flared inlet will be installed to reduce plugging and diversion potential. 3. 75% of the outboard fillslope will be armored with 15yd³ of ½ -2-foot diameter riprap. (See PWA Typical Drawings 1a and 2). 4. Any excess material (spoils) generated during construction will be endhauled to a stable location far from surface waters (See Figure 1 for spoil locations). To prevent surface erosion, spoil locations will be covered with native seed at a rate no less than 50 lbs/acre of seed. Seeded areas will be covered with weed-free straw mulch at a rate of two tons per acre and provide 100% ground cover. Straw mulch will be evenly distributed on the ground surface. 	<ol style="list-style-type: none"> 1. 24" dia. X 70' long CMP 2. 15yd³ of ½ -2-foot diameter riprap 3. Native seed and straw mulch

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-6 APN 316-086-017	1 and 2	17	40.909114	-123.788847	A 36-inch diameter culvert on a Class III watercourse on a paved section of Old Highway 299. The culvert is located high in the fill, has a 7-foot plunge at the outlet, and does not allow for the passage of aquatic organisms. The culvert is adequately sized for the 100-year peak stream flow and associated debris however it is poorly installed. Additionally, in the event the culvert becomes plugged or fails, diversion potential exists to the right	<ol style="list-style-type: none"> 1. The existing culvert will be replaced with a 36-inch dia. x 70-foot-long culvert sized for 100-year stream flows and associated debris. The new culvert shall be installed in line with the natural stream channel, at channel grade, at the base of fill, and will allow for the passage of aquatic organisms. 2. A flared inlet will be installed to reduce plugging and diversion potential. 3. The lower 25% of the outboard fillslope will be rocked with 5yd³ of ½ -2-foot diameter riprap. (See PWA Typical Drawings 1a and 2). 4. Any excess material (spoils) generated during construction will be endhauled to a stable location far from surface waters (See Figure 1 for spoil locations). To prevent surface erosion, spoil locations will be covered with native seed at a rate no less than 50 lbs/acre of seed. Seeded areas will be covered with weed-free straw mulch at a rate of two tons per acre and provide 100% ground cover. Straw mulch will be evenly distributed on the ground surface. 	<ol style="list-style-type: none"> 1. 36" dia. X 70' long CMP 2. 5yd³ of ½ -2-foot diameter riprap 3. Native seed and straw mulch
SC-8 APN 316-086-011	1 and 3	18	40.906432	-123.784474	SC 8 is located on a Class III watercourse on a paved section of Old Highway 299. The stream flow is diverted approximately 80 feet down the inboard ditch to a plugged 18-inch diameter culvert. The culvert is installed high in the fill, with another plugged 15-inch diameter culvert below. The outboard fillslope is actively eroding into the road prism. The 18-inch culvert is not adequately sized for the 100-year peak streamflow and associated debris	<ol style="list-style-type: none"> 1. The existing culvert will be replaced with a 42-inch dia. x 50-foot-long culvert sized for 100-year stream flows and associated debris. The new culvert shall be installed in line with the natural stream channel, at channel grade, at the base of fill, and will allow for the passage of aquatic organisms. 2. The lower 25% of the outboard fillslope will be armored with 5yd³ of ½ -2-foot diameter riprap. (See PWA Typical Drawings 1a and 2). 	<ol style="list-style-type: none"> 1. 42" dia. X 50' long CMP 2. 5yd³ of ½ -2-foot diameter riprap 3. Native seed and straw mulch

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-9 APN 316-086-011	1 and 3	19	40.906147	-123.784249	A Class III watercourse with a 24-inch diameter plastic culvert on a paved section of Old Highway 299. The culvert outlet is installed high in the fill, has a 7-foot plunge at the outlet and does not allow for the passage of aquatic organisms. There is approximately 200 feet of inboard ditch on the left that delivers to the inlet. The culvert is undersized for the 100-year peak streamflow and associated debris, and the outboard fillslope is actively slumping. Additionally, if the culvert fails or become plugged diversion potential exists to the right	<ol style="list-style-type: none"> The existing culvert will be replaced with a 42-inch dia. x 60-foot-long culvert sized for 100-year stream flows and associated debris. The new culvert shall be installed in line with the natural stream channel, at channel grade, at the base of fill, and will allow for the passage of aquatic organisms. The lower 75% of the outboard fillslope will be armored with 40yd³ of ½ -2-foot diameter riprap. (See PWA Typical Drawings 1a and 2). 	<ol style="list-style-type: none"> 42" dia. X 60' long CMP 40yd³ of ½ -2-foot diameter riprap Native seed and straw mulch
SC-10 APN 316-086-011	1 and 3	20	40.905358	-123.784184	An 18-inch diameter metal culvert on a Class III watercourse on a paved section of Old Highway 299. The culvert bottom is rusted though and is plugged at the inlet. The culvert is installed high in the fill, and not in line with the natural stream channel. Additionally, the culvert is undersized sized for the 100-year peak streamflow event nor associated debris and does not allow for the passage of aquatic organisms	<ol style="list-style-type: none"> The existing culvert will be replaced with a 60-inch dia. x 40-foot-long culvert sized for 100-year stream flows and associated debris. The new culvert shall be installed in line with the natural stream channel, at channel grade, at the base of fill, and will allow for the passage of aquatic organisms. The lower 75% of the outboard fillslope will be armored with 10yd³ of ½ -2-foot diameter riprap. (See PWA Typical Drawings 1a and 2) 	<ol style="list-style-type: none"> 60" dia. X 40' long CMP 10yd³ of ½ -2-foot diameter riprap Native seed and straw mulch

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-11 APN 316-086-011	1 and 3	21	40.903825	-123.783703	An 18-inch diameter metal culvert on a steep, rocky Class III watercourse on a paved section of Old Highway 299. The culvert is installed high in the fill, has been exposed in areas through the roadbed which have rusted through, and in the event the culvert fails or becomes plugged diversion potential exists to the left. Flow from the outlet discharges onto an active landslide located along the outboard fill of the road. Additionally, the culvert is undersized for the 100-year peak streamflow event and associated debris and does not allow for the passage of aquatic organisms	<ol style="list-style-type: none"> 1. The existing culvert will be replaced with a 48-inch dia. x 80-foot-long culvert sized for 100-year stream flows and associated debris. The new culvert shall be installed in line with the natural stream channel, at channel grade, at the base of fill, and will allow for the passage of aquatic organisms. 2. The lower 75% of the outboard fillslope will be armored with 40 yd³ of ½ -2-foot diameter riprap (See PWA Typical Drawings 1a and 2). 	<ol style="list-style-type: none"> 1. 48" dia. X 80' long CMP 2. 40 yd³ of ½ -2-foot diameter riprap 3. Native seed and straw mulch
SC-12 APN 316-086-011	1 and 3	22	40.902611	-123.783645	A Class III watercourse with no formal drainage structure on a section of Old Highway 299. The road surface is dipped through the crossing and some pavement exists at the outboard edge of the road.	<ol style="list-style-type: none"> 1. The existing culvert will be replaced with a 48-inch dia. x 60-foot-long culvert sized for 100-year stream flows and associated debris. The new culvert shall be installed in line with the natural stream channel, at channel grade, at the base of fill, and will allow for the passage of aquatic organisms. PWA also recommends relocating the inlet 17 feet to the right of the existing culvert and to align the outlet accordingly. 2. Remove all pavement and dispose of at the appropriate waste disposal facility. 3. The lower 75% of the outboard fillslope will be armored with 35yd³ of ½ -2-foot diameter riprap. Technical oversight is recommended prior to and during implementation due to the complexity of the crossing (See PWA Typical Drawings 1a and 2). 	<ol style="list-style-type: none"> 1. 48" dia. X 60' long CMP 2. 35 yd³ of ½ -2-foot diameter riprap 3. Native seed and straw mulch

Table. 1 Project Scope with Descriptions

MAP/SITE ID	Figure Number	Photo Numbers	Latitude	Longitude	Site Information	Treatment Recommendations	Materials
SC-13 APN 316-086-011	1 and 3	23	40.901216	-123.784635	An 18-inch plastic culvert is located on a Class III watercourse with both the inlet and outlet obscured by vegetation, and both are approximately 8 feet offset to the right of the natural channel. The outlet is installed high in the fill, has a 1½ foot plunge and is actively eroding the outboard fill slope. There is no diversion potential at this crossing as the road is adequately dipped. The culvert undersized sized for the 100-year peak streamflow event and associated debris and does not allow for the passage of aquatic organisms	1.The existing culvert will be replaced with a 24-inch dia. x 40-foot-long culvert sized for 100-year stream flows and associated debris. The new culvert shall be installed in line with the natural stream channel, at channel grade, at the base of fill, and will allow for the passage of aquatic organisms. 2.The lower 25% of the outboard fillslope will be armored with 5yd³ of ½ -2-foot diameter riprap. Treatment immediacy is low due to the small drainage area and minimal amounts of erosion. (See PWA Typical Drawings 1a and 2)	1. 24" dia. X 40' long CMP 2. 5yd³ of ½ -2-foot diameter riprap 3. Native seed and straw mulch

Table 2. Permanent and Temporary Impacts Associated with Construction							
Site ID	Temporary Impacts			Permanent Impacts			Comments on Impacts
	Square Feet	Cubic Yards	Linear Feet	Square Feet	Cubic Yards	Linear Feet	
SC-2 Big Oak	130	17	20	0	0	0	The new culvert will be the same length as the existing culvert. There will be no permanent impacts outside the existing fill prism.
SC-3 Big Oak	1,600	133	40	0	0	0	All impacts will be temporary the crossing will be decommissioned, and the stream channel restored to its "natural" configuration. Temporary disturbance will also include the removal of the surrounding pavement (old Highway 299) to allow for revegetation Approx. 40 x 20).
SC-4 Big Oak	875	117	35	0	0	0	All impacts will be temporary the crossing will be decommissioned, and the stream channel restored to its "natural" configuration. Temporary disturbance will also include the removal of the surrounding pavement (old Highway 299) to allow for revegetation Approx. 280 x 20).
SC-1	350	182	50	0	0	0	Disturbance within the bed and banks of the stream will be limited to the road footprint of the crossing and new culvert installation area, measuring approximately 7-foot wide x 50-foot long = 350 ft ² .
SC-2	525	495	70	0	0	0	Disturbance within the bed and banks of the stream will be limited to the road footprint of the crossing and new culvert installation area, measuring approximately 7.5-foot wide x 70-foot long = 525 ft ² .
SC-4	195	26	30	0	0	0	Disturbance within the bed and banks of the stream will be limited to the length and width of channel excavated/decommissioned, measuring approximately 6.5-foot wide x 30-foot long = 195 ft ² .
SC-5	520	325	80	0	0	0	Disturbance within the bed and banks of the stream will be limited to the road footprint of the crossing and new culvert installation area, measuring approximately 6.5-foot wide x 80-foot long = 520 ft ² .
SC-6	520	265	80	0	0	0	Disturbance within the bed and banks of the stream will be limited to the road footprint of the crossing and new culvert installation area, measuring approximately 6.5-foot wide x 80-foot long = 520 ft ² .
SC-8	450	43	60	0	0	0	Disturbance within the bed and banks of the stream will be limited to the road footprint of the crossing and new culvert installation area, measuring approximately 7.5-foot wide x 60-foot long = 450 ft ² .
SC-9	525	248	70	0	0	0	Disturbance within the bed and banks of the stream will be limited to the road footprint of the crossing and new culvert installation area, measuring approximately 7.5-foot wide x 70-foot long = 525 ft ² .
SC-10	450	78	50	0	0	0	Disturbance within the bed and banks of the stream will be limited to the road footprint of the crossing and new culvert installation area, measuring approximately 9-foot wide x 50-foot long = 450 ft ² .
SC-11	720	229	90	0	0	0	Disturbance within the bed and banks of the stream will be limited to the road footprint of the crossing and new culvert installation area, measuring approximately 8-foot wide x 90-foot long = 720 ft ² .
SC-12	720	497	90	0	0	0	Disturbance within the bed and banks of the stream will be limited to the road footprint of the crossing and new culvert installation area, measuring approximately 8-foot wide x 90-foot long = 720 ft ² .
SC-13	300	24	50	0	0	0	Disturbance within the bed and banks of the stream will be limited to the road footprint of the crossing and new culvert installation area, measuring approximately 6-foot wide x 50-foot long = 300 ft ² .
Totals:	7,880	2,679	815	0	0	0	

Table 3. Culvert Sizing Recommendations for Upgraded Crossings Only to Accommodate 100-year stream flows and associated debris

Site ID	Existing Culvert Diameter (in)	Existing Culvert Length (ft)	Watershed Area (acres)	Q ₁₀₀ (cfs) ^{1, 2}	Recommended Culvert Diameter (in)	Recommended Culvert Length (ft)
SC-2 Big Oak	18	20	6	9	30	30
SC-1	36	40	7	10	36	40
SC-2	15	60	12	16	42	60
SC-5	12	70	4	6	24	70
SC-6	36	70	5	7	36	70
SC-8	12	50	11	16	42	50
SC-9	24	60	14	20	42	60
SC-10	18	40	33	49	60	40
SC-11	18	40	18	27	48	80
SC-12	12	40	20	30	48	60
SC-13	18	40	2	3	24	40

¹Assumes mean annual precipitation of 79 inches, 0.35 runoff coefficient (C), 24-hour rainfall intensity of 4.15 in/hr., and a headwater to depth ratio of 0.67 was used to determine the culvert sizing.
²The 100-year Return-Period precipitation data was sourced from: http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ca

Hydrologic Study-Design Flow

The Rational Method was used to determine the 100-year design discharge for stream crossings where the culvert will be upgraded. The Rational Method is limited to watersheds less than 100 acres. The method is based on this equation:

$$Q_{100} = CIA$$

Where *Q* is the peak flow in cubic feet per second (cfs), *C* is the runoff coefficient, *i* is the intensity in inches/hour, and *A* is the watershed area in acres. The results of the analysis may be found tabulated in Table 1 below.

