MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
TITLE SHEET & INDEX

PLAN AND PROFILE OF

ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

IN THE TOWN OF

WESTFORD

MIDDLESEX COUNTY

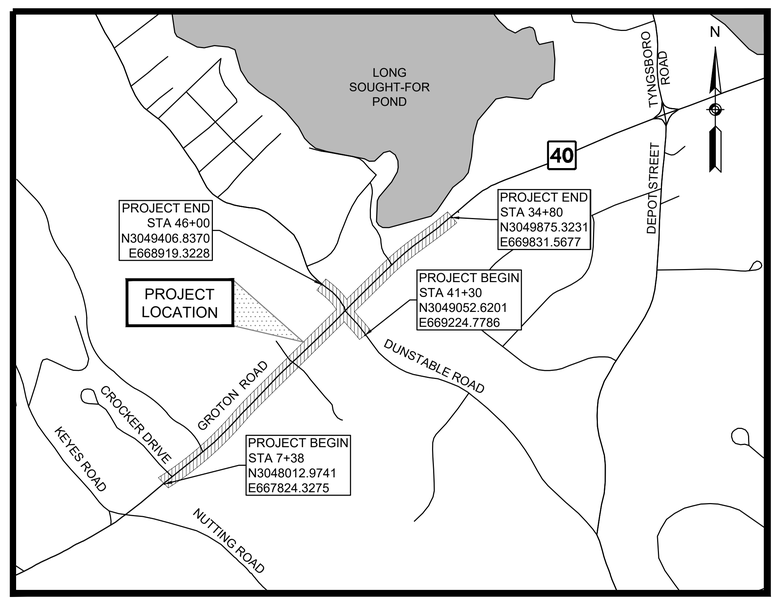
FEDERAL AID PROJECT NO.

PRELIMINARY RIGHT OF WAY

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JULY 1, 2015, THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WTH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2-3	TYPICAL SECTIONS
4-9	CONSTRUCTION PROFILES
10-11	PARCEL SUMMARY SHEET
12	LOCATION PLAN
13-17	PROPERTY PLANS



0 500 1000 1500 2000

SCALE: 1" = 500'

LENGTH OF PROJECT = 2,742.00 FEET = 0.519 MILES (GROTON RD)
470.00 FEET = 0.089 MILES (DUNSTABLE RD)

DESIGN DESIGNATION

	GROTON ROAD (ROUTE 40)	DUNSTABLE ROAD
DESIGN SPEED	40 MPH	30 MPH
ADT (2017)	10,995 VPD	2,985 VPD
ADT (2037)	13,685 VPD	3,715 VPD
K	9.3%	10.3%
D	54.5% EB	73.6% NB
T (PEAK HOUR)	0.8%	0.6%
T (AVERAGE DAY)	1.4%	1.0%
DHV	1,270 VPH	380 VPH
DDHV	695 VPH	280 VPH
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL	URBAN MINOR ARTERIAL (NORTH) URBAN COLLECTOR (SOUTH)

DATE	DESCRIPTION	REV #
2/26/2018	100%/PS&E SUBMITTAL	4
12/18/2017	UPDATE PER ARBORIST REPORT	3
11/21/2017	75% SUBMITTAL	2
6/23/2017	25% REVISED SUBMITTAL	1
2/15/2017	25% SUBMITTAL	-

TEC, Inc.
65 Glenn Street | 169 Ocean Blvd
Lawrence, MA 01843 | Hampton, NH 03842

massDOT
Massachusetts Department of Transportation
Highway Division

RECOMMENDED FOR APPROVAL

CHIEF ENGINEER **DATE**

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR **DATE**

APPROVED

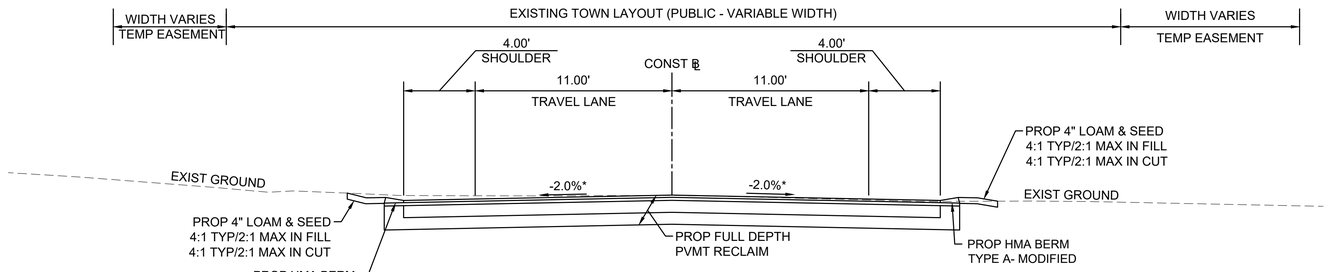
HIGHWAY ADMINISTRATOR **DATE**

608037\PS&E\RW1\TITLE SHEET & INDEX).DWG Plotted on 2/15/2018 4:23 PM

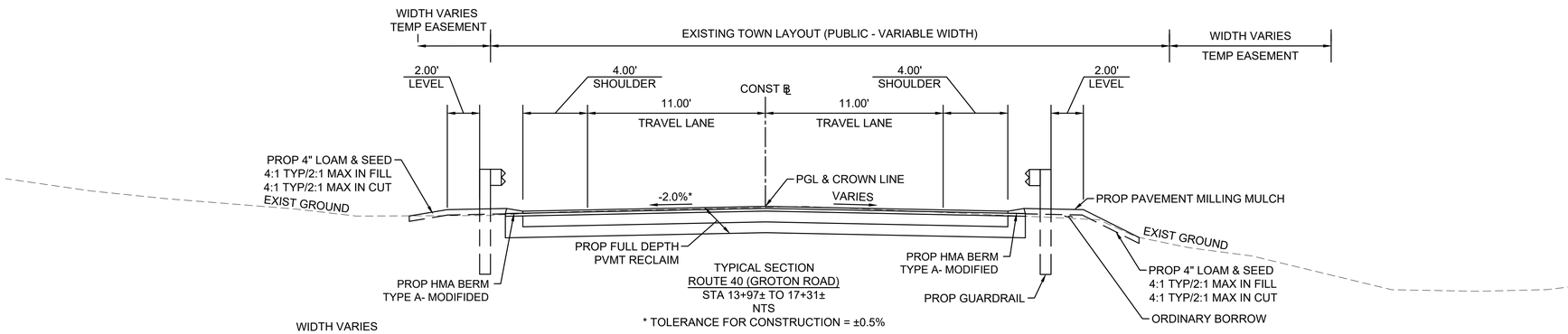
WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	17
PROJECT FILE NO.	608037		

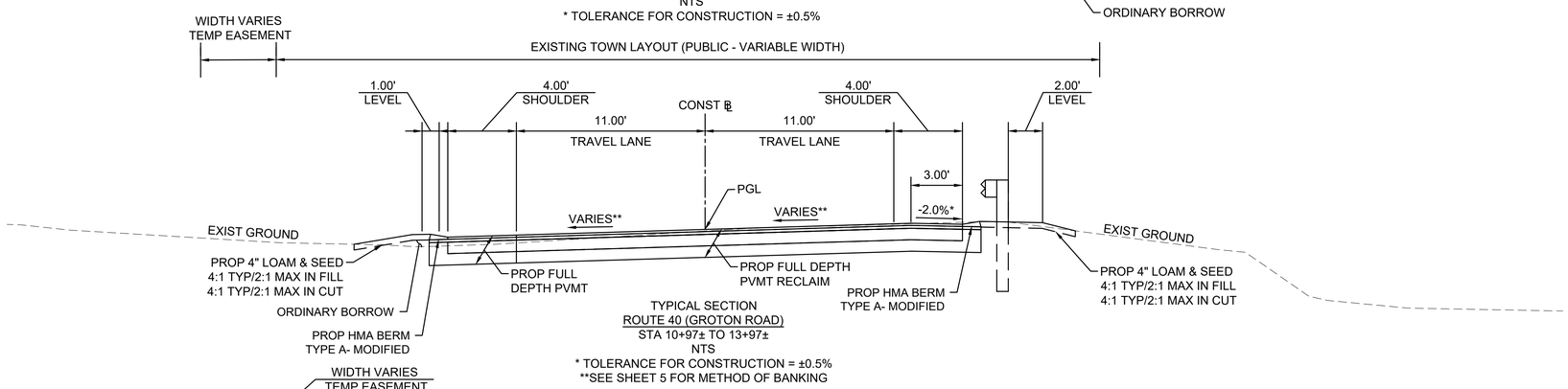
PRELIMINARY RIGHT OF WAY
TYPICAL SECTIONS - 1 OF 2



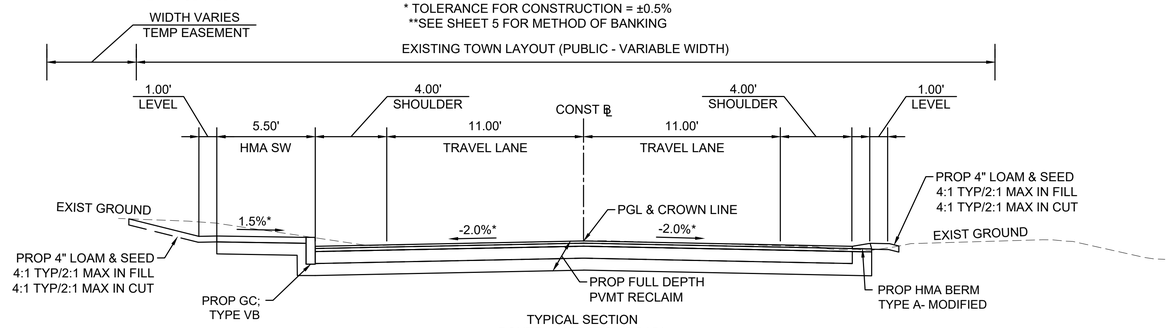
TYPICAL SECTION
ROUTE 40 (GROTON ROAD)
STA 17+31± TO 23+40±
NTS
* TOLERANCE FOR CONSTRUCTION = ±0.5%



