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EVERSOURCE

ENERGY



MAIN

INSTALLATION: ±1485' OF 4" PLASTIC LIP/35# MAIN

ABANDONMENT: ±1425' OF 4" CAST IRON LP/14" W.C MAIN

ABANDONMENT: ±625' OF 6" CAST IRON LP/14" W.C MAIN

AFFECTED STREETS: VIAL STREET AND SALISBURY STREET.

SERVICES

REPLACEMENT: ±1400' OF 0.5" PLASTIC LIP/35# SERVICE

TIE-OVER: ±1300' OF 0.5" PLASTIC LIP/35# SERVICE

TOTAL SERVICES: 54

METER MOVE OUTS: 48

COVE STREET, NEW BEDFORD, MA
WO# XXXXXXX

ISSUED FOR
REVIEW

A	ISSUED FOR REVIEW	12/31/2021	BS/AB
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
COVE STREET MAIN RELAY			
NEW BEDFORD, MASSACHUSETTS			
WORK SCOPE AND TABLE OF CONTENTS			
SCALE: AS NOTED		SHEET 1 OF 14	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER
ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-01
			REV. NO.
			A

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

A. IF ANY OF THE FOLLOWING OCCUR, A DRAWING REVISION IS REQUIRED AND MUST BE APPROVED AND/OR STAMPED BY THE ENGINEER OF RECORD. CHANGES CAN BE APPROVED AND/OR STAMPED BY A PROJECT ENGINEER, BUT THE ENGINEER OF RECORD MUST BE INFORMED.

1. IF THE TIE IN POINT MOVES TO A DIFFERENT SEGMENT OF PIPE THAN SHOWN.
2. IF A CHANGE IN THE LOCATION OF VALVES IS REQUIRED.
3. IF THERE IS ANY CHANGE TO WHAT IS SHOWN ON THE DRAWING WITHIN 50 FT OF A PRESSURE REGULATING STATION, DISTRICT REGULATOR, OR GATE STATION.
4. IF A CHANGE IN PIPE SIZE, MATERIAL, OR WALL THICKNESS IS REQUIRED.
5. ALTERNATE FITTINGS THAT ARE ACCEPTABLE FOR ANY TIE-IN DETAIL WILL BE CALLED OUT IN THE DRAWING. FITTING CHANGES NOT SHOWN AS ALTERNATIVES ON THE DRAWING WILL NEED TO FOLLOW THE DRAWING CHANGE PROCESS CONTAINED IN SECTION V.D.

B. CONSTRUCTION DRAWINGS, LOCATIONS OF EXISTING UTILITIES, UNDERGROUND STRUCTURES AND WORK LOCATIONS ARE BASED ON BEST AVAILABLE INFORMATION BUT HAVE NOT BEEN FIELD VERIFIED.

C. ALL WORK, MATERIAL AND CONSTRUCTION SHALL BE PERFORMED AND COMPLETED IN COMPLIANCE WITH ALL PERMITS AND APPROVALS PER EVERSOURCE, LOCAL, STATE, OSHA AND FEDERAL REGULATIONS AND STANDARDS.

D. ALL LIVE GAS WORK EXCEPT SERVICE SIZE TAPS, INCLUDING BUT NOT LIMITED TO TAPPING OF FITTINGS ON LIVE MAINS, STOPPING, MANIPULATING VALVE, ABANDONMENT, SHALL BE PERFORMED BY, OR AT THE DIRECTION AND UNDER THE DIRECT SUPERVISION OF EVERSOURCE GAS PERSONNEL AND IN ACCORDANCE WITH THE WRITTEN PROCEDURE. DRAWING CHANGES MAY ALSO REQUIRE A CHANGE TO THE PROCEDURE.

E. EXCAVATOR IS REQUIRED TO PROTECT EXISTING UTILITIES, STRUCTURES, LANDSCAPES FEATURES, SIGNAGE, CURBS, ETC. CARE SHOULD BE TAKEN NOT TO DISTURB OR DAMAGE SUCH ITEMS. ROADWAY, SIDEWALKS, AND GRASS DISTURBED SHALL BE RESTORED TO THE SATISFACTION OF THE CITY OR TOWN. PLANT BEDS WILL BE RELOCATED TO THEIR EXISTING REGULAR LOCATION.

F. ALL TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), INCLUDING ALL REVISIONS AND ADDENDA. ALL TRAFFIC CONTROL DEVICES WILL BE SUPPLIED BY EXCAVATOR.

G. EXCAVATOR REQUIRED TO CALL DIG-SAFE/CALL BEFORE YOU DIG (DIAL 811) AT LEAST 72 HOURS PRIOR TO CONSTRUCTION. SATURDAYS, SUNDAYS AND HOLIDAYS ARE EXCLUDED FROM THE 72-HOUR TIME SPAN. NOT CONSIDERED BUSINESS WORKDAYS.

H. IF THE PROJECT IS WITHIN 50 FEET OF A DISTRICT REGULATOR OR GATE STATION, ENSURE THAT A QUALIFIED I&R TECHNICIAN IS ON SITE.

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.

*ADDITIONAL ELBOWS MAY BE REQUIRED FOR OFFSETS

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REVISION STATUS				
<div> <div>EVERSOURCE</div> <div>ENERGY</div> </div>				
COVE STREET MAIN RELAY				
NEW BEDFORD, MASSACHUSETTS				
GENERAL NOTES AND MASTER BOM				
SCALE: NOT TO SCALE			SHEET 2 OF 14	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-02	A

2109775.37

LEGEND

— G — G — G — G —

EXISTING GAS MAIN

— G — G — G — G —

EXISTING GAS MAIN TO BE
ABANDONED

— G — G — G — G —

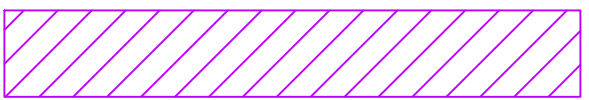
EXISTING GAS MAIN WITH SERVICE TRANSFERS

_____G_____G_____G_____G_____

EXISTING GAS MAIN WITH PRESSURE INCREASE

--- G --- G --- G --- G ---

PROPOSED GAS MAIN



REGULATOR STATION 50' BOUNDARY

RIGHT OF WAY

— X — X — X —

FENCE

_____ W _____ W _____ W _____ W _____

WATER LINE



FIRE HYDRANT

— S — S — S — S —

SEWER LINE



SEWER MANHOLE

———— D ———— D ———— D ———— D ————

DRAIN LINE



DRAIN MANHOLE



CATCH BASIN



UTILITY POLE



ELECTRIC MANHOLE

_____E_____E_____E_____E_____

ELECTRIC LINE

_____T_____T_____T_____T_____


TELEPHONE LINE

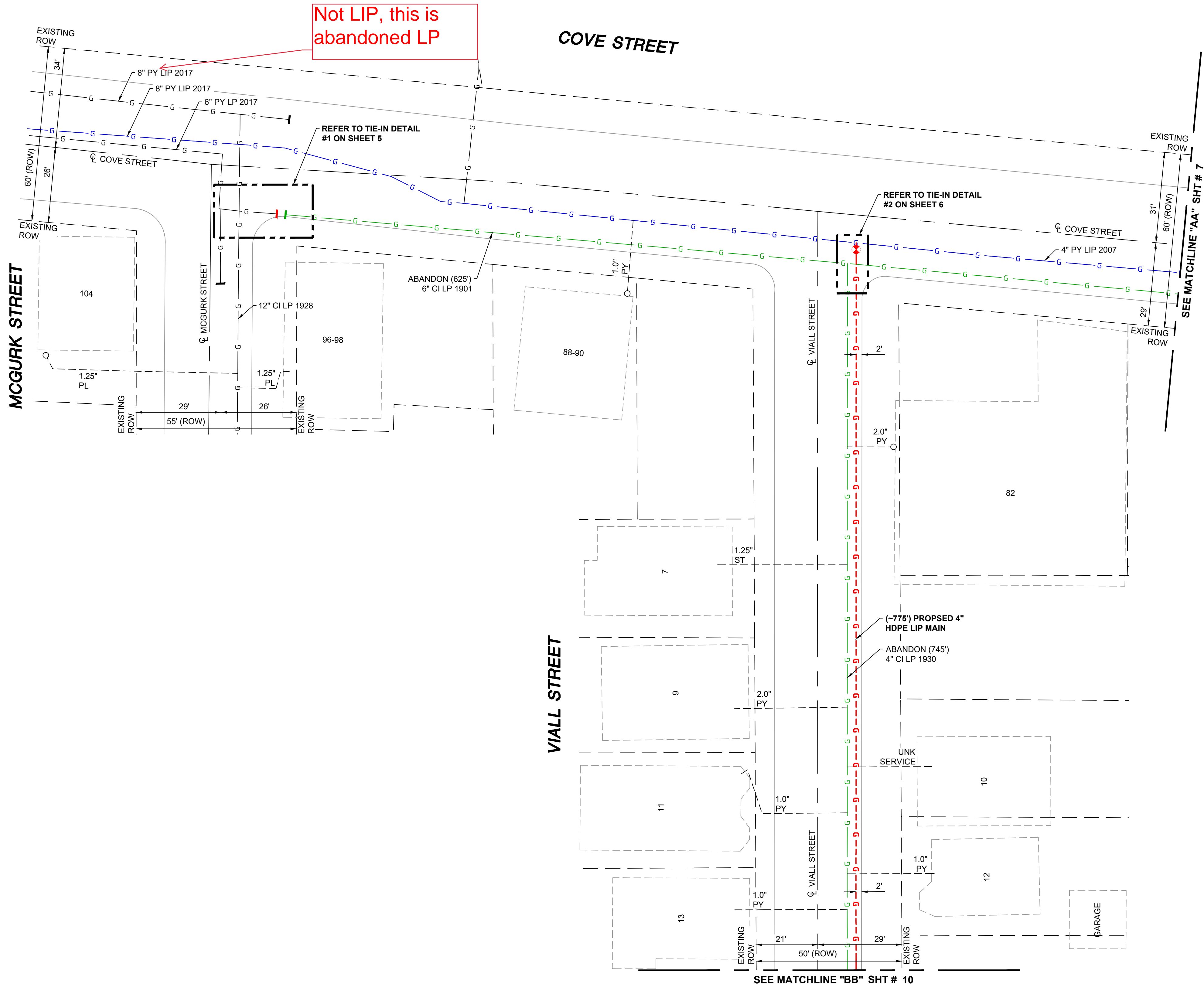
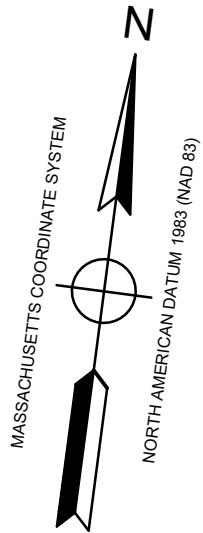


TELEPHONE MANHOLE

ISSUED FOR
REVIEW

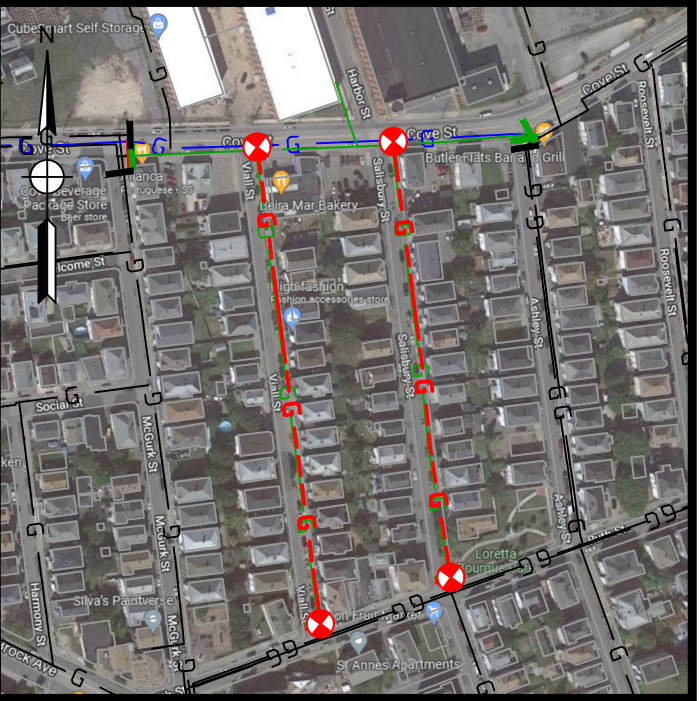
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NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
<div>EVERSOURCE</div> <div>ENERGY</div>				
COVE STREET MAIN RELAY				
NEW BEDFORD, MASSACHUSETTS				
LEGEND				
SCALE: NOT TO SCALE			SHEET 3 OF 14	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-03	A

