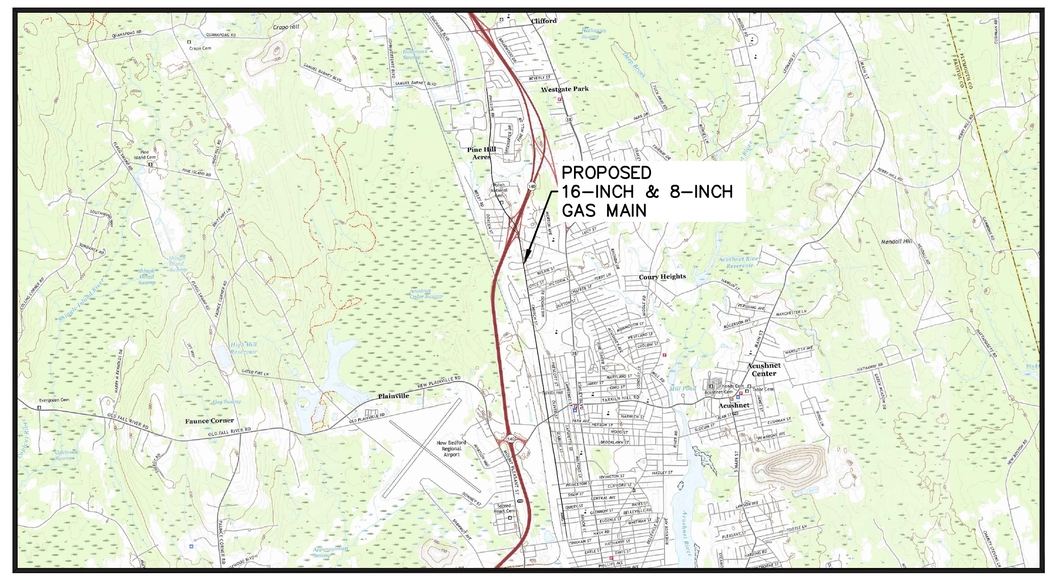
EVERSOURCE ENERGY
5,020' OF 16" COATED STEEL GAS MAIN REPLACEMENT PLAN
4,291' OF 8" HDPE PLASTIC GAS MAIN REPLACEMENT PLAN
CHURCH STREET, NEW BEDFORD, MA
WORK ORDER #10007683

DRAWING NO.	REVISION	DWG. DESCRIPTION
MA-21-PIP-NEB-499-T03	0	TITLE SHEET
MA-21-PIP-NEB-499-G09	0	GENERAL OVERVIEW
GEOTECHNICAL SOIL BORINGS		
MA-21-PIP-NEB-499-G10	0	GEOTECHNICAL SOIL BORINGS
MA-21-PIP-NEB-499-G11	0	GEOTECHNICAL SOIL BORINGS
PHASE 5 ALIGNMENT SHEETS		
MA-21-PIP-NEB-499-C36	0	GAS PIPELINE ALIGNMENT SHEET 36
MA-21-PIP-NEB-499-C37	0	GAS PIPELINE ALIGNMENT SHEET 37
MA-21-PIP-NEB-499-C38	0	GAS PIPELINE ALIGNMENT SHEET 38
MA-21-PIP-NEB-499-C39	0	GAS PIPELINE ALIGNMENT SHEET 39
MA-21-PIP-NEB-499-C40	0	GAS PIPELINE ALIGNMENT SHEET 40
MA-21-PIP-NEB-499-C41	0	GAS PIPELINE ALIGNMENT SHEET 41
MA-21-PIP-NEB-499-C42	0	GAS PIPELINE ALIGNMENT SHEET 42
MA-21-PIP-NEB-499-C43	0	GAS PIPELINE ALIGNMENT SHEET 43
MA-21-PIP-NEB-499-C44	0	GAS PIPELINE ALIGNMENT SHEET 44
MA-21-PIP-NEB-499-C45	0	GAS PIPELINE ALIGNMENT SHEET 45
MA-21-PIP-NEB-499-C46	0	GAS PIPELINE ALIGNMENT SHEET 46
MA-21-PIP-NEB-499-C47	0	GAS PIPELINE ALIGNMENT SHEET 47
MA-21-PIP-NEB-499-C48	0	GAS PIPELINE ALIGNMENT SHEET 48
MA-21-PIP-NEB-499-D020	0	FACILITY DETAILS SHEET 20
MA-21-PIP-NEB-499-D021	0	FACILITY DETAILS SHEET 21
MA-21-PIP-NEB-499-D022	0	FACILITY DETAILS SHEET 22
MA-21-PIP-NEB-499-D023	0	FACILITY DETAILS SHEET 23
MA-21-PIP-NEB-499-D024	0	FACILITY DETAILS SHEET 24
MA-21-PIP-NEB-499-D025	0	FACILITY DETAILS SHEET 25
MA-21-PIP-NEB-499-D026	0	FACILITY DETAILS SHEET 26
MA-21-PIP-NEB-499-D027	0	FACILITY DETAILS SHEET 27
MA-21-PIP-NEB-499-D028	0	FACILITY DETAILS SHEET 28
MA-21-PIP-NEB-499-D029	0	FACILITY DETAILS SHEET 29
MA-21-PIP-NEB-499-D030	0	FACILITY DETAILS SHEET 30
MA-21-PIP-NEB-499-D031	0	FACILITY BILL OF MATERIALS
MA-21-PIP-NEB-499-T01	0	TRAFFIC CONTROL DETAILS SHEET 1 OF 3
MA-21-PIP-NEB-499-T02	0	TRAFFIC CONTROL DETAILS SHEET 2 OF 3
MA-21-PIP-NEB-499-T03	0	TRAFFIC CONTROL DETAILS SHEET 3 OF 3
MA-21-PIP-NEB-499-D06	0	TYPICAL DETAILS SHEET 1
MA-21-PIP-NEB-499-D07	0	TYPICAL DETAILS SHEET 2
MA-21-PIP-NEB-499-D08	0	TYPICAL DETAILS SHEET 3
MA-21-PIP-NEB-499-D09	0	TYPICAL DETAILS SHEET 4
MA-21-PIP-NEB-499-D10	0	TYPICAL DETAILS SHEET 5
MA-21-PIP-NEB-499-D11	0	TYPICAL DETAILS SHEET 6
MA-21-PIP-NEB-499-D12	0	TYPICAL DETAILS SHEET 7



No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJR/MWF/DBD

Revision/Status

MOTT MACDONALD

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD, MA
TITLE SHEET

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

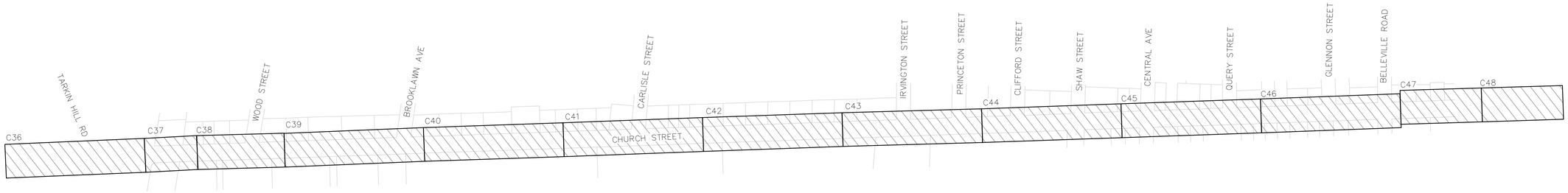
SCALE: N.T.S. SHEET 1 OF 1

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 07-09-2021	MWF / 12-05-2022	MA-21-PIP-NEB-499-T03	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		

G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\CoverIndex\Phase 5\ T03.dwg

Mar 09, 2023 - 2:30pm

CITY OF NEW BEDFORD



KEY

PHASE 5

GENERAL SITE PLAN

SCALE: 1" = 200'

GENERAL NOTES

1. EXISTING CONDITIONS SHOWN HEREON ARE BASED ON A SURVEY PERFORMED BY VHB BETWEEN SEPTEMBER – NOVEMBER 2020 AND NOVEMBER 2022.
2. CONTRACTOR IS REQUIRED TO PROTECT EXISTING UTILITIES, STRUCTURES, LANDSCAPE FEATURES, SIGNAGE, CURBS, ETC.; CARE SHALL BE TAKEN NOT TO DISTURB OR DAMAGE SUCH ITEMS AND THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR OR RESTORE ANY DAMAGE OR DISTURBANCE TO THE SATISFACTION OF THE CITY.
3. PROPOSED WORK SHALL BE PERFORMED AND COMPLETED IN COMPLIANCE WITH ALL PERMITS AND APPROVALS.
4. PROPOSED WORK SHALL BE PERFORMED AND COMPLETED IN COMPLIANCE WITH MASSDOT AND CITY OF NEW BEDFORD SPECIFICATIONS AND STANDARDS ,WHERE APPLICABLE, UNLESS OTHERWISE SPECIFIED ON THESE PLANS AND ACCOMPANYING PROJECT SPECIFICATIONS.
5. PROPOSED WORK SHALL BE PERFORMED AND COMPLETED IN ACCORDANCE WITH THE EVERSOURCE BMP MANUAL.
6. ALL WORK SHALL BE PERFORMED PER EVERSOURCE, LOCAL, STATE, OSHA, AND FEDERAL REGULATIONS AND STANDARDS.
7. PROPERTY LINES, RIGHT–OF–WAY AND BUILDING LOCATION DATA SHOWN HEREON ARE APPROXIMATE AND HAVE BEEN PROVIDED BY VHB AND GIS DATA.
8. THE SURVEY BAND SHOWN ON THESE PLANS IS INTENDED TO SHOW THE DIRECTIONAL ORIENTATION OF THE PROPOSED PIPE AS WELL AS THE PROPOSED LOCATION AND ANGLE OF PROPOSED BENDS.
9. NATURAL RESOURCE INFORMATION SHOWN HEREON IS BASED ON INFORMATION PROVIDED BY SWCA.
10. METHODS OF EROSION CONTROL SHOWN HEREON IS BASED ON INFORMATION PROVIDED BY SWCA.
11. 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 IS SHOWN.
    B. IF A CHANGE IN THE LOCATION OF VALVES IS REQUIRED.
    C. IF THERE AS 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.
12. MINOR CHANGES SUCH AS OFFSETS MAY NOT REQUIRE DRAWING CHANGES.
13. 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.
14. 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.
15. ALL LIVE GAS WORK INCLUDING BUT NOT LIMITING TO TAPPING OF FITTINGS ON LIVE MAINS, STOPPING, MANIPULATING VALVE, ABANDONMENT, SHALL BE PREFORMED 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.

GENERAL NOTES (CONTINUED)

16. IF THE PROJECT IS WITHIN 50 FEET OF A DISTRICT REGULATOR OR GATE STATION, ENSURE THAT A QUALIFIED I&R TECHNICIAN IS ON SITE.
17. 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.

CONSTRUCTION NOTES

1. THE PIPELINE WILL BE CONSTRUCTED IN ACCORDANCE WITH FEDERAL MINIMUM SAFETY REGULATIONS CFR 49, PART 192, "TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE"; ASME B31.8, "GAS TRANSMISSION AND DISTRIBUTION PIPING", CMR 220 PART 100, EVERSOURCE ENERGY GAS CONSTRUCTION STANDARDS AND APPLICABLE STATE REGULATIONS.
2. THE PROPOSED STEEL PIPELINE SHALL BE 16.00" OD X 0.375"WT AND PRITEC COATED UNLESS OTHERWISE INDICATED BY OWNER OR ON THESE PLANS. THE PIPE WILL HAVE A MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) OF 90 PSIG, WITH A FUTURE MAOP OF 150 PSIG, AND WILL BE PRESSURE TESTED TO A MINIMUM OF 225 PSIG, FOR A MINIMUM DURATION OF 4–HOURS. A PRESSURE CHART RECORDER, PROVIDED BY EVERSOURCE, WILL BE REQUIRED. TEST MEDIUM WILL BE AIR OR NITROGEN AND WILL BE PROVIDED BY THE CONTRACTOR.
3. THE PROPOSED PLASTIC PIPELINE SHALL BE 8" HDPE 3408/4710 SDR11 PERFORMANCE PIPE UNLESS OTHERWISE INDICATED BY OWNER OR ON THESE PLANS. THE PIPE WILL BE PRESSURE TESTED TO A MINIMUM OF 90 PSIG FOR A MINIMUM OF DURATION OF 4–HOURS. A PRESSURE CHART RECORDER, PROVIDED BY EVERSOURCE, WILL BE REQUIRED. TEST MEDIUM WILL BE AIR OR NITROGEN AND WILL BE PROVIDED BY THE CONTRACTOR.
4. CONTRACTOR WILL MAINTAIN A 12–INCH MINIMUM CLEARANCE (24" PREFERRED) BETWEEN THE NEW GAS PIPE AND FOREIGN STRUCTURES OR OTHER UTILITIES. ANY VARIANCE MUST BE REVIEWED AND APPROVED BY EVERSOURCE ENGINEERING.
5. PROPOSED PIPE SHALL MAINTAIN A 12–INCH MINIMUM CLEARANCE (24" PREFERRED) FROM EXISTING GAS PIPE.
6. ALL CONSTRUCTION SIGNING, DRUMS, BARRICADES AND OTHER DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) INCLUDING ALL REVISIONS AND ADDENDA. CONTRACTOR IS TO SUPPLY THESE ITEMS.
7. ALL VEHICLES ARE TO BE HIGHLY VISIBLE USING ROTATING BEACONS AND BE MARKED BY USE OF TRAFFIC CONES.
8. CONTRACTOR SHALL SUPPLY TEMPORARY ROAD SIGNS AS NECESSARY.
9. ALL TRENCH EXCAVATION PROTECTION SYSTEMS SHALL BE IN COMPLIANCE WITH OSHA SPECIFICATIONS.
10. LOCATION OF ANY IDENTIFIED UNDERGROUND UTILITIES IS APPROXIMATE ONLY, AND IS NOT WARRANTED TO BE CORRECT. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT INDICATED ON THESE PLANS WHICH MAY REQUIRE ADDITIONAL OFFSETS IN THE PIPELINE. ALL EXISTING UTILITIES SHALL BE VERIFIED BY CONTRACTOR FOR SERVICE, SIZE, INVERT ELEVATIONS, LOCATION, ETC.
11. THE PIPE COATING TYPE, LOCATION, AND LENGTH IDENTIFIED ON THE DRAWINGS IS TO BE VERIFIED PRIOR TO CONSTRUCTION BASED ON ACTUAL FIELD CONDITIONS. THE CONTRACTOR WILL PROVIDE THE APPROPRIATE PIPE COATING TYPE, LOCATION, AND LENGTH AS DETERMINED BY THE CONSTRUCTION MANAGER BASED ON ACTUAL CONDITIONS.
12. FIELD JOINT COATING SHALL BE CONDUCTED IN ACCORDANCE WITH EVERSOURCE STANDARDS AND SPECIFICATIONS.

CONSTRUCTION NOTES (CONTINUED)

13. MAINTAIN A MINIMUM VERTICAL DISTANCE OF 3' FROM THE ROAD SURFACE TO TOP OF PIPE.
14. CONTRACTOR MUST NOTIFY DIG SAFE (811) AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. SATURDAYS, SUNDAYS, AND HOLIDAYS ARE EXCLUDED FROM THE 72–HOUR TIME SPAN, NOT CONSIDERED BUSINESS WORKDAYS.
15. EXISTING PIPELINE WILL BE ABANDONED IN–PLACE.
16. ALL TRENCHES SHALL EITHER BE BACKFILLED OR COVERED WITH STEEL SHEET AT THE END OF DAY.
17. SOIL SPOIL PILES SHALL BE PLACED DIRECTLY NEXT TO THE TRENCH IN PREPARATION FOR BACKFILLING OF PROPOSED PIPE. ANY SOIL MATERIAL BROUGHT FROM AN OFF–SITE LOCATION TO THE PROJECT SITE SHALL BE STORED IN AN UPLAND, NON–JURISDICTIONAL LOCATION AND SURROUNDED WITH APPROPRIATE EROSION CONTROL MEASURES.
18. NO EQUIPMENT REFUELING MAY TAKE PLACE WITHIN WETLANDS, THE 100 FT BUFFER ZONE, 25 FT RIVERFRONT AREA, OR FLOODPLAIN.
19. SILT SACKS SHALL BE INSTALLED IN ALL CATCH BASINS IN ACTIVE CONSTRUCTION ZONES IN ADVANCE OF ALL EXCAVATIONS.
20. MATERIALS SHALL NOT BE STORED WITHIN PHILLIPS STREET RIGHT–OF–WAY OR SIDEWALK. ANY MATERIALS STORED ON PUBLIC RIGHT–OF–WAY MUST BE APPROVED IN ADVANCE BY EVERSOURCE AND CITY OF NEW BEDFORD.

ALIGNMENT SHEET PLAN VIEW LEGEND

- 11+00 — PROPOSED 8–INCH PLASTIC GAS LINE
- 11+00 — PROPOSED 16–INCH STEEL GAS LINE
- RETIRED PIPING
- CENTER OF ROAD
- PAVEMENT
- PARCEL BOUNDARY
- EXISTING FENCE
- EROSION CONTROL BARRIER
- CHAIN LINK FENCE
- EXISTING GAS LINE
- OVERHEAD WIRE
- DRAIN LINE
- SEWER LINE
- WATER LINE
- ELECTRIC LINE
- STONE WALL
- DELINEATED WATERCOURSE CENTERLINE
- 100–FT STREAM/WETLAND BUFFER
- BORDERING VEGETATED WETLAND (BVW)
- WETLAND FLAG
- 10–FT & 25–FT NO DISTURBANCE ZONE
- 1' CONTOUR
- EXISTING TREELINE

- TREE TO BE REMOVED
- UTILITY/LIGHT POLE
- MANHOLES
- CATCH BASIN
- FIRE HYDRANT
- GATES/VALVES
- SOIL BORE LOCATIONS

PROFILE VIEW LEGEND

- PROPOSED 8–INCH PLASTIC GAS LINE
- PROPOSED 16–INCH STEEL GAS LINE
- EXISTING GRADE

SCALE LIST

0 10 20 40 60 80

VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80

HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJR/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

NEW BEDFORD, MA

GENERAL OVERVIEW

SCALE: N.T.S. SHEET 1 OF 1

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS / 12-22-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-G09	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		

G09.dwg

G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\GeneralNotes\Phase5\

Mar 14, 2023 - 11:19am

SOIL BORING LOG

MOTT MACDONALD

BORING NO.: **B-10**

Project:	New Bedford Relay Project	**Project No.:**	507102597
Location:	New Bedford, Massachusetts, United States	**Project Mgr:**	Scott Kibby, P.E.
Client:	Eversource Energy	**Field Eng. Staff:**	Alex Joseph Toporek, E.I.T.
Drilling Co.:	New England Boring	**Date/Time Started:**	2021 January 15 at 12:03 pm
Driller:	Gary Twombly, Jr.	**Date/Time Finished:**	2021 January 15 at 3:08 pm

Elevation: 90.98 ft. **Vertical Datum:** NAVD 1988 **Boring Location:** 460 Church Street, New Bedford, MA 02745 Southbound Bike Lane **Coord.:** N: 2707957.467 E: 809640.953 **Horizontal Datum:** MA State Plane (US Survey Feet)

Item	Casing	Sampler	Core Barrel
Type	HW	-	-
Length (ft)	5	-	-
Inside Dia. (in.)	4	-	-
Hammer Wt. (lb.)	140	-	-
Hammer Fall (in.)	30	-	-

Rig Make & Model: CME-75
☑ Truck ☐ Tripod ☐ Cat-Head
☐ Rubber Tire ☐ Geoprobe ☑ Winch
☐ Track ☐ Air Track ☑ Roller Bit
☐ Skid ☐ Cutting Head

Hammer Type
☐ Safety
☐ Doughnut
☑ Automatic

Drilling Fluid
☐ Bentonite
☐ Polymer
☑ Water
☐ None

Drill Rod Size:
Casing Advance
Driven Split Spoon / Drive and Wash

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Group Symbol	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests: Dilatancy	Toughness	Plasticity	Dry Strength	Remarks
						0.5 6" ASPHALT PAVEMENT					
80	SS-S-1 0.0'- 2.0'	6/24	22 12 8 7		FILL	Medium dense, light brown, Poorly-Graded SAND (SP), medium-grained, moist, STRUCTURAL FILL	-	-	-	-	Sample S-1 sent for environmental sampling
	SS-S-2 2.0'- 4.0'	12/24	9 2 3 14		FILL	Medium dense, light brown, Poorly-Graded SAND (SP), trace Gravel, fine- to medium-grained, moist, STRUCTURAL FILL	-	-	-	-	Sample S-2 sent for environmental sampling
					FILL	Medium dense, light gray, Poorly-Graded SAND (SP), trace Gravel, fine-grained, moist, STRUCTURAL FILL	-	-	-	-	
5	SS-S-3 4.0'- 6.0'	16/24	21 27 28 33		FILL	Very dense, light gray, Poorly-Graded SAND (SP), fine-grained, moist, STRUCTURAL FILL	-	-	-	-	4.00' - 6.00' - orange staining in Sample S-3 potentially indicative of past seasonal high water tables Sample S-3 sent for environmental sampling
	SS-S-4 6.0'- 8.0'	15/24	47 34 25 22		FILL	Very dense, light gray, Poorly-Graded SAND (SP), fine-grained, moist, STRUCTURAL FILL	-	-	-	-	Sample S-4 sent for environmental sampling
					SM	6.8 Dense, light brown, Silty SAND (SM), trace Gravel, fine- to coarse-grained, moist, GLACIAL TILL					
10	SS-S-5 8.0'- 10.0'	11/24	13 11 9 9		SM	Medium dense, light brown, Silty SAND (SM), fine- to coarse-grained, moist, contains rock fragments, GLACIAL TILL	-	-	-	-	
80	SS-S-6 13.0'- 14.6'	10/19	19 16 23 118/1"		SM	Dense, light brown, Silty SAND (SM) with Gravel, fine- to coarse-grained, moist, contains rock fragments, GLACIAL TILL	-	-	-	-	
15						14.50' - DIORITE coarse-grained Gravel at bottom of split spoon					
						16.0 POTENTIAL BOULDER	-	-	-	-	
						17.0					
	SS-S-7 18.0'- 20.0'	11/24	19 16 11 8		SM	Medium dense, light brown, Silty SAND (SM), fine- to medium-grained, wet, contains GRANITE rock fragments, GLACIAL TILL	-	-	-	-	16.00' - 17.00' - High downward pressure used by drill rig and slow penetration rate indicative of potential boulder

Water Level Data

Date	Time	Elapsed Time (hr)	Depth in feet to: Bot. of Casing	Bottom of Hole	Water

Sample Type
- **O** Open End Rod
- **T** Thin-Wall Tube
- **U** Undisturbed Sample
- **SS** Split Spoon Sample
- **G** Geoprobe

Notes:
1. The northing and easting coordinates were estimated from online mapping services and were not surveyed. The coordinates should be considered close approximations of the location.
2. The elevation was taken from a survey conducted by VHB in September 2020 using the NAVD 1988 Geoid 12 B vertical datum.

Boring No.: **B-10**

Field Test Legend: Dilatancy: N - None S - Slow R - Rapid; Toughness: L - Low M - Medium H - High; Plasticity: NP - Non-Plastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Medium H - High VH - Very High

NOTES: 1.) "ppd" denotes soil sample average diametral pocket penetrometer reading. 2.) "ppa" denotes soil sample average axial pocket penetrometer reading.
3.) Maximum Particle Size is determined by direct observation within limitations of sampler size. 4.) Soil identifications and field tests based on visual-manual methods per ASTM D2488.

SOIL BORING LOG (continued)

MOTT MACDONALD

BORING NO.: **B-10**

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests: Dilatancy	Toughness	Plasticity	Dry Strength	Remarks*
70											
	SS-S-8 23.0'- 25.0'	17/24	59 79 85 64		SW	23.0 Very dense, brown, Well-Graded SAND (SW) with Gravel, fine- to medium-grained, moist, contains rock fragments, WEATHERED ROCK	-	-	-	-	23.00' - 25.00' - Sample S-8 retains relic rock structure
25						25.0 END OF BORING AT 25 FEET - BOREHOLE BACKFILLED WITH SPOILS, REMAINDER OF BETONITE AND SAND FROM MONITORING WELL INSTALLATION AND TOPPED WITH COLD PATCH ASPHALT					
30											
80											
35											
40											
90											
45											

NOTES:

PROJECT NO.: **507102597** BORING NO.: **B-10**

NOTES: 1.) "ppd" denotes soil sample average diametral pocket penetrometer reading. 2.) "ppa" denotes soil sample average axial pocket penetrometer reading.
3.) Maximum Particle Size is determined by direct observation within limitations of sampler size. 4.) Soil identifications and field tests based on visual-manual methods per ASTM D2488.

