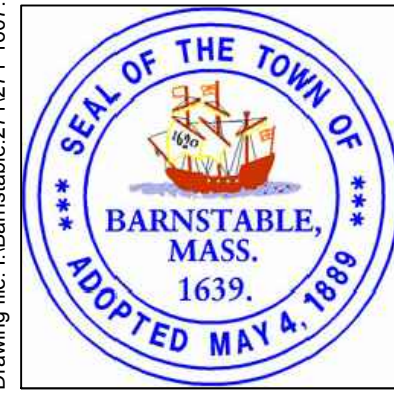


NOTE:
 WITH THE EXCEPTION OF STREET NAME SIGNS (D3), ALL
 EXISTING SIGNS WITHIN PROJECT LIMITS SHALL BE
 REMOVED AND STACKED UNLESS OTHERWISE NOTED.

0 20 50 100
 SCALE: 1" = 20'

CONTINUED ON SHEET 58



Environmental Partners
 GROUP
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MARK	DATE	DESCRIPTION	Scale	AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	JRC
02	08/22/18	FINAL SUBMISSION	Drawn by	KMB
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	BLH
			Approved by	JDF

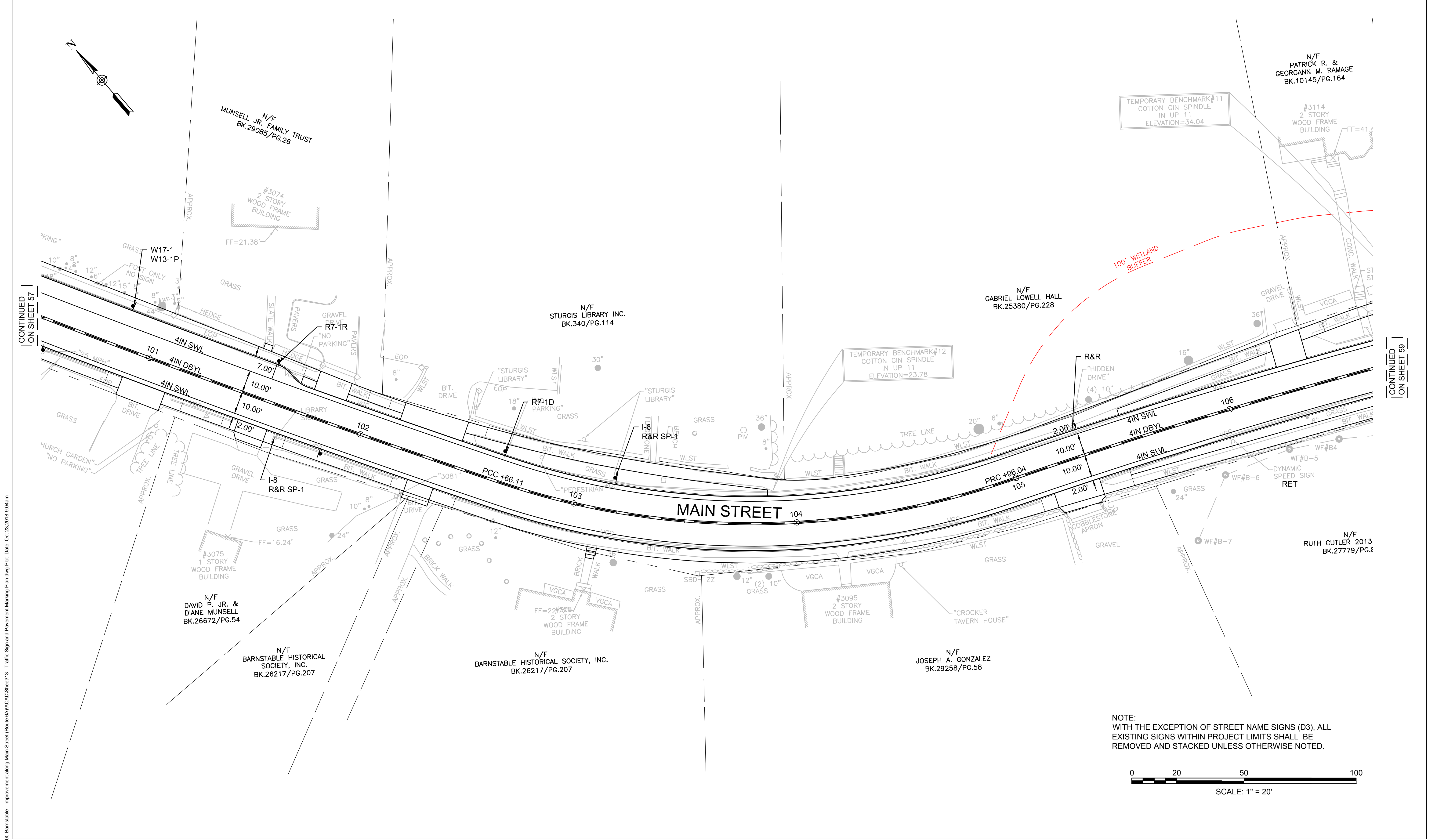
THIS LINE IS ONE INCH
 LONG WHEN PLOTTED
 AT FULL SCALE ON A
 22" X 34" DRAWING

TRANSPORTATION IMPROVEMENTS
 ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
 BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNS AND
 PAVEMENT MARKINGS PLAN - 01

NOT FOR CONSTRUCTION
 Sheet No.
57

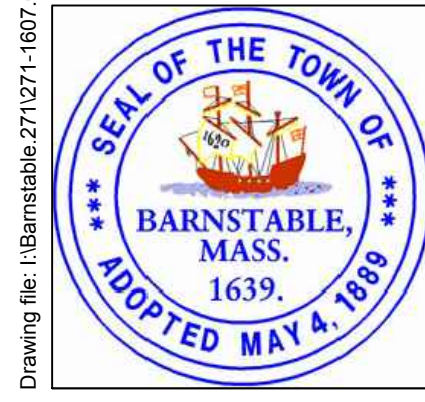
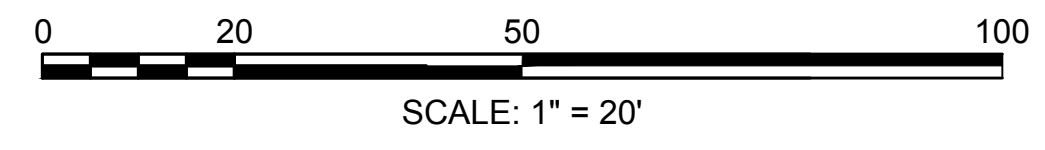
Drawing file: I:\Barnstable\2711271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\13 - Traffic Sign and Pavement Marking Plan.dwg Plot Date: Oct 23, 2018 9:01am



CONTINUED
ON SHEET 57

CONTINUED
ON SHEET 59

NOTE:
WITH THE EXCEPTION OF STREET NAME SIGNS (D3), ALL
EXISTING SIGNS WITHIN PROJECT LIMITS SHALL BE
REMOVED AND STACKED UNLESS OTHERWISE NOTED.



MARK	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	APPROVED BY
03	10/19/18	REVISED FINAL SUBMISSION	JRC	BLH	JDF
02	08/22/18	FINAL SUBMISSION	KMB	BLH	JDF
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	BLH	BLH	JDF

Scale AS NOTED
Date OCTOBER 2018
Job No. 271-1607
Designed by JRC
Drawn by KMB
Checked by BLH
Approved by JDF

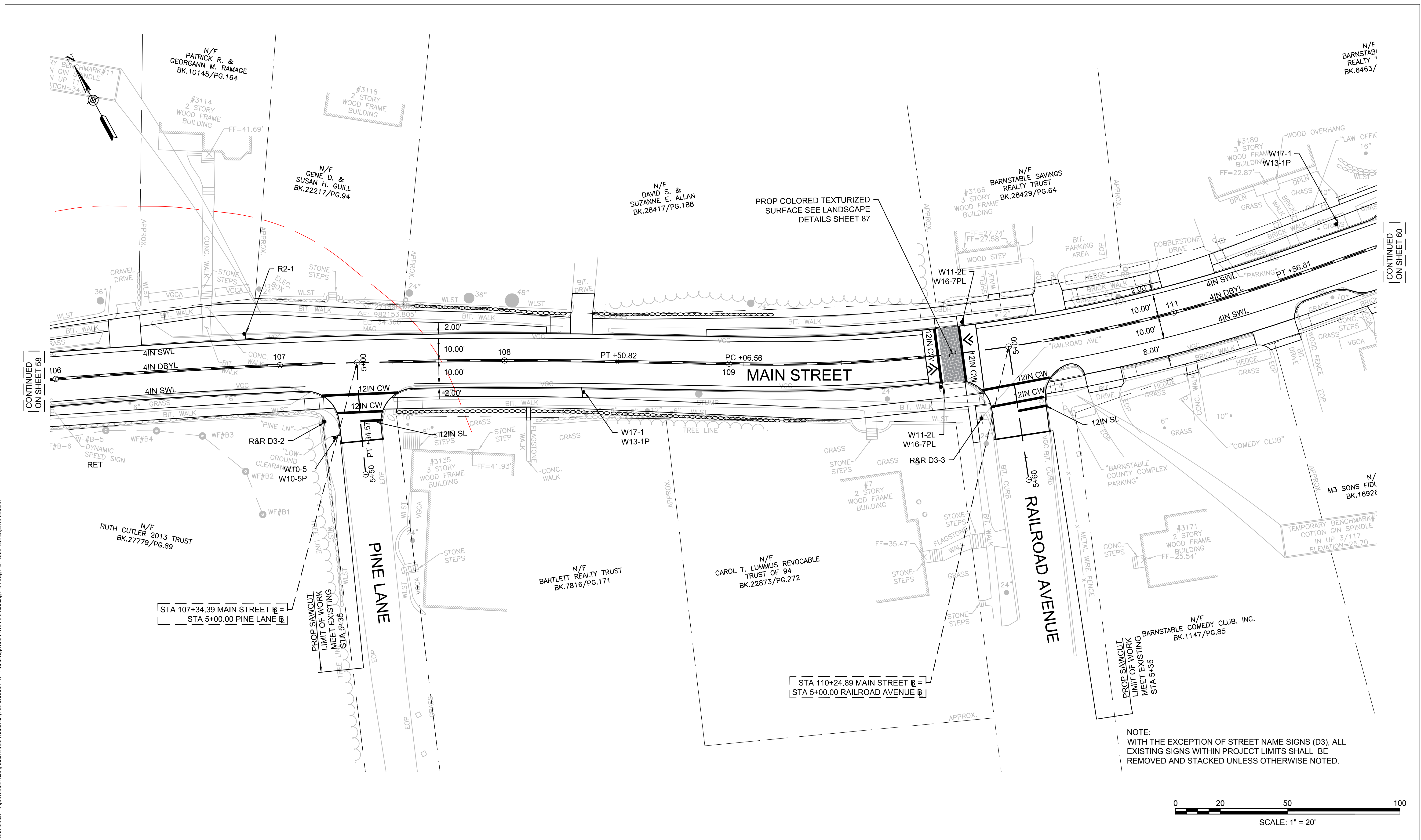
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNS AND
PAVEMENT MARKINGS PLAN - 02

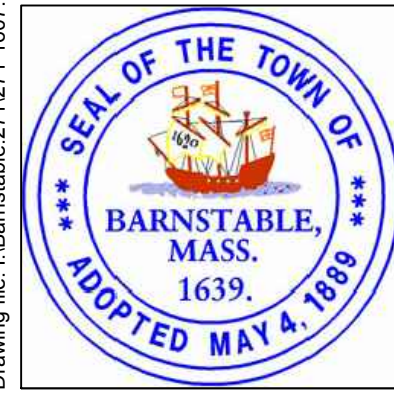
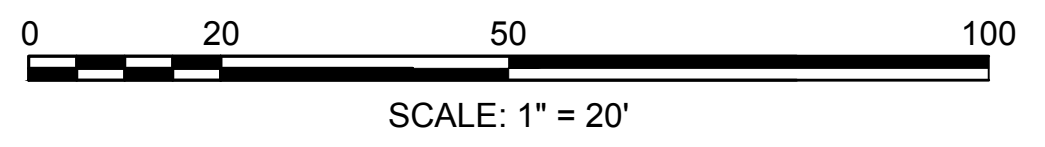
NOT FOR CONSTRUCTION
Sheet No. 58

Drawing file: I:\Barnstable\2711271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\13 - Traffic Sign and Pavement Marking Plan.dwg Plot Date: Oct 23, 2018 9:04am

Drawing file: I:\Barnstable\2710271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\13 - Traffic Sign and Pavement Marking Plan.dwg Plot Date: Oct 23, 2018 - 9:05am



NOTE:
WITH THE EXCEPTION OF STREET NAME SIGNS (D3), ALL
EXISTING SIGNS WITHIN PROJECT LIMITS SHALL BE
REMOVED AND STACKED UNLESS OTHERWISE NOTED.



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MARK	DATE	DESCRIPTION	Scale	AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	JRC
02	08/22/18	FINAL SUBMISSION	Drawn by	KMB
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	BLH
			Approved by	JDF

THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

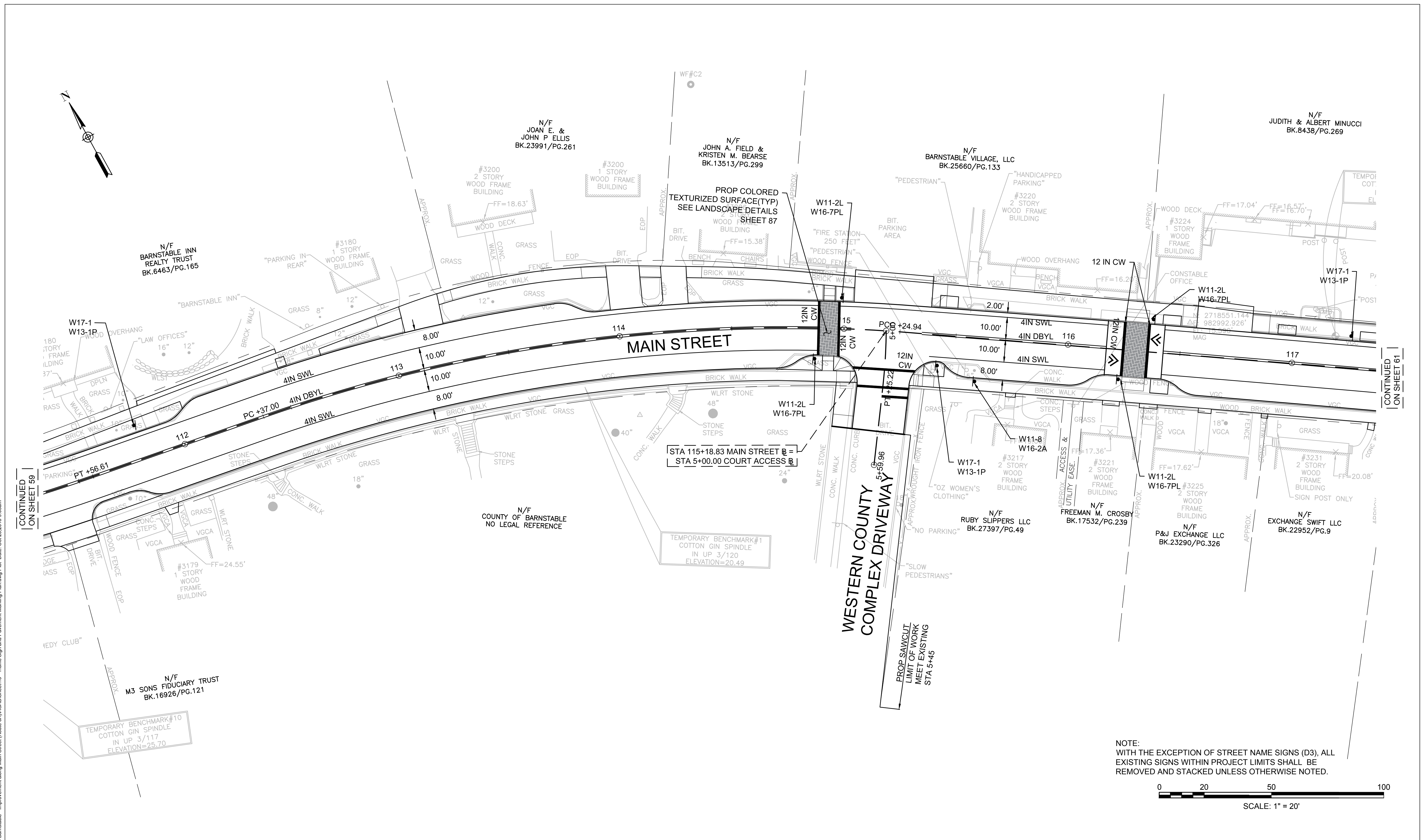
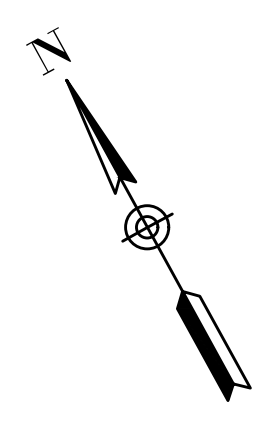
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNS AND
PAVEMENT MARKINGS PLAN - 03

NOT FOR CONSTRUCTION

Sheet No.

59



CONTINUED ON SHEET 59

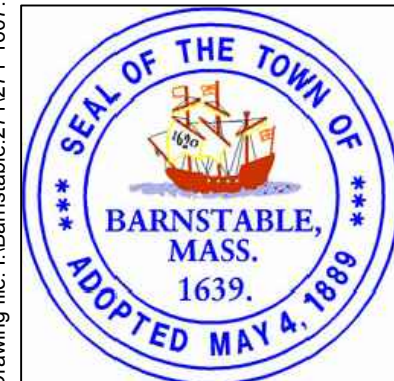
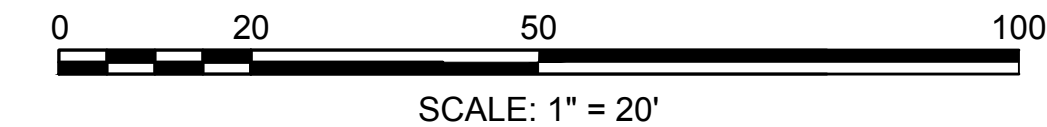
CONTINUED ON SHEET 61

STA 115+18.83 MAIN STREET @ =
STA 5+00.00 COURT ACCESS @

TEMPORARY BENCHMARK #1
COTTON GIN SPINDLE
IN UP 3/120
ELEVATION=20.49

TEMPORARY BENCHMARK #10
COTTON GIN SPINDLE
IN UP 3/117
ELEVATION=23.70

NOTE:
WITH THE EXCEPTION OF STREET NAME SIGNS (D3), ALL
EXISTING SIGNS WITHIN PROJECT LIMITS SHALL BE
REMOVED AND STACKED UNLESS OTHERWISE NOTED.



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MARK	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	APPROVED BY
03	10/19/18	REVISED FINAL SUBMISSION	JRC	BLH	JDF
02	08/22/18	FINAL SUBMISSION	KMB	BLH	JDF
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	BLH	BLH	JDF

Scale AS NOTED
Date OCTOBER 2018
Job No. 271-1607
THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

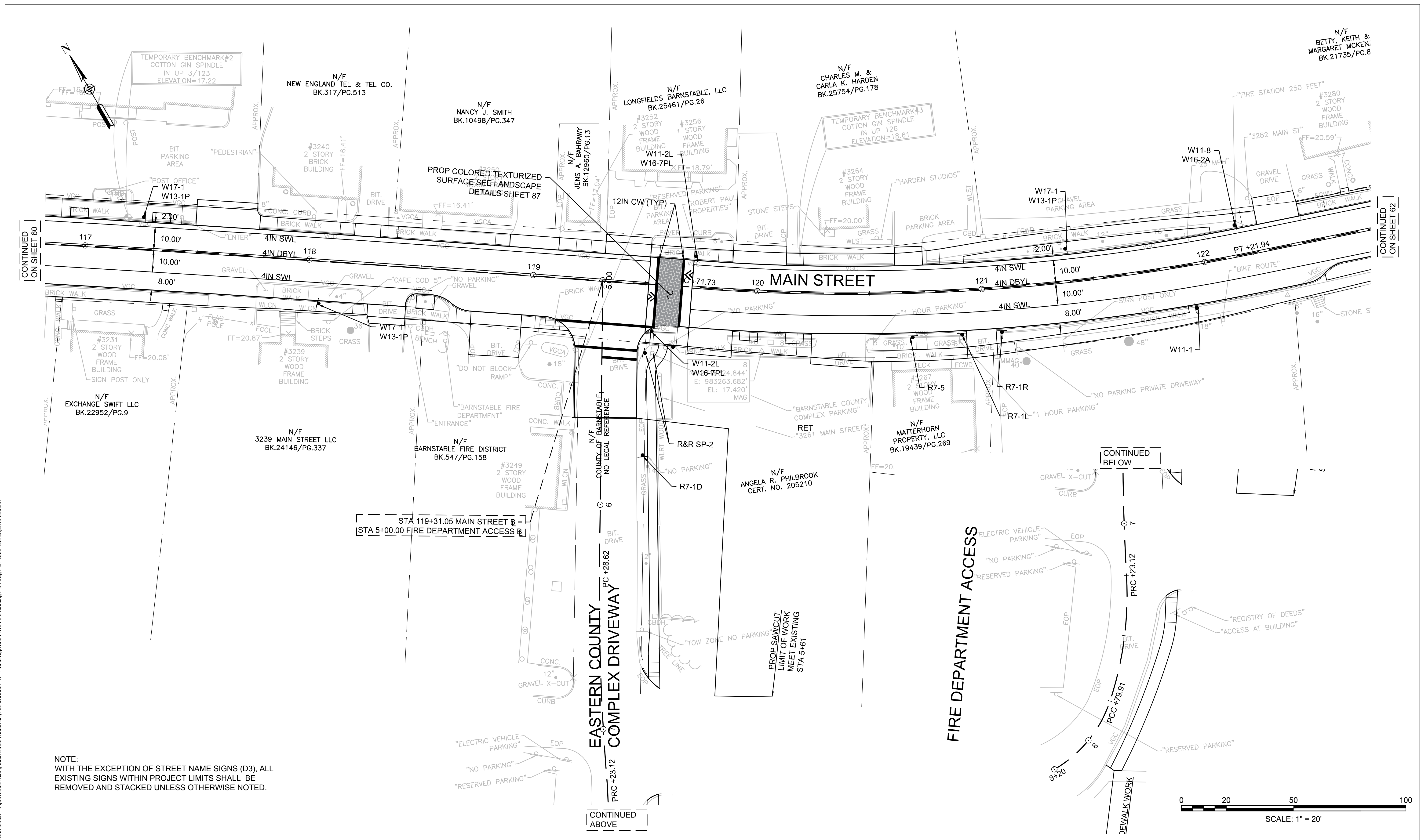
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNS AND
PAVEMENT MARKINGS PLAN - 04

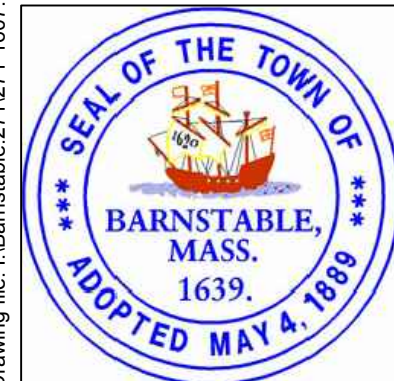
NOT FOR CONSTRUCTION
Sheet No. **60**

Drawing file: I:\Barnstable\2711271-1607\00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\13 - Traffic Sign and Pavement Marking Plan.dwg Plot Date: Oct 23, 2018 9:05am

Drawing file: I:\Barnstable\271071-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\13 - Traffic Sign and Pavement Marking Plan.dwg Plot Date: Oct 23, 2018 - 9:08am



NOTE:
WITH THE EXCEPTION OF STREET NAME SIGNS (D3), ALL
EXISTING SIGNS WITHIN PROJECT LIMITS SHALL BE
REMOVED AND STACKED UNLESS OTHERWISE NOTED.



MARK	DATE	DESCRIPTION	Scale	AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	JRC
02	08/22/18	FINAL SUBMISSION	Drawn by	KMB
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	BLH
			Approved by	JDF

THIS LINE IS ONE INCH
LONG WHEN PLOTTED
AT FULL SCALE ON A
22" X 34" DRAWING

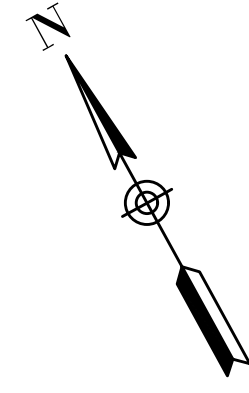
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNS AND
PAVEMENT MARKINGS PLAN - 05

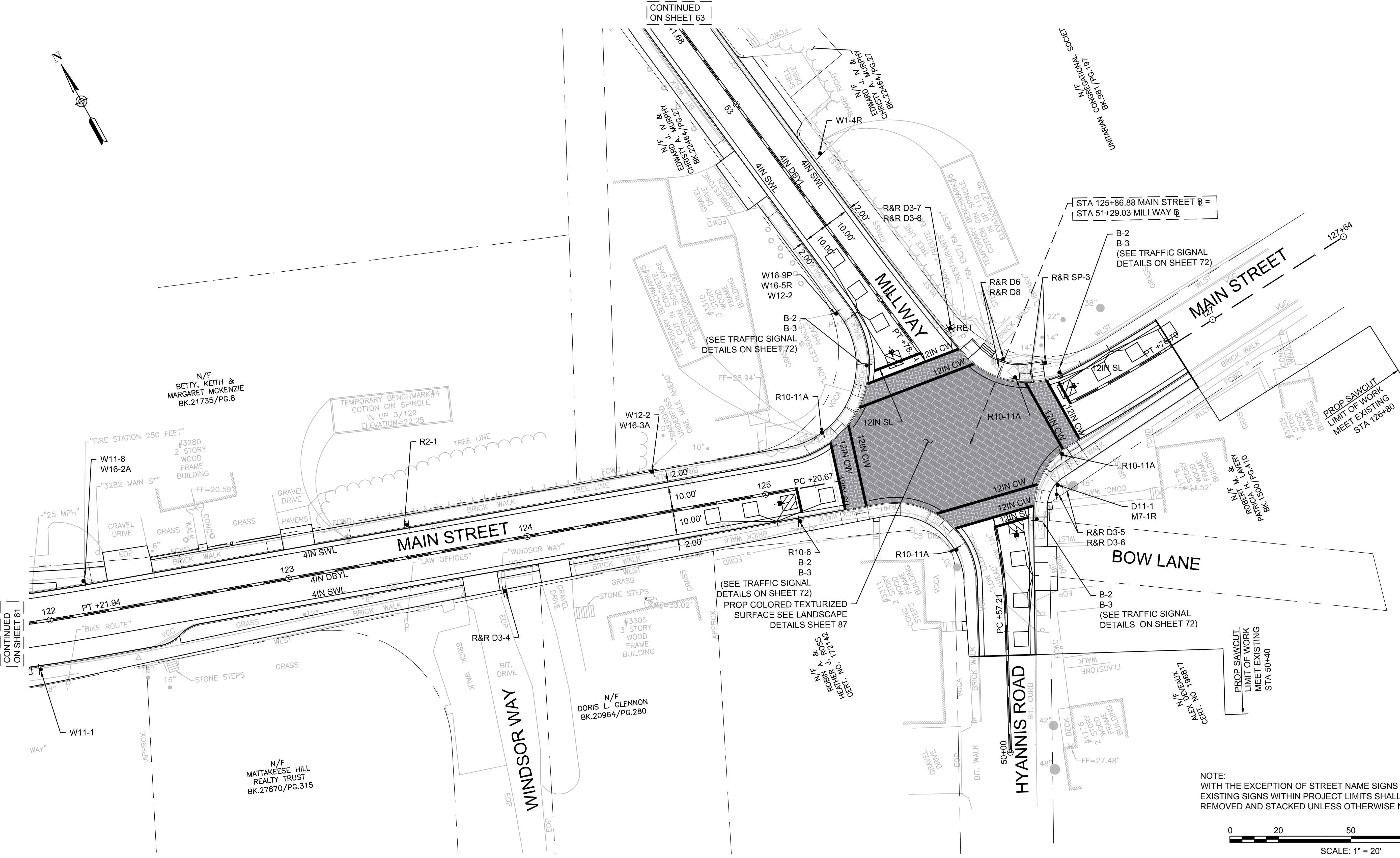
NOT FOR CONSTRUCTION

Sheet No.

61



CONTINUED
ON SHEET 63

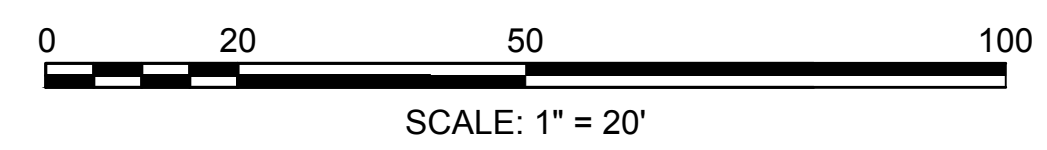


STA 125+86.88 MAIN STREET @ =
STA 51+29.03 MILLWAY @

PROP SAWCUT
LIMIT OF WORK
MEET EXISTING
STA 126+80

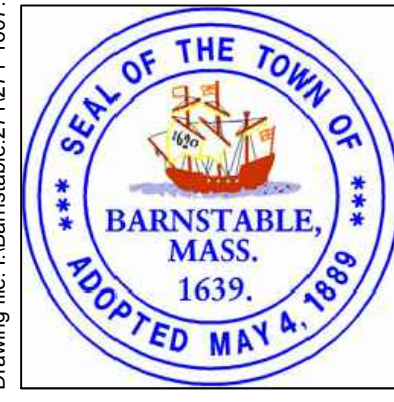
PROP SAWCUT
LIMIT OF WORK
MEET EXISTING
STA 50+40

NOTE:
WITH THE EXCEPTION OF STREET NAME SIGNS (D3), ALL
EXISTING SIGNS WITHIN PROJECT LIMITS SHALL BE
REMOVED AND STACKED UNLESS OTHERWISE NOTED.



CONTINUED
ON SHEET 61

Drawing file: I:\Barnstable\2711271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\13 - Traffic Sign and Pavement Marking Plan.dwg Plot Date: Oct 23, 2018 - 9:07am



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MARK	DATE	DESCRIPTION	Scale	AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	JRC
02	08/22/18	FINAL SUBMISSION	Drawn by	KMB
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	BLH
			Approved by	JDF

THIS LINE IS ONE INCH
LONG WHEN PLOTTED
AT FULL SCALE ON A
22" X 34" DRAWING

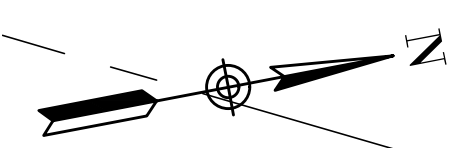
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNS AND
PAVEMENT MARKINGS PLAN - 06

NOT FOR CONSTRUCTION

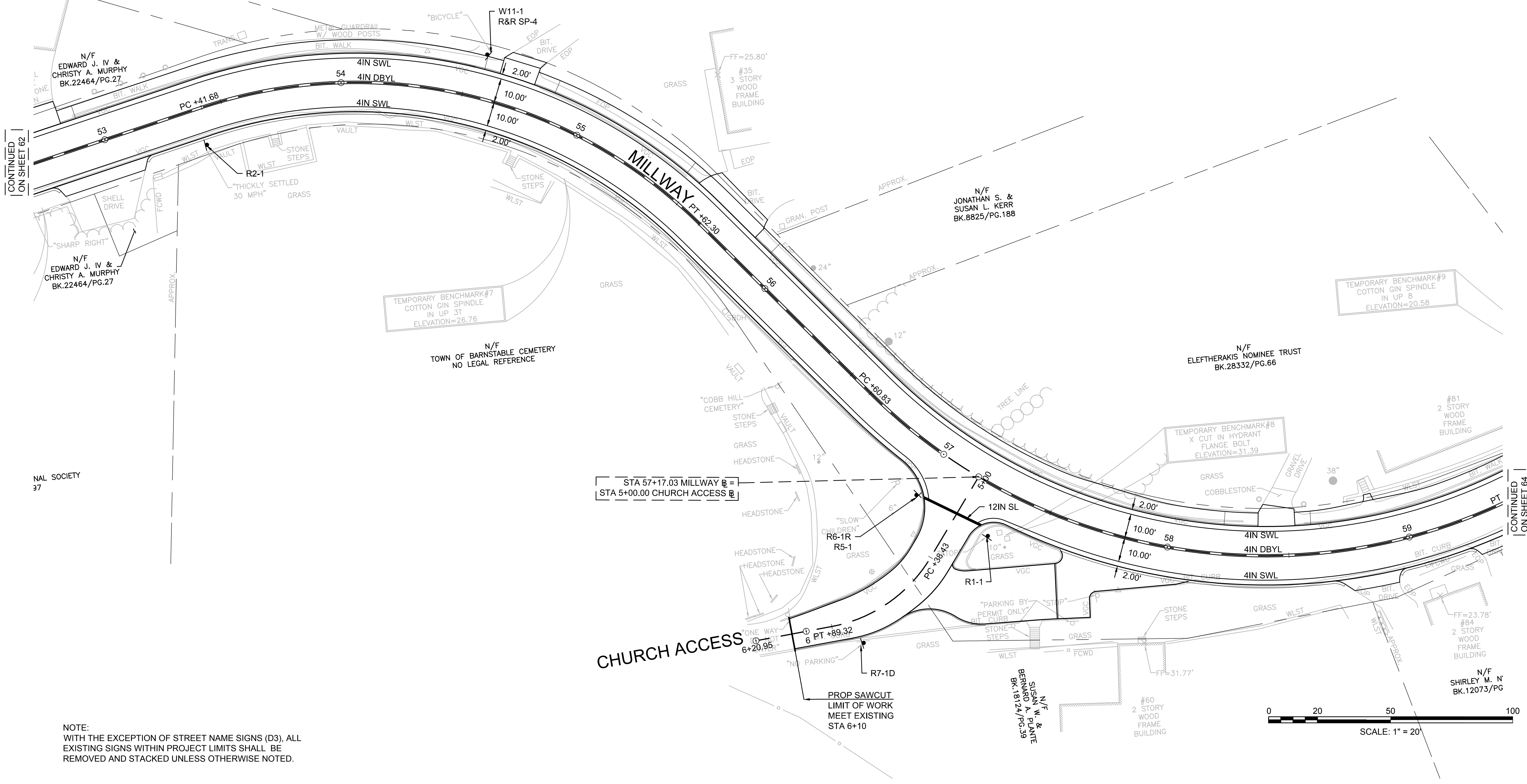
Sheet No.

62



CONTINUED ON SHEET 62

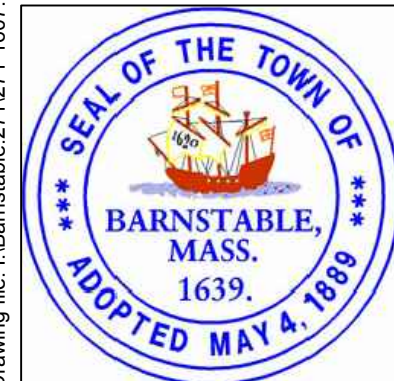
CONTINUED ON SHEET 64



NAL SOCIETY
37

STA 57+17.03 MILLWAY =
STA 5+00.00 CHURCH ACCESS

NOTE:
WITH THE EXCEPTION OF STREET NAME SIGNS (D3), ALL
EXISTING SIGNS WITHIN PROJECT LIMITS SHALL BE
REMOVED AND STACKED UNLESS OTHERWISE NOTED.



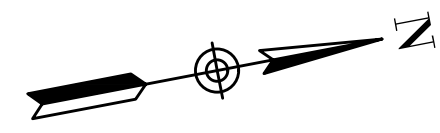
MARK	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	APPROVED BY
03	10/19/18	REVISED FINAL SUBMISSION	JRC	BLH	JDF
02	08/22/18	FINAL SUBMISSION	KMB	BLH	JDF
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	BLH	BLH	JDF

Scale AS NOTED
Date OCTOBER 2018
Job No. 271-1607
THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNS AND
PAVEMENT MARKINGS PLAN - 07

NOT FOR CONSTRUCTION
Sheet No. 63



N/F
JOSEPH M. &
CAROL J. RODRIGUES
BK.16009/PG.84

N/F
EUGENE J. SINISCALCHI &
FRANCESCA RUSSO
BK.10424/PG.92

N/F
EUGENE J. SINISCALCHI &
FRANCESCA RUSSO
BK.10424/PG.92

N/F
PETER &
BARBARA J. CHALPARA
BK.19701/PG.263

N/F
DAVID & CAROL WEBER
BK.24916/PG.55

N/F
MILLWAY REALTY TRUST
BK.18124/PG.39

N/F
SHIRLEY M. NYDAM
BK.12073/PG.127

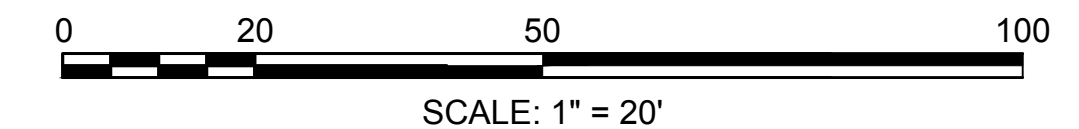
MILLWAY
PT +44.88
4IN SWL
4IN DBYL
4IN SWL

MILLWAY
PC +67.31
4IN SWL
4IN DBYL
4IN SWL

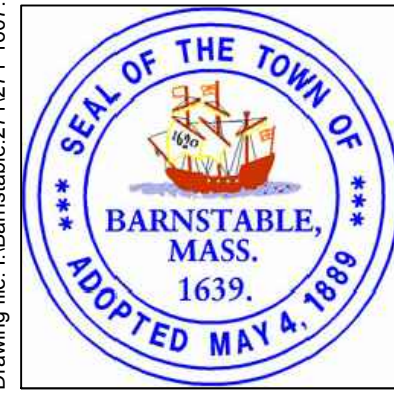
FREEZER ROAD
PT +57.20
12IN SL
12IN CW (TYP) "STOP"

STA 61+35.62 MILLWAY =
STA 5+00.00 FREEZER ROAD

NOTE:
WITH THE EXCEPTION OF STREET NAME SIGNS (D3), ALL
EXISTING SIGNS WITHIN PROJECT LIMITS SHALL BE
REMOVED AND STACKED UNLESS OTHERWISE NOTED.



Drawing file: I:\Barnstable\2711271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\13 - Traffic Sign and Pavement Marking Plan.dwg Plot Date: Oct 23, 2018 - 9:03am



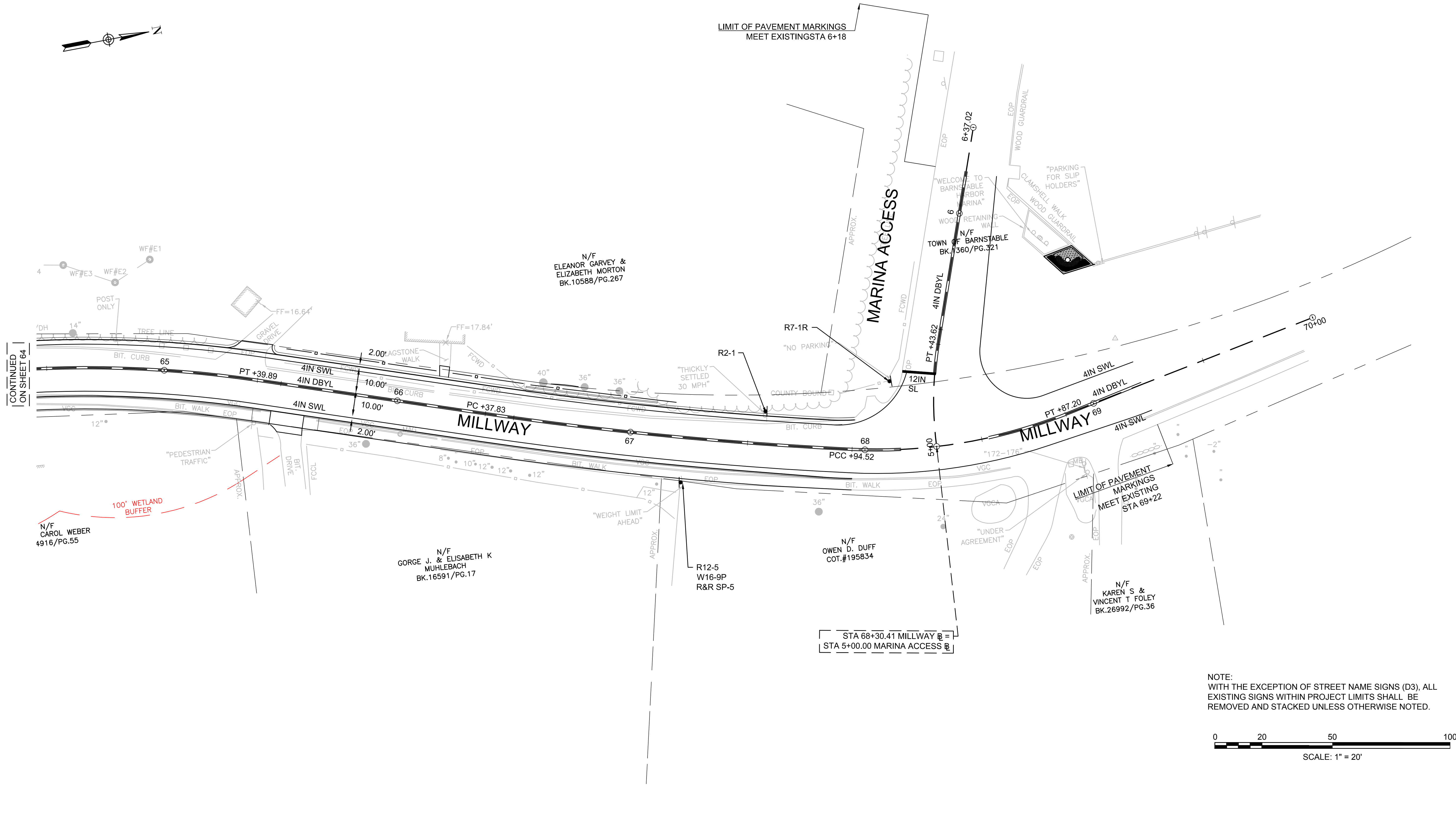
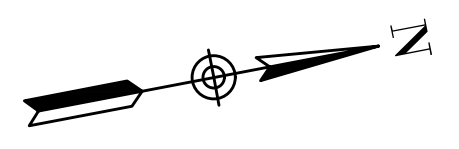
MARK	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	APPROVED BY
03	10/19/18	REVISED FINAL SUBMISSION	JRC	BLH	JDF
02	08/22/18	FINAL SUBMISSION	KMB	BLH	JDF
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	BLH	BLH	JDF

Scale AS NOTED
Date OCTOBER 2018
Job No. 271-1607
Designed by JRC
Drawn by KMB
Checked by BLH
Approved by JDF

TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNS AND
PAVEMENT MARKINGS PLAN - 08

NOT FOR CONSTRUCTION
Sheet No.
64

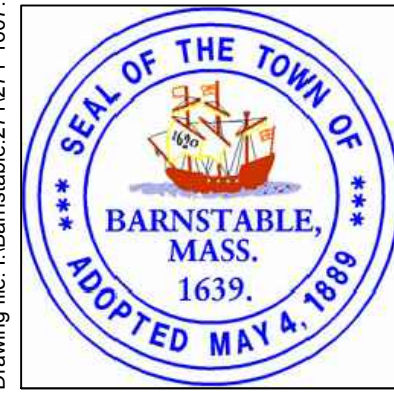


CONTINUED ON SHEET 64

NOTE:
WITH THE EXCEPTION OF STREET NAME SIGNS (D3), ALL EXISTING SIGNS WITHIN PROJECT LIMITS SHALL BE REMOVED AND STACKED UNLESS OTHERWISE NOTED.



Drawing file: I:\Barnstable\2711271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\13 - Traffic Sign and Pavement Marking Plan.dwg Plot Date: Oct 23, 2018 - 9:09am



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MARK	DATE	DESCRIPTION	Scale	AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	JRC
02	08/22/18	FINAL SUBMISSION	Drawn by	KMB
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	BLH
			Approved by	JDF

THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING












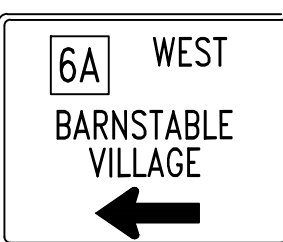
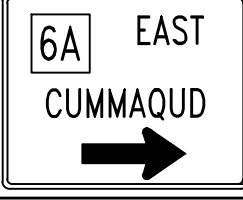





TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNS AND
PAVEMENT MARKINGS PLAN - 09

NOT FOR CONSTRUCTION

Sheet No.

65

IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES)		TEXT	TEXT DIMENSIONS (INCHES)		NUMBER OF SIGNS	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	TOTAL AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING		BACK-GROUND	LEGEND	BORDER			
B2	24	18		MASSDOT STANDARD		4	MASSDOT STANDARD			P5 (4)	3	12
B3	18	18		MASSDOT STANDARD		4	MASSDOT STANDARD			MOUNT WITH B2	2.25	9
D3-1						R&R (2)				P-5 (1)	NA	NA
D3-2						R&R (1)				P5 (1)	NA	NA
D3-3						R&R (1)				P5 (1)	NA	NA
D3-4						R&R (2)				P5 (1)	NA	NA
D3-5						R&R (1)				P5 (1)	NA	NA
D3-6						R&R (1)				MOUNT WITH D3-4	NA	NA
D3-7						R&R (2)				P5 (1)	NA	NA
D3-8						R&R (2)				MOUNT WITH D3-6	NA	NA
D3-9						R&R (2)				P5(1)	NA	NA
D6						R&R (1)				5" NOM. STEEL PIPE 14.62LBS./FT (1)	EACH	EACH
D8						R&R (1)				MOUNT WITH D6	EACH	EACH
D11-1	24	30		MUTCD STANDARD		1	MUTCD STANDARD			P5 (1)	5.00	5.00
I-8	30	30				2				P5 (2)	6.25	12.50
M7-1R	12	9				1				MOUNT WITH D11-1	0.75	0.75
R1-1	30	30				2				P5 (2)	6.25	12.50
R2-1*	18	24				5				P5 (5)	3.00	15.00

SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009 EDITION WITH LATEST REVISIONS AND MASSACHUSETTS AMENDMENTS FOR LATEST SPECIFICATIONS ON TEXT DIMENSIONS AND COLOR.

*25 MPH SPEED LIMIT PER TOWN DIRECTION

NOTE:
THE TOWN OF BARNSTABLE INTENDS TO R&R ALL STREET NAME (D3) SIGNS. ANY SIGNS DEEMED BY THE TOWN TO BE REPLACED WILL BE ADDRESSED OUTSIDE THE SCOPE OF THIS PROJECT.

Drawing file: I:\Barnstable\2710271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\14 - Traffic Sign Summary.dwg Plot Date: Oct 23, 2018 - 10:17am



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MARK	DATE	DESCRIPTION	Scale	NTS
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	JRC
02	08/22/18	FINAL SUBMISSION	Drawn by	KMB
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	BLH
			Approved by	JDF

THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

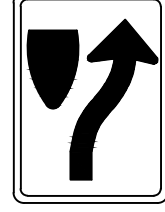


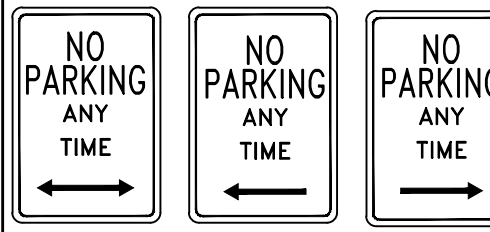


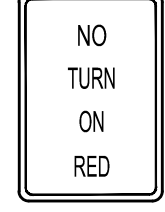
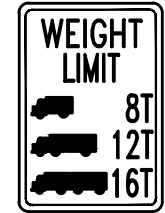


TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGN SUMMARY-01

NOT FOR CONSTRUCTION

Sheet No.

66

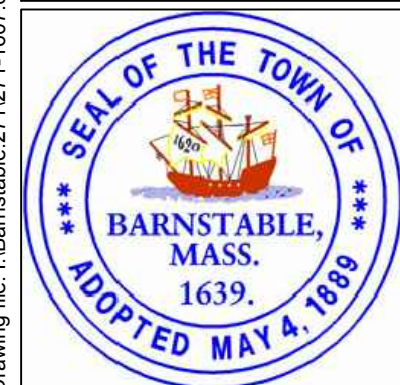
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	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING		BACK-GROUND	LEGEND	BORDER			
R4-7	18	24		MUTCD STANDARD		2	MUTCD STANDARD			P5 (2)	3.00	6.00
R5-1	30	30				1				MOUNT WITH R6-1R	6.25	6.25
R6-1R	36	12				1				P5(1)	3.00	3.00
R7-1D	12	18				3				P5 (3)	1.50	4.50
R7-1L						2				P5 (2)	1.50	3.00
R7-1R						4				P5 (4)	1.50	6.00
R7-5	12	18				1				P5 (1)	1.50	1.50
R10-6	24	36				1				MOUNT WITH B2 & B3	6.00	6.00
R10-11A	24	30				4				P5 (4)	5.00	20.00
R12-5	24	36				1				P5 (1)	6.00	6.00
W1-4R	30	30				1				P5 (1)	6.25	6.25
W3-5*	30	30				1				P5 (1)	6.25	6.25
SP-1			STURGIS LIBRARY			R&R (2)				MOUNT WITH I-8	NA	NA
SP-2			BARNSTABLE COUNTY COUNTY COMPLEX PARKING			R&R (1)				P5 (1)	NA	NA
SP-3			STURGIS LIBRARY, COUNTY COMPLEX, GUARD HERITAGE MUSEUM			R&R (1)				P5 (1)	NA	NA
SP-4			PUBLIC TRANSIT TROLLEY/BUS STOP			R&R (1)				MOUNT WITH W11-1	NA	NA
SP-5			BLISH POINT STATE BOAT RAMP OPEN			R&R (1)				MOUNT WITH W12-5 & W16-9P	NA	NA

SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009 EDITION WITH LATEST REVISIONS AND MASSACHUSETTS AMENDMENTS FOR LATEST SPECIFICATIONS ON TEXT DIMENSIONS AND COLOR.

*25 MPH SPEED LIMIT PER TOWN DIRECTION

NOTE:
THE TOWN OF BARNSTABLE INTENDS TO R&R ALL STREET NAME (D3) SIGNS. ANY SIGNS DEEMED BY THE TOWN TO BE REPLACED WILL BE ADDRESSED OUTSIDE THE SCOPE OF THIS PROJECT.

Drawing file: I:\Barnstable\2711271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\14 - Traffic Sign Summary.dwg Plot Date: Oct 18 2018 2:08pm



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MARK	DATE	DESCRIPTION	Scale	NTS
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	JRC
02	08/22/18	FINAL SUBMISSION	Drawn by	KMB
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	BLH
			Approved by	JDF

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TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGN SUMMARY-02

NOT FOR CONSTRUCTION

Sheet No.

67

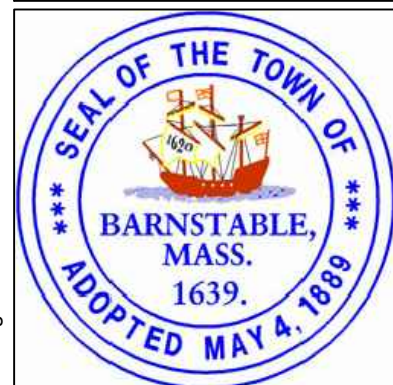
IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES)		TEXT	TEXT DIMENSIONS (INCHES)		NUMBER OF SIGNS	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	TOTAL AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING		BACK-GROUND	LEGEND	BORDER			
W10-5	30	30		MUTCD STANDARD		1	MUTCD STANDARD			P5 (1)	6.25	6.25
W10-5P	24	18				1				MOUNT WITH W10-5	3.00	3.00
W11-1	30	30				2				P5 (2)	6.25	12.50
W11-2L	30	30				12				P5 (12)	6.25	75.00
W11-2R	30	30				12				P5 (2)	6.25	12.50
W11-8	30	30				2				P5 (2)	6.25	12.50
W12-2	30	30				2				P5 (2)	6.25	12.50
W13-1P	18	18				10				MOUNT WITH W17-1	2.25	22.50
W14-2	30	30				1				MOUNT WITH D3-8	6.25	6.25
W16-2A	24	12				2				MOUNT WITH W11-8	2.00	4.00
W16-3A	24	12				1				MOUNT WITH W12-2	2.00	2.00
W16-5R	24	18				1				MOUNT WITH W12-2	3.00	3.00
W16-7PL	24	12				12				MOUNT WITH W11-2	2.00	24.00
W16-7PR	24	12				2				MOUNT WITH W11-2R	2.00	4.00
W16-9P	24	12				2				MOUNT WITH W12-2 & R12-5	2.00	4.00
W17-1	30	30				10				END P5 (10)	6.25	62.50

SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009 EDITION WITH LATEST REVISIONS AND MASSACHUSETTS AMENDMENTS FOR LATEST SPECIFICATIONS ON TEXT DIMENSIONS AND COLOR.

*25 MPH SPEED LIMIT PER TOWN DIRECTION

NOTE:
THE TOWN OF BARNSTABLE INTENDS TO R&R ALL STREET NAME (D3) SIGNS. ANY SIGNS DEEMED BY THE TOWN TO BE REPLACED WILL BE ADDRESSED OUTSIDE THE SCOPE OF THIS PROJECT.