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	LICENSE EXPIRATION: _____	 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 335-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	



LOCATION PLAN #1
(SCALE: 1"=20')

ISSUED FOR
REVIEW



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

SEALED BY:
SIGNATURE

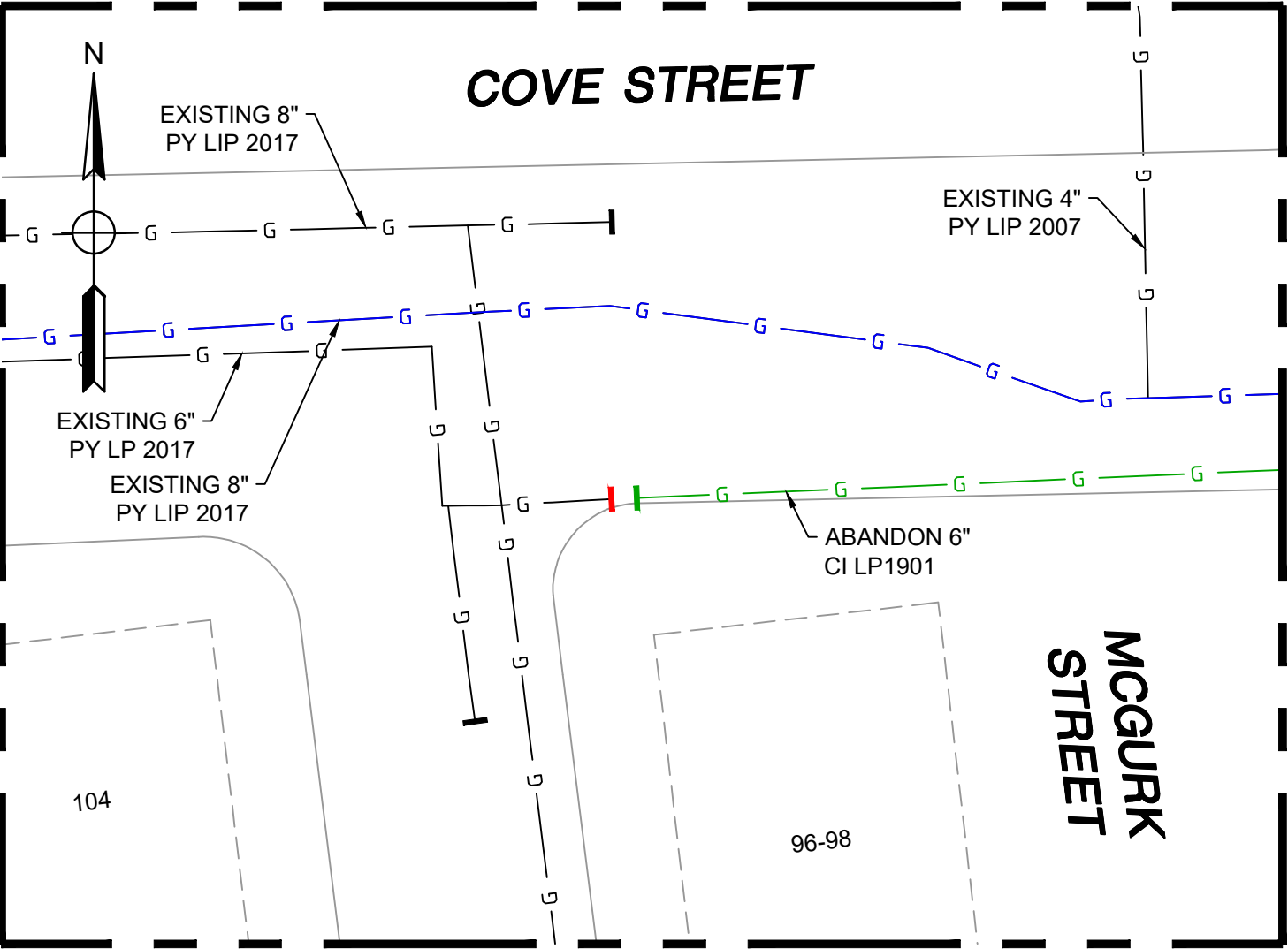
SEALED ON:
LICENSE EXPIRATION:

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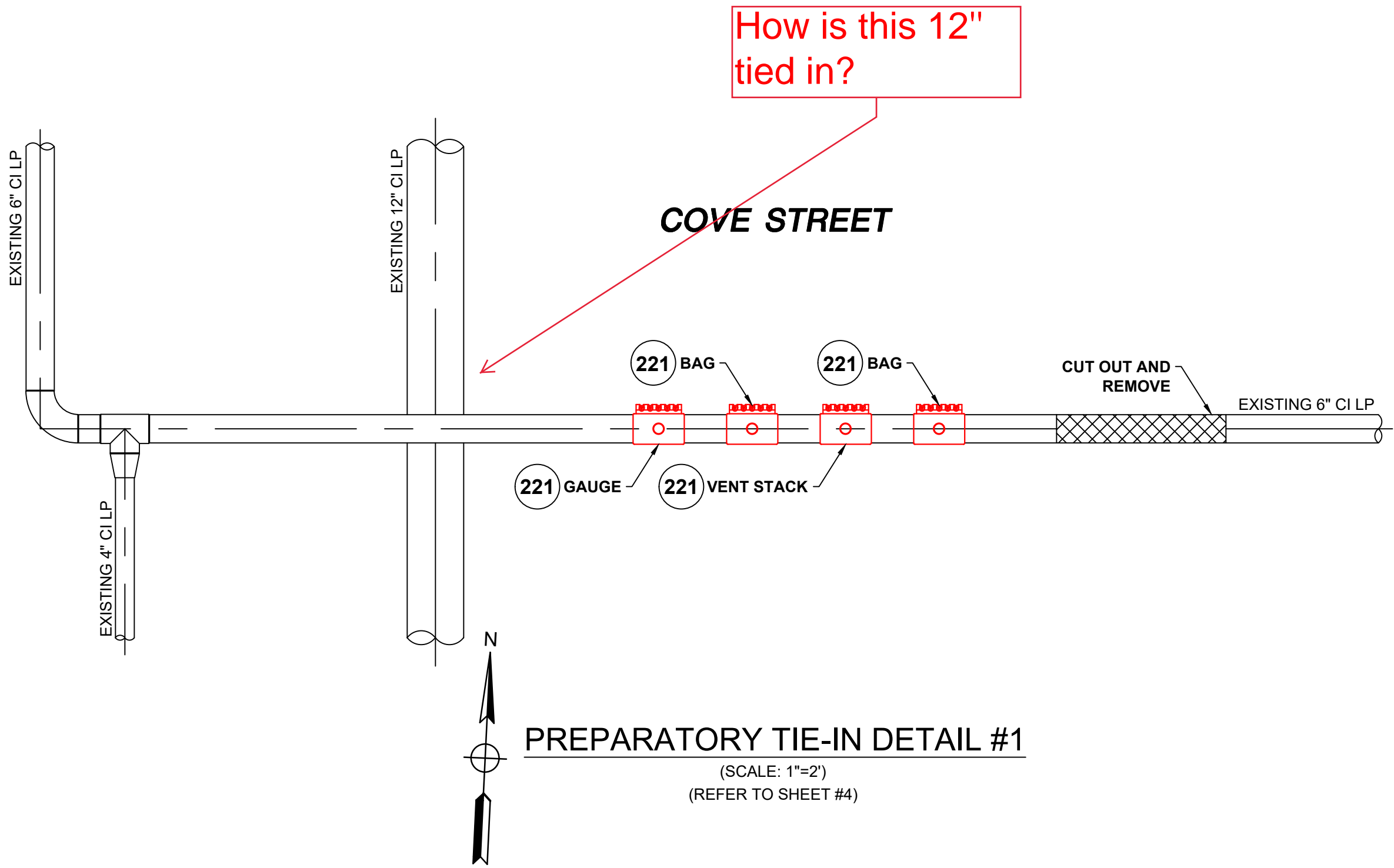
A	ISSUED FOR REVIEW	12/31/2021	BS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
EVERSOURCE ENERGY				
COVE STREET MAIN RELAY				
NEW BEDFORD, MASSACHUSETTS				
LOCATION PLAN #1				
SCALE: 1"=20'			SHEET 4 OF 14	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-04	A



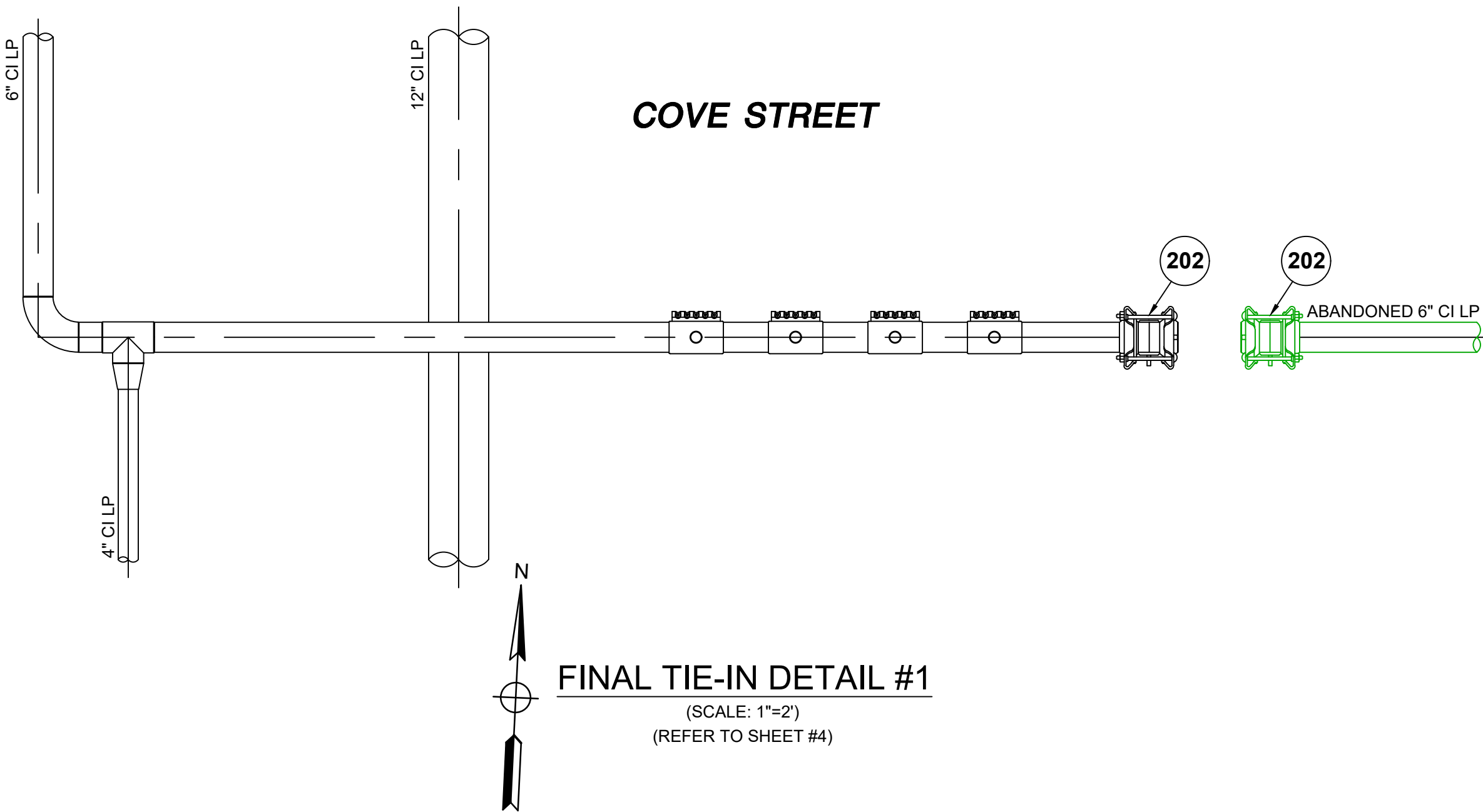
TIE-IN DETAIL #1 - PLAN VIEW
(SCALE: 1"=20')
(REFER TO SHEET #4)

