

ARROYO GRANDE GAGE FISH PASSAGE IMPROVEMENT PROJECT

100% SUBMITTAL

PREPARED AT THE REQUEST OF:
CREEK LANDS CONSERVATION

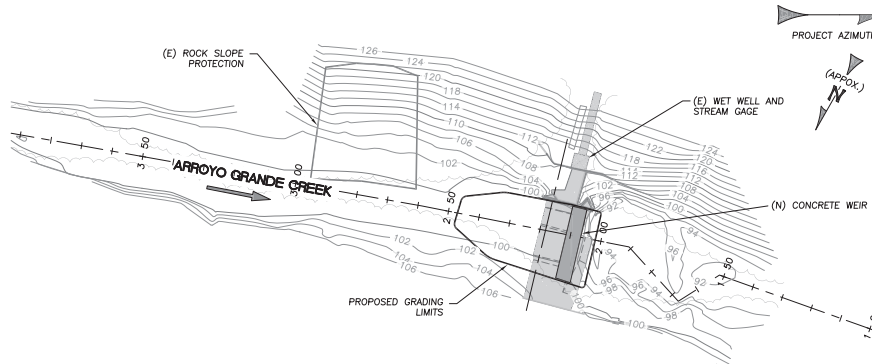
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PROJECT DESCRIPTION

PROPOSED PROJECT
THIS PROJECT MODIFIES AN EXISTING STREAM GAGE SITE ON ARROYO GRANDE CREEK WITH THE GOAL OF IMPROVING FISH PASSAGE CONDITIONS. STREAM GAGING EQUIPMENT WILL BE UPGRADED AND INCORPORATED INTO THE COUNTY "ALERT SYSTEM".

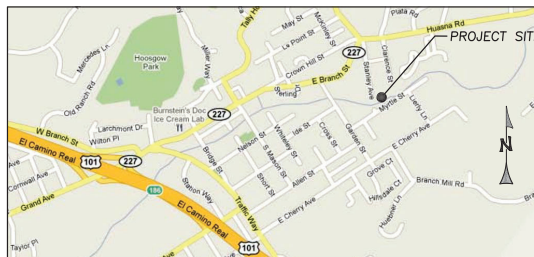
CONSTRUCTION ACTIVITY
CONSTRUCTION INCLUDES TEMPORARY FLOW DIVERSION, IN-CHANNEL GRADING AND DEMOLITION, AND CONSTRUCTION OF A NEW CONCRETE WEIR.



SITE OVERVIEW
SCALE: 1"=20'

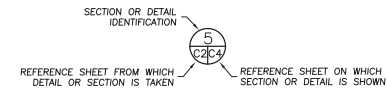
SURVEY NOTES

- ELEVATION DATUM NGVD 1929: THE BENCHMARK FOR THIS SURVEY IS POINT #4, A USGS BRONZE DISC SET IN THE TIP OF CONCRETE BLOCK SUPPORTING THE LANDWARD END OF THE WALKWAY LEADING TO THE GAGE SHELTER WITH THE ELEVATION: 127.92'
- BASIS OF BEARINGS: LOCAL ASSUMED AZIMUTH (N00°00'00"E) BASED ON THE ALIGNMENT BETWEEN POINTS #1 AND #2. THE TWO POINTS ARE LOCATED IN THE CENTER OF MYRTLE AVENUE.
- TOPOGRAPHIC MAPPING WAS PERFORMED BY SH+G ENGINEERING ON APRIL 11TH AND 12TH, 2007.
- UPDATED TREE MAPPING WAS COMPLETED BY CREEK LANDS CONSERVATION DURING JULY 2022 AND PROVIDED TO WATERWAYS. TREE LOCATIONS SHOWN ARE APPROXIMATE.
- CONTOUR INTERVAL IS TWO FOOT. ELEVATIONS AND DISTANCES SHOWN ARE IN DECIMAL FEET, EXCEPT TREE DIMENSIONS, WHICH ARE SHOWN IN INCHES.
- UNDERGROUND UTILITIES WERE NOT LOCATED.
- 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 CURRENT 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.



VICINITY MAP
N.T.S.

SECTION AND DETAIL CONVENTION



ABBREVIATIONS

APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATE
BMP	BEST MANAGEMENT PRACTICES
CC	CONCRETE
CK	CREEK
CY	CUBIC YARDS
DIA	DIAMETER
(E)	EXISTING
EF	EACH FACE
EG	EXISTING GROUND
EL	ELEVATION
EP	EDGE OF PAVEMENT
EW	EACH WAY
FG	FINISHED GRADE
GALV	GALVANIZED
H	HORIZONTAL
LF	LINEAR FEET
MIN	MINIMUM
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
RMC	RIGID METAL CONDUIT

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DATE: 1/23/23

 MATT W. WELD

PREPARED AT THE REQUEST OF:
CREEK LANDS CONSERVATION

COVER SHEET

ARROYO GRANDE GAGE
FISH PASSAGE
IMPROVEMENT PROJECT
100% SUBMITTAL

DESIGNED BY: MWW
 DRAWN BY: SMZ
 CHECKED BY: MWW
 DATE: 1/23/23
 JOB NO.: 07-580

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

C1 1 OF 8

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

GENERAL NOTES

- NOTIFY THE ENGINEER AT LEAST 96 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.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL 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.
- ALL TESTS, INSPECTIONS, SPECIAL OR OTHERWISE THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS OR THESE PLANS, SHALL BE PERFORMED BY AN INDEPENDENT INSPECTOR 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 RESPONSIBLE 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, 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 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 CONFORM TO THE RULES AND REGULATIONS OF THE CONSTRUCTION SAFETY ORDERS OF THE CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH PERTAINING TO EXCAVATION AND TRENCHES THE CALIFORNIA CODE OF REGULATIONS TITLE 8, SUBCHAPTER 4 CONSTRUCTION SAFETY ORDERS, ARTICLE 6 EXCAVATION.

EARTHWORK/GRADING NOTES

- GRADING SUMMARY:
 - TOTAL CUT VOLUME = 95 CY
 - TOTAL FILL VOLUME = 0 CY
 - NET (CUT/FILL) = 95 CY
- THE ABOVE QUANTITIES ARE APPROXIMATE IN-PLACE VOLUMES CALCULATED AS THE DIFFERENCE BETWEEN EXISTING GROUND AND THE PROPOSED FINISH GRADE, PREPARED FOR PERMITTING PURPOSES ONLY. EXISTING GROUND IS DEFINED BY THE TOPOGRAPHIC CONTOURS AND/OR SPOT ELEVATIONS ON THE PLAN. FINISH GRADE IS DEFINED AS THE DESIGN SURFACE ELEVATION OF WORK TO BE CONSTRUCTED. THE QUANTITIES HAVE NOT BEEN FACTORED TO INCLUDE ALLOWANCES FOR BULKING, CLEARING AND GRUBBING, SUBSIDENCE, SHRINKAGE, OVER EXCAVATION, AND RECOMPACTATION, UNDERGROUND UTILITY AND SUBSTRUCTURE SPILLS AND CONSTRUCTION METHODS.
- 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.
- 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.
- REMOVE ALL EXCESS SOILS, ROCK AND CONCRETE TO AN APPROVED DUMP SITE.
- 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.
- FINE GRADING ELEVATIONS, CONFORMS, AND SLOPES NOT CLEARLY SHOWN ON THE DRAWINGS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD TO DIRECT DRAINAGE IN A MANNER THAT SUPPORTS THE INTENT OF THE DESIGN. ALL FINAL GRADING SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- ALL FILL TO BE COMPACTED TO A MINIMUM OF 90% MAXIMUM DENSITY AS DETERMINED BY ASTM-D1557.
- SPREAD MATERIAL IN LIFTS OF APPROXIMATELY 8 INCHES, MOISTENED OR DRIED TO NEAR OPTIMUM MOISTURE CONTENT AND RECOMPACTED. THE MATERIALS FOR ENGINEERED FILL SHALL BE THE MATERIAL EXCAVATED ALONG THE BASE OF THE EXISTING ROCK SLOPE PROTECTION WITH ORGANIC MATERIAL REMOVED.
- 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 6 INCHES, UNLESS DEEPER EXCAVATION IS REQUIRED BY THE ENGINEER.

