19 OF 31 TI	E-IN DETAIL #12 AND BC	M			
20 OF 31 TI	E-IN DETAIL #13 AND BC	M			and the second second
21 OF 31 LC	DCATION PLAN #5				the course of
22 OF 31 TI	E-IN DETAIL #14 AND BC	M			- 11 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
23 OF 31 TI	E-IN DETAIL #15 AND BC	M			
24 OF 31 LC	DCATION PLAN #6				and the state of
25 OF 31 TI	E-IN DETAIL #16 AND BC	M			
26 OF 31 LC	DCATION PLAN #7				
27 OF 31 TI	E-IN DETAIL #17 AND BC	M			
28 OF 31 TI	E-IN DETAIL #18 AND BC	M			
29 OF 31 LC	DCATION PLAN #8				
30 OF 31 TI	E-IN DETAIL #19 AND BC	M			
31 OF 31 S	TANDARD CORROSION [DETAILS			
MAIN	WO# XXXXXX	WO# XXXXXX	WO# XXXXXX	WO# XXXXXX	
	W RODNEY FRENCH	GRIT STREET	WELCOME STREET	SOCIAL STREET	
INSTALLATION:	(~1,905') 8" HDPE LIP MAIN	(~90) 8" HDPE LIP MAIN	(~375') 2" HDPE LIP MAIN	(~420') 2" HDPE LIP MAIN	
					G G
ABANDONMENT:	(1,020') 6" CI LP MAIN	(85) 8" BS LIP MAIN	(380') 4" CI LP MAIN	(145') 4" PL LP MAIN	G
	(90') 6" PY LIP MAIN			(210') 4" CI LP MAIN	
	(450') 8" BS LIP MAIN				G
SERVICES					G
REPLACEMENT:	8	0	2	3	
TIE-OVER:	8	0	5	4	
METER MOVE OUT	-S: 16	0	7	6	
TOTAL SERVICES:	18	0	11	12	
MAIN	WO# XXXXXX	WO# XXXXXX	WO# XXXXXX	WO# XXXXXX	
	HARMONY STREET	GEORGE STREET	DAVID STREET	OCEANSIDE PLAZA	
INSTALLATION:	(~395') 2" HDPE LIP MAIN	(~490) 4" HDPE LIP MAIN	(~590') 4" HDPE LIP MAIN	(~580') 2" HDPE LIP MAIN	
ABANDONMENT:	(415') 4" CI LP MAIN	(460') 3" CI LIP MAIN	(575') 4" CI LP MAIN	(290') 4" PY LP MAIN (120') 4" PL LP MAIN (185') 4" CS LP MAIN	
SERVICES					
REPLACEMENT:	5	7	15	2	
TIE-OVER:	4	, 11	7	6	
METER MOVE OUT		13	16	6	
TOTAL SERVICES:		18	20	6	
2309775.49				-	

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TABLE OF CONTENTS DESCRIPTION

WORK SCOPE AND TABLE OF CONTENTS

GENERAL NOTES AND MASTER BOM

SHEET

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LEGEND

LOCATION PLAN #1

LOCATION PLAN #2

TIE-IN DETAIL #1 AND BOM

TIE-IN DETAIL #2 AND BOM

TIE-IN DETAIL #3 AND BOM

TIE-IN DETAIL #4 AND BOM

TIE-IN DETAIL #5 AND BOM

TIE-IN DETAIL #6 AND BOM

TIE-IN DETAIL #7 AND BOM

TIE-IN DETAIL #8 AND BOM

TIE-IN DETAIL #9 AND BOM

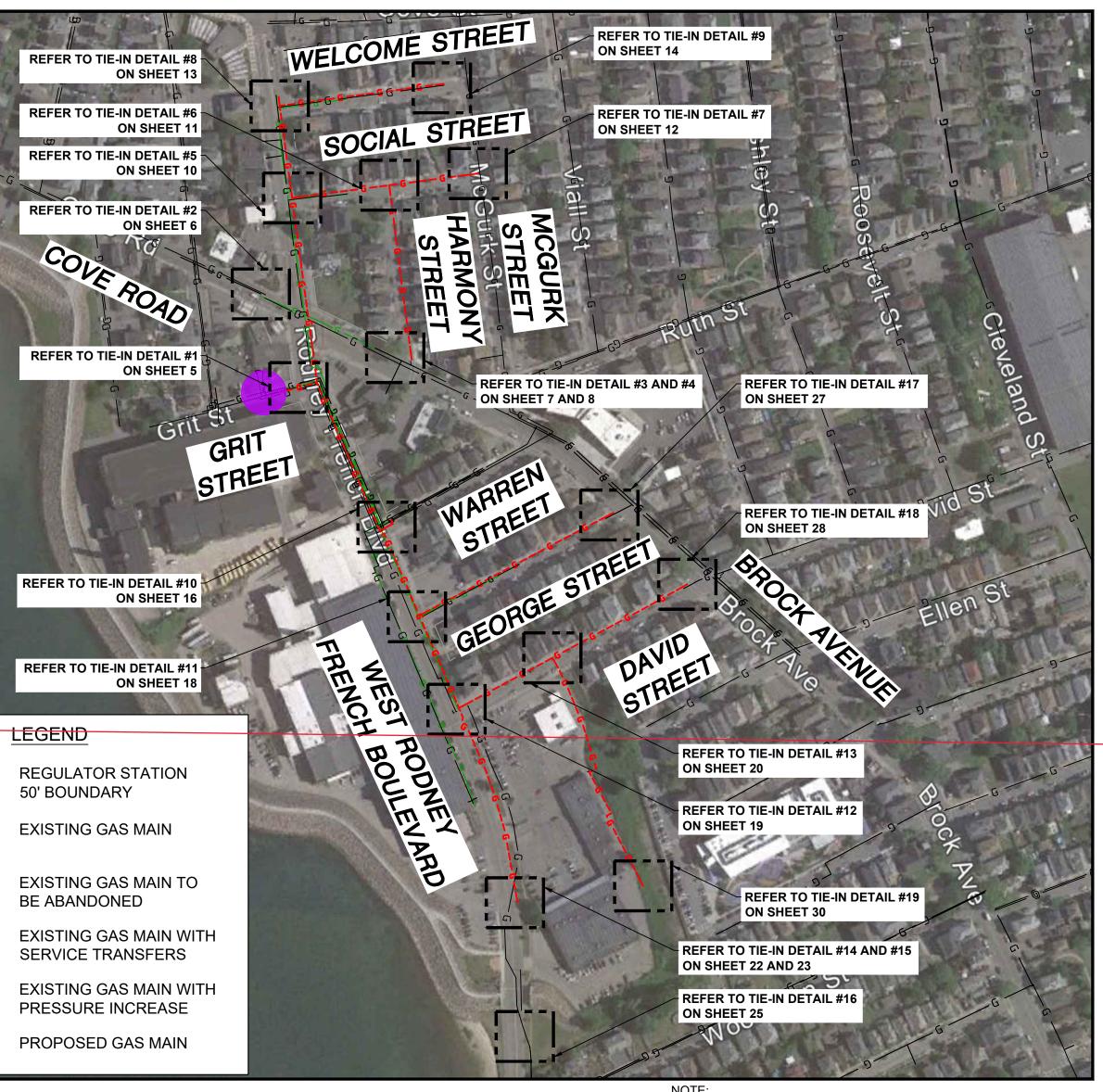
TIE-IN DETAIL #10 AND BOM

TIE-IN DETAIL #11 AND BOM

LOCATION PLAN #3

LOCATION PLAN #4

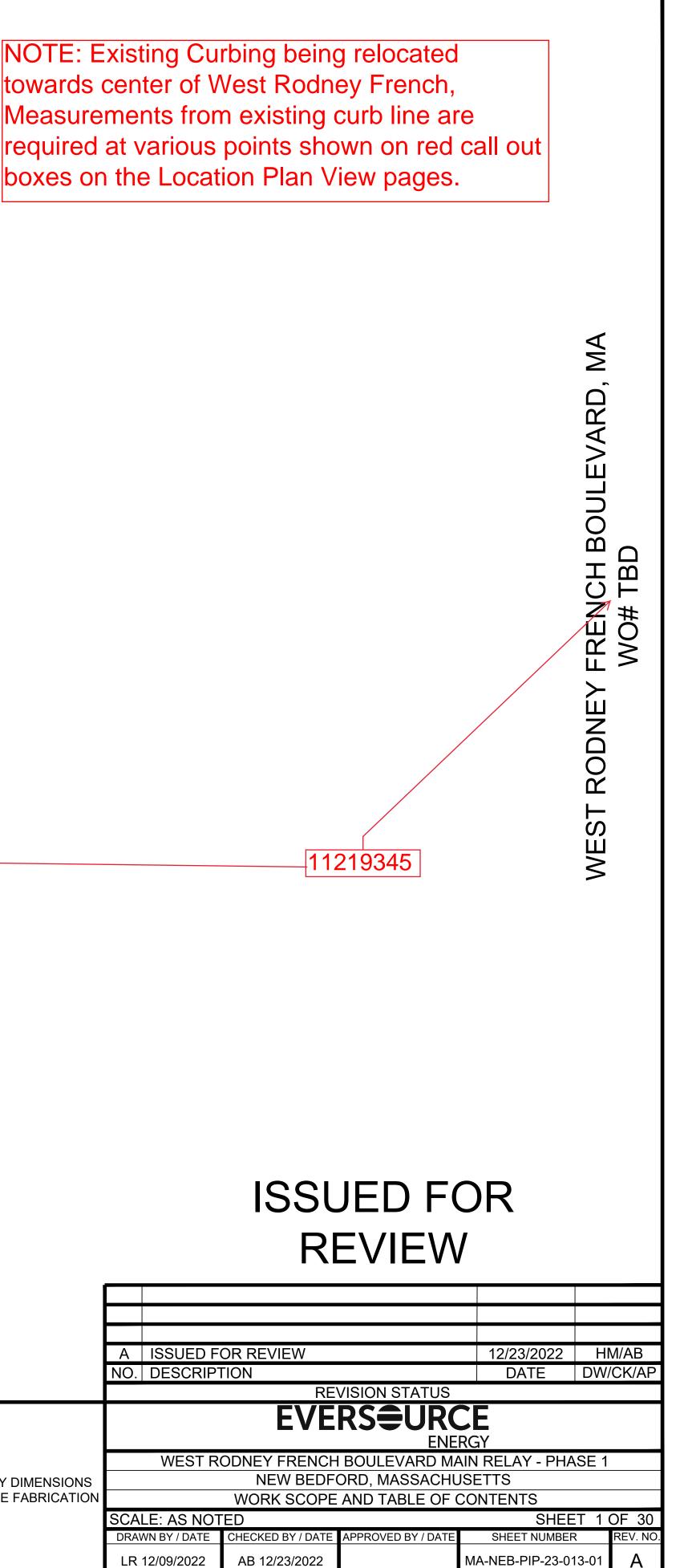
EVERSEURCE **ENERGY**



WORK SCOPE NEW BEDFORD, MASSACHUSETTS (NOT TO SCALE)

EXISTING CONDITIONS SHOWN ARE BASED ON GIS, AERIAL AND AVAILABLE RECORD DATA, NO FIELD SURVEY WAS PERFORMED. CONTRACTOR TO VERIFY EXISTING CONDITIONS AS NEEDED IN THE FIELD. PROPOSED MAIN ALIGNMENT AND OFFSETS ARE APPROXIMATE

SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY [
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE I



GENERAL NOTES

- A. IF ANY OF THE FOLLOWING OCCUR, A DRAWING REVISION IS REQUIRED AND MUST BE APPROVED AND/OR STAMPED BY THE ENGINEER OF RECORD. CHANGES CAN BE APPROVED AND/OR STAMPED BY A PROJECT ENGINEER, BUT THE ENGINEER OF RECORD MUST BE INFORMED.
 - 1. IF THE TIE IN POINT MOVES TO A DIFFERENT SEGMENT OF PIPE THAN SHOWN.
 - IF A CHANGE IN THE LOCATION OF VALVES IS REQUIRED.
 - 3. IF THERE IS ANY CHANGE TO WHAT IS SHOWN ON THE DRAWING WITHIN 50 FT OF A PRESSURE REGULATING STATION, DISTRICT REGULATOR. OR GATE STATION.
 - 4. IF A CHANGE IN PIPE SIZE, MATERIAL, OR WALL THICKNESS IS REQUIRED.
 - 5. ALTERNATE FITTINGS THAT ARE ACCEPTABLE FOR ANY TIE-IN DETAIL WILL BE CALLED OUT IN THE DRAWING. FITTING CHANGES NOT SHOWN AS ALTERNATIVES ON THE DRAWING WILL NEED TO FOLLOW THE DRAWING CHANGE PROCESS CONTAINED IN SECTION V.D.
- B. CONSTRUCTION DRAWINGS, LOCATIONS OF EXISTING UTILITIES, UNDERGROUND STRUCTURES AND WORK LOCATIONS ARE BASED ON BEST AVAILABLE INFORMATION BUT HAVE NOT BEEN FIELD VERIFIED.
- C. ALL WORK. MATERIAL AND CONSTRUCTION SHALL BE PERFORMED AND COMPLETED IN COMPLIANCE WITH ALL PERMITS AND APPROVALS PER EVERSOURCE, LOCAL, STATE, OSHA AND FEDERAL REGULATIONS AND STANDARDS.
- D. ALL LIVE GAS WORK EXCEPT SERVICE SIZE TAPS, INCLUDING BUT NOT LIMITED TO TAPPING OF FITTINGS ON LIVE MAINS, STOPPING, MANIPULATING VALVE, ABANDONMENT, SHALL BE PERFORMED BY. OR AT THE DIRECTION AND UNDER THE DIRECT SUPERVISION OF EVERSOURCE GAS PERSONNEL AND IN ACCORDANCE WITH THE WRITTEN PROCEDURE. DRAWING CHANGES MAY ALSO REQUIRE A CHANGE TO THE PROCEDURE.
- E. EXCAVATOR IS REQUIRED TO PROTECT EXISTING UTILITIES, STRUCTURES, LANDSCAPES FEATURES, SIGNAGE, CURBS, ETC, CARE SHOULD BE TAKEN NOT TO DISTURB OR DAMAGE SUCH ITEMS. ROADWAY, SIDEWALKS, AND GRASS DISTURBED SHALL BE RESTORED TO THE SATISFACTION OF THE CITY OR TOWN. PLANT BEDS WILL BE RELOCATED TO THEIR EXISTING **REGULAR LOCATION.**
- F. ALL TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), INCLUDING ALL REVISIONS AND ADDENDA. ALL TRAFFIC CONTROL DEVICES WILL BE SUPPLIED BY EXCAVATOR.
- G. EXCAVATOR REQUIRED TO CALL DIG-SAFE/CALL BEFORE YOU DIG (DIAL 811) AT LEAST 72 HOURS PRIOR TO CONSTRUCTION. SATURDAYS, SUNDAYS AND HOLIDAYS ARE EXCLUDED FROM THE 72-HOUR TIME SPAN. NOT CONSIDERED BUSINESS WORKDAYS.
- H. IF THE PROJECT IS WITHIN 50 FEET OF A DISTRICT REGULATOR OR GATE STATION, ENSURE THAT A QUALIFIED I&R TECHNICIAN IS ON SITE.
- PROPERTY LINES, STRUCTURES AND EXISTING CONDITIONS DEPICTED ON PLANS ARE BASED ON EVERSOURCE GIS INFORMATION AND HAVE NOT BEEN FIELD VERIFIED BY LAND SURVEY UNLESS OTHERWISE NOTED.
- J. EXISTING SERVICES SHOWN ON PLAN ARE FOR INFORMATION ONLY. PROPOSED SERVICES ARE NOT SHOWN ON PLANS AND ARE TO BE INSTALLED PER EVERSOURCE CONSTRUCTION STANDARDS.
- K. MAINS AND SERVICES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH EVERSOURCE STANDARDS.
- L. ALL PIPE SHALL BE INSTALLED WITH THE MINIMUM DEPTH REQUIRED BY EVERSOURCE STANDARDS AND APPLICABLE REGULATIONS.
- M. MAOP DEFINITIONS:
 - LP = 14" W.C
 - LIP = 35 PSIG
 - IP = 60 PSIG
 - HP = 90 PSIG
- N. ENSURE ALL SERVICES BEING TRANSFERRED TO A HIGHER PRESSURE SYSTEM HAVE UPGRADED PRESSURE REGULATORS INSTALLED PRIOR TO ACTIVATION.

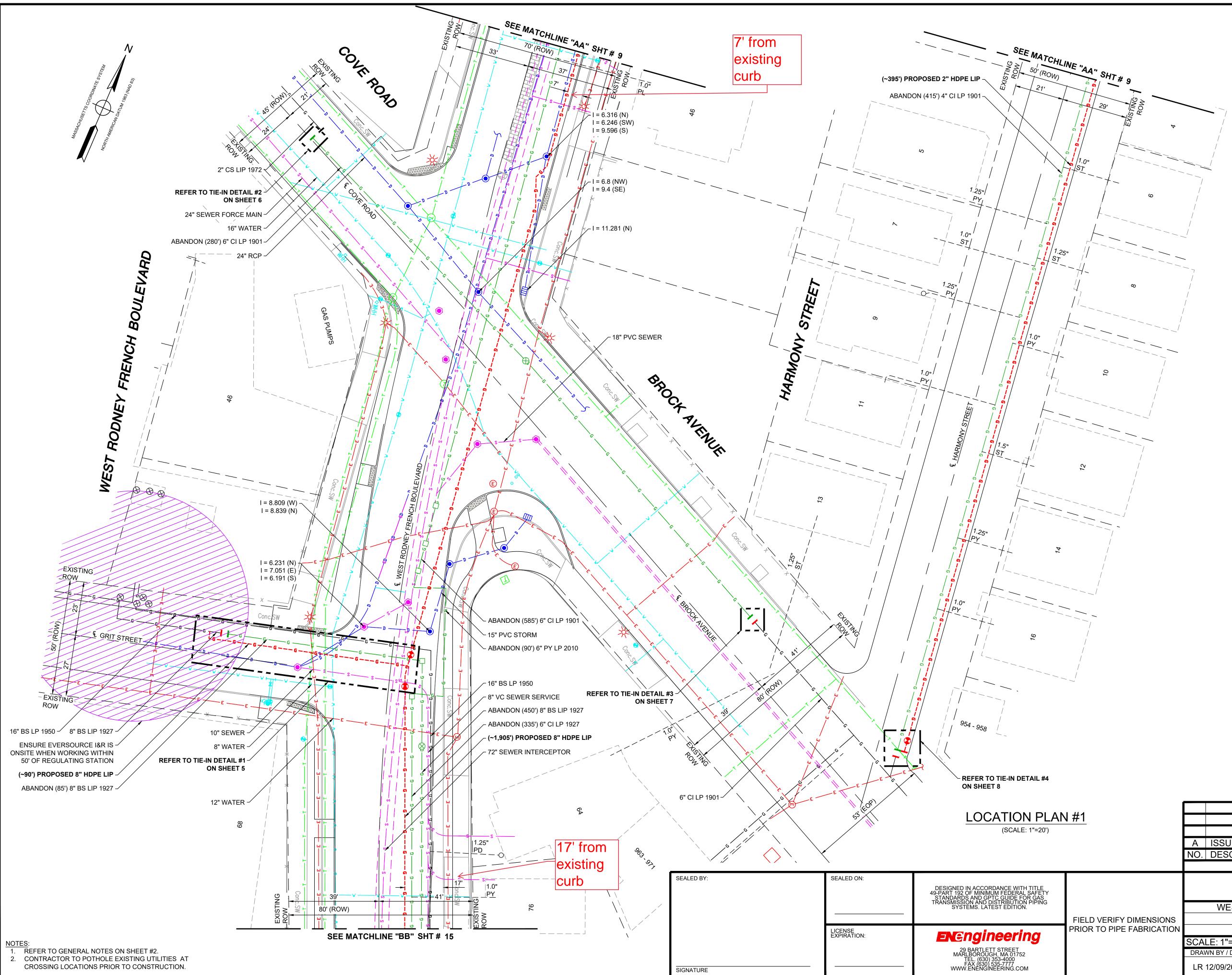
West Rodney French E	ī			· · · · · ·	
	Maximo #	Units	Quanity	Size	ltem#
VALVE, BALL, 2 IN IPS, PO	562087	EA	6	2"	9
VALVE, BALL, 4 IN, POLYE	501002	EA	4	4"	11
VALVE, BALL, 8 IN IPS, PO	500705	EA	5	8"	13
COUPLING, PIPE, 6 IN IPS,	500856	EA	2	6"	46
ELBOW, PIPE, 90 DEG, 8 IN	545343	EA	2	8"	57
REDUCER, PIPE, 4 X 2 IPS,	555593	EA	2	4" X 2"	69
CAP, PIPE, 4 IN IPS SDR 11	542538	EA	10	4"	90
CAP, PIPE, 6 IN IPS SDR 11	542539	EA	2	6"	91
CAP, PIPE, 8 IN IPS SDR 11	542540	EA	2	8"	92
TEE, PIPE, 2 IN IPS SDR 11	560705	EA	1	2"	100
TEE, PIPE, 4 IN SDR 11, BU	560679	EA	1	4"	101
TEE, PIPE, 8 IN SDR 11, BU	560681	EA	2	8"	103
FITTING, TRANSITION, 81	546255	EA	2	8"	120
TEE, PIPE, NON-BLOWING		_, .		_	
PE3408/PE100	500866	EA	3	2" X 1/2"	133
TEE, PIPE, NON-BLOWING					
PE3408/PE100, 1	500867	EA	6	4" X 1/2"	134
TEE, PIPE, NON-BLOWING					
PE3408/PE100	500869	EA	1	6" X 1/2"	136
FITTING, TEE, 8 IN IPS X 1/	584713	EA	1	8" X 1/2"	137
TEE, PIPE, NON-BLOWING	560779	EA	3	2" X 1"	147
FITTING, TEE, 2 IN IPS X 1	602892	EA	2	2" X 1"	148
FITTING, TEE, 8 IN IPS X 1	584301	EA	2	8" X 1"	153
FITTING, TEE, 4 IN IPS X 2	584304	EA	4	4" X 2"	172
TEE, PIPE, 6 X 2 IN IPS , EL	500870	EA	1	6" X 2"	172
FITTING, TEE, 8 IN IPS X 2	500870	LA	L	0 7 2	1/5
PURCHA	577623	EA	2	8" X 2"	176
FITTING,COUPLING, VEN	578182	EA	2	2"	200
FITTING,COUPLING, VEN	578182	EA	12	4"	200
FITTING,COUPLING, VEN	578128	EA	2	6"	201
FITTING,COUPLING, VEN	578132	EA	4	8"	202
CLAMP, PIPE, FULL CIRCLE	601627	EA	4	3" x 2"	205
CLAMP, PIPE, REPAIR, 4 IN	543028	EA	27	4" x 2"	220
FITTING,CLAMP, SERVI-S	578021	EA	7	6" x 2"	220
SADDLE, PIPE, TEE, BRAN	500677	EA	1	8" x 4"	243
TEE, PIPE, NON-BLOWING	560709	EA	5	3/4" x 1/2"	243
				<u> </u>	
FITTING, TEE, SHORTSTOP	578139	EA	1	8 2"	256
FITTING, TEE, SHORTSTOP	578396	EA	5	_	259
FITTING, TEE, SHORTSTOP	578400	EA	1	8"	264
FITTING,CAP, METFIT, 21	581633	EA	11	2"	349
FITTING,COUPLING, MET	579840	EA	2	2"	350
PIPE, 2 IN IPS SDR 11, 250	592668	LF	1,770	2"	359
PIPE, 4 IN IPS X 0.409 IN 1	554008	LF	1,080	4"	362
PIPE, 8 IN IPS X 8-3/8 IN >	554010	LF	2,040	8"	364
FITTING,CAP, METFIT, 1/2	579972	EA	11	1/2"	369
FITTING,CAP, METFIT, 1	583182	EA	6	1"	371
FITTING,CAP, VENTED, IN	578126	EA	2	3"	407
ANODE, BAG, 17 LB NET, H	577776	EA	1	17 lb.	521
BOX VALVE, CURB, W/ 4-	577813	EA	6	4 1/4" square	737
BOX VALVE, W/ 5-1/4 IN	577814	EA	4	5 1/4" square	738
BOX VALVE, W/ 5-1/4 IN	604132	EA	5	8"	740

