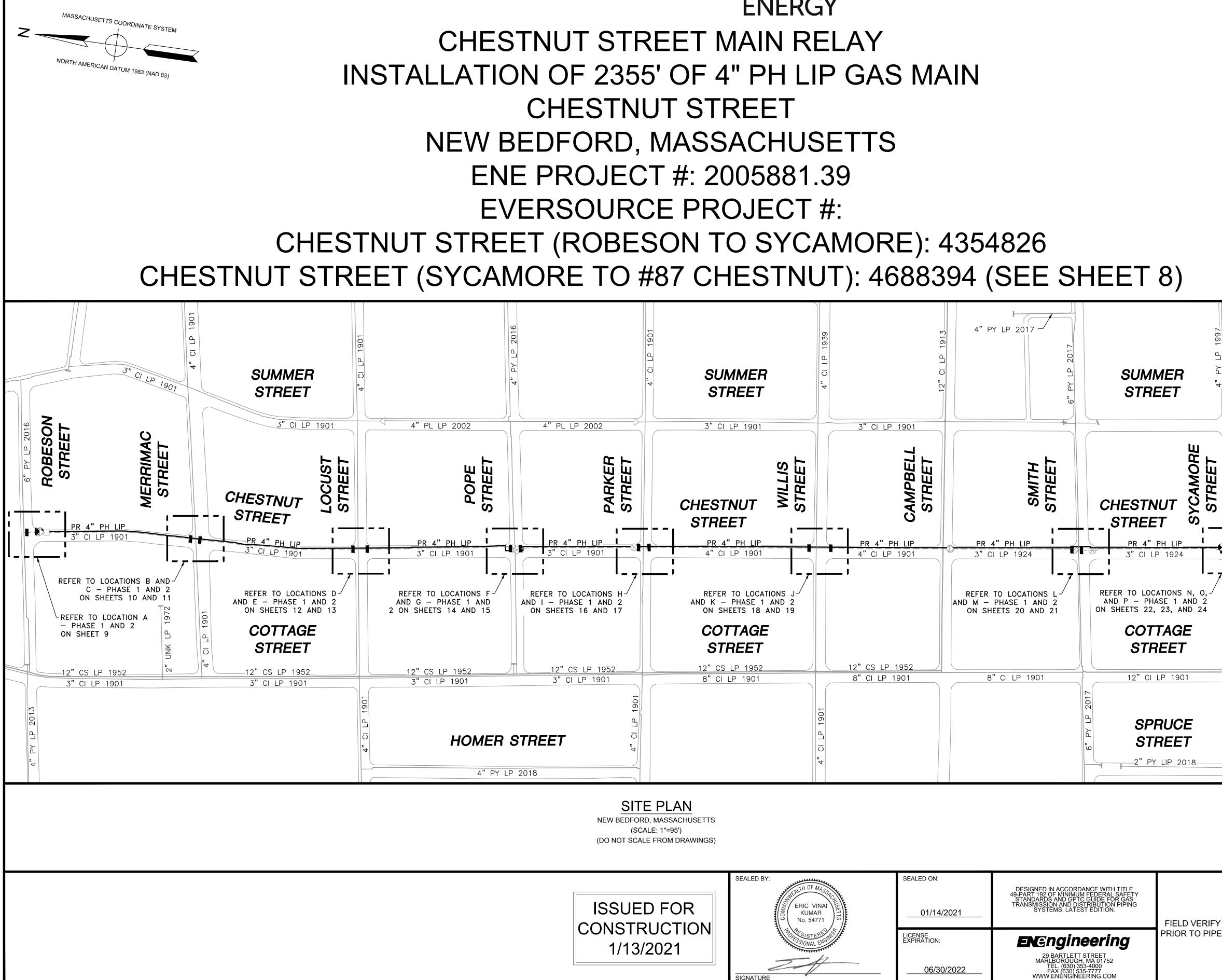
EVERSSURCE ENERGY CHESTNUT STREET



SSUED FOR NSTRUCTION 1/13/2021	SEALED BY:	SEALED ON: 01/14/2021	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
		LICENSE EXPIRATION:	EN ©ngineering	PRIOR TO PIPE
		06/30/2022	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	

	Caroline Senior Center	Diversified Roofing Systems, Inc	Tropical Barbershop Kingdom Hall of Jehovah's Witnesses Franklin St Expression art St Franklin St Expression Franklin St Expression art St Bedford Village Franklin St Expression Franklin St Expression page St Clasky Common Park Franklin St Expression Franklin St Expression Parker St Parker St Savoy Nursing St Rehabilitation Franklin St Expression Expression Campbell St Savoy Nursing St Rehabilitation Savoy Nursing St Rehabilitation Network Alliance System of St Campbell St Saverage Safelite AutoGlass System of St Cuttyhunk Fery Groundwork System of St Wetwork are store Martel St Mark S Beverage Steret of Store Martel St System of St Wetwork are store Martel St More of Store Store store Martel St <t< th=""></t<>			
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	1	SITE PLAN, LOCUS PLAN AND SHEET IN	IDEX			
	2	GENERAL NOTES				
4 °	4	INSTALLATION PLAN				
	5	INSTALLATION PLAN				
	6	INSTALLATION PLAN				
	7	INSTALLATION PLAN				
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	9 LOCATION A - PHASE 1, 2 AND SCHEDULE OF MATERIALS					
	10	LOCATION B - PHASE 1, 2 AND SCHEDU				
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	14	LOCATION F - PHASE 1, 2 AND SCHEDU				
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	16	LOCATION H - PHASE 1, 2 AND SCHEDU	ILE OF MATERIALS			
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	EK 1/13/2021	MA21PIPNEB018R1	MA-21-PIP-NEB-018-01 1			

GENERAL NOTES

- 1. 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.
 - A. IF THE TIE IN POINT MOVES TO A DIFFERENT SEGMENT OF PIPE THAN SHOWN
 - B. IF A CHANGE IN THE LOCATION OF VALVES IS REQUIRED
 - C. 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
 - D. IF A CHANGE IN PIPE SIZE, MATERIAL, FITTINGS, OR WALL THICKNESS IS REQUIRED.
- 2. MINOR CHANGES SUCH AS OFFSETS MAY NOT REQUIRE DRAWING CHANGES.
- 3. EXCAVATOR SHALL CALL DIGSAFE/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.
- 4. CONSTRUCTION DRAWINGS ARE BASED ON EVERSOURCE HISTORICAL DOCUMENTATION AND HAVE NOT BEEN FIELD VERIFIED. WHEN THE PIPE IS EXPOSED AND VARIANCES TO THE CERTIFIED DRAWINGS ARE FOUND, CONTACT GAS ENGINEERING TO DETERMINE PATH FORWARD.
- 5. ALL WORK SHALL BE PERFORMED PER EVERSOURCE, LOCAL, STATE, OSHA, AND FEDERAL REGULATIONS AND STANDARDS.
- 6. MATERIAL AND CONSTRUCTION SHALL CONFORM TO EVERSOURCE GAS STANDARDS.
- 7. THE LOCATIONS OF EXISTING UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MUST BE FIELD VERIFIED. ADDITIONAL UNDERGROUND FACILITIES MAY EXIST THAT ARE NOT SHOWN ON THESE DRAWINGS WHICH MAY REQUIRE ADDITIONAL OFFSETS IN THE PIPELINE.
- 8. WORK LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXACT LOCATIONS OF TIE-INS SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION TO SUIT FIELD CONDITIONS AT THE SPECIFIC TIE-IN POINT. VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY TIE-IN WORK.
- 9. ALL LIVE GAS WORK 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.
- 10. EXCAVATOR IS REQUIRED TO PROTECT EXISTING UTILITIES, STRUCTURES, LANDSCAPE FEATURES, SIGNAGE, CURBS, ETC. CARE SHOULD BE TAKEN NOT TO DISTURB OR DAMAGE SUCH 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.
- 11. IF THE PROJECT IS WITHIN 50 FEET OF A DISTRICT REGULATOR OR GATE STATION, ENSURE THAT A QUALIFIED I&R TECHNICIAN IS ON SITE.
- 12. 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.
- 13. PROPERTY LINES, STRUCTURES AND EXISTING CONDITIONS DEPICTED ON PLANS ARE BASED ON EVERSOURCE GIS INFORMATION AND HAVE NOT BEEN VERIFIED BY LAND SURVEY UNLESS NOTED.
- 14. 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.
- 15. PROPOSED WORK SHALL BE PERFORMED AND COMPLETED IN COMPLIANCE WITH ALL PERMITS AND APPROVALS.
- 16. MAINS AND SERVICES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH EVERSOURCE OM-205.
- 17. MAOP:

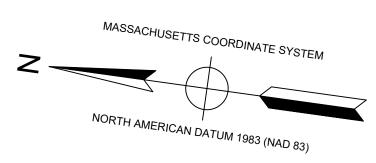
LP = 14" W.C.
LIP = 35 PSIG
IP = 60 PSIG
HP = 90 PSIG

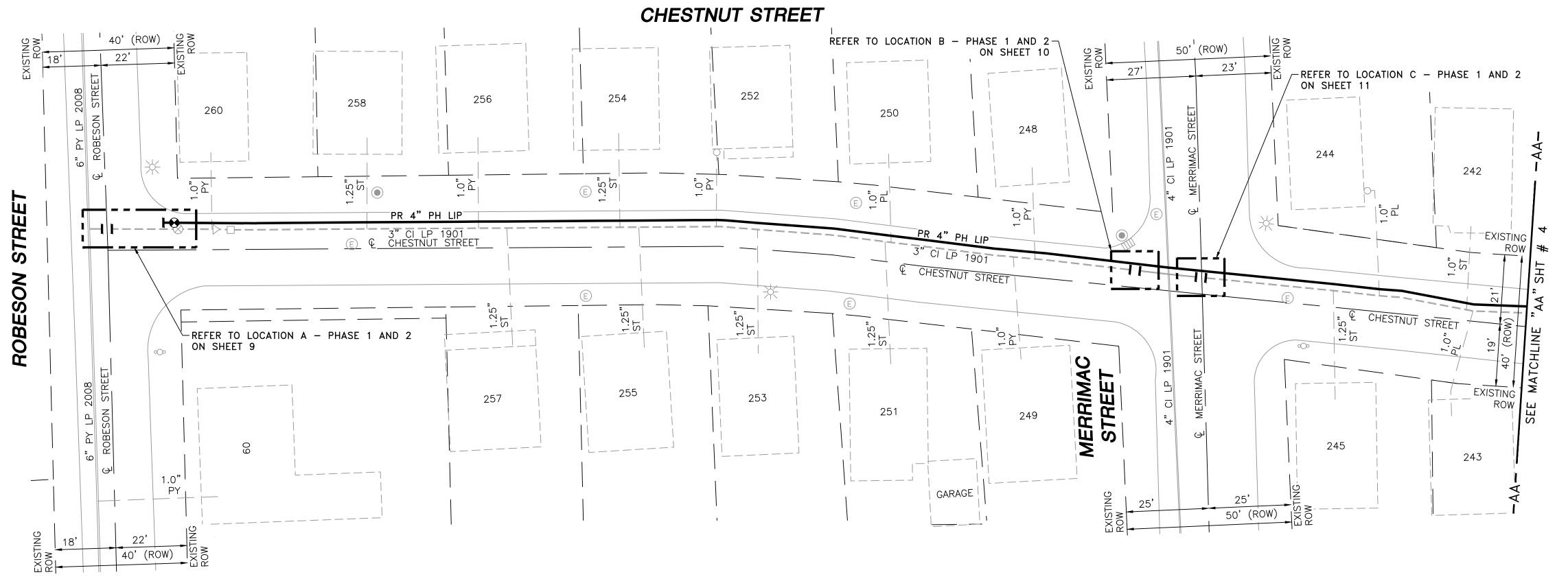
18. ALL WORK SHALL BE PERFORMED PER EVERSOURCE, LOCAL, STATE AND FEDERAL REGULATIONS AND STANDARDS.

- 19. ALL PIPE WILL BE INSTALLED WITH A MINIMUM DEPTH IN ACCORDANCE WITH EVERSOURCE STANDARDS
- 20. SQUEEZE OPERATIONS SHOULD BE COMPLETED IN ACCORDANCE WITH OM-233
- 21. ENSURE ALL SERVICES BEING TRANSFERRED TO A HIGHER PRESSURE SYSTEM HAVE UPGRADED PRESSURE REGULATORS INSTALLED PRIOR TO ACTIVATION.
- 22. ENSURE VALVES ON EXISTING MAIN, WHERE PROPOSED MAIN WILL BE INSERTED HAVE BEEN MADE INOPERABLE.
- 23. ADDITIONAL VALVES AND TEES THAT ARE INCLUDED IN THE SCHEDULE OF MATERIALS MAY BE INSTALLED TEMPORARILY WHEN NEEDED TO FACILITATE TIE-INS AND PURGES.
- 24. METFIT FITTINGS MAY BE SUBSTITUTED FOR ELECTROFUSION FITTINGS WHERE NEEDED.
- 25. DO NOT SCALE FROM DRAWINGS.

SEALED BY:	SEALED ON: 01/14/2021	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
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SIGNATURE	06/30/2022	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	

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NOTES: 1. CONTRACTOR TO POTHOLE EXISTING UTILITIES

AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION. 2. REFER TO GENERAL NOTES AND SCHEDULE OF MATERIALS ON SHEET #2.

LENGTH	SIZE MATERIAL		DESCRIPTION
415'	4"	РН	INSTALL
375'	3"	CI	RETIRE
40'	4"	PY	RETIRE



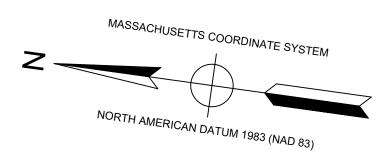
	SEALED BY:			FIELD VERIFY
CONSTRUCTION 1/13/2021		LICENSE EXPIRATION: 06/30/2022	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPI

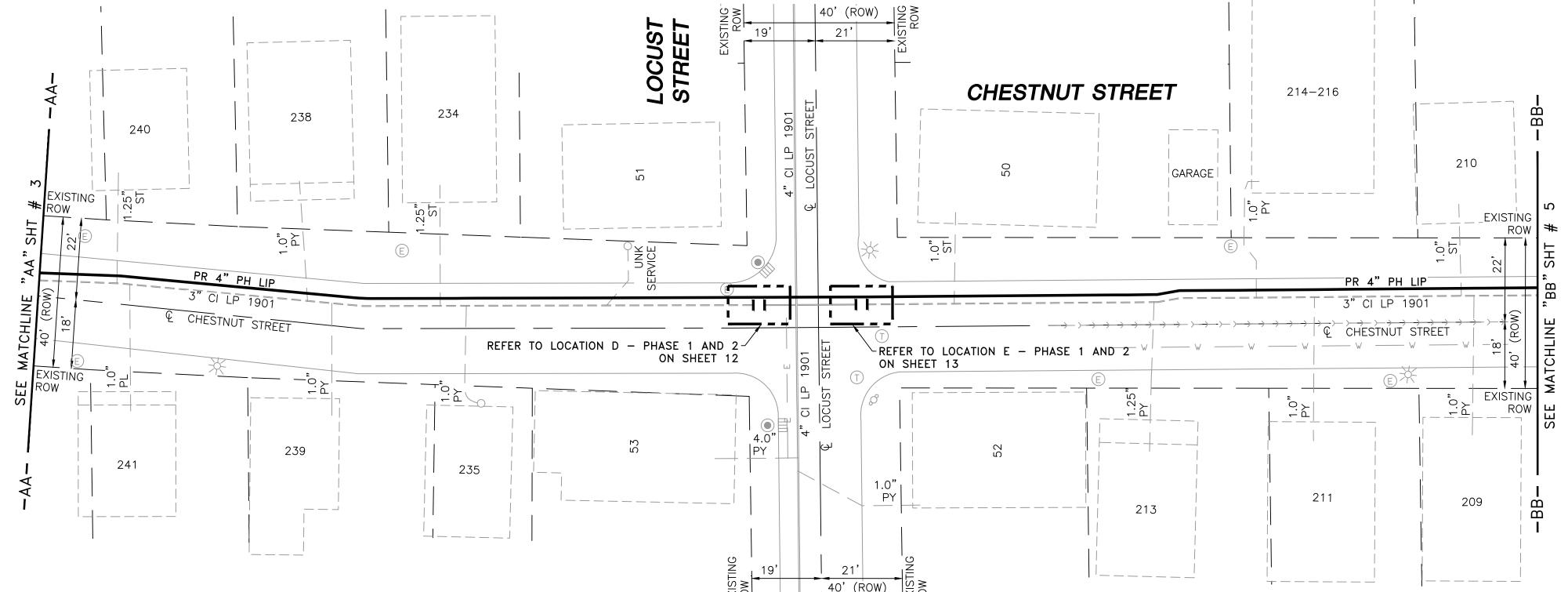




DRAWING LEGEND

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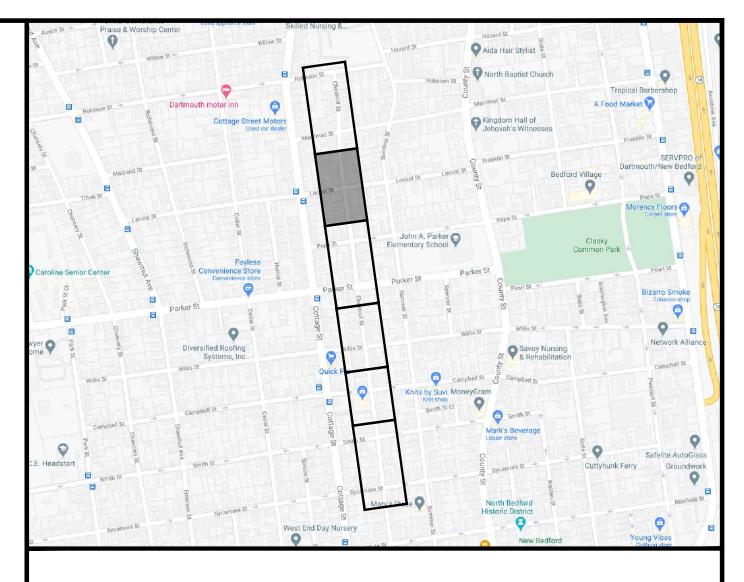


NOTES: 1. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

2. REFER TO GENERAL NOTES AND SCHEDULE OF MATERIALS ON SHEET #2.

LENGTH	SIZE	MATERIAL	DESCRIPTION
400'	4"	РН	INSTALL
245'	3"	CI	RETIRE

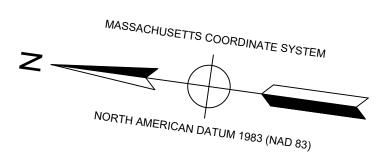
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ISSUED FOR	SEALED BY:	SEALED ON: 01/14/2021	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS
CONSTRUCTION 1/13/2021	SIGNATURE	LICENSE EXPIRATION: 06/30/2022	ENERGINEERING 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE FABRICATION

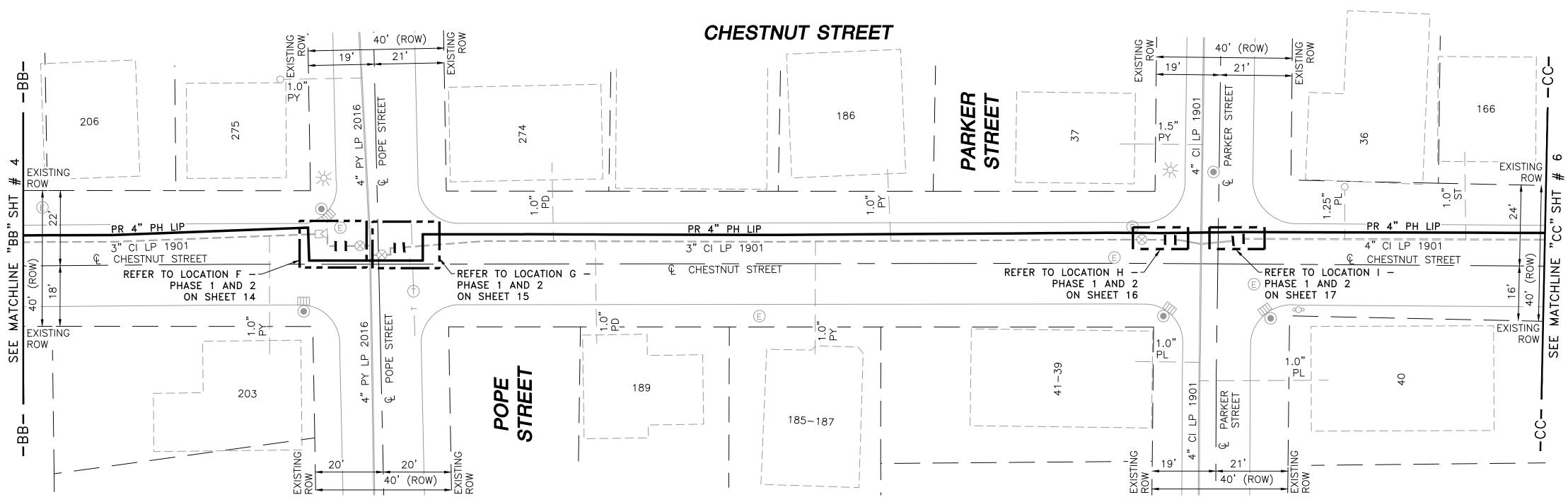




DRAWING LEGEND

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NOTES: 1. CONTRACTOR TO POTHOLE EXISTING UTILITIES

AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION. 2. REFER TO GENERAL NOTES AND SCHEDULE OF MATERIALS ON SHEET #2.

