BOARD OF SELECTMEN
June 13, 2018
Needham Town Hall- Powers Hall
Agenda

1.	7:30	Public Hearing: Grant of Location for Eversource Energy – West Roxbury to Needham Reliability Project

Board of Selectmen
TOWN OF NEEDHAM
AGENDA FACT SHEET

MEETING DATE: 6/13/2018

Agenda Item	Public Hearing: Eversource Energy – West Roxbury to Needham Reliability Project
Presenter(s)	Domenic Nicotera, Project Manager

1. BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED

Eversource Energy requests permission to construct a new transmission line within the public ways as shown on attached drawings. Project route is described as: commences at 15 Valley Road and continues west then south for approximately ¼ of a mile and then turns to the southwest at the intersection of Peacedale Road. It follows Peacedale Road for approximately ¼ of a mile to the intersection of Great Plain Avenue where it turns to the northwest. Then it continues for approximately 3/10 of a mile to the intersection of South Street then turns to the South. Then it follows along South Street for approximately 1 4/10 miles to the intersection of High Rock Street where the route turns slightly to the north. Then it follows along High Rock Street for approximately 5/10 of a mile to the point where the existing Eversource Transmission Line right of way is located. This work would replace one of the two existing overhead transmission lines that currently run between the Baker Street and Needham Substations on a line of double circuit towers (DCT). The replacement 115 kV line would be installed on a combination of new overhead structures and underground. The Project, separating the lines on the existing DCT, is designed to improve system reliability in the event of contingencies including disruption to the existing DCT.

The Energy Facilities Siting Board has issued a final decision on this project dated May 18, 2018 and as part of the decision the Noticed Alternative Route was approved for this project. The Department of Public Works has approved this petition, based on Eversource Energy's commitment to adhere to the Town's conditions as described in the motion.

2. VOTE REQUIRED BY BOARD OF SELECTMEN

Suggested Motion:

Move that the Board of Selectmen approve and sign a petition from Eversource Energy to install a new transmission line within the public ways as shown on the Noticed Alternative Route subject to the following conditions:

1. Any design deviations must be approved in advance by the Director of Public Works/designee.
2. Any traffic management plan changes must be approved in advance by the Chief of Police/designee.
3. Construction hours are limited to Monday through Friday from 7:00 a.m. to 5:00 p.m. (excluding holidays) and 9:00 a.m. to 5:00 p.m. in school zones where the school is in use except for extraordinary circumstances approved in advance by the Town Manager.
4. The Chief of Police or his designee is authorized to order the work stopped if it is deemed necessary in his judgment, and to also alter the traffic management plan

depending on conditions in the field.

5. The final project will include gutter to gutter paving of all public ways involved in the route.
6. The applicant will conduct pre- and post-construction EMF monitoring in accordance with a protocol approved by the Town Manager on behalf of the Board of Selectmen.
7. The applicant will comply with all provisions of the Street Permit Procedures & Regulations dated April 1, 2012 specifically including the excavations, backfilling and paving provisions of Section 9.
8. The Board of Selectmen reserves the right to impose additional conditions as warranted.

3.	**BACK UP INFORMATION ATTACHED**

(Describe backup below)

(a) Letter of Application (b) Petition (c) Order (to follow) (d)Petition Plan (aerial)
(e) Project Plan & Profile Drawings (f) Notice Sent to Abutters (g) List of Abutters

Letter of Transmittal

EVERSOURCE ENERGY

247 Station Drive
Southeast 210
Westwood, MA 02090

Date: May 23, 2018
Project No.: West Roxbury to Needham DCT Separation Project
Re: Town of Needham Grant of Location Petition Package

To:

Town of Needham
Board of Selectmen
Sandra J. Cincotta
Support Services Manager

We are sending you:

☒ Attached ☐ Under separate cover via: _____

The following items:

Copies	Date	Ref. No.	Description 8½ X 11 DRAWINGS
1	05/23.2018		Cover Letter (2 pages)
1	05/23/2018		Grant of Location Petition (1 page)
1	05/23/2018		Grant of Location Order (1 page)
1	05/23/2018		1"=6,000' Ariel Locus Map (2 pages)
1	05/23/2018		Project Plan and Profile Drawings dated May 10, 2018 (41 pages)
1	05/23/2018		Exhibit List (5 pages)

Remarks:

5/23/18 @ 8:30AM HAND DELIVERED BY: AJW

Received by:

Nikki Witham 5/23/2018

Signature and date received:

EVERSOURCE
ENERGY

May 23, 2018

Town of Needham
Board of Selectmen
1471 Highland Avenue
Needham, MA 02492
Attn: Sandra J. Cincotta

RE: Petition for Grant of Location in Town Ways

Dear Mrs. Cincotta:

Pursuant to G.L. c. 166 § 22, NSTAR Electric Company d/b/a Eversource Energy (hereinafter the "Petitioner" or "Eversource"), a company incorporated for the transmission of electricity for lighting, heating or power, hereby submits this Petition for a Grant of Location ("GOL") to the Town of Needham, MA. See attached Exhibit A. The Petitioner respectfully requests the Town of Needham by order to issue the GOL to the Petitioner for construction of a new electric transmission line within public ways as provided for herein. See attached Exhibit B.

Project Description

Approximately 15,000-feet of new underground transmission line cable are proposed to be installed within the public ways of the Town of Needham. The proposed underground transmission line will consist of a "duct bank" with electric transmission cables installed within individual High-Density Polyethylene ("HDPE") conduits. The duct bank will consist of four $8^5/_8$-inch-diameter HDPE conduits, as well as two 4-inch-diameter Polyvinyl Chloride ("PVC") conduits, and two 2-inch-diameter PVC conduits to carry communications lines and ground continuity conductors.

Project Route

In the Town of Needham, the underground project route along public ways commences at a point located at 15 Valley Road and continues west then south for approximately ¼ of a mile then turns to the southwest at the intersection of Peacedale Road. It follows Peacedale Road for approximately ¼ of a mile to the intersection of Great Plain Avenue where it turns to the northwest. Then it continues for approximately $^2/_{10}$ of a mile to the intersection of South Street then turns to the South. Then it follows along South Street for approximately $1^4/_{10}$ miles to the intersection of High Rock Street where the route turns slightly to the north. Then it follows along High Rock Street for approximately $^5/_{10}$ of a mile to the point where the existing Eversource Transmission Line right-of-way is located. See Exhibit C for a 1"= 6,000' scale aerial locus map of the project.

Project Design

The HDPE and PVC conduits placed in the duct bank will be encased in a thermal concrete envelope. The typical duct bank trench will be approximately four feet wide and five feet deep. Manholes will be installed along the underground cable route spaced approximately 1,500 to 1,800 feet apart. Each manhole will be approximately 8 feet wide by 8 feet high and 24 feet long. See attached Exhibit D for project plan and profile drawings for the proposed duct bank, duct bank cross section data, trench backfill specifications.

Municipal Permits

Upon issuance of the requested GOL, Eversource's contractor shall obtain all required local municipal permits prior to beginning work within the Town (e.g., street opening, curb cut, trench permits, etc.). The Contractor shall work with the Town's engineering and public works departments to ensure that all disturbances to the public are avoided and/or minimized to the greatest extent possible. Eversource will provide contact information for appropriate personnel for use by Town officials and concerned citizens during construction activities. Lastly, please see the attached Exhibit E for a list of abutters that has been provided by the Town.

As such, Eversource respectfully requests the Town to issue a GOL as set forth above. If you have any questions or require additional information, please contact me at your earliest convenience.

Sincerely,

Theresa Feuersanger
Supervisor
T & D Rights and Survey
Eversource Energy
247 Station Drive SE210
Westwood, MA 02090

Email: Theresa.Feuersanger@eversource.com
Office: (781) 441-8277
Fax: (781)441-8909

Grant of Location Request
West Roxbury to Needham DCT Separation Project

Exhibit A

Grant of Location Petition

PETITION FOR GRANT OF LOCATION FOR
WIRES, CABLES, POLES, PIERS, ABUTMENTS, CONDUITS OR FIXTURES

Town of Needham, Massachusetts
Board of Selectmen
Date: May 23, 2018

RESPECTFULLY represents **NSTAR ELECTRIC COMPANY d/b/a/ EVERSOURCE ENERGY** (hereinafter known as the PETITIONER) a company incorporated for the transmission of electricity, lighting, heating or power, that it desires to construct upon, along, under or across the public way(s) of the Town of Needham, wires, cables, poles, piers, abutments, conduits or fixtures.

WHEREFORE, your PETITIONER prays that, after due notice and public hearing as provided by law, the Board of Selectmen may by Order grant to the PETITIONER permission to construct, in accordance with plan(s) dated **May 10, 2018**, the following (describe work):

Installation of new 115 kV underground transmission line beneath and within the public ways of the Town of Needham along Valley Road, Peacedale Road, Great Plain Avenue, South Street and High Rock Street. The underground transmission line will consist of a "duct bank" with electric transmission cables installed within individual High-Density Polyethylene ("HDPE") conduits. The duct bank will consist of four 8 $^{5}/_{8}$ -inch-diameter HDPE conduits, as well as two 4-inch-diameter Polyvinyl Chloride ("PVC") conduits, and two 2-inch-diameter PVC conduits to carry communications lines and ground continuity conductors.

The PETITIONER understands and agrees that:

1. PETITIONER shall locate and complete all work as specified and approved by the Town.

2. PETITIONER shall comply with the requirements of existing ordinances and such as may hereafter be adopted governing the construction.

3. PETITIONER shall perform all work to the requirements and satisfaction of the Department of Public Works or other such officer(s) as may be hereafter appointed by the Town.

4. PETITIONER shall not commence work until after the Energy Facility Siting Board issues the final decision authorizing the work.

For the PETITIONER:

By: _____
Theresa Feuersanger
Supervisor, T&D Rights & Survey
Date: May 23, 2018

Town of **NEEDHAM**, Massachusetts
Received and filed _____, 2018
By: _____
Title: _____

Exhibit B

Order for Grant of Location

ORDER FOR GRANT OF LOCATION FOR
WIRES, CABLES, POLES, PIERS, ABUTMENTS, CONDUITS OR FIXTURES

Town of Needham, Massachusetts
Board of Selectmen
Date: June 13, 2018

WHEREAS, **NSTAR ELECTRIC COMPANY** d/b/a/ **EVERSOURCE ENERGY** (hereinafter known as the PETITIONER) has petitioned for permission to construct a line for the transmission of electricity for lighting, heating or power upon, along, under or across the public way(s) of the Town of Needham, the following (describe work):

Installation of new 115 kV underground transmission line beneath and within the public ways of the Town of Needham along Valley Road, Peacedale Road, Great Plain Avenue, South Street and High Rock Street. The underground transmission line will consist of a "duct bank" with electric transmission cables installed within individual High-Density Polyethylene ("HDPE") conduits. The duct bank will consist of four 8 $^5/_8$ -inch-diameter HDPE conduits, as well as two 4-inch-diameter Polyvinyl Chloride ("PVC") conduits, and two 2-inch-diameter PVC conduits to carry communications lines and ground continuity conductors.

AND WHEREAS, notice has been given and a hearing held on said petition as provided by law;

NOW THEREFORE BE IT ORDERED that the PETITIONER be and hereby is granted permission to construct and a location for the construction described above, all in accordance with the following conditions:

1. PETITIONER shall locate and complete all work as shown by plan(s) dated **May 10, 2018**, and as may have been amended by the Town.

2. PETITIONER shall comply with the requirements of existing ordinances and such as may hereafter be adopted governing the construction.

3. PETITIONER shall perform all work to the requirements and satisfaction of the Board of Selectmen or other such officer(s) as may be hereafter appointed by the Town.

4. PETITIONER shall not commence work until after the Energy Facility Siting Board issues the final decision authorizing the work.

5. Other conditions as voted by the Board of Selectmen (Attached)

1. _____
2. _____
3. _____
4. _____
5. _____

Board of Selectmen
the Town of
NEEDHAM

CERTIFICATE

We hereby certify that the foregoing Order was adopted by the Board of Selectmen on the _____ day of _____, 2018 after due notice and public hearing as prescribed by Section 22 of Chapter 166 of the General Laws and any additions or amendments thereto, after written notice of the time and place of the hearing mailed at least seven days prior to the date of the hearing by the Selectmen to all owners of real estate abutting upon that part of the way(s) upon , along or across which the line is to be constructed under said Order, as determine by the last preceding assessment for taxation, and public hearing held on the _____ day of _____ 2018 at _____ in said Town.

1. _____
2. _____
3. _____
4. _____
5. _____

Board of Selectmen
the Town of
NEEDHAM

CERTIFICATE

I hereby certify that the foregoing are true copies of the Order of the Board of Selectmen of the Town of NEEDHAM, Massachusetts, duly adopted on the _____ day of _____, 2018, and recorded with the records of location Orders of said Town, in Book _____, Page _____ and of the certificate of notice of hearing thereon required by Section 22 of Chapter 166 of the General Laws and any additions thereto or amendments thereof, as the same appear of record.

Certified Attest:_____ Date:_____
Clerk of the Town of **NEEDHAM,** Massachusetts

Grant of Location Request
West Roxbury to Needham DCT Separation Project

Exhibit C

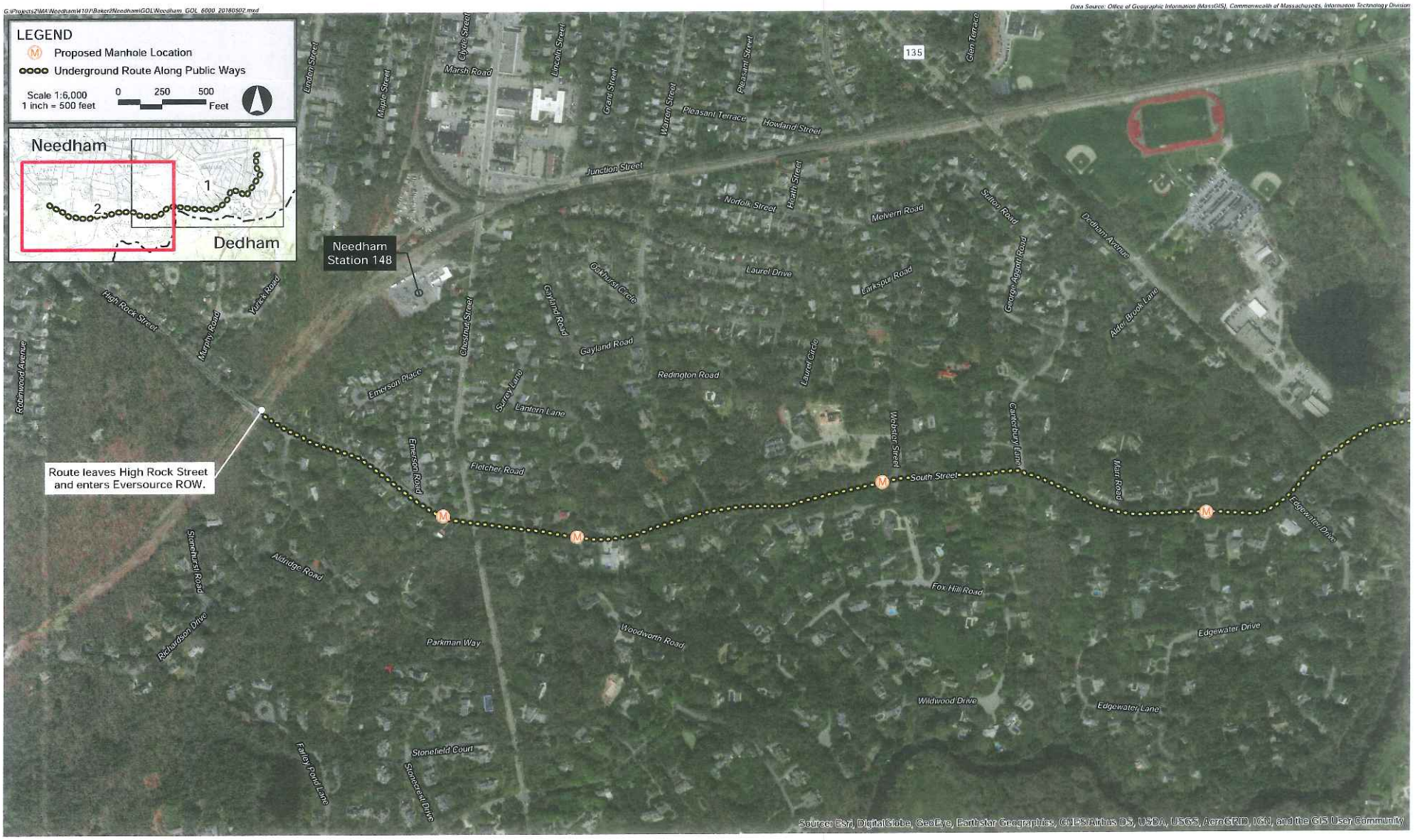
1"=6,000' Scale Aerial Locus Map

West Roxbury to Needham Reliability Project

EVERSOURCE

Exhibit C, Page 1 of 2

Aerial Locus Map



West Roxbury to Needham Reliability Project

EVERSOURCE

Aerial Locus Map

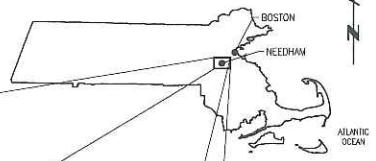
Grant of Location Request
West Roxbury to Needham DCT Separation Project

Exhibit D

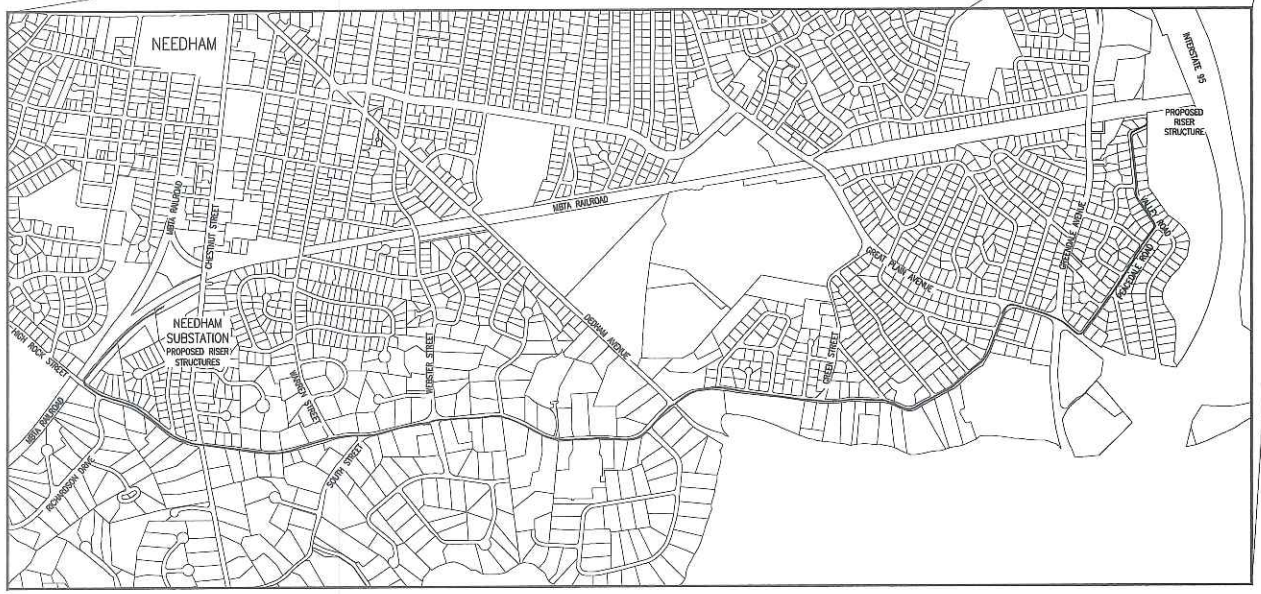
Project Plan and Profile Drawings

NSTAR ELECTRIC COMPANY d/b/a EVERSOURCE ENERGY
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE

DRAWING MANIFEST			
DRAWING NO.	TITLE/DESCRIPTION	REVISION	DATE
1 OF 41	COVER SHEET	0	5/10/2018
2 OF 41	KEY AND GENERAL NOTES	0	5/10/2018
3 OF 41	PLAN AND PROFILE STA. 0+00 TO STA. 5+00	0	5/10/2018
4 OF 41	PLAN AND PROFILE STA. 5+00 TO STA. 10+00	0	5/10/2018
5 OF 41	PLAN AND PROFILE STA. 10+00 TO STA. 15+00	0	5/10/2018
6 OF 41	PLAN AND PROFILE STA. 15+00 TO STA. 20+00	0	5/10/2018
7 OF 41	PLAN AND PROFILE STA. 20+00 TO STA. 25+00	0	5/10/2018
8 OF 41	PLAN AND PROFILE STA. 25+00 TO STA. 30+00	0	5/10/2018
9 OF 41	PLAN AND PROFILE STA. 30+00 TO STA. 35+00	0	5/10/2018
10 OF 41	PLAN AND PROFILE STA. 35+00 TO STA. 40+00	0	5/10/2018
11 OF 41	PLAN AND PROFILE STA. 40+00 TO STA. 45+00	0	5/10/2018
12 OF 41	PLAN AND PROFILE STA. 45+00 TO STA. 50+00	0	5/10/2018
13 OF 41	PLAN AND PROFILE STA. 50+00 TO STA. 55+00	0	5/10/2018
14 OF 41	PLAN AND PROFILE STA. 55+00 TO STA. 60+00	0	5/10/2018
15 OF 41	PLAN AND PROFILE STA. 60+00 TO STA. 65+00	0	5/10/2018
16 OF 41	PLAN AND PROFILE STA. 65+00 TO STA. 70+00	0	5/10/2018
17 OF 41	PLAN AND PROFILE STA. 70+00 TO STA. 75+00	0	5/10/2018
18 OF 41	PLAN AND PROFILE STA. 75+00 TO STA. 80+00	0	5/10/2018
19 OF 41	PLAN AND PROFILE STA. 80+00 TO STA. 85+00	0	5/10/2018
20 OF 41	PLAN AND PROFILE STA. 85+00 TO STA. 90+00	0	5/10/2018
21 OF 41	PLAN AND PROFILE STA. 90+00 TO STA. 95+00	0	5/10/2018
22 OF 41	PLAN AND PROFILE STA. 95+00 TO STA. 100+00	0	5/10/2018
23 OF 41	PLAN AND PROFILE STA. 100+00 TO STA. 105+00	0	5/10/2018
24 OF 41	PLAN AND PROFILE STA. 105+00 TO STA. 110+00	0	5/10/2018
25 OF 41	PLAN AND PROFILE STA. 110+00 TO STA. 115+00	0	5/10/2018
26 OF 41	PLAN AND PROFILE STA. 115+00 TO STA. 120+00	0	5/10/2018
27 OF 41	PLAN AND PROFILE STA. 120+00 TO STA. 125+00	0	5/10/2018
28 OF 41	PLAN AND PROFILE STA. 125+00 TO STA. 130+00	0	5/10/2018
29 OF 41	PLAN AND PROFILE STA. 130+00 TO STA. 135+00	0	5/10/2018
30 OF 41	PLAN AND PROFILE STA. 135+00 TO STA. 140+00	0	5/10/2018
31 OF 41	PLAN AND PROFILE STA. 140+00 TO STA. 145+00	0	5/10/2018
32 OF 41	PLAN AND PROFILE STA. 145+00 TO STA. 150+00	0	5/10/2018
33 OF 41	PLAN AND PROFILE STA. 150+00 TO STA. 153+00	0	5/10/2018
34 OF 41	DUCT BANK AND TRENCH DETAILS	0	5/10/2018
35 OF 41	DUCT BANK AND TRENCH DETAILS	0	5/10/2018
36 OF 41	RISER SWEEP DETAILS	0	5/10/2018
37 OF 41	MANHOLE DETAILS	0	5/10/2018
38 OF 41	MANHOLE PROFILE DETAILS	0	5/10/2018
39 OF 41	HANDHOLE DETAILS	0	5/10/2018
40 OF 41	MANHOLE COVER DETAILS	0	5/10/2018
41 OF 41	SHEATH BONDING DIAGRAM	0	5/10/2018



AREA MAP
MASSACHUSETTS
N.T.S.



VICINITY MAP
N.T.S.

THREE BUSINESS DAYS BEFORE YOU DIG CALL
MASSACHUSETTS 811
TOLL FREE
811 or 1-888-344-7233

POWER ENGINEERS
www.powerengineers.com

EVERSOURCE DESIGN ENGINEER:

POWER ENGINEERS
PROJECT ENGINEER: TODD GOYETTE

EVERSOURCE WORK ORDER NUMBER:

POWER ENGINEERS
PROJECT NUMBER: 145121

COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48181
REGISTERED PROFESSIONAL ENGINEER

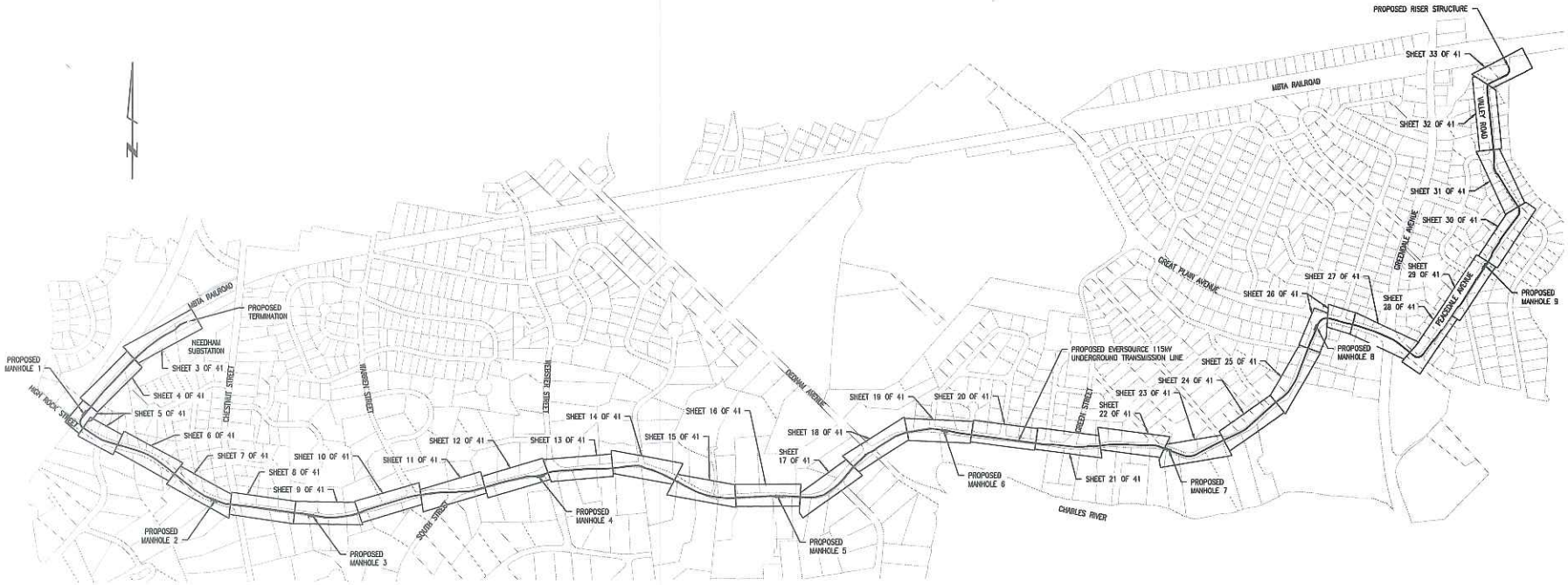
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

REVISION

EVERSOURCE ENERGY

COVER SHEET
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE:	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
N.T.S	5/10/18	DRC	TPB	TSG	1 OF 41	0



KEY

LEGEND

BIT. CONC.	BITUMINOUS CONCRETE
	CABLE MANHOLE
	CATCH BASIN
CONC.	CONCRETE
	CONCRETE BOUND
	CONCRETE BOUND W/DRILL HOLE
	CONIFEROUS TREE
	DECIDUOUS TREE
	STORM DRAIN MANHOLE
	ELECTRIC HANDHOLE
	ELECTRIC MANHOLE
	GAS GATE
	HYDRANT
INV.	INVERT
	LAMP
	LIGHT POLE
	MAIL BOX
	MANHOLE
	METAL POST
R.O.W.	RIGHT-OF-WAY
	SANITARY MANHOLE
	SHRUB
	STONE BOUND W/DRILL HOLE
	TELEPHONE MANHOLE
	TRAFFIC CONTROL BOX
	UTILITY ACCESS PANEL
	UTILITY POLE
	UTILITY POLE W/LIGHT
	UTILITY POLE W/TRANSFORMER
	WATER GATE
	WATER MANHOLE
— w —	WATER LINE
— T —	TELEPHONE LINE
— D —	DRAIN LINE
— S —	SEWER LINE
— G —	GAS LINE
— E —	UNDERGROUND ELECTRIC CONDUIT
— OH —	OVERHEAD ELECTRIC WIRE
	CABLE TELEVISION CONDUIT
	TREELINE
	BRUSHLINE
	FENCE
	WETLANDS

NOTES:

1. THE UTILITIES SHOWN HEREON ARE BASED ON FIELD SURVEYS, AERIAL PHOTOGRAPHY AND RECORD DOCUMENTS. OTHER FACILITIES MAY EXIST NOT DISCOVERED THROUGH THE RECORD CHECK. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH HORIZONTAL AND VERTICAL, OF ALL UTILITIES THROUGH THE APPROPRIATE UTILITY COMPANIES. CALL BEFORE YOU DIG ~ 1-888-344-7233.
2. VERTICAL DATUM IS BASED ON NAVD 1988, HORIZONTAL DATUM IS BASED ON MASSACHUSETTS PLANE COORDINATE GRID VALUES IN US FEET, NAD 1983 (2011).
3. ALL VERTICAL CURVES ARE 500' UNLESS OTHERWISE NOTED.
4. DUCTBANK SHALL MAINTAIN MINIMUM DEPTH OF 3'-0" IN THE ROADWAY UNLESS OTHERWISE NOTED. MAINTAIN A MINIMUM DEPTH OF 2'-6" IN EVERSOURCE RIGHT OF WAY. PREFERRED DEPTH OF 5'-0" ON PEACEDALE AVE. AND VALLEY RD. UNLESS OTHERWISE NOTED.
5. SIZE AND DEPTH OF ALL TELEPHONE, GAS, AND UNDERGROUND ELECTRICAL UTILITIES ARE ASSUMED.
6. DEPTH OF ALL WATER UTILITIES ARE BASED ON AS-BUILT DATA PROVIDED BY THE UTILITY OWNER.
7. DETAIL DESIGN MAY BE OPTIMIZED TO REFLECT ACTUAL CONDITIONS.
8. ALL EXISTING ROAD MARKINGS ARE ESTIMATED.
9. CONTRACTOR IS RESPONSIBLE FOR PLACING SILT FENCE OR OTHER APPROVED EROSION CONTROL DEVICES. WETLANDS DEPICTED HEREIN WERE DELINEATED BY EPSILON ASSOCIATES, INC. IN 2016.
10. CONTRACTOR SHALL INSTALL SILT SACK OR APPROVED EQUAL TO ALL CATCH BASINS OR CURB INLETS WITHIN THE DEFINED WORK ZONE.
11. CONTRACTOR SHALL ENSURE PROPER CONTROLS ARE IN PLACE SO WORKERS DO NOT TRACK SEDIMENT PAST THE LIMITS OF WORK.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY & ALL UTILITIES AND FACILITIES DAMAGED DURING CONSTRUCTION IN ACCORDANCE WITH THE APPLICABLE UTILITY SPECIFICATION, LOCAL AND/OR STATE REQUIREMENTS.

