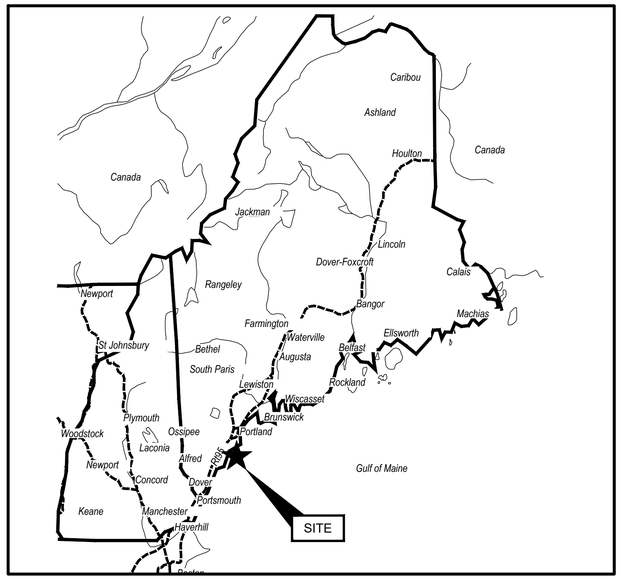
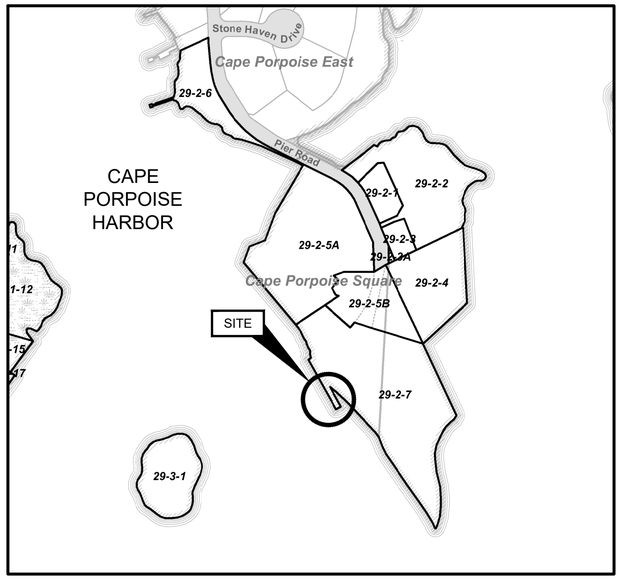
CAPE PORPOISE PIER REHABILITATION

TOWN OF KENNEBUNKPORT, MAINE
MAINE DOT WIN 025205.00 & 025207.00
EDA 01-79-15171



SOURCE:

STATE MAP
(NOT TO SCALE)



SOURCE:
TOWN WEBSITE - TAX MAP 29

SITE LOCATION MAP
(NOT TO SCALE)

PREPARED FOR:

TOWN OF KENNEBUNKPORT
6 ELM STREET
PO BOX 566
KENNEBUNKPORT, MAINE
(207)967-1606

PREPARED BY:

GEI CONSULTANTS, INC.
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PORTLAND, ME 04101
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GEI CONSULTANTS

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GEI PROJECT NO. 2104738

NO.	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

DWG. NO.
G-1

GENERAL NOTES

1. THE CONTRACTOR SHALL BE GOVERNED BY THE CONSTRUCTION SAFETY RULES AS ADOPTED BY THE STATE BOARD OF CONSTRUCTION SAFETY, AUGUSTA, MAINE.
2. THE PROJECT IS SUBJECT TO THE SAFETY AND HEALTH REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AS PROMULGATED BY THE US DEPARTMENT OF LABOR.
3. ALL PAVED AREAS DISTURBED SHALL BE PATCHED WITH BITUMINOUS UNLESS OTHERWISE SPECIFIED.
4. ALL NON-PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE LOAMED, SEEDED, FERTILIZED AND MULCHED UNLESS OTHERWISE DIRECTED BY THE TOWN OR THEIR REPRESENTATIVE.
5. THE CONTRACTOR SHALL INCLUDE IN THEIR BID, COSTS FOR COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATORY REQUIREMENTS.
6. ALL WORK SHALL BE GOVERNED BY THE FOLLOWING DOCUMENTS. IN THE EVENT THESE DOCUMENTS ARE IN CONFLICT, THE EDA CONTRACTING PROVISIONS SHALL PREVAIL.
   a. ECONOMIC DEVELOPMENT ADMINISTRATION (EDA) CONTRACTING PROVISIONS FOR CONSTRUCTION PROJECTS.
   b. MAINEDOT'S STANDARD SPECIFICATIONS (MARCH 2020) AND STANDARD DETAILS (MARCH 2020: www.maine.gov/mdot/contractors/publications/.
7. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL CONSTRUCTION DEBRIS AT AN APPROVED FACILITY IN ACCORDANCE WITH ALL APPLICABLE LOCAL STATE AND FEDERAL REGULATORY REQUIREMENTS.

CONSTRUCTION SEQUENCE & COORDINATION

1. THE CONTRACTOR SHALL ADHERE TO CONSTRUCTION PERIOD COORDINATION GUIDANCE FOR CONTRACTOR SITE ACCESS AND FISHERMAN ACCESS AS PROVIDED IN SPECIAL PROVISION SECTION 107-CONTRACT TIME.
2. SCHEDULE FOR ALL SITE CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH TOWN OF KENNEBUNKPORT HARBORMASTER/PIER MANAGER SO AS TO MINIMIZE IMPACT TO PIER OPERATIONS.
3. THE CONTRACTOR SHALL ADHERE TO TIMING OF WORK ACTIVITY RESTRICTIONS REQUIRED IN THE REGULATORY PERMITS FOR THE PROJECT.
4. CONTRACTOR ACCESS TO THE SITE BY WATER SHALL MINIMIZE ANY IMPACT TO NAVIGATION IN THE ADJACENT FEDERAL NAVIGATION CHANNEL AND SHALL CLEARLY MARK ANY OBSTRUCTUCTION.

EROSION CONTROL NOTES

1. REFER TO SHEET C-6 SITE DETAILS
   a. TEMPORARY SILTATION AND EROSION CONTROL FENCING SHALL BE INSTALLED AND MAINTAINED AROUND ALL LAND SIDE ACTIVITY.
   b. A TEMPORARY DEBRIS BOOM SHALL BE INSTALLED AND MAINTAINED AROUND IN-WATER WORK ACTIVITY.
2. APPLICATION OF TEMPORARY AND PERMANENT EROSION CONTROL MEASURES FOR THE PROJECT SHALL BE IN ACCORDANCE WITH PROCEDURES AND SPECIFICATIONS OF THE CURRENT MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION; BEST MANAGEMENT PRACTICES.
3. INSTALL EROSION CONTROL MESH ON ALL PROPOSED SLOPES 2:1 OR STEEPER, UNLESS SHOWN OR NOTED OTHERWISE.
4. ALL EROSION CONTROL MEASURES, SEEDING AND MULCHING SHALL BE INSPECTED WEEKLY, AFTER RAINSTORMS AND DURING RUNOFF EVENTS. ALL MEASURES SHALL BE REPAIRED OR REPLACED WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DAMAGE.
5. SEEDED AND MULCHED AREAS SHALL BE MAINTAINED UNTIL FINAL ACCEPTANCE OF THE WORK
6. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED UPON COMPLETION OF GRADING OPERATIONS AND ESTABLISHMENT OF ACCEPTABLE GROUND COVER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES DURING CONSTRUCTION.
8. THE CONTRACTOR MUST BE CERTIFIED WITH THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION COASTAL EROSION CONTROL PRACTICES PROGRAM.

SURVEY & DATUM NOTES

1. BASE SURVEY, TOPGRAPHY, SITE DATUM CONTROL, AND PROJECT BENCHMARKS ARE FROM A TOPOGRAPHIC SURVEY WITH DOCUMENTING PLAN; "CAPE PORPOISE_KENNEBUNKPORT, MAINE"; BY LITTLE RIVER LAND SURVEYING DATED 20/09/2017.
2. ALL TOPOGRAPHIC INFORMATION PROVIDED IS REFERENCED TO MLLW =0.0' VERTICAL DATUM UNLESS OTHERWISE NOTED.
3. BASE FLOOD/TIDAL INFORMATION TAKEN FROM MEDEP, FEMA, AND NOAA PUBLISHED DATA, REFER TO THE TABLE BELOW.

PROJECT ELEVATIONS (BY DATUM)

ELEVATION		CHART (ft)	NAVD88 (ft)	Notes
FEMA Base Flood (Preliminary		23.5	18.0	*Zone VE (April 2017)*
FEMA Base Flood (Effective)		17.8	12.4	Zone V2 (April 1983 FIRM)
LOMR (Pending)		17.5	**12.0**	Post Preliminary
Existing Pier Elevation		14.7	9.3	
Stillwater Elevations	0.2% Annual Chance	15.0	9.5	FEMA April 2017 FIRM Transect 100
	1% Annual Chance	14.4	8.9	
	2% Annual Chance	14.0	8.5	
	10% Annual Chance	13.4	7.9	
Highest Annual Tide		**11.4**	6.0	2018 MEDEP Predictions
MHHW		**9.41**	4.0	BASED ON NOAA TIDAL BM 8418772 CAPE PORPOISE, ME
MHW		**9.00**	3.5	
NAVD88		**5.45**	0.0	
MLW		**0.33**	-5.1	
MLLW		**0.00**	-5.5	

DESIGN CRITERIA

SITE EXPOSURE

- WAVE HEIGHT SEASONAL FLOATS - <3 FT
  FIXED PIER-> 3-FT (V-ZONE)
- MAXIMUM WIND SPEED - 100 MPH HURRICANE COASTLINE
- NO ICING HAS BEEN REPORTED AT THIS SITE AND HAS NOT BEEN CONSIDERED.

TIMBER PIER

- DESIGN LIVE LOAD = 250 PSF
- DESIGN VEHICLE = AASHTO H-10
  4,000 LB FRONT AXLE, 16,000 LB REAR AXLE
  SINGLE AXLE PICKUP OR TRAILER
- ALL HANDRAIL AND POSTS SHALL BE CONSTRUCTED TO WITHSTAND A 200 LB LOAD APPLIED IN ANY DIRECTION OR 50 LB/FT APPLIED ALONG RAIL LENGTH.

GANGWAY

1. DEAD LOADS SHALL CONSIST OF THE ENTIRE WEIGHT OF THE GANGWAY STRUCTURE.
2. GANGWAY DECK SURFACE AND STRUCTURAL FRAME SHALL NOT EXCEED ALLOWABLE MATERIAL STRESSES FOR A UNIFORM LIVE LOAD OF 100 PSF APPLIED OVER THE FULL SURFACE OF THE GANGWAY WITH DEFLECTION LIMIT NOT TO EXCEED GANGWAY CAMBER.
3. GANGWAY DECK SURFACE AND STRUCTURAL FRAME SHALL NOT EXCEED ALLOWABLE MATERIAL STRESSES FOR A UNIFORM LIVE LOAD OF 50 PSF APPLIED OVER THE FULL SURFACE OF THE GANGWAY WITH DEFLECTION LIMIT NOT TO EXCEED SPAN/360.
4. ALL HANDRAIL AND POSTS SHALL BE CONSTRUCTED TO WITHSTAND A 200 LB LOAD APPLIED IN ANY DIRECTION OR 50 LB/FT APPLIED ALONG RAIL LENGTH.

FLOAT SYSTEM

1. FLOAT FREEBOARD AND LIVE LOAD CAPACITY SHALL BE AS INDICATED ON THE CORRESPONDING FLOAT PLAN SHEETS.
2. DEAD LOADS SHALL CONSIST OF THE ENTIRE WEIGHT OF THE FLOATING STRUCTURE, INCLUDING UTILITIES, GANGWAYS, DOCK BOXES, AND PILE GUIDES, MOORING TACKLE.
3. A CONCENTRATED LIVE LOAD OF 400 LBS APPLIED AT ANY POINT SHALL NOT TILT THE DECK MORE THAN SIX DEGREES TO THE HORIZONTAL.
4. VESSELS USING THE FLOAT SYSTEM WILL USE FENDERS AND WILL NOT BE LEFT UNATTENDED.

STRUCTURAL NOTES

CAST-IN-PLACE CONCRETE

1. MIX DESIGN- REFER TO SPECIAL PROVISION SP502.
2. MINIMUM COVER TO REINFORCEMENT = 3"
3. REINFORCING STEEL:
   a. EPOXY COATED
   b. ASTM A615 GRADE 60; F_V = 60,000 PSI

STEEL SHEET PILES

1. STEEL SHEET PILES SHALL BE PZ22 OR SECTION WITH EQUIVALENT PROPERTIES, CONFORMING TO ASTM A690 STEEL WITH A MINIMUM YIELD STRENGTH OF 50 KSI. SHEET PILES SHALL BE DRIVEN TO REFUSAL OR THE SPECIFIED EMBEDMENT.
2. STEEL SHEET PILES SHALL BE INTERLOCKED AT THEIR CONNECTION NODES TO ASSURE A CONTINUOUS STRUCTURE THROUGHOUT THEIR ENTIRE LENGTH.
3. STEEL SHEET PILES SHALL CONTAIN STANDARD SIZE HANDLING HOLE APPROXIMATELY 9" BELOW THE TOP OF THE PILE. HOLE DIMENSION IS TO BE 2-9/16" DIAMETER.
4. STEEL SHALL BE PROTECTED FROM CORROSION, DEFORMATION, AND OTHER TYPES OF DAMAGE.
5. STEEL SHEET PILES SHALL BE SHOP PAINTED PRIOR TO DRIVING WITH TWO (2) COATS OF TNEMEC SERIES 46H-413 COAL TAR EPOXY OR APPROVED EQUAL. STEEL SURFACE SHALL BE PREPARED IN ACCORDANCE WITH SSPC SPIO NEAR WHITE BLASTING CLEANING. TOUCH UP ABRADED AND DAMAGED AREAS IN THE FIELD. MINIMUM TOTAL DRY FILM THICKNESS SHALL BE 16 MILS WITH A MINIMUM DRY FILM THICKNESS OF 8 MILS PER COAT. SHEET PILES SHALL BE COATED FULL LENGTH, BOTH SIDES.
6. SHEET PILES AND INTERLOCKS SHALL NOT HAVE EXCESSIVE KINKS, CAMBER, OR TWIST THAT WOULD PREVENT THE PILE FROM REASONABLE FREE SLIDING TO FINAL POSITION.
7. SHEET PILES SHALL BE PLUMB AND STRAIGHT WITH ALL INTERLOCKS PROPERLY CONNECTED TO PREVENT LOSS OF MATERIAL.
8. TOLERANCES FOR SHEET PILES PLACEMENT SHALL BE:
   - HORIZONTAL: 1" IN 5 FEET.
   - VERTICAL: 3/4" PER FOOT
9. EXCEPT WHERE SHOWN ON THE CONTRACT DRAWINGS OR DIRECTED BY THE ENGINEER OF RECORD, SPLICING OF SHEET PILES SHALL NOT BE PERMITTED.
10. STEEL SHEET PILES SHALL BE DRIVEN IN THE PRESENCE OF A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF MAINE. DRIVING RECORDS, INCLUDING EMBEDMENT DEPTH SHALL BE RECORDED AND SUBMITTED TO THE TOWN AND ENGINEER OF RECORD.
11. ALL STEEL SHEET PILE HOLES AND PENETRATIONS SHALL BE DRILLED AND NOT BURNED.

STRUCTURAL NOTES CONTINUED

STEEL GUIDE PIPE PILES

1. STEEL PIPE PILES SHALL BE 12 INCH DIAMETER, MINIMUM 1/2-INCH WALL, STEEL PIPE PILES IN ACCORDANCE WITH ASTM A252 GRADE 3.
2. ALL PILES SHALL BE SEAMLESS.
3. ALL PILES SHALL BE FITTED WITH STEEL CUTTING SHOE.
4. STEEL PIPE PILES SHALL BE COATED WITH FUSION BONDED EPOXY (COLOR BROWN) TO A MINIMUM DEPTH OF 5-FT BELOW GRADE IN ACCORDANCE WITH ASTM A972/A972M STANDARD SPECIFICATION FOR FUSION BONDED EPOXY-COATED PIPE PILES. COATING THICKNESS (DRY) SHALL BE 18-20 MILS.
5. THE CONTRACTOR SHALL TAKE STEPS TO PROTECT PILE COATING FROM DAMAGE DURING HANDLING AND DRIVING OPERATIONS AND SHALL REPAIRANY DEFECTS IN COATING AS DIRECTED BY THE ENGINEER.
6. ALL PILES SHALL BE FILLED WITH CAST-IN PLACE CONCRETE.
7. ALL STEEL PILES FITTED WITH BLACK, UV RESISTANT, LOW DENSITY, CONICAL, POLYETHYLENE CAPS BY FOLLANSBEE (800-223-3444) OR EQUAL

TIMBER PILES

1. TIMBER PILES SHALL HAVE A MINIMUM DIAMETER OF 12-INCHES AT 3-FEET FROM THE BUTT AND MEET ASTM D2899 DESIGN VALUES FOR TREATED ROUND TIMBER PILES, WITH MINIMUM TIP CIRCUMFERENCE AS INDICATED BELOW:

LOCATION	TIP CIRCUMFERENCE	MATERIAL
SUPPORT PILES	25"	SYP
FENDER PILES	25"	GREENHEART
GUIDE PILES	25"	GREENHEART

2. TIMBER PILES SHALL BE SOUTHERN PINE OR GREENHEART CONFORMING TO ASTM D25. PROVIDE PROTECTION TO PILE TIP AND BUTT TO AVOID DAMAGE DURING DRIVING.
3. EXPOSED FASTENERS TO FENDER AND GUIDE PILES SHALL BE COUNTERSUNK A MINIMUM OF 1-1/2 INCHES.
4. ALL FENDER AND GUIDE PILES SHALL BE BANDED WITH ¾" STAINLESS STEEL UTILITY STRAPPING BY BAND-IT IDEX INC. (800-525-0758), "GIANT BAND" PRODUCT #G44099 OR EQUAL, AND FITTED WITH BLACK, UV RESISTANT, LOW DENSITY, CONICAL, POLYETHYLENE CAPS BY FOLLANSBEE (800-223-3444) OR EQUAL. SELECT SIZE TO MATCH PILE DIAMETER AND FASTEN WITH STAINLESS STEEL SCREWS. STAINLESS STRAPS SHALL BE INSTALLED APPROXIMATELY 6" BELOW THE CUTOFF ELEVATION PRIOR TO MAKING THE FINAL CUT.
5. REFER TO SPECIFICATIONS FOR PILE DRIVING CRITERIA. THE CONTRACTOR IS CAUTIONED OF ANTICIPATED RAPID INCREASE IN DRIVING RESISTANCE DUE TO ABRUPT CHANGES IN SOIL STRATA. CARE SHOULD BE TAKEN TO AVOID DAMAGE TO THE PILE.
6. THE CONTRACTOR SHALL ORDER PILES OF SUFFICIENT LENGTH TO ALLOW FOR 5 FT VARIATION IN THE TABULATED LENGTH. REFER TO PILE LAYOUT ON SHEET S-0.

TIMBER MEMBERS

1. ALL EXPOSED EDGES SHALL BE PLANED OR SANDED TO PROVIDE SMOOTH SURFACE FREE OF ROUGH EDGES OR DEFECTS.
2. ALL EXPOSED FASTENERS SHALL BE COUNTERSUNK.
3. REFER TO SCHEDULE THIS SHEET FOR SPECIFIED PIER TIMBER.
4. REFER TO SCHEDULE ON SHEET F-1 FOR SPECIFIED FLOAT TIMBER MATERIALS.

STEEL FABRICATION, MISCELLANEOUS METALS AND FASTENERS

1. ALL STEEL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AISC STEEL MANUAL AND THE AWS D1.1 STRUCTURAL WELDING CODE.
2. ALL METAL ITEMS TO BE A36 STEEL, HOT-DIP GALVANIZED AFTER FABRICATION UNLESS OTHERWISE NOTED.
3. ALL FASTENERS SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.
4. ALL BOLTS SHALL CONFORM TO ASTM A-307. MINIMUM SIZE SHALL BE ¾" DIA. UNLESS OTHERWISE NOTED. ALL BOLTS TO BE HEAVY HEX UNLESS OTHERWISE NOTED.
5. REFER TO DRAWING DETAILS AND FASTENER SCHEDULE LOCATED ON THIS SHEET FOR FASTENER SPECIFICATION.

DEMOLITION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL COMPONENTS FROM THE SITE THAT ARE NOT SPECIFIED FOR REUSE OR SELECTED FOR RETAINAGE BY THE TOWN.
2. THE CONTRACTOR SHALL DISPOSE OF DEMOLITION MATERIAL AT AN APPROVED FACILITY IN ACCORDANCE WITH ALL APPLICABLE REGULATORY REQUIREMENTS.
3. SOUND PILES AND TIMBER MEMBERS SELECTED FOR RETAINAGE BY THE TOWN SHALL BE STOCKPILED ON SITE AND LOADED ONTO TOWN VEHICLES FOR REMOVAL BY THE TOWN.

REFERENCE DOCUMENTS

1. REFER TO "SURVEY & DATUM NOTES" FOR SURVEY BASE MAPPING REFERENCE.
2. SUBSURFACE INFORMATION IS BASED ON A PRELIMINARY FIELD INVESTIGATION BY R.W. GILLESPIE & ASSOCIATES COMPLETED ON AUGUST 21, 2017. REFER TO TEST PIT AND BORING LOGS APPENDED TO THE PROJECT MANUAL.
3. REFER TO THE PROJECT MANUAL FOR COPIES OF REGULATORY PERMITS.

PIER TIMBER SCHEDULE

Timber Size	Location	% Moisture at Treatment	Treatment Type	Treatment pcf	Grading to SPIB	Surface Finishing	Minimum Length (also see drawings)
Timber Pier							
6 x 12,12 x12	Edge Beam	25%	CCA	2.5	No. 2	S2S	Single Span
12 x 12	Pile Caps -Transverse & Longitudinal	25%	CCA	2.5	No. 2	S2S	Single Span
4 x 8	Abutment Ledger Ledger	25%	CCA	2.5	No. 2	S2S	Single Span
6 x 12	Deck Joist, Blocking	25%	CCA	2.5	No. 2	S2S	Single Span
4 x 8	Deck Planking	19%	ACQ	0.6	No. 1	S4S	11'-6"
6 x 12, 12 x 12	Deck Reinforcement at Hoists	25%	CCA	2.5	No. 2	S2S	Single Span
6 x 10	Fender Block	19%	ACQ	0.6	No. 1	S4S	4'-0"
8 x 8	Fender Chock	19%	ACQ	0.6	No. 1	S4S	Single Span
12 x 12	Pile Cap Splice Block	25%	CCA	2.5	No. 1	S4S	4'-0"
6 x 12	Pile Support Blocking	25%	CCA	2.5	No. 1	S4S	Full Length
8x8, 6x8	Ladder Waler	25%	CCA	2.5	No. 2	S2S	10'-9"
4 x 12	Hoist Face Sheathing Apron	Untreated Oak			No. 2	S4S	14'-0"
8x8, 6x8	Sheathing Blocking - Mid Height	25%	CCA	2.5	No. 2	S4S	Single Span
8x8, 6x8	Sheathing Blocking - Bottom	25%	CCA	2.5	No. 2	S4S	Single Span
8 x 12	Sheathing Waler	25%	CCA	2.5	No. 2	S2S	Single Span
8 x 8	Curb	19%	ACQ	0.6	No. 1	S4S	8'-0"
3 x 8	Curb Blocking	19%	ACQ	0.6	No. 1	S4S	2'-0"
3 x 8	Pile Bracing (Pier Widening)	25%	CCA	2.5	No. 2	R	Full Length
Pedestrian Walkways							
1 x 6	Boardwalk Deck Sheathing	19%	ACQ	0.6	No. 1	S4S	5'
4 x 4	Railing Post	19%	ACQ	0.6	No. 1	S4S	4'-6"
2 x 4	Top Rail Backer	19%	ACQ	0.6	No. 1	S4S	16'
2 x 6	Top Rail and Side Rails	19%	ACQ	0.6	No. 1	S4S	16'
6 x 6	Integral Light Post	19%	ACQ	0.6	No. 1	S4S	14'
New Float							
See Float Timber Schedule, Sheet F-1, F-2, F-3, F-4, F-5							

Chromated Copper Arsenate (CCA)
Alkaline Copper Quaternary (ACQ) oc Micronized Copper Azole (MCA) Equivalent
Quantities shall include sufficient material to include blocking and splices (where authorized).
R = Rough Sawn, S2S = Finished Two Sides, S4S = Finished All Sides.

PIER FASTENER SCHEDULE

Location	Diameter in	No./ Connection	Finish	Length in
Drift Pins				
Cap to Pile	1"	1	Hot Dip Galvanized	10"
Joists to Cap	1"	1	Hot Dip Galvanized	20"
Spikes				
Joist to Blocking	spike	2	Hot Dip Galvanized	8"
Wood Decking	3/8" Spiral Shank	2	Hot Dip Galvanized	8"
Timber Bolted Connections (Heavy Hex U.N.O)				
Cap splice	1"	2	Hot Dip Galvanized	Length to suit construction
Transverse Cap to Longitudinal Cap	1-1/4"	1		
Joist Clip to Joist	7/8"	1	Hot Dip Galvanized	
Fender/Guide Pile Top Connection	1-1/4"	1	Hot Dip Galvanized	
Pile Bracing	1"	1	Hot Dip Galvanized	
Ladder Waler to Pile	1"	1	Hot Dip Galvanized	
Fender Waler to Pile	1"	1	Hot Dip Galvanized	
Pile Chocks	1"	2 (min), 1per 5'	Hot Dip Galvanized	
Curb to Cap/Fender Beam	1"	2 (min), 1per 5'	Galvanized Bolts "Weather Tuff" SeaPort Marine or Equal (800) 446-8056	
Face Joist to Joist	5/8"	2		
Timber Handrail/Light Post Post to Cap	5/8"	2		
Timber Handrail/Light Post to Edge Beam	5/8"	2		
Screw/Lag Connections				
Timber Handrail to post	Square Drive	2	316 Stainless	4"
Timber Boardwalk Planks	Square Drive	2	316 Stainless	4"
Abutment RC, Stone, Granite Block Pinning				Embedment
Bolted Connections	1" threaded rod	Refer to Plans	Set in Epoxy Grout	12" Min
Existing Stone Pins	1" Rod	See sheet S-4	Cold formed steel	30

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE BARNEY J. BAKER No. 5737 LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

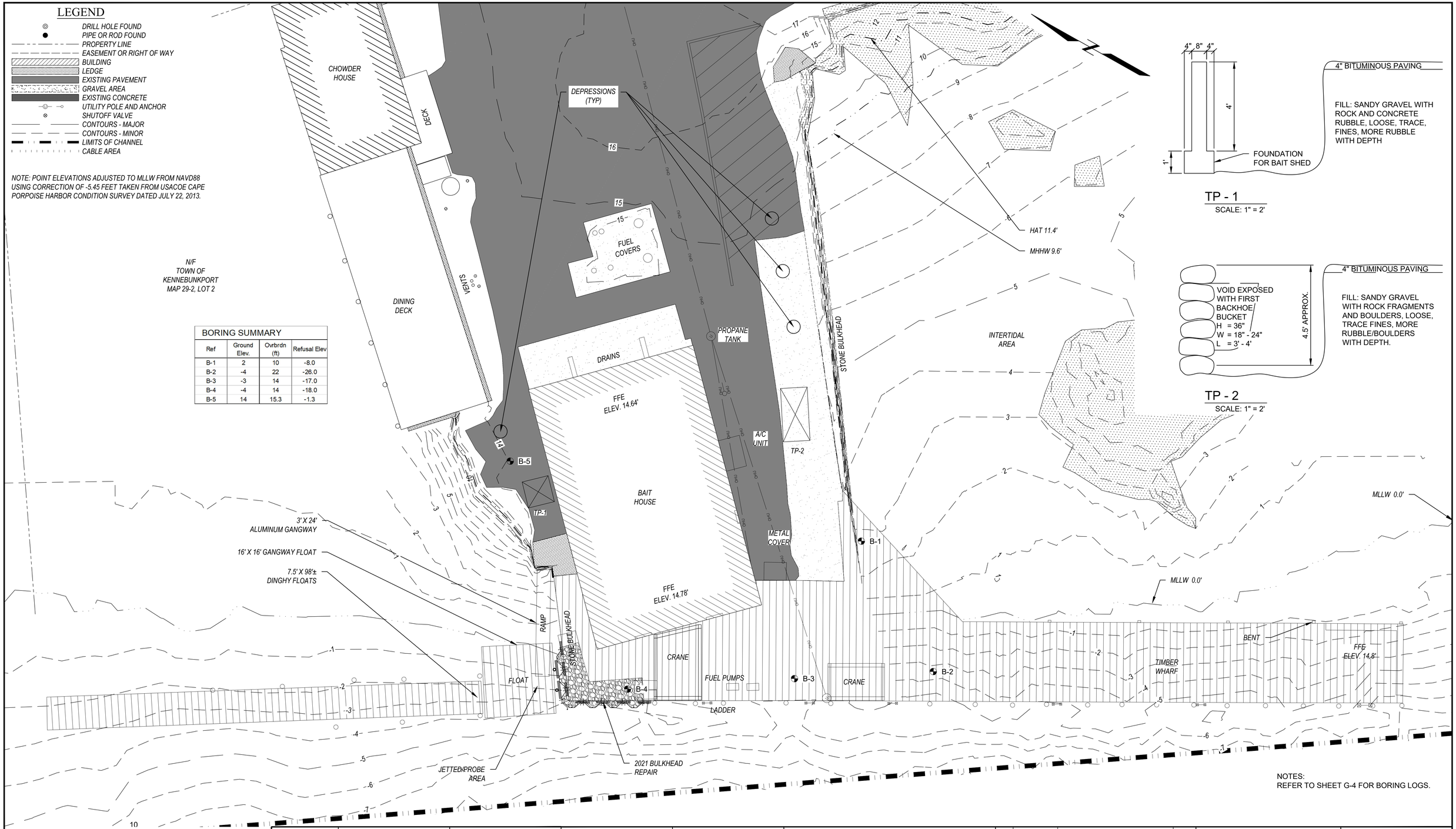
SHEET NAME
NOTES & SCHEDULES

SHEET NO.
G-2

LEGEND

- DRILL HOLE FOUND
- PIPE OR ROD FOUND
- PROPERTY LINE
- EASEMENT OR RIGHT OF WAY
- BUILDING
- LEDGE
- EXISTING PAVEMENT
- GRAVEL AREA
- EXISTING CONCRETE
- UTILITY POLE AND ANCHOR
- SHUTOFF VALVE
- CONTOURS - MAJOR
- CONTOURS - MINOR
- LIMITS OF CHANNEL
- CABLE AREA

NOTE: POINT ELEVATIONS ADJUSTED TO MLLW FROM NAVD88 USING CORRECTION OF -5.45 FEET TAKEN FROM USACOE CAPE PORPOISE HARBOR CONDITION SURVEY DATED JULY 22, 2013.



BORING SUMMARY

Ref	Ground Elev.	Ovrbrdn (ft)	Refusal Elev
B-1	2	10	-8.0
B-2	-4	22	-26.0
B-3	-3	14	-17.0
B-4	-4	14	-18.0
B-5	14	15.3	-1.3

TP - 1
SCALE: 1" = 2'

TP - 2
SCALE: 1" = 2'

NOTES:
REFER TO SHEET G-4 FOR BORING LOGS.

0 10 20
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME
GEOTECHNICAL INVESTIGATION PLAN

SHEET NO.
G-3

R.W. Gillespie & Associates, Inc.
Geotechnical Engineering•Geohydrology•Materials Testing Services

Boring Log: B-1
Total Depth (ft): 10
Sheet 1 of 1

Project Name: Cape Porpoise Pier Bulkhead Stabilization
RWG&A Project No. 0855-008
Location: Kennebunkport, Maine
Client: Baker Design Consultants, Inc.
RWG&A Representative: D. Walker
Boring Location: See Exploration Location Plan
Boring Abandonment Method:
Observed Water Depth: N/A

Drilling Contractor: Northern Test Boring
Drill Rig: Diedrich D-50
Driller Rep.: M. Nadeau
Date Started: 08/21/2017
Date Completed: 08/21/2017
Surface Elevation: N/A
Drilling Method: Drive + Wash
Casing Type: 4" ID Steel

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	SILTY SAND AND GRAVEL (GW); Medium dense, wet, fine to medium sand and fine to coarse gravel with little silt, black, organic odor.	7	1 5 12 16	17		
5			S-2	SILT WITH SAND AND CLAY (ML); Loose, wet, silt, little fine sand and clay, olive brown, occasional shell, organic odor.	2	1 1 1 1	2		
				Becomes very dense at 7.8'.					
10			S-3	SILTY SAND WITH GRAVEL (SW); Very dense, wet, fine to medium sand, some silt, little fine to medium gravel, tan.	10	20 38 50/5"	88/11"		
				Bottom of Exploration at 10'; Roller bit refusal, possible boulder or bedrock.					
15									
20									
25									
30									

Notes: Pier deck surface is approximately 11.7 feet above ground surface.

R.W. Gillespie & Associates, Inc.
Geotechnical Engineering•Geohydrology•Materials Testing Services

Boring Log: B-2
Total Depth (ft): 32.6
Sheet 1 of 2

Project Name: Cape Porpoise Pier Bulkhead Stabilization
RWG&A Project No. 0855-008
Location: Kennebunkport, Maine
Client: Baker Design Consultants, Inc.
RWG&A Representative: D. Walker
Boring Location: See Exploration Location Plan
Boring Abandonment Method:
Observed Water Depth: N/A

Drilling Contractor: Northern Test Boring
Drill Rig: Diedrich D-50
Driller Rep.: M. Nadeau
Date Started: 08/21/2017
Date Completed: 08/21/2017
Surface Elevation: N/A
Drilling Method: Drive + Wash
Casing Type: 4" ID Steel

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	Poor recovery consisting of marine shells	1	WOH WOH WOH WOH	WOH		
5			S-2	SILTY SAND (SM); Very loose, wet, fine sand, some silt, frequent shells, dark gray, strong organic odor.	10	WOH 1 for 18"	WOH		
				SILTY CLAY (CL); Very soft, wet, clay, some silt, gray, occasional shell, slight organic odor.					
10		FV	FV	Field Vane: Undrained Shear Strength: Su= 0.41 ksf, residual= 0.0 ksf.					
		FV	FV	Field Vane: Undrained Shear Strength: Su= 0.44 ksf, residual= 0.0 ksf.					
15			S-3	Drilling resistance increases at 13.5'. Poorly Graded Gravel (GP) Poor recovery in spoon, fine to coarse gravel was only recovered material.	0	10 4 5 6	9		
20			S-4	Becomes very dense, poor spoon sample recovery.	0.5	50/2"	50/2"		
			R-1	Roller bit refusal at 22' below ground surface. Began NQ2 rock core	24				
25			R-2	Recovery 24"/24" = 100% RQD 5.5"/24" = 23% Very Poor GRANITE; Light gray, hard, moderately weathered, fine to medium grained biotite granite. Rock structure is massive and highly fractured with near horizontal and vertical cleavage fractures. Joint walls are moderately weathered and are tight to moderately open and rough.	20				
			R-3		40				
			R-4	BASALT; Black, hard, slightly weathered, aphanitic basalt. Rock structure is massive, hightly fractured with shallow and high angle cleavage fractures. Joint walls are slightly weathered, tight to moderately open, and slightly rough.	12				
30									

Notes: Pier deck surface is approximately 16' above ground surface.

R.W. Gillespie & Associates, Inc.
Geotechnical Engineering•Geohydrology•Materials Testing Services

Boring Log: B-2
Total Depth: 32.6
Sheet 2 of 2

Project Name: Cape Porpoise Pier Bulkhead Stabilization
Location: Kennebunkport Maine
Client: Baker Design Consultants, Inc.
Observed Water Depth: N/A

RWG&A Project No. 0855-008
Surface Elevation: N/A
Casing Type: 4" ID Steel

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
30			R-5	Recovery 20"/20" = 100% RQD = 8"/20" = 40% Poor Recovery 40"/40" = 100% RQD = 15"/40" = 38% Poor Recovery 12"/12" = 100% RQD = 11"/12" = 92% Excellent	32				
				GRANITE; Light gray, hard, moderately weathered, fine to medium grained biotite granite. Rock structure is massive and highly fractured with near moderate angle cleavage fractures. Joint walls are slightly weathered and are tight to moderately open and rough. Recovery 32"/32" = 100% RQD = 18.5"/32" = 58% Fair					
35				Bottom of exploration @ 32.6'; Rock core terminated in bedrock					
40									
45									
50									
55									
60									

Notes: Pier deck surface is approximately 16' above ground surface.

R.W. Gillespie & Associates, Inc.
Geotechnical Engineering•Geohydrology•Materials Testing Services

Boring Log: B-3
Total Depth (ft): 8
Sheet 1 of 1

Project Name: Cape Porpoise Pier Bulkhead Stabilization
RWG&A Project No. 0855-008
Location: Kennebunkport, Maine
Client: Baker Design Consultants, Inc.
RWG&A Representative: D. Walker
Boring Location: See Exploration Location Plan
Boring Abandonment Method:
Observed Water Depth: N/A

Drilling Contractor: Northern Test Boring
Drill Rig: Diedrich D-50
Driller Rep.: M. Nadeau
Date Started: 08/21/2017
Date Completed: 08/21/2017
Surface Elevation: N/A
Drilling Method: Drive + Wash
Casing Type: 4" ID Steel Casing

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	SANDY SILT (ML); Very loose, wet, silt with some sand, gray.	8	WOH WOH WOH WOH	WOH		
5				Drilling resistance increases at 7'.					
			S-2	Bottom of Exploration at 8'; Roller bit refusal, possible boulder or bedrock.	50/2"	50/2"			
10									
15									
20									
25									
30									

Notes: Pier deck surface is approximately 17 feet above ground surface.

R.W. Gillespie & Associates, Inc.
Geotechnical Engineering•Geohydrology•Materials Testing Services

Boring Log: B-4
Total Depth (ft): 10.3
Sheet 1 of 1

Project Name: Cape Porpoise Pier Bulkhead Stabilization
RWG&A Project No. 0855-008
Location: Kennebunkport, Maine
Client: Baker Design Consultants, Inc.
RWG&A Representative: D. Walker
Boring Location: See Exploration Location Plan
Boring Abandonment Method:
Observed Water Depth:

Drilling Contractor: Northern Test Boring
Drill Rig: Diedrich D-50
Driller Rep.: M. Nadeau
Date Started: 08/21/2017
Date Completed: 08/21/2017
Surface Elevation: N/A
Drilling Method: Drive + Wash
Casing Type: 4" ID Steel Casing

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	FILL; Wet, silt with fine to medium gravel, black.	6	WOH WOH WOH WOH	WOH		
				SILTY SAND (SM); Very loose, wet, fine sand, some silt, frequent shells, organic odor, gray.					
5				SILTY CLAY (CL); Very soft, wet, clay, some silt, gray.					
			S-2			WOH WOH WOH WOH	WOH		
10				Bottom of Exploration at 10.3'; Roller bit refusal, possible boulder or bedrock.					
15									
20									
25									
30									

Notes: Pier deck surface is 18 feet above ground surface.

R.W. Gillespie & Associates, Inc.
Geotechnical Engineering•Geohydrology•Materials Testing Services

Boring Log: B-5
Total Depth (ft): 15.3
Sheet 1 of 1

Project Name: Cape Porpoise Pier Bulkhead Stabilization
RWG&A Project No. 0855-008
Location: Kennebunkport, Maine
Client: Baker Design Consultants, Inc.
RWG&A Representative: D. Walker
Boring Location: See Exploration Location Plan
Boring Abandonment Method:
Observed Water Depth:

Drilling Contractor: Northern Test Boring
Drill Rig: Diedrich D-50
Driller Rep.: M. Nadeau
Date Started: 08/21/2017
Date Completed: 08/21/2017
Surface Elevation: N/A
Drilling Method: Drive + Wash
Casing Type: 4" ID Steel Casing

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	ASPHALTIC PAVEMENT (1 inch).					
				FILL; Moist, fine to coarse sand, little fine gravel, brown.					
5			S-2	Becomes wet, very dense, fine to coarse sand and fine to coarse gravel, brown.	3	115/3"	115/3"		
10			S-3	Becomes medium dense.	8	5 1 14 13	15		
				Wood section at 12' may be 8" thick, foreign chemical odor.					
15			S-4	SILTY SAND WITH GRAVEL (SM); Very dense, wet, fine sand, some silt, little fine to medium gravel, possible till.	2	50/4"	50/4"		
				Bottom of Exploration at 15.3'; Auge refusal, possible boulder or bedrock.					
20									
25									
30									

Notes: Disturbance of fill during auger drilling created cavernous space beneath the asphalt.

Attention:
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STATE OF MAINE
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GEI Project	2104738

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

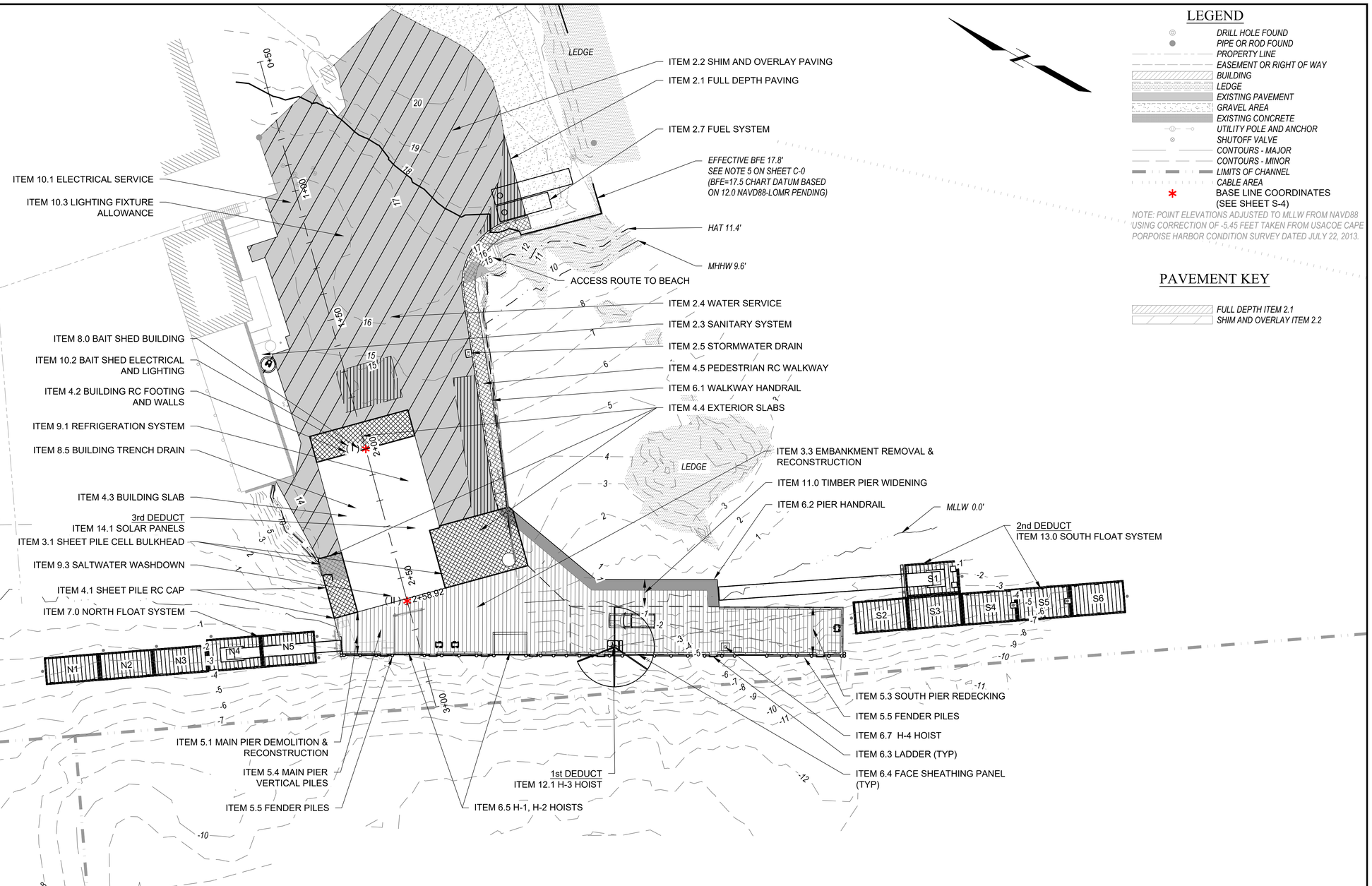
KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **BORING LOGS**
SHEET NO.: **G-4**

BASE BID

Bid Item	Description (See Measurement & Payment Specification)	Sheet Reference	Quantity	UNIT
1. GENERAL ITEMS				
1.1	MOBILIZATION & DEMOBILIZATION	-	1	LS
1.2	MAINTENANCE OF PIER ACCESS	G-2	1	LS
1.3	EROSION CONTROL	G-2	1	LS
1.4	SITE TRAILER AND SIGNAGE	G-2	1	LS
2. SITE WORK				
2.1	FULL DEPTH PAVING	C-2	26	Tons
2.2	SHIM AND OVERLAY PAVING	C-2	184	Tons
2.3	SANITARY SYSTEM	C-5	1	LS
2.4	WATER SERVICE	C-5	1	LS
2.5	STORMWATER & DRAINAGE	C-5	1	LS
2.6	LEDGE REMOVAL	-	110	CY
2.7	FUEL SYSTEM	C-4	1	LS
3. RECONSTRUCTED UPLAND PIER ELEMENTS				
3.1	SHEET PILE CELL BULKHEAD	S-2	1	LS
3.2	EXISTING SEAWALL REPAIRS	-	200	SF
3.3	EMBANKMENT REMOVAL & RECONSTRUCTION	S-3	1	LS
4. REINFORCED CONCRETE				
4.1	SHEET PILE RC CAP	S-4	210	LF
4.2	BUILDING RC FOUNDATION WALLS & FOOTINGS	B SERIES	71	CY
4.3	BUILDING SLAB	B-8	54	CY
4.4	EXTERIOR SLABS	S-1	32	CY
4.5	PEDESTRIAN RC WALKWAY	S-10	74	CY
5. TIMBER PIER RECONSTRUCTION				
5.1	MAIN PIER DEMOLITION AND RECONSTRUCTION	C-0	1	LS
5.2	NOT USED			
5.3	SOUTH PIER REDECKING AND BRACING	S-1	1	LS
5.4	MAIN PIER VERTICAL PILES	S-2	53	EA
5.5	FENDER PILES	S-2	33	EA
6. PIER/SITE AMENITIES				
6.1	WALKWAY HANDRAIL	S-10	120	LF
6.2	PIER HANDRAIL	S-10	190	LF
6.3	PIER LADDERS	S-8	7	EA
6.4	FACE SHEATHING PANELS	S-2	4	EA
6.5	HOIST H-1 & H-2 (REFURBISH + SHED ROOFS)	S-1	2	EA
6.6	NOT USED			
6.7	HOIST H-4 (REFURBISH)	S-1	1	LS
7. NORTH FLOAT SYSTEM				
7.1	G-2 NORTH GANGWAY 40-FT	F-1	1	EA
7.2	12 X 20 N4 FLOAT	F-2	1	EA
7.3	10 X 20 N1, N2 OR N3 FLOATS	F-3	3	LS
7.4	12 X 20 N5 FLOAT	F-5	2	EA
7.5	TIMBER GUIDE PILES- NORTH FLOATS	S-2	6	EA
8. BAIT SHED				EA
8.1	BUILDING ABOVE RC FOUNDATION	B-1 - B-6	1	LS
8.2	DOORS AND WINDOWS	B-1 - B-6	1	LS
8.3	METAL ROOFING	B-2	1	LS
8.4	CABINETRY	B-2	1	LS
8.5	BUILDING TRENCH DRAIN	B-4, B-6	74	LF
9. MECHANICAL SYSTEMS				
9.1	MECHANICAL SYSTEMS	M-1 - M-4	1	LS
9.2	PLUMBING	P-1 - P3	1	LS
9.3	SALT WATER WASHDOWN	P-1	1	LS
10. ELECTRICAL SYSTEMS				
10.1	SITE ELECTRICAL SERVICE, LIGHTING, POWER, FUEL AND EQUIPMENT FEEDS	E1-0/ES-1	1	LS
10.2	BAIT SHED ELECTRICAL & LIGHTING	E1-0/ES-0	1	LS
10.3	LIGHTING FIXTURE ALLOWANCE	E-4	ALLOWANCE	
10.4	RADIO AND CAMERA EQUIPMENT ALLOWANCE	G-1	ALLOWANCE	
11. TIMBER PIER WIDENING				
11.1	PIER WIDENING	S-1	1	LS
11.2	PIER WIDENING PILES	S-2	53	EA
12. HOIST (Non EDA Eligible)	**1st DEDUCT**			
12.1	HOIST H-3 (NEW)	S-1	1	LS
13. SOUTH FLOAT SYSTEM	**2nd DEDUCT**			
13.1	G-1 SOUTH GANGWAY 80-FT	F-1	1	EA
13.2	12 X 20 S1 FLOAT	F-4	1	EA
13.3	12 X 20 S2,S3,S6 FLOATS	F-5	3	EA
13.4	12 X 20 S4,S5 FLOATS	F-6	2	EA
13.5	STEEL GUIDE PILES- SOUTH FLOATS	S-2	7	EA
13.6	STEEL PILE SOCKETS	S-2, S-8	7	EA
14. SOLAR	**3rd DEDUCT**			
14.1	SOLAR PANEL INSTALLATION	B-2	1	LS



LEGEND

- DRILL HOLE FOUND
- PIPE OR ROD FOUND
- PROPERTY LINE
- EASEMENT OR RIGHT OF WAY
- BUILDING
- LEDGE
- EXISTING PAVEMENT
- GRAVEL AREA
- EXISTING CONCRETE
- UTILITY POLE AND ANCHOR
- SHUTOFF VALVE
- CONTOURS - MAJOR
- CONTOURS - MINOR
- LIMITS OF CHANNEL
- CABLE AREA
- * BASE LINE COORDINATES (SEE SHEET S-4)

NOTE: POINT ELEVATIONS ADJUSTED TO MLLW FROM NAVD88 USING CORRECTION OF -5.45 FEET TAKEN FROM USACOE CAPE PORPOISE HARBOR CONDITION SURVEY DATED JULY 22, 2013.

PAVEMENT KEY

- FULL DEPTH ITEM 2.1
- SHIM AND OVERLAY ITEM 2.2

0 20 40
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
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GEI Project	2104738

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TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **BID ITEMS**

SHEET NO.: **G-5**

LEGEND

- DRILL HOLE FOUND
- PIPE OR ROD FOUND
- PROPERTY LINE
- EASEMENT OR RIGHT OF WAY
- BUILDING
- LEDGE
- EXISTING PAVEMENT
- GRAVEL AREA
- EXISTING CONCRETE
- UTILITY POLE AND ANCHOR
- SHUTOFF VALVE
- CONTOURS - MAJOR
- CONTOURS - MINOR
- LIMITS OF CHANNEL
- CABLE AREA

NOTE: POINT ELEVATIONS ADJUSTED TO MLLW FROM NAVD88 USING CORRECTION OF -5.45 FEET TAKEN FROM USACOE CAPE PORPOISE HARBOR CONDITION SURVEY DATED JULY 22, 2013.

SECTION OF NOAA CHART 13286: CAPE ELIZABETH TO PORTSMOUTH CAPE PORPOISE HARBOR INSET

SURVEYOR'S NOTES: (LITTLE RIVER LAND SURVEY)

1. RECORD OWNER: THE INHABITANTS OF THE TOWN OF KENNEBUNKPORT, SEE DEED BOOK 3122, PAGE 6 DATED FEBRUARY 8, 1983. THE PROPERTY LINES SHOWN HEREON ARE BASED SOLEY ON SAID DEED. NO OTHER RECORD RESEARCH HAS BEEN PERFORMED BY THIS SURVEYOR.
2. BEARINGS ARE REFERENCED TO THE STATE PLANE COORDINATE SYSTEM OF 1983, MAINE WEST ZONE, AS DETERMINED BY STATIC GNSS OBSERVATION WITH POST PROCESSING BY THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE.
3. ELEVATIONS WERE ORIGINALLY DERIVED IN REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS DETERMINED BY STATIC GNSS OBSERVATION AND POST PROCESSING WITH THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE. THEY WERE SUBSEQUENTLY ADJUSTED TO THE MEAN LOWER LOW WATER DATUM (MLLW) AS DESCRIBED IN GENERAL NOTE 3 ON A PLAN ENTITLED "CAPE PORPOISE HARBOR, KENNEBUNKPORT, MIANE, CONDITION SURVEY...6, 15, 16, AND 18-FOOT AND 15-FOOT ANCHORAGE" DATED JULY 22, 2013 BY THE U.S. ARMY CORP OF ENGINEERS NEW ENGLAND DISTRICT. SAID PLAN INDICATES A DATUM SHIFT BETWEEN NAVD88 AND MLLW OF 5.45 FEET.
4. THE HIGHEST ANNUAL TIDE ELEVATION (HAT) OF 11.4 FEET IN MLLW WAS TAKEN FROM TIDE TABLES PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AVAILABLE ONLINE FOR CAPE PORPOISE. THE LOCATION OF THE HAT UNDER THE PIER NEAR THE BAIT HOUSE HAS NOT BEEN CLEARLY IDENTIFIED.
5. A PORTION OF THE PROJECT AREA IS SHOWN IN A SPECIAL FLOOD HAZARD AREA, ZONE V2 (AREAS OF 100 YEAR FLOOD WITH THE VELOCITY (WAVE ACTION); BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS DETERMINED) ON THE FLOOD INSURANCE RATE MAP FOR THE TOWN OF KENNEBUNKPORT WITH COMMUNITY PANEL NUMBER 230170 0007 B AND AN EFFECTIVE DATE OF APRIL 18, 1983. THE BASE FLOOD ELEVATION OF 13 FEET IN NAVD29 SHOWN THEREON IS EFFECTIVELY THE SAME AS AN ELEVATION OF 12.33 FEET IN NAVD88 AND 17.8 IN MLLW. THAT ELEVATION IS DEPICTED HEREON.
6. A PORTION OF THE PROJECT AREA IS SHOWN IN A SPECIAL FLOOD HAZARD AREA, ZONE VE (COASTAL FLOOD ZONE WITH VELOCITY HAZARD (WAVE ACTION); BASE FLOOD ELEVATIONS DETERMINED) ON THE PRELIMINARY FLOOD INSURANCE RATE MAP FOR YORK COUNTY WITH MAP NUMBER 23031CO606G AND A PRELIMINARY DATE OF APRIL 14, 2017. THE BASE FLOOD ELEVATION SHOWN THEREON OF 18 FEET IN NAVD88 IS EFFECTIVELY THE SAME AS AN ELEVATION OF 23.5 IN MLLW. THAT ELEVATION IS DEPICTED HERON.
7. THE MEAN HIGHER HIGH WATER (MHHW) ELEVATION OF 9.6 FEET IN THE MLLW DATUM WAS DERIVED FROM THE VERTICAL DATUM TRANSLATION UTILITY DEVELOPED JOINTLY BY NOAA'S NATIONAL GEODETIC SURVEY, OFFICE OF COAST SURVEY AND CENTER FOR OPERATIONAL OCEANOGRAPHIC PRODUCTS AND SERVICES.
8. BATHYMETRIC DATA WAS ACQUIRED BY USE OF SONARMITE SINGLE BEAM ECHOSOUNDER SYNCED TO A LEICA TCRP1203 ROBOTIC TOTAL STATION WITH AN ALLEGRO CX DATA COLLECTOR.

NOTES:
1. REFER TO GEOTECHNICAL INFORMATION ON SHEETS G-3 AND G-4.

0 20 40
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

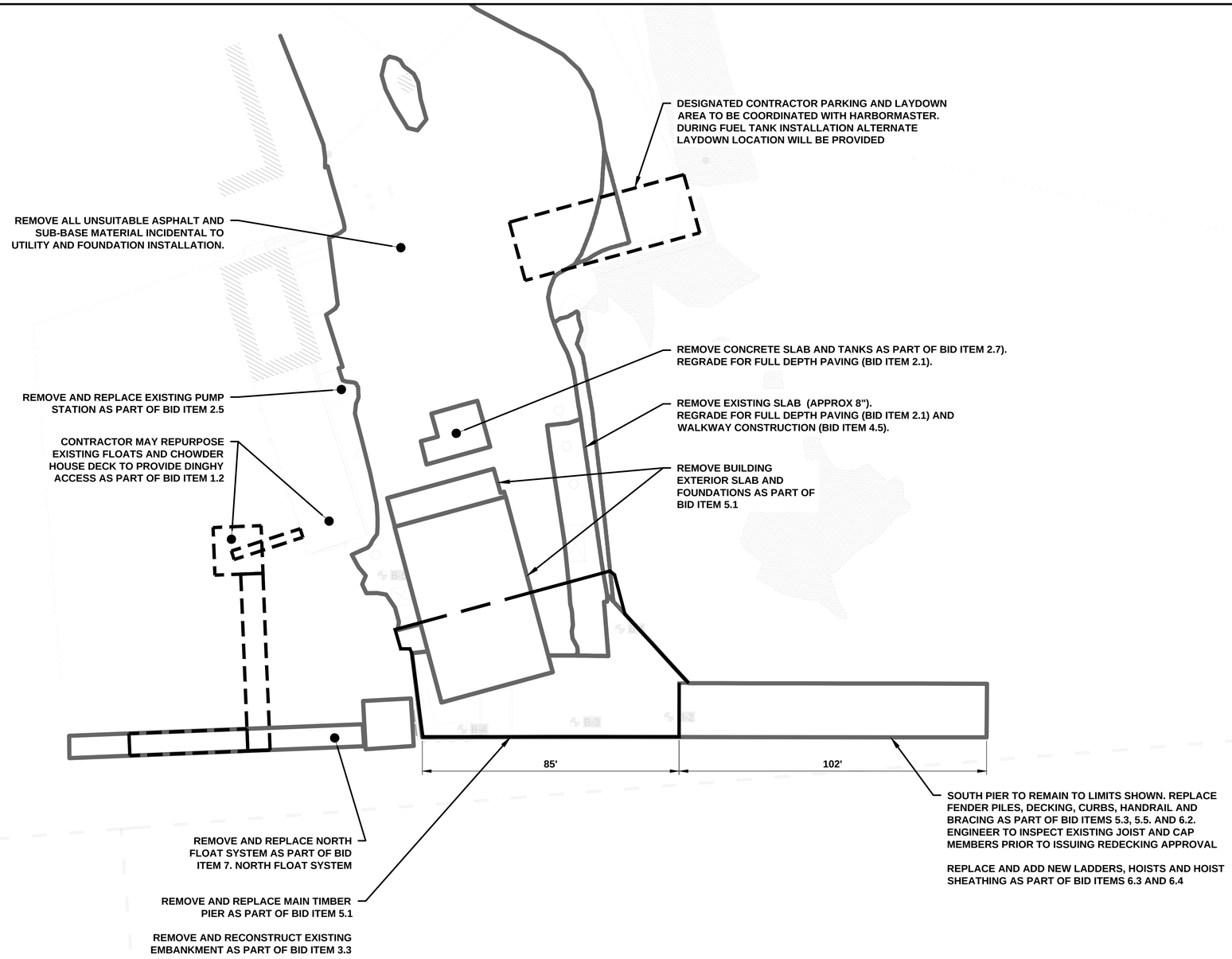
KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: EXISTING CONDITIONS

SHEET NO.: C-0

---- B:\Working\KENNEBUNKPORT, TOWN OF\2104738 - 16-68 Cape Porpoise Pier\00_CAD\Design\Sheets\C-0 EXISTING CONDITIONS.dwg - 1/22/2024



NOTES:
1. REFER TO GEOTECHNICAL INFORMATION ON SHEETS G-3 AND G-4.

