

## APPLICATION/AGREEMENT

Permit # 245-2022

For Trench/Disturbance Permit within the City of New Bedford

Dig Safe# 20222506156Date: 6/21/2022

TO THE MAYOR AND CITY COUNCIL:

DISTURBANCE PERMIT/TRENCH SAFETY PERMIT

Permission is hereby requested to excavate the surface of: X City Property and/or X Private Property  
Provide Sketch

Location of Work: Rockdale Ave

Cross streets Grape St and Allen St Working in the street and street to houses working from Grape St to Allen St including intersectionsRelay gas main and servicesWork will begin (weather permitting) on: June 24, 2022ROADWAY CLOSURES WILL REQUIRE  
AUTHORIZATION FROM THE  
COMMISSIONER OF PUBLIC  
INFRASTRUCTURE. TRAFFIC MANAGEMENT  
PLANS MAY BE REQUIRED.Applicant Name: Steven Botelho (sl)

Excavator(s) Name: \_\_\_\_\_

Company Name: Eversource

Hoisting Equipment License Number: \_\_\_\_\_

Grade: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Contact Number: 339-987-8010

Name &amp; Contact Number of Insurer: \_\_\_\_\_

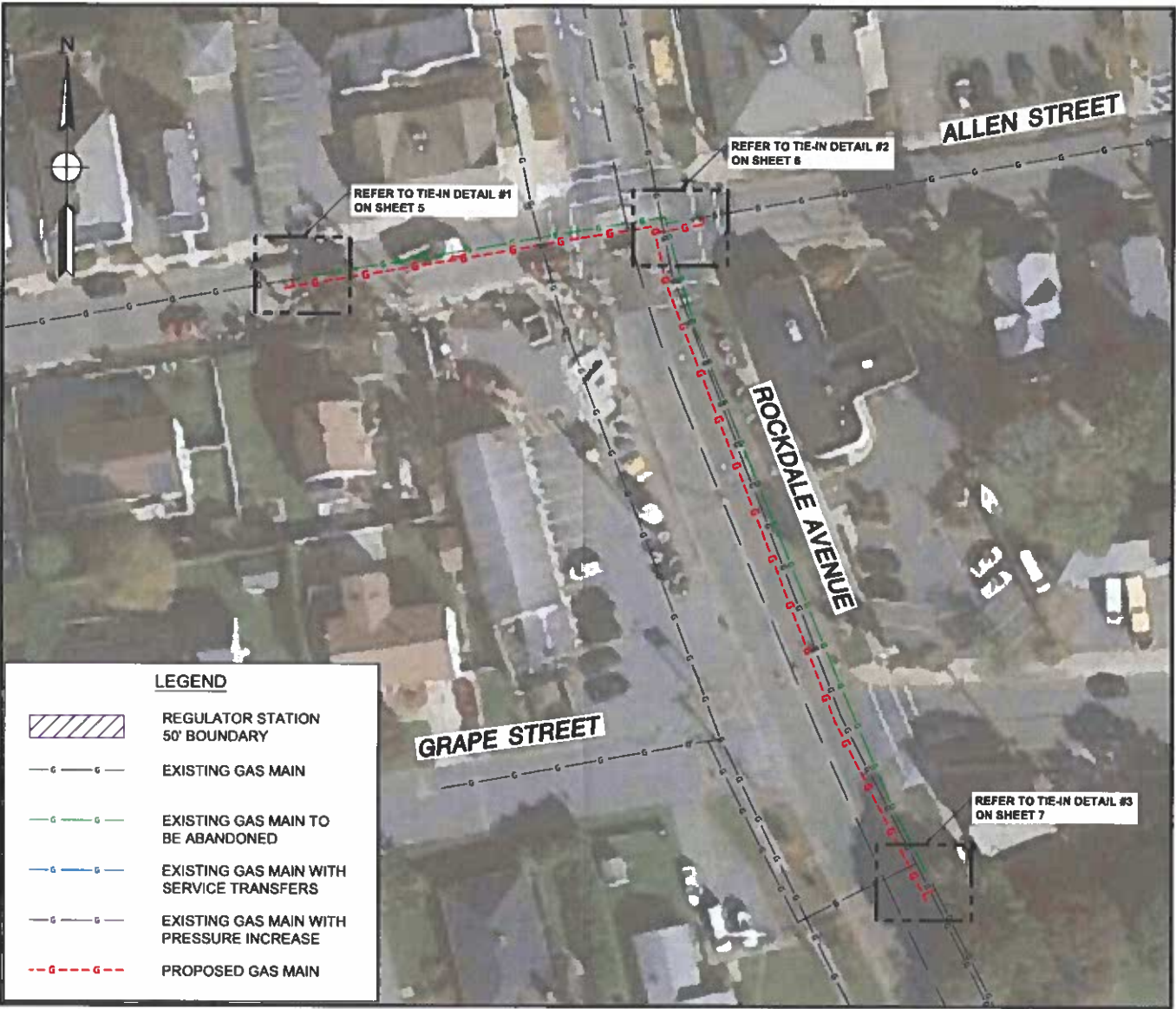
Competent Person on Work Site: ON FILEAPPROVED BY: Stephen CaputoDATE: 7-29-2022TITLE: Asst City Engineer**This permit shall be posted at the work site, and shall remain until the work is completed. It is subject to inspection at all times.**Trenches must be maintained  
weekly until final paving is  
completedPermit only valid for six months  
from date of approval

site meeting held 7-28-22 w/ Eversource, City & State reps to review scope of work and timeline. Slightly connection of new main tie into existing main, south of Grape St. proposed to be within MassDOT project limits. Work outside MassDOT project limits may impact final wearing course of the City's road reconstruction project. If so, curb to curb mill and overlay will be required.

TABLE OF CONTENTS

SHEET NUMBER	DESCRIPTION
1 OF 8	WORK SCOPE AND TABLE OF CONTENTS
2 OF 8	GENERAL NOTES AND MASTER BOM
3 OF 8	LEGEND
4 OF 8	LOCATION PLAN
5 OF 8	TIE-IN DETAIL #1 AND BOM
6 OF 8	TIE-IN DETAIL #2 AND BOM
7 OF 8	TIE-IN DETAIL #3 AND BOM
8 OF 8	STANDARD CORROSION DETAILS

EVERSOURCE  
ENERGY



NOTE:  
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.

WORK SCOPE  
NEW BEDFORD, MASSACHUSETTS  
(NOT TO SCALE)

MAIN	WO# TBD	WO# TBD
	ALLEN STREET	ROCKDALE AVENUE
INSTALLATION:	(~160') 8" HDPE LIP MAIN (~10') 4" HDPE LIP MAIN	(~305') 8" HDPE LIP MAIN

ABANDONMENT:	(150') 8" WI LI MAIN	(300') 8" WI LI MAIN
--------------	----------------------	----------------------

SERVICES		
REPLACEMENT:	0	0
TIE-OVER:	1	0
METER MOVE OUTS:	0	0
TOTAL SERVICES:	1	0

ISSUED FOR  
CONSTRUCTION

0	ISSUED FOR CONSTRUCTION	06/21/2022	HM/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
ROCKDALE AND ALLEN MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
WORK SCOPE AND TABLE OF CONTENTS			
SCALE: AS NOTED			
SHEET 1 OF 8			
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER
HM 06/07/2022	AB 06/21/2022	EK 06/21/2022	MA-NEB-PIP-22-038-01
			REV. NO.
			0

SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 48 PART 1B2 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPIC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.	FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION
	06/22/2022		
SIGNATURE	06/30/2024	<b>ENEngineering</b> 23 BARTLETT STREET MARLBOROUGH, MA 01752 TEL: (508) 353-4000 FAX: (508) 353-7777 WWW.ENENGINEERING.COM	

ALLEN STREET AND ROCKDALE AVENUE, NEW BEDFORD, MA  
WO# 9280488



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.
- IF THE TIE IN POINT MOVES TO A DIFFERENT SEGMENT OF PIPE THAN SHOWN.
  - IF A CHANGE IN THE LOCATION OF VALVES IS REQUIRED.
  - 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.
  - IF A CHANGE IN PIPE SIZE, MATERIAL, OR WALL THICKNESS IS REQUIRED.
  - 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.
- I. 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.