SEEDING NOTES

- GENERAL
 - SEED ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION OUTSIDE THE ACTIVE CHANNEL WHICH ARE NOT RECEIVING ROCK, AS STAKED BY THE ENGINEER.
 - SEEDING INCLUDES FURNISHING THE SEED, PREPARATION OF THE SEEDBED, AND HAND BROADCASTING SEED AS SPECIFIED ON THE DRAWINGS AND IN THESE NOTES.
- MATERIALS
 - SEED MIX IS SPECIFIED IN TABLE 1.
 - MULCH SHALL CONSIST OF "WEED FREE" RICE STRAW.
- INSTALLATION
 - PREPARE THE SEEDBED PRIOR TO SEED APPLICATION. SEEDBED PREPARATION INCLUDES LOOSENING OF COMPACTED SOILS TO A DEPTH OF 3 TO 5 INCHES, BREAKING DOWN SOIL CLUMPS LARGER THAN 2 INCHES IN DIAMETER, GRADING OF THE SURFACE TO BE NON-UNIFORM, ROUGH AND NATURAL IN APPEARANCE.
 - COMMENCE SEED APPLICATION FOLLOWING PREPARATION OF THE SEEDBED. SEED APPLICATION INCLUDES UNIFORM BROADCASTING SEED OVER PREPARED AREAS.
 - LIGHTLY RAKE SEED TO A DEPTH OF 1/4 INCH TO 1/2 INCH. DO NOT LEAVE SEED UNCOVERED FOR MORE THAN 24 HOURS.
 - HAND BROADCAST STRAW MULCH AT A RATE OF 500 POUNDS PER ACRE OVER ALL SEEDED AREAS RECEIVING SLOPE PROTECTION FABRIC AND 3,000 POUNDS PER ACRE OVER ALL SEEDED AREAS NOT RECEIVING FABRIC.

TABLE 1. EROSION CONTROL SEED MIX

	Botanical name	Common Name	Propogation Method	lbs/acre	Growth Form
Seed Mix	Achillea millefolium	yellow	Broadcast seed	2	forb
	Artemisia douglasiana	muugwort	Broadcast seed	4	forb
	Collinsia heterophylla	Chinese houses	Broadcast seed	2	forb
	Elymus glaucus	blue wildrye	Broadcast seed	10	grass
	Hordium brachyantherum	California barley	Broadcast seed	10	grass
	Leymus triticoides	creeping wild ry	Broadcast seed	10	grass
	Lotus scoparius	deerweed	Broadcast seed	4	forb
	Trifolium obtusiflorum	creek clover	Broadcast seed	2	forb
	Synonymum bialium	blue eyed grass	Broadcast seed	2	forb
	Vulpia microstachya	wulpia	Broadcast seed	10	grass

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 15, CONSULT THE ENGINEER FOR ADDITIONAL RAINY SEASON EROSION CONTROL MEASURES.
- PRIOR TO COMMENCING WORK, PROTECT AREAS TO REMAIN UNDISTURBED WITH EA FENCING, AS SHOWN ON THE DRAWINGS. ADDITIONAL FENCING MAY BE REQUIRED AT THE DIRECTION OF THE ENGINEER.
- 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 FLOODING 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.
- CLEAN DAILY ANY EROSION OR DEBRIS SPILLING ONTO A PUBLIC STREET.
- 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.

STREAM CONSTRUCTION NOTES

- STAGING AND STORAGE AREAS FOR EQUIPMENT, MATERIALS, FUELS, LUBRICANTS AND SOLVENTS, SHALL BE LOCATED OUTSIDE OF THE STREAM AND CHANNEL BANKS. STATIONARY EQUIPMENT SUCH AS MOTORS, PUMPS, GENERATORS, COMPRESSORS, AND WELDERS, LOCATED WITHIN OR ADJACENT TO THE STREAM SHALL BE POSITIONED OVER DRIP PANS. ANY EQUIPMENT OR VEHICLE DRIVEN AND/OR OPERATED WITHIN OR ADJACENT TO THE STREAM SHALL BE CHECKED AND MAINTAINED DAILY TO PREVENT LEAKS OR MATERIALS THAT IF INTRODUCED TO WATER COULD BE DELETERIOUS TO AQUATIC LIFE.
- NO DEBRIS, RUBBISH, CREOSOTE-TREATED WOOD, SOIL, SILT, SAND, CEMENT, CONCRETE, OR WASHINGS THEREOF, OR OTHER CONSTRUCTION-RELATED MATERIALS OR RAINFALL, OIL, OR PETROLEUM PRODUCTS OR OTHER ORGANIC MATERIAL OR EARTHEN MATERIAL SHALL BE ALLOWED TO ENTER INTO, OR BE PLACED WHERE IT MAY BE WASHED BY WASTEWATER OR RUNOFF DOWNSTREAM. ANY OF THESE MATERIALS PLACED WITHIN OR WHERE THEY MAY ENTER THE CONSTRUCTION WORK LIMITS, 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. THE CONTRACTOR SHALL PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER TO ENSURE A TIMELY COMPLETION OF THE PROJECT. CONSTRUCTION PHASING SHALL BE GENERALLY ACCOMPLISHED AS FOLLOWS:
 - INSTALL BMP'S.
 - ESTABLISH ACCESS AND EQUIPMENT STAGING AREAS.
 - COORDINATE WITH FISHERIES BIOLOGIST TO INSTALL BLOCKNETS AND RELOCATE FISH (NIC).
 - INSTALL DIVERSION AND DEWATER THE SITE.
 - PERFORM CLEARING AND GRUBBING.
 - DEMOLISH CONCRETE.
 - EXCAVATE BEDROCK AND EXPLORATORY TRENCH.
 - OFFHAUL WASTE.
 - PLACE CONCRETE.
 - ALLOW CONCRETE TO CURE.
 - INSTALL GAUGE.
 - RESTORE DISTURBED AREAS.
 - REMOVE DIVERSION/REWATER.
 - SEED DISTURBED AREAS.

