-REPLACE CATCH BASIN GRATE WITH SOLID COVER, RAISE TO GRADE -CB 13819 CB-9-MH 13278 CONGRESS STREET CONGRESS STREET _—СВ-10 SMH 13348— └─_SD-15 CMP #8.1U 🛱 CLCB 14635 ———ОНГ REMOVE CATCH-BASIN GRATE AND FRAME, REPLACE WITH SOLID COVER NEW CATCH BASIN-WITH HEADSTONE ≥#8"≤ -4"S —*SMH 13187* LEGEND EXISTING DESCRIPTION PROPOSED PROPERTY LINE/R.O.W. ----- ABUTTER LINE/R.O.W. INSTALL 8"X6" TAPPING SLEEVE AND 6" GATE BUILDING VALVE <u>....</u> INSTALL 8"X8" TAPPING-PAVEMENT SAWCUT SLEEVE AND 8" GATE ------ EDGE CONCRETE VALVE SPOT GRADE +120.00 ×120.00 E RETAINING WALL _____ DECIDUOUS TREE 83 CONIFEROUS TREE Bottom of Sewer - 42' a edge of building SIGN _____ ------ GAS GAS GATE VALVE GAS METER GAS MANHOLE - WATER ______W ____ _____ WATER GATE VALVE **Proposed Tiebacks 4** WATER SHUT OFF each below Gilman St Electrical conduit - Bottom @ El. 51' HYDRANT - 55' long at 20 WATER MANHOLE degree angle -Tieback head at El — SANITARY SEWER SANITARY MANHOLE SEE ENABLING _____ BANK, CONDUIT, AND SEWER CONSTRUCTION — UNDER DRAIN ____UD____ DRAINAGE MANHOLE IN GILMAN STREET CATCH BASIN Bottom of structure:45.95 Rim 55.47 Inv. In: 47.02 Inv. Out: 46.77 TRANSFORMER PAD 三 で ELECTRICAL MANHOLE Water line approx 5 TELEPHONE MANHOLE LIGHT POLE - ★ ●--■ 未 -Q--0-UTILITY POLE -----GUY WIRE \leftarrow Electrical Vault Bottom @ + - 46' (irrigation source -- is --) /4 _____ Electrical conduit - Bottom @ El. 50' NOTE: SEE SHEET C30-03 FOR ELECTRICAL CONDUIT LAYOUT. CMP#1/ -24"SD-A STREET ₩0-10"SD-*CB* 13034-₩ —*DMH 12906*| NOTES: 1. THE CONTRACTOR SHALL EXCAVATE TEST PITS TO LOCATE AND CONFIRM THE DEPTH OF WATER AND 7. CATCH BASIN CB-6 IS TO BE INSTALLED, IN THE ENABLING PACKAGE, IN THE TRAVELED WAY OF GAS MAINS AND SERVICES AT ALL CROSSINGS IN ADVANCE OF THE WORK. THE DEPTH OF DUCT CONGRESS STREET AT THE LOCATION OF THE PROPOSED CURB LINE. REMOVE THE TEMPORARY BANKS MAY BE ADJUSTED TO MAINTAIN REQUIRED CLEARANCES. CIRCULAR GRATE AND FRAME, ROTATE COVER AS NEEDED TO ALIGN OPENING WITH CURB LINE. INSTALL SPECIAL CURB FACE INLET (EAST JORDAN IRON WORKS MODEL 7500Z CURB INLET 2. THE PORTLAND WATER DISTRICT (PWD) WILL BE REPLACING THE 8" WATER MAIN IN CONGRESS FRAME). ALIGN FRAME INLET WITH THE CURB LINE. PLUG TEMPORARY CONNECTION IN FROM THE STREET WITH NEW 12" DUCTILE IRON WATER MAIN FROM WEYMOUTH STREET TO ST. JOHN STREET IN COORDINATION WITH THE MAINE MEDICAL CENTER'S WORK. WORK ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF WATER MAINS, SERVICES AND HYDRANTS WILL BE PERFORMED UNDER SEPARATE 8. CATCH BASIN CB-7 IS TO BE INSTALLED IN THE ENABLING PACKAGE IN THE TRAVELED WAY OF CONTRACT WITH PWD. WATER MAIN WORK SHOWN IN THE ENABLING PACKAGE IS FOR REFERENCE AND GILMAN STREET AT THE PROPOSED CURB LINE. REMOVE THE TEMPORARY CIRCULAR GRATE AND COORDINATION ONLY AND MAY BE REVISED BY PWD. FRAME AND PRECAST TOP SECTION, REPLACE WITH CITY OF PORTLAND STANDARD CATCH BASIN TOP WITH D-FRAME GRATE AND HEADSTONE. 3.EXISTING WATER MAINS ARE INSTALLED AT APPROXIMATELY 4' OF COVER. THE CONTRACTOR SHALL TEST PIT TO VERIFY THE DEPTH OF THE WATER MAINS AT ALL CROSSING LOCATIONS TO COORDINATE 9. MODIFY EXISTING CB-13770. REMOVE EXISTING GRATE FRAME AND PRECAST TOP SECTION. INSTALL NEW PRECAST ECCENTRIC CONE. ROTATE CONE TO MOVE OPENING AWAY FROM CROSSWALK TO COVER AND SEPARATION REQUIREMENTS FOR THE NEW WORK. REPORT DISCREPANCIES TO THE ENGINEER. ALL WORK FOR THE MMC CONGRESS BUILDING AND ENABLING PACKAGE SHALL ASSUME THE EXTENT PRACTICABLE (SEE SITE PLAN). INSTALL NEW CIRCULAR GRATE AND FRAME. THE NEW 12" WATER MAIN WILL BE INSTALLED AT THE LOCATIONS INDICATED WITH 5.5' COVER. 4. THE EXISTING GAS MAINS IN CONGRESS STREET AND GILMAN STREET ARE CAST IRON INSTALLED IN 1908. DEPTH IS UNDETERMINED. THE CONTRACTOR SHALL TEST PIT TO VERIFY GAS MAIN LOCATIONS AND DEPTHS IN ADVANCE OF THE WORK. FOR WORK IN PROXIMITY TO OR CROSSING THE GAS MAIN THE CONTRACTOR SHALL EITHER: A. SUPPORT THE EXISTING CAST IRON GAS MAIN AT ALL JOINTS WITHIN THE EXCAVATION, OR; B. PROVIDE EXCAVATION AND BACKFILL FOR UNITIL'S INSTALLATION OF DRY LAID 8" MAIN AND (2)-2" BYBASS LINES. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING AND SCHEDULING THE WORK WITH UNITIL AND FOR FURNISHING AND INSTALLING BACKFILL MATERIALS. 5. DURING INSTALLATION OF NEW WORK THE CONTRACTOR SHALL PROVIDE CLEARANCE FOR A FUTURE 8" GAS MAIN REPLACEMENT BY UNITIL. THE FUTURE MAIN WILL BE LAID ADJACENT THE EXISTING GAS MAINS AND IS TO BE INSTALLED WITH 42" MINIMUM COVER COVER. 6.STREET TREES THAT ARE TO REMAIN ARE NOT SHOWN ON THIS PLAN FOR CLARITY. REFER THE DEMOLITION PLANS FOR STREET TREES TO BE REMOVED. PROTECT EXISTING STREET TREES TO RFMAIN.