ROCKDALE/ALLEN - MASTER BOM						
Item #	Size	Quantity	Units	Maximo #	Description	
9	2"	1	EA	562087	VALVE,BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	
13	8"	5	EA	500705	VALVE,BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH	
45	4"	2	EA	500855	COUPLING,PIPE, 4 IN IPS, ELECTROFUSION, PLASTIC, P100	
57	8"	1	EA	545343	ELBOW,PIPE, 90 DEG, 8 IN SDR 11, BUTT WELD ENDS, POLYETHYLENE, P100	
90	4"	2	EA	542538	CAP,PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	
92	8"	2	EA	542540	CAP,PIPE, 8 IN IPS SDR 11, BUTT END, 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	
134	4" X 1/2"	2	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, PE3408/PE100, 1	
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	
149	4" X 1"	1	EA	500868	TEE,PIPE, NON-BLOWING, 4 X 1 IN CTS X 0.090 IN THK WALL SDR 12.5, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100,	
154	8" X 1"	1	EA	560788	TEE,PIPE, NON-BLOWING, 8 X 1 IN IPS SDR 11, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100, 25/BOX	
172	4" X 2"	1	EA	584304	FITTING,TEE, 4 IN IPS X 2 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK, WAS ITEM 577621	
176	8" X 2"	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	
203	8"	4	EA	578132	FITTING,COUPLING, VENTED, INSULATED, W/ END CAP, FOR 8 IN CI PIPE	
249	3/4" x 1/2"	4	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"	2	EA	578139	FITTING,TEE, SHORTSTOPP, 3-WAY, 8 IN	
259	2"	2	EA	578396	FITTING,TEE, SHORTSTOPP, 2 IN, WELDED	
351	2"	1	EA	582521	FITTING,ELBOW, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924, WAS ITEM 578277, NSTAR M-410, E-27-A	
360	2"	30	LF	592667	PIPE, 2 IN IPS SDR 11, 20 FT LG. HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES	
364	8"	465	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	
369	1/2"	7	EA	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	
371	1"	2	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	
396	3"	0	EA	545382	ELBOW,PIPE, 90 DEG, 3 IN X 0.216 IN THK WALL, BUTT WELD ENDS, CS, ASTM A234 GR A, ANSI B16.9, LONG RADIUS	
521	17 lb.	2	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	1	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	
740	8"	5	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	

\*ADDITIONAL ELBOWS MAY BE REQUIRED FOR OFFSETS

ISSUED FOR  
CONSTRUCTION

0	ISSUED FOR CONSTRUCTION	06/21/2022	HM/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
ROCKDALE AND ALLEN MAIN RELAY NEW BEDFORD, MASSACHUSETTS GENERAL NOTES AND MASTER BOM			
SCALE: NOT TO SCALE			SHEET 2 OF 8
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER REV. NO
HM 06/07/2022	AB 06/21/2022	EK 06/21/2022	MA-NEB-PIP-22-038-02 0

SEALED BY:  SIGNATURE	SEALED ON: 06/22/2022 LICENSE EXPIRATION: 06/30/2024	DESIGNED IN ACCORDANCE WITH TITLE 49 PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND OPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION. <b>ENEngineering</b> 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL: (830) 353-4000 FAX: (830) 353-7777 WWW.ENENGINEERING.COM	FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION
--	---	--	--

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
- REGULATOR STATION 50' BOUNDARY
- RIGHT OF WAY
- FENCE
- WATER LINE
- FIRE HYDRANT
- SEWER LINE
- SEWER MANHOLE
- DRAIN LINE
- DRAIN MANHOLE
- CATCH BASIN
- UTILITY POLE
- ELECTRIC MANHOLE
- ELECTRIC LINE
- TELEPHONE LINE
- TELEPHONE MANHOLE

ISSUED FOR  
CONSTRUCTION

0	ISSUED FOR CONSTRUCTION	06/21/2022	HM/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
ROCKDALE AND ALLEN MAIN RELAY			
NEW BEDFORD, MASSACHUSETTS			
LEGEND			
SCALE: NOT TO SCALE		SHEET 3 OF 8	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	REV. NO
HM 06/07/2022	AB 06/21/2022	EK 06/21/2022	MA-NEB-PIP-22-038-03 0

SEALED BY:  
  
