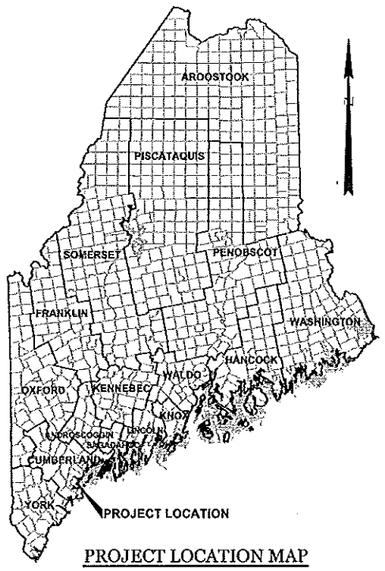
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



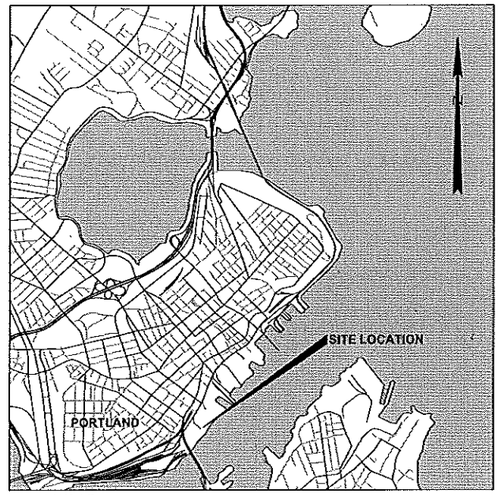
PROJECT LOCATION MAP

40 0 40 80

Scale in miles

CITY OF PORTLAND
CUMBERLAND COUNTY

PORTLAND INTERNATIONAL MARINE TERMINAL
FACILITY IMPROVEMENTS
PHASE 2
WIN: 018413.10



SOURCE:

SITE LOCATION MAP

1/2 0 1/2 1

Scale in miles

SHEET INDEX

WIN 018413.10

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE

COMMISSIONER:

CHIEF ENGINEER:

PROJECT INFORMATION

PROGRAM	MULTIMODAL	
PROJECT MANAGER	JOEL KITTREDGE	SIGNATURE
DESIGNER	CRAIG R. MORIN, P.E.	
CONSULTANT	HNTB CORP.	P.E. NUMBER
PROJECT RESIDENT	-	
CONTRACTOR	-	DATE
PROJECT COMPLETION DATE	-	

PORTLAND INTERNATIONAL
MARINE TERMINAL IMPROVEMENTS
PORTLAND CUMBERLAND COUNTY

TITLE/INDEX SHEET

SHEET NUMBER
1
1 OF 7

GENERAL NOTES:

1. RESEARCH PERFORMED BY THE MAINE DEPARTMENT OF TRANSPORTATION'S ENVIRONMENTAL OFFICE (MAINEDOT'S-ENV) SUGGESTED THAT THE SUBSURFACE ENVIRONMENT AT THE PORTLAND INTERNATIONAL MARINE TERMINAL HAD BEEN ADVERSELY AFFECTED BY PAST ACTIVITIES. SUBSEQUENT ON-SITE WORK BY MAINEDOT-ENV CONFIRMED THE REPORTED CONCERNS. HOWEVER, THE ENVIRONMENTAL ISSUES WERE NOTED TO BE LARGELY AT DEPTH; IT APPEARS THAT THE MOST RECENT WORK PROPOSED FOR THE SITE WILL NOT ENCOUNTER THE IDENTIFIED ENVIRONMENTAL CONCERNS. IN LIGHT OF THE AVAILABLE ENVIRONMENTAL DATA, THE CONTRACTOR SHALL REMAIN ALERT FOR EVIDENCE OF CONTAMINATION. IF THE CONTRACTOR ENCOUNTERS EVIDENCE OF SOIL OR GROUNDWATER CONTAMINATION, THE CONTRACTOR SHALL SECURE THE EXCAVATION, STOP WORK IN THE CONTAMINATED AREA AND IMMEDIATELY NOTIFY THE RESIDENT. THE RESIDENT SHALL CONTACT THE HYDROGEOLOGIST IN MAINEDOT'S ENVIRONMENTAL OFFICE AT 207-624-3100 AND THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AT 800-482-0777. WORK MAY ONLY CONTINUE WITH AUTHORIZATION FROM THE RESIDENT.

2. UTILITIES REMOVED FROM SERVICE MUST BE RECONNECTED AND OPERATIONAL WITHIN A TIMEFRAME ACCEPTED BY THE OWNER. CCTV AND SECURITY SYSTEMS MUST REMAIN ONLINE AT ALL TIMES. SCHEDULING OF ALL WORK SHALL BE COORDINATED WITH CENTRAL MAINE POWER, CO., THE OWNER AND THE RESIDENT.

3. ELEVATIONS ARE IN FEET BASED ON PROJECT DATUM, NGVD29.

4. CONTRACTOR SHALL MAINTAIN ADEQUATE SURVEY CONTROL AT ALL TIMES TO ESTABLISH AND MAINTAIN ALL LINES AND ELEVATIONS.

5. ALL DIMENSIONS, ELEVATIONS & CONDITIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE AFFECTED PART OF THE WORK.

6. ALL NORTH ARROWS SHOWN ARE GRID NORTH BASED ON NAD83.

7. THE EXACT SIZE & LOCATION OF ALL EXISTING UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR. CARE SHALL BE TAKEN TO PROTECT ANY UTILITIES PRESENT AND ALL CONSTRUCTION SHALL BE COORDINATED WITH THE RESIDENT.