SOIL BORING LOG

MOTT MACDONALD

BORING NO.: **B-11**

Project:	New Bedford Relay Project	**Project No.:**	507102597
Location:	New Bedford, Massachusetts, United States	**Project Mgr:**	Scott Kibby, P.E.
Client:	Eversource Energy	**Field Eng. Staff:**	Alex Joseph Toporek, E.I.T.
Drilling Co.:	New England Boring	**Date/Time Started:**	2021 January 18 at 8:00 am
Driller:	Gary Twombly, Jr.	**Date/Time Finished:**	2021 January 18 at 10:46 am

Elevation: 80.62 ft. **Vertical Datum:** NAVD 1988 **Boring Location:** Northbound Parking Lane Approximately 125 ft North of Church Street and Princeton Street Intersection **Coord.:** N: 2706164.102 E: 809967.994 **Horizontal Datum:** MA State Plane (US Survey Feet)

Item	Casing	Sampler	Core Barrel
Type	HW	-	-
Length (ft)	5	-	-
Inside Dia. (in.)	4	-	-
Hammer Wt. (lb.)	140	-	-
Hammer Fall (in.)	30	-	-

Rig Make & Model: CME-75
☑ Truck ☐ Tripod ☐ Cat-Head
☐ Rubber Tire ☐ Geoprobe ☑ Winch
☐ Track ☐ Air Track ☑ Roller Bit
☐ Skid ☐ Cutting Head

Hammer Type
☐ Safety
☐ Doughnut
☑ Automatic

Drilling Fluid
☐ Bentonite
☐ Polymer
☑ Water
☐ None

Drill Rod Size:
Casing Advance
Driven Split Spoon / Drive and Wash

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Group Symbol	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests: Dilatancy	Toughness	Plasticity	Dry Strength	Remarks
						0.5 6" ASPHALT PAVEMENT					
80	SS-S-1 0.0'- 2.0'	14/24	17 15 21 18		FILL	Dense, brown, Well-Graded SAND (SW), fine- to medium-grained, dry, STRUCTURAL FILL	-	-	-	-	Sample S-1 sent for environmental sampling / Amount retained by Mott MacDonald only indicative of top 3 inches of recovery
					FILL	Dense, gray, Poorly-Graded SAND (SP), fine-grained, dry, STRUCTURAL FILL					
	SS-S-2 2.0'- 4.0'	8/24	16 9 7 5		FILL	Medium dense, dark brown gray, Poorly-Graded SAND (SP), trace Silt, fine-grained, metallic odor, dry, STRUCTURAL FIL	-	-	-	-	Sample S-2 sent for environmental sampling
5	SS-S-3 4.0'- 6.0'	15/24	11 9 23 23		FILL FILL	Medium dense, dark brown gray, Poorly-Graded SAND (SP), trace Silt, fine-grained, moist, STRUCTURAL FILL Dense, gray, Poorly-Graded SAND (SP) with Silt, fine-grained, metallic odor, moist, STRUCTURAL FILL	-	-	-	-	Water introduced to the borehole after 4 feet because of the drive and wash method Sample S-3 sent for environmental sampling
	SS-S-4 6.0'- 8.0'	19/24	24 22 25 25		FILL	Dense, gray, Poorly-Graded SAND (SP) with Silt, fine-grained, moist, STRUCTURAL FILL	-	-	-	-	Sample S-4 sent for environmental sampling
10	SS-S-5 8.0'- 10.0'	16/24	24 21 15 13		FILL	Dense, brown, Poorly-Graded SAND (SP), trace Silt, fine- to medium-grained, moist, STRUCTURAL FILL	-	-	-	-	
70											
						12.5 POTENTIAL BOULDER	-	-	-	-	12.50' - 15.00' - Drill rig switches to higher downward pressure and penetration rate slows down
15						15.0					
80	SS-S-6 15.0'- 17.0'	11/24	16 15 20 18		SM	Dense, light brown, Silty SAND (SM), fine- to medium-grained, moist, GLACIAL TILL	-	-	-	-	
	SS-S-7 18.0'- 20.0'	12/24	15 16 21 10		SM	Dense, light brown, Silty SAND (SM), trace gravel, fine- to coarse-grained, moist, GLACIAL TILL	-	-	-	-	

Water Level Data

Date	Time	Elapsed Time (hr)	Depth in feet to: Bot. of Casing	Bottom of Hole	Water

Sample Type
- **O** Open End Rod
- **T** Thin-Wall Tube
- **U** Undisturbed Sample
- **SS** Split Spoon Sample
- **G** Geoprobe

Notes:
1. The northing and easting coordinates were estimated from online mapping services and were not surveyed. The coordinates should be considered close approximations of the location.
2. The elevation was taken from a survey conducted by VHB in September 2020 using the NAVD 1988 Geoid 12 B vertical datum.

Boring No.: **B-11**

Field Test Legend: Dilatancy: N - None S - Slow R - Rapid; Toughness: L - Low M - Medium H - High; Plasticity: NP - Non-Plastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Medium H - High VH - Very High

NOTES: 1.) "ppd" denotes soil sample average diametral pocket penetrometer reading. 2.) "ppa" denotes soil sample average axial pocket penetrometer reading.
3.) Maximum Particle Size is determined by direct observation within limitations of sampler size. 4.) Soil identifications and field tests based on visual-manual methods per ASTM D2488.

SOIL BORING LOG (continued)

MOTT MACDONALD

BORING NO.: **B-11**

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests: Dilatancy	Toughness	Plasticity	Dry Strength	Remarks*
60											
	SS-S-8 23.0'- 25.0'	12/24	7 8 23 20		SM	Dense, light brown, Silty SAND (SM) with Gravel, fine- to coarse-grained, wet, GLACIAL TILL	-	-	-	-	
25						25.0 END OF BORING AT 25 FEET - MONITORING WELL INSTALLED FROM 2 FEET TO 12 FEET					
30											
80											
35											
40											
40											
45											

NOTES:

PROJECT NO.: **507102597** BORING NO.: **B-11**

NOTES: 1.) "ppd" denotes soil sample average diametral pocket penetrometer reading. 2.) "ppa" denotes soil sample average axial pocket penetrometer reading.
3.) Maximum Particle Size is determined by direct observation within limitations of sampler size. 4.) Soil identifications and field tests based on visual-manual methods per ASTM D2488.

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJR/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD, MA
GEOTECHNICAL SOIL BORINGS

SCALE: N.T.S. SHEET 1 0F 2

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS 12-22-2020	MWF / 12-05-2022	MA-21-NEB-PIP-499-G010	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		

G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Typicals\Construction\Phase_3-5\BORES\Phase5_G05.dwg

Mar 09, 2023 - 2:44pm

MOTT MACDONALD

SOIL BORING LOG

BORING NO.: **B-12**

Project:	New Bedford Relay Project	**Project No.:**	507102597
Location:	New Bedford, Massachusetts, United States	**Project Mgr:**	Scott Kibby, P.E.
Client:	Eversource Energy	**Field Eng. Staff:**	Alex Joseph Toporek, E.I.T.
Drilling Co.:	New England Boring	**Date/Time Started:**	2021 January 18 at 12:37 pm
Driller:	Gary Twombly, Jr.	**Date/Time Finished:**	2021 January 18 at 3:26 pm

Elevation: 82.00 ft. **Vertical Datum:** NAVD 1988 **Boring Location:** Northbound Parking Lane 40 ft north of Church Street and Belleville Road intersection **Coord.:** N: 2704580.563 E: 810214.179 **Horizontal Datum:** MA State Plane (US Survey Feet)

Item	Casing	Sampler	Core Barrel
Type	HW	-	-
Length (ft)	5	-	-
Inside Dia. (in.)	4	-	-
Hammer Wt. (lb.)	140	-	-
Hammer Fall (in.)	30	-	-

Rig Make & Model: CME-75
☐ Truck ☐ Tripod ☐ Cat-Head
☐ Rubber Tire ☐ Geoprobe ☑ Winch
☐ Track ☐ Air Track ☑ Roller Bit
☐ Skid ☐ ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic ☐

Drilling Fluid: ☐ Bentonite ☐ Polymer ☑ Water ☐ None

Drill Rod Size: **Casing Advance** — Driven Split Spoon / Drive and Wash

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Group Symbol	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests: Dilatancy	Toughness	Plasticity	Dry Strength	Remarks
	SS-S-1 0.0'- 2.0'	0/24	9 2 2 3		FILL	0.5 6" ASPHALT PAVEMENT Very loose, brown, black, gray, Well-Graded SAND (SW) with Silt, trace Gravel, moist, STRUCTURAL FILL	-	-	-	-	Additional oversized split spoon redriven from 0' - 2' (Sample S-1A) gathered for environmental testing / Visual description from Sample S-2A
80	SS-S-2 2.0'- 4.0'	13/24	2 8 16 18		SM	2.0 Medium dense, light brown, Silty SAND (SM) with Gravel, fine-grained, moist, GLACIAL TILL	-	-	-	-	Sample S-2 sent for environmental testing
5	SS-S-3 4.0'- 5.3'	8/16	23 32 33/4"		SM	Very dense, light brown, Silty SAND (SM), trace Gravel, fine- to medium-grained, moist, contains rock fragments, GLACIAL TILL	-	-	-	-	Sample S-3 sent for environmental testing
							-	-	-	-	Sample S-3 refusal attributed to split spoon encountering Gravel rock fragment
	SS-S-4 6.0'- 8.0'	15/24	26 36 60 44		SM	Very dense, light brown, Silty SAND (SM), trace Gravel, fine-grained, moist, GLACIAL TILL	-	-	-	-	Sample S-4 sent for environmental testing
	SS-S-5 8.0'- 8.4'	5/5	77/5"		SM	Very dense, light brown, Silty SAND (SM) with Gravel, fine- to coarse-grained, moist, contains rock fragments, GLACIAL TILL	-	-	-	-	8.00' - 10.00' - Sample S-5 rock fragment are GRANITE
10						10.0 POTENTIAL BOULDER					
70						12.0	-	-	-	-	
	SS-S-6 13.0'- 15.0'	12/24	17 21 26 19		SM	Dense, light brown, Silty SAND (SM), trace Gravel, fine-grained, moist, contains rock fragments, GLACIAL TILL	-	-	-	-	13.00' - 15.00' - Sample S-6 rock fragments are GRANITE
15											
	SS-S-7 18.0'- 20.0'	17/24	20 17 16 15		SM	Dense, light yellow brown, Silty SAND (SM), fine-grained, wet, GLACIAL TILL	-	-	-	-	

Water Level Data

Date	Time	Elapsed Time (hr)	Depth in feet to: Bot. of Casing	Bottom of Hole	Water

Sample Type
- **O** Open End Rod
- **T** Thin-Wall Tube
- **U** Undisturbed Sample
- **SS** Split Spoon Sample
- **G** Geoprobe

Notes:
1. The northing and easting coordinates were estimated from online mapping services and were not surveyed. The coordinates should be considered close approximations of the location.
2. The elevation was taken from a survey conducted by VHB in September 2020 using the NAVD 1988 Geoid 12 B vertical datum.

Boring No.: **B-12**

Field Test Legend: Dilatancy: N - None S - Slow R - Rapid; Toughness: L - Low M - Medium H - High; Plasticity: NP - Non-Plastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Medium H - High VH - Very High

NOTES: 1.) "ppd" denotes soil sample average diametral pocket penetrometer reading. 2.) "ppa" denotes soil sample average axial pocket penetrometer reading.
3.) Maximum Particle Size is determined by direct observation within limitations of sampler size. 4.) Soil identifications and field tests based on visual-manual methods per ASTM D2488.

MOTT MACDONALD

SOIL BORING LOG
(continued)

BORING NO.: **B-12**

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests: Dilatancy	Toughness	Plasticity	Dry Strength	Remarks*
60	SS-S-8 23.0'- 25.0'	6/24	14 30 40 28		SM	Very dense, light brown, Silty SAND (SM), trace Gravel, fine- to medium-grained, wet, contains rock fragments, GLACIAL TILL	-	-	-	-	
25						25.0 END OF BORING AT 25 FEET - BOREHOLE BACKFILLED WITH SPOILS AND REMAINDER OF BETONITE AND SAND BAGS USED FOR MONITORING WELL AT BORING B-11 AND TOPPED WITH COLD PATCH ASPHALT					
30											
80											
35											
40											
40											
45											

NOTES:

PROJECT NO.: **507102597** BORING NO.: **B-12**

NOTES: 1.) "ppd" denotes soil sample average diametral pocket penetrometer reading. 2.) "ppa" denotes soil sample average axial pocket penetrometer reading.
3.) Maximum Particle Size is determined by direct observation within limitations of sampler size. 4.) Soil identifications and field tests based on visual-manual methods per ASTM D2488.

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJR/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD, MA
GEOTECHNICAL SOIL BORINGS

SCALE: N.T.S. SHEET 2 OF 2

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS 12-22-2020	MWF / 12-05-2022	MA-21-NEB-PIP-499-G011	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		

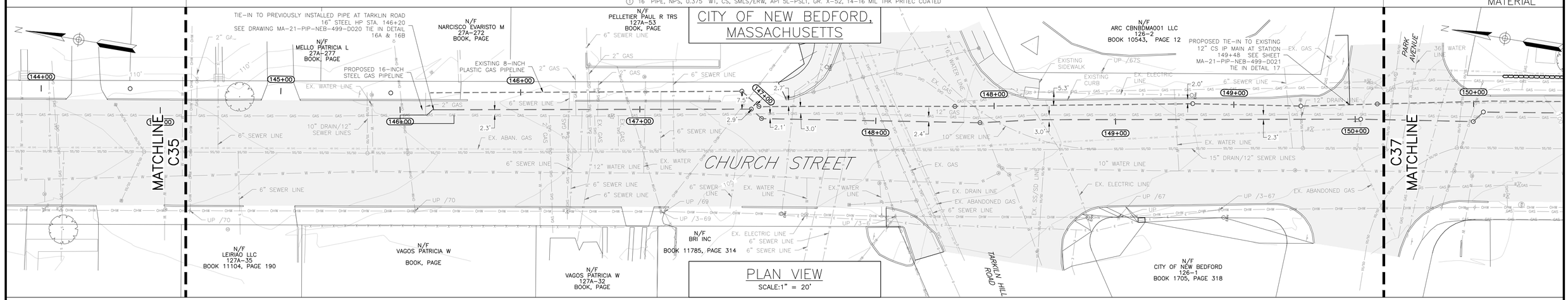
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Typicals\Construction\Phase_3-5\BORES\Phase5\ G05.dwg

Mar 09, 2023 - 2:43pm

③ 8" PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE

① 16" PIPE, NPS, 0.375" WT, CS, SMLS/ERW, API 5L–PSL1, GR. X–52, 14–16 MIL THK PRITEC COATED

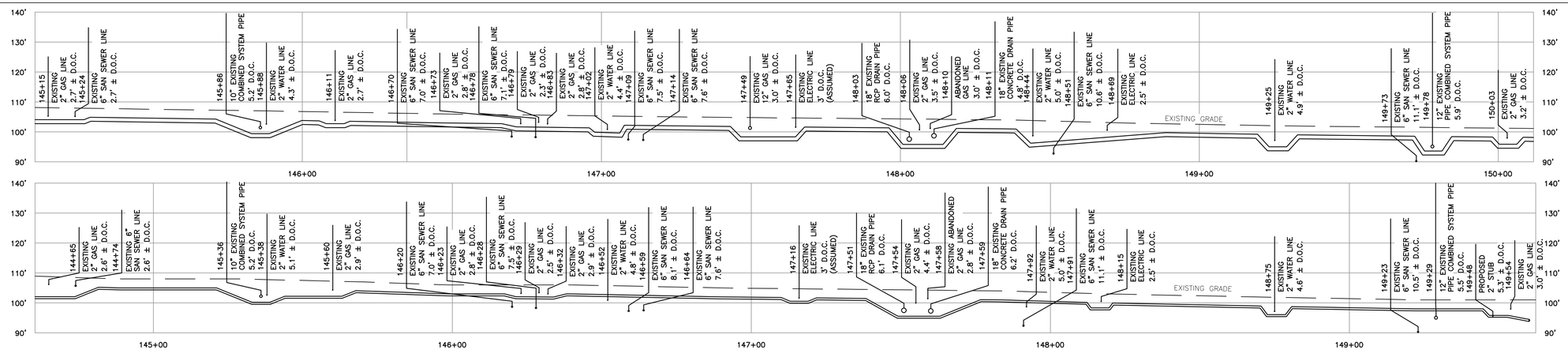
PIPE MATERIAL



PLAN VIEW

SCALE:1" = 20'

1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA–PIP–NEB–499–D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA–PIP–NEB–499–D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON–ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA–COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA–PIP–NEB–499–D11.



PROFILE VIEW

HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535–0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20' SHEET 36 OF 48

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 09/08/2021	MA-21-PIP-NEB-499-C36	0
Approved by / Date: DBD / 09/16/2021	MA21PIPNEB499		

MA-21-PIP-NEB-499-C36.dwg

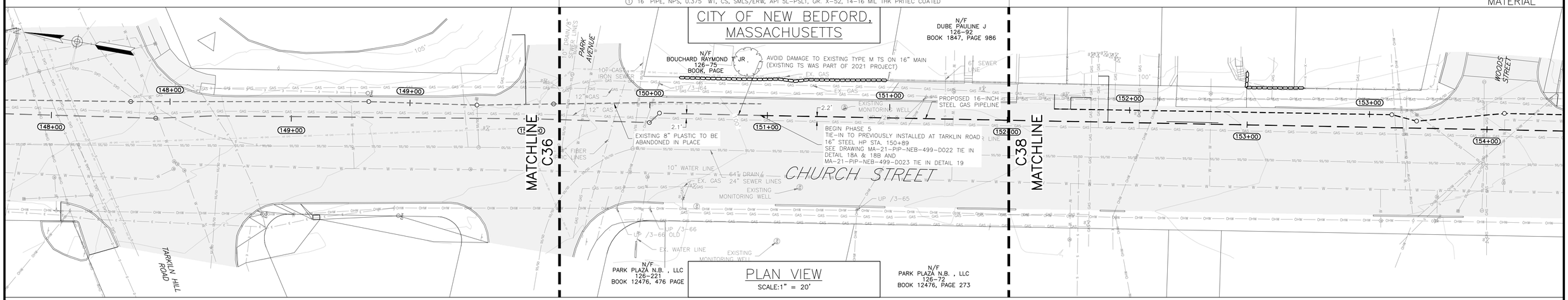
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\

Mar 14, 2023 - 4:00pm

③ 8" PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE

① 16" PIPE, NPS, 0.375" WT, CS, SMLS/ERW, API 5L–PSL1, GR. X–52, 14–16 MIL THK PRITEC COATED

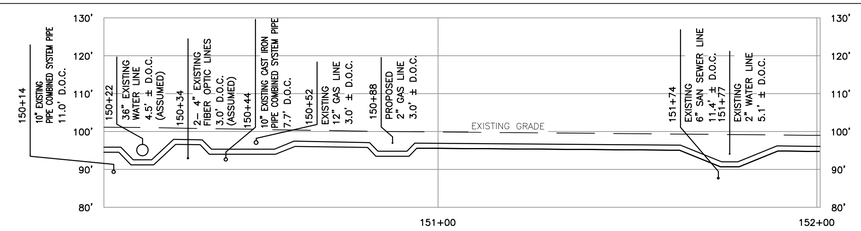
PIPE MATERIAL



PLAN VIEW

SCALE:1" = 20'

1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA–PIP–NEB–499–D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA–PIP–NEB–499–D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON–ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA–COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA–PIP–NEB–499–D11.



STEEL LINE

PLASTIC LINE

PROFILE VIEW

HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535–0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20' SHEET 37 OF 48

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 09/08/2021	MA-21-PIP-NEB-499-C37	0
Approved by / Date DBD / 09/16/2021	MA21PIPNEB499		

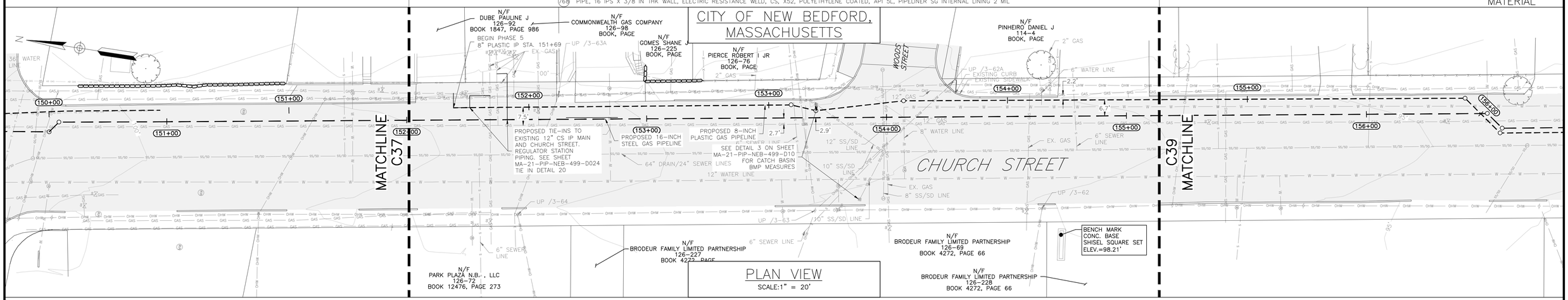
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\ MA-21-PIP-NEB-499-C37.dwg

Mar 14, 2023 - 10:50am

164 PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, POLYETHYLENE, PE3408/PE100

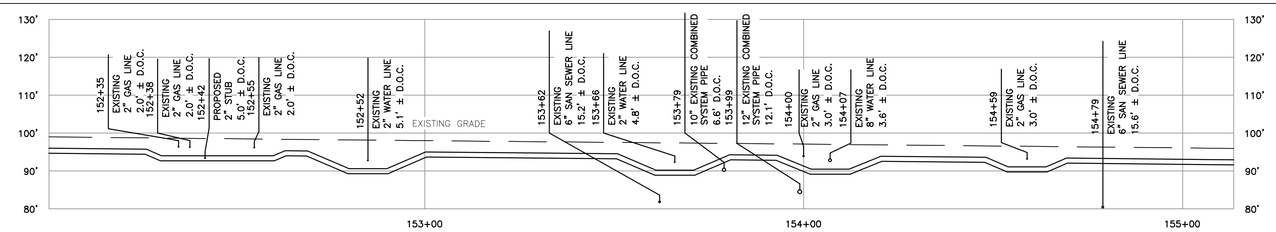
768 PIPE, 16 IPS X 3/8 IN THK WALL, ELECTRIC RESISTANCE WELD, CS, X52, POLYETHYLENE COATED, API 5L, PIPELINER SG INTERNAL LINING 2 MIL

PIPE MATERIAL

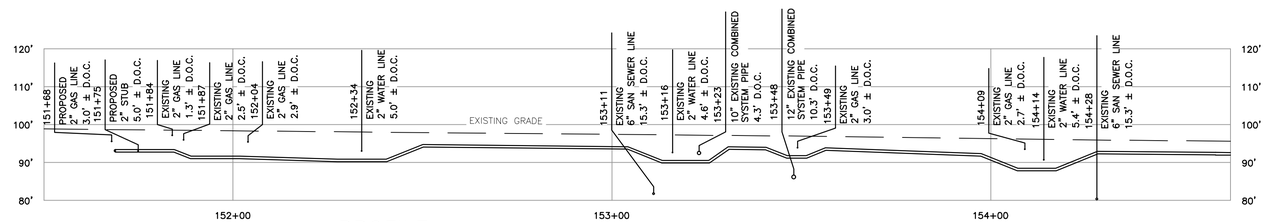


1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.