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03	10/19/18	REVISED FINAL SUBMISSION	Designed by	JRC
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			Approved by	JDF

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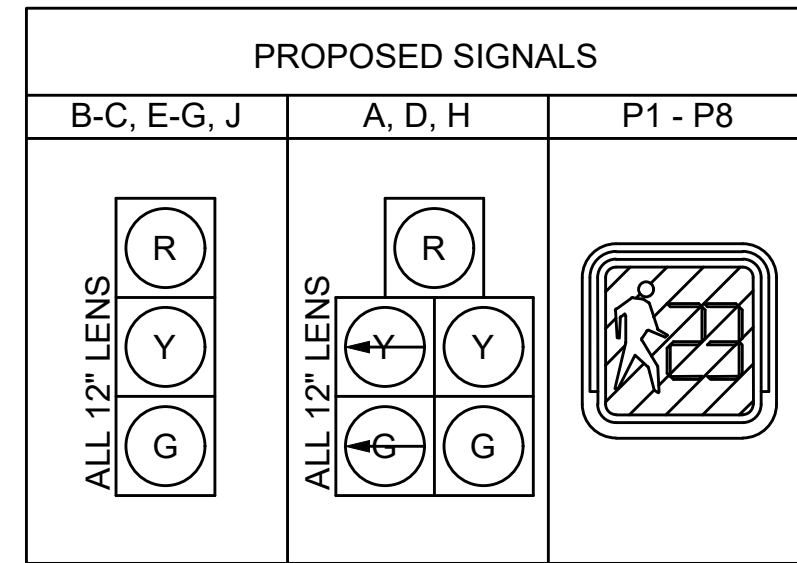
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGN SUMMARY-03

NOT FOR CONSTRUCTION

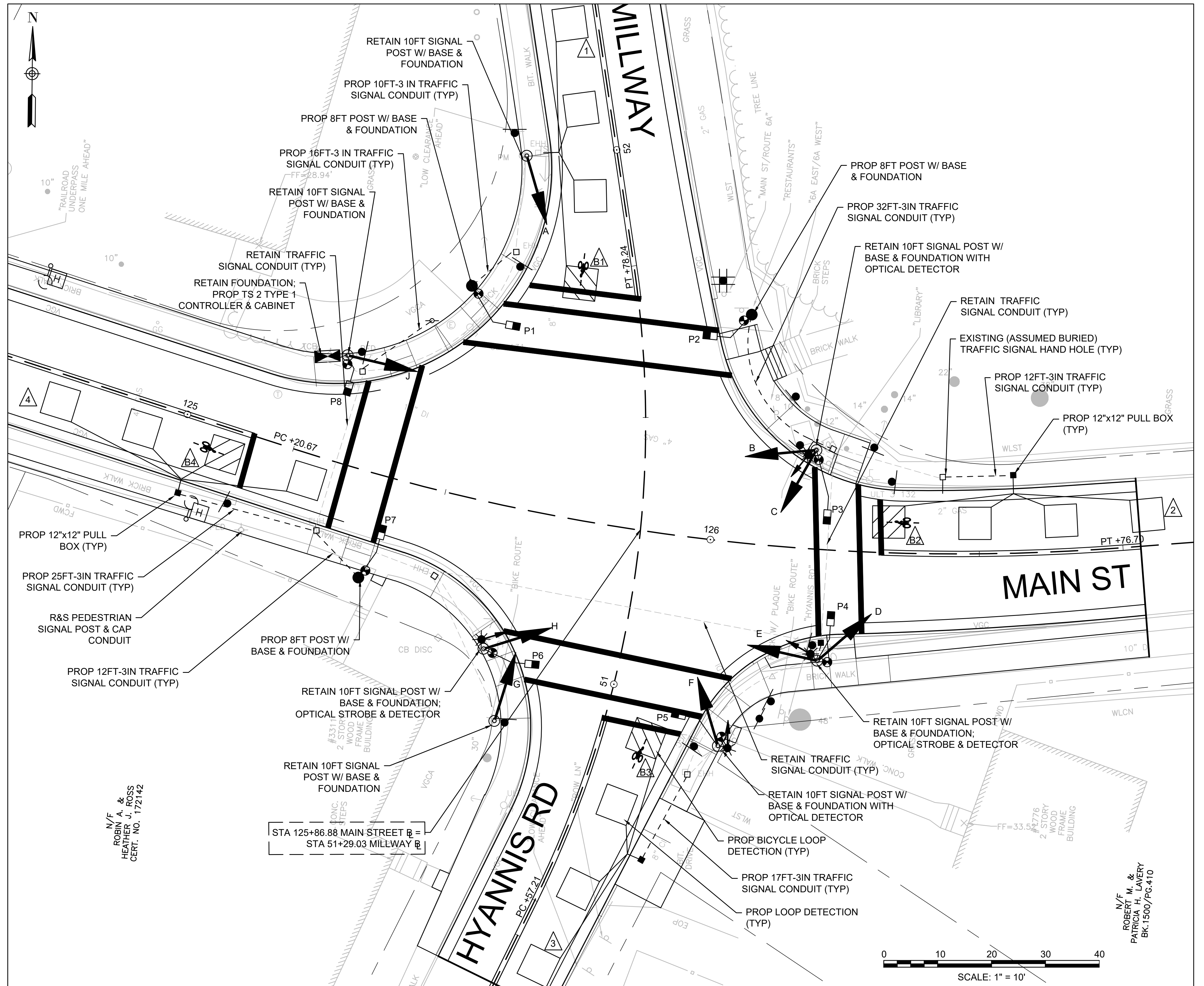
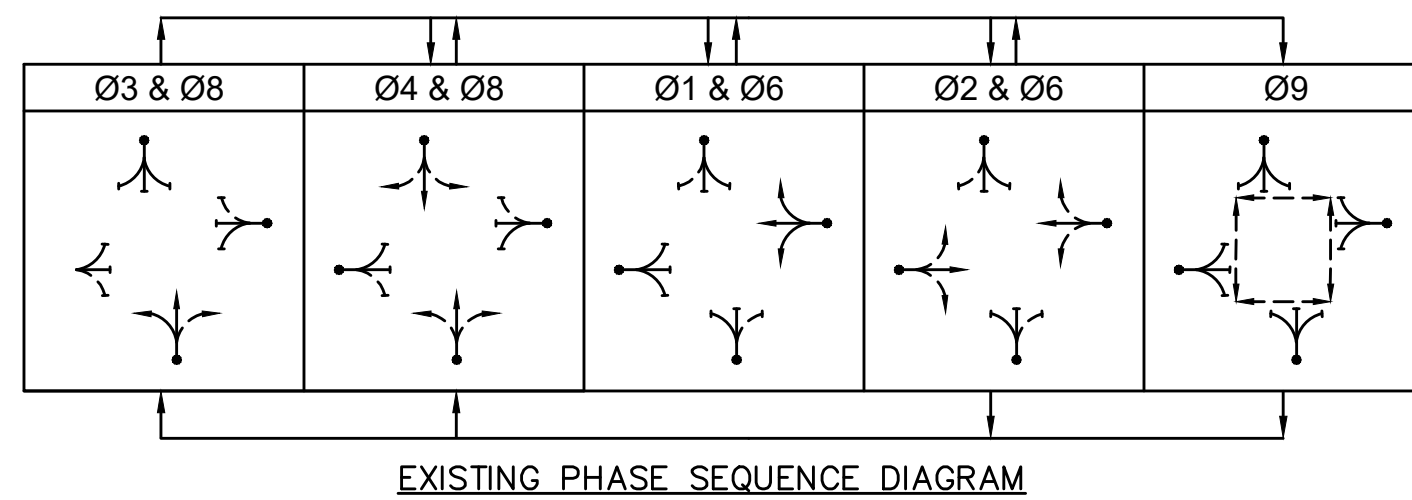
Sheet No.

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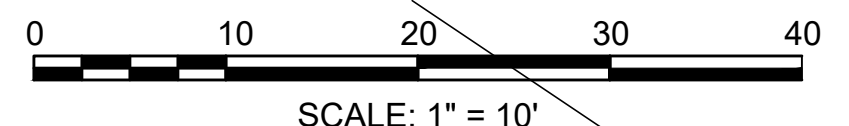
- ALL INDICATIONS SHALL BE L.E.D. LENSES IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND EQUIPPED WITH CAP VISORS.
- ALL PEDESTRIAN INDICATIONS SHALL BE 12" COUNTDOWN L.E.D. AND BE EQUIPPED WITH SUN CAP VISORS.
- ALL SIGNALS SHALL BE RIGIDLY MOUNTED AND EQUIPPED WITH 5" LOUVERED BACKPLATES WITH REFLECTIVE BORDERS.

- NOTE:
- ALL EXISTING TRAFFIC SIGNAL EQUIPMENT AND CONDUIT IS TO BE RETAINED EXCEPT FOR THE FOLLOWING WHICH ARE TO BE REPLACED: VEHICULAR AND PEDESTRIAN SIGNAL HEADS, PEDESTRIAN PUSH BUTTONS, CONTROLLER AND CONTROLLER CABINETS, ONE SIGNAL POST, AND EMERGENCY PRE-EMPTION EQUIPMENT.
 - ALL EXISTING TRAFFIC SIGNAL POSTS AND BASES SHALL BE REFINISHED INCLUDING SANDED AND REPAINTED AS SPECIFIED.
 - ADDITIONAL PEDESTRIAN POSTS ARE PROPOSED TO PROVIDE ADA/MUTCD COMPLIANT A.P.S. PEDESTRIAN ACCOMMODATIONS. NEW LOOP DETECTION IS TO BE PROVIDED.
 - ANY WIRING REQUIRED TO ACHIEVE AN OPERATING SYSTEM SHOWN ON PLAN OR SPECIFIED IS CONSIDERED INCIDENTAL TO THE PROJECT.

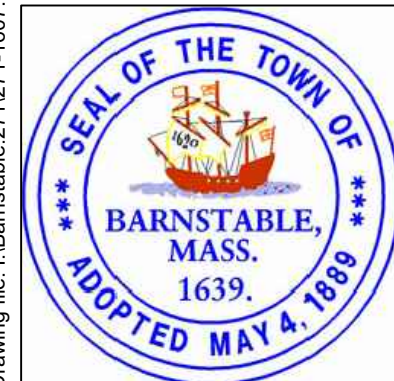


N/F
ROBIN A. &
HEATHER J. ROSS
CERT. NO. 172142

N/F
ROBERT M. &
PATRICIA H. LAVERY
BK. 1500/PG-410



Drawing file: I:\Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\15 - Traffic Signal Plan.dwg Pk1 Date: Oct 23, 2018 12:15pm



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TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNAL PLAN - 01

NOT FOR CONSTRUCTION

Sheet No.

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SIGNAL OPERATION CHART ¹																		
FULLY-ACTUATED <input checked="" type="checkbox"/>		UNCOORDINATED <input checked="" type="checkbox"/>		Ø3 & Ø8		Ø4 & Ø8		Ø1 & Ø6		Ø2 & Ø6		Ø9						
SEMI-ACTUATED <input type="checkbox"/>		COORDINATED <input type="checkbox"/>																
PRE-TIMED <input type="checkbox"/>		WIRE <input type="checkbox"/>		TBCU <input type="checkbox"/>														
SEQUENCE AND TIMING																		
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	FLASH OPER.
MAIN STREET	EB	B,E	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FR
MAIN STREET	WB	D,J	R	R	R	R	R	R	G	Y	R	G	Y	R	R	R	R	FR
		H	R	R	R	R	R	R	G	Y	R	G	Y	R	R	R	R	FYLA
HYANNIS-BARNSTABLE ROAD	NB	A	G	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	FYLA
		C	G	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR
MILLWAY	SB	F,G	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR
PEDESTRIAN	NB,SB	P1,P2	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	OUT
TIMING IN SECONDS																		
MINIMUM INITIAL			8			8			8			8			8			
PASSAGE			3			3			3			3			-			
MAXIMUM 1			8			18			8			22			7			
MAXIMUM 2			8			18			8			22			7			
YELLOW CLEARANCE				4			4			4			4			13		EMERGENCY
ALL RED CLEARANCE					2			2			2			2			2	
WALK INTERVAL																		
CLEARANCE INTERVAL																		
RECALL			OFF		OFF		OFF		SOFT		OFF							
MEMORY			LOCKING		LOCKING		LOCKING		LOCKING		LOCKING							

* MAX 2 TO OPERATE MONDAY THRU FRIDAY 3-7PM
MAX 1 TO OPERATE ALL OTHER TIMES

TRAFFIC SIGNAL AND PHASING NOTES

- ANY SERIES OR COMBINATION OF PHASES MAY BE SKIPPED
- IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE THE SIGNAL INDICATIONS FOR THAT MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
- IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE THE SIGNAL INDICATION FOR THAT TRAFFIC MOVEMENT WILL DISPLAY THE APPROPRIATE CLEARANCE INTERVAL.

LOOP DETECTOR DATA							
DET. ID.	NO. SECTIONS SIZE	NO. OF TURNS	CALL DELAY	CALL PHASE	EXTEND PHASE	OPERATION	LOOP CONNECTION
1	3-6' x 6'	3	0	4	-	PRESENCE	SERIES
B1	1 - BICYCLE	*	0	4	-	PRESENCE	-
2	3-6' x 6'	3	0	1	-	PRESENCE	SERIES
B2	1 - BICYCLE	*	0	1	-	PRESENCE	-
3	3-6' x 6'	3	0	3	-	PRESENCE	SERIES
B3	1 - BICYCLE	*	0	3	-	PRESENCE	-
4	3-6' x 6'	3	0	2	-	PRESENCE	SERIES
B4	1 - BICYCLE	*	0	2	-	PRESENCE	-

* SEE STANDARD BICYCLE LOOP DETECTOR DETAILS

PRE-EMPTION PHASING & PRIORITY			
DETECTOR & PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT	VEHICLE PHASE ASSIGNMENT
D1	1		Ø2
D2	2		Ø1
D3	3		Ø3
D4	4		Ø4

EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS 1, 2, 3 OR 4 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (1 HIGHEST AND 4 LOWEST)

IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2, D3, D4) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE #1 (OR #2, #3, #4) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCE (3 SECONDS: YELLOW AND 2 SECONDS ALL RED) AND SERVICE EMERGENCY VEHICLE PRE-EMPTION PHASE #2 (OR #1) IF NECESSARY, THEN TIME PHASE PRE-EMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATION. EMERGENCY VEHICLE PRE-EMPTION PHASE #3 AND #4 SHALL BE SIMILARLY SERVED.

MINIMUM GREEN, NORMAL VEHICLE CLEARANCE, SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

OPTICOM STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.

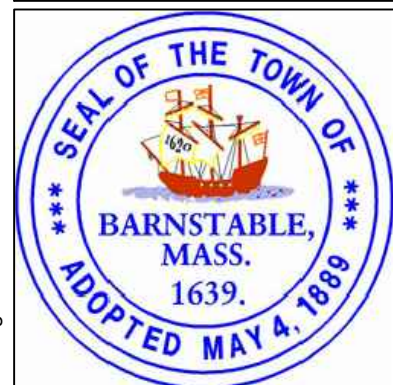
ITEM 816.01

TRAFFIC CONTROL SIGNALS MAJOR ITEMS REQUIRED	
QUAN.	ITEM
1	R&S ONE EXISTING TRAFFIC SIGNAL POST AND CAP CONDUIT: REMOVE AND DISPOSE OF FOUNDATION;
1	R&S VEHICULAR AND PEDESTRIAN SIGNAL HEADS, PEDESTRIAN PUSH BUTTONS, CONTROLLER, AND EXISTING EMERGENCY PRE-EMPTION EQUIPMENT AS REQUIRED
3	8" ORNAMENTAL SIGNAL POST, BASE & FOUNDATION
7	PREPARE, REFINISH, SAND AND RE-PAINT EXISTING T.S. POSTS AND BASES AS SPECIFIED
3	SIGNAL HEAD-1 WAY-3 SECTION-12" L.E.D. SIGNAL LENSES
2	SIGNAL HEAD-1 WAY-5 SECTION-12" L.E.D. SIGNAL LENSES
1	SIGNAL HEAD-2 WAY- 3 SECTION/5 SECTION-12" LED SIGNAL LENSES
8	COUNTDOWN PEDESTRIAN SIGNAL HEAD
16	WIRE LOOP DETECTORS INCLUDING ALL LEAD-IN WIRES AND WIRING AS REQ'D
2	DUAL CHANNEL LOOP DETECTOR AMPLIFIERS
8	PEDESTRIAN AUDIBLE & VIBRO-TACTILE PUSH BUTTON, SIGN & SADDLE WITH LED CONFIRMATION
9	5" LOUVERED BACKPLATES WITH REFLECTIVE BORDERS
4	12"x12" PULL BOX - SD2.031 (ITEM 811.31)
1	SERVICE CONNECTION (OVERHEAD) (ITEM 813.80)
1	TS2 CONTROLLER IN BASE MOUNTED TS2 TYPE 1 8-PHASE CABINET MOUNTED ON EXISTING FOUNDATION
1	MALFUNCTION MANAGEMENT UNIT
1	BATTERY BACK UP SYSTEM
PLUS ALL MISC. EQUIPMENT, CABLE WIRING AND INCIDENTALS NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL (SEE SPECIAL PROVISIONS FOR COMPLETE EQUIPMENT REQUIRED).	

ITEM 816.01

EMERGENCY VEHICLE PRIORITY CONTROL SYSTEM LIST OF MAJOR ITEMS REQUIRED	
QUAN.	DESCRIPTION
1	OPTICOM 4-CHANNEL PHASE SELECTOR KIT (OPTICOM MODEL 754)
2	CONFIRMATION WHITE STROBE LIGHT
4	OPTICAL DETECTOR (UNIDIRECTIONAL) (OPTICOM MODEL 711) WITH EXTENDER ARMS AS REQUIRED
PLUS ALL MISCELLANEOUS EQUIPMENT, CABLE AND INCIDENTAL MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING CONTROL SYSTEM (SEE SPECIAL PROVISIONS FOR COMPLETE EQUIPMENT REQUIRED.)	

Drawing file: I:\Barnstable\2710271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\15 - Traffic Signal Plan.dwg Plot Date: Oct 23, 2018 12:17am



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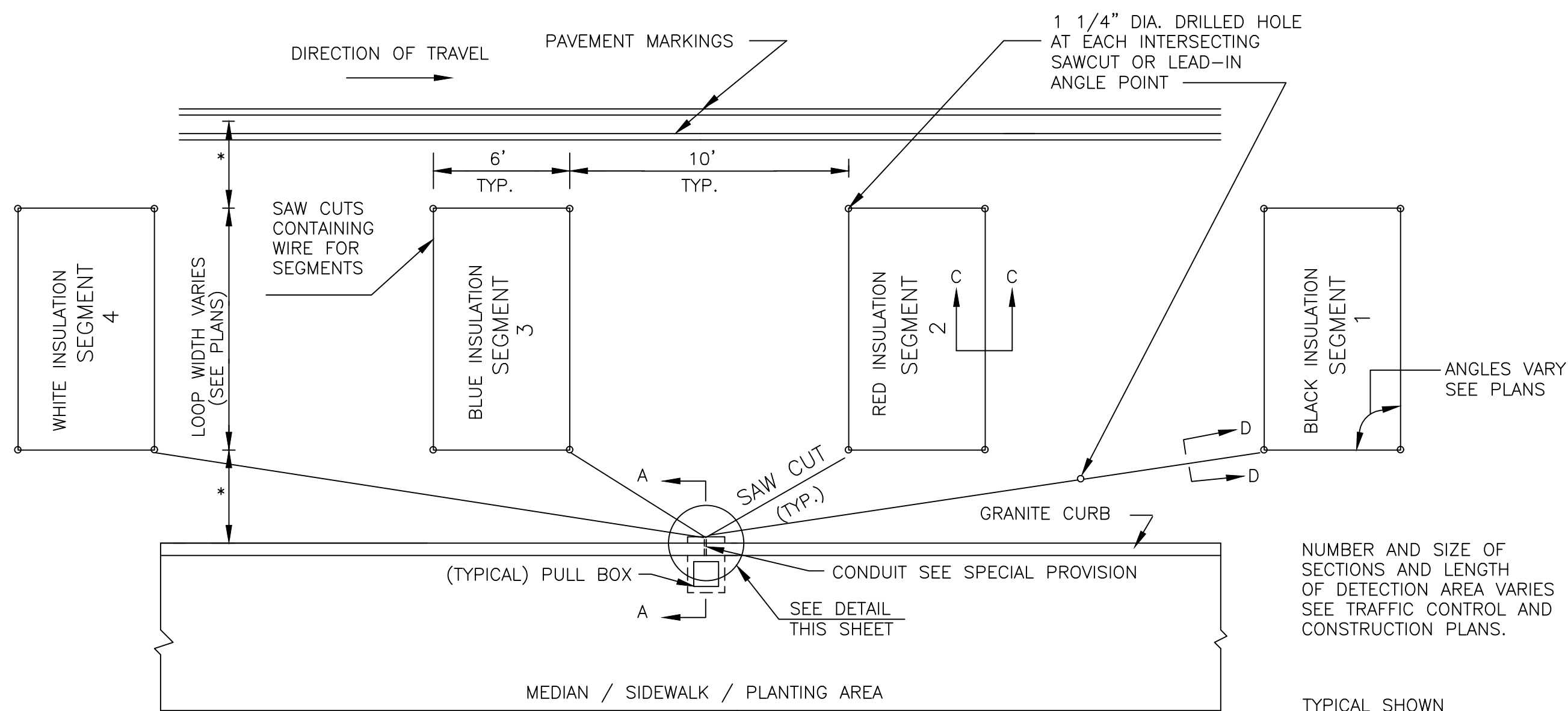
TRANSPORTATION IMPROVEMENTS ALONG MAIN STREET (ROUTE 6A) AND MILLWAY BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNAL PLAN - 02

NOT FOR CONSTRUCTION

Sheet No.

70

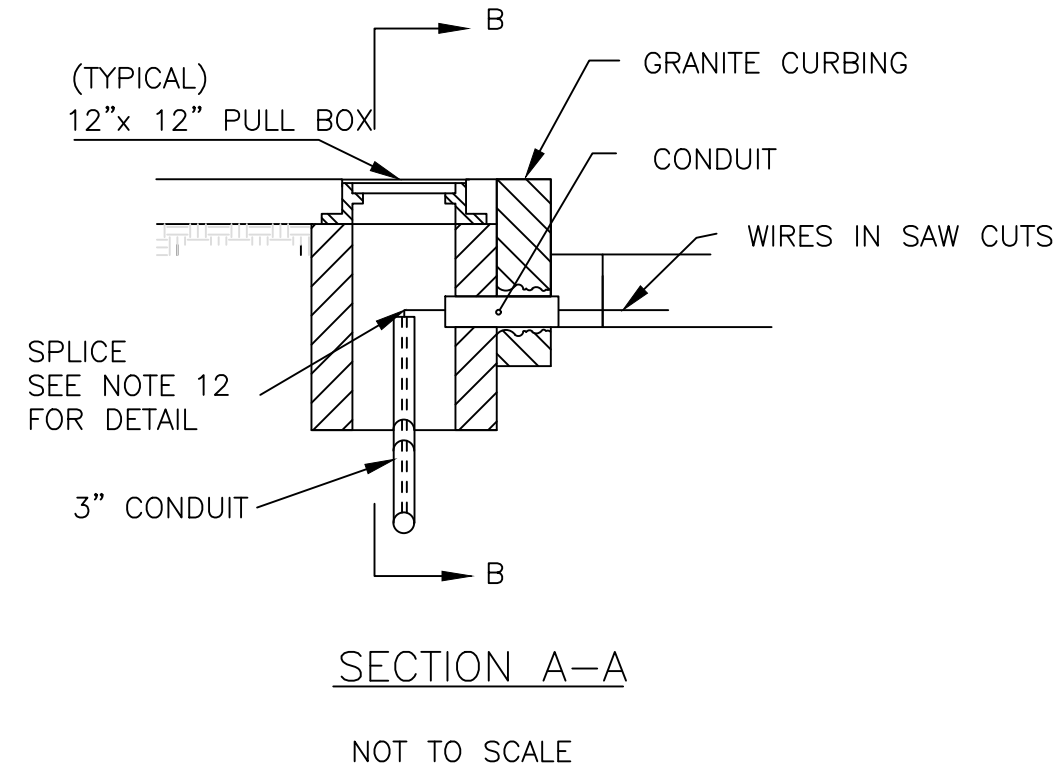


* OFFSETS FROM CURB TO LOOP AND EDGE OF LANE TO LOOP EQUAL IF NOT SHOWN.

PLAN OF SEGMENTED DETECTOR DETAIL
NOT TO SCALE

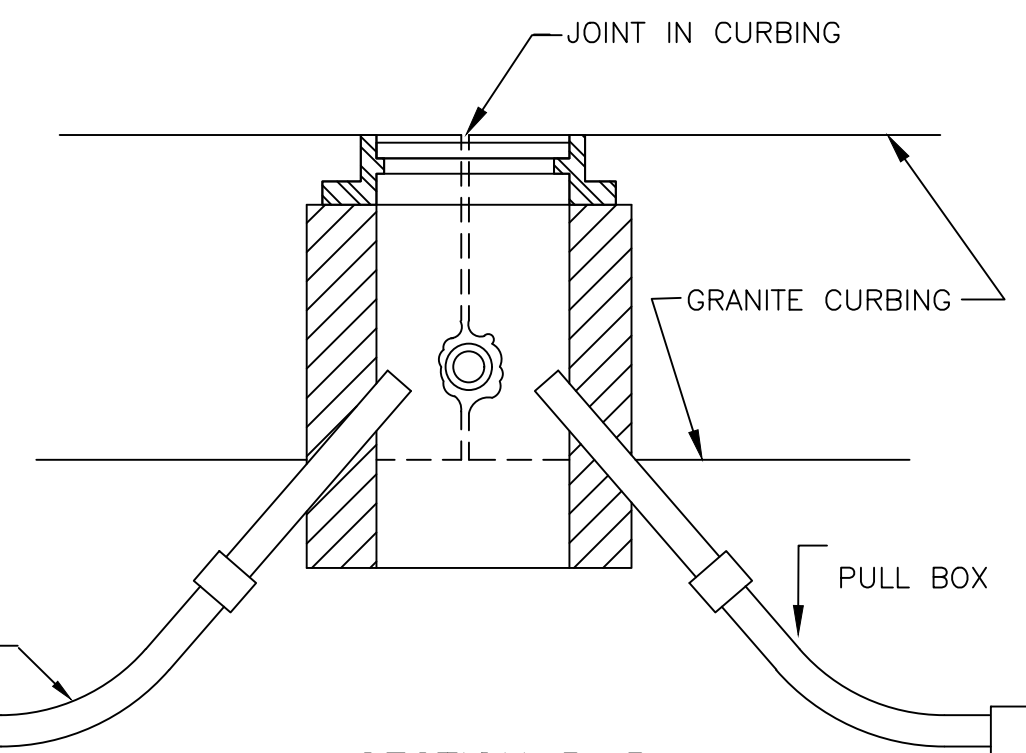
NUMBER AND SIZE OF SECTIONS AND LENGTH OF DETECTION AREA VARIES SEE TRAFFIC CONTROL AND CONSTRUCTION PLANS.

TYPICAL SHOWN DIMENSIONS MAY VARY SEE PLANS FOR VARIATIONS



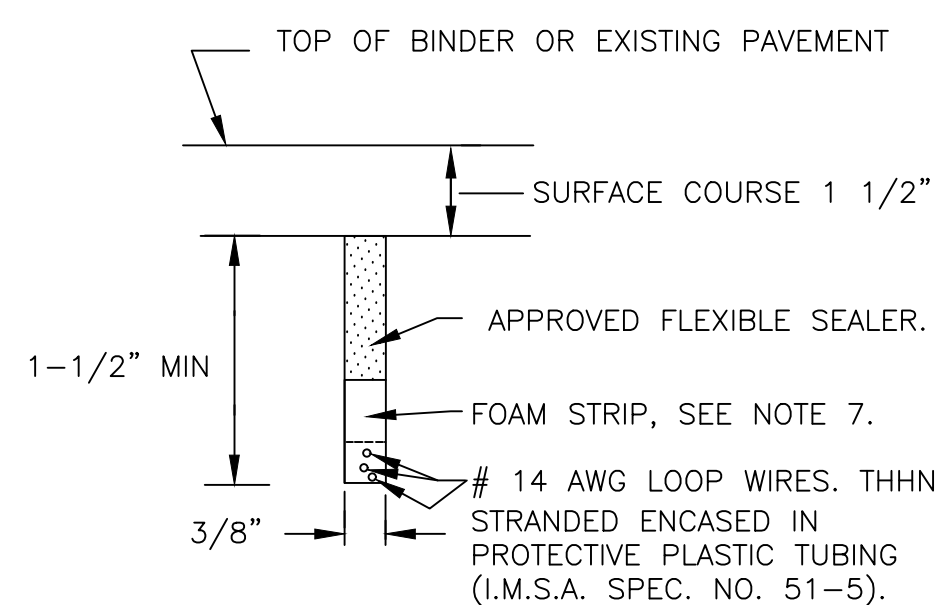
SECTION A-A

NOT TO SCALE



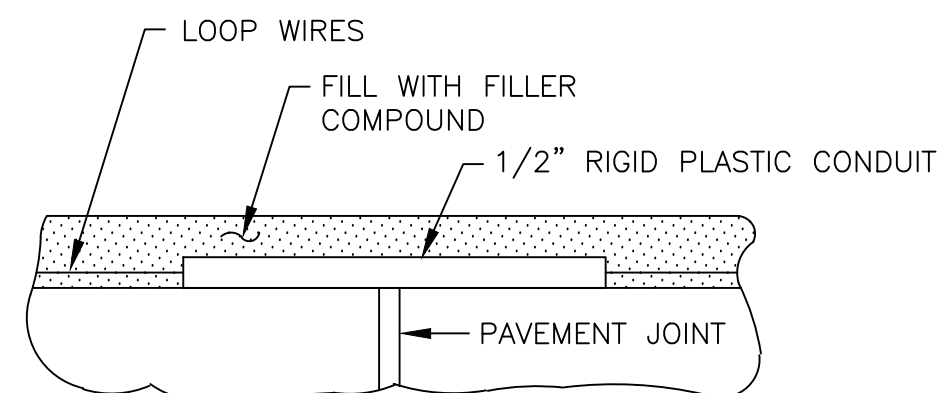
SECTION B-B

NOT TO SCALE



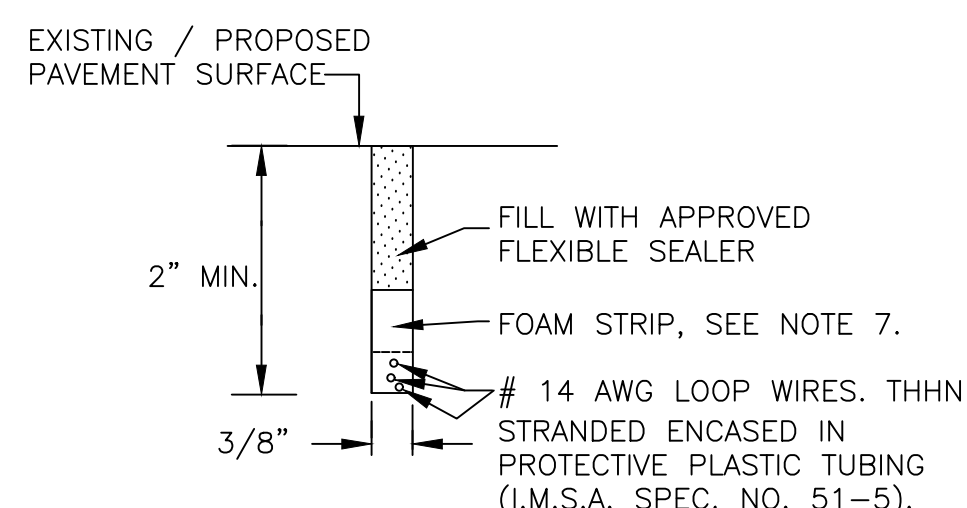
SECTION C-C & D-D

LOOPS IN BINDER COURSE OR EXISTING PAVEMENT TO BE RESURFACED NOT TO SCALE



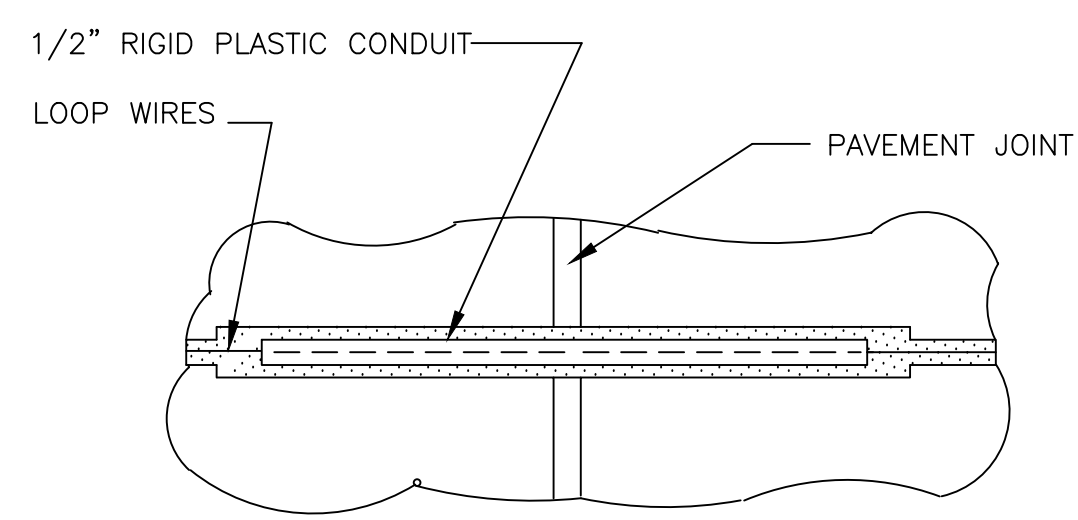
VERTICAL SECTION

TREATMENT AT PAVEMENT JOINTS
NOT TO SCALE



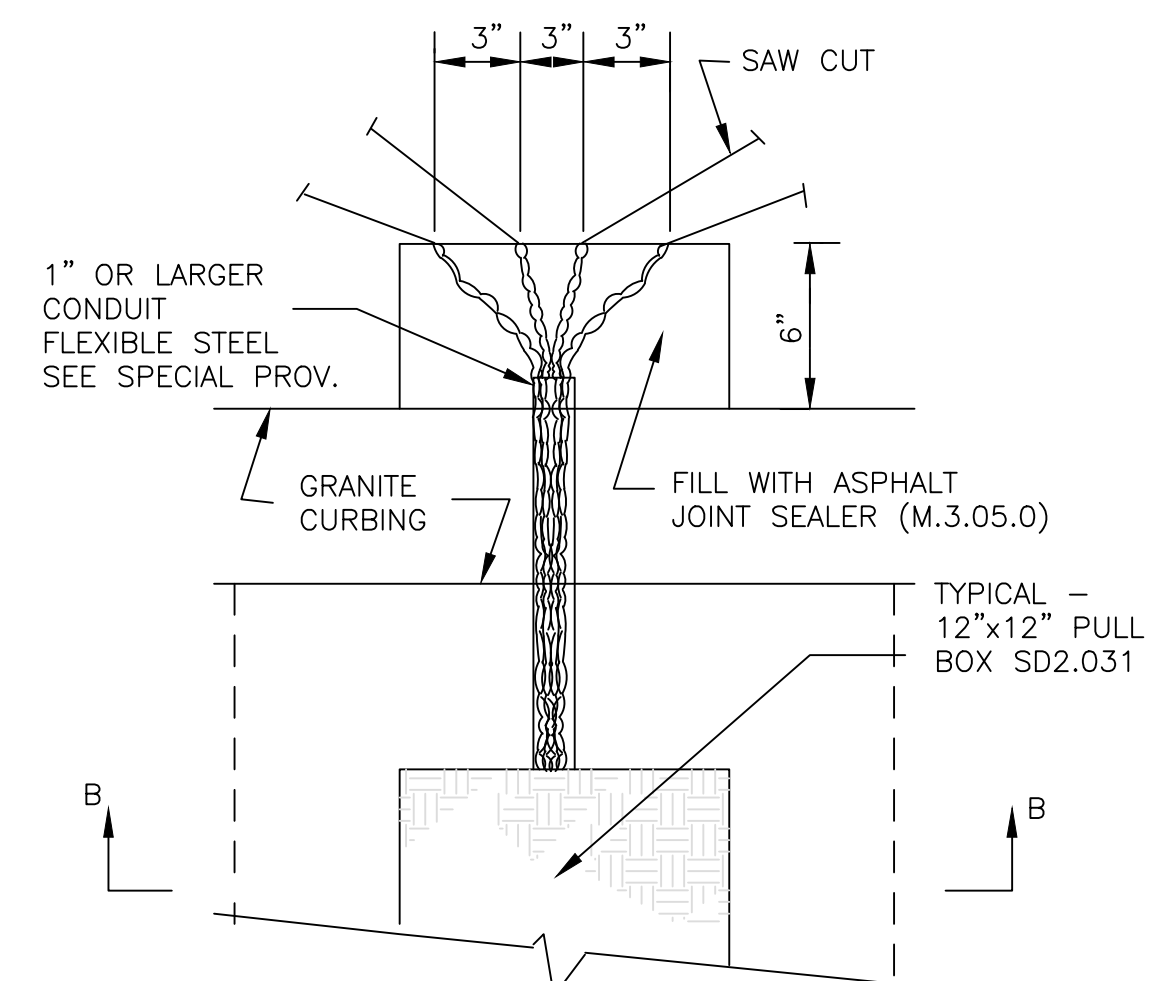
SECTION C-C & D-D

LOOPS IN SURFACE COURSE NOT TO SCALE



PLAN

TREATMENT AT PAVEMENT JOINTS
NOT TO SCALE



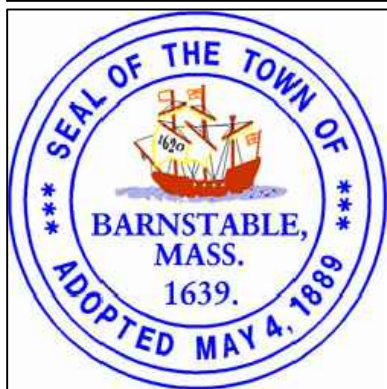
DETAIL - PLAN VIEW

NOT TO SCALE

DETECTOR NOTES

- IN HANDHOLE, SPLICE ALL SEGMENTS TO TYPE II--SHIELDED LOOP DETECTOR DETECTOR LEAD-IN CABLE. SEGMENTS SHALL BE SPLICED IN PARALLEL, IN SERIES, OR IN A COMBINATION OF PARALLEL & SERIES AS SHOWN ON THE PLAN SHEET FOR EACH DETECTOR. NUMBER OF TURNS OF WIRE SHALL ALSO BE AS SHOWN ON THE PLAN SHEET FOR EACH DETECTOR. SEE NOTE 12.
- SEE SPECIAL PROVISIONS FOR REQUIREMENTS OF DETECTOR AMPLIFIER.
- LEAD IN WIRES SHALL BE TWISTED FROM SEGMENT TO SPLICE WITH SHIELDED CABLE FIVE TURNS PER FOOT. LEAD-IN SHALL BE TYPE II (M8. 16. II).
- BEFORE STARTING ANY SPLICING, THE ELECTRICAL CONTRACTOR SHALL FURNISH DATA SHEETS ON THE MATERIALS AND/OR METHODS TO BE USED IN ACCORDANCE WITH THE DEPARTMENTS STANDARD OPERATING PROCEDURES FOR APPROVAL OF SHOP DRAWINGS SEE SECTION 815.64, ESPECIALLY PARAGRAPH 1.
- THE METALLIC SHIELD WHICH SHALL ENCASE THE DETECTOR LEADS FROM A SPLICE (TYPICALLY LOCATED IN A PULL BOX NEAR THE ROADWAY COMPONENT OF THE DETECTOR) THE METALLIC SHIELD WHICH SHALL ENCASE THE DETECTOR LEADS FROM A SPLICE (TYPICALLY LOCATED IN A PULL BOX NEAR THE ROADWAY COMPONENT OF THE DETECTOR) OF THE CONTROLLER, AND THE DRAIN WIRE UNDER THE METALLIC SHIELD, SHALL NOT BE GROUNDED TO THE EARTH GROUNDING BUSS IN THE CONTROLLER, AND THE SHIELD AND DRAIN WIRE SHALL BE CAREFULLY INSULATED FROM THE TRANSFORMER NEUTRAL TO CONTROL CABINET, OR FROM EARTH GROUND AT ALL POINTS ALONG IT'S LENGTH. SPECIFICALLY, THIS INCLUDES CAREFUL INSULATION OF THE EXPOSED PORTION OF THE SHIELD AND THE AND THE DRAIN WIRE AT THE END AWAY FROM THE CONTROLLER WHERE IT IS SPLICED TO WIRES LEADING TO THE ROADWAY COMPONENT OF THE DETECTOR. THIS IS IMPORTANT TO AVOID A GROUND RETURN LOOP.
- FILL ALL CONDUIT OPENINGS WITH DUCT SEAL.
- AFTER SAW CUTS ARE COMPLETE, BLOW OUT WATER WITH OIL - FREE COMPRESSED AIR UNTIL CUTS ARE CLEAN AND DRY. INSERT WIRE INTO CLEAN SLOT WITH A BLUNT, SMOOTH, ROUND EGED TOOL OF WOOD OR PLASTIC SUCH AS A PAINT STIRRER. DO NOT USE A SCREWDRIVER, THEN INSERT FOAM PLASTIC HOLD DOWN STRIPS, SIMILAR TO ETHA FOAM SB STRIPS SHALL BE ABOUT 2" LONG, PLACED IN THE SLOT ABOUT EVERY 2 FEET . THEN POUR SEALER, TAKING CARE TO ELIMINATE BUBBLES.
- THE COMBINED ROADWAY LOOP, TWISTED LEAD-IN WIRES, SPLICE AND SHIELDED LEAD-IN CABLE SHALL HAVE A RESISTANCE TO GROUND OF AT LEAST 100 MEGOHMS. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
- FOR INSTALLATION OF SINGLE (ONE SEGMENT) SMALL WIRE LOOP DETECTOR DETAIL IS THE SAME
- CUT LOOPS IN BINDER AND FILL WITH APPROVED FLEXIBLE SEALER.
- DETECTOR WIRE SHALL BE A DIFFERENT COLOR FOR EACH SEGMENT OF A DETECTOR GROUP. SEE DETAIL
- SPLICING PATTERN P = SERIES/PARALLEL: SPLICE SEGMENTS 1 AND 3 OF AN 12. INDIVIDUAL DETECTOR IN SERIES. SPLICE SEGMENTS 2 AND 4 IN SERIES. SPLICE THE RESULTANT TWO GROUPS IN PARALLEL. SPLICE THE RESULTANT COMBINATION TO ONE LEAD-IN CABLE. CONNECT THIS CABLE TO AN OTHERWISE UNUSED AMPLIFIER CHANNEL. SPLICING PATTERN S = SERIES: SPLICE ALL SEGMENTS (TYPICALLY FOUR, BUT MAY BE LESS) OF AN INDIVIDUAL DETECTOR IN SERIES. SPLICE THE RESULTANT COMBINATION TO ONE LEAD-IN CABLE TO AN OTHERWISE UNUSED AMPLIFIER CHANNEL.

Drawing file: I:\Barnstable\2711271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\16 - Traffic Signal Details.dwg Plot Date: Oct 23, 2018 11:16am



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BARNSTABLE, MASSACHUSETTS

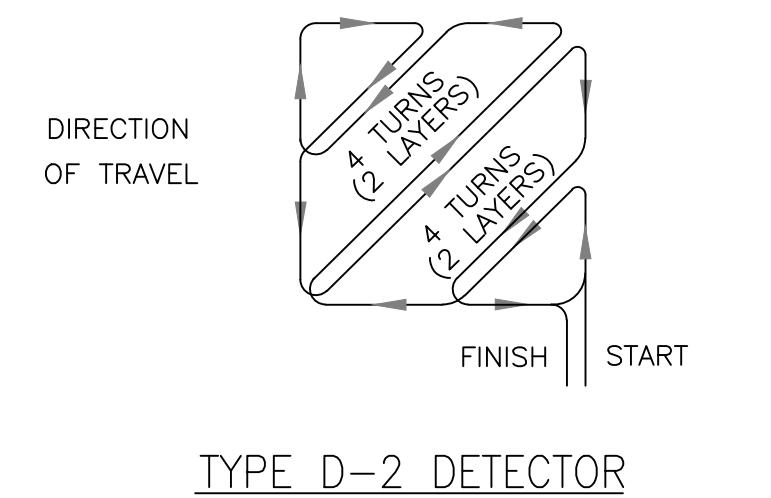
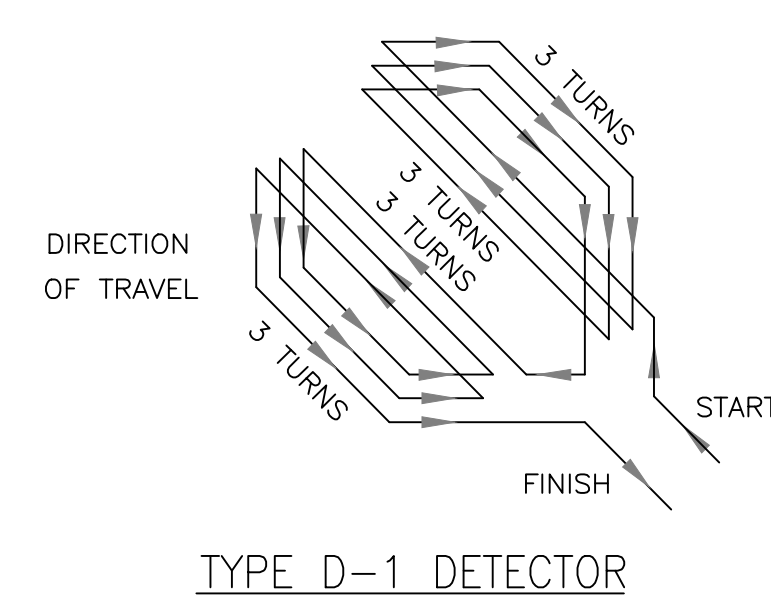
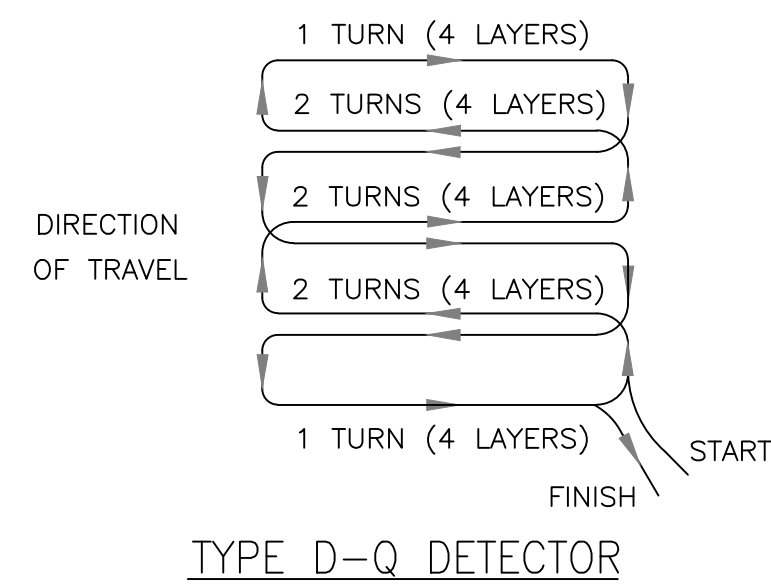
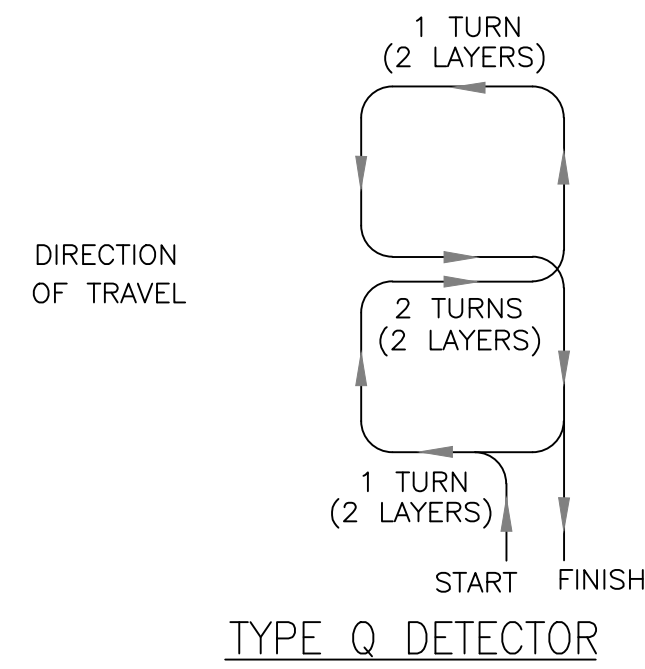
TRAFFIC SIGNAL DETAILS - 01

NOT FOR CONSTRUCTION

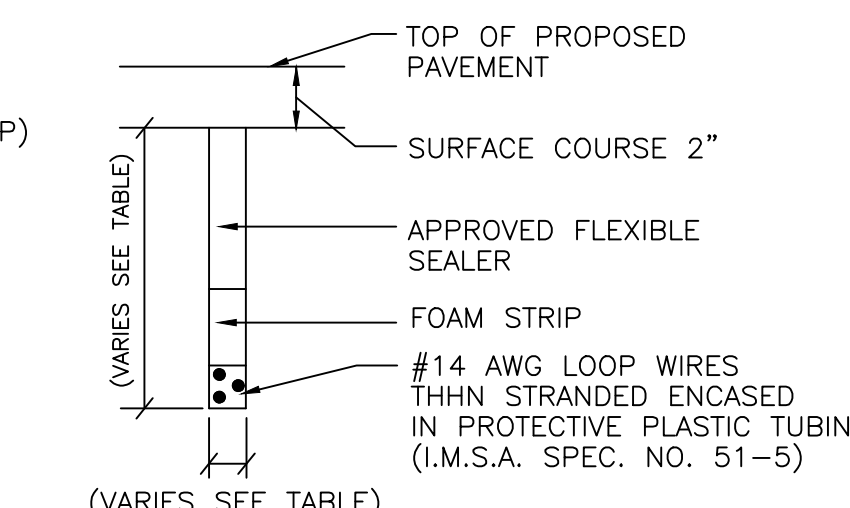
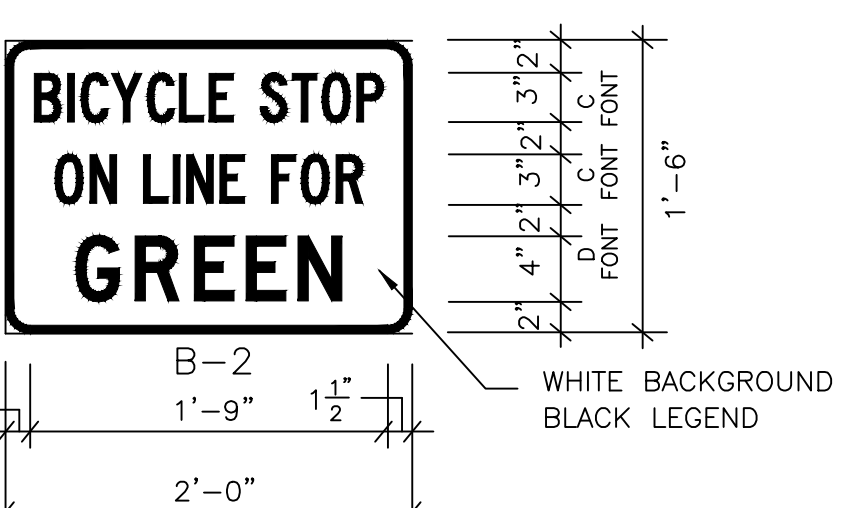
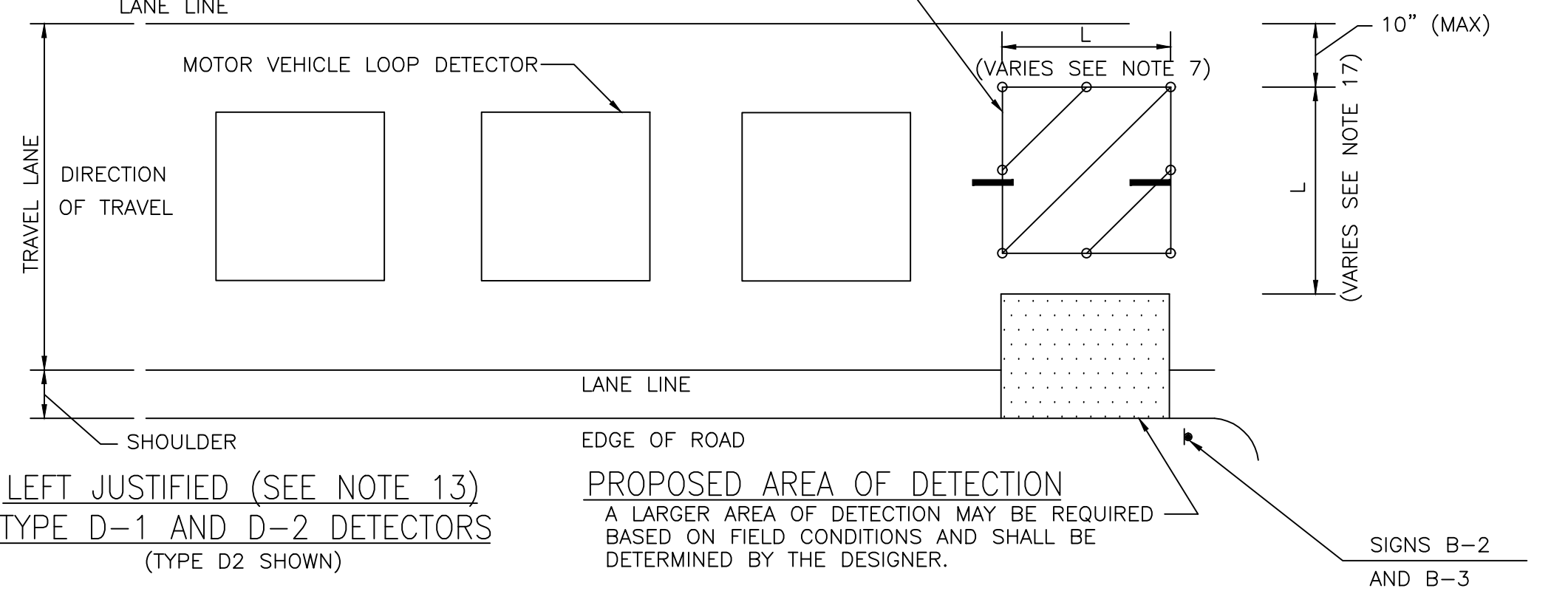
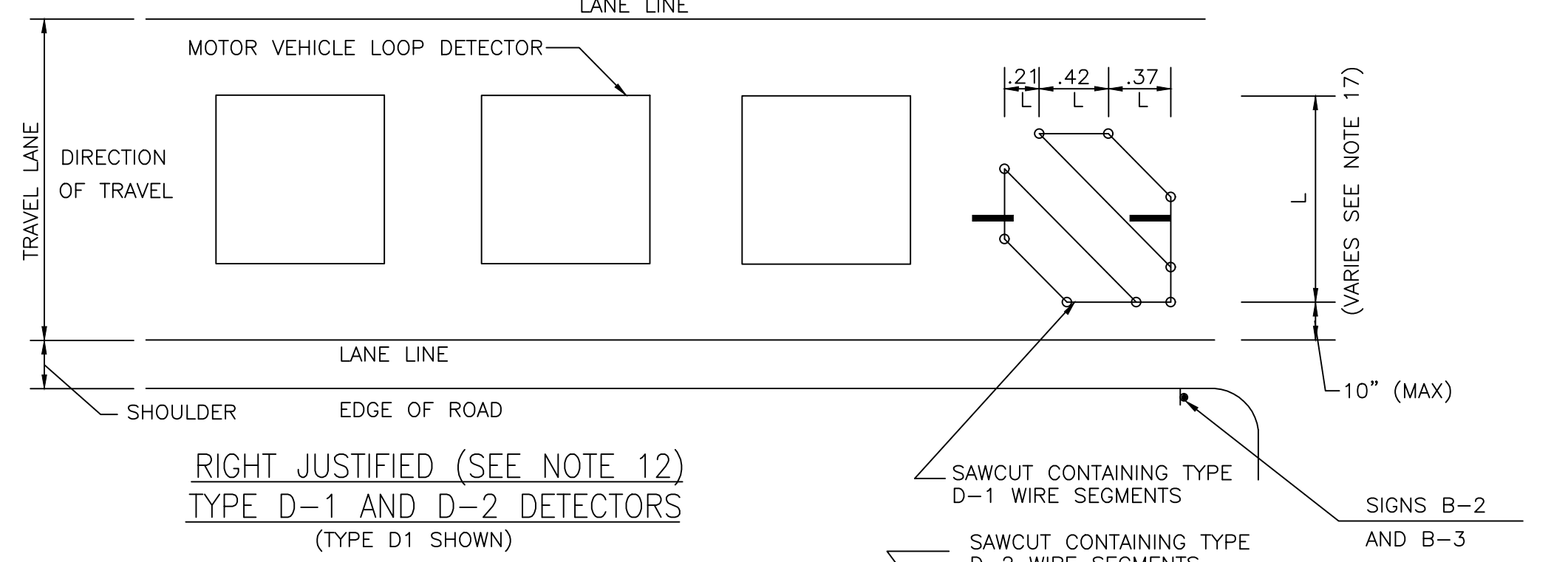
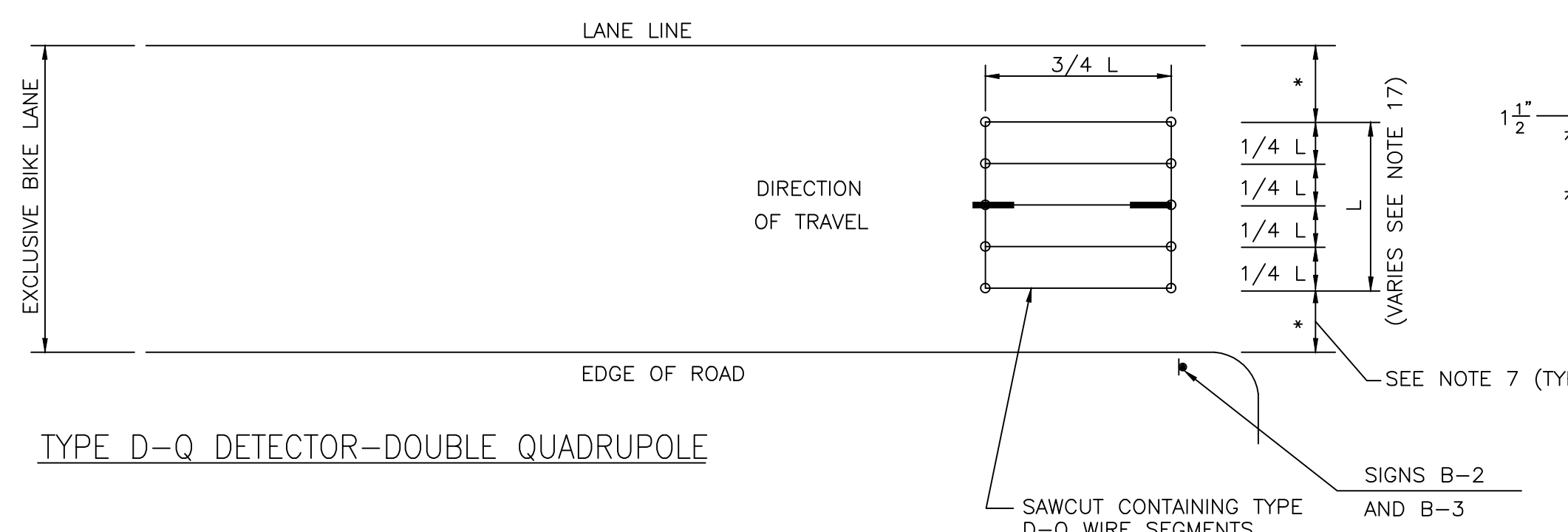
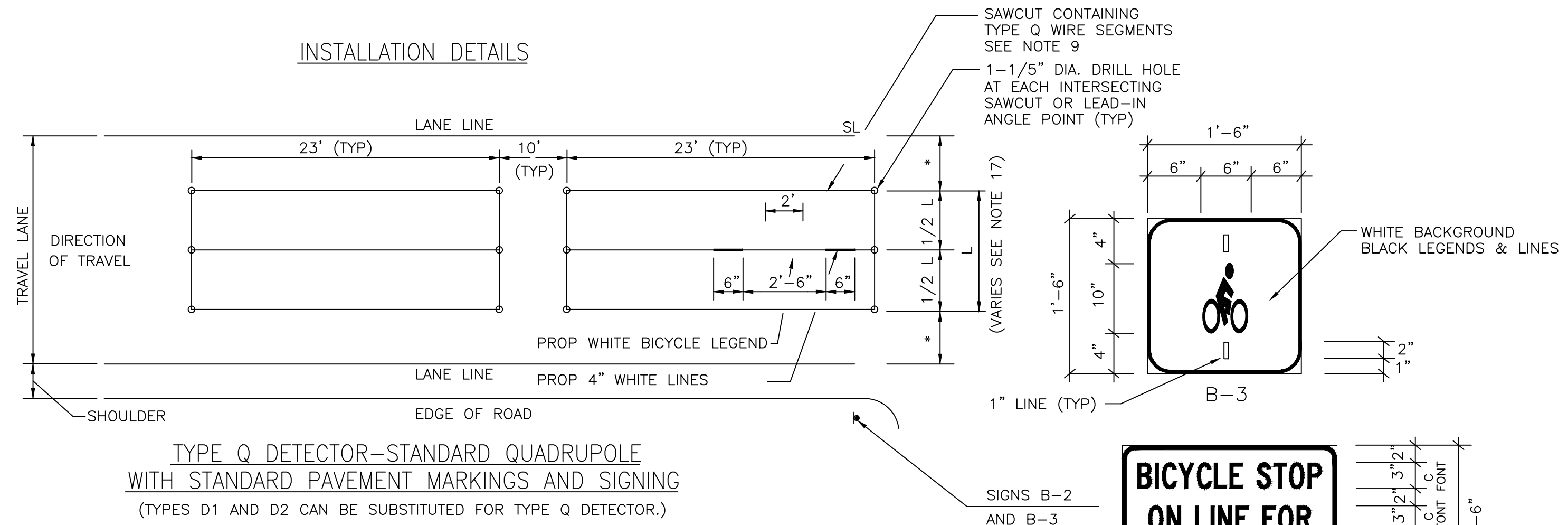
Sheet No.

