

POND 22 PERMANENTE CREEK RESTORATION PROJECT

PERMIT LEVEL DESIGN SUBMITTAL

PRELIMINARY
NOT FOR CONSTRUCTION

PREPARED AT THE REQUEST OF:
LEHIGH SOUTHWEST CEMENT COMPANY

COVER SHEET

**POND 22
PERMANENTE CREEK
RESTORATION PROJECT
PERMIT LEVEL DESIGN**

DESIGNED BY: B.Z.
DRAWN BY: P.L.
CHECKED BY: B.Z.
DATE: 2/20/24
JOB NO.: 13-016

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES FOR REDUCED PLOTS

C1

1 OF 12

TABLE 1. EARTHWORK

IMPROVEMENT	EARTHWORK QUANTITY (C.Y.)		MAXIMUM DEPTH (FT.)	
	CUT	FILL	CUT	FILL
DRIVEWAY, ACCESS ROAD	0	0	0	0
BUILDING PAD	0	0	0	0
LANDSCAPING	0	0	0	0
OTHER IMPROVEMENTS (RESTORATION)	1395	980	5	5
TOTAL	1395	980	5	5

IMPERVIOUS SURFACE AREA CREATED AS PART OF PROJECT IMPLEMENTATION = 0 SQ.FT.
TOTAL LIMITS OF DISTURBANCE = 0.44 ACRE

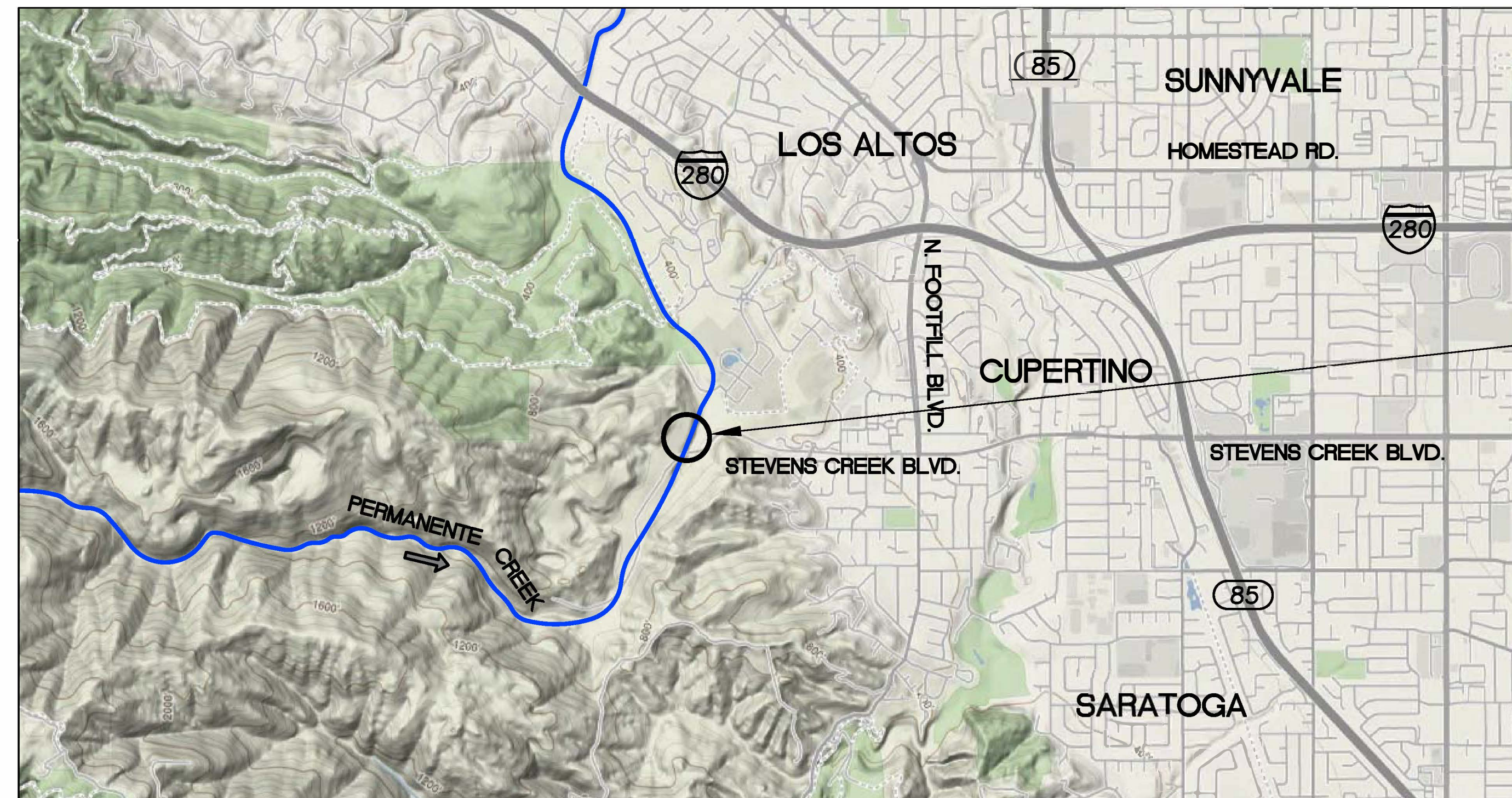
EARTHWORK NOTES

- THE ABOVE QUANTITIES ARE FOR PERMITTING PURPOSES ONLY. EXISTING GROUND IS DEFINED BY THE TOPOGRAPHIC CONTOURS AND/OR SPOT ELEVATIONS ON THE PLAN. PROPOSED FINISH GRADE IS DEFINED AS THE DESIGN SURFACE ELEVATION OF THE WORK TO BE CONSTRUCTED. THE QUANTITIES HAVE NOT BEEN FACTORED TO INCLUDE ALLOWANCES FOR BULKING, CLEARING AND GRUBBING, SUBSIDENCE, SHRINKAGE, RECOMPACTION, UNDERGROUND UTILITY AND SUBSTRUCTURE SPOILS, AND CONSTRUCTION METHODS.
- THE CUT QUANTITY INCLUDES EXCAVATION TO REACH FINISH GRADE AND OVEREXCAVATION FOR THE PLACEMENT OF ENGINEERED STREAMBED MATERIAL AND VEGETATED RSP, WHERE SHOWN ON THE DRAWINGS.
- THE FILL QUANTITY INCLUDES THE PLACEMENT OF ENGINEERED STREAMBED MATERIAL AND VEGETATED RSP WITHIN THE OVEREXCAVATED AREAS DESCRIBED IN NOTE #2 AND THE PLACEMENT OF ENGINEERED STREAMBED MATERIAL AND VEGETATED RSP TO REACH FINISH GRADE, WHERE SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL PERFORM AN INDEPENDENT EARTHWORK ESTIMATE FOR THE PURPOSE OF PREPARING BID PRICES FOR EARTHWORK. THE BID PRICE SHALL INCLUDE COSTS FOR ANY NECESSARY IMPORT AND PLACEMENT OF EARTH MATERIALS OR THE EXPORT AND PROPER DISPOSAL OF EXCESS OR UNSUITABLE EARTH MATERIALS.

GENERAL NOTES

- TOPOGRAPHIC MAPPING WAS PERFORMED BY: WATERWAYS CONSULTING, INC. 509A SWIFT STREET, SANTA CRUZ, CA 95060
SURVEY DATES:
2024, JANUARY 18
2023, AUGUST 16
2014, MULTI-DAY SURVEY BETWEEN FEBRUARY 24 AND APRIL 16
2013, JUNE 19
- ELEVATION DATUM: GPS TIES TO NAVD88 USING THE LEICA GEOSYSTEMS SMARTNET GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) NETWORK.
- BASIS OF BEARINGS: GPS TIES TO NAD83 CALIFORNIA STATE PLANE, ZONE 3 USING THE LEICA GEOSYSTEMS SMARTNET GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) NETWORK.
- AERIAL PHOTO SOURCE: MICROSOFT CORPORATION, 2023
- CONTOUR INTERVAL IS ONE FOOT. ELEVATIONS AND DISTANCES SHOWN ARE IN DECIMAL FEET.
- THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES WERE COMPILED FROM RECORD INFORMATION. THE LOCATION OF THESE LINES IS SUBJECT TO CHANGE, PENDING THE RESULTS OF A COMPLETE BOUNDARY SURVEY.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE 2018 EDITION OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS, ISSUED BY THE DEPARTMENT OF TRANSPORTATION (HEREAFTER REFERRED TO AS "STANDARD SPECIFICATIONS").
- THESE DESIGNS ARE INCOMPLETE WITHOUT THE FINAL STAMPED TECHNICAL SPECIFICATIONS PREPARED BY WATERWAYS CONSULTING, INC. REFER TO TECHNICAL SPECIFICATIONS FOR DETAILS NOT SHOWN HEREON.

*** CALL BEFORE YOU DIG ***
CONTACT UNDERGROUND SERVICE ALERT (USA)
PRIOR TO ANY CONSTRUCTION WORK 1-800-332-2344

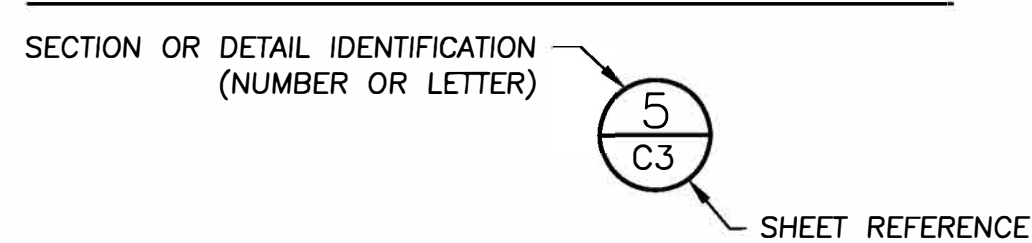


VICINITY MAP
N.T.S. (GOOGLE)

ABBREVIATIONS

AVG.	AVERAGE	T.B.D.	TO BE DETERMINED
CC	CONCRETE	TYP	TYPICAL
CY	CUBIC YARDS	UNK	UNKNOWN
DIA.	DIAMETER	WSE	WATER SURFACE ELEVATION
E	EXISTING	YR	YEAR
EG	EXISTING GROUND ELEVATION		
DI	DRAINAGE INLET	TREE SPECIES	
FG	FINISHED GRADE	A	ALDER
FT	FEET	M	MAPLE
INV	INVERT	O	OAK
MIN	MINIMUM	T	TREE (SPECIES UNKNOWN)
N	NEW	W	WILLOW
NIC	NOT IN CONTRACT	BAY	BAY-LAUREL
N.T.S.	NOT TO SCALE	SYC	SYCAMORE
O.C.	ON CENTER	ELD	ELDERBERRY
RC	RELATIVE COMPACTION		
RSP	ROCK SLOPE PROTECTION		
SPK	SPIKE		
SQ.FT.	SQUARE FOOT		
T	TREE		

SECTION AND DETAIL CONVENTION



PROJECT DESCRIPTION

THESE DRAWINGS PROVIDE PERMIT LEVEL DESIGN DETAILS FOR THE RESTORATION OF A SEGMENT OF PERMANENTE CREEK BY THE REMOVAL OF A CONCRETE DAM AND CULVERTED ROAD CROSSING AT THE PERMANENTE QUARRY PROPERTY IN SANTA CLARA COUNTY, CALIFORNIA.

WORK SHALL CONSIST OF:

- THE REMOVAL AND DISPOSAL OF:
 - A 60-INCH DIAMETER STEEL CULVERT.
 - APPROXIMATELY 50-FOOT LONG CONCRETE DAM.
 - SACKED CONCRETE, CONCRETE RUBBLE AND TIRES PLACED ALONG THE BANK.
- RESTORATION OF PERMANENTE CREEK THROUGH THE AGGRADED POND, DAM AND CULVERT REMOVAL AREA.
- DECOMMISSIONING OF AN UNMAINTAINED DIRT ACCESS.
- REVEGETATION OF THE PROJECT AREA WITH NATIVE PLANTS.

THE RESTORED CHANNEL WILL BE PROTECTED WITH ENGINEERED STREAMBED MATERIAL TO HELP MAINTAIN CHANNEL STABILITY AND A VEGETATED ROCK-LINED SIDE CHANNEL WILL BE CONSTRUCTED TO MAINTAIN HYDRAULIC AND BIOLOGICAL CONNECTIVITY BETWEEN THE CREEK AND POND 14 VIA EXISTING CULVERTS.

SHEET INDEX

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- C11 FEMA SPECIAL FLOOD HAZARD AREA PLAN
- L1 REVEGETATION PLAN

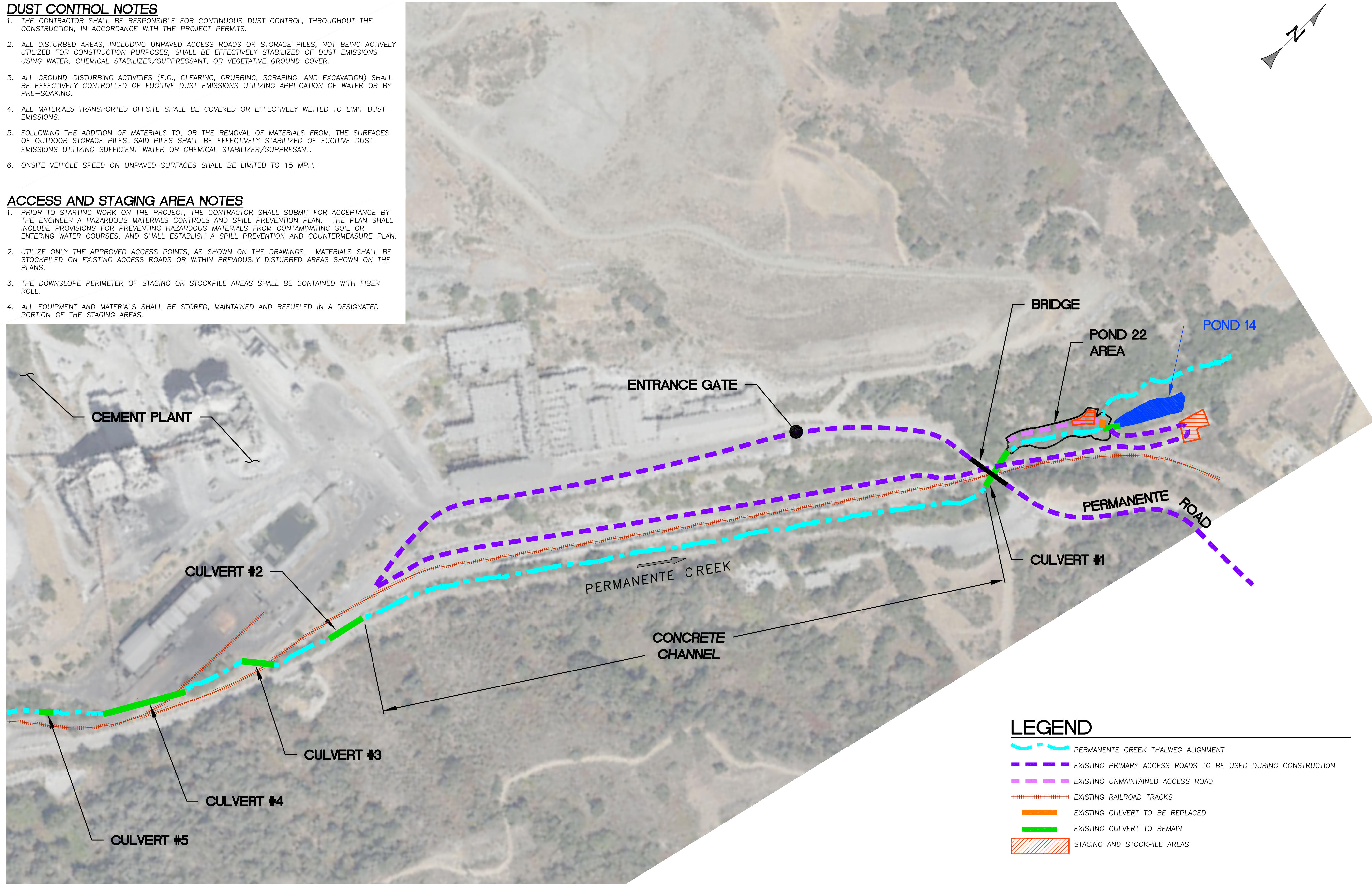
REV.	DATE	DESCRIPTION	BY
△	07/17/24	EARTHWORK TABLE ADDED	N.B.
△	08/26/24	L.O.D. AREA UPDATED	P.L.

