

# CITY OF MARLBOROUGH MEETING POSTING

Meeting Name: Conservation Commission  
Date: April 9, 2020 (Thursday)  
Time: 7:00 PM  
Location: Will be conducted via remote participation

RECEIVED  
CITY CLERK'S OFFICE  
CITY OF MARLBOROUGH  
2020 APR -3 P 3:26

## Agenda Items to be addressed:

*In accordance with the March 12, 2020 Executive Order issued by Governor Baker modifying certain requirements of the Open Meeting Law, the City of Marlborough Conservation Commission will hold a virtual meeting on Thursday, April 9, 2020 at 7:00 PM. The public may access the meeting by clicking on the link provided on the Conservation Commission website (Click the April 9,th meeting on the calendar, <https://www.marlbrough-ma.gov/.....or> by dialing in using the referenced phone number and conference ID#. (Phone # and Conference ID# also found on Conservation Commission website. Any questions please call: 508-460-3768.*

### Public Hearings:

- 7:00 Request for Determination of Applicability  
19 Forest St. - Elan Walshe – Higher Ground Education  
Proposes to convert a section of each existing parking area to a playground. The parking conversion consists of placing soil with drainage and turn over the asphalt surface. Fencing and playground structures will be installed at each playground. Portions of the existing building and the parking areas lie within the 100 ft. wetland buffer.
- 7:15 Notice of Intent - Continuation  
Poirier Dr. - The City of Marlborough DPW  
Proposes to add parking and drainage along Poirier Dr. (High School entrance) work is proposed near wetlands.
- 7:30 Notice of Intent  
Rte. 20 reconstruction from Peters Ave. to Marlborough/Sudbury town line  
Rte 20 reconstruction from Peters Ave. to Marlborough/Sudbury town line – Mass DOT is proposing to reconstruct Rte 20 from Peters Ave. to the Marlborough/Sudbury town line. The highway will replace deteriorated pavement structures, widen the travel way to safe and acceptable lane and shoulder widths, adding new sidewalks and provide upgrades to the existing drainage system. Several sections of this work are within the buffer zone to wetlands.

### Certificates of Compliance:

- DEP 212-1035 41 Boivin Dr. (Lot 12)

### Discussion:

- Marlborough Public School – Area of Holt's Grove for an educational rope course.
- Special Permit request under the Floodplain and Wetland Protection District – 339 Boston Post Rd. East (former Magee Farm) – Before the Zoning Board of Appeals on April 14, 2020.

Next Meeting – April 16<sup>th</sup> and May 7<sup>th</sup>, 2020

### Adjournment

THE LISTING OF TOPICS THAT THE CHAIR REASONABLY ANTICIPATES WILL BE DISCUSSED AT THE MEETING IS NOT INTENDED AS A GUARANTEE OF THE TOPICS THAT WILL HAVE BEEN DISCUSSED. NOT ALL TOPICS LISTED MAY IN FACT BE DISCUSSED, AND OTHER TOPICS NOT LISTED MAY ALSO BE BROUGHT UP FOR DISCUSSION TO THE EXTENT PERMITTED BY LAW.

PROJECT INFORMATION	
PROJECT NAME:	HGE-MARLBOROUGH
OWNER:	LAKE WILLIAM MARSH, LLC
PHONE:	(508)-650-4900
PLANS PREPARED BY:	LITTLE DIVERSIFIED ARCHITECTURAL CONSULTING
PHONE:	(704)-525-6350
ZONING:	LI (LIMITED INDUSTRIAL)
JURISDICTION:	CITY OF MARLBOROUGH
LOT SIZE:	5.92 ACRES
PARCEL #:	91-4
ADDITIONAL IMPERVIOUS AREA:	0 SF

- LAYOUT NOTES**
- ALL TRAFFIC CONTROL SIGNAGE, DEVICES, AND STRIPING TO CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
  - ALL PAVING CUTS SHALL BE MADE BY SAW CUTS.
  - EXISTING ELEVATIONS SHALL BE FIELD VERIFIED AND MATCHED.
  - CONTRACTOR TO COORDINATE ANY CHANGES IN FIELD CONDITIONS THAT MAY REVISE THE DESIGN WITH DESIGNER OF RECORD PRIOR TO PROCEEDING.
  - ALL DIMENSIONS ARE TO FACE OF CURB OR TO FINISHED FACE OF BUILDING UNLESS NOTED OTHERWISE.
  - ALL RADII ON CURBS SHALL BE 5'-0" UNLESS NOTED OTHERWISE.
  - ALL ACCESSIBLE PARKING SPACES SHALL DISPLAY APPROVED RESERVED PARKING SPACE SIGNAGE AS PRESCRIBED BY THE AMERICANS WITH DISABILITIES ACT (ADA), M.U.T.C.D., AND ANY ADDITIONAL STATE AND/OR LOCAL REQUIREMENTS. HEIGHT FROM FINISHED GRADE TO BOTTOM OF SIGN IN ANY LOCATION SHALL BE 84" MINIMUM.
  - A MINIMUM OF 18" IS TO BE MAINTAINED BETWEEN ALL PAVED SURFACES AND TOPS OF FOOTINGS.

- LAYOUT LEGEND:**
- PROPOSED VERTICAL CURB - SEE DETAIL 3/C5.00
  - CURB CUT - LENGTH NOTED ON PLAN
  - PROPOSED 4" WHITE PAINTED STRIPING
  - PROPOSED DUMPSTER ENCLOSURE - SEE DETAIL 4/C5.00
  - PROPOSED HEAVY DUTY CONCRETE PAVING - SEE DETAIL 2/C5.00
  - PROPOSED 4' TALL CHAIN LINK FENCING - SEE DETAIL 8/C5.00
  - PROPOSED CURB CUT - LENGTH AS NOTED ON PLAN, SEE DETAIL 8/C5.00
  - PROPOSED PLAYGROUND - SEE DETAIL 11/C5.00
  - EXISTING CONCRETE PAD TO REMAIN
  - PROPOSED LANDSCAPE TIMBER EDGING BEHIND CURB - SEE DETAIL 11/C5.00
  - PROPOSED MANUFACTURED PLAYGROUND EQUIPMENT ADA RAMP
  - PROPOSED RIP RAP APRON - SEE DETAIL 12/C5.00

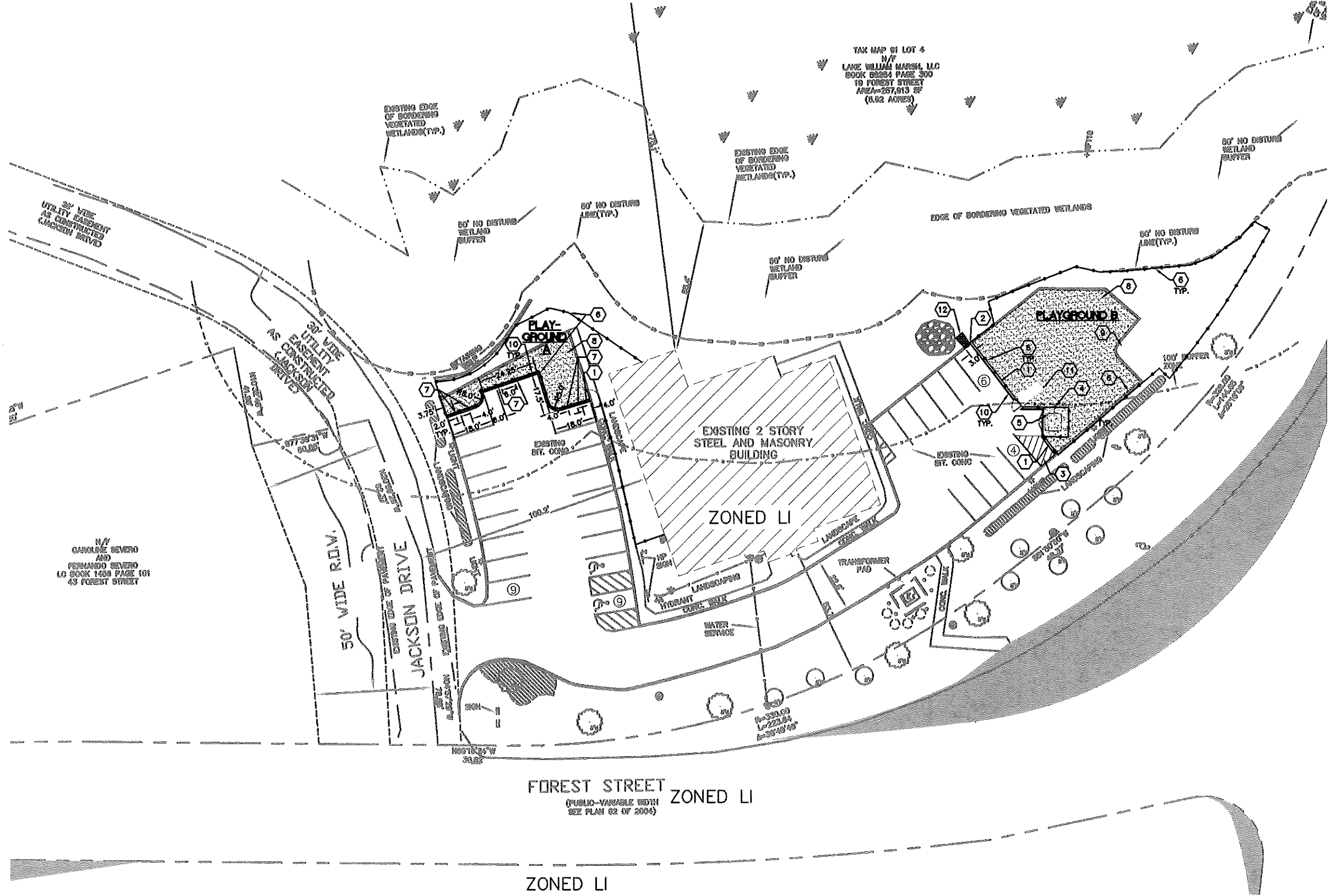
**PARKING SUMMARY:**

1 SPACE PER EMPLOYEE = 23 SPACES  
 5 DROP OFF SPACES  
 28 SPACES REQUIRED (INCL. 1 STD AND 1 VAN ACCESSIBLE SPACES)

PARKING PROVIDED = 28 SPACES (INCL. 1 STD AND 1 VAN ACCESSIBLE SPACES)

**PLAYGROUND AREA SUMMARY:**

PLAYGROUND A = 2,400 SF  
 PLAYGROUND B = 5,160 SF  
 TOTAL = 7,560 SF



# SITE PLAN — WETLANDS IMPACT REVIEW

DATE: 11-11-11 11:11 AM

**PROJECT INFORMATION**

PROJECT NAME: HGE-MARLBOROUGH  
 OWNER: LAKE WILLIAM MARSH, LLC  
 PHONE: (508)-820-4800  
 PLANS PREPARED BY: LITTLE DESIGNER ARCHITECTURAL CONSULTING  
 PHONE: (708)-822-8350  
 ZONING: LI (LIMITED INDUSTRIAL)  
 JURISDICTION: CITY OF MARLBOROUGH  
 LOT SIZE: 8.92 ACRES  
 PARCEL #: 81-4  
 ADDITIONAL IMPERVIOUS AREA: 0 SF

**LAYOUT NOTES**

A. ALL TRAFFIC CONTROL SIGNAGE, DEVICES, AND STRIPING TO CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).  
 B. ALL PAVING CUTS SHALL BE MADE BY SAW CUTS.  
 C. EXISTING ELEVATIONS SHALL BE FIELD VERIFIED AND MATCHED.  
 D. CONTRACTOR TO COORDINATE ANY CHANGES IN FIELD CONDITIONS THAT MAY REVISE THE DESIGN WITH DESIGNER OF RECORD PRIOR TO PROCEEDING.  
 E. ALL DIMENSIONS ARE TO FACE OF CURB OR TO FINISHED FACE OF BUILDING UNLESS NOTED OTHERWISE.  
 F. ALL RAMP ON CURBS SHALL BE 8'-0" UNLESS NOTED OTHERWISE.  
 G. ALL ACCESSIBLE PARKING SPACES SHALL DISPLAY APPROVED RESERVED PARKING SPACE SIGNAGE AS PRESCRIBED BY THE AMERICANS WITH DISABILITIES ACT (ADA), M.U.T.C.D., AND ANY ADDITIONAL STATE AND/OR LOCAL REQUIREMENTS. HEIGHT FROM FINISHED GRADE TO BOTTOM OF SIGN IN ANY LOCATION SHALL BE 64" MINIMUM.  
 H. A MINIMUM OF 18" IS TO BE MAINTAINED BETWEEN ALL PAVED SURFACES AND TOPS OF FOOTINGS.

**LAYOUT LEGEND:**

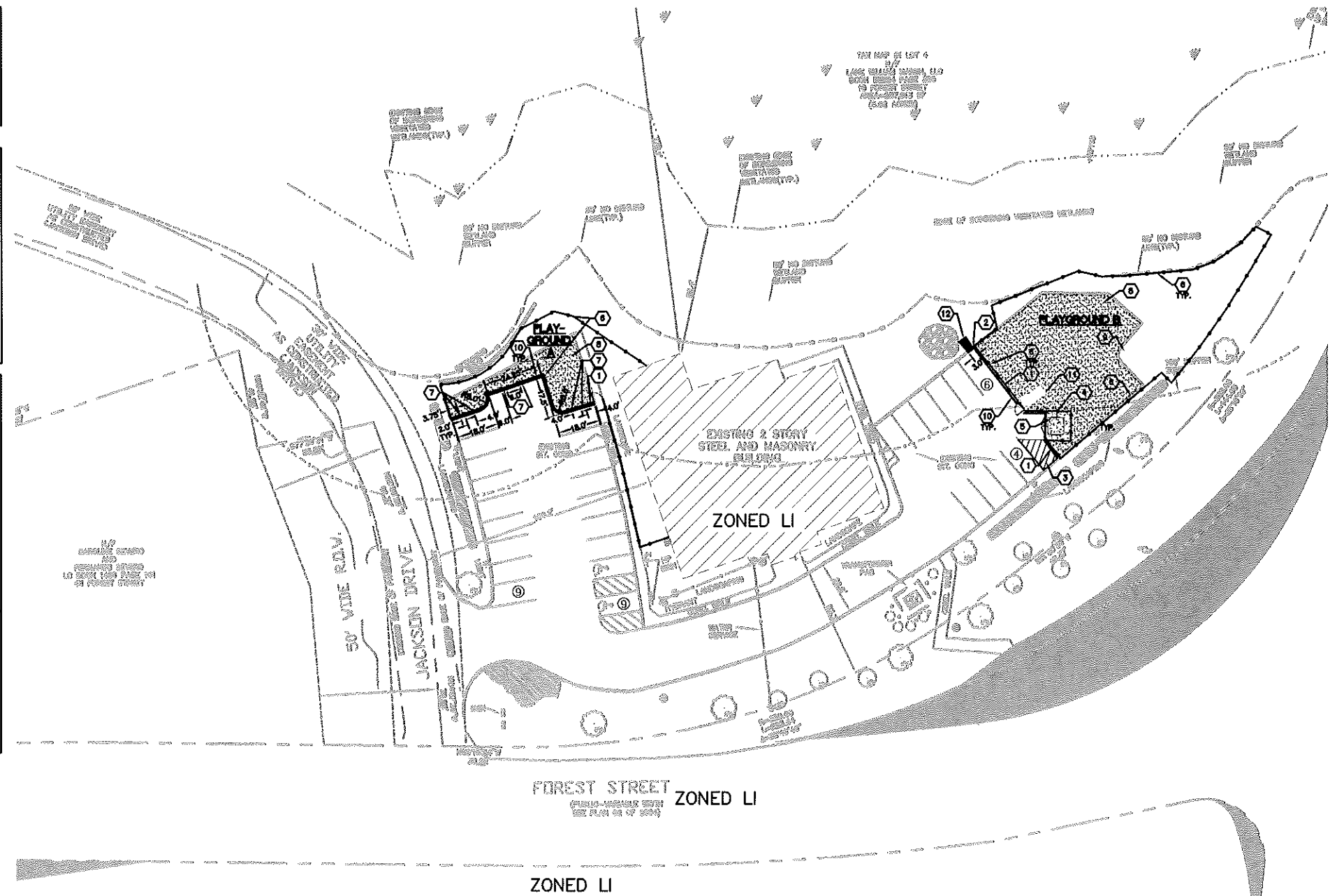
1. PROPOSED VERTICAL CURB - SEE DETAIL 3/05.00  
 2. CURB CUT - LENGTH NOTED ON PLAN  
 3. PROPOSED 4" WHITE PAINTED STRIPING  
 4. PROPOSED DUMPSTER ENCLOSURE - SEE DETAIL 4/05.00  
 5. PROPOSED HEAVY DUTY CONCRETE PAVING - SEE DETAIL 2/05.00  
 6. PROPOSED 4" TALL CHAIN LINK FENCING - SEE DETAIL 6/05.00  
 7. PROPOSED CURB CUT - LENGTH AS NOTED ON PLAN, SEE DETAIL 6/05.00  
 8. PROPOSED PLAYGROUND - SEE DETAIL 11/05.00  
 9. EXISTING CONCRETE PAD TO REMAIN  
 10. PROPOSED LANDSCAPE TIMBER EDGING BEHIND CURB - SEE DETAIL 11/05.00  
 11. PROPOSED MANUFACTURED PLAYGROUND EQUIPMENT ADA RAMP  
 12. PROPOSED RIP RAP APRON - SEE DETAIL 12/05.00

**PARKING SUMMARY:**

1 SPACE PER EMPLOYEE = 23 SPACES  
 2 DUMP OFF SPACES  
 28 SPACES REQUIRED (INCL. 1 STD AND 1 VAN ACCESSIBLE SPACES)  
 PARKING PROVIDED = 28 SPACES (INCL. 1 STD AND 1 VAN ACCESSIBLE SPACES)

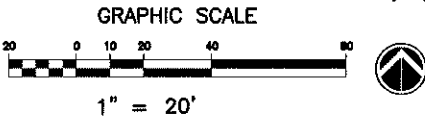
**PLAYGROUND AREA SUMMARY:**

PLAYGROUND A = 2,400 SF  
 PLAYGROUND B = 2,100 SF  
 TOTAL = 4,500 SF



W:\Community\Schools\_HGE\6121272200 Marlborough\2 Design\9 Engineering\Civil\OD\C3.00 SITE 1-15-20.dwg Mar 9, 2020-10:34am

**CAUTION!!!**  
 The locations and depths of existing underground utilities as shown on this drawing are only APPROXIMATE. It is guaranteed to other contractors or involved in the completion of emergency services. The contractor shall be completely responsible for determining the exact utility locations and depths prior to the start of construction.



**LITTLE**  
 DESIGNER ARCHITECTURAL CONSULTING

131 South College Street, Suite 1000, Durham, NC  
 T: 704.525.6350 F: 704.561.8700

www.littleonline.com

This drawing and the design thereon are the property of Little Designer Architectural Consulting. The reproduction, copying or other use of this drawing without the written consent is prohibited and any infringement will be subject to legal action.  
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PERMIT SET

DATE SET: 02/24/20

NO.	REVISION	DATE

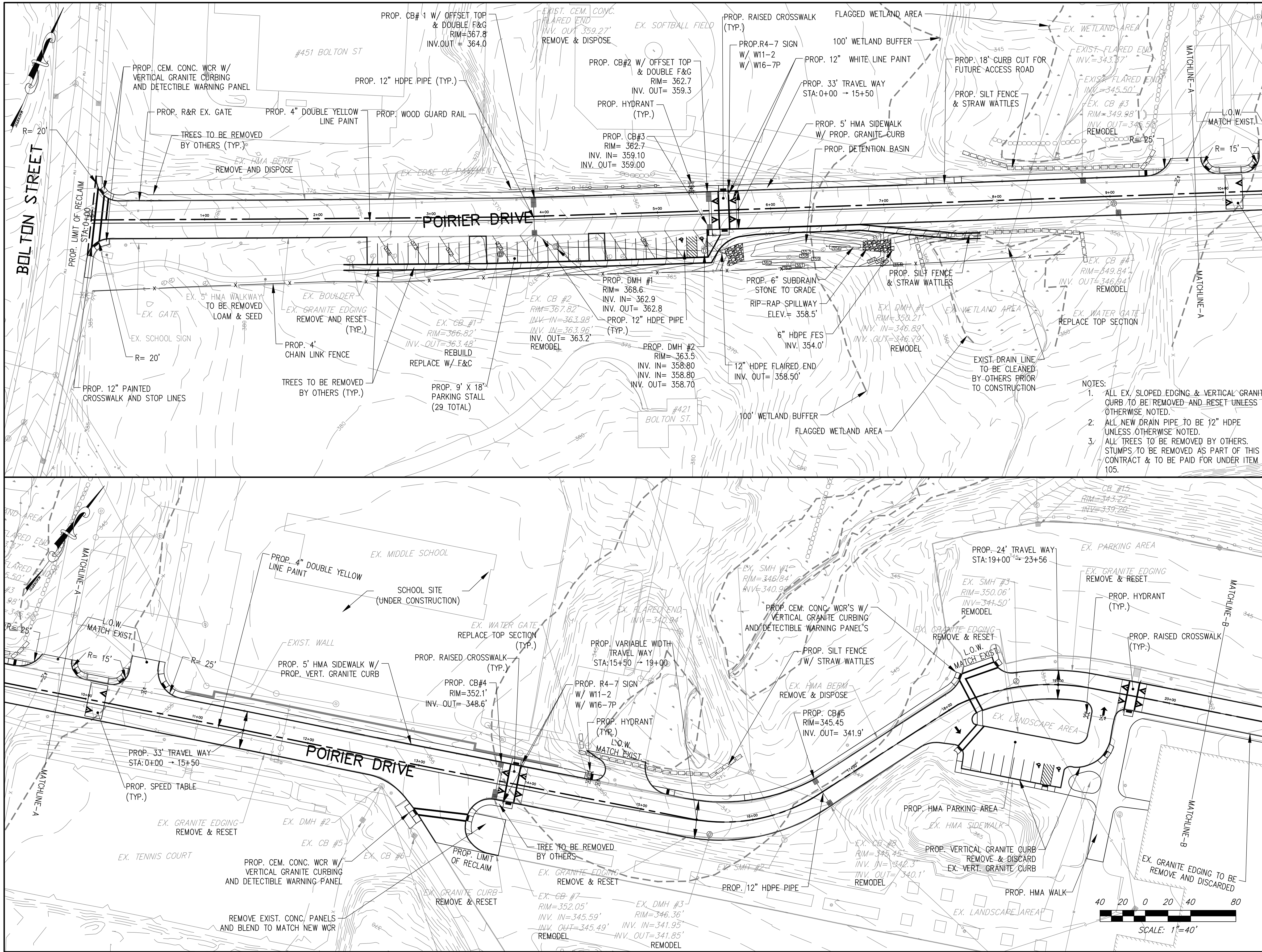
PROJECT TEAM  
 PRINCIPAL IN CHARGE: ...  
 PROJECT MANAGER: ...  
 DESIGN TEAM: ETJ  
 PROJECT NAME: HGE MARLBOROUGH  
 19 FOREST ST. MARLBOROUGH, MA

PROJECT NUMBER: 612.12722.00

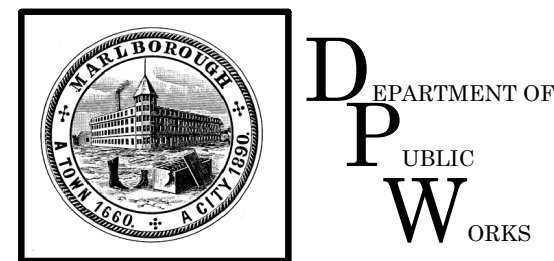
CITY: SITE PLAN

C3.00





# CITY OF MARLBOROUGH



Engineering Division  
135 Neil Street  
Marlborough, MA 01752  
p. (508) 624-6910  
f. (508) 624-7699  
www.marlborough-ma.gov

### REVISIONS

No.	Date	Description
1.	1/15	MJD/TD COMMENTS

Drawn By: RJM	Designed By: RJM	Checked By: MJD	Approved By: [Signature]
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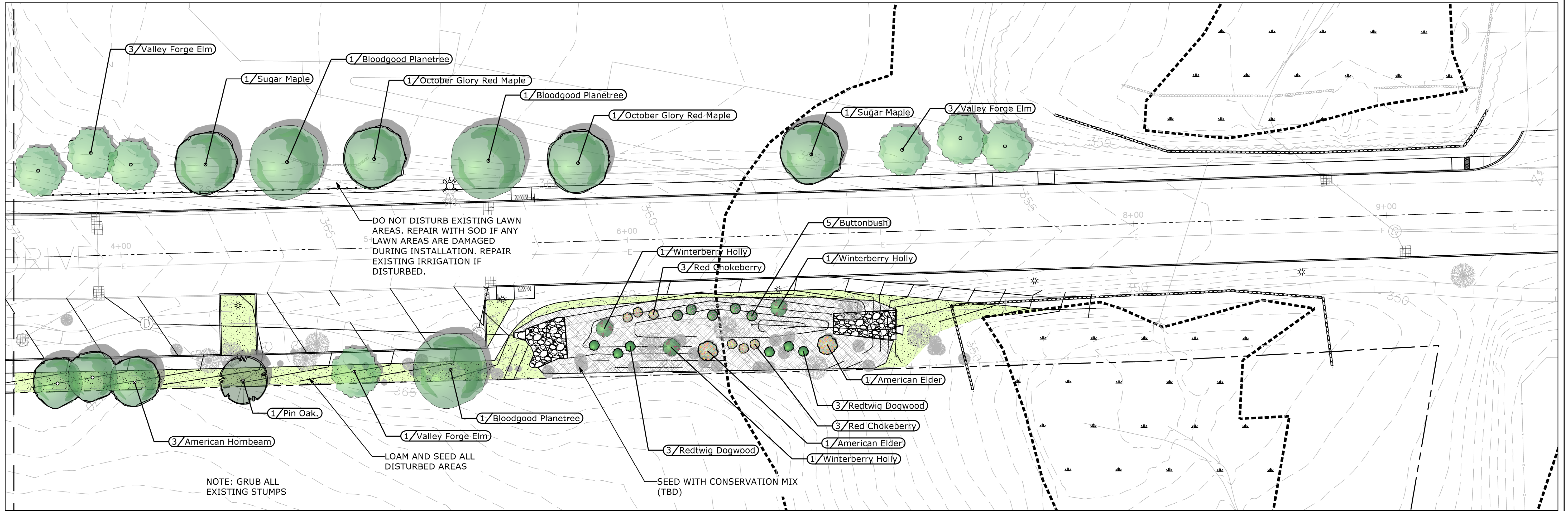
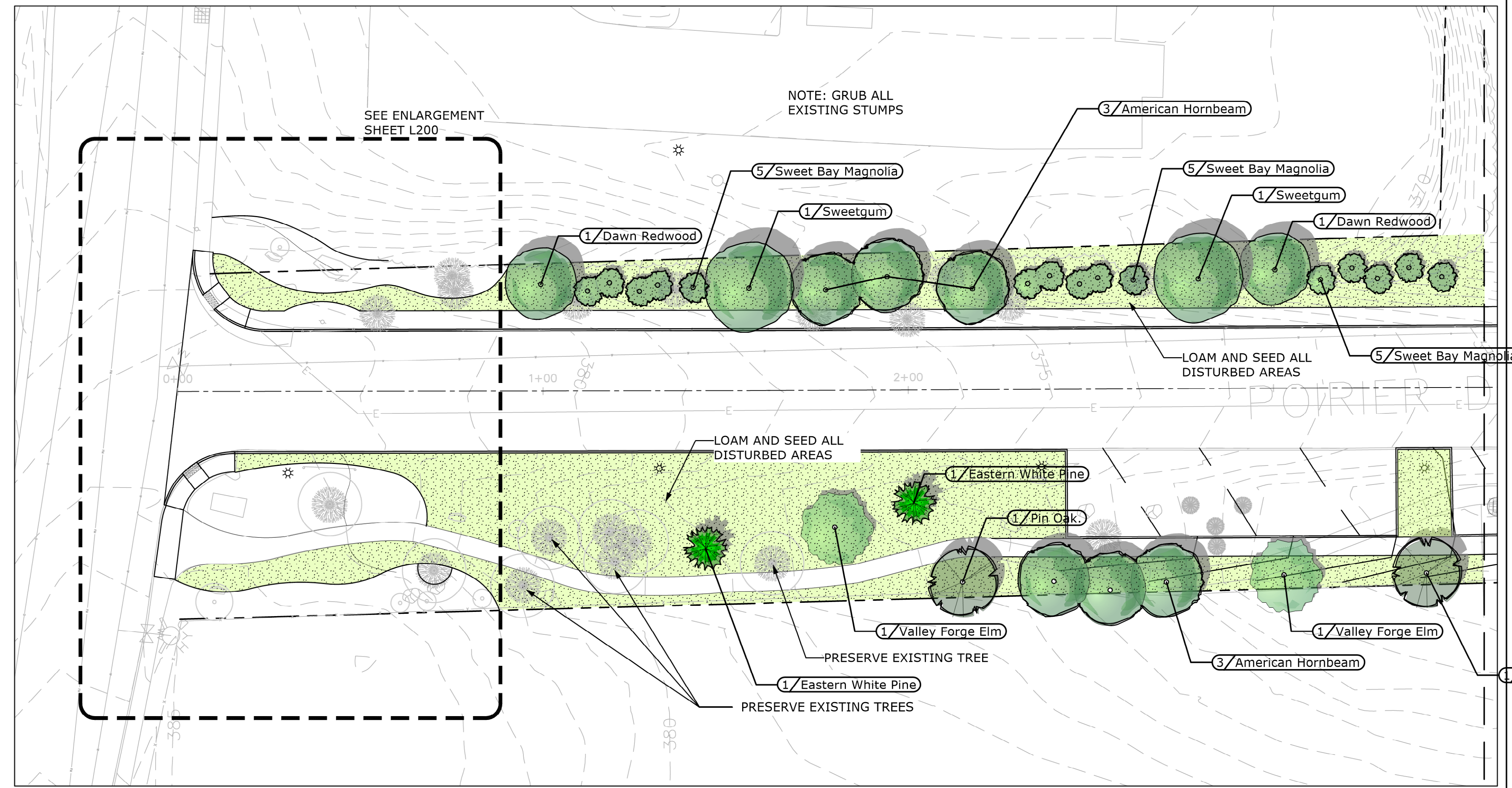
Project Title:  
**RECONSTRUCTION OF POIRIER DRIVE & APPURTENANT WORK**

Sheet Title:  
**CONSTRUCTION PLAN**

Contract No: ED 2020-06	Sheet No: 4
Date: 1-22-2020	
Scale: 1"=40'	

PLANT SCHEDULE - Sheet L100				
Qty.	Latin Name	Common Name	Scheduled Size	Remarks
<b>Trees</b>				
2	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	2.5-3" Cal.	B&B, Full, Symmetrical, High Branched
2	<i>Acer saccharum</i> 'Green Mountain'	Green Mountain Sugar Maple	2.5-3" Cal.	B&B, Full, Symmetrical, High Branched
9	<i>Carpinus caroliniana</i>	American Hornbeam	12-14" Ht.	B&B, Full, Symmetrical, Multi-trunk
2	<i>Liquidambar styraciflua</i>	Sweetgum	2.5-3" Cal.	B&B, Full, Symmetrical, High Branched
3	<i>Platanus acerifolia</i> 'Bloodgood'	Bloodgood Planetree	2.5-3" Cal.	B&B, Full, Symmetrical, High Branched
3	<i>Quercus palustris</i>	Pin Oak	2.5-3" Cal.	B&B, Full, Symmetrical, High Branched
9	<i>Ulmus americana</i> 'Valley Forge'	Valley Forge Elm	2.5-3" Cal.	B&B, Full, Symmetrical, High Branched
<b>Ornamental Trees</b>				
15	<i>Magnolia virginiana</i>	Sweet Bay Magnolia	8-10' Ht.	B&B, Full, Symmetrical, Multi-trunk
<b>Coniferous Trees</b>				
2	<i>Metasequoia glyptostroboides</i>	Dawn Redwood	2.5-3" Cal.	B&B, full, symmetrical, strong central leader
2	<i>Pinus strobus</i>	Eastern White Pine	7-8' Ht.	B&B, full, symmetrical, strong central leader
<b>Shrubs</b>				
6	<i>Aronia arbutifolia</i> 'Brilliantissima'	Red Chokeberry	30-36" Ht.	Container
5	<i>Cephalanthus occidentalis</i>	Buttonbush	30-36" Ht.	Container
6	<i>Cornus alba</i> 'Sibirica'	Redtwig Dogwood	30-36" Ht.	Container
3	<i>Ilex verticillata</i>	Winterberry Holly	30-36" Ht.	Container
2	<i>Sambucus canadensis</i>	American Elder	30-36" Ht.	Container

PLANT SCHEDULE - Sheet L200				
Qty.	Latin Name	Common Name	Scheduled Size	Remarks
<b>Evergreen Trees</b>				
1	<i>Picea abies</i>	Norway Spruce	7-8' Ht.	B&B, full, symmetrical, strong central leader
1	<i>Picea glauca</i>	White Spruce	7-8' Ht.	B&B, full, symmetrical, strong central leader
2	<i>Pinus cembra</i>	Swiss Stone Pine	4-5' Ht.	B&B, full, symmetrical, strong central leader
7	<i>Pinus strobus</i> 'Fastigiata'	Columnar Eastern White Pine	7-8' Ht.	B&B, full, symmetrical, strong central leader
<b>Shrubs</b>				
22	<i>Aronia melanocarpa</i> 'Groundhog'	Groundhog Chokeberry	12-18" Ht.	Container
3	<i>Hydrangea macrophylla</i> 'All Summer Beauty'	All Summer Beauty Hydrangea	7 Gal.	Container
13	<i>Ilex glabra</i> 'Shamrock'	Shamrock Holly	24-30" Ht.	Container
17	<i>Juniperus horizontalis</i> 'Wiltonii'	Blue Rug Juniper	12-18" Spr.	Container
9	<i>Juniperus horizontalis</i> 'Bar Harbor'	Bar Harbor Juniper	12-18" Spr.	Container
34	<i>Leucothoe fontanesiana</i> 'Girard's Rainbow'	Rainbow Leucothoe	12-18" Ht.	Container
3	<i>Physocarpus opulifolium</i> 'Diabolo'	Ninebark	30-36" Ht.	Container
1	<i>Spiraea x vanhouttei</i>	Bridal Wreath Spirea	30-36" Ht.	Container
<b>Grasses, Perennials and Groundcovers</b>				
12	<i>Calamagrostis x acutiflora</i> 'Karl Foerster'	Foerster's Feather Reed Grass	1 Gal.	Container
17	<i>Carex pennsylvanica</i>	Oak Sedge	1 Gal.	Container
49	<i>Hemerocallis x 'Pardon Me'</i>	Pardon Me Daylily	1 Gal.	Container
24	<i>Hemerocallis x 'Stella de Oro'</i>	Stella D'Oro Daylily	1 Gal.	Container
24	<i>Hosta 'Big Daddy'</i>	Big Daddy Hosta	1 Gal.	Container
22	<i>Hosta 'Francee'</i>	Variiegated Hosta	1 Gal.	Container
54	<i>Liriope muscari</i> 'Variegata'	Variiegated Liriope	1 Gal.	Container
24	<i>Nepeta x faassenii</i> 'Walker's Low'	Walker's Low Catmint	1 Gal.	Container
28	<i>Pennisetum alopecuroides</i>	Fountain Grass	2 Gal.	Container
20	<i>Polystichum acrostichoides</i>	Christmas Fern	1 Gal.	Container



**Poirier Road  
Landscape**  
Marlborough, MA

Owner  
**City of Marlborough**  
Department of Public Works  
135 Neil Street  
Marlborough, MA 01752

Landscape Architect



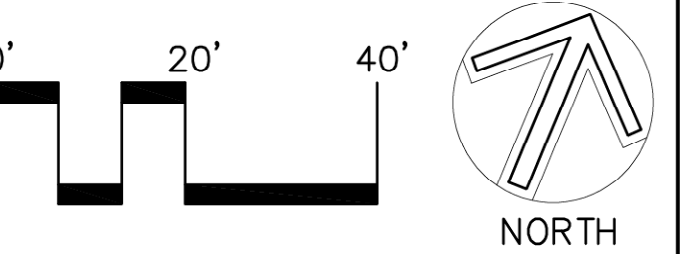
945 Concord Street, Suite 100  
Framingham, MA 01701  
508.736.6144  
[www.RadnerDesign.com](http://www.RadnerDesign.com)

Revision:

Drawn: mr

Scale: 1"=20'-0"

**PROGRESS PLAN**



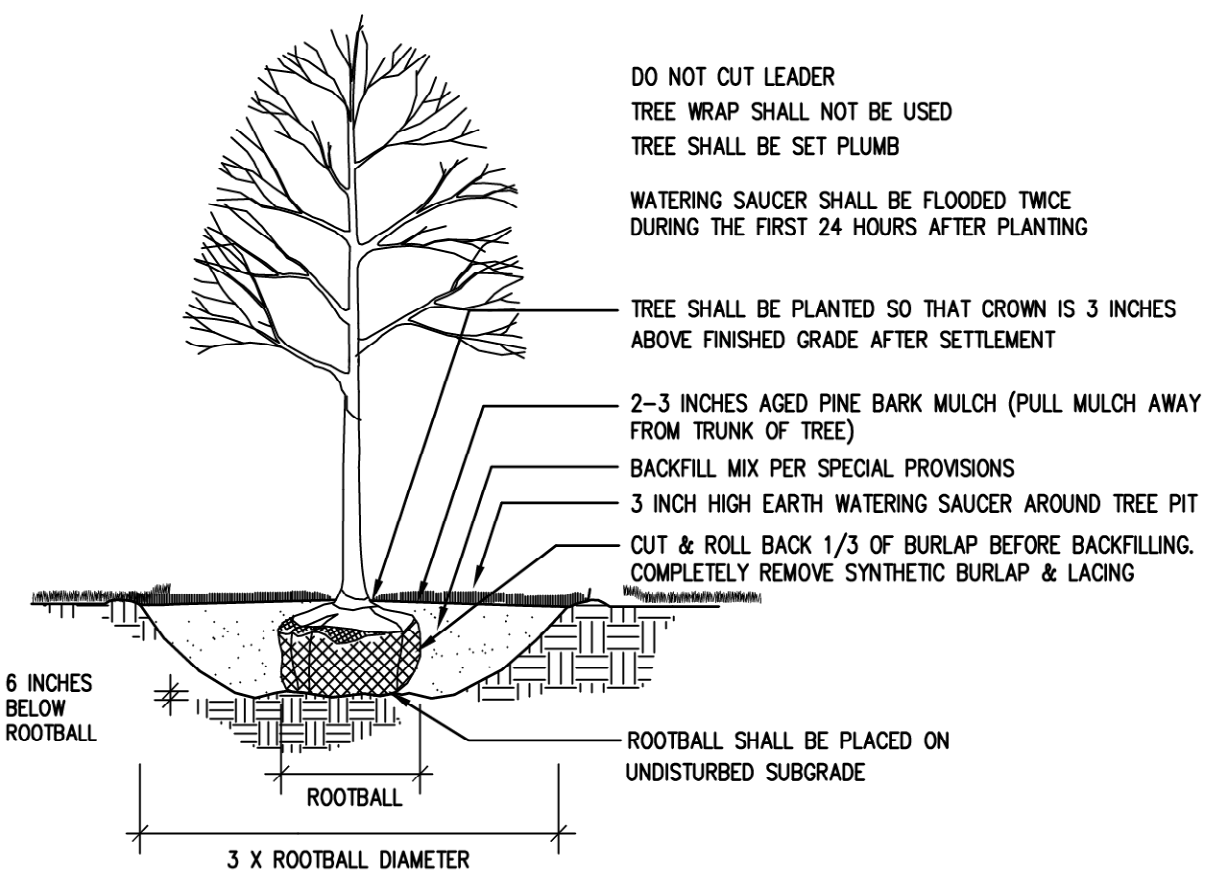
Sheet Name:  
**Landscape Plan**

Project No.:  
**20-10**

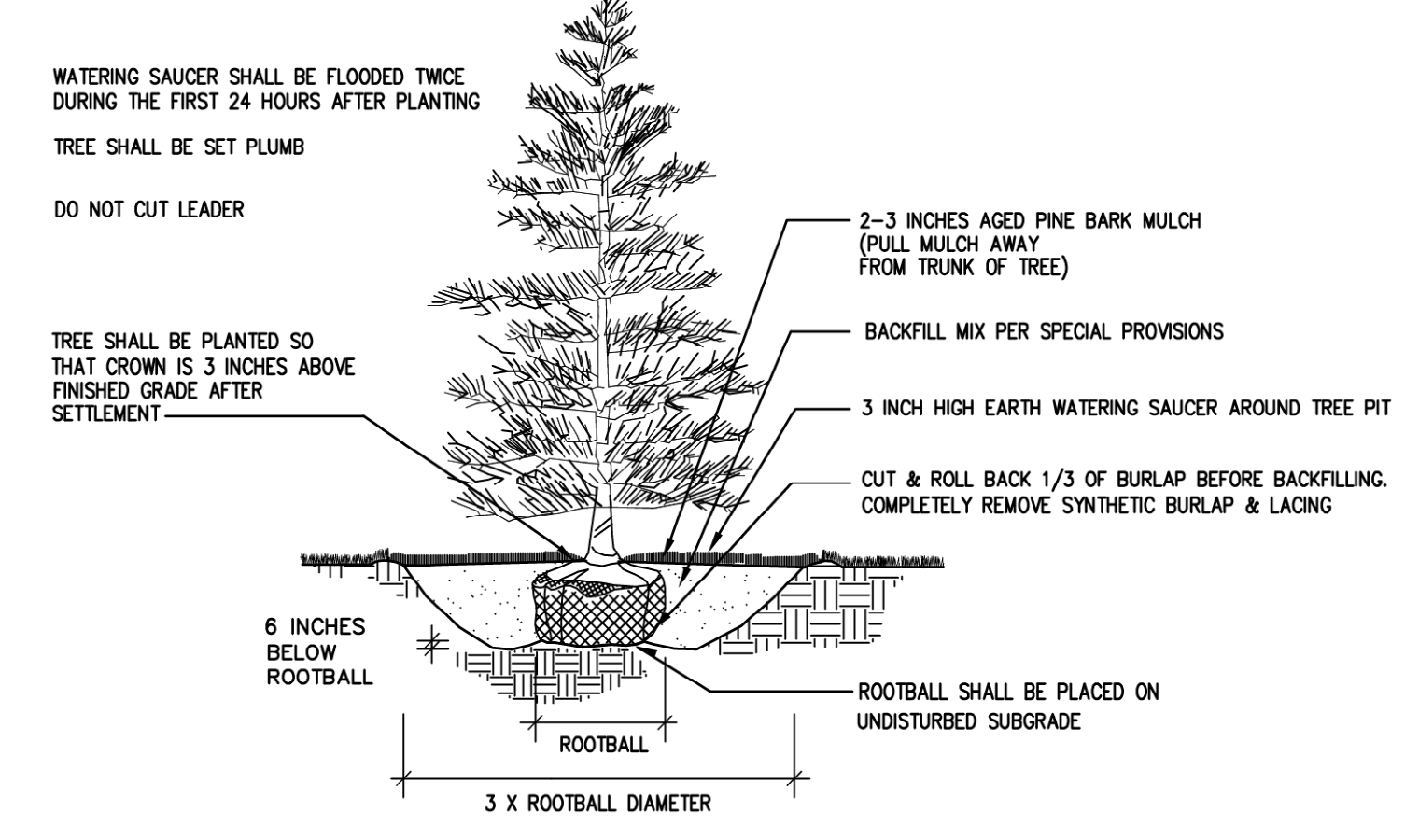
Issue Date:  
**04.01.2020**

Sheet No.:

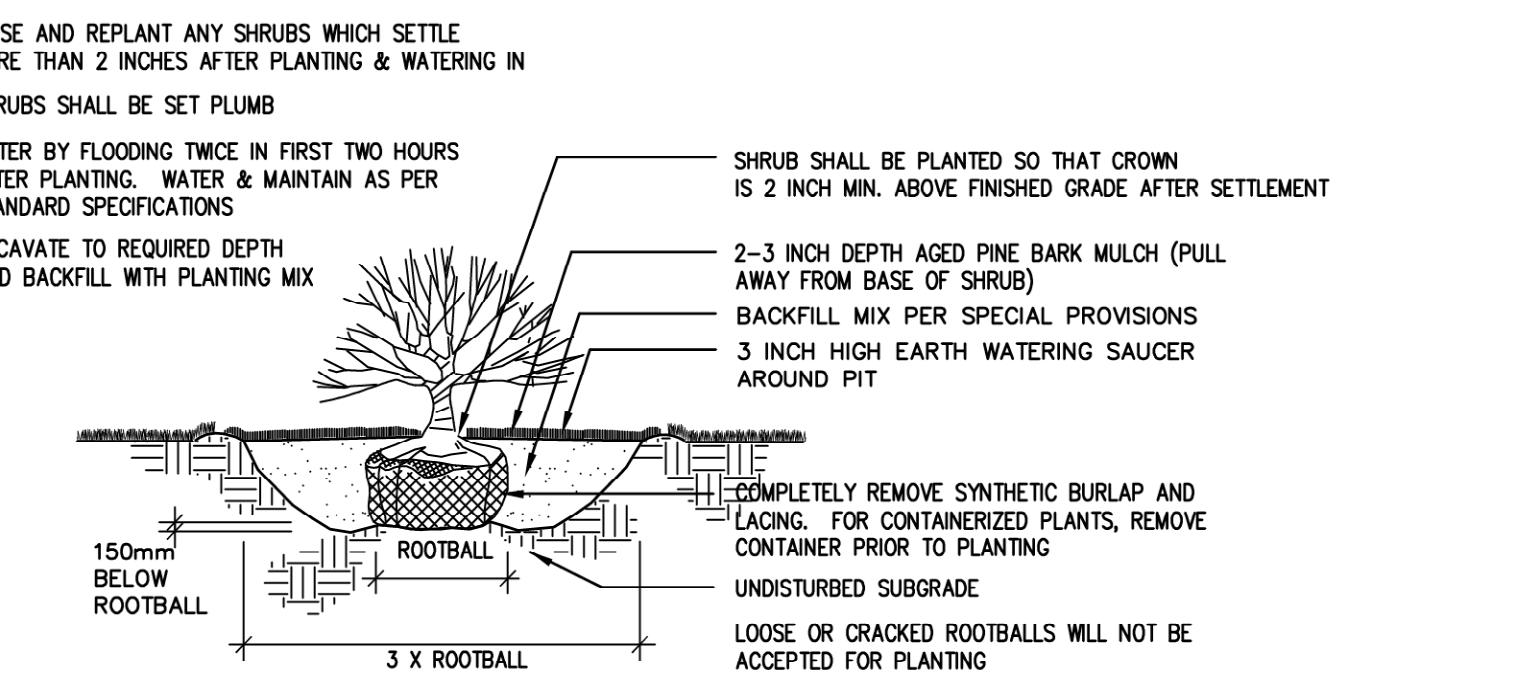
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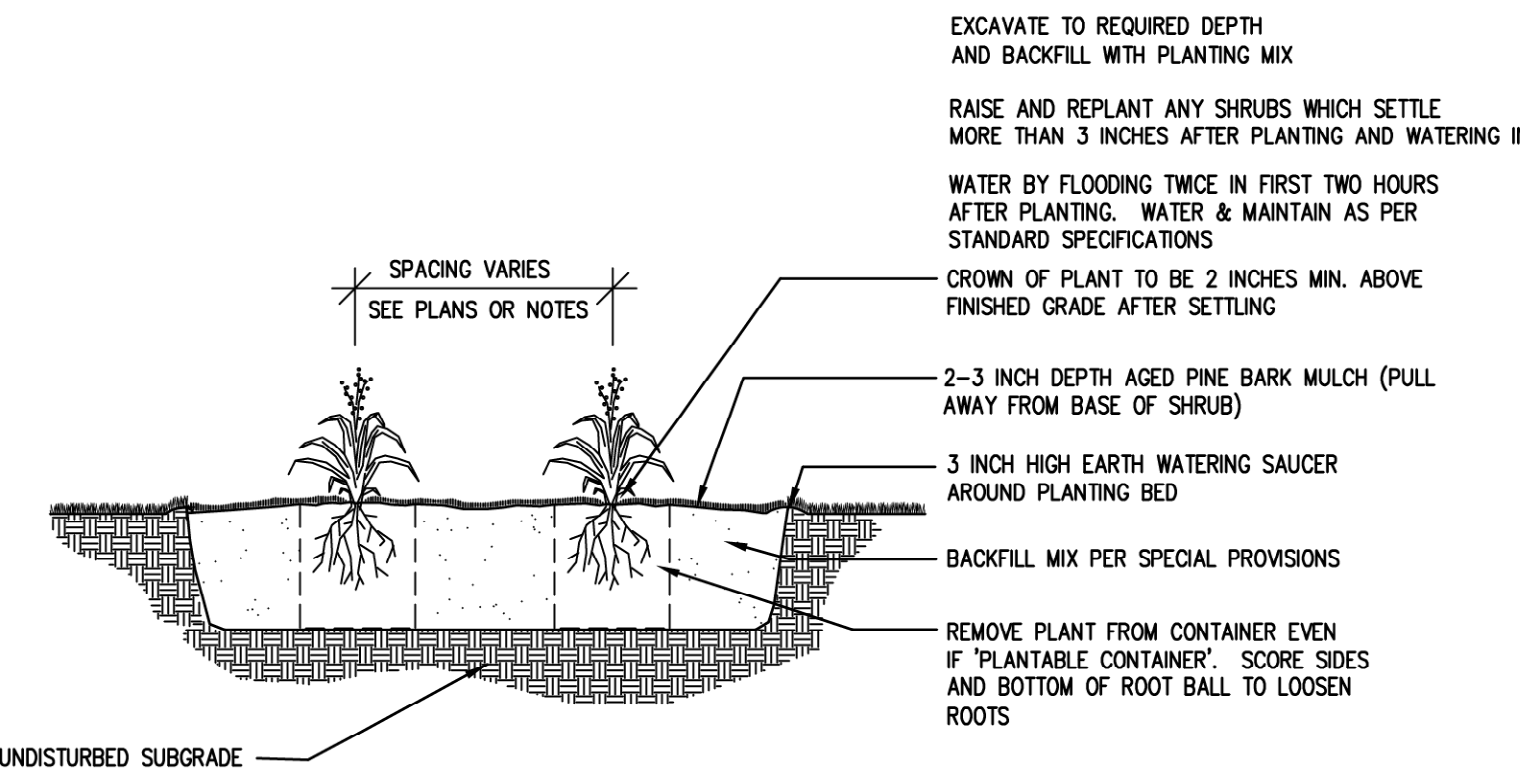
**DECIDUOUS TREE PLANTING**  
NOT TO SCALE



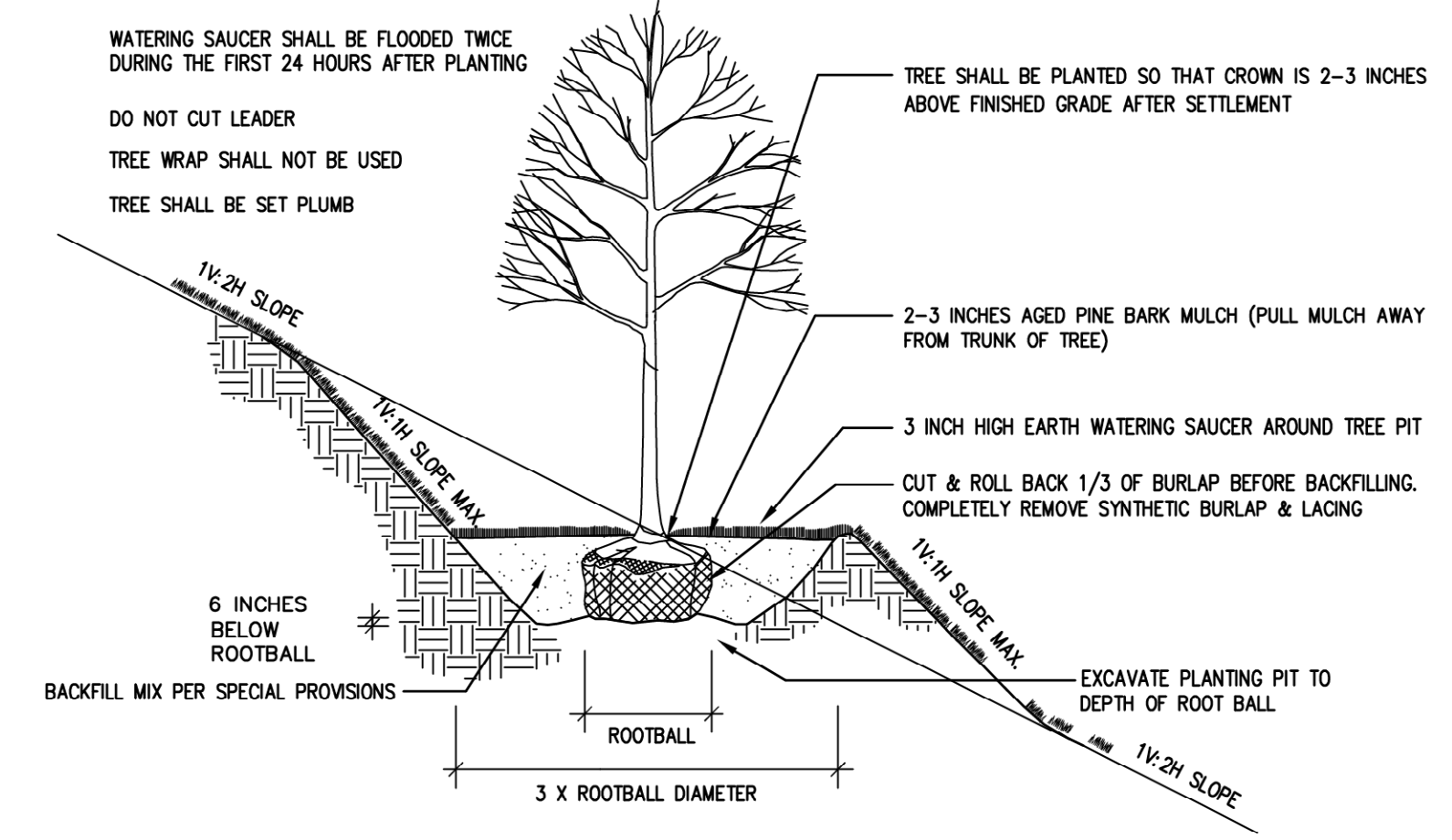
**EVERGREEN TREE PLANTING**  
NOT TO SCALE



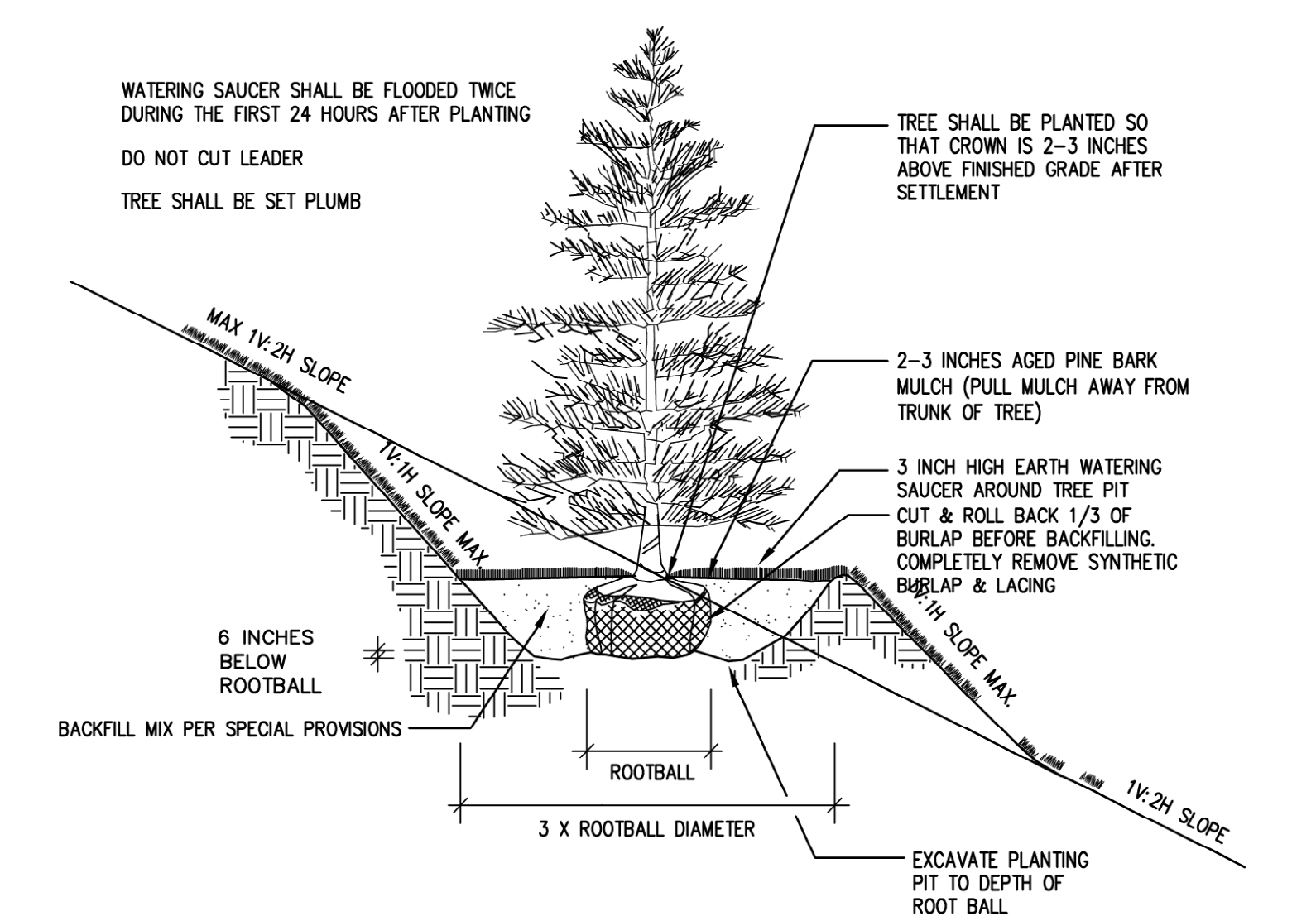
**SHRUB PLANTING**  
NOT TO SCALE



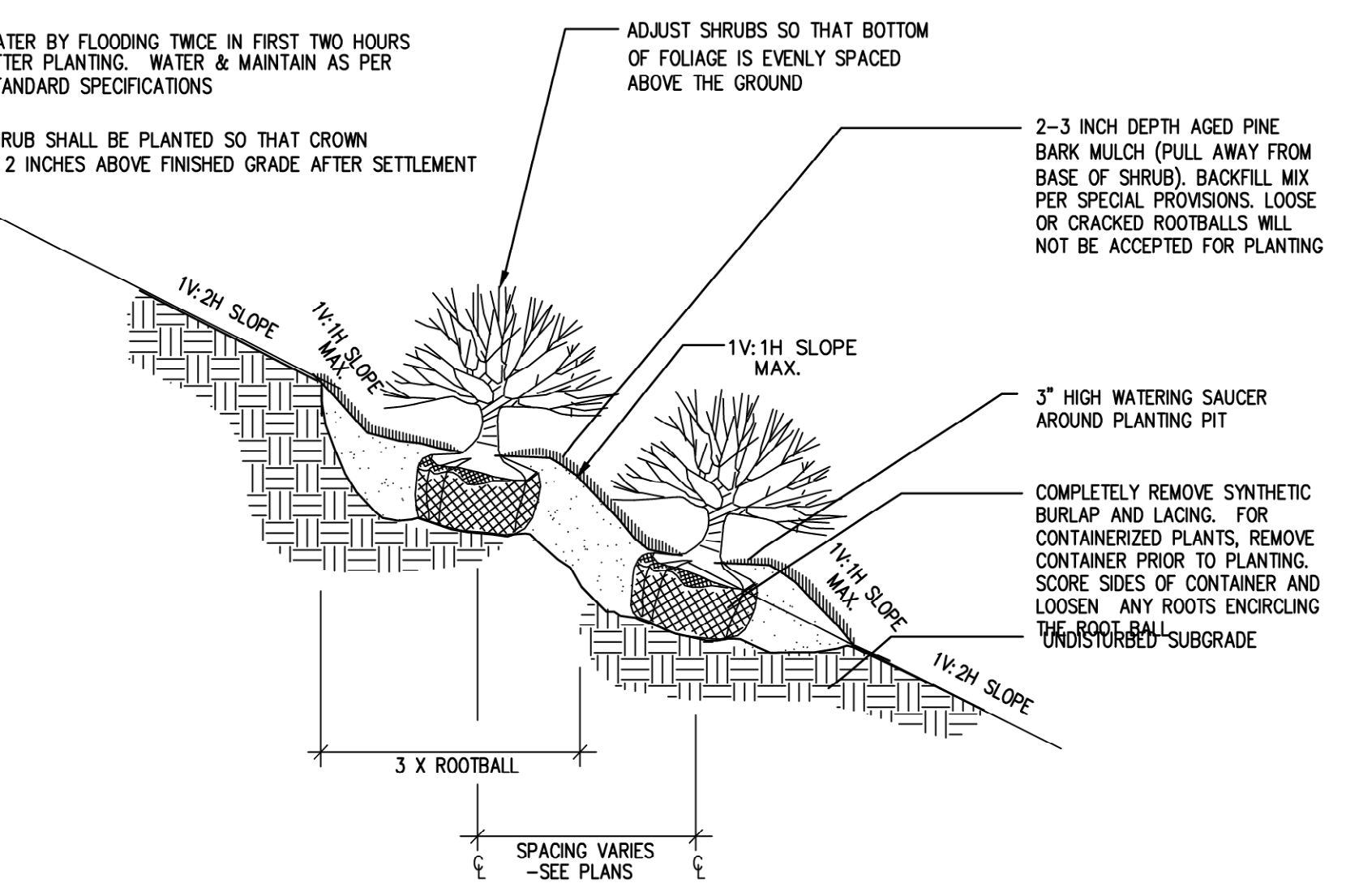
**PERENNIAL PLANTING**  
NOT TO SCALE



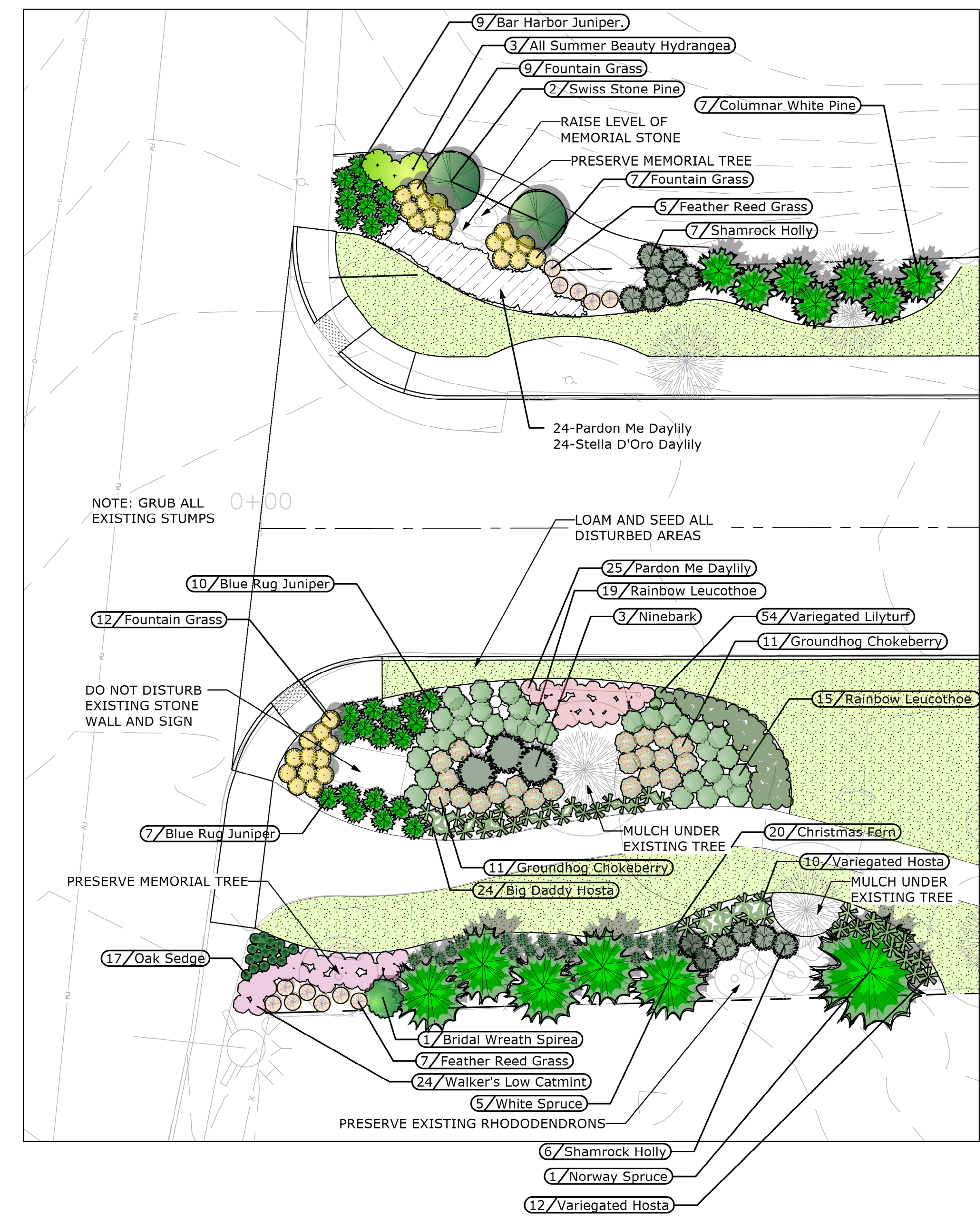
**DECIDUOUS TREE PLANTING (SLOPE)**  
NOT TO SCALE



**EVERGREEN TREE PLANTING (SLOPE)**  
NOT TO SCALE



**CONTAINERIZED SHRUB PLANTING (SLOPE) DETAIL**  
NOT TO SCALE



- NOTES**
- FURNISH AND INSTALL PLANTS AS SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR QUANTITY OF SHRUBS GRAPHICALLY SHOWN ON PLANS. IF THERE IS A DISCREPANCY BETWEEN PLANT LIST QUANTITIES AND GRAPHICS, THE GRAPHIC SHALL TAKE PRECEDENCE.
  - PRIOR TO THE START OF EXCAVATION FOR THE PROJECT BOTH ON AND OF THE SITE, THE CONTRACTOR SHALL NOTIFY DIGSAFE AND BE PROVIDED A DIGSAFE NUMBER INDICATING THAT EXISTING UTILITIES HAVE BEEN LOCATED AND MARKED.
  - CONTRACTOR SHALL BEGIN 90 DAY MAINTENANCE PERIOD IMMEDIATELY UPON PLANTING AND WILL CONTINUE UNTIL FINAL ACCEPTANCE.
  - CONTRACTOR SHALL VERIFY TREE REMOVALS WITH LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION START.
  - CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS, STRUCTURES, AND PLANTING BEDS.
  - MAXIMUM SLOPE WITHIN DISTURBED AREAS SHALL NOT EXCEED 3:1, UNLESS OTHERWISE NOTED.
  - PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS TO ORIGINAL GRADES BEFORE DIGGING.
  - PLANT MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY "THE AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
  - PLANTS TO BE BALLED IN BURLAP OR CONTAINERIZED.
  - MULCH FOR PLANTED AREAS TO BE AGED PINE BARK: PARTIALLY DECOMPOSED, DARK BROWN IN COLOR AND FREE OF WOOD CHIPS THICKER THAN 1/4 INCH.
  - PLANTING SOIL MIX: LOAM THOROUGHLY INCORPORATED WITH ROTTED MANURE PROPORTIONED 5 C.Y. TO 1 C.Y. OR EQUIVALENT. USE OF PEAT MOSS IS PROHIBITED.
  - THE LANDSCAPE CONTRACTOR SHALL GUARANTEE PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF ACCEPTANCE. REQUEST THE LANDSCAPE ARCHITECT PROVIDE A WRITTEN LETTER OF ACCEPTANCE UPON COMPLETION OF EACH PHASE.
  - PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT, AT THE NURSERY, AND AT THE SITE.
  - LANDSCAPE ARCHITECT TO FLAG TREES TO BE TRANSPLANTED PRIOR TO CONSTRUCTION START.
  - AREAS OF THE SITE WHICH HAVE BEEN DISTURBED AND NOT OTHERWISE DEVELOPED SHALL BE LOAMED WITH TOPSOIL TO A MINIMUM DEPTH OF 6", AND SEEDED WITH A MIX CONSISTING OF 40% PERENNIAL RYE GRASS; 30% CHEWINGS FESCUE; 30% KENTUCKY BLUEGRASS.
  - SCREENED IMAGES SHOW EXISTING CONDITIONS. WHERE EXISTING CONDITIONS LIE UNDER OR ARE IMPINGED UPON BY PROPOSED BUILDINGS AND/OR SITE ELEMENTS, THE EXISTING CONDITION WILL BE REMOVED, ABANDONED AND/OR CAPPED OR DEMOLISHED AS REQUIRED.
  - THERE SHALL BE NO SUBSTITUTION OF PLANT SPECIES WITHOUT AUTHORIZATION BY THE LANDSCAPE ARCHITECT.
  - NO PLANTING SHALL BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
  - PLANTS TO BE THOROUGHLY WATERED AFTER INSTALLATION, AT LEAST TWICE WITHIN THE FIRST 24 HOURS.

**Poirier Road Landscape**  
Marlborough, MA

Owner  
**City of Marlborough**  
Department of Public Works  
135 Neil Street  
Marlborough, MA 01752

Landscape Architect  
**Radner Design Associates, Inc.**

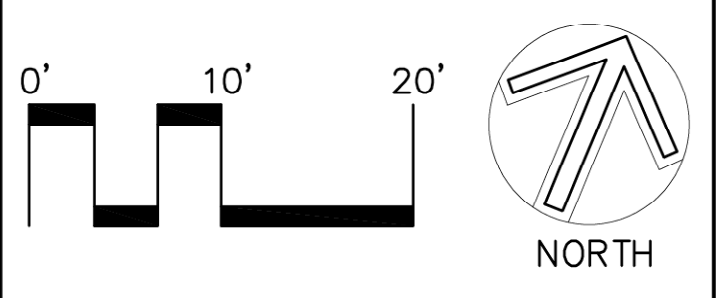
945 Concord Street, Suite 100  
Framingham, MA 01701  
508.736.6144  
[www.RadnerDesign.com](http://www.RadnerDesign.com)

Revision:

Drawn: mr

Scale: 1"=10'-0"

**PROGRESS PLAN**



Sheet Name:  
**Landscape Enlargement**

Project No.:  
**20-10**

Issue Date:  
**04.01.2020**

Sheet No.:  
**L200**

# MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

MARLBOROUGH BOSTON POST ROAD (ROUTE 20)			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	428
PROJECT FILE NO.		608467	
TITLE SHEET & INDEX			

## PLAN AND PROFILE OF RESURFACING AND RELATED WORK ON ROUTE 20

### IN THE CITY OF MARLBOROUGH MIDDLESEX COUNTY

FEDERAL AID PROJECT NO.

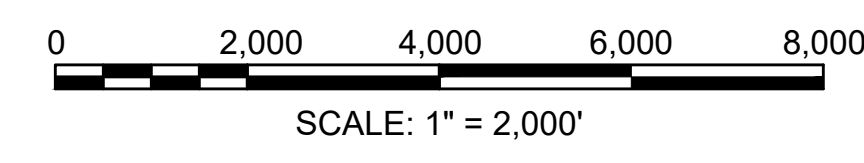
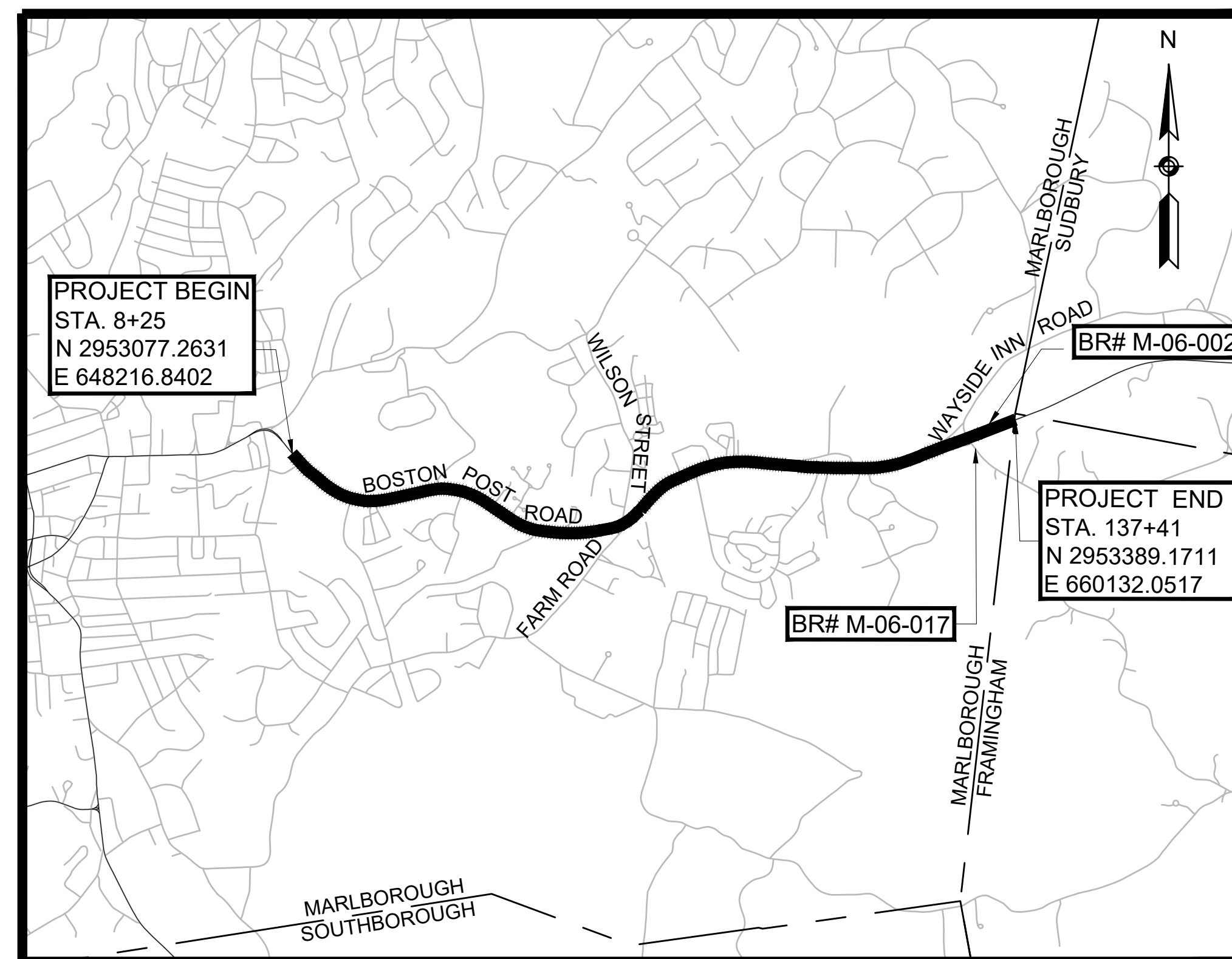
THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

#### INDEX Plans showing wetlands jurisdiction areas and relevant details are highlighted below.

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	GENERAL NOTES
3	LEGEND & ABBREVIATIONS
4 - 7	KEY PLAN
8 - 11	BORING LOGS
12	PAVEMENT NOTES
13 - 25	TYPICAL SECTIONS Sh. 18 Hager Pond Slope Detail
26 - 38	CONSTRUCTION BASELINE TIES
39 - 65	CONSTRUCTION PLANS Sheets 41, 42, 45-48, 55-59, 61, 62, 64, 65 show wetland jurisdiction areas.
66 - 79	PROFILES
80 - 83	SIDE STREET PROFILES
84 - 134	CURB TIE PLANS
135 - 161	GRADING PLANS

SHEET NO.	DESCRIPTION
162 - 188	TRAFFIC SIGN & PAVEMENT MARKINGS
189 - 190	TRAFFIC SIGN SUMMARY SHEET
191 - 203	TRAFFIC SIGNAL PLANS & DATA
204	TRAFFIC SIGNAL DETAILS
205	MAST ARM FOUNDATION DETAIL
206 - 222	TEMPORARY TRAFFIC CONTROL PLANS
223 - 249	UTILITY PLANS
250 - 253	DRAINAGE SCHEDULE
254 - 256	WETLAND MITIGATION PLANS
257 - 283	WATER PLANS
284 - 287	LANDSCAPE PLANS
288 - 290	LANDSCAPE DETAILS
291 - 300	CONSTRUCTION DETAILS Sheets 290 & 293 Wetland Related Details
301 - 306	WHEELCHAIR RAMP/DRIVEWAY DETAILS

SHEET NO.	DESCRIPTION
307 - 410	CROSS SECTIONS
411 - 428	CROSS SECTIONS SIDE STREETS



LENGTH OF PROJECT = 12916 FEET = 2.44 MILES

DESIGN DESIGNATION (ROUTE 20)	
DESIGN SPEED	35 MPH
ADT (2016)	21,700
ADT (2026)	22,810
K	9.2%
D	65%
T (PEAK HOUR)	5.0%
T (AVERAGE DAY)	3.0%
DHV	2,028
DDHV	1,318
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

DATE	DESCRIPTION	REV #
FEB 2020	PS&E SUBMISSION	
NOV 2019	100% SUBMISSION	
JUL 2019	75% SUBMISSION	
AUG 2018	25% SUBMISSION	
OCT 2017	25% SUBMISSION	

**HOWARD STEIN HUDSON**  
11 Beacon Street, Suite 1010  
Boston, MA 02108  
www.hshassoc.com

(ERASE IF NOT APPLICABLE)  
PE Stamp & Signature  
Consultant Name

**massDOT**  
Massachusetts Department of Transportation  
Highway Division

RECOMMENDED FOR APPROVAL

CHIEF ENGINEER	DATE
APPROVED	
HIGHWAY ADMINISTRATOR	DATE



GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER
		CATCH BASIN
		CATCH BASIN CURB INLET
		GUTTER INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		GATE VALVE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		RAILROAD TRACKS
		WOOD FENCE
		COMPOST FILTER TUBE
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT
		PROPOSED WHEELCHAIR RAMP NUMBER
		PROPOSED DRIVEWAY NUMBER

GENERAL SYMBOLS (CONT.)