0 20 40
SCALE, FEET

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KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **DEMOLITION PLAN**

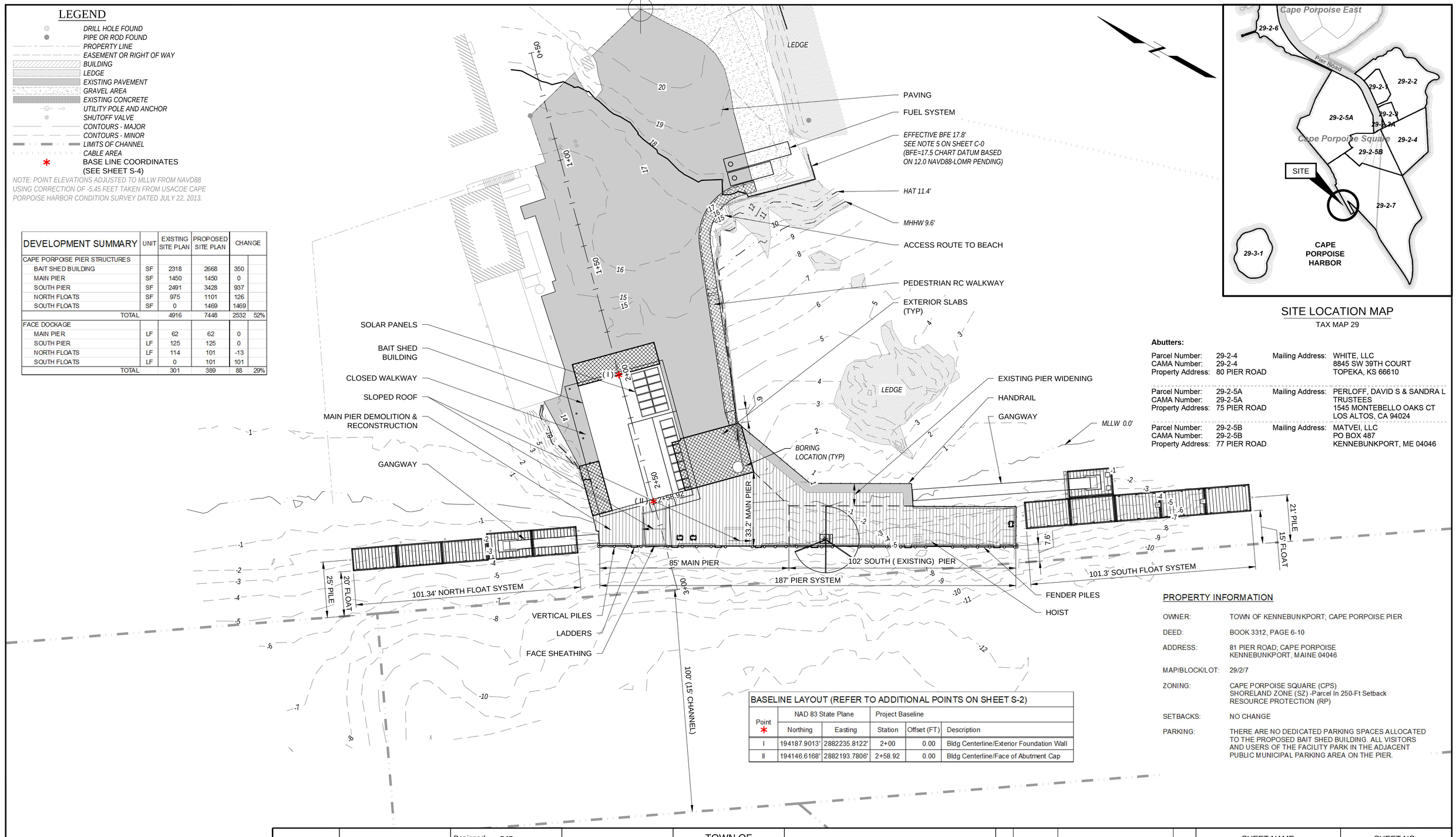
SHEET NO.: **C-1**

LEGEND

- DRILL HOLE FOUND
- PIPE OR ROD FOUND
- PROPERTY LINE
- EASEMENT OR RIGHT OF WAY
- BUILDING
- LEDGE
- EXISTING PAVEMENT
- GRAVEL AREA
- EXISTING CONCRETE
- UTILITY POLE AND ANCHOR
- SHUTOFF VALVE
- CONTOURS - MAJOR
- CONTOURS - MINOR
- LIMITS OF CHANNEL
- CABLE AREA
- * BASE LINE COORDINATES (SEE SHEET S-4)

NOTE: POINT ELEVATIONS ADJUSTED TO MLLW FROM NAVD88 USING CORRECTION OF -5.45 FEET TAKEN FROM USACOE CAPE PORPOISE HARBOR CONDITION SURVEY DATED JULY 22, 2013.

DEVELOPMENT SUMMARY	UNIT	EXISTING SITE PLAN	PROPOSED SITE PLAN	CHANGE	
CAPE PORPOISE PIER STRUCTURES					
BAIT SHED BUILDING	SF	2318	2668	350	
MAIN PIER	SF	1450	1450	0	
SOUTH PIER	SF	2491	3428	937	
NORTH FLOATS	SF	975	1101	126	
SOUTH FLOATS	SF	0	1469	1469	
TOTAL		4916	7448	2532	52%
FACE DOCKAGE					
MAIN PIER	LF	62	62	0	
SOUTH PIER	LF	125	125	0	
NORTH FLOATS	LF	114	101	-13	
SOUTH FLOATS	LF	0	101	101	
TOTAL		301	389	88	29%



SITE LOCATION MAP

TAX MAP 29

Abutters:

Parcel Number:	29-2-4	Mailing Address:	WHITE, LLC
CAMA Number:	29-2-4		8845 SW 39TH COURT
Property Address:	80 PIER ROAD		TOPEKA, KS 66610
Parcel Number:	29-2-5A	Mailing Address:	PERLOFF, DAVID S & SANDRA L
CAMA Number:	29-2-5A		TRUSTEES
Property Address:	75 PIER ROAD		1545 MONTEBELLO OAKS CT
			LOS ALTOS, CA 94024
Parcel Number:	29-2-5B	Mailing Address:	MATVEI, LLC
CAMA Number:	29-2-5B		PO BOX 487
Property Address:	77 PIER ROAD		KENNEBUNKPORT, ME 04046

BASELINE LAYOUT (REFER TO ADDITIONAL POINTS ON SHEET S-2)					
Point *	NAD 83 State Plane		Project Baseline		
	Northing	Easting	Station	Offset (FT)	Description
I	194187.9013'	2882235.8122'	2+00	0.00	Bldg Centerline/Exterior Foundation Wall
II	194146.6168'	2882193.7806'	2+58.92	0.00	Bldg Centerline/Face of Abutment Cap

PROPERTY INFORMATION

OWNER:	TOWN OF KENNEBUNKPORT; CAPE PORPOISE PIER
DEED:	BOOK 3312, PAGE 6-10
ADDRESS:	81 PIER ROAD; CAPE PORPOISE KENNEBUNKPORT, MAINE 04046
MAP/BLOCK/LOT:	29/2/7
ZONING:	CAPE PORPOISE SQUARE (CPS) SHORELAND ZONE (SZ) -Parcel In 250-Ft Setback RESOURCE PROTECTION (RP)
SETBACKS:	NO CHANGE
PARKING:	THERE ARE NO DEDICATED PARKING SPACES ALLOCATED TO THE PROPOSED BAIT SHED BUILDING. ALL VISITORS AND USERS OF THE FACILITY PARK IN THE ADJACENT PUBLIC MUNICIPAL PARKING AREA ON THE PIER.

0 20 40
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: PROPOSED SITE PLAN

SHEET NO.: C-2

LEGEND

- DRILL HOLE FOUND
- PIPE OR ROD FOUND
- PROPERTY LINE
- EASEMENT OR RIGHT OF WAY
- BUILDING
- LEDGE
- EXISTING PAVEMENT
- GRAVEL AREA
- EXISTING CONCRETE
- UTILITY POLE AND ANCHOR
- SHUTOFF VALVE
- CONTOURS - MAJOR
- CONTOURS - MINOR
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- BASE LINE COORDINATES (SEE SHEET S-4)

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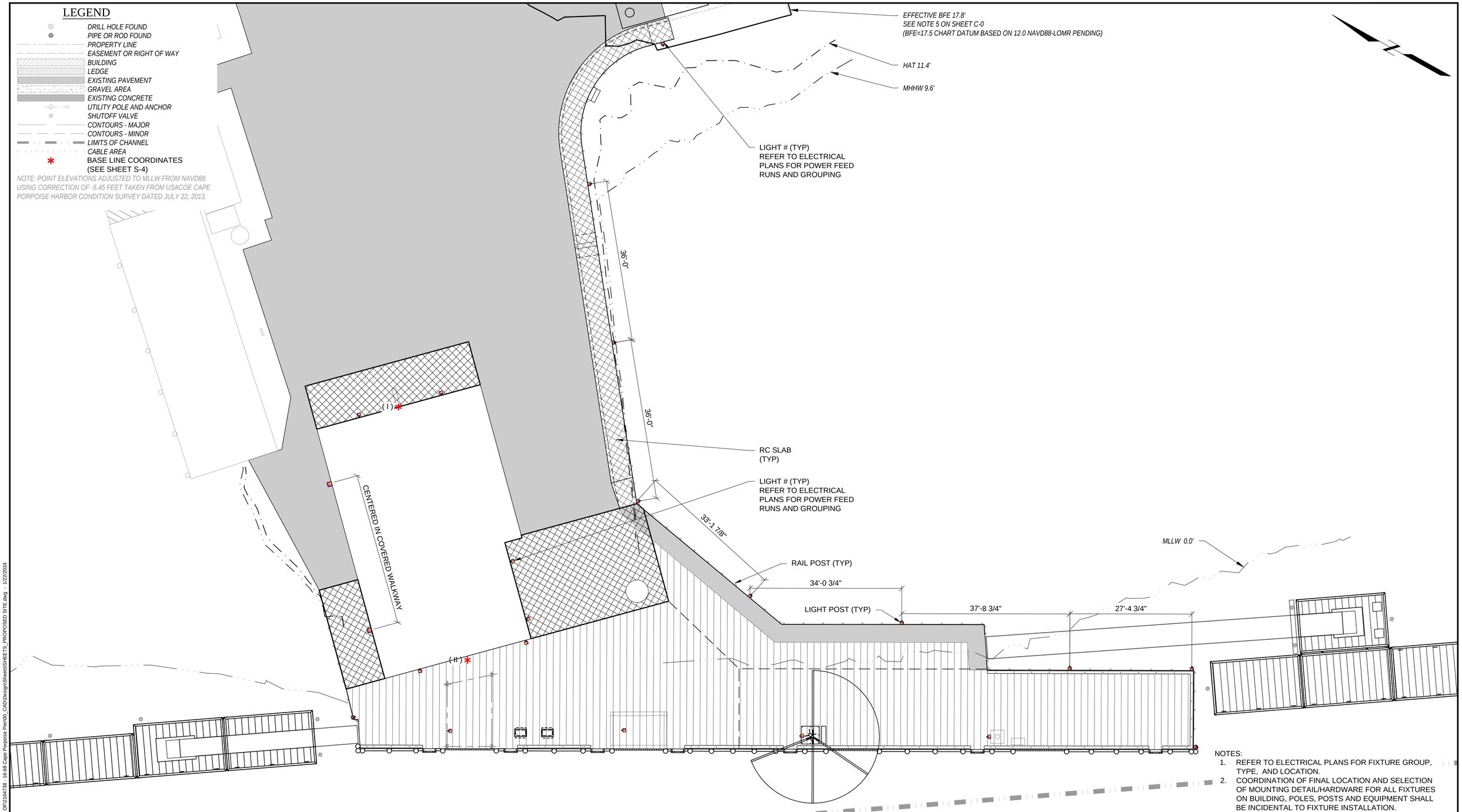

NOTES:
1. REFER TO ELECTRICAL PLANS FOR FIXTURE GROUP, TYPE, AND LOCATION.
2. COORDINATION OF FINAL LOCATION AND SELECTION OF MOUNTING DETAIL/HARDWARE FOR ALL FIXTURES ON BUILDING, POLES, POSTS AND EQUIPMENT SHALL BE INCIDENTAL TO FIXTURE INSTALLATION.

REFERENCE DOCUMENTS

1. REFER TO "SURVEY & DATUM NOTES" FOR SURVEY BASE MAPPING REFERENCE.
2. SUBSURFACE INFORMATION IS BASED ON A FIELD INVESTIGATION BY R.W. GILLESPIE & ASSOCIATES COMPLETED ON AUGUST 21, 2017.. REFER TO TEST PIT AND BORING LOGS APPENDED TO THE PROJECT MANUAL.
3. REFER TO THE PROJECT MANUAL FOR COPIES OF REGULATORY PERMITS.

0 10 20
SCALE, FEET

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TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

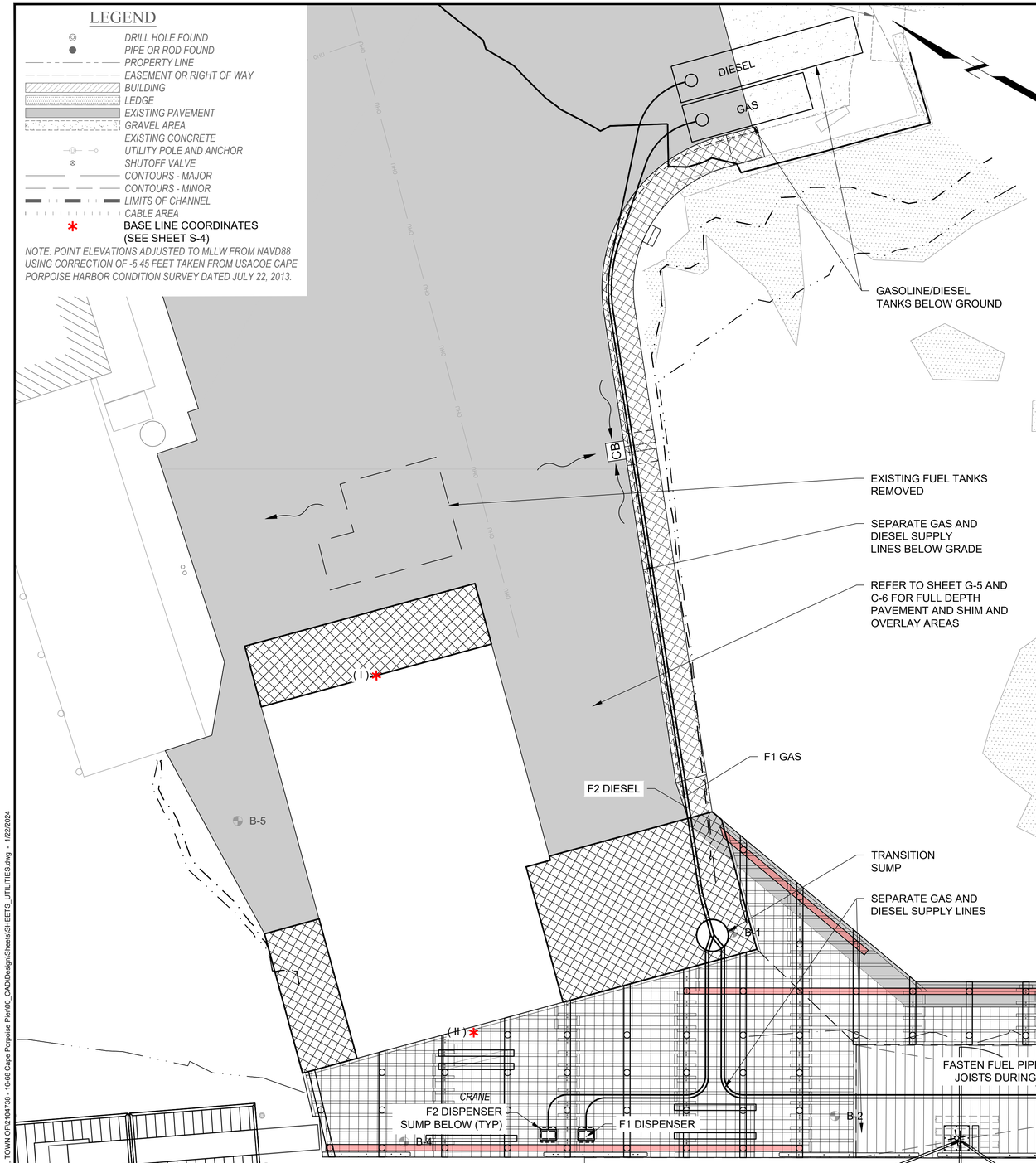
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **SITE LIGHTING**

SHEET NO.: **C-3**



FUEL SYSTEM NOTES

1. THE FUEL SYSTEM IS OPERATED AS FOLLOWS.
   a. COMMERCIAL DIESEL AND GASOLINE DISPENSERS- COOP MEMBERS ARE TRAINED IN THE USE OF THE DISPENSERS WITH MONITORING BY THE FUEL MASTER SYSTEM.
   b. THE TWIN (DIESEL & GAS) DISPENSER ON THE SOUTH PIER IS AN "ATTENDED FUEL OPERATION' WITH CREDIT CARD PAYMENT AND ACTIVATION CONTROLLED FROM THE POINT-OF-SALE OFFICE IN THE BAIT SHED.
2. THE PROPERTY IS LOCATED ABOVE THE 100-YEAR FLOOD PLAIN AS SHOWN. TANK INSTALLATION MUST CONSIDER INUNDATION TO THE BASE FLOOD ELEVATION.
3. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 70, NATIONAL ELECTRIC CODE.
4. UNLESS OTHERWISE NOTED, ALL STEEL PIPING SHALL BE SCHEDULE 40 OR GREATER AND SHALL BE COMPLETELY ISOLATED FROM SOIL, GROUNDWATER, AND BACKFILL MATERIAL USING SECONDARY CONTAINMENT THAT IS NON-METALLIC, NON-POROUS, AND NON-BIODEGRADABLE.
5. PIPING AND CONDUIT SHALL BE EQUIPPED WITH LIQUID TIGHT ENTRY FITTINGS AT ALL SUMPS.
6. A DIELECTRIC INSULATING UNION OR FITTING IS REQUIRED TO ISOLATE THE DIFFERENT MATERIALS AND EACH MATERIAL MUST BE SEPARATELY CATHODICALLY PROTECTED UNLESS IT IS COMPLETELY ISOLATED FROM THE SOIL.
7. ALL SUMP SENSORS SHALL BE INSTALLED IN THE LOWEST POINT OF THE SUMP BEING MONITORED AND SECURED IN A MANNER THAT KEEPS THEM IN A VERTICAL ORIENTATION WITHOUT PUTTING STRESS OF ANY SORT ON THE ELECTRICAL WIRING.

SCOPE OF WORK (BID ITEM 2.2 FUEL SYSTEM, BID ITEM 10.1 SITE ELECTRIAL SERVICE)

1. DECOMMISSIONING, DEMOLITION AND DISPOSAL OF AN EXISTING DIESEL AND GASOLINE FUEL SYSTEM THAT INCLUDES TWO (2) UNDERGROUND TANKS.
2. THE STORAGE AND REUSE OF THE "FUEL MASTER SYSTEM".
3. THE DETAILING, PERMITTING, INSTALLATION, AND CERTIFICATION OF A NEW FUEL SYSTEM THAT INCLUDES TWO (2) NEW UNDERGROUND TANKS FOR DIESEL AND GASOLINE, (3) PIER MOUNTED DISPENSERS AND ALL ANCILLARY SUMPS, CONTROLS, SENSORS AND PIPING CONSISTENT WITH A YEAR-ROUND FACILITY AS SHOWN ON THE PLAN.
4. THE REMOVAL, STORAGE, AND REUSE OF THE "FUEL MASTER SYSTEM'.
5. FIRE EXTINGUISHERS SHALL BE PROVIDED IN ACCORDANCE WITH THE EXTRA (HIGH) HAZARD REQUIREMENTS FOR CLASS B HAZARDS.
6. FUEL SYSTEM OPERATION AND SAFETY SIGNAGE.
7. LEDGE REMOVAL SHALL BE COMPLETED BY CONTRACTOR AS NECESSARY TO FACILITATE THE INSTALLATION OF UNDERGROUND FUEL TANKS AND CONDUIT RUNS. LEDGE REMOVAL WILL BE PAID UNDER BID ITEM 2.6.
8. COORDINATE HOSE REEL LOCATION AT EACH DISPENSER WITH PIER MANAGER.

RESPONSIBLE PARTIES

1. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL WORK UNDERTAKEN IN THE DECOMMISSIONING OF THE EXISTING FUEL SYSTEM AND IN THE INSTALLATION OF THE NEW FUEL SYSTEM IN ACCORDANCE WITH THE PROVISIONS OF ALL MAINE AND FEDERAL CODES.
2. ALL WORK UNDERTAKEN MUST BE IN COMPLIANCE WITH THE RULES FOR UNDERGROUND OIL STORAGE FACILITIES, 38 MRSA § 566 CHAPTER 691.
3. IF THERE IS A FUEL LEAK DURING SYSTEM REMOVAL OR INSTALLATION. MAINE DEP SHALL BE NOTIFIED IMMEDIATELY AT 1 (800) 482-0777 (24 hours a day, 365 days a year).
4. THE FUEL SYSTEM CONTRACTOR (FSC) REFERENCED IN THESE NOTES SHALL REFER TO THE SUBCONTRACTOR RETAINED BY THE GENERAL CONTRACTOR TO COMPLETE THE WORK.
   a. THE FSC SHALL BE A MAINE CERTIFIED UNDERGROUND STORAGE TANK INSTALLER.
   b. THE FSC WILL BE RESPONSIBLE FOR ALL REGULATORY PERMITTING AND NOTIFICATION REQUIREMENTS ASSOCIATED WITH THE EXISTING FUEL PIPING AND SUMP REMOVAL AND REPLACEMENT THAT INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING APPLICATIONS.
   c. MAINE DEP "NOTICE OF INTENT TO REMOVE AN UNDERGROUND STORAGE TANK FACILITY OR UNDERGROUND PIPING" PAPERWORK FOR CONTRACTOR SIGNATURE BEFORE WORK STARTS.
   d. MAINE DEP "REMOVAL CONFIRMATION NOTICE" PAPERWORK FOR CONTRACTOR SIGNATURE TO BE FILED WITHIN 10 DAYS OF PROJECT COMPLETION.
5. THE FSC SHALL COORDINATE AND ATTEND ANY INSPECTIONS OF THE COMPLETED WORK BY REGULATORY AGENCIES. IF DEVIATION FROM TANK, PIPING, DISPENSER AND SUMP LOCATION AND ALIGNMENT IS REQUIRED TO MEET CODE OR REGULATORY REQUIREMENTS, THE CONTRACTOR SHALL STOP WORK AND INFORM THE ENGINEER/TOWN SO THAT ANY SUBMITTAL CHANGES CAN BE EVALUATED AND APPROVED.
6. THE FSC SHALL TEST THE MONITORING SYSTEM AND SHALL PROVIDE TOWN STAFF WITH OPERATION AND MAINTENANCE TRAINING.

INSTALLATION PROCEDURES

1. PRIMARY PRODUCT PIPING SHALL BE AIR TESTED AT 50-100 PSI FOR AT LEAST ONE HOUR PRIOR TO BACKFILLING AND ALL JOINTS SHALL BE SOAPED ALL AROUND AND INSPECTED FOR BUBBLES.
2. SECONDARY PRODUCT PIPING SHALL BE AIR TESTED AT 5 TO 8 PSI FOR AT LEAST ONE HOUR PRIOR TO BACKFILLING. ALL JOINTS SHALL BE SOAPED ALL AROUND AND INSPECTED FOR BUBBLES. RETEST SHALL OCCUR AFTER COMPLETION OF BACKFILLING. THE SECONDARY PIPING SHALL BE PRESSURIZED FOR A MINIMUM OF TWO HOURS AFTER BACKFILL IS COMPLETED.
3. ALL SUMPS SHALL BE TESTED FOR HYDROSTATIC TIGHTNESS BY FILLING THE SUMP WITH WATER TO WITHIN 1" OF THE TOP OR 10" ABOVE THE TOP OF THE HIGHEST SUMP PENETRATION. NO LIQUID LEVEL CHANGE SHALL BE ALLOWED FOR 3 HOURS. TESTING SHALL BE CONDUCTED AFTER ALL SEAMS, PIPING CONNECTIONS, AND CONDUITS HAVE BEEN INSTALLED THROUGH ALL SUMPS.
4. PRODUCT SHALL NOT BE DRAWN INTO ANY PIPING FOR TESTING, CALIBRATION, OR FOR ANY OTHER REASON UNTIL A POST BACKFILL INSPECTION HAS BEEN PERFORMED AND AUTHORIZATION TO OPERATE HAS BEEN GRANTED.

SUBMITTAL REQUIREMENTS

1. SHOP DRAWING SHOWING PLAN LOCATION AND CONNECTION OF ALL FUEL SYSTEM PRIMARY COMPONENTS.
2. SUBMITTAL OF MANUFACTURER'S LITERATURE, INSTRUCTIONS, WARRANTIES AND COMPLETED INSTALLATION CHECKLISTS FOR ALL EQUIPMENT AND COMPONENTS OF THE FUEL SYSTEM.
3. RECORD DRAWING SHOWING ACTUAL LOCATIONS, LAYOUT, EQUIPMENT, AND CONFIGURATIONS AS INSTALLED.
4. FUEL SYSTEM PERMITS AND CERTIFICATES WITH THE STATE UNDERGROUND STORAGE TANK PERMITS POSTED IN A CONSPICUOUS PROTECTED LOCATION APPROVED BY THE PIER MANAGER.
5. MANDATED POSTINGS FOR OPERATION, SPILL RESPONSE AND SENSOR LIST.
6. A LABEL LISTING THE TANK MANUFACTURER'S INFORMATION FROM THE TANK PLATE, AS WELL AS THE INSTALLATION DATE, INSTALLATION CONTRACTOR(S) AND VOLUME BY PERCENTAGE OF ADDITIVES, SHALL BE POSTED NEAR THE STATE PERMIT.
7. SIGNAGE WITH THE FOLLOWING LEGENDS PRINTED IN 50MM (2IN.) RED LETTERS ON A WHITE BACKGROUND SHALL BE CONSPICUOUSLY POSTED AT THE DISPENSING AREA:
   - 'NO SMOKING' POSTED IN VIEW OF THE CUSTOMER BEING SERVED AND THE FUEL DISPENSER
   - 'BEFORE FUELING'
     - STOP ALL ENGINES AND AUXILIARIES.
     - SHUT OFF ALL ELECTRICITY, OPEN FLAMES, AND HEAT SOURCES.
     - CHECK ALL BILGES FOR FUEL VAPORS.
     - EXTINGUISH ALL SMOKING MATERIALS.
     - CLOSE ACCESS FITTINGS AND OPENINGS THAT COULD ALLOW FUEL VAPORS TO ENTER ENCLOSED SPACES OF THE VESSEL.
   - 'DURING FUELING'
     - MAINTAIN NOZZLE CONTACT WITH FILL PIPE.
     - WIPE UP SPILLS IMMEDIATELY.
     - AVOID OVERFILLING.
     - FUEL FILLING NOZZLE MUST BE ATTENDED AT ALL TIMES.
   - 'AFTER FUELING'
     - INSPECT BILGES FOR LEAKAGE AND FUEL ODORS.
     - VENTILATE UNTIL ODORS ARE REMOVED.

Fuel System

Item	Fuel	QTY	Description	Size/Capacity/ Dimensions	Minimum Standard	
					Manufacturer	Specification
Fuel Tanks and Piping (Inc. fittings, sensors, communication, truck-rated watertight cover)						
Fuel Tank	Gas	1	Double Wall, Fiberglass, Below ground	4000 Gallons	XERXES fuelsales@shawcor.com Or Equal	Z10-106-02
Fuel Tank	Diesel	1		6000 Gallons		Z10-106-02
Vent Pipe & Fittings	Both	2	Fiberglass Pipe		Fiber Glass Systems fgspipe@nov.com	Dualoy 3000/L Fiberglass
Sump	Both	2	Fiberglass by Tank Manufacturer or equal			
Transition Sump (Inc fittings, sensors, communication, truck-rated watertight cover)						
Transition Sump	Both	1	Composite Tank Sump	45.7 Base Diameter	Franklin Fueling franklinfueling.com	TSD-W-4736
Solenoid	Gas	1	Valve	1.5-inch	Morrison Brothers www.morbros.com Or Equal	710SS-2150 IV 1.5"
Solenoid	Diesel	1	Valve	2-inch		
Breakaway	Gas	2	HV Breaktime Breakaway	1.5-inch	M Carder Industries www.mcarder.com Or Equal	AB15
Breakaway	Diesel	2	HV Breaktime Breakaway	2-inch		AB2
Piping and Ducts						
Duct/Sleeve Tank to Transition Sump	Both + Spare	450 LF	Flexible for under pier or RC/underground	4-inch HDPE or Corrugated	Franklin Fueling franklinfueling.com Or Equal	XP Marine Duct-400
Duct/Sleeve Sump to F1, F2, F12	Both	400 LF		4-inch HDPE or Corrugated		XP Marine Duct-400
Flexible Pipe Tank to Transition Sump	Both	450 LF	Double wall Pipe (Min 36" radius bend)	2-inch		XP-150-SC
Flexible Pipe Sump to F12, F1 Gas	Both	360 LF		1.5-inch		XP-150-SC
Flexible Pipe Tank to F2	Diesel	60 LF		2-inch		XP-200-SC
XP Pipe & Fittings	Gas/ Diesel		Clamshell, Tee & Elbow, etc.	1.5-inch, 2-inch		APT Brand
Fuel Dispensers						
FD12 Twin, Island	Gas/ Diesel	1	(2) Single Hose, T-7 Card Reader to POS	Up to 22 GPM 32"x 20"x 63"H	Wayne Fueling Wayne.com Or Equal	3/G7203D/2GJK
FD1 Single, Island	Gas	1	Single Hose to Fuel Master	Up to 22 GPM 32"x 20"x 63"H		3/G7201D/2GJK
FD2 Single, Island	Diesel	1	Single Hose High Speed to Fuel Master	Up to 36 GPM 32"x 20"x 63"H		3/G7221D/2GJK
Dispenser Sumps	Gas/ Diesel	3	Fiberglass below Dispenser Sump	28"x29"x29.5"H	Bravo www.sbravo.com	B1000
Hose & Nozzle	Gas	2	Green 75-ft			
Hose & Nozzle	Diesel	2	Red 75-ft			
Hose Reels	Gas	2	Stainless Steel Fueling Application	Std 100-ft hose capacity	Hannay Reels reels@hannay.com Or Equal	SSN718-25-26-15-5G
Hose Reels	Diesel	2	Stainless Steel Fueling Application	Std 100-ft hose capacity		SSN718-25-26-15-5G
Equipment located in Building Point of Sale Office						
Tank Gauges	Both	2	Color with Touch Screen Display with Gauge Data from both tanks		Veeder-Root veeder.com	0860196-020 TLS4B Console
Point of Sale Terminal	Both	1	All in one site controller/card reader for Retail Fueling		Verifone Verifone.com/petro	RubyCi
Fuel Master Equipment	Both	1	Remove and Reinstall Existing System			

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No. 5737
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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **FUEL SYSTEM PLAN**

SHEET NO.: **C-4**

LEGEND

- DRILL HOLE FOUND
- PIPE OR ROD FOUND
- PROPERTY LINE
- EASEMENT OR RIGHT OF WAY
- BUILDING
- LEDGE
- EXISTING PAVEMENT
- GRAVEL AREA
- EXISTING CONCRETE
- UTILITY POLE AND ANCHOR
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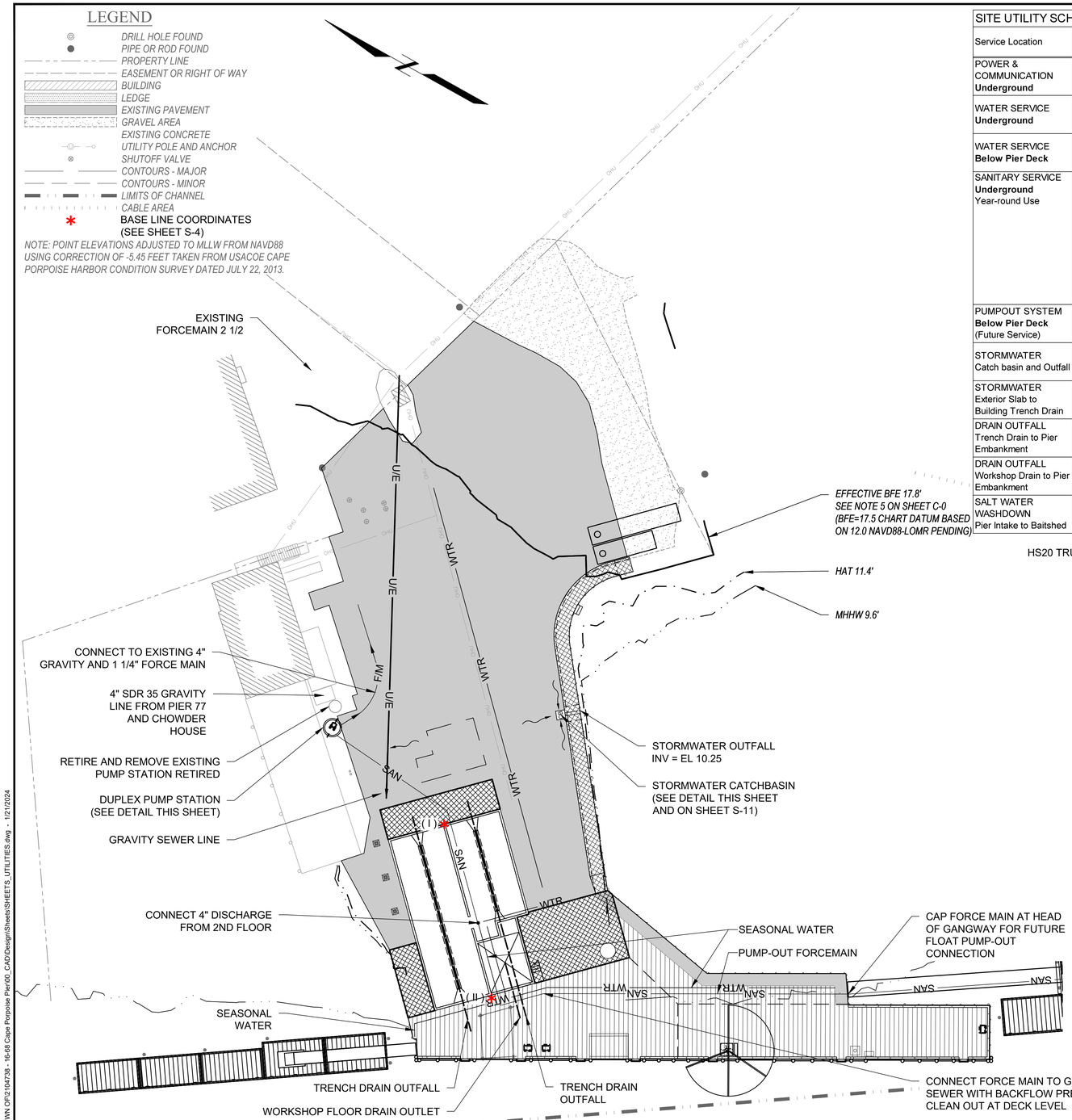
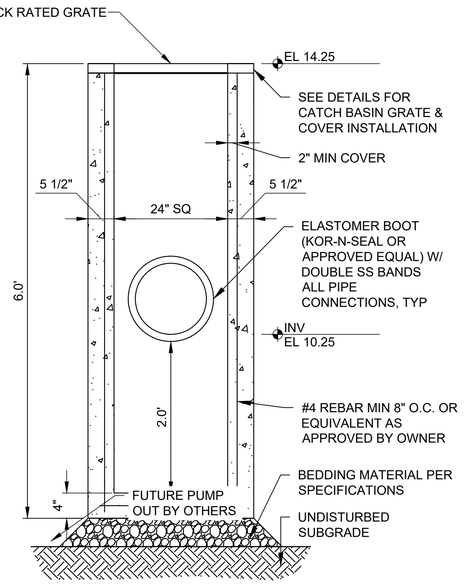
NOTE: POINT ELEVATIONS ADJUSTED TO MLLW FROM NAVD88 USING CORRECTION OF -5.45 FEET TAKEN FROM USACOE CAPE PORPOISE HARBOR CONDITION SURVEY DATED JULY 22, 2013.



0 20 40
SCALE, FEET

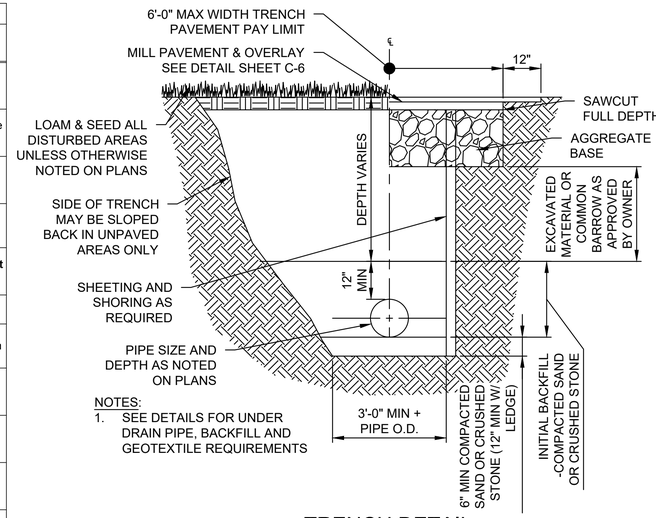
SITE UTILITY SCHEDULE

Service Location	Bid Item	Description	Cable/Conduit/Pipe #	Size	Material	Location/ Notes
POWER & COMMUNICATION **Underground**	Bid Item 10.1	Phone Cable Power	**Pole to Baitshed** Replace existing overhead service with underground service. Back feed Chowderhouse from Bait Shed. Refer to Sheet E-4.			
WATER SERVICE **Underground**	Bid Item 2.4	Year-round Water Supply	2		HDPE (200 PSI)	**Baitshed Building.** Provide new service to Bait Shed from Property line
WATER SERVICE **Below Pier Deck**		Seasonal Water Supply	1		HDPE (200 PSI)	**Bait Building to top of (2) gangways.** Hose Bib to gravity drain at each gangway.
SANITARY SERVICE **Underground** Year-round Use	Bid Item 2.3	Pump Station	6-ft diameter Duplex Pump Station. See detail this sheet.			**New Pumpstation** 2 HP, 1-Phase 240V. 6-ft wet well, steps, generator hookup.
		Forcemain	2-1/2		HDPE (200 PSI)	**Pump station to existing forcemain at Property Line**
		Gravity Piping 1	4		SDR 26	**Bait Building to Pump Station**
		Gravity Piping 2	4		SDR 26	**Chowderhouse to Pumpstation.** Retire and remove existing Pump Station and service.
PUMPOUT SYSTEM **Below Pier Deck** (Future Service)	Bid Item 2.3	Force Main, Back Flow Preventer, Cleanout & Cap	2		HDPE SDR-11	**Bait Shed to top of Gangway 1.** Float Mounted Pumpout Equipment installation by Others.
STORMWATER Catch basin and Outfall	Bid Item 2.5	F-Type Basin	12		HDPE (200 PSI)	**Low Point of RC Walkway** See Detail this sheet, S-10 & S-11.
STORMWATER Exterior Slab to Building Trench Drain	Bid Item 4.3	2 No.	8		HDPE (200 PSI)	**Bait Delivery Pads** Gravity Drain, Provide Cleanout
DRAIN OUTFALL Trench Drain to Pier Embankment	Bid Item 2.5	2 No.	10		HDPE (200 PSI)	**Sheetpile Cell Abutment** Gravity Drain, Daylight below MHW.
DRAIN OUTFALL Workshop Drain to Pier Embankment	Bid Item 4.6	1 No.	6		HDPE (200 PSI)	**Sheetpile Cell Abutment** Gravity Drain, Provide Cleanout, Daylight below MHW.
SALT WATER WASHDOWN Pier Intake to Baitshed	Bid Item 9.3	1 No.	1-1/4		SCH 80 PVC	**Vertical Pile H4 adjacent to ladder.** Refer to Sheets S-4, P-1, P-3.



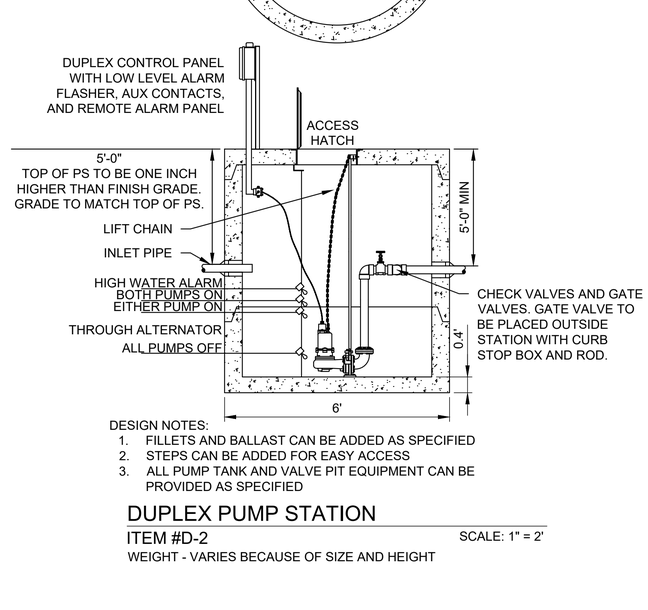
CATCH BASIN - TYPE "F"

SCALE: 1" = 1'



TRENCH DETAIL

SCALE: 1" = 2'



DUPLEX PUMP STATION

ITEM #D-2

SCALE: 1" = 2'

WEIGHT - VARIES BECAUSE OF SIZE AND HEIGHT

Attention:

0 1"

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STATE OF MAINE — BARNEY J. BAKER No. 5737 — LICENSED PROFESSIONAL ENGINEER

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TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

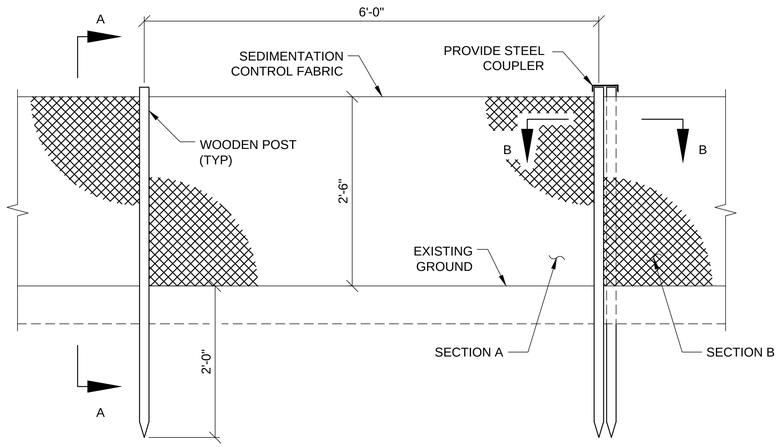
NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME

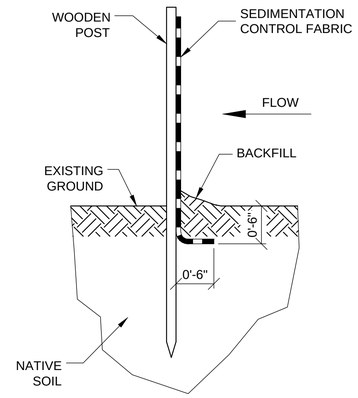
WATER, SANITARY & STORMWATER PLAN

SHEET NO.

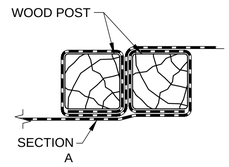
C-5



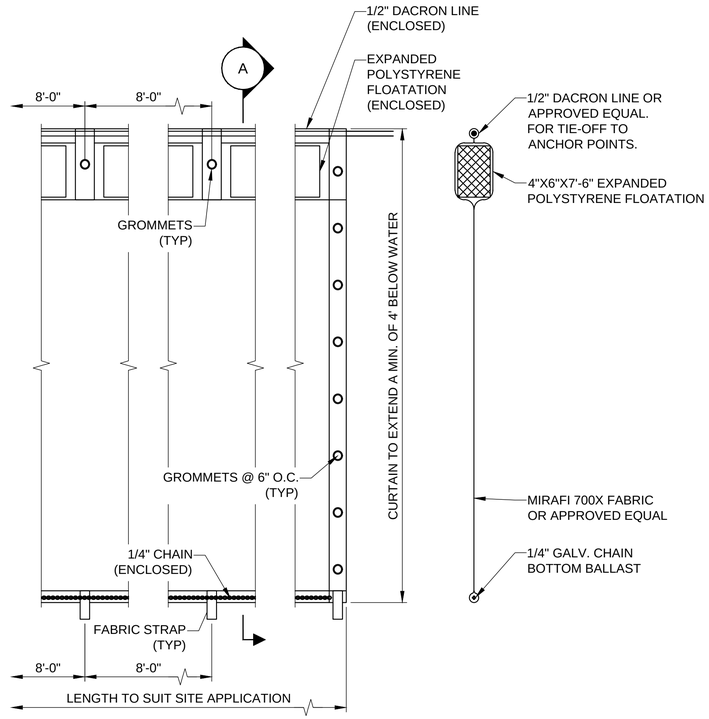
DETAIL
SILTATION FENCE — SCALE: 1" = 1'-0"



A SECTION
SILTATION FENCE — SCALE: 1" = 1'-0"

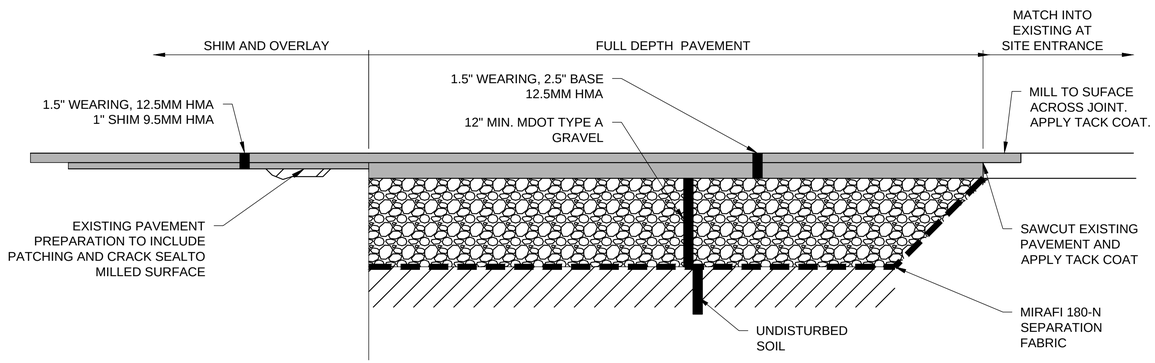


B SECTION
SILTATION FENCE — NO SCALE

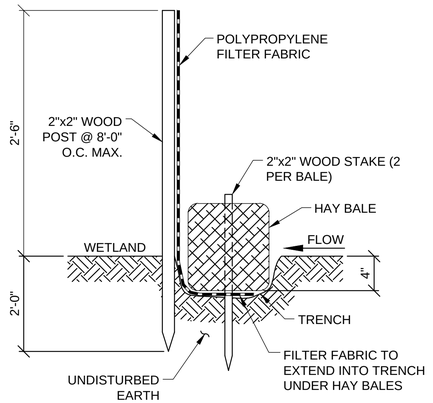


DETAIL
DEBRIS BOOM — SCALE: 1/4" = 1'-0"

A SECTION
DEBRIS BOOM — SCALE: 1/4" = 1'-0"



DETAIL
PAVEMENT BUILD-UP — SCALE: 1" = 1'-0"



DETAIL
EROSION CONTROL FENCE — SCALE: 1" = 1'-0"

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE — BARNEY J. BAKER No. 5737 — LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

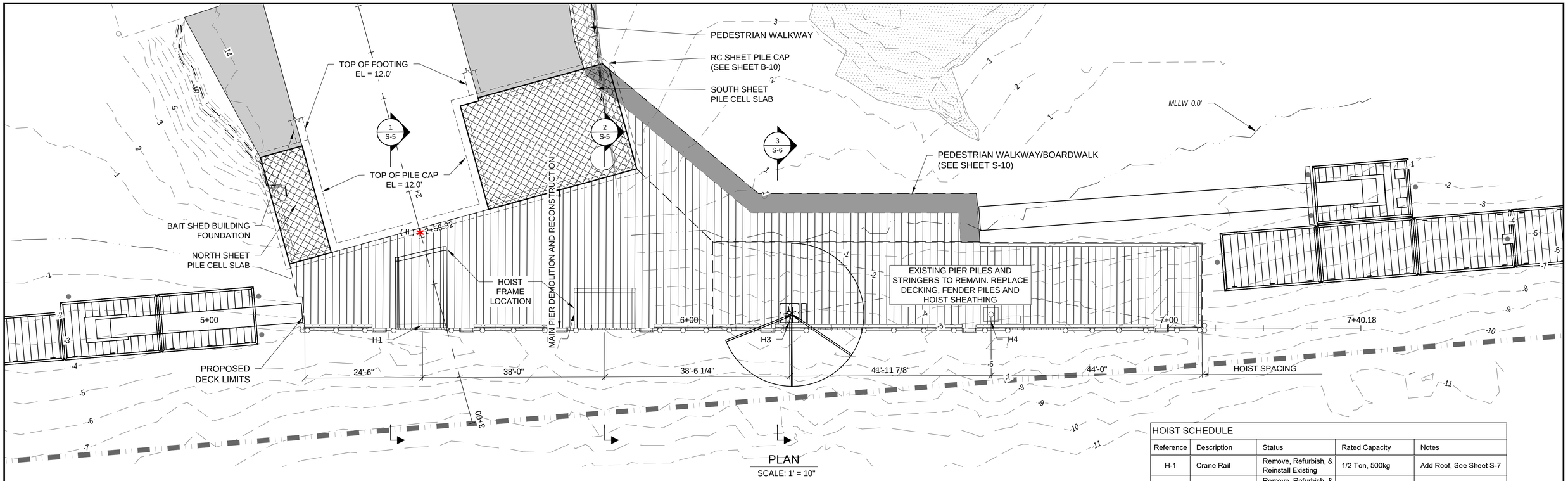
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **SITE DETAILS**

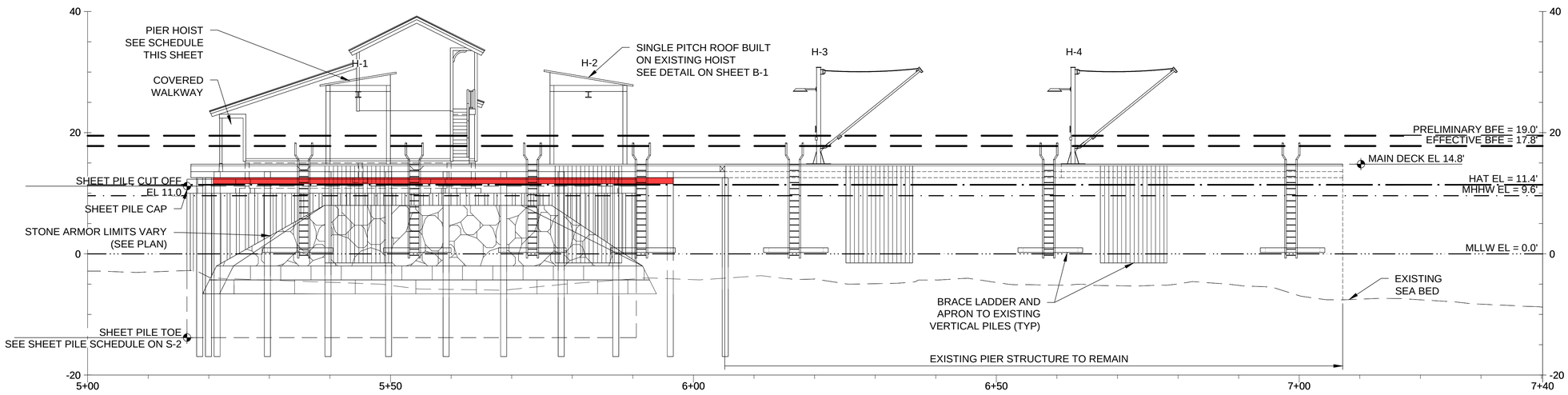
SHEET NO.: **C-6**



PLAN

SCALE: 1' = 10"

HOIST SCHEDULE				
Reference	Description	Status	Rated Capacity	Notes
H-1	Crane Rail	Remove, Refurbish, & Reinstall Existing	1/2 Ton, 500kg	Add Roof, See Sheet S-7
H-2	Crane Rail	Remove, Refurbish, & Reinstall Existing	1/2 Ton, 500kg	Add Roof, See Sheet S-7
H-3	Hydraulic Hoist	New Hoist	1/2 Ton	See Sheet S-10
H-4	Hydraulic Hoist	Remove, Refurbish & Reinstall Existing	1/2 Ton	-



ELEVATION (FENDER PILES NOT SHOWN)

SCALE: 1' = 10"

0 10 20

SCALE, FEET

Attention:

0 1"

If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED
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SHEET NAME

MAIN PIER PLAN AND ELEVATION

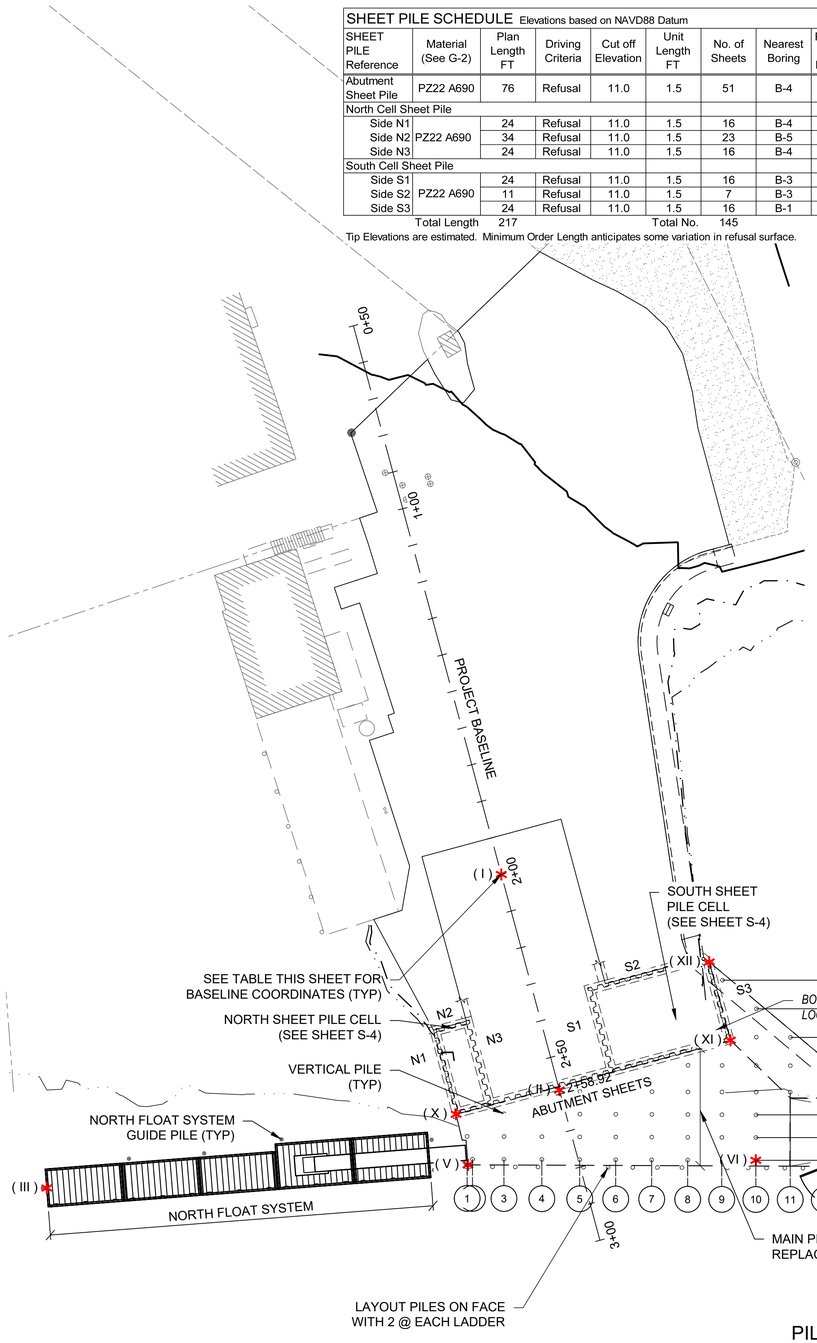
SHEET NO.

S-1

SHEET PILE SCHEDULE Elevations based on NAVD88 Datum

SHEET PILE Reference	Material (See G-2)	Plan Length FT	Driving Criteria	Cut off Elevation	Unit Length FT	No. of Sheets	Nearest Boring	Predicted Tip Elevation	Pile Length	
									Calculated	Min. Order Length
Abutment Sheet Pile	PZ22 A690	76	Refusal	11.0	1.5	51	B-4	-18	29.0	34
North Cell Sheet Pile										
Side N1	PZ22 A690	24	Refusal	11.0	1.5	16	B-4	-18	29.0	34
Side N2		34	Refusal	11.0	1.5	23	B-5	-17	28.0	34
Side N3		24	Refusal	11.0	1.5	16	B-4	-18	29.0	34
South Cell Sheet Pile										
Side S1	PZ22 A690	24	Refusal	11.0	1.5	16	B-3	-17	28.0	34
Side S2		11	Refusal	11.0	1.5	7	B-3	-17	28.0	34
Side S3		24	Refusal	11.0	1.5	16	B-1	-8	19.0	25
Total Length		217			Total No.	145				

Tip Elevations are estimated. Minimum Order Length anticipates some variation in refusal surface.



FENDER PILE SCHEDULE Elevations based on NAVD88 Datum

PILE Reference	Material (See G-2)	Quantity	Driving Criteria	Cut off Elevation	Pile Location				Predicted Tip Elevation	Pile Length	
					Mudline Elevation		Nearest Boring	~Embed-ment			
					Existing	Proposed				Calculated	Min. Order Length
Fender Piles											
1.1 G	Light Pole	1	Depth	29.80		-4.00	B-4	10.0	-14.0	44	49
1.2 H	Corner	3	Depth	17.80		-4.00	B-4	10.0	-14.0	32	111
2.1 H		1	Depth	17.80		-4.00	B-4	10.0	-14.0	32	37
2.2 H		1	Depth	17.80		-4.00	B-4	10.0	-14.0	32	37
2.3 H		1	Depth	17.80		-4.00	B-4	10.0	-14.0	32	37
4.1 H		1	Depth	17.80		-4.00	B-4	10.0	-14.0	32	37
4.2 H		1	Depth	17.80		-4.00	B-4	10.0	-14.0	32	37
5.1 H		1	Depth	17.80		-4.00	B-4	10.0	-14.0	32	37
6.1 H		1	Depth	17.80		-4.00	B-4	10.0	-14.0	32	37
6.2 H		1	Depth	17.80		-4.00	B-4	10.0	-14.0	32	37
8.1 H		1	Depth	17.80		-4.00	B-3	10.0	-14.0	32	37
8.2 H		1	Depth	17.80		-4.00	B-3	10.0	-14.0	32	37
9.1 H		1	Depth	17.80		-4.00	B-3	10.0	-14.0	32	37
9.2 H		1	Depth	17.80		-4.00	B-3	10.0	-14.0	32	37
10.1 H	Greenheart Piles	1	Depth	17.80	No Change	-4.00	B-3	10.0	-14.0	32	37
11.1 H		1	Depth	17.80		-5.00	B-3	10.0	-15.0	33	38
12.1 H		1	Depth	17.80		-5.00	B-2	10.0	-15.0	33	38
12.2 H		1	Depth	17.80		-5.00	B-2	10.0	-15.0	33	38
13.1 H		1	Depth	17.80		-5.00	B-2	10.0	-15.0	33	38
14.1 H		1	Depth	17.80		-6.00	B-2	10.0	-16.0	34	39
15.1 H		1	Depth	17.80		-6.00	B-2	10.0	-16.0	34	39
16.1 H		1	Depth	17.80		-6.00	B-2	10.0	-16.0	34	39
16.2 H		1	Depth	17.80		-6.00	B-2	10.0	-16.0	34	39
16.3 H		1	Depth	17.80		-7.00	B-2	10.0	-17.0	35	40
16.4 H		1	Depth	17.80		-7.00	B-2	10.0	-17.0	35	40
16.5 H		1	Depth	``		-7.00	B-2	10.0	-17.0	35	40
16.6 H		1	Depth	17.80		-7.00	B-2	10.0	-17.0	35	40
16.7 H	Light Pole	1	Depth	29.80		-8.00	B-2	10.0	-18.0	48	53
16.8 H	Corner	3	Depth	17.80		-8.00	B-2	10.0	-18.0	36	123
Total No.		33								Total Length	1285

GUIDE PILE SCHEDULE Elevations based on NAVD88 Datum

PILE Reference	Material (See G-2)	Quantity	Driving Criteria	Cut off Elevation	Pile Location				Predicted Tip Elevation	Pile Length	
					Mudline Elevation		Nearest Boring	~Embed-ment			
					Existing	Proposed				Calculated	Min. Order Length
North Float System Guide Piles											
N1 1		1	Refusal	21.0		-2.00	B-4	15.0	-17	38	44
N2 1	Pressure	1	Refusal	21.0		-2.00	B-4	15.0	-17	38	44
N3 1	Treated	1	Refusal	21.0	No	-2.00	B-4	15.0	-17	38	44
N4 1	Southern	1	Refusal	21.0	Change	-2.00	B-4	15.0	-17	38	44
N5 1	Yellow Pine	1	Refusal	21.0		-2.00	B-4	15.0	-17	38	44
N5 2		1	Refusal	21.0		-2.00	B-4	15.0	-17	38	44
Total No.		6								Total Length	264
South Float System Guide Piles											
S1 1		1	Socket	21.0		-1.00	B-2	15.0	-16.0	37	43
S1 2		1	Socket	21.0		-2.00	B-2	15.0	-17.0	38	44
S1 3	Steel Pipe	1	Socket	21.0	No	-2.00	B-2	15.0	-17.0	38	44
S2 1	Pile	1	Socket	21.0	Change	-4.00	B-2	15.0	-19.0	40	46
S4 1		1	Socket	21.0		-6.00	B-2	15.0	-21.0	42	48
S5 1		1	Socket	21.0		-6.00	B-2	15.0	-21.0	42	48
S6 1		1	Socket	21.0		-8.00	B-2	15.0	-23.0	44	50
Total No.		7								Total Length	323

Tip Elevations are estimated. Contractor shall order all piles of sufficient length to accommodate variations in subsurface conditions encountered onsite.