DUST CONTROL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUS DUST CONTROL, THROUGHOUT THE CONSTRUCTION, IN ACCORDANCE WITH THE PROJECT PERMITS.
2. ALL DISTURBED AREAS, INCLUDING UNPAVED ACCESS ROADS OR STORAGE PILES, NOT BEING ACTIVELY UTILIZED FOR CONSTRUCTION PURPOSES, SHALL BE EFFECTIVELY STABILIZED OF DUST EMISSIONS USING WATER, CHEMICAL STABILIZER/SUPPRESSANT, OR VEGETATIVE GROUND COVER.
3. ALL GROUND-DISTURBING ACTIVITIES (E.G., CLEARING, GRUBBING, SCRAPING, AND EXCAVATION) SHALL BE EFFECTIVELY CONTROLLED OF FUGITIVE DUST EMISSIONS UTILIZING APPLICATION OF WATER OR BY PRE-SOAKING.
4. ALL MATERIALS TRANSPORTED OFFSITE SHALL BE COVERED OR EFFECTIVELY WETTED TO LIMIT DUST EMISSIONS.
5. FOLLOWING THE ADDITION OF MATERIALS TO, OR THE REMOVAL OF MATERIALS FROM, THE SURFACES OF OUTDOOR STORAGE PILES, SAID PILES SHALL BE EFFECTIVELY STABILIZED OF FUGITIVE DUST EMISSIONS UTILIZING SUFFICIENT WATER OR CHEMICAL STABILIZER/SUPPRESSANT.
6. ONSITE VEHICLE SPEED ON UNPAVED SURFACES SHALL BE LIMITED TO 15 MPH.

ACCESS AND STAGING AREA NOTES

1. PRIOR TO STARTING WORK ON THE PROJECT, THE CONTRACTOR SHALL SUBMIT FOR ACCEPTANCE BY THE ENGINEER A HAZARDOUS MATERIALS CONTROLS AND SPILL PREVENTION PLAN. THE PLAN SHALL INCLUDE PROVISIONS FOR PREVENTING HAZARDOUS MATERIALS FROM CONTAMINATING SOIL OR ENTERING WATER COURSES, AND SHALL ESTABLISH A SPILL PREVENTION AND COUNTERMEASURE PLAN.
2. UTILIZE ONLY THE APPROVED ACCESS POINTS, AS SHOWN ON THE DRAWINGS. MATERIALS SHALL BE STOCKPILED ON EXISTING ACCESS ROADS OR WITHIN PREVIOUSLY DISTURBED AREAS SHOWN ON THE PLANS.
3. THE DOWNSLOPE PERIMETER OF STAGING OR STOCKPILE AREAS SHALL BE CONTAINED WITH FIBER ROLL.
4. ALL EQUIPMENT AND MATERIALS SHALL BE STORED, MAINTAINED AND REFUELED IN A DESIGNATED PORTION OF THE STAGING AREAS.



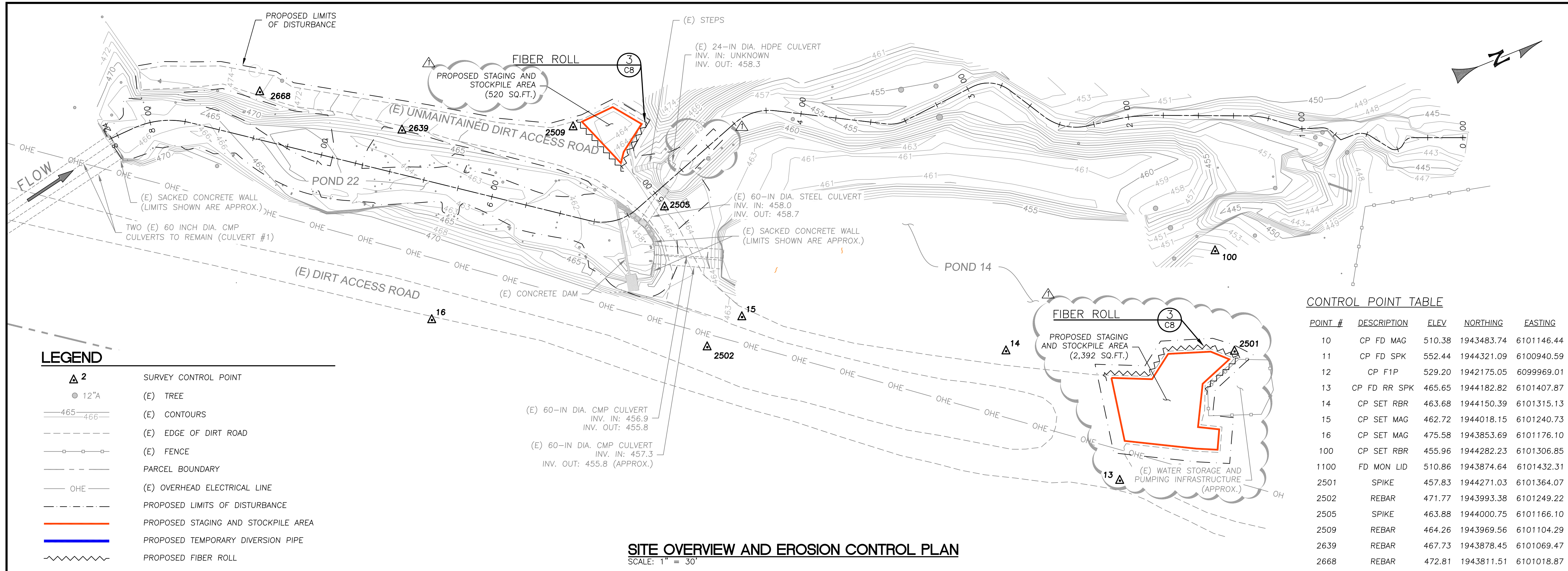
ACCESS AND STAGING PLAN
SCALE: 1"=200'

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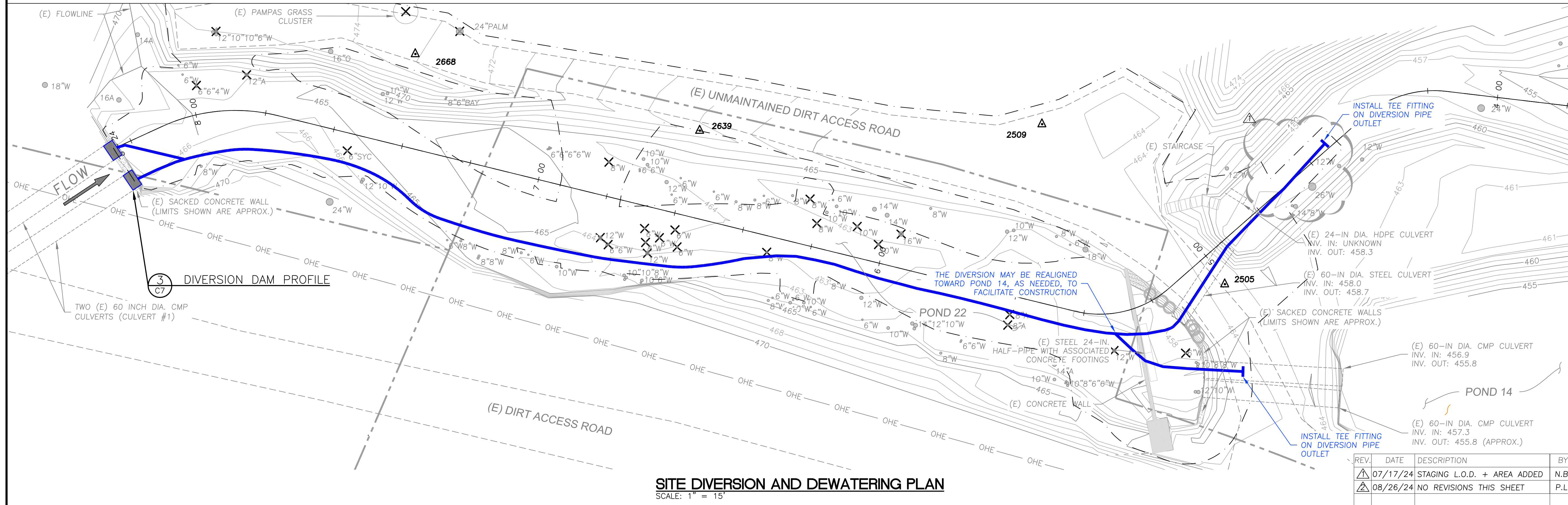
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SITE OVERVIEW AND EROSION CONTROL PLAN
SCALE: 1" = 30'

CONTROL POINT TABLE

POINT #	DESCRIPTION	ELEV	NORTHING	EASTING
10	CP FD MAG	510.38	1943483.74	6101146.44
11	CP FD SPK	552.44	1944321.09	6100940.59
12	CP F1P	529.20	1942175.05	6099969.01
13	CP FD RR SPK	465.65	1944182.82	6101407.87
14	CP SET RBR	463.68	1944150.39	6101315.13
15	CP SET MAG	462.72	1944018.15	6101240.73
16	CP SET MAG	475.58	1943853.69	6101176.10
100	CP SET RBR	455.96	1944282.23	6101306.85
1100	FD MON LID	510.86	1943874.64	6101432.31
2501	SPIKE	457.83	1944271.03	6101364.07
2502	REBAR	471.77	1943993.38	6101249.22
2505	SPIKE	463.88	1944000.75	6101166.10
2509	REBAR	464.26	1943969.56	6101104.29
2639	REBAR	467.73	1943878.45	6101069.47
2668	REBAR	472.81	1943811.51	6101018.87



SITE DIVERSION AND DEWATERING PLAN
SCALE: 1" = 15'

REV	DATE	DESCRIPTION	BY
07/17/24		STAGING L.O.D. + AREA ADDED	N.B.
08/26/24		NO REVISIONS THIS SHEET	P.L.

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SITE OVERVIEW, DIVERSION AND EROSION CONTROL PLAN

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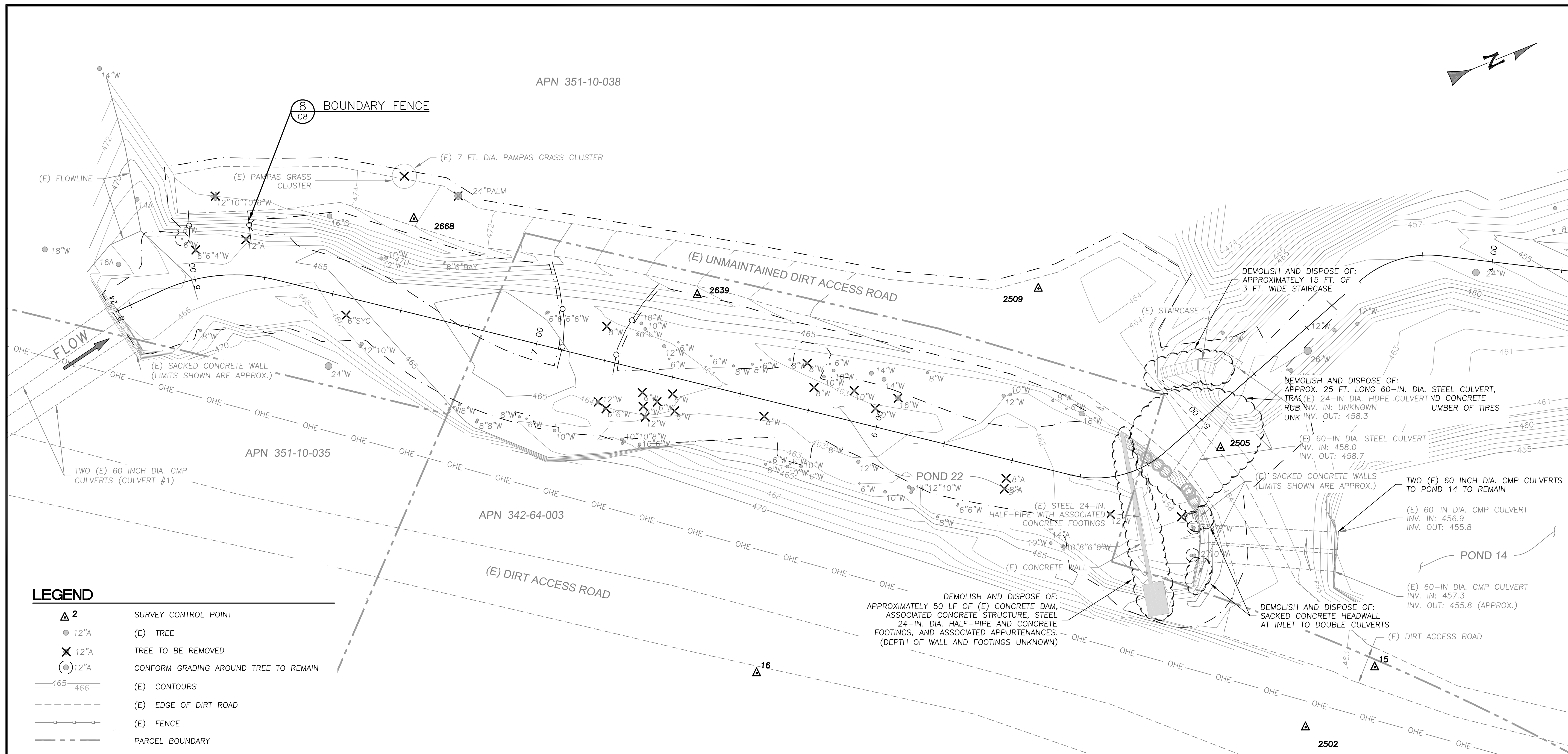
DEMOLITION PLAN

POND 22 PERMANENTE CREEK RESTORATION PROJECT PERMIT LEVEL DESIGN

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C4 OF 12



LEGEND

- ▲ 2 SURVEY CONTROL POINT
- 12"A (E) TREE
- ✕ 12"A TREE TO BE REMOVED
- ⊙ 12"A CONFORM GRADING AROUND TREE TO REMAIN
- 465—466— (E) CONTOURS
- - - (E) EDGE OF DIRT ROAD
- - - (E) FENCE
- - - PARCEL BOUNDARY
- - - OHE (E) OVERHEAD ELECTRICAL LINE
- - - LIMITS OF DISTURBANCE
- - - BOUNDARY FENCE

DEMOLITION NOTES:

1. GENERAL
 - a. BEFORE BEGINNING ANY WORK, CAREFULLY INSPECT THE WORK AND EXAMINE THE DRAWINGS AND SPECIFICATIONS TO DETERMINE THE EXTENT OF THE WORK TO BE PERFORMED.
 - b. USE OF EXPLOSIVES WILL NOT BE PERMITTED.
 - c. PREVENT DUST FROM BECOMING A NUISANCE TO THE PUBLIC, TO NEIGHBORS, AND TO OTHER WORK BEING PERFORMED ON OR NEAR THE SITE.
 - d. ROCK REMOVED FROM THE SITE MAY BE RE-USED IF IT MEETS THE MATERIALS SPECIFICATIONS OF THE WORK ITEM FOR WHICH IT IS PROPOSED.
2. PROTECTION OF EXISTING WORK
 - a. TAKE ALL NECESSARY PRECAUTIONS TO ENSURE AGAINST DAMAGE TO EXISTING WORK TO REMAIN IN PLACE, OR TO BE SALVAGED. ANY DAMAGE TO SUCH WORK SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER.
 - b. CONSTRUCT AND MAINTAIN SHORING, BRACING, AND SUPPORTS, AS REQUIRED. ENSURE THAT STRUCTURAL ELEMENTS ARE NOT OVERLOADED AND INCREASE STRUCTURAL SUPPORTS, OR ADD NEW SUPPORTS, AS MAY BE REQUIRED BECAUSE OF ANY CUTTING, REMOVAL, OR DEMOLITION WORK PERFORMED.
3. DEMOLITION
 - a. REMOVE AND DISPOSE OF MATERIALS AND STRUCTURES SPECIFIED FOR DEMOLITION OFFSITE AT AN APPROPRIATE FACILITY.
 - b. COMPLY WITH ALL LOCAL RULES, REGULATIONS, ORDINANCES, AND STATUTES FOR HANDLING AND DISPOSAL OF ANY HAZARDOUS MATERIALS ENCOUNTERED.
 - c. DEMOLISH ALL SPECIFIED STRUCTURES IN ACCORDANCE WITH ALL LOCAL REGULATIONS. COMPLETELY REMOVE FOOTINGS, FOUNDATION, AND ABOVE-GROUND CONSTRUCTION AS SHOWN ON THE DRAWINGS.