71

WINDING DETAILS



INSTALLATION DETAILS

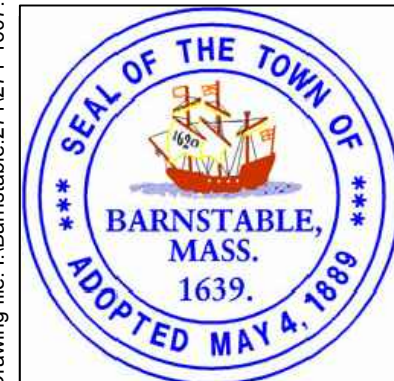


SAWCUT SLOT DEPTH GUIDE

TURNS OF WIRE	SLOT SIZE	
	DEPTH (INCH)	WIDTH (INCH)
1	1-3/16	3/8
2	1-3/8	3/8
3	1-9/16	3/8
4	1-3/4	3/8
5	2	1/2
6	2	1/2
7	2	1/2
8	2	1/2

- NOTES:
- REFER TO VEHICLE LOOP DETECTOR DETAIL SHEET FOR ADDITIONAL NOTES AND CONSTRUCTION DETAILS.
 - ALL DETAILS ARE GRAPHICAL WITH NO SCALE.
 - THE NUMBER, SIZE, LOCATION AND LENGTH OF DETECTION AREA VARIES AND SHALL BE DETERMINED BY THE DESIGNER REFER TO TRAFFIC SIGNAL PLAN.
 - BICYCLE LOOPS SHALL BE CONNECTED TO SEPARATE LOOP DETECTOR AMPLIFIERS CAPABLE OF HIGHER LEVELS OF SENSITIVITY.
 - BICYCLE LOOPS SHALL BE INSTALLED IN THE BASE COURSE OF EXISTING PAVEMENT. THE EXISTING PAVEMENT SHALL BE COLD PLANED TO THE BASE COURSE AND SAWCUT FOR LOOP INSTALLATION.
 - SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED FOR ALL BICYCLE DETECTORS TO INFORM CYCLISTS OF THE DETECTION AREA.
 - OFFSETS FROM LANE LINE EQUAL UNLESS OTHERWISE NOTED. SEE PLANS.
 - TYPE Q DETECTORS SHALL BE WIRED IN A FIGURE EIGHT PATTERN WITH A DOUBLE LAYER DESIGN (2-4-2") WITH 2 TURNS IN THE PERIMETER SLOTS AND 4 TURNS IN THE CENTER SLOT AS SHOWN IN THE WINDING DETAIL.
 - BICYCLES WILL BE DETECTED WITHIN 4" OF THE INTERIOR LONGITUDINAL LOOP WIRES FOR TYPE Q AND D-Q DETECTORS.
 - PROVIDE 3 TURNS FOR TYPE D-1 DETECTORS.
 - INSTALL 2 LAYERS OF WIRE WOUND IN THE SAME DIRECTION IN BOTH LAYERS FOR TYPE D-2 DETECTORS. THE RESULT IS 4 TURNS IN EACH DIAGONAL.
 - RIGHT JUSTIFIED LOOP DETECTORS SHALL BE CONSIDERED FOR THE FOLLOWING CONDITIONS:
 - BICYCLE STOPPING ON THE RIGHT SIDE OF A THRU TRAVEL LANE.
 - BICYCLE STOPPING ON THE RIGHT SIDE OF AN EXCLUSIVE LEFT TURN LANE.
 - LEFT JUSTIFIED LOOP DETECTORS SHALL BE CONSIDERED FOR THE FOLLOWING CONDITIONS:
 - BICYCLE STOPPING ON THE LEFT SIDE OF A SHARED LEFT/THRU LANE.
 - BICYCLE STOPPING JUST TO THE RIGHT OF THE CENTERLINE WHEN TURNING LEFT ON A TWO-LANE ROADWAY.
 - RECTANGULAR LOOP DETECTORS SHALL BE CONSIDERED FOR BICYCLES STOPPING ON EITHER THE LEFT OR RIGHT SIDE OF A TWO-LANE ROADWAY. THE MAXIMUM OFFSET FROM LANE LINE AND CURB LINE SHALL BE 10".
 - PAVEMENT CORES OR TEST PITS MAY BE REQUIRED TO DETERMINE THE DEPTH OF EXISTING PAVEMENT AND CONFIRM THAT THE DETECTION OPTION CHOSEN AND CORRESPONDING WINDING PATTERN CAN BE ACCOMMODATED.
 - THESE DETAILS APPLY TO BICYCLE LOOPS INSTALLED IN ROADWAYS. PUSH BUTTON ACTUATION SHALL BE CONSIDERED FOR RECREATIONAL BIKE PATHS.
 - THE MINIMUM DIMENSION FOR L SHALL BE 6 FEET MIN. FOR DETECTORS TYPE D-Q, D-1 & D-2. FINAL DIMENSIONS SHALL BE DETERMINED BY THE DESIGN ENGINEER.
 - DETECTORS SHALL BE INSTALLED TO ELIMINATE CONFLICT WITH PAVEMENT MARKING LEGENDS AND OTHER TRAFFIC MARKINGS.

Drawing file: I:\Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\16 - Traffic Signal Details.dwg Plot Date: Oct 23, 2018 11:18am



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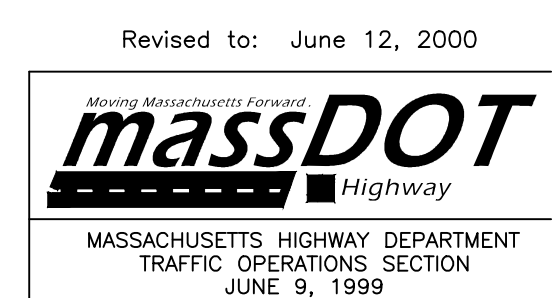
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02	08/22/18	FINAL SUBMISSION	Drawn by	AMT
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	JDF
			Approved by	JDF

THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

TRAFFIC SIGNAL DETAILS - 02

NOT FOR CONSTRUCTION
Sheet No.
72

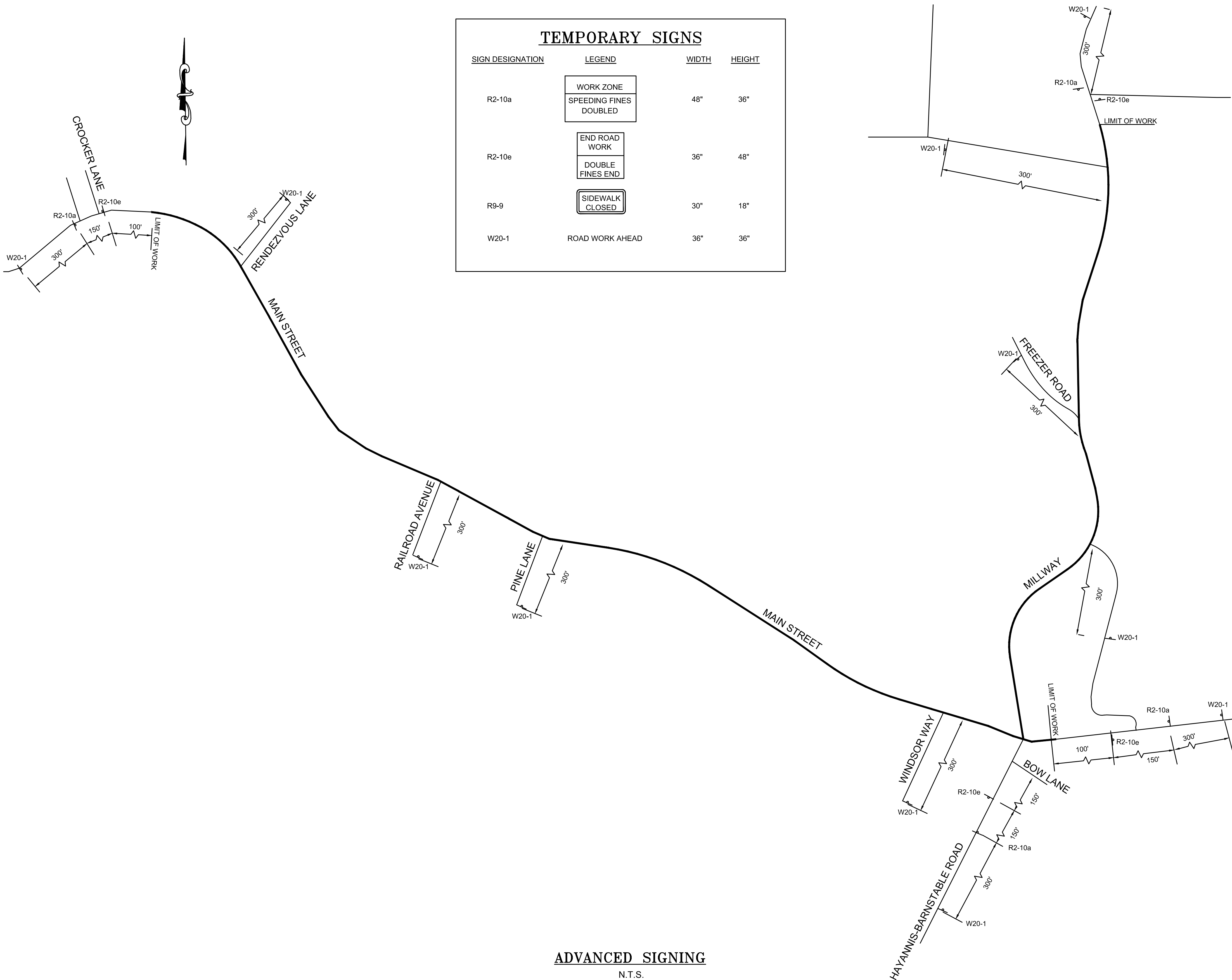


TEMPORARY SIGNS

SIGN DESIGNATION	LEGEND	WIDTH	HEIGHT
R2-10a	WORK ZONE SPEEDING FINES DOUBLED	48"	36"
R2-10e	END ROAD WORK DOUBLE FINES END	36"	48"
R9-9	SIDEWALK CLOSED	30"	18"
W20-1	ROAD WORK AHEAD	36"	36"

GENERAL NOTES

- ALL CONSTRUCTION SIGNING, DRUMS, BARRICADES AND OTHER DEVICES SHALL CONFORM WITH PART 6 OF THE LATEST EDITION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)
- ALL CHANNELIZING DEVICES SHALL BE SET @ 25' O.C. MAX. UNLESS OTHERWISE NOTED OR ADJUSTED BY THE RESIDENT ENGINEER.
- ALL DRUMS SHALL BE APPROPRIATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS AT ALL TIMES. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN, VEHICULAR AND EMERGENCY TRAFFIC THROUGH THE WORK AREAS, BOTH DURING AND AFTER WORK HOURS, TO MAINTAIN SUCH ACCESS.
- ALL DISTANCE MAY BE ADJUSTED TO FIT FIELD CONDITIONS, AS DIRECTED BY THE TOWN. HOWEVER MINIMUM DISTANCES, WHERE INDICATED SHALL BE MAINTAINED.
- THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
- THE CONTRACTOR WILL NOTIFY BUSINESSES AND THE TOWN AT LEAST 24 HRS IN ADVANCE OF IMPACTED ON STREET PARKING CLOSURES
- THE CONTRACTOR SHALL NOTIFY THE TOWN OF BARNSTABLE POLICE, FIRE, AND DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS IN ADVANCE OF LANE CLOSURES.
- A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES.
- DETOURS MAY ONLY BE CONSIDERED FOR TRAVELWAY SURFACE RESTORATION WORK ONLY (I.E. PAVEMENT COLD PLANE AND RESURFACING) AT THE APPROVAL OF THE RESIDENT ENGINEER. EXCEPTIONS MAY BE MADE FOR MAJOR INTERSECTION WORK, BUT MUST BE APPROVED IN WRITING BY THE RESIDENT ENGINEER AND COORDINATED WITH THE APPROPRIATE LOCAL AUTHORITIES.
- GRADE SEPARATIONS IN EXCESS OF 2 INCHES DURING NON-WORKING HOURS WILL REQUIRE DELINEATION BY USE OF DRUMS.
- EXCAVATION EDGES IN EXCESS OF 4 INCHES DEEP SHALL BE PROTECTED DURING NON-WORKING HOURS BY BACKFILLING WITH A WEDGE OF GRAVEL OR SOIL COMPACTED TO A 4:1 SLOPE.
- NONESSENTIAL TEMPORARY CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS.
- THE GENERAL SEQUENCE OF WORK IS DEPENDENT UPON THE REMOVAL AND RELOCATION OF THE EXISTING UTILITY POLES AND WIRES THAT ARE FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK. BY THE UTILITY COMPANIES. THE CONTRACTOR SHALL SCHEDULE THE WORK IN EACH AREA TO COORDINATE WITH THE POLE RELOCATION WORK.
- ADVISORY SPEED PLATES (W13-1) SHALL BE USED IF APPROPRIATE AND AS DIRECTED BY THE ENGINEER.
- SUPPORTS FOR ALL TRAFFIC MANAGEMENT SIGNS SHALL BE 4" X 4" PRESSURE TREATED WOOD POSTS.
- ANY LANE CLOSURE WORK MUST BE PERFORMED BETWEEN THE HOURS OF 7:00 AM - 3:30 PM ONLY, EXCEPTION FOR A SHORT PERIOD OF TIME AS APPROVED BY THE CITY. WORKING BEYOND THESE HOURS OR OVER THE WEEKEND MUST BE APPROVED BY THE TOWN.
- CONSTRUCTION SHALL NOT TAKE PLACE DURING THE SUMMER MONTHS (BETWEEN MEMORIAL DAY AND LABOR DAY).
- CEMENT CONCRETE BARRIERS TO BE USED AS NEEDED AND DIRECTED BY THE TOWN.
- ALL TEMPORARY TRAFFIC CONTROL WORK FOR SIDEWALK CLOSURE AND PEDESTRIAN DETOUR SHALL CONFORM TO THE LATEST EDITION OF THE MASSDOT STANDARD
- DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TEMPORARY TRAFFIC CONTROL PLANS FIGURE PED-1 TO FIGURE PED-7.

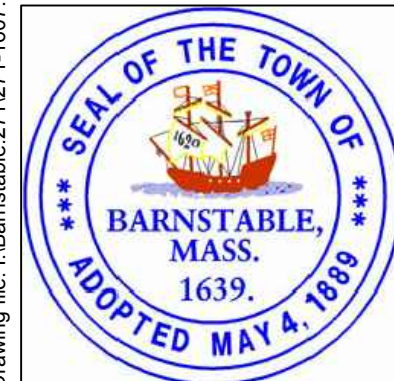


ADVANCED SIGNING
N.T.S.

LEGEND

- CHANNELIZING DEVICE
- PROPOSED TRAFFIC FLOW
- WORK ZONE
- TYPE III BARRICADE
- POLICE DETAIL
- FLAGGER
- CONSTRUCTION SIGN
- N.T.S. NOT TO SCALE

Drawing file: I:\Barnstable\2711271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\17 - Traffic Management Plan.dwg Plot Date: Oct 18, 2018 2:25pm



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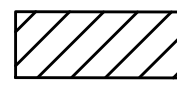



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TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

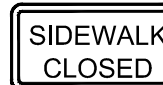


TRAFFIC MANAGEMENT PLAN

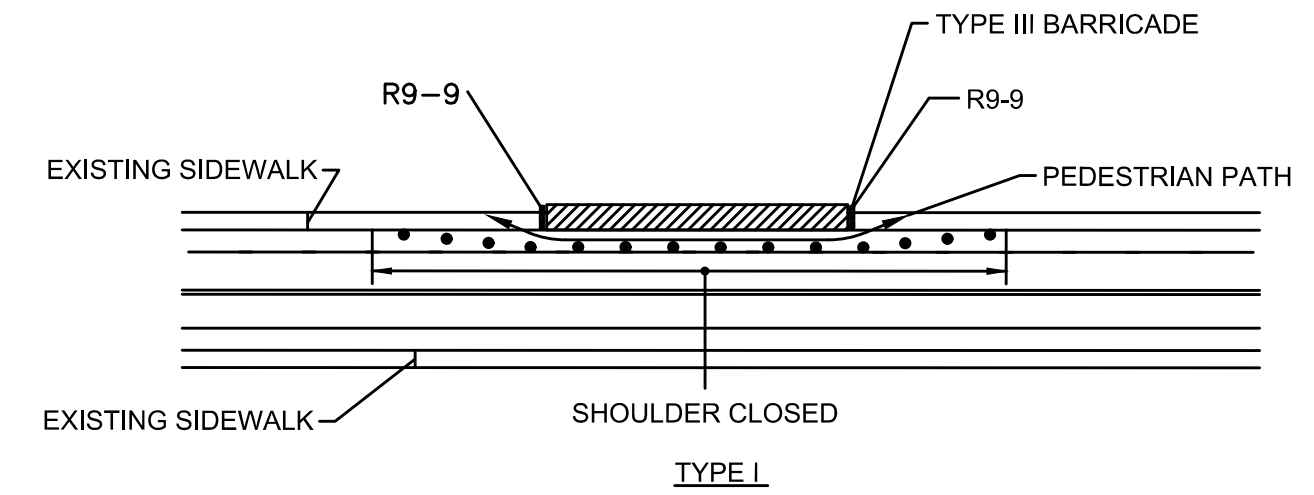
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Sheet No. **73**

LEGEND

-  HIGH LEVEL WARNING DEVICE - FLAG TREE
-  REFLECTORIZED CONE
-  REFLECTORIZED DRUM
-  PROPOSED TRAFFIC FLOW
-  WORK ZONE
-  TYPE III BARRICADE
-  POLICE DETAIL
-  CONSTRUCTION SIGN
- N.T.S. NOT TO SCALE

TEMPORARY SIGNS

SIGN DESIGNATION	LEGEND	HEIGHT	WIDTH
R9-9		30"	18"
W1-4R		30"	30"
W1-4L		30"	30"
W5-1	ROAD NARROWS	36"	36"
W13-1	XX MPH	24"	24"
W20-1	ROAD WORK AHEAD	36"	36"
W20-4	ONE LANE ROAD AHEAD	36"	36"
W20-7a	FLAGGER AHEAD	36"	36"
W20-7b	POLICE OFFICER AHEAD	36"	36"



NOTES

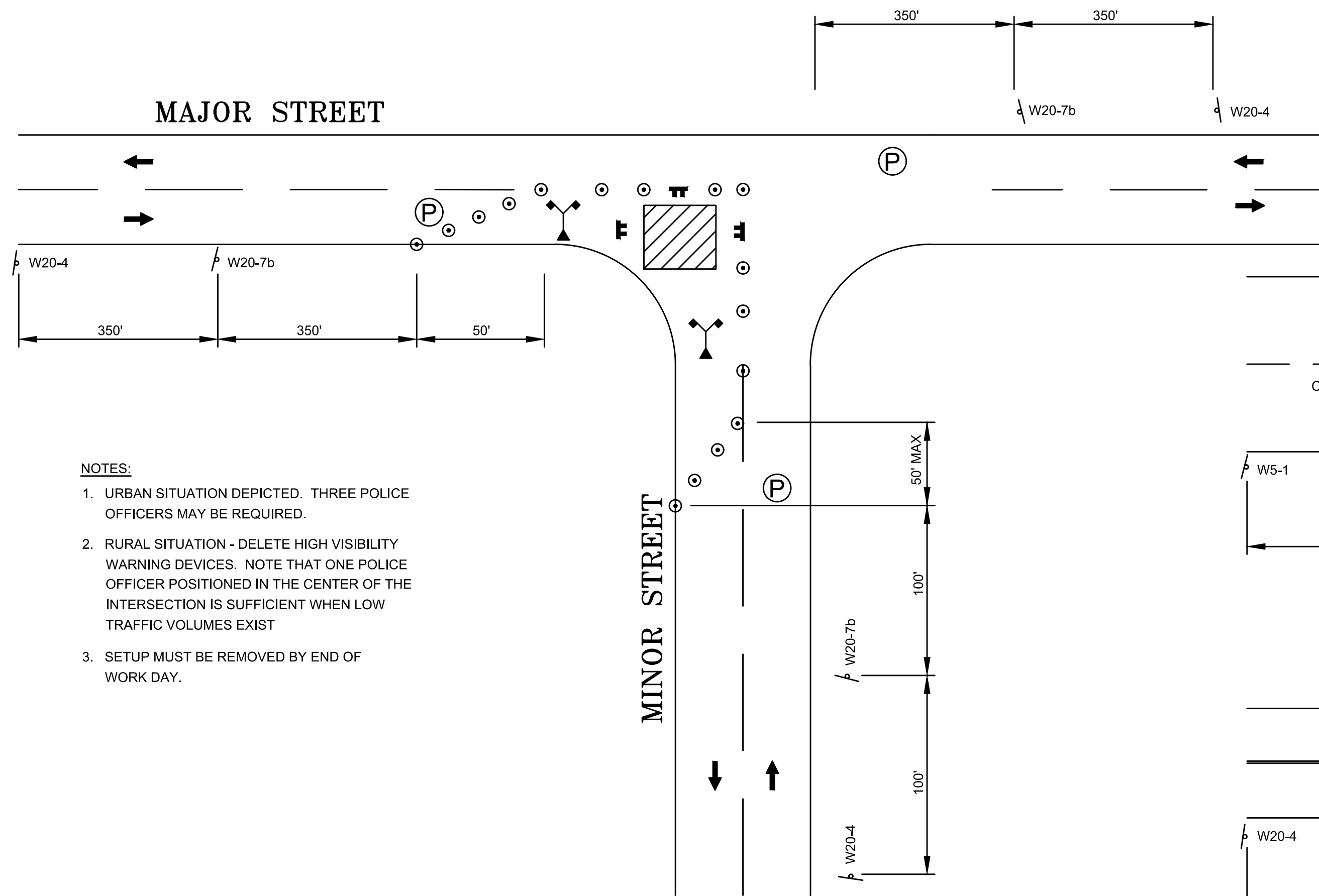
- ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
- CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
- IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT AS SHOWN, PEDESTRIANS MAY BE REQUIRED TO CROSS TO THE OPPOSITE SIDE OF THE STREET AS DIRECTED BY THE RESIDENT ENGINEER.
- BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE RESIDENT ENGINEER.
- ACCESS TO ALL BUSINESSES AND RESIDENCES SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE TOWN

PEDESTRIAN BYPASS

N.T.S.

OPERATIONAL SIGNING

TEMPORARY LANE CLOSURES SHOWN ARE FOR ROADWAY CONSTRUCTION. ALL DRUMS AND SIGNS ARE SHOWN AS THEY SHOULD APPEAR DURING THE WORKING DAY, OR WHILE OPERATING IN THE WORK ZONE. FOR WORK ON OPPOSITE SIDES OF ROADWAY, REVERSE ALL SIGNING, DRUMS, AND TAPER LENGTHS.



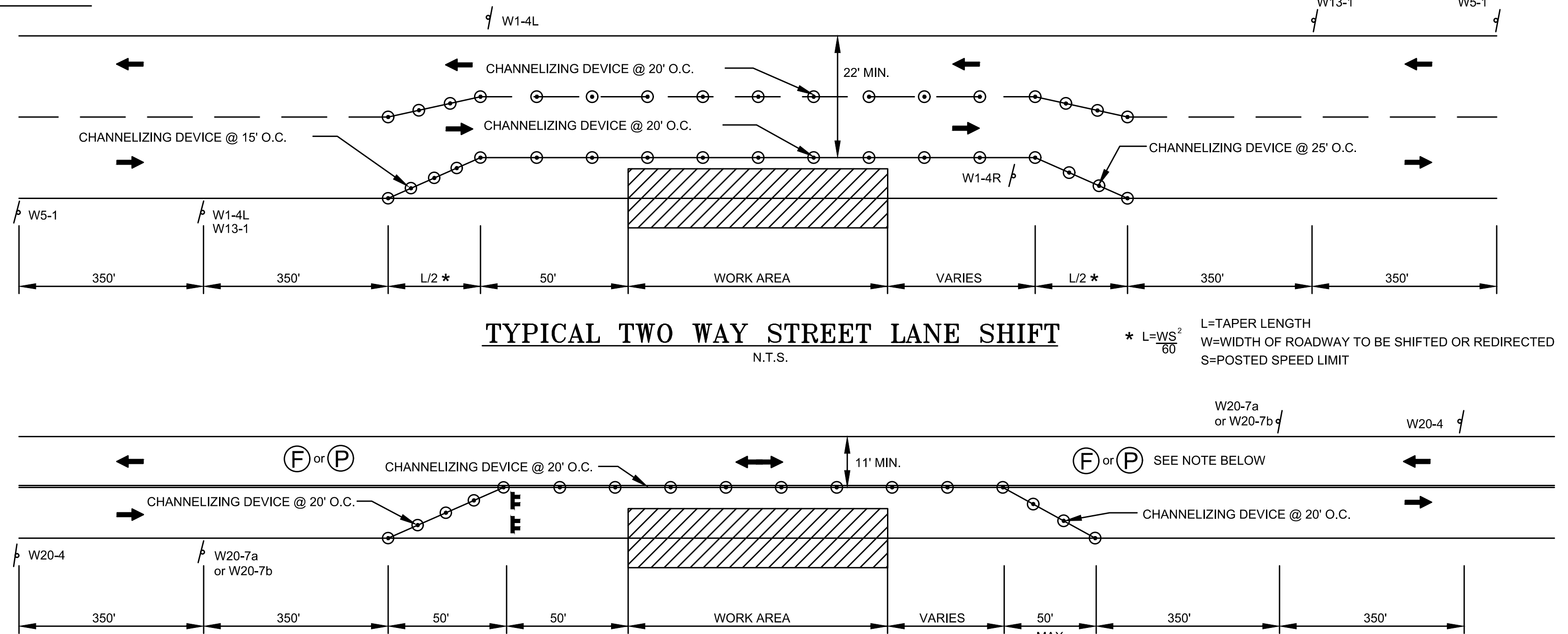
NOTES:

- URBAN SITUATION DEPICTED. THREE POLICE OFFICERS MAY BE REQUIRED.
- RURAL SITUATION - DELETE HIGH VISIBILITY WARNING DEVICES. NOTE THAT ONE POLICE OFFICER POSITIONED IN THE CENTER OF THE INTERSECTION IS SUFFICIENT WHEN LOW TRAFFIC VOLUMES EXIST
- SETUP MUST BE REMOVED BY END OF WORK DAY.

TYPICAL MOVABLE WORK AREA

"OPERATIONAL" (DAY-TO-DAY) PLAN

N.T.S.



TYPICAL TWO WAY STREET LANE SHIFT

N.T.S.

* $L = \frac{WS^2}{80}$ L=TAPER LENGTH
W=WIDTH OF ROADWAY TO BE SHIFTED OR REDIRECTED
S=POSTED SPEED LIMIT

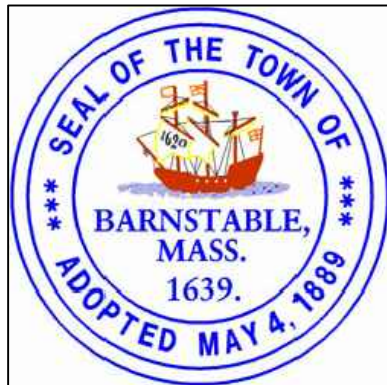
TYPICAL TWO WAY STREET LANE CLOSURE

N.T.S.

NOTE:

WORK THAT WILL DISRUPT EXISTING TRAFFIC PATTERNS WITHIN THE EXISTING ROADWAYS (LANE REDUCTION, ETC.) SHALL ONLY BE DONE DURING OFF PEAK HOURS. NUMBERS AND LOCATION OF POLICE DETAILS FOR WORK ZONE AND/OR DETOUR MANAGEMENT SHALL BE DETERMINED BY THE RESIDENT ENGINEER ON A CASE BY CASE BASIS, AS WORK PROGRESSES.

Drawing file: I:\Barnstable\2711271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\17 - Traffic Management Plan.dwg Plot Date: Oct 18, 2018 2:28pm



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02	08/22/18	FINAL SUBMISSION	JRC	BLH	JDF
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Job No.: 271-1607
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TRANSPORTATION IMPROVEMENTS ALONG MAIN STREET (ROUTE 6A) AND MILLWAY BARNSTABLE, MASSACHUSETTS
TRAFFIC MANAGEMENT PLAN- 02

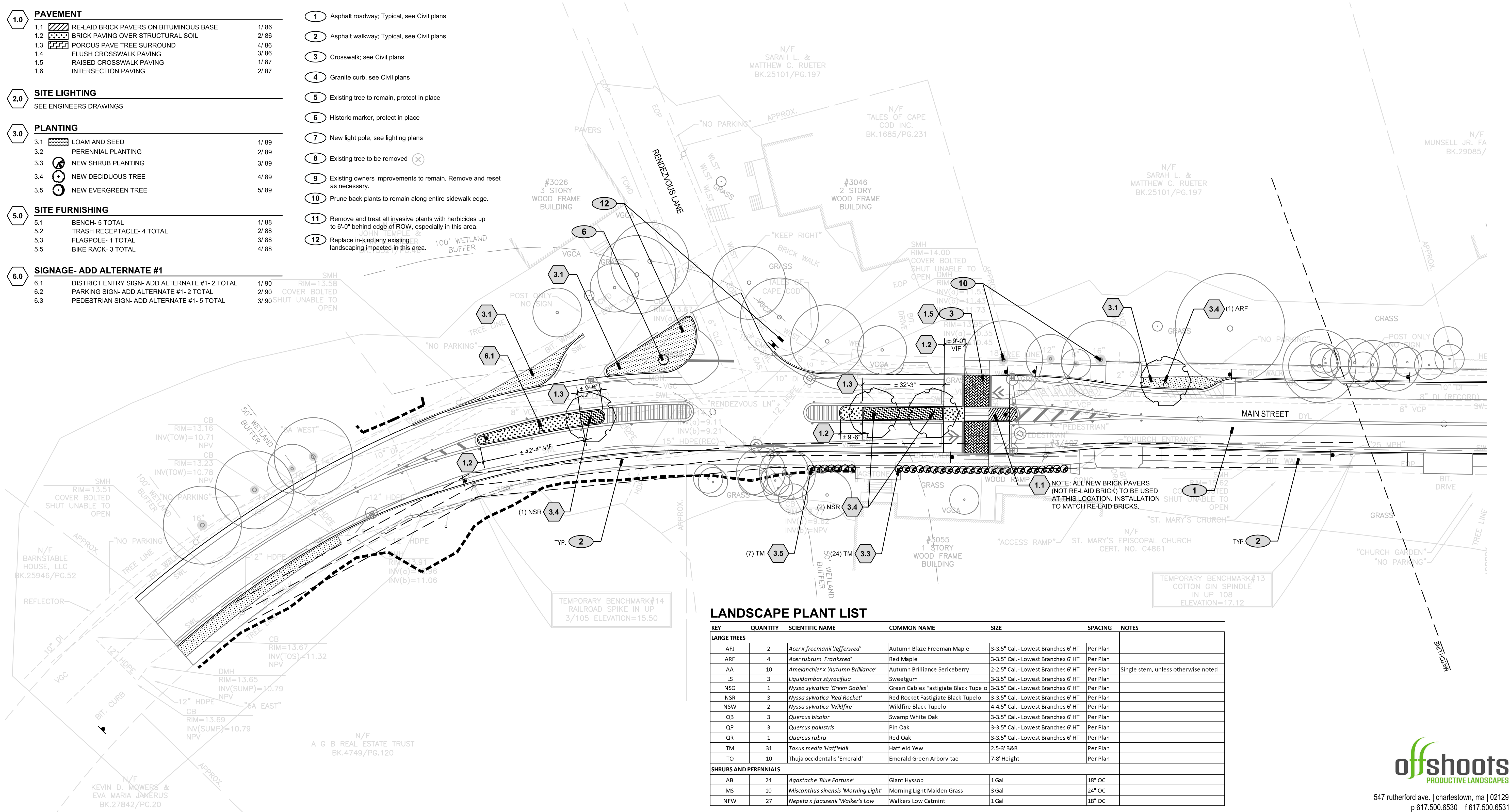
NOT FOR CONSTRUCTION
Sheet No. 74

LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

- 1.0 PAVEMENT**
 - 1.1 RE-LAID BRICK PAVERS ON BITUMINOUS BASE 1/ 86
 - 1.2 BRICK PAVING OVER STRUCTURAL SOIL 2/ 86
 - 1.3 POROUS PAVE TREE SURROUND 4/ 86
 - 1.4 FLUSH CROSSWALK PAVING 3/ 86
 - 1.5 RAISED CROSSWALK PAVING 1/ 87
 - 1.6 INTERSECTION PAVING 2/ 87
- 2.0 SITE LIGHTING**
 - SEE ENGINEERS DRAWINGS
- 3.0 PLANTING**
 - 3.1 LOAM AND SEED 1/ 89
 - 3.2 PERENNIAL PLANTING 2/ 89
 - 3.3 NEW SHRUB PLANTING 3/ 89
 - 3.4 NEW DECIDUOUS TREE 4/ 89
 - 3.5 NEW EVERGREEN TREE 5/ 89
- 5.0 SITE FURNISHING**
 - 5.1 BENCH- 5 TOTAL 1/ 88
 - 5.2 TRASH RECEPTACLE- 4 TOTAL 2/ 88
 - 5.3 FLAGPOLE- 1 TOTAL 3/ 88
 - 5.5 BIKE RACK- 3 TOTAL 4/ 88
- 6.0 SIGNAGE- ADD ALTERNATE #1**
 - 6.1 DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL 1/ 90
 - 6.2 PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL 2/ 90
 - 6.3 PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL 3/ 90

LANDSCAPE KEYNOTES:

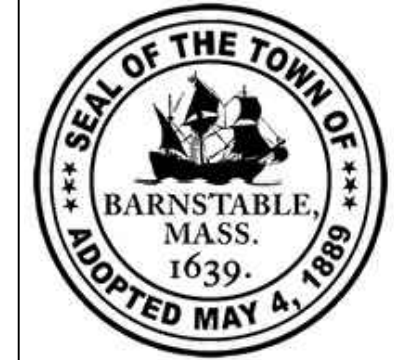
- 1 Asphalt roadway; Typical, see Civil plans
- 2 Asphalt walkway; Typical, see Civil plans
- 3 Crosswalk; see Civil plans
- 4 Granite curb, see Civil plans
- 5 Existing tree to remain, protect in place
- 6 Historic marker, protect in place
- 7 New light pole, see lighting plans
- 8 Existing tree to be removed
- 9 Existing owners improvements to remain. Remove and reset as necessary.
- 10 Prune back plants to remain along entire sidewalk edge.
- 11 Remove and treat all invasive plants with herbicides up to 6'-0" behind edge of ROW, especially in this area.
- 12 Replace in-kind any existing landscaping impacted in this area.



LANDSCAPE PLANT LIST

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	NOTES
LARGE TREES						
AFJ	2	<i>Acer x freemanii</i> 'Jeffersred'	Autumn Blaze Freeman Maple	3-3.5' Cal.- Lowest Branches 6' HT	Per Plan	
ARF	4	<i>Acer rubrum</i> 'Franksred'	Red Maple	3-3.5' Cal.- Lowest Branches 6' HT	Per Plan	
AA	10	<i>Amelanchier x 'Autumn Brilliance'</i>	Autumn Brilliance Sericeberry	2-2.5' Cal.- Lowest Branches 6' HT	Per Plan	Single stem, unless otherwise noted
LS	3	<i>Liquidambar styraciflua</i>	Sweetgum	3-3.5' Cal.- Lowest Branches 6' HT	Per Plan	
NSG	1	<i>Nyssa sylvatica</i> 'Green Gables'	Green Gables Fastigiate Black Tupelo	3-3.5' Cal.- Lowest Branches 6' HT	Per Plan	
NSR	3	<i>Nyssa sylvatica</i> 'Red Rocket'	Red Rocket Fastigiate Black Tupelo	3-3.5' Cal.- Lowest Branches 6' HT	Per Plan	
NSW	2	<i>Nyssa sylvatica</i> 'Wildfire'	Wildfire Black Tupelo	4-4.5' Cal.- Lowest Branches 6' HT	Per Plan	
QB	3	<i>Quercus bicolor</i>	Swamp White Oak	3-3.5' Cal.- Lowest Branches 6' HT	Per Plan	
QP	3	<i>Quercus palustris</i>	Pin Oak	3-3.5' Cal.- Lowest Branches 6' HT	Per Plan	
QR	1	<i>Quercus rubra</i>	Red Oak	3-3.5' Cal.- Lowest Branches 6' HT	Per Plan	
TM	31	<i>Taxus media</i> 'Hatfieldii'	Hatfield Yew	2.5-3' B&B	Per Plan	
TO	10	<i>Thuja occidentalis</i> 'Emerald'	Emerald Green Arborvitae	7-8' Height	Per Plan	
SHRUBS AND PERENNIALS						
AB	24	<i>Agastache</i> 'Blue Fortune'	Giant Hyssop	1 Gal	18" OC	
MS	10	<i>Miscanthus sinensis</i> 'Morning Light'	Morning Light Maiden Grass	3" Gal	24" OC	
NFW	27	<i>Nepeta x faassenii</i> 'Walker's Low'	Walkers Low Catmint	1 Gal	18" OC	

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				AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	KK & SCH
02	08/22/18	FINAL SUBMISSION	Drawn by	SCH & EH
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	KK
			Approved by	KK

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**TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS**

LANDSCAPE MATERIAL PLAN- 01

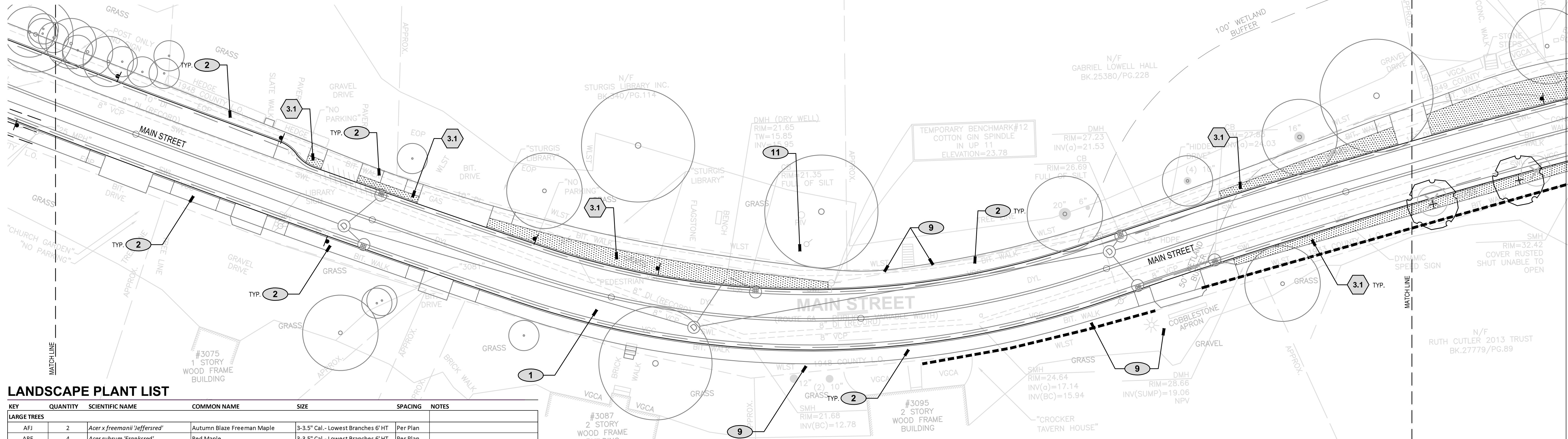
CONSTRUCTION DOCUMENTS
Sheet No.
75

LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

- 1.0 PAVEMENT**
- 1.1 RE-LAID BRICK PAVERS ON BITUMINOUS BASE 1/86
 - 1.2 BRICK PAVING OVER STRUCTURAL SOIL 2/86
 - 1.3 POROUS PAVE TREE SURROUND 4/86
 - 1.4 FLUSH CROSSWALK PAVING 3/86
 - 1.5 RAISED CROSSWALK PAVING 1/87
 - 1.6 INTERSECTION PAVING 2/87
- 2.0 SITE LIGHTING**
- SEE ENGINEERS DRAWINGS
- 3.0 PLANTING**
- 3.1 LOAM AND SEED 1/89
 - 3.2 PERENNIAL PLANTING 2/89
 - 3.3 NEW SHRUB PLANTING 3/89
 - 3.4 NEW DECIDUOUS TREE 4/89
 - 3.5 NEW EVERGREEN TREE 5/89
- 5.0 SITE FURNISHING**
- 5.1 BENCH- 5 TOTAL 1/88
 - 5.2 TRASH RECEPTACLE- 4 TOTAL 2/88
 - 5.3 FLAGPOLE- 1 TOTAL 3/88
 - 5.5 BIKE RACK- 3 TOTAL 4/88
- 6.0 SIGNAGE- ADD ALTERNATE #1**
- 6.1 DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL 1/90
 - 6.2 PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL 2/90
 - 6.3 PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL 3/90

LANDSCAPE KEYNOTES:

- 1 Asphalt roadway; Typical, see Civil plans
- 2 Asphalt walkway; Typical, see Civil plans
- 3 Crosswalk; see Civil plans
- 4 Granite curb, see Civil plans
- 5 Existing tree to remain, protect in place
- 6 Historic marker, protect in place
- 7 New light pole, see lighting plans
- 8 Existing tree to be removed (X)
- 9 Existing owners improvements to remain. Remove and reset as necessary.
- 10 Prune back plants to remain along entire sidewalk edge.
- 11 Remove and treat all invasive plants with herbicides up to 6'-0" behind edge of ROW, especially in this area.
- 12 Replace in-kind any existing landscaping impacted in this area.

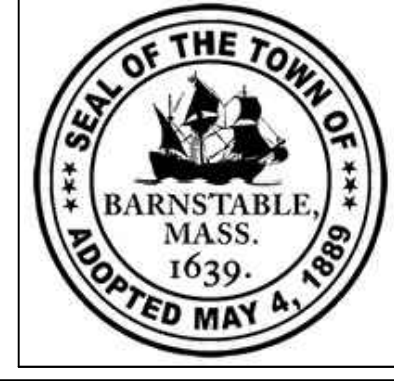


LANDSCAPE PLANT LIST

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	NOTES
LARGE TREES						
AFJ	2	<i>Acer x freemanii</i> 'Jeffersred'	Autumn Blaze Freeman Maple	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
ARF	4	<i>Acer rubrum</i> 'Franksred'	Red Maple	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
AA	10	<i>Amelanchier</i> x 'Autumn Brilliance'	Autumn Brilliance Sericeberry	2-2.5" Cal. - Lowest Branches 6' HT	Per Plan	Single stem, unless otherwise noted
LS	3	<i>Liquidambar styraciflua</i>	Sweetgum	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSG	1	<i>Nyssa sylvatica</i> 'Green Gables'	Green Gables Fastigiata Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSR	3	<i>Nyssa sylvatica</i> 'Red Rocket'	Red Rocket Fastigiata Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSW	2	<i>Nyssa sylvatica</i> 'Wildfire'	Wildfire Black Tupelo	4-4.5" Cal. - Lowest Branches 6' HT	Per Plan	
QB	3	<i>Quercus bicolor</i>	Swamp White Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
QP	3	<i>Quercus palustris</i>	Pin Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
QR	1	<i>Quercus rubra</i>	Red Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
TM	31	<i>Taxus media</i> 'Hatfieldii'	Hatfield Yew	2.5-3' B&B	Per Plan	
TO	10	<i>Thuja occidentalis</i> 'Emerald'	Emerald Green Arborvitae	7-8' Height	Per Plan	
SHRUBS AND PERENNIALS						
AB	24	<i>Agastache</i> 'Blue Fortune'	Giant Hyssop	1 Gal	18" OC	
MS	10	<i>Miscanthus sinensis</i> 'Morning Light'	Morning Light Maiden Grass	3 Gal	24" OC	
NFW	27	<i>Nepeta x faassenii</i> 'Walker's Low'	Walkers Low Catmint	1 Gal	18" OC	

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MARK	DATE	DESCRIPTION	Scale	AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	KK & SCH
02	08/22/18	FINAL SUBMISSION	Drawn by	SCH & EH
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	KK
			Approved by	KK

THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

**TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS**

LANDSCAPE MATERIAL PLAN- 02

CONSTRUCTION DOCUMENTS

Sheet No.

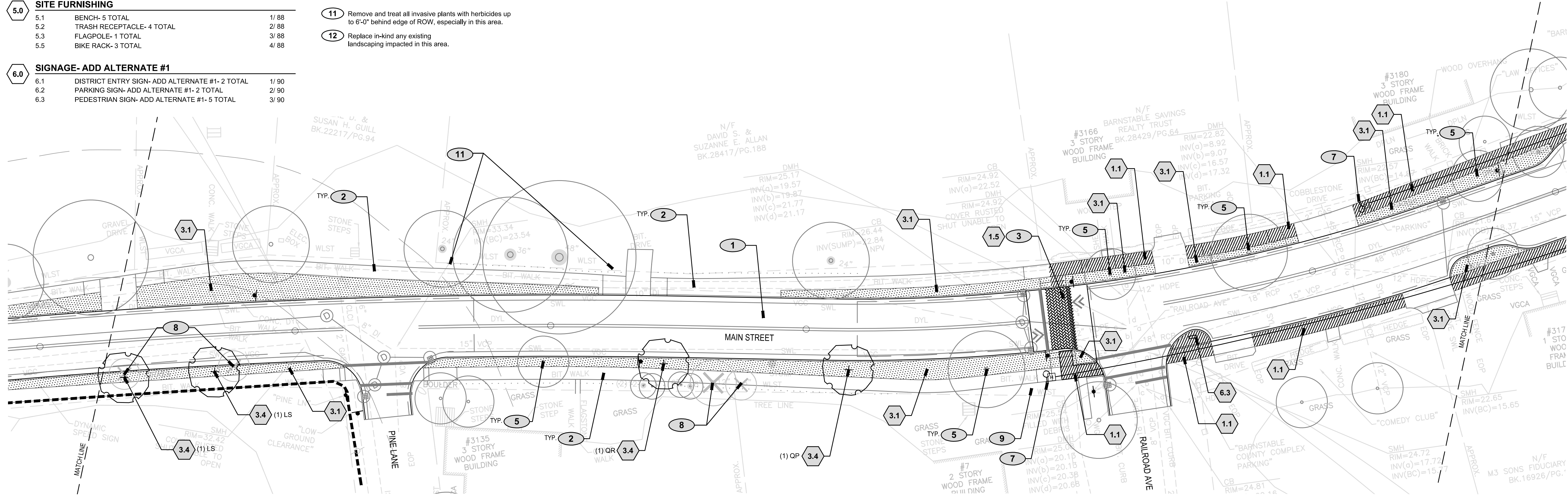
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LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

- 1.0 PAVEMENT**
- 1.1 RE-LAID BRICK PAVERS ON BITUMINOUS BASE 1/86
 - 1.2 BRICK PAVING OVER STRUCTURAL SOIL 2/86
 - 1.3 POROUS PAVE TREE SURROUND 4/86
 - 1.4 FLUSH CROSSWALK PAVING 3/86
 - 1.5 RAISED CROSSWALK PAVING 1/87
 - 1.6 INTERSECTION PAVING 2/87
- 2.0 SITE LIGHTING**
- SEE ENGINEERS DRAWINGS
- 3.0 PLANTING**
- 3.1 LOAM AND SEED 1/89
 - 3.2 PERENNIAL PLANTING 2/89
 - 3.3 NEW SHRUB PLANTING 3/89
 - 3.4 NEW DECIDUOUS TREE 4/89
 - 3.5 NEW EVERGREEN TREE 5/89
- 5.0 SITE FURNISHING**
- 5.1 BENCH- 5 TOTAL 1/88
 - 5.2 TRASH RECEPTACLE- 4 TOTAL 2/88
 - 5.3 FLAGPOLE- 1 TOTAL 3/88
 - 5.5 BIKE RACK- 3 TOTAL 4/88
- 6.0 SIGNAGE- ADD ALTERNATE #1**
- 6.1 DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL 1/90
 - 6.2 PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL 2/90
 - 6.3 PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL 3/90

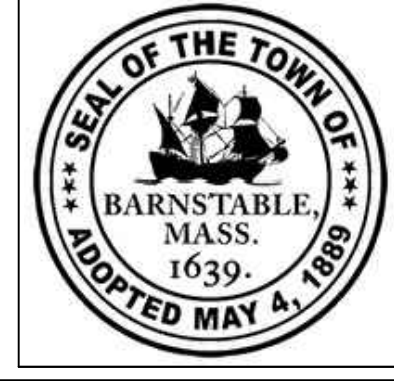
LANDSCAPE KEYNOTES:

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LANDSCAPE PLANT LIST

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	NOTES
LARGE TREES						
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ARF	4	<i>Acer rubrum</i> 'Franksred'	Red Maple	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
AA	10	<i>Amelanchier x 'Autumn Brilliance'</i>	Autumn Brilliance Serviceberry	2-2.5" Cal. - Lowest Branches 6' HT	Per Plan	Single stem, unless otherwise noted
LS	3	<i>Liquidambar styraciflua</i>	Sweetgum	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSG	1	<i>Nyssa sylvatica</i> 'Green Gables'	Green Gables Fastigiata Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSR	3	<i>Nyssa sylvatica</i> 'Red Rocket'	Red Rocket Fastigiata Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSW	2	<i>Nyssa sylvatica</i> 'Wildfire'	Wildfire Black Tupelo	4-4.5" Cal. - Lowest Branches 6' HT	Per Plan	
QB	3	<i>Quercus bicolor</i>	Swamp White Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
QP	3	<i>Quercus palustris</i>	Pin Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
QR	1	<i>Quercus rubra</i>	Red Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
TM	31	<i>Taxus media</i> 'Hatfieldii'	Hatfield Yew	2.5-3' B&B	Per Plan	
TO	10	<i>Thuja occidentalis</i> 'Emerald'	Emerald Green Arborvitae	7-8' Height	Per Plan	
SHRUBS AND PERENNIALS						
AB	24	<i>Agastache</i> 'Blue Fortune'	Giant Hyssop	1 Gal	18" OC	
MS	10	<i>Miscanthus sinensis</i> 'Morning Light'	Morning Light Maiden Grass	3 Gal	24" OC	
NFW	27	<i>Nepeta x faassenii</i> 'Walker's Low'	Walkers Low Catmint	1 Gal	18" OC	



MARK	DATE	DESCRIPTION	Scale	AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
			Designed by	KK & SCH
			Drawn by	SCH & EH
			Checked by	KK
			Approved by	KK

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**TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS**

LANDSCAPE MATERIAL PLAN- 03

CONSTRUCTION DOCUMENTS

Sheet No.

