

APPENDIX A

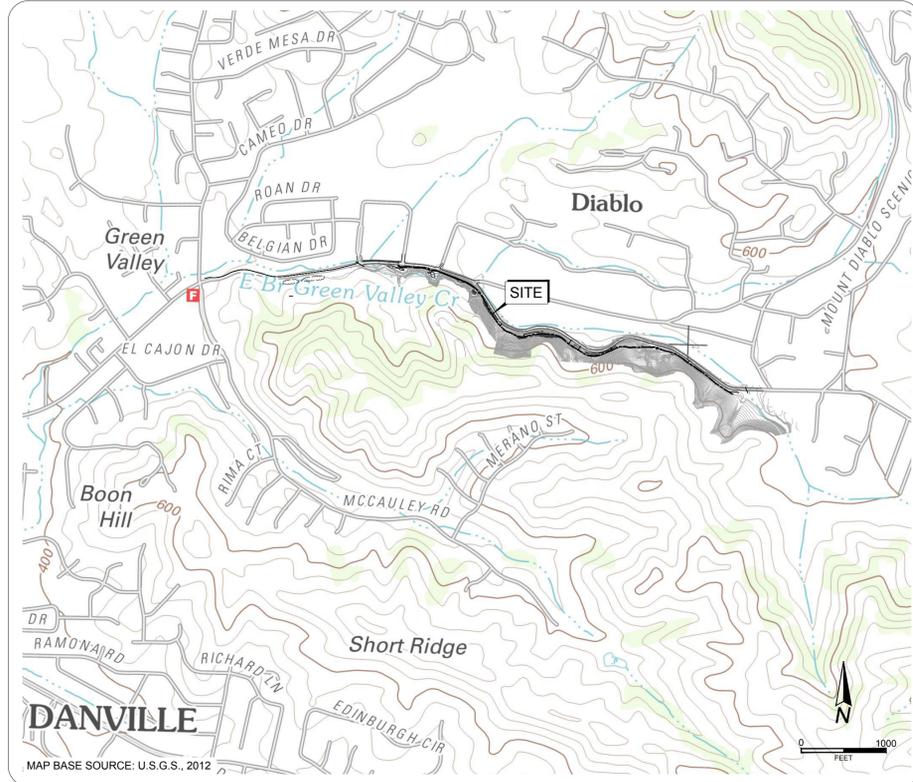
PLANS

Plans

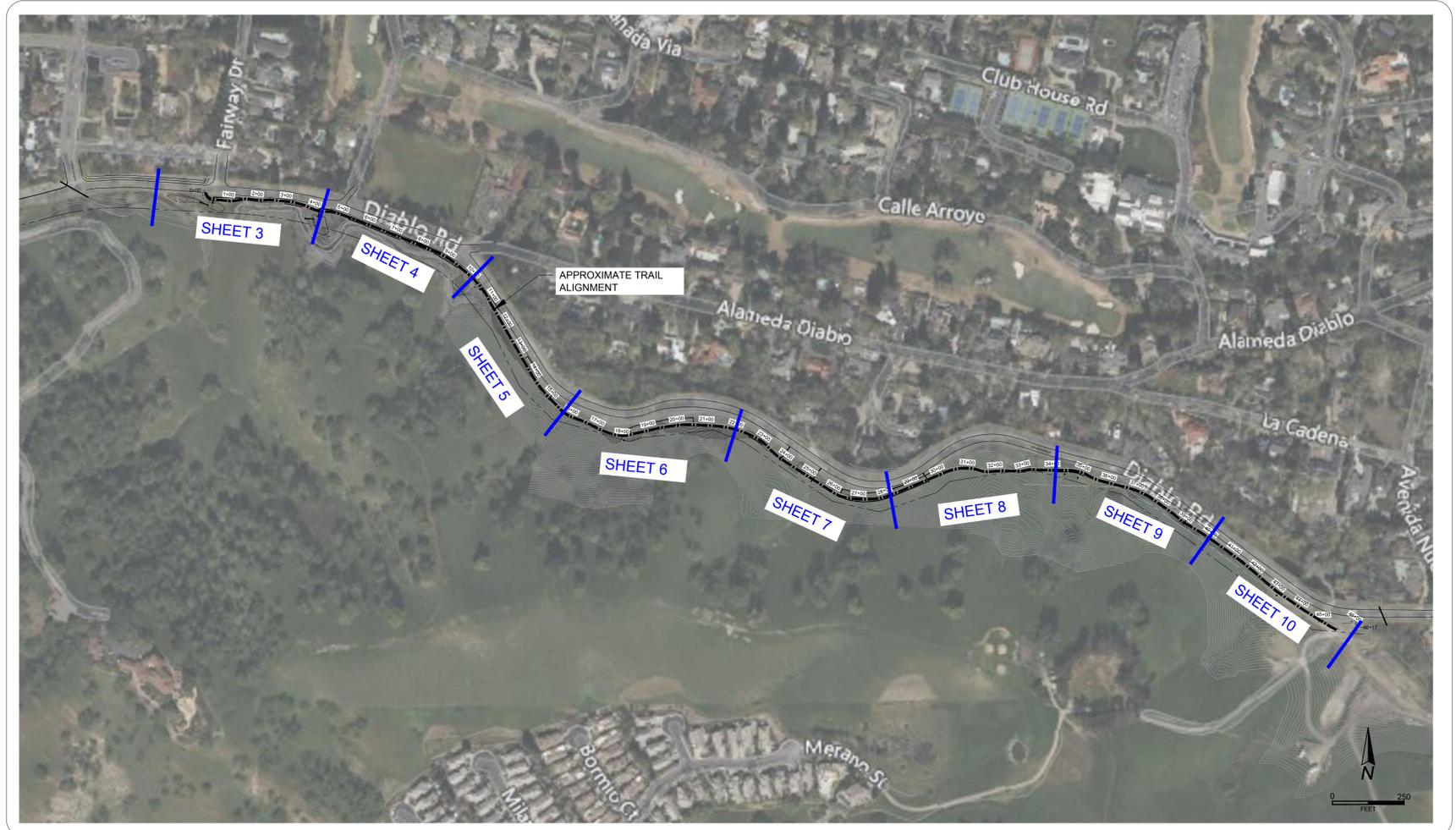
TOWN OF DANVILLE

CONTRA COSTA COUNTY, CALIFORNIA

IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL



VICINITY MAP



SITE PLAN

SHEET INDEX

SHEET NUMBER	TITLE
1	COVER SHEET
2	NOTES, LEGEND, & ABBREVIATIONS
3	PLAN AND PROFILE (STA: 0+00 - 5+00)
4	PLAN AND PROFILE (STA: 5+00 - 10+50)
5	PLAN AND PROFILE (STA: 10+50 - 15+50)
6	PLAN AND PROFILE (STA: 15+50 - 22+00)
7	PLAN AND PROFILE (STA: 22+00 - 28+00)
8	PLAN AND PROFILE (STA: 28+00 - 34+00)
9	PLAN AND PROFILE (STA: 34+00 - 40+00)
10	PLAN AND PROFILE (STA: 40+00 - 45+50)
11	EMBANKMENT 1 CROSS SECTIONS
12	EMBANKMENT 2 CROSS SECTIONS
13	EMBANKMENT 3 CROSS SECTIONS
14	MSE WALL SECTIONS AND DETAILS
15	MSE WALL SECTIONS AND DETAILS
16	SOLDIER PILE @ DEBRIS WALLS SECTIONS AND DETAILS
17	SOLDIER PILE WALLS PROFILES
18	CONSTRUCTION DETAILS
19	DEMOLITION PLAN
20	FENCING, PLANTING AND EROSION AND SEDIMENT CONTROL PLAN
21	FENCING AND EROSION CONTROL PLAN
22	EROSION AND SEDIMENT CONTROL DETAILS

TOPOGRAPHIC SURVEY NOTES

- ALL DISTANCES SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.
- PHYSICAL ITEMS SHOWN ON THIS SURVEY ARE LIMITED TO THOSE SURFACE ITEMS VISIBLE AS OF THE DATE OF THIS SURVEY. SUBSURFACE OBJECTS NOT SHOWN MAY INCLUDE, BUT ARE NOT LIMITED TO, CONCRETE FOOTINGS, SLABS, SHORING, STRUCTURAL PILES, UTILITY VAULTS, PIPING, UNDERGROUND TANKS, AND ANY OTHER SUBSURFACE STRUCTURES NOT REVEALED BY A SURFACE INSPECTION OR PER SITE IMPROVEMENT PLANS.
- DIMENSIONAL TIES TO IMPROVEMENTS ARE 90° TO THE PROPERTY LINES UNLESS NOTED OTHERWISE.
- THE FIELD DATA FOR THIS SURVEY WAS COLLECTED USING A LEICA RTC 360 LASER SCANNER AND THE TRIMBLE SS 1 SECOND TOTAL STATION.
- THE TOPOGRAPHIC POINTS AND LINE WORK SHOWN HEREON WERE MAPPED FROM THE LASER SCAN POINT CLOUD.
- POINT ELEVATIONS ARE FOR THE FEATURE DESCRIBED AND DO NOT CORRESPOND PRECISELY TO THE ADJACENT HORIZONTAL LOCATION. PRECISE LINE WORK WAS DERIVED FROM THE LASER SCAN POINT CLOUD.

PROJECT SURVEY CONTROL

THE PROJECT CONTROL IS BASED ON THE SURVEY BY GUIDA SURVEYING INC. JOB NUMBER 0220-00386 AS SHOWN BELOW:

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN POINT 10000 AND POINT 10001, BEING N33°51'53"W, AS DERIVED BY REAL TIME NETWORK MEASUREMENT BASED UPON THE CALIFORNIA COORDINATE SYSTEM 1983 (CCS83), ZONE III, NORTH AMERICAN DATUM OF 1983 (NA2011, EPOCH 2011.00)

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
10000	2129990.56'	6138040.34'	482.51'	SET MAG AC ALAMEDA DIABLO & DIABLO RD
10001	2129988.56'	6138243.01'	500.01'	SET MAG AC DIABLO RD
10002	2129934.20'	6138060.40'	485.36'	SET MAG SPK ALAMEDA DIABLO RD
11000	2129924.40'	6138013.93'	482.84'	FND 1.5" OPEN IP NONE DOWN 2"

BENCHMARK:

ELEVATIONS SHOWN HEREON ARE BASED ON THE PUBLISHED ELLIPSOID HEIGHTS OF THE C.O.R.S. STATIONS CALCULATING THE GEOID SEPARATION TO DERIVE ELEVATIONS FOR NAVD 88 (GEOID2012A), PER RECORDS ON FILE WITH THE CALIFORNIA SPATIAL REFERENCE CENTER.

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DRAWN BY: JDB
CHECKED BY: JDB
DATE: MAY 2025
SCALE: AS SHOWN



COVER SHEET
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
1
OF 22 SHEETS
PROJECT NO.
8870.000.011

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GENERAL NOTES:

- ALL WORK IS TO BE DONE UNDER THE OVERSIGHT OF THE ENGINEER.
- IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORK HOURS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND CONSTRUCTION OF PROPER SHORING OF EXCAVATIONS IN ACCORDANCE WITH THE LATEST OCCUPATIONAL SAFETY LAWS. THE DUTIES OF THE ENGINEER DO NOT INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY IN, ON, OR NEAR THE CONSTRUCTION SITE.
- CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES DURING CONSTRUCTION. PROPER REPAIR SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER AND THE RESPECTIVE UTILITY COMPANY.
- ALL PIPELINES AND OTHER UNDERGROUND UTILITIES MAY NOT BE SHOWN, AND WHERE SHOWN, ARE APPROXIMATELY LOCATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD. CALL "UNDERGROUND SERVICE ALERT" AT 800-227-2600 AT LEAST 48 HOURS BEFORE EXCAVATION OR DEMOLITION FOR IMPROVEMENTS. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY LOCATIONS, ELEVATIONS, ETC. OF EXISTING FACILITIES AND TO IMMEDIATELY NOTIFY THE ENGINEER OF ANY FIELD CONFLICTS OR OMISSIONS.
- ALL CONSTRUCTION MUST CONFORM TO CALTRANS STANDARD PLANS & SPECIFICATIONS DATED 2023 AND TOWN OF DANVILLE STANDARD PLANS DATED MARCH 1989. ALL CONSTRUCTION MUST BE ACCEPTED BY THE PUBLIC WORKS INSPECTOR. TYPICAL DETAILS REFERRED TO ON THESE DRAWINGS ARE DERIVED FROM THESE STANDARD PLANS (AND ANY ADDENDUM THERETO), AND ARE AVAILABLE AT THE OFFICE OF THE PUBLIC WORKS INSPECTOR.
- CONTRACTOR IS RESPONSIBLE FOR MAKING ALL ARRANGEMENTS FOR SITE INSPECTIONS AND SHALL ENSURE THAT ALL CURRENT TOWN OF DANVILLE STANDARDS ARE OBSERVED PRIOR TO BEGINNING OF ANY PHASE OF CONSTRUCTION WORK.
- DUST CONTROL DURING ALL PHASES OF CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR.
- WATER USED FOR DUST CONTROL AND COMPACTION MAY BE PURCHASED FROM EAST BAY MUD PRIOR TO THE START OF ANY WORK. ANY FEES OR DEPOSITS ARE THE CONTRACTOR'S RESPONSIBILITY.
- ANY DAMAGE TO THE EXISTING FACILITIES INCLUDING, TREES, AND FENCES SHALL BE REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE.
- CONTRACTOR IS RESPONSIBLE TO MEET WITH TOWN OF DANVILLE AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION AND PROVIDE 24 HOURS NOTICE ON ALL INSPECTIONS.
- HAUL ROUTES SHALL BE ONLY ON STREETS AS PRE-APPROVED BY THE CITY ENGINEER.
- TESTING AND OBSERVATION FOR THE PROJECT SHALL BE IN CONFORMANCE WITH THE TOWN OF DANVILLE QUALITY ASSURANCE PROGRAM DATED MAY 2022.
- THE CONTRACTOR SHALL MONITOR AND MAINTAIN RECORDS OF THE NATIONAL WEATHER SERVICE 72-HOUR FORECAST ON A DAILY BASIS AND BE PREPARED TO IMPLEMENT EMERGENCY EROSION CONTROL MEASURES IN THE EVENT OF RAIN OR IF THE PREDICTION FOR RAIN EXCEEDS 20 PERCENT, ALL CONSTRUCTION ACTIVITIES SHALL CEASE AND ALL REASONABLE EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO THE ONSET OF PRECIPITATION.
- ALL ELEVATIONS SHOWN ARE FINISHED ELEVATIONS UNLESS STATED OTHERWISE.
- CONTRACTOR SHALL LAY OUT ALL WORK. ESTABLISH ALL NECESSARY MARKERS, BENCH MARKS, GRADING STAKES, AND OTHER STAKES AS REQUIRED TO ACHIEVE DESIGN GRADES.
- PLAN BASED ON TOPOGRAPHIC SURVEY PROVIDED BY THE TOWN, DATED DECEMBER 2, 2020 AND CHAPPELL GEOMATRIX DATED APRIL, 2024 AND AUGUST, 2024.

ENVIRONMENTAL NOTES:

- THE CONTRACTOR SHOULD BE PREPARED TO IDENTIFY HOW THE WORK BELOW TOP OF BANK IN GREEN VALLEY CREEK WILL BE PROTECTED IN THE EVENT OF AN UNREASONABLE STORM EVENT.
- ALL CREEK IMPROVEMENTS SHOWN ON THESE PLANS WILL BE PROPERLY IN PLACE PRIOR TO THE RAINY SEASON.
- NO EQUIPMENT SHALL BE OPERATED IN AREAS OF FLOWING OR STANDING WATER; NO FUELING, CLEANING OR MAINTENANCE OF VEHICLES OR EQUIPMENT SHALL TAKE PLACE WITHIN ANY AREAS WHERE AN ACCIDENTAL DISCHARGE TO GREEN VALLEY CREEK MAY OCCUR; CONSTRUCTION MATERIALS AND HEAVY EQUIPMENT MUST BE STORED OUTSIDE THE CREEK BANKS; ALL EARTH MOVING WORK SHALL BE PERFORMED OUTSIDE OF AREAS OF FLOWING WATER.
- PER THE PROJECT STREAMBED ALTERATION AGREEMENT, THE FOLLOWING CONSTRUCTION ACTIVITIES ARE RESTRICTED TO DATES INDICATED BELOW:
 - TREE REMOVALS MUST BE PERFORMED IN CONJUNCTION WITH TOWN PAID BIOLOGIST BETWEEN MARCH 1 THROUGH APRIL 15 AND SEPTEMBER 1 THROUGH OCTOBER 15.
 - WORK IN CREEK CORRIDOR RESTRICTED FROM JUNE 15 TO OCTOBER 15.
 - POURING OF CONCRETE IN CREEK CORRIDOR RESTRICTED FROM JUNE 15 THROUGH SEPTEMBER 15.