STEEL LINE



PLASTIC LINE



PROFILE VIEW

HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20' SHEET 27 OF 35

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 12/05/2022	MA-21-PIP-NEB-499-C38	0
Approved by / Date DBD / 12/05/2022	MA21PIPNEB499		

MA-21-PIP-NEB-499-C38.dwg

G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\

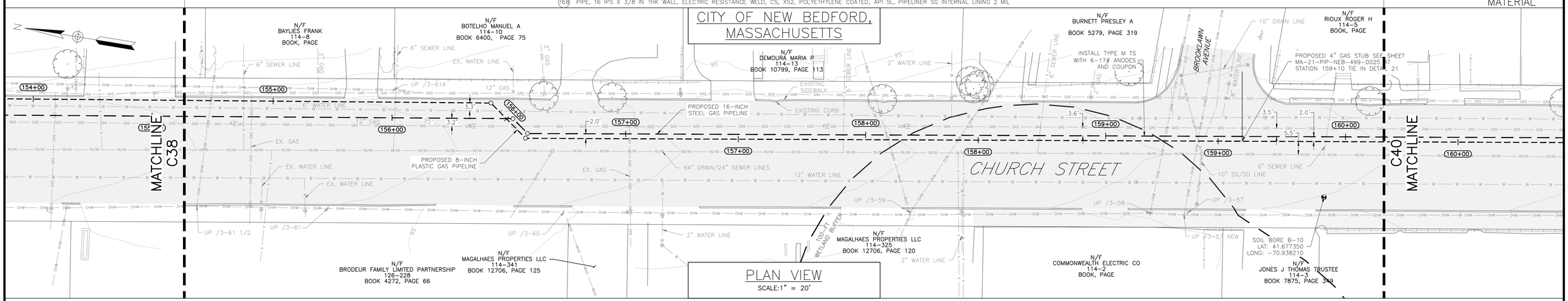
Mar 14, 2023 - 10:57am

164 PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, POLYETHYLENE, PE3408/PE100

768 PIPE, 16 IPS X 3/8 IN THK WALL, ELECTRIC RESISTANCE WELD, CS, X52, POLYETHYLENE COATED, API 5L, PIPELINER SG INTERNAL LINING 2 MIL

PIPE MATERIAL

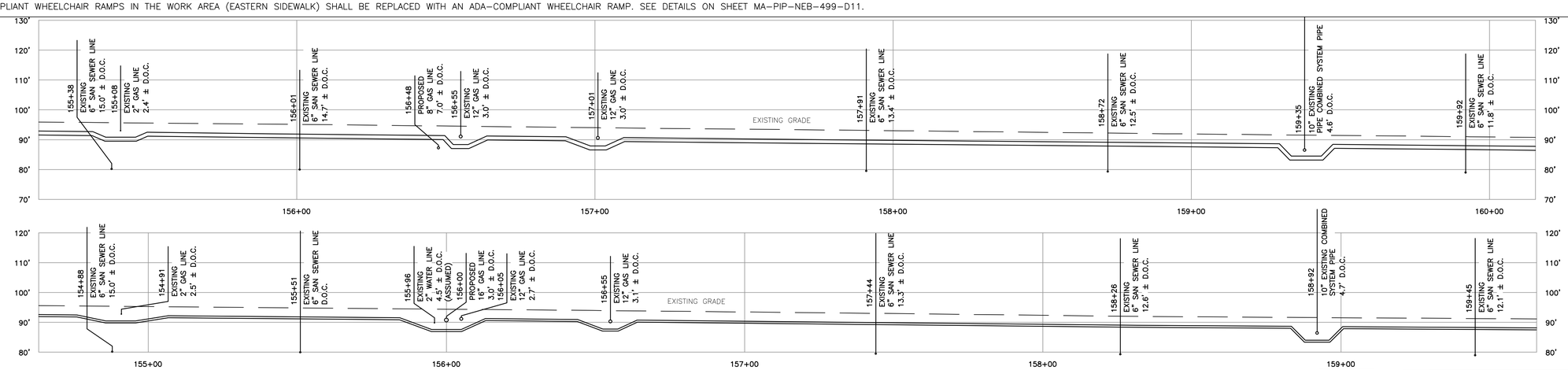
CITY OF NEW BEDFORD, MASSACHUSETTS



PLAN VIEW

SCALE:1" = 20'

1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.



PROFILE VIEW

HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20' SHEET 28 OF 35

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 12/05/2022	MA-21-PIP-NEB-499-C39	0
Approved by / Date: DBD / 12/05/2022	MA21PIPNEB499		

MA-21-PIP-NEB-499-C39.dwg

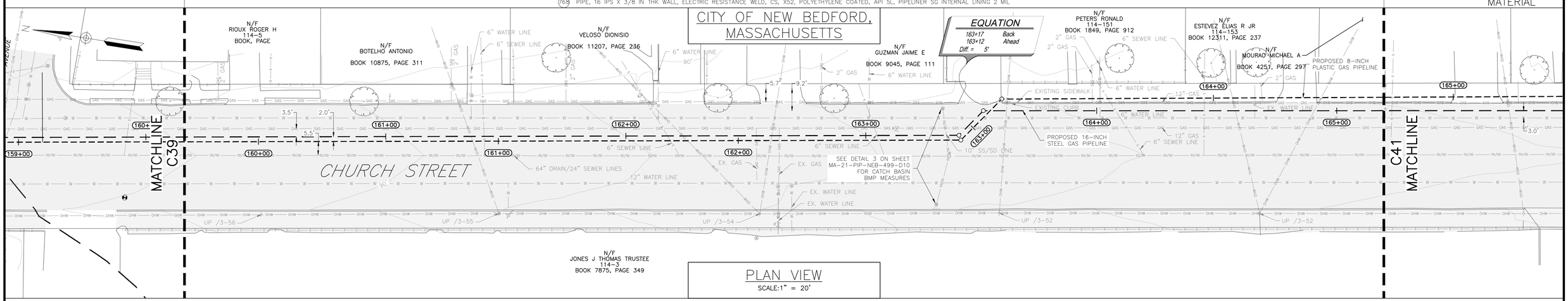
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\

Mar 14, 2023 - 11:35am

(364) PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, POLYETHYLENE, PE3408/PE100

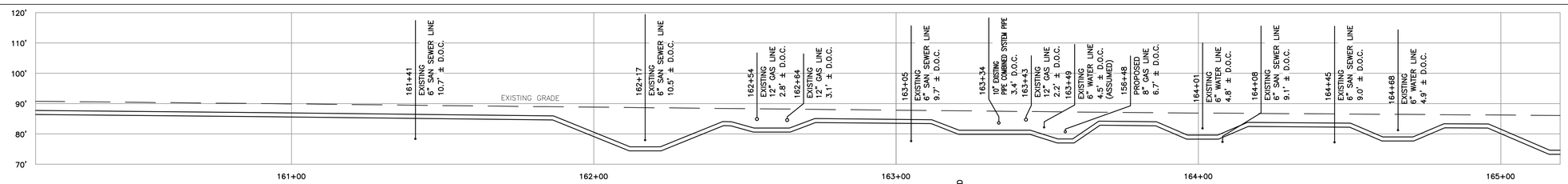
(768) PIPE, 16 IPS X 3/8 IN THK WALL, ELECTRIC RESISTANCE WELD, CS, X52, POLYETHYLENE COATED, API 5L, PIPELINER SG INTERNAL LINING 2 MIL

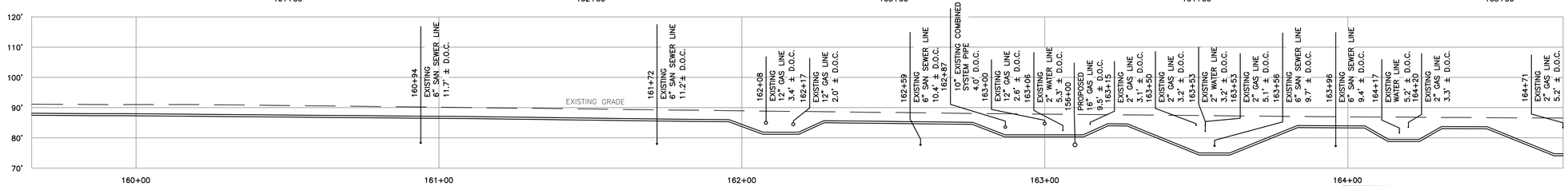
PIPE MATERIAL



PLAN VIEW
SCALE:1" = 20'

1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.





PROFILE VIEW
HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

EVERSOURCE ENERGY

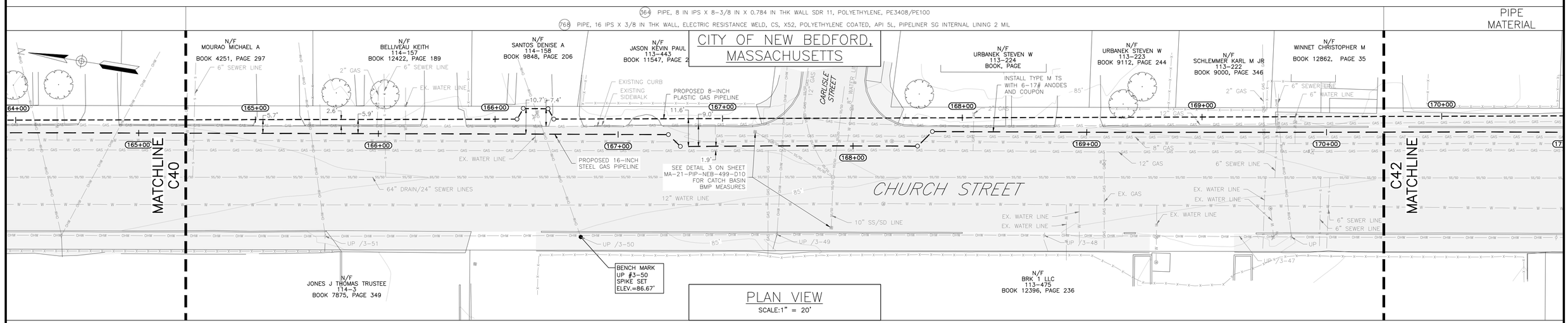
CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20'
SHEET 29 OF 35

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 12/05/2022	MA-21-PIP-NEB-499-C40	0
Approved by / Date: DBD / 12/05/2022	MA21PIPNEB499		

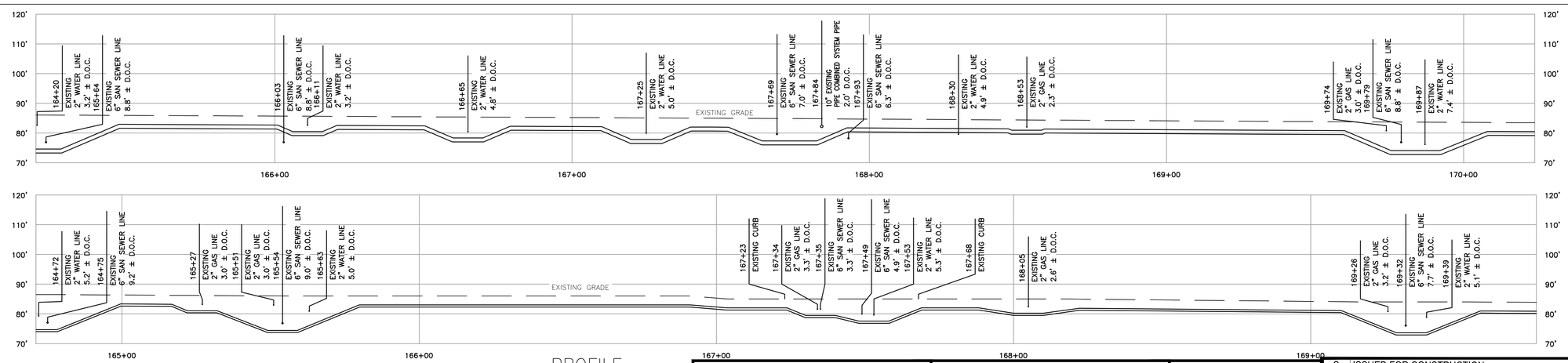
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\ MA-21-PIP-NEB-499-C40.dwg

Mar 14, 2023 - 11:41am



PLAN VIEW
SCALE:1" = 20'

1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.



PROFILE VIEW
HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

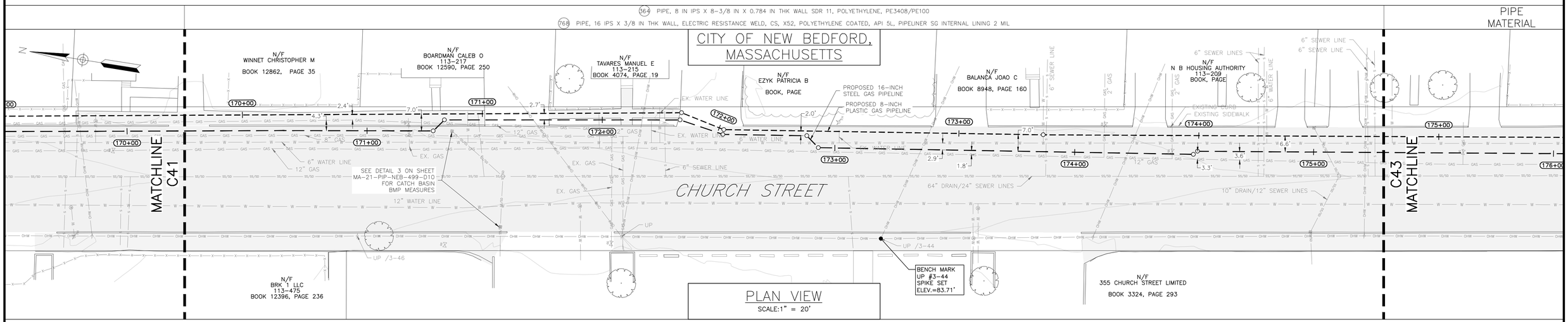
EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20'
SHEET 30 OF 35

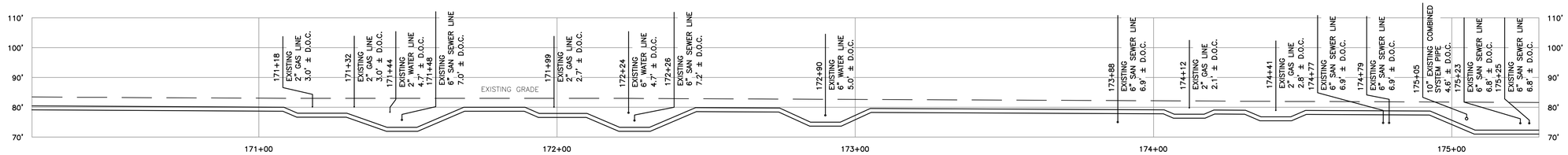
Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 12/05/2022	MA-21-PIP-NEB-499-C41	0
Approved by / Date: DBD / 12/05/2022	MA21PIPNEB499		

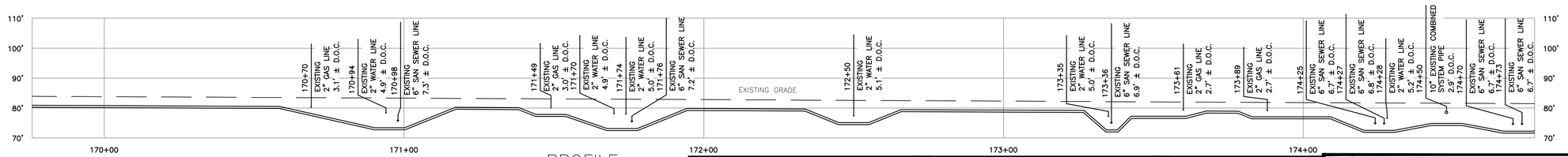
MA-21-PIP-NEB-499-C41.dwg
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\
Mar 09, 2023 - 2:58pm



PLAN VIEW
SCALE:1" = 20'

1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.





PROFILE VIEW
HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

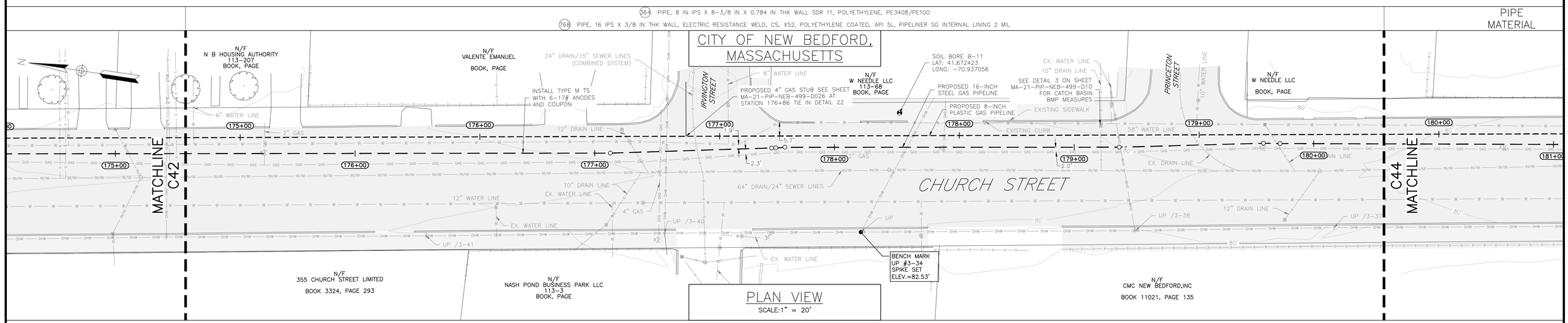
SCALE: 1" = 20'
SHEET 31 OF 35

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 12/05/2022	MA-21-PIP-NEB-499-C42	0
Approved by / Date: DBD / 12/05/2022	MA21PIPNEB499		

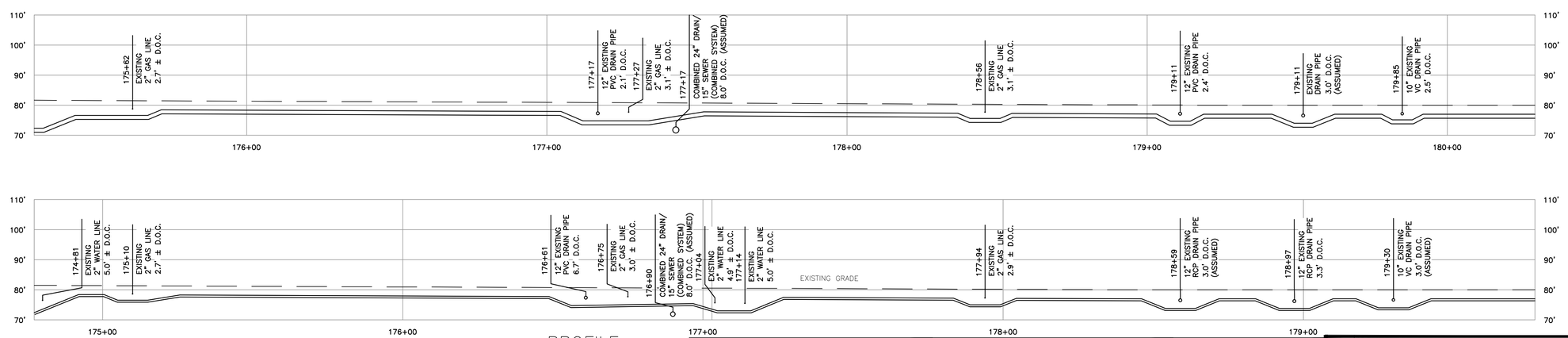
MA-21-PIP-NEB-499-C42.dwg

G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\

Mar 09, 2023 - 2:59pm



1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.



PROFILE VIEW
HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

EVERSOURCE ENERGY

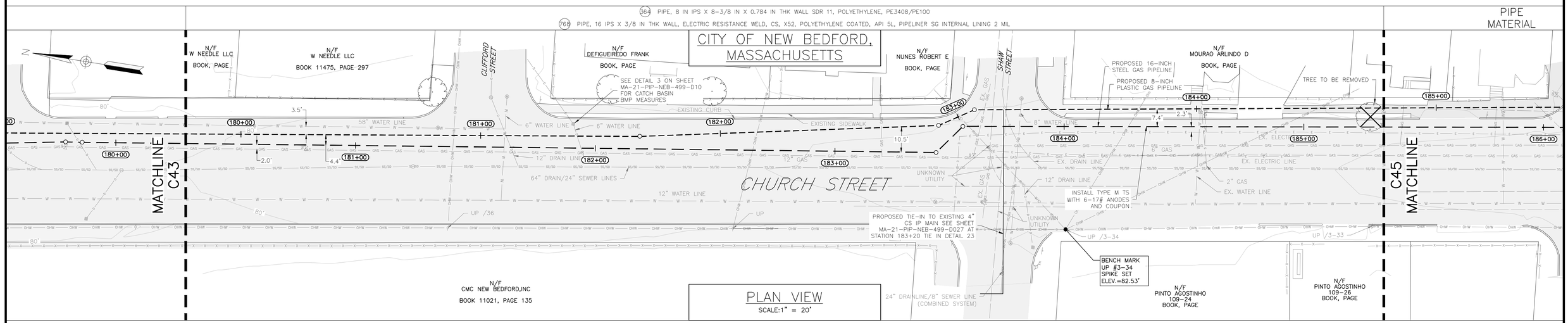
CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20'
SHEET 32 OF 35

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 12/05/2022	MA-21-PIP-NEB-499-C43	0
Approved by / Date			
DBD / 12/05/2022	MA21PIPNEB499		

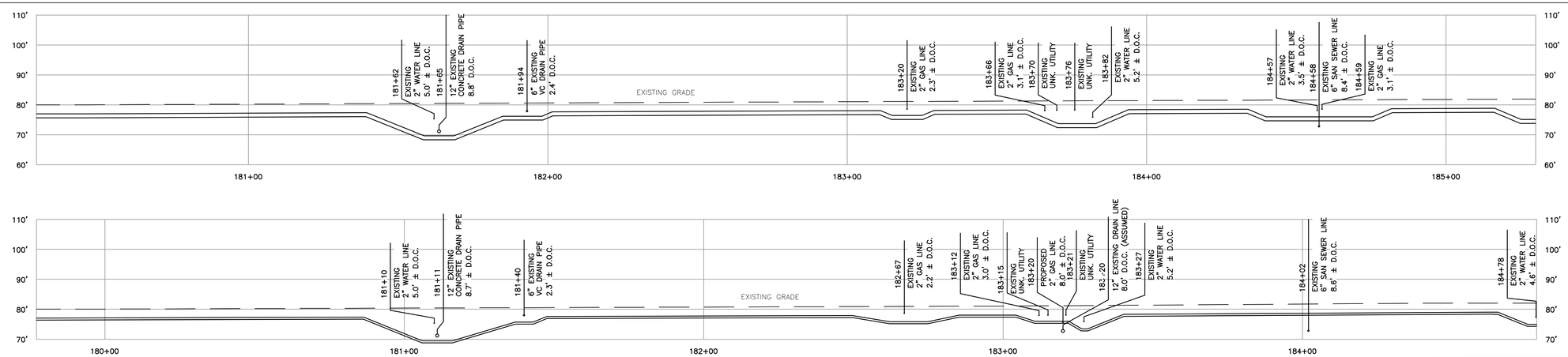
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\ MA-21-PIP-NEB-499-C43.dwg

Mar 14, 2023 - 11:46am



PLAN VIEW
SCALE:1" = 20'

1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.



STEEL LINE

PLASTIC LINE

PROFILE VIEW
HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

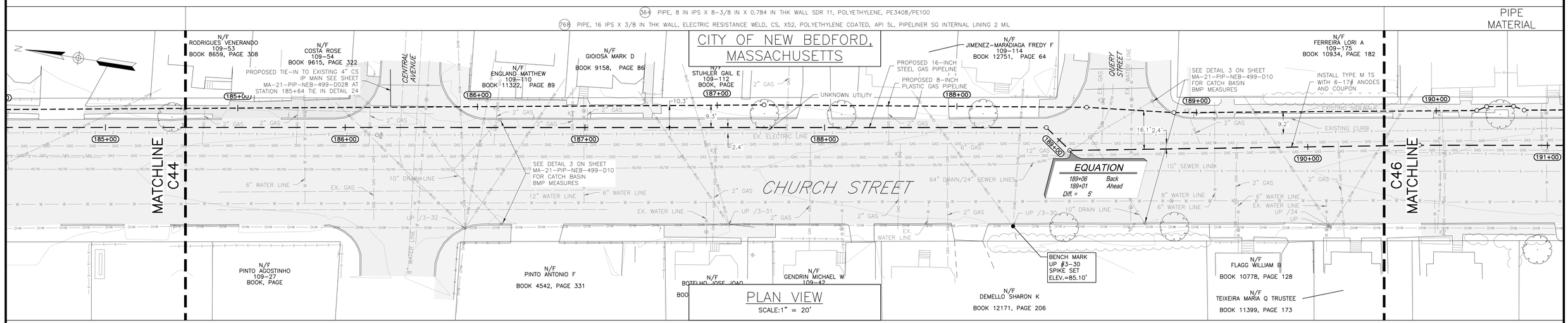
CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20'
SHEET 33 OF 35

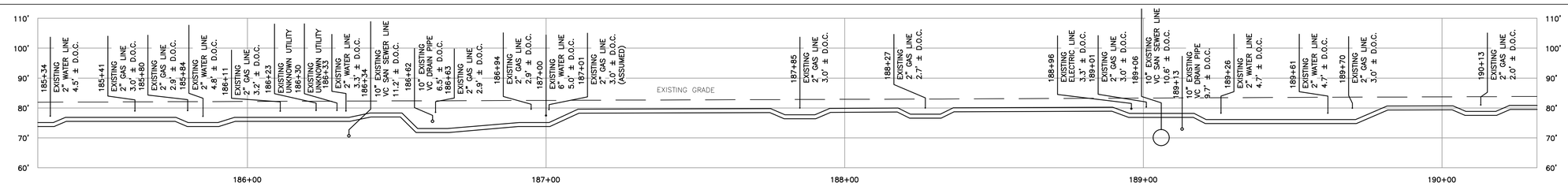
Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 12/05/2022	MA-21-PIP-NEB-499-C44	0
Approved by / Date DBD / 12/05/2022	MA21PIPNEB499		

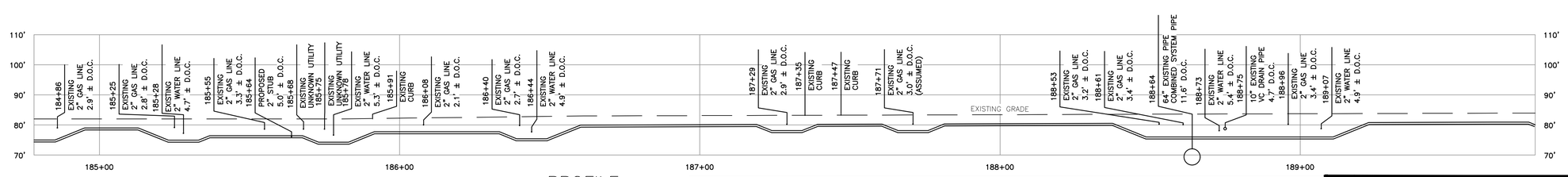
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\ MA-21-PIP-NEB-499-C44.dwg

Mar 14, 2023 - 11:51am



1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.





