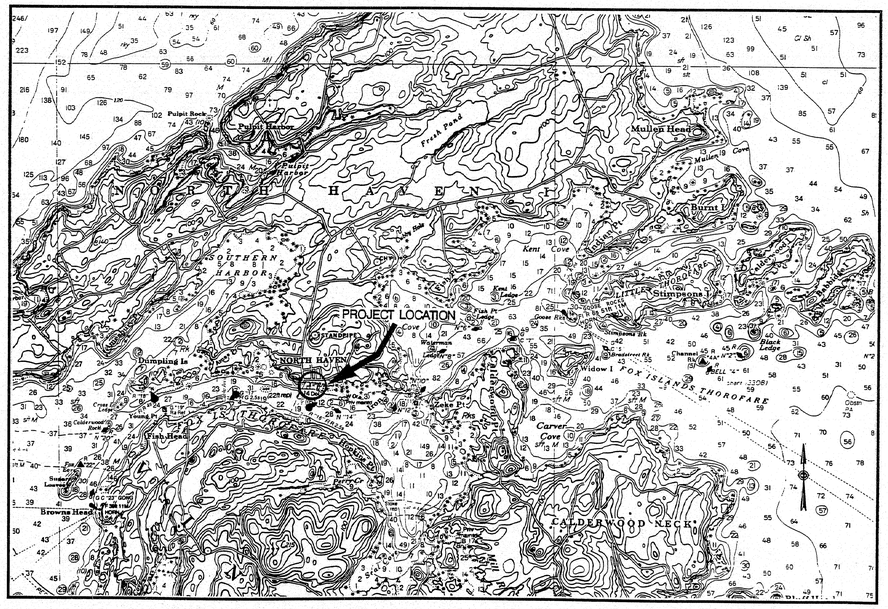
State of Maine
Department of Transportation
NORTH HAVEN FERRY TERMINAL

PROJECT NO. **STP-5644(00)X**



LIST OF DRAWINGS

L1	EXISTING CONDITIONS PLAN
L2	BASE LINE PLAN
L3	LAYOUT AND MATERIALS PLAN
L4	GRADING PLAN
L5	SITE DETAILS
D1	DEMOLITION PLAN
D2	MOORING RELOCATION
S1	STRUCTURAL NOTES
S2	CONSTRUCTION PHASING
S3	BORING LOGS- PART I
S4	BORING LOGS- PART II
S5	WHARF- PILE PLAN
S6	WHARF- FRAMING PLAN
S7	WHARF- DETAILS PART 1
S8	WHARF- DETAILS PART 2
S9	TRANSFER BRIDGE ABUTMENT
S10	PRESTRESSED BEAM DETAILS
S11	SHELTER/MISC. DETAILS
W1	BERTHING FACILITY
W2	DOLPHIN LAYOUT
W3	SIDE/BERTHING DOLPHINS
W4	TURNING DOLPHINS
W5	TOWER DOLPHINS
W6	PILE DETAILS
W7	FENDER PANEL
W8	DOLPHIN DETAILS
E1	ELECTRICAL PLANS
E2	SCHEMATIC DIAGRAMS
E3	WIRING DIAGRAM - 1
E4	WIRING DIAGRAM - 2
E5	ELECTRICAL DETAILS - 1
E6	ELECTRICAL DETAILS - 2
E7	ELECTRICAL SCHEDULES
TB1	TRANSFER BRIDGE- PLAN ELEVATION AND SECTION
TB2	TRANSFER BRIDGE- FRAMING PLAN AND DETAILS
TB3	TRANSFER BRIDGE- BARRIER AND RAILING DETAILS
TB4	TRANSFER BRIDGE- APRON DETAILS - PART 1
TB5	TRANSFER BRIDGE- APRON DETAILS - PART 2
TB6	TRANSFER BRIDGE- HOIST TOWER DETAILS - PART 1
TB7	TRANSFER BRIDGE- HOIST TOWER DETAILS - PART 2
TB8	TRANSFER BRIDGE- HOIST TOWER DETAILS - PART 3
TB9	TRANSFER BRIDGE- HOIST TOWER DETAILS - PART 4
TB10	TRANSFER BRIDGE- HOIST TOWER FOUNDATION DETAILS AND MISCELLANEOUS DETAILS
TB11	TRANSFER BRIDGE- REEVING DIAGRAMS AND HOIST MACHINERY DETAILS

Added S12 & S13 11/17/93 PDP

TAMS Consultants, Inc.
ENGINEERS • ARCHITECTS • PLANNERS
38 Chauncy Street • Boston MA 02111 • (617) 482-4835

COMMONWEALTH OF MASSACHUSETTS THOMAS P. DONALD STRUCTURAL No. 32755 REGISTERED PROFESSIONAL ENGINEER

MAINE TEMP. NO. 11-1993

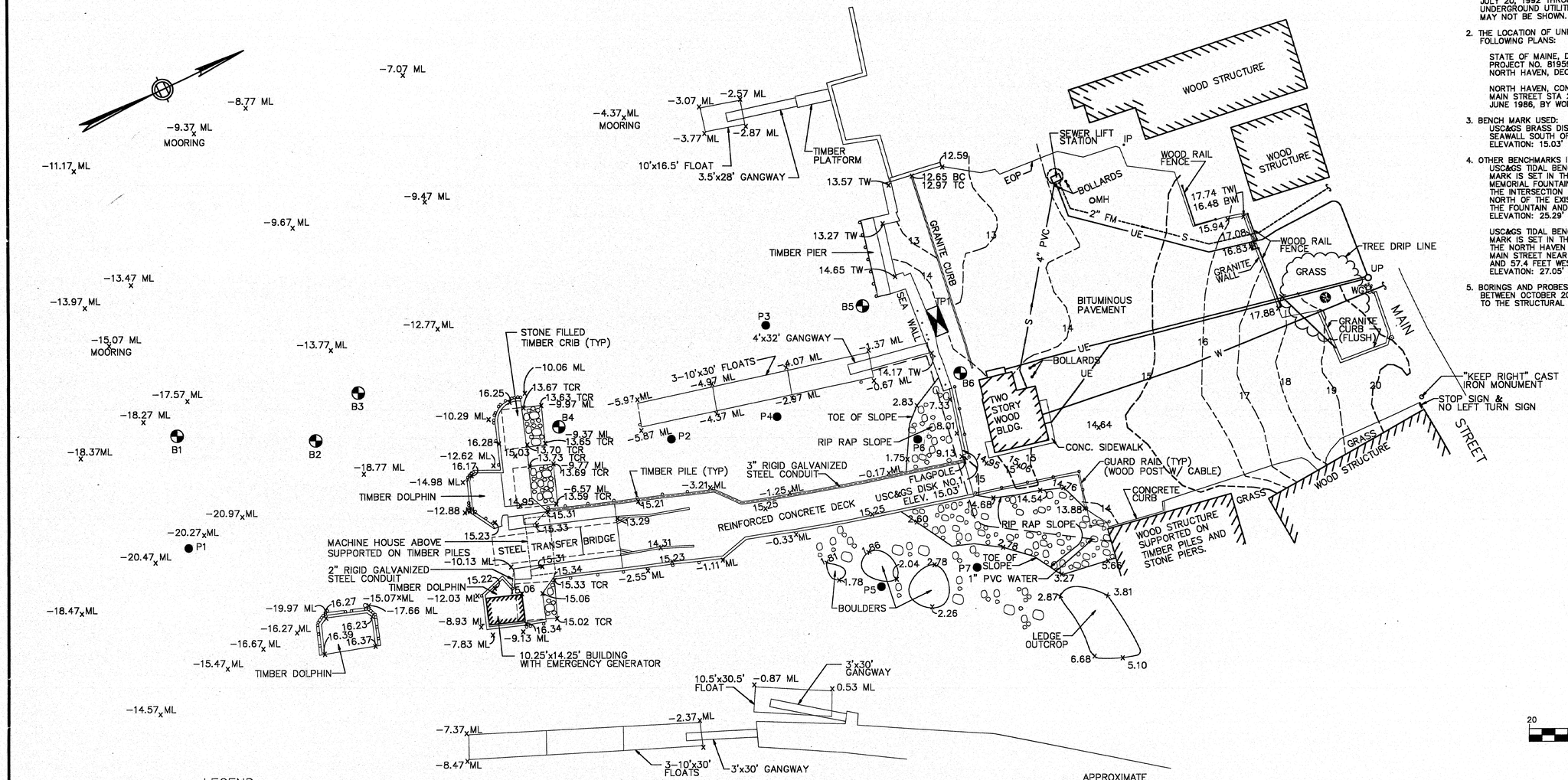
APPROVED:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

COMMISSIONER

DATE: 6/24/93

129-159



GENERAL NOTES:

1. THIS DRAWING IS THE RESULT OF A FIELD SURVEY AND VISUAL INSPECTION OF SURFACE UTILITIES BY TAMS CONSULTANTS INC. JULY 20, 1992 THROUGH JULY 23, 1992. THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN.
2. THE LOCATION OF UNDERGROUND UTILITIES IS BASED ON THE FOLLOWING PLANS:

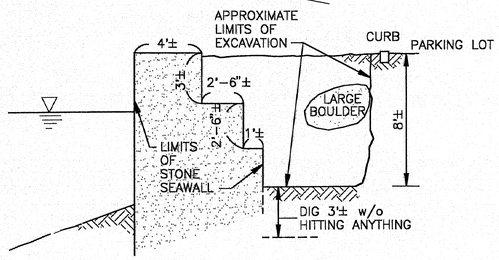
   STATE OF MAINE, DEPARTMENT OF TRANSPORTATION
   PROJECT NO. 81959, ELECTRICAL REHABILITATION OF
   NORTH HAVEN, DECEMBER 1982

   NORTH HAVEN, CONTRACT 1 – POLLUTION ABATEMENT PROGRAM
   MAIN STREET STA 2+16 TO 11+58
   JUNE 1986, BY WODDARD & CURRAN, SHEETS 2 & 11
3. BENCH MARK USED:
   USC&GS BRASS DISK STAMPED NO. 1 1970 LOCATED ON THE SEAWALL SOUTH OF THE EXISTING TERMINAL BUILDING.
   ELEVATION: 15.03' (MLLW)
4. OTHER BENCHMARKS IN AREA:
   USC&GS TIDAL BENCH MARK STAMPED NO.4 1931: THE BENCH MARK IS SET IN THE GRANITE WALL BEHIND THE NORTH HAVEN MEMORIAL FOUNTAIN ON THE NORTH SIDE OF MAIN STREET NEAR THE INTERSECTION WITH THE WHARF ROAD, ABOUT 400 FEET NORTH OF THE EXISTING FERRY TERMINAL, 8 FEET NORTH OF THE FOUNTAIN AND 3.5 FEET ABOVE GRADE.
   ELEVATION: 25.29' (MLLW)

   USC&GS TIDAL BENCH MARK STAMPED NO.2 '970: THE BENCH MARK IS SET IN THE WEST END OF THE GRANITE WALL BEHIND THE NORTH HAVEN MEMORIAL FOUNTAIN ON THE NORTH SIDE OF MAIN STREET NEAR THE INTERSECTION WITH THE WHARF ROAD, AND 57.4 FEET WEST OF THE FOUNTAIN.
   ELEVATION: 27.05' (MLLW)
5. BORINGS AND PROBES PERFORMED BY MAINE TEST BORINGS, INC. BETWEEN OCTOBER 20, 1992 AND NOVEMBER 2, 1992. REFER TO THE STRUCTURAL DRAWINGS FOR LOGS.

LEGEND

ML	MUD LINE
EOP	EDGE OF PAVEMENT
TCR	TOP OF CRIB
TC	TOP OF CURB
BC	BOTTOM OF CURB
TW	TOP OF WALL
BW	BOTTOM OF WALL
12.56	SPOT GRADE
11	CONTOUR
—S—	SEWER LINE
—W—	WATER LINE
—UE—	UNDERGROUND ELECTRIC
----FM----	FORCE MAIN
UP	UTILITY POLE
⊕	BORING
●	PROBE
⋈	TEST PIT



TP 1
1/4"=1'-0"

GRAPHIC SCALE
20 0 10 20 40 60
(IN FEET)
1 inch = 20 ft.

129-160

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN
FERRY TERMINAL

TITLE: EXISTING CONDITIONS PLAN

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

DES: SMG	CHK: KS	DR: KS
SCALE: 1"=20'		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICES
P POTTLE

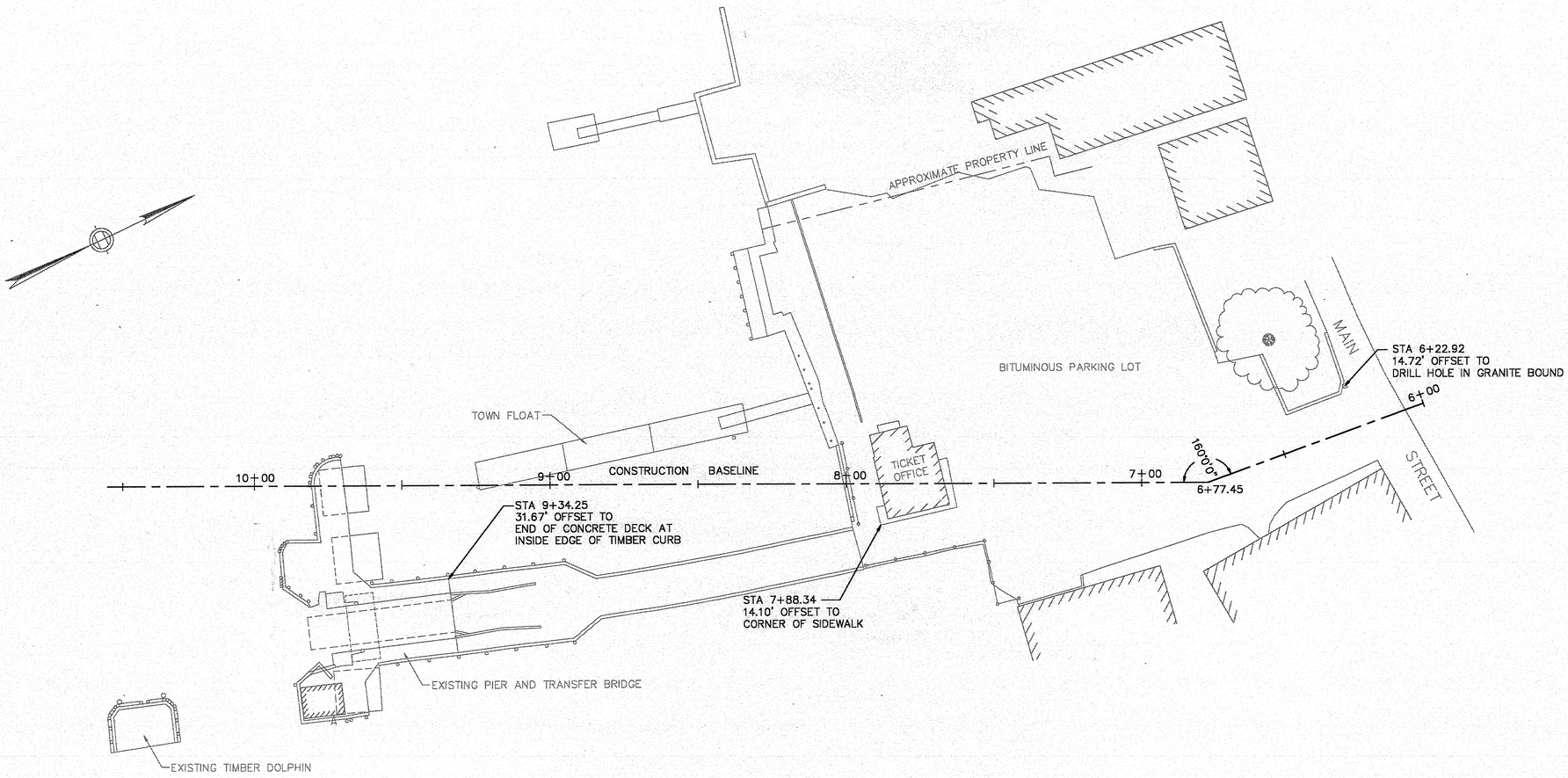
SHEET L1

COMMONWEALTH OF MASSACHUSETTS
THOMAS P. DONALD
STRUCTURAL
No. 32755
REGISTERED
PROFESSIONAL ENGINEER

MAINE TEMP NO. 11-1993

GENERAL NOTES:

1. VERIFY LAYOUT OF BASELINNE TO EXISTING CONDITIONS. REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. PROVIDE A STAKED LAYOUT ON SITE FOR ENGINEER'S REVIEW PRIOR TO CONSTRUCTION.



GRAPHIC SCALE

20 0 10 20 40 60

(IN FEET)
1 inch = 20 ft.

129-161

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APP'D. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

TITLE: BASELINE PLAN

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

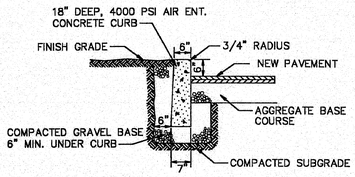
DES: KS	CHK: TPD	DR: KS
SCALE: 1"=20'		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P Pottle

SHEET L2

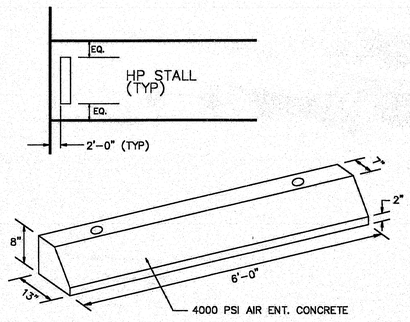
COMMONWEALTH OF MASSACHUSETTS
THOMAS P. DONALD
STRUCTURAL
No. 32755
REGISTERED
PROFESSIONAL ENGINEER

MAINE TEMP NO. 11-1993



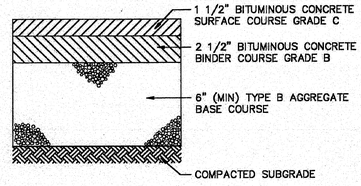
1 PRECAST CONCRETE CURB
NTS

NOTE: FOR INSTALLATION OF EACH BUMPER LOG, DRIVE 2– 5/8" DIA. x 15" LONG STEEL RODS THROUGH BUMPER LOGS AND INTO PAVEMENT UNTIL FLUSH WITH TOP OF BUMPER LOG.



TO BE PLACED IN HANDICAP STALLS ONLY

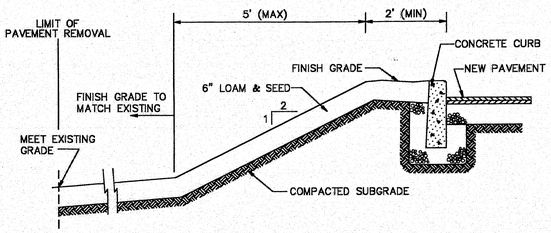
2 PRECAST CONCRETE BUMPER LOG
NTS



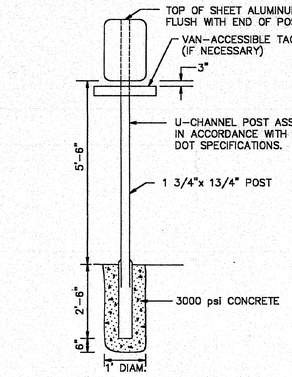
3 BITUMINOUS PAVEMENT
NTS

GENERAL NOTES:

1. INFORMATION SHOWN ON THIS DRAWING ESTABLISHES MINIMUM REQUIREMENTS FOR CONSTRUCTION. REFER TO SPECIFICATIONS FOR ADDITIONAL CRITERIA REGARDING PRODUCTS AND EXECUTION.

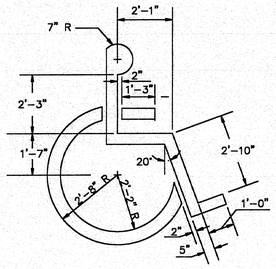


A/L4 SECTION
NTS

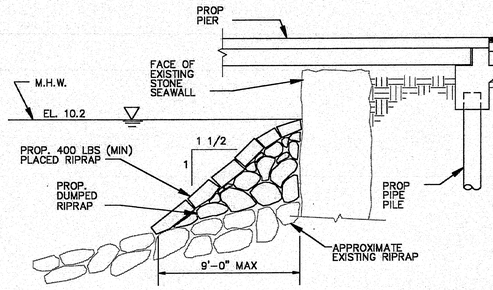


5 SIGN POST DETAIL
NTS

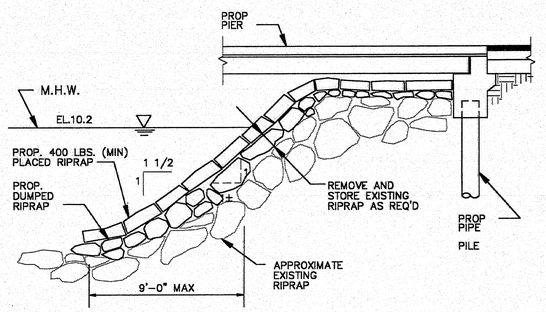
NOTES: 1. HANDICAP SYMBOL PAINT SHALL CONFORM TO STRIPING PAINT AS SPECIFIED.
2. SYMBOL SHALL BE CENTERED IN STALL



4 HANDICAP PARKING SPACE–PAINTING DETAIL
NTS



B/L4 SECTION
1/4"=1'–0"

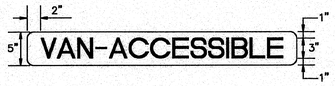


C/L4 SECTION
1/4"=1'–0"

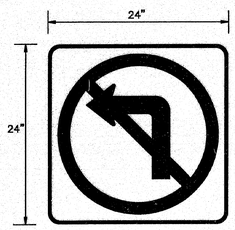


NOTE: ARTWORK– WHITE ON BLUE FIELD

6 SIGN DETAIL FOR HP PARKING
NTS

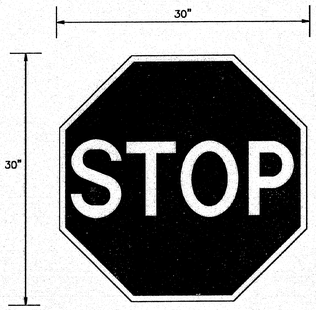


7 VAN–ACCESSIBLE TAG
NTS



NOTE: SIGN SHALL CONFORM TO MUTCD SIGN R3–2

8 NO LEFT TURN SIGN
NTS



NOTE: SIGN SHALL CONFORM TO MUTCD SIGN R1–1

9 NO LEFT TURN SIGN
NTS

COMMONWEALTH OF MASSACHUSETTS
THOMAS P. DONALD STRUCTURAL No. 32755 REGISTERED PROFESSIONAL ENGINEER

MAINE TEMP. NO. 11-1993

129-K62

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

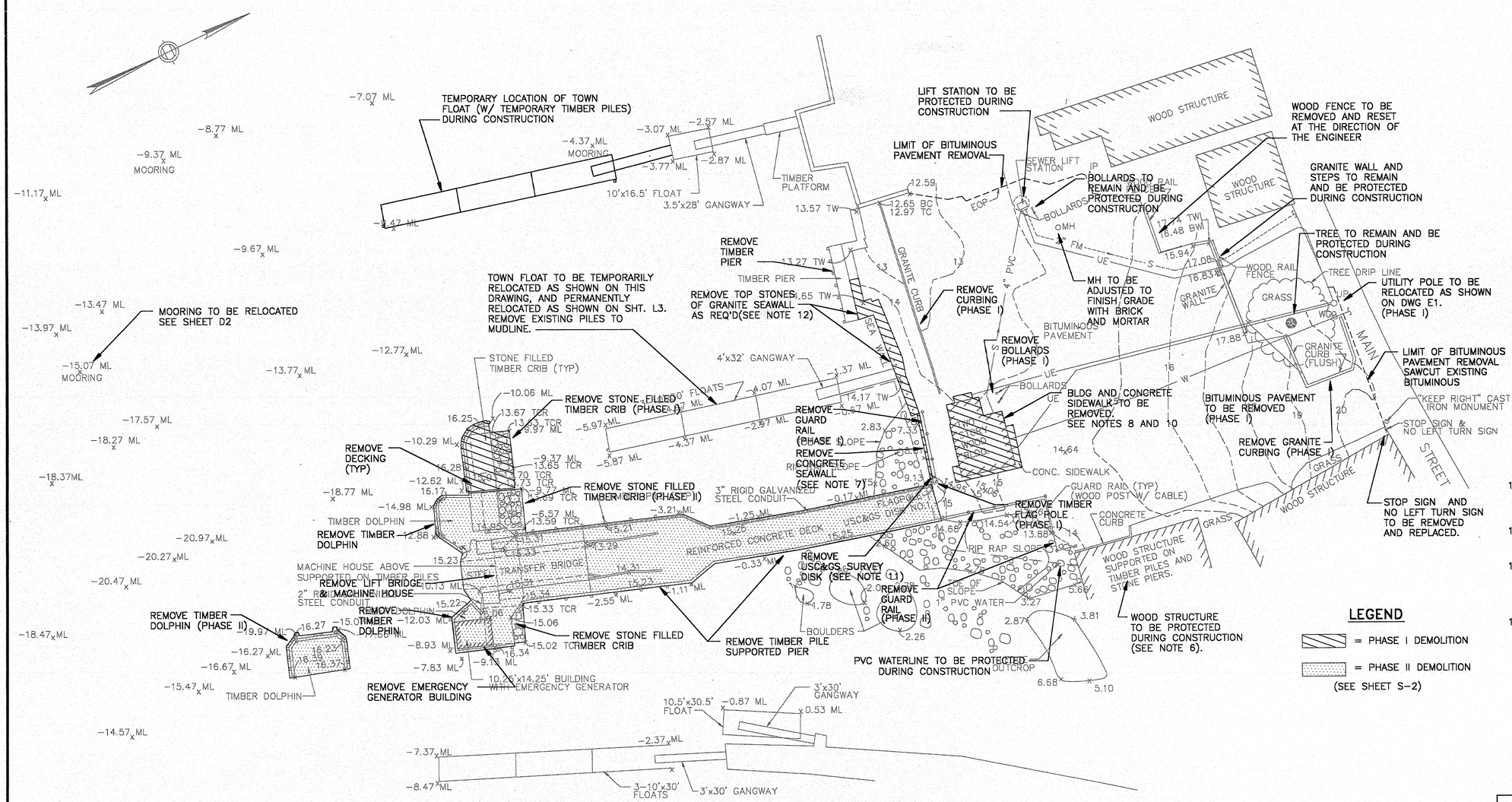
TITLE: SITE DETAILS

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

DES: KS	CHK: TPD	DR: KS
SCALE: AS NOTED		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICE: P POTTLE

SHEET L5



NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND CONFIRMING EXISTING CONDITIONS. ANY DISCREPANCIES FROM THAT SHOWN SHALL BE IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
2. DISPOSE OF ALL DEMOLISHED MATERIAL, RUBBISH AND DEBRIS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS HAVING JURISDICTION.
3. MAINTAIN CONTINUOUS ACCESS THROUGH THE SITE DURING CONSTRUCTION.
4. ADJACENT PROPERTIES SHALL BE PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
5. DRAWINGS OF EXISTING FERRY PIER, INCLUDING STEEL TRANSFER BRIDGE, EMERGENCY GENERATOR, MACHINE HOUSE, SUPPORT AND STONE FILLED TIMBER CRIBS ARE AVAILABLE AT THE MAINE DEPARTMENT OF TRANSPORTATION, OFFICE, AUGUSTA, ME.
6. PROTECT EXISTING WOOD STRUCTURE BY PROVIDING TEMPORARY SUPPORT AS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE EXISTING STRUCTURAL INTEGRITY OF THE BUILDING DURING CONSTRUCTION.
7. AT LOCATION OF SEAWALL TO BE REMOVED, PLACE RIP-RAP AS SHOWN ON SHEET L5.
8. WATER AND SEWER LINES TO BE CUT AND CAPPED. WATER LINE TO BE SHUT OFF AT STREET AND DRAINED PRIOR TO BEING CAPPED.
9. PHASE II DEMOLITION SHALL NOT COMMENCE UNTIL THE NEW TRANSFER BRIDGE, APPROACH ROADWAY, AND DOLPHINS (PHASE I) ARE COMPLETED.
10. CONTRACTOR TO PROVIDE TEMPORARY TICKET BUILDING AND CREW QUARTERS BEFORE REMOVING THE EXISTING STRUCTURE.
11. CONTRACTOR TO REMOVE USC&GS SURVEY DISK AND TURN OVER TO THE RESIDENT ENGINEER.
12. REMOVED STONES SHALL BECOME THE PROPERTY OF THE STATE OF MAINE, AND SHALL BE DELIVERED TO AN ISLAND SITE TO BE DETERMINED BY THE RESIDENT ENGINEER.
13. REFER TO SHEET S2 AND SPECIFICATIONS FOR ADDITION INFORMATION.

LEGEND

= PHASE I DEMOLITION

= PHASE II DEMOLITION

(SEE SHEET S-2)

GRAPHIC SCALE

20 0 10 20 40 60

(IN FEET)
1 inch = 20 ft.

129-163

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

TITLE: DEMOLITION PLAN

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

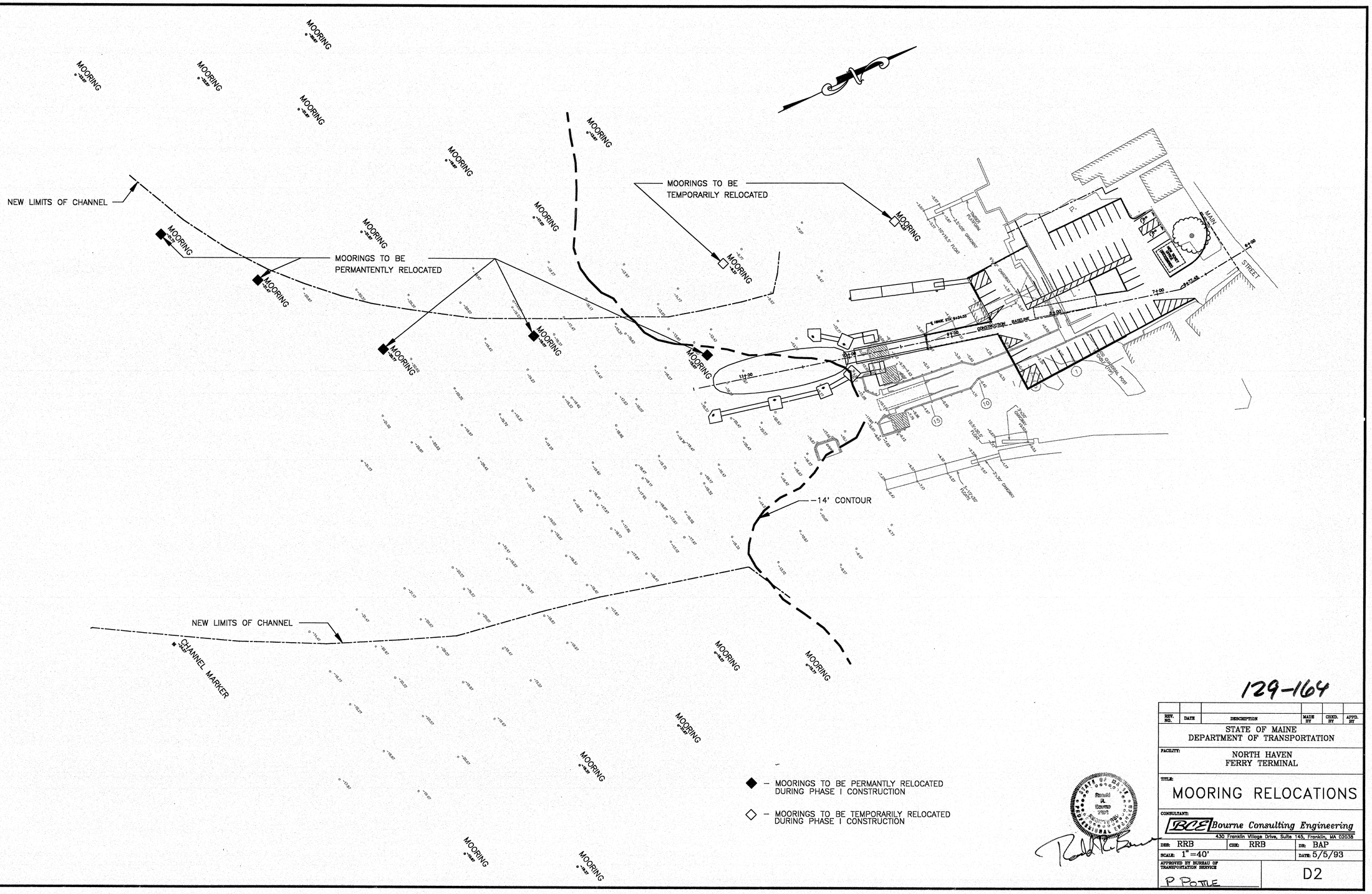
DES: RAL	CHK: TPD	DR: RAL
SCALE: 1"=20'		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P POTTLE

SHEET D1

COMMONWEALTH OF MASSACHUSETTS
THOMAS P. DONALD
STRUCTURAL
No. 32755
REGISTERED PROFESSIONAL ENGINEER

MAINE TEMP. NO. 11-1993



129-164

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY:
NORTH HAVEN
FERRY TERMINAL

TITLE:
MOORING RELOCATIONS

CONSULTANT:
BCE Bourne Consulting Engineering
430 Franklin Village Drive, Suite 145, Franklin, MA 02038

DES: RRB	CHK: RRB	DR: BAP
SCALE: 1"=40'		DATE: 5/5/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICES
P POTTLE

D2

A. GENERAL

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER DRAWINGS. CONSULT THESE DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
2. SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL TAKE ALL NECESSARY FIELD MEASUREMENTS. ANY CONFLICT WITH THESE DRAWINGS SHALL BE REPORTED TO THE ENGINEER.
4. ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.
5. ALL WORK SHALL BE PERFORMED AS SPECIFIED UNDER THE MAINE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS – HIGHWAYS AND BRIDGES", 1990, UNLESS OTHERWISE NOTED.
6. THE LATEST EDITION OF THE FOLLOWING LISTED CODES, AND ALL CODES REFERRED TO IN THE SPECIFICATIONS, SHALL BE FOLLOWED:

   AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, FOR HS25–44 LOADING.

   BUILDING OFFICIALS AND CODE ADMINISTRATORS INTERNATIONAL (BOCA).

B. STEEL PILES

1. STEEL PIPE PILES SHALL CONFORM TO ASTM A252, GRADE 3 AND SHALL BE SEAMLESS OR ELECTRIC RESISTANCE WELDED, WITH NO VISIBLE SEAMS, WITH OUTSIDE DIAMETERS AS NOTED AND WITH 0.500 INCH WALL THICKNESS. NO SPLICING OF PILES WILL BE PERMITTED.
2. PIPE TIPS SHALL CONFORM TO THE STRENGTH REQUIREMENTS OF ASTM A148, GRADE 90–60.
3. ALL STEEL PIPE PILES SHALL BE DRIVEN TO REFUSAL ON ROCK. REFUSAL SHALL BE DEFINED AS LESS THAN 0.50 INCH OF PENETRATION FOR 10 OR MORE BLOWS AT THE PILE HAMMERS RATED ENERGY. ALL PILES SHALL BE DRIVEN OPEN ENDED WITH A PILE DRIVING SHOE.
4. ALL STEEL PIPE PILES SHALL BE COATED FULL LENGTH WITH A FUSION BONDED EPOXY POWDER COATING SYSTEM. THE FINISHED COATING SHALL BE 10 MILS (NOMINAL) IN THICKNESS.
5. ALL STEEL PIPE PILES FOR THE TURNING, SIDE, BERTHING AND TOWER DOLPHINS SHALL HAVE ROCK ANCHORS. ANCHOR DESIGN, TESTING AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE POST–TENSION INSTITUTE "POST–TENSIONING MANUAL", 4TH EDITION.
6. PILE DRIVING HAMMER ENERGY REQUIREMENTS SHALL BE AS FOLLOWS:

12"ø AND 14"ø PILES:	MAX	24,000 FT–LBS
	MIN	13,000 FT–LBS
18"ø PILES:	MAX	30,000 FT–LBS
	MIN	18,000 FT–LBS

C. PILE DRIVING TEMPLATE

1. ALL PILE SHALL BE INSTALLED UTILIZING AN APPROVED PILE DRIVING TEMPLATE.
2. CONTRACTOR MAY INCORPORATE A PRECAST CONCRETE DRIVING TEMPLATE INTO THE DOLPHIN CONSTRUCTION PROVIDED THE FOLLOWING IS PERFORMED:
   - A) THE DRIVING TEMPLATE MATERIALS AND CONSTRUCTION MEETS THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS.
   - B) A CONCRETE KEY IS PROVIDED AROUND THE PERIMETER OF THE TEMPLATE.
   - C) THE PLAN DIMENSIONS OF THE TEMPLATE MATCH THE DOLPHIN TO BE CONSTRUCTED.
   - D) ADEQUATE STEEL IS PROVIDED BETWEEN THE TEMPLATE AND THE DOLPHIN TO SECURE THE TWO STRUCTURES TOGETHER.
   - E) THE BOTTOM STEEL ASSOCIATED WITH THE CONSTRUCTION OF THE DOLPHIN IS RAISED AS REQUIRED TO MAINTAIN A 3 INCH CLEARANCE BETWEEN THE STEEL MAT AND THE TEMPLATE.
   - F) ADEQUATE EDGE DISTANCE IS MAINTAINED FOR ALL FENDER SYSTEM ATTACHMENTS AND ANCHORS FOR FASTENERS.

D. ROCK ANCHORS

1. ROCK ANCHOR DESIGN, TESTING AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE POST–TENSIONING INSTITUTE "POST–TENSIONING MANUAL", 4TH EDITION.
2. ROCK ANCHOR TENDONS SHALL BE SOLID THREADED BAR MEETING ASTM A722, TYPE II, GRADE 150 KSI.
3. PLASTIC SHEATHING AND SLEEVES SHALL BE POLYVINYL CHLORIDE. CORRUGATED SHEATHING SHALL HAVE A MINIMUM TENSILE AND COMPRESSIVE STRENGTH OF 7000 PSI. SLEEVES SHALL BE SCHEDULE 40 PVC PLASTIC PIPE CONFORMING TO ASTM D1785.
4. GROUT FOR ROCK ANCHOR INSTALLATION SHALL HAVE A NON–SHRINK ADDITIVE, MAXIMUM WATER–CEMENT RATIO OF 0.45 BY WEIGHT AND HAVE A MINIMUM UNCONFINED COMPRESSIVE STRENGTH OF 4000 PSI AT TIME OF TESTING.
5. NO TORCH CUTTING OF ROCK ANCHOR THREAD BAR IS PERMITTED. ALL ANCHOR ROD SHALL BE SAW CUT IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
6. CONTRACTOR MAY BE REQUIRED TO GROUT AND REDRILL AREAS OF POOR QUALITY ROCK TO STABILIZE HOLE FOR ANCHOR INSTALLATION.
7. ALL ROCK ANCHORS ARE TO BE PROOF OR PERFORMANCE TESTED AS DIRECTED BY THE ENGINEER TO THE LIMITS INDICATED ON SHEETS W3, W4 AND W5.

E. CONCRETE

1. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE HAVING AN ULTIMATE COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, AND 3/4" AGGREGATE UNLESS NOTED OTHERWISE. THE MAXIMUM WATER CEMENT RATIO SHALL BE 0.38. THE CONTRACTOR SHALL SUBMIT DESIGN MIXES FOR ALL CONCRETE.
2. REINFORCING BARS SHALL BE DEFORMED AND EPOXY COATED, AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A615, GRADE 60.
3. DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH "CRSI" MANUAL OF STANDARD PRACTICE, LATEST EDITION.
4. SPLICES IN REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 36 BAR DIAMETERS UNLESS NOTED OTHERWISE.
5. ALL ANCHOR BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A307.
6. COMPLETE SHOP DRAWINGS AND SCHEDULES OF ALL REINFORCING STEEL SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF THAT PORTION OF THE WORK. ALL ACCESSORIES MUST BE SHOWN ON THE SHOP DRAWINGS.
7. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE MINIMUM CONCRETE COVER PROVIDED FOR REINFORCEMENT SHALL BE 3".
8. ALL TEMPORARY FORMS SHALL REMAIN IN PLACE UNTIL CONCRETE HAS ATTAINED 75% OF ITS 28–DAY STRENGTH.
9. CONSTRUCTION JOINTS SHALL BE AS SHOWN ON THESE DRAWINGS AND SHALL NOT BE ALTERED WITHOUT PRIOR APPROVAL OF THE ENGINEER. HORIZONTAL CONSTRUCTION JOINTS WILL NOT BE ALLOWED BETWEEN LOW TIDE AND HIGH TIDE ELEVATIONS UNLESS APPROVED BY THE ENGINEER.

F. PRESTRESSED CONCRETE

1. PRECAST PRESTRESSED CONCRETE WORK SHALL CONFORM TO THE AASHTO, LATEST EDITION.
2. PRECAST PRESTRESSED CONCRETE BEAMS SHALL HAVE A MINIMUM ULTIMATE COMPRESSED STRENGTH OF 6,000 PSI AT 28 DAYS. THE CONCRETE SHALL ATTAIN A STRENGTH OF 4,000 PSI BEFORE TRANSFER. ALL PRESTRESSING STEEL SHALL BE 1/2"ø UNCOATED SEVEN WIRE STRAND, GRADE 270. BEARING PADS SHALL BE NEOPRENE, DUROMETER 50.
3. PRECAST PRESTRESSED CONCRETE MEMBERS SHALL BE HANDLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. THE BEAMS SHALL BE MAINTAINED IN AN UPRIGHT POSITION.
4. TOP OF PRECAST PRESTRESSED BEAMS SHALL BE FINISHED ROUGH FOR BONDING OF CONCRETE TOPPING, WHICH IS USED FOR COMPOSITE DESIGN WITH PRECAST PRESTRESSED BEAMS.

G. TIMBER

1. BEARING PILES SHALL BE SOUTHERN YELLOW PINE OR DOUGLAS FIR, AND SHALL CONFORM TO ASTM D25.
2. BEARING PILES SHALL BE PRESSURE TREATED WITH CHROMATED COPPER ARSENATE (CCA) IN ACCORDANCE WITH AWPA STANDARDS, TO A RETENTION OF 2.5 LBS PER CUBIC FOOT.
3. PILE DRIVING HAMMER ENERGY REQUIREMENTS SHALL BE AS FOLLOWS:

   MAX 15,000 FT–LBS
   MIN 6,000 FT–LBS
4. FENDER PILES, WALES AND CHOCKS SHALL BE WHITE OAK, CONFORMING TO ASTM A2555, AND SHALL BE UNTREATED AND PEELED.
5. ALL ROUGH FRAMING FOR JOISTS, GIRDERS AND RAFTERS SHALL BE SOUTHERN YELLOW PINE OR BETTER:

   Fb (SINGLE USE) = 1150 PSI
   Fb (REPETITIVE USE) = 1300 PSI
   E = 1,700,000 PSI
6. ALL HEAVY TIMBER FOR PILE CAPS SHALL BE SOUTHERN YELLOW PINE OR BETTER:

   Fb (SINGLE USE) = 1500 PSI
   Fb (REPETITIVE USE) = 1700 PSI
   E = 1,600,000 PSI
7. ALL ROUGH FRAMING LUMBER SHALL BE EITHER K–DRY OR S–DRY, WITH A MOISTURE CONTENT OF NOT MORE THAN 19%.
8. ALL ROUGH FRAMING LUMBER SHALL BE PRESSURE TREATED WITH CHROMATED COPPER ARSENATE (CCA) IN ACCORDANCE WITH AWPA STANDARDS, TO A RETENTION OF 0.6 LBS PER CUBIC FOOT.
9. SHEATHING SHALL BE 3/4" C–C PLYWOOD, EXTERIOR GLUE.
10. PROVIDE BRIDGING AT CENTER OF JOISTS.