LEGEND:

- FOUND MONUMENT
- GUIDE CONTROL
- ASPH ASPHALT CONCRETE
- CONC CONCRETE
- DWY DRIVEWAY
- BARBED WIRE FENCE
- WOOD FENCE
- CONCRETE WALL
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- POST INDICATOR VALVE
- WATER METER
- WATER VALVE
- IRRIGATION CONTROL VALVE
- LIGHT
- GUY ANCHOR
- JUNCTION POLE
- POWER POLE
- TRAFFIC SIGNAL WITH ARM
- GATE POST
- GUARD POST
- SIGN
- TREE EXISTING
- TREE REMOVED IN 2025 BY THE TOWN
- TREE (E) TO BE REMOVED
- TREE PROTECTION DETAIL PER DETAIL 3 SHEET 23
- SEWER MANHOLE
- UTILITY PULL BOX
- DETAIL # SHEET #
- TYPICAL SECTION SHEET #
- 2 X 2 CATCH BASIN (TYPICAL); PER DETAIL 3; SHEET 18
- 3 X 3 ROCK APRON (TYPICAL); PER DETAIL 4; SHEET 18

ABBREVIATIONS

- AB AGGREGATE BASE
- ACP ASBESTOS CEMENT PIPE
- AS AGGREGATE SUBBASE
- BW BACK OF SIDEWALK
- BVC BEGIN VERTICAL CURVE
- C&G CURB AND GUTTER
- CB CATCH BASIN
- CL CENTER LINE
- CL CLEARANCE
- CMP CORRUGATED METAL PIPE
- DIA DIAMETER
- DET DETAIL
- DI DROP INLET
- DWG DRAWING
- E ELECTRIC
- EG EXISTING GRADE
- ELEV ELEVATION
- EP EDGE OF PAVEMENT
- EX EXISTING
- EVC END OF VERTICAL CURVE
- FC FACE OF CURB
- FL FLOW LINE
- FG FINISHED GRADE
- FOW FACE OF WALL
- G GAS LINE
- GA GAUGE
- GALV GALVANIZED
- HMA HOT MIX ASPHALT
- ID INSIDE DIAMETER
- INV INVERT GRADE ELEVATION
- LT LEFT
- MAX MAXIMUM
- MH MANHOLE
- MIN MINIMUM
- MON MONUMENT
- NTS NOT TO SCALE
- OC ON CENTER
- OD OUTSIDE DIAMETER CONCRETE
- PCC PORTLAND CEMENT
- PED PEDESTRIAN ELECTRIC CO.
- PG&E PACIFIC GAS &
- P/L PROPERTY LINE
- PVMT PAVEMENT
- R RADIUS
- RCP REINFORCED CONCRETE PIPE
- RR RAILROAD
- RT RIGHT
- R/W RIGHT-OF-WAY
- S SLOPE
- SD STORM DRAIN
- SS SANITARY SEWER
- STA STATION
- STD STANDARD
- T TELEPHONE
- TC TOP OF CURB
- TC TOP OF WALL
- TE TIP ELEVATION
- TYP TYPICAL
- W WATER
- Δ DELTA



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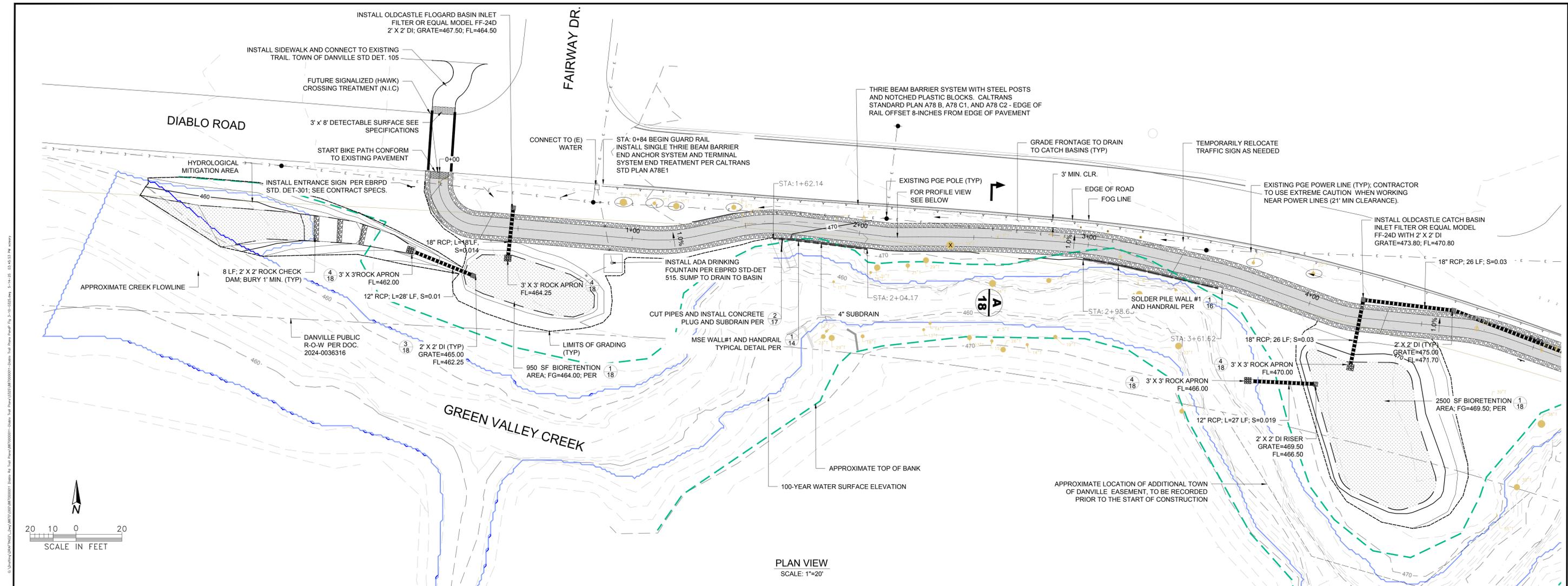


NOTES, LEGEND, AND ABBREVIATIONS

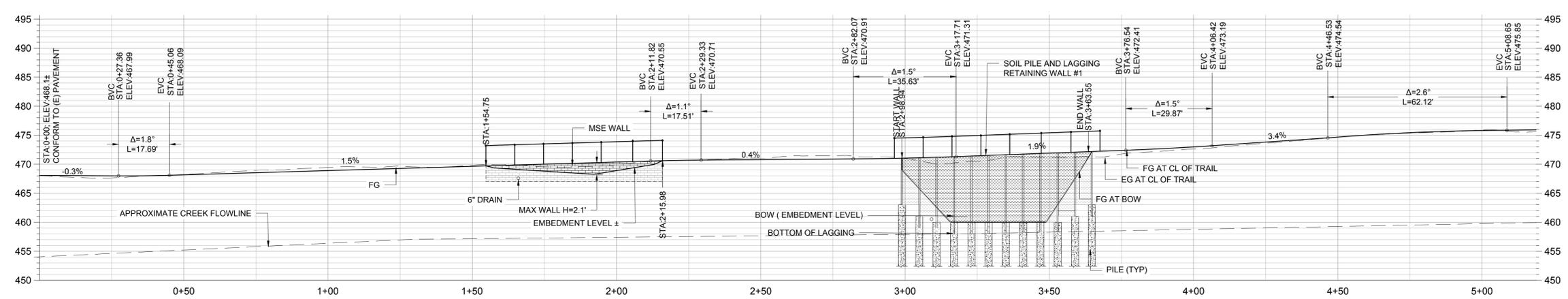
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL

TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
2
OF 22 SHEETS
PROJECT NO.
8870.000.011



PLAN VIEW
SCALE: 1"=20'



PROFILE VIEW
SCALE: 1"=20' (HORIZONTAL), 1"=10' (VERTICAL)



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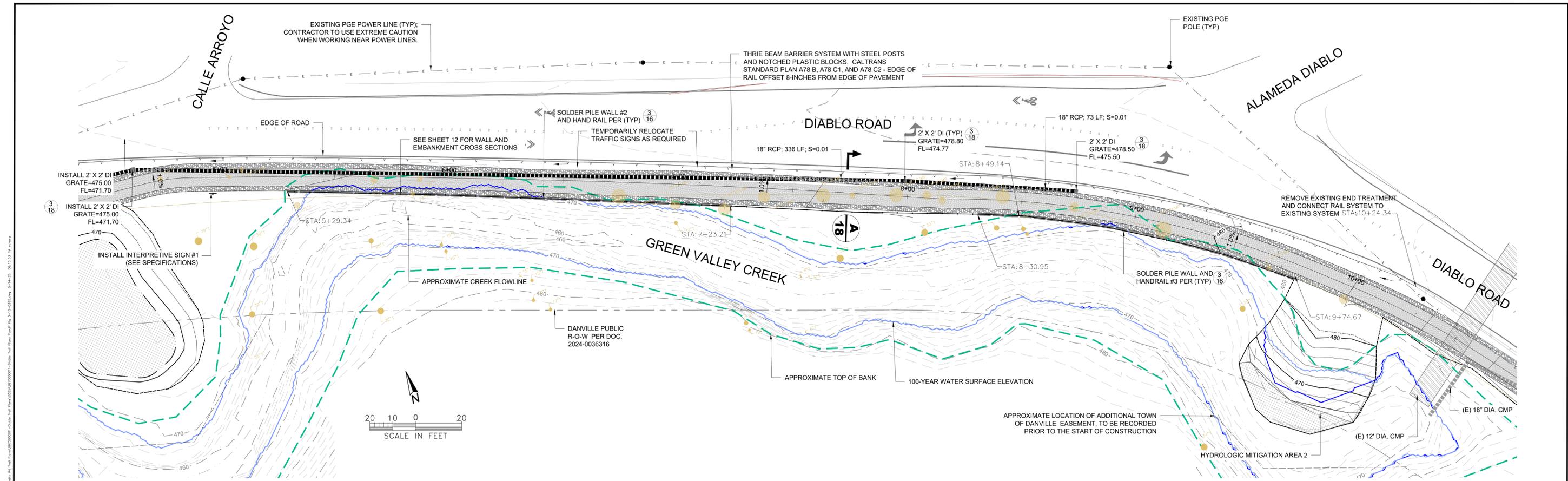
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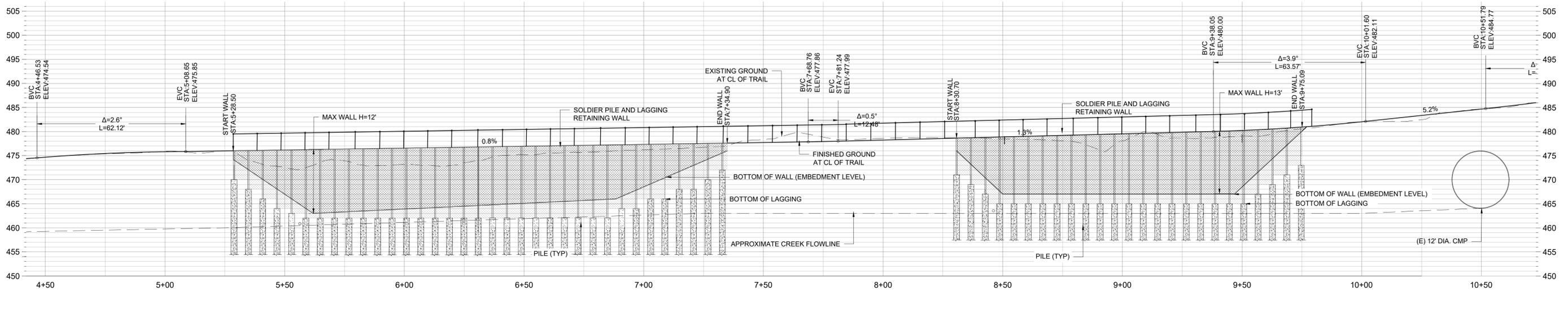
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IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
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PLAN VIEW
SCALE: 1"=20'



PROFILE VIEW
SCALE: 1"=20' (HORIZONTAL); 1"=10' (VERTICAL)



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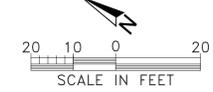
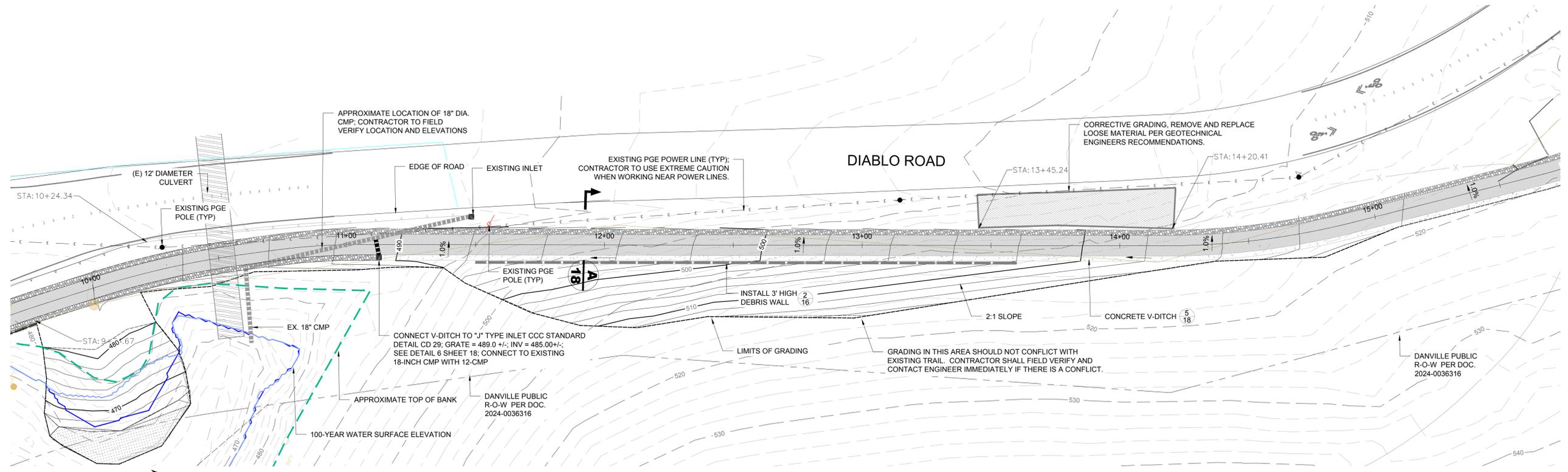
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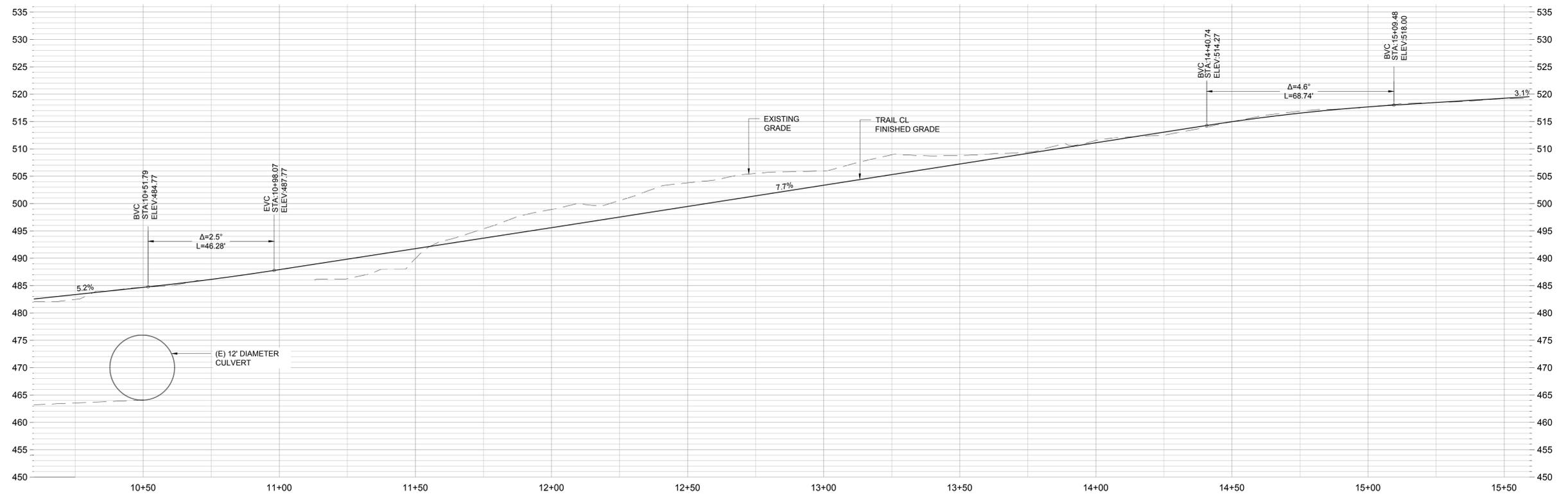
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IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
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PLAN VIEW
SCALE: 1"=20'



PROFILE VIEW
SCALE: 1"=20' (HORIZONTAL); 1"=10' (VERTICAL)



