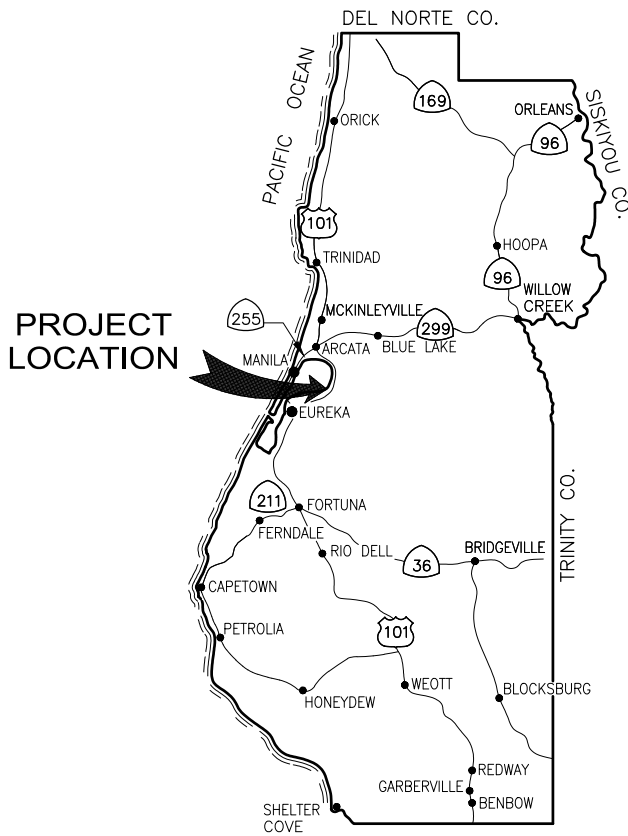
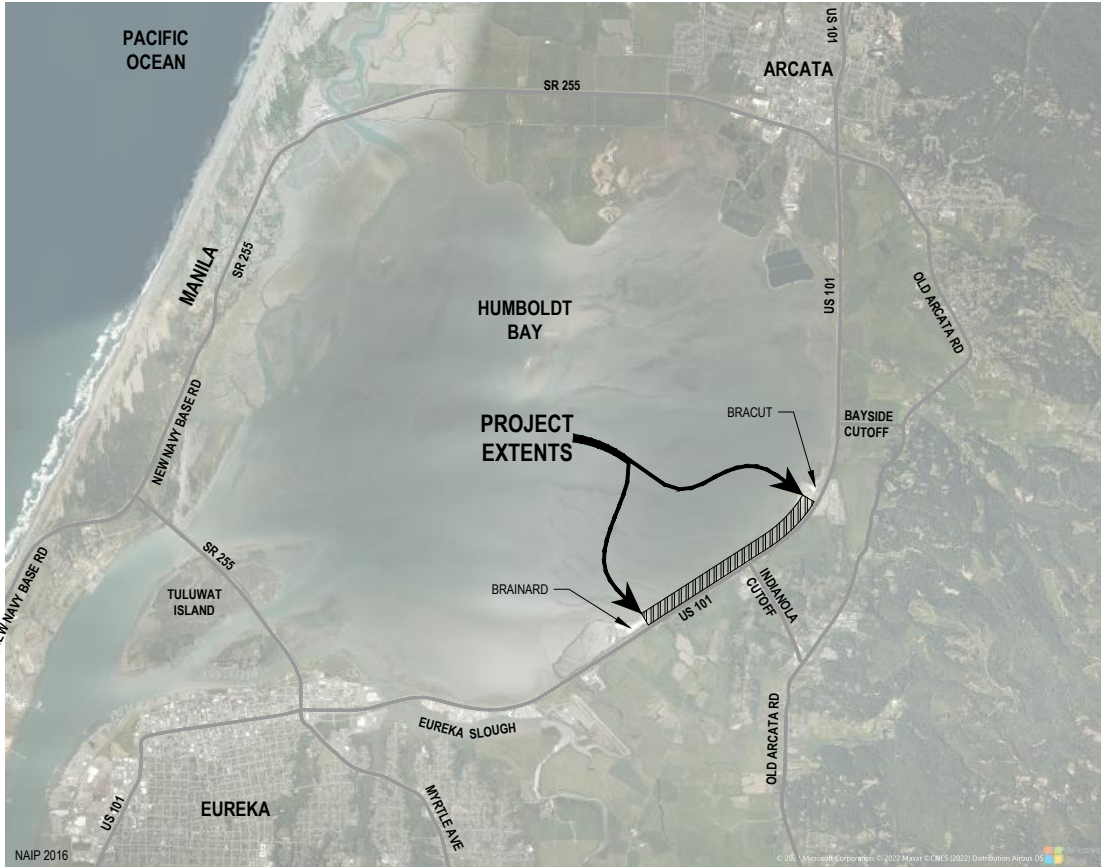








COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS

NATURAL SHORELINE INFRASTRUCTURE (NSI) IN HUMBOLDT BAY FOR INTERTIDAL COASTAL MARSH RESTORATION AND TRANSPORTATION CORRIDOR PROTECTION

May 2022

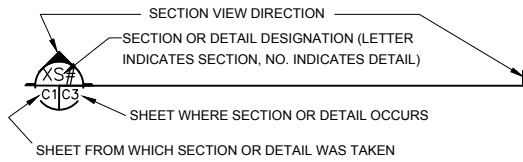
AREA MAP	LOCATION MAP	PROJECT COLLABORATORS																																										
 <p style="text-align: center;">PROJECT LOCATION</p>	 <p style="text-align: center;">PROJECT EXTENTS</p>	<p style="text-align: center;">SHEET INDEX</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sheet</th> <th>Drawing</th> <th>Title</th> </tr> </thead> <tbody> <tr><td>1</td><td>G-001</td><td>COVER SHEET</td></tr> <tr><td>2</td><td>G-002</td><td>LEGEND AND ABBREVIATIONS</td></tr> <tr><td>3</td><td>G-003</td><td>GENERAL NOTES</td></tr> <tr><td>4</td><td>G-004</td><td>EROSION CONTROL NOTES</td></tr> <tr><td>5</td><td>G-005</td><td>OVERALL SITE PLAN & SHEET INDEX</td></tr> <tr><td>6</td><td>G-006</td><td>INVASIVE PLANT REMOVAL AND RARE PLANT AVOIDANCE AND SALVAGE PLAN</td></tr> <tr><td>7</td><td>G-007</td><td>STAGING & PHASING PLAN</td></tr> <tr><td>8</td><td>C-101</td><td>SITE PLAN 1</td></tr> <tr><td>9</td><td>C-102</td><td>SITE PLAN 2</td></tr> <tr><td>10</td><td>C-103</td><td>SITE PLAN 3</td></tr> <tr><td>11</td><td>C-104</td><td>SITE PLAN 4</td></tr> <tr><td>12</td><td>C-301</td><td>TYPICAL SECTIONS</td></tr> <tr><td>13</td><td>C-302</td><td>TYPICAL DETAILS</td></tr> </tbody> </table> <p>FUNDING SOURCE</p> <p>CALIFORNIA OCEAN PROTECTION COUNCIL (OPC) NATIONAL FISH AND WILDLIFE FOUNDATION (NFWF)</p> <p>TECHNICAL WORKING GROUP</p> <p>CALIFORNIA COASTAL COMMISSION CALIFORNIA DEPARTMENT OF FISH & WILDLIFE CAL POLY HUMBOLDT SEA LEVEL RISE INITIATIVE CALTRANS HUMBOLDT BAY HARBOR, CONSERVATION AND RECREATION DISTRICT HUMBOLDT COUNTY PUBLIC WORKS STATE COASTAL CONSERVANCY U.S. FISH & WILDLIFE SERVICE U.S. GEOLOGICAL SURVEY WIYOT TRIBE</p> <p>DESIGN TEAM</p> <p>JEREMY SVEHLA, P.E. AND BRETT VIVYAN, P.E. (GHD) JEFFREY K. ANDERSON, P.E., (NORTHERN HYDROLOGY & ENGINEERING) CONOR SHEA, Ph.D., P.E., (U.S. FISH & WILDLIFE SERVICE)</p>	Sheet	Drawing	Title	1	G-001	COVER SHEET	2	G-002	LEGEND AND ABBREVIATIONS	3	G-003	GENERAL NOTES	4	G-004	EROSION CONTROL NOTES	5	G-005	OVERALL SITE PLAN & SHEET INDEX	6	G-006	INVASIVE PLANT REMOVAL AND RARE PLANT AVOIDANCE AND SALVAGE PLAN	7	G-007	STAGING & PHASING PLAN	8	C-101	SITE PLAN 1	9	C-102	SITE PLAN 2	10	C-103	SITE PLAN 3	11	C-104	SITE PLAN 4	12	C-301	TYPICAL SECTIONS	13	C-302	TYPICAL DETAILS
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LEGEND:

GENERAL:

- ± APPROXIMATE
- @ AT
- ∅ DIAMETER
- △ DELTA
- ▽ WATER SURFACE
- ⊕ CENTERLINE
- △ TEMPORARY BENCHMARK (TBM)
- ⊗³⁷ HORIZONTAL CONTROL POINT



TOPOGRAPHY:

- NEW EXISTING
- AC PAVEMENT
- FENCE
- CONTOUR LINE
- PROPOSED ALIGNMENT AND STATION
- PROPERTY BOUNDARY

UTILITIES:

- ELECTRICAL LINE

ENVIRONMENTAL:

- EXISTING SALT MARSH
- UPLAND / SALT MARSH TRANSITIONAL SLOPE
- NEW SALT MARSH
- BARRIER / SHINGLE BEACH
- ROCK SLOPE PROTECTION
- TIDAL CHANNEL
- HISTORIC MARSH LIMIT
- LARGE WOODY DEBRIS (LWD) GROIN
- POTENTIAL NATURE STUDY VIEWING AREA

TIDAL DATUM TABLE

TIDAL DATUM	STILLWATER ELEV. FT - NAVD 1988
MEAN LOWER LOW WATER (MLLW) ¹	-0.34
MEAN TIDE LEVEL (MTL) ¹	3.36
MEAN HIGHER HIGH WATER (MHHW) ²	7.07
MEAN MONTHLY MAXIMUM WATER (MMMWW) ²	8.41
HIGHEST ASTRONOMICAL TIDE (HAT) ¹	8.50

¹ NORTH SPIT HUMBOLDT BAY (NOAA)
² PROJECT AREA (NHE 2015)

NOTE: TIDAL WATER LEVELS ARE APPROXIMATE AND ARE PROVIDED FOR CONTRACTORS INFORMATION ONLY. ACTUAL WATER LEVELS AT THE TIME OF CONSTRUCTION MAY FLUCTUATE ABOVE AND BELOW THE LEVELS IN THIS TABLE. REFER TO GENERAL NOTES.

ABBREVIATIONS:

NOTE: CONTACT ENGINEER FOR ABBREVIATIONS NOT LISTED.

