

# ELECTRICAL PERMIT City of Portland, Me.



To the Chief Electrical Inspector, Portland Maine:  
The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the City of Portland Electrical Ordinance, National Electrical Code and the following specifications:

Date 2010 4 30

Permit # 4321

CBL# 42-C-1

LOCATION: 378 Commercial St

METER MAKE & # Westinghouse 96-202-653

CMP ACCOUNT # \_\_\_\_\_

OWNER Gulf of Maine Research Inst

TENANT SAME

PHONE # (207) 228-1620

**TOTAL EACH FEE**

<b>OUTLETS</b>	<u>10</u>	Receptacles	Switches	Smoke Detector	.20	<u>2</u>
<b>FIXTURES</b>	<u>8</u>	Incandescent	Fluorescent	Strips	.20	<u>1.60</u>
<b>SERVICES</b>		Overhead	Underground	TTL AMPS <800	15.00	
		Overhead	Underground	TTL AMPS >800	25.00	
<b>Temporary Service</b>		Overhead	Underground	TTL AMPS	25.00	<u>25.00</u>
<b>METERS</b>		(number of)			1.00	
<b>MOTORS</b>		(number of)			2.00	
<b>RESID/COM</b>		Electric units			1.00	
<b>HEATING</b>		oil/gas units	Interior	Exterior	5.00	
<b>APPLIANCES</b>		Ranges	Cook Tops	Wall Ovens	2.00	
		Insta-Hot	Water heaters	Fans	2.00	
		Dryers	Disposals	Dishwasher	2.00	
		Compactors	Spa	Washing Machine	2.00	
		Others (denote)			2.00	
<b>MISC. (number of)</b>		Air Cond/win			3.00	
		Air Cond/cent		Pools	10.00	
		HVAC	EMS	Thermostat	5.00	
		Signs			10.00	
		Alarms/res			5.00	
		Alarms/com			15.00	
		Heavy Duty(CRKT)			2.00	<u>2.00</u>
	<u>1</u>	Circus/Carnv			25.00	
		Alterations			5.00	
		Fire Repairs			15.00	
		E Lights			1.00	
		E Generators			20.00	
<b>PANELS</b>		Service	Remote	Main	4.00	
<b>TRANSFORMER</b>		0-25 Kva			5.00	
		25-200 Kva			8.00	
		Over 200 Kva			10.00	
					<b>TOTAL AMOUNT DUE</b>	
					<b>MINIMUM FEE/COMMERCIAL 55.00</b>	<b>MINIMUM FEE 45.00</b>
						<u>55.00</u>

42

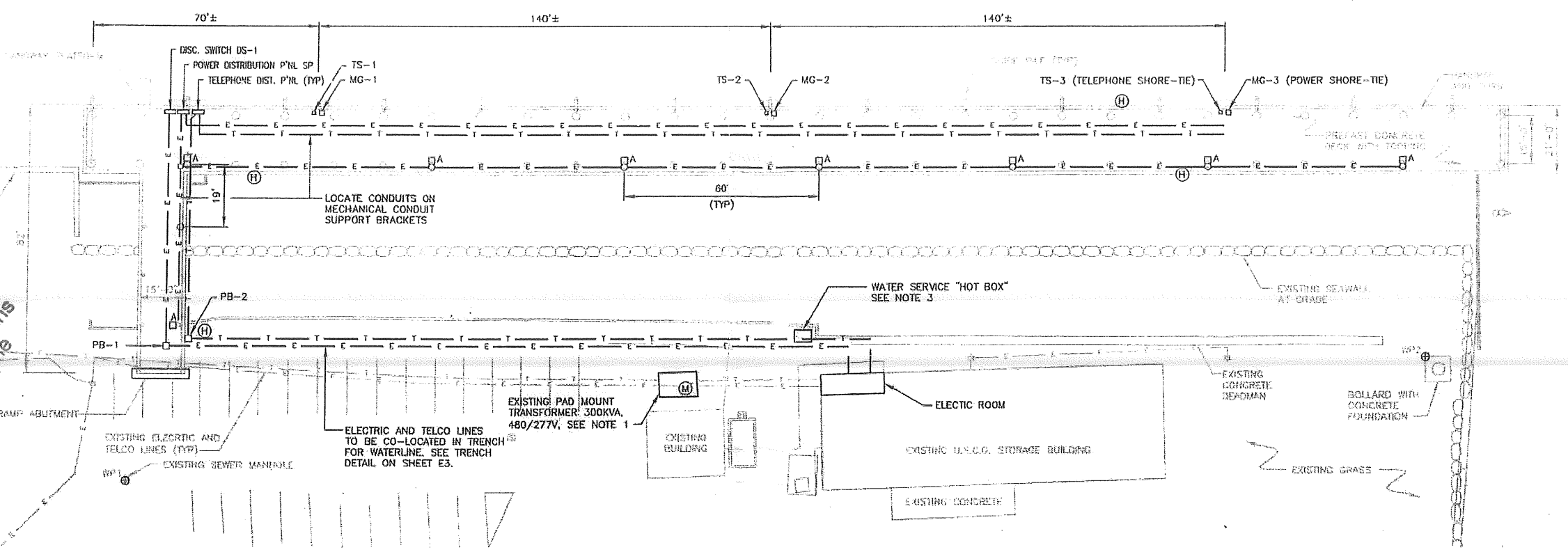
RECEIVED  
MAY 25 2010  
Dept of Building Inspections  
City of Portland Maine