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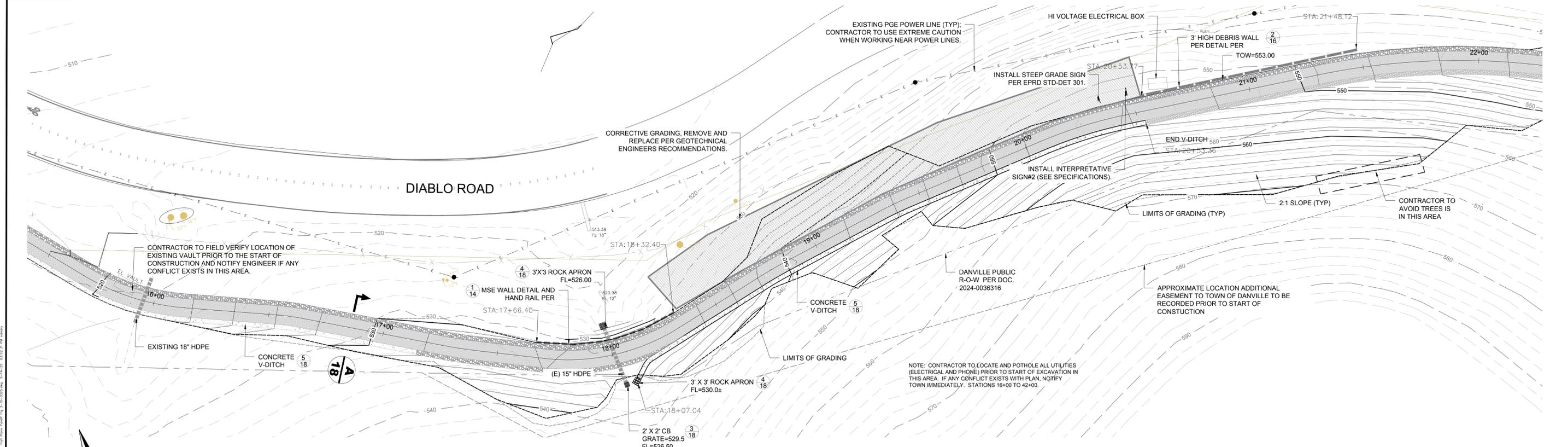
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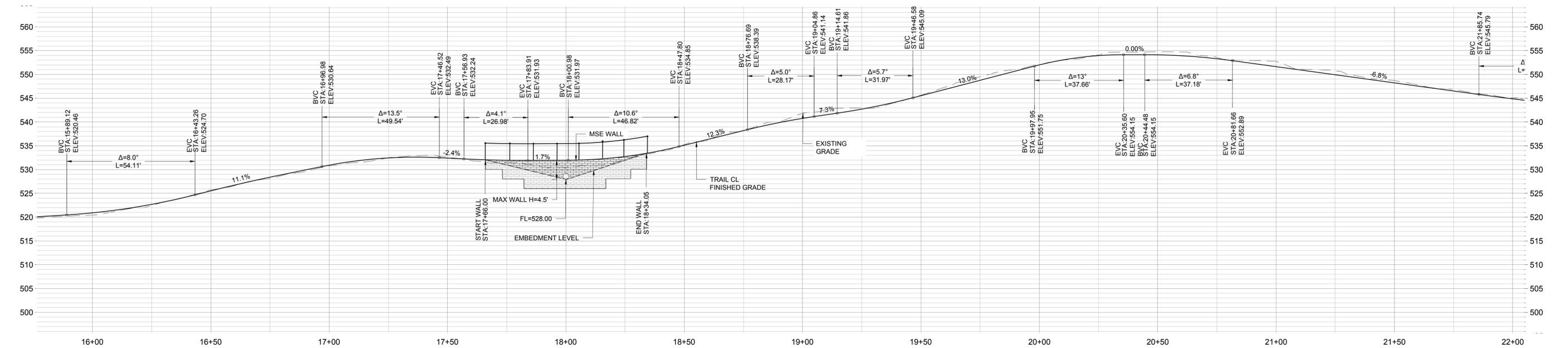
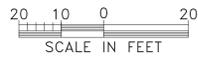
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IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
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PLAN VIEW
SCALE: 1"=20'



PROFILE VIEW
SCALE: 1"=20' (HORIZONTAL); 1"=10' (VERTICAL)



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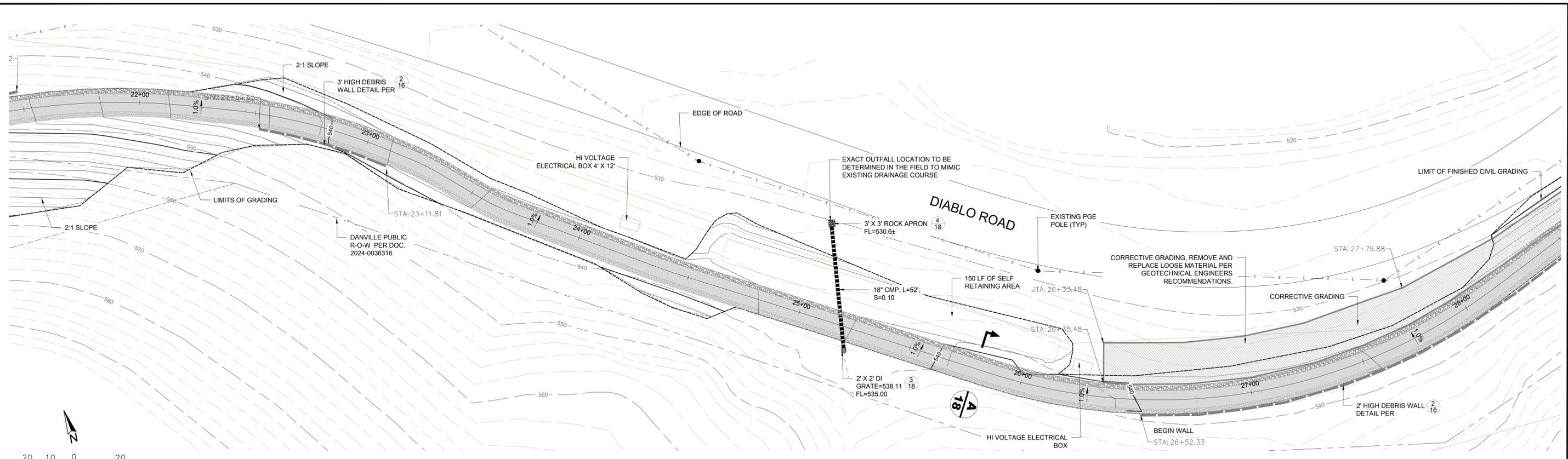
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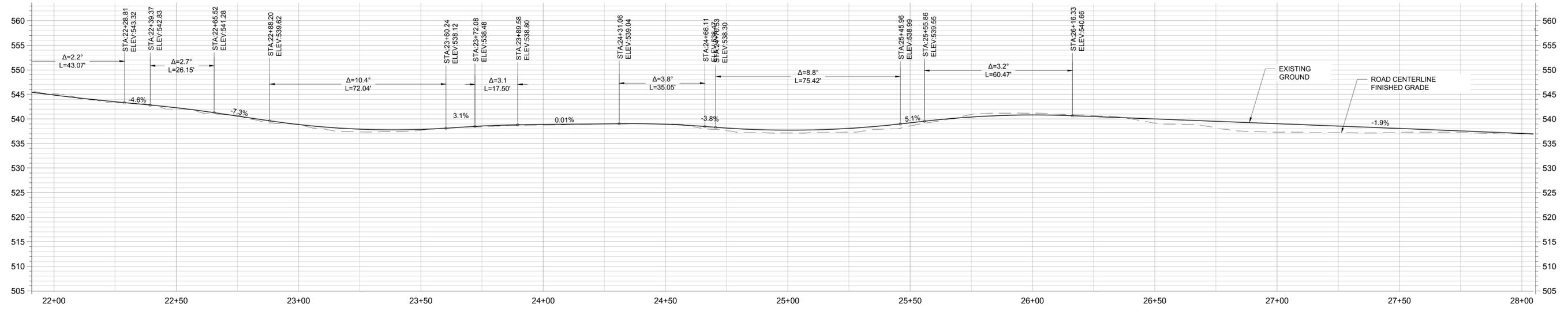


PLAN AND PROFILE STA: 15+50 - 22+00
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
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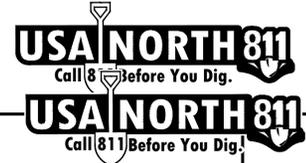
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PLAN VIEW
SCALE: 1"=20' (HORIZONTAL); 1"=10' (VERTICAL)



PROFILE VIEW
SCALE: 1"=20' (HORIZONTAL); 1"=10' (VERTICAL)



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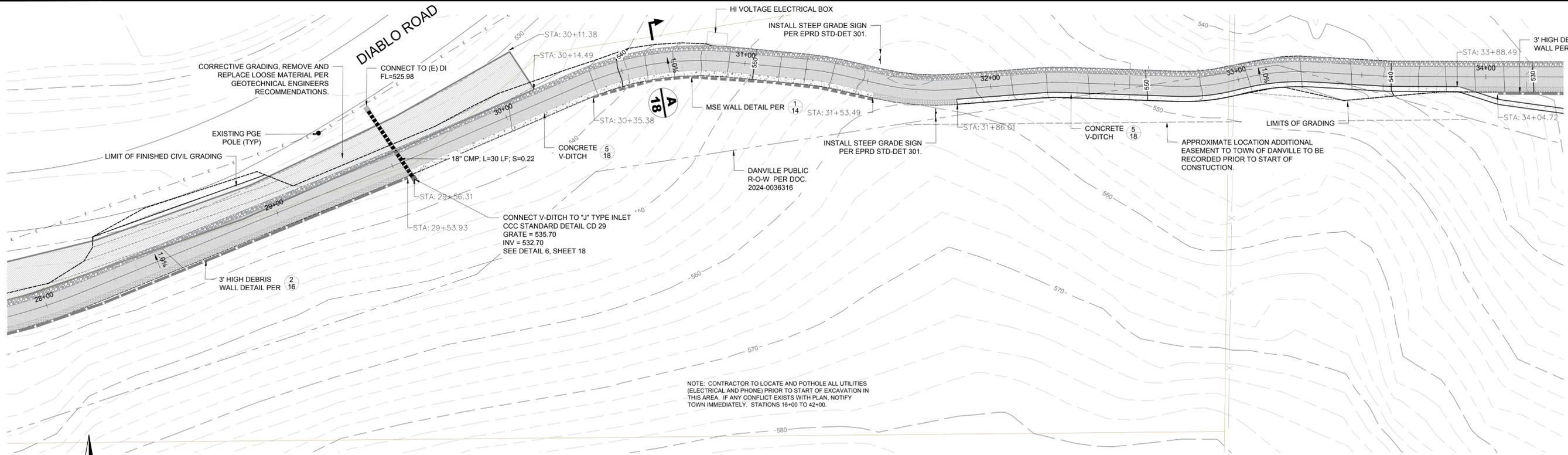
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PLAN AND PROFILE STA: 22+00 - 28+00
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
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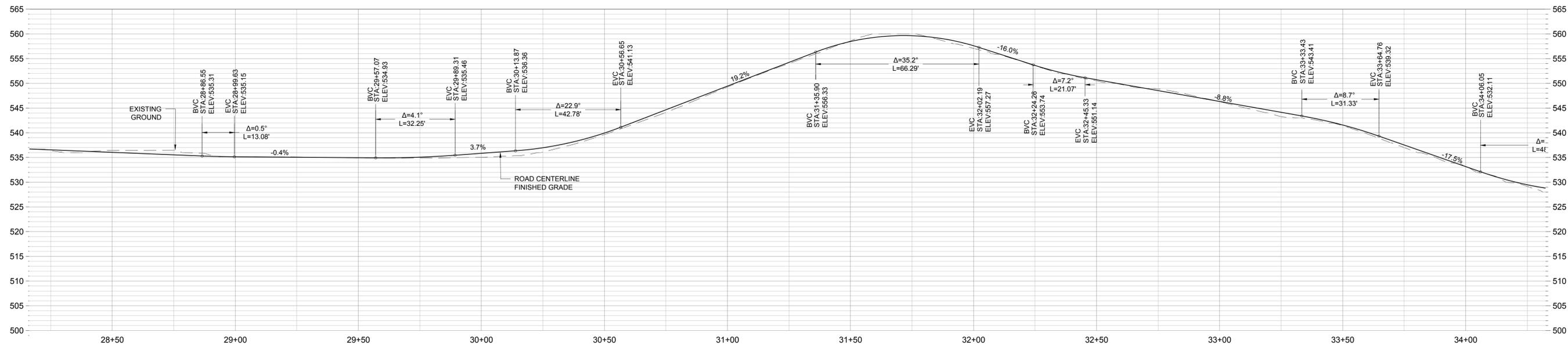
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PLAN VIEW
SCALE: 1"=20'



PROFILE VIEW
SCALE: 1"=20' (HORIZONTAL); 1"=10' (VERTICAL)



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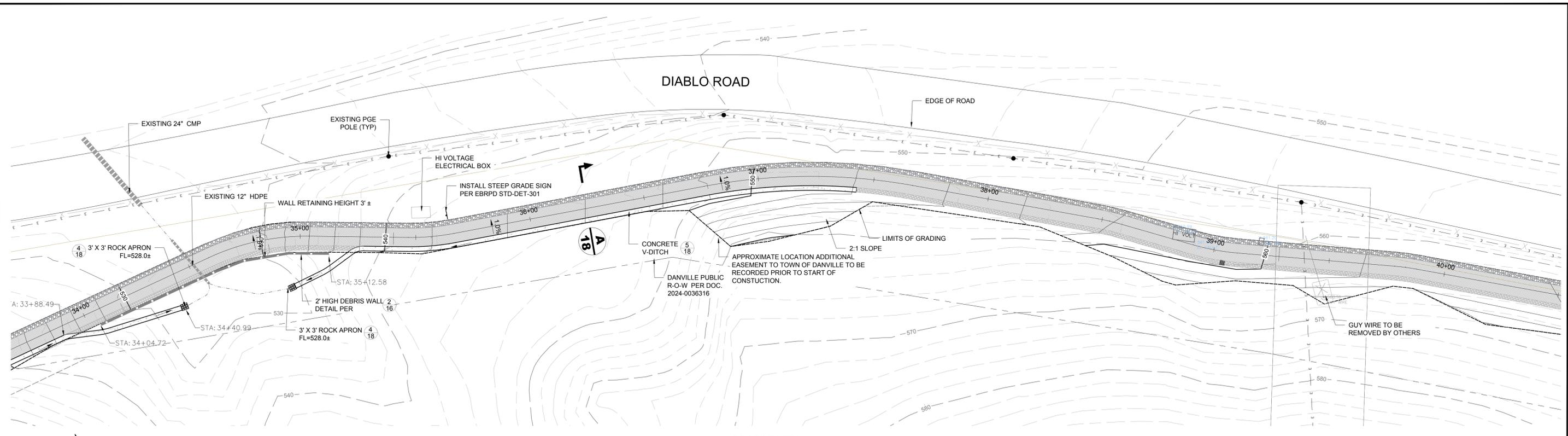
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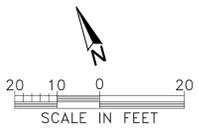


PLAN AND PROFILE STA: 28+00 - 34+00
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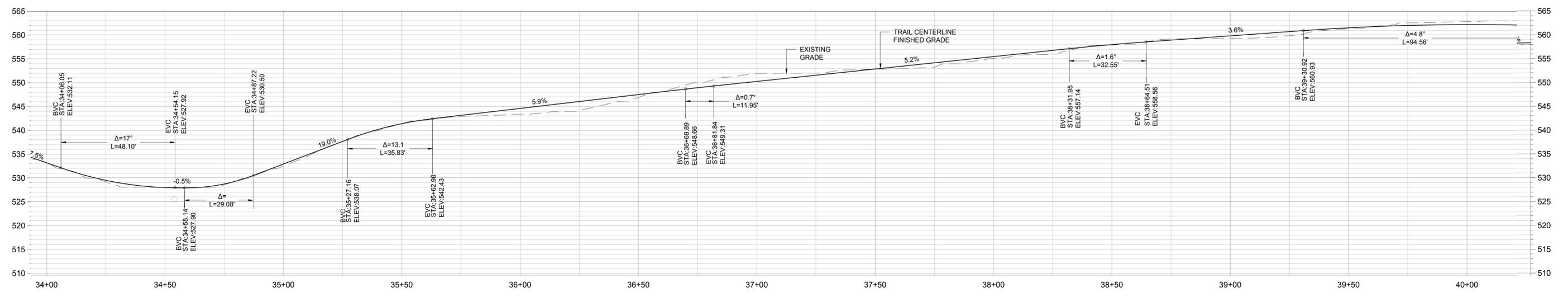
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PROFILE VIEW
SCALE: 1"=20'



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PLAN VIEW
SCALE: 1"=20' (HORIZONTAL); 1"=10' (VERTICAL)



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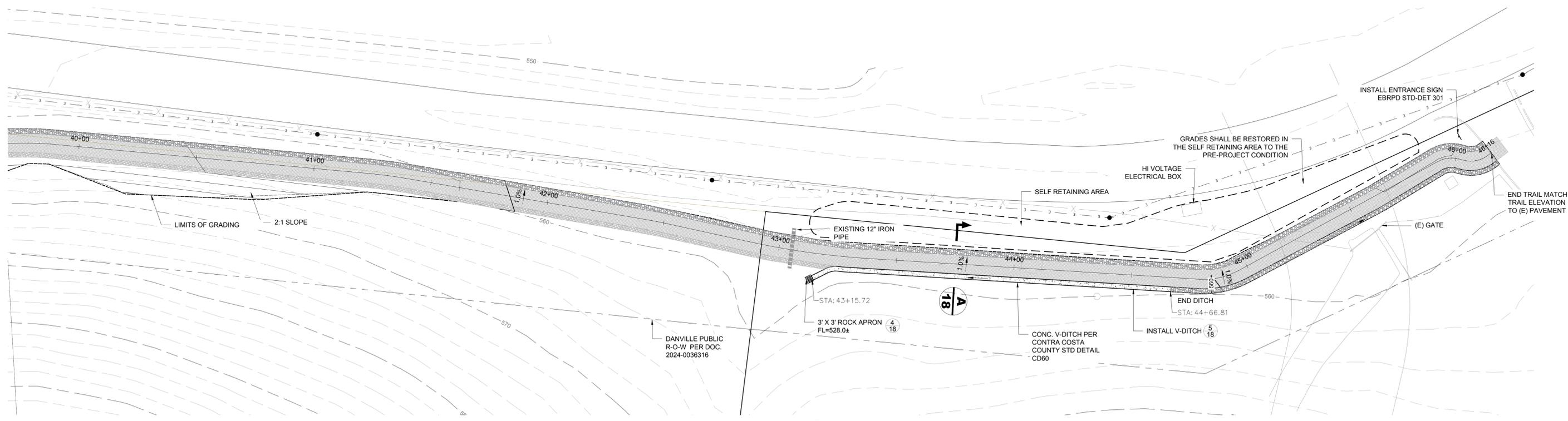
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DATE: MAY 2025
SCALE: AS SHOWN

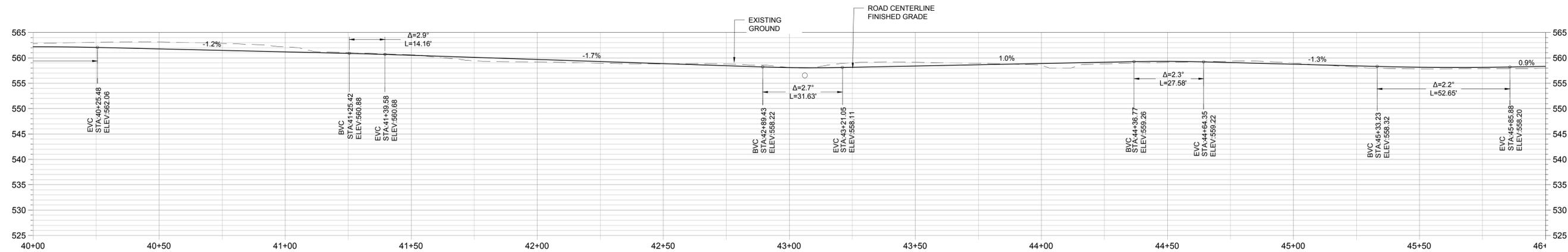
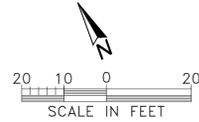