129-165

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

TITLE: STRUCTURAL NOTES

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

DES: RAL	CHK: TPD	DR: RAL
SCALE:		DATE: 5/7/93

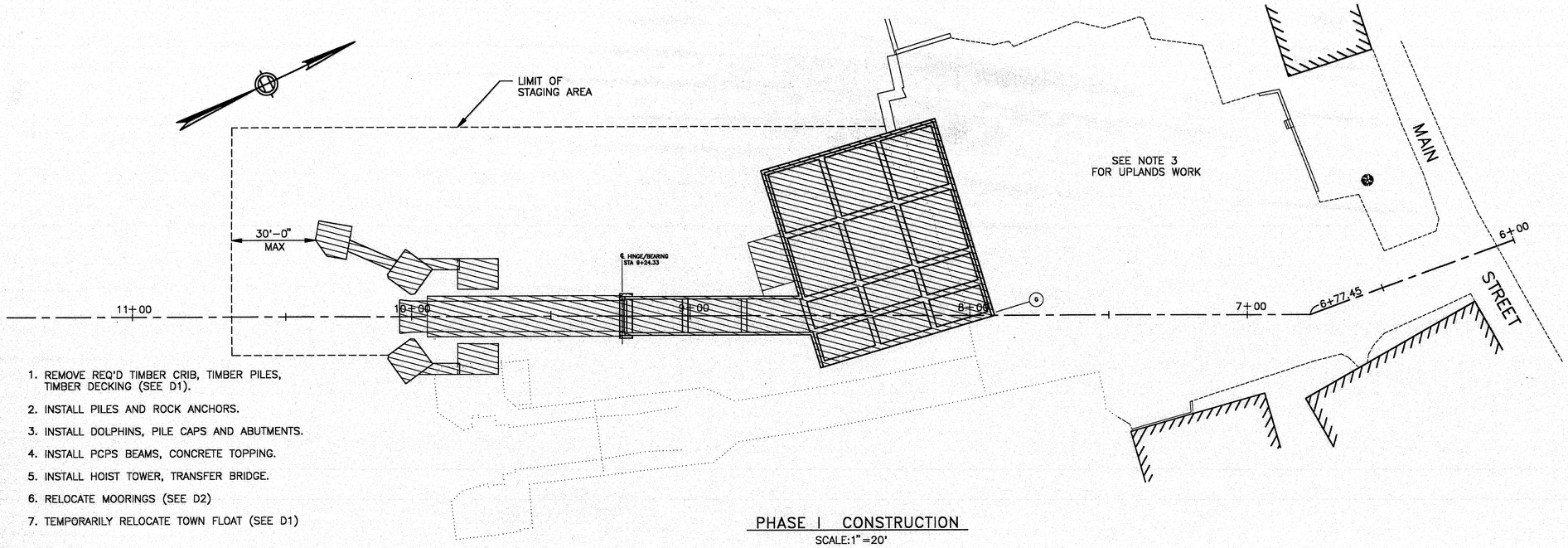
APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P POTTLE

SHEET S1

MAINE TEMP. NO. 11-1933

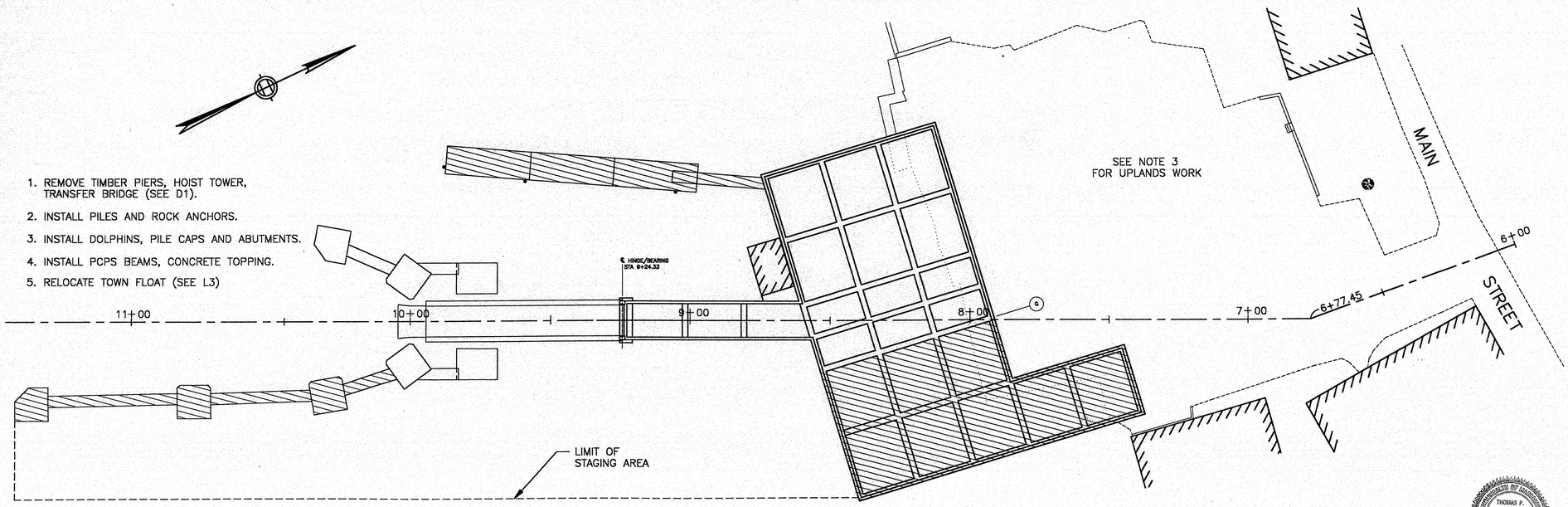
COMMONWEALTH OF MASSACHUSETTS — THOMAS P. DONALD — STRUCTURAL — No. 32755 — REGISTERED PROFESSIONAL ENGINEER

Thomas P. Donald



1. REMOVE REQ'D TIMBER CRIB, TIMBER PILES, TIMBER DECKING (SEE D1).
2. INSTALL PILES AND ROCK ANCHORS.
3. INSTALL DOLPHINS, PILE CAPS AND ABUTMENTS.
4. INSTALL PCPS BEAMS, CONCRETE TOPPING.
5. INSTALL HOIST TOWER, TRANSFER BRIDGE.
6. RELOCATE MOORINGS (SEE D2)
7. TEMPORARILY RELOCATE TOWN FLOAT (SEE D1)

PHASE I CONSTRUCTION
SCALE:1" =20'



1. REMOVE TIMBER PIERS, HOIST TOWER, TRANSFER BRIDGE (SEE D1).
2. INSTALL PILES AND ROCK ANCHORS.
3. INSTALL DOLPHINS, PILE CAPS AND ABUTMENTS.
4. INSTALL PCPS BEAMS, CONCRETE TOPPING.
5. RELOCATE TOWN FLOAT (SEE L3)

PHASE II CONSTRUCTION
SCALE:1" =20'

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A BARRIER BETWEEN THE CONSTRUCTION OPERATIONS AND THE FERRY OPERATIONS. THE CONTRACTOR SHALL IN NO MANNER INTERFERE WITH FERRY OPERATIONS.
2. THE CONTRACTOR SHALL MAINTAIN VEHICLE ACCESS FROM MAIN STREET TO THE FERRY PIER AT ALL TIMES.
3. UPLANDS WORK TO BE PHASED BY CONTRACTOR WITH THE FOLLOWING GUIDELINES:
   - A. THE SURFACE COURSE OF BITUMINOUS PAVEMENT FOR THE ENTIRE LOT SHALL BE PLACED AT ONE TIME.
   - B. ANY TEMPORARY PARKING AREAS OR TRAVEL LANES SHALL BE CONSTRUCTED OF A DURABLE MATERIAL APPROVED BY THE RESIDENT ENGINEER.
   - C. ANY CHANGES IN GRADE IN A TEMPORARY TRAVEL LANE SHALL HAVE A MAXIMUM SLOPE OF 10:1. (TEN FEET HORIZONTAL TO ONE FOOT VERTICAL).

GRAPHIC SCALE
20 0 10 20 40 60
(IN FEET)
1 inch = 20 ft.

129-166

MAINE TEMP. NO. 11-1933

THOMAS P. DONALD STRUCTURAL No. 12755 REGISTERED PROFESSIONAL ENGINEER

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

TITLE: CONSTRUCTION PHASING

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

DES: RAL	CHK: TPD	DR: RAL
SCALE: 1"=20'		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P POTTLE

SHEET S2

BORING B-1

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	NW	SS	NQ	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	3.0	1 3/8	2.0	BIT TYPE ROLLER BIT
HAMMER WEIGHT (LB)	300	140	-	DRILL MUD NONE
HAMMER FALL (IN)	24	30	-	OTHER

ELEVATION -18.6
DATUM MLW
START 28 October 1992
FINISH 29 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOC	WOR	S1 18"	0.0 1.5		Very soft dark gray organic SILT, trace clay and seashell particles -HARBOR BOTTOM DEPOSIT-
	WOC	WOR				
	WOC					
	WOH					
5	1					
	2	WOR	S2 18"	5.0 6.5		Very soft dark gray organic SILT, trace clay and seashell particles -HARBOR BOTTOM DEPOSIT-
	3	WOR				
	5				-26.6 8.0	
	13					
	16					
10	18	10	S3 12"	10.0 11.5		Medium dense gray organic silty coarse to fine SAND, little gravel, seashell fragments -HARBOR BOTTOM DEPOSIT-
	39	12				
	46	9			-31.6 13.0	
	80					
	40	12	S4 7"	14.0 15.5		Dense gray-brown fine sandy SILT, some gravel imbedded, trace coarse to medium sand -GLACIAL TILL-
15	83	16				
	127	23				NOTE: Drove casing through cobble or decomposed bedrock from 17.1 to 18.0 ft.
	130				-36.6 18.0	
	-					Top of Bedrock at 18.0 ft. Begin NQ rock core at 18.0 ft. (See Core Boring Report)

DEPTH (FT)	DRILLING RATE MIN./FT.	RUN NO.	DEPTH (FT)	RECOVERY/ROD IN.	RECOVERY/ROD %	WEATHERING	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
15								18.0 ft. of Overburden (See Test Boring Report) Begin NQ rock core at 18.0 ft.
							-36.6 18.0	
		C1	18.0 20.7	32/32	100/100	SL.		C1: Moderately hard, slightly weathered, purple fine grained to aphanitic ANDESITE. Shears high angle, moderately close, slicken-sided planar, calcite coated and slightly oxidized, open. Joint low angle, close to moderately close, smooth, planar, calcite coated and slightly oxidized, open.
20		C2	20.7 25.7	60/51	100/85	SL.		C2: Same as C1, except lithology grades to very coarse grained to aphanitic ANDESITE BRECCIA with distinct flow banding dipping at moderate to high angles. Lithology change to blue-green CALCAREOUS BRECCIA at 22.3 ft. Joints moderately dipping, generally moderately close, occasionally very close to close, rough, undulating to planar, occasionally smooth, planar, oxidized to highly decomposed, open, occasional high angle, calcite healed joint.
		C3	25.7 30.9	62/53	100/85	SL.		C3: Same as C1, except lithology grades to purple, very coarse grained to aphanitic ANDESITE BRECCIA. Joints moderately dipping to high angle, smooth or rough, undulating, slightly oxidized, open, extremely fractured zone associated with extremely closely spaced, parallel, moderately dipping joints 30.2 to 30.5 ft. Single vertical joint, rough, undulating 30.5 to 30.9 ft.
25								
		C4	30.9 35.9	60/60	100/100	SL.		C4: Same as C1, except joints moderately close to wide. Shear moderately dipping to high angle, slicken-sided, undulating, calcite coated, open at 33.0 ft. Occasional calcite healed joint. Lithology grades to blue-green CALCAREOUS BRECCIA at 35.0 ft.
30								
		C5	35.9 40.9	60/59	100/98	SL.		C5: Same as C1, except joints high angle to moderately dipping, occasionally low angle, very close to close, rough, undulating, highly oxidized, open. Shear high angle, slicken-sided, planar, highly oxidized, calcite infilled and epidotized at 36.5 ft.
35								
		C6	40.9 42.4	18/18	100/50	SL.		C6: Same as C1, with shears moderately dipping to high angle, slicken-sided, planar, highly oxidized and calcite infilled at 41.6 and 42.0 ft.
40							-61.0 42.4	
								Bottom of Exploration at 42.4 ft.

WATER LEVEL DATA					
DATE	TIME	ELAPSED TIME (HR)	DEPTH (FT.) TO: BOTTOM OF CASING	BOTTOM OF HOLE	WATER

SAMPLE IDENTIFICATION	
O	OPEN END ROD
T	THIN WALL TUBE
U	UNDISTURBED SAMPLE
S	SPLIT SPOON

SUMMARY	
OVERBURDEN (LIN FT)	18.0
ROCK CORED (LIN FT)	24.4
SAMPLES	45,6C
BORING NO.	B1

BORING B-2

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	NW	SS	-	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	3.0	1 3/8	-	BIT TYPE ROLLER BIT
HAMMER WEIGHT (LB)	300	140	-	DRILL MUD NONE
HAMMER FALL (IN)	24	30	-	OTHER

ELEVATION -19.8
DATUM MLW
START 27 October 1992
FINISH 27 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOR/15"	WOR	S1 NR	0.0 1.5		No Recovery. Organic SILT residue on outside of split spoon sampler. -HARBOR BOTTOM DEPOSIT-
		WOR				
	WOH					
	WOH				-23.1 3.3	
	50/0"					Casing refusal on probable bedrock at 3.3 ft. Bottom of Exploration at 3.3 ft.

WATER LEVEL DATA					
DATE	TIME	ELAPSED TIME (HR)	DEPTH (FT.) TO: BOTTOM OF CASING	BOTTOM OF HOLE	WATER

SAMPLE IDENTIFICATION	
O	OPEN END ROD
T	THIN WALL TUBE
U	UNDISTURBED SAMPLE
S	SPLIT SPOON

SUMMARY	
OVERBURDEN (LIN FT)	3.3
ROCK CORED (LIN FT)	0.0
SAMPLES	1S
BORING NO.	B2

BORING B-3

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	NW	SS	-	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	3.0	1 3/8	-	BIT TYPE ROLLER BIT
HAMMER WEIGHT (LB)	300	140	-	DRILL MUD NONE
HAMMER FALL (IN)	24	30	-	OTHER

ELEVATION -15.3
DATUM MLW
START 27 October 1992
FINISH 27 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOC	WOR	S1 4"	0.0 1.5		Very soft gray organic SILT, trace seashell particles -HARBOR BOTTOM DEPOSIT-
	WOC	WOR				
	WOC				-11.8 2.5	
	18					
	45					Hard gray silty CLAY, some gravel, little coarse to fine SAND -MARINE DEPOSIT-
5	56	25 50/3" 50/0"	S2 5"	4.3 5.0	-14.1 4.8	
					-14.3 5.0	Very dense gray GRAVEL, consisting of moderately weathered andesite fragments -POSSIBLE DECOMPOSED BEDROCK-
						Refusal on probable BEDROCK at 5.0 ft. Bottom of Exploration at 5.0 ft.

WATER LEVEL DATA					
DATE	TIME	ELAPSED TIME (HR)	DEPTH (FT.) TO: BOTTOM OF CASING	BOTTOM OF HOLE	WATER

SAMPLE IDENTIFICATION	
O	OPEN END ROD
T	THIN WALL TUBE
U	UNDISTURBED SAMPLE
S	SPLIT SPOON

SUMMARY	
OVERBURDEN (LIN FT)	5.0
ROCK CORED (LIN FT)	0.0
SAMPLES	2S
BORING NO.	B3

BORING B-4

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	NW	SS	NQ	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	3.0	1 3/8	2.0	BIT TYPE ROLLER BIT
HAMMER WEIGHT (LB)	300/SPIN	140	-	DRILL MUD NONE
HAMMER FALL (IN)	24/-	30	-	OTHER NW SPUN TO 4.8 FT.

ELEVATION -9.6
DATUM MLW
START 21 October 1992
FINISH 23 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOR	WOR	S1 10"	0.0 1.5		Very loose dark gray organic silty fine SAND, trace coarse to medium sand, fine gravel, seashell fragments -HARBOR BOTTOM DEPOSIT-
	WOR	WOR				
	WOR					
					-15.6 6.0	
5	2					Medium stiff gray silty CLAY -MARINE DEPOSIT-
	6	2	S2	6.6 8.1	-17.1 7.5	
		3			-17.7 8.1	Medium dense gray gravelly CLAY, some coarse to fine sand, little silt
	16/6"	10/4" 6/2"				NOTE: Coarse gravel lodged in bottom of sampler.
	25/0"					Top of Bedrock at 8.1 ft. Advanced roller bit to 8.7 ft. Begin HQ rock core at 8.7 ft. (See Core Boring Report)

DEPTH (FT)	DRILLING RATE MIN./FT.	RUN NO.	DEPTH (FT)	RECOVERY/ROD IN.	RECOVERY/ROD %	WEATHERING	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
5								8.1 ft. of Overburden (See Test Boring Report) Advanced roller bit to 8.7 ft. Begin HX rock core at 8.7 ft.
							-18.3 8.7	
10		C1	8.7 10.0	16/8	100/50	ROD.		C1: Moderately hard, moderately weathered, purple medium grained to aphanitic ANDESITE PORPHYRY. Distinct foliation and banding dipping at high angles. Joints are mostly shears moderately dipping to high angle, slicken-sided, planar to stepped or undulating, moderately decomposed to highly oxidized and/or silt infilled, generally open. Frequent extremely thin to very thin calcite stringers dipping at moderate to high angles. Slicken-sides show at least two motions.
		C2	10.0 11.0	7/0	0	ROD.		C2: Same as C1, except shears high angle, slicken-sided, undulating, discolored or calcite coated. Joints smooth, planar.
		C3	11.0 12.9	20/0	80/0	ROD.		C3: Same as C1, except extremely fractured zone from 11.0 to 12.0 ft. associated with intersecting high angle to vertical and moderately dipping joints and shears. Surfaces highly oxidized to highly decomposed.
15		C4	12.9 13.9	8/0	67/0	ROD.		C4: Same as C1, except extremely fractured from 12.9 to 13.9 ft.
		C5	13.9 16.8	35/35	100/100	SL.		NOTE: Borehole collapsed, spun NW casing to 16.8 ft.
		C6	16.8 21.2	54/54	100/100	SL.		C5: Same as C1, except slightly weathered and sound with only two shears in a single 1/2 in. zone at 15.2 ft. Moderately dipping slicken-sided, undulating, highly oxidized, open along very thin calcite vein. High angle to vertical calcite healed joint broken at top of run.
20		C7	21.2 26.2	60/60	100/100	SL.		C6: Same as C1, except joints or shears moderately close, frequent along calcite stringers, occasionally epidotized.
		C8	26.2 29.0	32/27	100/84	SL.		C7: Same as C1, except rock breaks along extremely thin low angle calcite stringers.
25		C9	29.0 34.0	60/59	100/98	SL.		C8: Same as C1, except joints or shears moderately dipping to high angle, close to moderately close, smooth or slicken-sided, planar, discolored and calcite coated, open.
30								C9: Same as C1, except calcite stringers show displacement.
							-43.6 34.0	
								Bottom of Exploration at 34.0 ft.

WATER LEVEL DATA					
DATE	TIME	ELAPSED TIME (HR)	DEPTH (FT.) TO: BOTTOM OF CASING	BOTTOM OF HOLE	WATER

SAMPLE IDENTIFICATION	
O	OPEN END ROD
T	THIN WALL TUBE
U	UNDISTURBED SAMPLE
S	SPLIT SPOON

SUMMARY	
OVERBURDEN (LIN FT)	8.7
ROCK CORED (LIN FT)	25.3
SAMPLES	2S,9C
BORING NO.	B4

BORING B-5

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	NW	SS	-	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	3.0	1 3/8	-	BIT TYPE ROLLER BIT
HAMMER WEIGHT (LB)	300	140	-	DRILL MUD NONE
HAMMER FALL (IN)	24	30	-	OTHER

ELEVATION 0.2
DATUM MLW
START 23 October 1992
FINISH 23 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOH	WOR	S1 2"	0.0 1.5		Very loose gray fine gravelly coarse to fine SAND, some seashell fragments -HARBOR BOTTOM DEPOSIT-
	4	WOH				
	7	2				
	WOH/13"				-3.9 4.1	NOTE: Organic silt residue on drive casing shoe.
	50/0"					Casing refusal on probable bedrock at 4.1 ft. Bottom of Exploration at 4.1 ft.

WATER LEVEL DATA					
DATE	TIME	ELAPSED TIME (HR)	DEPTH (FT.) TO: BOTTOM OF CASING	BOTTOM OF HOLE	WATER

SAMPLE IDENTIFICATION	
O	OPEN END ROD
T	THIN WALL TUBE
U	UNDISTURBED SAMPLE
S	SPLIT SPOON

SUMMARY	
OVERBURDEN (LIN FT)	4.1
ROCK CORED (LIN FT)	0.0
SAMPLES	1S
BORING NO.	B5

BORING B-6

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	NW	SS	NQ	RIG TYPE CME 45 SKID
INSIDE DIAMETER (IN)	3.0	1 3/8	2.0	BIT TYPE ROLLER BIT
HAMMER WEIGHT (LB)	SPIN	140	-	DRILL MUD NONE
HAMMER FALL (IN)	-	30	-	OTHER

ELEVATION 14.2
DATUM MLW
START 29 October 1992
FINISH 2 November 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0		8	S1 9"	0.0 1.5	14.1 0.1	-ASPHALT-
		8				Medium dense brown coarse to fine SAND, trace silt and fine gravel -FILL-
		6				
		-				
5						Very loose brown fine GRAVEL, little silt, and coarse to fine sand NOTE: Poor recovery - gravel lodged in bottom of sampler -FILL-
	1	52	S2 2"	5.0 6.5		NOTE: Cored 6 in. granite cobble from 7.2 to 7.7 ft.
	1	1				
						NOTE: Cored 9 in. andesite boulder from 8.6 to 9.4 ft.
10	100/3"	43	S3	10.0		No recovery NOTE: Cored 3 in. granite gravel from 10.5 to 10.8 ft.
		WR		10.5		
						NOTE: Cored boulder and cobbles from 14.0 to 16.5 ft. Recovered 4 in. andesite cobble on top with 8 in. granite boulder on bottom.
15					-2.3 16.5	
						NOTE: Casing advanced rapidly during spinning from 16.5 to 18.5 ft. -POSSIBLE MARINE DEPOSIT-
					-4.6 18.8	
						Top of Bedrock at 18.8 ft. Begin NQ rock core at 18.8 ft. (See Core Boring Report)

DEPTH (FT)	DRILLING RATE MIN./FT.	RUN NO.	DEPTH (FT)	RECOVERY/ROD IN.	RECOVERY/ROD %	WEATHERING	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
15								18.8 ft. of Overburden (See Test Boring Report) Begin NQ rock core at 18.8 ft.
							-4.6 18.8	
		C1	18.8 19.4	6/0	86/0	SL.		C1 & C2: Hard, slightly weathered gray-tan fine grained to aphanitic TUFF-BRECCIA. Occasional very coarse to medium grains. Distinct banding, moderately dipping. Shears moderately dipping, close to moderately close, occasionally extremely close, slicken-sided, undulating, moderately oxidized, occasionally calcite coated, open. Joints moderately dipping, moderately close to close, rough, undulating, occasionally smooth, slightly to highly oxidized, open.
20		C2	19.4 24.1	58/51	100/91	SL.		
		C3	24.1 27.1	36/27	100/75	SL.		C3: Same as C1 & C2, except with very fractured zone associated with intersecting moderately dipping, low angle and vertical joints from 24.9 to 25.5 ft. Joint surfaces moderately to highly oxidized, rough, undulating, occasionally smooth, planar, open.
25		C4	27.1 32.1	59/52	98/86	SL.		C4: Hard, slightly weathered gray-tan fine grained to aphanitic TUFF-BRECCIA occasional coarse to medium grains. Joints close to wide, tight to open, moderately dipping, undulating and rough, to stepped and rough. Slight oxidation and calcite coatings on joint surfaces. Occasional steeply dipping healed joints. One vertical joint from approximately 27.7 to 28.9 ft., planar, rough, oxidized.
30		C5	32.1 37.2	62/37	100/60	SL.		C5: Same as C4, except joints close to moderate, near vertical fracture from approximately 32.1 to 34.6 ft., undulating, rough, slicken-sides observed. Primary joints, low angle to moderately dipping.
35								
40		C6	37.2 42.4	62/54	97/87	SL.		C6: Same as C4, except joints close to moderate, no vertical joints observed.
							-28.2 42.4	
								Bottom of Exploration at 42.4 ft.

WATER LEVEL DATA					
DATE	TIME	ELAPSED TIME (HR)	DEPTH (FT.) TO: BOTTOM OF CASING	BOTTOM OF HOLE	WATER

SAMPLE IDENTIFICATION	
O	OPEN END ROD
T	THIN WALL TUBE
U	UNDISTURBED SAMPLE
S	SPLIT SPOON

SUMMARY	
OVERBURDEN (LIN FT)	18.8
ROCK CORED (LIN FT)	23.6
SAMPLES	3S,6C
BORING NO.	B6

BORING NOTES

1. LOCATIONS OF BORINGS ARE SHOWN ON DRAWINGS L1, SHOWN THUS ⊕ B-1.
2. LOCATIONS OF PROBES ARE SHOWN ON DRAWING L1, SHOWN THUS ● P-1.
3. BORINGS TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINT ONLY, BUT DO NOT NECESSARILY SHOW NATURE OF MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.

COMMONWEALTH OF MASSACHUSETTS
THOMAS P. DONALO
STRUCTURAL
No. 32755
REGISTERED
PROFESSIONAL ENGINEER

MAINE TEMP. NO. 11-1993

129-167

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY:
NORTH HAVEN
FERRY TERMINAL

TITLE:
BORING LOGS - PART I

CONSULTANT:
TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

DES: CHK: DR: 5/7/93

SCALE: NTS DATE:

APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P POTTE

SHEET S3

PROBE P-1

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	-	-	-	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	-	-	-	BIT TYPE
HAMMER WEIGHT (LB)	-	-	-	DRILL MUD
HAMMER FALL (IN)	-	-	-	OTHER

ELEVATION -20.7
DATUM MLW
START 27 October 1992
FINISH 27 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOR					AW rod probe driven with 300 lb. hammer
	WOR					No samples taken.
	WOR					
	WOR					
	WOR					
5	WOR/.6					
	3					
	3					
	8					
	8					
10	31					
	27					
	32					
	38					
	48					
15	64					
	62					
	65					
	74					
	92				-40.3	
	50/0"				19.6	Rod probe refusal at 19.6 ft.

PROBE P-3

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	-	-	-	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	-	-	-	BIT TYPE
HAMMER WEIGHT (LB)	-	-	-	DRILL MUD
HAMMER FALL (IN)	-	-	-	OTHER

ELEVATION -5.8
DATUM MLW
START 26 October 1992
FINISH 26 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOR					AW rod probe driven with 300 lb. hammer
	WOR					No samples taken.
	WOR					
	WOH					
	WOH					
5	WOH					
	WOH				-12.9	
	17/3"				7.1	Rod probe refusal at 7.1 ft.
	50/0"					

PROBE P-5

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	-	-	-	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	-	-	-	BIT TYPE
HAMMER WEIGHT (LB)	-	-	-	DRILL MUD
HAMMER FALL (IN)	-	-	-	OTHER

ELEVATION 1.8
DATUM MLW
START 21 October 1992
FINISH 21 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOR/0.7					AW rod probe driven with 300 lb. hammer
	2					No samples taken.
	12					
	4					
	11					
5	11					
	15					
	19				-6.0	
	50/0"				7.8	Rod probe refusal at 7.8 ft.

PROBE P-7

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	-	-	-	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	-	-	-	BIT TYPE
HAMMER WEIGHT (LB)	-	-	-	DRILL MUD
HAMMER FALL (IN)	-	-	-	OTHER

ELEVATION 2.2
DATUM MLW
START 20 October 1992
FINISH 20 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	3					AW rod probe driven with 300 lb. hammer
	4					No samples taken.
	47					
	89					
5	99				-3.0	
	110/2"				5.2	Rod probe refusal at 5.2 ft.

PROBE P-2

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	-	-	-	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	-	-	-	BIT TYPE
HAMMER WEIGHT (LB)	-	-	-	DRILL MUD
HAMMER FALL (IN)	-	-	-	OTHER

ELEVATION -5.1
DATUM MLW
START 23 October 1992
FINISH 23 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOR					AW rod probe driven with 300 lb. hammer
	WOR					No samples taken.
	WOR					
	WOR					
	WOH					
5	WOH					
	16				-12.3	
	13/ 1/2"				7.2	Rod probe refusal at 7.2 ft.
	50/0"					

PROBE P-4

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	-	-	-	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	-	-	-	BIT TYPE
HAMMER WEIGHT (LB)	-	-	-	DRILL MUD
HAMMER FALL (IN)	-	-	-	OTHER

ELEVATION -3.8
DATUM MLW
START 23 October 1992
FINISH 23 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOR					AW rod probe driven with 300 lb. hammer
	WOR					No samples taken.
	WOR					
	WOR					
	WOH					
5	WOH					
	WOH				-10.6	
	WOH/6"				6.8	Rod probe refusal at 6.8 ft.
	20/3"					
	50/0"					

PROBE P-6

ITEM	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES
TYPE	-	-	-	RIG TYPE CME 45 SKID ON BARGE
INSIDE DIAMETER (IN)	-	-	-	BIT TYPE
HAMMER WEIGHT (LB)	-	-	-	DRILL MUD
HAMMER FALL (IN)	-	-	-	OTHER

ELEVATION 4.2
DATUM MLW
START 23 October 1992
FINISH 23 October 1992
DRILLER M. GUNNING
H & A REP C. OSGOOD

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION AND REMARKS
0	WOR/6"					AW rod probe driven with 300 lb. hammer
	3					No samples taken.
	4					
	6					
	11					
5	12					
	6				-2.6	
	5/4"				6.8	Rod probe refusal at 6.8 ft.
	50/0"					

COMMONWEALTH OF MASSACHUSETTS
THOMAS F. DONALD
STRUCTURAL
No. 32155
REGISTERED
PROFESSIONAL ENGINEER

Thomas F. Donald

MAINE TEMP. NO. 11-1993

129-168

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

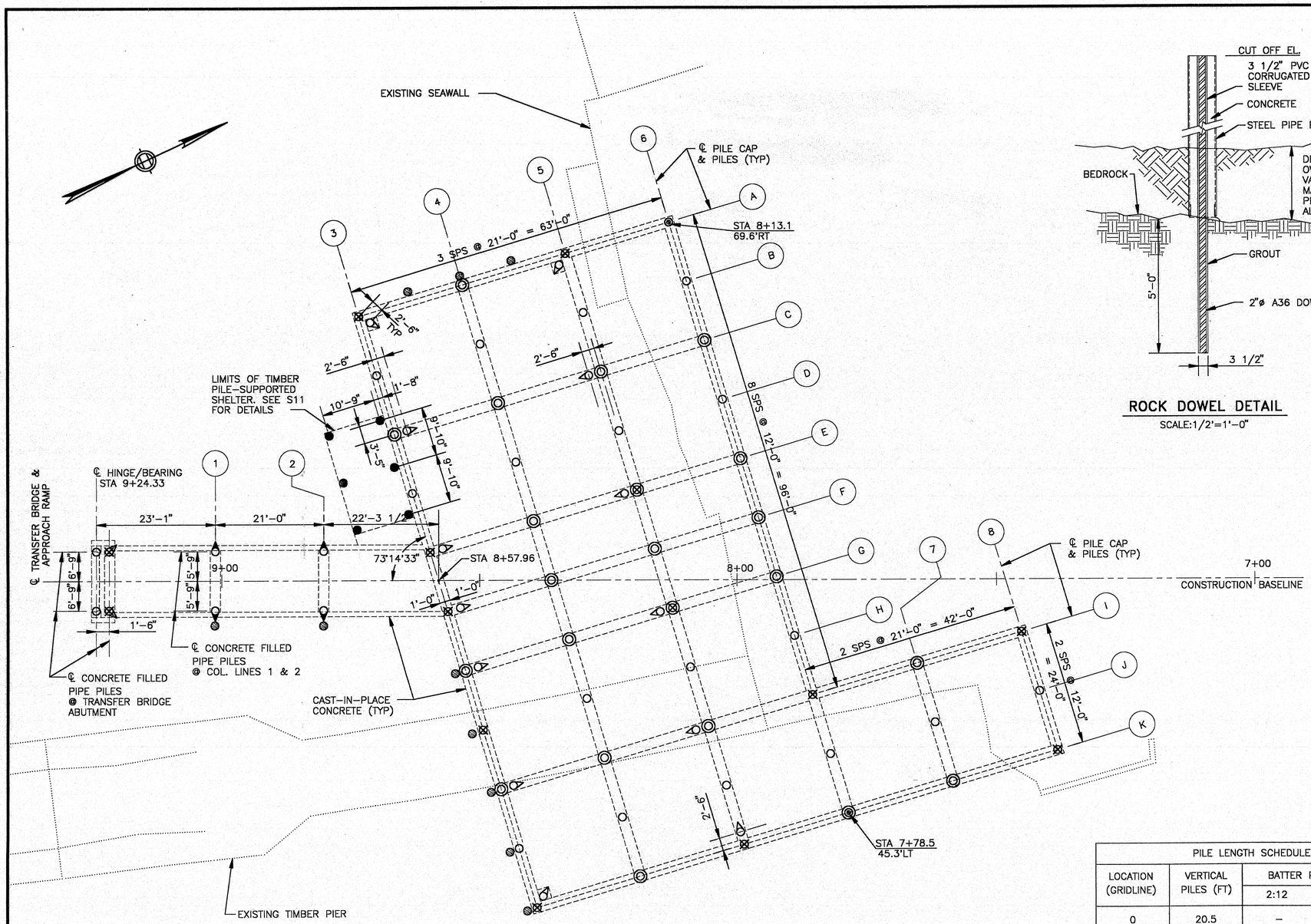
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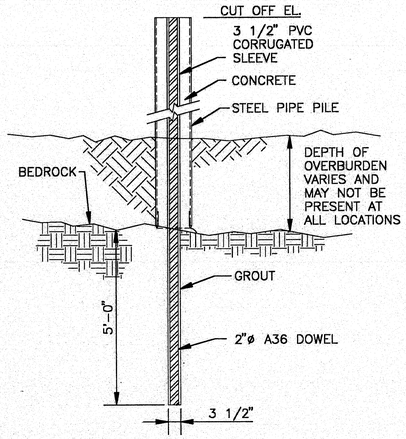
CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

DES: CHK: DR:
SCALE: NTS DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P POTTLE

SHEET S4





ROCK DOWEL DETAIL

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

NOTES

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER DRAWINGS. ANY CONFLICT WITH THESE DRAWINGS SHALL BE REPORTED TO THE ENGINEER.
2. SEE SHEET W6 FOR ROCK ANCHOR DETAIL.
3. TIMBER FENDER PILES DRIVEN TO REFUSAL. (FOUR BLOWS/INCH)
4. TIMBER BEARING PILES DRIVEN TO 20 TON CAPACITY AS SPECIFIED UNDER SPEC. SPECTION 501.5.

PILE LEGEND

- ○ PLUMB
- ◠ 3:12
- ◠ 1:12

CONCRETE FILLED PIPE PILES
O.D. = 12.75"
I.D. = 11.75"
ASTM A252, GR 3

- ⊠ PILES WITH ROCK ANCHORS
- ◎ PILES WITH ROCK DOWELS

- ● BEARING PILES
- ⊘ FENDER PILES

TIMBER PILES

* THE INTENT OF THE SCHEDULE IS TO PROVIDE A BASIS FOR BIDDING ONLY. THE PILES SHALL BE INSTALLED IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS TO REFUSAL ON BEDROCK. ACTUAL TIP ELEVATIONS WILL VARY FROM THIS SCHEDULE. PILE ORDER LENGTHS SHALL BE AT LEAST 5 FT LONGER THAN LENGTH BASED ON ESTIMATED TIP ELEVATIONS.

PILE LENGTH SCHEDULE *			
LOCATION (GRIDLINE)	VERTICAL PILES (FT)	BATTER PILES (FT)	
		2:12	3:12
0	20.5	–	21.0
1	23.5	24.0	–
2	24.5	24.5	–
3	19.0	–	20.0
4	19.0	–	20.0
5	18.5	–	19.5
6	15.5	–	16.0
7	15.5	–	–
8	15.5	–	–

THOMAS P. DONALD STRUCTURAL No. 12755 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

MAINE TEMP. NO. 11-1993

129-169

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

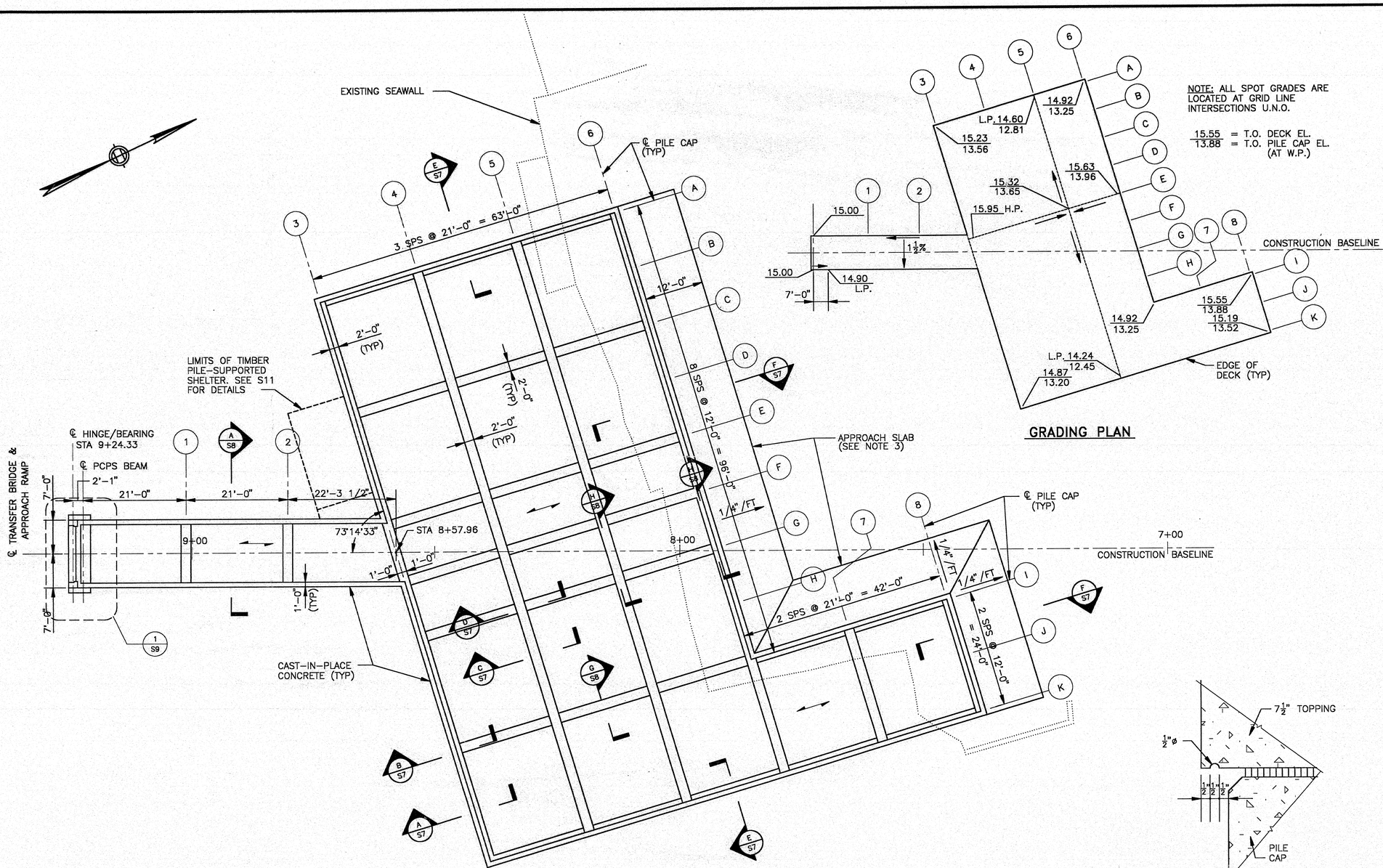
TITLE: WHARF-PILE PLAN

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

DES: RAL	CHK: TPD	DR: RAL
SCALE: 1"=10'		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICE: P POTTLE

SHEET: S5



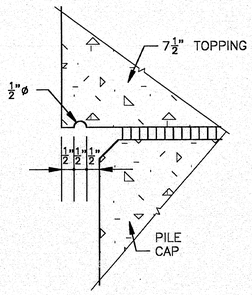
GRADING PLAN

NOTE: ALL SPOT GRADES ARE LOCATED AT GRID LINE INTERSECTIONS U.N.O.

15.55 = T.O. DECK EL.
13.88 = T.O. PILE CAP EL. (AT W.P.)

NOTES

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER DRAWINGS. ANY CONFLICT WITH THESE DRAWINGS SHALL BE REPORTED TO THE ENGINEER.
2. ⟵ DENOTES TYPICAL SPAN OF 12 INCH PRESTRESSED BEAM.
3. UPLANDS END OF APPROACH SLAB SHALL REST ON 12" (MIN) OF UNDISTURBED SOIL. IF LIMIT OF EXCAVATION ENCROACHES ON THIS DIMENSION, THE APPROACH SLAB SHALL BE INCREASED IN WIDTH TO PROVIDE THE 12" BEARING.
4. ADD 2-#4 BARS DIAGONALLY AT TOP AND BOTTOM AT INSIDE CORNERS OF 7 1/2" TOPPING. EXTEND BARS 2'-0" IN BOTH DIRECTIONS FROM THE CORNER.