Item # 9 11 13 46	Size 2" 4" 8" 6"	Quanity 6 4	Units EA	Maximo # 562087	West Rodney French Boulevard - MASTER BOM Description
11 13	4" 8"		EA	EC2007	
13	8"	4	F A		VALVE, BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING
	6"	5	EA EA	501002 500705	VALVE, BALL, 4 IN, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING, TO BE USED W/ BRAND SADDLE INST, P100 VALVE, BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH
		2	EA	500856	COUPLING, PIPE, 6 IN IPS, ELECTROFUSION, PLASTIC, P100
57	8" 4" X 2"	2	EA	545343	ELBOW, PIPE, 90 DEG, 8 IN SDR 11, BUTT WELD ENDS, POLYETHYLENE, P100
69 90	4" X 2" 4"	2 10	EA EA	555593 542538	REDUCER, PIPE, 4 X 2 IPS, BUTT ENDS, POLYETHYLENE, P100, SDR11 CAP, PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100
91	6"	2	EA	542539	CAP, PIPE, 6 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100
92	8"	2	EA	542540	CAP, PIPE, 8 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100
100 101	2" 4"	1	EA EA	560705 560679	TEE, PIPE, 2 IN IPS SDR 11, BUTT ENDS, POLYETHYLENE, P100 TEE, PIPE, 4 IN SDR 11, BUTT ENDS, POLYETHYLENE, P100
103	8"	2	EA	560681	TEE, PIPE, 8 IN SDR 11, BUTT ENDS, POLYETHYLENE, P100
120	8"	2	EA	546255	FITTING, TRANSITION, 8 IN IPS CS X 8 IN IPS PE4710, SDR 11, STEEL WELD X PLASITC, BUTT ENDS
133	2" X 1/2"	3	EA	500866	TEE, PIPE, NON-BLOWING, 2 X 1/2 IN CTS X 0.090 IN THK WALL SDR 7, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100
134	4" X 1/2"	6	EA	500867	TEE, PIPE, NON-BLOWING, 4 X 1/2 IN CTS X 0.090 IN THK WALL SDR 7, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE,
134	- / 1/2			500807	
136	6" X 1/2"	1	EA	500869	TEE, PIPE, NON-BLOWING, 6 X 1/2 IN CTS X 0.090 IN THK WALL SDR 7, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100
137	8" X 1/2"	1	EA	584713	FITTING, TEE, 8 IN IPS X 1/2 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB OUTLET, HDPE, BLACK, NSTAR M-140
147	2" X 1"	3	EA	560779	TEE, PIPE, NON-BLOWING, 2 X 1 IN IPS SDR 11, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100
148 153	2" X 1" 8" X 1"	2	EA EA	602892 584301	FITTING, TEE, 2 IN IPS X 1 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK FITTING, TEE, 8 IN IPS X 1 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB OUTLET, HDPE, BLACK, ASTM F1055, WAS ITEM 577628
172	4" X 2"	4	EA	584304	FITTING, TEE, 4 IN IPS X 2 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK, WAS ITEM 577621
175	6" X 2"	1	EA	500870	TEE, PIPE, 6 X 2 IN IPS , ELECTROFUSION, PLASTIC, P100, W/ 1.8 IN PERF, 5/BOX
176	8" X 2"	2	EA	577623	FITTING, TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055, RESTRICTED PURCHA
200	2"	2	EA	578182	FITTING,COUPLING, VENTED, INSULATED, 2 IN, W/ END CAP, FOR STEEL PIPE, EZB2VIUMG
201	4" C"	12	EA	578128	FITTING, COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP, FOR CAST IRON PIPE
202 203	6" 8"	2 4	EA EA	578129 578132	FITTING,COUPLING, VENTED, INSULATED, W/ END CAP, FOR 6 CI PIPE FITTING,COUPLING, VENTED, INSULATED, W/ END CAP, FOR 8 IN CI PIPE
203	3" x 2"	4	EA	601627	CLAMP, PIPE, FULL CIRCLE REPAIR, SINGLE BAND, 3 IN, 5 BOLT, 304 SS, w/ 2" NPT out for 3" CI, Buna-N gasket, galv. bolts & nuts, 12.5" L
220	4" x 2"	27	EA	543028	CLAMP, PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP
221 243	6" x 2" 8" x 4"	7	EA EA	578021 500677	FITTING,CLAMP, SERVI-SEAL REPAIR, 6 IN DIA, 9 IN LG, W/ 2 IN OUTLET, FOR STEEL PIPE SADDLE,PIPE, TEE, BRANCH, 8 IN IPS SADDLE X 4 IN IPS OUTLET SDR 11, ELECTROFUSION , PLASTIC, P100
243 249	3/4" x 1/2"	5	EA	560709	TEE, PIPE, NON-BLOWING, 3/4 IN X 1/2 IN CTS PLASTIC X 3/8 IN PERF SDR 7, WELDED INLET X COMPRESSION OUTLET, LIGHT WALL, CS, 24/BOX
256	8"	1	EA	578139	FITTING,TEE, SHORTSTOPP, 3-WAY, 8 IN
259 264	2" 8"	5	EA EA	578396 578400	FITTING,TEE, SHORTSTOPP, 2 IN, WELDED
264 349	2"	1	EA EA	578400	FITTING, TEE, SHORTSTOPP, 8 IN, WELD FITTING, CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924, FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410
350	2"	2	EA	579840	FITTING,COUPLING, METFIT, 2 IN X 0.216 IN THK WALL SDR 11
359	2" 4"	1,770	LF	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007
362 364	4"	1,080 2,040	LF LF	554008 554010	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE, PE3408/PE100, 1200 FT/BUNDLE PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100
369	1/2"	11	EA	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609
371	1"	6	EA	583182	FITTING, CAP, METFIT, 1 IN IPS X 0.119 IN THK WALL SDR 11, ASTM F1924, FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, REPLACED IN 542612
407	- 3"	2	EA	578126	FITTING,CAP, VENTED, INSULATED, SEAL AND RESTRAINT, 3.80 IN OD, FOR 3 IN CI PIPE, REPLACED IN 542551
407 521	17 lb.	1	EA	577776	ANODE, BAG, 17 LB NET, HIGH POTENTIAL MAGNESIUM, W/ 10 FT #10 AWG TW ORANGE LEAD WIRE, PACKED IN CARDBOARD BOX 42 LB TOTAL WEIGHT
737	4 1/4" square	6	EA	577813	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX
738 740	5 1/4" square 8"	4	EA EA	577814 604132	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 4 IN VALVES, PAVEMENT RISER RING IN 583488, BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 8 IN FULL PORT VALVES, PAVEMENT RISER IN 583488. 6/BOX
	ELBOWS MAY BE I				
					ISSUED FOR REVIEW
					A ISSUED FOR REVIEW 12/23/2022 HM// NO. DESCRIPTION DATE DW/CH
	SEALED ON:		DESIGNED IN ACCO 49-PART 192 OF MINIM	RDANCE WITH TITLE	EVERSOR STATUS
			STANDARDS AND G TRANSMISSION AND I SYSTEMS. LA	RDANCE WITH TITLE IUM FEDERAL SAFETY PTC GUIDE FOR GAS DISTRIBUTION PIPING TEST EDITION.	FIELD VERIFY DIMENSIONS NEW BEDFORD, MASSACHUSETTS
	LICENSE EXPIRATION:		Enenaii	neering	PRIOR TO PIPE FABRICATION GENERAL NOTES AND MASTER BOM
					SCALE: NOT TO SCALE SHEET 2 OF DRAWN BY / DATE CHECKED BY / DATE APPROVED BY / DATE SHEET NUMBER RE
	.		ΤΕL. (630) FAX (630)	TT STREET GH, MA 01752) 353-4000) 535-7777 NEERING.COM	LR 12/09/2022 AB 12/23/2022 MA-NEB-PIP-23-013-02
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SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE FABRICATION

LEGEND

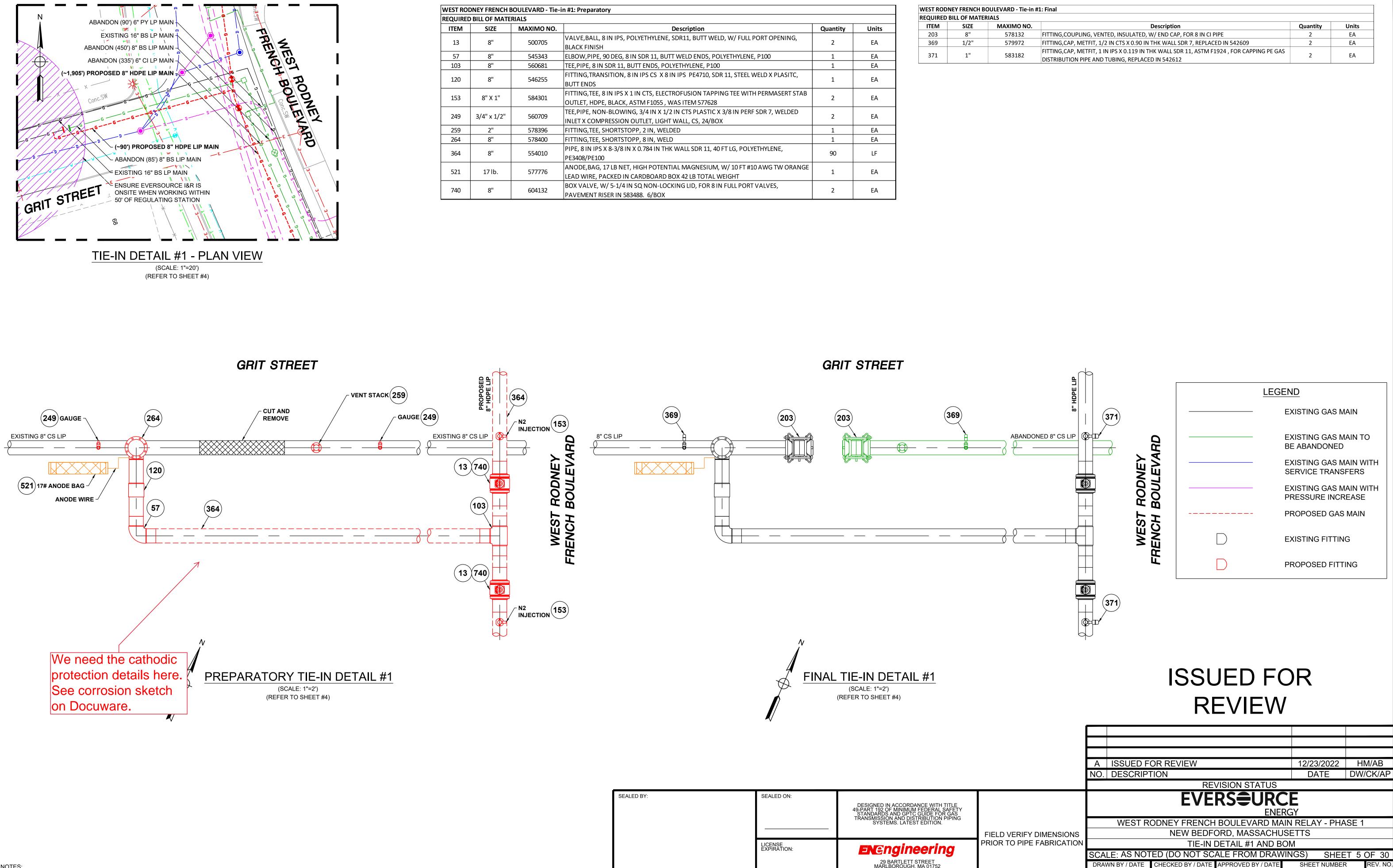
		LEGEND				
G	— G ——— G ———	- G — E	XISTING GAS MAIN			
G	— G ——— G ———		XISTING GAS MAIN TO BE BANDONED			
G	— G ——— G ———	- 6	XISTING GAS MAIN WITH SERVICE RANSFERS			
G	— G ——— G ———	u	XISTING GAS MAIN WITH PRESSURE			
—— G ———	- G — — – G — — –	- G — — PI	ROPOSED GAS MAIN			
		R	EGULATOR STATION 50' BOUNDARY			
		— — R	IGHT OF WAY			
X	X X	۲۴ – Ff	ENCE			
w	— w ——— w ———	- w W	ATER LINE			
	¢¢0	FI	RE HYDRANT			
S	- s s	- s —— SI	EWER LINE			
	۲	SI	EWER MANHOLE			
D	— D ——— D ———	– D —— D	RAIN LINE			
	۲	D	RAIN MANHOLE			
		C	ATCH BASIN			
	\ominus	U	TILITY POLE			
	E	E	LECTRIC MANHOLE			
—— E ——	— E ——— E ———	- E El	LECTRIC LINE			
— T	— T —— T ——	- T TI	ELEPHONE LINE			
	T	TI	ELEPHONE MANHOLE			
	ISSUED FOR REVIEW					
A ISSUED F	OR REVIEW		12/23/2022 HM/AB			
NO. DESCRIPT	TION	EVISION STATUS	DATE DW/CK/AP			
WEST R	ODNEY FRENC	EN	IERGY MAIN RELAY - PHASE 1			
SCALE: NOT TC		LEGEND	SHEET 3 OF 30			
DRAWN BY / DATE	CHECKED BY / DATE	E APPROVED BY / DAT	E SHEET NUMBER REV. NO.			
LR 12/09/2022	AB 12/23/2022		MA-NEB-PIP-23-013-03 A			





KEY MAP

	Α	ISSUED F	OR REVIEW		12/23/2022	HM/AB	
	NO.	DESCRIPT	ΓΙΟΝ		DATE	DW/CK/AP	
			RE	VISION STATUS			
	EVERS URCE						
	ENERGY						
	WEST RODNEY FRENCH BOULEVARD MAIN RELAY - PHASE 1						
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS						
E FABRICATION	LOCATION PLAN #1						
	SCA	LE: 1"=20'			SHEE	T 4 OF 30	
	DRAV	WN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	R REV. NO.	
	LR	12/09/2022	AB 12/23/2022		MA-NEB-PIP-23-0 ⁻	13-04 A	

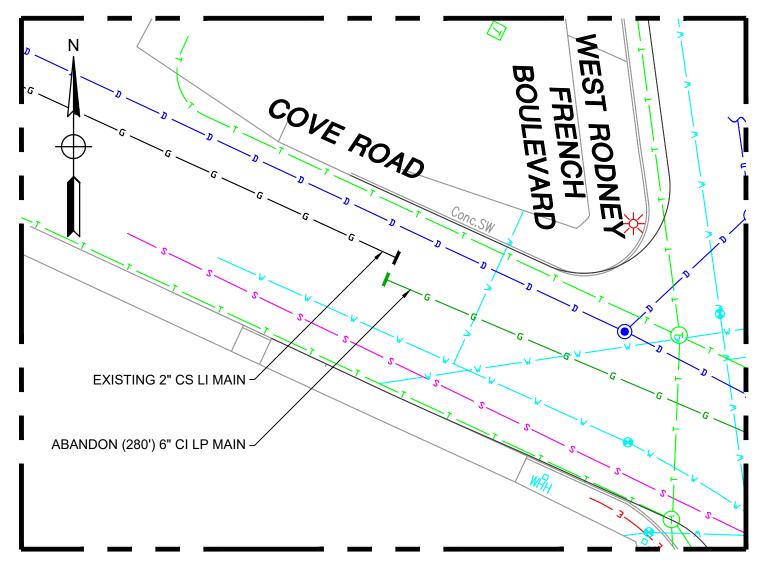


TERIALS			
MAXIMO NO.	Description	Quantity	Units
500705	VALVE,BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING,	2	EA
500705	BLACK FINISH	2	LA
545343	ELBOW, PIPE, 90 DEG, 8 IN SDR 11, BUTT WELD ENDS, POLYETHYLENE, P100	1	EA
560681	TEE, PIPE, 8 IN SDR 11, BUTT ENDS, POLYETHYLENE, P100	1	EA
546255	FITTING, TRANSITION, 8 IN IPS CS X 8 IN IPS PE4710, SDR 11, STEEL WELD X PLASITC,	1	EA
540255	BUTT ENDS	±	LA
584301	FITTING, TEE, 8 IN IPS X 1 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB	2	EA
564501	OUTLET, HDPE, BLACK, ASTM F1055 , WAS ITEM 577628	Z	LA
560709	TEE, PIPE, NON-BLOWING, 3/4 IN X 1/2 IN CTS PLASTIC X 3/8 IN PERF SDR 7, WELDED	2	EA
500709	INLET X COMPRESSION OUTLET, LIGHT WALL, CS, 24/BOX	Z	
578396	FITTING,TEE, SHORTSTOPP, 2 IN, WELDED	1	EA
578400	FITTING,TEE, SHORTSTOPP, 8 IN, WELD	1	EA
554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE,	90	
554010	PE3408/PE100	90	LF
577776	ANODE, BAG, 17 LB NET, HIGH POTENTIAL MAGNESIUM, W/ 10 FT #10 AWG TW ORANGE	1	E A
	LEAD WIRE, PACKED IN CARDBOARD BOX 42 LB TOTAL WEIGHT	±	EA
604132	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 8 IN FULL PORT VALVES,	2	EA
004152	PAVEMENT RISER IN 583488. 6/BOX	2	

WEST RODNEY FRENCH BOULEVARD - Tie-in #						
REQUIRED BILL OF MATERIALS						
ITEM	SIZE	MAXIMO NO.				
203	8"	578132				
369	1/2"	579972				
371	1"	583182				

					SUED FOR REVIEW ESCRIPTION	12/23/2022 DATE	HM/AB DW/CK/AP
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION	REVISION STATUS EVERSEURCE ENERGY WEST RODNEY FRENCH BOULEVARD MAIN RELAY - PHASE 1 NEW BEDFORD, MASSACHUSETTS			
	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM		SCALE: DRAWN B LR 12/0	TIE-IN DETA AS NOTED (DO NOT SCALE BY / DATE CHECKED BY / DATE APPR	AIL #1 AND BOM FROM DRAWINGS) SHEE	

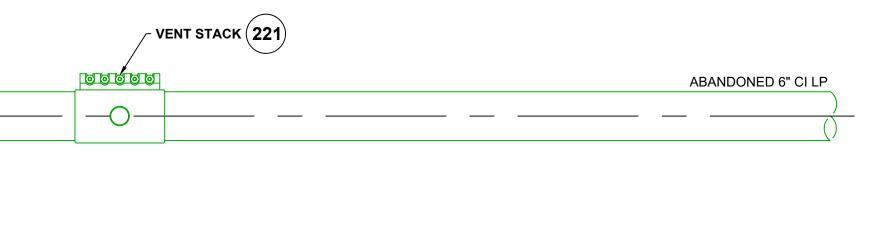
#:	L: Final		
	Description	Quantity	Units
	FITTING,COUPLING, VENTED, INSULATED, W/ END CAP, FOR 8 IN CI PIPE	2	EA
	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	2	EA
	FITTING,CAP, METFIT, 1 IN IPS X 0.119 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, REPLACED IN 542612	2	EA

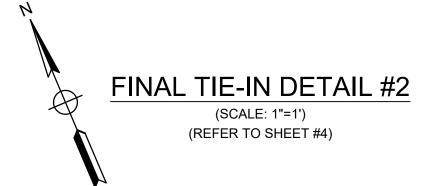


TIE-IN DETAIL #2 - PLAN VIEW (SCALE: 1"=20') (REFER TO SHEET #4)

WEST RODNEY FRENCH BOULEVARD - Tie-in #2: Final								
REQUIRED BILL OF MATERIALS								
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units			
221	6" x 2"	578021	FITTING,CLAMP, SERVI-SEAL REPAIR, 6 IN DIA, 9 IN LG, W/ 2 IN OUTLET, FOR STEEL PIPE	1	EA			

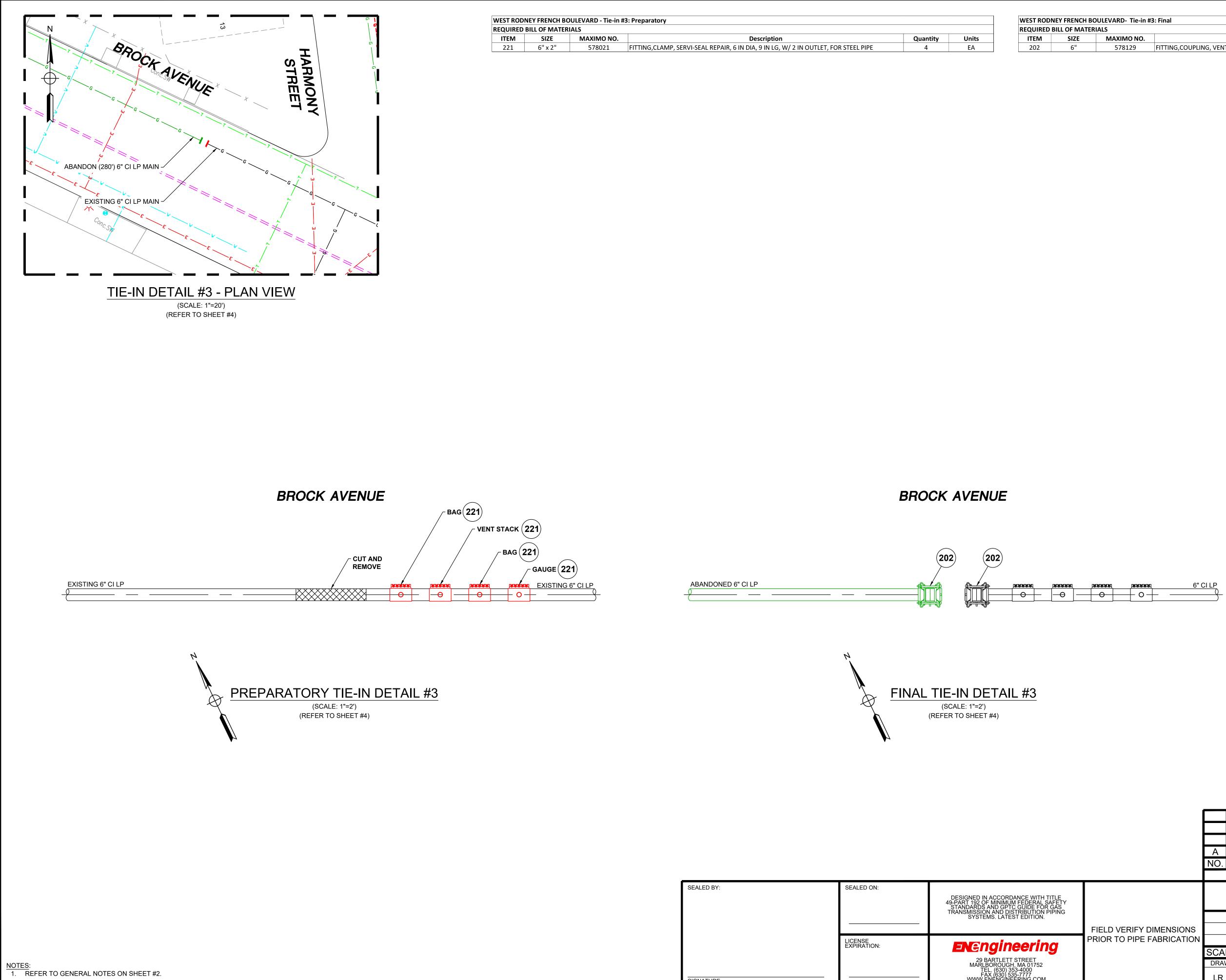
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			A ISSUED FOR REVIEW	12/23/2022 HM/AB
			NO. DESCRIPTION REVISION	DATE DW/CK/AP
SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS		EVERS	
	STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.		WEST RODNEY FRENCH BOUL NEW BEDFORD, M	
LICENSE EXPIRATION:	EN Engineering	PRIOR TO PIPE FABRICATION		
			DRAWN BY / DATE CHECKED BY / DATE APPROV LR 12/09/2022 AB 12/23/2022	/
		DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	License Expiration: License Expiration:	SEALED ON: DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION. NO. DESCRIPTION LICENSE EXPIRATION: DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION. WEST RODNEY FRENCH BOULL WEST RODNEY FRENCH BOULL NEW BEDFORD, M FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION LICENSE EXPIRATION: Image: Comparison of the transmission of t

l	<u>_EGEND</u>
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING

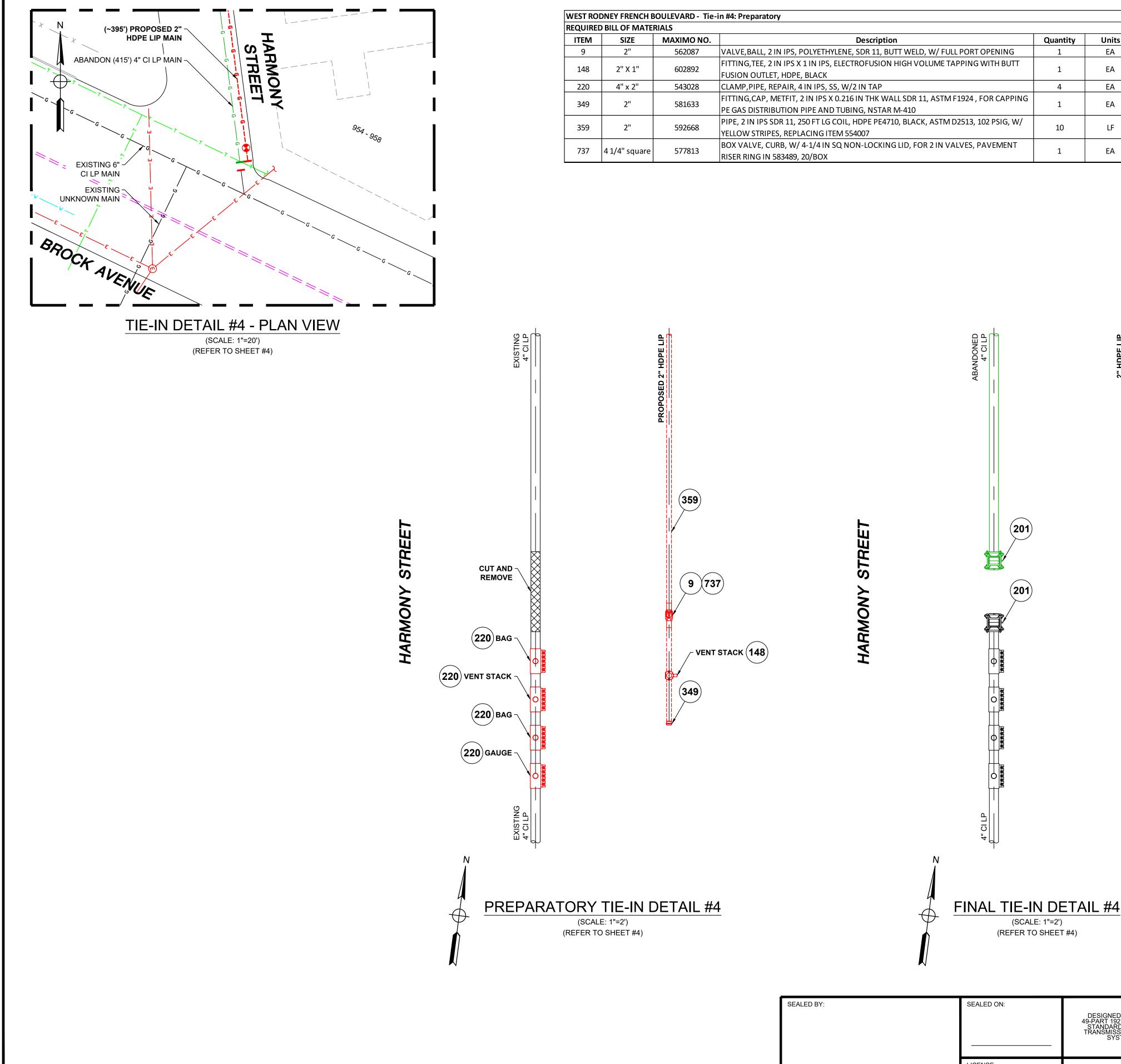


сн вс	DULEVARD - Tie-in #	3: Preparatory			WEST ROD	NEY FRENCH B	OULEVARD- Tie-in	#3: Final		
ATER	IALS				REQUIRED	BILL OF MATE	RIALS			
	MAXIMO NO.	Description	Quantity	Units	ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
	578021	FITTING,CLAMP, SERVI-SEAL REPAIR, 6 IN DIA, 9 IN LG, W/ 2 IN OUTLET, FOR STEEL PIPE	4	EA	202	6"	578129	FITTING,COUPLING, VENTED, INSULATED, W/ END CAP, FOR 6 CI PIPE	2	EA