LENGTH SIZE MATERIAL DESCRIPTION 455' INSTALL 4" PH 310' 3" CI RETIRE 90' CI RETIRE 4" ΡY 10' RETIRE 4"



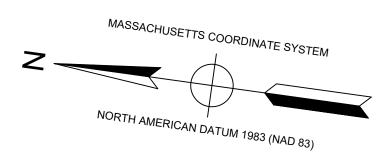
ISSUED FOR CONSTRUCTION 1/13/2021	ERIC VINAI KUMAR No. 54771	SEALED ON: 01/14/2021	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS
		LICENSE EXPIRATION: 06/30/2022	ENErgineering 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE FABRICATION

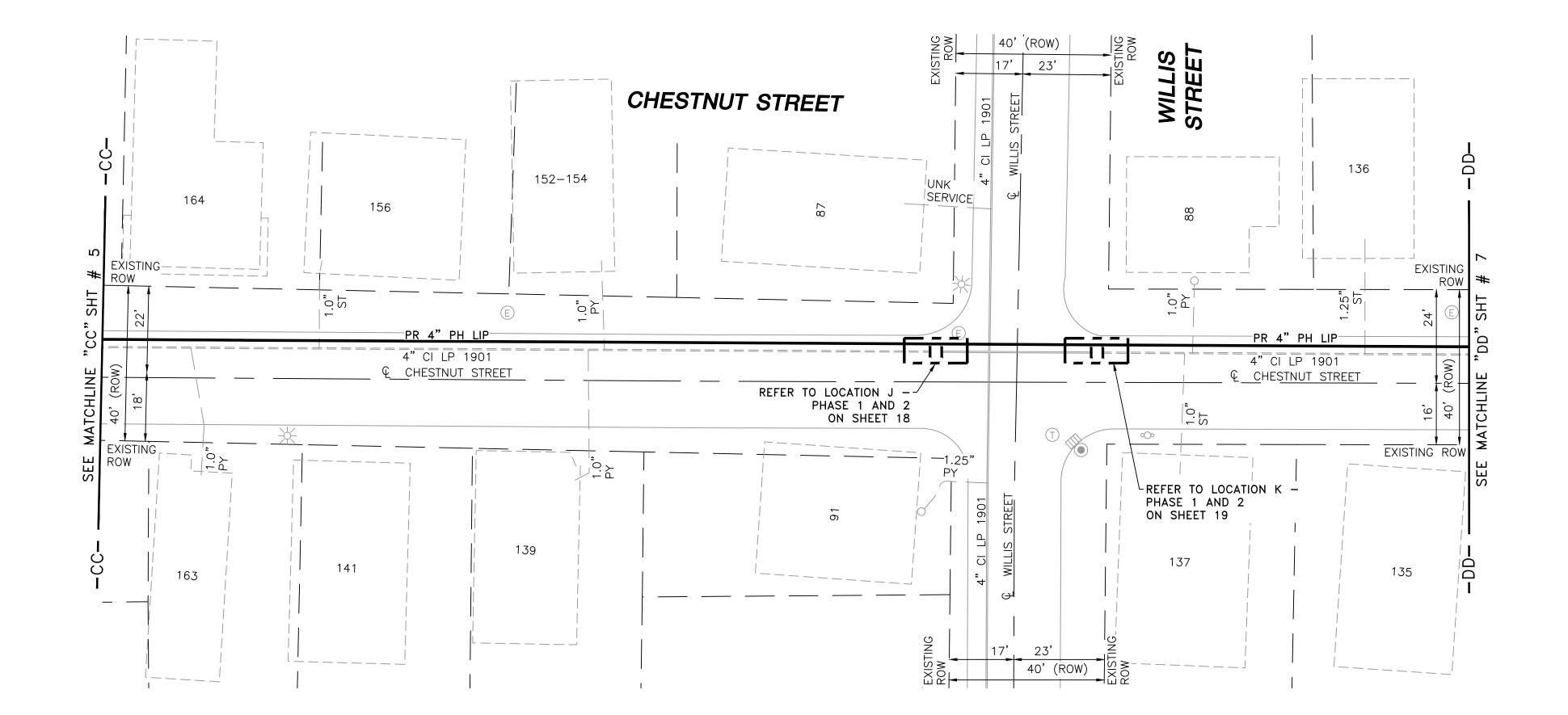




DRAWING LEGEND

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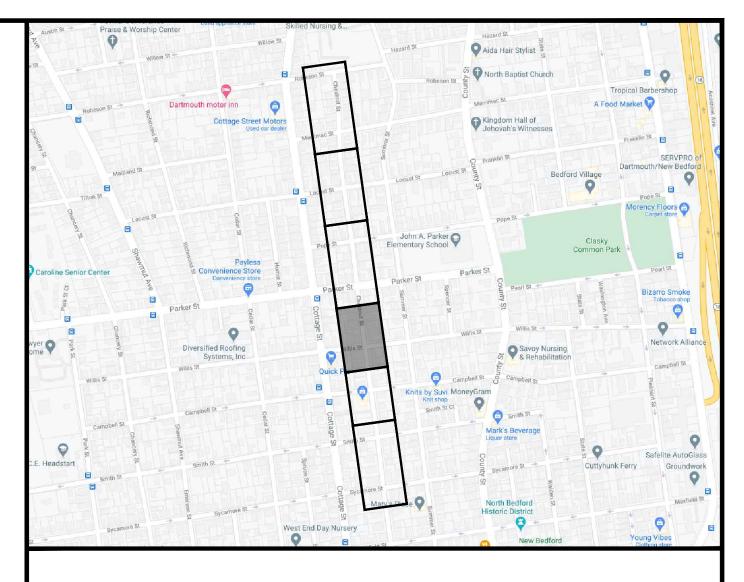
NOTES: 1. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

2. REFER TO GENERAL NOTES AND SCHEDULE OF MATERIALS ON SHEET #2.

LENGTH	SIZE	MATERIAL	DESCRIPTION
355'	4"	РН	INSTALL
310'	4"	CI	RETIRE



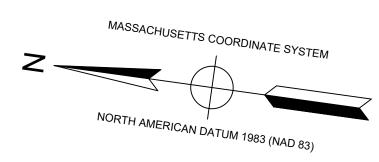
ISSUED FOR	SEALED BY:	SEALED ON: 01/14/2021	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY DIMENSIONS
CONSTRUCTION 1/13/2021	SIGNATURE	LICENSE EXPIRATION: 06/30/2022	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 535-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE FABRICATION

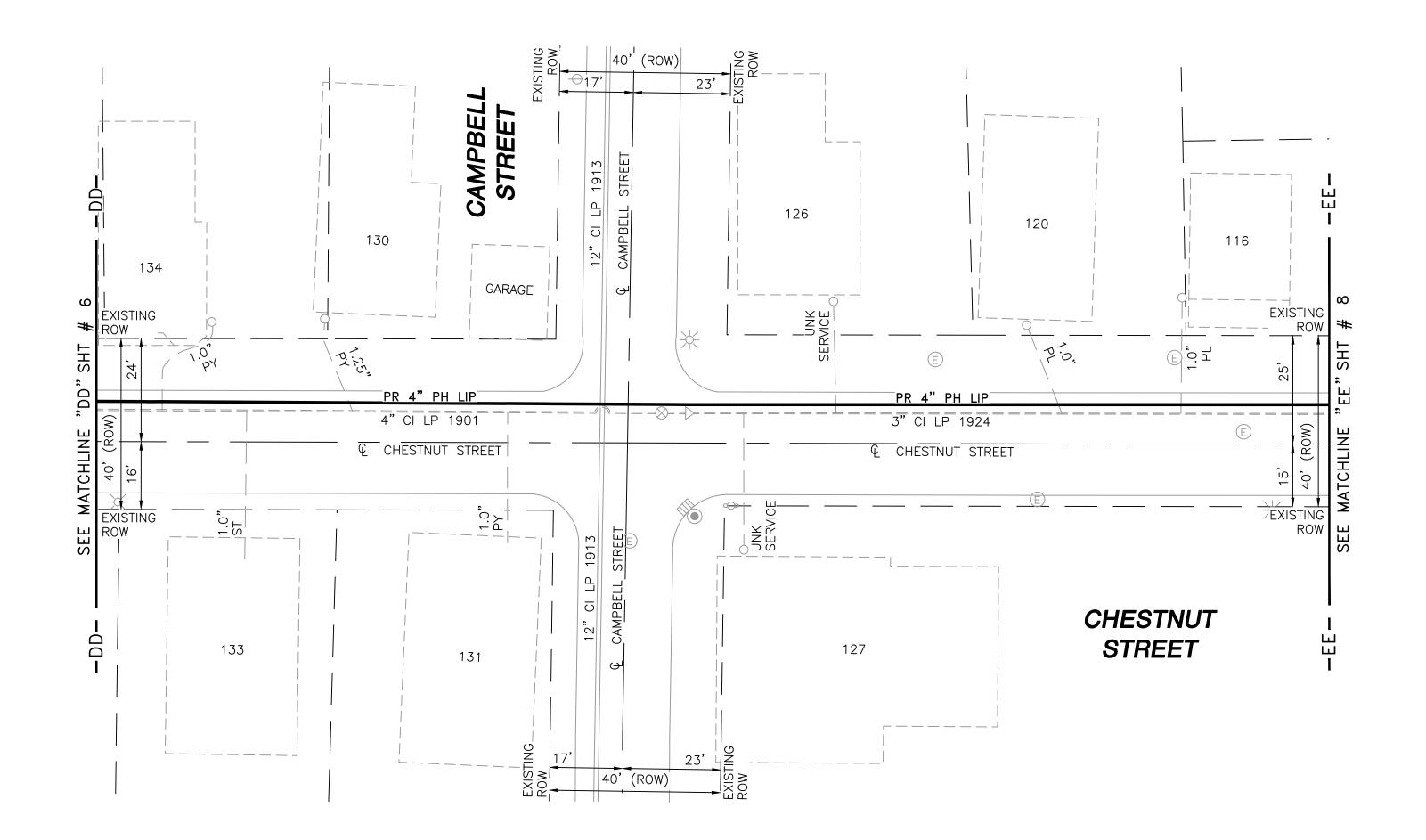




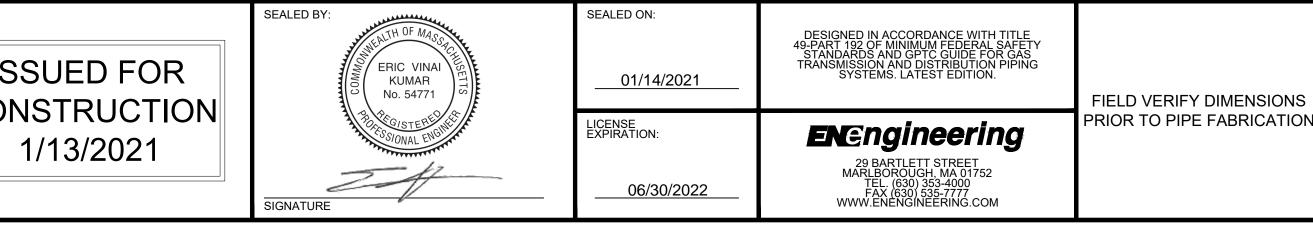
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LENGTH	I SIZE	MATERIAL	DESCRIPTION
290'	4"	PH	INSTALL
150'	3"	CI	RETIRE
140'	4"	CI	RETIRE

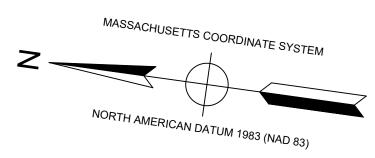


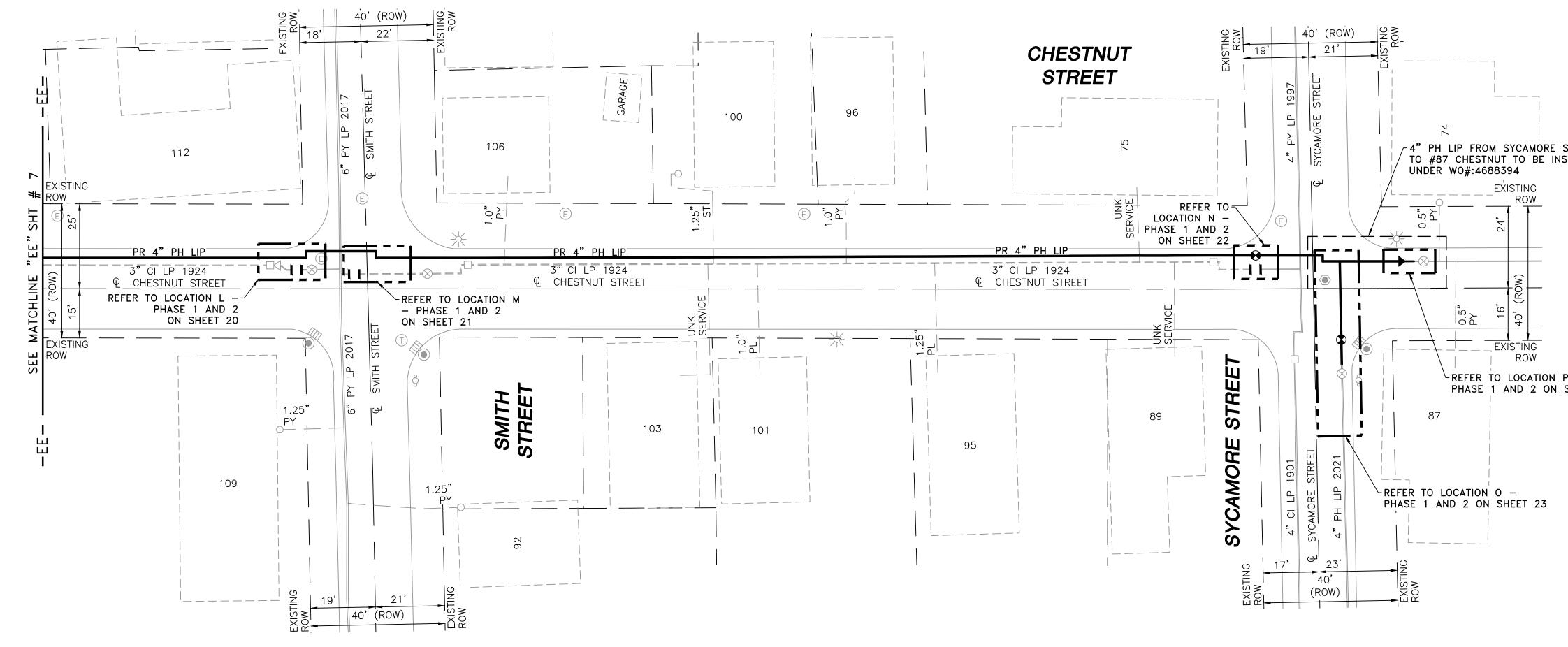




DRAWING LEGEND

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			CHESTNUT S	STREET MA	IN REI	AY		
;			NEW BEDFOR	-		TTS		
N			INSTA	LLATION PI	LAN			
	SCAL	E:1"=20' (DO N	IOT SCALE FR	OM DRAWI	NGS)	SHEE	T 7	OF 25
		AWN BY / DATE S 10/30/2020	CHECKED B AB 1/13/	/ / DATE 2021		SHEET NUMBER		REV. NO.
	APP	ROVED BY / DATE	MA21PIPNE		MA-2	21-PIP-NEB-018-	07	1
	Ľ	EK 1/13/2021						