TYPICAL SECTION
ROUTE 40 (GROTON ROAD)
STA 13+97± TO 17+31±
NTS
* TOLERANCE FOR CONSTRUCTION = ±0.5%



TYPICAL SECTION
ROUTE 40 (GROTON ROAD)
STA 10+97± TO 13+97±
NTS
* TOLERANCE FOR CONSTRUCTION = ±0.5%
**SEE SHEET 5 FOR METHOD OF BANKING



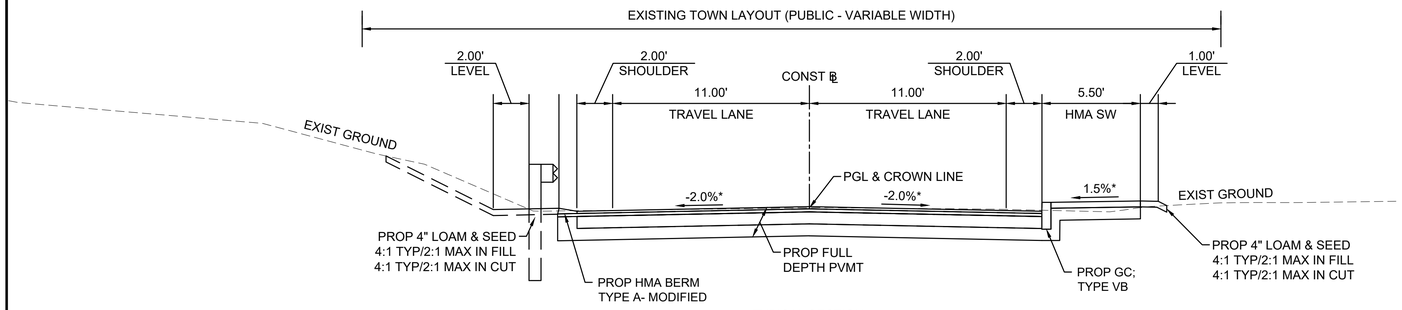
TYPICAL SECTION
ROUTE 40 (GROTON ROAD)
STA 8+50± TO 10+97±
NTS
* TOLERANCE FOR CONSTRUCTION = ±0.5%

608037(PS&E)RW2(TYPICAL SECTIONS).DWG Plotted on 2/15/2018 5:05 PM

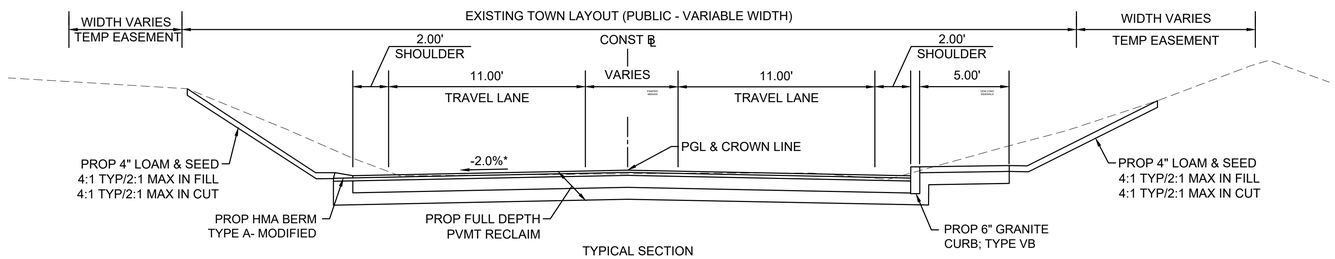
WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	17
PROJECT FILE NO.	608037		

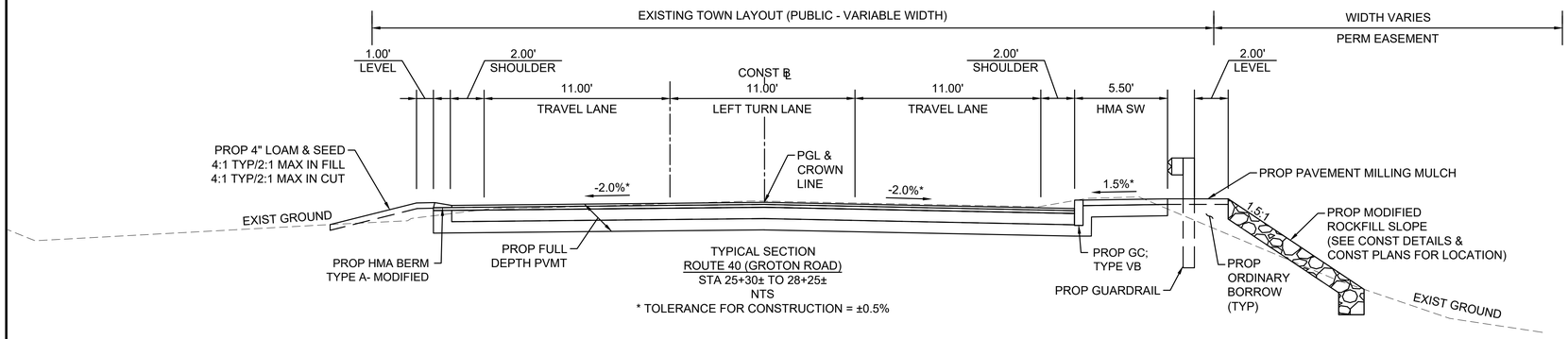
PRELIMINARY RIGHT OF WAY
TYPICAL SECTIONS - 2 OF 2



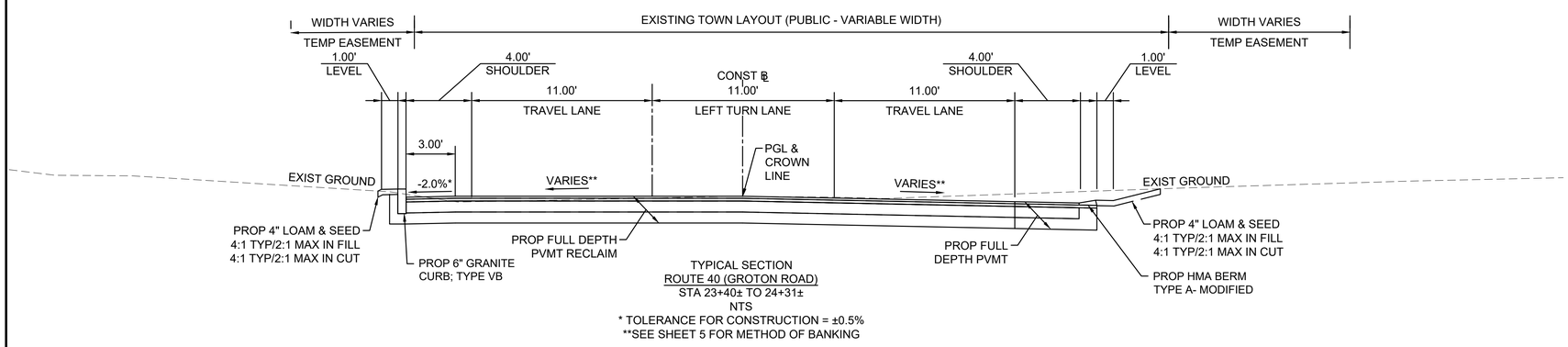
TYPICAL SECTION
ROUTE 40 (GROTON ROAD)
STA 30+00± TO 34+05±
NTS
* TOLERANCE FOR CONSTRUCTION = ±0.5%



TYPICAL SECTION
ROUTE 40 (GROTON ROAD)
STA 28+25± TO 30+00±
NTS
* TOLERANCE FOR CONSTRUCTION = ±0.5%

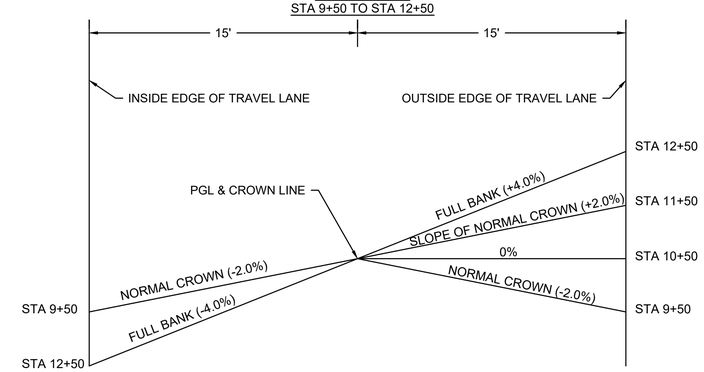


TYPICAL SECTION
ROUTE 40 (GROTON ROAD)
STA 25+30± TO 28+25±
NTS
* TOLERANCE FOR CONSTRUCTION = ±0.5%

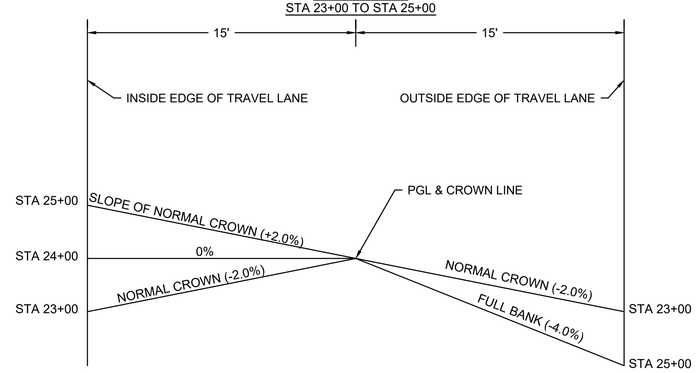


TYPICAL SECTION
ROUTE 40 (GROTON ROAD)
STA 23+40± TO 24+31±
NTS
* TOLERANCE FOR CONSTRUCTION = ±0.5%
**SEE SHEET 5 FOR METHOD OF BANKING

