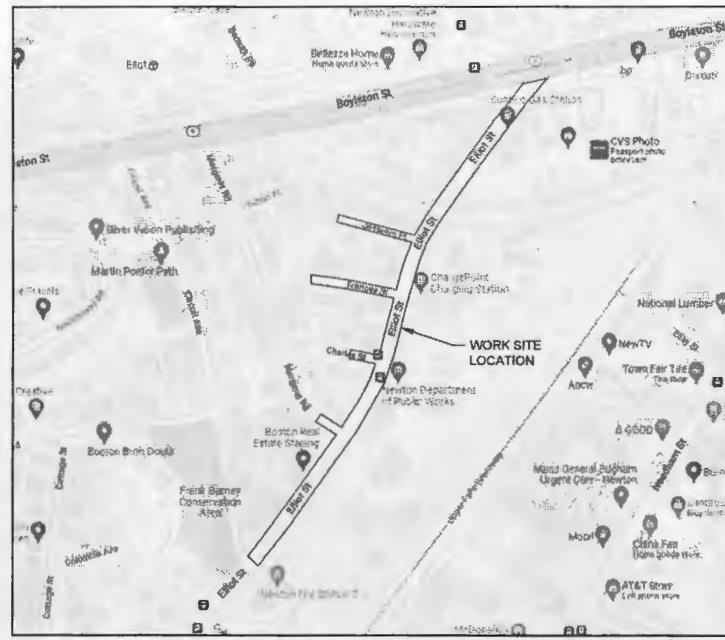


# CIRE101214 PROGRAM - MAIN & SERVICE REPLACEMENT

## 10/8/6/4" CI-LP, 6" PL-LP, 4" BS-LP & 4/3" CS-LP TO 8/4/2" PL-22#

### 3-144 ELLIOT ST, NEWTON, MA.

#### W.O. NO.: 1444162



INDEX OF PAGES		
PAGE	DRAWING NO.	TITLE
1	CIR-NEW-1444162 G-001	COVER PAGE
2	CIR-NEW-1444162 G-002	CONSTRUCTION NOTES AND BOM
3	CIR-NEW-1444162 C-001	PROPOSED INSTALLATION PLAN OVERVIEW
4	CIR-NEW-1444162 C-002	PROPOSED INSTALLATION PLAN
5	CIR-NEW-1444162 C-003	PROPOSED INSTALLATION PLAN
6	CIR-NEW-1444162 C-004	PROPOSED INSTALLATION PLAN
7	CIR-NEW-1444162 C-005	PROPOSED INSTALLATION PLAN
8	CIR-NEW-1444162 C-006	PROPOSED INSTALLATION PLAN
9	CIR-NEW-1444162 C-101	PROPOSED TIE-IN DETAILS
10	CIR-NEW-1444162 C-102	PROPOSED MBTA CROSSING DETAILS
11	CIR-NEW-1444162 C-201	STANDARD DETAILS
12	CIR-NEW-1444162 C-202	STANDARD DETAILS
13	CIR-NEW-1444162 C-203	STANDARD DETAILS

PROJECT SUMMARY TABLE					
PROPOSED INSTALLATION			PROPOSED ABANDONMENT		
LENGTH (FT)	SIZE (IN)	TYPE	LENGTH (FT)	SIZE (IN)	TYPE
1,850	8	PL-22#	1,840	10	CI-LP (1924)
630	4	PL-22#	10	8	CI-LP (1926)
335	2	PL-22#	270	6	CI-LP (1924/26)
			65	6	PL-LP (2010)
			135	4	CS-LP (1923)
			300	4	CS-LP (1961)
			110	4	BS-LP (1953)
			35	3	CS-LP (1961)
2,815	TOTAL INSTALLATION (FT)		2,785	TOTAL ABANDONMENT (FT)	



**NOTE TO CONTRACTOR:**  
BEFORE PERFORMING ANY WORK, THE CONTRACTOR SHALL CONTACT THE "811 NUMBER" (PHONE 800-275-5000). FOR A MARK-OUT OF ALL UNDERGROUND UTILITIES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE "811 NUMBER" AND TO ASCERTAIN THE LOCATION OF ALL UNDERGROUND CONSTRUCTION IN THE AREA OF THE PROJECT.

THE CONTRACTOR SHALL CONDUCT TEST PITS TO VERIFY THE LOCATIONS OF UNDERGROUND UTILITIES WHERE POTENTIAL CONFLICTS MAY OCCUR OR WHERE DISCREPANCIES ARE PRESENT BETWEEN THE PLAN AND UNDERGROUND UTILITY MARK-OUTS.  
THESE TEST PITS SHALL BE IN ADDITION TO THE SPECIFIED TEST PIT LOCATIONS AS SHOWN ON THE PLANS AND SHALL NOT BE LIMITED TO EXCAVATION SOLELY BUT INCLUDE ANY ADDITIONAL MEANS TO DETERMINE THE LOCATION OF UTILITIES IN QUESTION.

**TRC** 215 GREENFIELD PARKWAY  
SUITE 102  
LIVERPOOL, N.Y. 13088



1	ISSUED FOR PERMITS	07/21/2010	PL	NO	CC
2	ISSUED FOR CONSTRUCTION	08/24/2010	PL	NO	CC



CIRE101214 PROGRAM MAIN & SERVICE REPLACEMENT  
10/8/6/4" CI-LP, 6" PL-LP & 4/3" CS-LP TO 8/4/2" PL-22#  
3-144 ELLIOT ST  
NEWTON, MASSACHUSETTS  
**COVER PAGE**