PLAN AND PROFILE STA: 34+00 - 40+00
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
9
OF 22 SHEETS
PROJECT NO.
8870.000.011



PLAN VIEW
SCALE: 1"=20'



PROFILE VIEW
SCALE: 1"=20' (HORIZONTAL); 1"=10' (VERTICAL)



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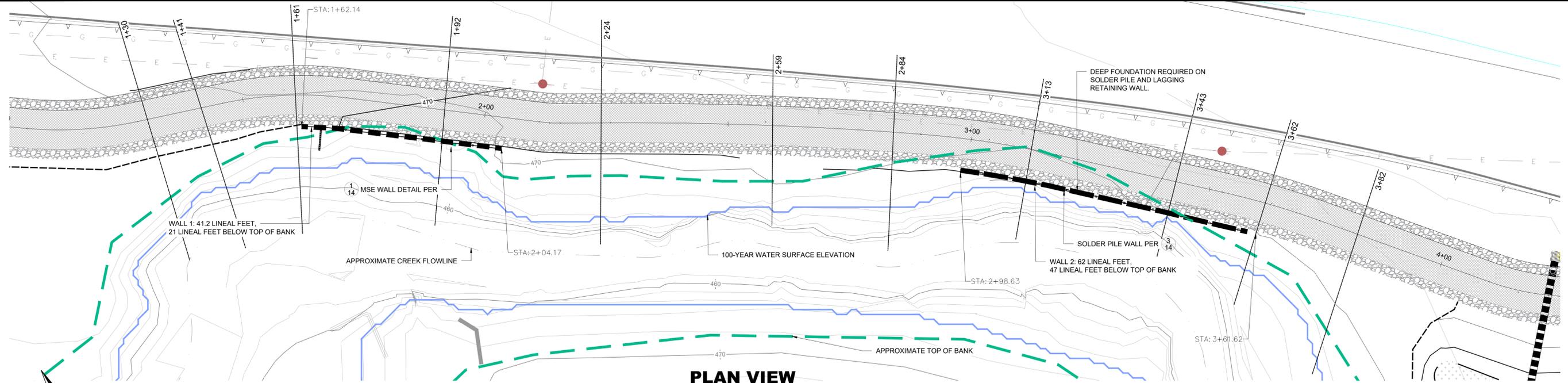
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PLAN AND PROFILE STA: 40+00 - 45+50
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
TOWN OF DANVILLE, CALIFORNIA

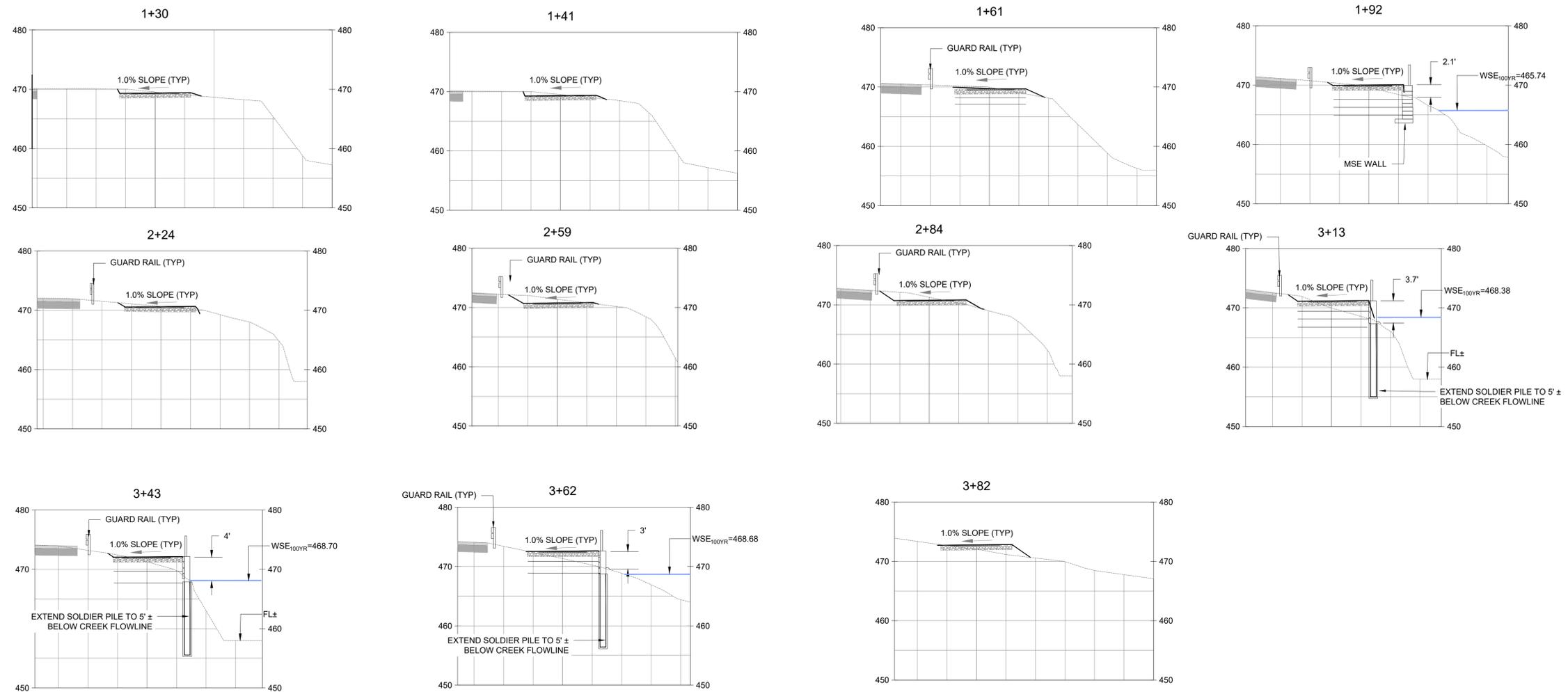
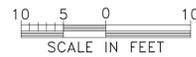
SHEET NUMBER
10
OF 22 SHEETS
PROJECT NO.
8870.000.011

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PLAN VIEW

SCALE: 1"=10'



CROSS SECTIONS

SCALE: 1"=10', SCALE FACTOR 1:1 (H:V)



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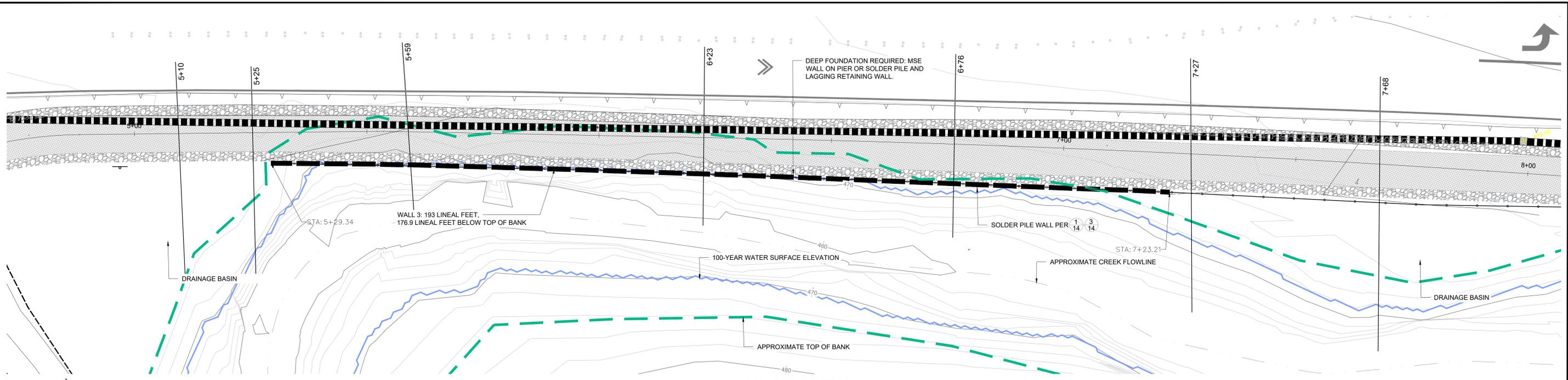
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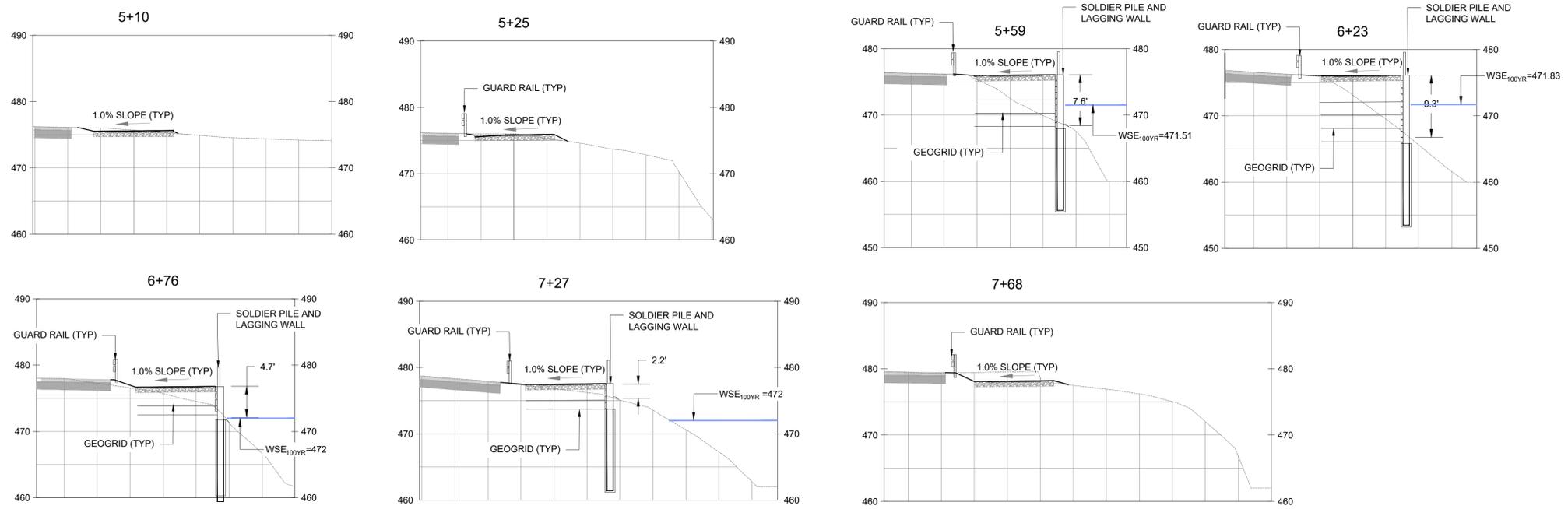
EMBANKMENT 1 CROSS SECTIONS
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
11
OF 22 SHEETS
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PLAN VIEW
SCALE: 1"=10'



CROSS SECTIONS
SCALE: 1"=10', SCALE FACTOR 1:1 (H:V)



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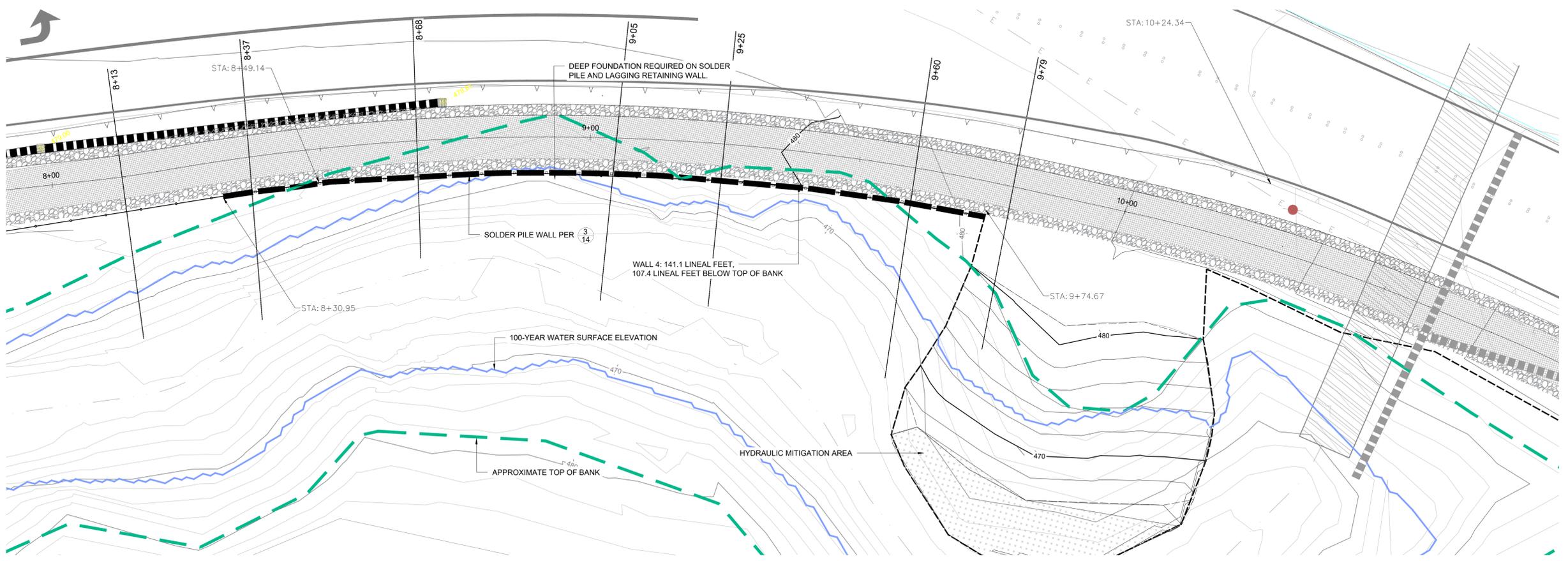


EMBANKMENT 2 CROSS SECTIONS
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
12
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PROJECT NO.
8870.000.011

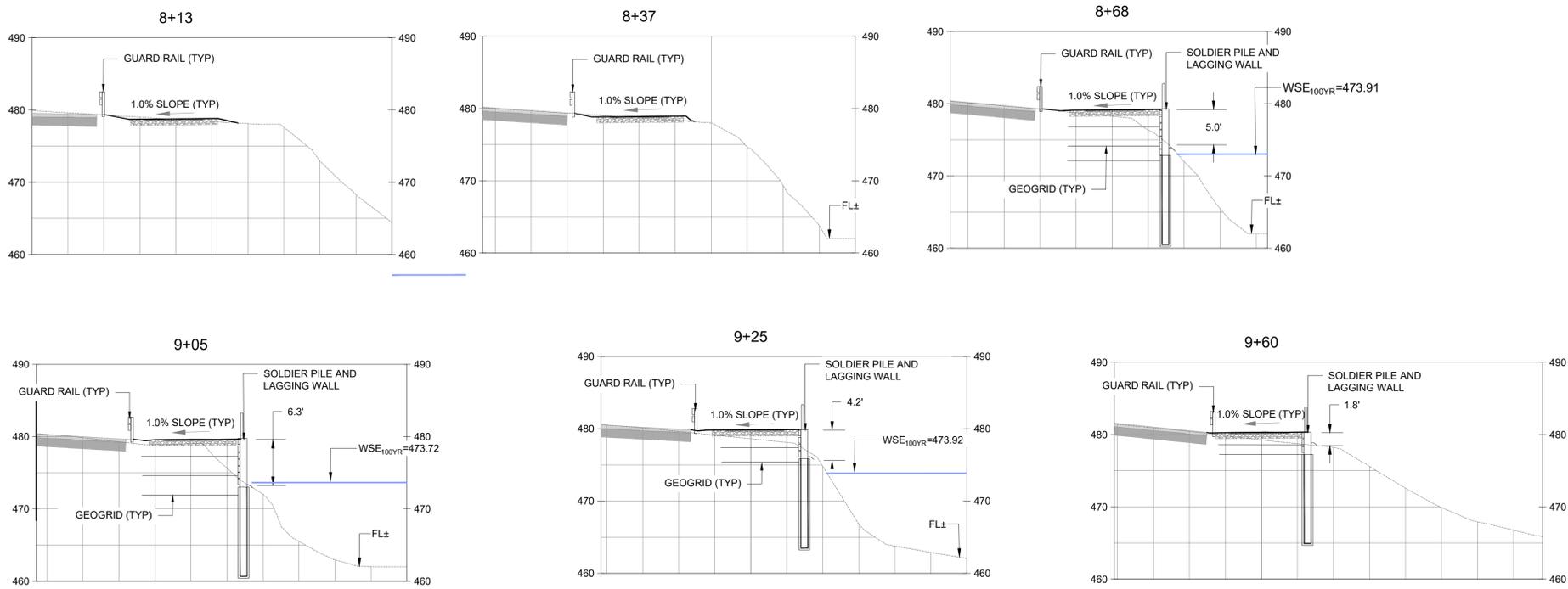
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PLAN VIEW

SCALE: 1"=10'



CROSS SECTIONS

SCALE: 1"=10', SCALE FACTOR 1:1 (H:V)



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EMBANKMENT 3 CROSS SECTIONS
 IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
 TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
13
 OF 22 SHEETS
 PROJECT NO.
 8870.000.011

GENERAL NOTES

1. BASIS OF DESIGN:
 - A. 2022 CALIFORNIA BUILDING CODE.
 - B. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA); DESIGN MANUAL FOR SEGMENTAL RETAINING WALL, 2012
 - C. ENGEO. 2024. IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL, DANVILLE CALIFORNIA. MARCH, 2025 PROJECT NO.8870.000.011.
 - D. ENGEO. 2024. GEOTECHNICAL DATA REPORT, DIABLO ROAD TRAIL, DANVILLE CALIFORNIA. 2025 PROJECT NO.8870.000.011.
2. SPECIAL INSPECTION / CONSTRUCTION OBSERVATION SHALL BE PERFORMED INCLUDING TESTING AND OBSERVATION OF FOUNDATION AND LEVELING PAD, MSE BLOCK PLACEMENT, GEOGRID PLACEMENT, ENGINEERED FILL APPROVAL AND PLACEMENT, AND DRAINAGE PLACEMENT.
3. MSE WALL CONSTRUCTION SHALL BE PERFORMED BY AN APPROVED MSE WALL CONTRACTOR, APPROVED BY THE ENGINEER.
4. EXCAVATION AND SHORING SHALL BE PERFORMED IN ACCORDANCE WITH OSHA, STATE, AND LOCAL JURISDICTIONAL REQUIREMENTS.
5. EARTHWORK SHALL BE IN CONFORMANCE WITH THE PROJECT GEOTECHNICAL REPORT.