AB	AGGREGATE BASE	FL, F	FLOW LINE	R/W	RIGHT OF WAY
AC	ASPHALT CONCRETE	FS	FINISH SURFACE	SCHED	SCHEDULE
ACP	ASBESTOS CONCRETE PIPE	FT	FOOT OR FEET	SD	STORM DRAIN
AGG	AGGREGATE	G	GAS	SF	SQUARE FOOT/FEET
APPROX	APPROXIMATE	GALV	GALVANIZED	SHT	SHEET
B	BERM	GB	GRADE BREAK	SIM	SIMILAR
BFP	BACKFLOW PREVENTER	GR	GRADE	SST	STAINLESS STEEL
BMPS	BEST MANAGEMENT PRACTICES	GRD	GROUND	STA	STATION
CS	CENTERVILLE SLOUGH	H, HORIZ	HORIZONTAL	STL	STEEL
CB	CENTERVILLE BERM	HMMP	HABITAT MITIGATION AND MONITORING PLAN	SWPPP	STORM WATER POLLUTION PREVENTION PLAN
CBC	CALIFORNIA BUILDING CODE	HYD	FIRE HYDRANT	SY	SQUARE YARD
CL, C	CENTER LINE	INV/IE	INVERT ELEVATION	T	TELEPHONE
CLR	CLEAR	L	LENGTH	TBD	TO BE DETERMINED
CM	CONSTRUCTION MANAGER	LF	LINEAR FOOT/FEET	TBM	TEMPORARY BENCH MARK
CMP	CORRUGATED METAL PIPE	LT	LEFT	TYP	TYPICAL
CO	CLEANOUT	LWD	LARGE WOOD OR LARGE WOODY DEBRIS	UNO	UNLESS NOTED OTHERWISE
CONC	CONCRETE	MAX	MAXIMUM	V, VERT	VERTICAL
CONT'D	CONTINUED	MIN	MINIMUM	W/	WITH
COORD	COORDINATE	MISC	MISCELLANEOUS	W	WIDE
COR	CONTRACTING OFFICER'S REPRESENTATIVE	N	NORTHING	W	WIDTH
COR	CORNER	NO.	NUMBER	W	WEST
CPP	CORRUGATED PLASTIC PIPE	(N)	NEW	XS	CROSS SECTION
CU	CUBIC	NIC	NOT IN CONTRACT	YD	YARD
CY	CUBIC YARD	NTS	NOT TO SCALE		
DIA	DIAMETER	OC	ON CENTER		
DTL	DETAIL	OD	OUTSIDE DIAMETER		
DI	DROP (DRAINAGE) INLET	OHE	OVERHEAD ELECTRIC		
DI	DUCTILE IRON	PE	POLYETHYLENE		
DWG	DRAWING	PI	POINT OF INTERSECTION		
E	EAST	PL, P	PROPERTY LINE		
(E)	EXISTING	PP	POWER POLE		
EA	EACH	PCV	POLYVINYL CHLORIDE		
EC	END CURVE	PVI	POINT OF VERTICAL INTERSECTION		
EF	EACH FACE	R	RIGHT		
EL, ELEV	ELEVATION	REQ'D	REQUIRED		
EG	EXISTING GRADE	RCP	REINFORCED CONCRETE PIPE		
ENGR	ENGINEER	RSP	ROCK SLOPE PROTECTION		
EP	EDGE PAVING	RT	RIGHT		
EQ	EQUAL				
ER	EDGE ROAD				
EVC	END VERTICAL CURVE				
EW	EACH WAY				
FG	FINISH GRADE				
FIN	FINISH				

TOPOGRAPHIC SURVEY NOTES

- TOPOGRAPHIC DATA WITHIN THE REGION FROM THE WESTERN BOUNDARY OF HIGHWAY 101 TO THE WESTERN BOUNDARY OF THE RAILROAD RIGHT OF WAY IS BASED ON A FIELD SURVEY BY GUTIERREZ LAND SURVEYING BETWEEN FEBRUARY 14, 2017 AND MARCH 4, 2017. ALL TOPOGRAPHIC DATA OUTSIDE OF THESE BOUNDARIES IS PROVIDED FROM COASTAL LIDAR DATA.
- HORIZONTAL DATUM: BASED ON CALIFORNIA COORDINATE SYSTEM (CCS83, EPOCH 2010), ZONE 1, NAVD 88. USING STATIC GPS SURVEY OF MONUMENTS BY THE ABOVE GUTIERREZ LAND SURVEY AND THE RECORD OF SURVEY BY CALTRANS DATED JULY 2, 2015.
- VERTICAL DATUM: BASED ON SURVEY BY CALTRANS DATED JULY 2, 2015. ALL BENCHMARKS BASED ON NAVD 88 DATUM.

UTILITY NOTES

- THE LOCATION FOR UTILITIES ON THESE PLANS IS APPROXIMATE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION, DEPTH AND HEIGHT. THEIR VERIFICATION SHALL BE COORDINATED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANY, A MINIMUM OF SEVENTY-TWO HOURS BEFORE BEGINNING IN ANY AREA. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT NORTH (USA), AT 1-800-227-2600, TO DETERMINE LOCATIONS OF EXISTING UTILITIES. THE CONTRACTOR SHALL COOPERATE WITH UTILITY OWNERS TO EXPEDITE THE RELOCATION OR ADJUSTMENT OF THEIR UTILITIES TO MINIMIZE INTERRUPTION OF SERVICE AND DUPLICATION OF WORK. THE CONTRACTOR SHALL EXERCISE CARE WHEN WORKING NEAR EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ALL DAMAGE, BREAKS, AND/OR LEAKS. IF DAMAGE OCCURS, THE CONTRACTOR SHALL REPAIR UTILITY AT NO ADDITIONAL EXPENSE TO THE HCRCD.
- PRIOR TO RELOCATION, ALL UTILITIES TO BE RELOCATED WITHIN THE COUNTY RIGHT OF WAY SHALL BE STAKED AND APPROVED BY THE COUNTY, IF NEEDED.
- LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE PLOTTED FROM RECORD INTERPOLATION OF PHYSICAL EVIDENCE ON THE SITE AND ARE SUBJECT TO FIELD VERIFICATION BY THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES, FEATURES, AND STRUCTURES LOCATED ON THE SITE. LOCATE, PROTECT, AND AVOID DISRUPTION OF ALL ABOVE AND BELOW GRADE UTILITIES DURING CONSTRUCTION.
- CONSTRUCTION ACTIVITY WILL TAKE PLACE IN THE VICINITY OF ELECTRIC LINES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE AWARE OF, AND OBSERVE, THE MINIMUM CLEARANCES FOR WORKERS AND EQUIPMENT OPERATING NEAR HIGH VOLTAGE ELECTRIC LINES AS SET OUT IN THE HIGH VOLTAGE SAFETY ORDERS OF THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY AS WELL AS OTHER APPLICABLE SAFETY REGULATIONS.

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Client **COUNTY OF HUMBOLDT**

Project **NATURAL SHORELINE INFRASTRUCTURE PROJECT**

Project No. **11214987** Date **3/7/2022** Scale **AS SHOWN**

Title **LEGEND AND ABBREVIATIONS**

Size **ANSI D**

Sheet No. **G-002** Sheet **2 of 12**

GENERAL NOTES

1. PROJECT REQUIRES A CLASS A GENERAL ENGINEERING CONTRACTOR'S LICENSE IN THE STATE OF CALIFORNIA.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK AND REPORT ANY DISCREPANCIES TO THE CONSTRUCTION MANAGER. SHOULD EXISTING CONDITIONS DIFFER FROM THOSE SHOWN OR INDICATED, OR IF IT APPEARS THAT THESE PLANS DO NOT ADEQUATELY DETAIL THE WORK TO BE DONE, CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER PRIOR TO CONTINUING WITH ANY RELATED WORK. NO ALLOWANCE WILL BE MADE ON CONTRACTOR'S BEHALF FOR ANY EXTRA EXPENSE RESULTING FROM FAILURE OR NEGLIGENCE IN DETERMINING THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALE.
3. QUANTITIES OF ITEMS, LENGTH OF PROJECT, AND SITE CONDITIONS SHOWN IN THE PLANS ARE APPROXIMATE. ALL MATERIALS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
4. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER, GHD, AND THEIR REPRESENTATIVES HARMLESS FROM ANY AND ALL LIABILITY, REAL AND/OR ALLEGED, IN CONJUNCTION WITH THE PERFORMANCE OF THIS PROJECT.
5. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING STRUCTURES, ROADS, AND UTILITIES DURING CONSTRUCTION. ALL DAMAGE SHALL BE RESTORED TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
6. A SET OF SIGNED CONTRACT DOCUMENTS (PLANS AND SPECIFICATIONS) WILL BE KEPT AT ALL TIMES AT THE JOB SITE ON WHICH ALL CHANGES OR VARIATIONS IN THE WORK ARE TO BE RECORDED AND/OR CORRECTED DAILY AND SUBMITTED TO THE OWNER WHEN THE WORK TO BE DONE IS COMPLETED.
7. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AT LEAST 72 HOURS IN ADVANCE OF COMMENCEMENT OF ANY PART OF THE WORK AND SHALL COORDINATE CONSTRUCTION SCHEDULE UPDATES ACCORDINGLY.
8. THE DESIGN FEATURES SHOWN ON THESE DESIGN PLANS SHALL NOT BE ALTERED OR MODIFIED IN ANY WAY DURING CONSTRUCTION WITHOUT THE EXPRESSED, WRITTEN DIRECTION AND APPROVAL OF THE CONSTRUCTION MANAGER.
9. ANY INFORMATION DERIVED FROM THE MAPS, PLANS, SPECIFICATIONS, PROFILES, DRAWINGS OR FROM THE ENGINEER WILL NOT RELIEVE THE CONTRACTOR FROM ANY RISK OR FROM FULFILLING THE TERMS OF THE CONTRACT.
10. NO WORK SHALL BE PERFORMED OUTSIDE OF THE DESIGNATED AREAS WITHOUT THE APPROVAL OF THE CONSTRUCTION MANAGER.
11. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ADDITIONAL STAGING AREAS WITH THE OWNER BEYOND WHAT IS SHOWN ON THE PLANS.
12. UPON COMPLETION OF THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIAL U.N.O. ALL DAMAGE CAUSED BY THE CONTRACTOR SHALL BE RESTORED TO AN "AS GOOD OR BETTER" CONDITION.
13. THE CONTRACTOR SHALL PROTECT EXISTING SURVEY MONUMENTS WITHIN WORK LIMITS. ANY MONUMENT DAMAGED BY THE CONTRACTOR SHALL BE RESET IN ACCORDANCE WITH THE CALIFORNIA PROFESSIONAL LAND SURVEYORS ACT.
14. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER UPON DISCOVERING DISCREPANCIES, ERRORS OR OMISSIONS IN THE PLANS. PRIOR TO PROCEEDING, THE DISCREPANCY SHALL BE RESOLVED TO THE SATISFACTION OF THE CONSTRUCTION MANAGER.
15. HOURS OF WORK: THE CONTRACTOR SHALL CONDUCT ALL WORK BETWEEN THE HOURS OF 7:00 A.M. AND 7:00 P.M., MONDAY THROUGH FRIDAY. A WORKING DAY IS DEFINED AS MONDAY THROUGH FRIDAY EXCLUDING WEEKENDS AND HOLIDAYS. WEEKEND AND HOLIDAY WORK WILL ONLY BE CONDUCTED AFTER PRIOR AUTHORIZATION FROM THE OWNER. IF WEEKEND/HOLIDAY WORK IS AUTHORIZED, IT SHALL BE LIMITED TO 9:00 A.M. - 6 P.M. EQUIPMENT DELIVERY SHALL BE DURING HOURS OF WORK.
16. CONTRACTOR SHALL MAINTAIN DAILY COMMUNICATIONS WITH THE CONSTRUCTION MANAGER TO DISCUSS DETAILS OF IMPLEMENTATION, ORDER OF WORK, METHODS OF MINIMIZING ENVIRONMENTAL IMPACTS AND OTHER RELEVANT COMPONENTS OF CONSTRUCTION. CONTRACTOR AND OWNER SHALL MEET DAILY ON-SITE TO DISCUSS PROJECT DETAILS.
17. ANY MODIFICATIONS FROM PLANS NEED TO BE COMPLETED AND/OR APPROVED BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION.
18. WORK SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS AND PERMITS ISSUED FOR THE PROJECT.
19. PROJECT PERMITS SHALL REMAIN ON SITE AT ALL TIMES.
20. NO SHUTDOWN OF THE PROJECT SITE IS ANTICIPATED. HOWEVER, UNFORESEEABLE CONDITIONS INCLUDING BUT NOT LIMITED TO FIRE, GEO-HAZARD CONDITIONS, OR RAINS COULD REQUIRE THE CONSTRUCTION MANAGER TO SUSPEND CONSTRUCTION ACTIVITIES AT ALL OR PART OF THE SITE FOR SAFETY REASONS AT NO COST TO THE OWNER OR THEIR REPRESENTATIVES.