PROFILE VIEW
HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20' SHEET 34 OF 35

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 12/05/2022	MA-21-PIP-NEB-499-C45	0
Approved by / Date: DBD / 12/05/2022	MA21PIPNEB499		

MA-21-PIP-NEB-499-C45.dwg

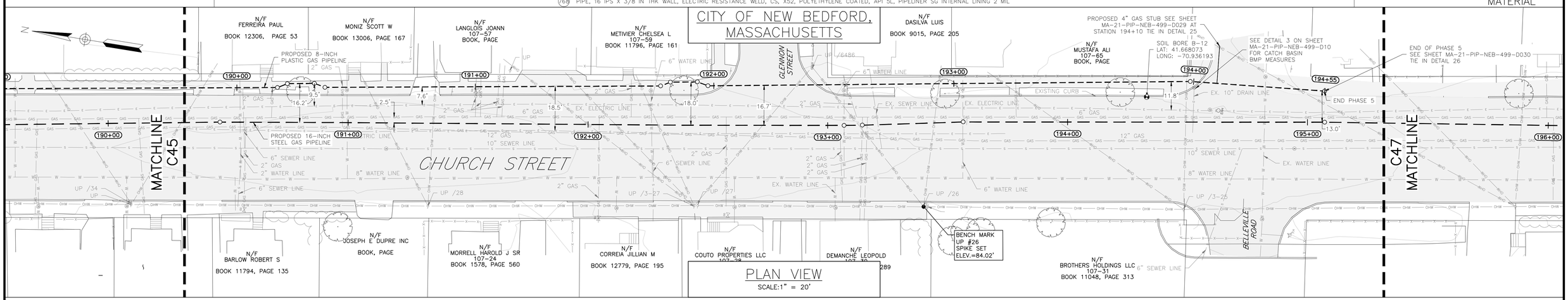
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\

Mar 09, 2023 - 3:01pm

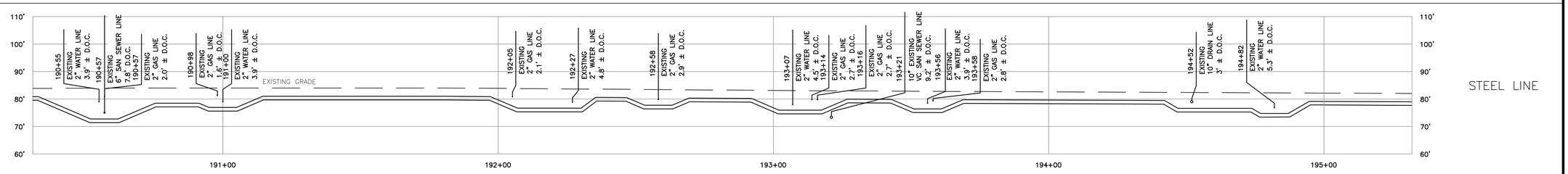
164 PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, POLYETHYLENE, PE3408/PE100

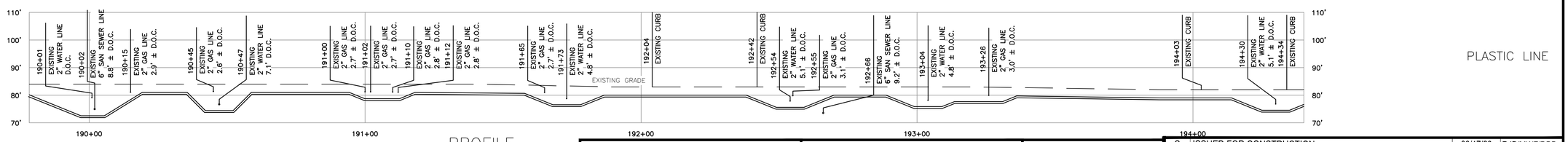
768 PIPE, 16 IPS X 3/8 IN THK WALL, ELECTRIC RESISTANCE WELD, CS, X52, POLYETHYLENE COATED, API 5L, PIPELINER SG INTERNAL LINING 2 MIL

PIPE MATERIAL



1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.





PROFILE VIEW

HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20' SHEET 35 OF 35

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 12/05/2022	MA-21-PIP-NEB-499-C46	0
Approved by / Date DBD / 12/05/2022	MA21PIPNEB499		

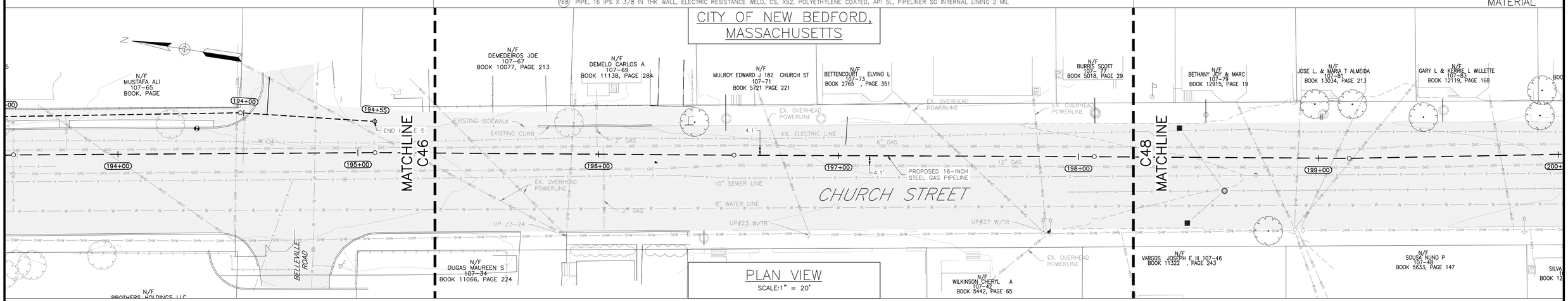
MA-21-PIP-NEB-499-C46.dwg

G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\

Mar 14, 2023 - 3:30pm

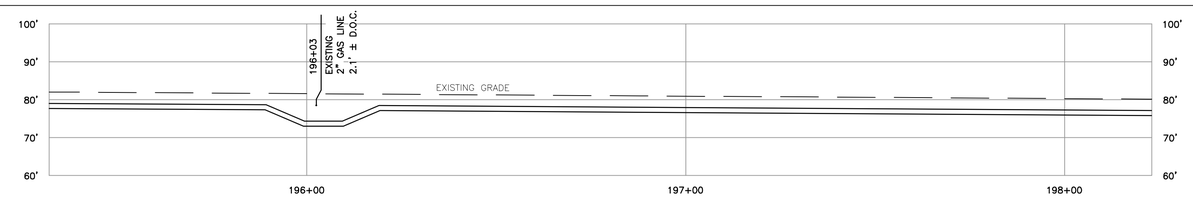
768 PIPE, 16 IPS X 3/8 IN THK WALL, ELECTRIC RESISTANCE WELD, CS, X52, POLYETHYLENE COATED, API 5L, PIPELINER SG INTERNAL LINING 2 MIL

PIPE MATERIAL



PLAN VIEW
SCALE:1" = 20'

1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.



STEEL LINE

PLASTIC LINE

PROFILE VIEW
HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

SCALE: 1" = 20'
SHEET 47 OF 48

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 09/08/2021	MA-21-PIP-NEB-499-C47	0
Approved by / Date DBD / 09/16/2021	MA21PIPNEB499		

MA-21-PIP-NEB-499-C47.dwg

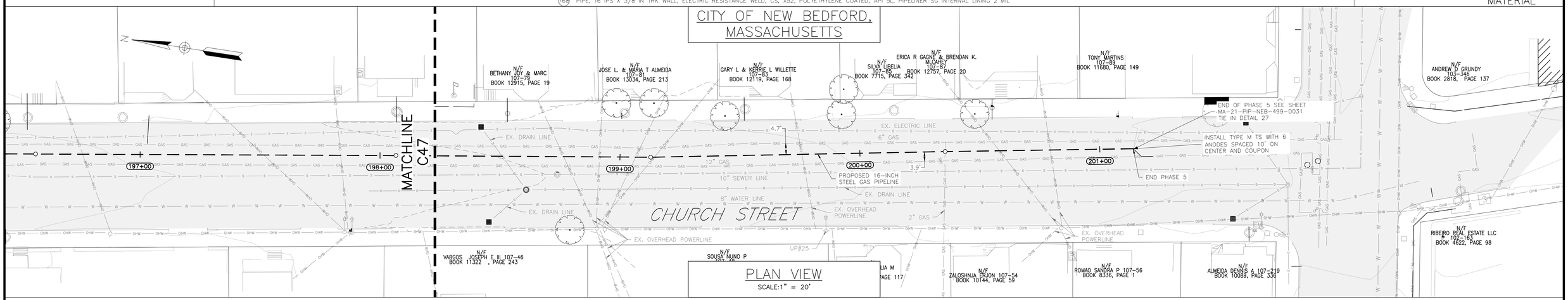
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\

Mar 14, 2023 - 1:14pm

(364) PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, POLYETHYLENE, PE3408/PE100

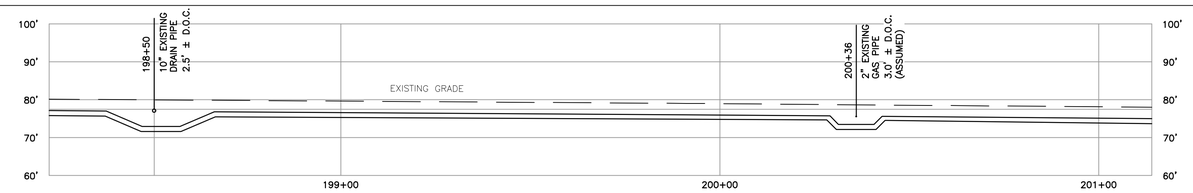
(768) PIPE, 16 IPS X 3/8 IN THK WALL, ELECTRIC RESISTANCE WELD, CS, X52, POLYETHYLENE COATED, API 5L, PIPELINER SG INTERNAL LINING 2 MIL

PIPE MATERIAL



PLAN VIEW
SCALE:1" = 20'

1) INSTALLATION TO BE IN ACCORDANCE WITH EVERSOURCE BEST MANAGEMENT PRACTICE MANUAL AND EVERSOURCE OPERATIONS AND MAINTENANCE MANUAL.
2) PIPELINE TRENCHES SHALL BE REPAIRED IN ACCORDANCE WITH TRENCHING DETAILS ON SHEET MA-PIP-NEB-499-D05. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING LINE STRIPING, CURBING, AND THE FULL DEPTH OF PAVEMENT WITHIN THE TRENCH LIMITS TO MATCH EXISTING CONDITIONS. EVERSOURCE WILL CONDUCT MILL AND OVERLAY CURB TO CURB THE FOLLOWING CONSTRUCTION SEASON.
3) EROSION CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION/SEDIMENT RUNOFF. SEE APPENDIX A OF EVERSOURCE BMP MANUAL AND DETAILS ON SHEET MA-PIP-NEB-499-D11 FOR MORE INFORMATION ON THE INSTALLATION OF EROSION CONTROLS.
4) EXTREME CARE SHALL BE TAKEN WHEN WORKING IN CLOSE PROXIMITY TO THE EXISTING STEEL EVERSOURCE GAS MAIN.
5) CONTRACTOR SHALL SHORE/PROTECT UTILITY POLES AS REQUIRED TO INSTALL THE PROPOSED GAS MAINS.
6) ALL EXISTING NON-ADA COMPLIANT WHEELCHAIR RAMPS IN THE WORK AREA (EASTERN SIDEWALK) SHALL BE REPLACED WITH AN ADA-COMPLIANT WHEELCHAIR RAMP. SEE DETAILS ON SHEET MA-PIP-NEB-499-D11.



STEEL LINE

PLASTIC LINE

PROFILE VIEW
HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE:1" = 20'

0 10 20 40 60 80
VERTICAL SCALE: 1" = 20'

0 10 20 40 60 80
HORIZONTAL SCALE: 1" = 20'

MOTT MACDONALD
134 CAPITAL DRIVE, SUITE D
WEST SPRINGFIELD, MASSACHUSETTS 01089
(413)535-0135

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	RJP/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD , MA
PROPOSE 8" AND 16" PIPELINES - ALIGNMENT SHEETS

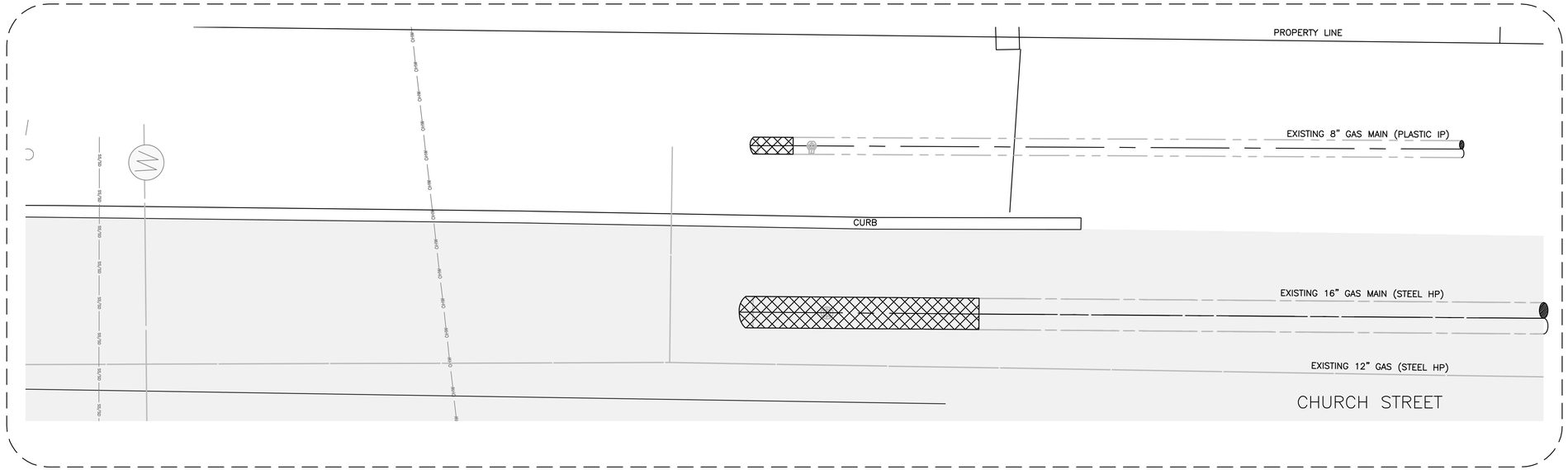
SCALE: 1" = 20'
SHEET 48 OF 48

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RJP / 09/08/2021	MWF / 09/08/2021	MA-21-PIP-NEB-499-C48	0
Approved by / Date DBD / 09/16/2021	MA21PIPNEB499		

MA-21-PIP-NEB-499-C48.dwg

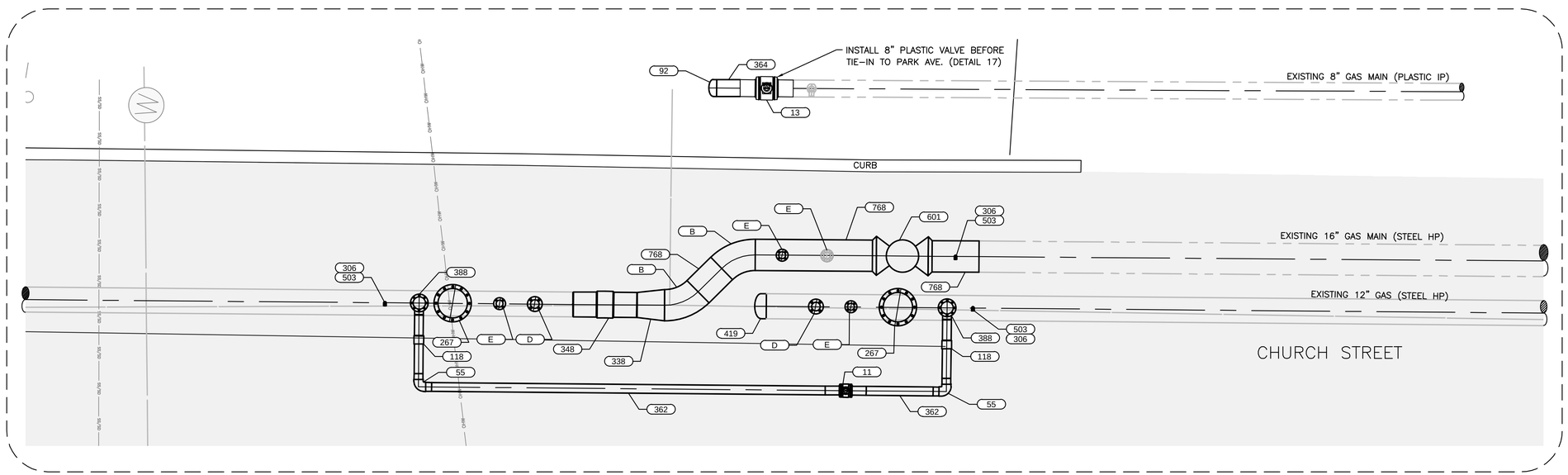
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Alignments\Preliminary\Phase3-5\

Mar 14, 2023 - 11:58am



TIE-IN AT STA. 146+14 (16") 16A

(EXISTING PIPING PREVIOUSLY INSTALLED AT TARKILN HILL CROSSING)
SCALE: 3/8"=1'-0"



TIE-IN AT STA. 146+14 (16") 16B

(TIE-IN TO EXISTING PIPING PREVIOUSLY INSTALLED AT TARKILN HILL CROSSING)
SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RJW/JVV/DBD

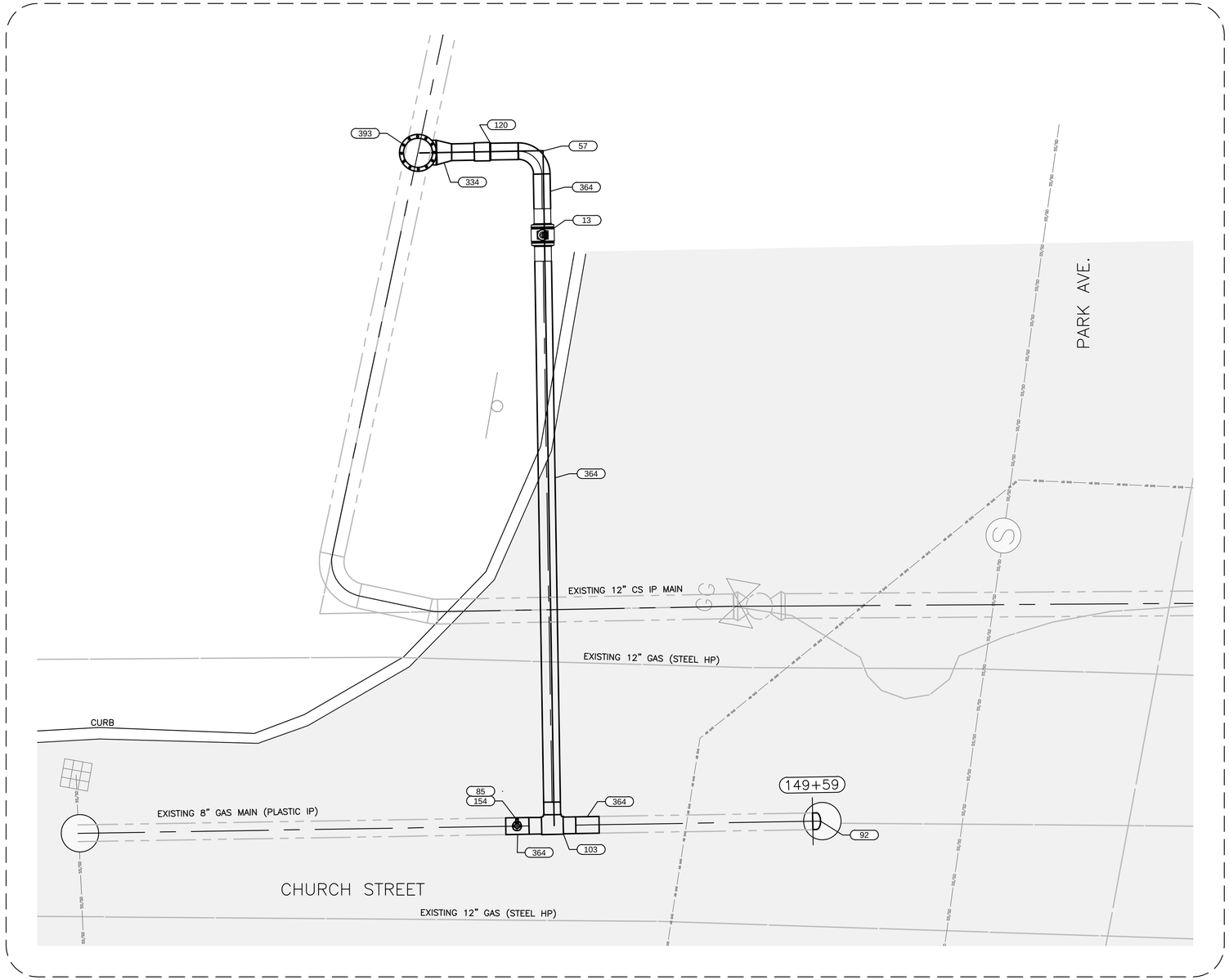
Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION - NEW BEDFORD RELAY
NEW BEDFORD, MA
FACILITY DETAILS

SCALE: AS SHOWN
SHEET 1 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 01-26-2021	MA-21-PIP-NEB-499-D020	0
Approved by / Date: DBD / 01-26-2021	MA21PIPNEB499		



TIE-IN AT STA. 149+48 (8") (17)

(PARK AVE. 8" PLASTIC PIPING TIE-IN)
SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RPM/JVV/DBD

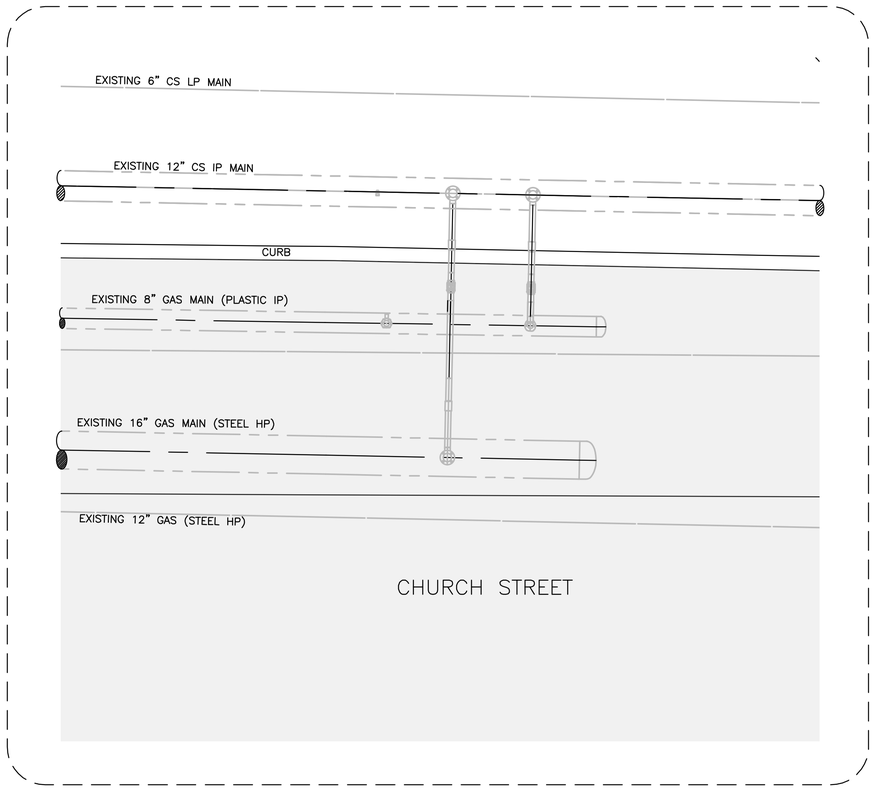
Revision/Status

EVERSOURCE ENERGY

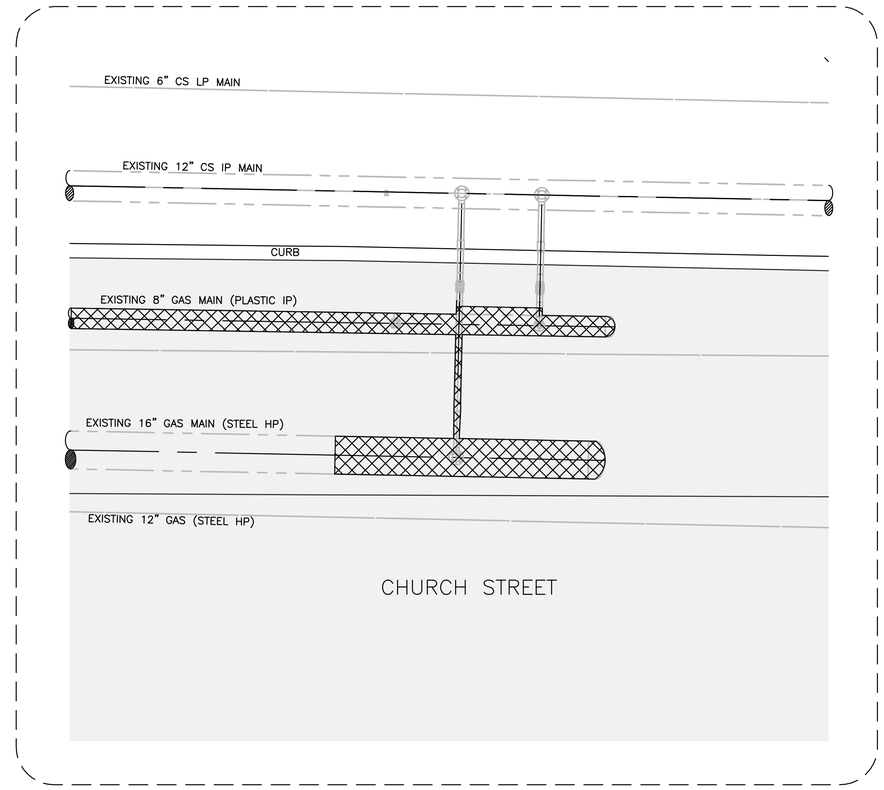
CHURCH STREET MAIN RELAY AND INSTALLATION - NEW BEDFORD RELAY
NEW BEDFORD, MA
FACILITY DETAILS