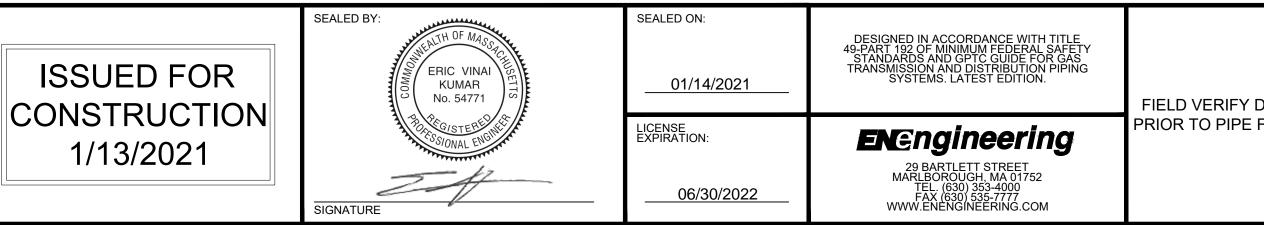


NOTES: 1. CONTRACTOR TO POTHOLE EXISTING UTILITIES

AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

2. REFER TO GENERAL NOTES AND SCHEDULE OF MATERIALS ON SHEET #2.

LENGTH	SIZE	MATERIAL	DESCRIPTION
5'	3"	PH	INSTALL
440'	4"	РН	INSTALL
290'	3"	CI	RETIRE
60'	4"	PY	RETIRE

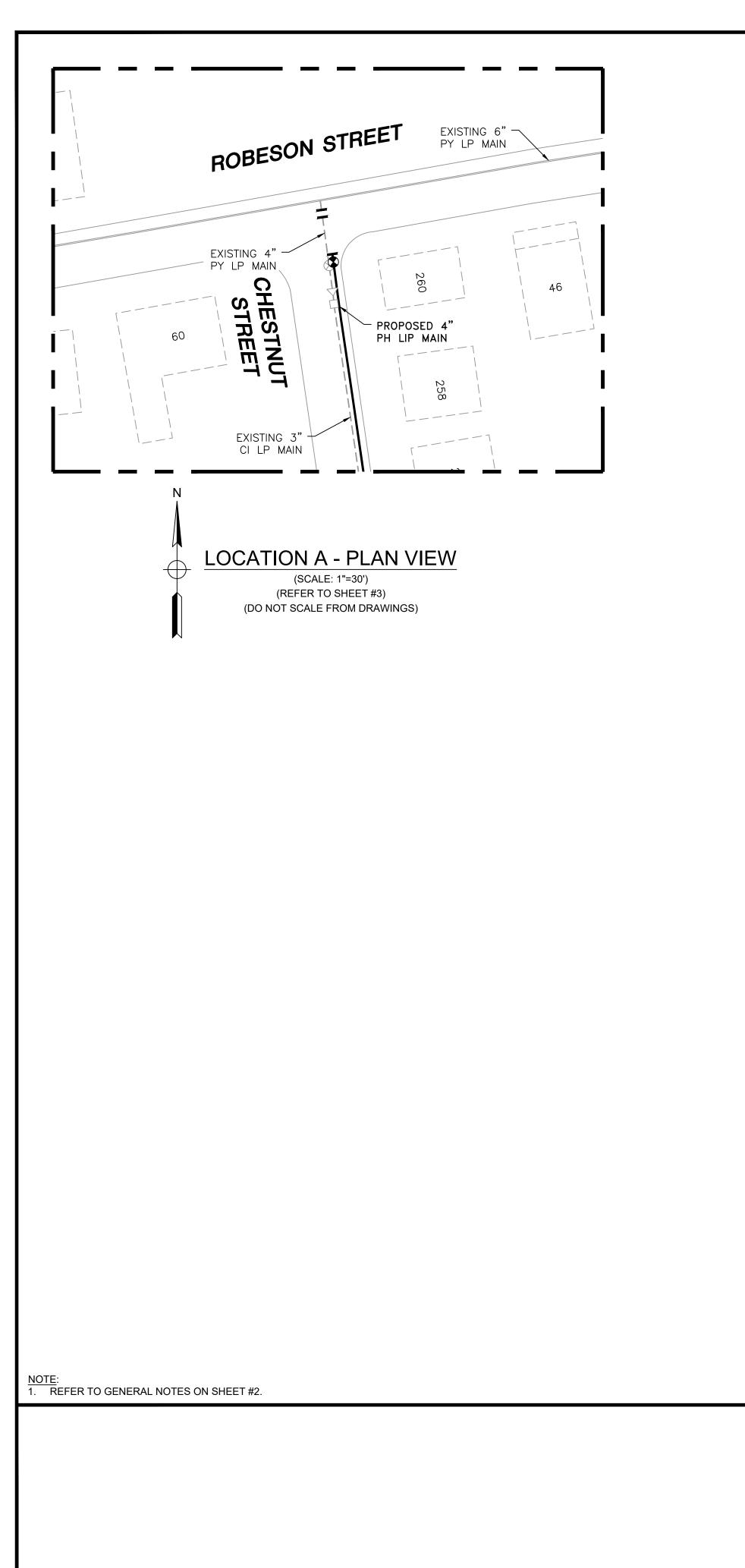






DRAWING LEGEND

STREET ISTALLED)	UTILITY POLE			EXISTING G	AS MA	IN	
	X	×	LIGHT POLE			RETIRED GA	AS MAI	N	
	CATCH BASIN				PROPOSED	GAS N	ΛΑΙΝ		
	0)o	FIRE HYDRANT			EXISTING SE	ERVIC	E	
			UTILITY MANHOLE			RIGHT OF W	ΆΥ		
	E		ELECTRIC MANHOLE	——— E —		ELECTRIC			
P – SHEET 24	(1	D	TELEPHONE MANHOLI	Е — т -		TELEPHONE	E		
	V	V	WATER MANHOLE	W		WATER			
	SANITARY MANHOLE			$\prec -\!$	<	SANITARY SEWER			
	STORM MANHOLE			-<((((((<	STORM SEW	/ER		
		>	EXISTING REDUCER	•	► PROPOS			ED REDUCER	
	1	l	EXISTING CAP	I		PROPOSED CAP			
	Ś	3	EXISTING VALVE	θ		PROPOSED VALVE			
			EXISTING COUPLING	\$		PROPOSED ANODE			
	4			-		4/40/0004			
	1		ADDED WO#4688394 ED FOR CONSTRUCT			1/13/2021 12/14/2020		AB/EK AB/EK	
	NO.		CRIPTION			DATE		CK/AP	
				VISION STAT					
			EVE	RSU I	RCE				
					ENERGY				
	CHESTNUT STREET MAIN RELAY								
	NEW BEDFORD, MASSACHUSETTS								
FABRICATION	INSTALLATION PLAN SCALE:1"=20' (DO NOT SCALE FROM DRAWINGS) SHEET 8 OF 25								
	DF	RAWN B	/ / DATE CHECKE	DBY / DATE		SHEE HEET NUMBER		OF 25 REV. NO.	
	Z	ZS 10/3	D/2020 AB 1/	13/2021		-PIP-NEB-018-		1	
	2.4.1	EK 1/13	MA21PIP	NEB018R1	IVI/~~~ I		00	1	



STREET CHES

6"PYLP

	CHESTNUT STREET MAIN RELAY - LOCATION A - SCHEDULE OF MATERIALS								
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL				
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513				
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID					
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350				
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513				
92	1	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513				
128	2	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513				
254	AS REQUIRED	2"	581633	END CAP MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513				
265	10'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513				
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER,	ASTM D2513				

ROBESON STREET ROBESON STREET 6" PY LP 6" PY LP 6"PYLP 270 – GAUGE (92) łœ 1, (MIN.) SQUEEZE OFF MAIN 35 67 (35) 67 VENT STACK (128) 254 Ш 4" PY LP TR (67) 254 VENT STACK (128) Z CH ð **ا**ل 265 4" PY LP 4 PR LOCATION A - PHASE 1 LOCATION A - PHASE 2 (SCALE: 1"=2') (REFER TO SHEET #3) (SCALE: 1"=2') (REFER TO SHEET #3) (DO NOT SCALE FROM DRAWINGS) (DO NOT SCALE FROM DRAWINGS) SEALED ON: SEALED BY: 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. **ISSUED FOR** ERIC VINAI KUMAR No. 54771 01/14/2021 CONSTRUCTION LICENSE EXPIRATION: **EN**@ngineering 1/13/2021

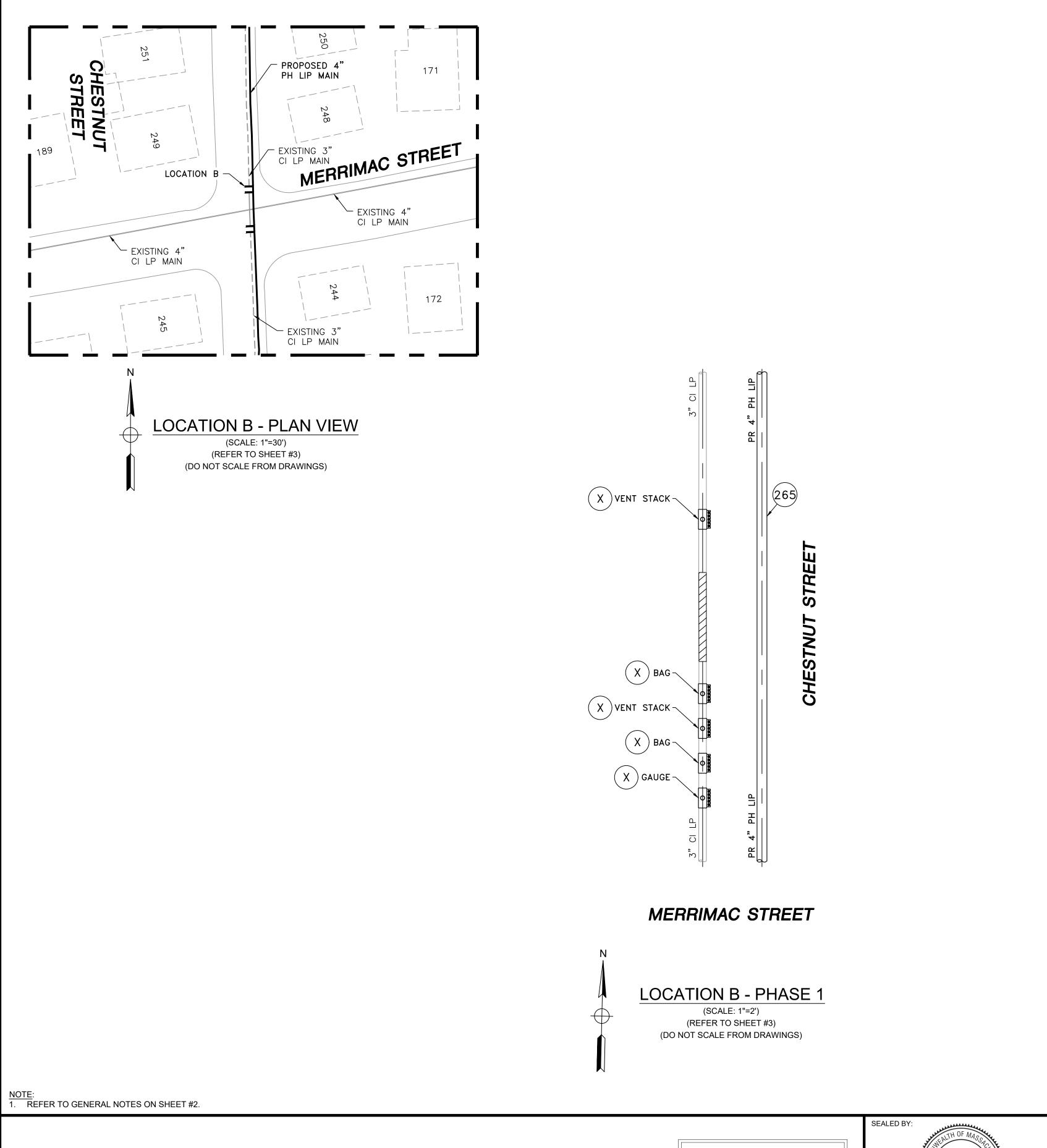
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SIGNATURE

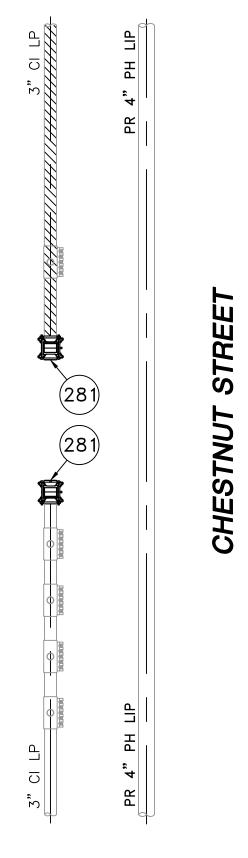
29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM

06/30/2022

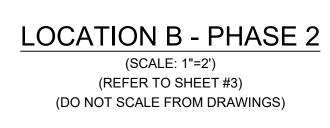
	1 IFC - NO CHAN	IGES THIS SHEET	1/13/2021	BS/	AB/EK		
	0 ISSUED FOR C	ONSTRUCTION	12/14/2020	ZS//	AB/EK		
	NO. DESCRIPTION		DATE	DW/	CK/AP		
		REVISION STATI	JS				
		EVERS€ U	RCE				
	ENERGY						
	CHESTNUT STREET MAIN RELAY						
FIELD VERIFY DIMENSIONS	NEW BEDFORD, MASSACHUSETTS						
PRIOR TO PIPE FABRICATION	LOCATION	A - PHASE 1, 2 AND SCH	EDULE OF MATERIA	ALS			
	SCALE: AS NOTED		SHEE	ET 9	OF 25		
	DRAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021	SHEET NUMBER		REV. NO.		
	APPROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-21-PIP-NEB-018-	-09	1		



CH								
ITEM	QTY	SIZE	MAXIMO NO.					
				BAND CLAMP,				
Х	5	3" x 2"		WITH TEFLON				
				APPROVED EQ				
265	15'	4"	554008	PIPE, IPS, HDPE				
281	2	3"		END CAP, BOL				
	X 265	X 5 265 15'	X 5 3" x 2" 265 15' 4"	X 5 3" x 2" 265 15' 4" 554008				

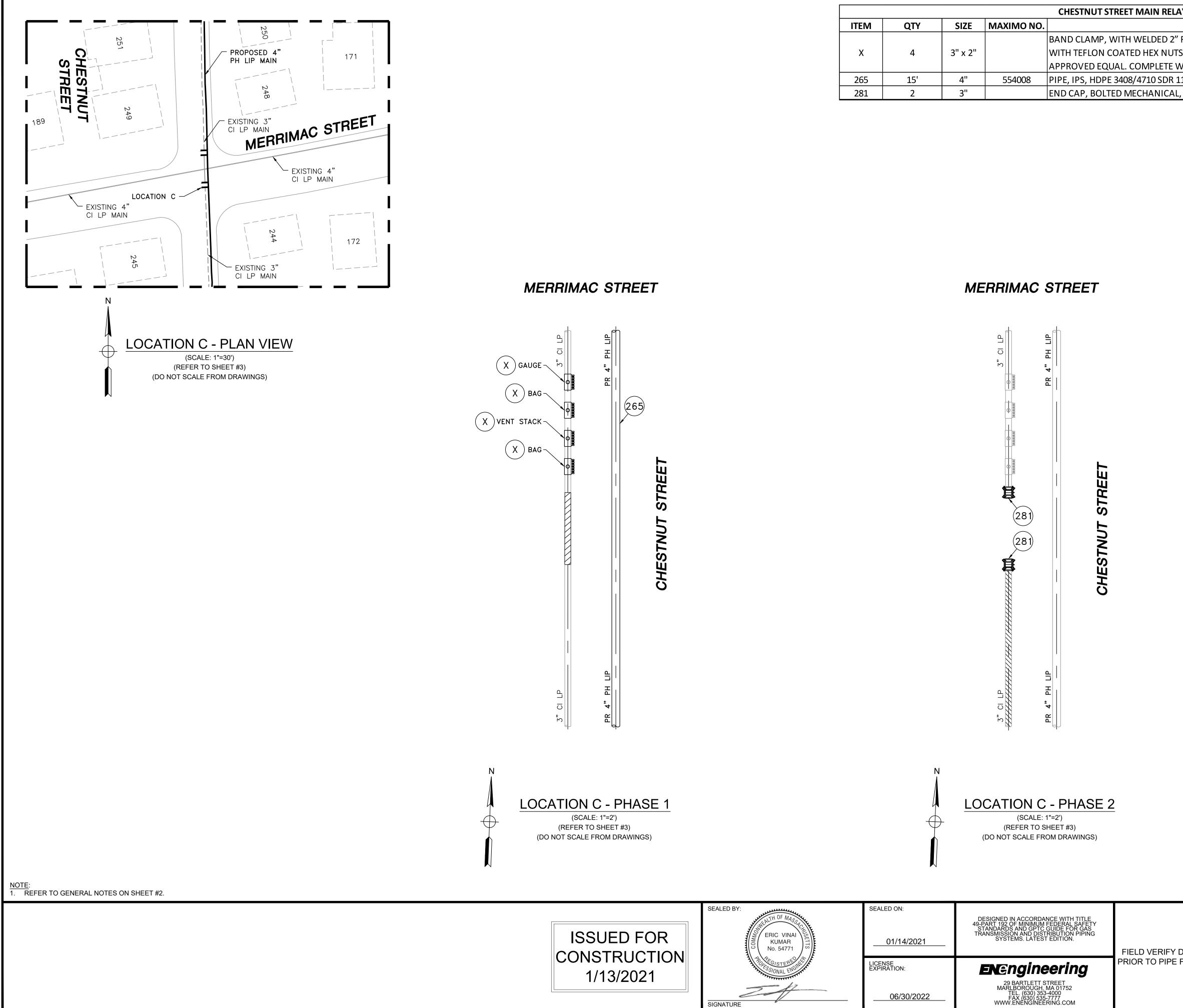


MERRIMAC STREET



		<u> </u>						
(SCALE: 1"=2') (REFER TO SHEET #3)		\oplus	(SCALE: 1"=2') (REFER TO SHEET #3)					
NOT SCALE FROM DRAWINGS)		(DO NOT SCALE FROM DRAWINGS)						
					1 IFC - NO CHAN	NGES THIS SHEET	1/13/2021	BS/AB/EK
					0 ISSUED FOR (CONSTRUCTION	12/14/2020	ZS/AB/EK
					NO. DESCRIPTION		DATE	DW/CK/AP
						REVISION STAT	JS	
SEALE	ED BY:	SEALED ON:				EVERS UI	RCF	
	ERIC VINAI KUMAR	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.						
ISSUED FOR		01/14/2021	TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.			CHESTNUT STREET MA	12/14/2020 ZS/A DATE DW/C STATUS DECE ENERGY ENERGY ET MAIN RELAY SSACHUSETTS SCHEDULE OF MATERIALS SHEET 10 C SHEET NUMBER R MA 24 DID NED 040, 40 R	
	No. 54771			FIELD VERIFY DIMENSIONS		NEW BEDFORD, MASSAG	CHUSETTS	
CONSTRUCTION	30 EGISTERES	LICENSE EXPIRATION:	ENGnaineorina	PRIOR TO PIPE FABRICATION	LOCATION	B - PHASE 1, 2 AND SCH	EDULE OF MATERIA	LS
1/13/2021	300/ONAL ENG	EXFINATION.	EN Engineering		SCALE: AS NOTED		SHEE	T 10 OF 25
	24	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (200) 252 4000		DRAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021	REV. NO.	
SIGNA	GIGNATURE 06/30/202			APPROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-21-PIP-NEB-018-	10 1	

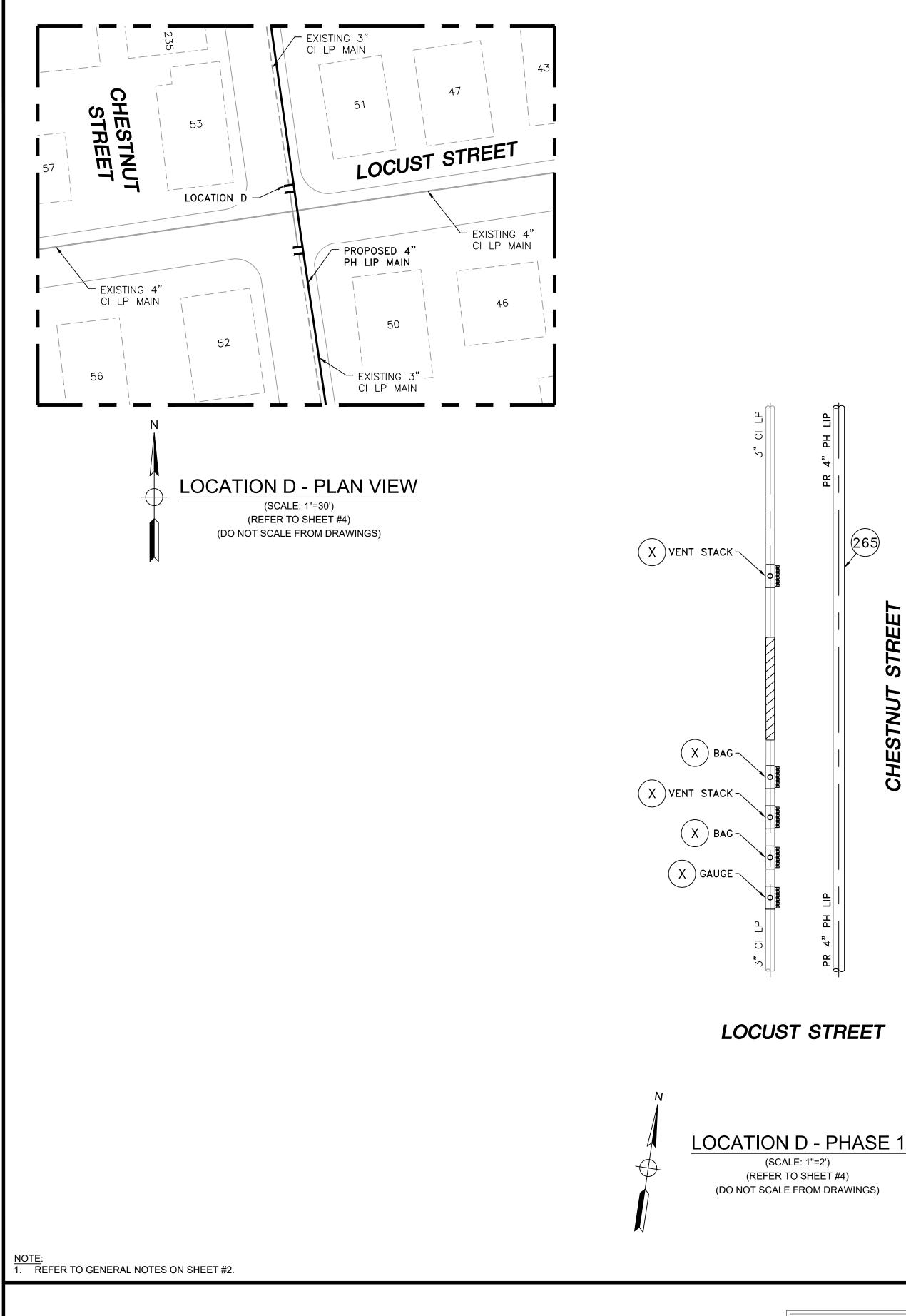
STREET MAIN RELAY - LOCATION B - SCHEDULE OF MATERIALS				
DESCRIPTION	MATERIAL			
WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS				
COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR				
UAL. COMPLETE WITH PLUG.				
E 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513			
TED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL				