VERTICAL PILE SCHEDULE Elevations based on NAVD88 Datum

PILE Reference	Material (See G-2)	Quantity	Driving Criteria	Cut off Elevation	Pile Location				Predicted Tip Elevation	Pile Length	
					Mudline Elevation		Nearest Boring	~Embed-ment			
					Existing	Proposed				Calculated	Min. Order Length
Vertical Piles											
1 G		1	Refusal	11.63		-2.00	B-4	14.0	-18.0	30	36
1 H		1	Refusal	12.59		-4.00	B-4	14.0	-18.0	30	36
2 F		1	Refusal	12.59		2.00	B-4	14.0	-18.0	30	36
2 G		1	Refusal	11.63		-2.00	B-4	14.0	-18.0	30	36
2 H		1	Refusal	12.59		-4.00	B-4	14.0	-18.0	30	36
3 F		1	Refusal	12.59		2.00	B-4	14.0	-18.0	30	36
3 G		1	Refusal	11.63		-2.00	B-4	14.0	-18.0	30	36
3 H		1	Refusal	12.59		-4.00	B-4	14.0	-18.0	30	36
4 E		1	Refusal	12.59		6.00	B-4	14.0	-18.0	30	36
4 F		1	Refusal	12.59		2.00	B-4	14.0	-18.0	30	36
4 G		1	Refusal	11.63		-2.00	B-4	14.0	-18.0	30	36
4 H		1	Refusal	12.59		-4.00	B-4	14.0	-18.0	30	36
5 E		1	Refusal	12.59		6.00	B-3	14.0	-17.0	29	35
5 F		1	Refusal	12.59		2.00	B-3	14.0	-17.0	29	35
5 G		1	Refusal	11.63		-2.00	B-3	14.0	-17.0	29	35
5 H		1	Refusal	12.59		-4.00	B-3	14.0	-18.0	30	36
6 E		1	Refusal	12.59		6.00	B-3	14.0	-17.0	29	35
6 F		1	Refusal	12.59		2.00	B-3	14.0	-17.0	29	35
6 G		1	Refusal	11.63		-2.00	B-3	14.0	-17.0	29	35
6 H		1	Refusal	12.59		-4.00	B-3	14.0	-18.0	30	36
7 D		1	Refusal	11.63		6.00	B-3	14.0	-17.0	29	35
7 E		1	Refusal	12.59		4.00	B-3	14.0	-17.0	29	35
7 F		1	Refusal	12.59		2.00	B-3	14.0	-17.0	29	35
7 G		1	Refusal	11.63		-2.00	B-3	14.0	-17.0	29	35
7 H		1	Refusal	12.59		-4.00	B-3	14.0	-18.0	30	36
8 A		1	Refusal	11.63		3.00	B-3	14.0	-17.0	29	35
8 D		1	Refusal	11.63		4.00	B-3	14.0	-17.0	29	35
8 E		1	Refusal	12.59		2.00	B-3	14.0	-17.0	29	35
8 F		1	Refusal	12.59		0.00	B-3	14.0	-17.0	29	35
8 G		1	Refusal	11.63		-2.00	B-3	14.0	-17.0	29	35
8 H		1	Refusal	12.59		-4.00	B-3	14.0	-18.0	30	36
9 B		1	Refusal	11.63		3.00	B-1	10.0	-8.0	20	30
9 C		1	Refusal	12.59		2.00	B-1	10.0	-8.0	20	30
9 D		1	Refusal	11.63		2.00	B-1	10.0	-8.0	20	30
9 E		1	Refusal	12.59		0.00	B-2	22.0	-26.0	38	44
9 F		1	Refusal	12.59		-2.00	B-2	22.0	-26.0	38	44
9 G		1	Refusal	11.63		-4.00	B-2	22.0	-26.0	38	44
9 H		1	Refusal	12.59		-5.00	B-2	22.0	-27.0	39	45
10 C		1	Refusal	11.63		1.00	B-1	10.0	-9.0	21	30
10 D		1	Refusal	11.63		1.00	B-1	10.0	-9.0	21	30
10 E		1	Refusal	12.59		0.00	B-1	10.0	-10.0	22	30
11 D		1	Refusal	12.59		1.00	B-1	10.0	-9.0	21	30
11 E		1	Refusal	12.59		0.00	B-1	10.0	-10.0	22	30
12 D		1	Refusal	11.63		1.00	B-1	10.0	-9.0	21	30
12 E		1	Refusal	12.59		0.00	B-1	10.0	-10.0	22	30
13 D		1	Refusal	11.63		1.00	B-1	10.0	-9.0	21	30
13 E		1	Refusal	12.59		0.00	B-1	10.0	-10.0	22	30
14 D		1	Refusal	11.63		1.00	B-1	10.0	-9.0	21	30
14 E		1	Refusal	12.59		0.00	B-1	10.0	-10.0	22	30
15 D		1	Refusal	11.63		0.00	B-1	10.0	-10.0	22	30
15 E		1	Refusal	12.59		-1.00	B-1	10.0	-11.0	23	30
16 D		1	Refusal	11.63		-1.00	B-1	10.0	-11.0	23	30
16 E		1	Refusal	12.59		-2.00	B-1	10.0	-12.0	24	30
Total No.		53								Total Length	1818

Tip Elevations are estimated. Contractor shall order all piles of sufficient length to accommodate variations in subsurface conditions encountered onsite.

Pressure Treated Southern Yellow Pine — Remove debris, Reshape slope, Armor with stone.

Pressure Treated Southern Yellow Pine — No Change

BASELINE COORDINATES

Point	Station	Offset (FT)		Description
I	2+00	0.00	CL	Bldg Centerline/Exterior Foundation Wall
II	2+58.92	0.00	CL	Bldg Centerline/Face of Abutment Cap
III	2+48.68	137.40	RT	Pile N1 / Float Centerline
IV	2+66.52	37.68	RT	N5 Float End/Centerline
V	2+71.71	28.45	RT	Pile 1H Main Pier
VI	2+90.32	45.23	LT	Pile 9H Main Pier
VII	3+08.97	159.63	LT	Pile S2 / Float Centerline
VIII	3+28.76	258.92	LT	Pile S6 / Float Centerline
IX	2+81.80	114.44	LT	Pile 16D Main Pier
X	2+58.00	28.00	RT	SW Abutment Cap Corner
XI	2+58.00	47.00	LT	SE Abutment Cap Corner
XII	2+36.60	47.00	LT	NE Abutment Cap Corner

PILE PLAN

SCALE: 1" = 20'

SHEET PILE NOTES:
1. USE 30-FT SHEETS
2. ALL SHEET PILES SHOULD BE DRIVEN TO REFUSAL
3. CONTACT ENGINEER IF REFUSAL SURFACE RESULTS IN LESS THAN 5-FT OF OVERBURDEN

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

0 20 40
SCALE, FEET

STATE OF MAINE — BARNEY J. BAKER No. 5737 — LICENSED PROFESSIONAL ENGINEER

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

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SHEET NAME: PILE PLAN

SHEET NO.: S-2

SOUTH SHEET PILE CELL
AND EXTERIOR SLAB

1 S-5

2 S-5

3 S-5

NORTH SHEET PILE CELL
AND EXTERIOR SLAB

BAIT SHED

(II)

2:1 SLOPE

STONE
REVETMENT

MAIN PIER DEMOLITION
AND RECONSTRUCTION

2:1 SLOPE

5:1 SLOPE

REMOVE AND RECONSTRUCT
EXISTING EMBANKMENT AND
ARMOR WITH STONE

PIER WIDENING

PROPOSED RIPRAP

GRANITE STONE
BLOCK TOE

VERTICAL PILE (TYP)

GRANITE STONE BLOCK TOE
(BLOCKS PROVIDED BY TOWN)

EXISTING PIER FRAMING
REMAINS REPLACE DECKING

DECK FACE
(TIMBER PILE CAPS, JOISTS, FENDER PILES NOT SHOWN)

8 6 4 2 0 -2 -4 -6

-1 -2 -3 -4 -5 -6 -7

EMBANKMENT GRADING PLAN

SCALE: 1" = 5'

BAIT SHED

PRELIMINARY BFE = 19.0'

EFFECTIVE BFE = 17.8'

GRIDLINE H EDGE BEAM

MAIN DECK EL 14.8'

SHEET
PILE CAP

HAT EL = 11.4'

MHHW EL = 9.6'

TOP OF STONE

2:1 SLOPE

LONGITUDINAL PILE CAP ON GRID LINE H.
SEE SHEET S-2

STONE ARMOR
LIMITS VARY
(SEE PLAN)

SHEET PILE BULKHEAD

SLOPE VARIES
(SEE PLAN)

EXISTING PIER STRUCTURE NOT SHOWN

GRANITE
TOE BLOCKS

MLLW EL = 0.0'

TOP OF GRANITE BLOCK

VERTICAL PILE
(TYP)

EXISTING
SEA BED

EMBANKMENT ELEVATION

SCALE: 1" = 5'

NOTE: FENDER PILES, LADDERS & APRONS NOT SHOWN

Attention:

0 1"

If this scale bar does not measure 1" then drawing is not original scale.

0 2.5 5 10

SCALE, FEET

STATE OF MAINE
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TOWN OF
KENNEBUNKPORT

KENNEBUNKPORT,
MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

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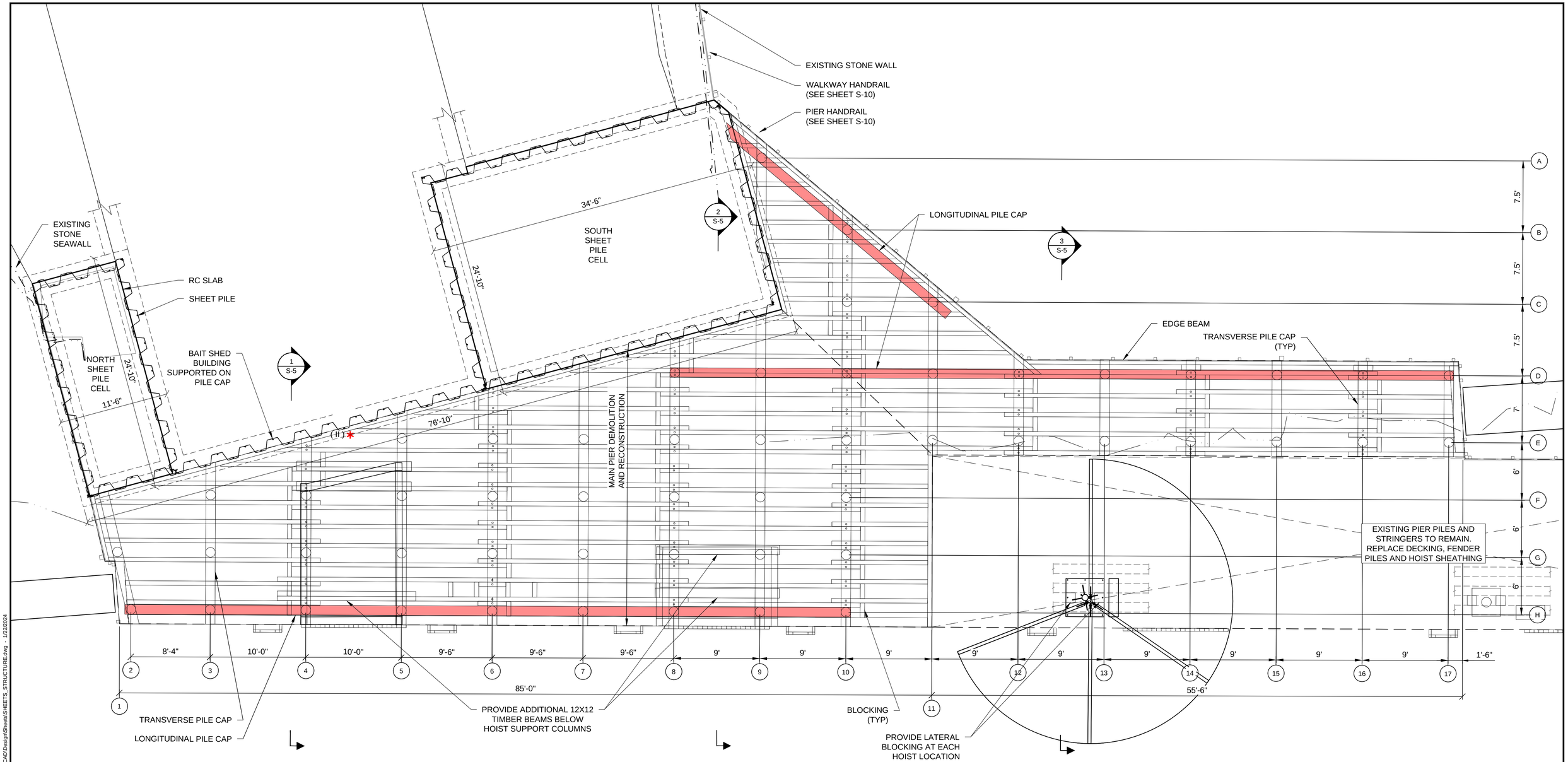
SHEET NAME

EMBANKMENT GRADING PLAN

SHEET NO.

S-3

---- B:\Working\KENNEBUNKPORT, TOWN OF\2104738 - 16-68 Cape Porpoise Pier\00_CAD\Design\Sheets\SHEETS_STRUCTURE.dwg - 1/22/2024



PIER FRAMING PLAN

SCALE: 1" = 5'

NOTE:
1. REFER TO PILE SCHEDULE ON SHEET S-2.

0 2.5 5 10
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

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PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

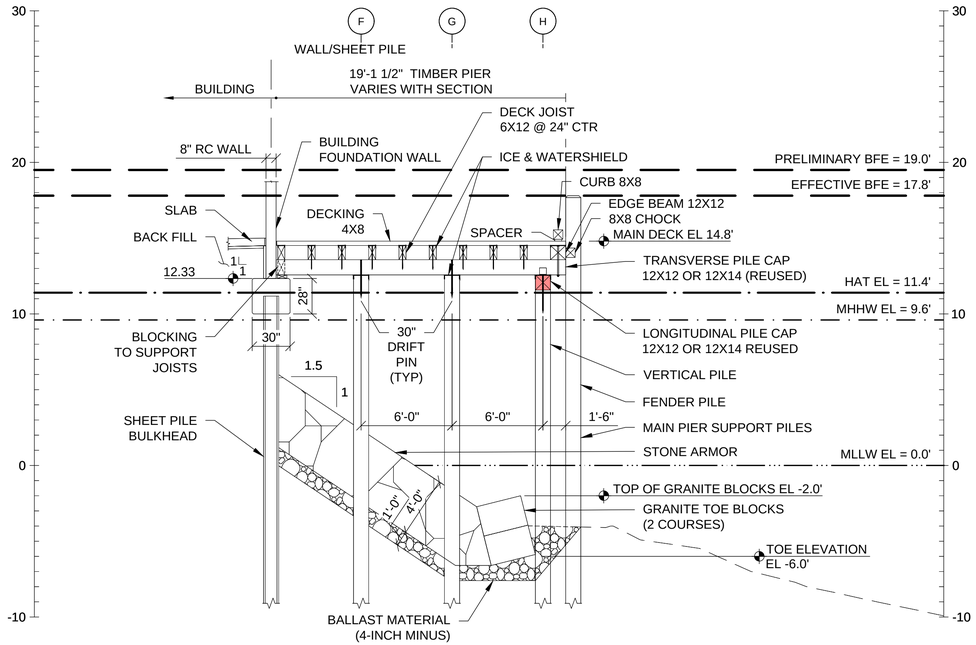
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

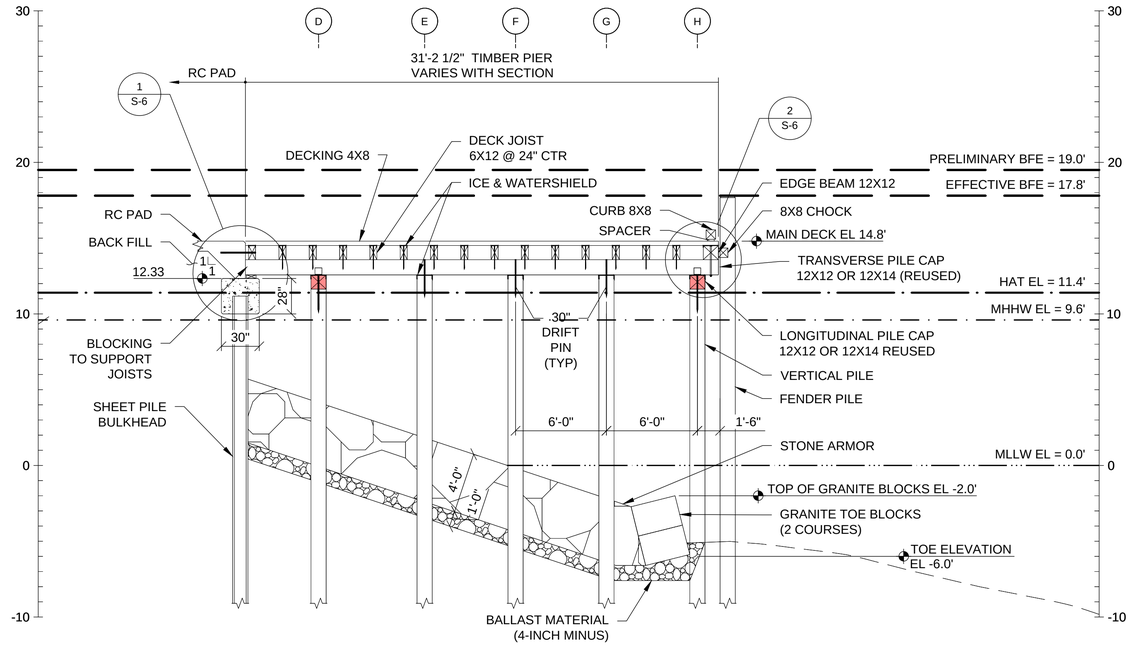
NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **PIER FRAMING PLAN**

SHEET NO.: **S-4**



1 SECTION
S-3 PIER @ BUILDING SCALE: 1" = 5'
S-4



2 SECTION
S-3 PIER @ SLAB SCALE: 1" = 5'
S-4

0 2.5 5 10
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

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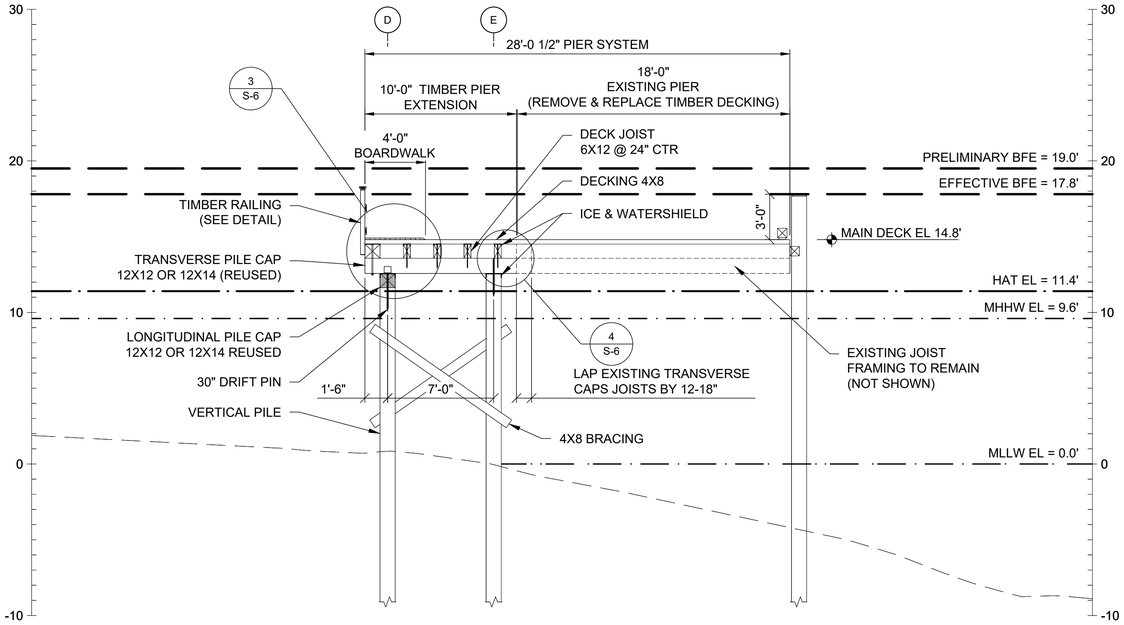
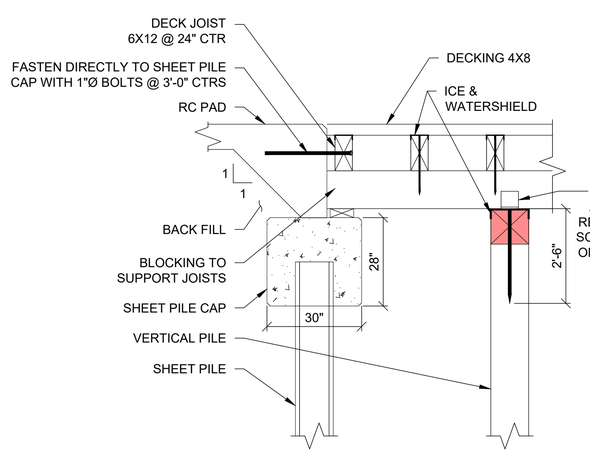
SHEET NAME
PIER SECTIONS I

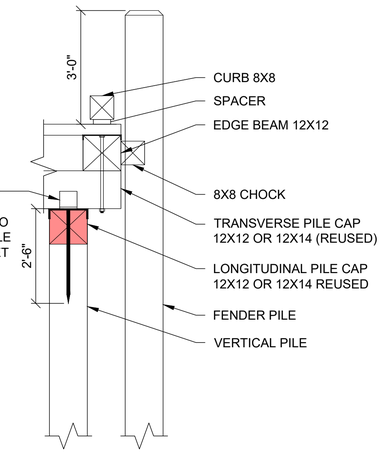
SHEET NO.
S-5



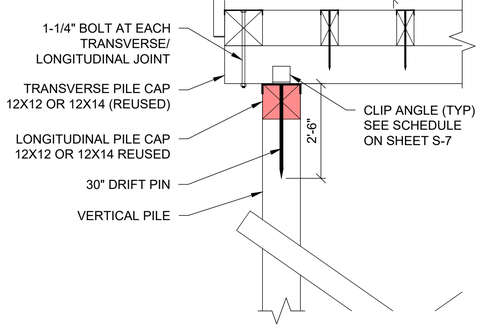
3 S-2 S-3 S-4 SECTION
PIER EXTENSION SCALE: 1" = 5'



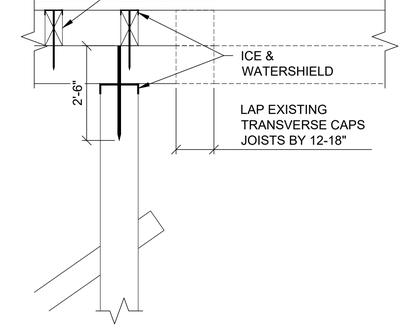
1 S-6 DETAIL
RC PAD SCALE: 1" = 2'



2 S-6 DETAIL
EDGE BEAM SCALE: 1" = 2'



3 S-6 SECTION
PIER EXTENSION SCALE: 1" = 2'



4 S-6 SECTION
PIER EXTENSION SCALE: 1" = 2'

NOTE:
1. FOR SHEET PILE CAP AND BUILDING FOUNDATION REINFORCEMENTS SEE SHEET.

0 2.5 5 10
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

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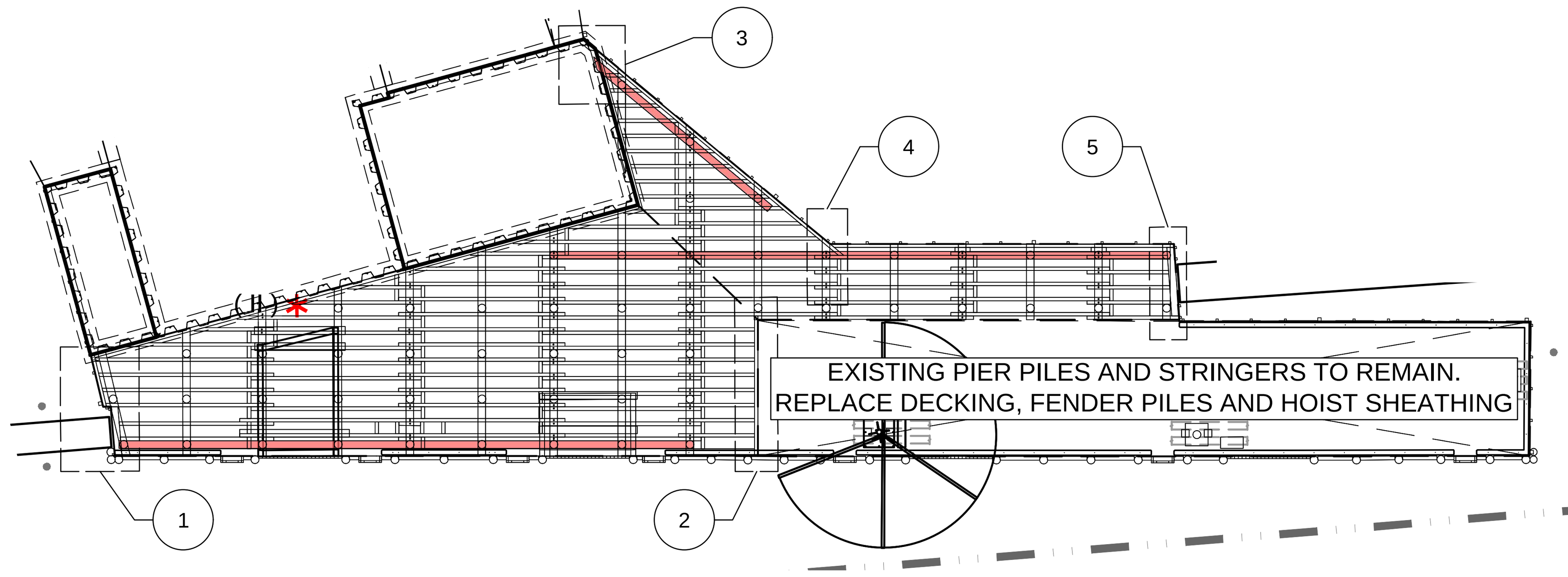
SHEET NAME: **PIER SECTIONS II**

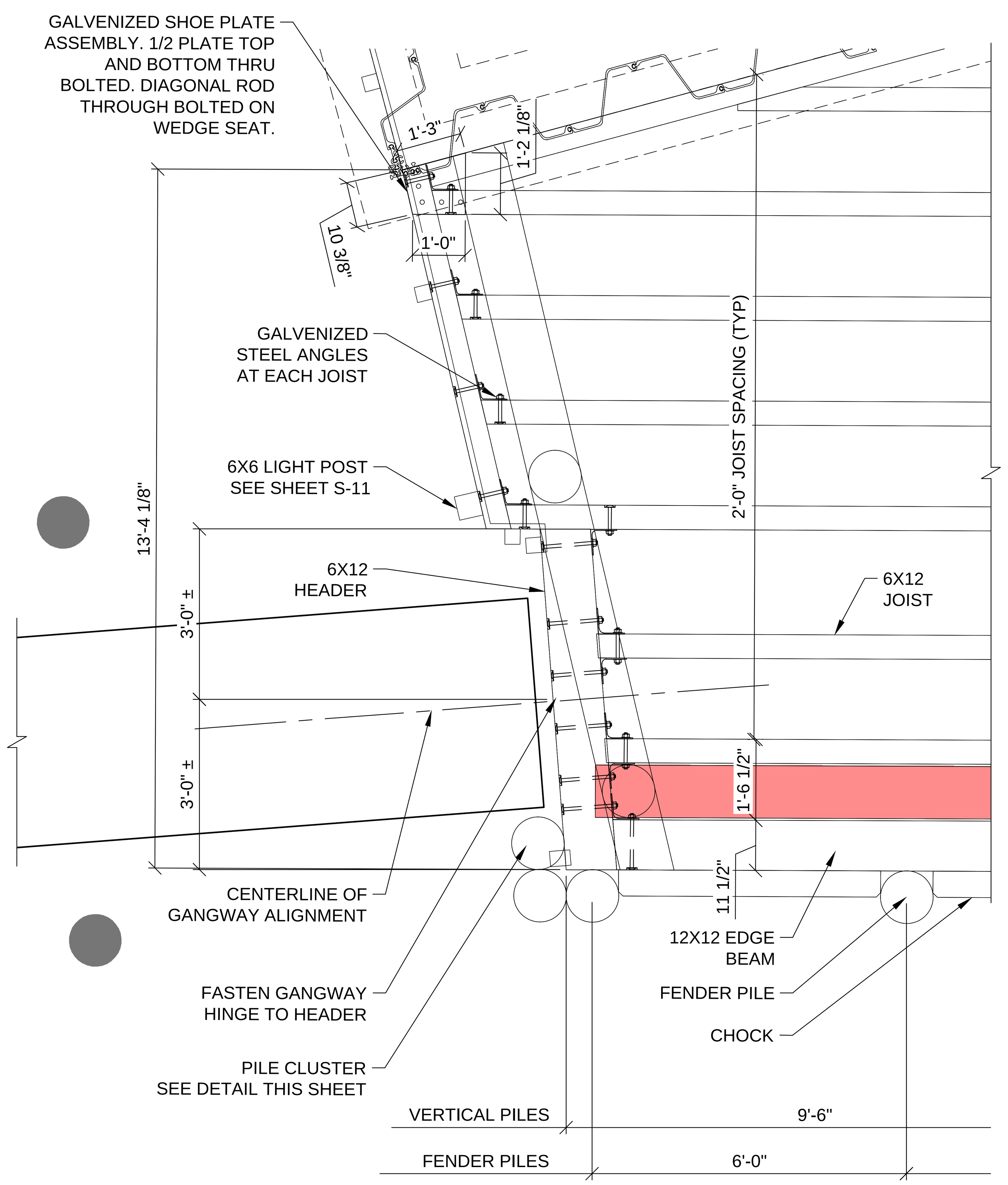
SHEET NO.: **S-6**



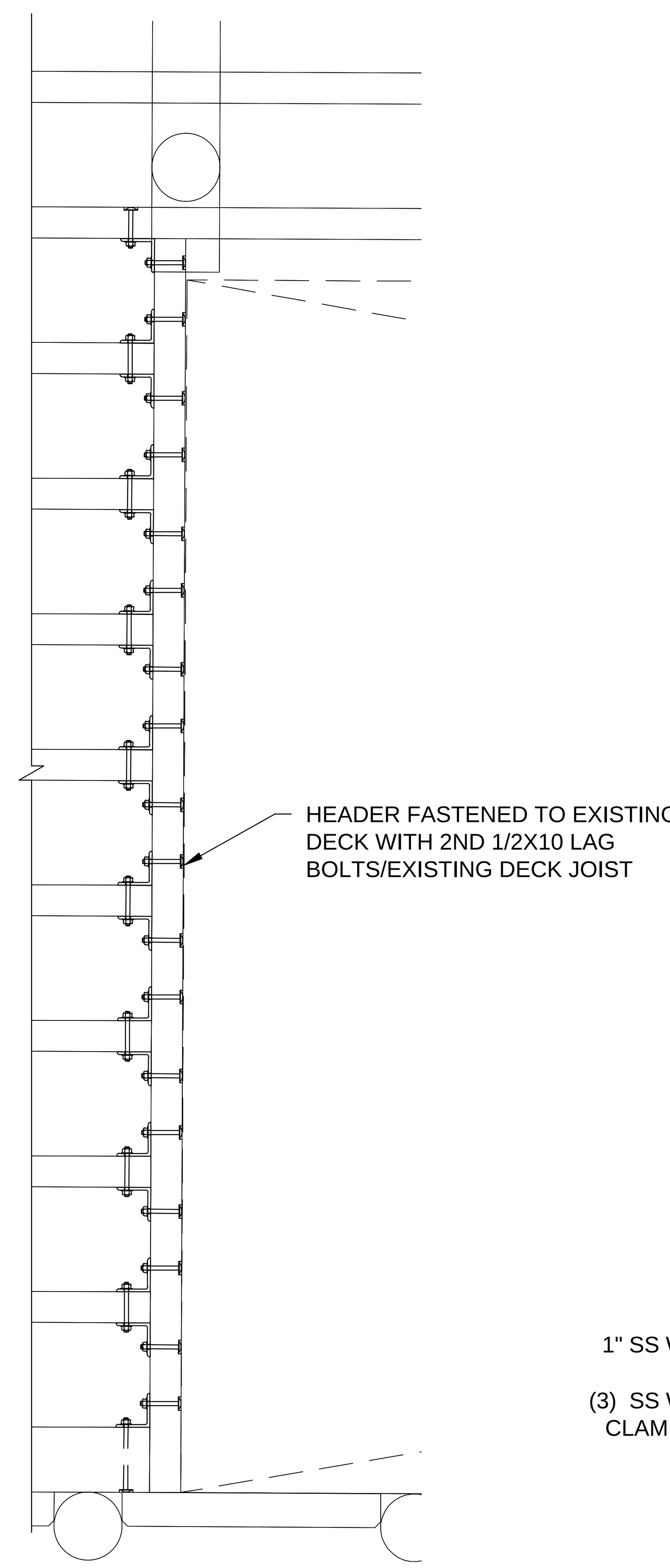
KEY
SCALE: 1" = 20'

PIER FRAMING ANGLES SCHEDULE

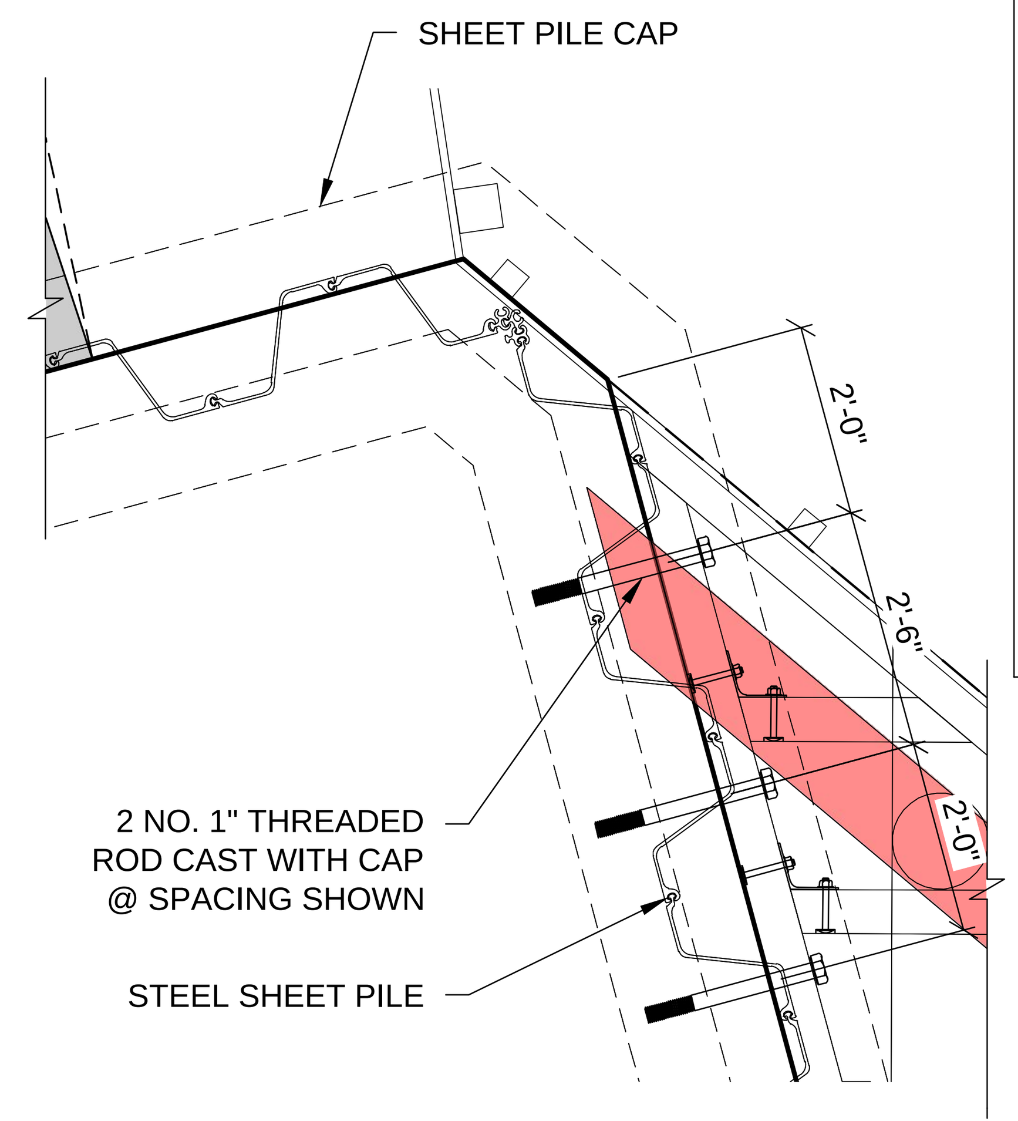
LOCATION(S)	SECTION/SIZE	NO. PER CONNECTION	SECTION	ELEVATION
- JOIST TO PILE CAP		2	$1\frac{3}{4}$" / $1\frac{3}{4}$"	6" / 3" / 1"Ø HOLE FOR $\frac{7}{8}$" BOLT (TYP)
- JOIST TO HEADER - JOIST TO EDGE BEAM	L6X6X$\frac{1}{2}$" 9" LONG	1	$1\frac{3}{4}$" / $1\frac{3}{4}$"	2" 5" 2" / $\frac{3}{4}$"Ø HOLE FOR $\frac{5}{8}$" BOLT (TYP)
- JOIST ANGLED CONNECTION	12"X9"X$\frac{1}{2}$" BENT PL	1	$1\frac{3}{4}$" / $1\frac{3}{4}$"	2" 5" 2" / $\frac{7}{8}$"Ø HOLE FOR $\frac{3}{4}$" BOLT (TYP)



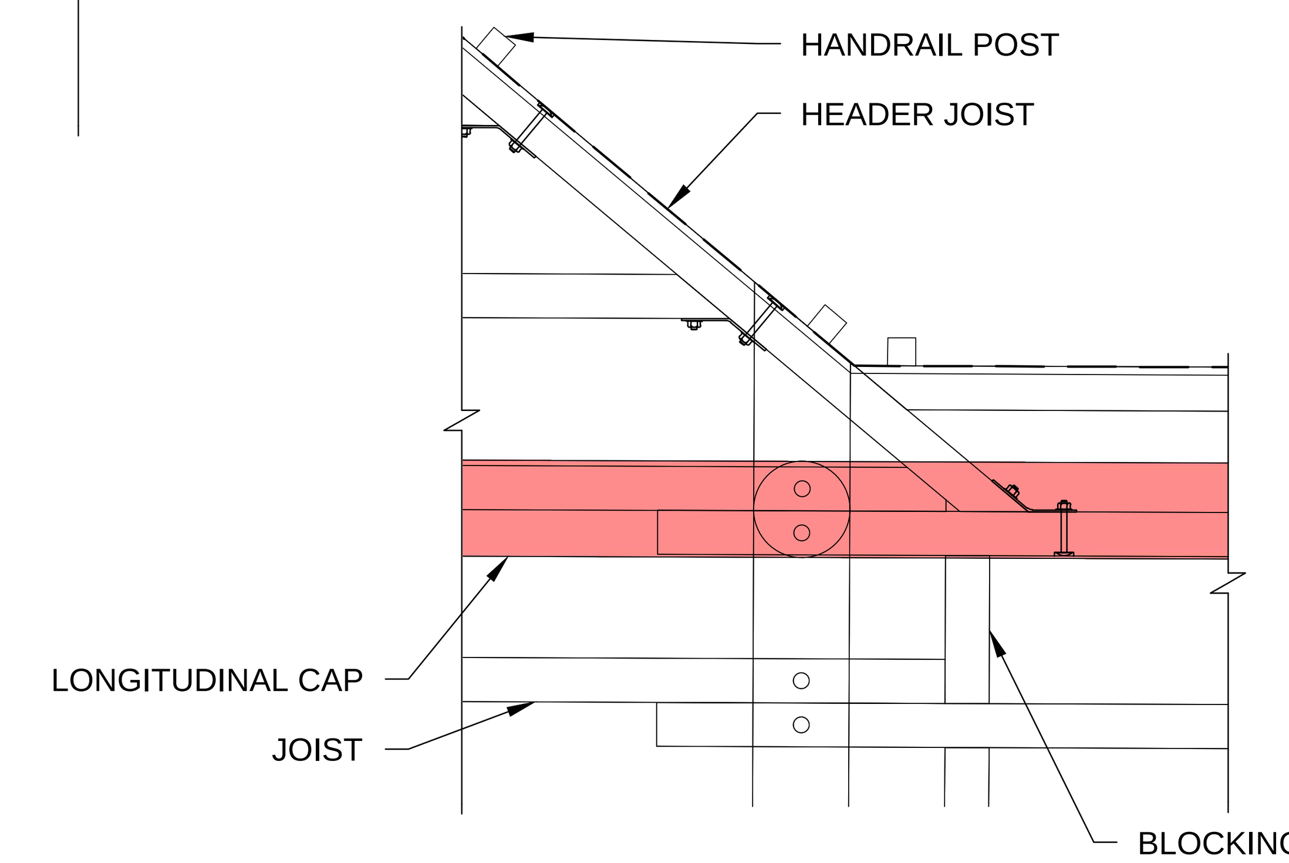
1 DETAIL
PIER FRAMING SCALE: 1" = 2'



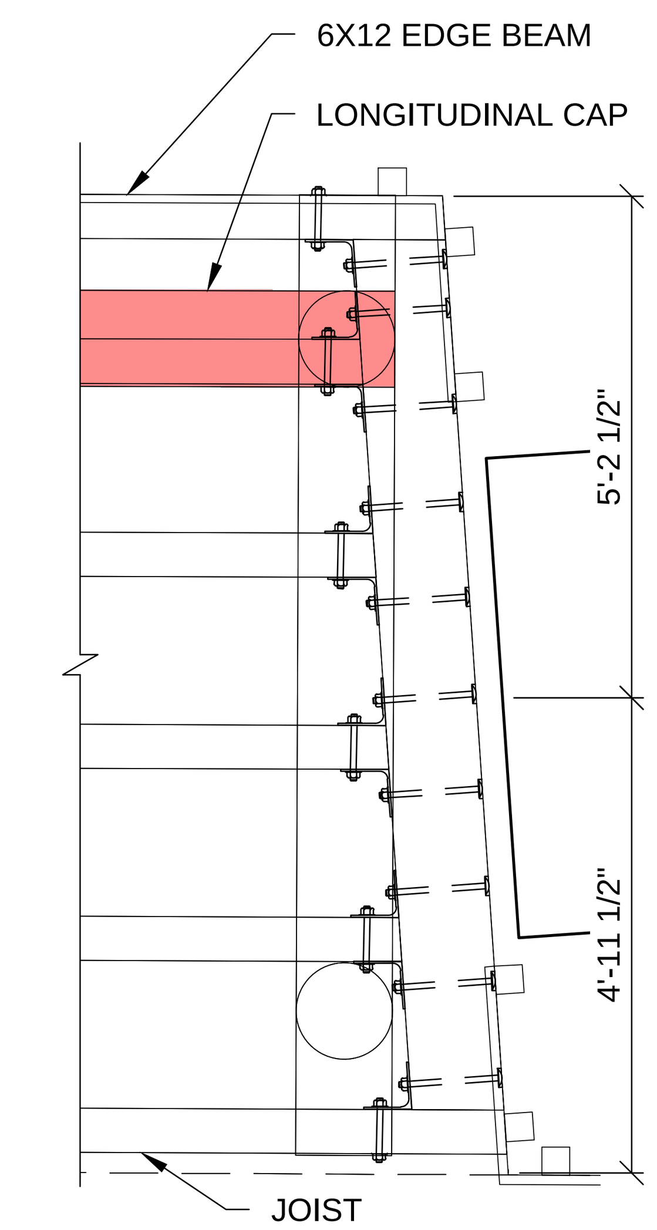
2 DETAIL
PIER FRAMING SCALE: 1" = 2'



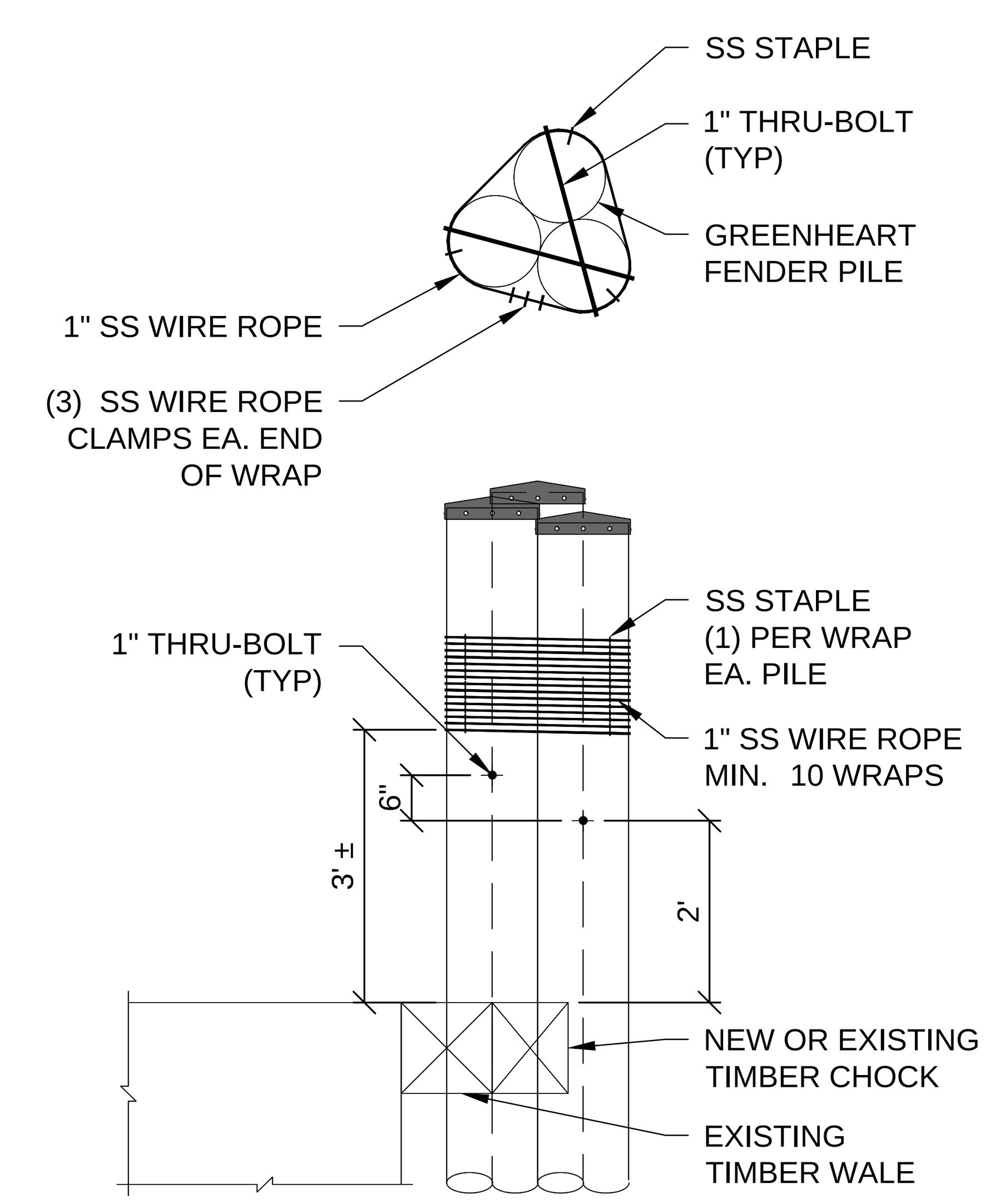
3 DETAIL
PIER FRAMING SCALE: 1" = 2'



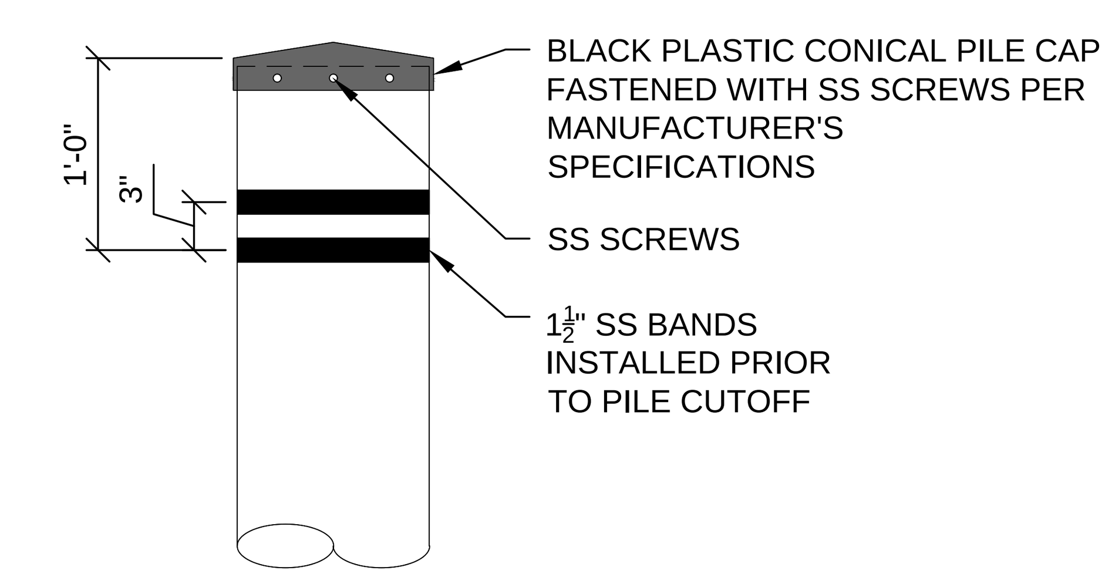
4 DETAIL
PIER FRAMING SCALE: 1" = 2'



5 DETAIL
PIER FRAMING SCALE: 1" = 2'



3-PILE FENDER CLUSTER DETAIL
SCALE: 1" = 2'



GUIDE PILE AND FENDER PILE BANDING DETAIL
SCALE: 1" = 1'

0 1 2 4
SCALE, FEET

Attention:
0 1"
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TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

THE TOWN OF KENNEBUNKPORT, ME INCORPORATED 1653

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
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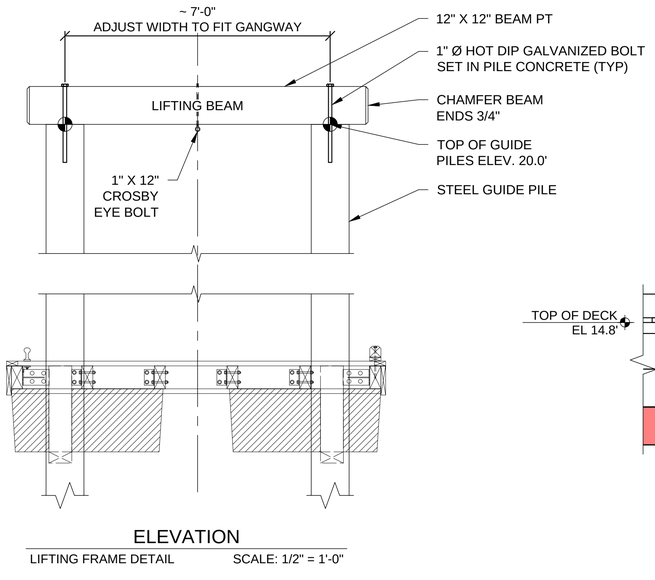
SHEET NAME
STRUCTURAL DETAILS I

SHEET NO.
S-7

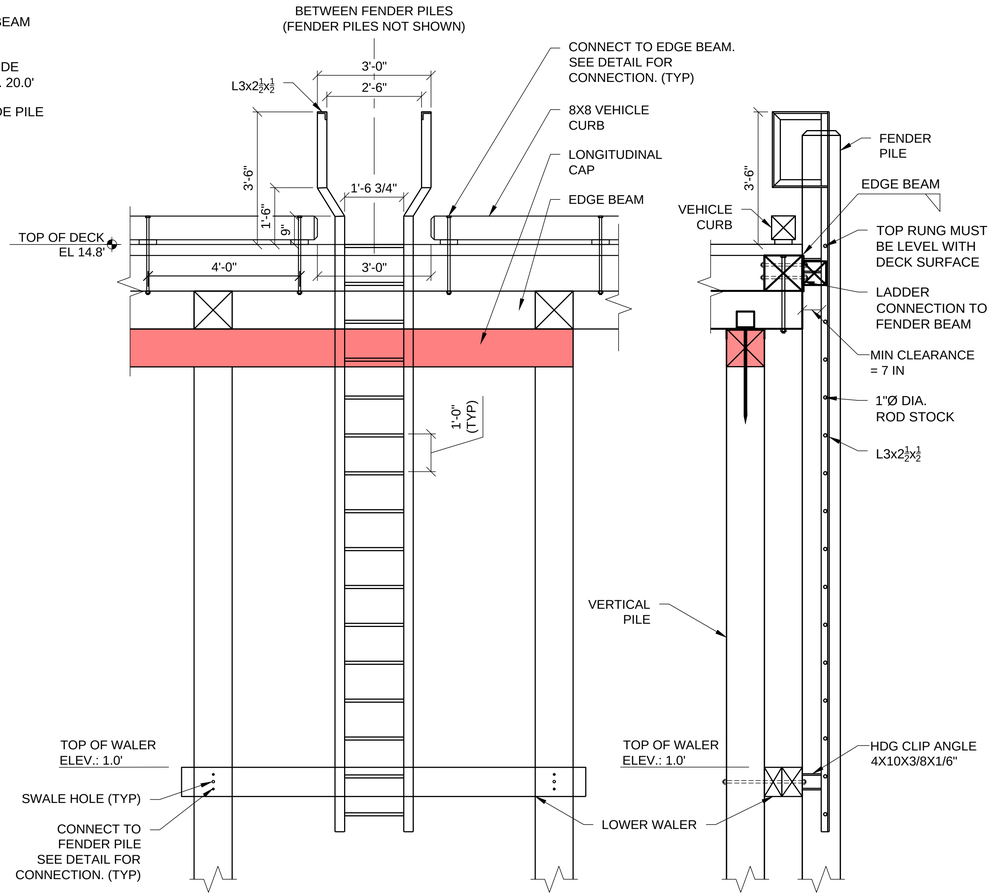
DOYLE, JESSY B:\Working\KENNEBUNKPORT, TOWN OF\2104738 - 16-68 Cape Porpoise Pier\00_CAD\Design\Sheets\SHEETS_STRUCTURE.dwg - 1/22/2024

---- B:\Working\KENNEBUNKPORT, TOWN OF\2104738 - 16-68 Cape Porpoise Pier\00_CAD\Design\Sheets\SHEETS_STRUCTURE.dwg - 1/22/2024



ELEVATION

LIFTING FRAME DETAIL SCALE: 1/2" = 1'-0"

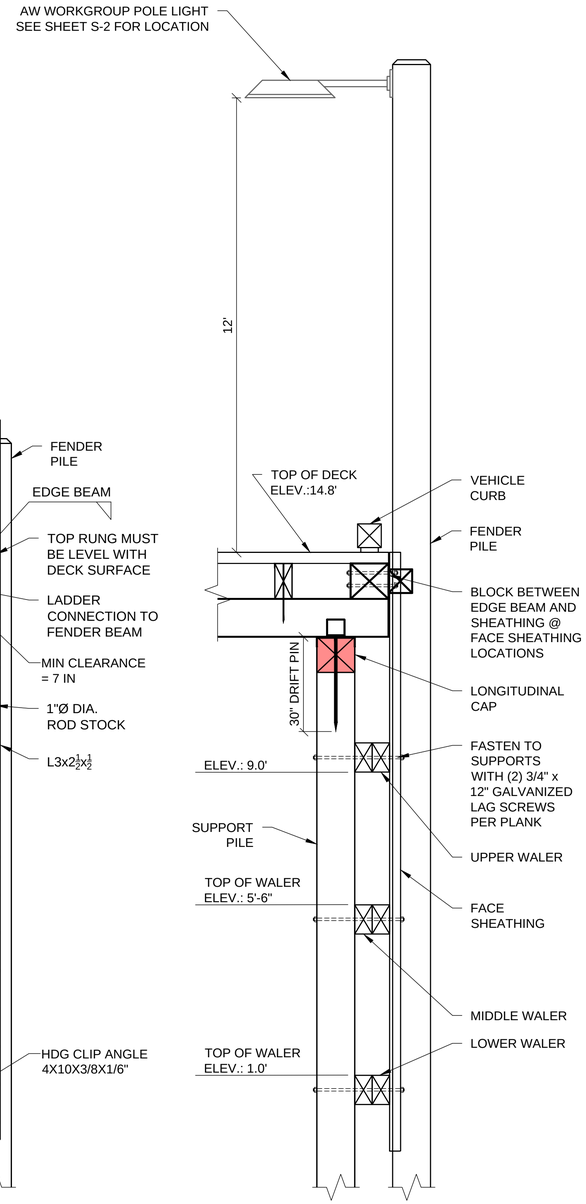


LADDER ELEVATION

LADDER DETAIL SCALE: 1/2" = 1'-0"

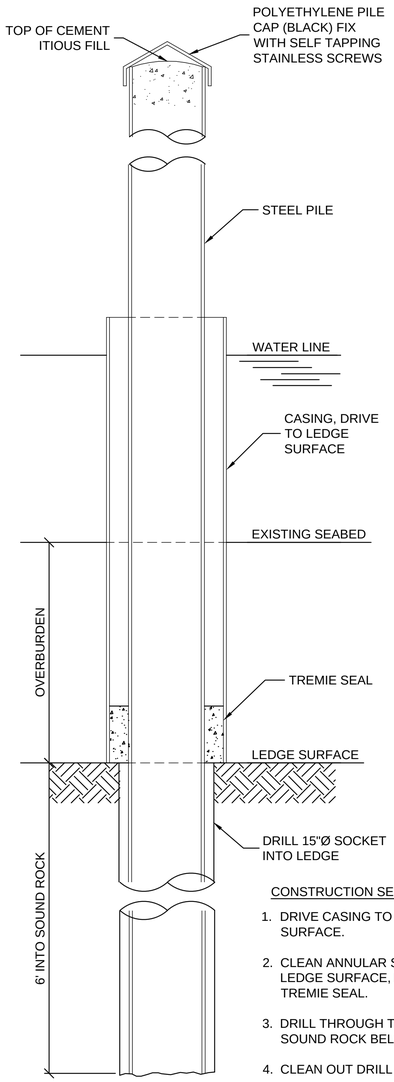
TYPICAL SECTION LADDER

LADDER DETAIL SCALE: 1/2" = 1'-0"



TYPICAL SECTION APRON

FACE SHEATHING DETAIL SCALE: 1/2" = 1'-0"



CONSTRUCTION SEQUENCE

1. DRIVE CASING TO LEDGE SURFACE.
2. CLEAN ANNULAR SPACE TO LEDGE SURFACE, PLACE TREMIE SEAL.
3. DRILL THROUGH TREMIE INTO SOUND ROCK BELOW.
4. CLEAN OUT DRILL HOLE.
5. INSERT PILE AND GROUT TO SURFACE.
6. REMOVE CASING.