TYPICAL DRIP EDGE AT TOPPING
NTS

THOMAS P. DONALD STRUCTURAL No. 32755 REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

MAINE TEMP. NO. 11-1993
Thomas P. Donald
129-170

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

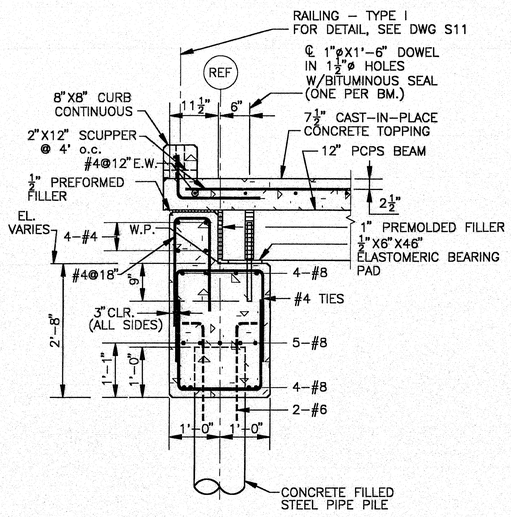
TITLE: WHARF-FRAMING PLAN

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

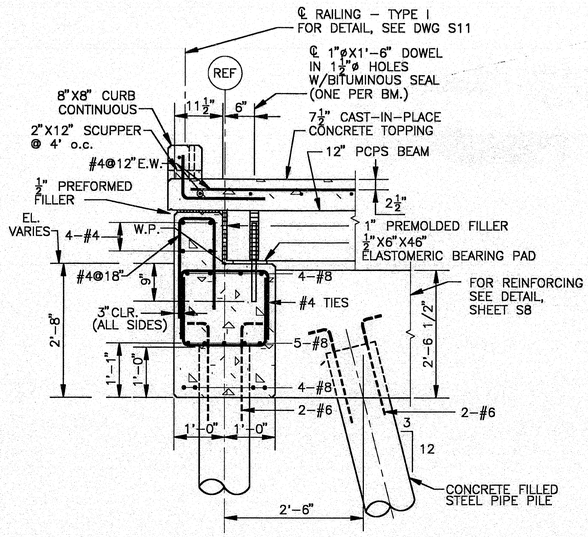
DES: RAL	CHK: TPD	DR: RAL
SCALE: 1"=10'		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P Pottle

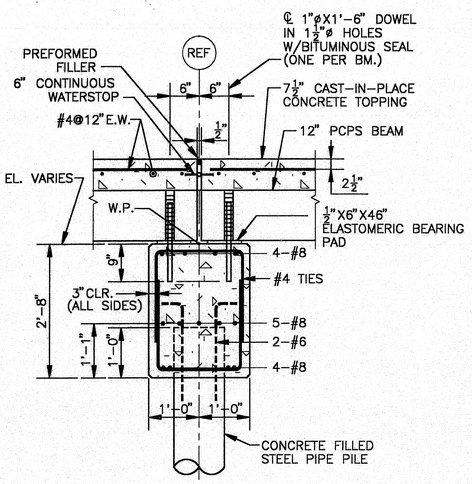
SHEET S6



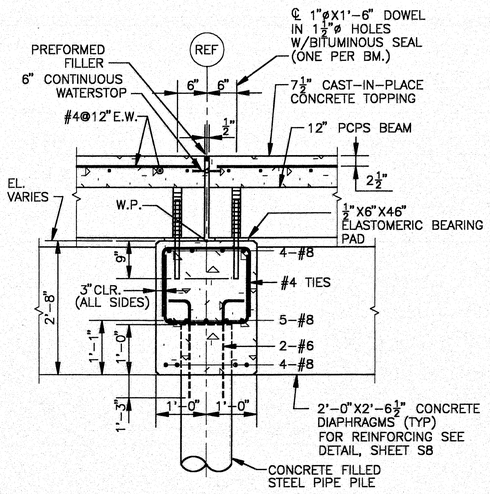
A / S6 **SECTION**
SCALE:3/4"=1'–0"



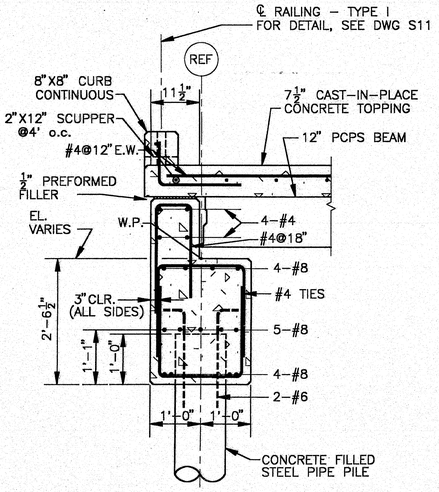
B / S6 **SECTION**
SCALE:3/4"=1'–0"



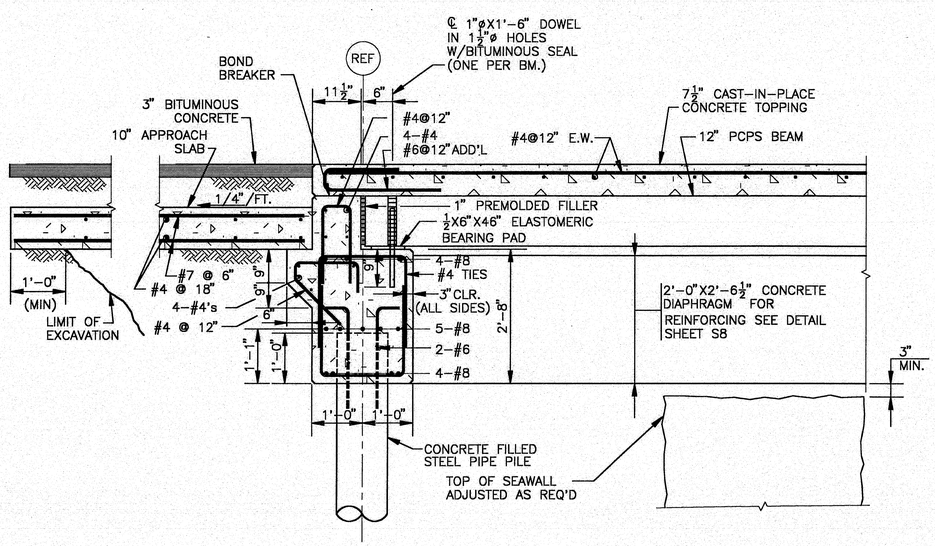
C / S6 **SECTION**
SCALE:3/4"=1'–0"



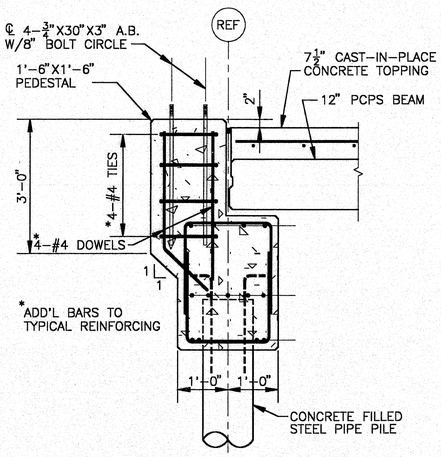
D / S6 **SECTION**
SCALE:3/4"=1'–0"



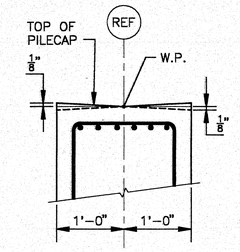
E / S6 **SECTION**
SCALE:3/4"=1'–0"



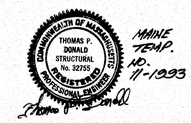
F / S6 **SECTION**
SCALE:3/4"=1'–0"



LIGHT POLE BASE DETAIL
SCALE:3/4"=1'–0"



PILE CAP WORKING POINT DETAIL
SCALE:1"=1'–0"



MAINE TEMP. NO. 11-1993

129-171

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

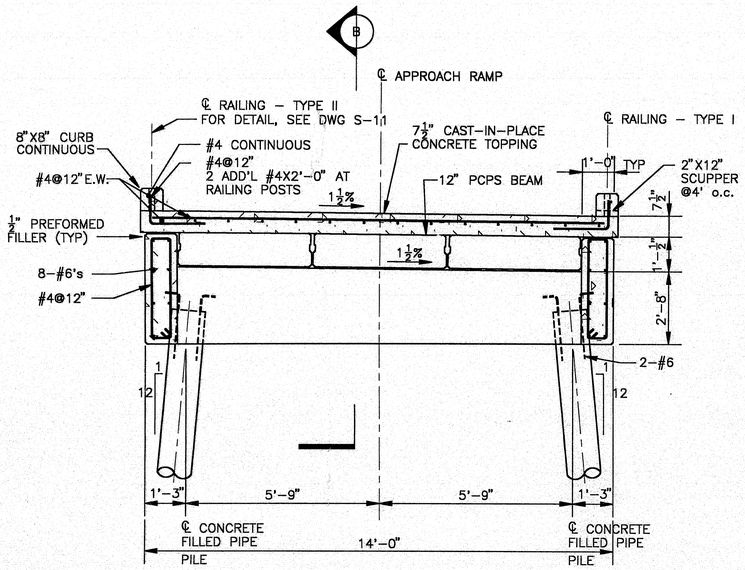
TITLE: WHARF–DETAILS PART I

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

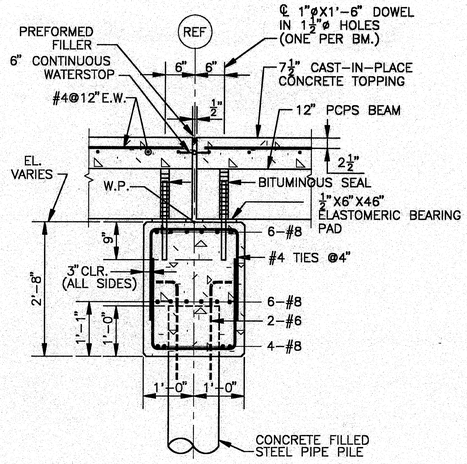
DES: RAL	CHK: TPD	DR: RAL
SCALE: AS NOTED		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICES: PPOTTLE

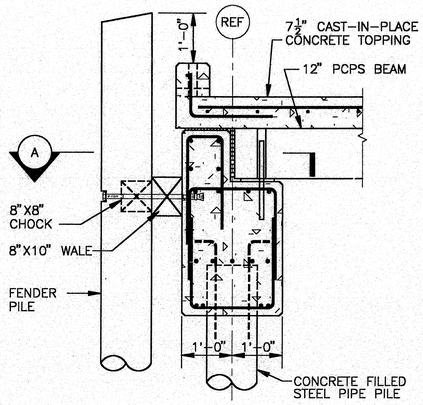
SHEET S7



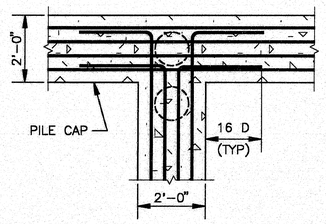
A S6 SECTION
SCALE:3/4"=1'-0"



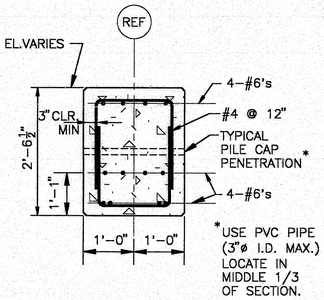
B SECTION
SCALE:3/4"=1'-0"



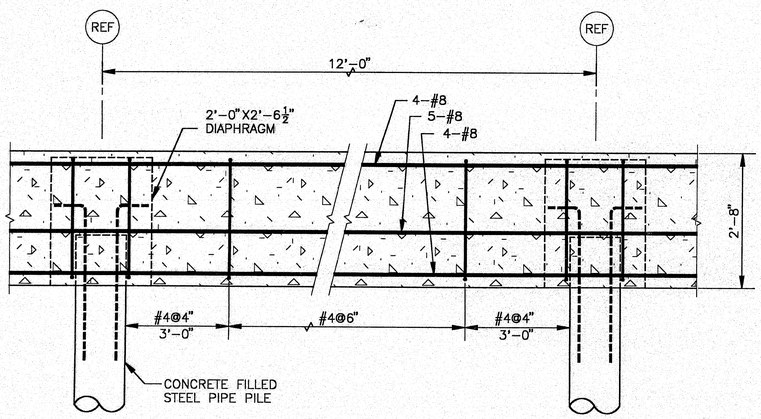
FENDER PILE CONNECTION
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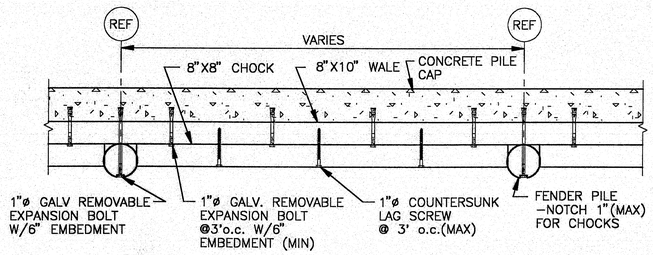
TYPICAL INTERSECTION
SCALE:1/2'=1"-0"



G S6 SECTION
SCALE:3/4"=1"-0"



H S8 PILE CAP ELEVATION
SCALE:3/4"=1'-0"



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

COMMONWEALTH OF MASSACHUSETTS
THOMAS F. DONALD
STRUCTURAL
No. 32755
REGISTERED
PROFESSIONAL ENGINEER

MAINE REG. NO. 11-1933

129-172

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN
FERRY TERMINAL

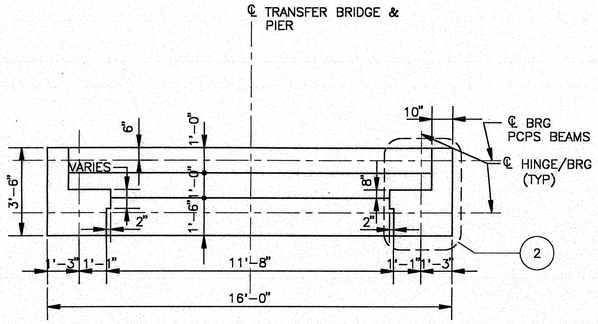
TITLE: WHARF-DETAILS PART II

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

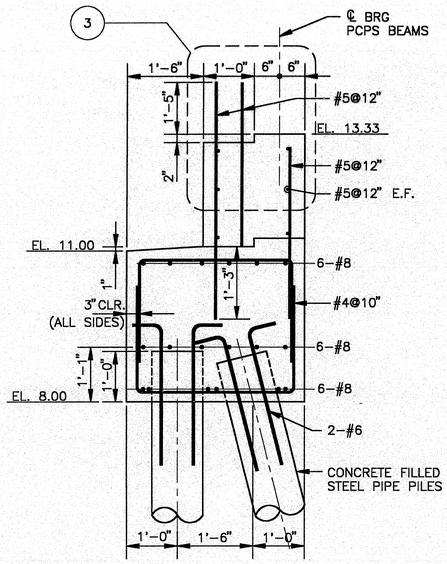
DES: RAL	CHK: TPD	DR: RAL
SCALE: AS NOTED		DATE: 5/7/93

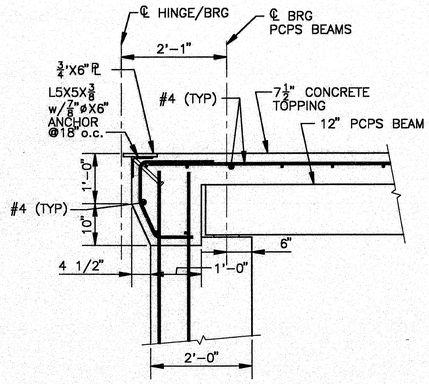
APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P POTTLE

SHEET S8

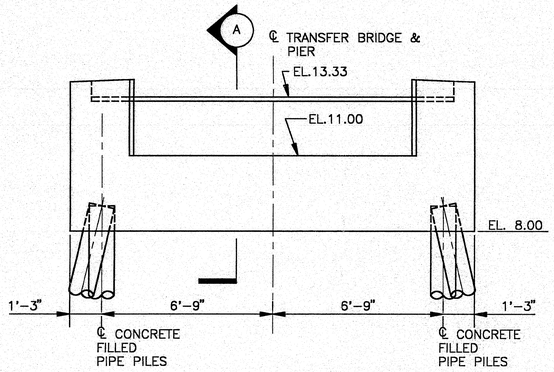


1 / S6 **PLAN**
SCALE:3/8"=1'-0"



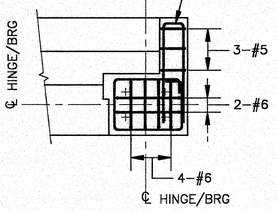


3 **SECTION**
SCALE:3/4"=1'-0"

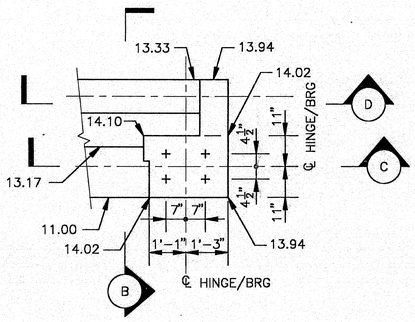


ELEVATION
SCALE:3/8"=1'-0"

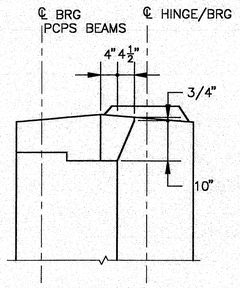
A **SECTION**
SCALE:3/4"=1'-0"



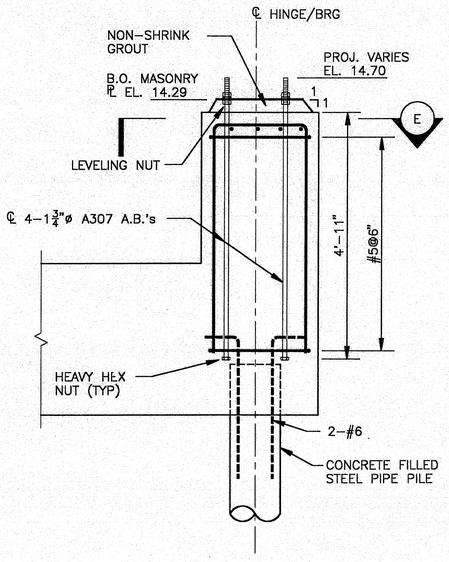
E **SECTION**
SCALE:1/2"=1'-0"



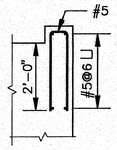
DETAIL 2
SCALE:1/2"=1'-0"



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



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



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

THOMAS P. DONALD STRUCTURAL No. 32755 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

MAINE REG. NO. 11-1993

129-173

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

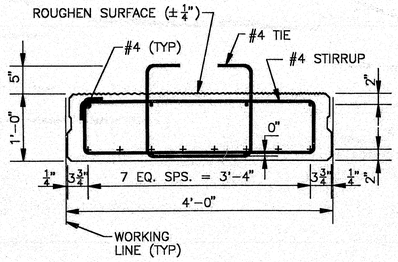
TITLE: TRANSFER BRIDGE ABUTMENT

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

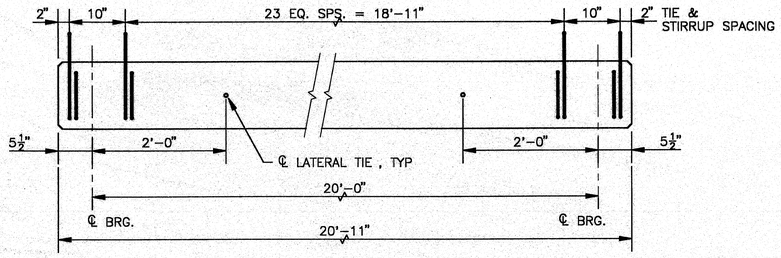
DES: RAL	CHK: TPD	DR: RAL
SCALE: AS NOTED		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P POTTLE

SHEET S9



SECTION
SCALE:1"=1'-0"



ELEVATION
SCALE:1"=1'-0"

PRESTRESSED BEAM NOTES

MINIMUM ULTIMATE COMPRESSIVE STRENGTH = 6000PSI

MINIMUM COMPRESSIVE STRENGTH AT TIME OF TRANSFER = 4000 PSI.

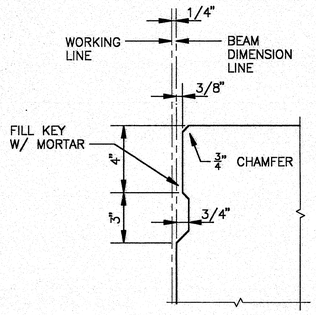
ALL PRESTRESSING STEEL TO BE 1/2" ø UNCOATED SEVEN WIRE STRAND, GRADE 270.

INITIAL PRESTRESS FORCE = 28,920 LBS PER STRAND.

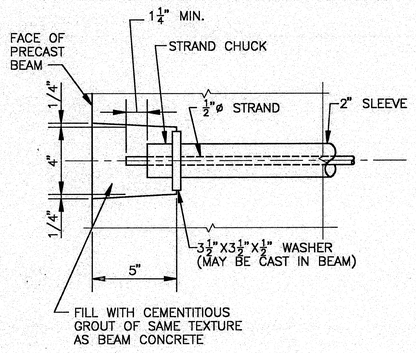
REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, AND SHALL BE EPOXY COATED.

BEARING PADS SHALL BE NEOPRENE, DUROMETER 50.

BEAM



KEY DETAIL
SCALE:3"=1'-0"



LATERAL TIE ANCHORAGES
SCALE:3"=1'-0"

1. 1/2'ø PRESTRESSED STRAND, CHUCK, AND WASHER EACH END.
2. THE STRAND SHALL BE TENSIONED TO 10,000 LBS AFTER GROUTING OF THE LONGITUDINAL JOINTS.
3. THE SLEEVE SHALL BE PUMPED FULL OF GROUT AFTER TENSIONING.
4. DO NOT BURN OFF THE STRAND LESS THAN 1 1/4" FROM THE END OF CHUCK.

129-174

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

TITLE: PRESTRESSED BEAM DETAILS

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

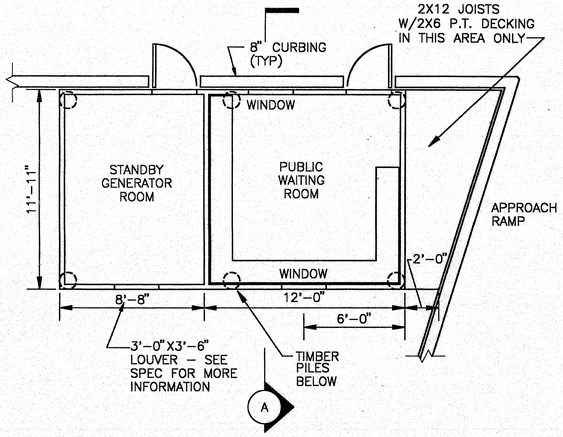
DES: RAL	CHK: TPD	DR: RAL
SCALE: AS NOTED		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICE: P POTTLE

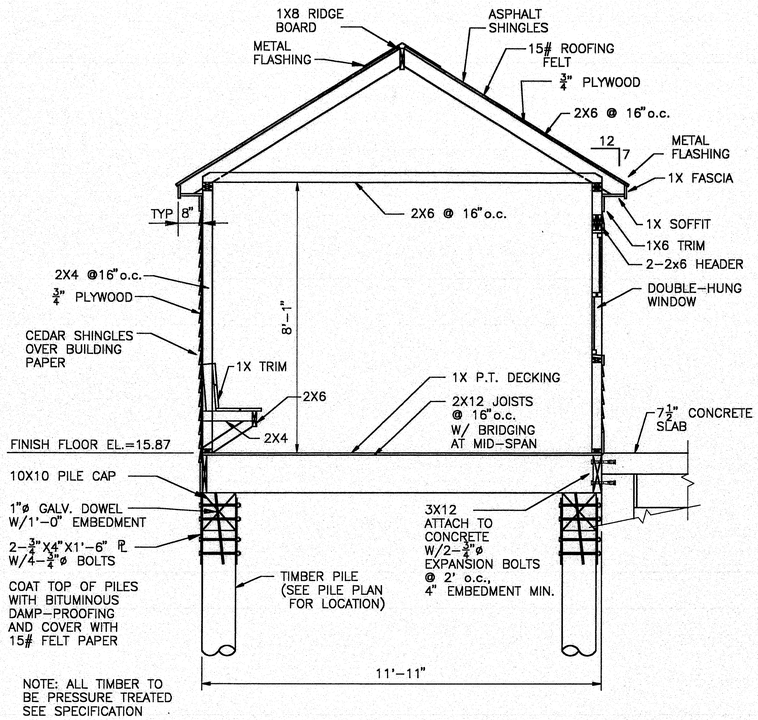
SHEET: S10

THOMAS P. DONALD STRUCTURAL No. 12755 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

MAINE TEMP. NO. 11-1993

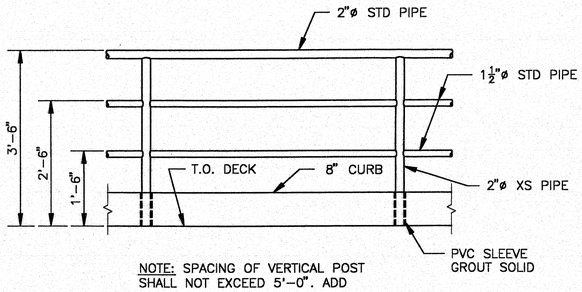


PLAN
SCALE: 1/4"=1'-0"



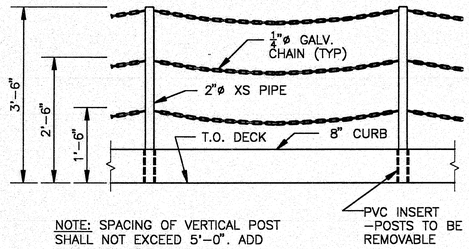
ELEVATION
SCALE: 1/2"=1'-0"

PASSENGER SHELTER



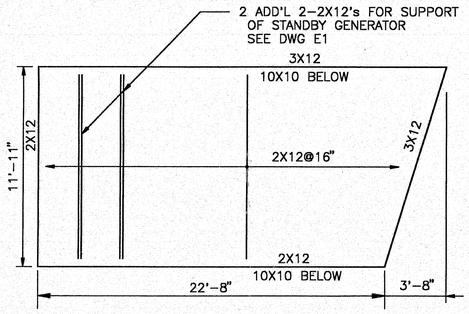
NOTE: SPACING OF VERTICAL POST SHALL NOT EXCEED 5'-0". ADD TWO ADD'L #4 BARS AT EACH RAILING POST.

RAILING - TYPE I
SCALE: 3/4"=1'-0"

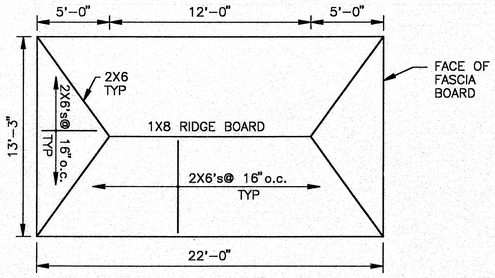


NOTE: SPACING OF VERTICAL POST SHALL NOT EXCEED 5'-0". ADD TWO ADD'L #4 BARS AT EACH RAILING POST.

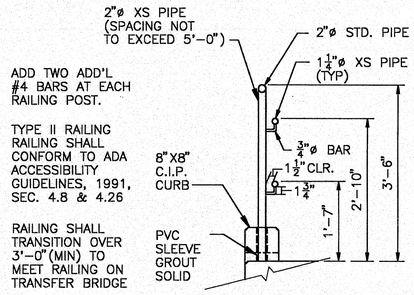
CHAIN RAILING
SCALE: 3/4"=1'-0"



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



ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"



ADD TWO ADD'L #4 BARS AT EACH RAILING POST.

TYPE II RAILING RAILING SHALL CONFORM TO ADA ACCESSIBILITY GUIDELINES, 1991, SEC. 4.8 & 4.26

RAILING SHALL TRANSITION OVER 3'-0"(MIN) TO MEET RAILING ON TRANSFER BRIDGE

RAILING - TYPE II
SCALE: 3/4"=1'-0"

COMMONWEALTH OF MASSACHUSETTS
THOMAS P. DONALD
STRUCTURAL
No. 32753
REGISTERED
PROFESSIONAL ENGINEER

MAINE TEMP. NO. 11-1933

129-175

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

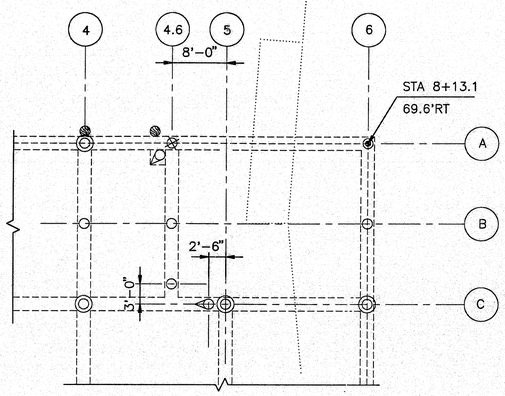
TITLE: SHELTER/MISC DETAILS

CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

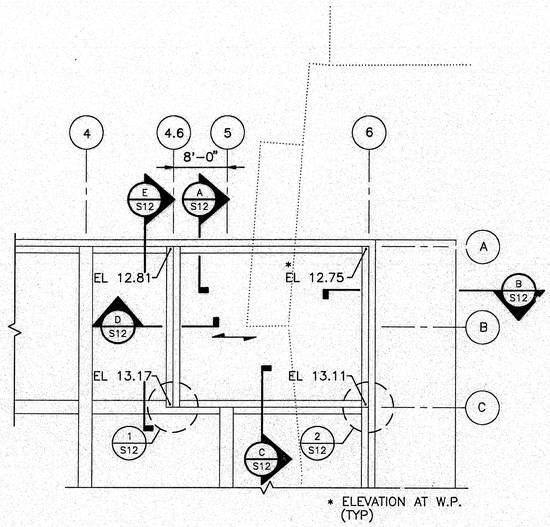
DES: RAL	CHK: TPD	DR: RAL
SCALE: AS NOTED		DATE: 5/7/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICES: P POTTLE

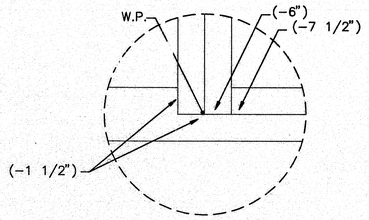
SHEET S11



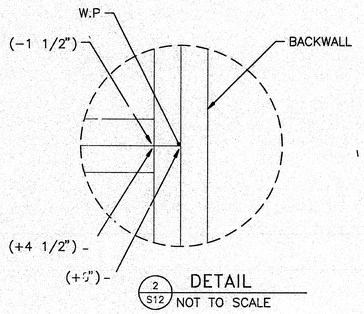
PART PILE PLAN
SCALE: 1" = 10'-0"



PART FRAMING PLAN
SCALE: 1" = 10'-0"



1 S12 DETAIL
NOT TO SCALE



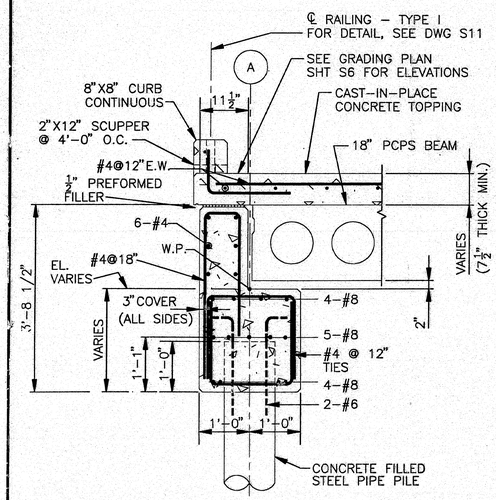
2 S12 DETAIL
NOT TO SCALE

NOTES

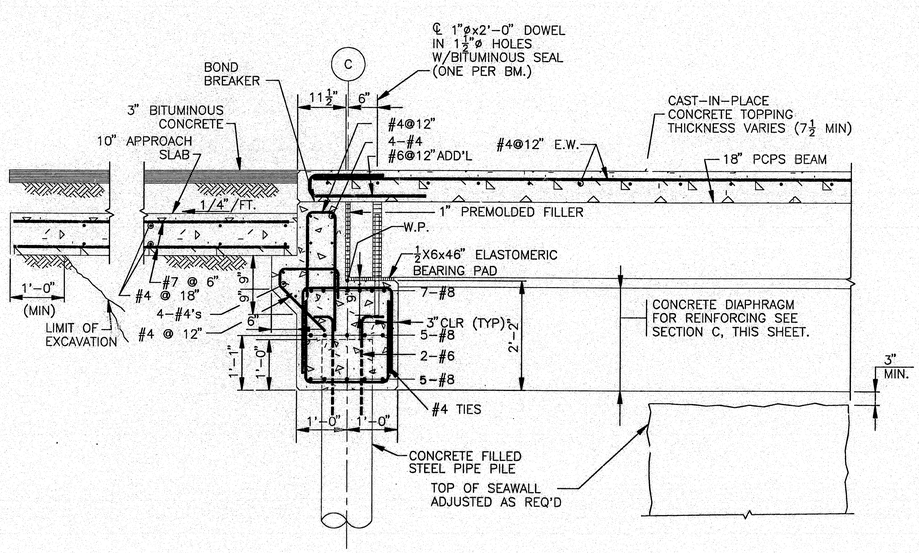
DRAWINGS S12 AND S13 REFLECT REVISED DESIGN DUE TO UNDERGROUND OBSTRUCTIONS ENCOUNTERED BY THE CONTRACTOR DURING PILE DRIVING OPERATIONS. INFORMATION SHOWN ON DRAWINGS S12 AND S13 SHALL SUPERSEDE CONFLICTING INFORMATION GIVEN ON OTHER DRAWINGS.

◄► DENOTES SPAN OF 18 INCH PRESTRESSED BEAM.

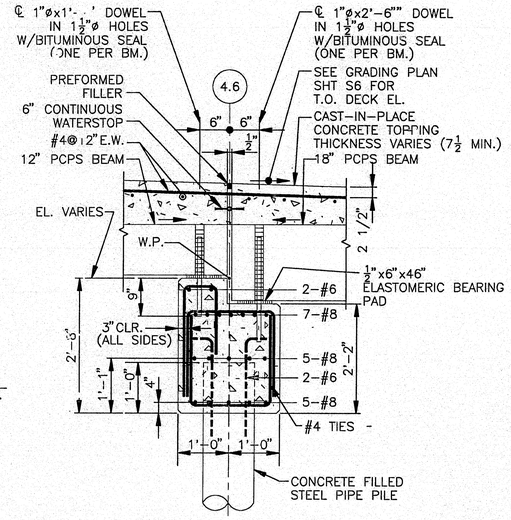
TOP OF DECK ELEVATIONS SHALL BE DETERMINED FROM SHEET S6, GRADING PLAN.



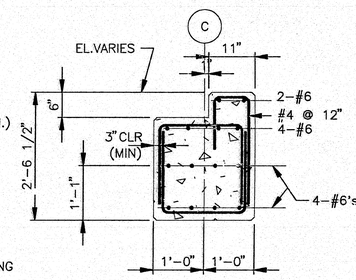
A S12 SECTION
SCALE:3/4"=1'-0"



B S12 SECTION
SCALE:3/4"=1'-0"



D S12 SECTION
SCALE:3/4"=1'-0"



C S12 SECTION
SCALE:3/4"=1'-0"

129-176

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY
1	11/17/93	ISSUE DRAWING	MEG	RAL	TPD

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

TITLE: PIER REDESIGN

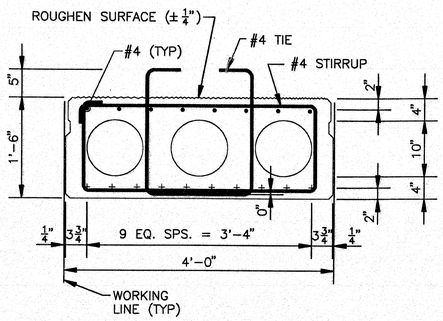
CONSULTANT: TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

DES: RAL	CHK: TPD	DR: MEG
SCALE: AS NOTED		DATE: 11/17/93

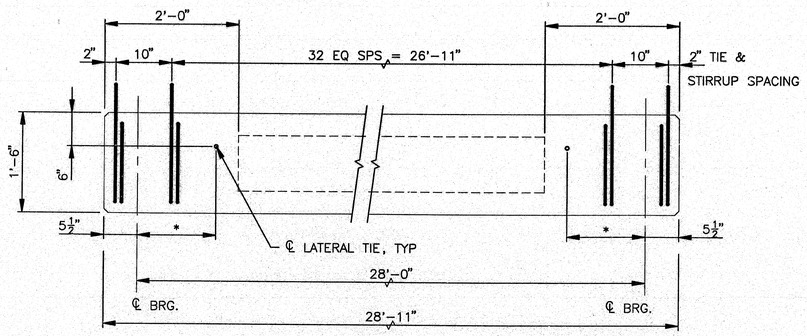
APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P Pottle

SHEET S12

STATE OF MAINE — LAWRENCE A. COTTON No. 6187 — REGISTERED PROFESSIONAL ENGINEER



SECTION
SCALE:1"=1'-0"



ELEVATION
SCALE:1"=1'-0"

* CONTRACTOR TO COORDINATE LOCATION OF LATERAL TIES WITH ADJACENT 12" PCI'S BEAMS.

PRESTRESSED BEAM NOTES

MINIMUM ULTIMATE COMPRESSIVE STRENGTH = 6000PSI

MINIMUM COMPRESSIVE STRENGTH AT TIME OF TRANSFER = 4000 PSI.

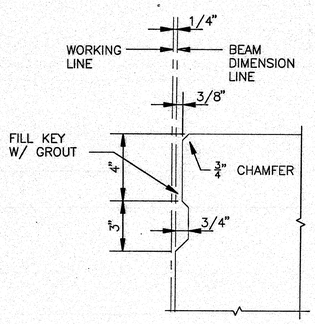
ALL PRESTRESSING STEEL TO BE 1/2" ø UNCOATED SEVEN WIRE STRAND, GRADE 270.

INITIAL PRESTRESS FORCE = 28,920 LBS PER STRAND.

REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, AND SHALL BE EPOXY COATED.

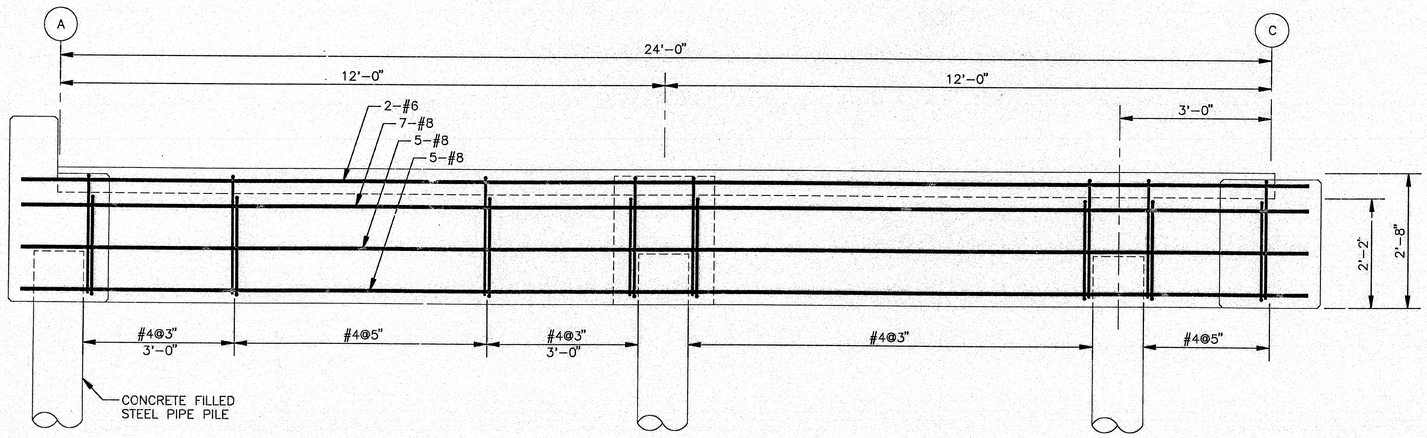
BEARING PADS SHALL BE NEOPRENE, DUROMETER 50.

FOR LATERAL TIE ANCHOR DETAIL, SEE SHEET S10.



