

CITY OF ARCATA

ARCATA MARSH KAYAK BOAT LAUNCH PROJECT

APRIL 2022

DIVISION OF BOATING AND WATERWAYS GRANT CONTRACT #C4128035 (1064)

AREA MAP

A map of Humboldt County, California, showing the project location near Arcata. The map includes major roads like US 101 and US 255, and various towns such as Orick, Weitchpec, Hoopa, Arcata, Eureka, and Fortuna. A black arrow points from the text 'PROJECT LOCATION' to the Arcata area. A north arrow is located at the bottom right, with the text 'NOT TO SCALE' below it.

LOCATION MAP

An aerial photograph of the Arcata Marsh area. A black arrow points from the text 'PROJECT LOCATION' to a specific area within the marsh. A north arrow is located at the bottom right, with the text 'NOT TO SCALE' and 'IMAGE PROVIDED BY GOOGLE EARTH' below it.

ABBREVIATIONS

AB	AGGREGATE BASE	HDPE	HIGH DENSITY POLYETHYLENE	R/W	RIGHT OF WAY
AC	ASPHALT CONCRETE	HMA	HOT MIX ASPHALT	RCP	REINFORCED CONCRETE PIPE
AD	AREA DRAIN	HP	HINGE POINT	RPP	REDUCED PRESSURE PRINCIPAL DEVICE
BLDG	BUILDING	INV	INVERT	RSP	REVISED STANDARD PLAN
CATV	COMMUNICATIONS CONNECTION	JT	JOINT TRENCH	S	SLOPE
CB	CATCH BASIN	L	LENGTH	SD	STORM DRAIN
C-C	CENTER TO CENTER	LF	LINEAR FEET	SDMH	STORM DRAIN MANHOLE
Conc	CONCRETE	MAX	MAXIMUM	SIM	SIMILAR
Const	CONSTRUCTION	MSB	MAIN SERVICE BOARD	SS	SANITARY SEWER
CORR	CORRUGATED	MIN	MINIMUM	SSMH	SANITARY SEWER
CL	CENTERLINE	(N)	NEW	ST	STREET
DIA	DIAMETER	No.	NUMBER	STD	STANDARD
EA	EACH	NTS	NOT TO SCALE	STL	STEEL
ELEV	ELEVATION	O.C.	ON CENTER	SW	SIDEWALK
EP	EDGE OF PAVEMENT	OG	ORIGINAL GROUND	TBC	TOP BACK OF CURB
ESMT	EASEMENT	PCC	PORTLAND CEMENT CONCRETE	TC	TOP OF CURB
EX OR (E)	EXISTING	PERF	PERFORATED	TYP	TYPICAL
Exist	EXISTING	PG&E	PACIFIC GAS AND ELECTRIC	Var	VARIES
FES	FLARED END SECTION	P/L	PROPERTY LINE	W	WATER, WIDTH
FG	FINISH GRADE	POC	POINT OF CONNECTION	W/	WITH
FL	FLOW LINE	PSE	PUBLIC SERVICE EASEMENT		
GAL	GALLON	PUE	PUBLIC UTILITY EASEMENT		
GD	GRADE	PVC	POLYVINYL CHLORIDE		
GR	GRATE				

SHEET	SHEET NO.	SHEET TITLE
GENERAL		
1	G-001	COVER SHEET
2	G-002	GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS
CIVIL		
3	C-101	EXISTING CONDITIONS AND DEMOLITION PLAN
4	C-102	IMPROVEMENT PLAN
CIVIL DETAILS		
5	C-501	CONSTRUCTION DETAILS
6	C-502	CONSTRUCTION DETAILS
7	C-503	CONSTRUCTION DETAILS
8	C-504	CONSTRUCTION DETAILS
9	C-505	CONSTRUCTION DETAILS
10	C-506	CONSTRUCTION DETAILS
STRUCTURAL		
11	S-001	STRUCTURAL NOTES
12	S-100	GANGWAY DETAILS
13	S-101	STRUCTURAL AND FLOAT DETAILS

SYMBOLS

GENERAL

	CENTERLINE
	DIAMETER
	APPROXIMATE
	AT
	DELTA
	WATER SURFACE
	SECTION OR DETAIL DESIGNATION
	SHEET WHERE SECTION OR DETAIL OCCURS

TOPOGRAPHIC

NEW	EXISTING	
		LIMITS OF DISTURBANCE
		LIMITS OF GRADING
		PROPERTY LINE (APPROXIMATE)
		RIGHT OF WAY LINE (APPROXIMATE)
		FENCE
		EDGE OF PAVEMENT
		CONTOUR LINE
		DRAINAGE/CREEK/DITCH/SWALE
		CONCRETE SLAB SECTION
		AC PAVEMENT
		TREE
		CONTROL POINT
		SIGN

PROJECT SCOPE

THE PROJECT IS LOCATED AT THE SOUTH END OF SOUTH I STREET AT THE ARCATA BIRD SANCTUARY IN ARCATA, CALIFORNIA. THE PROPOSED PROJECT INCLUDES THE INSTALLATION OF A VAULT TOILET, PARKING LOT AC, CONCRETE WALKWAY AND ABUTMENT, AND THE CONSTRUCTION OF A BOAT LAUNCH FLOAT LOCATED AT THE SOUTHERLY END OF THE TRAILHEAD/PARKING AREA IN THE SANCTUARY. THE 6' X 30' LAUNCHING FLOAT WILL BE ACCESSIBLE FROM THE PARKING AREA VIA A 4-FOOT WIDE (INSIDE WALKING WIDTH) ACCESSIBLE ROUTE WHICH INCLUDES A 75' LONG ALUMINUM GANGWAY SUPPORTED ONSHORE WITH A CONCRETE ABUTMENT ON THE SHORE END AND A 10' X 16' GANGWAY LANDING FLOAT ON THE WATERSIDE, WITH A 10' LONG ALUMINUM TRANSITION PLATE BRIDGING BETWEEN THE LANDING FLOAT AND LAUNCHING FLOAT. THE OVER-WATER PORTION OF THE DOCK WILL UTILIZE FOUR (4) GUIDE PILES TO Laterally STABILIZE THE LAUNCHING FLOATS.

ENGINEER'S NOTES

1. THE DIVISION OF BOATING AND WATERWAYS (DBW) AND ITS AGENTS MAY, AT ANY AND ALL REASONABLE TIMES DURING THE TERM OF THIS CONTRACT, ENTER THE PROJECT AREA FOR PURPOSES OF INSPECTING THE PROJECT AREA.
2. THE PROJECT SHALL BE CONSTRUCTED ACCORDING TO THE PLANS AND SPECIFICATIONS PREPARED FOR THE PROJECT, AND QUALITY CONTROL SHALL BE PERFORMED, AND COMPLIANCE SHALL BE VERIFIED, BY QUALIFIED PROFESSIONALS SELECTED BY DBW OR DBW'S REPRESENTATIVE.
3. IT IS INTENDED THAT THESE PLANS REQUIRE ALL LABOR AND MATERIAL NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES OR AMBIGUITIES WHICH MAY EXIST IN THE PLANS OR SPECIFICATIONS. THE ENGINEER'S INTERPRETATION THEREOF SHALL BE CONCLUSIVE.
4. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.
5. THE CONTRACTOR SHALL, AT THE SAME TIME OF BIDDING, AND, THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE OF CALIFORNIA UNDER THE PROVISIONS OF CHAPTER 9, DIVISION 3 OF THE BUSINESS AND PROFESSIONS CODE AND SHALL BE BONDBLE FOR AN AMOUNT EQUAL TO OR GREATER THAN THE AMOUNT BID AND TO DO THE TYPE OF WORK CONTEMPLATED IN THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PLANS AND SPECIFICATIONS.
6. CONTRACTOR SHALL INSPECT THE SITE OF THE WORK PRIOR TO BIDDING TO SATISFY THEMSELVES BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS THEY MAY PREFER, OF THE LOCATION OF THE PROPOSED WORK, AND OF THE ACTUAL CONDITIONS OF AND AT THE SITE OF WORK.

IF, DURING THE COURSE OF THEIR EXAMINATION, A BIDDER FINDS FACTS OR CONDITIONS WHICH APPEAR TO THEM TO BE IN CONFLICT WITH THE LETTER OR SPIRIT OF THE PROJECT PLANS AND SPECIFICATIONS, THEY SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION AND EXPLANATION BEFORE SUBMITTING THEIR BID.

SUBMISSION OF A BID BY THE CONTRACTOR SHALL CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, THEY HAVE RELIED AND ARE RELYING ON THEIR OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON THEIR OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.

THE INFORMATION PROVIDED BY THE OWNER OR THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO THE INDEPENDENT VERIFICATION BY THE CONTRACTOR TO THE EXTENT SUCH INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY OR DESIRABLE BY THE CONTRACTOR. CONTRACTOR SHALL NOT RELY SOLELY UPON OWNER OR ENGINEER FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING THEIR BID.
7. ALL WORK SHALL CONFORM TO THE CALTRANS STANDARD SPECIFICATIONS, CURRENT EDITION AND THE CITY OF ARCATA ENGINEERING STANDARD DETAILS, CURRENT EDITION. THE CITY OF ARCATA ENGINEERING STANDARD DETAILS PREVAIL IN CASE OF CONFLICT.
8. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, BARRICADES, SIGNS, FLAGMEN OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.
9. THE CONTRACTOR AGREES THAT:
 - A. THEY SHALL BE RESPONSIBLE TO CLEAN THE JOB SITE AT THE END OF EACH PHASE OF WORK.
 - B. THEY SHALL BE RESPONSIBLE TO REMOVE AND DISPOSE OF ALL TRASH, SCRAP AND UNUSED MATERIAL AT THEIR OWN EXPENSE IN A TIMELY MANNER.
 - C. THEY SHALL BE RESPONSIBLE TO MAINTAIN THE SITE IN A NEAT, SAFE AND ORDERLY MANNER AT ALL TIMES.
 - D. THEY SHALL BE RESPONSIBLE TO KEEP MATERIALS, EQUIPMENT, AND TRASH OUT OF THE WAY OF OTHER CONTRACTORS SO AS NOT TO DELAY THE JOB. FAILURE TO DO SO WILL RESULT IN A DEDUCTION FOR THE COST OF CLEAN UP FROM THE FINAL PAYMENT.
 - E. THEY SHALL BE RESPONSIBLE FOR THEIR OWN SAFETY, TRAFFIC CONTROL, PERMITS, RETESTING AND REINSPECTIONS AT THEIR OWN EXPENSE.
 - F. UNLESS OTHERWISE NOTED ALL EXCESS SOILS AND MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LAWFULLY DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE.
10. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS 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 AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
11. DUST CONTROL SHALL BE PROVIDED AT ALL TIMES, AT THE CONTRACTOR'S EXPENSE, TO MINIMIZE ANY DUST NUISANCE AND SHALL BE IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATIONS, CURRENT EDITION AND THE REQUIREMENTS OF THE CITY OF ARCATA. CONTRACTOR SHALL OBTAIN A PERMIT FROM THE CITY OF ARCATA PUBLIC WORKS DEPARTMENT FOR USE OF WATER FROM FIRE HYDRANTS FOR CONSTRUCTION PURPOSES.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER; ALL RE-TESTING AND/OR REINSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
13. IF EXISTING IMPROVEMENTS INCLUDING SURVEY MONUMENTATION NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE PRICE FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT OF EXISTING IMPROVEMENTS. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
14. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. AFTER PROPER BACKFILLING AND/OR CONSTRUCTION, WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.
15. THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL MECHANICAL, ELECTRICAL AND INSTRUMENTATION EQUIPMENT; PIPING AND CONDUITS; STRUCTURES AND OTHER FACILITIES. THE AS-BUILTS OF THE ELECTRICAL SYSTEM SHALL INCLUDE THE STREET LIGHT LAYOUT PLAN SHOWING LOCATION OF LIGHTS, CONDUITS, CONDUCTORS, POINTS OF CONNECTIONS TO SERVICES, PULLBOXES, AND WIRE SIZES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR.

PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
16. PRIOR TO ANY CORRECTIVE ACTION, BY THE CONTRACTOR, WHICH IS NECESSARY DUE TO ALLEGED DESIGN ERROR, THE CONTRACTOR SHALL NOTIFY GHD FOR REDESIGN. SHOULD ANY CORRECTIVE WORK BE DONE PRIOR TO NOTIFICATION, GHD ASSUMES NO LIABILITIES FOR THE COSTS INCURRED FOR THIS WORK. WHERE IT IS DETERMINED THAT ANY CORRECTIVE ACTION WILL REQUIRE FINANCIAL PARTICIPATION BY GHD, THAT AMOUNT SHALL BE AGREED TO IN WRITING PRIOR TO TAKING CORRECTIVE ACTION. FAILURE TO OBTAIN WRITTEN ACCEPTANCE FROM GHD WILL NEGATE ALL REQUIREMENTS OF OUR FINANCIAL ASSISTANCE.
17. GHD HAS EXERCISED REASONABLE AND ACCEPTABLE STANDARD OF CARE IN PREPARATION OF THESE PLANS. HOWEVER, THE DESIGN PROCESS INCLUDES ACTIVITIES THAT OCCUR AFTER PLAN SIGNATURE. THESE ACTIVITIES INCLUDE CALCULATION, PLAN CHECK AND VERIFICATIONS DURING CONSTRUCTION. SHOULD PERSONS, OTHER THAN GHD PERFORM THE CONSTRUCTION STAKING OPERATIONS, THEY SHALL INDEMNIFY GHD FROM ANY DAMAGES RESULTING FROM FAILURE TO PERFORM THOSE TASKS OR ANY EXPENSE OR DAMAGE RESULTING FROM THE OMISSION OR ERROR CONTAINED IN THE PLANS, WHICH WOULD REASONABLY HAVE BEEN DISCOVERED AND CORRECTED BY GHD.
18. PRIOR TO COMMENCEMENT OF GRADING OPERATIONS, THE CONTRACTOR SHALL IDENTIFY THE SITE WHERE THE EXCESS EARTHEN MATERIAL SHALL BE DEPOSITED. IF THE DEPOSIT SITE IS WITHIN THE CITY OF ARCATA, THE CONTRACTOR SHALL VERIFY THAT THE EXPORTED MATERIALS ARE SUITABLE FOR THE INTENDED FILL, AND SHALL SHOW PROOF OF ALL APPROVED GRADING PLANS, HAUL ROUTES TO BE USED SHALL BE SPECIFIED.