31.28 (12" HDPE)

31.48 (12" HDPE)

DMH-8 41.50 29.57 (12" HDPE) 29.47 (12" HDPE)

42.44

DMH-6

30.57 (12" HDPE)

SANITARY SEWER PIPE DATA						
NAME	SIZE	LENGTH	SLOPE			
<i>SS</i> –6	12"	61'	0.456%			
SS-7	12"	37'	0.596%			
SS–7.1A	8"	42'	1.154%			
SS–9A	15"	26'	5.298%			

SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-5	38.90	29.07 (12" PVC)	28.83 (12" RCP)	48"
SMH—6	41.78	29.45 (12" PVC) 29.47 (12" RCP) 29.45 (12" PVC) 32.44 (12" RCP)	29.35 (12" PVC)	48"
SMH—7	44.00	30.00 (8" PVC) 34.49 (10" PVC) 29.75 (10" PVC) 38.37 (8" PVC)	29.67 (12" PVC)	48"
SMH-8	55.47	47.02 (15" PVC) 48.22 (12" PVC)	46.77 (12" PVC)	48"

STORM	DRAIN	STRUCTURE	DA TA

			CICKE DIT	/ 1
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB 12640	40.47		38.52 (12" PVC)	48"
CB 13034	67.79		63.39 (12" PVC)	48"
CB 13395	35.29	32.25 (SD-15)	32.15 (12" PVC)	48"
CB 13581	42.66		40.62 (8" PVC)	48"
CB 13770	42.18	38.63 (6" PVC)	38.63 (8" PVC) 38.61 (8" PVC)	48"
CB 13796	42.56	38.86 (8" PVC)	38.66 (10" PVC)	48"
CB 13819	36.38	31.31 (SD-14)	31.21 (12" PVC)	48"
CB 15960	65.99		62.69 (8" PVC)	48"
CB 21201	108.29	102.69 (12" PVC)	102.64 (12" PVC)	48"
CB 26560	108.54		102.69 (12" PVC)	48"
CBR 21349	106.08	97.88 (12" PVC) 98.41 (12" CPP)	97.08 (15" HDPE)	48"
CBR 21385	106.32		102.63 (15" HDPE)	48"
CBR 21466	106.75	102.75 (6" PVC)	99.40 (12" PVC)	48"
CBR 21802	107.94		105.05 (8" CPP)	48"
CBR 21848	106.49	100.35 (18" PVC)	100.16 (18" HDPE)	48"
CBR 22087	115.13	108.88 (15" CPP) 106.38 (18" RCP) 106.53 (6" PVC)	106.37 (18" CPP)	48"
CBR 25688	125.20		121.67 (12" CPP)	48"
DMH 12906	72.45	62.96 (12" PVC) 67.07 (12" RCP)	63.08 (12" RCP)	48"
DMH 12909	66.92	60.15 (12" RCP) 59.95 (12" PVC)	59.90 (12" PVC)	48"
DMH 12914	65.22	57.39 (12" PVC) 59.74 (10" CPP) 49.37 (24" CPP)	49.31 (24" CPP)	48"
DMH 12964	65.39			48"