PARCEL NOTE FOR APN 342-64-003:
LEHIGH SOUTHWEST CEMENT COMPANY MAINTAINS ACCESS/AUTHORIZATION FOR CREEK MAINTENANCE/RESTORATION PURSUANT TO A 12/30/41 LICENSE AGREEMENT WITH LANDOWNER SOUTHERN PACIFIC RAILROAD, RECORDED FOR THIS PARCEL ON MAY 6, 1942.

DEMOLITION PLAN
SCALE: 1" = 15'

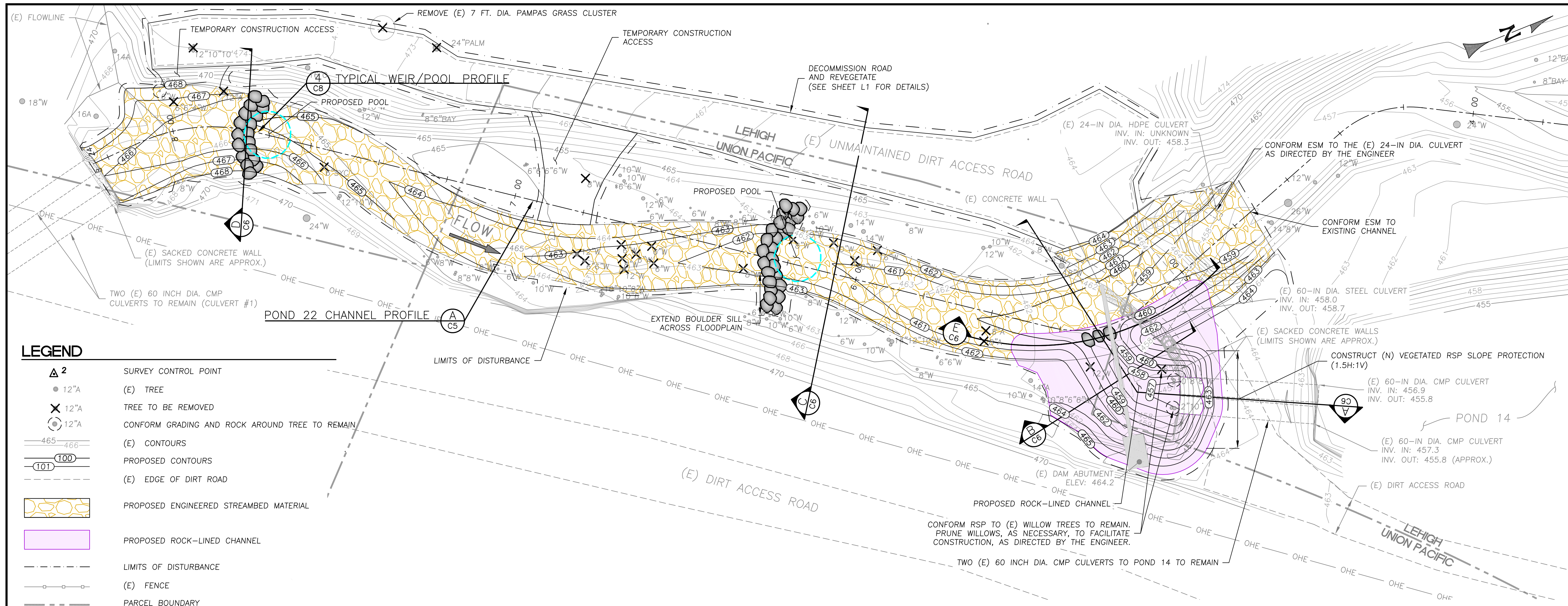
TREE REMOVAL AND PRUNING NOTES:

1. FLAG ALL VEGETATION FOR REMOVAL AND PRUNING FOR APPROVAL BY THE ENGINEER PRIOR TO INITIATING CLEARING AND GRUBBING ACTIVITIES.
2. SIGNIFICANT PRUNING OF VEGETATION TO REMAIN WILL BE REQUIRED AT SOME LOCATIONS TO FACILITATE CONSTRUCTION.
3. INSTALL BOUNDARY FENCE AROUND TREES TO REMAIN, AS DIRECTED BY THE ENGINEER.

TREE REMOVAL SUMMARY TABLE

TREE SPECIES	DBH	NUMBER
WILLOW	6"	5
WILLOW	8"	5
WILLOW	10"	3
WILLOW	12"	3
WILLOW	16"	1
WILLOW (DOUBLE STEM)	6"6"	1
WILLOW (TRIPLE STEM)	6"6"4"	1
WILLOW (TRIPLE STEM)	12"10"10"	1
ALDER	8"	2
ALDER	12"	1
SYCAMORE	6"	1
PALM	24"	1
PAMPAS GRASS CLUSTER	7 FT.	1

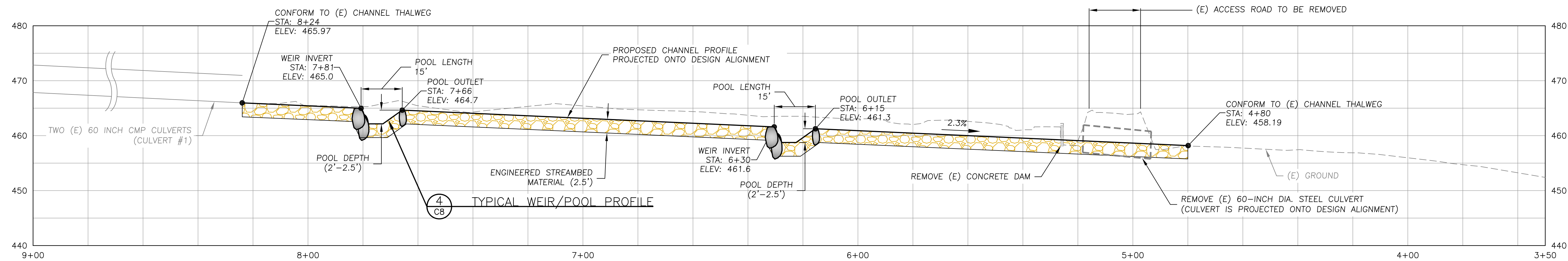
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07/17/24		PARCEL NOTE ADDED	N.B.
08/26/24		NO REVISIONS THIS SHEET	P.L.



SITE PLAN AND PROFILES

SCALE: 1" = 15'

NOTE:
FINISHED GRADE CONTOURS SHOWN WITHIN POOL AREAS REPRESENT TYPICAL CHANNEL GEOMETRY AND DO NOT REPRESENT THE FULL EXTENT OF POOL GRADING FOR GRAPHIC CLARITY.



POND 22 CHANNEL PROFILE

SCALE: H:1" = 20' V: 1" = 10'

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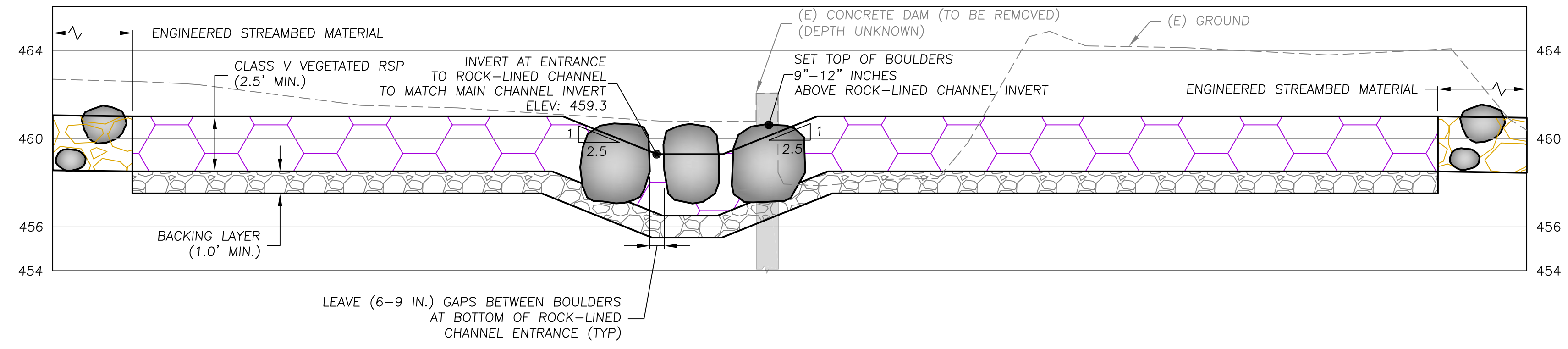
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SITE PLAN AND PROFILES

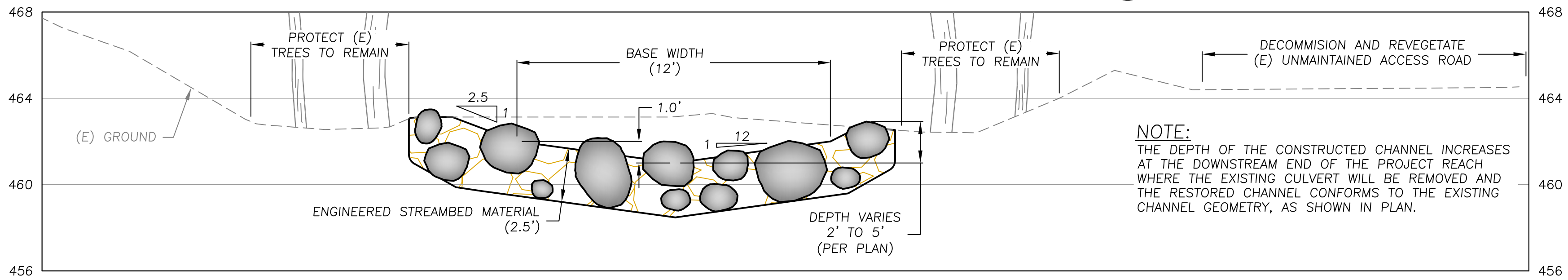
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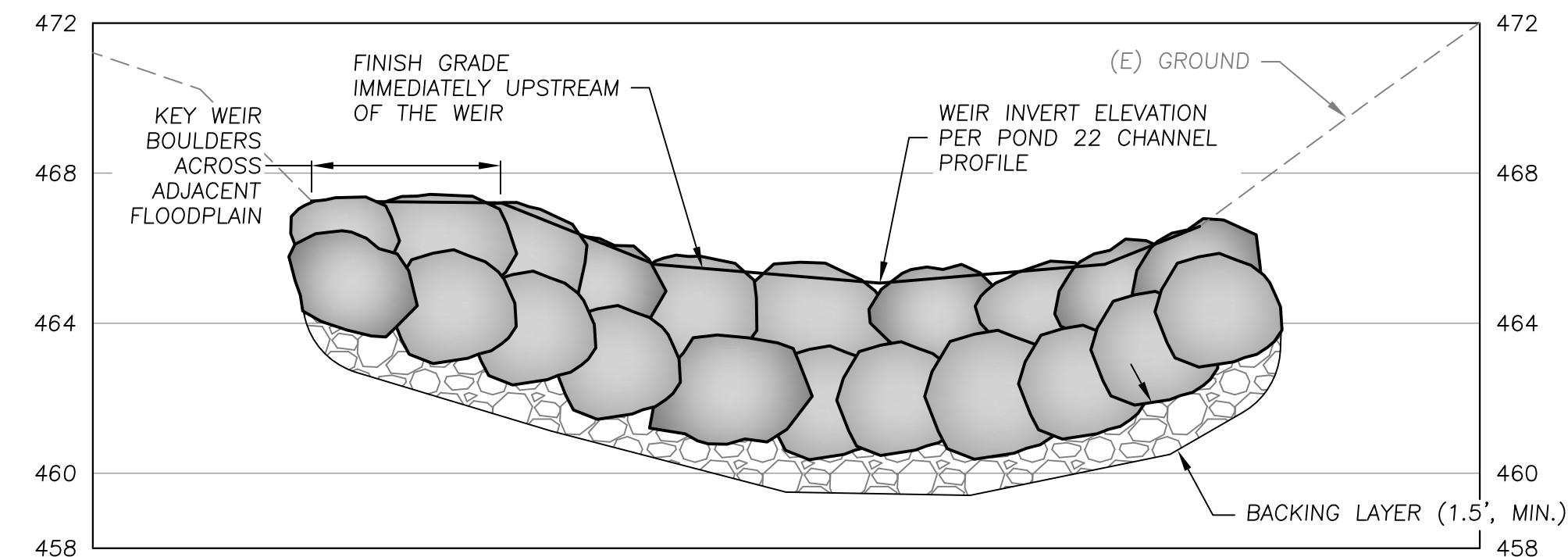
ROCK-LINED CHANNEL ENTRANCE SECTION
 SCALE: 1" = 4'



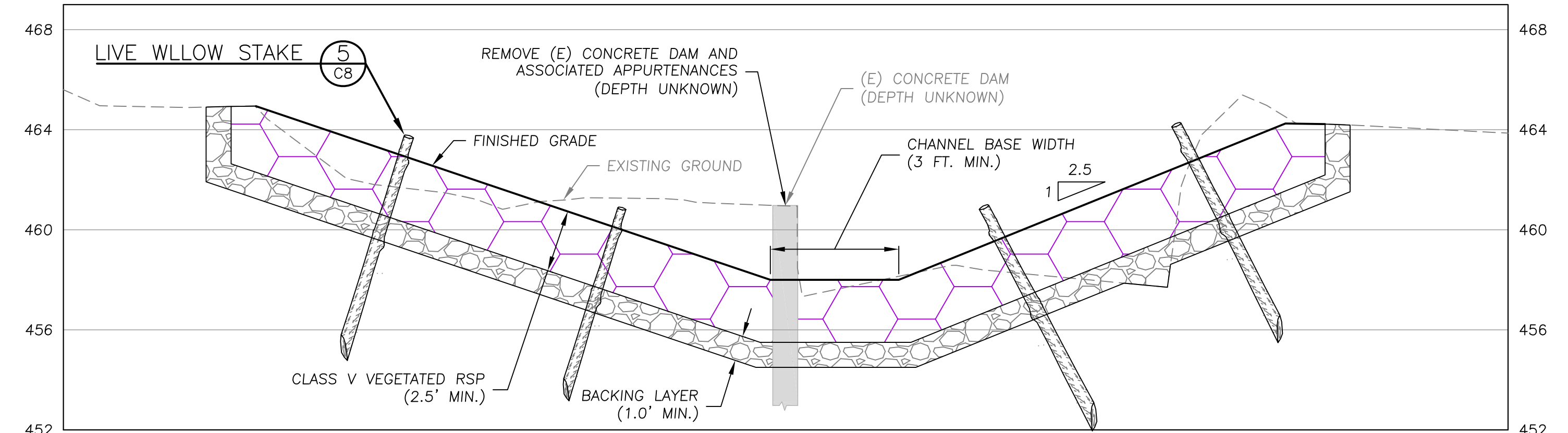
TYPICAL ENGINEERED STREAMBED MATERIAL SECTION
 SCALE: 1" = 4'