EXISTING	PROPOSED	DESCRIPTION
		PROPOSED PLANTING - SEE PLANTING SCHEDULE
		PROPOSED PLANTING - SEE PLANTING SCHEDULE
		PROPOSED PLANTING - SEE PLANTING SCHEDULE
		PROPOSED PLANTING - SEE PLANTING SCHEDULE
		PROPOSED PLANTING - SEE PLANTING SCHEDULE

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN, AND SADDLE
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
		RAILROAD SIGNAL
		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT
		TRAFFIC SIGNAL CONDUIT (ABANDONED)
		LOOP DETECTOR

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
		LEGEND "ONLY" - WHITE
		STOP LINE
		YIELD LINES (2' BASE, 3' HEIGHT, 3' CENTER-TO-CENTER SPACING)
		WHITE - CROSSWALK (12" LINES, 10' O.C.; 12" LONGITUDINAL LINE, 4' O.C.)
		6" SOLID WHITE LINE
		12" WIDE SOLID WHITE LINE
		6" SOLID YELLOW LINE
		6" BROKEN WHITE LINE
		6" DOTTED WHITE LINE (3' LINES, 9' GAPS)
		6" DOTTED YELLOW LINE
		6" DOTTED WHITE LINE EXTENSION (2' LINES, 6' GAPS)
		6" DOTTED YELLOW LINE EXTENSION
		6" DOTTED DOUBLE YELLOW LINE EXTENSION
		2-6" DOUBLE WHITE LINE
		2-6" DOUBLE YELLOW LINE (10' O.C.)
		12" SOLID WHITE GORE LINE (10' O.C. @45°)
		12" SOLID YELLOW CHANNELIZED LINE (10' O.C. @45°)
		BIKE LANE SYMBOL

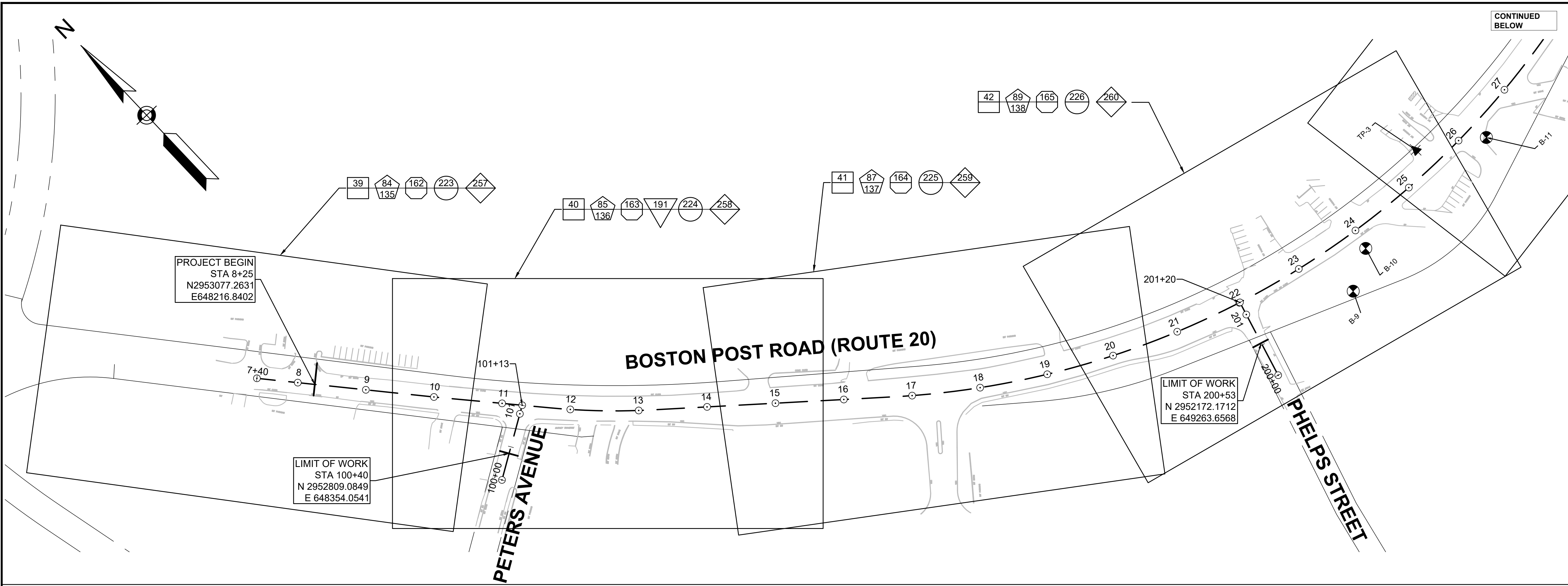
ABBREVIATIONS

GENERAL		ABBREVIATIONS (CON'T)	
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PROP	PROPOSED
ABAN	ABANDON	PSB	PLANTABLE SOIL BORROW
ADJ	ADJUST	PT	POINT OF TANGENCY
APPROX	APPROXIMATE	PVC	POINT OF VERTICAL CURVATURE
AC PIPE	ASBESTOS-CEMENT PIPE	PVCC	POINT OF COMPOUND VERTICAL CURVATURE
AC	ASPHALT CONCRETE	PVI	POINT OF VERTICAL INTERSECTION
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE	PVT	POINT OF VERTICAL TANGENCY
BIT	BITUMINOUS	PVMT	PAVEMENT
BC	BOTTOM OF CURB	PWW	PAVED WATERWAY
BD	BOUND	R	RADIUS OF CURVATURE
BL	BASELINE	R&D	REMOVE AND DISPOSE
BLDG	BUILDING	RCP	REINFORCED CONCRETE PIPE
BM	BENCHMARK	RD	ROAD
BO	BY OTHERS	RDWY	ROADWAY
BOS	BOTTOM OF SLOPE	REM	REMOVE
BR	BRIDGE	RET	RETAIN
CB	CATCH BASIN	RET WALL	RETAINING WALL
CBCI	CATCH BASIN WITH CURB INLET	ROW	RIGHT OF WAY
CC	CEMENT CONCRETE	RR	RAILROAD
CCM	CEMENT CONCRETE MASONRY	R&R	REMOVE AND RESET
CEM	CEMENT	R&S	REMOVE AND STACK
CI	CURB INLET	RT	RIGHT
CIP	CAST IRON PIPE	SB	STONE BOUND
CIT	CHANGE IN TYPE	SGE	SLOPED GRANITE EDGING
CLF	CHAIN LINK FENCE	SHLD	SHOULDER
CL	CENTERLINE	SMH	SEWER MANHOLE
CMP	CORRUGATED METAL PIPE	ST	STREET
CSP	CORRUGATED STEEL PIPE	STA	STATION
CO	COUNTY	SSD	STOPPING SIGHT DISTANCE
CONC	CONCRETE	SHLO	STATE HIGHWAY LAYOUT LINE
CONT	CONTINUED	SW	SIDEWALK
CONST	CONSTRUCTION	T	TANGENT DISTANCE OF CURVE/TRUCK %
CR GR	CROWN GRADE	TAN	TANGENT
DHV	DESIGN HOURLY VOLUME	TEMP	TEMPORARY
DI	DROP INLET	TC	TOP OF CURB
DIA	DIAMETER	TOS	TOP OF SLOPE
DIP	DUCTILE IRON PIPE	TYP	TYPICAL
DMH	DRAINAGE MANHOLE	UP	UTILITY POLE
DW	STEADY DON'T WALK - PORTLAND ORANGE	VAR	VARIES
DWY	DRIVEWAY	VERT	VERTICAL
ELEV	ELEVATION	VC	VERTICAL CURVE
EMB	EMBANKMENT	VLF	VINYL FENCE
EOP	EDGE OF PAVEMENT	WCR	WHEEL CHAIR RAMP
EXIST	EXISTING	WDF	WOOD FENCE
EXC	EXCAVATION	WG	WATER GATE
F&C	FRAME AND COVER	WIF	WROUGHT IRON FENCE
F&G	FRAME AND GRATE	WIP	WROUGHT IRON PIPE
FDN	FOUNDATION	WM	WATER METER/WATER MAIN
FES	FLARED END SECTION	X-SECT	CROSS SECTION
FLDSTN	FIELDSTONE	TRAFFIC SIGNAL	
FT	FEET	CAB	CABINET
GAR	GARAGE	CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
GD	GROUND	DW	STEADY DON'T WALK
GG	GAS GATE	FDW	FLASHING DON'T WALK
GI	GUTTER INLET	FR	FLASHING CIRCULAR RED
GICI	GUTTER INLET WITH CURB INLET	FRL	FLASHING RED LEFT ARROW
GIP	GALVANIZED IRON PIPE	FRR	FLASHING RED RIGHT ARROW
GRAN	GRANITE	FY	FLASHING CIRCULAR AMBER
GRAV	GRAVEL	FYL	FLASHING AMBER LEFT ARROW
GRD	GUARD	FYR	FLASHING AMBER RIGHT ARROW
GV	GATE VALVE	G	STEADY CIRCULAR GREEN
HDW	HEADWALL	GL	STEADY GREEN LEFT ARROW
HMA	HOT MIX ASPHALT	GR	STEADY GREEN RIGHT ARROW
HOR	HORIZONTAL	GSL	STEADY GREEN SLASH LEFT ARROW
HYD	HYDRANT	GSR	STEADY GREEN SLASH RIGHT ARROW
INV	INVERT	GV	STEADY GREEN VERTICAL ARROW
IRF	IRON PIPE FOUND	OL	OVERLAP
JCT	JUNCTION	PED	PEDESTRIAN
L	LENGTH OF CURVE	PTZ	PAN, TILE, ZOOM
LB	LEACH BASIN	R	STEADY CIRCULAR RED
LP	LIGHT POLE	RL	STEADY RED LEFT ARROW
LSA	LANDSCAPE	RR	STEADY RED RIGHT ARROW
LT	LEFT	TR SIG	TRAFFIC SIGNAL
MAX	MAXIMUM	TSC	TRAFFIC SIGNAL CONDUIT
MB	MAILBOX	W	STEADY WALK
MH	MANHOLE	Y	STEADY CIRCULAR AMBER
MHB	MASSACHUSETTS HIGHWAY BOUND	YL	STEADY AMBER LEFT ARROW
MIN	MINIMUM		
NIC	NOT IN CONTRACT		
NO	NUMBER		
PC	POINT OF CURVATURE		
PCC	POINT OF COMPOUND CURVATURE		
PGL	PROFILE GRADE LINE		
PI	POINT OF INTERSECTION		
POC	POINT ON CURVE		
POT	POINT ON TANGENT		
PRC	POINT OF REVERSE CURVATURE		
PROJ	PROJECT		

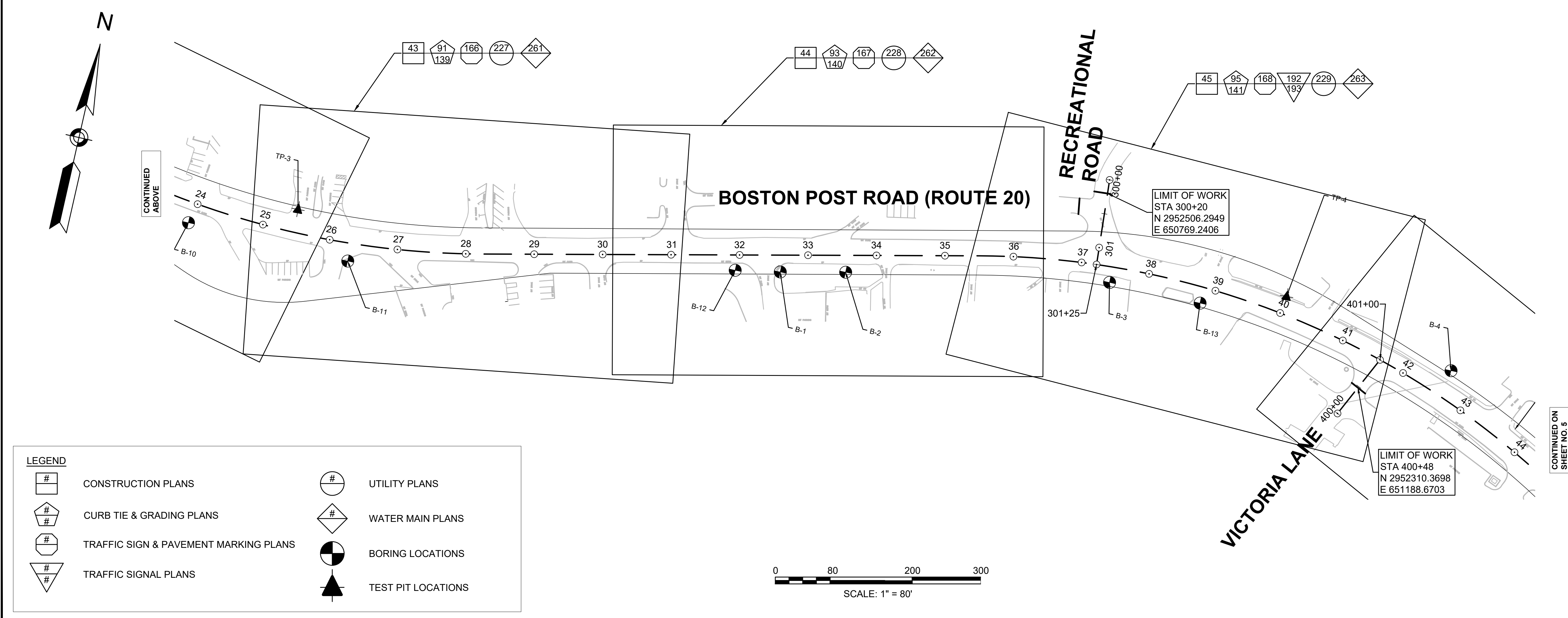
**MARLBOROUGH**  
**BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	428
PROJECT FILE NO. 608467			

**LEGEND & ABBREVIATIONS**



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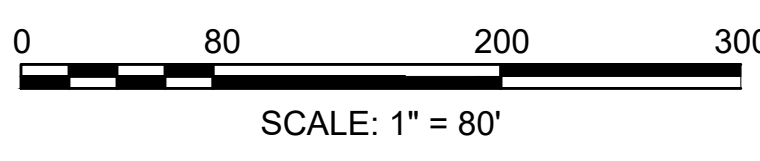


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**LEGEND**

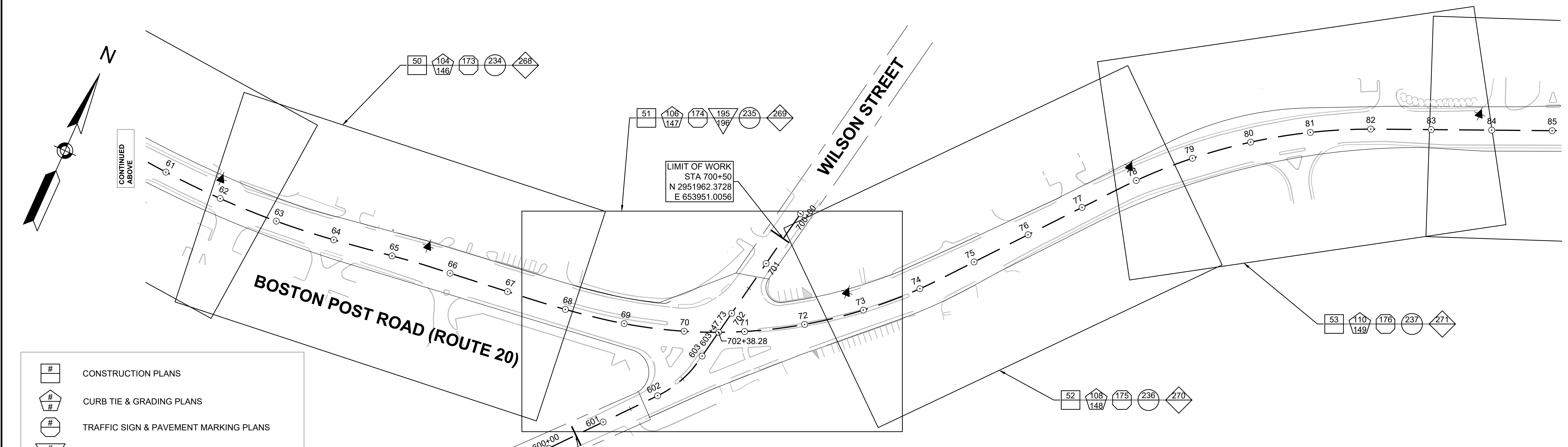
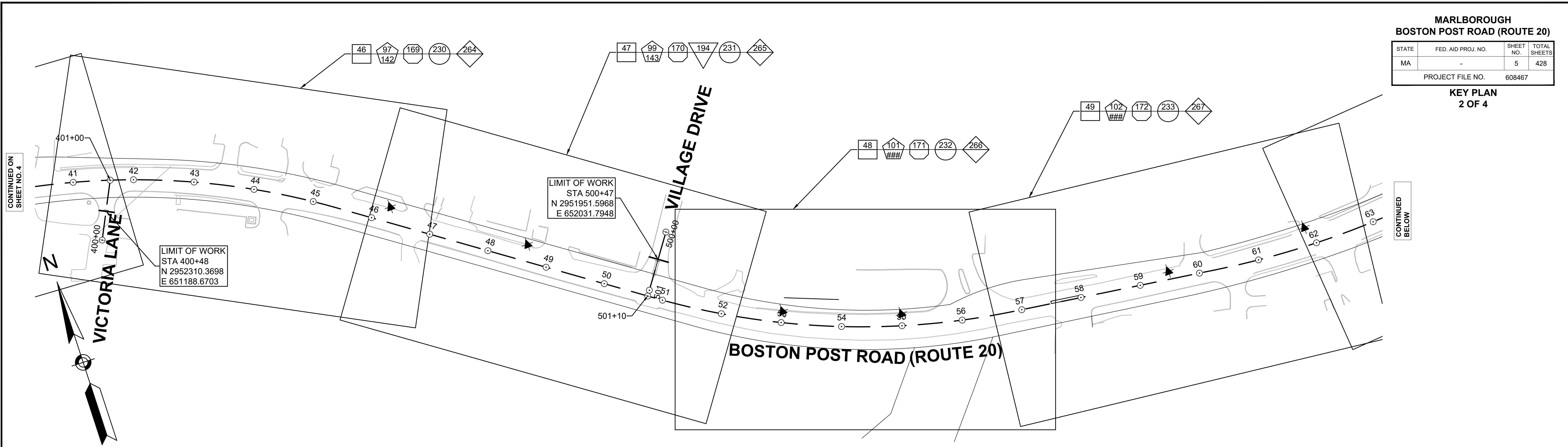
CONSTRUCTION PLANS	UTILITY PLANS
CURB TIE & GRADING PLANS	WATER MAIN PLANS
TRAFFIC SIGN & PAVEMENT MARKING PLANS	BORING LOCATIONS
TRAFFIC SIGNAL PLANS	TEST PIT LOCATIONS



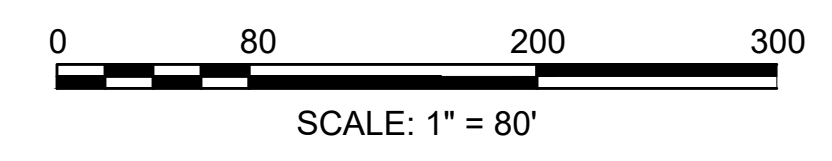
**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	428

**KEY PLAN  
2 OF 4**



- CONSTRUCTION PLANS
- CURB TIE & GRADING PLANS
- TRAFFIC SIGN & PAVEMENT MARKING PLANS
- TRAFFIC SIGNAL PLANS
- UTILITY PLANS
- WATER MAIN PLANS
- BORING LOCATIONS
- TEST PIT LOCATIONS



CONTINUED ON  
SHEET NO. 4

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BELOW

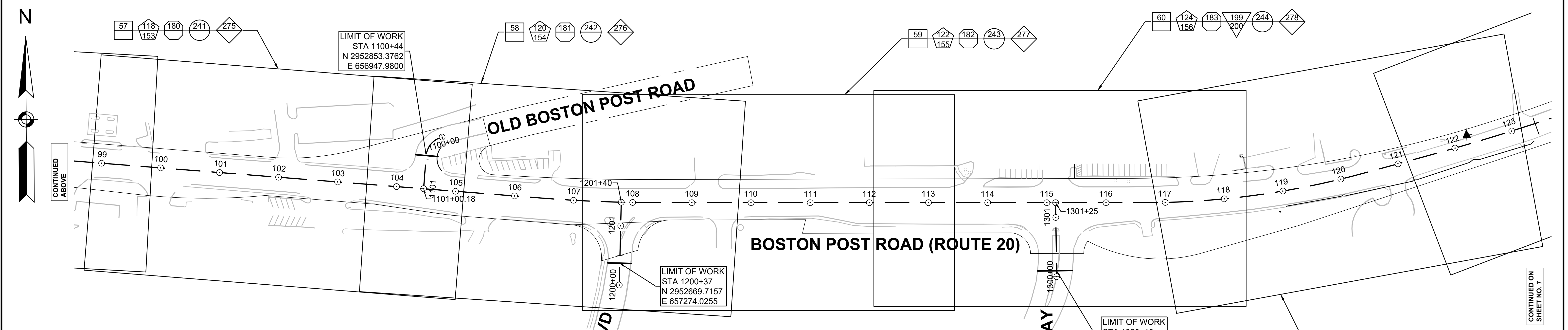
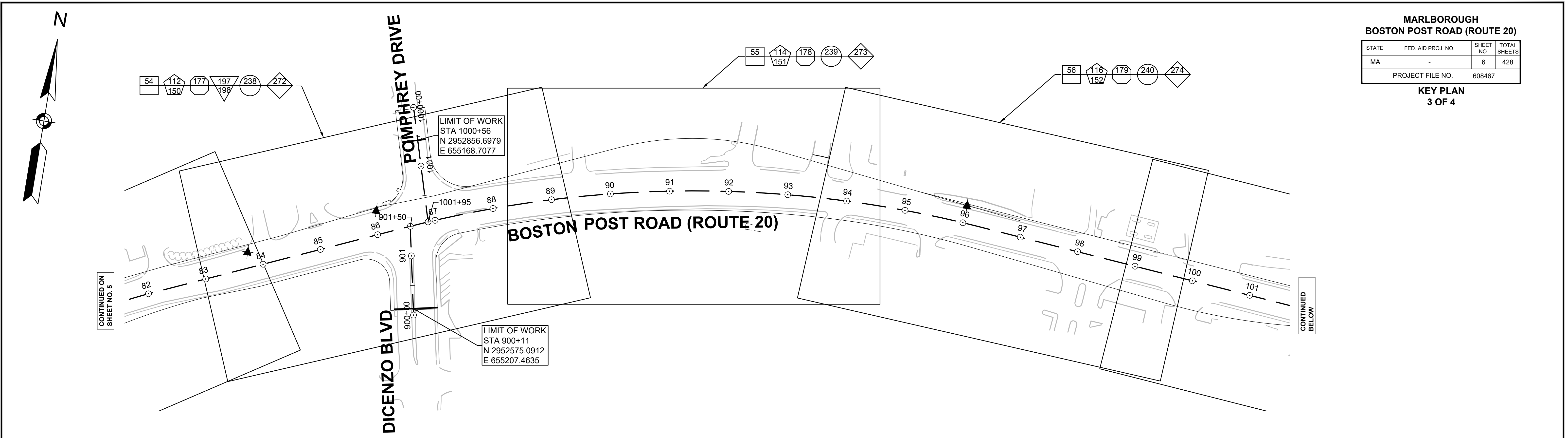
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SHEET NO. 6

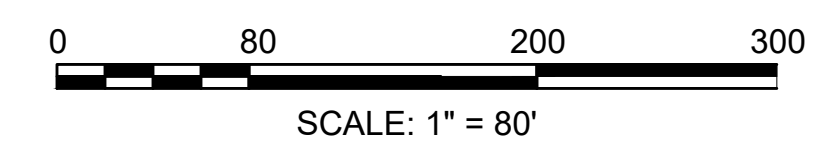
**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	428

PROJECT FILE NO. 608467  
**KEY PLAN  
3 OF 4**



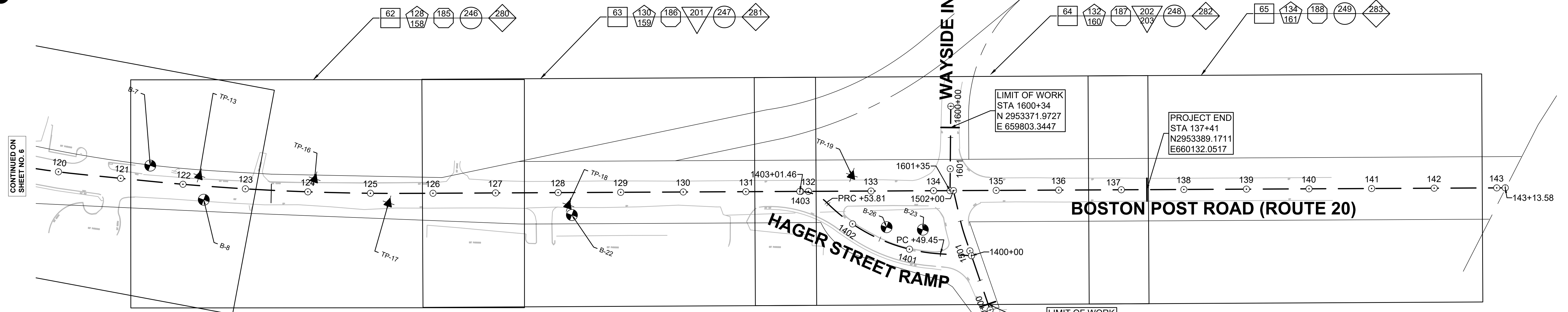
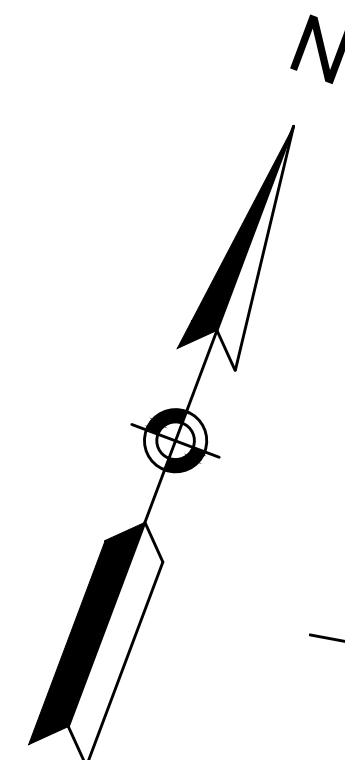
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- # CURB TIE & GRADING PLANS
- # TRAFFIC SIGN & PAVEMENT MARKING PLANS
- # TRAFFIC SIGNAL PLANS
- # UTILITY PLANS
- # WATER MAIN PLANS
- BORING LOCATIONS
- TEST PIT LOCATIONS



**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

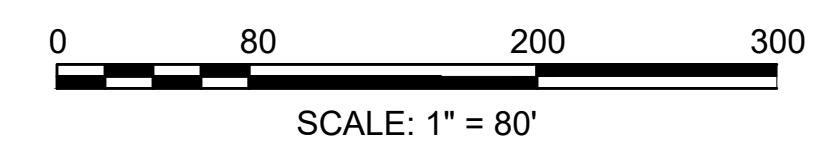
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MA	-	7	428
PROJECT FILE NO.		608467	

**KEY PLAN  
4 OF 4**



CONTINUED ON  
SHEET NO. 6

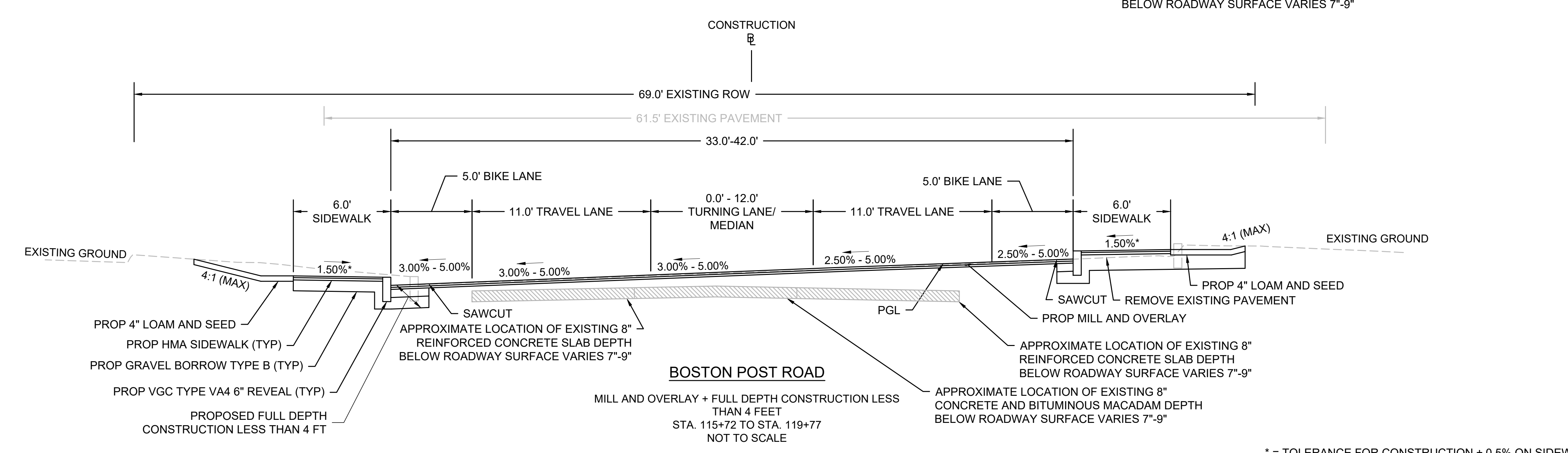
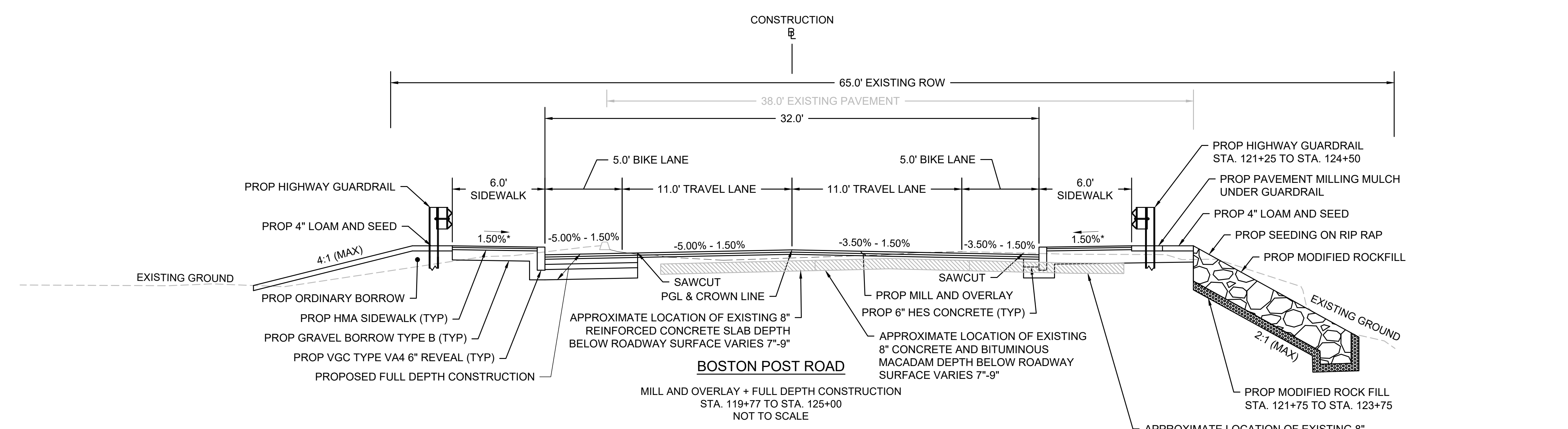
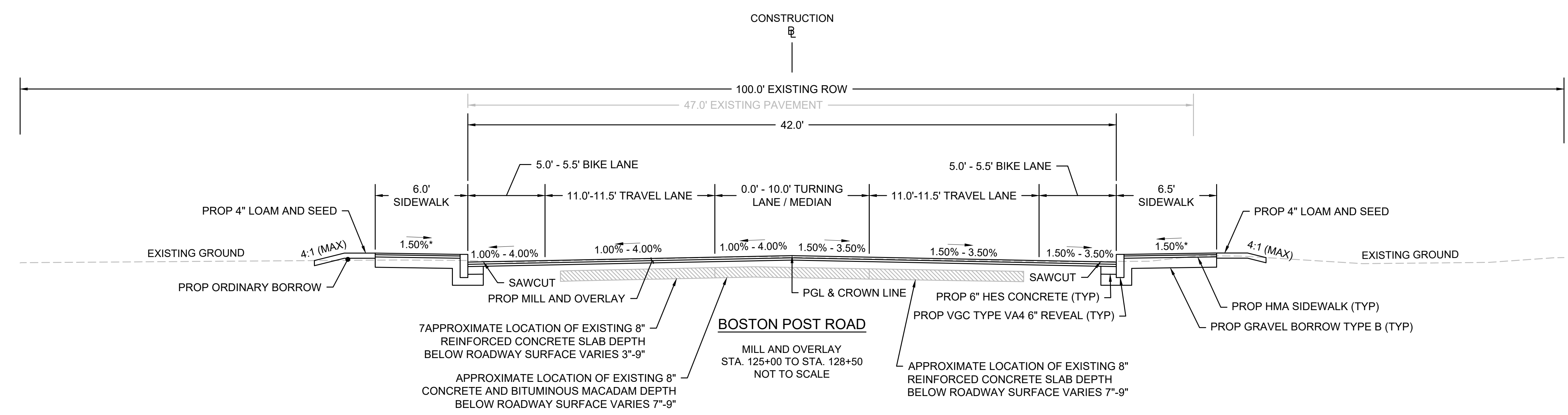
- CONSTRUCTION PLANS
- CURB TIE & GRADING PLANS
- TRAFFIC SIGN & PAVEMENT MARKING PLANS
- TRAFFIC SIGNAL PLANS
- UTILITY PLANS
- WATER MAIN PLANS
- BORING LOCATIONS
- TEST PIT LOCATIONS



**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	428
PROJECT FILE NO.		608467	

**TYPICAL SECTIONS  
6 OF 13**



\* = TOLERANCE FOR CONSTRUCTION ± 0.5% ON SIDEWALK SLOPES, DRIVEWAY SLOPES, AND WHEELCHAIR RAMPS.  
\*\* = EXISTING GRAVEL DETERMINED TO BE SUITABLE SHALL REMAIN.

**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	428
PROJECT FILE NO.		608467	

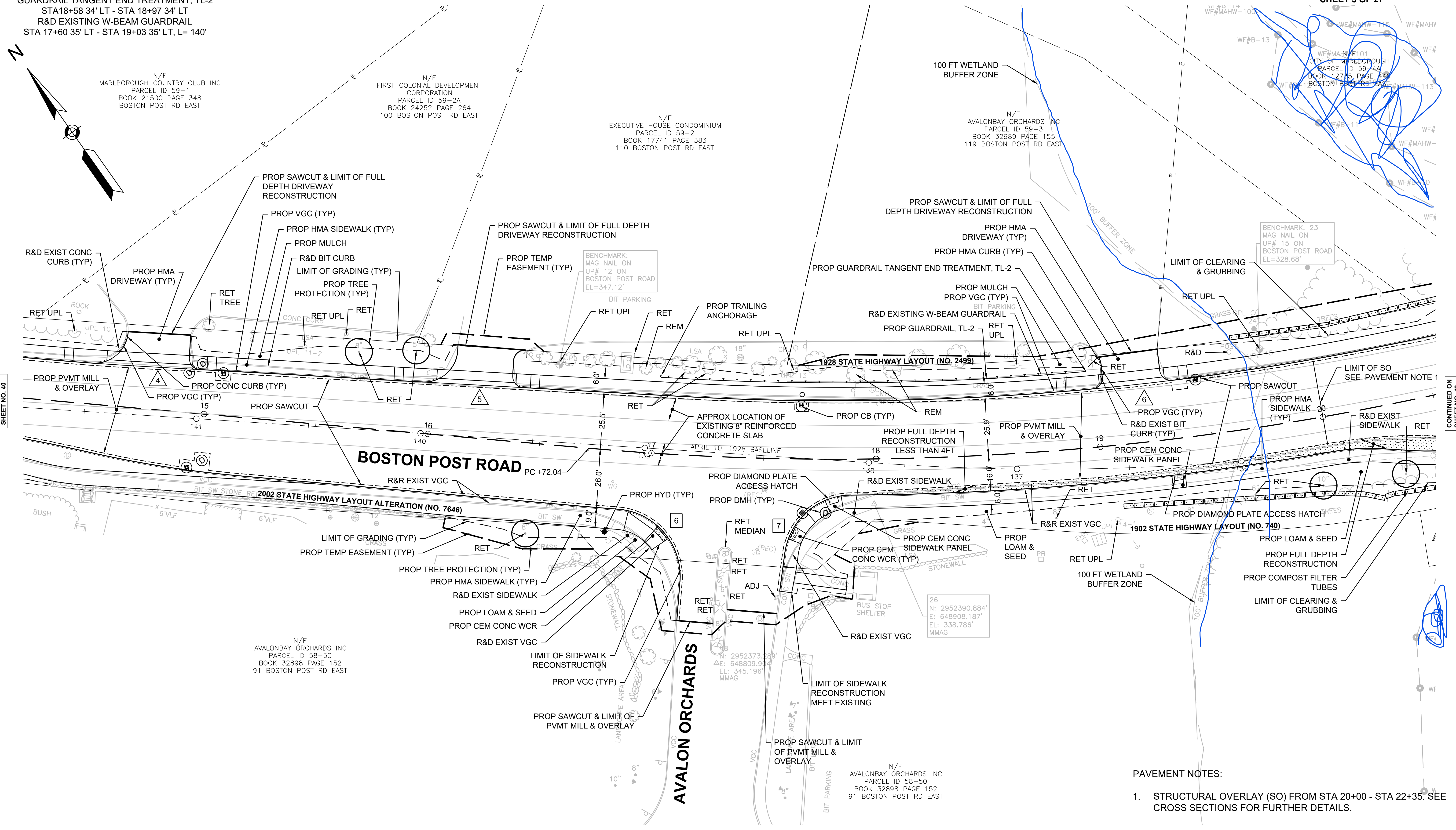
**CONSTRUCTION PLANS  
SHEET 3 OF 27**

**HIGHWAY GUARD DETAILS**  
TRAILING ANCHORAGE  
STA 17+02 34' LT - STA 17+13 34' LT  
GUARDRAIL, TL-2 (SINGLE FACED)  
STA 17+13 34' LT - STA 18+58 34' LT, L= 141'  
GUARDRAIL TANGENT END TREATMENT, TL-2  
STA 18+58 34' LT - STA 18+97 34' LT  
R&D EXISTING W-BEAM GUARDRAIL  
STA 17+60 35' LT - STA 19+03 35' LT, L= 140'

**TRAFFIC SIGNAL CONDUIT**  
NONE

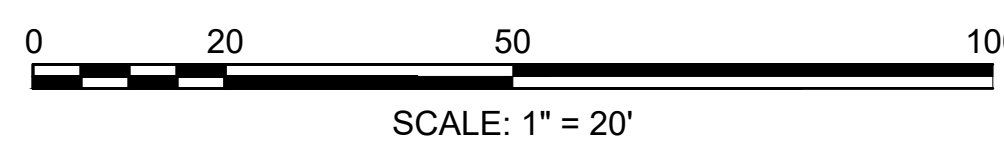
**WATER SUPPLY ALTERATIONS**  
SEE SHEET 225 & 259

**DRAINAGE DETAILS**  
SEE SHEET 225



CONTINUED ON  
SHEET NO. 40

CONTINUED ON  
SHEET NO. 42



**PAVEMENT NOTES:**

- STRUCTURAL OVERLAY (SO) FROM STA 20+00 - STA 22+35'. SEE CROSS SECTIONS FOR FURTHER DETAILS.

FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 67

**NOTES:** DISPOSITION OF UTILITIES SEE UTILITY PLANS  
DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS

**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	428

**CONSTRUCTION PLANS  
SHEET 4 OF 27**

N/F  
CIDER HILL CONDOMINIUM  
PARCEL ID 59-4F  
BOOK 13855 PAGE 664  
178 BOSTON POST RD EAST

N/F  
CIDER HILL CONDOMINIUM  
PARCEL ID 59-4  
BOOK 13855 PAGE 664  
168 BOSTON POST RD EAST

N/F  
CIDER HILL CONDOMINIUM  
PARCEL ID 59-4D  
BOOK 13855 PAGE 664  
158 BOSTON POST RD EAST

N/F  
CIDER HILL CONDOMINIUM  
PARCEL ID 59-4C  
BOOK 13855 PAGE 664  
148 BOSTON POST RD EAST

N/F  
CITY OF MARLBOROUGH  
PARCEL ID 59-4A  
BOOK 12735 PAGE 649  
BOSTON POST RD EAST

**HIGHWAY GUARD DETAILS**

TRAILING ANCHORAGE  
STA 20+61 36' LT - STA 20+72 36' LT  
GUARDRAIL, TL-2 (SINGLE FACED)  
STA 20+72 36' LT - STA 21+62 34' LT, L= 87'  
GUARDRAIL TANGENT END TREATMENT, TL-2  
STA 21+62 34' LT - STA 22+00 34' LT  
R&D EXISTING W-BEAM GUARDRAIL  
STA 20+98 34' LT - STA 21+77 34' LT, L= 78'

**TRAFFIC SIGNAL CONDUIT**

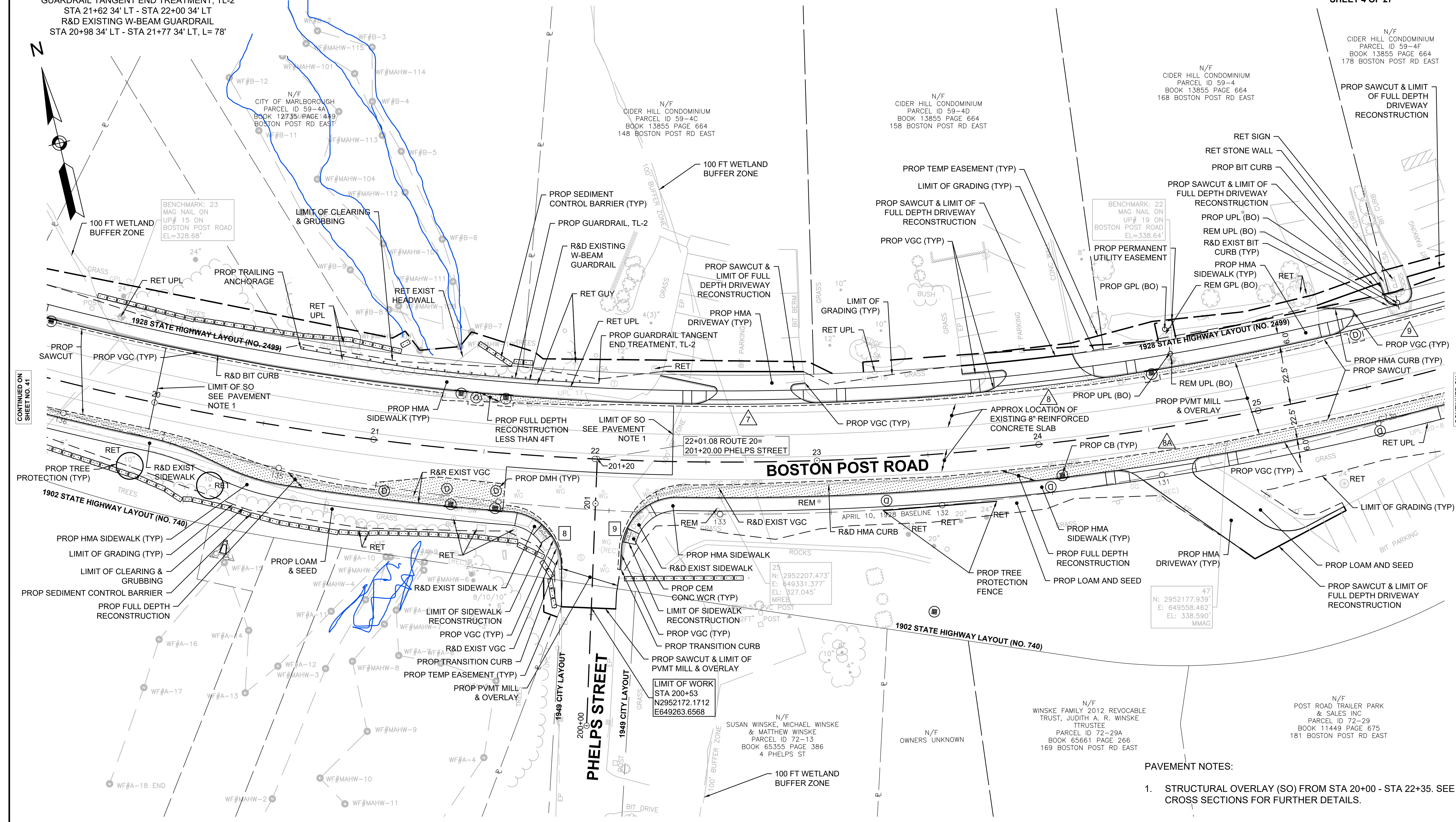
NONE

**WATER SUPPLY ALTERATIONS**

SEE SHEET 226 & 260

**DRAINAGE DETAILS**

SEE SHEET 226



CONTINUED ON  
SHEET NO. 41

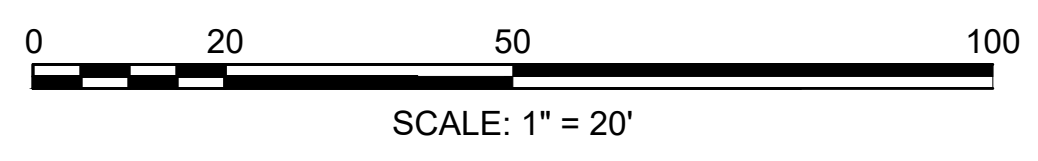
CONTINUED ON  
SHEET NO. 43

**PAVEMENT NOTES:**

- STRUCTURAL OVERLAY (SO) FROM STA 20+00 - STA 22+35. SEE CROSS SECTIONS FOR FURTHER DETAILS.

FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 68

NOTES: DISPOSITION OF UTILITIES SEE UTILITY PLANS  
DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS





HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 229 & 263

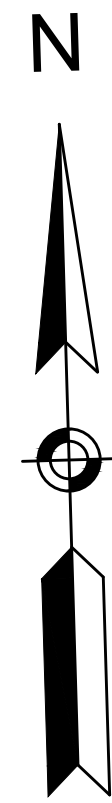
DRAINAGE DETAILS

SEE SHEET 229

MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	45	428
PROJECT FILE NO.		608467	

CONSTRUCTION PLANS  
SHEET 7 OF 27

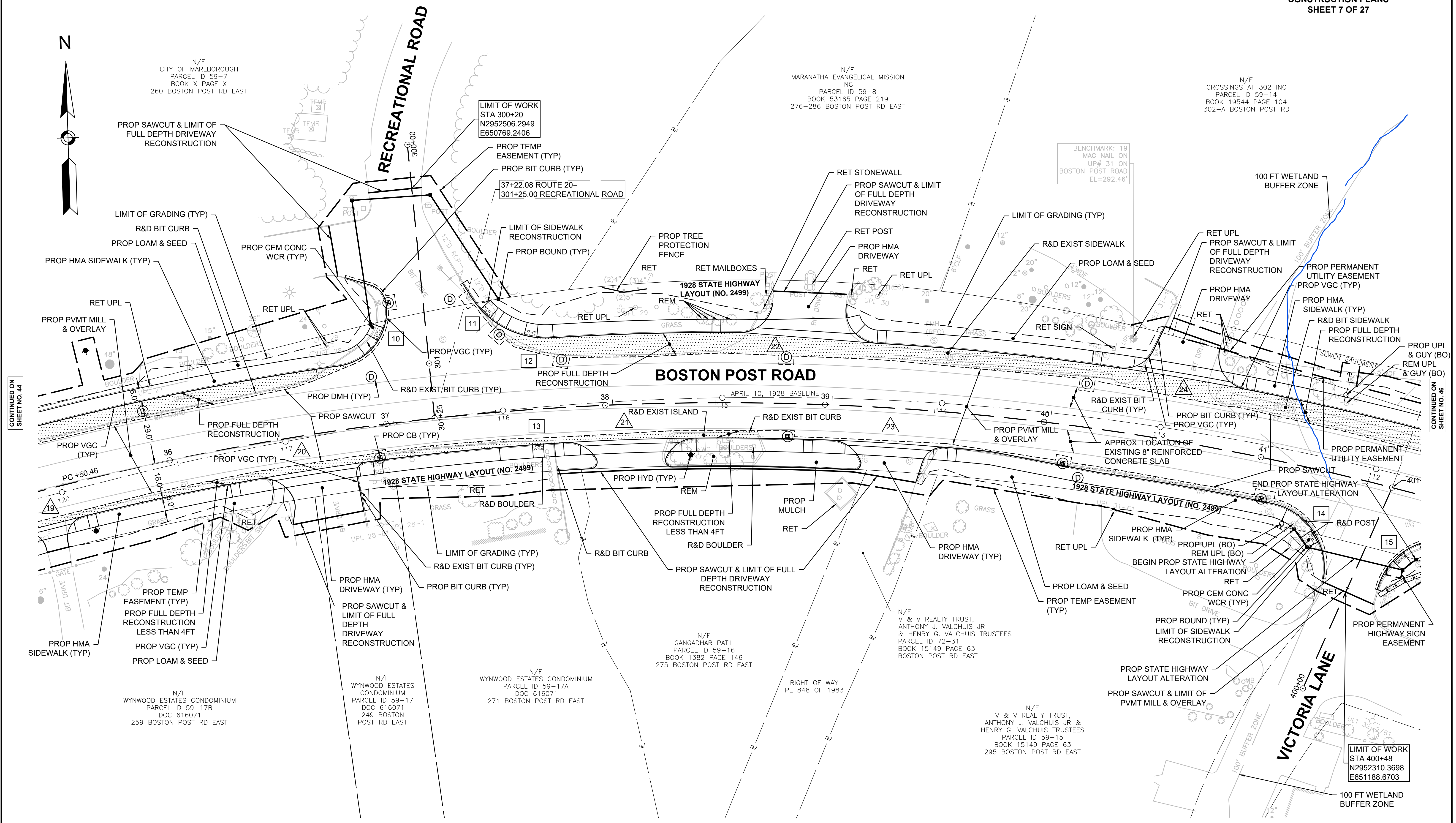


N/F  
CITY OF MARLBOROUGH  
PARCEL ID 59-7  
BOOK X PAGE X  
260 BOSTON POST RD EAST

N/F  
MARANATHA EVANGELICAL MISSION  
INC  
PARCEL ID 59-8  
BOOK 53165 PAGE 219  
276-286 BOSTON POST RD EAST

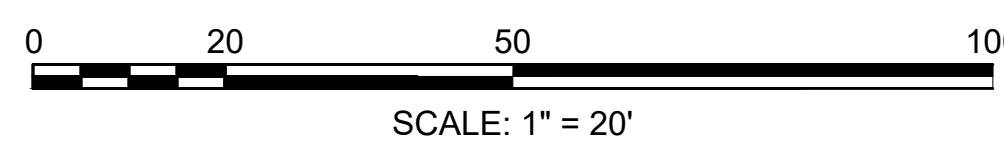
N/F  
CROSSINGS AT 302 INC  
PARCEL ID 59-14  
BOOK 19544 PAGE 104  
302-A BOSTON POST RD

BENCHMARK: 19  
MAG NAIL ON  
UP# 31 ON  
BOSTON POST ROAD  
EL=292.46'



CONTINUED ON  
SHEET NO. 44

CONTINUED ON  
SHEET NO. 46



FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 69 & 70

NOTES: DISPOSITION OF UTILITIES SEE UTILITY PLANS  
DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS

**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	46	428

PROJECT FILE NO. 608467  
**CONSTRUCTION PLANS  
SHEET 8 OF 27**

**HIGHWAY GUARD DETAILS**

R&D EXISTING W-BEAM GUARDRAIL  
STA 42+00 22' RT - STA 42+66 20' RT, L= 65'  
TRAILING ANCHORAGE  
STA 42+22 35' LT - STA 42+31 35' LT  
STA 43+14 25' RT - STA 43+24 27' RT  
GUARDRAIL, TL-2  
STA 42+31 35' LT - STA 42+59 35' LT, L= 29'  
STA 42+71 36' LT - STA 42+99 40' LT, L= 29'  
STA 42+36 24' RT - STA 43+00 24' RT, L= 63'

**HIGHWAY GUARD DETAILS**

GUARDRAIL - CURVED, TL-2  
STA 42+59 35' LT - STA 42+71 36' LT, L= 12'  
STA 43+00 24' RT - STA 43+14 25' RT L= 14'  
GUARDRAIL FLARED END TREATMENT, TL-2  
STA 42+99 40' LT - STA 43+35 43' LT  
GUARDRAIL TANGENT END TREATMENT, TL-2  
STA 41+98 24' RT - STA 42+36 24' RT

**TRAFFIC SIGNAL CONDUIT**

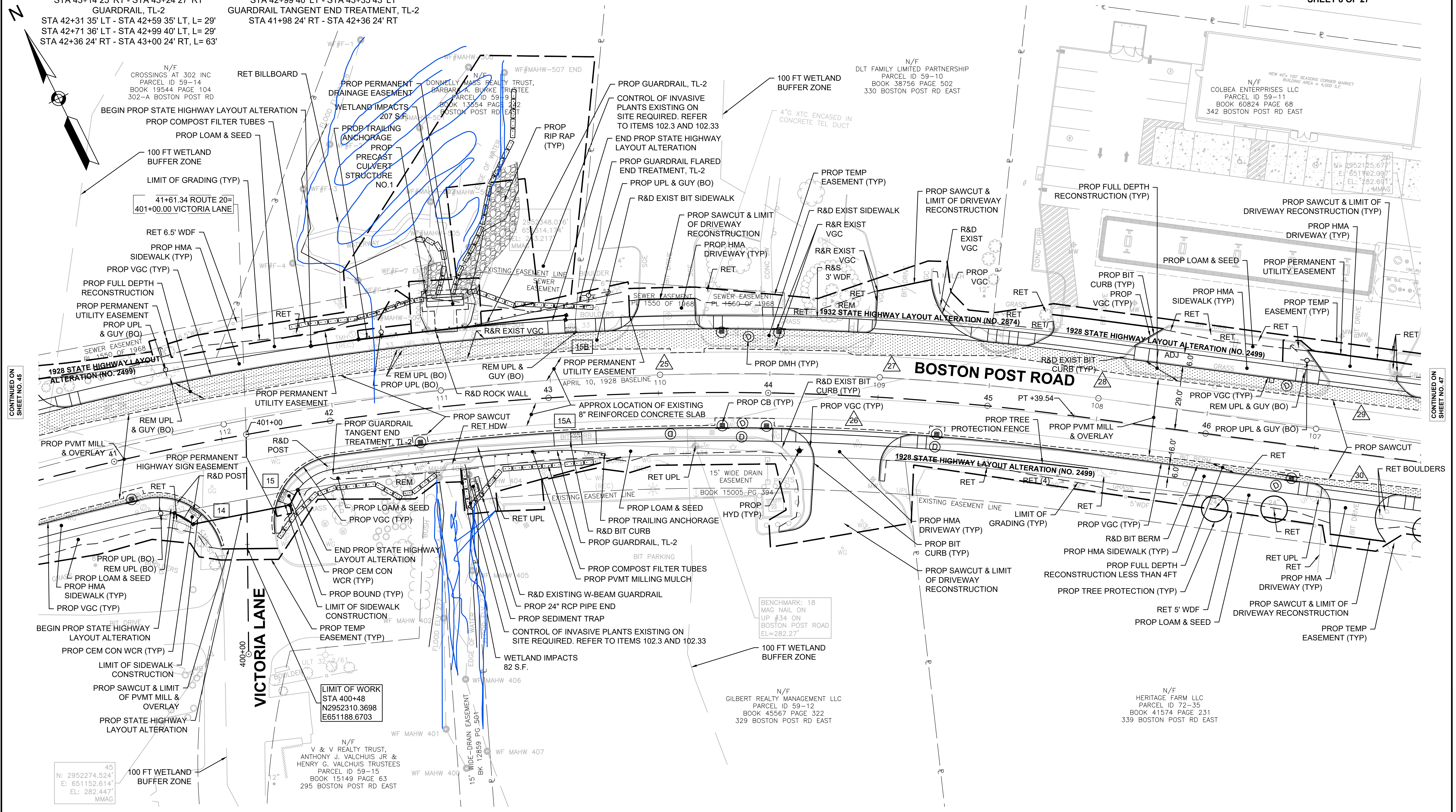
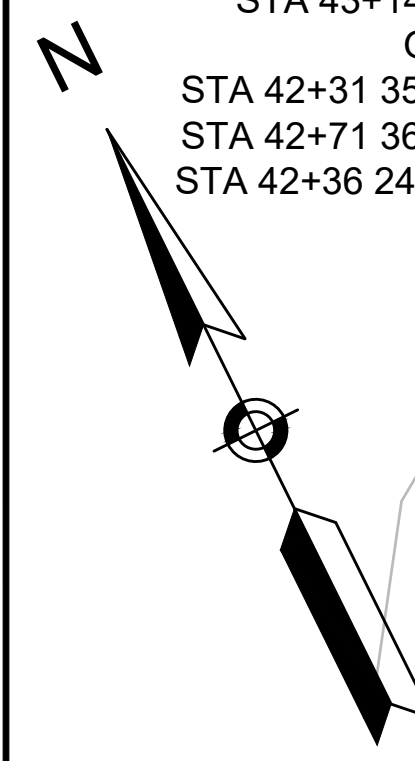
NONE

**WATER SUPPLY ALTERATIONS**

SEE SHEET 230 & 264

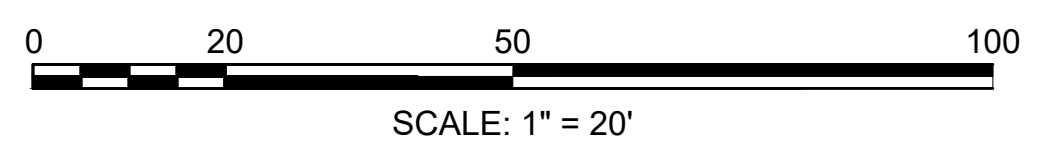
**DRAINAGE DETAILS**

SEE SHEET 230



CONTINUED ON SHEET NO. 45

CONTINUED ON SHEET NO. 47



FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 70

NOTES: DISPOSITION OF UTILITIES SEE UTILITY PLANS  
DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS

**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	47	428

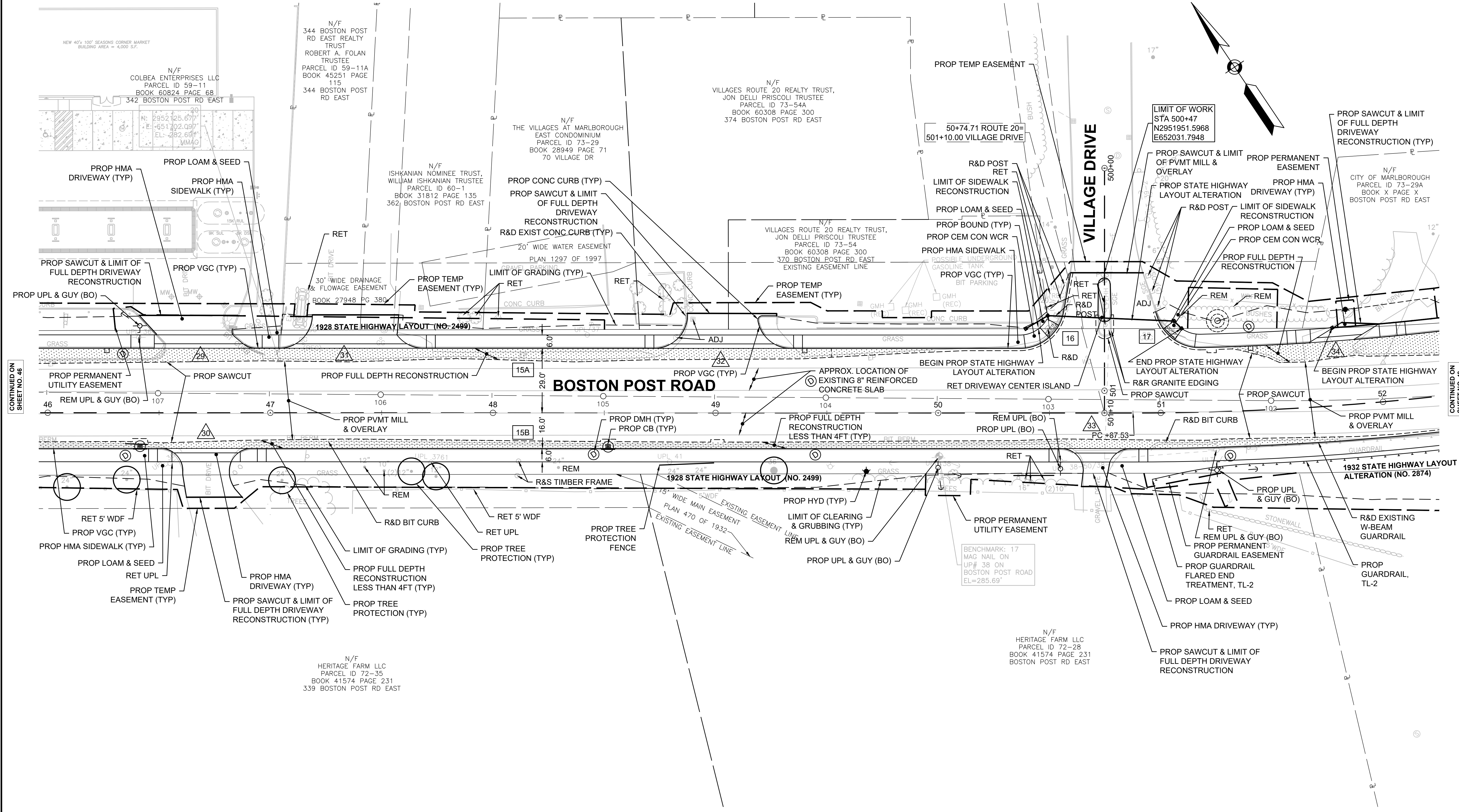
PROJECT FILE NO. 608467  
**CONSTRUCTION PLANS  
SHEET 9 OF 27**

**HIGHWAY GUARD DETAILS**  
GUARDRAIL FLARED END TREATMENT, TL-2  
STA 50+96 30' RT - 51+32 24' RT  
GUARDRAIL, TL-2  
STA 51+32 24' RT - STA 55+56 24' RT, L= 432'

**TRAFFIC SIGNAL CONDUIT**  
NONE

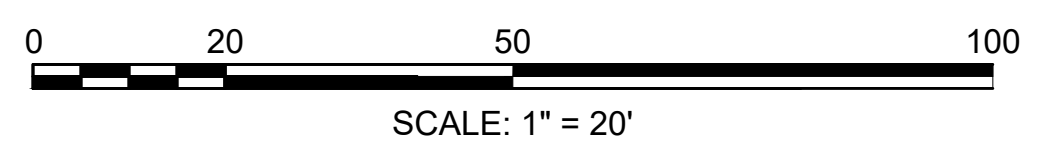
**WATER SUPPLY ALTERATIONS**  
SEE SHEET 231 & 265

**DRAINAGE DETAILS**  
SEE SHEET 231



CONTINUED ON SHEET NO. 46

CONTINUED ON SHEET NO. 48



FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 70 & 71

NOTES: DISPOSITION OF UTILITIES SEE UTILITY PLANS  
DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS

608467\_HQ(CONST)-1(DWG) Plotted on 10-Mar-2020 9:54 AM



**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	55	424
PROJECT FILE NO. 608467			

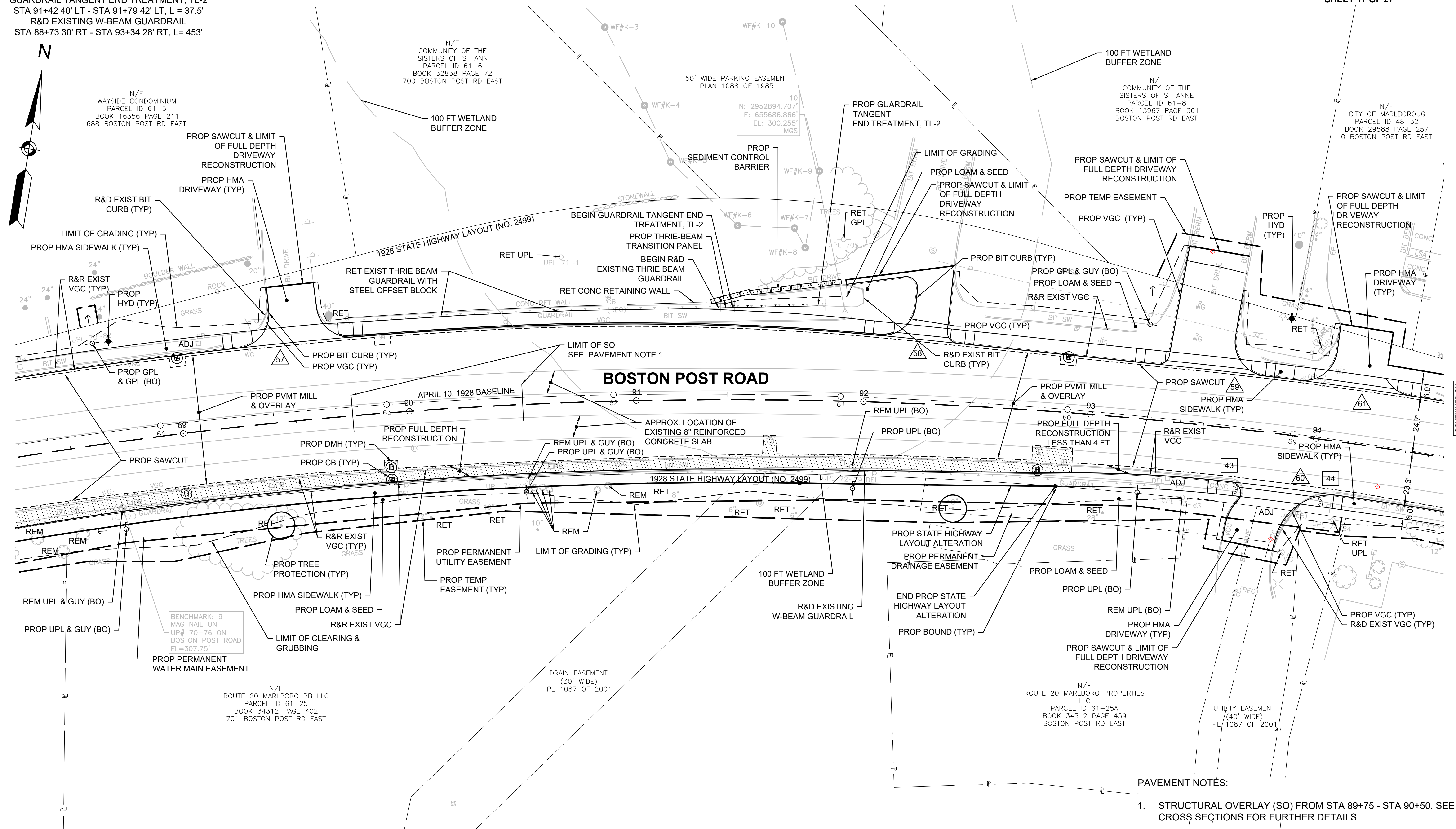
**CONSTRUCTION PLANS  
SHEET 17 OF 27**

**HIGHWAY GUARD DETAILS**  
R&D EXISTING THRIE-BEAM GUARDRAIL  
STA 91+36 40' LT - STA 91+81 42' LT, L= 45'  
THRIE-BEAM TRANSITION PANEL  
STA 91+36 40' LT - STA 91+42 40' LT, L= 6.25'  
GUARDRAIL TANGENT END TREATMENT, TL-2  
STA 91+42 40' LT - STA 91+79 42' LT, L= 37.5'  
R&D EXISTING W-BEAM GUARDRAIL  
STA 88+73 30' RT - STA 93+34 28' RT, L= 453'

**TRAFFIC SIGNAL CONDUIT**  
SEE SHEET 197

**WATER SUPPLY ALTERATIONS**  
SEE SHEET 239 & 273

**DRAINAGE DETAILS**  
SEE SHEET 239



CONTINUED ON  
SHEET NO. 64

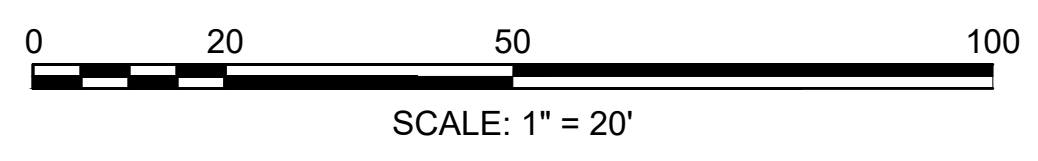
CONTINUED ON  
SHEET NO. 65

**BOSTON POST ROAD**

**PAVEMENT NOTES:**  
1. STRUCTURAL OVERLAY (SO) FROM STA 89+75 - STA 90+50. SEE CROSS SECTIONS FOR FURTHER DETAILS.

FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 74

**NOTES:** DISPOSITION OF UTILITIES SEE UTILITY PLANS  
DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS





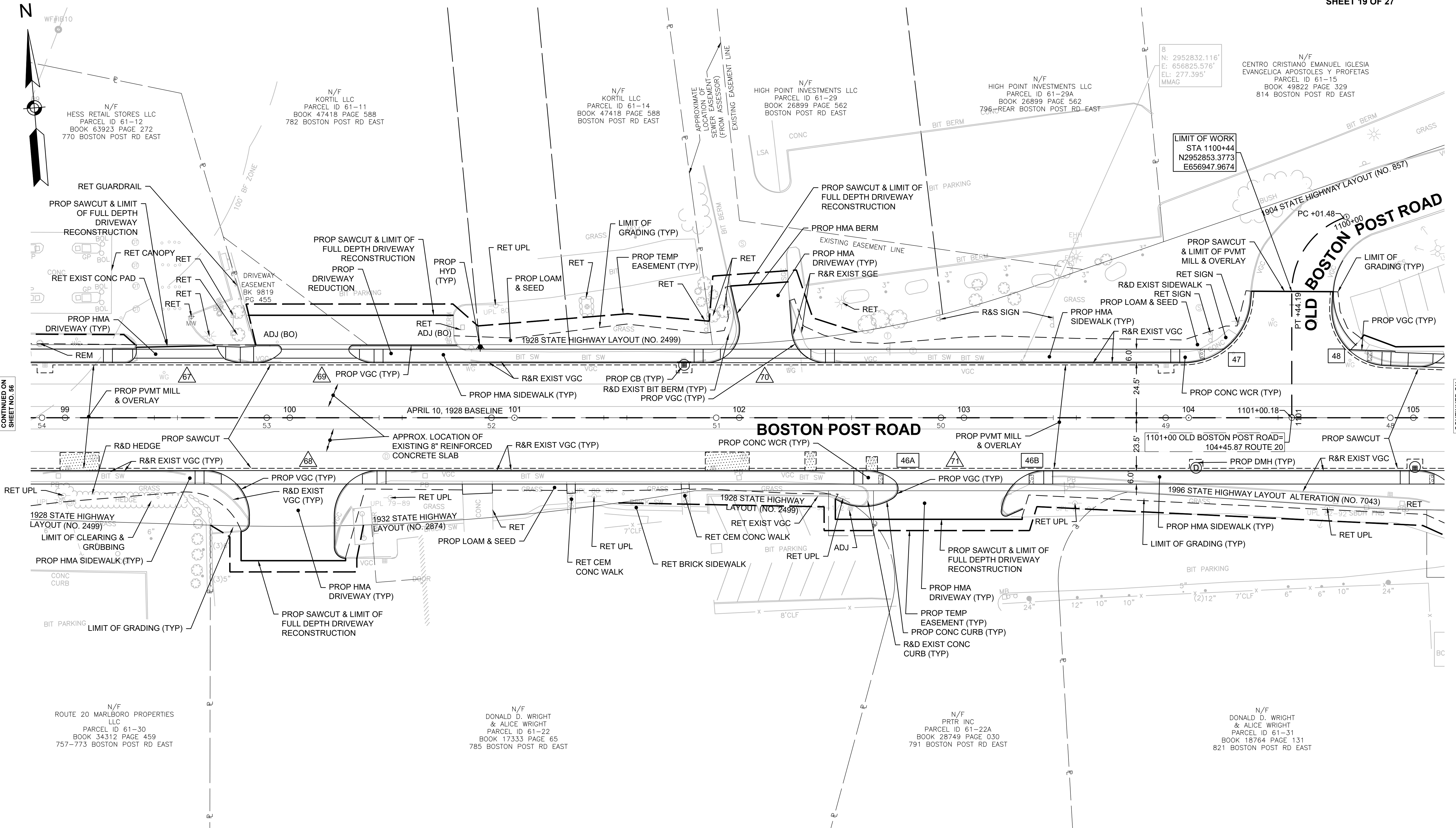
HIGHWAY GUARD DETAILS  
SEE BELOW

TRAFFIC SIGNAL CONDUIT  
NONE

WATER SUPPLY ALTERATIONS  
SEE SHEET 241 & 275

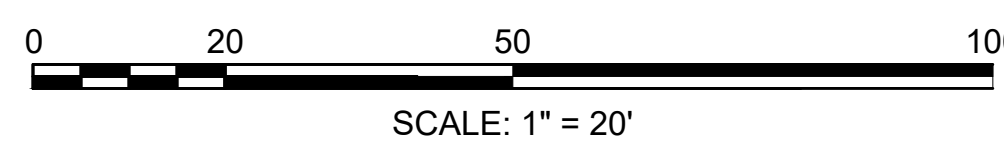
DRAINAGE DETAILS  
SEE SHEET 241

MARLBOROUGH BOSTON POST ROAD (ROUTE 20)			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	57	424
PROJECT FILE NO. 608467			
CONSTRUCTION PLANS SHEET 19 OF 27			



CONTINUED ON  
SHEET NO. 56

CONTINUED ON  
SHEET NO. 58



FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 76

NOTES: DISPOSITION OF UTILITIES SEE UTILITY PLANS  
DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS

MASSDOT BORDER/DWG  
Plotted on 9-Mar-2017 1:04 PM





STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	59	424
PROJECT FILE NO. 608467			

**HIGHWAY GUARD DETAILS**

R&D EXISTING W-BEAM GUARDRAIL  
 STA 105+92 42' RT - STA 107+54 89' RT, L= 191'  
 STA 106+87 29' LT - STA 108+04 25' LT, L= 119'  
 STA 112+55 41' RT - STA 114+84 80' RT, L=246'  
 GUARDRAIL, TL-2  
 STA 106+14 32' RT - STA 107+06 33' RT, L= 93'  
 STA 106+87 31' LT - STA 108+12 28' LT, L= 124'  
 STA 112+93 42' RT - STA 114+20 42' RT, L=128'  
 GUARDRAIL TANGENT END TREATMENT, TL-2  
 STA 112+55 42' RT - STA 112+93 42' RT  
 GUARDRAIL FLARED END TREATMENT, TL-2  
 STA 107+12 26' LT - STA 107+50 27' LT  
 TRAILING ANCHORAGE  
 STA 107+52 77' RT - STA 107+52 87' RT

**TRAFFIC SIGNAL CONDUIT**

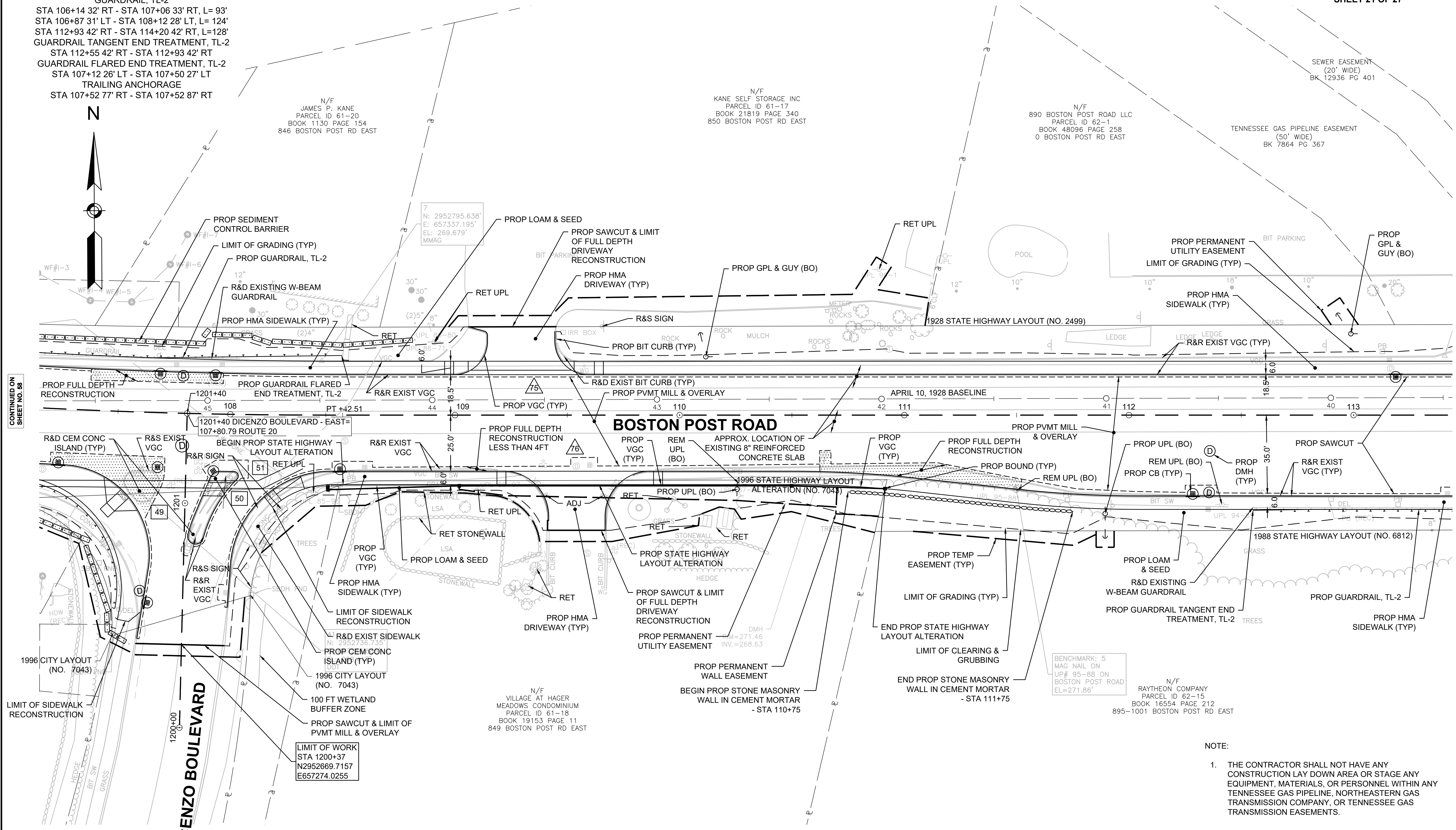
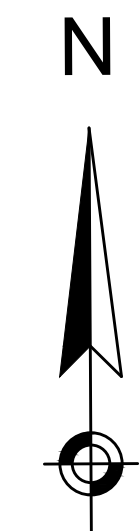
NONE

**WATER SUPPLY ALTERATIONS**

SEE SHEET 243 & 277

**DRAINAGE DETAILS**

SEE SHEET 243



CONTINUED ON  
SHEET NO. 58

CONTINUED ON  
SHEET NO. 60

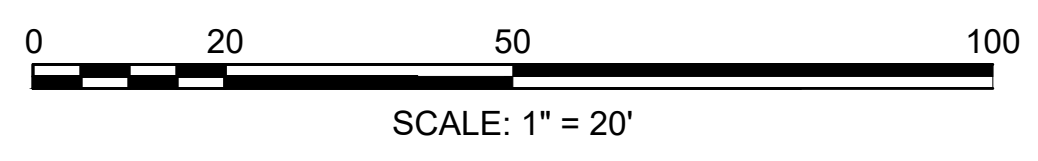
**BOSTON POST ROAD**

**DICENZO BOULEVARD**

- NOTE:
1. THE CONTRACTOR SHALL NOT HAVE ANY CONSTRUCTION LAY DOWN AREA OR STAGE ANY EQUIPMENT, MATERIALS, OR PERSONNEL WITHIN ANY TENNESSEE GAS PIPELINE, NORTHEASTERN GAS TRANSMISSION COMPANY, OR TENNESSEE GAS TRANSMISSION EASEMENTS.

FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 76, 77

NOTES: DISPOSITION OF UTILITIES SEE UTILITY PLANS  
 DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS



**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	61	428
PROJECT FILE NO. 608467			

**CONSTRUCTION PLANS  
SHEET 23 OF 27**

**HIGHWAY GUARD DETAILS**

R&D EXISTING W-BEAM GUARDRAIL  
 STA 121+45 16' LT - STA 122+09 14' LT, L=65'  
 STA 121+25 32' RT - STA 124+39 28' RT, L=316'  
 GUARDRAIL, TL-2  
 STA 121+37 24' LT - STA 122+30 25' LT, L= 92'  
 STA 121+10 55' RT - STA 121+13 43' RT, L= 13'  
 STA 121+37 24' RT - STA 124+40 26' RT, L= 305'

**HIGHWAY GUARD DETAILS**

GUARDRAIL - CURVED, TL-2  
 STA 121+13 43' RT - STA 121+37 24' RT, L= 33'  
 STA 121+27 28' LT - STA 121+37 24' LT, L= 11'  
 GUARDRAIL FLARED END TREATMENT, TL-2  
 STA 122+30 25' LT - STA 122+67 29' LT  
 TRAILING ANCHORAGE  
 STA 121+08 65' RT - STA 121+10 55' RT  
 STA 121+21 36' LT - STA 121+27 28' LT

**TRAFFIC SIGNAL CONDUIT**

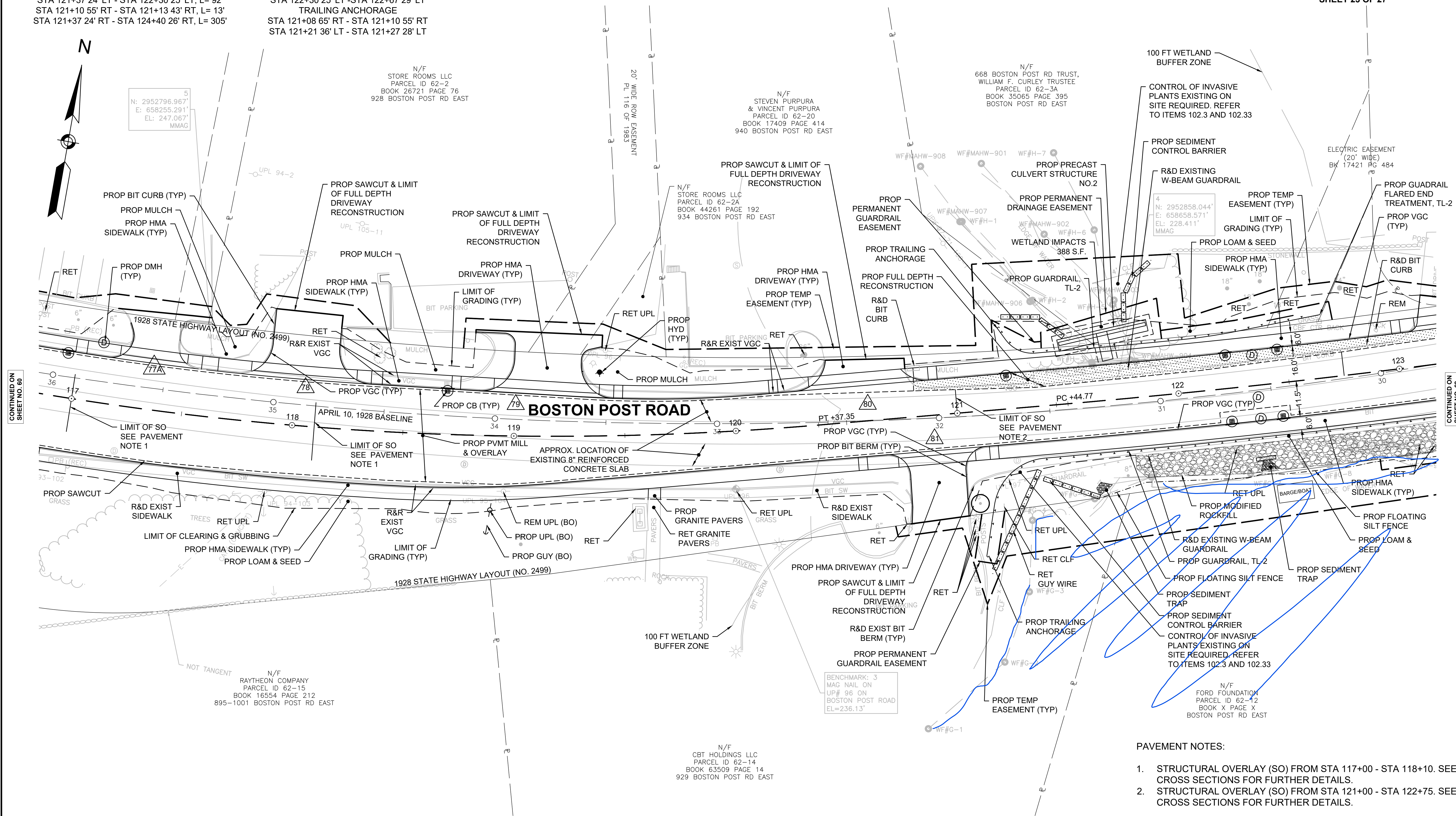
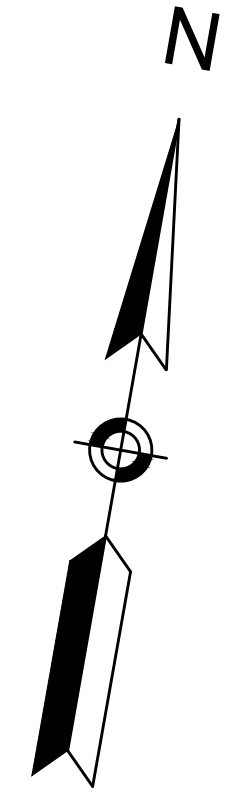
SEE SHEET 199

**WATER SUPPLY ALTERATIONS**

SEE SHEET 245 & 279

**DRAINAGE DETAILS**

SEE SHEET 245



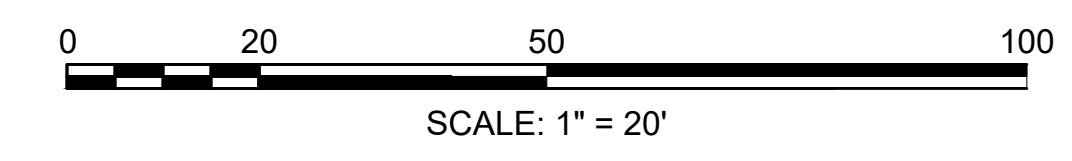
CONTINUED ON  
SHEET NO. 60

CONTINUED ON  
SHEET NO. 62

- PAVEMENT NOTES:**
1. STRUCTURAL OVERLAY (SO) FROM STA 117+00 - STA 118+10. SEE CROSS SECTIONS FOR FURTHER DETAILS.
  2. STRUCTURAL OVERLAY (SO) FROM STA 121+00 - STA 122+75. SEE CROSS SECTIONS FOR FURTHER DETAILS.

FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 77, 78

NOTES: DISPOSITION OF UTILITIES SEE UTILITY PLANS  
 DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS



**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	62	428
PROJECT FILE NO. 608467			

**CONSTRUCTION PLANS  
SHEET 24 OF 27**

**HIGHWAY GUARD DETAILS**

R&D EXISTING W-BEAM GUARDRAIL  
 STA 121+45 16' LT - STA 122+09 14' LT, L=65'  
 STA 121+25 32' RT - STA 124+39 28' RT, L=316'  
 GUARDRAIL, TL-2  
 STA 121+37 24' LT - STA 122+30 25' LT, L= 92'  
 STA 121+10 55' RT - STA 121+13 43' RT, L= 13'  
 STA 121+37 24' RT - STA 124+40 26' RT, L= 305'

**HIGHWAY GUARD DETAILS**

GUARDRAIL - CURVED, TL-2  
 STA 121+13 43' RT - STA 121+37 24' RT, L= 33'  
 STA 121+27 28' LT - STA 121+37 24' LT, L= 11'  
 GUARDRAIL FLARED END TREATMENT, TL-2  
 STA 122+30 25' LT - STA 122+67 29' LT  
 TRAILING ANCHORAGE  
 STA 121+08 65' RT - STA 121+10 55' RT  
 STA 121+21 36' LT - STA 121+27 28' LT  
 STA 124+40 26' RT - STA 124+50 26' RT

**TRAFFIC SIGNAL CONDUIT**

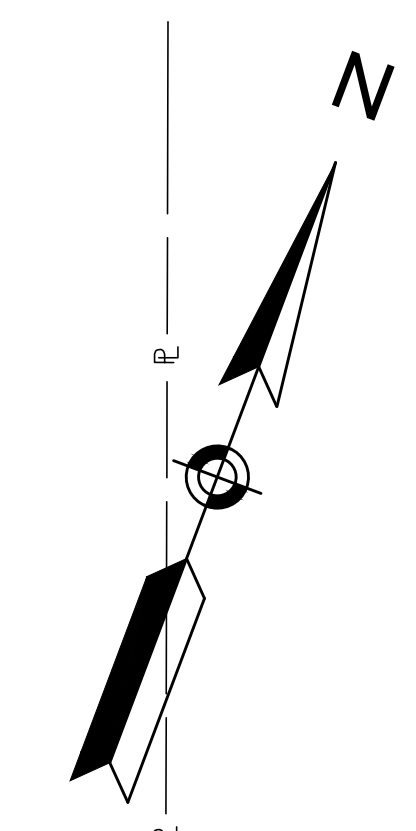
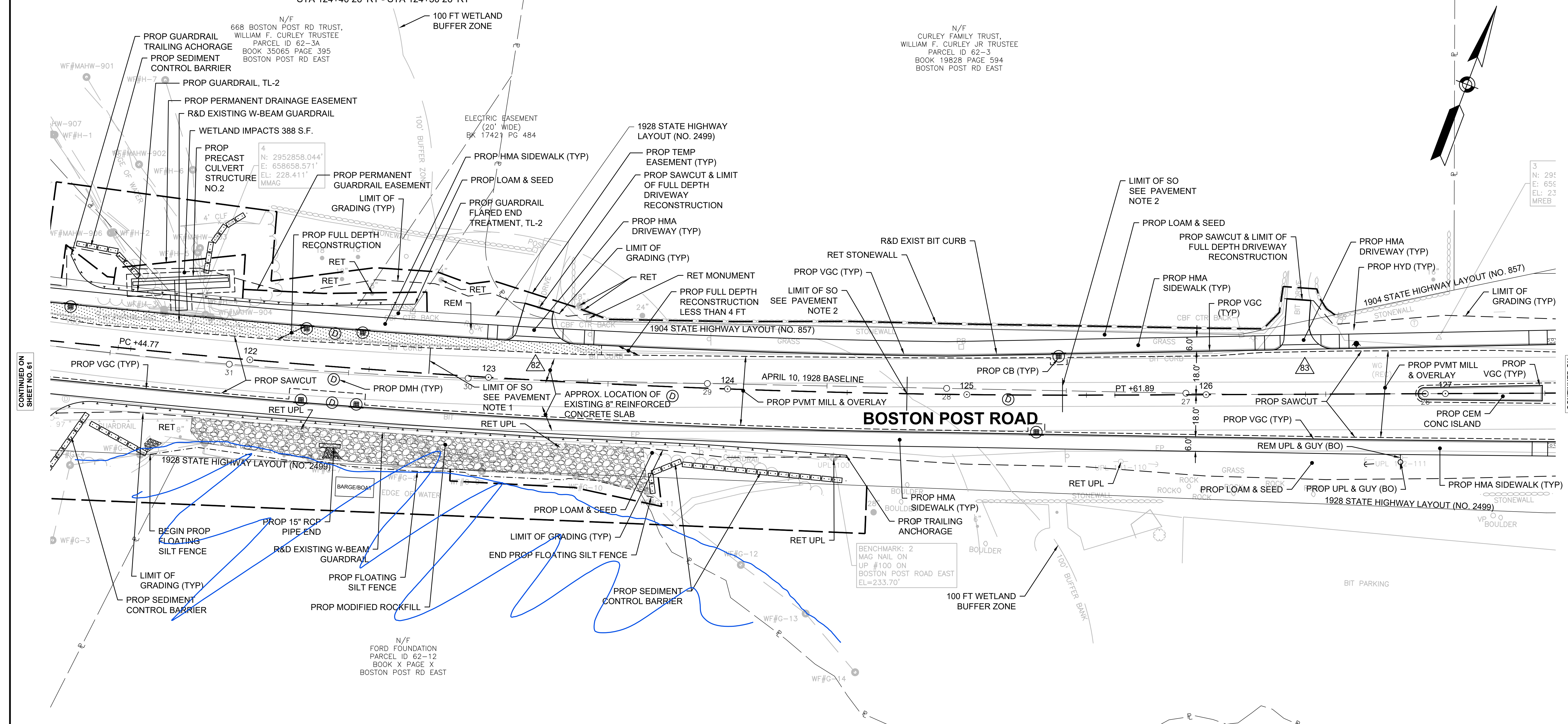
NONE

**WATER SUPPLY ALTERATIONS**

SEE SHEET 246 & 280

**DRAINAGE DETAILS**

SEE SHEET 246



3  
 N: 295'  
 E: 655'  
 EL: 23'  
 MREB

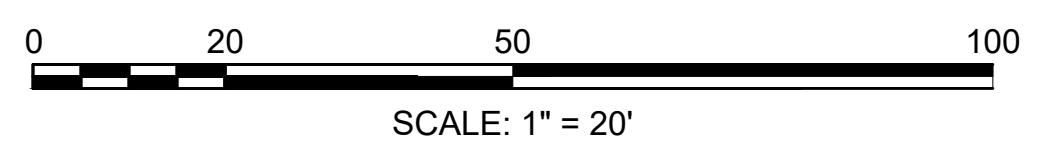
CONTINUED ON  
SHEET NO. 61

CONTINUED ON  
SHEET NO. 63

- PAVEMENT NOTES:**
- STRUCTURAL OVERLAY (SO) FROM STA 121+00 - STA 122+75. SEE CROSS SECTIONS FOR FURTHER DETAILS.
  - STRUCTURAL OVERLAY (SO) FROM STA 124+75 - STA 125+40. SEE CROSS SECTIONS FOR FURTHER DETAILS.

FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 78

NOTES: DISPOSITION OF UTILITIES SEE UTILITY PLANS  
 DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS



T

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	64	428
PROJECT FILE NO.		608467	

HIGHWAY GUARD DETAILS

GUARDRAIL, TL-2  
 STA 134+11 51' LT - STA 134+11 64' LT, L= 13'  
 STA 133+02 17' LT - STA 133+77 17' LT, L= 74'  
 STA 132+71 17' RT - STA 132+83 17' RT, L= 13'  
 STA 133+41 17' RT - STA 133+99 17' RT, L= 58'  
 STA 132+62 45' RT - STA 134+07 99' RT, L= 154'  
 STA 134+13 29' RT - STA 134+23 80' RT, L= 53'  
 STA 134+81 22' RT - STA 134+26 24' RT, L= 145'  
 STA 135+36 22' LT - STA 137+04 22' LT, L= 168'  
 STA 134+06 128' RT - STA 134+19 129' RT, L= 13'  
 STA 134+63 164' RT - STA 134+66 176' RT, L= 12'  
 GUARDRAIL - CURVED, TL-2  
 STA 133+77 17' LT - STA 134+11 51' LT, L= 54'  
 STA 134+57 46' RT - STA 134+81 22' RT, L= 37'  
 STA 132+62 44' RT - STA 132+71 17' RT, L= 37'  
 STA 134+07 99' RT - STA 134+23 80' RT, L= 28'  
 STA 133+99 17' RT - STA 134+13 29' RT, L= 20'  
 STA 134+19 129' RT - STA 134+63 164' RT, L= 60'

HIGHWAY GUARD DETAILS

GUARDRAIL TANGENT END TREATMENT, TL-2  
 STA 133+07 17' RT - STA 133+45 17' RT  
 STA 133+69 125' RT - STA 134+06 128' RT  
 STA 134+11 64' LT - STA 134+11 101' LT  
 GUARDRAIL FLARED END TREATMENT, TL-2  
 STA 137+03 22' LT - STA 137+41 25' LT  
 TRAILING ANCHORAGE  
 STA 132+83 17' RT - STA 132+93 17' RT  
 STA 133+02 17' LT - STA 132+92 17' LT  
 STA 134+66 176' RT - STA 134+69 185' RT  
 STA 134+57 46' RT - STA 134+59 55' RT  
 STA 135+26 22' LT - STA 135+36 22' LT  
 STA 136+26 24' RT - STA 136+36 24' RT  
 R&D EXISTING W-BEAM GUARDRAIL  
 STA 133+23 20' LT - STA 134+08 87' LT, L= 136'  
 STA 134+00 137' RT - STA 134+69 185' RT, L= 99'  
 STA 134+58 56' RT - STA 135+90 27' RT, L= 157'  
 STA 135+71 27' LT - STA 136+88 26' LT, L= 118'

TRAFFIC SIGNAL CONDUIT

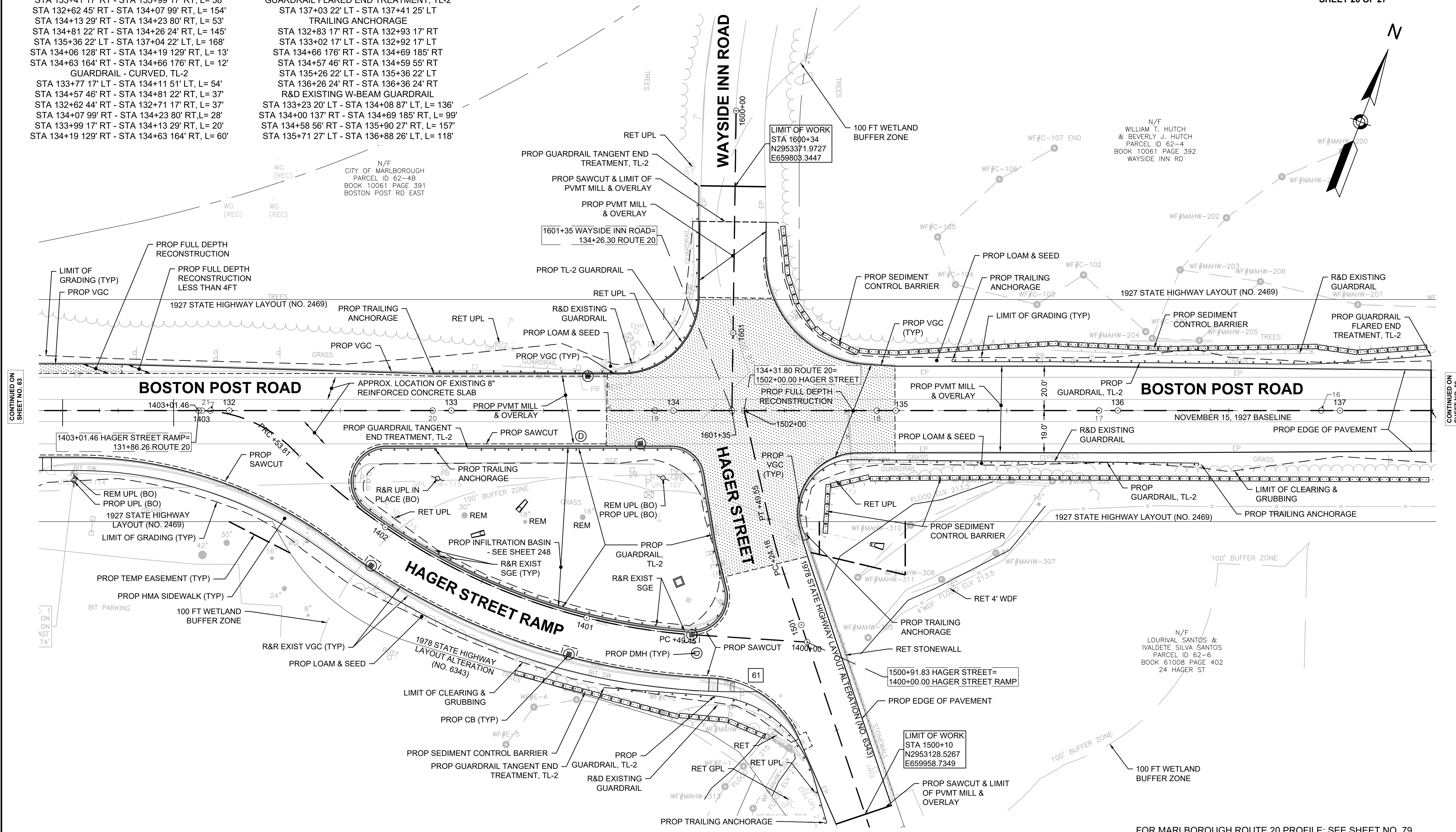
SEE SHEET 202

WATER SUPPLY ALTERATIONS

SEE SHEET 248 & 282

DRAINAGE DETAILS

SEE SHEET 248



CONTINUED ON  
SHEET NO. 63

CONTINUED ON  
SHEET NO. 65

FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 79

NOTES: DISPOSITION OF UTILITIES SEE UTILITY PLANS  
DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS

**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	65	428
PROJECT FILE NO. 608467			

**CONSTRUCTION PLANS  
SHEET 27 OF 27**

**HIGHWAY GUARD DETAILS**

GUARDRAIL, TL-2  
 STA 135+36 22' LT - STA 137+03 22' LT, L= 168'  
 GUARDRAIL FLARED END TREATMENT, TL-2  
 STA 137+03 22' LT - STA 137+41 25' LT  
 R&D EXISTING W-BEAM GUARDRAIL  
 STA 135+71 27' LT - STA 136+88 26' LT, L= 118'

**TRAFFIC SIGNAL CONDUIT**

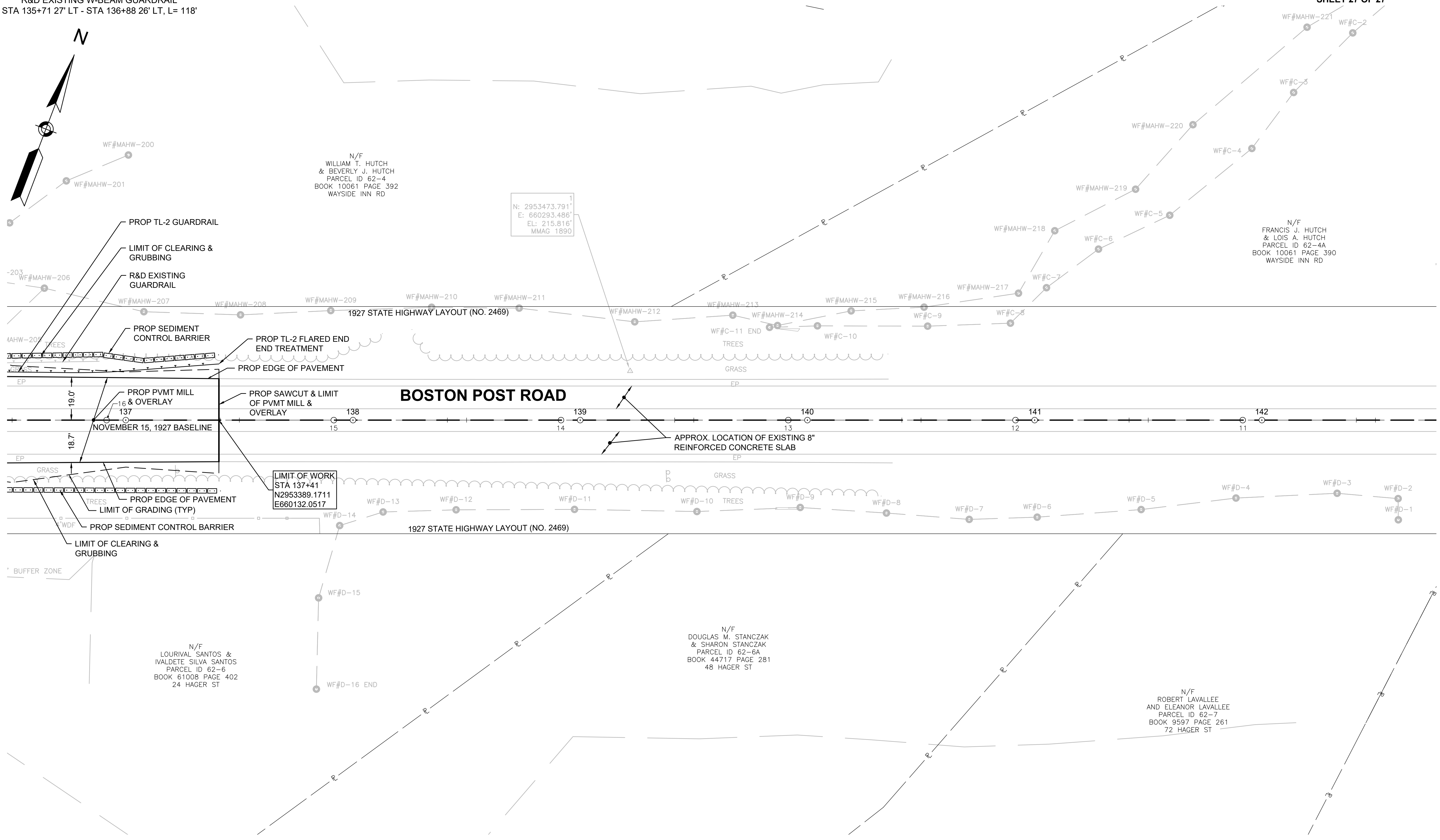
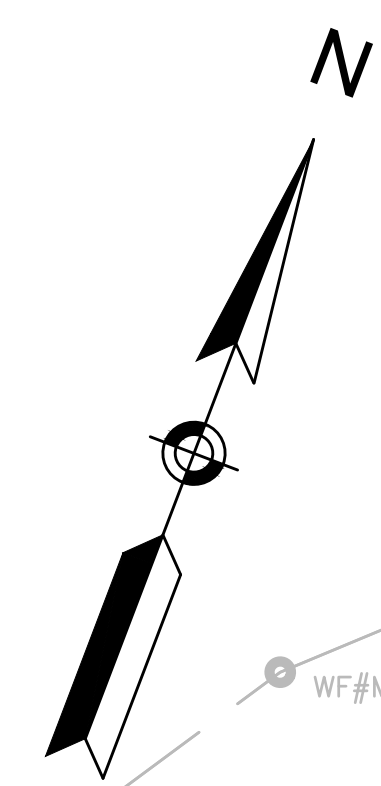
SEE SHEET 202

**WATER SUPPLY ALTERATIONS**

SEE SHEET 249 & 283

**DRAINAGE DETAILS**

SEE SHEET 249



1  
 N: 2953473.791'  
 E: 660293.486'  
 EL: 215.816'  
 MMAG 1890

N/F  
 WILLIAM T. HUTCH  
 & BEVERLY J. HUTCH  
 PARCEL ID 62-4  
 BOOK 10061 PAGE 392  
 WAYSIDE INN RD

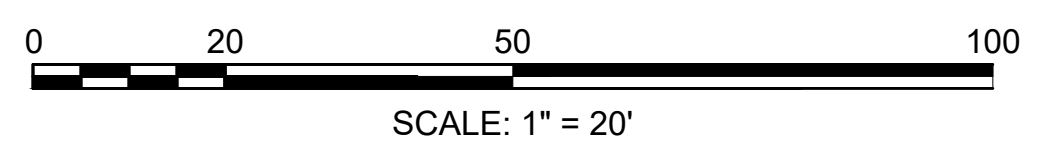
N/F  
 FRANCIS J. HUTCH  
 & LOIS A. HUTCH  
 PARCEL ID 62-4A  
 BOOK 10061 PAGE 390  
 WAYSIDE INN RD

LIMIT OF WORK  
 STA 137+41  
 N2953389.1711  
 E660132.0517

N/F  
 DOUGLAS M. STANCZAK  
 & SHARON STANCZAK  
 PARCEL ID 62-6A  
 BOOK 44717 PAGE 281  
 48 HAGER ST

N/F  
 ROBERT LAVALLEE  
 AND ELEANOR LAVALLEE  
 PARCEL ID 62-7  
 BOOK 9597 PAGE 261  
 72 HAGER ST

CONTINUED ON  
 SHEET NO. 64



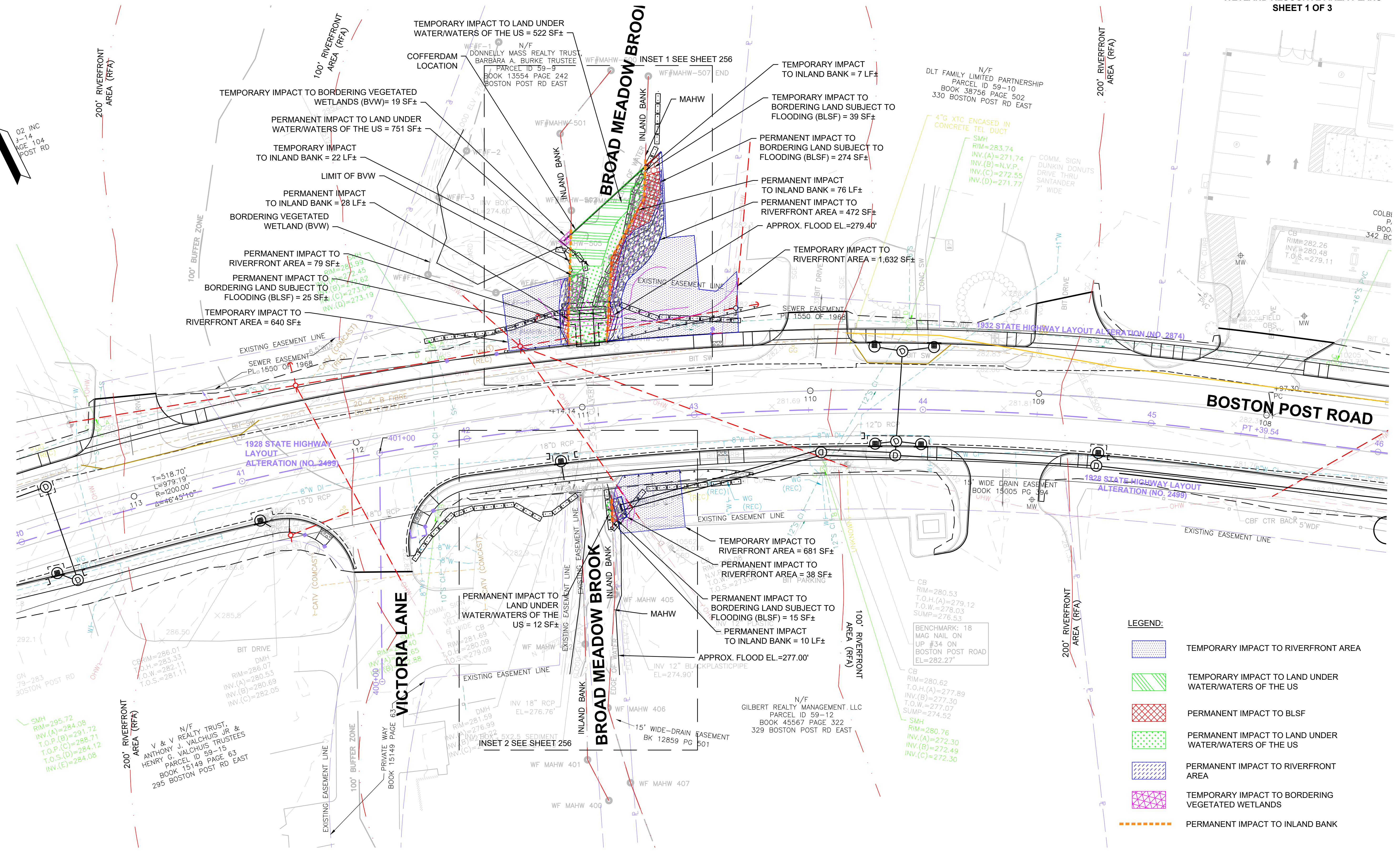
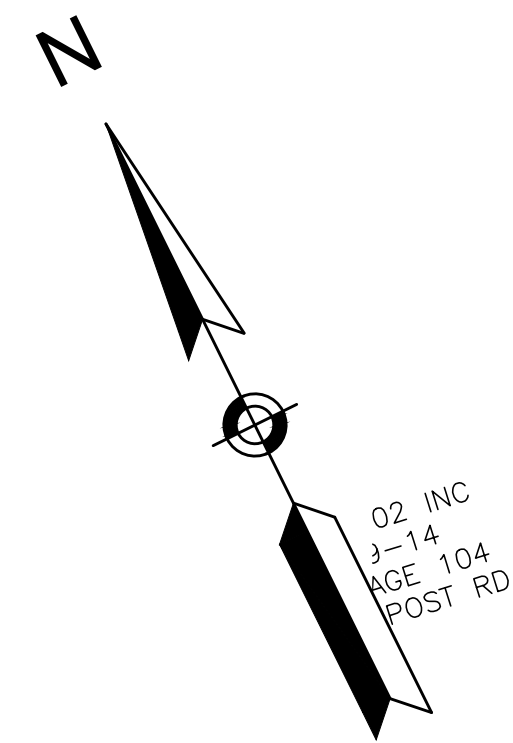
FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 79

NOTES: DISPOSITION OF UTILITIES SEE UTILITY PLANS  
 DISPOSITION OF SIGNS SEE PAVEMENT MARKING PLANS

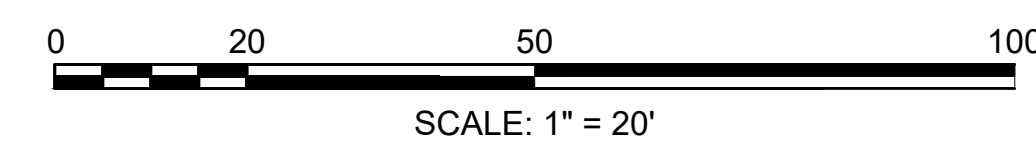
**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	254	428
PROJECT FILE NO.		608467	

**WETLAND RESOURCE AREA PLANS  
SHEET 1 OF 3**



- LEGEND:**
- TEMPORARY IMPACT TO RIVERFRONT AREA
  - TEMPORARY IMPACT TO LAND UNDER WATERWATERS OF THE US
  - PERMANENT IMPACT TO BLSF
  - PERMANENT IMPACT TO LAND UNDER WATERWATERS OF THE US
  - PERMANENT IMPACT TO RIVERFRONT AREA
  - TEMPORARY IMPACT TO BORDERING VEGETATED WETLANDS
  - PERMANENT IMPACT TO INLAND BANK

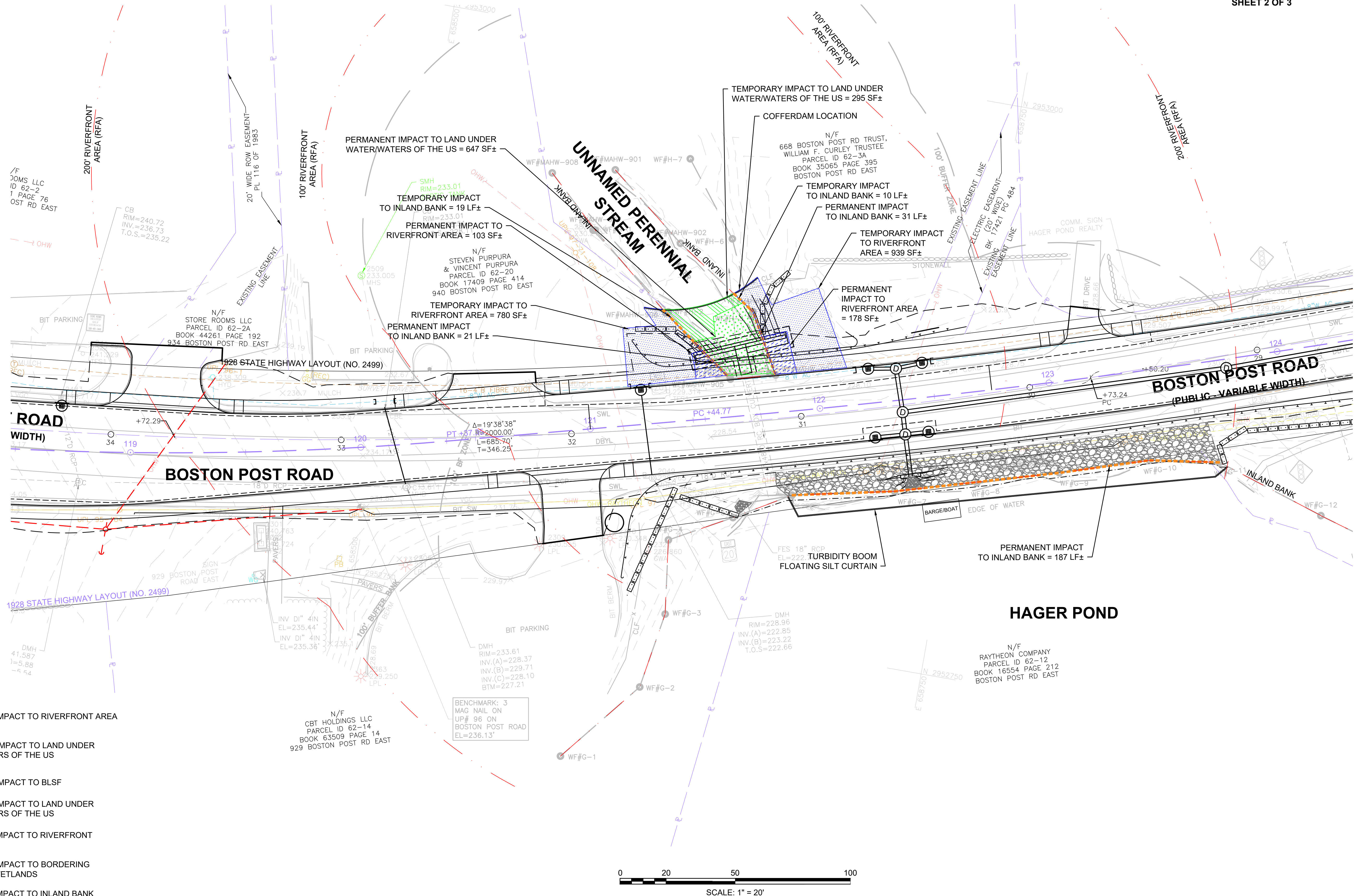
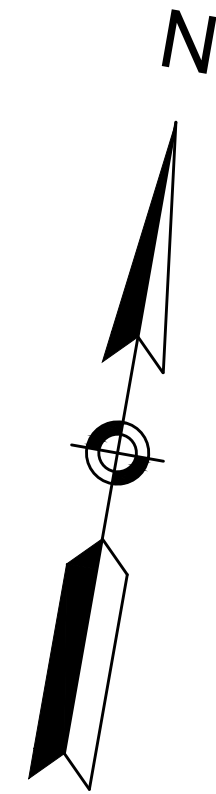


FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 70

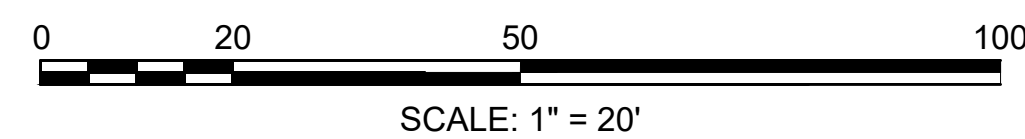
**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	255	428
PROJECT FILE NO.		608467	

**WETLAND RESOURCE AREA PLANS  
SHEET 2 OF 3**

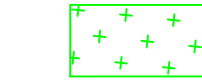


- LEGEND:**
- TEMPORARY IMPACT TO RIVERFRONT AREA
  - TEMPORARY IMPACT TO LAND UNDER WATER/WATERS OF THE US
  - PERMANENT IMPACT TO BLSF
  - PERMANENT IMPACT TO LAND UNDER WATER/WATERS OF THE US
  - PERMANENT IMPACT TO RIVERFRONT AREA
  - TEMPORARY IMPACT TO BORDERING VEGETATED WETLANDS
  - PERMANENT IMPACT TO INLAND BANK

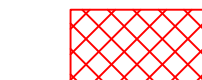


STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	256	428
PROJECT FILE NO.		608467	

LEGEND:



BLSF REPLACEMENT

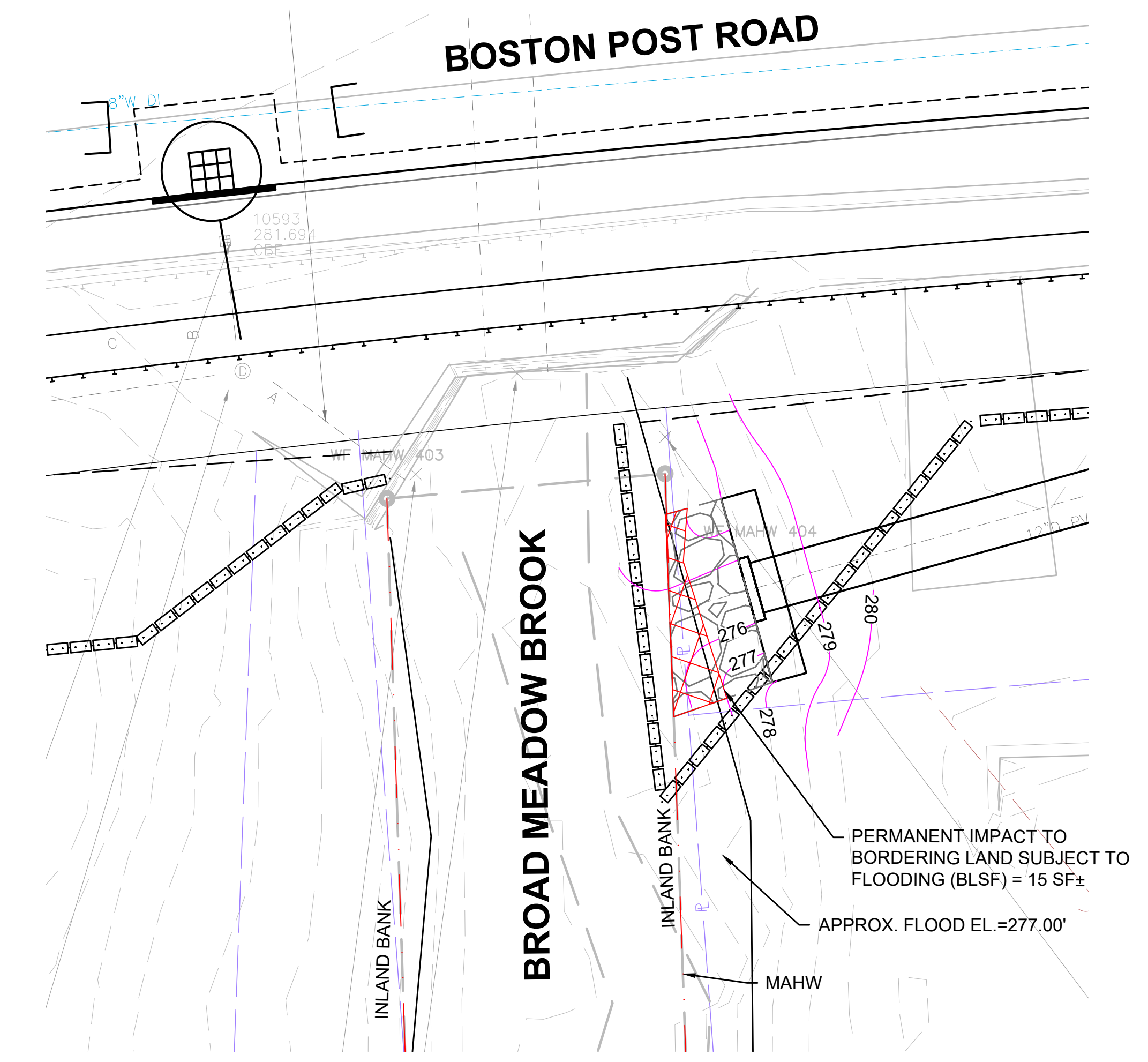
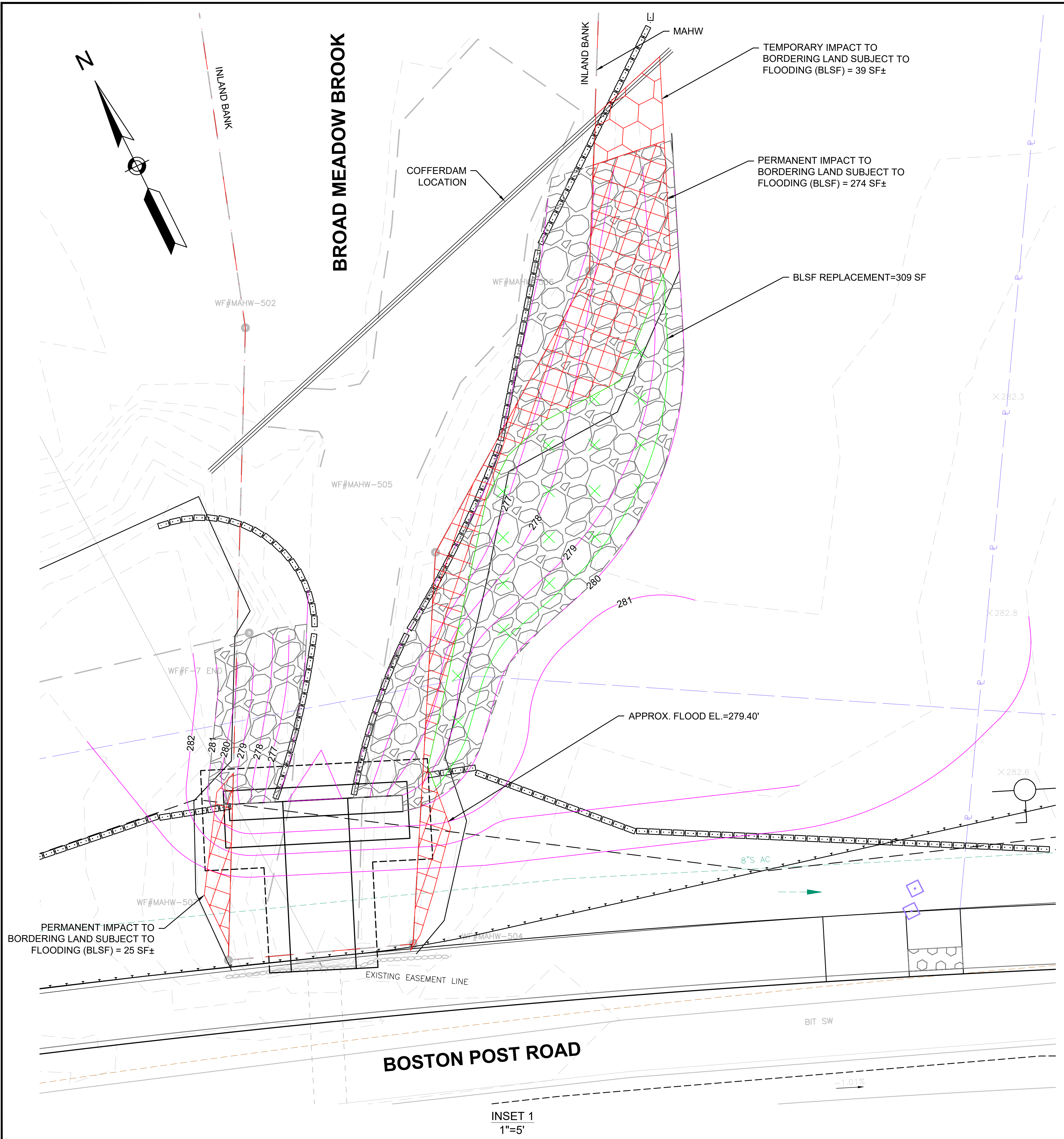


PERMANENT IMPACT TO BLSF

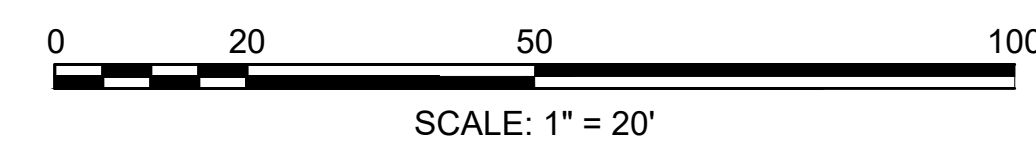
PERMANENT BLSF ALT AREA (CUT-FLOOD STORAGE)				
CONTOUR ELEVATION	AREA (SF)	AVERAGE AREA (SF)	DEPTH (FT)	VOLUME (CF)
279.4	301			
		306	0.4	122.4
279.0	311			
		266.5	1.0	266.5
278.0	222			
		199.0	1.0	199.0
277.0	176			
		158.0	1.0	158.0
276.0	140			
		75.5	1.0	75.5
275.0	11			
		5.5	0.4	2.2
274.6	0			
TOTAL VOLUME				823.6

PERMANENT BLSF ALT AREA (FILL-FLOOD STORAGE)				
CONTOUR ELEVATION	AREA (SF)	AVERAGE AREA (SF)	DEPTH (FT)	VOLUME (CF)
279.4	309			
		300	0.4	120
279.0	291			
		249.5	1.0	249.5
278.0	208			
		187.5	1.0	187.5
277.0	167			
		151.5	1.0	151.5
276.0	136			
		72.3	1.0	72.3
275.0	8.5			
		4.5	0.4	1.8
274.6	0			
TOTAL VOLUME				782.6

TOTAL FILL BLSF (FLOODPLAIN) VOLUME	783
TOTAL CUT BLSF (FLOODPLAIN) VOLUME	824



FOR MARLBOROUGH ROUTE 20 PROFILE: SEE SHEET NO. 70

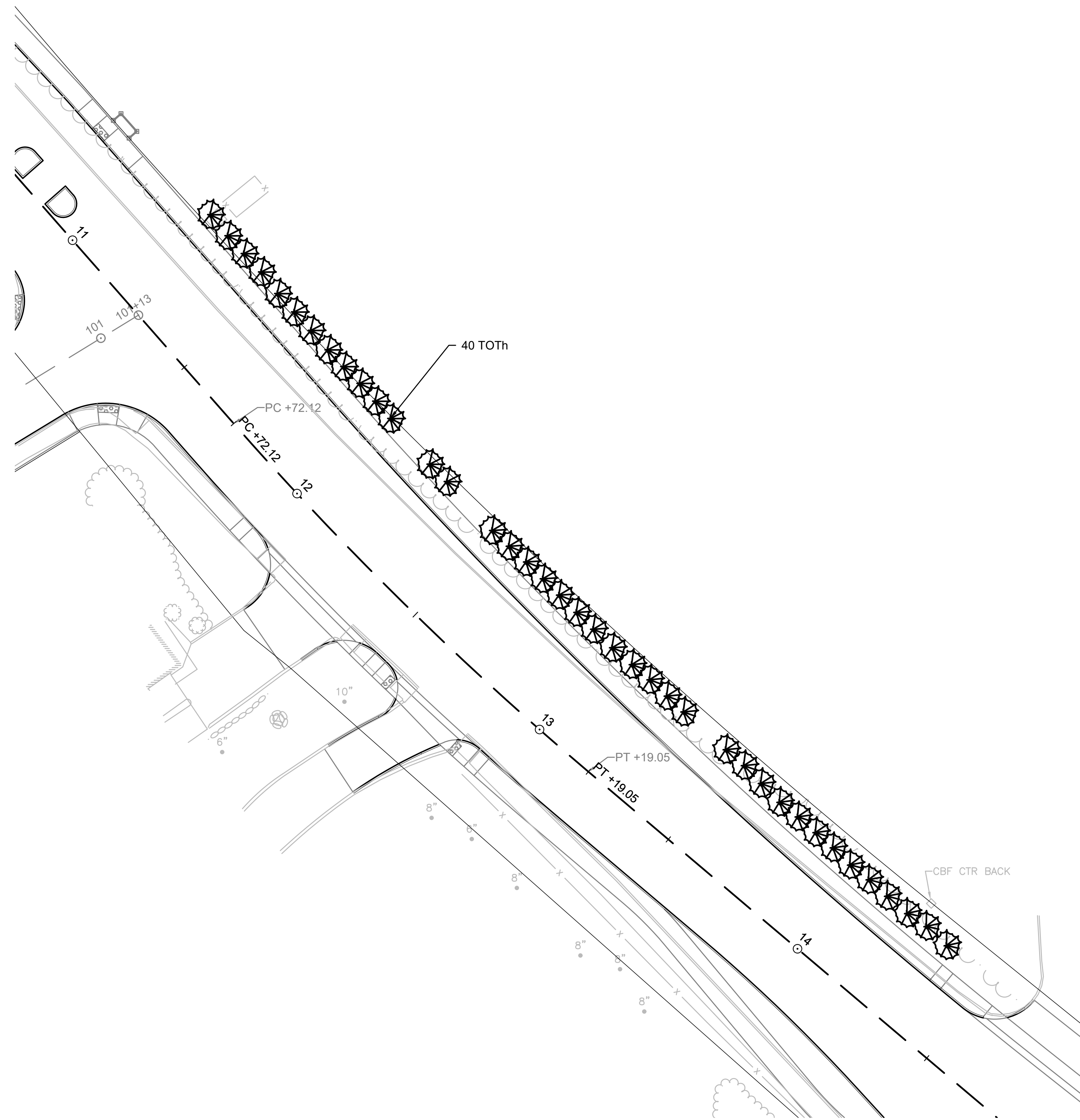
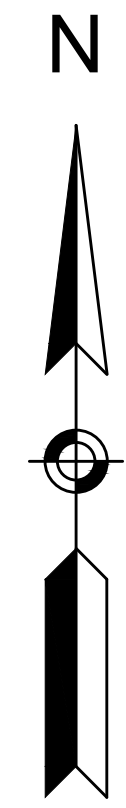




MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)

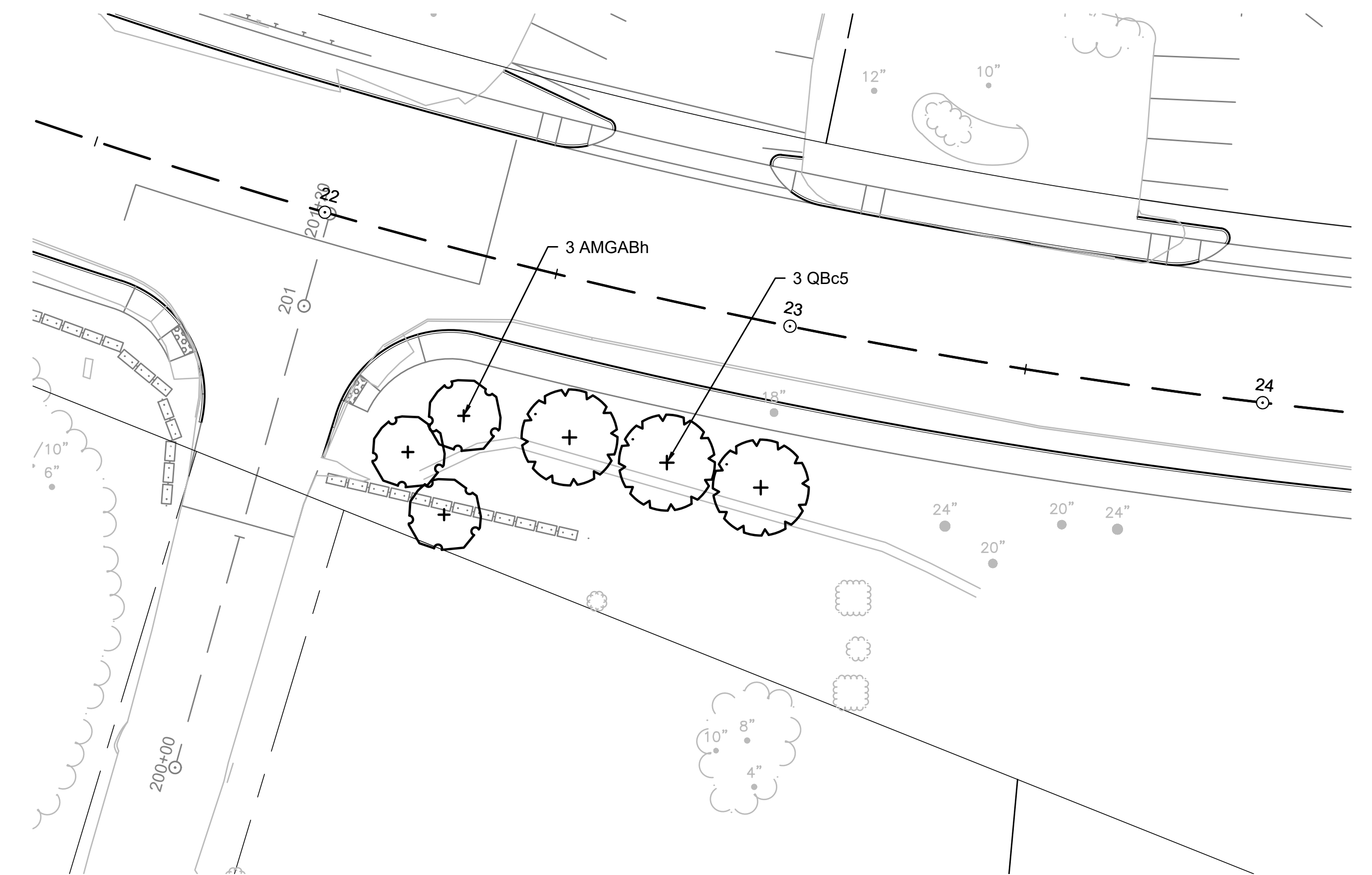
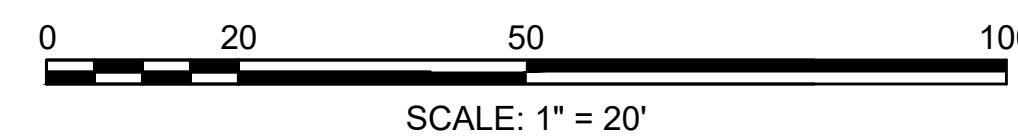
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	284	428
PROJECT FILE NO.		608467	

LANDSCAPE PLANS - ZONE A



STA 11+00 TO 14+50 RT

ZONE A:  
STA 11+00 TO 14+50 RT  
STA 22+00 TO 23+50 RT



STA 22+00 TO 23+50 RT

PLANTING NOTES

1. CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
2. PLANT LOCATIONS ARE APPROXIMATE. PRIOR TO PLANTING, LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER AND THE LANDSCAPE ARCHITECT.
3. ALL PLANT MATERIAL WILL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME, & SIZE.
4. UPON APPROVAL OF PLANTING, TAGS SHALL BE IMMEDIATELY REMOVED.
5. ALL PLANTS WILL BE MULCHED PER PLANS AND SPECIFICATIONS.
6. ALL SHRUB AND PERENNIAL BEDS WILL BE WEEDED AND OTHERWISE NEATLY MAINTAINED FOR THE DURATION OF THE CONTRACT.
7. PLANTS AND PLANTING BEDS SHALL BE THOROUGHLY WATERED AS NECESSARY AND PER SPECIFICATIONS.
8. PLANTING AREAS SHALL BE EXCAVATED TO MINIMUM DEPTH OF 12 INCHES TO ALLOW FOR PLACEMENT OF 12 INCH DEPTH OF LOAM. PLANTING AND SEEDING SHALL IMMEDIATELY FOLLOW PLACEMENT OF LOAM.

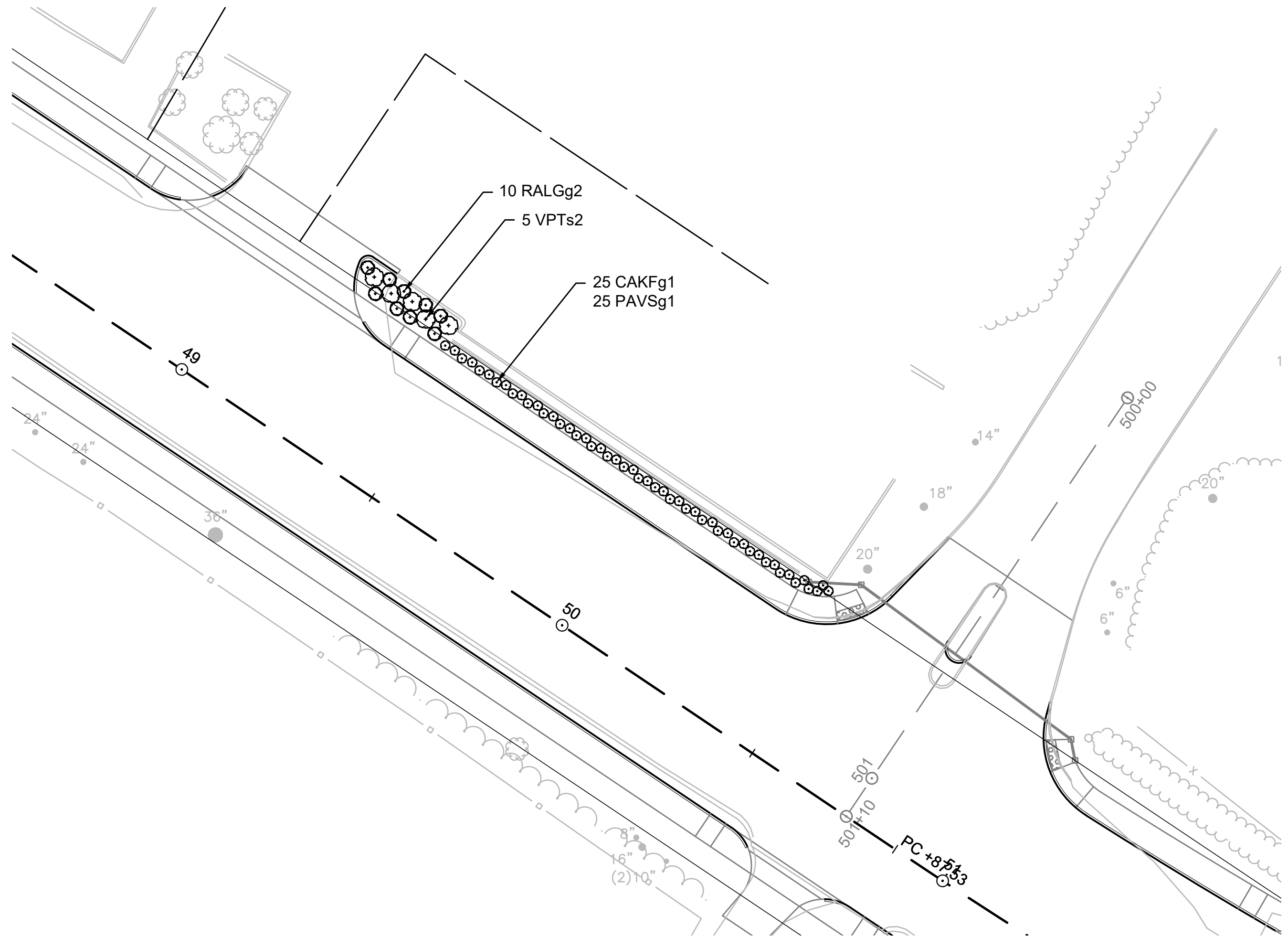
PLANT LIST - A

SYMBOL	SPECIES	SIZE	NOTES	TOTAL QUANTITY	Z-A	Z-B	Z-C	Z-D	Z-E	Z-F
TOTh	ARBORVITAE 'TECHNY' THUJA OCCIDENTALIS 'TECHNY'	4-5 FT		2	40					
AMGABh	SERVICE 'AUT. BRILL.' AMELANCH. GRAND. 'AUT. BRILL'	4-5 FT CLUMP		9	3		3	3		
QBc5	OAK - SWAMP WHITE QUERCUS BICOLOR	2-2.5 IN CAL		6	3			3		

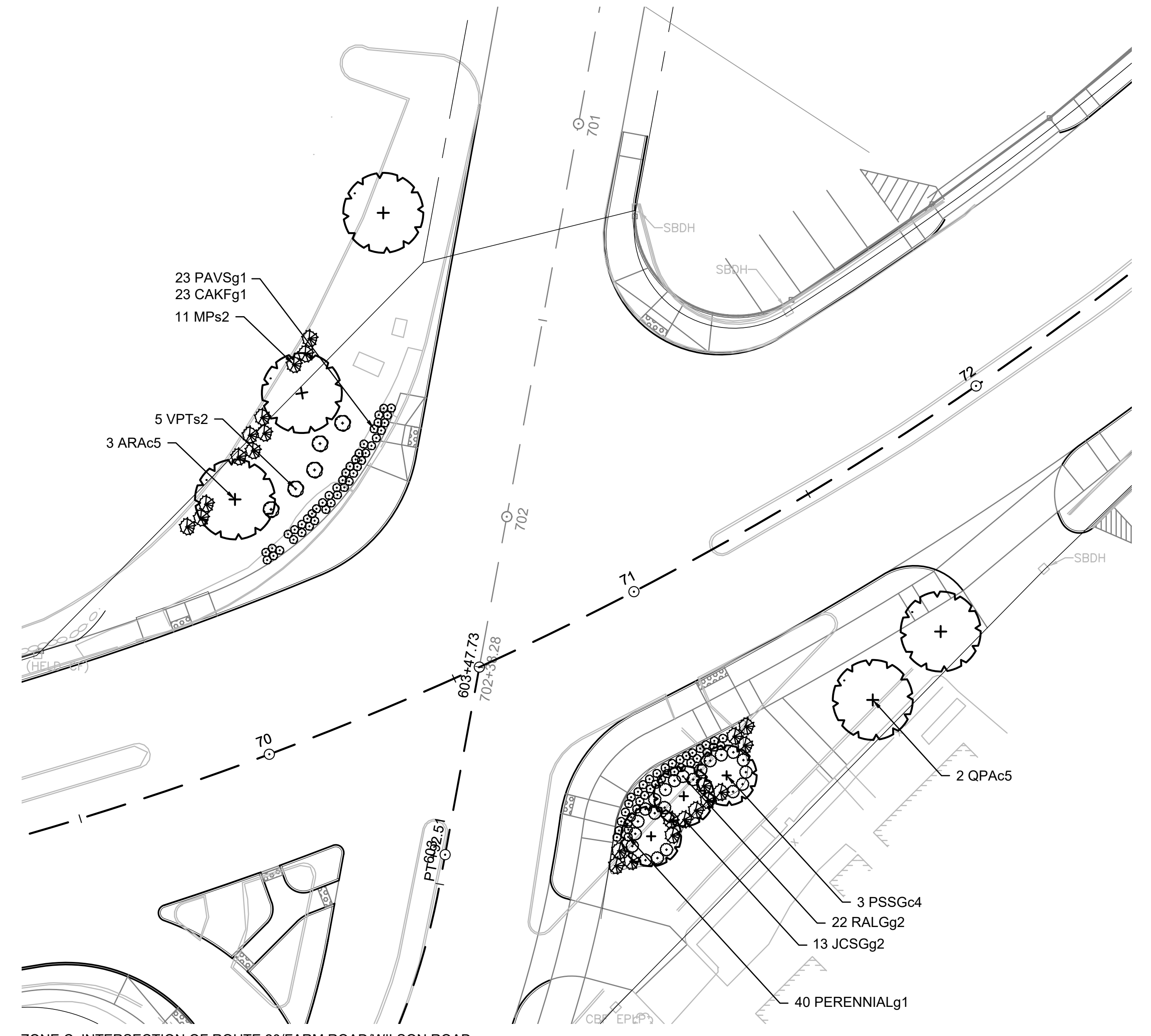
**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	285	428
PROJECT FILE NO.		608467	

**LANDSCAPE PLANS - ZONE B & C**



ZONE B: STA 49+10 TO 50+75 RT



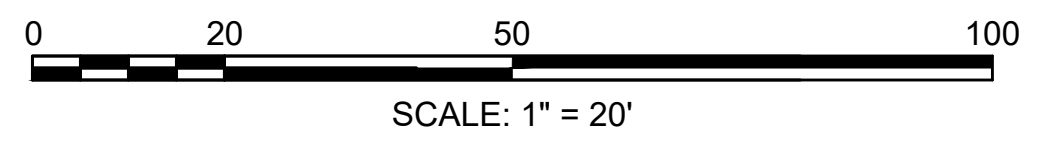
ZONE C: INTERSECTION OF ROUTE 20/FARM ROAD/WILSON ROAD

**PLANT LIST - B & C**

SYMBOL	SPECIES	SIZE	NOTES	TOTAL QUANTITY	Z-A	Z-B	Z-C	Z-D	Z-E	Z-F
ARAc5	RED MAPLE - 'ARMSTRONG' ACER RUBRUM 'ARMSTRONG'	2-2.5 IN CAL		6			3	3		
PSSGc4	CHERRY 'SNOW GOOSE' PRUNUS SERRUL. 'SNOW GOOSE'	1.5-2 IN CAL		5			3	2		
QPAc5	OAK - PIN QUERCUS PALUSTRIS	2-2.5 IN CAL		8			2		5	
JCSGg2	JUNIPER - 'SARGENTS GREEN' JUNIPER. CHIN. 'SGTS GREEN'	2 GALLON		23			13	10		
MPs2	BAYBERRY - NORTHERN MYRICA PENNSYLVANICA	2-2.5 FT		26			11			15
RALGg2	SUMAC 'GRO-LOW' RHUS AROMATICA 'GRO-LOW'	2 GALLON		64		10	22	32		
VPTs2	VIBURNUM - DOUBLEFILE VIBURNUM PLICATUM TOMENT	2-2.5 FT		20		5	5	5	5	
CAKFg1	FEATH. REED GRASS 'KF' CALAMAGROSTIS ACUTIFOLIA 'KF'	1 GALLON		73		25	23	25		
PAVSg1	SWITCHGRASS 'SHENANDOAH' PANICUM VIRGATUM	1 GALLON		83		25	23	35		
PERENNIALg1	PERENNIALS PERENNIALS	1 GALLON	TBD	40			40			

**PLANTING NOTES**

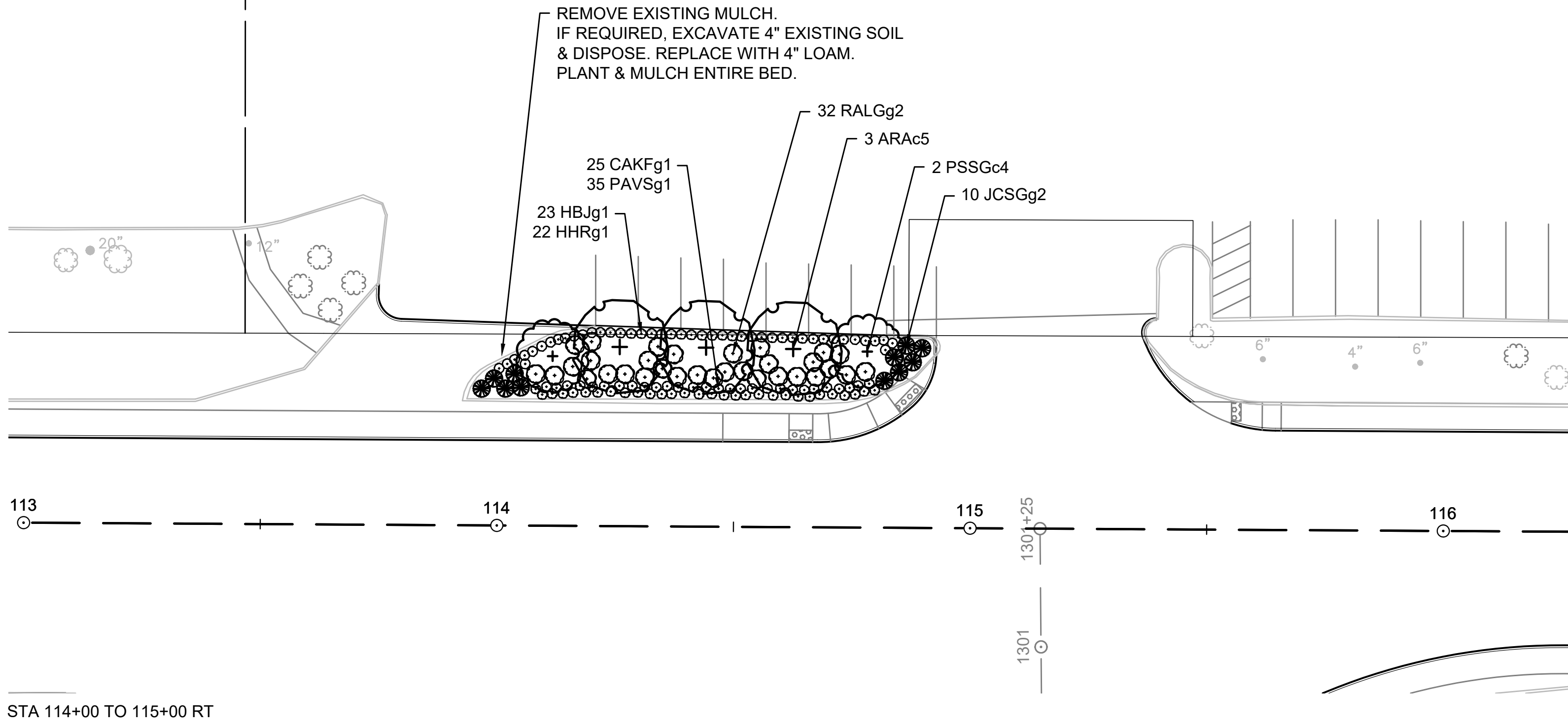
1. CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
2. PLANT LOCATIONS ARE APPROXIMATE. PRIOR TO PLANTING, LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER AND THE LANDSCAPE ARCHITECT.
3. ALL PLANT MATERIAL WILL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME, & SIZE.
4. UPON APPROVAL OF PLANTING, TAGS SHALL BE IMMEDIATELY REMOVED.
5. ALL PLANTS WILL BE MULCHED PER PLANS AND SPECIFICATIONS.
6. ALL SHRUB AND PERENNIAL BEDS WILL BE WEDED AND OTHERWISE NEATLY MAINTAINED FOR THE DURATION OF THE CONTRACT.
7. PLANTS AND PLANTING BEDS SHALL BE THOROUGHLY WATERED AS NECESSARY AND PER SPECIFICATIONS.
8. PLANTING AREAS SHALL BE EXCAVATED TO MINIMUM DEPTH OF 12 INCHES TO ALLOW FOR PLACEMENT OF 12 INCH DEPTH OF LOAM. PLANTING AND SEEDING SHALL IMMEDIATELY FOLLOW PLACEMENT OF LOAM.



**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

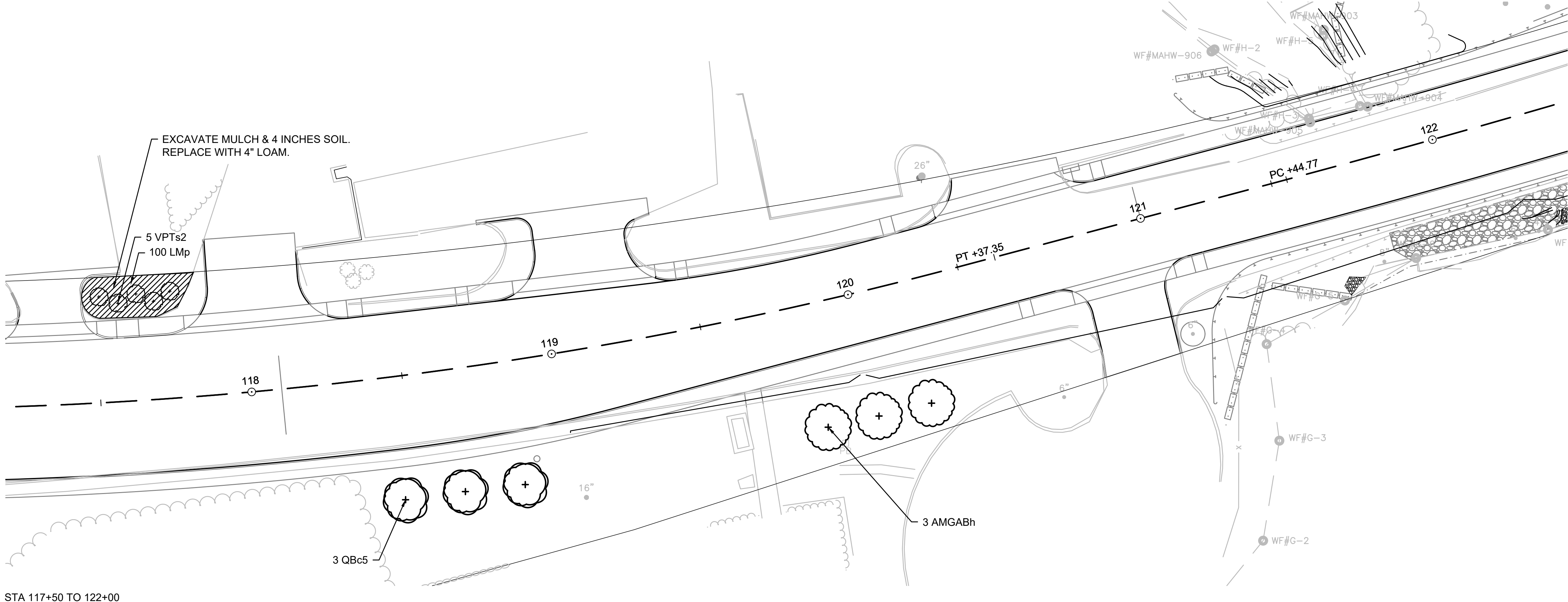
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	286	428
PROJECT FILE NO.		608467	

**LANDSCAPE PLANS - ZONE D**



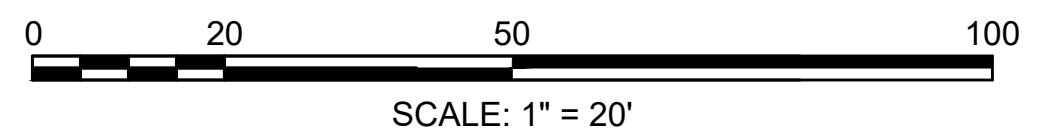
PLANT LIST - D										
SYMBOL	SPECIES	SIZE	NOTES	TOTAL QUANTITY	Z-A	Z-B	Z-C	Z-D	Z-E	Z-F
AMGABh	SERVICEBERRY 'AUT. BRILL' AMELANCH. GRAND. 'AUT BRILL'	4-5 FT CLUMP		9	3			3	3	
ARAc5	RED MAPLE - 'ARMSTRONG' ACER RUBRUM 'ARMSTRONG'	2-2.5 IN CAL		6			3	3		
PSSGc4	CHERRY 'SNOW GOOSE' PRUNUS SERRUL. 'SNOW GOOSE'	1.5-2 IN CAL		6	3			3		
QBc5	OAK - SWAMP WHITE QUERCUS BICOLOR	2-2.5 IN CAL		6	3			3		
JCSGg2	JUNIPER - 'SARGENTS GREEN' JUNIPER. CHIN. 'SGTS GREEN'	2 GALLON		23			13	10		
RALGg2	SUMAC 'GRO-LOW' RHUS AROMATICA 'GRO-LOW'	2 GALLON		64		10	22	32		
VPTs2	VIBURNUM - DOUBLEFILE VIBURNUM PLICATUM TOMENT	2-2.5 FT		20		5	5	5	5	
CAKFg1	FEATH. REED GRASS 'KF' CALAMAGROSTIS ACUTIFOLIA 'KF'	1 GALLON		73		25	23	25		
HBJg1	DAYLILY - 'BAJA' HEMEROCALLIS 'HAPPY RETURNS'	1 GALLON		23				23		
HHRg1	DAYLILY - HAPPY RETURNS HEMEROCALLIS 'HAPPY RETURNS'	1 GALLON		22				22		
LMP	LILYTURF HEMEROCALLIS 'HAPPY RETURNS'	4 INCH POT		100				100		
PAVSg1	SWITCHGRASS 'SHENANDOAH' PANICUM VIRGATUM	1 GALLON		83		25	23	35		

STA 114+00 TO 115+00 RT



STA 117+50 TO 122+00

**ZONE D:**  
STA 114+00 TO 115+00 RT  
STA 117+50 TO 122+00



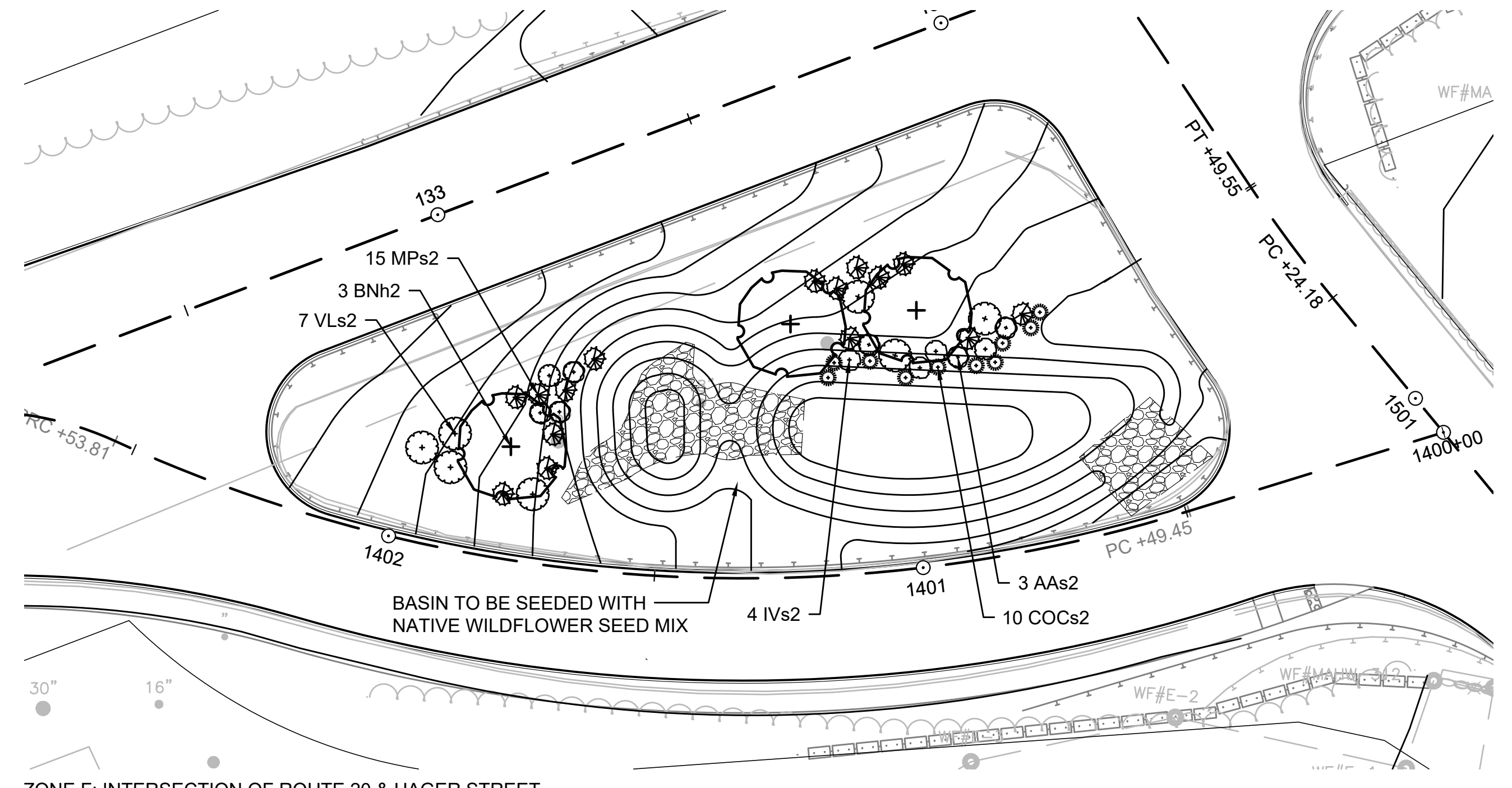
**PLANTING NOTES**

1. CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
2. PLANT LOCATIONS ARE APPROXIMATE. PRIOR TO PLANTING, LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER AND THE LANDSCAPE ARCHITECT.
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8. PLANTING AREAS SHALL BE EXCAVATED TO MINIMUM DEPTH OF 12 INCHES TO ALLOW FOR PLACEMENT OF 12 INCH DEPTH OF LOAM. PLANTING AND SEEDING SHALL IMMEDIATELY FOLLOW PLACEMENT OF LOAM.