Culvert sizing recommendations were then determined using the culvert sizing nomograph developed by the Federal Highway Administration. A headwater depth (HW/D) of 0.67 was used to accommodate woody debris and reduce the potential for clogging and overtopping. Additionally, it was assumed that the culvert entrance type (inlet) would be projecting. Based on the calculated 100-year peak stream flow magnitudes, all stream crossings require new appropriately sized culverts.

Appendix B



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Project Photos



<p>Photo 1</p>	 <p style="text-align: center;">North Elevation</p>
<p>March 2021</p>	<p style="text-align: center;">☀ 196°S (T) LAT: 40.899479 LON: -123.783869 ±32ft ▲ 2378ft</p> 
<p>Description: SC-2 Big Oak (BO), View of culvert inlet looking downstream. Culvert will be replaced with a 30" dia. culvert sized for 100-year stream flows.</p>	<p>Culvert 2 inlet MEE</p> <p style="text-align: right;">Armstrong 17 Mar 2021, 14:03:56</p>

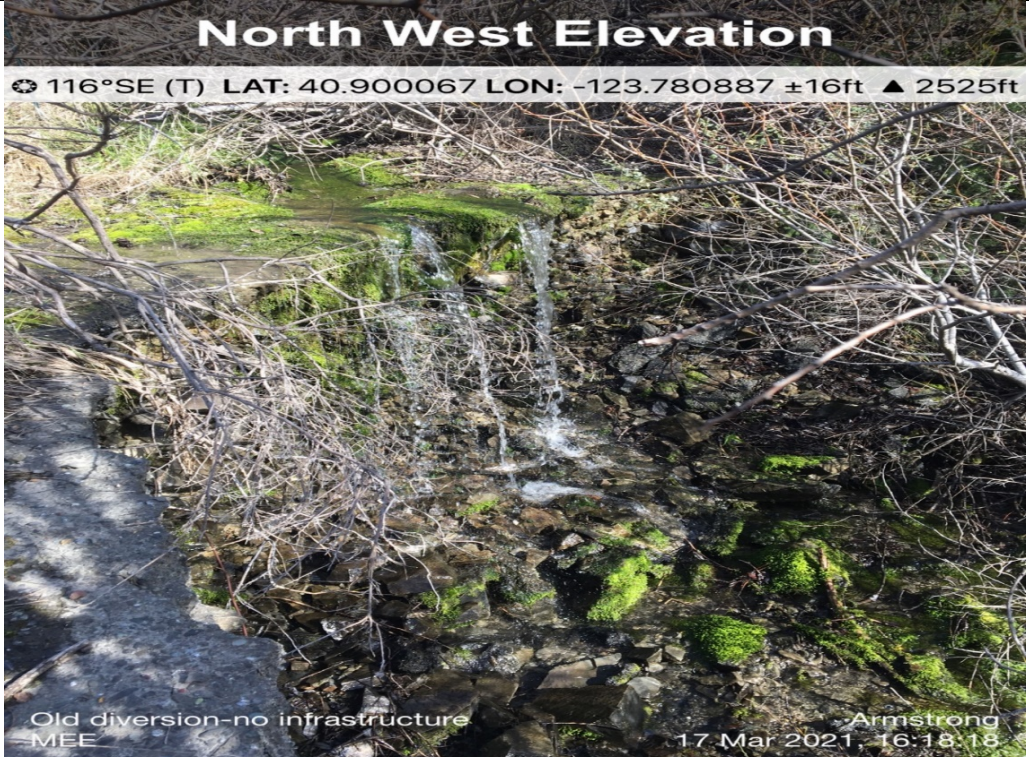
<p>Photo 2</p>	 <p style="text-align: center;">NW N NE E</p> <p style="text-align: center;">300 330 0 30 60 90 120</p>
<p>March 2021</p>	<p style="text-align: center;">☀ 31°NE (T) LAT: 40.899198 LON: -123.783895 ±16ft ▲ 2271ft</p> 
<p>Description: SC-2 BO, View of culvert outlet looking upstream. Culvert will be replaced with a 30" dia. culvert sized for 100-year stream flows.</p>	<p>SC-2 outlet Courtney's iPhone</p> <p style="text-align: right;">Big Oak Ranch 17 Mar 2021, 18:51:59</p>

<p>Photo 3</p>	
<p>March 2021</p>	<p>☀ 251°W (T) LAT: 40.899382 LON: -123.783801 ±16ft ▲ 2331ft</p>
<p>Description: SC-2 BO, View of the crossing from the left road. Culvert will be replaced with a 30" dia. culvert sized for 100-year stream flows.</p>	<p>SC-2 from left road Courtney's iPhone</p> <p>Big Oak Ranch 17 Mar 2021 14:13:51</p>

<p>Photo 4</p>	
<p>March 2021</p>	<p>☀ 224°SW (T) LAT: 40.900423 LON: -123.781336 ±32ft ▲ 2498ft</p>
<p>Description: SC-3 BO, View of culvert inlet looking downstream. The crossing will be decommissioned, and the stream channel restored.</p>	<p>SC #3 15-in dia inlet Courtney's iPhone</p> <p>21003 Big Oak Ranch 12 May 2021 11:57:06</p>

<p>Photo 5</p>	
<p>March 2021</p>	<p>☀ 171°S (T) LAT: 40.900399 LON: -123.781434 ±16ft ▲ 2529ft</p> 
<p>Description: SC-3 BO, View of crossing from the hillslope above. Crossing will be decommissioned, and the stream channel restored.</p>	<p>SC #3 view from Citibank on the right Courtney's iPhone</p> <p>21003 Big Oak Ranch 12 May 2021, 12:08:44</p>

<p>Photo 6</p>	<p>North West Elevation</p> 
<p>March 2021</p>	<p>☀ 116°SE (T) LAT: 40.900008 LON: -123.780783 ±16ft ▲ 2543ft</p> 
<p>Description: SC-4 BO, View of the stream channel which is obscured by vegetation. The crossing will be decommissioned, and the stream channel restored.</p>	<p>Old diversion-no infrastructure MEE</p> <p>Armstrong 17 Mar 2021, 16:16:14</p>

<p>Photo 7</p>	 <p>North West Elevation 116°SE (T) LAT: 40.900067 LON: -123.780887 ±16ft ▲ 2525ft</p> <p>Old diversion-no infrastructure MEE</p> <p>Armstrong 17 Mar 2021, 16:18:18</p>
<p>March 2021</p>	
<p>Description: SC-4 BO, View of SC-4 the stream channel is obscured by vegetation. The crossing will be decommissioned, and the stream channel restored.</p>	

<p>Photo 8</p>	
<p>November 2018</p>	
<p>Description: SC-1 RTR, View of rusted 36" dia. Culvert inlet view looking downstream. Culvert will be replaced with a 36" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 9</p>	
<p>November 2018</p>	
<p>Description: SC-1 RTR, Looking upstream at rusted culvert outlet. Culvert will be replaced with a 36" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 10</p>	
<p>November 2018</p>	
<p>Description: SC-1 RTR, View from the left road approach. Culvert will be replaced with a 36" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 11</p>	
<p>November 2018</p>	
<p>Description: SC-2 RTR, View of rusted 15" dia. culvert inlet. Culvert will be replaced with a 42" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 12</p>	
<p>November 2018</p>	
<p>Description: SC-2 RTR, View of the culvert outlet installed high in the fill.</p>	

<p>Photo 13</p>	
<p>November 2018</p>	
<p>Description: SC-4 RTR, View of rusted 24" dia. culvert inlet. Crossing will be decommissioned, and the stream channel restored.</p>	

<p>Photo 14</p>	
<p>November 2018</p>	
<p>Description: SC-4 RTR, View of the crossing from the right road approach. Crossing will be decommissioned, and the stream channel restored.</p>	

<p>Photo 15</p>	
<p>November 2018</p>	
<p>Description: SC-5, View of rusted 12" dia. culvert inlet. Culvert will be replaced with a 24" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 16</p>	
<p>November 2018</p>	
<p>Description: SC-5, View looking upstream at culvert outlet. Culvert will be replaced with a 24" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 17</p>	
<p>November 2018</p>	
<p>Description: SC-6, View of rusted 36" dia. culvert inlet. Culvert will be replaced with a 36" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 18</p>	
<p>November 2018</p>	
<p>Description: SC-8, View of culvert outlets. Two culverts (15" and 18" dia.) culverts are exposed. Culvert will be replaced with a 42" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 19</p>	
<p>November 2018</p>	
<p>Description: SC-9, View of rusted 24" dia. culvert inlet. Culvert will be replaced with a 42" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 20</p>	
<p>November 2018</p>	
<p>Description: SC-10, View of plugged 18" dia. culvert inlet. Culvert will be replaced with a 60" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 21</p>	
<p>November 2018</p>	
<p>Description: SC-11, View of rusted 18" dia. culvert inlet. Culvert will be replaced with a 48" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 22</p>	
<p>September 2020</p>	
<p>Description: Downstream view of SC-12. Crossing will be upgraded with a 48" dia. culvert sized for 100-year stream flows.</p>	

<p>Photo 23</p>	
<p>November 2018</p>	
<p>Description: SC-13 downstream view of culvert inlet. Note the inlet is obscured by vegetation. Culvert will be replaced with a 24" dia. culvert sized for 100- year stream flows.</p>	

Appendix C



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Project Budget

Project Budget. Armstrong Road Improvement and Sediment Reduction Project					
<i>Project Expense Item</i>		<i>Cost</i>	<i>Amount Requested from MRFP</i>	<i>Amount of Other Funding</i>	<i>Source of Other Funding</i>
Heavy Equipment for Road Improvements (includes move in/move out costs)	Excavator	\$1,610	\$1,610	\$0	N/A
	Bulldozer	\$4,080	\$4,080	\$0	
	Water Truck	\$1,370	\$1,370	\$0	N/A
	Dump Truck (Assumes 2 dump trucks)	\$15,680	\$15,680	\$0	N/A
	Truck/Trailer	\$640	\$640	\$0	N/A
Heavy Equipment for Site Specific Treatments (i.e., stream crossing upgrade or decommission)	Excavator	\$53,580	\$53,580	\$0	N/A
	Bulldozer	\$44,650	\$44,650	\$0	N/A
	Water Truck	\$6,050	\$6,050	\$0	N/A
	Dump Truck (Assumes 2 dump trucks)	\$24,080	\$24,080	\$0	N/A
Labor Costs		\$4,900	\$4,900	\$0	N/A
Materials	Rock	\$31,040	\$0	\$31,040	Applicant
	Culverts	\$50,350	\$50,350	\$0	N/A
	Erosion Control (seed and mulch)	\$705	\$705	\$0	N/A
Permit Fees (401 WQC)		\$2,066	\$2,066	\$0	N/A
Project Layout, Coordination, and Oversight (Conducted by Qualified Professional)		\$15,000	\$15,000	\$0	N/A
Erosion Control and Monitoring Plan		\$5,000	\$5,000	\$0	N/A
Total Project Costs		\$260,801	\$229,761	\$31,040	

The Armstrong Road Improvement and Sediment Reduction Project Proposes to improve 2.3 miles of privately owned and accessed road in the Redwood Creek Watershed. The plan proposes to replace/upgrade eleven (11) undersized culverted stream crossings with culverts sized to accommodate 100-year stream flows and associated debris, re-rock the road surface, decommission three (3) stream crossings and restore the stream channel (two of which are on a paved section of Old Highway 299), and install seven (7) road drainage features (such as rolling dips and water bars) to reduce surface erosion and sediment delivery. Project costs also include the removal (disposal) and installation of pavement.

Heavy equipment expenses include move in and move out costs, logistics (moving from site to site), culvert installation, rock installation, rolling dip installation, water bar installation, dust abatement, pavement removal and disposal. Labor costs include time for culvert installation and application of erosion control seed and mulch. Rock costs include the cost of riprap and road base (\$100/cubic yard of rock). Approximately 120 cubic yards of road rock will be applied on road reaches and 190 cubic yards of riprap will be installed for slope protection along stream crossing fillslopes. Culvert costs include the cost of steel culvert pipe, culvert couplers, and flared inlets. Project Layout, Coordination, and Oversight will be conducted by qualified professional and includes time materials. Project monitoring will be conducted for 5 years following project completion and will be conducted by a qualified professional and includes time and materials.