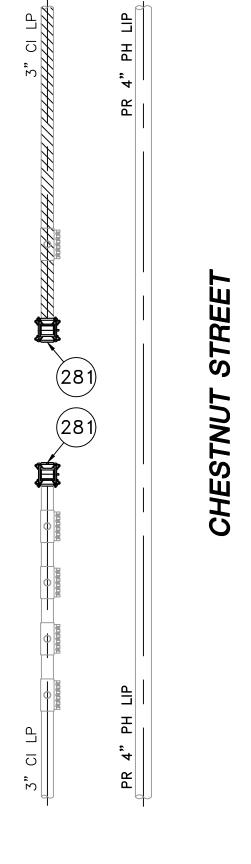
			CHESTNUT STREET MAIN RELA
QTY	SIZE	MAXIMO NO.	
			BAND CLAMP, WITH WELDED 2"
4	3" x 2"		WITH TEFLON COATED HEX NUTS
			APPROVED EQUAL. COMPLETE V
15'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 1
2	3"		END CAP, BOLTED MECHANICAL
	4	4 3" x 2" 15' 4"	4 3" x 2" 15' 4" 554008

AY - LOCATION C - SCHEDULE OF MATERIALS	
DESCRIPTION	MATERIAL
FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS	
S, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR	
VITH PLUG.	
1, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL	

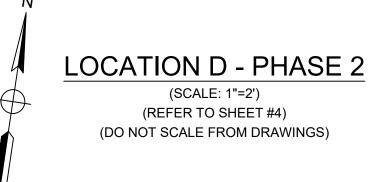
	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK
	0	ISSUED FOR C	CONSTRUCTION		12/14/2020	ZS/	AB/EK
	NO.	DESCRIPTION			DATE	DW/	CK/AP
			REVISION STAT	JS			
			EVERS UI				
	CHESTNUT STREET MAIN RELAY						
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS						
FABRICATION	LOCATION C - PHASE 1, 2 AND SCHEDULE OF MATERIALS						
	SCALE: AS NOTED SHEET				T 11	OF 25	
	DF	RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.
	APP	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	21-PIP-NEB-018-	11	1



CHESTNUT				
	MAXIMO NO.	SIZE	QTY	ITEM
BAND CLAMP,				
WITH TEFLON		3" x 2"	5	Х
APPROVED EQ				
PIPE, IPS, HDPE	554008	4"	15'	265
END CAP, BOL		3"	2	281



LOCUST STREET

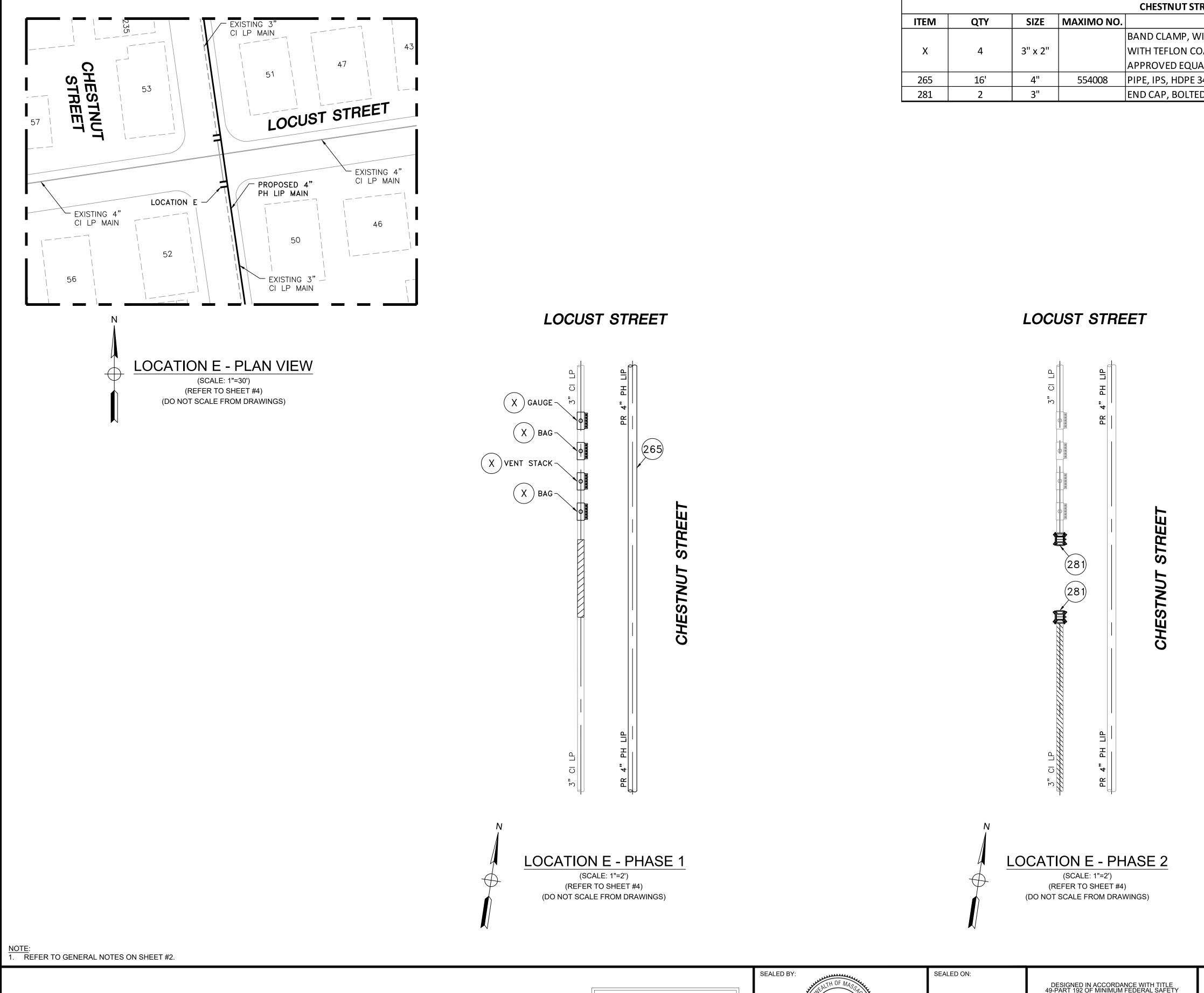


ISSUED FOR	ERIC VINAI KUMAR No. 54771	SEALED ON: 01/14/2021	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY I PRIOR TO PIPE
CONSTRUCTION 1/13/2021		LICENSE EXPIRATION: 06/30/2022	ENERGINEERING 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7177 WWW.ENENGINEERING.COM	

РR 265 STREET CHESTNUT HH LIP *****

UT STREET MAIN RELAY - LOCATION D - SCHEDULE OF MATERIALS				
DESCRIPTION	MATERIAL			
P, WITH WELDED 2″ FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS				
N COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR				
QUAL. COMPLETE WITH PLUG.				
PE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513			
DLTED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL				

	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK	
	0	ISSUED FOR C	ONSTRUCTION		12/14/2020	ZS/	AB/EK	
	NO.	DESCRIPTION			DATE	DW/	CK/AP	
			REVISION STAT	JS				
	EVERS URCE ENERGY							
	CHESTNUT STREET MAIN RELAY							
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS							
FABRICATION	LOCATION D - PHASE 1, 2 AND SCHEDULE OF MATERIALS							
	SCALE: AS NOTED SHEET 12					T 12	OF 25	
	DF	RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.	
	APP	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	1-PIP-NEB-018-	12	1	

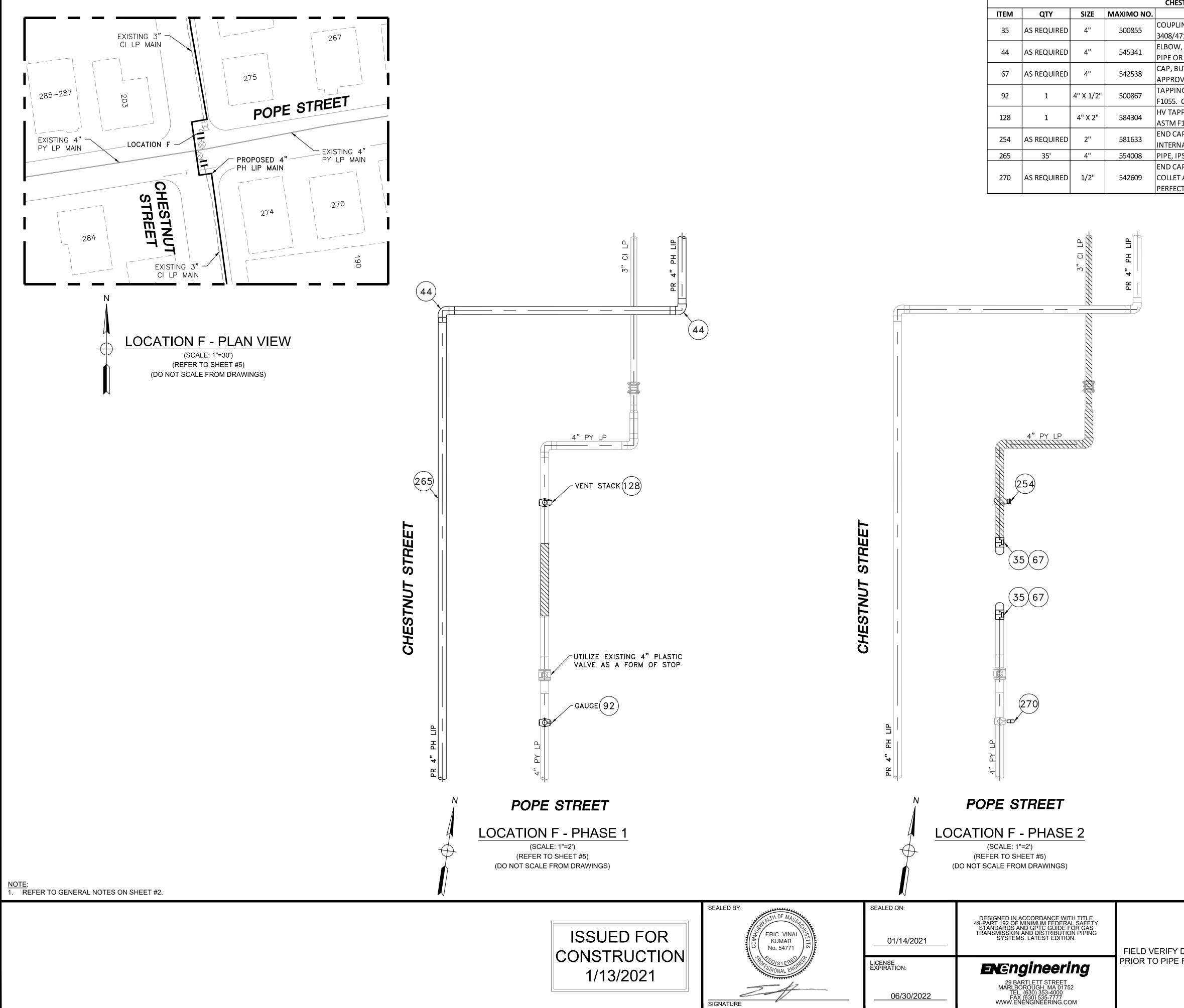


				CHESTNUT STREET MAIN RELA
ITEM	QTY	SIZE	MAXIMO NO.	
				BAND CLAMP, WITH WELDED 2"
X	4	3" x 2"		WITH TEFLON COATED HEX NUTS
				APPROVED EQUAL. COMPLETE V
265	16'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 1
281	2	3"		END CAP, BOLTED MECHANICAL

ISSUED FOR	SEALED BY:	SEALED ON: 01/14/2021	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
CONSTRUCTION 1/13/2021	SIGNATURE	LICENSE EXPIRATION: 06/30/2022	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE

AY- LOCATION E - SCHEDULE OF MATERIALS	
DESCRIPTION	MATERIAL
FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS	
S, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR	
NITH PLUG.	
l1, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL	

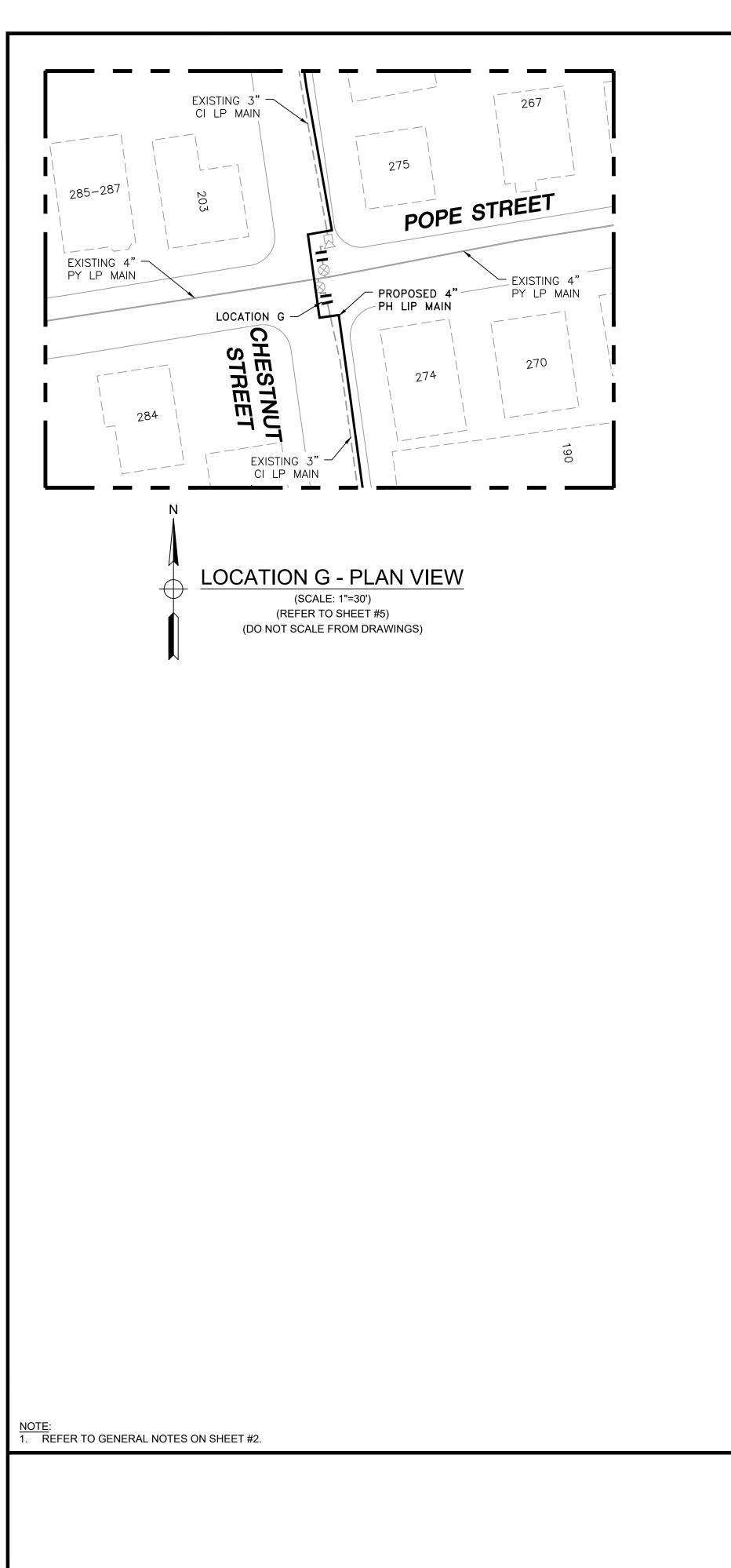
	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK
	0	ISSUED FOR C	CONSTRUCTION		12/14/2020	ZS/	AB/EK
	NO.	DESCRIPTION			DATE	DW/	CK/AP
			REVISION STAT	JS			
			EVERS UI	RCE			
	CHESTNUT STREET MAIN RELAY						
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS						
FABRICATION	LOCATION E - PHASE 1, 2 AND SCHEDULE OF MATERIALS						
	SCALE: AS NOTED SHEET 13 OI					OF 25	
	DF	RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.
	APF	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	21-PIP-NEB-018-	13	1

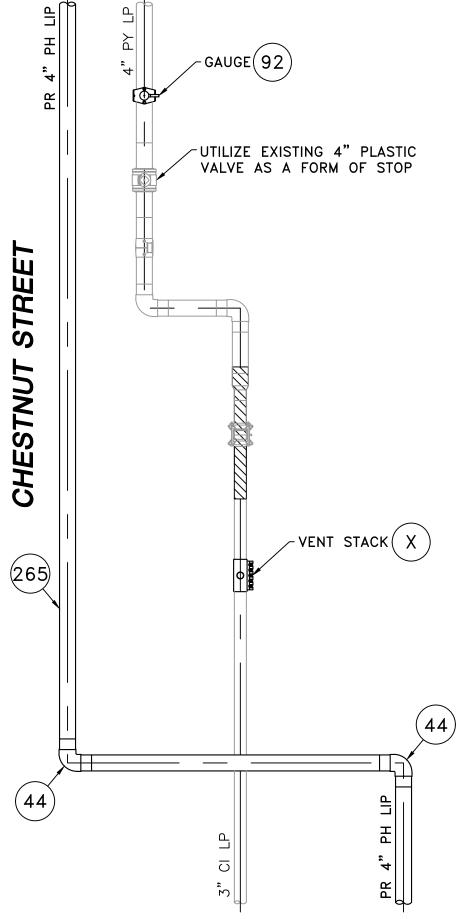


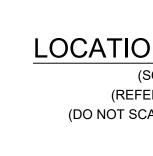
				CHES
ITEM	QTY	SIZE	MAXIMO NO.	
35	AS REQUIRED	4"	500855	COUPLIN
55	AS REQUIRED	4	500855	3408/47
44	AS REQUIRED	4"	545341	ELBOW,
44	AS REQUIRED	4	545541	PIPE OR
67	AS REQUIRED	4"	542538	CAP, BU
07	67 AS REQUIRED		542556	APPROV
92	92 1		500867	TAPPINO
52		4" X 1/2"	500007	F1055. (
128	1	4" X 2"	584304	Ην ταρί
120		4 7 2	564504	ASTM F1
254	AS REQUIRED	2"	581633	END CAI
2.54	AS REQUIRED	2	301033	INTERN
265	35'	4"	554008	PIPE, IPS
				END CAI
270	AS REQUIRED	1/2"	542609	COLLET
				PERFECT

STNUT STREET MAIN RELAY - LOCATION F - SCHEDULE OF MATERIALS	
DESCRIPTION	MATERIAL
NG, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE	
710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE	
R APPROVED EQUAL.	ASTM D2513
JTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR	
VED EQUAL.	ASTM D2513
IG TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM	
CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
PING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261,	
1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
AP MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMRESSION RING,	
IAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
PS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
AP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL	
AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER,	ASTM D2513
TION WITH END CAP OR APPROVED EQUAL.	