				A ISSUED F	FOR REVIEW	12/23/2022	HM/AB
				NO. DESCRIP		DATE	DW/CK/AP
					REVISION S	TATUS	
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.			EVERS		
		TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.		WEST F	RODNEY FRENCH BOULEV		SE 1
			FIELD VERIFY DIMENSIONS		NEW BEDFORD, MA		
	LICENSE EXPIRATION:	EN Engineering	PRIOR TO PIPE FABRICATION		TIE-IN DETAIL #	3 AND BOM	
				SCALE: AS NO	TED (DO NOT SCALE FRO	M DRAWINGS) SHEE	T 7 OF 30
		29 BARTLETT STREET MARLBOROUGH, MA 01752		DRAWN BY / DATE	CHECKED BY / DATE APPROVED	BY / DATE SHEET NUMBER	R REV. NO
SIGNATURE		29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM		LR 12/09/2022	AB 12/23/2022	MA-NEB-PIP-23-07	13-07 A

L	EGEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING

ISSUED	FOR
REVIE	W



/IATEF	RIALS			
	MAXIMO NO.	Description	Quantity	Units
	562087	VALVE, BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
	602892	FITTING, TEE, 2 IN IPS X 1 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT	1	EA
	002052	FUSION OUTLET, HDPE, BLACK	-	
н	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	4	EA
	581633	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING	1	EA
	201022	PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	T	СA
	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/	10	
	292000	YELLOW STRIPES, REPLACING ITEM 554007	10	LF
laro	577813	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT	1	E ۸
lare	5//615	RISER RING IN 583489, 20/BOX	±	EA

WEST ROD	NEY FRENCH BO	ULEVARD - Tie-in #
REQUIRED	BILL OF MATER	ALS
ITEM	SIZE	MAXIMO NO.
201	4"	578128
371	1"	583182

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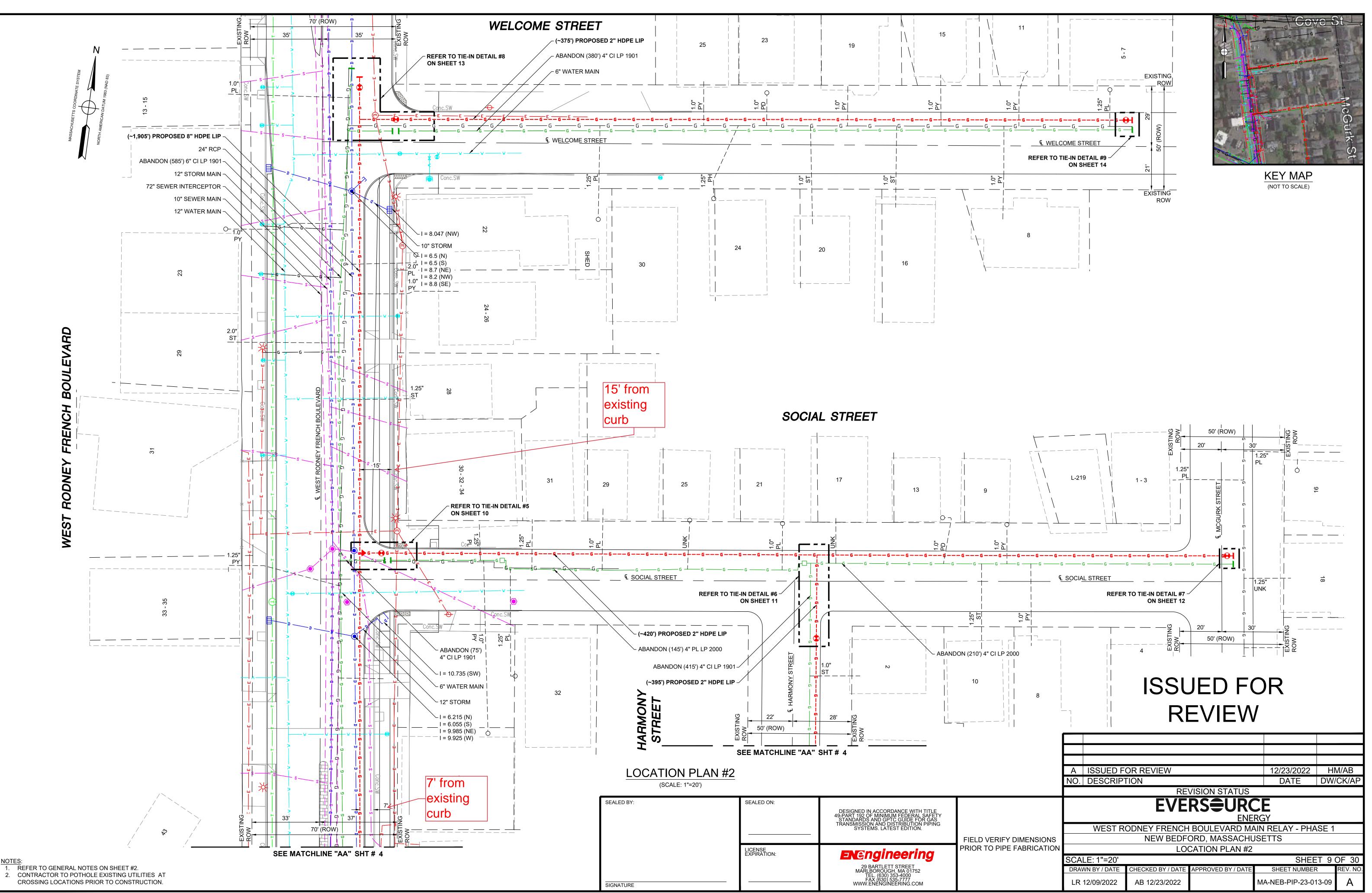
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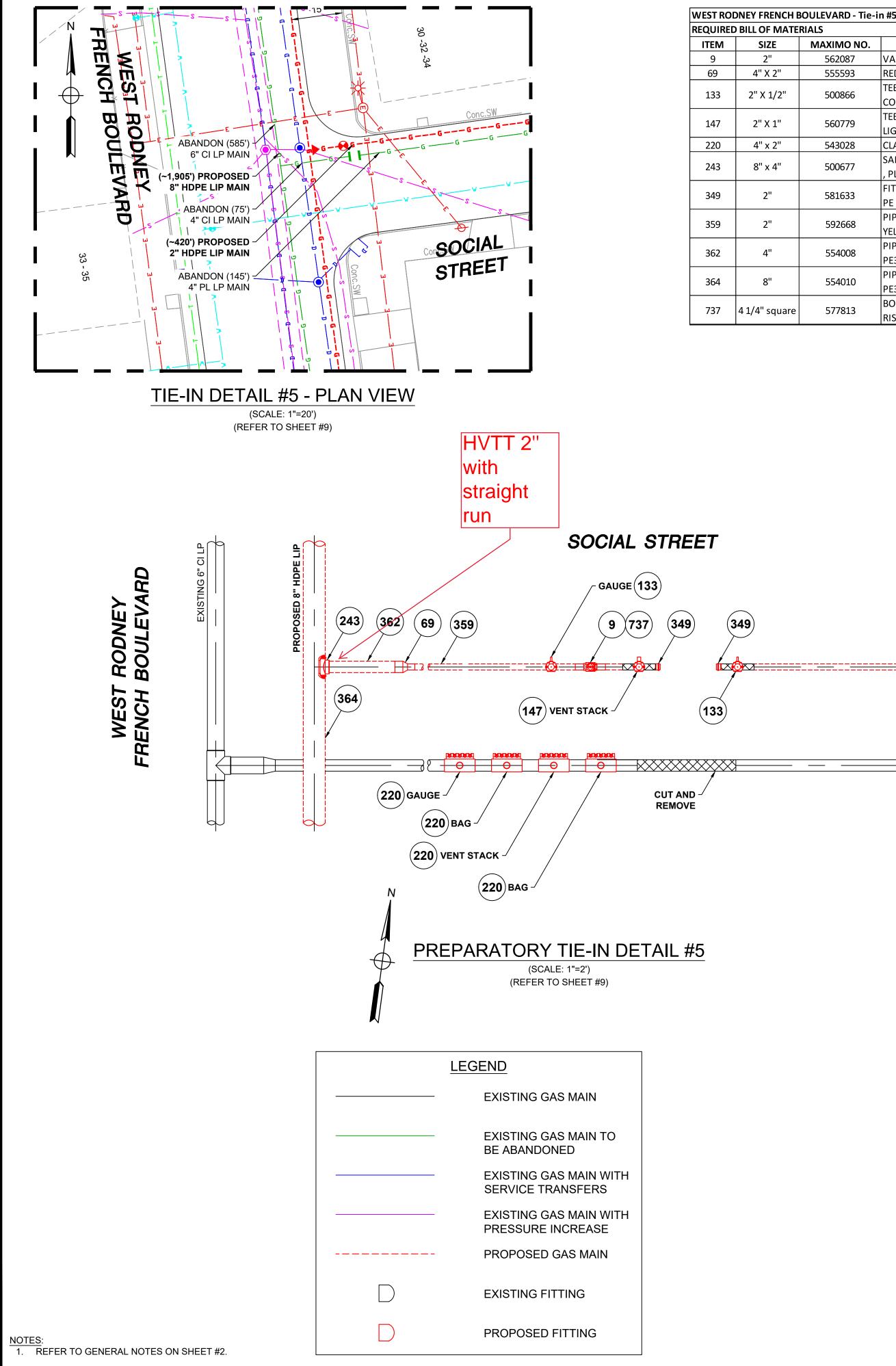
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\Rightarrow	FINAL TIE-IN DI (SCALE: 1"=2' (REFER TO SHEE)						
				A ISSUED F	OR REVIEW		12/23/2022	IM/AB
				NO. DESCRIP	TION		DATE DV	V/CK/AP
						VISION STATUS		
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.			EVE		-	
		SYSTEMS. LATEST EDITION.		WEST R	ODNEY FRENCH	BOULEVARD MA	AIN RELAY - PHASE	1
			FIELD VERIFY DIMENSIONS		NEW BEDF	ORD, MASSACHL	JSETTS	
	LICENSE EXPIRATION:	EN Engineering	PRIOR TO PIPE FABRICATION			DETAIL #4 AND B		
		-		SCALE: AS NOT	ED (DO NOT SC	ALE FROM DRAV	VINGS) SHEET 8	OF 30
		29 BARTLETT STREET MARLBOROUGH, MA 01752 MARLEL (2000)		DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
SIGNATURE		29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM		LR 12/09/2022	AB 12/23/2022		MA-NEB-PIP-23-013-08	³ A

# 4	: Final		
	Description	Quantity	Units
	FITTING,COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP , FOR CAST IRON PIPE	2	EA
	FITTING,CAP, METFIT, 1 IN IPS X 0.119 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, REPLACED IN 542612	1	EA

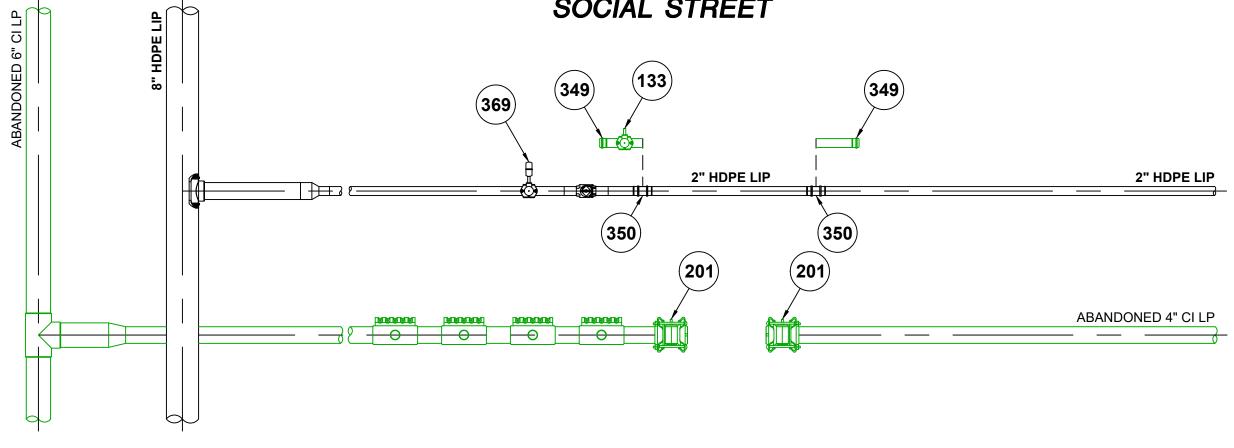
	LEGEND
·	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING

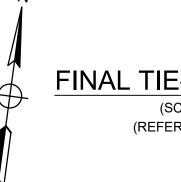




IAIE	RIALS			
	MAXIMO NO.	Description	Quantity	Units
	562087	VALVE,BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
	555593	REDUCER, PIPE, 4 X 2 IPS, BUTT ENDS, POLYETHYLENE, P100, SDR11	1	EA
2"	500866	TEE,PIPE, NON-BLOWING, 2 X 1/2 IN CTS X 0.090 IN THK WALL SDR 7, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100	2	EA
	560779	TEE, PIPE, NON-BLOWING, 2 X 1 IN IPS SDR 11, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100	1	EA
	543028	CLAMP, PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	4	EA
	500677	SADDLE,PIPE, TEE, BRANCH, 8 IN IPS SADDLE X 4 IN IPS OUTLET SDR 11, ELECTROFUSION , PLASTIC, P100	1	EA
	581633	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	2	EA
	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	15	LF
	554008	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE, PE3408/PE100, 1200 FT/BUNDLE	5	LF
	554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100	10	LF
are	577813	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX	1	EA

REQUIRED BILL OF MATERIALS									
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units				
133	2" X 1/2"	500866	TEE, PIPE, NON-BLOWING, 2 X 1/2 IN CTS X 0.090 IN THK WALL SDR 7, ELECTROFUSION X	1	EA				
	2 \ 1/2	2 / 1/2	COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100	Ŧ					
201	4"	578128	FITTING,COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP , FOR CAST IRON PIPE	2	EA				
349	2"	2"	2"	581633	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS	C	ГЛ		
349				Z	Ζ	Z	2	2 58163	201022
350	2"	579840	FITTING,COUPLING, METFIT, 2 IN X 0.216 IN THK WALL SDR 11	2	EA				
369	1/2"	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	2	EA				





SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY I PRIOR TO PIPE
SIGNATURE	EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	

RODNEY BOULEVARD WEST FRENCH I

PROPOSED 2" HDPE LIP _____

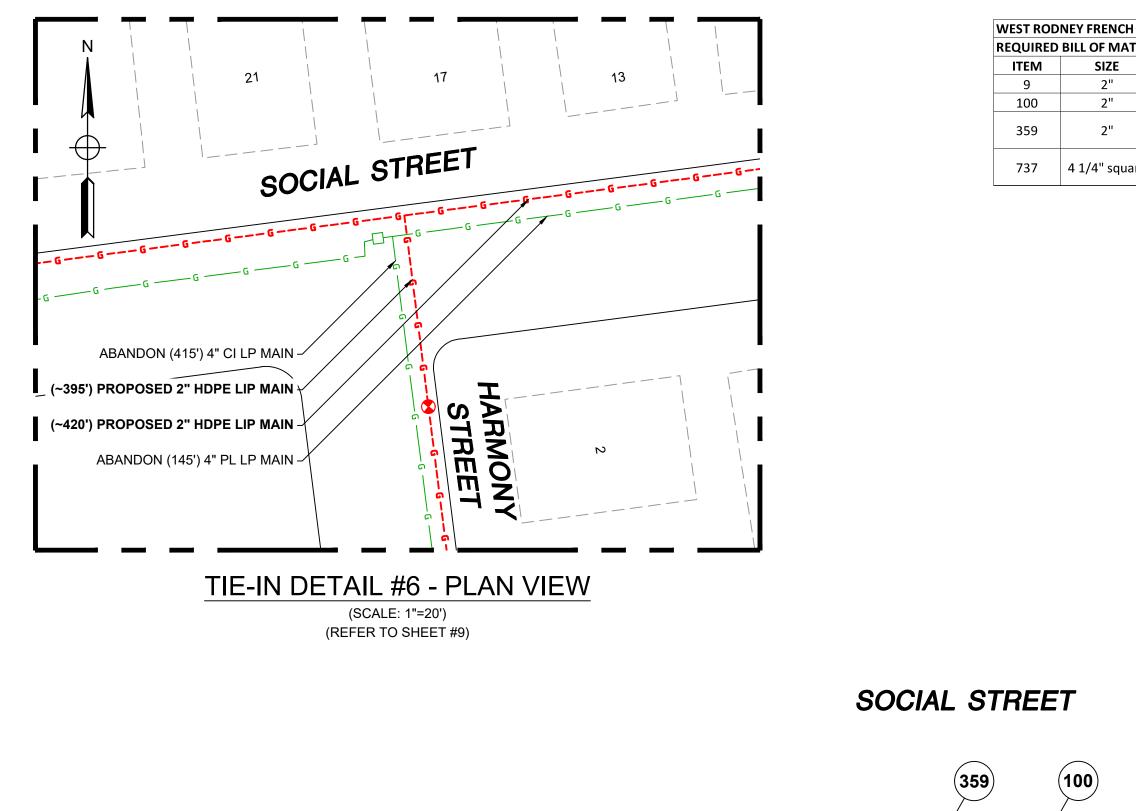
> EXISTING 4" CI LP _____

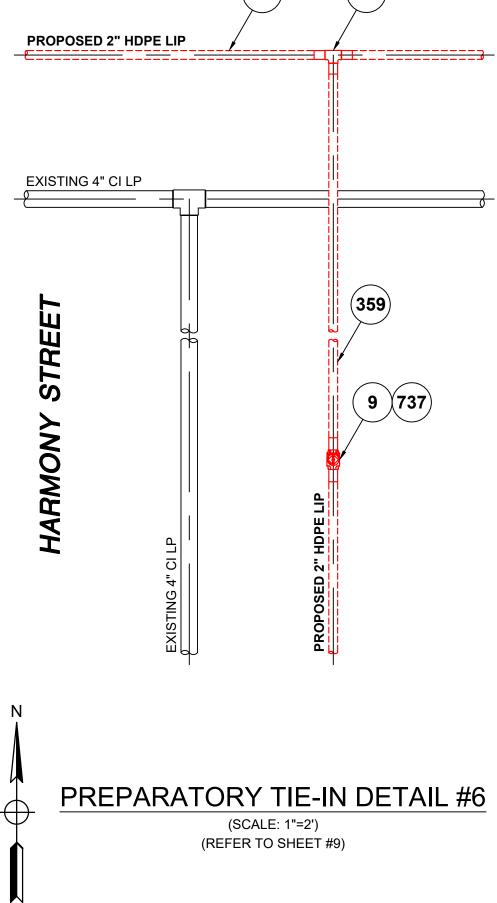
SOCIAL STREET

FINAL TIE-IN DETAIL #5

(SCALE: 1"=2') (REFER TO SHEET #9)

	A ISSUE	D FOR REVIEW		12/23/2022	HM/AB		
	NO. DESC	RIPTION		DATE	DW/CK/AP		
		RE	VISION STATUS				
	EVERS © URCE						
			ENE				
	WEST RODNEY FRENCH BOULEVARD MAIN RELAY - PHASE 1						
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS						
FABRICATION	TIE-IN DETAIL #5 AND BOM						
	SCALE: AS	NOTED (DO NOT SC	CALE FROM DRAV	VINGS) SHEE	T 10 OF 30		
	DRAWN BY / DA	TE CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	R REV. NO.		
	LR 12/09/202	AB 12/23/2022		MA-NEB-PIP-23-0 ⁴	13-10 A		





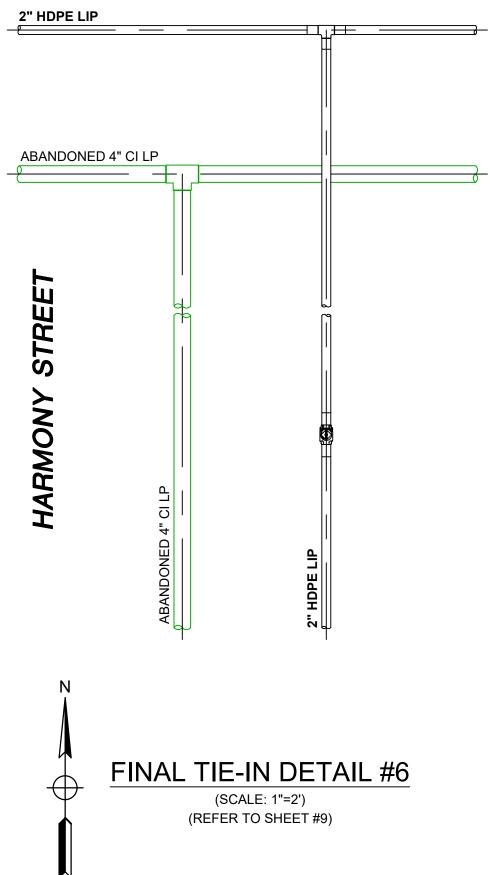
SIZE

2"

2"