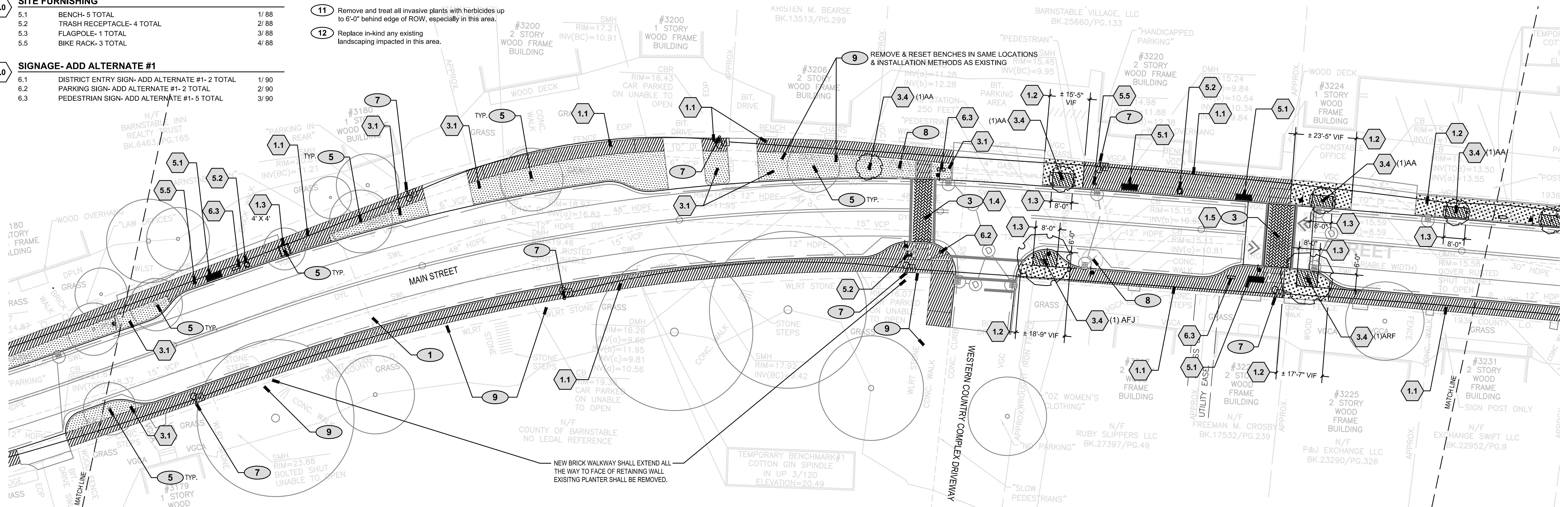
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LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

- 1.0 PAVEMENT**
 - 1.1 RE-LAID BRICK PAVERS ON BITUMINOUS BASE 1/86
 - 1.2 BRICK PAVING OVER STRUCTURAL SOIL 2/86
 - 1.3 POROUS PAVE TREE SURROUND 4/86
 - 1.4 FLUSH CROSSWALK PAVING 3/86
 - 1.5 RAISED CROSSWALK PAVING 1/87
 - 1.6 INTERSECTION PAVING 2/87
- 2.0 SITE LIGHTING**
 - SEE ENGINEERS DRAWINGS
- 3.0 PLANTING**
 - 3.1 LOAM AND SEED 1/89
 - 3.2 PERENNIAL PLANTING 2/89
 - 3.3 NEW SHRUB PLANTING 3/89
 - 3.4 NEW DECIDUOUS TREE 4/89
 - 3.5 NEW EVERGREEN TREE 5/89
- 5.0 SITE FURNISHING**
 - 5.1 BENCH-5 TOTAL 1/88
 - 5.2 TRASH RECEPTACLE- 4 TOTAL 2/88
 - 5.3 FLAGPOLE- 1 TOTAL 3/88
 - 5.5 BIKE RACK-3 TOTAL 4/88
- 6.0 SIGNAGE- ADD ALTERNATE #1**
 - 6.1 DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL 1/90
 - 6.2 PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL 2/90
 - 6.3 PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL 3/90

LANDSCAPE KEYNOTES:

- 1 Asphalt roadway; Typical, see Civil plans
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- 12 Replace in-kind any existing landscaping impacted in this area.



LANDSCAPE PLANT LIST

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	NOTES
LARGE TREES						
AFJ	2	<i>Acer x freemanii</i> 'Jeffersred'	Autumn Blaze Freeman Maple	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
ARF	4	<i>Acer rubrum</i> 'Franksred'	Red Maple	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
AA	10	<i>Amelanchier x 'Autumn Brilliance'</i>	Autumn Brilliance Sericeberry	2-2.5" Cal. - Lowest Branches 6' HT	Per Plan	Single stem, unless otherwise noted
LS	3	<i>Liquidambar styraciflua</i>	Sweetgum	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSG	1	<i>Nyssa sylvatica</i> 'Green Gables'	Green Gables Fastigiata Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSR	3	<i>Nyssa sylvatica</i> 'Red Rocket'	Red Rocket Fastigiata Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSW	2	<i>Nyssa sylvatica</i> 'Wildfire'	Wildfire Black Tupelo	4-4.5" Cal. - Lowest Branches 6' HT	Per Plan	
QB	3	<i>Quercus bicolor</i>	Swamp White Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
QP	3	<i>Quercus palustris</i>	Pin Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
QR	1	<i>Quercus rubra</i>	Red Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
TM	31	<i>Taxus media</i> 'Hatfieldii'	Hatfield Yew	2.5-3' B&B	Per Plan	
TO	10	<i>Thuja occidentalis</i> 'Emerald'	Emerald Green Arborvitae	7-8' Height	Per Plan	
SHRUBS AND PERENNIALS						
AB	24	<i>Agastache</i> 'Blue Fortune'	Giant Hyssop	1 Gal	18" OC	
MS	10	<i>Miscanthus sinensis</i> 'Morning Light'	Morning Light Maiden Grass	3 Gal	24" OC	
NFW	27	<i>Nepeta x faassenii</i> 'Walker's Low'	Walkers Low Catmint	1 Gal	18" OC	



MARK	DATE	DESCRIPTION	Scale	AS NOTED
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			Approved by	KK

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TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS

LANDSCAPE MATERIAL PLAN- 04

CONSTRUCTION DOCUMENTS

Sheet No.

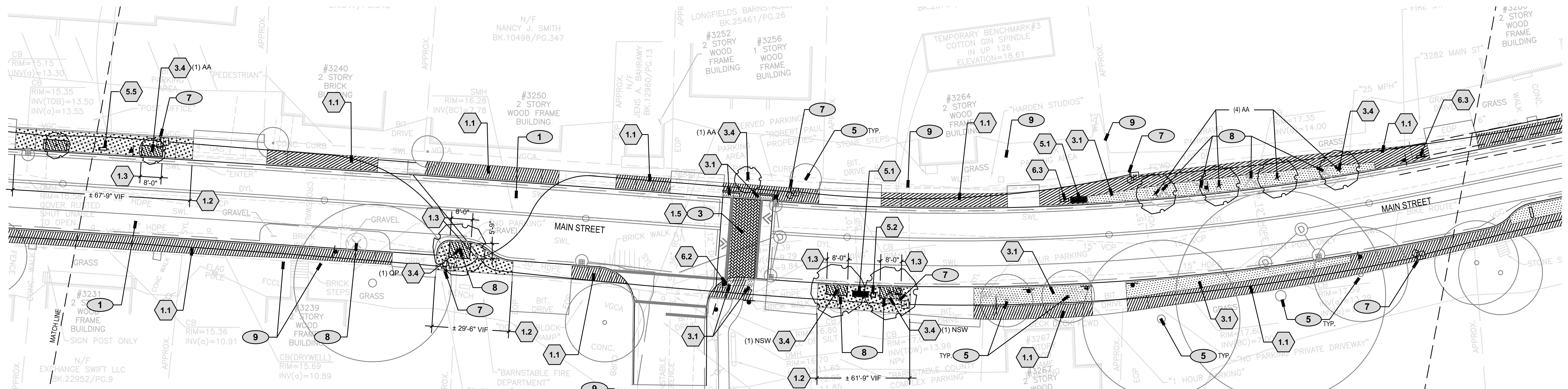
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LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

- 1.0 PAVEMENT**
- 1.1 RE-LAID BRICK PAVERS ON BITUMINOUS BASE 1/86
 - 1.2 BRICK PAVING OVER STRUCTURAL SOIL 2/86
 - 1.3 POROUS PAVE TREE SURROUND 4/86
 - 1.4 FLUSH CROSSWALK PAVING 3/86
 - 1.5 RAISED CROSSWALK PAVING 1/87
 - 1.6 INTERSECTION PAVING 2/87
- 2.0 SITE LIGHTING**
- SEE ENGINEERS DRAWINGS
- 3.0 PLANTING**
- 3.1 LOAM AND SEED 1/89
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 - 3.4 NEW DECIDUOUS TREE 4/89
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- 5.0 SITE FURNISHING**
- 5.1 BENCH- 5 TOTAL 1/88
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 - 5.3 FLAGPOLE- 1 TOTAL 3/88
 - 5.5 BIKE RACK- 3 TOTAL 4/88
- 6.0 SIGNAGE- ADD ALTERNATE #1**
- 6.1 DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL 1/90
 - 6.2 PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL 2/90
 - 6.3 PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL 3/90

LANDSCAPE KEYNOTES:

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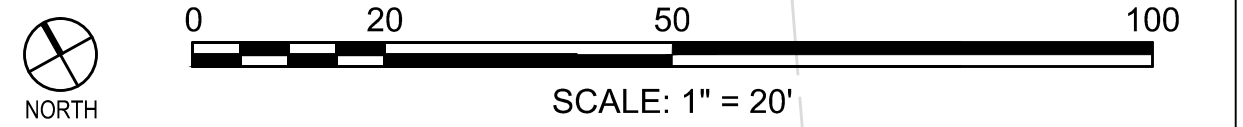


LANDSCAPE PLANT LIST

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	NOTES
LARGE TREES						
AFJ	2	<i>Acer x freemanii 'Jeffersred'</i>	Autumn Blaze Freeman Maple	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
ARF	4	<i>Acer rubrum 'Franksred'</i>	Red Maple	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
AA	10	<i>Amelanchier x 'Autumn Brilliance'</i>	Autumn Brilliance Sericeberry	2-2.5" Cal. - Lowest Branches 6' HT	Per Plan	Single stem, unless otherwise noted
LS	3	<i>Liquidambar styraciflua</i>	Sweetgum	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSG	1	<i>Nyssa sylvatica 'Green Gables'</i>	Green Gables Fastigiata Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSR	3	<i>Nyssa sylvatica 'Red Rocket'</i>	Red Rocket Fastigiata Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSW	2	<i>Nyssa sylvatica 'Wildfire'</i>	Wildfire Black Tupelo	4-4.5" Cal. - Lowest Branches 6' HT	Per Plan	
QB	3	<i>Quercus bicolor</i>	Swamp White Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
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MARK	DATE	DESCRIPTION	Scale	AS NOTED
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**TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS**

LANDSCAPE MATERIAL PLAN- 05

CONSTRUCTION DOCUMENTS

Sheet No.

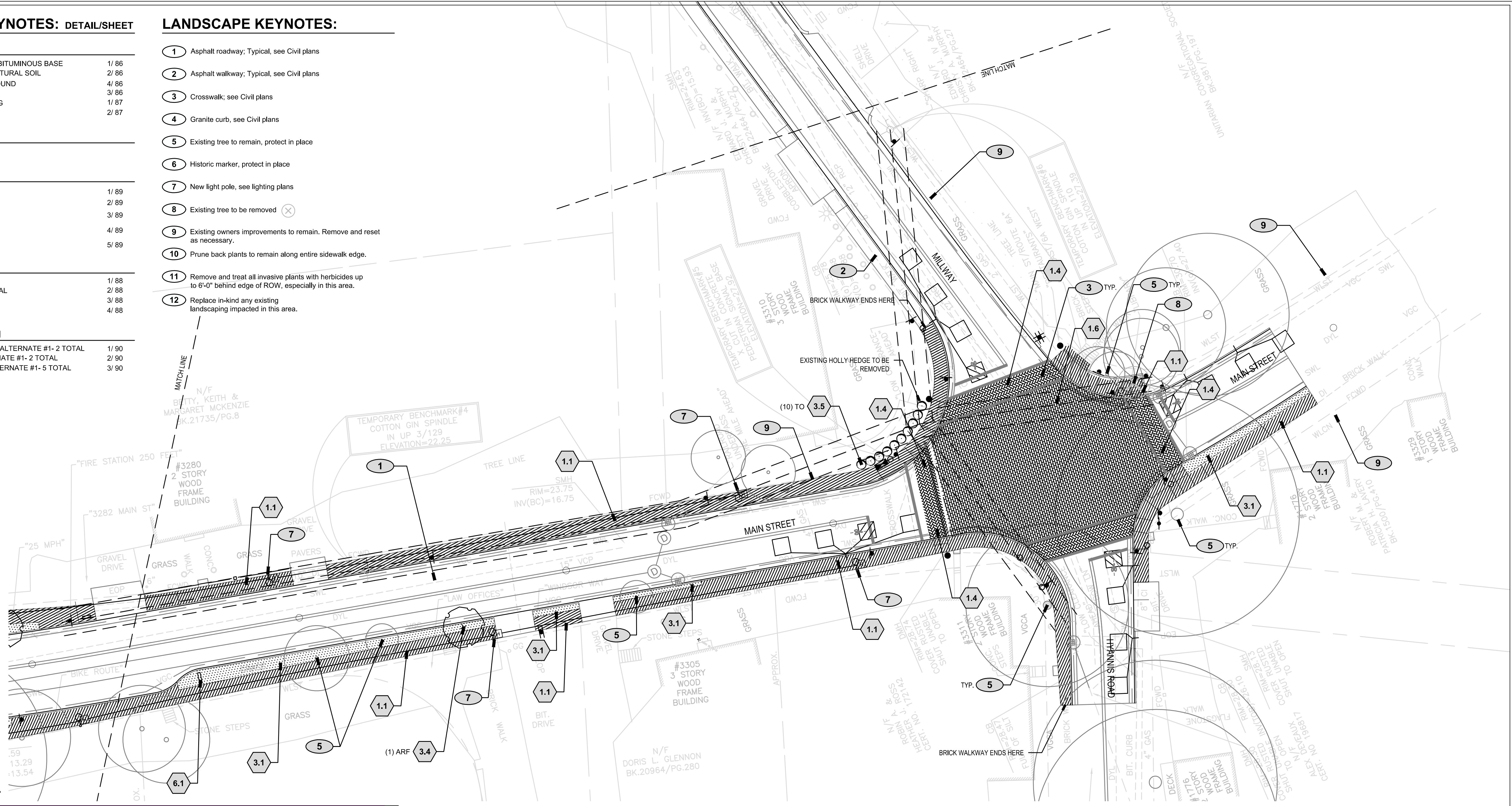
79

LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

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LANDSCAPE KEYNOTES:

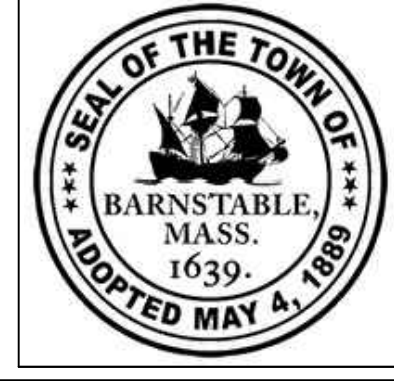
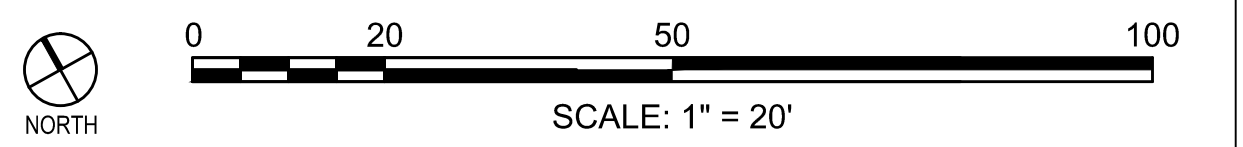
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AB	24	<i>Agastache</i> 'Blue Fortune'	Giant Hyssop	1 Gal	18" OC	
MS	10	<i>Miscanthus sinensis</i> 'Morning Light'	Morning Light Maiden Grass	3 Gal	24" OC	
NFW	27	<i>Nepeta x faassenii</i> 'Walker's Low'	Walkers Low Catmint	1 Gal	18" OC	

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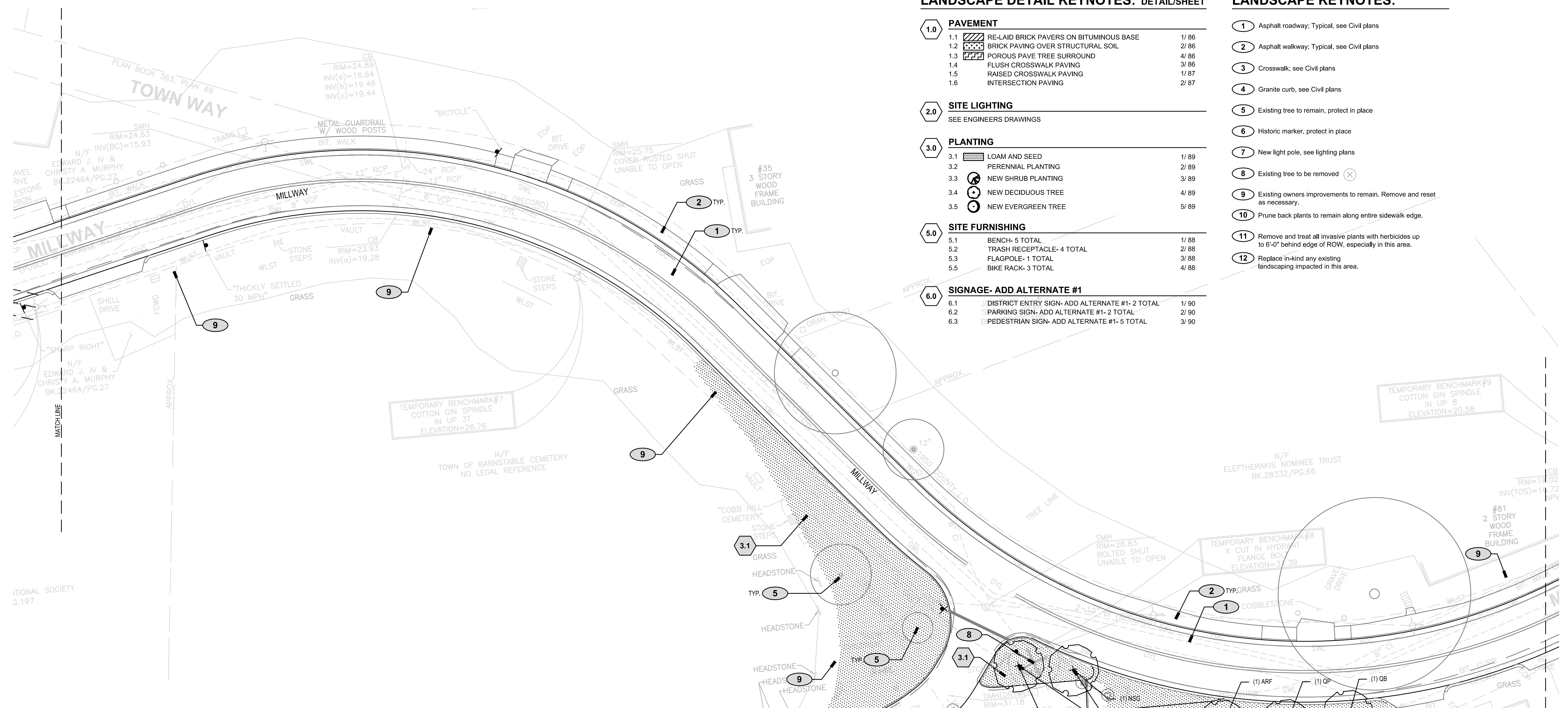
MARK	DATE	DESCRIPTION	Scale	AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	KK & SCH
02	08/22/18	FINAL SUBMISSION	Drawn by	SCH & EH
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	KK
			Approved by	KK

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**TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS**

LANDSCAPE MATERIAL PLAN- 06

CONSTRUCTION DOCUMENTS
Sheet No.
80



LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

- 1.0 PAVEMENT**
 - 1.1 RE-LAID BRICK PAVERS ON BITUMINOUS BASE 1/ 86
 - 1.2 BRICK PAVING OVER STRUCTURAL SOIL 2/ 86
 - 1.3 POROUS PAVE TREE SURROUND 4/ 86
 - 1.4 FLUSH CROSSWALK PAVING 3/ 86
 - 1.5 RAISED CROSSWALK PAVING 1/ 87
 - 1.6 INTERSECTION PAVING 2/ 87
- 2.0 SITE LIGHTING**
 - SEE ENGINEERS DRAWINGS
- 3.0 PLANTING**
 - 3.1 LOAM AND SEED 1/ 89
 - 3.2 PERENNIAL PLANTING 2/ 89
 - 3.3 NEW SHRUB PLANTING 3/ 89
 - 3.4 NEW DECIDUOUS TREE 4/ 89
 - 3.5 NEW EVERGREEN TREE 5/ 89
- 5.0 SITE FURNISHING**
 - 5.1 BENCH- 5 TOTAL 1/ 88
 - 5.2 TRASH RECEPTACLE- 4 TOTAL 2/ 88
 - 5.3 FLAGPOLE- 1 TOTAL 3/ 88
 - 5.5 BIKE RACK- 3 TOTAL 4/ 88
- 6.0 SIGNAGE- ADD ALTERNATE #1**
 - 6.1 DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL 1/ 90
 - 6.2 PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL 2/ 90
 - 6.3 PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL 3/ 90

LANDSCAPE KEYNOTES:

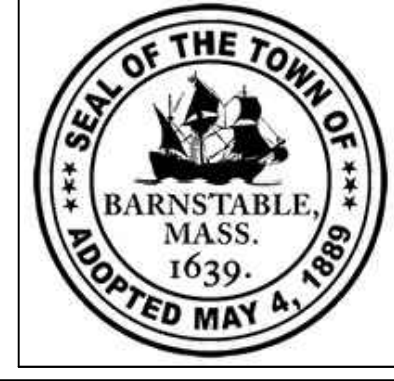
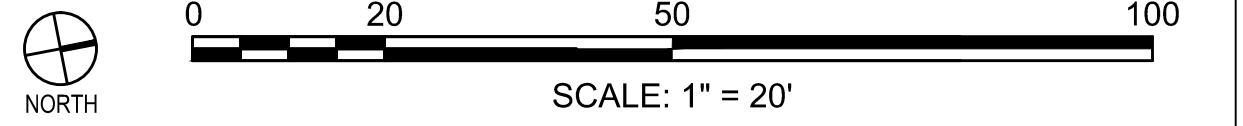
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- 6 Historic marker, protect in place
- 7 New light pole, see lighting plans
- 8 Existing tree to be removed (X)
- 9 Existing owners improvements to remain. Remove and reset as necessary.
- 10 Prune back plants to remain along entire sidewalk edge.
- 11 Remove and treat all invasive plants with herbicides up to 6'-0" behind edge of ROW, especially in this area.
- 12 Replace in-kind any existing landscaping impacted in this area.

LANDSCAPE PLANT LIST

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	NOTES
LARGE TREES						
AFJ	2	<i>Acer x freemanii</i> 'Jeffersred'	Autumn Blaze Freeman Maple	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
ARF	4	<i>Acer rubrum</i> 'Franksred'	Red Maple	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
AA	10	<i>Amelanchier x 'Autumn Brilliance'</i>	Autumn Brilliance Sericeberry	2-2.5" Cal. - Lowest Branches 6' HT	Per Plan	Single stem, unless otherwise noted
LS	3	<i>Liquidambar styraciflua</i>	Sweetgum	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSG	1	<i>Nyssa sylvatica</i> 'Green Gables'	Green Gables Fastigiata Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSR	3	<i>Nyssa sylvatica</i> 'Red Rocket'	Red Rocket Fastigiata Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSW	2	<i>Nyssa sylvatica</i> 'Wildfire'	Wildfire Black Tupelo	4-4.5" Cal. - Lowest Branches 6' HT	Per Plan	
QB	3	<i>Quercus bicolor</i>	Swamp White Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
QP	3	<i>Quercus palustris</i>	Pin Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
QR	1	<i>Quercus rubra</i>	Red Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
TM	31	<i>Taxus media</i> 'Hatfieldii'	Hatfield Yew	2.5-3" B&B	Per Plan	
TO	10	<i>Thuja occidentalis</i> 'Emerald'	Emerald Green Arborvitae	7-8' Height	Per Plan	
SHRUBS AND PERENNIALS						
AB	24	<i>Agastache</i> 'Blue Fortune'	Giant Hyssop	1 Gal	18" OC	
MS	10	<i>Miscanthus sinensis</i> 'Morning Light'	Morning Light Maiden Grass	3 Gal	24" OC	
NFW	27	<i>Nepeta x faassenii</i> 'Walker's Low'	Walkers Low Catmint	1 Gal	18" OC	

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TRANSPORTATION IMPROVEMENTS ALONG ROUTE 6A AND MILLWAY BARNSTABLE, MASSACHUSETTS

LANDSCAPE MATERIAL PLAN- 07

CONSTRUCTION DOCUMENTS

Sheet No.

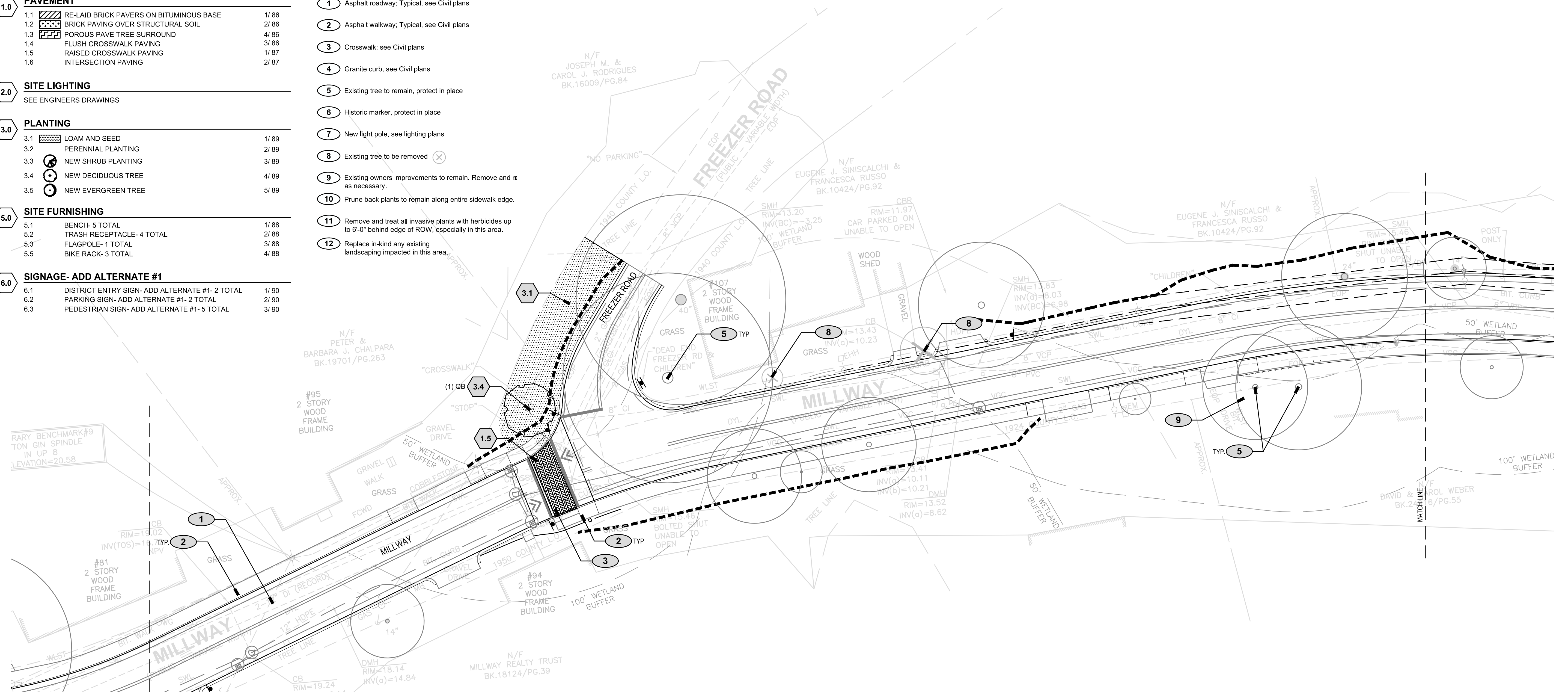
81

LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

- 1.0 PAVEMENT**
 - 1.1 RE-LAID BRICK PAVERS ON BITUMINOUS BASE 1/86
 - 1.2 BRICK PAVING OVER STRUCTURAL SOIL 2/86
 - 1.3 POROUS PAVE TREE SURROUND 4/86
 - 1.4 FLUSH CROSSWALK PAVING 3/86
 - 1.5 RAISED CROSSWALK PAVING 1/87
 - 1.6 INTERSECTION PAVING 2/87
- 2.0 SITE LIGHTING**
 - SEE ENGINEERS DRAWINGS
- 3.0 PLANTING**
 - 3.1 LOAM AND SEED 1/89
 - 3.2 PERENNIAL PLANTING 2/89
 - 3.3 NEW SHRUB PLANTING 3/89
 - 3.4 NEW DECIDUOUS TREE 4/89
 - 3.5 NEW EVERGREEN TREE 5/89
- 5.0 SITE FURNISHING**
 - 5.1 BENCH- 5 TOTAL 1/88
 - 5.2 TRASH RECEPTACLE- 4 TOTAL 2/88
 - 5.3 FLAGPOLE- 1 TOTAL 3/88
 - 5.5 BIKE RACK- 3 TOTAL 4/88
- 6.0 SIGNAGE- ADD ALTERNATE #1**
 - 6.1 DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL 1/90
 - 6.2 PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL 2/90
 - 6.3 PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL 3/90

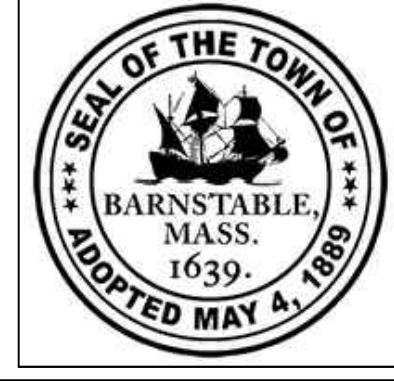
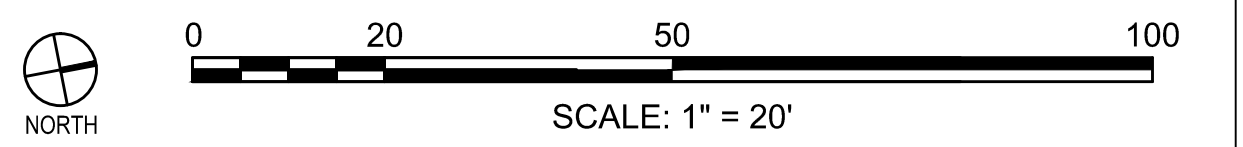
LANDSCAPE KEYNOTES:

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LANDSCAPE PLANT LIST

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	NOTES
LARGE TREES						
AFJ	2	<i>Acer x freemanii 'Jeffersred'</i>	Autumn Blaze Freeman Maple	3-3.5" Cal.- Lowest Branches 6' HT	Per Plan	
ARF	4	<i>Acer rubrum 'Franksred'</i>	Red Maple	3-3.5" Cal.- Lowest Branches 6' HT	Per Plan	
AA	10	<i>Amelanchier x 'Autumn Brilliance'</i>	Autumn Brilliance Sericeberry	2-2.5" Cal.- Lowest Branches 6' HT	Per Plan	Single stem, unless otherwise noted
LS	3	<i>Liquidambar styraciflua</i>	Sweetgum	3-3.5" Cal.- Lowest Branches 6' HT	Per Plan	
NSG	1	<i>Nyssa sylvatica 'Green Gables'</i>	Green Gables Fastigiata Black Tupelo	3-3.5" Cal.- Lowest Branches 6' HT	Per Plan	
NSR	3	<i>Nyssa sylvatica 'Red Rocket'</i>	Red Rocket Fastigiata Black Tupelo	3-3.5" Cal.- Lowest Branches 6' HT	Per Plan	
NSW	2	<i>Nyssa sylvatica 'Wildfire'</i>	Wildfire Black Tupelo	4-4.5" Cal.- Lowest Branches 6' HT	Per Plan	
QB	3	<i>Quercus bicolor</i>	Swamp White Oak	3-3.5" Cal.- Lowest Branches 6' HT	Per Plan	
QP	3	<i>Quercus palustris</i>	Pin Oak	3-3.5" Cal.- Lowest Branches 6' HT	Per Plan	
QR	1	<i>Quercus rubra</i>	Red Oak	3-3.5" Cal.- Lowest Branches 6' HT	Per Plan	
TM	31	<i>Taxus media 'Hatfieldii'</i>	Hatfield Yew	2.5-3' B&B	Per Plan	
TO	10	<i>Thuja occidentalis 'Emerald'</i>	Emerald Green Arborvitae	7-8' Height	Per Plan	
SHRUBS AND PERENNIALS						
AB	24	<i>Agastache 'Blue Fortune'</i>	Giant Hyssop	1 Gal	18" OC	
MS	10	<i>Miscanthus sinensis 'Morning Light'</i>	Morning Light Maiden Grass	3 Gal	24" OC	
NFW	27	<i>Nepeta x faassenii 'Walker's Low'</i>	Walkers Low Catmint	1 Gal	18" OC	



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TRANSPORTATION IMPROVEMENTS ALONG ROUTE 6A AND MILLWAY BARNSTABLE, MASSACHUSETTS

LANDSCAPE MATERIAL PLAN- 08

CONSTRUCTION DOCUMENTS
Sheet No.
82

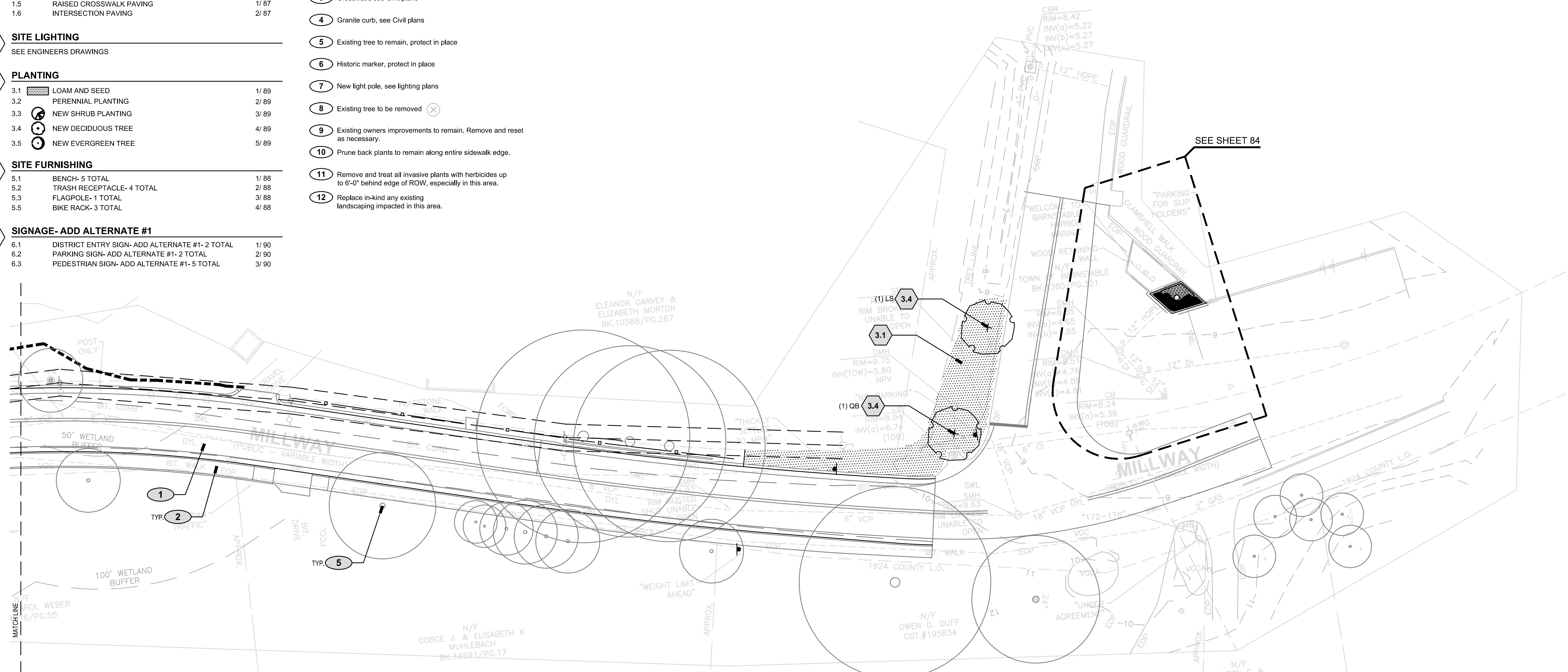
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 - 1.1 RE-LAID BRICK PAVERS ON BITUMINOUS BASE 1/86
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 - 1.4 FLUSH CROSSWALK PAVING 3/86
 - 1.5 RAISED CROSSWALK PAVING 1/87
 - 1.6 INTERSECTION PAVING 2/87
- 2.0 SITE LIGHTING**

SEE ENGINEERS DRAWINGS
- 3.0 PLANTING**
 - 3.1 LOAM AND SEED 1/89
 - 3.2 PERENNIAL PLANTING 2/89
 - 3.3 NEW SHRUB PLANTING 3/89
 - 3.4 NEW DECIDUOUS TREE 4/89
 - 3.5 NEW EVERGREEN TREE 5/89
- 5.0 SITE FURNISHING**
 - 5.1 BENCH- 5 TOTAL 1/88
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- 6.0 SIGNAGE- ADD ALTERNATE #1**
 - 6.1 DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL 1/90
 - 6.2 PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL 2/90
 - 6.3 PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL 3/90

LANDSCAPE KEYNOTES:

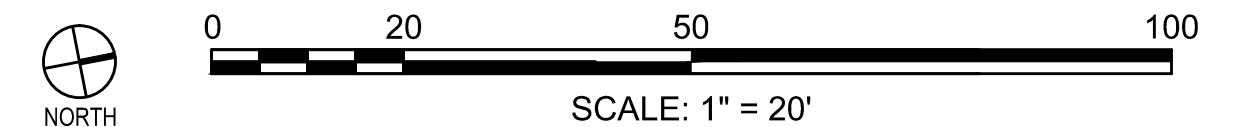
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LANDSCAPE PLANT LIST

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	NOTES
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ARF	4	<i>Acer rubrum</i> 'Franksred'	Red Maple	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
AA	10	<i>Amelanchier</i> x 'Autumn Brilliance'	Autumn Brilliance Sericeberry	2-2.5" Cal. - Lowest Branches 6' HT	Per Plan	Single stem, unless otherwise noted
LS	3	<i>Liquidambar styraciflua</i>	Sweetgum	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSG	1	<i>Nyssa sylvatica</i> 'Green Gables'	Green Gables Fastigiate Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSR	3	<i>Nyssa sylvatica</i> 'Red Rocket'	Red Rocket Fastigiate Black Tupelo	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
NSW	2	<i>Nyssa sylvatica</i> 'Wildfire'	Wildfire Black Tupelo	4-4.5" Cal. - Lowest Branches 6' HT	Per Plan	
QB	3	<i>Quercus bicolor</i>	Swamp White Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
QP	3	<i>Quercus palustris</i>	Pin Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
QR	1	<i>Quercus rubra</i>	Red Oak	3-3.5" Cal. - Lowest Branches 6' HT	Per Plan	
TM	31	<i>Taxus media</i> 'Hatfield'	Hatfield Yew	2.5-3' B&B	Per Plan	
TO	10	<i>Thuja occidentalis</i> 'Emerald'	Emerald Green Arborvitae	7-8' Height	Per Plan	
SHRUBS AND PERENNIALS						
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TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS

LANDSCAPE MATERIAL PLAN- 09

CONSTRUCTION DOCUMENTS
Sheet No.
83

LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

1.0 PAVEMENT

1.1	RE-LAID BRICK PAVERS ON BITUMINOUS BASE	1/86
1.2	BRICK PAVING OVER STRUCTURAL SOIL	2/86
1.3	POROUS PAVE TREE SURROUND	4/86
1.4	FLUSH CROSSWALK PAVING	3/86
1.5	RAISED CROSSWALK PAVING	1/87
1.6	INTERSECTION PAVING	2/87

2.0 SITE LIGHTING

SEE ENGINEERS DRAWINGS

3.0 PLANTING

3.1	LOAM AND SEED	1/89
3.2	PERENNIAL PLANTING	2/89
3.3	NEW SHRUB PLANTING	3/89
3.4	NEW DECIDUOUS TREE	4/89
3.5	NEW EVERGREEN TREE	5/89

5.0 SITE FURNISHING

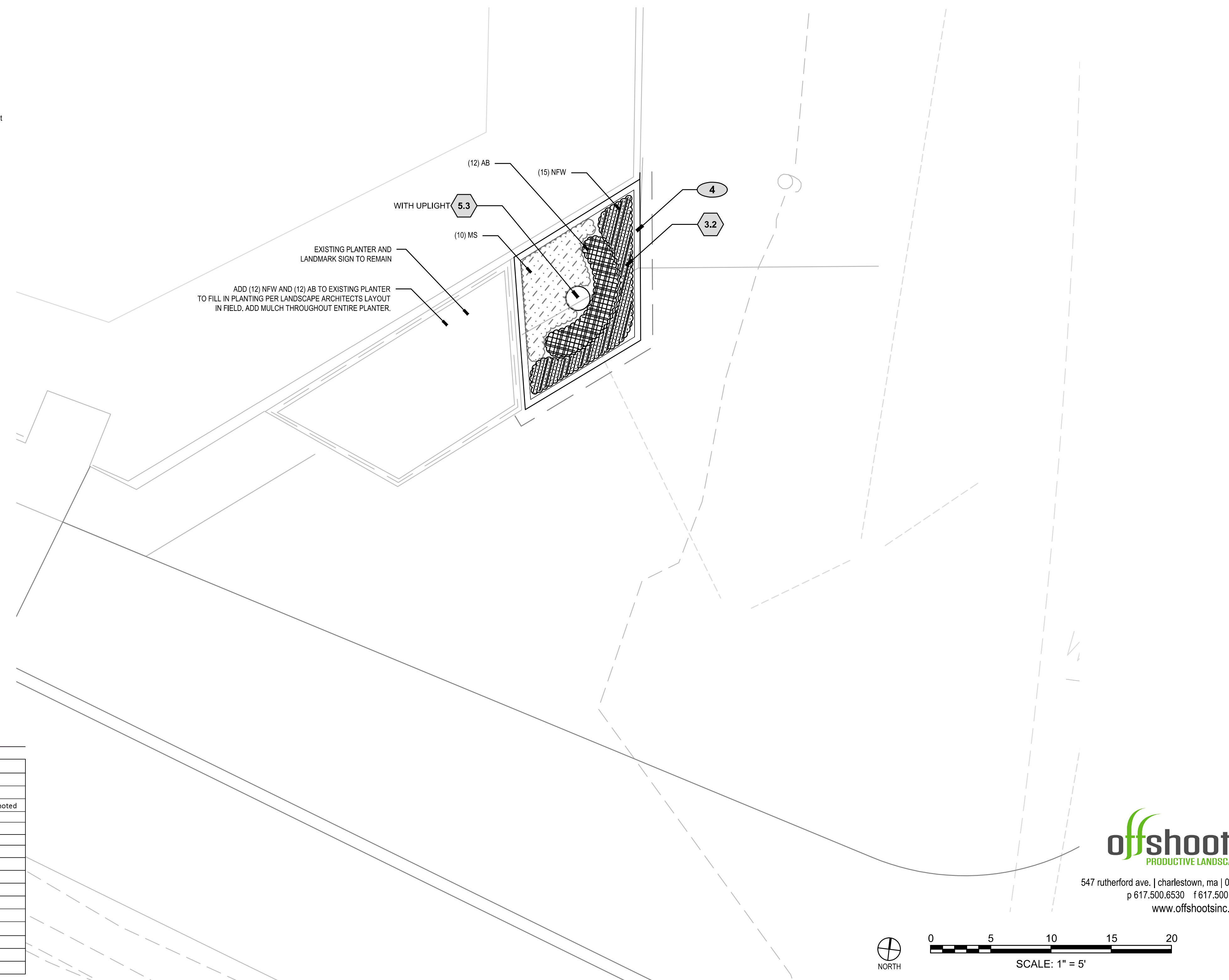
5.1	BENCH- 5 TOTAL	1/88
5.2	TRASH RECEPTACLE- 4 TOTAL	2/88
5.3	FLAGPOLE- 1 TOTAL	3/88
5.5	BIKE RACK- 3 TOTAL	4/88

6.0 SIGNAGE- ADD ALTERNATE #1

6.1	DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL	1/90
6.2	PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL	2/90
6.3	PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL	3/90

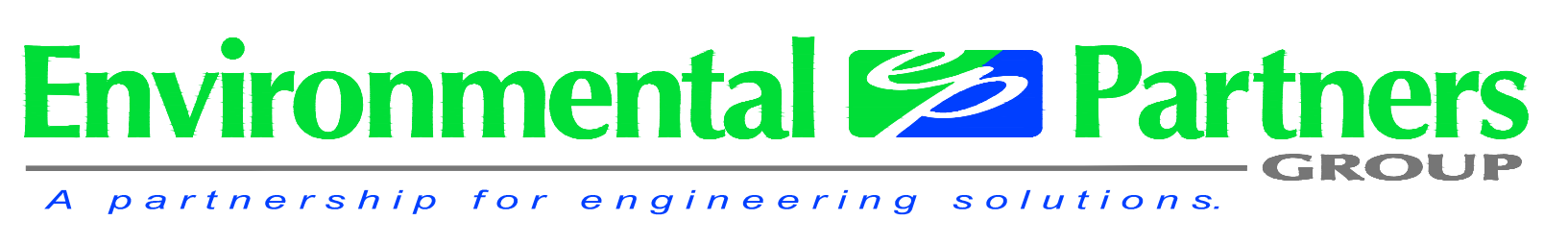
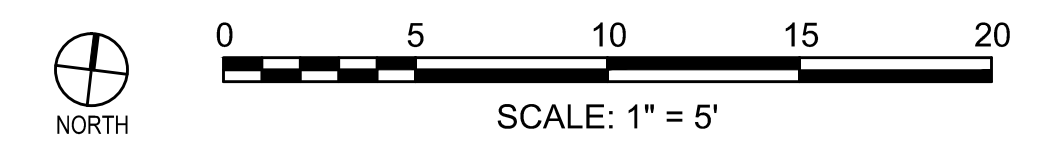
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TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS

LANDSCAPE MATERIAL PLAN- 10

CONSTRUCTION DOCUMENTS

Sheet No.

84

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LANDSCAPE NOTES:

GENERAL:

- WHERE ANY DISCREPANCIES EXIST BETWEEN THE SPECIFICATIONS AND DRAWINGS, BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE MORE RESTRICTIVE SHALL GOVERN (WHICH SHALL BE DETERMINED BY THE LANDSCAPE ARCHITECT.)
- FOR ALIGNMENTS, DIMENSIONS, ROADWAY, CURBS, CURB RAMPS, DETECTIBLE WARNING STRIPS, SIDEWALKS, CROSSWALKS, LIGHTING, DRAINAGE, AND GRADING, SEE ENGINEER'S DRAWINGS.
- EXISTING UNDERGROUND UTILITIES ARE SHOWN PER AVAILABLE RECORDS FROM ENGINEER. VERIFY THE ACTUAL LOCATION AND ELEVATION IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION. PROTECT EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UTILITIES ENCOUNTERED DURING CONSTRUCTION.
- WHERE LANDSCAPE ARCHITECT'S APPROVAL IS REQUIRED, REQUEST APPROVAL AND OR INSPECTION A MINIMUM OF 14 BUSINESS DAYS IN ADVANCE. LANDSCAPE ARCHITECT MAINTAINS THE RIGHT TO REJECT WORK WHEN NOT IN CONFORMANCE WITH THE DRAWINGS OR SPECIFICATIONS.
- MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, PAY ALL FEES INCLUDING POLICE DETAILS AND POST ALL BONDS, IF NECESSARY, ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE OWNER AND THE ENGINEER.
- UNLESS OTHERWISE INDICATED ON THE DRAWINGS AND/OR IN THE SPECIFICATIONS, ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE MOST RECENT VERSION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION AND THE SPECIAL PROVISIONS PROVIDED.
- RESTORE ALL ADJACENT SURFACES EQUAL TO THEIR ORIGINAL CONDITION AFTER CONSTRUCTION IS COMPLETE PER SPECIFICATIONS. LEAVE ALL AREAS NOT DISTURBED BY CONSTRUCTION IN THEIR NATURAL STATE. TAKE CARE TO PREVENT DAMAGE TO SHRUBS, TREES, OTHER LANDSCAPING AND/OR NATURAL FEATURES, BUILT WALLS, FENCES AND CURBS TO REMAIN. WHEREAS THE PLANS DO NOT SHOW ALL LANDSCAPE FEATURES, EXISTING CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF THE WORK. LOAM AND SEED ALL DISTURBED LANDSCAPE AREAS, EVEN WHERE NOT EXPLICITLY CALLED OUT ON THE DRAWINGS.

DEMOLITION AND REMOVALS:

- DEMOLITION SHALL CONSIST OF BOTH THE ITEMS NOTES IN THE ENGINEER'S AND LANDSCAPE ARCHITECT'S PLANS. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ENGINEER AND LANDSCAPE ARCHITECT
- ALL TREES, HEDGES, FENCES AND OTHER SITE AMENITIES TO BE REMOVED OR RESET SHALL BE MARKED IN THE FIELD BY THE CONTRACTOR FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO DEMOLITION. ANY OF THESE ITEMS, ESPECIALLY TREES, THAT ARE REMOVED WITHOUT PRIOR APPROVAL BY THE OWNERS REPRESENTATIVE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL CONFIRM THAT A TREE REMOVAL HEARING AND ALL NECESSARY TREE DEMOLITION PERMITS HAVE BEEN OBTAINED BY THE TOWN FOR EACH SPECIFIC TREE BEFORE IT IS REMOVED. ANY TREES REMOVED BY THE CONTRACTOR WITHOUT THE TREE REMOVAL PERMITS OBTAINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE TOWN SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS.
- ALL FENCES AND WALLS WITHIN THE ROW THAT MUST BE REMOVED FOR CONSTRUCTION SHALL BE REMOVED, RETAINED, AND RESET AT THE BACK SIDE OF THE R.O.W. ALIGNMENT. THIS INCLUDES ALL ITEMS BOTH INDICATED AND NOT INDICATING IN THE DRAWINGS.

LANDSCAPE MATERIALS AND LAYOUT:

- FOR ALL PAVING PATTERNS, CONTRACTOR SHALL PROVIDE SUBMITTALS, SAMPLES AND FULL MOCKUPS TO SPECIFICATION SIZES SHOWING THE PAVING PATTERN FOR LANDSCAPE ARCHITECTS APPROVAL PRIOR TO ORDERING ANY MATERIALS. COLOR SHALL BE SELECTED BY LANDSCAPE ARCHITECT IN THE FIELD WITH CONTRACTORS SAMPLES AND MOCKUPS ONCE THEY ARE PROVIDED. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST THE COLOR AND PATTERN ONCE THE MOCKUP HAS BEEN REVIEWED IN THE FIELD.
- THE FULL LAYOUT OF ALL WALKWAYS, PLANTING BEDS, TREE LOCATIONS, CROSSWALKS AND OTHER ALIGNMENTS SHALL BE LAID OUT IN FIELD BY CONTRACTOR FOR LANDSCAPE ARCHITECTS REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. ANY WORK CONSTRUCTED WITHOUT THE LAYOUT BEING REVIEWED BY THE LANDSCAPE ARCHITECT MAY BE REJECTED AND REQUIRED TO BE REBUILT AT THE CONTRACTOR'S EXPENSES. TREE LOCATIONS MAY BE SHIFTED DUE TO FIELD CONDITION.
- INSTALL INTERSECTING ELEMENTS AT 90 DEGREE ANGLES TO EACH OTHER UNLESS OTHERWISE NOTED.
- SAWCUT ALL WORK ADJACENT OR WITHIN EXISTING PAVEMENTS. BACKFILL AND COMPACT WORK AS INDICATED ON THE DRAWING AND IN THE SPECIFICATIONS. IF SETTLEMENT OCCURS DUE TO INADEQUATE COMPACTION, AS DETERMINED BY THE LANDSCAPE ARCHITECT, WITHIN THE WARRANTY PERIOD, CONTRACTOR IS REQUIRED TO REMOVE, PATCH AND REPAVE AFTER ONE COMPLETE 24-MONTH CYCLE.

PLANTING:

- ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
- THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS. WHERE DISCREPANCIES EXIST BETWEEN THE PLANT LIST AND THE GRAPHICS, THE HIGHER NUMBER SHALL GOVERN.
- THE CONTRACTOR SHALL STAKE THE LOCATIONS OF ALL PROPOSED PLANTING FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING. ANY PLANTINGS INSTALLED WITHOUT APPROVAL BY THE LANDSCAPE ARCHITECT MAY BE REJECTED AND REQUIRED TO BE REINSTALLED WITH NEW PLANT MATERIALS THAT MEET THE SIZE AND SPECIFICATIONS AT THE CONTRACTOR'S EXPENSES.
- ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT, AND CULTURE ONLY AS APPROVED BY THE LANDSCAPE ARCHITECT.
- WHERE ALL TREES ARE INDICATED, PROVIDE 24" DEEP OF CONTINUOUS NEW PLANTING SOIL IN A 48 SQUARE FOOT AREA AROUND THE ENTIRE TREE. PLANTING SOIL SHALL BE PER THE SPECIFICATIONS.
- APPLY MULCH IN ALL PLANTING BEDS AND AROUND ALL TREES FOR A 4' DIAMETER EXCEPT WHERE OTHERWISE CALLED OUT ON THE PLANS.
- CONTRACTOR SHALL HIRE A CERTIFIED ARBORIST TO PRUNE AND DEEP ROOT FERTILIZE ALL EXISTING TREES TO REMAIN WITH ANY PORTION OF THEIR CANOPY WITHIN THE RIGHT OF WAY. THIS WORK SHALL BE COMPLETED AT THE END OF THE PROJECT, PRIOR TO SUBSTANTIAL COMPLETION.