THREE BUSINESS DAYS BEFORE YOU DIG CALL
MASSACHUSETTS 811
TOLL FREE
811 or 1-888-344-7233

POWER ENGINEERS
www.powerengineers.com

COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 45181
REGISTERED PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

REVISION

EVERSOURCE ENERGY

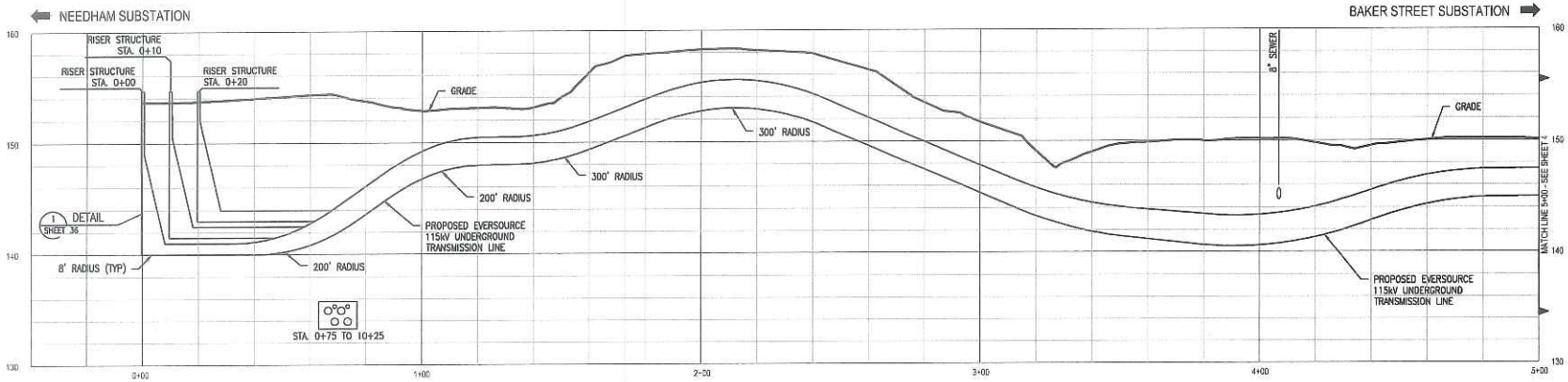
KEY AND GENERAL NOTES

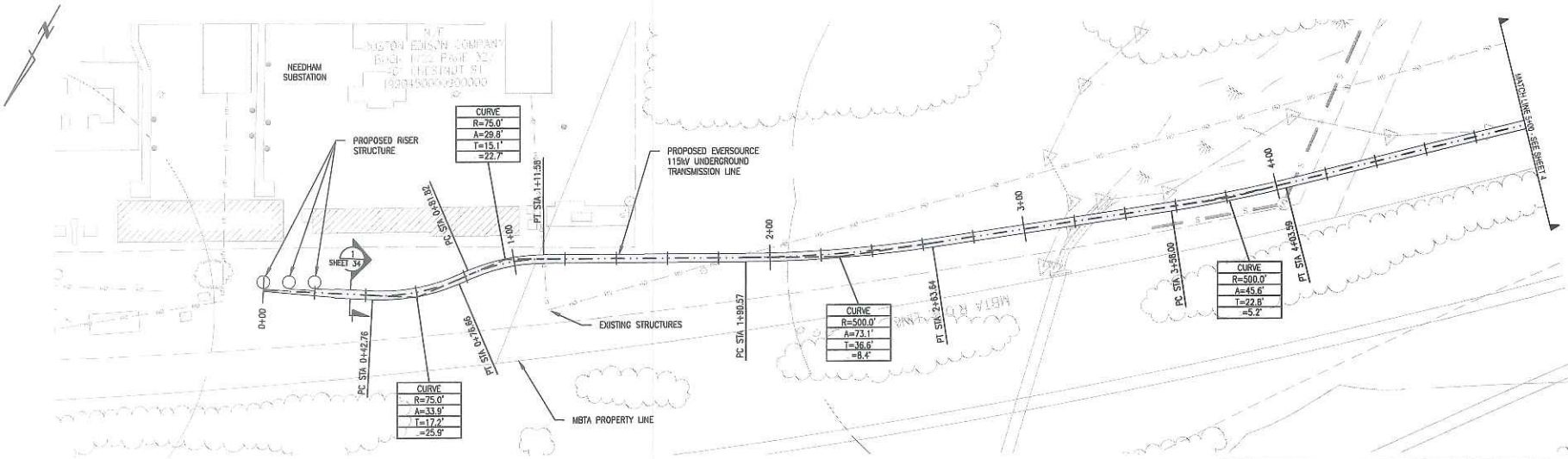
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT

115kV UNDERGROUND TRANSMISSION LINE

NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
N.T.S.	5/10/18	DRC	TPB	TSG	2 OF 41	0





THREE BUSINESS DAYS BEFORE YOU DIG CALL
MASSACHUSETTS 811
TOLL FREE
811 or 1-888-344-7233

POWER ENGINEERS
www.powereng.com

NOTES:

1. THE UTILITIES SHOWN HEREON ARE BASED ON FIELD SURVEYS, AERIAL PHOTOGRAPHY AND RECORD DOCUMENTS. OTHER FACILITIES MAY EXIST NOT DISCOVERED THROUGH THE RECORD CHECK. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH HORIZONTAL AND VERTICAL, OF ALL UTILITIES THROUGH THE APPROPRIATE UTILITY COMPANIES. CALL BEFORE YOU DIG – 1-888-344-7233.

2. PROPERTY BOUNDARIES AND TOWN WAYS HAVE BEEN SUPPLIED FROM TOWN OF NEEDHAM GIS AND ARE NOT BASED ON A GROUND SURVEY. REVISED PLANS WILL INCORPORATE THE BOUNDARIES OF THE TOWN WAYS, BASED ON TOWN LAYOUTS OF ROADWAYS AND ADJACENT PROPERTY, IN CORRELATION WITH MONUMENTS LOCATED IN THE FIELD.

COMMONWEALTH OF MASSACHUSETTS
TODD P. GOVSITE
ELECTRICAL
No. 43181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

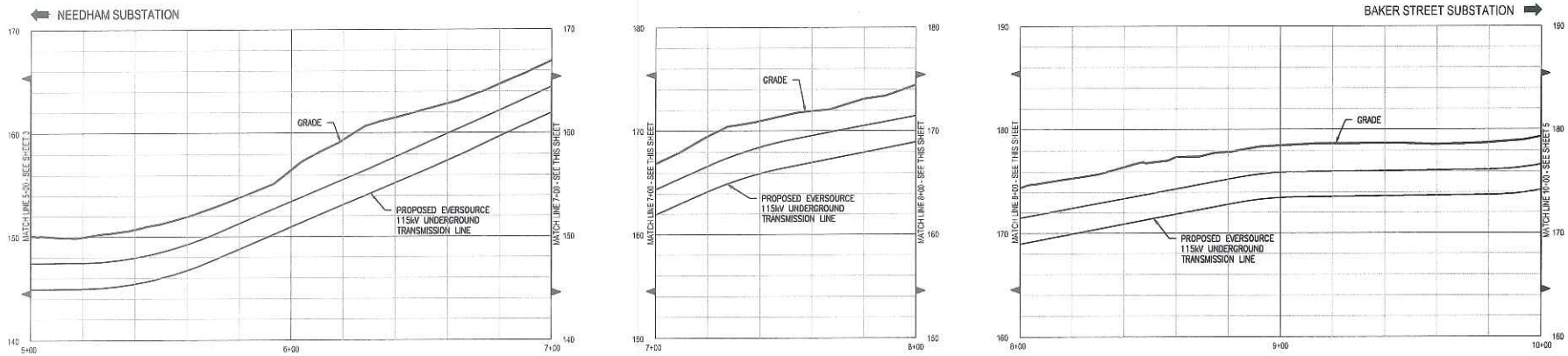
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

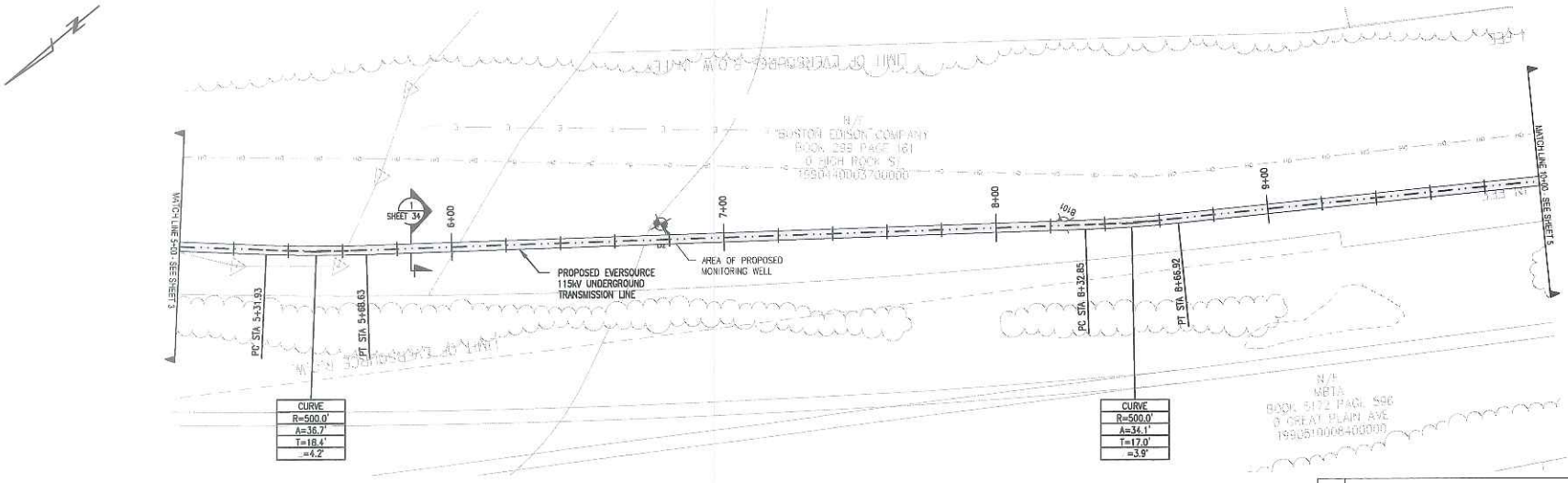
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 0+00 TO 5+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H. 1"=20' V. 1"=5'	5/10/18	DRC	TPB	TSG	3 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE ELECTRICAL No. 49161
PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

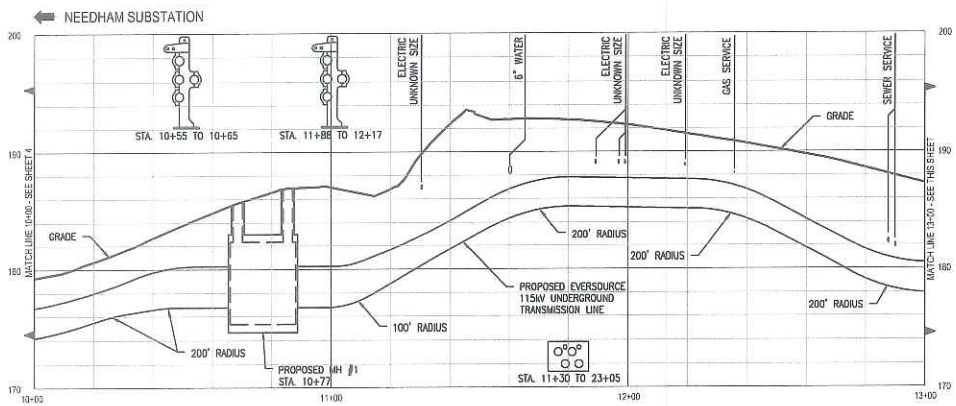
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

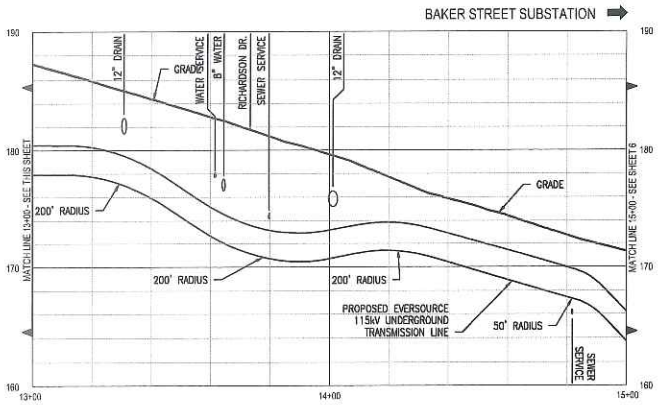
REVISION

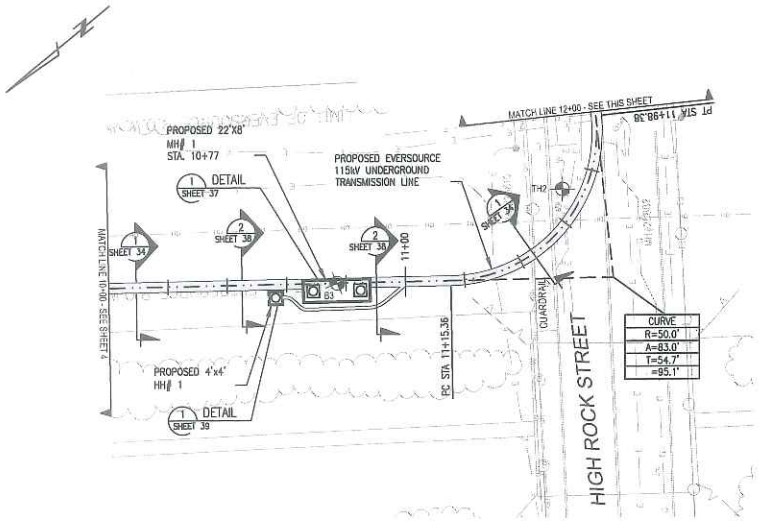
EVERSOURCE ENERGY

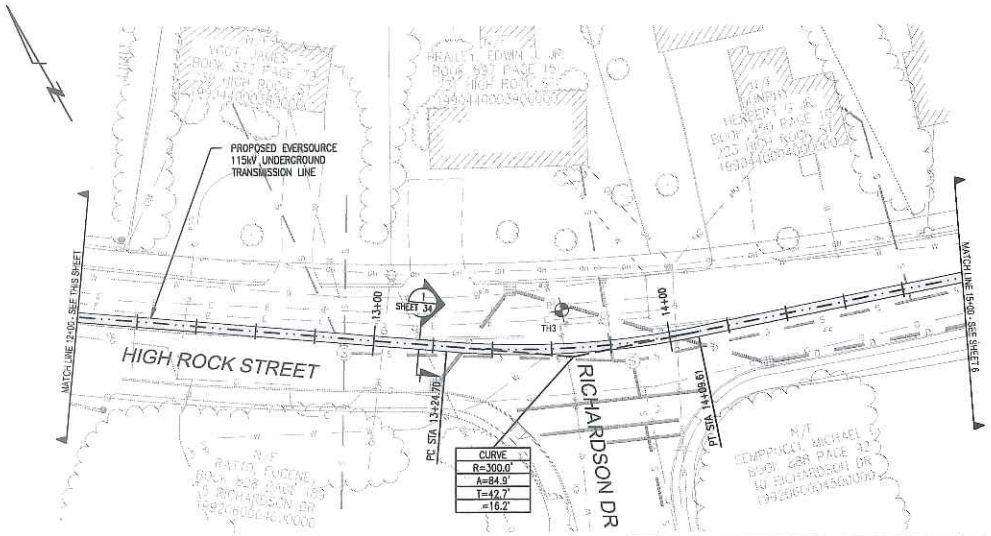
PLAN AND PROFILE STA 5+00 TO 10+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	4 OF 41	0









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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

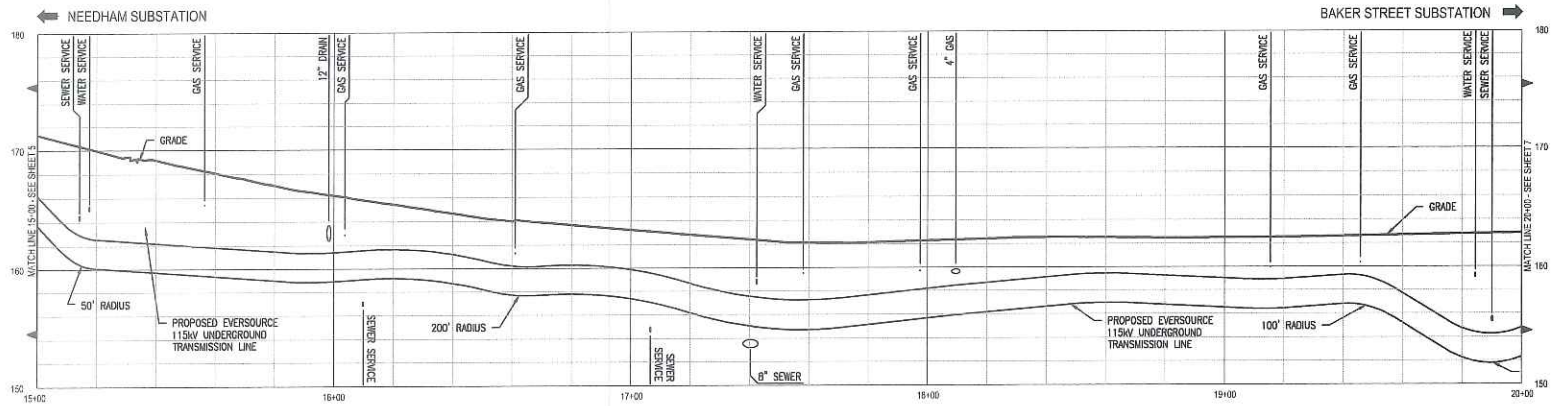
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

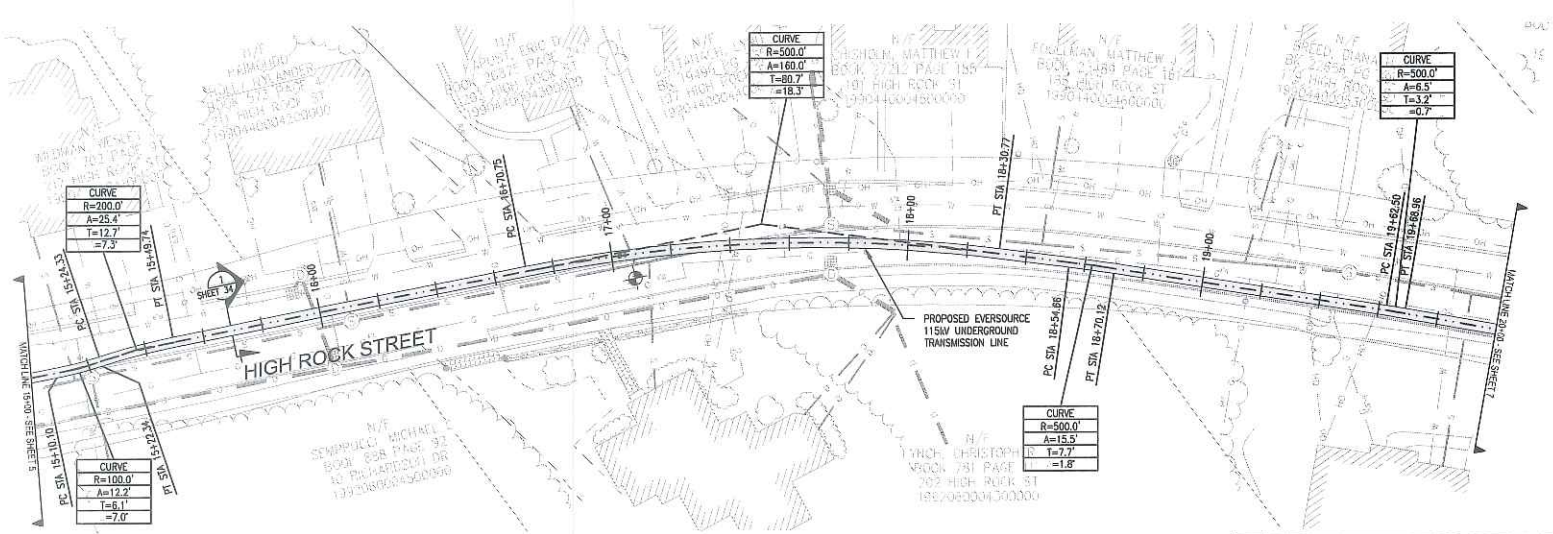
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 10+00 TO 15+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM - WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHKD.	APPR.	DRAWING NO.	REV.
H. 1"=20' V. 1"=5'	5/10/18	DRC	TPB	TSG	5 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 45161
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

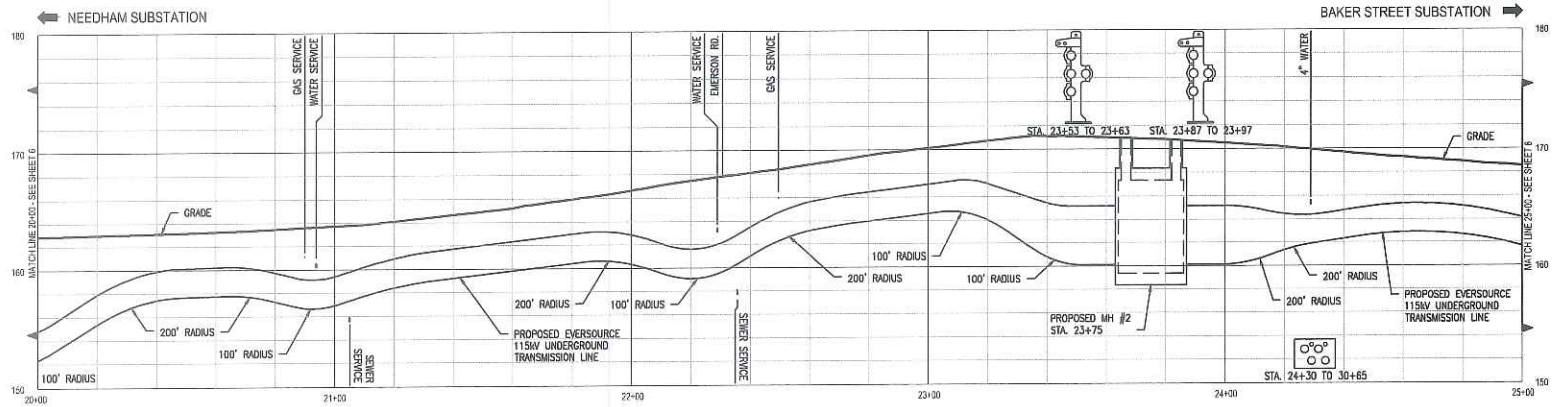
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

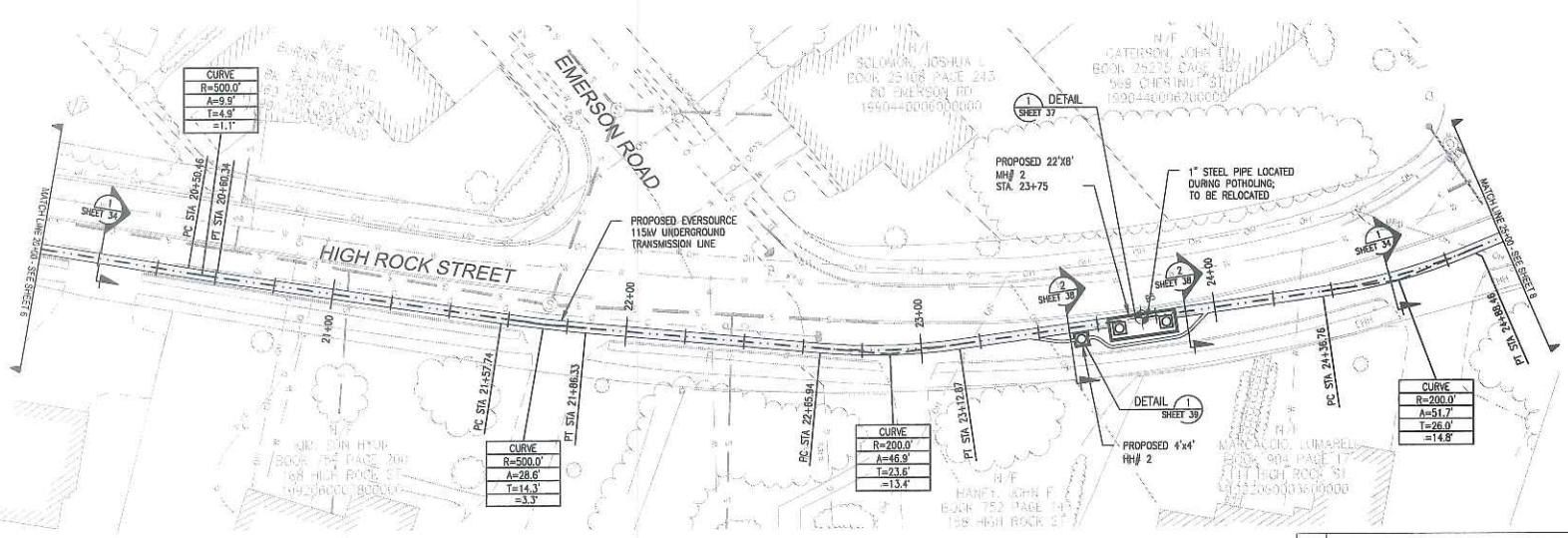
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 15+00 TO 20+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	6 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48161
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

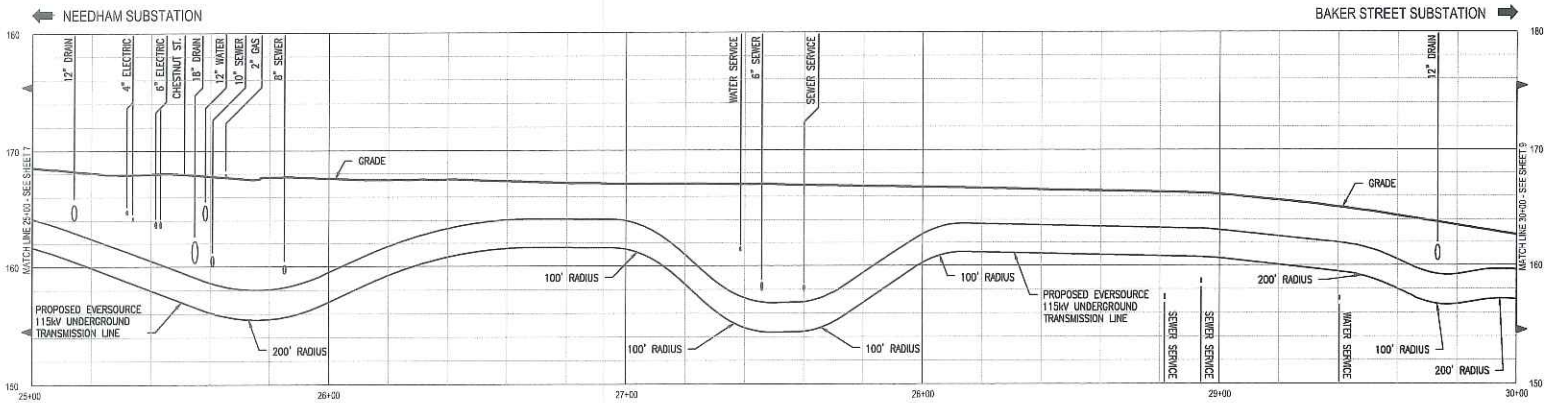
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