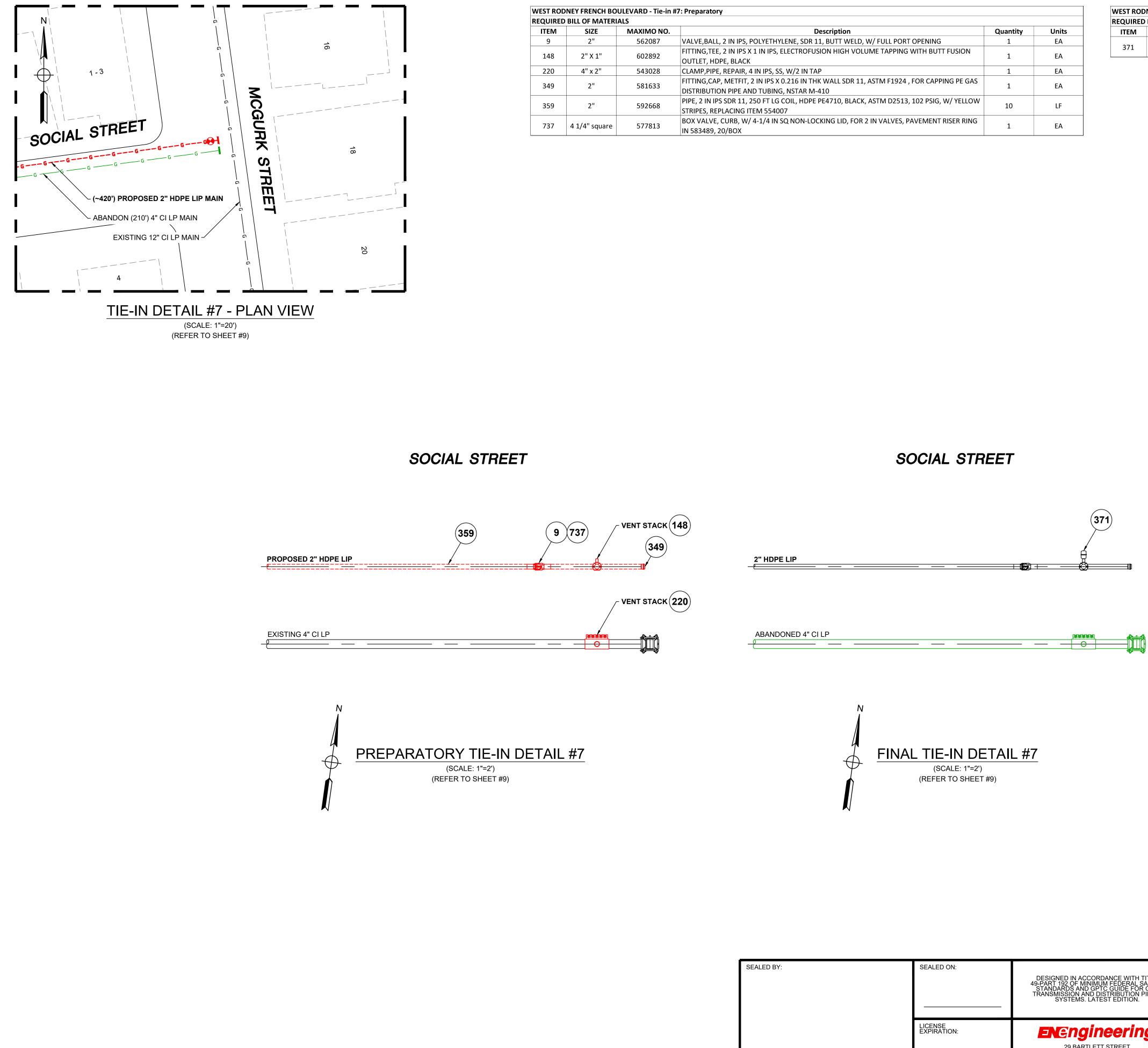
ATERIALS				
	MAXIMO NO.	Description	Quantity	Units
	562087	VALVE, BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
	560705	TEE, PIPE, 2 IN IPS SDR 11, BUTT ENDS, POLYETHYLENE, P100	1	EA
	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	15	LF
uare	577813	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX	1	EA

SOCIAL STREET



	(REFER TO SHEET #9)					
				A ISSUED FOR REVIEW	12/23/2022	HM/AB
				NO. DESCRIPTION	DATE	DW/CK/AP
					REVISION STATUS	
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.		EV		
		SYSTEMS. LATEST EDITION.			NCH BOULEVARD MAIN RELAY - PH	ASE 1
			FIELD VERIFY DIMENSIONS		EDFORD, MASSACHUSETTS	
	LICENSE EXPIRATION:	EN Engineering	PRIOR TO PIPE FABRICATION		-IN DETAIL #6 AND BOM	
				SCALE: AS NOTED (DO NOT	SCALE FROM DRAWINGS) SHE	ET 110F 30
		29 BARTLETT STREET MARLBOROUGH, MA 01752		DRAWN BY / DATE CHECKED BY / D	DATE APPROVED BY / DATE SHEET NUMBE	R REV. NO.
SIGNATURE		29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-777 WWW.ENENGINEERING.COM		LR 12/09/2022 AB 12/23/202	22 MA-NEB-PIP-23-0	013-11 A

LE	GEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING



NOTES: 1. REFER TO GENERAL NOTES ON SHEET #2.

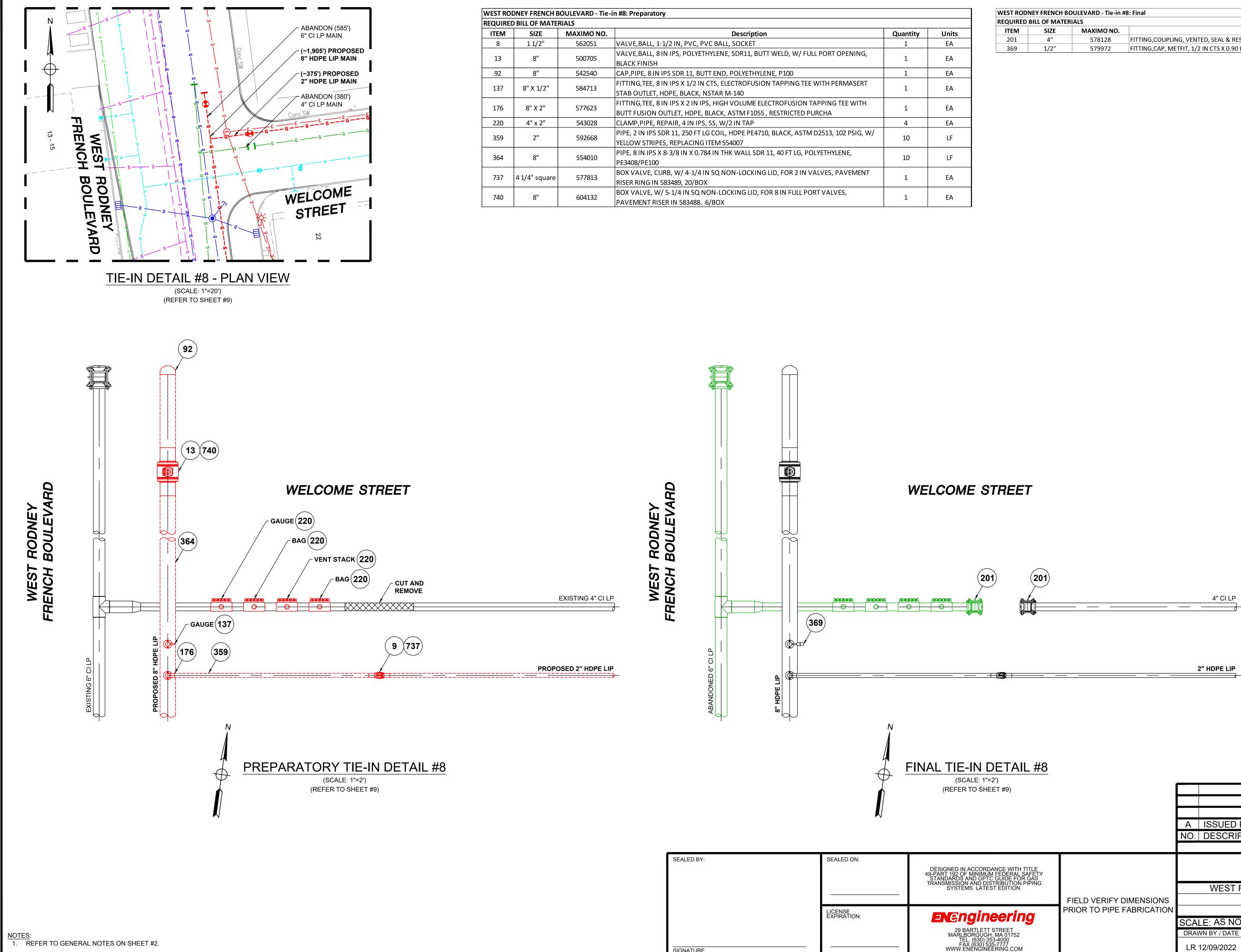
1ATERI	ALS			
Ξ	MAXIMO NO.	Description	Quantity	Units
	562087	VALVE, BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
1"	602892	FITTING, TEE, 2 IN IPS X 1 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK	1	EA
2"	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	1	EA
	581633	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	1	EA
	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	10	LF
quare	577813	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX	1	EA

WEST RODNEY FRENCH BOULEVARD - Tie-in #					
REQUIRED	REQUIRED BILL OF MATERIALS				
ITEM	SIZE	MAXIMO NO.			
371	1"	583182			

				A ISSUED F NO. DESCRIP	OR REVIEW TION REVISION ST	12/23/2022 DATE ATUS	HM/AB DW/CK/AP
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS	WEST R	EVERSEU RODNEY FRENCH BOULEVA NEW BEDFORD, MAS	JRCE ENERGY ARD MAIN RELAY - PHA	ASE 1
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE FABRICATION		TIE-IN DETAIL #7 TED (DO NOT SCALE FROM CHECKED BY / DATE APPROVED B AB 12/23/2022	AND BOM 1 DRAWINGS) SHEE	

#7	': Final		
	Description	Quantity	Units
	FITTING,CAP, METFIT, 1 IN IPS X 0.119 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS	1	ГА
	DISTRIBUTION PIPE AND TUBING, REPLACED IN 542612	1	EA

LE	GEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING



ATERIALS			
MAXIMO NO.	Description	Quantity	Units
562051	VALVE, BALL, 1-1/2 IN, PVC, PVC BALL, SOCKET	1	EA
500705	VALVE,BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH	1	EA
542540	CAP, PIPE, 8 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	1	EA
584713	FITTING,TEE, 8 IN IPS X 1/2 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB OUTLET, HDPE, BLACK, NSTAR M-140	1	EA
577623	FITTING,TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055 , RESTRICTED PURCHA	1	EA
543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	4	EA
592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	10	LF
554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100	10	LF
ire 577813	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX	1	EA
604132	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 8 IN FULL PORT VALVES, PAVEMENT RISER IN 583488. 6/BOX	1	EA

WEST ROD	NEY FRENCH BC	ULEVARD - Tie-in #			
REQUIRED	REQUIRED BILL OF MATERIALS				
ITEM	SIZE	MAXIMO NO.			
201	4"	578128			
369	1/2"	579972			

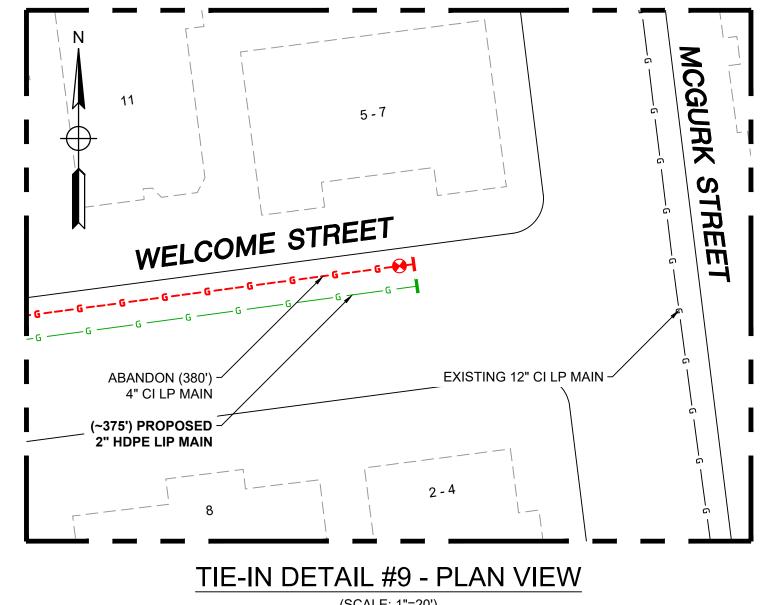
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY D
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE F

8: Final		
Description	Quantity	Units
FITTING,COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP , FOR CAST IRON PIPE	2	EA
FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	1	EA

	LEGEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING

2" HDPE LIP

	Α	ISSUED F	OR REVIEW		12/23/2022	H	M/AB
	NO.	DESCRIPT	ION		DATE	DW/	/CK/AP
			RE	VISION STATUS			
	EVERS URCE						
	ENERGY						
	WEST RODNEY FRENCH BOULEVARD MAIN RELAY - PHASE 1						
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS						
-ABRICATION			TIE-IN I	DETAIL #8 AND B	OM		
	SCA	LE: AS NOT	ED (DO NOT SC	ALE FROM DRAW	/INGS) SHEE	T 13	OF 30
	DRAV	WN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	२	REV. NO.
	LR	12/09/2022	AB 12/23/2022		MA-NEB-PIP-23-0 ²	13-13	Α



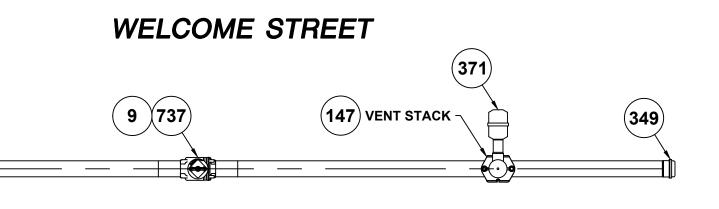
(SCALE: 1"=20') (REFER TO SHEET #9)

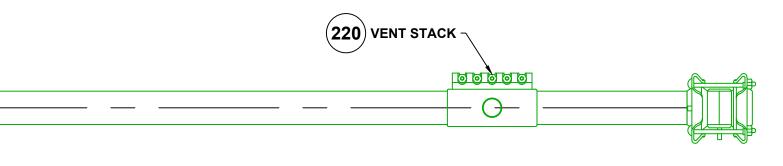


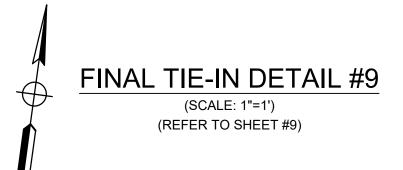
ABANDONED 4" CI LP

NOTES: 1. REFER TO GENERAL NOTES ON SHEET #2.

WEST RO	DNEY FRENCH	BOULEVARD - Tie-ii
REQUIRE	D BILL OF MATE	RIALS
ITEM	SIZE	MAXIMO NO.
9	2"	562087
147	2" X 1"	560779
220	4" x 2"	543028
349	2"	581633
359	2"	592668
371	1"	583182
737	4 1/4" square	577813



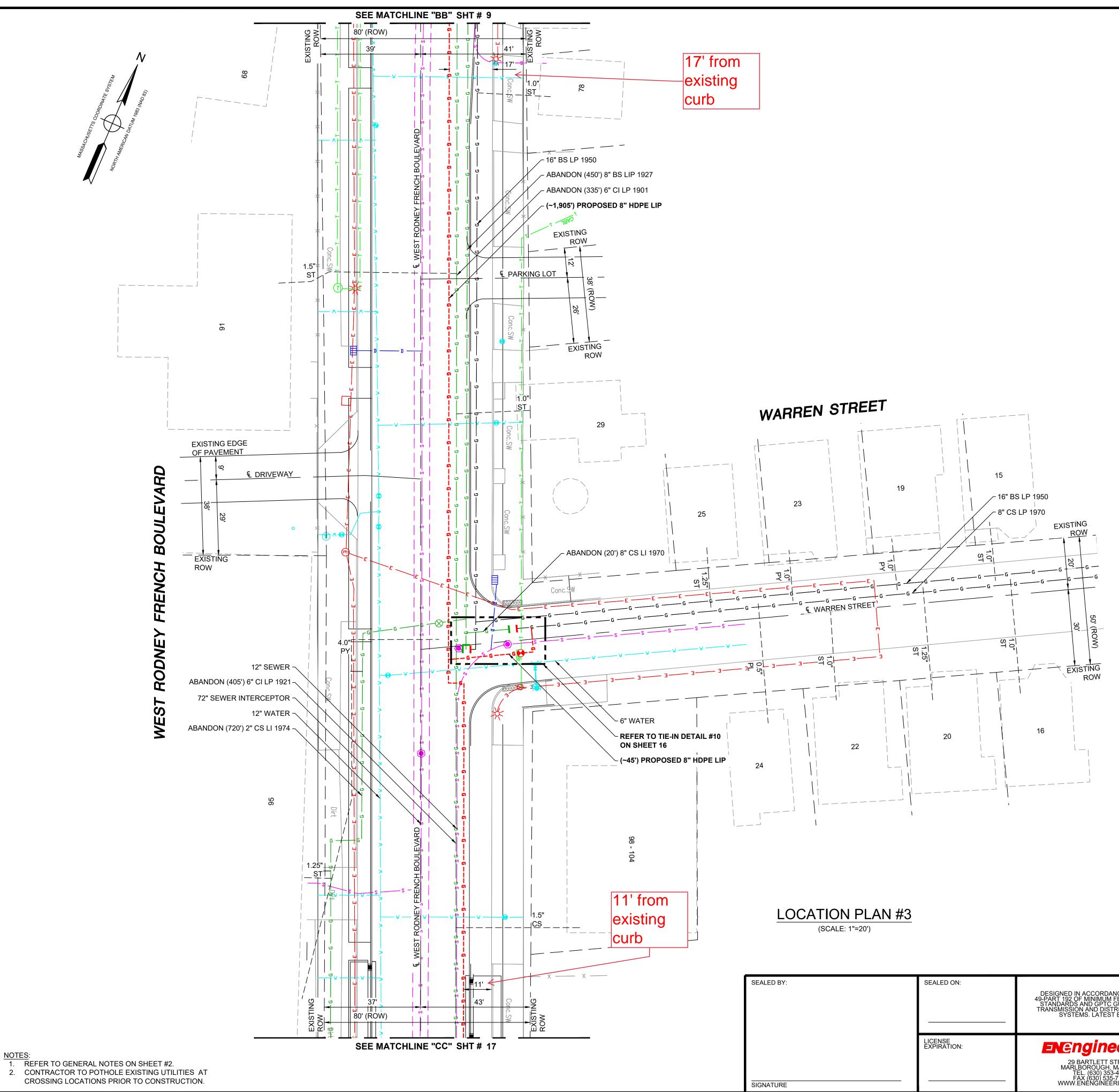




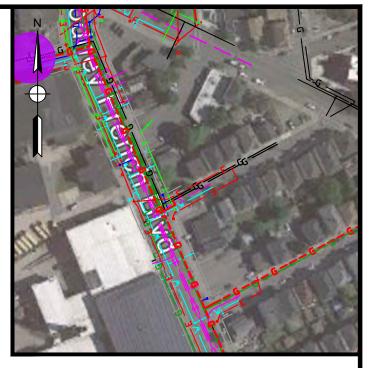
				A ISSUED FO NO. DESCRIPT		12/23/2022 DATE	HM/AB DW/CK/AP
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS	WEST RC	EVERS	EVARD MAIN RELAY - PHA	ASE 1
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE FABRICATION	SCALE: AS NOT	TIE-IN DETAIL ED (DO NOT SCALE FR CHECKED BY / DATE APPROV AB 12/23/2022	_ #9 AND BOM ROM DRAWINGS) SHEE	

-ir	n #9: Final		
	Description	Quantity	Units
	VALVE, BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
	TEE, PIPE, NON-BLOWING, 2 X 1 IN IPS SDR 11, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100	1	EA
	CLAMP, PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	1	EA
	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	1	EA
	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	10	LF
	FITTING,CAP, METFIT, 1 IN IPS X 0.119 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, REPLACED IN 542612	1	EA
	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX	1	EA

	LEGEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING

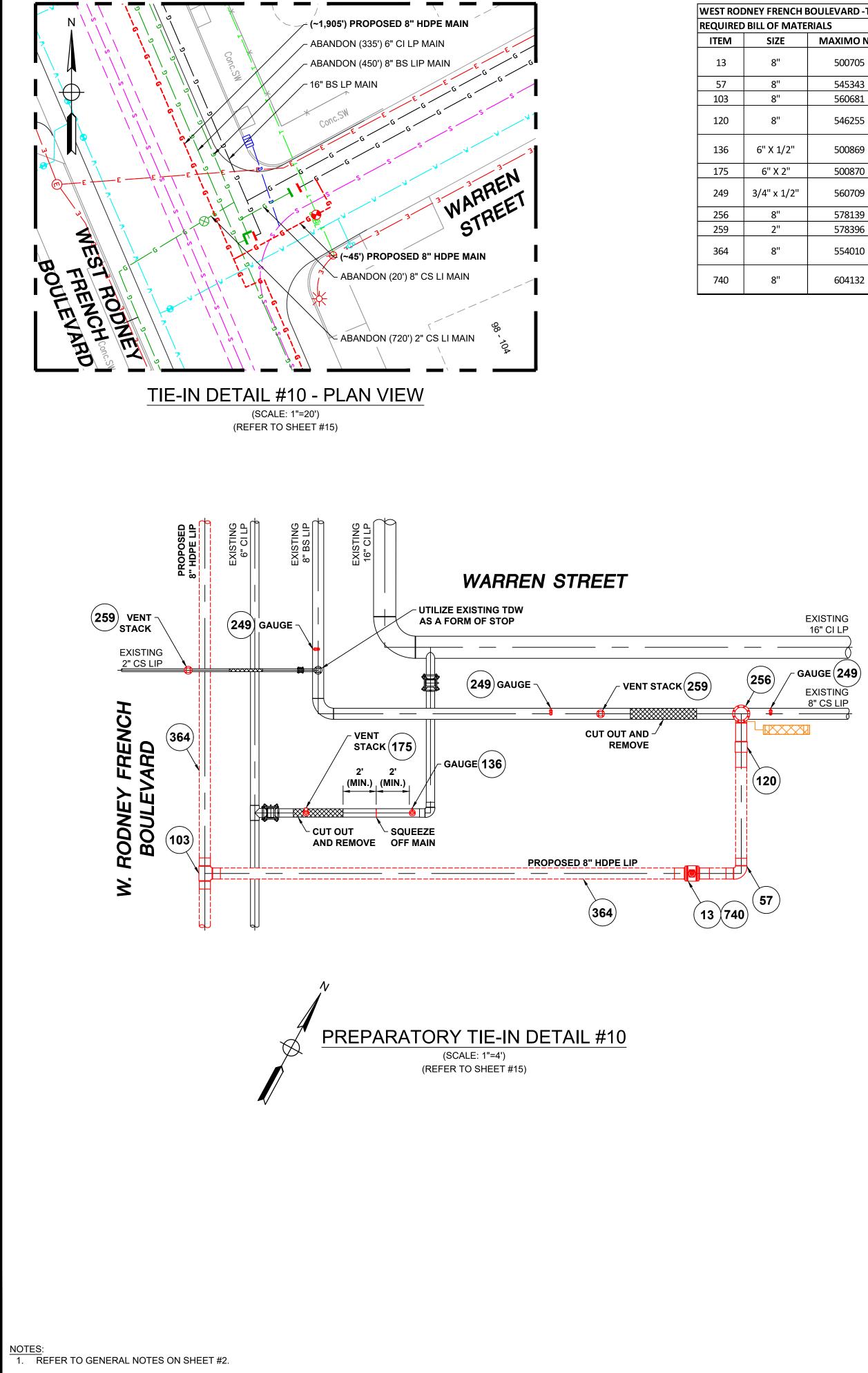


SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY I
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-777 WWW.ENENGINEERING.COM	PRIOR TO PIPE



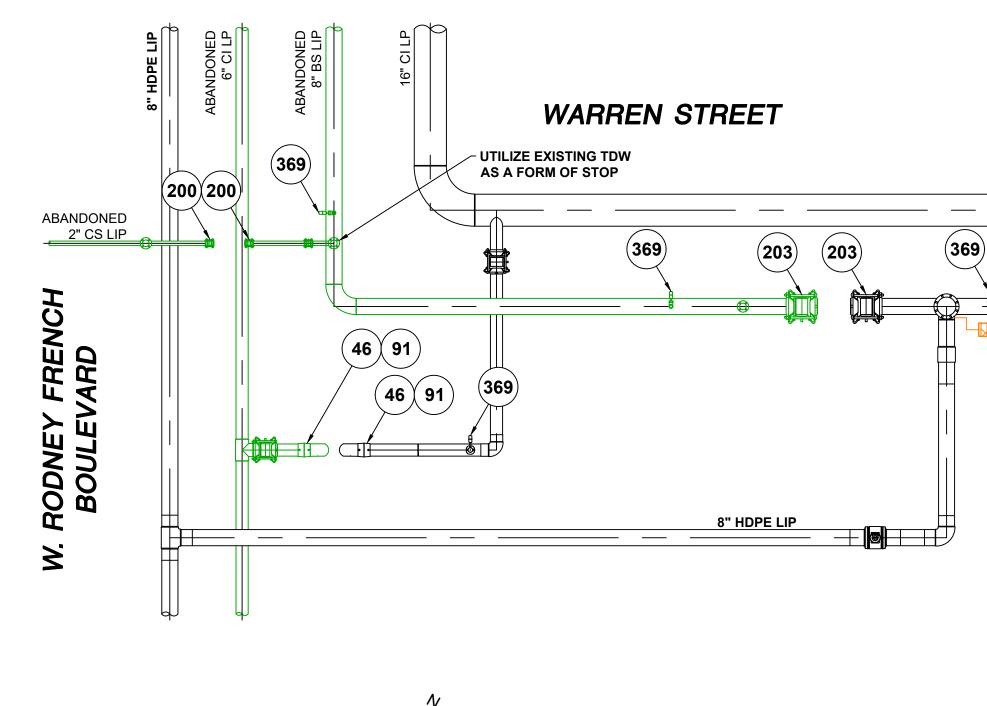
KEY MAP

	Α	ISSUED F	OR REVIEW		12/23/2022	H	M/AB
	NO.	DESCRIPT	ΓΙΟΝ		DATE	DW/	CK/AP
			RE	VISION STATUS			
	EVERS © URCE						
	ENERGY						
	WEST RODNEY FRENCH BOULEVARD MAIN RELAY - PHASE 1						
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS						
E FABRICATION	LOCATION PLAN #3						
	SCA	LE: 1"=20'			SHEE	ET 150	OF 30
	DRAV	VN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	२	REV. NO.
	LR	12/09/2022	AB 12/23/2022		MA-NEB-PIP-23-07	13-15	А