Appendix D



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Typical Drawings and Design Specifications

Typical Drawings and Applied Treatments

#1a. Typical Problems and Applied Treatments for a Non-fish Bearing Upgraded Stream Crossing

#1b. Armoring Fill Faces to Upgrade Stream Crossings

#2. Typical Design of a Non-fish Bearing Culverted Stream Crossing

#4. Typical Design of Upgraded Stream Crossing

#10. Typical Methods for Dispersing Road Surface Runoff with Waterbars, Cross-road Drains, and Rolling Dips

#11. Typical Road Surface Drainage by Rolling Dips

#19a. Standard Type I Rolling Dip Construction

#19c. Type 3 Rolling Dip Construction

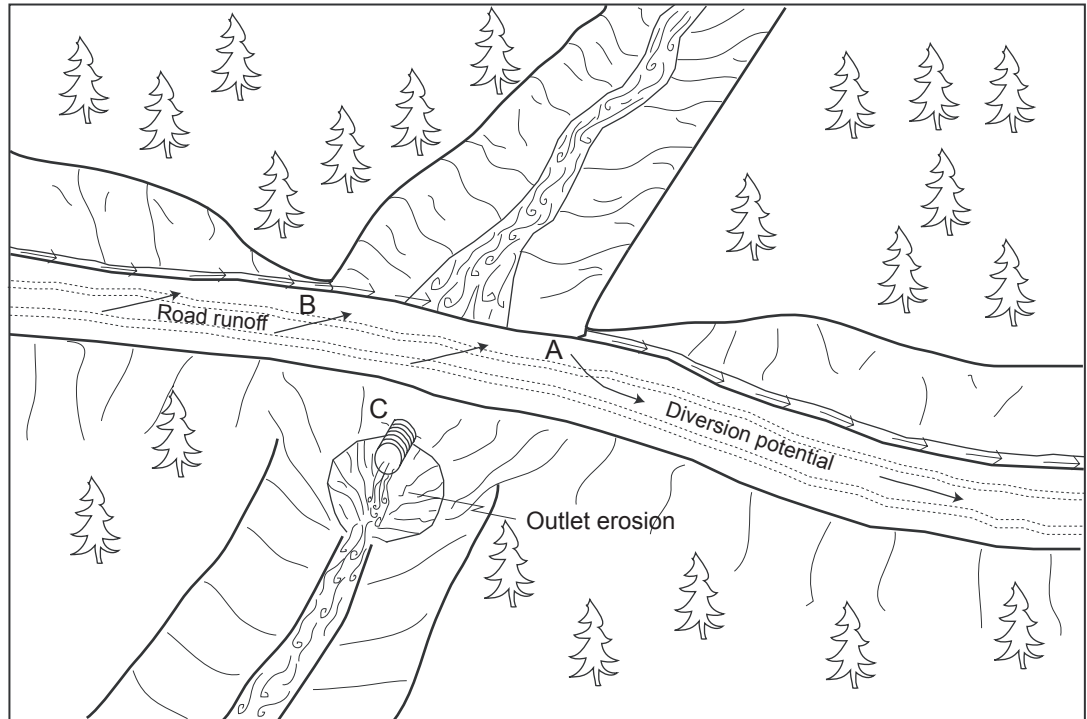
#14. Typical Problems and Applied Treatments for a Decommissioned Stream Crossing

#15. Typical Design for Road Decommission Treatments Employing Export and In-place Out slope Techniques

Typical Problems and Applied Treatments for a Non-fish Bearing Upgraded Stream Crossing

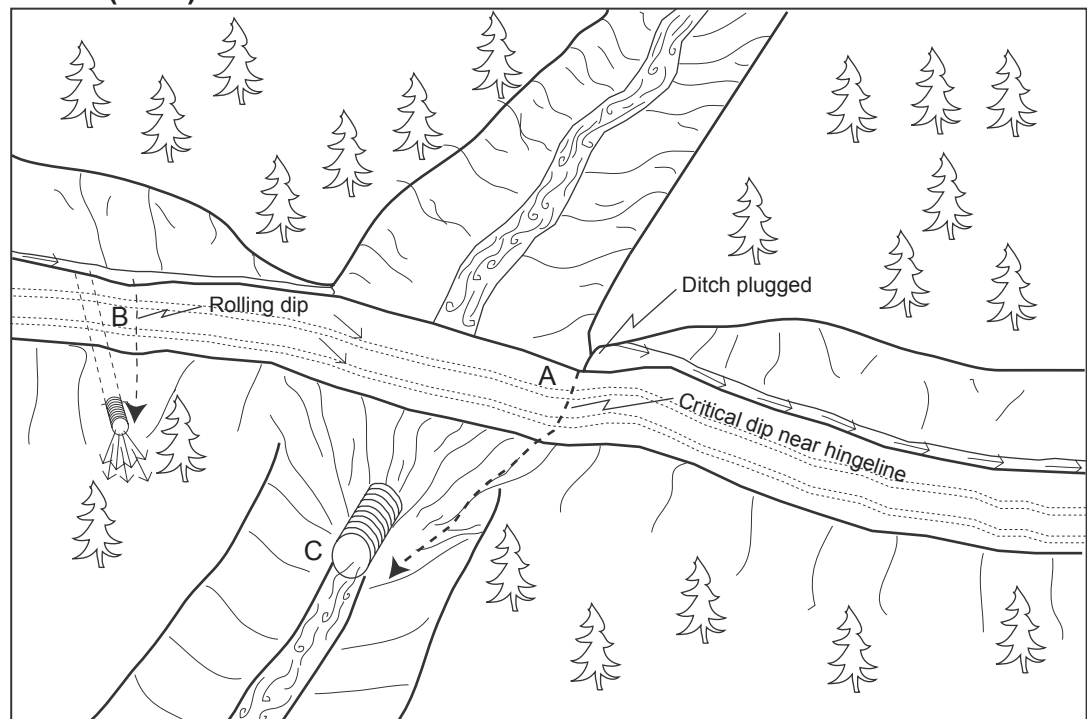
Problem condition (before)

- A - Diversion potential
- B - Road surface and ditch drain to stream
- C - Undersized culvert high in fill with outlet erosion



Treatment standards (after)

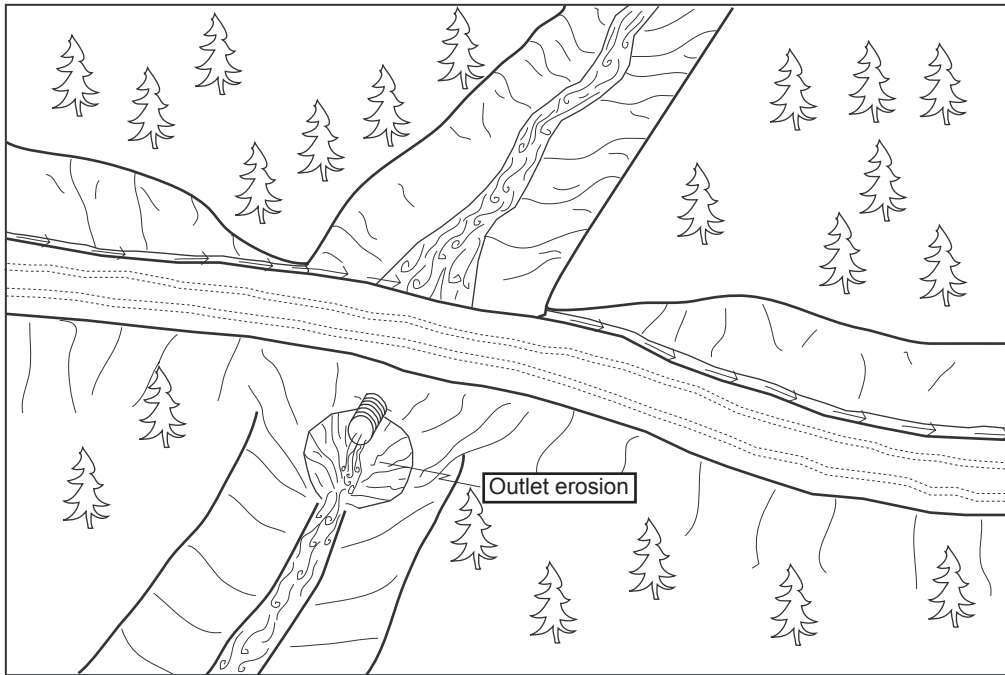
- A - No diversion potential with critical dip installed near hingeline
- B - Road surface and ditch disconnected from stream by rolling dip and ditch relief culvert
- C - 100-year culvert set at base of fill



Pacific Watershed Associates Inc.

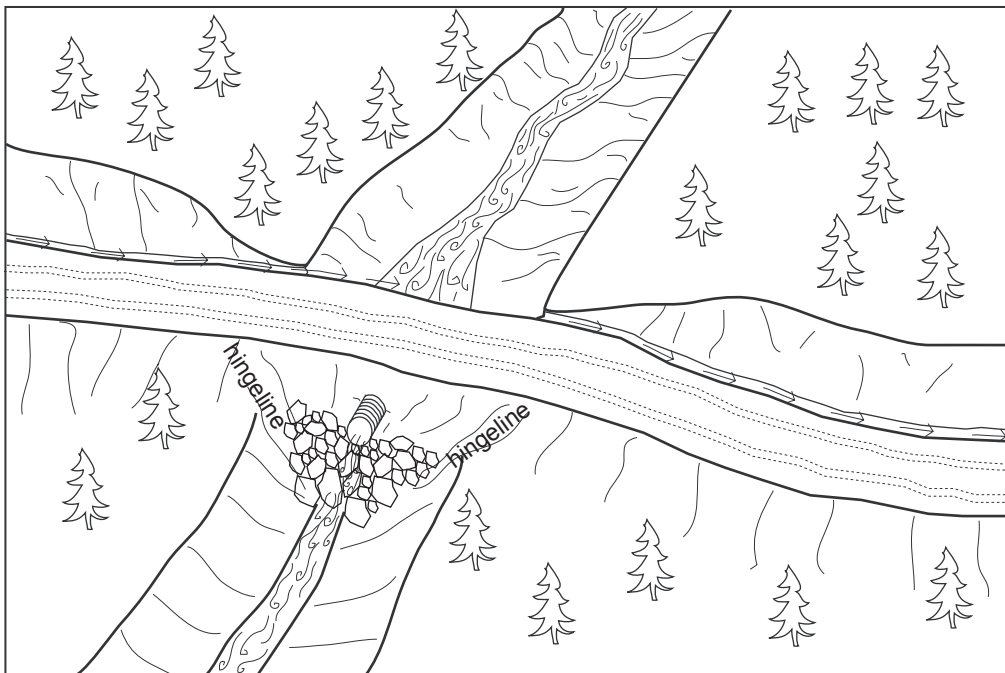
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
 PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

Armoring Fill Faces to Upgrade Stream Crossings



Problem: Culvert set high in outboard fill has resulted in scour of the outboard fill face and natural channel.

Conditions: The existing stream crossing has a culvert sufficient in diameter to manage design stream flows and has a functional life.



Action: The area of scour is backfilled with rip-rap to provide protection in the form of energy dissipation for the remaining fill face and channel.

Treatment Specifications:

- 1) Placement of rip-rap should be between the left and right hingelines and extend from a keyway excavated below the existing channel base level at the base of the fill slope up and under the existing culvert.
- 2) Rock size and volume is determined on a site by site basis based on estimated discharge and existing stream bed particle size range (See accompanying road log).

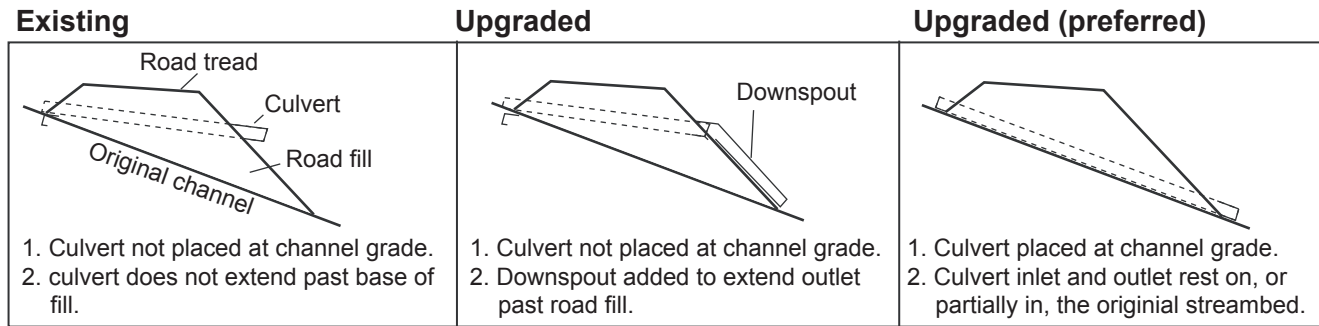
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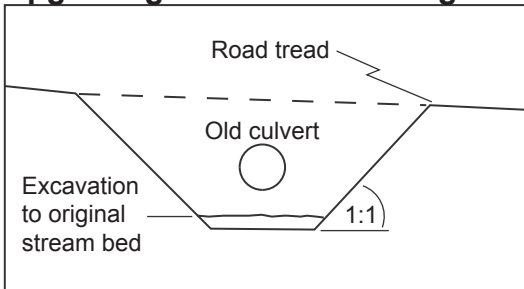
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

PWA Typical Drawing #1b

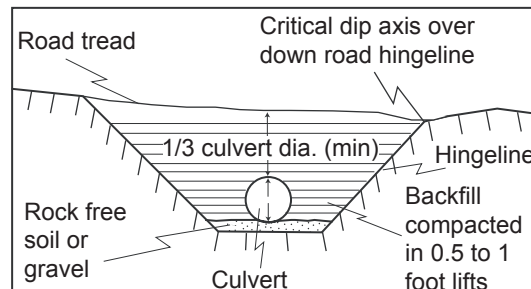
Typical Design of a Non-fish Bearing Culverted Stream Crossing



Excavation in preparation for upgrading culverted crossing



Upgraded stream crossing culvert installation



Note:

Road upgrading tasks typically include upgrading stream crossings by installing larger culverts and inlet protection (trash barriers) to prevent plugging. Culvert sizing for the 100-year peak storm flow should be determined by both field observation and calculations using a procedure such as the Rational Formula.