LANDSCAPE MAINTENANCE NOTES:

THE CONTRACTOR SHALL PROVIDE 1 YEAR OF FULL LANDSCAPE MAINTENANCE (MAINTENANCE PERIOD) FOR THE ENTIRE LANDSCAPE SCOPE OF THE PROJECT FROM DATE OF SUBSTANTIAL COMPLETION AS PART OF THE BASE BID OF THIS PROJECT. IN ADDITION, THE CONTRACTOR SHALL PROVIDE A TWO-YEAR ESTABLISHMENT (WARRANTY) PERIOD FROM SUBSTANTIAL COMPLETION (EQUAL TO AN ADDITIONAL YEAR PAST THE MAINTENANCE PERIOD) FOR ALL ITEMS SHOW ON THE LANDSCAPE SHEETS. LANDSCAPE MAINTENANCE SHALL INCLUDE THE FOLLOWING:

- CULTIVATION AND WEEDING PLANT BEDS. ALL PLANTED AREAS MUST REMAIN WEED FREE AT ALL TIMES.
- WATER ALL TREES, PLANTINGS AND SEED AREAS FOR ESTABLISHMENT AND IN TIMES OF DROUGHT. CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATER TO SITE. DURING FIRST YEAR OF PLANT ESTABLISHMENT, CHECK FOR MOISTURE PENETRATION THROUGHOUT ROOT ZONE TO 6" AT LEAST ONCE A MONTH. FILL SLOW RELEASE TREE WATERING BAGS. ADJUST SUPPLEMENTAL WATERING AS REQUIRED.
- PRUNING, INCLUDING REMOVAL OF DEAD OR BROKEN BRANCHES.
- SOIL TESTS- PROVIDE A SOIL TESTS FOR A PLANTING AND LAWN AREAS 6 MONTHS INTO MAINTENANCE CONTRACT. CONTRACTOR IS REQUIRED TO APPLY ORGANIC FERTILIZER AND ADJUST PH WITH AMENDMENTS FOR ALL LAWNS, TREES AND PLANTING BEDS AFTER SOIL TEST AT RATES PER SOIL TEST RECOMMENDATIONS FOR THOSE TYPES OF PLANTINGS. SUBMIT TEST RESULTS AND AMENDMENT PLAN FOR LANDSCAPE ARCHITECTS APPROVAL PRIOR TO COMPLETING.
- APPLY DISEASE AND INSECT CONTROL ONLY IF REQUIRED AND WITH LANDSCAPE ARCHITECT'S PERMISSION. ONLY ORGANIC PRODUCTS ARE PERMITTED UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT
- REPLACEMENT OF MULCH.
- REMOVAL OF TRASH WITHIN ALL NEW PLANTING AREAS AND LAWNS. SWEEP ALL SIDEWALK AREAS TO KEEP CLEAN AND NEAT.
- LAWN AREAS SHOULD BE MOWED TO 3" HEIGHT ABOVE FINISHED GRADE IN ORDER TO RENEW GROWTH, IMPROVE DENSITY AND ATTRACTIVENESS. SUBMIT SUGGESTED MOWING SCHEDULE TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO MOWING. TRIM EDGES AS NEEDED FOR NEAT APPEARANCE.
- APPLY A SLOW RELEASE ORGANIC FERTILIZER ONCE IN SPRING AND AGAIN IN THE FALL TO ALL LAWN AREAS AT RATES ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. APPLY FERTILIZER WHEN GRASS IS DRY AND PREFERABLY AFTER MOWING. DO NOT APPLY DURING HOT WEATHER OR WHEN GRASS IS UNDER STRESS. WATER IMMEDIATELY AFTER APPLICATION.
- DISPOSE OF PRUNED MATERIALS, EXCESSIVE LAWN CLIPPINGS AND LEAVES, SWEEP WALKWAYS AND RAKE SMOOTH MULCHED AREAS. ALL SPRING AND FALL CLEANUPS MUST BE DONE IN A TIMELY MANNER TO KEEP THE LANDSCAPE AREAS FREE OF LEAVES AND NATURAL DEBRIS. REMOVE FROM SITE BAGS OF LEAVES, TRASH AND EVIDENCE OF MAINTENANCE ACTIVITIES AT THE END OF EACH MAINTENANCE VISIT.

ADD ALTERNATE 1- WAYFINDING SIGNAGE NOTES:

AN ADD ALTERNATE PRICE SHALL BE PROVIDED FOR THE DESIGN AND CONSTRUCTION OF A SIGNAGE SYSTEM AS INDICATED IN THE DRAWINGS. LOCATIONS FOR THE SIGNS AND GENERAL DESIGN INTENT IS INDICATED. CONTRACTOR IS RESPONSIBLE FOR DESIGNING THE FULL DETAILS OF THE SIGNAGE SYSTEM, INCLUDING BUT NOT LIMITED TO FOUNDATIONS, STRUCTURAL SUPPORTS, AND ALL SIGNAGE ELEMENTS. CONTRACTOR SHALL SUBMIT SHOW DRAWINGS SHOWING ALL ELEMENTS OF THE SIGNAGE DESIGN TO THE LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE FOR APPROVAL. OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT RESERVE THE RIGHT TO MAKE CHANGES TO THE SHOP DRAWINGS TO REFLECT THE DESIRED HISTORIC DESIGN INTENT. EXACT CONTENT OF EACH SIGN WILL BE PROVIDED BY THE TOWN DURING THE SHOP DRAWING PROCESS.

GENERAL DETAILS INDICATING BASIC INTENT FOR THE PROPOSED SIGNS ARE INCLUDED IN THE DRAWING SET.

THE FOLLOWING SHALL BE ASSUMED AND INCLUDED IN THE SIGNAGE ELEMENTS:

- ALL TEXT ON PEDESTRIAN WAYFINDING SIGNS SHALL BE A MINIMUM OF 3" HEIGHT.
- ALL TEXT ON THE VEHICULAR WAYFINDING SIGNS (REGIONAL DISTRICT SIGNS AND PARKING SIGNS) SHALL BE A MINIMUM 6" HEIGHT.
- MATERIALS FOR THE SIGNS SHALL BE CARVED HIGH DENSITY URETHANE FOAM (HDU), OFF-WHITE BACKGROUND (FINISH OF ALL POSTS AND SIGNS TO MATCH) WITH BLACK LETTERS. EXACT SHADES OF WHITE AND BLACK SHALL BE DETERMINED FROM COLOR SAMPLES. POST SHALL BE PRESSURE TREATED WOOD (WITHOUT BLEMISHES, KNOTS, OR ROUGH SURFACES), PRIMED AND PAINTED WHITE.
- ALL STRUCTURAL ENGINEERING OF THE SIGNS, FOUNDATIONS, ATTACHMENTS, AND INSTALLATION DETAILS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL POSTS SHALL BE DIRECT BURIED INTO THE GROUND, AT NECESSARY DEPTHS AND INSTALLATION DETAILS AS DETERMINED BY THE SIGN MANUFACTURER AND STRUCTURAL ENGINEER.
- CONTRACTOR SHALL PROVIDE A TEN YEAR WARRANTY ON BOTH THE INSTALLATION AND MATERIALS OF ALL SIGNAGE ELEMENTS.



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			Job No.	271-1607
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			Approved by	KK

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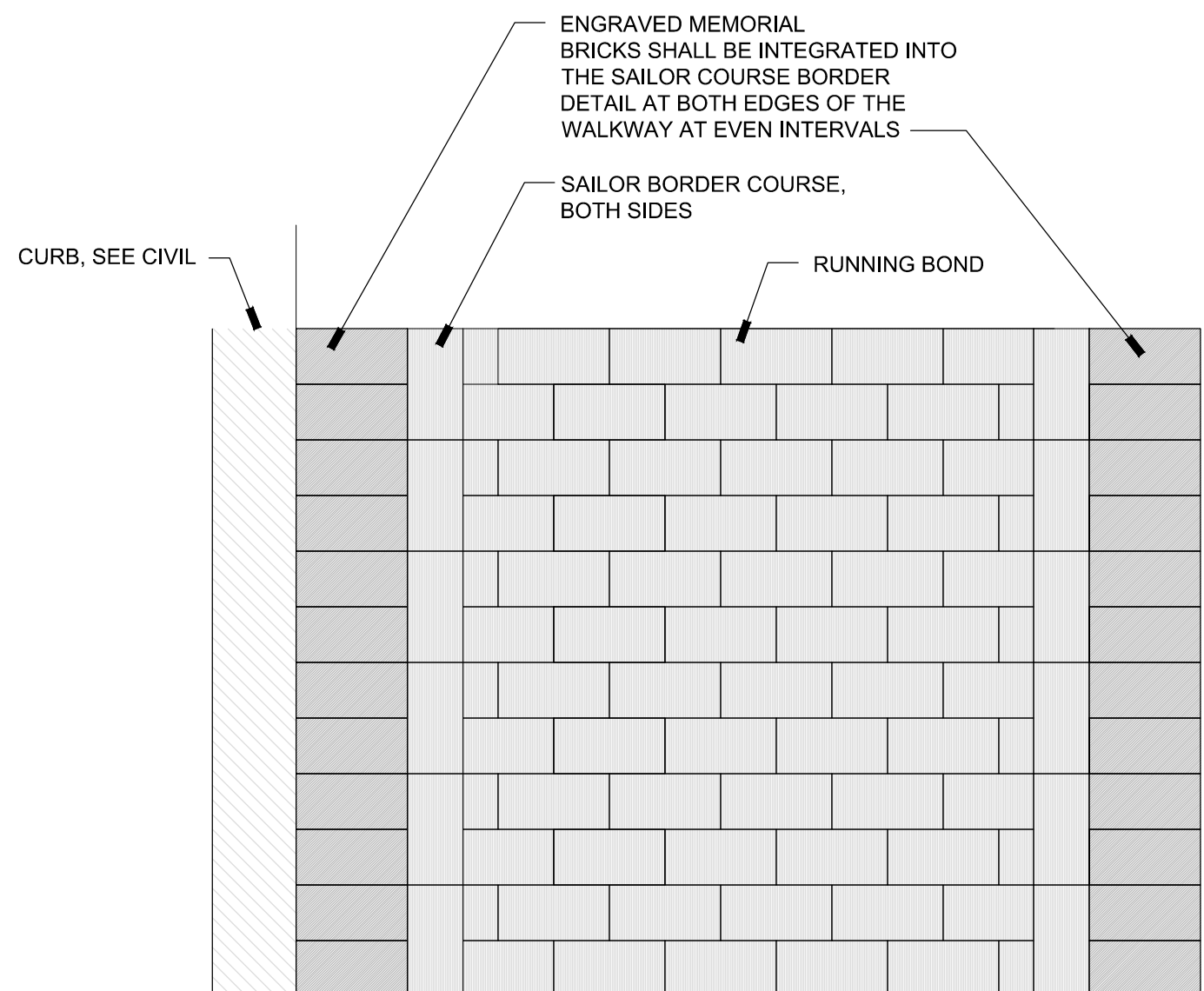
TRANSPORTATION IMPROVEMENTS
 ALONG ROUTE 6A AND MILLWAY
 BARNSTABLE, MASSACHUSETTS

LANDSCAPE NOTES

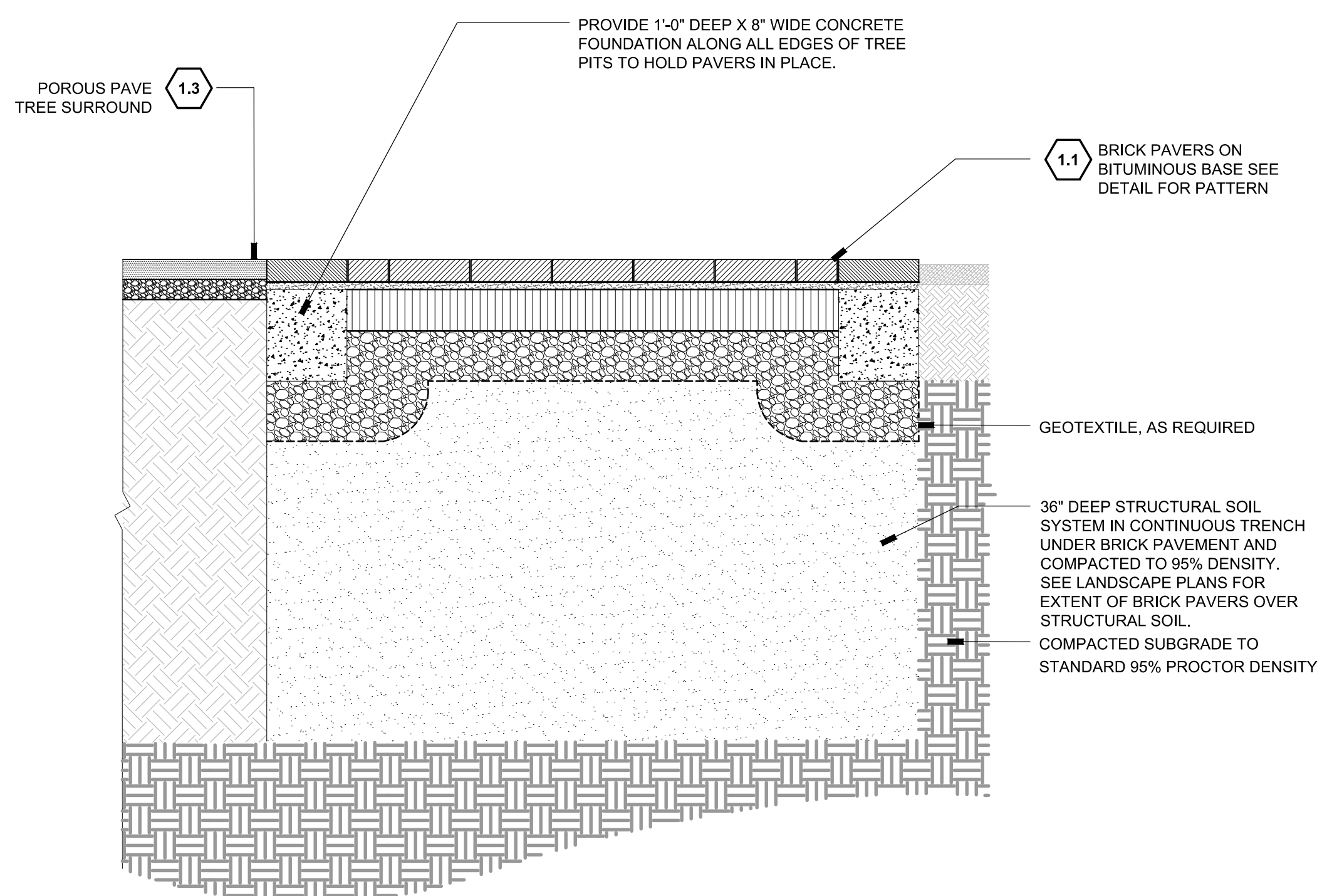
CONSTRUCTION DOCUMENTS

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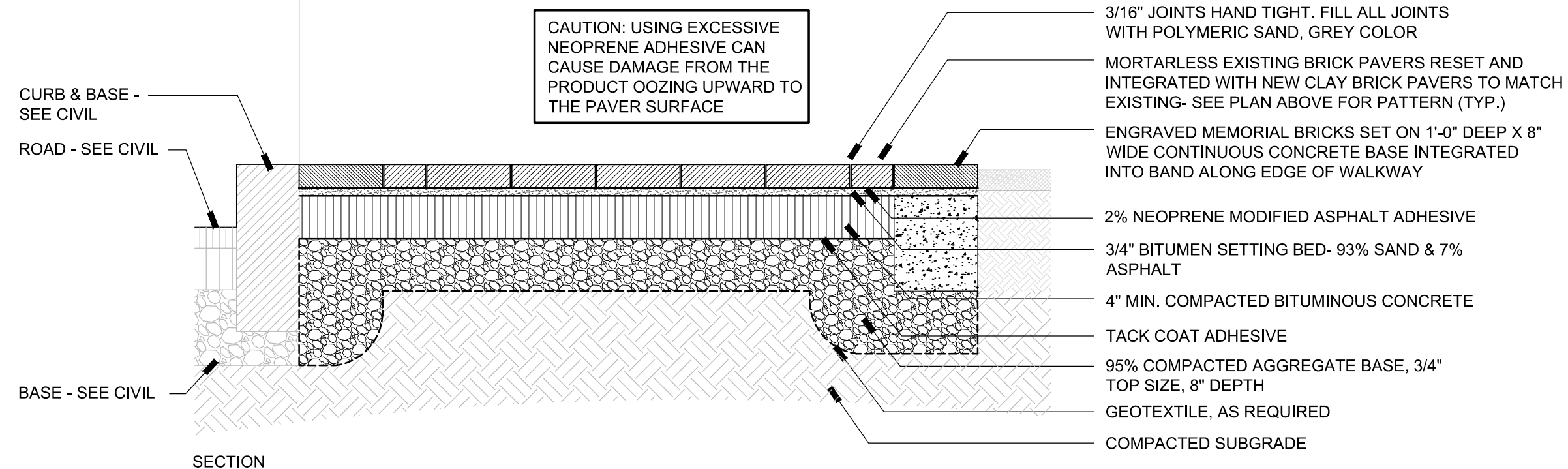
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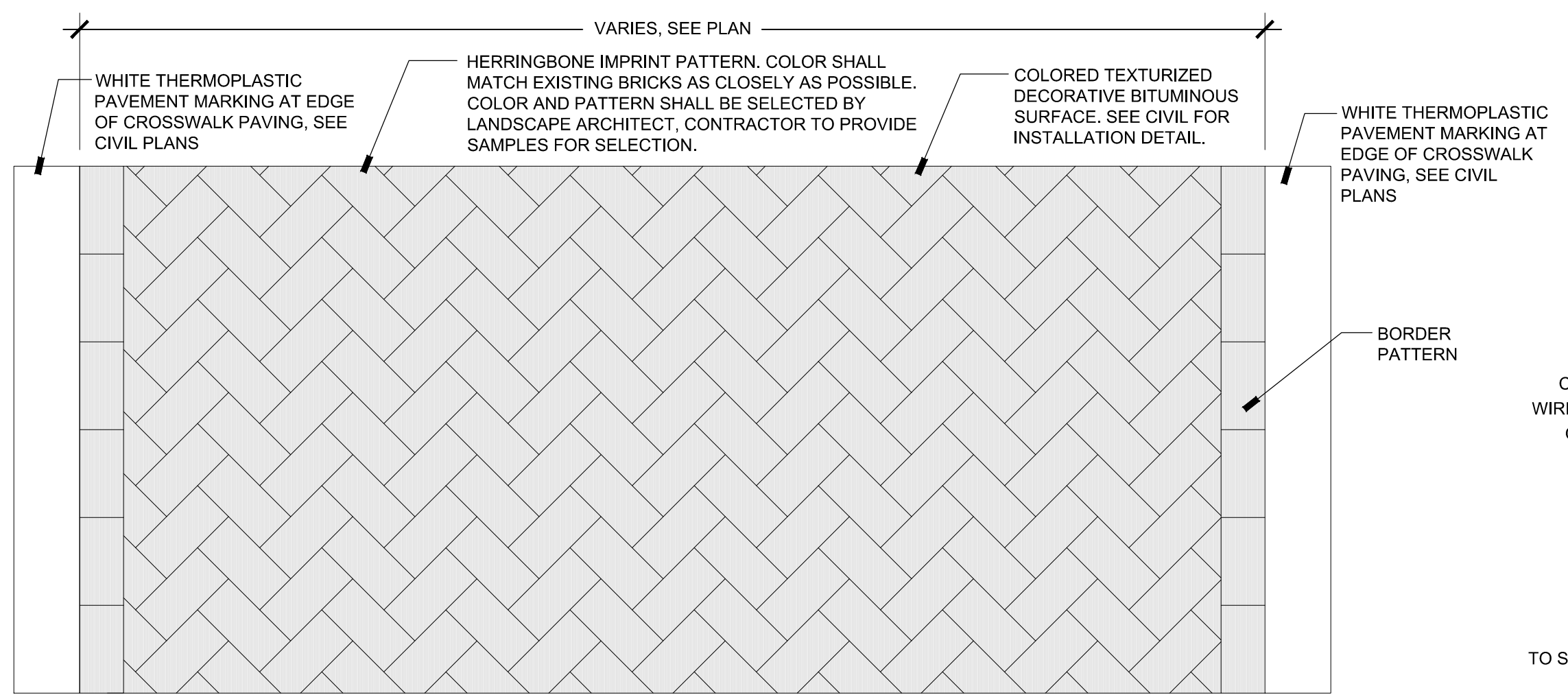
- NOTES:**
- The existing brick sidewalks throughout the whole downtown area shall be removed and all bricks stockpiled for reuse. Contractor shall make a map of the existing location of all existing engraved bricks with memorial names. These bricks must be removed and stockpiled for reuse, and shall be reinstalled in approximately the same location in the new walks as they were in the existing condition (within 10 feet), but shall be installed into the sailor course border detail on either side of the new brick walkways. Memorial bricks shall be spaced apart as evenly as possible to create a border that is uniform in appearance. Memorial bricks shall be integrated into the borders on both sides of the sidewalk, an shall be staggered in location across the sidewalk. Contractor shall build a 6' long x 6' wide mockup for Landscape Architect's approval of the color, pattern and memorial brick installation prior to ordering any materials.
 - Do not reuse bricks with chips, cracks, or other visible defects. Individual bricks that are in poor condition will be replaced with new bricks of the same color and style by the Contractor and shall be included in this item. Any memorial bricks that have defects should be brought to the attention of the Town before being installed. Memorial bricks with defects will be cataloged by the Contractor and resupplied in new condition by the Contractor. The Contractor is responsible for coordinating the new memorial brick engraving schedule and delivery to this site as well as installation.
 - The Town will also be supplying new memorial bricks to the Contractor for incorporation into the new sidewalks. The memorial brick engraving process is being coordinated by the Town in conjunction with the Barnstable Village Association. The Contractor is responsible for coordinating the brick engraving schedule and delivery to the site of the new memorial bricks, and installation of these bricks into the new brick walks. New memorial bricks shall be located in any location with the extent of the project, within the borders of the new walks as shown on the drawings.
 - New clay bricks in the same color and style will be required to be purchased and installed by the Contractor to complete the areas of brick sidewalks indicated on the drawings and are included in this item. New bricks shall be evenly distributed and integrated into the new walkways so that areas of new brick are not segregated.
 - Brick walkways will be re-laid to match the patterns as shown in the Drawings and as directed by the Landscape Architect.



2 BRICK PAVING OVER STRUCTURAL SOIL 1'-1'-0"

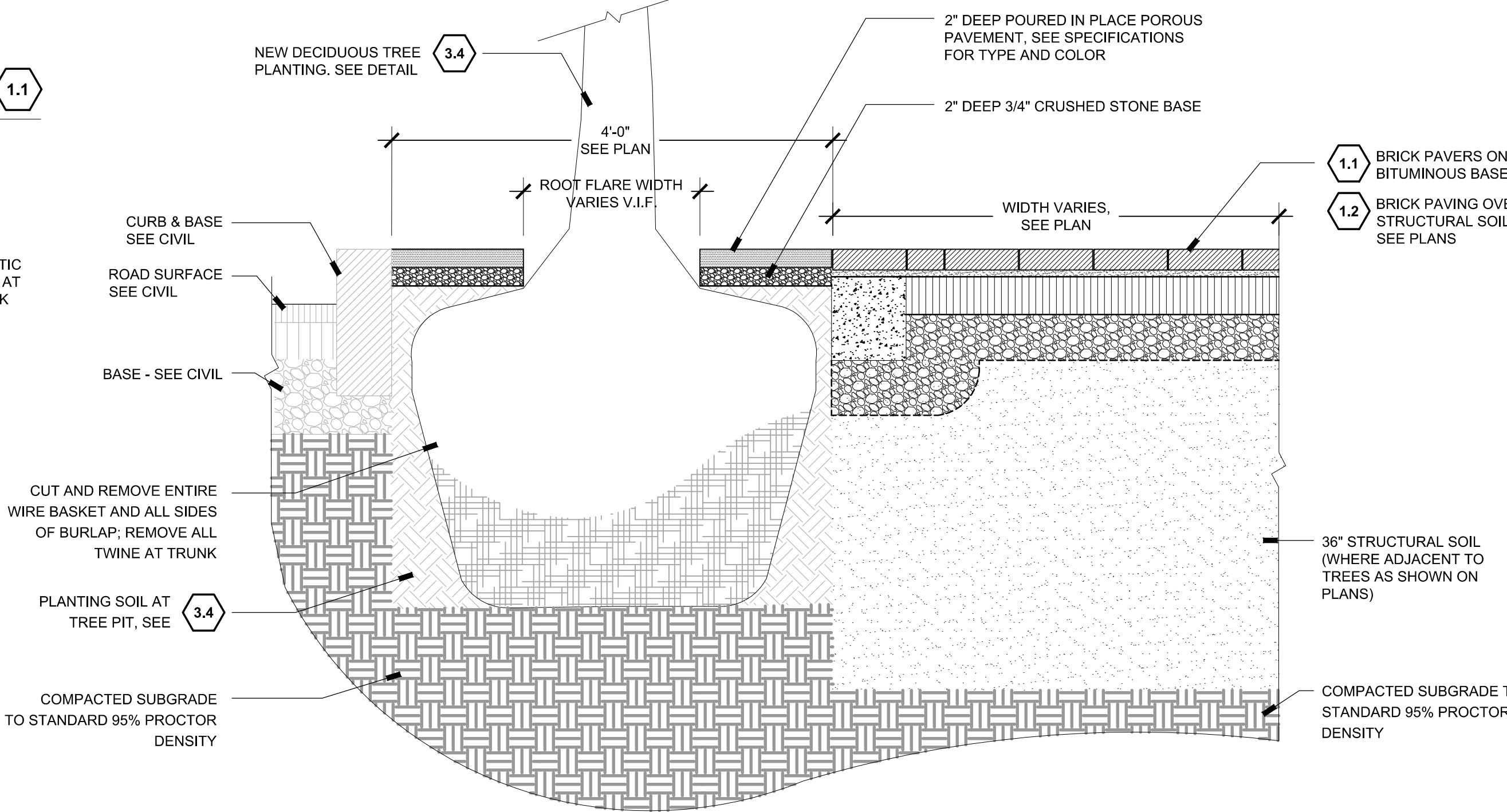


1 RE-LAID BRICK PAVERS ON BITUMINOUS BASE 1'-1'-0"



NOTE: SEE CIVIL PLAN SET FOR INSTALLATION DETAIL.

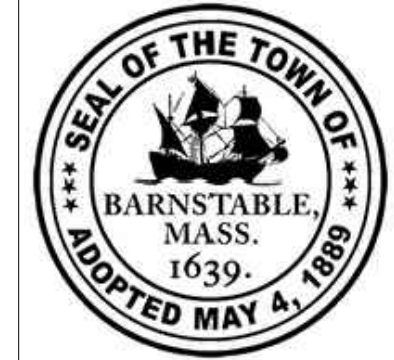
3 FLUSH CROSSWALK PAVING 1'-1'-0"



4 POROUS PAVE TREE SURROUND 1'-1'-0"

LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

1.0 PAVEMENT		
1.1	RE-LAID BRICK PAVERS ON BITUMINOUS BASE	1/ 86
1.2	BRICK PAVING OVER STRUCTURAL SOIL	2/ 86
1.3	POROUS PAVE TREE SURROUND	4/ 86
1.4	FLUSH CROSSWALK PAVING	3/ 86
1.5	RAISED CROSSWALK PAVING	1/ 87
1.6	INTERSECTION PAVING	2/ 87
2.0 SITE LIGHTING		
SEE ENGINEERS DRAWINGS		
3.0 PLANTING		
3.1	LOAM AND SEED	1/ 89
3.2	PERENNIAL PLANTING	2/ 89
3.3	NEW SHRUB PLANTING	3/ 89
3.4	NEW DECIDUOUS TREE	4/ 89
3.5	NEW EVERGREEN TREE	5/ 89
5.0 SITE FURNISHING		
5.1	BENCH- 5 TOTAL	1/ 88
5.2	TRASH RECEPTACLE- 4 TOTAL	2/ 88
5.3	FLAGPOLE- 1 TOTAL	3/ 88
5.5	BIKE RACK- 3 TOTAL	4/ 88
6.0 SIGNAGE- ADD ALTERNATE #1		
6.1	DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL	1/ 90
6.2	PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL	2/ 90
6.3	PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL	3/ 90



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TRANSPORTATION IMPROVEMENTS ALONG ROUTE 6A AND MILLWAY BARNSTABLE, MASSACHUSETTS

LANDSCAPE DETAILS: PAVING- 01

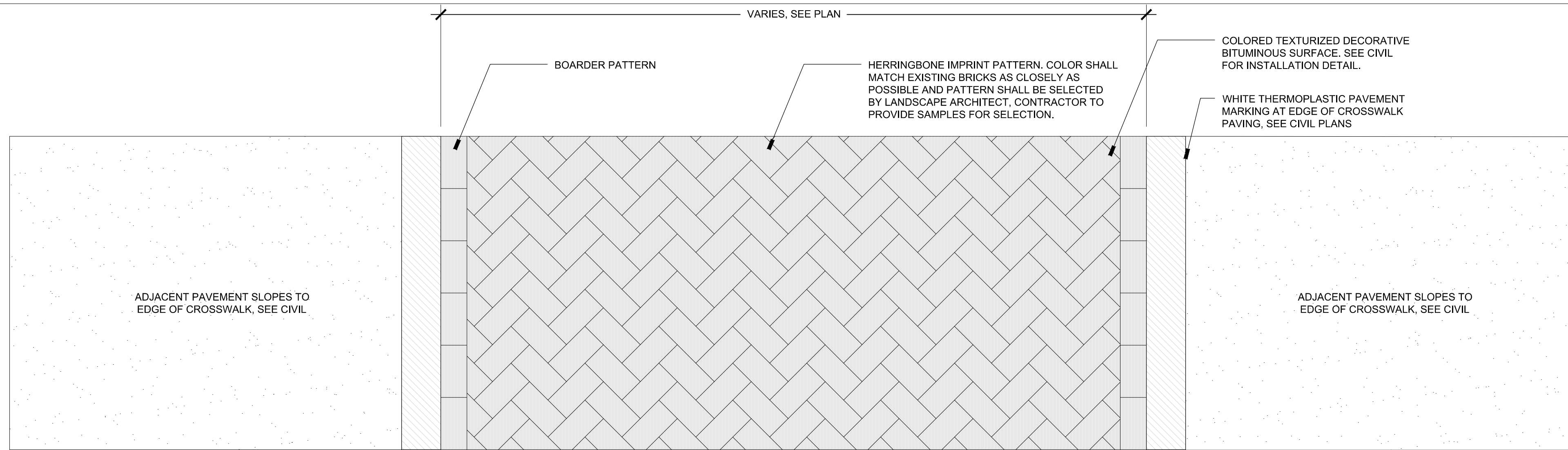
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Sheet No. 86



LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

1.0 PAVEMENT		
1.1	RE-LAID BRICK PAVERS ON BITUMINOUS BASE	1/86
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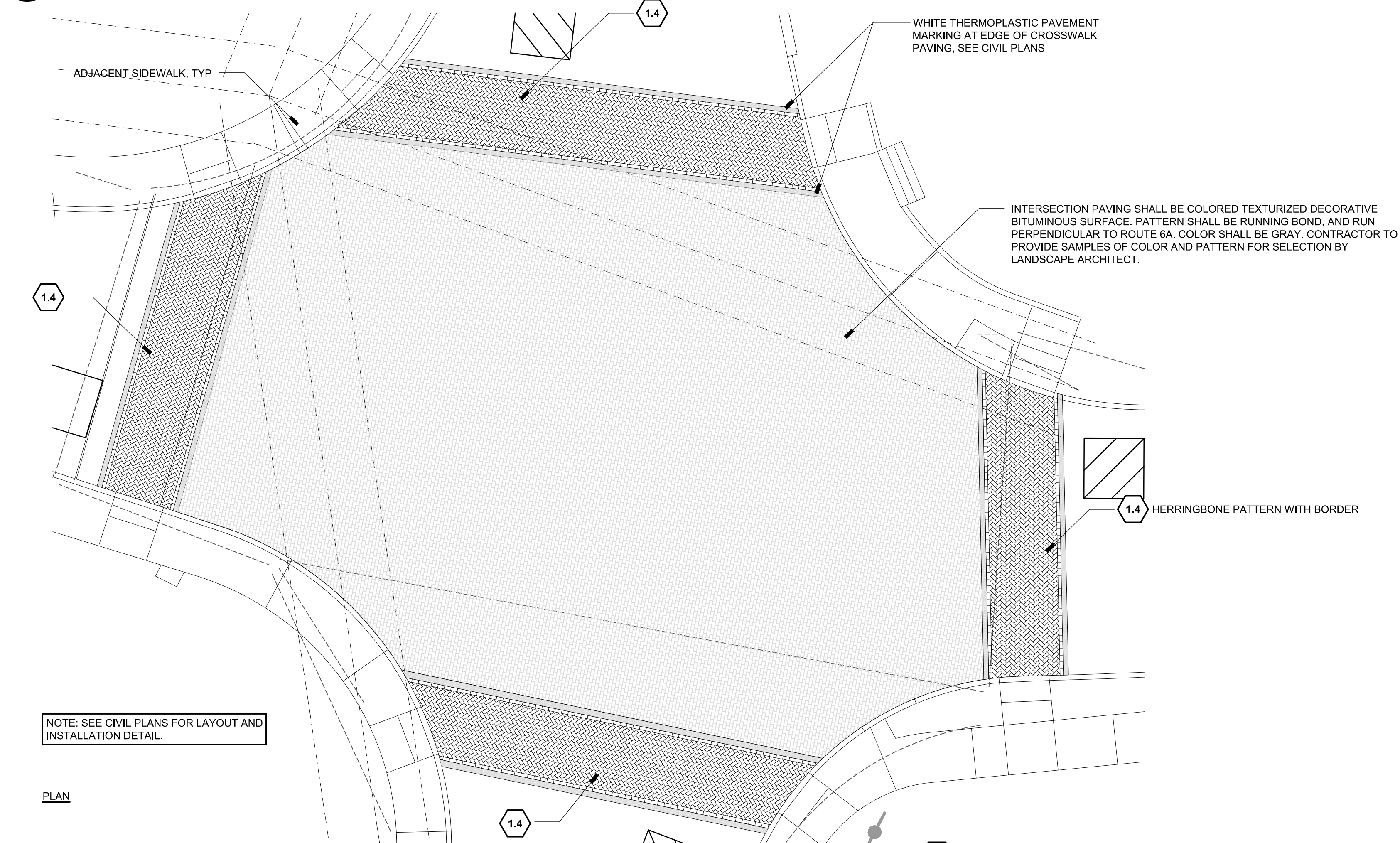


NOTE: SEE CIVIL PLAN SET FOR INSTALLATION DETAIL.

PLAN

1 RAISED CROSSWALK PAVING

1" -1'-0"



NOTE: SEE CIVIL PLANS FOR LAYOUT AND INSTALLATION DETAIL.

PLAN

2 INTERSECTION PAVING

1" -1'-0"



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TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
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LANDSCAPE DETAILS:
PAVING- 02

CONSTRUCTION DOCUMENTS

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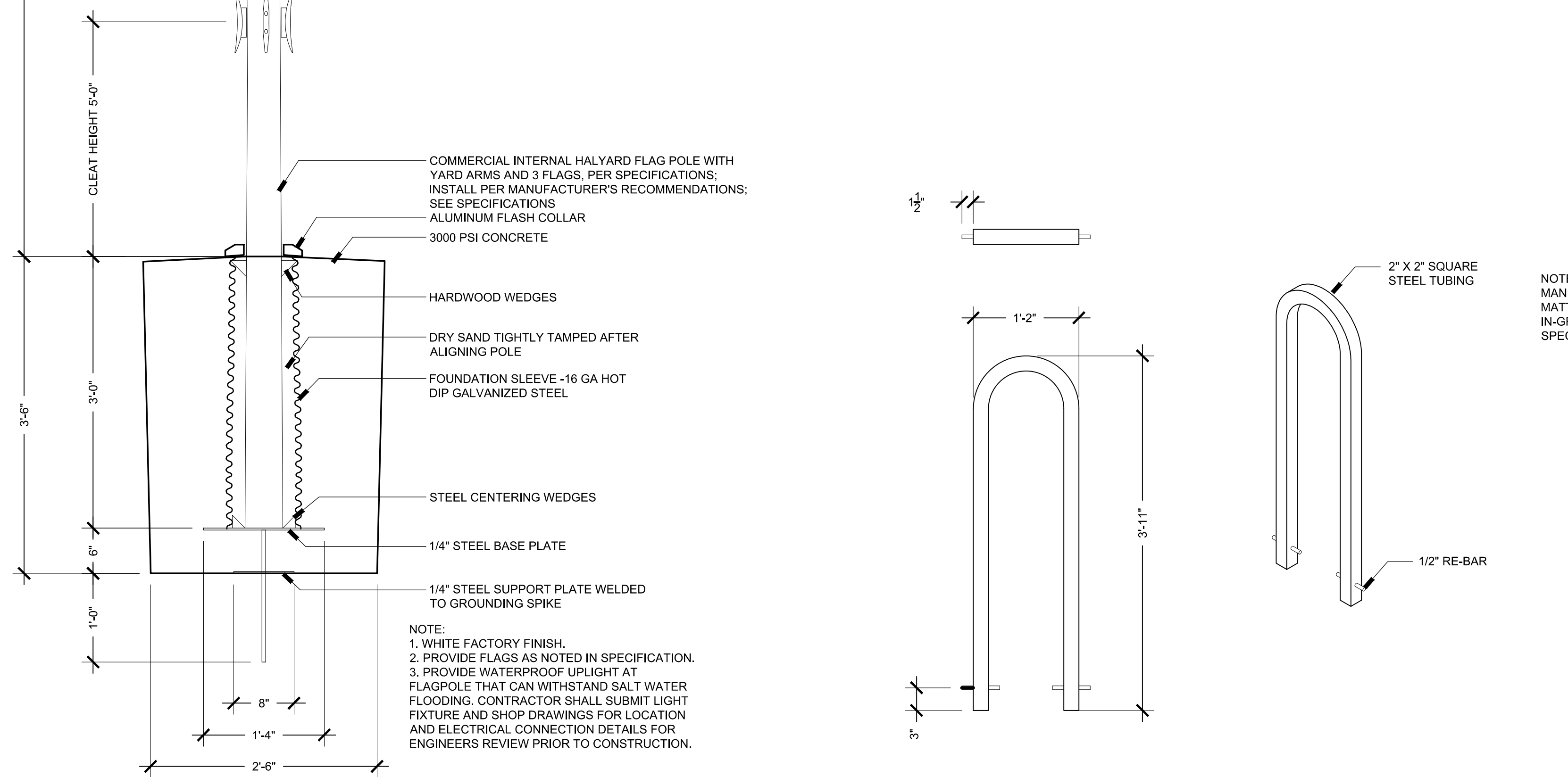
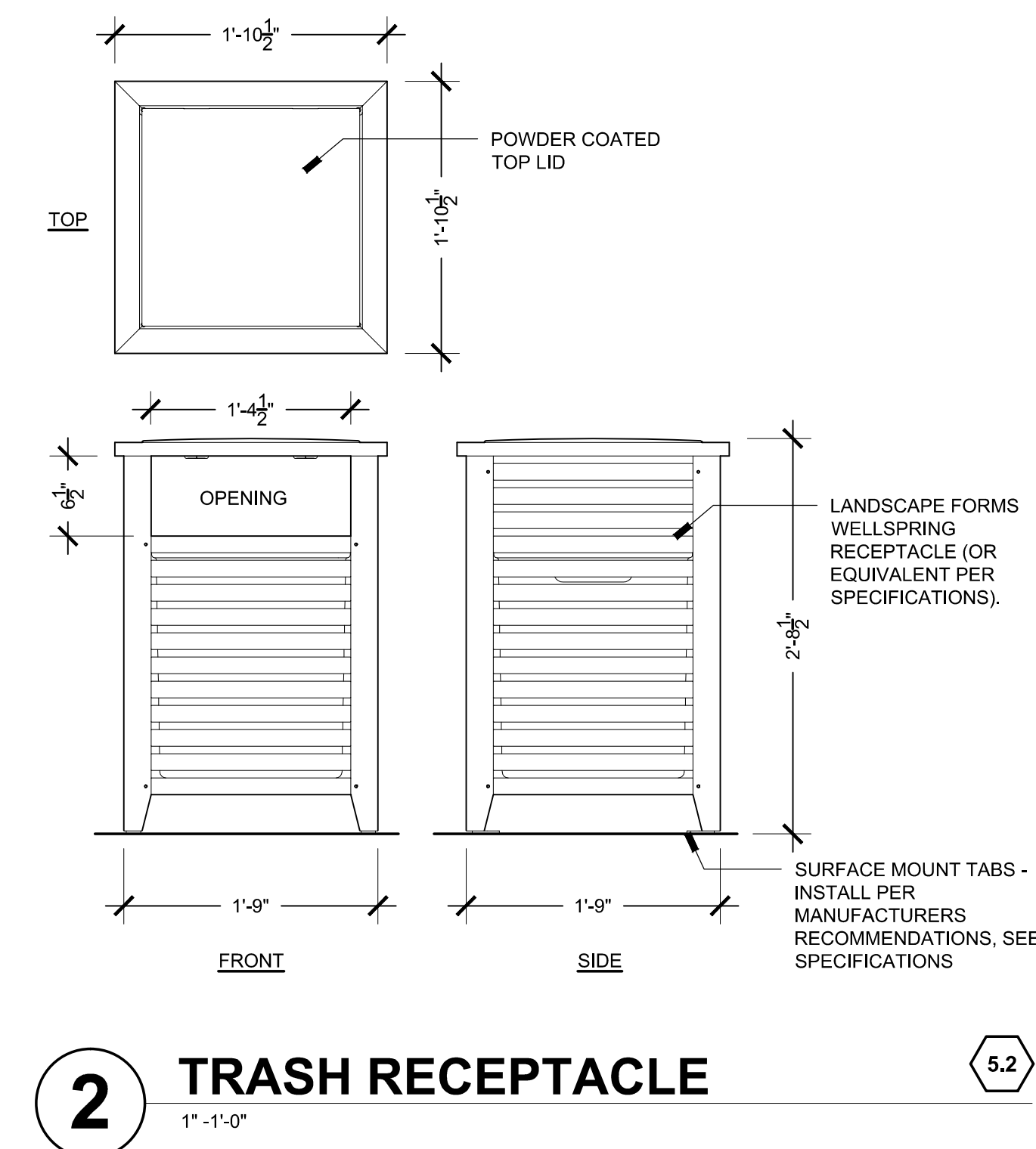
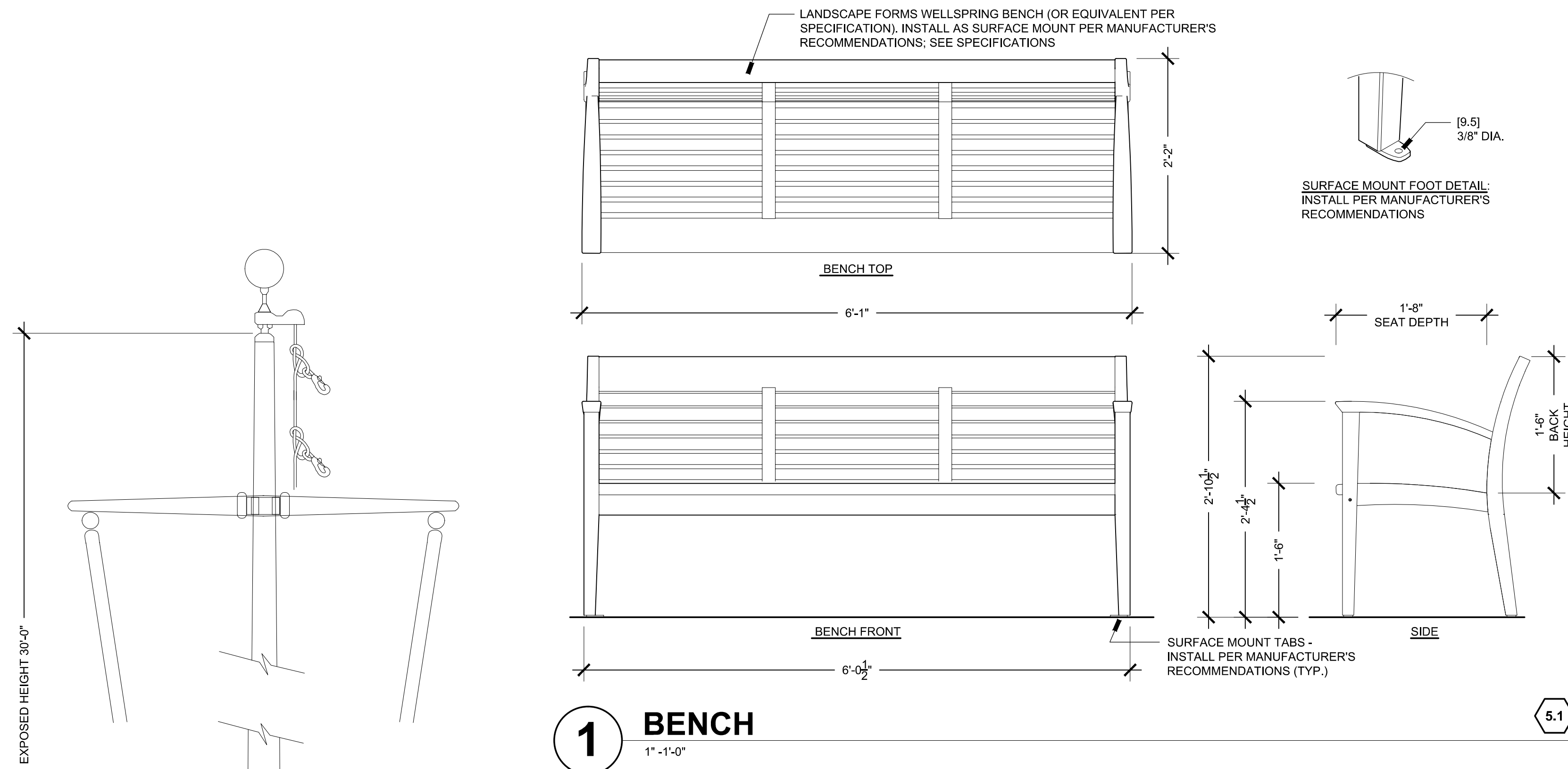
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LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

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Scale: AS NOTED

Date: OCTOBER 2018

Job No.: 271-1607

Designed by: KK & SCH

Drawn by: SCH & EH

Checked by: KK

Approved by: KK

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TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS

LANDSCAPE DETAILS:
FURNITURE- 03

CONSTRUCTION DOCUMENTS

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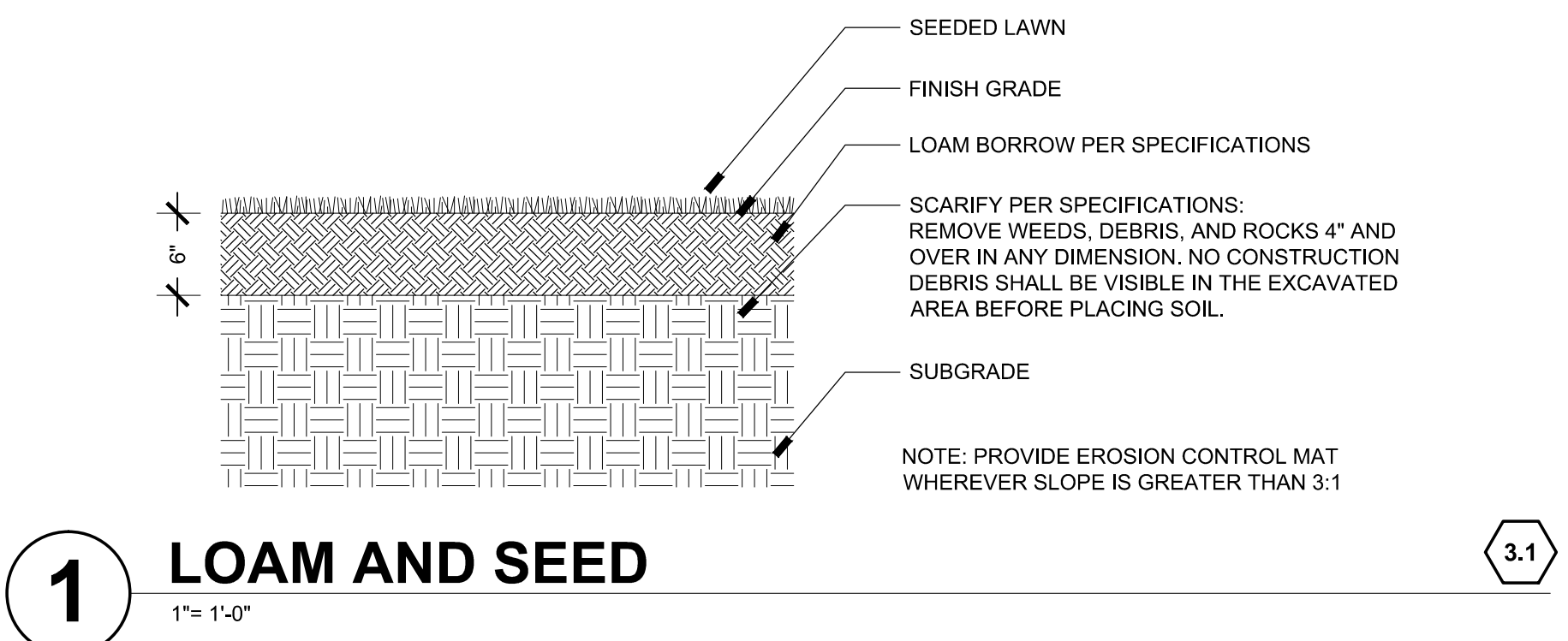
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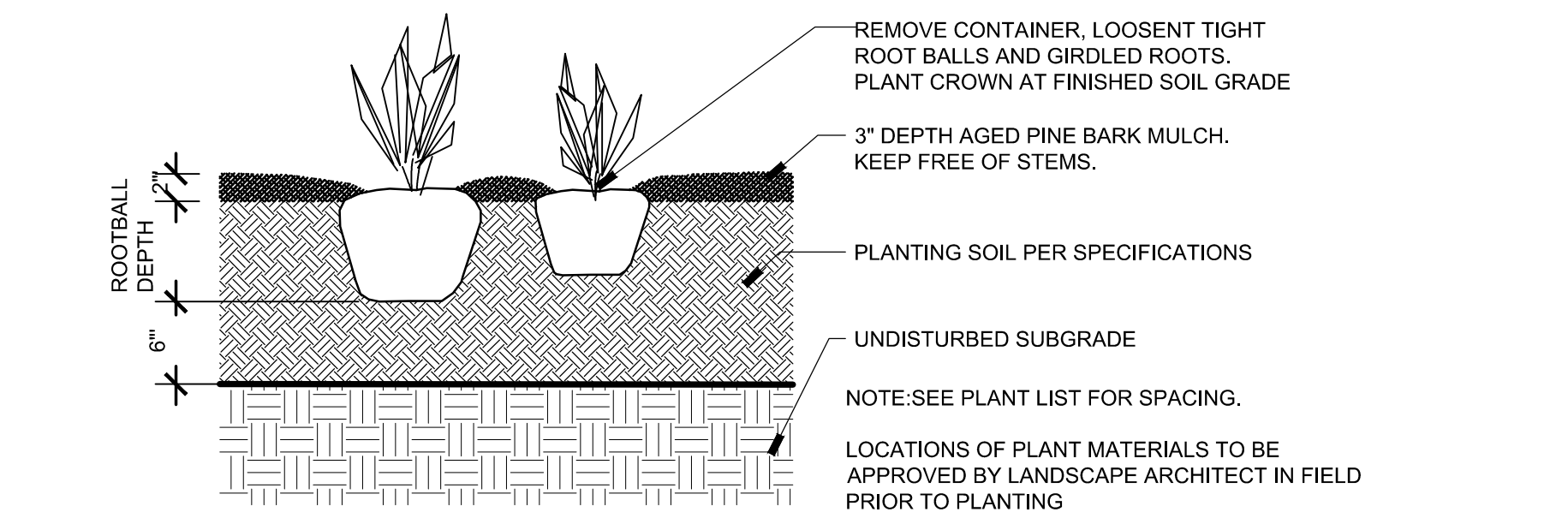
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LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