CONSTRUCTION SCHEDULE / PHASING NOTES

PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL PROVIDE ENGINEER A DETAILED CONSTRUCTION SCHEDULE FOR APPROVAL. THE CONTRACTOR SHALL 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. THE CONTRACTOR SHALL PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER TO ENSURE A TIMELY COMPLETION OF THE PROJECT. CONSTRUCTION PHASING SHALL BE GENERALLY ACCOMPLISHED AS FOLLOWS:

- INSTALL BMP'S.
- ESTABLISH ACCESS AND EQUIPMENT STAGING AREAS.
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DATE: 1/23/23

 MATT W. WILD

PREPARED AT THE REQUEST OF:
CREEK LANDS CONSERVATION

NOTES

ARROYO GRANDE GAGE FISH PASSAGE IMPROVEMENT PROJECT 100% SUBMITTAL

DESIGNED BY: MWW
 DRAWN BY: BMZ
 CHECKED BY: MWW
 DATE: 1/23/23
 JOB NO.: 07-580

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS
 0" = 1"

C2 OF 8

ACCESS NOTES

- PEDESTRIAN ACCESS TO THE CREEK SHALL BE LIMITED TO THE PORTION OF THE BANK WHERE RSP IS PRESENT, EXCEPT DURING INSTALLATION OF THE BUBBLER GAGING SYSTEM WHERE ACCESS ALONG THE EXISTING STAIRWAY AND PATH WILL BE PERMITTED.
- EQUIPMENT INGRESS/EGRESS SHALL BE LIMITED TO ONE ROUND TRIP ALONG THE TEMPORARY ACCESS PATH SHOWN.
- INSTALL FIBER ROLL ALONG THE DOWNSLOPE PERIMETER OF THE STAGING AREA.
- WASTE CONCRETE AND ROCK SHALL BE REMOVED TO STAGING AREA EITHER BY LONG-REACH EXCAVATOR, CRANE OR MANUAL LABOR, TO MINIMIZE DISTURBANCE TO STREAMBANK.
- FOLLOWING CONSTRUCTION, ACCESS PATH SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS, AS DIRECTED BY THE ENGINEER. RESTORATION SHALL INCLUDE, BUT NOT BE LIMITED TO, RESTORING GRADES, SEEDING, APPLYING SLOPE PROTECTION FABRIC, AND REPLACEMENT OF DISTURBED VEGETATION WITH APPROPRIATE NATIVE SPECIES ALONG PORTIONS OF THE SLOPE WHERE RSP IS NOT PRESENT.
- CONTRACTOR SHALL UTILIZE ONLY THE APPROVED ACCESS POINT FROM MYRTLE STREET FOR TRANSPORT OF MATERIALS.

FISH BLOCK NET (NIC), TO BE INSTALLED BY QUALIFIED FISHERIES BIOLOGIST.

APN 007-572-029

APN 007-572-030

APN 007-572-031

APN 007-522-018

APN 007-522-019

APN 007-511-001

LEGEND

- | | | | |
|---------|---------------------------|---|-----------------------|
| △ 31 | SURVEY CONTROL POINT | (E) CONCRETE WALL | |
| × 97.47 | SPOT ELEVATION | (E) FENCE | |
| ● 24"W | (E) TREE | (E) RAILING | |
| ⊗ 24"W | (E) TREE TO BE REMOVED | (E) OVERHEAD ELECTRIC | |
| --- | PARCEL LINE (APPROXIMATE) | (E) OVERHANGING VEGETATION DRIPLINE (APPROXIMATE) | |
| - - - | (E) CHANNEL ALIGNMENT | (E) BEDROCK | |
| 100 | (E) MAJOR CONTOUR | (E) CONCRETE | |
| 98 | (E) MINOR CONTOUR | — X — | PROPOSED ESA FENCE |
| | | --- | LIMITS OF DISTURBANCE |
| | | ~~~~~ | FIBER ROLL |

STAGING, ACCESS, AND DIVERSION PLAN

SCALE: 1" = 10'

KEY NOTES:
 ① EXCAVATE INSPECTION TRENCH AT TOE OF UPSTREAM ROCK SLOPE PROTECTION TO CONFIRM EXISTING DEPTH OF EMBEDMENT. TRENCH DIMENSIONS SHALL BE APPROXIMATELY 18" WIDE X 5' DEEP X 12" LONG. TRENCHING IS TO BE PERFORMED UNDER SUPERVISION OF ENGINEER. FOLLOWING INSPECTION OF THE TRENCH BY THE ENGINEER, CONTRACTOR WILL BE INSTRUCTED TO EITHER:
 A. BACKFILL AND COMPACT TRENCH, OR;
 B. EXTEND RSP DOWN TO EITHER BEDROCK OR ELEVATION 94.0, WHICHEVER IS HIGHER.

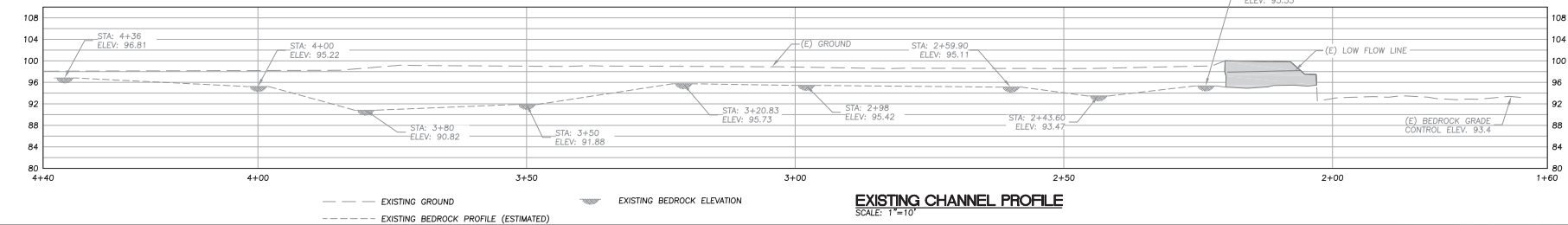
IN THE EVENT THAT ADDITIONAL RSP IS REQUIRED, WIDEN AND EXTEND THE TRENCH ALONG THE ENTIRE BASE OF THE EXISTING ROCK SLOPE PROTECTION AND BACKFILL WITH A 4-FOOT THICK LAYER OF CALTRANS CLASS IX RSP (2 TON) IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND UNDER THE CONTINUOUS SUPERVISION OF THE ENGINEER. PLACE FILL OVER THE RSP TO CONFORM TO ADJACENT GRADES, AS NECESSARY, UNDER THE DIRECTION OF THE ENGINEER.

4
 3308
 ESA FENCE

ACCESS TO THE STAIRWAY WILL BE PERMITTED DURING INSTALLATION OF THE BUBBLER GAGING SYSTEM

UNITED STATES GEOLOGICAL SURVEY GAGING STATION ON ARROYO GRANDE AT ARROYO GRANDE, CA
 GAGE# 11141500

FISH BLOCK NET (NIC), TO BE INSTALLED BY QUALIFIED FISHERIES BIOLOGIST.