PAGE 1 OF 13

DRAWING NO.  
**CIR-NEW-1444162 G-001**

DATE	ISSUED	ISSUED BY	DATE	APPROV. I.D.	W.O. NO.
07/21/2010	J.L. SMITH	D. CHEN	08/24/2010	XXXXXXXXXX	1444162

Item	SIZE (IN.)	QTY	UOM	DESCRIPTION	SPECIFICATION	SAP ID NUMBER	
<b>BILL OF MATERIALS</b>							
<b>GAS MAIN</b>							
1	2	335	FT	PIPE, PLASTIC, MDPE, PE 2708, SDR 11, 250' COIL	CS-FIT001	904087	
2	4	630	FT	PIPE, PLASTIC, MDPE, PE 2708, SDR 11.5, 40' STICK	CS-FIT001	904087	
3	8	1860	FT	PIPE, PLASTIC, MDPE, PE 2708, SDR 13.5, 40' STICK	CS-FIT001	904092	
4	6	6	EA	TEE, PLASTIC, BUTT FUSE, MDPE, SDR 13.5	CS-FIT02	904270	
5	3	3	EA	TEE, TOW, 3-WAY, FLANGED TOP, FLAT BOTTOM	HTAP-9025-MA	900551	
6	2	1	EA	VALVE, PLASTIC, FULL PORT BALL, MDPE, SDR 11	VALV-6200	924194	
7	2	1	EA	ROADWAY VALVE BOX/W/IN COVER	VALV-6200	924194	
8	2	1	EA	VALVE, PLASTIC, FULL PORT BALL, MDPE, SDR 11.5	VALV-6200	9341709	
9	4	4	EA	ROADWAY VALVE BOX/W/IN COVER	VALV-6200	933982	
10	8	3	EA	VALVE, PLASTIC, FULL PORT BALL, MDPE, SDR 13.5	VALV-6200	930504	
11	8	3	EA	ROADWAY VALVE BOX/W/IN COVER	VALV-6200	9307590	
12	4	1	EA	REDUCER, PLASTIC, BUTT FUSE, MDPE, SDR 11.5 X 11	CS-FIT013	908453	
13	4	5	EA	REDUCER, PLASTIC, BUTT FUSE, MDPE, SDR 11.5	CS-FIT013	9042673	
14	8	6	EA	REDUCER, PLASTIC, BUTT FUSE, MDPE, SDR 13.5 X 11.5	CS-FIT013	9042616	
15	8	1	EA	ELBOW, PLASTIC, 45 DEGREE, BUTT FUSE, MDPE, SDR 13.5	CS-FIT011	9041492	
16	2	4	EA	COUPLING, PLASTIC, ELECTROFUSION, HDPE	CS-FIT015	9014594	
17	4	4	EA	COUPLING, PLASTIC, ELECTROFUSION, HDPE	CS-FIT015	9014594	
18	6	1	EA	COUPLING, PLASTIC, ELECTROFUSION, HDPE	CS-FIT015	9014592	
19	8	5	EA	COUPLING, PLASTIC, ELECTROFUSION, HDPE	CS-FIT015	9014592	
20	24	1	EA	BREASER STYLE SOA SPOT SLEEVE INSULATED	FITS-6009	9342325	
21	2	1	EA	CAP, PLASTIC, BUTT FUSE, MDPE, SDR 11	CS-FIT010	9335640	
22	4	4	EA	CAP, PLASTIC, BUTT FUSE, MDPE, SDR 11.5	CS-FIT010	9335634	
23	8	1	EA	CAP, PLASTIC, BUTT FUSE, MDPE, SDR 13.5	CS-FIT010	9335599	
24	6	2	EA	CAP, BOLTED, SELF-RESTRAINING, R/S CAST IRON, INSULATING	FITS-6024	9011589	
25	10	4	EA	CAP, BOLTED, NON-RESTRAINING, O.S. CAST IRON, INSULATING	FITS-6014	9006572	
26	10	4	EA	CAP, BOLTED, NON-RESTRAINING, R/S CAST IRON, INSULATING	FITS-6014	9037959	
27	8	1	EA	TRANSITION FITTING, PLASTIC TO STEEL, MDPE SDR 13.5 X 6CH 40 WELD END	FITS-6022	9339390	
<b>CATHODIC PROTECTION</b>							
G1	12 AWG	2815	FT	TRACER WIRE, DRECHT BUR, COPPER, 1/2 AWG	CRST-6001	9011500	
G2	5	6	2815	FT	YELLOW CATION TAPE, GAS MAIN, 3/8" WIDE	CRST-6000	9341904
<b>PRESSURE TESTING (TEMPORARY)</b>							
P1	2	1	EA	TEE, SERVICE, PLASTIC, HDPE, EP 1" IPS OUTLET	CS-MAN004	922263	
P2	4	4	EA	TEE, SERVICE, PLASTIC, HDPE, EP 1" IPS OUTLET	CS-MAN004	922263	
P3	8	3	EA	TEE, SERVICE, PLASTIC, HDPE, EP 1" IPS OUTLET	CS-MAN004	923497	
P4	8	2	EA	CAP, PLASTIC, BUTT FUSE, MDPE, SDR 13.5	CS-FIT010	9339559	
P5	1	8	EA	COUPLING, PLASTIC, ELECTROFUSION, HDPE, IPS XCTS	FITS-6022	9041488	
P6	1	8	EA	RISER, ANODELESS, 1" CTS MDPE X 3/4" IPS STEEL OUTLET	CS-MAN004	9044395	
P7	1	8	EA	END CAP, PERMIASERT, CTS	FITS-6022	931256	
<b>CATHODIC PROTECTION</b>							
C1	NA	3	EA	CP TEST BOX/COVER, ROADWAY AREAS	030026-CS	933961	
C2	NA	3	EA	CP TEST BOX/COVER, ROADWAY AREAS	030026-CS	933967	
C3	NA	4	EA	WIRE, NO. 6, STRAND	030026-CS	930759	
C4	NA	3	EA	ANODE, MAGNESIUM 17LB	030024-CS	931163	
NATIONAL QUANTITIES SPECIFIED REPRESENT MINIMUM QUANTITIES ONLY. FINAL QUANTITIES MAY CHANGE SUBJECT TO MEETING NATIONAL GRID STANDARDS AND DESIGN/SPEC REQUIREMENTS.							
<b>REFERENCE DRAWING</b>							
1 LOCATION OF IDENTIFIED UNDERGROUND UTILITIES ARE AN APPROXIMATE BASED ON AVAILABLE RECORD AND FIELD INFORMATION IN ACCORDANCE WITH CIRCE 98-02. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT IDENTIFIED ON THESE PLANS. ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR FOR SERVICE, SIZE, INVERT/ELEVATIONS, LOCATIONS, ETC.							

 <p>215 GREENFIELD PARKWAY SUITE 102 LIVERPOOL, N.Y. 13088</p>	 <p>nationalgrid 40 BYLINES ROAD WILMINGTON, MA 01897</p>	<p>CIR101214 PROGRAM MAIN &amp; SERVICE REPLACEMENT 10/8/04* CH-UP, 6" PL-LP, 4" BS-LP &amp; 4/3" CS-LP TO 8/4/2" PL-22"</p> <p>3-144 ELLIOT ST NEWTON, MASSACHUSETTS</p> <p>CONSTRUCTION NOTES AND BILL OF MATERIALS</p> <p>DATE: 04/24/04 DRAWN: J.A. SMITH CHECKED: D. CHEN DATE: 04/29/04 PROJECT: 00000000000000000000 SHEET NO.: 1444162</p>	<p>PAGE 2 OF 13</p> <p>CIR-NEW-1444162 G-002</p>
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NO.	REV.	DESCRIPTION	DATE	BY	CHKD.	APP'D.
1	ISSUED FOR CONSTRUCTION	REVISED PER COMMENTS	04/29/04	J.A. SMITH	D. CHEN	[Signature]
2	ISSUED FOR CONSTRUCTION	REVISED PER COMMENTS	04/29/04	J.A. SMITH	D. CHEN	[Signature]
3	ISSUED FOR CONSTRUCTION	REVISED PER COMMENTS	04/29/04	J.A. SMITH	D. CHEN	[Signature]
4	ISSUED FOR CONSTRUCTION	REVISED PER COMMENTS	04/29/04	J.A. SMITH	D. CHEN	[Signature]



**LEGEND:**

	EPICURB		SANITARY MH
	PROPOSED GAS MAIN		DRAINAGE MH
	GAS MAIN BY OTHER VENDOR		POLE
	ABANDONED GAS MAIN		CATCH BASIN
	CRITICAL DISTRIBUTION		HYDRANT
	EXISTING BS LP MAIN		EXISTING GAS VALVE
	EXISTING BS HP MAIN		EXISTING CAP
	EXISTING CI LP MAIN		EXISTING REDUCER
	EXISTING CI LP MAIN		NEW GAS VALVE
	EXISTING CS LP MAIN		NEW CAP
	EXISTING CS HP MAIN		NEW REDUCER
	EXISTING PL LP MAIN		BOM ITEM#
	EXISTING PL HP MAIN		
	WATER MAIN		
	SANITARY		
	DRAINAGE		
	TELECOM		

TRC  
TERRACON CONSULTANTS, INC.

0 100 200 400  
APPROXIMATE SCALE 1" = 100' (NEAR PLOTTED 3/4" = 30')  
APPROXIMATE SCALE 1" = 200' (NEAR PLOTTED 1" = 110')



NO.	DESCRIPTION	DATE	BY	CHKD.	APP'D.
1	ISSUED SHOP DRAWINGS SUBJECT TO REVIEW & RECORD DRAWING DATE	07/01/2022	PL	MS	CS
2	REVISION FOR CONSTRUCTION	08/24/2022	JM	MS	CS

40 SWAN ROAD  
MILWAUKEE, WI 53219

**FINAL**

CIR-NEW-1444162 PROFORMA MAIN & SERVICE REPLACEMENT  
10/3/4" CH-LP, 8" PL-LP, 4" BS-LP & 4/3" CS-LP TO 8/4" PL-228  
3-144 ELIJAH ST  
NEWTON, MASSACHUSETTS

**PROPOSED INSTALLATION PLAN OVERVIEW**

DATE	DESIGNER	ENGINEER	DATE	PROJECT NO.	W.G. NO.
04/20/22	J.R. SMITH	C. CHEN	08/24/2022	0000000000	1444162

PAGE 3 OF 13

DRAWING NO.

CIR-NEW-1444162 C-001

NOTE: THIS PROJECT INVOLVES REPLACING LP GAS MAIN WITH 22 PSIG GAS MAIN.