21. PERFORM GRADING IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE AND APPLICABLE HUMBOLDT COUNTY REGULATIONS.
22. THE CONTRACTOR SHALL BE AWARE OF THE SOFT AND SATURATED SOIL CONDITION THAT MAY BE ENCOUNTERED DURING THE CONSTRUCTION. SEE GEOTECHNICAL REPORT.
23. IN THE EVENT CULTURAL RESOURCES (I.E., HISTORICAL, ARCHAEOLOGICAL, AND PALEONTOLOGICAL RESOURCES, AND HUMAN REMAINS) ARE DISCOVERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL BE HALTED. A QUALIFIED ARCHEOLOGIST SHALL BE CONSULTED FOR AN ON-SITE EVALUATION. IF HUMAN BURIALS OR HUMAN REMAINS ARE ENCOUNTERED, THE CONTRACTOR SHALL ALSO NOTIFY THE COUNTY CORONER.
24. SHOULD GRADING OPERATIONS ENCOUNTER HAZARDOUS MATERIALS, OR WHAT APPEAR TO BE HAZARDOUS MATERIALS, STOP WORK IN THE AFFECTED AREA IMMEDIATELY AND CONTACT THE CONSTRUCTION MANAGER OR THE APPROPRIATE AGENCY FOR FURTHER INSTRUCTION.
25. ALL CONSTRUCTION SITES AND HAUL ROADS SHALL BE MAINTAINED, AS NECESSARY, TO MINIMIZE THE EMISSION OF DUST AND PREVENT CREATION OF NUISANCE TO ADJACENT PROPERTIES.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL CONSTRUCTION. ADEQUATE SHORING, BRACING, TIES, AND SUPPORTS SHALL BE USED TO PROVIDE PROPER TEMPORARY INTEGRITY DURING ALL PHASES OF CONSTRUCTION.
27. ALL EXISTING STAGING/STOCKPILE AREAS WHICH ARE DISTURBED BY CONSTRUCTION OR EARTHWORK OPERATIONS SHALL BE RETURNED TO ORIGINAL EXISTING CONDITIONS OR BETTER.
28. ALL DITCHES, SWALES, CULVERTS, ETC. SHOULD BE CONSIDERED ACTIVE STORM CONVEYANCES UNLESS OTHERWISE INDICATED. CONTRACTOR IS RESPONSIBLE FOR ADDRESSING STORM WATER DRAINAGE AND DEWATERING OF WORK AREAS DURING CONSTRUCTION.
29. DURING WET WEATHER PERIODS, CONTRACTOR IS RESPONSIBLE FOR SEQUENCING CONSTRUCTION IN A MANNER TO MINIMIZE IMPACT ON OPEN EARTHWORK AND COMPACTION OPERATIONS.
30. THE OWNER'S REPRESENTATIVE WILL PROVIDE GRADING INSPECTION PER HUMBOLDT COUNTY CODE SECTION 331-14 H.5 AND UPON COMPLETION OF WORK THE OWNER WILL PROVIDE REPORT PER HUMBOLDT COUNTY CODE SECTION 331-14 I.1.
31. ANY MATERIAL NOT UTILIZED ON SITE SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER CONSISTENT WITH APPLICABLE REGULATIONS SUCH AS COUNTY GRADING ORDINANCES AND PROJECT PERMITS. CONTRACTOR IS RESPONSIBLE FOR PROPER LEGAL DISPOSAL OF ALL MATERIALS TAKEN FROM SITE.
32. EXISTING VEGETATION SHALL BE PROTECTED AND LEFT UNDISTURBED AS MUCH AS PRACTICAL. EXISTING NATIVE PLANTS IN AREAS TO BE DISTURBED WILL BE FLAGGED BY PROJECT BOTANIST FOR SALVAGE AND STORAGE IN TEMPORARY NURSERY TO BE REPLANTED AFTER FINAL GRADING HAS OCCURRED.
33. THE CONTRACTOR SHALL SUBMIT A DUST CONTROL PLAN FOR REVIEW AND APPROVAL BY THE COUNTY OF HUMBOLDT AND THE CONSTRUCTION MANAGER. THE DUST CONTROL PLAN SHALL INCLUDE CASQA BMPS.
34. BIOLOGICAL RESTRICTIONS - WILDLIFE: PRIOR TO START OF CONSTRUCTION, THE ENVIRONMENTAL MONITOR OR REPRESENTATIVES WILL GIVE CONTRACTOR'S STAFF A PRESENTATION REGARDING SPECIAL STATUS SPECIES AND RESTRICTIONS REQUIRED IN TERMS OF CONSTRUCTION START CLEARANCE SURVEYS, AND CONSTRUCTION MONITORING. BECAUSE OF THE HIGH NUMBER OF SPECIAL STATUS SPECIES THAT OCCUR IN THE AREA, MOST, IF NOT ALL, ELEMENTS MAY NOT BE IMPLEMENTED UNTIL AFTER CERTAIN DATES AND AFTER CONSTRUCTION CLEARANCE SURVEYS HAVE BEEN PERFORMED AND COMPLETED.
35. REQUIRED CLEARANCE SURVEYS: IF SPECIAL STATUS SPECIES ARE LOCATED DURING CLEARANCE SURVEYS, REQUIRED ACTIONS COULD INCLUDE, BUT ARE NOT LIMITED TO: 1) TEMPORARY DELAY IN CONSTRUCTION WHILE SPECIES ARE RELOCATED BY QUALIFIED BIOLOGISTS; OR 2) DELAY OF CONSTRUCTION UNTIL PREDETERMINED DATE A OF BREEDING SEASON WITH NO CONSTRUCTION OCCURRING WITHIN A BUFFER ZONE AROUND THE AREA WHERE SPECIES WERE FOUND.
36. SCHEDULING OF REQUIRED CLEARANCE SURVEYS: AT THE START OF CONSTRUCTION, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A CONSTRUCTION SCHEDULE. ON A WEEKLY BASIS, THE CONTRACTOR, CONSTRUCTION MANAGER, AND ENVIRONMENTAL MONITOR WILL MEET AND DISCUSS THE STATUS OF THE PROJECT AND UPDATES TO SCHEDULES. CLEARANCE SURVEYS WILL BE SCHEDULED WITH THE BASIS OF THIS REVISED WEEKLY SCHEDULE. THE CONTRACTOR WILL NOT BE ALLOWED TO START CONSTRUCTION UNTIL ALL THE APPROVED CLEARANCE SURVEYS HAVE BEEN PERFORMED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE ENVIRONMENTAL MONITOR AND UPDATED SCHEDULE THAT ALLOW FOR ADEQUATE TIME TO SCHEDULE THE CLEARANCE SURVEYOR SURVEYS REQUIRED.

WATER MANAGEMENT NOTES

1. WORK IS LOCATED WITHIN AND ADJACENT TO SENSITIVE WETLAND AND SUBTIDAL RESOURCES, CONTRACTOR SHALL IMPLEMENT BMPS FOR ACCESS, STAGING, EROSION CONTROL, AND CONSTRUCTION METHODS TO MINIMIZE IMPACTS TO EXISTING RESOURCES AND AVOID IMPACTS OUTLINE THE LIMITS OF WORK.
2. PROJECT SITE IS LOCATED IN THE MARINE ENVIRONMENT. CONDITIONS ARE DYNAMIC AND WORK AREAS ARE SUBJECT TO THE ACTION OF THE FLUCTUATING TIDES, WAVES, BOAT WAKES, AND CURRENTS. CONTRACTOR SHALL BE FAMILIAR WITH MARINE CONDITIONS AND IMPLEMENT CONSTRUCTION TECHNIQUES APPROPRIATE TIE TO CONDUCT AND PROTECT WORK AS REQUIRED.
3. SOILS AND SEDIMENTS WITHIN THE LIMITS OF WORK VARY. CONTRACTOR SHALL ANTICIPATE THE USE OF SPECIAL CONSTRUCTION EQUIPMENT FOR ACCESS AND WORK IN SOFT AND SATURATED SOIL CONDITIONS.
4. WHERE DEWATERING IS REQUIRED, A DEWATERING PLAN SHALL BE DEVELOPED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL BY THE CONSTRUCTION MANAGER TO MINIMIZE IMPACTS TO WATER QUALITY OF AQUATIC HABITATS IN THE PROJECT AREA. IN GENERAL, TEMPORARY BARRIER BERMS OR COFFER DAMS ARE REQUIRED IN AREAS WHERE FULL DEWATERING WILL BE CONDUCTED. WITH ADDITIONAL MEASURES TO REDUCE WATER QUALITY IMPACTS DURING CONSTRUCTION DEWATERING, INSTALLATION OF SILT FENCING AND TURBIDITY CURTAINS MAY ALSO BE REQUIRED TO CONTROL SEDIMENT. AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY BMPS AND RESTORE AREAS BACK TO PRE-CONSTRUCTION CONDITIONS UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.
5. BARRIER BERMS OR COFFER DAMS SHALL BE INSTALLED DURING LOW TIDES AND IN COORDINATION WITH FISH RELOCATION. CONTRACTOR SHALL COORDINATE WITH FISHERIES BIOLOGIST RESPONSIBLE FOR REMOVING FISH. CONTRACTOR IS RESPONSIBLE TO MAINTAIN ACTIVE WORK AREA FREE OF TIDAL EXCHANGE AND SEQUENCE WORK TO PREVENT AQUATIC SPECIES FROM ENTERING WORK AREA.
6. ANY PUMPS USED ON-SITE (DEWATERING ETC) SHALL BE PLACED ON ABSORBENT PADS. THE CONTRACTOR SHALL HAVE SPILL CONTAINMENT MATERIALS LOCATED AT THE SITE, WITH OPERATORS TRAINED IN SPILL CONTROL PROCEDURES. PUMPS SHALL BE SCREENED TO PREVENT INTAKE OF SALMON, TIDEWATER GOBY, AND OTHER SPECIES.

TRAFFIC CONTROL AND ENCROACHMENT NOTES:

1. ALL FUELING, EQUIPMENT MAINTENANCE, STAGING AND CONSTRUCTION MANAGEMENT SHALL BE LOCATED OUTSIDE THE COUNTY AND CALTRANS RIGHT OF WAY.
2. ALL EQUIPMENT AND LOADS OVER WEIGHT, LENGTH, WIDTH LIMITS WILL REQUIRE A TRANSPORTATION PERMIT FROM THE COUNTY OF HUMBOLDT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THESE PERMITS IF NECESSARY AND PAYING ALL PERMIT FEES.
3. ALL ACTIVE CONSTRUCTION AREAS SHALL BE WATERED AT A RATE SUFFICIENT TO KEEP SOIL MOIST AND PREVENT FORMATION OF WIND-BLOWN DUST.
4. ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS SHALL BE COVERED, OR ALL TRUCKS SHALL BE REQUIRED TO MAINTAIN AT LEAST 2 FEET OF FREEBOARD, OR SHALL HAVE MOISTURE CONTENT, OR UTILIZE SOME OTHER METHODS THAT PREVENTS GENERATION OF FUGITIVE DUST.
5. EXPOSED STOCKPILES OF SOIL, SAND, AND SIMILAR MATERIAL SHALL BE ENCLOSED, COVERED, AND/OR WATERED DAILY, OR TREATED WITH NON-TOXIC SOIL BINDERS AS NECESSARY TO PREVENT GENERATION OF FUGITIVE DUST.
6. TRAFFIC SPEEDS ON UNPAVED ROADS AND RAIL PRISM SHALL BE LIMITED TO 10 MILES PER HOUR.
7. OUTDOOR DUST-PRODUCING ACTIVITIES SHALL BE SUSPENDED WHEN HIGH WINDS (>15 MPH) CREATE VISIBLE DUST PLUMES IN SPITE OF CONTROL MEASURES.
8. REASONABLE PRECAUTIONS SHALL BE TAKEN TO PREVENT THE ENTRY OF UNAUTHORIZED VEHICLES INTO THE CONSTRUCTION AREA DURING NON-WORK HOURS.
9. THE CONTRACTOR SHALL COMPLY WITH AIR QUALITY MANAGEMENT DISTRICT (AQMD) RULE 420 (PARTICULATE MATTER) AND RULE 430 (FUGITIVE DUST EMISSIONS), OR SUCCEEDING AQMD RULES THAT CARRY OUT THE AQMD'S MANAGEMENT PROGRAM FOR PARTICULATE MATTER.
10. ALL EQUIPMENT SHALL OPERATE WITH FACTORY-EQUIPPED MUFFLERS.