STORM DRAIN STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-1	60.00	55.62 (SD-3)	55.52 (SD-1.1)	48"
CB-2	59.89	55.49(SD-1.1) 55.49(SD-3.1)	55.39 (SD-2.1)	48"
CB-3	59.89		55.66 (SD-3.1)	48"
CB-4	58.05		52.00 (SD-10)	48"
CB-5	60.25		53.83 (SD-5.4) 51.33 (SD-5.1)	48"
CB-6	44.18	39.68 (EXSD-3)	32.11 (SD-6.5)	48"
CB-7	43.18	31.79 (SD-6.5)		48"
CB-8	42.28		38.69 (SD-13)	48"
DMH-1	55.04	49.35(SD-2) 45.76(SD-5)	45.66 (SD-1)	48"
DMH-2	58.28	50.14 (SD-10)	50.04 (SD-2)	48"
DMH-3	60.70	55.77 (SD-7)	55.67 (SD-3)	48"
DMH-4	64.63		54.46 (SD-4)	48"
DMH-5	60.12	55.33 (SD-2.1)	51.43 (SD-5.2) 51.43 (SD-5.5) 55.33 (SD-5.3)	60"
DMH-7	60.00	54.16 (SD-4)	51.43 (SD-6.1) 54.16 (SD-6.3) 54.16 (SD-6.2)	60"
DMH-9	111.70	107.70 (SD-17) 107.70 (SD-16B) 102.80 (EXSD-1)	102.70 (SD-18)	48"
DMH-10	109.35	101.42 (SD-18)	101.32 (EXSD-2)	48"
OCS-1	60.40	54.00 (SD-5.3)	45.94 (SD-5) 49.09 (SD-5.6) 49.09 (SD-5.7)	72"

STORI	M DR	PAIN STRUC	CTURE DAT	^r A
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM
DMH 12965	64.87	47.80 (18" CPP)	49.80 (24" CPP)	48"
DMH 12966	58.83	49.83 (4" PVC) 53.17 (6" PVC) 52.77 (18" DI)	48.38 (18" CPP)	48"
DMH 13456	80.75	72.05 (18" HDPE)	67.87 (18" DI)	48"
DMH 13592	42.62	37.64(SD-9) 37.79(SD-12)	37.59 (12" PVC)	48"
DMH 15952	67.02		64.98 (4" DI)	48"
DMH 15953	67.00			48"
DMH 21220	108.04	104.44 (6" PVC) 87.36 (12" RCP) 94.86 (12" RCP)	86.99 (12" PVC)	48"
DMH 21240	107.93	101.68 (12" RCP) 101.68 (12" PVC)	101.58 (12" CPP)	48"
DMH 21425	106.58	101.79 (15" HDPE) 96.27 (15" HDPE)	96.24 (18" HDPE)	48"
DMH 21468	106.93	103.99 (6" PVC)	103.94 (6" PVC)	48"
DMH 21903	110.18		107.30 (8" PVC)	48"
DMH 21913	110.33	107.30 (8" PVC) 102.65 (18" PVC) 107.13 (18" PVC) 101.78 (18" CPP)	101.73 (18" PVC)	24"
DMH 22098	115.18	106.03 (18" CPP)	105.99 (18" CPP)	48"
DMH 25531	130.05	110.05 (12" PVC)	109.44 (18" RCP)	48"
DMH 25556	128.73	110.87 (12" PVC) 121.03 (12" CPP)	110.11 (12" PVC)	48"
DMH 25575	128.66	121.31 (12" CPP)	121.21 (12" CPP)	48"
DMH 26205	89.94	83.67 (18" HDPE) 83.72 (6" PVC) 84.60 (18" HDPE)	83.64 (18" HDPE)	48"
DMH 26212	97.74	87.11 (18" HDPE)	87.11 (18" HDPE)	48"



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SANITARY SEWER PIPE DATA					
NAME	SIZE	LENGTH	SLOPE		
SS-1.1	10"	15'	0.58%		
SS-1.2	10"	88'	0.52%		
SS-2	18"	92'	6.60%		
SS-3	15"	62'	1.51%		
SS-4	15" 44'		4.02%		
SS-7.1B	8"	23'	0.50%		
SS-9B	15"	14'	5.37%		
SS-10	15"	22'	12.64%		

SANITARY SEWER STRUCTURE DATA						
RUCTURE	RIM	INV. IN	INV. OUT:	DIAM.		
SMH-1	55.16	44.71(SS-2) 46.85(SS-1.1) 45.63(SD-1)	44.61 (SS-13952)	48"		
SMH-1.1	54.07	47.04 (SS-1.2)	46.94 (SS-1.1)	48"		
SMH-2	60.23	51.21 (SS-3) 51.41 (SS-16008 RECONNECT)	50.77 (SS-2)	48"		
SMH-3	60.50	52.24 (SS-4)	52.14 (SS-3)	48"		
SMH-4	64.11	57.95 (SS-11065)	54.00 (SS-4)	48"		
SMH-9	61.40	55.49 (SS-10) 49.27 (SS-10 DROP)	49.17 (SS-9B)	48"		
SMH-10	68.00	58.41 (SS-13457.2 RECONNECT (DROP)) 58.41 (SS-13457 RECONNECT) 61.53 (SS-13457.2 RECONNECT)	58.31 (SS-10)	60"		