PROPOSED BANKFULL CHANNEL DIMENSIONS

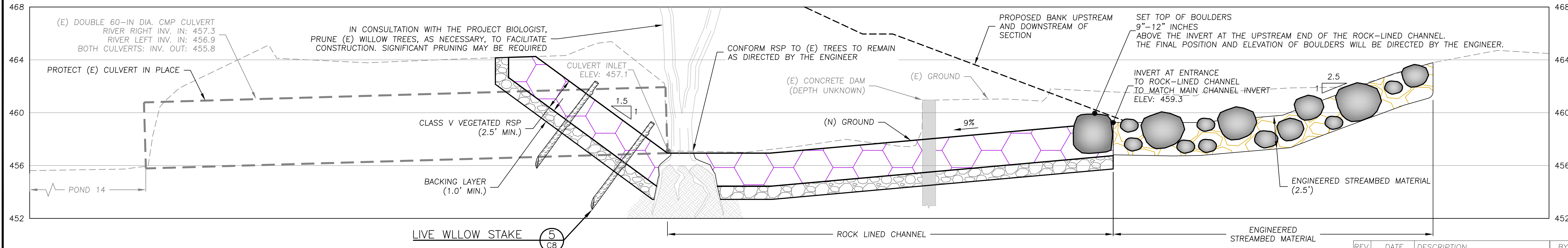
BANKFULL WIDTH (FT)	BANKFULL DEPTH (FT)
18-22	2.2-2.8



TYPICAL WEIR SECTION
 SCALE: 1" = 4'

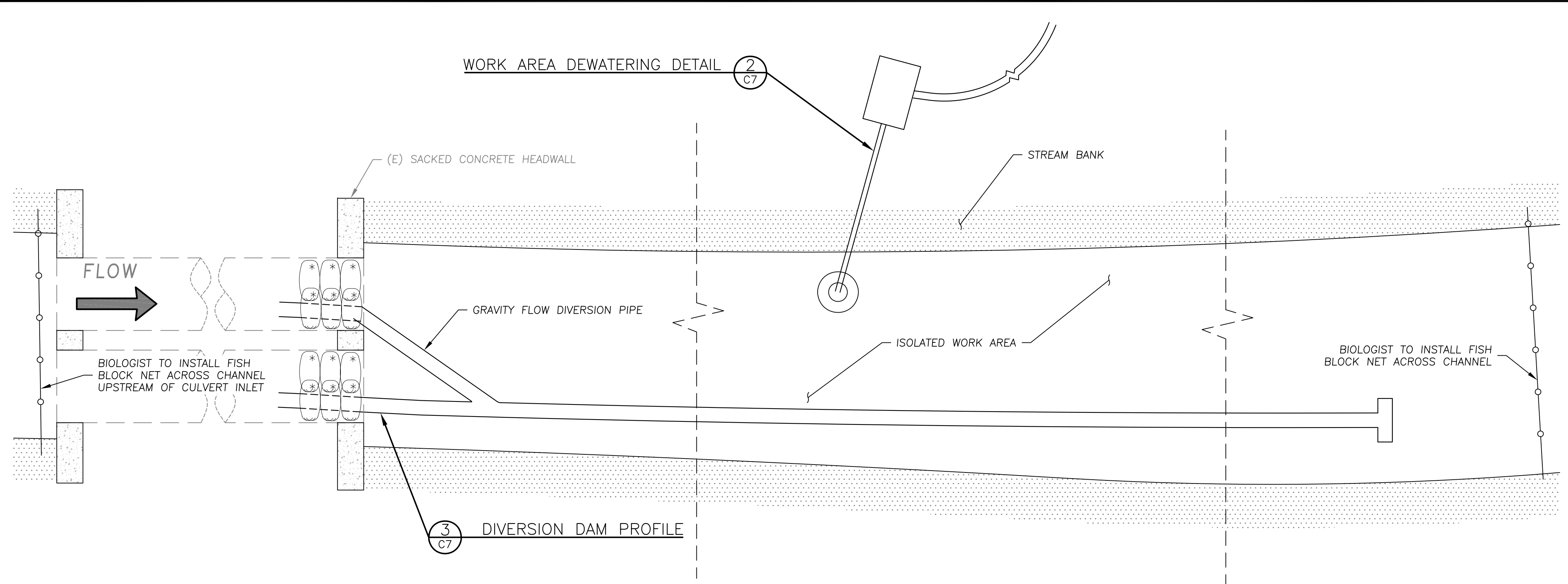


ROCK-LINED CHANNEL SECTION
 SCALE: 1" = 4'

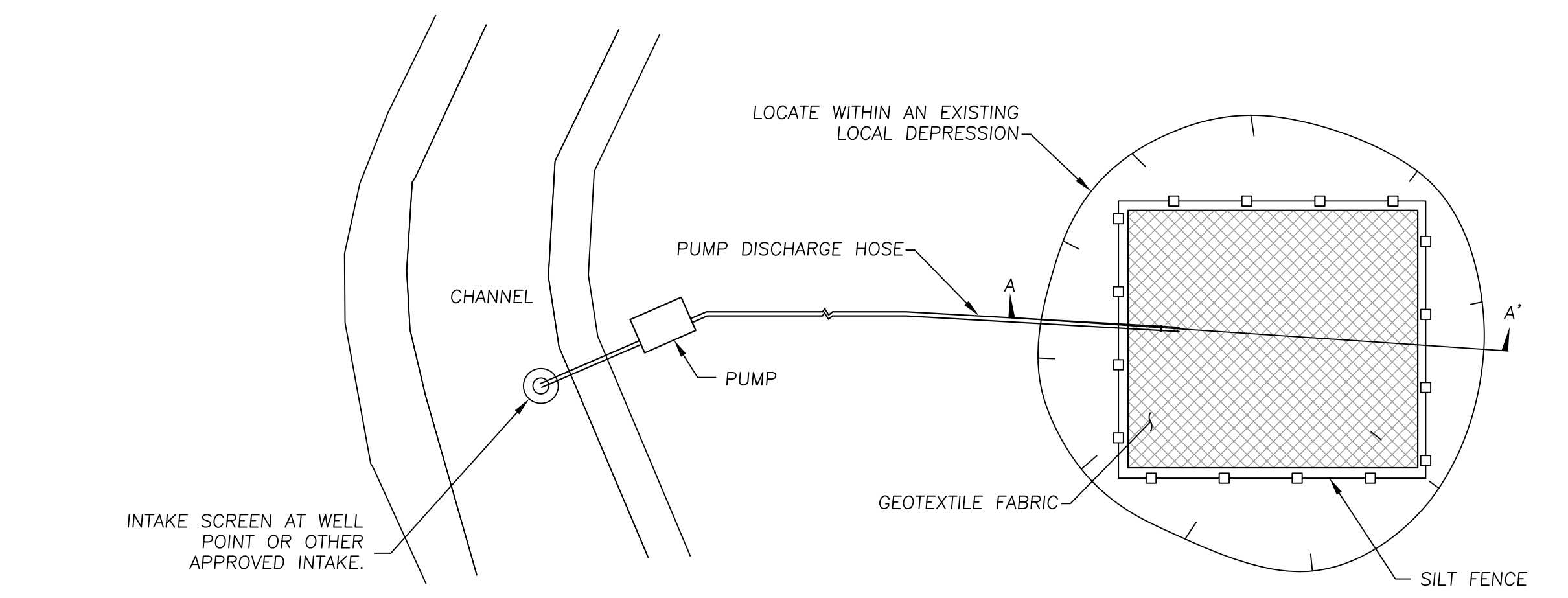


ROCK-LINED CHANNEL PROFILE
 SCALE: 1" = 4'

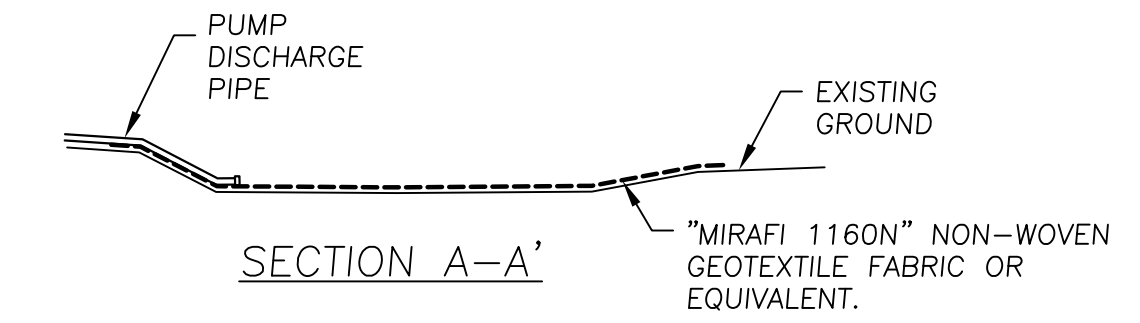
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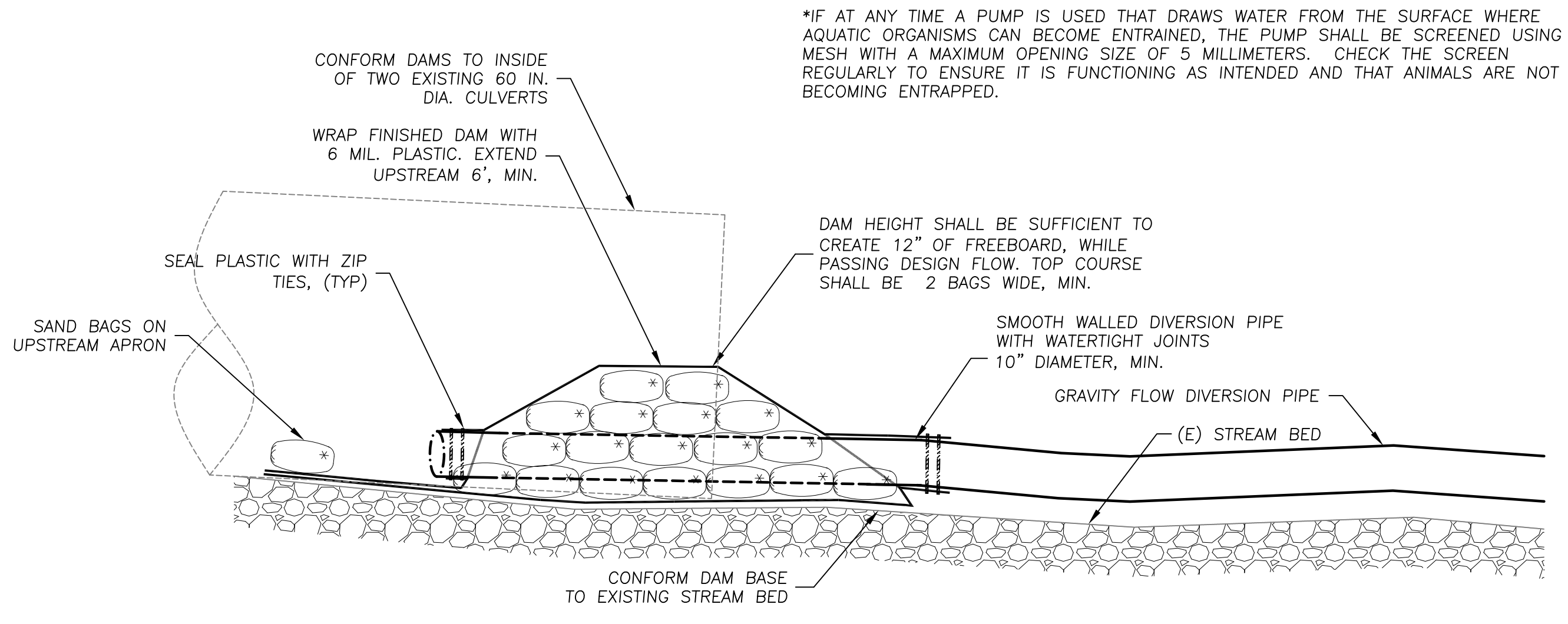
TYPICAL DEWATERING PLAN
SCALE: N.T.S.



- DEWATERING DISCHARGE AREA NOTES:**
1. DEWATERING SHALL COMPLY WITH ALL PROJECT PERMITS.
 2. THIS DETAIL REPRESENTS A POTENTIAL OPTION FOR DEWATERING OF WORK AREAS.
 3. TURBID WATER RESULTING FROM DEWATERING ACTIVITIES WILL EITHER BE TREATED OR DISCHARGED TO A LOCAL DEPRESSION(S) TO INFILTRATE OR EVAPORATE.
 4. TURBID WATERS WILL NOT BE ALLOWED TO DISCHARGE INTO PERMANENTE CREEK.
 5. PROPOSED FILTRATION METHODS WILL BE FIELD-FIT TO EXISTING CONDITIONS AT THE TIME OF CONSTRUCTION, AS APPROVED BY THE ENGINEER.
 6. REMOVE ACCUMULATED SEDIMENT AT THE COMPLETION OF DEWATERING ACTIVITIES AND DISPOSE OF AT AN APPROVED LOCATION.



WORK AREA DEWATERING DETAIL
SCALE: N.T.S.



DIVERSION DAM PROFILE
SCALE: N.T.S.

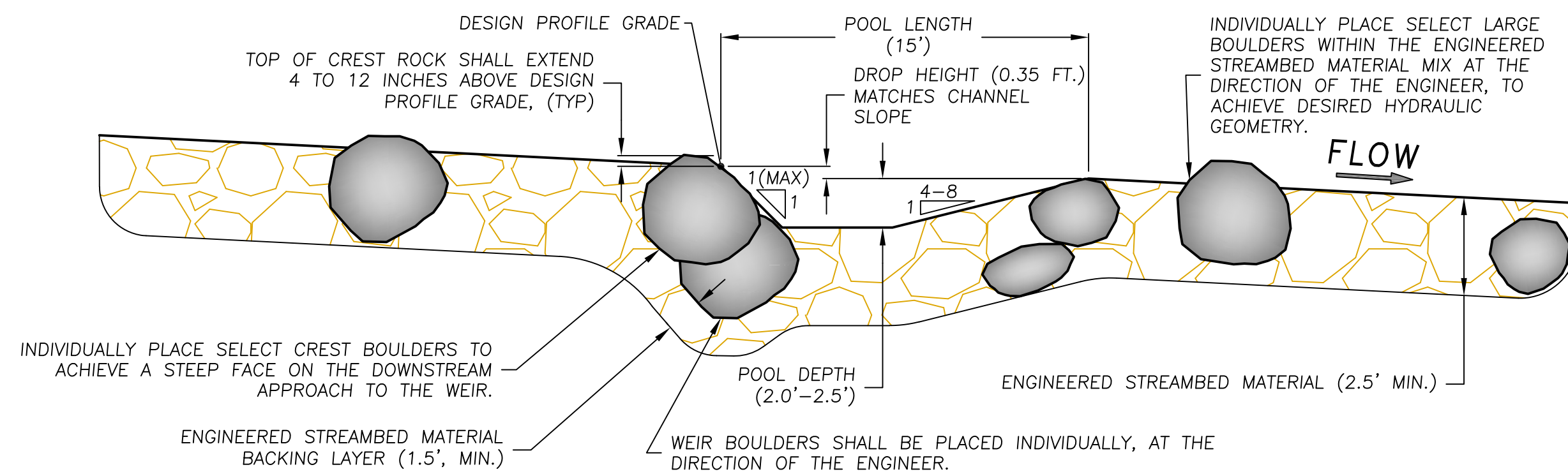
NOTE: CONTRACTOR MAY USE ALTERNATE DAM DETAIL, SUBJECT TO APPROVAL OF THE ENGINEER AND THE PERMITTING AGENCIES.