METHOD OF BANKING
GROTON ROAD
STA 9+50 TO STA 12+50



METHOD OF BANKING
GROTON ROAD
STA 23+00 TO STA 25+00

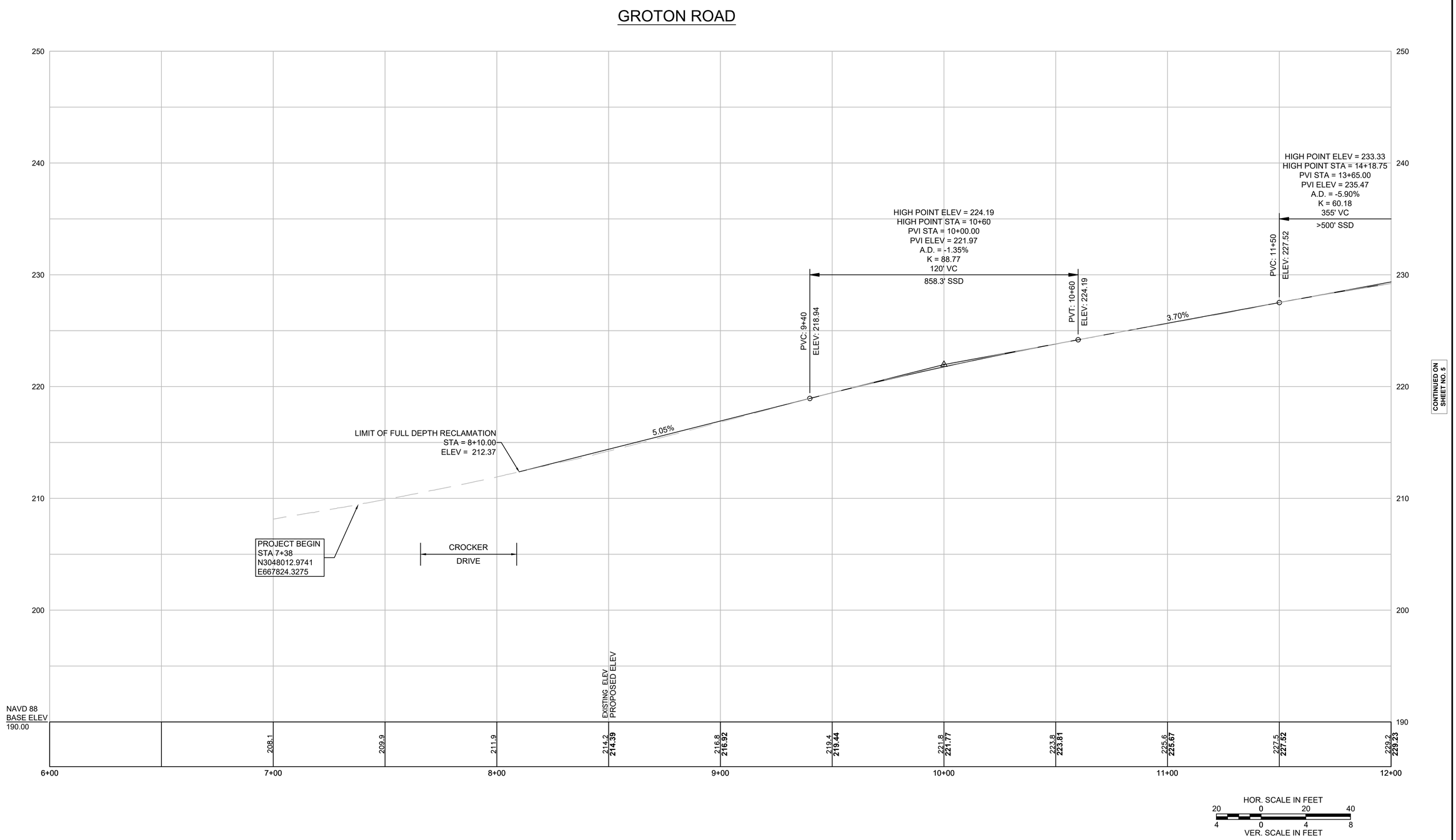


608037(PS&E)RW2(TYPICAL SECTIONS).DWG Plotted on 2/15/2018 5:05 PM

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
CONSTRUCTION PROFILES - 1 OF 6



CONTINUED ON SHEET NO. 5

FOR PROPERTY PLAN: SEE SHEET NO. 13

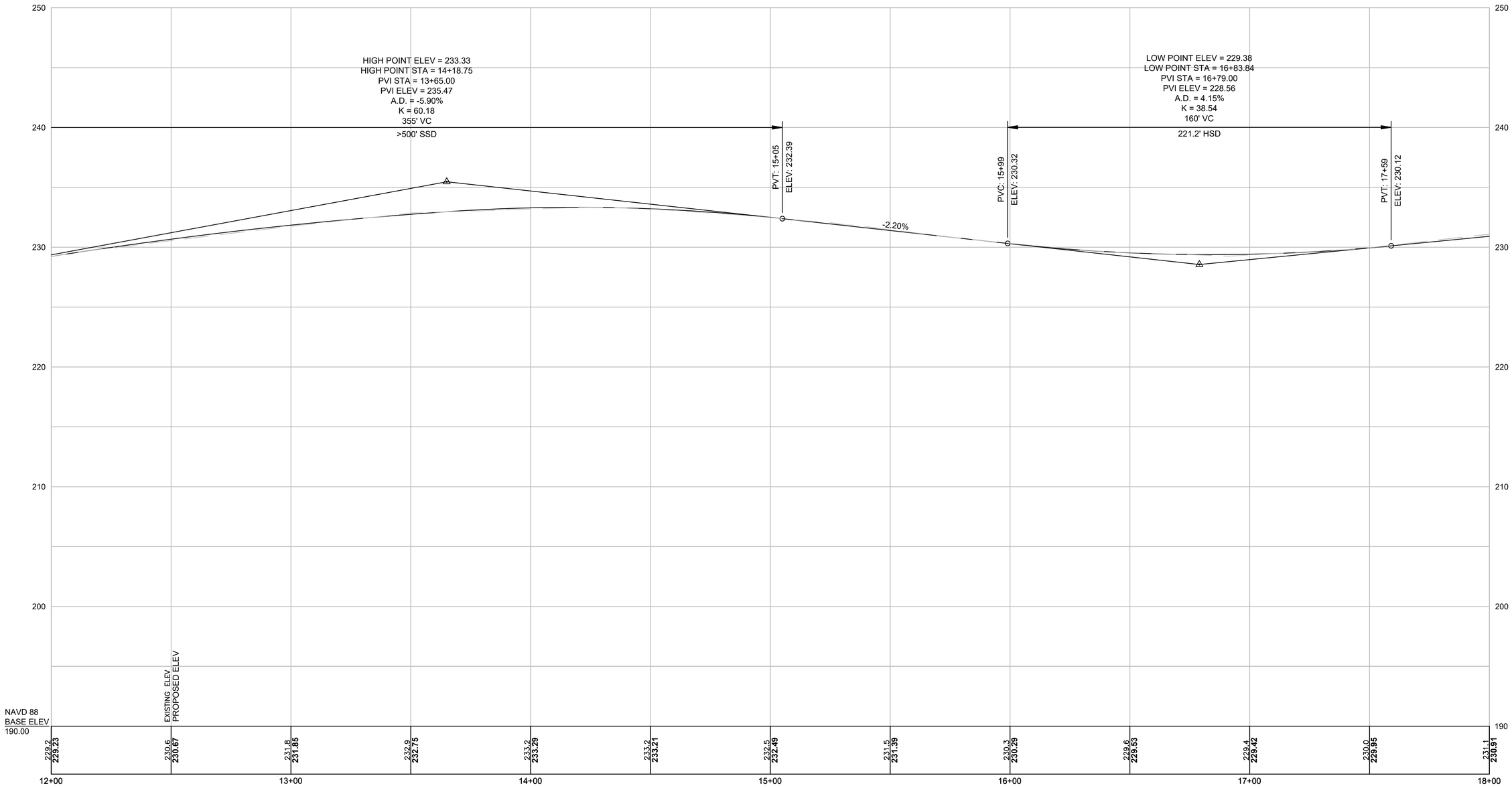
608037/PS&E/RW3/CONSTRUCTION PROFILES).DWG Plotted on 2/15/2018 5:08 PM

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
CONSTRUCTION PROFILES - 2 OF 6