SCALE: AS SHOWN
SHEET 2 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 01-26-2021	MA-21-PIP-NEB-499-D021	0
Approved by / Date			
DBD / 01-26-2021	MA21PIPNEB499		



TIE-IN AT STA. 150+96 (16") 18A
(EXISTING PIPING PREVIOUSLY INSTALLED AT TARKILN HILL CROSSING)
SCALE: 3/8"=1'-0"



TIE-IN AT STA. 150+96 (16") 18B
(DEMO EXTENTS OF EXISTING PIPING)
SCALE: 3/8"=1'-0"

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RPM/JVV/DBD

Revision/Status

MOTT MACDONALD

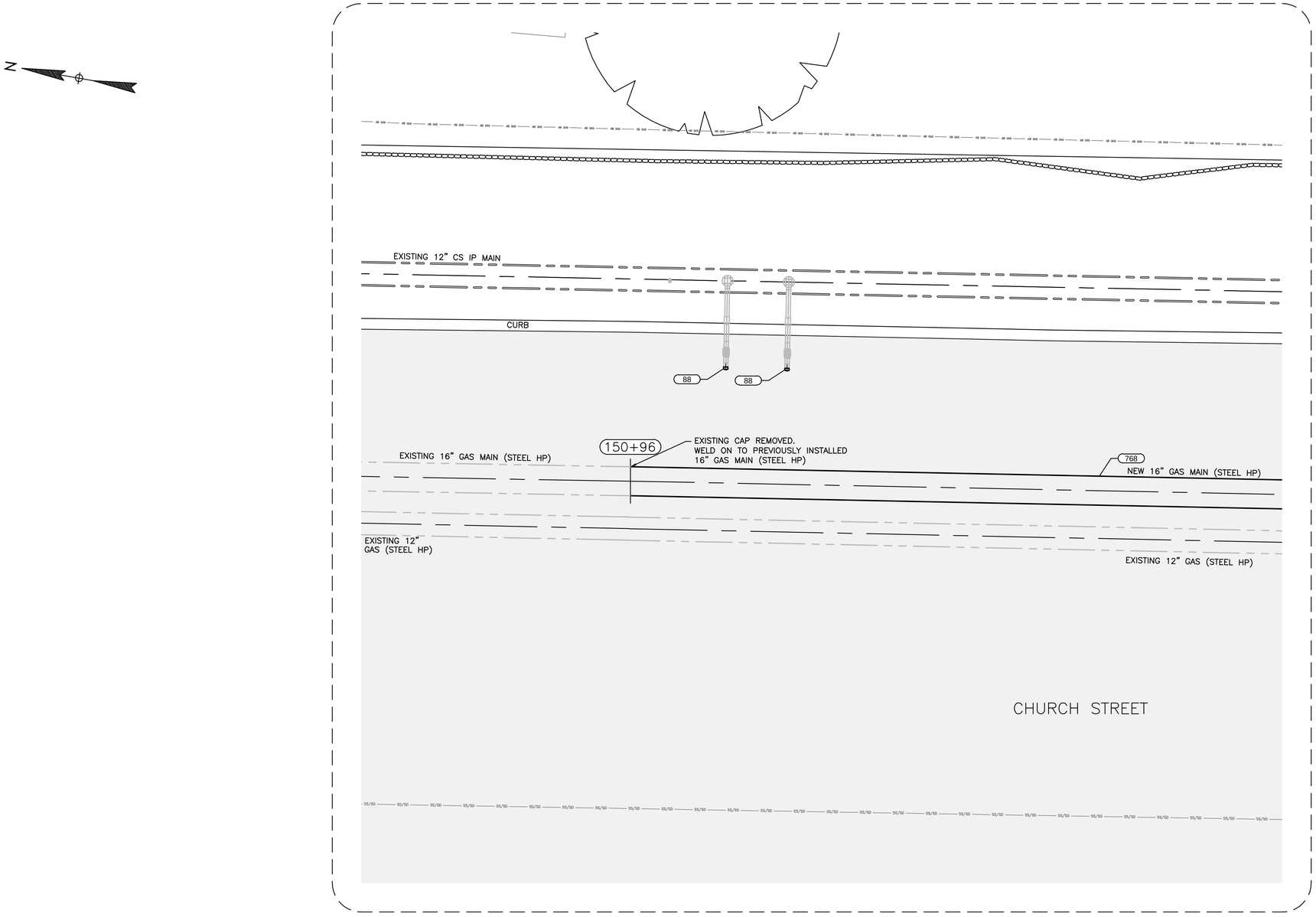
FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION - NEW BEDFORD RELAY
NEW BEDFORD, MA
FACILITY DETAILS

SCALE: AS SHOWN
SHEET 3 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 01-26-2021	MA-21-PIP-NEB-499-D022	0
Approved by / Date: DBD / 01-26-2021	MA21PIPNEB499		



TIE-IN AT STA. 150+89 (19)

(BEGIN OF PROPOSED PHASE 5 PIPING)

SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RPM/JVV/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

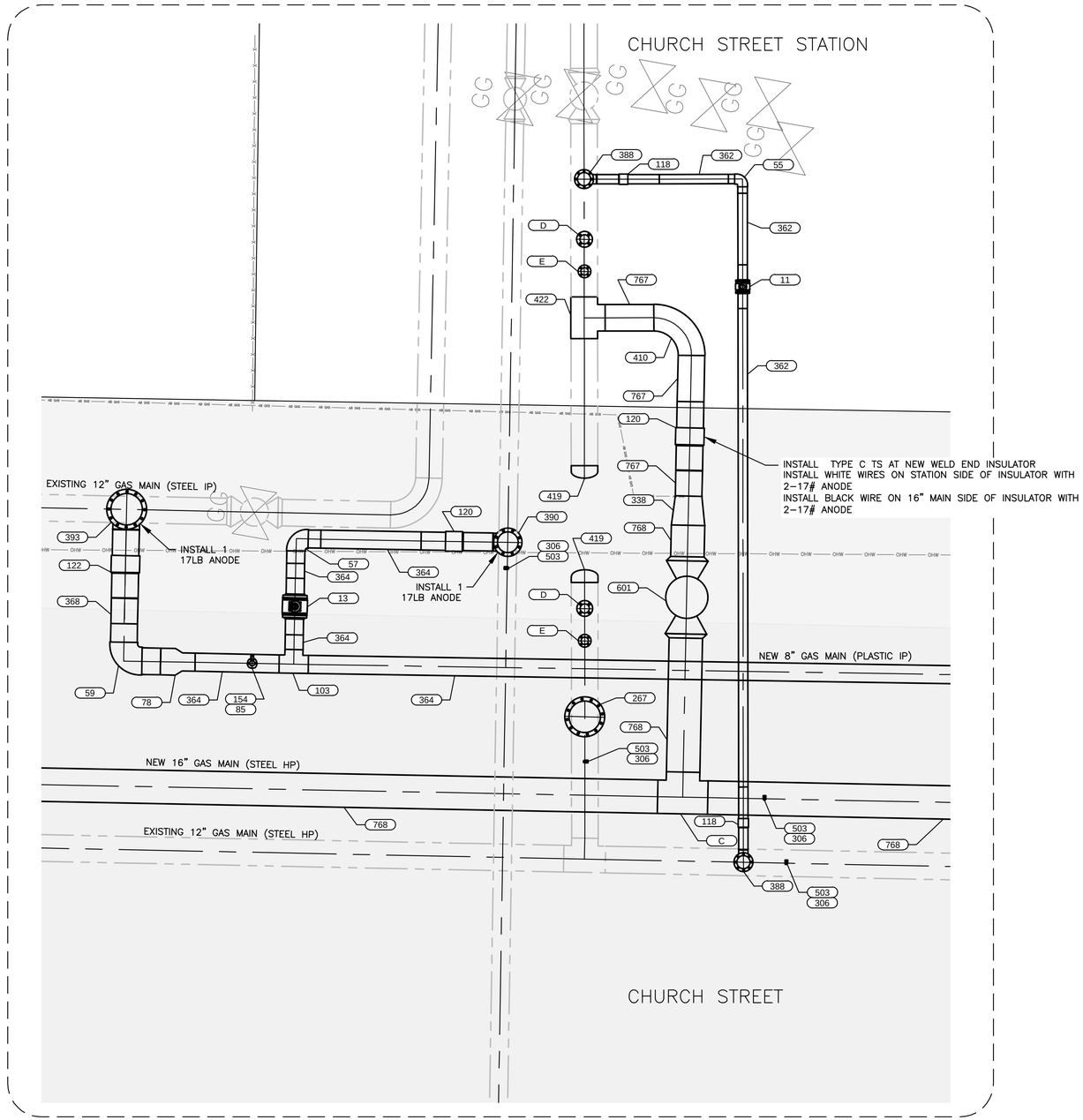
NEW BEDFORD, MA

FACILITY DETAILS

SCALE: AS SHOWN

SHEET 4 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 12-05-2022	MA-21-PIP-NEB-499-D023	0
Approved by / Date			
DBD / 12-05-2022	MA21PIPNEB499		



TIE-IN AT STA. 151+75 (8") AND 152+41 (16") 20

(CHURCH ST. STATION TIE IN)

SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RPM/JVV/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

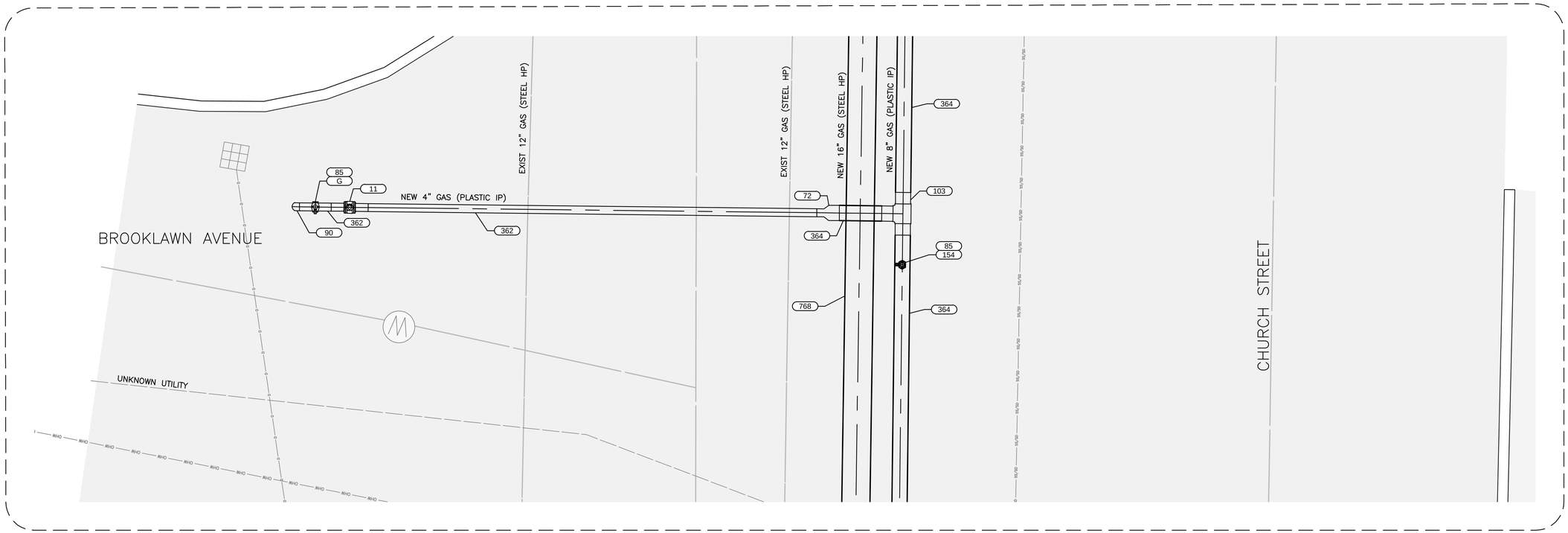
NEW BEDFORD, MA

FACILITY DETAILS

SCALE: AS SHOWN

SHEET 5 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 12-05-2022	MA-21-PIP-NEB-499-D024	0
Approved by / Date			
DBD / 12-05-2022	MA21PIPNEB499		



TIE-IN AT STA. 159+10 (8") (21)

(BROOKLAWN AVE. NEW 4" PLASTIC PIPING STUB)

SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RJW/JVV/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

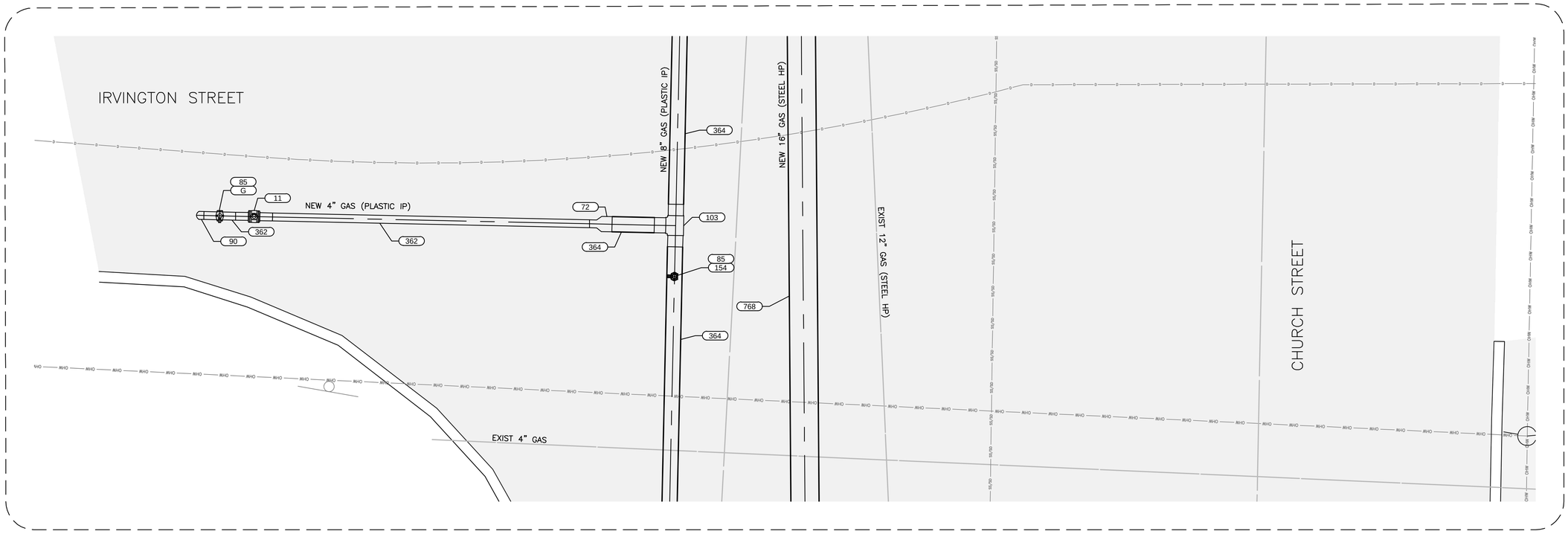
NEW BEDFORD, MA

FACILITY DETAILS

SCALE: AS SHOWN

SHEET 6 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 12-05-2022	MA-21-PIP-NEB-499-D025	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		



TIE-IN AT STA. 176+86 (8") (22)

(IRVINGTON STREET NEW 4" PLASTIC PIPING STUB)

SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RJW/JVV/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

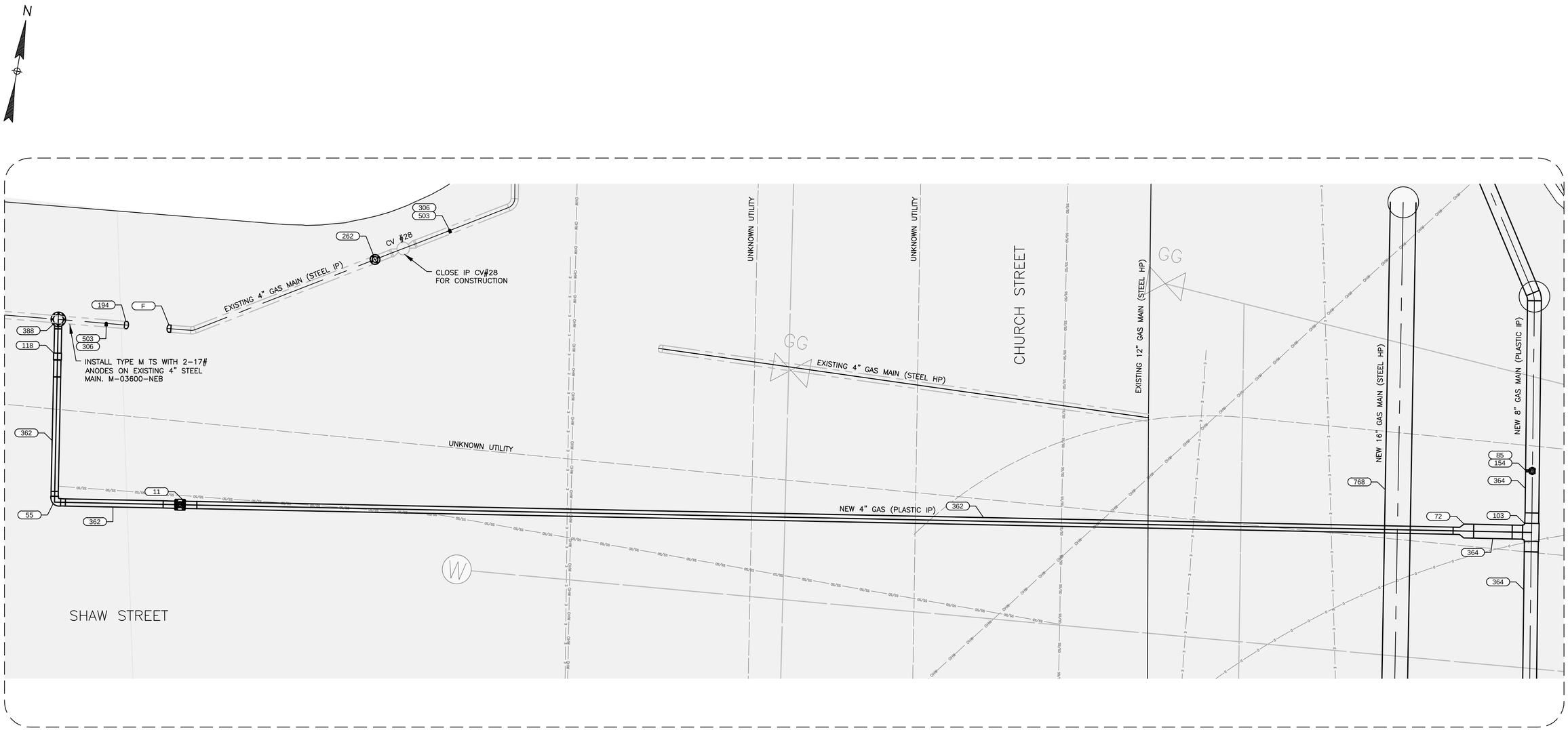
NEW BEDFORD, MA

FACILITY DETAILS

SCALE: AS SHOWN

SHEET 7 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 12-05-2022	MA-21-PIP-NEB-499-D026	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		



TIE-IN AT STA. 183+20 (8") (23)

(SHAW ST. REGULATOR TIE IN)

SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RJW/JVV/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

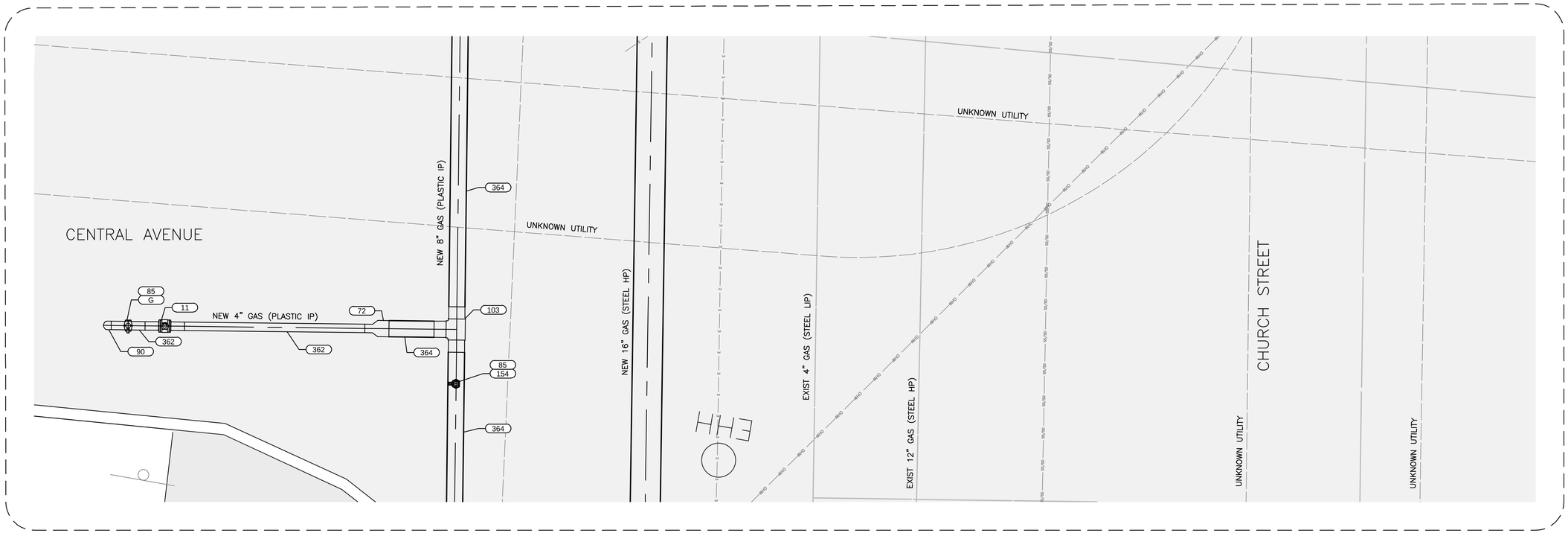
NEW BEDFORD, MA

FACILITY DETAILS

SCALE: AS SHOWN

SHEET 8 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 12-05-2022	MA-21-PIP-NEB-499-D027	0
Approved by / Date			
DBD / 12-05-2022	MA21PIPNEB499		



TIE-IN AT STA. 185+64 (8") (24)

(CENTRAL AVE. NEW 4" PLASTIC PIPING STUB)

SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RJW/JVV/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