STEEL PILE SOCKET DETAIL

SCALE: 1" = 1'-0"

Attention:

0 1"

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TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

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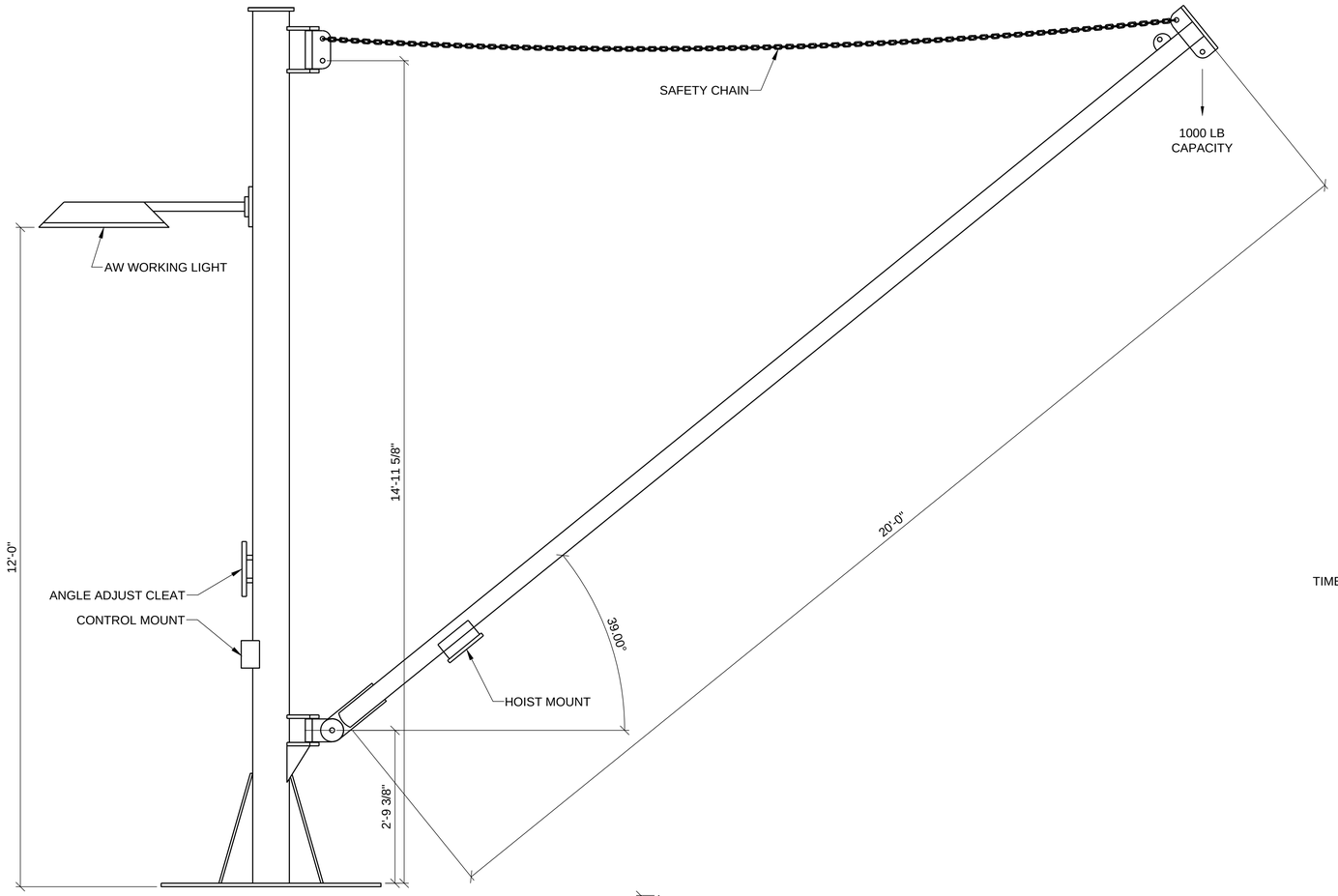
SHEET NAME

STRUCTURAL DETAILS II

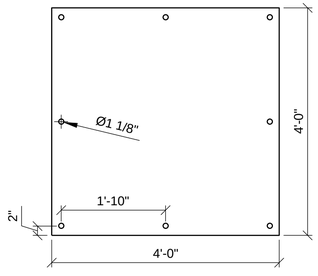
SHEET NO.

S-8



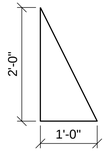
CENTER POST 8"X.25 WALL A513 GRADE 5 DOM PIPE
BOOM 4"X.5" WALL A513 GRADE 5 DOM PIPE

SCALE: 3/4" = 1'-0"



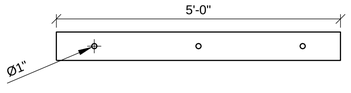
BASE PLATE

SCALE: 3/4" = 1'-0"



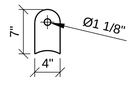
BASE PLATE GUSSET (4 REQD)

SCALE: 3/4" = 1'-0"



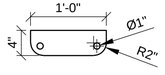
BACKER (6"X2"X1/4" CHANNEL)
A36 STRUCTURAL SHAPE

SCALE: 3/4" = 1'-0"



PIVOT SUPPORT
PLATE (4 REQD)

SCALE: 1" = 1'-0"

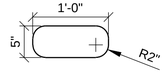


BOOM HEAD
CONNECTING PLATE

SCALE: 1" = 1'-0"

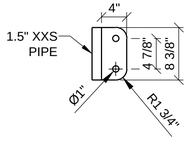
PIVOT SUPPORT
GUSSETT (2 REQD)

SCALE: 1" = 1'-0"



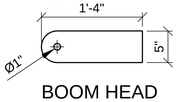
BOOM HEAD
TOP PLATE

SCALE: 1" = 1'-0"



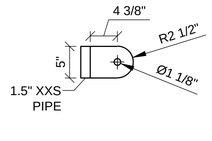
UPPER PIVOT

SCALE: 1" = 1'-0"



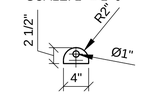
BOOM HEAD
CONNECTING PLATE
3/4" A36 PLATE

SCALE: 1" = 1'-0"



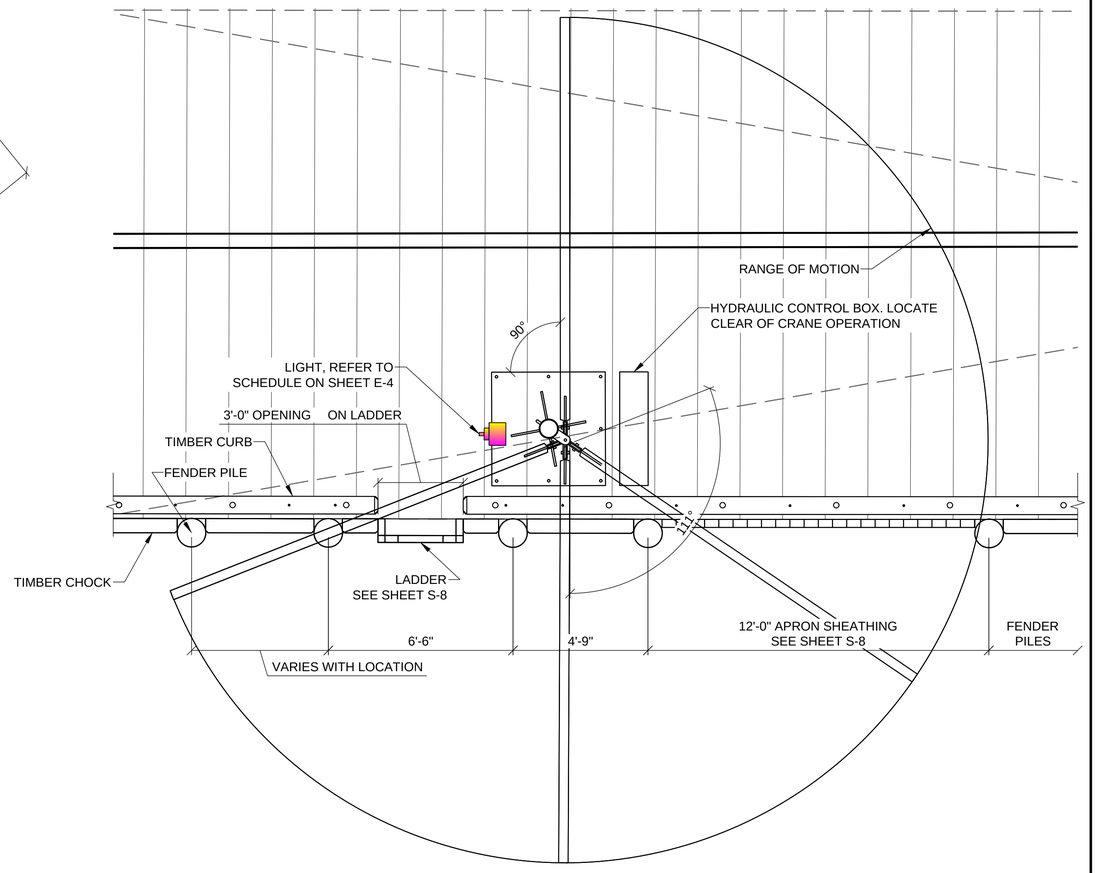
LOWER PIVOT

SCALE: 1" = 1'-0"



BLOCK &
TACKLE PADEYE

SCALE: 1" = 1'-0"



H-3 HOIST - SEE NOTES FOR FEATURES COMMON TO H-4

SCALE: 3/8" = 1'-0"

0 2 4

SCALE, FEET

HOIST NOTES:

NEW HYDRAULIC HOIST H-3:

1. CRANE COMPONENTS TO BE A36 STEEL AND HOT DIP GALVANIZED AFTER FABRICATION.
2. SUBMITTAL REQUIRED
3. REFER TO SPECIFICATION FOR PERFORMANCE REQUIREMENTS

EXISTING HYDRAULIC HOIST H-4:

1. FENDER AND CURB DETAIL ARE SIMILAR
2. STEEL DETAILS DO NOT APPLY TO H-4 HOIST WHICH IS A REFURBISHED EXISTING HOIST

Attention:

0 1"

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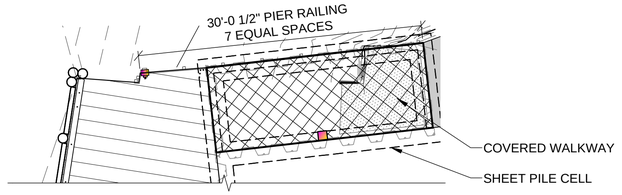
SHEET NAME

HOIST DETAILS

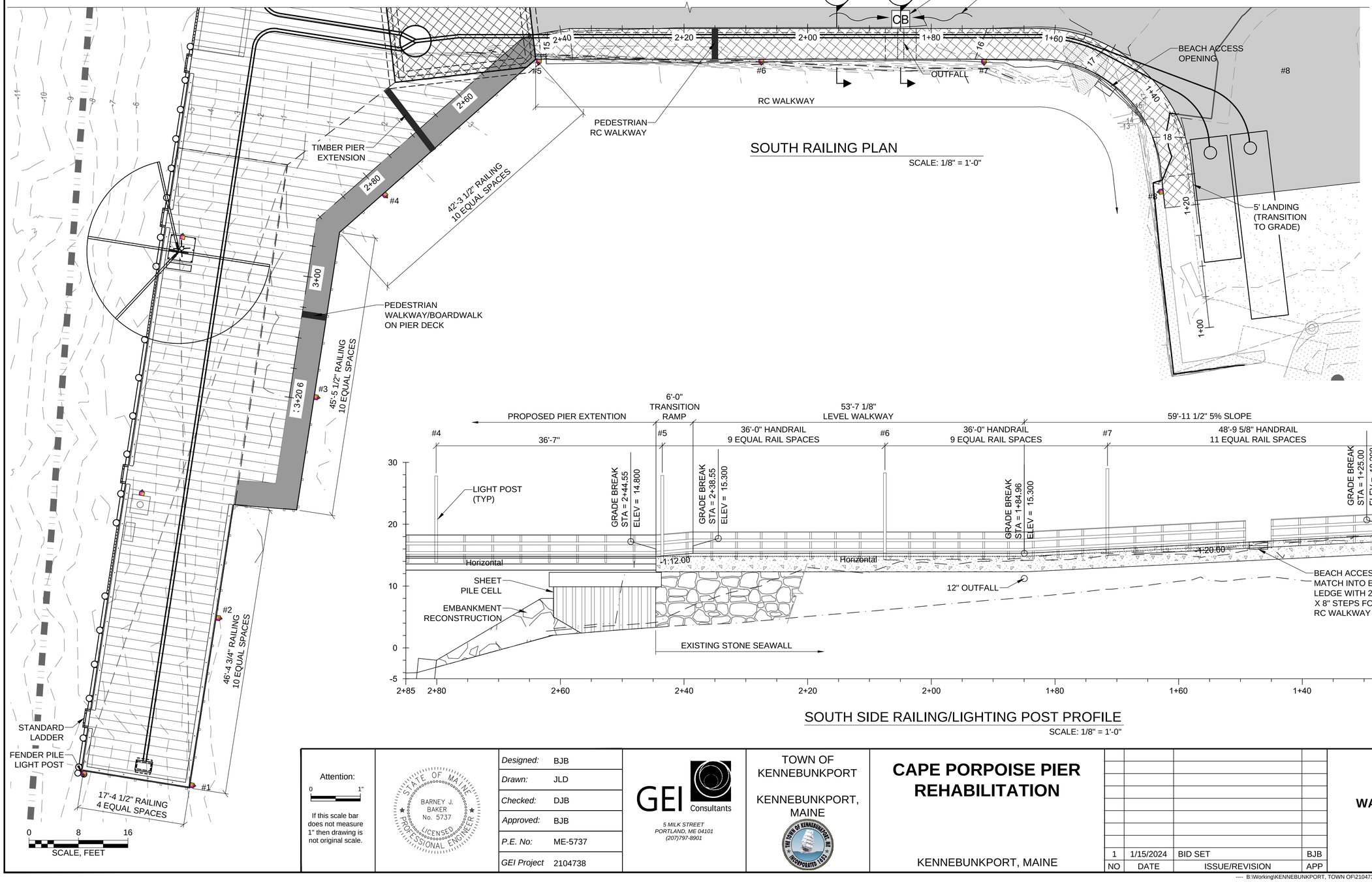
SHEET NO.

S-9



NORTH RAILING PLAN

SCALE: 1/8" = 1'-0"



SOUTH RAILING PLAN

SCALE: 1/8" = 1'-0"

SOUTH SIDE RAILING/LIGHTING POST PROFILE

SCALE: 1/8" = 1'-0"

NOTE:
1. REFER TO SHEET E-3 FOR LIGHT LOCATION.

Attention:
0 1"
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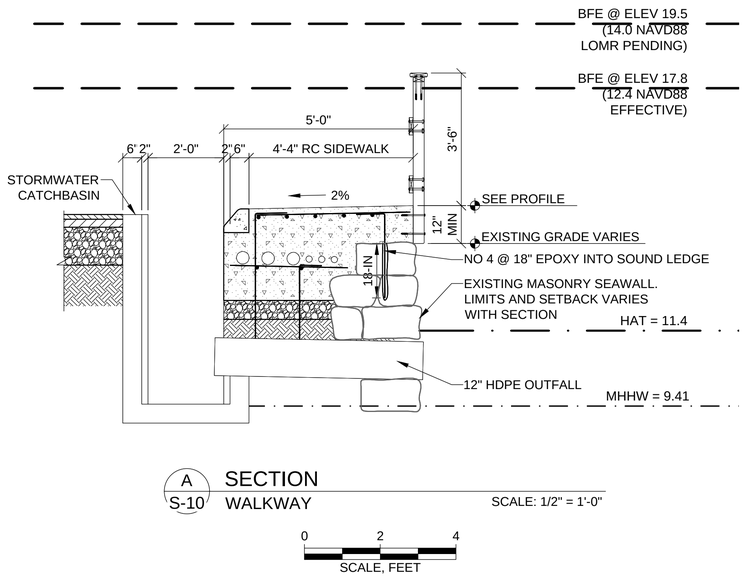
SHEET NAME

WALKWAY PLAN & PROFILE

SHEET NO.

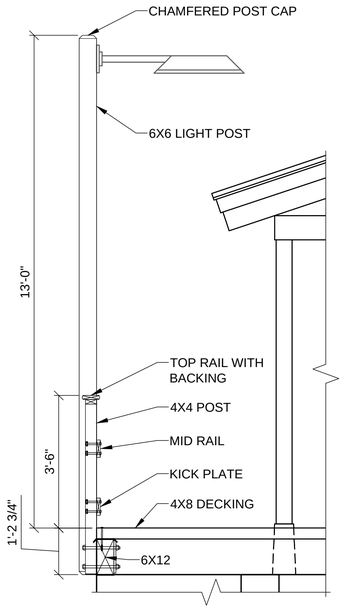
S-10



A S-10 SECTION
WALKWAY

SCALE: 1/2" = 1'-0"

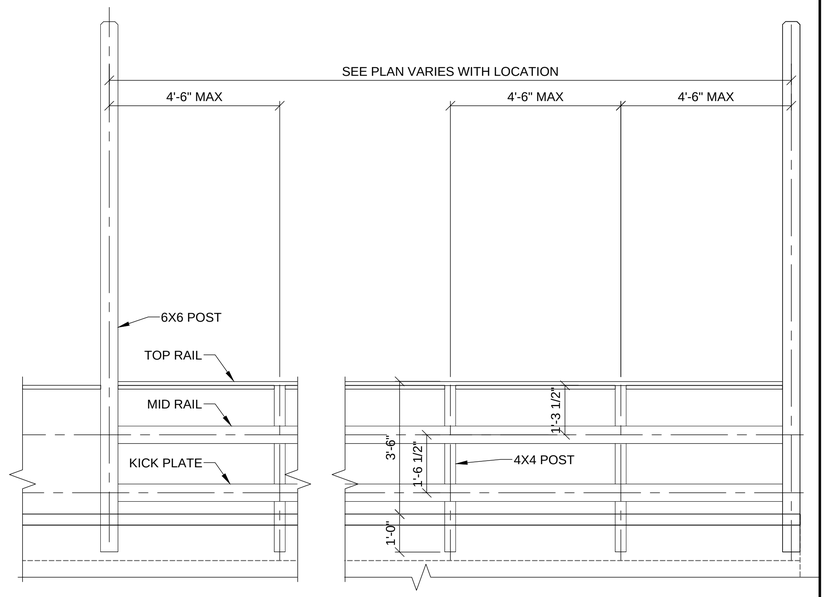
0 2 4
SCALE, FEET



RAILING/LIGHTING POST SECTION
NORTH END OF PIER SHOWN

SCALE: 1/2" = 1'-0"

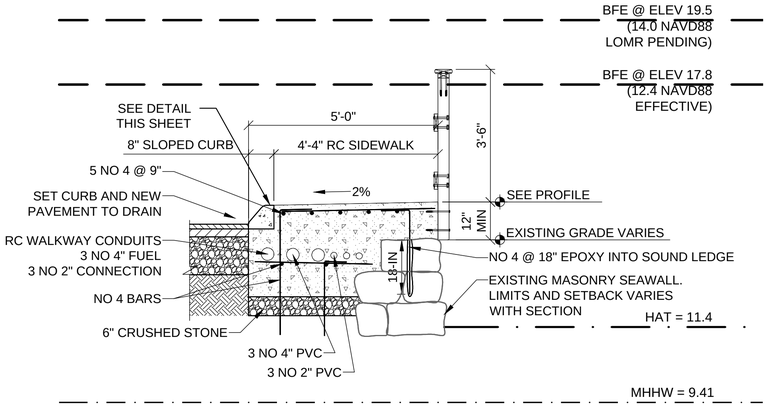
0 2 4
SCALE, FEET



RAILING ELEVATION

SCALE: 1/2" = 1'-0"

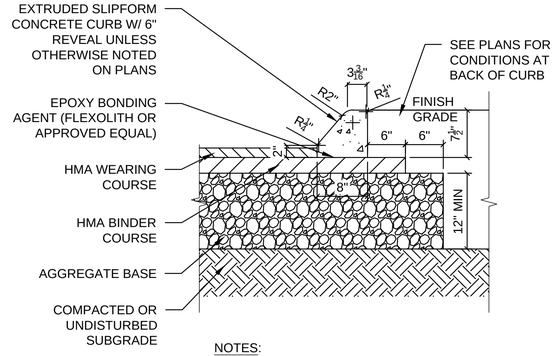
0 2 4
SCALE, FEET



B S-10 SECTION
WALKWAY

SCALE: 1/2" = 1'-0"

0 2 4
SCALE, FEET



NOTES:
1. ALL CONCRETE CURB MATERIALS AND CONSTRUCTION SHALL MEET MaineDOT SPECIFICATIONS.
2. APPLY EPOXY TO BINDER PAVEMENT PRIOR TO CURB PLACEMENT.

SLOPED SLIPFORM CONCRETE CURB (BASE BID)
NOT TO SCALE

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
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PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

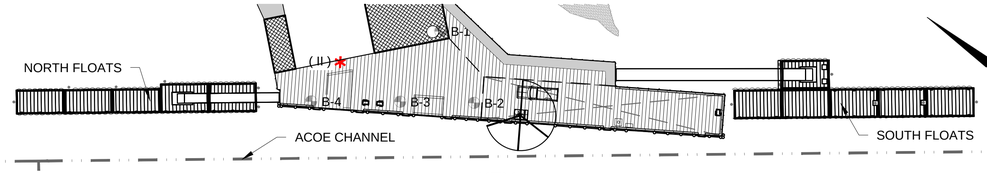
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

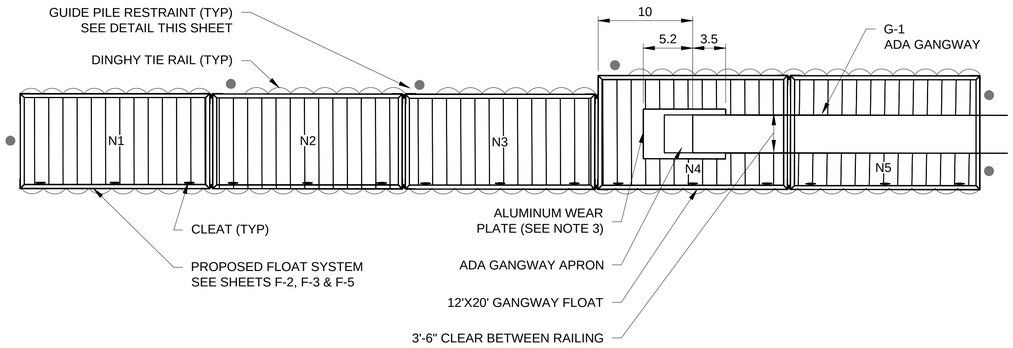
SHEET NAME
WALKWAY & RAILING DETAILS

SHEET NO.
S-11



KEY

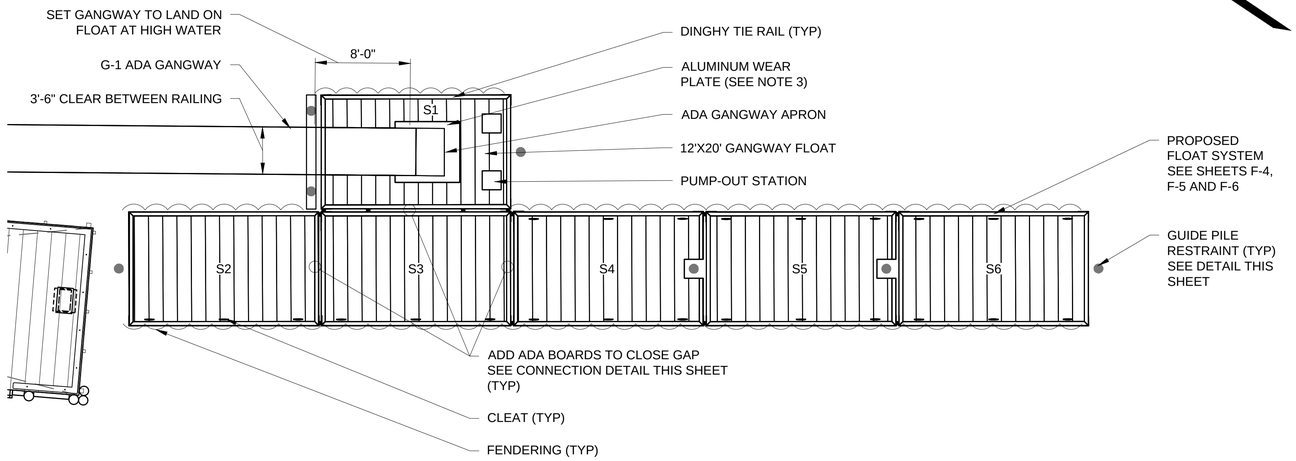
NOT TO SCALE



NORTH FLOATS

0 1 2

SCALE, FEET

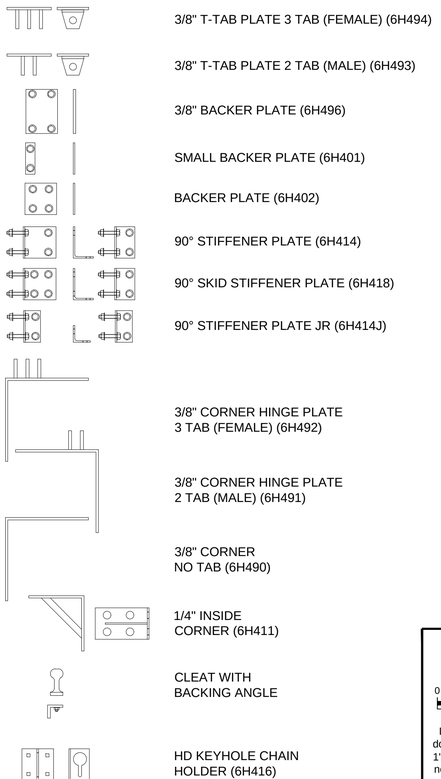


SOUTH FLOATS

0 1 2

SCALE, FEET

FLOAT HARDWARE KEY



GANGWAY SCHEDULE

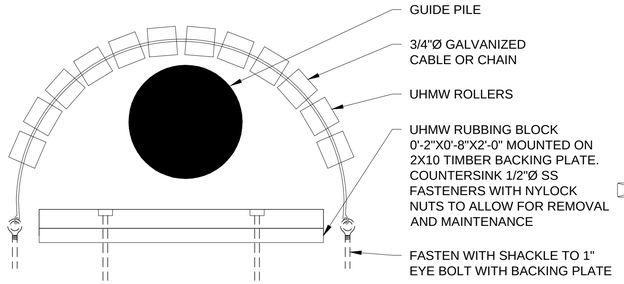
Reference	Status/Section	Length	Location
G-1	New/ADA Compliant	80'	See Sheet G-2
G-2	New/ADA Features	40'	See Sheet G-3

FLOAT TIMBER SCHEDULE

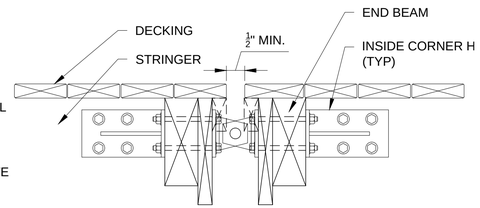
Timber Size	Location	% Moisture at Treatment	Treatment		Grading to SPIB	Surface Finishing
			Type	pcf		
2 x 6	Decking	19%	ACQ	0.6	No. 1	S4S
4 x 8	Longitudinal Framing	25%	CCA	1.0	No. 1	S4S
4 x 8	Transverse Framing	25%	CCA	1.0	No. 1	S4S
2 x 6	Spanner Board	25%	CCA	1.0	No. 1	S4S
4 x 8	Skids	25%	CCA	1.0	No. 2	R
4 x 8	Skid Upright -Interior	25%	CCA	1.0	No. 2	R
2 x 8	Skid Upright -End	25%	CCA	1.0	No. 2	R
2 x 4	Deck Closure Board	19%	ACQ	0.6	No. 1	S4S
2 x 10	Skirt Board	19%	ACQ	0.6	No. 1	S4S

FLOAT SCHEDULE

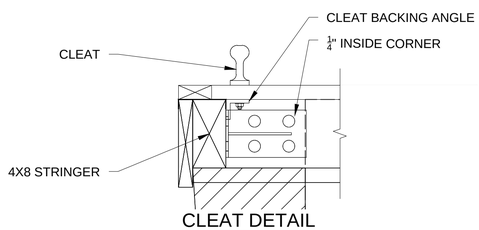
Float Reference	Size	Float Type	Drawing Reference	Quantity		Guide Pile Connections	Rubrail Fendering (FT)				Cleats/Tierail (NO/FT)				Notes
				Base Bid	Alternate Bid		North	East	South	West	North	East	South	West	
N1	10x20	B1	F-3	1	-	1	20'	–	20'	10'	20'	–	3	–	
N2	10x20	B1	F-3	1	-	1	20'	–	20'	–	20'	–	3	–	
N3	10x20	B1	F-3	1	-	1	20'	20'	20'	20'	20'	–	3	–	
N4	12x20	A1	F-2	1	-	1	20'	20'	20'	20'	20'	–	3	–	40-FT ADA GANGWAY
N5	12x20	A2	F-5	1	-	2	–	20'	20'	20'	20'	–	3	–	
S1	12x20	A3	F-4	1	-	3	20'	–	–	–	20'	–	–	–	80-FT ADA GANGWAY
S2	12x20	A2	F-5	1	-	1	–	–	20'	–	20'	–	3	–	
S3	12x20	A2	F-5	1	-	–	–	–	20'	–	–	–	3	–	
S4	12x20	A4	F-6	1	-	1	20'	–	20'	–	3	–	3	–	Internal Pile Guide
S5	12x20	A4	F-6	1	-	1	20'	–	20'	–	3	–	3	–	Internal Pile Guide
S6	12x20	A2	F-5	1	-	1	20'	–	20'	–	3	–	3	–	
			Total	11	0	13	22	80	22	80	9	0	30	0	



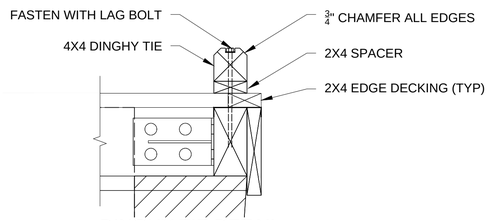
GUIDE PILE CONNECTION DETAIL



CONNECTION DETAIL



CLEAT DETAIL



DINGHY TIE DETAIL

0 1 2

SCALE, FEET

Attention:

0 1"

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STATE OF MAINE
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No. 5737
LICENSED PROFESSIONAL ENGINEER

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P.E. No:	ME-5737
GEI Project	2104738

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TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

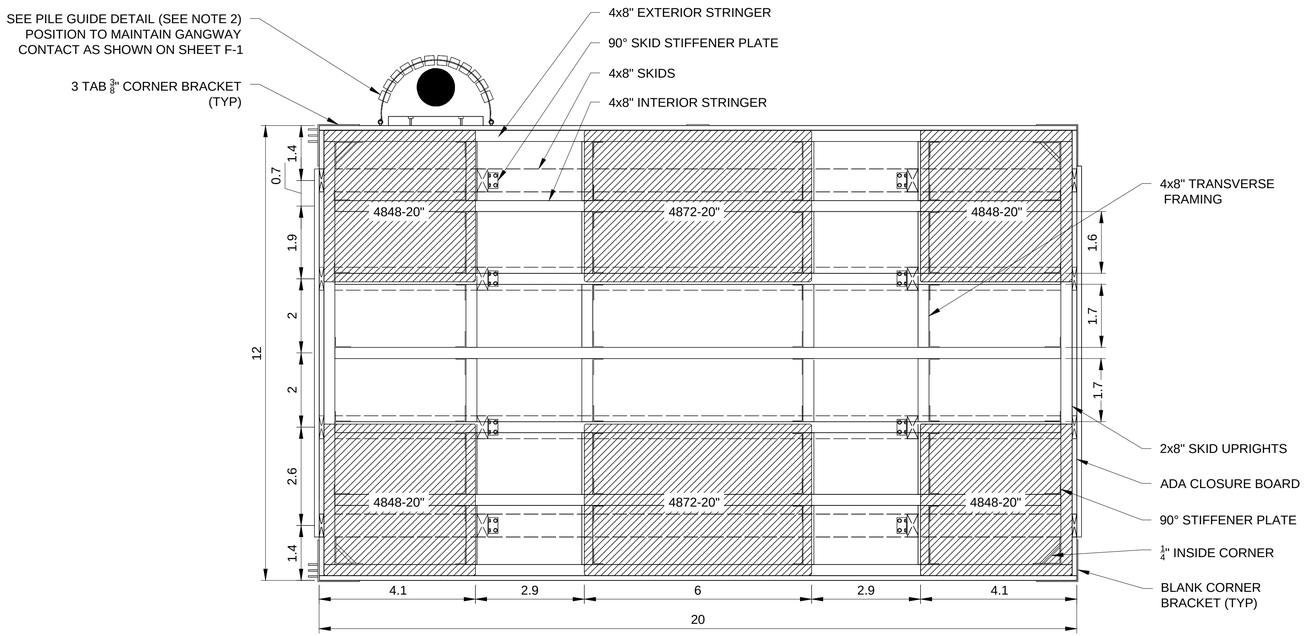
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

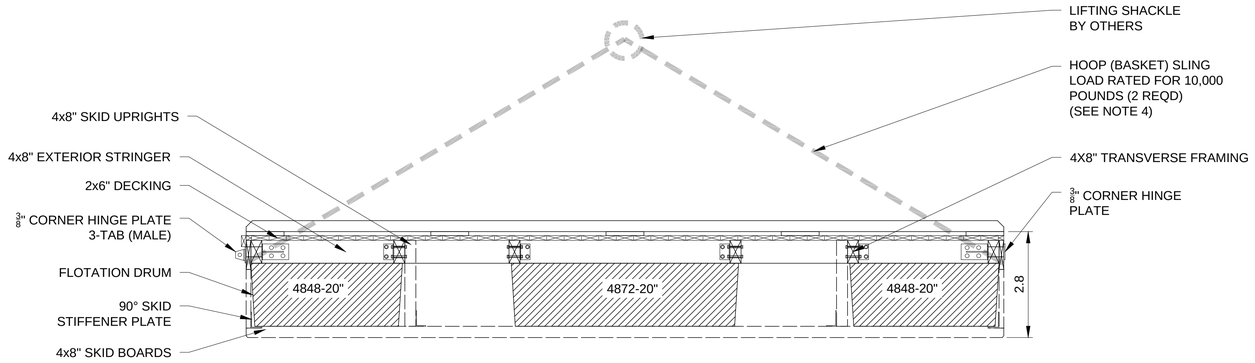
NO	DATE	ISSUE/REVISION	
1	1/15/2024	BID SET	BJB

SHEET NAME: **FLOAT PLAN**

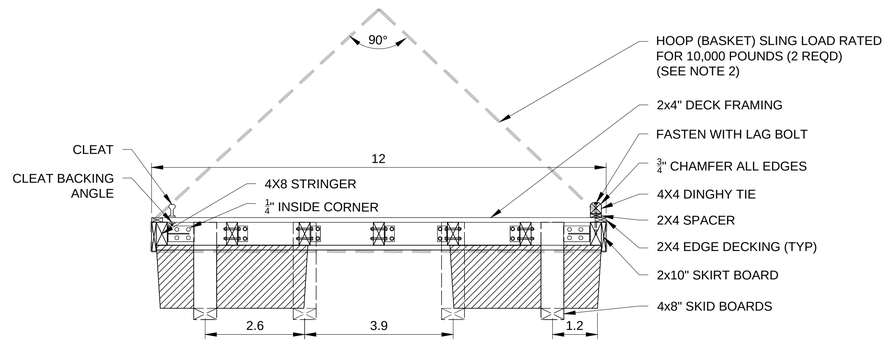
SHEET NO.: **F-1**



TOP VIEW - DECK REMOVED



SIDE ELEVATION



CROSS - SECTION

FLOAT PERFORMANCE
19.3in - CALCULATED FREEBOARD (WITH GANGWAY)
23 psf - RESERVE CAPACITY (DRUMS SUBMERGED)
4840lbs - CALCULATED DRY WEIGHT

Float Drums		
	Desc	Qty.
	4848-20	4
	4896-20	2

Timber Schedule					
Size	Member Desc.	Plan Length	Length	Qty	LF
4x8	Exterior Stringer	19.75	20	2	40
	Exterior Stringer	9.17	10	2	20
	Interior Stringer	19.17	20	4	80
	Transverse Framing	1.63	2	10	20
	Skids	20	20	2	40
	Skid Upright	1.94	2	4	8
	Total 4x8:				208
2x10	Skirt Board	20	20	2	40
	Skirt Board	9.75	10	2	20
	Total 2x10:				60
2x8	Spanner Board	9.17	8	0	0
	Interior Stringer	3.52	4	0	0
	Interior Stringer	2.27	3	0	0
	Interior Stringer	5.85	6	0	0
	Skid Upright	1.28	2	4	8
	Total 2x8:				8
2x4	Deck Framing	20	20	2	40
	ADA Closure Boards	7.71	8	2	16
	Total 2x4:				56
2x6	Decking	9.42	10	43	430
	Dinghy Tie-Up Blocks	1	1	0	0
	Total 2x6:				430
4x4	Dinghy Tie-Up Boards	0	0	0	0
	Total 4x6:				0

#	Description	LF	Qty
5008	4 Chamber Polyvinyl Rub Rail	10	3

Description	Custom Float Part No.	Qty.
1/2" HDG Bolts:		
2-1/2"		40
5"		100
6"		90
3/8" Corner Hinge Plate 3 Tab (Female)	6H492	2
3/8" Corner No Tab	6H490	2
3/4" Eye Bolt	DH-TM	2
90 Stiffener Plate	6H414	44
90 Skid Stiffener Plate	6H418	8
1/4" Inside Corner	6H411	4
12" Cleat (Typ) w/ Backing Angle		3
Pile Guide		2
HD Keyhole Chain Holder	6H416	0
Utility Aluminum Angle:		
5'		4
1'		2
90 Stiffener Plate JR	6H4147	0
Deck Screws		442

NOTES:
1. REFER TO SHEET F-1 FOR FLOAT HARDWARE, CLEAT, AND TIE LOCATION.
2. HOOP SLING DIMENSIONS TO BE BASED ON A 90 DEGREE CENTRAL AS INDICATED ON 10-FT CROSS SECTION WIDTH.
3. TIMBER AND FASTENER SCHEDULES PROVIDED FOR GUIDANCE. CONTRACTOR TO VERIFY.

0 1/4 1/2
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
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TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

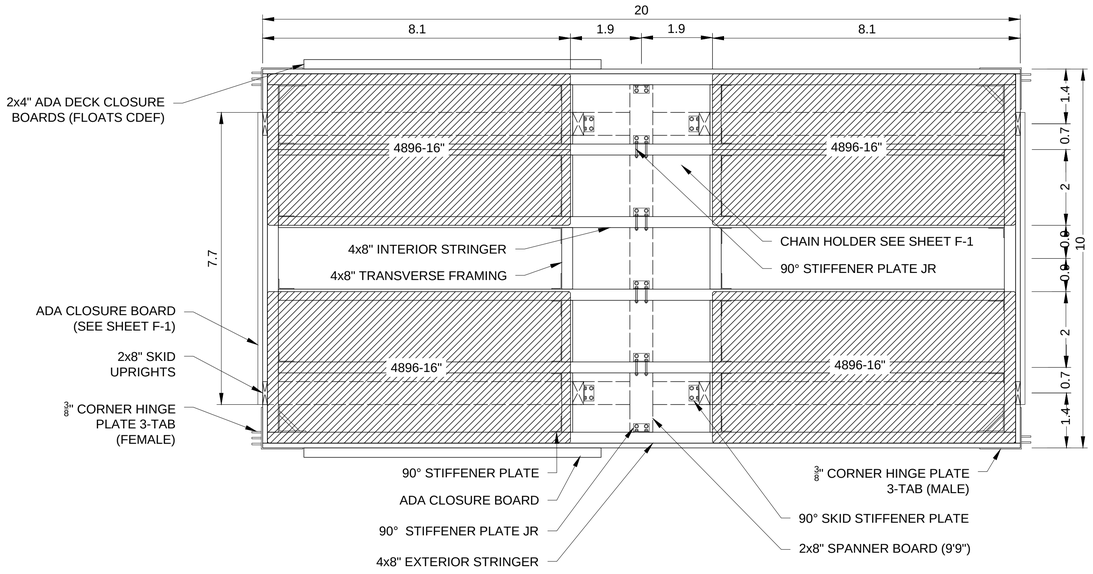
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME
NORTH GANGWAY FLOAT PLAN

SHEET NO.
F-2



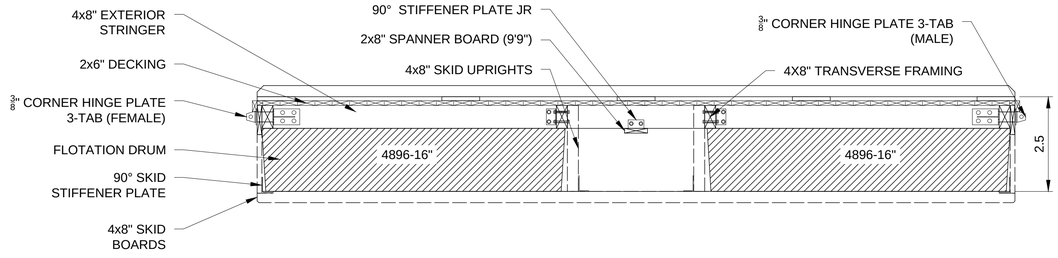
TOP VIEW - DECK REMOVED

Float Drums		
	Desc	Qty.
	4848-20	4
	4896-20	2

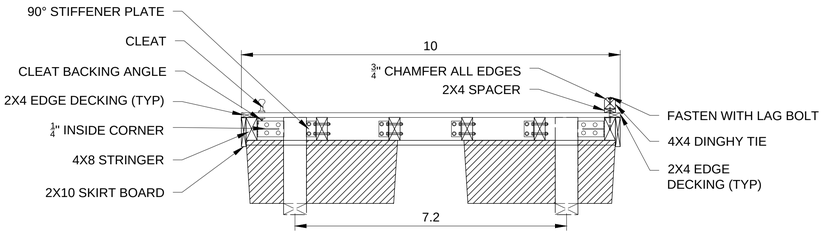
Timber Schedule					
Size	Member Desc.	Plan Length	Length	Qty	LF
4x8	Exterior Stringer	19.75	20	2	40
	Exterior Stringer	9.17	10	2	20
	Interior Stringer	19.17	20	4	80
	Transverse Framing	1.63	2	10	20
	Skids	20	20	2	40
	Skid Upright	1.94	2	4	8
	Total 4x8:				208
2x10	Skirt Board	20	20	2	40
	Skirt Board	9.75	10	2	20
	Total 2x10:				60
2x8	Spanner Board	9.17	8	0	0
	Interior Stringer	3.52	4	0	0
	Interior Stringer	2.27	3	0	0
	Interior Stringer	5.85	6	0	0
	Skid Upright	1.28	2	4	8
	Total 2x8:				8
2x4	Deck Framing	20	20	2	40
	ADA Closure Boards	7.71	8	2	16
	Total 2x4:				56
2x6	Decking	9.42	10	43	430
	Dinghy Tie-Up Blocks	1	1	0	0
	Total 2x6:				430
4x4	Dinghy Tie-Up Boards	0	0	0	0
	Total 4x6:				0

#	Description	LF	Qty
5008	4 Chamber Polyvinyl Rub Rail	10	3

Description	Custom Float Part No.	Qty.
1/2" HDG Bolts:		
2-1/2"		40
5"		100
6"		90
3/8" Corner Hinge Plate 3 Tab (Female)	6H492	2
3/8" Corner No Tab	6H490	2
3/4" Eye Bolt	DH-TM	2
90 Stiffener Plate	6H414	44
90 Skid Stiffener Plate	6H418	8
1/4" Inside Corner	6H411	4
12" Cleat (Typ) w/ Backing Angle		3
Pile Guide		2
HD Keyhole Chain Holder	6H416	0
Utility Aluminum Angle:		
5'		4
1'		2
90 Stiffener Plate JR	6H4147	0
Deck Screws		442



SIDE ELEVATION



CROSS - SECTION

FLOAT PERFORMANCE
18.8in - CALCULATED FREEBOARD
30.6psf - RESERVE CAPACITY (DRUMS SUBMERGED)
3910lbs - CALCULATED DRY WEIGHT

NOTES:
1. REFER TO SHEET F-1 FOR FLOAT HARDWARE, CLEAT, AND TIE LOCATION.
2. HOOP SLING DIMENSIONS TO BE BASED ON A 90 DEGREE CENTRAL AS INDICATED ON 10-FT CROSS SECTION WIDTH.
3. TIMBER AND FASTENER SCHEDULES PROVIDED FOR GUIDANCE. CONTRACTOR TO VERIFY.
4. SEE SHEET F-2 FOR CARRYING STRAP

0 1/4 1/2
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
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P.E. No:	ME-5737
GEI Project	2104738

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

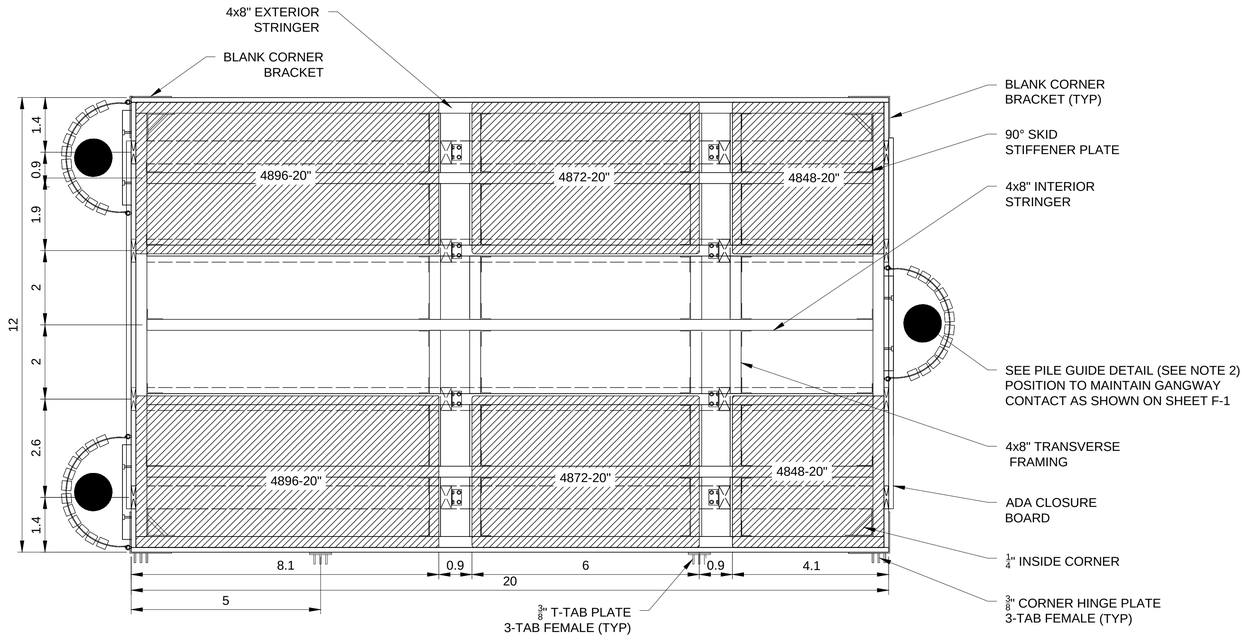
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **10X20 NORTH FLOATS**

SHEET NO.: **F-3**



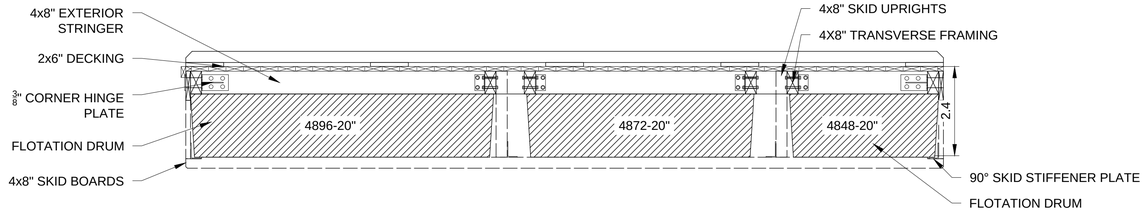
TOP VIEW - DECK REMOVED

Float Drums		
	Desc	Qty.
	4848-20	4
	4896-20	2

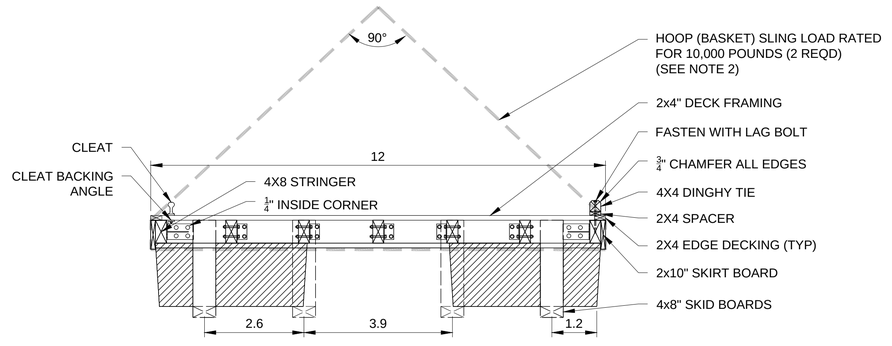
Timber Schedule					
Size	Member Desc.	Plan Length	Length	Qty	LF
4x8	Exterior Stringer	19.75	20	2	40
	Exterior Stringer	9.17	10	2	20
	Interior Stringer	19.17	20	4	80
	Transverse Framing	1.63	2	10	20
	Skids	20	20	2	40
	Skid Upright	1.94	2	4	8
			Total 4x8:		208
2x10	Skirt Board	20	20	2	40
	Skirt Board	9.75	10	2	20
			Total 2x10:		60
2x8	Spanner Board	9.17	8	0	0
	Interior Stringer	3.52	4	0	0
	Interior Stringer	2.27	3	0	0
	Interior Stringer	5.85	6	0	0
	Skid Upright	1.28	2	4	8
			Total 2x8:		8
2x4	Deck Framing	20	20	2	40
	ADA Closure Boards	7.71	8	2	16
			Total 2x4:		56
2x6	Decking	9.42	10	43	430
	Dinghy Tie-Up Blocks	1	1	0	0
			Total 2x6:		430
4x4	Dinghy Tie-Up Boards	0	0	0	0
			Total 4x6:		0

#	Description	LF	Qty
5008	4 Chamber Polyvinyl Rub Rail	10	3

Description	Custom Float Part No.	Qty.
1/2" HDG Bolts: 2-1/2"		40
5"		100
6"		90
3/8" Corner Hinge Plate 3 Tab (Female)	6H492	2
3/8" Corner No Tab	6H490	2
3/4" Eye Bolt	DH-TM	2
90 Stiffener Plate	6H414	44
90 Skid Stiffener Plate	6H418	8
1/4" Inside Corner	6H411	4
12" Cleat (Typ) w/ Backing Angle		3
Pile Guide		2
HD Keyhole Chain Holder	6H416	0
Utility Aluminum Angle: 5'		4
1'		2
90 Stiffener Plate JR	6H4147	0
Deck Screws		442



SIDE ELEVATION



CROSS - SECTION

FLOAT PERFORMANCE
18.6in - CALCULATED FREEBOARD (WITH GANGWAY)
27.9psf - RESERVE CAPACITY (DRUMS SUBMERGED)
5050lbs - CALCULATED DRY WEIGHT

0 1/4 1/2
SCALE, FEET

Attention:
0 1"
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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

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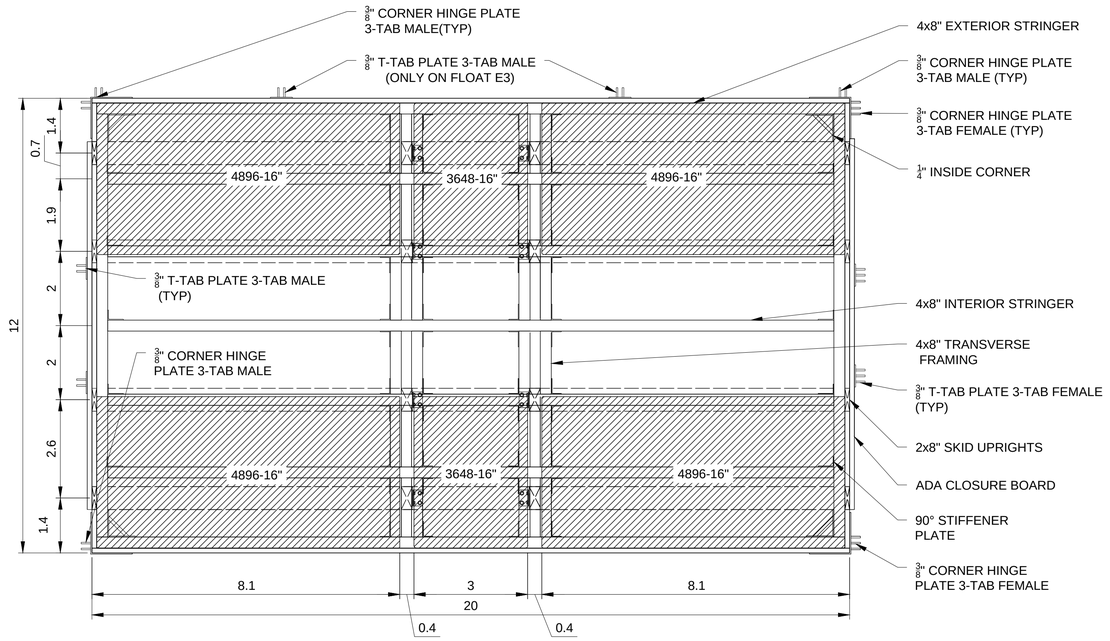
SHEET NAME
SOUTH GANGWAY FLOAT PLAN

SHEET NO.
F-4



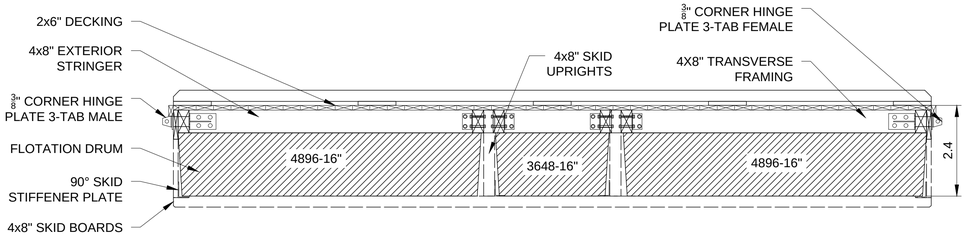
TOP VIEW - DECK REMOVED

Float Drums		
	Desc	Qty.
	4848-20	4
	4896-20	2

Timber Schedule					
Size	Member Desc.	Plan Length	Length	Qty	LF
4x8	Exterior Stringer	19.75	20	2	40
	Exterior Stringer	9.17	10	2	20
	Interior Stringer	19.17	20	4	80
	Transverse Framing	1.63	2	10	20
	Skids	20	20	2	40
	Skid Upright	1.94	2	4	8
			Total 4x8:		208
2x10	Skirt Board	20	20	2	40
	Skirt Board	9.75	10	2	20
			Total 2x10:		60
2x8	Spanner Board	9.17	8	0	0
	Interior Stringer	3.52	4	0	0
	Interior Stringer	2.27	3	0	0
	Interior Stringer	5.85	6	0	0
	Skid Upright	1.28	2	4	8
			Total 2x8:		8
2x4	Deck Framing	20	20	2	40
	ADA Closure Boards	7.71	8	2	16
			Total 2x4:		56
2x6	Decking	9.42	10	43	430
	Dinghy Tie-Up Blocks	1	1	0	0
			Total 2x6:		430
4x4	Dinghy Tie-Up Boards	0	0	0	0
			Total 4x6:		0

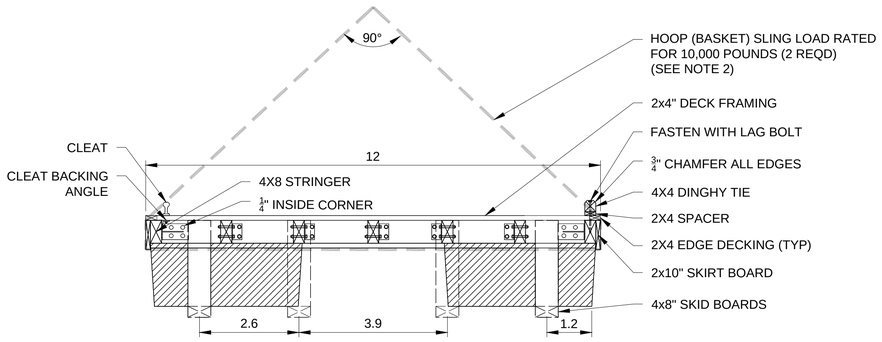
#	Description	LF	Qty
5008	4 Chamber Polyvinyl Rub Rail	10	3

Description	Custom Float Part No.	Qty.
1/2" HDG Bolts:		
2-1/2"		40
5"		100
6"		90
3/8" Corner Hinge Plate 3 Tab (Female)	6H492	2
3/8" Corner No Tab	6H490	2
3/4" Eye Bolt	DH-TM	2
90 Stiffener Plate	6H414	44
90 Skid Stiffener Plate	6H418	8
1/4" Inside Corner	6H411	4
12" Cleat (Typ) w/ Backing Angle		3
Pile Guide		2
HD Keyhole Chain Holder	6H416	0
Utility Aluminum Angle:		
5'		4
1'		2
90 Stiffener Plate JR	6H4147	0
Deck Screws		442



SIDE ELEVATION

FLOAT PERFORMANCE
18.5in - CALCULATED FREEBOARD
29.1psf - RESERVE CAPACITY (DRUMS SUBMERGED)
5000lbs - CALCULATED DRY WEIGHT



CROSS - SECTION

0 1/4 1/2
SCALE, FEET

Attention:
0 1"
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STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