UNDERGROUND UTILITIES

1. THE INFORMATION SHOWN ON THE PLANS WITH REGARD TO THE EXISTING UTILITIES AND/OR IMPROVEMENTS WAS DERIVED FROM FIELD INVESTIGATIONS AND/OR RECORD INFORMATION. THE ENGINEER DOES NOT GUARANTEE THESE LOCATIONS TO BE EITHER TRUE OR EXACT. PRIOR TO CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY ALL EXISTING IMPROVEMENTS AND TO EXPOSE ALL EXISTING UNDERGROUND UTILITIES RELATED TO THE PROJECT, INCLUDING BUT NOT LIMITED TO, SEWER, STORM DRAIN, WATER, IRRIGATION, GAS, ELECTRICAL, ETC. AND SHALL NOTIFY THE ENGINEER IN WRITING FORTY-EIGHT (48) HOURS IN ADVANCE OF EXPOSING THE UTILITIES, SO THAT THE EXACT LOCATION AND ELEVATION CAN BE VERIFIED AND DOCUMENTED. THE COST ASSOCIATED TO PERFORM THIS WORK SHALL BE INCLUDED IN EITHER THE LUMP SUM CLEARING COST OR IN THE VARIOUS ITEMS OF WORK. IF LOCATION AND/OR ELEVATION DIFFERS FROM THAT SHOWN ON THE DESIGN PLANS, PROVISION TO ACCOMMODATE NEW LOCATION/ELEVATION MUST BE MADE PRIOR TO CONSTRUCTION.
2. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY MEMBERS OF THE UNDERGROUND SERVICE ALERT (U.S.A.) TWO WORKING DAYS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK BY CALLING THE TOLL-FREE NUMBER 811. THE CONTRACTOR SHALL RECORD THE U.S.A. ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF UNDERGROUND SERVICE ALERT. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
3. THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 5 FEET OR MORE. EXCAVATIONS OF 5 FEET OR MORE IN DEPTH WILL REQUIRE AN EXCAVATIONS PERMIT FROM THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL SAFETY. FOR TRENCHES 5 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL COMPLY WITH THE CALTRANS STANDARDS, CURRENT EDITION, SECTION 6705 OF THE STATE OF CALIFORNIA LABOR CODE, AND ANY LOCAL CODES OR ORDINANCES.
4. WE CALL YOUR ATTENTION TO TITLE 8 CALIFORNIA ADMINISTRATION CODE SECTION 1540 (A)(1) OF THE CONSTRUCTION SAFETY ORDERS ISSUED BY THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD PURSUANT TO THE CALIFORNIA OCCUPATIONS SAFETY AND HEALTH ACT OF 1973 AS AMENDED WHICH STATES:
(1) PRIOR TO OPENING AN EXCAVATION, EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS, I.E. SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH AN INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING; AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.
5. TRENCHING AND BACKFILL FOR ALL UNDERGROUND CONSTRUCTION SHALL CONFORM TO CITY OF ARCATA CONSTRUCTION STANDARDS.
6. ALL ABANDONED UTILITIES SHALL BE AS DIRECTED BY THE CITY OF ARCATA.

SURFACE IMPROVEMENTS

1. ALL EXISTING AND PROPOSED MANHOLE RIMS, DRAIN BOXES, LAMPHOLES, VALVES, VAULTS, PULLBOXES, AND MONUMENT BOXES, ETC. SHALL BE ADJUSTED TO FINISH GRADE AFTER PAVING OPERATIONS, WHETHER IN PAVED OR UNPAVED AREAS. ITEMS IN PROPOSED PAVEMENT AREAS SHALL BE REPLACED AS NECESSARY WITH TRAFFIC RATED MATERIALS, UNLESS OTHERWISE NOTED. COST FOR THIS WORK, AND ANY REQUIRED TESTING AND CERTIFICATIONS SHALL BE INCLUDED IN OTHER VARIOUS ITEMS OF WORK AND NO ADDITIONAL PAYMENT WILL BE ALLOWED THEREFORE.

GRADING & EROSION CONTROL PLAN NOTES

PRIOR TO INITIATING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE CITY OF ARCATA A WATER POLLUTION CONTROL PLAN. THE WATER POLLUTION CONTROL PLAN WILL DETAIL ALL OF THE STORMWATER BEST MANAGEMENT PRACTICES (BMP'S) THAT SHALL BE IMPLEMENTED TO MINIMIZE THE POTENTIAL FOR CONSTRUCTION RELATED ACTIVITIES TO CONTRIBUTE POLLUTANTS TO WATERS OF THE STATE. THE WATER POLLUTION PLAN SHALL ALSO DETAIL THE CONTRACTORS PLAN FOR MINIMIZING DISTURBANCE AND IMPACTS TO HUMBOLDT BAY WHILE CONSTRUCTING THE BOAT LAUNCH WITHIN THE TIDAL AREAS. THE WATER POLLUTION PLAN SHALL BE SUBJECT TO THE APPROVAL OF THE CITY OF ARCATA, AND SHALL BE IN COMPLIANCE WITH ALL ENVIRONMENTAL PERMIT REQUIREMENTS FOR THE PROJECT.

DESIGN CODES, REFERENCES, AND STANDARDS

THE DESIGN REQUIREMENTS OF THE FOLLOWING DESIGN CODES AND STANDARDS WILL BE INCORPORATED INTO THE DESIGN OF THE SOUTH I STREET BOAT LAUNCH FACILITY:

1. CALIFORNIA DEPARTMENT OF BOATING AND WATERWAYS, LAYOUT, DESIGN AND CONSTRUCTION HANDBOOK FOR SMALL CRAFT BOAT LAUNCHING FACILITIES, MARCH 1991.
2. CALIFORNIA DEPARTMENT OF BOATING AND WATERWAYS, LAYOUT AND DESIGN GUIDELINES FOR MARINA BERTHING FACILITIES, JULY 2005.
3. AMERICANS WITH DISABILITIES ACT (ADA) - ADA STANDARDS FOR ACCESSIBLE DESIGN, CHAPTER 10 RECREATIONAL FACILITIES, 2010.
4. 2019 CALIFORNIA BUILDING CODE STANDARDS (2019 CBC), CALIFORNIA CODE OF REGULATIONS, TITLE 24.
5. 2019 CBC REFERENCES 2018 IBC
6. INTERNATIONAL CODE COUNCIL, "2018 INTERNATIONAL BUILDING CODE (IBC)".
6. AMERICAN SOCIETY OF CIVIL ENGINEERS, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES," ASCE/SEI 7-16, 2016.
7. US ARMY CORPS OF ENGINEERS, SHORE PROTECTION MANUAL, 1984.
8. US ARMY CORPS OF ENGINEERS, COASTAL ENGINEERING MANUAL, EM 1110-2-1100, 2002.
9. MARINAS AND SMALL CRAFT HARBORS, SECOND EDITION, 2000, BRUCE O. TOBIASSON.
10. UNIFORM FACILITIES CRITERIA (UFC), DESIGN: MOORINGS UFC-4-159-03, 2005, REV. 2012.
11. DESIGN OF MARINE FACILITIES FOR THE BERTHING, MOORING, AND REPAIR OF VESSELS, SECOND EDITION, JOHN W. GAYTHWAITE, 2004.
12. WORLD METEOROLOGICAL ORGANIZATION, GUIDELINES FOR CONVERTING BETWEEN VARIOUS WIND AVERAGING PERIODS IN TROPICAL CYCLONE CONDITIONS, OCTOBER 2008.

PERMITS

THE REQUIREMENTS OF THE FOLLOWING PERMITS WILL BE FOLLOWED FOR THE PROJECT:

1. CALIFORNIA COASTAL DEVELOPMENT PERMIT (CDP# 1-20-0712)
2. NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD 401 PERMIT
3. NOAA NATIONAL MARINE FISHERIES SERVICE (NMFS) CONCURRENCE
4. US ARMY CORP OF ENGINEERS 404 CONSULTATION

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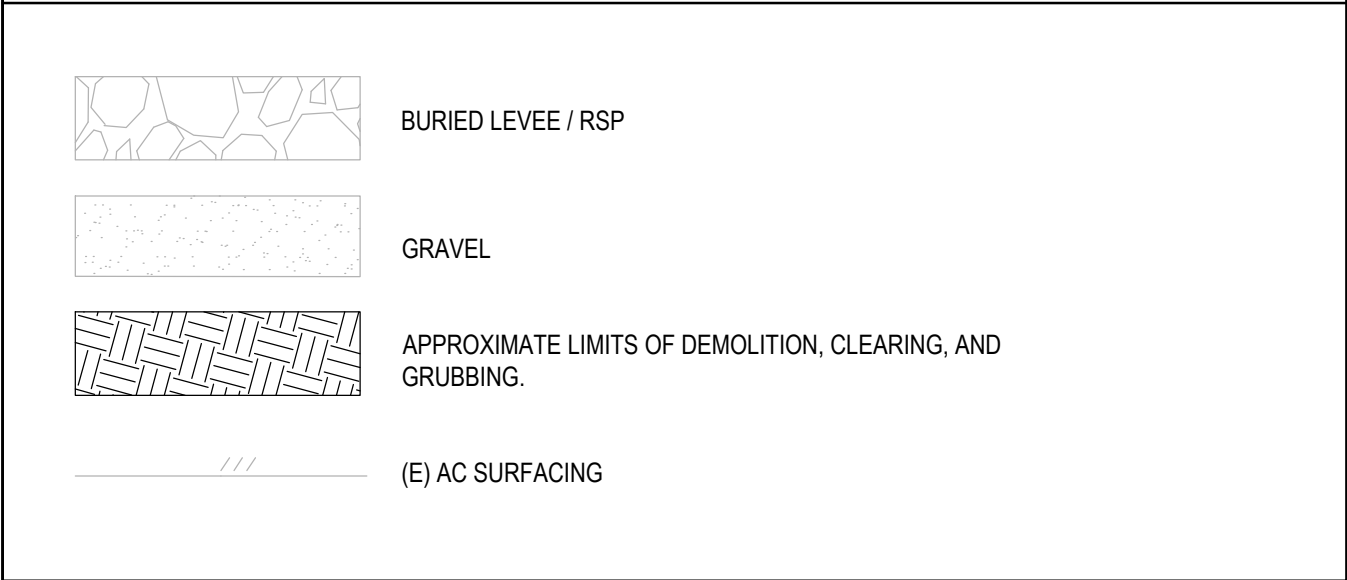
BENCHMARK

1. THE BASIS OF BEARINGS AND COORDINATES FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM, ZONE 1 NAD83 (EPOCH 2010.0) AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITIONING STATIONS (CGPS) AND/OR CONTINUOUS OPERATING REFERENCE STATIONS (CORS) P343 CHINA PEAK-CN2007 (PID DN6622), CMES MENDOCINO 5 (PID DJ3665), P157 GRADATWO-CN2006 (PID DN6619) AND P316 REQUAYUROC-CN2006 (PID DN7375) DERIVED FROM GEODETIC VALUES PUBLISHED BY THE CALIFORNIA SPATIAL REFERENCE CENTER (CSRC) AND/OR NATIONAL GEODETIC SURVEY (NGS), RESPECTIVELY
2. THE VERTICAL DATUM FOR THIS SURVEY BASED ON NAVD88 AS DETERMINED FROM GPS OBSERVATIONS CONSTRAINED TO CONTINUOUS OPERATING REFERENCE STATIONS P343, CMES, P157 AND P316.

