MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN AND PROFILE OF

BRUCE FREEMAN RAIL TRAIL

PHASE 3

IN THE TOWN OF

SUDBURY & FRAMINGHAM

MIDDLESEX COUNTY

FEDERAL AID PROJECT NO. -

75% SUBMITTAL

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	1	103
PROJECT FILE NO.	613319		

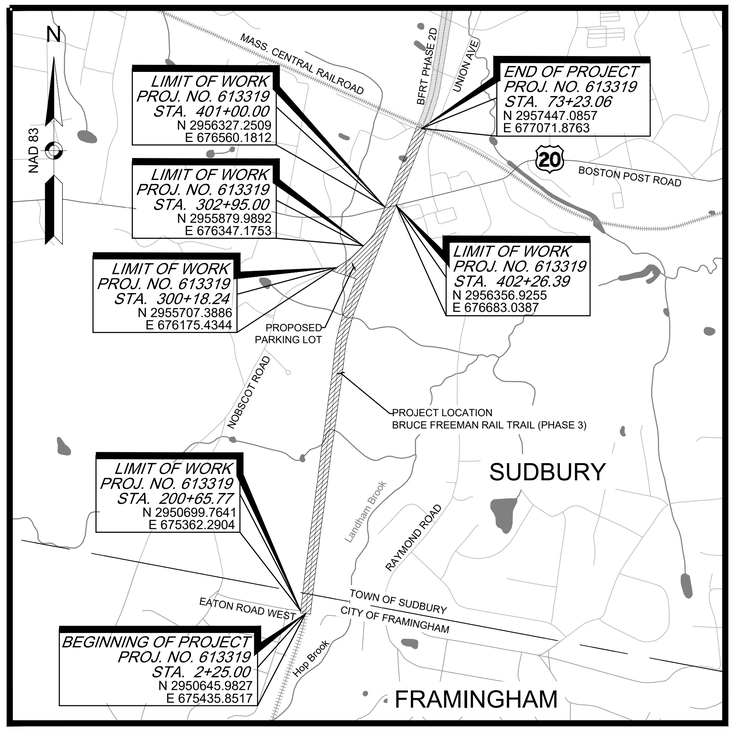
TITLE SHEET & INDEX

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THESE PLANS ARE SUPPLEMENTED BY THE LATEST EDITIONS OF THE FOLLOWING PUBLICATIONS, AS IDENTIFIED IN THE CONTRACT SPECIAL PROVISIONS: THE MASSDOT CONSTRUCTION STANDARD DETAILS, THE MASSDOT STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE MASSDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, THE MASSDOT OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, THE MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, AND THE ANSI AMERICAN STANDARD FOR NURSERY STOCK.

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0 1000 2000 3000 4000

SCALE: 1" = 1000'

LENGTH OF PROJECT = 7087.02 FEET = 1.342 MILES

SHARED-USE PATH DESIGN DESIGNATION

BRUCE FREEMAN RAIL TRAIL

DESIGN SPEED	18 MPH
FUNCTIONAL CLASSIFICATION	OFF ROAD PEDESTRIAN/BICYCLE FACILITY

* 18 MPH FOR GRADES LESS THAN 2%, 20 MPH FOR GRADES BETWEEN 2% & 4%

DESIGN DESIGNATION (BOSTON POST ROAD)

DESIGN SPEED	30 MPH
ADT (2022)	21,748
ADT (2042)	21,967
T (PEAK HOUR)	4.7%
T (AVERAGE DAY)	3.4%
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL
DHV	1,727
DDHC	872

DATE	DESCRIPTION	REV #
2-12-2024	75% SUBMISSION	0
6-19-2024	25% SUBMISSION	0
2-5-2024	PRE-25% SUBMISSION	0

massDOT
Massachusetts Department of Transportation
Highway Division

APPROVED

CHIEF ENGINEER **DATE**

FUSS & O'NEILL
1550 MAIN STREET, SUITE 400
SPRINGFIELD, MA 01103
413.452.0445
www.fando.com