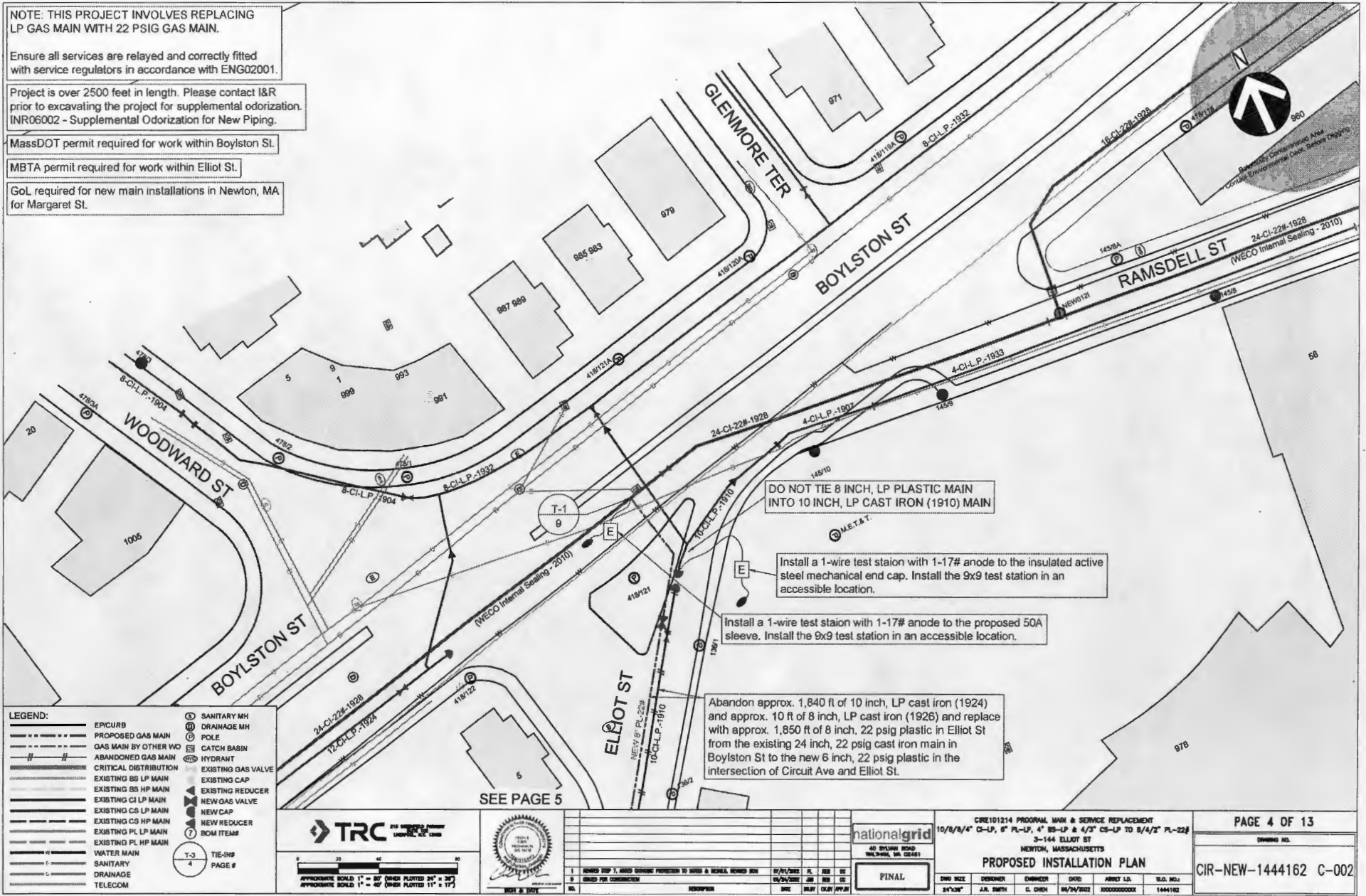
Ensure all services are relayed and correctly fitted with service regulators in accordance with ENG02001.

Project is over 2500 feet in length. Please contact I&R prior to excavating the project for supplemental odorization. INR06002 - Supplemental Odorization for New Piping.

MassDOT permit required for work within Boylston St.

MBTA permit required for work within Elliot St.

GoL required for new main installations in Newton, MA for Margaret St.



DO NOT TIE 8 INCH, LP PLASTIC MAIN INTO 10 INCH, LP CAST IRON (1910) MAIN

Install a 1-wire test station with 1-17# anode to the insulated active steel mechanical end cap. Install the 9x9 test station in an accessible location.

Install a 1-wire test station with 1-17# anode to the proposed 50A sleeve. Install the 9x9 test station in an accessible location.

Abandon approx. 1,840 ft of 10 inch, LP cast iron (1924) and approx. 10 ft of 8 inch, LP cast iron (1926) and replace with approx. 1,850 ft of 8 inch, 22 psig plastic in Elliot St from the existing 24 inch, 22 psig cast iron main in Boylston St to the new 6 inch, 22 psig plastic in the intersection of Circuit Ave and Elliot St.

**LEGEND:**

- EPICURB
- PROPOSED GAS MAIN
- GAS MAIN BY OTHER W/O
- ABANDONED GAS MAIN
- CRITICAL DISTRIBUTION
- EXISTING BS LP MAIN
- EXISTING BS HP MAIN
- EXISTING CI LP MAIN
- EXISTING CS LP MAIN
- EXISTING CS HP MAIN
- EXISTING PL LP MAIN
- WATER MAIN
- SANITARY
- DRAINAGE
- TELECOM

- ① SANITARY MH
- ② DRAINAGE MH
- ③ POLE
- ④ CATCH BASIN
- ⑤ HYDRANT
- ⑥ EXISTING GAS VALVE
- ⑦ EXISTING CAP
- ⑧ EXISTING REDUCER
- ⑨ NEW GAS VALVE
- ⑩ NEW CAP
- ⑪ NEW REDUCER
- ⑫ ROM ITEM
- ⑬ TIE-IN#

T-3 PAGE #

**TRC**

APPROXIMATE SCALE 1" = 80' (OVER PLOTTED 24" = 30')

APPROXIMATE SCALE 1" = 60' (OVER PLOTTED 11" = 17')



NO.	DESCRIPTION	DATE	BY	CHKD.	APP'D.
1	ISSUED FOR CONSTRUCTION	02/14/2022	J.A. SMITH	G. OREN	

**nationalgrid**

40 SYLVEY ROAD  
NEWTON, MA 02459

FINAL

CIR-NEW-1444162 PROPOSAL MAIN & SERVICE REPLACEMENT

10/8/8/4" CI-LP, 6" PL-LP, 4" BS-LP & 4/3" CS-LP TO 8/4/2" PL-22#

3-144 ELLIOT ST  
NEWTON, MASSACHUSETTS

**PROPOSED INSTALLATION PLAN**

DWG NO. 347304  
DESIGNER J.A. SMITH  
OWNER G. OREN  
DATE 06/24/2022  
PROJECT NO. 3000000004  
S.D. NO. 1444162

PAGE 4 OF 13

DRAWING NO. CIR-NEW-1444162 C-002

NOTE: THIS PROJECT INVOLVES REPLACING LP GAS MAIN WITH 22 PSIG GAS MAIN.

Ensure all services are relayed and correctly fitted with service regulators in accordance with ENG02001.

Project is over 2500 feet in length. Please contact I&R prior to excavating the project for supplemental odorization. INR06002 - Supplemental Odorization for New Piping.

MassDOT permit required for work within Boylston St.

MBTA permit required for work within Elliot St.

GoL required for new main installations in Newton, MA for Margaret St.

SEE PAGE 4

Abandon approx. 35 ft of 3 inch, LP coated steel (1961) and approx. 300 ft of 4 inch, LP coated steel (1961) branched service with approx. 335 ft of 2 inch, 22 psig plastic to #978 Boylston St.

Abandon approx. 1,840 ft of 10 inch, LP cast iron (1924) and approx. 10 ft of 8 inch, LP cast iron (1926) and replace with approx. 1,850 ft of 6 inch, 22 psig plastic in Elliot St from the existing 24 inch, 22 psig cast iron main in Boylston St to the new 6 inch, 22 psig plastic in the intersection of Circuit Ave and Elliot St.

ELLIOT ST

Elevated MBTA track

See MBTA Crossing Detail Page 10



LEGEND:	
	EPICURS
	PROPOSED GAS MAIN
	GAS MAIN BY OTHER W/O
	ABANDONED GAS MAIN
	CRITICAL DISTRIBUTION
	EXISTING BS LP MAIN
	EXISTING HP LP MAIN
	EXISTING CI LP MAIN
	EXISTING CS LP MAIN
	EXISTING PL LP MAIN
	EXISTING PL HP MAIN
	WATER MAIN
	SANITARY
	DRAINAGE
	TELECOM
	SANITARY MH
	DRAINAGE MH
	POLE
	CATCH BASIN
	HYDRANT
	EXISTING GAS VALVE
	EXISTING CAP
	EXISTING REDUCER
	NEW GAS VALVE
	NEW CAP
	NEW REDUCER
	BOM ITEM#
	TIE-IN#
	PAGE #

**TRC** THE TRC GROUP  
 1000 STATE STREET  
 WILMINGTON, MA 01897

APPROXIMATE SCALE: 1" = 30' (WHICH PLOTTED 24" = 30')  
 APPROXIMATE SCALE: 1" = 40' (WHICH PLOTTED 11" = 17')



NO.	DESCRIPTION	DATE	BY	CHECKED	DATE	BY
1	ISSUED FOR PERMITTING	07/16/2023	J.A.	C.G.		
2	ISSUED FOR CONSTRUCTION	08/24/2023	J.A.	C.G.		