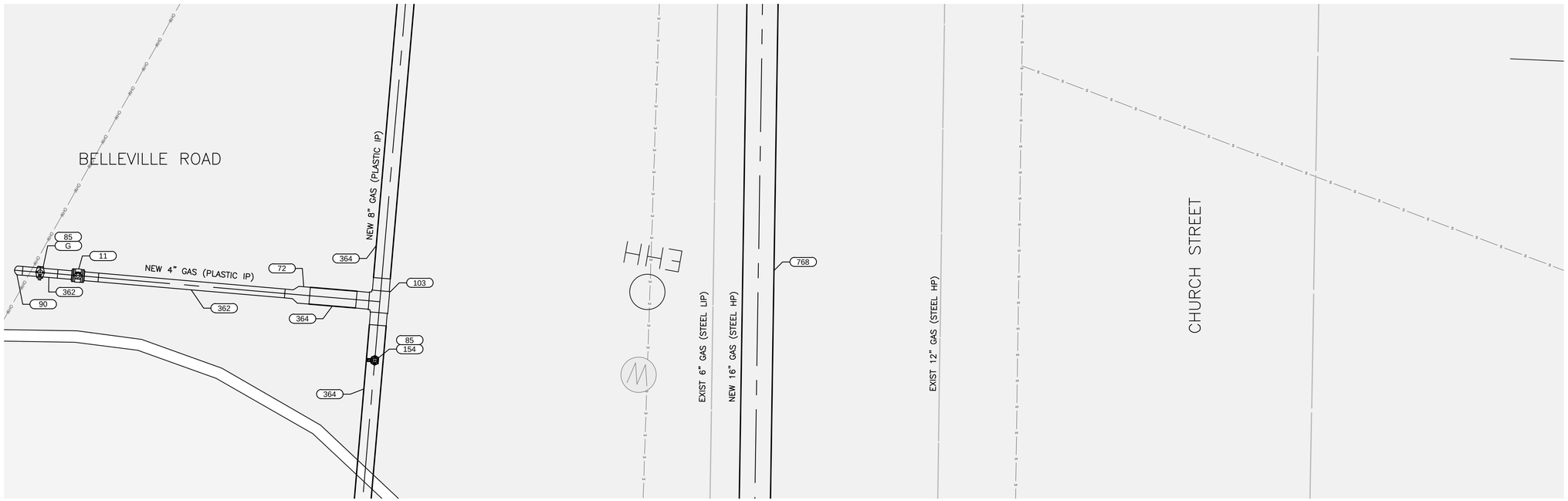
NEW BEDFORD, MA

FACILITY DETAILS

SCALE: AS SHOWN

SHEET 9 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 12-05-2022	MA-21-PIP-NEB-499-D028	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		



TIE-IN AT STA. 194+10 (8") (25)

(BELLEVILLE RD. NEW 4" PLASTIC PIPING STUB)

SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RJW/JVV/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

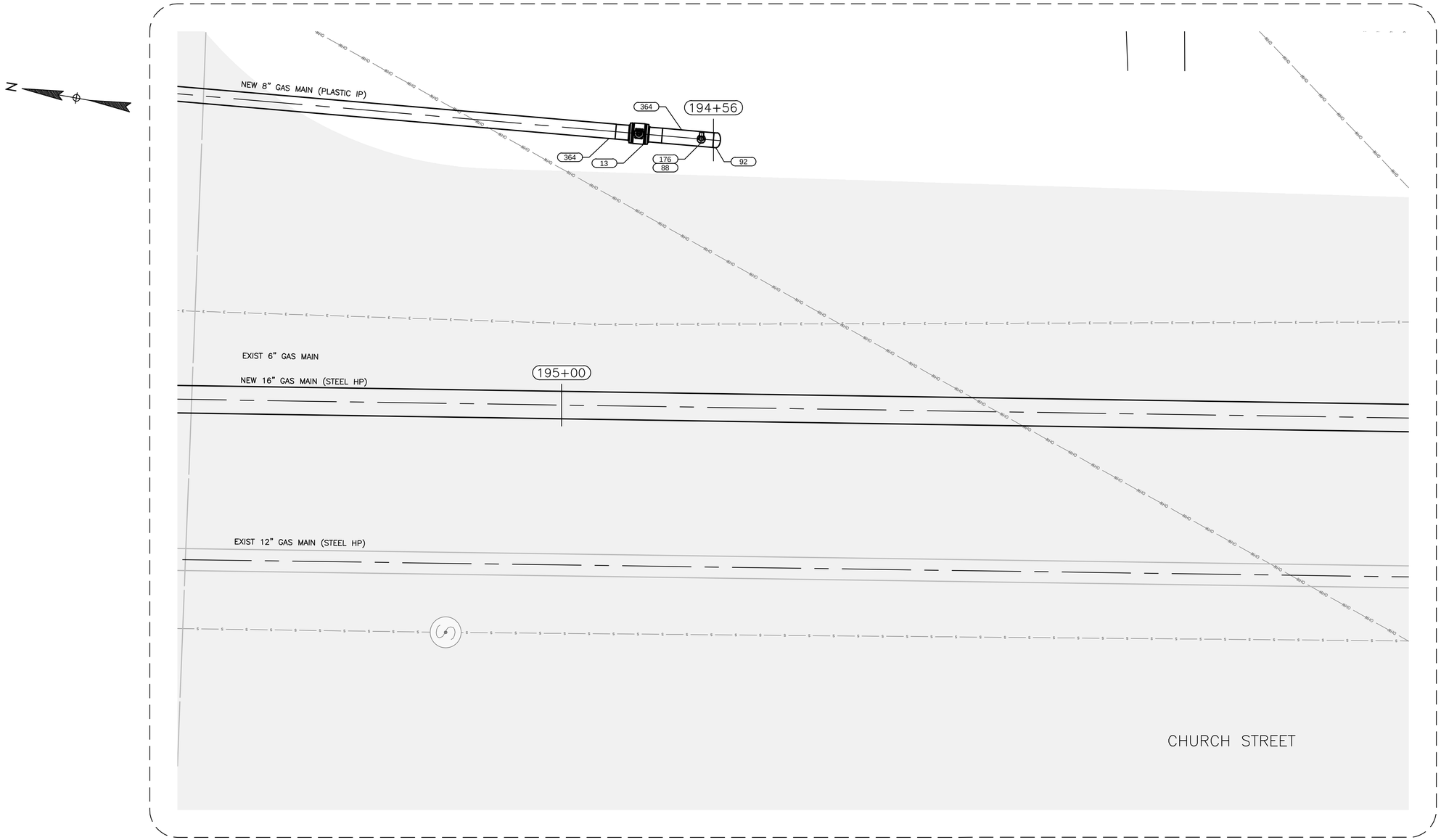
NEW BEDFORD, MA

FACILITY DETAILS

SCALE: AS SHOWN

SHEET 10 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 12-05-2022	MA-21-PIP-NEB-499-D029	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		



TIE-IN AT STA. 194+56 (8") 26

(END OF PROPOSED PHASE 5 PIPING)

SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RJW/JVV/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

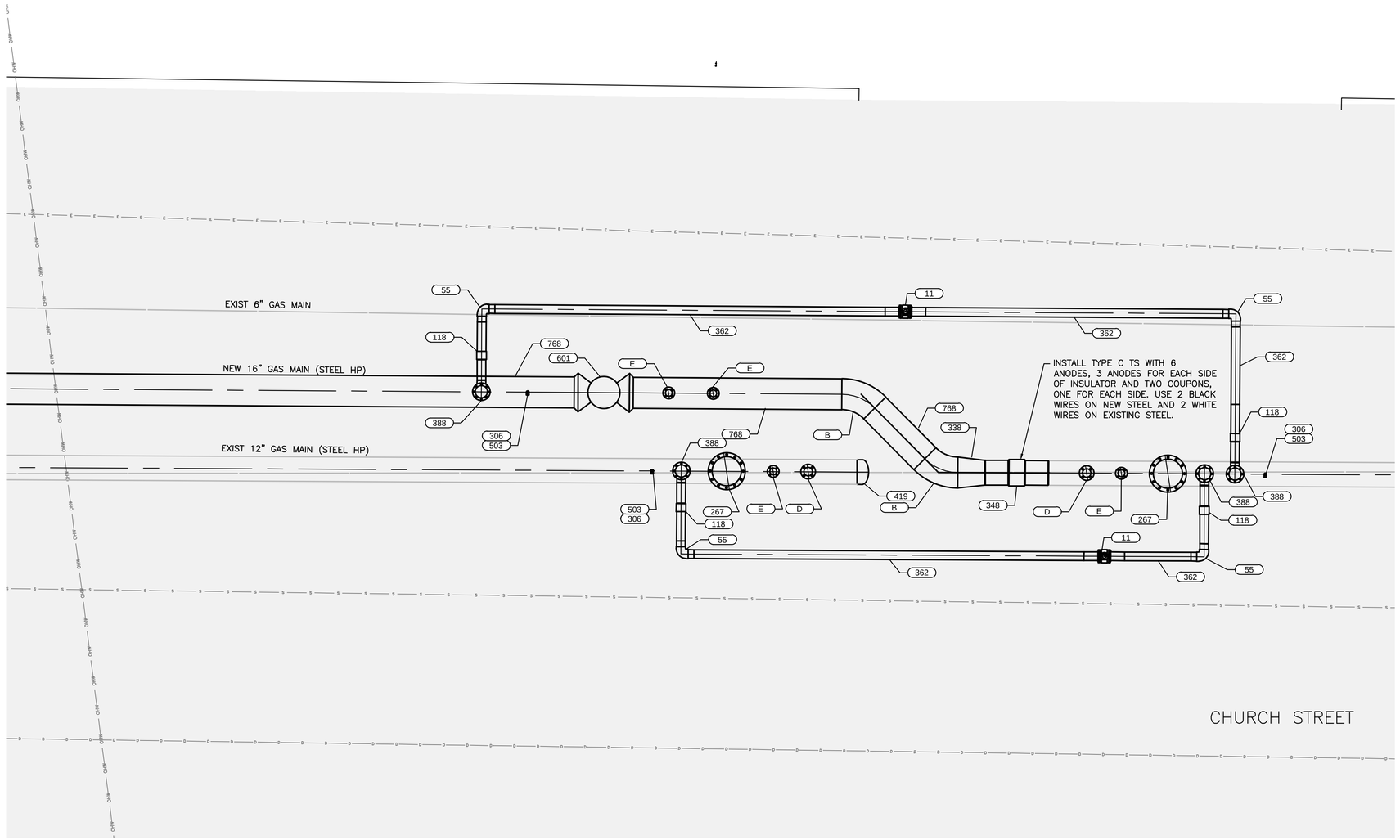
NEW BEDFORD, MA

FACILITY DETAILS

SCALE: AS SHOWN

SHEET 11 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 12-05-2022	MA-21-PIP-NEB-499-D030	0
Approved by / Date DBD / 12-05-2022	MA21PIPNEB499		



TIE-IN AT STA. 201+14 (16") 27

(END OF PROPOSED PHASE 5 PIPING)

SCALE: 3/8"=1'-0"

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RJW/JVV/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

NEW BEDFORD, MA

FACILITY DETAILS

SCALE: AS SHOWN

SHEET 12 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 12-05-2022	MA-21-PIP-NEB-499-D031	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		

CHURCH STREET MAIN RELAY AND INSTALLATION - NEW BEDFORD RELAY - PHASE 5 - BILL OF MATERIALS						
NO	QTY	UNIT	SIZE		DESCRIPTION	REMARKS
11	9	EA	4"	501002	VALVE,BALL, 4 IN, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING, TO BE USED W/ BRAND SADDLE INST, P100	
13	4	EA	8"	500705	VALVE,BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH	
54	AS REQ'D	EA	2"	545367	ELBOW,PIPE, 90 DEG, 2 IN SDR 11, BUTT WELD ENDS, POLYETHYLENE, P100	
55	AS REQ'D	EA	4"	545341	ELBOW,PIPE, 90 DEG, 4 IN SDR 11, BUTT WELD ENDS, PLASTIC, P100	
57	AS REQ'D	EA	8"	545343	ELBOW,PIPE, 90 DEG, 8 IN SDR 11, BUTT WELD ENDS, POLYETHYLENE, P100	
59	AS REQ'D	EA	12"	580739	FITTING,ELBOW, 90 DEG, 12 IPS SDR 11, BUTT FUSION END, HDPE, BLACK, NSTAR M-145	
72	4	EA	8"x4"		REDUCER, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	
78	1	EA	12" X 8"	584732	FITTING,REDUCER, 12 X 8 IN, BUTT FUSION END, HDPE, BLACK, NSTAR M-145	
85	11	EA	1"	583187	FITTING,CAP, 1 IN IPS, ELECTROFUSION, HDPE, BLACK, ASTM F1055 , NSTAR M-140	
88	3	EA	2"	542572	CAP,PIPE, 2 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	
90	4	EA	4"	542538	CAP,PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	
92	3	EA	8"	542540	CAP,PIPE, 8 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	
103	7	EA	8"	560681	TEE,PIPE, 8 IN SDR 11, BUTT ENDS, POLYETHYLENE, P100	
118	9	EA	4"	546146	FITTING,TRANSITION, 4 IN IPS CS X 4 IN IPS PE4710, SDR 11, STEEL WELD X PLASITC BUTT END	
120	3	EA	8"	546255	FITTING,TRANSITION, 8 IN IPS CS X 8 IN IPS PE4710, SDR 11, STEEL WELD X PLASITC, BUTT ENDS	
122	1	EA	12"	546263	FITTING,TRANSITION, 12 IN IPS CS X 12 IN IPS PE4710, SDR 11, STEEL WELD X PLASITC, BUTT ENDS	
154	7	EA	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	
176	1	EA	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 PURCHA	
194	1	EA	4"	542568	CAP,PIPE, 4 IN X 4.026 IN BORE X 0.237 IN THK WALL, WELDED END, ASTM A234, ANSI B16.9, FOR USE IN GAS DISTRIBUTION	
262	1	EA	4"	578398	FITTING, SHORTSTOPP, 4 IN, WELDED	
267	5	EA	12"	578520	FITTING,TEE, SHORTSTOPP, 12 IN, WELDED ENDS, 672170000	
306	12	EA	1"	542509	CAP,PIPE, 1 IN, FNPT END, SCH 40, MI, ASTM A197, 150 LB	
334	1	EA	12" x 8"	555615	FITTING, REDUCER, 12 X 8 IN, WELDED ENDS	
338	4	EA	16"x12"	555601	REDUCER,PIPE, CONCENTRIC, 16 X 12 IN X 0.375 IN THK WALL, WELDED ENDS, ASTM A234 GR B, ANSI B16.9, CS	
348	2	EA	12"	582045	WELD,INSULATOR, SCH 40, WELD END, 12 IN, STEEL, 0.375 IN THK, EPOXY COATED, SCH 40, 25 KV RATED, ANSI 300, FITTING, KEROTEST WEI	
359	84	FT	2"	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	
362	103	FT	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	
364	4300	FT	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	
368	2	FT	12"	554031	PIPE, 12 IN IPS X 1.160 IN THK WALL SDR 11, 12.750 IN OD, 40 FT LG, POLYETHYLENE, PE3408	
388	8	EA	4"	588059	FITTING,TEE, SHORTSTOPP, 3-WAY SPHERICAL, 4 IN	
390	1	EA	8"	578141	FITTING,TEE, SHORTSTOPP, 3-WAY SPHERICAL, 8 IN	
393	2	EA	12"	581163	FITTING,TEE, SHORTSTOPP, 3-WAY SPHERICAL, 12 IN, ANSI 150, PART #06-7227-0000	
410	AS REQ'D	EA	12"	545364	ELBOW,PIPE, 90 DEG, 12 IN X 0.375 IN THK WALL, BUTT WELD ENDS, CS, ASTM A234 GR B, ANSI B16.9 , LONG RADIUS	
419	4	EA	12"	542565	CAP,PIPE, 12 IN X 12 IN BORE X 0.375 IN THK WALL, WELDED END, CS, ASTM A234, ANSI B16.9, FOR USE IN GAS DISTRIBUTION	
422	1	EA	12"	582950	FITTING,TEE, 12 IN, WELDED ENDS, STD WALL, STEEL, ASTM A234 GR WPB, ANSI B16.9 , NSTAR M-137, NSTAR C-900	
503	12	EA	1"	587271	FITTING, TEE, PUNCH-IT, 3/4 IN WELD INLET X 1 IN BUTT WELD X 3/4 SOCKET WELD OUTLET, CS BODY, 3/8 IN DIA TAP TOOL, NSTAR M-143	
601	3	EA	16"	591727	VALVE, 16 IN, STEEL, WELD END X WELD END, API 6D, CLASS 600, MFG: DELTA, FIG 55, AS SPECIFIED	
767	8	FT	12"	593827	PIPE, 12 IN X 3/4 IN STD WALL THK, 42 FT LG, WELDED, STEEL, 10/40 BLACK PRITEC COATED, API5L X52, SERIES: TGSF-3	
768	5200	FT	16"	602837	PIPE, 16 IPS X 3/8 IN THK WALL, 45 FT LG, ELECTRIC RESISTANCE WELD, CS, X52, POLYETHYLENE COATED, API 5L, PIPELINER SG INTERNAL LINING 2 MIL	
B	AS REQ'D	EA	16"	545353	ELBOW, LR, 45°, SEGMENTABLE, BW, SCH 40, ASTM A860, WPHY52, ASME B16.9	
C	1	EA	16"		TEE STRAIGHT, BARRED, NPS 16", 0.375" WT, BW, SMLS, A860 WPHY 52, MSS SP-75	
D	6	EA	3"	578397	STOPPER FITTING, TD WILLIAMSON WELD SHORTSTOPP, ASTM A106 GR B SMLS NIPPLE, COMPLETE WITH PLUG AND BOLTED FLANGED CAP.	
E	10	EA	2"	578396	FITTING,TEE, FLAT BOTTOM, 2 IN, FOR USE WITH SHORTSTOPP 60, SHORTSTOP II & SHORTSTOPP 275 PLUGGING MACHINES	
F	1	EA	4"		FITTING,CAP, METFIT, 4 IN IPS X 0.237 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	
G	4	EA	4x1		FITTING,TEE, 4 IN IPS X 1 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK	

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/2023	RJW/JVV/DBD

Revision/Status

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION

NEW BEDFORD, MA

BILL OF MATERIALS

SCALE: AS SHOWN

SHEET 13 OF 13

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
RPM / 11-30-2020	JVV / 12-05-2022	MA-21-PIP-NEB-499-D032	0
Approved by / Date DBD / 12-05-2022	MA21PIPNEB499		

LEGEND

- REFLECTORIZED PLASTIC DRUM OR 36" CONE
- P/F POLICE/FLAGGER DETAIL
- TYPE III BARRICADE
- CHANGEABLE MESSAGE SIGN
- ARROW BOARD
- WORK ZONE
- DIRECTION OF TRAFFIC
- WORK VEHICLE
- TRUCK MOUNTED ATTENUATOR
- TRAFFIC OR PEDESTRIAN SIGNAL
- SIGN
- IMPACT ATTENUATOR
- MEDIAN BARRIER
- MEDIAN BARRIER WITH WARNING LIGHTS

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350 (100)	350 (100)	350 (100)
MOST OTHER ROADWAYS*	500 (150)	500 (150)	500 (150)
FREEWAYS AND EXPRESSWAYS*	1,000 (300)	1,500 (450)	2,640 (800)

* ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.

** DISTANCES ARE SHOWN IN FEET (METERS). THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/ TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "THIRD" SIGN IS THE FIRST ONE TYPICALLY ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL (TTC) ZONE.)

THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCP SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (i.e. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (i.e. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

R2-10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

R2-10a, R2-10e, AND W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

GENERAL NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6. CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
7. THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
8. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
9. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
10. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
11. MINIMUM LANE WIDTH IS TO BE 11 FEET (3.3m) UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
12. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
13. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SETUPS SHALL BE IN CONFORMANCE WITH THE 2009 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), AND THE MASSACHUSETTS AMENDMENTS TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
14. CHANNELIZING DEVICE SPACING SHALL BE A MAXIMUM OF 20' CENTER TO CENTER. ALL TAPERS SHALL HAVE A MINIMUM OF 6 CHANNELIZING DEVICES, EQUALLY SPACED, AT NO GREATER THAN 25' CENTER TO CENTER.
15. ALL TEMPORARY CONSTRUCTION SIGNS SHALL BE 36"x36" UNLESS OTHERWISE NOTED ON PLANS.
16. SIGNS INSTALLED ON PORTABLE STANDS REQUIRE 60" MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF SIGN.
17. SIGNS MOUNTED ON POSTS REQUIRE A MINIMUM 84" MOUNTING HEIGHT FROM THE ROADWAY OR SIDEWALK SURFACE TO BOTTOM OF SIGN.
18. ALL TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE NOTED, SHALL CONFORM TO APPLICABLE SPECIFICATIONS OF THE M.U.T.C.D. PART 6, AND STANDARD HIGHWAY SIGNS, CURRENT EDITIONS. ALL SIGNS AND CHANNELIZING DEVICES SHALL BE RETRO-REFLECTORIZED.
19. EXISTING OR TEMPORARY SIGNS WHICH ARE IN CONFLICT WITH DAILY TRAFFIC MANAGEMENT SETUPS SHALL BE COVERED. IMMEDIATELY PRIOR TO COMPLETION, CONTRACTOR SHALL UNCOVER SIGNS, AS DIRECTED BY THE ENGINEER.
20. ALL DETAILS DEPICT THE MINIMAL REQUIREMENTS FOR MAINTENANCE OF TRAFFIC. THE DETAILS SHALL BE USED AS A GUIDE TO PROVIDE TRAFFIC MANAGEMENT FOR DAILY OPERATIONS AND MAY BE AUGMENTED AT THE DISCRETION OF THE GOVERNING TRAFFIC AUTHORITY.
21. WORKERS SHALL WEAR PERSONAL PROTECTIVE EQUIPMENT IN ACCORDANCE WITH MUTCD AND OSHA STANDARDS AT ALL TIMES.
22. DETOURS SHALL BE COORDINATED WITH THE CITY.