8. EXISTING FEATURES WERE SURVEYED BY JAMES D. NADEAU, LLC UNDER SUBCONTRACT TO THE MAINE PORT AUTHORITY BETWEEN OCTOBER 2010 AND NOVEMBER 2010 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME.

9. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE RESIDENT.

10. METHODS OF CONSTRUCTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY FEDERAL, STATE AND MUNICIPAL REGULATIONS AND PERMITS. ENVIRONMENTAL CONTROLS SHALL INCLUDE BUT NOT BE LIMITED TO NOISE, TURBIDITY, LIQUIDS AND DUST. INSTALL EROSION CONTROL MEASURES AT STORMWATER INLET STRUCTURES AND INSTALL SEDIMENT BARRIER AT LIMITS OF PAVEMENT RECONSTRUCTION.

11. THE CONTRACTOR MAY BE CHARGED ADDITIONAL COST OF REINSPECTION OR RETEST WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY.

12. THE PORTLAND INTERNATIONAL MARINE TERMINAL IS IN COMPLIANCE WITH MTSA 33 CFR PART 105. ALL ACTIVITIES SHALL BE COORDINATED WITH THE PORT OPERATOR. NO ADDITIONAL TIME OR PAYMENT WILL BE MADE FOR CONTRACTOR TO ENSURE COMPLIANCE.

ABBREVIATIONS:

BLDG	BUILDING
CIP	CAST-IN-PLACE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CY	CUBIC YARD
DIA	DIAMETER
EA	EACH
EF	EACH FACE
ELEV	ELEVATION IN FEET
EW	EACH WAY
FFE	FIRST FLOOR ELEVATION
HDG	HOT DIPPED GALVANIZED
ID	INSIDE DIAMETER
INV	INVERT
JBOX	AT GRADE JUNCTION BOX
K (KIP)	1000 POUNDS
LBS	POUNDS
L	LENGTH
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PSF	POUNDS PER SQUARE FOOT
R	RADIUS
REF	REFERENCE
REQ'D	REQUIRED
SCH	SCHEDULE
S	SLOPE
SQ	SQUARE
SF	SQUARE FEET
TYP	TYPICAL

LEGEND:

ℙ	PLATE
℄	CENTER LINE
#6	REINFORCING BAR SIZE
	TEST BORINGS
	FIRE HYDRANT
	UNDERGROUND ELECTRIC BOX
	EXISTING LIGHT POLE
	PROPOSED LIGHT SWITCH
	PROPOSED ELECTRIC METER
	HARDWOOD TREE
	SANITARY MANHOLE
	WATER GATE
	CATCH BASIN
	DRAIN MANHOLE
	MANHOLE
	TELEPHONE MANHOLE
	ELECTRICAL MANHOLE
	PROPOSED JBOX
	PROPOSED REEFER PEDESTAL
	EXISTING CHAIN LINK FENCE
	EXISTING CHAIN LINK FENCE
	GUARD RAIL
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	SANITARY SEWER
	STORM DRAIN
	TELEPHONE
	WATER
	GAS
	CURBING
	RAILROAD TRACKS

GEOTECHNICAL NOTES:

1. SOIL CLASSIFICATION, PROPERTIES AND DESCRIPTIONS ARE BASED ON ENGINEERING INTERPRETATION OF AVAILABLE SUBSURFACE INFORMATION BY HALEY & ALDRICH, INC. AND MAY NOT NECESSARILY REFLECT ACTUAL VARIATIONS IN SUBSURFACE CONDITIONS THAT MAY BE ENCOUNTERED BETWEEN INDIVIDUAL BORINGS OR SAMPLE LOCATIONS.

2. OBSERVED WATER LEVELS AND/OR WATER CONDITIONS INDICATED ARE AS RECORDED AT THE TIME OF EXPLORATION AND MAY VARY ACCORDING TO THE PREVAILING RAINFALL, METHODS OF EXPLORATION, AND OTHER FACTORS.

3. SOUND ENGINEERING JUDGMENT WAS EXERCISED IN PREPARING THE SUBSURFACE INFORMATION PRESENTED HEREIN. ANALYSIS AND INTERPRETATION OF SUBSURFACE DATA WAS PERFORMED AND INTENDED FOR AUTHORITY DESIGN AND ESTIMATE PURPOSES ONLY. PRESENTATION OF THE INFORMATION ON THESE PLANS OR ELSEWHERE IS FOR THE PURPOSE OF PROVIDING INTENDED USERS WITH ACCESS TO THE SAME DATA AVAILABLE TO THE AUTHORITY. THE SUBSURFACE INFORMATION IS PRESENTED IN GOOD FAITH AND IS NOT INTENDED AS A SUBSTITUTE FOR ADDITIONAL EXPLORATIONS, INDEPENDENT INTERPRETATIONS, INDEPENDENT ANALYSIS OR JUDGMENT BY THE CONTRACTOR.