MSE WALL MATERIALS

1. MASONRY WALL UNITS
 - A. ALL MODULAR WALL UNITS SHALL CONSIST OF BASALITE GEOWALL™ MAX STANDARD PINNED UNITS (18" X 8" X 21-1/2") OR APPROVED EQUIVALENT, WHICH SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C1372 AND ASTM C-140. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 POUNDS PER SQUARE INCH (PSI) WITH A MAXIMUM MOISTURE ABSORPTION OF 8 PERCENT, AS FOR A NORMAL WEIGHT CONCRETE. SHAPE OF BLOCK AND COLOR REFER TO LANDSCAPE PLANS.
2. CONNECTING PINS
 - A. THE FIBERGLASS PINS SHALL BE 1/2-INCH-DIAMETER RODS. THE FLEXURAL STRENGTH FOR THE CONNECTING PINS SHALL BE AT LEAST 128,000 PSI WITH A SHORT BEAM SHEAR OF 6,400 PSI.
3. CAP CONSTRUCTION ADHESIVE
 - A. THE ADHESIVE SHALL BE APPROVED EQUIVALENT IN CONFORMANCE WITH ASTM 2339.
4. LEVELING BASE
 - A. LEVELING PAD SHALL CONSIST OF COMPACTED CRUSHED STONE OR CLASS 2 AGGREGATE BASE, 6 INCHES THICK BY 33 1/2 INCHES WIDE.
5. UNIT FILL
 - A. FILL FOR THE MODULAR UNITS SHALL BE CLASS 2 PERMEABLE MATERIAL OR FREE-DRAINING CRUSHED ROCK OR GRAVEL, 3/8 INCH TO 3/4 INCH, WITH NO MORE THAN 5 PERCENT PASSING THE NO. 50 SIEVE, IN ACCORDANCE WITH ASTM D448, AND IN ACCORDANCE WITH EITHER REQUIREMENTS FROM THE MANUFACTURER OR FROM NCMA DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS. THE GEOTECHNICAL ENGINEER SHOULD APPROVE GRADATION OF THE UNIT FILL. PEA GRAVEL IS NOT ALLOWED.
6. REINFORCED AND RETAINED WALL BACKFILL
 - A. REINFORCED BACKFILL AND RETAINED WALL BACKFILL MATERIAL SHALL CONSIST OF ONSITE NATIVE ACCEPTABLE FILL IN ACCORDANCE WITH THE REFERENCED GEOTECHNICAL REPORT. ANY IMPORTED MATERIAL SHOULD BE APPROVED BY THE GEOTECHNICAL ENGINEER AND SHOULD MEET THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.
7. GEOGRID
 - A. WHERE REQUIRED, GEOGRID SHALL CONSIST OF MIRAGRID 7XT OR EQUIVALENT. APPROVED EQUIVALENT GEOGRID MATERIALS MAY ALSO BE SUITABLE. MAXIMUM GEOGRID SPACING IS 2' AND NO MORE THAN 2' FROM FINISHED GRADE TO UPPER LAYER OF GEOGRID.
8. DRAINAGE SYSTEM
 - A. DRAINAGE SYSTEM IMMEDIATELY BEHIND THE WALLS SHOULD BE PROVIDED USING A 4"-DIAMETER PVC PERFORATED PIPE (SDR 35) EMBEDDED IN CLASS 2 PERMEABLE MATERIAL OR FREE-DRAINING GRAVEL SURROUNDED BY SYNTHETIC FILTER FABRIC. THE WIDTH OF THE DRAIN BLANKET SHOULD BE AT LEAST 12". THE DRAIN BLANKET SHOULD EXTEND TO ABOUT 1' BELOW THE FINISHED GRADES. THE PIPE SHALL OUTFALL THROUGH THE FACE OF WALL PER DETAILS ON SHEET AS DETERMINED DURING CONSTRUCTION. A SECONDARY DRAINAGE BLANKET AND SUBDRAIN AT THE BACK OF THE REINFORCED SOIL ZONE MAY BE REQUIRED BY THE GEOTECHNICAL ENGINEER.
9. COMPACTION

THE LEVELING BASE SHALL BE COMPACTED WITH A VIBRATORY PLATE OR EQUIVALENT AS APPROVED BY THE ENGINEER OR GEOTECHNICAL ENGINEER. DURING PLACEMENT OF THE INITIAL BLOCKS, THE BACKFILL ON BOTH SIDES (IF ANY) OF THE BLOCKS SHOULD BE COMPACTED SIMULTANEOUSLY TO REDUCE THE POTENTIAL FOR MOVEMENT OF INITIAL BLOCK COURSE(S). ENGINEERED FILL SHALL CONFORM TO THE COMPACTION REQUIREMENTS PROVIDED IN THE PROJECT GEOTECHNICAL INVESTIGATION REPORT.

DESIGN PARAMETERS

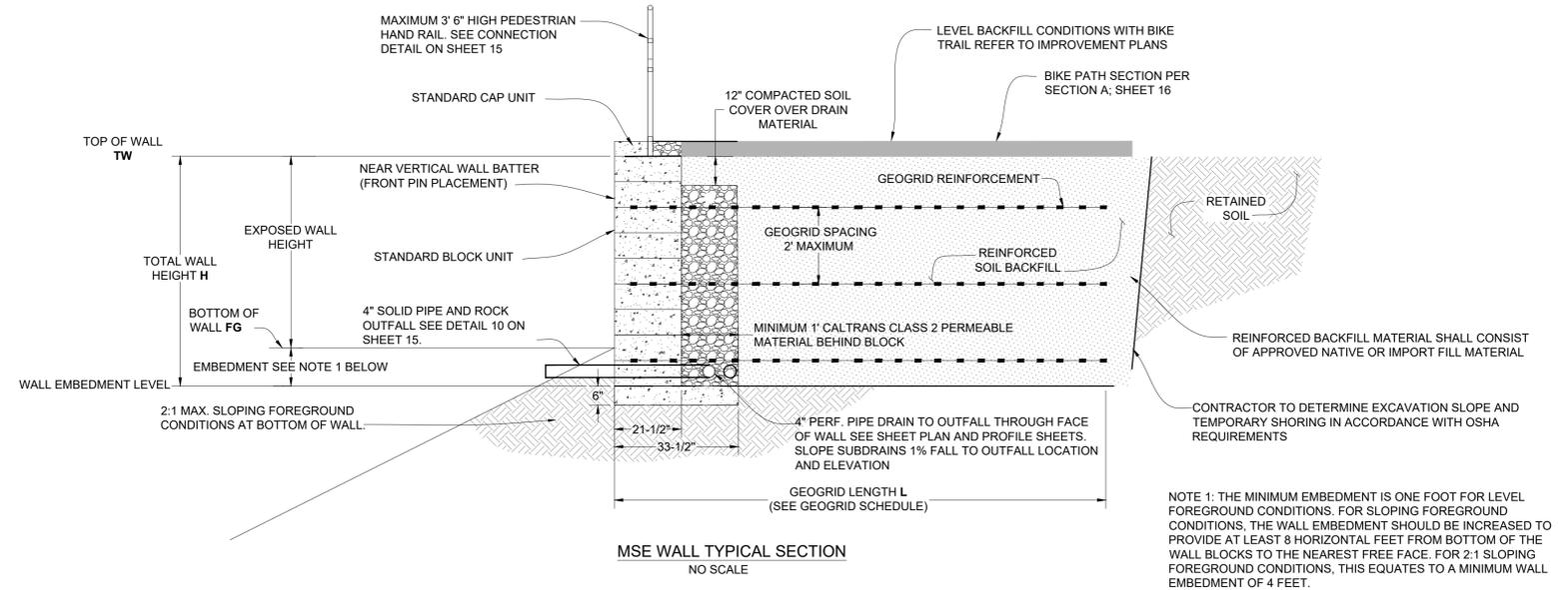
1. DESIGN LOADINGS
 - A. GEOTECHNICAL DESIGN PARAMETERS

MSE Wall Soil Material Parameters			
CONDITION	COHESION	FRICTION	UNIT WEIGHT
	(c' pcf)	ANGLE (φ' degrees)	(g pcf)
Reinforced Fill (On-site Soil Material)	0	28	125
Retained Soil	0	28	125
Foundation Fill	0	28	125

- B. WIND LOADING
 - 7.4 PSF (SERVICE LOAD) ON EXPOSED WOOD FENCE

INSTALLATION PROCEDURES:

1. EXCAVATE TO THE GRADES AS REQUIRED.
2. PREPARE BASE FOR LEVELING PAD. PLACE LEVELING PAD MATERIAL. STEP LEVELING PAD IN 8-INCH INCREMENTS WHEN FOUNDATION ELEVATION CHANGES.
3. INSTALL BASE COURSE OVER LEVELING PAD.
4. PLACE DRAINAGE PIPE AND DRAINAGE MATERIAL BACK OF WALL.
5. INSERT FIBERGLASS PINS AND PLACE DRAINAGE MATERIAL.
6. PLACE WALL BACKFILL AND COMPACT TO PROJECT REQUIREMENTS. USE ONLY HAND OPERATED EQUIPMENT WITHIN 3 FEET OF WALL.
7. PLACE GEOGRID OVER THE FIBERGLASS PINS AND EXTEND OVER LEVEL BACKFILL BEHIND FACING UNITS.
8. PLACE NEXT UNIT.
9. PULL GEOGRID TAUGHT AND BACKFILL (STAKE AS REQUIRED TO MAINTAIN GEOGRID TENSION). FOR GEOGRID PLACEMENT REFER TO MANUFACTURER'S RECOMMENDATIONS FOR PROPER PLACEMENT.



MSE RETAINING WALL - GEOGRID SCHEDULE

TOTAL WALL HEIGHT INCLUDING EMBEDMENT H	MIRAFI GEOGRID TYPE	GEOGRID LENGTH L	GEOGRID ELEVATIONS MEASURED FROM BOTTOM OF WALL
4'	7XT	6'	2'
6'	7XT	8.5'	2 1/4'
8'	7XT	10.5'	2 1/4' / 16'
10'	7XT	13'	2 1/4' / 16' / 8'

1 TYPICAL MSE WALL DETAIL
NO SCALE

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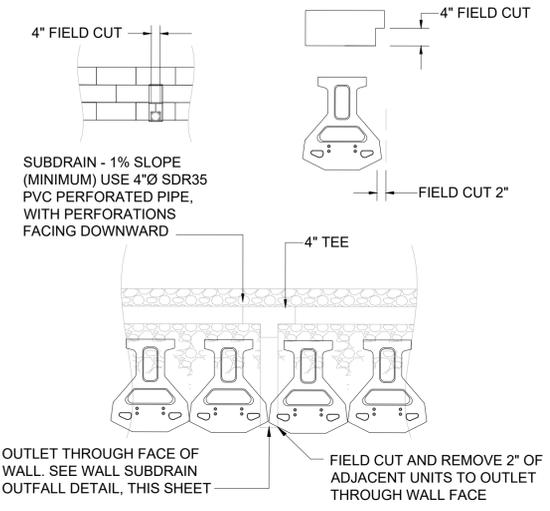
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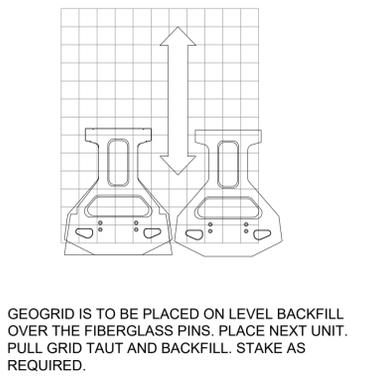
MSE WALL NOTES AND DETAILS
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
14
OF 22 SHEETS
PROJECT NO.
8870.000.011

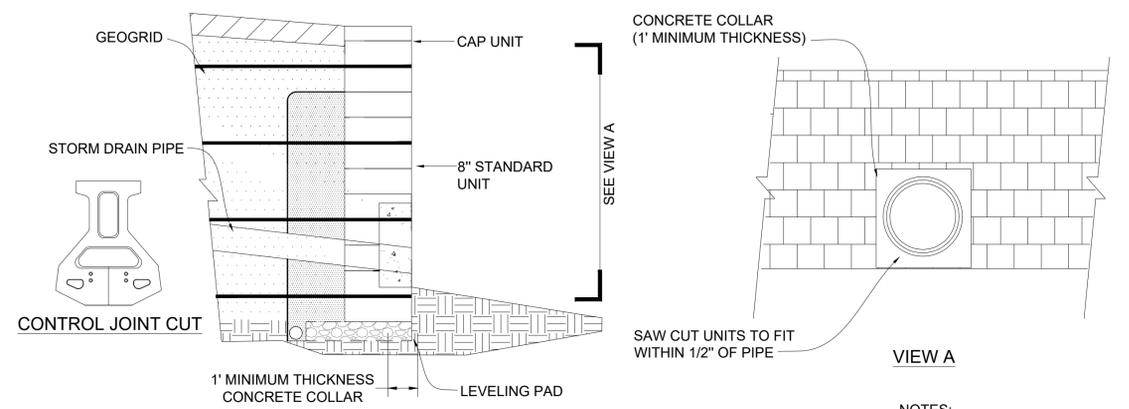
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1 DRAIN DETAIL
NO SCALE

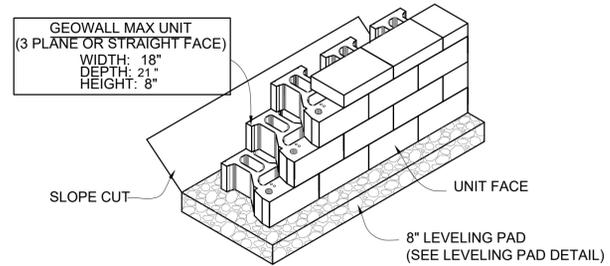


2 FRICTIONAL CONNECTION
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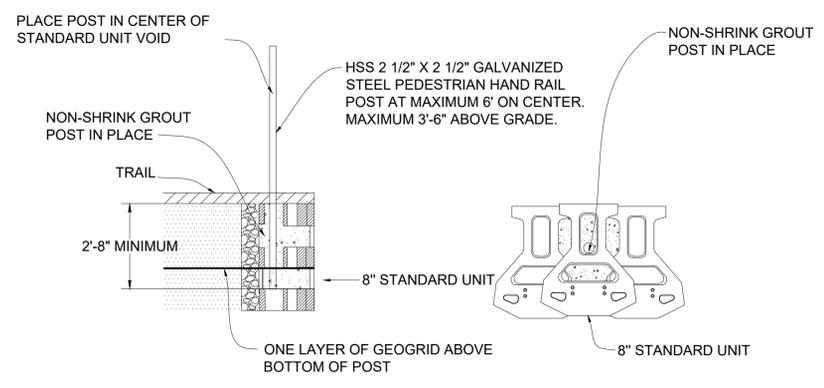


3 TYPICAL STORM DRAIN DETAIL
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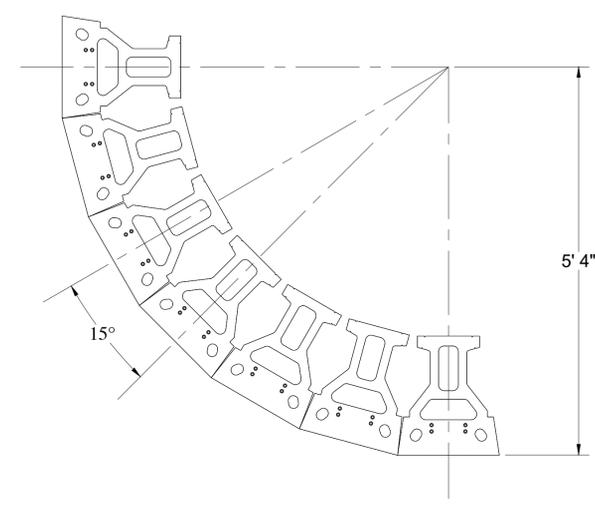
NOTES:
-REFER TO PROJECT CIVIL IMPROVEMENT PLANS FOR STORM DRAIN OUTFALL DETAIL.



4 GEOWALL MAX UNIT/BASE PAD ISOMETRIC VIEW
NO SCALE

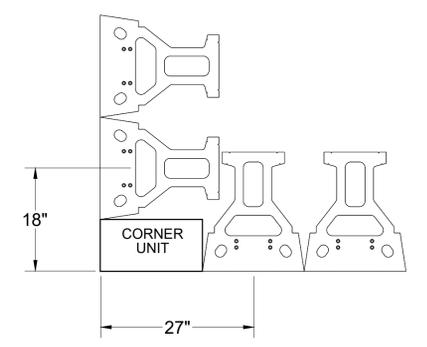


5 STEEL HANDRAIL POST CONNECTION DETAIL
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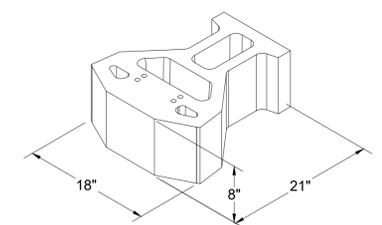


6 RADIUS DETAIL (PLAN)
NO SCALE

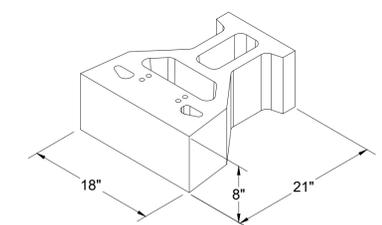
NOTE:
CORNERS AND RADII ARE TO BE CONSTRUCTED AS SPECIFIED IN THE CURRENT BASALITE CONSTRUCTION MANUAL.



