

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

PROPOSED GRADED FLAT: 309.7 CUBIC YARDS OF GRADING FOR PROSED RESIDENCE

PREPARED FOR:

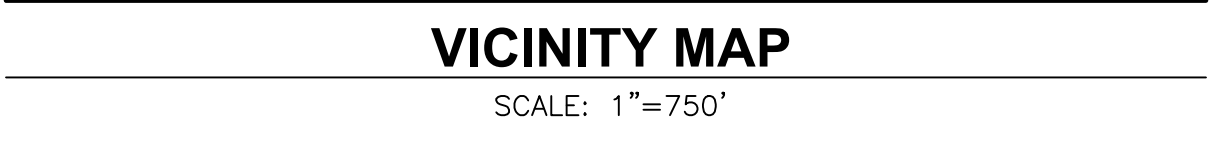
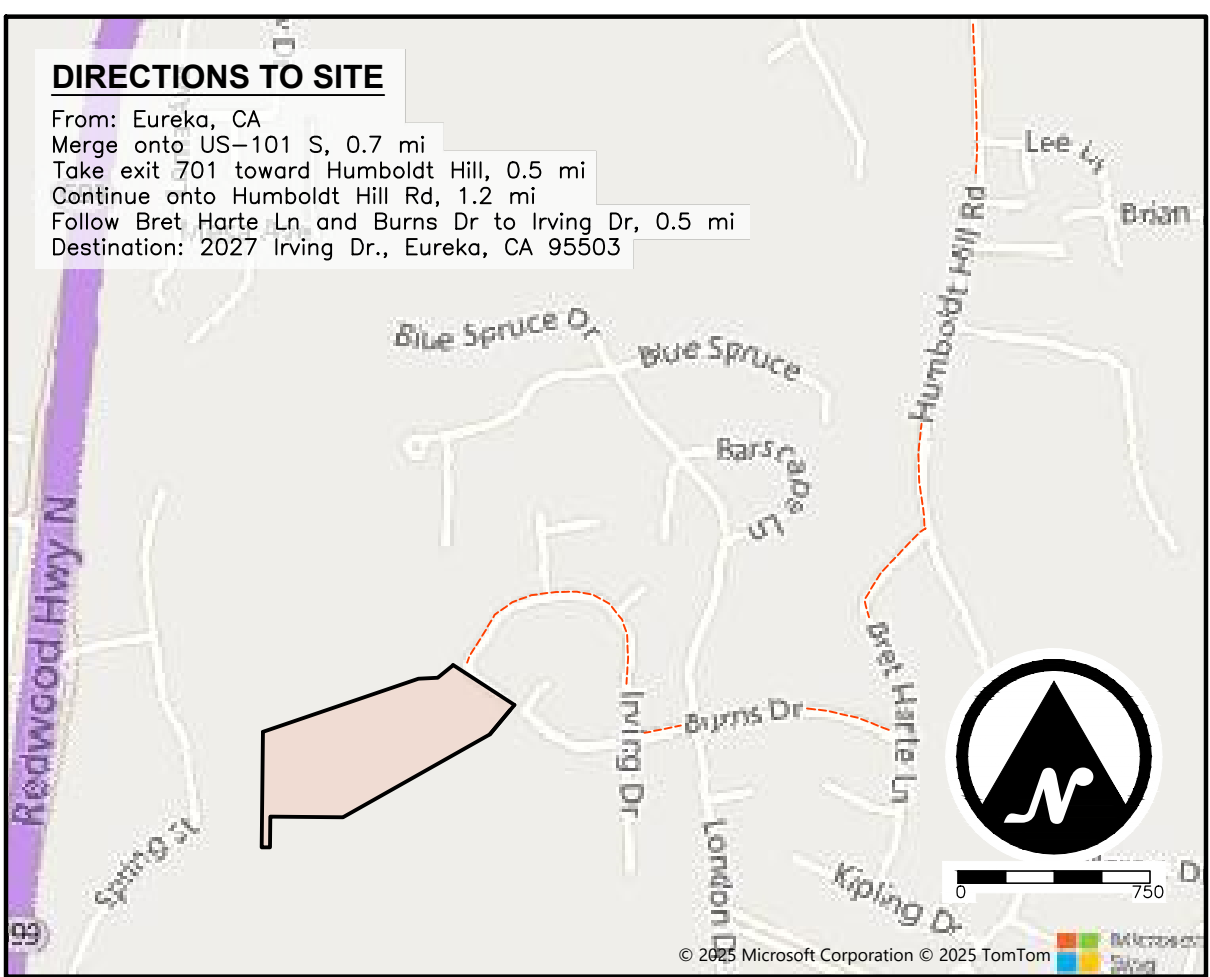
**TIM WALSH
APN: 306-371-017
Eureka, CA
Humboldt County**

PREPARED BY:



ALLAN M. BAIRD, RCE 23681

June 9, 2025
Job# 23-6050



OWNER OF RECORD

NAME: Tim Walsh
MAILING ADDRESS: 2050 Irving Dr. Eureka, CA 95501
EMAIL: timwalsh1@suddenlink.net
PHONE: 707-443-0604