**nationalgrid**  
 40 BEAVER ROAD  
 WILMINGTON, MA 01891

PINAL

CIR-101214 PROGRAM, MAIN & SERVICE REPLACEMENT					
10/8/8/4" CS-LP, 8" PL-LP, 8" BS-LP & 4/3" CS-LP TO 8/4/2" PL-22#					
3-144 ELLIOT ST					
NEWTON, MASSACHUSETTS					
<b>PROPOSED INSTALLATION PLAN</b>					
DWG NO.	DESIGNER	ENGINEER	DATE	AMT L.A.	S.A. NO.
04/2023	J.A. SMITH	C. O'NEIL	04/24/2023	0000000000	1444162

PAGE 5 OF 13

DRAWING NO.

CIR-NEW-1444162 C-003

NOTE THIS PROJECT INVOLVES REPLACING LP GAS MAIN WITH 22 PSIG GAS MAIN.

Ensure all services are relayed and correctly fitted with service regulators in accordance with ENG02001.

Project is over 2500 feet in length. Please contact I&R prior to excavating the project for supplemental odorization. INR06002 - Supplemental Odorization for New Piping.

MassDOT permit required for work within Boylston St.

MBTA permit required for work within Elliot St.

GoL required for new main installations in Newton, MA for Margaret St.

SEE PAGE 5



Abandon approx. 110 ft of 4 inch, LP bare steel (1953) and approx. 135 ft of 4 inch, LP cast iron (1923) and replace with approx. 245 ft of 4 inch, 22 psig plastic in Elliot St from the new 8 inch, 22 psig plastic in Elliot St to the end of the main at #16 Joselyn Pl.

Abandon approx. 220 ft of 6 inch, LP cast iron (1924) and approx. 65 ft of 6 inch, LP plastic (2010) and replace with approx. 285 ft of 4 inch, 22 psig plastic in Frances St from the new 8 inch, 22 psig plastic in Elliot St to the end of the main at #22 Frances St.

Abandon approx. 1,840 ft of 10 inch, LP cast iron (1924) and approx. 10 ft of 8 inch, LP cast iron (1926) and replace with approx. 1,850 ft of 8 inch, 22 psig plastic in Elliot St from the existing 24 inch, 22 psig cast iron main in Boylston St to the new 6 inch, 22 psig plastic in the intersection of Circuit Ave and Elliot St.

**LEGEND:**

- EPICURB
- PROPOSED GAS MAIN
- GAS MAIN BY OTHER W/O
- ABANDONED GAS MAIN
- CRITICAL DISTRIBUTION
- EXISTING BS LP MAIN
- EXISTING BS HP MAIN
- EXISTING CI LP MAIN
- EXISTING CS LP MAIN
- EXISTING CS HP MAIN
- EXISTING PL LP MAIN
- EXISTING PL HP MAIN
- WATER MAIN
- SANITARY
- DRAINAGE
- TELECOM

- ① SANITARY MH
- ② DRAINAGE MH
- ③ POLE
- ④ CATCH BASIN
- ⑤ HYDRANT
- ⑥ EXISTING GAS VALVE
- ⑦ EXISTING CAP
- ⑧ EXISTING REDUCER
- ⑨ NEW GAS VALVE
- ⑩ NEW CAP
- ⑪ NEW REDUCER
- ⑫ BOM ITEM#

T-3 TIE-IN#  
4 PAGE #

**TRC** ENGINEERS ARCHITECTS

APPROXIMATE SCALE: 1" = 30' (W/AS PLOTTED 24" = 30')  
APPROXIMATE SCALE: 1" = 40' (W/AS PLOTTED 11" = 17')



NO.	REVISION	DATE	BY	CHKD.	APP'D.
1	ISSUED PER T. AND CHANGED PERMITTED TO W/AS & RECALL ISSUED PER	07/01/2022	J.L.	CS	
2	ISSUED PER CONSTRUCTION	06/29/2022	J.B.	CS	

**nationalgrid**

40 STUYVESANT ROAD  
MILFORD, MA 02148

FINAL

CRE101214 PROGRAM MAIN & SERVICE REPLACEMENT  
10/8/1/4" CS-LP, 6" PL-LP, 4" BS-LP & 4/2" CS-LP TO 8/4/2" PL-22#  
3-144 ELLIOT ST  
NEWTON, MASSACHUSETTS

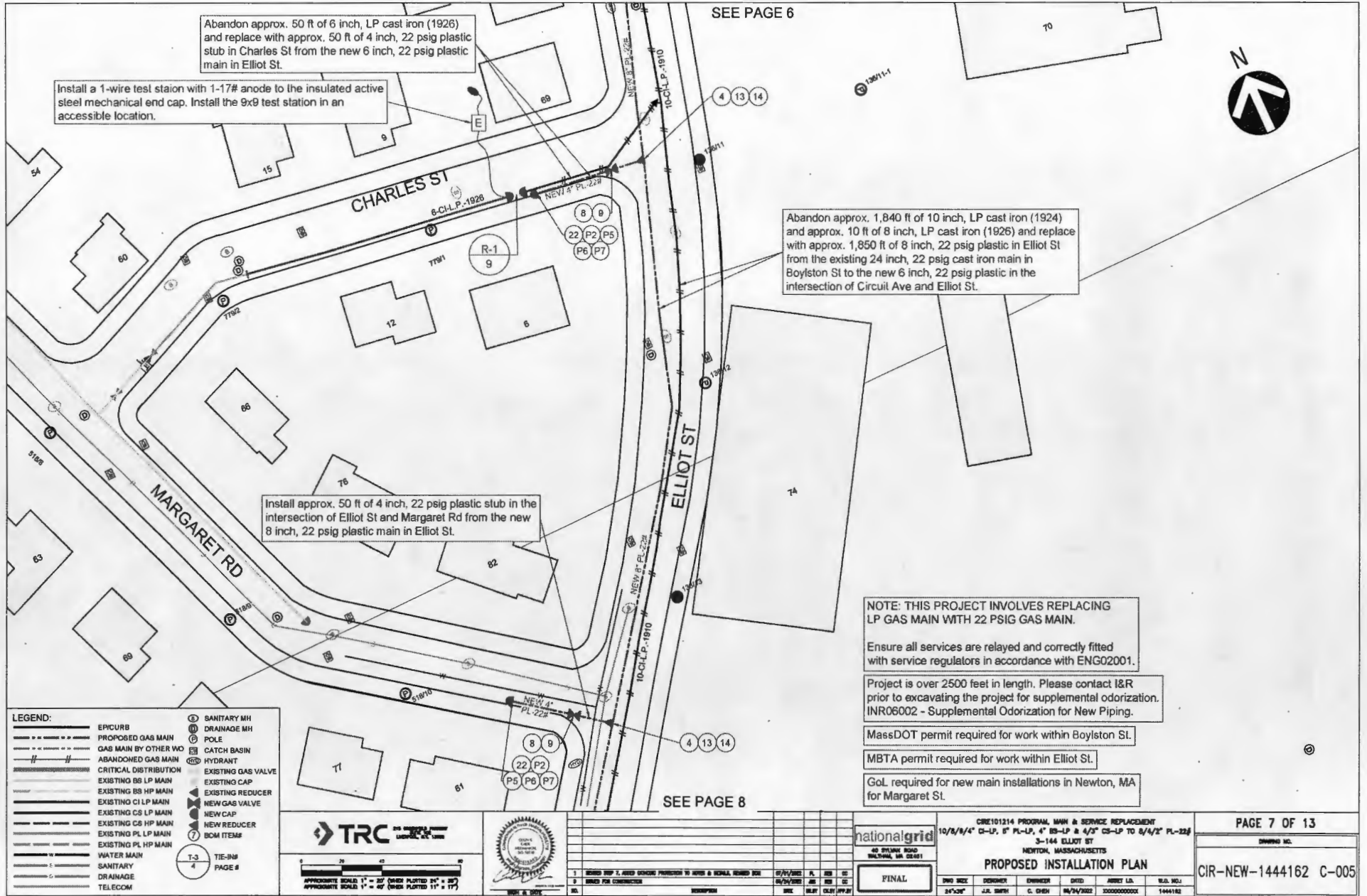
**PROPOSED INSTALLATION PLAN**

DWG NO. 24-28 DESIGNER J.A. SMITH ENGINEER C. OHEN DTD 06/24/2022 ASSET NO. 000000000X S.D. NO. 144182

PAGE 6 OF 13

DWG NO. CIR-NEW-1444162 C-004

SEE PAGE 7



SEE PAGE 6



Abandon approx. 50 ft of 6 inch, LP cast iron (1926) and replace with approx. 50 ft of 4 inch, 22 psig plastic stub in Charles St from the new 6 inch, 22 psig plastic main in Elliot St.