DIVERSION NOTES CONTINUED

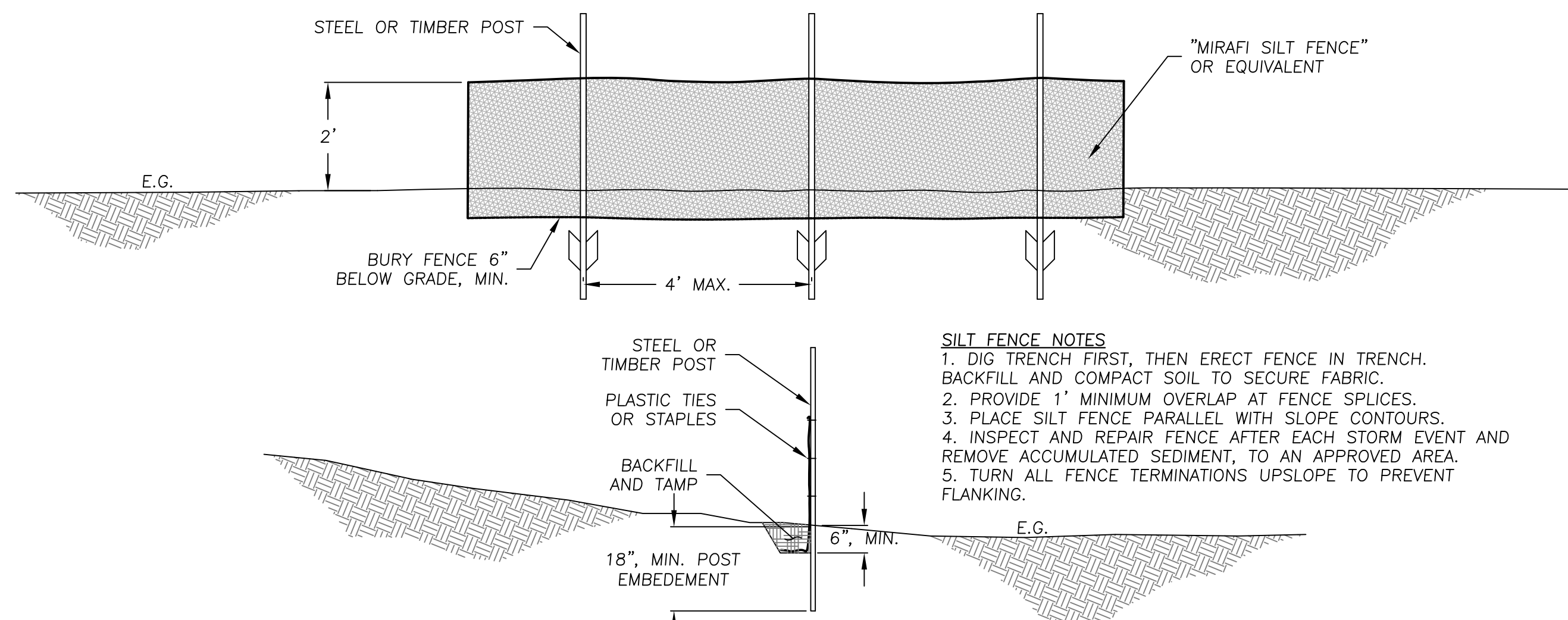
1. GENERAL
 - 1.1. DIVERSION SYSTEMS SHALL BE INSTALLED TO DEWATER THE INDIVIDUAL PROJECT AREAS TO FACILITATE IN-STREAM CONSTRUCTION AND TO REDUCE THE POTENTIAL IMPACTS TO WATER QUALITY DOWNSTREAM OF THE PROJECT SITES.
 - 1.2. THE CONTRACTOR SHALL CONFIRM THAT A FAVORABLE LONG TERM WEATHER FORECAST (1 WEEK MIN.) IS OBSERVED PRIOR TO PLACEMENT OF DIVERSION STRUCTURE.
 - 1.3. PRIOR TO PLACEMENT OF DIVERSION STRUCTURE, AQUATIC ORGANISMS SHALL BE REMOVED FROM THE DIVERTED REACH, IN ACCORDANCE WITH SECTION 2.
 - 1.4. DIVERSION SYSTEM INSTALLATION SHALL NORMALLY BEGIN IN THE DOWNSTREAM AREA AND CONTINUE IN AN UPSTREAM DIRECTION. THE FLOW SHALL BE DIVERTED ONLY WHEN THE DIVERSION CONSTRUCTION IS COMPLETE.
 - 1.5. THE DIVERSION PLAN SHOWN IS SCHEMATIC. THE DESIGN AND IMPLEMENTATION OF THE DIVERSION DAM IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO INSTALLATION. THE CONTRACTOR SHALL SUBMIT A DIVERSION PHASING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL. THE BASIC REQUIREMENTS OF THE DIVERSION PLAN ARE SHOWN.
 - 1.6. DIVERSION PIPES MAY BE RELOCATED, AS NECESSARY, TO FACILITATE CONSTRUCTION. THIS WORK MUST BE PERFORMED IN A MANNER THAT PROTECTS WATER QUALITY IN ACCORDANCE WITH PROJECT PERMITS.
 - 1.7. FOLLOWING ENGINEER'S APPROVAL OF THE COMPLETED WORK, DIVERSION SHALL BE REMOVED IMMEDIATELY, IN AN UPSTREAM DIRECTION.
2. AQUATIC ORGANISM REMOVAL
 - 2.1. ALL AQUATIC ORGANISM SHALL BE REMOVED AND RELOCATED TO APPROPRIATE HABITAT OUTSIDE THE LIMITS OF PROJECT DISTURBANCE PRIOR TO THE START OF CONSTRUCTION. PROTECTED AMPHIBIAN AND FISH SPECIES SHALL BE REMOVED FROM THE DIVERTED REACHES BY INDIVIDUALS LICENSED FOR SUCH ACTIVITIES BY THE NATIONAL MARINE FISHERIES SERVICE AND THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, AS RELEVANT.
 - 2.2. BLOCK NETS SHALL BE PROVIDED AND INSTALLED BY THE PROJECT BIOLOGIST. BLOCK NETS SHALL BE MAINTAINED BY THE CONTRACTOR BOTH UPSTREAM AND DOWNSTREAM OF THE WORK AREA, THROUGHOUT THE PERIOD OF CONSTRUCTION. MAINTENANCE INCLUDES PERIODIC REMOVAL OF ACCUMULATED DEBRIS, AS NECESSARY TO ENSURE FUNCTION. BLOCK NETS SHALL BE REMOVED BY THE PROJECT BIOLOGIST AFTER THE DIVERSION IS REMOVED AND THE IN CHANNEL WORK AREA IS RE-WATERED.
3. DIVERSION SYSTEM
 - 3.1. INSTALL A SEALED, TEMPORARY DIVERSION DAM CONSTRUCTED USING SAND BAGS FILLED WITH CLEAN WASHED PEA GRAVEL. THE DAM AND METHOD OF SEALING SHALL BE PLACED AT AN APPROPRIATE DEPTH TO CAPTURE SUBSURFACE STREAM FLOW, AS NEEDED TO DEWATER THE STREAMBED. THE USE OF SAND WILL NOT BE ALLOWED. NO OTHER DIVERSION METHOD SHALL BE USED WITHOUT AUTHORIZATION OF THE ENGINEER. IF AN ALTERNATE DIVERSION METHOD IS PREFERRED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUBMIT A PLAN TO THE ENGINEER FOR APPROVAL, DETAILING THE DESIRED DIVERSION METHOD.
 - 3.2. THE DIVERSION STRUCTURE SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER.
 - 3.3. THE CONTRACTOR SHALL MAINTAIN THE DIVERSION DAM DURING THE COURSE OF CONSTRUCTION WORK.
 - 3.4. IN THE EVENT OF A SIGNIFICANT STORM, THE CONTRACTOR SHALL BE PREPARED TO TAKE NECESSARY MEASURES TO INSURE SAFE PASSAGE OF STORM WATER FLOW THROUGH THE PROJECT AREA, WITHOUT DAMAGE TO EXISTING STRUCTURES, OR INTRODUCTION OF EXCESSIVE SEDIMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY EROSION CONTROL B.M.P.'S.
4. DEWATERING OF CONSTRUCTION AREAS
 - 4.1. ANY DEWATERING ACTIVITIES WHICH MAY BE REQUIRED FOR CONSTRUCTION PURPOSES SHALL BE CONDUCTED IN A MANNER WHICH DOES NOT RESULT IN AN EXCEEDANCE OF ANY WATER QUALITY REQUIREMENTS ESTABLISHED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD.
 - 4.2. DISCHARGE OF WATER FROM THE DEWATERED CONSTRUCTION SITE, EITHER BY GRAVITY OR PUMPING, SHALL BE PERFORMED IN A MANNER TO PREVENT EXCESSIVE TURBIDITY FROM ENTERING THE RECEIVING WATERWAYS AND TO PREVENT SCOUR AND EROSION OUTSIDE OF THE CONSTRUCTION SITE. PUMPED WATER SHOULD BE PRE-FILTERED WITH SAND/GRAVEL PACK AROUND SUMPS FOR SUBSURFACE FLOWS AND A SILT FENCE OR HAY BALES AROUND PUMPS FOR SURFACE FLOW. PUMPED WATER SHALL BE DISCHARGED INTO ISOLATED LOCAL DEPRESSIONS OR TREATMENT FACILITIES, AS NECESSARY TO MEET WATER QUALITY REQUIREMENTS. WHERE WATER TO BE DISCHARGED INTO THE CREEK WILL CREATE EXCESSIVE TURBIDITY, THE WATER SHALL BE ROUTED THROUGH A SEDIMENT INTERCEPTOR OR OTHER FACILITIES TO REMOVE SEDIMENT FROM WATER.
 - 4.3. CONTRACTOR SHALL SUPPLY ALL NECESSARY PUMPS, PIPING, FILTERS, SHORING, AND OTHER TOOLS AND MATERIALS NECESSARY FOR DEWATERING.

*IF AT ANY TIME A PUMP IS USED THAT DRAWS WATER FROM THE SURFACE WHERE AQUATIC ORGANISMS CAN BECOME ENTRAPPED, THE PUMP SHALL BE SCREENED USING A MESH WITH A MAXIMUM OPENING SIZE OF 5 MILLIMETERS. CHECK THE SCREEN REGULARLY TO ENSURE IT IS FUNCTIONING AS INTENDED AND THAT ANIMALS ARE NOT BECOMING ENTRAPPED.

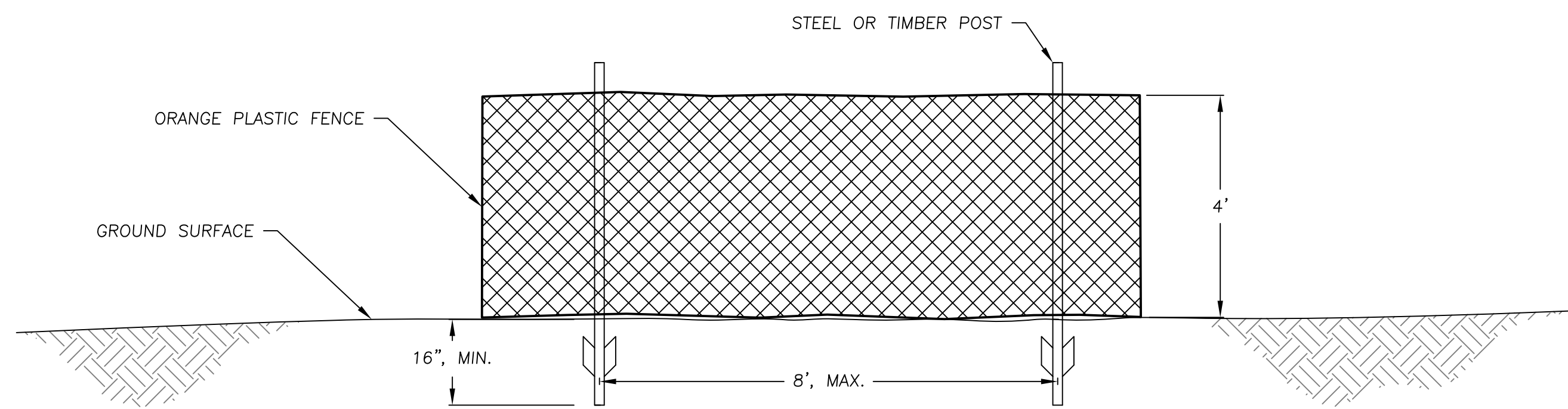
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△	07/17/24	NO REVISIONS THIS SHEET	N.B.
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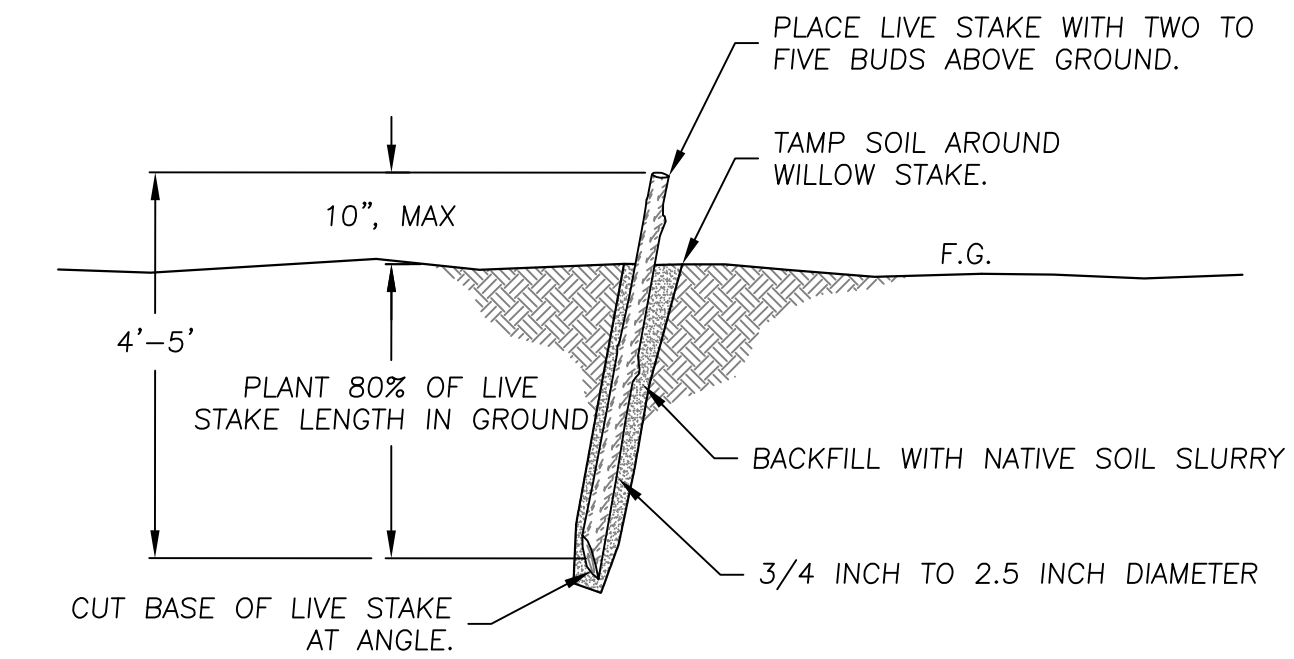
TYPICAL WEIR/POOL PROFILE (4)
SCALE: 1" = 5'



SILT FENCE (7)
SCALE: 1" = 2'



BOUNDARY FENCE (8)
SCALE: 1" = 2'



TYPICAL LIVE WILLOW STAKE (5)
SCALE: N.T.S.