Stream crossing culvert Installation

1. Culverts shall be aligned with natural stream channels to ensure proper function, and prevent bank erosion and plugging by debris.
2. Culverts shall be placed at the base of the fill and the grade of the original streambed, or downspouted past the base of the fill.
3. Culverts shall be set slightly below the original stream grade so that the water drops several inches as it enters the pipe.
5. To allow for sagging after burial, a camber shall be between 1.5 to 3 inches per 10 feet culvert pipe length.
6. Backfill material shall be free of rocks, limbs or other debris that could dent or puncture the pipe or allow water to seep around pipe.
7. First one end then the other end of the culvert shall be covered and secured. The center is covered last.
8. Backfill material shall be tamped and compacted throughout the entire process:
 - Base and side wall material shall be compacted before the pipe is placed in its bed.
 - Backfill compacting will be done in 0.5 - 1 foot lifts until 1/3 of the diameter of the culvert has been covered. A gas powered tamper can be used for this work.
9. Inlets and outlets shall be armored with rock or mulched and seeded with grass as needed.
10. Trash protectors shall be installed just upstream from the culvert where there is a hazard of floating debris plugging the culvert.
11. Layers of fill will be pushed over the crossing until the final designed road grade is achieved, at a minimum of 1/3 to 1/2 the culvert diameter.

Erosion control measures for culvert replacement

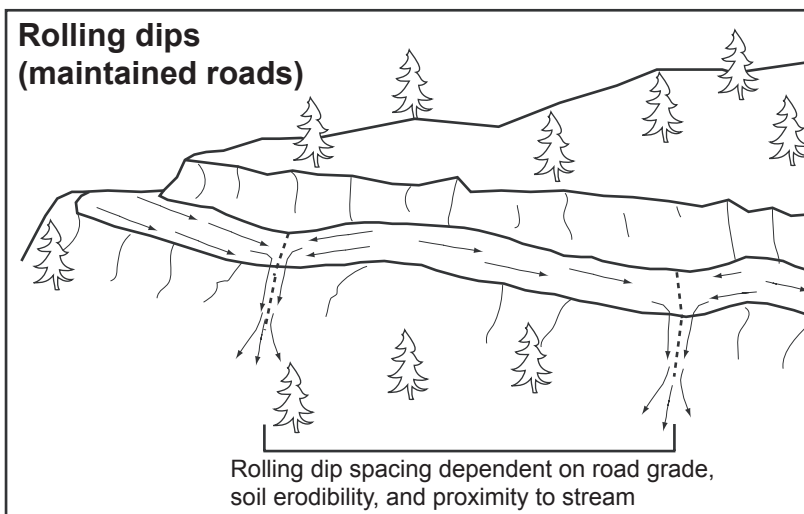
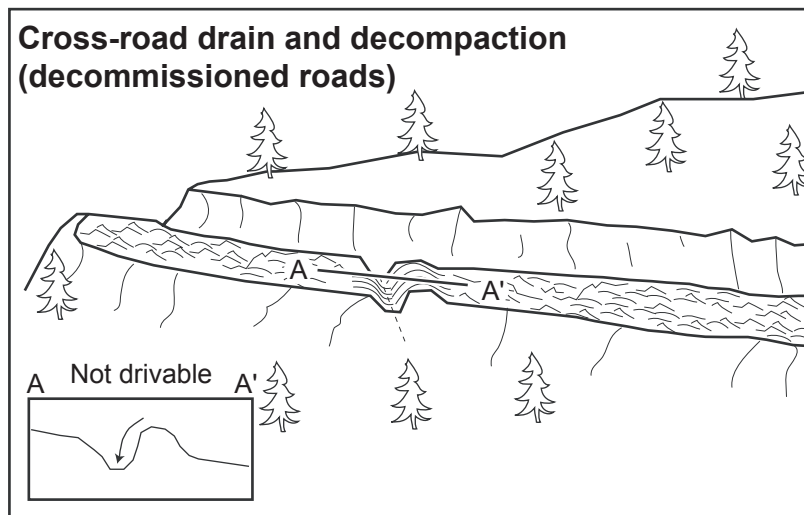
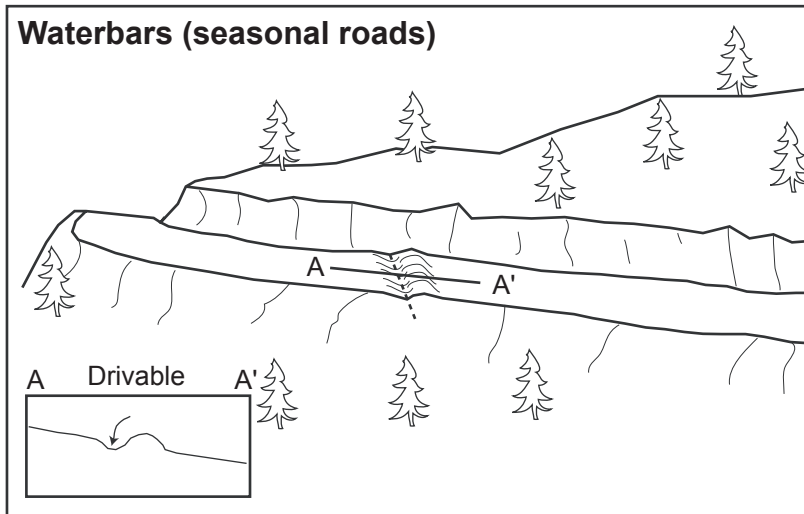
Both mechanical and vegetative measures will be employed to minimize accelerated erosion from stream crossing and ditch relief culvert upgrading. Erosion control measures implemented will be evaluated on a site by site basis. Erosion control measures include but are not limited to:

1. Minimizing soil exposure by limiting excavation areas and heavy equipment disturbance.
2. Installing filter windrows of slash at the base of the road fill to minimize the movement of eroded soil to downslope areas and stream channels.
3. Retaining rooted trees and shrubs at the base of the fill as "anchor" for the fill and filter windrows.
4. Bare slopes created by construction operations will be protected until vegetation can stabilize the surface. Surface erosion on exposed cuts and fills will be minimized by mulching, seeding, planting, compacting, armoring, and/or benching prior to the first rains.
5. Excess or unusable soil will be stored in long term spoil disposal locations that are not limited by factors such as excessive moisture, steep slopes greater than 10%, archeology potential, or proximity to a watercourse.
6. On running streams, water will be pumped or diverted past the crossing and into the downstream channel during the construction process.
7. Straw bales and/or silt fencing will be employed where necessary to control runoff within the construction zone.

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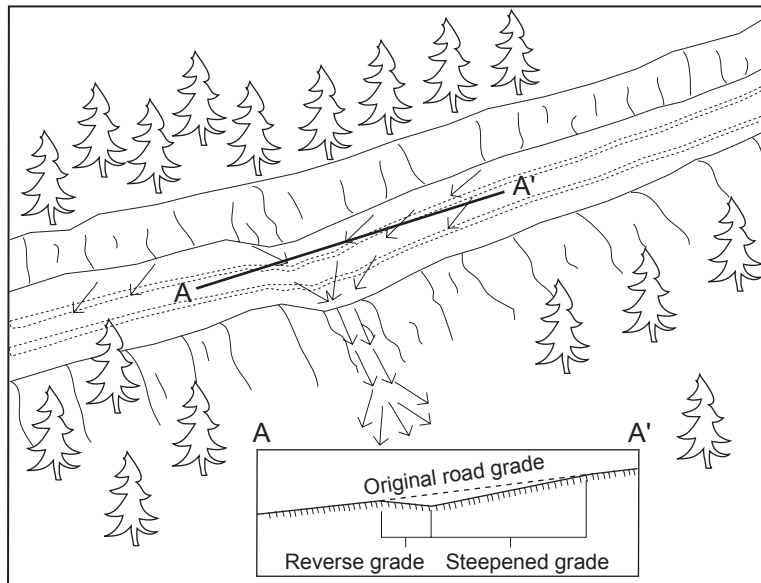
Typical Methods for Dispersing Road Surface Runoff with Waterbars, Cross-road Drains, and Rolling Dips



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Typical Road Surface Drainage by Rolling Dips



Rolling dip installation:

1. Rolling dips will be installed in the roadbed as needed to drain the road surface.
2. Rolling dips will be sloped either into the ditch or to the outside of the road edge as required to properly drain the road.
3. Rolling dips are usually built at 30 to 45 degree angles to the road alignment with cross road grade of at least 1% greater than the grade of the road.
4. Excavation for the dips will be done with a medium-size bulldozer or similar equipment.
5. Excavation of the dips will begin 50 to 100 feet up road from where the axis of the dip is planned as per guidelines established in the rolling dip dimensions table.
6. Material will be progressively excavated from the roadbed, steepening the grade until the axis is reached.
7. The depth of the dip will be determined by the grade of the road (see table below).
8. On the down road side of the rolling dip axis, a grade change will be installed to prevent the runoff from continuing down the road (see figure above).
9. The rise in the reverse grade will be carried for about 10 to 20 feet and then return to the original slope.
10. The transition from axis to bottom, through rising grade to falling grade, will be in a road distance of at least 15 to 30 feet.

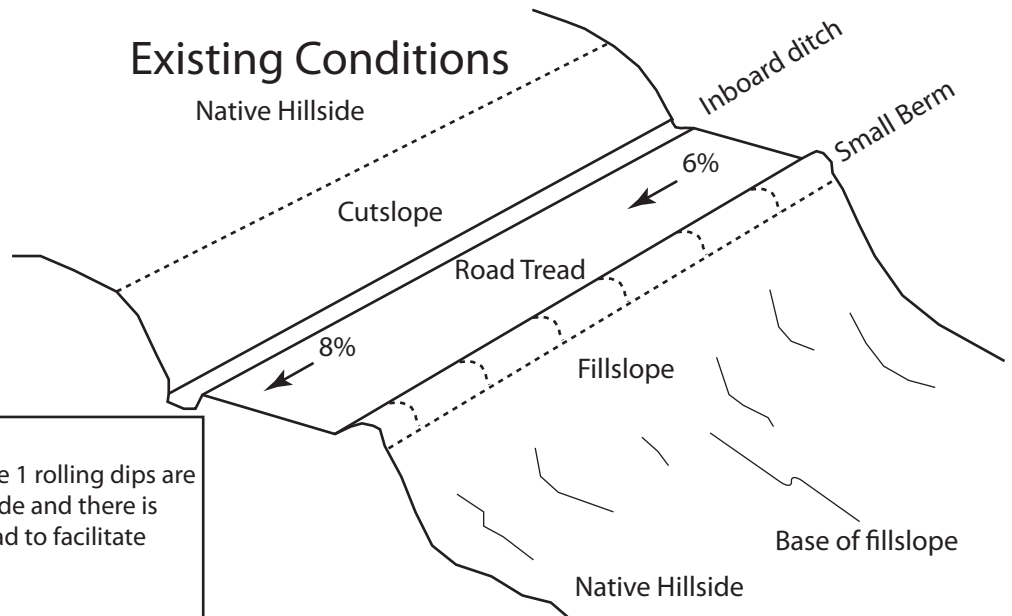
Table of rolling dip dimensions by road grade

Road grade %	Upslope approach distance (from up road start to trough) ft	Reverse grade distance (from trough to crest) ft	Depth at trough outlet (below average road grade) ft	Depth at trough inlet (below average road grade) ft
<6	55	15 - 20	0.9	0.3
8	65	15 - 20	1.0	0.2
10	75	15 - 20	1.1	0.01
12	85	20 - 25	1.2	0.01
>12	100	20 - 25	1.3	0.01

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Standard (Type 1) Rolling Dip Construction