GENERAL ABBREVIATIONS

ABAN	ABANDON
ADJ	ADJUST
APPROX	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS / CONTINUED
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DIA	DIAMETER
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EXIST (or EX)	EXISTING
EXC	EXCAVATION
FDN.	FOUNDATION
FDP	FULL DEPTH PAVEMENT
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HWY	HIGHWAY
JCT	JUNCTION
LOAM	LOAM BORROW
LSA	LANDSCAPED AREA
LT	LEFT
MAHWL	MEAN AVERAGE HIGH WATER LINE
MAX	MAXIMUM
MB	MAILBOX
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
MOD	MODIFIED
MSE	MECHANICALLY STABILIZED EARTH
NERR	NEW ENGLAND RAILROAD
NIC	NOT IN CONTRACT
NO.	NUMBER
NTS	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
PCR	PEDESTRIAN CURB RAMP
P.G.L.	PROFILE GRADE LINE
PREV	PREVIOUS/PREVIOUSLY
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PVMT	PAVEMENT
R&D	REMOVE AND DISCARD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RD	ROAD
RDWY	ROADWAY
REB	REBUILD
REM	REMOVE
REMOD	REMODEL
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SHLO/S.H.L.O.	STATE HIGHWAY LAYOUT LINE

GENERAL ABBREVIATIONS (CONT)

ST	STREET
STA	STATION
STD	STANDARD
SW	SIDEWALK
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TRANS	TRANSITION
TRM	TURF REINFORCING MAT
TYP	TYPICAL
VAR	VARIES
VERT	VERTICAL
WP	WORKING POINT
X-SECT	CROSS SECTION

UTILITY ABBREVIATIONS

CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
CSP	CORRUGATED STEEL PIPE
DI	DROP INLET
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HDW	HEADWALL
HYD	HYDRANT
INV	INVERT
LB	LEACH BASIN
LP	LIGHT POLE
MH	MANHOLE
MW	MONITORING WELL
OHW	OVERHEAD WIRE
PB	PULL BOX
PVC	POLYVINYLCHLORIDE PIPE
PWW	PAVED WATER WAY
RCP	REINFORCED CONCRETE PIPE
SMH	SEWER MANHOLE
TSV&B	TAPPING SLEEVE VALVE & BOX
UP	UTILITY POLE
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN

ALIGNMENT & GRADING ABBREVIATIONS

CC	CENTER OF CURVE
HP	HIGH POINT
I.T.	INTERSECTION OF TANGENT
LP	LOW POINT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
PNT	POINT
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
∠PT	ANGLE POINT
R	RADIUS OF CURVATURE
T	TANGENT DISTANCE OF CURVE
TAN	TANGENT
25.45	SPOT ELEVATION

PROFILE ABBREVIATIONS

AD	ALGEBRAIC DIFFERENCE IN RATES OF GRADE
HSD	HORIZONTAL SIGHT DISTANCE
K	RATE OF VERTICAL CURVATURE
L	LENGTH OF CURVE
PVC	POINT OF VERTICAL CURVATURE
PVCC	POINT OF VERTICAL COMPOUND CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVRC	POINT OF VERTICAL REVERSE CURVATURE
PVT	POINT OF VERTICAL TANGENCY
SSD	STOPPING SIGHT DISTANCE
VC	VERTICAL CURVE

TRAFFIC SIGNAL

CAB.	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY DON'T WALK
FDW	FLASHING DON'T WALK
FR	FLASHING CIRCULAR RED
←FR–	FLASHING RED LEFT ARROW
–FR→	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
←FY–	FLASHING YELLOW LEFT ARROW
–FY→	FLASHING YELLOW RIGHT ARROW
G	STEADY CIRCULAR GREEN
←G–	STEADY GREEN LEFT ARROW
–G→	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
↑G	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
←R–	STEADY RED LEFT ARROW
–R→	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALK
Y	STEADY CIRCULAR YELLOW
←Y–	STEADY YELLOW LEFT ARROW
–Y→	STEADY YELLOW RIGHT ARROW

SUDBURY/FRAMINGHAM
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GENERAL NOTES

GENERAL NOTES:

EXISTING CONDITIONS AND TOPOGRAPHICAL INFORMATION FROM AN ACTUAL FIELD SURVEY CONDUCTED BY GCG ASSOCIATES, INC. IN SEPTEMBER 2022 THROUGH APRIL 2023.