COVE STREET, NEW BEDFORD, MA - Tie-in #1: Preparatory					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
221	6" x 2"	578021	FITTING, CLAMP, SERVI-SEAL REPAIR, 6 IN DIA, 9 IN LG, W/ 2 IN OUTLET, FOR STEEL PIPE	4	EA

COVE STREET, NEW BEDFORD, MA - Tie-in #1: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
202	6"	578129	FITTING, COUPLING, VENTED, INSULATED, W/ END CAP, FOR 6 CI PIPE	2	EA



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



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

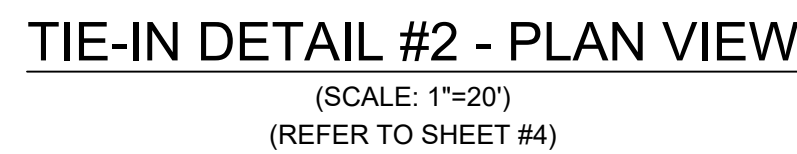
LEGEND	
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING

ISSUED FOR
REVIEW

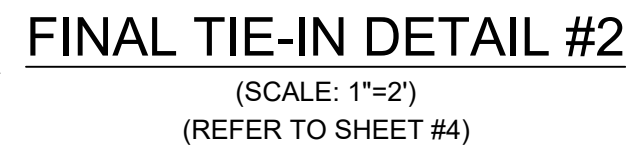
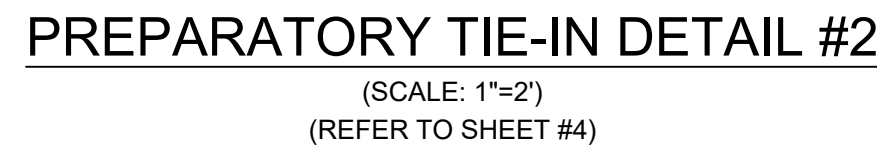
NOTES:
1. REFER TO GENERAL NOTES ON SHEET #2.

A	ISSUED FOR REVIEW	12/31/2021	BS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
EVERSOURCE ENERGY				
COVE STREET MAIN RELAY				
NEW BEDFORD, MASSACHUSETTS				
TIE-IN DETAIL #1 AND BOM				
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS)				SHEET 5 OF 14
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-05	A








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



COVE STREET, NEW BEDFORD, MA - Tie-in #2: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
45	4"	500855	COUPLING,PIPE, 4 IN IPS, ELECTROFUSION, PLASTIC, P100	AS REQUIRED	EA
90	4"	542538	CAP,PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	2	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
362	4"	554008	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE, PE3408/PE100, 1200 FT/BUNDLE	20	LF
369	1/2"	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	AS REQUIRED	EA



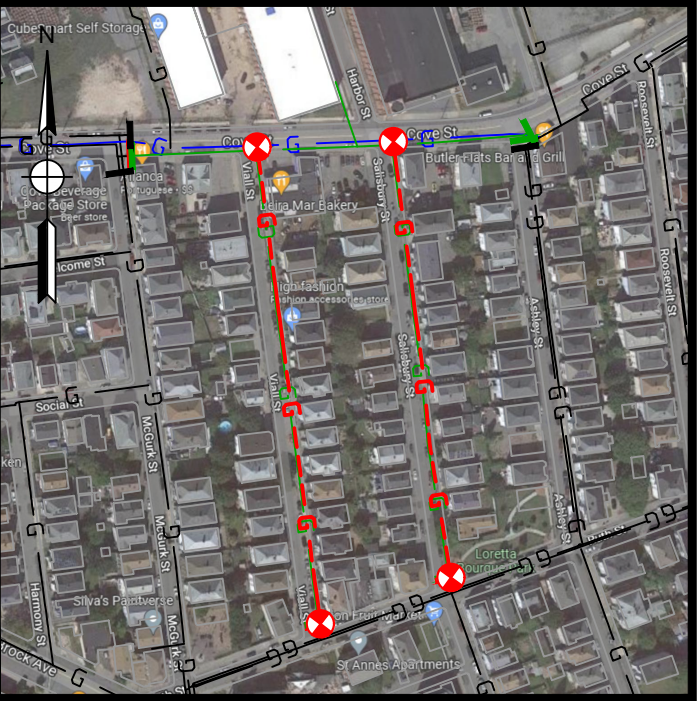
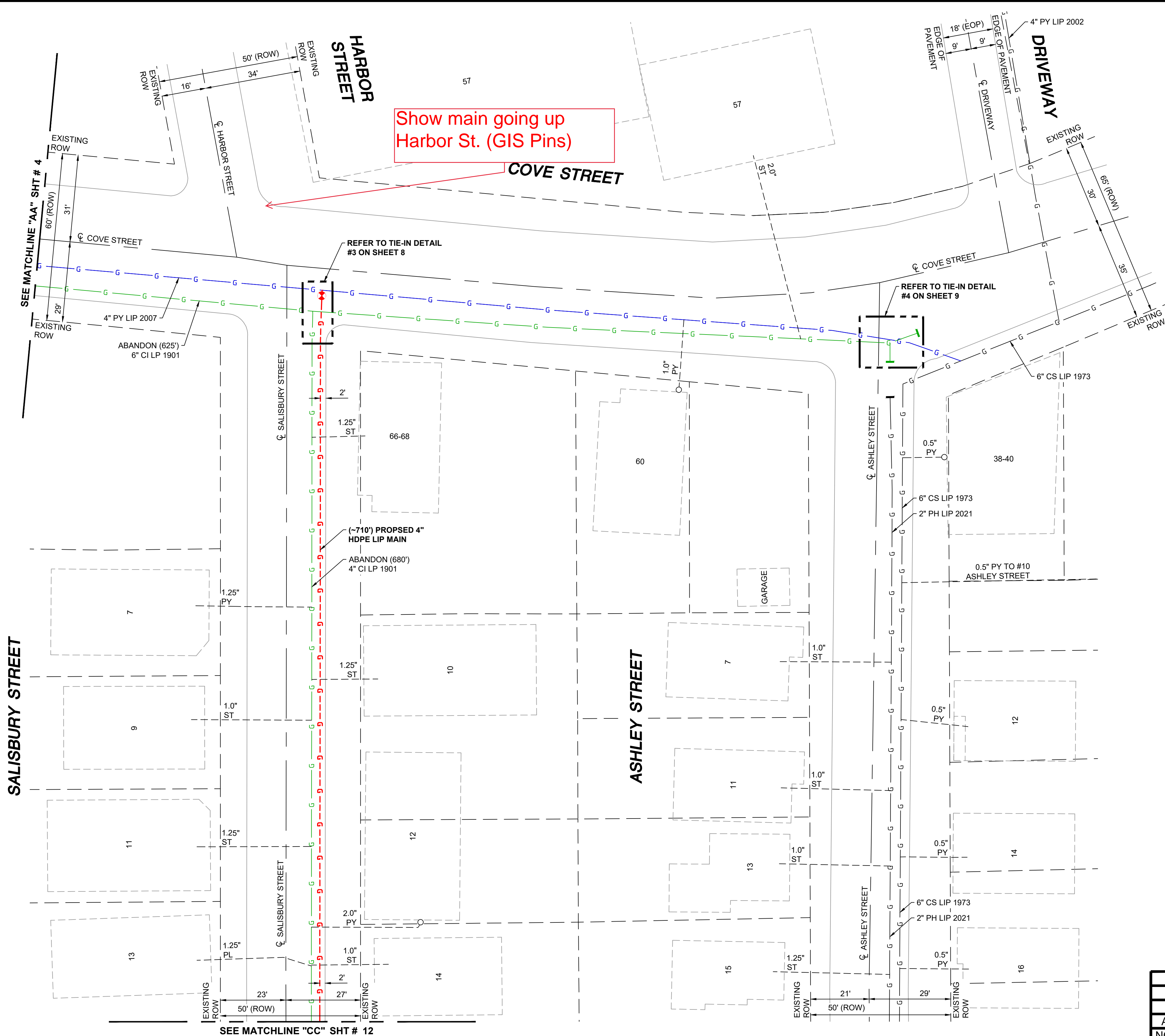
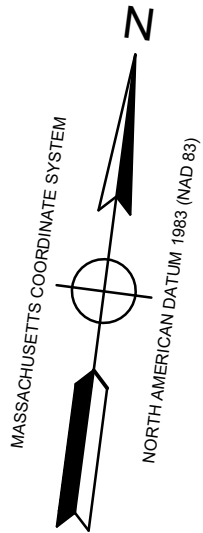
LEGEND

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

ISSUED FOR
REVIEW

A	ISSUED FOR REVIEW	12/31/2021	BS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
<div> <div>EVERSOURCE</div> <div>ENERGY</div> </div>				
COVE STREET MAIN RELAY				
NEW BEDFORD, MASSACHUSETTS				
TIE-IN DETAIL #2 AND BOM				
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS) SHEET 6 OF 14				
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-06	A

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



KEY MAP
(NOT TO SCALE)

ISSUED FOR
REVIEW

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

LOCATION PLAN #2
(SCALE: 1"=20')

SEALED BY:
SIGNATURE

SEALED ON:
LICENSE EXPIRATION:

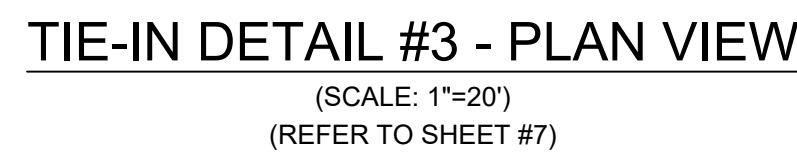
DESIGNED IN ACCORDANCE WITH TITLE 49B PART 1B2 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

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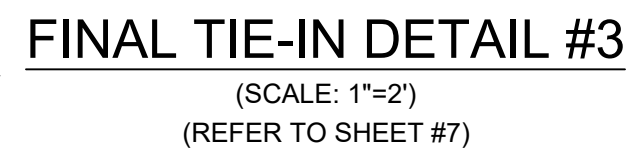
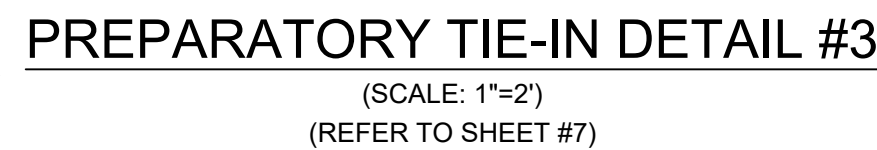
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FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

A	ISSUED FOR REVIEW	12/31/2021	BS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
EVERSOURCE ENERGY				
COVE STREET MAIN RELAY				
NEW BEDFORD, MASSACHUSETTS				
LOCATION PLAN #2				
SCALE: 1"=20'		SHEET 7 OF 14		
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-07	A