ATE	RIALS			
	MAXIMO NO.	Description	Quantity	Units
	500705	VALVE,BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH	1	EA
	545343	ELBOW, PIPE, 90 DEG, 8 IN SDR 11, BUTT WELD ENDS, POLYETHYLENE, P100	1	EA
	560681	TEE, PIPE, 8 IN SDR 11, BUTT ENDS, POLYETHYLENE, P100	1	EA
	546255	FITTING,TRANSITION, 8 IN IPS CS X 8 IN IPS PE4710, SDR 11, STEEL WELD X PLASITC, BUTT ENDS	1	EA
11	500869	TEE, PIPE, NON-BLOWING, 6 X 1/2 IN CTS X 0.090 IN THK WALL SDR 7, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100	1	EA
	500870	TEE, PIPE, 6 X 2 IN IPS , ELECTROFUSION, PLASTIC, P100, W/ 1.8 IN PERF, 5/BOX	1	EA
	560709	TEE, PIPE, NON-BLOWING, 3/4 IN X 1/2 IN CTS PLASTIC X 3/8 IN PERF SDR 7, WELDED INLET X COMPRESSION OUTLET, LIGHT WALL, CS, 24/BOX	3	EA
	578139	FITTING,TEE, SHORTSTOPP, 3-WAY, 8 IN	1	EA
	578396	FITTING,TEE, SHORTSTOPP, 2 IN, WELDED	2	EA
	554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100	20	LF
	604132	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 8 IN FULL PORT VALVES, PAVEMENT RISER IN 583488. 6/BOX	1	EA

WEST RODNEY FRENCH BOULEVARD -Tie-in #						
REQUIRED BILL OF MATERIALS						
ITEM	SIZE	MAXIMO NO.				
46	6"	500856				
91	6"	542539				
200	2"	578182				
203	8"	578132				
369	1/2"	579972				

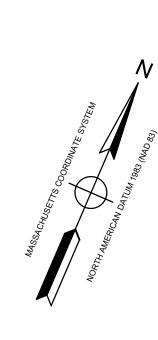




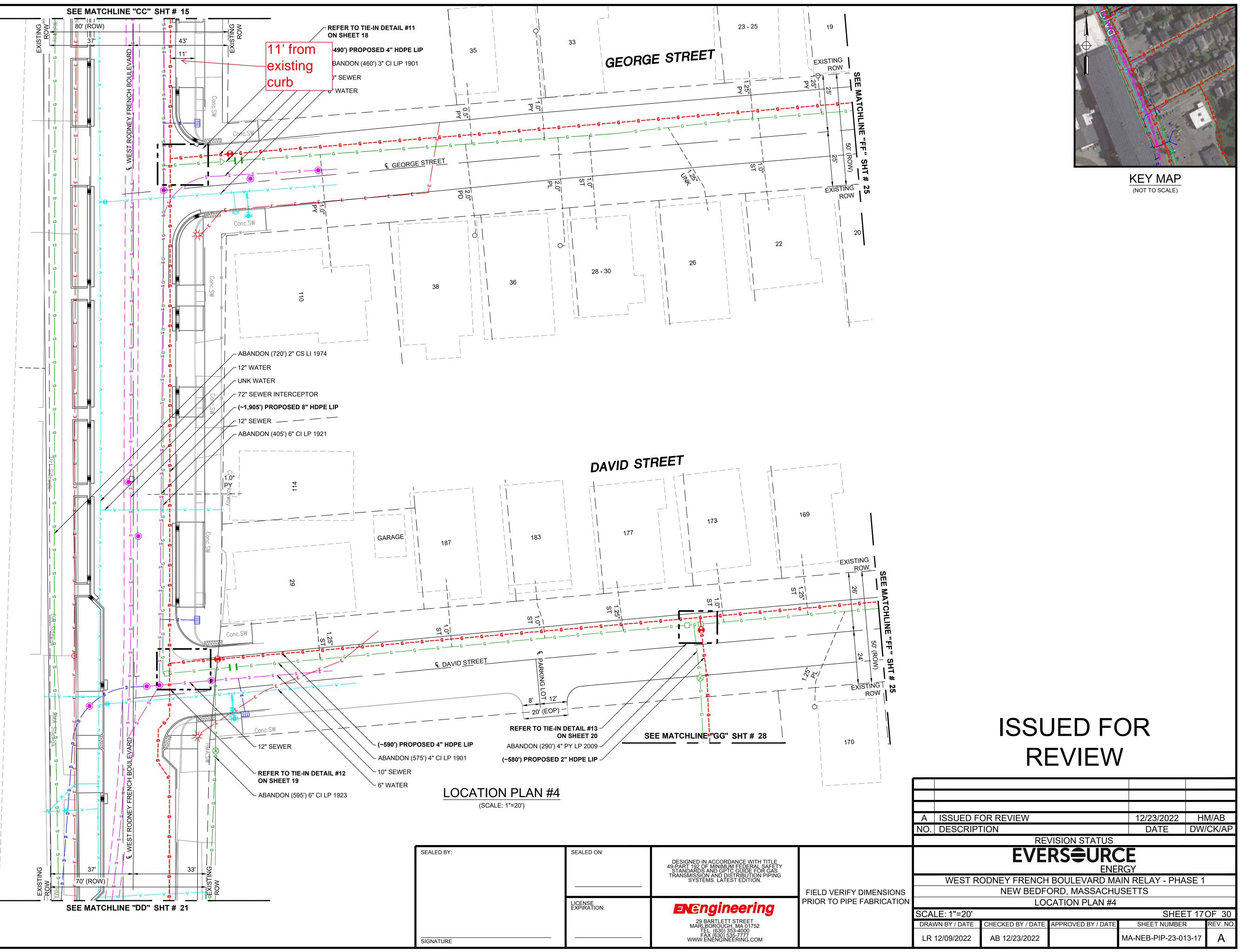
				A ISSUED	FOR REVIEW		12/23/2022	HM/AB
				NO. DESCRIF	PTION		DATE DW	V/CK/AP
					RE	VISION STATUS		
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	DESIGNED IN ACCORDANCE WITH TITLE 9-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS				_	
		TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	WEST F	RODNEY FRENCH	BOULEVARD MA	AIN RELAY - PHASE	1	
			FIELD VERIFY DIMENSIONS		NEW BEDF	ORD, MASSACHL	JSETTS	
			PRIOR TO PIPE FABRICATION		TIE-IN D	DETAIL #10 AND E	BOM	
	EXPIRATION.	EN Engineering		SCALE: AS NC	TED (DO NOT SC	ALE FROM DRAV	VINGS) SHEET 16	3OF 30
		29 BARTLETT STREET MARLBOROUGH, MA 01752		DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
SIGNATURE		29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM		LR 12/09/2022	AB 12/23/2022		MA-NEB-PIP-23-013-16	B A

#10: Final						
	Description	Quantity	Units			
	COUPLING, PIPE, 6 IN IPS, ELECTROFUSION, PLASTIC, P100	2	EA			
	CAP,PIPE, 6 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	2	EA			
	FITTING,COUPLING, VENTED, INSULATED, 2 IN, W/ END CAP, FOR STEEL PIPE, EZB2VIUMG	2	EA			
	FITTING,COUPLING, VENTED, INSULATED, W/ END CAP, FOR 8 IN CI PIPE	2	EA			
	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	4	EA			

	LEGEND
16" CI LP	 EXISTING GAS MAIN
8" CS LIP	 EXISTING GAS MAIN TO BE ABANDONED
	 EXISTING GAS MAIN WITH SERVICE TRANSFERS
	 EXISTING GAS MAIN WITH PRESSURE INCREASE
	 PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING



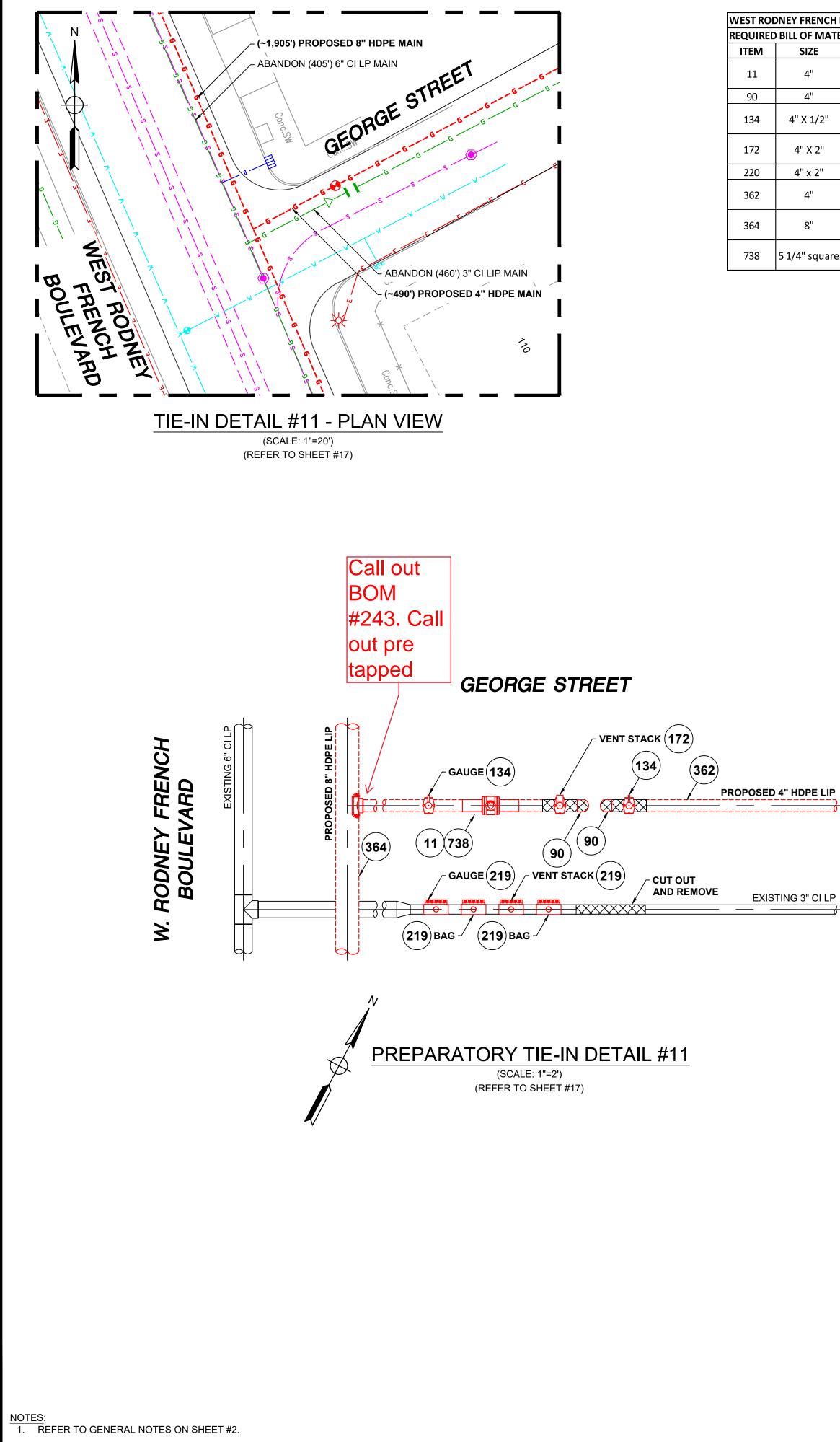




NOTES REFER TO GENERAL NOTES ON SHEET #2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT 2. CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

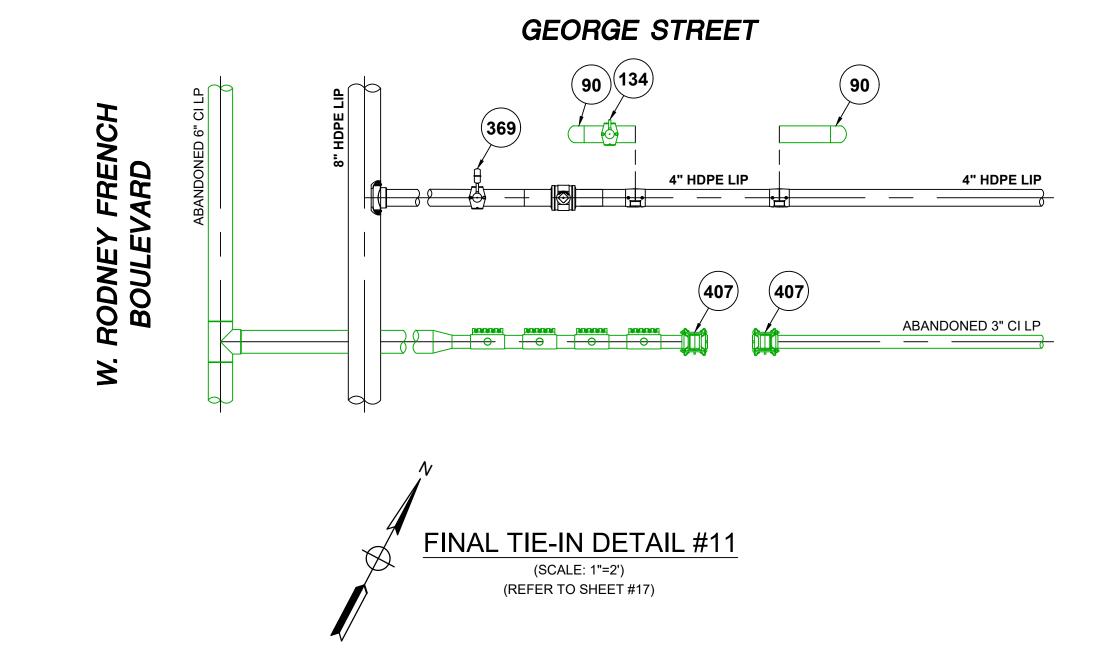
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY [
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE I





ATEF	RIALS			
	MAXIMO NO.	Description	Quantity	Units
	501002	VALVE, BALL, 4 IN, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING, TO BE	1	EA
		USED W/ BRAND SADDLE INST, P100		
	542538	CAP,PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	2	EA
	500867	TEE,PIPE, NON-BLOWING, 4 X 1/2 IN CTS X 0.090 IN THK WALL SDR 7, ELECTROFUSION X	2	EA
	500007	COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100, 1	2	LA
	584304	FITTING, TEE, 4 IN IPS X 2 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT	1	EA
	304304	FUSION OUTLET, HDPE, BLACK, WAS ITEM 577621		
	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	4	EA
	554008	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE,	10	١F
	554000	PE3408/PE100, 1200 FT/BUNDLE	10	LI
	554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE,	5	١F
	554010	PE3408/PE100	J	
	577814	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 4 IN VALVES, PAVEMENT RISER	1	E۸
are	577614	RING IN 583488,	1	EA

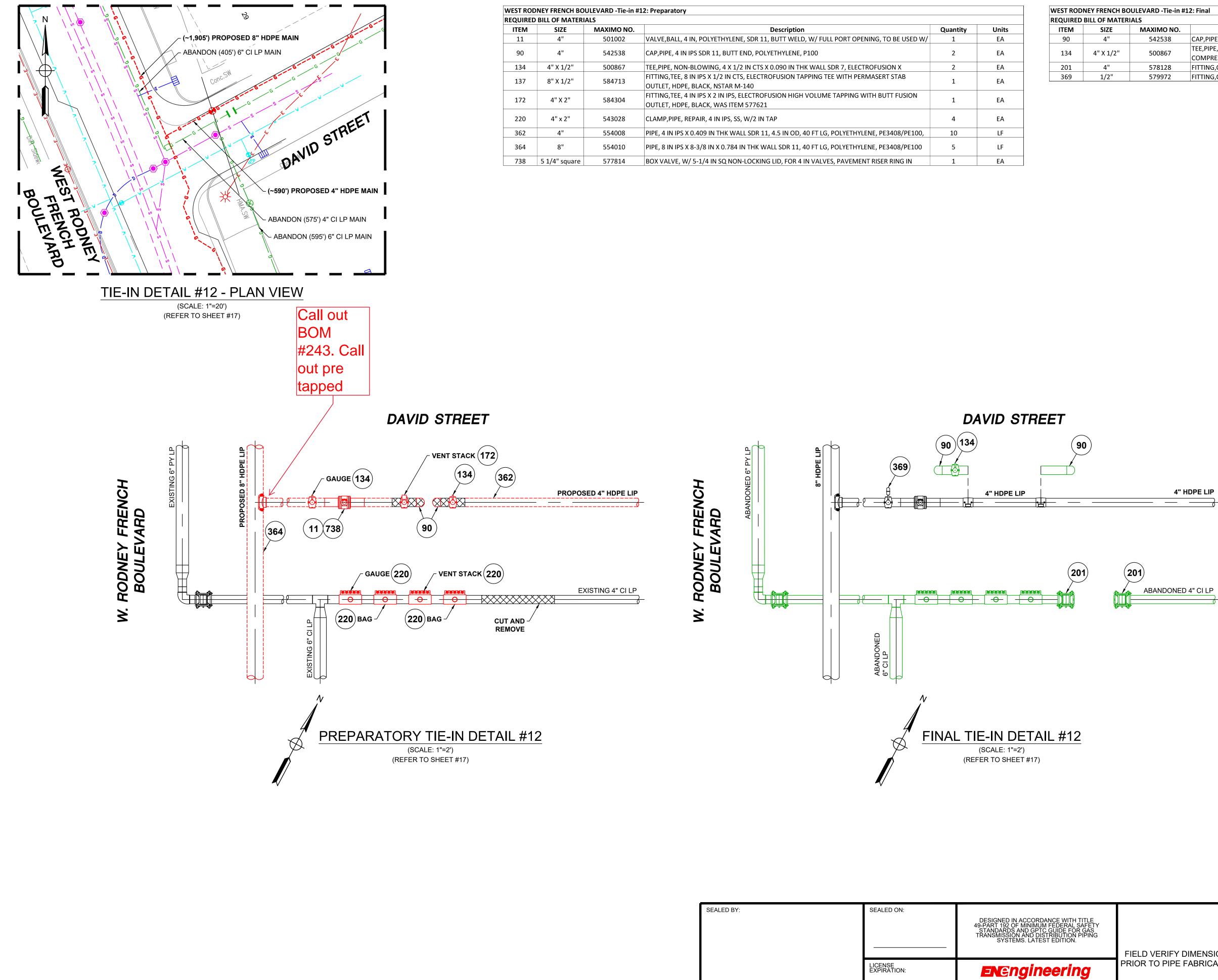
WEST RODNEY FRENCH BOULEVARD - Tie-ii						
REQUIRED BILL OF MATERIALS						
ITEM	SIZE	MAXIMO NO.				
90	4"	542538				
134	4" X 1/2"	500867				
201	4"	578128				
369	1/2"	579972				



				A ISSUED NO. DESCRI		12/23/2022 DATE	HM/AB DW/CK/AP
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.		WEST	REVISION ST	URCE ENERGY ARD MAIN RELAY - PHA	ASE 1
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION	SCALE: AS NO DRAWN BY / DATE LR 12/09/2022		1 AND BOM /I DRAWINGS) SHEE	

-i	n #12: Final		
	Description	Quantity	Units
	CAP, PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	2	EA
	TEE,PIPE, NON-BLOWING, 4 X 1/2 IN CTS X 0.090 IN THK WALL SDR 7, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100, 1	1	EA
	FITTING,COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP , FOR CAST IRON PIPE	2	EA
	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	1	EA

LEGEND					
	EXISTING GAS MAIN				
	EXISTING GAS MAIN TO BE ABANDONED				
	EXISTING GAS MAIN WITH SERVICE TRANSFERS				
	EXISTING GAS MAIN WITH PRESSURE INCREASE				
	PROPOSED GAS MAIN				
\square	EXISTING FITTING				
\square	PROPOSED FITTING				



NOTES: 1. REFER TO GENERAL NOTES ON SHEET #2.

ATERI	ALS			
	MAXIMO NO.	Description	Quantity	Units
	501002	VALVE, BALL, 4 IN, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING, TO BE USED W/	1	EA
	542538	CAP,PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	2	EA
2"	500867	TEE,PIPE, NON-BLOWING, 4 X 1/2 IN CTS X 0.090 IN THK WALL SDR 7, ELECTROFUSION X	2	EA
2"	584713	FITTING, TEE, 8 IN IPS X 1/2 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB OUTLET, HDPE, BLACK, NSTAR M-140	1	EA
11	584304	FITTING, TEE, 4 IN IPS X 2 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK, WAS ITEM 577621	1	EA
ı	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	4	EA
	554008	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE, PE3408/PE100,	10	LF
	554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100	5	LF
uare	577814	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 4 IN VALVES, PAVEMENT RISER RING IN	1	EA

WEST RODNEY FRENCH BOULEVARD -Tie-in #							
REQUIRED BILL OF MATERIALS							
ITEM	SIZE	MAXIMO NO.					
90	4"	542538					
134	4" X 1/2"	500867					
201	4"	578128					
369	1/2"	579972					

				A ISSUED FC NO. DESCRIPT	ION	12/23/2022 DATE ON STATUS	HM/AB DW/CK/AP
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS	EVERS URCE ENERG WEST RODNEY FRENCH BOULEVARD MAIN			ASE 1
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE FABRICATION	SCALE: AS NOTE		AIL #12 AND BOM FROM DRAWINGS) SHEE	

#1	2: Final		
	Description	Quantity	Units
	CAP, PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	2	EA
	TEE,PIPE, NON-BLOWING, 4 X 1/2 IN CTS X 0.090 IN THK WALL SDR 7, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100, 1	1	EA
	FITTING,COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP , FOR CAST IRON PIPE	2	EA
	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	2	EA

LE	GEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING

ISSUED	FOR
REVIE	W

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177

13

DAVID STREET

TIE-IN DETAIL #13 - PLAN VIEW

(SCALE: 1"=20') (REFER TO SHEET #17) ABANDON (575') 4" CI LIP MAIN

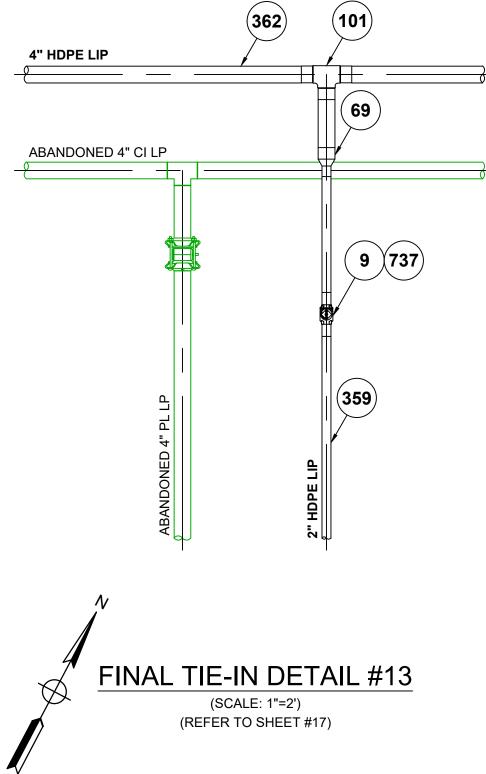
~ ABANDON (290') 4" PY LP 2009

10

└ (~490') PROPOSED 4" HDPE MAIN

WEST ROI	ONEY FRENCH E	BOULEVARD - Tie
REQUIRED	BILL OF MATE	RIALS
ITEM	SIZE	ΜΑΧΙΜΟ ΝΟ
9	2"	562087
69	4" X 2"	555593
101	4"	560679
359	2"	592668
362	4"	554008
737	4 1/4" square	577813