KEY DETAIL
SCALE:3"=1'-0"

BEAM



E / S12 PILE CAP ELEVATION
SCALE:3/4"=1'-0"

STATE OF MAINE
LAWRENCE A. CLOUTON
No. 6187
REGISTERED PROFESSIONAL ENGINEER

129-177

REV. NO.	DATE	DESCRIPTION	MADE BY	CKKD. BY	APPD. BY
1	11/17/93	ISSUE DRAWING	MEG	RAL	TPD

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY:
NORTH HAVEN
FERRY TERMINAL

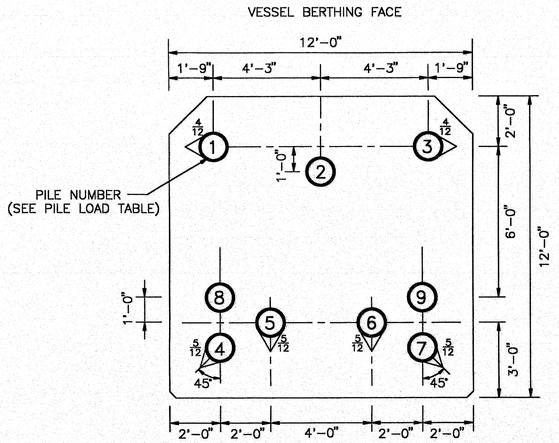
TITLE:
SECTIONS AND DETAILS

CONSULTANT:
TAMS CONSULTANTS, Inc.
ENGINEERS, ARCHITECTS, AND PLANNERS

DES: RAL	CHK: TPD	DR: MEG
SCALE: AS NOTED		DATE: 11/17/93

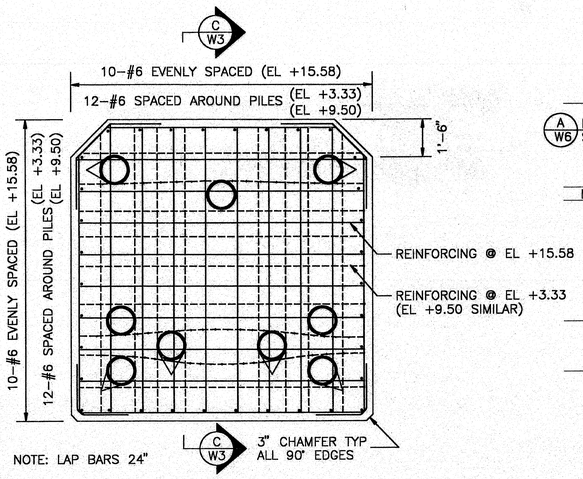
APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P Pottle

SHEET S13

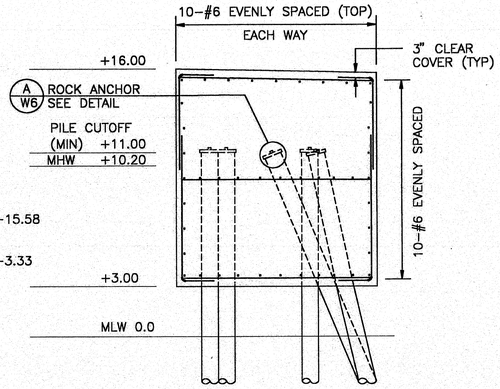


NOTE:
ALL PILES TO HAVE
ROCK ANCHORS
SEE SHEET W6

A/W3 PILE PLAN @ +3.0
SCALE: 3/8 " = 1'-0"



B/W3 REINFORCING PLAN
SCALE: 3/8 " = 1'-0"

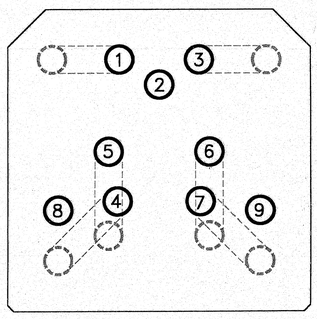


C/W3 REINFORCING SECTION
SCALE: 1/4 " = 1'-0 "

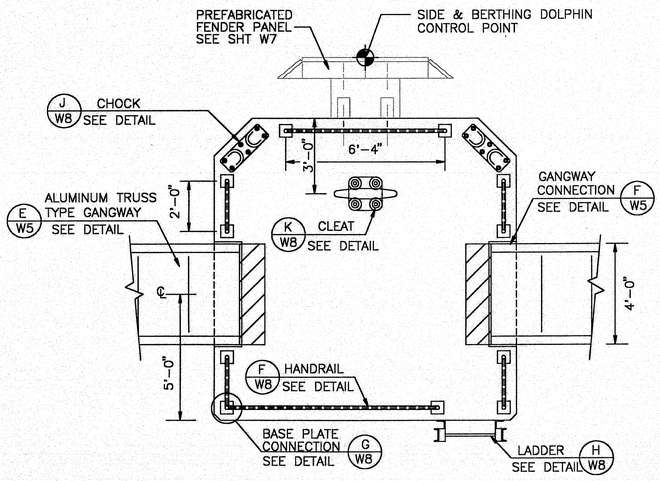
NORTH HAVEN						
PILE No.	PILE DESIGN LOAD	ANCHOR DESIGN LOAD	ANCHOR LOCK-OFF LOAD	PILE DIAMETER	THREADBAR DIAMETER	BONDED LENGTH
	SIDE / BERTHING DOLPHINS					
1	40	20	15	14"	1"	16'
2	40	20	15	14"	1"	16'
3	40	20	15	14"	1"	16'
4	40	20	15	14"	1"	16'
5	80	20	15	14"	1"	16'
6	80	20	15	14"	1"	16'
7	40	20	15	14"	1"	16'
8	40	40	30	14"	1 3/8"	20'
9	40	40	30	14"	1 3/8"	20'

PILE LOAD TABLE
LOADS IN TONS

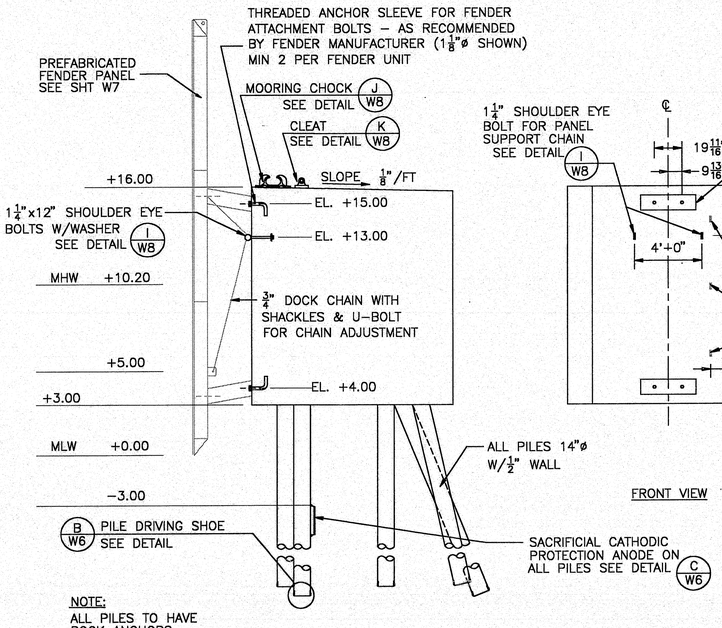
LEGEND:
4/12 : BATTERS 4" HORIZONTAL
12" VERTICAL
14'ø STEEL PILE W/1/2" WALL

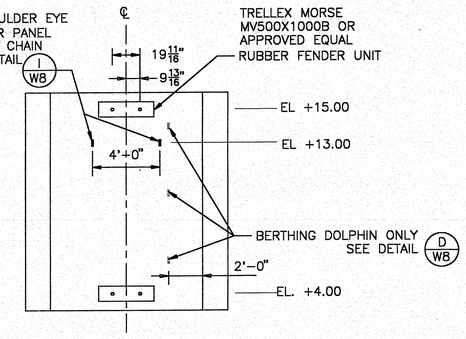


D/W3 PILE PLAN @ EL +11.0
SCALE: 3/8 " = 1'-0"



E/W3 SIDE DOLPHIN-PLAN
SCALE: 3/8 " = 1'-0"
(BERTHING DOLPHIN SIMILAR)





F/W3 SIDE DOLPHIN-ELEVATION
SCALE: 1/4 " = 1'-0 "
(BERTHING DOLPHIN SIMILAR)

129-178

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN
FERRY TERMINAL

TITLE: SIDE/BERTHING DOLPHINS

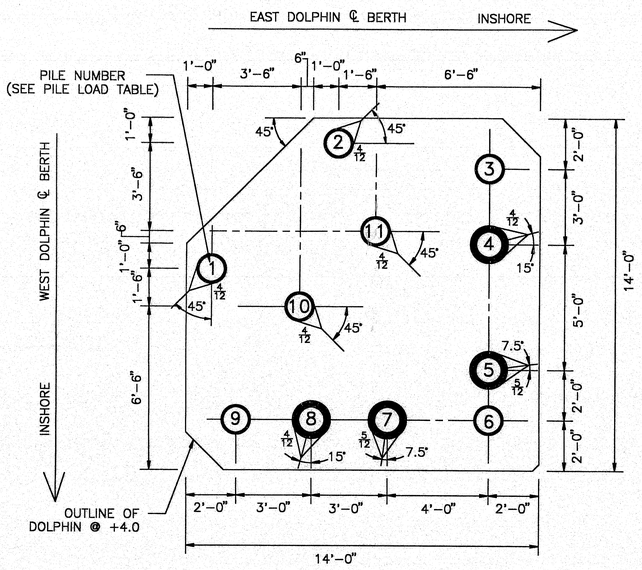
CONSULTANT: BCE Bourne Consulting Engineering
430 Franklin Village Drive, Suite 145, Franklin, MA 02038

DES: RRB	CHK: RRB	DR: BAP
SCALE: AS SHOWN		DATE: 5/5/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICES: P POTTLE

W3

Ronald R. Bourne 7202 REGISTERED PROFESSIONAL ENGINEER STATE OF MAINE



NOTE:
ALL PILES TO HAVE
ROCK ANCHORS
SEE SHEET W6

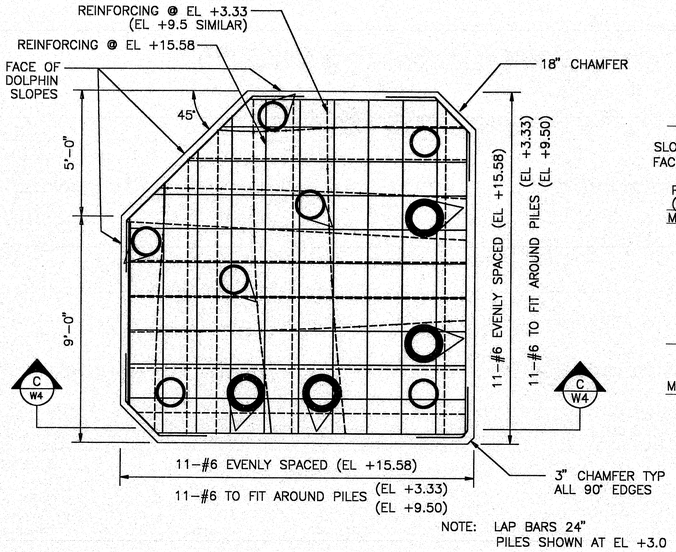
A/W4 PILE PLAN @ +3.0
SCALE: 3/8 " = 1'-0"

LEGEND

4/12 : BATTERS 4" HORIZONTAL 12" VERTICAL

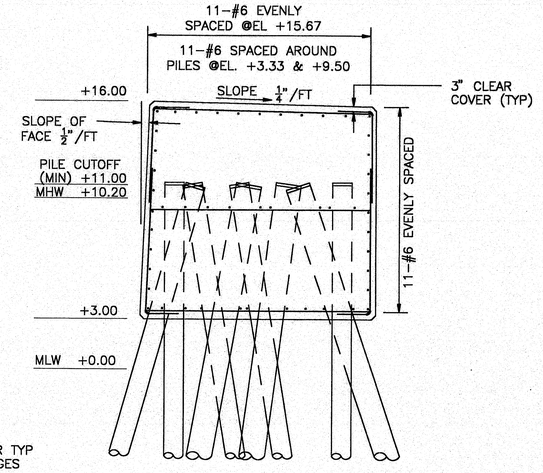
: 14"ø STEEL PILE W/½" WALL

: 18"ø STEEL PILE W/½" WALL



NOTE: LAP BARS 24"
PILES SHOWN AT EL +3.0

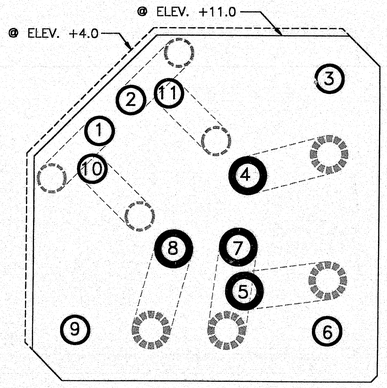
B/W4 REINFORCING PLAN @ ELEV +3.33
SCALE: 3/8 " = 1'-0"



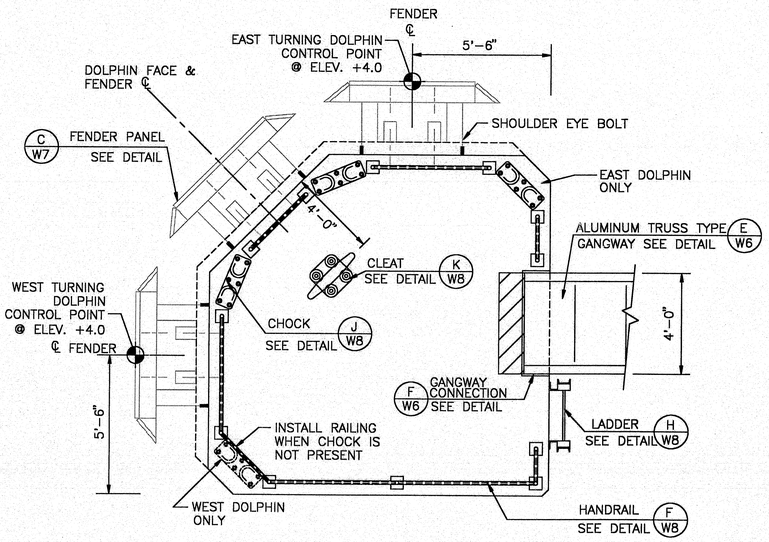
C/W4 REINFORCING – SECTION
SCALE: 1/4" = 1'-0"

PILE LOAD TABLE
LOADS IN TONS

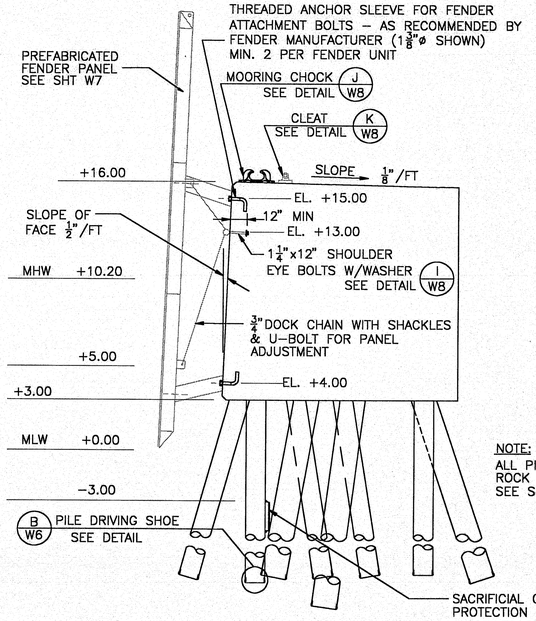
PILE No.	NORTH HAVEN					
	PILE DESIGN LOAD	ANCHOR DESIGN LOAD	ANCHOR LOCK-OFF LOAD	PILE DIAMETER	THREADBAR DIAMETER	BONDED LENGTH
	TURNING DOLPHINS					
1	40	55	41.25	14"	1⅜"	25'
2	40	55	41.25	14"	1⅜"	25'
3	40	40	30	14"	1⅜"	20'
4	80	20	15	18"	1"	16'
5	135	40	30	18"	1⅜"	20'
6	40	20	15	14"	1"	16'
7	135	40	30	18"	1⅜"	20'
8	80	20	15	18"	1"	16'
9	40	40	30	14"	1⅜"	20'
10	80	20	15	14"	1"	16'
11	80	20	15	14"	1"	16'



D/W4 PILE PLAN @ +11.0
SCALE: 3/8 " = 1'-0"

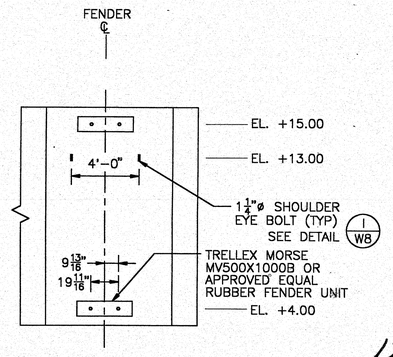


E/W4 EAST TURNING DOLPHIN PLAN
SCALE: 3/8 " = 1'-0"
(WEST TURNING DOLPHIN SIMILAR)



NOTE:
ALL PILES TO HAVE
ROCK ANCHORS
SEE SHEET W6

F/W3 TURNING DOLPHIN–ELEVATION
SCALE: 1/4 " = 1'-0 "



129-179

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY:
NORTH HAVEN
FERRY TERMINAL

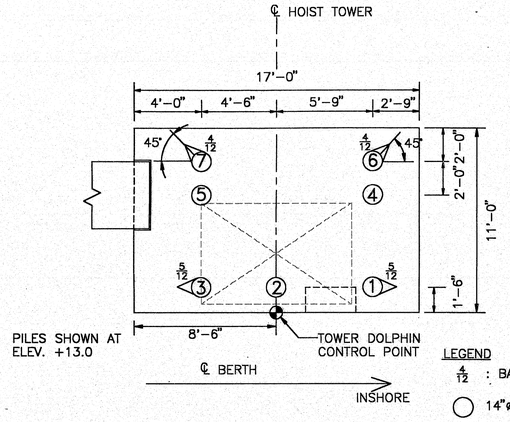
TITLE:
TURNING DOLPHINS

CONSULTANT:
BCE Bourne Consulting Engineering
430 Franklin Village Drive, Suite 145, Franklin, MA 02038

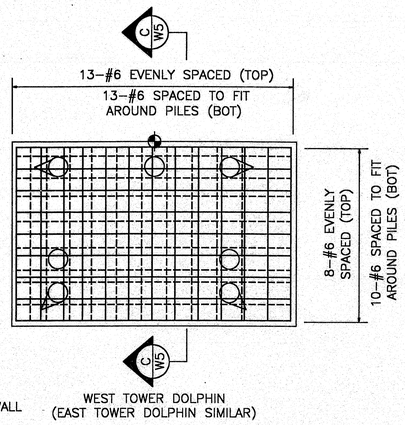
DSN: RRB CHK: RRB DR: BAP
SCALE: AS SHOWN DATE: 5/5/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICES
P POTTLE

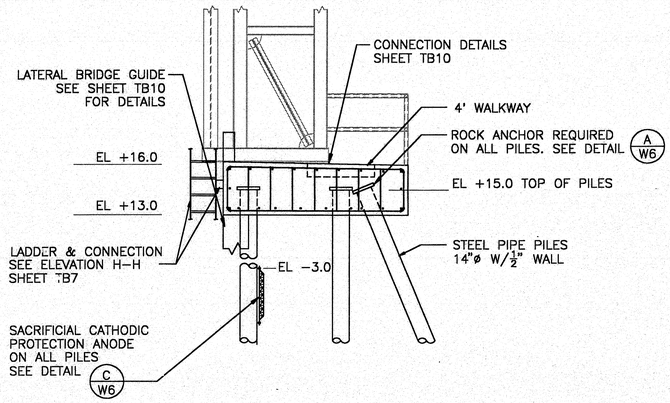
W4



A/W5 WEST (NORTH) TOWER–PILE PLAN
SCALE: 1/4 " = 1'–0"



B/W5 REINFORCING PLAN
SCALE: 1/4 " = 1'–0"

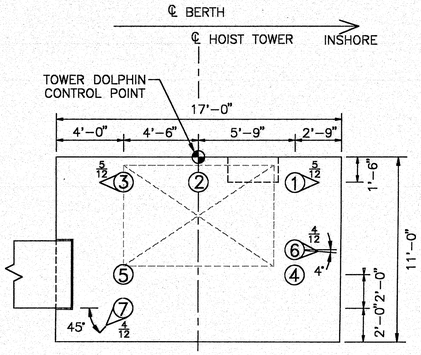


C/W5 REINFORCING SECTION
SCALE: 1/4 " = 1'–0"

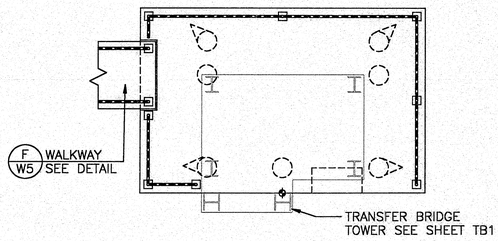
NORTH HAVEN						
PILE No.	PILE DESIGN LOAD	ANCHOR DESIGN LOAD	ANCHOR LOCK–OFF LOAD	PILE DIAMETER	THREADBAR DIAMETER	BONDED LENGTH
	TOWER DOLPHINS					
1	50	20	15	14"	1"	16'
2	50	20	15	14"	1"	16'
3	50	20	15	14"	1"	16'
4	50	20	15	14"	1"	16'
5	50	20	15	14"	1"	16'
6	50	20	15	14"	1"	16'
7	50	20	15	14"	1"	16'

NOTE: ALL PILES TO HAVE ROCK ANCHORS, PILE DRIVING SHOES AND SACRIFICAL CATHODIC PROTECTION ANODES.

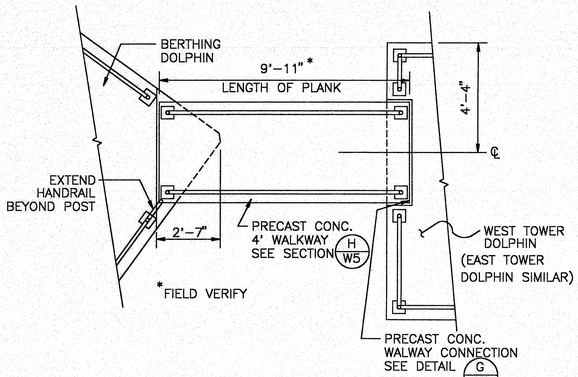
PILE LOAD TABLE
LOADS IN TONS



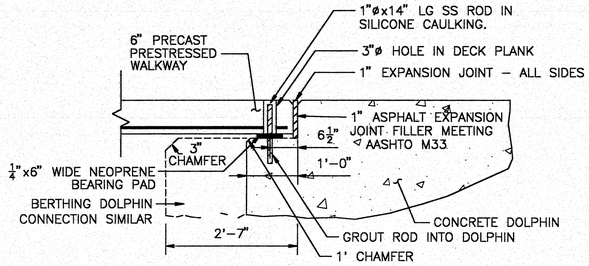
E/W5 EAST (SOUTH) TOWER–PILE PLAN
SCALE: 1/4 " = 1'–0"



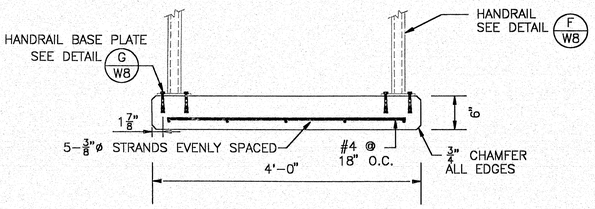
D/W5 TOWER DOLPHIN PLAN
SCALE: 1/4 " = 1'–0"



F/W5 PRECAST WALKWAY PLAN
SCALE: 3/8" = 1'–0"



G/W5 PRECAST WALKWAY CONNECTION–DETAIL
SCALE: 3/4" = 1'–0"



H/W5 PRECAST WALKWAY SECTION
SCALE: 1" = 1'–0"

NOTES:

MINIMUM ULTIMATE COMPRESSIVE STRENGTH = 6000 PSI

MINIMUM COMPRESSIVE STRENGTH AT TIME OF TRANSFER = 4000 PSI.

ALL PRESTRESSING STEEL TO BE ⅜"ø UNCOATED SEVEN–WIRE STRAND, GRADE 250.

INITIAL PRESTRESS FORCE = 12,000 LBS PER STRAND.

129-180

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

TITLE: TOWER DOLPHINS

CONSULTANT: BCE Bourne Consulting Engineering
430 Franklin Village Drive, Suite 145, Franklin, MA 02038

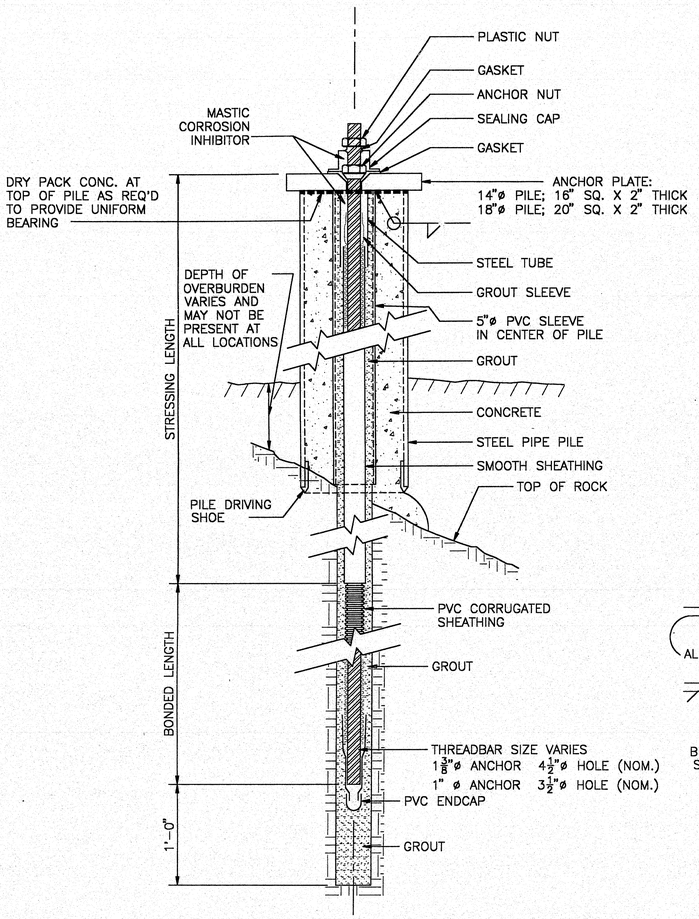
DES: RRB | CHK: RRB | DR: BAP

SCALE: AS SHOWN | DATE: 5/5/93

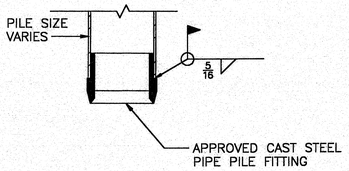
APPROVED BY BUREAU OF TRANSPORTATION SERVICE: P POTTLE

W5

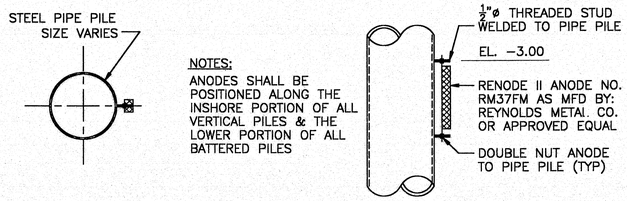
STATE OF MAINE — Ronald R. Bourne 7202 — REGISTERED PROFESSIONAL ENGINEER



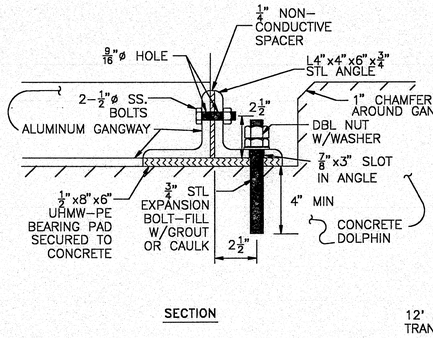
A/W6 ROCK ANCHOR DETAIL
NOT TO SCALE

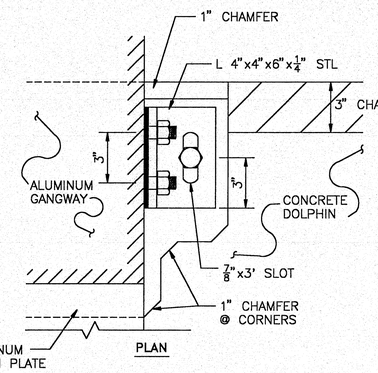


B/W6 PILE DRIVING SHOE
SCALE: 3/4" = 1'-0"

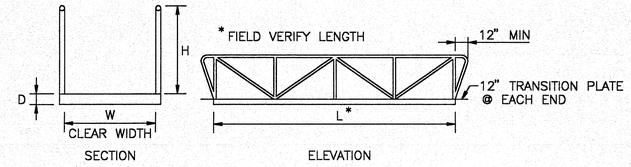


C/W6 CATHODIC PROTECTION-PIPE PILES
SCALE: 3/4" = 1'-0"





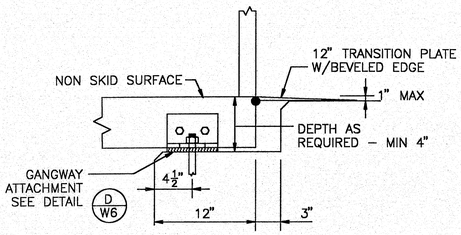
D/W6 GANGWAY ATTACHMENT
SCALE: 3" = 1'-0"



GANGWAY	DIMENSIONS W	H	D	L*
1	42"	42"	4"	46'
2	42"	42"	4"	38.5'
3	42"	42"	4"	22.5'
4	42"	42"	4"	20'

DESIGN REQUIREMENTS
- MIN 100 PSF LIVE LOAD
- TRUSS TYPE CONSTRUCTION
- FIELD VERIFY LENGTHS
- ALUMINUM SHALL BE 6061-T6 MARINE ALLOY
- EXTENDED RAILING MIN 12" BEYOND END OF GANGWAY

E/W6 ALUMINUM TRUSS TYPE GANGWAYS
NOT TO SCALE



F/W6 GANGWAY/DOLPHIN CONNECTION
SCALE: 1 1/2" = 1'-0"

129-181

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

TITLE: PILE DETAILS

CONSULTANT: BCE Bourne Consulting Engineering
430 Franklin Village Drive, Suite 145, Franklin, MA 02038

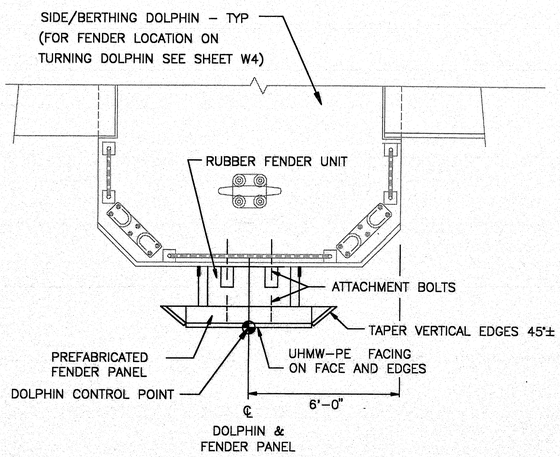
DES: RRB CHK: RRB DR: BAP

SCALE: AS SHOWN DATE: 5/5/93

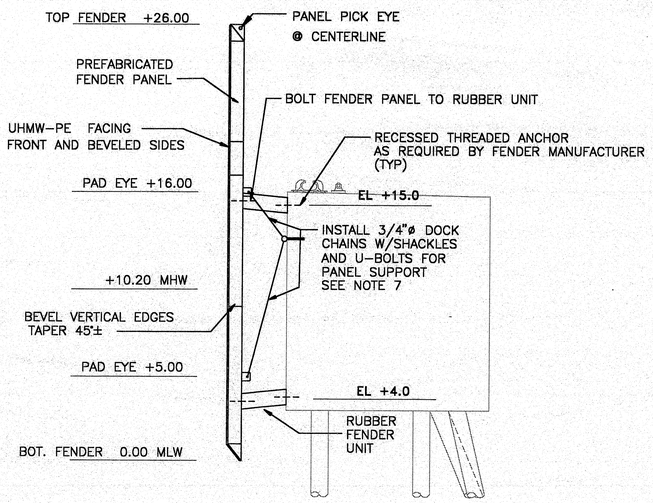
APPROVED BY BUREAU OF TRANSPORTATION SERVICES: P POTTLE

W6

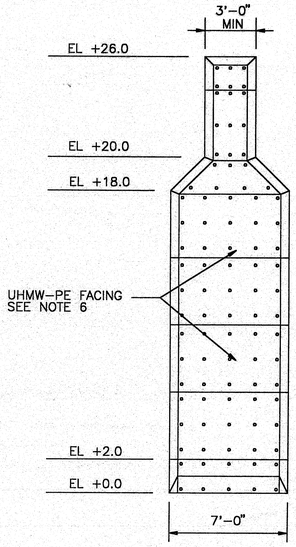
Ronald R. Bourne 7252 REGISTERED PROFESSIONAL ENGINEER

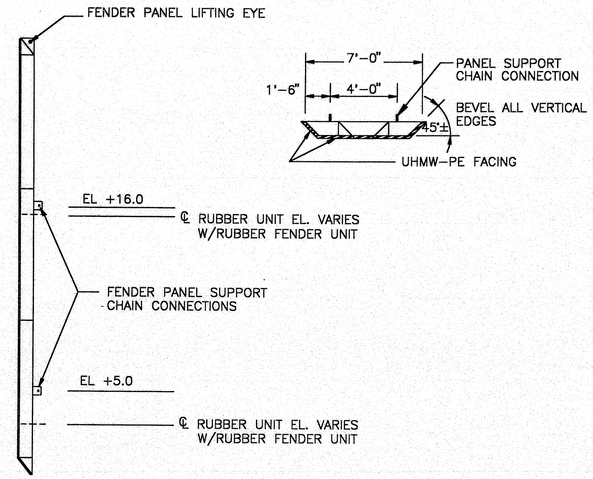


A W7 FENDER PLAN
SCALE: 3/8 " = 1'–0"



B W7 FENDER ATTACHMENT
SCALE: 1/4 " = 1'–0 "





C W7 FENDER PANEL
SCALE: 1/4"=1'–0"

NOTE:

1) STEEL FOR FENDER PANEL SHALL BE STRUCTURAL STEEL CONFORMING TO ASTM A572, GRADE 50 OR STRONGER UNLESS OTHERWISE NOTED.

2) STEEL PANELS SHALL BE CONSTRUCTED IN CONFORMANCE WITH AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STEEL FOR BUILDINGS". PANELS SHALL BE DESIGNED AND CONSTRUCTED AS ORTHOTROPIC DECK STRUCTURES

3) FENDER PANELS SHALL HAVE A MINIMUM STEEL PLATE THICKNESS ON BOTH FRONT AND BACK OF 1/2 INCH. PANELS SHALL BE CLOSED COMPLETELY WITH ALL EXPOSED WELDS BEING WATERTIGHT.

4) PANEL DESIGN LOADING SHALL BE BASED ON A VESSEL CONTACT FACE OF 8 INCHES WIDE (VERTICAL) AND A MAXIMUM OF 2 FEET LONG (HORIZONTAL) CREATING THE FOLLOWING LOADS:

EL + 9.5	160,000 POUNDS
EL + 26.0	50,000 POUNDS
FENDER UNITS	80,000 POUNDS

5) PANELS SHALL BE COATED AS SPECIFIED UNDER SECTION 506, PAINTING STRUCTURAL STEEL.

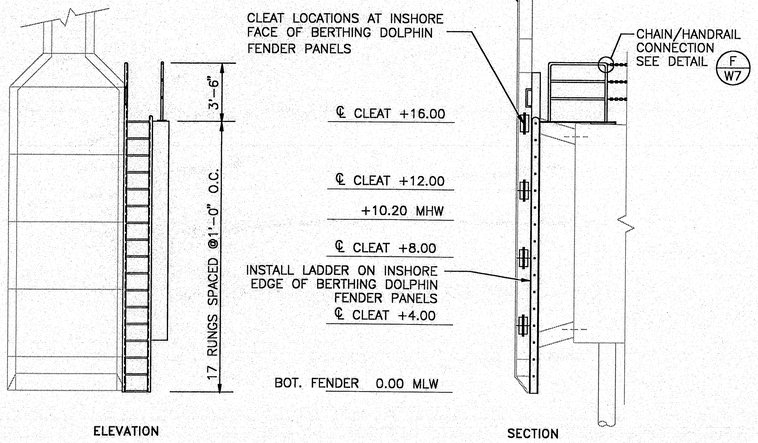
6) PANELS SHALL BE FACED WITH A MINIMUM 2 INCHES OF 2–1/2% UV–STABILIZED ULTRA–HIGH MOLECULAR WEIGHT POLYETHYLENE (UHMW–PE). ALL EDGES SHALL BE CHAMFERED 3/4 INCH. UHMW–PE SHALL BE BOLTED WITH 5/8 INCH DIA. MACHINE BOLTS (OR STUDS) WITH STANDARD WASHERS AND NUTS. BOLTING SHALL MEET THE FOLLOWING CRITERIA:

- BOLTS SHALL BE INSTALLED AT ALL CORNERS
- MAXIMUM BOLT SPACING AT EDGES SHALL BE 18 INCHES
- INTERIOR BOLTS SHALL BE INSTALL FOR A MINIMUM SPACING OF ONE BOLT FOR EVERY 4 SQUARE FEET OF UHMW–PE
- UHMW–PE SHALL HAVE A MINIMUM OF 3/4 INCH WEARING SURFACE OVER BOLT HEADS AND A MINIMUM OF 1/2 INCH UNDER THE WASHER.

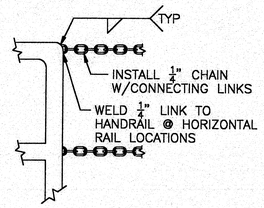
7) FENDER PANEL CHAIN SHALL BE LONG–LINK, ALLOY DOCK CHAIN HAVING THE STRENGTHS LISTED BELOW. SHACKLES SHALL BE ALLOY–STEEL BOLT TYPE ANCHOR SHACKLE HAVING THE MINIMUM SAFE WORKING STRENGTHS LISTED BELOW:

SIZE	CHAIN	SHACKLE
1/2"	15,000 LBS	16,000 LBS
5/8"	35,000 LBS	25,000 LBS
3/4"	55,000 LBS	35,000 LBS

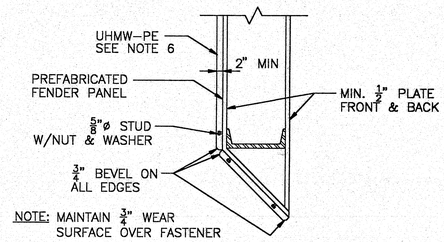
8) U–BOLTS SHALL BE USED FOR PANEL SUPPORT CHAIN ADJUSTMENT AND SHALL CONFORM TO ASTM A193, GRADE 7 AND HAVE PROOF LOADS EQUAL TO OR GREATER THAN THE CHAIN WORKING LOAD.



E W7 ACCESS LADDER
BERTHING DOLPHIN
SCALE: 1/4 " = 1'–0 "



F W7 CHAIN/HANDRAIL CONNECTION
SCALE: 1 1/2" = 1'–0"



D W7 FENDER DETAIL
SCALE: 1 1/2"=1'–0"

129–182

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY:
NORTH HAVEN
FERRY TERMINAL

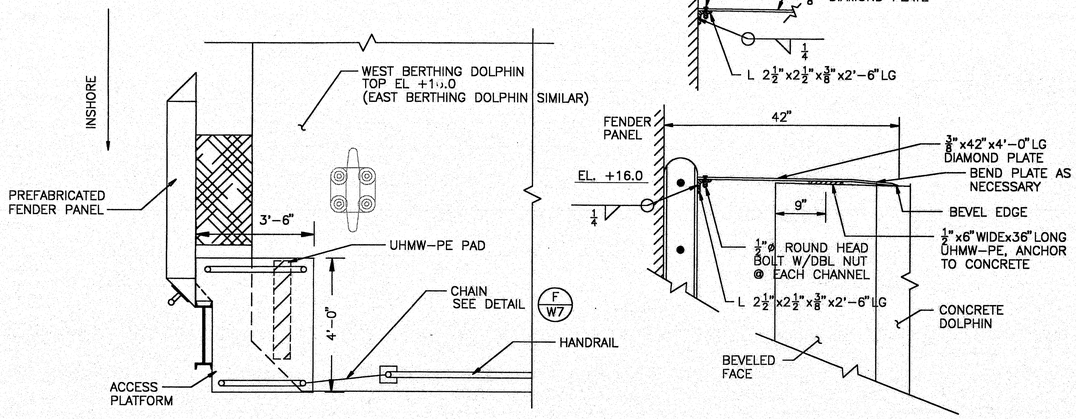
TITLE:
FENDER PANEL

CONSULTANT:
BCE Bourne Consulting Engineering
430 Franklin Village Drive, Suite 145, Franklin, MA 02038

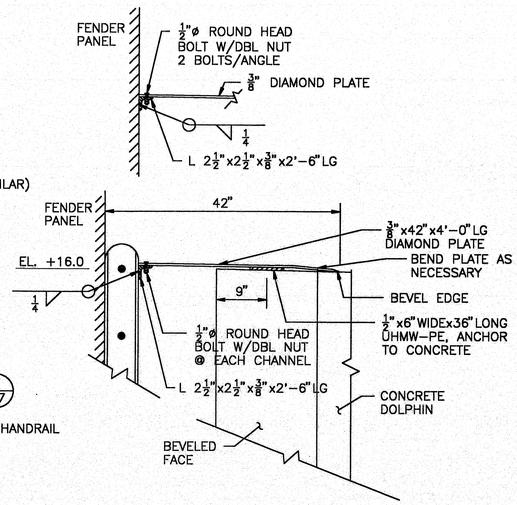
DES: RRB	CHK: RRB	DR: RRB/BAP
SCALE: AS SHOWN		DATE: 5/5/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICE
P POTTLE

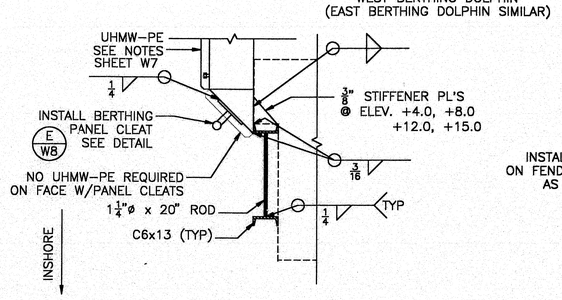
W7



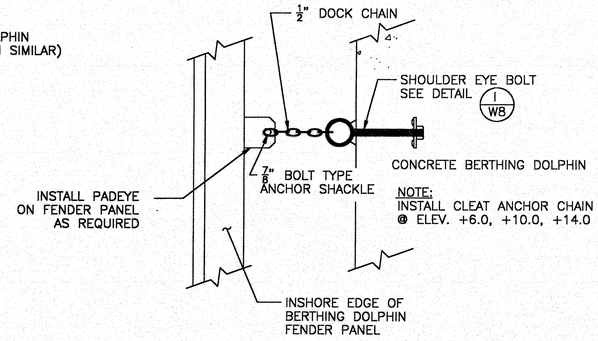
A W8 DOLPHIN ACCESS PLATORM
SCALE: 1/2" = 1'-0"



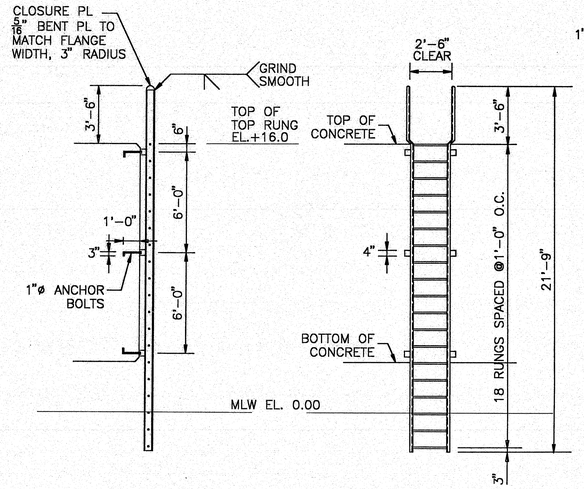
B W8 DOLPHIN ACCESS ATTACHMENT
SCALE: 1" = 1'-0"



C W8 LADDER & CLEAT ATTACHMENT
SCALE: 3/4" = 1'-0"
(FENDER PANEL @ BERTHING DOLPHIN ONLY)

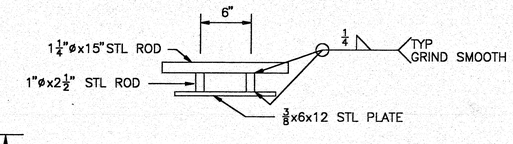


D W8 CLEAT ANCHOR CHAIN DETAIL
SCALE: 1" = 1'-0"

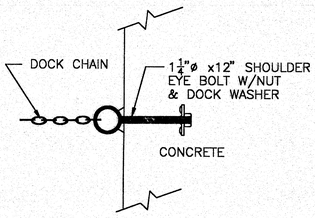


SECTION
SCALE: 1/4" = 1'-0"

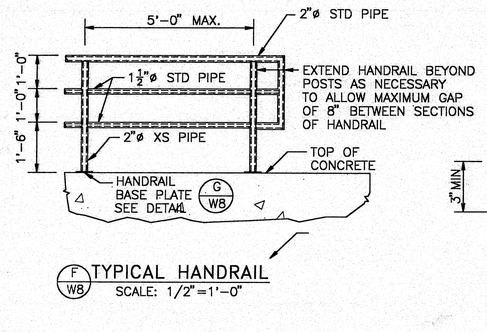
ELEVATION
SCALE: 1/4" = 1'-0"



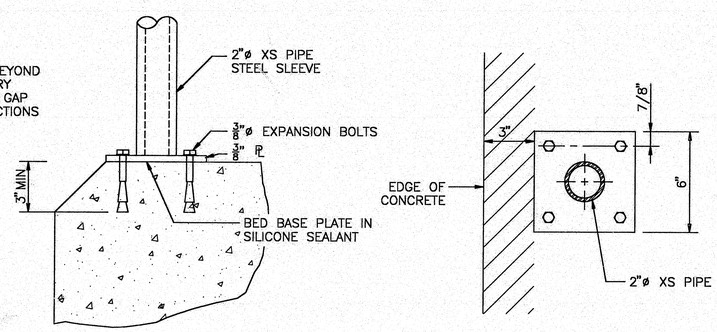
E W8 BERTHING PANEL CLEAT
SCALE: 1½=1'-0"



I W8 EYE BOLT DETAIL
SCALE: 1" = 1'-0"



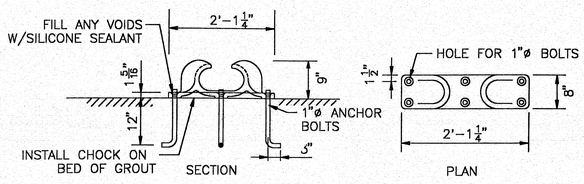
F W8 TYPICAL HANDRAIL
SCALE: 1/2"=1'-0"