1. THE HORIZONTAL CONTROL IS BASED ON THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM AND THE NATIONAL GEODETIC SURVEY (NAD83). ALL ELEVATION IS US FEET, REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND GRADES IN THE FIELD BEFORE COMMENCING WORK AND PROMPTLY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. NO GUARANTEE TO THE ACCURACY OF THE EXISTING UTILITIES FACILITIES SHOWN IN THIS PROJECT IS EXPRESSED OR IMPLIED UNLESS OTHERWISE NOTED. CONTRACTOR SHALL CONTACT "Mass DIG-SAFE", 1-888-344-7233. CONTRACTOR SHALL MAINTAIN MARKINGS WHERE NEEDED DURING PROJECT. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION. THE CONTRACTOR SHALL VERIFY LOCATIONS OF UTILITIES AND SERVICE LATERALS PRIOR TO CONSTRUCTION. ANY CONFLICTS WITH LOCATIONS OF LIGHT POLES, TREES, ETC. SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO CONSTRUCTION.
4. DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5' SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5' WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
5. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH PROPOSED CONDUIT AND SIGNAL EQUIPMENT. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER.
6. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
7. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SEWER STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK.
8. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
9. EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS IF REQUIRED.
10. PRIOR TO ONSET OF TREE REMOVAL ACTIVITIES, THE CONTRACTOR, RESIDENT ENGINEER AND MASSDOT LANDSCAPE ARCHITECT AND TOWN REPRESENTATIVE SHALL WALK SITE TO IDENTIFY TREES TO BE REMOVED/PROTECTED.
11. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
12. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
13. JOINTS BETWEEN NEW ASPHALT CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACKSANDED.
14. AFTER MILLING OPERATIONS AND PRIOR TO PAVING THE SUPERPAVE INTERMEDIATE OR SURFACES COURSES THE ENGINEER SHALL EVALUATE THE MILLED SURFACE AND SHALL APPLY THE APPROPRIATE REPAIR METHOD IF REQUIRED.
15. EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
16. IF SUITABLE, ALL EXISTING GRANITE CURB & EDGING SHALL BE RE-USED IN THE PROPOSED WORK, EXCEPT CURVED STONES OF A DIFFERENT RADIUS THAN PROPOSED CURB.
17. ALL PROPOSED HOT MIX ASPHALT CURB SHALL BE MASSDOT TYPE 3.
18. ALL EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
19. ALL PROPOSED BOUNDS SHALL BE PLACED BY A LICENSED PROFESSIONAL SURVEYOR. THE CONTRACTOR SHALL EXERCISE DUE CARE WHEN WORKING AROUND ALL PROPERTY BOUNDS WHICH ARE TO REMAIN. SHOULD ANY DAMAGE TO A BOUND RESULT FROM THE ACTIONS OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE THE BOUND REPLACED AND/OR REALIGNED BY A LICENSED PROFESSIONAL SURVEYOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.
20. DISPOSAL OF ALL SURPLUS MATERIAL SHALL BE AS APPROVED BY THE ENGINEER AND OWNER.
21. LATERAL DRAIN PIPES SHALL BE INSTALLED WITH A PITCH OF 0.01 FOOT PER FOOT (MINIMUM) UNLESS NOTED OTHERWISE ON THE PLANS.

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SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

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MA	----	3	103
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LEGEND & ABBREVIATIONS

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
C	C	CABLE MANHOLE
D	D	DRAINAGE MANHOLE
E	E	ELECTRIC MANHOLE
G	G	GAS MANHOLE
M	M	MISC MANHOLE
S	S	SEWER MANHOLE
T	T	TELEPHONE MANHOLE
W	W	WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UP	UP	UTILITY POLE
		BUSH
SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
100 99		CONTOURS (ON-THE-GROUND SURVEY DATA)
100 99		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
		WOOD FENCE
		EROSION CONTROL
		DRAINAGE SWALE
		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
AURA		100 FT SUDBURY AURA
WPA BUFFER AURA		100' WPA BUFFER ZONE/100' SUDBURY RESOURCE AREA
		200' SUDBURY RESOURCE AREA
		200' WPA RESOURCE AREA
100YR		100 YEAR FLOOD PLAIN
		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