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Client	COUNTY OF HUMBOLDT
Project	NATURAL SHORELINE INFRASTRUCTURE PROJECT
Project No.	11214987
Date	3/7/2022
Scale	AS SHOWN

Title	GENERAL NOTES
Sheet No.	G-003
Sheet	3 of 12


EROSION, SEDIMENT, POLLUTION AND WASTE CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH CORRIDOR CONSTRUCTION ACTIVITIES. THE SITE DISTURBANCE IS GREATER THAN 1 ACRE, THEREFORE THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE PROJECT OR A WATER POLLUTION CONTROL PLAN (WPCP) IF ACCEPTABLE TO AGENCIES.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MINIMIZE EROSION AND PREVENT THE TRANSPORT OF SEDIMENT TO THE ADJACENT STREAM AND SENSITIVE AREAS.
3. PERFORM EROSION PREVENTION AND SEDIMENT CONTROL IN ACCORDANCE WITH THE LATEST EDITION OF CHAPTER 33 OF THE CALIFORNIA BUILDING CODE, APPLICABLE HUMBOLDT COUNTY REGULATIONS, AND SECTION 20 OF THE CALTRANS STANDARD SPECIFICATIONS.
4. AT A MINIMUM, THE CONTRACTOR SHALL EMPLOY THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPs) AS DESCRIBED IN THE CURRENT CALTRANS STORM WATER QUALITY HANDBOOK AS NEEDED:


SS-2 PRESERVATION OF EXISTING VEGETATION SS-10 OUTLET PROTECTION/VELOCITY DISSIPATION DEVICES SC-1 SILT FENCE NS-2 DEWATERING OPERATIONS NS-3 PAVING AND GRINDING OPERATIONS NS-5 CLEAR WATER DIVERSION	NS-9 VEHICLE EQUIPMENT AND FUELING WM-1 MATERIALS DELIVERY AND STORAGE WM-2 MATERIAL USE WM-4 SPILL PREVENTION AND CONTROL WM-8 CONCRETE WASTE MANAGEMENT WM-9 SANITARY/SEPTIC WASTE MANAGEMENT
--	--
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIX ANY EROSION, SEDIMENT, POLLUTION, & WASTE CONTROL DEFICIENCIES IDENTIFIED BY THE OWNER OR THE OWNERS REPRESENTATIVE.
6. IF DISCREPANCIES OCCUR BETWEEN THESE NOTES, MATERIAL REFERENCED HEREIN OR MANUFACTURERS RECOMMENDATIONS, THEN THE MOST PROTECTIVE SHALL APPLY.
7. PRESERVATION OF EXISTING VEGETATION SHALL OCCUR TO THE MAXIMUM EXTENT PRACTICABLE.
8. DISCHARGES OF POTENTIAL POLLUTANTS FROM CONSTRUCTION SITES SHALL BE PREVENTED USING SOURCE CONTROLS TO THE MAXIMUM EXTENT PRACTICABLE. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SEDIMENT, TRASH, NUTRIENTS, PATHOGENS, PETROLEUM HYDROCARBONS, METALS, CONCRETE, CEMENT, ASPHALT, LIME, PAINT, STAINS, GLUES, WOOD PRODUCTS, PESTICIDES, HERBICIDES, CHEMICALS, HAZARDOUS WASTE, SANITARY WASTE, VEHICLE OR EQUIPMENT WASH WATER, CIGARETTE BUTTS, AND CHLORINATED WATER.
9. WHENEVER IT IS NOT POSSIBLE TO UTILIZE EROSION PREVENTION MEASURES, EXPOSED SLOPES SHALL EMPLOY SEDIMENT CONTROL DEVICES, SUCH AS FIBER ROLLS AND SILT FENCES. FIBER ROLLS AND SILT FENCES SHALL BE TRENCHED AND KEYED INTO THE SOIL AND INSTALLED ON CONTOUR. SILT FENCES SHALL BE INSTALLED APPROXIMATELY 2 TO 5 FEET FROM TOE OF SLOPE.
10. ENERGY DISSIPATORS SHALL BE INSTALLED AT STORM DRAIN OUTLETS WHICH MAY CONVEY STORM WATER FLOW LEADING TO SOIL EROSION.
11. SOIL AND MATERIAL STOCKPILES SHALL BE PROPERLY PROTECTED TO MINIMIZE SEDIMENT AND POLLUTANT TRANSPORT FROM THE CONSTRUCTION SITE.
12. SOLID WASTE, SUCH AS TRASH AND DEBRIS, SHALL BE PLACED IN DESIGNATED COLLECTION AREAS OR CONTAINERS. THE CONSTRUCTION SITE SHALL BE CLEARED OF SOLID WASTE DAILY, OR AS NECESSARY, AND REGULAR REMOVAL AND PROPER DISPOSAL SHALL BE ARRANGED.
13. PROPER APPLICATION, CLEANING AND STORAGE OF POTENTIALLY HAZARDOUS MATERIALS, SUCH AS PAINTS AND CHEMICALS, SHALL BE CONDUCTED TO PREVENT THE DISCHARGE OF POLLUTANTS.
14. WHEN UTILIZED, TEMPORARY RESTROOMS AND SANITARY FACILITIES SHALL BE LOCATED AND MAINTAINED TO PREVENT THE DISCHARGE OF POLLUTANTS.
15. APPROPRIATE VEHICLE STORAGE, FUELING, MAINTENANCE AND CLEANING AREAS SHALL BE DESIGNATED AND MAINTAINED TO PREVENT DISCHARGE OF POLLUTANTS.
16. ENTRANCE(S) TO THE CONSTRUCTION SITE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF POTENTIAL POLLUTANTS OFFSITE. POTENTIAL POLLUTANTS DEPOSITED ON PAVED AREAS WITHIN THE COUNTY RIGHT-OF-WAY, SUCH AS ROADWAYS AND SIDEWALKS, SHALL BE PROPERLY DISPOSED OF EACH WORKING DAY OR MORE FREQUENTLY AS NECESSARY.
17. CHANGES TO THE STORM WATER POLLUTION PREVENTION PLAN MAY BE MADE TO RESPOND TO FIELD CONDITIONS. CHANGES SHALL BE NOTED ON THE PLAN WHEN MADE.
18. EQUIPMENT SHALL NOT OPERATED DIRECTLY WITHIN TIDAL WATERS.
19. SEDIMENT SOURCES SHALL BE CONTROLLED USING BMPs SUCH AS FIBER ROLLS, SEDIMENT BASINS, AND/OR CHECK DAMS THAT WILL BE INSTALLED PRIOR TO OR DURING GRADING ACTIVITIES AND REMOVED ONCE THE SITE HAS STABILIZED.
20. EROSION CONTROL MAY INCLUDE REUSE OF ONSITE NATIVE TOP SOIL AND ORGANIC MULCH, SEEDING, EROSION CONTROL BLANKETS, PLASTIC COVERINGS, AND GEOTEXTILES OR OTHER BMPs AS APPROVED OF BY THE ENGINEER.
21. EXCESS NUISANCE WATER ENCOUNTERED DURING EXCAVATION WILL BE PUMPED INTO THE SURROUNDING FIELDS OR INTO TEMPORARY SETTLING BASINS WITHIN THE CORRIDOR TO PREVENT SEDIMENT-LADEN WATER FROM ENTERING THE DOWNSTREAM CHANNEL.
22. APPROPRIATE ENERGY DISSIPATION DEVICES WILL BE UTILIZED TO REDUCE OR PREVENT EROSION AT DISCHARGE END OF DEWATERING ACTIVITY.
23. CONSTRUCTION MATERIALS, DEBRIS, AND WASTE WILL NOT BE PLACED OR STORED WHERE IT CAN ENTER INTO OR BE WASHED BY RAINFALL INTO WATERS OF THE U.S./STATE.
24. OPERATORS OF HEAVY EQUIPMENT, VEHICLES, AND CONSTRUCTION WORK WILL BE INSTRUCTED TO AVOID SENSITIVE HABITAT AREAS. TO ENSURE CONSTRUCTION OCCURS IN THE DESIGNATED AREAS AND DOES NOT IMPACT ENVIRONMENTALLY SENSITIVE AREAS, THE BOUNDARIES OF THE WORK AREA WILL BE FENCED OR MARKED WITH FLAGGING.
25. EQUIPMENT WHEN NOT IN USE WILL BE STORED ABOVE HIGH TIDE ELEVATIONS.
26. ALL CONSTRUCTION EQUIPMENT WILL BE MAINTAINED TO PREVENT LEAKS OF FUELS, LUBRICANTS OR OTHER FLUIDS INTO THE CHANNEL. SERVICE AND REFUELING PROCEDURES WILL BE NOT CONDUCTED WHERE THERE IS POTENTIAL FOR FUEL SPILLS TO SEEP OR WASH INTO THE CHANNEL.
27. EXTREME CAUTION WILL BE USED WHEN HANDLING AND/OR STORING CHEMICALS AND HAZARDOUS WASTES (E.G., FUEL AND HYDRAULIC FLUID) NEAR WATERWAYS, AND ANY AND ALL APPLICABLE LAWS AND REGULATIONS WILL BE FOLLOWED. APPROPRIATE MATERIALS WILL BE ON SITE TO PREVENT AND MANAGE SPILLS.
28. THE CONTRACTOR SHALL TAKE PREVENTATIVE MEASURES TO AVOID ANY SPILLS OR LEAKS ON THE SITE FROM PETROLEUM PRODUCTS. THE CONTRACTOR SHALL PREPARE A SPILL PREVENTION AND RESPONSE PLAN THAT WILL BE APPROVED BY THE CONSTRUCTION MANAGER AND ENVIRONMENTAL MONITOR. THIS MUST BE IMPLEMENTED AND ADHERED TO BY THE CONTRACTOR. AT A MINIMUM, THIS PLAN SHALL REQUIRE THAT STAGING, STORAGE,
29. AT THE CONCLUSION OF CONSTRUCTION OF CERTAIN TASK ELEMENTS, THE CONTRACTOR WILL BE REQUIRED TO IMPLEMENT ADDITIONAL POST-CONSTRUCTION EROSION CONTROL MEASURES WHERE SPECIFIED IN THE PLANS OR WHERE DIRECTED BY THE CONSTRUCTION MANAGER OR ENVIRONMENTAL MANAGER IN ORDER TO PROTECT NATURAL RESOURCES. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, INSTALLING SEED, BIODEGRADABLE WATTLES OR STRAW LOGS, AND EROSION CONTROL BLANKET AND CONSISTENT WITH THE SWPPP AND RE-VEGETATION PLANS.

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Designer	L. PIPER	Design Check	B. VIVYAN	Project Director	S. ALLEN

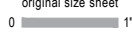



Northern Hydrology & Engineering



County of Humboldt
The Home of the Redwoods

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Client	COUNTY OF HUMBOLDT	
Project	NATURAL SHORELINE INFRASTRUCTURE PROJECT	
Project No.	Date	Scale
11214987	3/7/2022	AS SHOWN

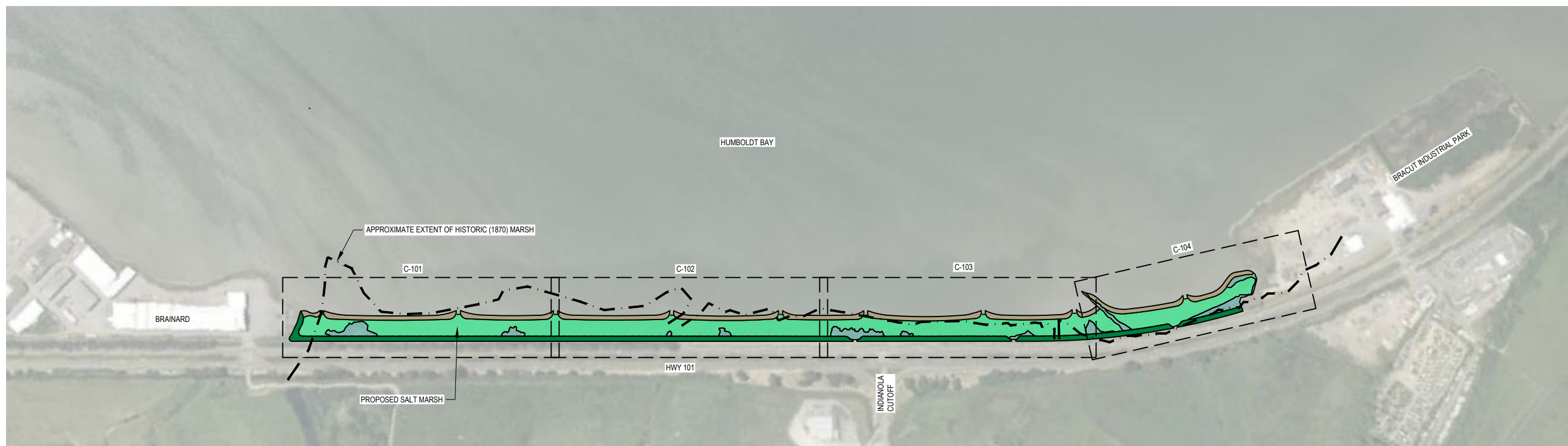
Title **EROSION CONTROL NOTES**

Sheet No. **G-004**
Sheet 4 of 12

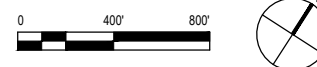


PROPERTY OWNERSHIP			
NO.	APN	OWNERSHIP	PARCEL BNDRY SOURCE
1	501-241-005	COUNTY OF HUMBOLDT	BAY TRAIL PROVIDED BY COUNTY
2	501-241-031	COUNTY OF HUMBOLDT	BAY TRAIL PROVIDED BY COUNTY
3	501-241-030	COUNTY OF HUMBOLDT	BAY TRAIL PROVIDED BY COUNTY
4	501-241-033	BRACUT LUMBER CO	BAY TRAIL PROVIDED BY COUNTY
5	501-241-027	COUNTY OF HUMBOLDT WITH NCRA EASEMENT	BAY TRAIL PROVIDED BY COUNTY
6	404-141-003	COUNTY OF HUMBOLDT WITH NCRA EASEMENT	BAY TRAIL PROVIDED BY COUNTY
7	404-141-005	COUNTY OF HUMBOLDT WITH NCRA EASEMENT	BAY TRAIL PROVIDED BY COUNTY
8	404-141-004	CALIFORNIA REDWOOD COMPANY	BAY TRAIL PROVIDED BY COUNTY
9	404-141-002	COUNTY OF HUMBOLDT	BAY TRAIL PROVIDED BY COUNTY
10	017-081-002	NCRA	BAY TRAIL PROVIDED BY COUNTY
11	405-061-004	CITY OF EUREKA	BAY TRAIL PROVIDED BY COUNTY
12	501-251-003	CITY OF ARCATA	BAY TRAIL PROVIDED BY COUNTY
13	501-241-004	YEUNG YING K & WYNEE M	COUNTY WEB GIS
14	501-241-019	CALIFORNIA STATE DEPARTMENT OF FISH AND WILDLIFE	COUNTY WEB GIS
15	501-241-018	CALIFORNIA STATE DEPARTMENT OF FISH AND WILDLIFE	COUNTY WEB GIS
16	501-241-020	CALIFORNIA STATE DEPARTMENT OF FISH AND WILDLIFE	COUNTY WEB GIS