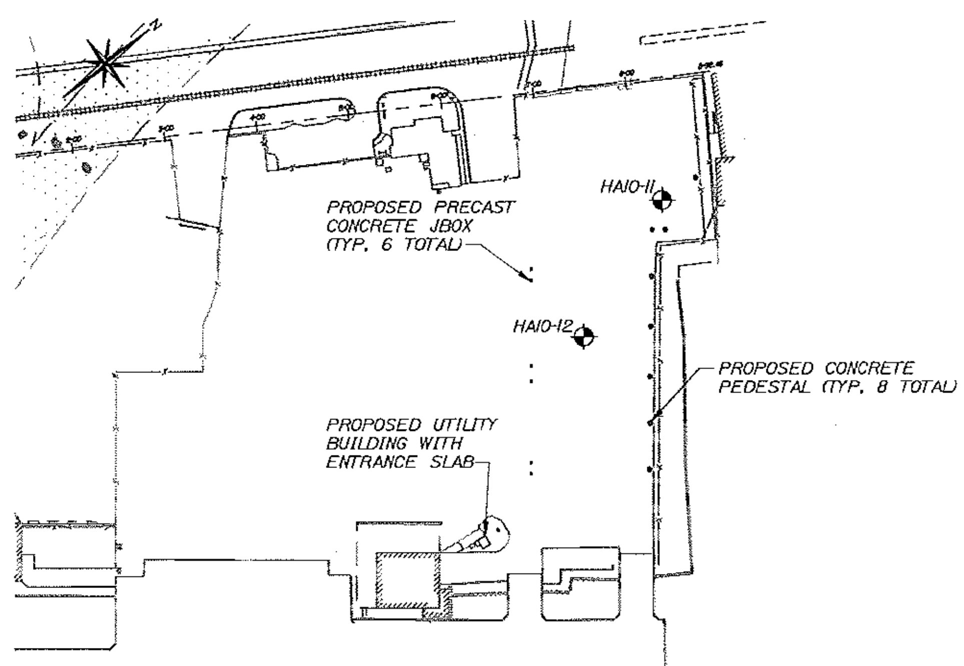
4. THE SUBSURFACE EXPLORATIONS SHOWN HEREIN WERE MADE BETWEEN NOVEMBER 15, 2010 AND NOVEMBER 18, 2010 BY HALEY & ALDRICH, INC. ALL BORINGS WERE PERFORMED BY MAINE TEST BORINGS AND WERE FIELD LOCATED BY JAMES D. NADEAU, LLC.

5. BORINGS ARE FOR THE PURPOSE OF DESIGN AND SHOW SOIL CONDITIONS AT BORING LOCATIONS ONLY, AND DO NOT NECESSARILY SHOW THE NATURE AND EXTENT OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION. ACTUAL SUBSURFACE CONDITIONS WILL VARY.

6. ELEVATIONS SHOWN ON TEST BORING LOGS ARE APPROXIMATE AND REFERENCE THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).

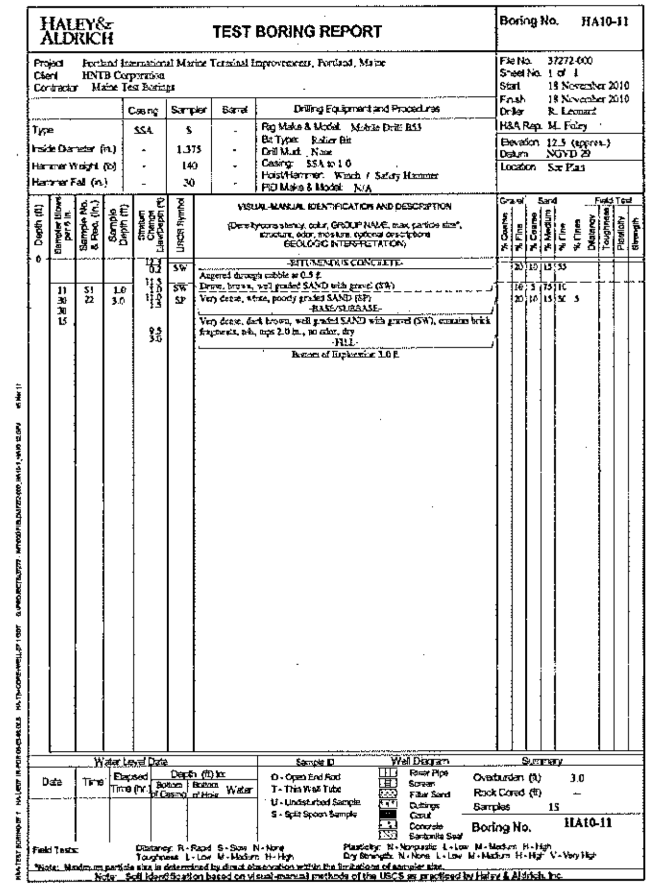
7. BORING STATION AND OFFSET INFORMATION IS BASED ON THE CONSTRUCTION BASELINE BETWEEN STEEL REBAR LOCATED AT THE PROPERTY CORNERS. SEE SHEET 3 FOR LAYOUT.

BORING NO.	STATION	OFFSET (RT)
HA10-11	8+27.7	131.6'
HA10-12	7+27.8	268.1'