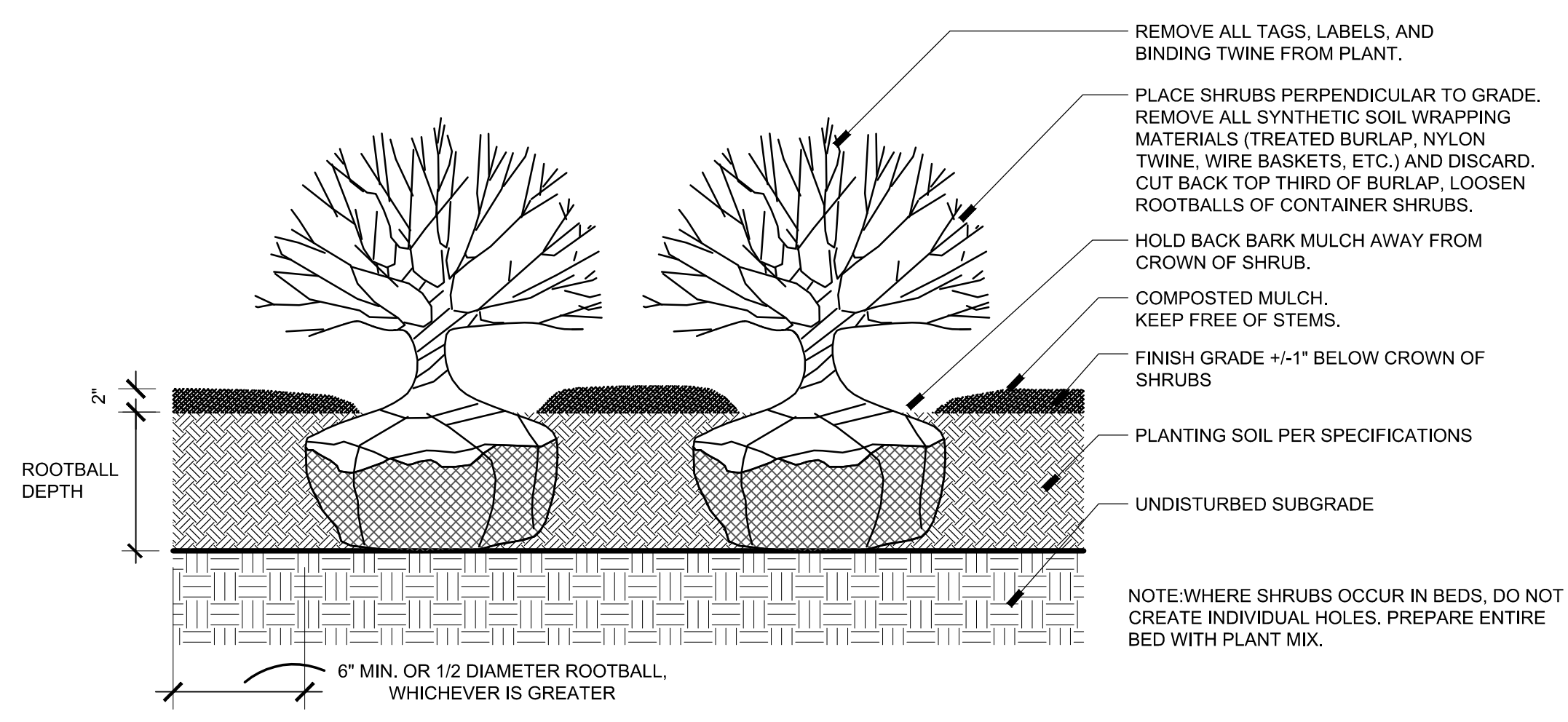
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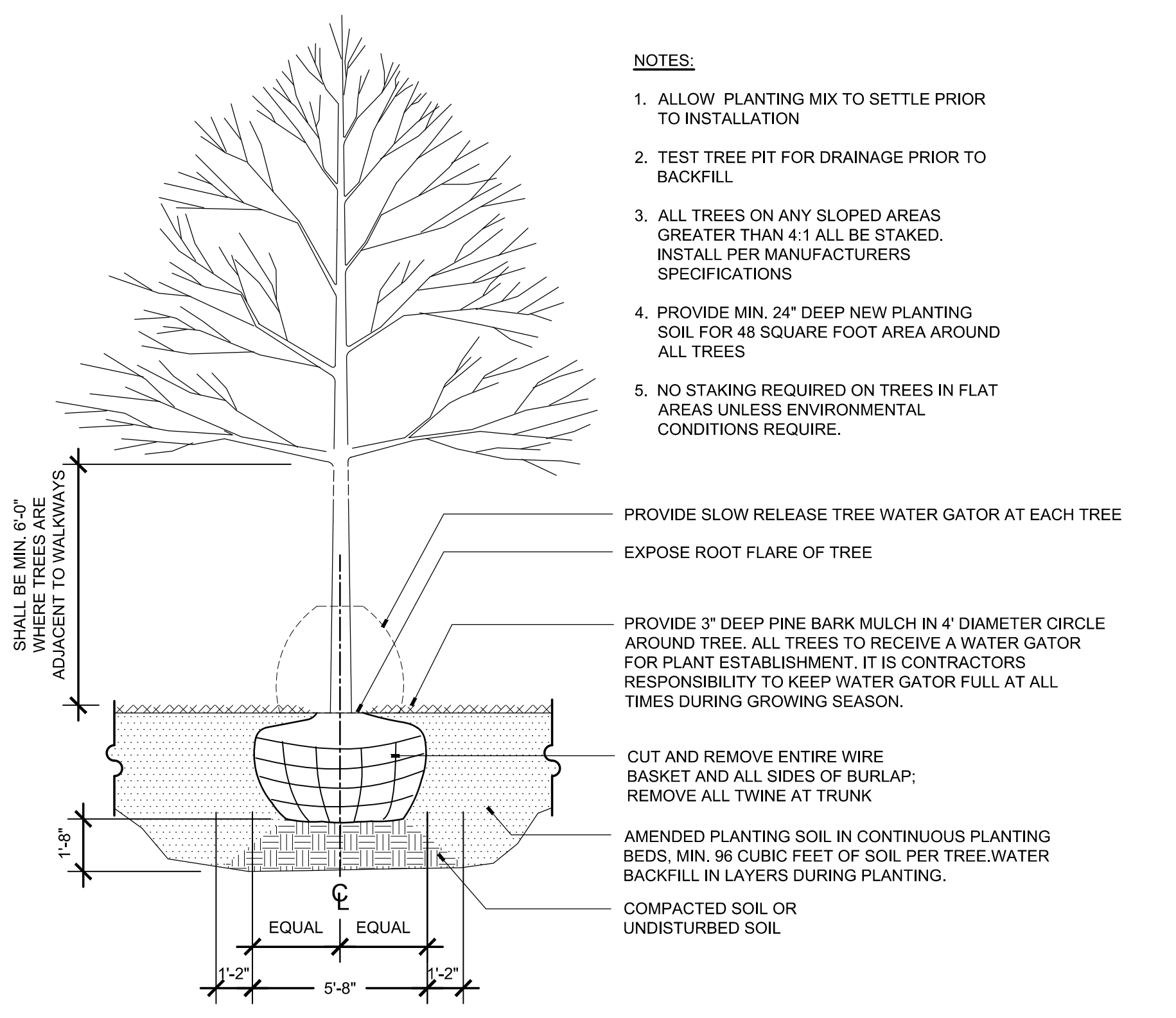
1 LOAM AND SEED
1" = 1'-0"
3.1



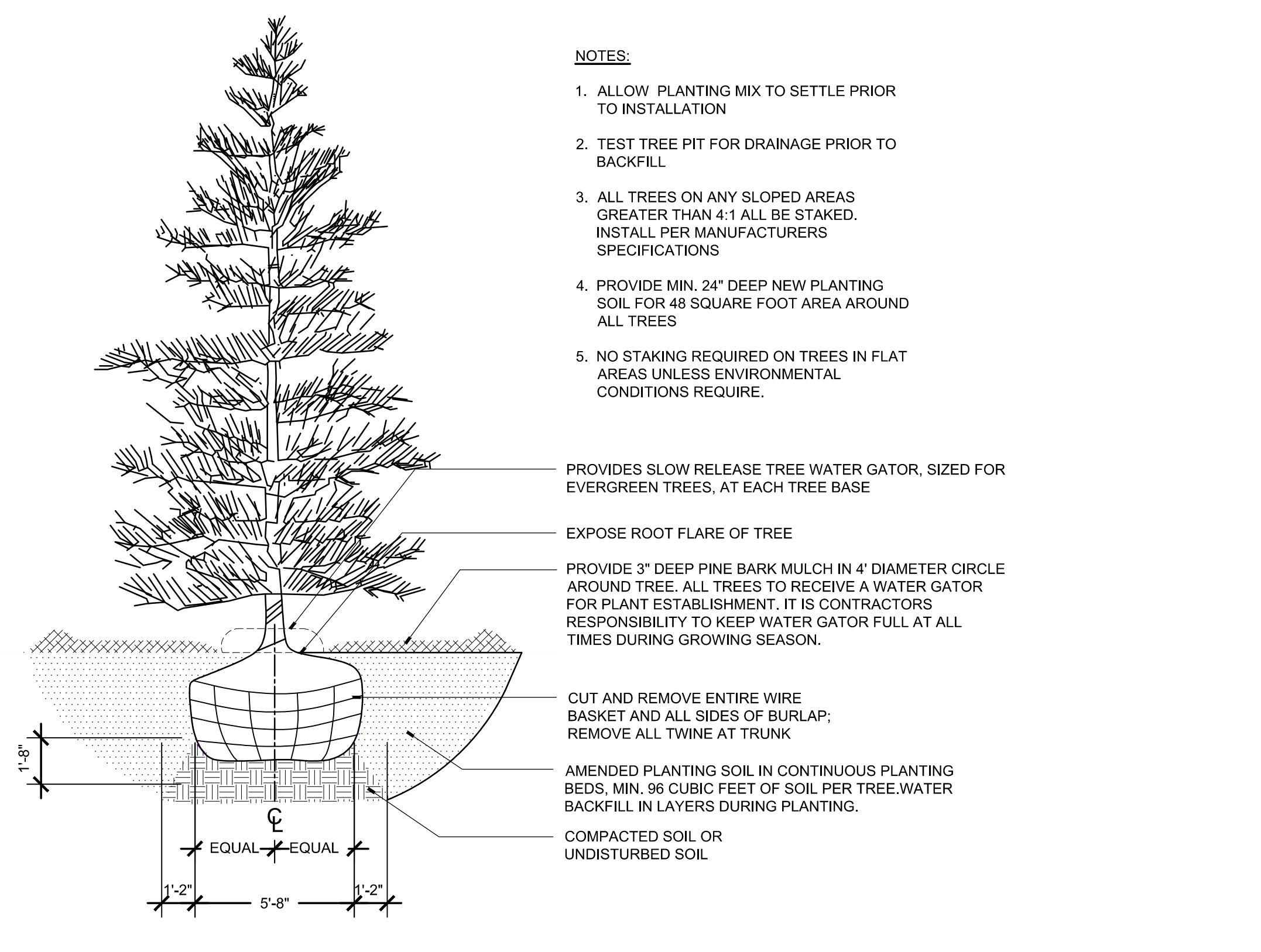
2 PERENNIAL PLANTING
1" = 1'-0"
3.2



3 SHRUB PLANTING
1" = 1'-0"
3.3

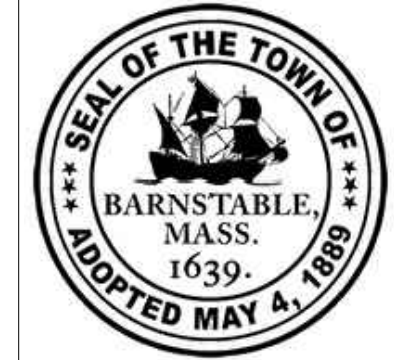


4 NEW DECIDUOUS TREE
NTS
3.4



5 NEW EVERGREEN TREE
NTS
3.5

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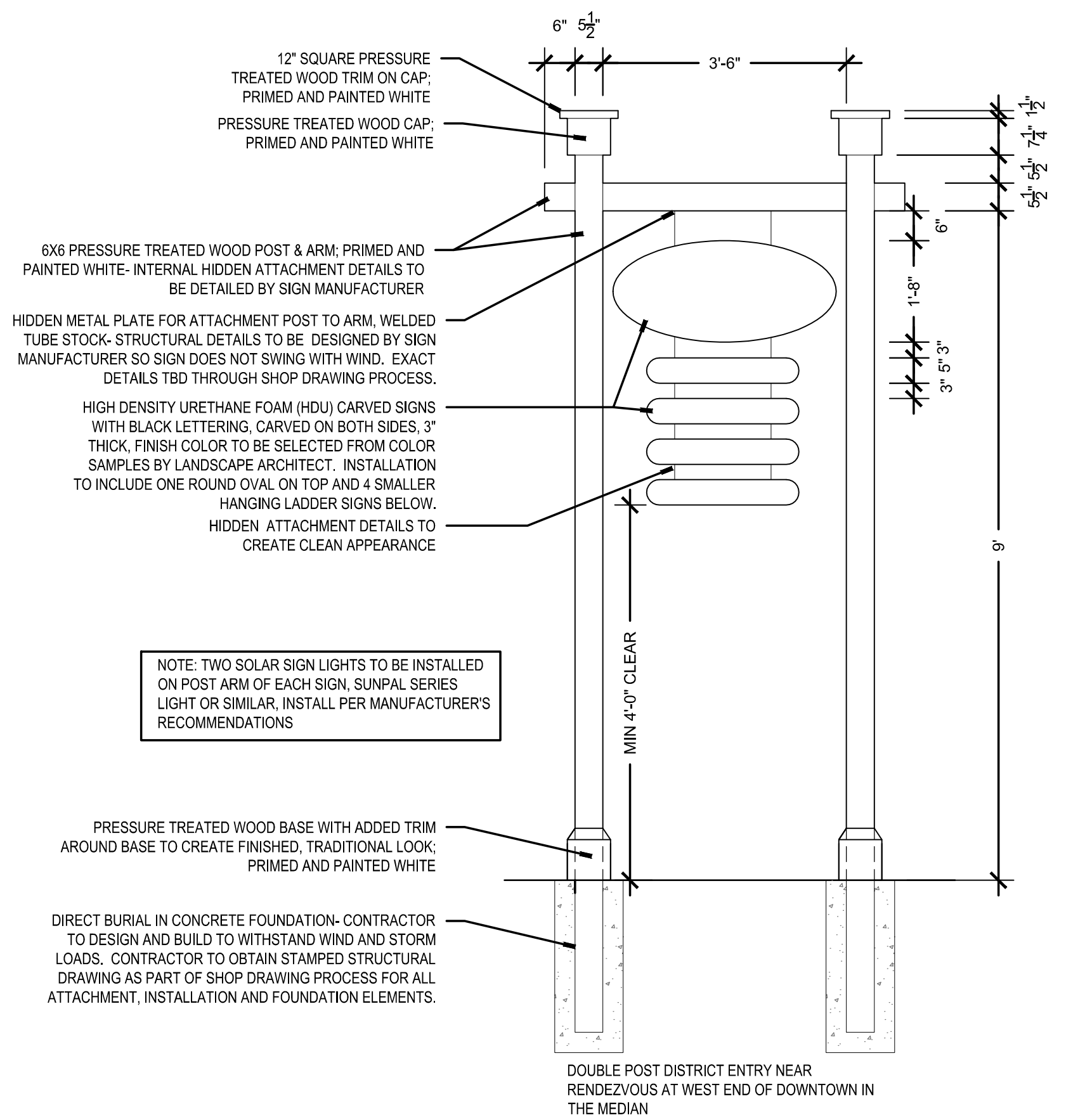
MARK	DATE	DESCRIPTION	Scale	AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	KK & SCH
02	08/22/18	FINAL SUBMISSION	Drawn by	SCH & EH
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	KK
			Approved by	KK

THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS

LANDSCAPE DETAILS:
PLANTING- 04

CONSTRUCTION DOCUMENTS
Sheet No.
89



CONTRACTOR TO DESIGN, MANUFACTURE AND INSTALL SIGNS THAT MIMIC THE APPEARANCE OF THE SIGN IN THE ABOVE PHOTO. THE BACKGROUND COLOR FOR THE SIGNAGE ELEMENTS SHALL BE WHITE (OR OFF-WHITE AS SELECTED BY THE LANDSCAPE ARCHITECT FROM SAMPLES PROVIDED BY CONTRACTOR) WITH BLACK CARVED LETTERING AND BLACK OUTLINES AROUND THE SIGN EDGES. THE SIGN EDGES SHALL HAVE A REVEAL SO THAT THE BLACK OUTLINE PROTRUDES FROM THE FACE OF EACH SIGN ELEMENT.

DOUBLE POST DISTRICT ENTRY NEAR RENDEZVOUS AT WEST END OF DOWNTOWN IN THE MEDIAN

LANDSCAPE DETAIL KEYNOTES: DETAIL/SHEET

1.0 PAVEMENT		
1.1	RE-LAID BRICK PAVERS ON BITUMINOUS BASE	1/86
1.2	BRICK PAVING OVER STRUCTURAL SOIL	2/86
1.3	POROUS PAVE TREE SURROUND	4/86
1.4	FLUSH CROSSWALK PAVING	3/86
1.5	RAISED CROSSWALK PAVING	1/87
1.6	INTERSECTION PAVING	2/87
2.0 SITE LIGHTING		
SEE ENGINEERS DRAWINGS		
3.0 PLANTING		
3.1	LOAM AND SEED	1/89
3.2	PERENNIAL PLANTING	2/89
3.3	NEW SHRUB PLANTING	3/89
3.4	NEW DECIDUOUS TREE	4/89
3.5	NEW EVERGREEN TREE	5/89
5.0 SITE FURNISHING		
5.1	BENCH- 5 TOTAL	1/88
5.2	TRASH RECEPTACLE- 4 TOTAL	2/88
5.3	FLAGPOLE- 1 TOTAL	3/88
5.5	BIKE RACK- 3 TOTAL	4/88
6.0 SIGNAGE- ADD ALTERNATE #1		
6.1	DISTRICT ENTRY SIGN- ADD ALTERNATE #1- 2 TOTAL	1/90
6.2	PARKING SIGN- ADD ALTERNATE #1- 2 TOTAL	2/90
6.3	PEDESTRIAN SIGN- ADD ALTERNATE #1- 5 TOTAL	3/90

ADD ALTERNATE 1- WAYFINDING SIGNAGE NOTES:

AN ADD ALTERNATE PRICE SHALL BE PROVIDED FOR THE DESIGN AND CONSTRUCTION OF A SIGNAGE SYSTEM AS INDICATED IN THE DRAWINGS. LOCATIONS FOR THE SIGNS AND GENERAL DESIGN INTENT IS INDICATED. CONTRACTOR IS RESPONSIBLE FOR DESIGNING THE FULL DETAILS OF THE SIGNAGE SYSTEM, INCLUDING BUT NOT LIMITED TO FOUNDATIONS, STRUCTURAL SUPPORTS, AND ALL SIGNAGE ELEMENTS. CONTRACTOR SHALL SUBMIT SHOW DRAWINGS SHOWING ALL ELEMENTS OF THE SIGNAGE DESIGN TO THE LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE FOR APPROVAL. OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT RESERVE THE RIGHT TO MAKE CHANGES TO THE SHOP DRAWINGS TO REFLECT THE DESIRED HISTORIC DESIGN INTENT. EXACT CONTENT OF EACH SIGN WILL BE PROVIDED BY THE TOWN DURING THE SHOP DRAWING PROCESS.

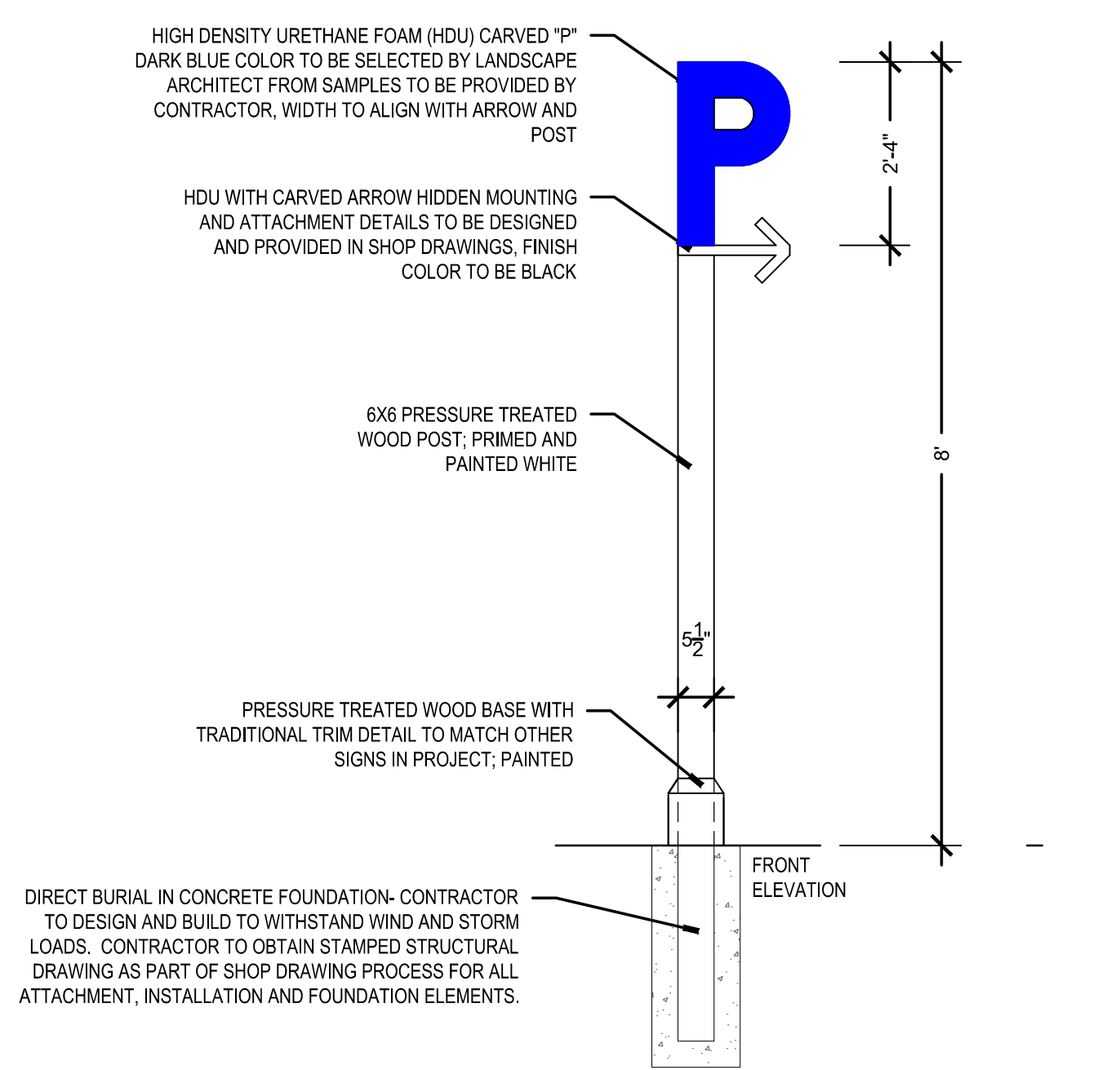
GENERAL DETAILS INDICATING BASIC INTENT FOR THE PROPOSED SIGNS ARE INCLUDED IN THE DRAWING SET.

THE FOLLOWING SHALL BE ASSUMED AND INCLUDED IN THE SIGNAGE ELEMENTS:

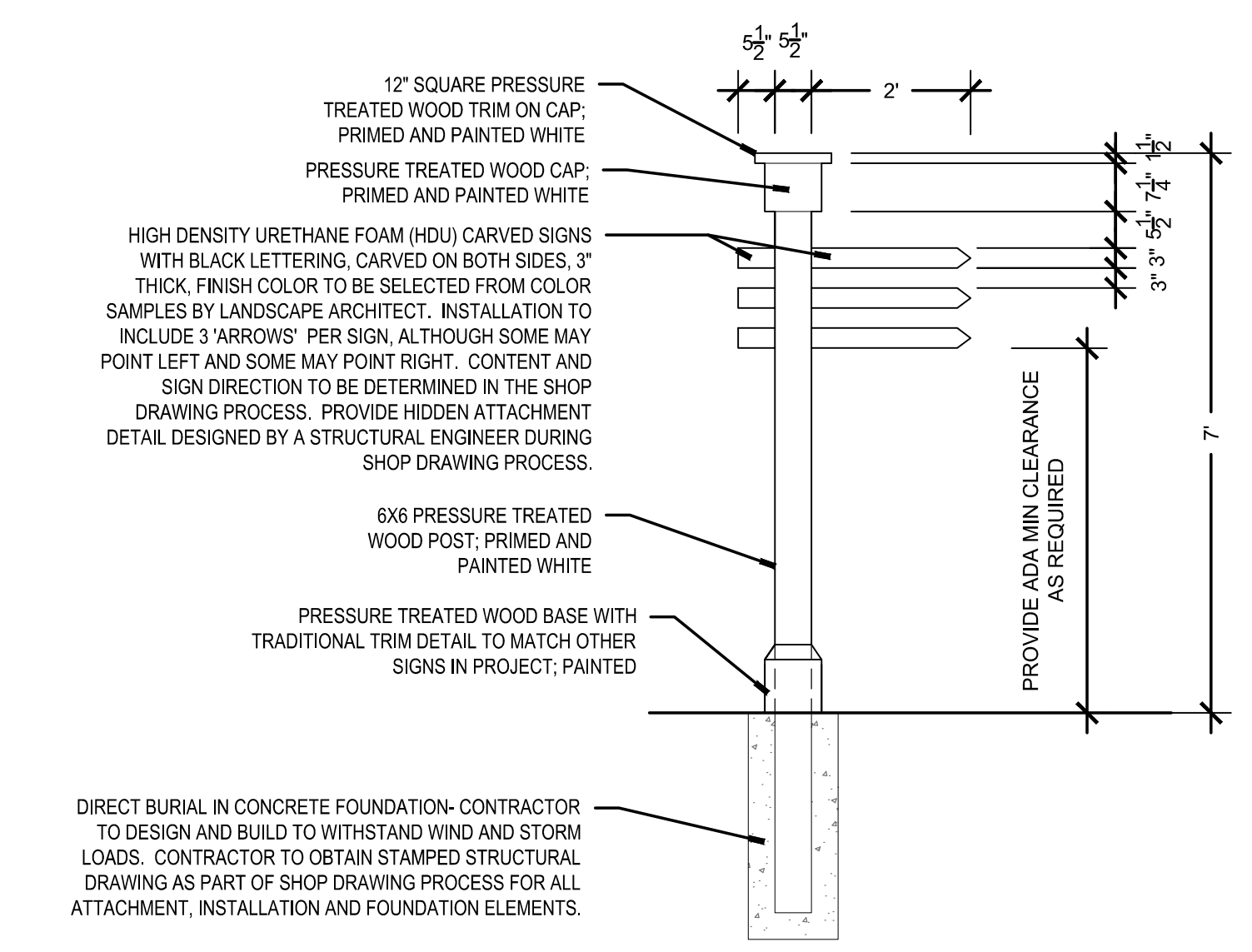
- ALL TEXT ON PEDESTRIAN WAYFINDING SIGNS SHALL BE A MINIMUM OF 3" HEIGHT.
- ALL TEXT ON THE VEHICULAR WAYFINDING SIGNS (REGIONAL DISTRICT SIGNS AND PARKING SIGNS) SHALL BE A MINIMUM 6" HEIGHT.
- MATERIALS FOR THE SIGNS SHALL BE CARVED HIGH DENSITY URETHANE FOAM (HDU), OFF-WHITE BACKGROUND (FINISH OF ALL POSTS AND SIGNS TO MATCH) WITH BLACK LETTERS. EXACT SHADES OF WHITE AND BLACK SHALL BE DETERMINED FROM COLOR SAMPLES. POST SHALL BE PRESSURE TREATED WOOD (WITHOUT BLEMISHES, KNOTS, OR ROUGH SURFACES), PRIMED AND PAINTED WHITE.
- ALL STRUCTURAL ENGINEERING OF THE SIGNS, FOUNDATIONS, ATTACHMENTS, AND INSTALLATION DETAILS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL POSTS SHALL BE DIRECT BURIED INTO THE GROUND, AT NECESSARY DEPTHS AND INSTALLATION DETAILS AS DETERMINED BY THE SIGN MANUFACTURER AND STRUCTURAL ENGINEER.
- CONTRACTOR SHALL PROVIDE A TEN YEAR WARRANTY ON BOTH THE INSTALLATION AND MATERIALS OF ALL SIGNAGE ELEMENTS.

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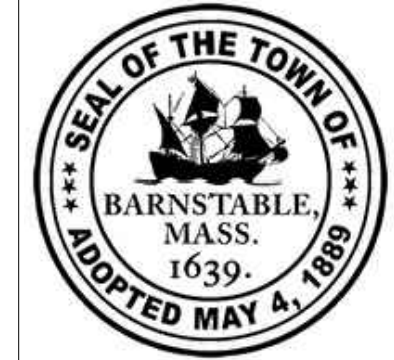
1 DISTRICT ENTRY SIGN- ADD ALTERNATE #1 6.1
1/4"=1'-0"



2 PARKING SIGN- ADD ALTERNATE #1 6.2
1/4"=1'-0"



3 PEDESTRIAN SIGN- ADD ALTERNATE #1 6.3
1/4"=1'-0"



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MARK	DATE	DESCRIPTION	Scale	AS NOTED
			Date	OCTOBER 2018
			Job No.	271-1607
	03	10/19/18	Designed by	KK & SCH
	02	08/22/18	Drawn by	SCH & EH
	01	08/01/18	Checked by	KK
			Approved by	KK

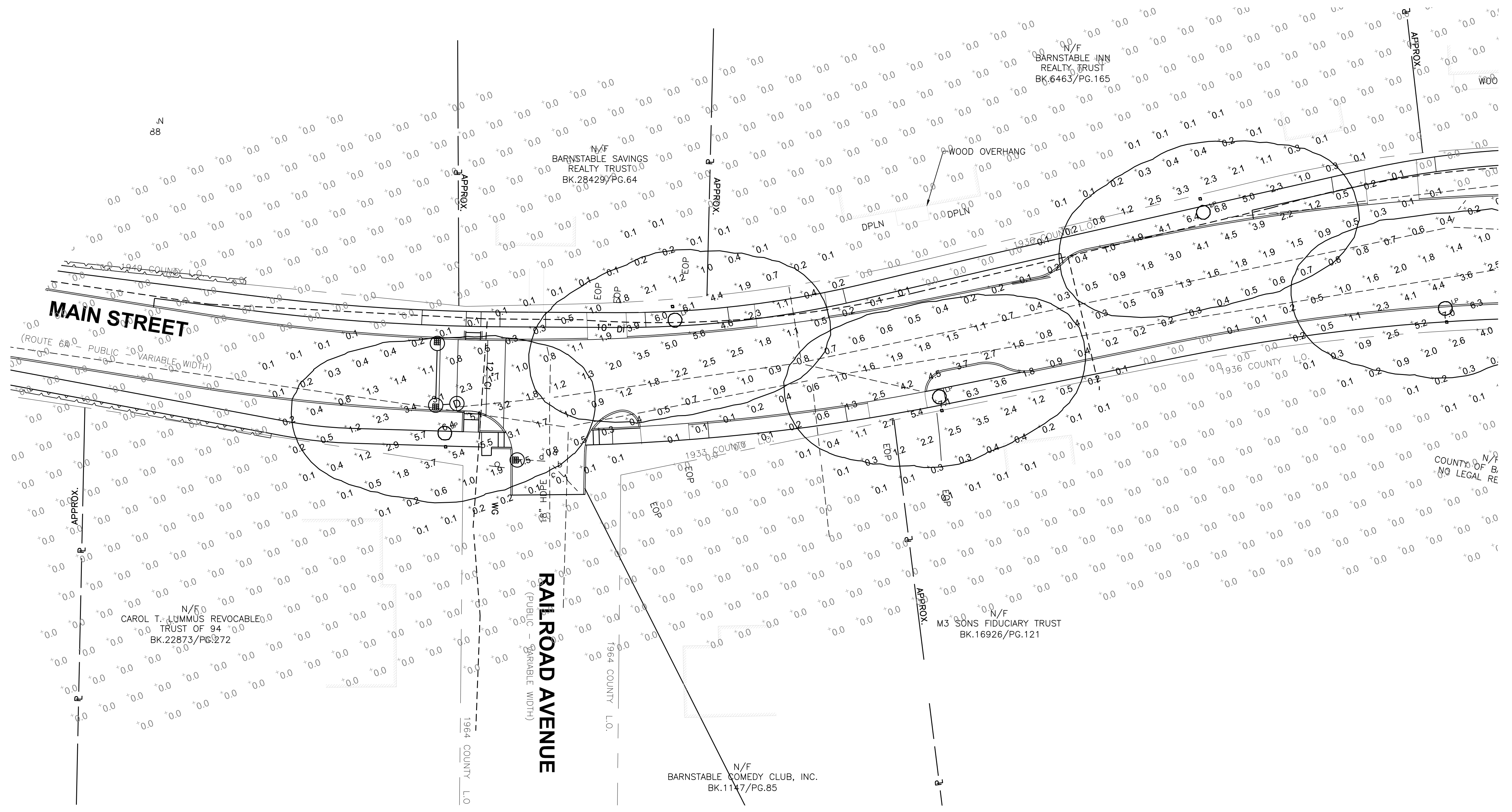
THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

TRANSPORTATION IMPROVEMENTS
ALONG ROUTE 6A AND MILLWAY
BARNSTABLE, MASSACHUSETTS

LANDSCAPE DETAILS:
SIGNAGE- 05

CONSTRUCTION DOCUMENTS
Sheet No.
90

Drawing file: I:\Barnstable 271271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\Corresponding\From Street Lighting Sub\2018-08-01\SL-1 Barnstable, MA - RL 6A Photometric.dwg Plot Date: Aug 23, 2018 10:08am

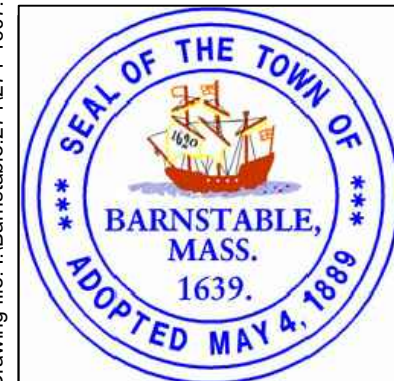
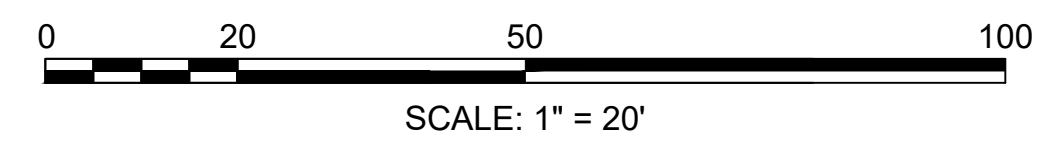


- NOTES:
- REFLECTANCES ASSUMED: GRADE: 50
 - MOUNTING HEIGHTS: 14'-0" ABOVE GRADE
 - FIXTURES SPACED: ~ 80'-0" OC
 - TASK HEIGHT: AT GRADE
 - CALCULATION POINT SPACING: 10'X10' OC
 - EXTERIOR CALCULATION

STATISTICS						
DESCRIPTION	SYMBOL	AVG.	MAX	MIN.	MAX/MIN	AVG/MIN
Outer Perimeter	+	0.3 fc	7.1 fc	0.0 fc	N/A	N/A
Route 6A	+	1.7 fc	6.7 fc	0.0 fc	N/A	N/A

SCHEDULE

SYMBOL	LABEL	QUANTITY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP	# OF LAMPS	LUMENS PER LAMP	LLF	WATTAGE
⊕	LP		ANP Lighting	LA195 3 NL P078LD4 D T3 40K ACCESSORIES MOUNTING FINISHES	LA195	LED	1	9480	0.9	76.45

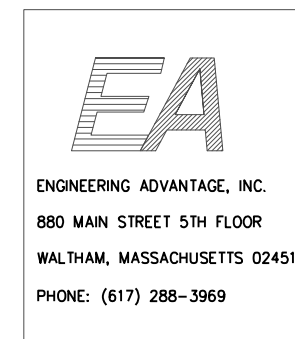


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MARK	DATE	DESCRIPTION

Scale	NTS
Date	OCTOBER 2017
Job No.	271-1607
Designed by	LAF
Drawn by	MC
Checked by	LAF
Approved by	---



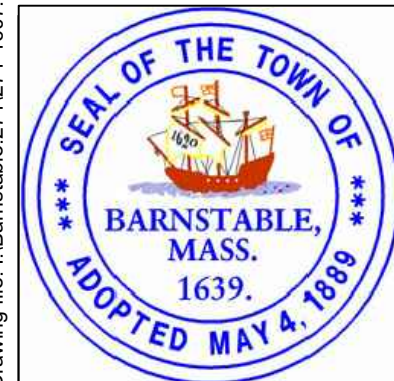
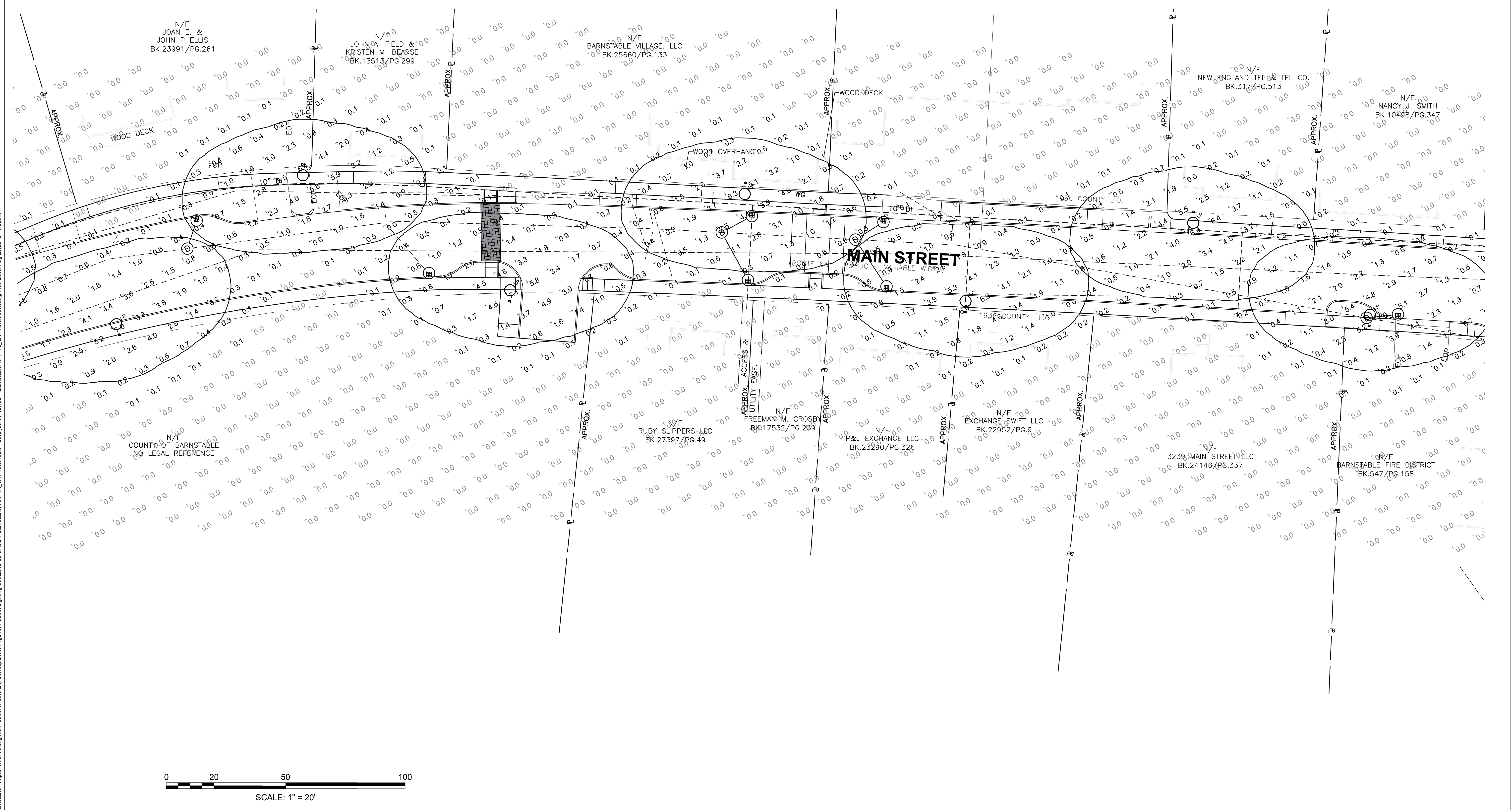
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

SITE PHOTOMETRIC
PLAN

NOT FOR CONSTRUCTION
Sheet No.

91

Drawing file: I:\Barnstable 271271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\Corresponding\From Street Lighting Sub\2018-09-01\SL-1 Barnstable, MA - RL 6A Photometric.dwg Plot Date: Aug 23, 2018 10:08am



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MARK	DATE	DESCRIPTION

Scale	NTS
Date	OCOTBER 2017
Job No.	271-1607
Designed by	LAF
Drawn by	MC
Checked by	LAF
Approved by	---



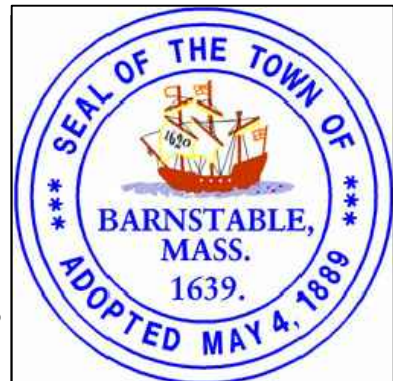
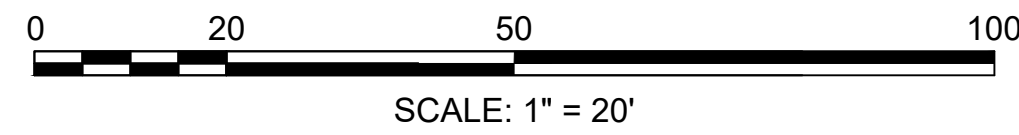
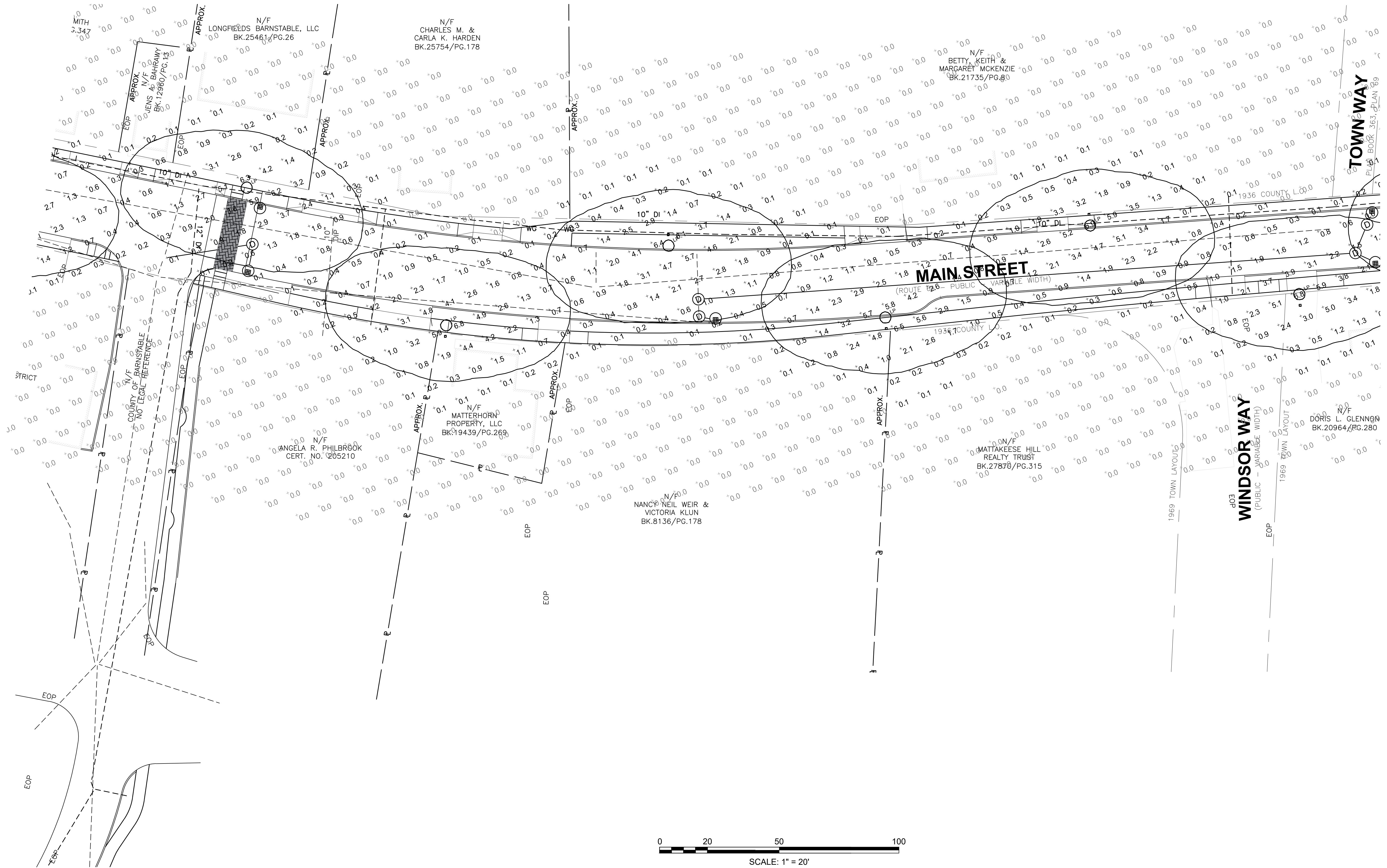
TRANSPORTATION IMPROVEMENTS
 ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
 BARNSTABLE, MASSACHUSETTS

**SITE PHOTOMETRIC
 PLAN**

NOT FOR CONSTRUCTION

Sheet No. **92**

Drawing file: I:\Barnstable 271271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\Corresponding\From Street Lighting Sub\2018-08-01\SL-1 Barnstable, MA - RL 6A Photometric.dwg Plot Date: Aug 23, 2018 10:11am



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MARK	DATE	DESCRIPTION

Scale	NTS
Date	OCTOBER 2017
Job No.	271-1607
Designed by	LAF
Drawn by	MC
Checked by	LAF
Approved by	---



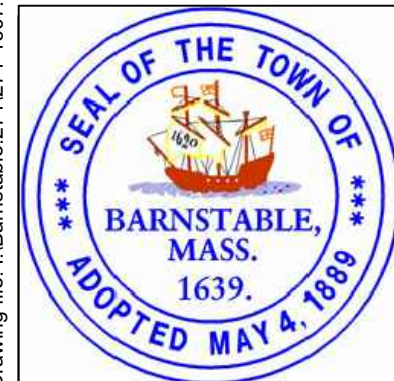
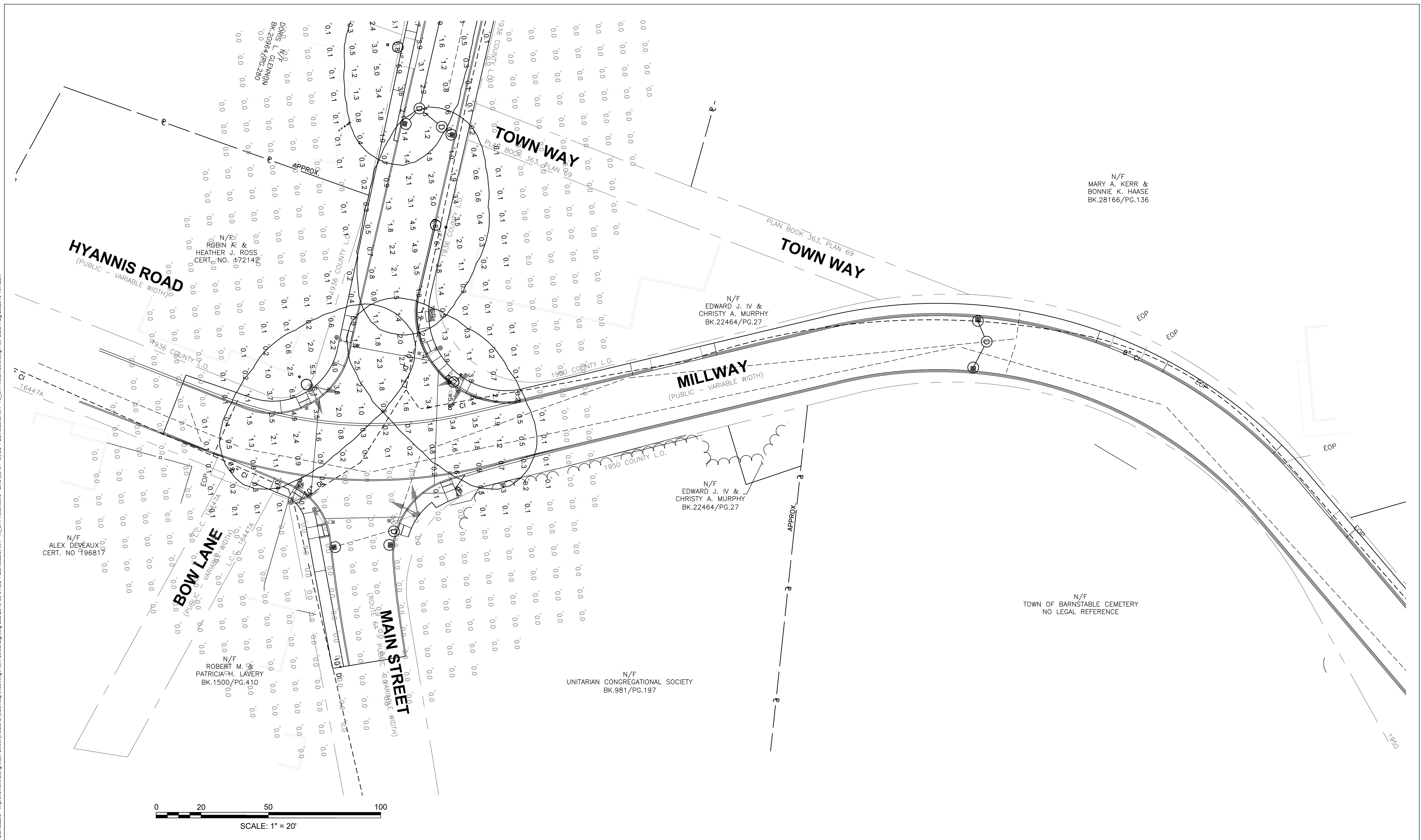
TRANSPORTATION IMPROVEMENTS
 ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
 BARNSTABLE, MASSACHUSETTS

SITE PHOTOMETRIC
 PLAN

NOT FOR CONSTRUCTION
 Sheet No.