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	ACS/MWF/DBD

Revision/Status

MOTT MACDONALD

EVERSOURCE ENERGY

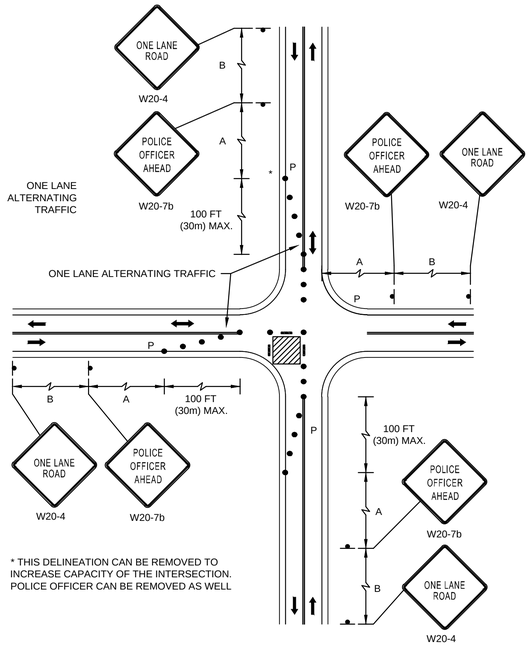
CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD, MA
TRAFFIC CONTROL DETAILS

SCALE: N.T.S. SHEET 1 OF 3

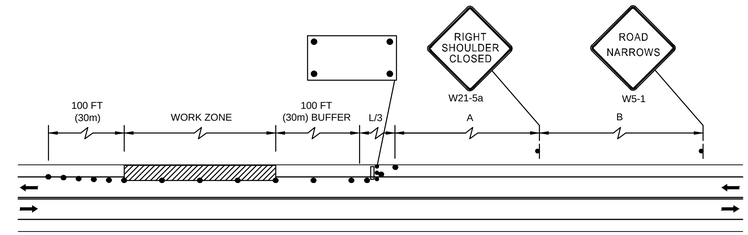
Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS / 12-22-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-T01	0
Approved by / Date DBD / 12-05-20222	MA21PIPNEB499		

G:\EversourceEnergy\507102597_New_Bedford_RelayPipeline\Drafting\Traffic Control\Phase_3-5\ T01.dwg

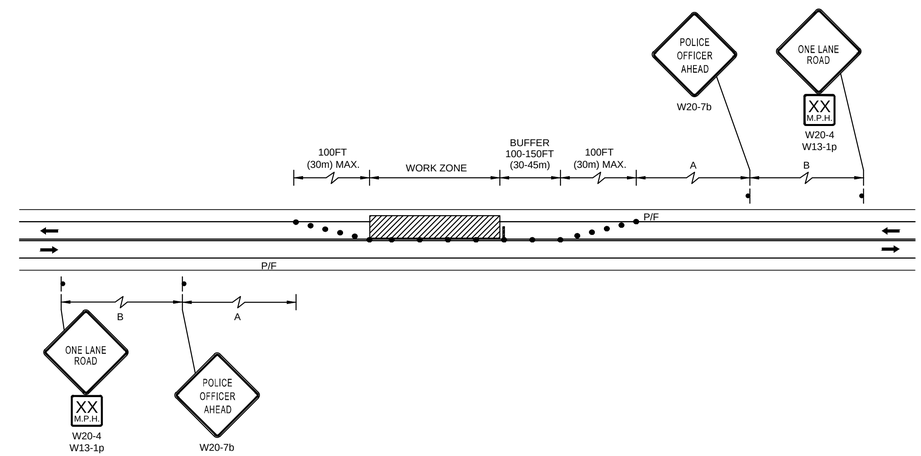
Mar 09, 2023 - 2:32pm



SINGLE LINE APPROACH
ONE QUADRANT CLOSURE
NTS



TWO LANE ROAD
SHOULDER CLOSURE
NTS



TWO LANE ROAD
ONE LANE ALTERNATING TRAFFIC
NTS

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	ACS/MWF/DBD

Revision/Status

MOTT MACDONALD

EVERSOURCE ENERGY

CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD, MA
TRAFFIC CONTROL DETAILS

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

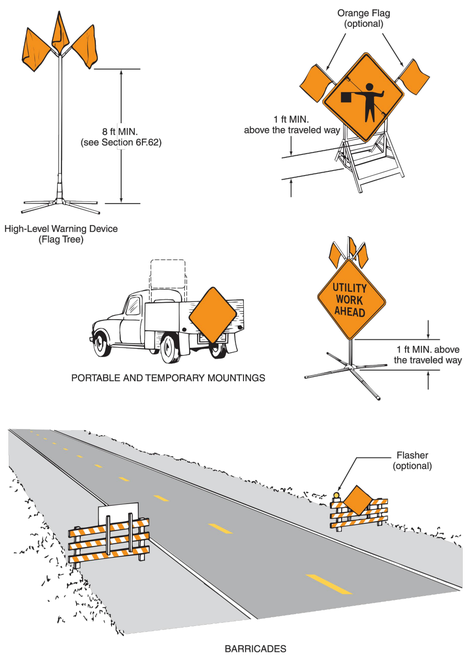
SCALE: N.T.S. SHEET 2 OF 3

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS / 12-22-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-T02	0
Approved by / Date			
DBD / 12-05-2022	MA21PIPNEB499		

G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Traffic Control\Phase_3-5\ T02.dwg

Mar 09, 2023 - 2:33pm

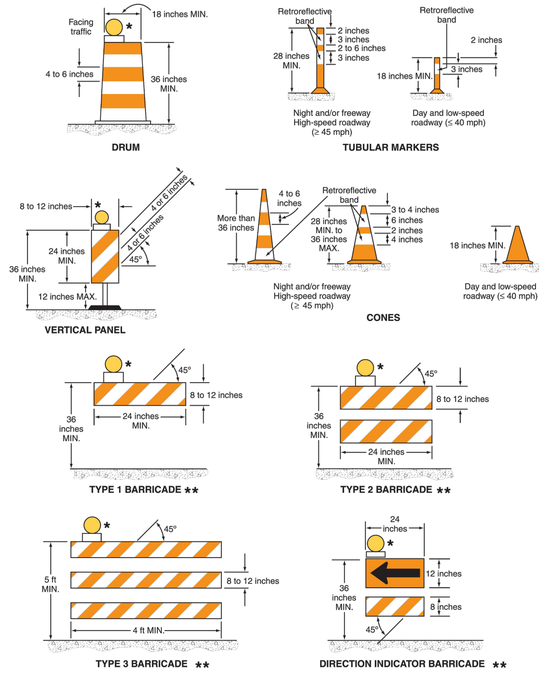
Figure 6F-2. Methods of Mounting Signs Other Than on Posts



METHODS OF MOUNTING SIGNS OTHER THAN ON POSTS

NTS

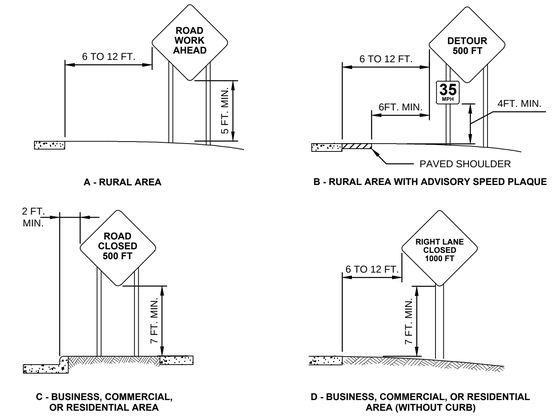
Figure 6F-7. Channelizing Devices



* Warning lights (optional)
** Rail stripe widths shall be 6 inches, except that 4-inch wide stripes may be used if rail lengths are less than 36 inches. The sides of barricades facing traffic shall have retroreflective rail faces.

CHANNELIZING DEVICES

NTS



HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATIONS

NTS

NOTES:

STANDARD:
WHERE IT HAS BEEN DETERMINED THAT THE ACCOMMODATION OF PEDESTRIANS WITH DISABILITIES IS NECESSARY, SIGNS SHALL BE MOUNTED AND PLACED IN ACCORDANCE WITH SECTION 4.4 OF THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG)" (SEE SECTION 1A.11).

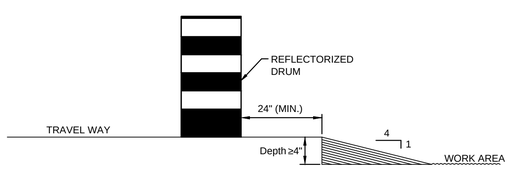
SIGNS MOUNTED ON BARRICADES AND BARRICADE/SIGN COMBINATIONS SHALL BE CRASHWORTHY.

GUIDANCE:
EXCEPT AS PROVIDED IN PARAGRAPH 12, SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS THAT DO NOT MEET THE MINIMUM MOUNTING HEIGHTS PROVIDED IN PARAGRAPHS 4 THROUGH 6 SHOULD NOT BE USED FOR A DURATION OF MORE THAN 3 DAYS.

OPTION:
THE R9-8 THROUGH R9-11A SERIES, R11 SERIES, W1-6 THROUGH W1-8 SERIES, M4-10, E5-1, OR OTHER SIMILAR TYPE SIGNS (SEE FIGURES 6F-3, 6F-4, AND 6F-5) MAY BE USED ON PORTABLE SIGN SUPPORTS THAT DO NOT MEET THE MINIMUM MOUNTING HEIGHTS PROVIDED IN PARAGRAPHS 4 THROUGH 6 FOR LONGER THAN 3 DAYS. SUPPORT: 13 METHODS OF MOUNTING SIGNS OTHER THAN ON POSTS ARE ILLUSTRATED IN FIGURE 6F-2.

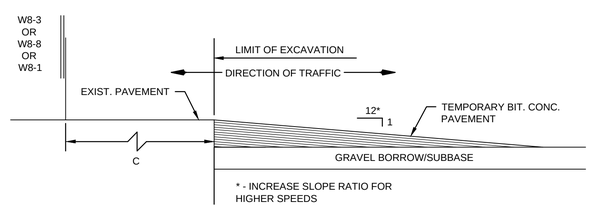
GUIDANCE:
SIGNS MOUNTED ON TYPE 3 BARRICADES SHOULD NOT COVER MORE THAN 50 PERCENT OF THE TOP TWO RAILS OR 33 PERCENT OF THE TOTAL AREA OF THE THREE RAILS.

STANDARD:
SIGN SUPPORTS SHALL BE CRASHWORTHY. WHERE LARGE SIGNS HAVING AN AREA EXCEEDING 50 SQUARE FEET ARE INSTALLED ON MULTIPLE BREAKAWAY POSTS, THE CLEARANCE FROM THE GROUND TO THE BOTTOM OF THE SIGN SHALL BE AT LEAST 7 FEET.



LATERAL DROP-OFF DETAIL

NTS



LONGITUDINAL DROP-OFF DETAIL

NTS

FORMULAS FOR DETERMINING TAPER LENGTH

SPEED (S)	TAPER LENGTH (L) IN FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	L = WS

WHERE: L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	ACS/MWF/DBD

Revision/Status

MOTT MACDONALD

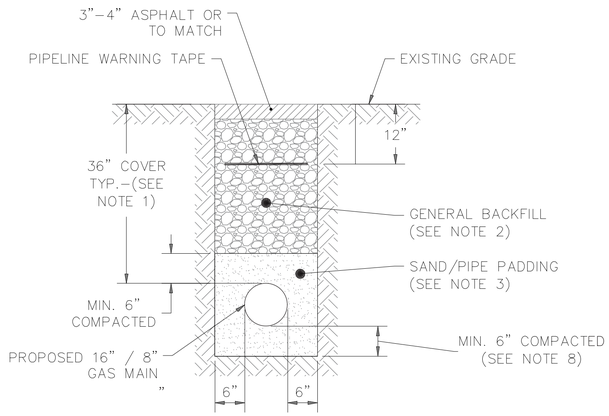
FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

EVERSOURCE ENERGY

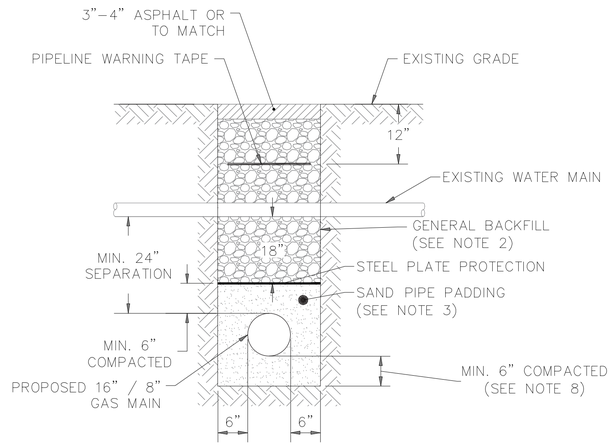
CHURCH STREET MAIN RELAY AND INSTALLATION
NEW BEDFORD, MA
TRAFFIC CONTROL DETAILS

SCALE: N.T.S. SHEET 3 OF 3

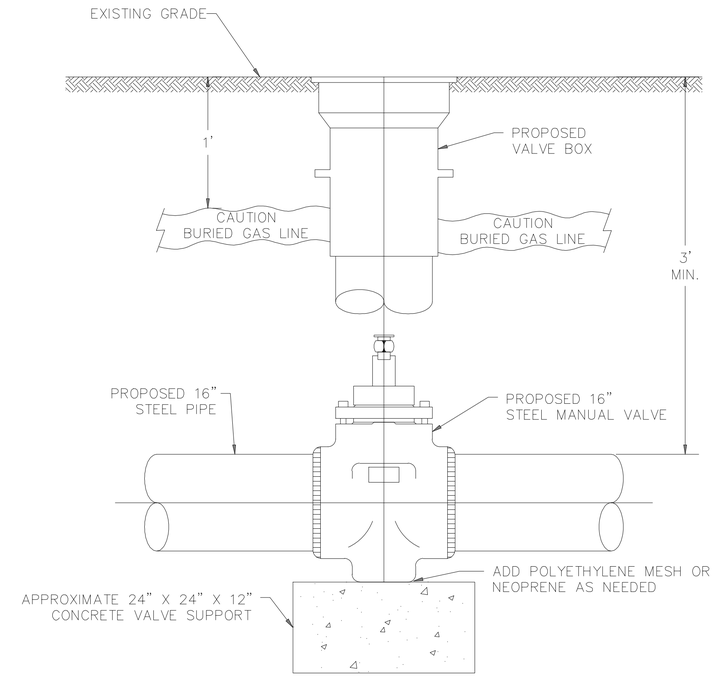
Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS / 12-22-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-T03	0
Approved by / Date			
DBD / 12-05-2022	MA21PIPNEB499		



TYPICAL TRENCH



CROSSING UNDER EXISTING WATER MAIN



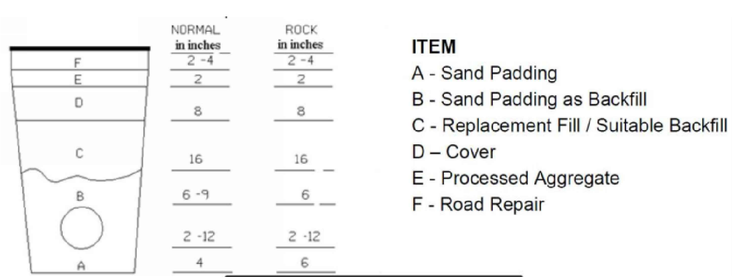
NOTES:

1. MINIMUM PIPELINE COVER IS 36" IN TYPICAL AREAS. SEE PROJECT DRAWINGS FOR MORE INFORMATION ON AREAS WHERE DEPTH OF COVER IS OTHER THAN 36".
2. GENERAL BACKFILL SHALL CONTAIN NO STONES OR CLODS GREATER THAN 6".
3. PIPE PADDING SHALL BE SAND OR ROCK FREE SOIL (NO ROCKS LARGER THAN 3/8" DIAMETER.
4. IN NATURAL RESOURCE AREAS, BACKFILL SHALL BE NATIVE MATERIAL AND SHALL MATCH PROFILE DEPTH OF ADJACENT NATIVE, UNDISTURBED SOIL.
5. PROPOSED PIPE SHALL MAINTAIN MIN. 12"-HORIZONTAL AND VERTICAL SEPARATION FROM ALL EXISTING UTILITIES. (24" SEPARATION PREFERRED).
6. BACKFILL SHALL BE COMPACTED IN 12" LIFTS IN ACCORDANCE WITH EVERSOURCE STANDARDS.
7. ALL TRENCH CONSTRUCTION SHALL CONFORM TO APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
8. IN AREAS OF CONSOLIDATED ROCK A MINIMUM DEPTH OF PIPE PADDING UNDERNEATH PIPE TO BE 6".
9. FUTURE FINAL RESTORATION OF THE ROAD SHALL BE COORDINATED WITH THE CITY OF NEW BEDFORD AND WILL BE COMPLETED FROM EASTERN CURB LINE TO CENTERLINE OF ROAD.

NOTES:

1. CONTRACTOR TO FURNISH ALL MATERIALS.
2. CONTRACTOR SHALL CLEAN, COAT, AND WRAP ALL FITTINGS AND PIPE WHICH WILL COME IN CONTACT WITH THE CONCRETE.
3. CONTRACTOR SHALL WRAP THE FITTINGS AND PIPE WITH "NEOPRENE" OR "TUFF-N-NUFF ROCKSHIELD" OR EQUAL POLYETHYLENE MESH.
4. CONTRACTOR SHALL POUR CONCRETE TO CENTERLINE OF THE HORIZONTAL PIPING.
5. THE CONTRACTOR SHALL NOT PLACE BACKFILL ON TOP OF THE CONCRETE UNTIL THE CONCRETE HAS CURED (7-DAY MINIMUM).
6. CONTRACTOR SHALL VERIFY THAT THE CONCRETE HAS A SOLID FOOTING.
7. RIGID FORMWORK SHALL NOT BE REQUIRED UNLESS THE CO-MINGLING OF SOILS AND CONCRETE WILL BE MINIMIZED.
8. THE CONCRETE SUPPORT BLOCK IS NOT DESIGNED NOR INTENDED FOR USE AS A THRUST BLOCK.

2 PROPOSED 16" MANUAL VALVE (STEEL)
NOT TO SCALE



1 OPEN CUT TRENCHING
NOT TO SCALE

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/14/23	ACS/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

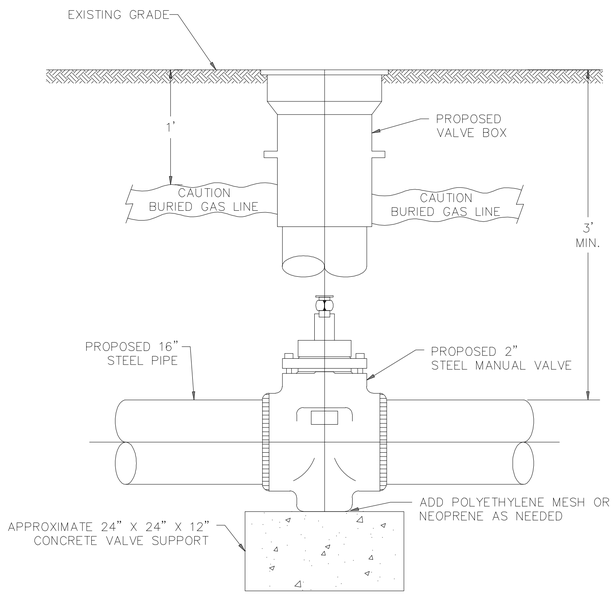
PHILLIPS ROAD MAIN RELAY AND INSTALLATION, NEW BEDFORD, MA
NEW BEDFORD, MA
TYPICAL DETAILS

SCALE: N.T.S. SHEET 1 0F 7

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS 12-22-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-D06	0
Approved by / Date DBD / 12-05-2022	MA21PIPNEB499		

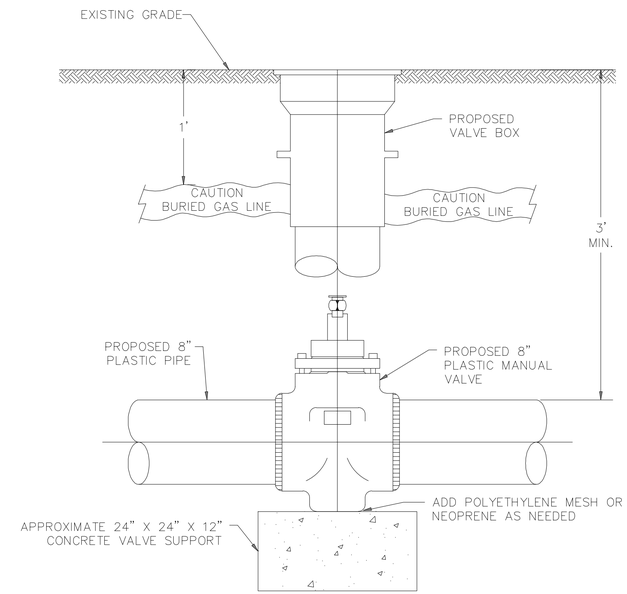
G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Typicals\Construction\Phase_5\ Construction_Typicals.dwg

Mar 09, 2023 - 2:10pm



NOTES:
1. CONTRACTOR TO FURNISH ALL MATERIALS.
2. CONTRACTOR SHALL CLEAN, COAT, AND WRAP ALL FITTINGS AND PIPE WHICH WILL COME IN CONTACT WITH THE CONCRETE.
3. CONTRACTOR SHALL WRAP THE FITTINGS AND PIPE WITH "NEOPRENE" OR "TUFF-N-NUFF ROCKSHIELD" OR EQUAL POLYETHYLENE MESH.
4. CONTRACTOR SHALL POUR CONCRETE TO CENTERLINE OF THE HORIZONTAL PIPING.
5. THE CONTRACTOR SHALL NOT PLACE BACKFILL ON TOP OF THE CONCRETE UNTIL THE CONCRETE HAS CURED (7-DAY MINIMUM).
6. CONTRACTOR SHALL VERIFY THAT THE CONCRETE HAS A SOLID FOOTING.
7. RIGID FORMWORK SHALL NOT BE REQUIRED UNLESS THE CO-MINGLING OF SOILS AND CONCRETE WILL BE MINIMIZED.
8. THE CONCRETE SUPPORT BLOCK IS NOT DESIGNED NOR INTENDED FOR USE AS A THRUST BLOCK.

1 PROPOSED 2" MANUAL VALVE (STEEL)
NOT TO SCALE



NOTES:
1. CONTRACTOR TO FURNISH ALL MATERIALS.
2. CONTRACTOR SHALL CLEAN, COAT, AND WRAP ALL FITTINGS AND PIPE WHICH WILL COME IN CONTACT WITH THE CONCRETE.
3. CONTRACTOR SHALL WRAP THE FITTINGS AND PIPE WITH "NEOPRENE" OR "TUFF-N-NUFF ROCKSHIELD" OR EQUAL POLYETHYLENE MESH.
4. CONTRACTOR SHALL POUR CONCRETE TO CENTERLINE OF THE HORIZONTAL PIPING.
5. THE CONTRACTOR SHALL NOT PLACE BACKFILL ON TOP OF THE CONCRETE UNTIL THE CONCRETE HAS CURED (7-DAY MINIMUM).
6. CONTRACTOR SHALL VERIFY THAT THE CONCRETE HAS A SOLID FOOTING.
7. RIGID FORMWORK SHALL NOT BE REQUIRED UNLESS THE CO-MINGLING OF SOILS AND CONCRETE WILL BE MINIMIZED.
8. THE CONCRETE SUPPORT BLOCK IS NOT DESIGNED NOR INTENDED FOR USE AS A THRUST BLOCK.

2 PROPOSED 8" MANUAL VALVE (PLASTIC)
NOT TO SCALE

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	ACS/MWF/DBD

Revision/Status

MOTT MACDONALD

EVERSOURCE ENERGY

PHILLIPS ROAD MAIN RELAY AND INSTALLATION, NEW BEDFORD, MA

NEW BEDFORD, MA

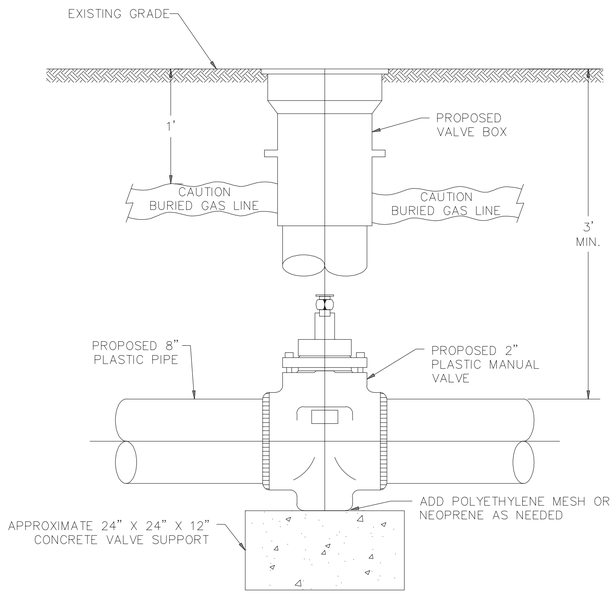
TYPICAL DETAILS

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

SCALE: N.T.S.

SHEET 2 OF 7

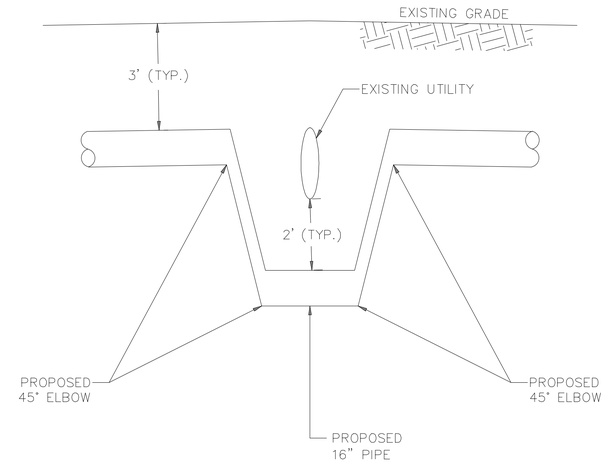
Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS 12-24-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-D07	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		



NOTES:

1. CONTRACTOR TO FURNISH ALL MATERIALS.
2. CONTRACTOR SHALL CLEAN, COAT, AND WRAP ALL FITTINGS AND PIPE WHICH WILL COME IN CONTACT WITH THE CONCRETE.
3. CONTRACTOR SHALL WRAP THE FITTINGS AND PIPE WITH "NEOPRENE" OR "TUFF-N-NUFF ROCKSHIELD" OR EQUAL POLYETHYLENE MESH.
4. CONTRACTOR SHALL POUR CONCRETE TO CENTERLINE OF THE HORIZONTAL PIPING.
5. THE CONTRACTOR SHALL NOT PLACE BACKFILL ON TOP OF THE CONCRETE UNTIL THE CONCRETE HAS CURED (7-DAY MINIMUM).
6. CONTRACTOR SHALL VERIFY THAT THE CONCRETE HAS A SOLID FOOTING.
7. RIGID FORMWORK SHALL NOT BE REQUIRED UNLESS THE CO-MINGLING OF SOILS AND CONCRETE WILL BE MINIMIZED.
8. THE CONCRETE SUPPORT BLOCK IS NOT DESIGNED NOR INTENDED FOR USE AS A THRUST BLOCK.