CONTRACTORS NAME Cianbro Corporation  
ADDRESS 60 Cassidy Point Drive  
TELEPHONE (207) 773-5852

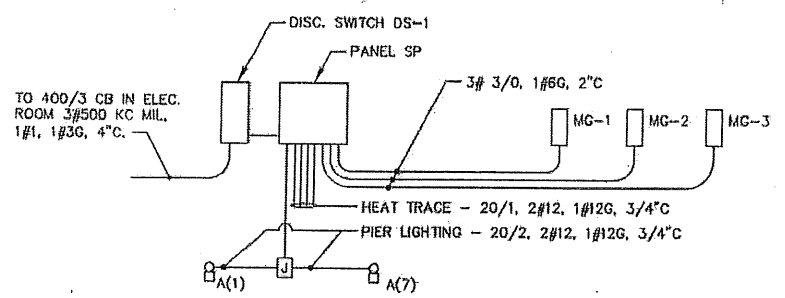
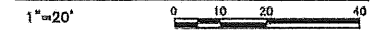
MASTER LIC. # MCG0008822  
LIMITED LIC. # \_\_\_\_\_

SIGNATURE OF CONTRACTOR [Signature]

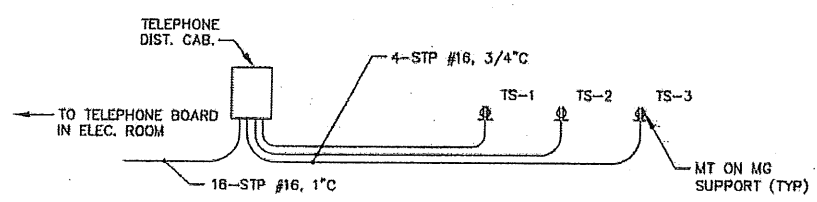
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 City of Portland Maine



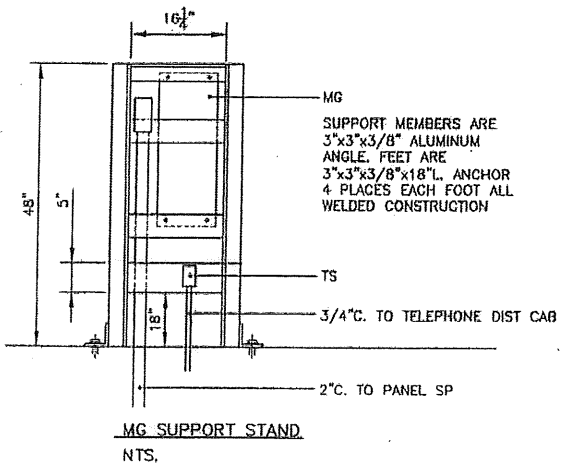
**PLAN**



**PIER-POWER WIRING DIAGRAM**  
 NTS.



**TELEPHONE WIRING DIAGRAM**  
 NTS.



**MG SUPPORT STAND**  
 NTS.

- LEGEND:**
- EXISTING STEEL SHEETPILE BULKHEAD
  - EXISTING ELECTRICAL LINE
  - EXISTING COMMUNICATION LINE
  - NEW ELECTRICAL LINE
  - NEW TELEPHONE LINE
  - POLE MOUNTED LIGHTING FIXTURE
  - ⊕ TELEPHONE RECEPTACLE ON PIER
  - ⊕ HEAT TRACE CIRCUIT CONNECTION (SEE NOTE 4)
  - ⊕ ELECTRICAL METER