93

Drawing file: I:\Barnstable 271271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\Corresponding\From Street Lighting Sub\2018-08-01\SL-1 Barnstable, MA - RL 6A Photometric.dwg Plot Date: Aug 23, 2018 10:12am

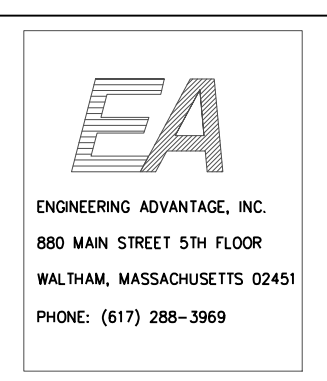


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MARK	DATE	DESCRIPTION

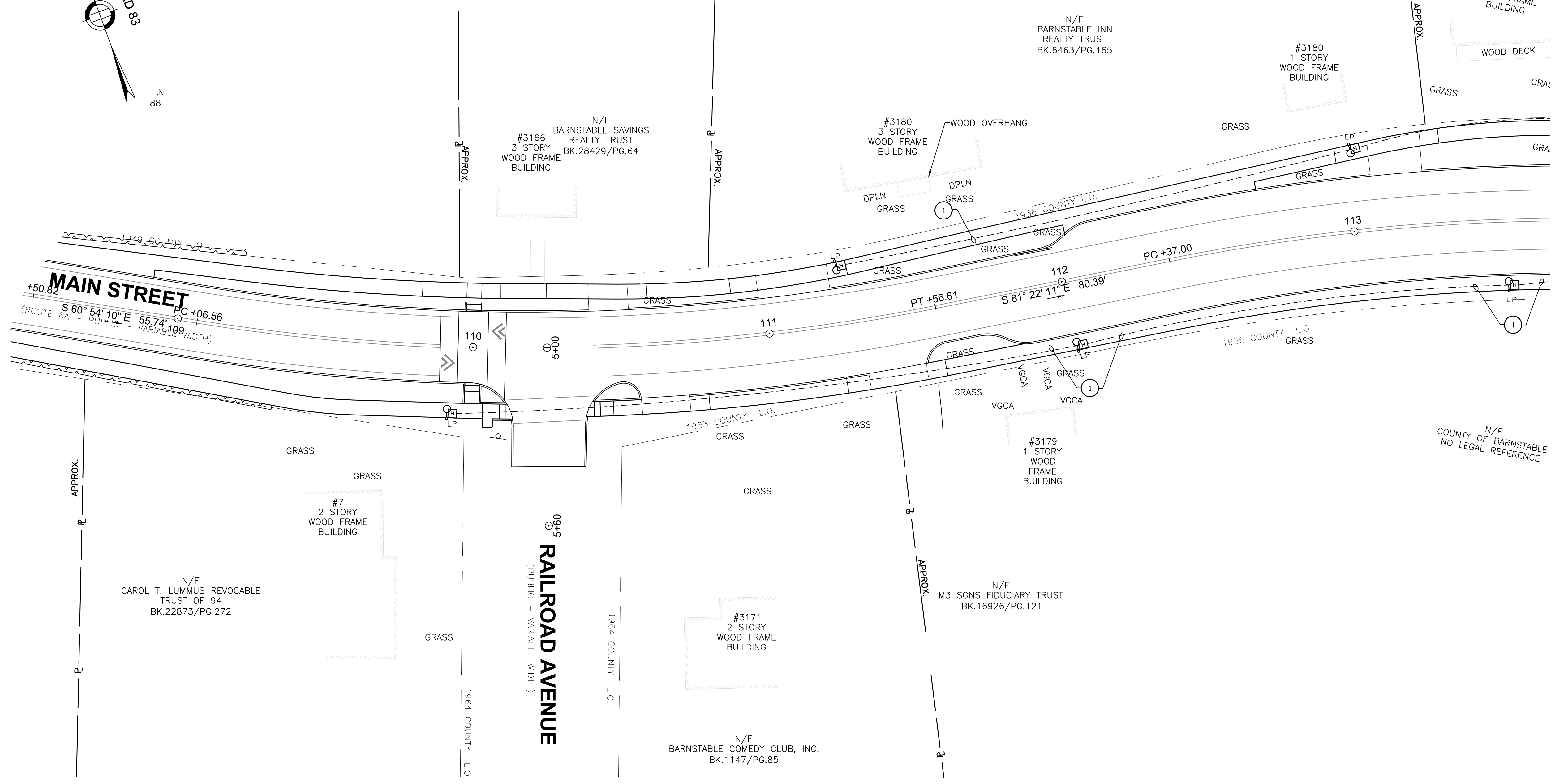
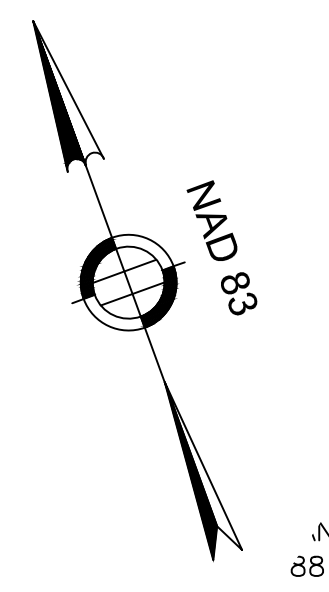
Scale	NTS
Date	OCTOBER 2017
Job No.	271-1607
Designed by	LAF
Drawn by	MC
Checked by	LAF
Approved by	---



**TRANSPORTATION IMPROVEMENTS
 ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
 BARNSTABLE, MASSACHUSETTS**

**SITE PHOTOMETRIC
 PLAN**

NOT FOR CONSTRUCTION
 Sheet No. **94**



WIRE FILL LEGEND
 ① 4#6 & 1#6 GND. - 2' PVC

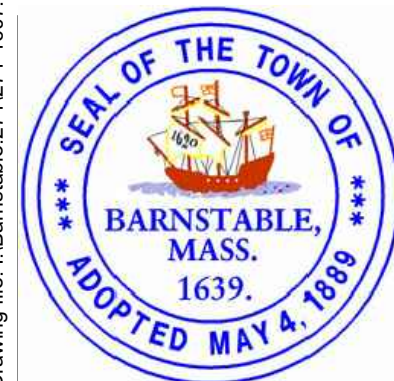
- NOTES:**
- REFLECTANCES ASSUMED: GRADE: 50
 - MOUNTING HEIGHTS: 14'-0" ABOVE GRADE
 - FIXTURES SPACED: ~ 80'-0" OC
 - TASK HEIGHT: AT GRADE
 - CALCULATION POINT SPACING: 10'X10' OC
 - EXTERIOR CALCULATION

STATISTICS						
DESCRIPTION	SYMBOL	AVG.	MAX	MIN.	MAX/MIN	AVG/MIN
Outer Perimeter	+	0.3 fc	7.1 fc	0.0 fc	N/A	N/A
Route 6A	+	1.7 fc	6.7 fc	0.0 fc	N/A	N/A

SCHEDULE

SYMBOL	LABEL	QUANTITY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP	# OF LAMPS	LUMENS PER LAMP	LLF	WATTAGE
⊙	LP		ANP Lighting	LA195 3 NL P078LD4 D T3 40K ACCESSORIES MOUNTING FINISHES	LA195	LED	1	9480	0.9	76.45

Drawing file: I:\Barnstable 271271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\Corresponding\From Street Lighting Sub\2018-08-16\SE-1 Barnstable, MA - RL 6A - Bin\SE-1 Barnstable, MA - RL 6A.dwg Plot Date: Aug 23, 2018 10:16am

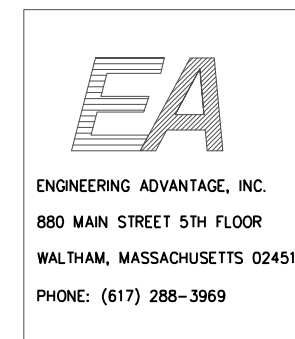


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MARK	DATE	DESCRIPTION

Scale	NTS
Date	August 14, 2018
Job No.	271-1607
Designed by	LAF
Drawn by	MC
Checked by	LAF
Approved by	---

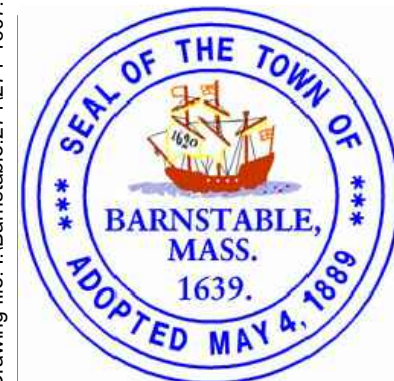
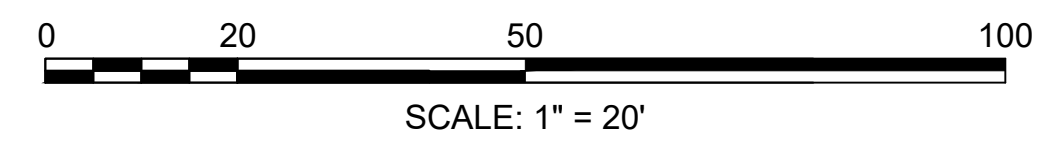
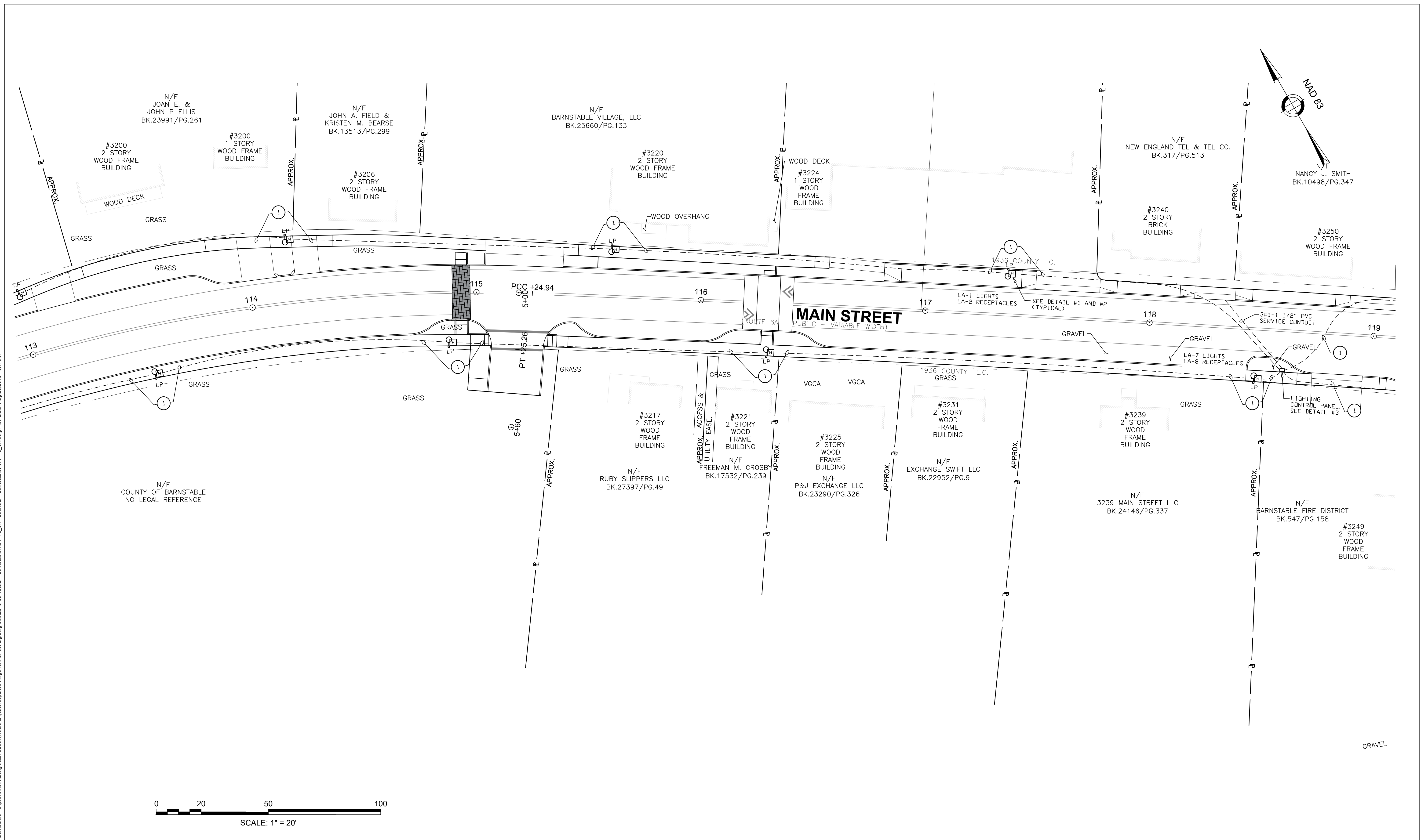


**TRANSPORTATION IMPROVEMENTS
 ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
 BARNSTABLE, MASSACHUSETTS**

SITE LIGHTING PLAN

NOT FOR CONSTRUCTION
 Sheet No.
95

Drawing file: I:\Barnstable 271271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\Corresponding\From Street Lighting Sub\2018-08-16\SE-1 Barnstable, MA - RT 6A - Bird\SE-1 Barnstable, MA - RT 6A.dwg Plot Date: Aug 23, 2018 10:17am

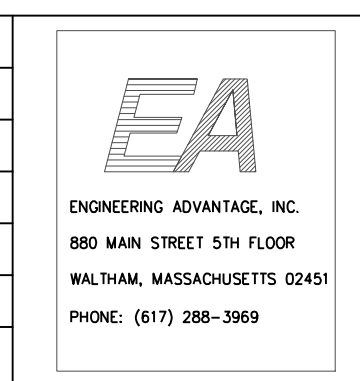


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MARK	DATE	DESCRIPTION

Scale	NTS
Date	August 14, 2018
Job No.	271-1607
Designed by	LAF
Drawn by	MC
Checked by	LAF
Approved by	---

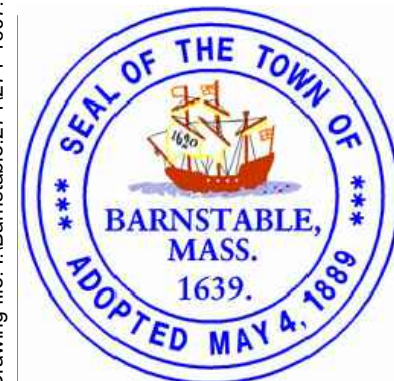
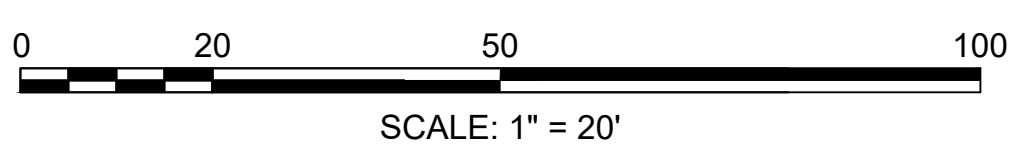
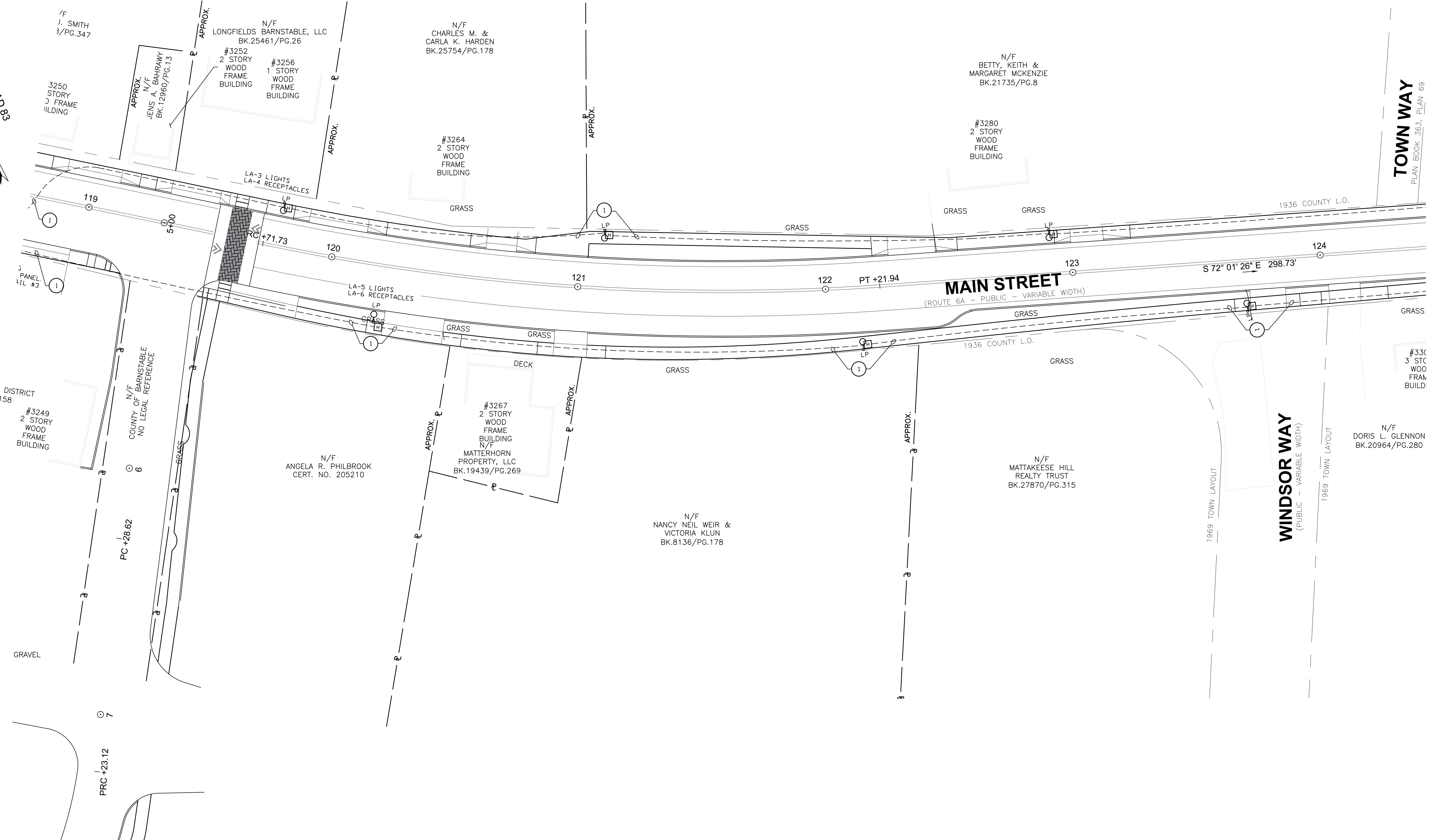
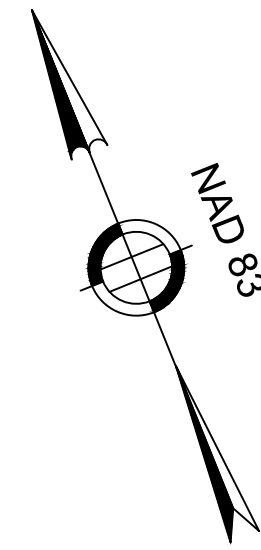


**TRANSPORTATION IMPROVEMENTS
 ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
 BARNSTABLE, MASSACHUSETTS**

SITE LIGHTING PLAN

NOT FOR CONSTRUCTION
 Sheet No. **96**

Drawing file: I:\Barnstable 271271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\Corresponding\From Street Lighting Sub\2018-08-16\SE-1 Barnstable, MA - RL 6A - Bnd\SE-1 Barnstable, MA - RL 6A.dwg Plot Date: Aug 23, 2018 10:18am



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MARK	DATE	DESCRIPTION

EA
 ENGINEERING ADVANTAGE, INC.
 880 MAIN STREET 5TH FLOOR
 WALTHAM, MASSACHUSETTS 02451
 PHONE: (617) 288-3969

TRANSPORTATION IMPROVEMENTS
 ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
 BARNSTABLE, MASSACHUSETTS

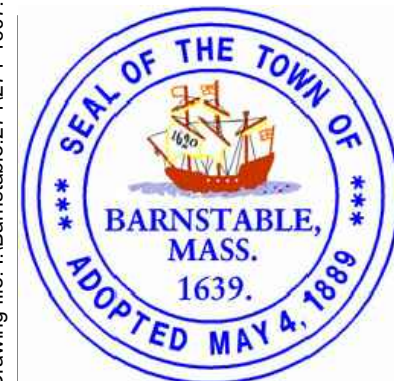
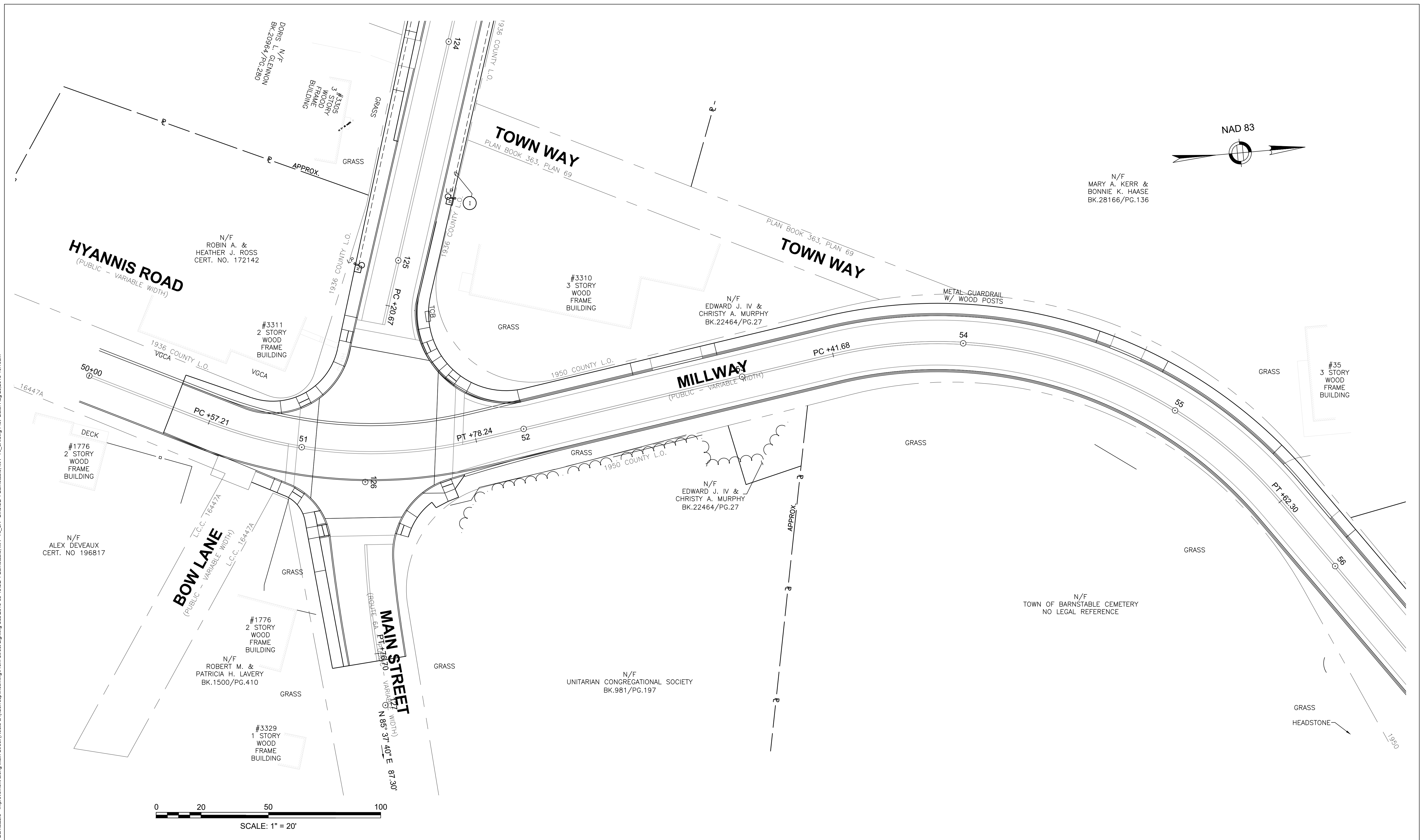
SITE LIGHTING PLAN

NOT FOR CONSTRUCTION

Sheet No.

97

Drawing file: I:\Barnstable 271271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\Corresponding\From Street Lighting Sub\2018-08-16\SE-1 Barnstable, MA - RL 6A - Bird\SE-1 Barnstable, MA - RL 6A.dwg Plot Date: Aug 23, 2018 10:18am

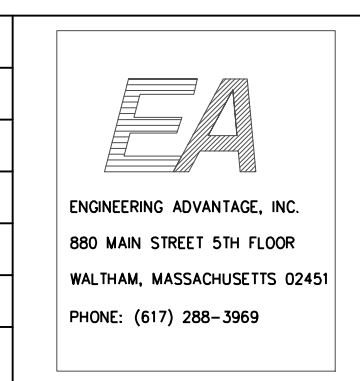


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MARK	DATE	DESCRIPTION

Scale	NTS
Date	August 14, 2018
Job No.	271-1607
Designed by	LAF
Drawn by	MC
Checked by	LAF
Approved by	---

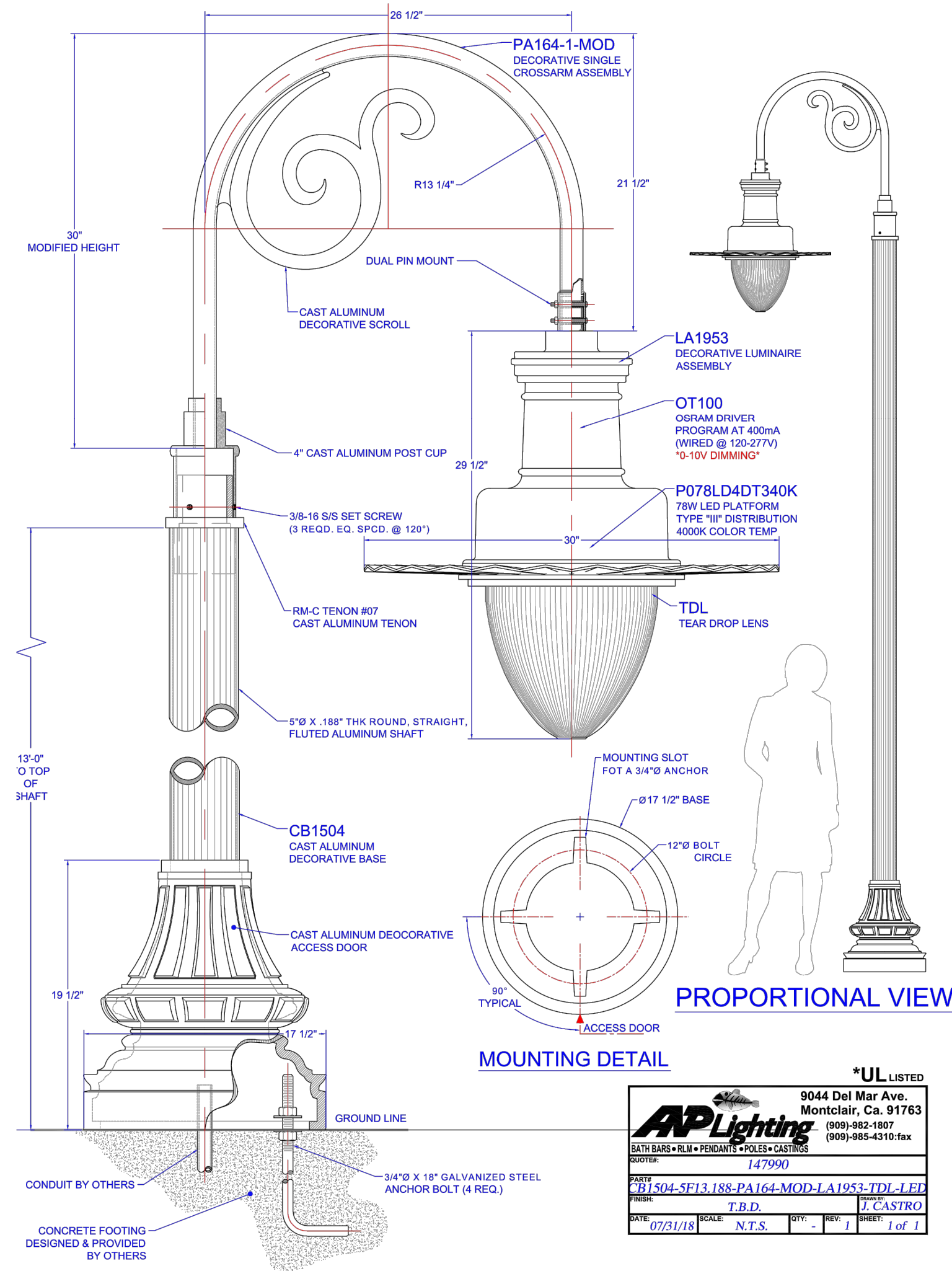


TRANSPORTATION IMPROVEMENTS
 ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
 BARNSTABLE, MASSACHUSETTS

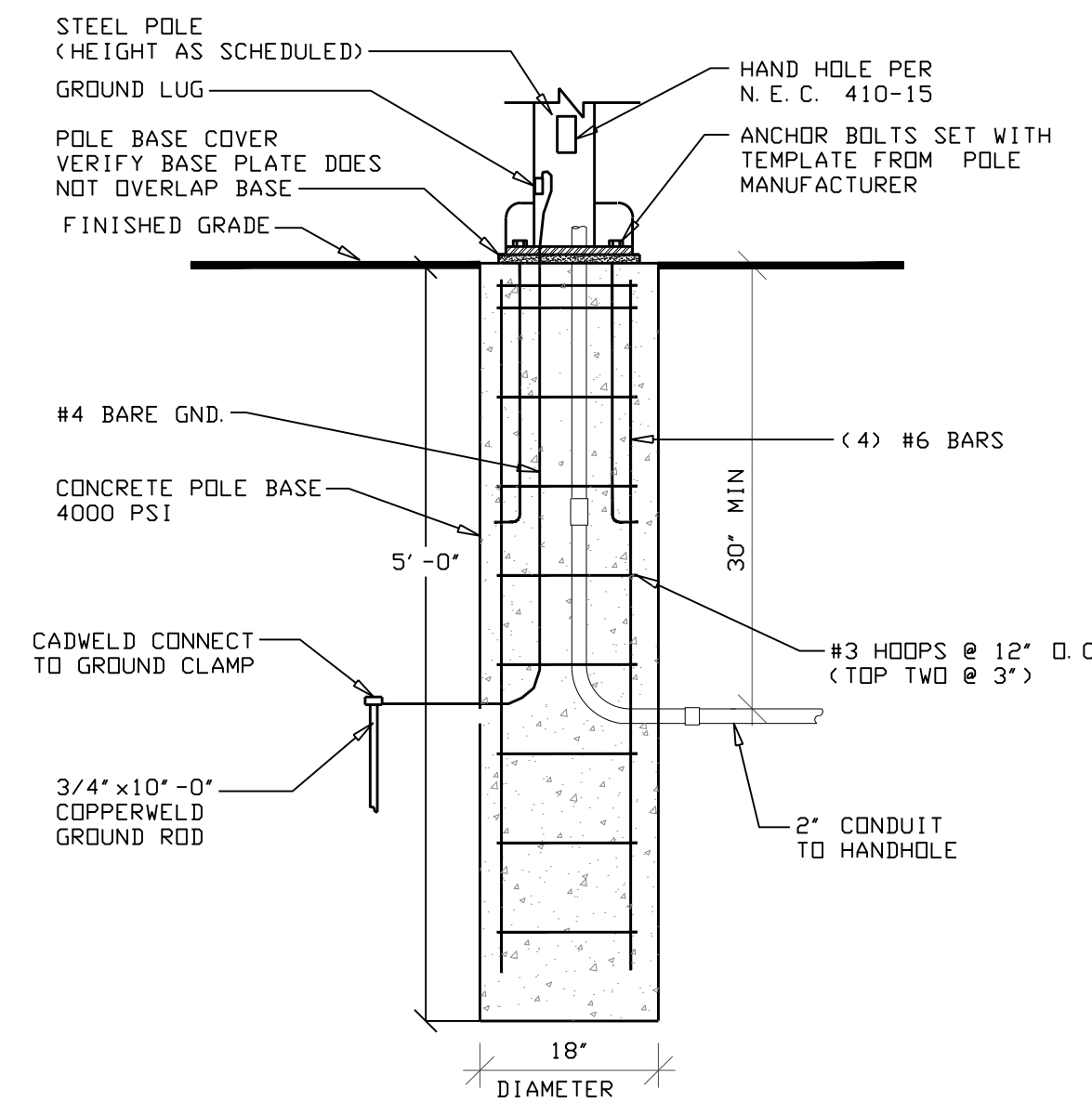
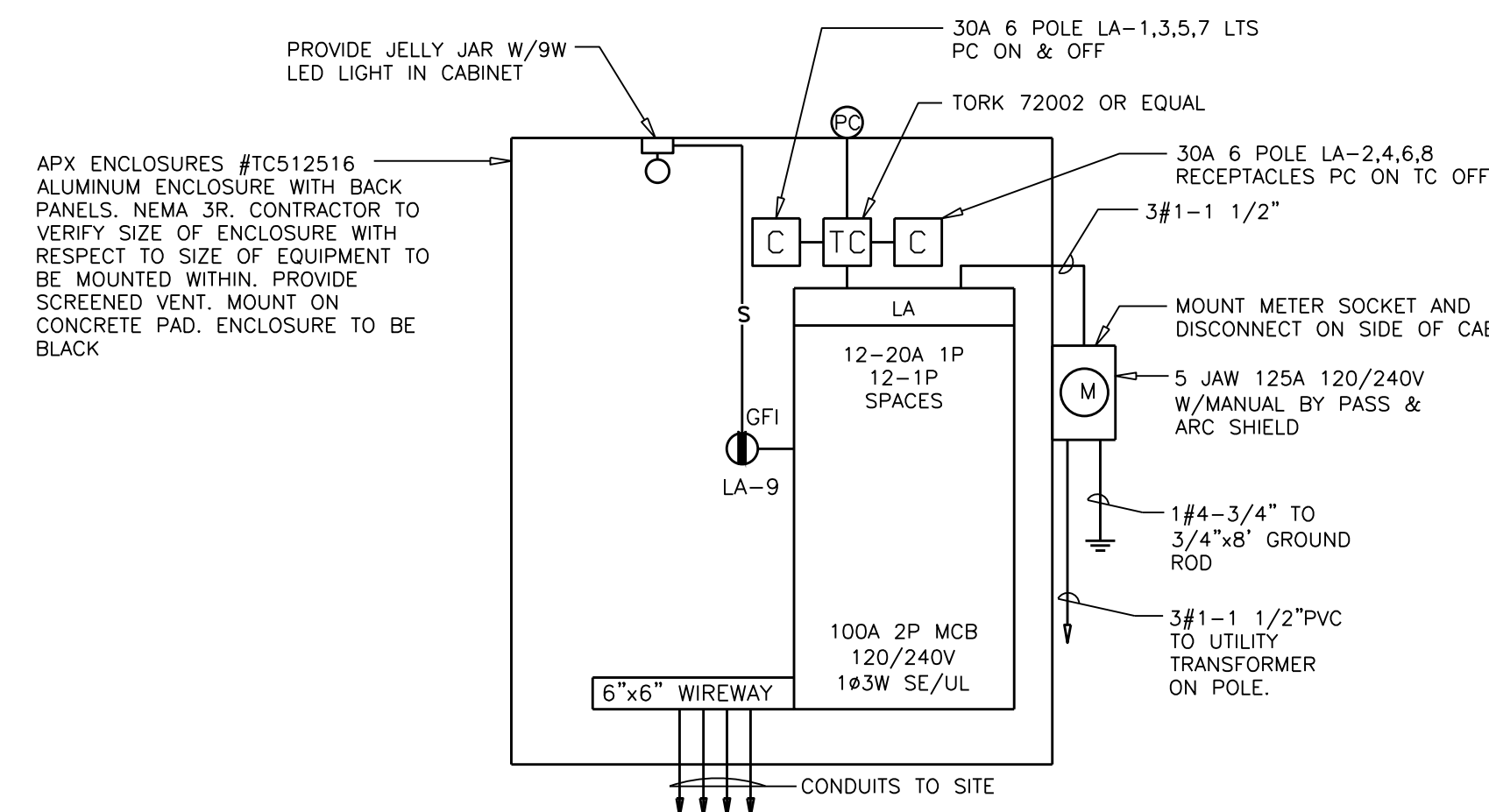
SITE LIGHTING PLAN

NOT FOR CONSTRUCTION
 Sheet No. **98**

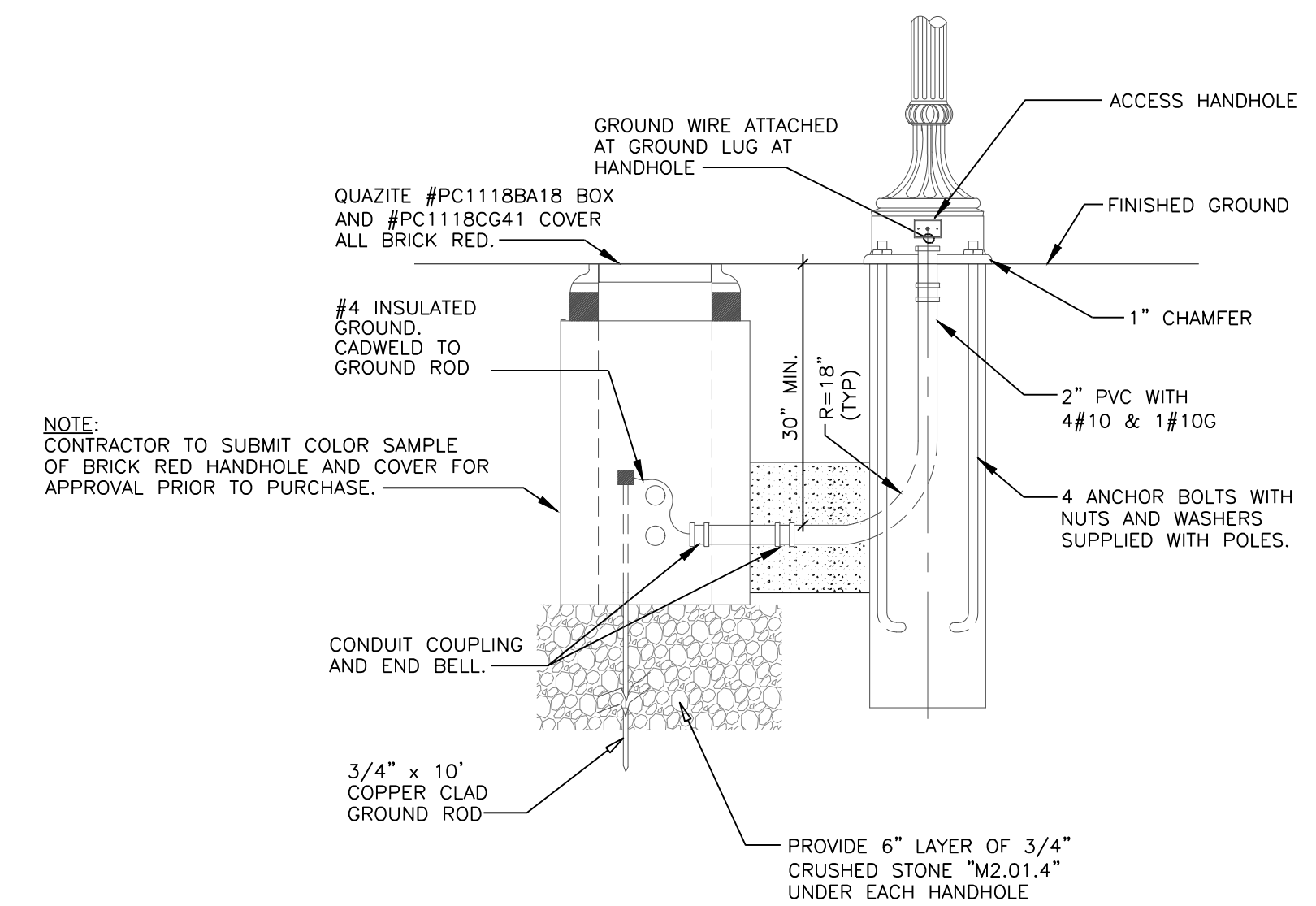
Drawing file: I:\Barnstable 271271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\Corresponding\From Street Lighting Sub\2018-08-16\SE-1 Barnstable, MA - RL 6A.dwg Plot Date: Aug 23, 2018 10:20am



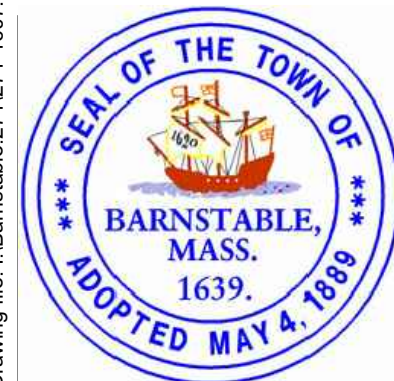
PANEL LA		CONNECTED LOAD:				*HANDLE LOCKS [S]		
		120/240 VOLTS 1Ø 3W				MAINS: 100A 2P		
CKT NO	DESCRIPTION	CKT BKR	CONNECTED LOAD WATTS		CKT BKR	DESCRIPTION	CKT NO	
			A	B				
1	LIGHTS	20	1		20	1	POLE RECEPTACLE	2
3	LIGHTS	20	1		20	1	POLE RECEPTACLE	4
5	LIGHTS	20	1		20	1	POLE RECEPTACLE	6
7	LIGHTS	20	1		20	1	POLE RECEPTACLE	8
9	CABINET & PLUG	20	1		20	1	SPARE	10
11	SPARE	20	1		20	1	SPARE	12
13	SPACE ONLY						SPACE ONLY	14
15	SPACE ONLY						SPACE ONLY	16
17	SPACE ONLY						SPACE ONLY	18
19	SPACE ONLY						SPACE ONLY	20
21	SPACE ONLY						SPACE ONLY	22
23	SPACE ONLY						SPACE ONLY	24



1 POLE BASE DETAIL TYPE B & C
 NOT TO SCALE



2 TYPICAL POLE BASE, HANDHOLE AND POLE FOUNDATION
 NOT TO SCALE

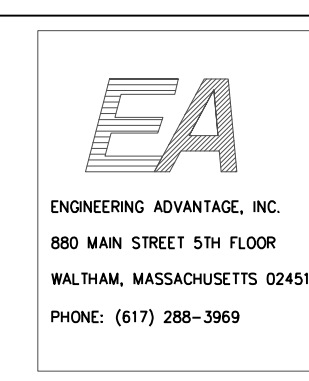


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MARK	DATE	DESCRIPTION

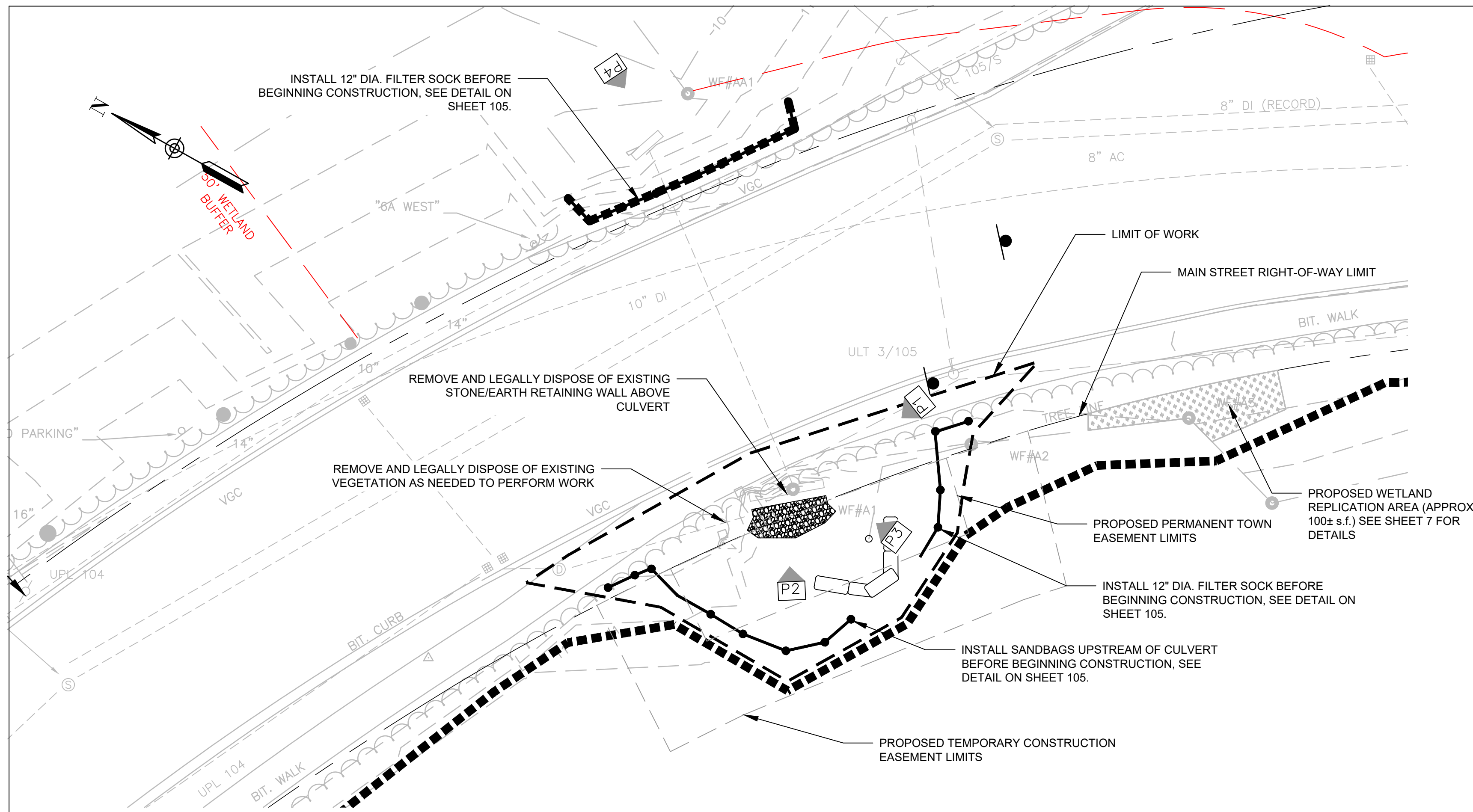
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Date	August 14, 2018
Job No.	271-1607
Designed by	LAF
Drawn by	MC
Checked by	LAF
Approved by	---



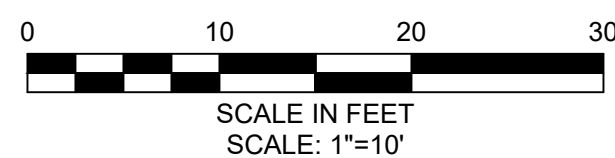
TRANSPORTATION IMPROVEMENTS
 ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
 BARNSTABLE, MASSACHUSETTS

SITE ELECTRICAL
 DETAIL PLAN

NOT FOR CONSTRUCTION
 Sheet No. 99



PLAN
SCALE: 1"=10'



GENERAL CONSTRUCTION PROCEDURE:

1. THE CONTRACTOR SHALL PROVIDE AND INSTALL PROJECT SIGNS AND TRAFFIC DETOUR SIGNS AS REQUIRED TO COMPLETE THE WORK.
2. THE CONTRACTOR SHALL INSTALL EROSION CONTROLS PRIOR TO ANY CLEARING ACTIVITIES. EROSION CONTROLS SHALL BE INSPECTED AND APPROVED BY THE CONSERVATION AGENT BEFORE ANY FURTHER ACTIVITIES COMMENCE.
3. THE CONTRACTOR SHALL DESIGNATE AN AREA FOR STORAGE OF MATERIAL, EQUIPMENT, TEMPORARY FACILITIES AS APPROVED BY THE ENGINEER AND THE TOWN OF BARNSTABLE.
4. START ANY NECESSARY DEWATERING BEFORE ANY EXCAVATION ACTIVITIES TAKE PLACE.
5. EXCAVATE AND REMOVE EXISTING STONE/EARTH RETAINING WALL ABOVE CULVERT AND ANY ASSOCIATED VEGETATION, RIPRAP OR MATERIALS NEEDED TO PERFORM THE WORK.
6. EXCAVATE TO BOTTOM OF EXISTING HEADWALL & SUBGRADE.
7. INSTALL FILTER FABRIC AND COMPACTED CRUSHED STONE AS SPECIFIED AND SHOWN ON THE DRAWINGS.
8. PLACE CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL AND CAST-IN-PLACE REINFORCED CONCRETE FOUNDATION AS SHOWN ON THE DRAWINGS.
9. PLACE CAST-IN-PLACE REINFORCED CONCRETE HEADWALL AS SHOWN ON THE DRAWINGS. DOWEL AND EPOXY #5 REBAR @ 6" O.C. (1-FT DEPTH) AT MIN. 6" EMBED. DEPTH AROUND ALL SIDES OF BOX CULVERT INTO EXISTING PRECAST CONCRETE HEADWALL.

GENERAL CONSTRUCTION PROCEDURE (CONT.):

10. PERFORM BANK STABILIZATION AND RESTORATION WORK.
11. REMOVE TEMPORARY SANDBAG DAM SYSTEM AND BYPASS PIPING.
12. INSTALL GUARD RAIL AS SHOWN.
13. PERFORM FINAL CLEANUP.

DEWATERING & BY-PASS PIPING GENERAL PROCEDURE:

1. THE CONTRACTOR SHALL SUBMIT A BY-PASS PIPING AND A LOCAL DEWATERING PLAN TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCEMENT OF WORK. ALL WORK SHALL BE IN COMPLIANCE WITH THE ISSUED ORDER OF CONDITIONS BY THE BARNSTABLE CONSERVATION COMMISSION.
2. CLEARING AND GRUBBING FOR BYPASS PIPING AND ACCESSORIES SHALL BE COORDINATED WITH THE ENGINEER AND THE BARNSTABLE CONSERVATION AGENT PRIOR TO ANY WORK ACTIVITIES. NO WORK SHALL BEGIN UNTIL AUTHORIZATION IS GRANTED BY ENGINEER AND CONSERVATION COMMISSION.
3. INSTALL TEMPORARY SANDBAG DAM SYSTEM, AS SHOWN ON THIS SHEET AND IN ACCORDANCE WITH THE DETAIL SHOWN ON SHEET 101. COORDINATE WITH ENGINEER AND CONSERVATION AGENT FOR FINAL LOCATIONS OF THE TEMPORARY SANDBAG DAM SYSTEM.
4. SUPER SAND BAGS MAY BE USED IN PLACE OF DOWNSTREAM PORTADAM AS APPROVED BY THE ENGINEER.
5. DEWATERING PUMP INTAKE(S) WITHIN THE TEMPORARY SANDBAG DAM SYSTEM SHALL BE EQUIPPED WITH A 1/2" SCREEN MESH SURROUNDING THE PUMP INTAKES AND PROPERLY SECURED TO THE STREAM/CULVERT/POND BOTTOM. TEMPORARY STONE SHALL BE USED TO MINIMIZE UPTAKE OF SEDIMENT.
6. THE CONTRACTOR SHALL PROVIDE A DISSIPATER AT THE END OF THE BYPASS PIPE AND DEWATERING PUMP DISCHARGE PIPE OUTLET(S) TO PREVENT ANY STREAMBED DISTURBANCE DOWNSTREAM OF THE WORK. ALL DISCHARGE ACTIVITIES SHALL OCCUR WITHIN THE CONTAINMENT OF THE DOWNSTREAM EROSION CONTROLS.
7. ALL FOUNDATIONS AND EXCAVATIONS SHALL OCCUR IN "THE DRY". GROUNDWATER SHALL BE LOWERED BY A MINIMUM OF 2' BELOW THE BASE OF THE EXCAVATION.
8. THE CONTRACTOR SHALL MAINTAIN SPILL KITS ON SITE AT ALL TIMES.



PHOTO 1
EXISTING SIDEWALK LOOKING DOWN AT CULVERT, VIEW LOOKING WEST



PHOTO 3
EXISTING UPSTREAM CULVERT, VIEW LOOKING NORTH



PHOTO 2
STONE/EARTH RETAINING WALL ABOVE UPSTREAM CULVERT, VIEW LOOKING NORTH

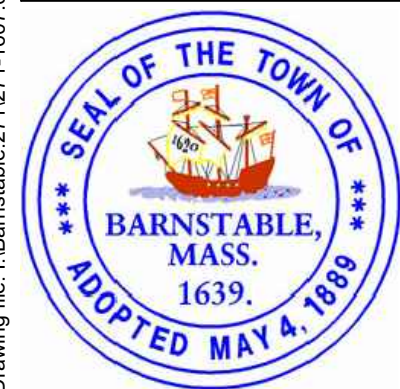


PHOTO 4
EXISTING DOWNSTREAM CULVERT, VIEW LOOKING SOUTH

DEWATERING & BY-PASS PIPING GENERAL PROCEDURE (CONT.):

9. INSTALL EXCAVATION SUPPORT AS NECESSARY.
10. MAKE FINAL ELEVATION AND DIRECTION ADJUSTMENTS.
11. INSTALL POLYETHYLENE SHEETING ALONG THE OUTSIDE FACE OF THE SANDBAGS AS NECESSARY TO PREVENT SEEPAGE.
12. LOCATE MINOR LEAKS AND REPAIR AS REQUIRED.
13. PROVIDE SUMP PUMPS AS REQUIRED TO MAINTAIN A DRY EXCAVATION.
14. BYPASS PIPING SHALL BE INSTALLED AND REMOVED PER MANUFACTURER'S INSTRUCTIONS.

Drawing file: I:\Barnstable\2711271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet\Culvert Modis - Rev. 2.dwg Plot Date: Oct 23, 2018 - 1:21pm



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02	08/22/18	FINAL SUBMISSION				
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION				

Scale	1" = 10'
Date	OCTOBER 2018
Job No.	271-1607
Designed by	ATG
Drawn by	ATG
Checked by	RJP
Approved by	ZFK

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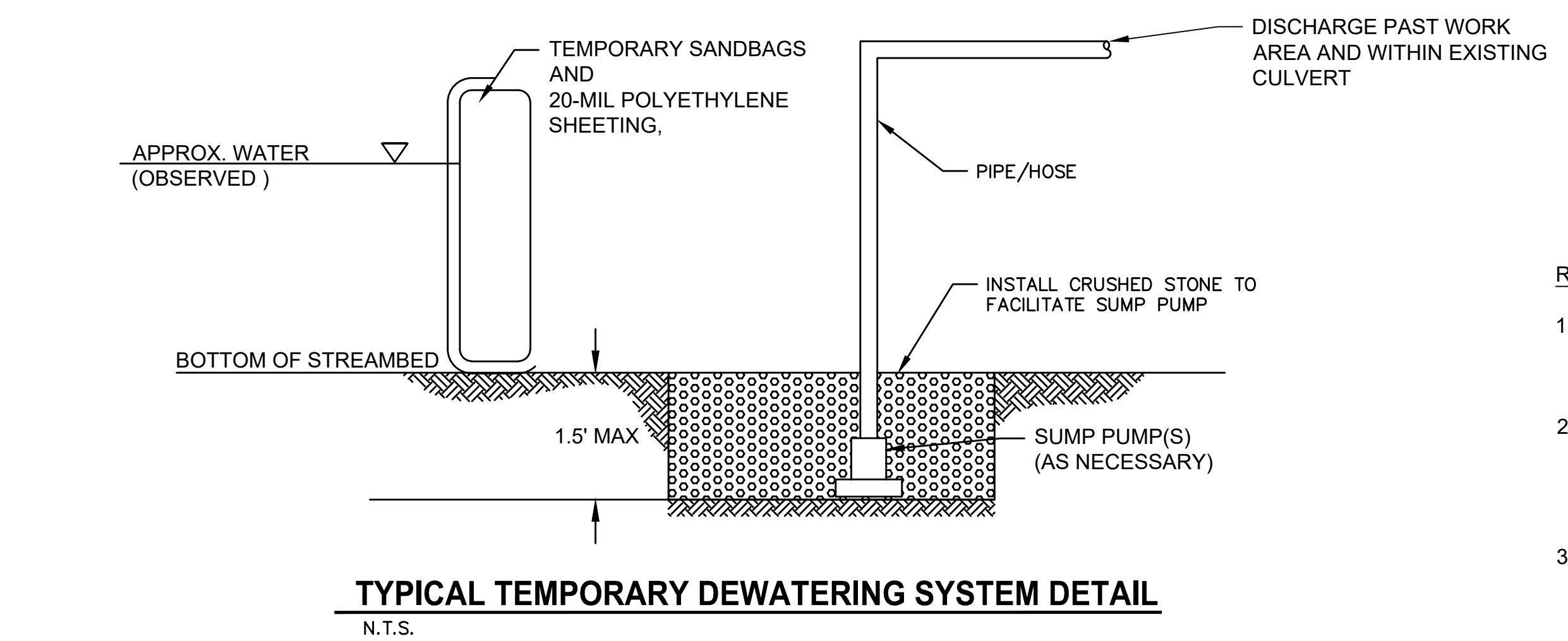
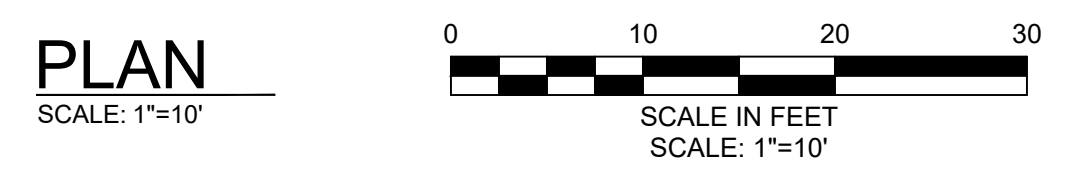
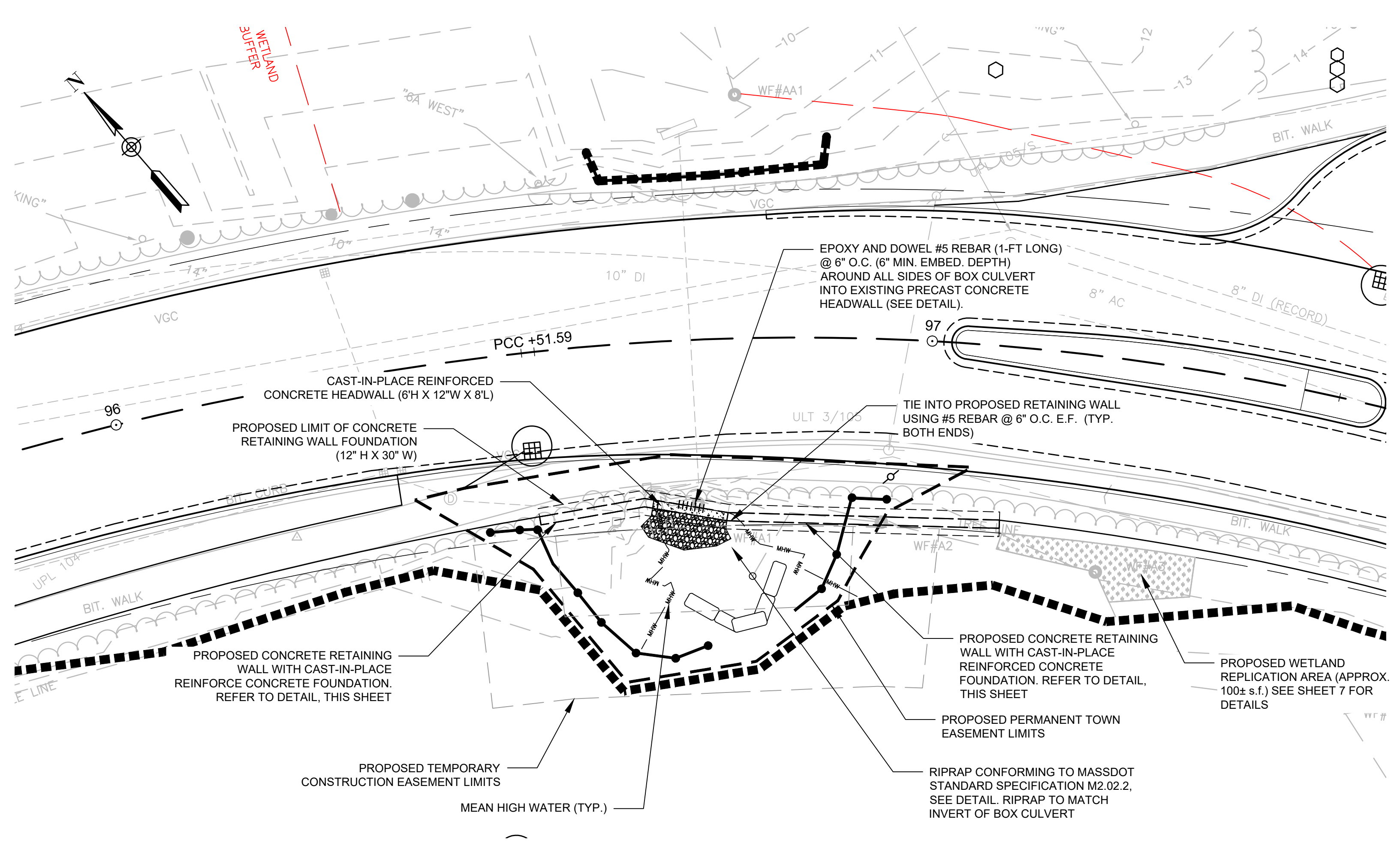
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

EXISTING CONDITIONS AND SEDIMENT
CONTROL PLAN

NOT FOR CONSTRUCTION

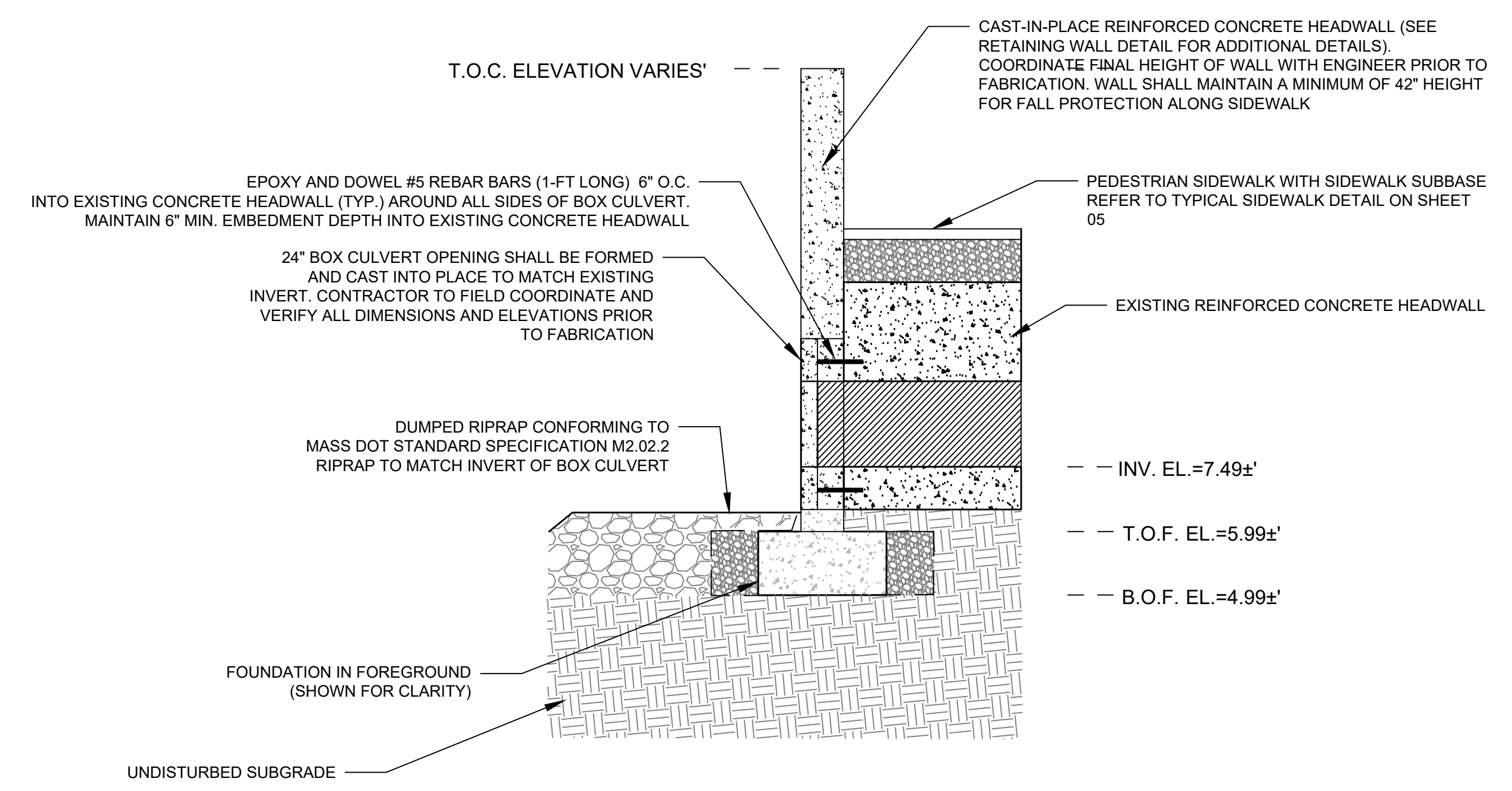
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100

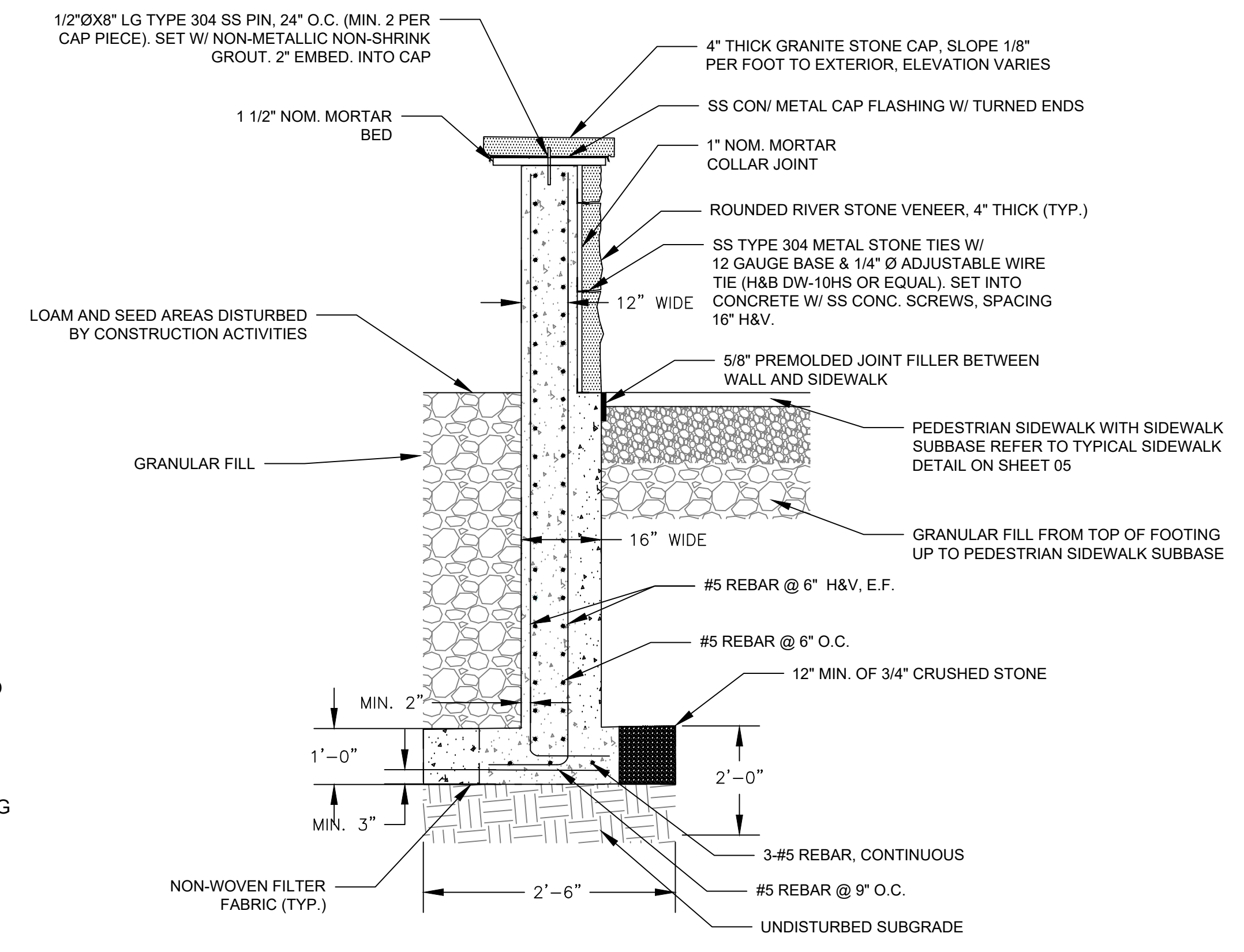


TYPICAL TEMPORARY DEWATERING SYSTEM DETAIL
N.T.S.