PROPERTY DETAILS

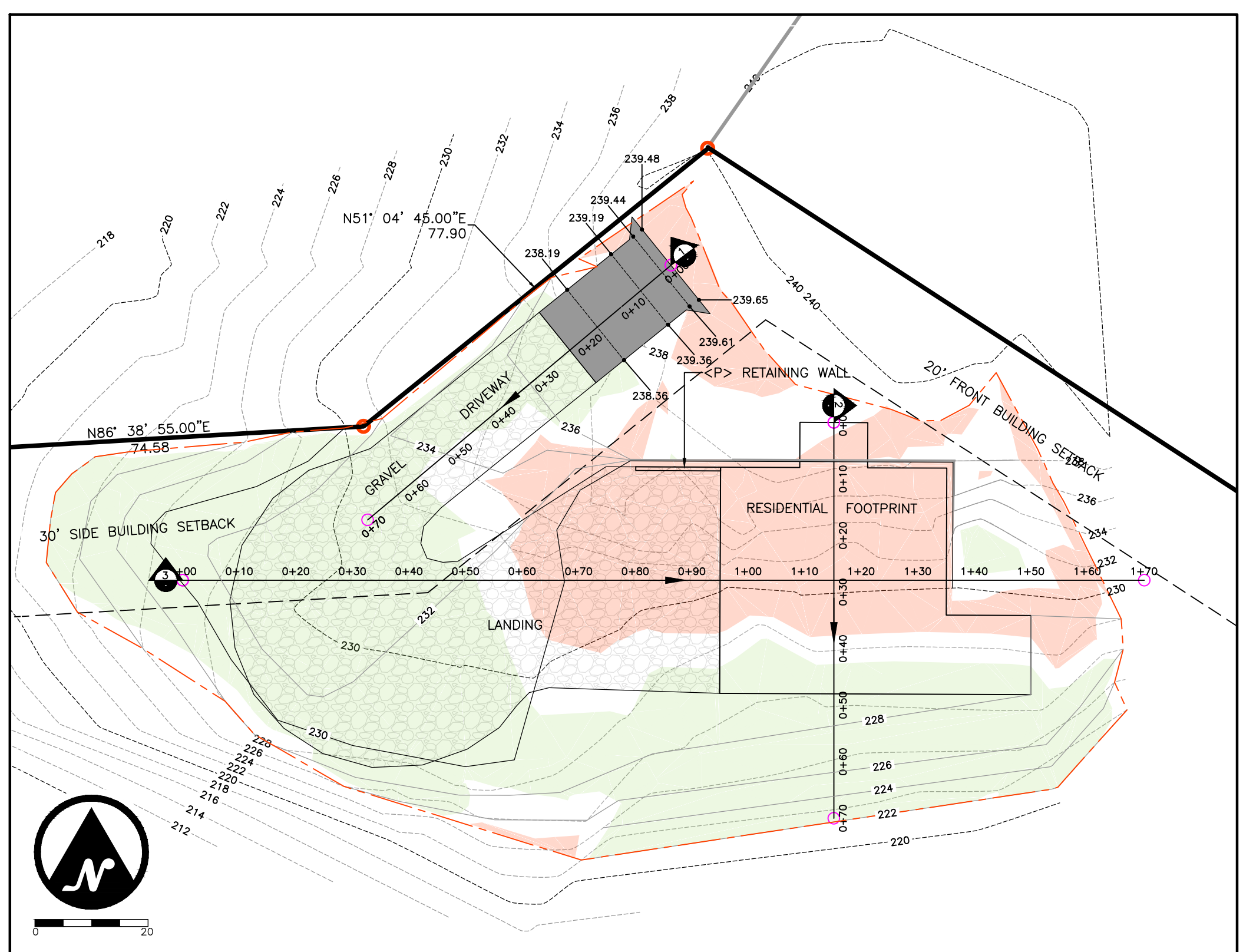
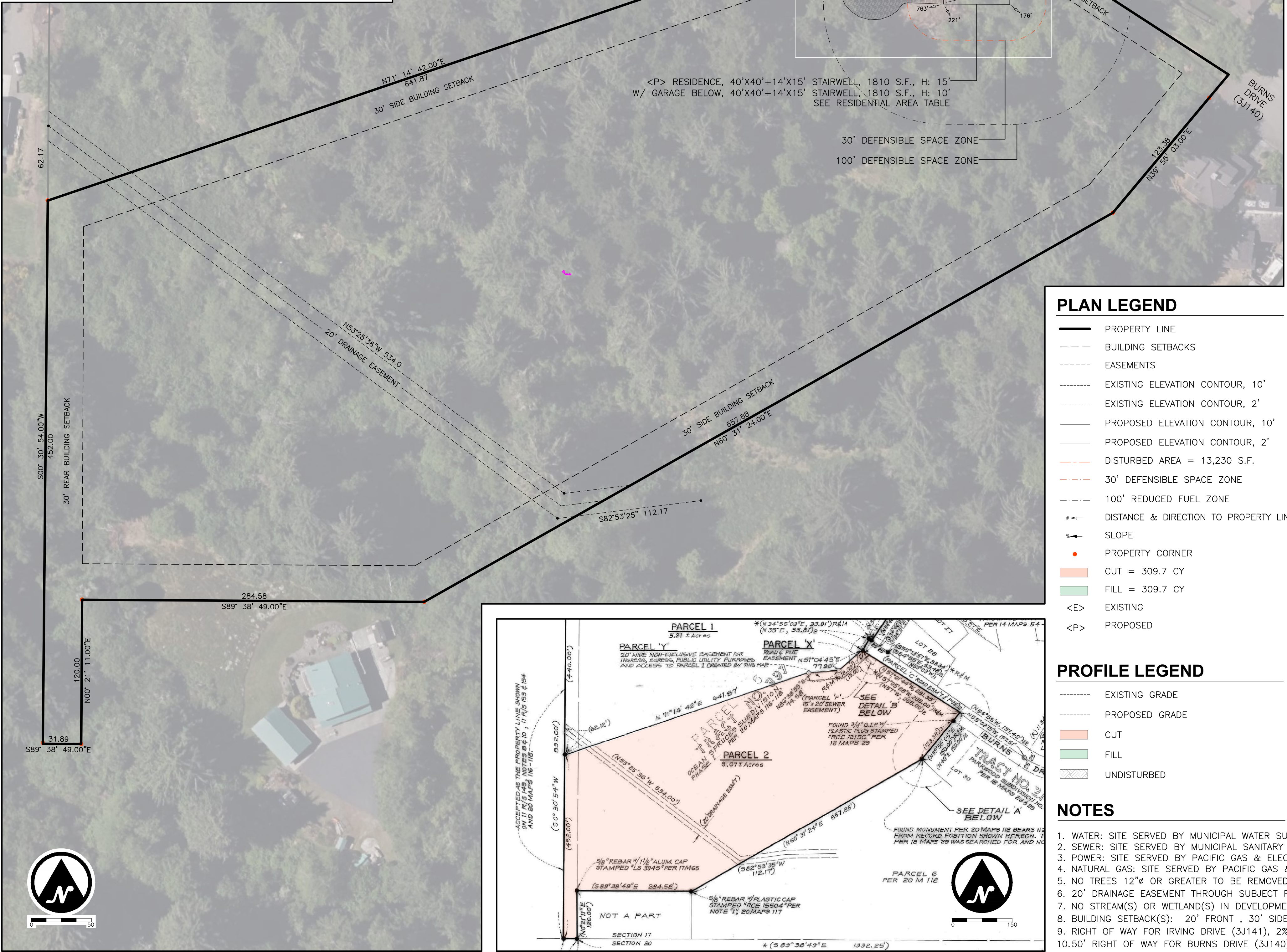
SITE ADDRESS: 2027 Irving Dr., Eureka, CA 95503
PARCEL SIZE: 7.43 acres
100-YR FLOOD ZONE: No
ALQUIST-PRIOLO FAULT HAZARD ZONE: Yes
ASSESSOR'S PARCEL NUMBER (APN): 306-371-017-000
ZONING: RA-5/A
COASTAL ZONE: Yes
AIRPORT COMPATIBILITY ZONE: No
PARCEL CENTROID (WGS84): 40.7241 (latitude), -124.2103 (longitude)
USE: Residential
RELATIVE SLOPE STABILITY: Low Instability, Moderate Instability
STATE FIRE RESPONSIBILITY AREA (SRA): No