**LIGHTING FIXTURE SCHEDULE**

TYPE	MANUFACTURER	CATALOG NO.	LAMP	VOLTAGE	NOTES
A	LUMARK	HPRL-FL-2-150-480V-F2LLKPER-OA/RA1027	1-150HRS-E39	480	1

NOTES: 1. POLE: RTA8M35AAS18V

**PANEL SCHEDULE**

CB	PANEL SP				CB
	A	B	C	LOAD	
200	X			MG-1	200
		X		MG-2	
			X	MG-3	
200	X			PIER	20*
		X		LTG	
			X		
20	X				20*
		X			
			X		
PROVISION					
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SQUARE D-1 LINE TYPE HCM, 400A M.L.O., 22 KAIC, 480/277V MOUNT IN 316 SS ENCLOSURE. \*GFCI

**COMPONENT SCHEDULE:**

- MG-1,2,3 RUSSELLSTOLL "MAX-GUARD" CATALOG NO. DBRS2404. EACH STATION SHALL INCLUDE A 75' LONG, 3 WIRE PART NO. LSHOF-150 CABLE. THE SHIP END OF THE CABLE SHALL HAVE A RUSSELLSTOLL PART NO. CJP52033 FR. PLUG, AND THE SHORE END OF THE CABLE SHALL HAVE A RUSSELLSTOLL PART NO. DS2404MP PLUG.
- TS-1,2,3 RUSSELLSTOLL CATALOG NO. SKWR RECEPTACLE, WITH NO. SKWP96 PLUG. MOUNT ON TYPE DSFD, NO. 3781A CAST ALUMINUM BOX. MOUNT ASSEMBLY ON STAND PROVIDED FOR MG-1,2,3.
- PB-1 PULL BOX-QUAZITE PART NO. PC1212DG12 BOX & PART NO. PC1212HG00 COVER. COVER SHALL SAY "PIER POWER".
- PB-2 PULL BOX-QUAZITE PART NO. PC0818DG08 BOX. PART NO. PC0818HG00 COVER. COVER SHALL SAY "PIER TELEPHONE".
- DS-1 DISCONNECT SWITCH-400A, 600V. HEAVY DUTY NON-FUSED 4 POLE SWITCH. PROVIDE WITH NEMA 4X, 316SS ENCLOSURE.
- TP HOFFMAN CAT. NO. A12108PHG ENCLOSURE WITH CAT. NO. A12P10AL PANEL. MOUNT ON 2"x2"x1/4" ANGLE (ALUMINUM) FRAME WITH TOP AT 24" ABOVE PIER. PROVIDE PUNCH DOWN BLOCKS FOR 18P CABLE AND PROVIDE THREADED CONDUIT OPENINGS.

**NOTES:**

1. REMOVE EXISTING ELECTRIC METERING, AND PROVIDE A 48"x48" G.T. CABINET (NEMA 4X) & 400A METER BASE. PROVIDE INSTRUMENT WIRING & SECONDARY TERMINATIONS AS DIRECTED BY CMP.
2. MOUNT PANEL SP & SWITCH DS-1 ON A COMMON BASE FABRICATED FROM 3"x3"x3/8" ALUMINUM ANGLE. PROVIDE 6 SUPPORT LEGS AND BASE PLATES 8"H.
3. PROVIDE NEW 20/1, CB IN EXISTING 208/120V PANEL IN ELECTRIC ROOM, AND EXTEND CIRCUIT TO "HOT BOX" ELECTRIC HEATER. PROVIDE SINGLE POLE TOGGLE DISCONNECT, AND MAKE FINAL CONNECTION. COORDINATE WITH PC.
4. HEAT TRACE CIRCUIT TERMINATION PANEL SP CIRCUITS NO. 8, 10, 12, 14, 20/1, 2 #12, 1 #12 G. 3°C. COORDINATE WITH PLUMBING CONTRACTOR.