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
1	1	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 (DIRECTIONAL ARROW AS SHOWN) 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)
RRSG	RRSG	RAILROAD SIGNAL
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
	20'	MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
	20'	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

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	STOP LINE
	CW	CROSSWALK
	SWL	SOLID WHITE LINE
	SYL	SOLID YELLOW LINE
	BWL	BROKEN WHITE LINE
	BYL	BROKEN YELLOW LINE
	DWL	DOTTED WHITE LINE
	DYL	DOTTED YELLOW LINE
	DWLEx	DOTTED WHITE LINE EXTENSION
	DYLEx	DOTTED YELLOW LINE EXTENSION
	DBWL	DOUBLE WHITE LINE
	DBYL	DOUBLE YELLOW LINE

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KEY PLAN & BORING LOCATIONS

NAD 83

EATON ROAD WEST (PUBLIC)

SUDBURY WATER DISTRICT ACCESS PATH INSET
SEE PAVEMENT MARKING AND SIGNAGE PLAN SHEET 44

BFRT PARKING SIGN INSET
SEE PAVEMENT MARKING AND SIGNAGE PLAN SHEET 41

LIMIT OF WORK
N2950699.7641
E675362.2904
STA 200+65.77
SAWCUT
MEET EXIST

PROJECT BEGIN
N2950645.9827
E675435.8517
STA 2+25
SAWCUT
MEET EXIST

SUDBURY
FRAMINGHAM

EATON ROAD WEST (PUBLIC)

200+00

1+00

201+46.63

BORING LOCATION CC-1

BORING LOCATION CC-2

BORING LOCATION CC-3

BORING LOCATION CC-4

BORING LOCATION CC-5

BORING LOCATION CC-6

BORING LOCATION CC-7

BORING LOCATION CC-8

BORING LOCATION CC-9

BORING LOCATION CC-10

BORING LOCATION CC-11

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PROFILE PLAN SHEET 21, 22
CURB & BASELINE TIE SHEET 27
GRADING SHEET 35
PAVEMENT MARKINGS & SIGNING PLAN SHEET 43
DRAINAGE AND UTILITY PLAN SHEET 61
CROSS SECTION SHEETS 92, 93

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PROFILE PLAN SHEET 22
CURB & BASELINE TIE SHEET 28
GRADING SHEET 36
PAVEMENT MARKINGS & SIGNING PLAN SHEET 44
DRAINAGE AND UTILITY PLAN SHEET 62
CROSS SECTION SHEETS 93, 94

CONSTRUCTION PLAN SHEET 16
PROFILE PLAN SHEET 22
CURB & BASELINE TIE SHEET 28
GRADING SHEET 36
PAVEMENT MARKINGS & SIGNING PLAN SHEET 44
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CROSS SECTION SHEETS 94, 95