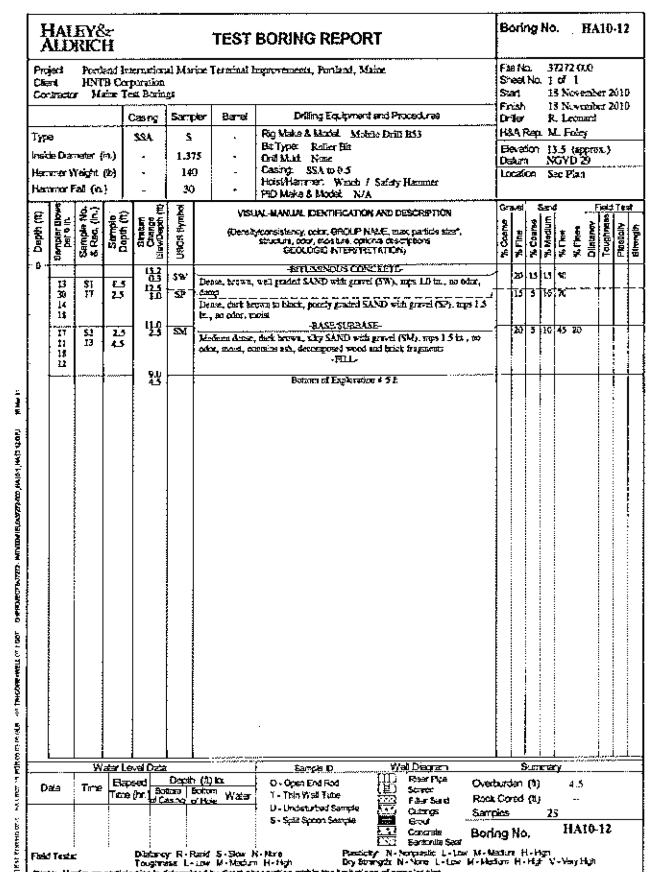


SITE LAYOUT PLAN

SCALE: 1"=100'-0"



HALEY& ALDRICH
TEST BORING REPORT
Boring No. HA10-11
Project Portland International Marine Terminal Improvements, Portland, Maine
Client HNTB Corporation
Contractor Maine Test Borings
File No. 37272-000
Sheet No. 1 of 1
Start 18 November 2010
Finish 18 November 2010
Driller R. Leonard
H&A Rep. M. Foley
Elevation 12.5 (approx.)
Datum NGVD 29
Location See Plan
Rig Make & Model Mobile Drill B53
Bit Type Roller Bit
Drill Mud None
Casing SSA to 1.0
Hoist/Hammer Winch / Safety Hammer
PID Make & Model N/A
VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION
-BITUMINOUS CONCRETE-
Augered through cobble at 0.5 ft.
Dense, brown, well graded SAND with gravel (SW)
Very dense, white, poorly graded SAND (SP)
-BASE/SUBBASE-
Very dense, dark brown, well graded SAND with gravel (SW), contains brick fragments, ash, mps 2.0 in., no odor, dry
-FILL-
Bottom of Exploration 3.0 ft.
Boring No. HA10-11
Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.



HALEY& ALDRICH
TEST BORING REPORT
Boring No. HA10-12
Project Portland International Marine Terminal Improvements, Portland, Maine
Client HNTB Corporation
Contractor Maine Test Borings
File No. 37272-000
Sheet No. 1 of 1
Start 15 November 2010
Finish 15 November 2010
Driller R. Leonard
H&A Rep. M. Foley
Elevation 13.5 (approx.)
Datum NGVD 29
Location See Plan
Rig Make & Model Mobile Drill B53
Bit Type Roller Bit
Drill Mud None
Casing SSA to 0.5
Hoist/Hammer Winch / Safety Hammer
PID Make & Model N/A
VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION
-BITUMINOUS CONCRETE-
Dense, brown, well graded SAND with gravel (SW), mps 1.0 in., no odor, damp
Dense, dark brown to black, poorly graded SAND with gravel (SP), mps 1.5 in., no odor, moist
-BASE/SUBBASE-
Medium dense, dark brown, silty SAND with gravel (SM), mps 1.5 in., no odor, moist, contains ash, decomposed wood and brick fragments
-FILL-
Bottom of Exploration 4.5 ft.
Boring No. HA10-12
Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER 018413.10

WIN 018413.10

	BY	DATE
PROJ. MANAGER CRAIG R. MORIN		
DESIGN-DETAILED	HME	3/1/13
CHECKED-REVIEWED	CRM	3/1/13
DESIGN2-DETAILED2	RAL	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

PORTLAND INTERNATIONAL
MARINE TERMINAL IMPROVEMENTS
PORTLAND CUMBERLAND COUNTY

GENERAL NOTES
AND SITE LAYOUT

SHEET NUMBER

2

NOTES:
1. REEFER OUTLET ASSEMBLIES SHOWN HEREIN WILL BE PRE-PURCHASED BY THE MAINEDOT AND SHALL BE SHIPPED DIRECTLY TO THE PROJECT SITE. THE CONTRACTOR SHALL OFFLOAD AND STORE THE ASSEMBLIES ON-SITE UPON ARRIVAL OF THE SHIPMENT. THE RESIDENT WILL DESIGNATE THE STORAGE LOCATION. CONTRACTOR SHALL FULLY INSTALL THE PEDESTAL-MOUNTED REEFER OUTLET ASSEMBLIES ONCE THE CONCRETE PEDESTALS ARE COMPLETE AND WIRING IS CHASED.

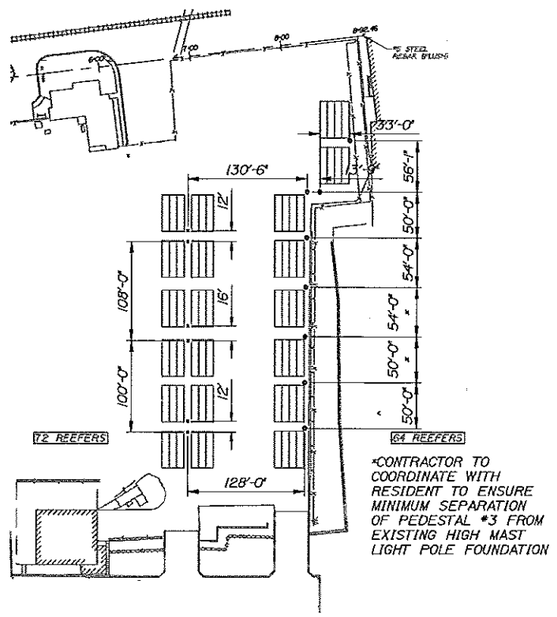
2. CORING AND CONNECTION OF UNDERDRAIN PIPE SHALL INCIDENTAL TO PAY ITEM 605.07, 4" UNDERDRAIN PIPE..