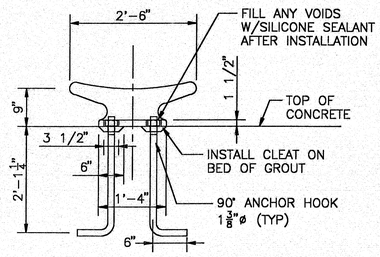
ELEVATION

PLAN

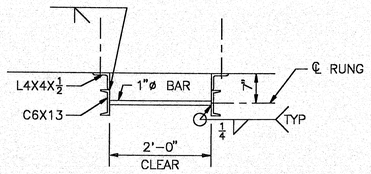
G W8 HANDRAIL BASE PLATE
SCALE: 3" = 1'-0"



J W8 MOORING CHOCK DETAIL
SCALE: 3/4"=1'-0"



K W8 CLEAT DETAIL
SCALE: 3/4"=1'-0"



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

H W8 DOLPHIN LADDER DETAILS

129-183

REV. NO.	DATE	DESCRIPTION	MADE BY	CHKD. BY	APPD. BY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FACILITY: NORTH HAVEN FERRY TERMINAL

TITLE: DOLPHIN DETAILS

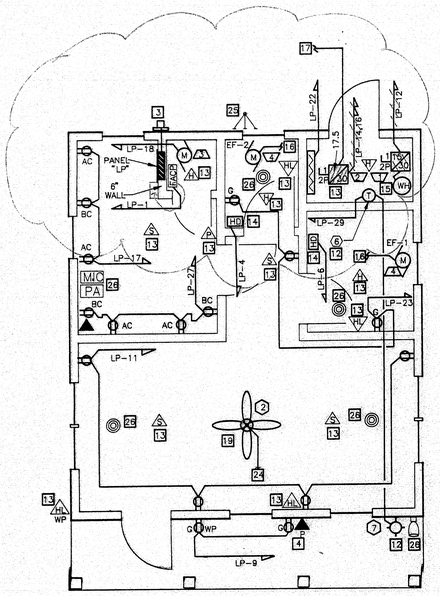
CONSULTANT: BCE Bourne Consulting Engineering
430 Franklin Village Drive, Suite 145, Franklin, MA 02038

DES: RRB	CHK: RRB	DR: BAP
SCALE: AS SHOWN		DATE: 5/5/93

APPROVED BY BUREAU OF TRANSPORTATION SERVICES: P POTTLE

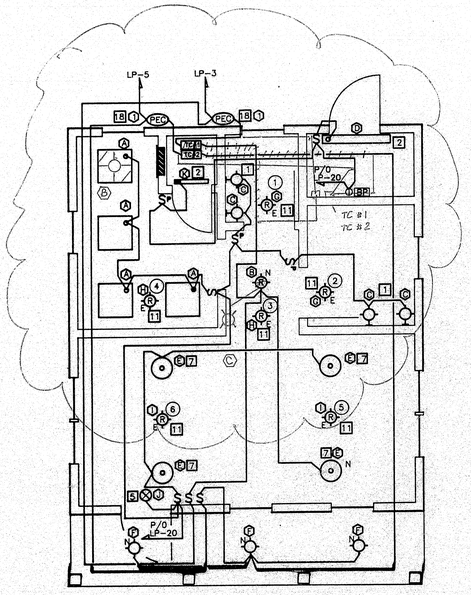
W8

STATE OF MAINE — Ronald R. Bourne 7602 — REGISTERED PROFESSIONAL ENGINEER



POWER AND SIGNAL SYSTEMS

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



LIGHTING

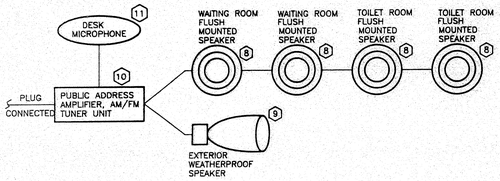
SCALE: 1/4" = 1'-0"

LEGEND

- DUPLEX RECEPTACLE---ABOVE COUNTER
- AC DUPLEX RECEPTACLE---BELOW COUNTER
- BC DUPLEX RECEPTACLE---GFCI TYPE
- G DUPLEX RECEPTACLE---WEATHER PROOF GFCI TYPE
- WP G SINGLE RECEPTACLE OUTLET
- S SINGLE POLE LIGHT SWITCH
- S_P LIGHT SWITCH WITH PILOT LIGHT
- (A) LETTER REFERS TO LUMINAIRE SCHEDULE ITEM
- FLUORESCENT LUMINAIRE
- (R) RECESSED DOWNLIGHT
- WALL MOUNTED LIGHT FIXTURE
- N (R) RECESSED DOWNLIGHT - NIGHT LIGHT - ON CONTINUOUSLY
- SURFACE MOUNTED INCANDESCENT LIGHT FIXTURE
- FIRE ALARM SYSTEM HEAT DETECTOR
- SMOKE DETECTOR
- EP EMERGENCY LIGHTING BATTERY PACK/INVERTER
- E WALL MOUNTED EMERGENCY LIGHT
- AFF ABOVE FINISHED FLOOR
- FACP FIRE ALARM CONTROL PANEL
- HL FIRE ALARM HORN/STROBE UNIT
- WP HL FIRE ALARM HORN/STROBE WEATHERPROOF
- UTILITY METER
- BASEBOARD ELECTRIC RESISTANCE HEATER
- AFG ABOVE FINISHED GRADE
- FA FIRE ALARM SYSTEM---MANUAL PULL STATION
- HD HAND DRIER
- FA FIRE ALARM PULL STATION
- E (R) RECESSED MOUNTED EMERGENCY LIGHT
- P COIN OPERATED TELEPHONE
- (1) NUMBER REFERS TO ITEM ON MATERIAL LIST
- PEC PHOTO ELECTRIC CONTROL SWITCH
- (1) PENDANT MOUNTED LUMINAIRE
- [1] NUMBER REFERS TO CONSTRUCTION NOTE
- EXIT SIGN
- (A) NUMBER REFERS TO ITEM ON EQUIPMENT LOAD SCHEDULE
- (WH) WATER HEATER
- 240 VOLT BRANCH CIRCUIT
- BRANCH CIRCUIT CONTINUED--SEE NOTES
- 30/15 2P FUSED DISCONNECT SWITCH, RATED 30 AMP T FUSED AT 15 AMPS, 2 POLE, NEMA-1
- (M) MOTOR OPERATED EQUIPMENT
- TELEPHONE OUTLET
- JB JUNCTION BOX
- TC#1 TIME CLOCK NUMBER 1
- PA PUBLIC ADDRESS AMPLIFIER, AM/FM TUNER
- FLUSH MOUNTED CEILING SPEAKER UNIT
- EXTERIOR SPEAKER-WEATHERPROOF HORN
- MIC DESK MICROPHONE AND CALL SWITCH
- (1) N PENDANT MOUNTED LUMINAIRE
- P/O PART OF
- (F) FLUORESCENT LUMINAIRE

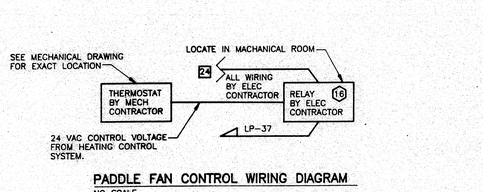
CONSTRUCTION NOTES

1. SEE MIRROR LIGHT MOUNTING DETAIL. VERIFY MIRROR SIZE AND EXACT LOCATION WITH ARCHITECTURAL DETAILS BEFORE ROUGHING-IN ELECTRICAL WORK.
2. WALL MOUNT LIGHT FIXTURE ABOVE DOOR.
3. VERIFY LOCATION OF METER ON SITE ELECTRICAL DRAWINGS BY ENTERPRISE ELECTRIC. IF METER IS NOT LOCATED WHERE SHOWN ON THIS DRAWING, THEN PROVIDE SERVICE ENTRANCE CONDUCTORS FROM METER TO PANELBOARD UNDER FLOOR.
4. VERIFY MOUNTING HEIGHT WITH NEW ENGLAND TELEPHONE BEFORE ROUGHING-IN PAY PHONE RECEPTACLE AND POWER OUTLET. MUST BE HANDICAPPED ACCESSIBLE.
5. EDGE LIT EXIT SIGN HAS RECESSED SELF-CONTAINED BATTERY AND CHARGER. COORDINATE DOOR HEADER CONSTRUCTION TO CENTER EXIT SIGN'S RECESSED BACKBOX. CONNECT TO LINE SIDE OF WAITING AREA LIGHTING BRANCH CIRCUIT.
6. REFER TO ARCHITECT'S REFLECTED CEILING FOR EXACT LOCATION OF ALL LIGHT FIXTURES.
7. REFER TO ARCHITECT'S CONSTRUCTION DETAIL FOR INSTALLATION OF TYPE (E) PENDANT MOUNTED LUMINAIRES.
8. MOUNT SINGLE RECEPTACLE FOR EMERGENCY LIGHTING BATTERY PACK AND BATTERY PACK AT WITH HIGHEST POINT NOT MORE THAN 48" AFF.
9. NOT USED
10. MOUNT THIS LIGHT SWITCH IN PARALLEL WITH NIGHT LIGHT PHOTOCELL FOR OPTIONAL MANUAL "ON" CONTROL OF NIGHT LIGHTS DURING DAYTIME.
11. SEE EMERGENCY LIGHTING WIRING DIAGRAM FOR POWER WIRING DETAILS.
12. SEE ARCHITECTURAL ELEVATION DRAWING FOR LOCATION OF LOW TEMPERATURE ROTATING ALARM BEACON. MOUNT THERMOSTAT AT 48" AFF. SET ALARM TEMPERATURE LEVEL AS DIRECTED BY OWNER.
13. SEE FIRE ALARM RISER DIAGRAM FOR CIRCUITING DETAILS.
14. SEE ARCHITECT'S WALL ELEVATION DETAILS FOR EXACT LOCATION OF HAND DRIER.
15. WATER HEATER IS WALL HUNG IN MECHANICAL ROOM. SEE MECHANICAL DRAWINGS FOR EXACT LOCATION.
16. CONTINUE CIRCUIT TO LIGHT SWITCH SO THAT EXHAUST FAN OPERATES WHEN LIGHT IS "ON".
17. CONTINUE CIRCUIT TO SUBMERSIBLE WELL PUMP. SEE SITE DRAWING FOR EXACT LOCATION.
18. MOUNT PHOTOCELL AT PEAK UNDER SOFFIT. AIM AWAY FROM ARTIFICIAL LIGHT SOURCE.
19. MOUNT CEILING FAN IN ACCORDANCE WITH ARCHITECT'S REFLECTED CEILING PLAN.
20. NOT USED
21. NOT USED
22. NOT USED
23. NOT USED
24. SEE FAN CONTROL WIRING DIAGRAM. CONTINUE WIRING AS SHOWN IN DIAGRAM AND ON FLOOR PLAN DRAWING.
25. INSTALL OWNER'S ANTENNA TRIPOD ON BUILDING SIDE WALL AT PEAK. PROVIDE COAX ANTENNA CABLE, AS SPECIFIED BY THE OWNER, FROM THE ANTENNA TO THE LOCATION OF THE MARINE RADIO.
26. SEE PUBLIC ADDRESS SYSTEM DIAGRAM FOR WIRING DETAIL. INTERCONNECTION BETWEEN SPEAKERS AND AMPLIFIER IS WITH TWO CONDUCTOR AWG #16 CABLE.



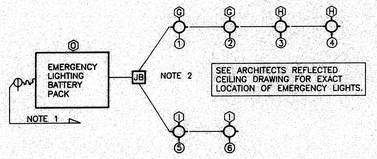
PUBLIC ADDRESS SYSTEM DIAGRAM

NO SCALE



PADDLE FAN CONTROL WIRING DIAGRAM

NO SCALE

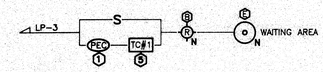


NOTE 1: SINGLE RECEPTACLE IS POWERED FROM SAME CIRCUIT THAT PROVIDES POWER FOR LIGHTING THE WAITING ROOM, OFFICE, CORRIDOR, AND TOILETS.

NOTE 2: ALL CIRCUIT WIRING IS #12/2 W-GND TYPE NMB.

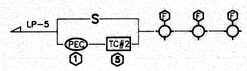
EMERGENCY LIGHTING RISER DIAGRAM

NO SCALE



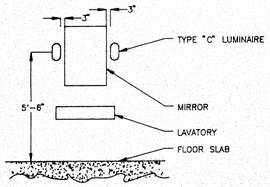
WAITING ROOM NIGHT LIGHTING CONTROL DIAGRAM

NO SCALE



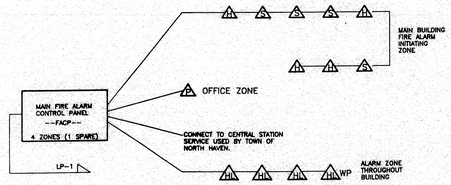
CANOPY NIGHT LIGHTING CONTROL DIAGRAM

NO SCALE



MIRROR LIGHT MOUNTING DETAIL

NO SCALE



FIRE ALARM SYSTEM COMPONENTS

FIRE ALARM CONTROL PANEL: FIRELITE MINISCAN #MS424A

SMOKE DETECTOR: FIRELITE #SD851

STROBE/SOUNDER INTERIOR: FIRELITE #MA/SS-24

STROBE/HORN EXTERIOR: FIRELITE #STH-72-24VDC W/WB BACKBOX

FIRE ALARM SYSTEM PART NUMBERS ARE BASED UPON FIRELITE AND EQUIVALENT COMPONENTS OF OTHER MANUFACTURER'S WILL BE REVIEWED FOR APPROVAL AND ACCEPTED IF EQUIVALENT.

FIRE ALARM SYSTEM RISER DIAGRAM

NO SCALE

AS BUILT DRAWINGS
CONTRACTOR: PROCK MARINE CO.
BY: STEPHEN DURRELL Date: 8-29-94
APPROVED MDOT:
Date:

STATE OF MAINE RALPH F. SWEET 2803 REGISTERED PROFESSIONAL ENGINEER

129-184

filename: ERRYNE1

REVISIONS

MAINE STATE FERRY SYSTEM
NORTH HAVEN
NEW TERMINAL FACILITY

TEAS FEELY AND HINGSTON
100 COMMERCIAL STREET
PORTLAND, MAINE 04101
ARCHITECTURE + PLANNING

CIVIL ENGINEERING
TEC ASSOCIATES

STRUCTURAL ENGINEERING
PINKHAM & GREER

MECHANICAL ENGINEERING
BENNETT ENGINEERING

ELECTRICAL ENGINEERING
ELECTRICAL DESIGN CONSULTANTS

APPROVED BY BUREAU OF TRANSPORTATION SERVICES
P. POTTLE

DATE	DRAWN
	ACAD
SCALE	CHECKED
AS NOTED	RFS
MDOT PROJ. #	TFK PROJ. #
	9216-N

DRAWING TITLE
LIGHTING / POWER PLANS, DIAGRAMS & CONST. NOTES

DRAWING NUMBER
E-1

PANELBOARD
V. Ø W. DATE:

FED FROM PANEL

CKT	LOAD DESCRIPTION	CKT	LOAD DESCRIPTION
1	Fire Alarm Control (lock)	2	Spare
3	Night Lights-waiting area	4	Hand Drier
5	Night Lights-canopy	6	Hand Drier
7	Spare	8	Spare
9	Exterior Recept-pay phone	10	Lights-storage,mechan.
11	Receptacle-waiting area	12	Water Heater-toilet
13	Utility Rm Recept	14	Electric Heat
15	Spare	16	
17	Recept-office	18	Furnace/Blower
19	Spare	20	Public Area Lighting
21	Spare	22	Spare
23	Recept-toilets,corr	24	Prkng Lghts (timed off)
25	Spare	26	
27	Office Recepts	28	Wlkwy Lghts (timed off)
29	Low Temperature Alarm	30	Prkng Lghts(on all nght)
31	Spare	32	
33	Spare	34	Spare
35	Spare	36	Spare
37	Waiting Rm Paddel Fan	38	Spare
39	Spare	40	Spare
41		42	

MADE IN U.S.A. SQUARE D COMPANY B80031-15801

MATERIAL SCHEDULE

ITEM	MANUFACTURER	CATALOG NUMBER	
①	PARAGON	CW-201-00	PHOTOELECTRIC LIGHT SWITCH
②	HUNTER	25606-ALL WHITE, SWIVEL, STEM	CEILING MOUNTED PADDLE FAN, WHITE, CUSTOM STEM LENGTH, SWIVEL TYPE SUPPORT CANOPY
③	SQUARE D	3130-D221N	30 AMP, 2-POLE, FUSIBLE DISCONNECT SWITCH
④	SQUARE D	NQOD42L225CU,MH50,MHC50F	PANELBOARD, 200 AMP MCB, 42 CKT, SINGLE PHASE, THREE WIRE, COPPER BUS, 22,000 AIC
⑤	PARAGON	EC-11-120	24-HOUR, SINGLE-CHANNEL, ELECTRONIC TIME CONTROL, 15 AMP, SPDT, 275 HR CARRYOVER
⑥	CHROMALOX	WR-80	LOW TEMPERATURE ALARM THERMOSTAT, 20-80 DEGREES
⑦	EDWARDS	52-B	LEW TEMPERATURE ALARM ROTATING BEACON, BLUE GLOBE, ON 1/2" ELBOW FOR WALL MOUNTING
⑧	GRANGER	5H740	FLUSH MOUNTED CEILING SPEAKER, WHITE BAFFLE, VOLUME CONTROL
⑨	GRANGER	5H101 PAINTED WHITE	EXTERIOR RATED, WEATHER PROOF HORN SPEAKER WITH WALL MOUNTING BRACKET WITH LOCK
⑩	GRANGER	5H516	PUBLIC ADDRESS AMPLIFIER, 40 WATTS, AM/FM TUNER AND ANTENNA
⑪	GRANGER	5H452	MICROPHONE WITH DESK STAND AND CALL SWITCH FOR PA SYSTEM
⑫	NOT USED		
⑬	NOT USED		
⑭	NOT USED		
⑮	NOT USED		
⑯	SQUARE D	8911-DPSG12V14--SP2R-SC2	PADDLE FAN MOTOR STARTER WITH OVERLOAD HEATERS, H-O-A SWITCH AND PILOT LIGHT

EQUIPMENT LOAD SCHEDULE

ITEM	EQUIPMENT	VOLTS	PHASE	KW	FLA	MCA	DISC SW	FEEDER CIRCUIT SIZE	BRANCH CIRCUIT SIZE
/1\	WATER HEATER	120	1	1.4	11.3	14.1	③	#12/2 W-GND TYPE NMB	#12/2 W-GND TYPE NMB
/2\	WELL PUMP	240	1	2HP	12.0	15.0	③	3-#10 IN 1/2" EMT	3-#10, IN 1/2" EMT/PVC
/3\	FURANCE	120	1	.5HP	12.5	16	–	–	#12/2 W-GND TYPE NMB
/4\	EXHAUST FAN	120	1	.1	1.0	1.3	–	#12/2 W-GND TYPE NMB	#12/2 W-GND TYPE NMB
/5\	HAND DRIER	120	1	1.8	20		–	#12/2 W-GND TYPE NMB	#12/2 W-GND TYPE NMB
/6\									
/7\									
/8\									
/10\									
/11\									

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE	LAMPS				NOTES
					QUANTITY	WATTS	COLOR	TYPE	
Ⓐ	LITHONIA	2PM0GB-3CF40-12LS-120ES	RECESSED 2X2 PARABOLIC LOUVERED TROFFER WITH 3-CF40 TYPE TT5 LAMPS.	120	3	40TT5	3500K	FLUOR.	1
Ⓑ	LIGHTOLIER	8056CL-726H120 (WHITE)	RECESSED DOWNLIGHT, 7" OPENING, WHITE ALZAK CONE, HIGH POWER FACTOR BALLAST	120	2	26W-Q	3500K	FLUOR.	1
Ⓒ	BEGA	2888-WHITE	SURFACE MOUNTED MIRROR SIDE LIGHTS	120	1	60	A-19	INCAN.	
Ⓓ	LITHONIA	C240-120-ES-WG9	SURVACE MOUNTED 4"X48" BARE LAMP STRIP LIGHT WITH WIRE GUARD	120	2	34	3500K	FLUOR.	1
Ⓔ	HOLOPHANE	CL2-35-CS-L-1-H-P	PENDANT MOUNTED, GLASS SHADE, WITH CUSTOM STEM LENGTH AND SWIVEL HANGER	120	1	150	A-TYPE	INCAN.	
Ⓕ	BEGA	2778 WHITE	SURFACE MOUNTED, DAMP LOCATION, WHITE, WITH CAGE GUARD	120	1	60	A-19	INCAN.	
Ⓖ	EMERGI-LITE	EF-13-24VDC-9W (WHITE)	TOILET ROOM, FLUSH MOUNTED EMERGENCY LIGHTING UNIT	24VDC	1	9	SUPPLIED	INCAN.	
Ⓗ	EMERGI-LITE	EF-15-24VDC-II-80X80 (WHITE)	WAITING AREA, FLUSH MOUNTED, GIMBAL TYPE EMERGENCY LIGHT UNIT, LOW CEILING	24VDC	1	9	SUPPLIED	HIT	
Ⓘ	EMERGI-LITE	EF-15-24VDC-LI-80X80 (WHITE)	WAITING AREA, FLUSH MOUNTED, GIMBAL TYPE EMERGENCY LIGHT UNIT, HIGH CEILING	24VDC	1	18	SUPPLIED	HIT	
Ⓙ	EMERGI-LITE	SNZ41-RC-120-HC	EXIT SIGN, EDGE-LIT, WALL MOUNT, SINGLE FACE, RED LETTERS, CLEAR BACKGROUND, SELF POWERED WITH NI-CAD BATTERIES W/ HC SYMBOL	120	2	8	STD	FLUOR.	1
Ⓚ	LITHONIA	C220-120-WG9	SURFACE MOUNTED, 4"X24" BARE LAMP STRIP LIGHT WITH WIRE GUARD CUT TO 24" IN THE FIELD	120	2	20	3500K	FLUOR.	1
Ⓛ	NOT USED								
Ⓜ	NOT USED								
Ⓝ	NOT USED								
Ⓞ	EMERGI-LITE	24-LSE-110-1 W/WP-3	EMERGENCY LIGHTING BATTERY PACK, LONG LIFE, NO MAINTENANCE, 110 WATT OUTPUT WITH MOUNTING SHELF	24VDC	–	–	–	–	
Ⓟ									
Ⓠ									
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NOTE 1: FLUORESCENT LAMPS SHALL BE MANUFACTURERED BY SYLVANIA OR PHILLIPS.

GENERAL NOTES

1 ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE IN EFFECT AT THE TIME THE BUILDING PERMIT IS ISSUED.

2 THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER TRADES.

3 THE ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT ELECTRICAL CONNECTION POINT FOR EQUIPMENT OF OTHER TRADES WITH THOSE TRADES BEFORE ROUGHING-IN ELECTRICAL WORK.

4 ALL ELECTRICAL WORK SHOWN WITHOUT DIMENSIONS IS SHOWN DIAGRAMMATICALLY AND EXACT LOCATIONS ARE TO BE DETERMINED IN THE FIELD.

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AS BUILT DRAWINGS
CONTRACTOR: PROCK MARINE CO.
BY: STEPHEN DURRELL DATE 8-29-94
APPROVED MDOT: DATE:

STATE OF MAINE · RALPH F. SWEET 7803 · REGISTERED PROFESSIONAL ENGINEER

129-185

filename: FERRYNE2

REVISIONS

MAINE STATE FERRY SYSTEM
NORTH HAVEN
NEW TERMINAL FACILITY

TEAS FEELY AND HINGSTON
100 COMMERCIAL STREET
PORTLAND, MAINE 04101
ARCHITECTURE - PLANNING

CIVIL ENGINEERING
TEC ASSOCIATES
STRUCTURAL ENGINEERING
PINKHAM & GREER
MECHANICAL ENGINEERING
BENNETT ENGINEERING
ELECTRICAL ENGINEERING
ELECTRICAL DESIGN CONSULTANTS

APPROVED BY BUREAU OF TRANSPORTATION SERVICES
P. POTTLE

DATE | DRAWN: KAO
SCALE: AS NOTED | CHECKED: P.F.S.
MDOT PROJ. # | TFH PROJ. # 9216

DRAWING TITLE: ELECTRICAL SCHED. & GENERAL NOTES

DRAWING NUMBER: E-2

④ PANEL "LP" — PANEL SCHEDULE

VOLTAGE: 120/240 | BUS: 200 | AIC: 22,000 AMPS | CONNECTED KVA:
PHASE: SINGLE | MLO: --- | CKTS: 40 | DEMAND KVA:
WIRE: THREE | MCB: 200 | MOUNTING: FLUSH

CKT.BRKR.				CIRCUIT KVA LOAD										
CKT #	AMP SIZE	POLE	Ø	LIGHTING A	LIGHTING B	RECEPTACLES A	RECEPTACLES B	POWER/HEAT A	POWER/HEAT B	MISC. A	MISC. B	BRANCH CIRCUIT DESCRIPTION
1	20	1	A							.1		FIRE ALARM CONTROL (LOCK)
3	20	1	B	.25								NIGHT LIGHTS–WAITING AREA
5	20	1	A	.18								NIGHT LIGHTS–CANOPY
7	20	1	B									SPARE
9	20	1	A			.18						EXTERIOR RECEP, PAY PHONE
11	20	1	B				.9					RECEPTACLE–WAITING AREA
13	20	1	A									SPARE
15	20	1	B									SPARE
17	20	1	A			.54						RECEPTACLE–OFFICE
19	20	1	B									SPARE
21	20	1	A									SPARE
23	20	1	B				.54					RECEPTACLE–TOILETS, CORR.
25	20	1	A									SPARE
27	20	1	B				.36					OFFICE RECEPTACLES
29	20	1	A							.1		LOW TEMPERATURE ALARM
31	20	1	B									SPARE
33	20	1	A									SPARE
35	20	1	B									SPARE
37	15	1	A									WAITING ROOM PADDEL FAN
39	20	1	B									SPARE
2	20	1	A									SPARE
4	20	1	B							1.8		HAND DRIER
6	20	1	A							1.8		HAND DRIER
8	20	1	B									SPARE
10	20	1	A	.3								LIGHTS–STORAGE, MECHANICAL
12	20	1	B							1.4		WATER HEATER–TOILET
14	25	2	A							1.4		WELL PUMP 2 HP
16	↓	↓	B							1.4		↓
18	20	1	A							1.5		FURNACE/BLOWER
20	20	1	B	1.5								PUBLIC AREA LIGHTING
22	20	1	A							.8		MECH. RM. HEATER
24	20	2	B	1.1								PARKING LIGHTS (TIMED OFF)
26	↓	↓	A	1.1								↓
28	20	1	B	.6								WALKWAY BOLLARDS (TIMED OFF)
30	20	2	A	.4								PARKING LIGHTS (ON-ALL NIGHT)
32	↓	↓	B	.4								↓
34	20	1	A									SPARE
36	20	1	B									SPARE
38	20	1	A									SPARE
40	20	1	B									SPARE
CONNECTED TOTAL												NOTES:
DEMAND				100%		70%		80%				
DEMAND TOTAL												

G=GFCI TYPE CIRCUIT BREAKER

MATERIAL SCHEDULE

ITEM	MANUFACTURER	CATALOG NUMBER	
①	PARAGON	CW–201–00	PHOTOELECTRIC LIGHT SWITCH
②	HUNTER	25605–ALL WHITE, SWIVEL, STEM	CEILING MOUNTED PADDLE FAN, WHITE, CUSTOM STEM LENGTH, SWIVEL TYPE SUPPORT CANOPY
③	SQUARE D	3130–D221N	30 AMP, 2–POLE, FUSIBLE DISCONNECT SWITCH
④	SQUARE D	NQOD42L225CU,MH50,MHC50F	PANELBOARD, 200 AMP MCB, 42 CKT, SINGLE PHASE, THREE WIRE, COPPER BUS, 22,000 AIC
⑤	PARAGON	EC–11–120	24–HOUR, SINGLE–CHANNEL, ELECTRONIC TIME CONTROL, 15 AMP, SPDT, 275 HR CARRYOVER
⑥	CHROMALOX	WR–80	LOW TEMPERATURE ALARM THERMOSTAT, 20–80 DEGREES
⑦	EDWARDS	52–8	LEW TEMPERATURE ALARM ROTATING BEACON, BLUE GLOBE, ON 1/2" ELBOW FOR WALL MOUNTING
⑧	GRANGER	5H740	FLUSH MOUNTED CEILING SPEAKER, WHITE BAFFLE, VOLUME CONTROL
⑨	GRANGER	5H101 PAINTED WHITE	EXTERIOR RATED, WEATHER PROOF HORN SPEAKER WITH WALL MOUNTING BRACKET WITH LOCK
⑩	GRANGER	5H516	PUBLIC ADDRESS AMPLIFIER, 40 WATTS, AM/FM TUNER AND ANTENNA
⑪	GRANGER	5H452	MICROPHONE WITH DESK STAND AND CALL SWITCH FOR PA SYSTEM
⑫	NOT USED		
⑬	NOT USED		
⑭	NOT USED		
⑮	NOT USED		
⑯	SQUARE D	8911–DPSG12V14––SP2R–SC2	PADDLE FAN MOTOR STARTER WITH OVERLOAD HEATERS, H–O–A SWITCH AND PILOT LIGHT

EQUIPMENT LOAD SCHEDULE

ITEM	EQUIPMENT	VOLTS	PHASE	KW	FLA	MCA	DISC SW	FEEDER CIRCUIT SIZE	BRANCH CIRCUIT SIZE
1	WATER HEATER	120	1	1.4	11.3	14.1	③	#12/2 W–GND TYPE NMB	#12/2 W–GND TYPE NMB
2	WELL PUMP	240	1	2HP	12.0	15.0	③	3–#10, IN 1/2" EMT	3–#10, IN 1/2" EMT/PVC
3	FURANCE	120	1	.5HP	12.5	16	--	--	#12/2 W–GND TYPE NMB
4	EXHAUST FAN	120	1	.1	1.0	1.3	--	#12/2 W–GND TYPE NMB	#12/2 W–GND TYPE NMB
5	HAND DRIER	120	1	1.8	20		--	#12/2 W–GND TYPE NMB	#12/2 W–GND TYPE NMB
6									
7									
8									
9									
10									
11									

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE	LAMPS QUANTITY	LAMPS WATTS	LAMPS COLOR	LAMPS TYPE	NOTES
Ⓐ	LITHONIA	2PM0GB–3CF40–12LS–120ES	RECESSED 2X2 PARABOLIC LOUVERED TROFFER WITH 3–CF40 TYPE TT5 LAMPS.	120	3	40TT5	3500K	FLUOR.	1
Ⓑ	LIGHTOLIER	8056CL–726H120 (WHITE)	RECESSED DOWNLIGHT, 7" OPENING, WHITE ALZAK CONE, HIGH POWER FACTOR BALLAST	120	2	26W–Q	3500K	FLUOR.	1
Ⓒ	BEGA	2888–WHITE	SURFACE MOUNTED MIRROR SIDE LIGHTS	120	1	60	A–19	INCAN.	
Ⓓ	LITHONIA	C240–120–ES–W09	SURVACE MOUNTED 4"X48" BARE LAMP STRIP LIGHT WITH WIRE GUARD	120	2	34	3500K	FLUOR.	1
Ⓔ	HOLOPHANE	CL2–35–CS–L–1–H–P	PENDANT MOUNTED, GLASS SHADE, WITH CUSTOM STEM LENGTH AND SWIVEL HANGER	120	1	150	A–TYPE	INCAN.	
Ⓕ	BEGA	2778 WHITE	SURFACE MOUNTED, DAMP LOCATION, WHITE, WITH CAGE GUARD	120	1	60	A–19	INCAN.	
Ⓖ	EMERGI–LITE	EF–13–24VDC–9W (WHITE)	TOILET ROOM, FLUSH MOUNTED EMERGENCY LIGHTING UNIT	24VDC	1	9	SUPPLIED	INCAN.	
Ⓗ	EMERGI–LITE	EF–15–24VDC–II–80X80 (WHITE)	WAITING AREA, FLUSH MOUNTED, GIMBAL TYPE EMERGENCY LIGHT UNIT, LOW CEILING	24VDC	1	9	SUPPLIED	HIT	
Ⓘ	EMERGI–LITE	EF–15–24VDC–IJ–80X80 (WHITE)	WAITING AREA, FLUSH MOUNTED, GIMBAL TYPE EMERGENCY LIGHT UNIT, HIGH CEILING	24VDC	1	18	SUPPLIED	HIT	
Ⓙ	EMERGI–LITE	SNZ41–RC–120–HC	EXIT SIGN, EDGE–LIT, WALL MOUNT, SINGLE FACE, RED LETTERS, CLEAR BACKGROUND, SELF POWERED WITH NI–CAD BATTERIES W/ HC SYMBOL	120	2	8	STD	FLUOR.	1
Ⓚ	LITHONIA	C220–120–W09	SURFACE MOUNTED, 4"X24" BARE LAMP STRIP LIGHT WITH WIRE GUARD CUT TO 24" IN THE FIELD	120	2	20	3500K	FLUOR.	1
Ⓛ	NOT USED								
Ⓜ	NOT USED								
Ⓝ	NOT USED								
Ⓞ	EMERGI–LITE	24–LSE–110–1 W/WP–3	EMERGENCY LIGHTING BATTERY PACK, LONG LIFE, NO MAINTENANCE, 110 WATT OUTPUT WITH MOUNTING SHELF	24VDC	–	–	–	–	
Ⓟ									
Ⓠ									
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Ⓨ									
Ⓩ									

NOTE 1: FLUORESCENT LAMPS SHALL BE MANUFACTURERED BY SYLVANIA OR PHILLIPS.

GENERAL NOTES

1 ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE IN EFFECT AT THE TIME THE BUILDING PERMIT IS ISSUED.

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BY: STEPHEN DURRELL DATE 8-29-94
APPROVED MDOT: DATE:

STATE OF MAINE · RALPH F. SWEET 2003 REGISTERED PROFESSIONAL ENGINEER

29-185

filename: FERRYNE2

REVISIONS

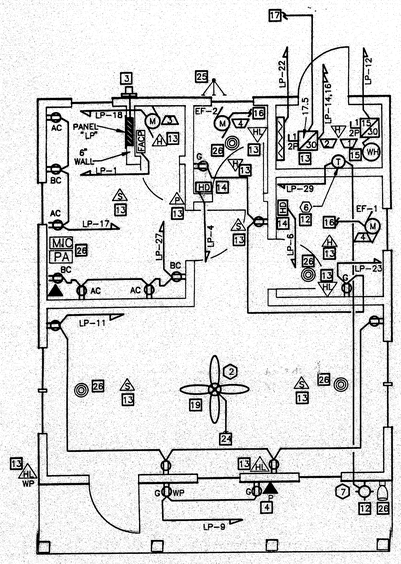
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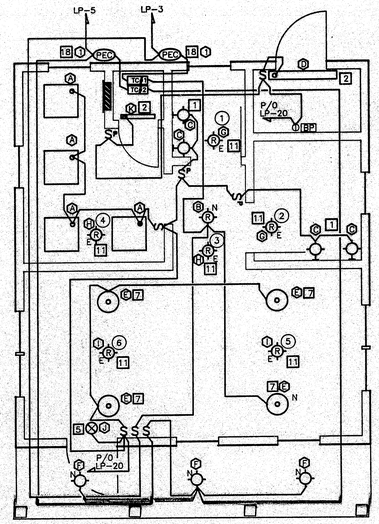
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MDOT PROJ. # | TFH PROJ. # 9216
DRAWING TITLE: ELECTRICAL SCHED. & GENERAL NOTES
DRAWING NUMBER: E-2



POWER AND SIGNAL SYSTEMS
SCALE: 1/4" = 1'-0"



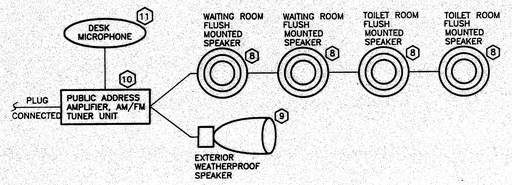
LIGHTING
SCALE: 1/4" = 1'-0"

LEGEND

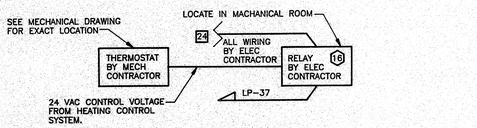
- AC — DUPLEX RECEPTACLE--ABOVE COUNTER
- BC — DUPLEX RECEPTACLE--BELOW COUNTER
- G — DUPLEX RECEPTACLE--GFCI TYPE
- WP G — DUPLEX RECEPTACLE--WEATHER PROOF GFCI TYPE
- DUPLEX RECEPTACLE--WEATHER PROOF GFCI TYPE
- SINGLE RECEPTACLE OUTLET
- S — SINGLE POLE LIGHT SWITCH
- S_P — LIGHT SWITCH WITH PILOT LIGHT
- (A) — LETTER REFERS TO LUMINAIRE SCHEDULE ITEM
- FLUORESCENT LUMINAIRE
- (B) — RECESSED DOWNLIGHT
- WALL MOUNTED LIGHT FIXTURE
- N (B) — RECESSED DOWNLIGHT - NIGHT LIGHT - ON CONTINUOUSLY
- SURFACE MOUNTED INCANDESCENT LIGHT FIXTURE
- FIRE ALARM SYSTEM HEAT DETECTOR
- SMOKE DETECTOR
- EP — EMERGENCY LIGHTING BATTERY PACK/INVERTER
- E — WALL MOUNTED EMERGENCY LIGHT
- AFF — ABOVE FINISHED FLOOR
- FACP — FIRE ALARM CONTROL PANEL
- HN — FIRE ALARM HORN/STROBE UNIT
- HN WP — FIRE ALARM HORN/STROBE WEATHERPROOF
- UTILITY METER
- BASEBOARD ELECTRIC RESISTANCE HEATER
- AFG — ABOVE FINISHED GRADE
- FIRE ALARM SYSTEM--MANUAL PULL STATION
- HD — HAND DRIER
- FIRE ALARM PULL STATION
- E (R) — RECESSED MOUNTED EMERGENCY LIGHT
- P — COIN OPERATED TELEPHONE
- (#) — NUMBER REFERS TO ITEM ON MATERIAL LIST
- PEC — PHOTO ELECTRIC CONTROL SWITCH
- (o) — PENDANT MOUNTED LUMINAIRE
- (#) — NUMBER REFERS TO CONSTRUCTION NOTE
- EXIT SIGN
- (A) — NUMBER REFERS TO ITEM ON EQUIPMENT LOAD SCHEDULE
- WH — WATER HEATER
- 240 VOLT BRANCH CIRCUIT
- BRANCH CIRCUIT CONTINUED--SEE NOTES
- 30/15 2P/1 — 2P FUSED DISCONNECT SWITCH, RATED 30 AMP FUSED AT 15 AMPS, 2 POLE, NEMA-1
- M — MOTOR OPERATED EQUIPMENT
- TELEPHONE OUTLET
- JB — JUNCTION BOX
- TC#1 — TIME CLOCK NUMBER 1
- PA — PUBLIC ADDRESS AMPLIFIER, AM/FM TUNER
- FLUSH MOUNTED CEILING SPEAKER UNIT
- EXTERIOR SPEAKER--WEATHERPROOF HORN
- MIC — DESK MICROPHONE AND CALL SWITCH
- N (o) — PENDANT MOUNTED LUMINAIRE
- P/O — PART OF
- FLUORESCENT LUMINAIRE

CONSTRUCTION NOTES

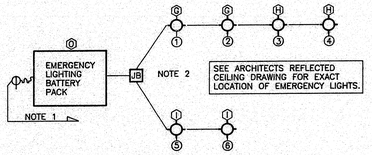
1. SEE MIRROR LIGHT MOUNTING DETAIL. VERIFY MIRROR SIZE AND EXACT LOCATION WITH ARCHITECTURAL DETAILS BEFORE ROUGHING-IN ELECTRICAL WORK.
2. WALL MOUNT LIGHT FIXTURE ABOVE DOOR.
3. VERIFY LOCATION OF METER ON SITE ELECTRICAL DRAWINGS BY ENTERPRISE ELECTRIC. IF METER IS NOT LOCATED WHERE SHOWN ON THIS DRAWING, THEN PROVIDE SERVICE ENTRANCE CONDUCTORS FROM METER TO PANELBOARD UNDER FLOOR.
4. VERIFY MOUNTING HEIGHT WITH NEW ENGLAND TELEPHONE BEFORE ROUGHING-IN PAY PHONE RECEPTACLE AND POWER OUTLET. MUST BE HANDICAPPED ACCESSIBLE.
5. EDGE LIT EXIT SIGN HAS RECESSED SELF-CONTAINED BATTERY AND CHARGER. COORDINATE DOOR HEADER CONSTRUCTION TO CENTER EXIT SIGN'S RECESSED BACKBOX. CONNECT TO LINE SIDE OF WAITING AREA LIGHTING BRANCH CIRCUIT.
6. REFER TO ARCHITECT'S REFLECTED CEILING FOR EXACT LOCATION OF ALL LIGHT FIXTURES.
7. REFER TO ARCHITECT'S CONSTRUCTION DETAIL FOR INSTALLATION OF TYPE (E) PENDANT MOUNTED LUMINAIRES.
8. MOUNT SINGLE RECEPTACLE FOR EMERGENCY LIGHTING BATTERY PACK AND BATTERY PACK AT WITH HIGHEST POINT NOT MORE THAN 48" AFF.
9. NOT USED
10. MOUNT THIS LIGHT SWITCH IN PARALLEL WITH NIGHT LIGHT PHOTOCELL FOR OPTIONAL MANUAL "ON" CONTROL OF NIGHT LIGHTS DURING DAYTIME.
11. SEE EMERGENCY LIGHTING WIRING DIAGRAM FOR POWER WIRING DETAILS.
12. SEE ARCHITECTURAL ELEVATION DRAWING FOR LOCATION OF LOW TEMPERATURE ROTATING ALARM BEACON. MOUNT THERMOSTAT AT 46" AFF. SET ALARM TEMPERATURE LEVEL AS DIRECTED BY OWNER.
13. SEE FIRE ALARM RISER DIAGRAM FOR CIRCUITING DETAILS.
14. SEE ARCHITECT'S WALL ELEVATION DETAILS FOR EXACT LOCATION OF HAND DRIER.
15. WATER HEATER IS WALL HUNG IN MECHANICAL ROOM. SEE MECHANICAL DRAWINGS FOR EXACT LOCATION.
16. CONTINUE CIRCUIT TO LIGHT SWITCH SO THAT EXHAUST FAN OPERATES WHEN LIGHT IS "ON".
17. CONTINUE CIRCUIT TO SUBMERSIBLE WELL PUMP. SEE SITE DRAWING FOR EXACT LOCATION.
18. MOUNT PHOTOCELL AT PEAK UNDER SOFFIT. AIM AWAY FROM ARTIFICIAL LIGHT SOURCE.
19. MOUNT CEILING FAN IN ACCORDANCE WITH ARCHITECT'S REFLECTED CEILING PLAN.
20. NOT USED
21. NOT USED
22. NOT USED
23. NOT USED
24. SEE FAN CONTROL WIRING DIAGRAM. CONTINUE WIRING AS SHOWN IN DIAGRAM AND ON FLOOR PLAN DRAWING.
25. INSTALL OWNER'S ANTENNA TRIPOD ON BUILDING SIDE WALL AT PEAK. PROVIDE COAX ANTENNA CABLE, AS SPECIFIED BY THE OWNER, FROM THE ANTENNA TO THE LOCATION OF THE MARINE RADIO.
26. SEE PUBLIC ADDRESS SYSTEM DIAGRAM FOR WIRING DETAIL. INTERCONNECTION BETWEEN SPEAKERS AND AMPLIFIER IS WITH TWO CONDUCTOR AWG #16 CABLE.