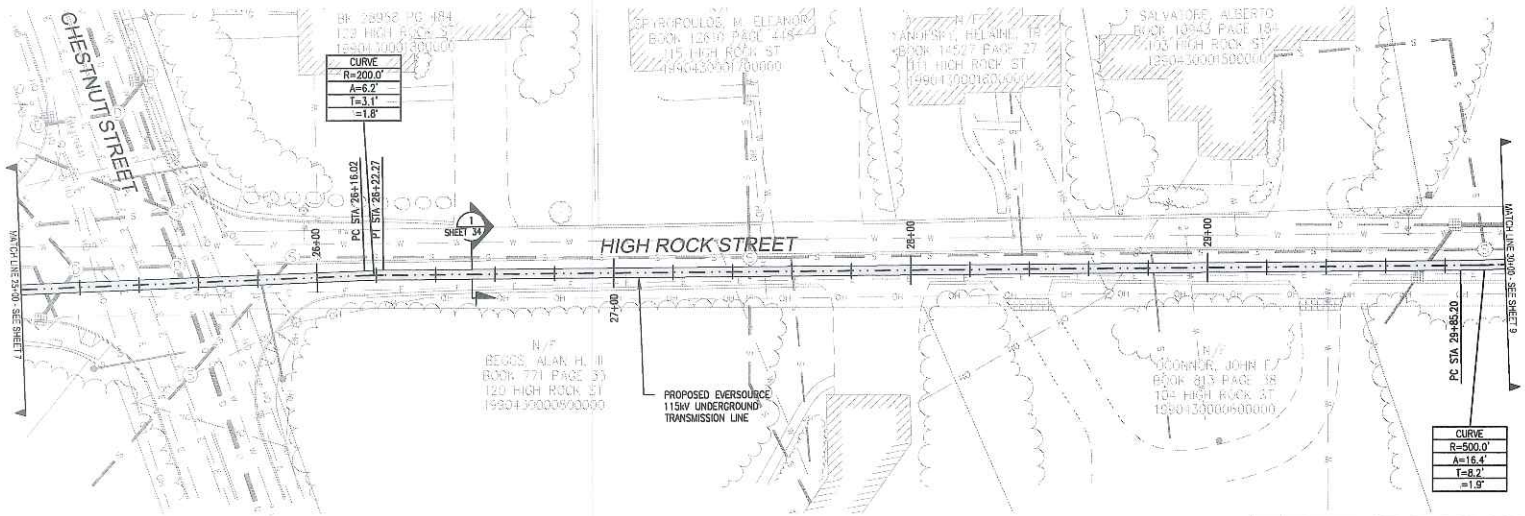
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 20+00 TO 25+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM - WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted H: 1"=20' V: 1"=5'	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
	5/10/18	DRC	TPB	TSG	7 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. DOYETTE
ELECTRICAL
No. 45161
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

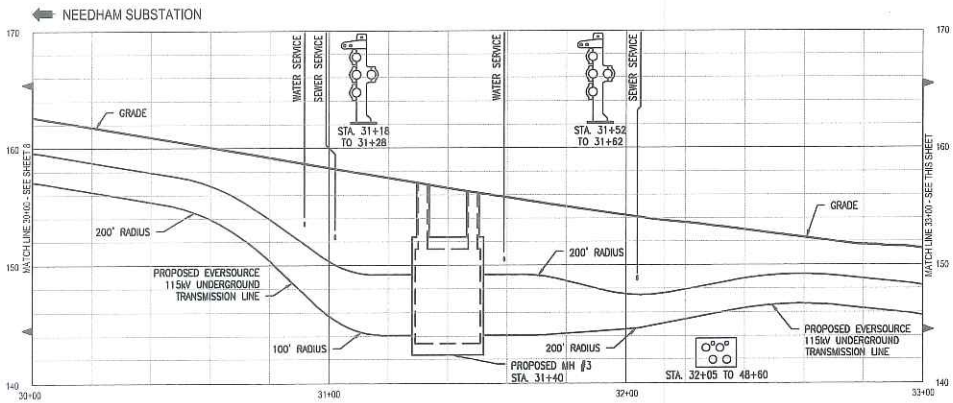
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

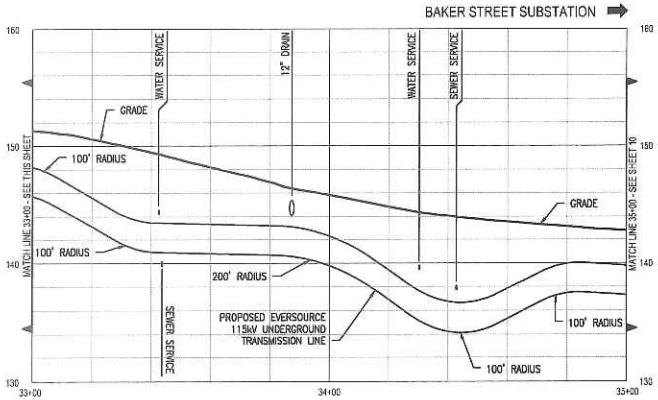
REVISION

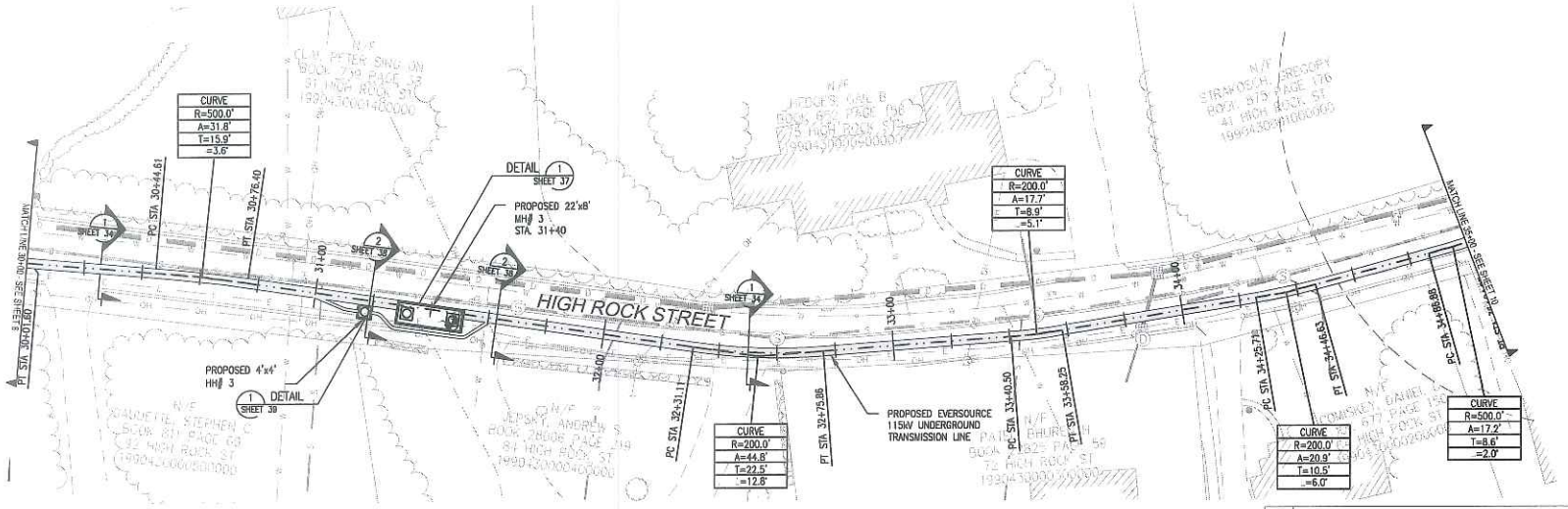
EVERSOURCE ENERGY

PLAN AND PROFILE STA 25+00 TO 30+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	8 OF 41	0







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COMMONWEALTH OF MASSACHUSETTS
TODD S. BOYETTE
ELECTRICAL
No. 48101
PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

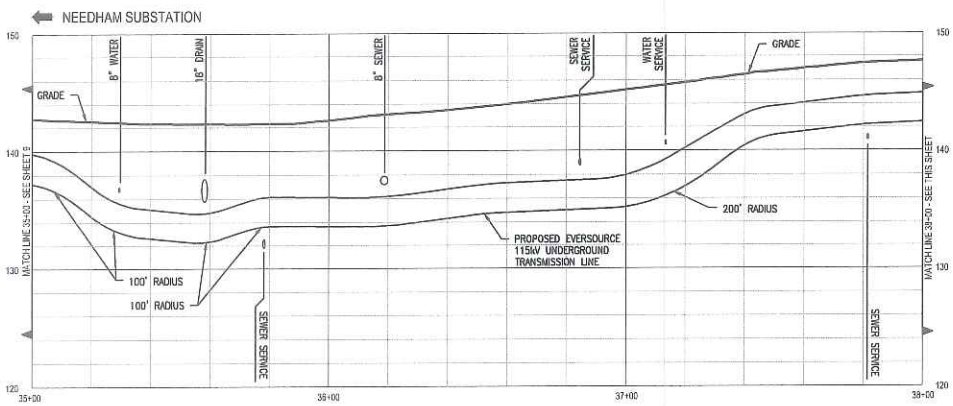
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

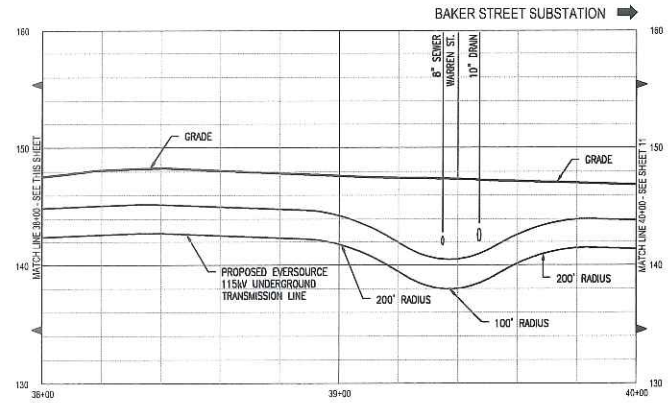
REVISION

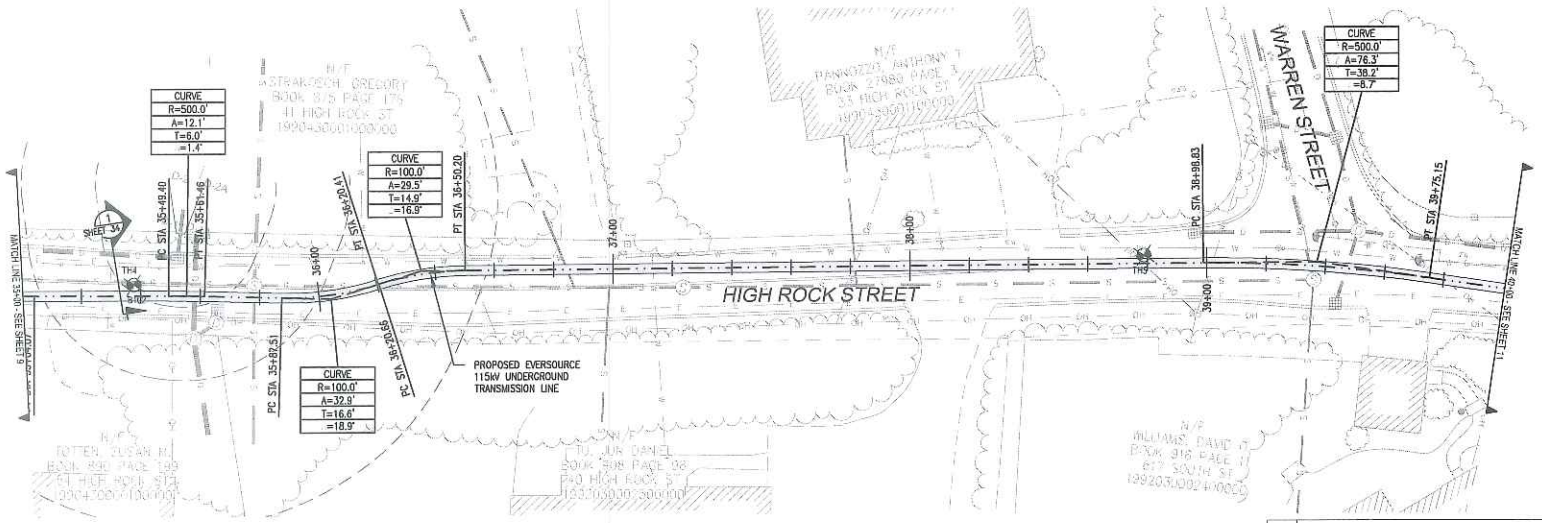
EVERSOURCE ENERGY

PLAN AND PROFILE STA 30+00 TO 35+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted H: 1"=20' V: 1"=5'	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
	5/10/18	DRC	TPB	TSG	9 OF 41	0







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COMMONWEALTH OF MASSACHUSETTS
TODD S. BOYETTE
ELECTRICAL
No. 48161
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

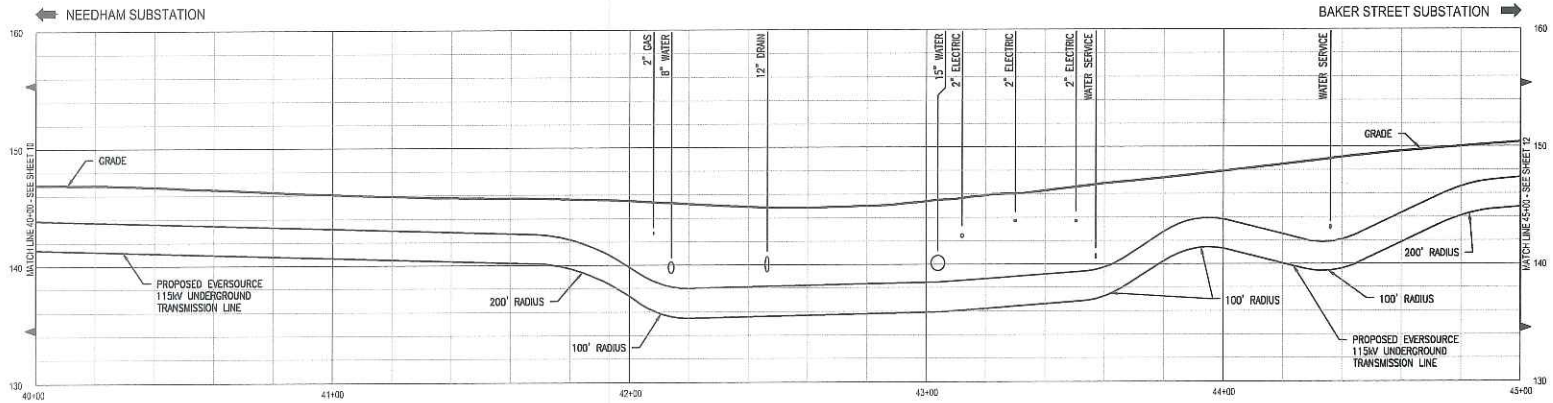
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

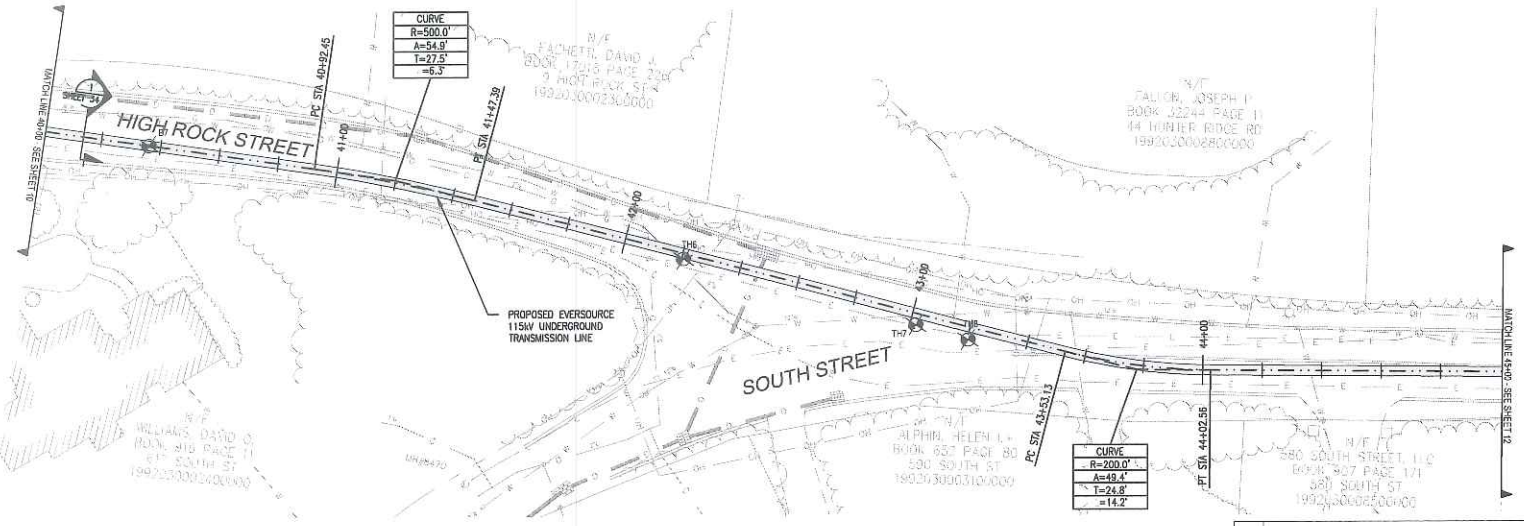
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 35+00 TO 40+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	10 OF 41	0





NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

REVISION

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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48181
REGISTERED PROFESSIONAL ENGINEER

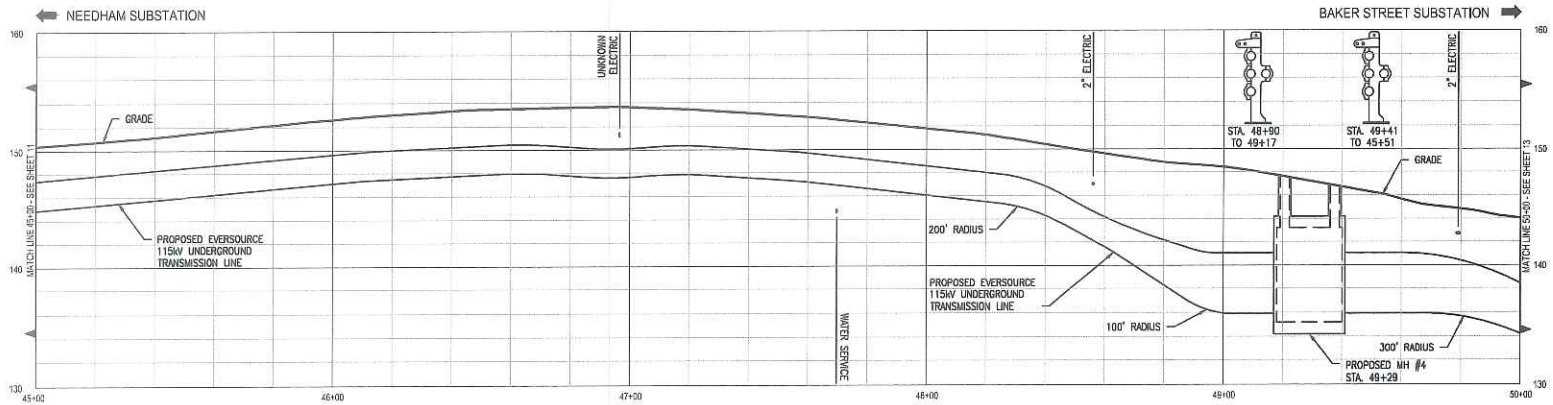
0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

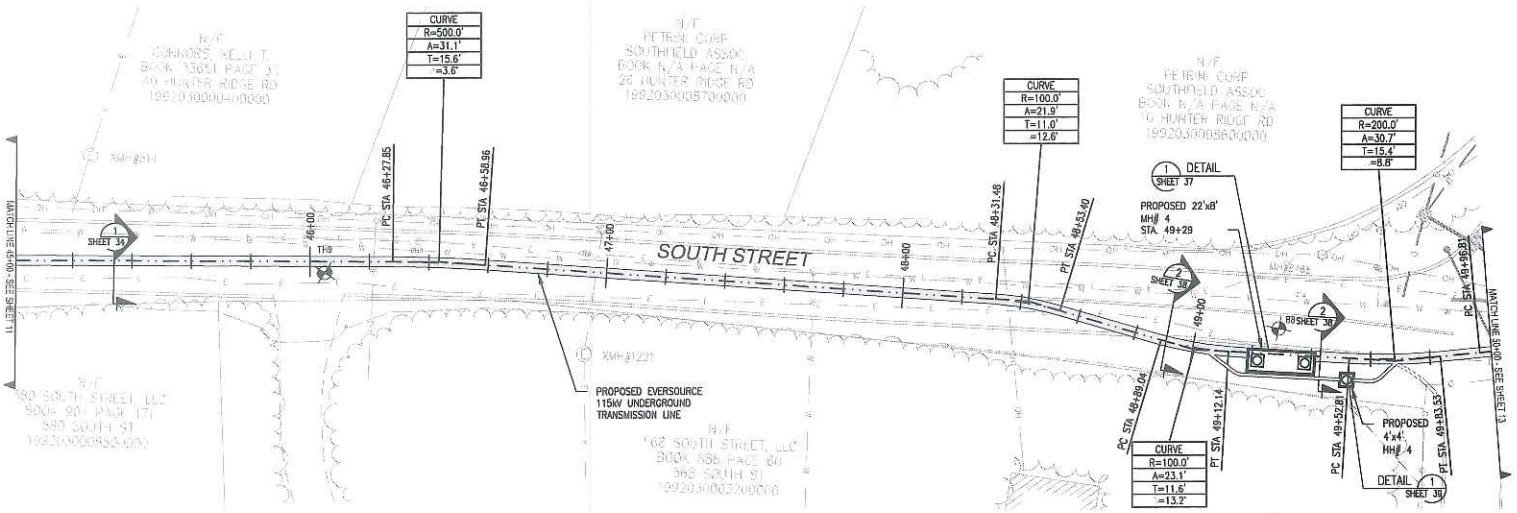
0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

EVERSOURCE ENERGY

PLAN AND PROFILE STA 40+00 TO 45+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	11 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 49181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

REVISION

EVERSOURCE ENERGY

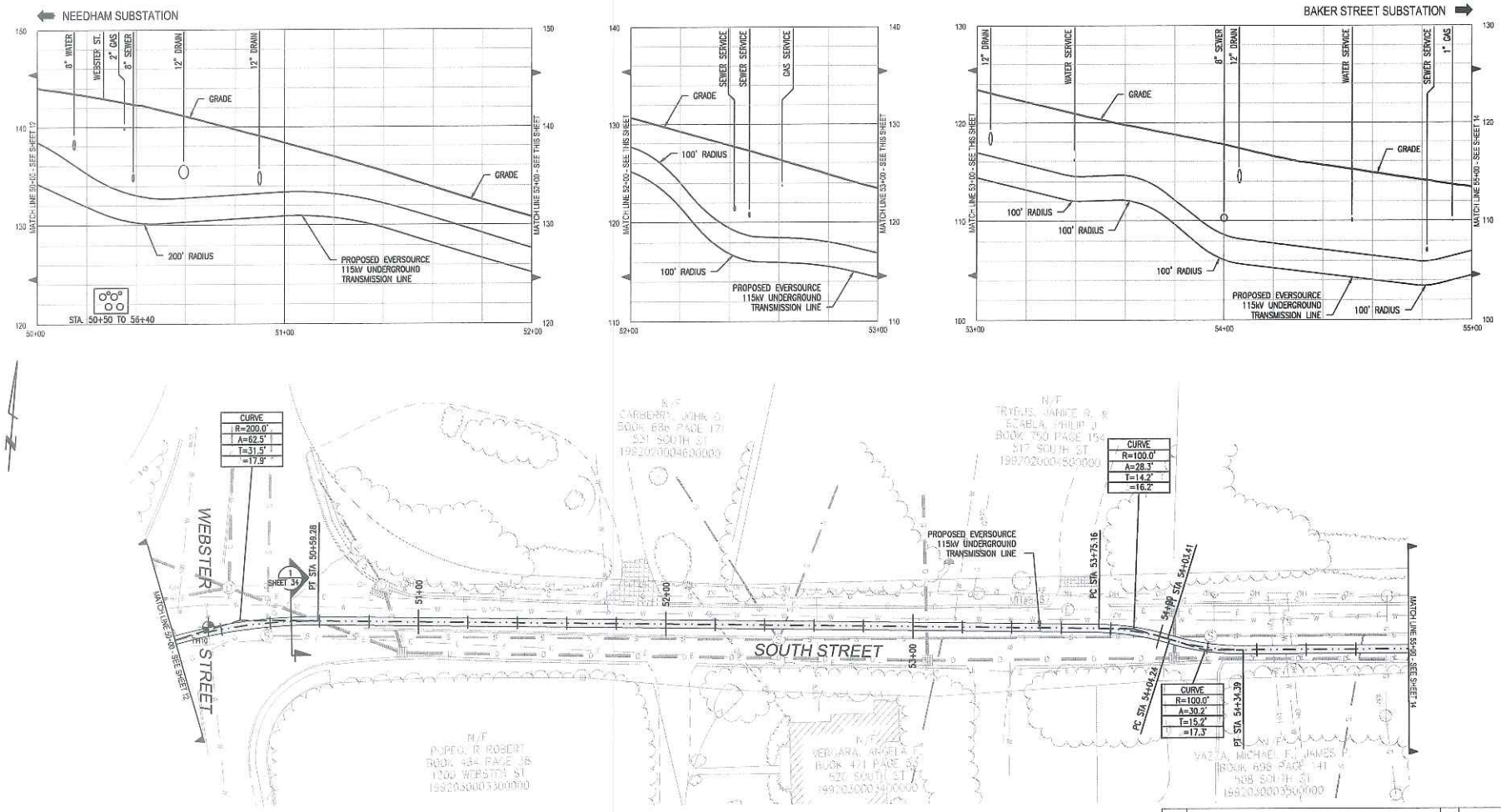
PLAN AND PROFILE STA 45+00 TO 50+00

WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT

115kV UNDERGROUND TRANSMISSION LINE

NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H. 1"=20' V. 1"=5'	5/10/18	DRC	TPB	TSG	12 OF 41	0



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COMMONWEALTH OF MASSACHUSETTS
TODD R. GOYETTE
ELECTRICAL
No. 48181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

REVISION

EVERSOURCE ENERGY

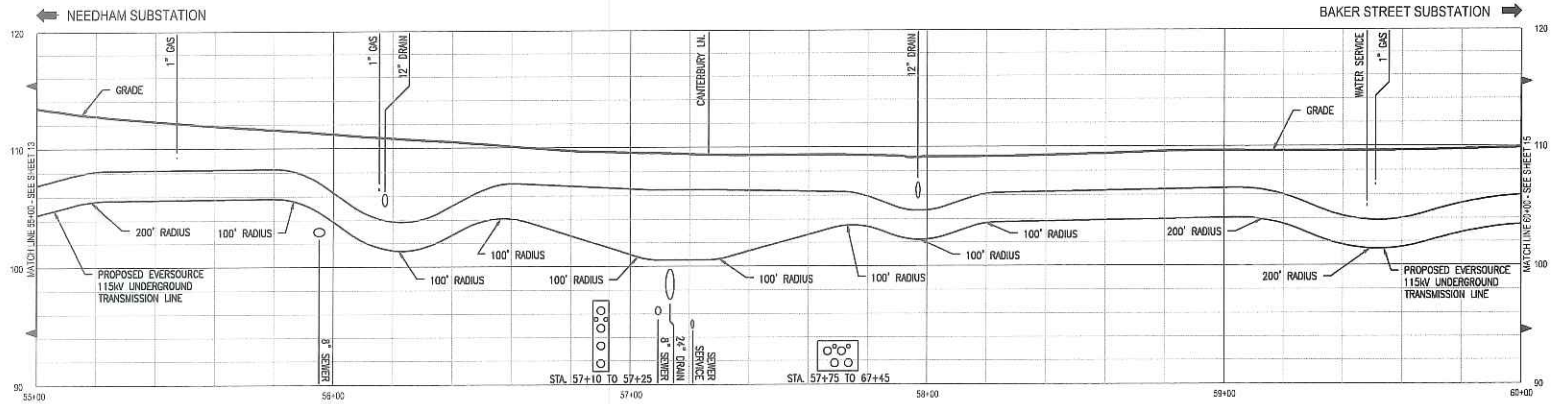
PLAN AND PROFILE STA 50+00 TO 55+00

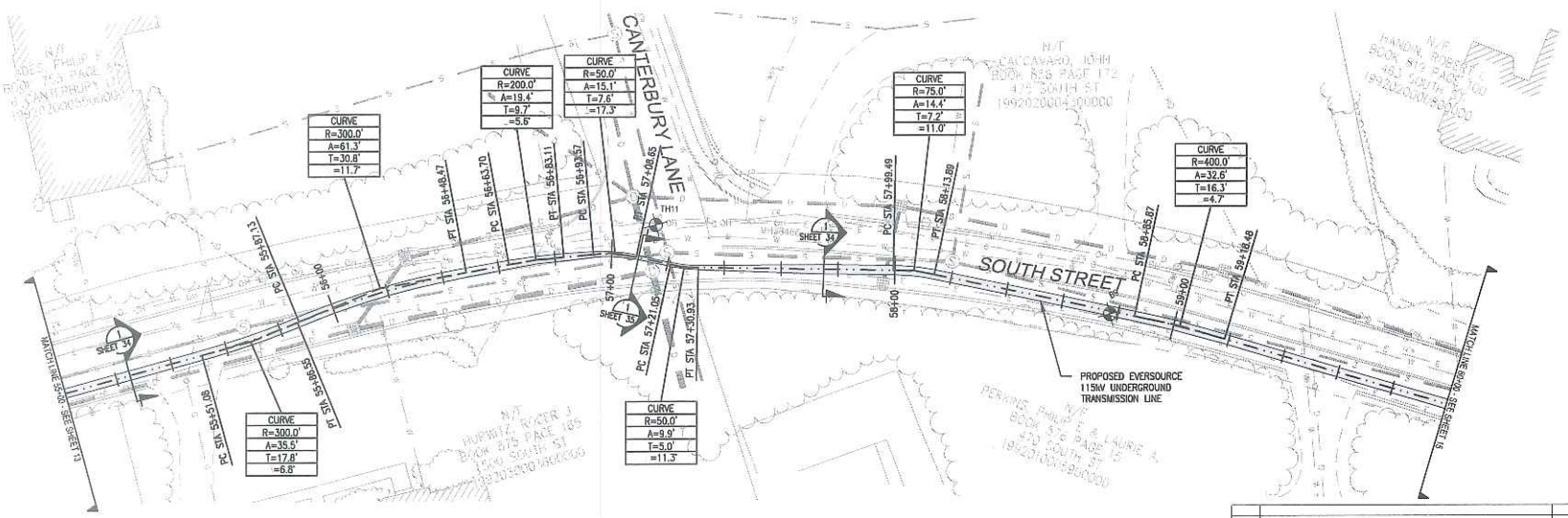
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT

115kV UNDERGROUND TRANSMISSION LINE

NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	13 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 43161
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

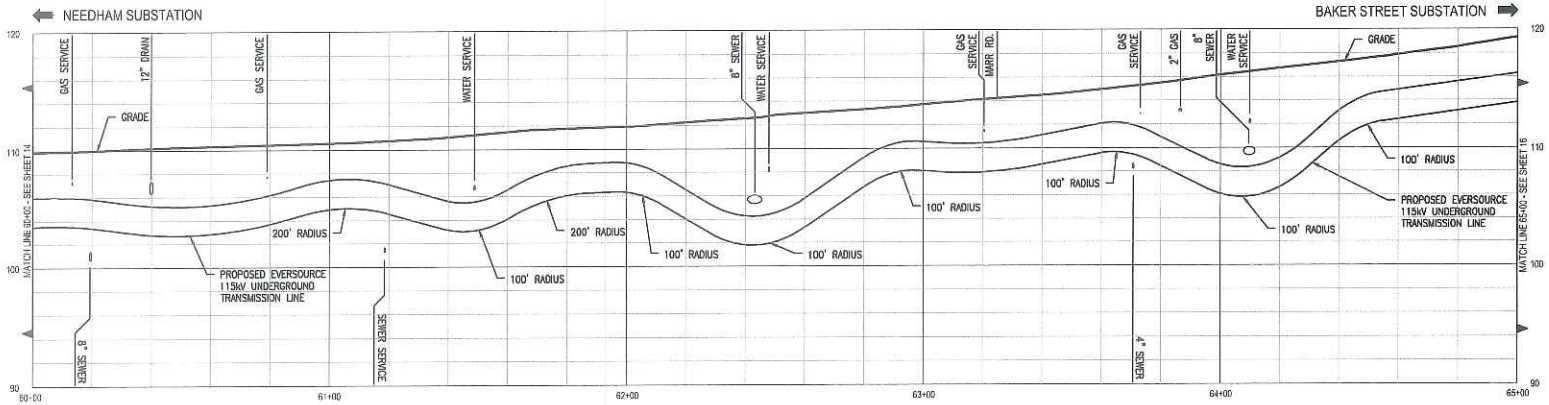
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

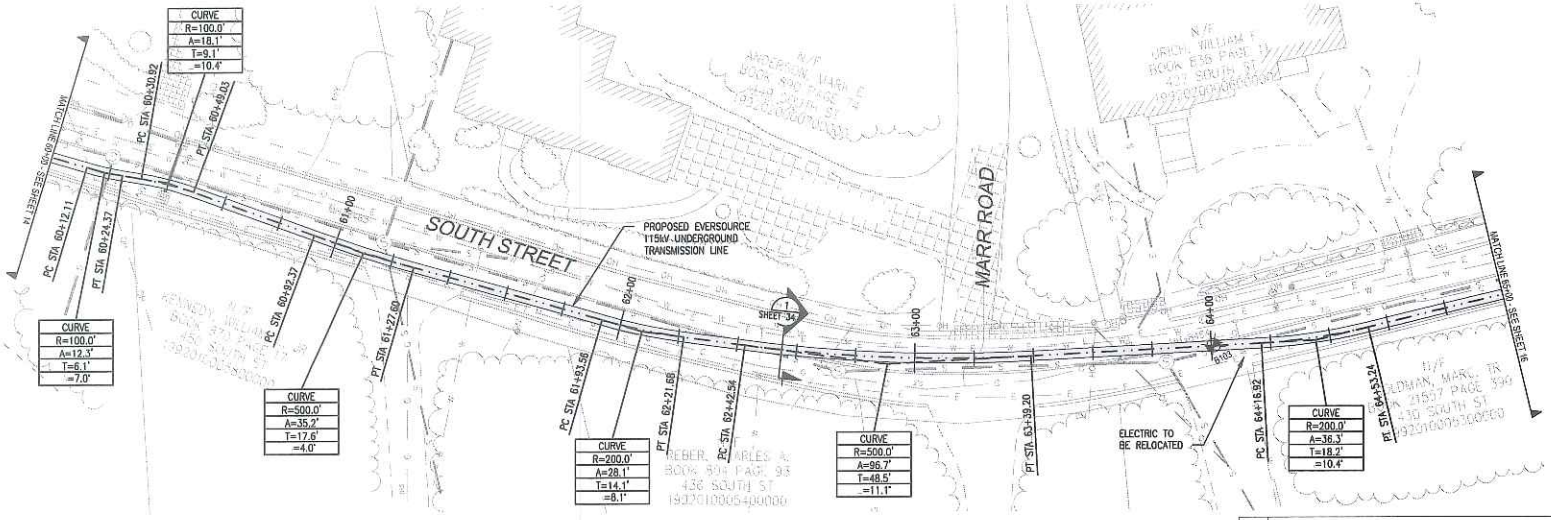
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 55+00 TO 60+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM - WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CH'K D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	14 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 45181
PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

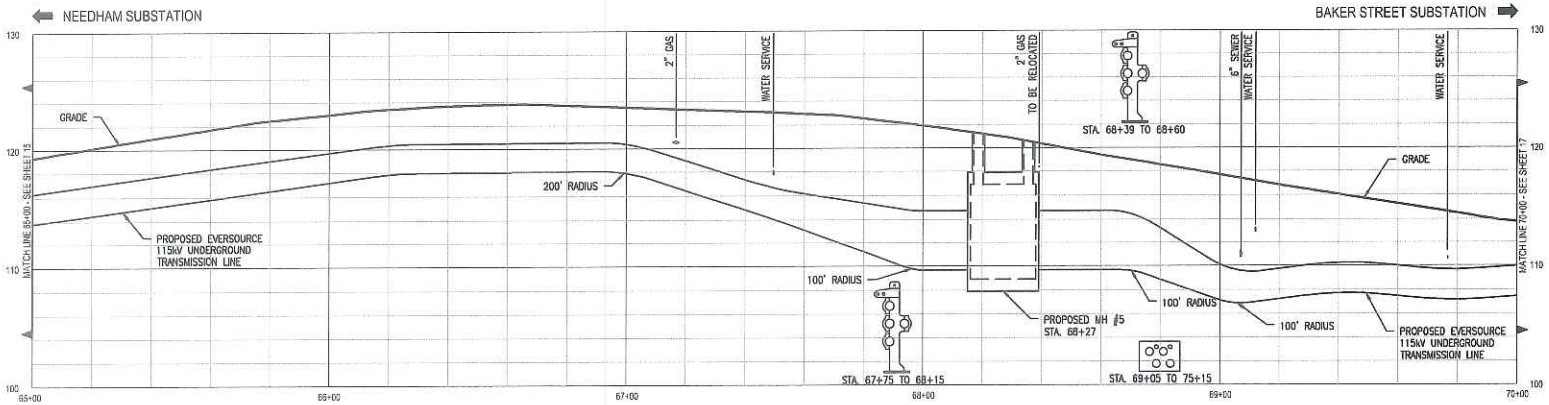
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

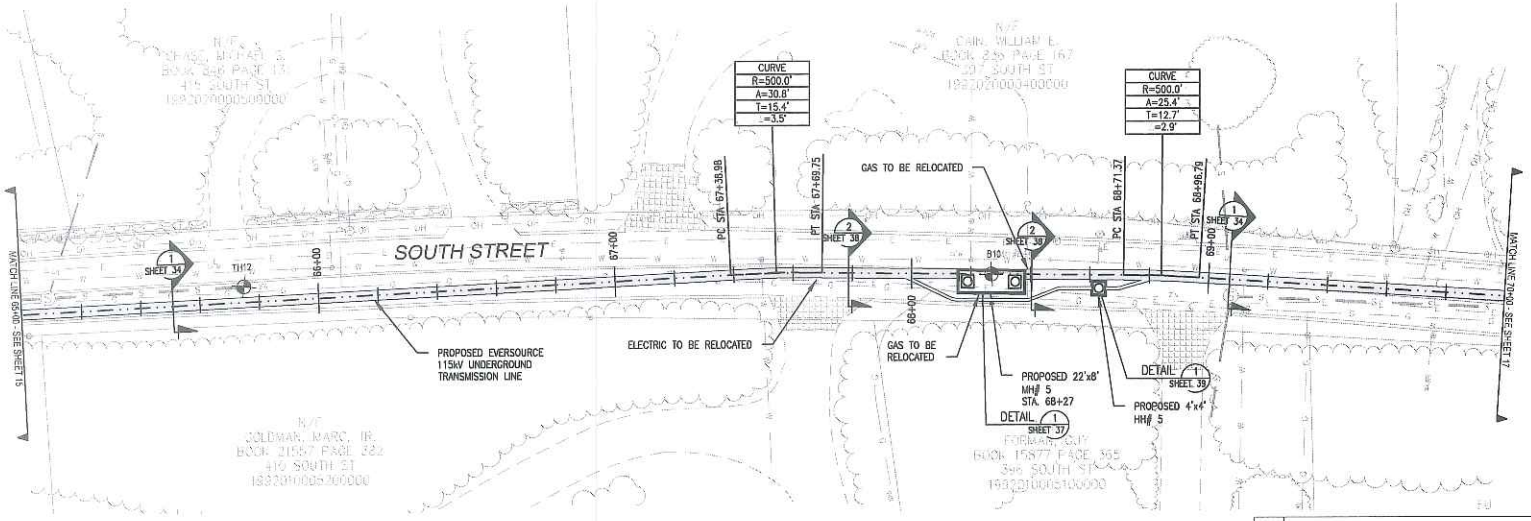
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 60+00 TO 65+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	15 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

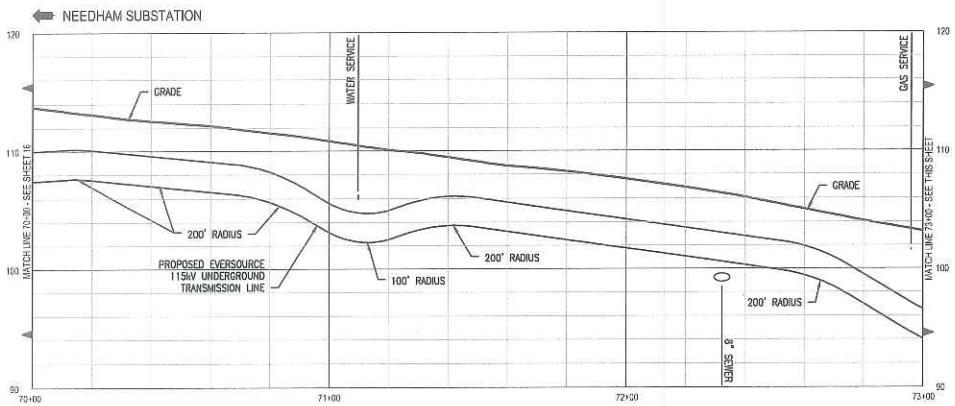
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

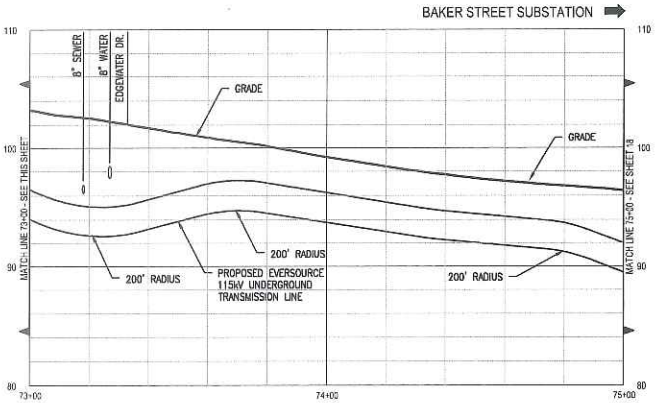
REVISION

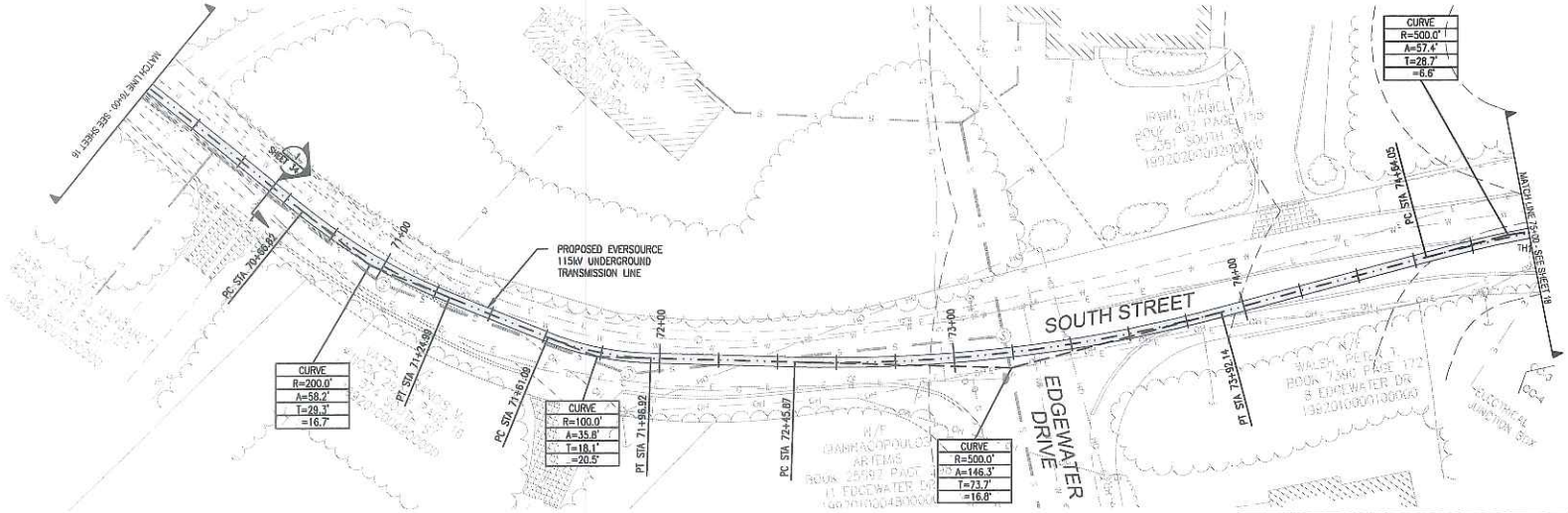
EVERSOURCE ENERGY

PLAN AND PROFILE STA 65+00 TO 70+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	16 OF 41	0







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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 45181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

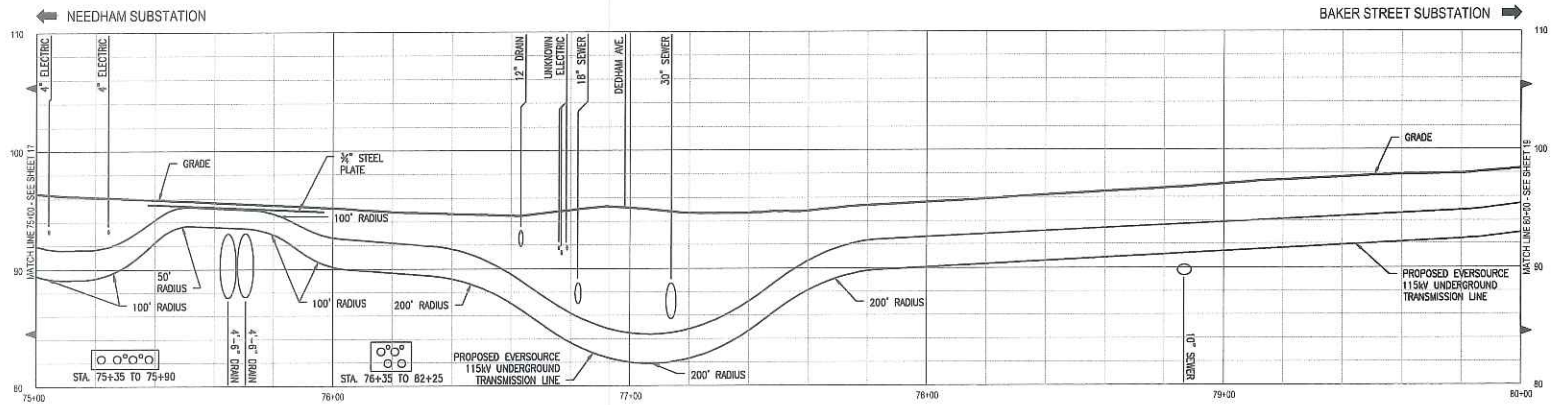
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

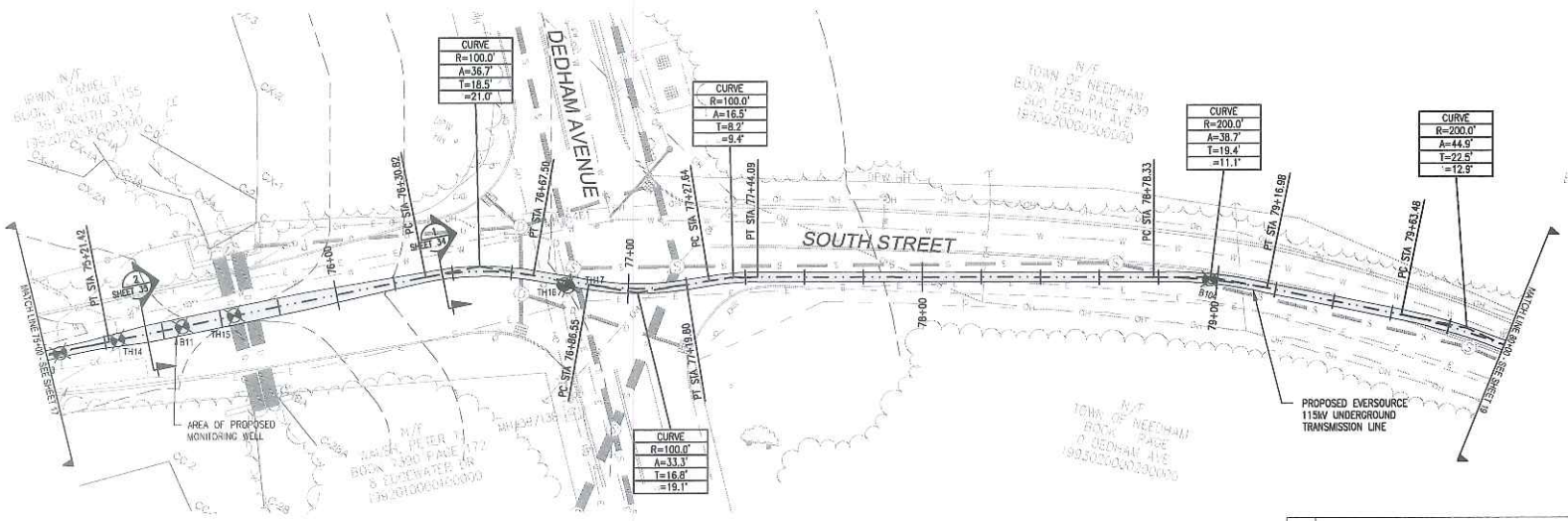
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 70+00 TO 75+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	17 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD B. GOYETTE
ELECTRICAL
No. 48181
PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

REVISION

EVERSOURCE ENERGY

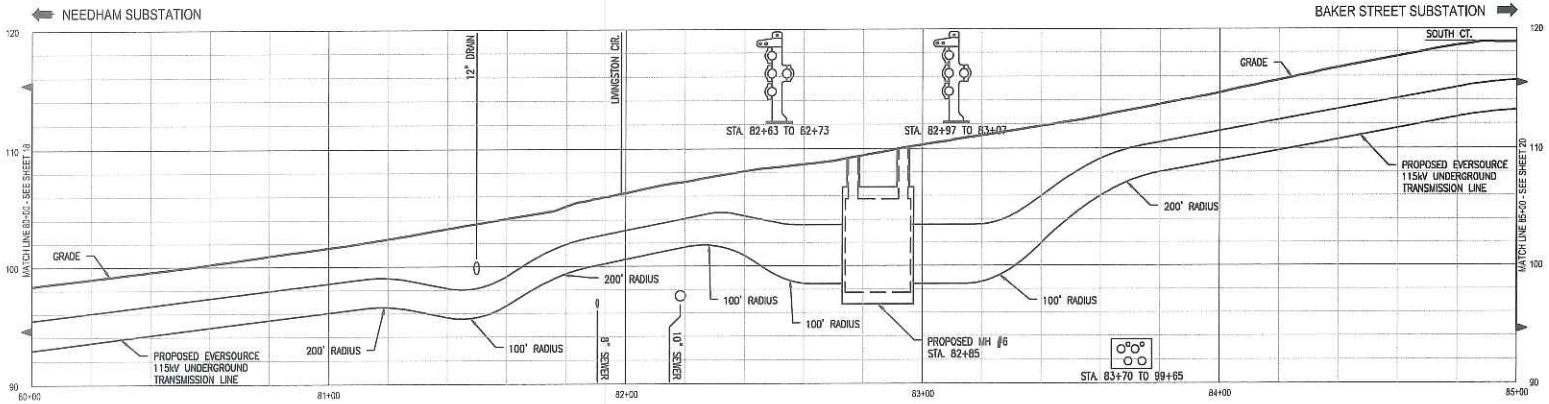
PLAN AND PROFILE STA 75+00 TO 80+00

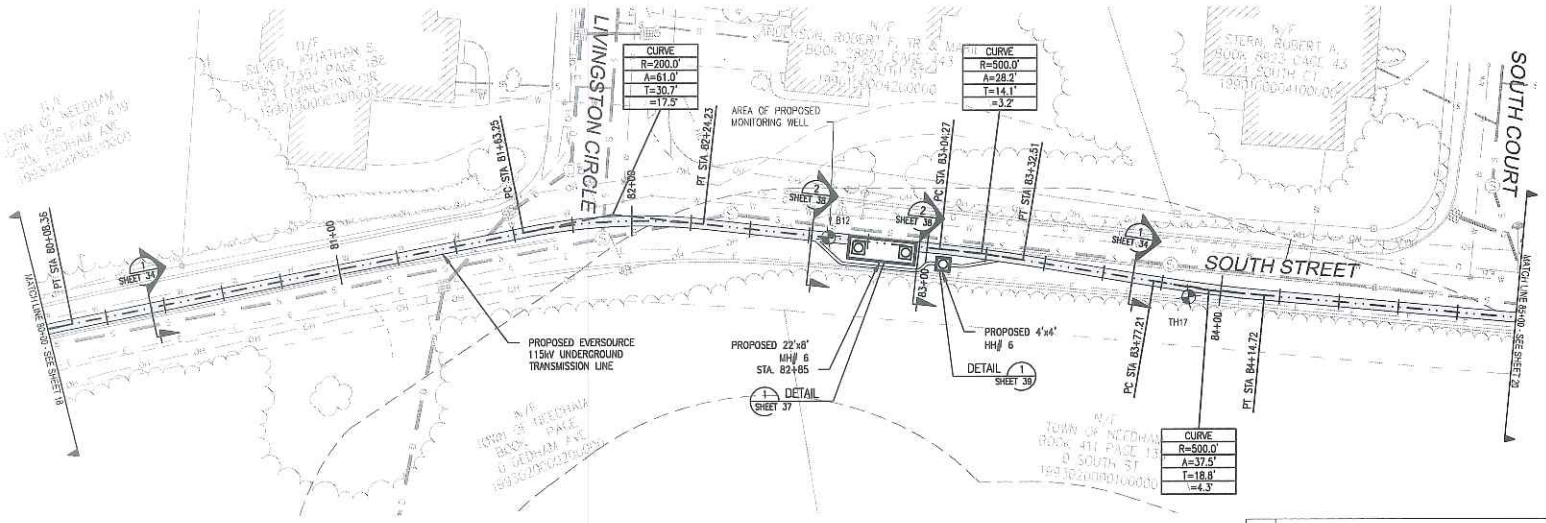
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT

115kV UNDERGROUND TRANSMISSION LINE

NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	18 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 45181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

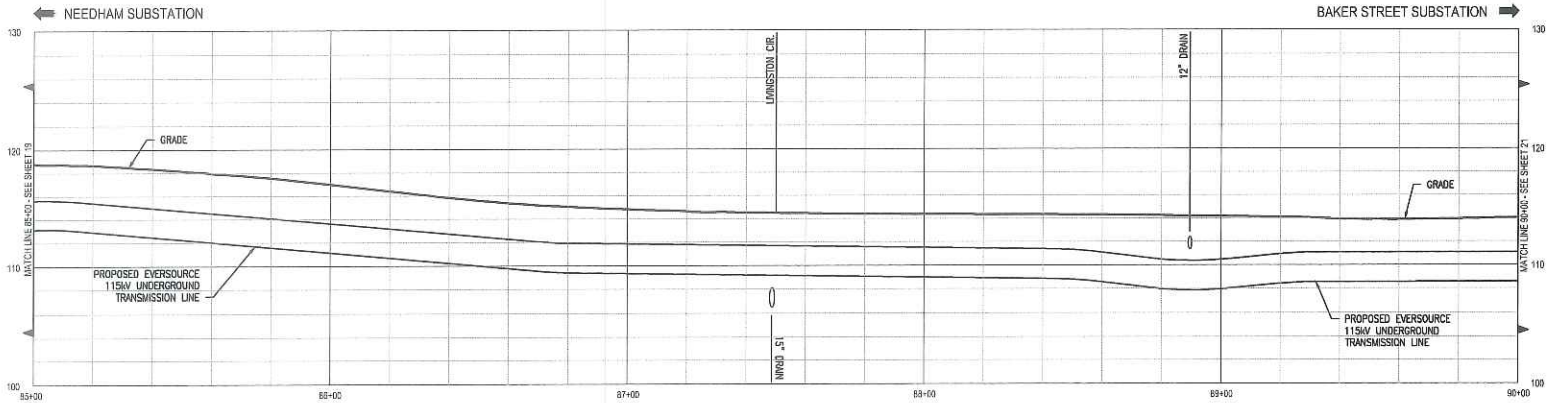
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

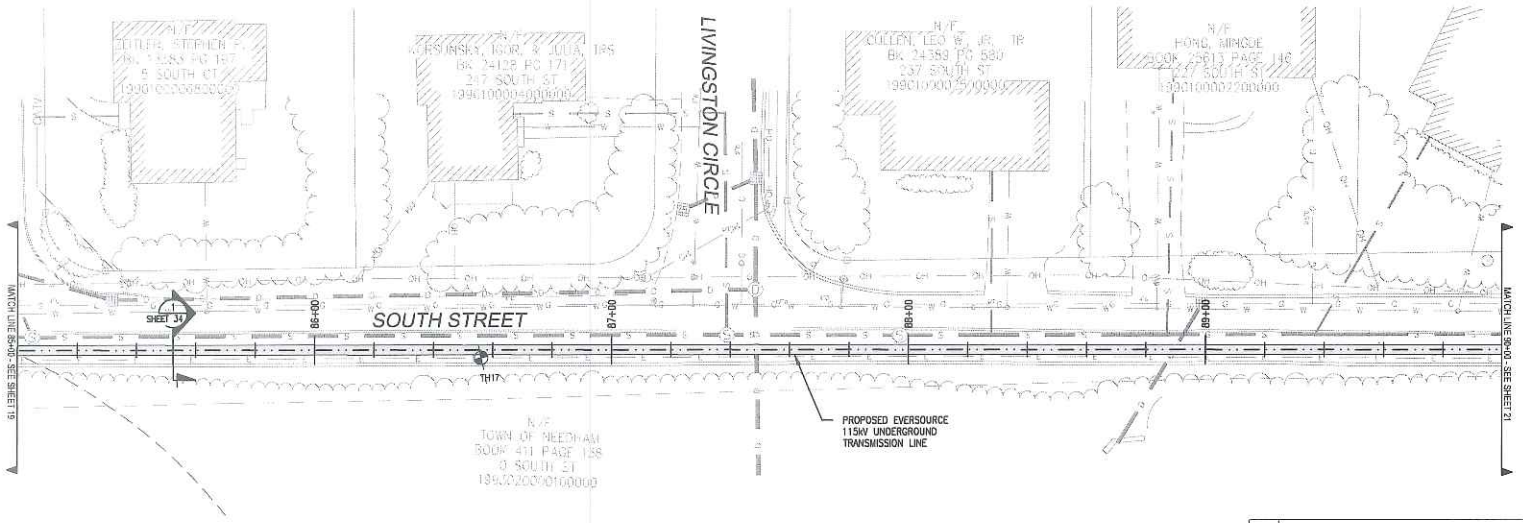
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 80+00 TO 85+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	19 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 46101
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