	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK	
	0	ISSUED FOR C	ONSTRUCTION		12/14/2020	ZS/	AB/EK	
	NO.	DESCRIPTION			DATE	DW/	CK/AP	
			REVISION STAT	US				
			EVERS€ U	RCF				
	ENERGY							
			CHESTNUT STREET MA	IN REL	AY			
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS							
FABRICATION		LOCATION	F - PHASE 1, 2 AND SCHE	EDULE	OF MATERIA	LS		
	SCA	LE: AS NOTED			SHEE	T 14	OF 25	
		RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021	S	SHEET NUMBER		REV. NO.	
	APF	PROVED BY / DATE FK 1/13/2021	MA21PIPNEB018R1	MA-2	1-PIP-NEB-018-	14	1	

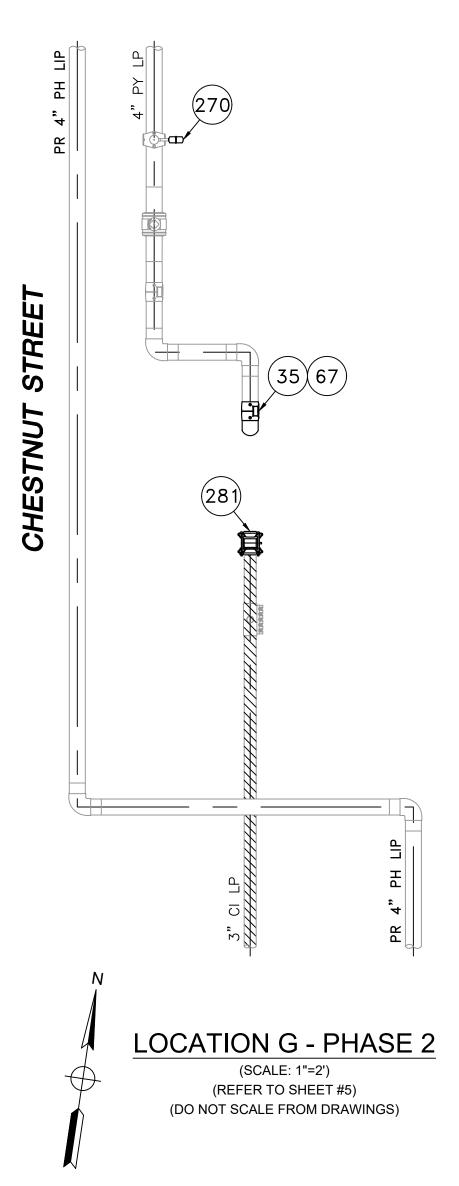


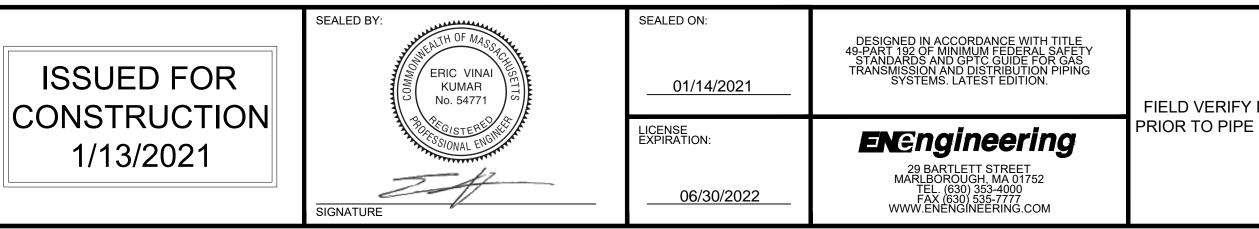




				CHESTNUT STREET MAIN RELAY - LOCATION G - SCHEDULE OF MATERIALS	
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
92	1	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
265	25'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.	ASTM D2513
281	1	3"		END CAP, BOLTED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL	
х	1	3" x 2"		BAND CLAMP, WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS WITH TEFLON COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR APPROVED EQUAL. COMPLETE WITH PLUG.	

POPE STREET

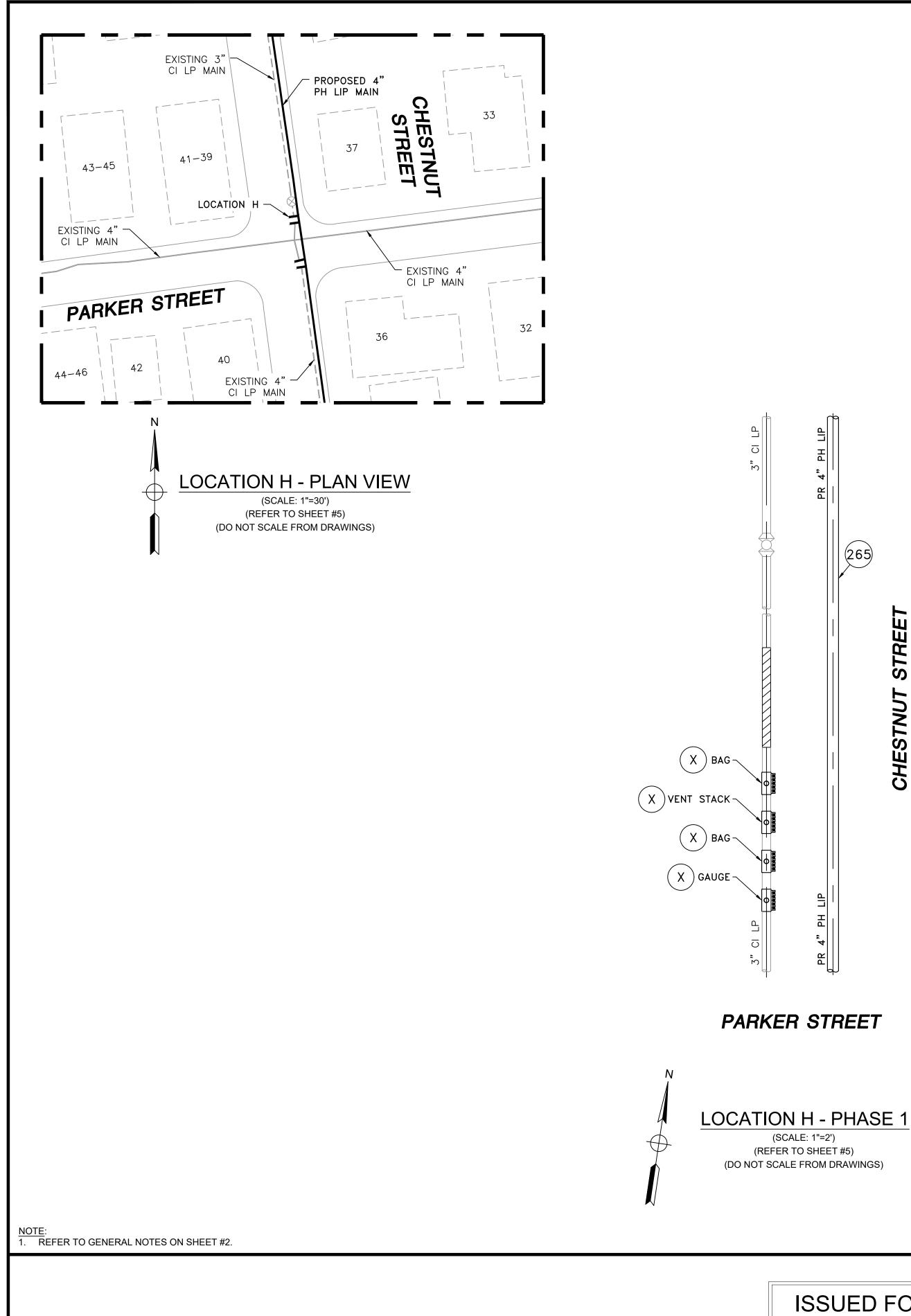




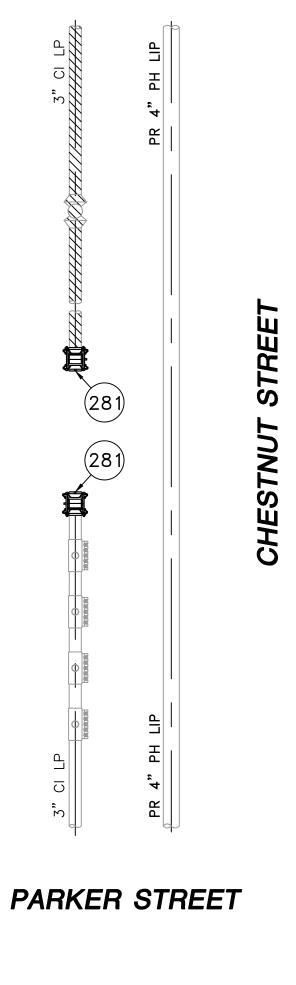
POPE STREET

LOCATION G - PHASE 1 (SCALE: 1"=2') (REFER TO SHEET #5) (DO NOT SCALE FROM DRAWINGS)

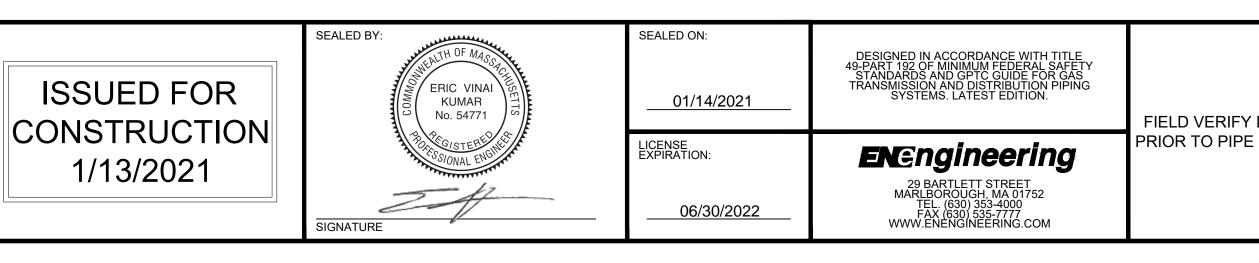
	1	IFC - NO CHAN	IGES THIS SHEET	1	/13/2021	BS/	AB/EK
	0	ISSUED FOR C	CONSTRUCTION	12	2/14/2020	ZS/	AB/EK
	NO.	DESCRIPTION			DATE	DW/	CK/AP
			REVISION STAT	JS			
			EVERS U	RCF			
				ENERGY			
			CHESTNUT STREET MA		ſ		
DIMENSIONS			NEW BEDFORD, MASSAG	CHUSETT	S		
FABRICATION		LOCATION	G - PHASE 1, 2 AND SCHI	EDULE O	F MATERIA	LS	
	SCA	LE: AS NOTED			SHEE	T 15	OF 25
	DF	RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021	SHE	ET NUMBER		REV. NO.
	APF	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-21-F	PIP-NEB-018-	15	1



				CHESTNUT STREET MAI
ITEM	QTY	SIZE	MAXIMO NO.	
265	15'	4"	554008	PIPE, IPS, HDPE 3408/4710
281	2	3"		END CAP, BOLTED MECHA
				BAND CLAMP, WITH WELI
Х	4	3" x 2"		WITH TEFLON COATED HE
				APPROVED EQUAL. COMF
	265 281	265 15' 281 2	265 15' 4" 281 2 3"	265 15' 4" 554008 281 2 3" 3" X 4 3" x 2" 3"



	LOCATION H - PHASE 2
	(SCALE: 1"=2')
-	(REFER TO SHEET #5)
	(DO NOT SCALE FROM DRAWINGS)

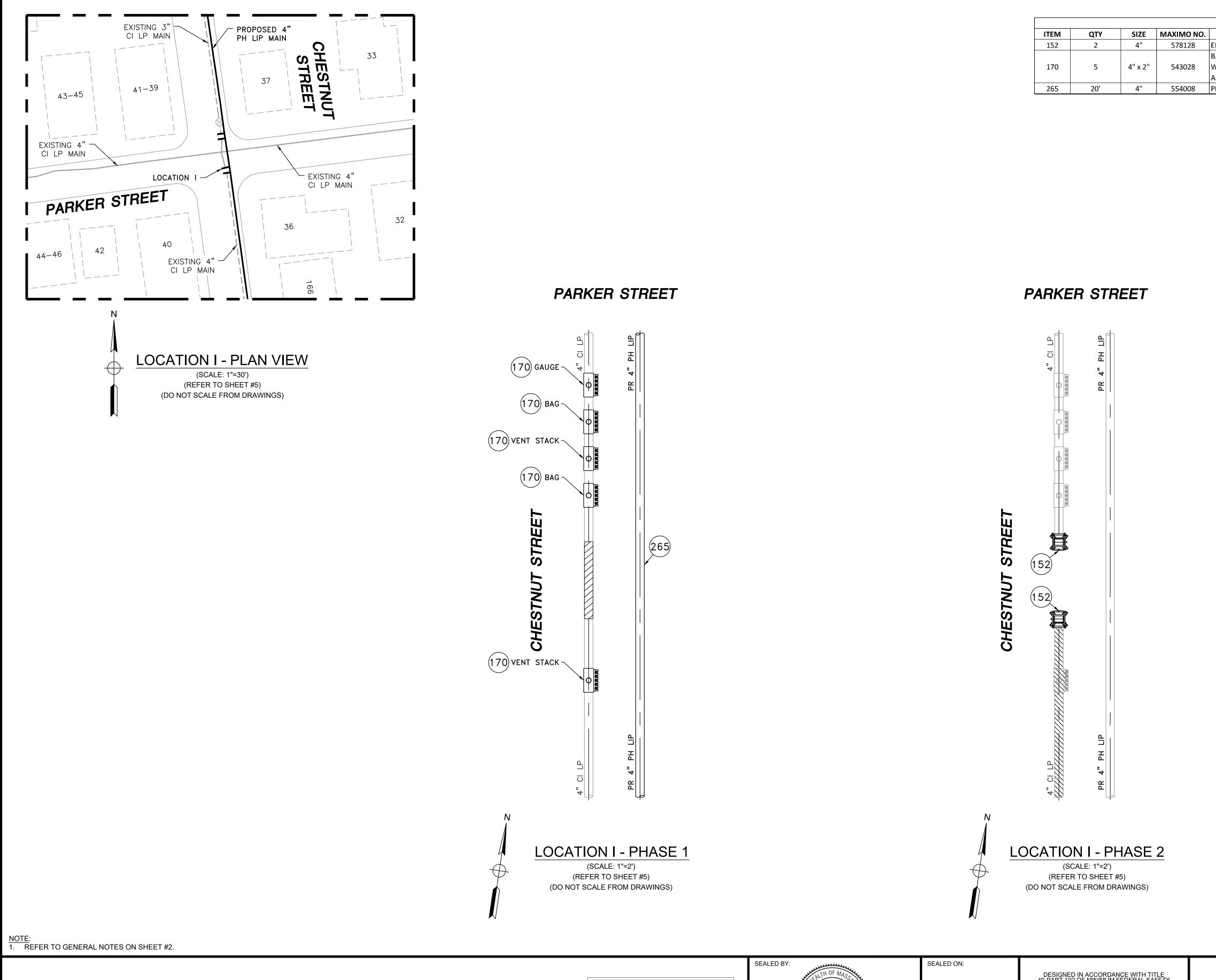


ПΡ E | **,**4 265 STREET F **,**4 Я

CHESTNUT

IN RELAY - LOCATION H - SCHEDULE OF MATERIALS	
DESCRIPTION	MATERIAL
10 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
ANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL	
LDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS	
IEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR	
1PLETE WITH PLUG.	

	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK	
	0	ISSUED FOR C	ONSTRUCTION		12/14/2020	ZS/	AB/EK	
	NO.	DESCRIPTION			DATE	DW/	CK/AP	
			REVISION STAT	JS				
			EVERS © UI	RCE				
	ENERGY							
			CHESTNUT STREET MA	IN REL	_AY			
DIMENSIONS			NEW BEDFORD, MASSAG	CHUSE	TTS			
FABRICATION		LOCATION	H - PHASE 1, 2 AND SCHE	EDULE	OF MATERIA	LS		
	SCA	LE: AS NOTED			SHEE	T 16	OF 25	
	DF	RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.	
	APF	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	1-PIP-NEB-018-	16	1	



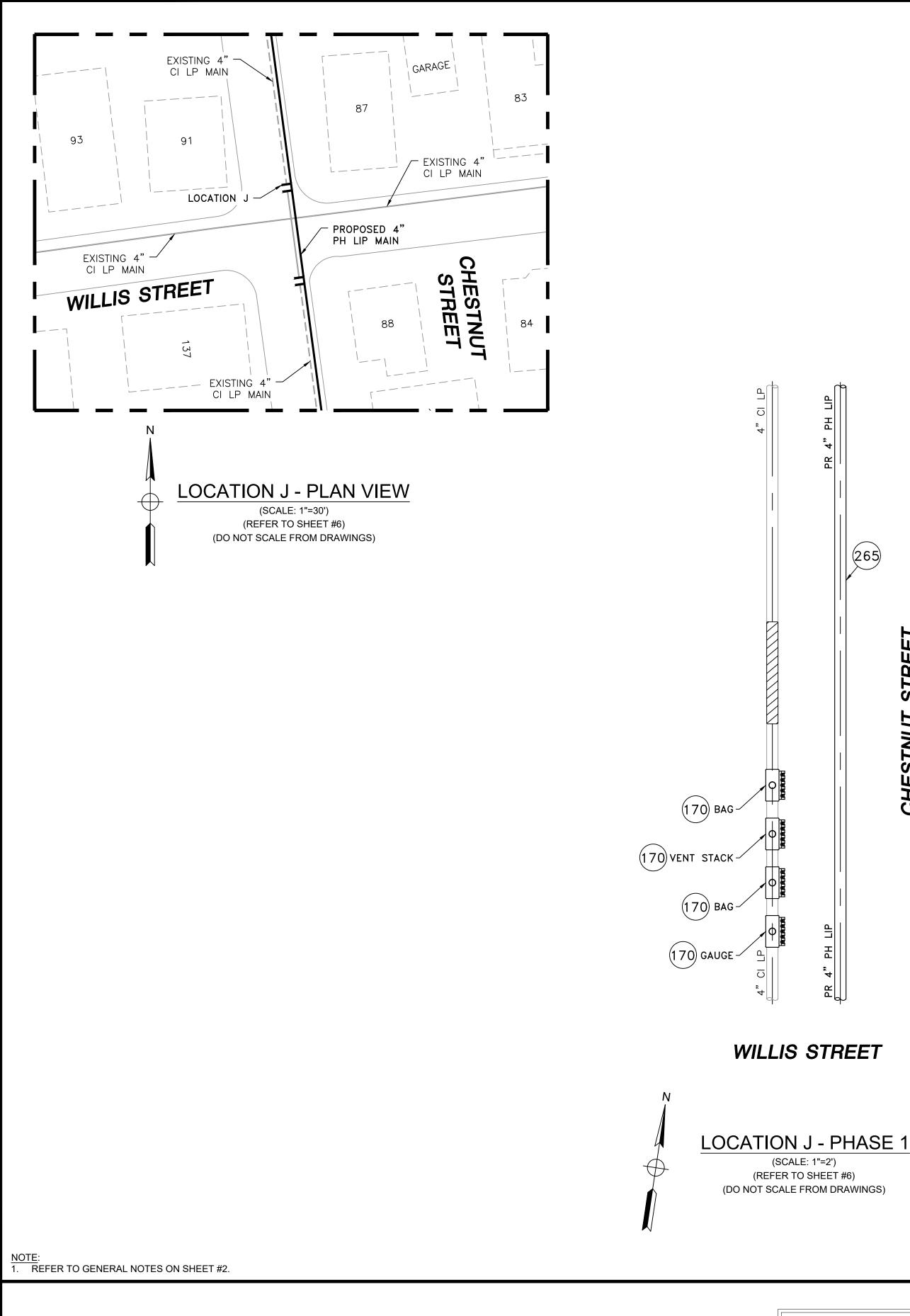
				CHESTNUT
ITEM	QTY	SIZE	MAXIMO NO.	
152	2	4"	578128	END CAP, BOLT
				BAND CLAMP,
170	5	4" x 2"	543028	WITH TEFLON
				APPROVED EQ
265	20'	4"	554008	PIPE, IPS, HDPE

ISSUED FOR CONSTRUCTION	SEALED BY:	SEALED ON: 01/14/2021	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.
1/13/2021	BARE SIGNAL ENGINE	LICENSE EXPIRATION:	
	SIGNATURE	06/30/2022	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM

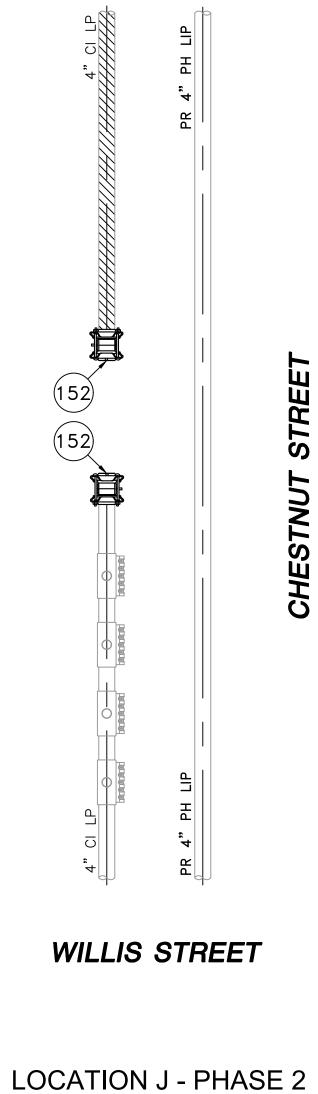
FIELD VERIFY D PRIOR TO PIPE I

STREET MAIN RELAY - LOCATION I - SCHEDULE OF MATERIALS				
MATERIAL				
ASTM D2513				

	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK	
	0	ISSUED FOR C	ONSTRUCTION		12/14/2020	ZS/	AB/EK	
	NO.	DESCRIPTION			DATE	DW/	CK/AP	
			REVISION STAT	JS				
	EVERS © URCE							
	ENERGY							
	CHESTNUT STREET MAIN RELAY							
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS							
FABRICATION	LOCATION I - PHASE 1, 2 AND SCHEDULE OF MATERIALS							
	SCA	LE: AS NOTED			SHEE	T 17	OF 25	
		RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021	, (SHEET NUMBER		REV. NO.	
	APF	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	1-PIP-NEB-018-	17	1	