SANITA	ARY S	SEWER STRU	JCTURE DA	TA
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH 12949	61.94	51.90 (6" PVC) 53.38 (12" PVC)	52.38 (12" PVC)	48"
SMH 13457	79.44	72.28 (15" PVC)	64.64 (15" PVC)	48"
SMH 13475	62.91	52.29 (15" PVC) 56.69 (15" PVC)	52.08 (12" PVC)	48"
SMH 13482	55.71	50.14 (12" PVC)	46.09 (12" PVC)	48"
SMH 13533	53.55	45.65 (12" PVC) 46.82 (12" PVC) 45.25 (12" PVC)	44.38 (12" RCP)	48"
SMH 13820	41.77	32.77 (10" PVC) 32.44 (12" RCP)	32.42 (12" RCP)	48"
SMH 13932	52.69	43.42 (15" RCP) 44.44 (12" PVC) 41.64 (18" RCP) 44.64 (8" PVC)	40.64 (18" RCP)	48"
SMH 13952	52.64	45.89 (12" PVC) 45.98 (18" RCP)	44.61 (18" RCP)	48"
SMH 15163	81.98	71.98 (12" PVC)	72.88 (12" PVC)	48"
SMH 16008	69.24	61.07 (10" PVC) 61.17 (10" PVC) 62.19 (12" PVC)	60.86 (12" PVC)	48"
SMH 16047	72.94	64.59 (8" PVC) 64.57 (8" PVC) 69.76 (4" PVC) 64.29 (8" RCP)	64.19 (10" PVC)	48"
SMH 16091	77.67	69.37 (8" PVC)	69.34 (8" PVC)	48"
SMH 16094	75.89	69.15 (8" PVC)	69.05 (8" PVC)	48"
SMH 21114	107.75	99.95 (8" PVC) 99.86 (8" PVC)	99.60 (8" PVC)	48"
SMH 21423	106.57	97.17 (12" PVC)	86.18 (12" PVC)	48"
SMH 22095	115.44	108.75 (18" PVC)	108.49 (15" PVC)	48"
SMH 25522	130.11	117.21 (15" PVC)	117.16 (15" PVC)	48"
SMH 25558	128.59	110.01 (12" PVC)	110.00 (12" PVC)	48"
SMH 26197	90.56	83.53 (12" PVC) 80.53 (12" PVC) 82.56 (15" CPP) 83.62 (15" PVC)	80.73 (15" PVC)	48"
SMH 26365	107.74	97.99 (8" PVC) 98.01 (12" PVC)	97.74 (12" PVC)	48"
SMH 26367	130.04	109.83 (12" PVC) 109.87 (15" PVC)	109.76 (18" PVC)	48"
		1		



175 Ridge R Tel. (603) 465-

REVISIONS

NO. DATE

THESE PLANS DETAIL THE TEMPORARY EXCAVATION SUPPORT SYSTEM TO BE INSTALLED AT THE SOUTHWEST CORNER OF THE NEW CONGRESS STREET BUILDINGAT THE MAINE MEDICAL CENTER IN PORTLAND, MAINE. THE EXCAVATION SUPPORT SYSTEM HAS BEEN DESIGNED FOR A MAXIMUM VERTICAL SURCHARGE OF 300 PSF APPLIED AT THE TOP OF THE SUPPORT WALL.

INSTALLATION PROCEDURE

THE LATERAL MOVEMENT OF THE SYSTEM SHALL BE MONITORED DURING CONSTRUCTION. MONITORING POINTS SHALL BE LOCATED EVERY 16 FEET ALONG THE EXCAVATION SUPPORT (MAX.) AND READINGS TAKEN 2 TO 3 TIMES PER WEEK DURING ACTIVE EXCAVATION WORK. AFTER THE EXCAVATION REACHES SUBGRADE THE READINGS SHALL BE TAKEN WEEKLY. MONITORING DATA SHALL BE PROVIDED TO EARTHWORK ENGINEERING FOR REVIEW AS IT IS OBTAINED.

MATERIAL SCHEDULE				
ITEM	MATERIAL	GRADE		
SOLDIER PILES	SEE SCHDULE	ASTM A572 (Fy=50 ksi)		
FLO FILL	LEAN CONCRETE	fc = 150 psi (min.)		
TIMBER LAGGING	3-INCH THICK (NOM.)	Fb = 875 psi		
TIEBACK WALES	2 - C15x33.9 CHANNEL	ASTM A36 (Fy=36 ksi)		
TIEBACK TENDONS	0.6"Ø 7 WIRE STRAND	ASTM A-416 (Fu=270 ksi)		
TIEBACK PLATES	12"x12"x1.5" PLATE	ASTM A572 (Fy=50 ksi)		
SUPPORT BRACKET	HP12x74 SECTION	ASTM A572 (Fy=50 ksi)		
WELDS	E70XX	Fy=70 ksi		

MATERIALS OF EQUAL OR GREATER STRENGTH MAY BE SUBSTITUTED FOR THOSE LISTED ABOVE WRITTEN UPON APPROVAL BY THE EARTHWORK ENGINEERING.