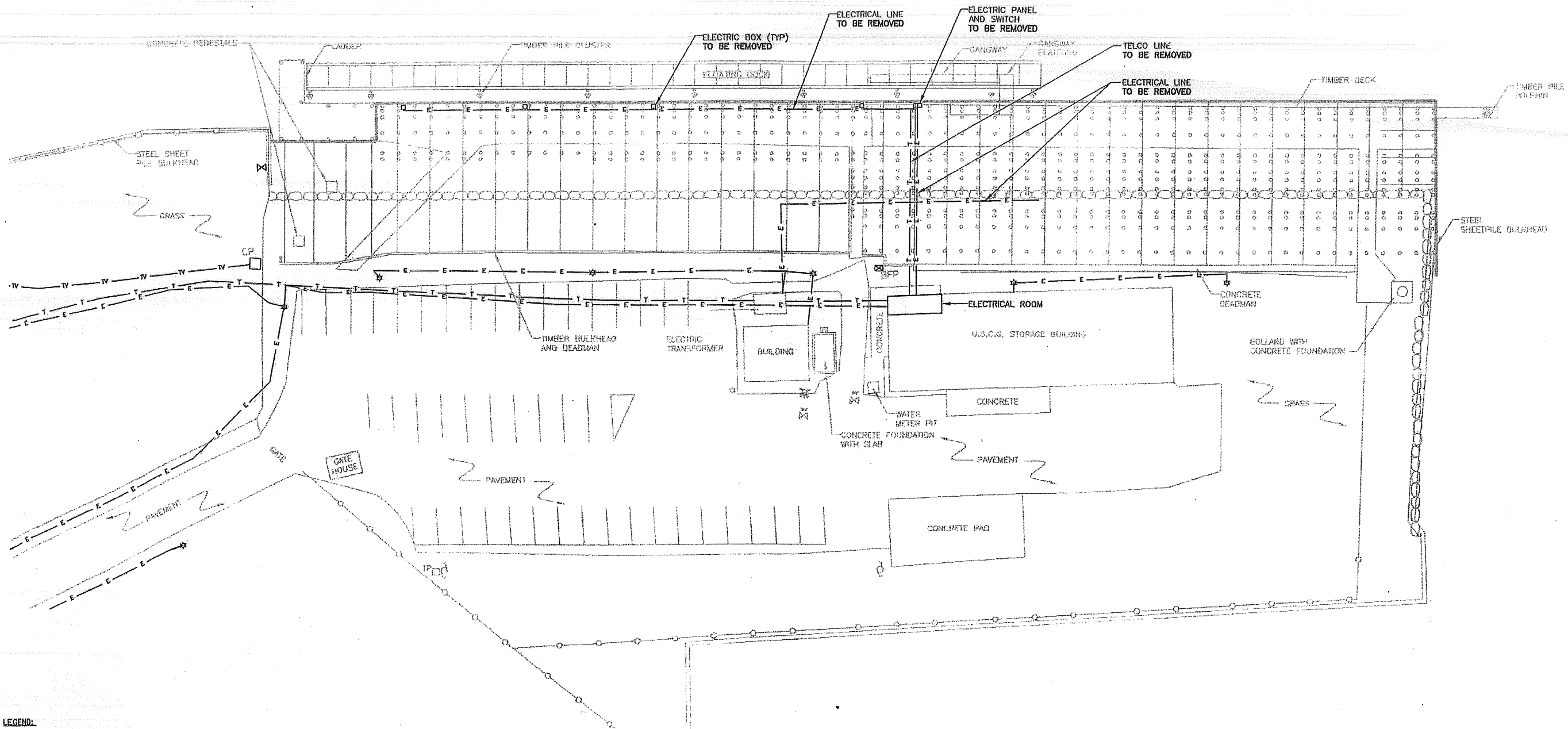
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 CAD FILE NAME: 5059A-ED3  
 DESIGNED BY: DOC  
 DRAWN BY: SJB  
 CHECKED BY: NLE  
 DATE: 10/23/2009  
 SCALE: AS SHOWN