3. FOR TRENCH SECTIONS, SEE SHEETS 5 AND 6.

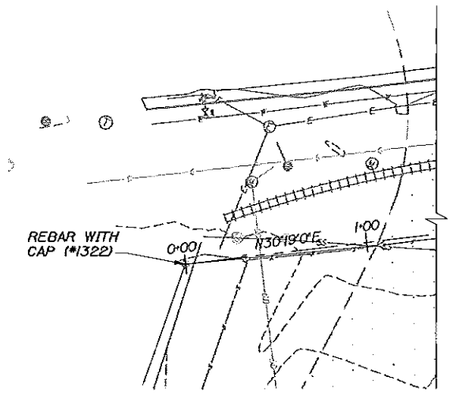
4. AFTER INSTALLATION OF THE 8-GANG PEDESTAL MOUNTED REEFER OUTLET ASSEMBLIES, ALL CONDUIT OPENINGS MUST BE COMPLETELY SEALED WITH EXPANDING FOAM.

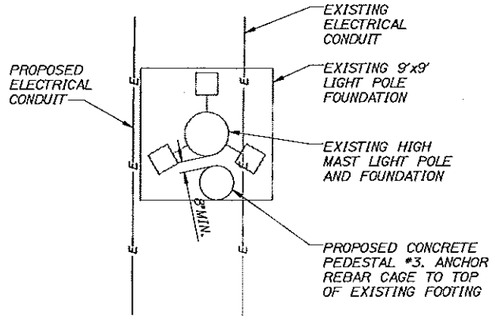
CONCRETE PEDESTAL LOCATION TABLE		
NO.	STATION	OFFSET
1	7+78.33	418.14'
2	7+84.27	368.50'
3	7+90.22	318.82'
4	7+97.16	265.29'
5	8+04.43	211.76'
6	8+10.71	162.18'
7	8+24.33	163.78'
8	8+63.66	112.02'

JBOX LOCATION TABLE		
NO.	STATION	OFFSET
1	6+50.73	407.19'
2	6+52.14	395.27'
3	6+62.43	307.88'
4	6+64.16	291.96'
5	6+74.77	200.57'
6	6+76.17	188.67'

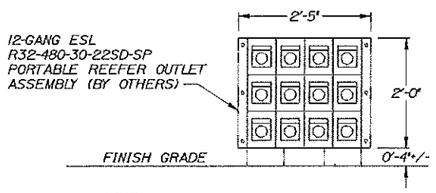


OPERATIONS PLAN
SCALE: 1"=80'