SIGN ENGINEER	CONTRACTOR	PR
K ENGINEERING, INC.	KELLER - NORTH AMERICA	CONGRESS ST
Road - Hollis, NH 03049	30 Martin - Cumberland, RI 02864	MAINE MEDICAI
-9500 - Fax (603) 465-9650	Tel. (401) 334-2565 - Fax (401) 334-3337	PORTLA

GENERAL NOTES

1. THE AREA ALONG THE SOLDIER PILE ALIGNMENT SHALL BE CLEARED OF ALL EXISTING UTILITIES AND OTHER OBSTRUCTIONS PRIOR TO PILE INSTALLATION. THE AREA AT PILE 1 TO BE GRADED TO ELEV. +65 AND SLOPED DOWN TO PILE 6 AT ELEV. 57.

2. THE SOLDIER PILES SHALL THEN BE INSTALLED AT THE LOCATIONS SHOWN IN PLAN. THE PILES SHALL BE INSTALLED WITHIN PREDRILLED CASED HOLES WHICH SHALL BE ADVANCED DOWN TO THE LENGTH GIVEN IN THE SOLDIER PILE SCHEDULE. THE PILES SHALL BE SET WITHIN THE DRILLED SHAFT IN THE CORRECT ORIENTATION AND THEN BACKFILLED WITH FLO FILL CONCRETE UP TO EXISTING GRADE. 3. AFTER THE SOLDIER PILES HAVE BEEN INSTALLED MAKE THE INITIAL EXCAVATION ALONG THE SOLDIER PILE WALL TO 5 FEET BELOW GRADE FOR INSTALLATION OF TIMBER LAGGING BETWEEN PILES. THE HEIGHT OF UNSUPPORTED SOIL FACE MAY NEED TO BE REDUCED FROM 5 FEET BASED ON ACTUAL SOIL CONDITIONS TO MAINTAIN A STABLE SOIL FACE. TIMBER LAGGING WILL BE EITHER TUCKED BEHIND THE PILE FLANGES OR ATTACHED TO THE FLANGES WITH WELDED THREADED ROD (SEE DETAIL ON DRWG. 2 OF 3). LAGGING WILL BE SPACED WITH LOUVERS TO PERMIT FREE DRAINAGE. ALL VOIDS BEHIND THE LAGGING WILL BE TIGHTLY BACK PACKED WITH ON-SITE GRANULAR MATERIAL. TIMBER LAGGING TO BE

INSTALLED IMMEDIATELY AFTER EXCAVATION IS MADE.

4. THE GENERAL EXCAVATION SHALL CONTINUE IN LIFTS WITH LAGGING INSTALLED BETWEEN THE PILES AS DESCRIBED ABOVE DOWN TO TWO FEET BELOW EACH BRACING LEVEL FOR INSTALLATION OF THE TIEBACK ANCHORS AND WALES, AS DETAILED. TIEBACKS SHALL BE INSTALLED AT THE DEPTH AND ANGLE GIVEN IN THE SOLDIER PILE SCHEDULE. THE TIEBACK TENDON AND REGROUT TUBE SHALL BE INSTALLED THE FULL LENGTH WITHOUT DIFFICULTY. PLACE GROUT BY TREMIE METHODS TO THE FACE OF EXCAVATION. TIEBACKS SHALL BE REGROUTED AT LEAST ONCE. AFTER THE TIEBACKS HAVE BEEN INSTALLED THEY SHALL BE TESTED FOLLOWING THE "TIEBACK TESTING PROCEDURE" GIVEN ON DRAWING 2 OF 3. TIEBACK TEST REPORTS TO BE PROVIDED TO EARTHWORK ENGINEERING FOR REVIEW. 5. AFTER THE STRUCTURE IS INSTALLED AND BACKFILL HAS BEEN PLACED UP TO WITHIN 2 FEET OF THE BRACING LEVEL THE WALE AND BRACING CAN BE REMOVED. IN ADDITION, THE TIEBACKS SHALL BE DETENTIONED AND THE DOUBLE CHANNLE WALES REMOVED.

SEE SHEET 2 OF 3 FOR WALL ELEVATION, DETAILS AND TIEBACK TESTING PROCEDURES. SEE SHEET 3 OF 3 FOR DESIGN SECTIONS.

JECT	DRAWING TITLE	DESIGN BY: PAD
REET BUILDING	SOLDIER PILE AND LAGGING	date: 12/11/20
CENTER FACILITY	WITH TIEBACK ANCHORS	project: 20092
D, MAINE	PLAN AND GENERAL NOTES	SHEET: 1 of 3



AFTER THE TIEBACK ANC
THE TIEBACK DESIGN LOA

TESTING PROCEDURE THE FIRST ANCHOR INSTALLED SHALL BE PERFORMANCE TESTED AND ALL OTHER TIEBACK ANCHORS SHALL BE PROOF TESTED. PERFORMANCE AND PROOF TESTS SHALL FOLLOW THE LOADING SCHEDULE GIVEN HERE. LOAD AND MOVEMENT MEASUREMENTS SHALL BE RECORDED AND PLOTTED. A RECENTLY CALIBRATED HYDRAULIC TEST JACK SHALL BE USED TO APPLY THE TEST LOADS AND A DIAL GAUGE MOUNTED ON AN INDEPENDENT REFERENCE SHALL BE USED TO RECORD MOVEMENTS TO AN ACCURACY OF 0.001 INCHES.