SHEET GENERAL NOTES	
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1. LOCATION OF EXISTING UTILITIES AND STRUCTURES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT BY DIALING IN A MINIMUM OF TWO WORKING DAYS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXACT LOCATION.
2. CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK

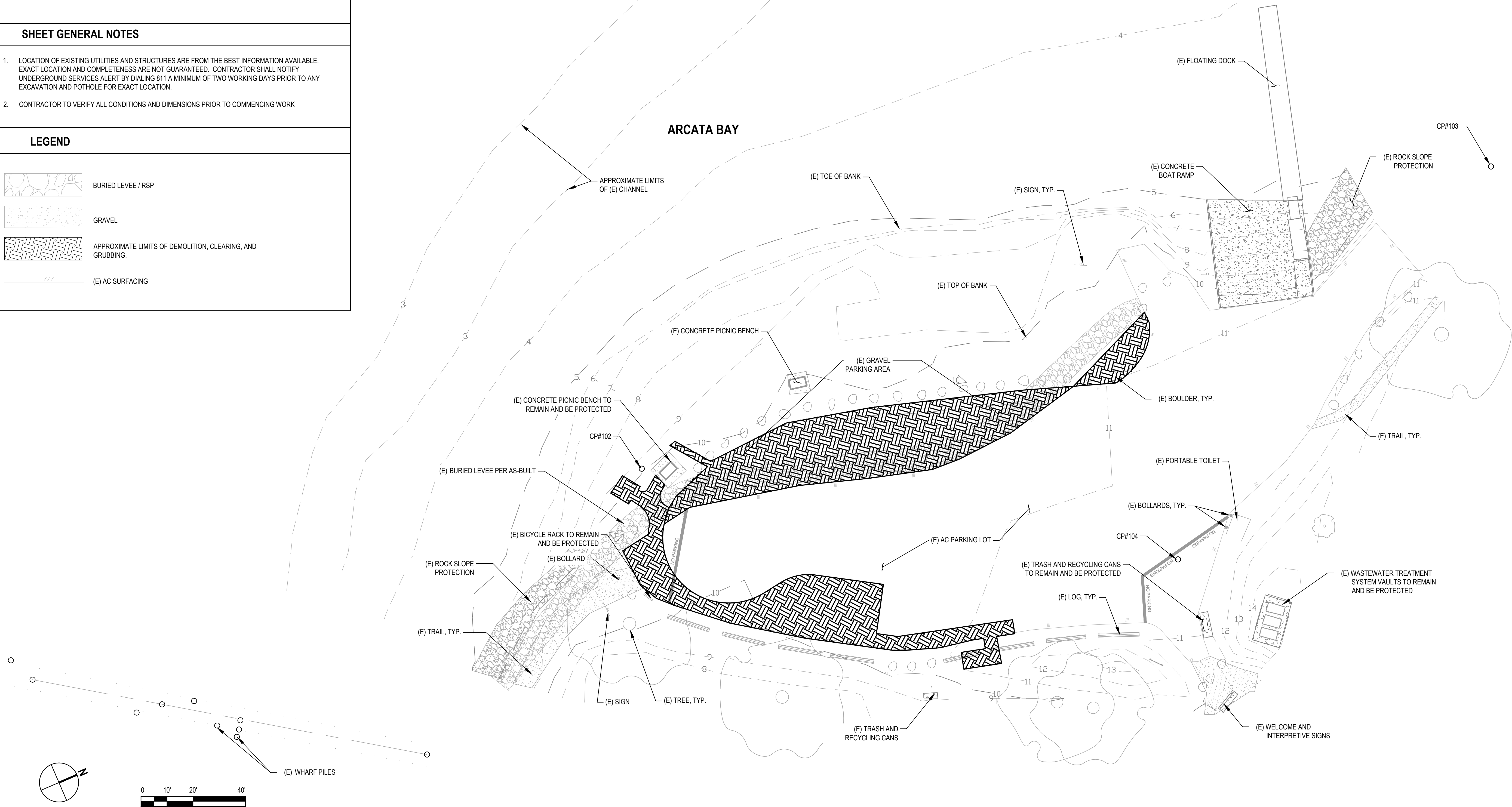
LEGEND

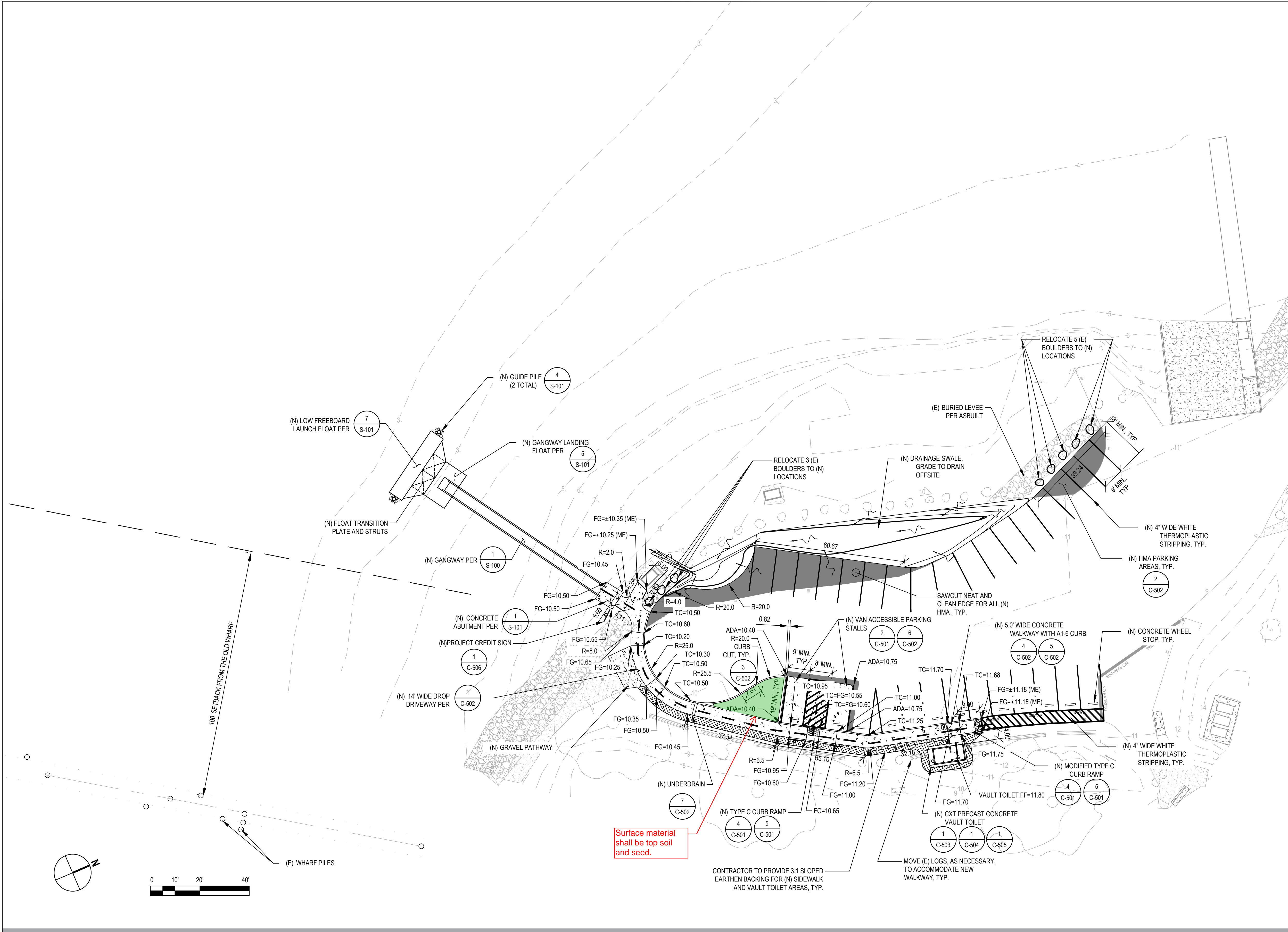


Notes:

1. The City gate on South I St is not usually closed at night. Contractors should plan on it remaining open, but the City will discuss the possibility of closing it at night with the Arcata Police Department.
2. Temporary fencing may be installed around the staged equipment and/or materials at the site. If used, at least 50% of the parking area will need to remain open to the public.

Point Table				
Point #	Eastings	Northings	Elevation	Description
102	5981284.88	2201876.63	9.87	CP 100D&WASH
103	5981306.69	2202220.97	11.40	CP MAG&WASH
104	5981397.69	2202051.59	11.46	CP MAG&WASH

[illegible]



SHEET GENERAL NOTES

- ALL CONSTRUCTION ACTIVITY SHALL BE CONFINED WITHIN THE LIMIT OF WORK SHOWN, UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER.
- PROVIDE TACK COAT TO ALL VERTICAL SURFACES OF EXISTING PAVEMENT, CURBS, GUTTERS AND CONSTRUCTION JOINTS IN THE SURFACING AGAINST WHICH NEW ASPHALT CONCRETE PAVING IS PLACED.
- CONTRACTOR SHALL REPAIR OR PATCH ALL DAMAGED PAVING AND STRUCTURES, BACKFILL GRADES TO MATCH EXISTING, AND REPLACE ANY DAMAGED VEGETATION INCLUDING GRASS.
- ALL DIMENSIONS ARE MEASURED TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL ELEVATIONS SHOWN ARE PER NAVD88 VERTICAL DATUM
- THE PROPOSED NUMBER OF PARKING STALLS FOR THE SITE IS 30, PER THE 2019 CALIFORNIA BUILDING CODE, SECTION 11B-208, TABLE 11B-208.2, A SITE WITH 26-60 PARKING STALLS IS REQUIRED TO HAVE A MINIMUM OF 2 (1 VAN MIN.) ACCESSIBLE PARKING STALLS.

LINE & HATCH LEGEND


- (N) ASPHALT CONCRETE
- (N) CONCRETE
- (N) EDGE OF PAVEMENT
- (E) EDGE OF PAVEMENT
- (N) ADA PATH OF TRAVEL

TRAFFIC LINES & PAVEMENT MARKINGS LEGEND

- TRAFFIC STRIPES AND PAVEMENT MARKINGS SHALL BE PER CALTRANS STANDARD PLANS, LATEST EDITION. PAVEMENT STRIPING DETAIL NO. AND MARKINGS PER CALTRANS STANDARD PLANS (CURRENT EDITION).
SIGNS MOUNTED ON POSTS WITH RECEIVER BASES PER DETAIL 1/C-501.

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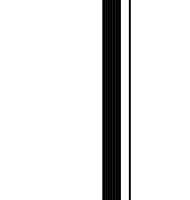
SIGN R99C (CA)

UNAUTHORIZED VEHICLES PARKED
IN DESIGNATED ACCESSIBLE
SPACES NOT DISPLAYING
DISTINGUISHING PLACARDS OR
SPECIAL LICENSE PLATES ISSUED
FOR PERSONS WITH DISABILITIES
WILL BE TOWED AWAY
AT THE OWNER'S EXPENSE

TOWED VEHICLES
MAY BE RECLAIMED AT
ARCATA POLICE DEPARTMENT


OR BY TELEPHONING
707-822-2428

SIGN R100B (CA)



SIGN R7-8b

NOTES:

 - ACCESSIBLE PARKING SIGNS SHALL CONFORM TO THE REQUIREMENTS OF THE CBC (CURRENT EDITION) AND THE DETAILS SHOWN ON THIS DRAWING.
 - THE BOTTOM OF THE SIGN OR PLAQUE PANEL SHALL BE A MINIMUM OF 7'-0" ABOVE THE SURROUNDING SURFACE.
 - SIGN PANELS SHALL BE REFLECTORIZED, 16 GA MIN GALV STL WITH PORCELAIN ENAMEL FINISH, ANTI-GRAFFITI COATING, AND WHITE LETTERS/SYMBOLS ON A BLUE BACKGROUND. THE BLUE COLOR SHALL BE EQUAL TO COLOR NO. 15090 IN FEDERAL STANDARD 595A.
 - INSTALL SIGNS ON POST PER  1
C-501
 - A R100B (CA) SIGN SHALL BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO OFF-STREET PARKING FACILITIES OR IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL. THE SIGN SHALL INCLUDE THE ADDRESS WHERE THE TOWED VEHICLE MAY BE RECLAIMED AND THE TELEPHONE NUMBER OF THE LOCAL TRAFFIC LAW ENFORCEMENT AGENCY.
 - ONE IN EVERY SIX ACCESSIBLE OFF-STREET PARKING STALLS, BUT NOT LESS THAN ONE, SHALL BE SERVED BY AN ACCESSIBLE AISLE OF 8'-0" MINIMUM WIDTH AND SHALL BE SIGNED VAN ACCESSIBLE. THE R7-8b SIGN SHALL BE MOUNTED BLOW THE R99B (CA) PLAQUE OR THE R99C (CA) SIGN.