PARCEL BOUNDARY IDENTIFICATION PLAN

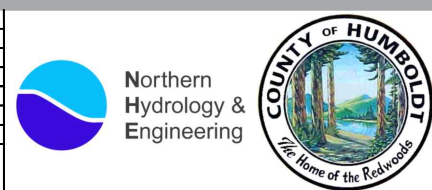


RESTORATION OVERVIEW PLAN AND SHEET IDENTIFICATION



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Designer	L. PIPER	Design Check	B. VIVYAN	Project Director	S. ALLEN



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Project No.	11214987
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
Title	OVERALL SITE PLAN & SHEET INDEX	Size	ANSI D
Sheet No.	G-005	Sheet	5 of 12

RARE PLANT RECONNAISSANCE (GHD, MAY 2020)


-  Chloropyron Maritimum ssp. palustre (Point Reyes Bird's Beak)
-  Castilleja Ambigua ssp. humboldtensis (Humboldt bay owl's clover)
-  Spargularia canadensis var. occidentalis (Western sand spurrey)
-  Angelica lucida (Sea watch)

VEGETATION MAPPING (GHD, 2014-2017)

-  Estuarine Intertidal Rocky Shore
-  Estuarine Intertidal Rocky Shore - with Spartina densiflora
-  Invasive dense-flowered cordgrass marsh (Spartina densiflora Semi-Natural Alliance)
-  Pickleweed marsh (Salicornia pacifica Alliance)

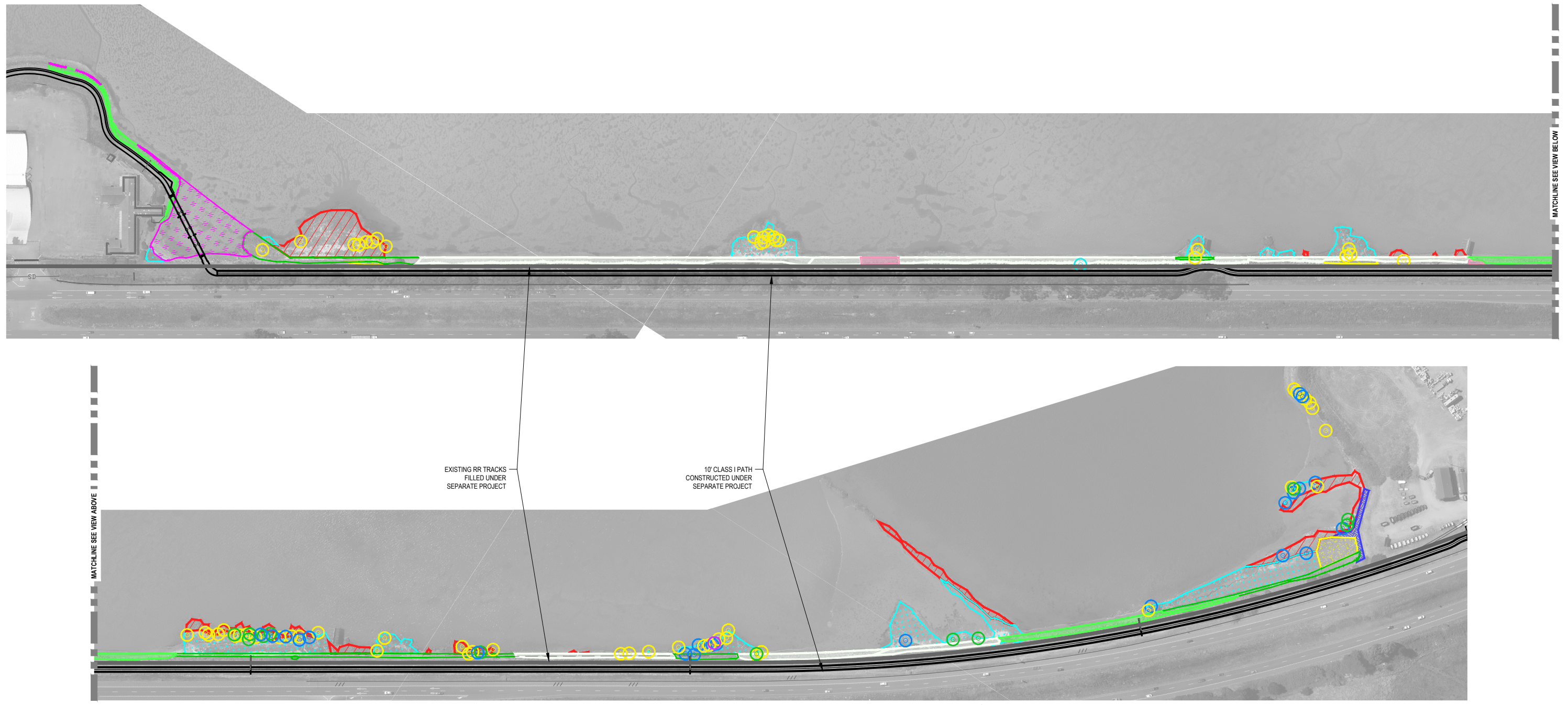
-  Estuarine Intertidal Unconsolidated Shore
-  Palustrine Emergent Ditch

VEGETATION ASSESSMENT (GHD, 2021)

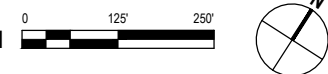
-  Coastal tufted hairgrass marsh (Deschampsia cespitosa Alliance)
-  Pickleweed marsh (Salicornia pacifica Alliance)
-  Invasive dense-flowered cordgrass marsh (Spartina densiflora Semi-Natural Alliance)
-  Coyotebrush shrubland (Baccharis pilularis Alliance)

NOTES:

1. LOCATION OF RARE PLANTS SHOWN IS APPROXIMATE. AVOID OR SALVAGE RARE PLANTS IN ACCORDANCE TO PROJECT HABITAT MITIGATION AND MONITORING PLAN AND RE-VEGETATION PLAN PRIOR TO GROUND DISTURBING ACTIVITIES.
2. REMOVE APPROXIMATELY 1.5 ACRES OF INVASIVE DENSE-FLOWERED CORDGRASS (SPARTINA DENSIFLORA) USING HAND AND MECHANICAL METHODS.





INVASIVE PLANT REMOVAL AND RARE PLANT AVOIDANCE / SALVAGE PLAN




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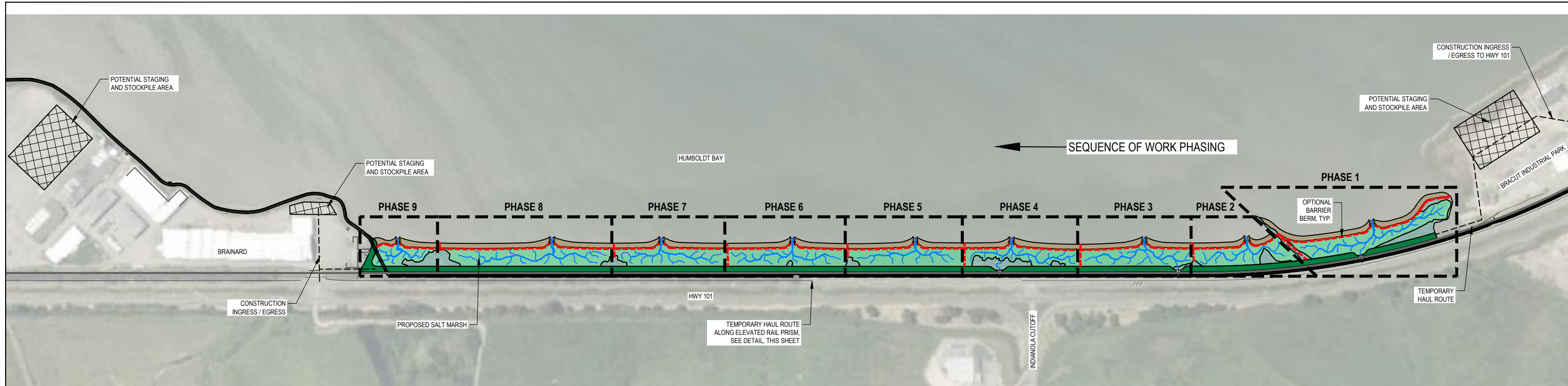
Client **COUNTY OF HUMBOLDT**

Project **NATURAL SHORELINE INFRASTRUCTURE PROJECT**

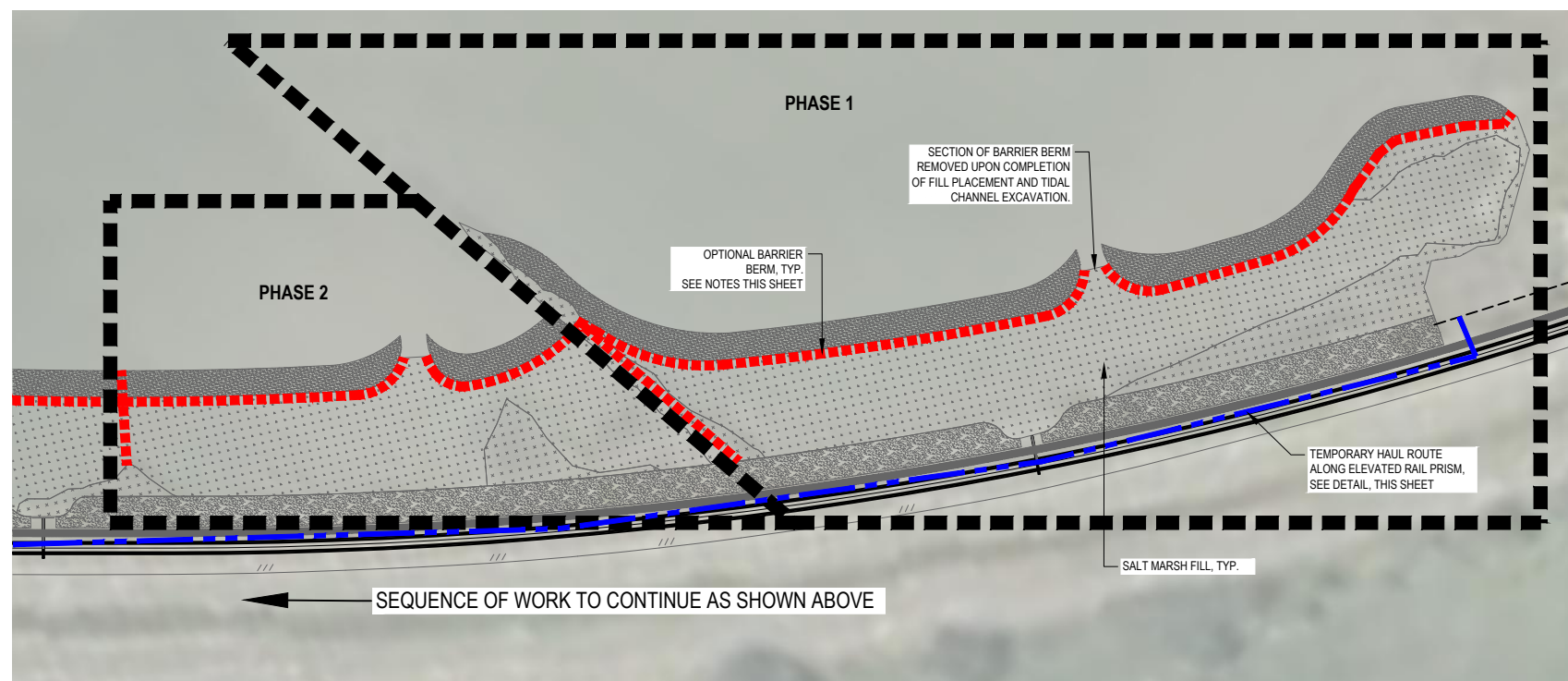
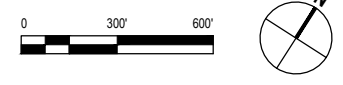
Project No. **11214987** Date **3/7/2022** Scale **AS SHOWN**