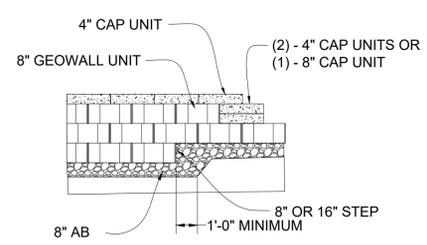
7 CORNER DETAIL (PLAN)
NO SCALE



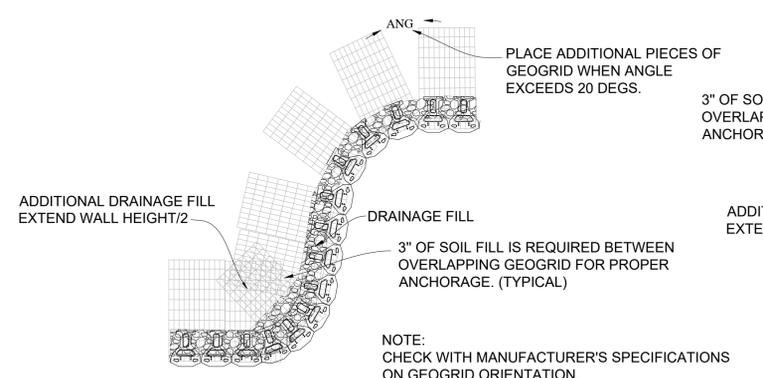
8 3 PLANE GEOWALL MAX UNIT
NO SCALE



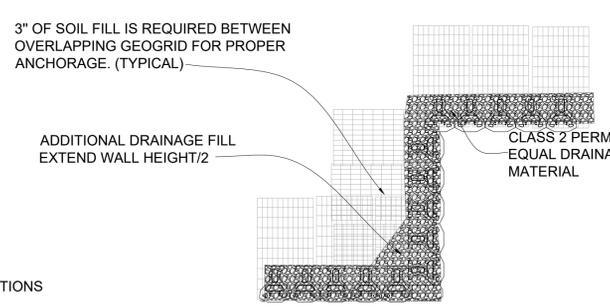
9 STRAIGHT FACE GEOWALL MAX UNIT
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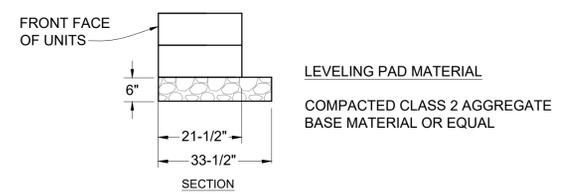
10 STEPPING AND CAPPING DETAIL
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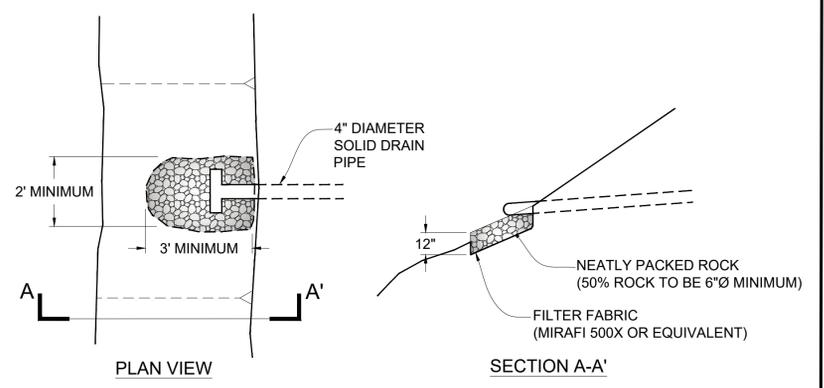
11 GEOGRID INSTALLATION ON CURVES
NO SCALE



12 GEOGRID INSTALLATION AT CORNERS
NO SCALE



13 LEVELING PAD DETAIL
NO SCALE



14 WALL SUBDRAIN OUTFALL
NO SCALE



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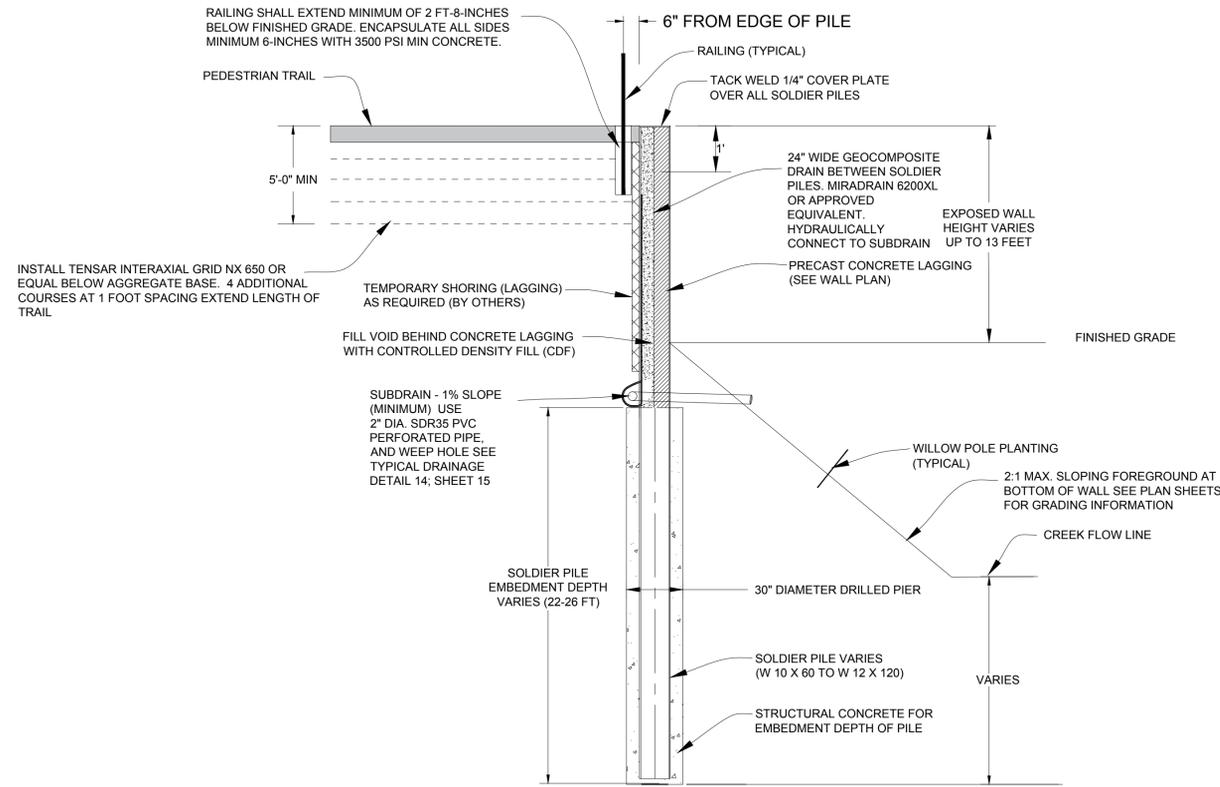
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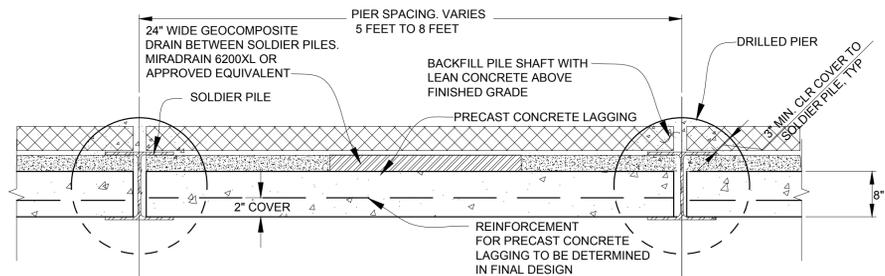
WALL DETAILS
 IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
 TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
15
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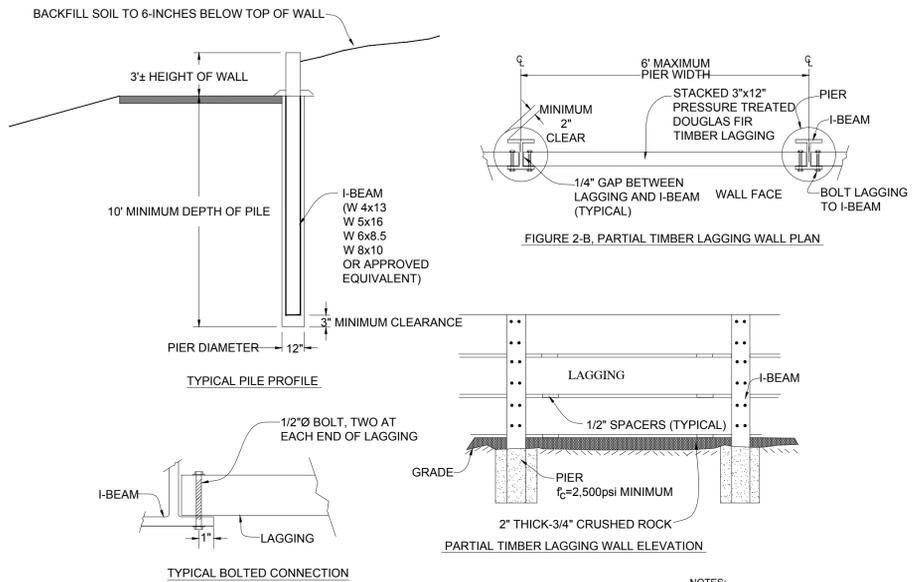


TYPICAL SECTION SOLDIER PILE WALL
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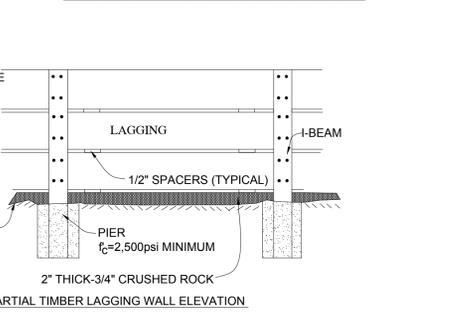
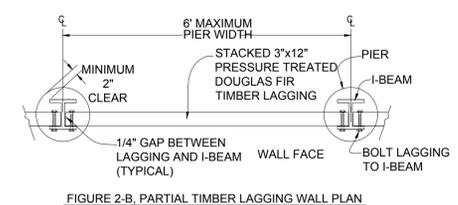


WALL PLAN
NO SCALE

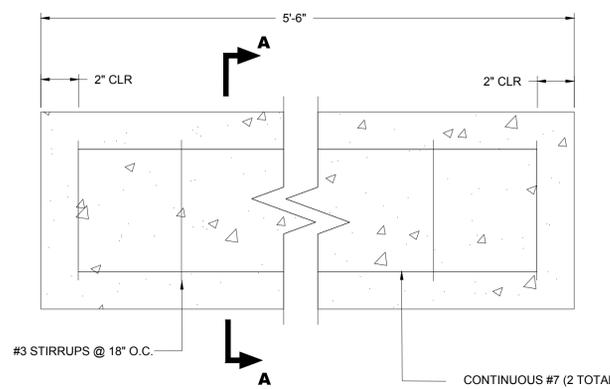
1 TYPICAL SOLDIER PILE WALL DETAIL
NO SCALE



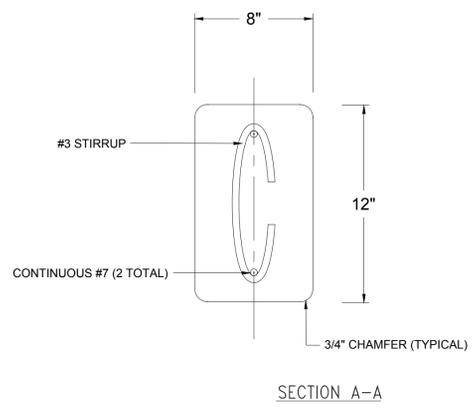
2 TYPICAL DEBRIS WALL DETAIL
NO SCALE



- NOTES:
- BOLTED CONNECTION NOT REQUIRED IN AREAS WHERE BACKFILL IS PLACED.
 - CONTRACTOR TO TAPER WALL AT BOTH ENDS, WITH 1 FOOT AND 2 FOOT SEGMENTS AS DIRECTED BY THE ENGINEER
 - TIMBER LAGGING SHALL CONFORM TO SECTION 57-2.01B(2), AND 57-2.01B(3) 2023 CALTRANS SPECIFICATIONS.



3 TYPICAL SOLDIER PILE WALL LAGGING DETAIL
NO SCALE



SECTION A-A



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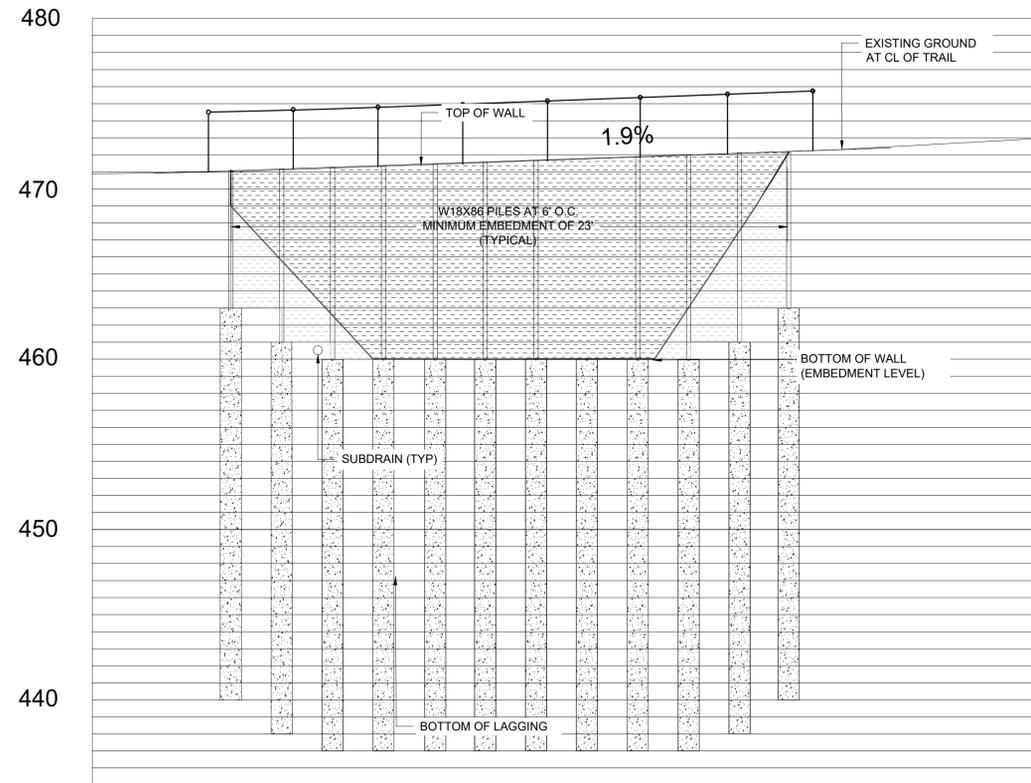
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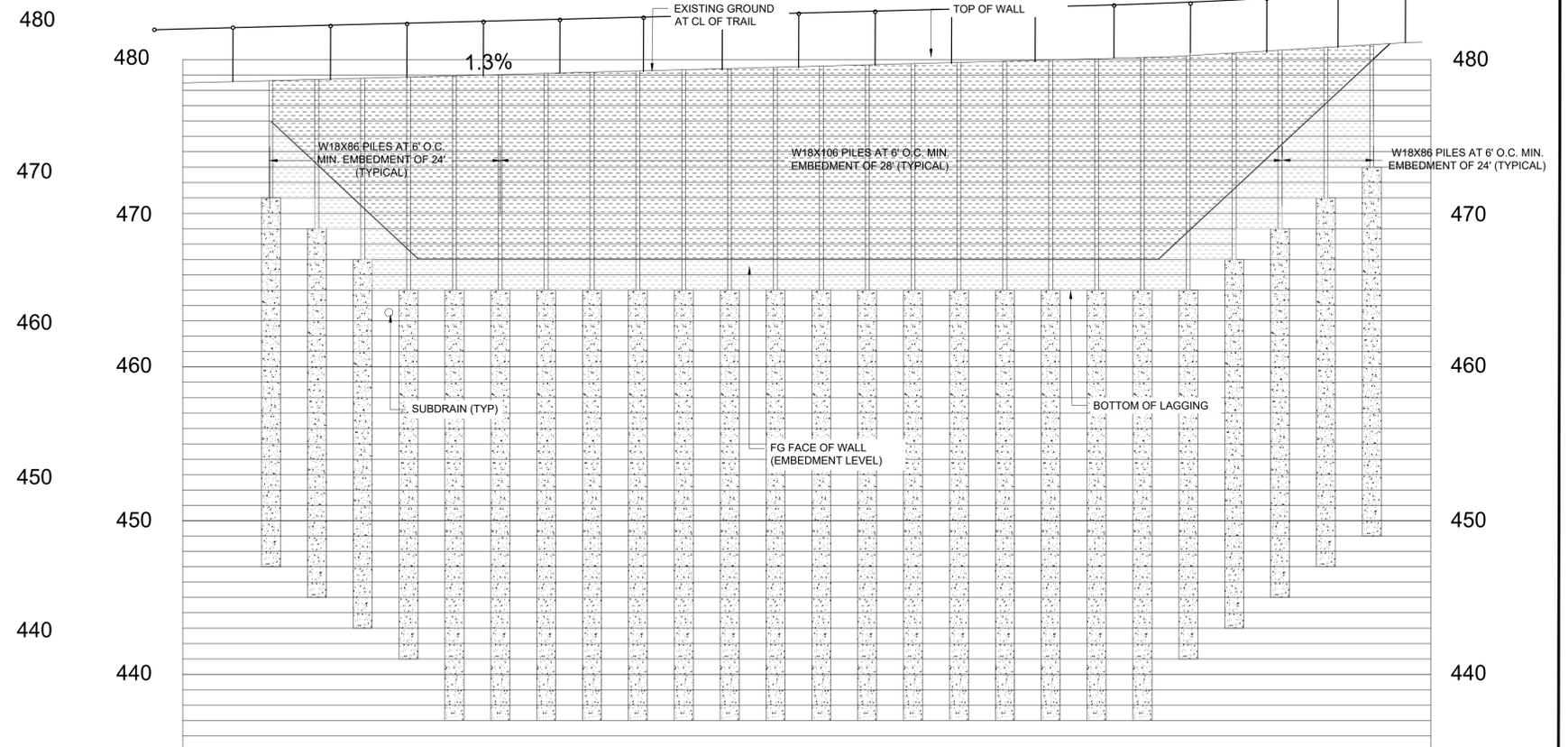
SOLDIER PILE WALL SECTIONS AND DETAILS
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
16
OF 22 SHEETS
PROJECT NO.
8870.000.011