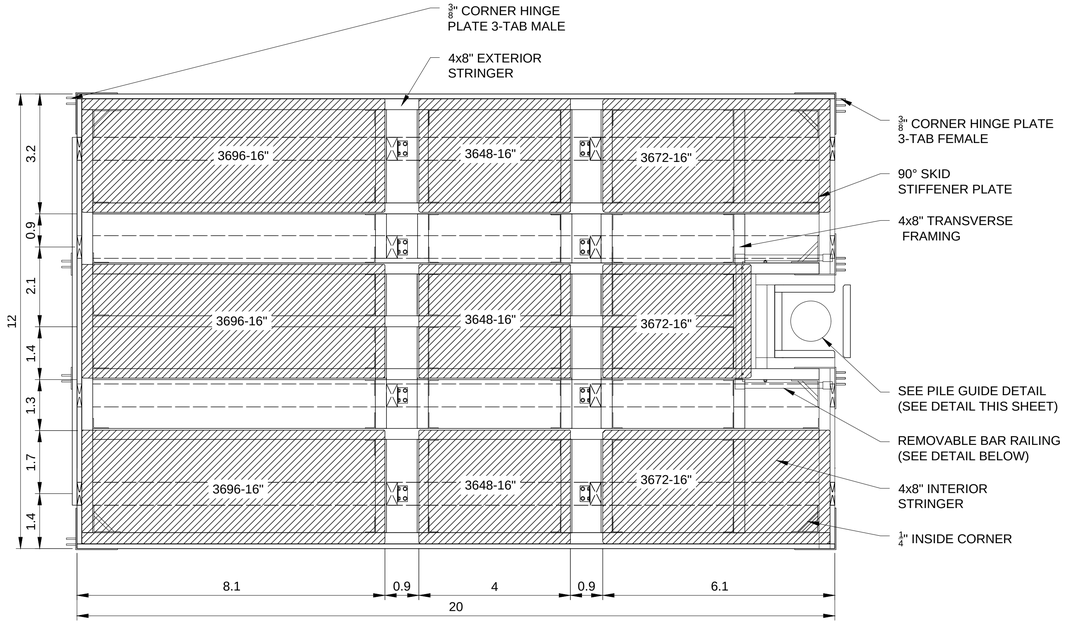
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME
SOUTH 12X20 FLOAT PLAN

SHEET NO.
F-5



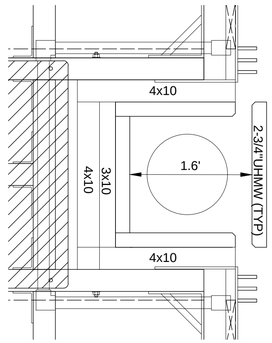
TOP VIEW - DECK REMOVED

#	Description	LF	Qty
5008	4 Chamber Polyvinyl Rub Rail	10	3

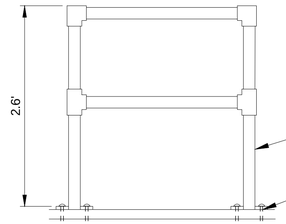
Float Drums		
	Desc	Qty.
	4848-20	4
	4896-20	2

Timber Schedule					
Size	Member Desc.	Plan Length	Length	Qty	LF
4x8	Exterior Stringer	19.75	20	2	40
	Exterior Stringer	9.17	10	2	20
	Interior Stringer	19.17	20	4	80
	Transverse Framing	1.63	2	10	20
	Skids	20	20	2	40
	Skid Upright	1.94	2	4	8
	Total 4x8:				208
2x10	Skirt Board	20	20	2	40
	Skirt Board	9.75	10	2	20
	Total 2x10:				60
2x8	Spanner Board	9.17	8	0	0
	Interior Stringer	3.52	4	0	0
	Interior Stringer	2.27	3	0	0
	Interior Stringer	5.85	6	0	0
	Skid Upright	1.28	2	4	8
	Total 2x8:				8
2x4	Deck Framing	20	20	2	40
	ADA Closure Boards	7.71	8	2	16
	Total 2x4:				56
2x6	Decking	9.42	10	43	430
	Dinghy Tie-Up Blocks	1	1	0	0
	Total 2x6:				430
4x4	Dinghy Tie-Up Boards	0	0	0	0
	Total 4x6:				0

Description	Custom Float Part No.	Qty.
1/2" HDG Bolts:		
2-1/2"		40
5"		100
6"		90
3/8" Corner Hinge Plate 3 Tab (Female)	6H492	2
3/8" Corner No Tab	6H490	2
3/4" Eye Bolt	DH-TM	2
90 Stiffener Plate	6H414	44
90 Skid Stiffener Plate	6H418	8
1/4" Inside Corner	6H411	4
12" Cleat (Typ) w/ Backing Angle		3
Pile Guide		2
HD Keyhole Chain Holder	6H416	0
Utility Aluminum Angle:		
5'		4
1'		2
90 Stiffener Plate JR	6H4147	0
Deck Screws		442

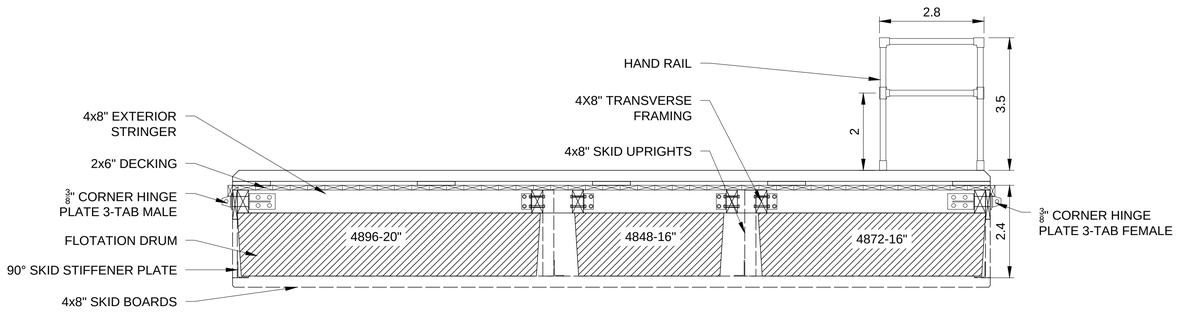


PILE CAPTURE DETAIL

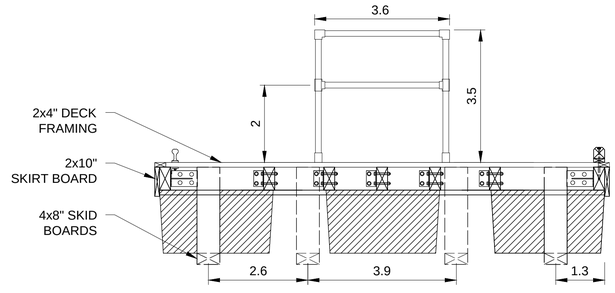


REMOVABLE BAR RAILING

0 1 2
SCALE, INCHES



SIDE ELEVATION



CROSS - SECTION

FLOAT PERFORMANCE
18.6in - CALCULATED FREEBOARD
31.0psf - RESERVE CAPACITY (DRUMS SUBMERGED)
5030lbs - CALCULATED DRY WEIGHT

NOTES:
1. REFER TO SHEET F-1 FOR FLOAT HARDWARE, CLEAT, AND TIE LOCATION.
2. HOOP SLING DIMENSIONS TO BE BASED ON A 90 DEGREE CENTRAL AS INDICATED ON 10-FT CROSS SECTION WIDTH.
3. TIMBER AND FASTENER SCHEDULES PROVIDED FOR GUIDANCE. CONTRACTOR TO VERIFY.
4. SEE SHEET F-2 FOR CARRYING STRAP

0 1/4 1/2
SCALE, FEET

Attention:
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STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
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SHEET NAME
SOUTH 12X20 FLOAT E4, E5 PLAN

SHEET NO.
F-6

CODE ANALYSIS

NFPA 101 Life Safety Code - 2021 Edition

Building Classification:	Mercantile - 2750 sf
Hazard Classification:	Ordinary Hazard
Construction Type:	Type V (000)
Occupancy Use:	Wholesale Bait Services
	Sales Floor (Bait Bins) - 1805 sf
	Business - 265 sf (Ancillary)
	Storage - 400 sf
	Utility - 280 sf
Occupant Loads:	1805 sf Sales 30 sf/occupant = 61 occupants
	265 sf Business @ 150 sf/occupant = 2 occupants
	400 sf Storage @ 500 sf/occupant = 1 occupant
	280 sf Utility - Not Applicable
	Total Occupant Load = 64 occupants
Janitor, Mech, Storage Rating:	1 hour
Mercantile/Business:	None (ancillary)

Building Uses — **Mercantile - Class C**

Max. Allowable Travel Distance:	150'
Max. Allowable Common Path:	75'
Max. Dead End Corridor Length:	20'
Minimum Egress Stair/Corridor Width:	36" if >50 occ; 44" otherwise
Minimum Number of Required Exits	2
	1 if maximum travel distance is less than 75' to exit
Minimum Separation of exits:	0.5 diagonal'
Minimum Egress Door Width:	36"
Minimum Headroom:	7'-6"
Minimum Stair width:	44" clear
Maximum Riser height:	7"
Minimum Tread width:	11"
Minimum Headroom - Stairs:	6'-8"
Maximum ht between landings:	12'-0"
Handrail height:	34"-38" @ 42" guardrail
Handrail top extension:	12" horz.
Handrail bottom extension:	11" angled + 12" horz.
Handrail diameter:	1-1/2" O.D.
Maximum baluster open space:	less than 4"
Exit Lighting:	Required
Emergency Lighting:	Required
Fire Alarm System:	Not Required
Fire Sprinkler System:	Not Required
Fire Detection System (Smoke/Heat):	Required
Portable Fire Extinguishers:	Required
Exit Devices/Panic Hardware	Required if over 50 occupants

Interior Finishes Class:

Exits	A
All other spaces	A, B, or C

2015 International Building Code

Building Classification:	Mercantile - 2750 sf
Hazard Classification:	Ordinary Hazard
Construction Type:	Type 5B; Non-Combustible/Combustible/Non-Sprinkled
Use Group Classification:	Mercantile - M
Occupancy Use:	Wholesale Bait Services
	Sales Floor (Bait Bins) - 1805 sf
	Business - 265 sf (Ancillary)
	Storage - 400 sf
	Utility - 280 sf
Occupant Loads:	1805 sf Sales 60 sf/occupant = 30 occupants
	265 sf Business @ 100 sf/occupant = 3 occupants
	400 sf Storage @ 300 sf/occupant = 2 occupants
	280 sf Utility - Not Applicable
	Total Occupant Load = 35 occupants

Building Limitations	Mercantile (M) - Non- Sprinkled
Construction Type:	5B - Unprotected
Maximum Height:	1 Story / 40'
Maximum Area / Floor:	9,000 sf
Actual Area/Height:	2750 sf / 24'

Fire Resistance Ratings

Load Bearing Exterior Walls:	None
Floor Structure	None
Roof Structure	None
Interior Bearing/Non-Bearing Partitions	None
Primary Structure	None
Minimum Number of Exits:	2
Maximum Dead-End Corridor Length:	20'
Maximum Common Travel Path:	75'
Maximum Travel Distance:	200'
Minimum Corridor Width:	44" except 36" if less than 50 occupants
Minimum Ceiling Height:	7'-6"
Fire Alarm System:	Not Required
Fire Sprinkler System:	Not Required
Portable Fire Extinguishers:	Required
Emergency Lighting	Required

Building Live Loads

Office:	100 psf
Lobbies:	100 psf
Sales Floor:	300 psf
Storage:	125 psf @ light; 250 psf @ heavy

Interior Finish Requirements

Interior Stairs & Exit Passageways	Class A
Corridors	Class A
Rooms & enclosed spaces	Class B

MUBEC (Maine Uniform Building Energy Code) MINIMUM INSULATION VALUES

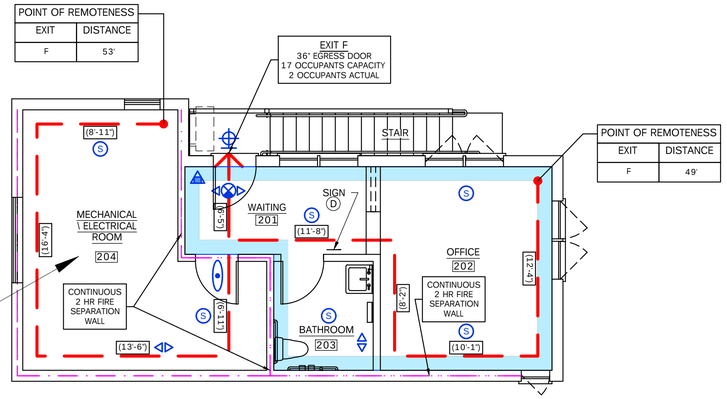
Per 2021 IECC; Table C402.1.3, C402.1.4 and C402.4

ZONE 6	R-VALUE	U-FACTOR	SHGC
Wood Framed Building			
Roof (Attic)	R-49	0.021	NA
Wood Framed Wall above Grade	R-13+ R-7.5 ci	0.051	NA
Or	R-20 + R-3.8ci		
Mass Wall above Grade	R-13.3 ci	0.080	NA
Mass Wall below Grade	R-10 ci	0.092 (C)	NA
Framed Floor	R-38	0.026	NA
Unheated Slab (24" band)	R-20 ci	0.51 (F)	NA
Doors - Swinging		0.37	NA
Doors - No Glazing		0.31	NA
Windows - Fixed		0.34	0.38
Windows - Operable		0.42	0.38

LS = Liner System
c.i. = Continuous Insulation

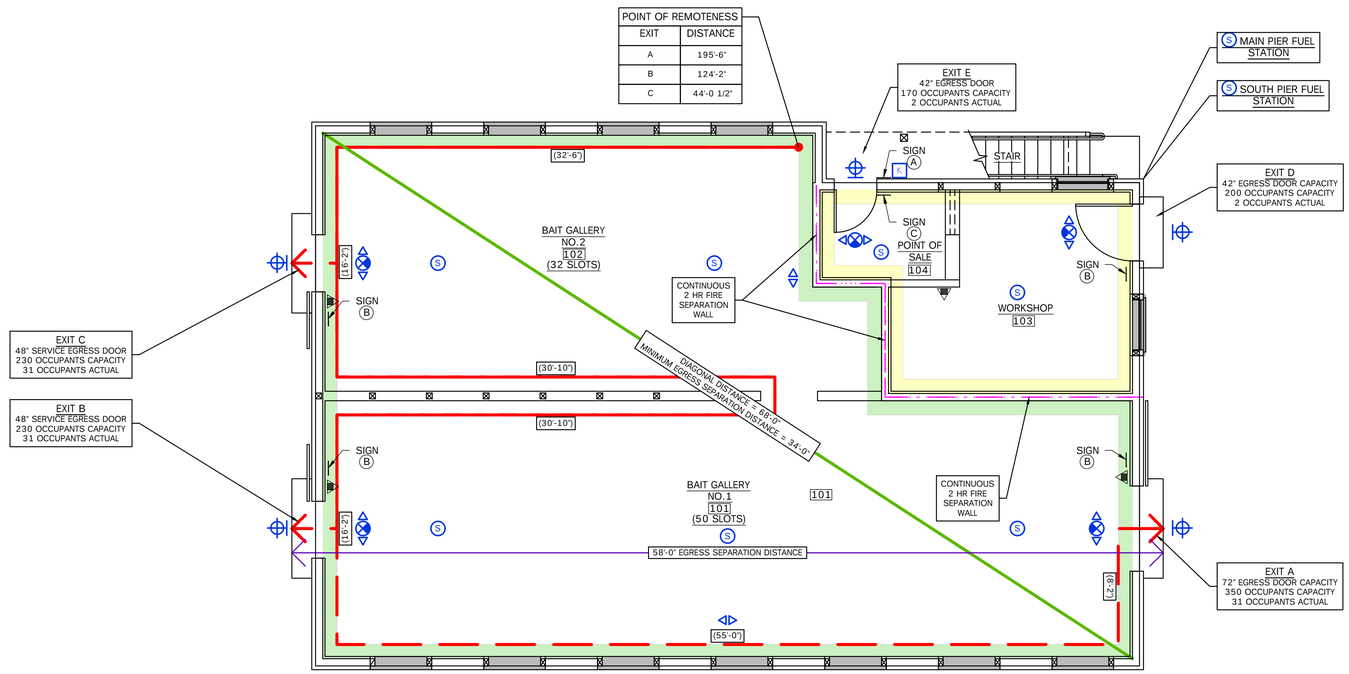
MECHANICAL/ELECTRICAL ROOM NOTES

1. ONE HOUR RATING AT ROOF FRAMING.
2. ONE HOUR RATING AT FLOOR / CEILING
3. ONE HOUR RATING AT WALL FRAMING.



SECOND FLOOR CODE COMPLIANCE PLAN

SCALE: 3/16" = 1'-0"



FIRST FLOOR CODE COMPLIANCE PLAN

SCALE: 3/16" = 1'-0"

NFPA LEGEND

SYMBOL	DESCRIPTION
	EMERGENCY / EXIT LIGHT
	EXTERIOR LIGHT
	IN CABINET ABC FIRE EXTINGUISHER
	W/ BRACKET ABC FIRE EXTINGUISHER
	EMERGENCY LIGHT
S	HEAT/SMOKE DETECTOR
K	KNOX BOX
	"NOT AN EXIT" SIGN

SYMBOLS LEGEND

- DIAGONAL DISTANCE
- EGRESS PATH
- # — EGRESS DISTANCE (FT)
- EGRESS SEPARATION DISTANCE
- ONE HOUR FIRE RATING
- TWO HOUR FIRE RATING

OCCUPANCY LEGEND	AREA	2015 IBC LOAD	2021 NFPA LOAD
STORAGE	400 SF	300/OCC	500/OCC
		2	1
BUSINESS	256 SF	100/OCC	150/OCC
		3	2
MERCANTILE/ RETAIL	1805 SF	60/OCC	30/OCC
		30	61
TOTAL	2,461 SF	35	64

LIFE SAFETY NOTES

1. THE ENTIRE BUILDING SHALL HAVE AN NFPA DETECTION SYSTEM. ALL DEVICES SHALL BE INTERCONNECTED THROUGHOUT THE ENTIRE STRUCTURE. LOCATION OF NFPA DEVICES IS SCHEMATIC AND SHALL BE VERIFIED WITH THE AUTHORITY HAVING JURISDICTION. SYSTEM SHALL HAVE REMOTE NOTIFICATION TO THIRD PARTY EMERGENCY MONITORING SYSTEM.
2. VERIFY KNOX BOX LOCATION WITH AUTHORITY HAVING JURISDICTION
3. SEE ACCESSIBILITY DETAILS FOR MOUNTING HEIGHTS OF LIFE SAFETY DETAILS.

GRANT HAYS ASSOCIATES
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P.O. BOX 6179 FALMOUTH MAINE 04105
207.871.5900 www.granthays.com

Attention:
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LICENSED ARCHITECT MICHAEL F. HAYS No. 1724 STATE OF MAINE

Designed:	MFH
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
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PORTLAND, ME 04101
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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **CODE COMPLIANCE**

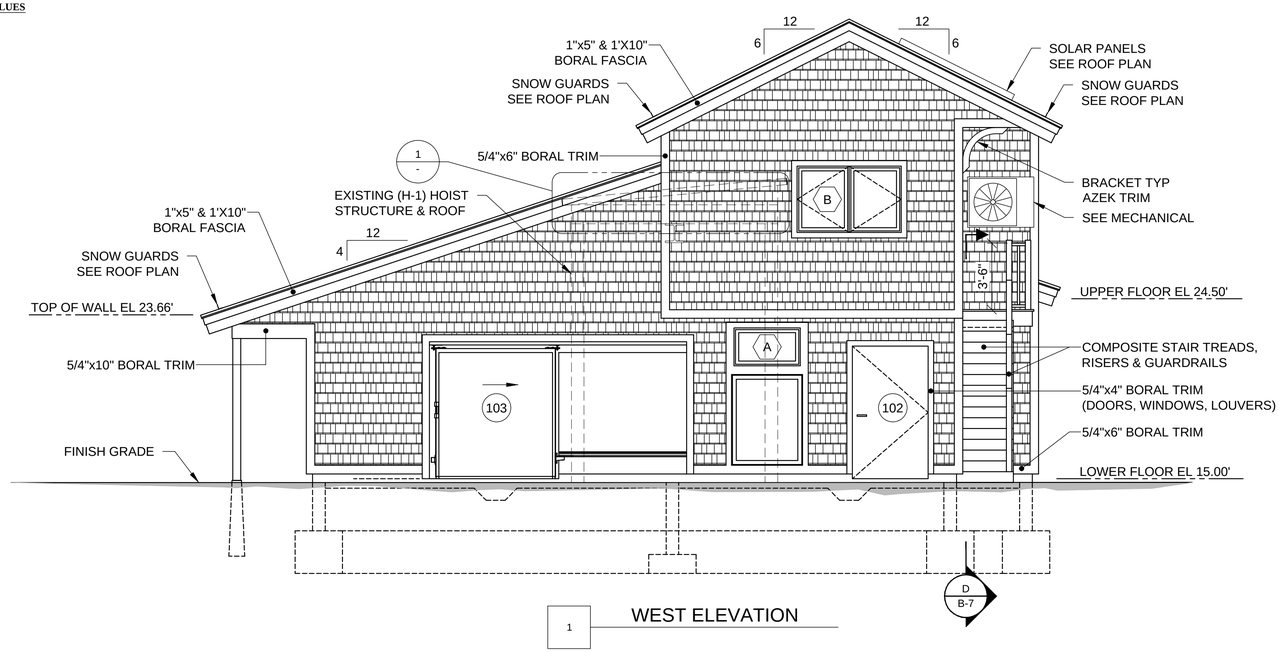
SHEET NO.: **B-0**

---- B:\Working\KENNEBUNKPORT, TOWN OF\2104738 - 16-68 Cape Porpoise Pier\00_CAD\Design\Sheets\SHEETS_CODE COMPLIANCE.dwg - 12/23/2022

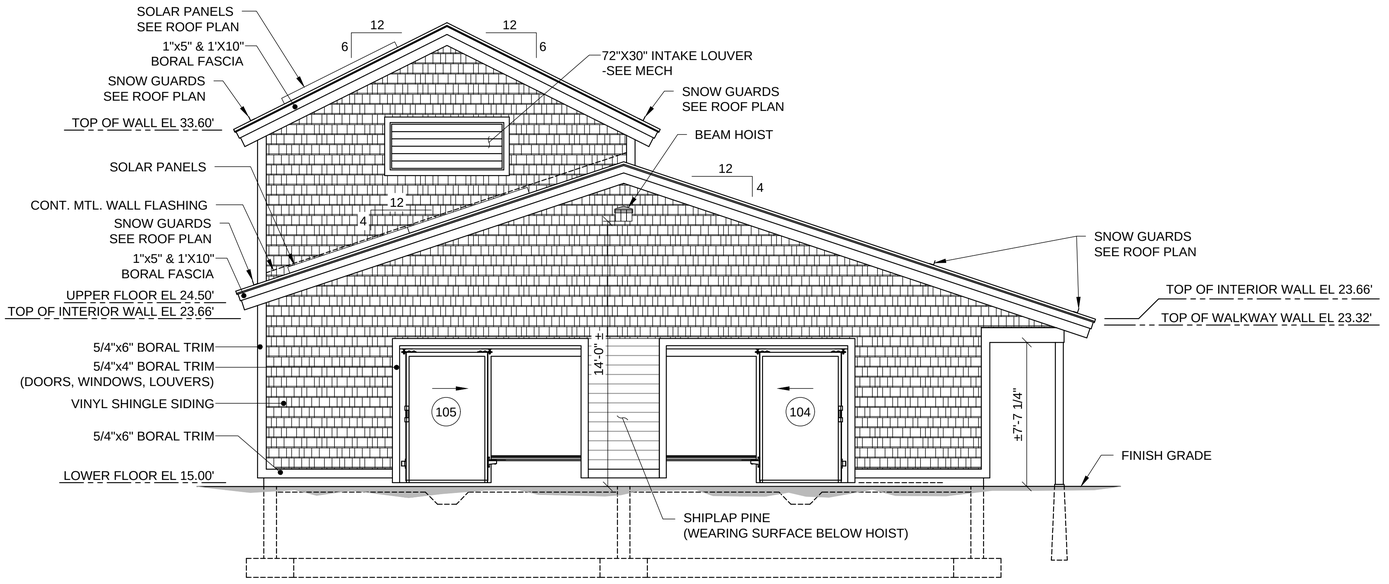
MUBEC (Maine Uniform Building Energy Code) MINIMUM INSULATION VALUES
Per 2021 IECC; Table C402.1.3, C402.1.4 and C402.4

ZONE 6	R-VALUE	U-FACTOR	SHGC
Wood Framed Building			
Roof (Attic)	R-49	0.021	NA
Wood Framed Wall above Grade	R-13+ R-7.5 ci	0.051	NA
Or	R-20 + R-3.8ci		
Mass Wall above Grade	R-13.3 ci	0.080	NA
Mass Wall below Grade	R-10 ci	0.092 (C)	NA
Framed Floor	R-38	0.026	NA
Unheated Slab (24" band)	R-20 ci	0.51 (F)	NA
Doors - Swinging		0.37	NA
Doors - No Glazing		0.31	NA
Windows - Fixed		0.34	0.38
Windows - Operable		0.42	0.38

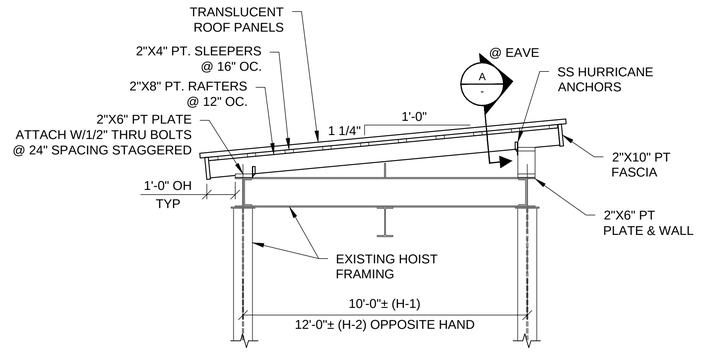
LS = Liner System
c.i. = Continuous Insulation



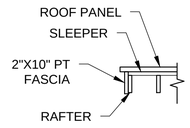
1 WEST ELEVATION



2 EAST ELEVATION



1 - DETAIL
HOIST ROOF (H-1 SHOWN)
HOIST ROOF (H-2)
SCALE: 3/8"=1'-0"



A - SECTION
EAVE OVERHANG
SCALE: 3/8"=1'-0"

0 4 8
SCALE, FEET

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LICENSED ARCHITECT MICHAEL F. HAYS No. 1724 STATE OF MAINE
Michael F. Hays

Designed:	MFH
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
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SHEET NAME
EAST & WEST ELEVATIONS

SHEET NO.
B-1

MUBEC (Maine Uniform Building Energy Code) MINIMUM INSULATION VALUES
Per 2021 IECC; Table C402.1.3, C402.1.4 and C402.4

ZONE 6	R-VALUE	U-FACTOR	SHGC
Wood Framed Building			
Roof (Attic)	R-49	0.021	NA
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Or	R-20 + R-3.8ci		
Mass Wall above Grade	R-13.3 ci	0.080	NA
Mass Wall below Grade	R-10 ci	0.092 (C)	NA
Framed Floor	R-38	0.026	NA
Unheated Slab (24" band)	R-20 ci	0.51 (F)	NA
Doors - Swinging		0.37	NA
Doors - No Glazing		0.31	NA
Windows - Fixed		0.34	0.38
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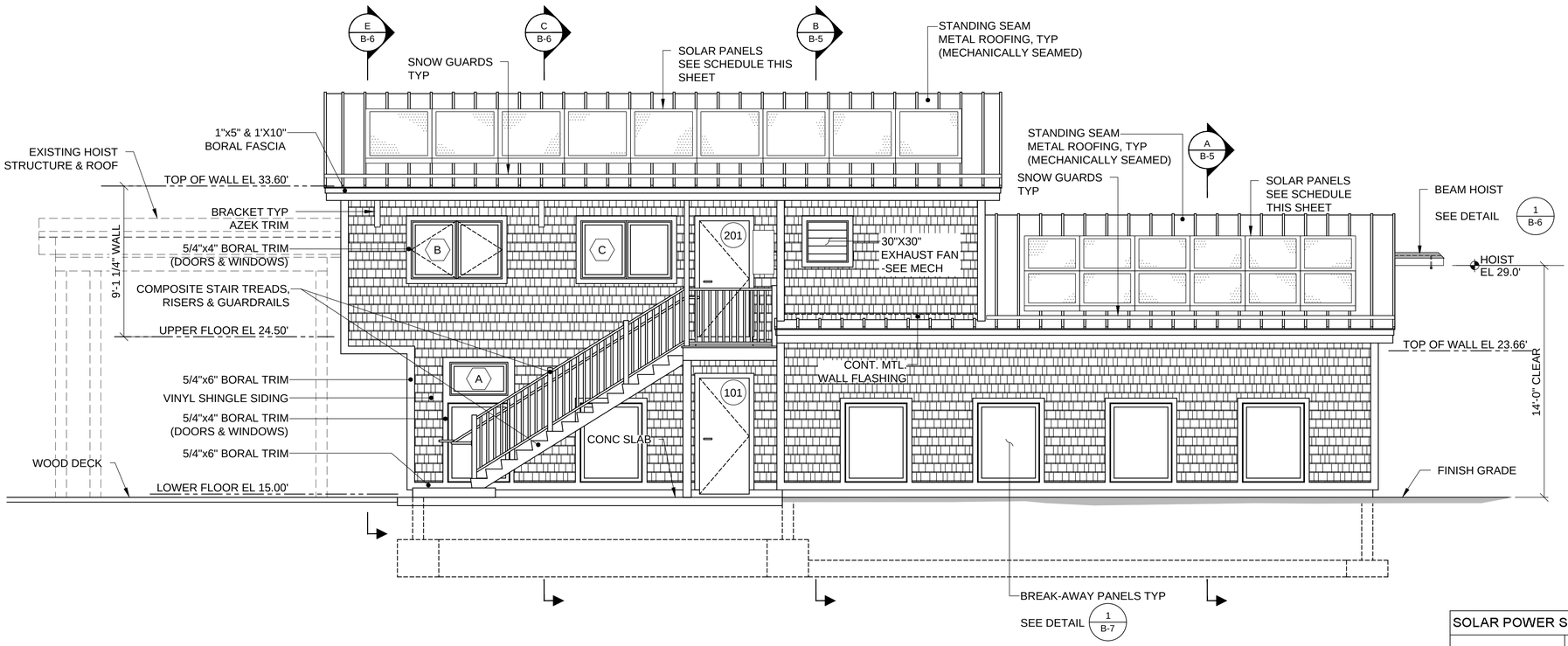

3 SOUTH ELEVATION

SOLAR POWER SYSTEM				
Component	Bid Item Reference	Description	Specification	
			Size	Unit
GENERAL	Bid Item 14.1	Total Power	9-10 kW	Capacity
		Warranty	25 Years Replacement	
		Durability	Salt Water Spray Exposure	
SOLAR PANEL UNITS	Bid Item 14.1	Upper Roof	9	No.
		Unit width (approx.)	4	FT
		Unit length (approx.)	8	FT
		Upper Roof	12	No.
		Unit width (approx.)	3.33	FT
		Unit length (approx.)	8	FT
INVERTER	Bid Item 14.1	Minimum Capacity	7-8 kW	Capacity
		Compatible with future battery wall		
INSTALLATION	Bid Item 10.1	Electrical Panel	Located in Mechanical Electrical Room	
	Bid Item 14.1	Cable/ Exterior wall Penetration	No penetrations through the roof.	
		Fasteners and Brackets	316 Stainless Steel	

0 4 8
SCALE, FEET

T
GRANT HAYS ASSOCIATES
ARCHITECTURE & INTERIOR DESIGN
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LICENSED ARCHITECT
MICHAEL F. HAYS
No. 1724
STATE OF MAINE
Michael F. Hays

Designed:	MFH
Drawn:	JLD
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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

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SHEET NAME
SOUTH ELEVATION

SHEET NO.
B-2

MUBEC (Maine Uniform Building Energy Code) MINIMUM INSULATION VALUES
Per 2021 IECC; Table C402.1.3, C402.1.4 and C402.4

ZONE 6	R-VALUE	U-FACTOR	SHGC
Wood Framed Building			
Roof (Attic)	R-49	0.021	NA
Wood Framed Wall above Grade	R-13+ R-7.5 ci	0.051	NA
Or	R-20 + R-3.8ci		
Mass Wall above Grade	R-13.3 ci	0.080	NA
Mass Wall below Grade	R-10 ci	0.092 (C)	NA
Framed Floor	R-38	0.026	NA
Unheated Slab (24" band)	R-20 ci	0.51 (F)	NA
Doors - Swinging		0.37	NA
Doors - No Glazing		0.31	NA
Windows - Fixed		0.34	0.38
Windows - Operable		0.42	0.38

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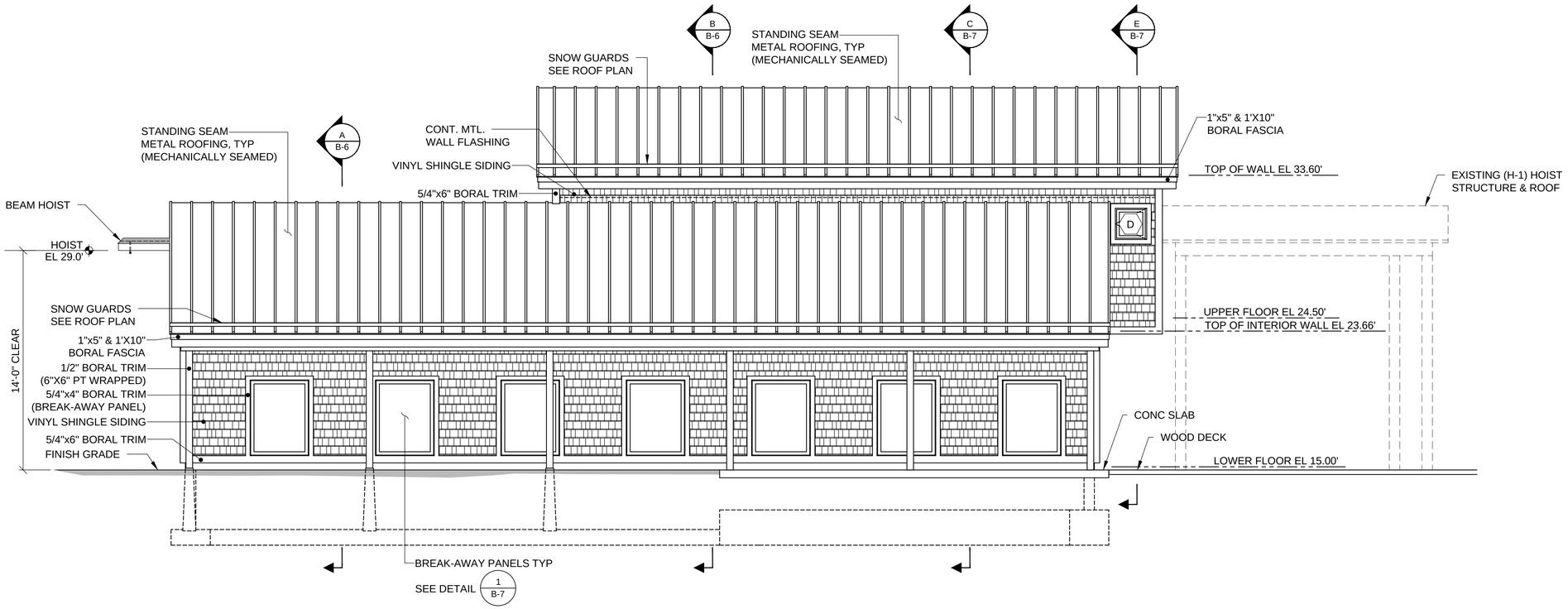

4 NORTH ELEVATION

0 4 8
SCALE, FEET

T
GRANT HAYS
ASSOCIATES
ARCHITECTURE & INTERIOR DESIGN
P.O. BOX 6179 FALMOUTH MAINE 04105
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LICENSED ARCHITECT
MICHAEL F. HAYS
No. 1724
STATE OF MAINE
Michael F. Hays

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
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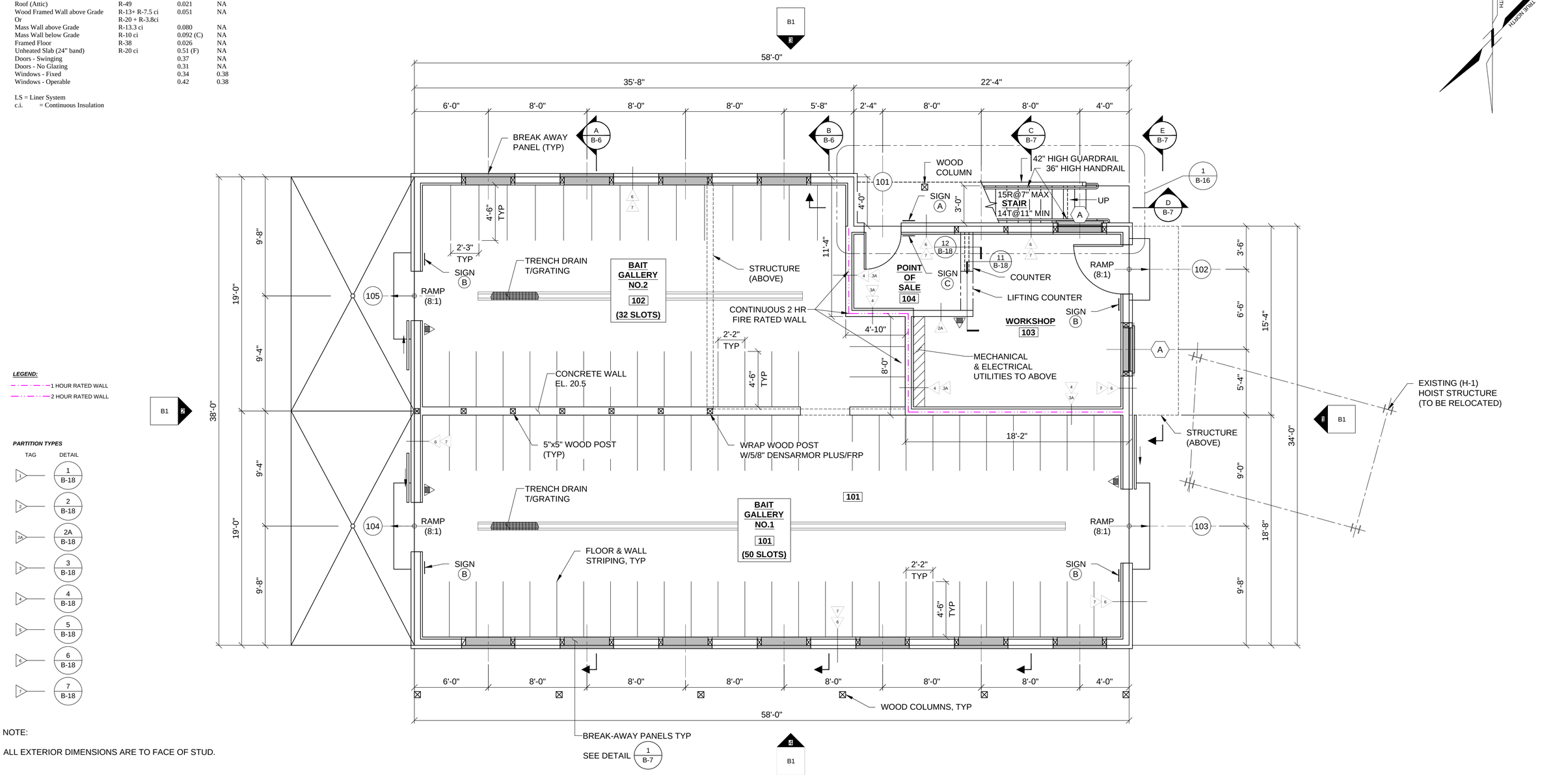
SHEET NAME
NORTH ELEVATION

SHEET NO.
B-3

MUBEC (Maine Uniform Building Energy Code) MINIMUM INSULATION VALUES
Per 2021 IECC; Table C402.1.3, C402.1.4 and C402.4

ZONE 6 Wood Framed Building	R-VALUE	U-FACTOR	SHGC
Roof (Attic)	R-49	0.021	NA
Wood Framed Wall above Grade	R-13+ R-7.5 ci	0.051	NA
Or	R-20 + R-3.8ci		
Mass Wall above Grade	R-13.3 ci	0.080	NA
Mass Wall below Grade	R-10 ci	0.092 (C)	NA
Framed Floor	R-38	0.026	NA
Unheated Slab (24" band)	R-20 ci	0.51 (F)	NA
Doors - Swinging		0.37	NA
Doors - No Glazing		0.31	NA
Windows - Fixed		0.34	0.38
Windows - Operable		0.42	0.38

LS = Liner System
c.i. = Continuous Insulation



LEGEND:

1 HOUR RATED WALL

2 HOUR RATED WALL

PARTITION TYPES

TAG	DETAIL
1	1 B-18
2	2 B-18
2A	2A B-18
3	3 B-18
4	4 B-18
5	5 B-18
6	6 B-18
7	7 B-18

NOTE:

ALL EXTERIOR DIMENSIONS ARE TO FACE OF STUD.

LOWER LEVEL FLOOR PLAN

SCALE: 1/4"=1'-0"

GRANT HAYS ASSOCIATES
ARCHITECTURE & INTERIOR DESIGN
P.O. BOX 6179 FALMOUTH MAINE 04105
207.871.5900 www.granthays.com

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

LICENSED ARCHITECT MICHAEL F. HAYS No. 1724 STATE OF MAINE

Designed:	MFH
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME
LOWER LEVEL FLOOR PLAN

SHEET NO.
B-4

---- B:\Working\KENNEBUNKPORT, TOWN OF\2104738 - 16-68 Cape Porpoise Pier\00_CAD\Design\Sheets\SHEETS_BUILDING.dwg - 1/16/2024

MUBEC (Maine Uniform Building Energy Code) MINIMUM INSULATION VALUES
Per 2021 IECC; Table C402.1.3, C402.1.4 and C402.4

ZONE 6	R-VALUE	U-FACTOR	SHGC
Wood Framed Building			
Roof (Attic)	R-49	0.021	NA
Wood Framed Wall above Grade	R-13+ R-7.5 ci	0.051	NA
Or	R-20 + R-3.8ci		
Mass Wall above Grade	R-13.3 ci	0.080	NA
Mass Wall below Grade	R-10 ci	0.092 (C)	NA
Framed Floor	R-38	0.026	NA
Unheated Slab (24" band)	R-20 ci	0.51 (F)	NA
Doors - Swinging		0.37	NA
Doors - No Glazing		0.31	NA
Windows - Fixed		0.34	0.38
Windows - Operable		0.42	0.38

LS = Liner System
c.i. = Continuous Insulation

LEGEND:

1 HOUR RATED WALL

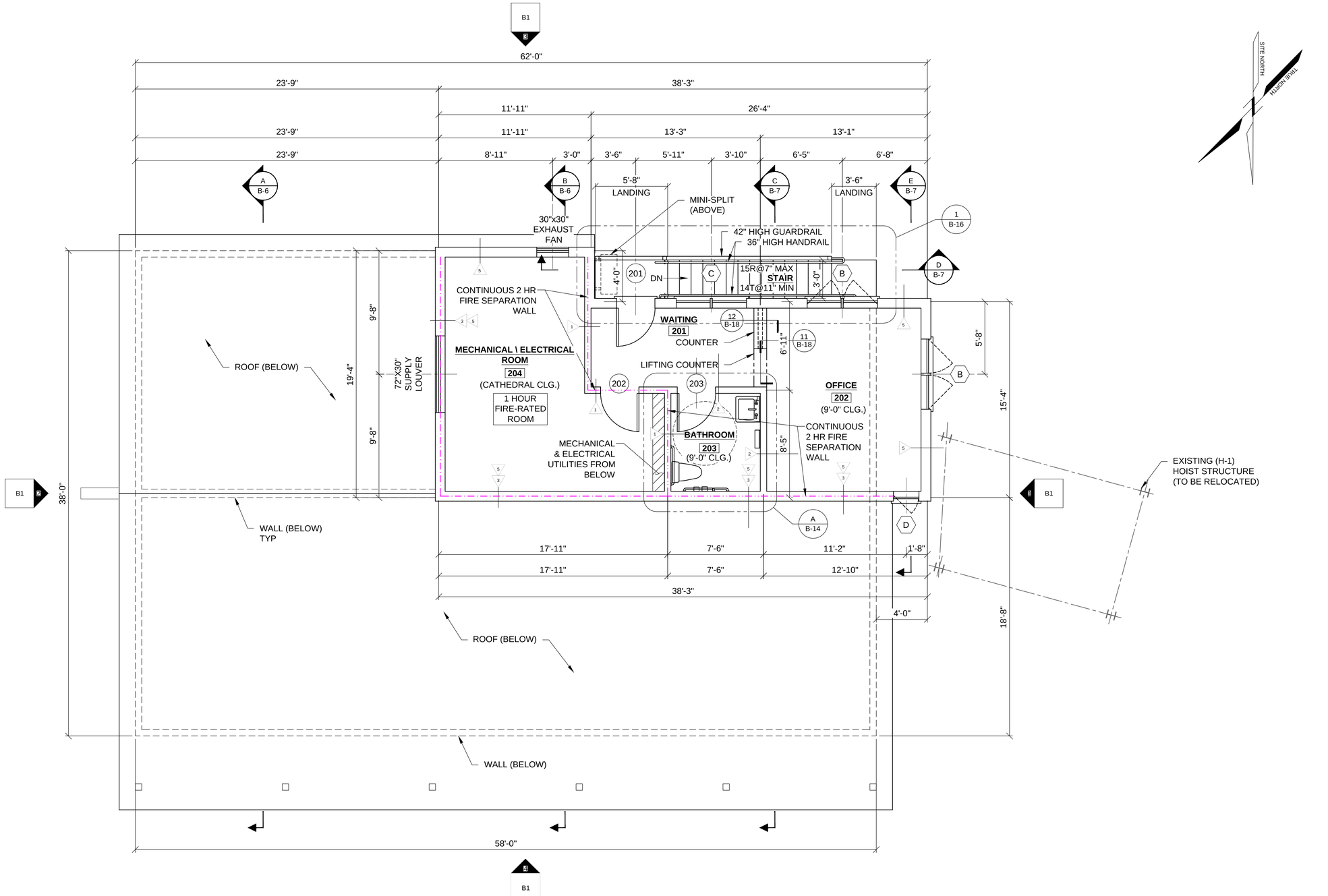
2 HOUR RATED WALL

PARTITION TYPES

TAG	DETAIL
1	1 / B-18
2	2 / B-18
2A	2A / B-18
3	3 / B-18
4	4 / B-18
5	5 / B-18
6	6 / B-18
7	7 / B-18

NOTE:

ALL EXTERIOR DIMENSIONS ARE TO FACE OF STUD.



UPPER LEVEL FLOOR PLAN
SCALE: 1/4"=1'-0"

0 4 8
SCALE, FEET

GRANT HAYS ASSOCIATES
ARCHITECTURE & INTERIOR DESIGN
P.O. BOX 6179 FALMOUTH MAINE 04105
207.871.5900 www.granthays.com

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

LICENSED ARCHITECT MICHAEL F. HAYS No. 1724 STATE OF MAINE

Designed:	MFH
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

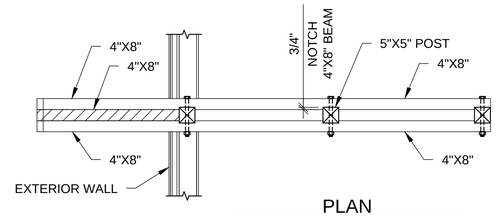
SHEET NAME: **UPPER LEVEL FLOOR PLAN**

SHEET NO.: **B-5**

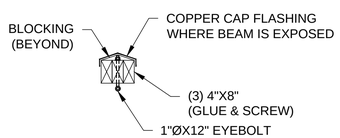
MUBEC (Maine Uniform Building Energy Code) MINIMUM INSULATION VALUES
Per 2021 IECC, Table C402.1.3, C402.1.4 and C402.4

ZONE 6	R-VALUE	U-FACTOR	SHGC
Wood Framed Building			
Roof (Attic)	R-49	0.021	NA
Wood Framed Wall above Grade	R-13+ R-7.5 ci	0.051	NA
Or	R-20 + R-3.8ci		
Mass Wall above Grade	R-13.3 ci	0.080	NA
Mass Wall below Grade	R-10 ci	0.092 (C)	NA
Framed Floor	R-38	0.026	NA
Unheated Slab (24" band)	R-20 ci	0.51 (F)	NA
Doors - Swinging		0.37	NA
Doors - No Glazing		0.31	NA
Windows - Fixed		0.34	0.38
Windows - Operable		0.42	0.38

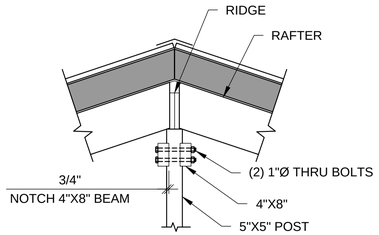
LS = Liner System
c.i. = Continuous Insulation



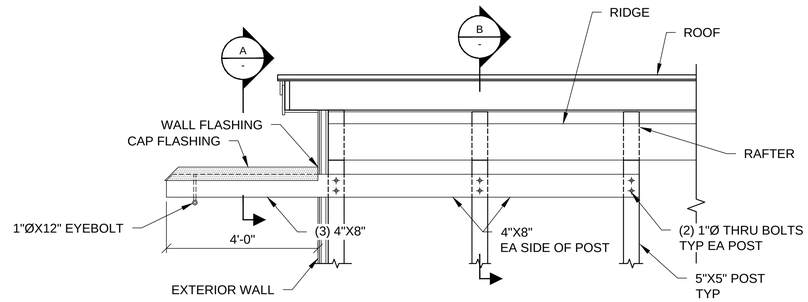
PLAN
BEAM HOIST SCALE: 1/2' = 1'-0"



A - SECTION
SCALE: 1/2"=1'-0"



B - SECTION
SCALE: 1/2"=1'-0"



1 / B-2 - DETAIL-BEAM HOIST
SCALE: 1/2"=1'-0"

A / B-3 - SECTION
SCALE: 1/4"=1'-0"

B / B-3 - SECTION
SCALE: 1/4"=1'-0"

PARTITION TYPES

TAG	DETAIL	TAG	DETAIL
1	1 B-18	4	4 B-18
2	2 B-18	5	5 B-18
2A	2A B-18	6	6 B-18
3	3 B-18	7	7 B-18

0 4 8
SCALE, FEET

GRANT HAYS ASSOCIATES
ARCHITECTURE & INTERIOR DESIGN
P.O. BOX 6179 FALMOUTH MAINE 04105
207.871.5900 www.granthays.com

Attention:
0 1"
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LICENSED ARCHITECT
MICHAEL F. HAYS
No. 1724
STATE OF MAINE
Michael F. Hays

Designed:	MFH
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME
BUILDING SECTIONS

SHEET NO.
B-6

---- B:\Working\KENNEBUNKPORT, TOWN OF\2104738 - 16-68 Cape Porpoise Pier\00_CAD\Design\Sheets\SHEETS_BUILDING.dwg - 1/16/2024

MUBEC (Maine Uniform Building Energy Code) MINIMUM INSULATION VALUES
Per 2021 IECC; Table C402.1.3, C402.1.4 and C402.4

ZONE 6 Wood Framed Building	R-VALUE	U-FACTOR	SHGC
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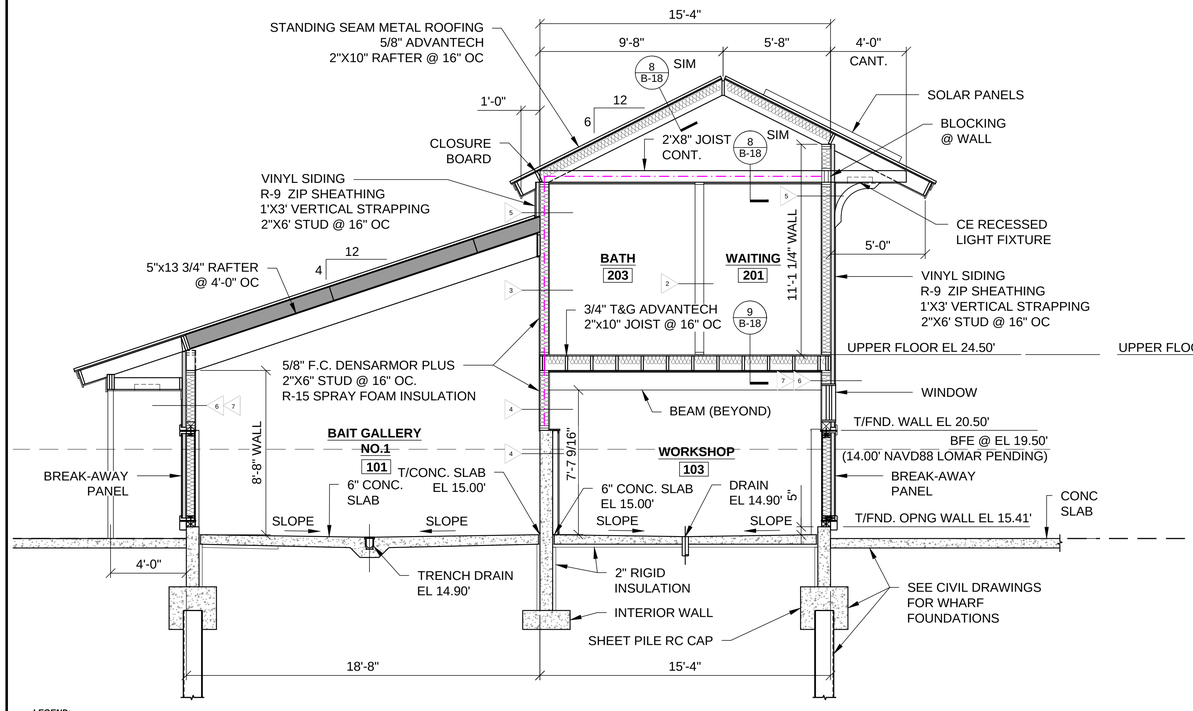
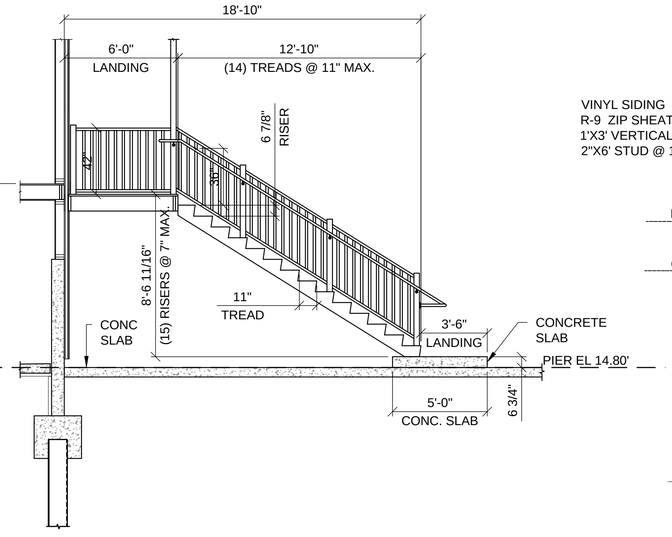
Wood Framed Wall above Grade	R-13+ R-7.5 ci	0.051	NA
Or	R-20 + R-3.8ci		
Mass Wall above Grade	R-13.3 ci	0.080	NA
Mass Wall below Grade	R-10 ci	0.092 (C)	NA
Framed Floor	R-38	0.026	NA
Unheated Slab (24" band)	R-20 ci	0.51 (F)	NA
Doors - Swinging		0.37	NA
Doors - No Glazing		0.31	NA
Windows - Fixed		0.34	0.38
Windows - Operable		0.42	0.38

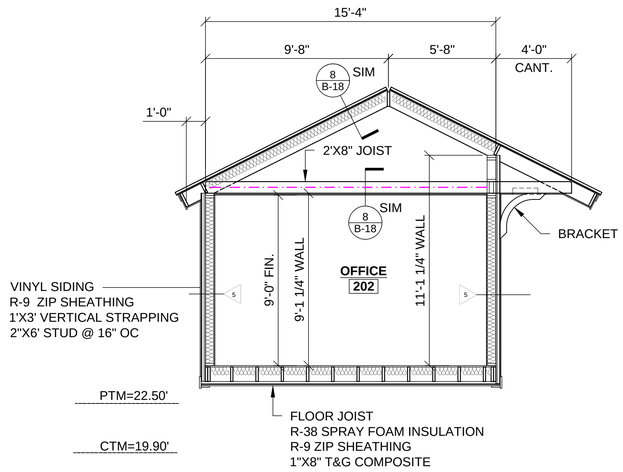
LS = Liner System
c.i. = Continuous Insulation



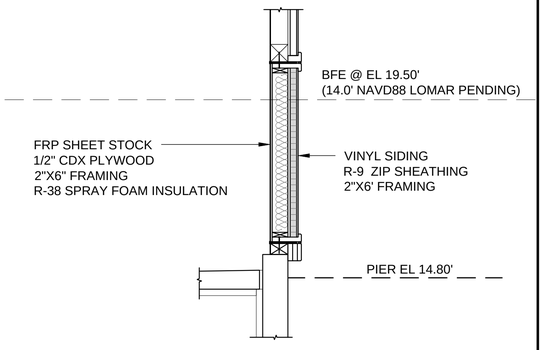
C B-4 SECTION
SCALE: 1/4"-1'-0"



D B-1 SECTION
SCALE: 1/4"=1'-0"



E B-4 SECTION
SCALE: 1/4"=1'-0"



1 B-2 DETAIL
BREAK AWAY PANEL SCALE: 1/2"=1'-0"

LEGEND:
1 HOUR RATED WALL
2 HOUR RATED WALL

PARTITION TYPES

TAG	DETAIL
1	1 B-16
2	2 B-16
2A	2A B-16
3	3 B-16
4	4 B-16
5	5 B-16
6	6 B-16
7	7 B-16

0 4 8
SCALE, FEET

GRANT HAYS ASSOCIATES
ARCHITECTURE & INTERIOR DESIGN
P.O. BOX 6179 FALMOUTH MAINE 04105
207.871.5900 www.granthays.com

Attention:
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LICENSED ARCHITECT MICHAEL F. HAYS No. 1724 STATE OF MAINE
Michael F. Hays

Designed:	MFH
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

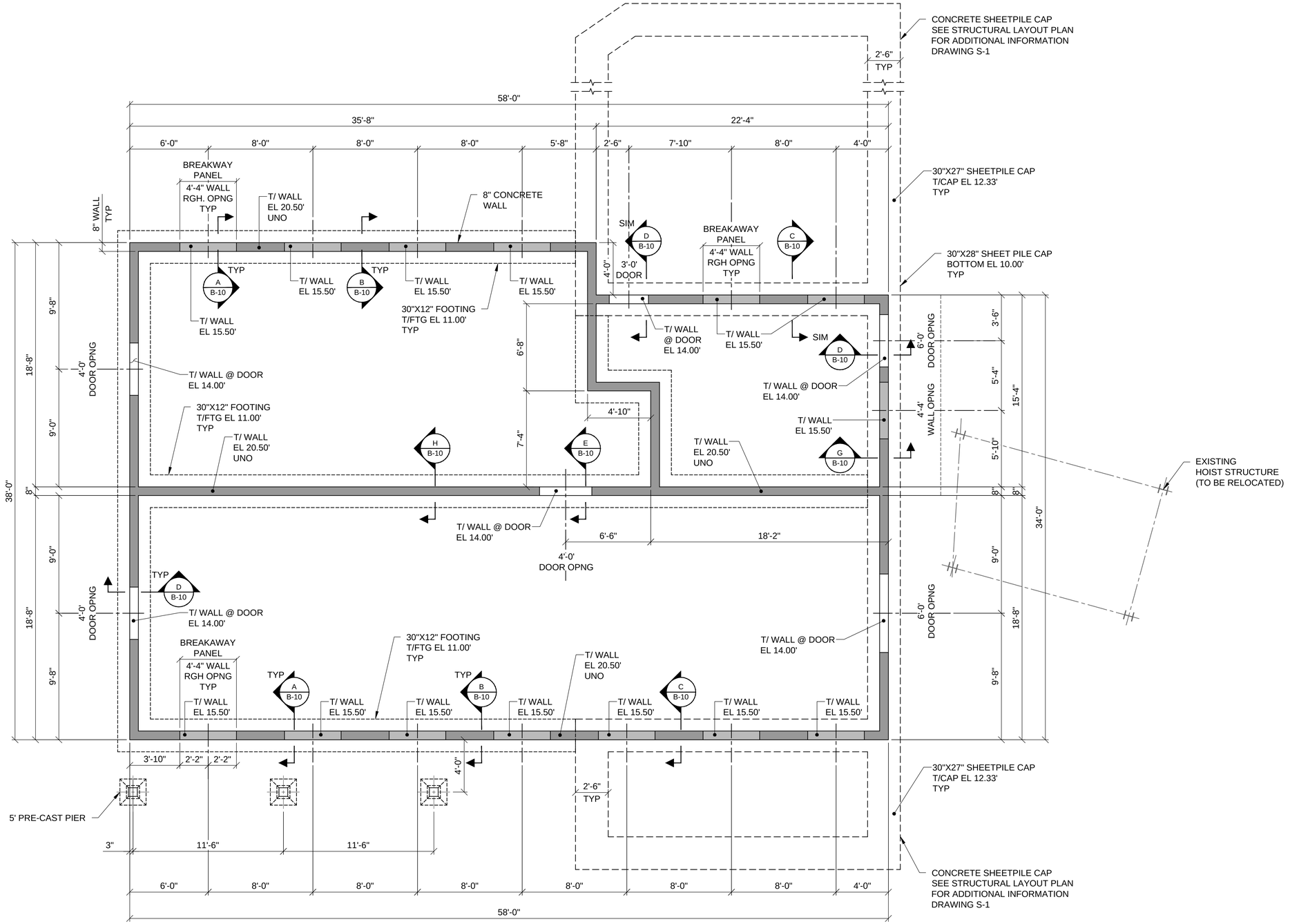
KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **BUILDING SECTIONS**
SHEET NO.: **B-7**

NOTE:

SEE SLAB PLAN DRAWING B-9 FOR ADDITIONAL INFORMATION.