PERFORMANCE TESTING LOAD SCHEDULE (DL=DESIGN LOAD) 5 KIPS, 25%DL 5 KIPS, 25%DL, 50%DL 5 KIPS, 25%DL, 50%DL, 75%DL 5 KIPS, 25%DL, 50%DL, 75%DL, 100%DL 5 KIPS, 25%DL, 50%DL, 75%DL, 100%DL, 125%DL 5 KIPS, 25%DL, 50%DL, 75%DL, 100%DL, 125%DL, 133%DL (CREEP TEST), 125%DL, 100%DL, 5 KIPS, 100%DL (LOCK-OFF).

PROOF TESTING LOAD SCHEDULE (DL=DESIGN LOAD) 5 KIPS, 25%DL, 50%DL, 75%DL, 100%DL, 120%DL, 133%DL, 100%DL (LOCK-OFF)

DURING TESTING THE MOVEMENT OF THE TENDON SHALL BE MEASURED TO THE NEAREST 0.001 INCHES AND RECORDED. THE LOAD SHALL BE HELD AT EACH LOAD INCREMENT UNTIL THE MOVEMENT STABILIZES. THE MAXIMUM TEST LOAD FOR THE PROOF AND PERFORMANCE TESTS SHALL BE HELD FOR 10 MINUTES AND MOVEMENT READINGS TAKEN AT 1 MINUTE INTERVALS. IF THE MOVEMENT BETWEEN 1 AND 10 MINUTES EXCEEDS 0.04 INCHES THE TEST LOAD SHALL BE HELD AND ADDITIONAL 50 MINUTES AND MOVEMENT READINGS TAKEN AT 10 MINUTE INTERVALS.

AFTER THE ANCHOR HAS BEEN LOAD TESTED AND DETERMINED TO BE ACCEPTABLE IT SHALL BE LOCKED-OFF AT THE DESIGN LOAD. THE ANCHORS WILL BE DETERMINED ACCEPTABLE USING THE FOLLOWING ACCEPTANCE CRITERIA:

- OF THE BONDED LENGTH.

TIEBACKS WHICH FAIL TO MEET THE ACCEPTANCE CRITERIA MAY BE REGROUTED AND RETESTED. A TIEBACK WHICH CANNOT MEET THE ACCEPTANCE CRITERIA MAY BE INCORPORATED INTO THE SYSTEM AT 67% OF THE STABILIZED LOAD. THE STABILIZED LOAD SHALL BE DETERMINED BASED ON THE STABILIZED HYDRAULIC JACK PRESSURE AFTER 10 MINUTES. EARTHWORK ENGINEERING SHALL BE NOTIFIED IF ANY ANCHORS FAILS TO HOLD THE FULL DESIGN LOAD IMMEDIATELY TO DETERMINE WHAT ADDITIONAL ANCHORS MAY BE REQUIRED. ALL TEST REPORTS TO BE PROVIDED TO EARTHWORK ENGINEERING FOR REVIEW.

SOLDIER PILE AND TIEBACK SCHEDULE							
PILE	SECTION	LENGTH	TIEBACK DL	STRANDS	FREE LENGTH	BOND LENGTH	ELEV.
1 & 2	W24x68	40 ft.	151 kips	5	20 ft.	55 ft.	EL. 55
			77 kips	3	15 ft.	25 ft.	EL. 44
3 & 4	W24x68	38 ft.	153 kips	5	20 ft.	45 ft.	EL. 51
5 & 6	W24x68	35 ft.	130 kips	4	15 ft.	40 ft.	EL. 48
7 & 8	HP14x73	30 ft.	112 kips	4	15 ft.	40 ft.	EL. 48
9 & 10	HP14x73	30 ft.	112 kips	4	15 ft.	40 ft.	EL. 47

IGN ENGINEER	CONTRACTOR	PROJECT	DRAWING TITLE	DESIGN BY: PAD
K ENGINEERING, INC.	KELLER - NORTH AMERICA	CONGRESS STREET BUILDING	SOLDIER PILE AND LAGGING	date: 12/11/20
oad - Hollis, NH 03049	30 Martin Street - Cumberland, RI 02864	MAINE MEDICAL CENTER FACILITY	WITH TIEBACK ANCHORS	project: 20092
9500 - Fax (603) 465-9650	Tel. (401) 334-2565 - Fax (401) 334-3337	PORTLAND, MAINE	ELEVATION, DETAILS AND TESTING	SHEET: 2 of 3

TIEBACK ANCHOR TESTING PROCEDURES HORS HAVE BEEN INSTALLED THEY SHALL BE TESTED USING THE FOLLOWING PROCEDURES. AD WILL BE AS GIVEN IN THE SOLDIER PILE AND TIEBACK SCHEDULE.

a.) CREEP RATE STABILIZED TO A RATE OF LESS THAN 0.040 INCHES BETWEEN 1 AND 10 MINUTES OR, FOR LOADS HELD 60 MINUTES, THE CREEP RATE SHALL BE LESS THAN 0.080 INCHES BETWEEN 6 AND 60 MINUTES.

b.) THE MEASURED TIEBACK ELONGATION IS GREATER THAN THE THEORETICAL ELASTIC ELONGATION BASED ON 80% OF THE FREE LENGTH AND LESS THAN THE THEORETICAL ELASTIC ELONGATION OF THE FREE LENGTH PLUS 50%



REVISIONS	



GENERAL NOTES

THESE PLANS DETAIL THE TEMPORARY EXCAVATION SUPPORT SYSTEM TO BE INSTALLED AT THE SOUTHWEST I HESE FUANS DE JAIL. THE TEMPORY EXCAVATION SUPPORT SYSTEM TO BE INSTALLED AT THE SOUTHWEST CONTRER OF THE NEW CONGRESS STREET BUILDINGAT THE MANNE MEDICAL CENTER IN PORTIAND, MAINEST THE EXCAVATION SUPPORT SYSTEM HAS BEEN DESIGNED FOR A MAXIMUM VERTICAL SURCHARGE OF 300 PSF APPLIED AT THE TOP OF THE SUPPORT WALL.