Install a 1-wire test station with 1-17# anode to the insulated active steel mechanical end cap. Install the 9x9 test station in an accessible location.

Abandon approx. 1,840 ft of 10 inch, LP cast iron (1924) and approx. 10 ft of 8 inch, LP cast iron (1926) and replace with approx. 1,850 ft of 8 inch, 22 psig plastic in Elliot St from the existing 24 inch, 22 psig cast iron main in Boylston St to the new 6 inch, 22 psig plastic in the intersection of Circuit Ave and Elliot St.

Install approx. 50 ft of 4 inch, 22 psig plastic stub in the intersection of Elliot St and Margaret Rd from the new 8 inch, 22 psig plastic main in Elliot St.

**NOTE: THIS PROJECT INVOLVES REPLACING LP GAS MAIN WITH 22 PSIG GAS MAIN.**

Ensure all services are relayed and correctly fitted with service regulators in accordance with ENG02001.

Project is over 2500 feet in length. Please contact I&R prior to excavating the project for supplemental odorization. INR06002 - Supplemental Odorization for New Piping.

MassDOT permit required for work within Boylston St.

MBTA permit required for work within Elliot St.

GoL required for new main installations in Newton, MA for Margaret St.

SEE PAGE 8

**LEGEND:**

—	EPCURB	⊙	SANITARY MH
—	PROPOSED GAS MAIN	⊙	DRAINAGE MH
—	GAS MAIN BY OTHER W/O	⊙	POLE
—	ABANDONED GAS MAIN	⊙	CATCH BASIN
—	CRITICAL DISTRIBUTION	⊙	HYDRANT
—	EXISTING BS LP MAIN	⊙	EXISTING GAS VALVE
—	EXISTING BS HP MAIN	⊙	EXISTING CAP
—	EXISTING CI LP MAIN	⊙	EXISTING REDUCER
—	EXISTING CS LP MAIN	⊙	NEW GAS VALVE
—	EXISTING CS HP MAIN	⊙	NEW CAP
—	EXISTING PL LP MAIN	⊙	NEW REDUCER
—	EXISTING PL HP MAIN	⊙	BOM ITEMS
—	WATER MAIN	⊙	
—	SANITARY	⊙	
—	DRAINAGE	⊙	
—	TELECOM	⊙	

T-3 TIE-IN PAGE 8  
 T-4 TIE-IN PAGE 8

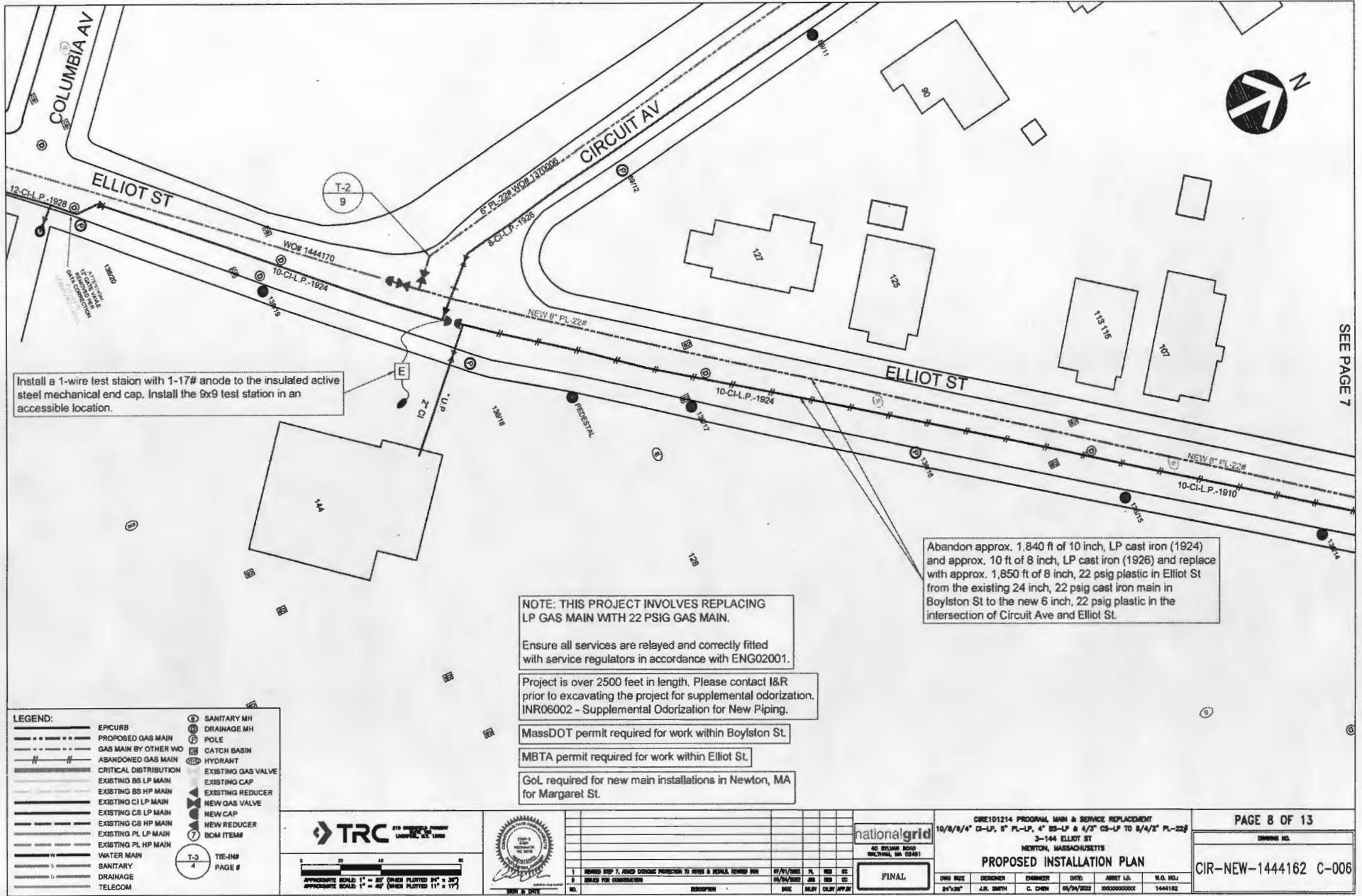


1	REVISION SHEET 7, ADD EXISTING PARALLEL TO NEW 6 INCH, 22 PSIG GAS	05/11/2022	PL	22	CS
2	REVISED FOR CONSTRUCTION	06/29/2022	AS	22	CS
3		06/29/2022	CS	22	CS

ONE101214 PROGRAM MAIN & SERVICE REPLACEMENT					
10/8/1/4" CS-LP, 6" PL-LP, 4" BS-LP & 4/3" CS-LP TO 8/4/2" PL-22#					
3-144 ELLIOT ST					
NEWTON, MASSACHUSETTS					
<b>PROPOSED INSTALLATION PLAN</b>					
DRW NO.	DESIGNER	ENGINEER	DATE	SHEET NO.	TOTAL SHEETS
245-207	J.A. BRYAN	C. GIBBY	04/24/2022	2000000000	1444162

**PAGE 7 OF 13**

DRAWING NO. CIR-NEW-1444162 C-005



Install a 1-wire test station with 1-17# anode to the insulated active steel mechanical end cap. Install the 9x9 test station in an accessible location.

Abandon approx. 1,840 ft of 10 inch, LP cast iron (1924) and approx. 10 ft of 8 inch, LP cast iron (1926) and replace with approx. 1,850 ft of 8 inch, 22 psig plastic in Elliot St from the existing 24 inch, 22 psig cast iron main in Boylston St to the new 6 inch, 22 psig plastic in the intersection of Circuit Ave and Elliot St.