SIGNATURE

SEALED ON:  
06/22/2022  
LICENSE EXPIRATION:  
06/30/2024

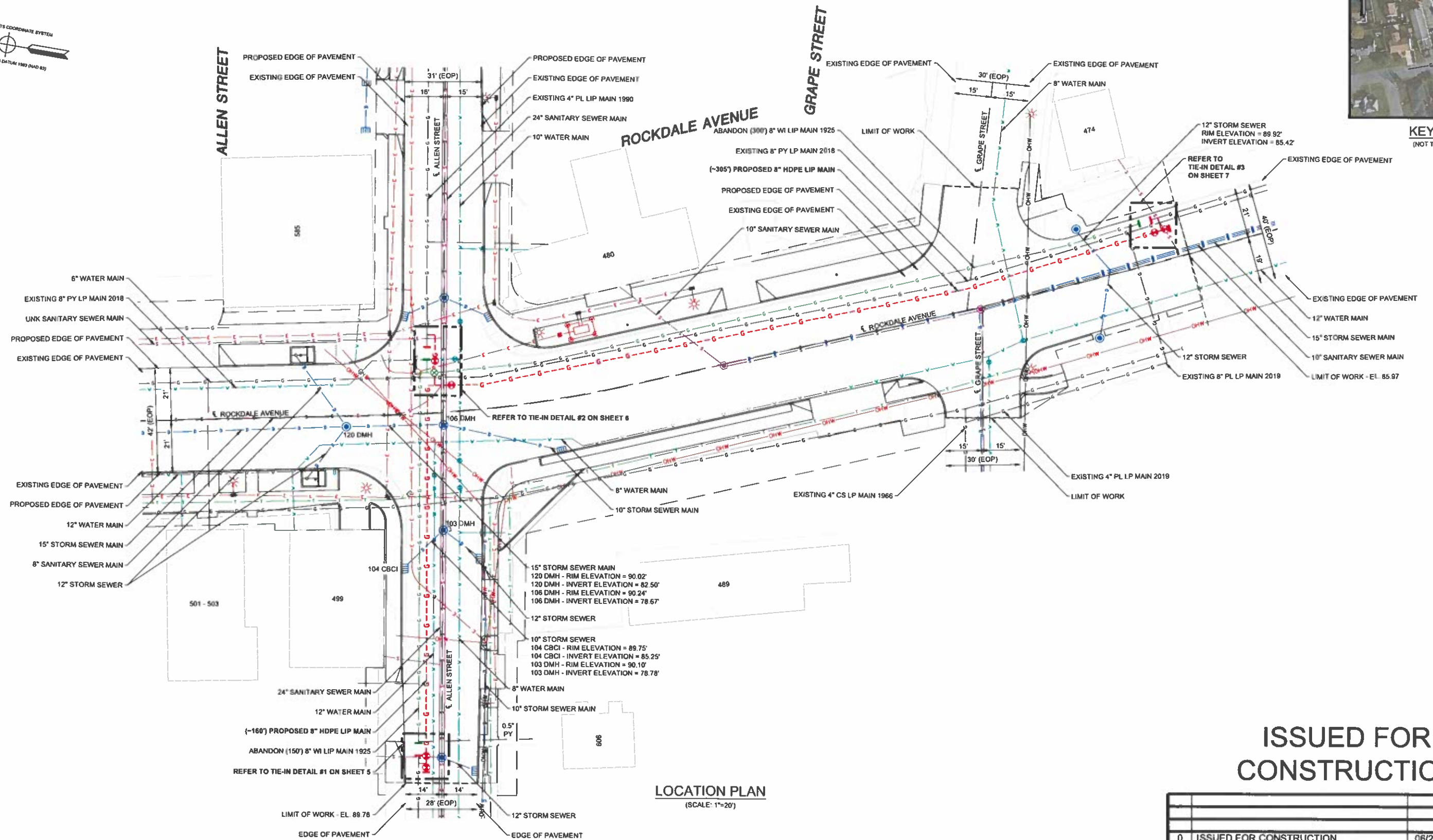
DESIGNED IN ACCORDANCE WITH TITLE 48 PART 1B2 OF MINIMUM FEDERAL SAFETY STANDARDS AND OPTIC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.  
**ENEngineering**  
29 BARTLETT STREET  
MARLBOROUGH, MA 01752  
TEL (630) 353-4000  
FAX (630) 558-7777  
WWW.ENENGINEERING.COM

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION





KEY MAP  
(NOT TO SCALE)



LOCATION PLAN  
(SCALE: 1"=20')

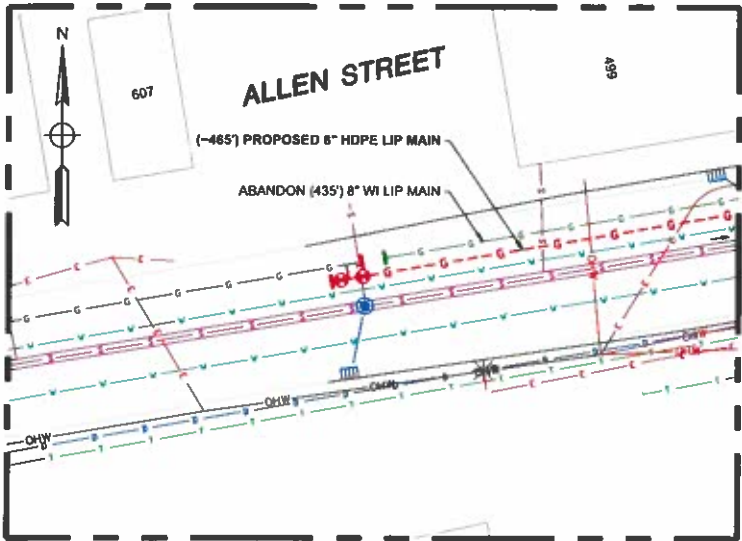
ISSUED FOR  
CONSTRUCTION

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

SEALED BY:  ERIC VINAI KUMAR No. 54771 REGISTERED PROFESSIONAL ENGINEER		SEALED ON: 06/22/2022	DESIGNED IN ACCORDANCE WITH TITLE 48-PART 1B2 OF MINIMUM FEDERAL SAFETY STANDARDS AND OPTIC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION. <b>ENEngineering</b> 28 BARTLETT STREET MARLBOROUGH, MA 01752 TEL: (603) 353-4000 FAX: (603) 353-7777 WWW.ENENGINEERING.COM	FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION
SIGNATURE:		LICENSE EXPIRATION: 06/30/2024		

REVISION STATUS			
NO.	DESCRIPTION	DATE	REV. NO.
0	ISSUED FOR CONSTRUCTION	06/21/2022	HM/AB/EK
			DW/CK/JAP

<b>EVERSOURCE ENERGY</b>			
ROCKDALE AND ALLEN MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
LOCATION PLAN #X			
SCALE: 1"=20'		SHEET 4 OF 8	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER
HM 06/07/2022	AB 06/21/2022	EK 06/21/2022	MA-NEB-PIP-22-038-04
			REV. NO.
			0

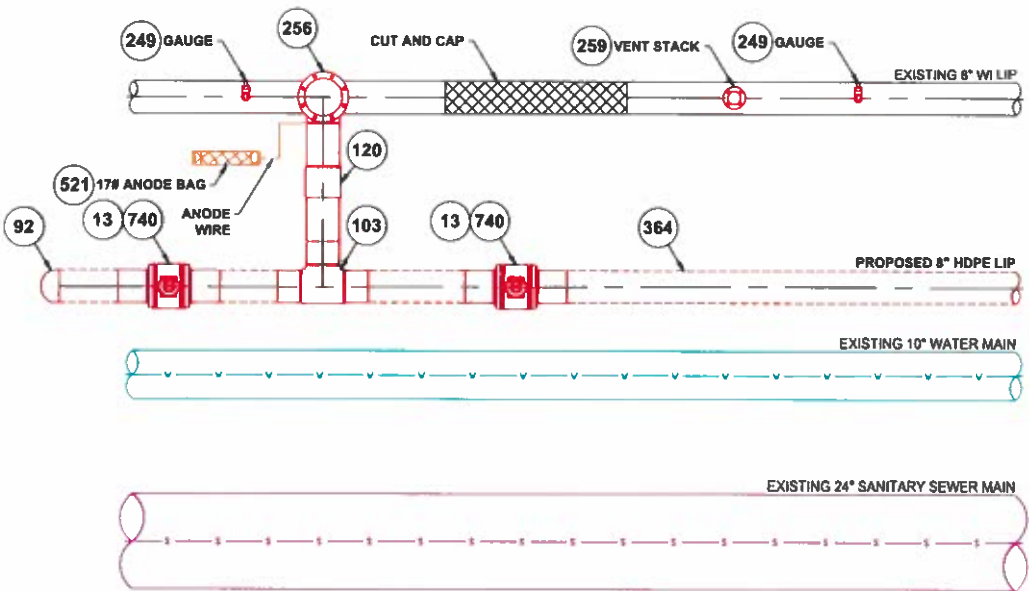


TIE-IN DETAIL #1 - PLAN VIEW

(SCALE: 1"=20')  
(REFER TO SHEET #4)