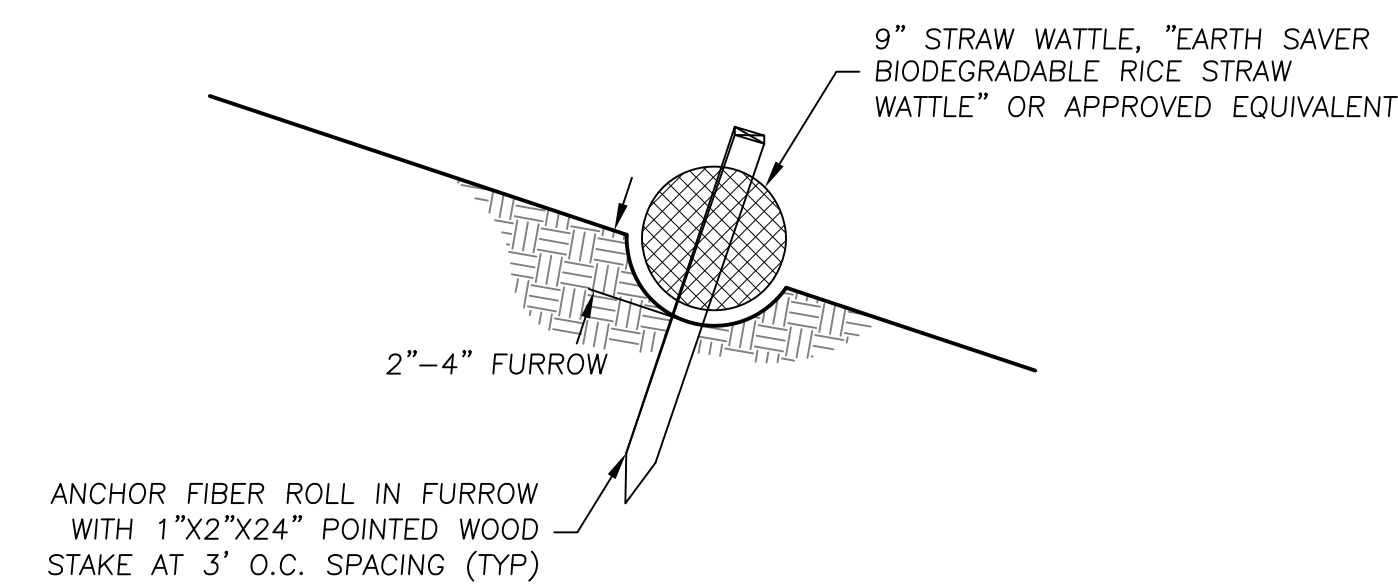
LIVE WILLOW STAKE NOTES
LIVE STAKES SHALL CONSIST OF LOCALLY-OBTAINED, NATIVE WILLOW SPECIES.

PREPARATION

1. CUT LIVE STAKE CUTTINGS WITH SHARP PRUNING SHEARS OR WITH A SHARP SAW BLADE, WITHOUT CAUSING INJURY TO THE BARK OR SPLITTING OF THE ENDS. ANGLE THE BUTT END OF THE CUTTING AND KEEP THE TOP END SQUARE. REMOVE ALL SIDE BRANCHES WITH SHARP PRUNING SHEARS. CUT FLUSH WITH STAKE, WITHOUT CAUSING INJURY.
2. CUT LIVE STAKES IN LENGTHS FROM 4 TO 5 FEET AND 0.75 TO 2.5 INCHES IN DIAMETER.

INSTALLATION

1. INSTALL LIVE STAKES WITHIN 6 HOURS OF BEING CUT OR SUBMERGE THEM IN CLEAN FRESH WATER FOR 24 HOURS, MIN. PRIOR TO INSTALLATION. DO NOT SOAK LIVE STAKES FOR MORE THAN 5 DAYS PRIOR TO INSTALLATION.
2. INSTALL LIVE STAKES WITH AT LEAST 2 BUDS AND/OR BUD SCARS ABOVE THE GROUND AFTER PLANTING.
3. INSTALL LIVE STAKES 4 FT. MINIMUM INTO SOIL, PREFERABLY WITH 80% OF ITS LENGTH IN CONTACT WITH NATIVE SOIL. USE OF A POWER AUGER OR PILOT BAR MAY HELP WITH INSTALLATION.
4. INSTALL LIVE STAKES WITH BASE IN CONTACT WITH NATIVE SOIL WHERE INSTALLED WITHIN RSP.
5. DO NOT DAMAGE THE BUDS, SPLIT STAKE ENDS, OR STRIP THE BARK DURING INSTALLATION.



FIBER ROLL (6)
SCALE: N.T.S.

FIBER ROLL NOTES

1. CLEAR THE BEDDING AREA FOR THE FIBER ROLL OF OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH IN DIAMETER BEFORE INSTALLATION.
2. CONSTRUCT FURROWS TO THE DEPTH SHOWN, AND TO A SUFFICIENT WIDTH TO HOLD THE FIBER ROLL. INSTALL STAKES AT THE ON-CENTER SPACING SHOWN ALONG THE LENGTH OF THE FIBER ROLL AND STOPPED AT 12 INCHES FROM EACH END OF THE ROLLS. DRIVE STAKES TO BETWEEN TWO AND THREE INCHES ABOVE THE TOP OF THE ROLL.
3. PLACE FIBER ROLLS 10 FEET APART ALONG THE SLOPE FOR SLOPE INCLINATION OF 2H:1V AND STEEPER, AND 15 FEET APART ALONG THE SLOPE FOR SLOPE INCLINATION BETWEEN 2H:1V AND 4H:1V.
4. INSTALL FIBER ROLLS APPROXIMATELY PARALLEL TO THE SLOPE CONTOUR. ANGLE THE TERMINUS OF ROWS UP-SLOPE AT 45 DEGREES FOR A DISTANCE OF THREE FEET. WHERE FIBER ROLLS MEET, PROVIDE AN OVERLAP OF 18 INCHES, WITH ADJACENT ROLLS TIGHTLY ABUTTING EACH OTHER.
5. INSTALL FIBER ROLLS PRIOR TO SEEDING, WHERE USED WITHOUT SLOPE PROTECTION FABRIC.

FIBER ROLL (6)
SCALE: N.T.S.

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DESIGNED BY: B.Z.
DRAWN BY: P.L.
CHECKED BY: B.Z.
DATE: 2/20/24
JOB NO.: 13-016

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES FOR REDUCED PLOTS

0 1" 1"

8 OF 12

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PRELIMINARY
NOT FOR CONSTRUCTION

PREPARED AT THE REQUEST OF:
LEHIGH SOUTHWEST CEMENT COMPANY

DETAILS

POND 22
PERMANENTE CREEK RESTORATION PROJECT
PERMIT LEVEL DESIGN

GENERAL NOTES

- NOTIFY THE ENGINEER AT LEAST 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER OR A DESIGNATED REPRESENTATIVE SHALL OBSERVE THE CONSTRUCTION PROCESS, AS NECESSARY TO ENSURE PROPER INSTALLATION PROCEDURES.
- EXISTING UNDERGROUND UTILITY LOCATIONS:
 - CALL UNDERGROUND SERVICE ALERT (1-800-642-2444) TO LOCATE ALL UNDERGROUND UTILITY LINES PRIOR TO COMMENCING CONSTRUCTION.
 - PRIOR TO BEGINNING WORK, CONTACT ALL UTILITIES COMPANIES WITH REGARD TO WORKING OVER, UNDER, OR AROUND EXISTING FACILITIES AND TO OBTAIN INFORMATION REGARDING RESTRICTIONS THAT ARE REQUIRED TO PREVENT DAMAGE TO THE FACILITIES.
 - EXISTING UTILITY LOCATIONS SHOWN ARE COMPILED FROM INFORMATION SUPPLIED BY THE APPROPRIATE UTILITY AGENCIES AND FROM FIELD MEASUREMENTS TO ABOVE GROUND FEATURES READILY VISIBLE AT THE TIME OF SURVEY. LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND DEPTH OF UNDERGROUND UTILITIES.
 - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING AND PROPOSED PIPING, UTILITIES, TRAFFIC SIGNAL EQUIPMENT (BOTH ABOVE GROUND AND BELOW GROUND), STRUCTURES, AND ALL OTHER EXISTING IMPROVEMENTS THROUGHOUT CONSTRUCTION.
 - PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION, DISCOVER OR VERIFY THE ACTUAL DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES AND POTHOLE THOSE AREAS WHERE POTENTIAL CONFLICTS ARE LIKELY OR DATA IS OTHERWISE INCOMPLETE.
 - TAKE APPROPRIATE MEASURES TO PROTECT EXISTING UTILITIES DURING CONSTRUCTION OPERATIONS. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COST OF REPAIR/REPLACEMENT OF ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
 - UPON LEARNING OF THE EXISTENCE AND/OR LOCATIONS OF ANY UNDERGROUND FACILITIES NOT SHOWN OR SHOWN INACCURATELY ON THE PLANS OR NOT PROPERLY MARKED BY THE UTILITY OWNER, IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY BY TELEPHONE AND IN WRITING.
 - UTILITY RELOCATIONS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT FACILITIES WILL BE PERFORMED BY THE UTILITY COMPANY, UNLESS OTHERWISE NOTED.
- IF DISCREPANCIES ARE DISCOVERED BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- ALL TESTS, INSPECTIONS, SPECIAL OR OTHERWISE, THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR THESE PLANS, SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY. JOB SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE REQUIRED TESTS AND INSPECTIONS ARE PERFORMED.
- PROJECT SCHEDULE: PRIOR TO COMMENCEMENT OF WORK, SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL A DETAILED CONSTRUCTION SCHEDULE. DO NOT BEGIN ANY CONSTRUCTION WORK UNTIL THE PROJECT SCHEDULE AND WORK PLAN IS APPROVED BY THE ENGINEER. ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL. PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, PERMITTING, INSTALLATION, AND MAINTENANCE OF ANY AND ALL TRAFFIC CONTROL MEASURES DEEMED NECESSARY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL SAFETY DURING CONSTRUCTION. ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK, AND PROVIDE FOR THE PROPER AND SAFE ROUTING OF VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
- CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTION LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL. NEITHER THE PROFESSIONAL ACTIVITIES OF CONSULTANT NOR THE PRESENCE OF CONSULTANT OR THEIR OR HER EMPLOYEES OR SUB-CONSULTANTS AT A CONSTRUCTION SITE SHALL RELIEVE THE CONTRACTOR AND ITS SUBCONTRACTORS OF THEIR RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND APPLICABLE HEALTH OR SAFETY REQUIREMENTS OF ANY REGULATORY AGENCY OR OF STATE LAW.
- MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL AS-BUILT DEVIATIONS FROM THE CONSTRUCTION AS SHOWN ON THESE DRAWINGS AND SPECIFICATIONS, FOR THE PURPOSE OF PROVIDING THE ENGINEER OF RECORD WITH A BASIS FOR THE PREPARATION OF RECORD DRAWINGS.
- MAINTAIN THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. STORE ALL MATERIALS WITHIN APPROVED STAGING AREAS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL PERMIT CONDITIONS, LAWS, ORDINANCES, CODES, REQUIREMENTS AND STANDARDS, WHICH IN ANY MANNER AFFECT THE COURSE OF CONSTRUCTION OF THIS PROJECT, THOSE ENGAGED OR EMPLOYED IN THE CONSTRUCTION AND THE MATERIALS USED IN THE CONSTRUCTION.
- PROVIDE, AT CONTRACTOR'S SOLE EXPENSE, ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLY WITH ALL APPLICABLE PERMIT CONDITIONS AND REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT, UNLESS OTHERWISE SPECIFIED.
- FIELD INSPECTIONS AND OR THE PROVISION OF CONSTRUCTION STAKES DO NOT RELIEVE THE CONTRACTOR OF THEIR SOLE RESPONSIBILITY FOR ESTABLISHING ACCURATE CONSTRUCTED LINES AND GRADES, AS SPECIFIED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND PRESERVATION OF ALL SURVEY MONUMENTS OR PROPERTY CORNERS. DISTURBED MONUMENTS SHALL BE RESTORED BACK TO THEIR ORIGINAL LOCATION AND SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR AT THE SOLE EXPENSE OF THE CONTRACTOR.
- CONTRACTOR IS REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- THE CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE CONSTRUCTION SAFETY ORDERS OF THE CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH, PAYING PARTICULAR ATTENTION TO THOSE PERTAINING TO EXCAVATION AND TRENCHES WITHIN THE CALIFORNIA CODE OF REGULATIONS TITLE 8, SUBCHAPTER 4 CONSTRUCTION SAFETY ORDERS, ARTICLE 6 EXCAVATION.

EARTHWORK NOTES

- PRIOR TO COMMENCING WORK, PROTECT ALL SENSITIVE AREAS TO REMAIN UNDISTURBED WITH TEMPORARY FENCING, AS SHOWN ON THE DRAWINGS, AS SPECIFIED, OR AS DIRECTED BY THE ENGINEER.
- DO NOT DISTURB AREAS OUTSIDE OF THE DESIGNATED LIMITS OF DISTURBANCE, UNLESS AUTHORIZED IN WRITING BY THE ENGINEER. THE COST OF ALL ADDITIONAL WORK ASSOCIATED WITH RESTORATION AND REVEGETATION OF DISTURBED AREAS OUTSIDE THE DESIGNATED LIMITS OF DISTURBANCE, AS SHOWN ON THE DRAWINGS, SHALL BE BORNE SOLELY BY THE CONTRACTOR.
- ALL EXCESS SOILS WILL BE USED ON SITE, AS APPROPRIATE, FOR RECLAMATION, OPERATIONS, AND MAINTENANCE PURPOSES.
- CLEARING AND GRUBBING, SUBGRADE PREPARATION AND EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 17 & 19 OF THE STANDARD SPECIFICATIONS, THESE DRAWINGS, AND THE TECHNICAL SPECIFICATIONS.
- PRIOR TO STARTING WORK ON THE PROJECT, SUBMIT FOR ACCEPTANCE BY THE ENGINEER A HAZARDOUS MATERIALS CONTROLS AND SPILL PREVENTION PLAN. INCLUDE PROVISIONS FOR PREVENTING HAZARDOUS MATERIALS FROM CONTAMINATING SOIL OR ENTERING WATER COURSES, AND ESTABLISH A SPILL PREVENTION AND COUNTERMEASURE PLAN.
- UNSUITABLE SOIL OR MATERIAL NOT TO BE INCORPORATED INTO THE WORK:
 - ORGANIC MATERIALS SUCH AS PEAT, MULCH, ORGANIC SILT OR SOD.
 - SOILS CONTAINING EXPANSIVE CLAYS.
 - MATERIAL CONTAINING EXCESSIVE MOISTURE.
 - POORLY GRADED COURSE MATERIAL.
 - PARTICLE SIZES IN EXCESS OF 6 INCHES.
 - MATERIAL WHICH WILL NOT ACHIEVE SPECIFIED DENSITY OR BEARING.
- FINE GRADING ELEVATIONS, CONFORMS, AND SLOPES NOT CLEARLY SHOWN ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD TO DIRECT DRAINAGE TO PROTECTED DRAINAGE CONTROL STRUCTURES OR NATURAL WATERWAYS IN A MANNER THAT SUPPORTS THE INTENT OF THE DESIGN. ALL FINAL GRADING SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- THE TOP 6" OF SUBGRADE UNDER ALL PAVED SURFACES SUBJECT TO VEHICULAR USE SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION, IN ACCORDANCE WITH ASTM-D1557. ALL OTHER FILL TO BE COMPACTED TO A MINIMUM OF 90% MAXIMUM DENSITY AS DETERMINED BY ASTM-D1557 AND SO CERTIFIED BY TESTS AND REPORTS FROM THE ENGINEER IN CHARGE OF THE GRADING CERTIFICATION.
- SPREAD FILL MATERIAL IN LIFTS OF APPROXIMATELY 8 INCHES, MOISTENED OR DRIED TO NEAR OPTIMUM MOISTURE CONTENT AND RECOMPACTED. THE MATERIALS FOR ENGINEERED FILL SHALL BE APPROVED BY A REGISTERED CIVIL ENGINEER. ANY IMPORTED MATERIALS MUST BE APPROVED BEFORE BEING BROUGHT TO THE SITE. THE MATERIALS USED SHALL BE FREE OF ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS.
- ALL CONTACT SURFACES BETWEEN ORIGINAL GROUND AND RECOMPACTED FILL SHALL BE EITHER HORIZONTAL OR VERTICAL. ALL ORGANIC MATERIAL SHALL BE REMOVED AND THE REMAINING SURFACE SCARIFIED TO A DEPTH OF AT LEAST 12 INCHES, UNLESS DEEPER EXCAVATION IS REQUIRED BY THE ENGINEER.