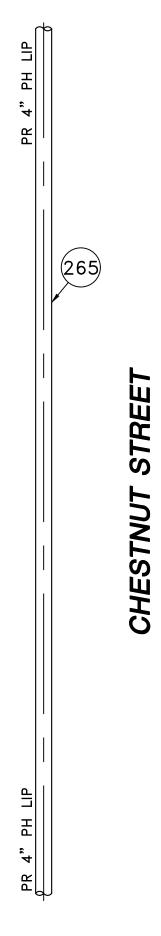


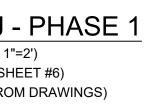
	CHESTNUT STREET MAIN RELAY - LOCATION J - SCHEDULE OF MATERIALS							
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL			
152	2	4"	578128	END CAP, BOLTED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL				
170	4	4" x 2"	543028	BAND CLAMP, WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS WITH TEFLON COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR APPROVED EQUAL. COMPLETE WITH PLUG.				
265	20'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513			



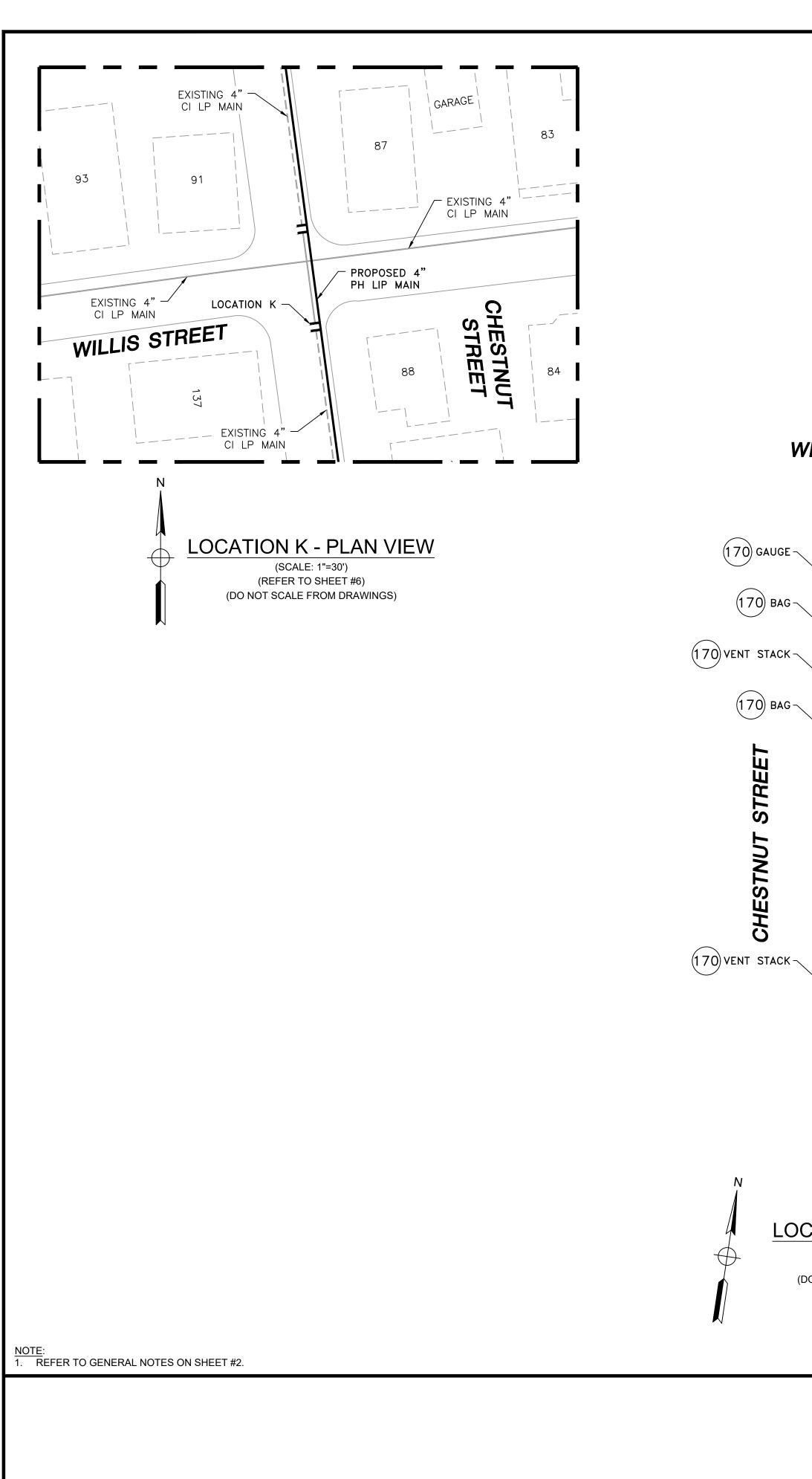
(SCALE: 1"=2') (REFER TO SHEET #6) (DO NOT SCALE FROM DRAWINGS)

SEALED ON: SEALED BY: 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. **ISSUED FOR** ERIC VINAI KUMAR No. 54771 01/14/2021 FIELD VERIFY D PRIOR TO PIPE F CONSTRUCTION LICENSE EXPIRATION: **EN**@ngineering 1/13/2021 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM ZA 06/30/2022 SIGNATURE





	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK	
	0	ISSUED FOR C	CONSTRUCTION		12/14/2020	ZS/	AB/EK	
	NO.	DESCRIPTION			DATE	DW/	CK/AP	
			REVISION STAT	JS				
	EVERS © URCE							
	ENERGY							
	CHESTNUT STREET MAIN RELAY							
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS							
FABRICATION	LOCATION J - PHASE 1, 2 AND SCHEDULE OF MATERIALS							
	SCA	LE: AS NOTED			SHEE	T 18	OF 25	
	DF	RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.	
	APF	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	1-PIP-NEB-018-	18	1	



(170) GAUGE –

(170) BAG~

(170) BAG~

STREET

CHESTNUT



				CHESTNUT
ITEM	QTY	SIZE	MAXIMO NO.	
152	1	4"	578128	END CAP, BOLT
				BAND CLAMP,
170	5	4" x 2"	543028	WITH TEFLON
				APPROVED EQU
265	20'	4"	554008	PIPE, IPS, HDPE

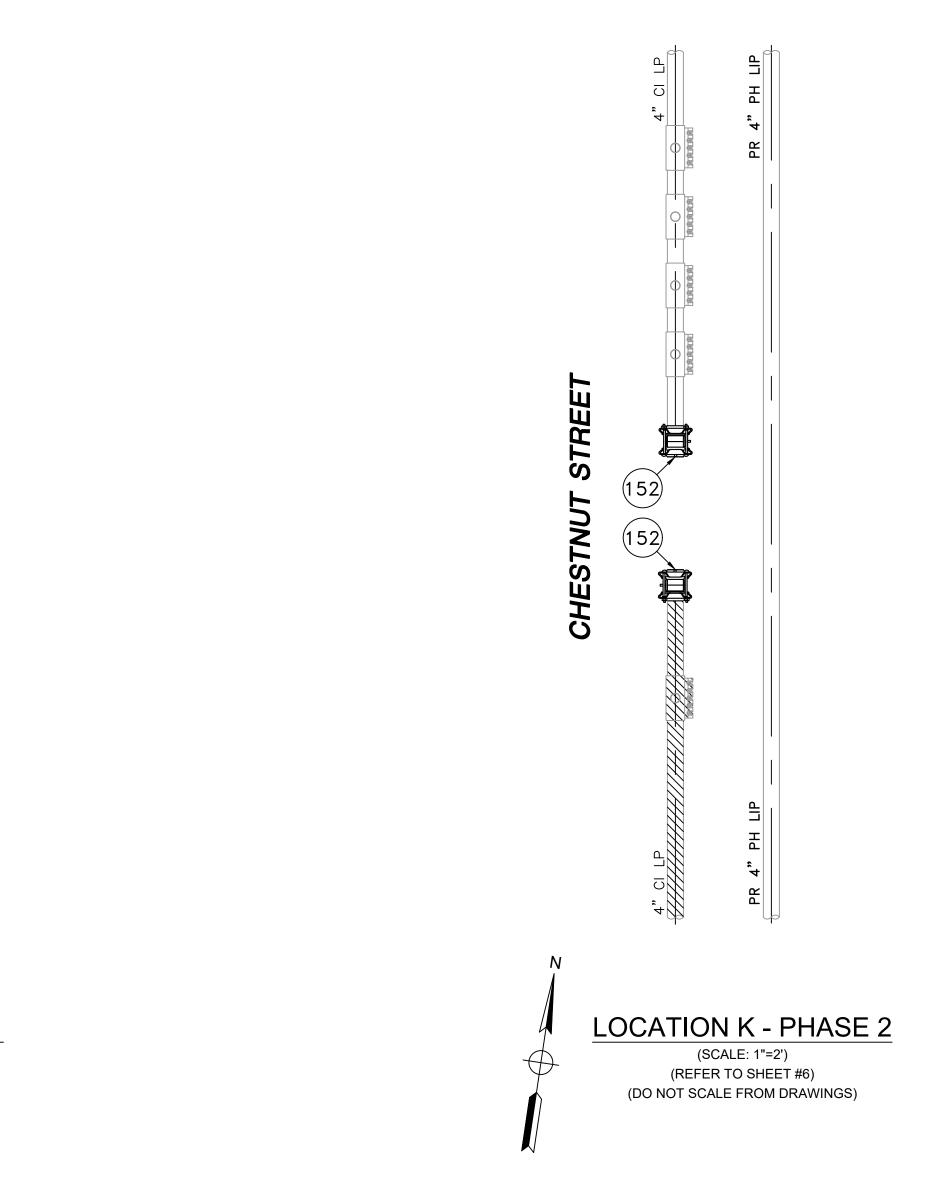
WILLIS STREET

LIP

ΡН

265

WILLIS STREET



LOCATION K - PHASE 1 (SCALE: 1"=2') (REFER TO SHEET #6) (DO NOT SCALE FROM DRAWINGS)

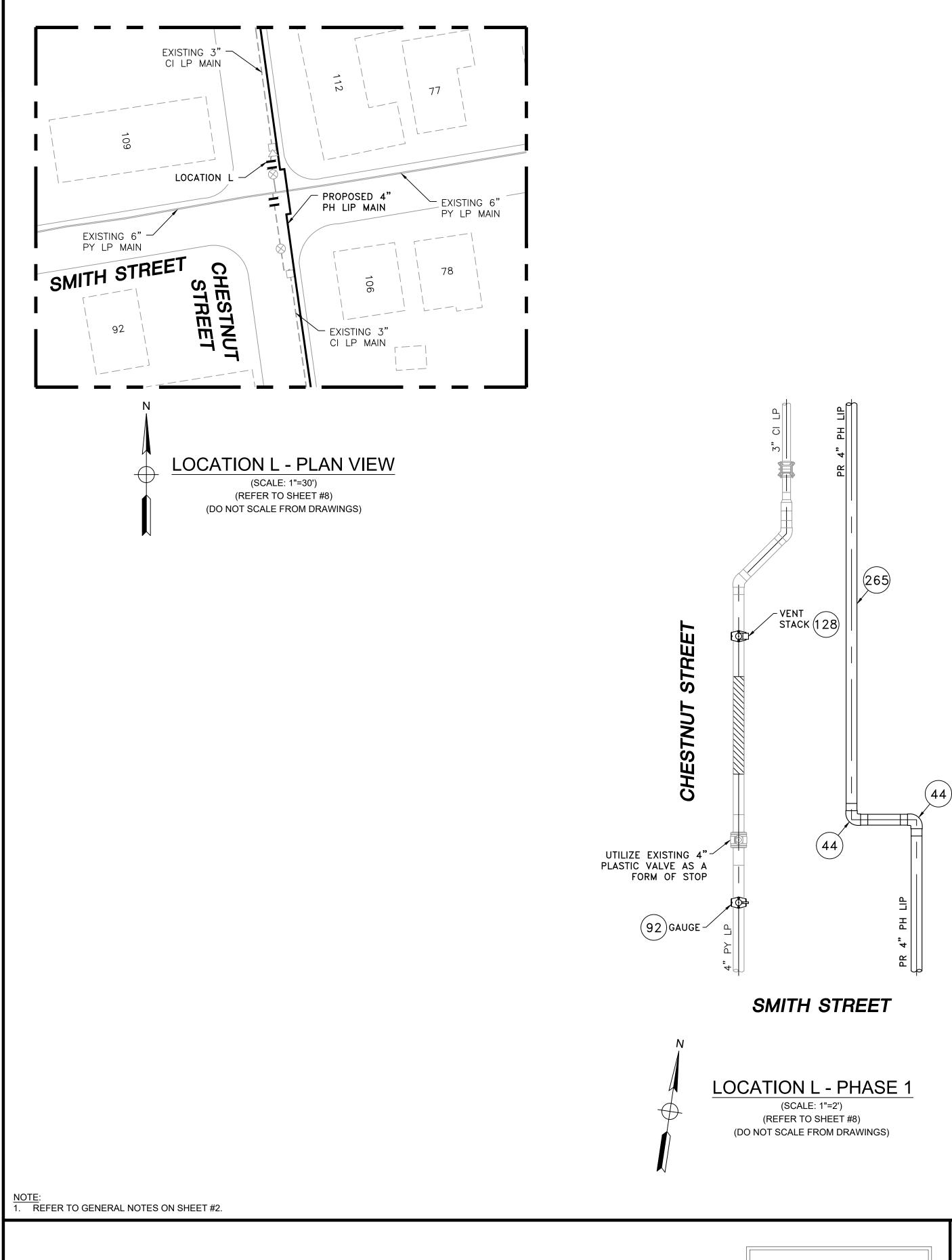
PH LIP

4 R R

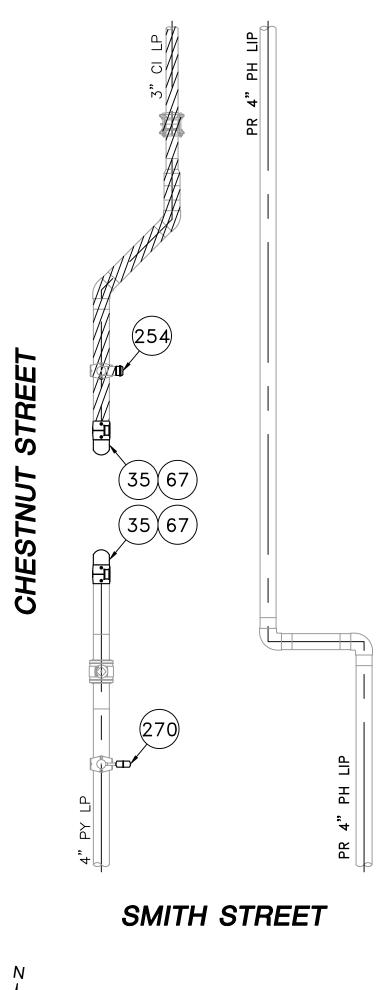
ISSUED FOR CONSTRUCTION	SEALED BY:	SEALED ON: 01/14/2021	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION.	FIELD VERIFY D
1/13/2021	SIGNATURE	LICENSE EXPIRATION: 06/30/2022	ENERGINEERING 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	PRIOR TO PIPE F

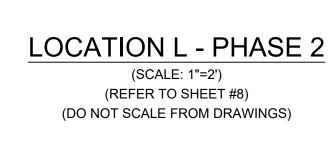
STREET MAIN RELAY - LOCATION K - SCHEDULE OF MATERIALS DESCRIPTION MATERIA						
TED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL						
WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS						
COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR						
UAL. COMPLETE WITH PLUG.						
3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513					

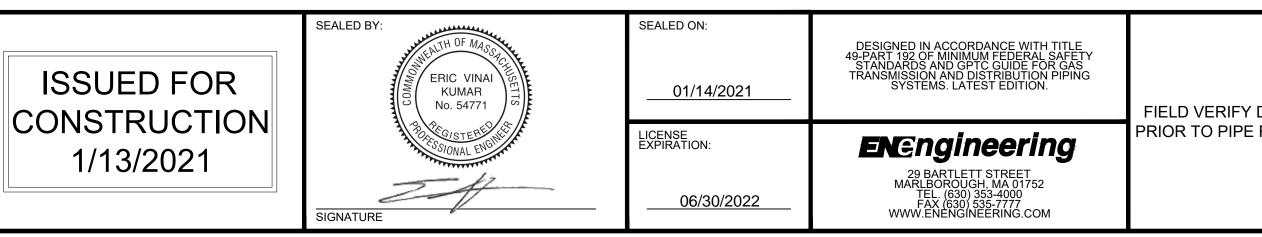
	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK	
	0	ISSUED FOR C	CONSTRUCTION		12/14/2020	ZS/	AB/EK	
	NO.	DESCRIPTION			DATE	DW/	CK/AP	
			REVISION STAT	JS				
	EVERS URCE ENERGY							
	CHESTNUT STREET MAIN RELAY							
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS							
FABRICATION	LOCATION K - PHASE 1, 2 AND SCHEDULE OF MATERIALS							
	SCA	LE: AS NOTED			SHEE	T 19	OF 25	
	DF	RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.	
	APF	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	1-PIP-NEB-018-	19	1	



				CHES
ITEM	QTY	SIZE	MAXIMO NO.	
٦r		4"	FOOREF	COUPLI
35	AS REQUIRED	4	500855	3408/47
4.4		4"	E4E241	ELBOW,
44	AS REQUIRED	4	545341	PIPE OR
67	AS REQUIRED	4"	542538	CAP, BU
67	AS REQUIRED	4	542558	APPROV
92	1	4" X 1/2" 50086 4" X 2" 58430	E00967	TAPPIN
92			500807	F1055. (
128	1		584304	Ην ταρι
120	L L	4 \ Z	564504	ASTM F1
158A	1	4"		FITTING
254	AS REQUIRED	2"	581633	END CAI
234	AS REQUIRED	2	201022	INTERN
265	20'	4"	554008	PIPE, IPS
				END CAI
270	AS REQUIRED	1/2"	542609	COLLET
				PERFECT
367	1	4"	578036	INSERT,