GROTON ROAD



CONTINUED ON SHEET NO. 4

CONTINUED ON SHEET NO. 6

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

FOR PROPERTY PLAN: SEE SHEET NO. 14

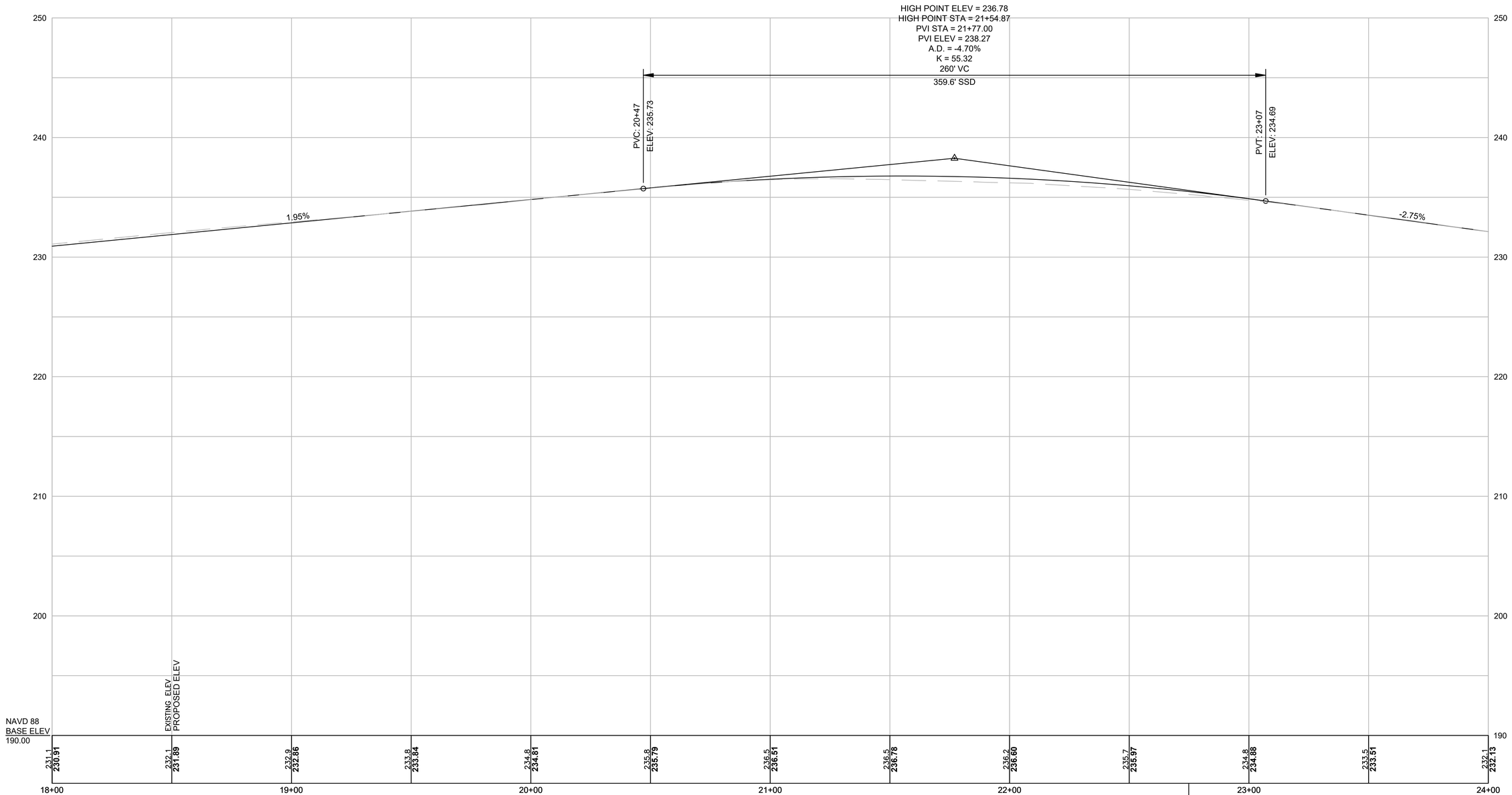
608037/PS&E/RW3/CONSTRUCTION PROFILES).DWG Plotted on 2/15/2018 5:08 PM

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
CONSTRUCTION PROFILES - 3 OF 6

GROTON ROAD



CONTINUED ON SHEET NO. 5

CONTINUED ON SHEET NO. 7

Benchmark
Top Spike in UPL #104
Elevation = 236.08'
Sta. 22+74.87, 19.6' LT

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

FOR PROPERTY PLAN: SEE SHEET NO. 15

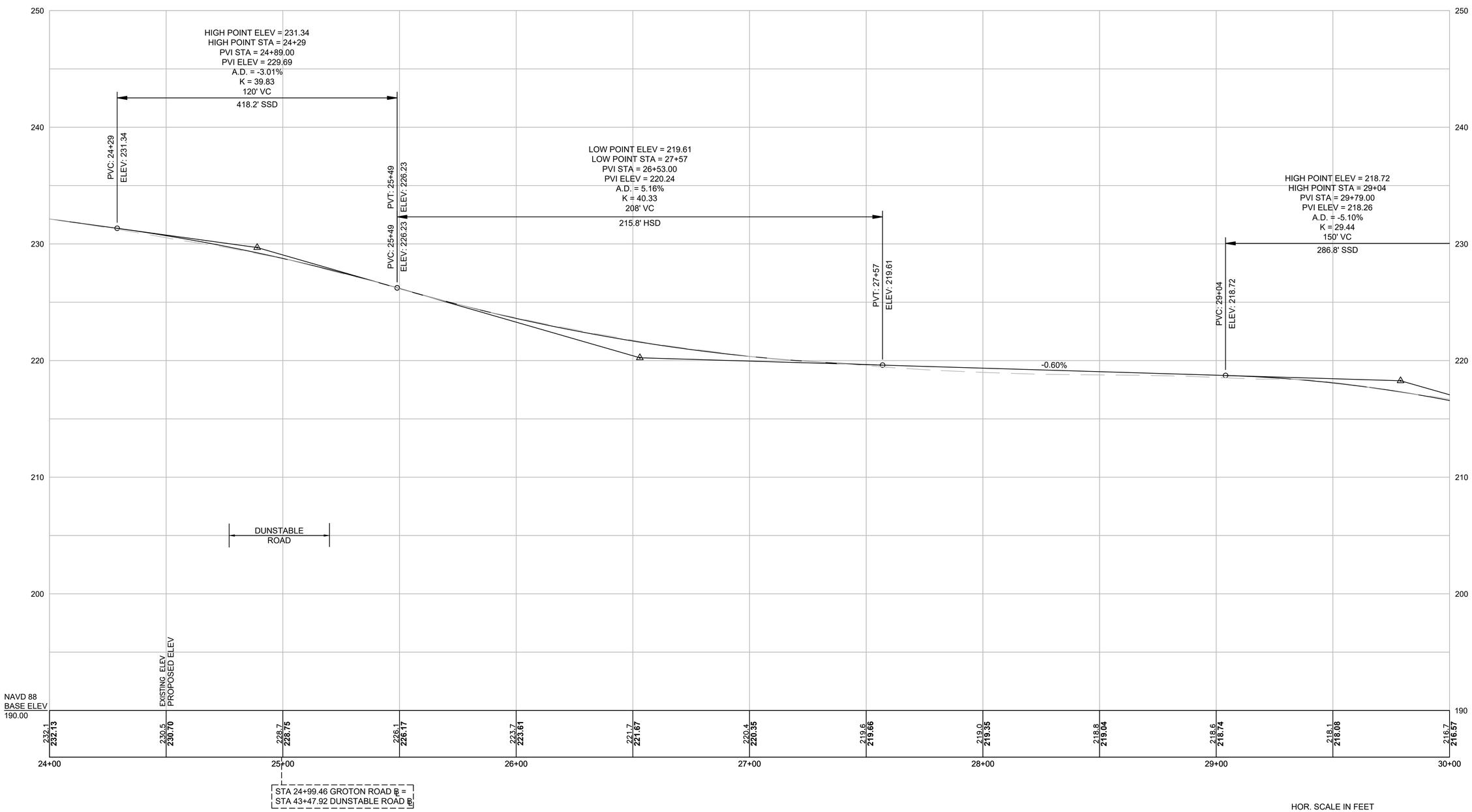
608037\PS&E\RW3\CONSTRUCTION PROFILES1.DWG Plotted on 2/15/2018 5:08 PM

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
CONSTRUCTION PROFILES - 4 OF 6

GROTON ROAD



CONTINUED ON SHEET NO. 6

CONTINUED ON SHEET NO. 8

FOR PROPERTY PLAN: SEE SHEET NO. 16

608037/PS&E/RW3/CONSTRUCTION PROFILES).DWG Plotted on 2/15/2018 5:08 PM

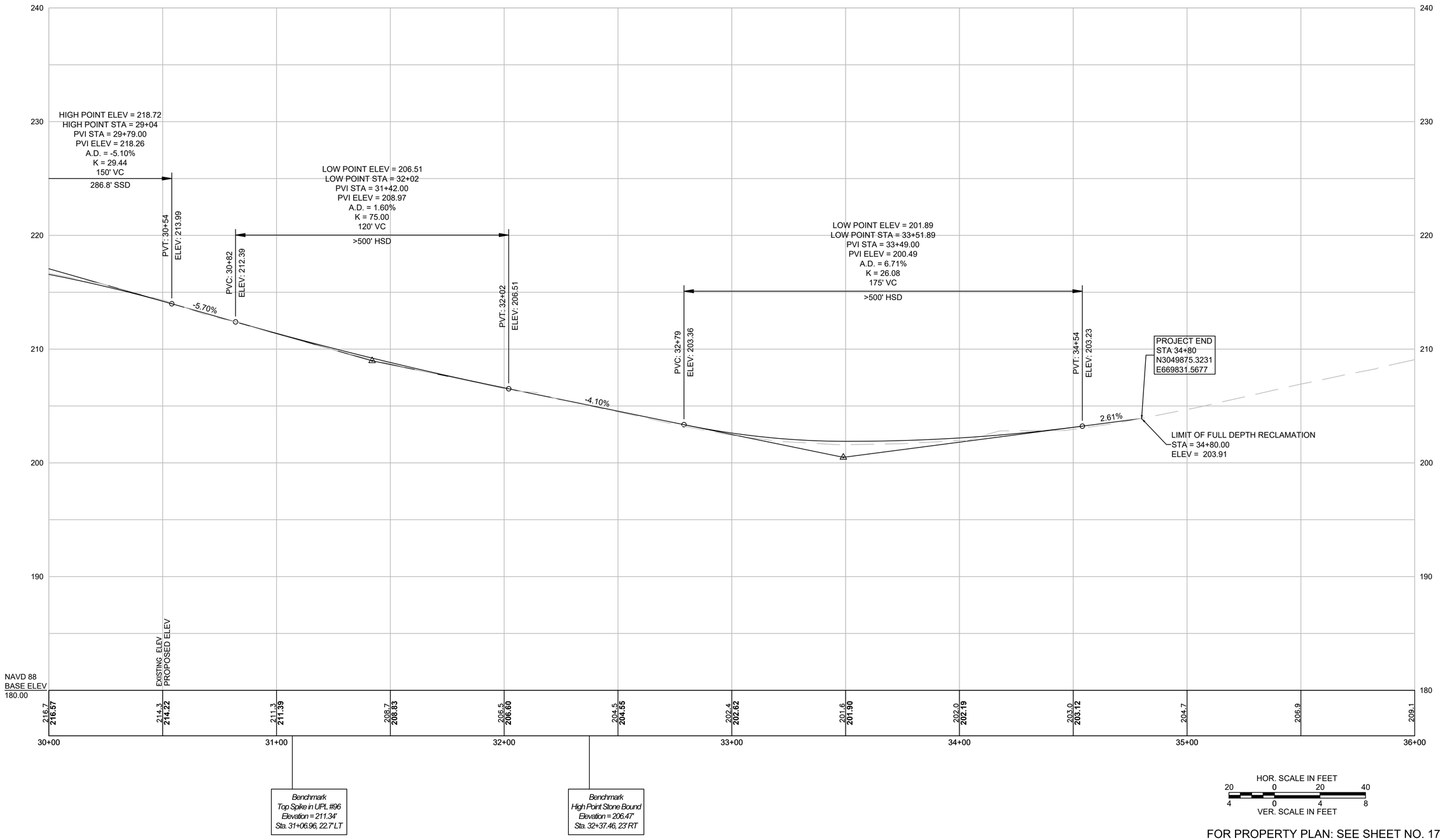
WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
CONSTRUCTION PROFILES - 5 OF 6