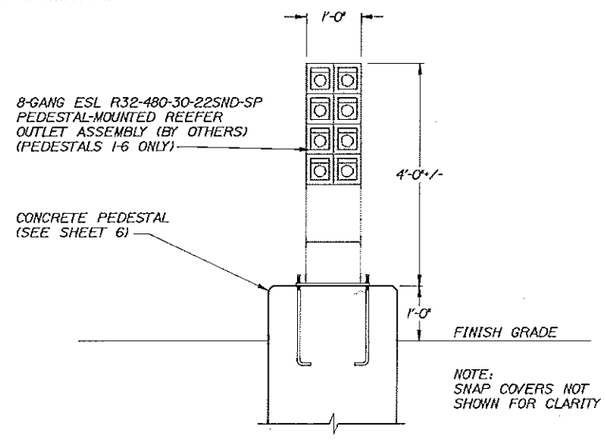




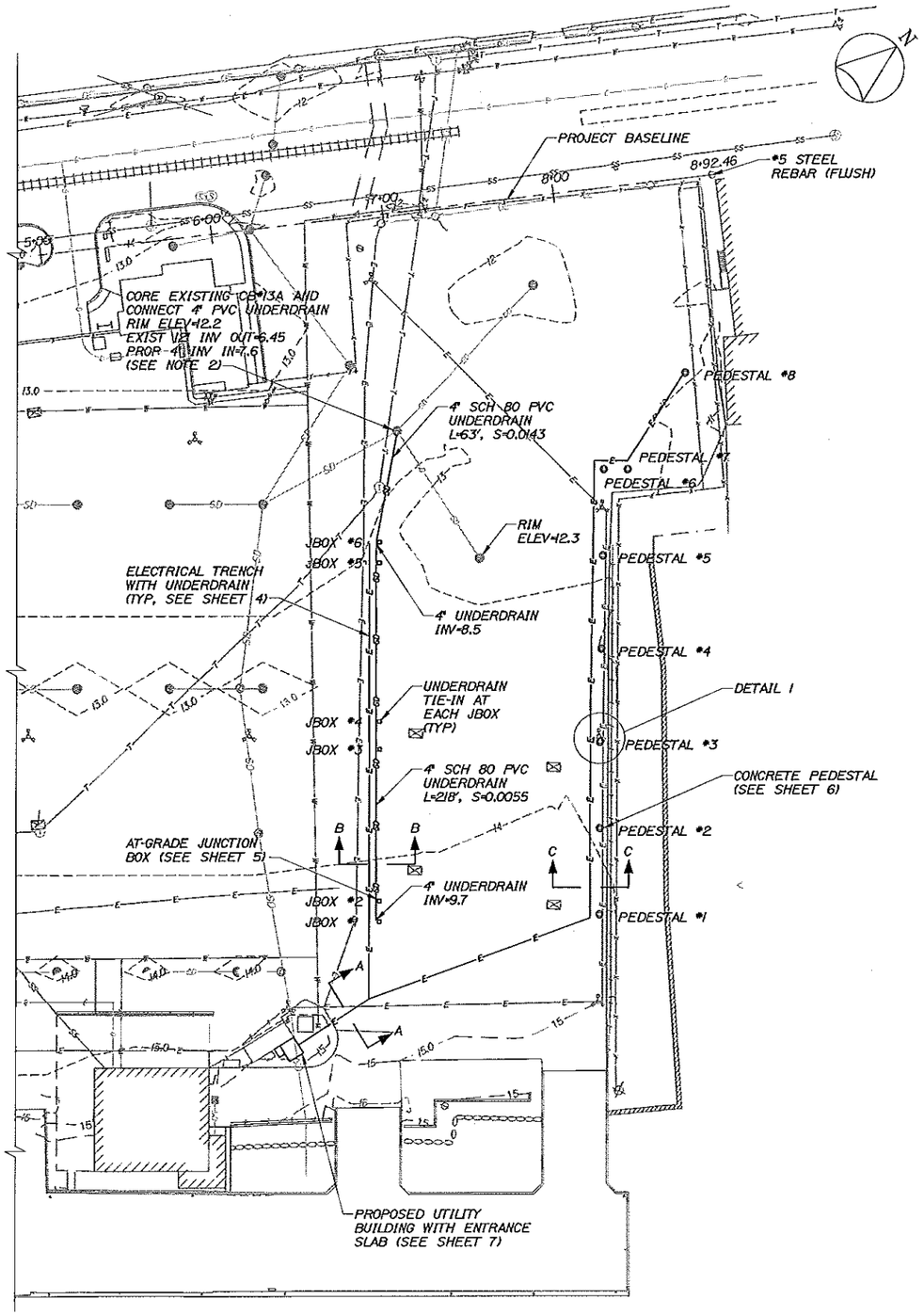
DETAIL 1
NOT TO SCALE



12-GANG PORTABLE REEFER OUTLET ASSEMBLY
NOT TO SCALE



8-GANG PEDESTAL-MOUNTED REEFER OUTLET ASSEMBLY
NOT TO SCALE



ELECTRICAL TRENCH LAYOUT
SCALE: 1"=40'

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER 018413.10

WIN 018413.10

	BY	DATE
PROJ. MANAGER CRAIG AL MORIN	BY	
DESIGN-DETAILED	HME	3/1/13
CHECKED-REVIEWED	CRM	3/1/13
DESIGN2-DETAILED2	-	-
DESIGN3-DETAILED3	-	-
REVISIONS 1	-	-
REVISIONS 2	-	-
REVISIONS 3	-	-
REVISIONS 4	-	-
FIELD CHANGES	-	-

SIGNATURE
P.E. NUMBER
DATE

PORTLAND INTERNATIONAL
MARINE TERMINAL IMPROVEMENTS
PORTLAND CUMBERLAND COUNTY

PROPOSED SITE ELECTRICAL

SHEET NUMBER
3
3 OF 7

NAME: M:\Jobs\60213 - INT Emmelp Phase 2\CADD\PHASE 2\WORKING-PH2.dwg DATE: Mar 01, 2013 - 1:58pm

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER 018413.10

WIN 018413.10

LAWRENCE L. BARTLETT #7928 LICENSED PROFESSIONAL ENGINEER STATE OF MAINE

	BY	DATE
PROJ. MANAGER CRAIG R. MORIN	-	2/25/13
DESIGN-DETAILED	LEB	2/25/13
CHECKED-REVIEWED	LEB	-
DESIGNS-DETAILED2	-	-
DESIGNS-DETAILED3	-	-
REVISIONS 1	-	-
REVISIONS 2	-	-
REVISIONS 3	-	-
REVISIONS 4	-	-
FIELD CHANGES	-	-

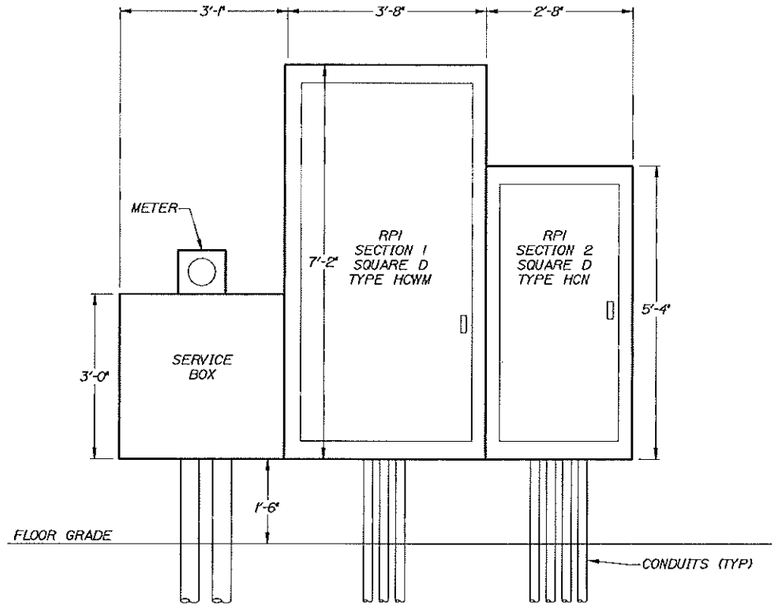
Lawrence L. Bartlett — SIGNATURE
7928 — P.E. NUMBER
02/25/13 — DATE