COVE STREET, NEW BEDFORD, MA - Tie-in #3: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
45	4"	500855	COUPLING,PIPE, 4 IN IPS, ELECTROFUSION, PLASTIC, P100	AS REQUIRED	EA
90	4"	542538	CAP,PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	2	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
362	4"	554008	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE, PE3408/PE100, 1200 FT/BUNDLE	20	LF
369	1/2"	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	AS REQUIRED	EA

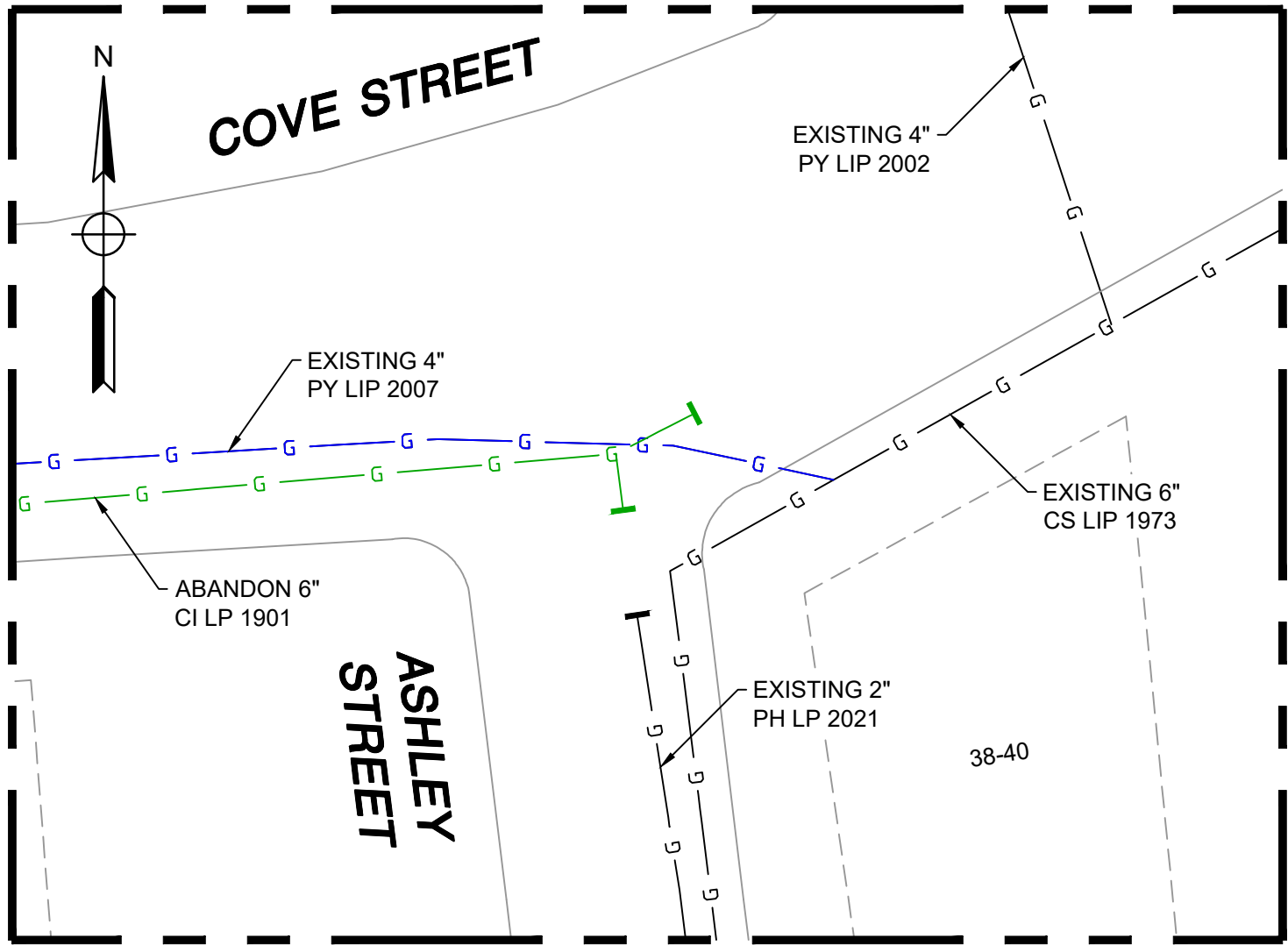


<u>LEGEND</u>	
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING

ISSUED FOR
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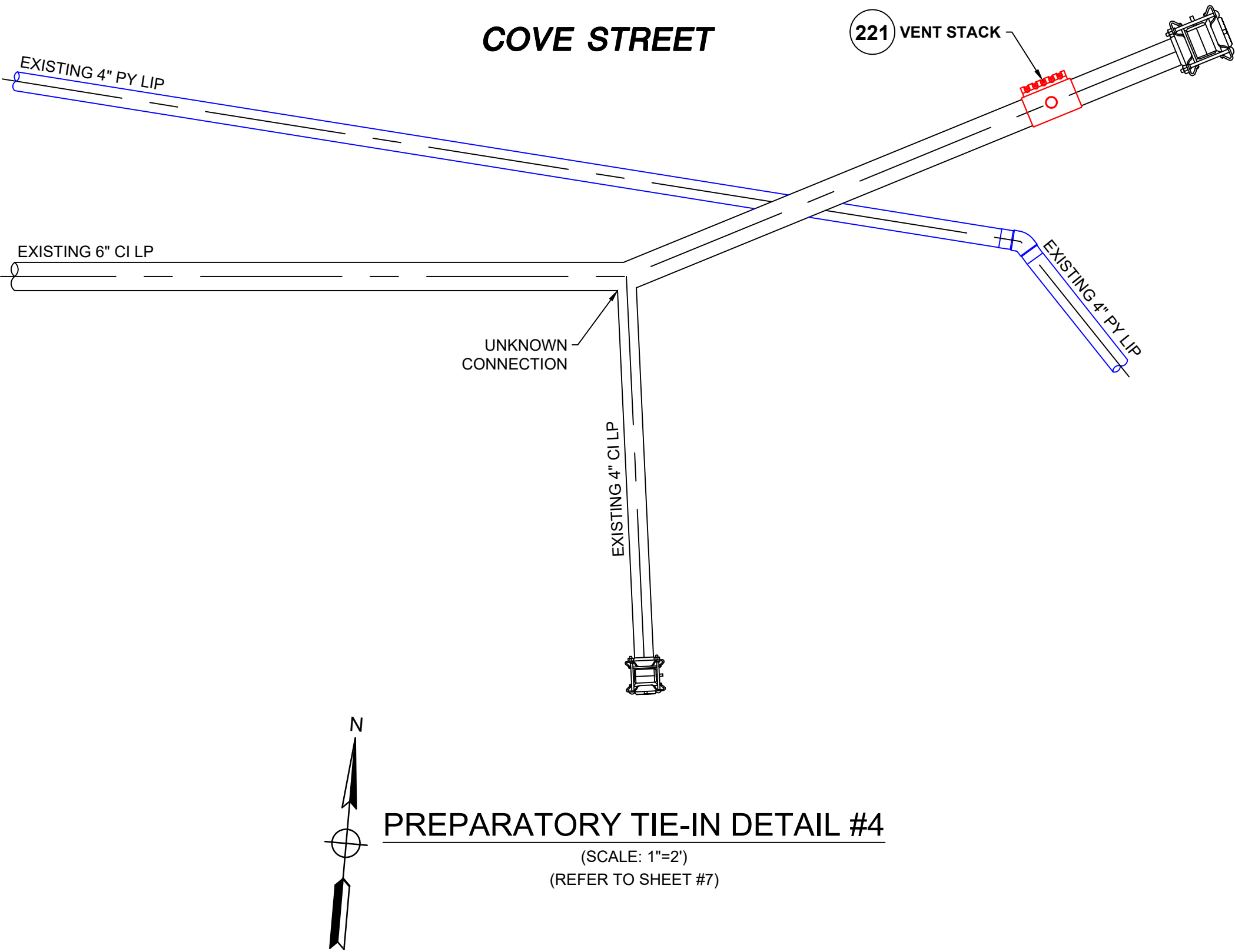
A	ISSUED FOR REVIEW	12/31/2021	BS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
<div>EVERSOURCE</div> <div>ENERGY</div>				
COVE STREET MAIN RELAY				
NEW BEDFORD, MASSACHUSETTS				
TIE-IN DETAIL #3 AND BOM				
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS) SHEET 8 OF 14				
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-08	A

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

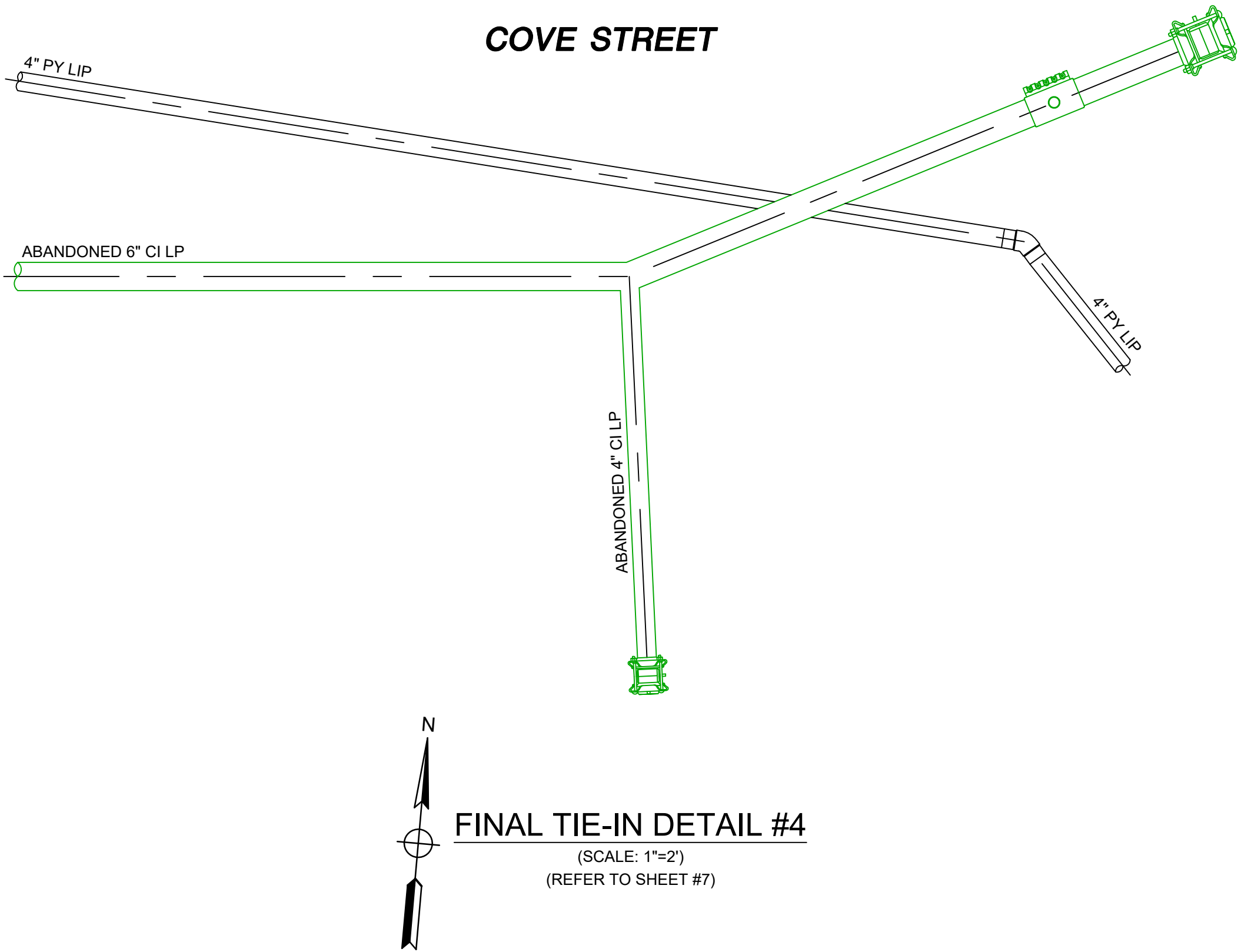


TIE-IN DETAIL #4 - PLAN VIEW
(SCALE: 1"=20')
(REFER TO SHEET #7)