608037/PS&E/RW3/CONSTRUCTION PROFILES).DWG Plotted on 2/15/2018 5:08 PM

GROTON ROAD

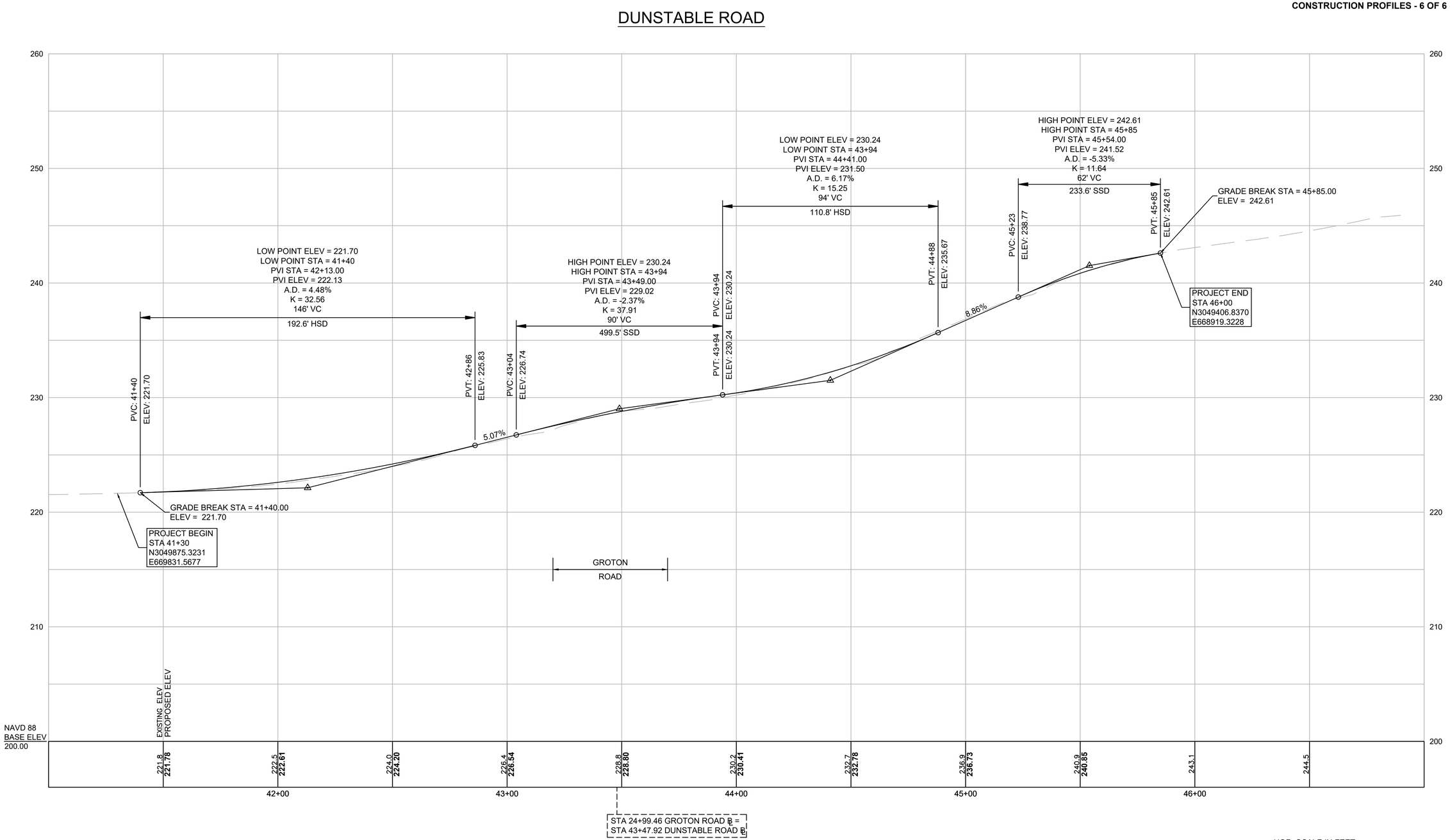


FOR PROPERTY PLAN: SEE SHEET NO. 17

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
CONSTRUCTION PROFILES - 6 OF 6



HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

FOR PROPERTY PLAN: SEE SHEET NO. 16

608037/PS&E/RW3/CONSTRUCTION PROFILES).DWG Plotted on 2/15/2018 5:08 PM

UNREGISTERED LAND								
PARCEL NO.	PLAN SHEET NO.	TITLEHOLDER	RECORDED		EASEMENT		TOTAL PARCEL AREA ACRE (+/-)	REMARKS
			DEED BOOK	PAGE NO.	TYPE	AREA (+/-) SF		
TE–1	13	HAILONG XU	17756	146	TEMP	58	-	FOR SITE GRADING
TE–2	13	DEREK JAMES BUTLAND	24011	40	TEMP	1496	-	FOR SITE GRADING, DRIVEWAY RECONSTRUCTION, WALL RECONSTRUCTION, HEDGE INSTALLATION, TREE PROTECTION
TE–3	13	CONNELL REAL ESTATE	21730	269	TEMP	54	-	FOR SITE GRADING
TE–4	13	WILLIAM D. CONNELL & RITA G. CONNELL	21730	269	TEMP	303	-	FOR DRIVEWAY RECONSTRUCTION
TE–5	14	SHAHLA AMINPOUR	21377	82	TEMP	892	-	FOR SITE GRADING
TE–6	14	RUIJIANG RAN & HONGXIA TIAN	18111	188	TEMP	2,566	-	FOR SITE GRADING, EROSION CONTROL, HEADWALL CONSTRUCTION
E–12	12,14	RUIJIANG RAN & HONGXIA TIAN	18111	188	PERM	70	1.76	FOR DRAINAGE OUTLET
TE–7	14	SUDAK CHILDREN'S GIFT TRUST	30066	267	TEMP	660	-	FOR SITE GRADING, EROSION CONTROL, HEADWALL CONSTRUCTION
E–13	12,14	SUDAK CHILDREN'S GIFT TRUST	30066	267	PERM	90	5.40	FOR DRAINAGE OUTLET
TE–9	15	RAJESH KUMAR MISHRA & KAITKI AGARWAL	12155	2	TEMP	98	-	FOR SITE GRADING, DRIVEWAY RECONSTRUCTION
TE–10	15	LESANDRA D. & LEWELL B. SKINNER	27424	273	TEMP	558	-	FOR SITE GRADING, DRIVEWAY RECONSTRUCTION, WALL RECONSTRUCTION, TREE PROTECTION
E–11	12,15	LESANDRA D. & LEWELL B. SKINNER	27424	273	PERM	330	0.81	FOR DRAINAGE OUTLET, EROSION CONTROL, WALL RECONSTRUCTION
TE–11	15	RAYMOND J. VENO & VERONICA I.F. SZABO	4252	298	TEMP	971	-	FOR SITE GRADING, DRIVEWAY RECONSTRUCTION, WALL RECONSTRUCTION, TREE AND SHRUB REMOVAL
E–16	12,15	RAYMOND J. VENO & VERONICA I.F. SZABO	4252	298	PERM	25	0.47	FOR OVERHEAD UTILITIES
TE–12	15	SAMITA APTE & MILIND S. APTE	20111	95	TEMP	1,149	-	FOR SITE GRADING, DRIVEWAY RECONSTRUCTION, WALL RECONSTRUCTION, TREE TRIMMING, TREE PROTECTION
TE–14	15,16	PAUL L. HOSFORD & MARY T. MCQUILKIN	2847	120	TEMP	1,037	-	FOR SITE GRADING, DRIVEWAY RECONSTRUCTION, RETAINING WALL AND FENCE INSTALLATION, TREE PROTECTION
TE–16	16	LEEMILT'S PETROLEUM, INC.	3812	256	TEMP	3,982	-	FOR PAVEMENT RESURFACING, SIDEWALK CONSTRUCTION, DRIVEWAY RECONSTRUCTION, FENCE REMOVE AND RESET, MONITORING WELL ADJUSTMENT, MAILBOX REMOVE AND RESET, SITE GRADING, TREE AND SHRUB REMOVAL, TREE PROTECTION
E–2	12,16	LEEMILT'S PETROLEUM, INC.	3812	256	PERM	932	0.45	FOR SIDEWALK, TRAFFIC SIGNAL ACCESS, HYDRANT ACCESS, OVERHEAD UTILITIES
TE–17	16	W. CLARK PEASE JR. & ELLEN DOW PEASE	4936	7	TEMP	1,836	-	FOR SIDEWALK CONSTRUCTION, WALL RECONSTRUCTION, SITE GRADING, TREE REMOVAL
E–3	12,16	W. CLARK PEASE JR. & ELLEN DOW PEASE	4936	7	PERM	249	1.24	FOR SIDEWALK ACCESS
TE–18	16	MICHAEL STEPHEN MAGEE & KRISTINA BROWN MAGEE	10179	252	TEMP	68	-	FOR SITE GRADING
TE–19	16	DANIEL KIRBY, JR. & KELLY LAVERY	30420	273	TEMP	1,102	-	FOR SITE GRADING, DRIVEWAY RECONSTRUCTION, FENCE RECONSTRUCTION, TREE PROTECTION
E–4	12,16	DANIEL KIRBY, JR. & KELLY LAVERY	30420	273	PERM	169	0.47	FOR ROADWAY ACCESS
E–7A	12,16	LISA HOANG	28465	87	PERM	3,732	1.42	FOR ROADWAY ACCESS, SIDEWALK ACCESS, TRAFFIC SIGNAL ACCESS, GUARDRAIL
E–7B	12,16	LISA HOANG	28465	87	PERM	19,921	1.42	FOR STORMWATER MANAGEMENT, WETLAND REPLICATION, EROSION CONTROL, TREE CLEARING, MODIFIED ROCKFILL SLOPE
TE–21	16,17	DALLEY REALTY TRUST OF 2012	26535	189	TEMP	2,746	-	FOR SITE GRADING, DRIVEWAY RECONSTRUCTION, WALL RECONSTRUCTION, TREE CLEARING, EROSION CONTROL
E–6	12,16	DALLEY REALTY TRUST OF 2012	26535	189	PERM	180	1.41	FOR SIDEWALK ACCESS
TE–22	17	JOSEPH F. FLANAGAN & BETH A. FLANAGAN	26571	139	TEMP	1,838	-	FOR SITE GRADING, TREE REMOVAL. WALL RECONSTRUCTION