ROCKDALE/ALLEN - Tie-In #1: Preparatory					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
13	8"	500705	VALVE,BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH	2	EA
92	8"	542540	CAP,PIPE, 8 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	1	EA
103	8"	560681	TEE,PIPE, 8 IN SDR 11, BUTT ENDS, POLYETHYLENE, P100	1	EA
120	8"	546255	FITTING,TRANSITION, 8 IN IPS CS X 8 IN IPS PE4710, SDR 11, STEEL WELD X PLASTIC, BUTT ENDS	1	EA
249	3/4" x 1/2"	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	2	EA
256	8"	578139	FITTING,TEE, SHORTSTOPP, 3-WAY, 8 IN	1	EA
259	2"	578396	FITTING,TEE, SHORTSTOPP, 2 IN, WELDED	1	EA
364	8"	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
521	17 lb.	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	1	EA
740	8"	604132	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 8 IN FULL PORT VALVES, PAVEMENT RISER IN 583488, 6/BOX	2	EA

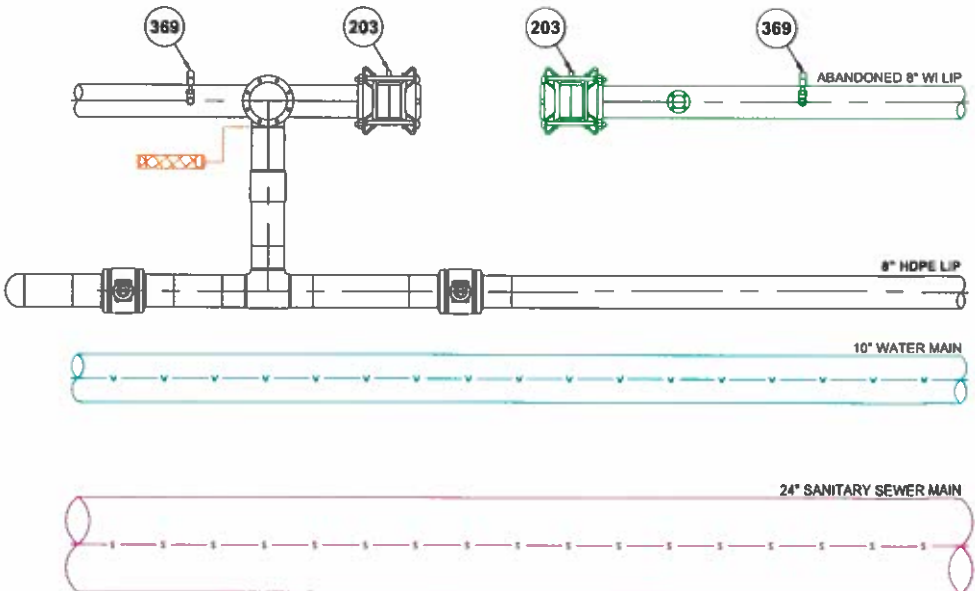
ROCKDALE/ALLEN - Tie-In #1: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
203	8"	578132	FITTING,COUPLING, VENTED, INSULATED, W/ END CAP, FOR 8 IN CI PIPE	2	EA
369	1/2"	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	2	EA



ALLEN STREET

PREPARATORY TIE-IN DETAIL #1

(SCALE: 1"=2')  
(REFER TO SHEET #4)



ALLEN STREET

FINAL TIE-IN DETAIL #1

(SCALE: 1"=4')  
(REFER TO SHEET #4)

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
	EXISTING FITTING
	PROPOSED FITTING

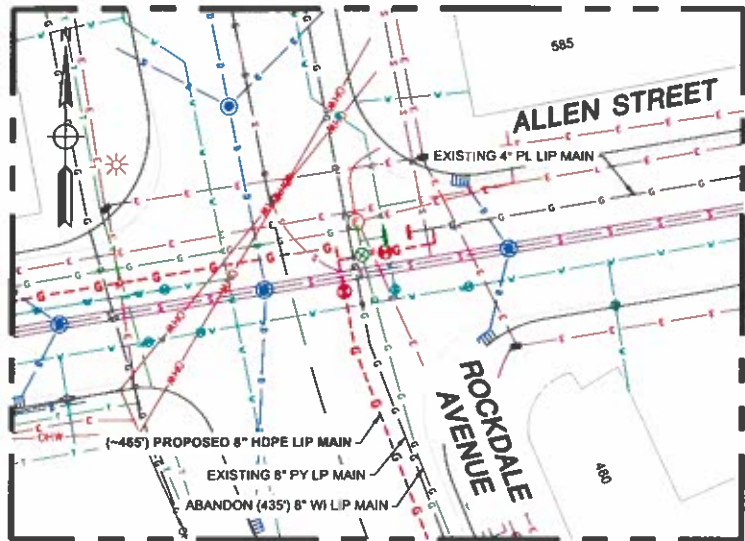
ISSUED FOR  
CONSTRUCTION

REVISION STATUS			
0	ISSUED FOR CONSTRUCTION	06/21/2022	HM/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
Eversource Energy			
ROCKDALE AND ALLEN MAIN RELAY NEW BEDFORD, MASSACHUSETTS TIE-IN DETAIL #1 AND BOM			
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS) SHEET 5 OF 8			
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER
HM 06/07/2022	AB 06/21/2022	EK 06/21/2022	MA-NEB-PIP-22-038-05
			REV. NO.
			0

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
	06/22/2022		
SIGNATURE	06/30/2024	<b>ENEngineering</b> 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL: (508) 353-4000 FAX: (508) 353-7777 WWW.ENENGINEERING.COM	

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



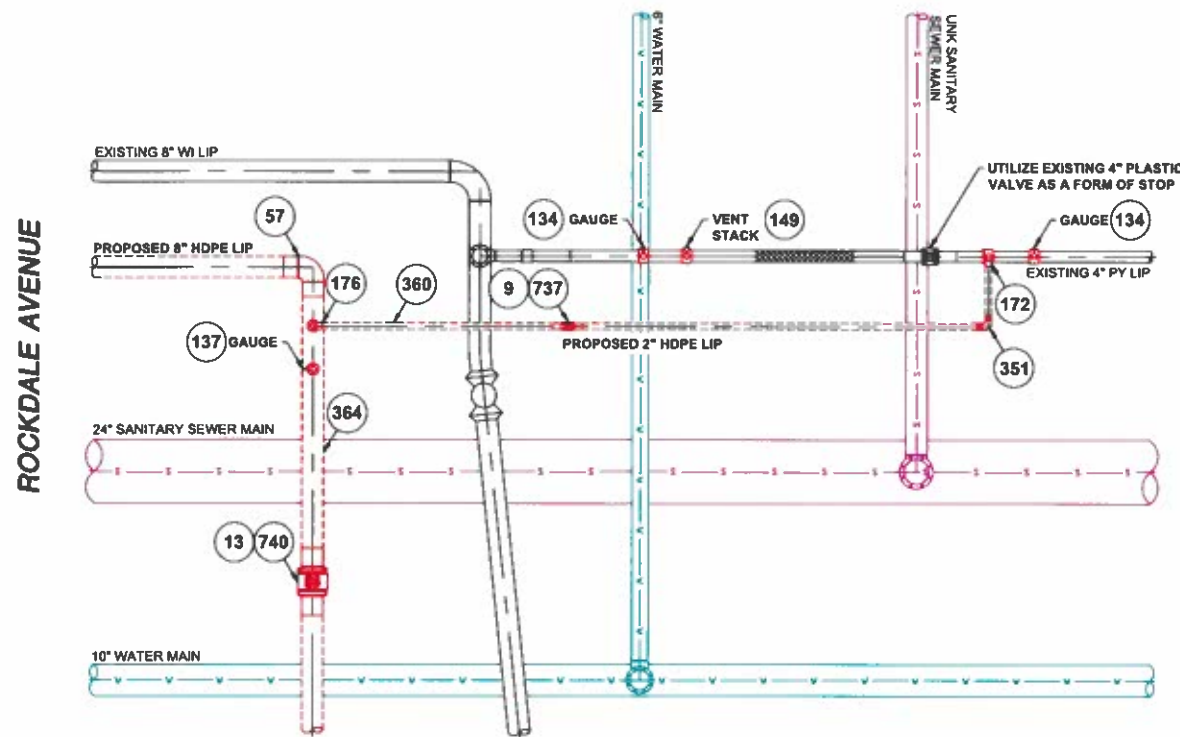


TIE-IN DETAIL #2 - PLAN VIEW

(SCALE: 1"=20')  
(REFER TO SHEET #4)

ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
9	2"	552087	VALVE, BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
13	8"	500705	VALVE, BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH	1	EA
57	8"	545343	ELBOW, PIPE, 90 DEG, 8 IN SDR 11, BUTT WELD ENDS, POLYETHYLENE, P100	1	EA
134	4" X 1/2"	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, PE3408/PE100, 1	2	EA
137	8" X 1/2"	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
149	4" X 1"	500868	TEE, PIPE, NON-BLOWING, 4 X 1 IN CTS X 0.090 IN THK WALL SDR 12.5, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100, 1	1	EA
172	4" X 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
176	8" X 2"	577623	FITTING, TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055, RESTRICTED PURCHASE	1	EA
351	2"	582521	FITTING, ELBOW, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924, WAS ITEM 578277, NSTAR M-410, E-27-A	1	EA
360	2"	592667	PIPE, 2 IN IPS SDR 11, 20 FT LG, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES	15	LF
364	8"	554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100	15	LF
737	4 1/4" square	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
740	8"	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

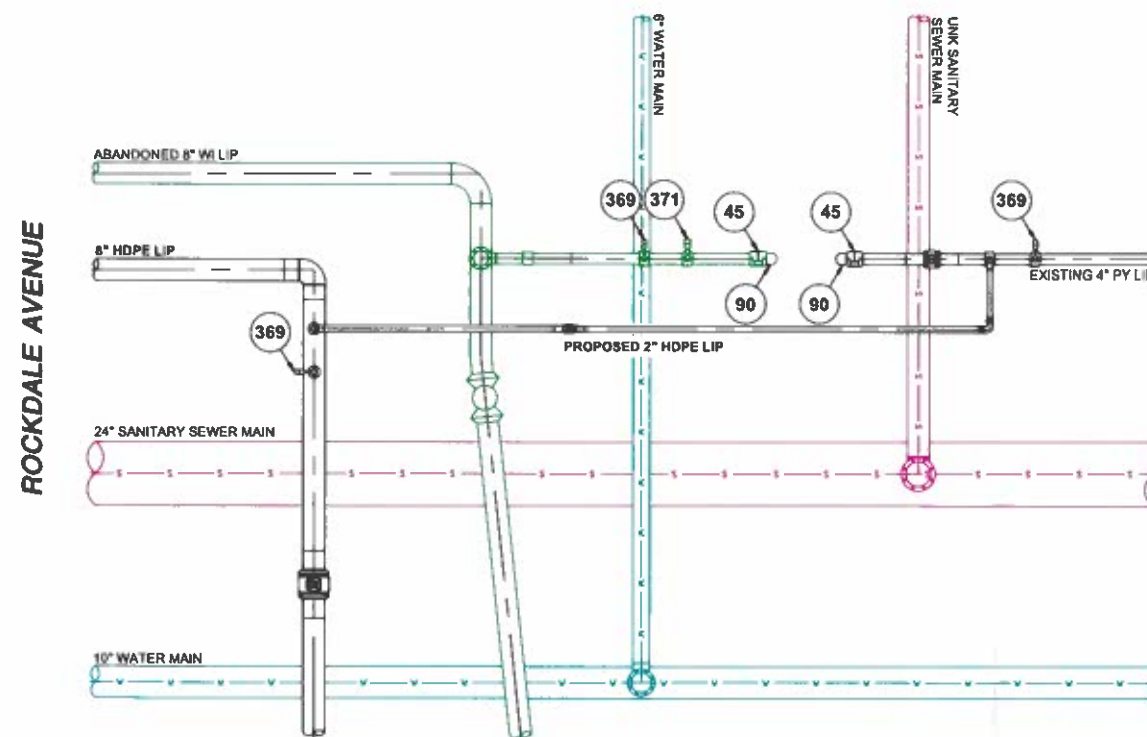
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
45	4"	500855	COUPLING, PIPE, 4 IN IPS, ELECTROFUSION, PLASTIC, P100	2	EA
90	4"	542538	CAP, PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	2	EA
369	1/2"	579972	FITTING, CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	3	EA
371	1"	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



ALLEN STREET

PREPARATORY TIE-IN DETAIL #2

(SCALE: 1"=3')  
(REFER TO SHEET #4)



ALLEN STREET

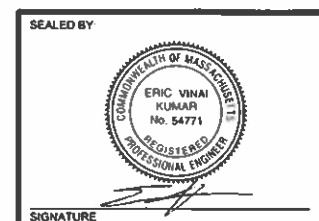
FINAL TIE-IN DETAIL #2

(SCALE: 1"=3')  
(REFER TO SHEET #4)

	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

ISSUED FOR  
CONSTRUCTION

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



SEALED BY  
ERIC VINAI KUMAR  
No. 54771  
REGISTERED  
PROFESSIONAL ENGINEER  
SIGNATURE

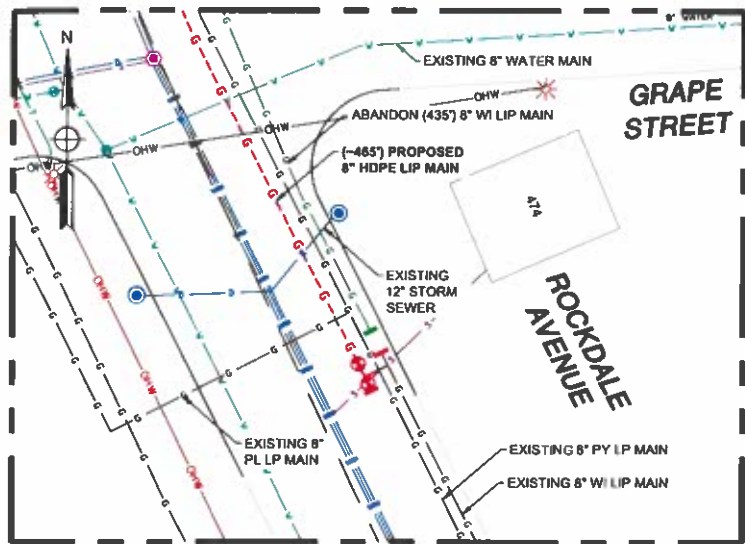
SEALED ON  
06/22/2022  
LICENSE  
EXPIRATION  
06/30/2024

DESIGNED IN ACCORDANCE WITH TITLE 48, PART 1B2 OF MINIMUM FEDERAL SAFETY STANDARDS AND OPTIC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