**Appledore Marine Engineering Inc.**  
 600 State Street, Suite E  
 Portland, Maine 04101  
 (603) 785-5070  
 info@appledoremarine.com

**GULF OF MAINE RESEARCH INSTITUTE**  
 PIER REPLACEMENT  
 PIER ELECTRICAL AND TELECOMMUNICATIONS PLAN AND DETAILS

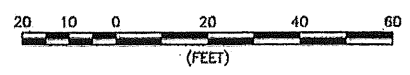
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 E2

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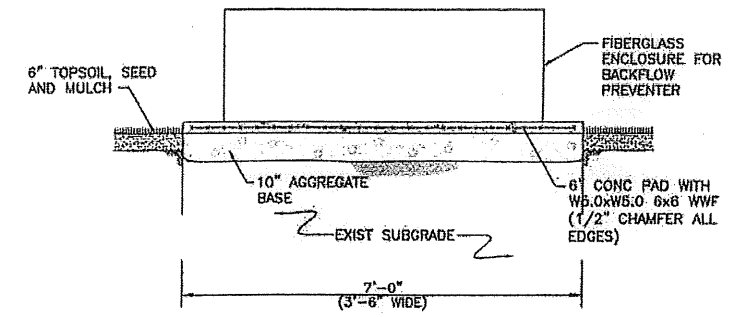
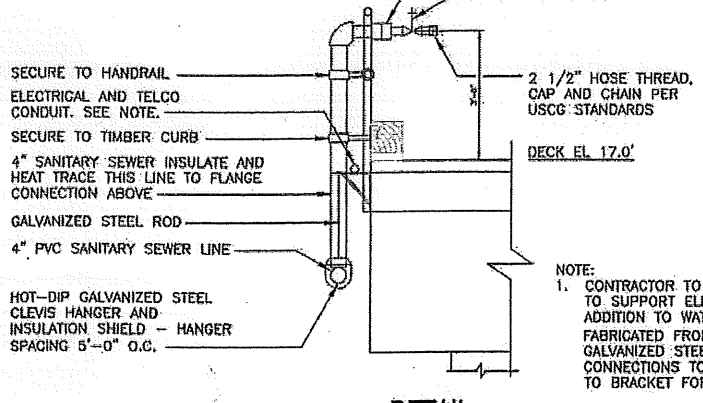
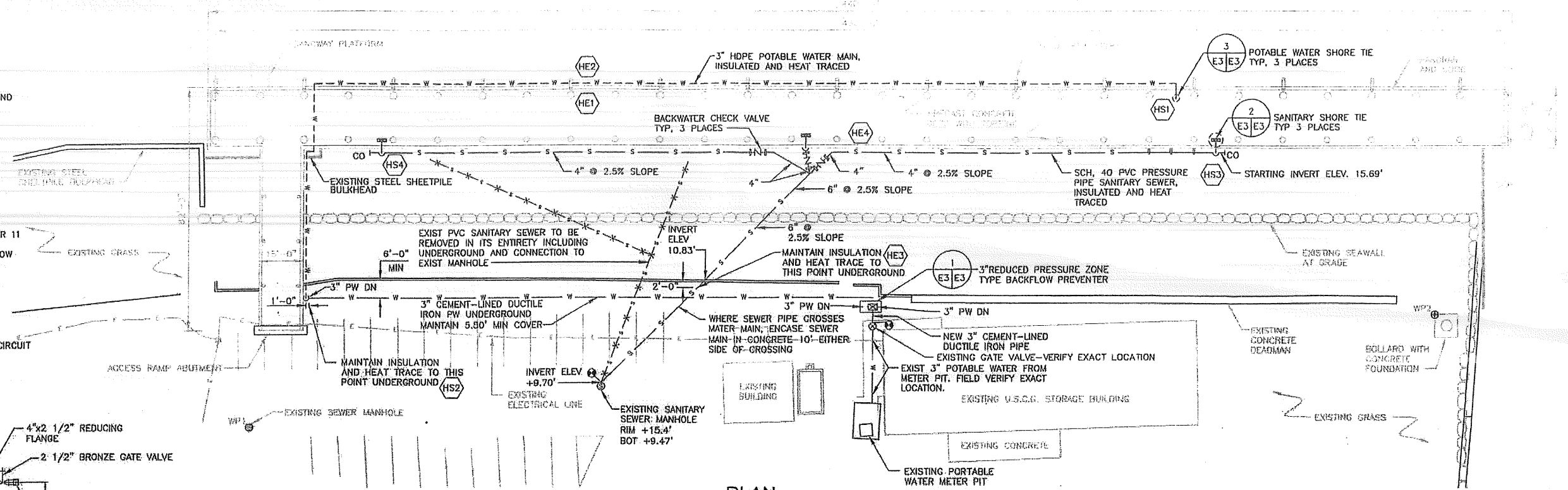
- LEGEND:**
- EXISTING STEEL SHEETPILE BULKHEAD
  - EXISTING TIE BACK
  - EXISTING WATER VALVE
  - EXISTING LIGHT
  - EXISTING UTILITY POLE
  - EXISTING CABLE PEDESTAL
  - EXISTING TELEPHONE PEDESTAL
  - EXISTING BACKFLOW PREVENTER
  - E --- EXISTING ELECTRICAL LINE
  - T --- EXISTING COMMUNICATION LINE
  - TV --- EXISTING TELEVISION
  - EXISTING FENCE LINE
  - EXISTING GUARDRAIL