Title **INVASIVE PLANT REMOVAL AND RARE PLANT AVOIDANCE AND SALVAGE PLAN**

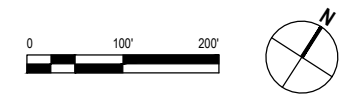
Sheet No. **G-006** Sheet **6 of 12**



CONSTRUCTION STAGING AND SEQUENCING PLAN

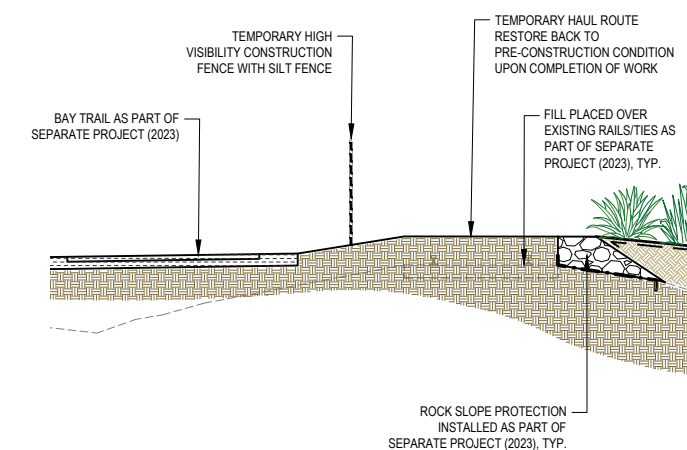


CONSTRUCTION SEQUENCE ENLARGEMENT PLAN



NOTES:

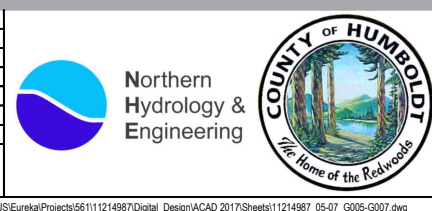
1. CONSTRUCTION PHASING WILL BE SUBJECT TO AVAILABILITY OF SALT MARSH FILL. ACTUAL PHASING MAY VARY FROM THAT SHOWN.
2. BARRIER BERMS SHOWN ARE OPTIONAL AND MAY BE PLACED TO MAINTAIN THE SALT MARSH FILL AREA DEWATERED DURING CONSTRUCTION AND FOR MATERIAL HAUL ROUTES.
3. BARRIER BERMS PLACED MAY REMAIN IN PLACE FOLLOWING CONSTRUCTION.



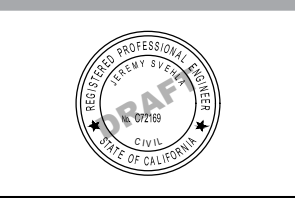
TEMPORARY HAUL ROUTE - TYPICAL SECTION



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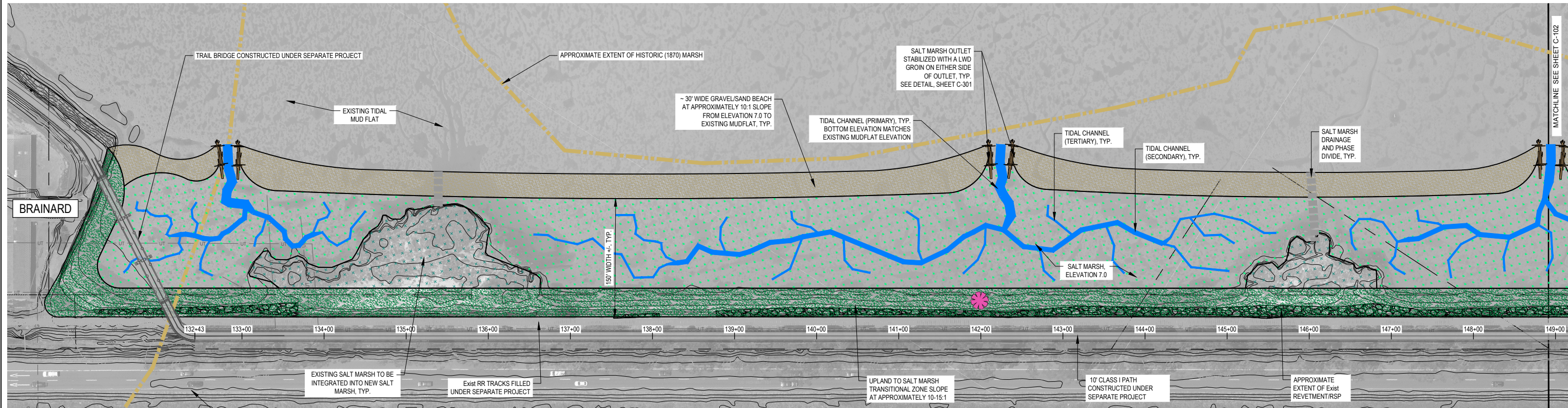


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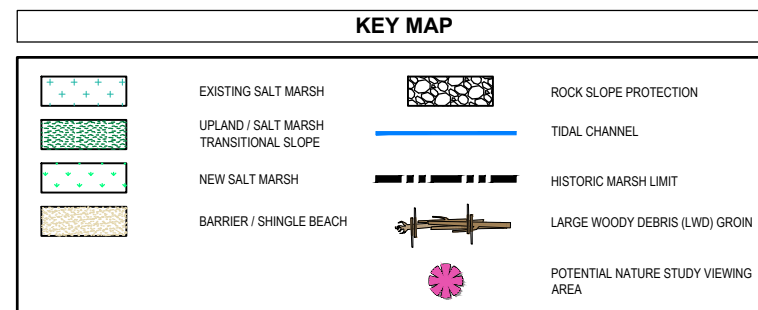
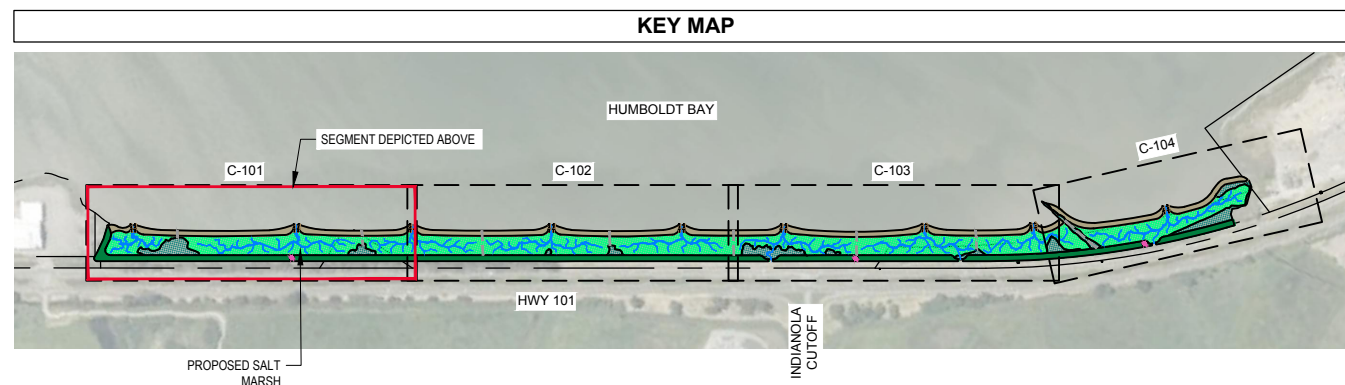
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Project	NATURAL SHORELINE INFRASTRUCTURE PROJECT
Project No.	11214987
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Scale	AS SHOWN

Title	STAGING & PHASING PLAN
Sheet No.	G-007
Sheet	7 of 12

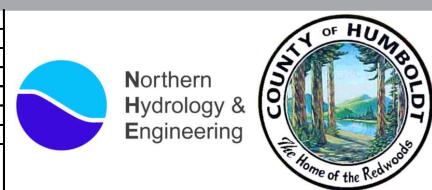


RESTORATION SITE PLAN



SHEET NOTE	
1.	OPTIONAL BARRIER BERM NOT SHOWN.

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		Project Manager	J. SVEHLA
		Project Director	S. ALLEN



Bar is one inch on original size sheet

0 1"

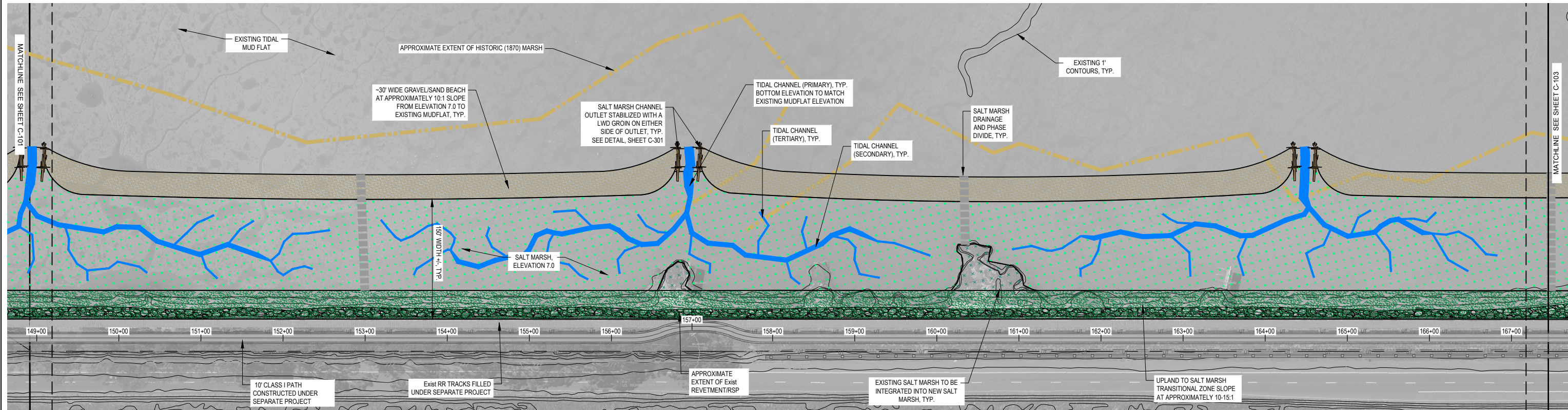


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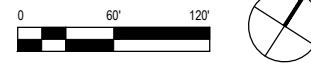
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Client	COUNTY OF HUMBOLDT
Project	NATURAL SHORELINE INFRASTRUCTURE PROJECT
Project No.	11214987
Date	3/7/2022
Scale	AS SHOWN

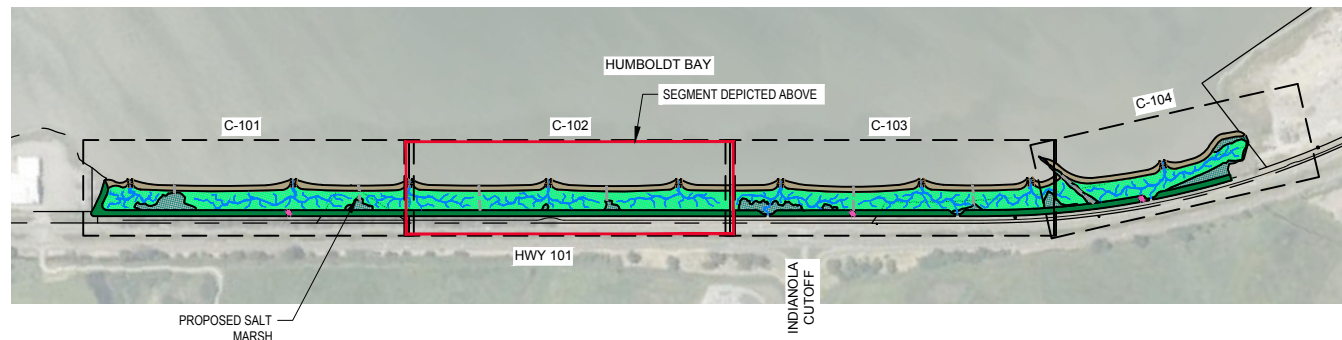
Title	SITE PLAN 1
Sheet No.	C-101
Sheet	8 of 12



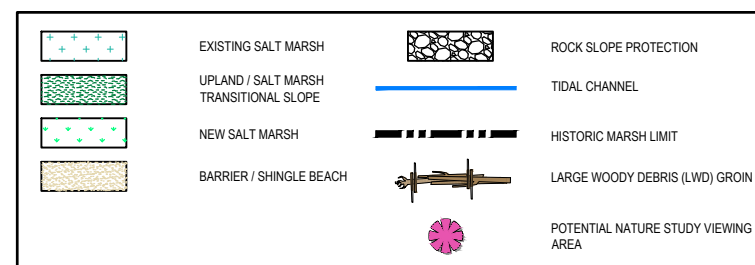
RESTORATION SITE PLAN



KEY MAP



KEY MAP



SHEET NOTE

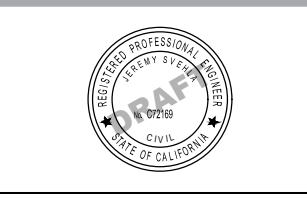
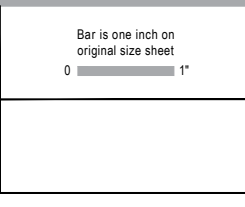
- OPTIONAL BARRIER BERM NOT SHOWN.