**ENEngineering**  
29 BARTLETT STREET  
MARIBOROUGH, MA 01752  
TEL: (508) 333-4000  
FAX: (508) 333-1777  
WWW.ENENGINEERING.COM

FIELD VERIFY DIMENSIONS  
PRIOR TO PIPE FABRICATION

REVISION STATUS				
NO.	DESCRIPTION	DATE	BY	APPROVED BY
0	ISSUED FOR CONSTRUCTION	06/21/2022	HM/AB/EK	
			DW/CK/AP	
EVERSOURCE ENERGY				
ROCKDALE AND ALLEN MAIN RELAY NEW BEDFORD, MASSACHUSETTS TIE-IN DETAIL #2 AND BOM				
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS) SHEET 6 OF 8				
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV NO
HM 06/07/2022	AB 06/21/2022	EK 06/21/2022	MA-NEB-PIP-22-038-06	0



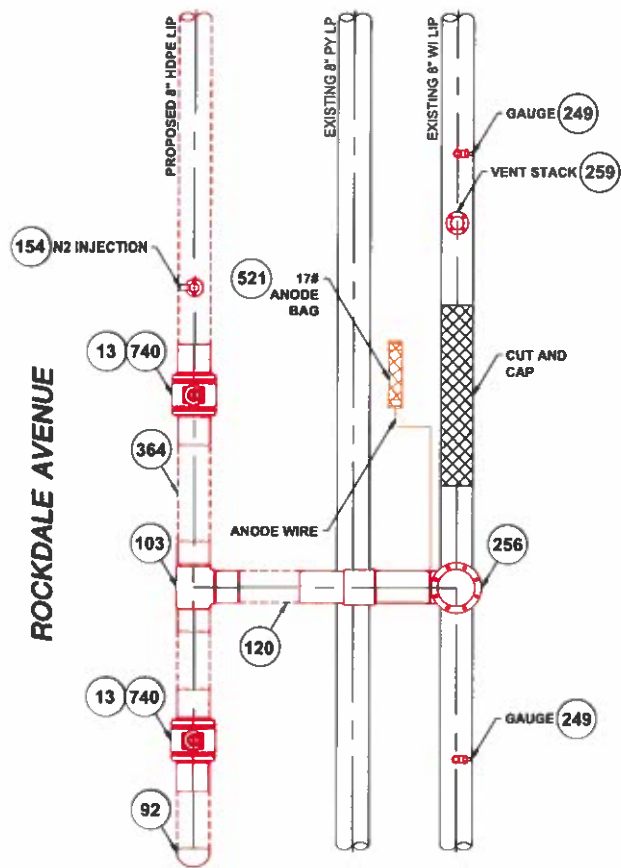
**TIE-IN DETAIL #3 - PLAN VIEW**  
(SCALE: 1"=20')  
(REFER TO SHEET #4)

**ROCKDALE/ALLEN - Tie-In #3: Preparatory**

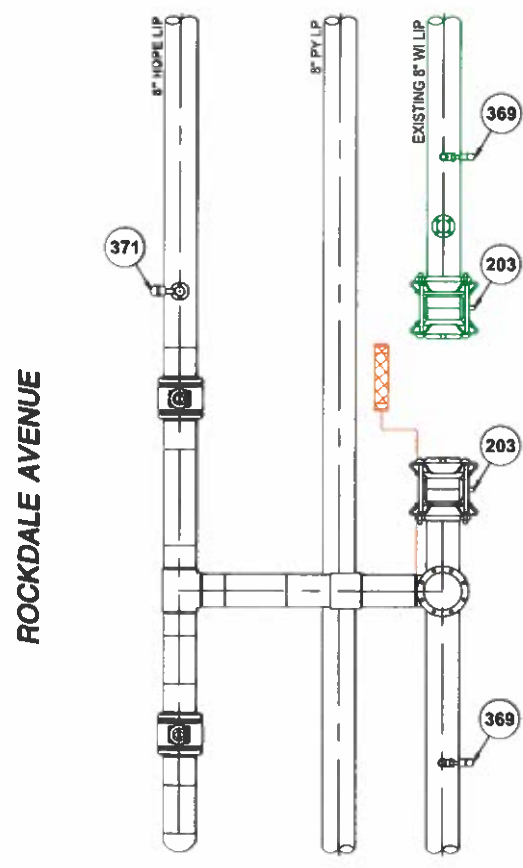
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
13	8"	500705	VALVE, BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH	2	EA
92	8"	542540	CAP, PIPE, 8 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	1	EA
103	8"	560681	TEE, PIPE, 8 IN SDR 11, BUTT ENDS, POLYETHYLENE, P100	1	EA
120	8"	546255	FITTING, TRANSITION, 8 IN IPS CS X 8 IN IPS PE4730, SDR 11, STEEL WELD X PLASTIC, BUTT ENDS	1	EA
154	8" x 1"	560788	TEE, PIPE, NON-BLOWING, 8 X 1 IN IPS SDR 11, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100, 25/BOX	1	EA
249	3/4" x 1/2"	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	2	EA
256	8"	578139	FITTING, TEE, SHORTSTOPP, 3-WAY, 8 IN	1	EA
259	2"	578396	FITTING, TEE, SHORTSTOPP, 2 IN, WELDED	1	EA
364	8"	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
521	17 lb.	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	1	EA
740	8"	604132	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 8 IN FULL PORT VALVES, PAVEMENT RISER IN 583488, 6/BOX	2	EA

**ROCKDALE/ALLEN - Tie-In #3: Final**

REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
203	8"	578132	FITTING, COUPLING, VENTED, INSULATED, W/ END CAP, FOR 8 IN CI PIPE	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
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



**PREPARATORY TIE-IN DETAIL #3**  
(SCALE: 1"=2')  
(REFER TO SHEET #4)



**FINAL TIE-IN DETAIL #3**  
(SCALE: 1"=2')  
(REFER TO SHEET #4)

**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
	EXISTING FITTING
	PROPOSED FITTING

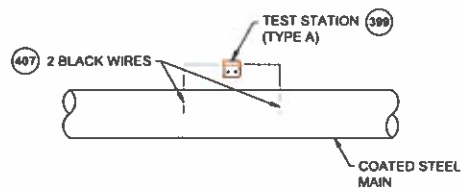
**ISSUED FOR CONSTRUCTION**

0	ISSUED FOR CONSTRUCTION	06/21/2022	HM/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
<b>EVERSOURCE ENERGY</b>			
ROCKDALE AND ALLEN MAIN RELAY			
NEW BEDFORD, MASSACHUSETTS			
TIE-IN DETAIL #3 AND BOM			
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS) SHEET 7 OF 8			
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER / REV. NO.
HM 06/07/2022	AB 06/21/2022	EK 06/21/2022	MA-NEB-PIP-22-038-07 / 0

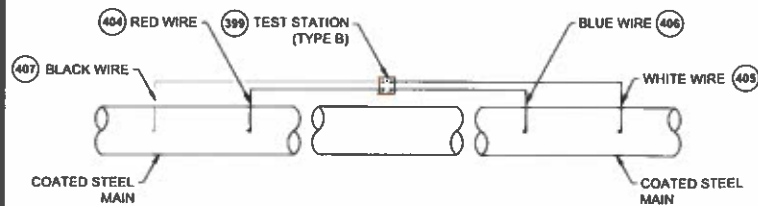
**NOTES**  
1. REFER TO GENERAL NOTES ON SHEET #2