PLANNING PROJECT DESCRIPTION

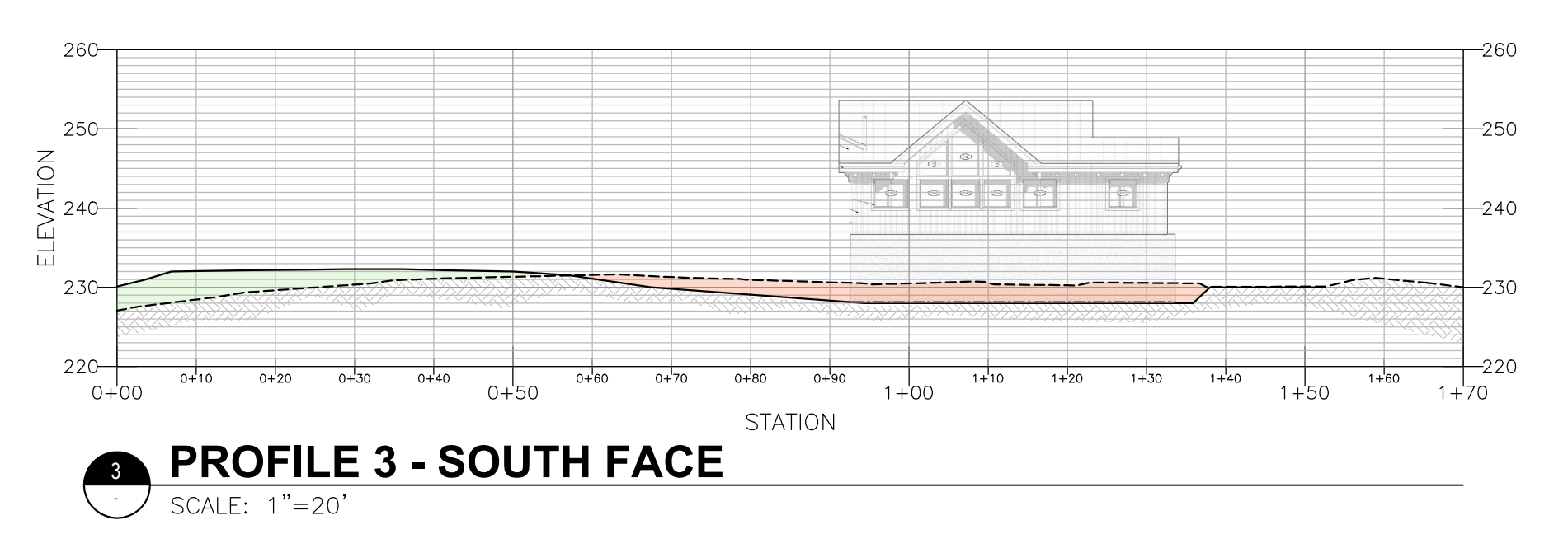
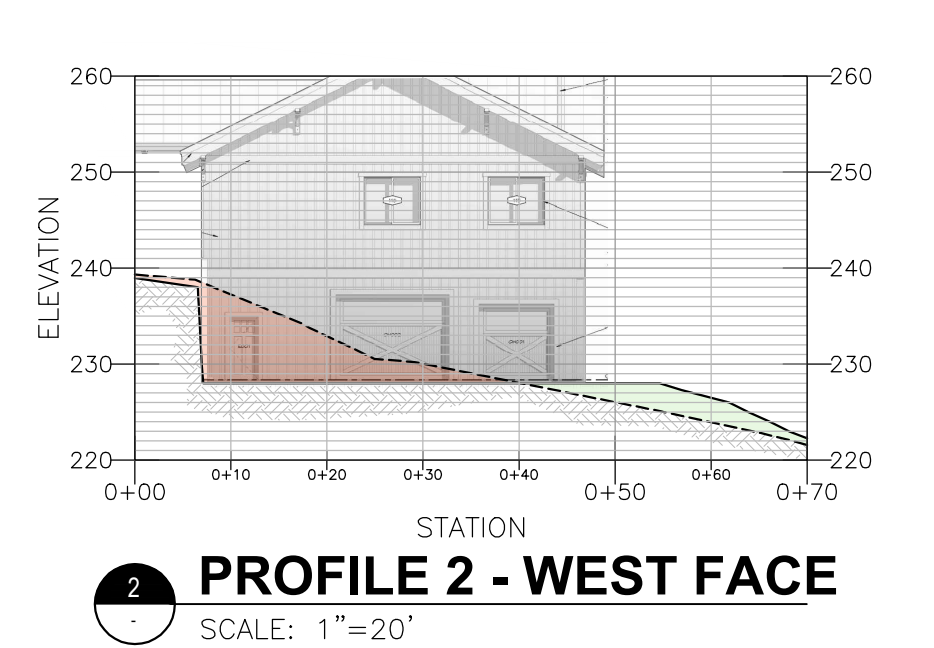
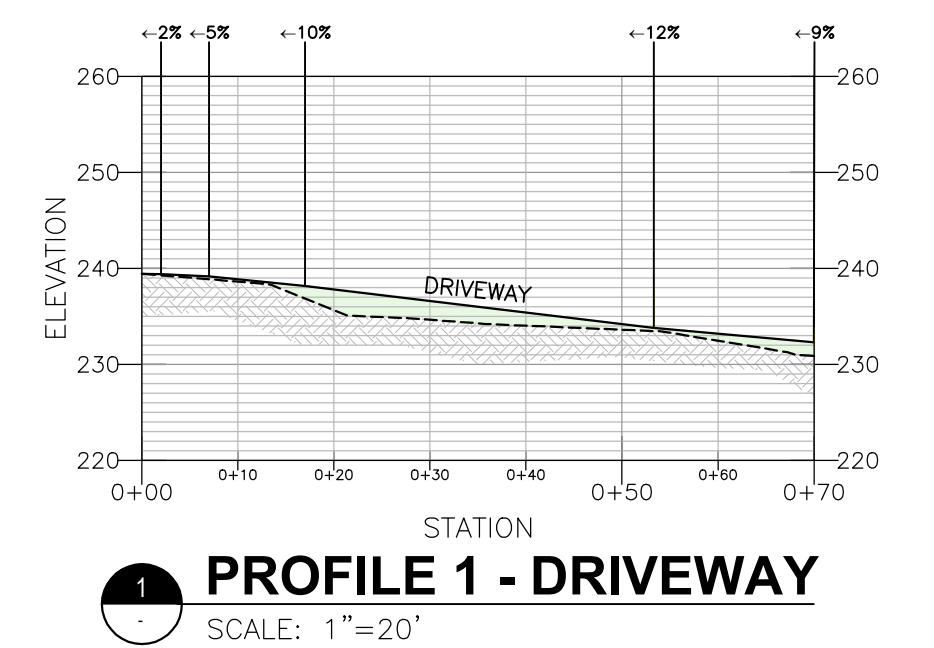
COASTAL PERMIT FOR SINGLE FAMILY RESIDENCE OF APPROXIMATELY 3519 SQUARE FEET, NO DECKS, WITH FOUR PARKING SPACES ON SITE. APPROXIMATELY 309.7 CY OF GRADING, CUT AND FILL TO BE BALANCED ON SITE.