EXISTING CHANNEL PROFILE

SCALE: 1" = 10'

WATERWAYS CONSULTING INC.
 5804 SHIFF CT
 SANTA CRUZ, CA 95060
 PH: (408) 421-8978 / FAX: (408) 919-6847
 WWW.WATERWAYS.COM

1/23/23 DATE
 MATT W. WILD
 REGISTERED PROFESSIONAL ENGINEER
 No. 62235
 Exp. 8-30-25
 CIVIL
 STATE OF CALIFORNIA

PREPARED AT THE REQUEST OF:
CREEK LANDS CONSERVATION

STAGING, ACCESS, AND DIVERSION PLAN

ARROYO GRANDE GAGE FISH PASSAGE IMPROVEMENT PROJECT 100% SUBMITTAL

DESIGNED BY: MWW
 DRAWN BY: BMZ
 CHECKED BY: MWW
 DATE: 1/23/23
 JOB NO.: 07-580

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

STAGING AND VEGETATION CLEARING NOTES:

1. A CRANE MAY BE OPERATED FROM THE STAGING AREA SHOWN ON THIS SHEET TO DELIVER EQUIPMENT AND MATERIALS TO THE WORK AREA WITHIN THE CREEK CHANNEL. ADDITIONAL STAGING AREA IS SHOWN ON SHEET C3.
2. PROTECT ROAD FROM DAMAGE BY EQUIPMENT AND ALL OPERATIONS REQUIRED TO COMPLETE THE WORK.
3. PLACE FIBER ROLL ACROSS DOWNSLOPE LIMITS OF STAGING AREA.
4. CLEAR VEGETATION WITHIN THE LIMITS OF DISTURBANCE TO PROVIDE LINES OF SITE, AS NEEDED, FOR SAFE OPERATION OF A CRANE IF USED DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY CLEARING REQUIREMENTS FOR LINES OF SITE.
 - 4.1. LIMIT VEGETATION CLEARING TO THE EXTENT POSSIBLE BY UTILIZING PRUNING AND THINNING RATHER THAN COMPLETE TREE REMOVAL.
 - 4.2. LEAVE LOWER TRUNK AND ROOTS IN PLACE WHERE TREES ARE REMOVED.
 - 4.3. FLAG MAIN BRANCHES AND TREES TO BE PRUNED AND REMOVED FOR FIELD REVIEW AND APPROVAL BY A CREEK LAND'S REPRESENTATIVE PRIOR TO COMPLETING ANY VEGETATION CLEARING WORK.

THE LOCATION OF ALL EXISTING FEATURES SHOWN IS APPROXIMATE. FEATURES WERE APPROXIMATELY LOCATED USING AERIAL AND GROUND PHOTOGRAPHY AND WERE NOT SURVEYED. CONTRACTOR SHALL MAKE AN INDEPENDENT ASSESSMENT OF FIELD CONDITIONS FOR PURPOSES OF CONSTRUCTION STAGING, ACCESS, AND BID PREPARATION.

ESA FENCE NOTES:

1. PORTIONS OF ESA FENCE MAY BE REPLACED WITH CHAIN LINK FENCE AT THE CONTRACTOR'S OPTION.
2. ALL FENCING IS TEMPORARY. REMOVE FENCING AT THE COMPLETION OF PROJECT CONSTRUCTION.

TRAFFIC CONTROL NOTES:

1. PROVIDE TRAFFIC CONTROL FOR THE SAFE MOVEMENT OF VEHICLES AND PEDESTRIANS THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.