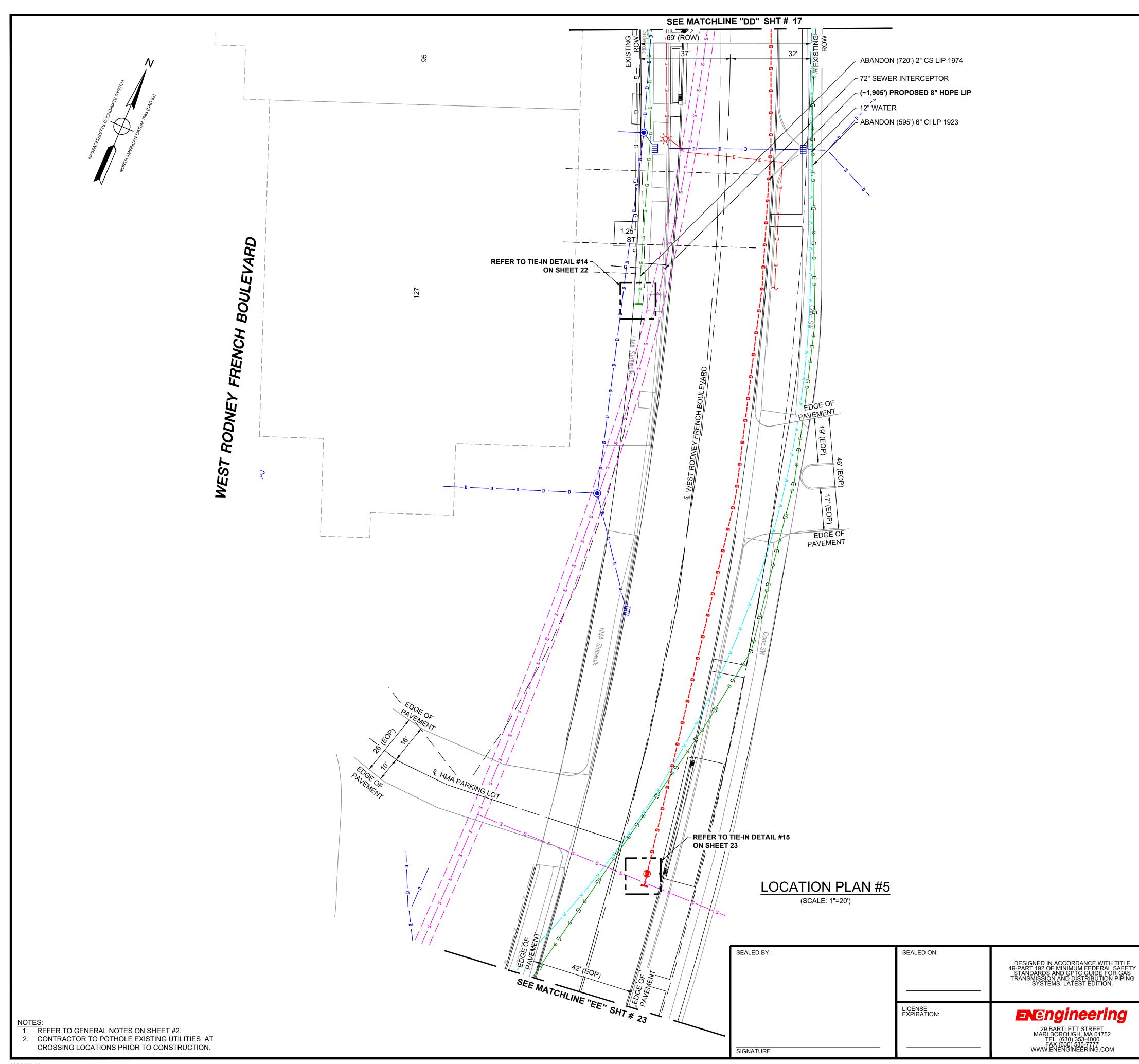
DAVID STREET



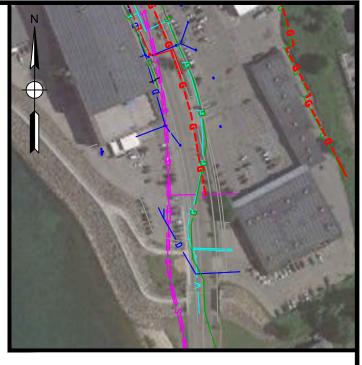
				A ISSUED F	FOR REVIEW	12/23/2022	HM/AB
				NO. DESCRIP	TION	DATE	DW/CK/AP
					REVISION STA	TUS	
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.			EVERS Q L	ENERGY	_
		SYSTEMS. LATEST EDITION.		WEST R			ASE 1
			FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION		NEW BEDFORD, MASS TIE-IN DETAIL #13		
	LICENSE EXPIRATION:	EN Engineering			TED (DO NOT SCALE FROM		T 200F 30
		29 BARTLETT STREET MARLBOROUGH, MA 01752		DRAWN BY / DATE	CHECKED BY / DATE APPROVED BY	/ DATE SHEET NUMBER	R REV. NC
SIGNATURE		29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM		LR 12/09/2022	AB 12/23/2022	MA-NEB-PIP-23-0	13-20 A

•	#40. 5t1		
-Ir	#13: Final		
	Description	Quantity	Units
	VALVE,BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
	REDUCER, PIPE, 4 X 2 IPS, BUTT ENDS, POLYETHYLENE, P100, SDR11	1	EA
	TEE,PIPE, 4 IN SDR 11, BUTT ENDS, POLYETHYLENE, P100	1	EA
	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	10	LF
	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE, PE3408/PE100, 1200 FT/BUNDLE	10	LF
	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX	1	EA

	LEGEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING

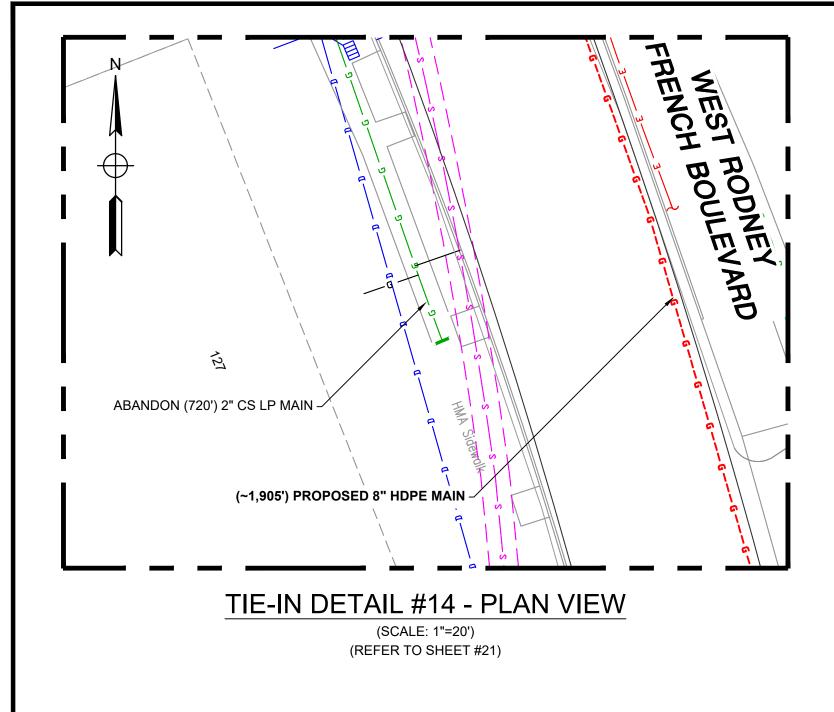


FIELD VERIFY I PRIOR TO PIPE

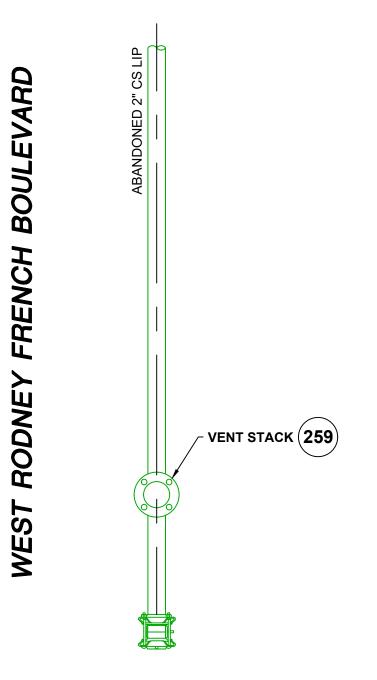


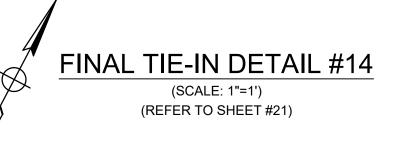
KEY MAP

	Α	ISSUED F	OR REVIEW		12/23/2022	HN	1/AB	
	NO.	DESCRIPT	ΓΙΟΝ		DATE	DW/	CK/AP	
			RE	VISION STATUS				
	EVERS © URCE							
	ENERGY							
	WEST RODNEY FRENCH BOULEVARD MAIN RELAY - PHASE 1							
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS							
E FABRICATION	LOCATION PLAN #5							
	SCA	SCALE: 1"=20' SHEET 210F					DF 30	
	DRAV	VN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	२	REV. NO.	
	LR	12/09/2022	AB 12/23/2022		MA-NEB-PIP-23-0 ²	13-21	А	



WEST RODNEY FRENCH BOULEVARD - Tie-in #						
REQUIRED	REQUIRED BILL OF MATERIALS					
ITEM	ITEM SIZE MAXIMO NO.					
259 2" 578396						

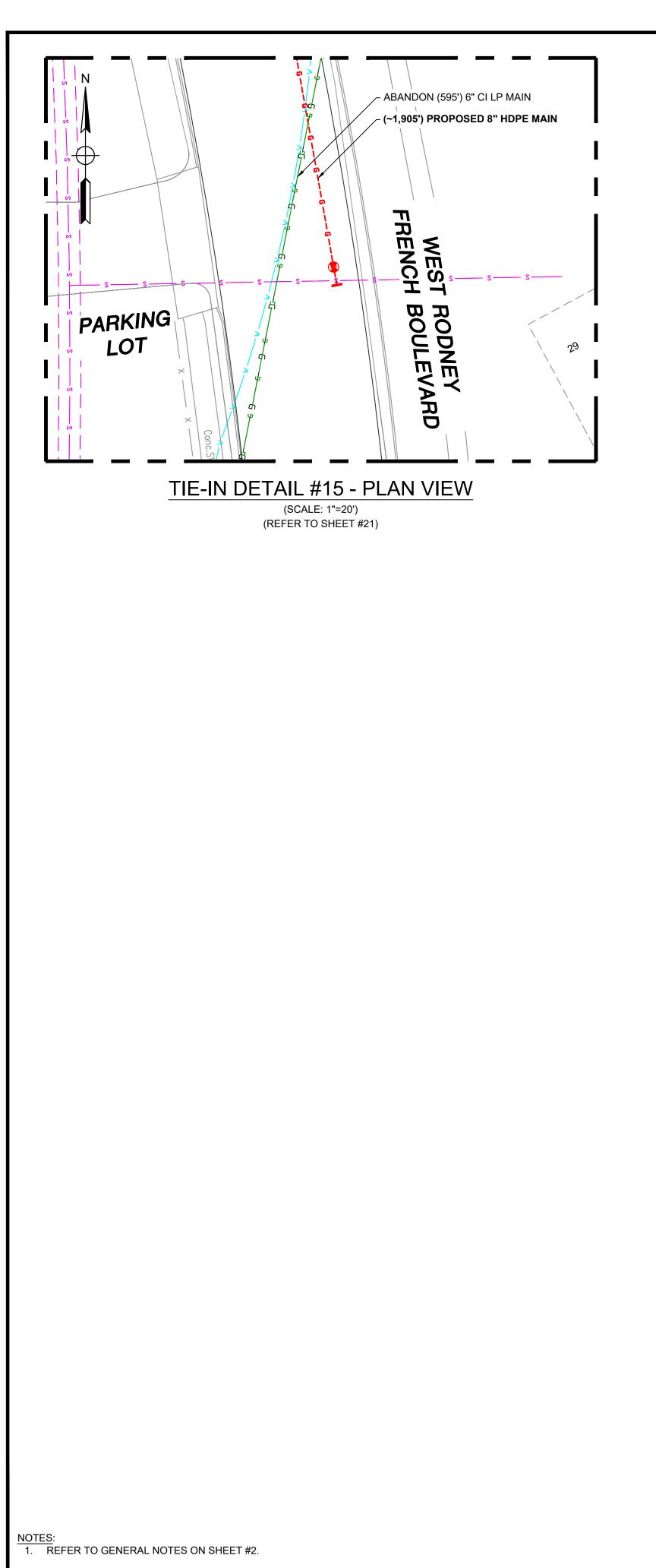




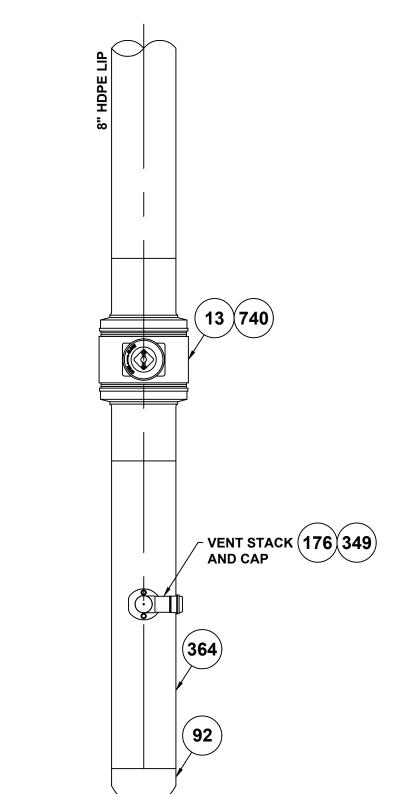
				A ISSUED F	OR REVIEW		12/23/2022	HM/AB
				NO. DESCRIP			DATE	DW/CK/AP
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.				RSEURC	-	
		TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS				AIN RELAY - PHAS	SE 1
	LICENSE EXPIRATION:	ENERGINEERING 29 BARTLETT STREET	PRIOR TO PIPE FABRICATION	SCALE: AS NOT	FED (DO NOT SCA		VINGS) SHEET	220F 30
SIGNATURE		29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM		DRAWN BY / DATE	CHECKED BY / DATE AB 12/23/2022		SHEET NUMBER MA-NEB-PIP-23-013	REV. NO. 3-22 A

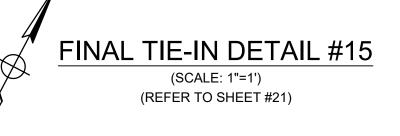
#1	14: Final						
	Description	Quantity	Units				
	FITTING,TEE, SHORTSTOPP, 2 IN, WELDED	1	EA				

	LEGEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING



WEST ROD	NEY FRENCH BC	ULEVARD - Tie-in
REQUIRED	BILL OF MATER	IALS
ITEM	SIZE	MAXIMO NO.
13	8"	500705
92	8"	542540
176	8" X 2"	577623
349	2"	581633
364	8"	554010
740	8"	604132

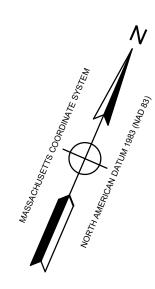




				A ISSUED F NO. DESCRIP				HM/AB W/CK/AP
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS	WEST R	EVE	VISION STATUS RSEURC ENE BOULEVARD MA ORD, MASSACHL	RGY AIN RELAY - PHASE	1
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE FABRICATION	SCALE: AS NO	TIE-IN D TED (DO NOT SC	DETAIL #15 AND E ALE FROM DRAV APPROVED BY / DATE	ЗОМ	23OF 30 REV. NO. 23 A

in #	.5: Final		
Э.	Description	Quantity	Units
	VALVE,BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH	1	EA
	CAP,PIPE, 8 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	1	EA
	FITTING,TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055 , RESTRICTED PURCHA	1	EA
	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	1	EA
	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100	10	LF
	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 8 IN FULL PORT VALVES, PAVEMENT RISER IN 583488. 6/BOX	1	EA

	LEGEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING



72" SEWER INTERCEPTOR ~ UNK STORM ~ ABANDON (595') 6" CI LP 1923 ~ 12" WATER ~

ULEVARD

| 's | | | | | |

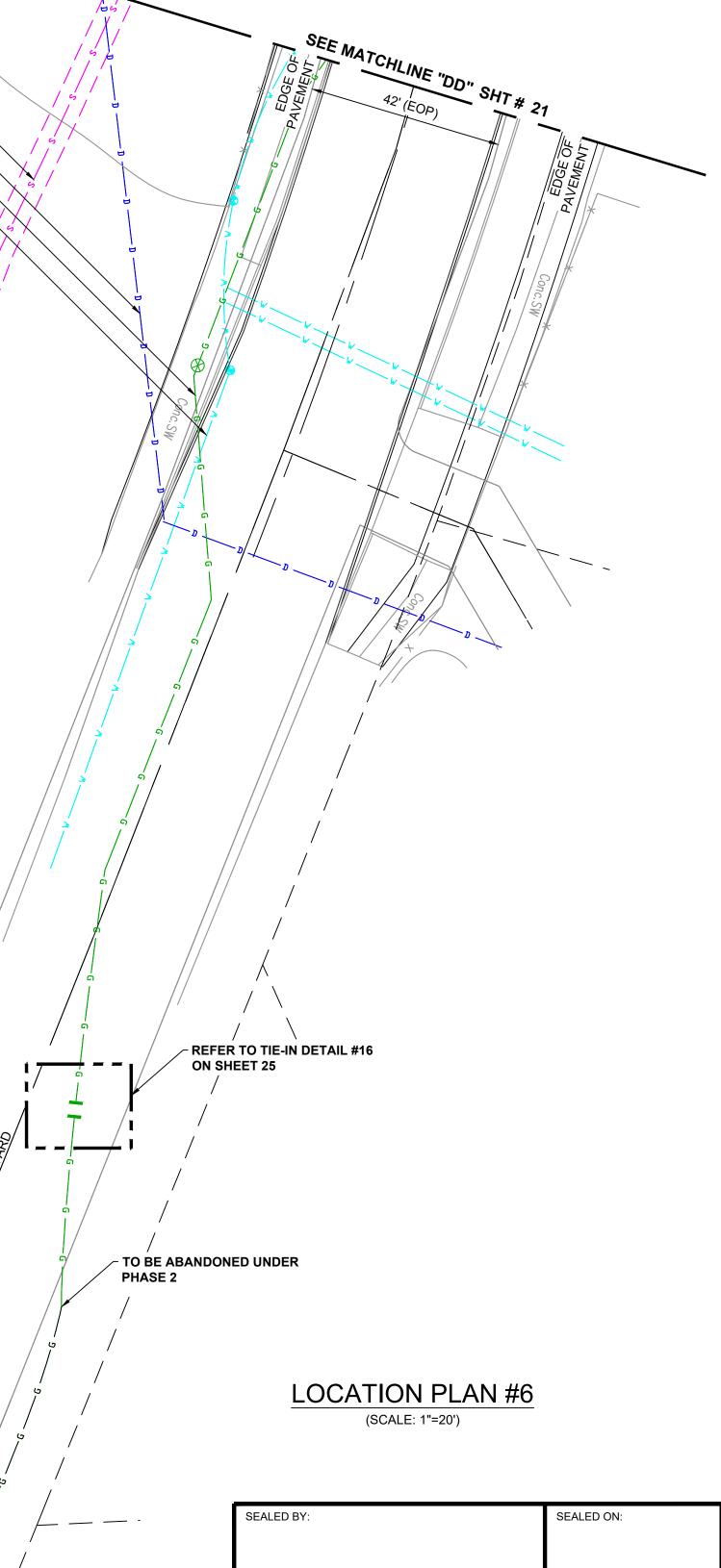
EDGE OF 24VEMENT

ACX.

RODNEY

WEST

NOTES: 1. REFER TO GENERAL NOTES ON SHEET #2. 2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

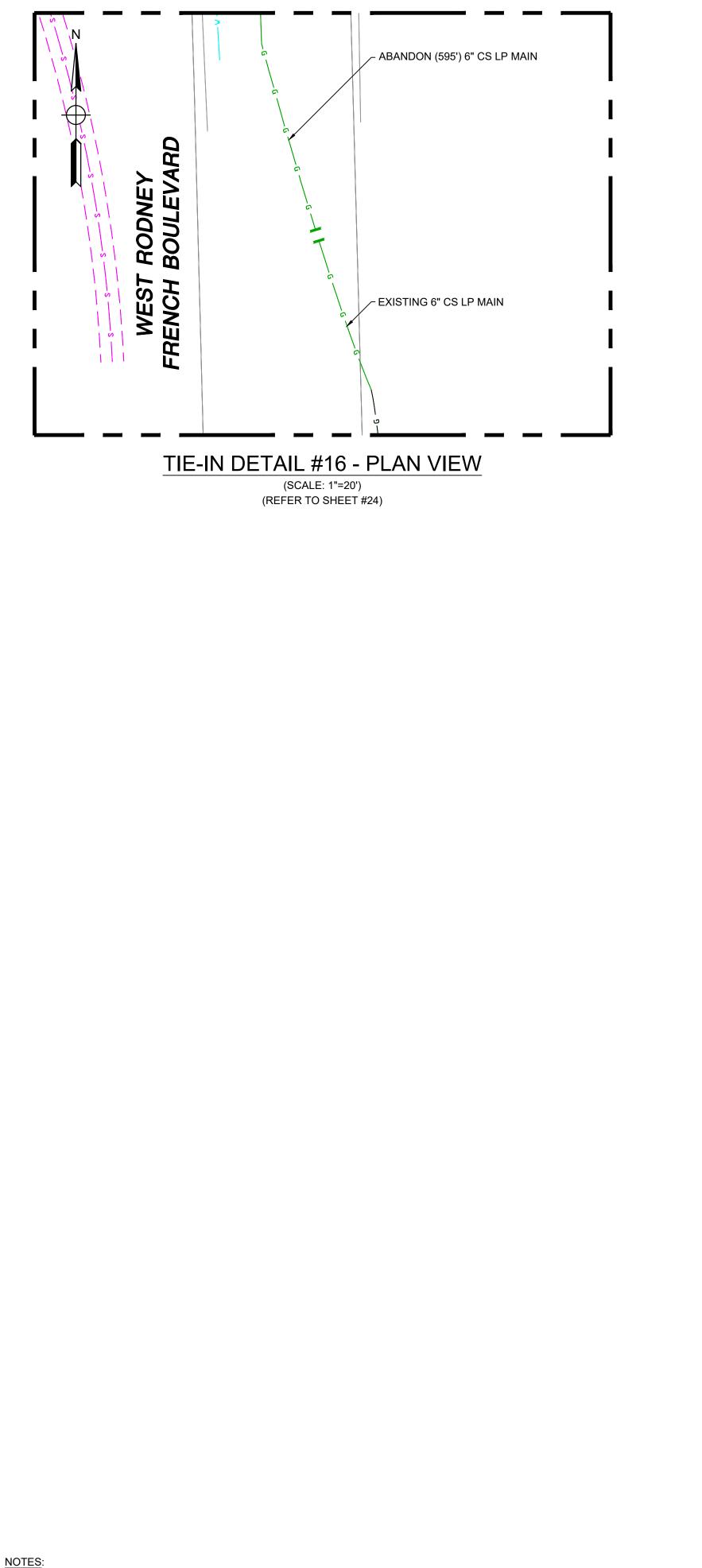


		DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIN
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE FA



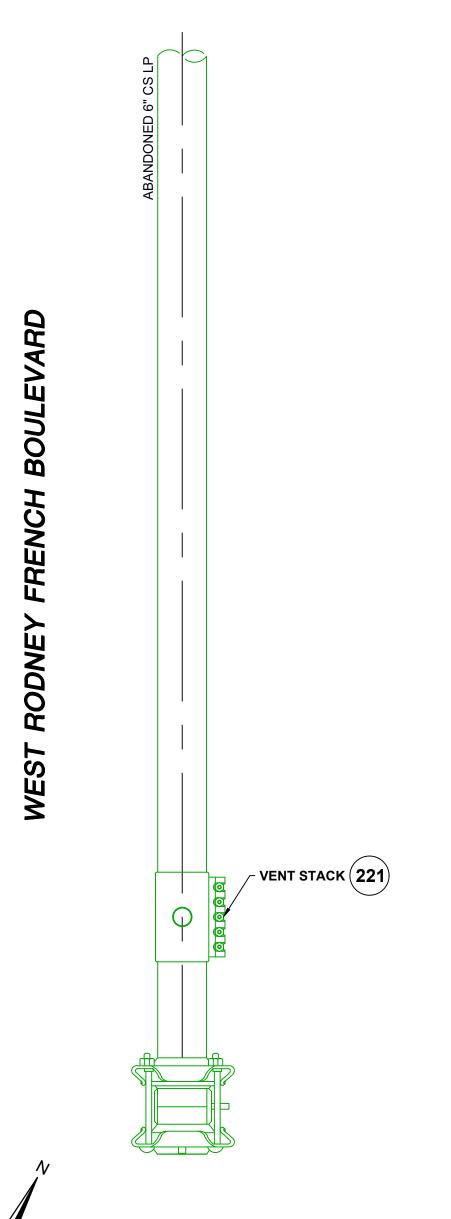
KEY MAP

	Α	ISSUED F	OR REVIEW		12/23/2022	HM/AB
	NO.	DESCRIP	ΓΙΟΝ		DATE	DW/CK/AP
			RE'	VISION STATUS		
			EVE	RSCURC	CE	
	ENERGY					
		WEST RODNEY FRENCH BOULEVARD MAIN RELAY - PHASE 1				
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS					
FABRICATION			LO	CATION PLAN #6		
	SCA	LE: 1"=20'			SHEE	T 240F 30
	DRA	WN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	R REV. NO.
	LR	12/09/2022	AB 12/23/2022		MA-NEB-PIP-23-01	13-24 A



NOTES: 1. REFER TO GENERAL NOTES ON SHEET #2.