50% DESIGN
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No.	Issue	Checked	Approved	Date	
Author	O. GOODE	Drafting Check	B. VIVYAN	Project Manager	J. SVEHLA
Designer	L. PIPER	Design Check	B. VIVYAN	Project Director	S. ALLEN

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Client **COUNTY OF HUMBOLDT**

Project **NATURAL SHORELINE INFRASTRUCTURE PROJECT**

Project No. **11214987**

Date **3/7/2022**

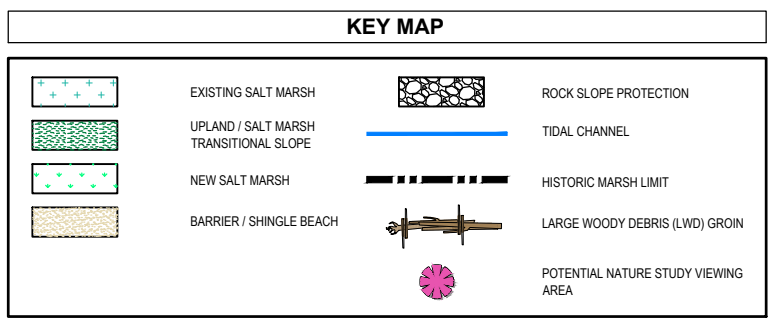
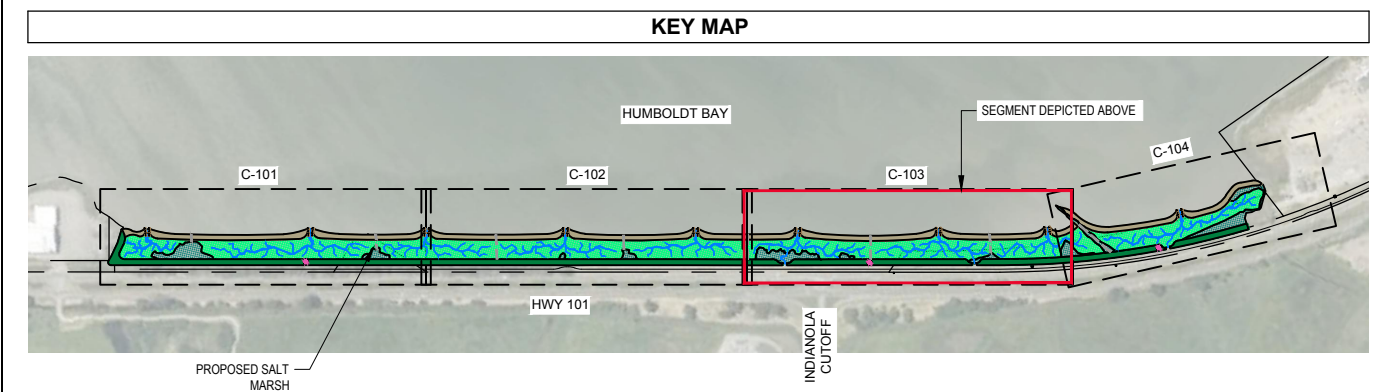
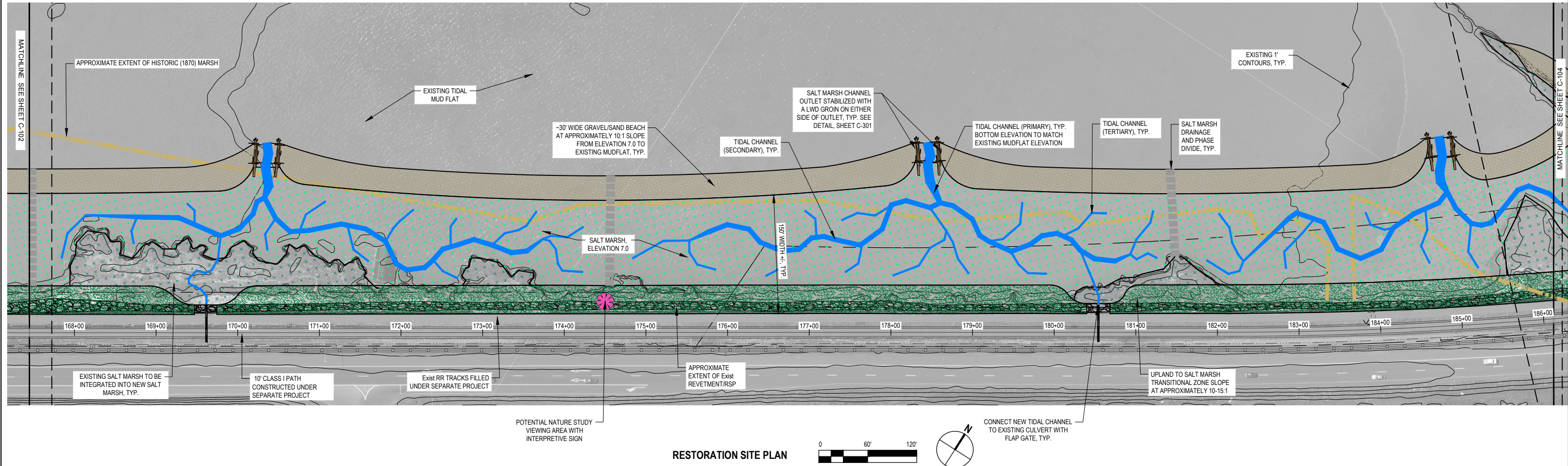
Scale **AS SHOWN**

Title **SITE PLAN 2**

Size **ANSI D**

Sheet No. **C-102**

Sheet **9 of 12**

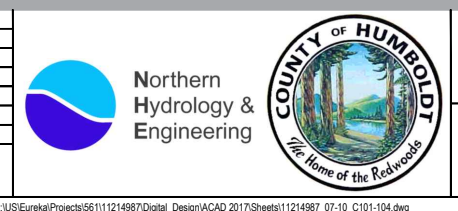


SHEET NOTE

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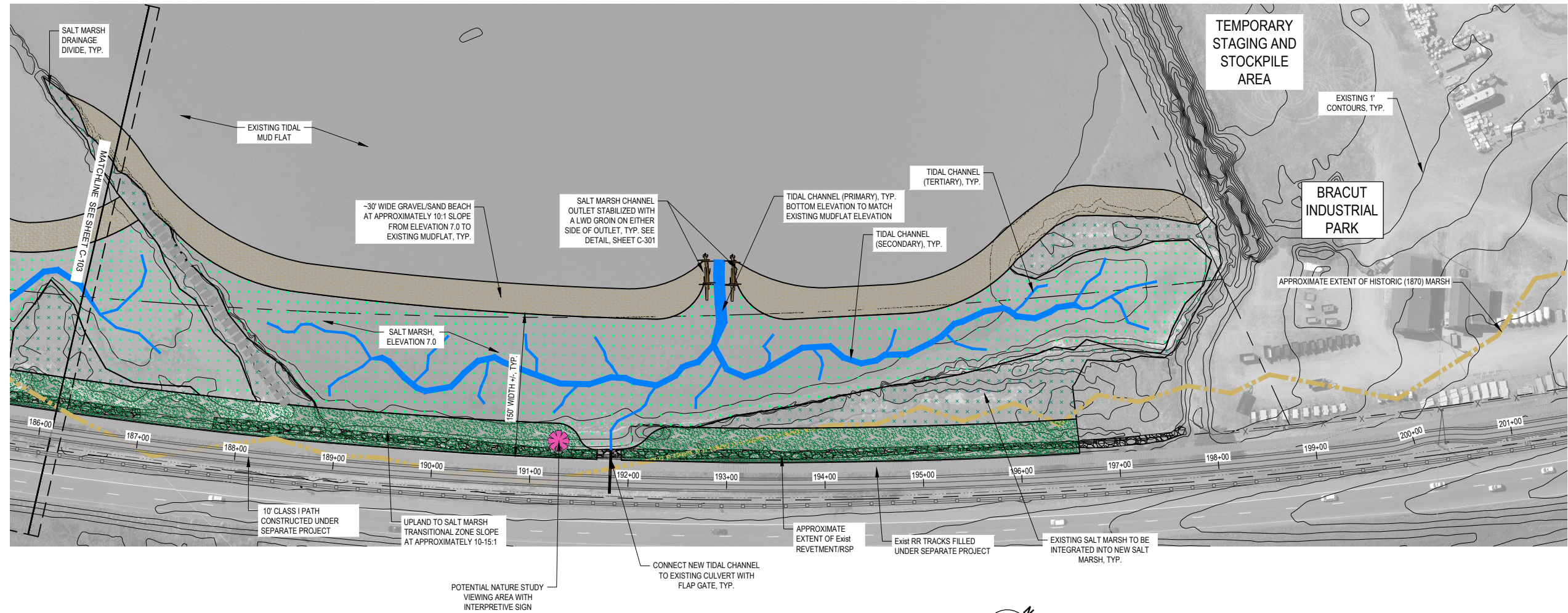
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Scale **AS SHOWN**

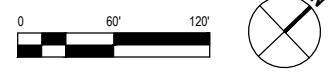
Title **SITE PLAN 3**

Sheet No. **C-103**

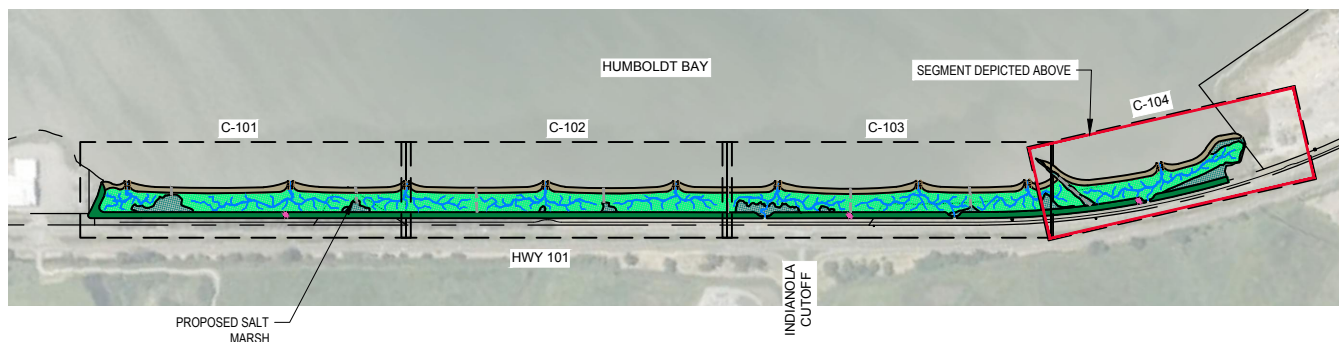
Sheet **10 of 12**



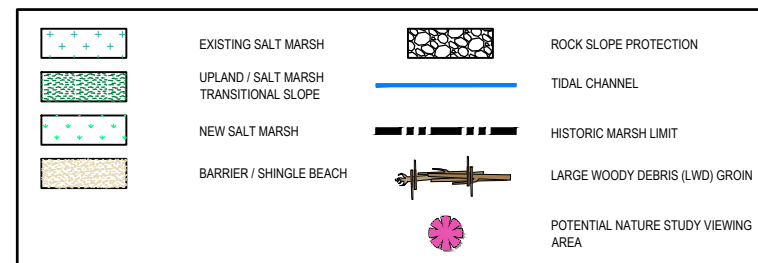
RESTORATION SITE PLAN



KEY MAP



KEY MAP



SHEET NOTE

- OPTIONAL BARRIER BERM NOT SHOWN.