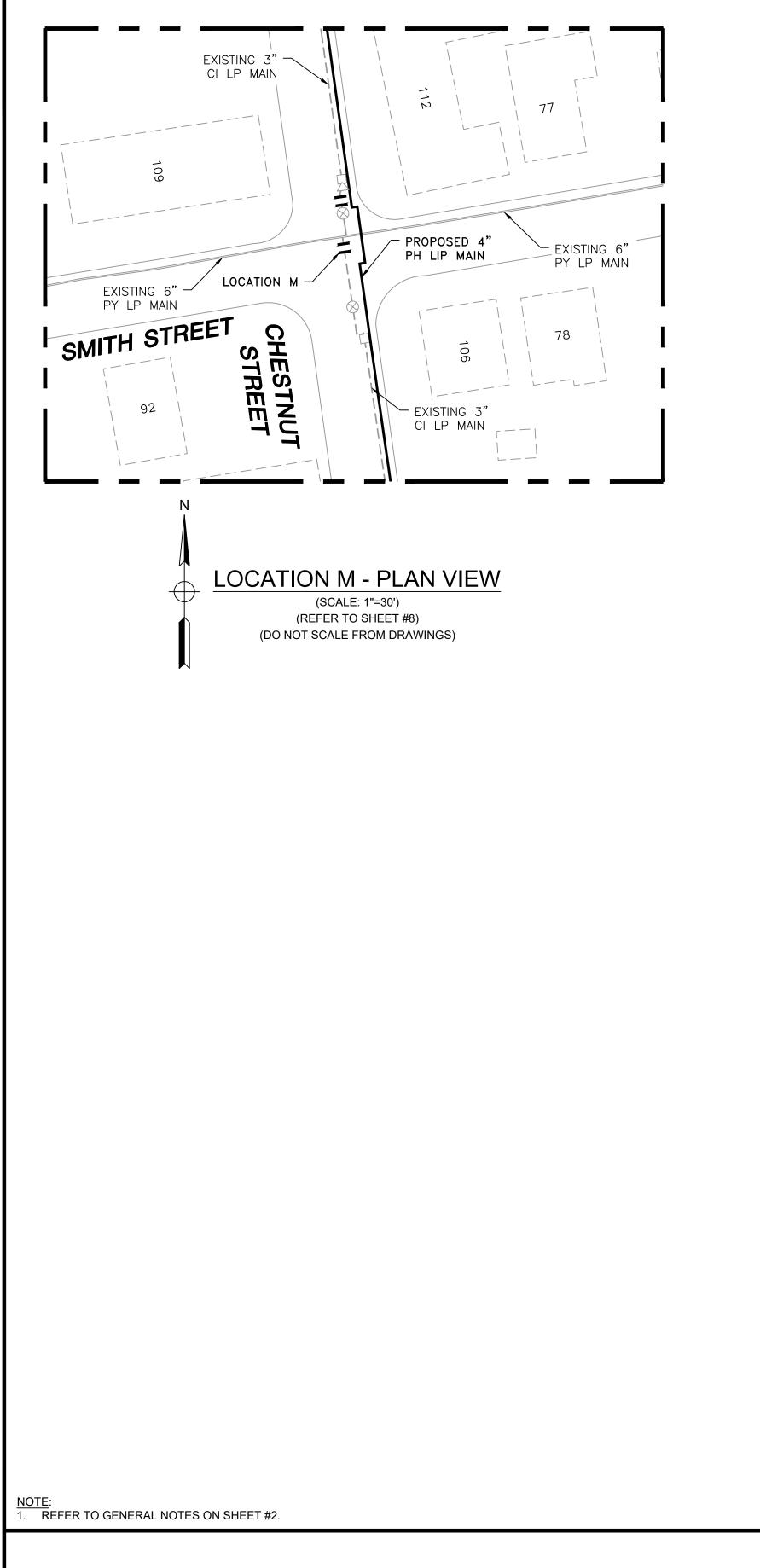




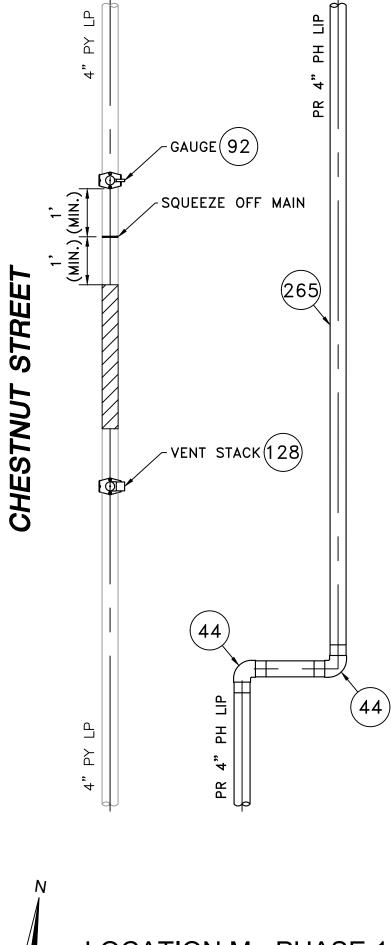


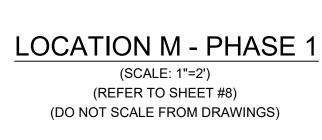
TNUT STREET MAIN RELAY - LOCATION L - SCHEDULE OF MATERIALS	
DESCRIPTION	MATERIAL
NG, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE	
10 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE	
APPROVED EQUAL.	ASTM D2513
ITT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR	
/ED EQUAL.	ASTM D2513
G TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM	
CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
PING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261,	
1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
,COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP , FOR PLASTIC PIPE	
P MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMRESSION RING,	ASTM D2513
AL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTIVI DZ515
S, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
P, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL	
AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER,	ASTM D2513
TION WITH END CAP OR APPROVED EQUAL.	
STIFFENER, 4 IN IPS SDR 11.5, 8 IN LG, RED EPOXY COATING, SMITH BLAIR	

-							
	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK
	0	ISSUED FOR C	CONSTRUCTION		12/14/2020	ZS/	AB/EK
	NO.	DESCRIPTION			DATE	DW/	CK/AP
			REVISION STAT	US			
	EVERS URCE						
	CHESTNUT STREET MAIN RELAY						
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS						
FABRICATION	LOCATION L - PHASE 1, 2 AND SCHEDULE OF MATERIALS						
	SCA	LE: AS NOTED			SHEE	T 20	OF 25
		RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.
	APF	PROVED BY / DATE FK 1/13/2021	MA21PIPNEB018R1	MA-2	21-PIP-NEB-018-	20	1





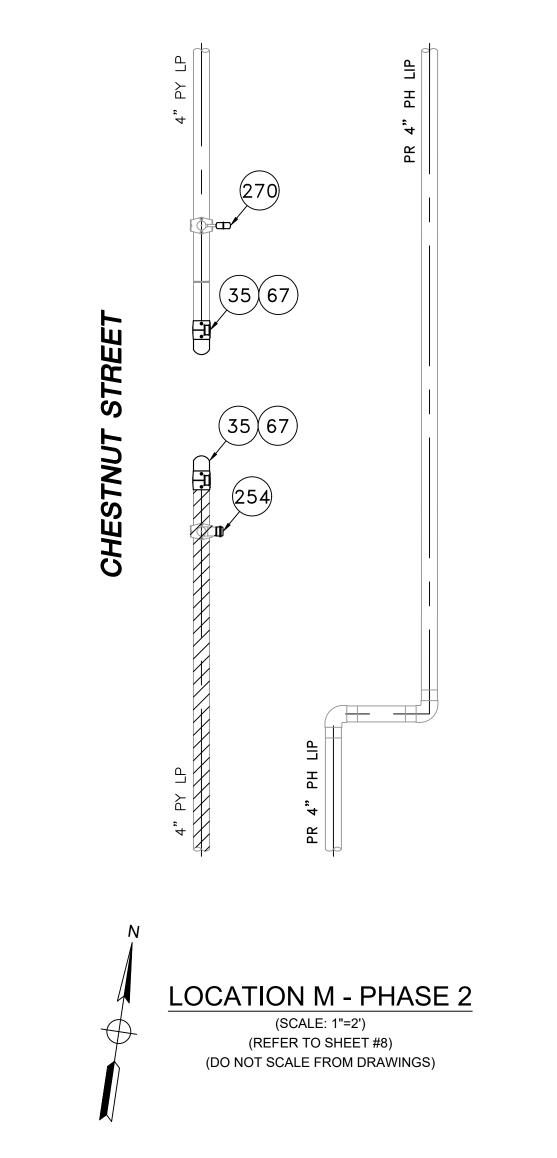




SEALED ON: SEALED BY: DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS. LATEST EDITION. **ISSUED FOR** ERIC VINAI KUMAR No. 54771 01/14/2021 FIELD VERIFY D PRIOR TO PIPE F CONSTRUCTION LICENSE EXPIRATION: **EN**@ngineering 1/13/2021 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM 24 06/30/2022 SIGNATURE

				CHESTNUT STRE
ITEM	QTY	SIZE	MAXIMO NO.	
25		4"	FOOREE	COUPLING, ELECT
35	AS REQUIRED	4	500855	3408/4710 PIPE. @
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, B
44	AS REQUIRED	4	545541	PIPE OR APPROVE
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION
67	AS REQUIRED	4	542558	APPROVED EQUA
92	1	4" X 1/2"	500867	TAPPING TEE, ELE
92	L	4 \ 1/2	500607	F1055. CENTRAL F
128	1	4" X 2"	584304	HV TAPPING TEE,
120	L	4 7 2	564504	ASTM F1055. CEN
254	AS REQUIRED	2"	581633	END CAP MECHAN
234	AS REQUIRED	2	201022	INTERNAL STIFFE
265	20'	4"	554008	PIPE, IPS, HDPE 34
				END CAP, MECHA
270	AS REQUIRED	1/2"	542609	COLLET AND SPAC
				PERFECTION WITH

SMITH STREET

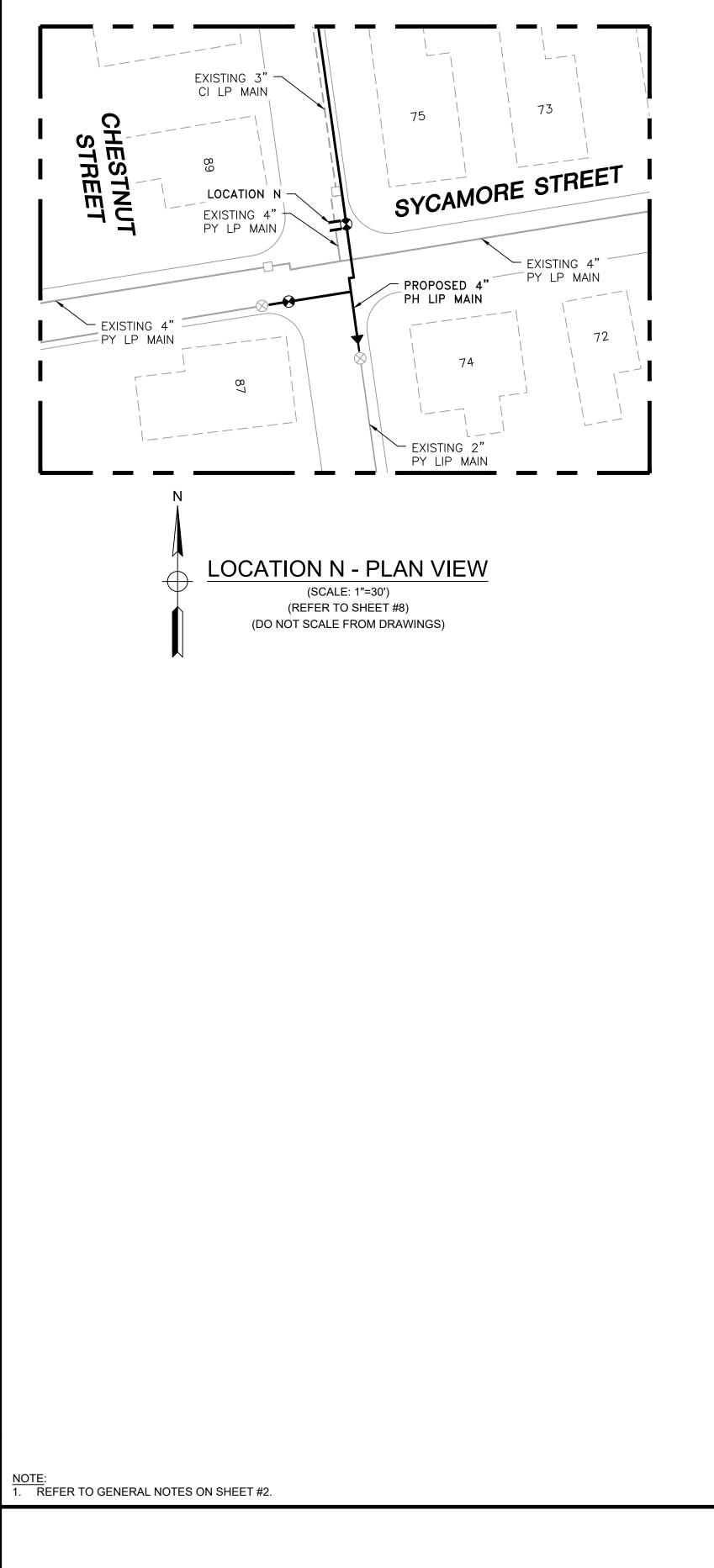


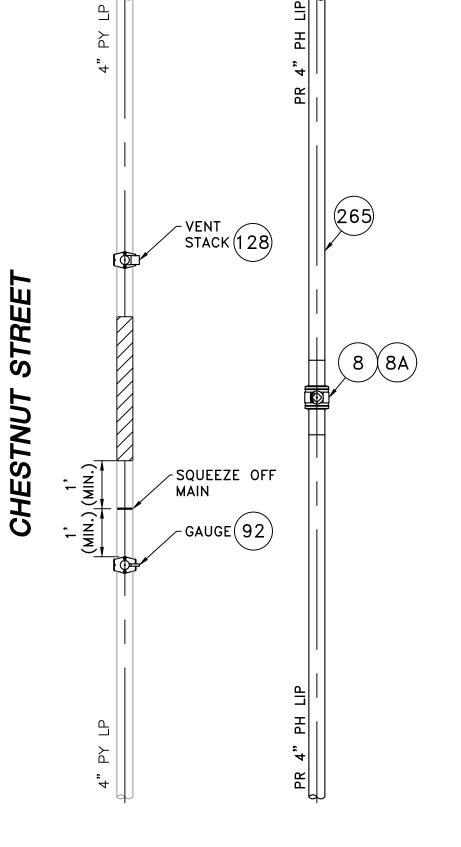
SMITH STREET

(SCALE: 1"=2') (REFER TO SHEET #8) (DO NOT SCALE FROM DRAWINGS)

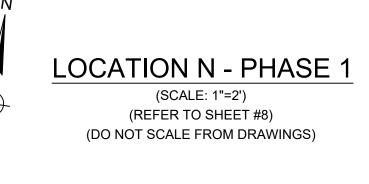
EET MAIN RELAY - LOCATION M - SCHEDULE OF MATERIALS						
DESCRIPTION	MATERIAL					
TROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE						
GFCP OR APPROVED EQUAL.	ASTM D3350					
BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE						
ED EQUAL.	ASTM D2513					
N, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR						
AL.	ASTM D2513					
ECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM						
PLASTICS OR APPROVED EQUAL.	ASTM D2513					
. ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261,						
NTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513					
NICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMRESSION RING,						
NER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513					
408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513					
ANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL						
CER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER,	ASTM D2513					
H END CAP OR APPROVED EQUAL.						

	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK	
	0	ISSUED FOR C	ONSTRUCTION		12/14/2020	ZS/	AB/EK	
	NO.	DESCRIPTION			DATE	DW/	CK/AP	
			REVISION STAT	JS				
	EVERS URCE ENERGY							
	CHESTNUT STREET MAIN RELAY							
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS							
FABRICATION	LOCATION M - PHASE 1, 2 AND SCHEDULE OF MATERIALS							
	SCA	LE: AS NOTED		SHEET 21 OF 25				
		RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.	
	APF	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	21-PIP-NEB-018-	21	1	

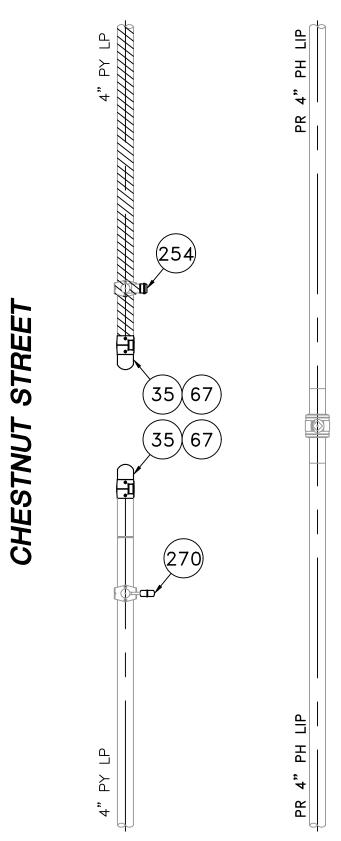




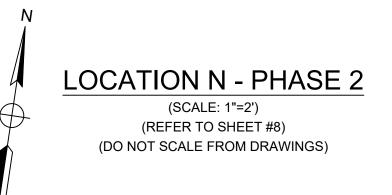
SYCAMORE STREET

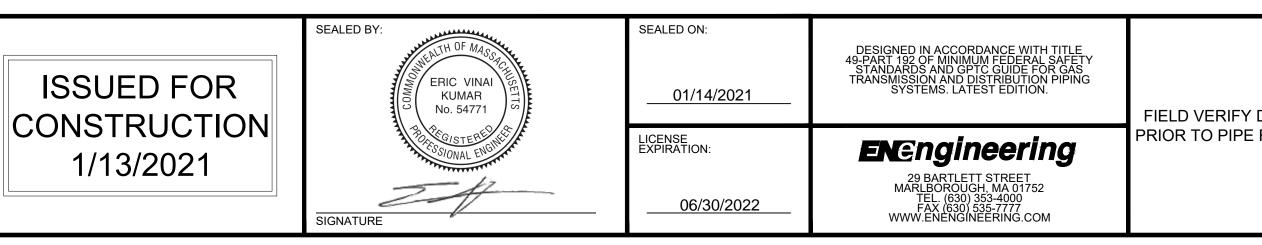


	CHESTNUT STREET MAIN RELAY - LOCATION N - SCHEDULE OF MATERIALS							
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL			
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513			
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID				
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350			
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513			
92	1	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513			
128	1	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513			
254	AS REQUIRED	2"	581633	END CAP MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513			
265	15'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513			
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.	ASTM D2513			