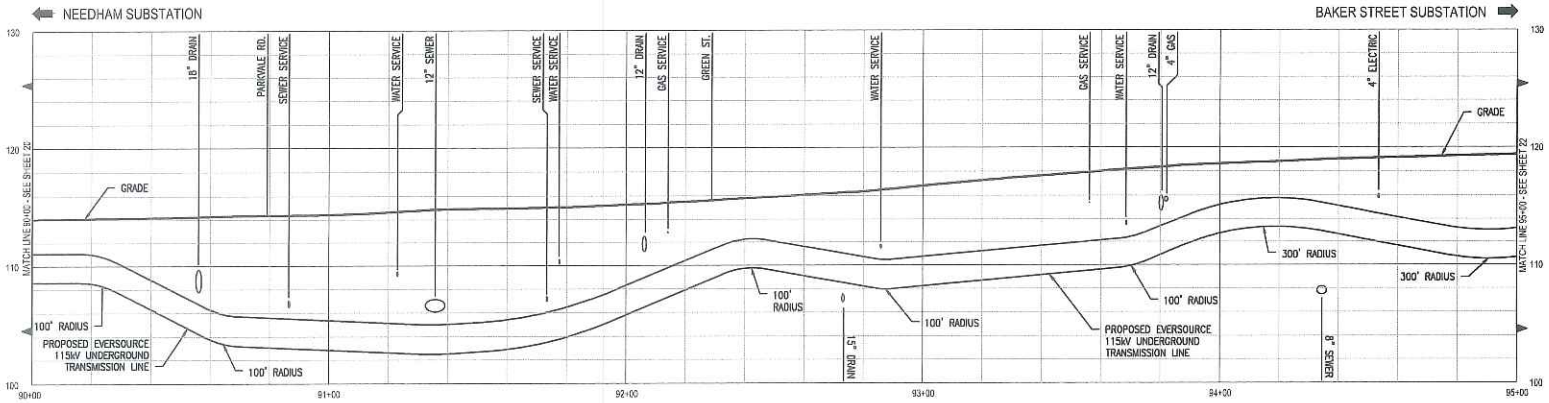
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

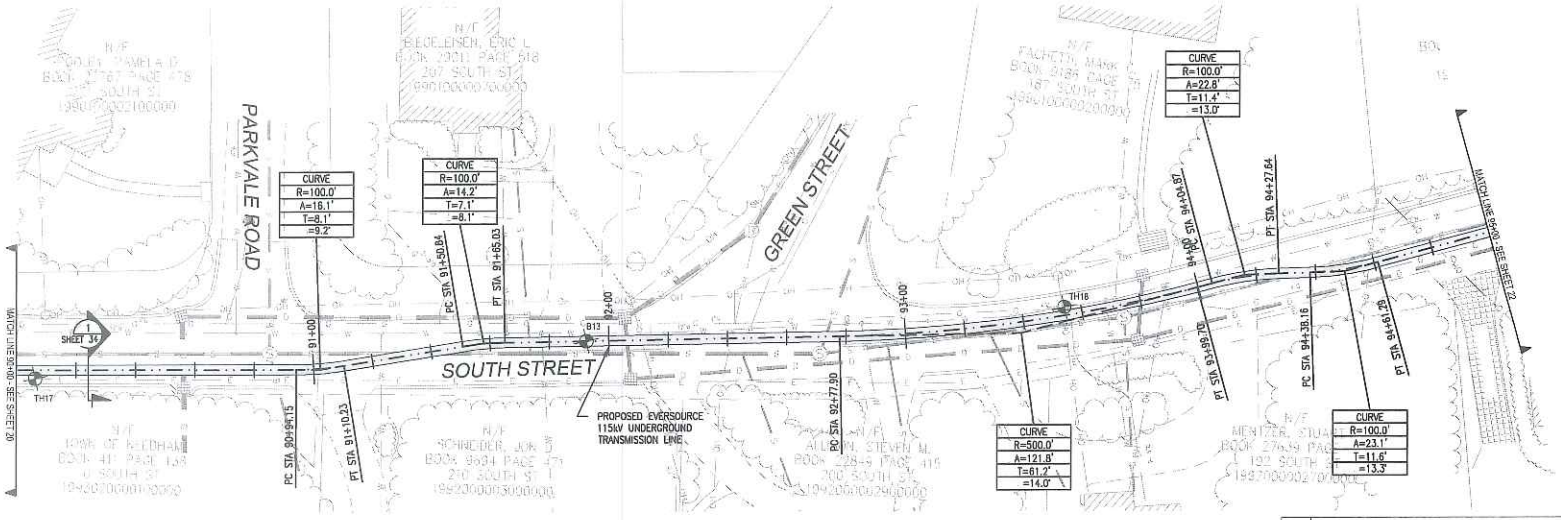
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 85+00 TO 90+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	20 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48101
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

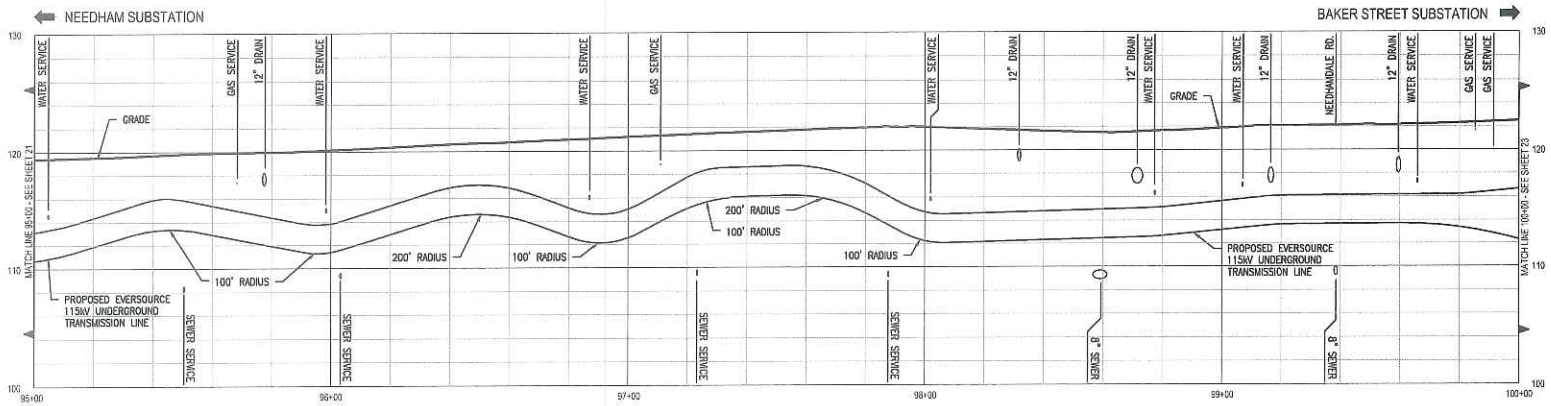
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

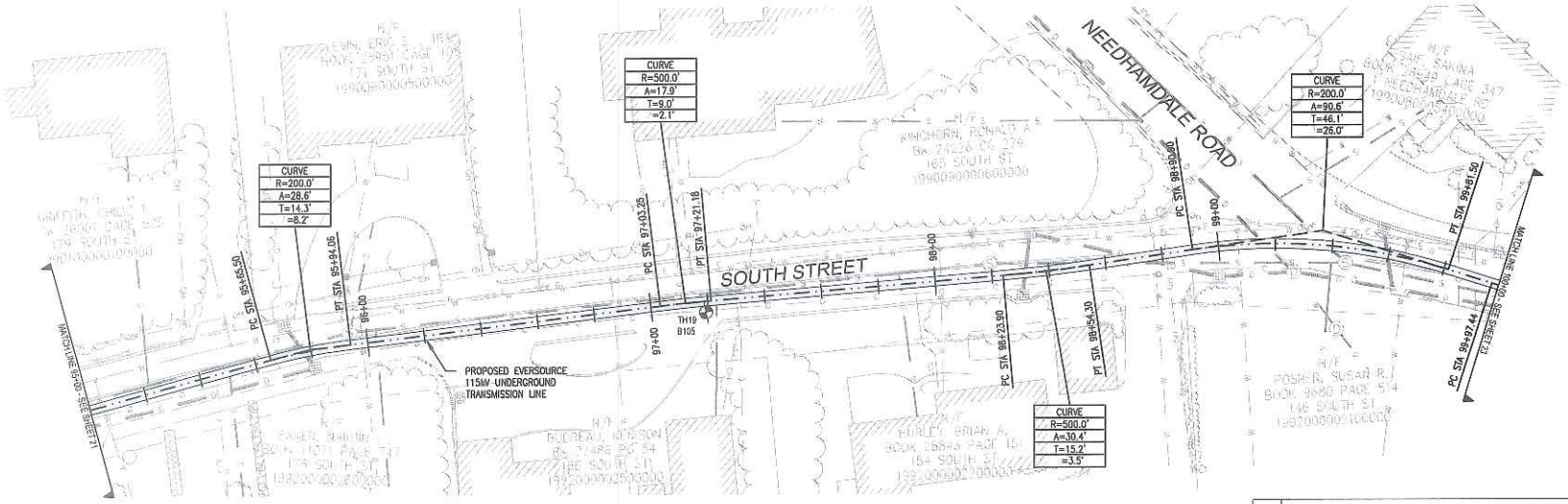
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 90+00 TO 95+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	21 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 45181
PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

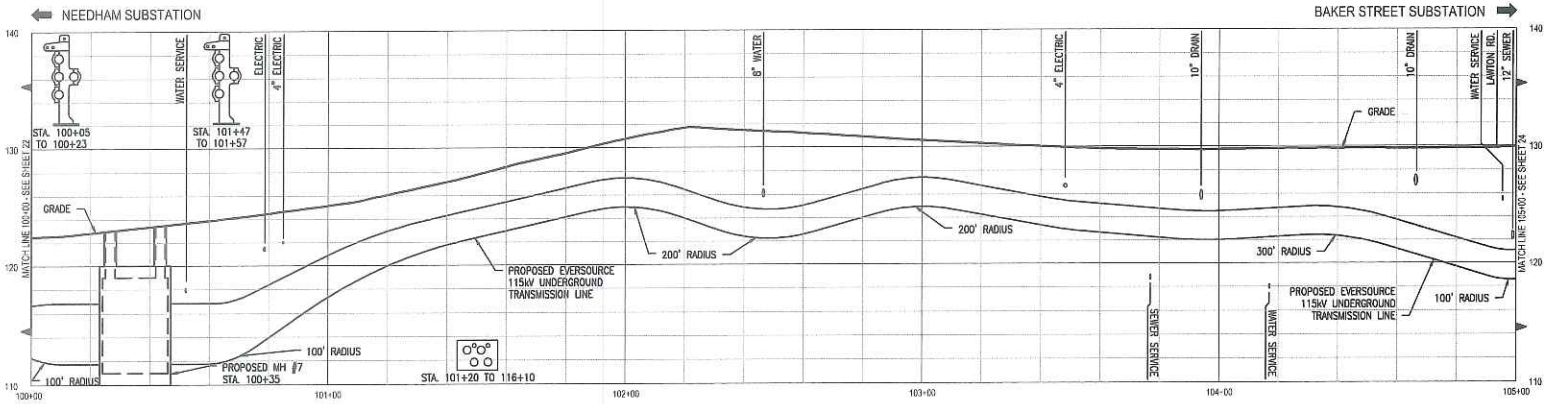
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

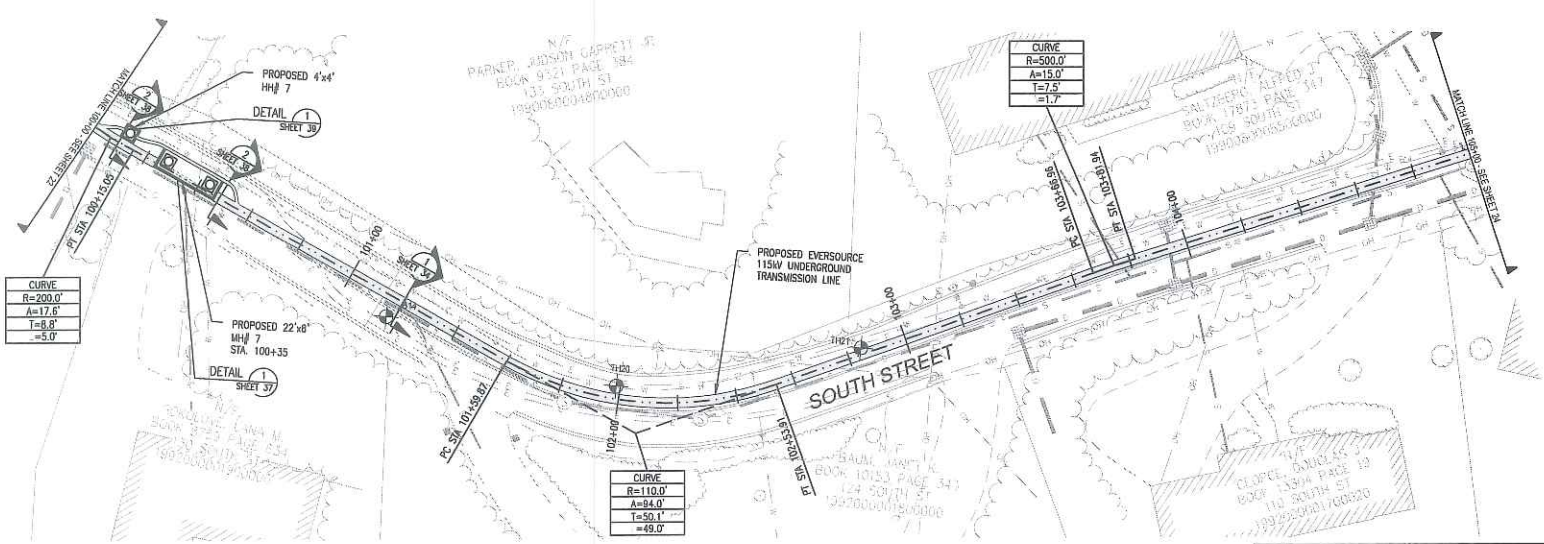
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 95+00 TO 100+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	22 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD J. GOYETTE
ELECTRICAL
No. 4818
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

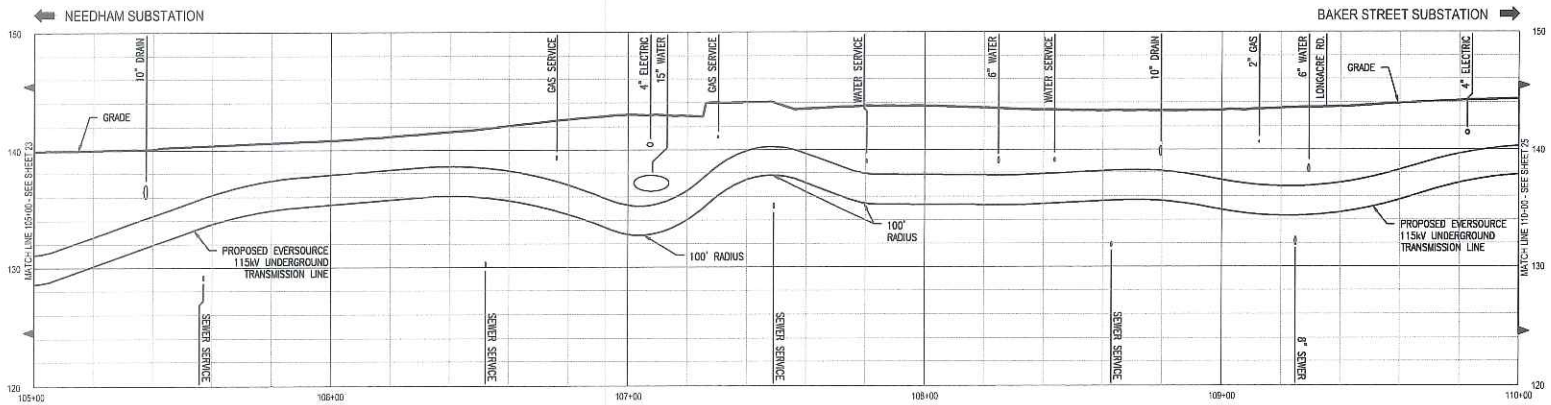
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

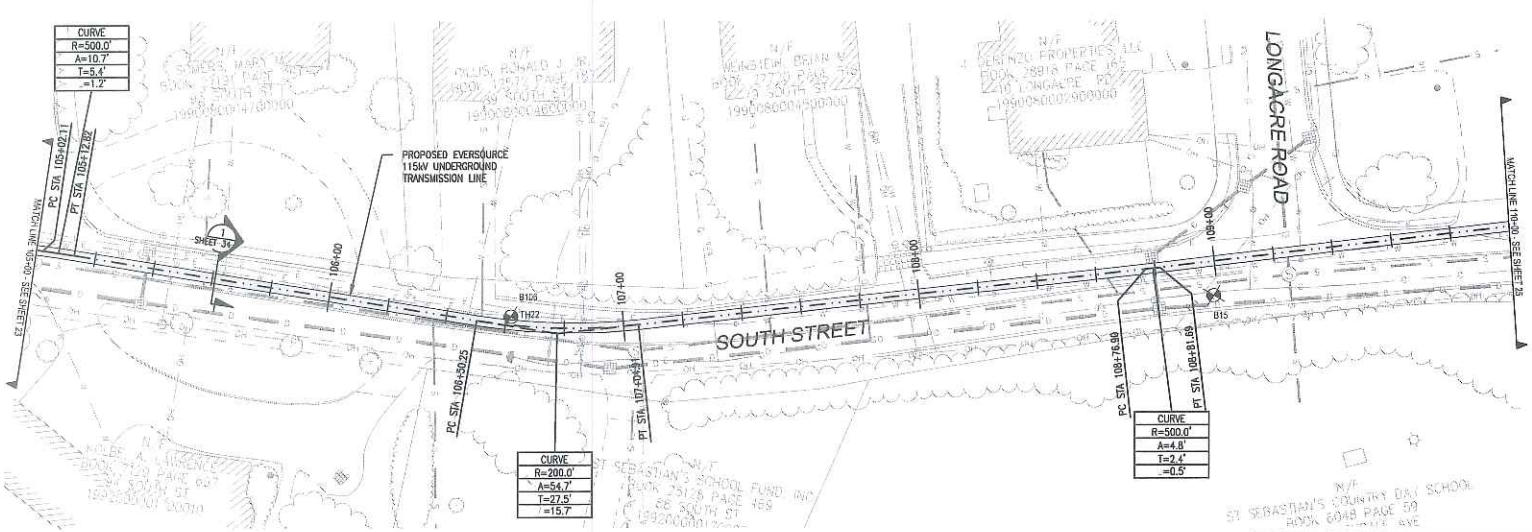
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 100+00 TO 105+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	23 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

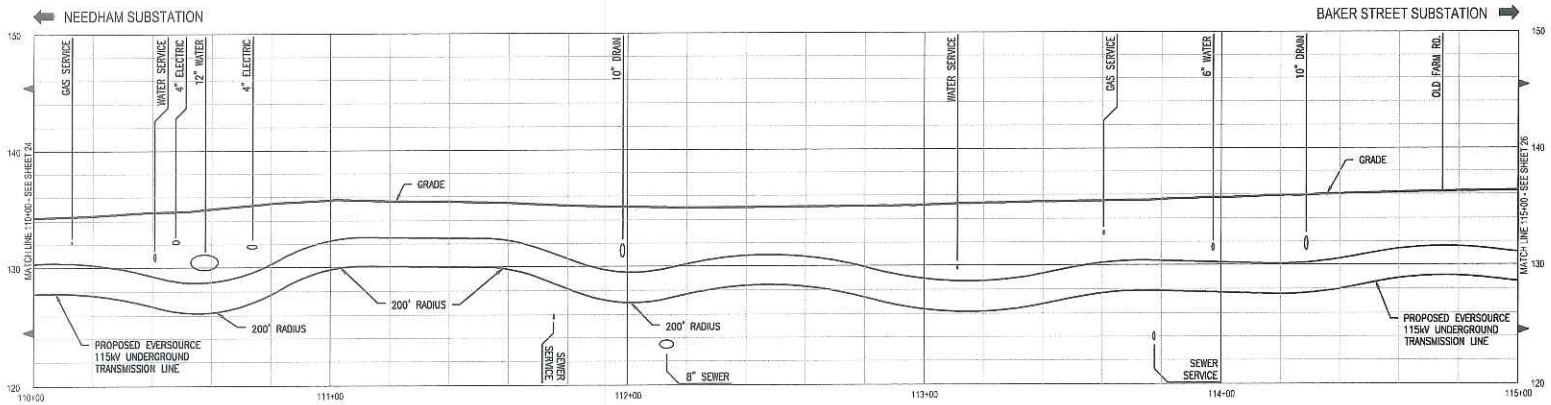
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

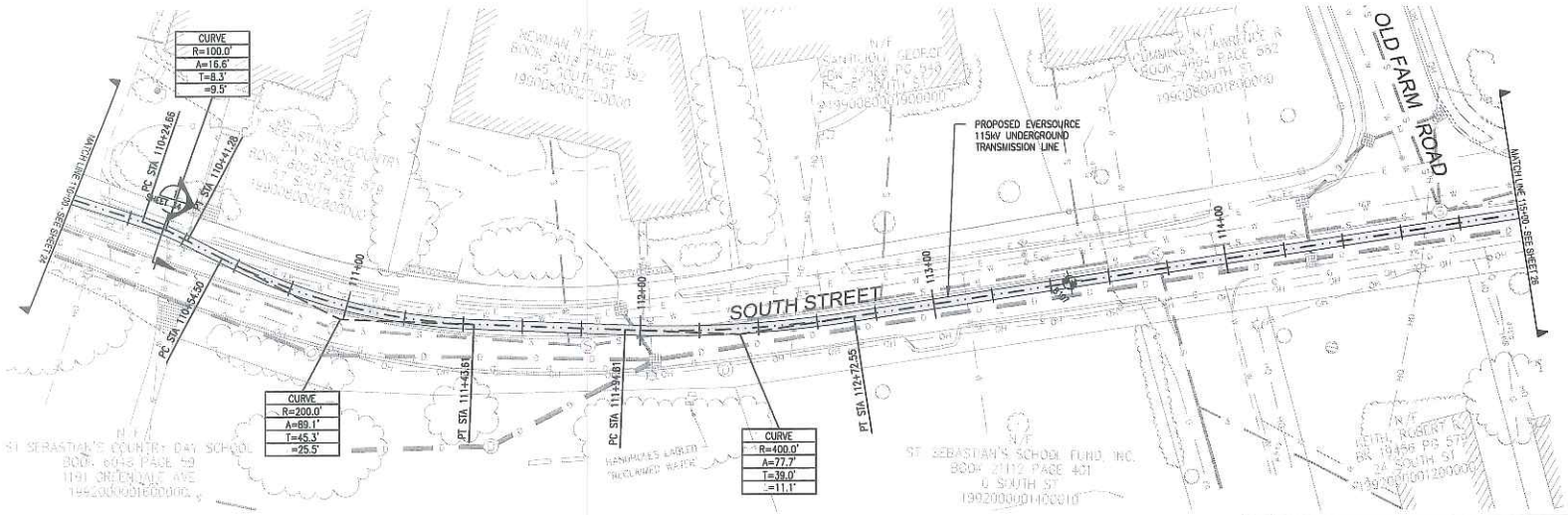
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 105+00 TO 110+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	24 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48181
PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

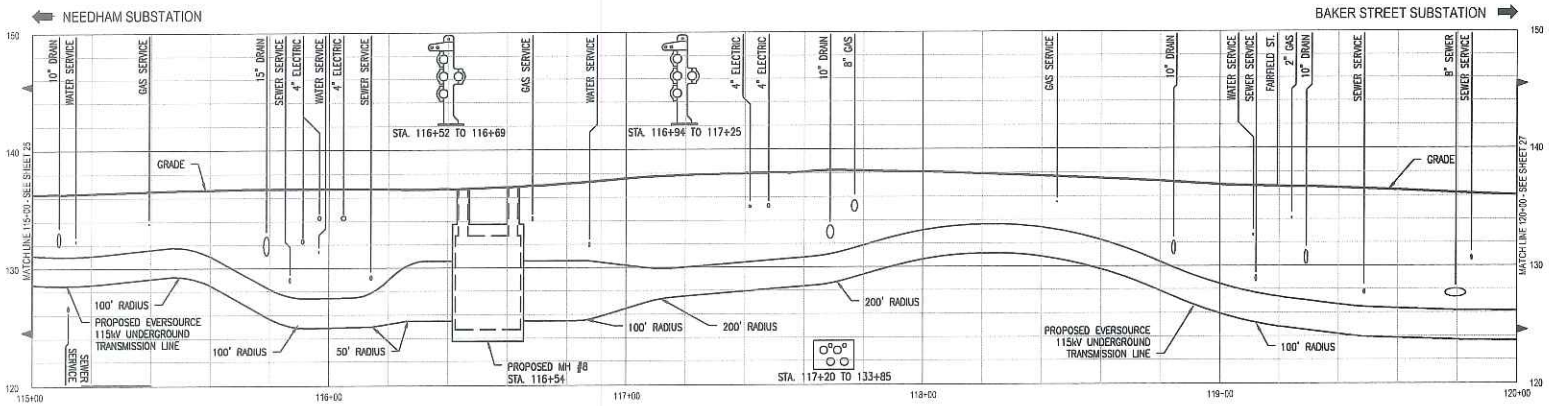
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

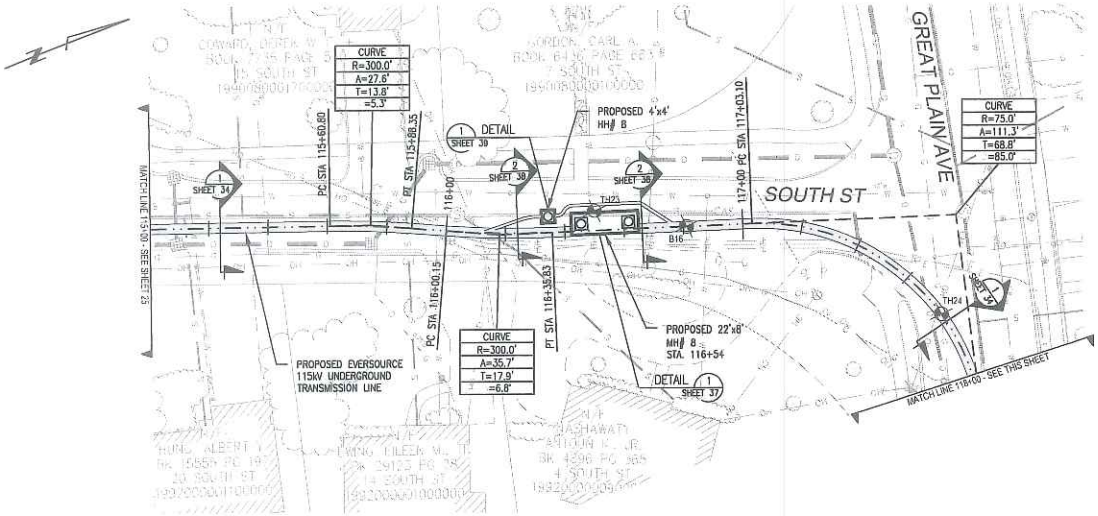
REVISION

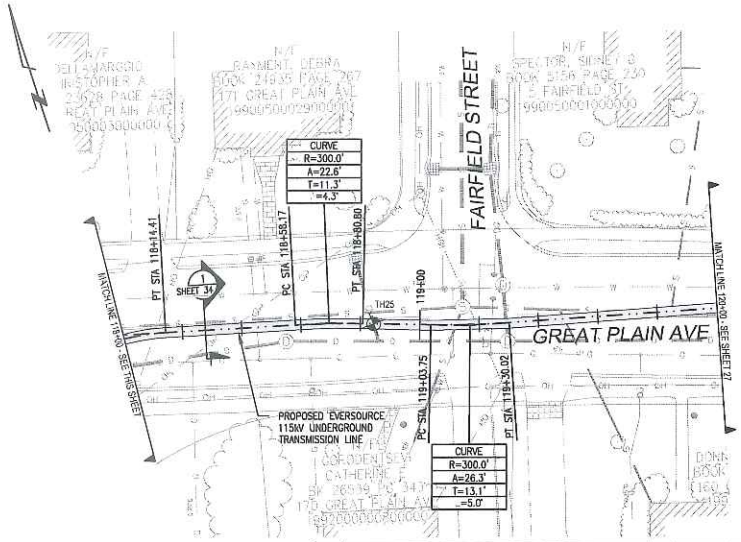
EVERSOURCE ENERGY

PLAN AND PROFILE STA 110+00 TO 115+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	25 OF 41	0







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COMMONWEALTH OF MASSACHUSETTS
TODD G. GOYETTE
ELECTRICAL
No. 45181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