- INSTALIATION PROCEDURE 1. THE AREA ALONG THE SOLDIER PILE ALIGNMENT SHALL BE CLEARED OF ALL EXISTING UTILITIES AND OTHER OBSTRUCTIONS PRIOR TO PILE INSTALLATION. THE AREA AT PILE 1 TO BE GRADED TO ELEV. +65 AND SLOPED DOWN TO PILE 6 AT ELEV. 57
- AND SLOPED DOWN TO PILE 6 AT ELEV. 57. THE SOLDER PILES SHALL THEN BE INSTALLED AT THE LOCATIONS SHOWN IN PLAN. THE PILES SHALL BE INSTALLED WITHIN PREDRILLED CASED HOLES WHICH SHALL BE ADVANCED DOWN TO THE LENGTH GIVEN IN THE SOLDER PILE SCHEDULE. THE PILES SHALL BE SET WITHIN THE DRILLED SHAFT IN THE CORRECT ORIENTATION AND THEN BACKFILLED WITH FLO FILL CONCRETE UP TO EXISTING GRADE.
- ORIENTATION AND THEN BACKFILLED WITH FLO FILL CONCRETE UP TO EXISTING GRADE. AFTER THE SOLDIER PILES HAVE BEEN INSTALLED MAKE THE INITIAL EXCAVATION ALONG THE SOLDIER PILE WALL TO 5 FEET BELOW GRADE FOR INSTALLATION OF TIMBER LAGGING BETWEEN PILES. THE HEIGHT OF UNSUPPORTED SOLF ACE MAY NEED TO BE REDUCED FROM 5 FEET BASED ON ACTUAL SOLL CONDITIONS TO MAINTAIN A STABLE SOLF ACE. TIMBER LAGGING WILL BE EITHER TUCKED BEHIND THE PILE FLANGES OR ATTACHED TO THE FLANGES WITH WELDOE THREADE RONG (SEE DETAIL ON DRWG, 2 OF 3). LAGGING WILL BE SPACED WITH LOUVERS TO PERMIT FREE DRAINAGE. ALL VOIDS BEHIND THE LAGGING WILL BE TIGHT Y BACK PACKED WITH NO.SSITE GRANULAR MATERIAL. TIMBER LAGGING TO BE INSTALLED IMMEDIATELY AFTER EXCAVATION IS MADE. INSTALLED UMIEDIATELY AFTER EXCAVATION IS MADE.
- INSI ALLEU IMMELIATELY AF LEK EXCAVATION IS MADE. THE GENERAL EXCAVATION SHALL CONTINUE IN LIFTS WITH LAGGING INSTALLED BETWEEN THE PILES AS DESCRIBED ABOVE DOWN TO TWO FEET BELOW EACH BRACING LEVEL FOR INSTALLATION OF THE TIEBACK ANCHORS AND WALES, AS DETALED. TIEBACKS SHALL BE INSTALLED AT THE DEPTH AND ANGLE GIVEN IN THE SOLDIER PILE SCHEDULE. THE TIEBACK TENDON AND REGROUT TUBE SHALL BE INSTALLED THE FULL LENGTH WITHOUT DIFFICULTY. PLACE GROUT BY THEME METHODS TO THE FACE OF THE FULL LENGTH WITHOUT DIFFLOE REGROUTS Y LACE GROUT BY TREMIE METHODS TO THE FACE OF EXCAVATION. TIBBACKS SHALE REGROUTED AT LEAST ONCE. AFTER THE TREBACKS HAVE BEEN INSTALLED THEY SHALL BE TESTED FOLLOWING THE *THEBACK* THORY MORE AND A THE TREBACKS HAVE BEEN 2 OF 3. TIEBACK TEST REPORTS TO BE PROVIDED TO EARTHWORE REGIMEERING FOR REVIEW.
- 2 OF 3. TIEDACK TEST REPORTS TO BE PROVIDED TO EAR ITMOVINE MININERNING FOR REVIEW. AFTER THE STRUCTURE IS INSTALLED AND BERKONED. ID EAR ITMOVINE MININER TO WITHIN 2 FEET OF THE BRACING LEVEL THE WALE AND BRACING CAN BE REMOVED. IN ADDITION, THE TIEBACKS SHALL BE DETENTIONED AND THE DOUBLE CHANNLE WALES REMOVED.

THE LATERAL MOVEMENT OF THE SYSTEM SHALL BE MONITORED DURING CONSTRUCTION. MONITORING POINTS SHALL BE LOCATED EVERY 16 FEET ALONG THE EXCAVATION SUPPORT (MAX), AND READINGS TAKEN 2 TO 3 TIMES PREVER UVERNO ACTIVE EXCAVATION WORK. AFTER THE EXCAVATION REACHES SUBGRADE THE READINGS SHALL BE TAKEN WEEKLY. MONITORING DATA SHALL BE PROVIDED TO EARTHWORK ENGINEERING FOR REVIEW AS IT IS OBTAINED

SECTION AT GILMAN ST LOOKING SOUTH

NOTE: Tiebacks will be de-tensioned and soldier piles and lagging will be removed to 4' below grade after completion of foundation work.