NOTE: THIS PROJECT INVOLVES REPLACING LP GAS MAIN WITH 22 PSIG GAS MAIN.

Ensure all services are relayed and correctly fitted with service regulators in accordance with ENG02001.

Project is over 2500 feet in length. Please contact I&R prior to excavating the project for supplemental odorization. INR06002 - Supplemental Odorization for New Piping.

MassDOT permit required for work within Boylston St.

MBTA permit required for work within Elliot St.

GoL required for new main installations in Newton, MA for Margaret St.

**LEGEND:**

- EPCURB
- - - - - PROPOSED GAS MAIN
- - - - - GAS MAIN BY OTHER W/O
- - - - - ABANDONED GAS MAIN
- ==== CRITICAL DISTRIBUTION
- ==== EXISTING BS LP MAIN
- ==== EXISTING BS HP MAIN
- ==== EXISTING CI LP MAIN
- ==== EXISTING CS LP MAIN
- ==== EXISTING CS HP MAIN
- ==== EXISTING PL LP MAIN
- ==== EXISTING PL HP MAIN
- ==== WATER MAIN
- ==== SANITARY
- ==== DRAINAGE
- ==== TELECOM

- ① SANITARY MH
- ② DRAINAGE MH
- ③ POLE
- ④ CATCH BASIN
- ⑤ HYDRANT
- ⑥ EXISTING GAS VALVE
- ⑦ EXISTING CAP
- ⑧ EXISTING REDUCER
- ⑨ NEW GAS VALVE
- ⑩ NEW CAP
- ⑪ NEW REDUCER
- ⑫ BOM ITEM#

T-3  
TIE-IN#  
PAGE #

**TRC** ENGINEERS ARCHITECTS

APPROXIMATE SCALE 1" = 20' (WHEN PLOTTED 24" = 25')

APPROXIMATE SCALE 1" = 40' (WHEN PLOTTED 11" = 17')



NO.	REVISION	DATE	BY	CHKD	APP'D
1	ISSUED FOR CONSTRUCTION				

**nationalgrid**

40 WILLOW ROAD  
MILFORD, MA 02148

FINAL

CIR-101214 PROGRAM MAIN & SERVICE REPLACEMENT

10/8/4" G-LP, 6" PL-LP, 4" BS-LP & 4/2" CS-LP TO 3/4/2" PL-22#

3-144 ELLIOT ST  
NEWTON, MASSACHUSETTS

**PROPOSED INSTALLATION PLAN**

DWG NO: 24"x36"    DESIGNER: J.R. SMITH    ENGINEER: C. CHEN    DATE: 04/24/2022    ABBREV:    W.O. NO.: 1444162

PAGE 8 OF 13

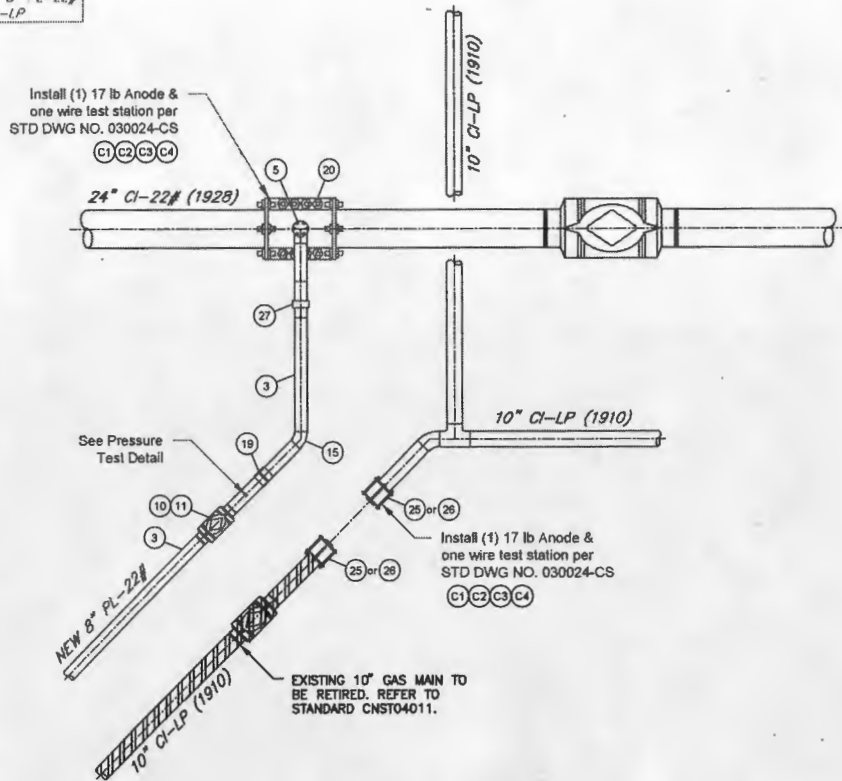
DRAWING NO. CIR-NEW-1444162 C-006

SEE PAGE 7



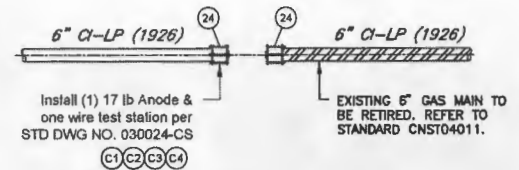
USE EXISTING VALVE FOR ISOLATION AND SQUEEZE-OFF IN ACCORDANCE WITH CNSTD3001 - OR - STOP-OFF IN ACCORDANCE WITH CNSTD3002

DO NOT TIE 8" PL-22# INTO 10" CI-LP

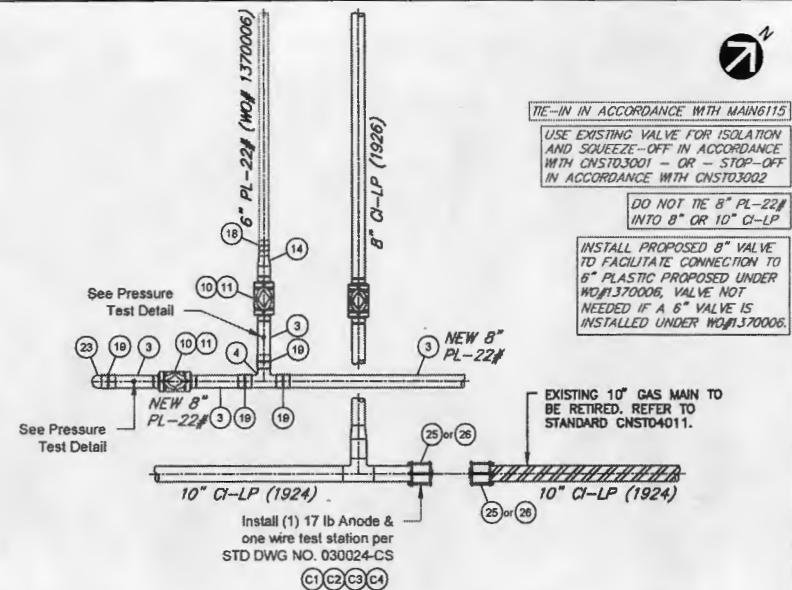


Tie-In Detail T-1  
Scale: 1" = 3'-0"

STOP-OFF IN ACCORDANCE WITH CNSTD3002



Retirement Detail R-1  
Scale: 1" = 3'-0"



Tie-In Detail T-2  
Scale: 1" = 3'-0"