LEGEND	
— OHE —	EXISTING OVERHEAD ELECTRICAL
— — —	EXISTING OVERHEAD UTILITY
○ — ○	EXISTING FENCELINE
○	EXISTING UTILITY POLE
▨	TEMPORARY STAGING AREA
---	LIMITS OF DISTURBANCE
X	PROPOSED ESA FENCE
~~~~~	PROPOSED FIBER ROLL

**MYRTLE ST. CONSTRUCTION STAGING PLAN**  
SCALE: 1" = 20'

**WATERWAYS CONSULTING INC.**  
 2500 SHIPLEY ST.  
 SAN JOSE, CA 95128  
 PH: (831) 421-3291 / FAX: (888) 819-6847  
 WWW.WATERWAYS.COM

1/23/23 DATE  
 PROFESSIONAL ENGINEER LICENSED IN CA  
 No. 62235  
 Exp. 8-2-23  
 MATTHEW W. WELD

PREPARED AT THE REQUEST OF:  
**CREEK LANDS CONSERVATION**

**MYRTLE ST. CONSTRUCTION STAGING PLAN**

**ARROYO GRANDE GAGE FISH PASSAGE IMPROVEMENT PROJECT 100% SUBMITTAL**

DESIGNED BY: MWW  
 DRAWN BY: SMZ  
 CHECKED BY: MWW  
 DATE: 1/23/23  
 JOB NO.: 07-580

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

**BUBBLER GAGING SYSTEM INSTALLATION NOTES:**

- GENERAL:**
- PROVIDE 5 WORKING DAYS NOTICE TO THE DESIGNATED REPRESENTATIVE OF THE SAN LUIS OBISPO WATER RESOURCES DIVISION OF PUBLIC WORKS (COUNTY'S REPRESENTATIVE) PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL MEET WITH THE COUNTY'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION TO REVIEW THE EXISTING STREAM GAGE SYSTEM COMPONENTS AND CONFIRM THE WORK TO BE COMPLETED BY THE CONTRACTOR.
  - THE COUNTY'S REPRESENTATIVE WILL REMOVE THE EXISTING ALERT 205 DATA LOGGER AND TELEMETRY SYSTEM IN THE WHITE ENCLOSURE PRIOR TO THE START OF CONSTRUCTION TO PROTECT THESE COMPONENTS FROM DUST AND DEBRIS THAT MAY BE GENERATED DURING CONSTRUCTION.
  - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT IN PLACE ANY EXISTING COMPONENTS TO REMAIN.
  - THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING SHAFT ENCODER AND ALL ASSOCIATED STILLING WELL COMPONENTS EXTENDING DOWN INTO THE WET WELL AS IDENTIFIED BY THE COUNTY'S REPRESENTATIVE.
  - THE INSIDE OF THE WET WELL IS CONSIDERED A "CONFINED SPACE". 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.

- THE BUBBLER GAGING SYSTEM COMPONENTS WILL BE PROVIDED BY THE COUNTY'S REPRESENTATIVE AND WILL INCLUDE THE FOLLOWING CAMPBELL SCIENTIFIC COMPONENTS:

MODEL	PART	DESCRIPTION
ALERT 205 WITH ENCLOSURE	ALERT205-F1-E-NA	DATA LOGGER AND TELEMETRY SYSTEM
LEVELVUEB10-15	34913-4	WATER LEVEL CONTINUOUS FLOW BUBBLER
LEVELVUEBCL-LS	35759-7	POWER AND COMMUNICATION CABLE
	34962	DESICCATOR KIT
	34960	ORIFICE LINE
	34961	ORIFICE LINE END CAP
	34970	LONG DESICCANT TUBE

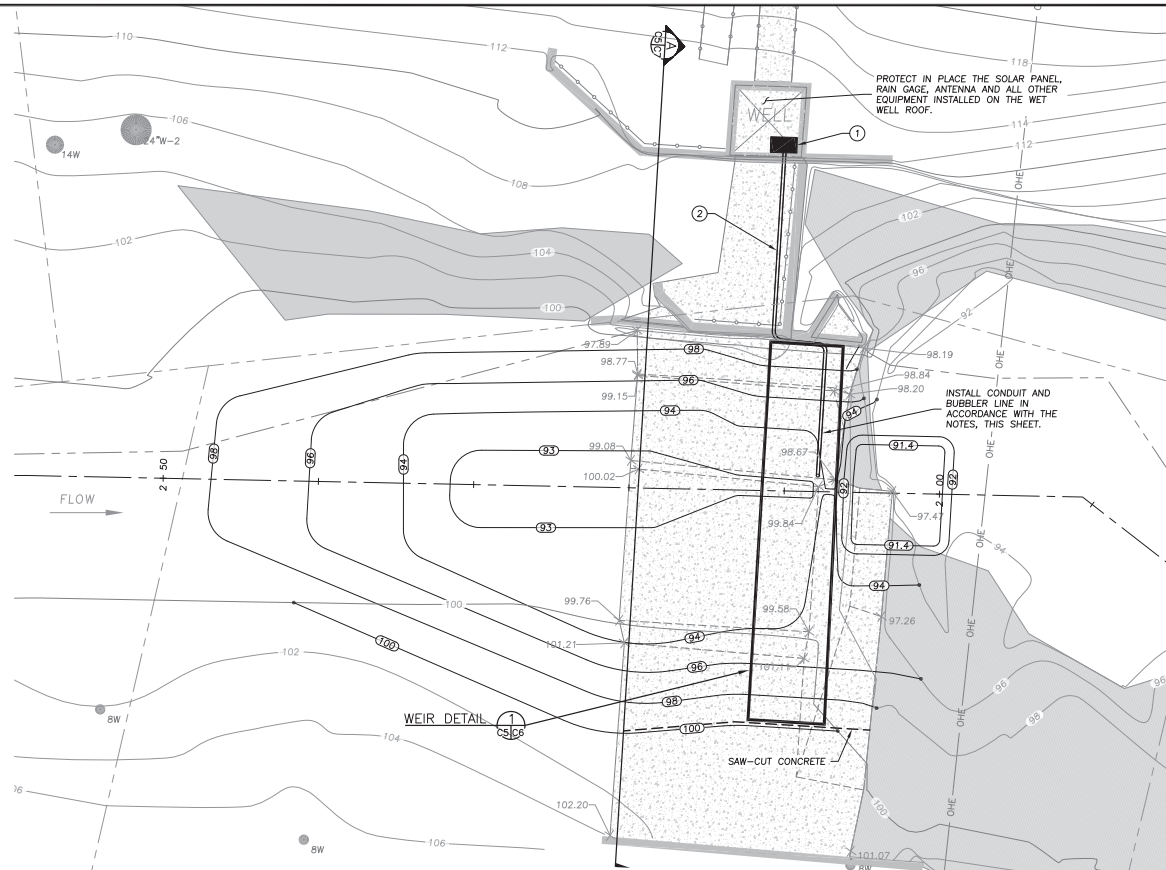
- THE CONTRACTOR SHALL MOUNT THE PROVIDED BUBBLER SYSTEM AND DESICCATOR KIT COMPONENTS TO THE WALL OF THE WET WELL AT THE LOCATION IDENTIFIED BY THE COUNTY'S REPRESENTATIVE.
- THE COUNTY'S REPRESENTATIVE WILL REINSTALL THE ALERT 205 DATA LOGGER AND TELEMETRY SYSTEM COMPONENTS ONCE THERE IS NO LONGER A RISK OF DAMAGE FROM DUST AND DEBRIS AND CONNECT THE WIRING TO THE BUBBLER SYSTEM. THE COUNTY'S REPRESENTATIVE WILL ALSO ATTACH THE STREAM GAGE SYSTEM COMPONENTS TO THE EXISTING POWER SUPPLY.
- INSTALLATION AND OPERATION OF THE BUBBLER GAGING SYSTEM SHALL BE INSPECTED AND APPROVED BY THE COUNTY'S REPRESENTATIVE.

- INSTALL 2-INCH DIAMETER HOT-DIPPED GALVANIZED STEEL RIGID METAL CONDUIT CONTINUOUS FROM ORIFICE LINE END CAP TO GAGE EQUIPMENT ENCLOSURE INSTALLED WITHIN THE WET WELL.

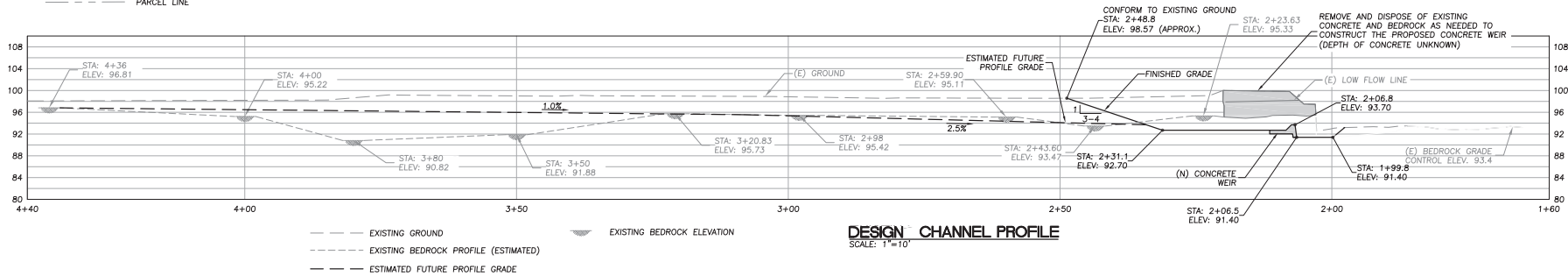
- SUBMIT SHOP DRAWINGS FOR STEEL CONDUIT INSTALLATION FOR REVIEW AND APPROVAL BY THE ENGINEER IN ADVANCE OF ANY WORK. SEE SPECIFICATIONS FOR FURTHER DETAILS.