COVE STREET, NEW BEDFORD, MA - Tie-in #4: Preparatory					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
221	6" x 2"	578021	FITTING,CLAMP, SERVI-SEAL REPAIR, 6 IN DIA, 9 IN LG, W/ 2 IN OUTLET, FOR STEEL PIPE	1	EA



PREPARATORY TIE-IN DETAIL #4
(SCALE: 1"=2')
(REFER TO SHEET #7)



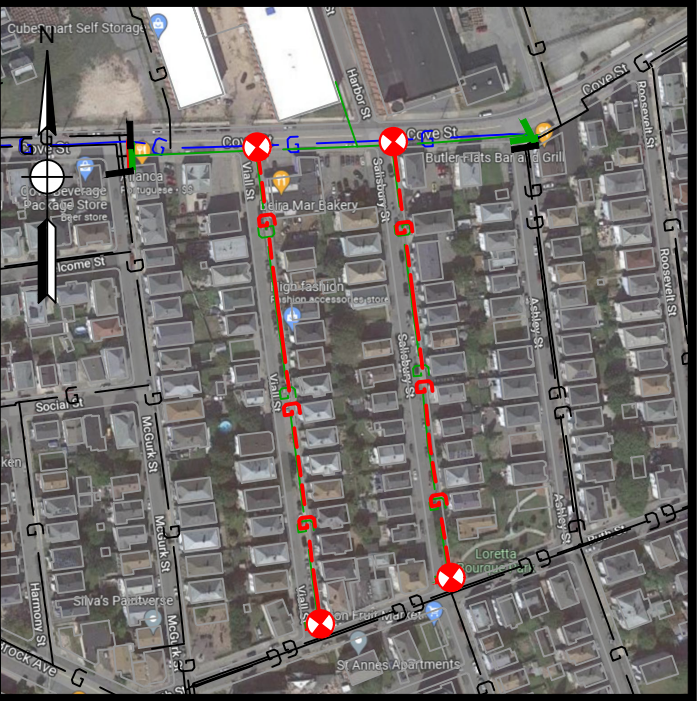
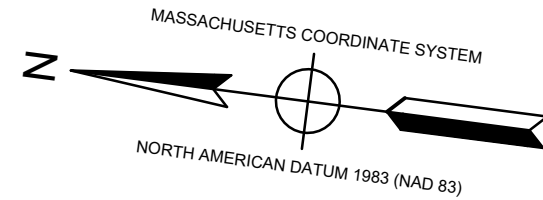
FINAL TIE-IN DETAIL #4
(SCALE: 1"=2')
(REFER TO SHEET #7)

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

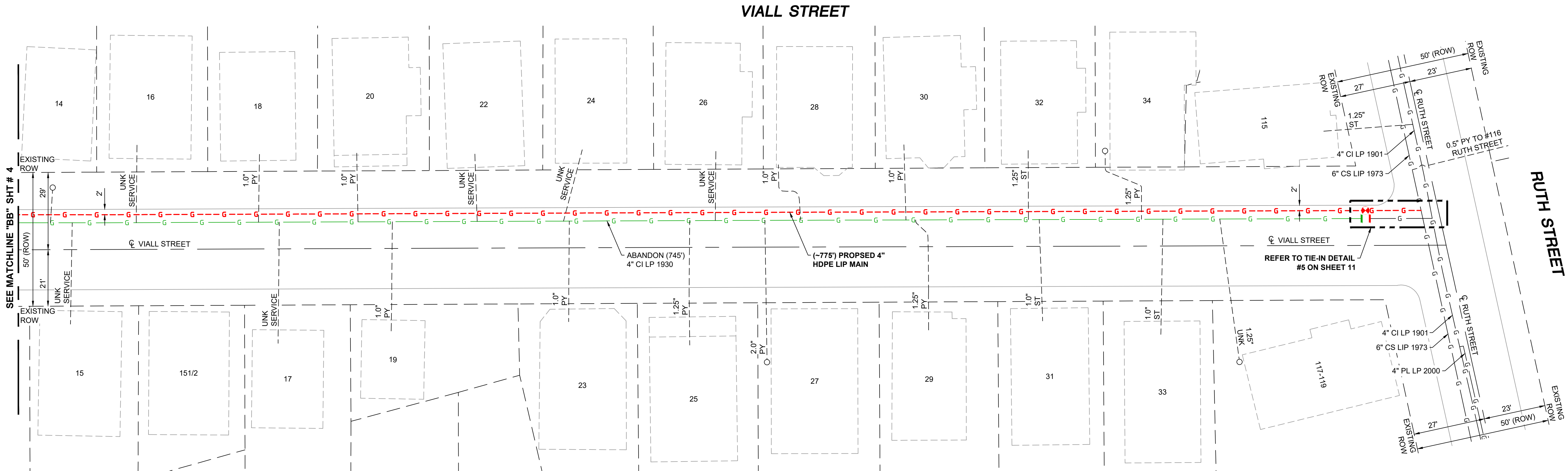
ISSUED FOR REVIEW

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

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				COVE STREET MAIN RELAY				
				NEW BEDFORD, MASSACHUSETTS				
				TIE-IN DETAIL #4 AND BOM				
				SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS) SHEET 9 OF 14				
		ENEngineering 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 353-4000 FAX (630) 353-7777 WWW.ENENGINEERING.COM		DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
				ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-09	A



KEY MAP
(NOT TO SCALE)

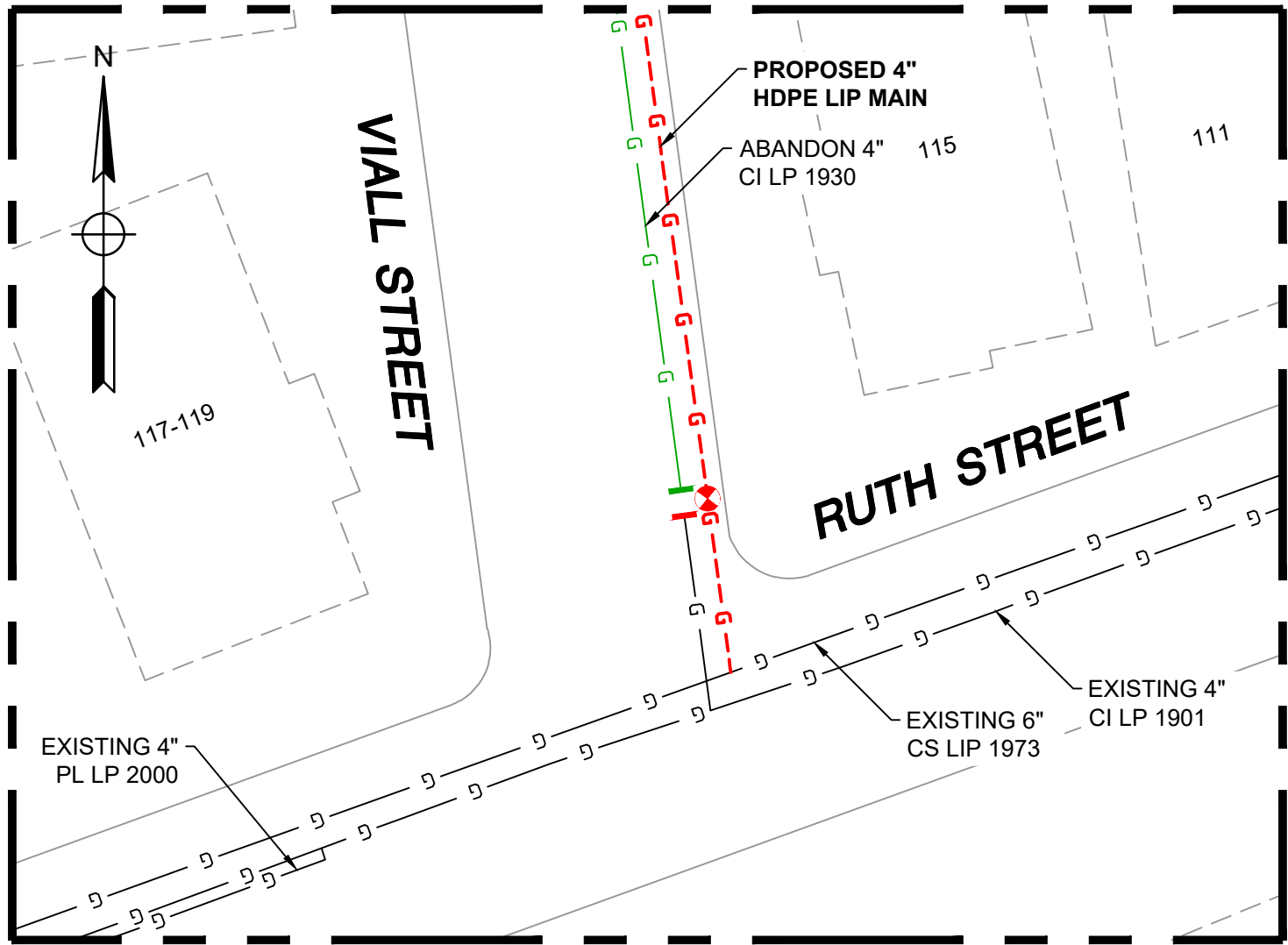


LOCATION PLAN #3
(SCALE: 1"=20')