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	17
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PRELIMINARY RIGHT OF WAY
PARCEL SUMMARY SHEET - 1 OF 2

608037(PS&E)RW4(PARCEL SUMMARY).DWG Plotted on 16-Feb-2018 2:22 PM

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
PARCEL SUMMARY SHEET - 2 OF 2

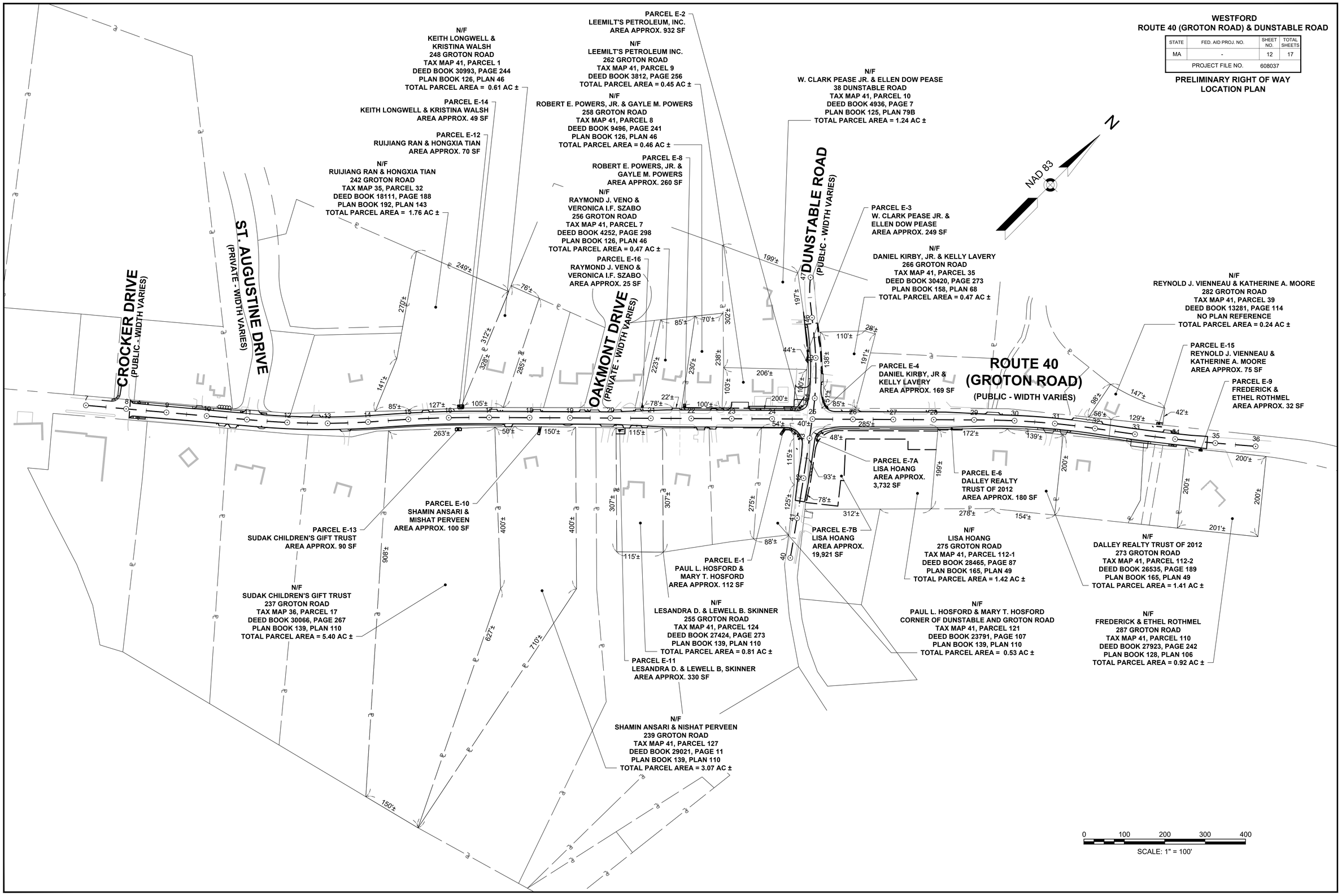
UNREGISTERED LAND								
PARCEL NO.	PLAN SHEET NO.	TITLEHOLDER	RECORDED		EASEMENT		TOTAL PARCEL AREA ACRE (+/-)	REMARKS
			DEED BOOK	PAGE NO.	TYPE	AREA (+/-) SF		
TE-23	17	UDAY TEKADE & SHWETA JAGTAP	18130	122	TEMP	2,352	-	FOR SIDEWALK CONSTRUCTION, SITE GRADING, DRIVEWAY RECONSTRUCTION, TREE REMOVAL, TREE PROTECTION
TE-24	17	COMMONWEALTH OF MASSACHUSETTS (DIVISION OF FISHERIES AND WILDLIFE)	6534	115	TEMP	1,777	-	FOR SIDEWALK CONSTRUCTION, SITE GRADING, DRIVEWAY RECONSTRUCTION, TREE PROTECTION
TE-26	17	FREDERICK & ETHEL ROTHMEL	27923	242	TEMP	597	-	FOR SITE GRADING, TREE PROTECTION, EROSION CONTROL
E-9	12,17	FREDERICK & ETHEL ROTHMEL	27923	242	PERM	32	0.92	FOR HYDRANT ACCESS
TE-27A	15	ROBERT E. POWERS, JR. & GAYLE M. POWERS	9496	241	TEMP	27	-	FOR SITE GRADING, WALL RECONSTRUCTION
TE-27B	15	ROBERT E. POWERS, JR. & GAYLE M. POWERS	9496	241	TEMP	331	-	FOR SITE GRADING, DRIVEWAY RECONSTRUCTION, WALL RECONSTRUCTION
E-8	12,15	ROBERT E. POWERS, JR. & GAYLE M. POWERS	9496	241	PERM	260	0.46	FOR UTILITY POLE GUY WIRE, OVERHEAD UTILITIES
TE-28A	16	PAUL L. HOSFORD & MARY T. HOSFORD	23791	107	TEMP	425	-	FOR SITE GRADING, TREE REMOVAL
TE-28B	16	PAUL L. HOSFORD & MARY T. HOSFORD	23791	107	TEMP	218	-	FOR SIDEWALK CONSTRUCTION, SITE GRADING
E-1	12,16	PAUL L. HOSFORD & MARY T. HOSFORD	23791	107	PERM	112	0.53	FOR WHEELCHAIR RAMP ACCESS, UTILITY POLE AND GUY WIRE
E-15	12,17	REYNOLD J. VIENNEAU & KATHERINE A. MOORE	13281	114	PERM	75	0.24	FOR EROSION CONTROL, HEADWALL CONSTRUCTION, TREE REMOVAL
TE-30	14	KEITH LONGWELL & KRISTINA WALSH	30993	244	TEMP	317	-	FOR SITE GRADING, EROSION CONTROL, HEADWALL CONSTRUCTION
E-14	12,14	KEITH LONGWELL & KRISTINA WALSH	30993	244	PERM	49	0.61	FOR DRAINAGE OUTLET
TE-31A	15	SHAMIN ANSARI & NISHAT PERVEEN	29021	11	TEMP	760	-	FOR SITE GRADING, DRIVEWAY RECONSTRUCTION, TREE TRIMMING, TREE PROTECTION
TE-31B	15	SHAMIN ANSARI & NISHAT PERVEEN	29021	11	TEMP	950	-	FOR SITE GRADING, WALL RECONSTRUCTION, TREE REMOVAL, TREE PROTECTION
E-10	12,15	SHAMIN ANSARI & NISHAT PERVEEN	29021	11	PERM	100	3.07	FOR UTILITY POLE AND GUY WIRE