PUBLIC ADDRESS SYSTEM DIAGRAM
NO SCALE



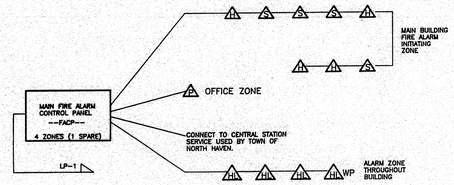
PADDLE FAN CONTROL WIRING DIAGRAM
NO SCALE



NOTE 1: SINGLE RECEPTACLE IS POWERED FROM SAME CIRCUIT THAT PROVIDES POWER FOR LIGHTING THE WAITING ROOM, OFFICE, CORRIDOR, AND TOILETS.

NOTE 2: ALL CIRCUIT WIRING IS #12/2 W-GND TYPE NMB.

EMERGENCY LIGHTING RISER DIAGRAM
NO SCALE



FIRE ALARM SYSTEM COMPONENTS

FIRE ALARM CONTROL PANEL: FIRELITE MINISCAN #MS424A

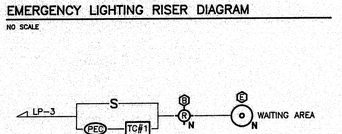
SMOKE DETECTOR: FIRELITE #SD851

STROBE/SOUNDER INTERIOR: FIRELITE #MA/SS-24

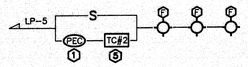
STROBE/HORN EXTERIOR: FIRELITE #STH-72-24VDC W/WB BACKBOX

FIRE ALARM SYSTEM PART NUMBERS ARE BASED UPON FIRELITE AND EQUIVALENT COMPONENTS OF OTHER MANUFACTURER'S WILL BE REVIEWED FOR APPROVAL AND ACCEPTED IF EQUIVALENT.

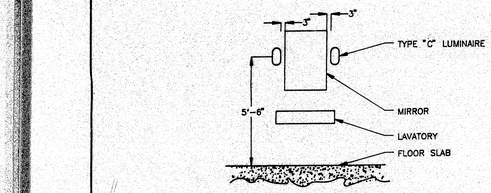
FIRE ALARM SYSTEM RISER DIAGRAM
NO SCALE



WAITING ROOM NIGHT LIGHTING CONTROL DIAGRAM
NO SCALE



CANOPY NIGHT LIGHTING CONTROL DIAGRAM
NO SCALE



MIRROR LIGHT MOUNTING DETAIL
NO SCALE

REVISIONS

MAINE STATE FERRY SYSTEM
NORTH HAVEN
NEW TERMINAL FACILITY

TEAS FEELY AND HINGSTON
100 COMMERCIAL STREET
PORTLAND, MAINE 04101
ARCHITECTURE - PLANNING

CIVIL ENGINEERING
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STRUCTURAL ENGINEERING
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ELECTRICAL ENGINEERING
ELECTRICAL DESIGN CONSULTANTS

APPROVED BY BUREAU OF TRANSPORTATION SERVICES
P. POTTLE

DATE	DRAWN ACAD
SCALE AS NOTED	CHECKED P.F.S.
MDOT PROJ. #	TFH PROJ. # 9216-N

DRAWING TITLE
LIGHTING / POWER PLANS, DIAGRAMS & SCHEDULES

DRAWING NUMBER
E-1

See-asbuilts

STATE OF MAINE — RALPH E. SWEET — 2803 — REGISTERED PROFESSIONAL ENGINEER

129-186

filename: FERRYNE1

PANEL SCHEDULE

④ PANEL "LP"

VOLTAGE: 120/240 | BUS: 200 | AIC: 22,000 AMPS | CONNECTED KVA:
PHASE: SINGLE | MLO: --- | CKTS: 40 | DEMAND KVA:
WIRE: THREE | MCB: 200 | MOUNTING: FLUSH

CKT.BRKR.				CIRCUIT KVA LOAD										
CKT #	AMP SIZE	POLE	Ø	LIGHTING A	LIGHTING B	RECEPTACLES A	RECEPTACLES B	POWER/HEAT A	POWER/HEAT B	A	MISC. B	BRANCH CIRCUIT DESCRIPTION
1	20	1	A							.1		FIRE ALARM CONTROL (LOCK)
3	20	1	B	.25								NIGHT LIGHTS-WAITING AREA
5	20	1	A	.18								NIGHT LIGHTS-CANOPY
7	20	1	B									SPARE
9	20	1	A			.18						EXTERIOR RECEP, PAY PHONE
11	20	1	B				.9					RECEPTACLE-WAITING AREA
13	20	1	A									SPARE
15	20	1	B									SPARE
17	20	1	A			.54						RECEPTACLE-OFFICE
19	20	1	B									SPARE
21	20	1	A									SPARE
23	20	1	B				.54					RECEPTACLE-TOILETS, CORR.
25	20	1	A									SPARE
27	20	1	B				.36					OFFICE RECEPTACLES
29	20	1	A							.1		LOW TEMPERATURE ALARM
31	20	1	B									SPARE
33	20	1	A									SPARE
35	20	1	B									SPARE
37	15	1	A									WAITING ROOM PADDEL FAN
39	20	1	B									SPARE
2	20	1	A									SPARE
4	20	1	B								1.8	HAND DRIER
6	20	1	A							1.8		HAND DRIER
8	20	1	B									SPARE
10	20	1	A	.3								LIGHTS-STORAGE, MECHANICAL
12	20	1	B								1.4	WATER HEATER-TOILET
14	25	2	A							1.4		WELL PUMP 2 HP
16	↓	↓	B								1.4	↓
18	20	1	A							1.5		FURNACE/BLOWER
20	20	1	B	1.5								PUBLIC AREA LIGHTING
22	20	1	A							.8		MECH RM. HEATER
24	20	2	B	1.1								PARKING LIGHTS (TIMED OFF)
26	↓	↓	A	1.1								↓
28	20	1	B	.6								WALKWAY BOLLARDS (TIMED OFF)
30	20	2	A	.4								PARKING LIGHTS (ON ALL NIGHT)
32	↓	↓	B	.4								↓
34	20	1	A									SPARE
36	20	1	B									SPARE
38	20	1	A									SPARE
40	20	1	B									SPARE
CONNECTED TOTAL												NOTES:
DEMAND				100%		70%		80%				
DEMAND TOTAL												

G=GFCI TYPE CIRCUIT BREAKER

MATERIAL SCHEDULE

ITEM	MANUFACTURER	CATALOG NUMBER	
①	PARAGON	CW-201-00	PHOTOELECTRIC LIGHT SWITCH
②	HUNTER	25606-ALL WHITE, SWIVEL, STEM	CEILING MOUNTED PADDLE FAN, WHITE, CUSTOM STEM LENGTH, SWIVEL TYPE SUPPORT CANOPY
③	SQUARE D	3130-D221N	30 AMP, 2-POLE, FUSIBLE DISCONNECT SWITCH
④	SQUARE D	NQOD42L225CU,MH50,MHC50F	PANELBOARD, 200 AMP MCB, 42 CKT, SINGLE PHASE, THREE WIRE, COPPER BUS, 22,000 AIC
⑤	PARAGON	EC-11-120	24-HOUR, SINGLE CHANNEL, ELECTRONIC TIME CONTROL, 15 AMP, SPDT, 275 HR CARRYOVER
⑥	CHROMALOX	WR-80	LOW TEMPERATURE ALARM THERMOSTAT, 20-80 DEGREES
⑦	EDWARDS	52-B	LEW TEMPERATURE ALARM ROTATING BEACON, BLUE GLOBE, ON 1/2" ELBOW FOR WALL MOUNTING
⑧	GRANGER	5H740	FLUSH MOUNTED CEILING SPEAKER, WHITE BAFFLE, VOLUME CONTROL
⑨	GRANGER	5H101 PAINTED WHITE	EXTERIOR RATED, WEATHER PROOF HORN SPEAKER WITH WALL MOUNTING BRACKET WITH LOCK
⑩	GRANGER	5H516	PUBLIC ADDRESS AMPLIFIER, 40 WATTS, AM/FM TUNER AND ANTENNA
⑪	GRANGER	5H452	MICROPHONE WITH DESK STAND AND CALL SWITCH FOR PA SYSTEM
⑫	NOT USED		
⑬	NOT USED		
⑭	NOT USED		
⑮	NOT USED		
⑯	SQUARE D	8911-DPSG12V14--SP2R-SC2	PADDLE FAN MOTOR STARTER WITH OVERLOAD HEATERS, H-O-A SWITCH AND PILOT LIGHT

EQUIPMENT LOAD SCHEDULE

ITEM	EQUIPMENT	VOLTS	PHASE	KW	FLA	MCA	DISC SW	FEEDER CIRCUIT SIZE	BRANCH CIRCUIT SIZE
1	WATER HEATER	120	1	1.4	11.3	14.1	③	#12/2 W-GND TYPE NMB	#12/2 W-GND TYPE NMB
2	WELL PUMP	240	1	2HP	12.0	15.0	③	3-#10 IN 1/2" EMT	3-#10, IN 1/2" EMT/PVC
3	FURANCE	120	1	.5HP	12.5	16	–	–	#12/2 W-GND TYPE NMB
4	EXHAUST FAN	120	1	.1	1.0	1.3	–	#12/2 W-GND TYPE NMB	#12/2 W-GND TYPE NMB
5	HAND DRIER	120	1	1.8	20		–	#12/2 W-GND TYPE NMB	#12/2 W-GND TYPE NMB
6									
7									
8									
9									
10									
11									

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE	LAMPS QUANTITY	LAMPS WATTS	LAMPS COLOR	LAMPS TYPE	NOTES
Ⓐ	LITHONIA	2PMOGB-3CF40-12LS-120ES	RECESSED 2X2 PARABOLIC LOUVERED TROFFER WITH 3-CF40 TYPE TT5 LAMPS.	120	3	40TT5	3500K	FLUOR.	1
Ⓑ	LIGHTOLIER	8056CL-726H120 (WHITE)	RECESSED DOWNLIGHT, 7" OPENING, WHITE ALZAK CONE, HIGH POWER FACTOR BALLAST	120	2	26W-Q	3500K	FLUOR.	1
Ⓒ	BEGA	2888-WHITE	SURFACE MOUNTED MIRROR SIDE LIGHTS	120	1	60	A-19	INCAN.	
Ⓓ	LITHONIA	C240-120-ES-WG9	SURVACE MOUNTED 4"X48" BARE LAMP STRIP LIGHT WITH WIRE GUARD	120	2	34	3500K	FLUOR.	1
Ⓔ	HOLOPHANE	CL2-35-CS-L-1-H-P	PENDANT MOUNTED, GLASS SHADE, WITH CUSTOM STEM LENGTH AND SWIVEL HANGER	120	1	150	A-TYPE	INCAN.	
Ⓕ	BEGA	2778 WHITE	SURFACE MOUNTED, DAMP LOCATION, WHITE, WITH CAGE GUARD	120	1	60	A-19	INCAN.	
Ⓖ	EMERGI-LITE	EF-13-24VDC-9W (WHITE)	TOILET ROOM, FLUSH MOUNTED EMERGENCY LIGHTING UNIT	24VDC	1	9	SUPPLIED	INCAN.	
Ⓗ	EMERGI-LITE	EF-15-24VDC-II-80X80 (WHITE)	WAITING AREA, FLUSH MOUNTED, GIMBAL TYPE EMERGENCY LIGHT UNIT, LOW CEILING	24VDC	1	9	SUPPLIED	HIT	
Ⓘ	EMERGI-LITE	EF-15-24VDC-IJ-80X80 (WHITE)	WAITING AREA, FLUSH MOUNTED, GIMBAL TYPE EMERGENCY LIGHT UNIT, HIGH CEILING	24VDC	1	18	SUPPLIED	HIT	
Ⓙ	EMERGI-LITE	SNZ41-RC-120-HC	EXIT SIGN, EDGE-LIT, WALL MOUNT, SINGLE FACE, RED LETTERS, CLEAR BACKGROUND, SELF POWERED WITH NI-CAD BATTERIES W/ HC SYMBOL	120	2	8	STD	FLUOR.	1
Ⓚ	LITHONIA	C220-120-WG9	SURFACE MOUNTED, 4"X24" BARE LAMP STRIP LIGHT WITH WIRE GUARD CUT TO 24" IN THE FIELD	120	2	20	3500K	FLUOR.	1
Ⓛ	NOT USED								
Ⓜ	NOT USED								
Ⓝ	NOT USED								
Ⓞ	EMERGI-LITE	24-LSE-110-1 W/WP-3	EMERGENCY LIGHTING BATTERY PACK, LONG LIFE, NO MAINTENANCE, 110 WATT OUTPUT WITH MOUNTING SHELF	24VDC	–	–	–	–	
Ⓟ									
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NOTE 1: FLUORESCENT LAMPS SHALL BE MANUFACTURERED BY SYLVANIA OR PHILLIPS.

GENERAL NOTES

1 ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE IN EFFECT AT THE TIME THE BUILDING PERMIT IS ISSUED.

2 THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER TRADES.

3 THE ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT ELECTRICAL CONNECTION POINT FOR EQUIPMENT OF OTHER TRADES WITH THOSE TRADES BEFORE ROUGHING-IN ELECTRICAL WORK.

4 ALL ELECTRICAL WORK SHOWN WITHOUT DIMENSIONS IS SHOWN DIAGRAMMATICALLY AND EXACT LOCATIONS ARE TO BE DETERMINED IN THE FIELD.

5 ALL REMOVED ELECTRICAL EQUIPMENT AND MATERIAL SHALL REMAIN THE PROPERTY OF THE OWNER UNTIL SUCH TIME THAT THE OWNER'S REPRESENTATIVE HAS REVIEWED AND RELEASED THE ELECTRICAL EQUIPMENT AND MATERIAL TO THE CONTRACTOR. ELECTRICAL EQUIPMENT AND MATERIAL RELEASED TO THE CONTRACTOR SHALL BE REMOVED FROM THE PREMISES BY THE CONTRACTOR.

6 THE ELECTRICAL CONTRACTOR SHALL VERIFY THE FIRE RATING OF WALLS, FLOORS AND CEILINGS WITH THE ARCHITECT'S DRAWINGS AND SHALL INSTALL PENETRATIONS WITH THE SAME FIRE RATING IN THESE PARTITIONS AS SHOWN IN THE UL FIRE RESISTANCE DIRECTORY FOR EACH CIRCUMSTANCE.

7 THE ELECTRICAL DRAWINGS AND SPECIFICATIONS FORM AN INTEGRAL PART OF THE CONTRACT DOCUMENTATION AND INFORMATION GIVEN IN EITHER IS AS APPLICABLE AS IF GIVEN IN BOTH.

8 WHERE DIFFERENCES EXIST BETWEEN TWO OR MORE DESCRIPTIONS OF WORK TO BE DONE, THE MORE DETAILED DESCRIPTION SHALL PREVAIL.

9 WHERE ALLOWED AND UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS, ALL WIRING FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS SHALL BE COPPER NUMBER 12/2 TYPE NMB OR TYPE NMC (ROMEX) CABLE.

10 GFCI RECEPTACLES ARE NOT TO BE THROUGH WIRED TO PROTECT DOWNSTREAM EQUIPMENT UNLESS OTHERWISE SPECIFICALLY NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS.

11 LUMINAIRES RECESSED INTO FIRE RATED CEILINGS SHALL HAVE FIRE *RATED ENCLOSURES IN ACCORDANCE WITH THE UL FIRE RESISTANCE* DIRECTORY.

12 THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE MOUNTING HEIGHT OF ALL LIGHT SWITCHES AND RECEPTACLES IN THE FIELD WITH ARCHITECT'S FLOOR PLANS AND ELEVATIONS.

13 ALL FUSES SHALL BE UL CLASS RK-1, CURRENT LIMITING, TIME DELAY, CARTRIDGE TYPE UNLESS OTHERWISE NOTED.

14 ALL INDIVIDUAL CONDUCTORS ARE COPPER WITH THWN INSULATION COLOR CODED AS SPECIFIED.

15 THE ELECTRICAL CONTRACTOR SHALL VERIFY WITH OTHER TRADES THAT RECEPTACLES MATCH THE PLUG PROVIDED WITH THEIR EQUIPMENT WHEN THAT EQUIPMENT IS REFERENCED ON THE ELECTRICAL DRAWINGS.

16 THE ELECTRICAL CONTRACTOR SHALL ARRANGE TO HAVE THE ELECTRICAL INSPECTOR HAVING JURISDICTION INSPECT ALL WIRING BEFORE IT IS CONCEALED.

17 ALL TEMPORARY WIRING AND ELECTRICAL EQUIPMENT USED DURING CONSTRUCTION SHALL BE REMOVED FROM THE BUILDING BEFORE COMPLETION.

18 THE EXTERIOR CANOPY LIGHTS ARE TO OPERATE FROM A WALL SWITCH IN THE WAITING ROOM DURING DAYLIGHT HOURS. REGARDLESS OF THE SWITCH POSITION, THE LIGHTS WILL TURN "ON" AUTOMATICALLY AT DUSK AND "OFF" AUTOMATICALLY BY THE TIME CLOCK #1 OR "OFF" AUTOMATICALLY AT DAWN BY THE PHOTOCELL. THESE LIGHTS WILL BE "OFF" DURING A POWER OUTAGE.

19 THE WAITING AREA NIGHT LIGHTS OPERATE SAME AS THE CANOPY LIGHTS. SEE GENERAL NOTE 18 FOR DETAILS

129-187

STATE OF MAINE · RALPH F. SWEET · 7803 · REGISTERED PROFESSIONAL ENGINEER

5-1-96

See As-builts

filename: FERRYNE2

REVISIONS

MAINE STATE FERRY SYSTEM
NORTH HAVEN
NEW TERMINAL FACILITY

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100 COMMERCIAL STREET
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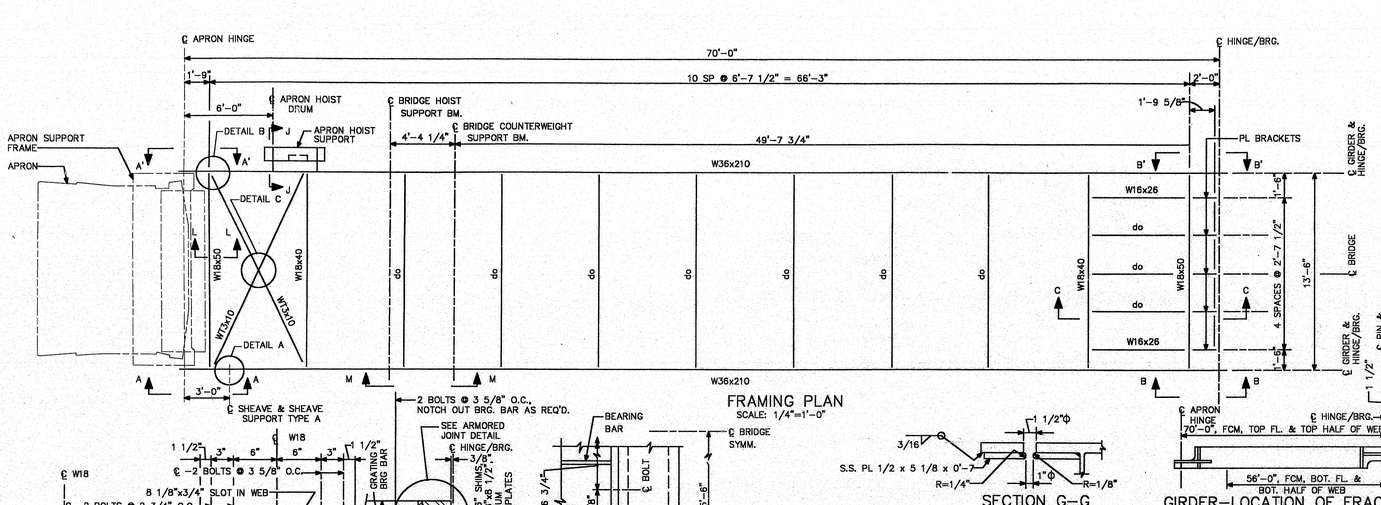
ELECTRICAL ENGINEERING
ELECTRICAL DESIGN CONSULTANTS

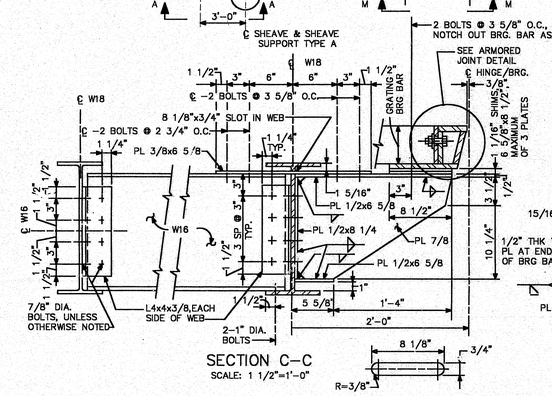
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P. POTTLE

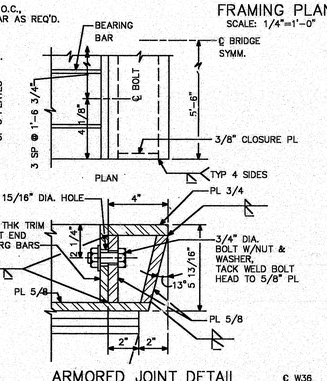
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MDOT PROJ. #	TFH PROJ. # 9316

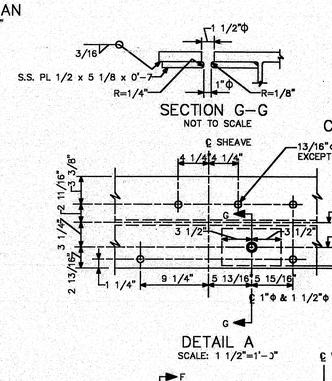
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ELECTRICAL SCHED. & GENERAL NOTES

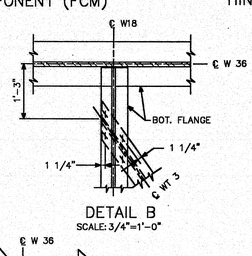
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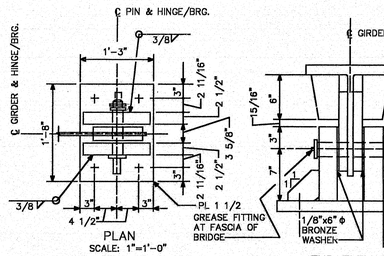


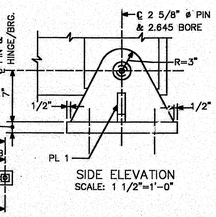


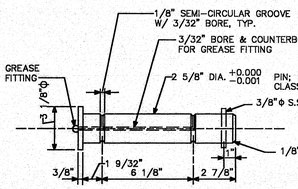


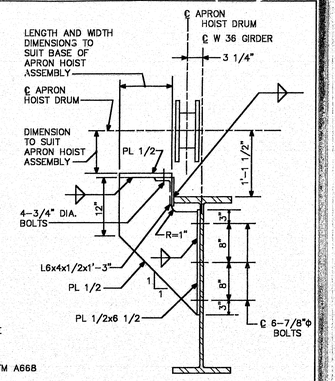


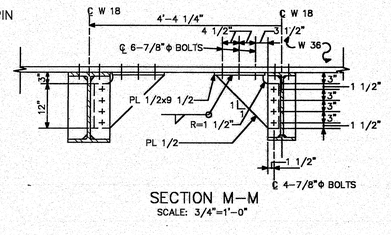


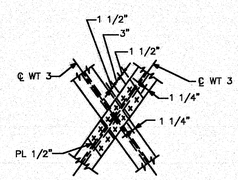


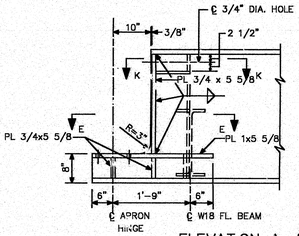


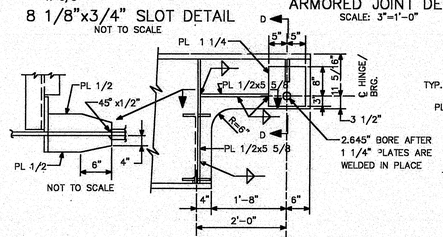


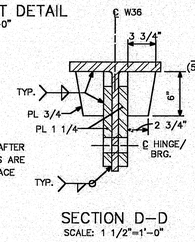


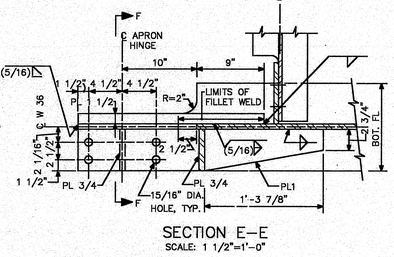


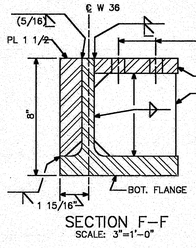


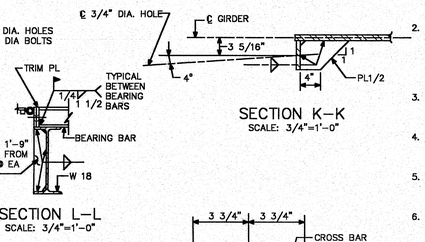


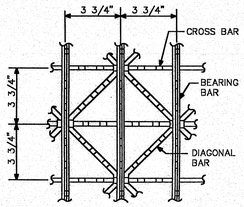


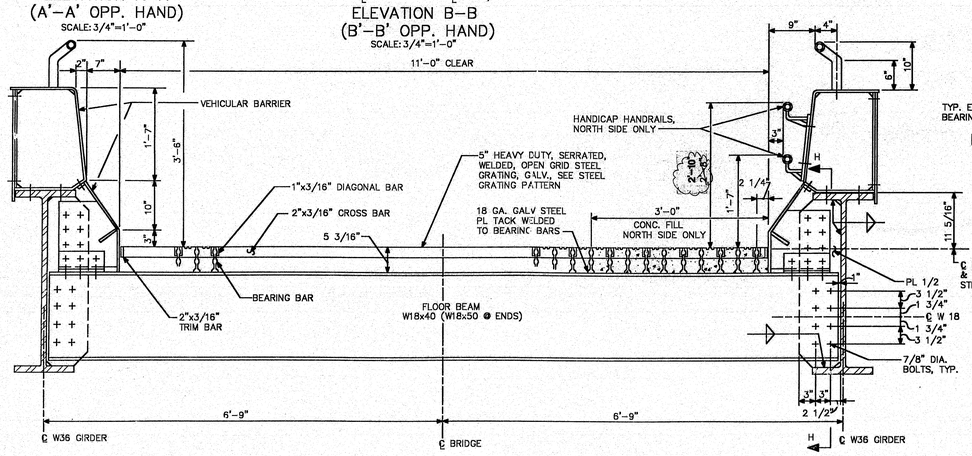


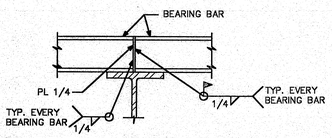


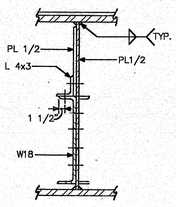


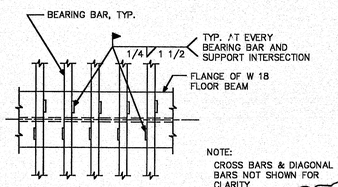


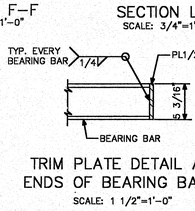












NOTE:
CROSS BARS & DIAGONAL BARS NOT SHOWN FOR CLARITY

STRUCTURAL STEEL NOTES:

1. CAMBER OF W36 GIRDERS AND W18 FLOOR BEAMS IS 0.0 INCH. PLACE BOW OF NATURAL CAMBER IN UPRIGHT POSITION.
2. STRUCTURAL STEEL FOR THE TRANSFER BRIDGE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M270 GRADE 36. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36/A36M UNLESS OTHERWISE INDICATED.
3. FOR DETAILS OF BRIDGE HOIST SUPPORT BEAM AND BRIDGE COUNTERWEIGHT SUPPORT BEAM, SEE SH. NO. 16.
4. 5" HEAVY DUTY, SERRATED, WELDED OPEN GRID STEEL GRATING IS TO CONFORM TO THE REQUIREMENTS OF ASTM A588/A588M.
5. BOLTS AND RELATED HARDWARE ARE TO CONFORM TO THE REQUIREMENTS OF ASTM A325 UNLESS OTHERWISE INDICATED.
6. BOLTED CONNECTIONS USING A325 BOLTS ARE FRICTION TYPE, WITH THREADS EXCLUDED FROM SHEAR PLANES AND WITH CLASS B SURFACE PREPARATION.
7. HARDENED WASHERS SHALL BE PROVIDED IN CONNECTIONS WITH OVERSIZE OR SLOTTED HOLES.
8. BEVELED WASHERS SHALL BE PROVIDED IN CONNECTIONS WITH CHANNEL FLANGES.
9. STANDARD HOLES SHALL BE USED FOR BOLTS UNLESS OTHERWISE INDICATED.
10. ANCHOR BOLTS SHALL BE GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A153.
11. FILLET WELDS ARE 5/16" UNLESS OTHERWISE INDICATED.
12. STEEL GRATINGS SHALL BE GALVANIZED. OMIT ZINC COATING ON SURFACE AREAS TO BE WELDED.
13. FRACTURE CRITICAL MEMBERS (FCM) AS SHOWN SHALL CONFORM TO THE REQUIREMENTS OF THE "GUIDE SPEC. FOR FRACTURE CRITICAL NON-REDUNDENT STEEL BRIDGE MEMBERS" BY AASHTO.

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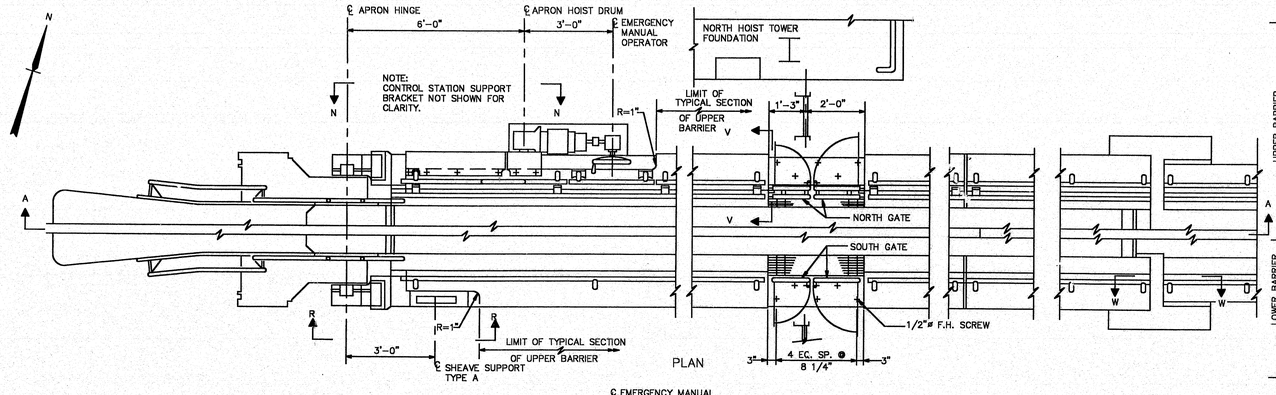
SEALED FOR MODIFICATIONS SHOWN THUS
COMMONWEALTH OF MASSACHUSETTS THOMAS P. DONALD STRUCTURAL No. 32752 REGISTERED PROFESSIONAL ENGINEER
TEMP MAINE NO. 11-1993

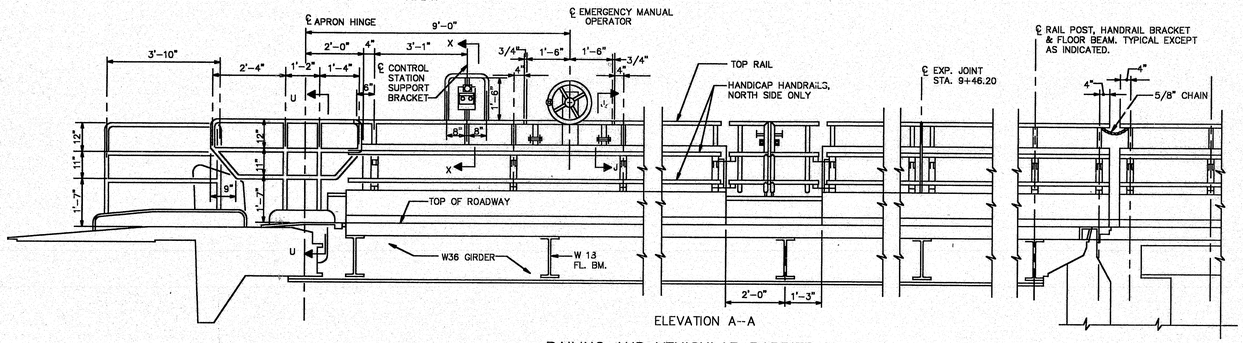
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

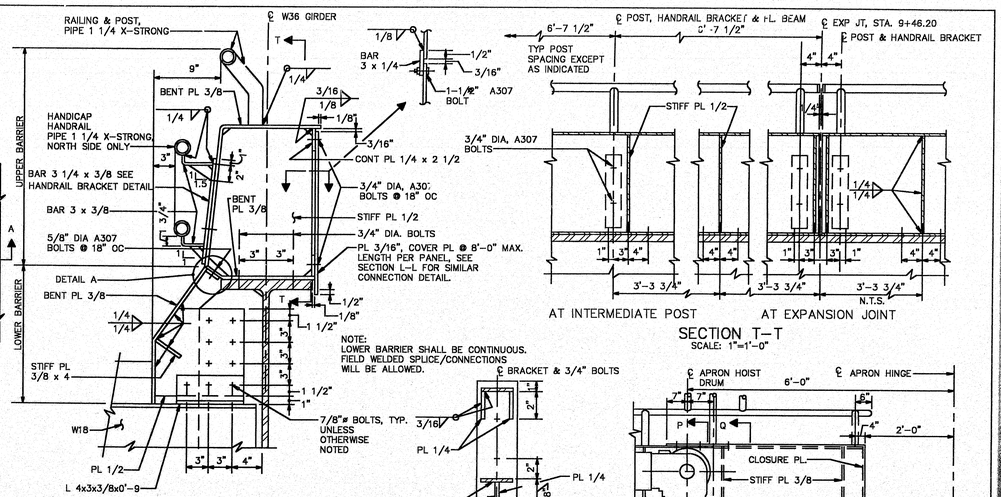
TRANSFER BRIDGE FRAMING PLAN AND DETAILS

SCALE:	DES.	CHK.	APPROVED BY BUREAU OF TRANSPORTATION SERVICES
DATE:	DR.	PROJ. ENGR.	P POTTLE

SHEET TB2 OF

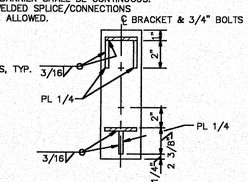




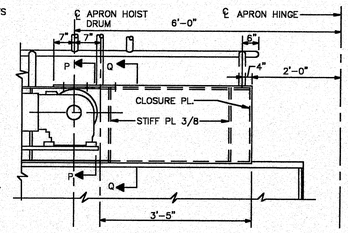


TYPICAL SECTION
VEHICULAR BARRIER DETAIL
SCALE: 1 1/2"=1'-0"

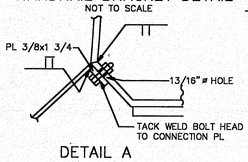
SECTION T-T
SCALE: 1"=1'-0"



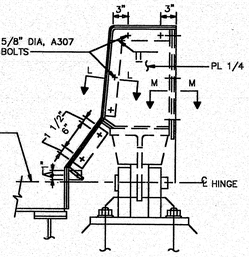
HANDRAIL BRACKET DETAIL
NOT TO SCALE



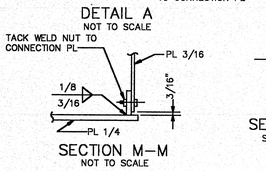
SECTION N-N
SCALE: 3/4"=1'-0"



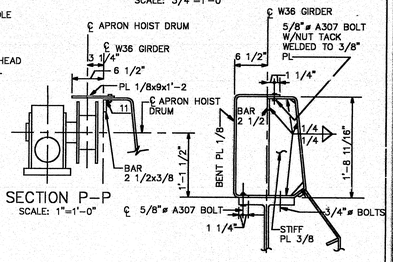
DETAIL A
NOT TO SCALE



CLOSURE PLATE DETAIL
AT INBOARD END
SCALE: 1"=1'-0"

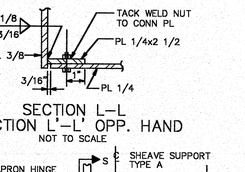


SECTION M-M
NOT TO SCALE

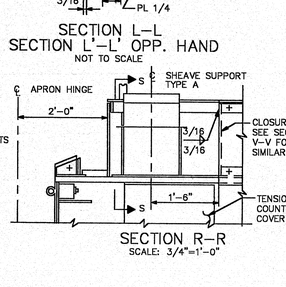


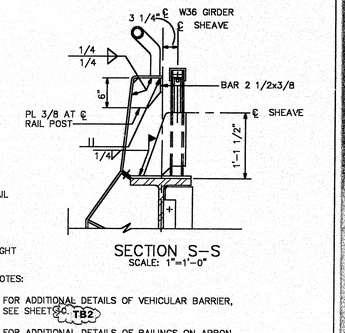
SECTION P-P
SCALE: 1"=1'-0"

SECTION Q-Q
SCALE: 1"=1'-0"



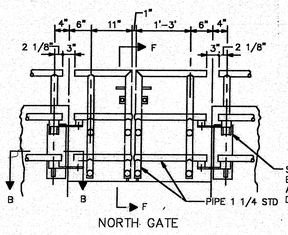
SECTION L-L
SECTION L'-L' OPP. HAND
NOT TO SCALE



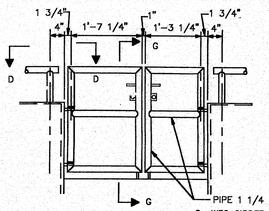


NOTES:
1. FOR ADDITIONAL DETAILS OF VEHICULAR BARRIER, SEE SHEET 30 TB2
2. FOR ADDITIONAL DETAILS OF RAILINGS ON APRON, SEE SHEET 32. TB4

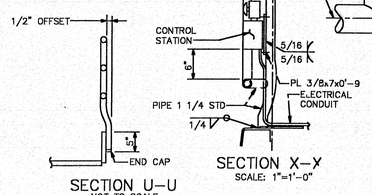
RAILING AND VEHICULAR BARRIER DETAILS
SCALE: 1/2"=1'-0"



NORTH GATE
ELEVATION
SCALE: 3/4"=1'-0"

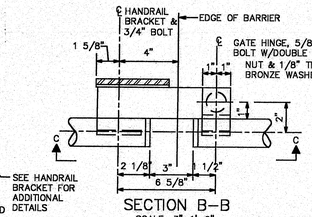


SOUTH GATE
ELEVATION
SCALE: 3/4"=1'-0"

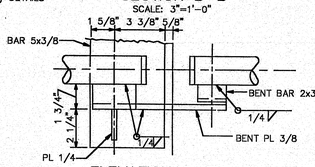


SECTION U-U
NOT TO SCALE

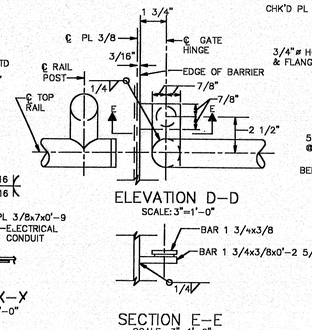
SECTION X-X
SCALE: 1"=1'-0"



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

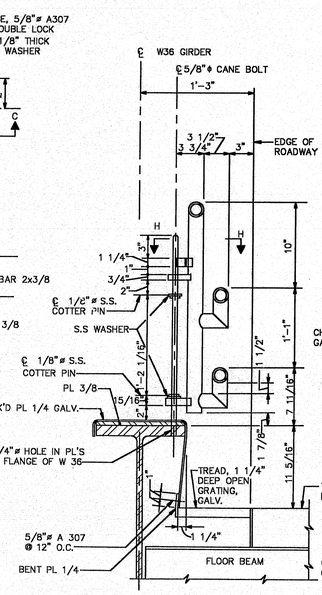


ELEVATION C-C
SCALE: 3"=1'-0"

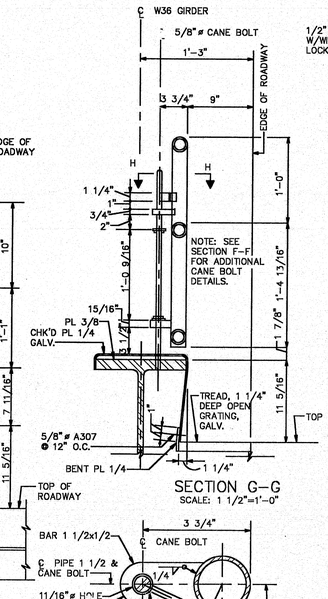


ELEVATION D-D
SCALE: 3"=1'-0"

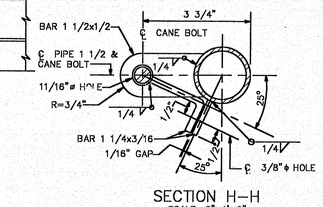
SECTION E-E
SCALE: 3"=1'-0"



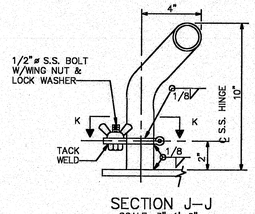
SECTION F-F
SCALE: 1 1/2"=1'-0"



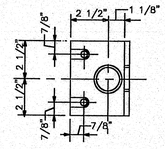
SECTION G-G
SCALE: 1 1/2"=1'-0"



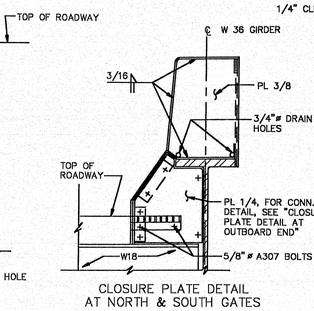
SECTION H-H
SCALE: 6"=1'-0"



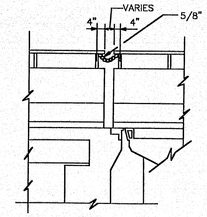
SECTION J-J
SCALE: 3"=1'-0"



SECTION K-K
SCALE: 3"=1'-0"



CLOSURE PLATE DETAIL
AT NORTH & SOUTH GATES
SECTION V-V
SCALE: 1"=1'-0"



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

SEALED FOR MODIFICATIONS SHOWN THUS
THOMAS P. DONALD STRUCTURAL No. 7575 REGISTERED PROFESSIONAL ENGINEER STATE OF MAINE
MAINE TEMP NO. 11-1993