STORM DRAIN STRUCTURE DATA STRUCTURE RM INV. IN INV. OUT: DIAM. CB-11074 66.20 56.33 (SD-64) 56.30 (SD-79) 49* CB-11074 66.70 56.33 (32)-64) 56.30 (32)-79) 48° CB 13581 42.86 40.62 (32)-13) 48° CP 13770 42.48 38.63 (30)-13) 38.63 (30)-7.1) 49°

STORM DRAIN STRUCTURE DATA

RIM	INV. IN	INV. OUT:	DIAM.
43.29		32.07 (50-6.5)	48'
42.65	31.73 (SD-6.5)	31.63 (SD-6)	48"
41.95		38.69 (SD-13)	48*
42.39	31.28 (SD-11) 31.52 (SD-6.4)	30.62 (50-6)	48'
41.38	29.57 (SD-6)	29.47 (SD-8)	40"

STORM DRAIN PIPE DATA

SIZE	LENGTH	SLOPE
12"	46	2.28%
12*	20'	0.50%
12*	31'	1.0.3%
8°	21"	0.53%
12"	z	0.84%
12*	36'	1.00%
12*	14'	0.50%

NOTES:

- THE CONTRACTOR SHALL EXCAVATE TEST PITS TO LOCATE AND CONFIRM THE DEPTH OF WATER AND GAS WARES AND SERVICES A LLL CROSSINGS IN ADVANCE OF THE IDDR. THE DEPTH OF OUCT BANKS MAY BE ADJUSTED TO MANIFAIN REQUIRED CLEARANCES.
- Service wint be Advanced to Materian REQUERD CLEARANCES. A FUTURE ELECTRATION SPEPCHES SYSTEM will be INSTALLED IN TO SOFANKA ALONG GLUAN STREET IN A FUTURE BUEDNO PACKARE. THE PROFESSIONET BANKS, MAINLES AND SPUECE BOXES AND BE INSTALLED ONTSILE OF THE FUTURE SUPPORT SYSTEM. THE CONTINACTOR SHALL CONFIRM THE EXCAVATION SUPPORT IDECTION WITH THE CONSTRUCTION MAINLER PRIOR TO INSTALLING DUCT BUHKS.
- DAMES. 3. THE CONTRACTORS SHALL PREPARE A CONSTRUCTION SEQUENCE AND SOMEDULE IDINIFYNS THE TANKS OF CONSTRUCTION OF THE OUT DAMES AND ELECTRICAL ANNIHOUS IN PREPARATION OF CONDUCTOR INSTALLATION BY CARE PORDE TO HERVORIO UTLITY POLES. THE CONTRACTOR SHALL COORDINATE TIS SCHEDULE WITH CARP AND SHALL ACCOMMODATE DAP'S SCHEDULE.
- 4.THE EXISTING UTILITY POLES, OVERHEAD UNES AND UNDERGR ELECTRICAL, AND RELECOMMUNICATIONS FADLINES INCLUEING UNDERGROUND CONDUIT FROM POLE #5 TO THE EXISTING ONE MANIFICE UMH-U4 ARE TO REMAIN IN SERVICE FEEDS UNTIL. A. THE NEW DUCT BANK, AND MANHOLES UMH-CMP1, UMH-CMP2, DHM-C1 AND CHH-C1 ARE INSTALLED;

- OWING UTUAL. DATE OF A DATE OF THE ADDATE OF THE SECTION OF THE SECTION OF THE ADDATE OF THE ADDATE
- Here is to de induced. Involution stretch here is to the second stretch in the second stretch is the second stretch is to a construction of a remer construction that is to the instruction and a three-second enclosed in the second stretch is construction shall constrain the organization transmission of the instruction shall constrain the organization of the second stretch is construction shall constrain the organization of the second stretch is construction shall constrain the organization of the second stretch is to the second stretch is the second stretch is constrained in organization of the second stretch is the second stretch is to be descripted with a local to second stretch is constrained and stretch is the location of a number of second stretch is the second behavior and the location of a number of second stretch is the second second stretch of the location of a number of second behavior and the location of a number of second behavior and the location of a number of second behavior and the location of a number of second behavior and the location of a number of second behavior and the location of a number of second behavior and the second behavior behavior behavior and the second behavior behavior behavior and the second behavior and the second behavior behavior

LEGEND CUVIERONE CUVIERONE EDGE PAVEMENT CURS LINE ==420== --118- CONTOURS X120.00 SPOT GRADE ==120== FETAINNG WALL 0 DECIDUOUS TREE CONFEROUS TREE 83 CAS GATE VALVE GAS GATE VALVE GAS METOR GAS MANHOLE WATER GATE VALVE WATER SHUT OFF HYDRANT WATER MANHOLE ×1.4 + ŝ SANETARY SEVER S UD UNDER DRAIN DRAINAGE MANHOLE EL CATCH BASN OHU OVERHEAD UTILITY B E CATCH BASN CATO BASH