608037(PS&E)RW4(PARCEL SUMMARY).DWG Plotted on 16-Feb-2018 2:17 PM

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY LOCATION PLAN

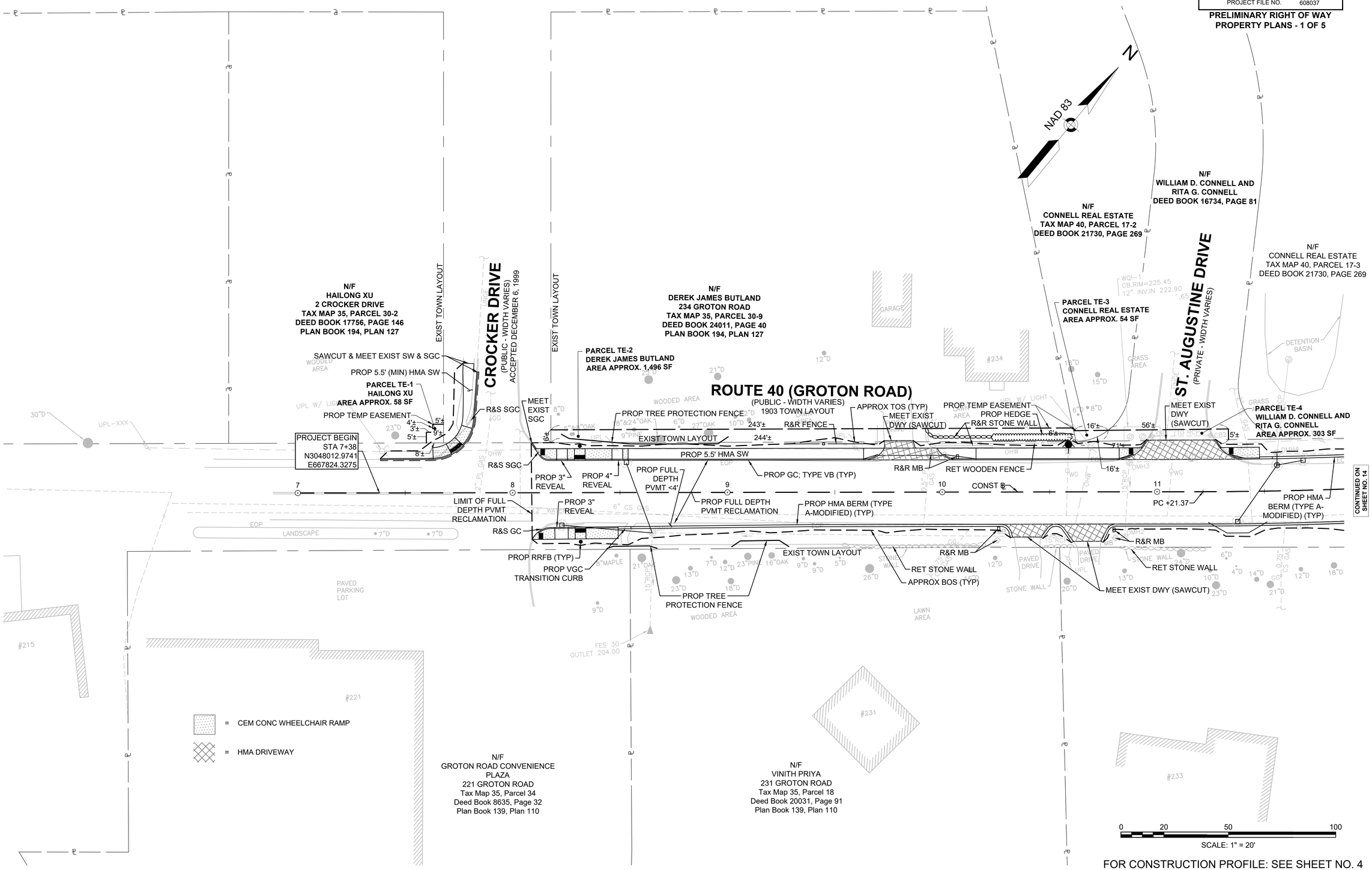


608037\[PS&E]\RW5\LOCATION PLAN].DWG Plotted on 2/16/2018 2:13 PM

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY PROPERTY PLANS - 1 OF 5



FOR CONSTRUCTION PROFILE: SEE SHEET NO. 4

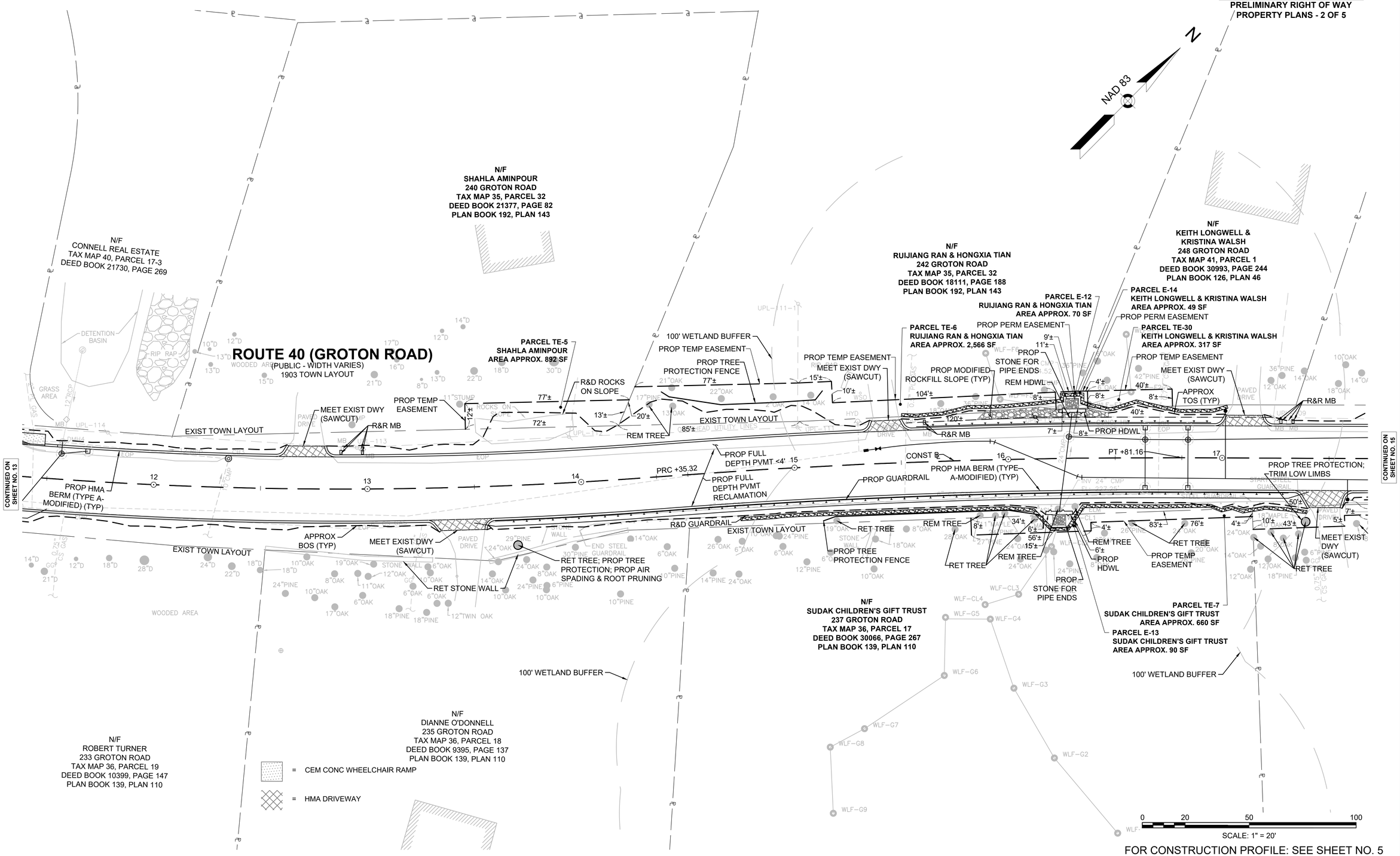
608037(PS&E)RW6(PROPERTY PLANS).DWG Plotted on 16-Feb-2018 2:18 PM