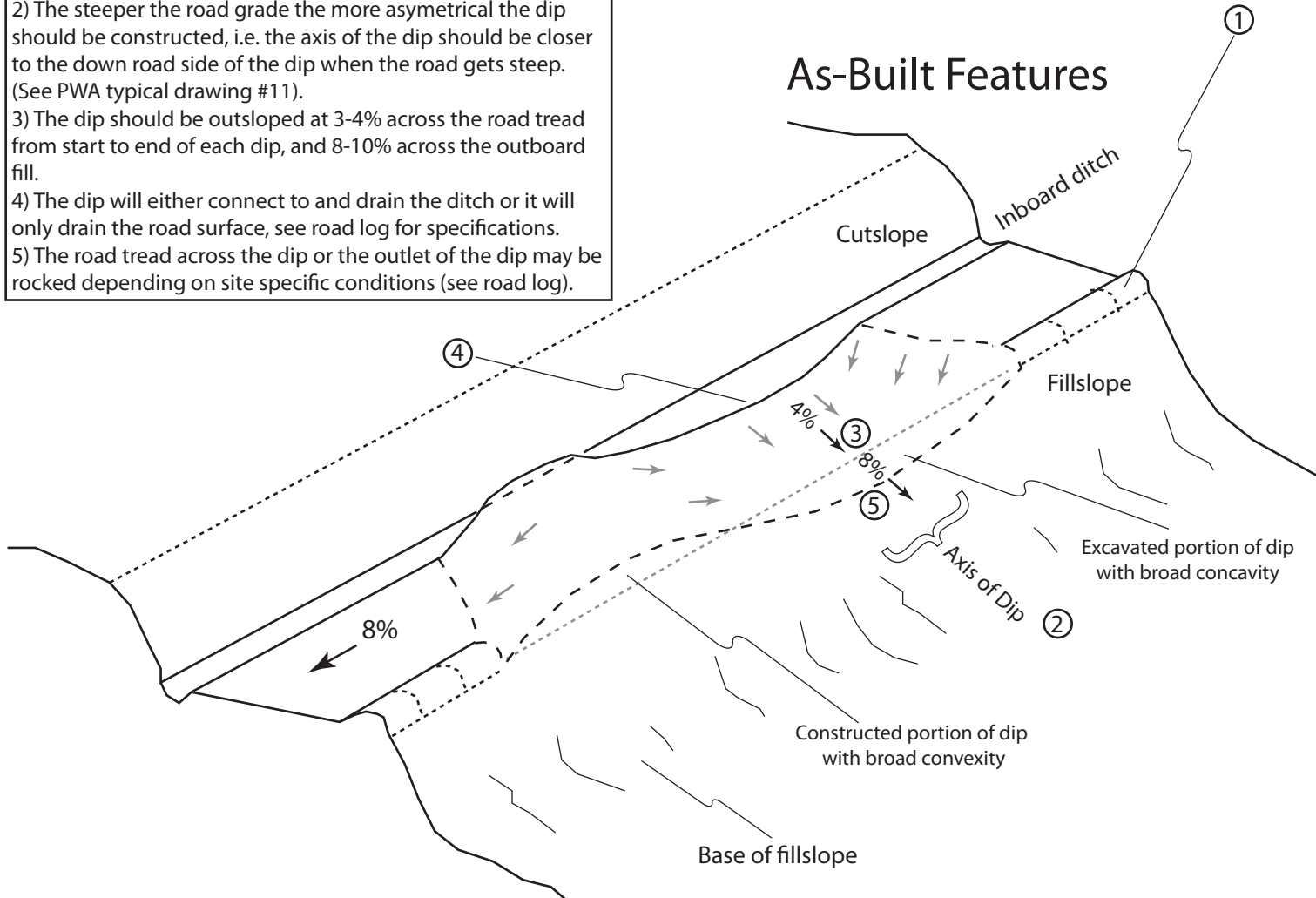
Notes

Rolling dip type 1 existing conditions: Type 1 rolling dips are utilized when roads are less than 12-14% grade and there is proximal outfall adjacent to the outboard road to facilitate road drainage.

Design Notes:

- 1) The berm should be removed for the entire length of the dip.
- 2) The steeper the road grade the more asymmetrical the dip should be constructed, i.e. the axis of the dip should be closer to the down road side of the dip when the road gets steep. (See PWA typical drawing #11).
- 3) The dip should be outsloped at 3-4% across the road tread from start to end of each dip, and 8-10% across the outboard fill.
- 4) The dip will either connect to and drain the ditch or it will only drain the road surface, see road log for specifications.
- 5) The road tread across the dip or the outlet of the dip may be rocked depending on site specific conditions (see road log).

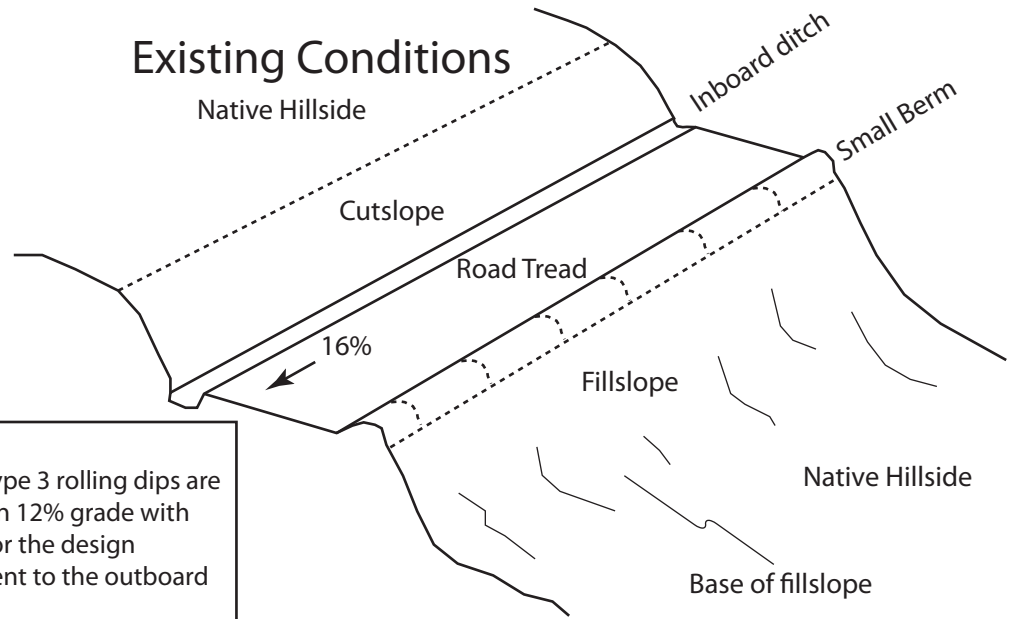
As-Built Features



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Type 3 Rolling Dip Construction (steep slope outslope)

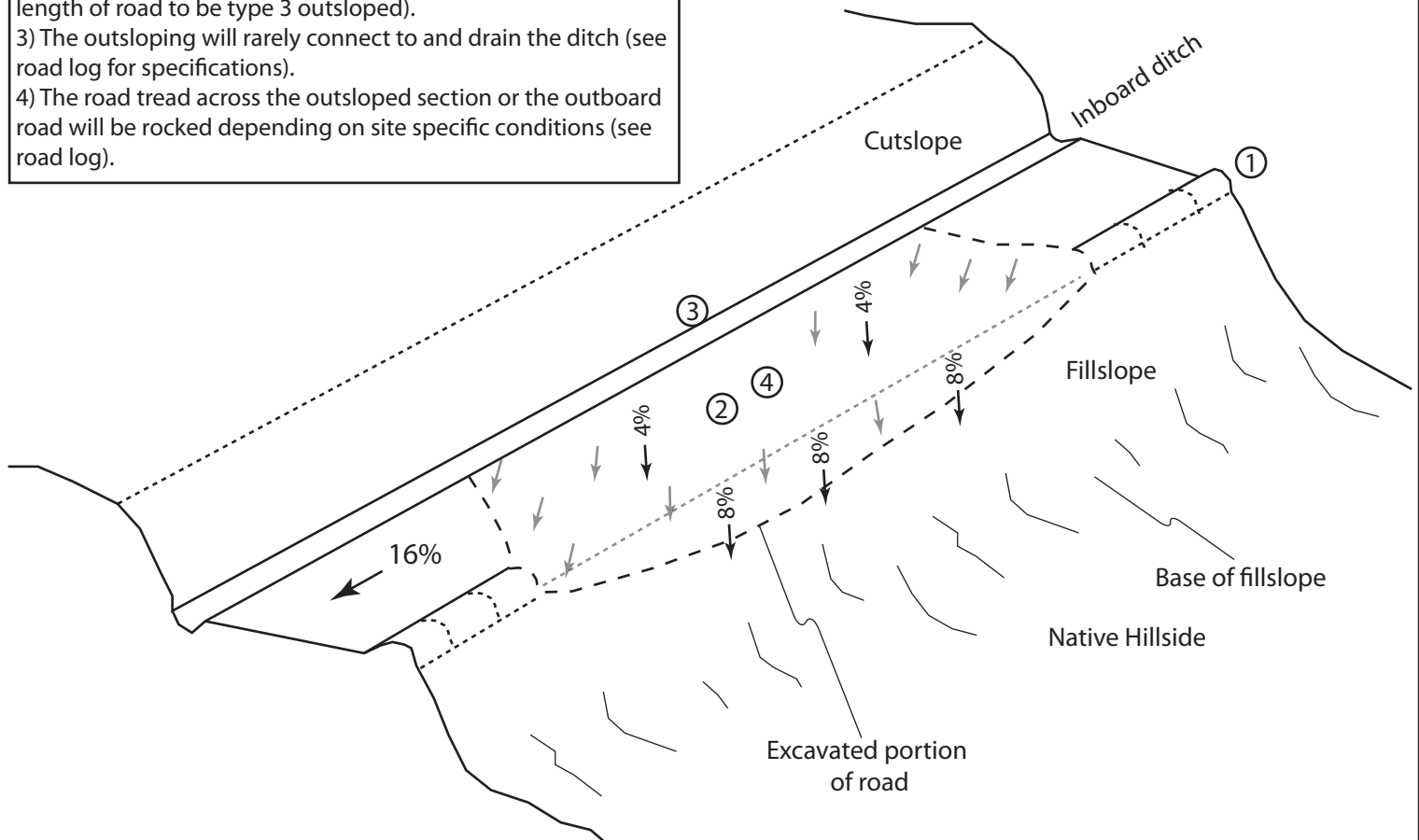


Notes

Rolling dip type 3 existing conditions: Type 3 rolling dips are utilized when roads grades are steeper than 12% grade with little opportunity to create reverse grade for the design vehicle, and there is proximal outfall adjacent to the outboard road to facilitate road drainage.

Design Notes:

- 1) The berm should be removed for the entire length of the outsloped section.
- 2) The dip should be outsloped at 2-4% across the road tread and 4-8% across the outboard fill. (The road log will specify the length of road to be type 3 outsloped).
- 3) The outsloping will rarely connect to and drain the ditch (see road log for specifications).
- 4) The road tread across the outsloped section or the outboard road will be rocked depending on site specific conditions (see road log).



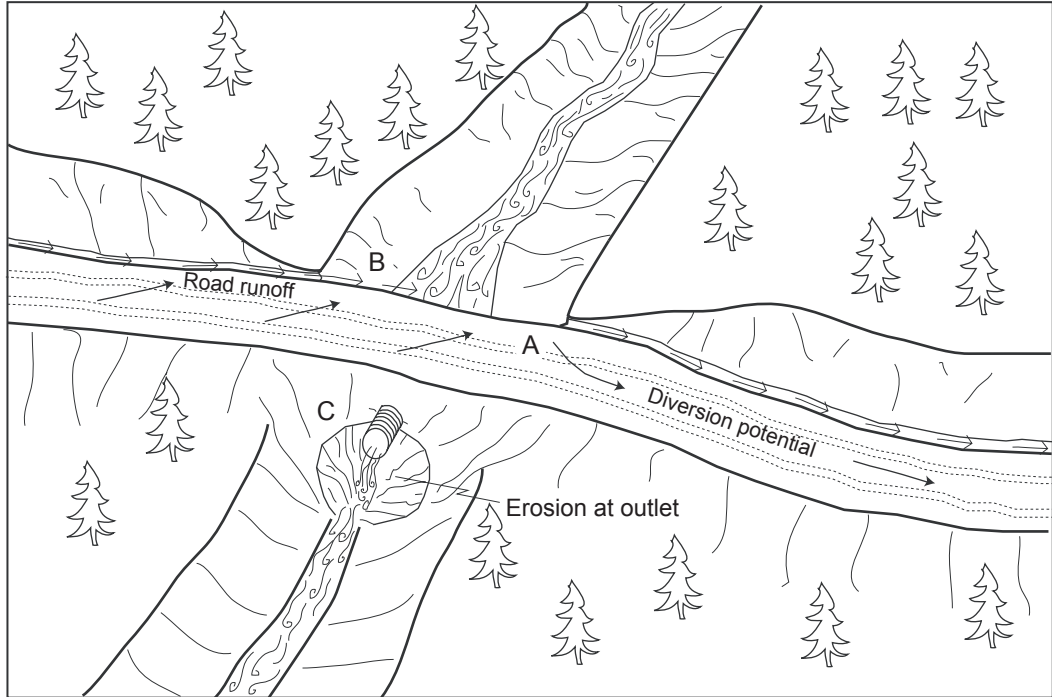
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Typical Problems and Applied Treatments for a Decommissioned Stream Crossing