- RETAINING WALL NOTES:**
1. CONTRACTOR SHALL PERFORM TEST PITS AT ALL WALL LOCATIONS TO DETERMINE SOIL TYPE AND SUBMIT TO TOWN AND ENGINEER TO CONFIRM DESIGN PRIOR TO CONSTRUCTION.
 2. THE TOP OF CONCRETE (T.O.C.) AND BOTTOM OF FOOTING (B.O.F.) ELEVATIONS WILL VARY ALONG THE ENTIRE LENGTH OF THE RETAINING WALL. CONTRACTOR SHALL FIELD COORDINATE AND VERIFY ALL DIMENSIONS PRIOR TO CONCRETE PLACEMENT.
 3. TURNED METAL CAP FLASHING WITH FULLY HEMMED CORNERS SHALL BE INSTALLED BELOW GRANITE CAP AND MORTAR BED. FLASHING AND GRANITE CAP SHALL BE SET IN MORTAR. BITUMASTIC SEALANT SHALL BE APPLIED WHERE PIN PENETRATES FLASHING.
 4. OFFSET JOINT OF METAL CAP FLASHING BY 2'-0" MINIMUM FROM MORTAR JOINT OF GRANITE CAP.

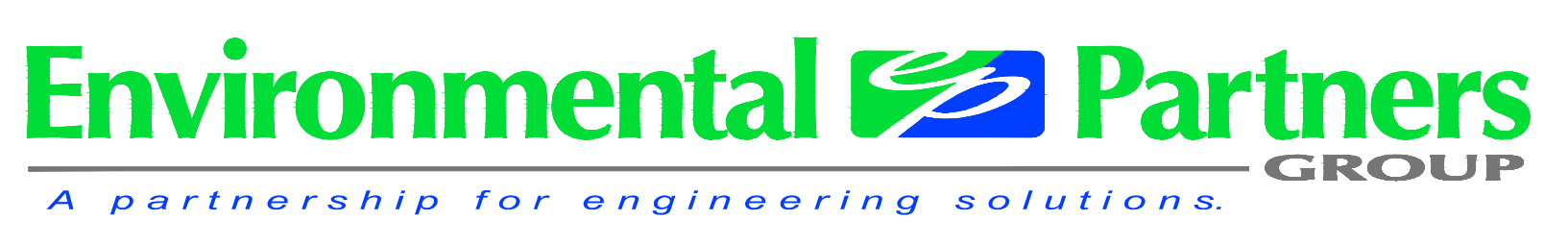
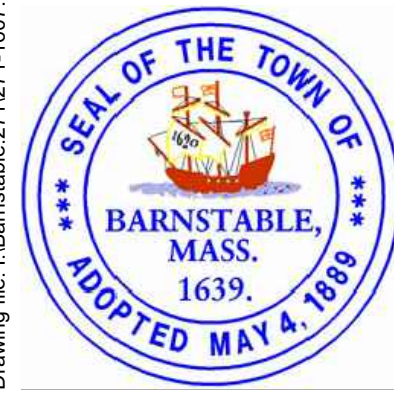


HEADWALL CONNECTION DETAIL
SCALE: N.T.S.



TYPICAL RETAINING WALL DETAIL
SCALE: N.T.S.

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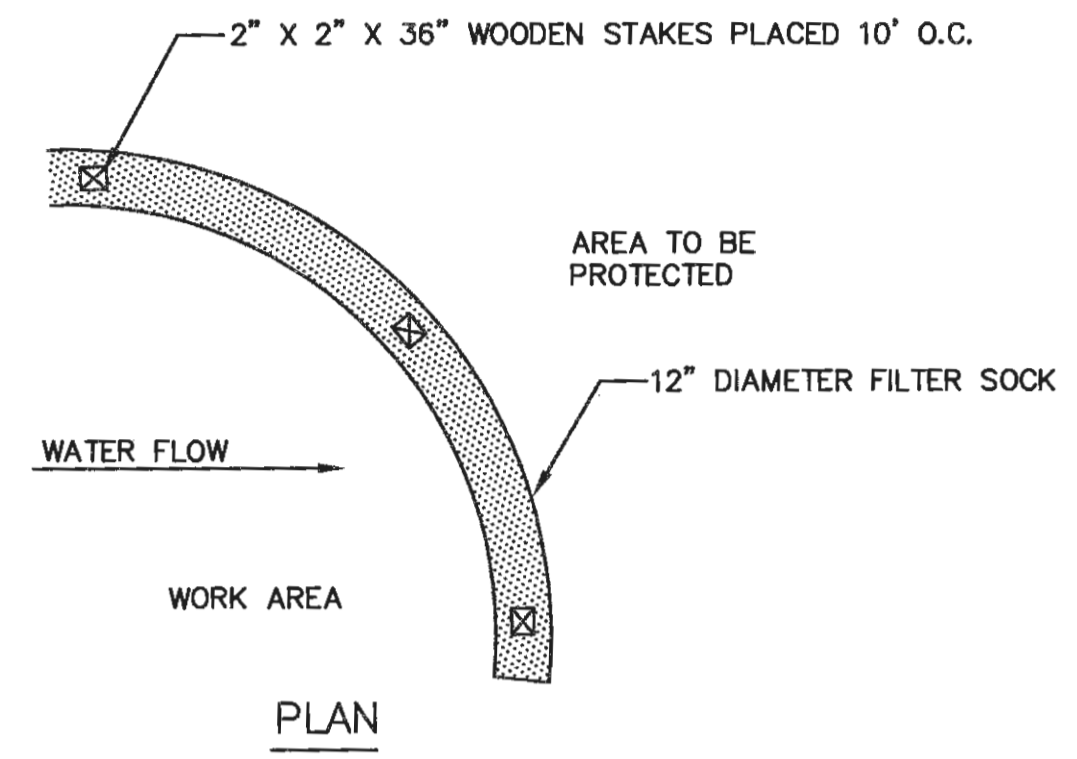
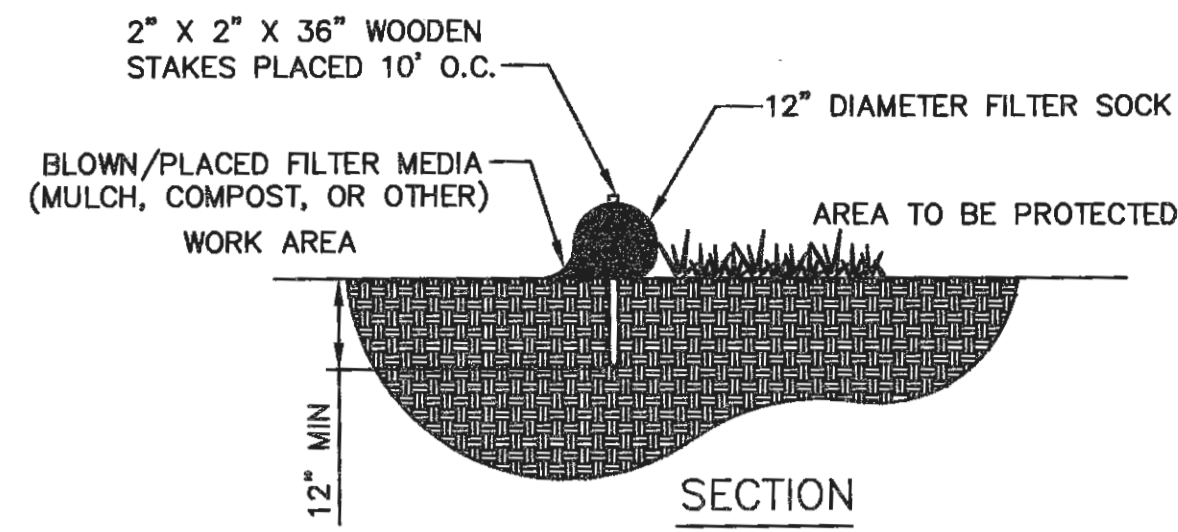
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02	08/22/18	FINAL SUBMISSION	ATG	RJP	ZFK
01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	ATG	RJP	ZFK

Scale: 1" = 10'
Date: OCTOBER 2018
Job No.: 271-1607
Designed by: ATG
Drawn by: ATG
Checked by: RJP
Approved by: ZFK

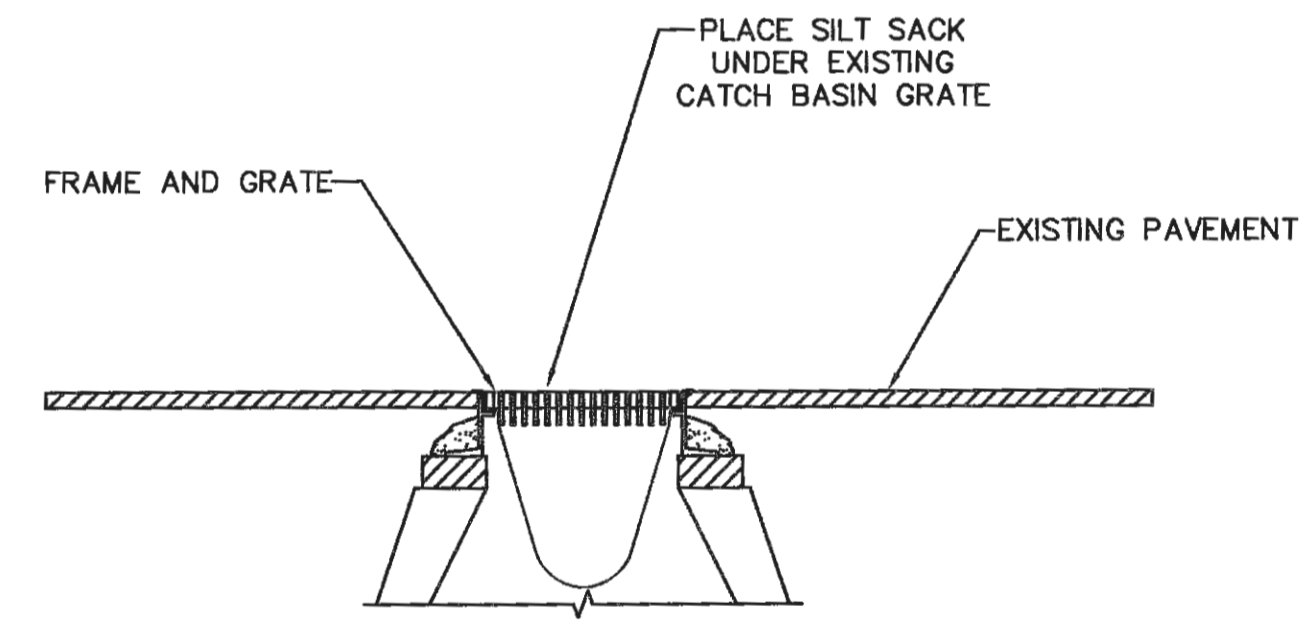
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

PROPOSED CULVERT PLAN AND DETAILS

NOT FOR CONSTRUCTION
Sheet No. 101

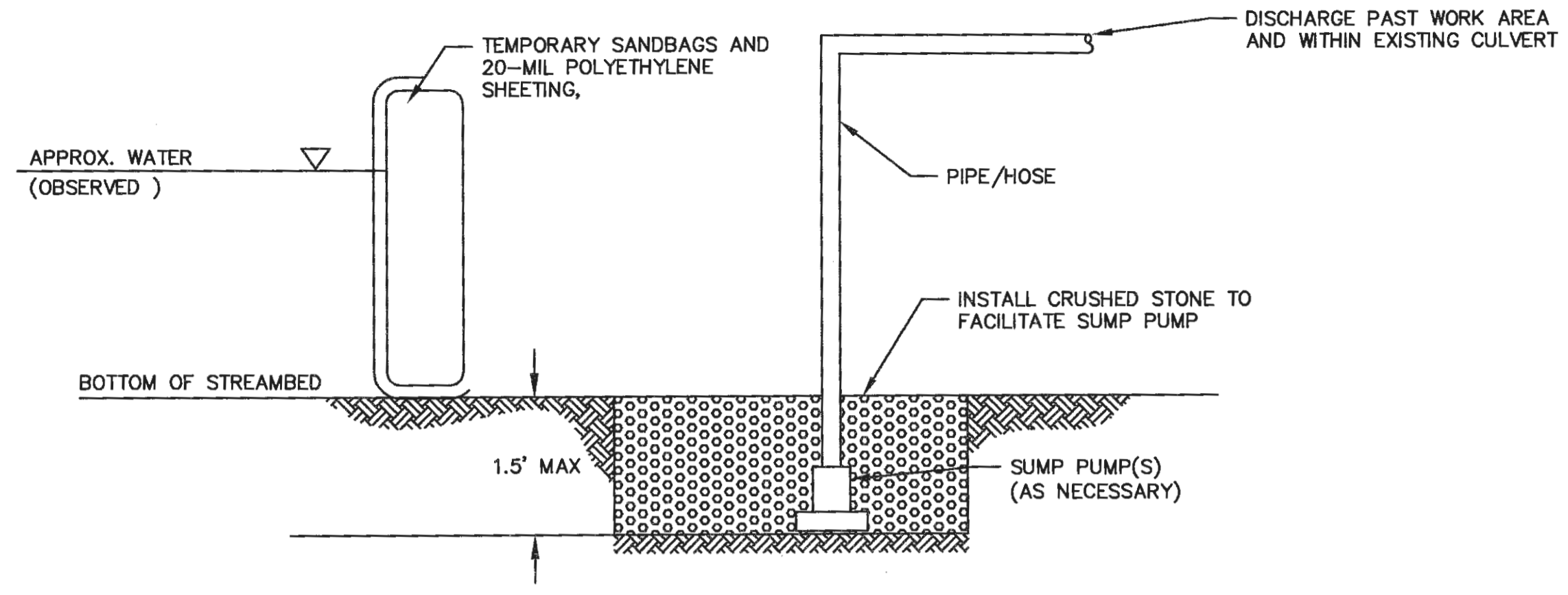


12" DIAMETER FILTER SOCK
N.T.S.

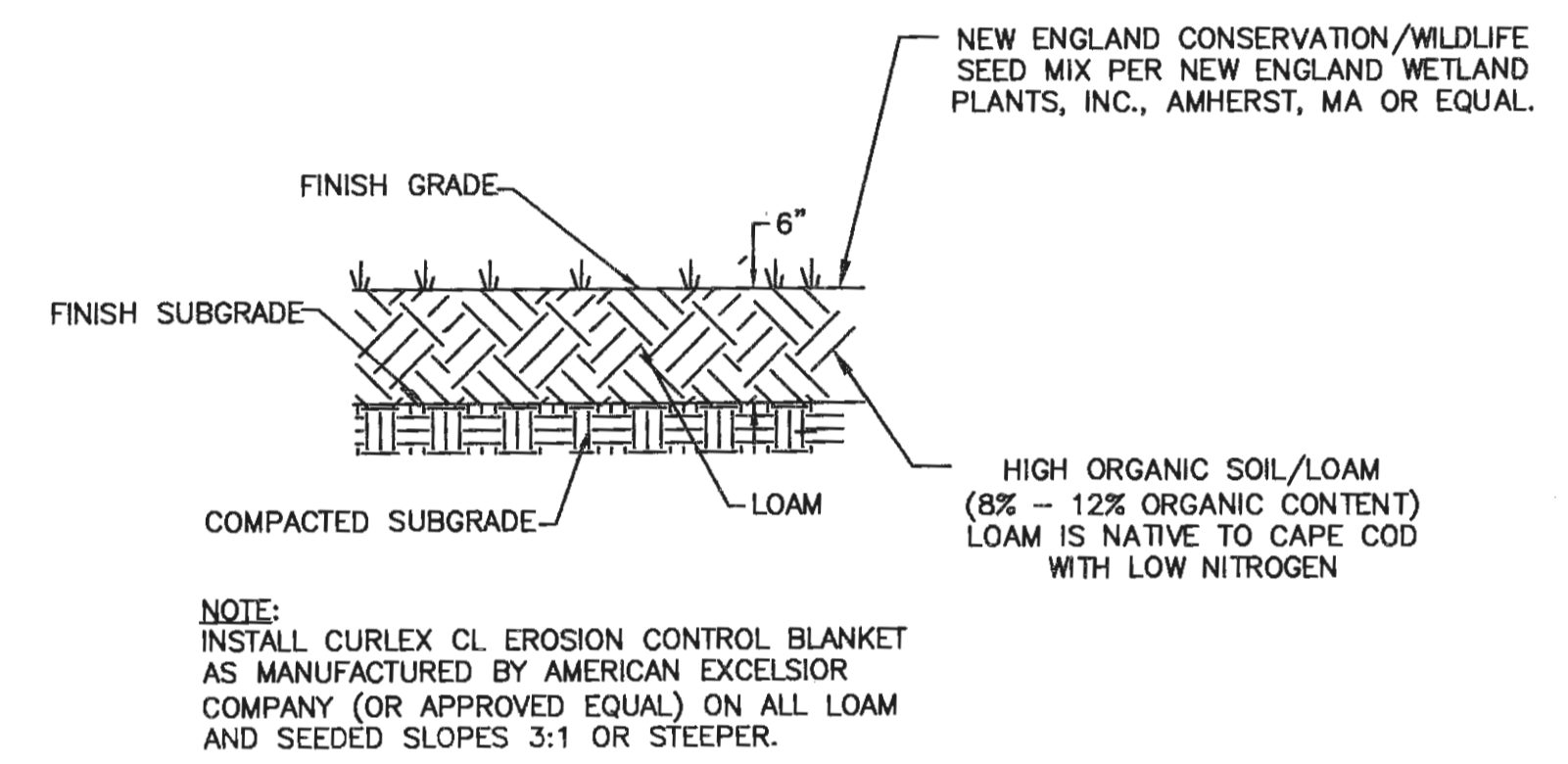


- NOTES:**
1. SILT SACKS SHALL BE INSPECTED WEEKLY AND ACCUMULATED SILT REMOVED TO ALLOW CATCH BASIN TO FUNCTION PROPERLY.
 2. SILT SACK AS MANUFACTURED BY ACF ENVIRONMENTAL (800-448-3636) OR APPROVED EQUAL.

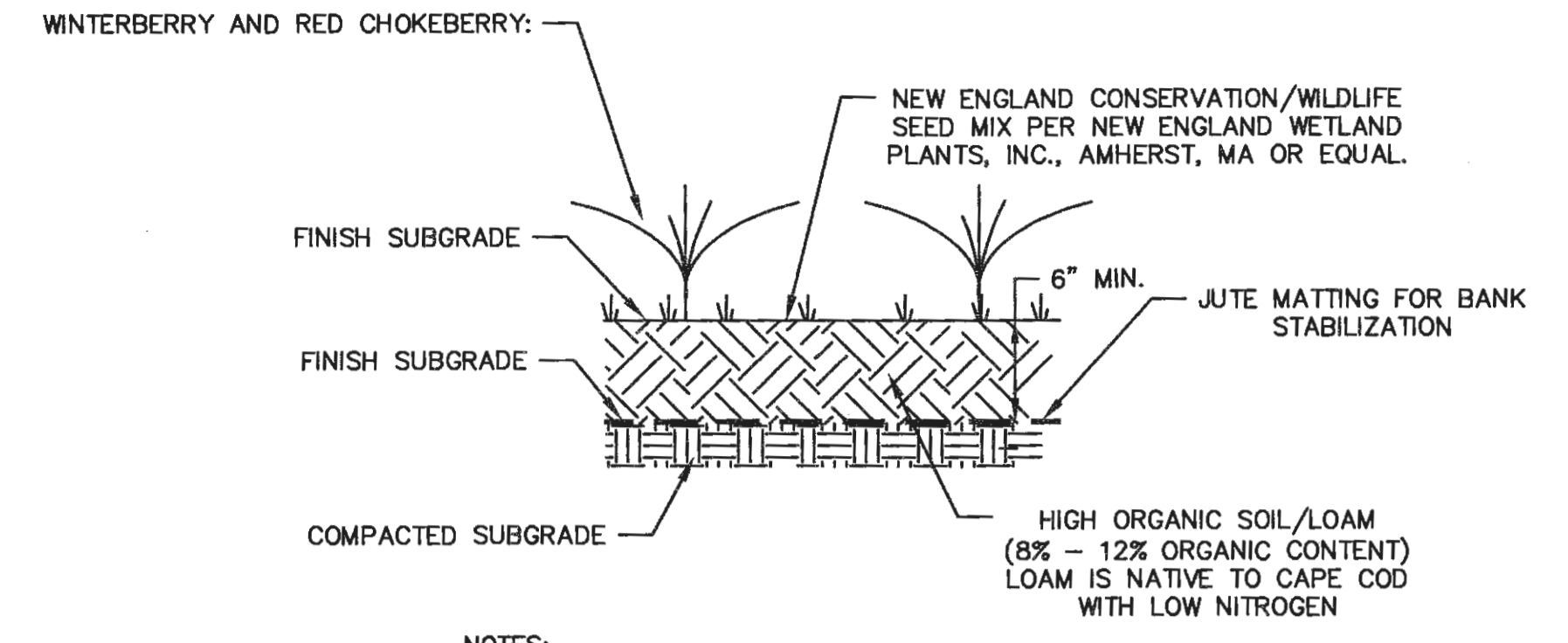
CATCH BASIN SILT SACK DETAIL
N.T.S.



TYPICAL TEMPORARY DEWATERING SYSTEM DETAIL
N.T.S.



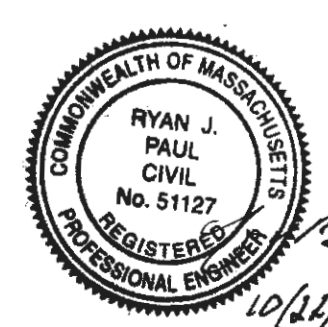
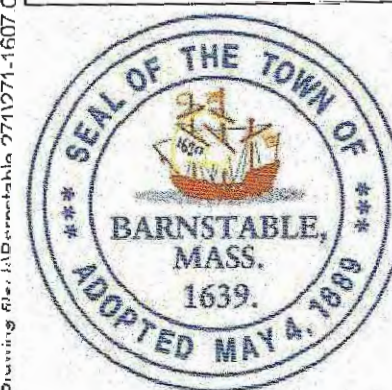
LOAM AND SEED (DISTURBED AREAS)
N.T.S.



- NOTES:**
1. ALL SHRUBS SHALL BE PLANTED 6-FOOT ON CENTER IN CLUSTERS CONTAINING THE FOLLOWING: RED CHOKEBERRY, WINTERBERRY.
 2. THE REPLICATION AREA SHALL BE EXCAVATED TO THE ELEVATION OF THE EXISTING WETLAND.
 3. 4 SHRUBS SHALL BE PLANTED PER EVERY 100 SQUARE FEET OF WETLAND REPLICATION.

WETLAND REPLICATION DETAIL
N.T.S.

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			Approved by	ZFK

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TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

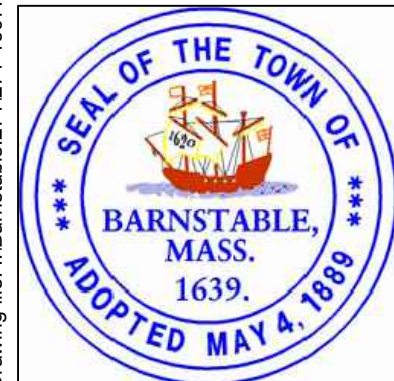
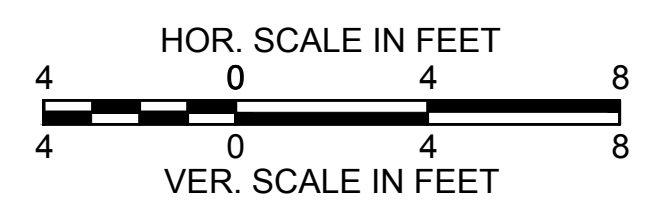
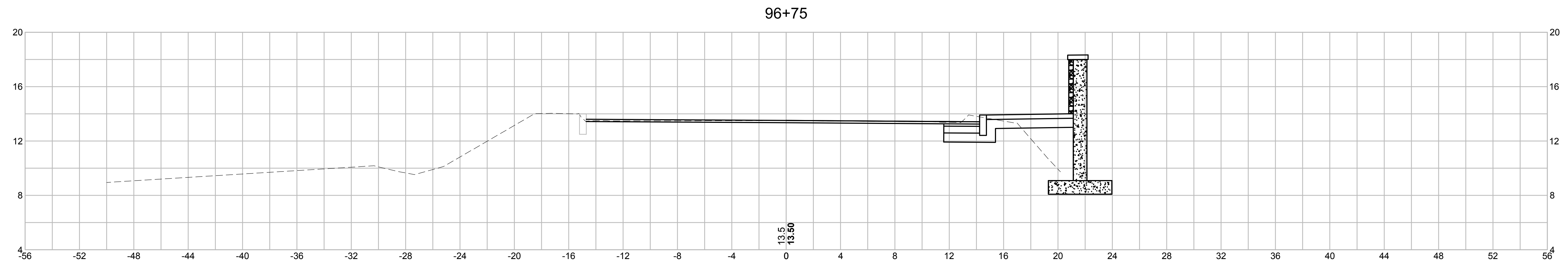
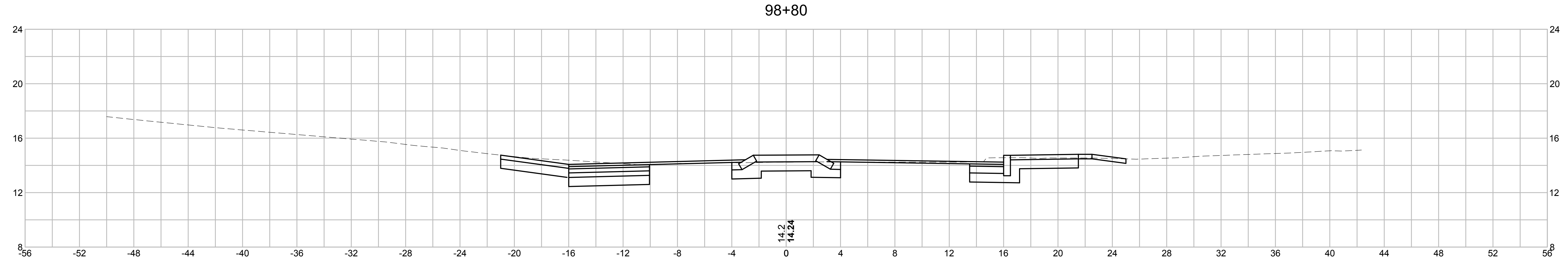
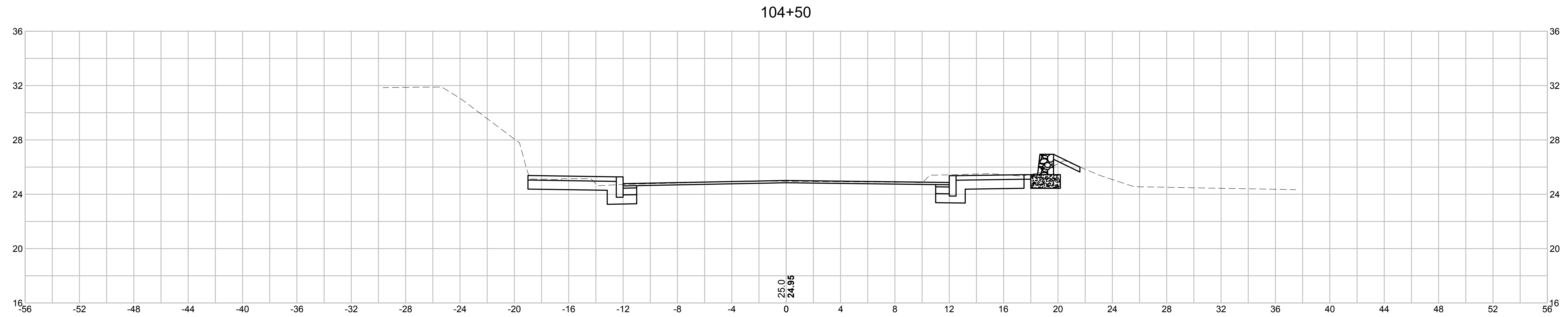
CIVIL DETAILS

NOT FOR CONSTRUCTION

Sheet No.

101A

Drawing file: I:\Barnstable\271\271-1607\00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet18 - CRITICAL CROSS SECTIONS.dwg Plot Date: Oct 18, 2018 2:23pm



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			Approved by	JDF

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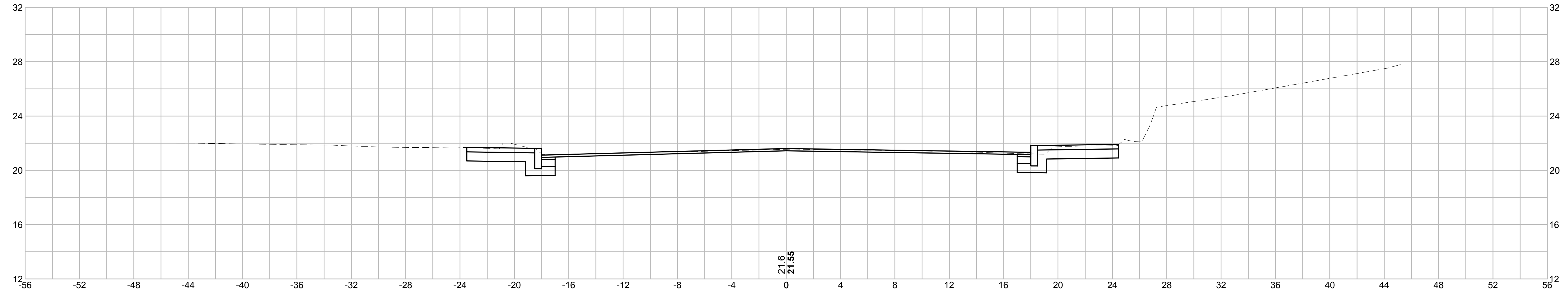
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

MAIN STREET
CRITICAL CROSS SECTIONS - 01

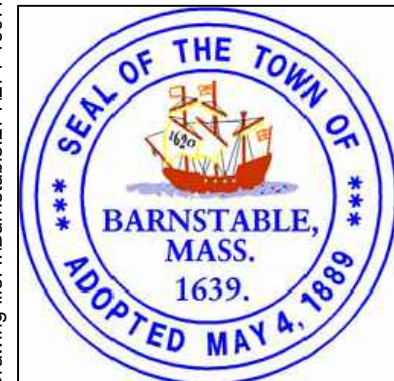
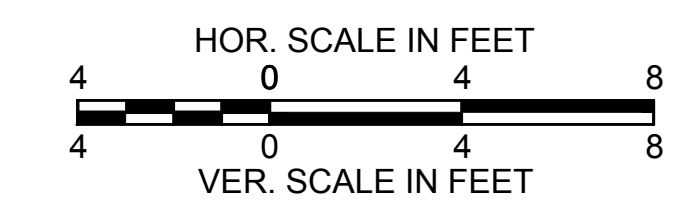
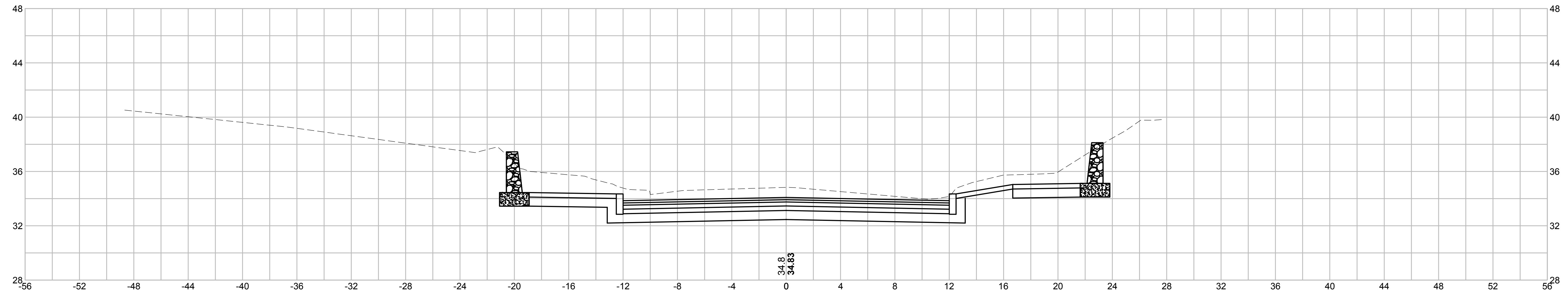
NOT FOR CONSTRUCTION
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102

Drawing file: I:\Barnstable\271\271-1607\00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet18 - CRITICAL CROSS SECTIONS.dwg Plot Date: Oct 18, 2018 2:28pm

112+50



108+50



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			Approved by	JDF

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TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

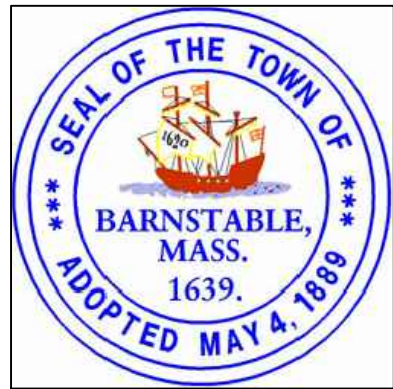
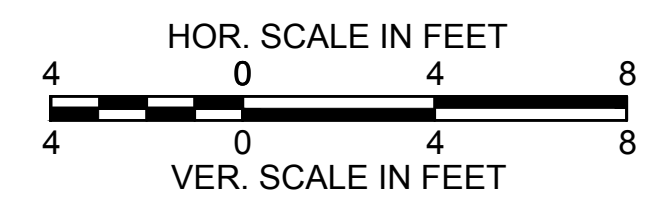
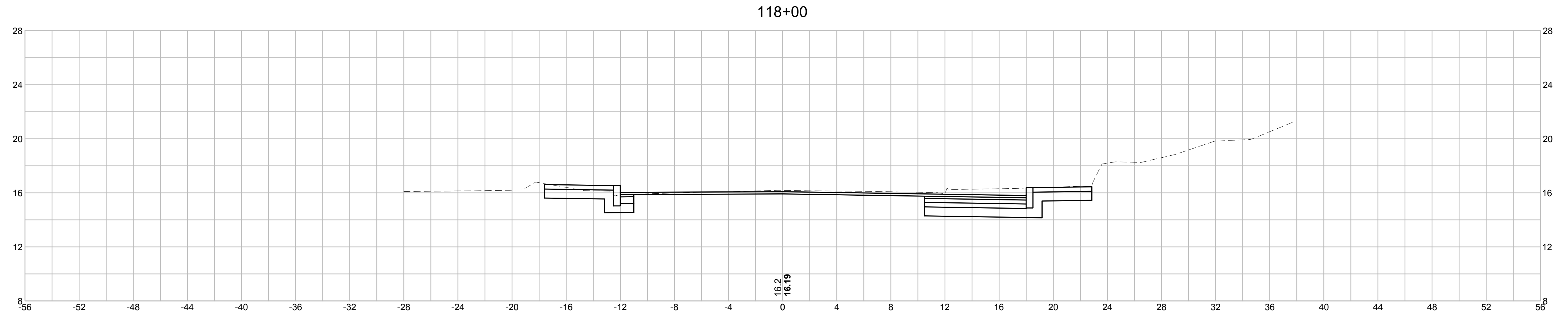
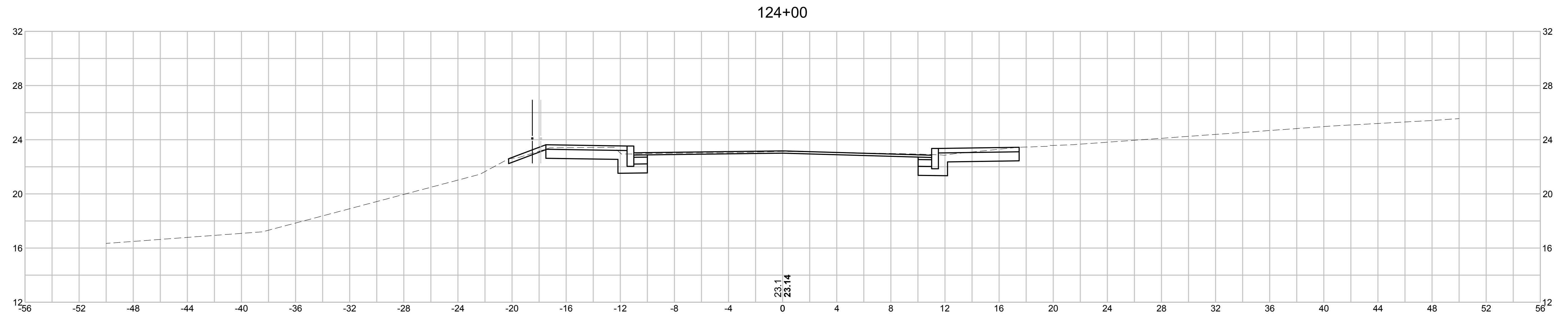
MAIN STREET
CRITICAL CROSS SECTIONS - 02

NOT FOR CONSTRUCTION

Sheet No.

103

Drawing file: I:\Barnstable\271\271-1607\00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet18 - CRITICAL CROSS SECTIONS.dwg Plot Date: Oct 18, 2018 2:28pm



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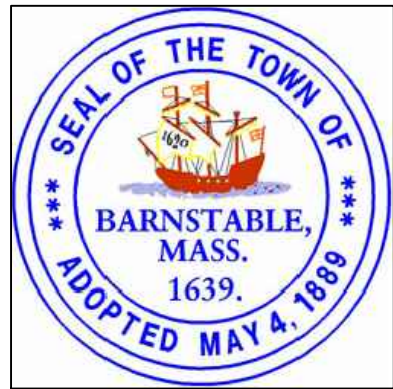
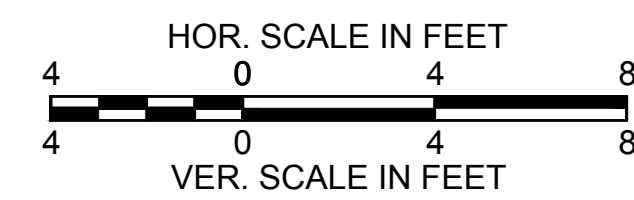
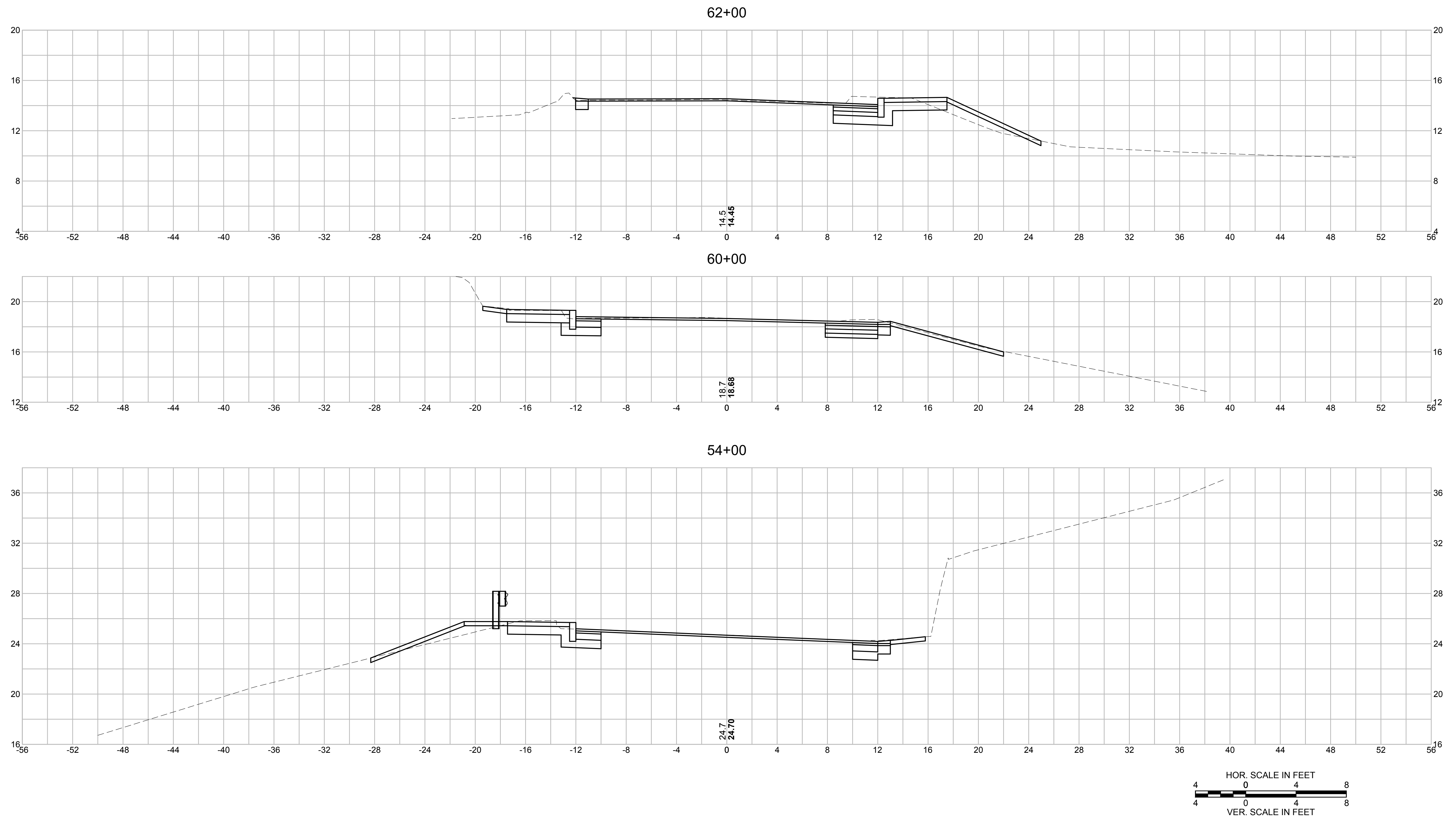
TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

MAIN STREET
CRITICAL CROSS SECTIONS - 03

NOT FOR CONSTRUCTION
Sheet No.

104

Drawing file: I:\Barnstable\271271-1607-00 Barnstable - Improvement along Main Street (Route 6A)\ACAD\Sheet18 - CRITICAL CROSS SECTIONS.dwg Plot Date: Oct 18, 2018 2:27pm



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01	08/01/18	DRAFT PRELIMINARY DESIGN SUBMISSION	Checked by	BLH
			Approved by	JDF

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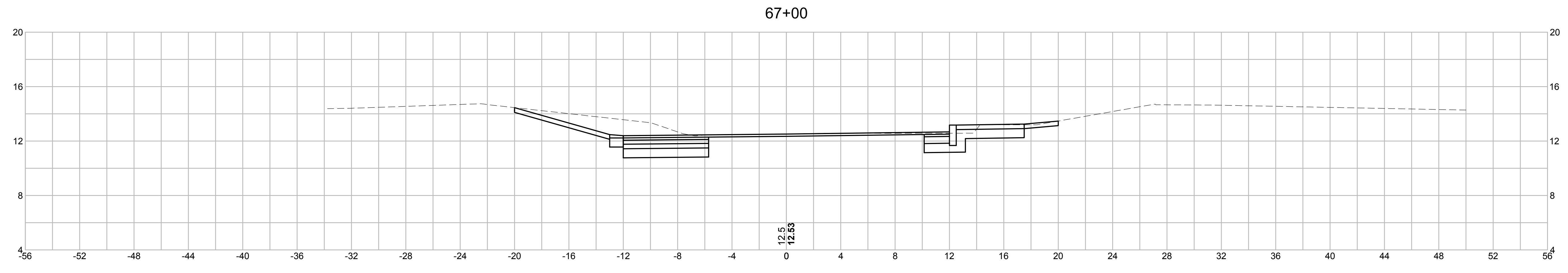
TRANSPORTATION IMPROVEMENTS
 ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
 BARNSTABLE, MASSACHUSETTS

MILLWAY
 CRITICAL CROSS SECTIONS - 01

NOT FOR CONSTRUCTION
 Sheet No.

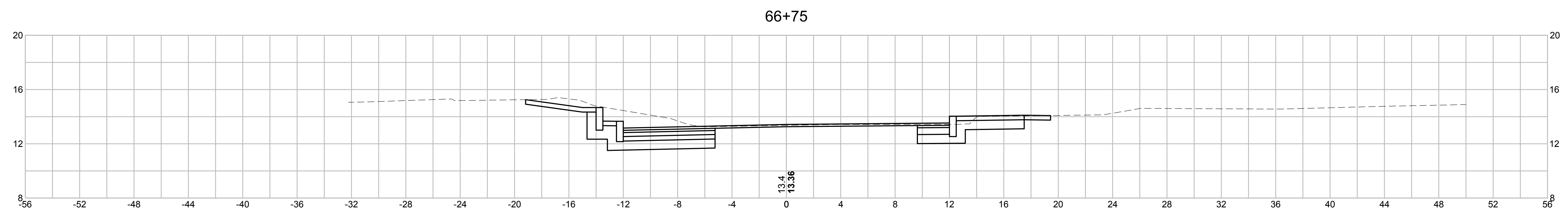
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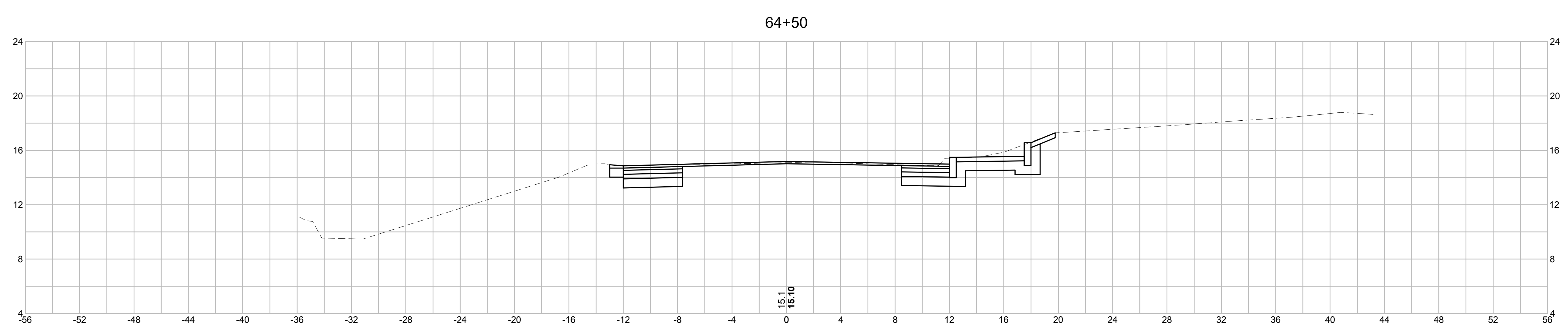
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12.5
12.53



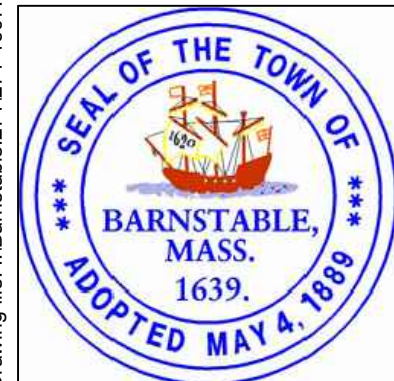
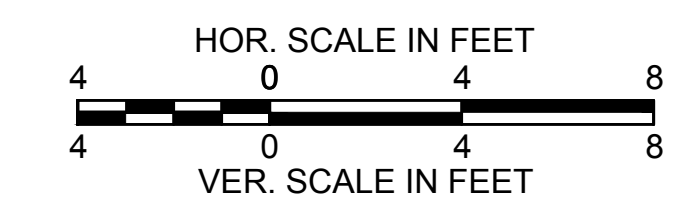
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13.4
13.36



64+50

15.1
15.10



MARK	DATE	DESCRIPTION	Scale	AS NOTED
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			Job No.	271-1607
03	10/19/18	REVISED FINAL SUBMISSION	Designed by	JRC
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			Approved by	JDF

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TRANSPORTATION IMPROVEMENTS
ALONG MAIN STREET (ROUTE 6A) AND MILLWAY
BARNSTABLE, MASSACHUSETTS

MILLWAY
CRITICAL CROSS SECTIONS - 02

NOT FOR CONSTRUCTION
Sheet No.
106