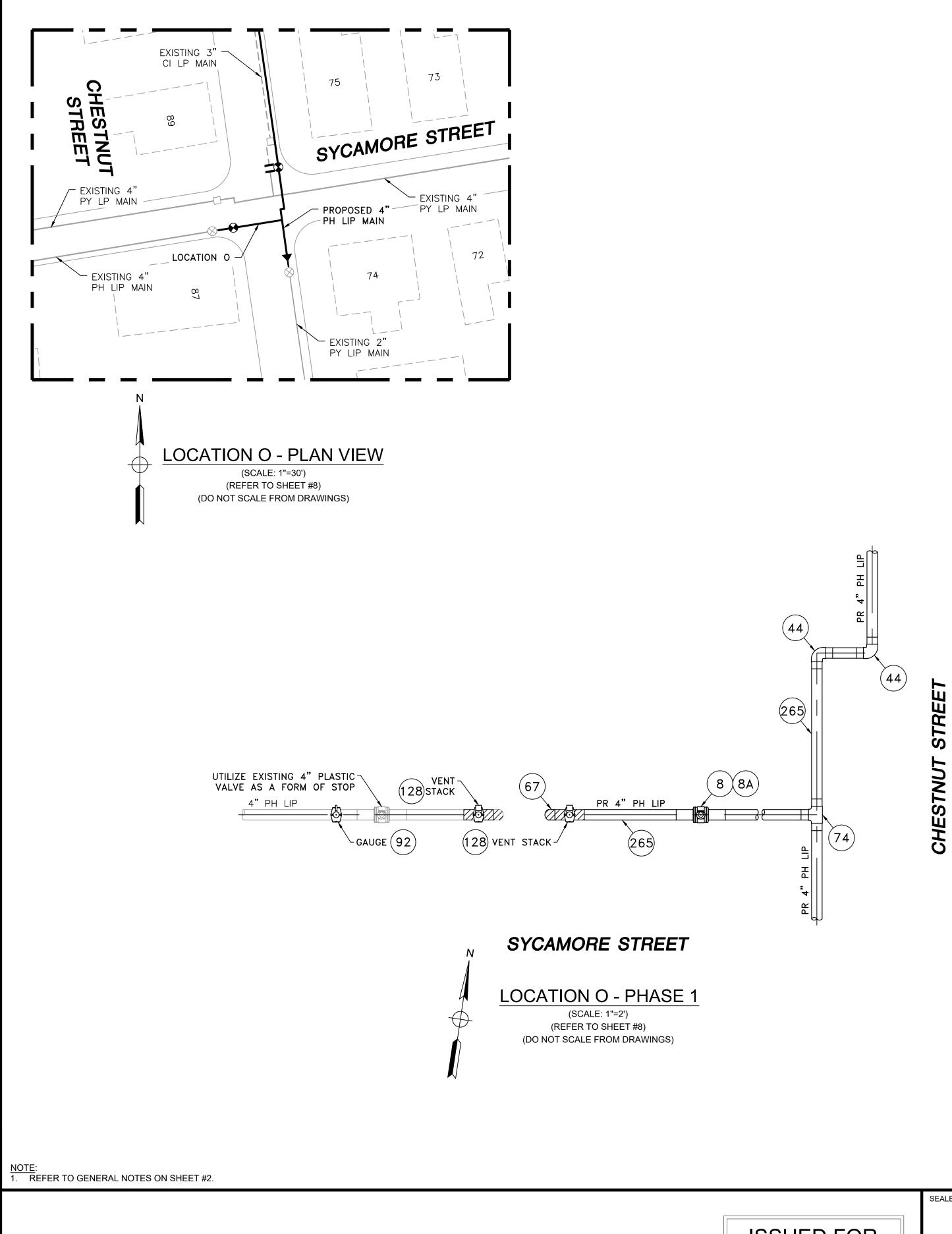


SYCAMORE STREET

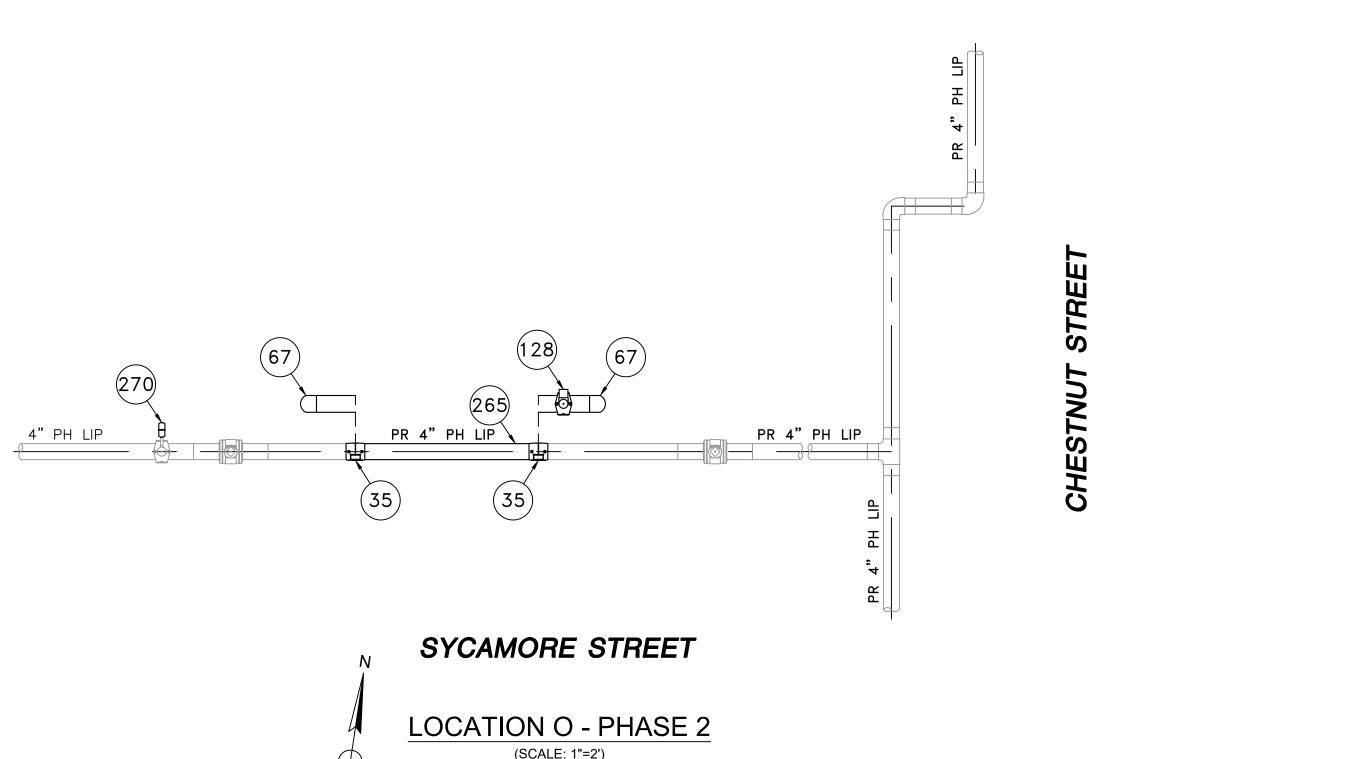


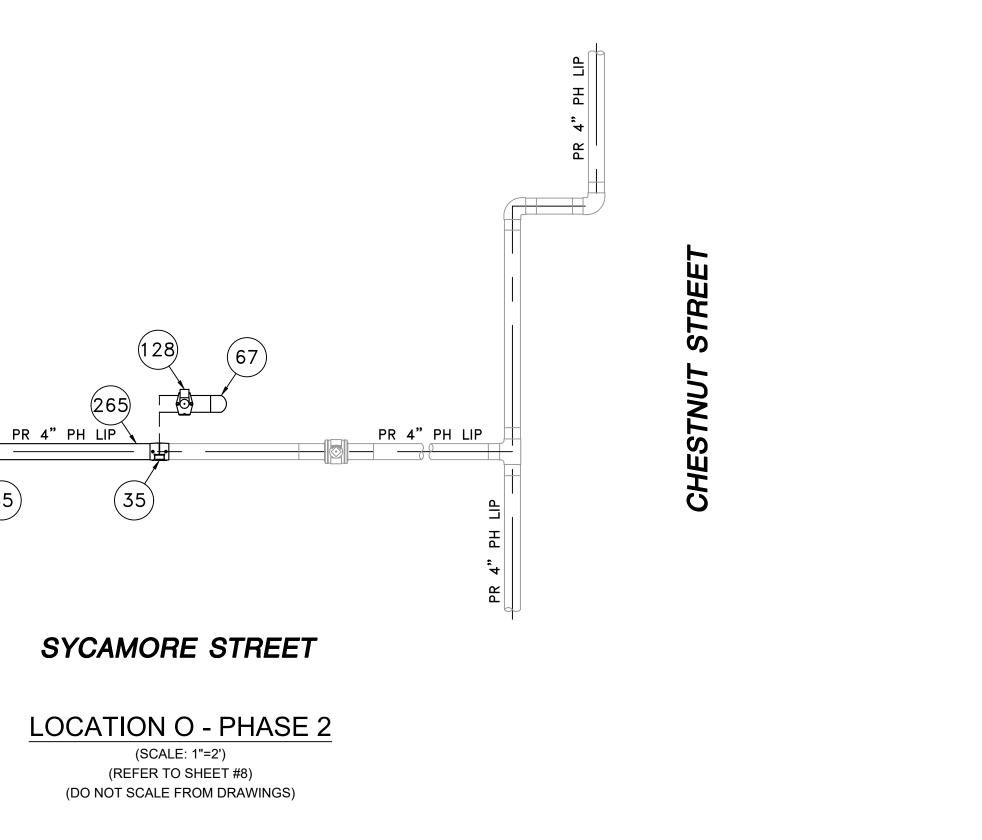


	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK		
	0	ISSUED FOR C	ONSTRUCTION		12/14/2020	ZS/	AB/EK		
	NO.	DESCRIPTION			DATE	DW/	CK/AP		
			REVISION STAT	JS					
	EVERS URCE								
	ENERGY								
	CHESTNUT STREET MAIN RELAY								
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS								
FABRICATION	LOCATION N - PHASE 1, 2 AND SCHEDULE OF MATERIALS								
	SCA	LE: AS NOTED			SHEE	T 22	OF 25		
		RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.		
	APF	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	21-PIP-NEB-018-	22	1		

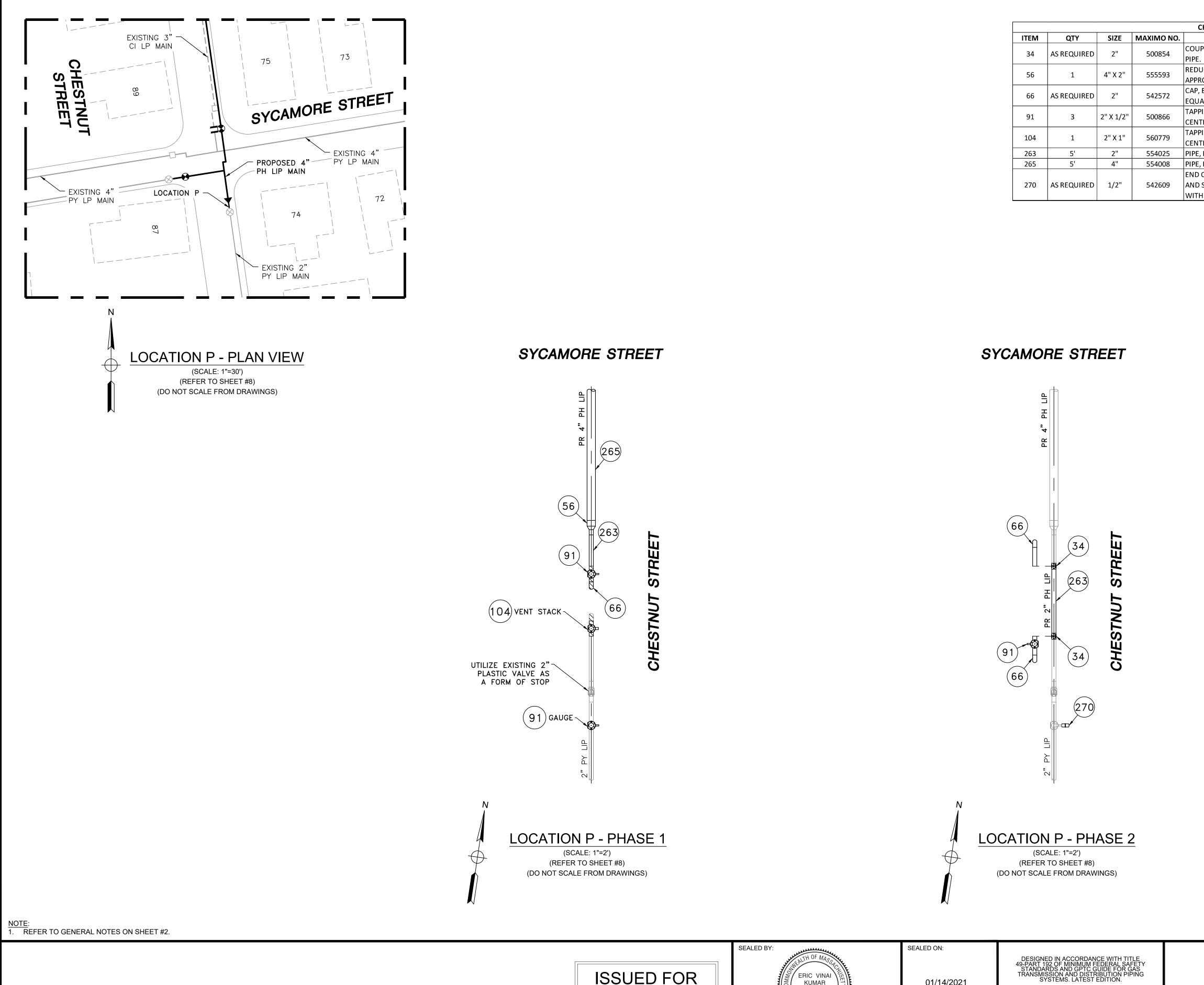


	CHESTNUT STREET MAIN RELAY - LOCATION O - SCHEDULE OF MATERIALS							
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL			
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513			
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID				
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350			
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513			
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513			
74	1	4"	560679	TEE, STRAIGHT, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513			
92	1	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513			
128	3	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513			
265	45'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513			
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.	ASTM D2513			





					1 IFC - NO CHANGES THIS SHEET	1/13/2021 BS/AB/EK		
					0 ISSUED FOR CONSTRUCTION	12/14/2020 ZS/AB/EK		
					NO. DESCRIPTION	DATE DW/CK/AP		
					REVISION STAT			
	SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY		EVERS Q U	RCE		
ISSUED FOR	ERIC VINAI KUMAR No. 54771	01/14/2021	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	CHESTNUT STREET MAIN RELAY			
CONSTRUCTION		LICENSE EXPIRATION:						
1/13/2021	33/ONAL ENGINE	EXPIRATION:	EN Engineering		SCALE: AS NOTED	SHEET 23 OF 25		
	SIGNATURE	06/30/2022	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM		DRAWN BY / DATE CHECKED BY / DATE ZS 10/30/2020 AB 1/13/2021 APPROVED BY / DATE MA21PIPNEB018R1	SHEET NUMBER REV. NO. MA-21-PIP-NEB-018-23 1		



	CHESTNUT STREET MAIN RELAY - LOCATION P - SCHEDULE OF MATERIALS							
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL			
34	AS REQUIRED	2"	500854	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350			
56	1	4" X 2"	555593	REDUCER, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513			
66	AS REQUIRED	2"	542572	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513			
91	3	2" X 1/2"	500866	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261 ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513			
104	1	2" X 1"	560779	TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513			
263	5'	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513			
265	5'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513			
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.	ASTM D2513			

ISSUED FOR CONSTRUCTION 1/13/2021

RIC VINAI KUMAR No. 54771 BOLESSIONAL ENGINE
ZH
SIGNATURE

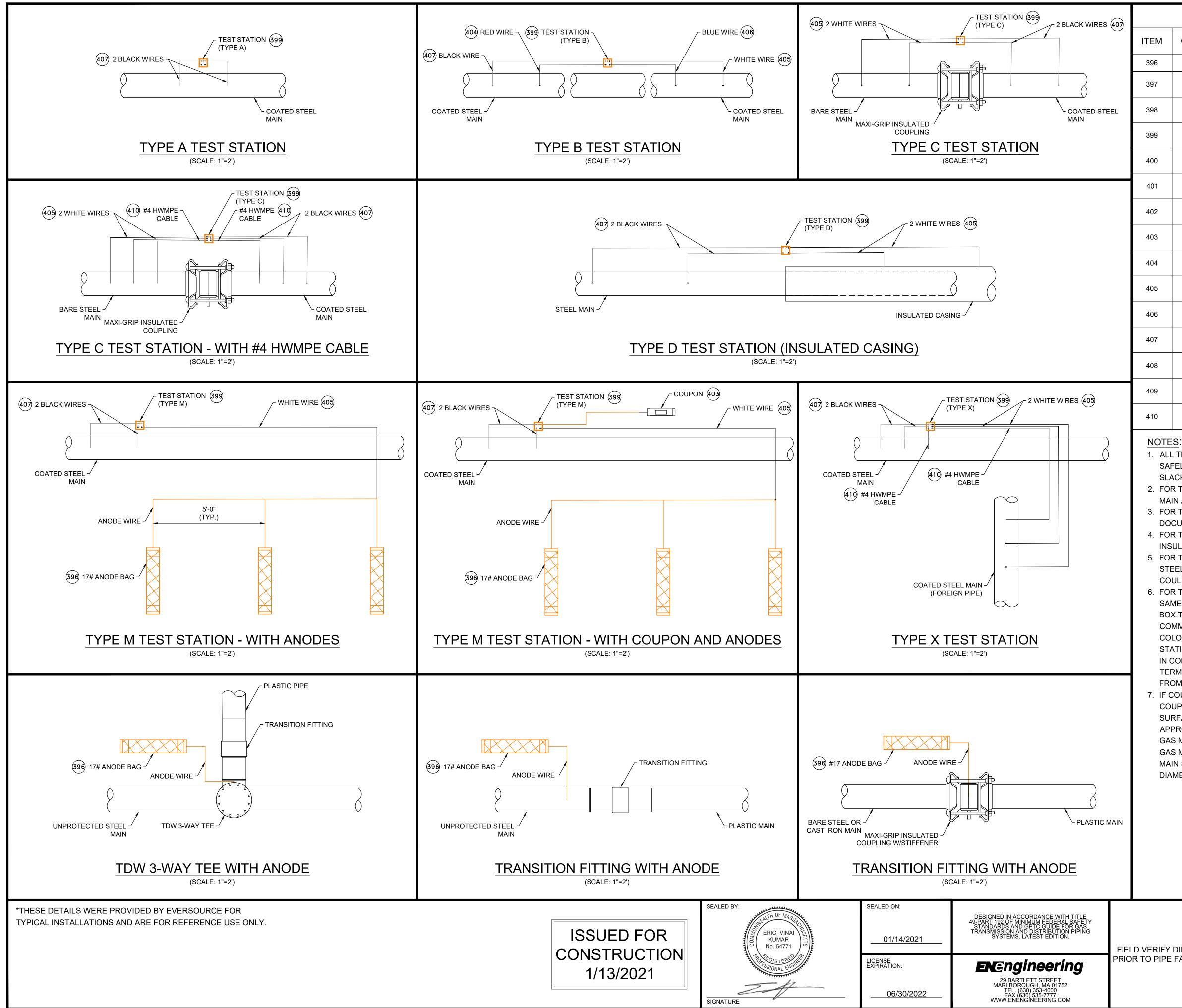
01/14/2021 LICENSE EXPIRATION:

06/30/2022

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

FIELD VERIFY I PRIOR TO PIPE

	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK		
	0	ISSUED FOR C	CONSTRUCTION		12/14/2020	ZS/	AB/EK		
	NO.	DESCRIPTION			DATE	DW/	CK/AP		
			REVISION STAT	JS					
	EVERS URCE								
	ENERGY								
	CHESTNUT STREET MAIN RELAY								
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS								
FABRICATION	LOCATION P - PHASE 1, 2 AND SCHEDULE OF MATERIALS								
	SCALE: AS NOTED SHEE						ET 24 OF 25		
		RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.		
	APF	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	1-PIP-NEB-018-	24	1		



	С	ATHODIC P	ROTECTION BILL OF MATERIALS
QTY	SIZE	MAXIMO NO.	DESCRIPTION
Х	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
x	EA	517626	CONNECTOR, SPLIT BOLT, 12 SOLID - 10 STRANDED, CU TO CU, HOUSING (COVER) MATE IN 590389,
x	EA	590389	HOUSING, 50 V MAX, 10 AWG MAX, FOR PROTECTING TRACER WIRE SPLICES, USED WITH CONNECTOR IN 517626. 10/BAG
x	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
x	BOX	508567	POWDER, CARTRIDGE, TYPE IS F-33, ALLOY , CAP COLOR CLEAR, 15 GM CHARGE, 20/PAC, FOR STEEL PIPE
x	EA	559168	SLEEVE,ELECTRICAL, #14 TO 10 AWG, W/ THERMITE WELDER, FOR CATHODIC PROTECTION
x	ES	584045	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCB-ZIN-LW010, 10 FT OF CABLE
x	ES	603126	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCB-ZIN-LW025, 25 FT OF CABLE
x	ROLL	603140	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, RED, INSULATED, CU, 500 FT SPOOL, WIRE
x	ROLL	578415	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, WHITE, INSULATED, CU, 500 FT SPOOL, WIRE
x	ROLL	603141	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, BLUE INSULATED, CU, 500 FT SPOOL, WIRE
x	ROLL	603139	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, BLACK, INSULATED, CU, 500 FT SPOOL,WIRE
x	EA	500804	WELDER,THERMITE, THERMITE, FOR GAS PIPE, #12 CABLE,HORIZONTAL STEEL PIPE 4 IN AND LARGER DIAMETER
x	EA	500805	WELDER,THERMITE, THERMITE, FOR GAS PIPE, #12 CABLE, HORIZONTAL STEEL PIPE 3/4 - 3-1/2 IN DIAMETER
x	FT	513850	CABLE, INSULATED, CATHODIC PROTECTION, 1/C, #4 AWG, 7 STR, 600 V, BLACK, HMWPE, CU, 1000 FT ROLLS

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

4. 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) 5. FOR TYPE D TEST STATIONS WHICH ARE AT A CASING, WHITE WIRES ARE NORMALLY INSTALLED ON THE STEEL CASING AND BLACK WIRES ON INSTALLED ON THE CARRIER PIPE. (ANODES AND/OR COUPONS COULD BE ADDED TO THIS TEST STATION TYPE).

6. 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. 7. IF COUPONS ARE TO BE NSTALLED, 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.

د.								
	1	IFC - NO CHAN	IGES THIS SHEET		1/13/2021	BS/	AB/EK	
	0	ISSUED FOR C	CONSTRUCTION		12/14/2020	ZS/	AB/EK	
	NO.	DESCRIPTION			DATE	DW/	/CK/AP	
			REVISION STAT	US				
	EVERS©URCE							
	ENERGY							
	CHESTNUT STREET MAIN RELAY							
DIMENSIONS	NEW BEDFORD, MASSACHUSETTS							
FABRICATION	STANDARD CORROSION DETAILS							
	SCALE:1"=2' (DO NOT SCALE FROM DRAWINGS) SHEET 25 OF						OF 25	
	DF	RAWN BY / DATE ZS 10/30/2020	CHECKED BY / DATE AB 1/13/2021		SHEET NUMBER		REV. NO.	
	APF	PROVED BY / DATE EK 1/13/2021	MA21PIPNEB018R1	MA-2	21-PIP-NEB-018-	25	1	