- NOTES:**
- LOCATION OF EXISTING UTILITIES ARE APPROXIMATE.
  - PLAN REFERENCE: SMRT "EXISTING CONDITIONS AND DEMOLITION PLAN" 7/30/03 CS101.
- DEMOLITION NOTES:**
- REMOVE ALL CONDUIT, BOXES, WIREWAYS, CONDUCTORS, PANEL, SWITCHES, TELEPHONE DISTRIBUTION, AND ASSOCIATED APPURTENANCES ON THE PIER, AND INTO THE ELECTRIC ROOM.
- ELECTRICAL ABBREVIATION LIST:**
- CAB CABINET
  - CB CIRCUIT BREAKER
  - CMP CENTRAL MAINE POWER CO.
  - CT CURRENT TRANSFORMER
  - DISC DISCONNECT
  - DIST DISTRIBUTION
  - MG MRG-GUARD POWER SHORE TIE
  - MT MOUNT
  - PC PLUMBING CONTRACTOR
  - TS TELEPHONE SHORE TIE



<p><b>GULF OF MAINE RESEARCH INSTITUTE</b></p>	<p><b>PIER REPLACEMENT</b></p>	<p><b>ELECTRICAL REMOVALS PLAN</b></p>	<p>SHEET 20 OF 21</p>	<p>E1</p>									
<p><b>Appletore Marine Engineering Inc.</b></p> <p>400 State Street, Suite E Portland, Maine 04101 Tel: 603.763.1070 Fax: 603.763.1071 www.appletoremarine.com</p>													
<p>STATE OF MAINE PROFESSIONAL ENGINEER</p> <p>CHRISTOPHER WILSON 12345 11-20-09</p>													