ISSUED FOR
REVIEW

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

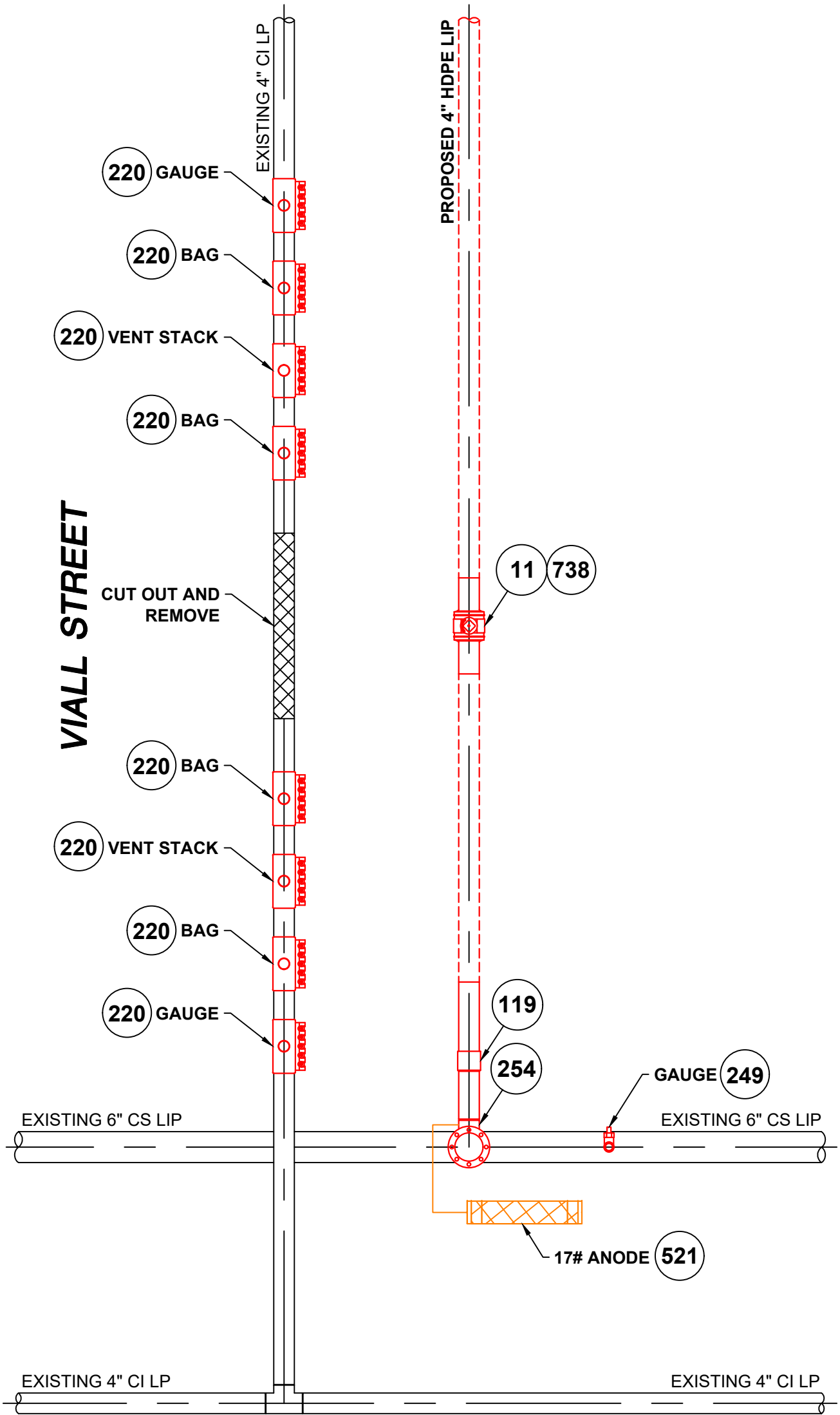
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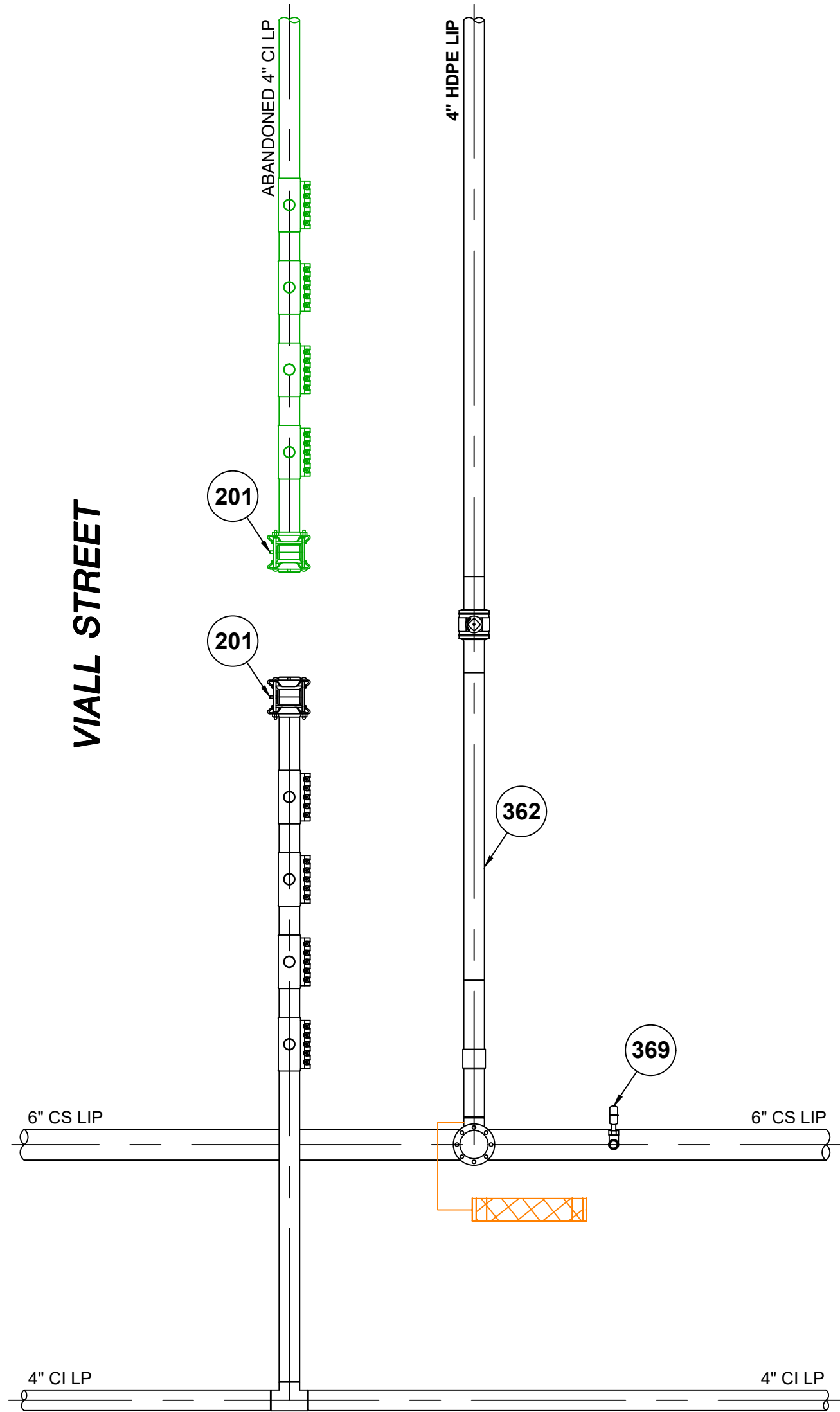
TIE-IN DETAIL #5 - PLAN VIEW
(SCALE: 1"=20')
(REFER TO SHEET #10)

COVE STREET, NEW BEDFORD, MA - Tie-in #5: Preparatory					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
11	4"	501002	VALVE,BALL, 4 IN, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING, TO BE USED W/ BRAND SADDLE INST, P100	1	EA
119	6"	546254	FITTING,TRANSITION, 6 IN IPS CS X 6 IN IPS PE4710, SDR 11, STEEL WELD X PLASITC BUTT END	1	EA
220	4" x 2"	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	8	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	1	EA
254	4"	578137	FITTING,TEE, SHORTSTOPP, 3-WAY, 4 IN	1	EA
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
738	5 1/4" square	577814	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 4 IN VALVES, PAVEMENT RISER RING IN 583488,	1	EA

COVE STREET, NEW BEDFORD, MA - Tie-in #5: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
201	4"	578128	FITTING,COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP , FOR CAST IRON PIPE	2	EA
362	4"	554008	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE, PE3408/PE100, 1200 FT/BUNDLE	30	LF
369	1/2"	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	AS REQUIRED	EA



PREPARATORY TIE-IN DETAIL #5
(SCALE: 1"=2')
(REFER TO SHEET #10)



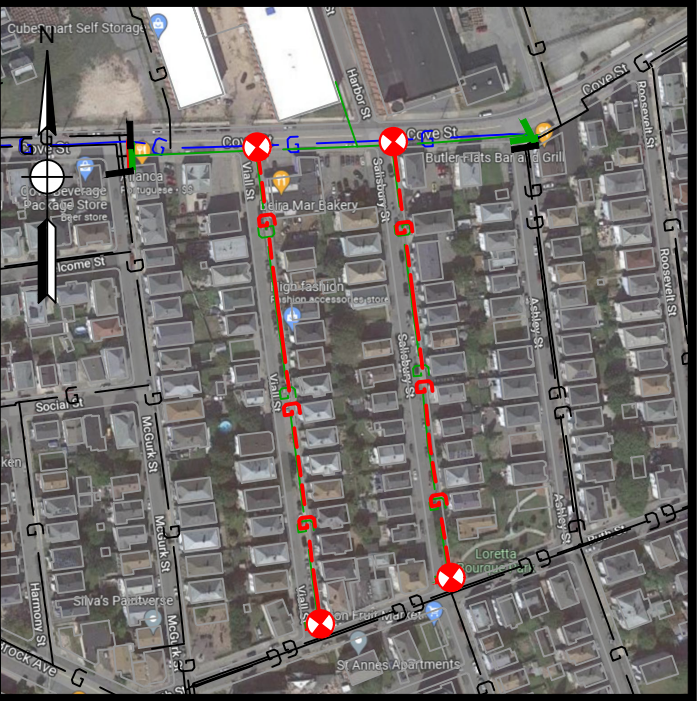
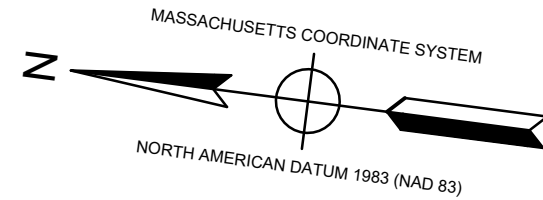
FINAL TIE-IN DETAIL #5
(SCALE: 1"=2')
(REFER TO SHEET #10)

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

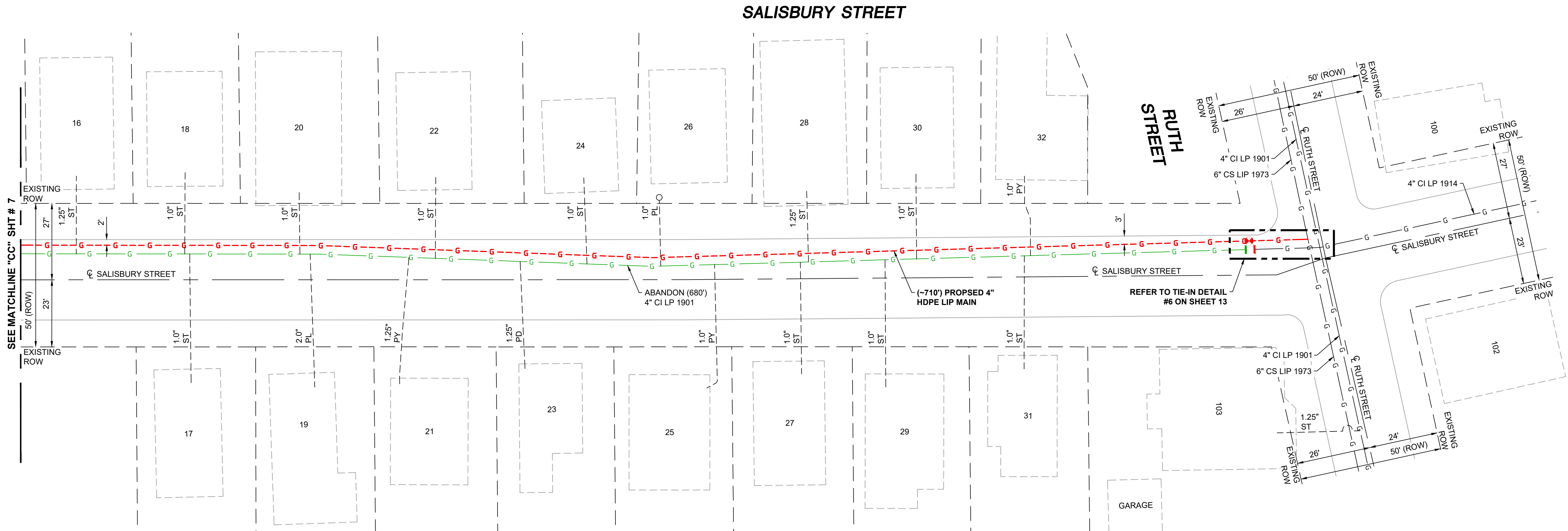
ISSUED FOR REVIEW

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

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KEY MAP
(NOT TO SCALE)