SCALE: NTS



1. THE CURB RAMP STANDARDS DEPICTED HERE MAY NOT BE APPROPRIATE FOR ALL LOCATIONS. FIELD CONDITIONS AT INDIVIDUAL LOCATIONS MAY REQUIRE SPECIFIC DESIGNS. DESIGNS MUST BE CONSISTENT WITH THE PROVISIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS (CURRENT EDITION) AND SUBSEQUENT REVISED STANDARD PLANS TO THE MAXIMUM EXTENT FEASIBLE.
2. CURB RAMP AND PEDESTRIAN REFUGE ISLAND THICKNESS SHALL BE 6" THICK MINIMUM. PEDESTRIAN REFUGE ISLANDS AND CURB RAMPS SHALL BE PLACED OVER 4" OF CLASS 2 AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION. SCARIFY SUBGRADE 6" DEEP, MOISTURE CONDITION AND RECOMPACT TO 95% RELATIVE COMPACTION.
3. TRANSITIONS FROM RAMPS AND LANDINGS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
4. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5% WITHIN 2'-0" OF THE CURB RAMP.
5. A 6" HIGH WARNING CURB IS REQUIRED PER CBC WHENEVER THERE IS AN ABRUPT CHANGE IN GRADE. ELEVATION OFF THE EDGE OF A WALKING SURFACE THAT EXCEEDS 4" VERTICAL EXCEPT BETWEEN A SIDEWALK AND AN ADJACENT STREET. LOCATION TO BE AS DIRECTED.
6. WHEN AN EXISTING ACCESSIBLE PATH OF TRAVEL IS TO BE BLOCKED OR REMOVED, THE CONTRACTOR SHALL SUBMIT A TEMPORARY ACCESS PLAN FOR CITY APPROVAL. NO WORK SHALL COMMENCE UNTIL AN ACCESS PLAN HAS BEEN APPROVED FROM THE CITY.
7. IF THE CONSTRUCTION WORK AREA IS WITHIN AN EXISTING FACILITY (E.G. BUS STOPS, CROSSWALKS, ETC.), CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCE NOTICE TO OWNERS OF THE FACILITY INDICATING THE AFFECTED LOCATION AND DURATION OF WORK. NO TWO FACILITIES OR PROGRAMS SEQUENCE SHALL BE BLOCKED OR CLOSED FOR PUBLIC USE.
8. PAYMENT FOR PROVIDING A CONTINUOUS PATH OF TRAVEL SHALL BE CONSIDERED AS INCLUDED IN VARIOUS ITEMS OF WORK AND NO SEPARATE PAYMENT SHALL BE MADE. PROVISIONS FOR CONTINUOUS PATH OF TRAVEL SHALL INCLUDE INSTALLATION AND MAINTENANCE OF TEMPORARY RAMPS, POTHOLING OF UTILITIES, RESTORATION OF EXISTING STREET IMPROVEMENTS, COORDINATION OF WORK, TRAFFIC CONTROLS AND ALL ASSOCIATED WORK NEEDED TO COMPLETE THIS REQUIREMENT.
9. DRILL AND DOWEL #4'S AT 24" O.C. INTO EXISTING CURB, GUTTERS, DRIVEWAYS AND SIDEWALKS.

	ISSUED FOR CONSTRUCTION	NS	NS	4/25/2022
No.	Issue	Drawn	Approved	Date

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Drawn	N. SANGER	Designer	N. SANGER
Drafting Check	O.GOOD	Design Check	J. WOLF
Project Manager	N. SANGER	Date	04/25/2022
This document shall not be used for construction unless signed and sealed for construction.		Scale	AS SHOWN

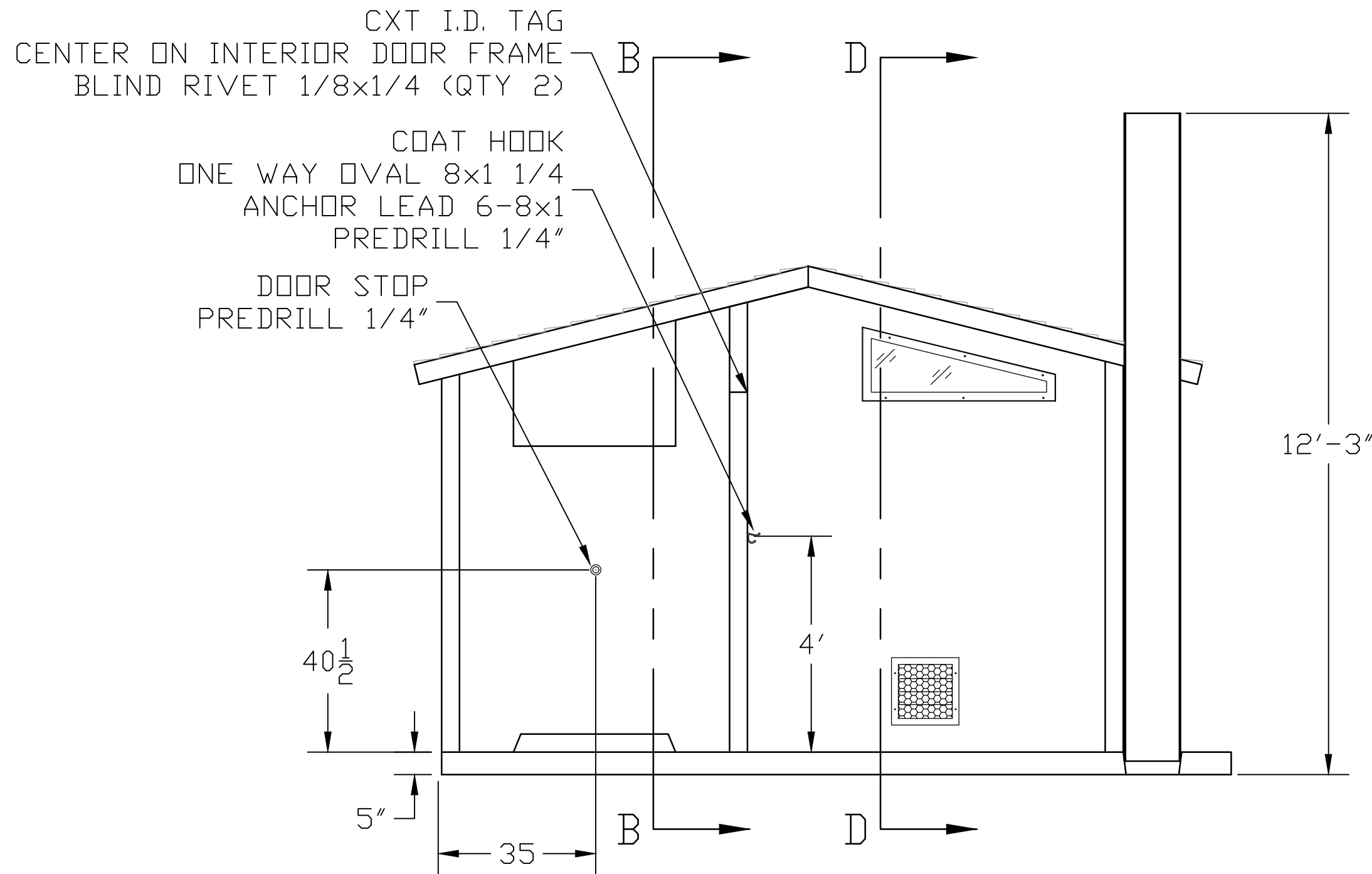
Original Size
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Sheet 5 of 13