<p>AMEI PROJECT NO: 5050A CAD FILE NAME: 5050A-ED DESIGNED BY: DOC DRAWN BY: SNB CHECKED BY: NIE DATE: 10/23/2009 SCALE: AS SHOWN</p>													
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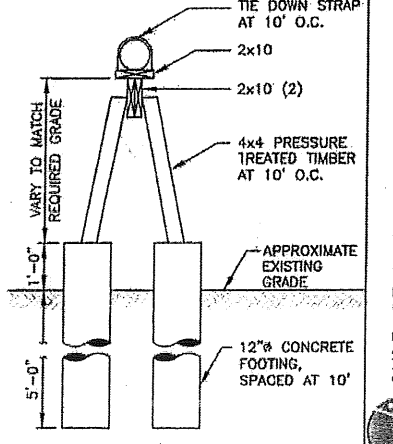
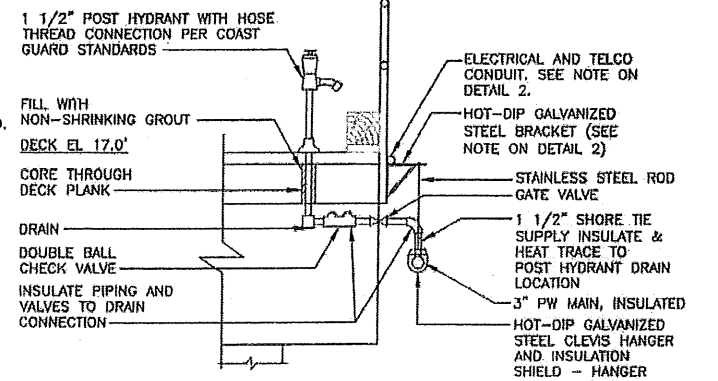
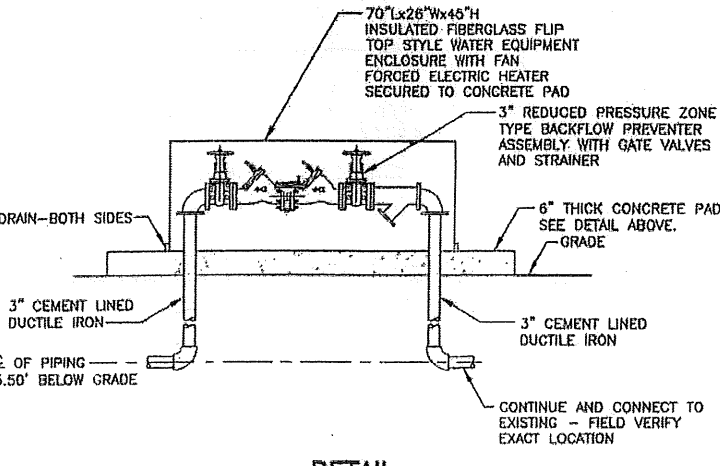
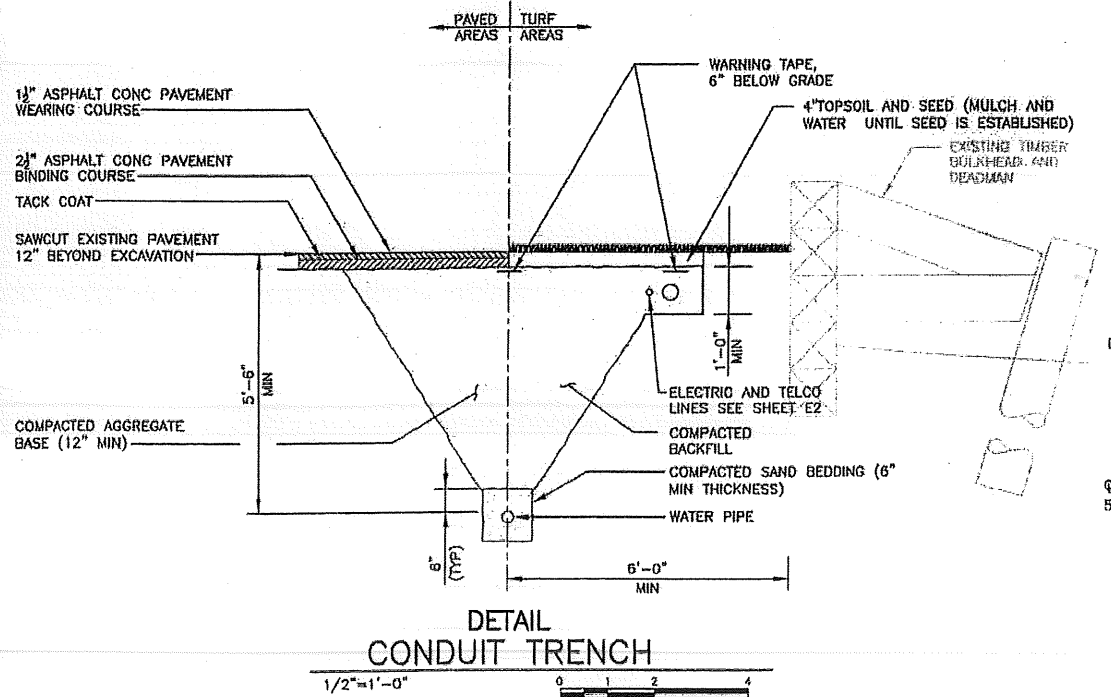
- LEGEND:**
- CONCRETE LAGGING
  - EXISTING STEEL SHEETPILE BULKHEAD
  - EXISTING SEAWALL AT GRADE (EL +8±)
  - WP1 WORKING POINT
  - EXISTING PORTABLE WATER BELOW GROUND
  - NEW PORTABLE WATER BELOW GROUND
  - EXISTING PORTABLE WATER ABOVE GROUND
  - PW PORTABLE WATER
  - DN DOWN
  - ELL TURNED UP
  - ELL TURNED DOWN
  - HDPE HIGH DENSITY POLYETHYLENE PIPE - SDR 11
  - RPZ REDUCED PRESSURE ZONE TYPE BACKFLOW PREVENTER
  - CO CLEANOUT
  - FNH SWING CHECK VALVE
  - ⊙ CONNECT TO EXISTING AT THIS POINT
  - ⊙ HS PROXIMITY FOR START OF HEAT TRACE CIRCUIT
  - ⊙ HE PROXIMITY FOR END OF HEAT TRACE CIRCUIT
  - PIPING TO BE REMOVED FOR TYPE INDICATED
  - MIN MINIMUM
  - OC ON CENTER