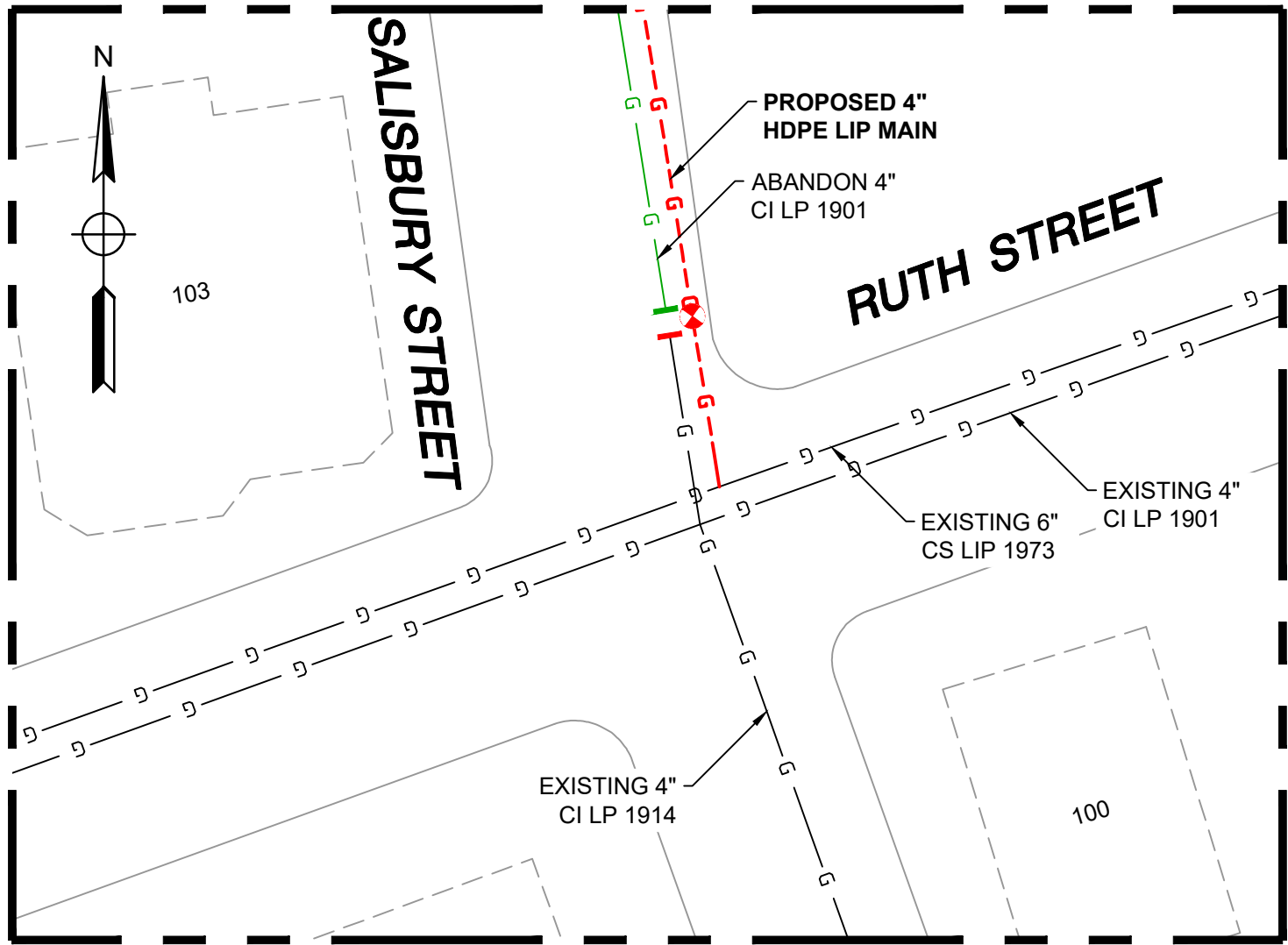


LOCATION PLAN #4
(SCALE: 1"=20')

ISSUED FOR
REVIEW

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

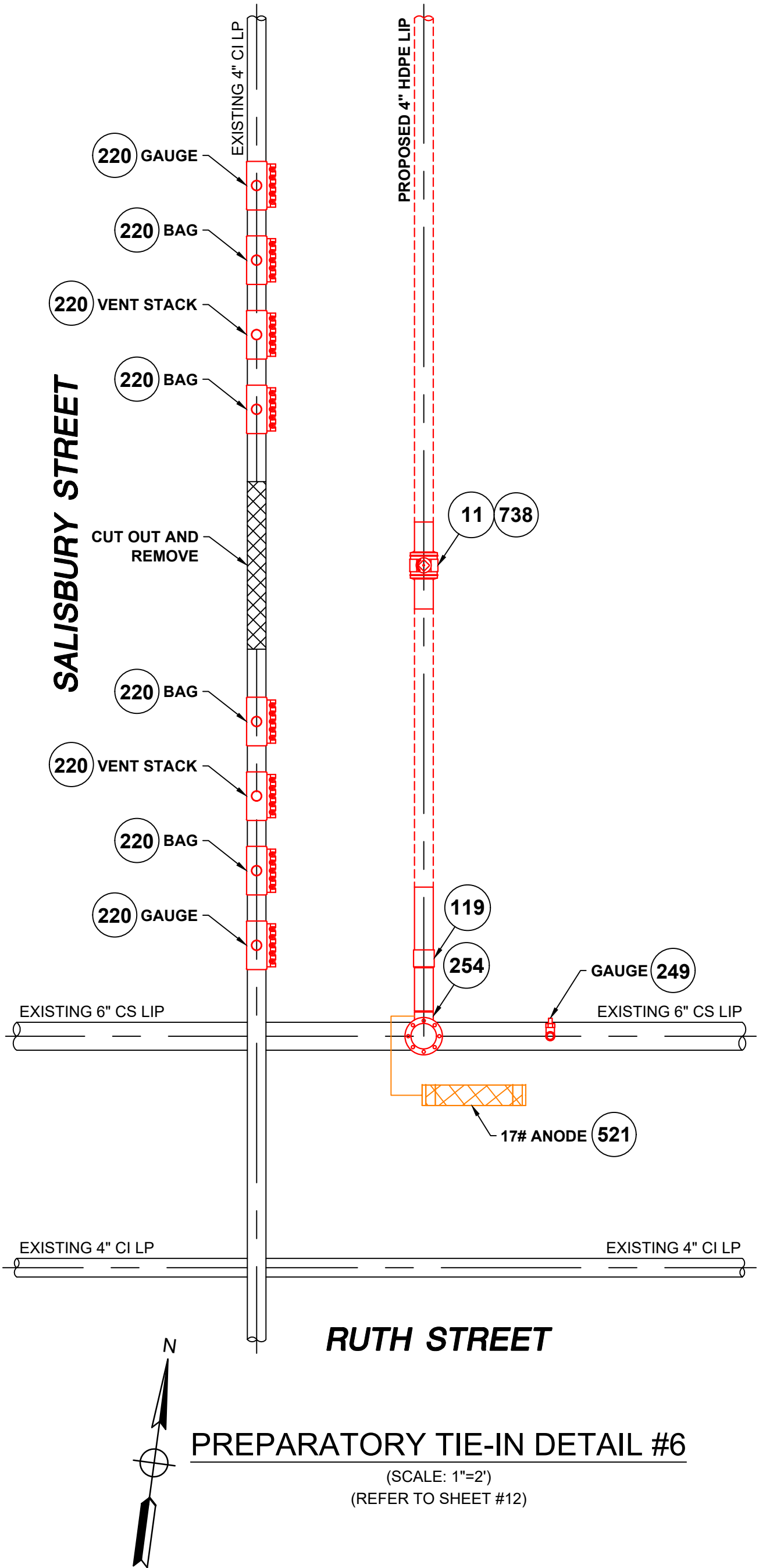
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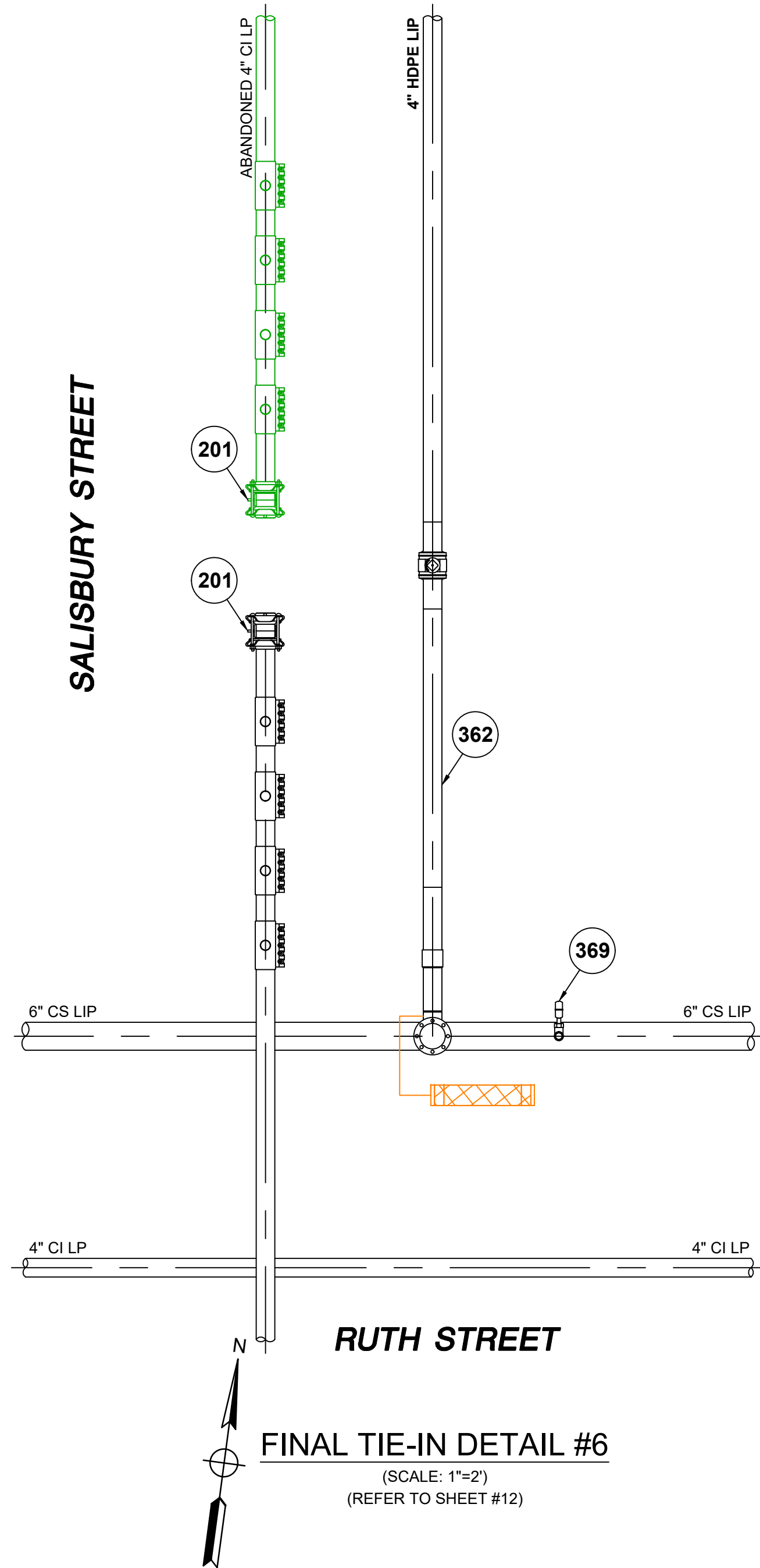
TIE-IN DETAIL #6 - PLAN VIEW
(SCALE: 1"=20')
(REFER TO SHEET #12)

COVE STREET, NEW BEDFORD, MA - Tie-in #6: Preparatory					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
11	4"	501002	VALVE,BALL, 4 IN, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING, TO BE USED W/ BRAND SADDLE INST, P100	1	EA
119	6"	546254	FITTING,TRANSITION, 6 IN IPS CS X 6 IN IPS PE4710, SDR 11, STEEL WELD X PLASITC BUTT END	1	EA
220	4" x 2"	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	8	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	1	EA
254	4"	578137	FITTING,TEE, SHORTSTOPP, 3-WAY, 4 IN	1	EA
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
738	5 1/4" square	577814	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 4 IN VALVES, PAVEMENT RISER RING IN 583488,	1	EA