EROSION CONTROL NOTES

- THE EROSION CONTROL PLAN SHOWN IS INTENDED FOR THE SUMMER CONSTRUCTION SEASON (APRIL 15TH TO OCTOBER 15TH). IF THE DRAINAGE FEATURES SHOWN ON THESE DRAWINGS ARE NOT COMPLETED AND DISTURBED AREAS STABILIZED BY OCTOBER 1ST, CONSULT THE ENGINEER FOR ADDITIONAL RAINY SEASON EROSION CONTROL MEASURES.
- UTILIZE ONLY THE APPROVED HAUL ROADS AND ACCESS POINTS (AS SHOWN ON THE DRAWINGS) FOR TRANSPORT OF MATERIALS AND EQUIPMENT.
- BETWEEN OCTOBER 15 AND APRIL 15, PROTECT EXPOSED SOIL FROM EROSION AT ALL TIMES. DURING CONSTRUCTION, SUCH PROTECTION MAY CONSIST OF MULCHING AND/OR PLANTING OF NATIVE VEGETATION OF ADEQUATE DENSITY. BEFORE COMPLETION OF THE PROJECT, STABILIZE ALL EXPOSED SOIL ON DISTURBED SLOPES AGAINST EROSION.
- MAINTAIN A STANDBY CREW FOR EMERGENCY WORK AT ALL TIMES DURING THE RAINY SEASON (OCTOBER 15 THROUGH APRIL 15). STOCKPILE NECESSARY MATERIALS AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES.
- CONSTRUCT TEMPORARY EROSION CONTROL MEASURES AS SHOWN ON THIS PLAN AND/OR AS DIRECTED BY THE ENGINEER TO CONTROL DRAINAGE WHICH HAS BEEN AFFECTED BY GRADING AND/OR TRENCHING OPERATIONS.
- INCORPORATE ADEQUATE DRAINAGE PROCEDURES DURING THE CONSTRUCTION PROCESS TO ELIMINATE EXCESSIVE PONDING AND EROSION.
- CONSTRUCT AND MAINTAIN EROSION CONTROL MEASURES TO PREVENT THE DISCHARGE OF EARTHEN MATERIALS TO THE CREEK FROM DISTURBED AREAS UNDER CONSTRUCTION AND FROM COMPLETED CONSTRUCTION AREAS.
- INSTALL ALL PROTECTIVE DEVICES AT THE END OF EACH WORK DAY WHEN THE FIVE-DAY RAIN PROBABILITY EQUALS OR EXCEEDS 50 PERCENT AS DETERMINED FROM THE NATIONAL WEATHER SERVICE FORECAST OFFICE: WWW.SRH.NOAA.GOV.
- AFTER EACH RAINSTORM, REMOVE ALL SILT AND DEBRIS FROM SEDIMENT CONTROL DEVICES.
- THE EROSION CONTROL DEVICES ON THIS PLAN ARE A SCHEMATIC REPRESENTATION OF WHAT MAY BE REQUIRED. EROSION CONTROL DEVICES MAY BE RELOCATED, DELETED, OR ADDITIONAL ITEMS MAY BE REQUIRED DEPENDING ON THE ACTUAL SOIL CONDITIONS ENCOUNTERED, AT THE DISCRETION OF THE ENGINEER.
- MAINTAIN ALL EROSION CONTROL DEVICES AND MODIFY THEM AS SITE PROGRESS DICTATES.
- MONITOR THE EROSION CONTROL DEVICES DURING STORMS AND MODIFY THEM IN ORDER TO PREVENT PROGRESS OF ANY ONGOING EROSION.
- CONTACT THE ENGINEER IN THE EVENT THAT THE EROSION CONTROL PLAN AS DESIGNED REQUIRES ANY SUBSTANTIAL REVISIONS.
- IMPLEMENT ALL REQUIRED BMP'S PRIOR TO COMMENCING SITE DISTURBING ACTIVITIES.

ROCK SPECIFICATIONS

- A. ALL ROCK SHALL CONFORM TO THE FOLLOWING QUALITY REQUIREMENTS:
- RESISTANT TO WEATHERING AND WATER ACTION AND FREE OF ORGANIC OR OTHER UNSUITABLE MATERIAL. DO NOT USE SHALE, ROCK WITH SHALE SEAMS, OR OTHER FISSILE OR FISSURED ROCK THAT MAY BREAK INTO SMALLER PIECES IN THE PROCESS OF HANDLING AND PLACING.
 - SUB-ROUNDED TO ANGULAR IN SHAPE.
 - GRANITE OR HAVE A SPECIFIC GRAVITY EQUAL TO OR GREATER THAN THAT OF GRANITE.
 - COLOR AND TEXTURE CONSTANT THROUGHOUT THE STOCKPILE.
- B. PROVIDE SAMPLES OF EACH GRADATION SPECIFIED FOR APPROVAL BY THE ENGINEER, PRIOR TO STOCKPILING AT THE PROJECT AREAS.
- C. INDIVIDUAL ROCK CLASSES AND PLACEMENT METHODS ARE FURTHER DEFINED AS FOLLOWS:

1 – ENGINEERED STREAMBED MATERIAL
ENGINEERED STREAMBED MATERIAL SHALL CONSIST OF SANDS, GRAVELS, COBBLES, AND BOULDERS FREE OF ORGANIC MATTER, AND MEETING THE FOLLOWING GRADATION SPECIFICATIONS (REFER TO DRAWINGS FOR TYPE LOCATIONS):

PERCENT OF MIX (BY WEIGHT)	SIZE RANGE (INCHES)
20	24–30
30	12–24
20	6–12
10	2–4
12	0.08–2
8	<0.08

- A. PLACE ENGINEERED STREAMBED MATERIAL TO THE LINES, GRADES AND THICKNESSES SHOWN ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER. UNIFORMLY DISTRIBUTE LARGE STONES TO PRODUCE THE REQUIRED GRADATION OF ROCK. PREVENT CONTAMINATION OF ROCK MATERIALS BY EXCAVATION AND/OR EARTH MATERIALS.
- B. FOLLOWING PLACEMENT, WATER-JET VOIDS WITHIN ROCK TO IMPROVE COMPACTION AND EMBED THE FINES WITHIN THE MIX. START JETTING AT THE UPSTREAM LIMITS OF PLACEMENT AND PROGRESS DOWNSTREAM. CONTINUE JETTING UNTIL THE TURBIDITY LEVELS OF RUNOFF PRODUCED FROM THE JETTING PROCESS HAVE REACHED AN ACCEPTABLE LEVEL AS DETERMINED BY THE ENGINEER. RETAIN ALL SEDIMENT-LOADED RUNOFF GENERATED BY THE JETTING OPERATIONS SO ENTRAINMENT SEDIMENT CAN SETTLE OUT OR BE PUMPED TO A SETTLING BASIN OR SIMILAR FEATURE TO REDUCE TURBIDITY TO ACCEPTABLE LEVELS, IN COMPLIANCE WITH PERMIT CONDITIONS, PRIOR TO DISCHARGE TO THE CREEK. DISPOSE OF ALL CAPTURED SEDIMENT AT AN APPROVED LOCATION.

2 – ROCK SLOPE PROTECTION

- A. ROCK SLOPE PROTECTION (RSP) SHALL CONFORM TO SECTION 72–2.02 MATERIALS OF THE STANDARD SPECIFICATIONS AND MEET THE MATERIAL GRADATIONS SHOWN ON THE DRAWINGS WHERE PROPOSED RSP IS SHOWN.
- B. RSP BACKING LAYER AND BACKFILL SHALL CONSIST OF A 50/50 BLEND OF THE CALTRANS UNIVERSAL GRAVEL FILTER AND CALTRANS CLASS 2 PERMEABLE MATERIAL.
- C. BACKFILL ALL VOIDS WITHIN THE RSP. NATIVE STREAMBED MATERIAL MAY BE USED AS BACKFILL IF IT MEETS THE GRADATION REQUIREMENTS FOR BACKFILL.
- D. PLACE BACKFILL MATERIAL TO MATCH THE FINISHED SURFACE OF THE RSP AND WATER-JET TO FILL ALL VOIDS, AS DIRECTED BY THE ENGINEER.

3 – WEIR BOULDERS

- A. WEIR BOULDERS SHALL HAVE A MINIMUM Y-AXIS DIMENSION OF 3.5 FEET AND A MINIMUM WEIGHT OF 1.5 TONS.

4 – SILL BOULDERS

- A. SILL BOULDERS SHALL BE BETWEEN THE D84–D100 OF THE SPECIFIED FLOODPLAIN ARMOR GRADATION AT THE LOCATION OF THE SILL.

REV.	DATE	DESCRIPTION	BY
△	07/17/24	GRADING SUMMARY MOVED	N.B.
△	08/26/24	NO REVISIONS THIS SHEET	P.L.

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DRAWN BY: P.L.
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PREPARED AT THE REQUEST OF:
LEHIGH SOUTHWEST CEMENT COMPANY

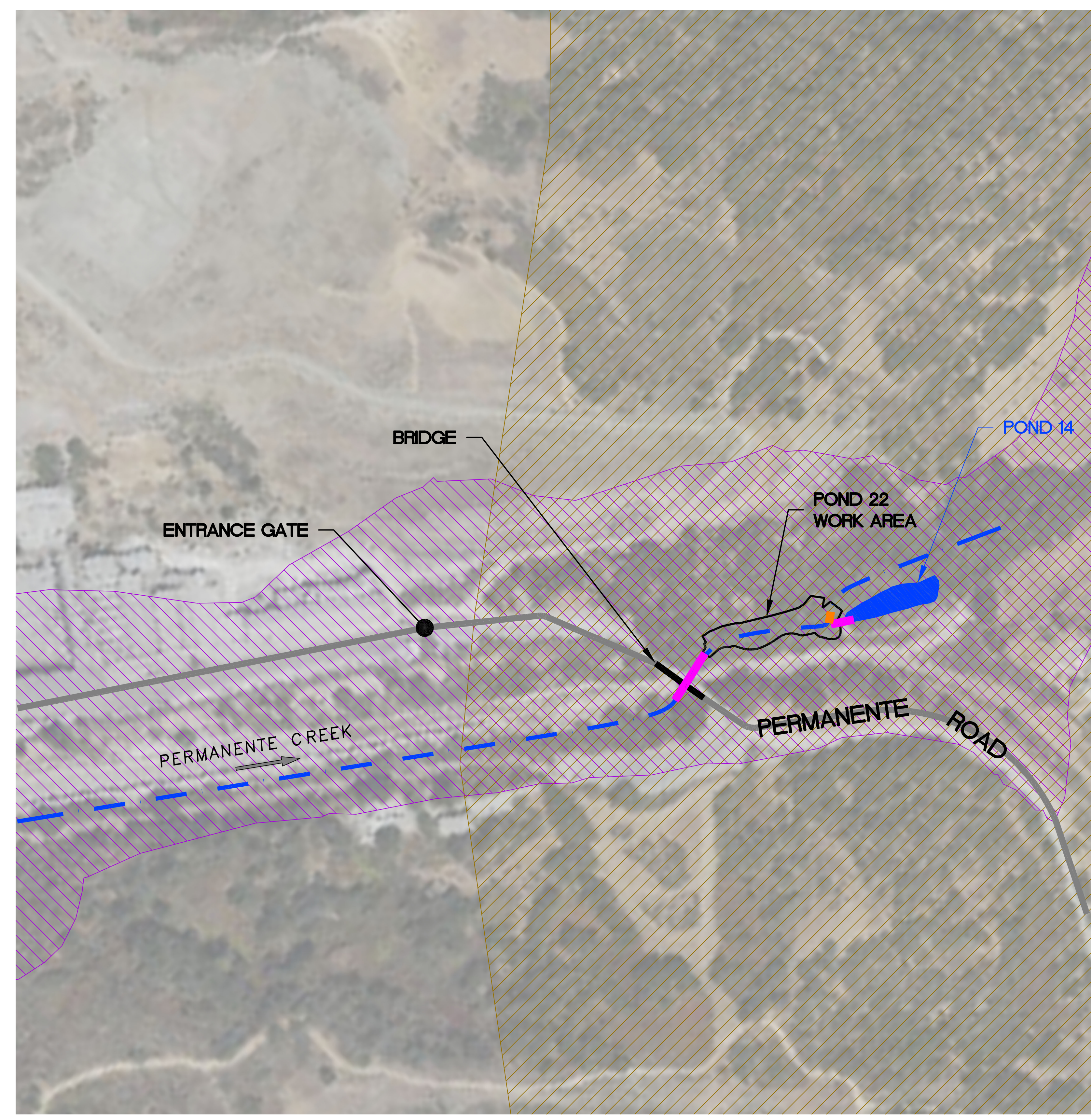
POND 22 NOTES

POND 22 PERMANENTE CREEK RESTORATION PROJECT PERMIT LEVEL DESIGN

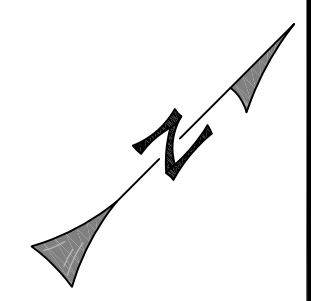
DATE PLOTTED: 08/26/24 10:55 AM

- LEGEND**
-  EXISTING POND
 -  EXISTING CULVERT TO BE REMOVED
 -  EXISTING CULVERT TO REMAIN
 -  EXISTING LIQUEFACTION ZONE
 -  EXISTING FAULT ZONE
 -  PERMANENTE CREEK

NOTE:
SOURCE OF EXISTING LIQUEFACTION AND FAULT ZONES: SANTA CLARA COUNTY.



PARTIAL GEOLOGIC FEATURES MAP
 SCALE: 1" = 150'



WATERWAYS
CONSULTING INC.