**LEGEND:**

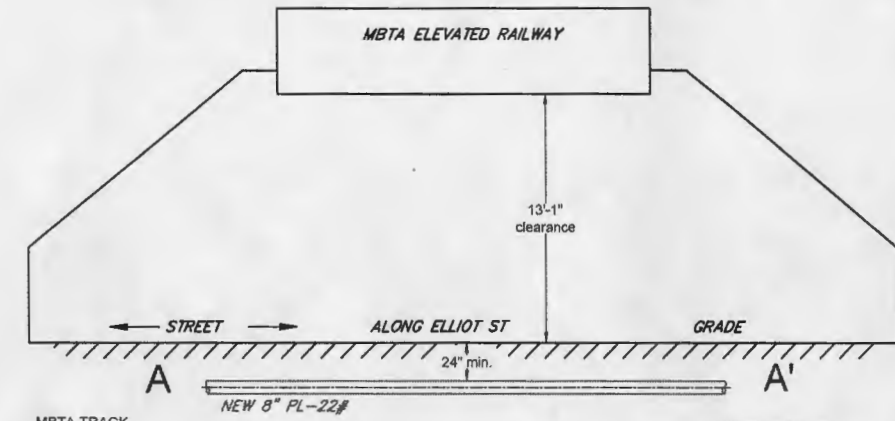
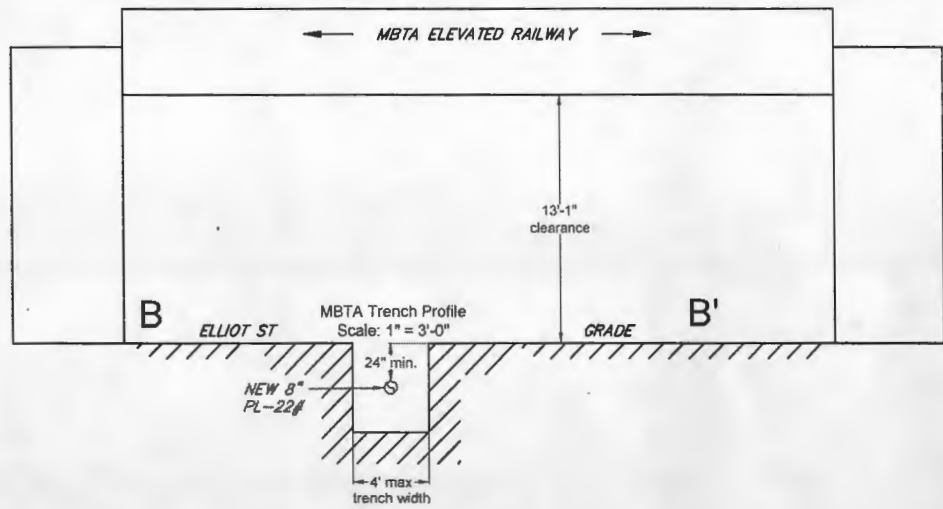
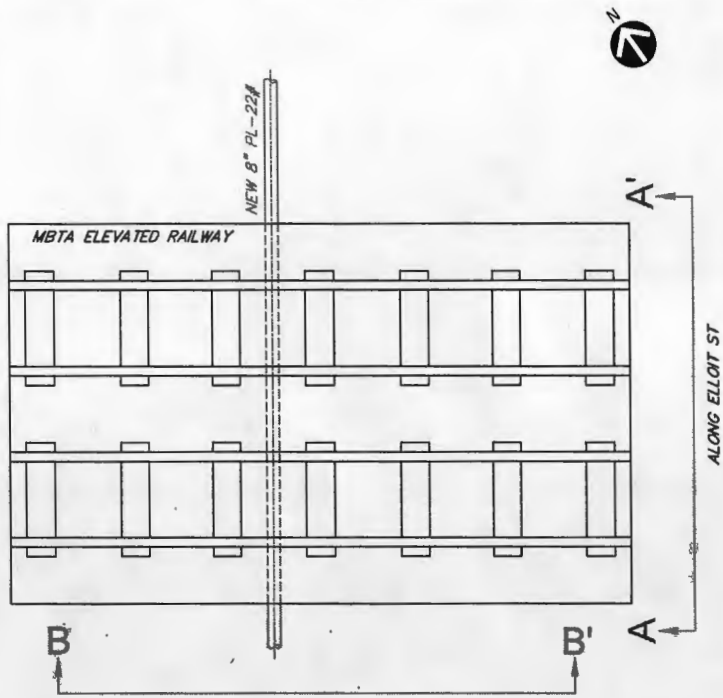
	PROPOSED GAS MAIN		CENTERLINE
	ABANDONED GAS MAIN		BILL OF MATERIALS ITEM NUMBER
	EXISTING BS GAS MAIN		
	EXISTING CI GAS MAIN		
	EXISTING CS GAS MAIN		
	EXISTING PL GAS MAIN		



1	ISSUED FOR CONSTRUCTION	DATE	08/20/14	BY	RLB
2	ISSUED FOR CONSTRUCTION	DATE		BY	
3	ISSUED FOR CONSTRUCTION	DATE		BY	
4	ISSUED FOR CONSTRUCTION	DATE		BY	
5	ISSUED FOR CONSTRUCTION	DATE		BY	
6	ISSUED FOR CONSTRUCTION	DATE		BY	
7	ISSUED FOR CONSTRUCTION	DATE		BY	
8	ISSUED FOR CONSTRUCTION	DATE		BY	
9	ISSUED FOR CONSTRUCTION	DATE		BY	
10	ISSUED FOR CONSTRUCTION	DATE		BY	

national grid			
CIR101214 PROGRAM MAIN & SERVICE REPLACEMENT			
10/8/8" CI-LP, 6" PL-LP, 4" BS-LP & 4/3" CS-LP TO 6/4/2" PL-22#			
3-144 ELLIOT ST			
NEWTON, MASSACHUSETTS			
PROPOSED TIE-IN DETAILS			
DWG NO.	DESIGNER	DRAWN	DATE
24/24	J.R. SMITH	C. CHEN	08/24/2014
CHECKED	DATE	PROJECT NO.	SCALE
		3000000001	1/4"=1'-0"

PAGE 9 OF 13
DRAWING NO.
CIR-NEW-1444162 C-101



Detail D-1  
 MBTA TRACK  
 CROSS-SECTION A-A'  
 (GAS CROSSING UNDER TRACK)  
 Scale: 1" = 3'-0"

Sheeting design shall be stamped by a Professional Engineer licensed in Massachusetts

**LEGEND:**

	PROPOSED GAS MAIN		CENTERLINE
	ABANDONED GAS MAIN		BILL OF MATERIALS ITEM NUMBER
	EXISTING BS GAS MAIN		
	EXISTING CI GAS MAIN		
	EXISTING CG GAS MAIN		
	EXISTING PL GAS MAIN		

**TRC**  
 TRANSPORTATION RESEARCH CONSULTANTS  
 1000 WASHINGTON ST.  
 BOSTON, MA 02111  
 (617) 552-1100

APPROXIMATE SCALE 1" = 2' WHEN PLOTTED 24" x 36"  
 APPROPRIATE SCALE 1" = 6' WHEN PLOTTED 11" x 17"



1	FORWARD SHOP 7, ADD CHANGES PERMITTED TO WARD & BERNAL, FORWARD SHOP	07/11/2002	PL	00	00
2	READY FOR CONSTRUCTION	08/26/2002	JD	00	00
3					
4					
5					
6					
7					
8					
9					
10					

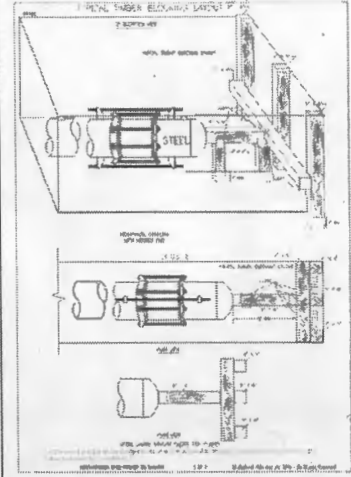
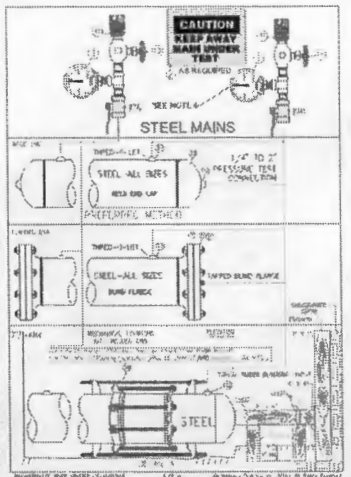
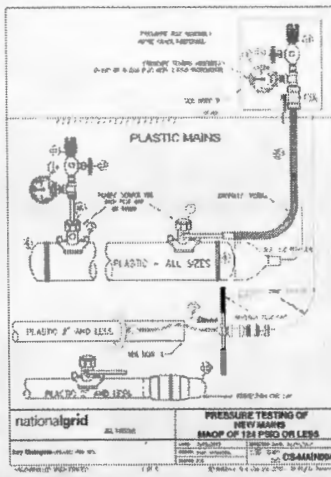
**nationalgrid**  
 40 STAMM ROAD  
 BURLINGTON, MA 01803

**FINAL**

CR101214 PROGRAM, MAIN & SERVICE REPLACEMENT  
 10/8/04 6" CI-LP, 8" PL-LP, 6" BS-LP, 4" CS-LP & 4/2" CS-LP TO 8/4/2" PL-22#  
 3-144 ELLIOT ST  
 NEWTON, MASSACHUSETTS

**PROPOSED MBTA CROSSING DETAILS**

PRO. NO.	DESIGNED	DRAWN	DATE	AMOUNT	U.S. NO.
247207	J.R. BISH	C. BISH	06/24/2002	3000000000	1444162



1. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.