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Designer	L. PIPER	Design Check	B. VIVYAN
Project Manager	J. SVEHLA	Project Director	S. ALLEN

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Project **NATURAL SHORELINE INFRASTRUCTURE PROJECT**

Project No. **11214987**

Date **3/7/2022**

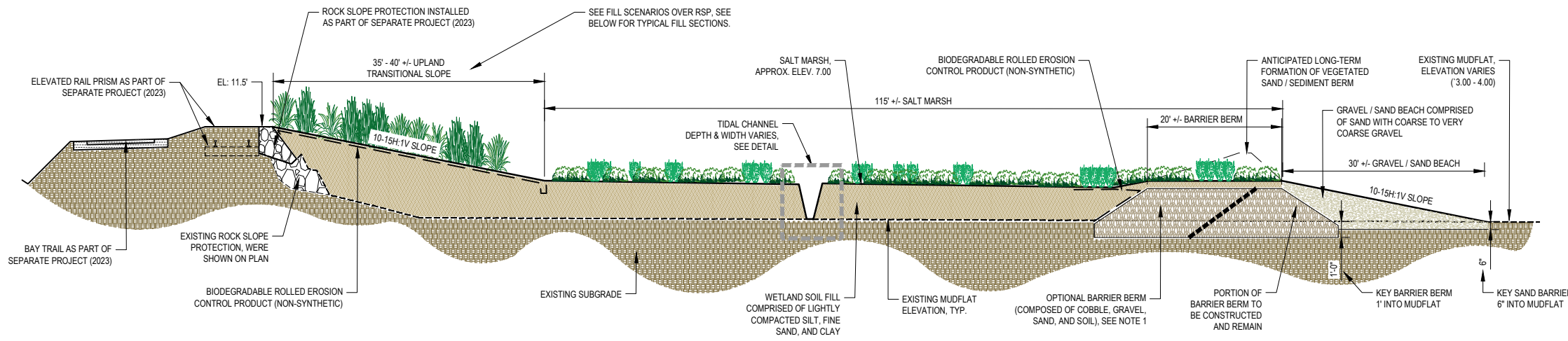
Scale **AS SHOWN**

Title **SITE PLAN 4**

Sheet No. **C-104**

Sheet **11 of 12**

Size **ANSI D**



SALT MARSH - TYPICAL SECTION

0 10' 20'

VERT. EXAG. X2

TRANSITION SLOPE NATIVE PLUG PLANTS: SPECIES SPACING AND MIX

Common name	Scientific name	Spacing (feet)	Percent of Mix
Coastal gumplant	<i>Grindelia stricta</i> var. <i>stricta</i>	3	10
Pacific aster	<i>Symphotrichum chilense</i>	3-4	10
Pacific silverweed	<i>Potentilla anserina</i> ssp. <i>pacifica</i>	2-3	25
Salt rush	<i>Juncus lescurii</i>	3	20
Seacoast angelica	<i>Angelica lucida</i>	4	10
Tufted hair grass	<i>Deschampsia caespitosa</i> ssp. <i>beringensis</i>	3	25

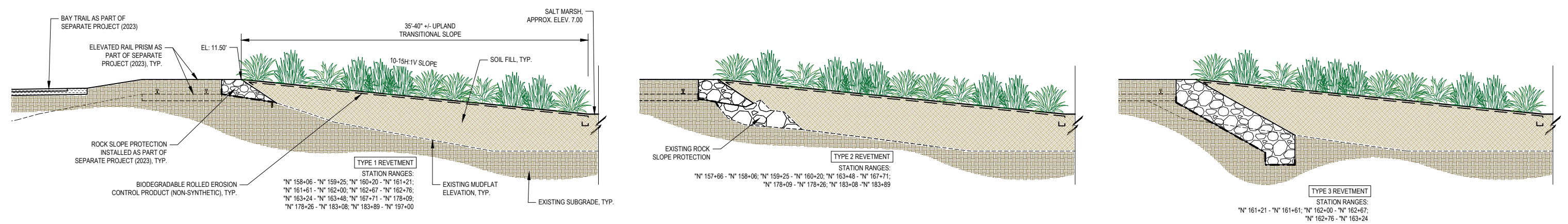
TRANSITION SLOPE NATIVE SEED MIX: SPECIES MIX AND QUANTITIES

PLS Lbs/Acre	Common name	Scientific name	Lifeform
1.00	Cows clover	<i>Trifolium wormskoldii</i>	Perennial herb
1.50	Dune rush	<i>Juncus lescurii</i>	Perennial rush
2.00	Marsh gumplant	<i>Grindelia stricta</i>	Sub-shrub
15.00	Meadow barley	<i>Hordeum brachyartherum</i>	Perennial grass
0.10	Pacific aster	<i>Symphotrichum chilense</i>	Perennial herb
2.00	Seacoast angelica	<i>Angelica lucida</i>	Perennial herb
12.00	Tufted hairgrass	<i>Deschampsia caespitosa</i>	Perennial grass

TRANSITIONAL SLOPE PLANTING & SEEDING SCHEDULE

SHEET NOTE

- IF USED, BARRIER BERMS SHALL BE CONSTRUCTED ABOVE HIGHEST ANTICIPATED TIDE TO PREVENT OVER-TOPPING DURING CONSTRUCTION. IF BARRIER BERM IS LEFT IN PLACE FOLLOWING CONSTRUCTION, IT SHALL BE LOWERED TO APPROXIMATELY ELEVATION 6-FEET AND BACKFILLED WITH SALT MARSH FILL TO MARSH PLAIN DESIGN ELEVATION.



UPLAND TRANSITIONAL SLOPE FILL SCENARIOS - TYPICAL SECTIONS

0 5' 10'

DRAFT 35% DESIGN
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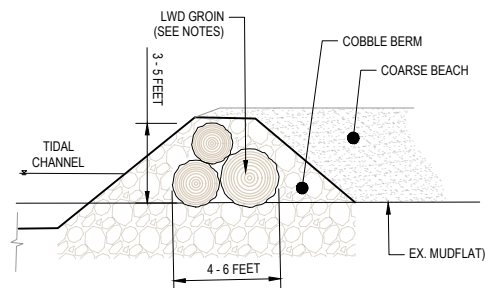
Client **COUNTY OF HUMBOLDT**

Project **NATURAL SHORELINE INFRASTRUCTURE PROJECT**

Project No. **11214987** Date **5/2/2022** Scale **AS SHOWN**

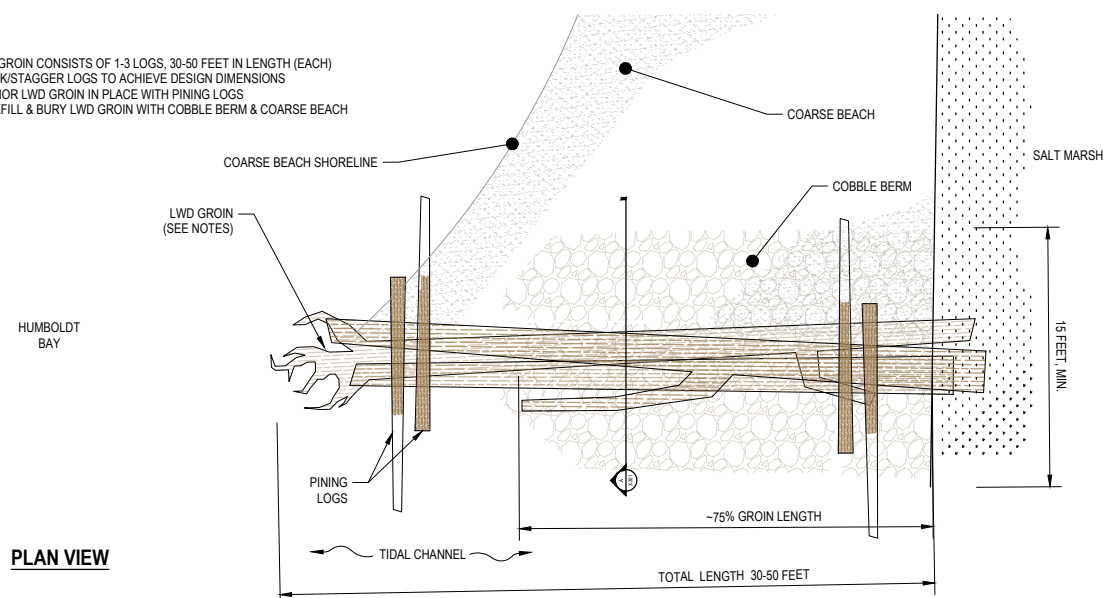
Title **TYPICAL SECTIONS**

Sheet No. **C-301** Sheet **12 of 13**



SECTION VIEW

- NOTES:
 1. LWD GROIN CONSISTS OF 1-3 LOGS, 30-50 FEET IN LENGTH (EACH)
 2. STACK/STAGGER LOGS TO ACHIEVE DESIGN DIMENSIONS
 3. ANCHOR LWD GROIN IN PLACE WITH PINING LOGS
 4. BACKFILL & BURY LWD GROIN WITH COBBLE BERM & COARSE BEACH

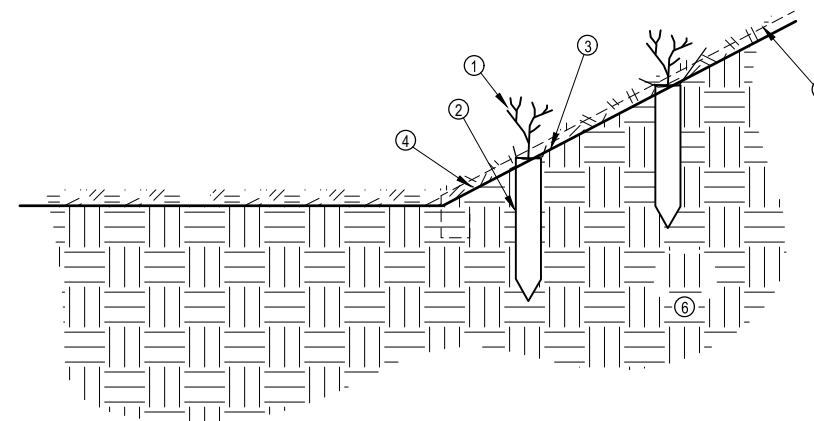


TYPICAL LARGE WOODY DEBRIS (LWD) DETAIL

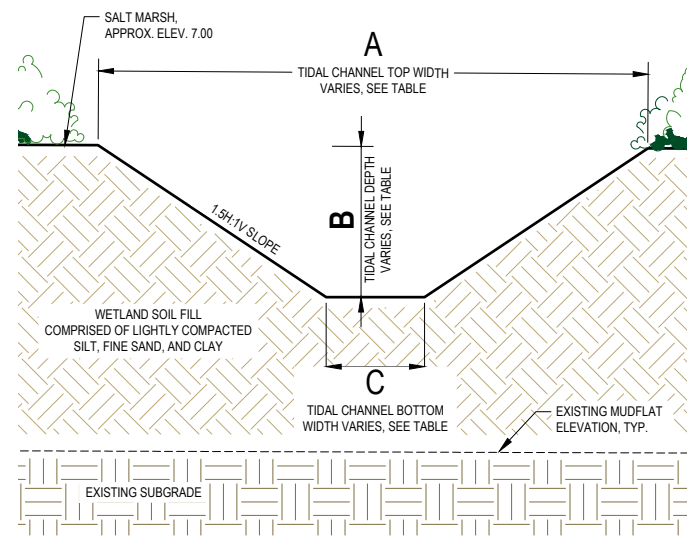
KEYNOTES

- ① PLANT GROWN IN RESTORATION CONTAINER (E.G. DEEPOP).
- ② PLANT HOLE, EQUAL DIA. TO CONTAINER. CREATE WITH DIBBLE. PINCH NATIVE SOIL CLOSED AGAINST ROOTS.
- ③ KEEP STEMS AND LEAVES FREE OF MULCH / HYDROSEED.
- ④ PLACE SEED PRIOR TO ROLLED EROSION CONTROL PRODUCT PLACEMENT
- ⑤ BIODEGRADABLE ROLLED EROSION CONTROL NETTING
- ⑥ SUBGRADE

* PLANTINGS TO BE INSTALLED AFTER SEEDING AND ROLLED EROSION CONTROL BLANKET (RECB) INSTALLATION. INSTALL PLANTS THROUGH BLANKET BY CUTTING A SMALL "X" IN THE RECB, JUST LARGE ENOUGH TO ALLOW FOR PLANTING, BUT NOT TOO LARGE TO DAMAGE OR COMPROMISE THE FUNCTION OF THE BLANKET.



**TYPICAL TRANSITION SLOPE PLUG-PLANTING
NOT TO SCALE**



TIDAL CHANNEL - TYPICAL SECTION

Channel Type	Typical Average Dimensions (ft.)		
	A	B	C
Primary	11	3	2
Secondary	5.5	1.5	1.5
Tertiary	4	1	1

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Project **NATURAL SHORELINE INFRASTRUCTURE PROJECT**

Project No. **11214987** Date **5/2/2022** Scale **AS SHOWN**

Title **TYPICAL DETAILS**

Size **ANSI D**

Sheet No. **C-302** Sheet **13 of 13**