**MARLBOROUGH  
BOSTON POST ROAD (ROUTE 20)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	287	428
PROJECT FILE NO.		608467	

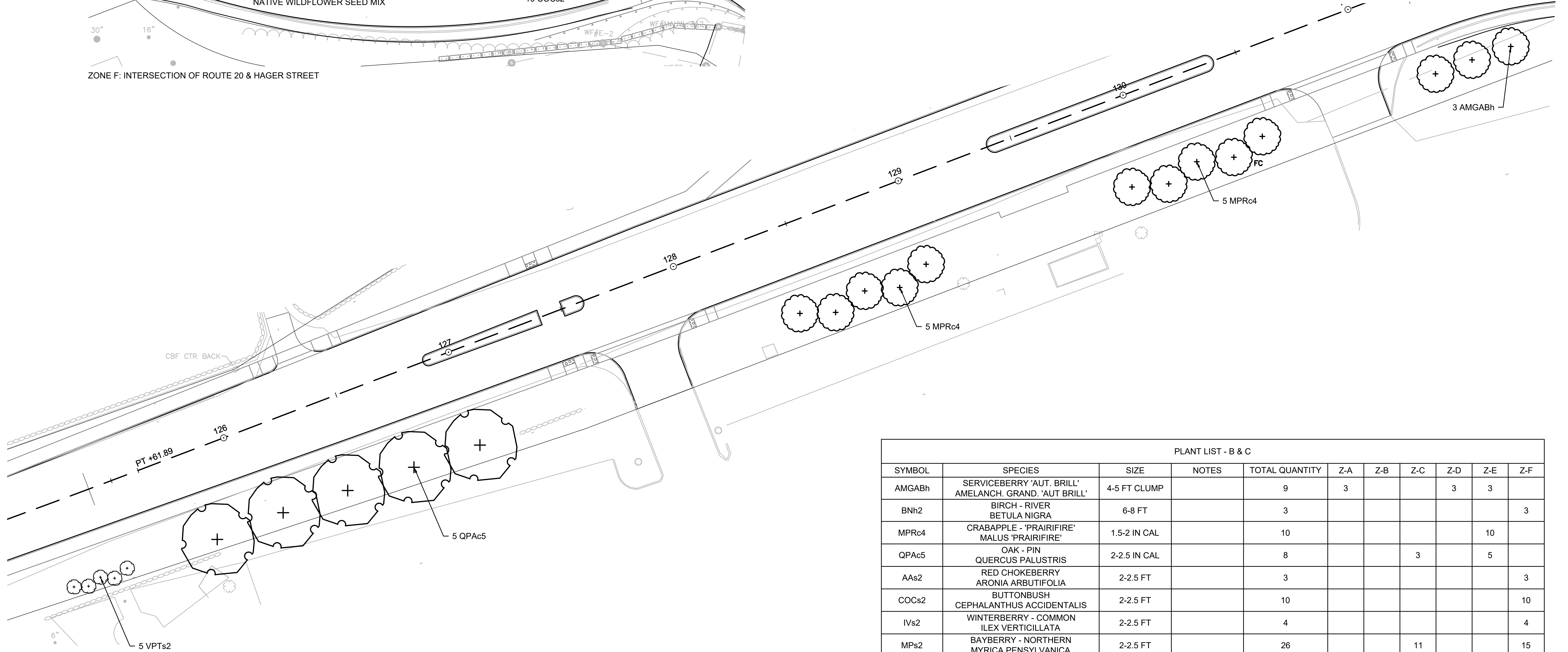
**LANDSCAPE PLANS ZONE - E & F**



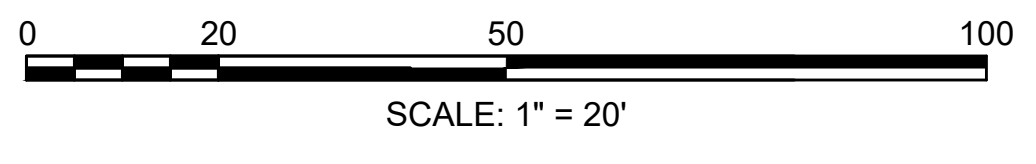
ZONE F: INTERSECTION OF ROUTE 20 & HAGER STREET

**PLANTING NOTES**

1. CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
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ZONE E: STA 125+50 TO 130+00 LT

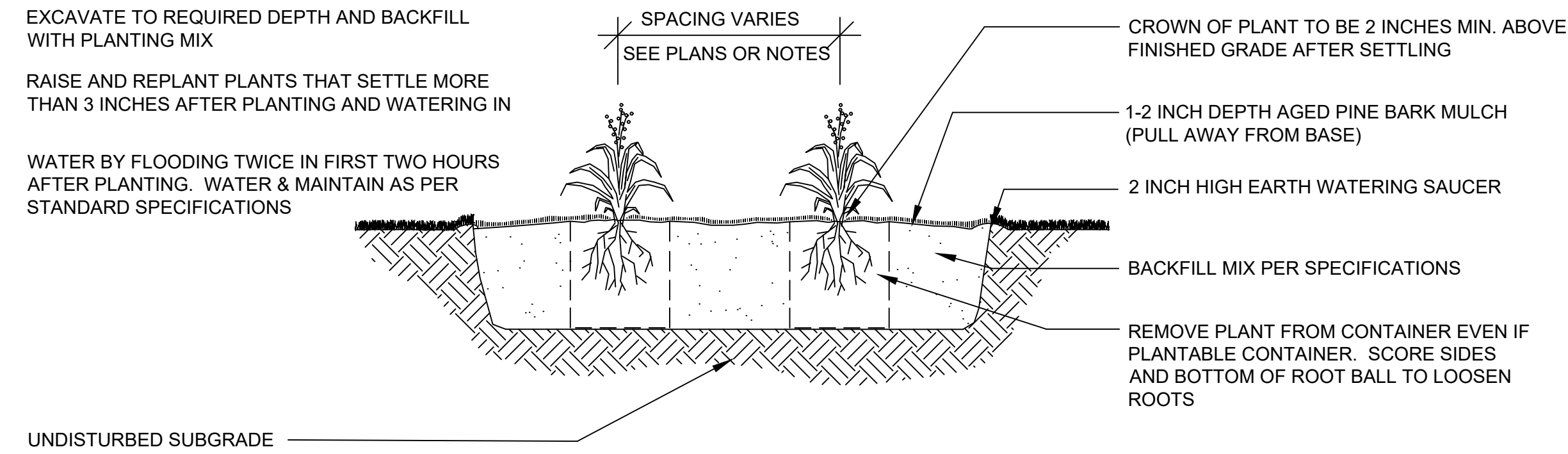


PLANT LIST - B & C										
SYMBOL	SPECIES	SIZE	NOTES	TOTAL QUANTITY	Z-A	Z-B	Z-C	Z-D	Z-E	Z-F
AMGAbh	SERVICEBERRY 'AUT. BRILL' AMELANCH. GRAND. 'AUT BRILL'	4-5 FT CLUMP		9	3			3	3	
BNh2	BIRCH - RIVER BETULA NIGRA	6-8 FT		3						3
MPRc4	CRABAPPLE - 'PRAIRIFIRE' MALUS 'PRAIRIFIRE'	1.5-2 IN CAL		10					10	
QPAc5	OAK - PIN QUERCUS PALUSTRIS	2-2.5 IN CAL		8			3		5	
AAs2	RED CHOKEBERRY ARONIA ARBUTIFOLIA	2-2.5 FT		3						3
COCs2	BUTTONBUSH CEPHALANTHUS ACCIDENTALIS	2-2.5 FT		10						10
IVs2	WINTERBERRY - COMMON ILEX VERTICILLATA	2-2.5 FT		4						4
MPs2	BAYBERRY - NORTHERN MYRICA PENNSYLVANICA	2-2.5 FT		26			11			15
VLs2	VIBURNUM - NANNYBERRY VIBURNUM LENTAGO	2-2.5 FT		7						7
VPTs2	VIBURNUM - DOUBLEFIRE VIBURNUM PLICATUM TOMENT.	2-2.5 FT		20		5	5	5	5	

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	289	428
PROJECT FILE NO.		608467	

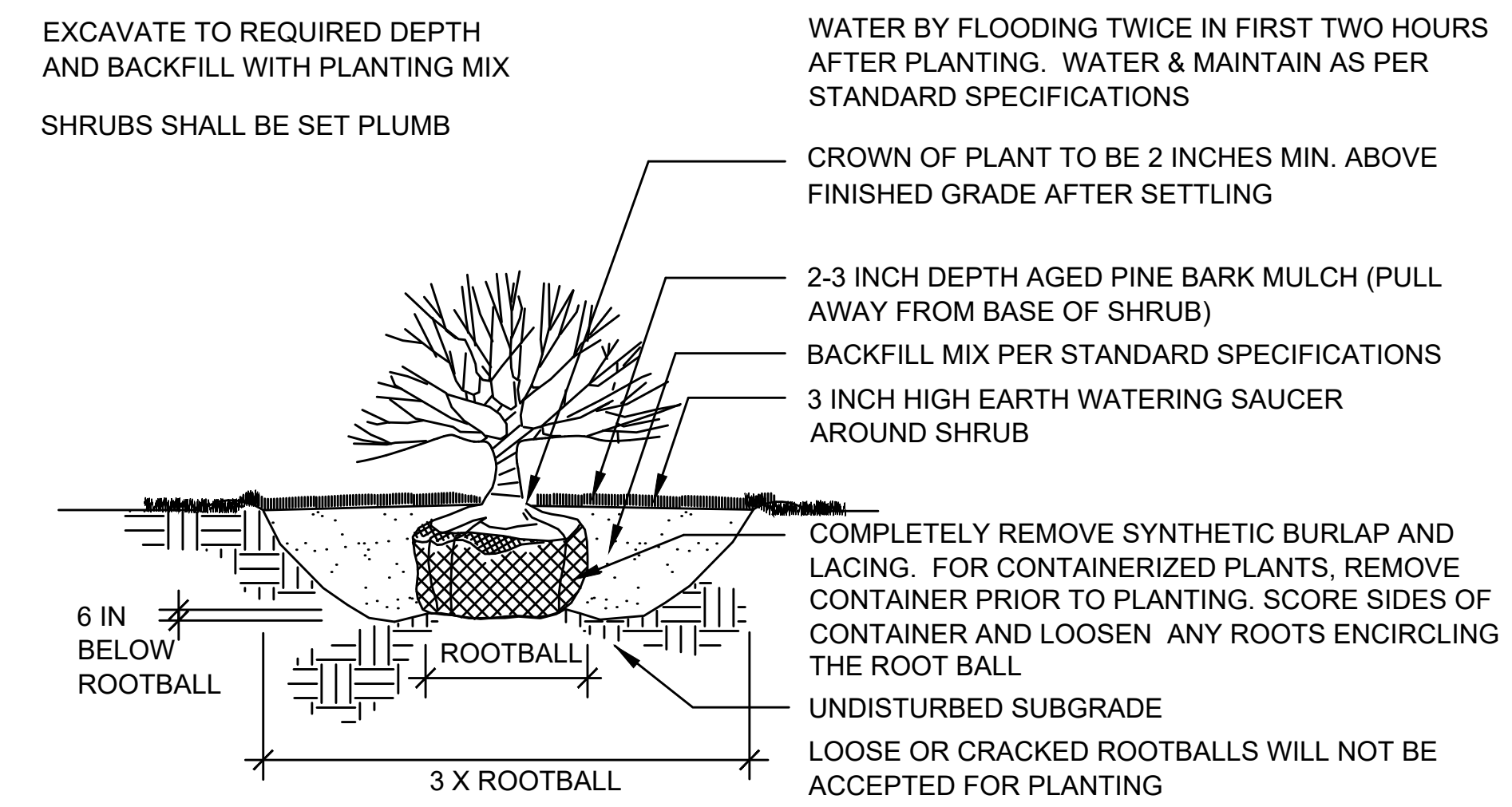
LANDSCAPE DETAILS

608467\_LD(LANDSCAPE PLANS).DWG Plotted on 10-Mar-2020 11:33 AM



PERENNIAL PLANTING

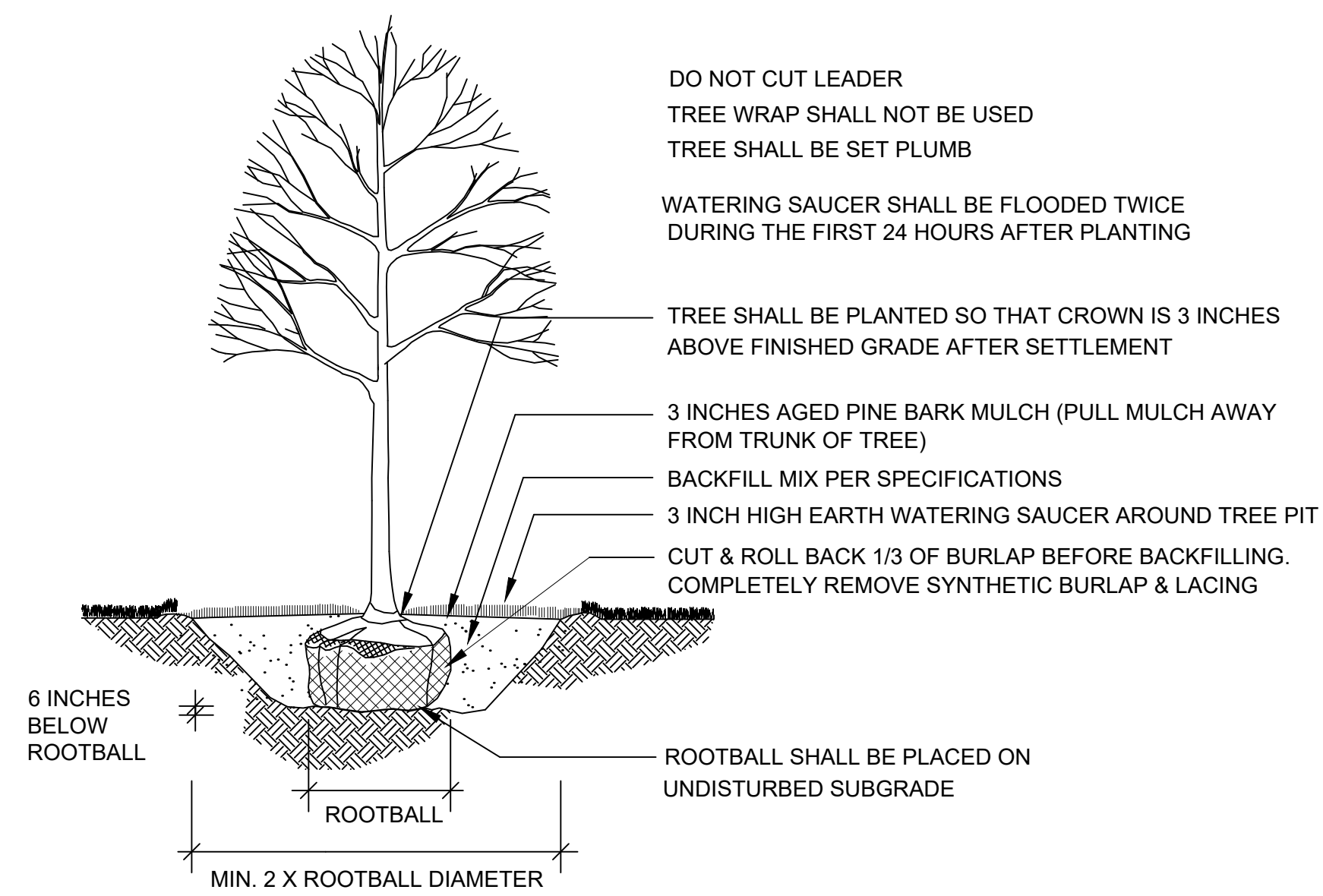
NOT TO SCALE



SHRUB PLANTING

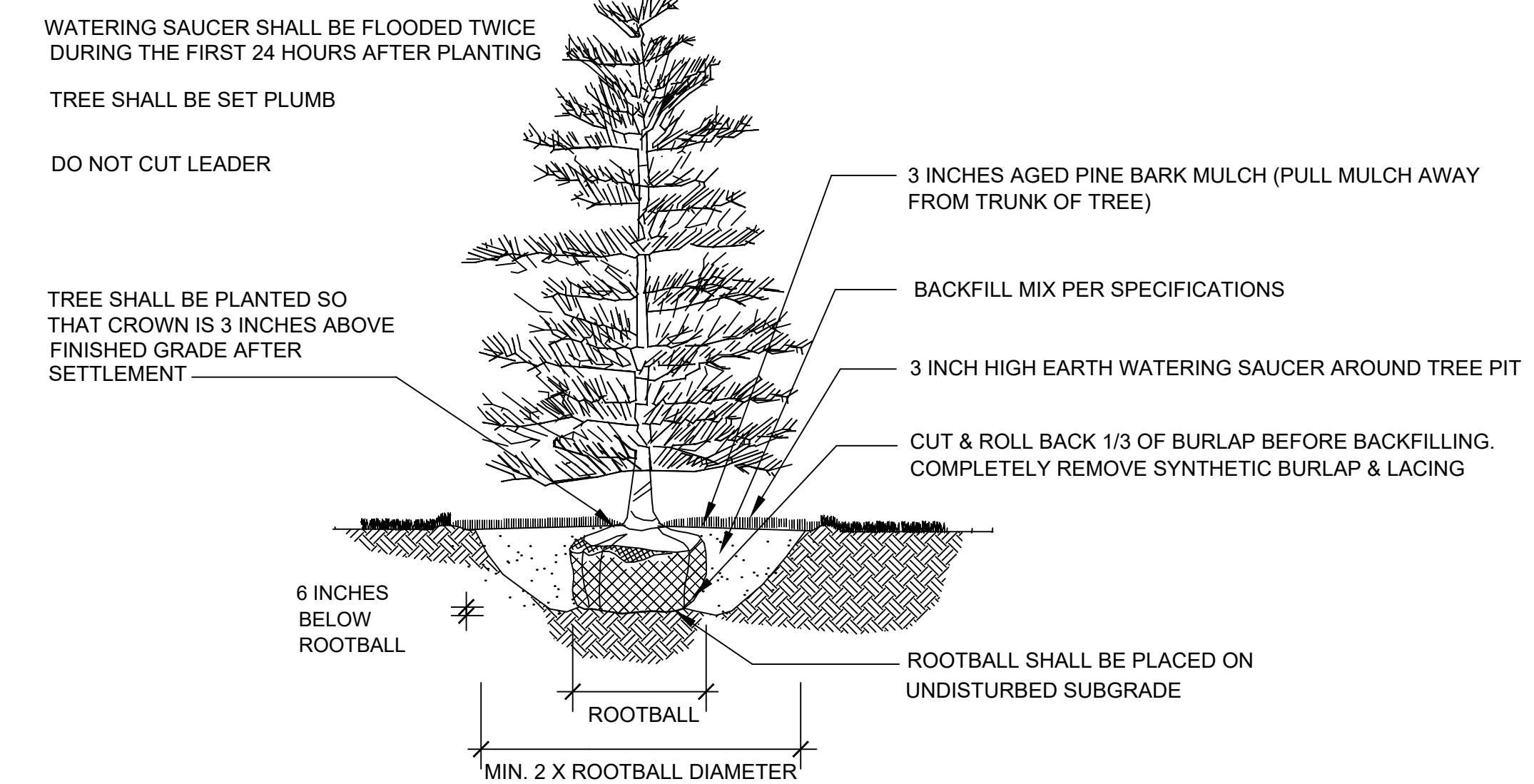
NOT TO SCALE

FEB 28, 2013



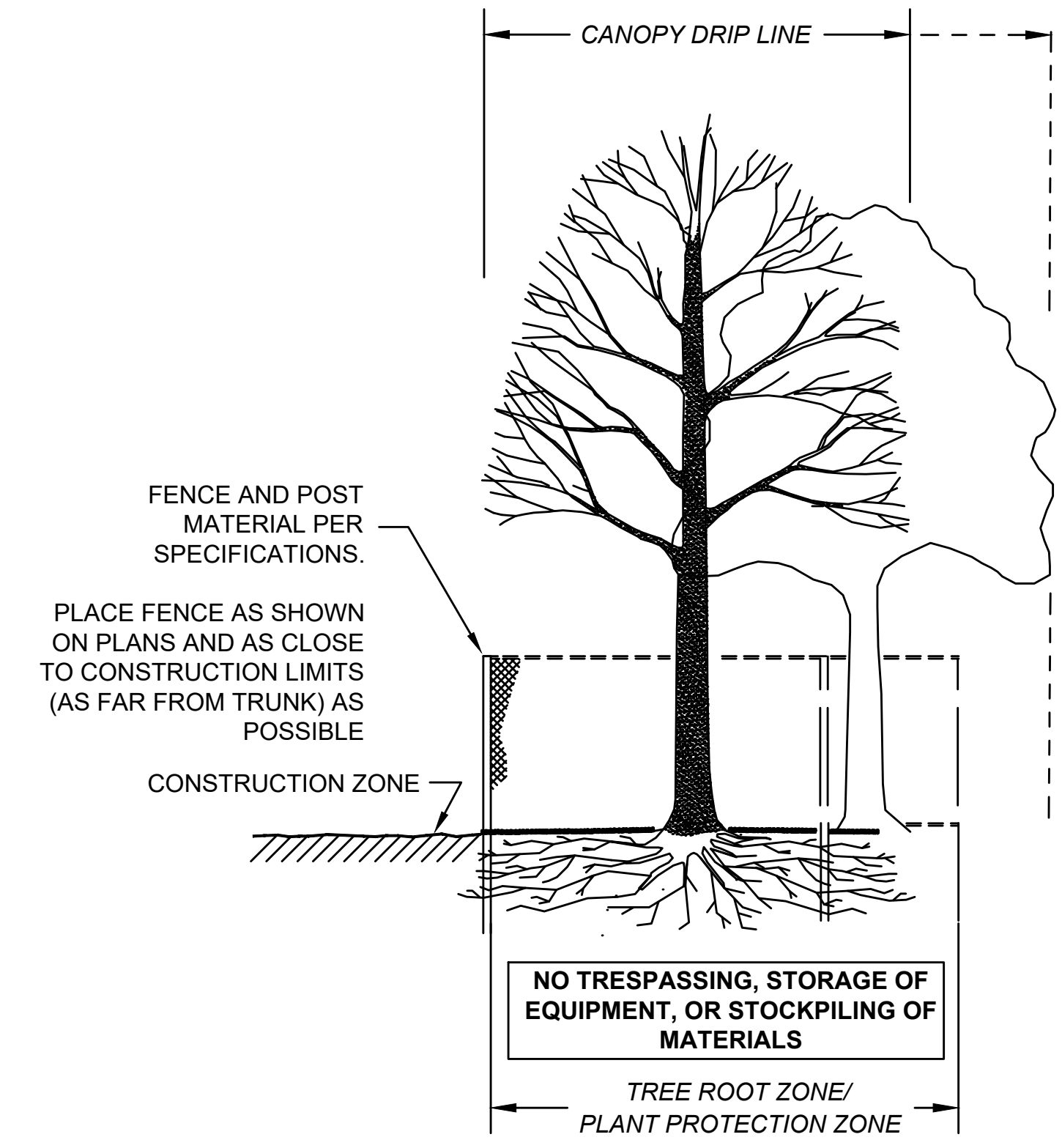
DECIDUOUS TREE PLANTING

NOT TO SCALE

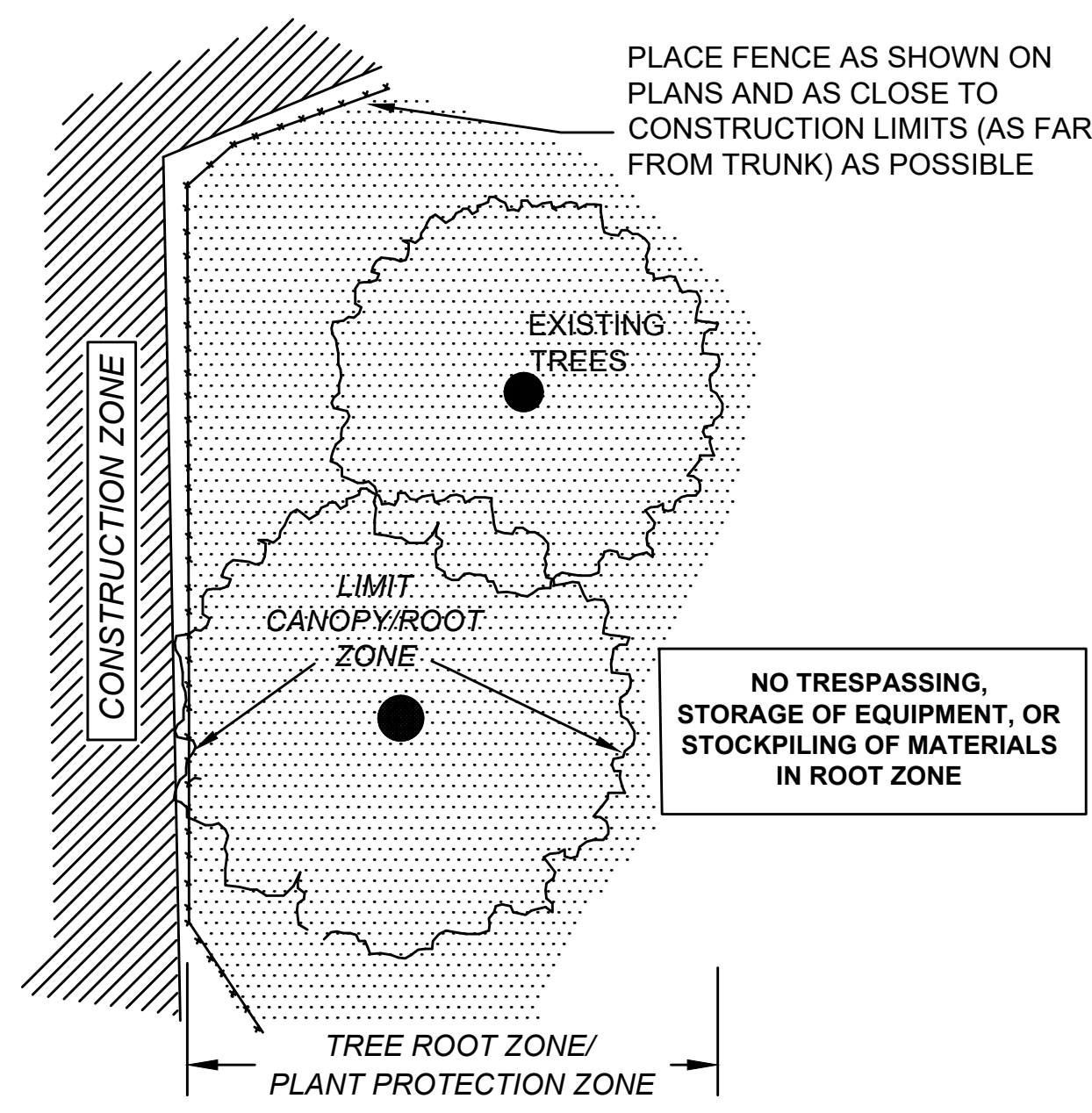


EVERGREEN TREE PLANTING

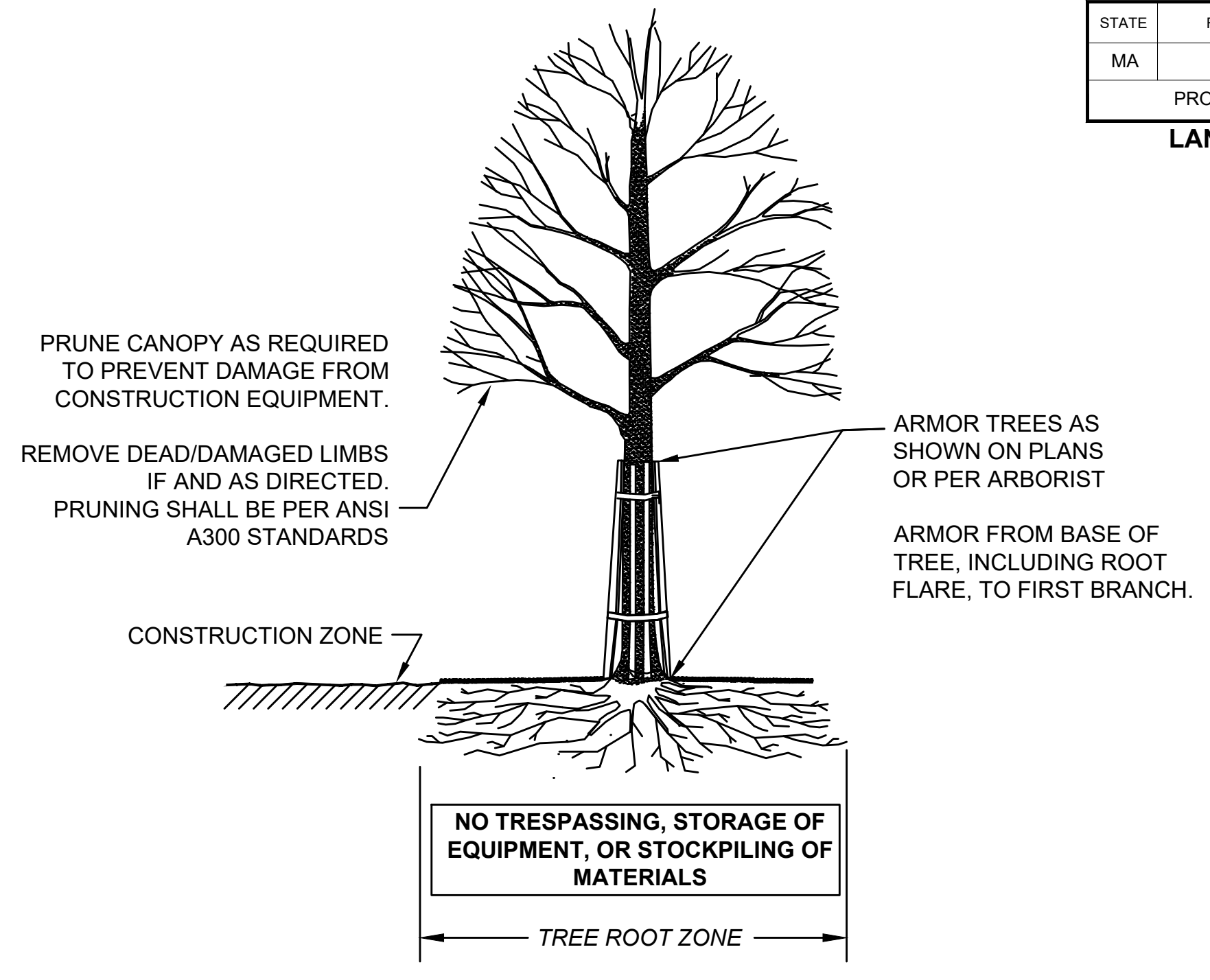
NOT TO SCALE



SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

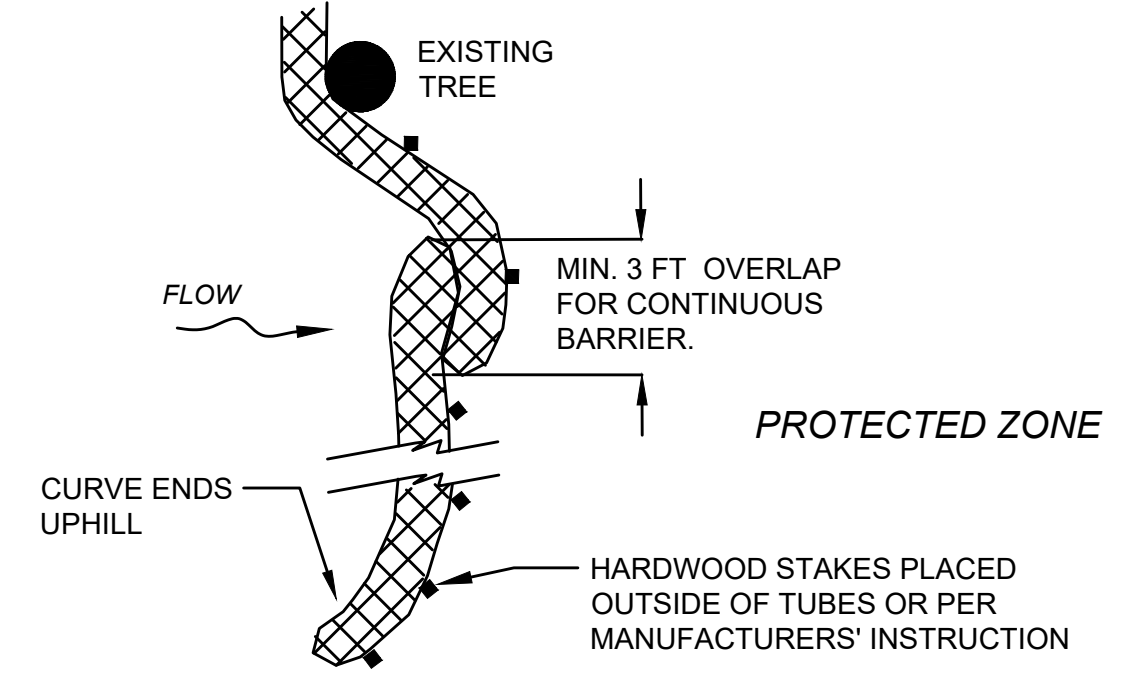


SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - TRUNK

**TREE PROTECTION - ROOT ZONE**

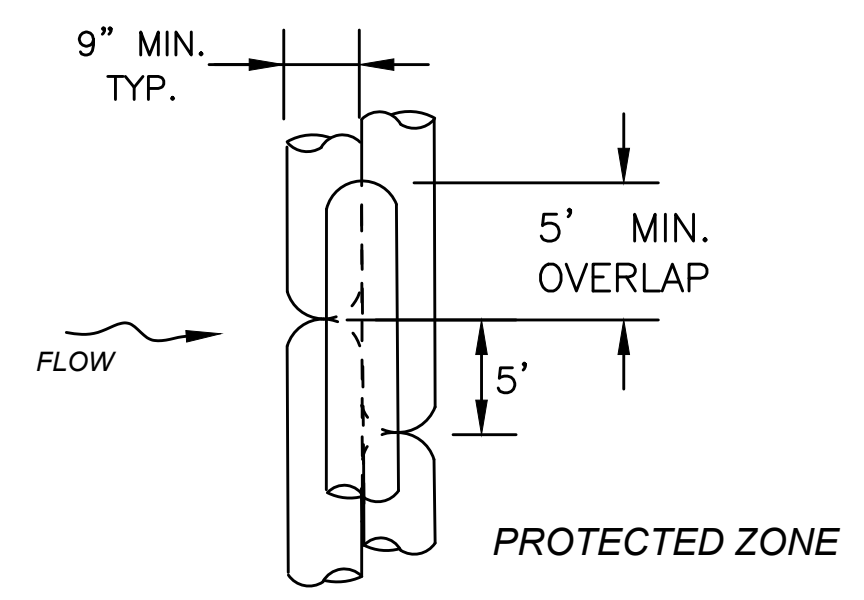
NOT TO SCALE



PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.  
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

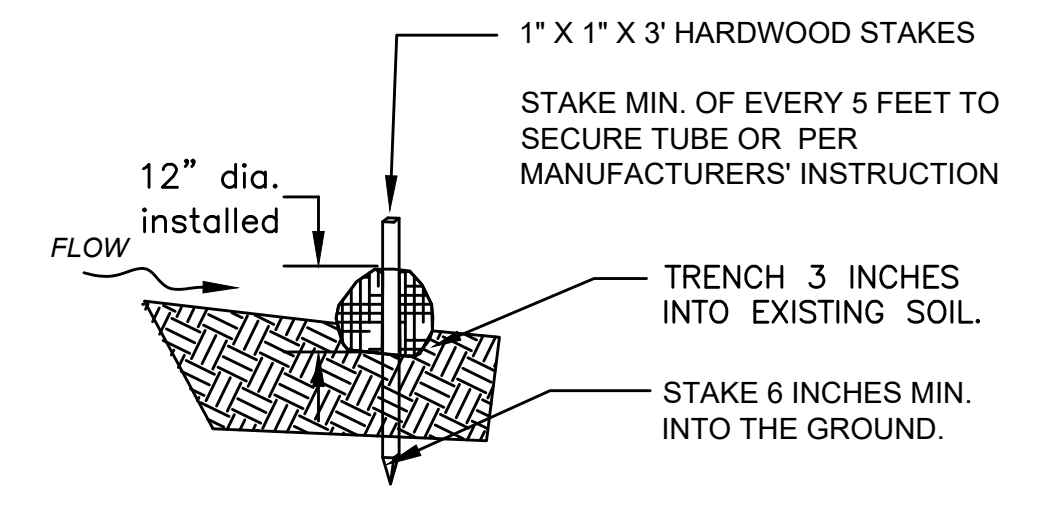
PLAN VIEW

WHERE SPECIFIED ON CONSTRUCTION PLANS OR AS REQUIRED



PLAN VIEW

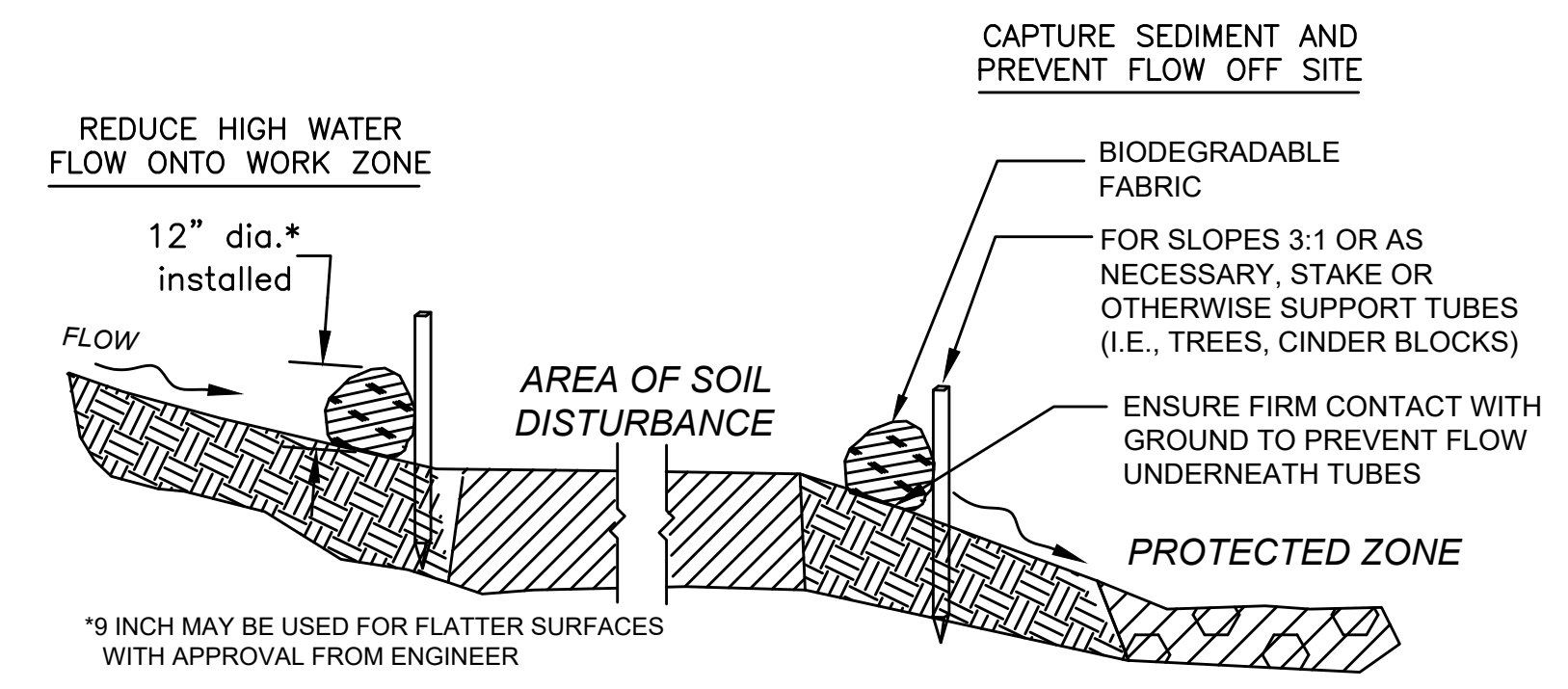
FOR USE ONLY ON SLOPES UP TO 5% AND WITH APPROVAL OF THE ENGINEER. NOT TO BE USED FOR WETLAND MITIGATION.