2. THE USE OF ANY OF THE ABOVE METHODS SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.

3. THE USE OF ANY OF THE ABOVE METHODS SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.

4. THE USE OF ANY OF THE ABOVE METHODS SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.

5. THE USE OF ANY OF THE ABOVE METHODS SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.

6. THE USE OF ANY OF THE ABOVE METHODS SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.

7. THE USE OF ANY OF THE ABOVE METHODS SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.

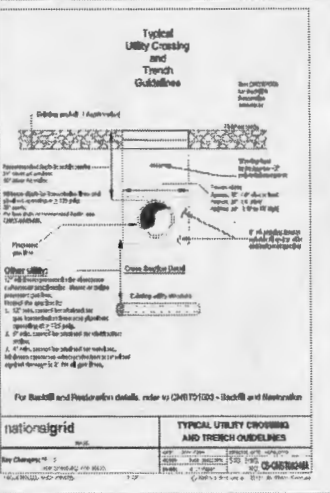
8. THE USE OF ANY OF THE ABOVE METHODS SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.

9. THE USE OF ANY OF THE ABOVE METHODS SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.

10. THE USE OF ANY OF THE ABOVE METHODS SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.

NO.	DESCRIPTION	QUANTITY	UNIT	REMARKS
1	10\"/>	100	LINEAL FEET	
2	8\"/>	200	LINEAL FEET	
3	6\"/>	300	LINEAL FEET	
4	4\"/>	400	LINEAL FEET	
5	3\"/>	500	LINEAL FEET	
6	2\"/>	600	LINEAL FEET	
7	1\"/>	700	LINEAL FEET	
8	1/2\"/>	800	LINEAL FEET	
9	3/4\"/>	900	LINEAL FEET	
10	1\"/>	1000	LINEAL FEET	

NO.	PERMISSION	DETECT POINT	NOTIFICATION
1	1. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.		
2	2. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.		
3	3. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.		
4	4. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.		
5	5. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.		
6	6. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.		
7	7. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.		
8	8. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.		
9	9. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.		
10	10. THE USE OF ANY OF THE ABOVE METHODS SHALL BE AT THE DISCRETION OF THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT.		



**TRC** TRC CONSTRUCTION COMPANY, INC.

NOT TO SCALE

**nationalgrid**

TYPICAL UTILITY CROSSINGS AND TRENCH GUIDELINES

DATE: 01/24/2002

BY: J.A. SMITH

CHECKED: C. CHEN

**nationalgrid**

40 BLYDEN ROAD  
MILWAUKEE, WI 53241

DATE: 01/24/2002

BY: J.A. SMITH

CHECKED: C. CHEN

CURIE 10214 PROGRAM, MAIN & SERVICE REPLACEMENT  
10/8/04 4" CS-UP, 8" PL-UP, 4" BS-UP & 4/2" CS-UP TO 8/4/2" PL-228  
3-144 ELLIOT ST  
NEWTON, MASSACHUSETTS

**STANDARD DETAILS**

NO. 0000000000

DATE: 01/24/2002

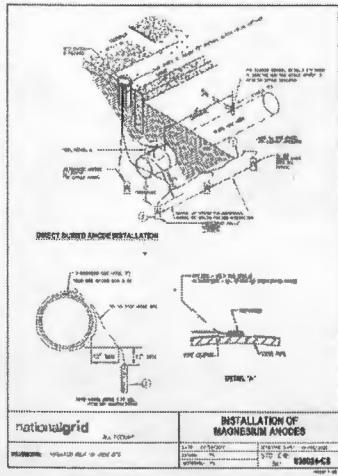
BY: J.A. SMITH

CHECKED: C. CHEN

PAGE 11 OF 13

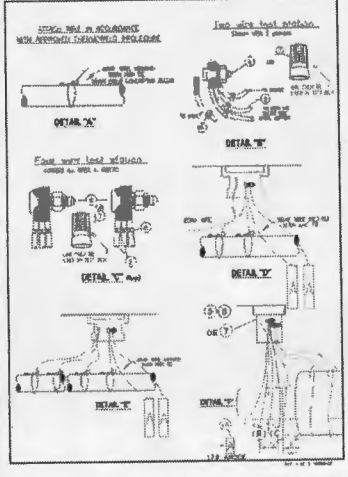
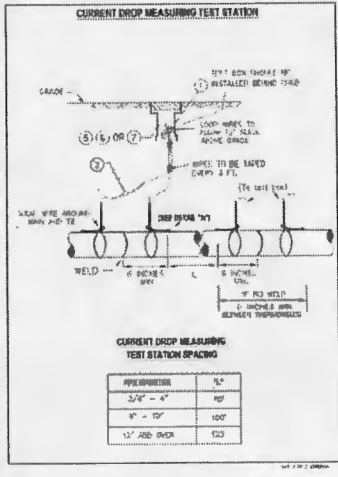
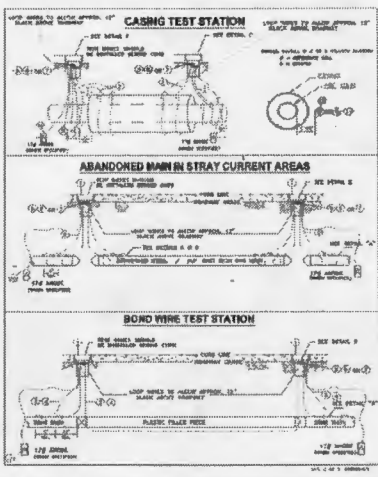
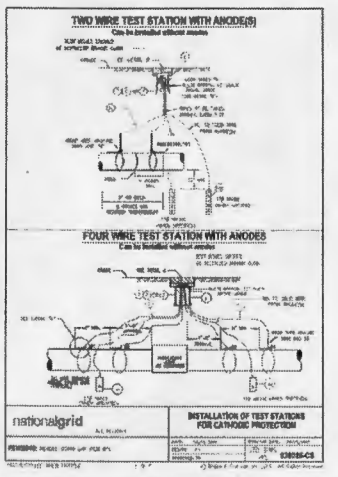
DRAWING NO. CIR-NEW-1444162 C-201





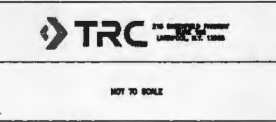
**MATERIAL LIST**

Description	Quantity	Material	Notes
1 ANODE MAGNESIUM	1	ANODE MAGNESIUM	1/2" DIA. x 12" LONG
2 ANODE WIRE	1	ANODE WIRE	1/8" DIA. x 12" LONG
3 ANODE WIRE	1	ANODE WIRE	1/8" DIA. x 12" LONG
4 ANODE WIRE	1	ANODE WIRE	1/8" DIA. x 12" LONG
5 ANODE WIRE	1	ANODE WIRE	1/8" DIA. x 12" LONG



**MATERIAL LIST**

Description	Quantity	Material	Notes
1 ANODE MAGNESIUM	1	ANODE MAGNESIUM	1/2" DIA. x 12" LONG
2 ANODE WIRE	1	ANODE WIRE	1/8" DIA. x 12" LONG
3 ANODE WIRE	1	ANODE WIRE	1/8" DIA. x 12" LONG
4 ANODE WIRE	1	ANODE WIRE	1/8" DIA. x 12" LONG
5 ANODE WIRE	1	ANODE WIRE	1/8" DIA. x 12" LONG



NO.	DESCRIPTION	DATE	BY	CHKD.	APP'D.
1	ISSUED FOR CONSTRUCTION	07/21/2014	J.S. SMITH	C. CHEN	

**nationalgrid**

40 STURGEON ROAD  
WILMINGTON, MA 01897

**FINAL**

CR101214 PROGRAM MAIN & SERVICE REPLACEMENT  
10/8/14 0-LP, 6" PL-LP, 4" BS-LP & 4/2" CS-LP TO 6/4" PL-250  
3-144 ELLIOT ST  
NEWTON, MASSACHUSETTS

**STANDARD DETAILS**

PRO. NO. 04708  
DESIGNER J.S. SMITH  
ENGINEER C. CHEN  
DATE 04/24/2012  
SHEET NO. 100000000001  
W.D. NO. 1444162

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ISSUING NO.

CIR-NEW-1444162 C-203