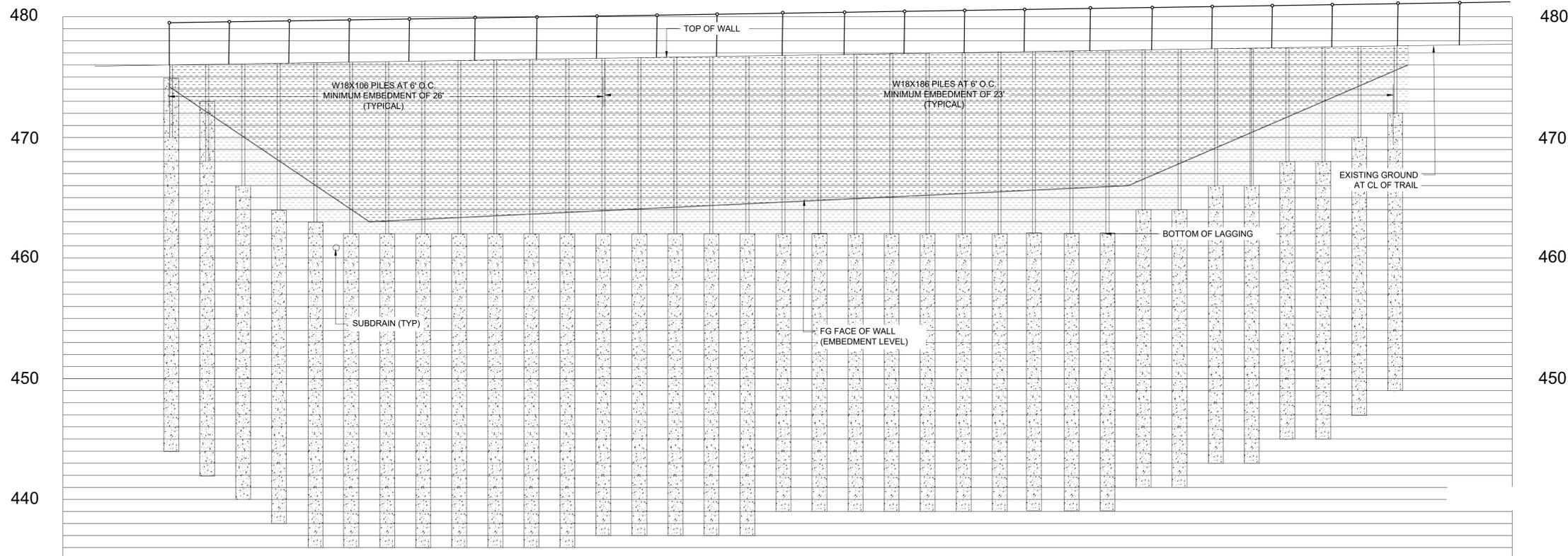
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SOLDIER PILE WALL #1 PROFILE
SCALE: 1"=10' (HORIZONTAL); 1"=5' (VERTICAL)



SOLDIER PILE WALL #3 PROFILE
SCALE: 1"=10' (HORIZONTAL); 1"=5' (VERTICAL)



SOLDIER PILE WALL #2 PROFILE
SCALE: 1"=10' (HORIZONTAL); 1"=5' (VERTICAL)



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DESIGNED BY: SPC
 DRAWN BY: JDB
 CHECKED BY: JDB
 DATE: MARCH 2025
 SCALE: AS SHOWN



SOLDIER PILE WALLS PROFILES
 IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
 TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
17
 OF 22 SHEETS
 PROJECT NO.
 8870.000.011

DRAFT

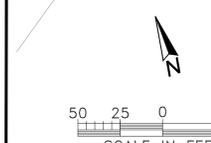
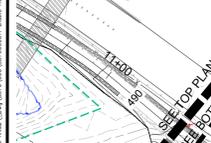
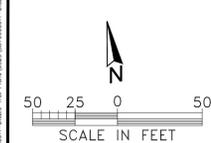
CLYDESDALE DR.

FAIRWAY DRIVE

CALLE ARROYO

ALAMEDA DIABLO

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- NOTES:**
- EXISTING BARBWIRE FENCE TO BE REMOVED IN COORDINATION WITH CONSTRUCTION OF NEW FENCE PER PLAN SHEETS 20-21 AND AS APPROVED BY THE TOWN.
 - TREE REMOVAL SHOWN HERE SHALL BE PERFORMED IN ACCORDANCE WITH TOWN OF DANVILLE. CONTRACTOR SHALL MINIMIZE TREE REMOVALS WHERE PRACTICAL.
 - ALL TREES TO REMAIN GREATER THAN 6-INCHES IN DIAMETER SHALL REQUIRE PROTECTIVE FENCING. SEE DETAIL 3, SHEET 22.

- EXPLANATION**
- TREES TO BE REMOVED BY TOWN OF DANVILLE IN 2025 PRIOR TO THIS PROJECT
 - TREES TO BE REMOVED BY TOWN OF DANVILLE IN 2025 PRIOR TO THIS PROJECT
 - EXISTING FENCE TO BE REMOVED

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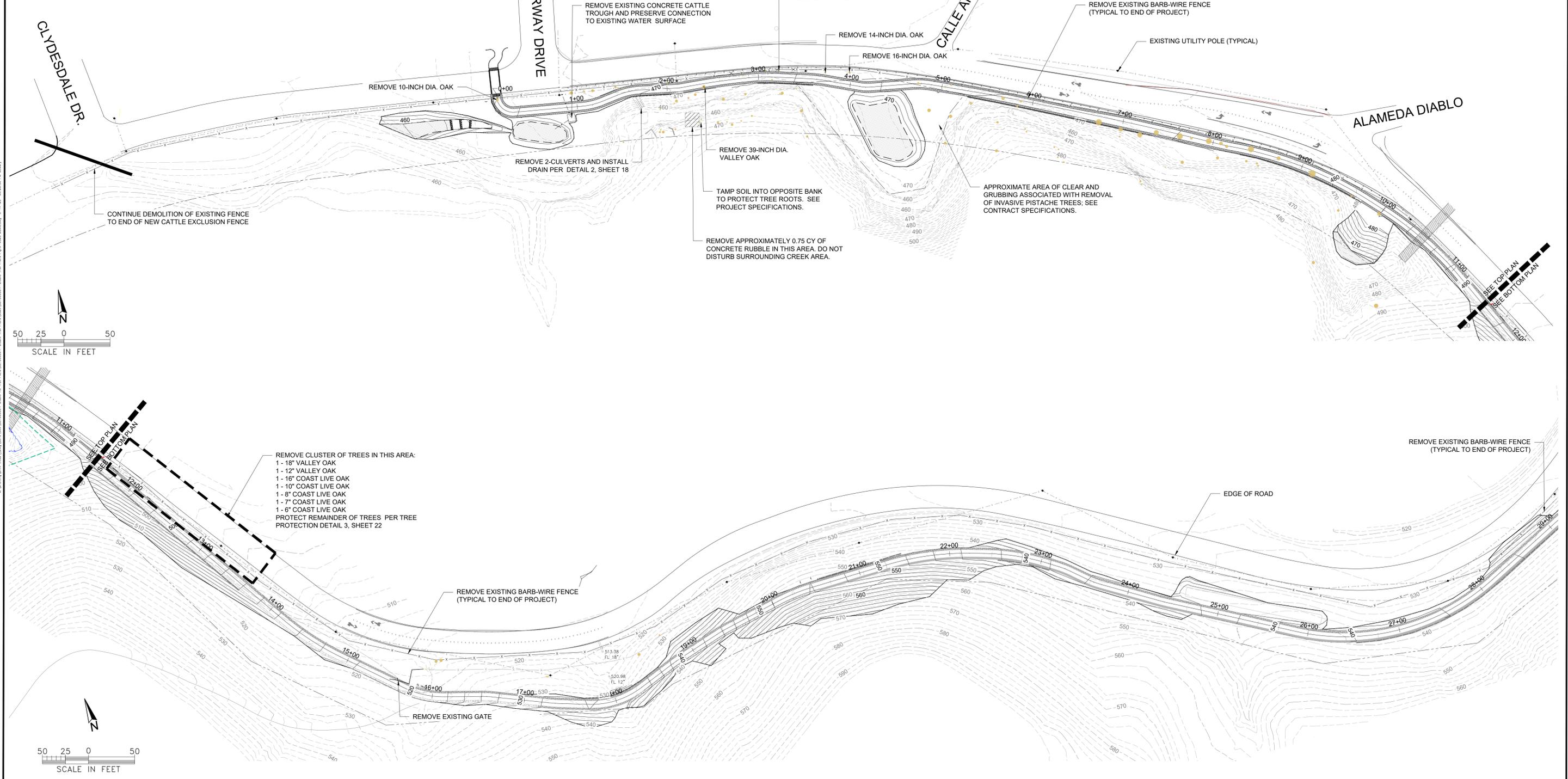
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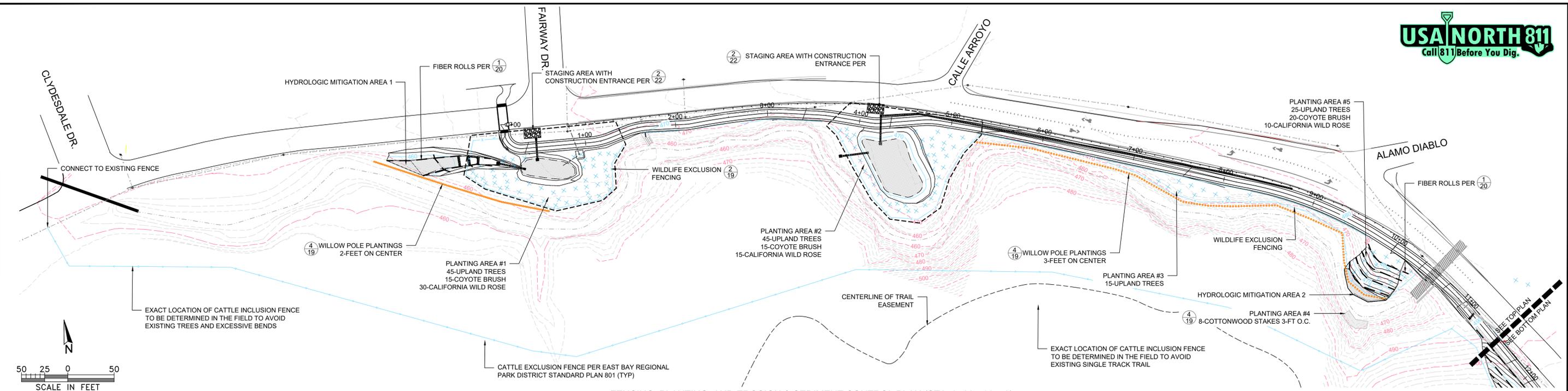
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SCALE: AS SHOWN



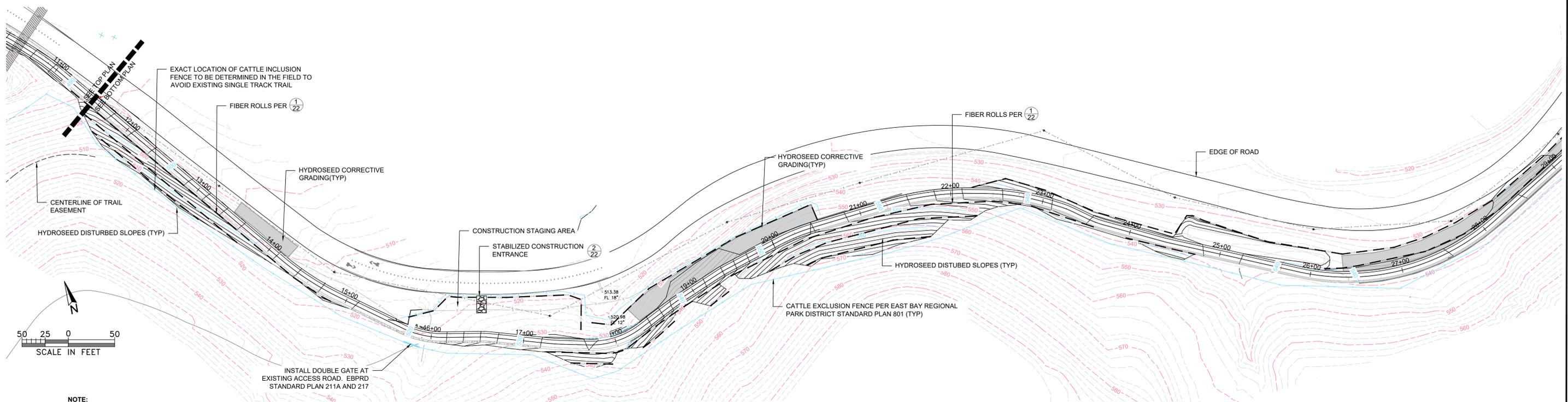
DEMOLITION PLAN
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER	19
OF 22 SHEETS	PROJECT NO.
8870.000.011	





FENCING, PLANTING, AND EROSION & SEDIMENT CONTROL PLAN (STA: 0+00 - 11+50)
SCALE: 1"=50'



FENCING, PLANTING, AND EROSION & SEDIMENT CONTROL PLAN (STA: 11+50 - 29+00)
SCALE: 1"=50'

- NOTE:**
1. EXACT LOCATION OF UPLAND TREE AND SHRUB SPECIES TO BE DETERMINED IN FIELD BY TOWN PAID RESTORATION ECOLOGIST. TREES SHALL CONSIST OF CALIFORNIA OAK (QUERCUS SPP.) AND CALIFORNIA BUCKEYE (AESCULUS SPP.). SHRUBS SHALL CONSIST OF CALIFORNIA WILD ROSE (ROSA CALIFORNIA) AND COYOTE BRUSH (BACCHARIS PILULARIS).
 2. 20% OF TREE CONTAINER PLANS SHALL BE 5-GALLON MINIMUM; REMAINDER SHALL BE 1-GALLON MINIMUM.
 3. ALL PLANTS GROWN IN NURSERY AND BROUGHT TO SITE SHALL CONFORM TO BEST PRACTICES TO PREVENT SPREAD OF SUDDEN OAK DEATH PER PROJECT STREAMBED ALTERATION AGREEMENT.
 4. CONTRACTOR TO INSTALL A GRAVITY FLOW IRRIGATION SYSTEM TO ALL AREAS WHERE CONTAINER PLANTING IS PROPOSED. SEE PROJECT SPECIFICATIONS.
 5. ALL CONSTRUCTION STAGING AREAS SHALL BE HYDROSEEDED AND RESTORED TO ORIGINAL CONDITION AT END OF PROJECT

- EXPLANATION**
- CATTLE EXCLUSION FENCE
 - - - TEMPORARY WILDLIFE EXCLUSION FENCE (SEE DETAIL SHEET 22)
 - - - STRAW WATTLES
 - × UPLAND TREE AND SHRUB INSTALLATION (SEE DETAIL SHEET 21)
 - WILLOW OR COTTONWOOD POLE PLANTING