- MAINTAIN A MINIMUM OF 2 PERCENT FALL ALONG THE CONDUIT'S ENTIRE LENGTH.
- SECURE CONDUIT TO WALL OF WET WELL WITH CONCRETE ANCHORS.
- THE CONDUIT SHALL EXIT THE WET WELL AT THE CAPPED PIPE IN THE WET WELL WALL ON THE CREEK-SIDE FACE OF THE WET WELL.
  - THE CAPPED PIPE IS 6-INCH DIAMETER AND LOCATED APPROXIMATELY 2 INCHES FROM THE GROUND AND APPROXIMATELY 10 FEET HORIZONTALLY FROM THE TOP OF THE CONCRETE RETAINING WALL BUILT ALONG THE CREEK BANK.
  - FILL GAP BETWEEN CONDUIT AND PIPE USING "GREAT STUFF BIG GAP FILLER", OR APPROVED EQUIVALENT. REMOVE EXCESS FOAM FROM FACE OF WALL.
  - SUPPORT CONDUIT AS NECESSARY ALONG ITS ENTIRE LENGTH TO PROTECT FROM DAMAGE.
- EXTEND THE CONDUIT DOWN THE FACE OF THE CONCRETE WALL TO THE RECESSED NOTCH TO BE CONSTRUCTED WITHIN THE PROPOSED CONCRETE WEIR.
  - INSTALL CONDUIT FLUSH AGAINST THE RETAINING WALL. MINIMIZE FITTING ANGLES.
  - USE SWEEP FITTINGS WHERE A CHANGE IN DIRECTION IS REQUIRED.
  - THE TOP OF THE EXISTING CONCRETE WALL MAY BE MODIFIED TO ALLOW FOR THE CONDUIT TO SIT FLUSH AGAINST THE FACE OF THE WALL, PENDING APPROVAL IN ADVANCE BY THE ENGINEER.
- INSTALL ORIFICE BUBBLER LINE THROUGH THE STEEL CONDUIT AFTER CONDUIT INSTALLATION HAS BEEN APPROVED BY THE ENGINEER. ENSURE ORIFICE BUBBLER LINE DOES NOT KINK OR BECOME OTHERWISE COMPROMISED WHEN INSERTED INTO THE STEEL CONDUIT.

**LEGEND**

	(E) TREE		PROPOSED GRADE DESIGN CONTOURS
	(E) CHANNEL ALIGNMENT		PROPOSED CHANNEL ALIGNMENT
	(E) MAJOR CONTOUR		(E) OVERHEAD ELECTRIC
	(E) MINOR CONTOUR		(E) BEDROCK
	(E) CONCRETE WALL		(E) CONCRETE
	(E) FENCE		
	(E) RAILING		
	PARCEL LINE		



**SITE PLAN**  
SCALE: 1"=4'



**DESIGN CHANNEL PROFILE**  
SCALE: 1"=10'

**WATERWAYS CONSULTING INC.**  
5894 SHURT CT  
SANTA CRUZ, CA 95060  
PH: (831) 421-9721 / FAX: (831) 919-6847  
WWW.WATERWAYS.COM

DATE: 1/23/25  
  
 MATT W. WILD

PREPARED AT THE REQUEST OF:  
**CREEK LANDS CONSERVATION**

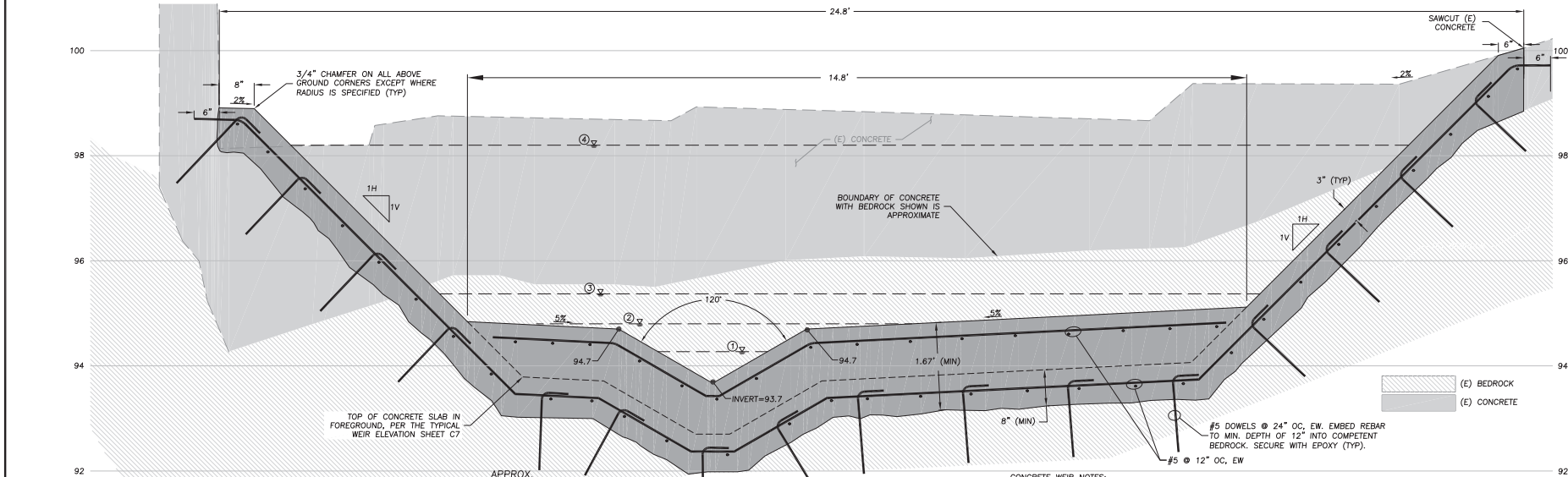
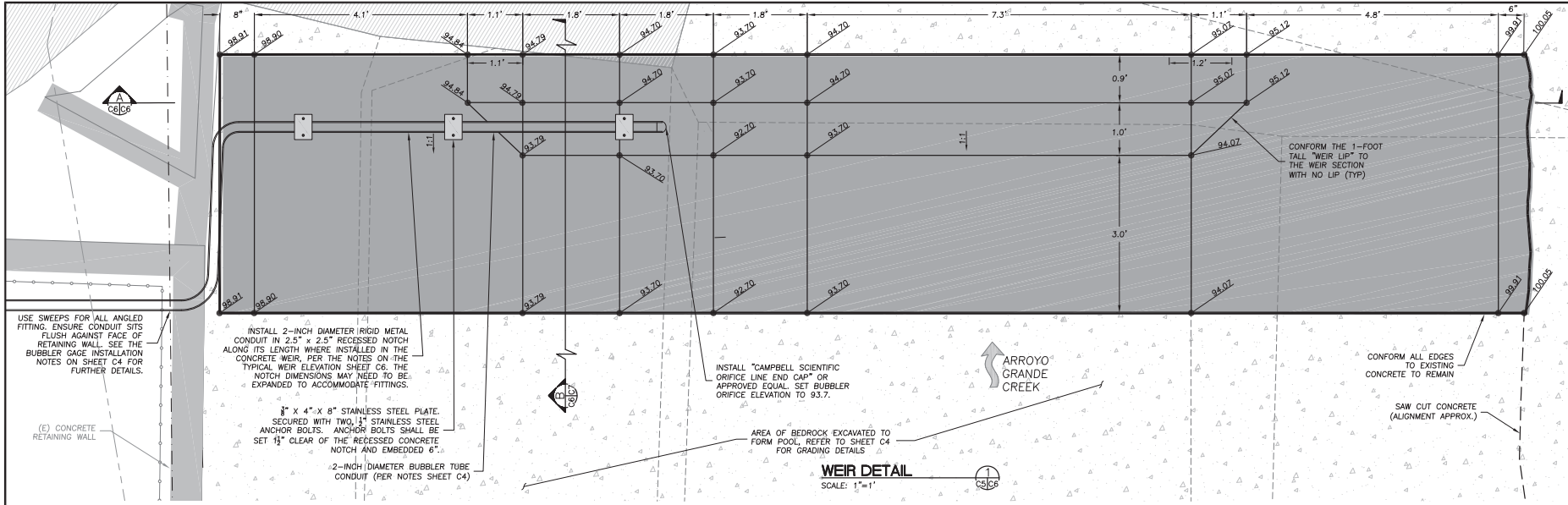
**SITE PLAN**

**ARROYO GRANDE GAGE FISH PASSAGE IMPROVEMENT PROJECT 100% SUBMITTAL**

DESIGNED BY: MWW  
 DRAWN BY: BMZ  
 CHECKED BY: MWW  
 DATE: 1/23/25  
 JOB NO.: 07-580

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



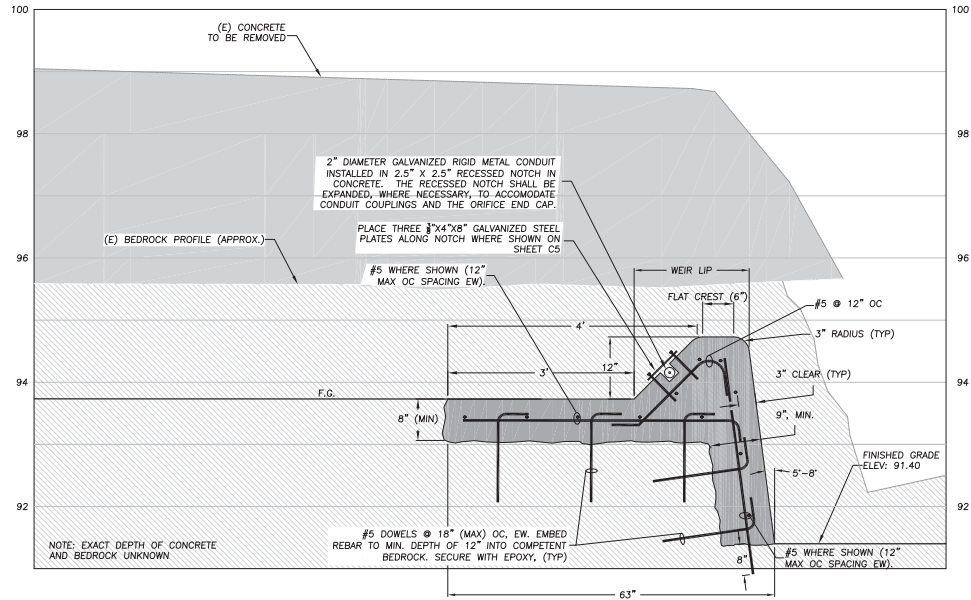


DESIGN PARAMETER	EXCEEDANCE	FLOW RATE	APPROX. DEPTH AT WEIR (FT)	APPROX. VELOCITY UPSTREAM OF WEIR* (FT/S)
① LOW FLOW JUVENILE	95%	1.8 CFS	0.7	0.2
② LOW FLOW ADULT	50%	5.1 CFS	1.1	0.3
③ HIGH FLOW JUVENILE	10%	25 CFS	1.7	1.0
④ HIGH FLOW ADULT	1%	349 CFS	4.8	4.6

* VELOCITY CALCULATED WITHIN CONCRETE CHANNEL UPSTREAM OF WEIR (STA. 2+10).

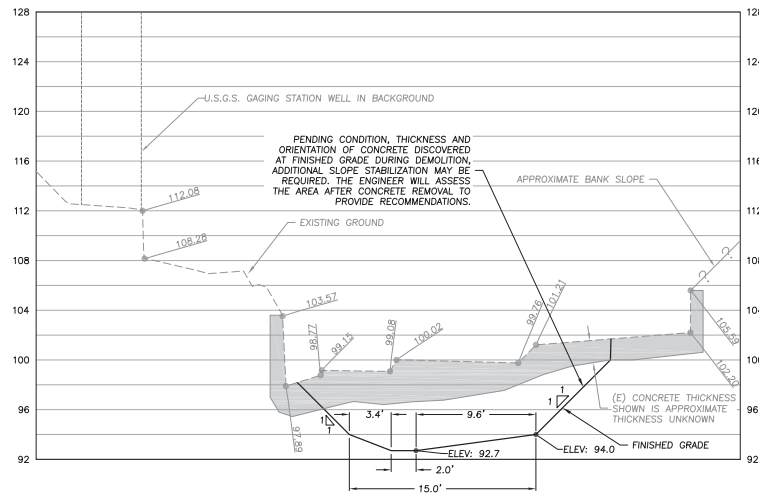
**WEIR SECTION**  
SCALE: 1"=1'

CONCRETE WEIR NOTES:  
1. EXTENT OF EXISTING CONCRETE AND BEDROCK HAVE BEEN APPROXIMATED.  
2. IT IS EXPECTED THAT EXCAVATION OF THE EXISTING CONCRETE AND/OR BEDROCK WILL LEAVE AN UNEVEN SURFACE WITH AREAS GREATER THAN DIMENSIONS AND THICKNESS OF CONCRETE SHOWN ON THE DRAWINGS. ALL AREAS OF OVER-EXCAVATION SHALL BE BACKFILLED WITH CONCRETE.



**TYPICAL WEIR ELEVATION**

SCALE: 1" = 1'



**SECTION**

SCALE: 1" = 5'



**NOTES**

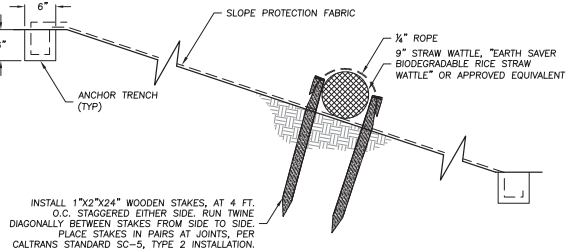
1. THE SLOPE PROTECTION DETAIL APPLIES TO ALL PORTIONS OF THE BANK DISTURBED DURING CONSTRUCTION.