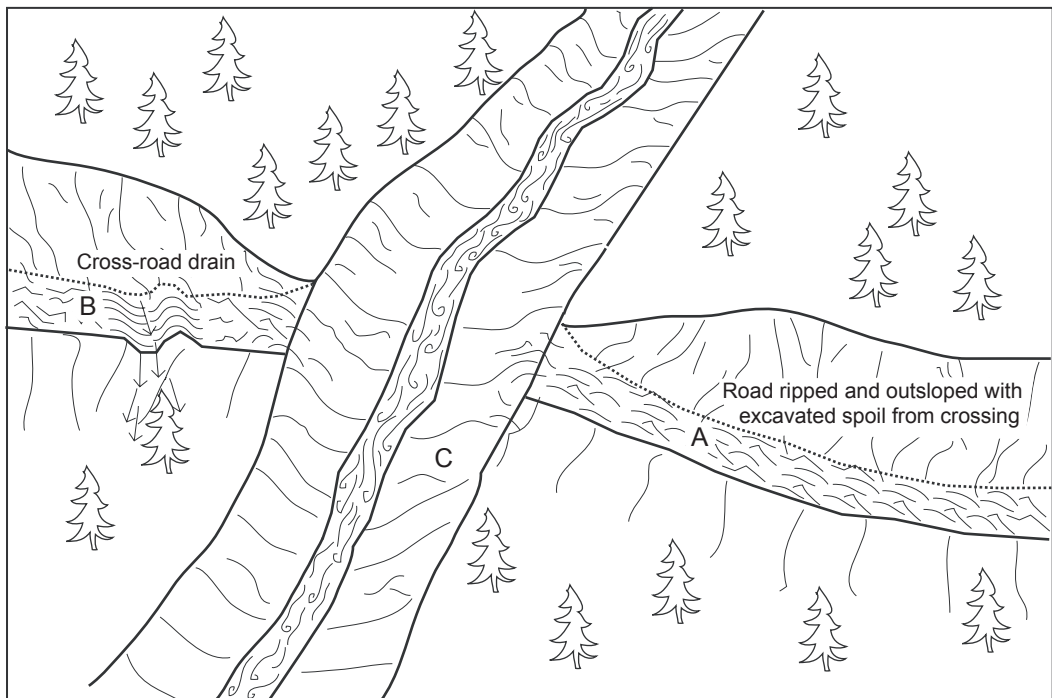
Problem condition (before)

- A - Diversion potential
- B - Road surface and ditch drain to stream
- C - Undersized culvert high in fill with outlet erosion



Treatment standards (after)

- A - Diversion prevented by road surface ripping and outsloping using excavated spoils
- B - Road surface and ditch disconnected from stream by road surface decompaction and cross-road drains
- C - Stream crossing fill completely excavated

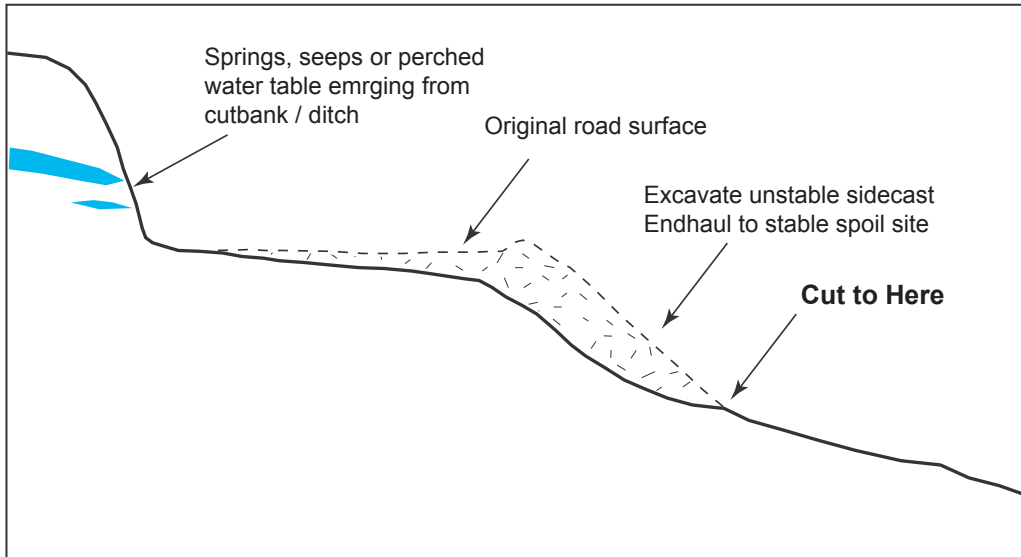


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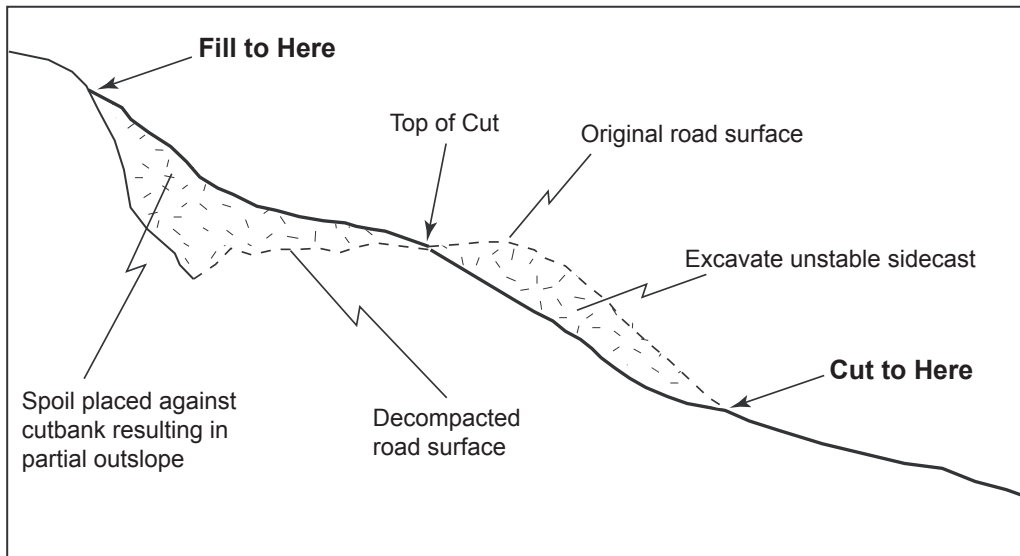
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Typical Design for Road Decommissioning Treatments Employing Export and In-Place Outsloping Techniques

Export outslope (EPOS)



In-place outslope (IPOS)



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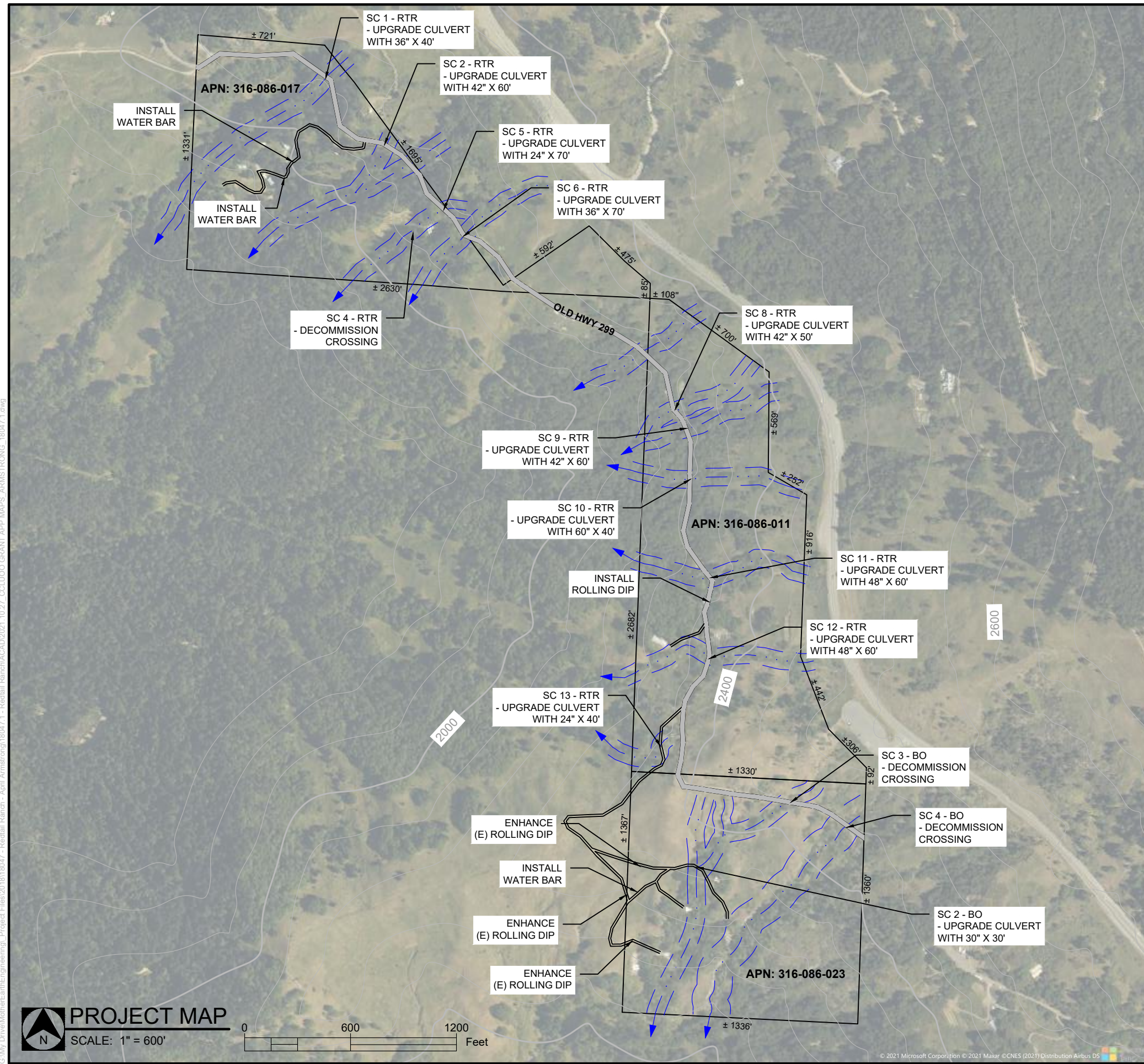
Figure 1



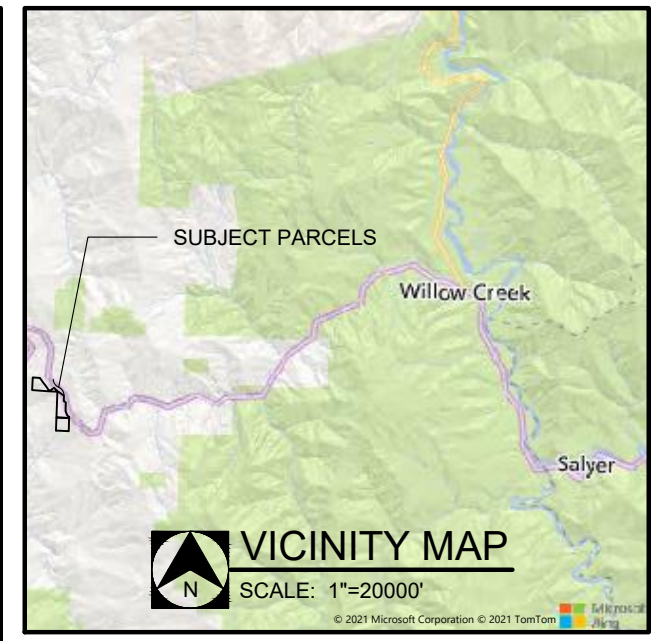
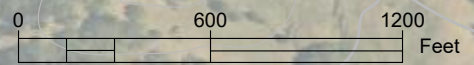
MOTHER EARTH
ENGINEERING

Project Map

G:\My Drive\MotherEarth\Engineering\Project Files\2018\18047 - Redtail Ranch - April Armstrong\18047 - Redtail Ranch\ACAD\2021-10-27_CCLJOO GRANT APP MAPS_ARMSTRONG_18047_1.dwg



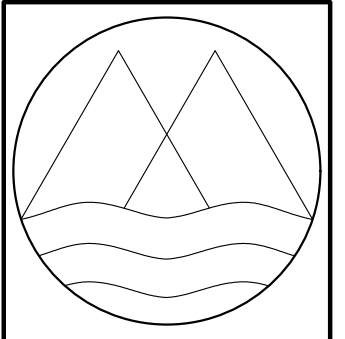
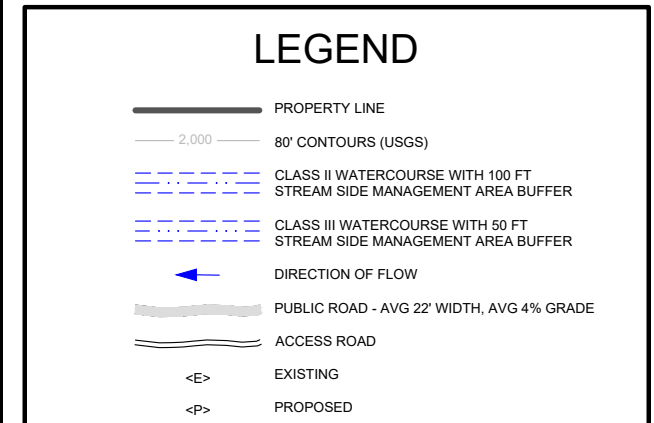
PROJECT MAP
SCALE: 1" = 600'



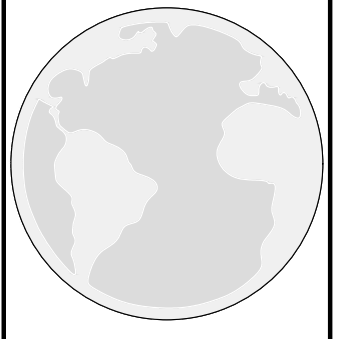
DIRECTIONS TO SITE

FROM ARCATA, CA:

- GO NORTH ON US HWY 101, TOWARDS CA-299 E EXIT, 2.0 MILES.
- CONTINUE ON TO CA-299 E, 26.3 MILES.
- TURN RIGHT ONTO OLD HWY 299, 1.5 MILES.
- ARRIVED AT PROPERTY.