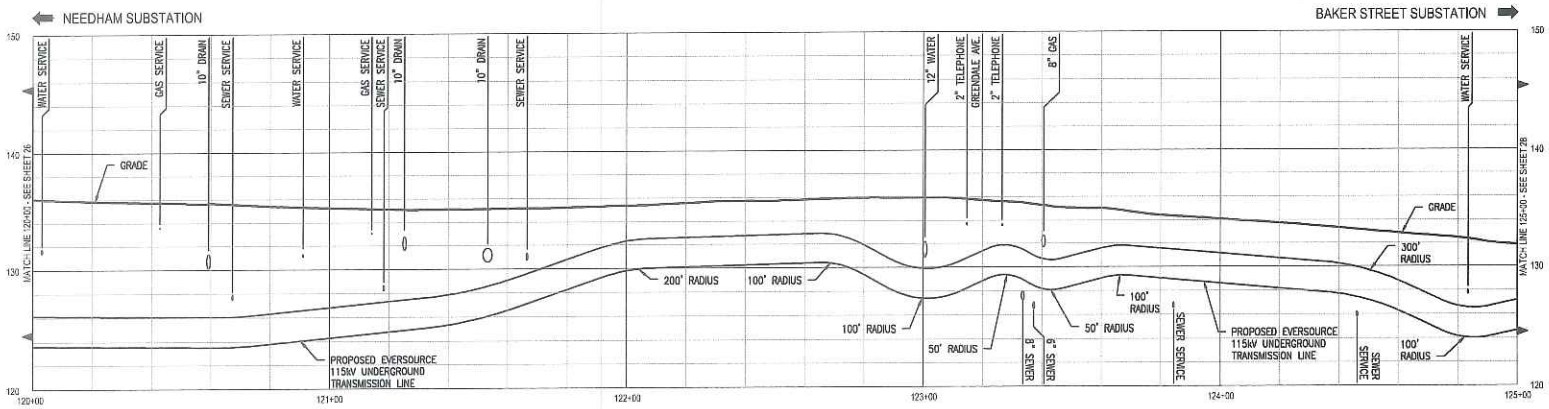
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

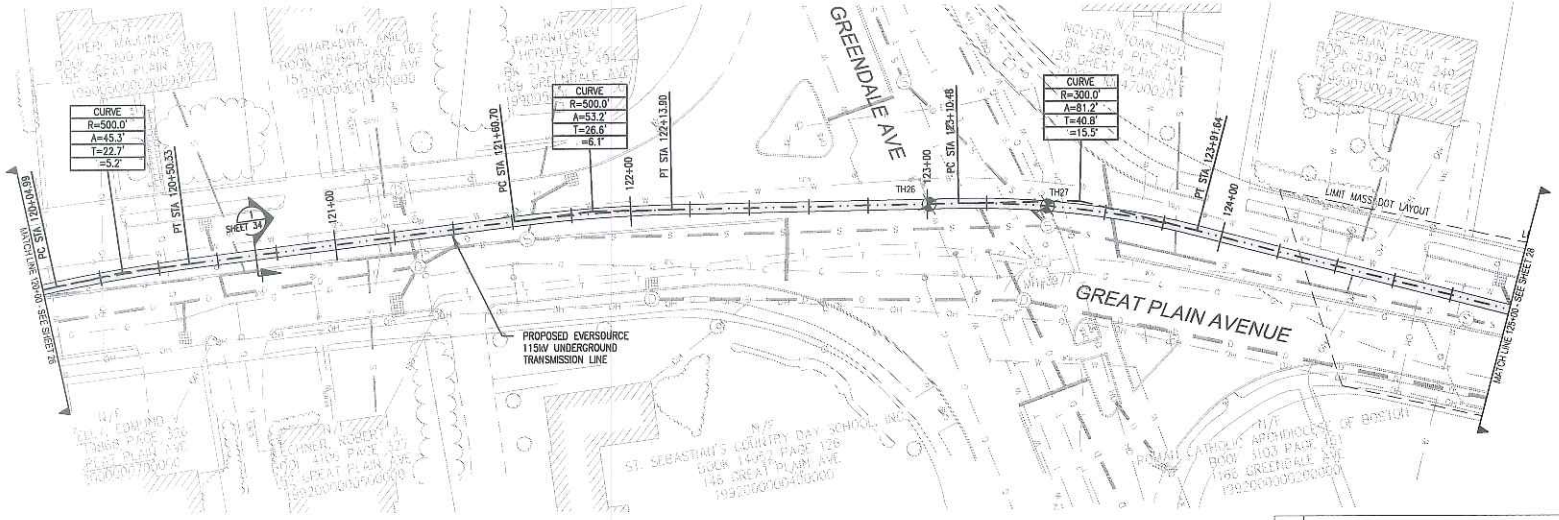
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 115+00 TO 120+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	26 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD E. GOYETTE
ELECTRICAL
No. 48181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

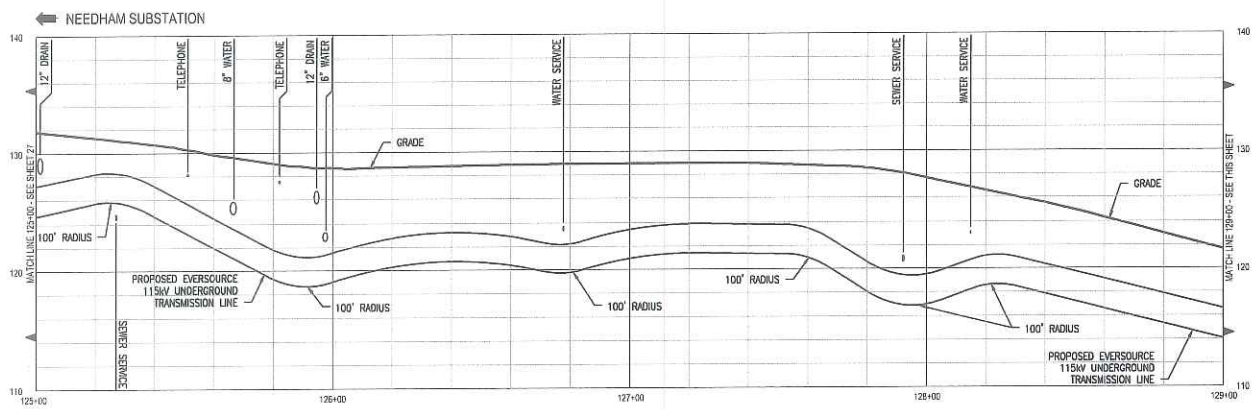
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

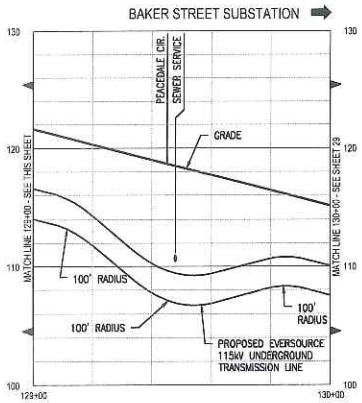
REVISION

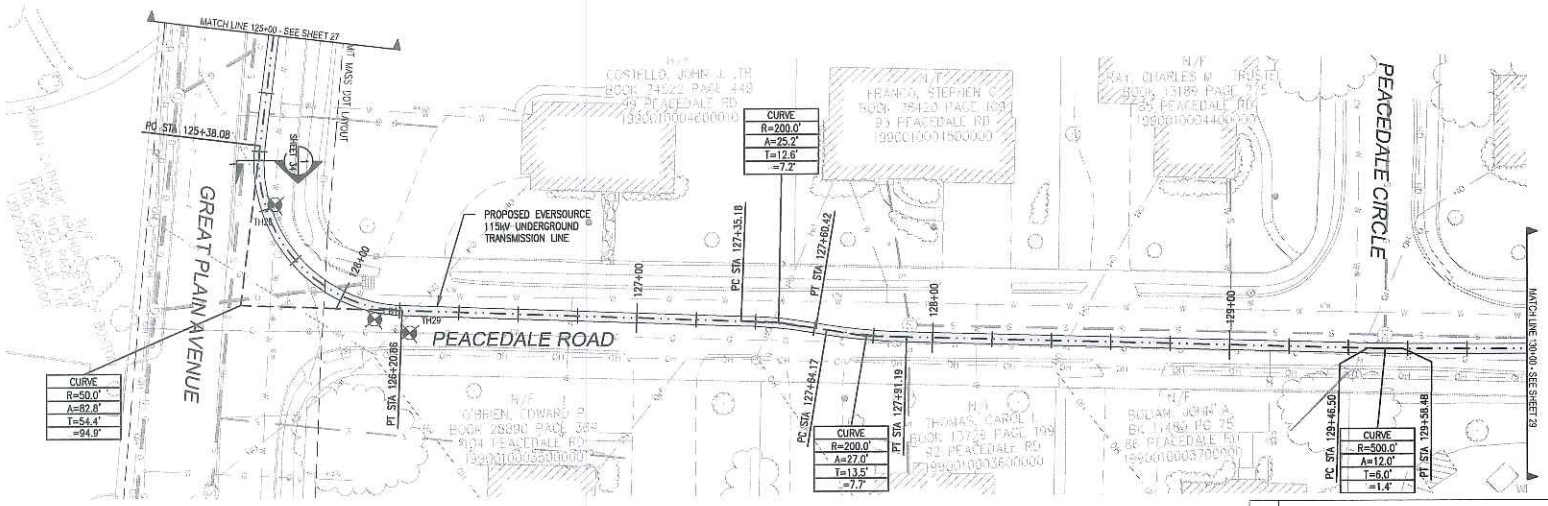
EVERSOURCE ENERGY

PLAN AND PROFILE STA 120+00 TO 125+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	27 OF 41	0







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COMMONWEALTH OF MASSACHUSETTS
TODD S. BOYETTE
ELECTRICAL
No. 46181
PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

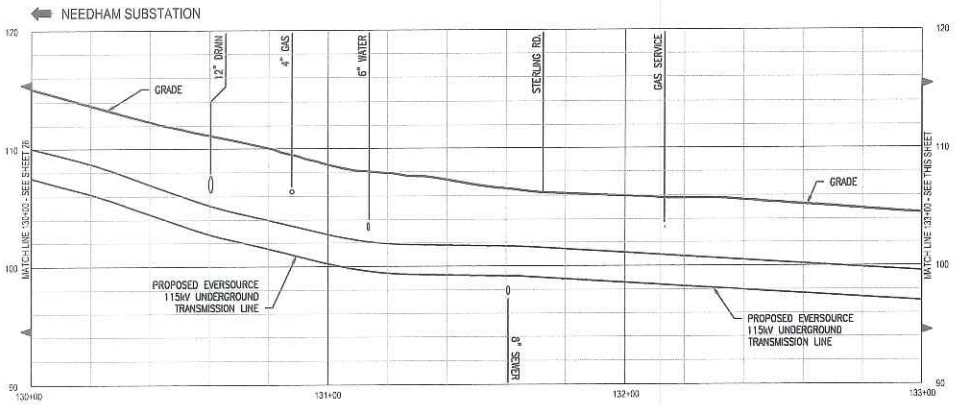
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

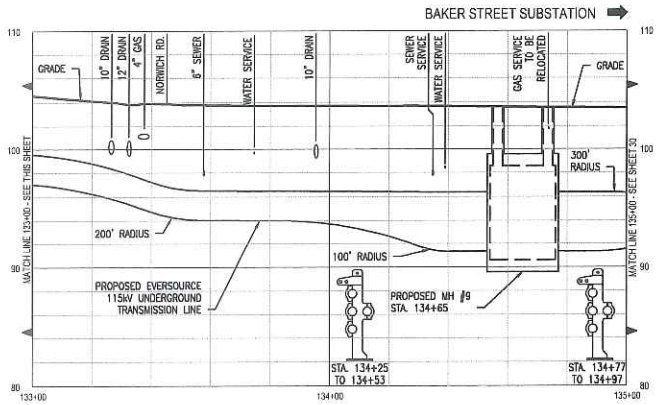
REVISION

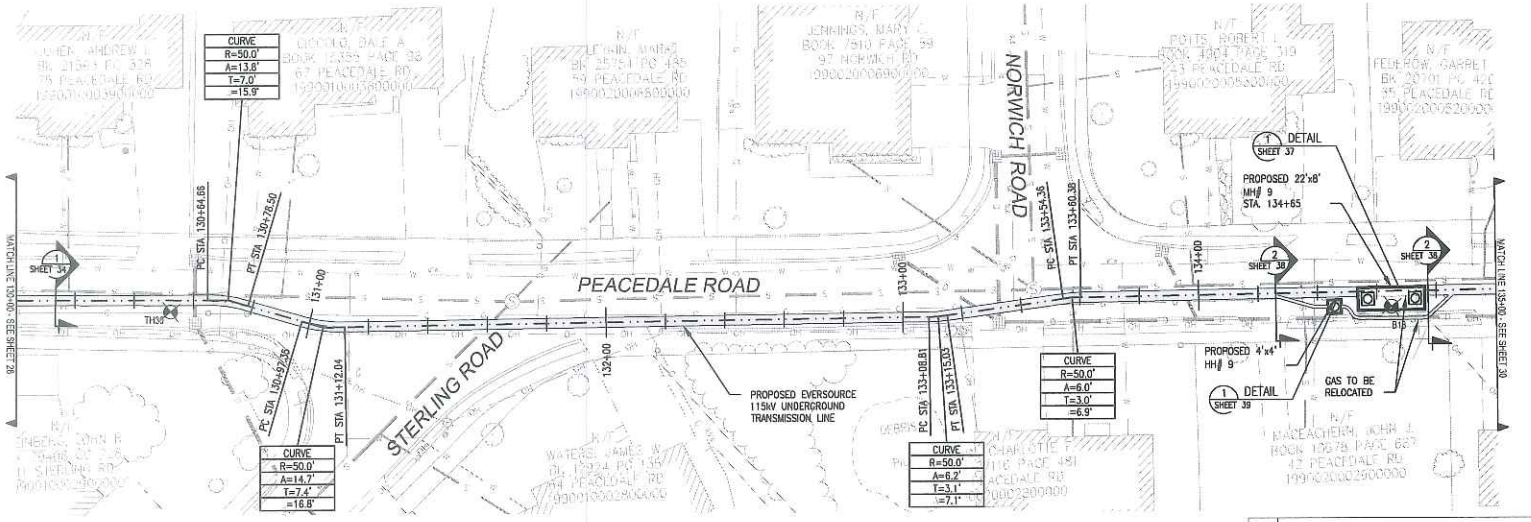
EVERSOURCE ENERGY

PLAN AND PROFILE STA 125+00 TO 130+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	28 OF 41	0







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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

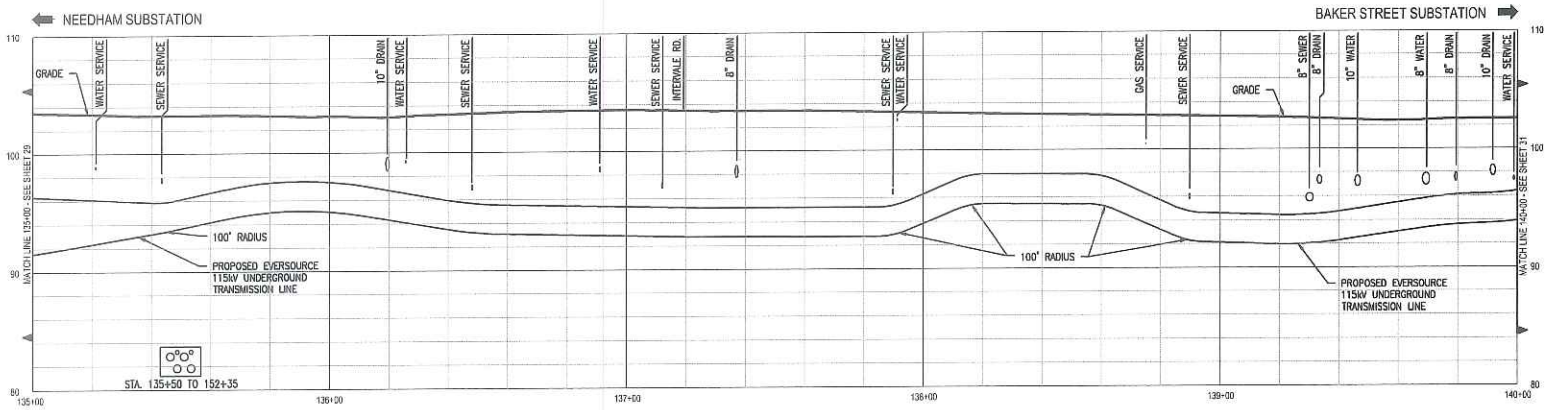
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

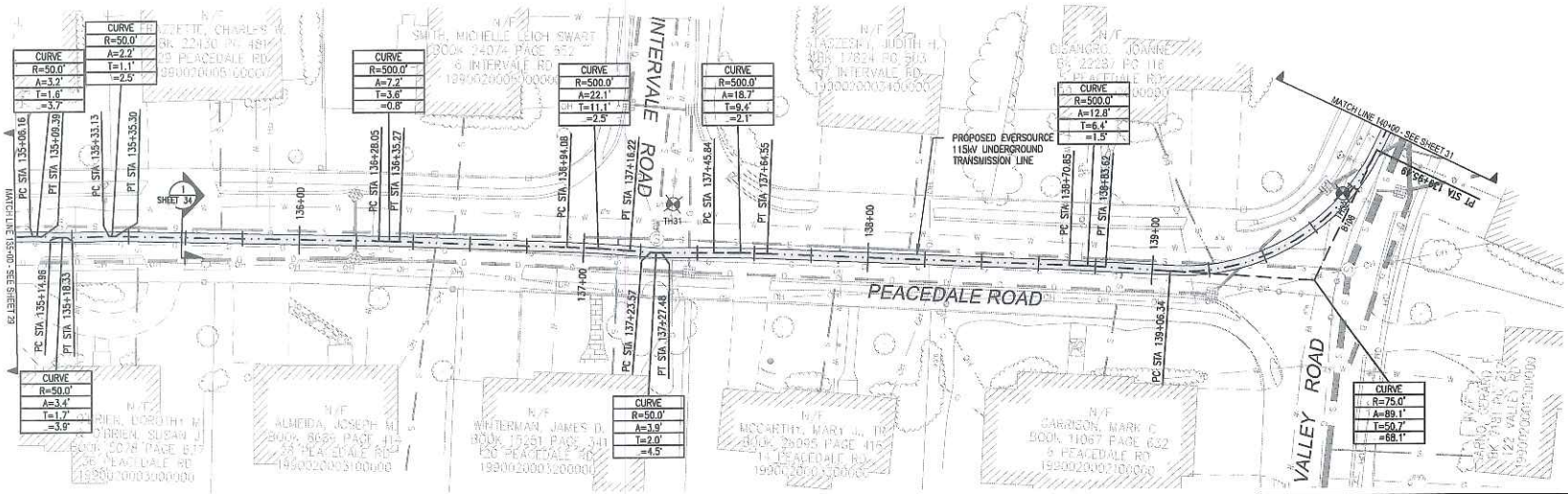
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 130+00 TO 135+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	29 OF 41	0





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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 45101
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

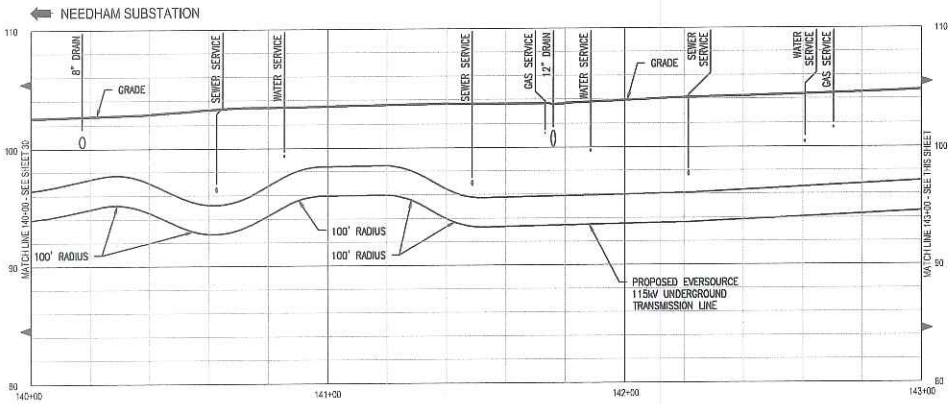
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

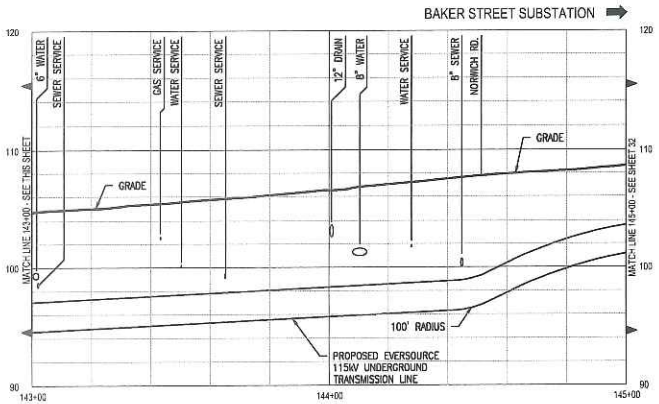
REVISION

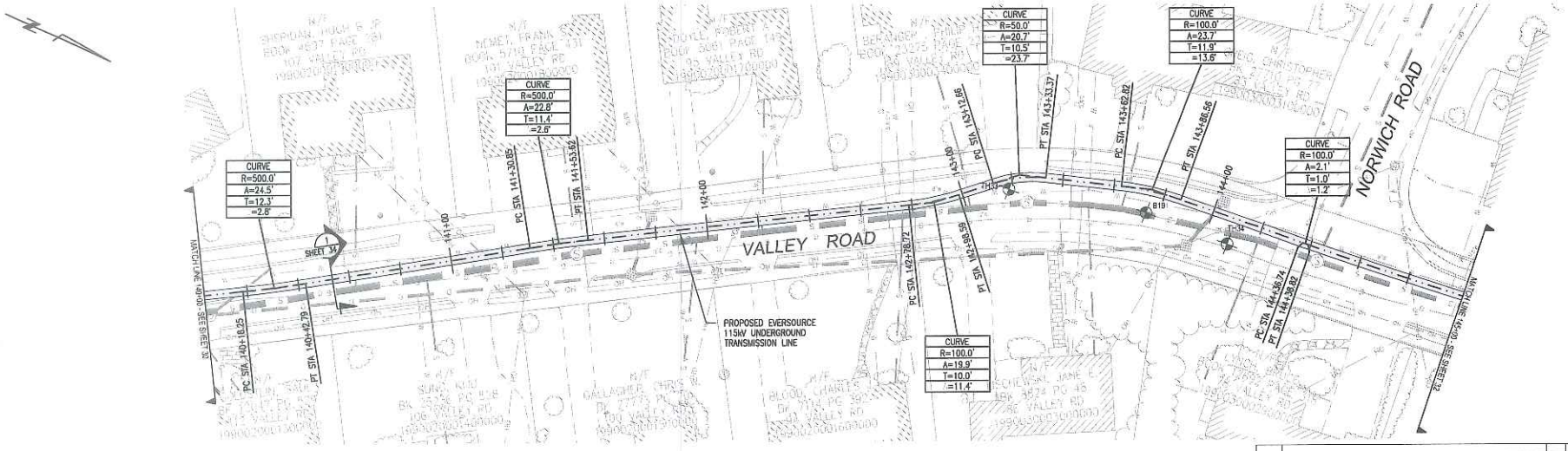
EVERSOURCE ENERGY

PLAN AND PROFILE STA 135+00 TO 140+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	30 OF 41	0







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2. PROPERTY BOUNDARIES AND TOWN WAYS HAVE BEEN SUPPLIED FROM TOWN OF NEEDHAM GIS AND ARE NOT BASED ON A GROUND SURVEY. REVISED PLANS WILL INCORPORATE THE BOUNDARIES OF THE TOWN WAYS, BASED ON TOWN LAYOUTS OF ROADWAYS AND ADJACENT PROPERTY, IN CORRELATION WITH MONUMENTS LOCATED IN THE FIELD.

COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 45161
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

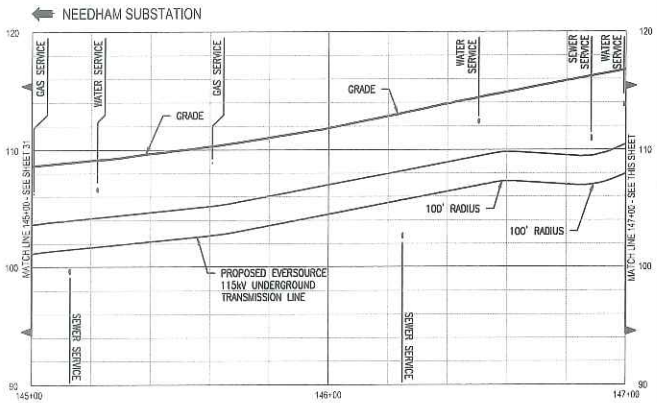
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

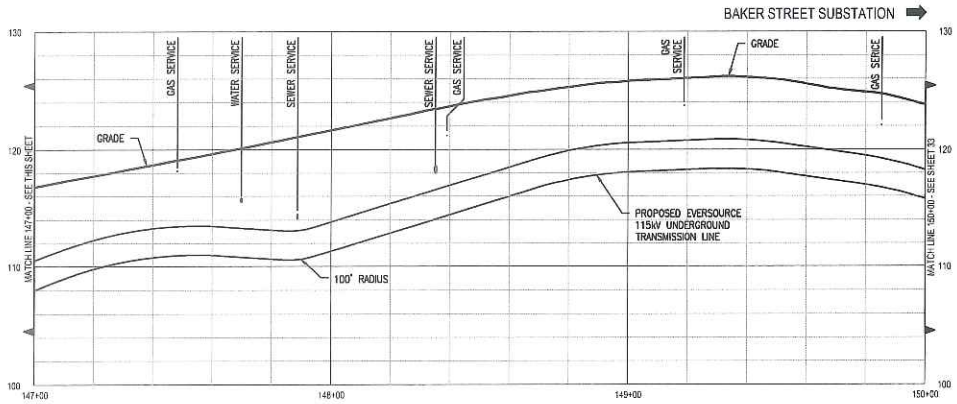
REVISION

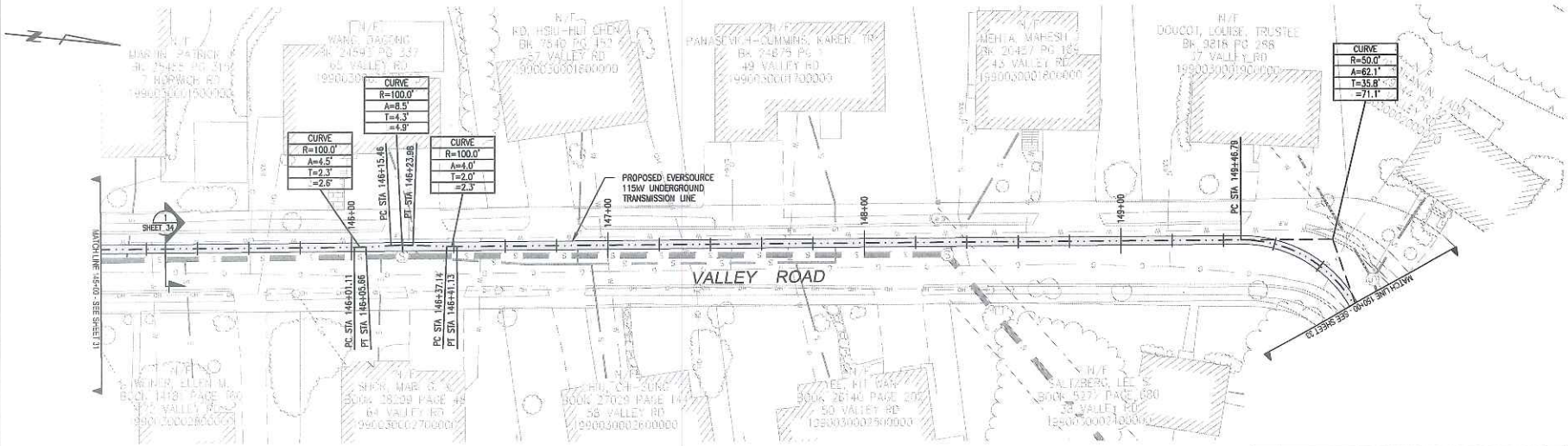
EVERSOURCE ENERGY

PLAN AND PROFILE STA 140+00 TO 145+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	31 OF 41	0







THREE BUSINESS DAYS BEFORE YOU DIG CALL
MASSACHUSETTS 811
TOLL FREE
811 or 1-888-344-7233

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COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48181
REGISTERED PROFESSIONAL ENGINEER

0 10 20 40 60 FEET
HORIZONTAL SCALE 1" = 20'

0 5 10 15 FEET
VERTICAL SCALE 1" = 5'