WEST ROD	NEY FRENCH BO	OULEVARD - Tie-in #	16: Final		
REQUIRED	BILL OF MATER	RIALS			
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
221	6" x 2"	578021	FITTING, CLAMP, SERVI-SEAL REPAIR, 6 IN DIA, 9 IN LG, W/ 2 IN OUTLET, FOR STEEL PIPE	1	EA

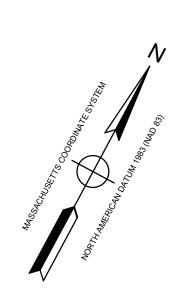


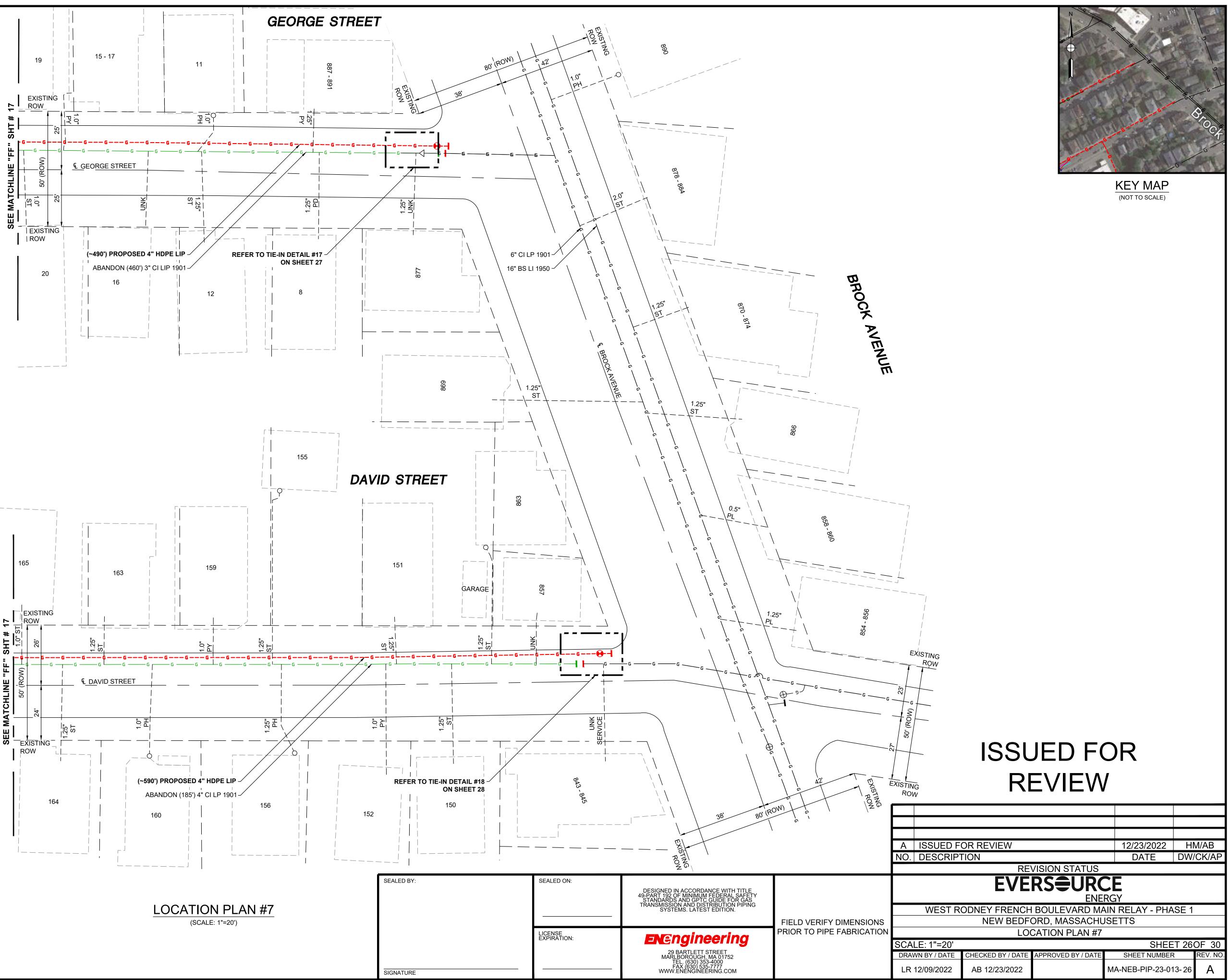
FINAL TIE-IN DETAIL #16 (SCALE: 1"=1') (REFER TO SHEET #24)

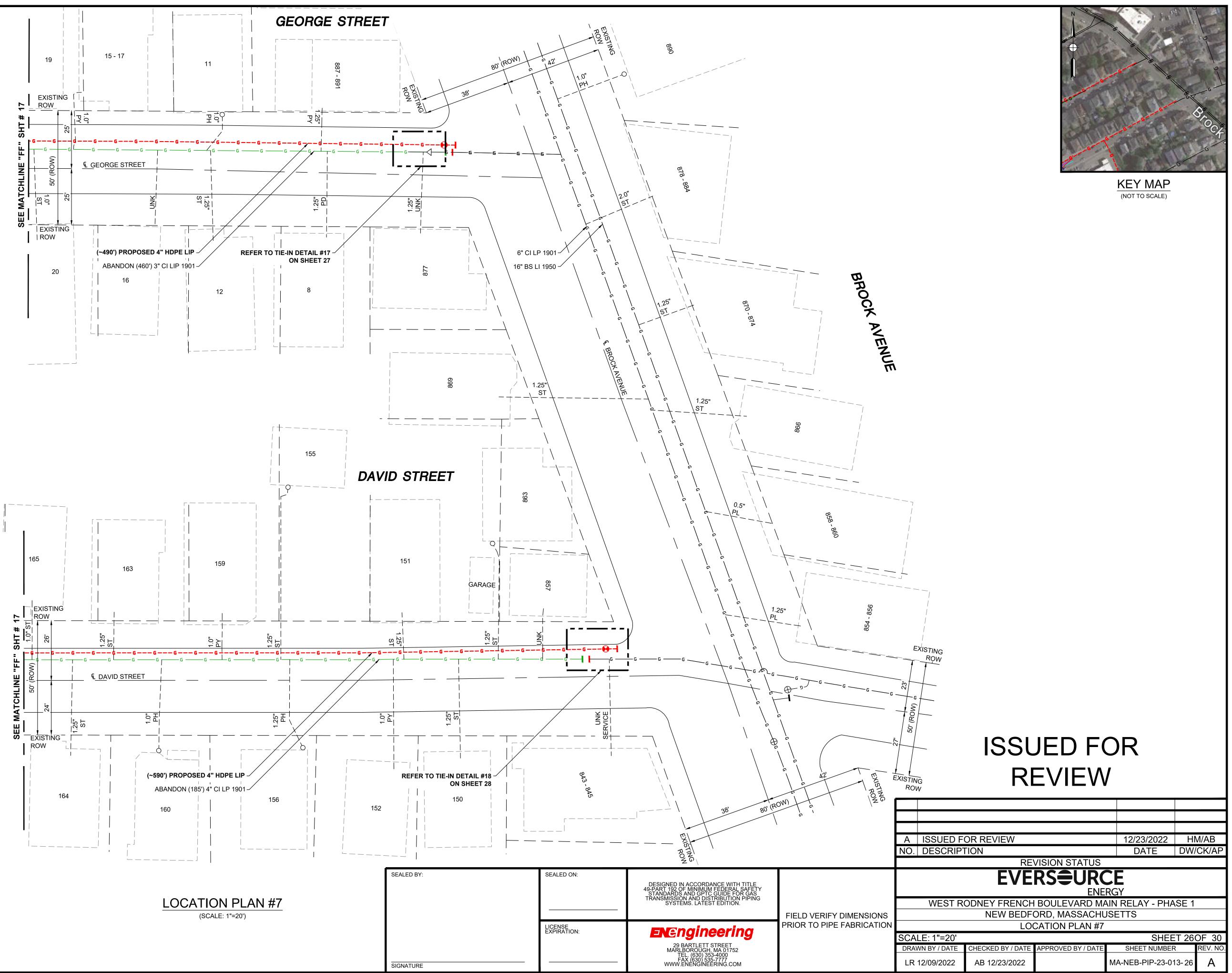
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DI
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE FA

Ē	EGEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING

	A IS	SSUED F	OR REVIEW		12/23/2022	HM/AB	
	NO. D	ESCRIPT	TION		DATE	DW/CK/AP	
			RE	VISION STATUS			
		EVERS URCE					
	ENERGY						
	WEST RODNEY FRENCH BOULEVARD MAIN RELAY - PHASE 1						
/ DIMENSIONS	NEW BEDFORD, MASSACHUSETTS						
E FABRICATION		TIE-IN DETAIL #16 AND BOM					
	SCALE	: AS NOT	ED (DO NOT SC	ALE FROM DRAW	/INGS) SHEE	T 250F 30	
	DRAWN	BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	R REV. NC	
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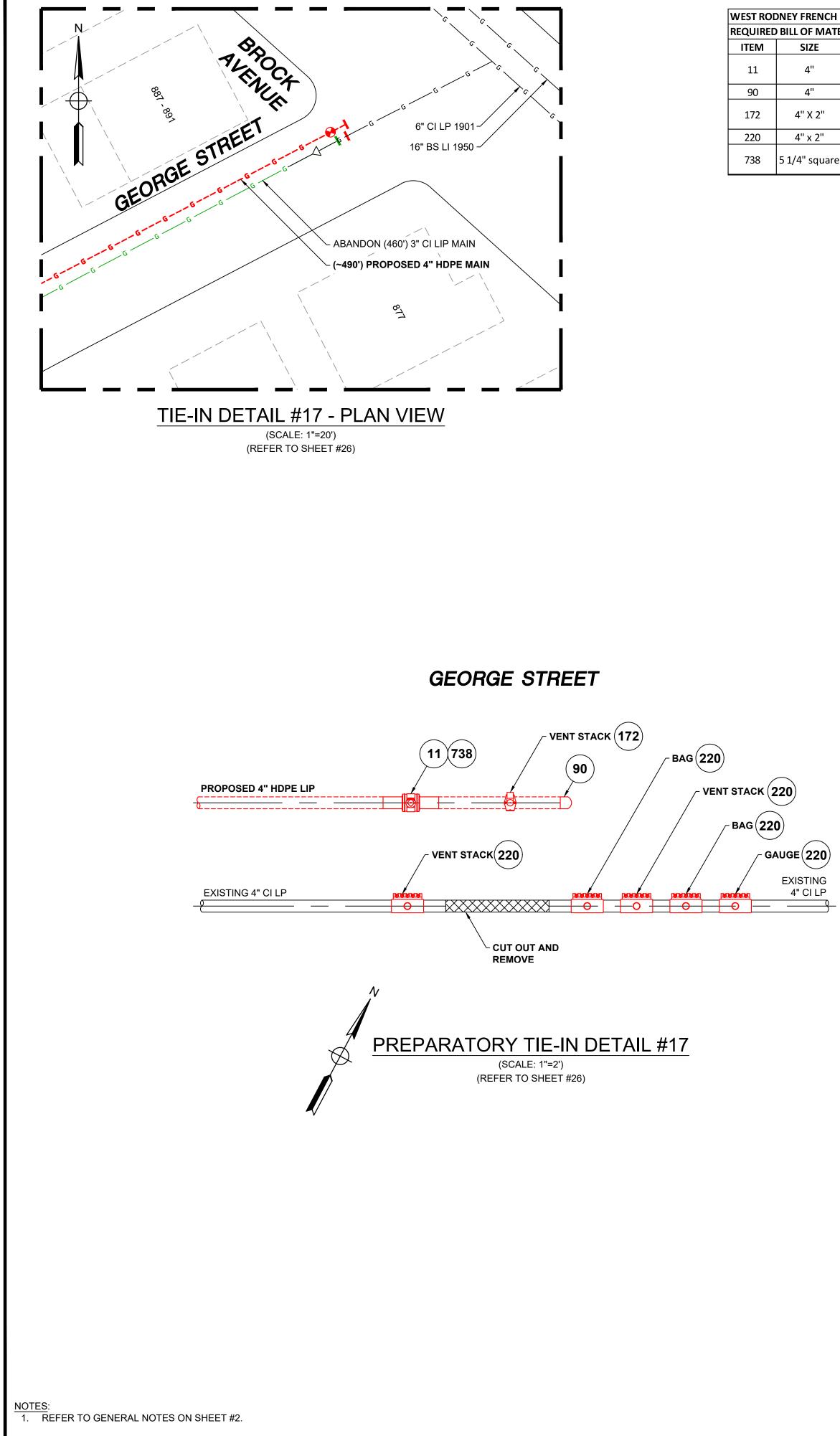






NOTES REFER TO GENERAL NOTES ON SHEET #2.
 CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

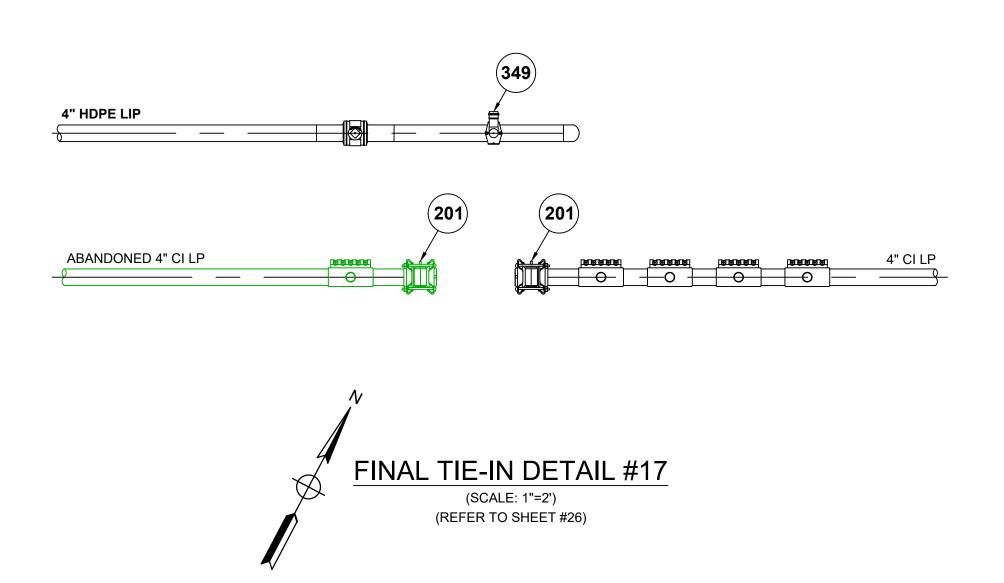




MATE	RIALS			
:	MAXIMO NO.	Description	Quantity	Units
	501002	VALVE,BALL, 4 IN, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING, TO BE USED W/ BRAND SADDLE INST, P100	1	EA
	542538	CAP, PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	1	EA
2"	584304	FITTING,TEE, 4 IN IPS X 2 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK, WAS ITEM 577621	1	EA
<u>2"</u>	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	5	EA
Juare	577814	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 4 IN VALVES, PAVEMENT RISER RING IN 583488,	1	EA

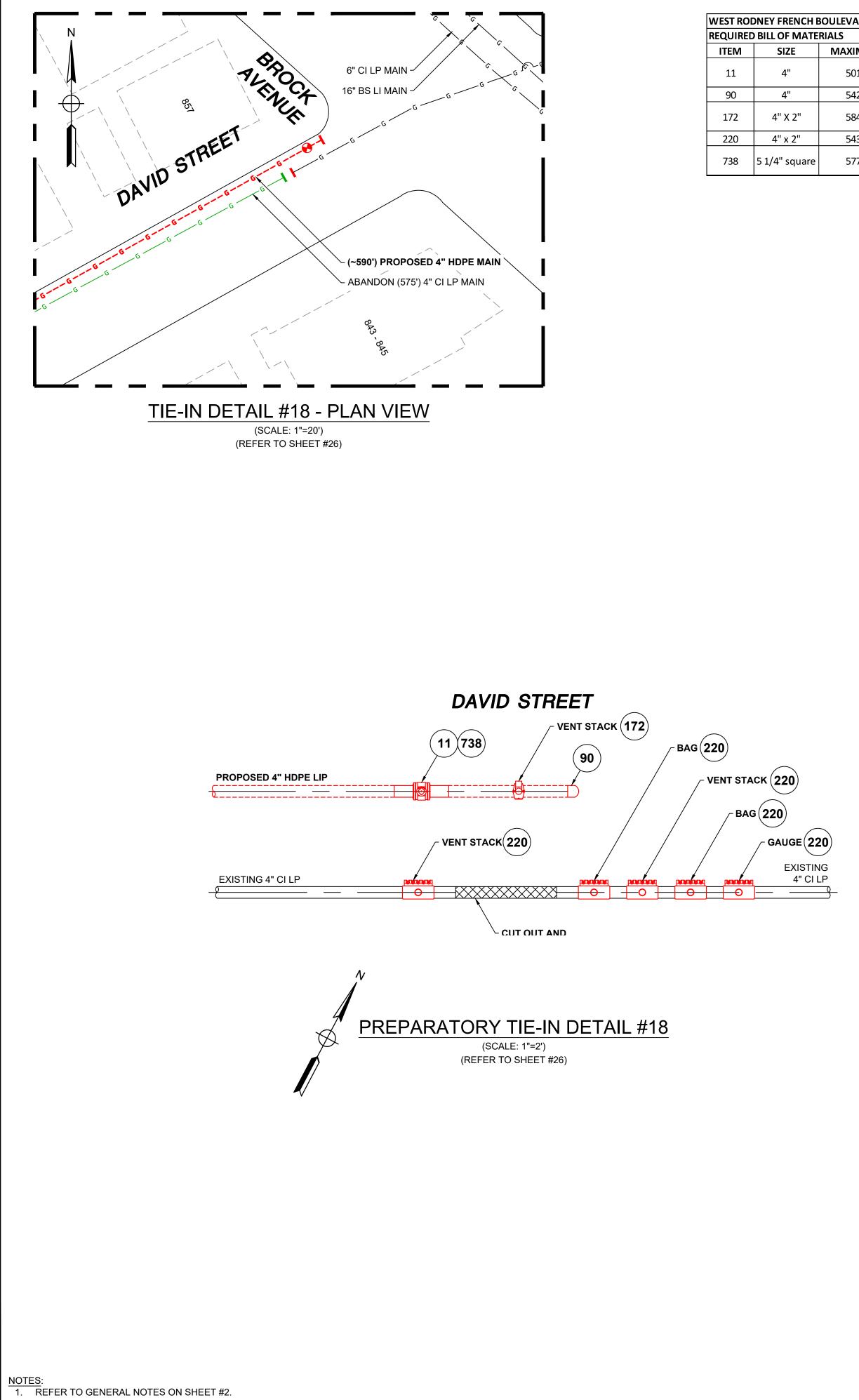
WEST RODNEY FRENCH BOULEVARD - Tie-in #17: Final REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
201	4"	578128	FITTING,COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP , FOR CAST IRON PIPE	2	EA
349	2"	581633	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	1	EA

GEORGE STREET



				A ISSUED FOR REVIEW NO. DESCRIPTION	12/23/2022 HM/AB DATE DW/CK/AP
<u>.</u>			_	REVISION S	TATUS
SEALED BY:	SEALED ON:	SEALED ON: DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.		EVERS €	URCE
	TRANSMISSION AND DIST SYSTEMS. LATEST	TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS	WEST RODNEY FRENCH BOULEV NEW BEDFORD, MAS	
	LICENSE EXPIRATION:	ENEngineering	PRIOR TO PIPE FABRICATION	TIE-IN DETAIL #1 SCALE: AS NOTED (DO NOT SCALE FRO	
SIGNATURE		29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM		DRAWN BY / DATECHECKED BY / DATEAPPROVEDLR 12/09/2022AB 12/23/2022	BY / DATE SHEET NUMBER REV. NO MA-NEB-PIP-23-013-27 A

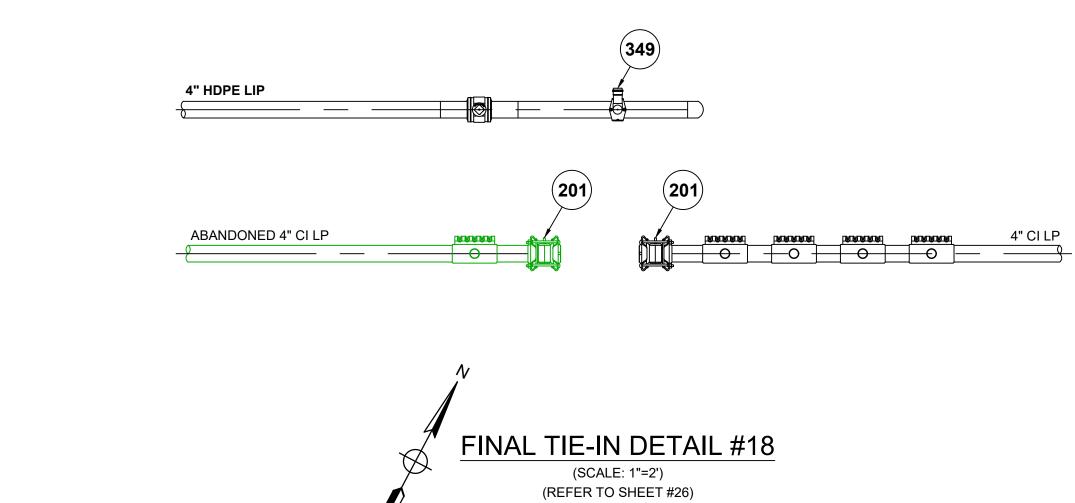
LE	GEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING



NCH B	OULEVARD - Tie-i	n #18: Preparatory		
MATE	RIALS			
	MAXIMO NO.	Description	Quantity	Units
	501002	VALVE,BALL, 4 IN, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING, TO BE USED W/ BRAND SADDLE INST, P100	1	EA
	542538	CAP, PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	1	EA
2"	584304	FITTING,TEE, 4 IN IPS X 2 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK, WAS ITEM 577621	1	EA
2"	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	5	EA
uare	577814	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 4 IN VALVES, PAVEMENT RISER RING IN 583488,	1	EA

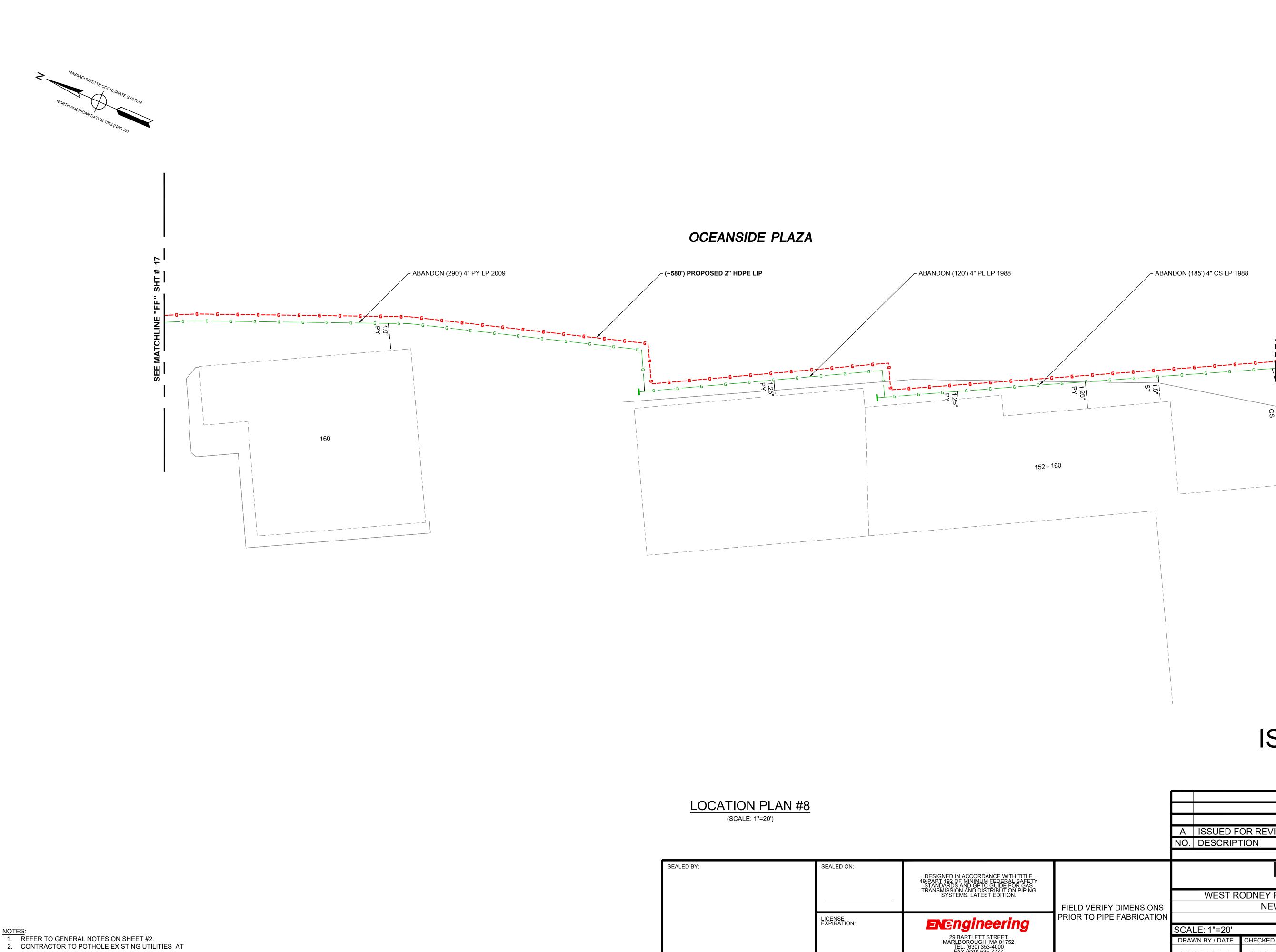
WEST RODNEY FRENCH BOULEVARD - Tie-in R: Final					
REQUIRED E	BILL OF MATER	IALS			
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
201	4"	578128	FITTING,COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP , FOR CAST IRON PIPE	2	EA
349	2"	581633	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	1	EA