**ELECTRIC HEAT TRACE SCHEDULE**

CIRCUIT NUMBER	SERVICE	PIPING TYPE	INSULATION	CABLE TYPE SEE NOTE 1	NOMINAL WATT S/FT	CIRCUIT LENGTH, FEET SEE NOTE 2	ACTUAL CABLE LENGTH, FEET SEE NOTE 2
H1	POTABLE WATER	HDPE SDR11	POLYISO-CYANURATE 2" WALL	CHROMALOX SRF 3-2CR	3	200	217
H2	POTABLE WATER	HDPE SDR11	POLYISO-CYANURATE 2" WALL	CHROMALOX SRF 3-2CR	3	200	217
H3	SANITARY SEWER	PVC SCHED 40 PRESSURE	POLYISO-CYANURATE 2" WALL	CHROMALOX SRF 3-2CR	5	230	234
H4	SANITARY SEWER	PVC SCHED 40 PRESSURE	POLYISO-CYANURATE 2" WALL	CHROMALOX SRF 3-2CR	5	180	188

- SCHEDULE NOTES:**
- CABLE VOLTAGE SHALL BE 277 VOLT, SINGLE PHASE, 60 CYCLE. VERIFY WITH MANUFACTURE THE CORRECT CABLE NUMBER TO USE AT THIS VOLTAGE
  - VERIFY ACTUAL 'CIRCUIT LENGTHS' (LENGTH OF PIPING RUN) AFTER INSTALLATION OF PIPING IS COMPLETE, THEN VERIFY WITH THE MANUFACTURE THE 'ACTUAL CABLE LENGTH' REQUIRED FOR EACH 'CIRCUIT LENGTH', TAKING INTO ACCOUNT THE HEAT SINKS (VALVES, ETC.) ALONG EACH CIRCUIT RUN.
  - HEAT TRACE DESIGN IS BASED ON MAINTAINING PIPING TEMPERATURE AT 40° F WITH A MINIMUM AMBIENT TEMPERATURE OF -20° F AND A WIND SPEED OF 20 MPH.
  - FOR EACH CIRCUIT PROVIDE POWER CONNECTION KIT, END SEAL KIT(S), CAUTION LABELS, STAINLESS STEEL PIPE CLAMP(S), FIBERGLASS TAPE TO SECURE CABLE TO PIPING, HIGH TEMPERATURE MOUNTING ADAPTERS (IF REQUIRED), TEMPERATURE CONTROLS OR HEATING MONITORING DEVICES, COMPONENT SEALING GROMMETS, AND ANY OTHER COMPONENTS, AS REQUIRED.



AMCI PROJECT NO: 50684  
 CAD FILE NAME: 50684-E03  
 DESIGNED BY: DDC  
 DRAWN BY: SNB  
 CHECKED BY: NE  
 DATE: 10/23/2009  
 SCALE: AS SHOWN

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NO.	DATE	REVISION	DESCRIPTION