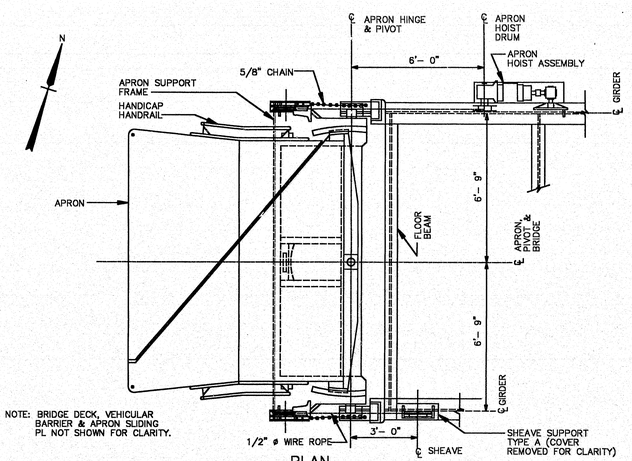
129-189

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

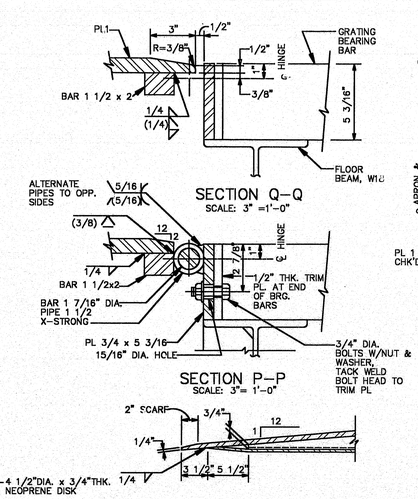
TRANSFER BRIDGE
BARRIER AND RAILING DETAILS

SCALE:	DES.	CHK.	APPROVED BY BUREAU OF TRANSPORTATION SERVICES
DATE:	DR.	PROJ. ENGR.	P BOTILE

SHEET TB3 OF



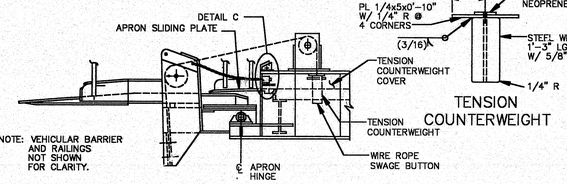
PLAN
SCALE: 3/8"= 1'-0"



SECTION Q–Q
SCALE: 3" =1'-0"

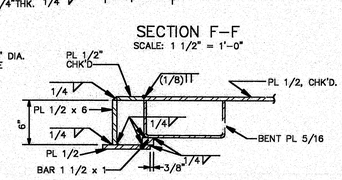
SECTION P–P
SCALE: 3"= 1'-0"

SECTION F–F
SCALE: 1 1/2" = 1'-0"

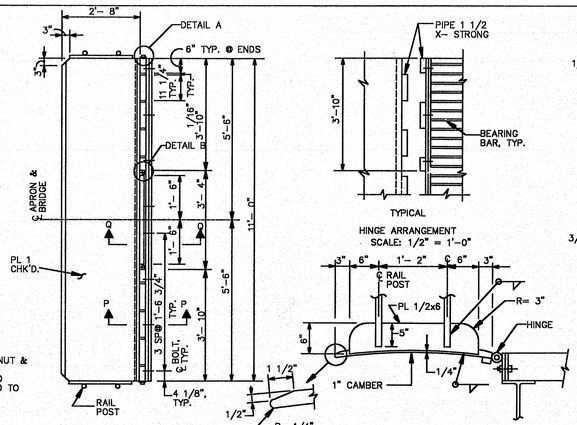


TENSION COUNTERWEIGHT

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



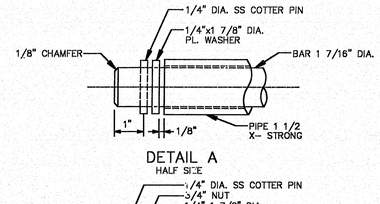
SECTION E–E
(E'–E' OPP. HAND)
SCALE: 1 1/2"= 1'-0"

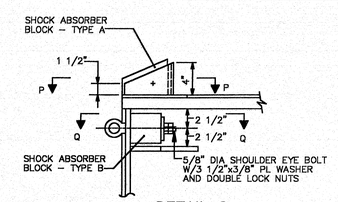


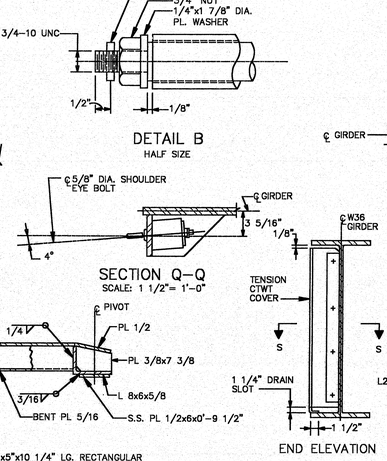
PLAN
SCALE: 1/2"= 1'-0"

SIDE ELEVATION
SCALE: 1"= 1'-0"

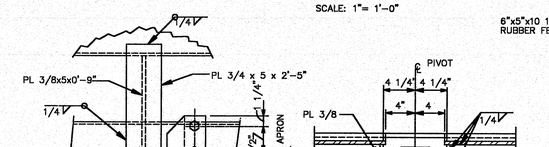
APRON SLIDING PLATE DETAILS



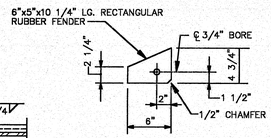




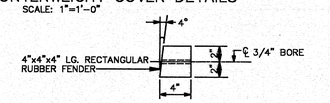
TENSION COUNTERWEIGHT COVER DETAILS
SCALE: 1"=1'-0"



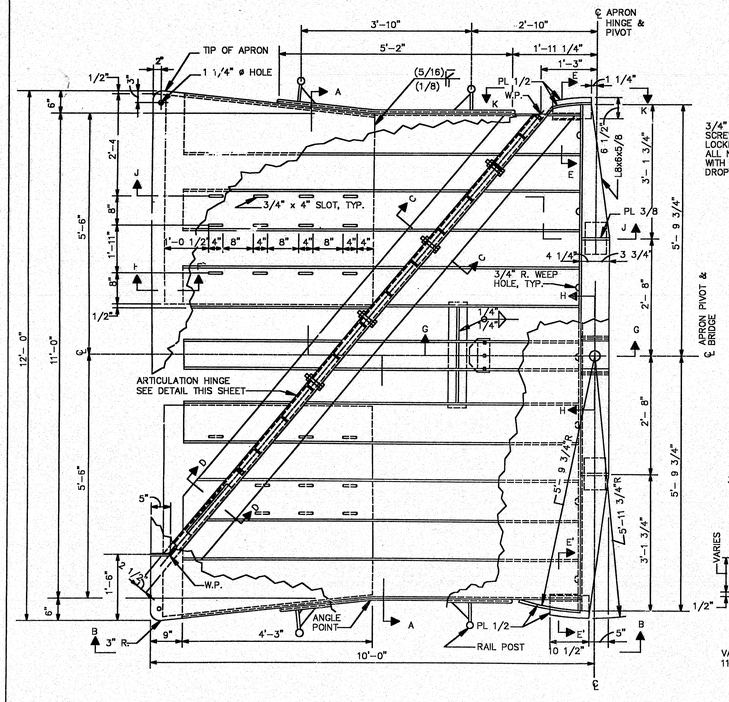
SECTION J–J
SCALE: 1"= 1'-0"



SHOCK ABSORBER BLOCK– TYPE A
SCALE: 1 1/2"= 1'- 0"

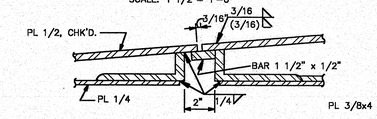


SHOCK ABSORBER BLOCK– TYPE B
SCALE: 1 1/2"= 1'-0"

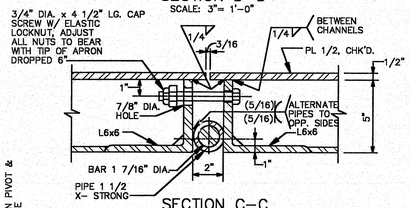


PLAN

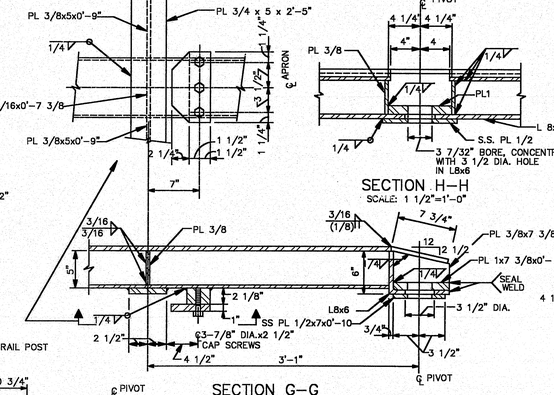
APRON DETAILS
SCALE: 3/4"=1'-0"



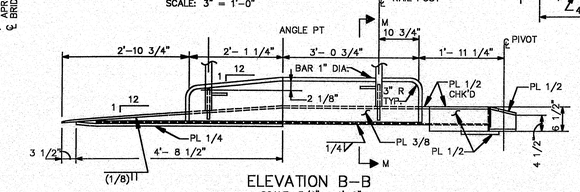
SECTION D–D
SCALE: 3"= 1'-0"



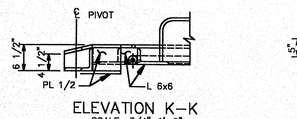
SECTION C–C
SCALE: 3" = 1'-0"



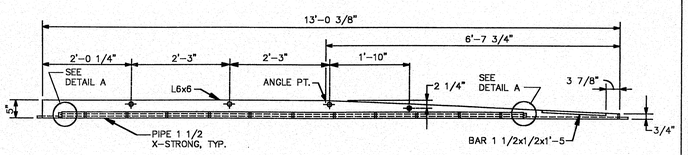
SECTION G–G
SCALE: 1 1/2"=1'-0"



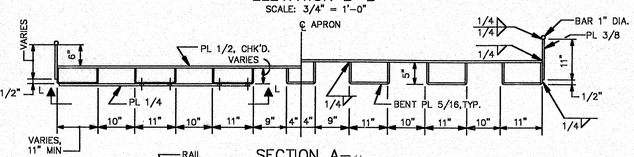
ELEVATION B–B
SCALE: 3/4" = 1'-0"

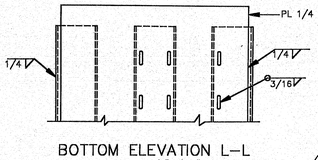


ELEVATION K–K
SCALE: 3/4"=1'-0"



ARTICULATION HINGE DETAILS
SCALE: 3/4"=1'-0"





BOTTOM ELEVATION L–L
SCALE: 3/4"=1'-0"

SECTION M–M
SCALE: 3/4"=1'-0"

129-190

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

TRANSFER BRIDGE
APRON DETAILS – PART 1

SEALED FOR MODIFICATIONS SHOWN THIS CO.

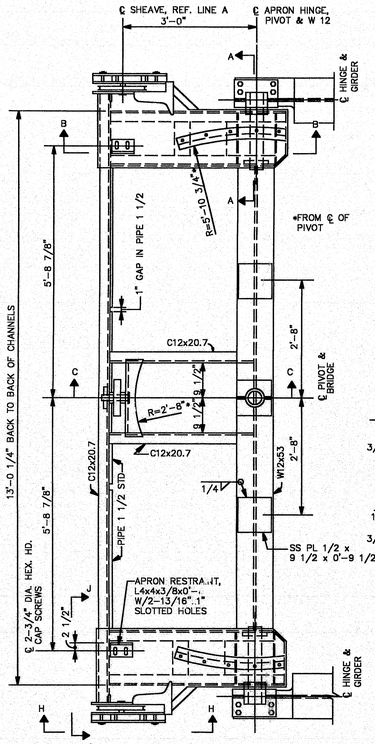
THOMAS P. LIBERALD STRUCTURAL No. 10755 STATE OF MAINE REGISTERED PROFESSIONAL ENGINEER

MAINE REG. NO. 11-1933

Thomas P. Liberald

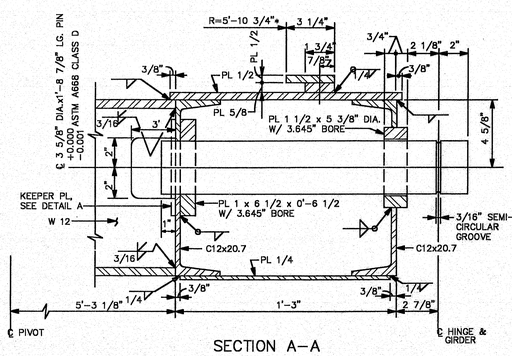
SCALE:	DES.	CHK.	APPROVED BY BUREAU OF TRANSPORTATION SERVICES
DATE:	DR.	PROJ. ENGR.	P Pomje

SHEET TB4 OF

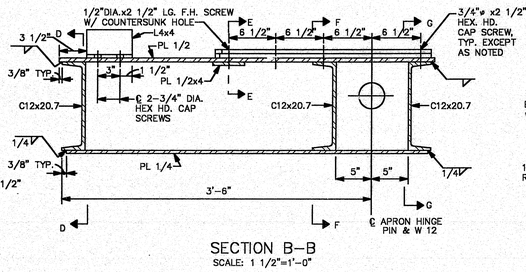


PLAN

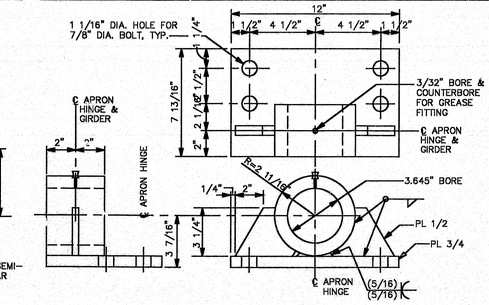
APRON SUPPORT FRAME
SCALE: 3/4"=1'-0"



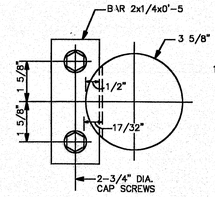
SECTION A–A
SCALE: 3"=1'-0"



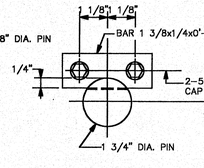
SECTION B–B
SCALE: 1 1/2"=1'-0"



APRON HINGE DETAILS
SCALE: 3"=1'-0"

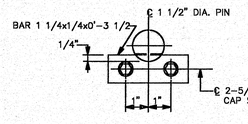


DETAIL A
NOT TO SCALE



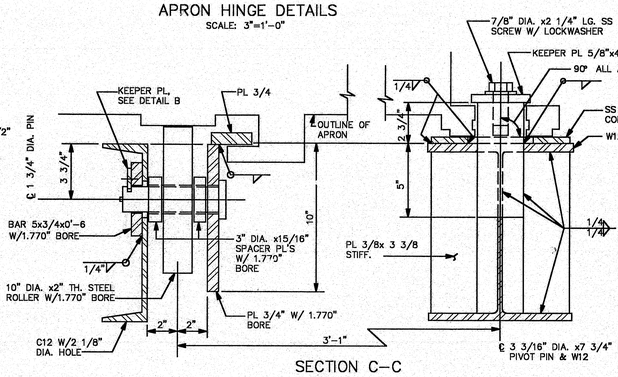
DETAIL B
NOT TO SCALE

1 3/4" DIAMETER PIN
NOT TO SCALE

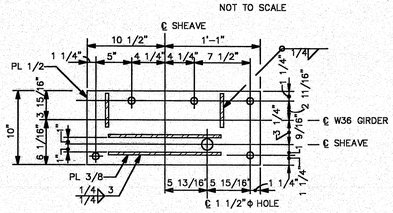


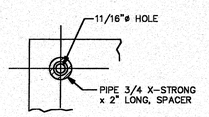
DETAIL C
NOT TO SCALE

1 1/2" DIAMETER PIN
NOT TO SCALE



SECTION C–C
SCALE: 3"=1'-0"

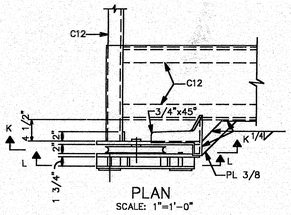




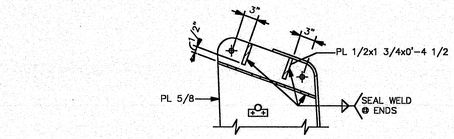
SECTION S–S
NOT TO SCALE

ELEVATION END ELEVATION

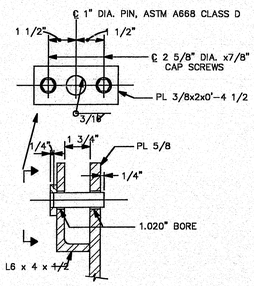
SHEAVE SUPPORT TYPE A DETAILS
SCALE: 1 1/2"=1'-0"



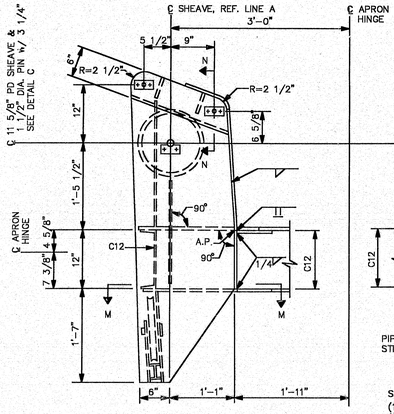
PLAN
SCALE: 1"=1'-0"



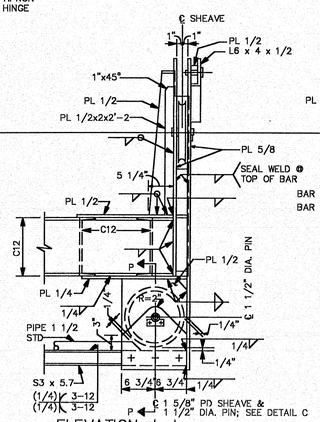
SECTION L–L
SCALE: 1"=1'-0"



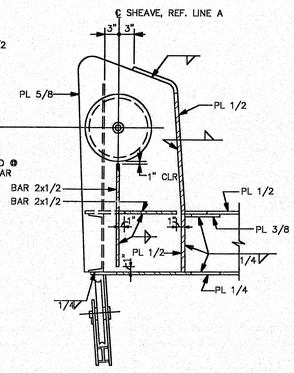
SECTION N–N
SCALE: 3"=1'-0"



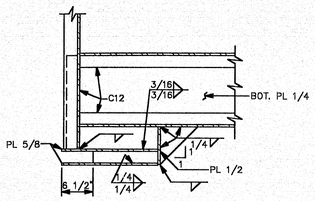
ELEVATION H–H
SCALE: 1"=1'-0"



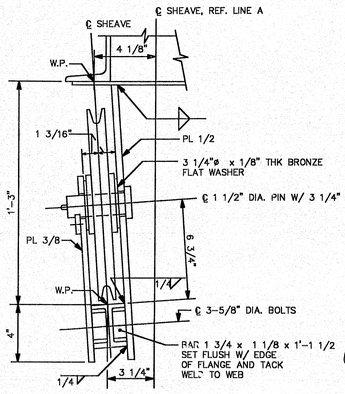
ELEVATION J–J
SCALE: 1"=1'-0"



SECTION K–K
SCALE: 1"=1'-0"



SECTION M–M
SCALE: 1"=1'-0"



SECTION P–P
SCALE: 3"=1'-0"

NOTES:

1. ALL BORE TOLERANCES AT $^{-0.000}_{+0.001}$ INCH.
2. 12" x 7 13/16" STEEL SHIMS SHALL BE PROVIDED FOR FIELD ADJUSTMENT OF APRON HINGE. TOTAL SHIM THICKNESS AT EACH APRON HINGE SHALL NOT EXCEED 1/8".

SEALED FOR MODIFICATIONS SHOWN THIS — THOMAS P. DONALD STRUCTURAL No. 9295 REGISTERED PROFESSIONAL ENGINEER — MAINE TEMP. NO. 11-1995

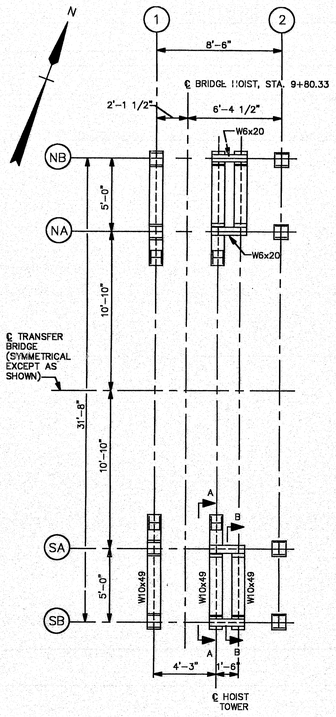
129-191

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

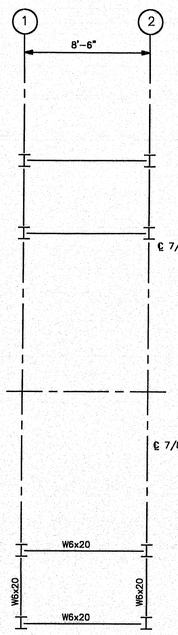
TRANSFER BRIDGE
APRON DETAILS – PART 2

SCALE:	DES.	CHK.	APPROVED BY BUREAU OF TRANSPORTATION SERVICES
DATE:	DR.	PROJ. ENGR.	P. Poole

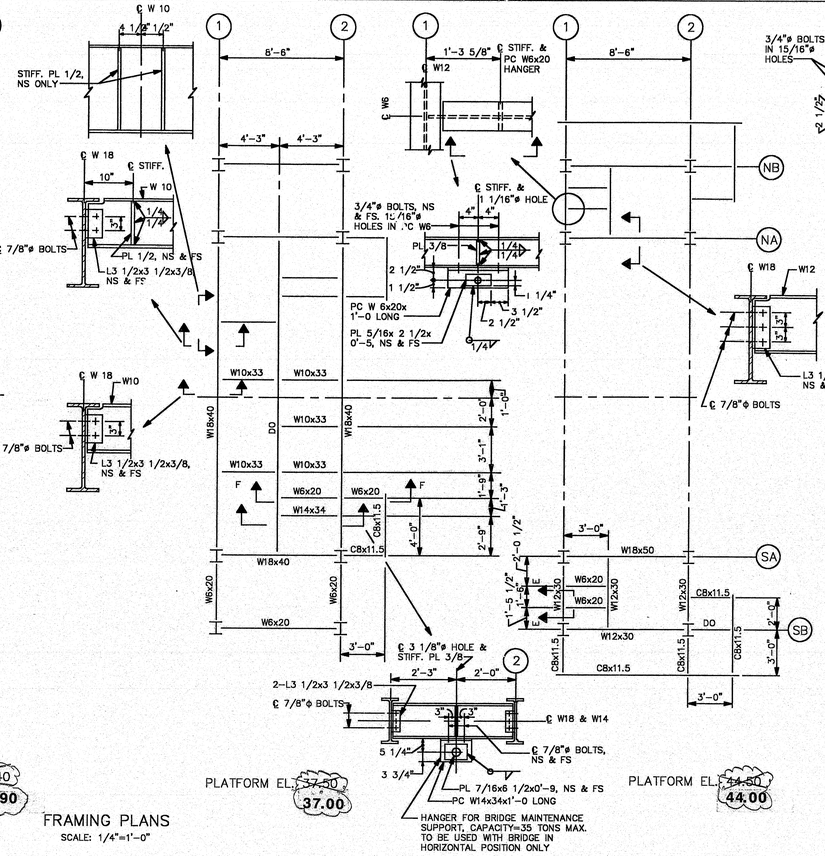
SHEET TB5 OF



FOUNDATION EL. 16.00

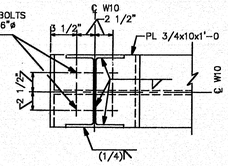


T.O.S. EL. ~~23.40 & 30.40~~ 22.90 & 29.90

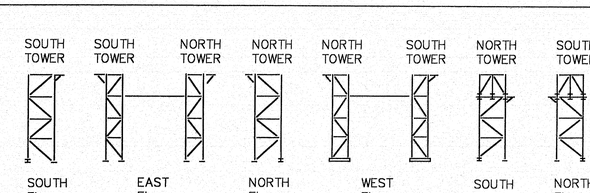


PLATFORM EL. 37.50

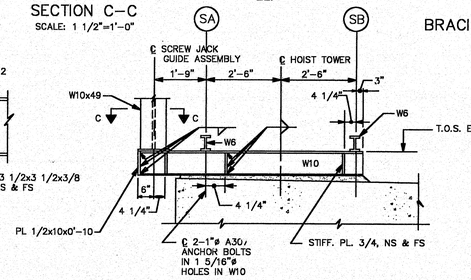
PLATFORM EL. ~~44.50~~ 44.00



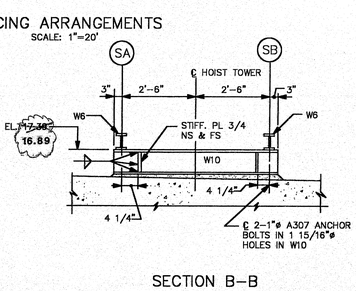
SECTION C–C
SCALE: 1 1/2"=1'-0"



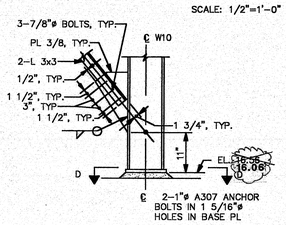
BRACING ARRANGEMENTS
SCALE: 1"=20'



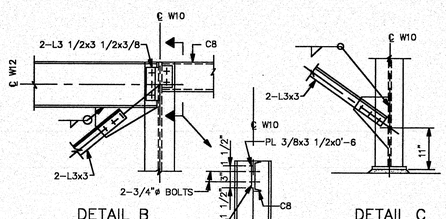
SECTION A–A
SCALE: 1/2"=1'-0"



SECTION B–B
SCALE: 1/2"=1'-0"

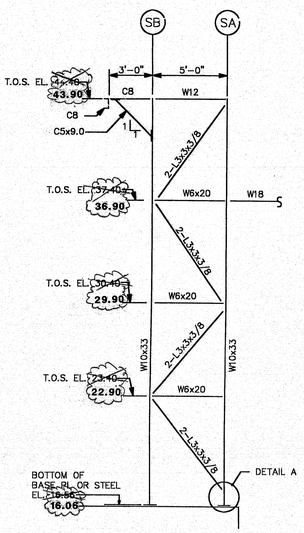


DETAIL A
SCALE: 3/4"=1'-0"

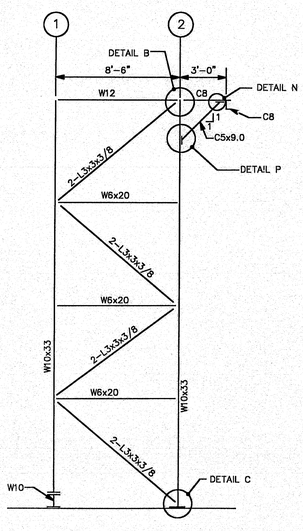


DETAIL B
SCALE: 3/4"=1'-0"

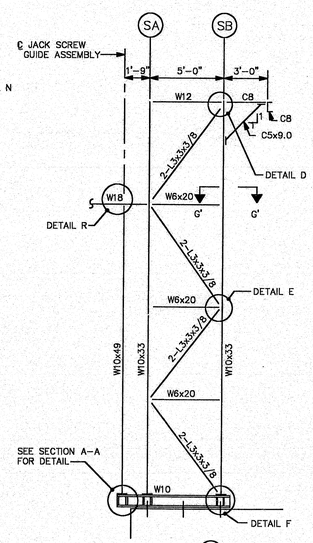
DETAIL C
SCALE: 3/4"=1'-0"



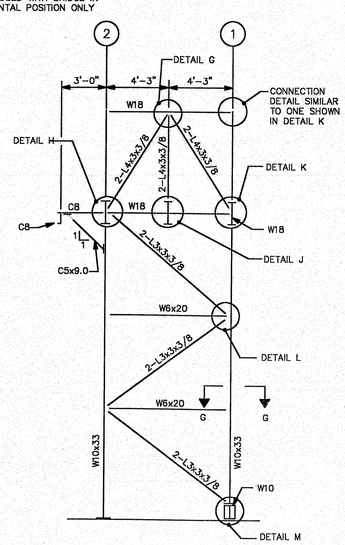
EAST @ LINE (2)



SOUTH @ LINE (SB)

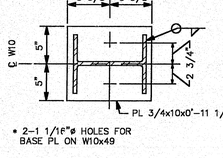


WEST @ LINE (1)

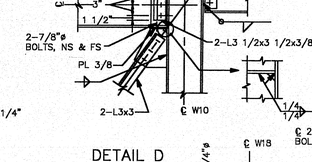


NORTH @ LINE (SA)

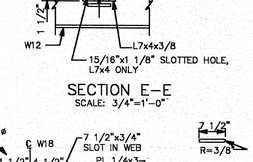
ELEVATIONS
(SOUTH HOIST TOWER SHOWN, NORTH HOIST TOWER OPP. HAND)
SCALE: 1/4"=1'-0"



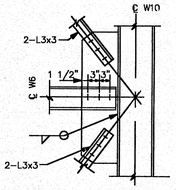
SECTION D–D
SCALE: 1 1/2"=1'-0"



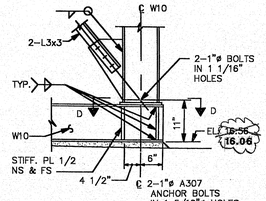
DETAIL D
SCALE: 3/4"=1'-0"



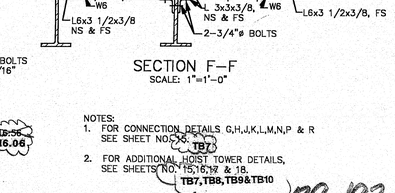
SECTION E–E
SCALE: 3/4"=1'-0"



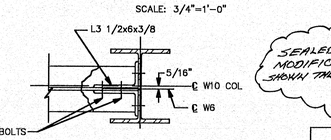
DETAIL E
SCALE: 3/4"=1'-0"



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



SECTION F–F
SCALE: 1"=1'-0"



SECTION G–G
(G'–G' SIMILAR)
SCALE: 1 1/2"=1'-0"

NOTES:
1. FOR CONNECTION DETAILS G,H,J,K,L,M,N,P & R SEE SHEET NO. ~~TB7~~ TB7
2. FOR ADDITIONAL HOIST TOWER DETAILS, SEE SHEETS NO. 15,16,17 & 18. TB7,TB8,TB9&TB10

SEALED FOR MODIFICATIONS SHOWN THIS — THOMAS P. DONALD STRUCTURAL No. 32758 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS — MAINE TEMP. NO. 11-1993

Thomas P. Donald

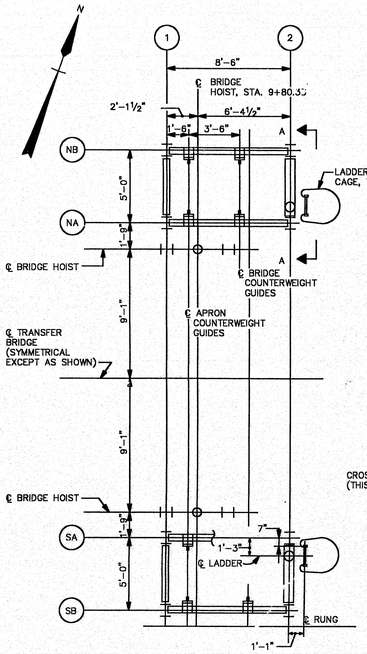
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

TRANSFER BRIDGE
HOIST TOWER DETAILS – PART 1

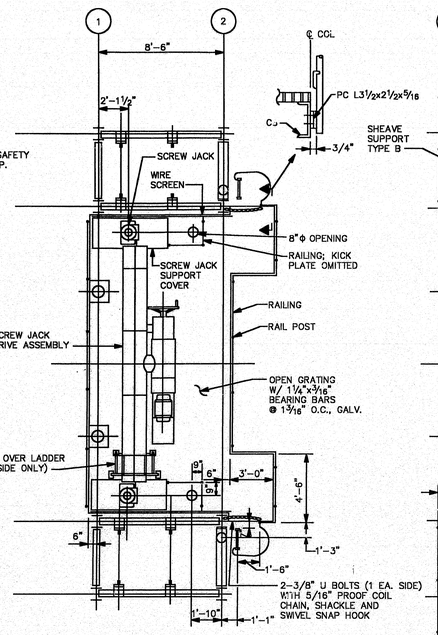
SCALE:	DES.	CHK.	APPROVED BY BUREAU OF TRANSPORTATION SERVICES
DATE:	DR.	PROJ. ENGR.	

129-192

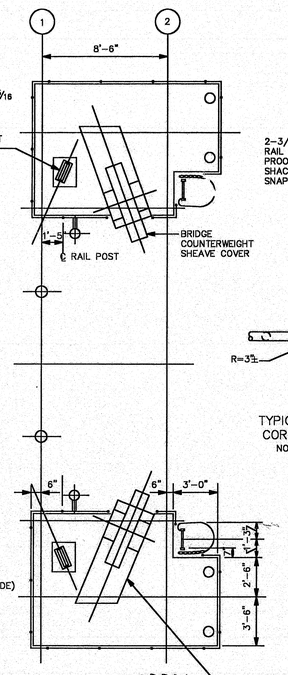
SHEET TB6 OF



T.O.S. EL. 23.40 & EL. 38.40
22.90 29.90

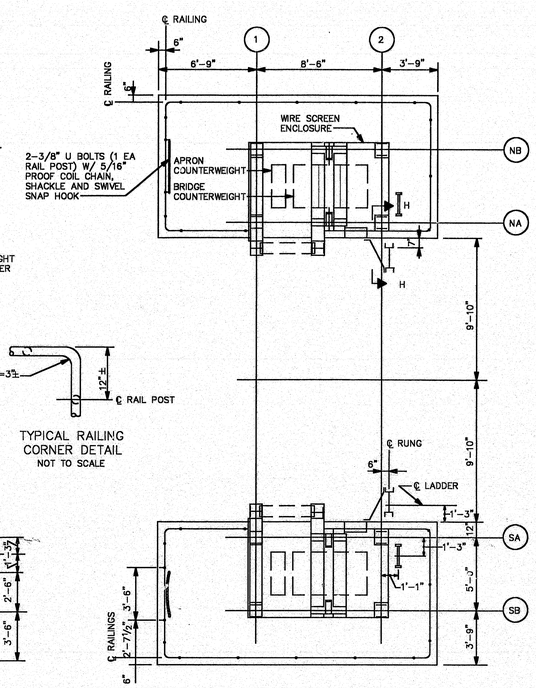


PLATFORM EL. 37.50
37.00

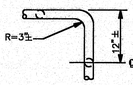


PLATFORM EL. 44.50
44.00

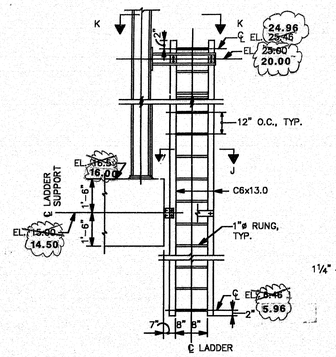
PLANS
SCALE: ¼"=1'-0"



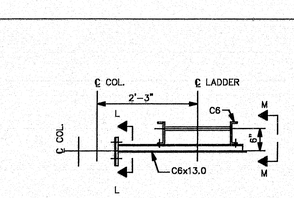
FOUNDATION EL. 16.5
16.00



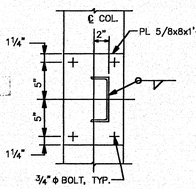
TYPICAL RAILING CORNER DETAIL
NOT TO SCALE



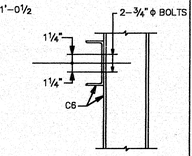
ELEVATION H-H
SCALE: 3/8"=1'-0"



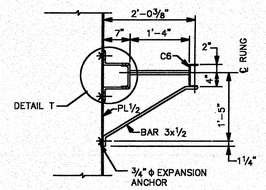
SECTION K-K
SCALE: ¾"=1'-0"



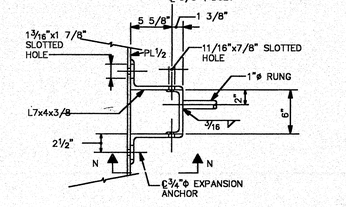
SECTION L-L
SCALE: 1½"=1'-0"



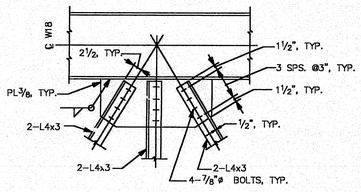
SECTION M-M
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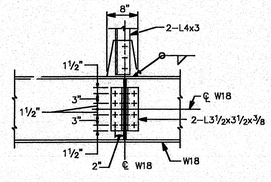
SECTION J-J
SCALE: ¾"=1'-0"



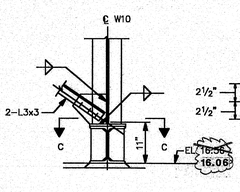
DETAIL T
SCALE: 1½"=1'-0"



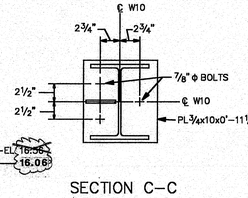
DETAIL G
SCALE: ¾"=1'-0"



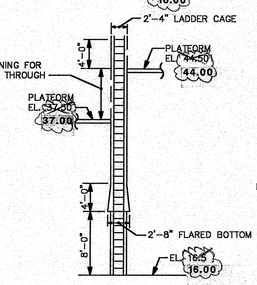
DETAIL J
SCALE: ¾"=1'-0"



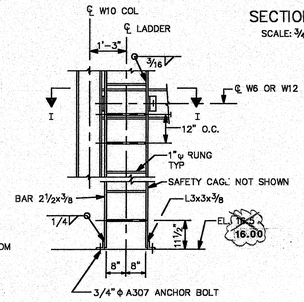
DETAIL M
SCALE: ¾"=1'-0"



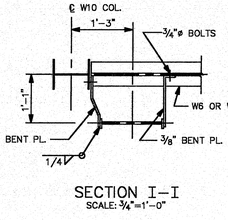
SECTION C-C
SCALE: 1½"=1'-0"



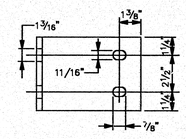
LADDER AND CAGE ARRANGEMENT
SCALE: ⅛"=1'-0"



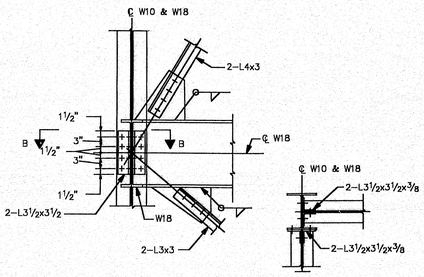
LADDER DETAIL
SCALE: ½"=1'-0"



SECTION I-I
SCALE: ¾"=1'-0"

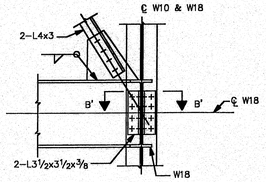


SECTION N-N
SCALE: 3"=1'-0"

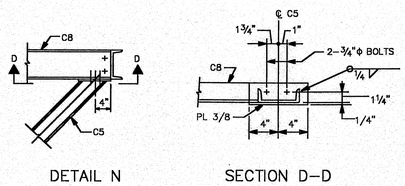


DETAIL H
SCALE: ¾"=1'-0"

SECTION B-B
(B'-B' SIMILAR OPPOSITE HAND)
SCALE: ¾"=1'-0"

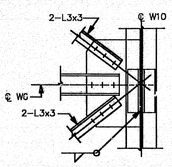


DETAIL K
SCALE: ¾"=1'-0"

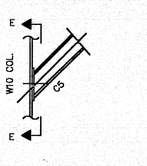


DETAIL N
SCALE: ¾"=1'-0"

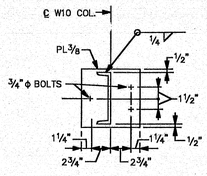
SECTION D-D
SCALE: 1½"=1'-0"



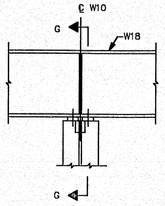
DETAIL L
SCALE: ¾"=1'-0"



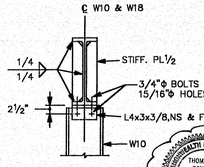
DETAIL P
SCALE: ¾"=1'-0"



SECTION E-E
SCALE: 1½"=1'-0"

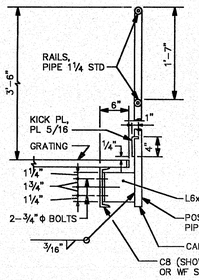


DETAIL R
SCALE: ¾"=1'-0"

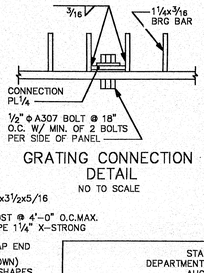


SECTION G-G
SCALE: ¾"=1'-0"

ELEVATION A-A
NORTH HOIST TOWER
(SOUTH HOIST TOWER, OPP. HAND)



RAILING AND POST CONNECTION DETAIL (TYPICAL UNLESS OTHERWISE INDICATED)
SCALE: 1"=1'-0"



GRATING CONNECTION DETAIL
NO TO SCALE

NOTES:
1. FOR DETAILS OF CROSS OVER LADDER, SEE SH. 14, TB11
2. FOR DETAIL OF RAIL POST CONNECTION TO CONCRETE FOUNDATION, SEE TYPICAL PIPE INSERT DETAIL ON SH. 26, W8.
3. BAND ALL EDGES AND OPENINGS OF OPEN GRATING WITH 1¼"x3/16" BAR.
4. WIRE SCREENS AT PLATFORM ELEVATION 37.50 ALONG COLUMN LINES NA & SA, SEE "WIRE SCREEN ENCLOSURE DETAILS" ON SH. 12, FOR SIMILAR DETAILS. TB9
5. FOR LADDER SAFETY CAGE DETAILS SEE SH. 24, TB11

129-193

MAINE TEMP. NO. 11-1993

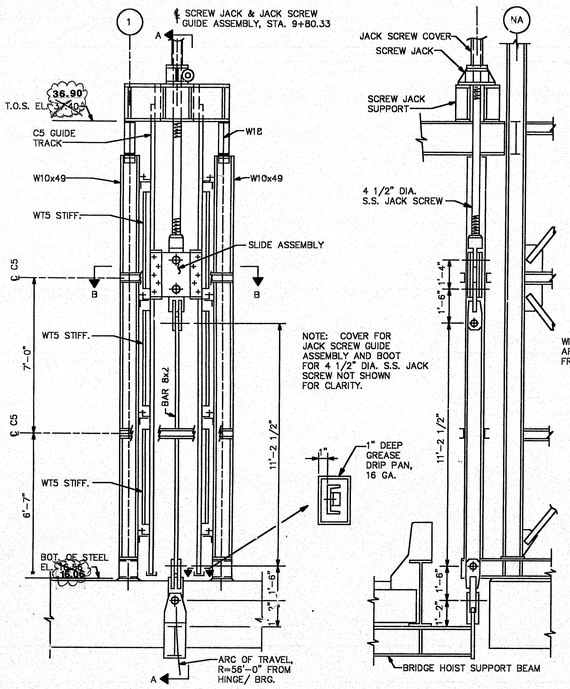
SEALED FOR MODIFICATIONS SHOWN THIS SHEET