DAVID STREET



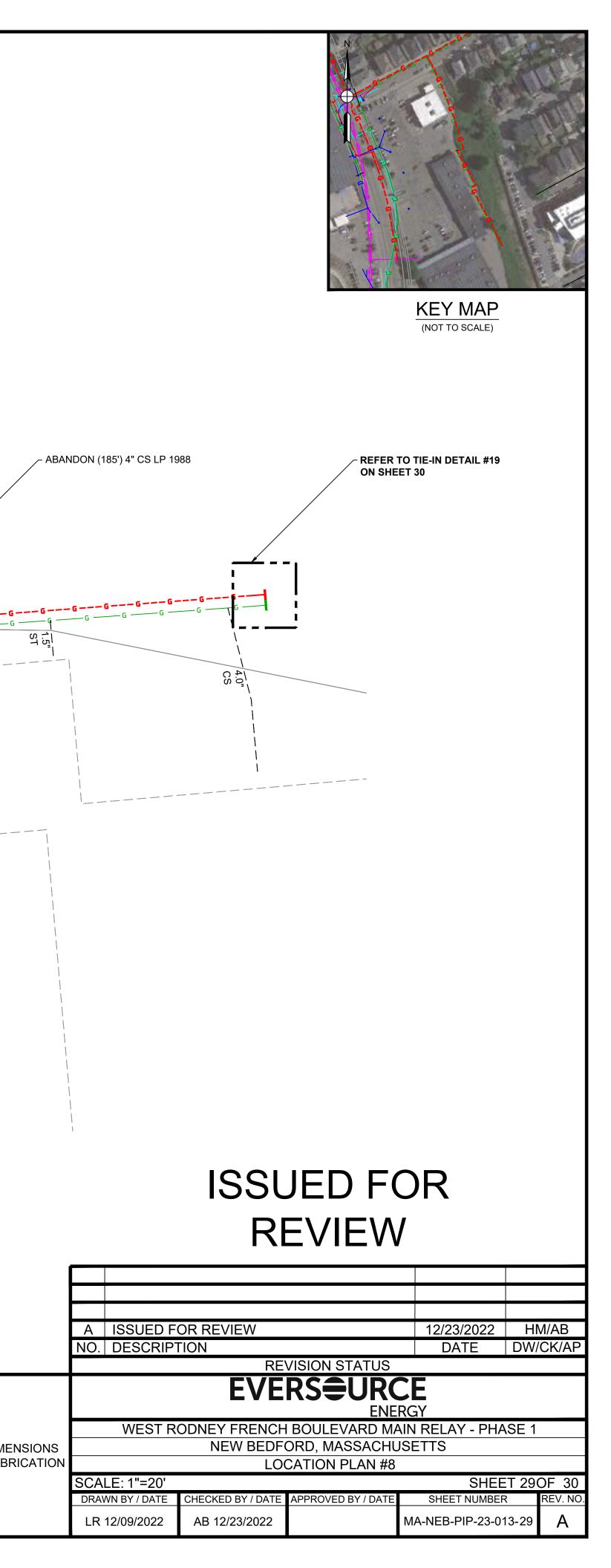
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	SEALED ON:					SION STATUS	· 	
SEALED BY:	SEALED ON.	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.			EVER			
	SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS WEST RODNEY FRENCH BOULEVARD MAIN RE				E 1		
	LICENSE EXPIRATION:	ENErginooring	FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION			TAIL #18 AND BO		
	EXPIRATION:	29 BARTLETT STREET MARLEOROUGH, MA 01752			TED (DO NOT SCALE CHECKED BY / DATE APP		NGS) SHEET SHEET NUMBER	280F 30 REV. NO.
SIGNATURE		29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM		LR 12/09/2022	AB 12/23/2022	Ν	MA-NEB-PIP-23-013	-28 A

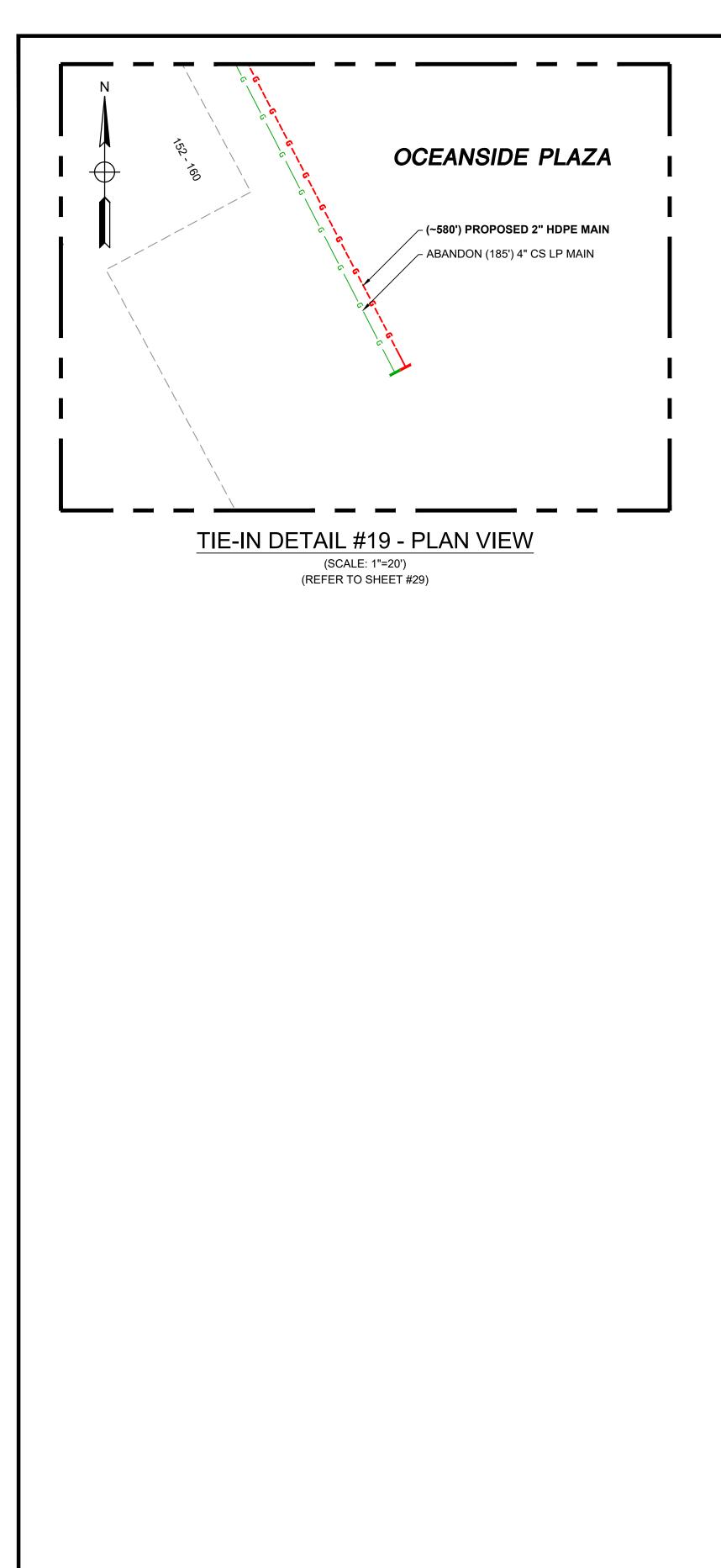
LE	GEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING



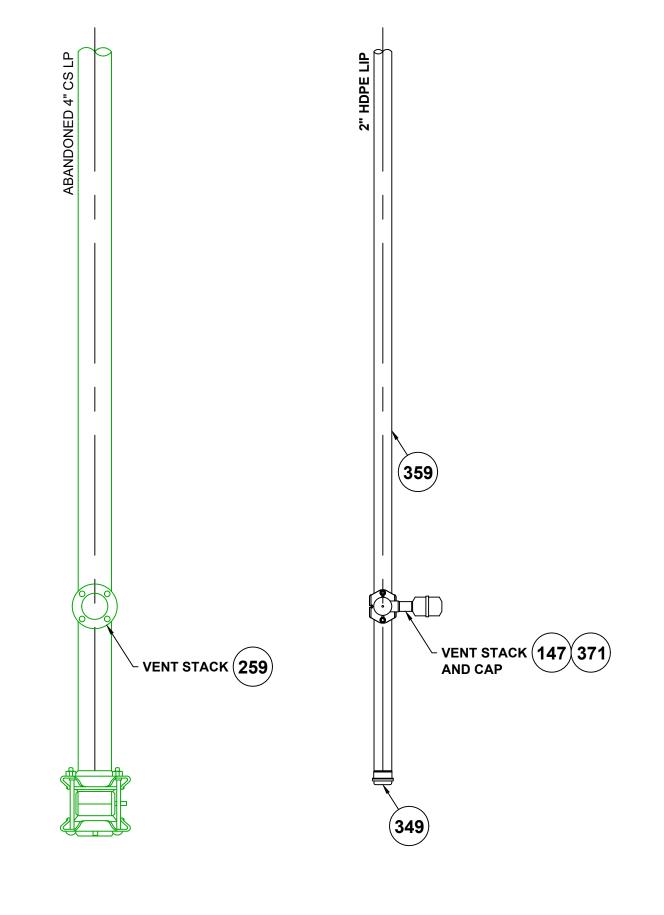
CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM SIGNATURE





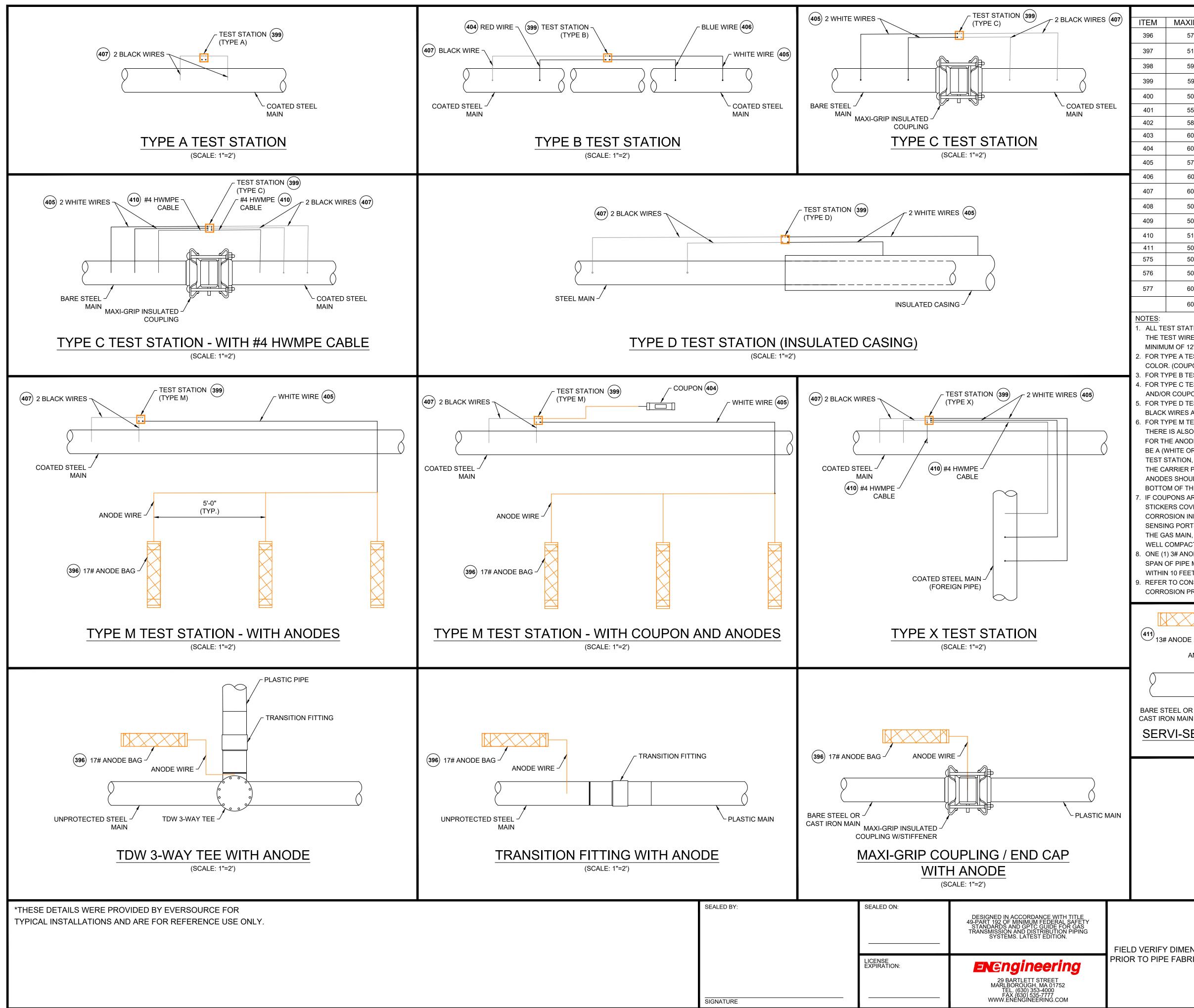
EQUIRED	BILL OF MATER	IALS			
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
147	2" X 1"	560779	TEE,PIPE, NON-BLOWING, 2 X 1 IN IPS SDR 11, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100	1	EA
259	2"	578396	FITTING,TEE, SHORTSTOPP, 2 IN, WELDED	1	EA
349	2"	581633	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	1	EA
359	2"	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	10	LF
371	1"	583182	FITTING,CAP, METFIT, 1 IN IPS X 0.119 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, REPLACED IN 542612	1	EA



FINAL TIE-IN DETAIL #19 (SCALE: 1"=1') (REFER TO SHEET #29)

				A ISSUED FOR REVIEW	12/23/2022 HM/AB
				NO. DESCRIPTION REVISION S	DATE DW/CK/AP
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.		EVERS C	
		TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS	WEST RODNEY FRENCH BOULE NEW BEDFORD, MA	
	LICENSE EXPIRATION:	ENErgineering	PRIOR TO PIPE FABRICATION	SCALE: AS NOTED (DO NOT SCALE FRO	DM DRAWINGS) SHEET 30 OF 30
SIGNATURE		29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM		DRAWN BY / DATECHECKED BY / DATEAPPROVELR 12/09/2022AB 12/23/2022	D BY / DATE SHEET NUMBER REV. NO MA-NEB-PIP-23-013-30 A

LE	GEND
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
\square	EXISTING FITTING
\square	PROPOSED FITTING



1	CATHODIC PROTECTION BILL OF MATERIALS	
MAXIMO NO.	DESCRIPTION	UNITS
577776	ANODE,BAG, 17 LB NET, HIGH POTENTIAL MAGNESIUM, W/ 10 FT #10 AWG TW ORANGE LEAD WIRE, PACKED IN CARDBOARD BOX 42 LB TOTAL WEIGHT	EA
517626	CONNECTOR, SPLIT BOLT, 12 SOLID - 10 STRANDED, CU TO CU, HOUSING (COVER) MATE IN 590389,	EA
590389	HOUSING, 50 V MAX, 10 AWG MAX, FOR PROTECTING TRACER WIRE SPLICES, USED WITH CONNECTOR IN 517626. 10/BAG	EA
590871	BOX VALVE, TEST STATION, CP TEST #178, 10-1/4 IN DIA. LID, 8-3/8 IN I.D. 16 IN H., ASTM A48 CL 25 CAST IRON, FOR OFF-ROAD USE ONLY	EA
508567	POWDER, CARTRIDGE, TYPE IS F-33, ALLOY , CAP COLOR CLEAR, 15 GM CHARGE, 20/PAC, FOR STEEL PIPE	BOX
559168	SLEEVE, ELECTRICAL, #14 TO 10 AWG, W/ THERMITE WELDER, FOR CATHODIC PROTECTION	EA
584045	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCB-ZIN-LW010, 10 FT OF CABLE	ES
603126	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCB-ZIN-LW025, 25 FT OF CABLE	ES
603140	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, RED, INSULATED, CU, 500 FT SPOOL, WIRE	ROLL
578415	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, WHITE, INSULATED, CU, 500 FT SPOOL, WIRE	ROLL
603141	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, BLUE INSULATED, CU, 500 FT SPOOL, WIRE	ROLL
603139	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, BLACK, INSULATED, CU, 500 FT SPOOL,WIRE	ROLL
500804	WELDER, THERMITE, THERMITE, FOR GAS PIPE, #12 CABLE, HORIZONTAL STEEL PIPE 4 IN AND LARGER DIAMETER	EA
500805	WELDER, THERMITE, THERMITE, FOR GAS PIPE, #12 CABLE, HORIZONTAL STEEL PIPE 3/4 - 3-1/2 IN DIAMETER	EA
513850	CABLE, INSULATED, CATHODIC PROTECTION, 1/C, #4 AWG, 7 STR, 600 V, BLACK, HMWPE, CU, 1000 FT ROLLS	FT
505818	ANODE, BAG, 2.5 X 2.5 X 4.5 IN, 10 FT LG, 3 LB, MAGNESIUM, Alternate IN 577776	EA
508572	PRIMER, 4 GAL/CASE, BROWN, FOR WAX TAPE, APPLICATION TEMP 0 TO 230 F, TEMCOAT 3000	EA
503673	TAPE,WAX, 9 FT LG X 4 IN W, 24 ROLLS/CS, ABOVE AND BELOW GROUND APPLICATIONS, TR-#2A WAX, ALUMINUM	ROLL
603769	TRENTON-FILL POR PM-GP, 140 FA, FOR FILLING VOIDS & IRREGULAR SPACES PRIOR TO WRAPPING W/WAX TAPE, 0F TO 110F APPLICATION TEMPERATURE, 6 BLOCKS/CASE,	CASE
603423	TAPE,WAX, 9 FT LG X 6 IN W X 70-90 MIL THK, 16 ROLLS/CS, ABOVE AND BELOW GROUND APPLICATIONS, TR-#2A WAX, ALUMINUM	ROLL

ALL TEST STATION BOXES SHOULD BE INSTALLED IN A SAFE LOCATION WHERE ONE INDIVIDUAL CAN SAFELY OPEN AND ACCESS THE TEST WIRES. ALL TEST WIRES INSIDE THE BOX SHOULD HAVE ENOUGH SLACK ON THE WIRES SO THEY CAN EXTEND A MINIMUM OF 12" ABOVE GRADE.

2. FOR TYPE A TEST STATIONS, THE TWO WIRES SHOULD BE THERMITE WELDED TO THE COATED STEEL MAIN AND BE THE SAME COLOR. (COUPONS COULD BE ADDED TO THE TEST STATION TYPE).

FOR TYPE B TEST STATIONS, EACH OF THE FOUR WIRES SHOULD BE A DIFFERENT COLOR AND DOCUMENTED

. FOR TYPE C TEST STATIONS, THE WIRES SHOULD BE THE SAME COLOR ON EACH SIDE OF THE INSULATED COUPLING. (ANODES AND/OR COUPONS COULD BE ADDED TO THIS TEST STATION TYPE).

FOR TYPE D TEST STATIONS WHICH ARE AT A CASING, WHITE WIRES ARE NORMALLY INSTALLED ON THE STEEL CASING AND BLACK WIRES ARE INSTALLED ON THE CARRIER PIPE. (ANODES AND/OR COUPONS COULD BE ADDED TO THIS TEST STATION TYPE). FOR TYPE M TEST STATIONS, THE TWO WIRES THERMITE WELDED TO THE CARRIER PIPE SHOULD BE THE SAME COLOR WIRE. THERE IS ALSO MAGNESIUM ANODE(S) WIRE(S) LOCATED INSIDE THE TEST STATION BOX. THE WIRE COLOR (TYPICALLY ORANGE) FOR THE ANODES. IF THE ANODE WIRES ARE SPLICED TO A COMMON ANODE HEADER CABLE, THE ANODE HEADER CABLE SHOULD BE A (WHITE OR RED) DIFFERENT COLOR WIRE THAN THE WIRE THAT WAS THERMITE WELDED TO THE CARRIER PIPE. AT A TYPE M TEST STATION, NO MAGNESIUM ANODES SHOULD BE DIRECTLY THERMITE WELDED TO THE CARRIER PIPE OR IN CONTACT WITH THE CARRIER PIPE. THE ANODE HEADER WIRE OR INDIVIDUAL ANODE WIRES SHOULD TERMINATE INSIDE THE TEST STATION BOX. ANODES SHOULD BE SPACED A MINIMUM OF 5' ON CENTER FROM EACH OTHER AND A MINIMUM OF 12" AWAY AND BELOW THE BOTTOM OF THE STEEL MAIN.

IF COUPONS ARE TO BE INSTALLED, FIRST REMOVE THE PROTECTIVE LABEL COVERING THE STEEL COUPON AND THE RED STICKERS COVERING EACH SENSING PORT. CLEAN THE ENTIRE STEEL COUPON SURFACE WITH ALCOHOL TO REMOVE THE CORROSION INHIBITOR .PLACE THE COUPON ASSEMBLY APPROXIMATELY 12" FROM THE GAS MAIN BEING MONITORED WITH THE SENSING PORTS FACING THE GAS MAIN. THE COUPON ASSEMBLY SHOULD BE LOCATED ADJACENT TO THE BOTTOM PORTION OF THE GAS MAIN, ANYWHERE BETWEEN 3 O'CLOCK AND 9 O'CLOCK. THE SOIL BETWEEN THE COUPON AND THE MAIN SHOULD BE WELL COMPACTED AND CONTAIN NO ROCKS LARGER THAN A CENTIMETER IN DIAMETER OR FOREIGN MATERIAL.

ONE (1) 3# ANODE (MINIMUM) SHALL BE INSTALLED TO PROTECT THE CLAMPS ON EACH 10-FOOT SPAN OF PIPE. EACH 10-FOOT SPAN OF PIPE MUST BE A CONTINUOUS SECTION OF STEEL. CLAMPS ON NON-CONTINUOUS SECTIONS OF STEEL EVEN IF THEY ARE WITHIN 10 FEET OF EACH CANNOT BE PROTECTED BY THE SAME ANODE.

9. REFER TO CONSTRUCTION STANDARD CS-500 SECTION IV.G WHICH PROVIDES GENERAL GUIDANCE REGARDING "WRAPPING" FOR CORROSION PROTECTION. CS-500 SECTION IV.G.5. DESCRIBES THE BASIC STEPS REQUIRED TO WRAP LEAK REPAIR CLAMPS.

ANODE BAG ANODE WIRI EEL OR SERVI		В	11) 13# ANODE BAG ANODE WIF		Æ	
VI-SEAL / CLAMP WITH ANODE (SCALE: 1"=2')			SERVICE TEE WITH ANODE (SCALE: 1"=2')			
ISSUED FOR REVIEW						
A ISSUED FOR REVIEW				12/23/2022		
	NO. DESCRIP	EVISION STATUS	DATE	DW/CK/AP		
	EVERS URCE ENERGY					
DIMENSIONS FABRICATION	WEST RODNEY FRENCH BOULEVARD MAIN RELAY - PHASE 1 NEW BEDFORD, MASSACHUSETTS STANDARD CORROSION DETAILS					
	SCALE: 1"=2' (DO NOT SCALE FROM DRAWINGS) DRAWN BY / DATE CHECKED BY / DATE APPROVED BY / DATE			, 	SHEET X OF 30 SHEET NUMBER REV. NO.	
	LR 12/09/2022	AB 12/23/2022	AFFROVED DT / DATE	MA-NEB-PIP-23-0		