PORTLAND INTERNATIONAL
MARINE TERMINAL IMPROVEMENTS
PORTLAND CUMBERLAND COUNTY

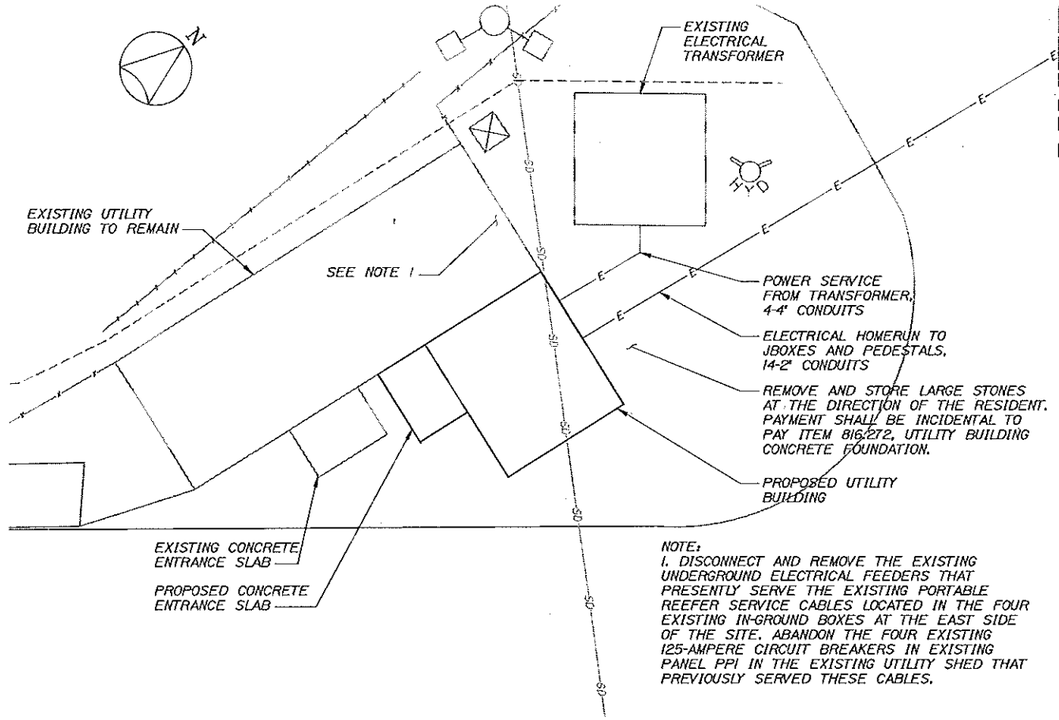
ELECTRICAL SINGLE LINE DIAGRAM

SHEET NUMBER
4
4 OF 7

NAME: M:\jobs\8023 - IMT Elmship Phase 2\CAD\FROM BARTLETT\1233 Sheet 4 02-20-13.dwg DATE: Mar 01, 2013 - 2:10pm

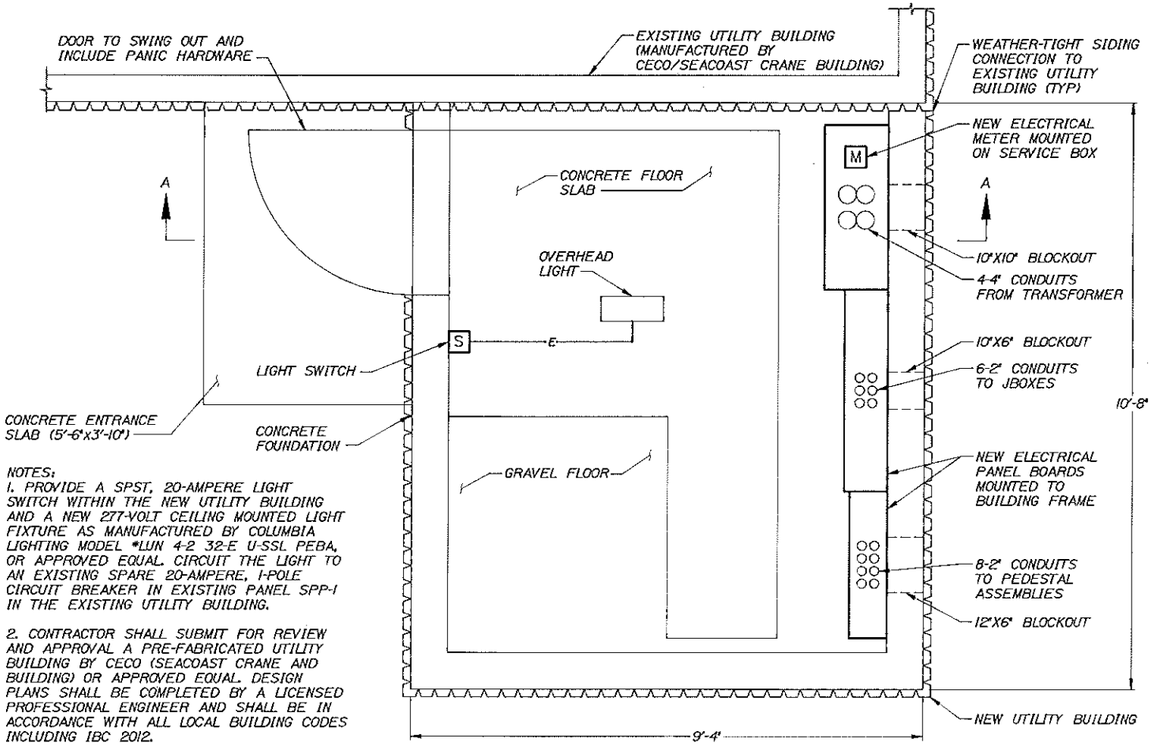


ELECTRICAL PANEL DETAILS
NOT TO SCALE



NOTE:
1. DISCONNECT AND REMOVE THE EXISTING UNDERGROUND ELECTRICAL FEEDERS THAT PRESENTLY SERVE THE EXISTING PORTABLE REEFER SERVICE CABLES LOCATED IN THE FOUR EXISTING IN-GROUND BOXES AT THE EAST SIDE OF THE SITE. ABANDON THE FOUR EXISTING 125-AMPERE CIRCUIT BREAKERS IN EXISTING PANEL PPI IN THE EXISTING UTILITY SHED THAT PREVIOUSLY SERVED THESE CABLES.