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

TRANSFER BRIDGE
HOIST TOWER DETAILS – PART 2

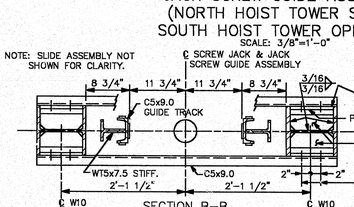
SCALE:	DES.	CHK.	APPROVED BY BUREAU OF TRANSPORTATION SERVICES
DATE:	DR.	PROJ. ENGR.	P. Pottle

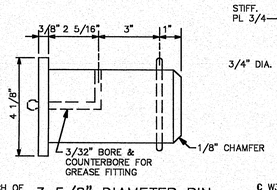
SHEET TB7 OF

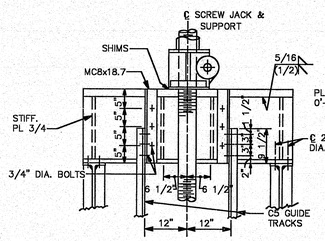


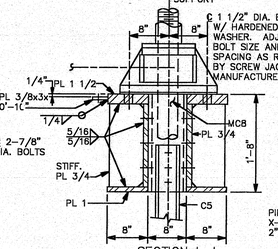
JACK SCREW GUIDE ASSEMBLY (NORTH HOIST TOWER SHOWN SOUTH HOIST TOWER OPP. HAND)

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

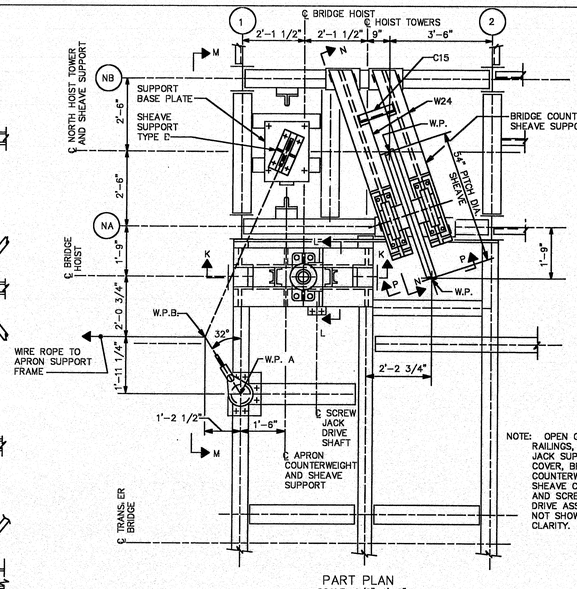


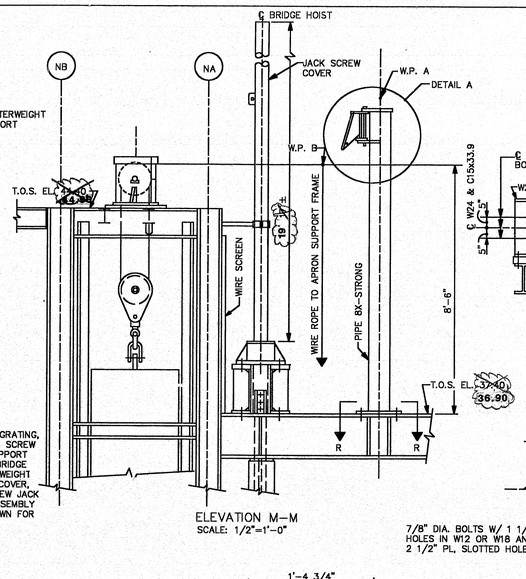


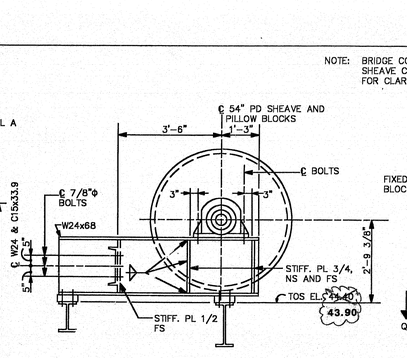


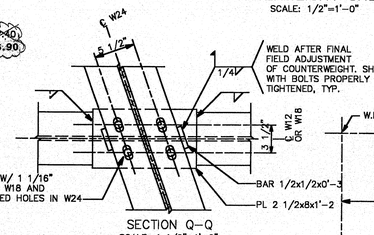


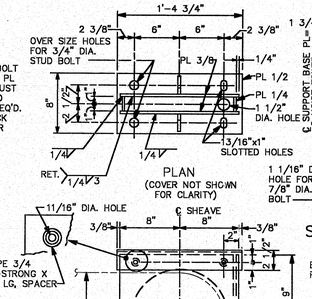
SCREW JACK SUPPORT DETAILS

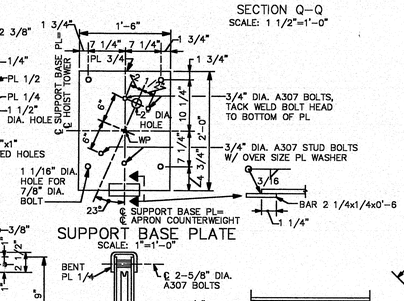


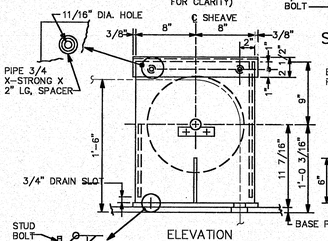






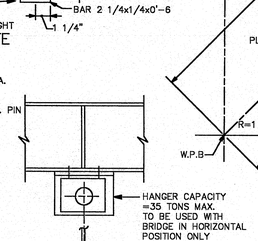


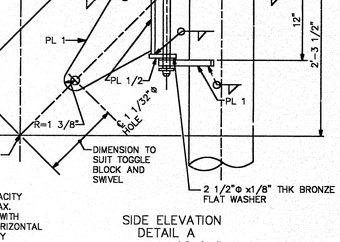


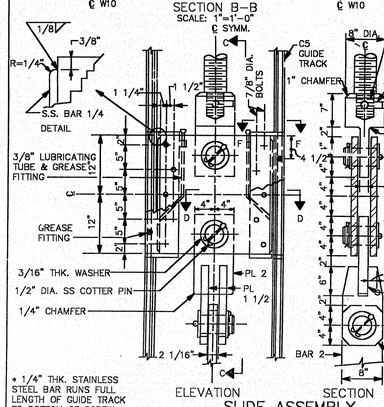


SHEAVE SUPPORT TYPE B DETAILS

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

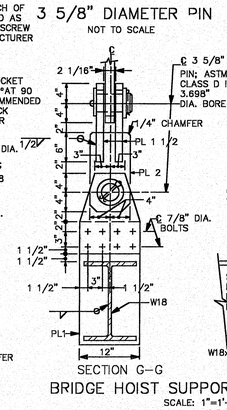


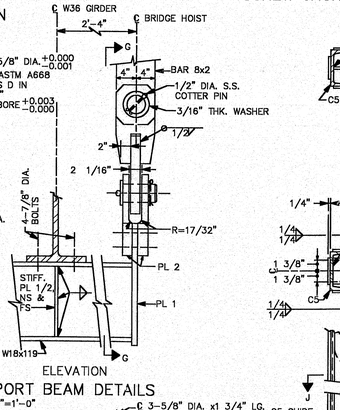


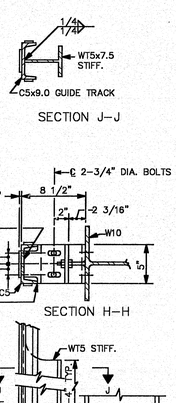


3 5/8" DIAMETER PIN

NOT TO SCALE

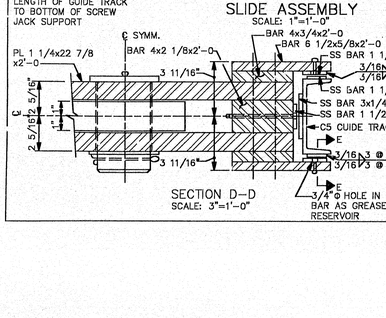


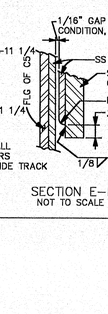


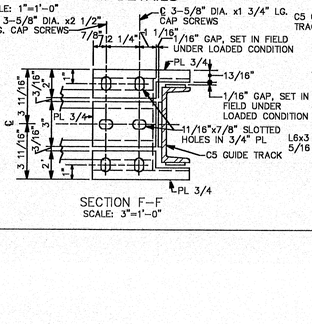


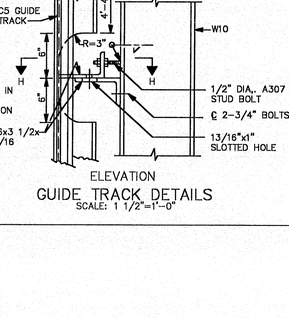
BRIDGE HOIST SUPPORT BEAM DETAILS

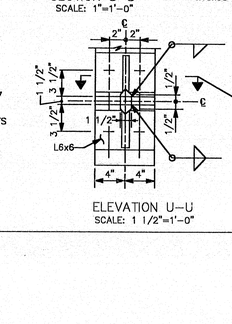
SCALE: 1"=1'-0"

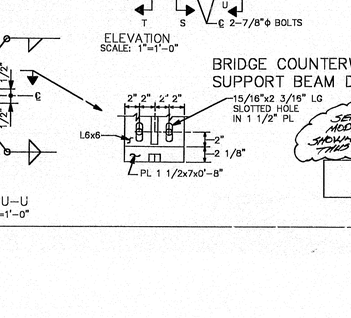




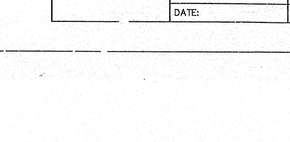








BRIDGE COUNTERWEIGHT SUPPORT BEAM DETAILS



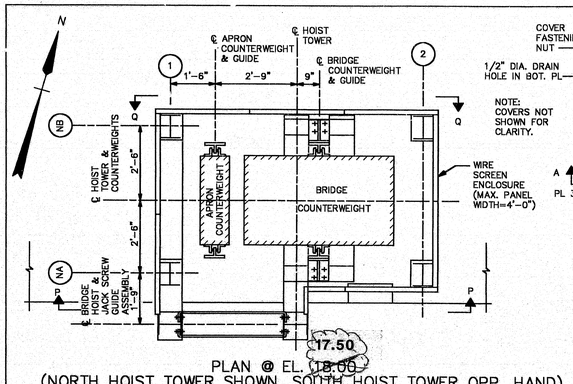
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

TRANSFER BRIDGE HOIST TOWER DETAILS – PART 3

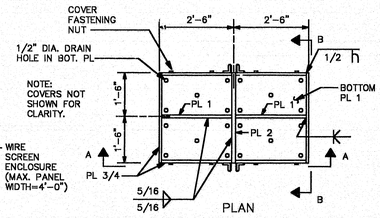
SCALE:	DES.	CHK.	APPROVED BY BUREAU OF TRANSPORTATION SERVICES
DATE:	DR.	PROJ. ENGR.	P BOTTLE

129-194

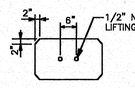
SHEET TB8 OF



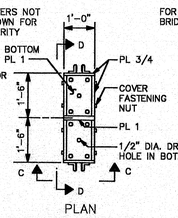
PLAN @ EL. 18.00
(NORTH HOIST TOWER SHOWN, SOUTH HOIST TOWER OPP. HAND)
SCALE: 1/2"=1'-0"



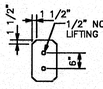
PLAN



FILLER PLATE
1'-4"x2'-3 1/2"

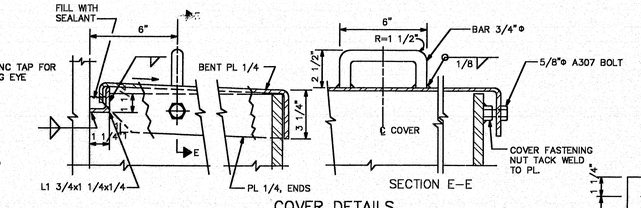


PLAN



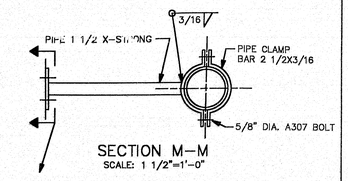
FILLER PLATE
9 3/4"x1'-4"

FOR WELDING DETAILS SEE BRIDGE COUNTERWEIGHT.

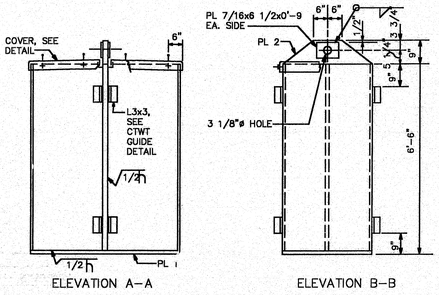


SECTION E-E

COVER DETAILS
SCALE: 3"=1'-0"



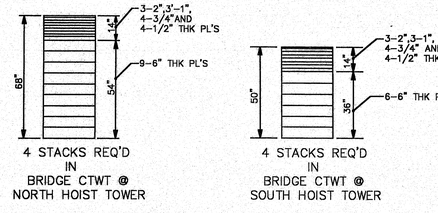
SECTION M-M
SCALE: 1 1/2"=1'-0"



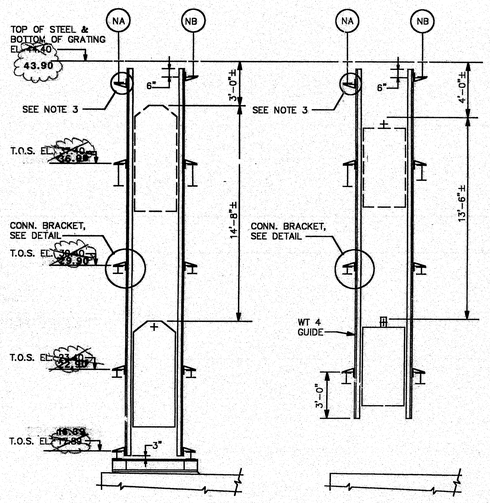
ELEVATION A-A | ELEVATION B-B | ELEVATION C-C | ELEVATION D-D

BRIDGE COUNTERWEIGHT DETAILS
SCALE: 1/2"=1'-0"

APRON COUNTERWEIGHT DETAILS
SCALE: 1/2"=1'-0"



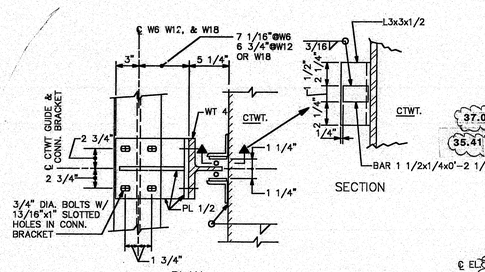
COUNTERWEIGHT FILLER PLATE DETAILS
SCALE: 3/8"=1'-0"



ELEVATION | ELEVATION

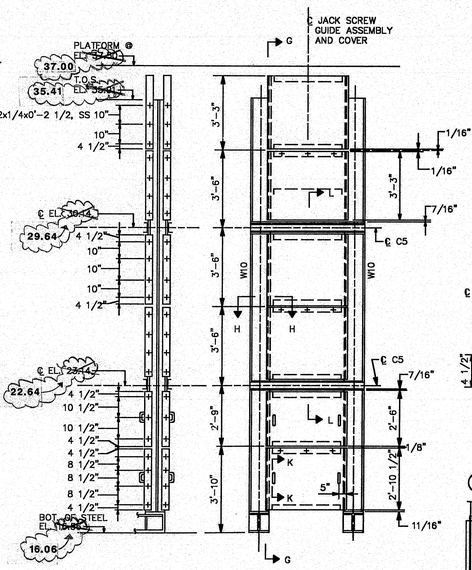
BRIDGE COUNTERWEIGHT & GUIDE
SCALE: 1/4"=1'-0"

APRON COUNTERWEIGHT & GUIDE
SCALE: 1/4"=1'-0"



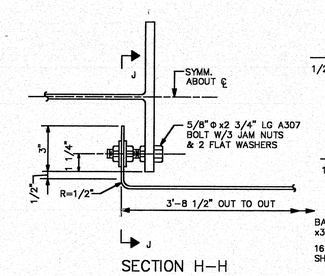
PLAN

SECTION

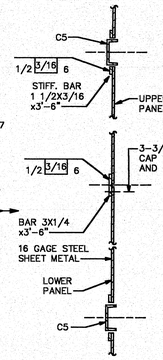


SECTION G-G | ELEVATION

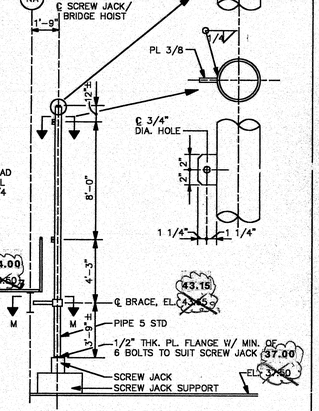
JACK SCREW GUIDE COVER DETAILS
SCALE: 3/8"=1'-0"



SECTION H-H
SCALE: 3"=1'-0"



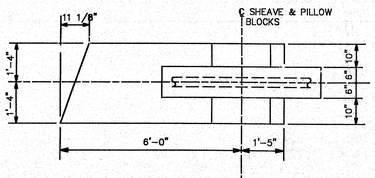
SECTION L-L
SCALE: 1"=1'-0"



JACK SCREW COVER DETAIL
SCALE: 1/4"=1'-0"

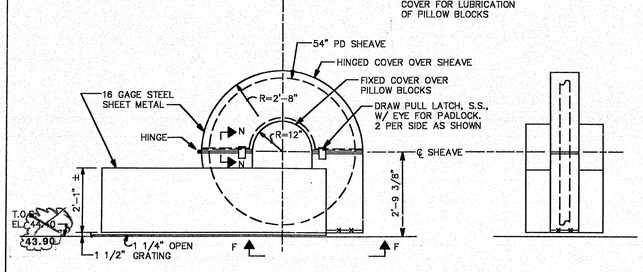
NOTES:

1. SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR THE BRIDGE COUNTERWEIGHT SHEAVE COVERS AND THE SCREW JACK SUPPORT COVERS. THE DESIGN WIND LOAD IS 50 PSF. THE COVERS SHALL BE ATTACHED TO THE SPECIFIC UNITS AND NOT TO THE OPEN GRATING. THE DIMENSIONS OF COVERS AS GIVEN ON THE PLAN SHALL BE COORDINATED AND ADJUSTED TO SUIT THE EQUIPMENTS SUPPLIED.
2. CTWT=COUNTERWEIGHT
3. TERMINATE CONNECTION BRACKET AT GUSSET PLATE AND USE ONLY TWO BOLTS FOR CONNECTION TO THE W18.



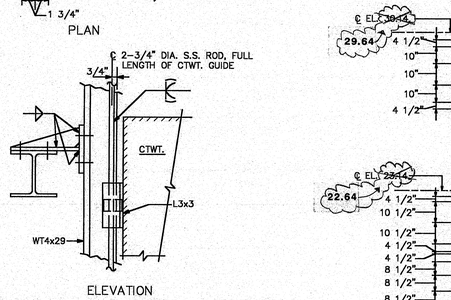
PLAN | SECTION N-N
SCALE: 3"=1'-0"

NOTE: PROVIDE ACCESS ON COVER FOR LUBRICATION OF PILLOW BLOCKS

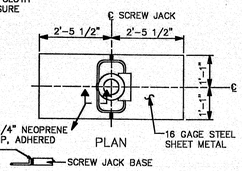


ELEVATION | END ELEVATION

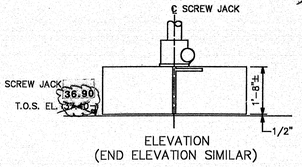
BRIDGE COUNTERWEIGHT SHEAVE COVER DETAILS
SCALE: 1/2"=1'-0"



BOTTOM
ELEVATION F-F
SCALE: 1/2"=1'-0"

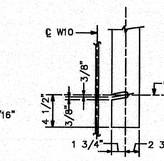


PLAN

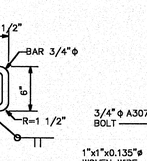


ELEVATION
(END ELEVATION SIMILAR)

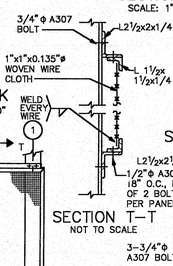
SCREW JACK SUPPORT COVER DETAIL
SCALE: 1/2"=1'-0"



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



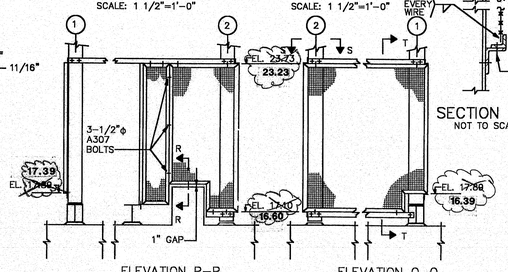
SECTION K-K
SCALE: 1 1/2"=1'-0"



SECTION T-T
NOT TO SCALE

SECTION S-S
NOT TO SCALE

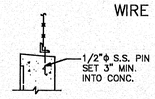
SECTION U-U
NOT TO SCALE



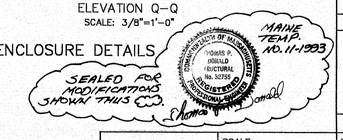
ELEVATION P-P
SCALE: 3/8"=1'-0"

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

WIRE SCREEN ENCLOSURE DETAILS

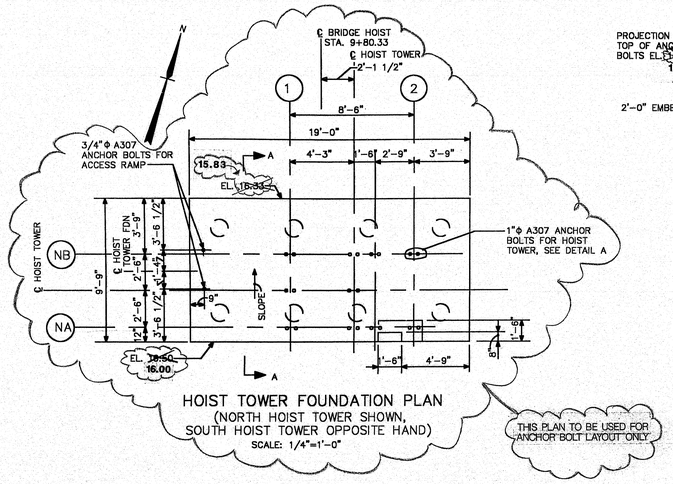


SECTION R-R
NOT TO SCALE

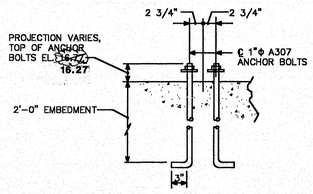


129-195

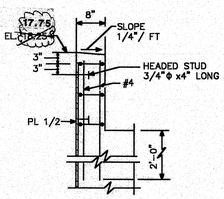
STATE OF MAINE DEPARTMENT OF TRANSPORTATION AUGUSTA, MAINE			
TRANSFER BRIDGE HOIST TOWER DETAILS – PART 4			
SCALE:	DES.	CHK.	APPROVED BY BUREAU OF TRANSPORTATION SERVICES
DATE:	DR.	PROJ. ENGR.	



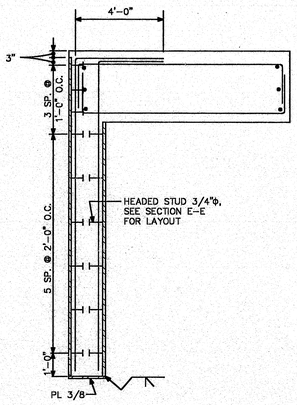
HOIST TOWER FOUNDATION PLAN
(NORTH HOIST TOWER SHOWN, SOUTH HOIST TOWER OPPOSITE HAND)
SCALE: 1/4"=1'-0"



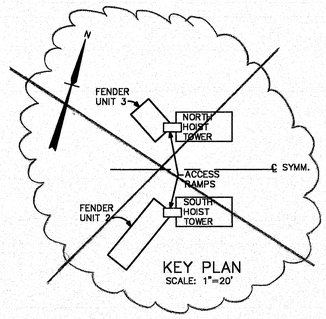
DETAIL A
SCALE: 1"=1'-0"



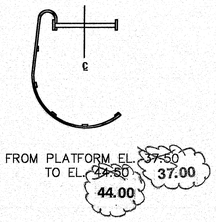
SECTION B–B
SCALE: 3/4"=1'-0"

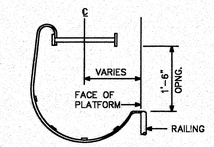


SECTION F–F
SCALE: 3/8"=1'-0"

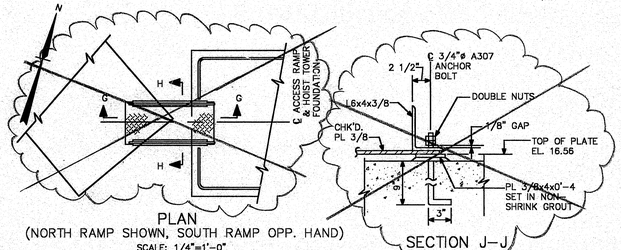


KEY PLAN
SCALE: 1"=20'



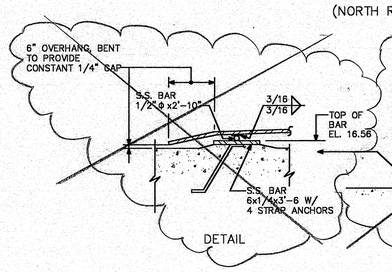


AT PLATFORM
RIGHT SIDE – STEP SHOWN
LEFT SIDE – STEP OPP. HAND

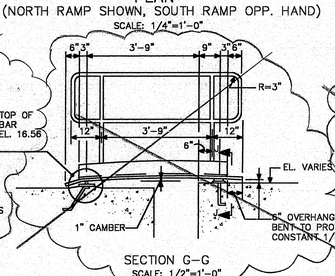


PLAN
(NORTH RAMP SHOWN, SOUTH RAMP OPP. HAND)
SCALE: 1/4"=1'-0"

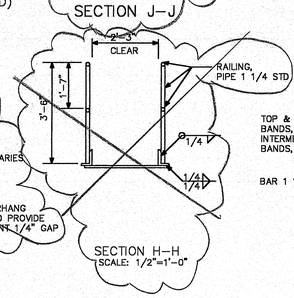
SECTION J–J



DETAIL

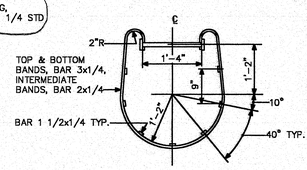


SECTION G–G
SCALE: 1/2"=1'-0"



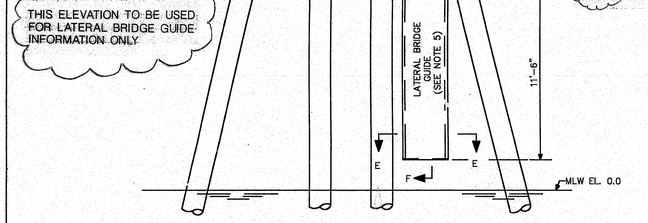
SECTION H–H
SCALE: 1/2"=1'-0"

ACCESS RAMP DETAILS

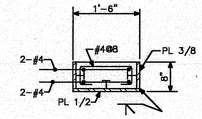


TYPICAL

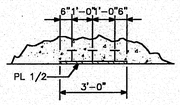
LADDER SAFETY CAGE DETAILS
SCALE: 3/4"=1'-0"



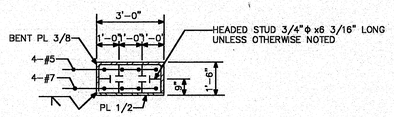
ELEVATION
SCALE: 1/4"=1'-0"



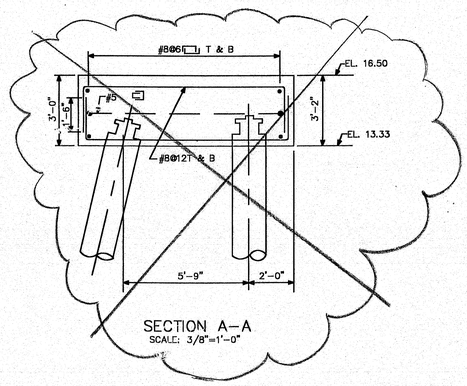
SECTION C–C
SCALE: 3/4"=1'-0"



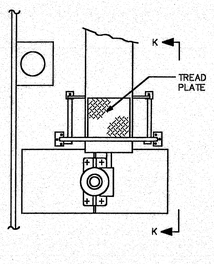
SECTION D–D
SCALE: 3/8"=1'-0"



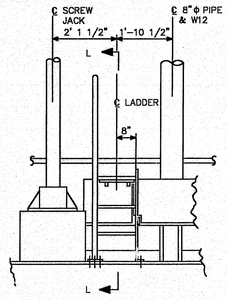
SECTION E–E
SCALE: 3/8"=1'-0"



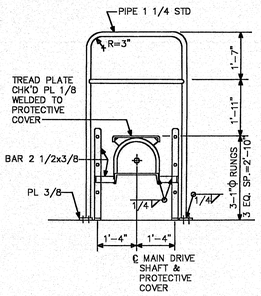
SECTION A–A
SCALE: 3/8"=1'-0"



PLAN



ELEVATION K–K



SECTION L–L

CROSS OVER LADDER DETAILS ON MACHINERY PLATFORM EL. ~~37.50~~ 37.00
SCALE: 1/2"=1'-0"

NOTES:

1. FOR RAILING DETAILS ON HOIST TOWER FOUNDATIONS, SEE SH. TB7
2. FOR RAIL POST CONNECTION TO CONCRETE FOUNDATION, SEE TYPICAL PIPE INSERT DETAIL ON SH. SH
3. ANCHOR BOLTS ARE TO BE SET BY TEMPLATES BEFORE THE CONCRETE IS PLACED.
4. FOR ADDITIONAL CONCRETE AND REINFORCEMENT NOTES, SEE SH. SEE WATERFRONT DRWGS.
5. THE GUIDE FACES OF THE NORTH AND SOUTH HOIST TOWER SHALL BE PLUMB AND PARALLEL TO EACH OTHER. THESE BRIDGE GUIDES SHALL BE MAINTAINED WITHIN A TOLERANCE OF ± 1/16" DURING PLACEMENT AND CURING OF THE CONCRETE.

129-196

SEALED FOR MODIFICATIONS SHOWN THIS — MAINE TEMP. NO. 11-1998

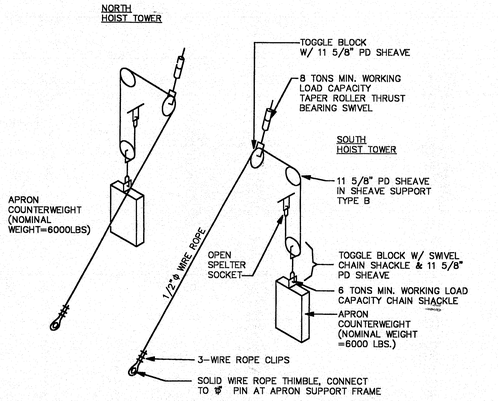
THOMAS F. DONALD STRUCTURAL No. 10755 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

TRANSFER BRIDGE
HOIST TOWER FOUNDATION DETAILS AND MISCELLANEOUS DETAILS

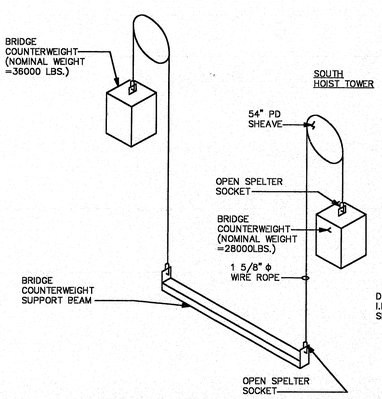
SCALE:	DES.	CHK.	APPROVED BY BUREAU OF TRANSPORTATION SERVICES
DATE:	DR.	PROJ. ENGR.	P. BOYLE

SHEET TB10 OF



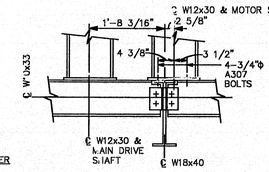
APRON COUNTERWEIGHT REEVING DIAGRAM

NOT TO SCALE

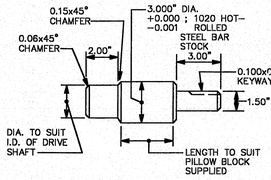


BRIDGE COUNTERWEIGHT REEVING DIAGRAM

NOT TO SCALE

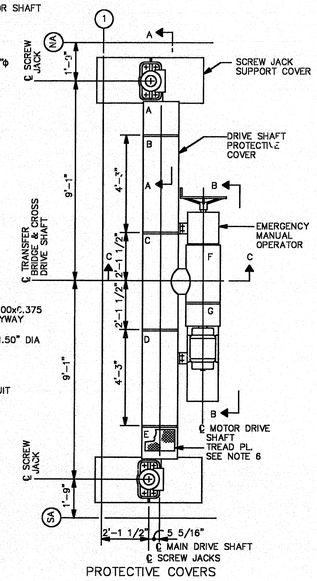


SECTION E-E

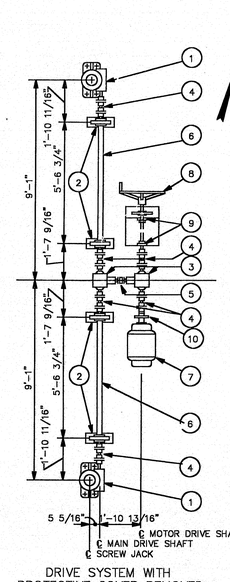


SHAFT TRANSITION DETAIL

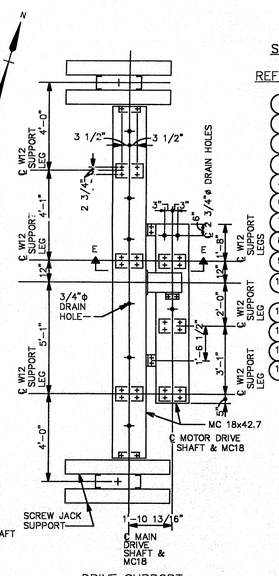
NOT TO SCALE



PROTECTIVE COVERS



DRIVE SYSTEM WITH PROTECTIVE COVER REMOVED



DRIVE SUPPORT

SCREW JACK DRIVE PLANS

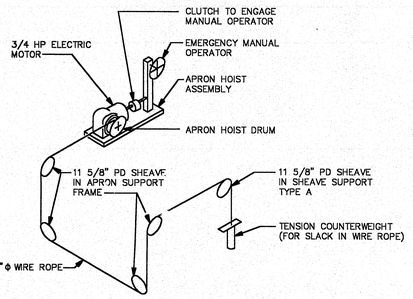
SCALE: 3/8"=1'-0"

SCREW JACK DRIVE ASSEMBLY COMPONENTS

REF. NO.	DESCRIPTION	
1	SCREW JACK	— MACHINE SCREW JACK, 50-TON LIFTING CAPACITY
2	PILLOW BLOCK	— FOR 3.00" DIA. SHAFT
3	SPIRAL BEVEL GEAR BOX	— 90°, 3-WAY W/ 1.50" DIA. SHAFTS
4	FLOATING SHAFT COUPLING	— W/ 1.50" BORE
5	SLEEVE COUPLING	— W/ 1.50" BORE
6	DRIVE SHAFT	— 3" DIA. HOLLOW BODY W/ 1.50" DIA. ENDS
7	ELECTRIC MOTOR	— 40 HP, FRAME NO. 364 U
8	HAND WHEEL	— 24" DIA. W/ REVOLVING HANDLE
9	FLANGE BEARING	— FOR 1.50" DIA. SHAFT
10	RIGID COUPLING/ SHAFT EXTENSION	— FLANGED COUPLING W/ 1.50" SHAFT EXTENSION AND 2.125" BORED HALVES
11	FLANGED BRONZE BEARING	— FOR 1.50" DIA. SHAFT
12	DRIVEN SPROCKET	— 32 TOOTH W/ PRESS FIT FLANGED BRONZE BEARING
13	DRIVE SPROCKET	— 96-TOOTH W/ 1.50" BORED HUB
14	ROLLER CHAIN	— ASA NO.40, 0.5" PITCH

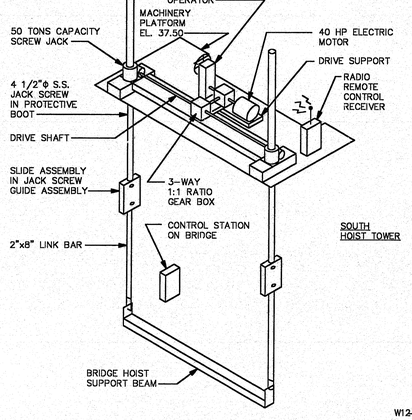
NOTES:

1. BOLTS FOR BOLTED CONNECTIONS OF THE SCREW JACK DRIVE SUPPORT SHALL BE 3/4" DIAMETER ASTM A325 UNLESS OTHERWISE INDICATED.
2. PLATES OR SHEETS INDICATED BY GAGES SHALL BE ASTM A611, GRADE B STEEL SHEET METAL.
3. FULL BEARING SHIMS, 1/2" THICK MAX., SHALL BE PROVIDED UNDER SCREW JACK, PILLOW BLOCKS, 3-WAY GEAR BOXES AND MOTOR.
4. JACK SCREWS SHALL BE PLUMB UNDER FULL DEAD LOAD.
5. PROVIDE ACCESS ON MACHINERY HOUSING AND PROTECTIVE COVERS FOR LUBRICATION OF ANTI-FRICTION BEARINGS AND BEVEL GEARS.
6. FOR DETAILS OF TREAD PLATE, SEE SH. 19. TB11



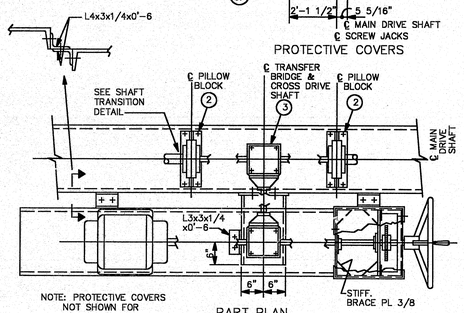
APRON HOIST REEVING DIAGRAM

NOT TO SCALE



BRIDGE HOIST SCHEMATIC DIAGRAM

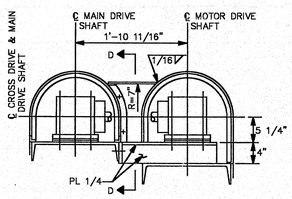
NOT TO SCALE



NOTE: PROTECTIVE COVERS NOT SHOWN FOR CLARITY.

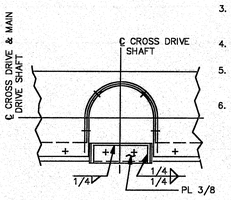
PART PLAN

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



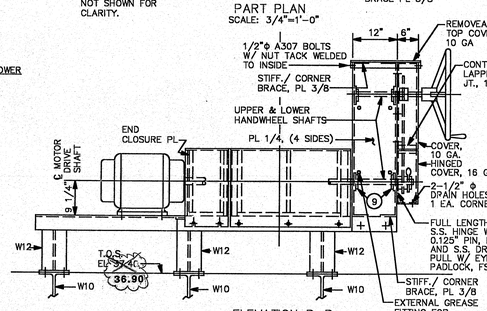
SECTION C-C

SCALE: 1"=1'-0"



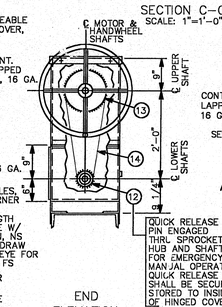
SECTION D-D

SCALE: 1"=1'-0"

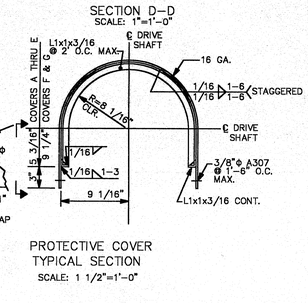


ELEVATION B-B

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

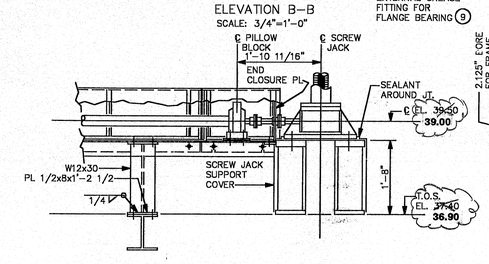


END ELEVATION



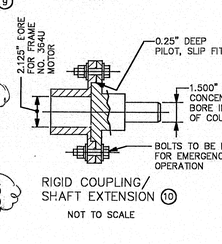
PROTECTIVE COVER TYPICAL SECTION

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



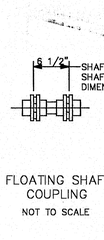
SECTION A-A

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



RIGID COUPLING/ SHAFT EXTENSION (10)

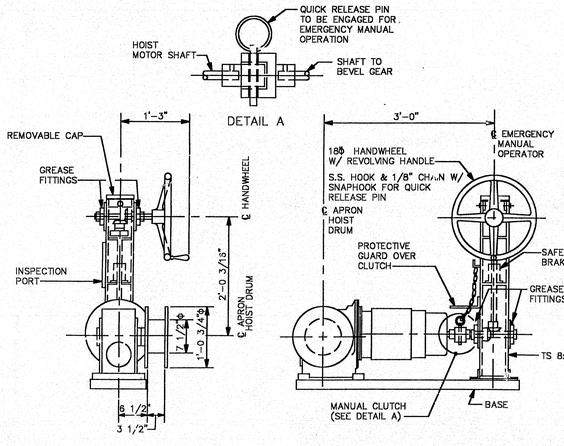
NOT TO SCALE



FLOATING SHAFT COUPLING (4)

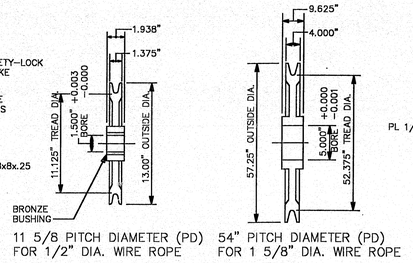
NOT TO SCALE

SCREW JACK DRIVE ASSEMBLY



APRON HOIST ASSEMBLY

NOT TO SCALE



11 5/8 PITCH DIAMETER (PD) FOR 1/2" DIA. WIRE ROPE

54" PITCH DIAMETER (PD) FOR 1 5/8" DIA. WIRE ROPE

WIRE ROPE SHEAVE DETAIL

NOT TO SCALE

SEALED FOR MODIFICATIONS SHOWN THIS

COMMONWEALTH OF MAINE THOMAS P. DONALD STRUCTURAL No. 12756 REGISTERED PROFESSIONAL ENGINEER

MAINE TEMP. NO. 11-1993

129-197

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

TRANSFER BRIDGE REEVING DIAGRAMS AND HOIST MACHINERY DETAILS

SCALE:	DES.	CHK.	APPROVED BY BUREAU OF TRANSPORTATION SERVICES
DATE:	DR.	PROJ. ENGR.	P Poole

SHEET TB11 OF