5094 SWIFT ST.
SANTA CRUZ, CA 95060
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WWW.WATWAYS.COM

PRELIMINARY
NOT FOR CONSTRUCTION

PREPARED AT THE REQUEST OF:
**LEHIGH SOUTHWEST
CEMENT COMPANY**

**PARTIAL
GEOLOGIC
FEATURES
MAP**

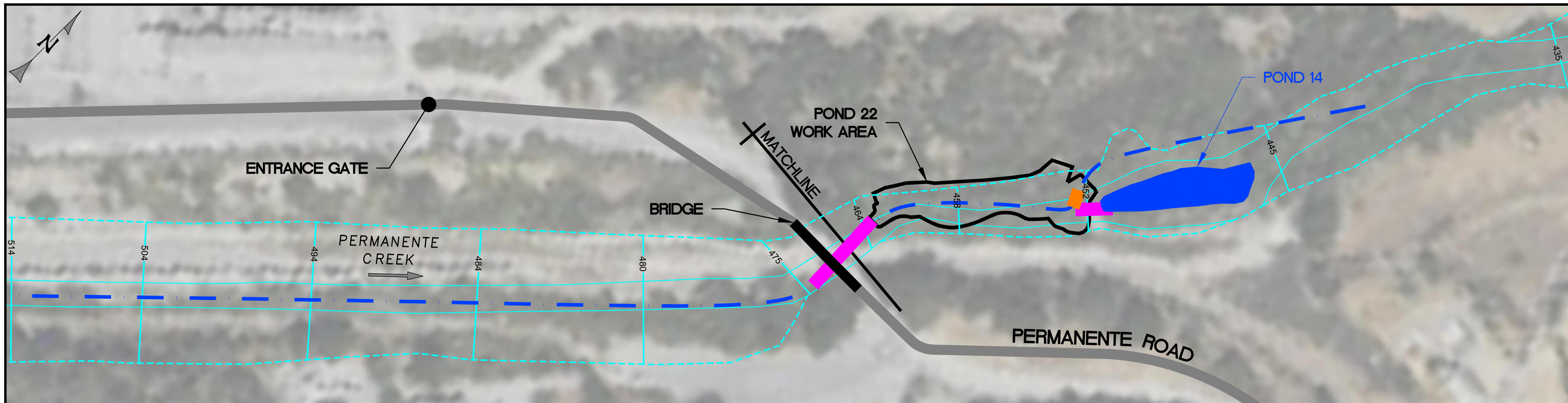
**POND 22
PERMANENTE CREEK
RESTORATION PROJECT
PERMIT LEVEL DESIGN**

DESIGNED BY: B.Z.
DRAWN BY: P.L.
CHECKED BY: B.Z.
DATE: 2/20/24
JOB NO.: 13-016

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES FOR REDUCED PLOTS

REV.	DATE	DESCRIPTION	BY
△	07/17/24	GEOLOGIC MAP ADDED	N.B.
△	08/26/24	NO REVISIONS THIS SHEET	P.L.

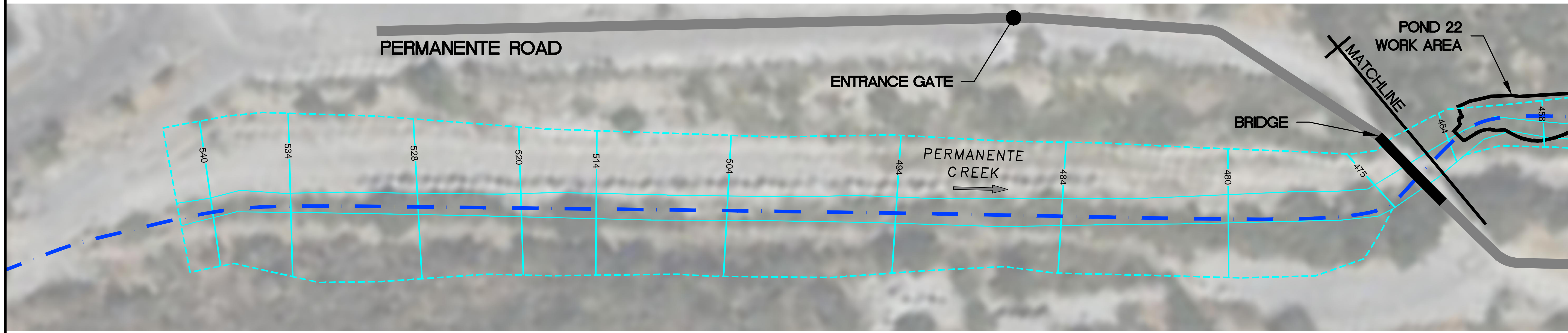
C10 **10**
OF **12**



NOTES:
 1. SOURCE OF FEMA FLOOD HAZARD AREA: SANTA CLARA COUNTY.
 2. THE FEMA DATA PRESENTED IS ON THE SAME DATUM AS THE TOPOGRAPHIC SURVEY. SEE THE GENERAL NOTES ON THE COVER SHEET FOR DATUM INFORMATION.

FEMA FLOODPLAIN AND FLOODWAY LIMITS PLAN
 SCALE: 1" = 80'

- LEGEND**
- EXISTING POND
 - EXISTING CULVERT TO BE REMOVED
 - EXISTING CULVERT TO REMAIN
 - FEMA SPECIAL FLOOD HAZARD AREA ZONE AE LIMITS
 - FEMA FLOODWAY WITHIN ZONE AE AREA
 - FEMA BASE FLOOD ELEVATIONS (BFE)
 - PERMANENTE CREEK (LIMITS OF GROUND SURVEY)



FEMA FLOODPLAIN AND FLOODWAY LIMITS PLAN
 SCALE: 1" = 80'

REV.	DATE	DESCRIPTION	BY
1	07/17/24	FEMA MAP ADDED	N.B.
2	08/26/24	NO REVISIONS THIS SHEET	P.L.

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LEHIGH SOUTHWEST CEMENT COMPANY

FEMA SPECIAL FLOOD HAZARD AREA PLAN

POND 22 PERMANENTE CREEK RESTORATION PROJECT PERMIT LEVEL DESIGN

DESIGNED BY: B.Z.
 DRAWN BY: P.L.
 CHECKED BY: B.Z.
 DATE: 2/20/24
 JOB NO.: 13-016

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES FOR REDUCED PLOTS

C11 11 OF 12

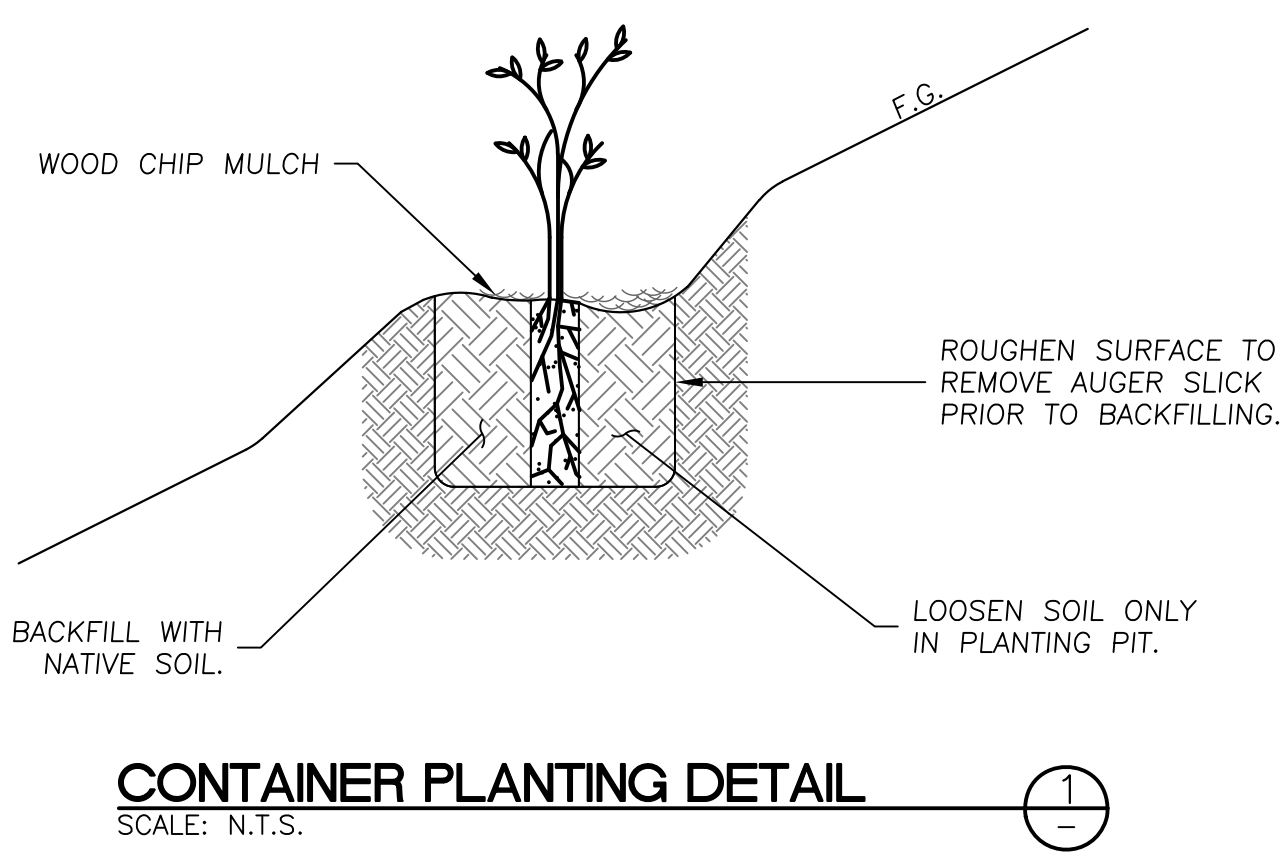
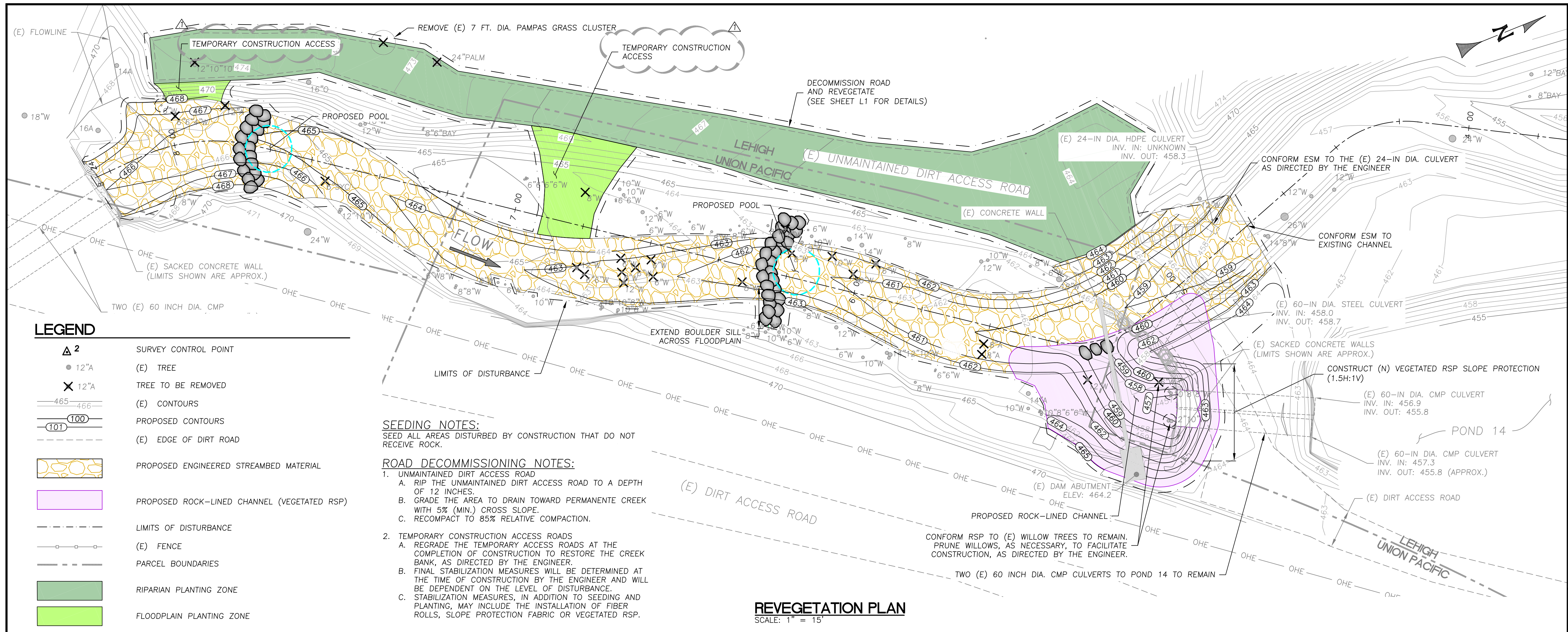


TABLE 1: FLOODPLAIN PLANTING

Temporary Access Road Area (s.f.) 610					
Rock-Lined Channel Area (s.f.) 2090					
COMMON NAME	SCIENTIFIC NAME	CONTAINER SIZE	ON-CENTER SPACING (FT)	TOTAL QUANTITY	
Big Leaf Maple (Floodplain)	<i>Acer Macrophyllum</i>	Treepot 4 (TP4)	15	2	
White Alder (Floodplain)	<i>Alnus Rhombifolia</i>	Treepot 4 (TP4)	15	2	
Red/Arroyo Willow (Floodplain)	<i>Salix Laevigata/lasiolepis</i>	Live Stake	15	3	
Red/Arroyo Willow (Vegetated RSP)	<i>Salix Laevigata/lasiolepis</i>	Live Stake	7	43	
*Spacing is approximate. Quantity will govern.				Total	49

*Install Live Willow Stakes at the spacing specified within the vegetated RSP ("Rock-Lined Channel") and the temporary access road, per Sections B and C, Sheet C5, and Detail 5, Sheet C10.

TABLE 2: RIPARIAN PLANTING

Area (s.f.): 5130					
COMMON NAME	SCIENTIFIC NAME	CONTAINER SIZE	ON-CENTER SPACING (FT)	TOTAL QUANTITY	
California Buckeye	<i>Aesculus Californica</i>	Treepot 4 (TP4)	15	10	
Coast Live Oak	<i>Quercus Agrifolia</i>	Treepot 4 (TP4)	12	10	
Blue Elderberry	<i>Sambucus Nigra, SSP. Caerulea</i>	Treepot 4 (TP4)	10	10	
Toyon	<i>Heteromelas Arbutifolia</i>	1 gallon	8	20	
Coyote Brush	<i>Baccharis Pillularis</i>	Deepot 40 (D-40)	8	20	
California Wild Rose	<i>Rosa Californica</i>	1 gallon	6	30	
California Blackberry	<i>Rubus Ursinus</i>	Deepot 40 (D-40)	5	30	
Black Sage	<i>Salvia Mellifera</i>	Deepot 60 (D-60)	5	30	
*Spacing is approximate. Quantity will govern.				Total	160

IRRIGATION NOTES:
ALL CONTAINER PLANTINGS WILL RECEIVE DRIP IRRIGATION. IRRIGATION DETAILS ARE NOT INCLUDED IN THIS DRAWINGS SET AND WILL BE INCLUDED IN THE NEXT DESIGN SUBMITTAL.

Floodplain Seeding Area (s.f.):

COMMON NAME	SCIENTIFIC NAME	PLS LBS / ACRE
California Brome	<i>Bromus Carinatus</i>	10.0
Blue Wildrye	<i>Elymus Glaucaus</i>	8.0
Creeping Wildrye	<i>Elymus Triticooides</i>	6.0
Small Fescue	<i>Festuca Microstachys</i>	8.0
Meadow Barley	<i>Hordeum Brachyantherum</i>	6.0
Blue-Eyed Grass	<i>Sisyrinchium Bellum</i>	1.0
Purple Needlegrass	<i>Stipa Bellum</i>	5.0
Tomcat Clover	<i>Trifolium Willdenovii</i>	5.0

Seed mix to be applied to the Floodplain Planting Zones at all project sites.

TABLE 2b. RIPARIAN PLANTING SEED MIX

Riparian Seeding Area (s.f.): 5130		
COMMON NAME	SCIENTIFIC NAME	PLS LBS / ACRE
California Sagebrush	<i>Artemisia Californica</i>	0.5
California Brome	<i>Bromus Carinatus</i>	12.0
Blue Wildrye	<i>Elymus Glaucaus</i>	10.0
California Poppy	<i>Eschscholzia Californica</i>	2.0
Deerweed	<i>Lotus Scoparius</i>	3.0
Purple Needlegrass	<i>Nasella Pulchra</i>	5.0
Three Weeks Fescue	<i>Festuca Microstachys</i>	6.0
Tomcat clover	<i>Trifolium willdenovii</i>	5.0
Lupine	<i>Lupinus Nanus</i>	4.0

Seed mix to be applied to the Upland Seeding Zones and the Riparian Planting Zones at all project sites.

REV.	DATE	DESCRIPTION	BY
07/17/24		TEXT UPDATES	N.B.
08/26/24		NO REVISIONS THIS SHEET	P.L.