BUILDING PROJECT DESCRIPTION

BUILDING PERMIT FOR SINGLE FAMILY RESIDENCE OF APPROXIMATELY 3519 SQUARE FEET, NO DECKS, WITH FOUR PARKING SPACES ON SITE. APPROXIMATELY 309.7 CY OF GRADING, CUT AND FILL TO BE BALANCED ON SITE.



- ### PLAN LEGEND
- PROPERTY LINE
 - BUILDING SETBACKS
 - EASEMENTS
 - EXISTING ELEVATION CONTOUR, 10'
 - EXISTING ELEVATION CONTOUR, 2'
 - PROPOSED ELEVATION CONTOUR, 10'
 - PROPOSED ELEVATION CONTOUR, 2'
 - DISTURBED AREA = 13,230 S.F.
 - 30' DEFENSIBLE SPACE ZONE
 - 100' REDUCED FUEL ZONE
 - DISTANCE & DIRECTION TO PROPERTY LINE
 - SLOPE
 - PROPERTY CORNER
 - CUT = 309.7 CY
 - FILL = 309.7 CY
 - EXISTING
 - PROPOSED



- ### PROFILE LEGEND
- EXISTING GRADE
 - PROPOSED GRADE
 - CUT
 - FILL
 - UNDISTURBED

- ### NOTES
- WATER: SITE SERVED BY MUNICIPAL WATER SUPPLY.
 - SEWER: SITE SERVED BY MUNICIPAL SANITARY SEWER.
 - POWER: SITE SERVED BY PACIFIC GAS & ELECTRIC.
 - NATURAL GAS: SITE SERVED BY PACIFIC GAS & ELECTRIC.
 - NO TREES 12" OR GREATER TO BE REMOVED.
 - 20' DRAINAGE EASEMENT THROUGH SUBJECT PARCEL.
 - NO STREAM(S) OR WETLAND(S) IN DEVELOPMENT AREA.
 - BUILDING SETBACK(S): 20' FRONT, 30' SIDES, 30' REAR/50'
 - RIGHT OF WAY FOR IRVING DRIVE (3J141), 2% GRADIENT IN CULDESAC FRONTING PARCEL.
 - 50.5' RIGHT OF WAY FOR BURNS DRIVE (3J140), <5% GRADIENT IN ROADWAY FRONTING PARCEL.
 - NO HISTORICAL BUILDINGS OR KNOWN ARCHAEOLOGICAL OR PALEONTOLOGICAL RESOURCES IN DEVELOPMENT AREA.
 - GRADING REQUIRED FOR THIS PROJECT: 309.7 CUBIC YARDS OF CUT, 309.7 CUBIC YARDS OF FILL, CUT AND FILL TO BE BALANCED ON SITE.
 - RE-VEGETATE ALL DISTURBED AREAS W/ NATIVE GRASSES & COVER W/ STRAW MULCH. KEEP MOIST UNTIL VEGETATION HAS BECOME 80% ESTABLISHED.
 - ENGINEERED GRADING, EXCAVATION, EROSION AND SEDIMENT CONTROL SHALL BE IN CONFORMANCE WITH THE COUNTY OF HUMBOLDT GRADING ORDINANCE COUNTY CODE SECTION 311-14.

SITE PLAN

SCALE: 1"=50'

TRACT MAP 506, BK 22, PG 80

SCALE: 1"=150'

RESIDENTIAL AREA

CONDITIONED SPACE
MAIN LEVEL: 1623 S.F.
STAIRWELL: 207 S.F.

OUTDOOR AREA
COVERED ENTRY: 96 S.F.

UNCONDITIONED SPACE
GARAGE/SHOP: 1593 S.F.

TOTAL AREA: 3519 S.F.

| | | | | | |
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| | | | | | REVISIONS |

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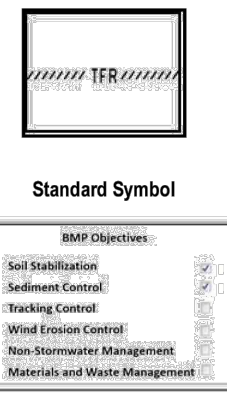
TIM WALSH
2027 IRVING DR., EUREKA, CA 95503
APN: 306-371-017-000

RESIDENTIAL DEVELOPMENT
SITE PLAN

JOB NO. 23-6050
SHEET NO. 1

Fiber Rolls

SC-5



Definition and Purpose

A fiber roll consists of wood excelsior, rice or wheat straw, or coconut fibers that is rolled or bound into a tight tubular roll and placed on the toe and face of slopes to intercept runoff, reduce its flow velocity, reduce the runoff as sheet flow and provide removal of sediment from the runoff. Fiber rolls may also be used for drainage inlet protection and as check dams under certain situations.