COVE STREET, NEW BEDFORD, MA - Tie-in #6: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
201	4"	578128	FITTING,COUPLING, VENTED, SEAL & RESTRAINT, 4 IN, W/ END CAP , FOR CAST IRON PIPE	2	EA
362	4"	554008	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE, PE3408/PE100, 1200 FT/BUNDLE	30	LF
369	1/2"	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	AS REQUIRED	EA



PREPARATORY TIE-IN DETAIL #6
(SCALE: 1"=2')
(REFER TO SHEET #12)



FINAL TIE-IN DETAIL #6
(SCALE: 1"=2')
(REFER TO SHEET #12)

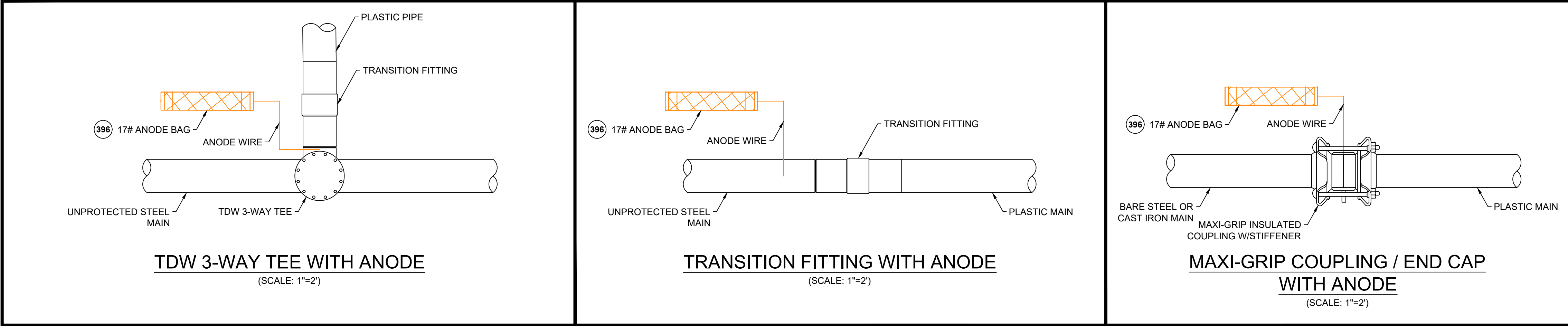
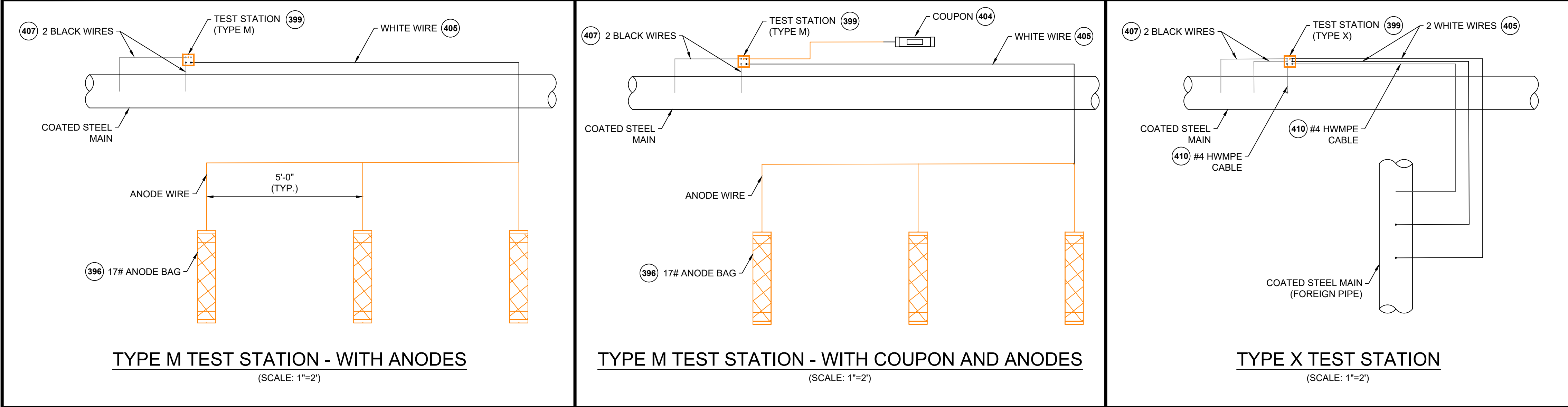
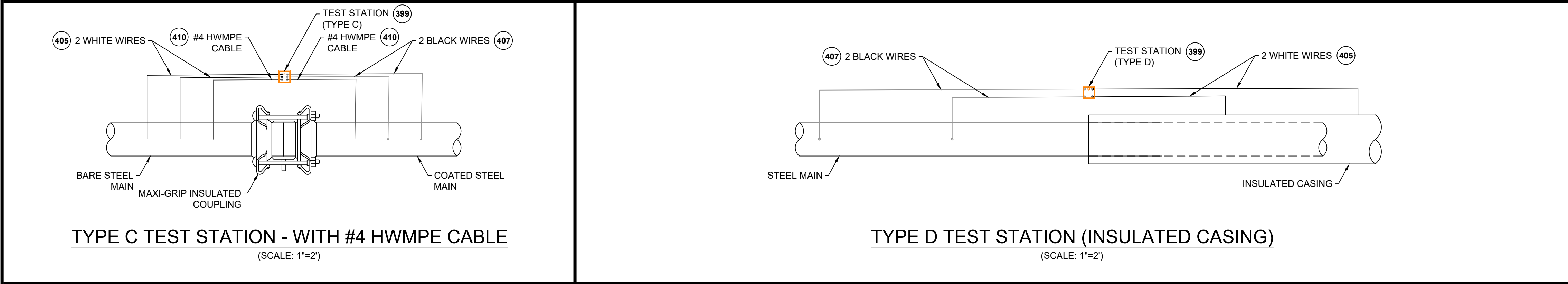
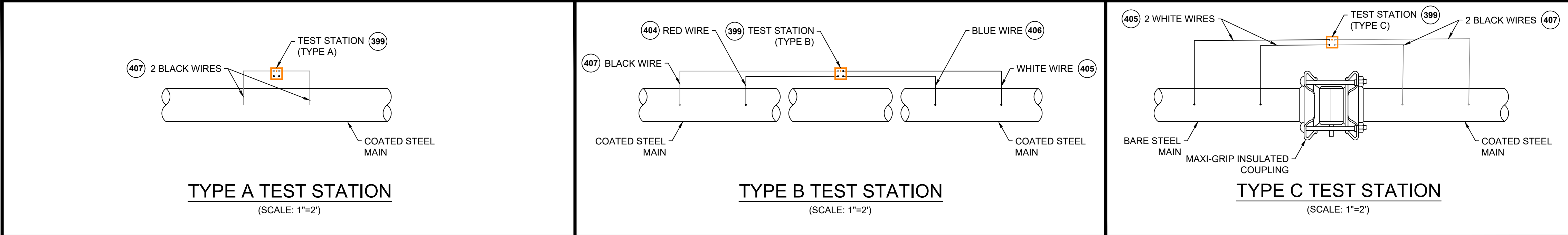
LEGEND	
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING

ISSUED FOR REVIEW

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

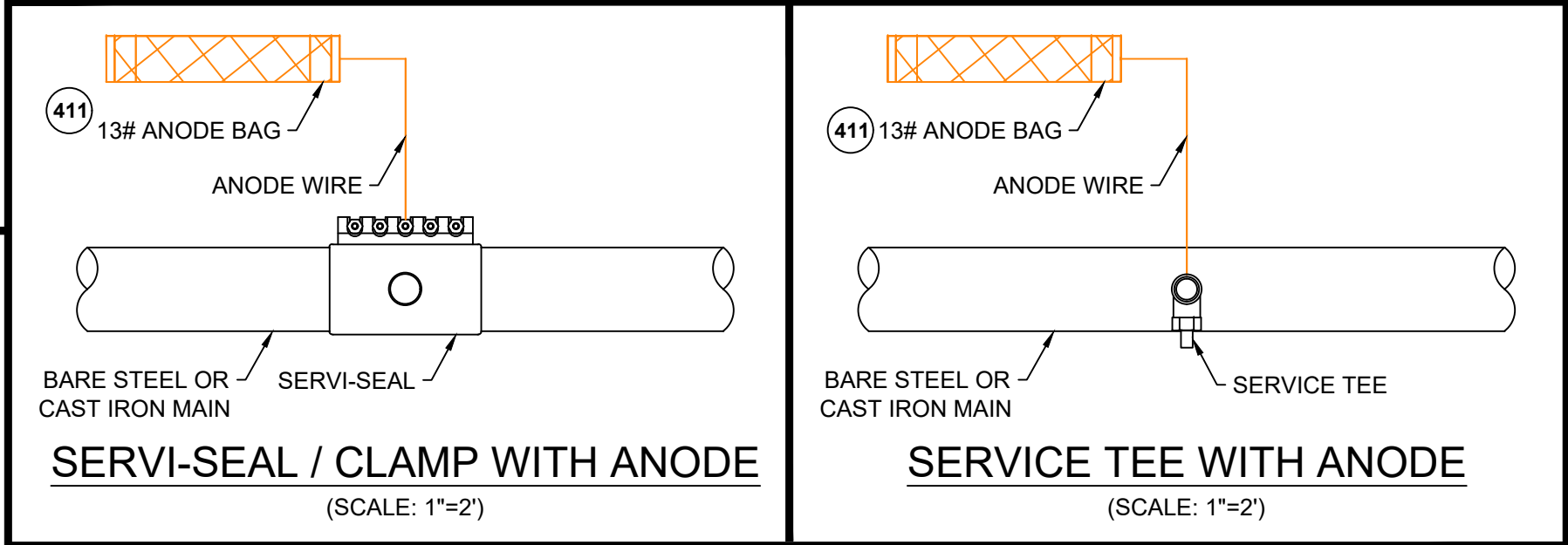
SEALED BY: SIGNATURE _____	SEALED ON: _____ LICENSE EXPIRATION: _____	DESIGNED IN ACCORDANCE WITH TITLE 49, PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPIC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION. ENEngineering 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 353-4000 FAX (630) 353-7777 WWW.ENENGINEERING.COM	FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION
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A	ISSUED FOR REVIEW	12/31/2021	BS/AB
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
COVE STREET MAIN RELAY			
NEW BEDFORD, MASSACHUSETTS			
TIE-IN DETAIL #6 AND BOM			
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS)		SHEET 13 OF 14	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER
ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-13
			REV. NO.
			A



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 WIRE, PACKED IN CARDBOARD BOX 42 LB TOTAL WEIGHT	EA
397	517626	CONNECTOR, SPLIT BOLT, 12 SOLID - 10 STRANDED, CU TO 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. LID, 8-3/8 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 UCB-ZIN-LW010, 10 FT OF CABLE	ES
403	603126	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCB-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 4 IN AND LARGER 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 IN 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 WAX, ALUMINUM	ROLL
577	603769	TRENTON-FILL POR PM-GP, 140 FA, FOR FILLING VOIDS & IRREGULAR SPACES PRIOR TO WRAPPING W/WAX TAPE, OF TO 110F APPLICATION TEMPERATURE, 6 BLOCKS/CASE, 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	CASE
	603423		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.



ISSUED FOR REVIEW

A	ISSUED FOR REVIEW	12/31/2021	BS/AB
NO.	DESCRIPTION	DATE	DW/CK/AP

REVISION STATUS				
EVERSOURCE ENERGY				
COVE STREET MAIN RELAY				
NEW BEDFORD, MASSACHUSETTS				
STANDARD CORROSION DETAILS				
SCALE: 1"=2' (DO NOT SCALE FROM DRAWINGS)				SHEET 14 OF 14
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 12/22/2021	AB 12/31/2021	XX XX/XX/2021	MA-NEB-22-PIP-000-14	A

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

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

SEALED BY:

SIGNATURE

SEALED ON:

LICENSE EXPIRATION:

DESIGNED IN ACCORDANCE WITH TITLE 49, PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPIC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

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WWW.ENENGINEERING.COM