FOUNDATION PLAN

Attention:

0 1"

If this scale bar does not measure 1" then drawing is not original scale.

0 4 8

SCALE, FEET

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
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SHEET NAME

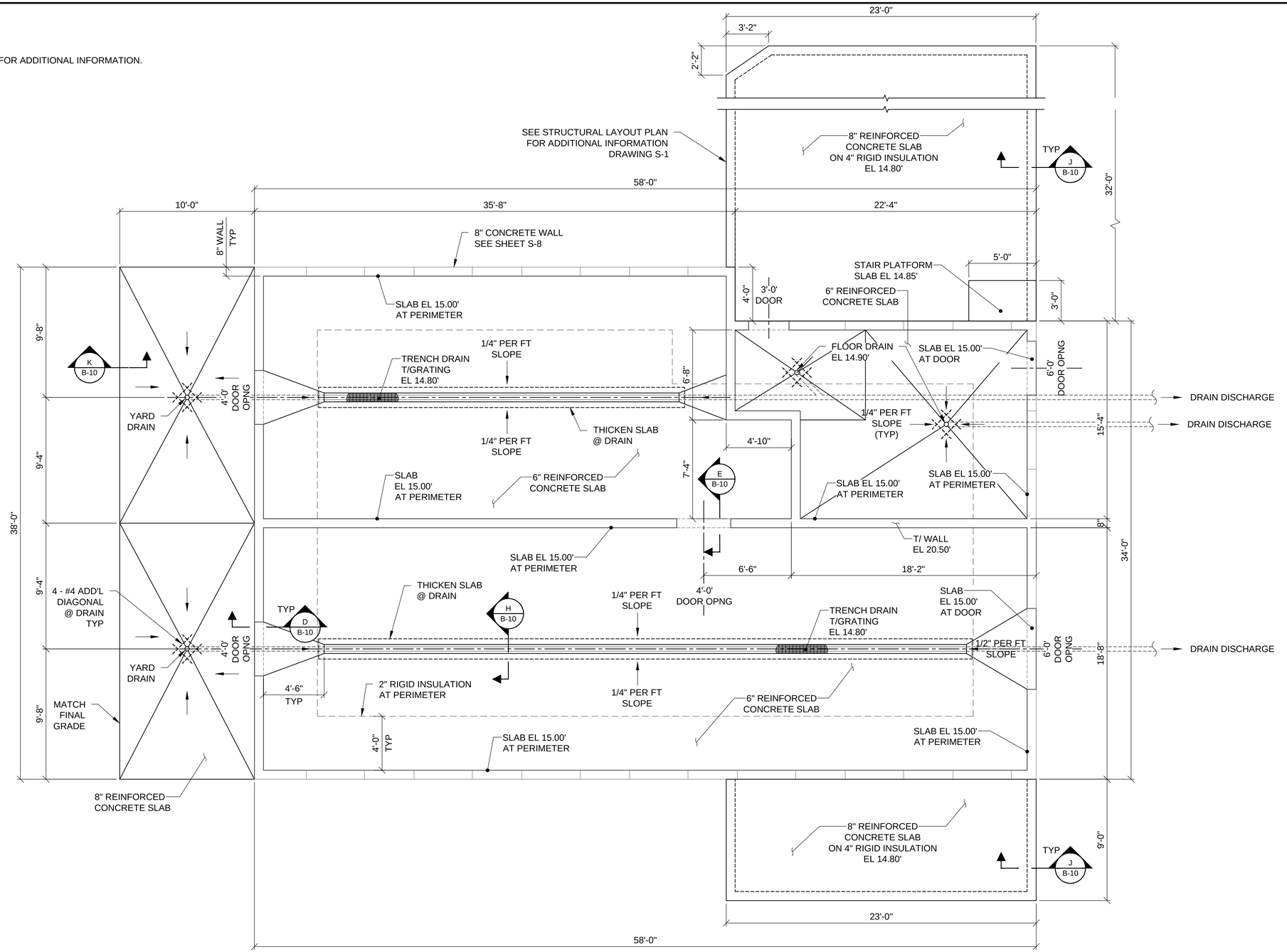
FOUNDATION PLAN

SHEET NO.

B-8

NOTE:

SEE FOUNDATION PLAN DRAWING B-8 FOR ADDITIONAL INFORMATION.



SLAB PLAN

0 4 8
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED
PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
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PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

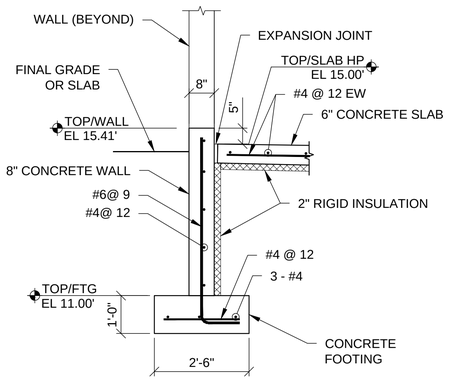
NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME: **SLAB PLAN**

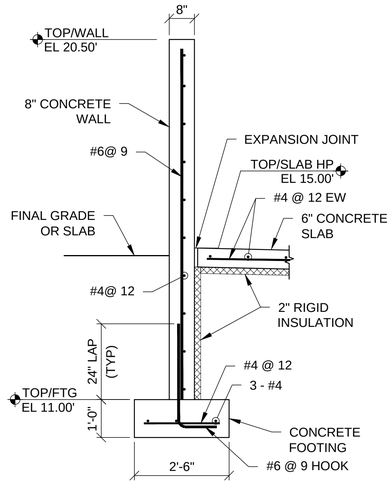
SHEET NO.: **B-9**

NOTE:

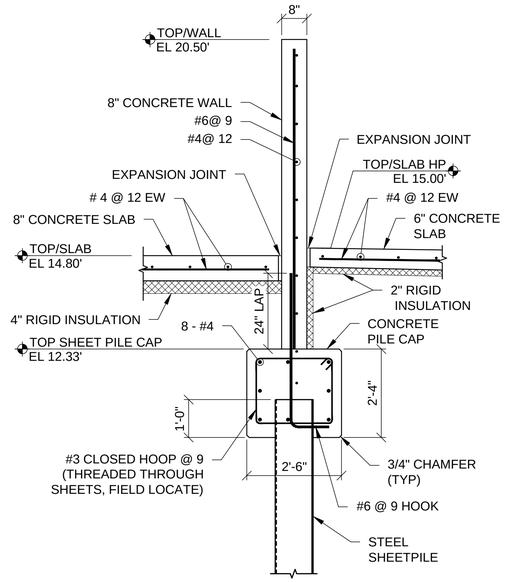
SEE FOUNDATION PLAN B-8 AND SLAB PLAN S-9 FOR ADDITIONAL INFORMATION.



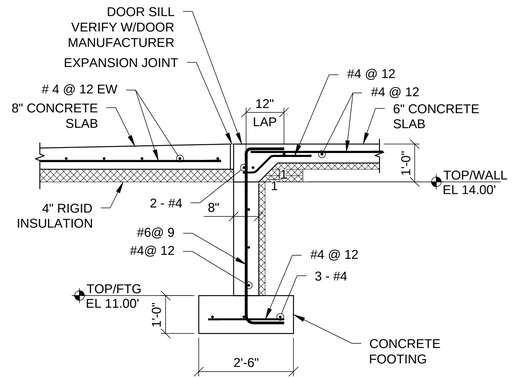
A B-8 SECTION
SCALE: 1/2"=1'-0"



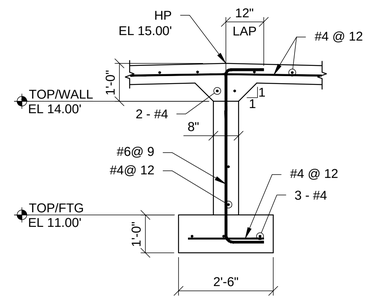
B B-8 SECTION
SCALE: 1/2"=1'-0"



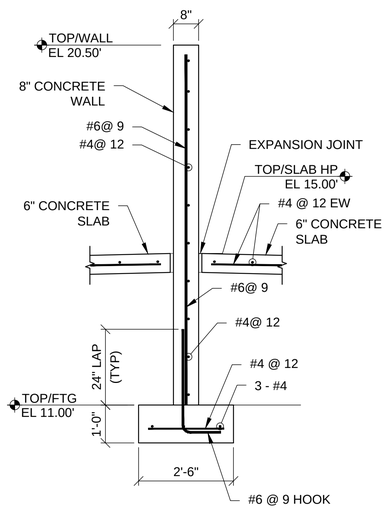
C B-8 SECTION
SCALE: 1/2"=1'-0"



D B-8 SECTION
SCALE: 1/2"=1'-0"

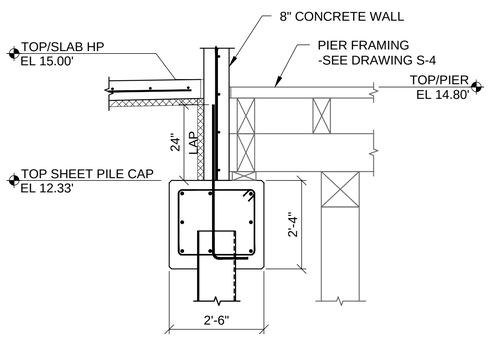


E B-8 SECTION
SCALE: 1/2"=1'-0"

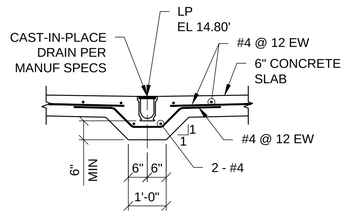


F B-8 SECTION
SCALE: 1/2"=1'-0"

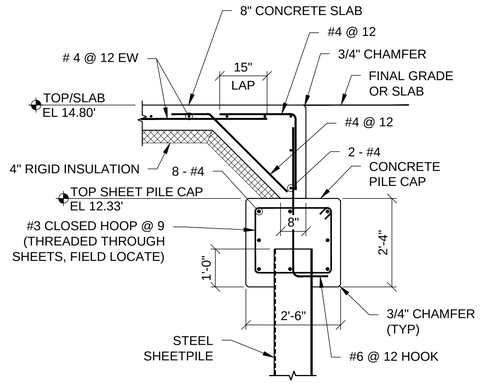
NOTE:
SEE SECTION C FOR ADDITIONAL INFORMATION



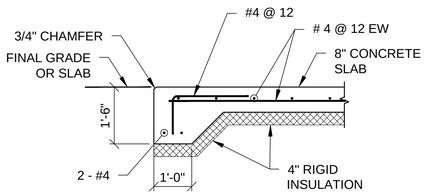
G B-8 SECTION
SCALE: 1/2"=1'-0"



H B-9 SECTION
SCALE: 1/2"=1'-0"



J B-9 SECTION
SCALE: 1/2"=1'-0"



K B-9 SECTION
SCALE: 1/2"=1'-0"

0 2 4
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE BARNEY J. BAKER No. 5737 LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

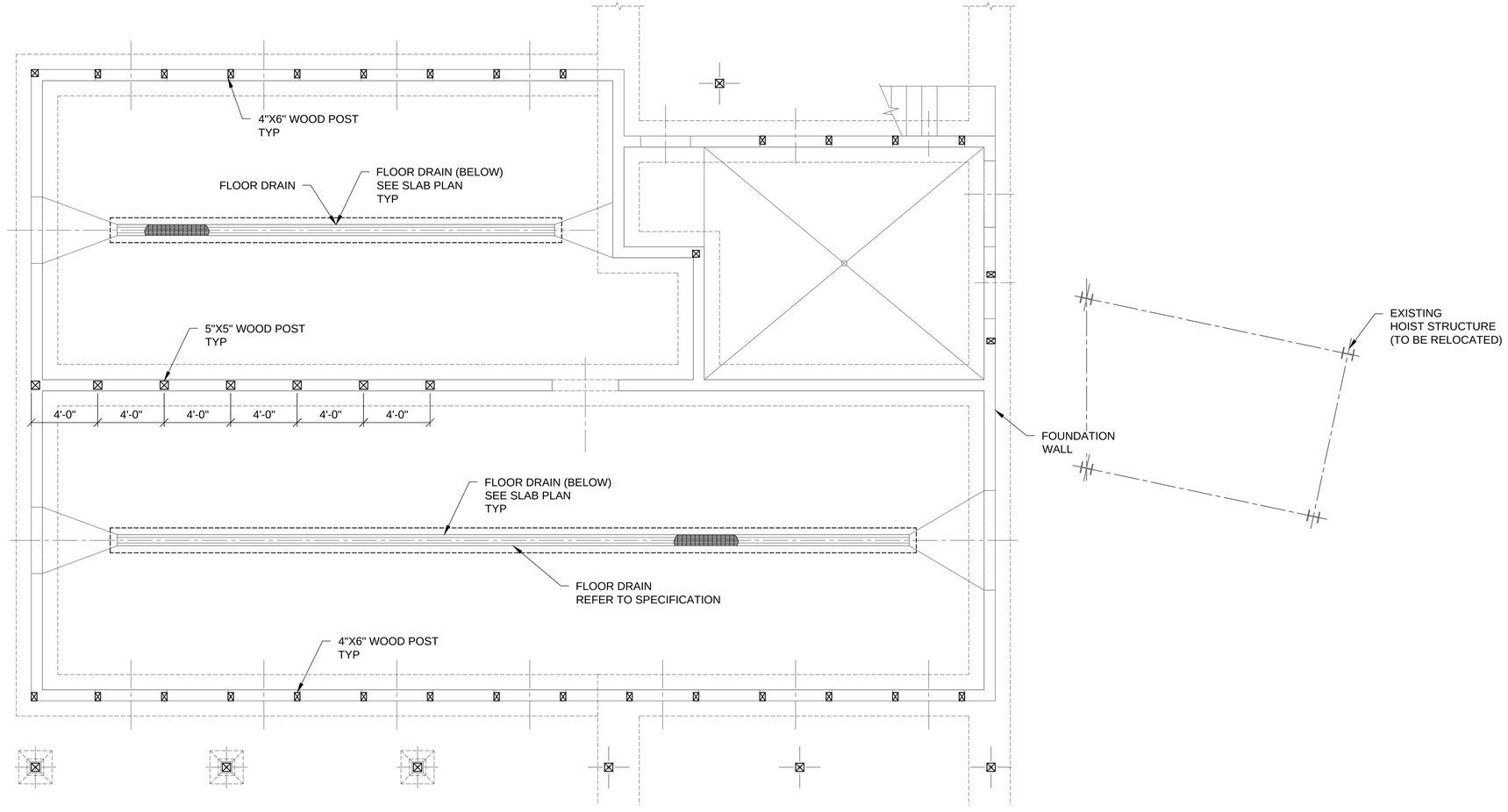
NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME

FOUNDATION & SLAB DETAILS

SHEET NO.

B-10



LOWER LEVEL FRAMING PLAN

0 4 8
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED
PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
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GEI Project	2104738

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TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

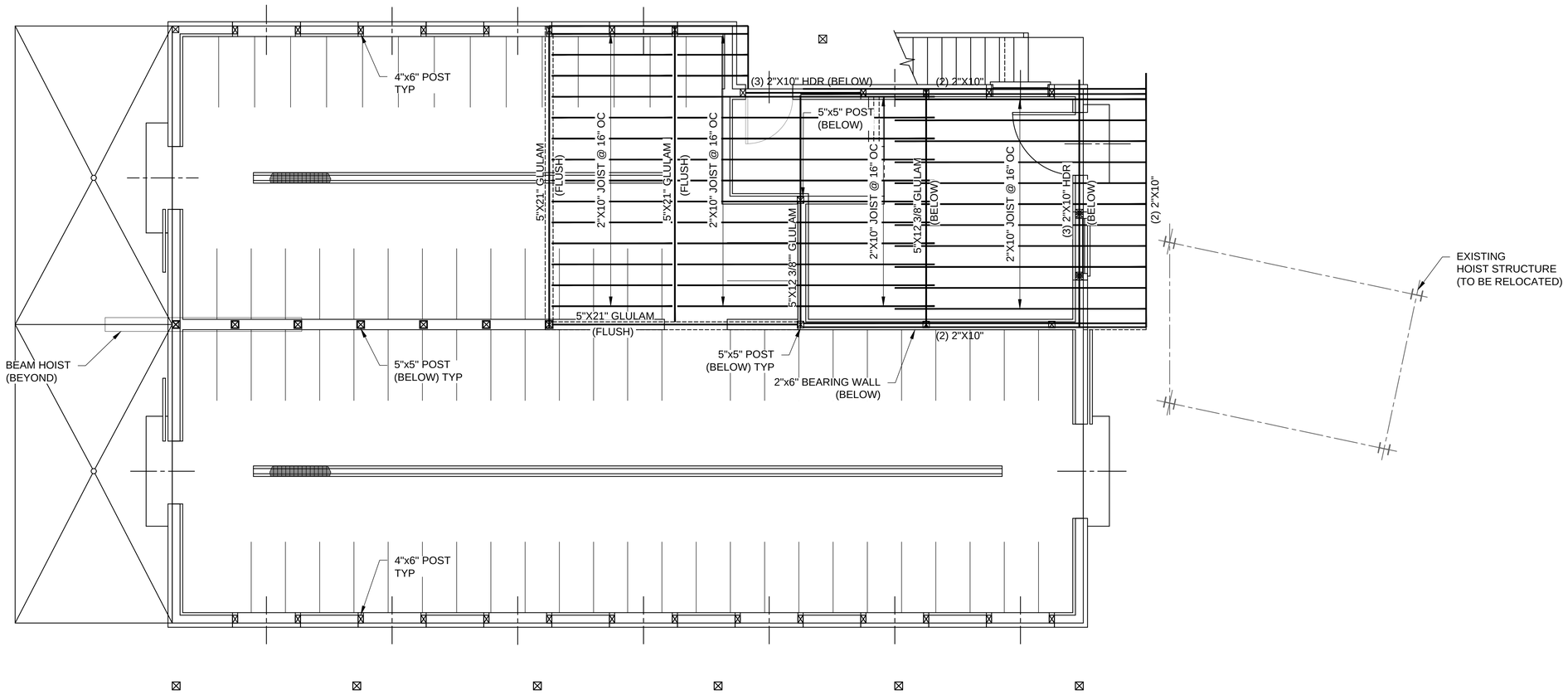
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME
LOWER LEVEL FRAMING PLAN

SHEET NO.
B-11



UPPER LEVEL FLOOR FRAMING PLAN

0 4 8
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

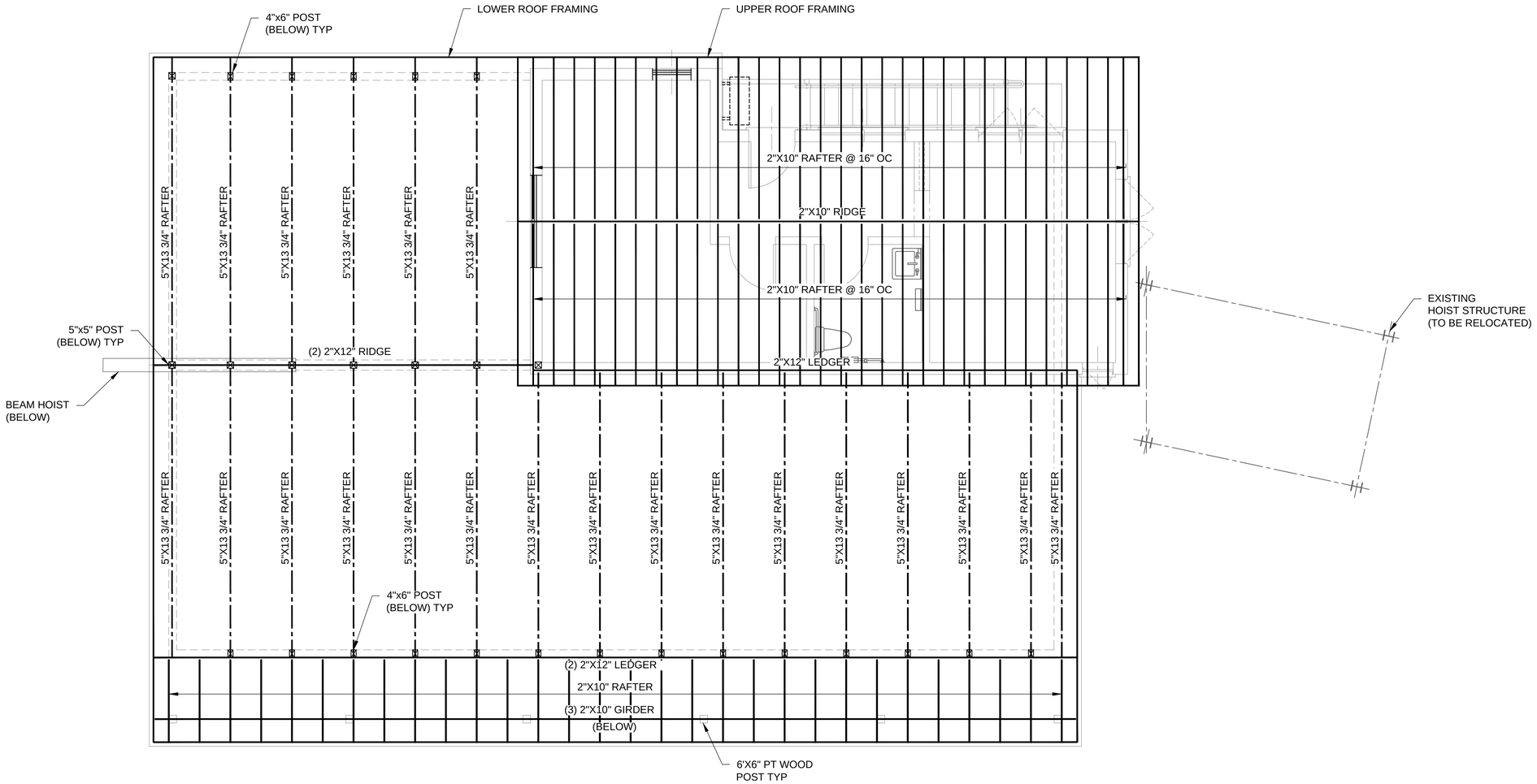
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

SHEET NAME
UPPER LEVEL FLOOR FRAMING PLAN

SHEET NO.
B-12



ROOF FRAMING PLAN

0 4 8
SCALE, FEET

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
BARNEY J. BAKER
No. 5737
LICENSED
PROFESSIONAL ENGINEER

Designed:	BJB
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

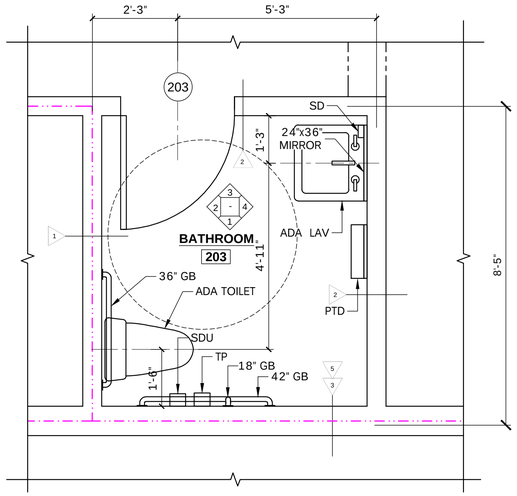
KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

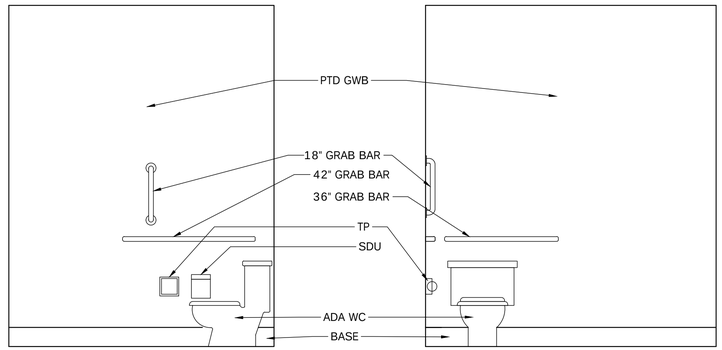
SHEET NAME
ROOF FRAMING PLAN

SHEET NO.
B-13

NOTE:
REFER TO SHEET B-19 FOR ADDITIONAL ADA DIMENSIONAL CRITERIA AT RESTROOM FIXTURES AND ACCESSORIES.

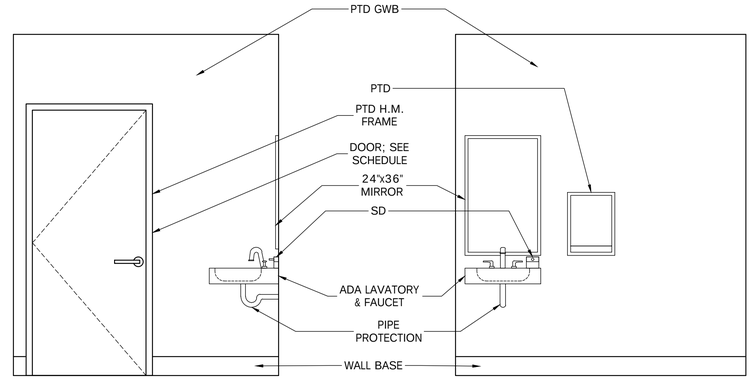


Ⓐ RESTROOM 203
SCALE: 1/2" = 1'-0"



1 RESTROOM 203
SCALE: 1/2" = 1'-0"

2 RESTROOM 203
SCALE: 1/2" = 1'-0"



3 RESTROOM 203
SCALE: 1/2" = 1'-0"

4 RESTROOM 203
SCALE: 1/2" = 1'-0"

0 4 8
SCALE, FEET

GRANT HAYS ASSOCIATES
ARCHITECTURE & INTERIOR DESIGN
P.O. BOX 6179 FALMOUTH MAINE 04105
207.871.5900 www.granthays.com

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

LICENSED ARCHITECT
MICHAEL F. HAYS
No. 1724
STATE OF MAINE

Designed:	MFH
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
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SHEET NAME
ENLARGED RESTROOM PLAN AND ELEVATIONS

SHEET NO.
B-14

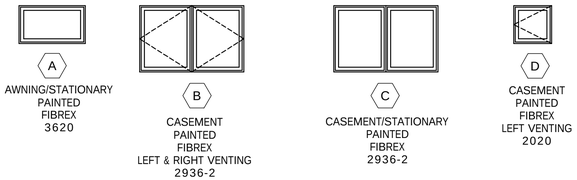
WINDOW SCHEDULE

ABBREVIATIONS

ALUM	ALUMINUM	MTL	METAL
CMT	CASEMENT	T	TEMPERED
DH	DOUBLE HUNG	V	VINYL
DW	DRYWALL	WG	WIRE GLASS
(E)	EXISTING	WD	WOOD
FIX	FIXED SASH	W /	WITH
INSUL	INSULATED		

NO.	TYPE	MANUFACTURER			ROUGH OPENING		DETAILS					REMARKS
		MFGR	SERIES	MODEL	WIDTH	HEIGHT	HEAD	JAMB	SILL	MUNT	MULL	
A	AWNING/STATIONARY	ANDERSEN	100*	3620	3'-6"	2'-0"	MFGR	MFGR	MFGR	-	-	*FIBREX
B	CASEMENT	ANDERSEN	100*	2936-2	5'-6"	3'-6"	MFGR	MFGR	MFGR	-	YES	*FIBREX
C	CASEMENT/STATIONARY	ANDERSEN	100*	2936-2-S	5'-6"	3'-6"	MFGR	MFGR	MFGR	-	YES	*FIBREX
D	CASEMENT	ANDERSEN	100*	2020	2'-0"	2'-0"	MFGR	MFGR	MFGR	-	-	*FIBREX

NOTE: THE LETTER "I" OR "O" ARE NOT USED FOR CLARITY.



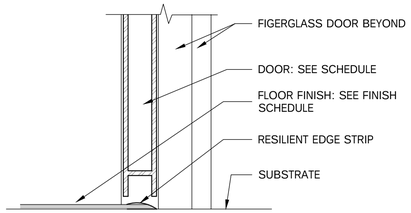
WINDOW TYPES 3/8"= 1'-0"

FINISH SCHEDULE

ABBREVIATIONS

CH	CONCRETE w/ HARDENER	FRP	FIBERGLASS REINFORCED PANELS	P	PAINT	TS	TRANSITION STRIP
CMU	CONCRETE MASONRY UNIT	FV	FIELD VERIFY	PLWD	PLYWOOD	TUP	TOUCH UP PAINT
CONC	CONCRETE	GL	GLASS	RF	RESILIENT FLOORING	UNF	UNFINISHED
DFP	DRY FALL PAINT	GWB	GYPSUM WALL BOARD	SAT	SUSPENDED ACOUSTICAL TILE	VCB	VINYL COVE BASE
EP	EPOXY PAINT	IMP	INSULATED METAL PANEL	SS	STAINLESS STEEL	WD	WOOD
FCS	FLOOR COATINGS SYSTEM	MP	METAL PANEL	STRUCT	STRUCTURE		

RM NO.	NAME	WALLS				FLOORS				CEILING A		CEILING B		REMARKS
		N	E	S	W	MAT'L	BASE	MAT'L	BASE	TYPE	HT.	TYPE	HT.	
101	BAIT GALLERY NO. 1	P-CONC/FRP	P.CONC/FRP	P.CONC/FRP	P.CONC/FRP	CH	-	-	-	P. STRUCT	VARIES	-	-	
102	BAIT GALLERY NO. 2	P.CONC/FRP	P.CONC/FRP	P.CONC/FRP	P.CONC/FRP	CH	-	-	-	P. STRUCT	VARIES	-	-	
103	WORKSHOP	P.FRP	P.FRP	P.FRP	P.FRP	CH	VBC	-	-	P. GWB*	8'-8"	-	-	* 1 HOUR RATED
104	POINT OF SALE	P.FRP	P.FRP	P.FRP	P.FRP	CH	VBC	-	-	P. GWB*	8'-8"	-	-	* 1 HOUR RATED
201	WAITING	P.GWB	P.GWB	P.GWB	P.GWB	RF	VBC	-	-	P. GWB*	9'-0"	-	-	* 1 HOUR RATED
202	OFFICE	P.GWB	P.GWB	P.GWB	P.GWB	RF	VBC	-	-	P. GWB*	9'-0"	-	-	* 1 HOUR RATED
203	BATHROOM	FRP	FRP	FRP	FRP	RF	VBC	-	-	P. GWB*	9'-0"	-	-	* 1 HOUR RATED
204	MECHANICAL\ELECTRICAL	P.GWB	P.GWB	P.GWB	P.GWB	PLWD	VBC	-	-	P. GWB*	9'-0"	-	-	* 1 HOUR RATED



1 RESILIENT EDGE TRANSITION STRIP DETAIL 3" = 1'-0"

HARDWARE SETS

HW-1 EXTERIOR SINGLE DOOR 101 & 201
- 3 BUTTS
- 1 LEVER LOCKSET (ENTRANCE FUNCTION)
- 1 DEADBOLT - KEYED/THUMBLATCH
- 1 CLOSER - PARALLEL ARM
- 1 KICKPLATE - 18" X 34"
- 1 THRESHOLD
- 1 WEATHERSTRIPPING - DOOR BOTTOM
- 1 SET WEATHERSTRIPPING - HEAD & JAMBS
- 1 DOORSTOP

HW-2 EXTERIOR SINGLE DOOR 102 (OVERSIZED)
- 4 BUTTS
- 1 LEVER LOCKSET (ENTRANCE FUNCTION)
- 1 DEADBOLT - KEYED/THUMBLATCH
- 1 CLOSER - PARALLEL ARM
- 1 KICKPLATE - 18" X 34"
- 1 THRESHOLD
- 1 WEATHERSTRIPPING - DOOR BOTTOM
- 1 WEATHERSTRIPPING SET - HEAD & JAMBS
- 1 DOORSTOP

HW-3 INTERIOR SINGLE RATED DOOR 202
- 3 BUTTS
- 1 LEVER LOCKSET - STORAGE FUNCTION
- 1 CLOSER - PARALLEL ARM
- 1 WEATHERSTRIPPING - DOOR BOTTOM
- 1 WEATHERSTRIPPING SET - HEAD & JAMBS
- 1 KICKPLATE - 18" X 34"
- 1 DOORSTOP

HW-4 INTERIOR SINGLE DOOR 203
- 3 BUTTS
- 1 LEVER LOCKSET - PRIVACY FUNCTION W/ OCCUPANCY INDICATOR
- 1 DOORSTOP
- 3 FRAME SILENCERS

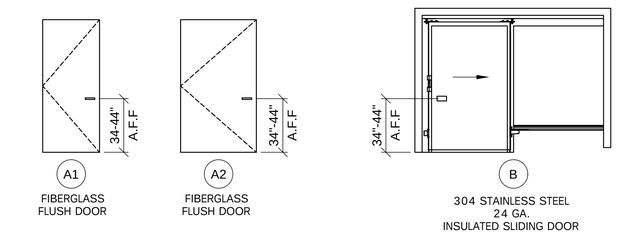
HARDWARE SETS

DOOR SCHEDULE

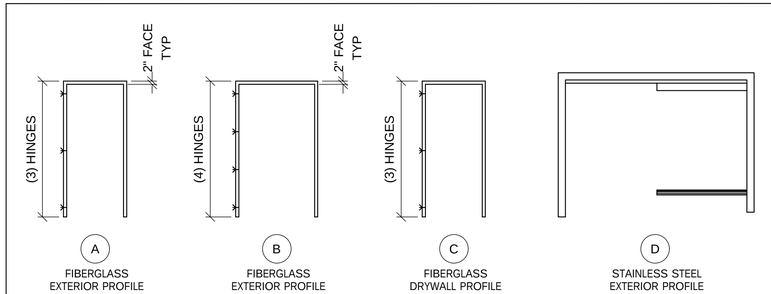
ABBREVIATIONS

ALUM	ALUMINUM	HM	HOLLOW METAL	T	TEMPERED		
DW	DRYWALL	INSUL	INSULATED	T-BREAK	THERMAL BREAK		
ES	EDGE STRIP	MAS	MASONRY	TH	THERMAL INSULATED		
EMHO	ELECTRO MAGNETIC HOLD OPENER	MFGR	MANUFACTURER	TS	TRANSITION STRIP		
GL	GLASS	OCD	OVERHEAD COILING DOOR	V	VINYL		
		OHD	OVERHEAD DOOR	WD	WOOD		
		SS	STAINLESS STEEL	W /	WITH		

DOORS										FRAMES					THRESHOLDS		
NO.	TYPE	SIZE (W x H)	THK	INSUL	HDWE	FR	GLASS TYPE	GLASS SIZE	REMARKS	TYPE	FR	PROFILE	DETAILS HEAD	DETAILS JAMB	MATERIAL	DETAILS SILL	DETAILS FIN
101	A1	3070	1 3/4"	YES	HW-1	-	NONE	NONE	FIBERGLASS	A	-	MFGR	MFGR	MFGR	ALUM	ADA	-
102	A2	4070	1 3/4"	YES	HW-2	-	NONE	NONE	FIBERGLASS	B	-	MFGR	MFGR	MFGR	ALUM	ADA	-
103	B	6070	5"	YES	MFGR	-	NONE	NONE	SST 14'± WIDE R.O.	D	-	MFGR	MFGR	MFGR	MFGR	MFGR	MFGR
104	B	4070	5"	YES	MFGR	-	NONE	NONE	SST 10'± WIDE R.O.	D	-	MFGR	MFGR	MFGR	MFGR	MFGR	MFGR
105	B	4070	5"	YES	MFGR	-	NONE	NONE	SST 10'± WIDE R.O.	D	-	MFGR	MFGR	MFGR	MFGR	MFGR	MFGR
201	A1	3070	1 3/4"	YES	HW-1	-	NONE	NONE	FIBERGLASS	C	-	MFGR	MFGR	MFGR	ALUM	ADA	-
202	A1	3070	1 3/4"	NO	HW-3	2 HR	NONE	NONE	FIBERGLASS	C	2 HR	MFGR	MFGR	MFGR	NONE	-	-
203	A1	3070	1 3/4"	NO	HW-4	-	NONE	NONE	FIBERGLASS	C	-	MFGR	MFGR	MFGR	NONE	-	-



DOOR TYPES 3/8"= 1'-0"



FRAME TYPES 3/8"= 1'-0"

GRANT HAYS ASSOCIATES
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LICENSED ARCHITECT MICHAEL F. HAYS No. 1724 STATE OF MAINE

Designed:	MFH
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

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CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
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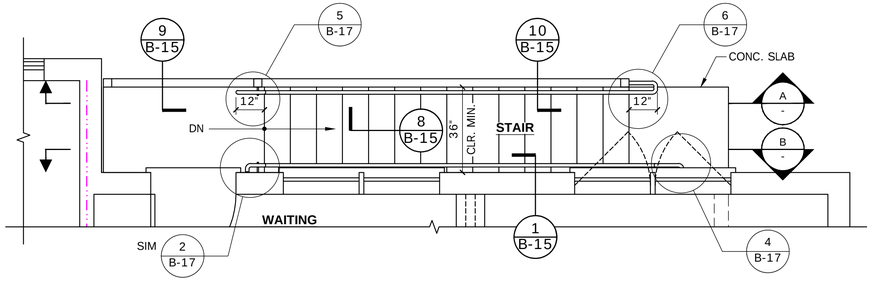
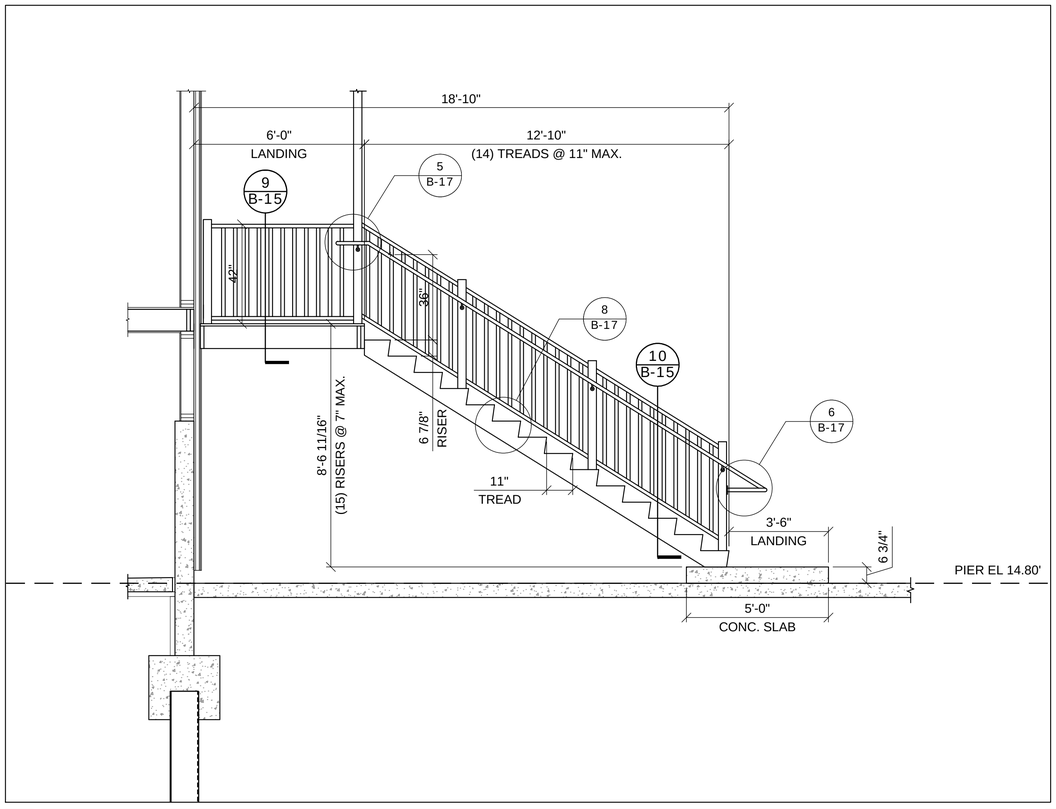
SHEET NAME
DOORS WINDOWS AND FINISHES SCHEDULES

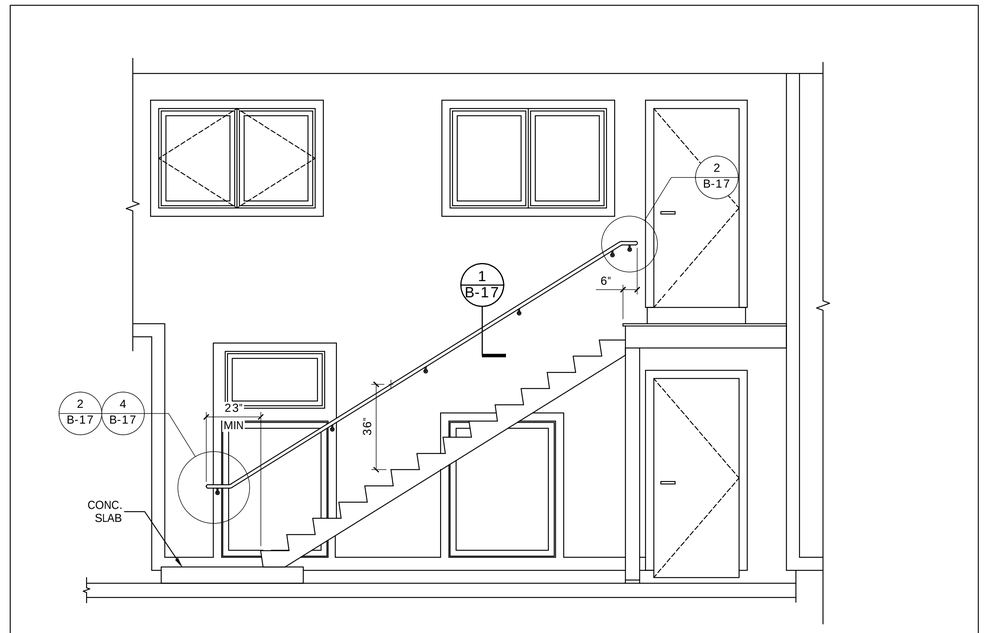
SHEET NO.
B-15



① STAIR PLAN 3/8"=1'-0"



Ⓐ STAIR SECTION 3/8"=1'-0"



Ⓑ STAIR SECTION 3/8"=1'-0"

T

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LICENSED ARCHITECT
MICHAEL F. HAYS
No. 1724
STATE OF MAINE

Michael F. Hays

Designed:	MFH
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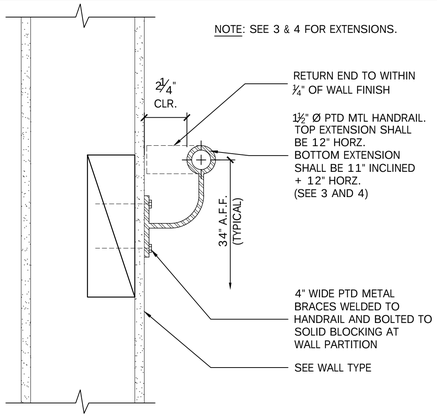
SHEET NAME

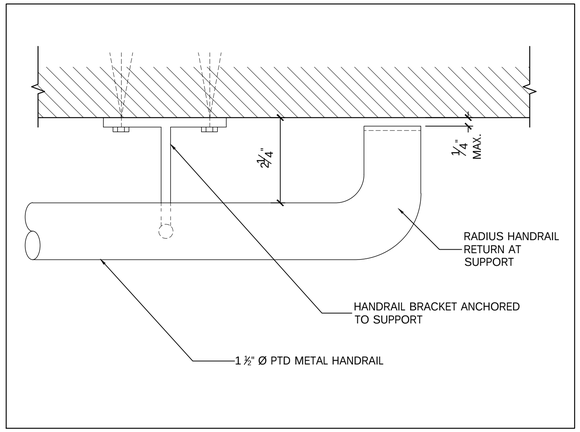
STAIR PLAN AND SECTION

SHEET NO.

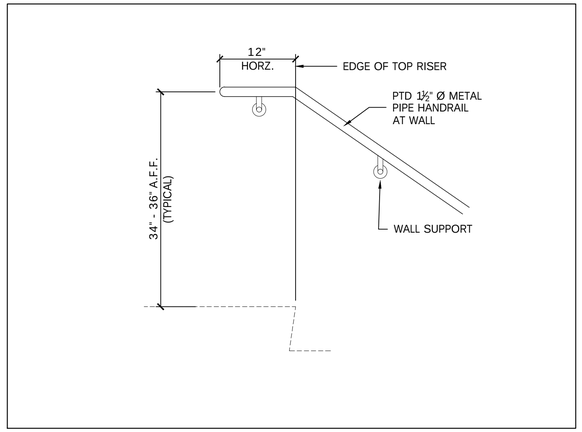
B-16



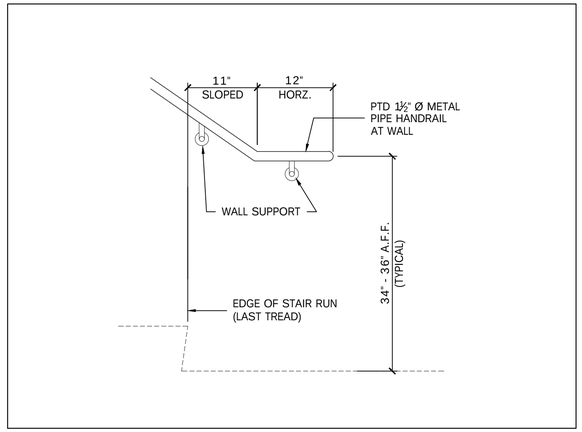
① TYPICAL WALL HANDRAIL SECTION 3"=1'-0"



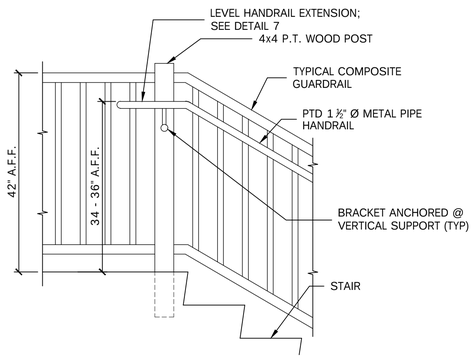
② HANDRAIL RETURN AT WALL 6"=1'-0"



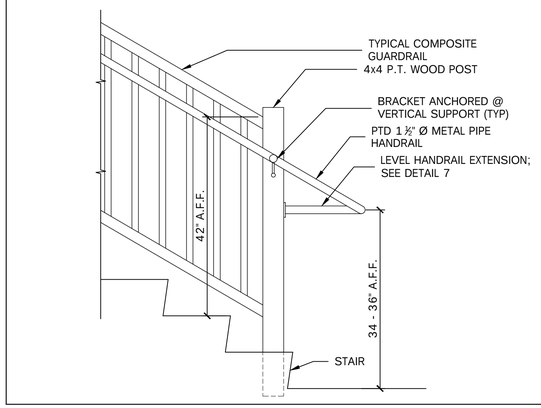
③ TYPICAL WALL HANDRAIL - TOP 1"=1'-0"



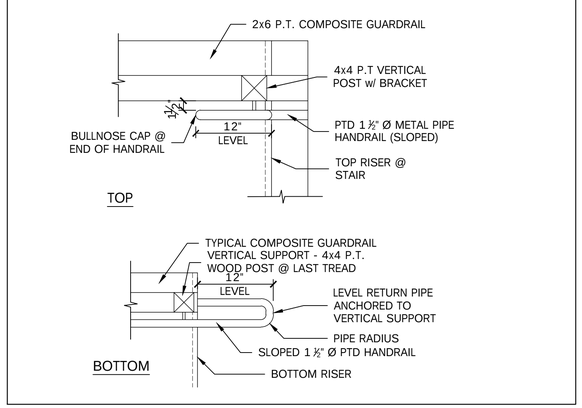
④ TYPICAL WALL HANDRAIL - BOTTOM 1"=1'-0"



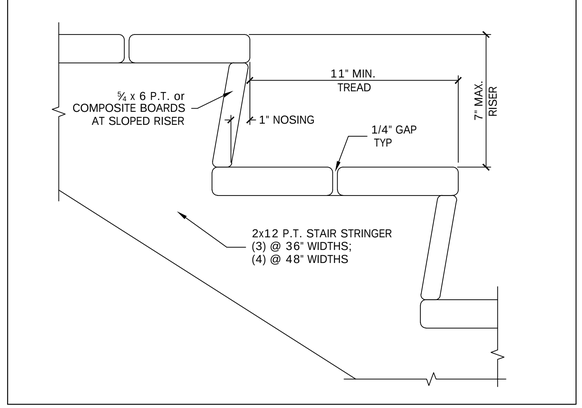
⑤ TYPICAL POSTGUARDRAIL/HANDRAIL TOP 3/4"=1'-0"



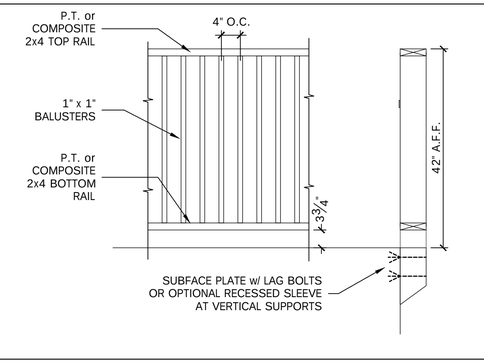
⑥ TYPICAL POST GUARDRAIL/HANDRAIL BOTTOM 3/4"=1'-0"



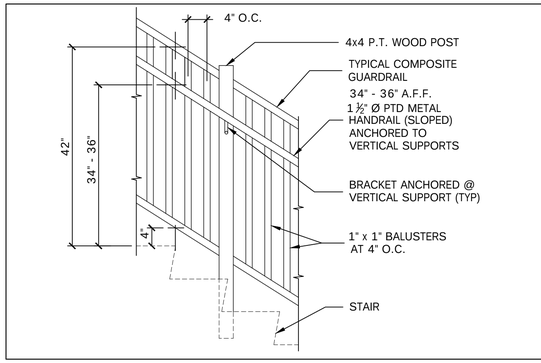
⑦ HANDRAIL EXTENSIONS - TOP/BOTTOM 1"=1'-0"



⑧ COMPOSITE STAIR RISE/RUN DETAIL 3"=1'-0"



⑨ TYPICAL GUARDRAIL/HANDRAIL TOP 3/4"=1'-0"



⑩ TYPICAL SLOPED GUARDRAIL/HANDRAIL DETAIL 3/4"=1'-0"

T
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LICENSED ARCHITECT MICHAEL F. HAYS No. 1724 STATE OF MAINE
Michael F. Hays

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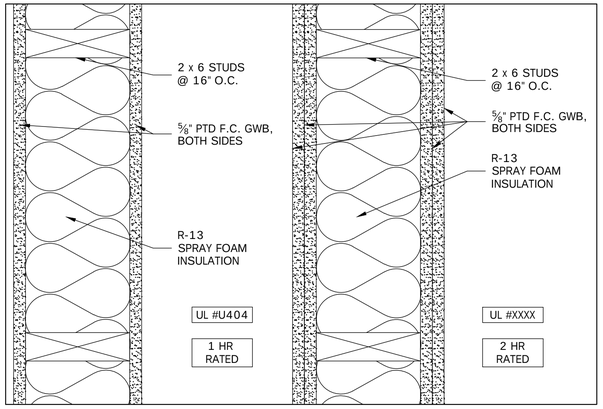
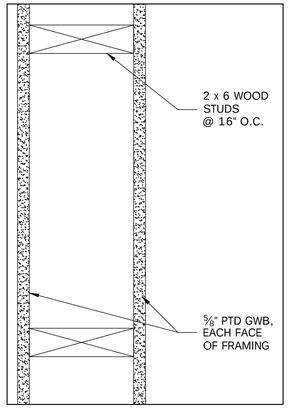
SHEET NAME
STAIR DETAILS

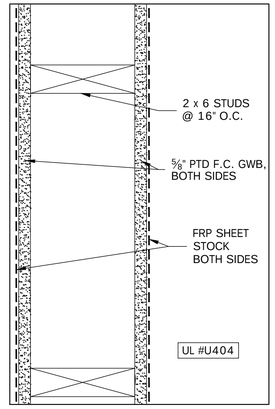
SHEET NO.
B-17



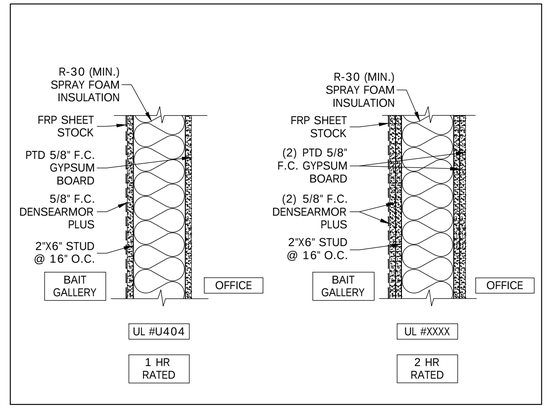
① PARTITION TYPE 1 RATED | PARTITION TYPE 1A RATED 3" = 1'-0"



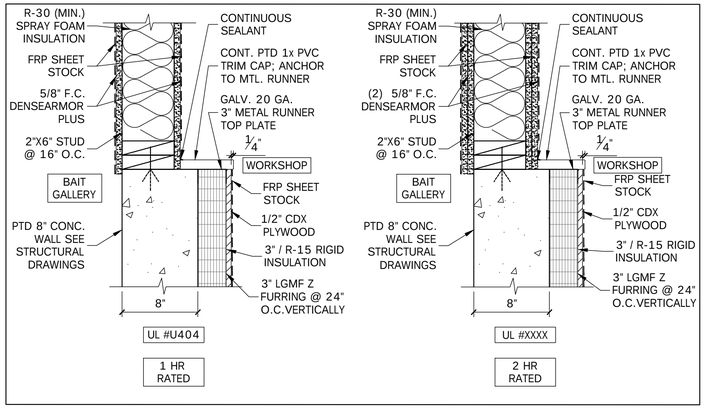
② PARTITION TYPE 2 3"=1'0"



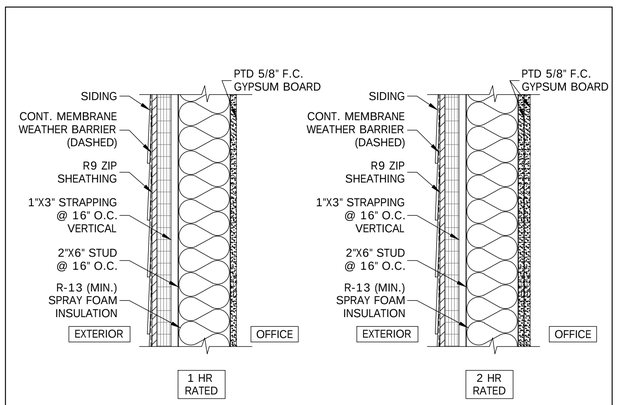
PARTITION TYPE 2A RATED



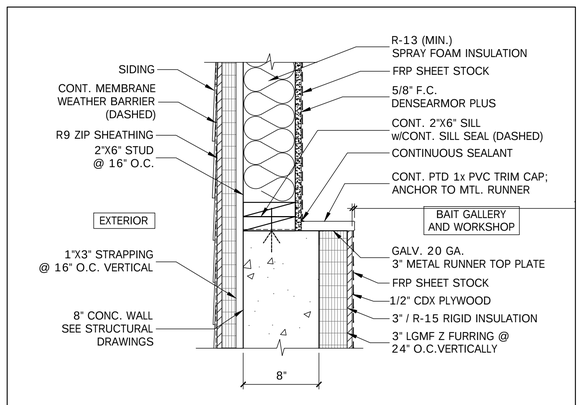
③ PARTITION TYPE 3 RATED | PARTITION TYPE 3A RATED 1 1/2"=1'-0"



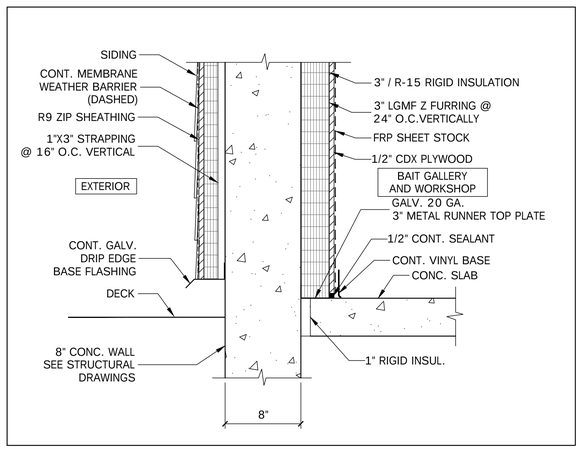
④ PARTITION TYPE 4 RATED | PARTITION TYPE 4A RATED 1 1/2"=1'-0"



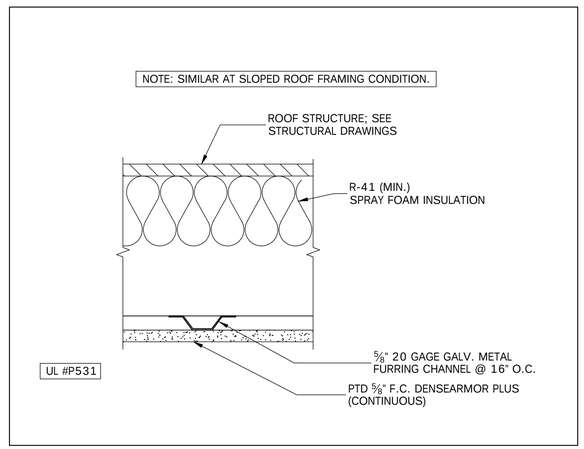
⑤ PARTITION TYPE 5 | PARTITION TYPE 5A 1 1/2"=1'-0"



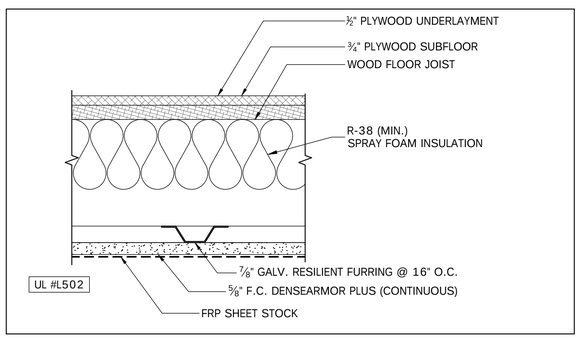
⑥ PARTITION TYPE 6 1 1/2"=1'-0"



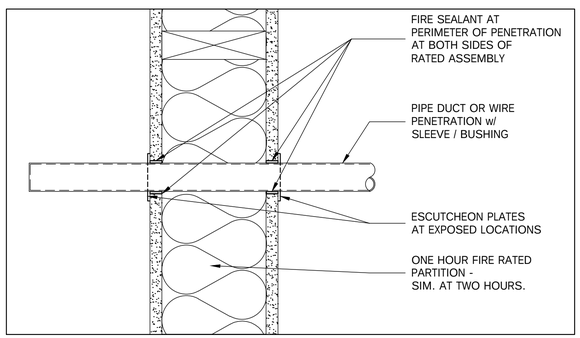
⑦ PARTITION TYPE 7 1 1/2"=1'-0"



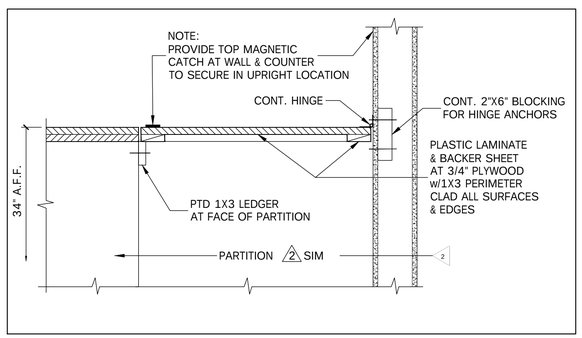
⑧ FIRE RATED ROOF STRUCTURE - 1 HOUR 3"=1'-0"



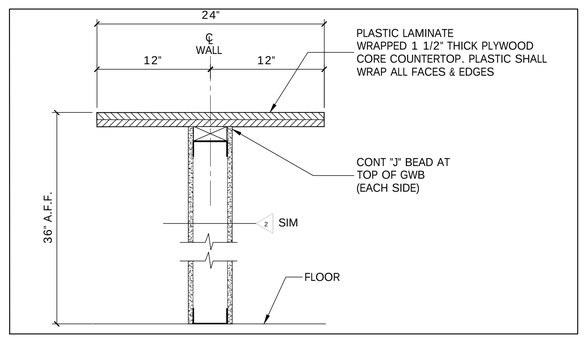
⑨ 1 HOUR FIRE RATED GWB CEILING DETAIL 3"=1'-0"



⑩ FIRE FIRESTOP PENETRATION DETAIL 3"=1'-0"



⑪ FILL-UP COUNTERTOP DETAIL 1 1/2"=1'-0"



⑫ COUNTERTOP (FIXED) DETAIL 1 1/2"=1'-0"

T
GRANT HAYS
ASSOCIATES
ARCHITECTURE & INTERIOR DESIGN
P.O. BOX 6179 FALMOUTH MAINE 04105
207.871.5900 www.granthays.com

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LICENSED ARCHITECT
MICHAEL F. HAYS
No. 1724
STATE OF MAINE
Michael F. Hays

Designed:	MFH
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants
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PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

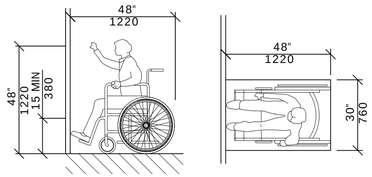
CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	BJB

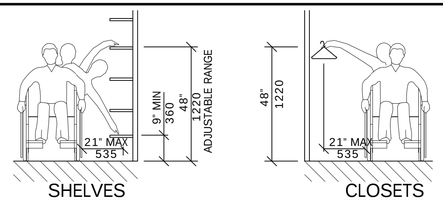
SHEET NAME
WALL TYPES

SHEET NO.
B-18



HIGH FORWARD REACH LIMIT

NTS

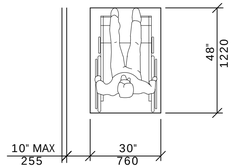


SHELVES

STORAGE SHELVES AND CLOSETS

NTS

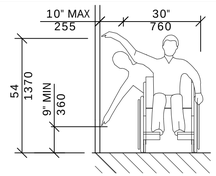
CLOSETS



CLEAR FLOOR SPACE

PARALLEL APPROACH

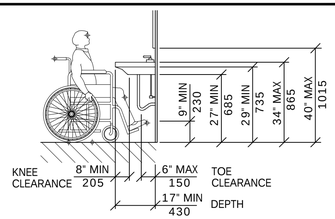
NTS



HIGH AND LOW

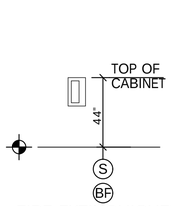
SIDE REACH LIMITS

NTS



LAVATORY CLEARANCES

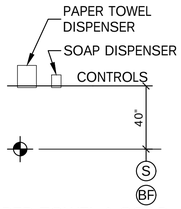
NTS



FIRE EXTINGUISHER

CABINET (FEC)

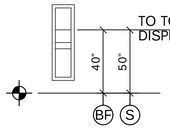
NTS



PAPER TOWEL & SOAP

DISPENSERS

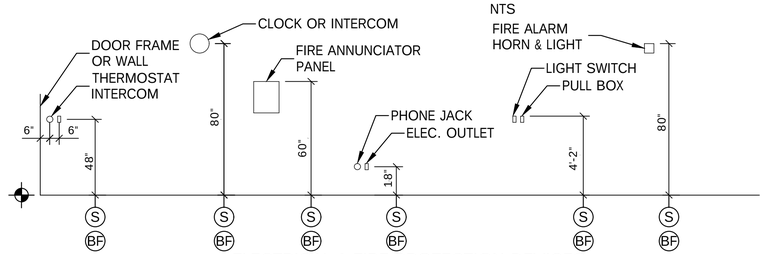
NTS



PAPER TOWEL DISPENSER

DISPOSAL UNIT

NTS



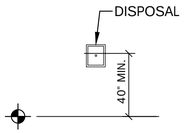
ELECTRICAL & FIRE PROTECTION DEVICES

TYPICAL UNLESS NOTED OTHERWISE

NTS

CLOTHES HOOK

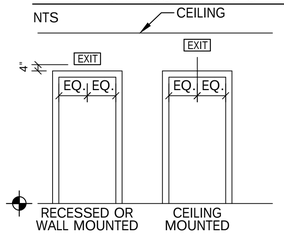
NTS



SANITARY

DISPOSAL UNIT

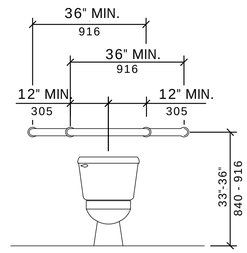
NTS



EXIT SIGNS

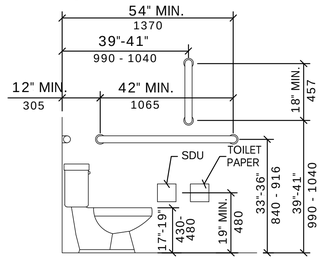
(TYPICAL UNLESS OTHERWISE NOTED)

NTS



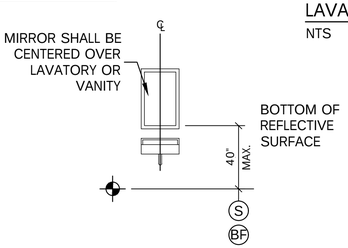
GRAB BARS AT WATER CLOSETS

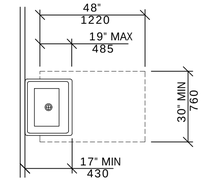
NTS



MIRROR OR MEDICINE CABINET

NTS

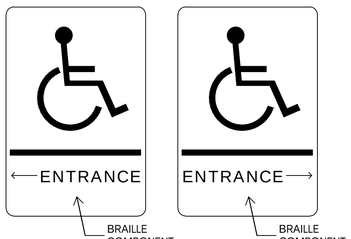




CLEAR FLOOR SPACE

AT LAVATORIES

NTS



SIGN Ⓐ

SIGN Ⓑ

SIGN Ⓒ

SIGN Ⓓ

LEGEND

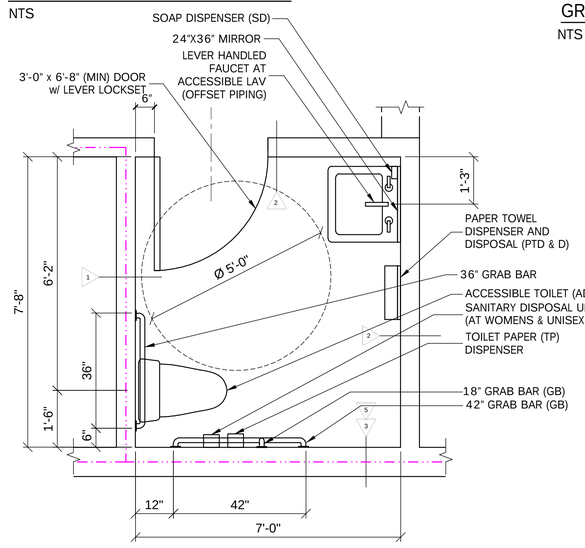
Ⓢ STANDARD MOUNTING HEIGHT

Ⓑⓕ BARRIER FREE ADULT MOUNTING HEIGHT

FINISH FLOOR LINE

NOTE

MOUNT ALL FIXTURES AT STANDARD MOUNTING HEIGHT UNLESS INDICATED ON PLAN BY A SYMBOL. A ♿ SYMBOL AT ANY ROOM SHALL INCLUDE ONE OF ANY FIXTURE AND ACCESSORY WITHIN THE ROOM.