Appropriate Applications

This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the RE.

Fiber rolls may be applied as both temporary and permanent sediment controls.

Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.

Below the toe of exposed and erodible slopes.

Fiber rolls may be used as check dams in unlined ditches or as temporary drainage inlet protection Down-slope of exposed soil areas.

Around temporary stockpiles.

Along the perimeter of a project.



Fiber Rolls

SC-5

Wood stakes must be untreated fir, redwood, cedar, or pine and cut from sound timber. The ends must be pointed for driving into the ground. Notched stakes must be at least 1 by 2 by 24 inches in size. Stakes without notches must be at least 1 by 1 by 24 inches.

Typical Fiber Roll Installation

Before installing fiber roll, remove obstructions from the ground, including rocks, clods, and debris greater than 1 inch in diameter.

For any 20-foot section of fiber roll, prevent the fiber roll from varying more than 5 percent from level.

Use the following spacing unless otherwise noted on the project plans or special provisions:

- 10 feet apart for slopes steeper than 2:1 (H:V)
- 15 feet apart for slopes from 2:1 to 4:1 (H:V)
- 20 feet apart for slopes from 4:1 to 10:1 (H:V)
- 50 feet apart for slopes flatter than 10:1 (H:V)

For Type 1 installations:

- Place in a furrow that is from 2 to 4 inches deep.
- Fasten with wood stakes every 4 feet along the length of the fiber roll.
- Fasten the ends of the fiber roll by placing a stake 6 inches from the end of the roll.
- Drive the stakes into the soil so the top of the stake is less than 2 inches above the top of the fiber roll.

For Type 2 installations:

- Fasten with notched wood stakes and rope.
- Drive stakes into the soil until the notch is even with the top of the fiber roll.
- Lace the rope between stakes and over the fiber roll. Knot the rope at each stake.
- Tighten the fiber roll to the surface of the slope by driving the stakes further into the soil.

If more than one fiber roll is placed in a row, the rolls should be overlapped; not abutted. Stagger overlapping joints in adjacent rows by 5 to 10 feet.

Typical Large Sediment Barrier Installation

Place a single row of fiber rolls end-to-end, approximately parallel with the slope contour. For any 20-foot section of fiber roll, do not allow the fiber roll to vary by more than 5 percent from level.

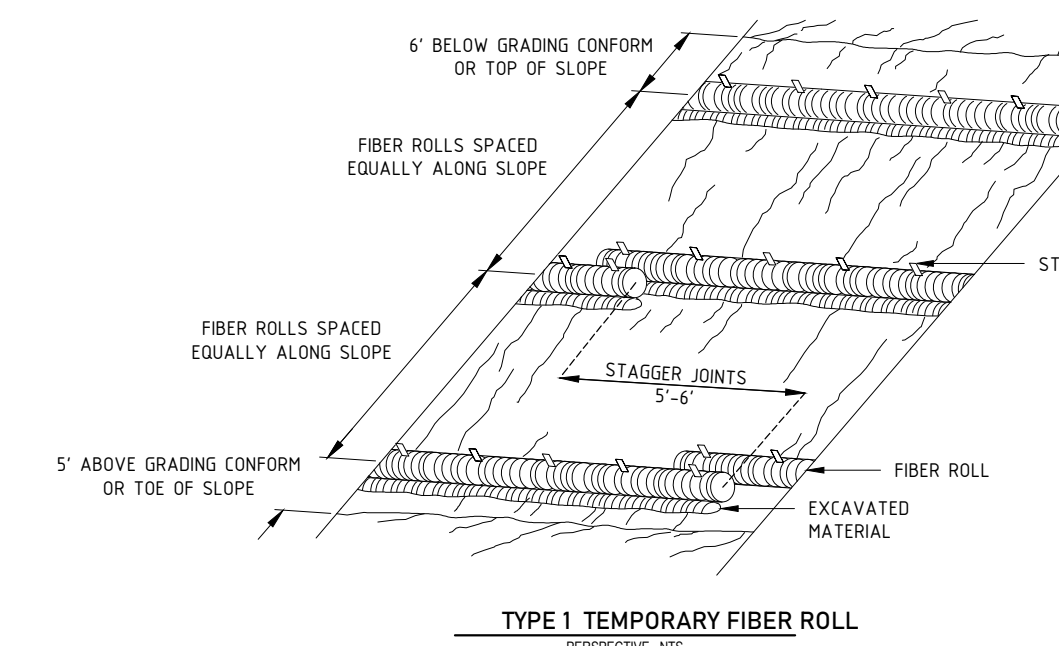
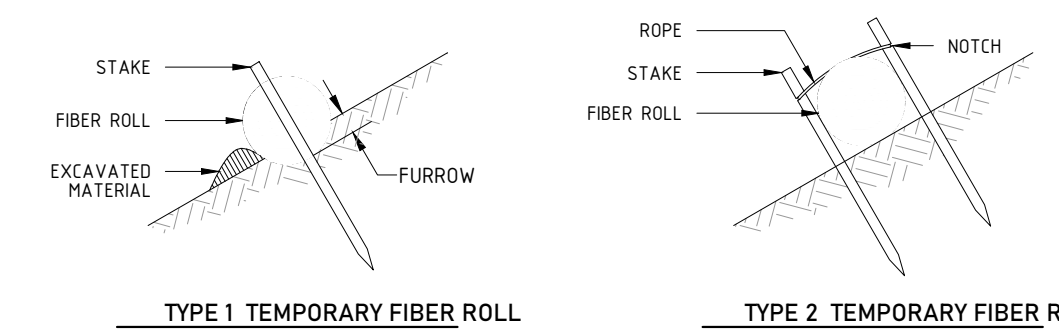
Place the fiber rolls in a furrow that is from 6 to 8 inches deep.