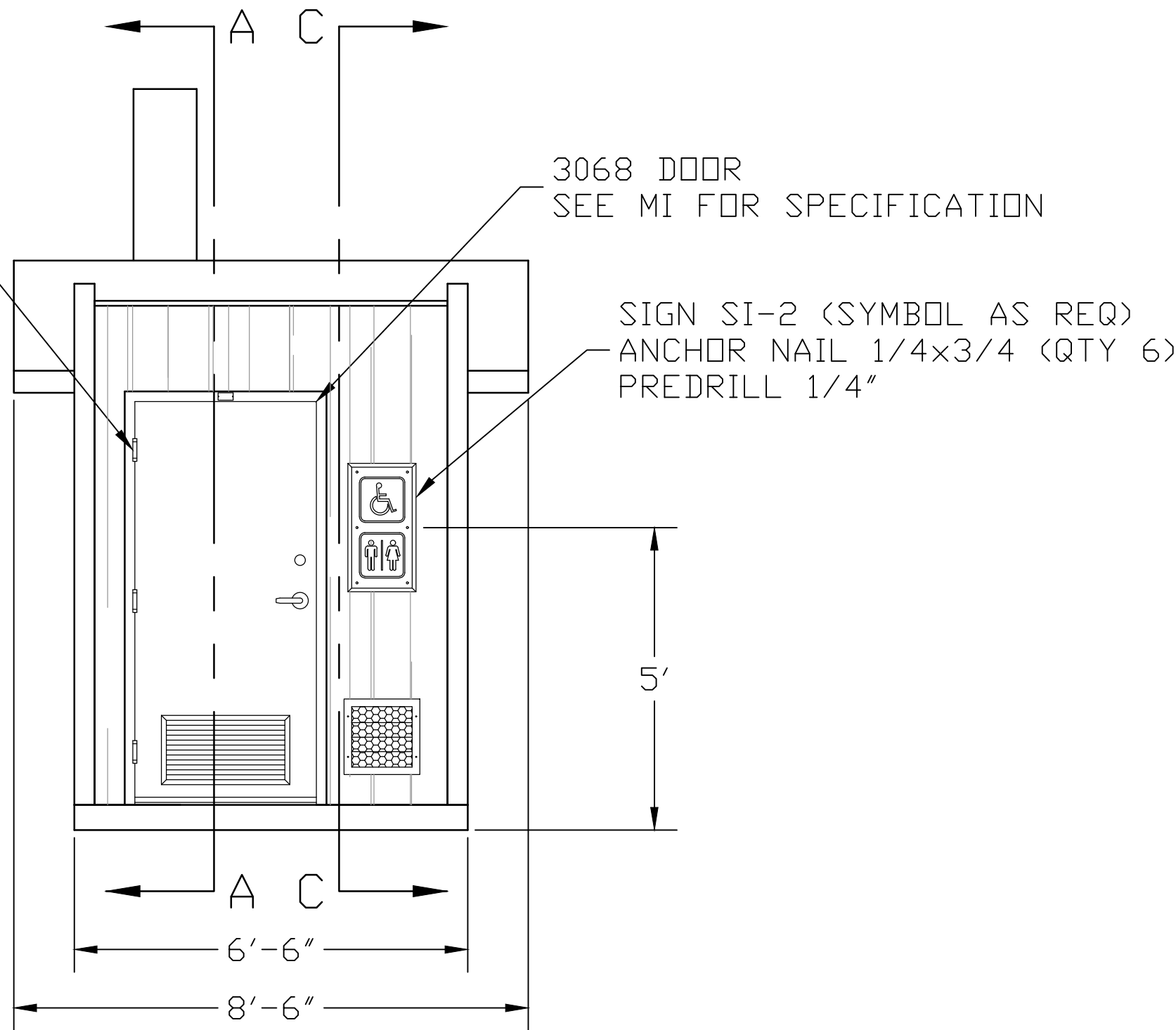


DWG NO.	SHEET	REV.
G-02		

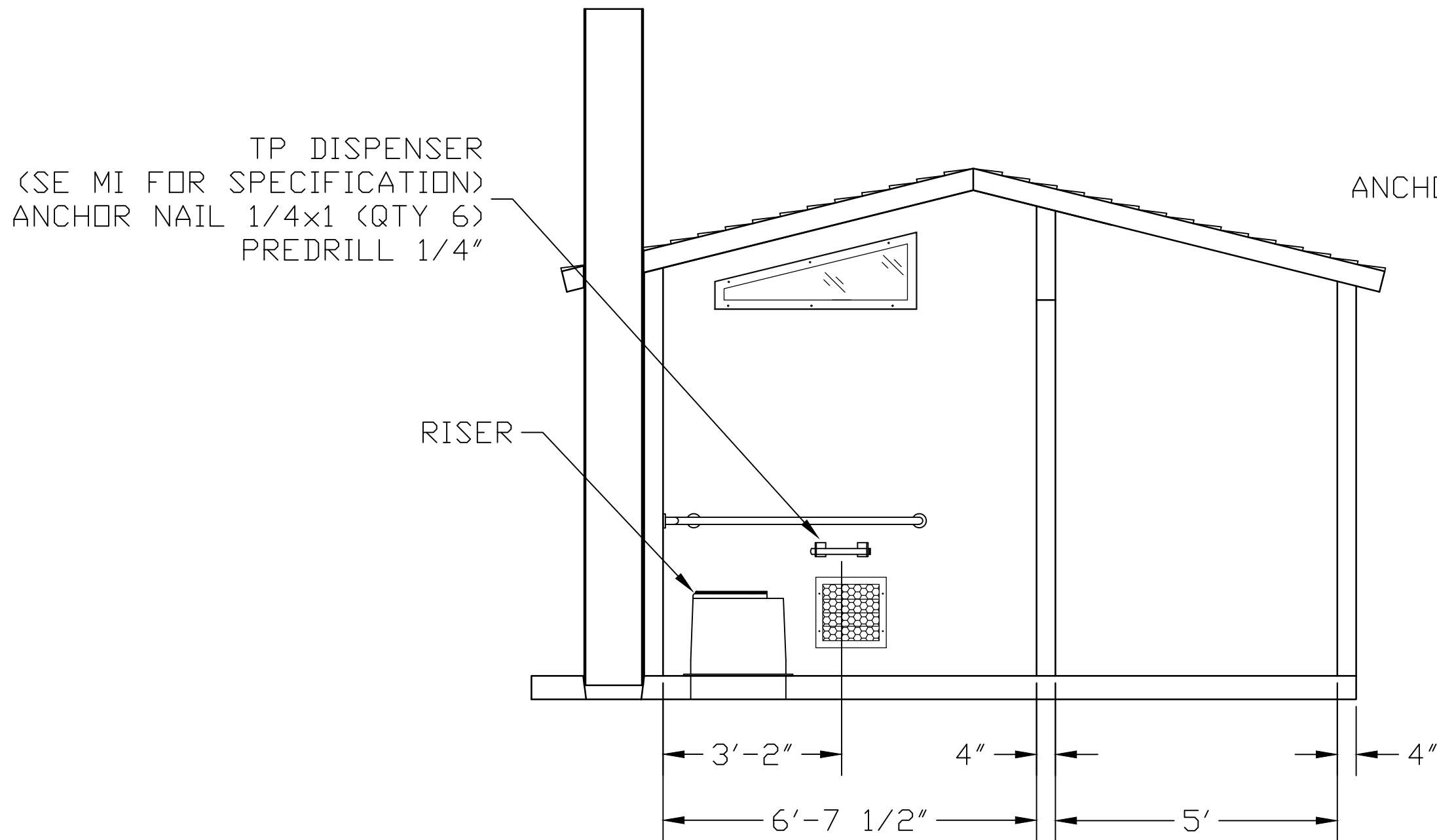
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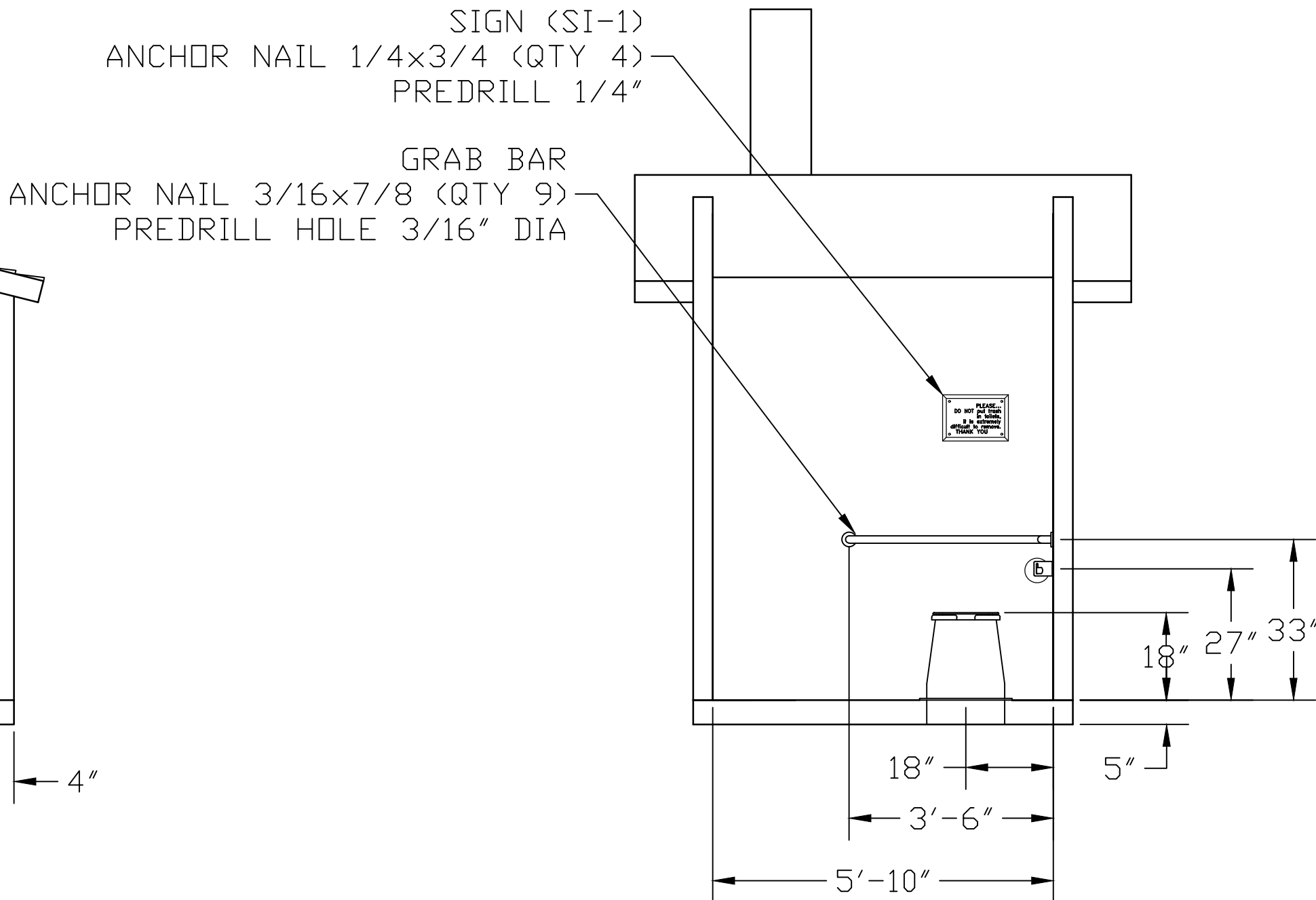
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

EMBEDDED MATERIALS			
ITEM	QTY	ITEM	QTY
RISER	1	ONE WAY OVAL 8x1 1/4	2
GRAB BAR	1	ANCHOR LEAD 6-8x1	2
TP DISPENSER	1	BLIND RIVET 1/8x1/4	2
TOILET PAPER ROLL	2-3	3068 DOOR ASSEMBLY	1
COAT HOOK	1	SPRING HINGE 4.5x4.5	3
DOOR STOP	1		
SI-1	1		
SI-2	1		
CXT I.D. TAG	1		
ANCHOR NAIL 1/4x1	6		
ANCHOR NAIL 1/4x3/4	10		
ANCHOR NAIL 3/16x7/8	9		
CU. FT. CONC.		SQ. FT. W.W.F.	APPROXIMATE WEIGHT



PROJECT TITLE
GUNNISON LEFT HAND
CXT STANDARD BUILDING

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CXT Incorporated			
REV.	DESCRIPTION	APPROVAL	DATE
SCALE	1/4"=1'-0"	DATE	03-28-05
DRAWN		FILE NO.	PD-G03
CHECKED		PLOT	48

INTERIOR ELEVATIONS

DWG NO. G-03

SHEET

REV.

Bar is one inch on original size sheet

0 1"

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REGISTERED PROFESSIONAL ENGINEER

NATHAN P. SANGER

No. 44816

Exp. 3/31/22

CIVIL

STATE OF CALIFORNIA

4/25/2022

GHD

GHD Inc.

718 Third Street

Eureka California 95501 USA

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Drawn N. SANGER

Drafting Check O.GOODIE

Project Manager N. SANGER

This document shall not be used for construction unless signed and sealed for construction.

Designer N. SANGER

Design Check J. WOLF

Date 04/25/2022

Scale AS SHOWN

Client CITY OF ARCATA

Project ARCATA MARSH KAYAK BOAT LAUNCH PROJECT

Title CONSTRUCTION DETAILS

Project No. 11191119

Original Size ANSI D

Sheet No. C-504

Client

Project

Title

Project No.

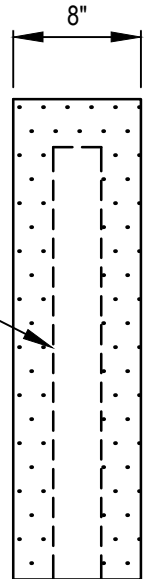
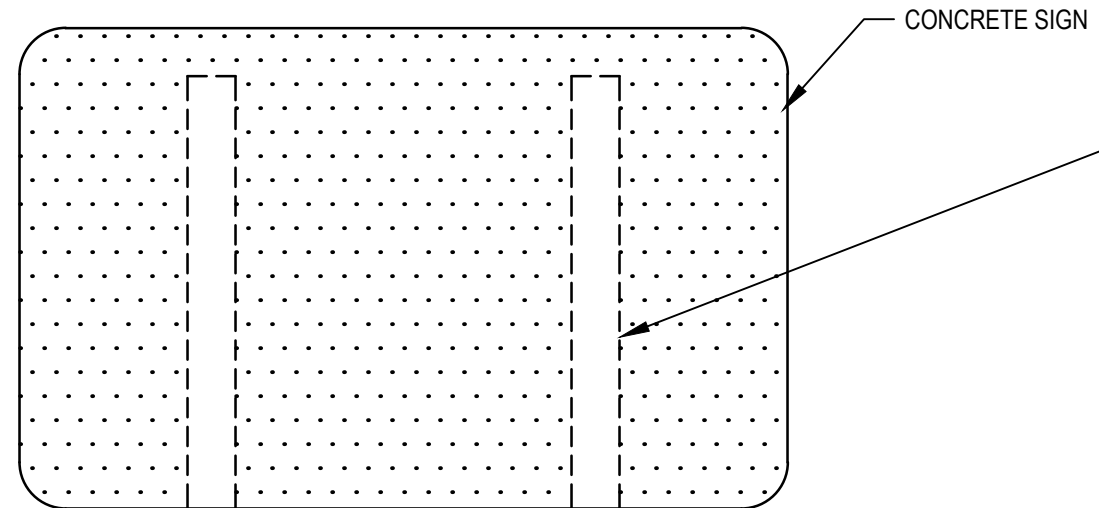
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Plot Date: 25 April 2022 - 4:08 PM

Plotted By: Nathan Sanger

Filename: lghdnet\ghd\US\Eureka\Projects\5611119\119\Digital_Design\ACAD 2018\Sheets\100 Percent\11191119_COA-Kayak_05-09-G-501-505_STRUCTURAL CONSTRUCTION DETAILS.dwg



1. SIGN AND FOOTING DETAILS SHOWN IN THIS SHEET ARE FOR THE SIGN MANUFACTURER'S USE ONLY. SIGN MANUFACTURER SHALL PRODUCE SIGN AND FOOTING AS SHOWN IN THIS SHEET.
2. SIGN MANUFACTURER SHALL DELIVER SIGN WITH FOOTING ON THE PROJECT SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR OFFLOADING THE SIGN AND FOOTING.
3. CITY OF ARCATA SHALL APPROVE THE SIGN AND FOOTING COLOR, LETTERING AND FINISH PRIOR TO THE SIGN INSTALLATION.
4. SIGN MANUFACTURER SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL.
5. THERE SHALL BE NO EXPOSED LIFTING POINT AND NO EXPOSED GROUT. NO GROUT SHALL BE ALLOWED AFTER SIGN AND FOOTING INSTALLATION, IN ANY HOLES OR LIFTING POINTS.
6. FOOTING SHALL NOT BE ACCEPTED IF ANY EXPOSED LIFTING POINTS OR HOLES FOUND IN THE PRECAST CONCRETE FOOTING.


1. CONCRETE PROJECT SIGN TO BE OUTDOOR CREATIONS, INC. PRECAST CONCRETE (SIGN # 703, MODIFIED) OR APPROVED EQUAL, WITH RECESSED AND PAINTED BORDER, LETTERING, AND LOGO. SIGN BASE SHALL BE AS SHOWN IN THIS SHEET.
2. TWO (2) MULTICOLOR LOGOS ARE APPROXIMATELY 8" WITH VARYING SHAPE. THE CITY ENGINEER SHALL FURNISH TEMPLATES FROM WHICH THE MANUFACTURER WILL DEVELOP MOLDS AND INCORPORATE INTO A MONOLITHIC CONCRETE SIGN.
3. SIGN SHALL BE SINGLE SIDED.
4. SIGN SHALL NOT BE ACCEPTED IN CASE OF ANY DAMAGE ON SIGN PANEL OR SIGN FOOTING.
5. MANUFACTURER SHALL DELIVER SIGN AND FOOTING WITH EPOXY, SCHEDULE 80 GALVANIZED PIPES, NECESSARY INSTALLATION KIT AND SIGN INSTALLATION INSTRUCTIONS. SIGN WITH FOOTING SHALL BE INSTALLED BY THE CONTRACTOR.
6. MANUFACTURER SHALL MATCH THE COLOR ON THE CITY'S LOGO FOR THE LETTERING AND BORDER TRIM.

COLOR SCHEDULE

SIGN PANEL:	TAN
SIGN FOOTING BASE:	TAN
LETTERING:	WHITE
LOGOS (2):	MULTICOLOR

1
C-506

Bar is one inch on original size sheet

0  1

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Drawn N. SANGER	Designer N. SANGER	Client CITY OF ARCATA		
Drafting Check O.GOOD	Design Check B. SHERWOOD	Project ARCATA MARSH KAYAK BOAT LAUNCH PROJECT		
Project Manager N. SANGER	Date 04/25/2022	Title CONSTRUCTION DETAILS		
This document shall not be used for construction unless signed and sealed for construction.		Project No. 11191119		
Scale AS SHOWN	Original Size ANSI D	Sheet No. C-506		Sheet 10 of 13

1. CONTRACTOR SHALL COORDINATE ALL STRUCTURAL DOCUMENTS WITH ALL OTHER DISCIPLINES AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO THE START OF ANY FABRICATION OR CONSTRUCTION.
2. UNLESS NOTED OTHERWISE, REFER TO DRAWINGS OTHER THAN STRUCTURAL FOR FINISHES, SLOPES, DEPRESSIONS, OPENINGS, CURBS, STAIRS, RAMPS, TRENCHES, EQUIPMENT AND LOCATIONS AND EXTENT OF SUCH CONDITIONS.
3. CONTRACTOR SHALL COORDINATE ALL NEW WORK WITH EXISTING SITE CONDITIONS AND REPORT ANY DISCREPANCIES TO THE CONTRACTING OFFICER PRIOR TO CONSTRUCTION.
4. DETAILS OR CONDITIONS NOT FULLY DEVELOPED ON DRAWINGS ARE SIMILAR TO DEVELOPED DETAILS.
5. ELEVATIONS SHOWN ARE BASED ON NAVD88 = ELEVATION 0.00

1. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND COMPLETE CALCULATIONS UNDER SUPERVISION OF A LICENSED STRUCTURAL ENGINEER FOR REVIEW TO CONFIRM THAT THE FLOATING DOCK SYSTEM MEETS THE PERFORMANCE SPECIFICATIONS AND DIMENSIONS OF THIS PROJECT.
2. DESIGN CRITERIA
 - 2.1 SEE TECHNICAL SPECIFICATIONS FOR DESIGN CRITERIA, CODE AND STANDARDS REFERENCES.

1. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND COMPLETE CALCULATIONS UNDER SUPERVISION OF A LICENSED STRUCTURAL ENGINEER FOR REVIEW TO CONFIRM THAT THE ACCESS GANGWAYS MEET THE PERFORMANCE SPECIFICATIONS AND DIMENSIONS OF THIS PROJECT.
2. SEE SHEET S-501 FOR ACCESS GANGWAY DESIGN CRITERIA AND DIMENSIONS.

1. CONCRETE MIX DESIGN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SUBJECT TO REVIEW BY THE ENGINEER. COPIES OF THE LABORATORY MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW TWO (2) WEEKS PRIOR TO COMMENCEMENT OF CASTING OPERATIONS.
2. ALL CONCRETE SHALL BE NORMAL WEIGHT, WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH AS FOLLOWS:

STRUCTURAL CONCRETE:	5,000 PSI
----------------------	-----------
3. CONCRETE SHALL USE EITHER TYPE 2 OR 5 CEMENT, AND MAY CONTAIN UP TO 20% CLASS F FLY ASH.
4. CONCRETE SHALL HAVE A MAXIMUM WATER TO CEMENT RATIO OF 0.40
5. CONCRETE MIX SHALL INCLUDE A HIGH RANGE WATER REDUCER TO HELP RESIST FUTURE CHLORIDE ION PENETRATION.
6. ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS. CONTRACTOR SHALL REVIEW FORMING, REINFORCING DETAILS AND ANY EMBEDDED ITEMS AND DETERMINE PLACEMENT REQUIREMENTS AND CLEARANCES PRIOR TO FABRICATION OF ANY REINFORCING.

1. ALL CONCRETE REINFORCING SHALL BE ASTM A615 OR A706, GRADE 60.
2. REINFORCING SHALL EXTEND CONTINUOUS FOR THE DIMENSION SHOWN.
3. NO WELDING OF ANY REINFORCING SHALL BE PERMITTED FOR A615 MATERIAL.
4. LOCATE ALL REINFORCING AS SHOWN ON DRAWINGS AND FASTEN SECURELY.
5. ALL REINFORCING TO TERMINATE WITH STANDARD HOOKS AS SHOWN ON PLANS. ALL STIRRUPS AND TIES TO BE CLOSED WITH 135 DEGREE BENDS.

1. STRUCTURAL STEEL DESIGN IS BASED ON THE FOLLOWING STRENGTH OF MATERIALS:
 - E. STEEL SHAPES AND PLATES.....Fy=50 KSI, UNLESS NOTED OTHERWISE
 - F. BOLTSA 307 OR F593 (TYPE 316), UNLESS NOTED OTHERWISE
 - G. ANCHOR RODSASTM F 1554 GR 55, UNLESS NOTED OTHERWISE
 - H. STAINLESS STEELFy=25 KSI, TYPE 316L, UNLESS NOTED OTHERWISE
2. MINIMUM SIZE WELDS FOR CONNECTIONS NOT SHOWN SHALL BE 3/16 INCH UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY BRACING / SUPPORTS AS REQUIRED UNTIL ALL MEMBERS HAVE BEEN BOLTED OR WELDED SO MEMBERS ARE NOT OVERSTRESSED.
4. ALL WELDS SHALL CONFORM TO AWS D1.1 LATEST EDITION.

5. FOR WELDS NOT SHOWN ON DRAWINGS, PROVIDE COMPLETE PENETRATION OR FILLET WELDS WHICH FULLY DEVELOP THE STRENGTH OF THE CONNECTION MEMBER IN ACCORDANCE WITH WELDING CODE AWS D1.1 LATEST EDITION.
6. ALL EXPOSED NON-GALVANIZED STEEL SURFACES AND FASTENERS SHALL BE EITHER STAINLESS STEEL OR COATED PER SPECIFICATIONS, UNLESS OTHERWISE NOTED.
7. BOLTS - THREADS OF ALL BOLTS SHALL BE COATED WITH ANTI-SEIZE COMPOUND
8. STRUCTURAL STEEL WELDING:
 - PER LATEST AWS D 01.1 BY WELDERS QUALIFIED PER AWS FOR THE TYPE AND POSITION OF THE WELDS. ALL FILLER METAL SHALL MEET CHARTY IMPACT CRITERIA OF 20 FT-LBS AT -20° F AND SHALL HAVE A MAXIMUM CARBON CONTENT OF 0.20%. ELECTRODES SHALL BE PROPERLY CONDITIONED E7018-1 OR E7178-Ni 1%. SUBMIT WELDER QUALIFICATIONS AND WELDING PROCEDURES FOR APPROVAL.
 - THE CONTRACTOR SHALL PROVIDE A CERTIFIED WELDING INSPECTOR TO INSPECT ALL SHOP WELDS. ALL WELDS SHALL BE 100% VISUALLY INSPECTED. IN ADDITION, 10% OF ALL CJP SHOP WELDS SHALL BE TESTED BY UT EXAMINATION, OR OTHER APPROVED METHOD, BY AN INDEPENDENT CERTIFIED WELDING INSPECTOR.
 - THE CONTRACTOR SHALL PROVIDE 100% VISUAL INSPECTION OF FIELD WELDS. ANY WELD FAILING INSPECTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, WHICH WILL INCLUDE THE COST FOR RETESTING. THE CONTRACTING OFFICER MAY PROVIDE ADDITIONAL INSPECTION OF SHOP AND FIELD WELDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS REQUIRED AS A RESULT OF ADDITIONAL CONTRACTING OFFICER INSPECTIONS.
 - ACCEPTANCE CRITERIA FOR ALL WELD INSPECTIONS SHALL CONFORM TO AWS D1.1 CRITERIA FOR DYNAMICALLY LOADED STRUCTURES.

ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE (UHMW) SHALL BE UV STABILIZED VIRGIN MATERIAL. VIRGIN RESIN SHALL BE HOMOPOLYMER OF ETHYLENE WITH INTRINSIC VISCOSITY (IV) BETWEEN 22.0 AND 28.0 DL/G PER ASTM D792. FINISHED FORM SHALL MAINTAIN ULTRAVIOLET STABILITY FOR MINIMUM 25 YEARS AND SHALL BE FREE OF FRESHWATER OF PETROLEUM PRODUCT LEACHABLE MATERIAL. COLOR SHALL BE WHITE. FINISHED FORM SHALL HAVE THE FOLLOWING PROPERTIES:	
SPECIFIC GRAVITY (ASTM D792):	0.935 – 0.955 GM/CM3
ULTIMATE TENSILE STRENGTH, MIN (ASTM D638):	6,300 PSI
ULTIMATE ELONGATION, MIN (ASTM D638):	250 PERCENT
IMPACT STRENGTH (ASTM 256):	TEST METHOD A, IZOD NON-BREAK FOR ALL FIVE DETERMINATIONS IN SAMPLE
HARDNESS, MIN:	SHORE D 63
COEFFICIENT OF FRICTION (ASTM D1894):	KINETIC, MAXIMUM 0.11 STATIC, MAXIMUM 0.20
WATER ABSORPTION (ASTM D570):	NIL
THERMAL EXPANSION, MAX:	9.1x10 ⁻⁵ IN/IN*F

1. GALVANIZED/METALIZED COATING FIELD REPAIR - FIELD REPAIR OF FIELD WELDS OR OTHER DAMAGED AREAS SHALL CONFORM TO ASTM A760, USING ZINC-BASE SOLDERS, SUCH AS "GALV-STICK" OR APPROVED EQUAL, FOLLOWED BY A TOP COAT OF ZINC RICH PAINT. REPAIR SHALL FOLLOW PROCEDURES INDICATED IN ASTM A760, ANNEX A1, AND IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. FIELD WELDING - PREHEAT STEEL TO A MINIMUM 50°F TO DRIVE OFF MOISTURE AND WELD PER AWS D1.1.
3. GROUT PLACEMENT:
 - HIGH-STRENGTH GROUT SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL SUBMIT INTENDED METHODS OF PREPARING SUBSTRATE, MIXING, TRANSPORTING, PLACING AND FINISHING GROUT.
 - PRIOR TO PLACEMENT, GROUTED SURFACES SHALL BE FREED OF DUST AND DIRT USING HIGH-PRESSURE POTABLE WATER. MIX GROUT WITH MANUFACTURER'S RECOMMENDED WATER QUANTITY. DO NOT ADD ADDITIONAL WATER.
 - COLD WEATHER GROUT/ CONCRETE SHALL FOLLOW APPROPRIATE RECOMMENDATIONS OF ACI 306R. WHERE AMBIENT TEMPERATURE IS LESS THAN 40°F PROVIDE HEATED MATERIAL OR INSIDE SHELTER TO MAINTAIN 40°F MINERAL TEMPERATURE FOR 4 DAYS OR UNTIL GROUT/ CONCRETE OBTAINS $f_c = 2500$ PSI.

DEVELOPMENT LENGTH (ℓ_d)												
BAR SIZE	3000 PSI CONC (f'c)				4000 PSI CONC (f'c)				5000 PSI CONC (f'c)			
	TOP		OTHER		TOP		OTHER		TOP		OTHER	
	$s \geq 6"$	$s < 6"$	$s \geq 6"$	$s < 6"$	$s \geq 6"$	$s < 6"$	$s \geq 6"$	$s < 6"$	$s \geq 6"$	$s < 6"$	$s \geq 6"$	$s < 6"$
#3	13	22	12	17	12	19	12	15	12	17	12	13
#4	18	29	14	22	15	25	12	19	14	23	12	17
#5	22	36	17	28	19	31	15	24	17	28	13	22
#6	26	43	20	33	23	37	18	29	20	34	16	26
#7	38	63	29	48	33	54	25	42	29	49	23	38
#8	43	72	33	55	37	62	29	48	34	56	26	43
#9	49	81	37	62	42	70	33	54	38	63	29	48
#10	56	89	43	69	49	78	38	60	44	69	34	54
#11	68	98	52	76	59	85	45	66	53	76	41	59
TENSION LAP SPlice LENGTH (CLASS 'B' SPlice)												
BAR SIZE	3000 PSI CONC (f'c)				4000 PSI CONC (f'c)				5000 PSI CONC (f'c)			
	TOP		OTHER		TOP		OTHER		TOP		OTHER	
	$s \geq 6"$	$s < 6"$	$s \geq 6"$	$s < 6"$	$s \geq 6"$	$s < 6"$	$s \geq 6"$	$s < 6"$	$s \geq 6"$	$s < 6"$	$s \geq 6"$	$s < 6"$
#3	17	28	16	22	16	25	16	19	16	22	16	17
#4	23	38	18	29	20	33	16	25	18	29	16	23
#5	28	47	22	36	25	41	19	31	22	36	17	28
#6	34	56	26	43	29	49	23	38	26	44	20	34
#7	49	82	38	63	43	71	33	55	38	63	30	49
#8	56	93	43	72	49	81	38	62	44	72	34	56
#9	63	105	49	81	55	91	42	70	49	81	38	63
#10	73	116	56	90	63	101	49	78	57	90	44	70
#11	88	128	68	99	76	111	59	85	68	99	53	76

$D = 6d_b$ FOR #3 TO #8
 $D = 8d_b$ FOR #9, #10, #11
 $D = 10d_b$ FOR #14, #18

TYP BAR BEND DIAMETER
 TYP 90° END HOOK
 TYP 180° END HOOK

#5 DIAGONAL BARS x 3'-0" LONG CENTERED ON PENETRATION, SPACE AT 8" MAX THROUGHOUT WALL THICKNESS

3" TYP

PENETRATION

END MAIN BARS INTERRUPTED BY OPENING WITH STD HOOK

WHERE MAIN BARS ARE INTERRUPTED BY OPENING, ADD ONE HALF THE INTERRUPTED BARS EACH SIDE OF OPENING. (MIN 2-#5 BARS EACH SIDE)

d , TYP

12 d_b FOR #6, #7, #8
6 d_b FOR #3, #4, #5

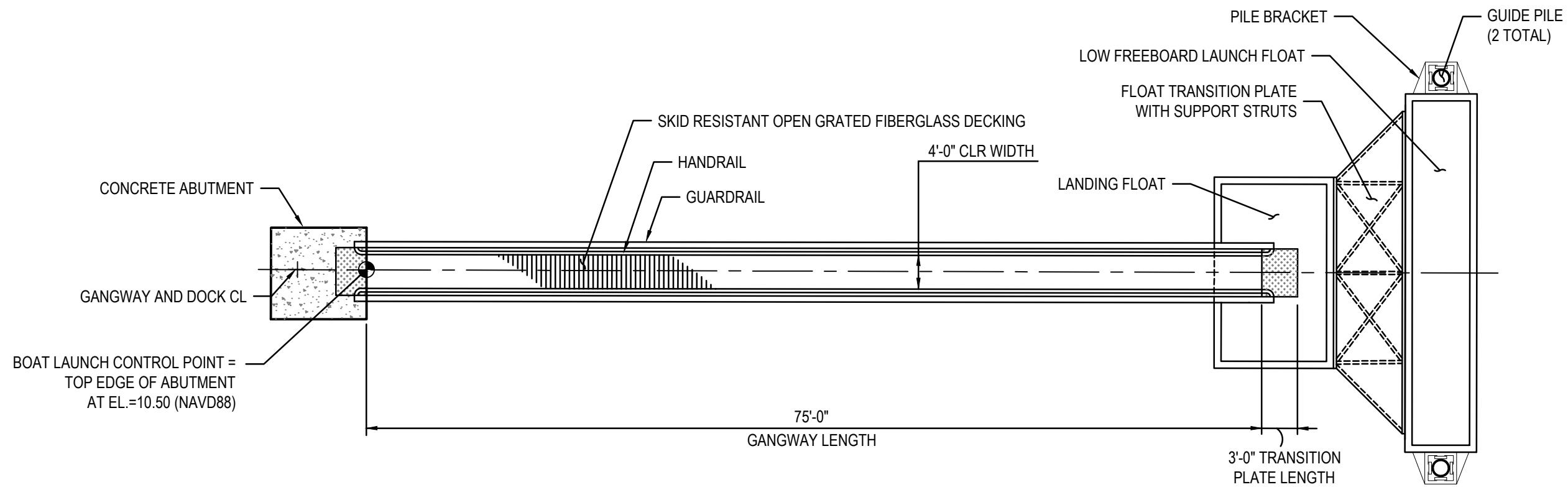
$D = \begin{cases} 4 d_b \text{ FOR } \#3, \#4, \#5 \\ 6 d_b \text{ FOR } \#6, \#7, \#8 \end{cases}$