NO.	DESCRIPTION	BY	DATE	APPR.
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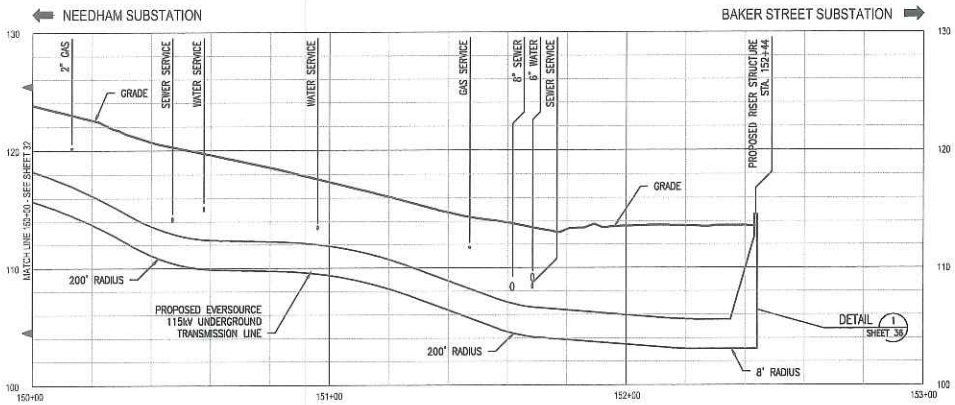
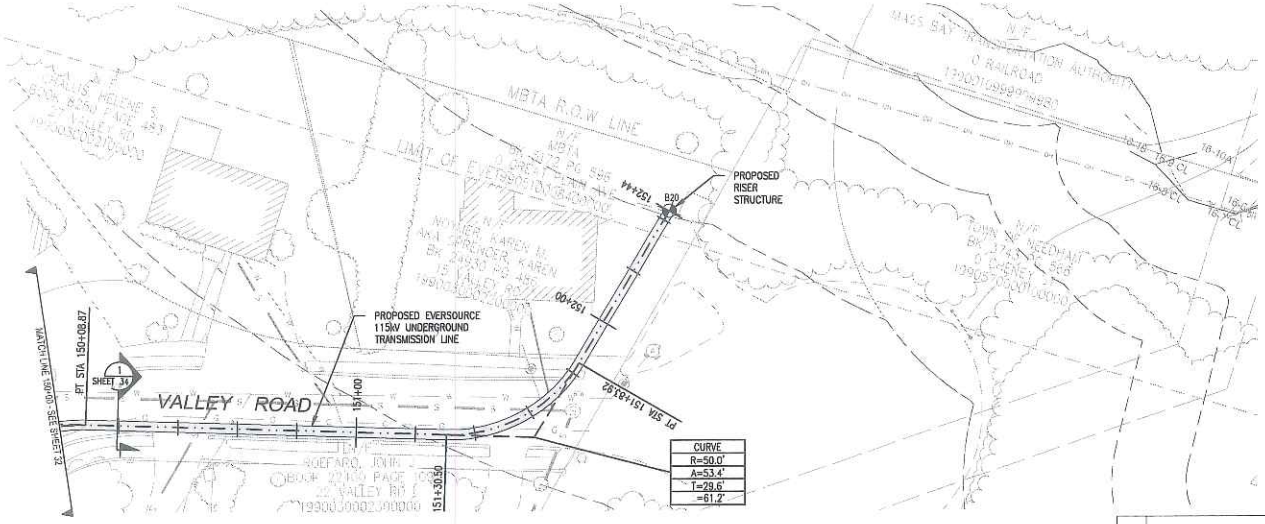
REVISION

EVERSOURCE ENERGY

PLAN AND PROFILE STA 145+00 TO 150+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	32 OF 41	0





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TODD E. DOYETTE
ELECTRICAL
No. 45161
REGISTERED PROFESSIONAL ENGINEER

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HORIZONTAL SCALE 1"= 20'

0 5 10 15 FEET
VERTICAL SCALE 1"= 5'

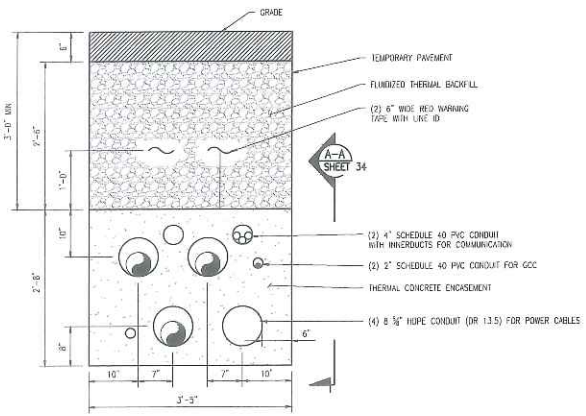
NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

REVISION

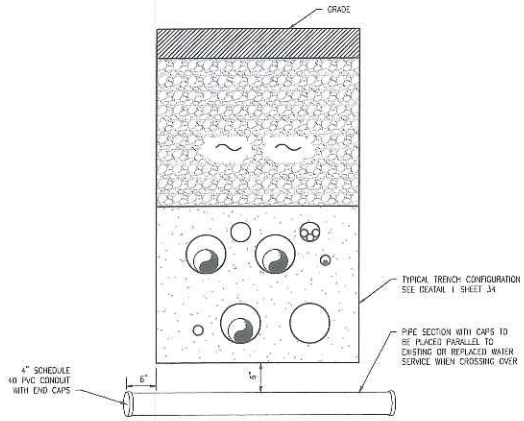
EVERSOURCE ENERGY

PLAN AND PROFILE STA 150+00 TO 153+00
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

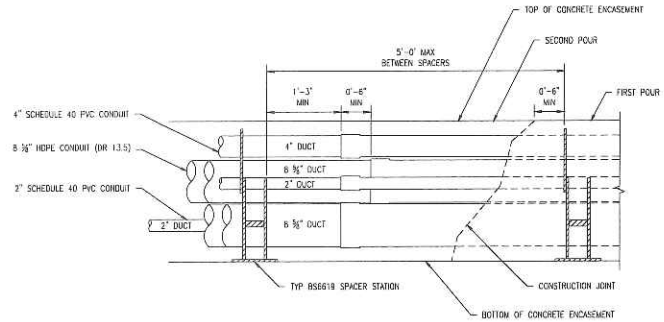
SCALE: unless noted	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
H: 1"=20' V: 1"=5'	5/10/18	DRC	TPB	TSG	33 OF 41	0



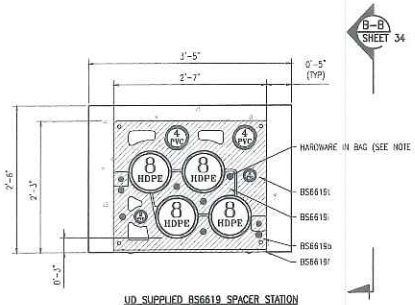
TYP TRENCH CONFIGURATION
DETAIL 1 SHEET 34
SCALE N.T.S.



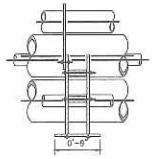
TRENCH CONFIGURATION OVER WATER SERVICE
DETAIL 2 SHEET 34
SCALE N.T.S.



TYP DUCT BANK PROFILE
SECTION A-A SHEET 34
SCALE: NTS



UD SUPPLIED BS6619 SPACER STATION
DETAIL 3 SHEET 34
SCALE N.T.S.



TYP BS6619 SPACER STATION
SECTION B-B SHEET 34
SCALE: NTS

NOTES:

1. MATERIAL:
   a. .500 ±.025 REPROCESSED HDPE (HIGH DENSITY POLYETHYLENE) SHEET
   b. COLOR: BLACK
2. THE NUTS, BOLTS, AND WASHERS REQUIRED TO SECURE THE TOP SPACER ARE IN A BAG THAT IS ATTACHED TO THE TOP SPACER.

NO.	DESCRIPTION	BY	DATE	APPR.
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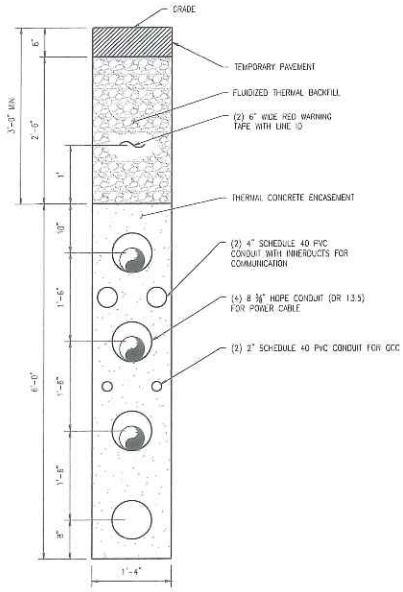
EVERSOURCE ENERGY

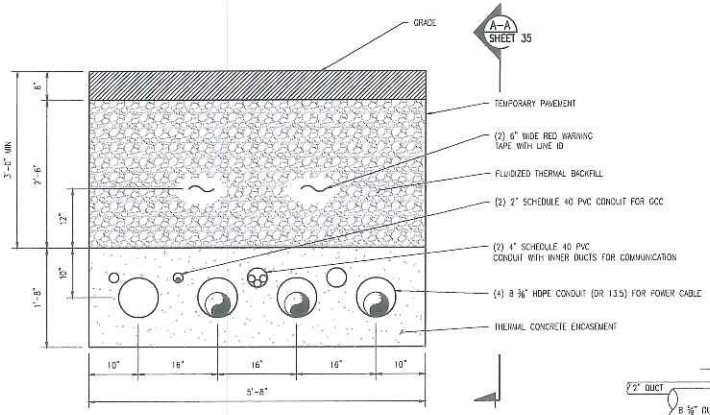
DUCT BANK AND TRENCH DETAILS
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE:	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
N.T.S.	5/10/18	DRC	TPB	TSG	34 OF 41	0

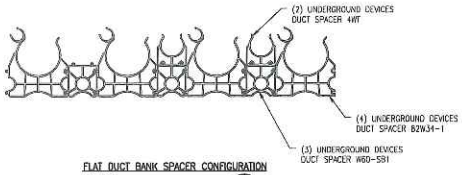
POWER ENGINEERS



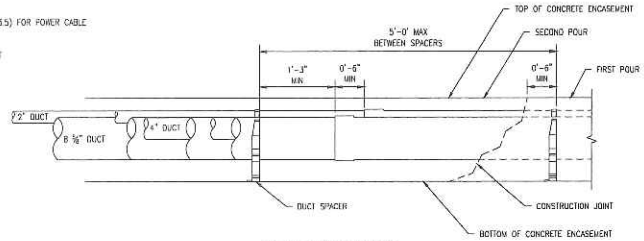
TYP VERTICAL TRENCH CONFIGURATION
DETAIL 1 SHEET 35
SCALE N.T.S.



TYP FLAT TRENCH CONFIGURATION
DETAIL 2 SHEET 35
SCALE N.T.S.



FLAT DUCT BANK SPACER CONFIGURATION
DETAIL 3 SHEET 35
SCALE N.T.S.



TYP FLAT DUCT BANK PROFILE
SECTION A-A SHEET 35
SCALE: NTS

NO.	DESCRIPTION	BY	DATE	APPR.
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DUCT BANK AND TRENCH DETAILS
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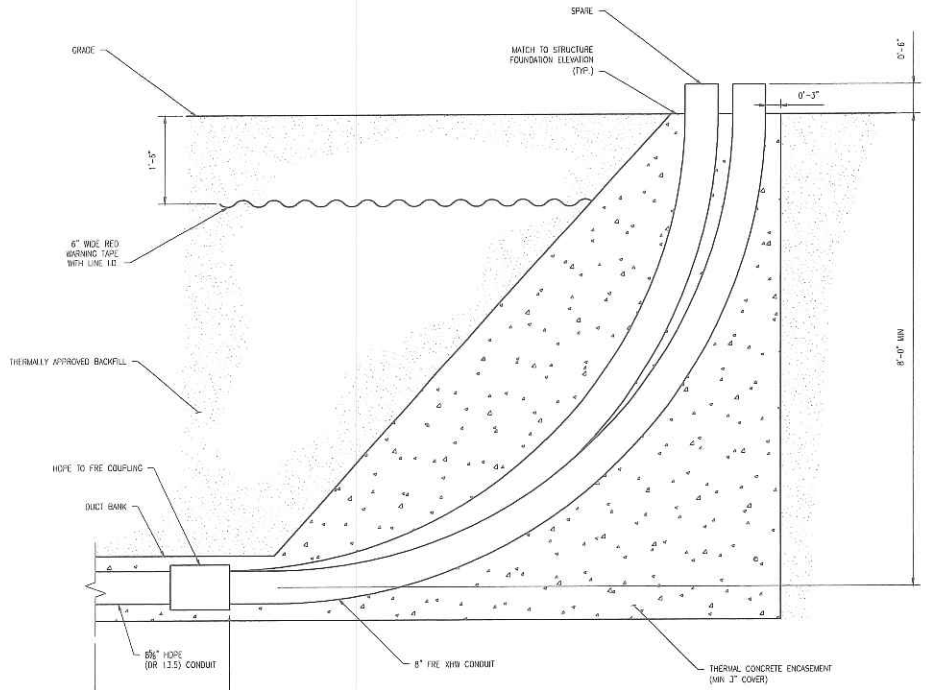
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE:	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
N.T.S.	5/10/18	DRC	TPB	TSG	35 OF 41	0

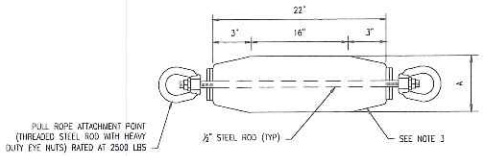
POWER ENGINEERS



DETAIL 1 NOTES:

1. AT NEEDHAM SUBSTATION, SPARE CONDUITS SHALL END BEFORE RISER SWEEPS.

TYP RISER SWEEP
DETAIL 1 SHEET 36
SCALE N.T.S



TYP MANDREL
DETAIL 2 SHEET 36
SCALE N.T.S.

DETAIL 2 NOTES:

1. MANDREL SHALL BE CONSTRUCTED OF HARD WOOD (e.g. OAK, ASH, MAPLE) OR ALUMINUM.
2. THE MANDRELS SHALL BE PAINTED WITH TWO COATS OF CONTRASTING PAINT SO THAT ANY SURFACE SCRATCHES WILL CONTRAST WITH THE BASE LAYERS BELOW AND CAN BE EASILY OBSERVED. THE BASE COAT OF PAINT SHALL BE RED AND THE TOP COAT OF PAINT SHALL BE WHITE.
3. THE ENDS OF THE MANDREL SHALL BE TAPERED FOR A MINIMUM OF 2", BUT NOT TO EXCEED 25% OF THE TOTAL MANDREL LENGTH, FROM EACH END OF THE MANDREL.
4. CABLE SUPPLIER SHALL DETERMINE FINALS DIMENSIONS OF MANDREL.

a. DIMENSION "A" TO BE ½" LESS THAN THE I.D. OF THE SPECIFIED CONDUIT

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RISER SWEEP DETAIL
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
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NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE:	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
N.T.S.	5/10/18	DRC	TPB	TSG	36 OF 41	0

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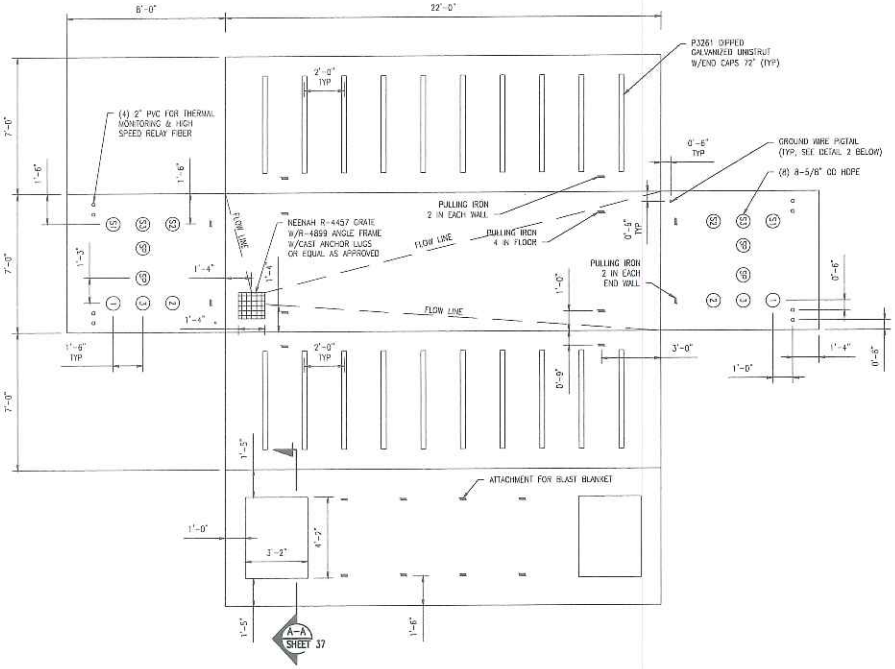
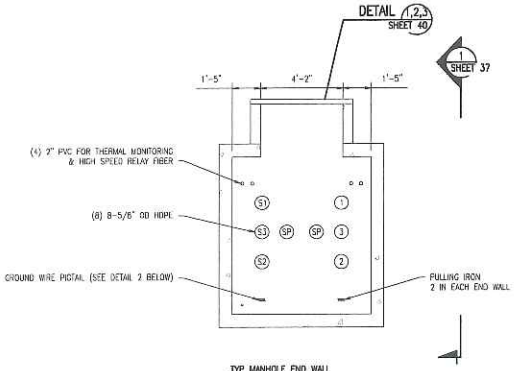
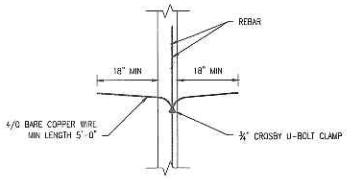


TYP MANHOLE
DETAIL
SCALE: N.T.S.
1 SHEET 37



TYP MANHOLE END WALL
SECTION
SCALE: N.T.S.
A-A SHEET 37



GROUND WIRE PIGTAIL
DETAIL
SCALE: N.T.S.
2 SHEET 37

NOTES:

1. MANHOLE DIMENSIONS SHOWN ARE INSIDE DIMENSIONS. MANHOLE WALL THICKNESS IS TYPICALLY 8".
2. THE FABRICATOR SHALL DESIGN THE PRECAST CONCRETE MANHOLES IN ACCORDANCE WITH ACI 318 AND AASHTO LOAD FACTOR DESIGN METHOD.
3. ALL MANHOLE DESIGN SHALL BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF MASSACHUSETTS.
4. CONCRETE SHALL BE MINIMUM STRENGTH OF 3000 PSI AT 28 DAYS.
5. REINFORCING STEEL SHALL BE ASTM A 615 GRADE 60.
6. THE MANHOLE SHALL BE FABRICATED IN TWO PIECES FOR FIELD ASSEMBLY. ALL JOINTS SHALL INCLUDE A WATERTIGHT SEAL DESIGN.
7. DESIGN ASSUMPTIONS SHALL BE AS FOLLOWS:

GROUNDWATER DEPTH:	9' MAX, 3' MIN BELOW FINISH GRADE
EARTH COVER:	3' MAX, 0' MIN BELOW FINISH GRADE
COEFFICIENT OF EARTH AT REST:	K = 0.50
DRY EARTH DENSITY:	120 PCF
SATURATED EARTH DENSITY:	57.6 PCF
DESIGN TRUCK:	AASHTO H20-S16

6. MANHOLE SHALL HAVE POSITIVE RESTRAINT FOR WATER FLOTATION.
9. THE EXTERIOR SURFACES OF THE MANHOLE SHALL BE COVERED WITH A DAMPROOFING COATING.
10. TWO PIECE PRECAST MANHOLE SHALL BE INSTALLED IN ACCORDANCE WITH FABRICATOR'S DRAWINGS AND INSTRUCTIONS.
11. THE JOINT BETWEEN MANHOLE SECTIONS SHALL BE SEALED WATERTIGHT.
12. STANDARD MANHOLE DEPTH SHALL INCLUDE SPACE FOR A TWO BRICK COLLAR. WHERE DEPTHS MUST BE GREATER, THE HEIGHT OF THE BRICK COLLAR SHALL BE INCREASED OR A CONCRETE CHIMNEY INSTALLED.
13. CONTRACTOR TO GROUND UNUSED SLEEVES TO SEAL MANHOLE WATERTIGHT.

MANHOLES

MANHOLE #	STATION	DIMENSIONS (LxWxH)
1	10+77	22'x7'x7'
2	23+75	22'x7'x7'
3	31+40	22'x7'x7'
4	49+28	22'x7'x7'
5	68+27	22'x7'x7'
6	82+85	22'x7'x7'
7	100+35	22'x7'x7'
8	116+54	22'x7'x7'
9	134+65	22'x7'x7'

COMMONWEALTH OF MASSACHUSETTS
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ELECTRICAL
No. 48181
REGISTERED PROFESSIONAL ENGINEER

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EVERSOURCE ENERGY

MANHOLE DETAILS
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE:	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
N.T.S.	5/10/18	DRC	TPB	TSG	37 OF 41	0

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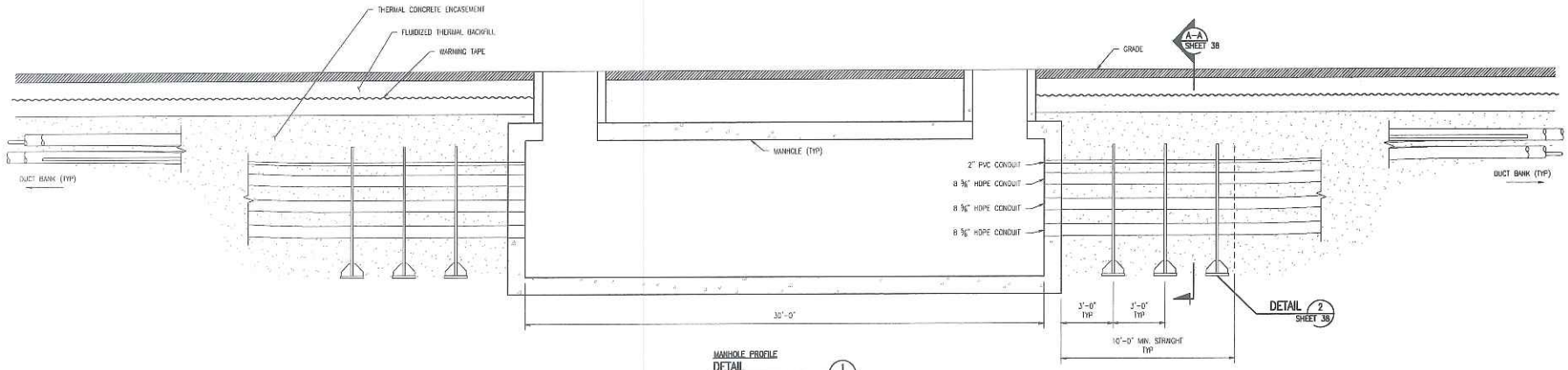
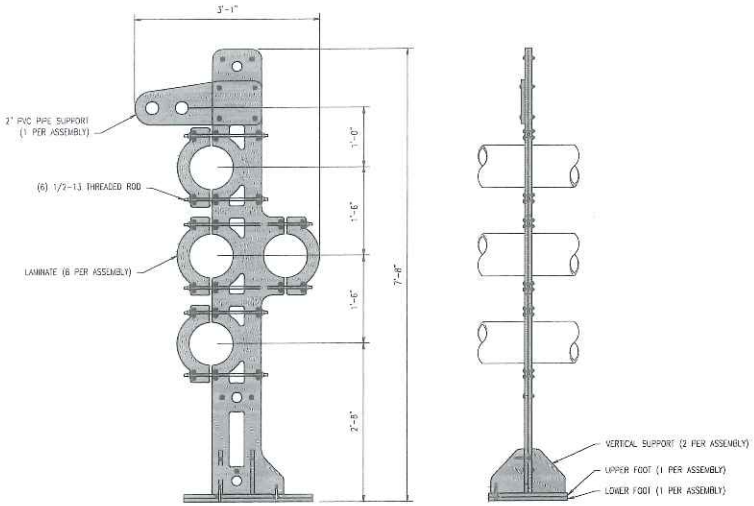
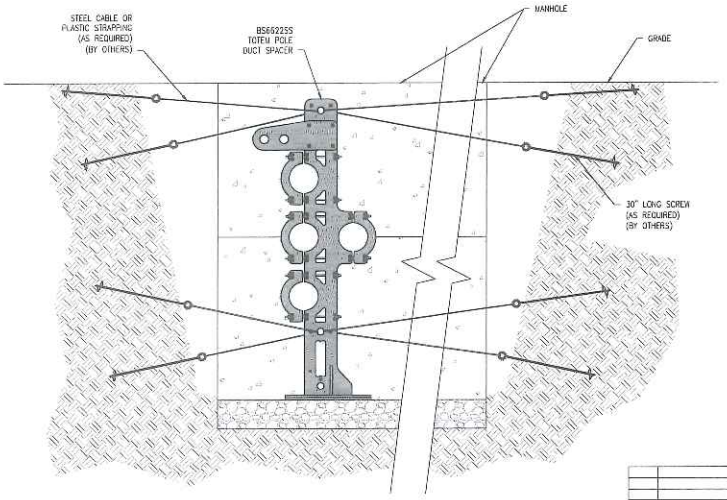


MANHOLE PROFILE
DETAIL 1 SHEET 3B
SCALE: N.T.S.



TYP TOTEM POLE DUCT SPACER
DETAIL 2 SHEET 3B
SCALE: N.T.S.



TYP TOTEM POLE SPACER STRAPPING DETAIL
SECTION A-A SHEET 3B
SCALE: N.T.S.

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MANHOLE PROFILE DETAILS
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE:	DATE	DRAWN	CHKD.	APPR.	DRAWING NO.	REV.
N.T.S.	5/10/18	DRC	TPB	TSG	3B OF 41	0

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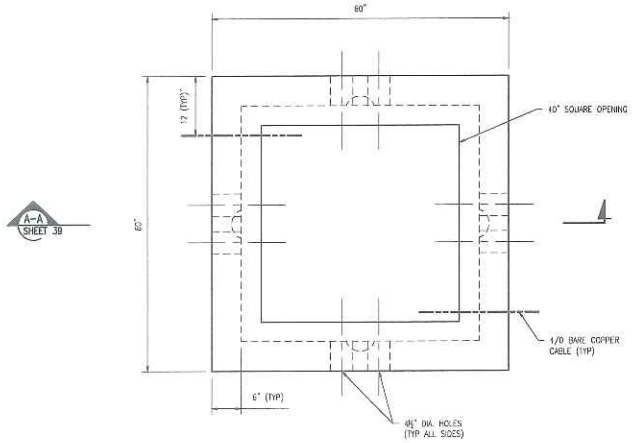
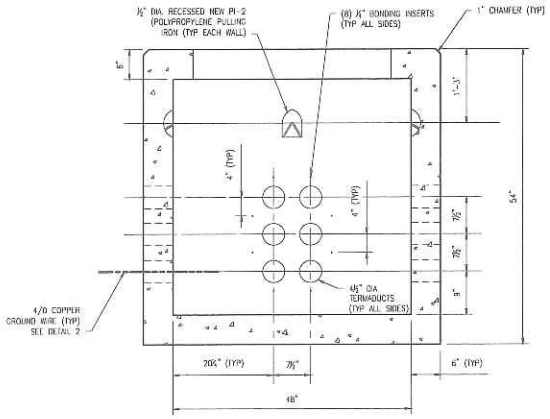
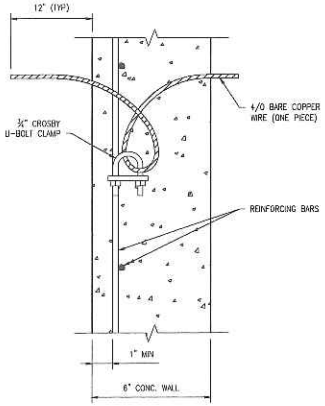


TYP 4'x4'x4' HANDHOLE
DETAIL 1 SHEET 39
SCALE: N.T.S.



TYP HANDHOLE WALL PROFILE
SECTION A-A SHEET 39
SCALE: N.T.S.



HANDHOLE GROUNDING DETAIL
DETAIL 2 SHEET 39
SCALE: N.T.S.

COMMUNICATION HANDHOLE DETAILS

NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

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EVERSOURCE ENERGY

HANDHOLE DETAILS
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
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NEEDHAM – WEST ROXBURY, MASSACHUSETTS

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N.T.S	5/10/18	DRC	IPB	TSG	39 OF 41	0

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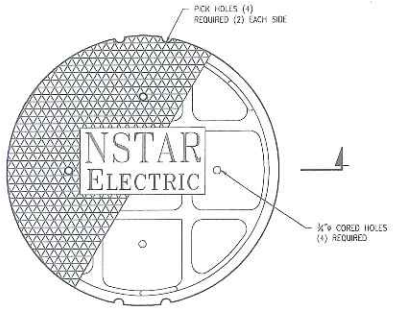
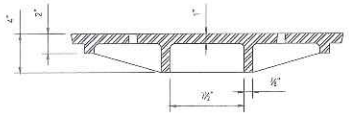


A-A SHEET 40

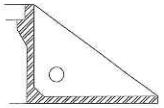
MANHOLE COVER
DETAIL 1 SHEET 40
SCALE: N.T.S.

DETAIL 1 NOTES:

1. COVER RAISED DIAMOND DESIGN
2. "NSTAR" IN 3" LETTERS
3. "E" & "LECTRIC" IN 2" & 1½" LETTERS



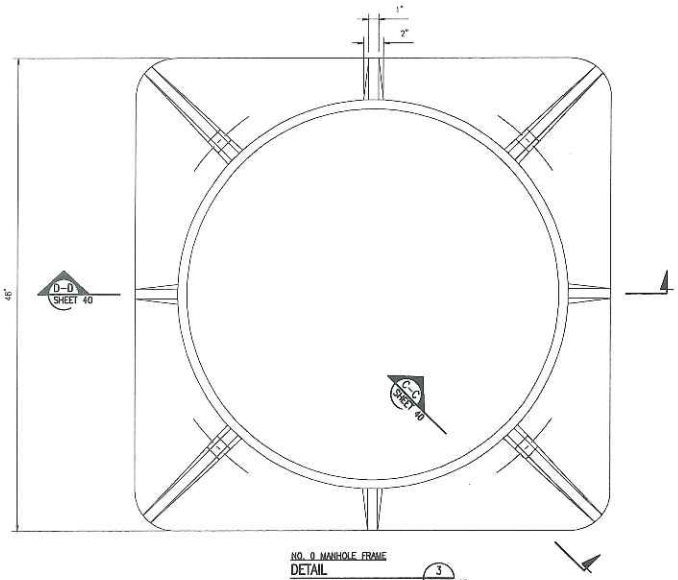
MANHOLE COVER PROFILE
SECTION A-A SHEET 40
SCALE: N.T.S.