1 TYPICAL ACCESSORIES

NTS

ACCESSIBILITY ACCESSORY MOUNTING HEIGHTS

GRAB BARS	33"-36"
TOILET PAPER HOLDER	19" MIN
TOWEL BAR/PAPER TOWEL DISPENSER	48" MAX
BUILT IN PAPER TOWEL DISPENSER	48" MAX
SOAP DISH/DISPENSER AT WALL	48" MAX
SANITARY DISPOSAL UNIT	19" MAX
MIRROR (BOTTOM)	40" MAX
SHELVES/STORAGE	48" MAX
ELECTRICAL SWITCHES/OUTLETS	48" MAX
COAT HOOKS/RODS	48" MAX
SIGNAGE (TO BRAILLE COMPONENT)	60" MAX

ACCESSIBILITY GENERAL NOTES

1. DOORWAYS SHALL HAVE A MINIMUM CLEAR WIDTH OF 32" WITH THE DOOR OPEN 90 DEGREES. MEASURED BETWEEN THE FACE OF THE DOOR AND THE OPPOSITE STOP.
2. ALL DOORS SHALL HAVE LEVER HANDLE HARDWARE, EXCEPT AT SECURED STORAGE ROOMS, MECHANICAL ROOMS AS NOTED.
3. ALL CLOSERS SHALL BE 5LB PULL MAXIMUM AT DOORS EQUIPPED WITH LEVER HANDLE HARDWARE.
4. ALL DOORS WITH CLOSERS SHALL HAVE 18" CLEAR DISTANCE FROM THE LATCHSIDE OF THE OPENING TO ANY ADJACENT WALL OR OBSTRUCTION ON THE PULL SIDE OF THE OPENING.
5. ALL DOORS WITH CLOSERS SHALL HAVE 12" CLEAR DISTANCE FROM THE LATCHSIDE OF THE OPENING TO ANY ADJACENT WALL OR OBSTRUCTION ON THE PUSH SIDE OF THE OPENING.
6. ALL SIGNAGE SHALL BE MOUNTED 60" AFF TO BRAILLE COMPONENT AT LATCH-SIDE WALL OF DOORS AND OPENINGS.
7. COMPLY WITH CURRENT EDITION OF THE AMERICANS WITH DISABILITIES ACT.

T

GRANT HAYS ASSOCIATES

ARCHITECTURE & INTERIOR DESIGN
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LICENSED ARCHITECT
MICHAEL F. HAYS
No. 1724
STATE OF MAINE

Designed:	MFH
Drawn:	JLD
Checked:	DJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

GEI Consultants

5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
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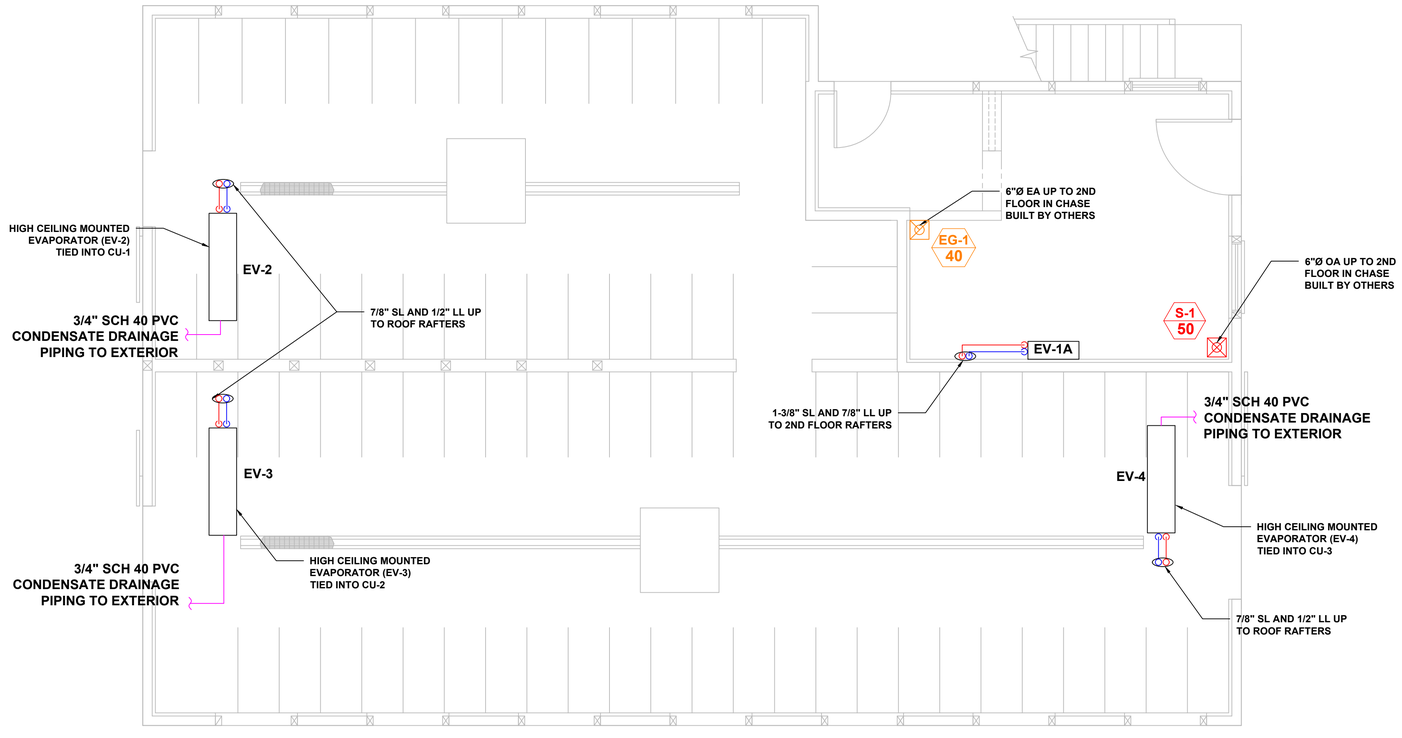
SHEET NAME

ADA DETAILS

SHEET NO.

B-19



GENERAL NOTES:

1. ALL GRILLES AND DIFFUSERS TO HAVE VOLUME DAMPERS ACCESSIBLE THROUGH GRILLE AND DIFFUSER LOCATION IN HARD CEILINGS WITHOUT ACCESS PANELS
2. ALL DUCTWORK TO BE ALUMINUM, STEEL WITH SALT-RESISTANT COATING, PVC, OR OTHER APPROVED CORROSION RESISTANT DUCTWORK
3. ALL REFRIGERANT PIPING TO BE ACR HARD PIPE WITH BRAZED FITTINGS AND MINIMUM 1" INSULATION; MINIMIZE REFRIGERANT PIPING LENGTHS AND USE LONG-SWEEP ELBOWS PER MANUFACTURER'S RECOMMENDATIONS
4. ALL CONTROLS TO BE RELIABLE CONTROLS OR APPROVED EQUIVALENT; ALL POWER WIRING TO BE DONE BY OTHERS; ALL CONTROL WIRING TO BE DONE BY CONTROLS CONTRACTOR
5. ALL CHASES FOR DUCT AND PIPE ROUTING TO BE BUILT BY OTHERS
6. SUCCESSFUL HVAC CONTRACTOR TO FURNISH WORKABLE SYSTEM THAT MEETS ALL APPLICABLE CODES; CHANGE ORDERS ON THIS DESIGN WILL NOT BE ACCEPTED, UNLESS THERE IS A CHANGE OF SCOPE REQUIRING ADDITIONAL FEATURES

Attention:
0 1"
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Designed:	BJB
Drawn:	JLD
Checked:	BJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

W.H. DEMMONS
SAVING YOU MONEY ON ENERGY All Year Long
www.whdemmons.com
93 Warren Ave., Portland, ME 04103
T: (207) 797-7468
F: (207) 878-3015

TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

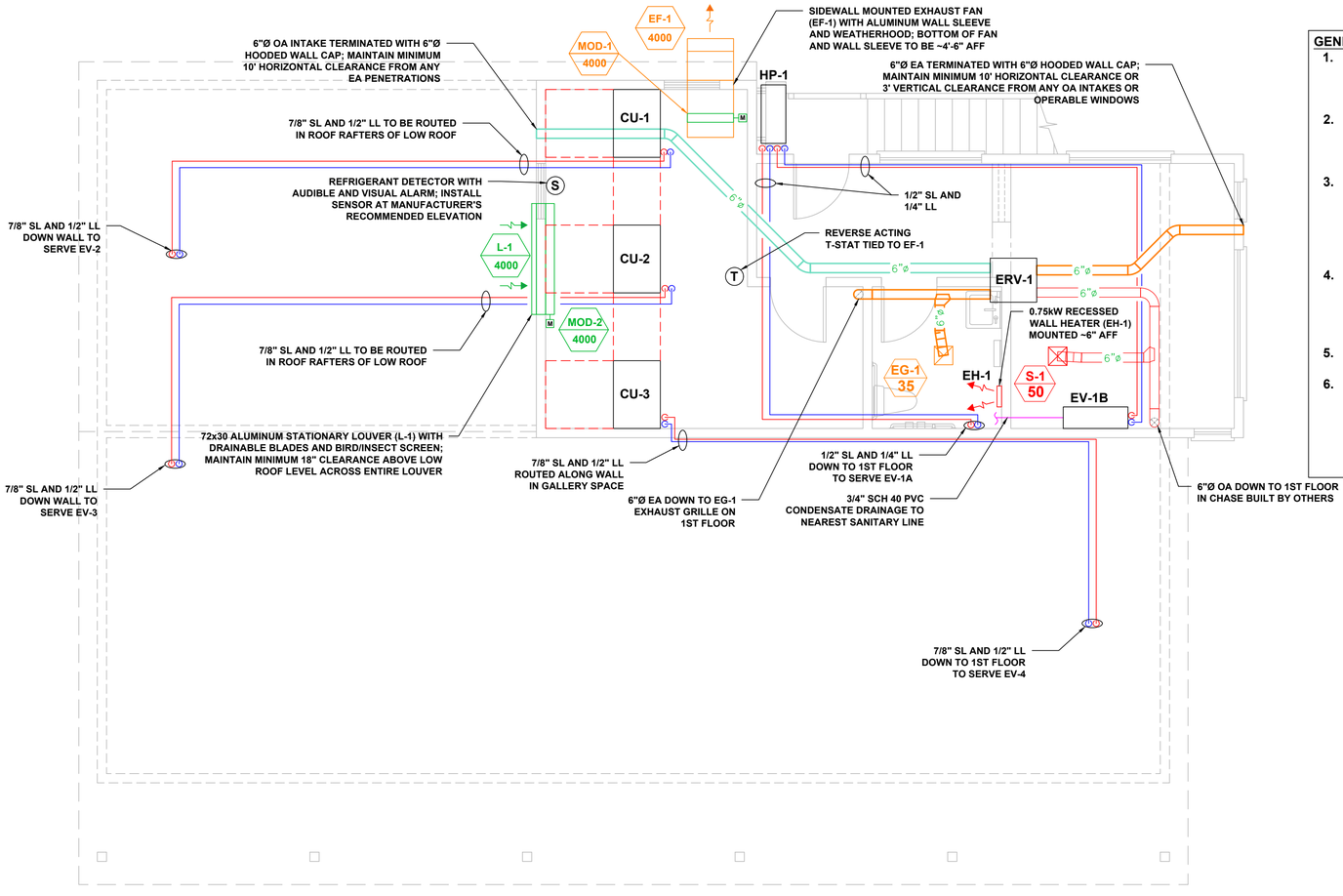
NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	XXX

SHEET NAME

1ST FLOOR MECHANICAL PLAN

SHEET NO.

M-1



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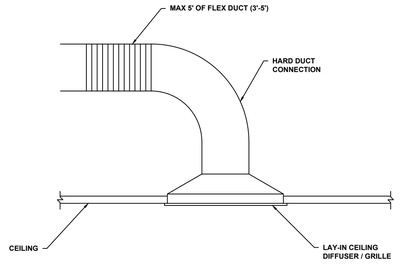
SHEET NAME

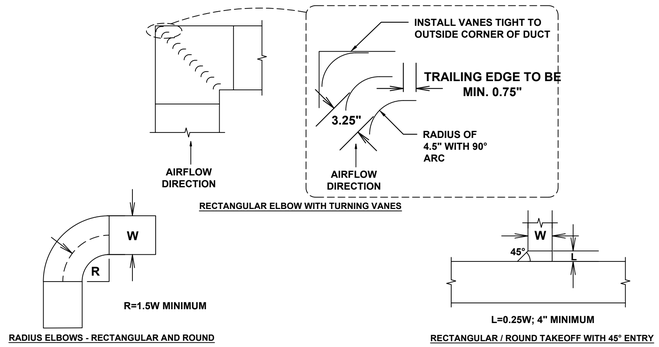
2ND FLOOR MECHANICAL PLAN

SHEET NO.

M-2



CEILING RD&G CONNECTION DETAIL
SCALE: NTS



LOW PRESSURE DUCT CONSTRUCTION DETAILS
SCALE: NTS

HEAT PUMP SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	CFM	TOTAL COOLING CAPACITY (MBh)	SENSIBLE COOLING CAPACITY (MBh)	HEATING OUTPUT CAPACITY (MBh)	ESP (in H2O)	FAN HP	V-Hz-Ph-MCA-MOCP	EER	COP	AREA SERVED	NOTES
HP-1	Carrier	38MGRQ30D--3	2130	30000		29000		1.3	208/230-60-1-30-45	10	3.6		

Notes: Heating based on 17°F outside air temperature
Heat pump to have a salt-rated coating

EVAPORATOR UNIT SCHEDULE

Tag	Manufacturer	Unit Model Number	Capacity(BTUH)	CFM	Motors (Quantity / Watts)	Total Fan Motor Amps	Defrost Heaters (Watts-Amps)	Weight(lbs.)	V-Ph-Hz	Notes
EV-1A	Carrier	40MAHBQ12AX2	12,000	382	1/36	0.182	N/A	23	208/230-1-60	
EV-1B	Carrier	40MAHBQ12AX3	12,000	382	1/36	0.182	N/A	23	208/230-1-60	
EV-2	Chandler		35,000	4450	2/417	7	N/A	163	230/1/60	
EV-3	Chandler		35,000	4450	2/417	7	N/A	163	230/1/60	
EV-4	Chandler		35,000	4450	2/417	7	N/A	163	230/1/60	

Notes: Evaporators to have salt-rated coating

COMPRESSOR / CONDENSING UNIT SCHEDULE

Tag	Manufacturer	Unit Model Number	Capacity(BTUH)	Weight(lbs.)	V/Ph/Hz	Comp Model Number	Comp HP	Fan HP	MCA / MOP	Notes
CU-1	Chandler		32,610	300	208-230/1/60	ZS26K4E	3.5	1/3	30 / 50	
CU-2	Chandler		32,610	300	208-230/1/60	ZS26K4E	3.5	1/3	30 / 50	
CU-3	Chandler		32,610	300	208-230/1/60	ZS26K4E	3.5	1/3	30 / 50	

Notes: Condensing units to have a salt-rated coating

LOUVER / MOD SCHEDULE

TAG	MANUFACTURE	MODEL	SERVICE	WIDTH	HEIGHT	CFM	FREE AREA SQ FT	FPM	NOTES
L-1	Ruskin	ELF375DX	Mechanical Room Makeup Air	72	30	4000	8.07	496	Aluminum Drainable Blade Stationary Louver
MOD-1	TAMCO		Mechanical Room Exhaust	30.25	30.25	4000	-	-	Aluminum Salt Rated Control Damper
MOD-2	Ruskin	TED50	Mechanical Room Makeup Air	72	30	4000	-	-	Aluminum Salt Rated Control Damper

RD&G SCHEDULE

Tag	Manufacture	Model	Neck Size (in)	Throw	CFM Range	Noise Criteria	Delta P (in.)	Style
S-1	TITUS	OMNI	6	6	50	-	0.10	1' x 1' Lay-in Ceiling Supply Grille with OBD's
EG-1	TITUS	OMNI	6	6	35-40	-	0.10	1' x 1' Lay-in Ceiling Exhaust Grille

EXHAUST FAN SCHEDULE

TAG	Service	Manufacturer	Model Number	Volume CFM	SP (in. wg.)	Speed (rpm)	Power	Electric V-Ph-Hz	Notes
EF-1	See Plans	Cook	24XLWH	4000	0.1	621	1/3	115-1-60	2-speed Sidewall Propeller Fan

Notes: Fan to have salt rated coating and corrosion resistant fasteners
Fan to be provided with aluminum weather hood and wall sleeve

ELECTRIC HEATER SCHEDULE

Tag	Manufacturer	Model	Style	Number of Elements	Electrical				Notes
					kW	V-Ph-Hz	MCA	MOCP	
EH-1	Markel	E3055T2DWB	Recessed Wall	1	0.75 / 1.5	120-1-60	15.63	20	

ENERGY RECOVERY UNIT SCHEDULE

TAG	MANUFACTURER	MODEL	FRESH AIR (CFM	EXHAUST AIR (CFM)	ESP (IN.WG.)	FAN HP	VOLTS	PHASE	Hz	MCA	MOPD	WEIGHT (LBS)	WINTER AIR TEMP / SUMMER AIR TEMP	WINTER EFF. / SUMMER EFF.	NOTES
ERV-1	Panasonic	FV-10VEC2	100	70	0.4	0.4	120	1	60	1.2	15	50	32°F / 78°F	60% / 60%	

① ERV with Total Enthalpic Core ② Double Wall Construction ③ Factory Mounted VFD On Supply and Exhaust Fan Motors ④ Factory Mounted Fused Disconnect ⑤ Factory Motorized Dampers on Outside Air and Exhaust Air ⑥ Factory Painted Standard White Exterior

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SHEET NAME
DETAILS AND SCHEDULES

SHEET NO.
M-3

GENERAL

15101 CODES AND PERMITS

1. THE FOLLOWING CODES WILL BE COMPLIED WITH WHEN DESIGNING AND INSTALLING COMPONENTS AND SYSTEMS UNDER DIVISION 15 - MECHANICAL: OHSA, BOCA, IMC, ASHRAE, SMACNA, NFPA, STATE AND LOCAL ENERGY CODES.
2. STATE AND LOCAL MECHANICAL PERMITS WILL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR

15102 DESIGN CONDITIONS

1. CLIMATIC DESIGN CONDITIONS WILL BE BASED ON KENNEBUNKPORT, MAINE AND THE SURROUNDING AND ARE AS FOLLOWS:

WINTER: -10° F
SUMMER: 87° F DB AND 71° F WB

2. INTERIOR CONDITIONS OF BAIT BUILDING:

WINTER: AMBIENT
SUMMER 40 DEG F +/-2

15103 CONTRACTOR REQUIREMENTS

1. MECHANICAL CONTRACTOR TO HAVE LICENSED PROFESSIONAL ENGINEER ON STAFF
2. MECHANICAL CONTRACTOR TO HAVE A SERVICE DEPARTMENT OPERATING TWENTY-FOUR HOURS A DAY, SEVEN DAYS A WEEK.
3. CONSTRUCTION DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MAINE

15110 BASIC MECHANICAL REQUIREMENTS

1. THESE DRAWINGS ARE DIAGRAMMATIC; IT IS THE INSTALLER'S RESPONSIBILITY TO VERIFY ALL CONDITIONS IN THE FIELD TO INSURE THE SYSTEMS CAN BE INSTALLED AS SHOWN. ANY CONFLICTS WITH STRUCTURE OF OTHER BUILDING SYSTEMS MUST BE RESOLVED PRIOR TO COMMENCING WORK.
2. IT IS THE INTENTION OF THESE DRAWINGS TO SHOW A COMPLETE DESIGN OF A BUILDING REFRIGERATION SYSTEM DESIGN, A SALT WATER WASH-DOWN SYSTEM AND A FLOOR DRAINAGE (PLUMBING) SYSTEM. ALL EQUIPMENT AND COMPONENTS THAT ARE INSTALLED AS PART OF THIS PROJECT MUST BE DONE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES AND REGULATIONS. ANY DISCREPANCIES MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER OF RECORD FOR RESOLUTION.
3. ANY DEVIATIONS PROM THE PROJECT SPECIFICATIONS, EQUIPMENT SCHEDULES OR DRAWINGS MUST BE PRE-APPROVED BY THE ENGINEER OF RECORD AND THE OWNER. ANY SUCH DEVIATION REQUESTS MUST BE SUBMITTED IN WRITING AND APPROVED IN WRITING. ALL SUBMITTALS NEED TO BE SUBMITTED TO THE ENGINEER OF RECORD BEFORE FINAL APPROVAL.
4. REFER TO M-3 FOR EQUIPMENT SCHEDULES FOR ALL MAJOR MECHANICAL COMPONENTS TO BE INSTALLED AS PART OF THIS PROJECT. NO DEVIATIONS OR SUBSTITUTIONS FROM THESE EQUIPMENT SCHEDULES SHALL BE ALLOWED UNLESS AGREED TO IN WRITING BY THE DESIGN ENGINEER OF RECORD AND THE OWNER
5. ALL MOTORS FURNISHED SHALL MEET NEMA REQUIREMENTS AND SHALL HAVE AN OPERATING TEMPERATURE OF NOT TO EXCEED 40° C ABOVE AMBIENT TEMPERATURE AND BE SO MARKED. EXCEPT AS NOTED ALL MOTORS SHALL BE OF THE OPEN DRIP-PROOF TYPE. MOTORS MAY BE FURNISHED OF THE FULLY ENCLOSED TYPE IF IT IS THE STANDARD EQUIPMENT.
6. NAMEPLATES BEARING MANUFACTURER'S NAME OR IDENTIFIABLE TRADEMARK SHALL BE SECURELY AFFIXED IN A CONSPICUOUS PLACE ON EQUIPMENT, OR OTHERWISE PERMANENTLY MARKED.
7. FLEXIBLE METAL CONDUIT SHALL BE USED FOR ALL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT.
8. CIRCULATION PUMPS TO BE SIZED WITH A MINIMUM OF A 10% SAFETY FACTOR IN FLOW RATES.
9.. WHERE APPLICABLE, ALL AIR SIDE HVAC SYSTEMS TO BE DESIGNED AT AN NC LEVEL OF < 35.

SECTION 15301
SALT WATER WASH DOWN AND PLUMBING HYDRONIC PIPING SYSTEMS

1. ALL SALT WATER WASH DOWN SYSTEM PIPING TO BE SCH 80 PVC AS SHOWN ON THE PLANS. TYPE L HARD COPPER WITH CAST BRONZE OR WROUGHT COPPER SOLDER FITTINGS IS ACCEPTABLE (IN THE MECHANICAL ROOM ONLY) IF PRE-APPROVED BY THE OWNER AND THE ENGINEER OF RECORD.
2. ALL NEW SANITARY / PLUMBING PIPING TO BE AS SHOWN ON THE PLANS
3. ALL HORIZONTAL PIPING SHALL BE SUPPORTED BY ADJUSTABLE SWIVEL HANGERS AS DESCRIBED BELOW; PROVIDE ADDITIONAL SUPPORTS AT ALL CHANGES OF DIRECTION AND AT LOCATIONS WITH CONCENTRATED LOADS SUCH AS VALVES ETC.
4. VERTICAL PIPING SHALL BE SUPPORTED WITH BEARING PLATE ON STRUCTURAL SUPPORT
5. ADJUSTABLE SWIVEL HANGERS: PIPE SIZES 2" AND LESS: CARPENTER AND PATERSON FIG. 800 CONFORMING TO MSS-SP-58, OVERSIZE FOR INSULATED PIPING SYSTEMS (OR EQUIVALENT). PIPE SIZES LARGER THAN 2": CARPENTER ANDS PATERSON FIG. 100, OVERSIZE FOR INSULATED PIPING SYSTEMS (OR EQUIVALENT).
6. HANGER ROD SIZES AND SPACING SHALL BE AS FOLLOWS:

PIPE SIZE	ROD DIAMETER	MAXIMUM SPACING
1-1/4" & BELOW	3/8"	5 FEET
1-1/2" & 2"	3/8"	8 FEET
2-1/2" & 3"	1/2"	8 FEET
4", 5" & 6"	3/4"	8 FEET

7. BALL VALVES: SCH 80 PVC BALL VALVES FOR ALL SCH 80 PVC PIPING; APOLLO 70-100 SERIES (OR EQUAL), BRONZE BODY, FED. SPEC. WW-V-35, TYPE 11, CLASS (BRONZE), STYLE 3, BLOW-OUT PROOF STEM, 600 POUND W.O.G., SCREWED CONNECTION FOR STEEL PIPE, SWEAT CONNECTION FOR COPPER PIPING. PROVIDE STEM EXTENSION TO ALLOW OPERATION WITHOUT INTERFERING WITH PIPE INSULATION.
8. GATE VALVES: NIBCO MODEL S-113 OR T-113 (OR EQUAL), BRONZE BODY FED. SPEC. WW-V- 54, WEDGE DISC, RISING STEM, SCREWED CONNECTION FOR STEEL PIPE, SWEAT CONNECTION FOR COPPER TUBE, 150-POUND CLASS.
9. OUTSIDE SCREW AND YOKE (OS&Y) GATE VALVES: NIBCO MODEL F-617-0, IRON BODY, FED. SPEC. WW-V-58 WITH BRONZE TRIM, 125 POUND CLASS (OR EQUAL).
10. CHECK VALVES: TACO MPV, FLOW CHECKS, OR EQUAL ACCORDING TO PIPE SIZES.
11. CIRCUIT BALANCE VALVES TO BE TACO MPV, OR TACO ACCU-FLOCIRCUIT SETTER OR B&G CIRCUIT SETTER DEPENDING ON PIPE SIZE. REFER TO PLANS FOR ADDITIONAL DETAILS
12. THERMOMETERS: TRERICE MODEL V80445 OR ASHCROFT SERIES 600A-04 (OR EQUAL); DIAL TYPE, MIL SPEC MIL-T-9955 (OR EQUAL) WITH 4-1/2" DIAMETER FACE.
13. PRESSURE GAUGES: TRERICE SERIES 800 OR ASHCROFT TYPE 1005, GRADE B, ANSI B40.1, 3-1/2" DIAMETER FACE (OR EQUAL) INSTALLED WITH SHUTOFF PETCOCK AND RESTRICTOR. PRESSURE RANGE: 0-60 PSIG WITH 5 PSI GRADUATIONS, 0-100 PSIG WITH 10 PSI GRADUATIONS FOR CONDENSER WATER PUMPS.
14. MANUAL AIR VENTS: BRASS BODY, FIBER DISCS, 125 PSI WORKING PRESSURE, AND 240 DEGREE F MAXIMUM TEMPERATURE, ADJUSTABLE FOR QUICK VENTING AT SYSTEM START-UP.
15. ALL HYDRONIC SPECIALTIES (AIR SEPARATORS, AIR VENTS, EXPANSION TANKS ETC) TO BE AS SCHEDULED (WHEN APPLICABLE).
16. ALL HYDRONIC COMPONENTS (VALVES, STRAINERS, CHECK VALVES, CIRCUIT BALANCE VALVES ETC) THAT ARE NOT SPECIFICALLY SCHEDULED SHALL BE RATED WITH A MAXIMUM OPERATING PRESSURE OF NO LESS THAN 125 PSI AND WITH TEMPERATURE RATINGS OF AT LEAST 225 F.

SECTION15303
PIPING INSULATION

A. GENERAL
1. ALL INSULATION MATERIALS INCLUDING JACKETS, FACING, ADHESIVE, COATING AND ACCESSORIES SHALL BE FIRE AND SMOKE HAZARD RATED AND LISTED BY UNDERWRITER'S LABORATORIES, INC. AND COMPLY WITH UL 723 (ASTM E-84). THE FUEL CONTRIBUTED AND SMOKE DEVELOPED SHALL NOT EXCEED 50 AND FLAME SPREAD SHALL NOT EXCEED 25.

B. PIPING INSULATION
1. ALL WELL SIDE SCH 80 PVC PIPING AND BUILDING HEAT PUMP LOOP SCH 80 PVC PIPING TO BE UNINSULATED
2. INSULATION FOR ALL HOT AND COLD DOMESTIC WATE PIPING IN OFFICE AND WORKSHOP SPACES SHALL BE ARMAFLEX COVERED WITH A PVC PROTECTIVE JACKET
3. INSULATION THICKNESS TO BE COMPLIANT WITH MUBEC

15810 DUCTWORK
PART 1 - GENERAL
1.01 SUMMARY
A. SECTION INCLUDES: THIS SPECIFICATION, IN CONJUNCTION WITH THE CONTRACT DOCUMENTS AND DESIGN DRAWINGS, PROVIDES THE MINIMUM REQUIREMENTS FOR MATERIALS AND OPERATIONS USED IN THE FABRICATION AND INSTALLATION OF DUCTWORK. SYSTEMS COVERED BY THIS DOCUMENT INCLUDE HEATING, VENTILATING, AIR CONDITIONING AND EXHAUST.
1.02 REFERENCES
THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS SHALL BE USED. WHERE DIFFERENCES BETWEEN STANDARDS AND THIS SPECIFICATION EXIST, THIS SPECIFICATION SHALL TAKE PRECEDENCE.
1. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
2. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
3. AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS (ASHRAE)
4. MUBEC

PART 2 - PRODUCTS
2.01 MATERIALS, GENERAL
RIGID DUCTS, CASINGS AND FITTINGS: SHALL BE MADE FROM GALVANIZED STEEL SHEETS OF LOCK FORM QUALITY PER ASTM A653 WITH A G90 ZINC COATING (0.90 OZ/FT2 BOTH SIDES), UNLESS OTHERWISE SHOWN ON THE CONTRACT DOCUMENTS. SHEETS SHALL BE FREE OF PITS, BLISTERS, SLIVERS, AND UN-GALVANIZED SPOTS.

A. SUPPORTS: ANGLE IRON, CHANNELS, RODS AND RELATED SUPPORTING MATERIALS SHALL BE GALVANIZED OR MUST UTILIZE SOME FORM OF RUST PREVENTIVE COATNG
B. FASTENERS: USE GALVANIZED RIVETS, SCREWS AND BOLTS THROUGHOUT, EXCEPT ON STAINLESS STEEL DUCTWORK, USE SS FASTENERS.
C. REINFORCEMENT: PROVIDE GALVANIZED STEEL OR STAINLESS STEEL REINFORCEMENT SHAPES AND PLATES WHERE REQUIRED.
D. TIE RODS: USE GALVANIZED STEEL, 1/4 INCH MINIMUM DIAMETER FASTENERS FOR DUCTWORK 36 INCH OR LESS IN LENGTH; USE 3/8 INCH MINIMUM DIAMETER FOR LENGTHS LONGER THAN 36 IN.
E. FLEXIBLE DUCT - SUPPLY & RETURN AIR (INSULATED, LOW PRESSURE): FLEXIBLE DUCT TO BE A FACTORY FABRICATED ASSEMBLY, ATCO 70 SERIES OR EQUIVALENT; UNLESS NOTED ELSEWHERE IN THESE DESIGN DOCUMENTS, ALL FLEXIBLE DUCT SHALL BE RATED FOR A MINIMUM R-VALUE OF R-4.2, MINIMUM 2.0" W.G. POSITIVE PRESSURE AND HAVE A MAXIMUM FLAME-SPREAD INDEX OF 25 AND SMOKE-DEVELOPED INDEX OF 50
F. MECHANICAL LINER AND FASTENERS:
1. LINERS: UNLESS SPECIFIED ELSEWHERE IN THESE DESIGN DOCUMENTS, ALL INTERNAL DUCT LINERS SHALL BE JOHNS MANVILLE LINACOUSTIC RC 1 INCH THICK FIBERGLASS DUCT LINER OR APPROVED EQUIVALENT. LINERS SHALL COMPLY WITH NFPA 90A AND 90B AND HAVE A MAXIMUM FLAME-SPREAD INDEX OF 25 AND SMOKE-DEVELOPED INDEX OF 50. LINERS SHALL BE TREATED WITH AN EPA APPROVED PROTECTIVE AGENT TO RESIST BACTERIAL AND FUNGAL GROWTH. ALL SURFACES EXPOSED TO THE AIR STREAM SHALL BE COATED TO PREVENT EROSION OF GLASS FIBERS.
2. MECHANICAL FASTENERS: GALVANIZED STEEL, SUITABLE FOR ADHESIVE, MECHANICAL OR WELDING ATTACHMENT (SELF-STICK ADHESIVE FASTENERS ARE NOT PERMITTED). PROVIDE FASTENERS THAT WILL NOT DAMAGE THE LINER WHEN APPLIED AS RECOMMENDED BY THE MANUFACTURER, THAT DO NOT CAUSE LEAKAGE WITHIN THE DUCT AND THAT WILL SUSTAIN A 50-POUND TENSILE DEAD LOAD PERPENDICULAR TO DUCT WALL.
3. LINER ADHESIVE: DURO DYNE PAB40 OR APPROVED EQUIVALENT.

2.02 DESIGN AND CONSTRUCTION
A. GENERAL:
1. CONSTRUCT ALL DUCTS, CASINGS AND FITTINGS OF RIGID, GALVANIZED STEEL, UNLESS OTHERWISE SHOWN IN THE CONTRACT DOCUMENTS.
2. CONTRACTOR IS RESPONSIBLE FOR COORDINATION BETWEEN THE DUCTWORK TRADE AND THE OTHER MECHANICAL, ELECTRICAL AND ARCHITECTURAL TRADES.
3. INSULATION SHALL BE AS SPECIFIED IN SECTION 15081, "INSULATION."
4. INSTALL INTERNAL DUCT LINERS ON ALL DUCTWORK INDICATED TO HAVE LINERS ON THE CONSTRUCTION DRAWINGS.
B. DUCTWORK PRESSURE CLASSIFICATION
UNLESS OTHERWISE INDICATED ON THE CONSTRUCTION DRAWINGS, DUCTWORK SHALL BE CONSTRUCTED TO MEET THE APPROPRIATE PRESSURE CLASS DEFINED BELOW.
1. DUCTWORK FROM THE SUPPLY AIR FAN TO THE TERMINAL VELOCITY REDUCTION DEVICE (VAV BOX) OR ZONE-TEMPERING COIL SHALL BE FABRICATED TO MEET MINIMUM 2" W.G. INTERNAL PRESSURE.
2. RETURN AIR DUCTWORK SHALL BE FABRICATED TO MEET MINIMUM 2" W.G. INTERNAL PRESSURE.
C. RECTANGULAR DUCTWORK:
1. SHALL CONFORM TO SMACNA HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE OR SMACNA RECTANGULAR INDUSTRIAL DUCT CONSTRUCTION STANDARDS. MITERED ELBOWS TO HAVE SINGLE WALL TURNING VANES.
D. ROUND DUCTWORK:
1. SPIRAL LOCKSEAM OR LONGITUDINAL WELDED SEAM AS MANUFACTURED BY NORTHEASTERN SHEET METAL, INC OR APPROVED EQUIVALENT
2. MINIMUM GALVANIZED STEEL OR STAINLESS STEEL GAUGES, HANGER SPACING, AND REINFORCEMENT SHALL BE PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS
3. FITTINGS: FITTINGS SHALL HAVE A WALL THICKNESS NOT LESS THAN THAT REQUIRED FOR LONGITUDINAL-SEAM STRAIGHT DUCT.
4. ELBOWS:
A. ELBOWS FOR ROUND DUCTS SHALL HAVE A MINIMUM CENTERLINE RADIUS OF 1-1/2 TIMES THE DIAMETER OF THE DUCT AND SHALL BE CONSTRUCTED WITHOUT SPLITTERS

2.03 DAMPERS
A. OUTSIDE AIR DAMPERS: DAMPERS SHALL BE LOW-LEAKAGE TYPE; GREENHECK MODEL VCD-23 OR EQUAL.
B. MANUAL BALANCING DAMPERS (SUPPLY AIR AND GENERAL EXHAUST SYSTEMS): DAMPERS MAY BE FACTORY OR CONTRACTOR FABRICATED PER SMACNA DUCT CONSTRUCTION STANDARDS.
2.04 HANGERS AND SUPPORTS
A. GENERAL: REFER TO SMACNA DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, RECTANGULAR INDUSTRIAL DUCT CONSTRUCTION STANDARDS, AND ROUND INDUSTRIAL DUCT CONSTRUCTION STANDARDS RESPECTIVELY FOR RECTANGULAR AND ROUND DUCTWORK FOR INSTALLATION OF HANGERS AND SPACING.
1. STRAPS AND ANGLES SHALL BE MANUFACTURED FROM GALVANIZED STEEL; RODS SHALL BE MANUFACTURED FROM UNCOATED OR GALVANIZED STEEL.
2. PERFORATED IRON BAND FOR DUCT SUPPORT IS PROHIBITED
3. DUCTMATE CLUTCHER CABLE HANGING SYSTEM IS ACCEPTABLE IF PRE-APPROVED BY THE ENGINEER OF RECORD
4. WIRE FOR DUCT SUPPORT IS PROHIBITED
2.05 SEALANTS
A. DUCT SEALER FOR INTERNAL DUCTS SHALL BE DUCTMATE EVERSEAL; DUCT SEALER FOR EXTERNAL DUCTS TO BE AIRSEAL ZERO.
B. SELF-ADHERING DUCT TAPE OF ANY TYPE IS NOT PERMITTED FOR DUCT SEALING PURPOSES, EXCEPT TO TEMPORARILY SEAL THE DUCT OPENINGS FOR CONTAMINATION PREVENTION.
PART 3 - EXECUTION
3.01 INSTALLATION
A. FLEXIBLE DUCTS:
1. PROVIDE FLEXIBLE DUCT IN FULLY EXTENDED CONDITION, FREE FROM KINKS.
2. USE ONLY THE MINIMUM LENGTH REQUIRED TO MAKE THE CONNECTION.
3. DO NOT EXCEED 8'-0" IN LENGTH, FULLY EXTENDED.
4. WHERE HORIZONTAL SUPPORT IS REQUIRED, HANGER OR SADDLE MATERIAL SHALL BE WIDE ENOUGH SO THAT IT DOES NOT REDUCE THE INTERNAL DIAMETER OF THE DUCT AND SHALL BE A MINIMUM 1" WIDE BANDING MATERIAL HANGERS AT NOT MORE THAN 2'-6" CENTERS. MAXIMUM ALLOWABLE SAG ½" PER FOOT OF SUPPORT SPACING. FLEXIBLE DUCT SHALL EXTEND STRAIGHT FOR SEVERAL INCHES FROM A CONNECTION BEFORE BENDING.
5. MAKE JOINTS AND CONNECTIONS WITH 1/2" WIDE POSITIVE LOCKING STEEL, NYLON OR PLENUM RATED STRAPS. CONNECTIONS SHALL BE PER SMACNA DUCT CONSTRUCTION STANDARDS.
6. USE INSULATED FLEX DUCT WHERE INSULATED DUCT IS REQUIRED.
B. METAL DUCTWORK:
1. INSTALL WITH A MINIMUM OF 12" SEPARATION FROM EARTH TO THE DUCT OR INSULATION FINISH.
2. SECURELY FASTEN AT EACH CHANGE IN DIRECTION.
3. INSTALL BRANCH CONNECTIONS AND COUPLINGS TIGHT TO THE DUCT WALL SURFACE WITH A MINIMUM OF PROJECTION INTO DUCT. SECURE WITH SHEET METAL SCREWS AT INTERVALS OF 12 INCHES WITH A MINIMUM OF 3 SCREWS IN EACH CONNECTION.
C. INSULATION: SHALL BE INSTALLED AS DETAILED IN SECTION 15081, "INSULATION." THE INSULATION, FACINGS, TAPES AND ADHESIVES APPLIED TO THE EXTERIOR SURFACES OF DUCTS LOCATED WITHIN THE BUILDINGS SHALL HAVE A COMPOSITE FLAME SPREAD OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS.
D. SEALING DUCTWORK:
1. 0"-2" W.G. CLASSIFICATION: TRANSVERSE JOINTS SHALL BE SEALED AS PER SMACNA GUIDELINES FOR SEAL CLASS A USING PRODUCTS LISTED IN SECTION 2.
3.02 GAS FIRED EQUIPMENT
A. COMBUSTION AIR AND VENTING OF GAS-FIRED EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL MECHANICAL CODE, NFPA AND THE EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3.03 DUCT LINERS
A. INSTALL DUCT LINERS AT LOCATIONS AS SHOWN ON THE DRAWINGS. APPLY WITH A SINGLE LAYER OF INDICATED THICKNESS.
3.04 HANGERS AND SUPPORTS
A. HANGERS SHALL BE INSTALLED PLUMB AND SHALL PRESENT A NEAT APPEARANCE.
B. STRAP HANGERS SHALL EXTEND THE FULL DEPTH OF THE DUCT, BEND AND EXTEND 1 INCH UNDER AND AGAINST THE BOTTOM OF THE DUCT.
C. ATTACH HANGERS TO THE DUCTS USING RIVETS OR SCREWS OF APPROPRIATE SIZES 6 INCHES ON CENTER (MINIMUM OF 2 EACH SIDE) AND ON THE BOTTOM RETURN.
D. ALL DUCTS SHALL BE RIGIDLY SUPPORTED.
1. WHERE VERTICAL DUCTS PASS THROUGH FLOORS OR ROOFS, SUPPORTING ANGLES SHALL BE ATTACHED TO DUCTS AND TO THE STRUCTURE.
2. PLACE SUPPORTING ANGLES ON AT LEAST TWO SIDES OF THE DUCT.
3.05 FLEXIBLE CONNECTORS
A. FLEXIBLE CONNECTIONS TO BE DUCTMATE PROFLEX FLEXIBLE DUCT CONNECTOR; INSTALL AT THE INLET AND OUTLET CONNECTION OF EACH FAN UNIT, SECURELY FASTENED TO THE UNIT AND TO THE DUCTWORK. THERE SHALL BE NO METAL-TO-METAL CONTACT AT FLEXIBLE CONNECTIONS. THERE SHALL BE NO STRETCHING OF THE FLEXIBLE MATERIAL AT FLEXIBLE CONNECTIONS.
B. INDOOR SUPPLY/RETURN AIR SYSTEMS SHALL UTILIZE DUCTMATE PROFLEX NEOPRENE COATED GLASS FABRIC
C. OUTDOOR SUPPLY/RETURN AIR SYSTEMS SHALL UTILIZE DUCTMATE PROFLEX U.V. RESISTANT HYPALON COATED GLASS FABRIC
3.08 DAMPERS
A. BALANCING DAMPERS: SHALL BE INSTALLED WHERE SHOWN ON DRAWINGS AND AS MAY BE REQUIRED TO BALANCE SYSTEM.

15855 DIFFUSERS, REGISTERS AND GRILLES
1. PROVIDE SUPPLY DIFFUSERS, RETURN GRILLES AND EXHAUST OUTLETS OF SIZE, TYPE AND DESIGN AS SHOWN ON DRAWINGS. ACCEPTABLE MANUFACTURERS SHALL BE: PRICE, TITUS OR APPROVED EQUIVALENT.
2. EQUIPMENT SHALL BE TESTED AND RATED PER ASHRAE 91-70.
3. EQUIPMENT SHALL HANDLE AIR QUANTITIES AT OPERATING VELOCITIES.
A. WITH MAXIMUM DIFFUSION WITHIN SPACE SUPPLIED OR EXHAUSTED.
B. WITHOUT OBJECTIONABLE AIR MOVEMENT AS DETERMINED BY ENGINEER.
C. WITH SOUND PRESSURE LEVEL NOT TO EXCEED NC 30.
4. DIFFUSERS WITHIN SAME ROOM OR AREA SHALL BE OF SAME TYPE AND STYLE TO PROVIDE ARCHITECTURAL UNIFORMITY.
5. FINISH SHALL BE AS DIRECTED BY ARCHITECT.
6. COORDINATE DIFFUSERS, REGISTERS AND GRILLES WITH CEILING AND WALL CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LENGTHS AND FOR FRAMING AND MITERING ARRANGEMENTS THAT MAY DIFFER FROM THOSE SHOWN ON HVAC DRAWINGS.

SECTION 15183
REFRIGERANT SYSTEMS

PART 1 - GENERAL
1.01 SUMMARY
A. MATERIALS AND OPERATIONS REQUIRED FOR THE INSTALLATION OF BUILT-UP AND PACKAGED SPLIT SYSTEM REFRIGERATION SYSTEMS, INCLUDING PIPING, FITTINGS, EQUIPMENT AND REFRIGERANTS.
B. RECOVERY AND RECLAMATION OF REFRIGERANTS FROM EQUIPMENT THAT IS TO BE REMOVED OR MODIFIED SHALL BE BY LICENSED PERSONNEL ONLY. THE OWNER / CONTRACTOR SHALL SCHEDULE SUCH WORK THROUGH WH DEMMONS INC.
1.02 REFERENCES
THE CURRENT EDITIONS OF THE FOLLOWING CODES AND STANDARDS ARE A PART OF THIS SPECIFICATION;
- AMERICAN SOCIETY OF MECHANICAL ENGINEERS STANDARDS AND AMERICAN NATIONAL STANDARDS (ASME/ANSI)
- AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)
- AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
- AMERICAN WELDING SOCIETY (AWS)
PART 2 - PRODUCTS
2.01 COPPER TUBE AND FITTINGS
A. DRAWN-TEMPER COPPER TUBE: ASTM B 280, TYPE ACR, CLEAN, DRY AND CAPPED.
B. ANNEALED-TEMPER COPPER TUBE: ASTM B 280, TYPE ACR, CLEAN, DRY AND CAPPED. ANNEALED COPPER TUBING SHALL NOT BE USED FOR PIPING LARGER THAN 0.625 O.D.
2.02 VALVES
A. LINES 1" O.D. OR SMALLER: DIAPHRAGM PACKLESS VALVES: 500-PSIG WORKING PRESSURE AND 275 DEG F WORKING TEMPERATURE; GLOBE DESIGN WITH STRAIGHT-THROUGH OR ANGLE PATTERN; FORGED-BRASS OR BRONZE BODY AND BONNET, PHOSPHOR BRONZE AND STAINLESS-STEEL DIAPHRAGMS, RISING STEM AND HAND-WHEEL, STAINLESS-STEEL SPRING, NYLON SEAT DISC, WITH SOLDER-END CONNECTIONS.
B. LINES 1-1/8" O.D. OR LARGER: WING CAP PACKED VALVES: 450-PSIG WORKING PRESSURE AND 275 DEG F WORKING TEMPERATURE; STRAIGHT-THROUGH OR ANGLED, FORGED-BRASS OR BRONZE BODY, FORGED-BRASS SEAL CAPS WITH COPPER GASKET, BACK SEATING, RISING STEM AND SEAT, MOLDED STEM PACKING, WITH SOLDER-END CONNECTIONS.
C. CHECK VALVES SMALLER THAN NPS 1: 500-PSIG OPERATING PRESSURE AND 285 DEG F OPERATING TEMPERATURE; CAST-BRASS BODY, WITH REMOVABLE PISTON, POLYTETRAFLUOROETHYLENE SEAT, AND STAINLESS-STEEL SPRING; GLOBE DESIGN. VALVE SHALL BE STRAIGHT-THROUGH PATTERN, WITH SOLDER-END CONNECTIONS.
D. SERVICE VALVES: 500-PSIG PRESSURE RATING; FORGED-BRASS BODY WITH COPPER STUBS, BRASS CAPS, REMOVABLE VALVE CORE, INTEGRAL BALL CHECK VALVE, AND WITH SOLDER-END CONNECTIONS.

2.05 REFRIGERANTS
A. 410A
B. ASHRAE 34, R-22: MONOCHLORODIFLUOROMETHANE

PART 3 - EXECUTION
3.01 GENERAL
A. BUILT-UP SYSTEMS: INSTALL ALL PIPING, EQUIPMENT, AND COMPONENTS SHOWN ON THE DRAWINGS. UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS, PROVIDE AND INSTALL PIPING AND COMPONENTS TO MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS AND THE REQUIREMENTS OF THIS SPECIFICATION.
B. LIQUID LINE COMPONENTS: REPLACEABLE CORE FILTER DRYER, ISOLATION VALVES FOR THE FILTER DRYER, ACCESS PORT FOR CHARGING (SERVICE VALVES), SOLENOID VALVE, MOISTURE INDICATING SITE GLASS, AND EXPANSION VALVES.
C. SUCTION LINE COMPONENTS: REPLACEABLE CORE FILTER, ACCESS PORT (SERVICE VALVES), ISOLATION VALVES FOR THE FILTER.
D. PROVIDE ISOLATION VALVES AT THE CONDENSER TO ISOLATE THE REFRIGERANT CHARGE DURING MAINTENANCE.
E. INSTALLATION SHALL CONFORM TO ANSI 31.5, REFRIGERATION PIPING AND ASHRAE 15, SAFETY CODE FOR MECHANICAL REFRIGERATION
3.04 PIPING INSTALLATION
A. INSTALL PIPING AS SHORT AND DIRECT AS POSSIBLE, WITH A MINIMUM NUMBER OF JOINTS, ELBOWS, AND FITTINGS. PIPING SHALL BE INSTALLED PARALLEL WITH THE BUILDING LINES UNLESS OTHERWISE NOTED, WITH APPROPRIATE PITCH FREE FROM TRAPS.
B. PIPE SHALL BE CUT ACCURATELY TO MEASUREMENTS ESTABLISHED AT THE CONSTRUCTION SITE AND SHALL BE WORKED INTO PLACE WITHOUT SPRINGING OR FORCING. PIPES SHALL BE INSTALLED AS TO PERMIT FREE EXPANSION AND CONTRACTION WITHOUT DAMAGE TO JOINTS OR HANGERS.
C. ARRANGE PIPING TO ALLOW INSPECTION AND SERVICE OF COMPRESSOR AND OTHER EQUIPMENT. INSTALL VALVES AND SPECIALTIES IN ACCESSIBLE LOCATIONS TO ALLOW FOR SERVICE AND INSPECTION. INSTALLED PIPING SHALL NOT INTERFERE WITH THE OPERATION OR ACCESSIBILITY OF DOORS OR WINDOWS AND SHALL NOT ENCROACH ON AISLES, PASSAGEWAYS, AND EQUIPMENT.
D. INSTALL PIPING WITH ADEQUATE CLEARANCE BETWEEN PIPE AND ADJACENT WALLS AND HANGERS OR BETWEEN PIPES FOR INSULATION INSTALLATION. USE SLEEVES THROUGH FLOORS, WALLS, OR CEILINGS, SIZED TO PERMIT INSTALLATION OF FULL-THICKNESS INSULATION.
E. OIL RETURN: MANUFACTURERS SPECIFICATIONS SHALL BE FOLLOWED FOR OIL RETURN ON RISERS OF 20 FT. OR MORE (I.E., OIL SEPARATORS, P-TRAPS OR INVERTED P-TRAPS).