MOTHER EARTH ENGINEERING
425 I STREET
ARCATA, CA 95521, 707-633-8321



MEE JOB NO: 18047.1

REVISION SCHEDULE			
#	DATE	BY	DESCRIPTION
0	10/27/21	DT	DRAFTED
1			
2			
3			
4			
5			

PROJECT MAP
APN: 316-086-017, 316-086-011, 316-086-023

CCLJOO MITIGATION AND REMEDIATION FUND PROGRAM GRANT
APPLICANT: APRIL ARMSTRONG
MAILING ADDRESS: 600 F ST., SUITE 3 PMB #521, ARCATA, CA 95521
PHONE NUMBER: (707) 616-4404

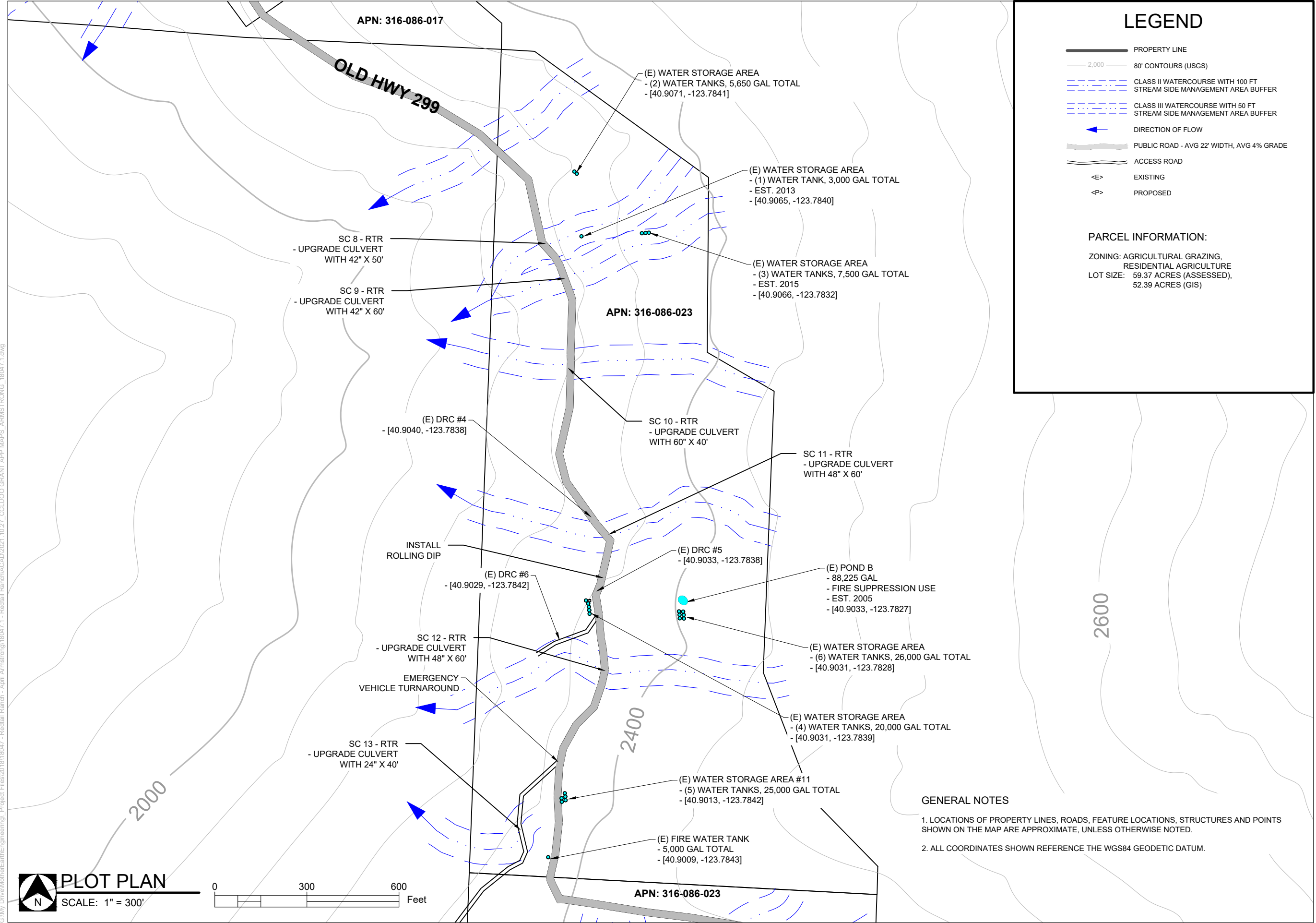
SHEET NO:
1
OF 4

Figure 2

Plot Plan APN 316-086-017

Plot Plan APN 316-086-011

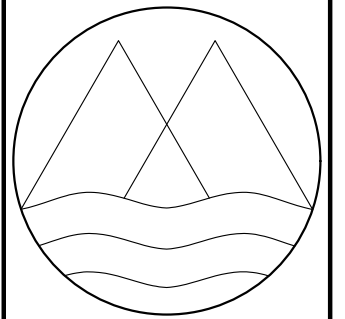
Figure 3



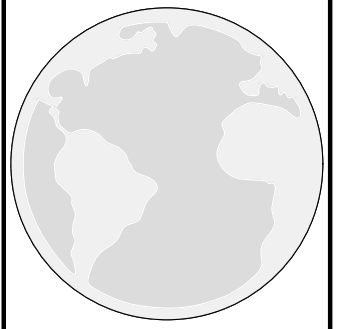
LEGEND

- PROPERTY LINE
- 2,000 80' CONTOURS (USGS)
- CLASS II WATERCOURSE WITH 100 FT STREAM SIDE MANAGEMENT AREA BUFFER
- CLASS III WATERCOURSE WITH 50 FT STREAM SIDE MANAGEMENT AREA BUFFER
- DIRECTION OF FLOW
- PUBLIC ROAD - AVG 22' WIDTH, AVG 4% GRADE
- ACCESS ROAD
- <E> EXISTING
- <P> PROPOSED

PARCEL INFORMATION:
 ZONING: AGRICULTURAL GRAZING, RESIDENTIAL AGRICULTURE
 LOT SIZE: 59.37 ACRES (ASSESSED), 52.39 ACRES (GIS)



MOTHER EARTH ENGINEERING
 425 I STREET
 ARCATA, CA 95521, 707-633-8321



MEE JOB NO: 18047.1

REVISION SCHEDULE

#	DATE	BY	DESCRIPTION
0	10/27/21	DT	DRAFTED
1			
2			
3			
4			
5			

PLOT PLAN
 APN: 316-086-011

CCLJQ MITIGATION AND REMEDIATION FUND PROGRAM GRANT

APPLICANT: APRIL ARMSTRONG
 MAILING ADDRESS: 800 F ST., SUITE 3 PMB #521, ARCATA, CA 95521
 PHONE NUMBER: (707) 616-4404

SHEET NO:

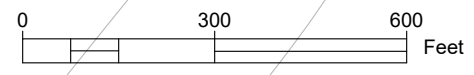
3

OF 4

GENERAL NOTES

1. LOCATIONS OF PROPERTY LINES, ROADS, FEATURE LOCATIONS, STRUCTURES AND POINTS SHOWN ON THE MAP ARE APPROXIMATE, UNLESS OTHERWISE NOTED.
2. ALL COORDINATES SHOWN REFERENCE THE WGS84 GEODETIC DATUM.

PLOT PLAN
 SCALE: 1" = 300'



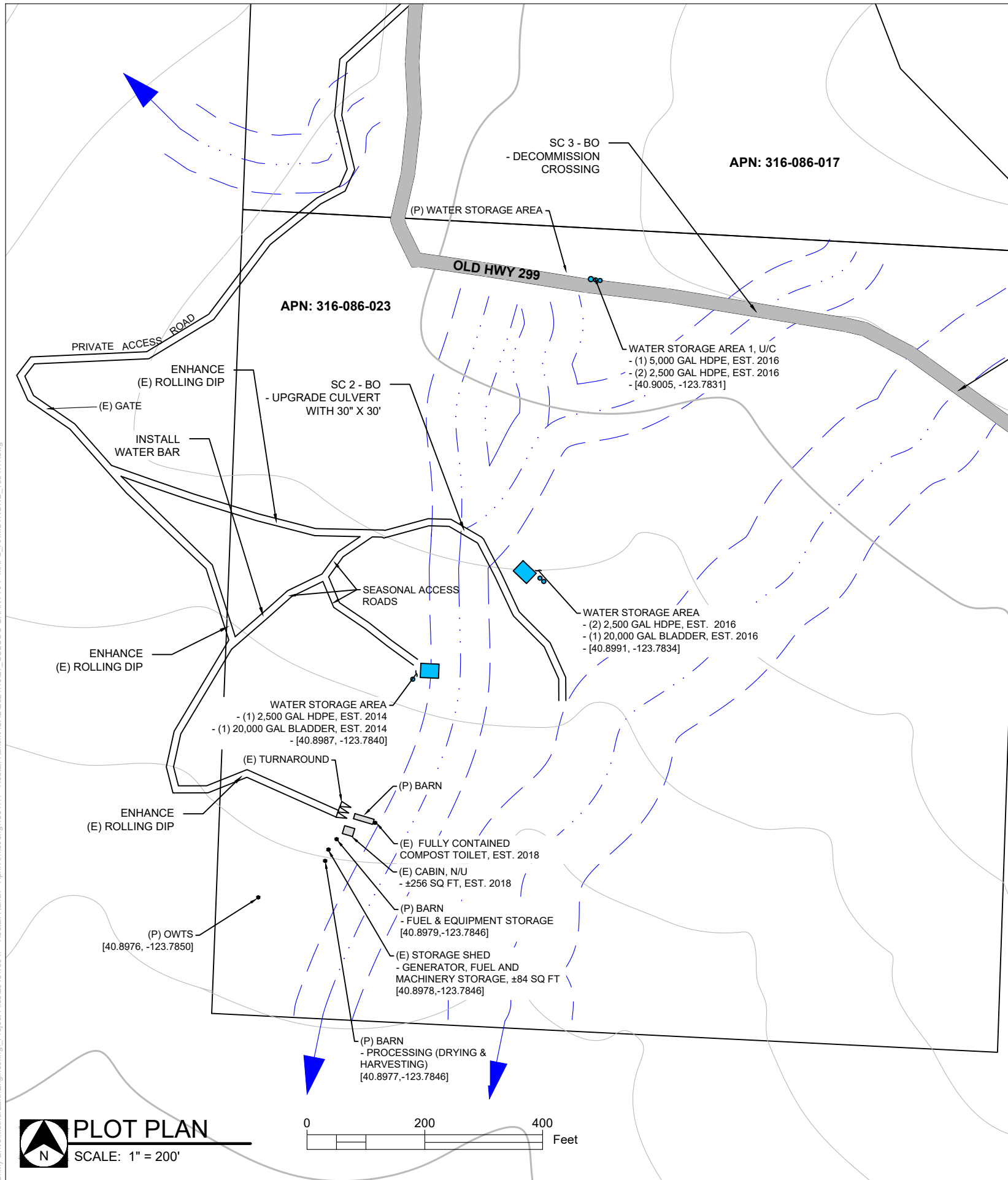
G:\My Drive\MotherEarth\Engineering\Project Files\2018\18047 - Redtail Ranch - April Armstrong\18047 - Redtail Ranch - April Armstrong\18047.1 - Redtail Ranch\ACAD\2021\10.27_CCLJQO GRANT APP MAPS_ARMSTRONG_18047.1.dwg

10.27.2021

Figure 4

Plot Plan APN 316-086-023

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LEGEND

- PROPERTY LINE
- 2,000 80' CONTOURS (USGS)
- CLASS II WATERCOURSE WITH 100 FT STREAM SIDE MANAGEMENT AREA BUFFER
- CLASS III WATERCOURSE WITH 50 FT STREAM SIDE MANAGEMENT AREA BUFFER
- DIRECTION OF FLOW
- PUBLIC ROAD - AVG 22' WIDTH, AVG 4% GRADE
- ACCESS ROAD
- <E> EXISTING
- <P> PROPOSED

PARCEL INFORMATION:

ZONING: UNCLASSIFIED
 LOT SIZE: 40.00 ACRES (ASSESSED),
 41.69 ACRES (GIS)

MOTHER EARTH ENGINEERING

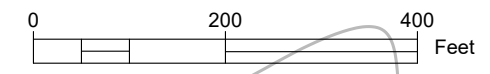
425 I STREET
 ARCATA, CA 95521, 707-633-8321

MEE JOB NO: 18047.1

REVISION SCHEDULE			
#	DATE	BY	DESCRIPTION
0	10/27/21	DT	DRAFTED
1			
2			
3			
4			
5			

- GENERAL NOTES**
1. LOCATIONS OF PROPERTY LINES, ROADS, FEATURE LOCATIONS, STRUCTURES AND POINTS SHOWN ON THE MAP ARE APPROXIMATE, UNLESS OTHERWISE NOTED.
 2. ALL COORDINATES SHOWN REFERENCE THE WGS84 GEODETIC DATUM.
 3. CLIENT OWNS APN: 316-086-024 TO THE WEST