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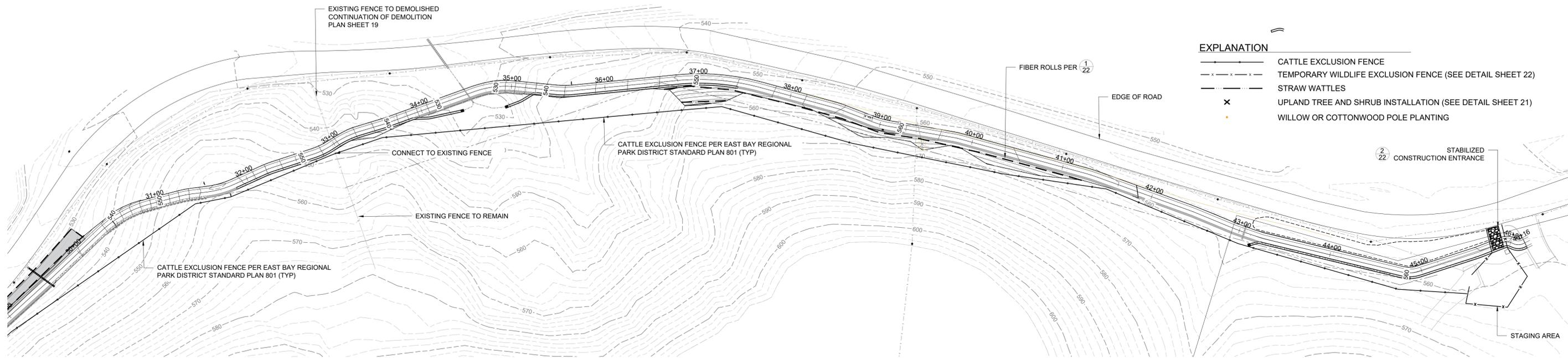
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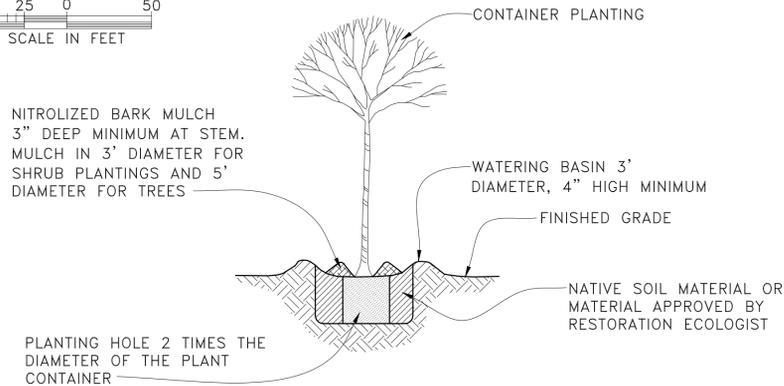
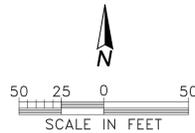
**FENCING, PLANTING AND
 EROSION AND SEDIMENT CONTROL PLAN**
 IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
 TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
20
 OF 22 SHEETS
 PROJECT NO.
 8870.000.011



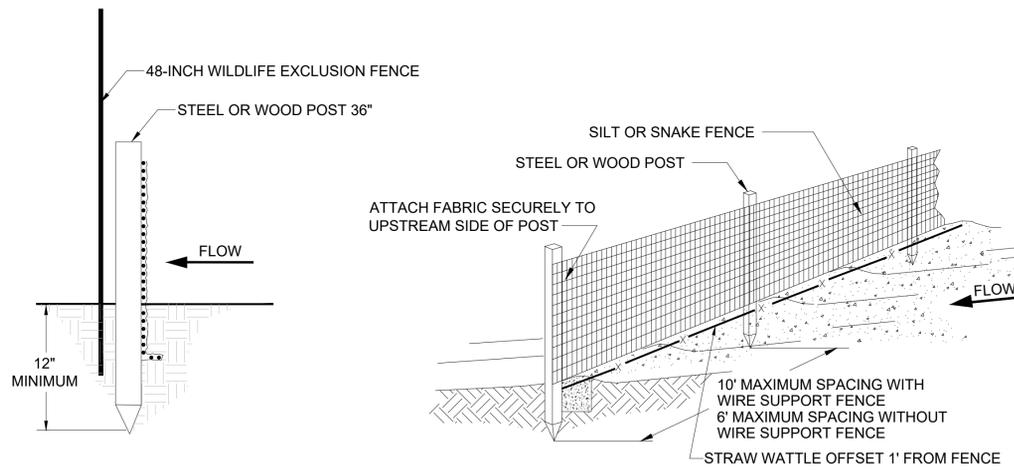
- EXPLANATION**
- CATTLE EXCLUSION FENCE
 - x x x x x - TEMPORARY WILDLIFE EXCLUSION FENCE (SEE DETAIL SHEET 22)
 - STRAW WATTLES
 - x UPLAND TREE AND SHRUB INSTALLATION (SEE DETAIL SHEET 21)
 - WILLOW OR COTTONWOOD POLE PLANTING

FENCING, PLANTING, AND EROSION & SEDIMENT CONTROL PLAN (STA: 29+00 - 45+55)
SCALE: 1"=50'



1. SCALP TREE POSITION CLEAR OF ANNUAL GRASS AND FORBS. 5' IN DIAMETER FOR TREES AND 3' IN DIAMETER FOR SHRUBS.
2. IN ENGINEERED FILL MATERIAL, AUGER PLANTING HOLE AND AUGER SIDES OF HOLE PRIOR TO BACKFILLING.

1 TYPICAL UPLAND TREE INSTALLATION
NO SCALE



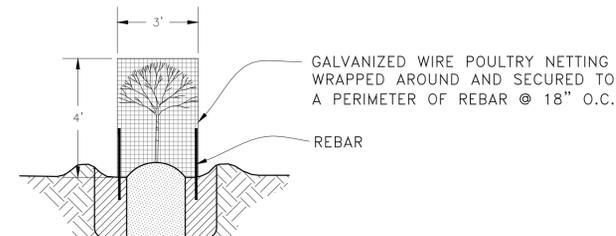
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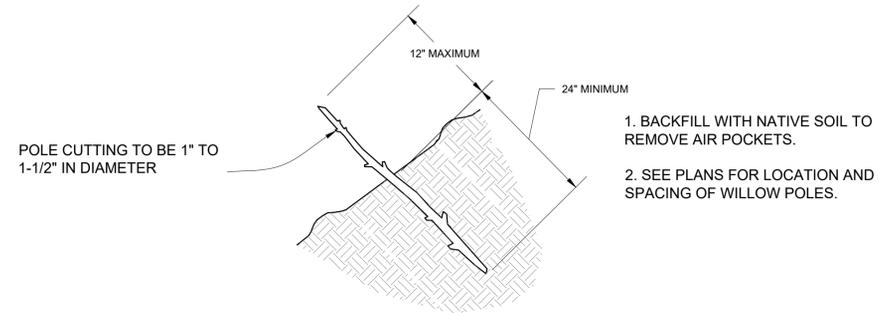
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY, 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. STOP FENCE AT TOP OF BANK OF ALL DRAINAGES.
4. INSTALL WILDLIFE EXCLUSION FENCE DOWNSLOPE OF SILT FENCE PER PROJECT STREAMBED ALTERATION AGREEMENT IN VICINITY OF GREEN VALLEY CREEK.

SOURCE: JOHN McCULLAH, 1994

2 SILT FENCE / WILDLIFE EXCLUSION FENCING DETAIL
NO SCALE



3 ANTI BROWSE CAGE
NO SCALE



4 TYPICAL WILLOW OR COTTONWOOD PLANTING
NO SCALE



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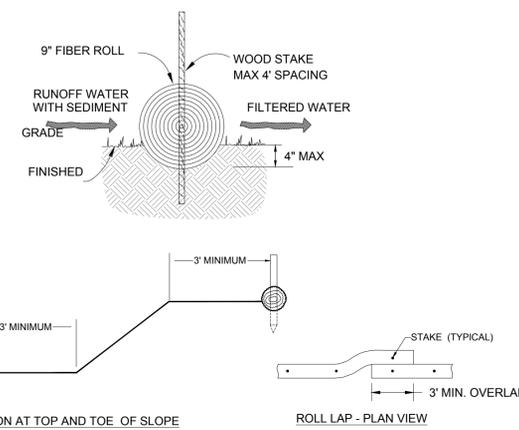


FENCING AND EROSION CONTROL PLAN
IMPROVEMENT PLANS FOR DIABLO ROAD TRAIL
TOWN OF DANVILLE, CALIFORNIA

SHEET NUMBER
21
OF 22 SHEETS
PROJECT NO.
8870.000.011

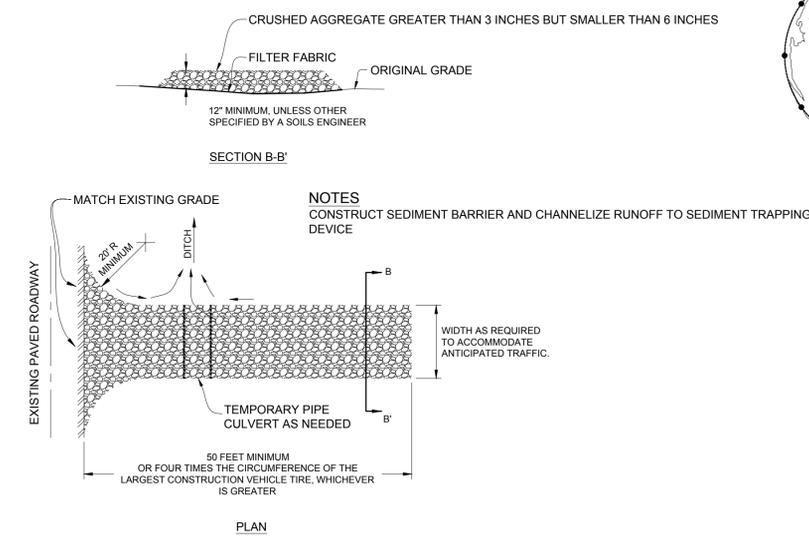
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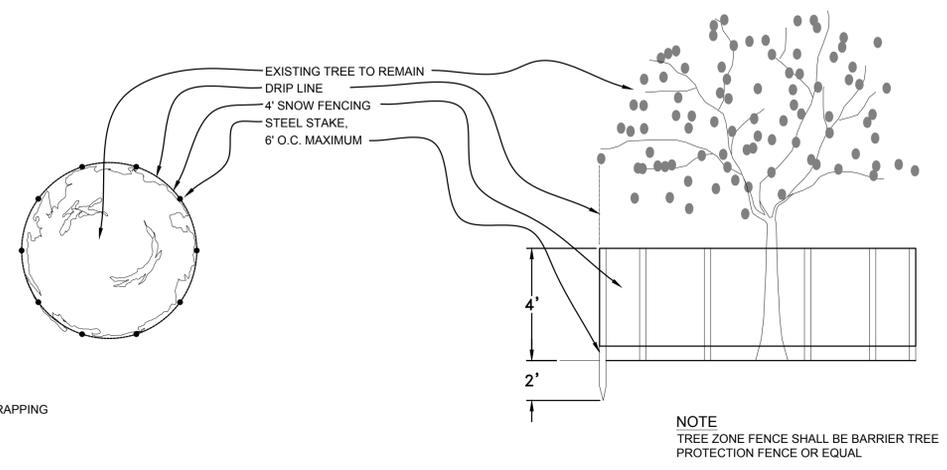
- NOTES:**
1. PREPARE SLOPE BEFORE THE FIBER ROLL PROCEDURE IS STARTED.
 2. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" TO 4" DEEP, ON CONTOUR OR AS SHOWN ON PLANS.
 3. USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE FIBER ROLL AND INTO THE SOIL FOR WOODEN STAKES.
 4. DRIVE THE STAKE THROUGH THE PREPARED HOLE INTO THE SOIL. LEAVE ONLY ONE OR TWO INCHES OF STAKE EXPOSED ABOVE FIBER ROLL.
 5. INSTALL STAKES THREE FEET ON CENTER THROUGH THE LENGTH OF THE FIBER ROLL.
 6. ADJACENT FIBER ROLLS SHALL TIGHTLY ABUT AND OVERLAP A MINIMUM OF 3 FEET.
 7. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND FIBER ROLL.
 8. INSTALL AT LOCATIONS SHOWN ON PLANS. IN SLOPE AREAS SPACE FIBER ROLLS EVERY 10 VERTICAL FEET ON SLOPE.

1 FIBER ROLL DETAIL
NO SCALE



2 STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

- BASIC CONTROL MEASURES:**
1. WATER ALL ACTIVE CONSTRUCTION AREAS AT LEAST TWICE DAILY.
 2. COVER ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOS MATERIALS OR REQUIRE ALL TRUCKS TO MAINTAIN AT LEAST TWO FEET OF FREEBOARD.
 3. PAVE, APPLY WATER THREE TIMES DAILY, OR APPLY (NON-TOXIC) SOIL STABILIZERS ON ALL UNPAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES.
 4. SWEEP STREETS DAILY (WITH WATER SWEEPERS) IF VISIBLE SOIL MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS.



3 EXISTING TREE PROTECTIVE FENCING
NO SCALE

EROSION AND SEDIMENT CONTROL NOTES

1. EROSION CONTROL MEASURES SHALL BE EFFECTIVE FOR CONSTRUCTION DURING THE RAINY SEASON; OCTOBER 1 THROUGH APRIL 30 OR UNTIL VEGETATION IS ESTABLISHED ON DISTURBED AREAS.
2. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. IN GENERAL, THE CONTRACTOR IS RESPONSIBLE FOR KEEPING SEDIMENT-LADEN STORMWATER RUNOFF FROM LEAVING THE SITE. STRAW WATTLES, SAND BAGS, AND SILT FENCES SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE. ALL EXISTING, TEMPORARY, AREAS OF CONCENTRATED OVERLAND FLOW SHALL USE SEDIMENT BARRIERS UNTIL UPSTREAM SOILS ARE STABILIZED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES TO PUBLIC AND/OR PRIVATELY OWNED AND MAINTAINED ROADS CAUSED BY THE CONTRACTOR'S ACTIVITIES, AND SHALL BE RESPONSIBLE FOR THE CLEANUP OF ANY MATERIAL SPILLED ON ANY PUBLIC ROAD ON THE HAUL ROUTE. ADJACENT PUBLIC ROADS SHALL BE CLEANED AT THE END OF EACH WORKING DAY.
4. BORROW AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES (TARPS, FIBER ROLL BARRIERS ETC.) TO ENSURE SILT DOES NOT LEAVE THE SITE OR ENTER THE STORM DRAIN SYSTEM.
5. ALL TRUCK TIRES SHALL BE CLEANED PRIOR TO EXITING THE PROPERTY.
6. DURING PERIODS WHEN STORMS ARE FORECAST -
 - a. EXCAVATED SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREAS.
 - b. WHERE STOCKPILING IS NECESSARY, USE A TARPULIN AND SURROUND THE STOCKPILED MATERIAL WITH A FIBER ROLL BARRIER OR OTHER RUNOFF CONTROLS.
 - c. THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION AND PLACEMENT.
 DURING PERIODS WHEN STORMS ARE NOT FORECAST -
 - a. PREVENT STOCKPILED MATERIAL FROM ENTERING THE STORM DRAIN SYSTEM.
 - b. THOROUGHLY REMOVE LOOSE SOIL VIA SWEEPING FOLLOWING REMOVAL OF DIRT.
7. TRAINING OF INSPECTION PERSONNEL WILL BE CONDUCTED PRIOR TO IMPLEMENTATION OF THE MONITORING PROGRAM. THE MONITORING PROGRAM SHALL INCLUDE REGULAR SITE INSPECTIONS AND REPORTS. MONITORING FORMS AND COMPLIANCE CERTIFICATION SHALL BE PROVIDED TO THE OWNER AND ENGINEER BY JULY 1 FOR THE PREVIOUS YEARS ACTIVITIES.
8. THE LIMITS OF GRADING SHALL BE STAKED. VEHICLES AND EQUIPMENT SHALL BE LIMITED TO THE EXISTING ROADS AND TO WITHIN PROJECT LIMITS.
9. ALL GRADING WORK BETWEEN OCTOBER 1 AND APRIL 30 IS AT THE DISCRETION OF ALAMEDA COUNTY.
10. THE OWNER/OWNERS'S CONTRACTOR, AGENT, AND/OR ENGINEER SHALL ENSURE THAT ALL TEMPORARY CONSTRUCTION FACILITIES INCLUDING, BUT NOT LIMITED TO CONSTRUCTION MATERIALS, DELIVERIES, HAZARDOUS AND NON HAZARDOUS MATERIAL STORAGE, EQUIPMENT, TOOLS, PORTABLE TOILETS, GARBAGE CONTAINERS, ARE LOCATED OUTSIDE COUNTY RIGHT OF WAYS AND WATERWAYS.
11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREVENT THE FORMATION OF AIRBORNE DUST NUISANCE AND SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM FAILURE TO DO SO.
12. PROPOSED BEST MANAGEMENT PRACTICES TO REDUCE POLLUTANTS IN STORM WATER DISCHARGES WILL BE IMPLEMENTED ON SITE, INCLUDING MINIMIZATION AND STABILIZATION OF DISTURBED AREAS, PROTECTION OF SLOPES AND CHANNELS, PERIMETER CONTROLS, INTERNAL EROSION CONTROL, AND SPECIFIC BEST MANAGEMENT PRACTICES.
13. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES LISTED ON THIS SHEET. MEASURES REGARDING THE DISCHARGE OF NON-STORM WATER RUNOFF SHALL APPLY YEAR-ROUND.
14. THE EROSION CONTROL PLAN AND ACCOMPANYING PLANS SHALL BE ON-SITE AT ALL TIMES.
15. CONTRACTOR SHALL HYDROSEED ALL DISTURBED AREAS AT END OF PROJECT, INCLUDING CONSTRUCTION STAGING AREAS, TO THE SATISFACTION OF THE ENGINEER.

SEED MIX

SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND RE-VEGETATION. ALL AREA DISTURBED DURING INSTALLATION MUST BE RESEEDED. SEED SHOULD CONSIST OF THE FOLLOWING MIX OR APPROVED EQUIVALENT APPLIED WITHING LIMITS INDICATED BELOW:

SEED MIX	
REGREEN (ELYMUS X TRITICUM)	12.0 LBS/ACRE
CREeping WILDryE (LEYMUS TRITICOIDES)	8.0 LBS/ACRE
BLUe WILDryE (ELYMUS CLAUcUS)	8.0 LBS/ACRE
MEADOW BALEy (HORDEUM BRACHyANTHERUM)	4.0 LBS/ACRE
MUGWORT (ARTEMESIA DOUGLASIANA)	4.0 LBS/ACRE
CALIFORNIA MILKWEED OR EQUAL (ASCLEPIAS SPP.)	0.5 LBS/ACRE
TOTAL (LBS/ACRE)	36.5 LBS/ARCE

SEED WILL BE MEASURED BY THE POUND. THE CONTRACT PRICE FOR SEED SHALL INCLUDE FULL COMPENSATION FOR FURNISHING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND INCIDENTALS.



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EROSION AND SEDIMENT CONTROL DETAILS
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TOWN OF DANVILLE, CALIFORNIA

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