1 PROPOSED 2" MANUAL VALVE (PLASTIC)
NOT TO SCALE

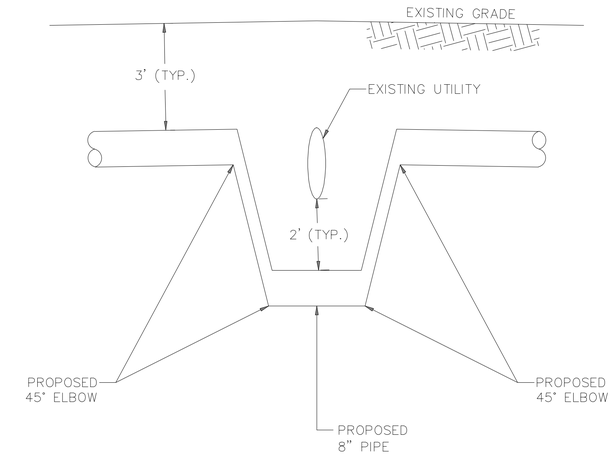


NOTES:

1. PROPOSED PIPE SHALL MAINTAIN A MINIMUM OF 12" VERTICAL CLEARANCE FROM EXISTING UTILITY (2' CLEARANCE PREFERRED).

2 EXISTING UTILITY OFFSET CROSSING - 16" PIPELINE
NOT TO SCALE

WIDTH VARIES



NOTES:

1. PROPOSED PIPE SHALL MAINTAIN A MINIMUM OF 12" VERTICAL CLEARANCE FROM EXISTING UTILITY (2' CLEARANCE PREFERRED).

3 EXISTING UTILITY OFFSET CROSSING - 8" PIPELINE
NOT TO SCALE

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	ACS/MWF/DBD

Revision/Status

MOTT MACDONALD

EVERSOURCE ENERGY

PHILLIPS ROAD MAIN RELAY AND INSTALLATION, NEW BEDFORD, MA

NEW BEDFORD, MA

TYPICAL DETAILS

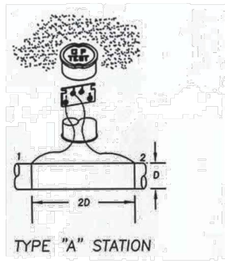
FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

SCALE: N.T.S. SHEET 3 OF 7

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS 12-22-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-D08	0
Approved by / Date DBD / 12-05-2022	MA21PIPNEB499		

CS-500
Corrosion Control

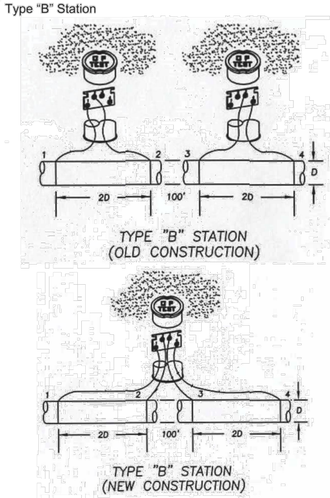
H. Type "A" Station



1 TEST STATION
(TYPE "A" STATION)
NOT TO SCALE

CS-500
Corrosion Control

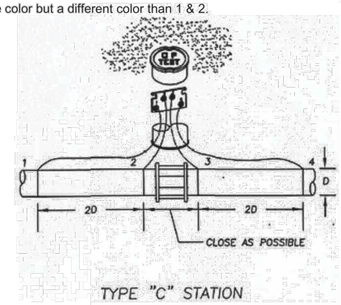
I. Type "B" Station



2 TEST STATION
(TYPE "B" STATION)
NOT TO SCALE

CS-500
Corrosion Control

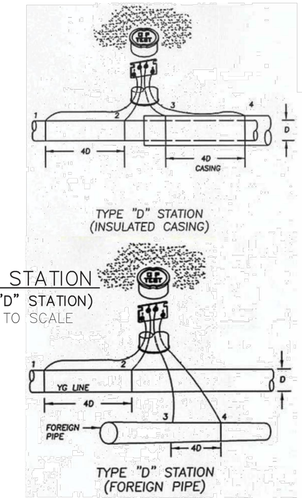
J. Type "C" Station
Wires 1 & 2 should be the same color and wires 3 and 4 should be the same color but a different color than 1 & 2.



3 TEST STATION
(TYPE "C" STATION)
NOT TO SCALE

CS-500
Corrosion Control

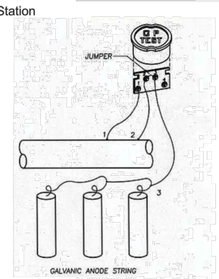
K. Type "D" Station
Wires 1 & 2 should be the same color and wires 3 and 4 should be the same color but a different color than 1 & 2.



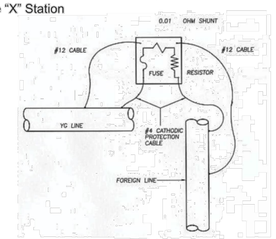
4 TEST STATION
(TYPE "D" STATION)
NOT TO SCALE

CS-500
Corrosion Control

L. Type "M" Station



M. Type "X" Station



5 TEST STATIONS
(TYPE "A" STATION & TYPE "X" STATION)
NOT TO SCALE

Big Fink® Cathodic Protection Test Station

The Big Fink® cathodic protection test station is a field proven, high strength, maintenance free terminal for monitoring electric currents and potentials. Since 1976 the Big fink® CP test station has been utilized worldwide by gas, oil, chemical and water pipeline companies. Manufactured by Cott in Pittsburgh, Pennsylvania and Los Angeles, California; it is available from Cott distributors everywhere.

CP Test Station
Cap, Terminal Board and Collect Nut made from Makrolon® polycarbonate. One of the toughest plastics in the world.

Hardware
Standard nickel plated brass or optional stainless steel for guaranteed long service life. Up to 11 terminals accessible from both sides of the board.

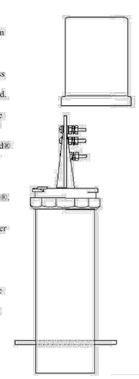
Accessories
All BigFink® terminal boards can accommodate COTTShunts®, Slide Resistors, COTTMeters® (Volt or Amp) Burndy connectors, Cott bonding/shorting straps, Banana Jacks, ZAPGard® , locking devices, lightning arrestors and flange mounting brackets.

Colors
Red, Orange, Yellow, Green, Blue, White and Black are standard on BigFink® and COTTPipe®. Any color is available as an option.

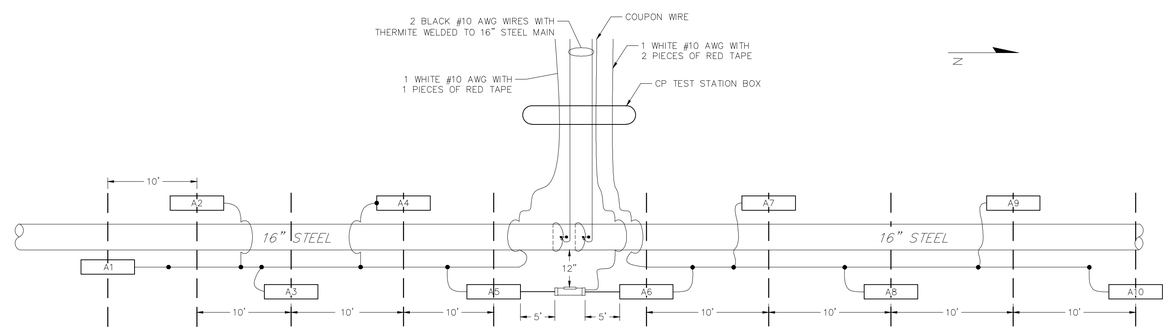
Support Post
COTTPipe® PE (standard) polyethylene has over 20 years of proven durability. COTTPipe® PC (optional) polycarbonate is available for the toughest applications. Standard length 6 feet, available to 40 feet.

Sizes
Available in models to fit 1-1/4", 2" and 3" pipe

Anchor
COTTPipe® PE is easily installed and prevents pullout.



6 TEST STATION
(BIG FINK)
NOT TO SCALE



7 TEST STATION
(TYPE M TS WTH 10–17# ANODES AND COUPON)
NOT TO SCALE

NOTES:
1. ANODES TO BE INSTALL A MINIMUM OF 12" BELOW BOTTOM OF 16" MAIN AND 12" AWAY TO THE SIDE.
2. 18" – IF ANODES ARE INSTALLED DIRECTLY BENEATH 16" MAIN IN SAME TRENCH. FOR THIS SITUATION, INSTALL ANODE AT EACH LOCATION BEFORE INSTALLING PIPE SECTION OR USE A VACUUM TRUCK. ANODES CAN BE INSTALLED VERTICAL OR HORIZONTAL BUT THE CLOSEST SECTION OF ANODE MUST BE 18" AWAY FROM GAS MAIN.
3. ANODES TO BE INSTALL 10' AWAY FROM EACH OTHER, 5' AWAY FROM COUPON IN EACH DIRECTION AND ALTERNATING SIDES OF PIPELINE IF INSTALLED TO THE SIDE.
4. EACH ANODE WILL BE SPICED TO A WHITE HEADER CABLE WITH A WIRE SPLICING CONNECTOR DR ITEM # 590389
5. THE ANODE HEAD CABLE TO THE SOUTH WILL BE A WHITE CABLE WITH ONE PIECE OF RED TAPE AROUND THE WIRE INSIDE THE TEST STATION BOX FOR IDENTIFICATION PURPOSES.
6. THE ANODE HEAD CABLE TO THE NORTH WILL BE A WHITE CABLE WITH TWO PIECE OF RED TAPE AROUND THE WIRE INSIDE THE TEST STATION BOX FOR IDENTIFICATION PURPOSES.
7. THE WIRES THERMITE WELDED TO THE MAIN WILL BE TWO BLACK WIRES, RECOAT THE AREA OF THE THERMITE WELD WITH WAX TAPE, WRAP THE WAX TAPE 3600 AROUND THE PIPE AT THE THERMITE WELDS.
8. PRIOR TO INSTALLING COUPON, FIRST REMOVE THE PROTECTIVE LABEL COVERING THE STEEL COUPON AND RED STICKERS COVERING EACH SENSING PORT.
9. NEXT CLEAN THE ENTIRE STEEL COUPON SURFACE WITH ALCOHOL TO REMOVE THE CORROSION INHIBITOR.
10. COUPON TO BE INSTALLED AT MAIN NEAR BASE OF TS APPROXIMATELY 12" FROM THE GAS MAIN 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.
11. ALL TEST STATION 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.

LEGEND
XXX COUPON
AX ANODE X= # OF ANODE

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	ACS/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

PHILLIPS ROAD MAIN RELAY AND INSTALLATION, NEW BEDFORD, MA
NEW BEDFORD, MA
TYPICAL DETAILS

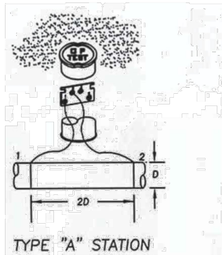
SCALE: N.T.S. SHEET 4 OF 7

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS 12-22-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-D09	0
Approved by / Date DBD / 12-05-2022	MA21PIPNEB499		

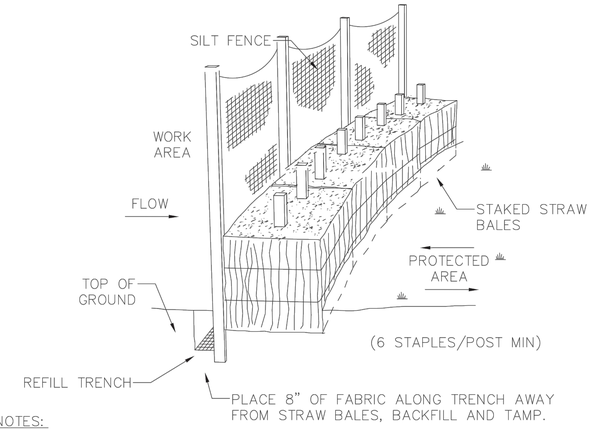
Construction_Typicals.dwg
G:\EversourceEnergy\507102597_New_Bedford_RelayPipeline\Drafting\Typicals\Construction\Phase_5\
Mar 09, 2023 - 2:11pm

CS-500
Corrosion Control

H. Type "A" Station

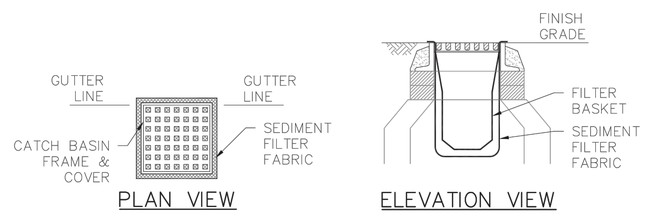


1 TEST STATION
(TYPE "A" STATION)
NOT TO SCALE



NOTES:
1. WHERE EXTREMELY ERODIBLE SOIL CONDITIONS EXIST, AT THE DIRECTION OF THE COMPANY'S INSPECTOR A COMBINED STRAW BALE AND SILT FENCE OR REINFORCED SILT FENCE SEDIMENT CONTROL BARRIER SHALL BE INSTALLED. FOR INSTALLATION CONDITIONS AND INSTRUCTIONS SEE:
1.1. STRAW BALE SEDIMENT BARRIERS. SEE DETAIL 2 ON SHEET MA-21-PIP-NEB-499-D09
1.2. SILT FENCE SEDIMENT BARRIERS. SEE DETAIL 2 ON SHEET MA-21-PIP-NEB-499-D09.
1.3. REINFORCED SILT FENCE WITH WIRE MESH. SEE DETAIL 2 ON SHEET MA-21-PIP-NEB-499-D09.

2 TYPICAL STRAW BALE & SILT FENCE
NOT TO SCALE



NOTES:

1. FILTER BASKET SHALL BE "SILT SAK" BY JENNIAN, MELROSE, MA; "DANDY BAG" BY DANDY PRODUCTS (1-800-591-2284); DRAIN PAC (91-800-272-2832); OR APPROVED EQUIVALENT.
2. FILTER BASKETS SHOULD BE USED IN COMBINATION WITH ANOTHER INLET PROTECTION MEASURE SUCH AS SEDIMENT FILTER FABRIC IF DRAINAGE AREA IS SMALL WITH SHALLOW FLOWS.

3 CATCH BASIN/INLET PROTECTION WITHIN PAVED ROAD SURFACE SEDIMENT FILTER FABRIC AND FILTER BASKET
NOT TO SCALE

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	ACS/MWF/DBD

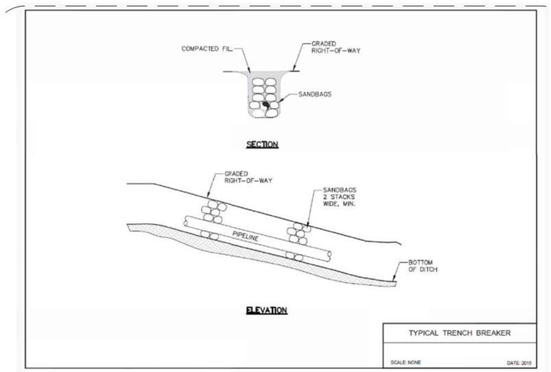
Revision/Status

EVERSOURCE ENERGY

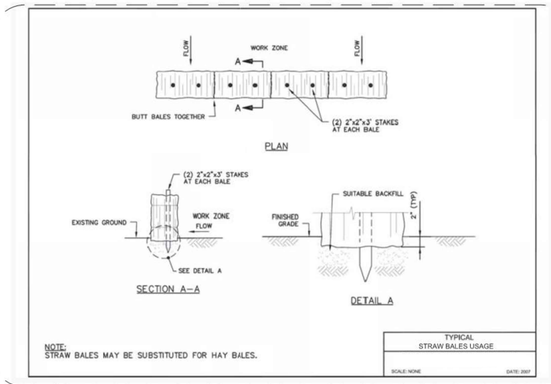
PHILLIPS ROAD MAIN RELAY AND INSTALLATION, NEW BEDFORD, MA
NEW BEDFORD, MA
TYPICAL DETAILS

SCALE: N.T.S. SHEET 5 OF 7

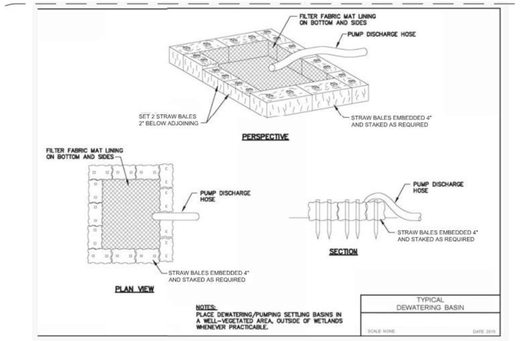
Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS 12-22-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-D10	0
Approved by / Date DBD / 12-05-2022	MA21PIPNEB499		



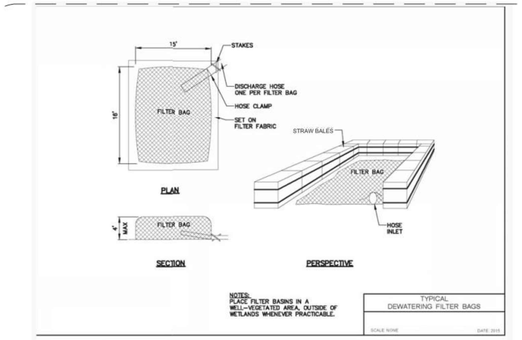
1 TYPICAL TRENCH BREAKER
NOT TO SCALE



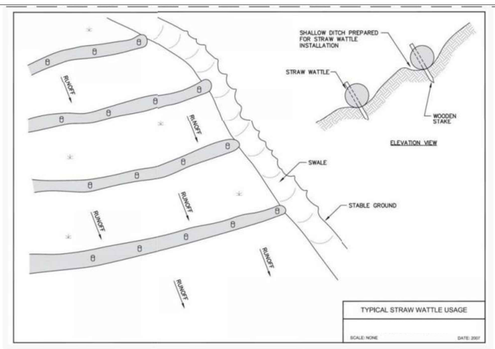
2 TYPICAL STRAW BALES USAGE
NOT TO SCALE



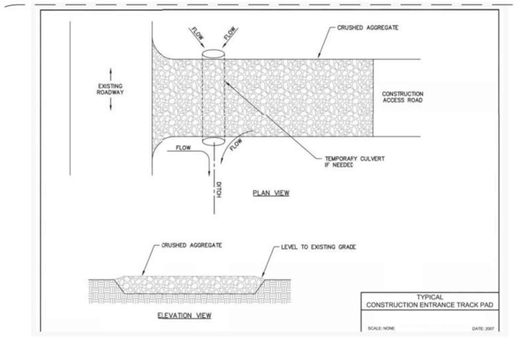
3 TYPICAL DEWATERING BASIN
NOT TO SCALE



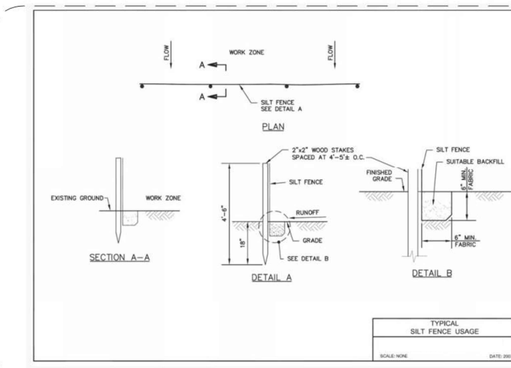
4 TYPICAL DEWATERING FILTER BAGS
NOT TO SCALE



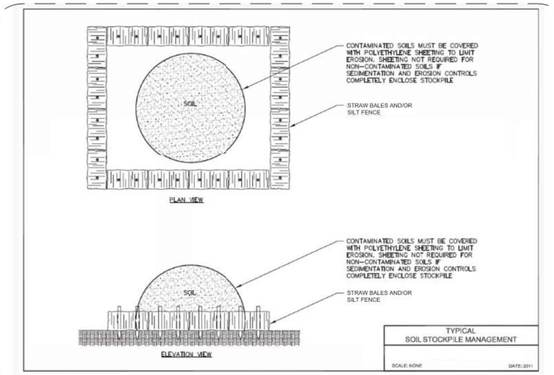
5 TYPICAL STRAW WATTLE USAGE
NOT TO SCALE



6 TYPICAL CONSTRUCTION ENTRANCE TRACK PAD
NOT TO SCALE



7 TYPICAL SILT FENCE USAGE
NOT TO SCALE



8 TYPICAL SOIL STOCKPILE MANAGEMENT
NOT TO SCALE

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	ACS/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

PHILLIPS ROAD MAIN RELAY AND INSTALLATION, NEW BEDFORD, MA

NEW BEDFORD, MA

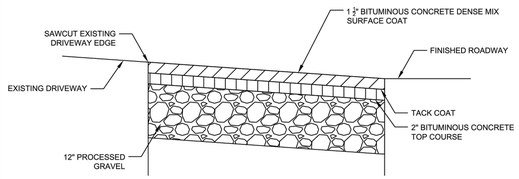
TYPICAL DETAILS

SCALE: N.T.S. SHEET 6 0F 7

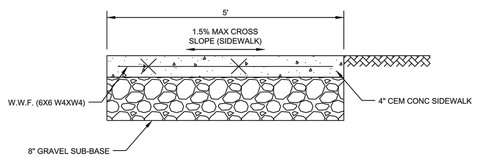
Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS 12-22-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-D11	0
Approved by / Date DBD / 12-05-2022	MA21PIPNEB499		

G:\EversourceEnergy\507102597_New_Bedford_Relay\Pipeline\Drafting\Typicals\Construction\Phase_5\ Construction_Typicals.dwg

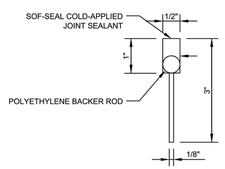
Mar 09, 2023 - 2:12pm



DRIVEWAY APRON REPLACEMENT



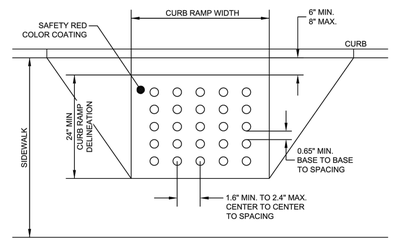
CEMENT CONCRETE SIDEWALK SECTION

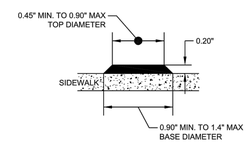


CONTRACTION JOINT DETAIL

TITLE: ROADWAY DETAILS			
LOC.:			REV. 0
CKD. BY: MM	ENG.	DATE: 07/2018	W.O.
DRN BY: MM	SCALE: NTS	PG: 1 OF 1	

MOTT MACDONALD
134 CAPITAL DRIVE
WEST SPRINGFIELD,
MA 01089
UNITED STATES
413-535-0135
INFO@MOTTMAC.COM



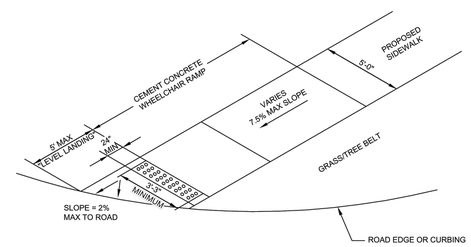


ELEVATION – TRUNCATED DOME (TD)

NOTE: DETECABLE WARNING SURFACES SHALL BE * CAST IN PLACE * TYPE

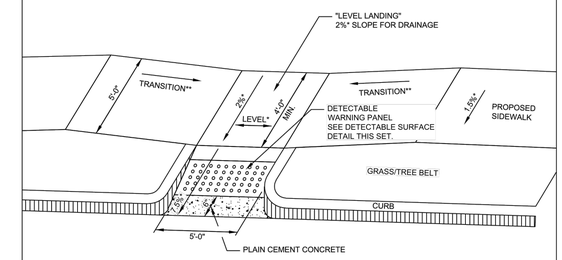
TITLE: DETECTABLE WARNING SURFACE			
LOC.:			REV. 0
CKD. BY: MM	ENG.	DATE: 07/2018	W.O.
DRN BY: MM	SCALE: NTS	PG: 1 OF 1	

MOTT MACDONALD
134 CAPITAL DRIVE
WEST SPRINGFIELD,
MA 01089
UNITED STATES



TITLE: TYPE 1 WHEELCHAIR RAMP			
LOC.:			REV. 0
CKD. BY: MM	ENG.	DATE: 07/2018	W.O.
DRN BY: MM	SCALE: NTS	PG: 1 OF 1	

MOTT MACDONALD
134 CAPITAL DRIVE
WEST SPRINGFIELD,
MA 01089
UNITED STATES



NOTES:
* MAX CROSS-SLOPE OF ACESSIBLE RAMP LANDING NOT TO EXCEED 2%
** ACCESSIBLE RAMP TRANSITIONS NOT TO EXCEED 7.5% TO LANDING OR TRAVELED WAY

TITLE: TYPE 2 WHEELCHAIR RAMP			
LOC.:			REV. 0
CKD. BY: MM	ENG.	DATE: 07/2018	W.O.
DRN BY: MM	SCALE: NTS	PG: 1 OF 1	

MOTT MACDONALD
134 CAPITAL DRIVE
WEST SPRINGFIELD,
MA 01089
UNITED STATES

MOTT MACDONALD

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck/Ap
0	ISSUED FOR CONSTRUCTION	03/17/23	ACS/MWF/DBD

Revision/Status

EVERSOURCE ENERGY

PHILLIPS ROAD MAIN RELAY AND INSTALLATION, NEW BEDFORD, MA

NEW BEDFORD, MA

TYPICAL DETAILS

SCALE: N.T.S. SHEET 7 0F 7

Drawn by / Date	Checked by / Date	Sheet Number	Rev. No.
ACS 12-22-2020	MWF / 12-05-2022	MA-21-PIP-NEB-499-D12	0
Approved by / Date: DBD / 12-05-2022	MA21PIPNEB499		