PLOT PLAN
 SCALE: 1" = 200'



PLOT PLAN
APN: 316-086-023

CCLJOO MITIGATION AND REMEDIATION FUND PROGRAM GRANT

APPLICANT: APRIL ARMSTRONG
 MAILING ADDRESS: 800 F ST., SUITE 3 PMB #521, ARCATA, CA 95521
 PHONE NUMBER: (707) 616-4404

SHEET NO: 4 OF 4

Appendix

A



MOTHER EARTH
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Project Scope and Description

Appendix B



MOTHER EARTH
ENGINEERING

Project Photos

Appendix C



MOTHER EARTH
ENGINEERING

Project Budget

Appendix D



MOTHER EARTH
ENGINEERING

Typical Drawings and Design Specifications

From: Courtney Sundberg <courtney@motherearthengineering.com>

Sent: Sunday, October 31, 2021 10:42 PM

To: Richardson, Michael <MRichardson@co.humboldt.ca.us>; April Armstrong <aprilalison@gmail.com>; Courtney Sundberg <courtney@motherearthengineering.com>

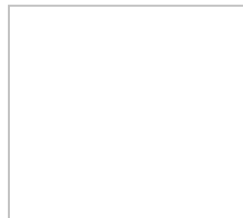
Subject: CCLUO Mitigation and Remediation Fund Program Application for April Armstrong

Hello Michael,

Hope this email finds you well. Thank you for the opportunity to apply for this grant. I think we have a great project and I hope you will think so too. I am writing on behalf of my client, April Armstrong. Please see the attached Application for the CCLUO Mitigation and Remediation Fund Program for Humboldt County APNs 316-086-017, 316-086-011, and 316-086-023. Due to the large file size the application packet is in three parts: 1) The Application and Project Description, 2) Project Figures, and 3) Project Appendices. Please let me know if you have any questions or if I need to submit anything on paper. We look forward to hearing from you. Thank you!

Sincerely,

--



COURTNEY SUNDBERG

Project Geologist

707.633.8321

courtney@motherearthengineering.com

425 I Street

Arcata, CA 95521

motherearthengineering.com

DBE# 45884 | SB# 2010193

SUPPLIER ID # BID0059191

Wylie, Brady

From: Meynell, Karen
Sent: Thursday, May 11, 2023 8:12 AM
To: Wylie, Brady
Subject: FW: DEADLINE for submissions: FOER Mitigation and Remediation Grant Program
Attachments: McCullough quote.pdf; Pacific Earthscapes Bid.xlsx.pdf

Hi Brady,
Please add this email and documents to the submittal for Armstrong (I think).

From: April Armstrong <aprilalison@gmail.com>
Sent: Wednesday, May 10, 2023 4:55 PM
To: Meynell, Karen <KMeynell@co.humboldt.ca.us>; PLBL_Grants <PLBL_Grants@co.humboldt.ca.us>
Subject: Re: DEADLINE for submissions: FOER Mitigation and Remediation Grant Program

Caution: This email was sent from an EXTERNAL source. Please take care when clicking links or opening attachments.

Greetings Karen,

Attached are the two estimates I received from licensed contractors to repair the old stretch of decommissioned 299 that runs through my property.

The McCullough Construction estimate was for \$754,195.
The Pacific Earthscapes estimate was for \$375,006.

I would hope to work with Pacific Earthscapes, as their quote was almost half of McCullough's. This estimate is much higher than the guess I was advised to use when first filing my LSAA, and even higher than the more recent guess I used for my grant application. The estimates from these two contractors are truly shocking, and there is no way as a single landowner I could ever afford to pay for the necessary emergency repairs to this old, crumbling state highway. If I am awarded this grant funding I was conditionally approved for, I can update my cost estimates on my LSAs and pay all the additional fees. If I am not going to be awarded this grant funding, I will not be able to repair the old highway by the September 2024 deadline on my LSAA.

When I found out Fish and Game was not recommending approval for my grant application I contacted David Manthorne because he has been to my site and seen the environmental damage being created by this old abandoned State Highway first hand. In addition to my cost estimates on my LSAA being off, I was also deficient in reporting. I have spent tens of thousands of dollars hiring Mother Earth Engineering to be responsible for all of my reporting to Fish and Game, and to write this grant proposal for me. They had been submitting my water diversion records to the state water board, but not to Fish and Game. And they had not submitted a water management plan or a diversion infrastructure plan, or the other reporting as they were contracted with me to do. When I started as a client with Mother Earth Engineering my consultant was a woman named Patricia Lai. I mistakenly put my trust in her and was given a lot of misinformation. When Patricia left Mother Earth Engineering I was passed through a series of consultants, because of staff turn over there, and no one caught her mistakes. (Mother Earth Engineering is now closed down, so after all the money I have paid them, I am now on my own). When I contacted David Manthorne about how to get in good standing with Fish and Game he forwarded my emails to Scott Bauer and a woman named Kalyn Bocast. Kalyn responded that she didn't even think I was eligible for this grant because I was not in a correct area of the Redwood Creek drainage. I spoke

with Michael Richardson after the board meeting where I received conditional approval, and he explained that county staff was going to help mediate an agreement between the applicants with conditional approval and CDFW to get their approval for our projects. The notes I took from that conversation were that Michael said the board had "instructed him to help me get Fish and Game approval for my project" and that he would be meeting with them the last week in June to, as my notes put it "help get them on board" (these are my notes from the conversation, not exact quotes from Michael). I was in contact with Michael multiple times after that to see what I should be doing to help this happen. When we spoke at the end of July he explained there was a woman assigned to help me and the other applicants with conditional approval (I forget her name), but that she had needed to be pulled away from this project and put on another project for a month, but that she returned from the vacation she was on she would be in touch with me about how to move forward. In the beginning of September, when I hadn't heard from anyone I contacted Michael again, and he said a different woman, Lana, would now be helping me, and ccd me on an email he wrote to her asking her to contact me. I never heard from anyone about how to move forward. My father's Cancer returned, and my focus was on supporting him the best I could, and then dealing with his tragic passing, so I never followed up after that.

I would be overwhelmingly grateful for any support you might be able to offer in helping me get this conditionally approved grant funding, so that I can repair this abandoned state highway that is negatively affecting tributaries to Redwood Creek.

Thanks so much for your time,
April Armstrong
(707) 616-4404

On Mon, May 1, 2023 at 9:43 AM Meynell, Karen <KMeynell@co.humboldt.ca.us> wrote:

The email address below is incorrect. Please submit any submissions to PLBL_Grants@co.humboldt.ca.us. (The underscore between "PLBL" and "Grants" was left out of the incorrect address below.

Thank you,

Karen Meynell

From: Meynell, Karen
Sent: Thursday, April 20, 2023 10:17 AM
To: Karen Meynell <kmeynell@co.humboldt.ca.us>
Subject: DEADLINE for submissions: FOER Mitigation and Remediation Grant Program

Hello-

I am reaching out to you as an applicant with a conditionally approved project for Round 1 funding from the FOER Mitigation and Remediation Grant Program. On 6/14/22 the Board of Supervisors tentatively approved your application for road improvements "subject to CDFW and RWQCB approval; after all permits are obtained, and the cost estimates are correlated with the LSAA agreements and the old cost estimates are updated. The LSAA agreement cost estimate shall be consistent with the amount of the grant."

The deadline to make additional submissions is May 10, 2023. After the deadline, the applications will be reviewed and brought to the Board of Supervisors for approval or denial. This meeting is anticipated to take place July 11th.

Please send your submissions to plblgrants@co.humboldt.ca.us. Questions can be directed to 707-267-9408.

Thank you,



Karen Meynell

[Planning and Building Department](#)

3015 H Street | Eureka, CA 95501

Phone: 707-268-3747

Email: kmeynell@co.humboldt.ca.us

Proposal



Phone: 707-825-1014
 Fax: 707-825-1769

Proposal: April Armstrong
Date: 4/4/2022

To: Mother Earth Engineering k@motherearthengineering.com 425 I Street Arcata, CA 95521 motherearthengineering.com	Project: Armstrong Road Improvement Project
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Salesperson		
Hugh McCullough		

Scope of Work

Road Improvements to April Armstrong property per plans and job walk.

Reference	Description	Quantity	UOM	Unit Price	Extended Price
1	Roadway Improvments	1.0000	LS	754,195.00	754,195.00
Total					754,195.00

Proposal Total: 754,195.00

Acceptance	
Accepted by:	_____
Title:	_____
Date:	_____

Estimate If Purchased Rock Is Included

Site #1	\$ 18,754.70	Total
Pipe	\$ 17,396.52	
Equipment	\$ 6,924.18	
Labor	\$ 2,813.58	
Material	\$ 7,658.76	
Rock	\$ 708.99	
Equipment	\$ 83.20	
Material	\$ 625.79	
Erosion Control	\$ 649.19	
Equipment	\$ 301.47	
Labor	\$ 137.45	
Material	\$ 210.27	
Site #2	\$ 42,791.12	Total
Pipe	\$ 39,611.90	
Equipment	\$ 20,150.47	
Labor	\$ 8,237.88	
Material	\$ 11,223.55	
Rock	\$ 2,424.19	
Equipment	\$ 499.20	
Material	\$ 1,924.99	
Erosion Control	\$ 755.03	
Equipment	\$ 301.47	
Labor	\$ 243.29	
Material	\$ 210.27	
Site #3	\$ 3,443.00	Total
Pipe	\$ 2,201.73	
Equipment	\$ 1,514.50	
Labor	\$ 687.23	
Erosion Control	\$ 1,241.27	
Equipment	\$ 602.94	
Labor	\$ 274.89	
Material	\$ 363.44	

Site #5	\$ 28,004.11	
Pipe	\$ 26,142.82	
Equipment	\$ 12,530.15	
Labor	\$ 5,594.82	
Material	\$ 8,017.85	
Rock	\$ 1,212.10	
Equipment	\$ 249.60	
Material	\$ 962.50	
Erosion Control	\$ 649.19	
Equipment	\$ 301.47	
Labor	\$ 137.45	
Material	\$ 210.27	
Site #6	\$ 33,732.40	Total
Pipe	\$ 32,679.18	
Equipment	\$ 12,444.35	
Labor	\$ 7,535.22	
Material	\$ 12,699.61	
Rock	\$ 404.03	
Equipment	\$ 83.20	
Material	\$ 320.83	
Erosion Control	\$ 649.19	
Equipment	\$ 301.47	
Labor	\$ 137.45	
Material	\$ 210.27	
Site #8	\$ 29,042.13	Total
Pipe	\$ 27,988.91	
Equipment	\$ 13,239.51	
Labor	\$ 5,336.10	
Material	\$ 9,413.30	
Rock	\$ 404.03	
Equipment	\$ 83.20	
Material	\$ 320.83	
Erosion Control	\$ 649.19	
Equipment	\$ 301.47	
Labor	\$ 137.45	
Material	\$ 210.27	

Site #9	\$ 42,499.59	Total
Pipe	\$ 38,022.79	
Equipment	\$ 19,131.72	
Labor	\$ 7,667.52	
Material	\$ 11,223.55	
Rock	\$ 3,827.61	
Equipment	\$ 665.60	
Labor	\$ 595.35	
Material	\$ 2,566.66	
Erosion Control	\$ 649.19	Total
Equipment	\$ 301.47	
Labor	\$ 137.45	
Material	\$ 210.27	
Site #10	\$ 62,139.89	Total
Pipe	\$ 60,682.64	
Equipment	\$ 33,083.19	
Labor	\$ 13,340.25	
Material	\$ 14,259.20	
Rock	\$ 808.06	
Equipment	\$ 166.40	
Material	\$ 641.66	
Erosion Control	\$ 649.19	
Equipment	\$ 301.47	
Labor	\$ 137.45	
Material	\$ 210.27	
Site #11	\$ 57,351.01	Total
Pipe	\$ 53,469.56	
Equipment	\$ 33,034.86	
Labor	\$ 13,598.97	
Material	\$ 6,835.73	
Rock	\$ 3,232.26	
Equipment	\$ 665.60	
Material	\$ 2,566.66	
Erosion Control	\$ 649.19	
Equipment	\$ 301.47	
Labor	\$ 137.45	
Material	\$ 210.27	

Site #12	\$ 38,481.47	Total
Pipe	\$ 35,004.06	
Equipment	\$ 21,549.72	
Labor	\$ 8,327.55	
Material	\$ 5,126.79	
Rock	\$ 2,828.22	
Equipment	\$ 582.40	
Material	\$ 2,245.82	
Erosion Control	\$ 649.19	
Equipment	\$ 301.47	
Labor	\$ 137.45	
Material	\$ 210.27	
Site #13	\$ 14,009.42	Total
Pipe	\$ 13,406.94	
Equipment	\$ 6,614.56	
Labor	\$ 2,534.28	
Material	\$ 4,258.10	
Rock	\$ 602.48	
Equipment	\$ 83.20	
Labor	\$ 198.45	
Material	\$ 320.83	
Mobilization	\$ 4,757.70	
Equipment	\$ 487.50	
Labor	\$ 970.20	
SubContr	\$ 3,300.00	
Grand Total	\$ 375,006.54	