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
PROPERTY PLANS - 2 OF 5

608037/PS&E/RW6\PROPERTY PLANS).DWG Plotted on 16-Feb-2018 2:18 PM

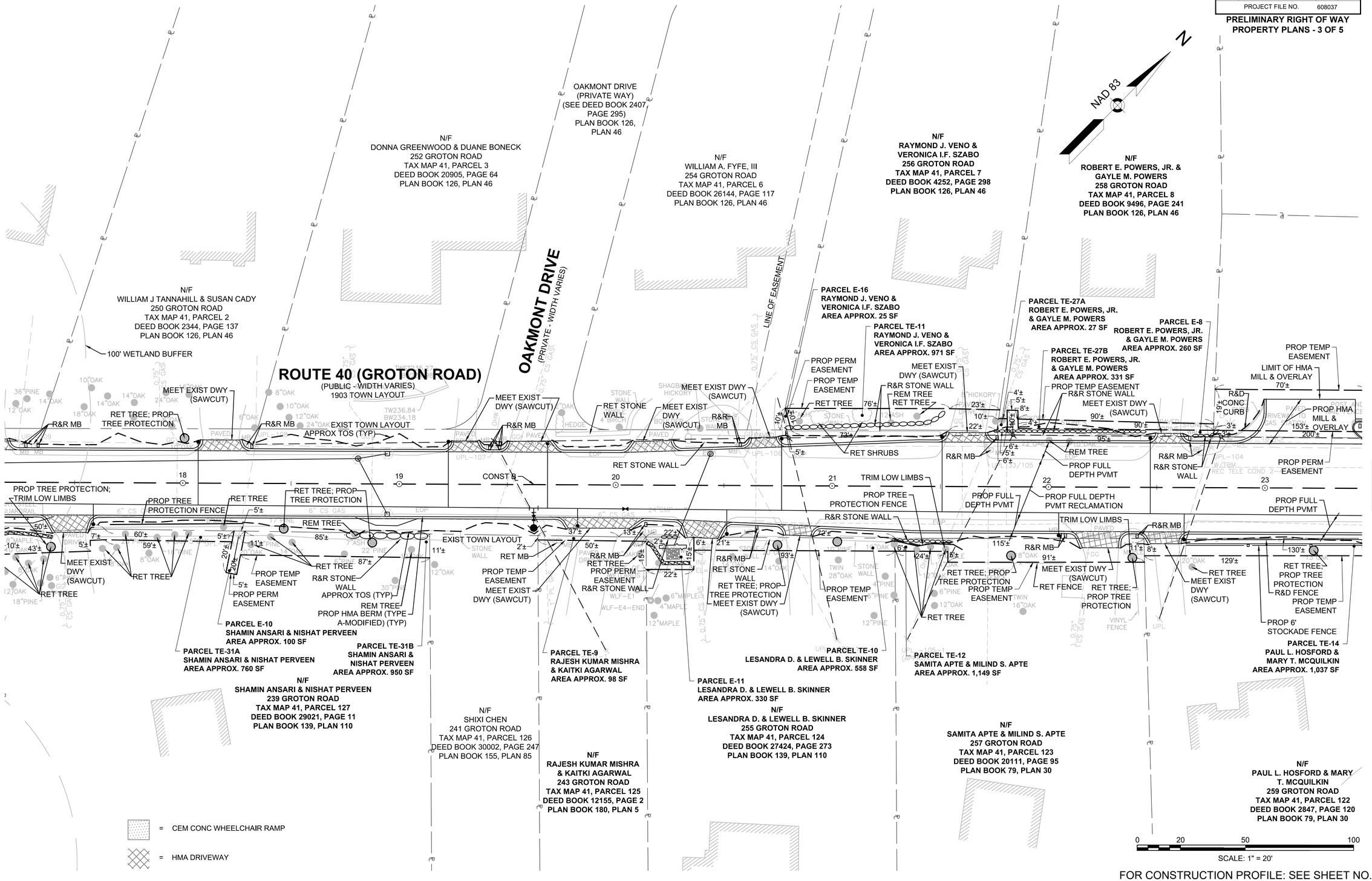


FOR CONSTRUCTION PROFILE: SEE SHEET NO. 5

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
PROPERTY PLANS - 3 OF 5



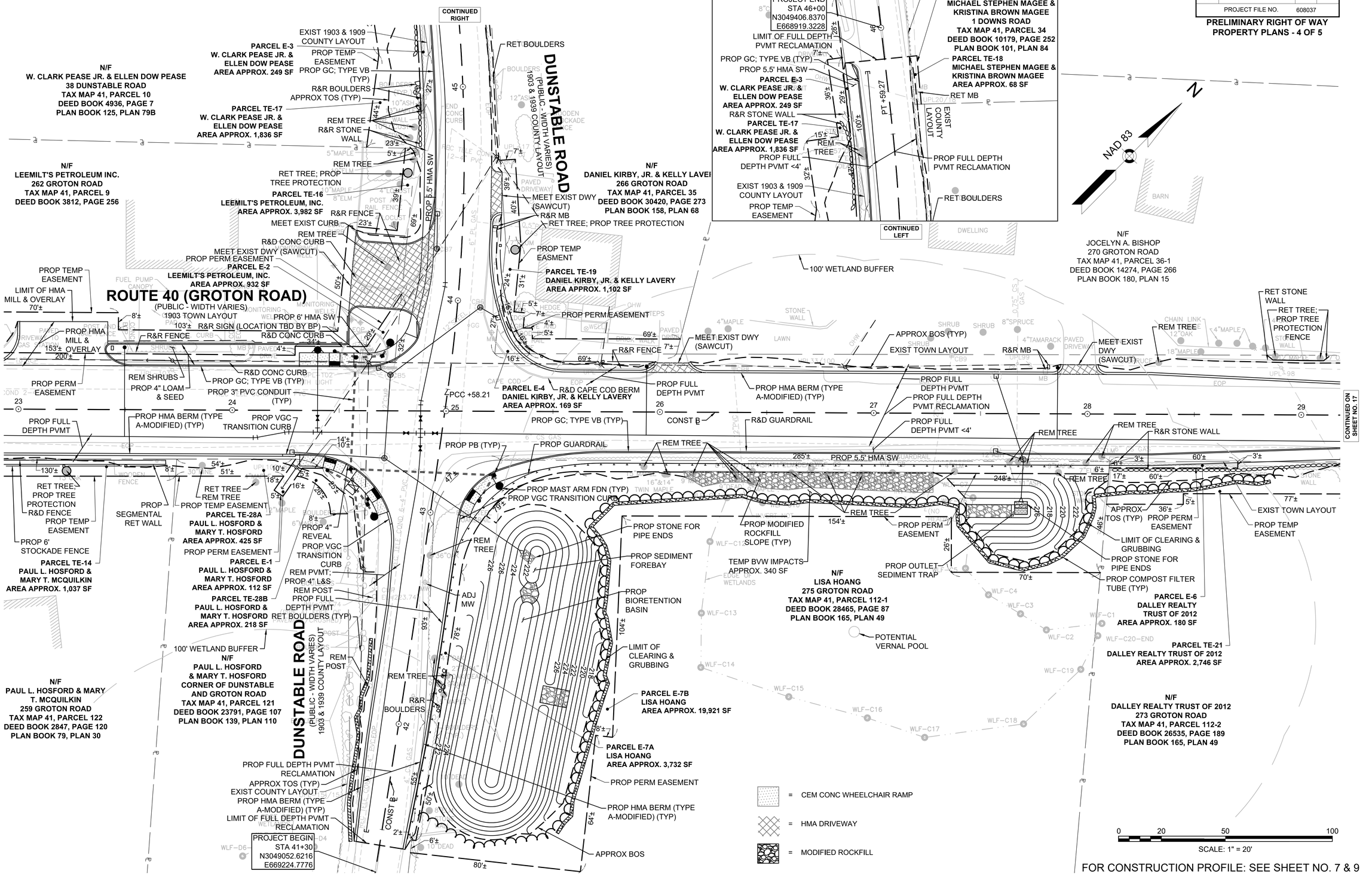
FOR CONSTRUCTION PROFILE: SEE SHEET NO. 6

608037(PS&E)RW6(PROPERTY PLANS).DWG Plotted on 16-Feb-2018 2:18 PM

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
PROPERTY PLANS - 4 OF 5



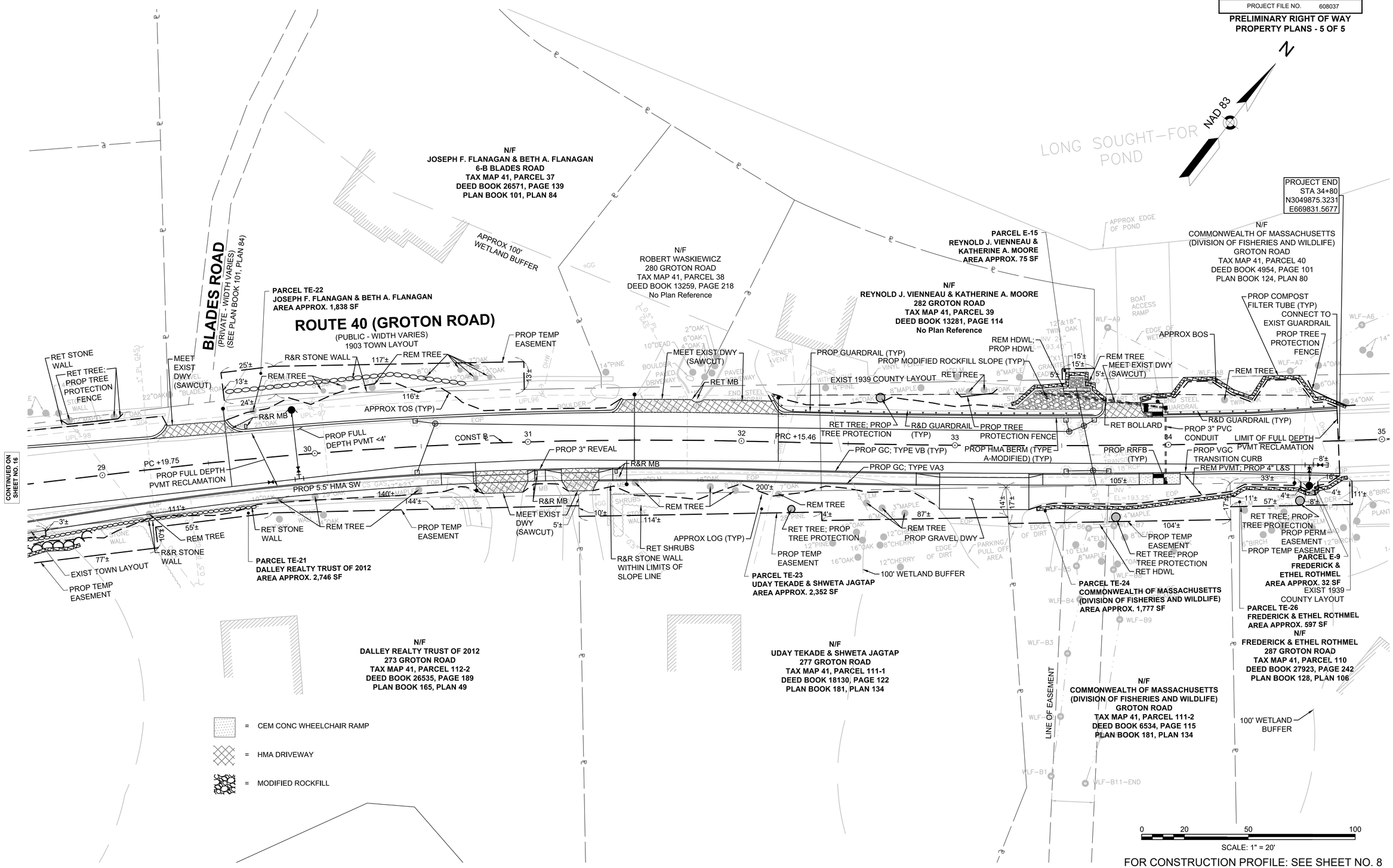
FOR CONSTRUCTION PROFILE: SEE SHEET NO. 7 & 9

608037(PS&E)RW6(PROPERTY PLANS).DWG Plotted on 16-Feb-2018 2:18 PM

WESTFORD
ROUTE 40 (GROTON ROAD) & DUNSTABLE ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	17
PROJECT FILE NO.	608037		

PRELIMINARY RIGHT OF WAY
PROPERTY PLANS - 5 OF 5



FOR CONSTRUCTION PROFILE: SEE SHEET NO. 8

608037/PS&E/RW6(PROPERTY PLANS).DWG Plotted on 16-Feb-2018 2:18 PM