90°

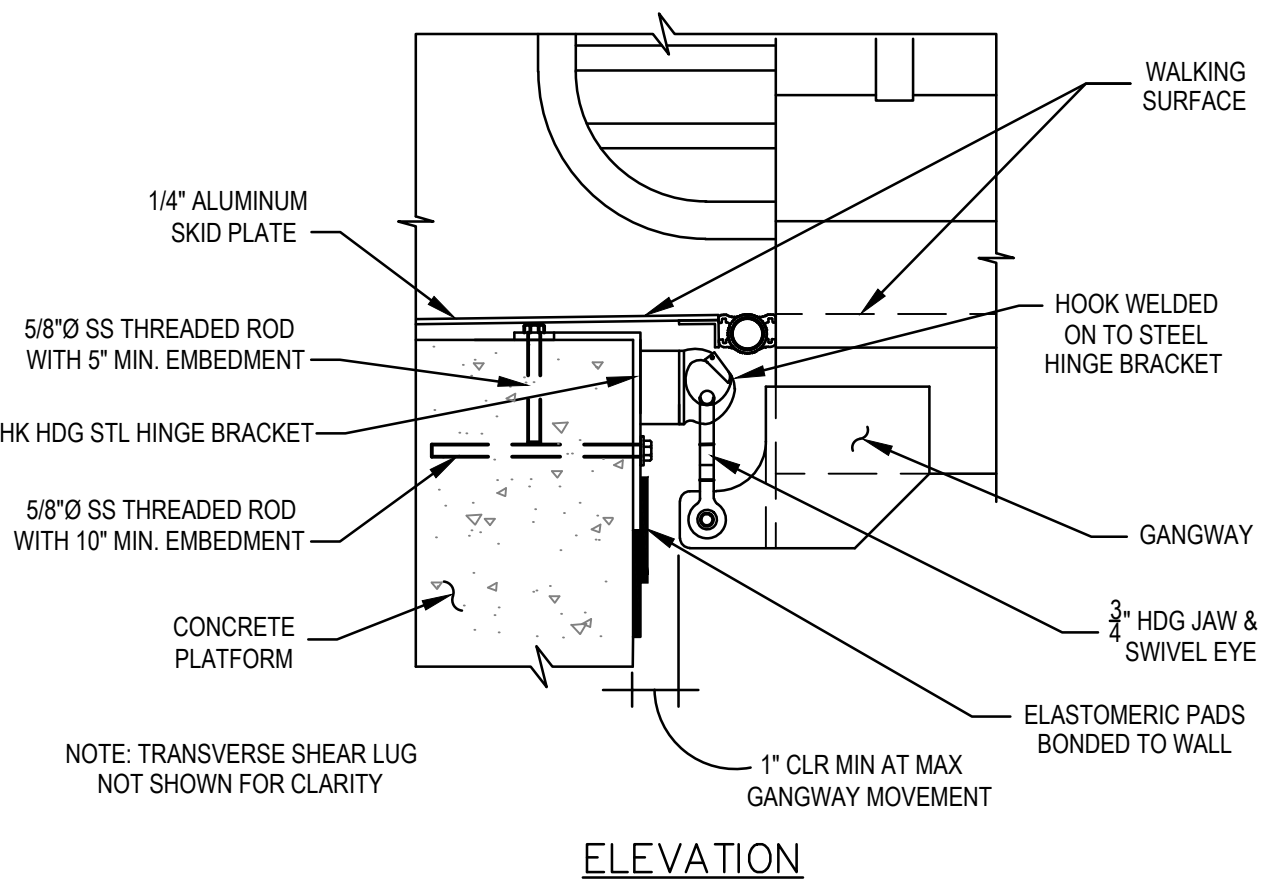
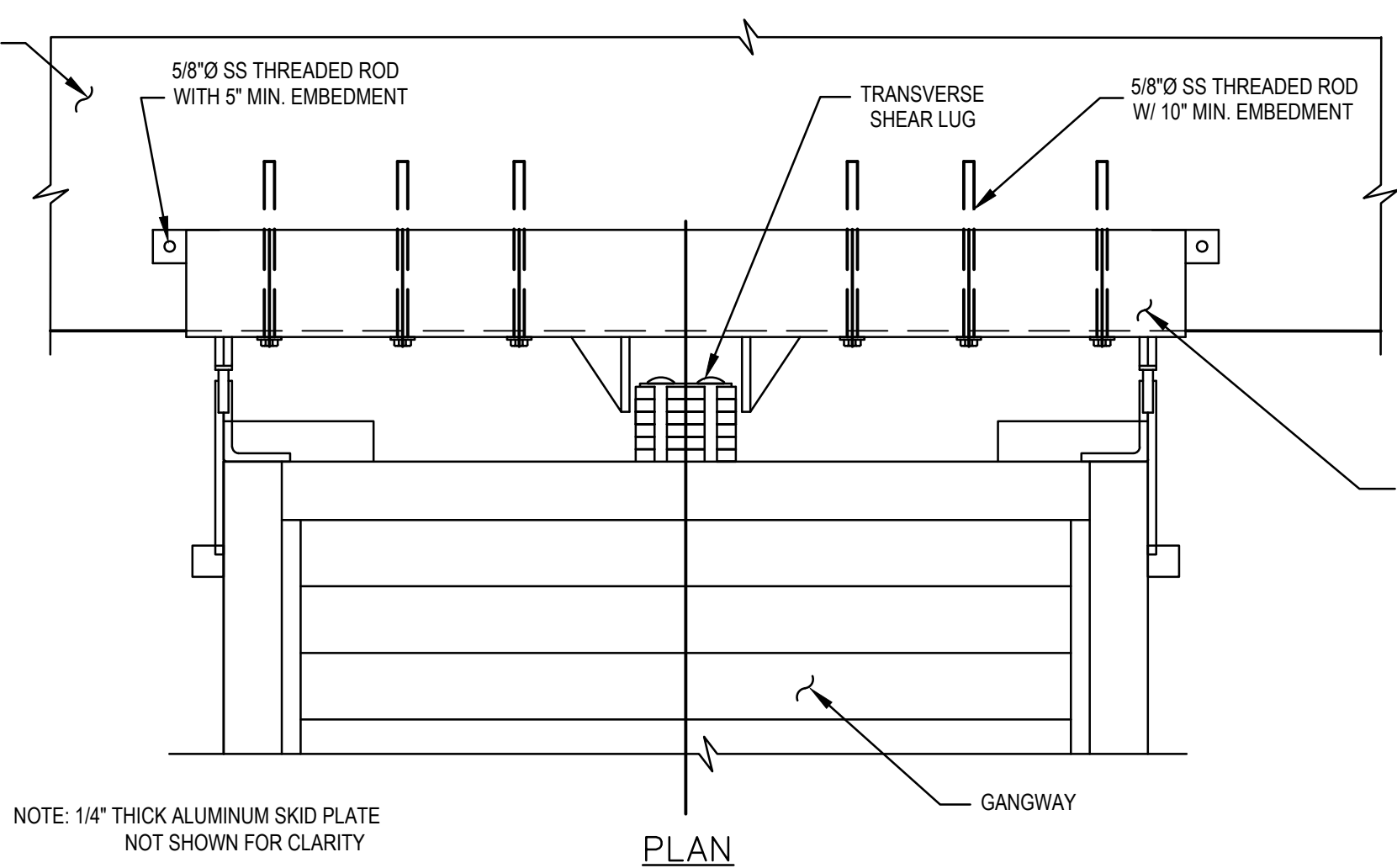
135°

SCALE: NTS

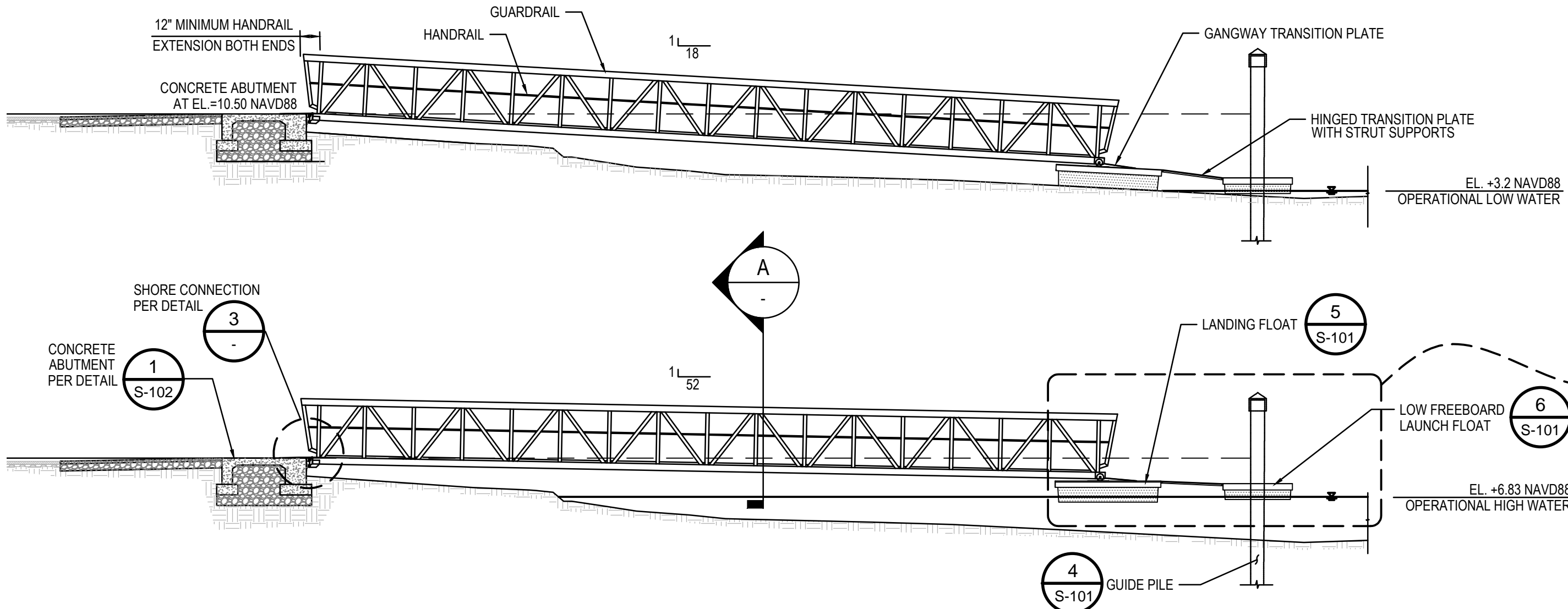
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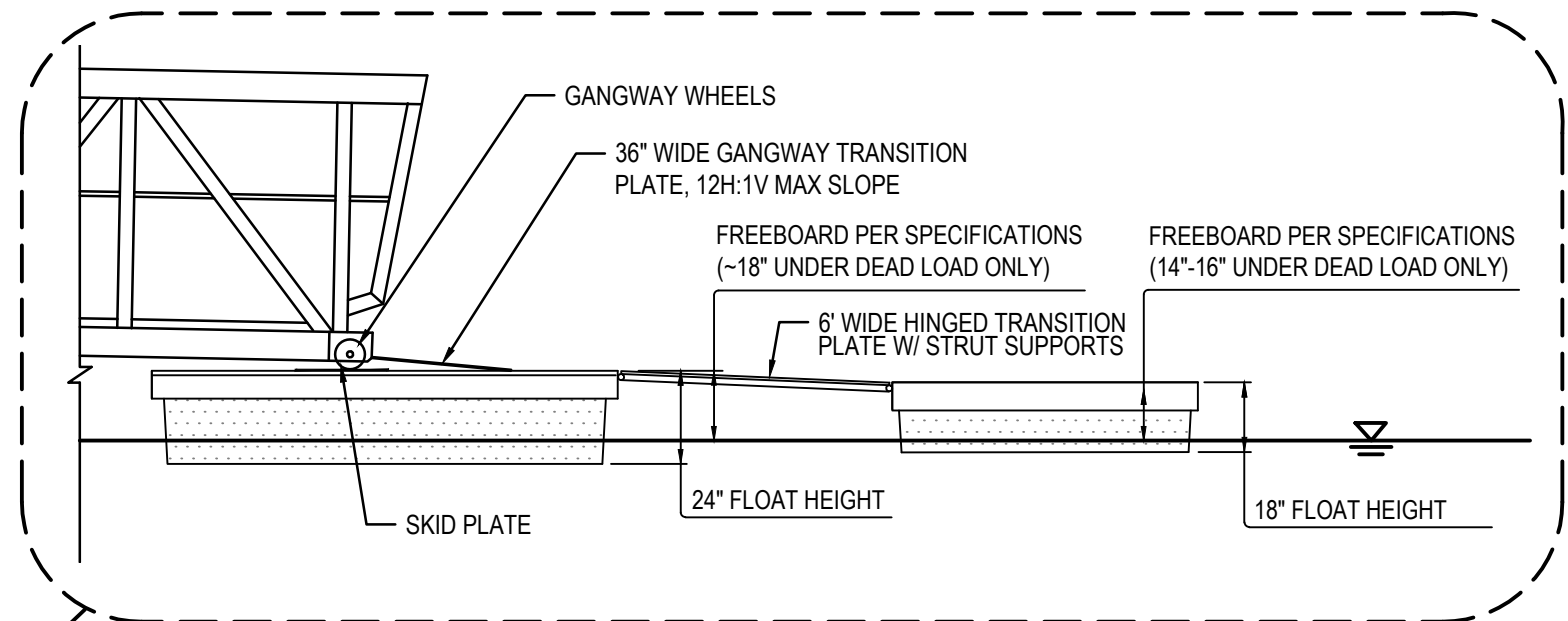
1 **GANGWAY - PLAN VIEW**
SCALE: 1" = 10'