Secure the fiber rolls with wood stakes 4 feet apart.

Place a stake 18 inches from each end of each fiber roll.

Drive the stakes into the soil such that the top of the stakes are less than 2 inches above the top of the fiber rolls.

Angle the last 6 feet upslope at the downhill end of the run.



Fiber Rolls

SC-5

Limitations

Runoff and erosion may occur if fiber roll is not adequately trenched in.

Fiber rolls at the toe of slopes greater than 5:1 (H:V) may require the use of a large sediment barrier as specified in Standard Specifications Section 13-10.03D Temporary Large Sediment Barrier or installations achieving the same protection (i.e., stacked smaller diameter fiber rolls, etc.).

Difficult to move once saturated.

Fiber rolls could be transported by high flows if not properly staked and trenched in.

Fiber rolls have limited sediment capture zone.

Do not use fiber rolls on slopes subject to creep, slumping, or landslides.

Plastic netting should not be used when regulatory permits prohibit their use or if there is a potential for plastic netting to endanger wildlife.

Plastic netting is only allowed where fiber rolls will be for short duration and will be removed.

Standards and Specifications

Materials

Fiber rolls must be premanufactured and filled with weed-free rice or wheat straw, wood excelsior, or coconut fiber. Fiber roll must be covered with biodegradable jute, sisal, or coir fiber netting secured tightly at each end.

Fiber rolls must have a minimum functional longevity of 1 year.

Fiber rolls must be:

- 8 to 10 inches in diameter and at least 1.1 lb/ft
- 10 to 12 inches in diameter and at least 3 lb/ft

Large sediment barriers are a subset of fiber rolls. Large sediment barriers must be:

- 18 to 22 inches in diameter
- At least 8 ft in length
- At least 6.5 lb/ft

Fiber rolls used within the jurisdiction of the Lahontan RWQCB must be made entirely of biodegradable materials if the project is near an ESA area, they are intended to be left in place after construction is completed or there are regulatory permits prohibiting the use of non-photo/biodegradable fiber rolls.

Submit a Certificate of Compliance for fiber rolls.

Rope to fasten fiber rolls must be 1/4 inch in diameter and biodegradable, such as sisal or manila.



Fiber Rolls

SC-5

Removal

For permanent installations, do not remove fiber rolls. Fiber rolls will degrade over time, while underlying soils are stabilized by other BMPs.

For temporary installations, remove fiber rolls, collect and dispose of sediment accumulation, and fill and compact holes, trenches, depressions or any other ground disturbance to blend with adjacent ground.

Maintenance and Inspection

Remove sediment from behind the fiber roll if sediment is 1/3 of fiber roll height above ground.

Repair or adjust the fiber roll if rills or other evidence of concentrated runoff occur beneath the fiber roll.

Repair or replace the fiber roll if they become split, torn, or unraveled.

Add stakes if the fiber roll slumps or sags.

Replace broken or split wood stakes.

Remove sediment deposits, trash, and debris from fiber roll as needed. If removed sediment is deposited within project limits, it must be stabilized and not exposed to erosion by wind or water.

Perform maintenance as needed or as required by the RE or CGP or LTCCP requirements.

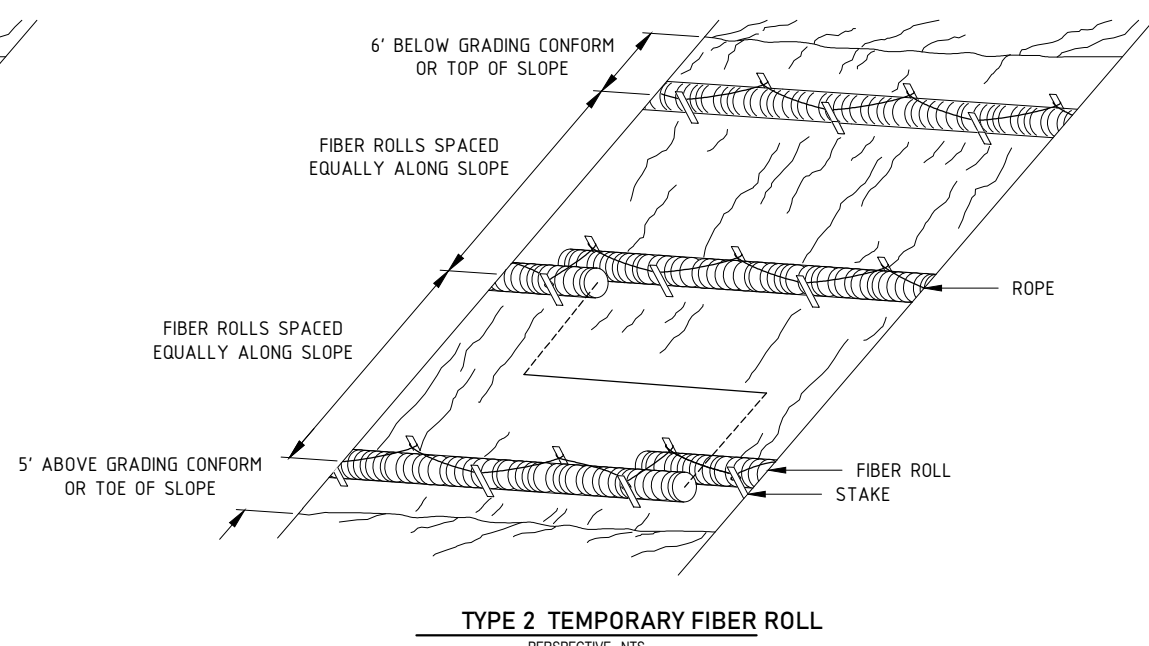
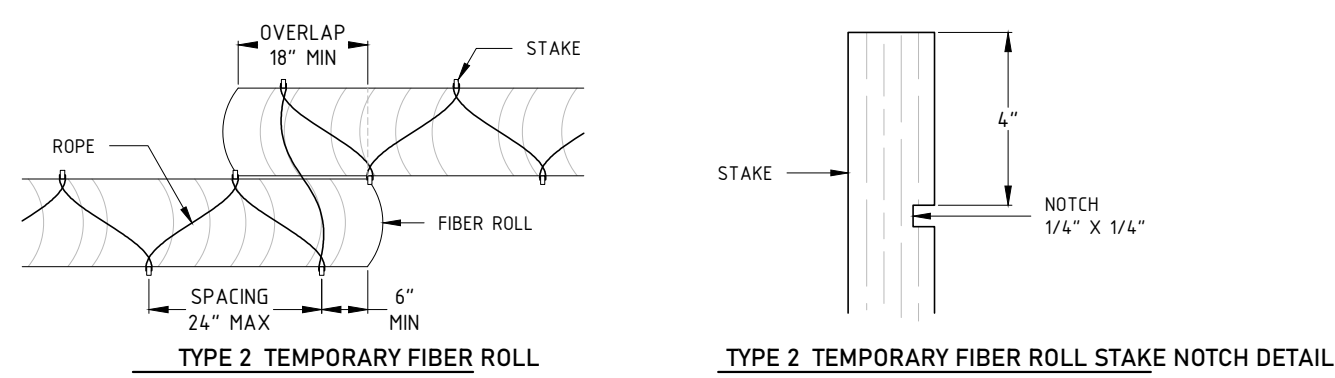
Inspect fiber rolls before and following rainfall events and a least daily during prolonged rainfall. Perform maintenance as needed or as required by the RE.