2. THE AREAS TO RECEIVE SLOPE PROTECTION FABRIC AND FIBER ROLLS WILL BE STAKED BY THE ENGINEER AFTER ALL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND EQUIPMENT HAS BEEN REMOVED FROM THE CHANNEL.

**SLOPE PROTECTION FABRIC NOTES**

1. SLOPE PROTECTION FABRIC SHALL BE "NORTH AMERICAN GREEN C125BN", OR APPROVED EQUAL.
2. GROUND ANCHORING DEVICES SHALL CONSIST OF 10" LONG METAL STAPLES. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE LENGTHS GREATER THAN 10" MAY BE NECESSARY TO PROPERLY ANCHOR SLOPE PROTECTION FABRIC.
3. SECURE UPSLOPE EDGE OF SLOPE PROTECTION FABRIC INTO A 6" X 6" TRENCH WITH A ROW OF GROUND ANCHORING DEVICES SPACED APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF SLOPE PROTECTION FABRIC'S BACK OVER SEED AND COMPACTED SOIL. SECURE SLOPE PROTECTION FABRIC OVER COMPACTED SOIL WITH A ROW OF GROUND ANCHORING DEVICES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE SLOPE PROTECTION FABRIC.
4. UNROLL SLOPE PROTECTION FABRIC DOWNSLOPE. CONSECUTIVE ROLLS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN 18" OVERLAP. WHEN MORE THAN ONE ROLL WIDTH IS REQUIRED, CONSECUTIVE ROLLS SHALL BE SPICED END OVER END IN THE DOWNSLOPE DIRECTION WITH AN 18" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE SLOPE PROTECTION FABRIC'S LENGTH.
5. SECURE SLOPE PROTECTION FABRIC TO SLOPE WITH GROUND ANCHORING DEVICES AT 2.5' ON-CENTER SPACING. ADDITIONAL STAPLES SHALL BE INSTALLED, AS NECESSARY, TO ENSURE CONSISTENT CONTACT WITH THE GROUND SURFACE.
6. ALL SLOPE PROTECTION FABRIC EDGES SHALL BE INSTALLED IN A 6" X 6" TRENCH WITH A ROW OF GROUND ANCHORING DEVICES SPACED APPROXIMATELY 12" APART AS DESCRIBED ABOVE.

**FIBER ROLL NOTES**

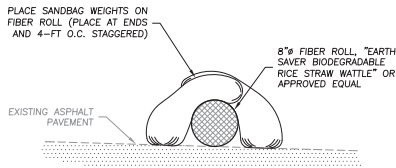
1. FIBER ROLL SHALL BE 9"9" STRAW WATTLE, "EARTH SAVER BIODEGRADABLE RICE STRAW WATTLE" OR APPROVED EQUAL.
2. STAKES SHALL BE INSTALLED AT THE ON-CENTER SPACING SHOWN ALONG THE LENGTH OF THE FIBER ROLL AND STOPPED AT 12 INCHES FROM EACH END OF THE ROLLS.
3. FIBER ROLLS SHALL BE PLACED 10 FEET APART ALONG 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. THE BEDDING AREA FOR THE FIBER ROLL SHALL BE CLEARED OF OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH IN DIAMETER BEFORE INSTALLATION.
5. FIBER ROLLS SHALL BE INSTALLED APPROXIMATELY PARALLEL TO THE SLOPE CONTOUR AND THE TERMINUS OF ROWS SHALL BE ANGLED UP-SLOPE AT 45 DEGREES FOR A DISTANCE OF THREE FEET. WHERE FIBER ROLLS MEET, PROVIDE AN OVERLAP OF TWO FEET, WITH ADJACENT ROLLS TIGHTLY ABUTTING EACH OTHER.
6. FIBER ROLLS SHALL BE INSTALLED PRIOR TO SEEDING WHERE USED WITHOUT SLOPE PROTECTION FABRIC.
7. FIBER ROLL SHALL BE INSTALLED OVER FABRIC (AFTER SEEDING) WHERE SLOPE PROTECTION FABRIC IS TO BE INSTALLED.



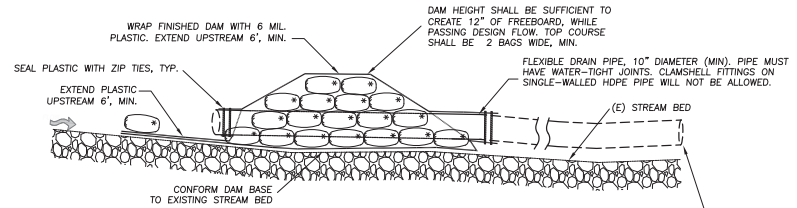
**SLOPE PROTECTION AND FIBER ROLL DETAIL**

SCALE: 1"=1'

C3.04CB



**FIBER ROLL ON PAVEMENT**



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

**DIVERSION DAM PROFILE**

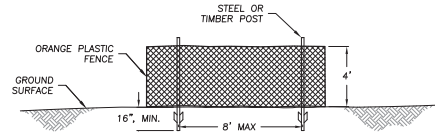
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C3.08

**DIVERSION NOTES**

THE DIVERSION PLAN SHOWN IS SCHEMATIC. THE LOCATION OF THE TEMPORARY DIVERSION DAM SHOWN ON THE DIVERSION PLAN IS APPROXIMATE. THE FINAL LOCATION WILL BE BASED ON FIELD CONDITIONS AT THE TIME OF CONSTRUCTION. GENERAL REQUIREMENTS ARE PROVIDED BELOW. THE FULL REQUIREMENTS OF THE DIVERSION AND DEWATERING PLAN ARE SPECIFIED IN THE PROJECT TECHNICAL SPECIFICATIONS AND PERMIT CONDITIONS.

1. GENERAL