3.05 HANGERS AND ANCHORS:
A. ALL PIPING SHALL BE RIGIDLY SUPPORTED FROM THE BUILDING STRUCTURE BY MEANS OF ADJUSTABLE RING-TYPE HANGERS. (WELDING TO BUILDING STRUCTURE WILL NOT BE PERMITTED.) UNISTRUT TYPE TRAPEZE HANGERS SHALL BE USED WHERE PIPES RUN SIDE BY SIDE. HANGER SPACING SHALL BE AS FOLLOWS:
HORIZONTAL:

COPPER PIPING	MAXIMUM SPACING
3/8" AND UNDER	4'-0"
1/2" THROUGH 3/4"	6'-0"
1" THROUGH 1-1/2"	8'-0"
2" AND LARGER	8'-0"

VERTICAL: COPPER PIPING SHALL BE SUPPORTED AT 10 FEET INTERVALS MAXIMUM.
B. ROUND RODS SUPPORTING THE PIPE HANGERS SHALL BE OF THE FOLLOWING DIMENSIONS:

2" PIPE AND UNDER	3/8" ROD
2-1/2" TO 3" PIPE	1/2" ROD

C. HANGER RODS SHALL BE CARBON STEEL PER ASTM A307, GRADE B, THREADED PER ANSI B1.1 COARSE THREAD SERIES, CLASS 2A FIT. HANGER RODS SHALL HAVE MINIMUM 6" THREADED ENDS.
D. PLACE A HANGER WITHIN 1'-0" OF EACH SIDE FOR EACH HORIZONTAL ELBOW.
E. USE HANGERS WHICH ARE VERTICALLY ADJUSTABLE 1-1/2" MINIMUM AFTER PIPING IS ERECTED.
F. USE PLASTIC COATED STRAPS ON COPPER PIPE.
3.06 BRAZED JOINTS:
A. WHEN BRAZING, REMOVE SOLENOID-VALVE COILS AND SIGHT GLASSES; ALSO REMOVE VALVE STEMS, SEATS, AND PACKING, AND ACCESSIBLE INTERNAL PARTS OF REFRIGERANT SPECIALTIES. DO NOT APPLY HEAT NEAR EXPANSION VALVE BULB. JOINTS SHALL BE COOL BEFORE REASSEMBLING VALVE.
B. TUBING SHALL BE CUT SQUARE, REAMED, AND BURRS REMOVED.
C. BOTH INSIDE OF FITTINGS AND OUTSIDE OF TUBING SHALL BE WELL CLEANED WITH AN ABRASIVE CLOTH OR STAINLESS-STEEL WIRE BRUSH BEFORE BRAZING. STEEL WOOL IS NOT PERMITTED.
D. DURING BRAZING AN INERT GAS (SUCH AS DRY NITROGEN) SHALL BE CONTINUOUSLY PASSED THROUGH THE SYSTEM AT A FLOW RATE SUFFICIENT TO MAINTAIN AN OXYGEN-FREE ENVIRONMENT TO PREVENT THE FORMATION OF COPPER OXIDE SCALE.
E. CARE SHALL BE TAKEN TO PREVENT ANNEALING OF FITTINGS AND TUBING WHEN MAKING CONNECTIONS.
F. COPPER TO COPPER JOINTS SHALL BE BRAZED WITH A COPPER-PHOSPHOROUS BRAZING ALLOY CONTAINING A MINIMUM OF 15% SILVER AND CONFORMING TO AWS A5.8, BCUP5.
G. COPPER TO BRASS JOINTS SHALL BE BRAZED WITH A SILVER BRAZING ALLOY CONTAINING A MINIMUM OF 50% SILVER AND CONFORMS TO AWS 5.8, BAG-7.
F. COPPER TO STAINLESS STEEL JOINTS SHALL BE BRAZED WITH A SILVER BRAZING ALLOY CONTAINING A MINIMUM OF 50% SILVER AND CONFORMS TO AWS 5.8, BAG-7. ALL BRAZED JOINTS SHALL BE CLEANED TO REMOVE RESIDUAL FLUX.
3.07 LEAK TESTING OF REFRIGERATION PIPING SYSTEMS
A. THE HIGHSIDE AND LOWSIDE OF EACH COMPLETED REFRIGERATION PIPING SYSTEM SHALL BE PRESSURE TESTED AT A PRESSURE NOT LESS THAN THE LOWER OF THE SYSTEM DESIGN PRESSURE OR THE SETTING OF THE PRESSURE RELIEF DEVICE PROTECTING THE HIGHSIDE OR LOWSIDE OF THE SYSTEM
EXCEPTION: FIELD INSTALLED SYSTEMS WITH COPPER TUBING NOT EXCEEDING 0.625" O.D., SHALL BE TESTED BY MEANS OF REFRIGERANT CHARGED INTO THE SYSTEM AT THE SATURATED VAPOR PRESSURE OF THE REFRIGERANT AT 68OF MINIMUM.
THE TESTING MEDIA SHALL BE DRY NITROGEN. THE CONTRACTOR SHALL PERFORM THE LEAK TEST BEFORE INSULATING, EVACUATING AND CHARGING.
ISOLATE THE COMPRESSOR FROM THE LEAK TEST BY FIRMLY CLOSING THE SUCTION AND DISCHARGE VALVES.
WHERE PRESSURE RELIEF VALVES ARE INSTALLED, POSITION THE THREE-WAY DUAL SHUT-OFF VALVES SO THAT FULL TEST PRESSURE IS APPLIED TO BOTH RELIEF VALVES.
DO NOT ATTEMPT TO REPAIR ANY LEAK WHILE THE SYSTEM IS PRESSURIZED. IF ANY LEAKS ARE FOUND, RELIEVE THE TEST PRESSURE AND PERFORM REPAIRS.
RECHARGE THE SYSTEM, AS PREVIOUSLY DESCRIBED, AND ALLOW IT TO REMAIN UNDER PRESSURE FOR 24 HOURS. MAXIMUM PRESSURE DROP SHALL BE 5 PSIG IN 24 HOURS, AT CONSTANT AMBIENT TEMPERATURE. FOR EVERY 10 F DROP IN AMBIENT TEMPERATURE, FROM START OF TEST, THE MAXIMUM PRESSURE DROP MAY INCREASE BY 3 PSIG.
3.08 EVACUATION AND CHARGING
A. AFTER COMPLETION OF THE PIPING PRESSURE TEST, THE REFRIGERATION SYSTEM SHALL BE EVACUATED AND DEHYDRATED WITH A VACUUM PUMP. THE FOLLOWING PROCEDURE SHALL BE USED UNLESS OTHERWISE NOTED:

CONNECT TO THE SYSTEM, AN ACCURATE HIGH VACUUM GAUGE WITH A RANGE OF 0 - 1000 MICRONS HG. CONNECT THE VACUUM PUMP TO BOTH THE HIGH AND LOW SIDE OF THE SYSTEM. LEAVE THE COMPRESSOR SUCTION AND DISCHARGE SERVICE VALVES CLOSED. START THE VACUUM PUMP. KEEP AMBIENT AIR TEMPERATURES ABOVE 60OF DURING THE EVACUATION PROCESS. OPERATE THE VACUUM PUMP UNTIL THE SYSTEM IS EVACUATED TO 500 MICRONS HG. BREAK THE SYSTEM VACUUM WITH DRY NITROGEN. OPEN THE COMPRESSOR SUCTION AND DISCHARGE SERVICE VALVES AND RE-EVACUATE THE SYSTEM TO 500 MICRONS HG.
AFTER THE SYSTEM HAS BEEN TWICE EVACUATED TO 500 MICRONS HG, CLOSE THE VACUUM PUMP SUCTION VALVE AND STOP THE PUMP. ALLOW THE SYSTEM TO STAND UNDER A VACUUM A MINIMUM OF 12 HOURS. IF NO RISE IN PRESSURE HAS TAKEN PLACE AFTER 12 HOURS, THE SYSTEM MAY BE CHARGED.

THE CONTRACTOR SHALL FURNISH AND INSTALL FULL CHARGE OF REFRIGERANT REQUIRED TO DEVELOP THE SYSTEM TO ITS FULL RATING. ALSO, DURING THE WARRANTY PERIOD, THE CONTRACTOR SHALL REPLACE, WITHOUT COST, ALL REFRIGERANT LOST DUE TO EQUIPMENT FAILURE OR SYSTEM LEAKS. REFRIGERANT TYPE AND CHARGE SHALL BE AS LISTED ON EQUIPMENT NAMEPLATE.

THE CONTRACTOR SHALL PROVIDE THE INITIAL CHARGE OF LUBRICATING OIL FOR ALL REFRIGERATION EQUIPMENT AND RELATED APPARATUS.
AFTER THE REFRIGERATION SYSTEM HAS BEEN CHARGED AND HAS BEEN IN CONTINUOUS OPERATION FOR ONE WEEK, THE CONTRACTOR SHALL REPLACE THE INITIAL TYPE "HH" FILTER DRIER WITH THE FINAL FILTER DRYER.

SECTION 15400
REFRIGERATION EQUIPMENT: EVAPORATOR AND CONDENSING UNIT COIL PROTECTION

REFRIGERANT COILS ON EV-1, EV-2, CU-1 AND CU-2 TO BE COATED WITH A CORROSION RESISTANT COATING DESIGNED TO PROVIDE PROTECTION AND EXTEND THE USEFUL LIFE OF THE COILS WHEN EXPOSED TO SALT WATER AND / OR SALT WATER LADEN AIR.

SECTION 15501
STARTUP, TESTING AND BALANCING

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE QUALIFIED PERSONNEL, EQUIPMENT, APPARATUS AND SERVICES FOR EQUIPMENT START UP AND ANY REQUIRED TESTING AND BALANCING; MECHANICAL CONTRACT SHALL ALSO BE RESPONSIBLE FOR START-UP AND COMMISSIONING OF ALL SYSTEM CONTROLS. NOTE THAT SOME START-UP PROCEDURES MAY REQUIRE THE COOPERATION OF THE BALANCING CONTRACTOR, THE EQUIPMENT MANUFACTURER'S REPRESENTATIVE THE MECHANICAL CONTRACTOR, THE CONTROLS CONTRACTOR AND THE OWNER.

SECTION 15985
CONTROL PLANS AND CONTROLS SEQUENCE OF OPERATION

CONTROLS TO BE STAND ALONE WITH A WATER RESISTANT TEMPERATURE SENSOR LOCATED IN THE BAIT BUILDING AND A CONTROLLING T-STAT LOCATED IN THE MECHANICAL ROOM. MECHANICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL ALL NECESSARY CONTROLS COMPONENTS AND CONTROL WIRING AS PART OF THE REFRIGERATION EQUIPMENT PACKAGE

Attention:
0 1"
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Drawn:	JLD
Checked:	BJB
Approved:	BJB
P.E. No:	ME-5737
GEI Project	2104738

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TOWN OF KENNEBUNKPORT

KENNEBUNKPORT, MAINE

THE TOWN OF KENNEBUNKPORT, ME INCORPORATED 1653

CAPE PORPOISE PIER REHABILITATION

KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
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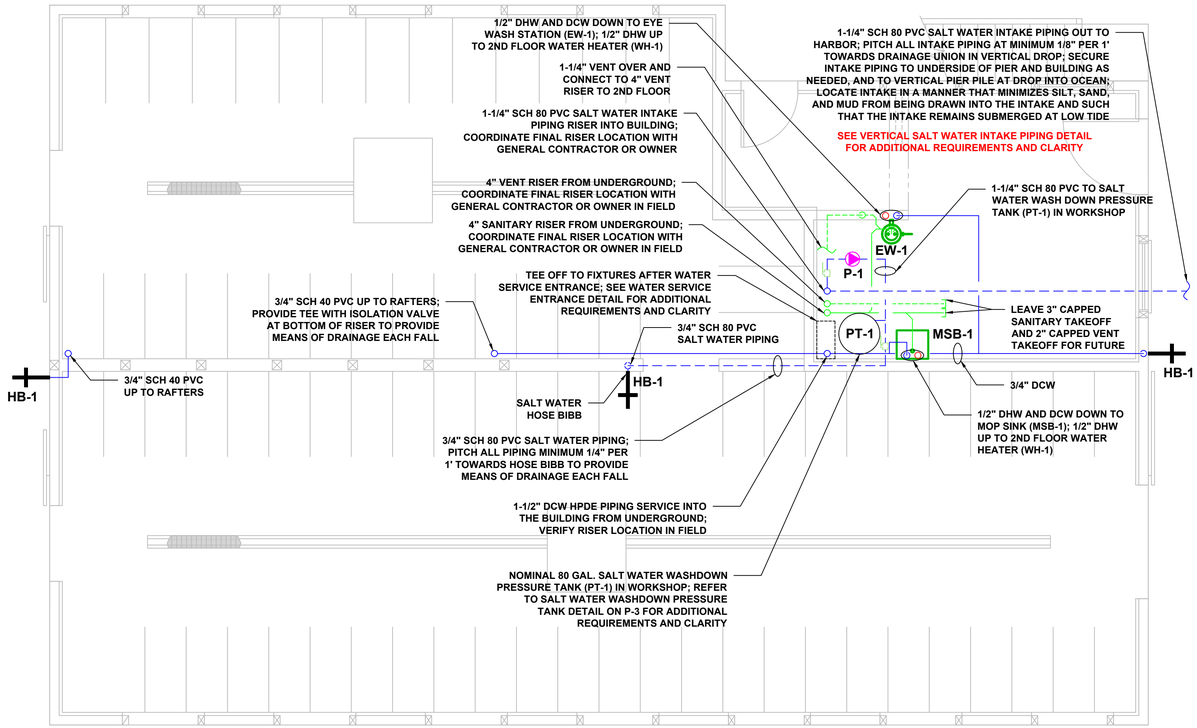
SHEET NAME
SPECIFICATIONS

SHEET NO.
M-4



GENERAL NOTES:

1. ALL FRESH DCW TO BE SCH 40 PVC UNLESS OTHERWISE NOTED; ALL SALT WATER PIPING TO BE SCH 80 PVC UNLESS OTHERWISE NOTED
2. ALL FRESH AND SALT COLD WATER INSIDE BAIT GALLERY SPACES TO BE PITCHED A MINIMUM 1/4" PER 1' TOWARDS NEAREST RISER/DROP DRAIN TEE OR NEAREST HOSE BIBB TO PROVIDE MEANS OF DRAINAGE EACH FALL
3. ALL DHW PIPING TO BE INSULATED WITH A MINIMUM OF 1/2" ARMAFLEX WRAP
4. ALL SANITARY PIPING SHOWN ON 2ND FLOOR PLAN TO BE RUN IN 1ST FLOOR CEILING
5. ALL SANITARY AND VENT PIPING TO BE SCH 40 PVC UNLESS OTHERWISE NOTED
6. ALL SANITARY PIPING TO BE PITCHED A MINIMUM OF 1/4" PER 1'
7. SANITARY AND VENT PIPING SIZES TO INDIVIDUAL FIXTURES TO BE AS SCHEDULED ON P-3
8. SUCCESSFUL PLUMBING CONTRACTOR TO FURNISH WORKABLE SYSTEM THAT MEETS ALL APPLICABLE CODES; CHANGE ORDERS ON THIS DESIGN WILL NOT BE ACCEPTED, UNLESS THERE IS A CHANGE OF SCOPE REQUIRING ADDITIONAL FEATURES

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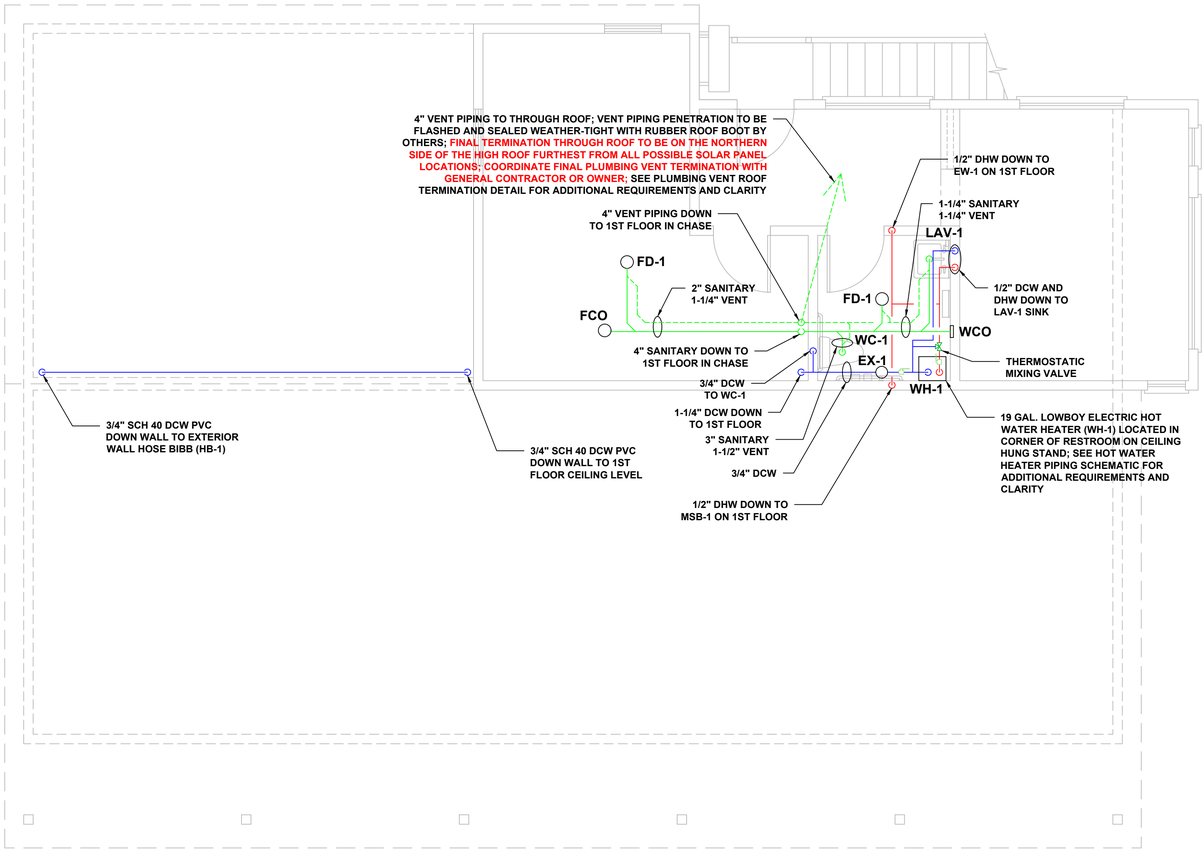
SHEET NAME

1ST FLOOR PLUMBING PLAN

SHEET NO.

P-1



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3. ALL DHW PIPING TO BE INSULATED WITH A MINIMUM OF 1/2" ARMAFLEX WRAP
4. ALL SANITARY PIPING SHOWN ON 2ND FLOOR PLAN TO BE RUN IN 1ST FLOOR CEILING
5. ALL SANITARY AND VENT PIPING TO BE SCH 40 PVC UNLESS OTHERWISE NOTED
6. ALL SANITARY PIPING 2-1/2" TO BE PITCHED A MINIMUM OF 1/4" PER 1'
7. SANITARY AND VENT PIPING SIZES TO INDIVIDUAL FIXTURES TO BE AS SCHEDULED ON P-3
8. SUCCESSFUL PLUMBING CONTRACTOR TO FURNISH WORKABLE SYSTEM THAT MEETS ALL APPLICABLE CODES; CHANGE ORDERS ON THIS DESIGN WILL NOT BE ACCEPTED, UNLESS THERE IS A CHANGE OF SCOPE REQUIRING ADDITIONAL FEATURES

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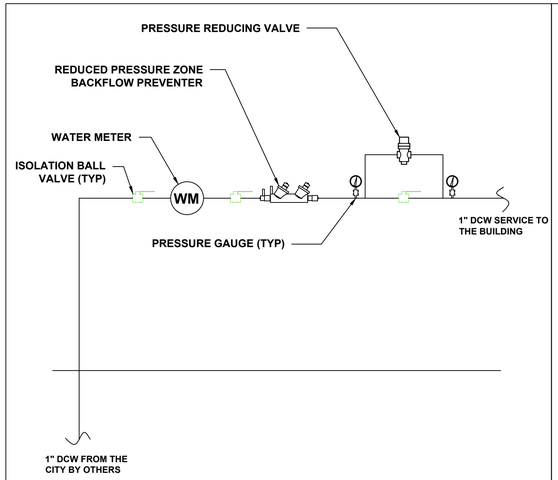
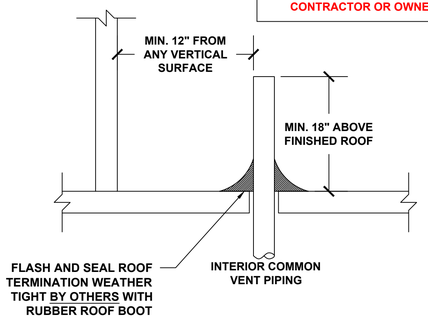
SHEET NAME
2ND FLOOR PLUMBING PLAN

SHEET NO.
P-2

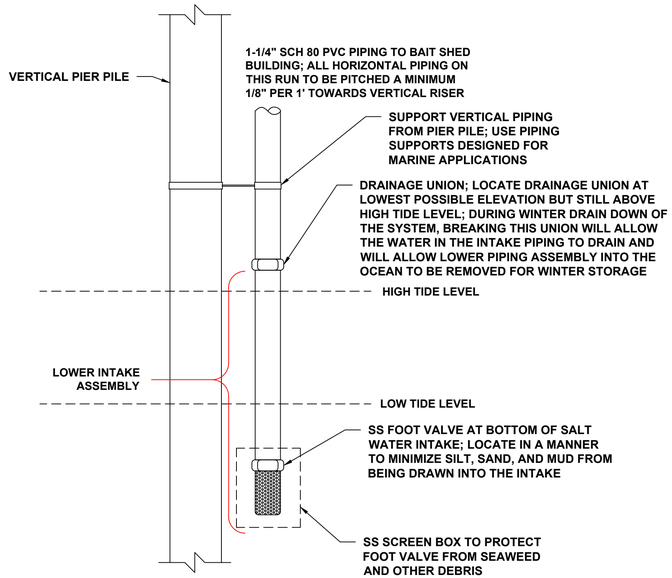


WATER SERVICE ENTRANCE DETAIL
SCALE: NTS

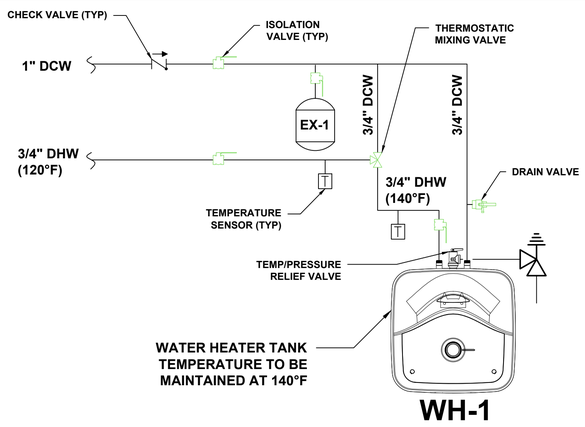
GENERAL NOTES:
1. ALL PLUMBING VENT PIPING TO BE SCH 40 PVC
2. FINAL VENT LOCATION TO TERMINATE ON NORTHERN SIDE OF THE HIGH ROOF FURTHEST FROM POSSIBLE SOLAR PANEL LOCATIONS; VERIFY FINAL VENT TERMINATION WITH GENERAL CONTRACTOR OR OWNER



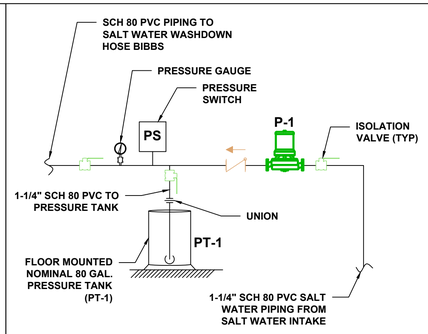
PLUMBING VENT ROOF TERMINATION DETAIL
SCALE: NTS



VERTICAL SALT WATER INTAKE PIPING DETAIL
SCALE: NTS



WATER HEATER PIPING DETAIL
SCALE: NTS



SALT WATER WASH DOWN PRESSURE TANK DETAIL
SCALE: NTS

SALT WATER PUMP AND TANK SCHEDULE

TAG	Description	Manufacturer	Model	GPM	Head (FT.)	Electrical	Power Input	Notes
P-1	Salt Water Wash Down Circ Pump	Century	ST1152					Pump specified by owner, provided by contractor
PT-1	Salt Water Wash Down Pressure Tank	Wellmate Pentair	UT-80QC	-	-	-	-	Nominal 80 gal. Corrosion Resistant Tank

Plumbing Fixture Schedule

Tag	Description	Maufacturer / Model	Waste	Vent	Hot Water	Cold Water	GPM	Electrical	Notes
WH-1	19 Gal. Hot Water Heater	Bradford White / LE120L3-3	-	-	3/4"	3/4"	-	208V-1Ph-60Hz	4500W Heating Element
LAV-1	ADA 3-Hole 4" Spread Lavatory	American Standard / 0355.012.020	1-1/4"	1-1/4"	1/2"	1/2"	1.2	-	2-Handle ADA Faucet with Pop-up (American Standard / 7075.200.002)
WC-1	Elongated ADA Tank Toilet	American Standard / 3483001.020	3"	1-1/2"	-	3/4"	1.6	-	
HB-1	Wash Down Hose Bibb		-	-	-	3/4"	3	-	
FD-1	2 Inch Floor Drain with Trap Primer	Watts / FD-102P-A5	2"	1-1/4"	-	-	-	-	
EW-1	ADA Eyewash with P-Trap	Speakman / SE-580-PT	1-1/4"	1-1/4"	1/2"	1/2"	3.6	-	
MSB-1	24" x 24" x 12" Mop Basin	Fiat / MSB2424	3"	2"	1/2"	1/2"			Wall-Mounted, Hose Thread Outlet Faucet (Chicago / 815-VBXKCP)

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SHEET NAME
PLUMBING DETAILS AND SCHEDULES

SHEET NO.
P-3

GENERAL NOTES

1. ALL RECEPTACLES SHALL BE INSTALLED 18" AFF TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE.
2. ALL WIRING SHALL BE COPPER UNLESS DESIGNATED AS "AL". UNLESS OTHERWISE NOTED ALL WIRING SHALL BE 2 #12 AWG AND 1 #12 EQUIPMENT GROUNDING CONDUCTOR. HOMERUNS FED FROM A 20A/1P, 120V CIRCUIT IN EXCESS OF 70' SHALL BE #10 AWG. ALL CONDUCTOR INSULATION FOR BUILDING WIRE SHALL BE THWN/THHN UNLESS NOTED OTHERWISE.
3. CONNECT BATTERY BACKED EMERGENCY AND EXIT LIGHTING TO NEAREST LIGHTING CIRCUIT AHEAD OF ANY SWITCHING. CONNECT REMOTE HEADS WITH #10 AWG COPPER CONDUCTORS. AC EXIT FIXTURES SHALL BE CONNECTED TO NEAREST EMERGENCY CIRCUIT OR AS INDICATED.
4. TEST ALL EMERGENCY LIGHTING UNITS FOR PROPER OPERATION OF LAMPS AND BATTERIES.
5. FUSES AND OVERLOAD UNITS FOR MOTORS SHALL BE SIZED BASED ON ACTUAL MOTOR NAMEPLATE DATA AND IN ACCORDANCE WITH NEC. CIRCUIT BREAKERS FOR MOTORS ARE SUPPLIED AT MAX VALUE PER NEC (2.5 x FLA). SIZE IN THE FIELD IN ACCORDANCE WITH MFGR RECOMMENDATION.
6. ALL WORK SHALL COMPLY WITH NFPA70, NFPA72, NFPA101 & ALL FEDERAL, STATE & LOCAL REGULATIONS.
7. ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH UL APPROVED FIRE SEALANT MATERIAL TO MAINTAIN FIRE RATING FOR THE SEPARATION.
8. ALL ENCLOSURES, CONDUIT BODIES AND THEIR COVERS CONTAINING FIRE ALARM SYSTEM CONDUCTORS SHALL BE PAINTED RED.
9. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITH ALL FEEDERS AND BRANCH CIRCUITS. SIZE IN ACCORDANCE WITH NFPA 70 ARTICLE 250.
10. COORDINATE INSTALLATION OF VOICE/DATA OUTLETS WITH OWNER, MIS OR COMMUNICATIONS CONTRACTOR.
11. LOCATE DISCONNECTS AT EQUIPMENT AS REQUIRED BY MANUFACTURER.
12. PROVIDE RISER OR PLENUM RATED CABLES ABOVE SUSPENDED CEILINGS.
13. THE CONTRACTOR SHALL SET ALL ELECTRONIC BREAKERS TO SPECIFIED TRIP SETTINGS BEFORE ENERGIZING EQUIPMENT.
14. PROVIDE EXPANSION FITTINGS FOR ALL UNDERGROUND RACEWAYS ENTERING ENCLOSURES ATTACHED TO FIXED STRUCTURES.
15. OUTDOOR RECEPTACLE COVERS SHALL COMPLY WITH NFPA 70 – ARTICLE 406.9.
16. PROVIDE LABEL ON SERVICE EQUIPMENT INDICATING AVAILABLE SHORT CIRCUIT CURRENT OBTAIN VALUES FROM ENGINEER.
17. PROVIDE ARC FAULT LABLES PER NFPA 70–ARTICLE 110.24
18. COORDINATE THE EXACT LOCATION AND MOUNTING OF ALL MECHANICAL EQUIPMENT. MECHANICAL EQUIPMENT ELECTRICAL REQUIREMENTS AND CIRCUITING ARE SHOWN ON MECHANICAL SCHEDULE SHEET E300.
19. PROVIDE A 120VAC, 20A WEATHERPROOF RECEPTACLE WITHIN 25FT OF EXTERIOR MECHANICAL UNITS. COORDINATE LOCATION AND MOUNTING OF RECEPTACLES ON ROOF WITH MECHANICAL CONTRACTOR. CIRCUIT TO SPARE CIRCUIT BREAKER IN NEAREST EXISTING PANELBOARD.
20. PROVIDE CAT 6 CABLING FROM EACH TECHNOLOGY DEVICE TO TELECOM SERVER RACK.
21. ALL LED LIGHTING SHALL BE DIMMABLE.

POWER SYMBOLS

- ELECTRICAL PANELBOARD, SEE DRAWING FOR DETAILS
- CONTROL PANEL, SEE DRAWING FOR DETAILS
- (J) JUNCTION BOX
  AS = AUTOMATIC SENSOR
- DUPLEX, TAMPER RESISTANT RECEPTACLE, 20A, 125V, SPEC GRADE, GROUNDING TYPE, FLUSH MOUNTED, PROVIDED W/MATCHING FACEPLATE
  AC = ABOVE COUNTER
  W = WASHER
- (G) DUPLEX, GFCI TAMPER RESISTANT RECEPTACLE 20A, 125V, SPEC GRADE, GROUNDING TYPE, FLUSH MOUNTED, PROVIDED W/MATCHING FACEPLATE
  42" = MOUNTING HEIGHT
  WP = WEATHERPROOF
- 30/3 WP — DISCONNECT SWITCH, SIZE AND NUMBER OF POLES AS INDICATED ON DRAWING. PROVIDED BY EC UNLESS NOTED OTHERWISE. PROVIDE FUSES WHERE RECOMMENDED BY MANUFACTURER.
  = NO OF POLES
  = AMPERE RATING
  = WEATHERPROOF
- S_{EM} EMERGENCY CUT–OFF SWITCH
- ▽ TELECOM DUAL JACK W/(2) 4PR CAT 6 CABLE RUN BACK TO NETWORK EQUIPMENT. MOUNT 18"AFF UNLESS OTHERWISE NOTED.

LIGHTING SYMBOLS

- E SELF CONTAINED EMERGENCY LIGHT W/2 HEADS DUAL–LITE (LED) MODEL LZ65I–03L, 65 WATTS FOR 90 MINUTES, COLOR BY ARCHITECT OR EQUAL
- X1 EXIT LIGHT FIXTURE, UNSWITCHED, DUAL–LITE LX–U–R–W–E OR APPROVED EQUAL

WIRING SYMBOLS

- RACEWAY & WIRING OR MC CABLE RUN CONCEALED IN WALLS/CEILINGS
- RACEWAY & WIRING RUN EXPOSED
- RACEWAY & WIRING RUN CONCEALED UNDER FLOOR OR BURIED 30" BELOW FINISH GRADE
- HP–XX HOME RUN TO PANEL, WITH PANEL AND CIRCUIT NUMBER

PANEL MDP SECTION 1 120/240 1PH 3W 400 AMP MCB 42K AIC NEMA TYPE 1 (SURFACE) W/ FEED THRU LUGS

CKT #	LOAD DESCRIPTION	AT	P	CA	DF	DA	VA	CKT #	LOAD DESCRIPTION	AT	P	CA	DF	DA	VA
1	PANEL FP	100	2		1.00	0	0	2	CU-2	50	2	30	1.00	30	3600
3						0	0	4						0	0
5	CU-1	50	2	30	1.00	30	3600	6	HP-1	30	2	25	1.00	25	3000
7						0	0	8						0	0
9	CU-3	50	2	30	1.00	30	3600	10	EV-2	20	2	4	1.00	4	480
11						0	0	12						0	0
13	EV-1A	20	2	4	1.00	4	480	14	EV-3	20	2	4	1.00	4	480
15						0	0	16						0	0
17	EV-1B	20	2	4	1.00	4	480	18	EV-4	20	2	4	1.00	4	480
19						0	0	20						0	0
21	TAKE OUT HOIST (EXIST)	20	2	4	1.00	4	480	22	NORTH HOIST (EXIST)	20	2	4	1.00	4	480
23						0	0	24						0	0
25	SOUTH HOIST (EXIST)	20	2	4	1.00	4	480	26	SOUTH HOIST (NEW)	20	2	4	1.00	4	480
27						0	0	28						0	0
29	POWER PEDESTAL	20	1	13	1.00	13	1801	30	POWER PEDESTAL	20	1	5	1.00	5	693
31	WORKSHOP/POS RECEPTACLES	20	1	8	1.00	8	1109	32	POWER PEDESTAL	20	1	5	1.00	5	693
33	WATING/BATH RECEPTACLES	20	1	5	1.00	5	693	34	OFFICE RECEPTACLES	20	1	13	1.00	13	1801
35	MECH ROOM RECEPTACLES	20	1	5	1.00	5	693	36	WH-1	30	2	4	1.00	4	480
37	ELECTRIC WALL HEATER (BATHROOM)	20	1	15	1.00	15	2078	38						0	0
39	EF-1	20	1	8	1.00	8	1081	40	ERV-1	30	2	4	1.00	4	480
41	SPARE	20	1		1.00	0	0	42						0	0

PANEL MDP SECTION 2 120/240 1PH 3W 400 AMP MLO 42K AIC NEMA TYPE 1 (SURFACE)

CKT #	LOAD DESCRIPTION	AT	P	CA	DF	DA	VA	CKT #	LOAD DESCRIPTION	AT	P	CA	DF	DA	VA
43	BAIT GALLERY LIGHTING	20	1	5	1.00	5	693	44	WORKSHOP/OFFICE LIGHTING	20	1		1.00	0	0
45	BATHROOM/MECHANICAL RM LIGHTING	20	1	5	1.00	5	693	46	EXTERIOR BUILDING LIGHTING	20	1		1.00	0	0
47	WALKWAY EXTERIOR LIGHTING	20	1	5	1.00	5	693	48	DOCK LIGHTING	20	1		1.00	0	0
49	P-1 SALT WATER PUMP*	25	2	12	1.00	12	1440	50	SPARE	20	1		1.00	0	0
51						0	0	52	SPARE	20	1		1.00	0	0
53	SOLAR PANEL INVERTER*	60	2		1.00	0	0	54	SPARE	20	1		1.00	0	0
55						0	0	56	ERV-1	30	2	4	1.00	4	480
57	SPARE	20	1		1.00	0	0	58						0	0
59	SPARE	20	1		1.00	0	0	60	SPARE	20	1		1.00	0	0
61	SPARE	20	1		1.00	0	0	62	SPARE	20	1		1.00	0	0
63	SPARE	20	1		1.00	0	0	64	SPARE	20	1		1.00	0	0
65	SPARE	20	1		1.00	0	0	66	SPARE	20	1		1.00	0	0
67	SPARE	20	1		1.00	0	0	68	SPARE	20	1		1.00	0	0
69	SPARE	20	1		1.00	0	0	70	SPARE	20	1		1.00	0	0
71	SPARE	20	1		1.00	0	0	72	SPARE	20	1		1.00	0	0
73	SPARE	20	1		1.00	0	0	74	SPARE	20	1		1.00	0	0
75	SPARE	20	1		1.00	0	0	76	SPARE	20	1		1.00	0	0
77	SPARE	20	1		1.00	0	0	78	SPARE	20	1		1.00	0	0
79	SPARE	20	1		1.00	0	0	80	SPARE	20	1		1.00	0	0
81	SPARE	20	1		1.00	0	0	82	SPARE	20	1		1.00	0	0
83	SPARE	20	1		1.00	0	0	84	SPARE	20	1		1.00	0	0

AT - Amp Trip
P - Poles
A - Amps
CA - Connected Amperes
DF - Demand Factor (1 - .1)
DA - Demand Amperes
DW - Demand Watts
MLO - Main Lug Only
MCB - Main Circuit Breaker

Panel Voltage	**240**
Total KVA	**33.72**
Tot Amps	**140.50**
Min. Panel Size (Demand x 1.25) - Amps	**175.63**

*** CONFIRM BREAKER SIZE WITH EQUIPMENT BEFORE ORDERING**

PANEL FP SECTION 1 120/240 1PH 4W 100 AMP MLO 42K AIC NEMA TYPE 1 (SURFACE) W/ FEED THRU LUGS

CKT #	LOAD DESCRIPTION	AT	P	CA	DF	DA	VA	CKT #	LOAD DESCRIPTION	AT	P	CA	DF	DA	VA
1	DIESEL PUMP	20	2	15	0.50	8	900	2	GASOLINE PUMP	20	2	15	0.50	8	900
3						0	0	4						0	0
5	FUEL DISPENSER (EXISTING)	20	1		1.00	0	0	6	FUEL DISPENSER (EXISTING)	20	1		1.00	0	0
7	FUEL DISPENSER (EXISTING)	20	1		1.00	0	0	8	FUEL DISPENSER (EXISTING)	20	1		1.00	0	0
9	FUEL DISPENSER (NEW)	20	1		1.00	0	0	10	FUEL DISPENSER (NEW)	20	1		1.00	0	0
11	FUEL DISPENSER (NEW)	20	1		1.00	0	0	12	FUEL DISPENSER (NEW)	20	1		1.00	0	0
13	POS SYSTEM	20	1		1.00	0	0	14	SPARE	20	1		1.00	0	0
15	SPARE	20	1		1.00	0	0	16	SPARE	20	1		1.00	0	0
17	SPARE	20	1		1.00	0	0	18	SPARE	20	1		1.00	0	0
19	SPARE	20	1		1.00	0	0	20	SPARE	20	1		1.00	0	0
21	SPARE	20	1		1.00	0	0	22	SPARE	20	1		1.00	0	0
23	SPARE	20	1		1.00	0	0	24	SPARE	20	1		1.00	0	0
25	SPARE	20	1		1.00	0	0	26	SPARE	20	1		1.00	0	0
27	SPARE	20	1		1.00	0	0	28	SPARE	20	1		1.00	0	0
29	SPARE	20	1		1.00	0	0	30	SPARE	20	1		1.00	0	0
31	SPARE	20	1		1.00	0	0	32	SPARE	20	1		1.00	0	0
33	SPARE	20	1		1.00	0	0	34	SPARE	20	1		1.00	0	0
35	SPARE	20	1		1.00	0	0	36	SPARE	20	1		1.00	0	0
37	SPARE	20	1		1.00	0	0	38	SPARE	20	1		1.00	0	0
39	SPARE	20	1		1.00	0	0	40	SPARE	20	1		1.00	0	0
41	SPARE	20	1		1.00	0	0	42	SPARE	20	1		1.00	0	0

AT - Amp Trip
P - Poles
A - Amps
CA - Connected Amperes
DF - Demand Factor (1 - .1)
DA - Demand Amperes
DW - Demand Watts
MLO - Main Lug Only
MCB - Main Circuit Breaker

Panel Voltage	**240**
Total KVA	**1.80**
Tot Amps	**7.50**
Min. Panel Size (Demand x 1.25) - Amps	**9.38**

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE STEVEN J. MONAGON #8468 LICENSED PROFESSIONAL ENGINEER

Designed:	MJM
Drawn:	MJM
Checked:	WSJRB
Approved:	SAJ
P.E. No:	ME-8468
GEI Project	2104738

BENNETT ENGINEERING
MECHANICAL • ELECTRICAL
(207) 865-9475

TOWN OF KENNEBUNKPORT
KENNEBUNKPORT, MAINE

CAPE PORPOISE PIER REHABILITATION
KENNEBUNKPORT, MAINE

NO	DATE	ISSUE/REVISION	APP
1	1/15/2024	BID SET	MJM

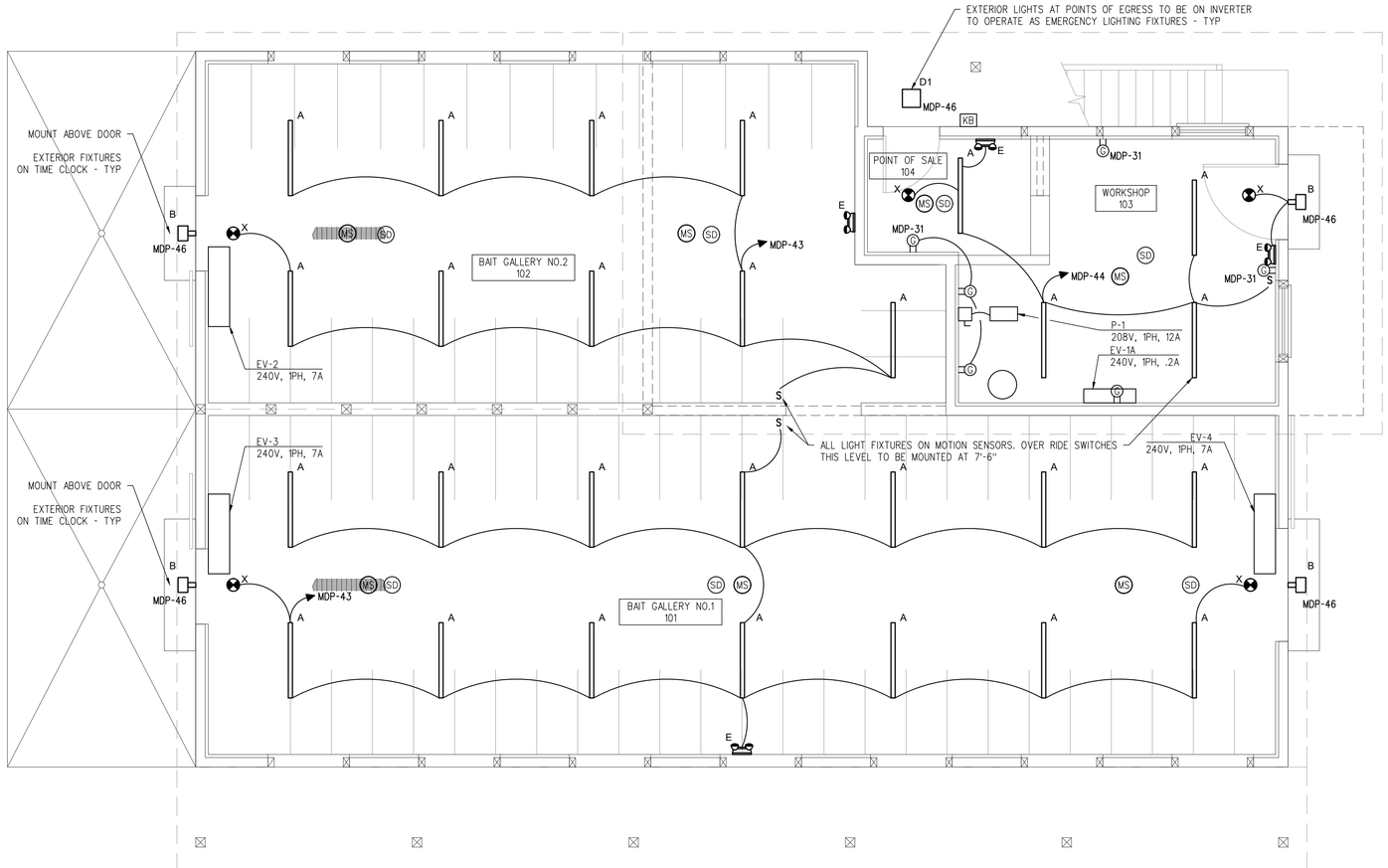
SHEET NAME
GENERAL NOTES LEGEND AND PANEL SCHEDULES

SHEET NO.
E-1

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER AND MODEL NUMBER	LAMP INFO	REMARKS
A	COLUMBIA LXEM4-40ML-RFA-EU OR EQUAL	47W LED 4900 LUMENS 4000K	4' LINEAR ENCLOSED AND GASKETED FIBERGLASS FIXTURE W/ F1 WEATHERABILITY RATING. LINEAL RIBBED FROSTED ACRYLIC LENS. FINISH: WHITE
B	RAB LIGHTING ALED26Y OR EQUAL	26W LED 3743 LUMENS 3000K	SURFACE MOUNT EXTERIOR WALL PACK FIXTURE, EXTRUDED ALUMINUM HOUSING. RATED FOR WET LOCATION. FINISH: BRONZE
D	PROGRESS LIGHTING P810024-030-30 OR EQUAL	12W 800 LUMENS 3000K	SURFACE MOUNT 5" EDGELIT SURFACE MOUNT LED DOWNLIGHT. POLYCARBONATE HOUSING AND DIFFUSER. INTEGRATED DIMMING DRIVER. RATED FOR WET LOCATIONS. FINISH: WHITE
D1	RAB LIGHTING VANLED10YF OR EQUAL	10W 2016 LUMENS 3000K	SURFACE MOUNT CANOPY FIXTURE, VANDAL RESISTANT POLYCARBONATE TEXTURED OPAQUE LENS. INTEGRAL DIMMING DRIVER. RATED FOR WET LOCATION. FINISH: BRONZE

NOTES:
1. FIXTURES SHALL BE ENERGY STAR RATED OR HAVE HIGH PERFORMANCE DRIVERS AND LAMPS TO MEET STATE EFFICIENCY CRITERIA.
2. ALL FIXTURE SUBSTITUTES TO BE AN APPROVED EQUAL



NOTE:
1. ALL POWERED EQUIPMENT UNLESS DESIGNED TO SUBMERSIBLE SHALL BE INSTALLED ABOVE OR FLOOD-PROOFED TO ELEVATION 22.50.$^{1}/_{64}$ REFER TO SHEET B-6 BUILDING SECTIONS.

2. ANY SPECIFIC BRAND NAME PRODUCTS REFERENCED ON THE PLANS OR SPECIFICATIONS ARE FOR DESIGN PURPOSES ONLY.$^{1}/_{64}$ ALL PRODUCTS ARE ELIGIBLE FOR AN 'OR APPROVED EQUAL SUBSTITUTION'.

1 MAIN LEVEL ELECTRICAL PLAN

E-2

SCALE: 1/4" = 1'-0"

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE STEVEN JAY MCNASON #8468 LICENSED PROFESSIONAL ENGINEER

Designed:	MJM
Drawn:	MJM
Checked:	WSJRB
Approved:	SAJ
P.E. No:	ME-8468
GEI Project	2104738

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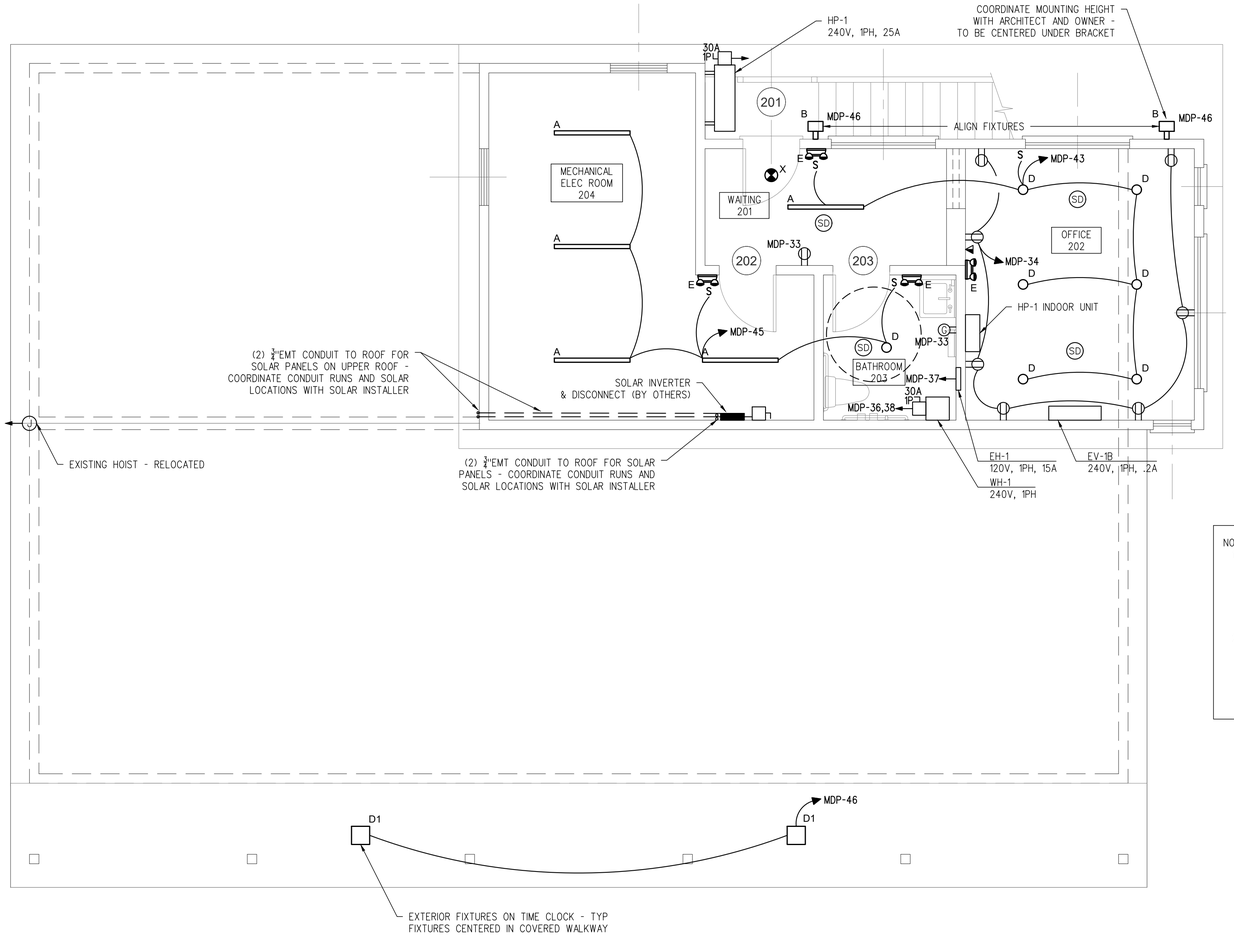
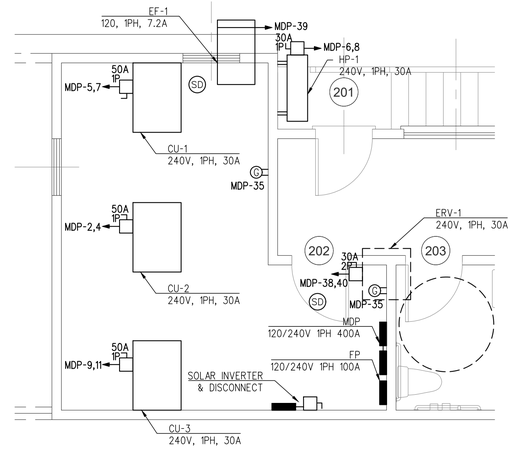
SHEET NAME
MAIN LEVEL ELECTRICAL PLAN

SHEET NO.
E-2



1 E-3 UPPER LEVEL ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"



2 E1.2 MECHANICAL ROOM POWER PLAN

SCALE: 1/4" = 1'-0"

NOTE:
1. ALL POWERED EQUIPMENT UNLESS DESIGNED TO SUBMERSIBLE SHALL BE INSTALLED ABOVE OR FLOOD-PROOFED TO ELEVATION 22.50.1/64 REFER TO SHEET B-6 BUILDING SECTIONS.
2. ANY SPECIFIC BRAND NAME PRODUCTS REFERENCED ON THE PLANS OR SPECIFICATIONS ARE FOR DESIGN PURPOSES ONLY.1/64 ALL PRODUCTS ARE ELIGIBLE FOR AN 'OR APPROVED EQUAL SUBSTITUTION'.

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

STATE OF MAINE
STEVEN A. MONASON
#8468
LICENSED
PROFESSIONAL ENGINEER

Designed:	MJM
Drawn:	MJM
Checked:	WSJRB
Approved:	SAJ
P.E. No:	ME-8468
GEI Project	2104738

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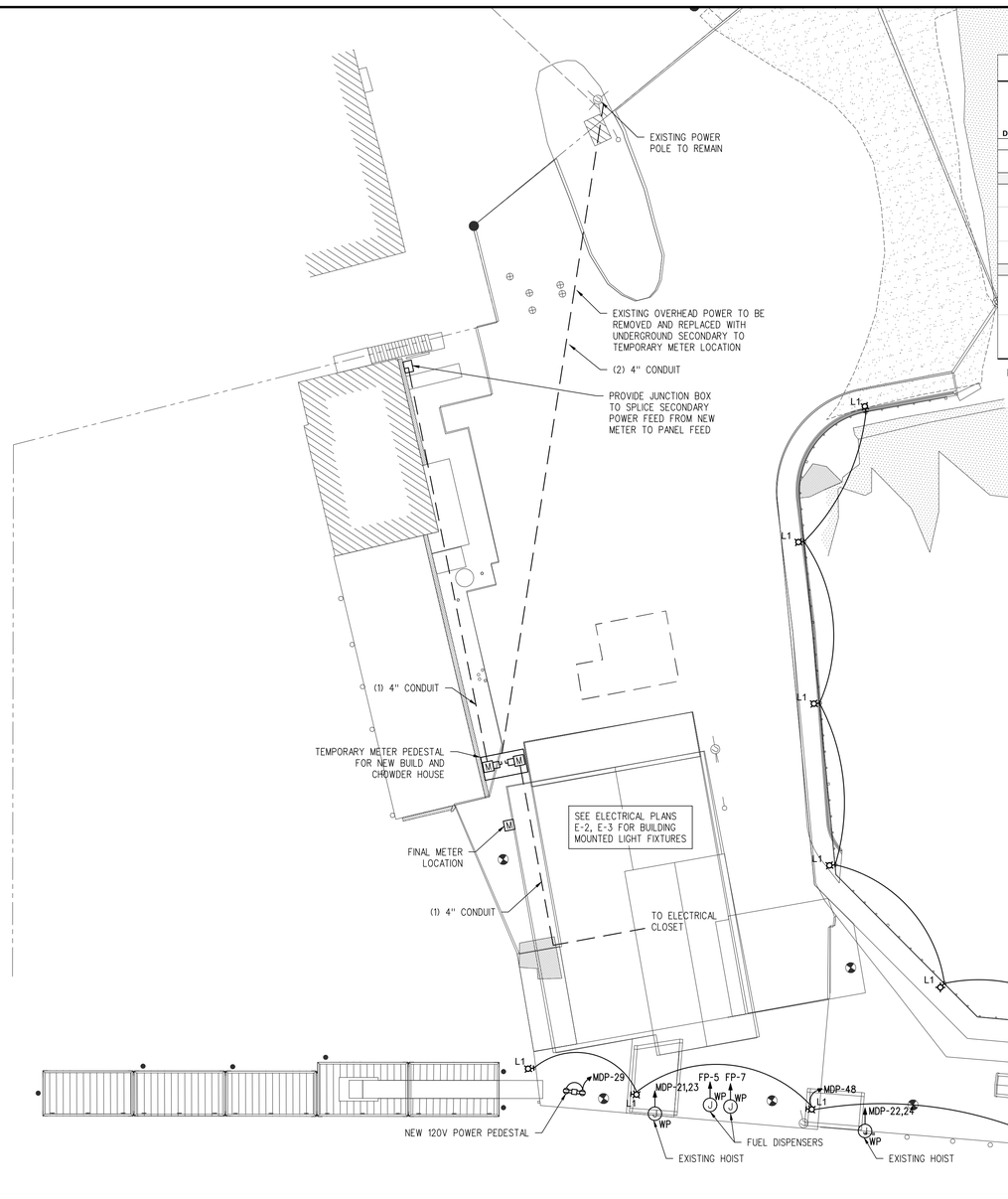
SHEET NAME
UPPER LEVEL ELECTRICAL PLAN

SHEET NO.
E-3

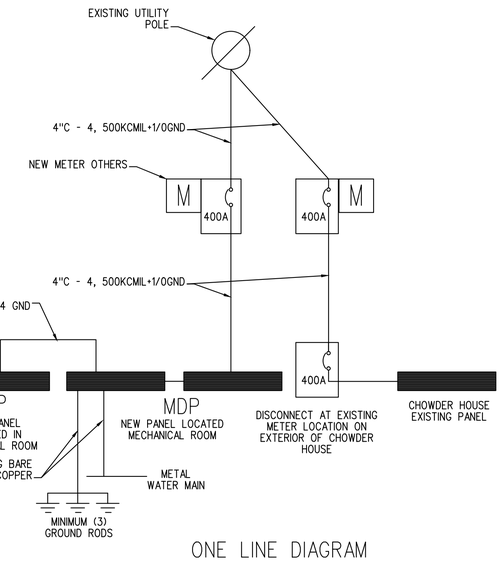
---- N:\4800 to 4899 Jobs\4896 Cape Porpoise Pier Rehab\Drawing\E1.dwg - 8/18/2022



SITE AND BUILDING MOUNTED LIGHT FIXTURE SCHEDULE AND CONTROL GROUPINGS																			
DRAWING TYPE	CONTROL GROUP	FUNCTION	MANUFACTURER	CATALOG NUMBER	QUANT.	MOUNTING	BEAM SPREAD OR LENGTH	WATTS PER FIXTURE	CIRCUIT WATTS	PER FIXTURE TOTAL LUMENS	VOLTAGE	DIMMING PROTOCOL confirm compatibility with dimmer	DIMMING LOW END	EPA	CRI	COLOR TEMP	LABEL	FIXTURE COLOR	ENERGY STAR OR DLC	BUG
L1	(A) WALKWAY GROUP	WALKWAY	RAB LIGHTING	ALED26Y	8	ON 6 X 6 POST	12'-ABOVE DOCK	26	208	3,749	120	0-10 VOLT	10%	0.27	70	3,000	UL WET	BRONZE	DLC P0000175Q	B1 - U0 - G0
L1	(B) WORK GROUP	WHARF WORK	RAB LIGHTING	ALED26Y	2	ON 6 X 6 POST	12'-ABOVE DOCK	26	52	3,749	120	0-10 VOLT	10%	0.27	70	3,000	UL WET	BRONZE	DLC P0000175Q	B1 - U0 - G0
L1	(B) WORK GROUP	CRANE SHEDS	RAB LIGHTING	ALED26Y	2	ON WEST HORIZONTAL TIMBERS	12'-ABOVE DOCK	26	52	3,749	120	0-10 VOLT	10%	0.27	70	3,000	UL WET	BRONZE	DLC P0000175Q	B1 - U0 - G0
L2	(B) WORK GROUP	CRANE	RAB LIGHTING	ALED26Y	2	ON CRANE	15'-ABOVE DOCK	26	52	3,749	120	0-10 VOLT	10%	0.27	70	3,000	UL WET	BRONZE	DLC P0000175Q	B1 - U0 - G0
D1	(C) DUSK TO DAWN GROUP	NORTH WALKWAY	RAB LIGHTING	VANLED10YF	2	SURFACE MOUNT ON CEILING		10	20	2,016	120	0-10 VOLT	10%	0.27	83	3,000	UL WET	BRONZE	DLC S-8SD2L6	B1 - U0 - G0
B	(C) DUSK TO DAWN GROUP	OVER DOORS	RAB LIGHTING	ALED26Y	4	WALL MOUNT ABOVE DOORS		26	104	3,749	120	0-10 VOLT	10%	N/A	70	3,000	UL WET	BRONZE	DLC P0000175Q	N/A

NOTE:

1. ANY SPECIFIC BRAND NAME PRODUCTS REFERENCED ON THE PLANS OR SPECIFICATIONS ARE FOR DESIGN PURPOSES ONLY.1/64 ALL PRODUCTS ARE ELIGIBLE FOR AN 'OR APPROVED EQUAL SUBSTITUTION'.



ONE LINE DIAGRAM

SCALE: NONE

1 ES.0 PRELIMINARY SITE PLAN

SCALE: 1/4" = 1'-0"

Attention:

0 1"

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STATE OF MAINE — STEVEN J. MCMASON #8468 — LICENSED PROFESSIONAL ENGINEER

Designed:	MJM
Drawn:	MJM
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Approved:	SAJ
P.E. No:	ME-8468
GEI Project	2104738

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KENNEBUNKPORT, MAINE

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SHEET NAME: ELECTRICAL SITE PLAN

SHEET NO.: E-4

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