UTILITY BUILDING SITE PLAN
SCALE: 1"=5'

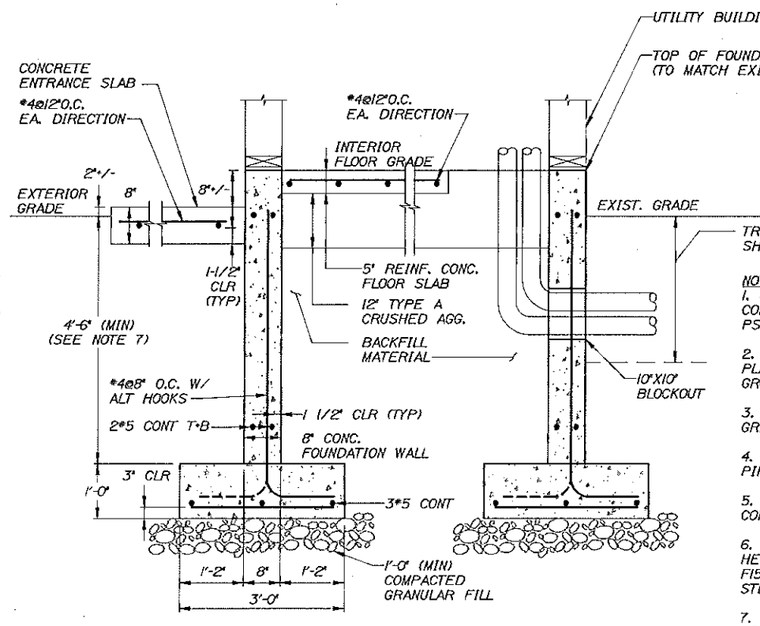


NOTES:
1. PROVIDE A SPST, 20-AMPERE LIGHT SWITCH WITHIN THE NEW UTILITY BUILDING AND A NEW 277-VOLT CEILING MOUNTED LIGHT FIXTURE AS MANUFACTURED BY COLUMBIA LIGHTING MODEL #LUN 4-2 32-E U-SSL PEBA, OR APPROVED EQUAL. CIRCUIT THE LIGHT TO AN EXISTING SPARE 20-AMPERE, 1-POLE CIRCUIT BREAKER IN EXISTING PANEL SPP-1 IN THE EXISTING UTILITY BUILDING.

2. CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A PRE-FABRICATED UTILITY BUILDING BY CECO (SEACOAST CRANE AND BUILDING) OR APPROVED EQUAL. DESIGN PLANS SHALL BE COMPLETED BY A LICENSED PROFESSIONAL ENGINEER AND SHALL BE IN ACCORDANCE WITH ALL LOCAL BUILDING CODES INCLUDING IBC 2012.

3. CONTRACTOR'S DESIGN OF PRE-FABRICATED UTILITY BUILDING SHALL INCLUDE WEATHER-TIGHT SIDING CONNECTION AND SLOPED ROOF TO MATCH EXISTING.

NEW UTILITY BUILDING DETAILS
SCALE: 3/4"=1'-0"



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

NOTES:
1. CONCRETE SHALL HAVE 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.

2. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.

3. REINFORCEMENT PER ASTM A615, GRADE 60 EPOXY COATED.

4. PROVIDE BLOCKOUTS WHERE PIPES PASS THROUGH CONCRETE.

5. REINFORCEMENT SHALL BE CONTINUOUS AROUND CORNERS.

6. ANCHOR RODS SHALL BE HEADED RODS CONFORMING TO F1554, GRADE 36 KSI WELDABLE STEEL.

7. DURING EXCAVATIONS, CONTRACTOR SHALL IDENTIFY THE DEPTH OF FOOTING OF THE EXISTING UTILITY BUILDING AND REPORT THIS INFORMATION TO THE ENGINEER. EXISTING FOOTINGS SHALL NOT BE UNDERMINED.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER 018413.10

WIN
018413.10

PROJ. MANAGER CRAIG R. MORIN	BY	DATE
DESIGN-DETAILED	HME	3/1/13
CHECKED-REVIEWED	CTM	3/1/13
DESIGNE-DETAILED2	-	-
DESIGNED-DETAILED3	-	-
REVISIONS 1	-	-
REVISIONS 2	-	-
REVISIONS 3	-	-
REVISIONS 4	-	-
FIELD CHANGES	-	-

SIGNATURE

P.E. NUMBER

DATE

PORTLAND INTERNATIONAL
MARINE TERMINAL IMPROVEMENTS
PORTLAND CUMBERLAND COUNTY

UTILITY BUILDING DETAILS

SHEET NUMBER
7
7 OF 7

NAME: M:\jobs\60213 - IMT Emkdp Phase 2\CAD\PHASE 2\WORKING-PH2.dwg DATE: Mar 01, 2013 - 2:10pm