Maintain fiber rolls to provide an adequate sediment holding capacity and runoff velocity reduction.

Fiber roll placement must be shown on the WPCDs.

SWPPP or WPCP

Fiber rolls must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WPCP.



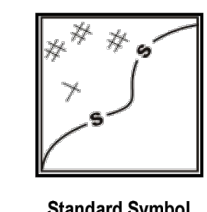
GENERAL

OWNER(S): TIM WALSH
 ORGANIZERS: A.M. BAIRD ENGINEERING & SURVEYING, INC.
 PROJECT LOCATION: SITE APN: 306-371-017
 PROJECT DESCRIPTION: GRADING PROJECT CONSISTS OF PLACING APPROXIMATELY 13,230 CUBIC YARDS OF FILL WITHIN A FOOTPRINT OF APPROXIMATELY 13,230 SQUARE FEET ONSITE.
 ENGINEER'S DECLARATION: THIS EROSION & SEDIMENT CONTROL PLAN WAS PREPARED BY A.M. BAIRD ENGINEERING & SURVEYING UNDER THE DIRECTION OF ALLAN BAIRD, RCE #23681 & IS ADOPTED FROM THE CALTRANS CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (BMPs) MANUAL MAY 2017.

- GRADING & EROSION CONTROL MEASURES TO BE TAKEN AT TIME OF PERMIT & TO CONTINUE THROUGHOUT CONSTRUCTION PROCESS.
- OWNER(S) INTEND TO BEGIN CONSTRUCTION AS SOON AS PERMIT IS ISSUED.
- IF CONSTRUCTION IS TO OCCUR BETWEEN OCTOBER 15 AND APRIL 15, SITE INSPECTIONS WILL BE CONDUCTED BY THE CONTRACTOR AND/OR OWNER(S); PRIOR TO A FORECASTED STORM, AFTER A RAIN EVENT, WEEKLY THROUGHOUT THE RAINY SEASON, AND EVERY TWO WEEKS THROUGHOUT CONSTRUCTION.
- SITE 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.
- 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 SAID RECOMMENDATION(S).
- IF A FOOTING REVIEW IS REQUIRED, SITE MUST BE EVALUATED BY AN ENGINEER, AND IF NECESSARY, ADDITIONAL EROSION CONTROL MEASURES WILL BE TAKEN.

Straw Mulch

SS-6



Definition and Purpose

Straw mulch consists of placing a uniform layer of straw and incorporating it into the soil with a studded roller, or anchoring it with a tackifier or Rolled Erosion Control Product (RECP). This is one of the temporary soil stabilization alternatives to consider.

Appropriate Applications

Straw mulch is typically used for soil stabilization as a temporary surface cover on disturbed areas until soils can be prepared for revegetation and permanent vegetation is established.

Also typically used in combination with temporary and/or permanent seeding strategies to enhance plant establishment.

Limitations

Availability of erosion control contractors and straw may be limited prior to the rain events due to high demand.

There is a potential for introduction of weed-seed and unwanted plant material.

Straw mulch applied by hand is more time intensive and potentially costly.

May have to be removed prior to permanent seeding or soil stabilization.



Straw Mulch

SS-6

"Punching" of straw does not work in sandy soils, must use a tackifier.

Standards and Specifications

General Requirements

Straw and tackifier must conform to Standard Specifications Sections 21-2.02H, 21.2-03G and 21-2.02E.

Submit a certificate of compliance for straw before application. If weed-free straw is used, the certificate of compliance must include the certificate of quarantine compliance.

Straw must be derived from wheat, rice, or barley.

A tackifier is the preferred method for anchoring straw mulch to the soil on slopes.

Selected tackifier must be environmentally benign (non-toxic to plants and animal life) and does not pose a threat to water quality.

Crimping, "punch" roller-type rollers, or track-walking may also be used to incorporate straw mulch into the soil on slopes. Track walking shall only be used where other methods are impractical.

Avoid placing straw onto the traveled way, sidewalks, lined drainage channels, sound walls, and existing vegetation.

Straw mulch with tackifier should not be applied during or immediately before a rain event.

Application Procedures

Apply loose straw at the rate indicated either by machine or by hand distribution.

The straw mulch must be evenly distributed on the soil surface.

Straw may be anchored in place by incorporating it into soil or using a tackifier. Additionally, in small areas and/or steep slopes, straw mulch can also be held in place using Rolled Erosion Control Product. Refer to BMP SS-7, "Temporary Cover and Rolled Erosion Control Products."

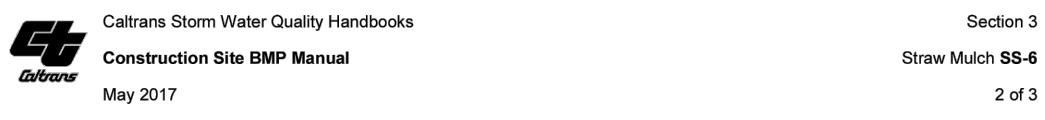
If a tackifier will be used to anchor the straw mulch in lieu of incorporation, roughen embankment or fill areas by rolling with a crimping or punching-type roller. Track walking should only be used where rolling is impractical.