SEALED BY: 	SEALED ON: 06/22/2022	DESIGNED IN ACCORDANCE WITH TITLE 48B PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND OPTIC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.	FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION
SIGNATURE: 	LICENSE EXPIRATION: 06/30/2024	<b>ENEngineering</b> 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL: (603) 353-4000 FAX: (603) 353-7777 WWW.ENENGINEERING.COM	

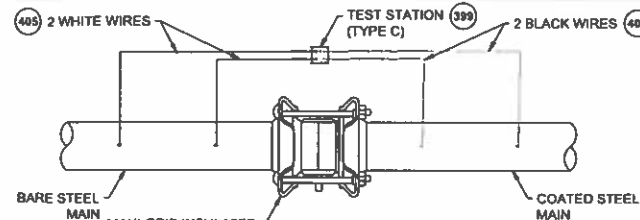




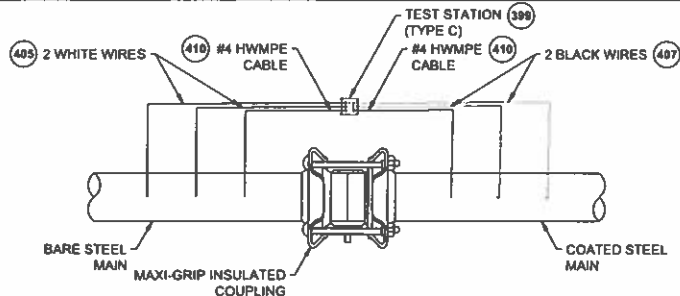
TYPE A TEST STATION  
(SCALE: 1"=2')



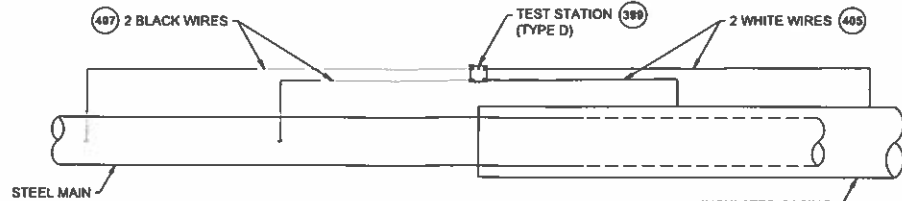
TYPE B TEST STATION  
(SCALE: 1"=2')



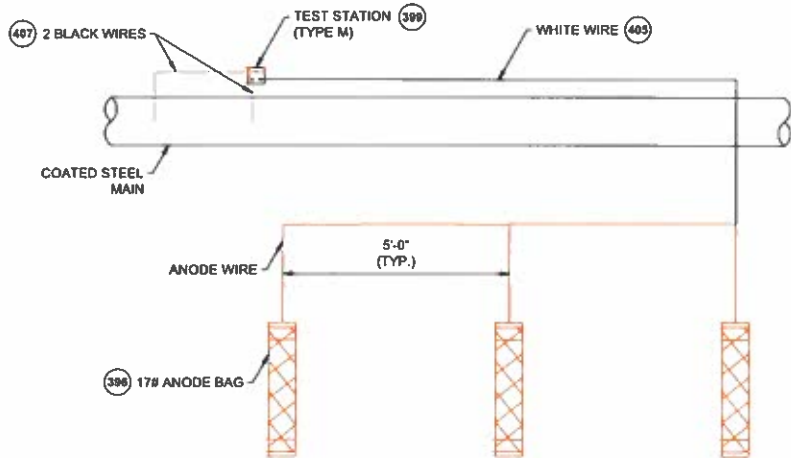
TYPE C TEST STATION  
(SCALE: 1"=2')



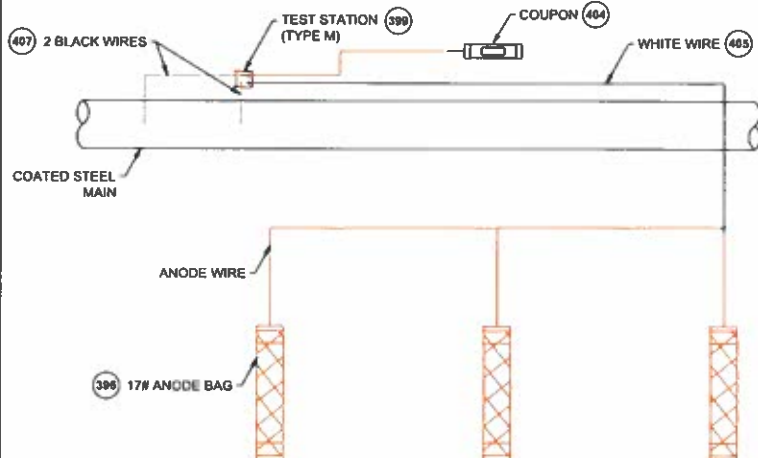
TYPE C TEST STATION - WITH #4 HWMPE CABLE  
(SCALE: 1"=2')



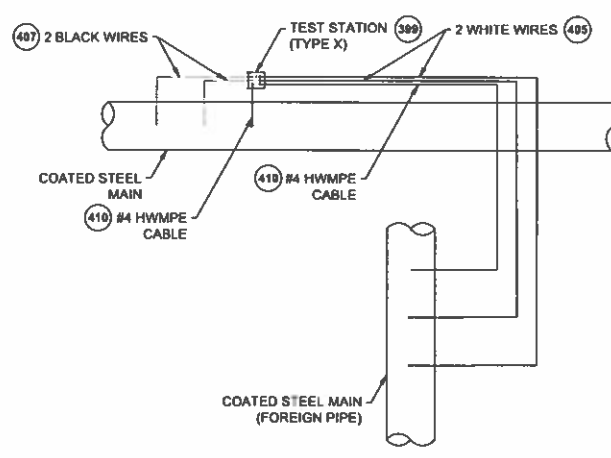
TYPE D TEST STATION (INSULATED CASING)  
(SCALE: 1"=2')



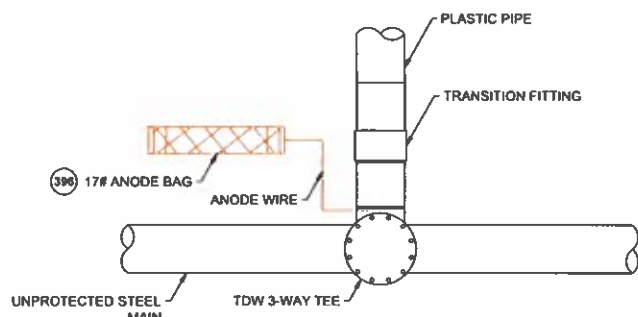
TYPE M TEST STATION - WITH ANODES  
(SCALE: 1"=2')



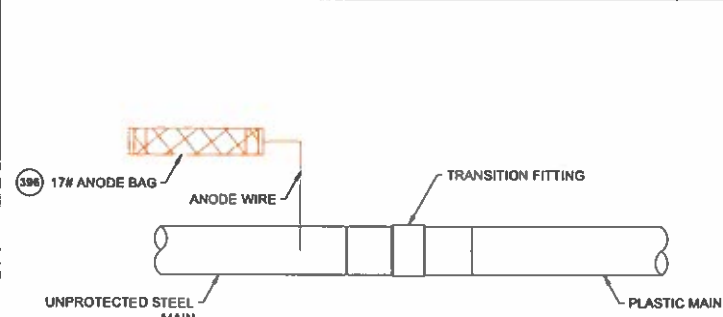
TYPE M TEST STATION - WITH COUPON AND ANODES  
(SCALE: 1"=2')