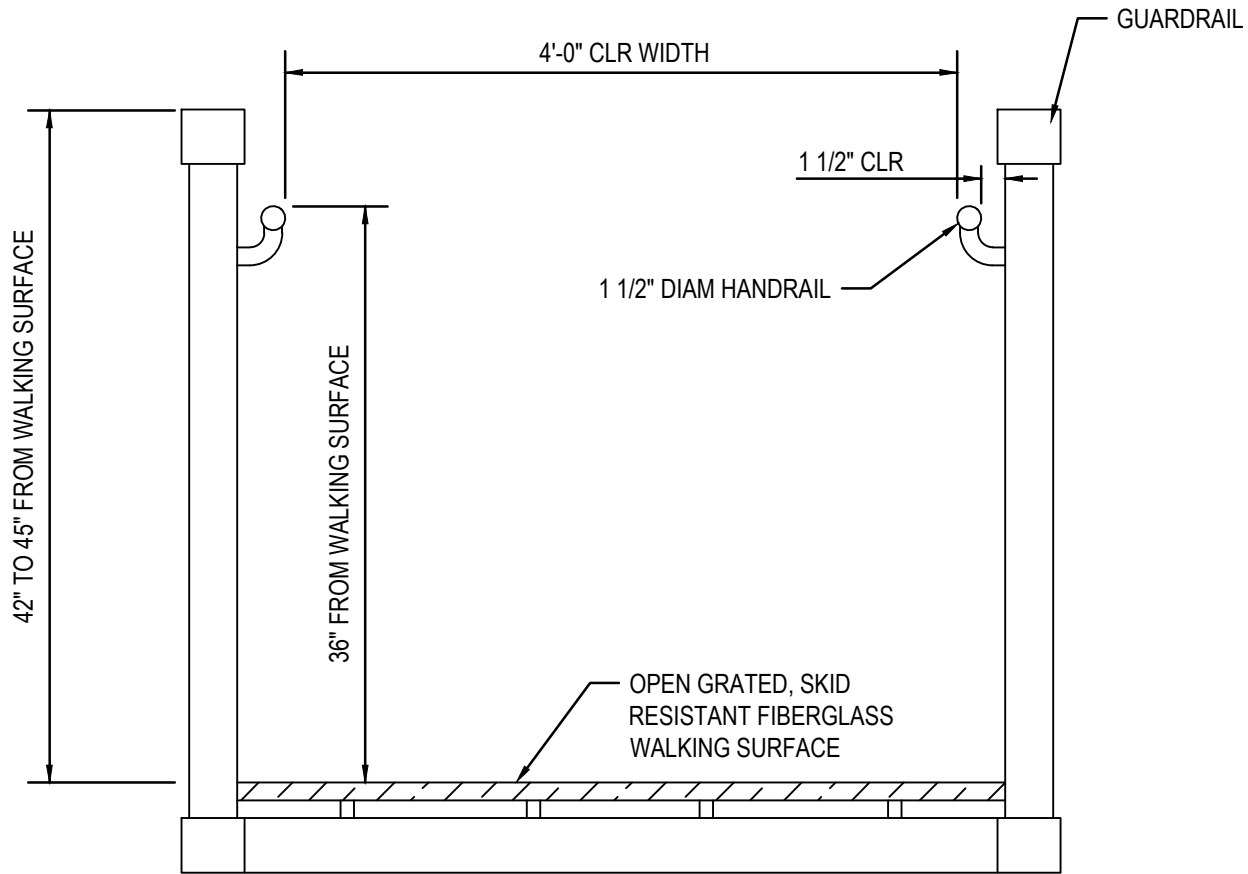
3 **SHORE CONNECTION DETAIL**
NTS



2 **GANGWAY ELEVATIONS**
SCALE: 1" = 10'



4 **FLOAT TRANSITION DETAIL**
NTS

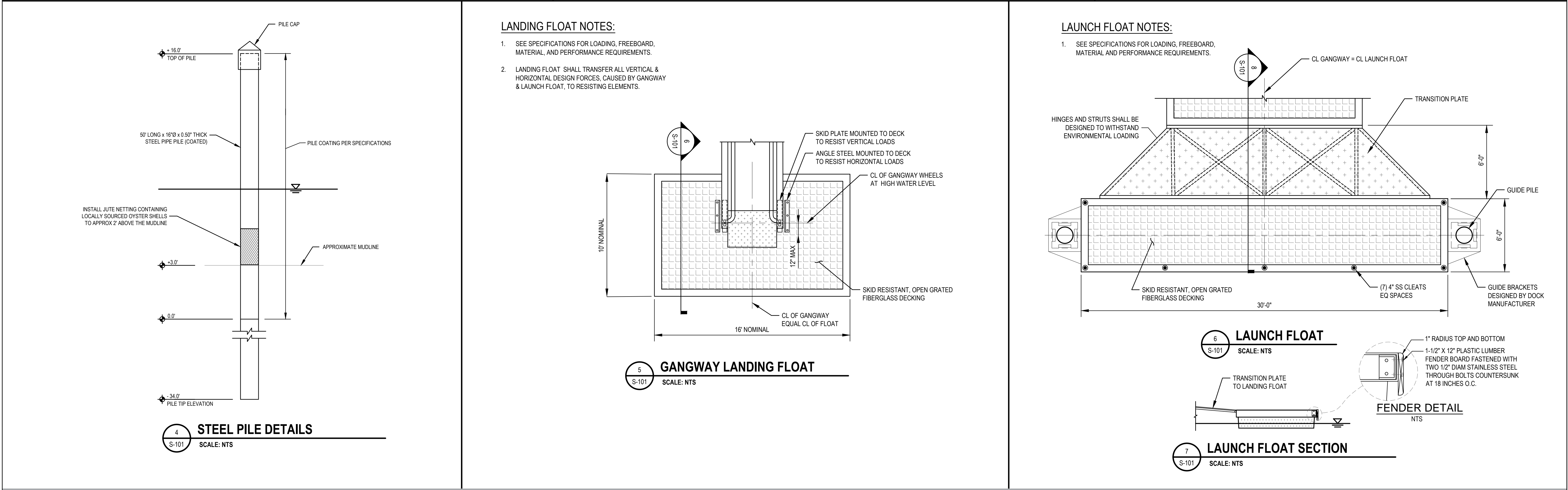
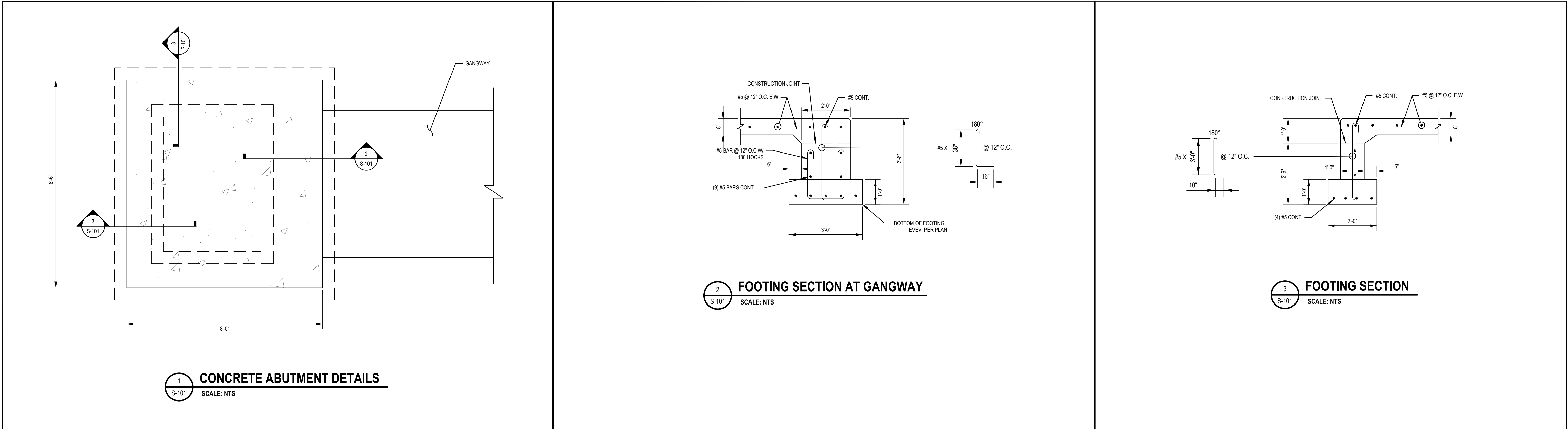


A **GANGWAY SECTION**
SCALE: 1" = 1'

GANGWAY NOTES:

- GANGWAY AND ABUTMENT CONNECTION SHALL BE DESIGNED BY CONTRACTOR, WITH CALCULATIONS AND SHOP DRAWINGS PREPARED BY A PROFESSIONAL ENGINEER LICENCED IN THE STATE OF CALIFORNIA, FOR REVIEW BY THE CITY OF ARCATA.
- GANGWAY SHALL BE CONSTRUCTED FROM 6061-T6 ALUMINUM AND DIRECT CONTACT OF DISSIMILAR MATERIALS SHALL NOT BE PERMITTED.
- OPENINGS IN GUARDRAIL SHALL NOT PERMIT THE PASSAGE OF A 4-INCH DIAMETER SPHERE.. SIDERAIL PICKETS NOT SHOWN IN THE PROFILE VIEW DRAWINGS FOR CLARITY.
- GANGWAY AND TRANSITION PLATES SHALL BE DESIGNED TO SUSTAIN A 100 PSF UNIFORM LIVE LOAD WITHIN L/240 DEFLECTION. LIVE LOAD TRANSFERRED TO FLOATING DOCK SHALL BE BASED ON A 50 PSF UNIFORM LIVE LOAD.
- GUARDRAIL SHALL BE DESIGNED TO SUSTAIN A 50 POUND PER LINEAR FOOT LOAD APPLIED HORIZONTALLY ALONG THE CENTERLINE OF TOP RAIL, AND A 200 POUND POINT LOAD APPLIED VERTICALLY AT ANY POINT ALONG THE LENGTH OF ANY POINT ALONG THE LENGTH OF ANY HORIZONTAL GUARDRAIL, INCLUDING THE TOP RAIL, HANDRAIL, AND ANY MID-RAILS.
- GANGWAY AND TRANSITION PLATE WALKING SURFACES MUST HAVE A DURABLE, NON-SKID SURFACE TO PROVIDE TRACTION, ESPECIALLY WHEN WET.
- GANGWAY WALKING SURFACE AND ABUTMENT CONNECTION SHALL NOT CREATE A TRIPPING HAZARD FOR PEDESTRIANS, AND SHALL MAINTAIN A MAXIMUM CHANGE OF 1/2 INCH, WITH CHANGES OF LEVEL EXCEEDING 1/4 INCH BE BEVELED.
- THE GANGWAY WHEELS AT THE TRANSITION PLATE SHALL BE SIZED APPROPRIATELY TO ENSURE THAT THE TRANSITION PLATE RISE DOES NOT EXCEED 6".
- PILE YOKES SHALL BE DESIGNED TO PROVIDE ENOUGH CLEARANCE TO ALLOW THE LANDING FLOAT TO MOVE FREELY IN THE VERTICAL DIRECTION, AND NOT BIND AND HANG CROOKED ON THE PILE DURING LOW TIDE CONDITIONS.

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