A tackifier acts to glue the straw fibers together and to the soil surface. Factors influencing tackifier selection include longevity and ability to hold the fibers in place.

Apply tackifier according to the manufacturer's instructed rate for the slope, soil, and wind conditions.

If incorporation of straw mulch into soil is the selected method for anchoring, then do as follows:

- A spade or shovel can be used to incorporate straw into soil in small areas.



DISPOSAL OF EXCAVATED MATERIALS

- APPROXIMATELY 309.7-CY OF GRADING TO BE PERFORMED ONSITE. NO MATERIAL (SOIL) TO BE EXPORTED OFF SITE. CUT AND FILL TO BE BALANCED ON SITE.
- CUT & FILL SLOPES ARE NOT TO EXCEED 2H:1V UNITS; RUNOFF FROM ROOF/DRIVEWAY SHALL BE DIRECTED AWAY FROM CUT & FILL AREAS.
- EROSION OF EXPOSED EXCAVATED MATERIALS WILL BE PREVENTED BY COMPACTING TO 90% BY TRACKING W/ HEAVY EQUIPMENT IN EIGHT INCH (8") LIFTS. MULCHING, & RE-SEEDING IMMEDIATELY FOLLOWING PLACEMENT, IN ORDER TO BE ABLE TO ACHIEVE A 90% TESTED COMPACTION WITH ASTM D154 OR EQUIVALENT.
- ALL HISTORICAL FILL SHALL BE REMOVED AND RE-SPREAD & COMPACTED IN EIGHT INCH LIFTS IN ORDER TO BE ABLE TO ACHIEVE A 90% OF MAX. R/C USING ASTM D154 OR EQUIVALENT, OR SOILS BE TESTED IN SITU FOR COMPLIANCE.

REMOVAL OF VEGETATION & RE-VEGETATION

- EXISTING VEGETATION SHALL BE PROTECTED BY ESTABLISHING THE CONSTRUCTION BOUNDARY PRIOR TO COMMENCEMENT OF SOIL-DISTURBING ACTIVITIES.
- EXISTING VEGETATION TO BE DISTURBED BY GRADING ACTIVITIES SHALL BE REPLACE W/ NATIVE GRASSES.
- ALL EXPOSED CUT &/OR FILL SLOPES SHOULD BE RE-VEGETATED TO MATCH EXISTING VEGETATION IN SURROUNDING AREA.
- CUT &/OR FILL SLOPES ARE LESS THAN NATURALLY OCCURRING SLOPES THAT SUPPORT PERMANENT VEGETATION.
- 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.

Straw Mulch

SS-6

- On slopes with soils that are stable enough and of sufficient gradient to safely support construction equipment without contributing to compaction and instability problems, straw can be "punched" into the ground using a knife-blade roller or a straight bladed couler, known commercially as a "crimper" under Section 21-2.03J of the Standard Specifications.

Maintenance and Inspection

Straw needs to last long enough to achieve erosion control objectives.

Maintain an unbroken, temporary mulched ground cover while DSAs are inactive. Repair any damaged ground cover and re-mulch exposed areas.

Reapplication of straw mulch and tackifier may be required by the RE to maintain effective soil stabilization over disturbed areas and slopes.

After any rainfall event, the Contractor is responsible for maintaining all slopes to prevent erosion.

SWPPP or WPCP

Straw Mulch must be discussed in Section 500.3.2 of the SWPPP or Section 30.2 of the WPCP.



LEGEND

- PROPERTY LINE
- PROPOSED DISTURBED AREA = 13,230 S.F.
- EXISTING ELEVATION CONTOUR, 10 FT
- EXISTING ELEVATION CONTOUR, 2 FT
- PROPOSED ELEVATION CONTOUR, 10 FT
- PROPOSED ELEVATION CONTOUR, 2 FT
- FIBER ROLL
- DRAINAGE DIRECTION
- CUT
- FILL
- <E> EXISTING
- <P> PROPOSED

NOTES

- NO TREES 12"Ø OR GREATER TO BE REMOVED.
- NO STREAM(S) OR WETLAND(S) IN DEVELOPMENT AREA.
- NO HISTORICAL BUILDINGS OR KNOWN ARCHAEOLOGICAL OR PALEONTOLOGICAL RESOURCES IN DEVELOPMENT AREA.
- RE-VEGETATE ALL DISTURBED AREAS W/ NATIVE GRASSES & COVER W/ STRAW MULCH. KEEP MOIST UNTIL VEGETATION HAS BECOMES 70% ESTABLISHED.
- ENGINEERED GRADING, EXCAVATION, EROSION AND SEDIMENT CONTROL IS IN CONFORMANCE WITH THE COUNTY OF HUMBOLDT GRADING ORDINANCE COUNTY CODE SECTION 311-14.

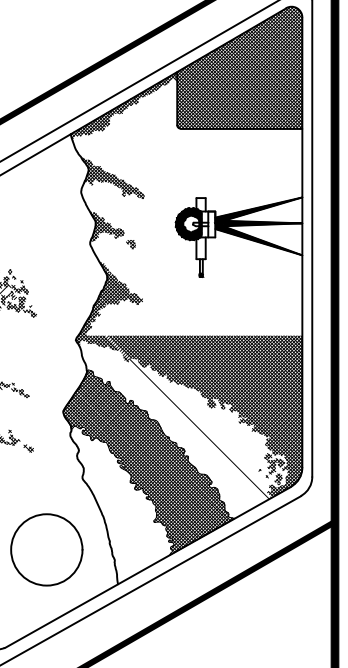


EROSION CONTROL PLAN

SCALE: 1"=20'

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| | | | | | | REVISIONS |

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 ambaird@saudenlinkmail.com



| | |
|----------|-----------------------------|
| SCALE | AS NOTED ON 24" X 36" PAPER |
| DRAWN BY | CPL |
| CHKD | A.M.B. |
| DATE | 06/09/2025 |

TIM WALSH
 2027 IRVING DR., EUREKA, CA 95503
 APN: 306-371-017-000

RESIDENTIAL DEVELOPMENT

EROSION CONTROL PLAN & BMPs

JOB NO. 23-6050

SHEET NO. 1