SECTION

12 INCH STRAW WATTLE

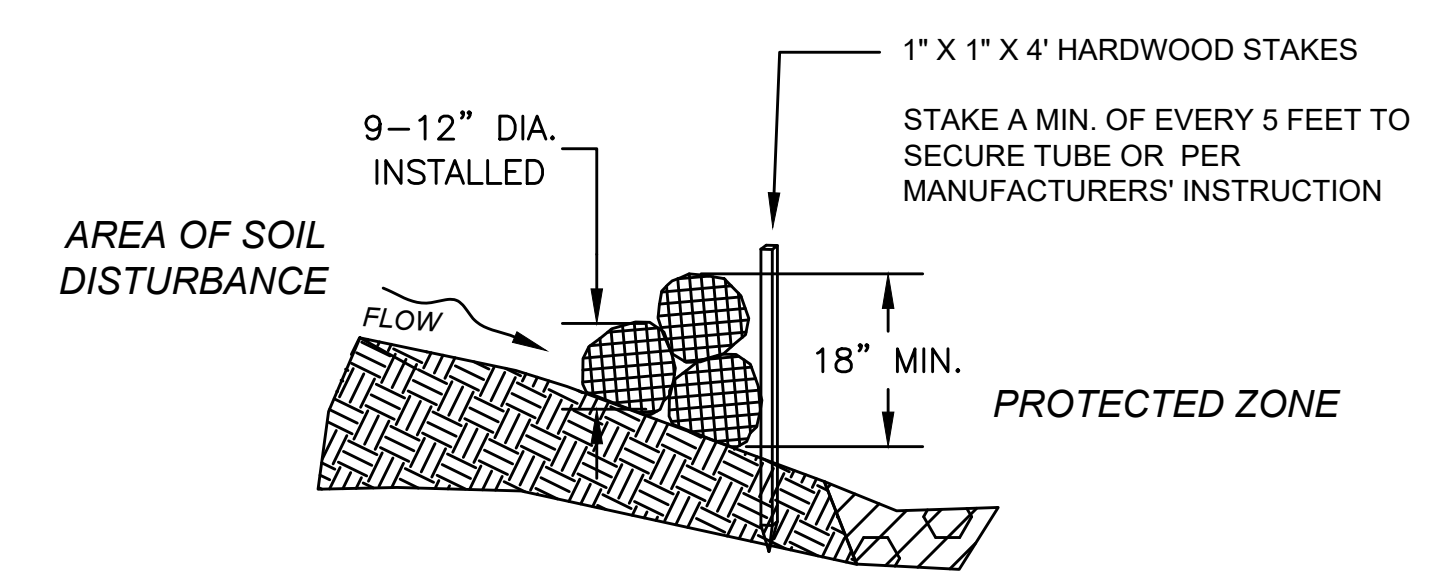
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SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBE

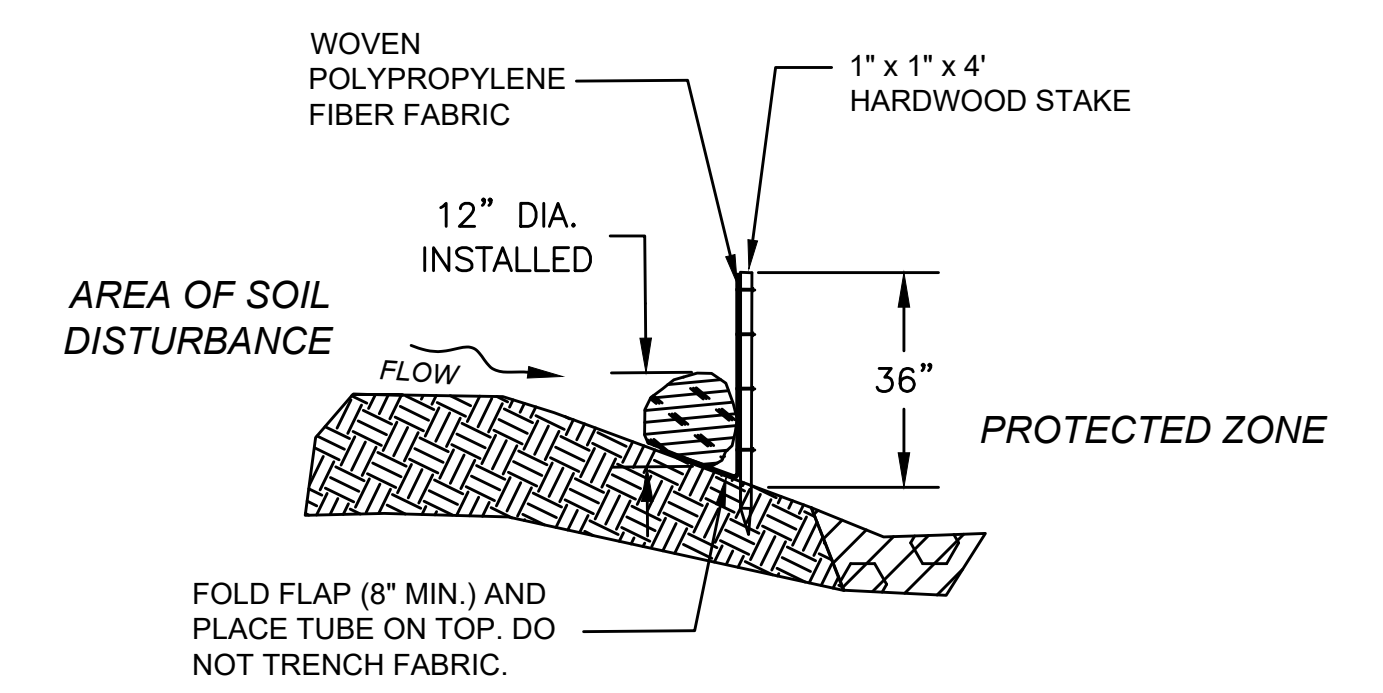
NOT TO SCALE



SECTION

COMPOST FILTER TUBES STACKED

NOT TO SCALE



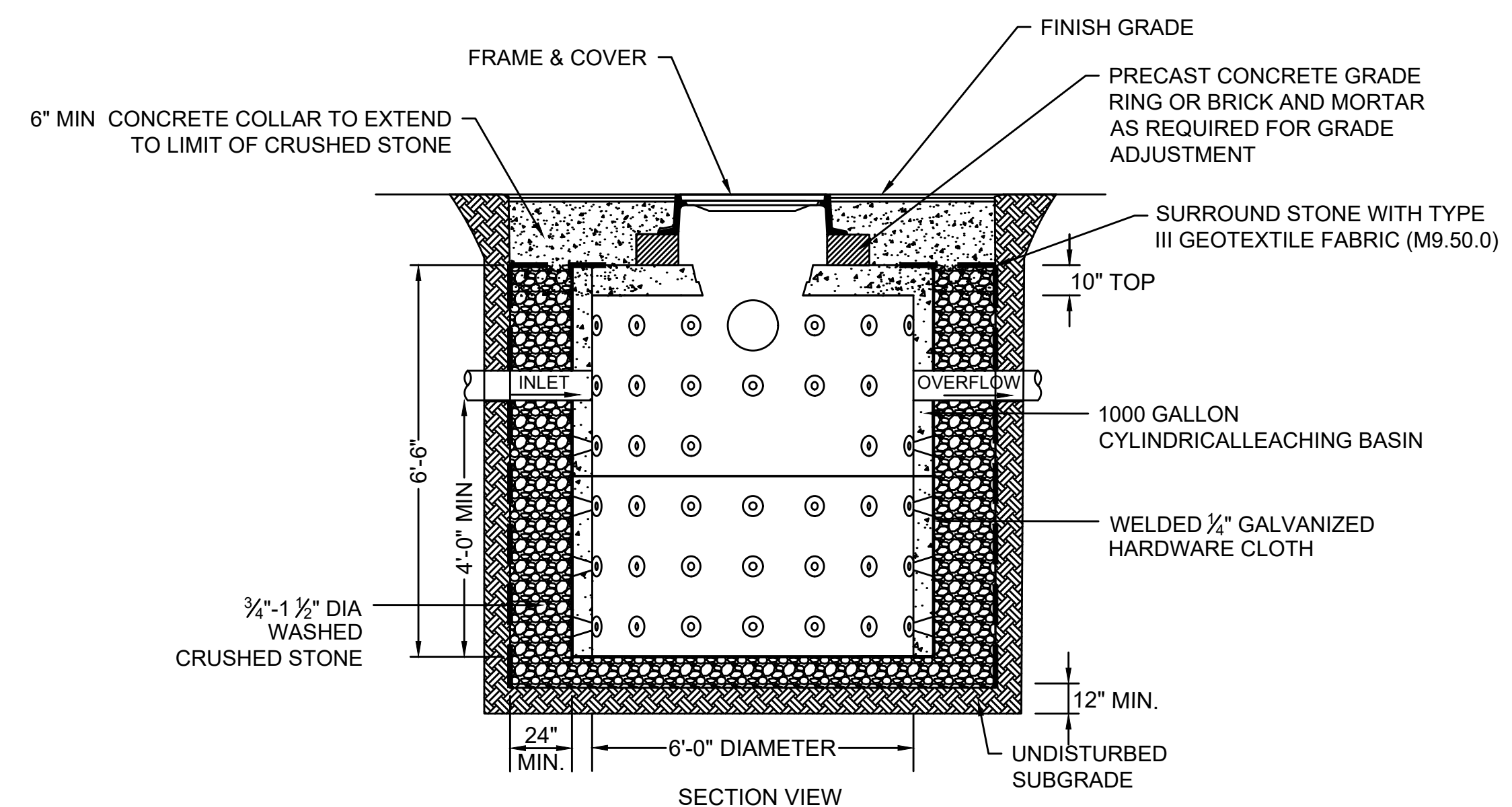
SECTION

COMPOST FILTER TUBE & SILT FENCE

NOT TO SCALE

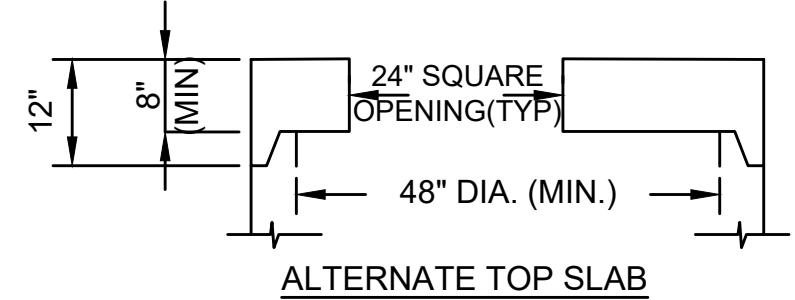
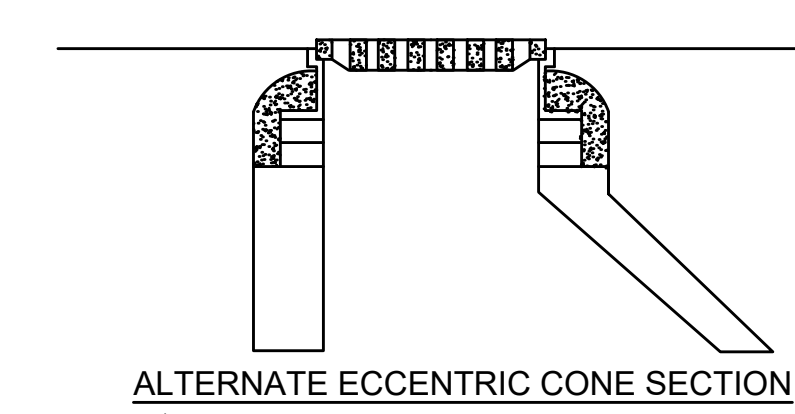
MARLBOROUGH BOSTON POST ROAD (ROUTE 20)			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	293	428
PROJECT FILE NO.		608467	

**CONSTRUCTION DETAILS**

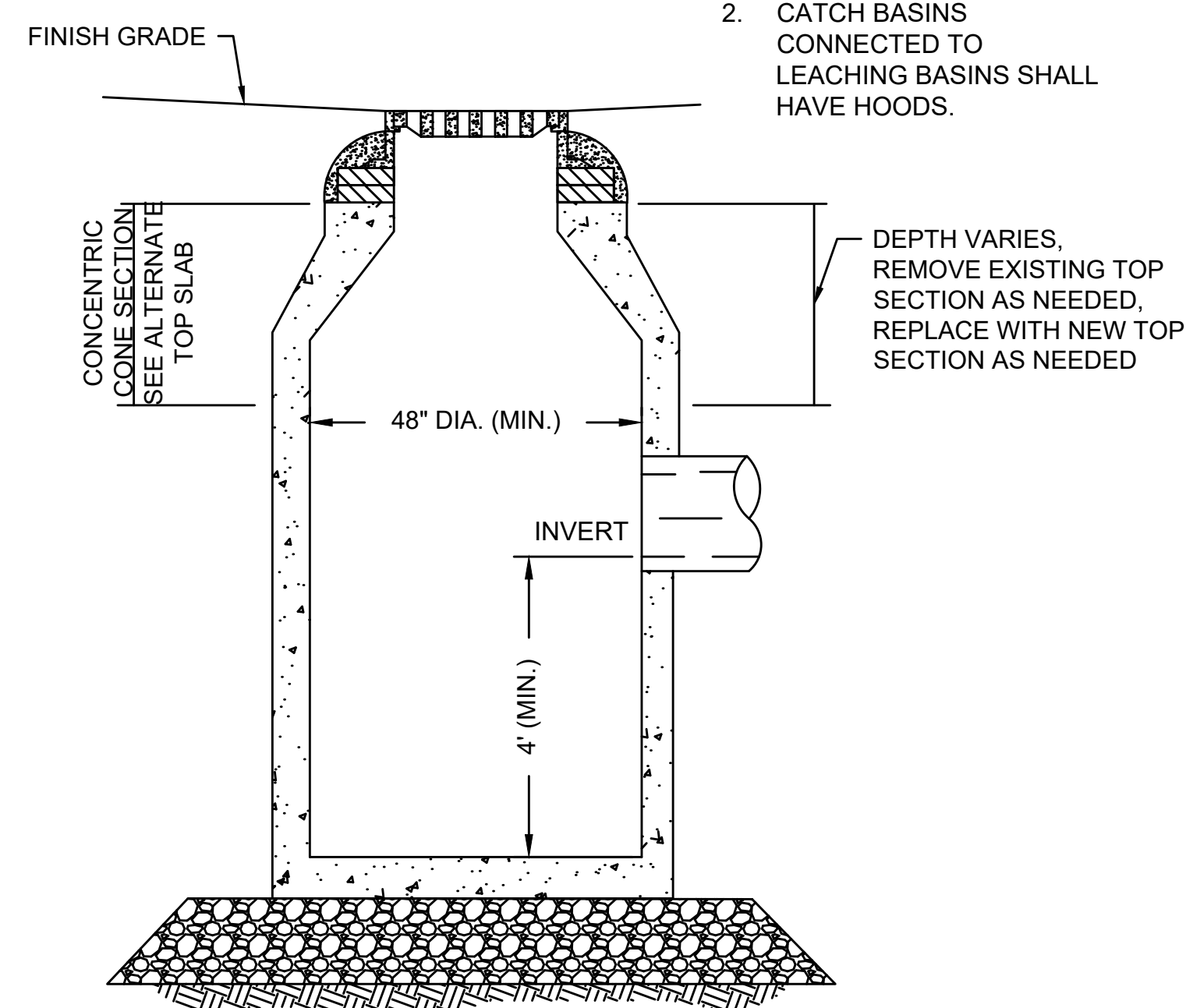


- NOTES:**
1. RATED FOR H-20 LOADING.
  2. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
  3. SEE PLANS FOR PIPE SIZES.

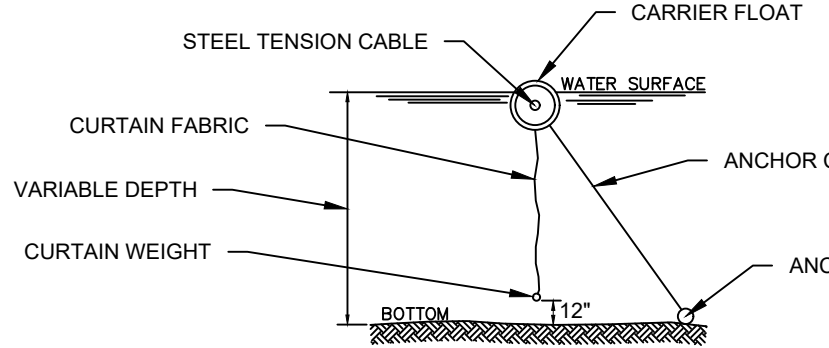
**LEACHING BASIN**  
NOT TO SCALE



- NOTES:**
1. BASED ON ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL DETERMINE WHICH STYLE OF TOP SECTION SHOULD BE USED.
  2. CATCH BASINS CONNECTED TO LEACHING BASINS SHALL HAVE HOODS.

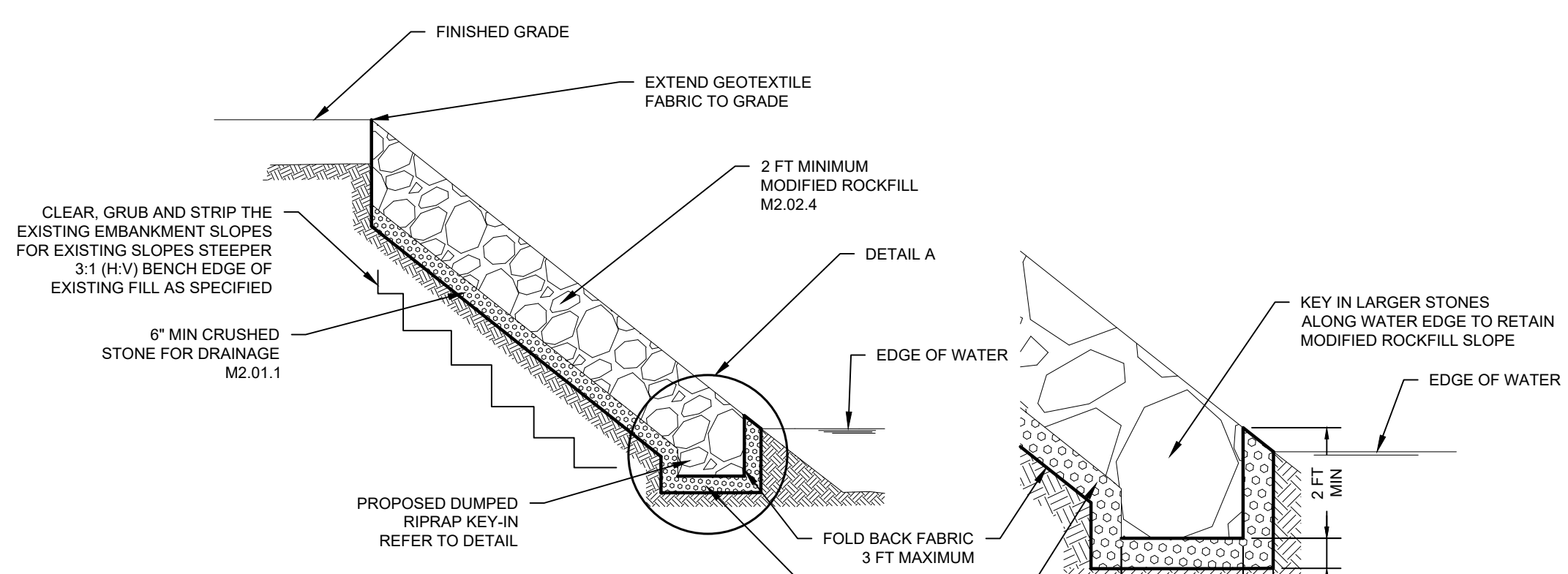


**DEEP SUMP CATCH BASIN**  
NOT TO SCALE

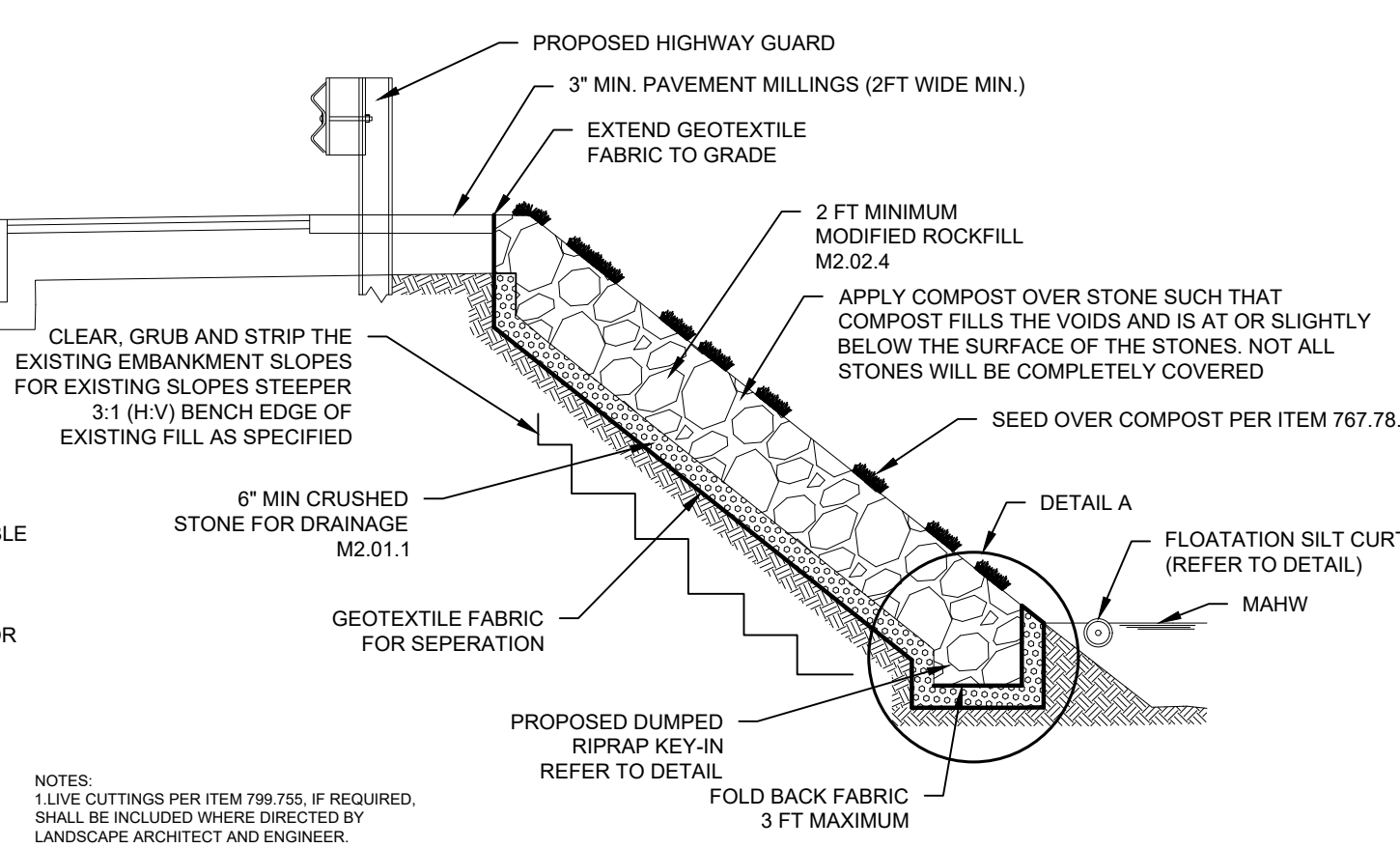


- NOTES:**
1. THE SILT CURTAIN SHOULD BE MAINTAINED UNTIL THE CONSTRUCTION AREA IS STABILIZED AND TURBIDITY IS REDUCED TO ACCEPTABLE LEVELS.
  2. SILT CURTAIN MAY BE REMOVED WHEN DIRECTED OR APPROVED IN WRITING BY THE LOCAL CONSERVATION COMMISSION.

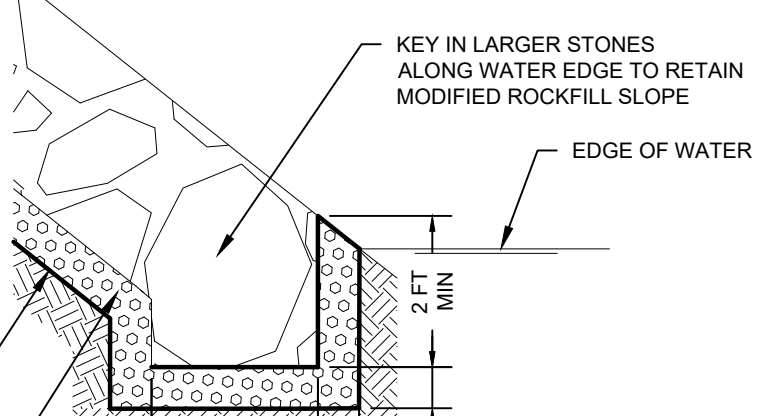
**FLOATATION SILT CURTAIN DETAIL**  
NOT TO SCALE



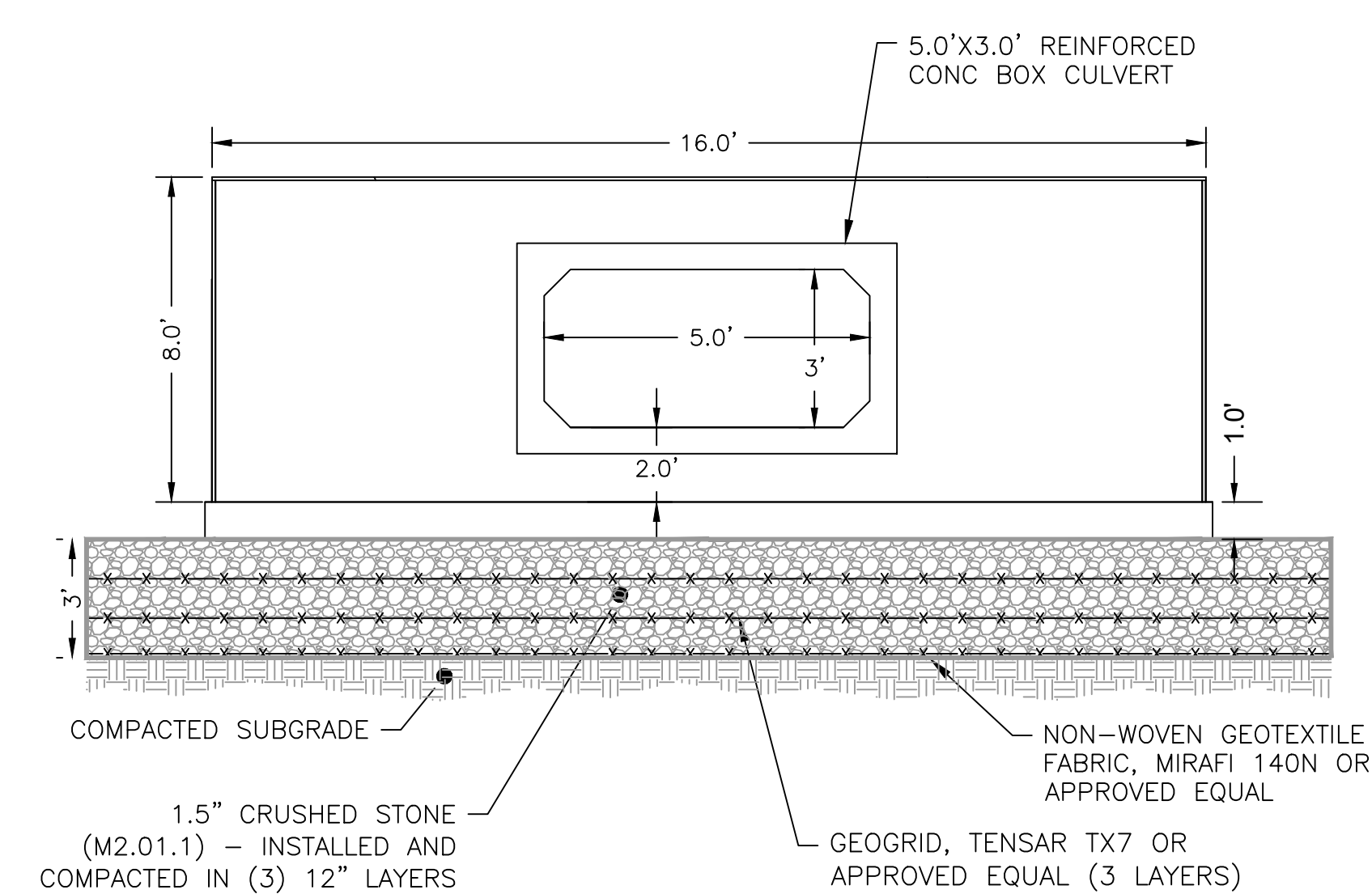
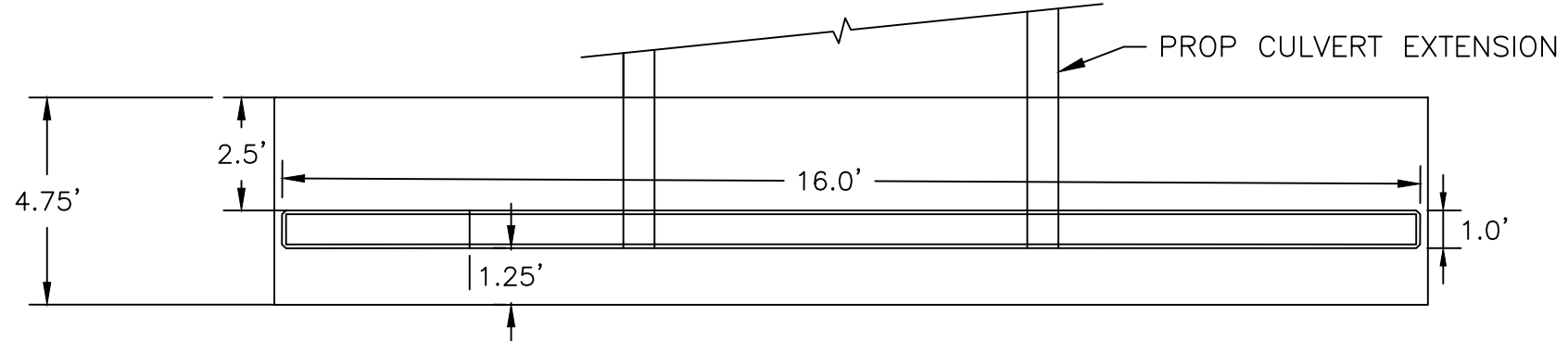
**MODIFIED ROCK FILL SLOPE DETAIL AT BROAD MEADOW BROOK**  
NOT TO SCALE



**MODIFIED ROCK FILL SLOPE DETAIL AT HAGER POND**  
NOT TO SCALE

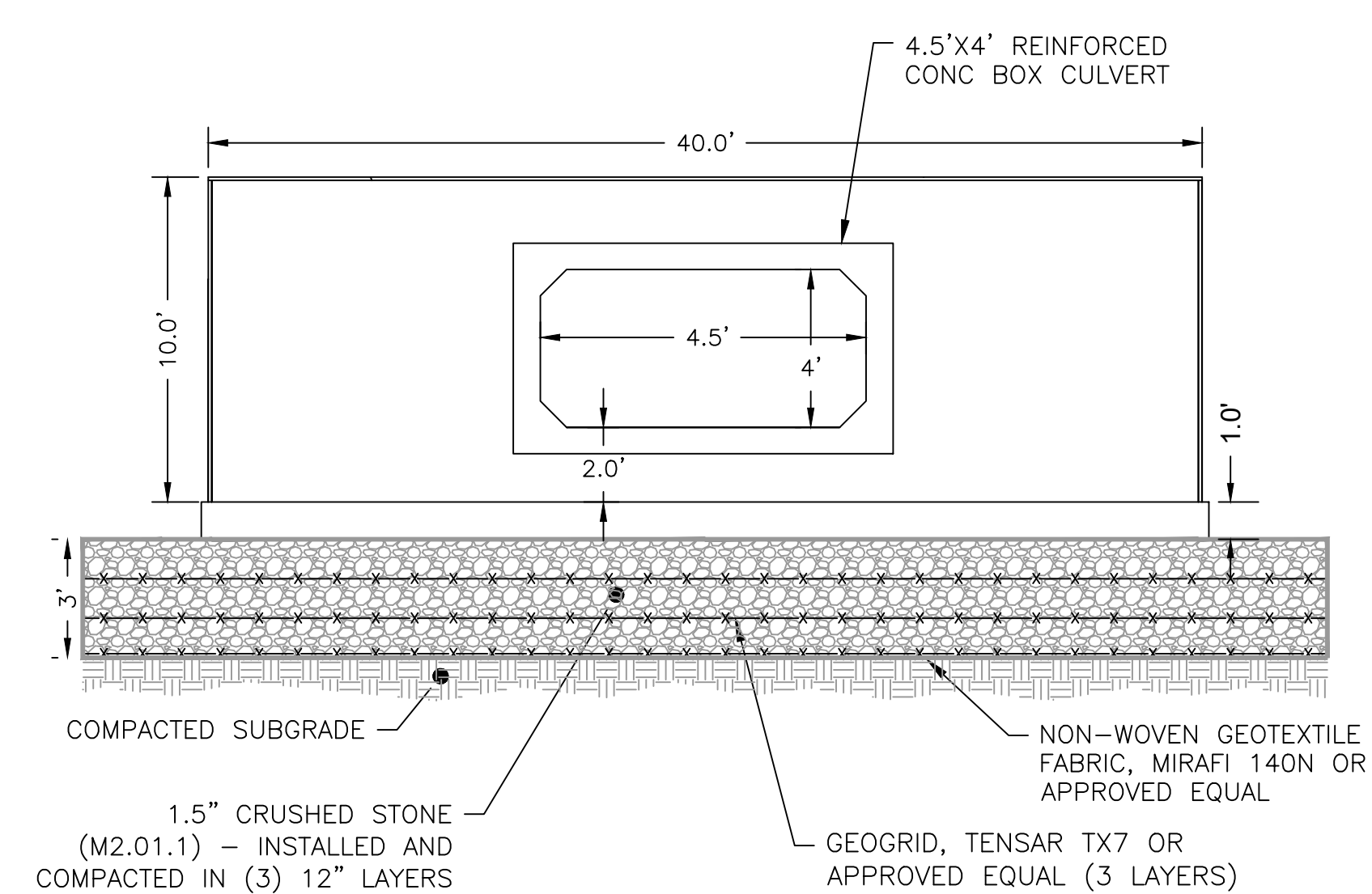
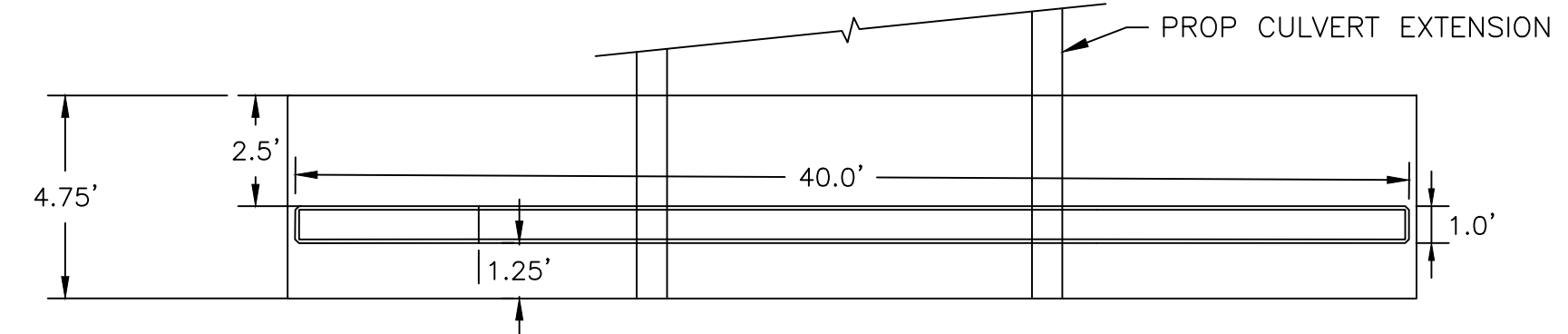


**KEY-IN DETAIL A**  
NOT TO SCALE



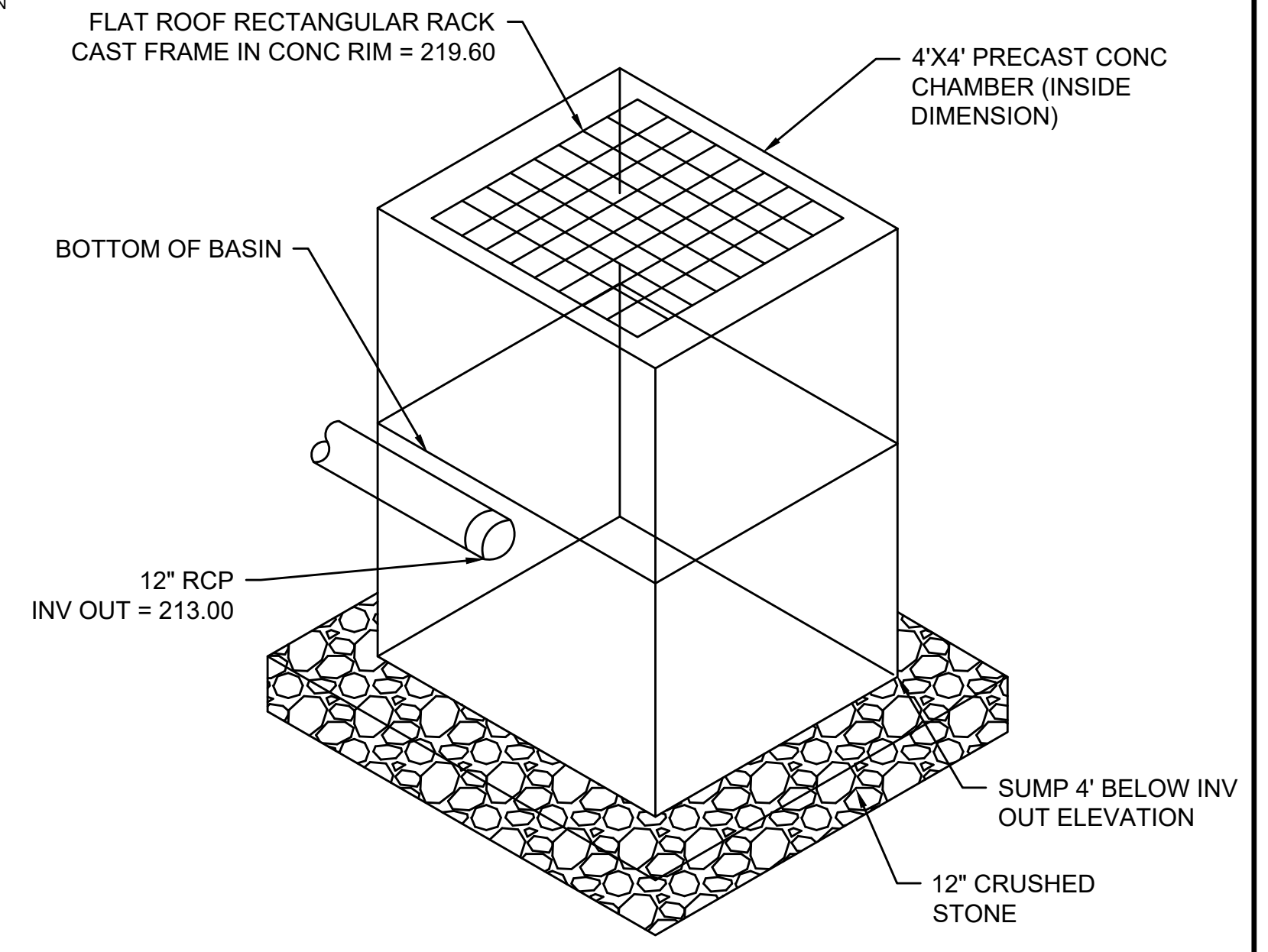
- NOTES:**
1. CONCRETE: MINIMUM 5,000 PSI
  2. NON-SHRINK GROUT SHALL BE USED TO SEAL INTERSTITIAL SPACES
  3. CONTRACTOR SHALL DESIGN, FURNISH AND INSTALL A COMPLETE PRECAST CONCRETE CULVERT STRUCTURE SYSTEM IN CONFORMANCE WITH ITEM 995.011.

**CULVERT NO. 1 STA 42+50**  
**5' X 3' REINFORCED CONCRETE BOX BROAD MEADOW BROOK**  
NOT TO SCALE



- NOTES:**
1. CONCRETE: MINIMUM 5,000 PSI
  2. NON-SHRINK GROUT SHALL BE USED TO SEAL INTERSTITIAL SPACES
  3. CONTRACTOR SHALL DESIGN, FURNISH AND INSTALL A COMPLETE PRECAST CONCRETE CULVERT STRUCTURE SYSTEM IN CONFORMANCE WITH ITEM 995.012.

**CULVERT NO. 2 STA 121+50**  
**4.5' X 4.0' REINFORCED CONCRETE BOX HAGER POND**  
NOT TO SCALE



**OUTLET CONTROL STRUCTURE**  
NOT TO SCALE