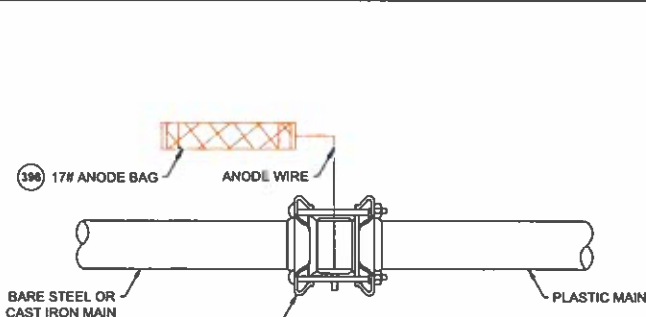
TYPE X TEST STATION  
(SCALE: 1"=2')



TDW 3-WAY TEE WITH ANODE  
(SCALE: 1"=2')



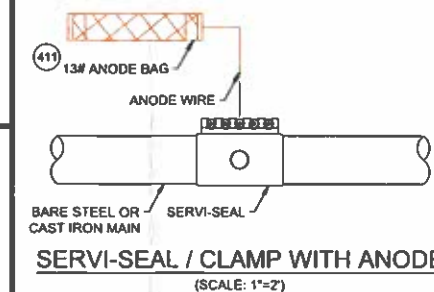
TRANSITION FITTING WITH ANODE  
(SCALE: 1"=2')



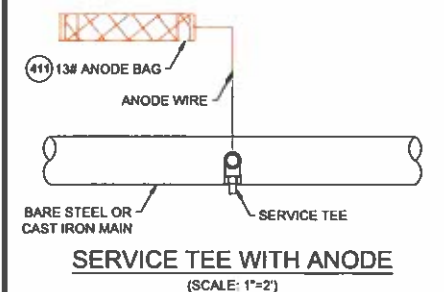
MAXI-GRIP COUPLING / END CAP  
WITH ANODE  
(SCALE: 1"=2')

CATHODIC PROTECTION BILL OF MATERIALS				
ITEM	MAXIMO NO.	DESCRIPTION	UNITS	
396	577776	ANODE, BAG, 17 LB NET, HIGH POTENTIAL MAGNESIUM, W/ 10 FT #10 AWG TW ORANGE LEAD	EA	
397	517826	WIRE, PACKED IN CARDBOARD BOX 42 LB TOTAL WEIGHT, 12 SOLID - 10 STRANDED, CU, HOUSING (COVER) MATE IN 590389,	EA	
398	590389	HOUSING, 50 V MAX, 10 AWG MAX, FOR PROTECTING TRACER WIRE SPLICES, USED WITH CONNECTOR IN 517626, 10 BAG	EA	
399	590871	BOX VALVE, TEST STATION, CP TEST #178, 10-1/4 IN DIA LUG, 3-3/8 IN I.D. 16 IN H., ASTM A48 CL 25 CAST IRON, FOR OFF-ROAD USE ONLY	EA	
400	508567	POWDER, CARTRIDGE, TYPE IS F-33, ALLOY, CAP COLOR CLEAR, 15 GM CHARGE, 20/PAC, FOR STEEL PIPE	BOX	
401	559168	SLEEVE, ELECTRICAL, #14 TO 10 AWG, W/ THERMITE WELDER, FOR CATHODIC PROTECTION	EA	
402	584045	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCS ZIN-LW010, 10 FT OF CABLE	ES	
403	603126	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCS ZIN-LW025, 25 FT OF CABLE	ES	
404	603140	WIRE, ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, RED, INSULATED, CU, 500 FT SPOOL, WIRE	ROLL	
405	578415	WIRE, ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, WHITE, INSULATED, CU, 500 FT SPOOL, WIRE	ROLL	
406	603141	WIRE, ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, BLUE, INSULATED, CU, 500 FT SPOOL, WIRE	ROLL	
407	603139	WIRE, ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, BLACK, INSULATED, CU, 500 FT SPOOL, WIRE	ROLL	
408	500804	WELDER, THERMITE, THERMITE, FOR GAS PIPE, #12 CABLE, HORIZONTAL STEEL PIPE 80/100/120 IN DIAMETER	EA	
409	500805	WELDER, THERMITE, THERMITE, FOR GAS PIPE, #12 CABLE, HORIZONTAL STEEL PIPE 3/4 - 3-1/2 IN DIAMETER	EA	
410	513850	CABLE, INSULATED, CATHODIC PROTECTION, 1/C, #4 AWG, 7 STR, 600 V, BLACK, HWMPE, CU, 1000 FT ROLLS	FT	
411	505818	ANODE, BAG, 2.5 X 2.5 X 4.5 IN, 10 FT LG, 3 LB, MAGNESIUM, Alternate to 577776	EA	
575	508572	PRIMER, 4 GAL/CASE, BROWN, FOR WAX TAPE, APPLICATION TEMP 0 TO 230 F, TEMCOAT 3000	EA	
576	503673	TAPE, WAX, 9 FT LG X 4 IN W, 24 ROLLS/CS, ABOVE AND BELOW GROUND APPLICATIONS, TR-#2A	ROLL	
577	603789	TRENTON-FILL FOR PM-GP, 140 FA, FOR FILLING VOIDS & IRREGULAR SPACES PRIOR TO WRAPPING W/WAX TAPE, OF 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	

- NOTES:
- 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.
  - 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.
  - 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.



SERVI-SEAL / CLAMP WITH ANODE  
(SCALE: 1"=2')



SERVICE TEE WITH ANODE  
(SCALE: 1"=2')

ISSUED FOR  
CONSTRUCTION

NO.	DESCRIPTION	DATE	REV. NO.
0	ISSUED FOR CONSTRUCTION	06/21/2022	HM/AB/EK
			DW/CK/JAP

REVISION STATUS

**EVERSOURCE**  
ENERGY

ROCKDALE AND ALLEN MAIN RELAY  
NEW BEDFORD, MASSACHUSETTS

STANDARD CORROSION DETAILS

SCALE: 1"=2' (DO NOT SCALE FROM DRAWINGS)				SHEET 8 OF 8	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.	
HM 06/07/2022	AB 06/21/2022	EK 06/21/2022	MA-NEB-PIP-22-038-08	0	

\*THESE DETAILS WERE PROVIDED BY EVERSOURCE FOR TYPICAL INSTALLATIONS AND ARE FOR REFERENCE USE ONLY.

SEALED BY:



SIGNATURE

SEALED ON:

06/22/2022

LICENSE EXPIRATION:

06/30/2024

DESIGNED IN ACCORDANCE WITH TITLE 46, PART 182 OF MINIMUM FEDERAL SAFETY STANDARDS AND OPTIC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

**ENEngineering**

28 BARTLETT STREET  
MARLBOROUGH, MA 01752  
TEL (833) 353-4000  
FAX (508) 555-7777  
WWW.ENENGINEERING.COM

FIELD VERIFY DIMENSIONS  
PRIOR TO PIPE FABRICATION