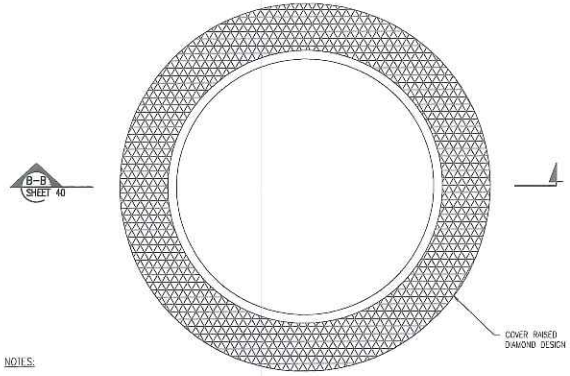
LIFTING HOLE DETAIL
SECTION C-C SHEET 40
SCALE: N.T.S.

SECTION C-C NOTES:

1. 1½"ø CORED LIFTING HOLE (4) REQUIRED ON ø44.5" B.C.



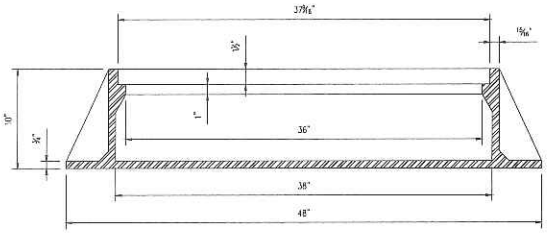
NO. 0 MANHOLE FRAME
DETAIL 3 SHEET 40
SCALE: N.T.S.



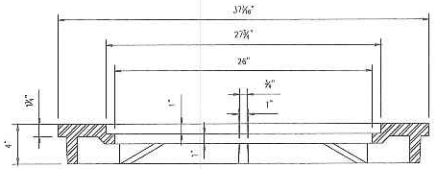
NOTES:

1. COVER READS:
   "LE2836X3 MM/DD/YY"
   "LFI MADE IN USA"
   CAST ON THE UNDERSIDE

ADAPTER FOR NO. 0 MANHOLE FRAME
DETAIL 2 SHEET 40
SCALE: N.T.S.



MANHOLE FRAME PROFILE
SECTION D-D SHEET 40
SCALE: N.T.S.



ADAPTER FRAME PROFILE
SECTION B-B SHEET 40
SCALE: N.T.S.

NO.	DESCRIPTION	BY	DATE	APPR.
0	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

REVISION

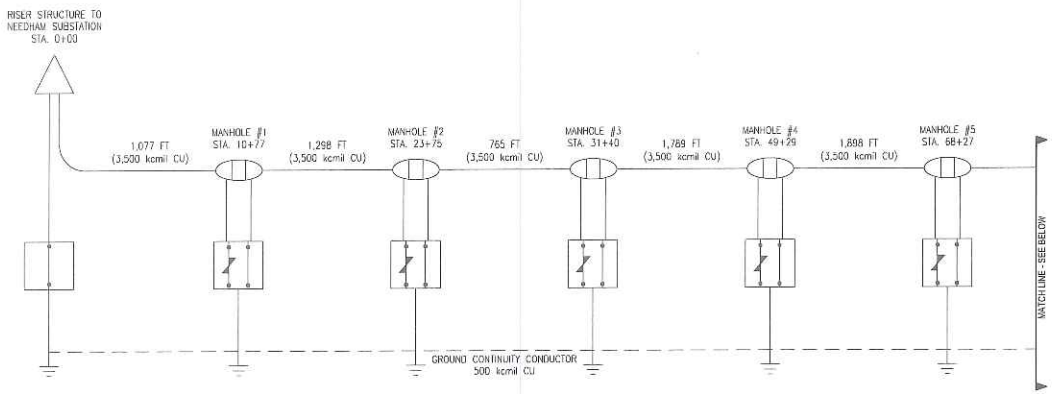
COMMONWEALTH OF MASSACHUSETTS
TODD S. GOYETTE
ELECTRICAL
No. 48101
REGISTERED PROFESSIONAL ENGINEER

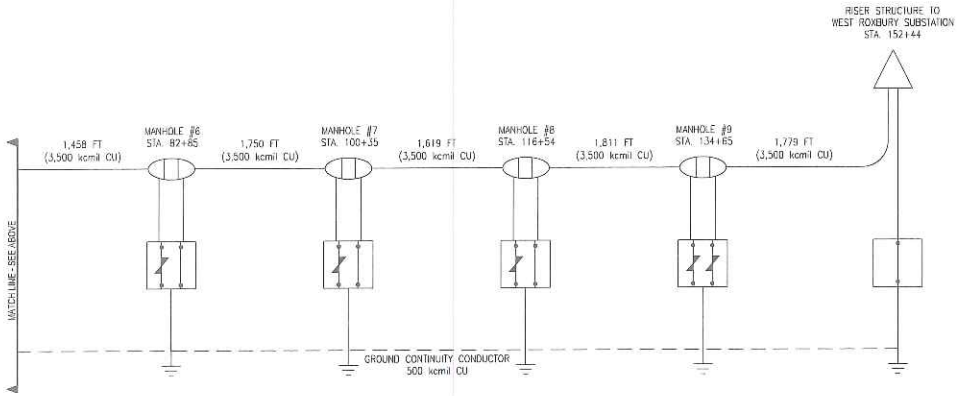
EVERSOURCE ENERGY

MANHOLE COVER DETAILS
WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT
115kV UNDERGROUND TRANSMISSION LINE
NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE:	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
N.T.S.	5/10/18	DRC	TPB	TSG	40 OF 41	0

POWER ENGINEERS
www.powereng.com





SHEATH BONDING DIAGRAM

LEGEND:

- TERMINATOR
- SHEATH BREAK SPLICE
- CONTINUOUS SHEATH SPLICE
- PARALLEL GROUND CONDUCTOR
- GROUND ROD
- THREE PHASE SHEATH VOLTAGE LIMITER LINK BOX
- COMBINED GROUNDING AND SHEATH VOLTAGE LIMITER LINK BOX
- 3 PHASE GROUNDING LINK BOX

NO.	DESCRIPTION	BY	DATE	APPR.
D	ISSUED FOR CONSTRUCTION	DRC	5/10/18	TSG

REVISION

EVERSOURCE ENERGY

SHEATH BONDING DIAGRAM

WEST ROXBURY TO NEEDHAM RELIABILITY PROJECT

115kV UNDERGROUND TRANSMISSION LINE

NEEDHAM – WEST ROXBURY, MASSACHUSETTS

SCALE:	DATE	DRAWN	CHK'D.	APPR.	DRAWING NO.	REV.
N.T.S.	5/10/18	DRC	TPB	TSG	41 of 41	0

TODD S. GOYETTE ELECTRICAL No. 48161 COMMONWEALTH OF MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER

POWER ENGINEERS
www.powerengineers.com

NOTICE

To the Record

You are hereby notified that a public hearing will be held at the **Needham Town Hall, 1471 Highland Avenue, at 7:30 p.m. on Wednesday, June 13, 2018** upon petition of Eversource Energy dated **May 23, 2018** for the construction of a new electric transmission line within public ways as provided for herein.

Project Description: Approximately 15,000 feet of new underground transmission line cable are proposed to be installed within the public ways of the Town of Needham. The proposed underground transmission line will consist of a "duct bank" with electric transmission cables installed within individual High-Density Polyethylene ("HDPE") conduits. The duct bank will consist of four 8 5/8" diameter HDPE conduits, as well as two 4- inch-diameter Polyvinyl Chloride ("PVC") conduits, and two 2-inch-diameter PVC conduits to carry communications lines and ground continuity conductors.

The project route has been included in this mailing. For more information regarding this request, read the attachment to the News Flash on our website at www.needhamma.gov.

A public hearing is required and abutters should be notified.

If you have any questions regarding this petition, please contact Eversource Energy representative, Theresa Feuersanger at 781-441-8277.

Daniel P. Matthews
John A. Bulian
Maurice P. Handel
Matthew D. Borrelli
Marianne B. Cooley

BOARD OF SELECTMEN

Dated: May 30, 2018

MATTA, RAJU
2 CARRIAGE LANE
NEEDHAM, MA 02492

ELITE HOME BUILDERS
C/O COLOGNESI, JACOB & ASHLEY
450 CHESTNUT ST
NEEDHAM, MA 02492

ROSSI, RONALD C & ROBERTA M
C/O TRIEST, SHERRY M. TR.
456 CHESTNUT ST
NEEDHAM, MA 02492

REDDISH, SHAWN
462 CHESTNUT ST
NEEDHAM, MA 02492

MILES, EMILY TR.
470 CHESTNUT STREET NEEDHAM
NOMINE
470 CHESTNUT ST
NEEDHAM, MA 02492

MASLI, SHARMILA &
DERASARI, ROHAN
569 CHESTNUT ST
NEEDHAM, MA 02492

WALSH, PETER T. +
WALSH, JEANNE M.
8 EDGEWATER DR
NEEDHAM, MA 02492

GIANNACOPOULOS, ARTEMIS &
GIANNACOPOULOS, PETER
11 EDGEWATER DR
NEEDHAM, MA 02492

HAYES, BRENT P. &
HAYES, STEPHANIE C.
234 ELMWOOD RD
NEEDHAM, MA 02492

KEARNS, EVAN D. &
KEARNS, KIMBERLY B.
71 EMERSON RD
NEEDHAM, MA 02492

SOLOMON, JOSHUA L &
SOLOMON, JENNIFER M
80 EMERSON RD
NEEDHAM, MA 02492

ESPERIAN, LEO M +
ESPERIAN, MARY +
125 GREAT PLAIN AV
NEEDHAM, MA 02492

NGUYEN, TOAN HUU
135 GREAT PLAIN AVE
NEEDHAM, MA 02492

BHARADWA, ANIL &
BHARADWA, SUSAN
151 GREAT PLAIN AVE
NEEDHAM, MA 02492

LECHNER, ROBERT J. &
LECHNER, PATRICIA M.
152 GREAT PLAIN AVE
NEEDHAM, MA 02492

PERI, MAJLINDA &
MILOSHI, XHOVALIN
155 GREAT PLAIN AVE
NEEDHAM, MA 02492

DONNELLY, EDMUND V. & PAULA
C/O ST. SEBASTIANS SCHOOL FUND
INC,
1191 GREENDALE AVE
NEEDHAM, MA 02492

MARRICHI, MATTHEW J. &
MARRICHI, SUE
170 GREAT PLAIN AVE
NEEDHAM, MA 02492

RAYMENT, DEBRA
171 GREAT PLAIN AVE
NEEDHAM, MA 02492

DELLAMARGGIO, CHRISTOPHER A. &
DELLAMARGGIO, ELLEN V.
177 GREAT PLAIN AVE
NEEDHAM, MA 02492

PINA, JAMIE &
GILBERT, HANNAH
133 GREEN ST
NEEDHAM, MA 02492

PAPANTONIOU, HERCULES D. &
PAPANTONIOU, MARIA B.
1109 GREENDALE AVE
NEEDHAM, MA 02492

FACHETTI, DAVID J. &
FACHETTI, JILL M.
9 HIGH ROCK ST
NEEDHAM, MA 02492

PANNOZZO, ANTHONY T &
PANNOZZO, LORIANNE M
33 HIGH ROCK ST
NEEDHAM, MA 02492

TU, JUN DANIEL &
LIU, LI
40 HIGH ROCK ST
NEEDHAM, MA 02492

STRAKOSCH, GREGORY &
STRAKOSCH, MARGARET
41 HIGH ROCK ST
NEEDHAM, MA 02492

TOTTEN, SUSAN M.
54 HIGH ROCK ST
NEEDHAM, MA 02492

COMISKEY, DANIEL C.
C/O ELLEN M. HARRINGTON, ESQ
160 FEDERAL ST - 15TH FLOOR
BOSTON, MA 02110

PATEL, BHUREN H. &
PATEL, PARSHAVI S.
72 HIGH ROCK ST
NEEDHAM, MA 02492

JEPSKY, ANDREW S &
HARRISON, TAMAR
84 HIGH ROCK ST
NEEDHAM, MA 02492

LAI, PETER SING ON &
LAI, JUDY Y.N.
91 HIGH ROCK STREET
NEEDHAM, MA 02492

GAUDETTE, STEPHEN C. &
GAUDETTE, PATRICIA S.
92 HIGH ROCK ST
NEEDHAM, MA 02492

SALVATORE, ALBERTO &
SALVATORE, KAREN C.
103 HIGH ROCK ST
NEEDHAM, MA 02492

MARTIN, PATRICK J. &
MARTIN, MEGHAN
104 HIGH ROCK ST
NEEDHAM, MA 02492

YANOFSKY, HELAINE TR. &
YANOFSKY, JOSEPH M. TR.
111 HIGH ROCK ST
NEEDHAM, MA 02492

SPYROPOULOS, M. ELEANOR &
SPYROPOULOS, PETER C.
115 HIGH ROCK ST
NEEDHAM, MA 02492

BEGGS, ALAN H. III &
LEVINE, JAMI C.
120 HIGH ROCK ST
NEEDHAM, MA 02492

BUXTON, CHARLOTTE R. &
BUXTON, ALFRED E.
129 HIGH ROCK ST
NEEDHAM, MA 02492

FRANCIONE, THOMAS E. &
FRANCIONE, BRIAN
66 SPRING RD APT 2
NEEDHAM, MA 02494

HANEY, JOHN F. &
DILLON, MAUREEN A.
158 HIGH ROCK ST
NEEDHAM, MA 02492

KIM, SUN HYUK &
KIM, WON O.
168 HIGH ROCK ST
NEEDHAM, MA 02492

DAI, WEI &
ZHAO, JIANG HONG
178 HIGH ROCK ST
NEEDHAM, MA 02492

BURTON, ELISSA C.S. &
BURTON, TIMOTHY M.
179 HIGH ROCK ST
NEEDHAM, MA 02492

FOGELMAN, MATTHEW J . &
FOGELMAN, AMY G.
185 HIGH ROCK
NEEDHAM, MA 02492

A.R.P. DEVELOPMENT LLC
7 MONTAGUE RD
DEDHAM, MA 02026

CATTANACH, LYNN
PO BOX 920041
NEEDHAM, MA 02492

FISHBONE, JEFFREY A. &
FISHBONE, KATHERINE R.L.
202 HIGH ROCK ST
NEEDHAM, MA 02492

KAPUST, ERIC D
203 HIGH ROCK ST
NEEDHAM, MA 02492

RAIMONDO, HOLLY NYLANDER
211 HIGH ROCK ST
NEEDHAM, MA 02492

WILDMAN, WESLEY J. &
WILDMAN, SUZANNE G.
217 HIGH ROCK ST
NEEDHAM, MA 02492

WOHL, MICHAEL S. &
WOHL, MELINDA K.
223 HIGH ROCK ST
NEEDHAM, MA 02492

BRAILEY, EDWIN J. JR. &
BRAILEY, BARBARA N
229 HIGH ROCK ST
NEEDHAM, MA 02492

VOGT, JAMES C +
VOGT, ALICE P
239 HIGH ROCK ST
NEEDHAM, MA 02492

PETRINI CORP.
SOUTHFIELD ASSOC.
187 ROSEMARY ST
NEEDHAM, MA 02494

PETRINI CORP.
SOUTHFIELD ASSOC.
187 ROSEMARY ST
NEEDHAM, MA 02494

CONNORS, KELLI T. &
CONNORS, CHRISTOPHER D.
40 HUTTER RIDGE RD
NEEDHAM, MA 02492

FALLON, JOSEPH P. &
FALLON, PAMELA P.
44 HUTTER RIDGE RD
NEEDHAM, MA 02492

SMITH, MICHELLE L. S.
6 INTERVALE RD
NEEDHAM, MA 02492

STASZESKY, JUDITH H. &
KRUGER, ROBERT & JENNIFER
7 INTERVALE RD
NEEDHAM, MA 02492

SILVER, JONATHAN S. &
SILVER, WENDY B.
153 LIVINGSTON CIR
NEEDHAM, MA 02492

ZHONG, CHANGNI
C/O FANEUIL, STACEY
10 LONGACRE RD
NEEDHAM, MA 02494

SAIF, SAKINA &
MULLA, IMTIYAZ
1 NEEDHAMDALE RD
NEEDHAM, MA 02492

DISANGRO, JOANNE
5 PEACEDALE RD
NEEDHAM, MA 02492

MARINO, STACY L.
C/O MARINO, STACEY L. TR.
6 PEACEDALE RD
NEEDHAM, MA 02492

MCCARTHY, MARY J., TR &
IGO, KERRY A., TR
29 STERLING RD
NEEDHAM, MA 02492

WINTERMAN, JAMES D. &
WINTERMAN, MIMI
20 PEACEDALE RD
NEEDHAM, MA 02492

ALMEIDA, JOSEPH M.
28 PEACEDALE RD
NEEDHAM, MA 02492

FRAZZETTE, CHARLES W. &
FRAZZETTE, MARYLOU
29 PEACEDALE RD
NEEDHAM, MA 02492

PARK, BRIAN &
IM, KYUNGAH
35 PEACEDALE RD
NEEDHAM, MA 02492

MACEACHERN, JOHN J. &
MACEACHERN, JAMIE LYNN
42 PEACEDALE RD
NEEDHAM, MA 02492

POTTS, ROBERT L. +
POTTS, SHARMAN M.
43 PEACEDALE RD
NEEDHAM, MA 02492

CULGIN, MICHAEL F. &
CULGIN, JENNIFER L.
48 PEACEDALE RD
NEEDHAM, MA 02492

CHIN, ALBERT C. &
CHIN, SALLY Y.
53 PEACEDALE RD
NEEDHAM, MA 02492

LEYKIN, MARK &
PRYMAK, LARISSA
59 PEACEDALE RD
NEEDHAM, MA 02492

WATERS, JAMES W. &
WATERS, HELEN M.
64 PEACEDALE RD
NEEDHAM, MA 02492

CICCOLO, DALE A. &
CICCOLO, ROBERT W. JR.
67 PEACEDALE RD
NEEDHAM, MA 02492

COHEN, ANDREW L. &
COHEN, JENNIFER LIEBMAN
75 PEACEDALE RD
NEEDHAM, MA 02492

RAY, CHARLES M. TRUSTEE
RAY REALTY TRUST
85 PEACEDALE RD
NEEDHAM, MA 02492

BULIAN, JOHN A. &
BULIAN, JANET L.
86 PEACEDALE RD
NEEDHAM, MA 02492

THOMAS, CAROL I. &
THOMAS, STEVEN M.
92 PEACEDALE RD
NEEDHAM, MA 02492

FRANCO, STEPHEN C &
FRANCO, AMY L.
93 PEACEDALE RD
NEEDHAM, MA 02492

COSTELLO, JOHN J. ,TR&
COSTELLO, ELLEN P , TR
99 PEACEDALE RD
NEEDHAM, MA 02492

O'BRIEN, EDWARD P &
BYRNE, CATHERINE D
104 PEACEDALE ROAD
NEEDHAM, MA 02492

RATTO, EUGENE J. JR & FRANCES M.
RATTO REALTY TRUST
5 RICHARDSON DR
NEEDHAM, MA 02492

SEMPRUCCI, MICHAEL C &
SEMPRUCCI, MARISSA R
10 RICHARDSON DR
NEEDHAM, MA 02492

STERN, ROBERT A. &
STERN, LORI BRONSTEIN
4 SOUTH COURT
NEEDHAM, MA 02492

ZEITLER, STEPHEN P. &
ZEITLER, CAREN
5 SOUTH COURT
NEEDHAM, MA 02492

GORDON, CARL A.
C/O EATON VANCE INVESTMENT
COUNCIL
2 INTERNATIONAL PLACE
BOSTON, MA 02110

EWING, EILEEN M., TR &
MAUGHN, MARY FRANCES, TR
P O BOX 920306
NEEDHAM, MA 02492

COWARD, DEREK W. F. & JEAN
C/O KOWALSKI, JEFFREY &
DANIELLE M.
15 SOUTH ST
NEEDHAM, MA 02492

HUNG, ALBERT Y. &
WANG, AUDREY K.
20 SOUTH ST
NEEDHAM, MA 02492

KEITH, ROBERT R.
24 SOUTH STREET
NEEDHAM, MA 02492

CUMMINGS, LAWRENCE R +
CUMMINGS, MARGARET L
27 SOUTH ST
NEEDHAM, MA 02492

SANTICIOLI, GEORGE &
SHENTON, MARTHA E.
35 SOUTH ST
NEEDHAM, MA 02492

NEWMAN, PHILIP H. +
NEWMAN, BARBARA J.
45 SOUTH STREET
NEEDHAM, MA 02492

WEINSTEIN, BRIAN M &
WEINSTEIN, JANE M
79 SOUTH ST
NEEDHAM, MA 02492

GILLIS, RONALD J. JR. &
GILLIS, KARI A.
89 SOUTH ST
NEEDHAM, MA 02492

SOMERS, MARY M
93 SOUTH ST
NEEDHAM, MA 02492

KOLBE, A. LAWRENCE +
KOLBE, RUTH C
94 SOUTH STREET
NEEDHAM, MA 02492

SALTZBERG, ALFRED J. & JUNE
C/O SALTZBERG, ALFED J. & JUNE E.
TRS.
109 SOUTH ST
NEEDHAM, MA 02492

BARBERA, DARIO &
BLOCK, INGRID H.
110 SOUTH STREET
NEEDHAM, MA 02492

BUCKING, JAMES &
BUCKING, CATHERINE
124 SOUTH STREET
NEEDHAM, MA 02492

SOKOLOVE, LANA M.
130 SOUTH ST
NEEDHAM, MA 02492

PARKER, JUDSON GARRETT JR. &
PETERS, HELEN FRAME
133 SOUTH ST
NEEDHAM, MA 02492

FEDEROW, GARRETT J. &
FEDEROW, SARA N.
146 SOUTH ST
NEEDHAM, MA 02492

GEISHECKER, JOHN A. JR., TR.
PO BOX 80
NEEDHAM, MA 02492

HURLEY, BRIAN A, &
HURLEY, AMY
154 SOUTH ST
NEEDHAM, MA 02492

KINGHORN, RONALD A. &
KINGHORN, LAUREN
165 SOUTH ST
NEEDHAM, MA 02492

BUDREAU, KENISON &
BUDREAU, ELAINE M
166 SOUTH ST
NEEDHAM, MA 02492

LEVIN, ERIC S. , TR&
LEVIN, MARGARITA L., TR
171 SOUTH ST
NEEDHAM, MA 02492

BAKER, NARDIN L. &
BAKER, JULIA S.
178 SOUTH ST
NEEDHAM, MA 02492

GRIFFITH, PHILIP T
179 SOUTH ST
NEEDHAM, MA 02492

FACHETTI, MARK P. &
FACHETTI, CAROL A.
187 SOUTH ST
NEEDHAM, MA 02492

MENTZER, STUART G &
CAMANN, JOANNE H
192 SOUTH ST
NEEDHAM, MA 02492

ALLISON, STEVEN M. &
CAHILL, KATHLEEN M.
200 SOUTH ST
NEEDHAM, MA 02492

BIEGELEISEN, ERIC L &
BIEGELEISEN, ALLYSON S.
207 SOUTH STREET
NEEDHAM, MA 02492

LYNCH, CHRISTOPHER R. &
LYNCH, MARIE ELENA
221 SOUTH ST
NEEDHAM, MA 02492

HONG, MINGDE & YAN, KUN
C/O NAGLE, JOHN F. & KAITLIN D.
227 SOUTH ST
NEEDHAM, MA 02492

CULLEN, LEO W., JR, TR &
C/O DAHILL, CATHERINE, TR
85 E. INDIA ROW # 33F
BOSTON, MA 02110

KORSUNSKY, IGOR, & JULIA, TRS
SOUTH STREET REALTY TRUST
247 SOUTH ST
NEEDHAM, MA 02492

ANDERSON, ROBERT F. & MARIE
TRS.
ANDERSON REALTY TRUST
279 SOUTH ST
NEEDHAM, MA 02492

IRWIN, DANIEL P. TR.&
IRWIN, SHEILA M. HOWARD TR
351 SOUTH ST
NEEDHAM, MA 02492

KLEMMER, GREGORY G. &
KLEMMER, ALEXANDRA P.
369 SOUTH ST
NEEDHAM, MA 02492

BAI, YANG &
ZHANG, YAN
374 SOUTH ST
NEEDHAM, MA 02492

REDCO PROPERTIES LLC
28582 LACAILLE DR
NAPLES, FL 34119

FORMAN, GUY &
FORMAN, PAMELA B.
396 SOUTH STREET
NEEDHAM, MA 02492

CAIN, WILLIAM E. &
HARMAN, BARBARA LEAH
397 SOUTH ST
NEEDHAM, MA 02492

GOLDMAN, MARC, TR.
400-410 SOUTH STREET NOMINEE
TRUST
400 SOUTH ST
NEEDHAM, MA 02492

JEWETT, WILLIAM D. &
PINALS, BETH R.
415 SOUTH ST
NEEDHAM, MA 02492

URICH, WILLIAM F. &
URICH, THERESA
427 SOUTH ST
NEEDHAM, MA 02492

GOLDMAN, MARC, TR
430 SOUTH STREET NOMINEE TRUST
400 SOUTH ST
NEEDHAM, MA 02492

WARD, ROBERTA L.
436 SOUTH ST
NEEDHAM, MA 02492

SHAHRAM, VAHID &
SHAHRAM, ANNA H.
449 SOUTH ST
NEEDHAM, MA 02492

KENNEDY, WILLIAM J., JR &
KENNEDY, WANITA D.
450 SOUTH ST
NEEDHAM, MA 02492

HANDIN, ROBERT I. &
HANDIN, MARCIA REW
463 SOUTH ST
NEEDHAM, MA 02492

TADROS, CHRISTINE &
BOUTROS, BASSEM
470 SOUTH ST
NEEDHAM, MA 02492

CACCAVARO, JOHN
475 SOUTH ST
NEEDHAM, MA 02492

HURWITZ, ROGER J &
HURWITZ, FAWN
500 SOUTH ST
NEEDHAM, MA 02492

VAZZA, MICHAEL F., JAMES P.
VAZZA, ANNMARIE, & THOMAS J.,
TRS.
508 SOUTH ST
NEEDHAM, MA 02492

CHRISTEN THOMAS &
WONG, CINDY WAI YIN
517 SOUTH ST
NEEDHAM, MA 02492

VERGARA, ANGELA F.
C/O VERGARA, ANGELA& PAULA &
JOHN M TRS.
1488 TIPPERARY DRIVE
MELBOURNE, FL 32904

CARBERRY, JOHN G. &
WATKINS, MARGARET M.
531 SOUTH ST
NEEDHAM, MA 02492

568 SOUTH STREET, LLC
568 SOUTH ST
NEEDHAM, MA 02492

NASCIMBEN, LUIGINO &
CARABUENA, JEAN MARIE
580 SOUTH ST
NEEDHAM, MA 02492

ALPHIN, HELEN I.+
ALPHIN, ALBERT
590 SOUTH ST
NEEDHAM, MA 02492

WEINBERG, JOHN R &
WEINBERG, MARIAN E TRS
11 STERLING ROAD
NEEDHAM, MA 02492

LISCHEWSKI, JANE E.
86 VALLEY RD
NEEDHAM, MA 02492

LISCHEWSKI, JANE E.
86 VALLEY RD
NEEDHAM, MA 02492

BERANGER , PHILIP H. &
BERANGER, SUSAN M.
89 VALLEY RD
NEEDHAM, MA 02492

BERANGER , PHILIP H. &
BERANGER, SUSAN M.
89 VALLEY RD
NEEDHAM, MA 02492

BLOOD, CHARLES J. &
BLOOD, KATHRYN A.
94 VALLEY RD
NEEDHAM, MA 02492

BLOOD, CHARLES J. &
BLOOD, KATHRYN A.
94 VALLEY RD
NEEDHAM, MA 02492

DOYLE, ROBERT A +
DOYLE, MARGARET M
95 VALLEY RD
NEEDHAM, MA 02492

DOYLE, ROBERT A +
DOYLE, MARGARET M
95 VALLEY RD
NEEDHAM, MA 02492

GALLAGHER, CHRIS W. &
GALLAGHER, MAUREEN L.
100 VALLEY RD
NEEDHAM, MA 02492

GUTTELL, DANIEL J. &
GUTTELL, LINDSAY
101 VALLEY RD
NEEDHAM, MA 02492

SUNG, KIJU &
HONG, JONGHEE M
106 VALLEY RD
NEEDHAM, MA 02494

SHERIDAN, HUGH B JR +
SHERIDAN, JOAN D
107 VALLEY RD
NEEDHAM, MA 02492

GOLDSTEIN, SAUL
112 VALLEY RD
NEEDHAM, MA 02492

POPEO, R ROBERT +
POPEO, BRENDA E.
1200 WEBSTER ST
NEEDHAM, MA 02492

HOFFMAN, ZONA
1205 WEBSTER ST
NEEDHAM, MA 02492

Grant of Location Request
West Roxbury to Needham DCT Separation Project

Exhibit E

List of Abutters