  - 1.1. DEWATER THE PROJECT SITE AS REQUIRED TO FACILITATE IN-STREAM CONSTRUCTION AND REDUCE POTENTIAL IMPACTS TO WATER QUALITY DOWNSLOPE OF THE PROJECT SITE.
  - 1.2. CONFIRM THAT A FAVORABLE LONG TERM WEATHER FORECAST (1 WEEK, MIN.) IS OBSERVED PRIOR TO PLACEMENT OF DIVERSION STRUCTURES.
  - 1.3. PRIOR TO PLACEMENT OF DIVERSION STRUCTURE, REMOVE FISH FROM THE PROJECT REACH, IN ACCORDANCE WITH SECTION 2.
  - 1.4. DIVERT FLOW ONLY WHEN THE DIVERSION CONSTRUCTION IS OTHERWISE COMPLETE. FOLLOWING ENGINEER'S APPROVAL OF THE COMPLETED WORK, REMOVE DIVERSION BEGINNING AT THE DOWNSLOPE LIMIT, IN AN UPSTREAM DIRECTION.
2. FISH REMOVAL
  - 2.1. COORDINATE WITH CREEK LANDS FOR THE REMOVAL OF FISH AND OTHER AQUATIC ORGANISMS FROM THE PROJECT AREA BY A QUALIFIED FISHERIES BIOLOGIST, AUTHORIZED TO PERFORM SUCH ACTIVITIES BY THE NATIONAL MARINE FISHERIES SERVICE AND THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW).
  - 2.2. BLOCK NETS WILL BE PROVIDED AND INSTALLED BY THE FISHERIES BIOLOGIST. BLOCK NETS SHALL BE MAINTAINED BY THE CONTRACTOR BOTH UPSTREAM AND DOWNSLOPE OF THE DIVERSION, THROUGHOUT THE PERIOD OF CONSTRUCTION. MAINTENANCE INCLUDES PERIODIC REMOVAL OF ACCUMULATED DEBRIS, AS NECESSARY TO ENSURE FUNCTION. BLOCK NETS SHALL BE REMOVED BY THE FISHERIES 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 IN THE FIELD.
  - 3.3. IN THE EVENT OF A SIGNIFICANT STORM FORECAST, THE CONTRACTOR SHALL BE PREPARED TO TAKE NECESSARY MEASURES TO ENSURE 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.
  - 3.4. THE DIVERSION SHALL BE CAPABLE OF CONVEYING ANTICIPATED FLOWRATES WITH LESS THAN 6 INCHES OF HEAD OVER THE TOP OF PIPE AT THE INLET, AND SHALL BE A MINIMUM DIAMETER OF 10", WITH A MANNING'S ROUGHNESS NOT EXCEEDING .012.
4. DEWATERING OF CONSTRUCTION AREAS
  - 4.1. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY PUMPS, PIPING, FILTERS, SHORING, AND OTHER TOOLS AND MATERIALS NECESSARY FOR DEWATERING. IF A PUMPED SYSTEM IS RELIED UPON TO ENSURE DOWNSLOPE WATER QUALITY, A BACKUP PUMP OF EQUAL CAPACITY SHALL BE PROVIDED AT ALL TIMES AND THE PUMP MUST BE CONTINUOUSLY MONITORED.
  - 4.2. DEWATERING ACTIVITIES WHICH MAY BE REQUIRED FOR CONSTRUCTION PURPOSES SHALL COMPLY WITH WATER QUALITY STANDARDS ISSUED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD.
  - 4.3. DISCHARGE OF WATER FROM THE DEWATERED CONSTRUCTION SITE, EITHER BY GRAVITY OR PUMPING, SHALL BE PERFORMED IN A MANNER THAT PREVENTS EXCESSIVE TURBIDITY FROM ENTERING THE RECEIVING WATERWAYS AND PREVENTS SCOUR AND EROSION OUTSIDE OF THE CONSTRUCTION SITE. PUMPED WATER SHOULD BE PRE-FILTERED WITH A GRAVEL PACK AROUND SUMPS FOR SUBSURFACE FLOWS AND A SILT FENCE AROUND PUMPS FOR SURFACE FLOW. PUMPED WATER SHALL BE DISCHARGED INTO ISOLATED LOCAL DEPRESSIONS, FILTER BAGS, SETTLING (BAKER) TANKS, OR TEMPORARY SEDIMENT BASINS, 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.



**ESA FENCE DETAIL**

SCALE: 1"=4'

C3.04CB

**WATERWAYS CONSULTING, INC.**  
 5094 SHURT CT  
 SANTA CRUZ, CA 95060  
 PH: (408) 421-7776 / FAX: (408) 919-6847  
 WWW.WATERWAYS.COM

DATE: 1/23/23  
 MATT W. WILD

PREPARED AT THE REQUEST OF:  
**CREEK LANDS CONSERVATION**

DETAILS

**ARROYO GRANDE GAGE FISH PASSAGE IMPROVEMENT PROJECT 100% SUBMITTAL**

DESIGNED BY: MWW  
 DRAWN BY: BMZ  
 CHECKED BY: MWW  
 DATE: 1/23/23  
 JOB NO.: 07-580

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS  
 0 1"

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