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CROSS SECTION SHEETS 91, 92

150 0 150 300
SCALE IN FEET

100 0 100 200
SCALE IN FEET

100 0 100 200
SCALE IN FEET

CONTINUED BELOW

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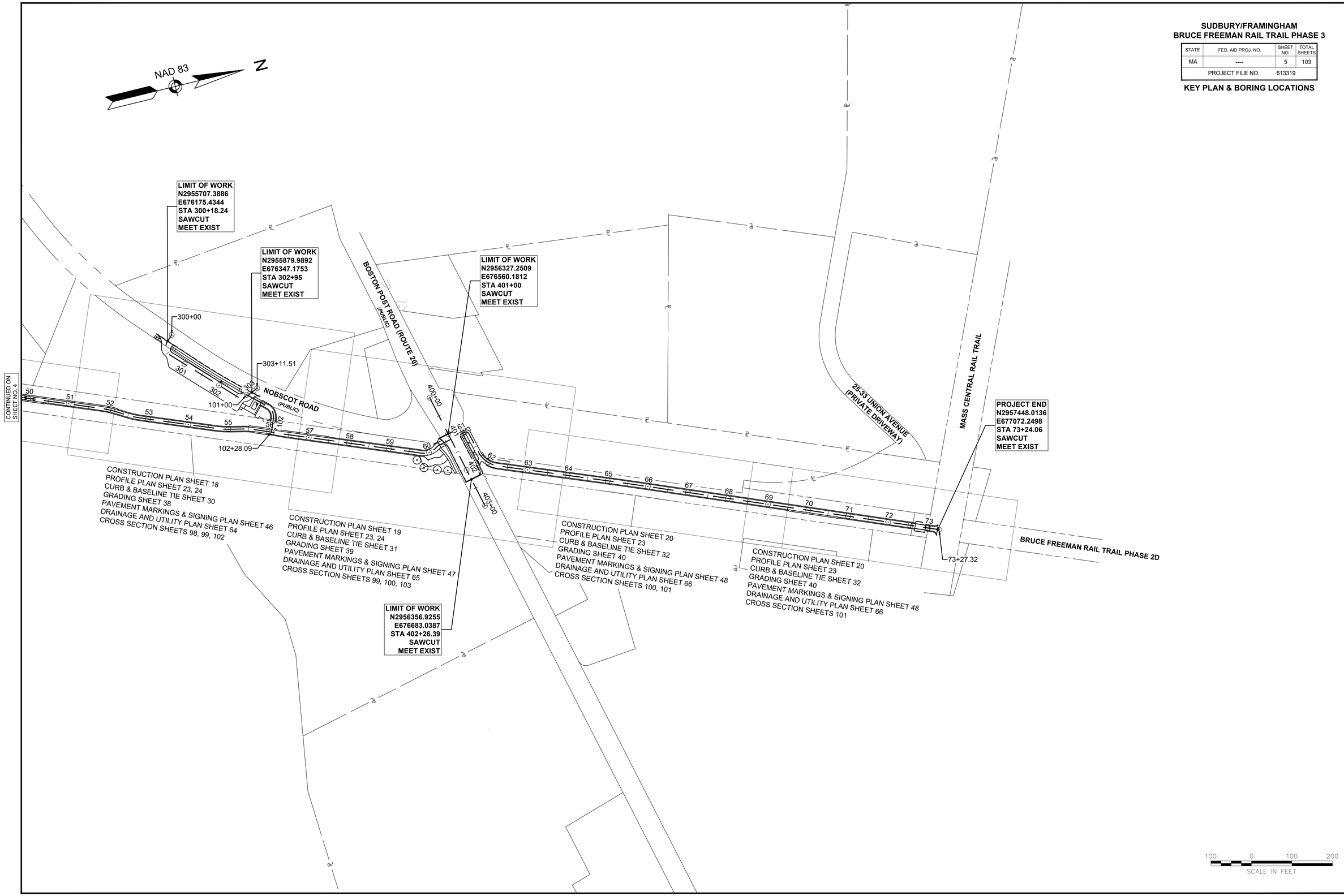
CONTINUED ON SHEET NO. 5

20200785.A30_KEY PLAN.DWG Plotted on 12-Feb-2026 5:05 PM

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KEY PLAN & BORING LOCATIONS



20200785.A30_KEY PLAN.DWG Plotted on 12-Feb-2026 5:05 PM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	103
PROJECT FILE NO.	613319		

BORING LOGS

LOG OF BORING CC-1 (Cattle Crossing CX3-1)

PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	22.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	144.5	FOREMAN	Mike K.	CASING	
START DATE	3/18/2024	DISTURBED SAMPLES	7	HELPER	Jeremiah H.	CASE DIAMETER	N/A
FINISH DATE	3/18/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	North of Cattle Crossing CX3-1	FIRST (ft)	15.0	SAMPLER	2" O.D. Split Spoon	ROCK CORING INFORMATION	
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES: PENETR. RESIST. (bl / 6 in)	SAMPLES: REC. (in)	SAMPLES: TYPE/ NO.	SAMPLES: FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	5/4/5/7	15/24	S-1 (0'-2')	--	Top 7" : Loose, dark brown, fine to medium SAND, some coarse gravel, some silt, little fine gravel, little coarse sand, dry Bottom 8" : Loose, light brown, fine to medium SAND, some fine gravel, little coarse sand, little silt, dry	FINE TO MEDIUM SAND (FILL)	1.
	7/8/7/7	11/24	S-2 (2'-4')	--	Top 3" : Medium dense, light brown, fine to medium SAND, little fine gravel, little coarse sand, little silt, dry Bottom 8" : Medium dense, very light brown, fine to medium SAND, little coarse sand, trace (+) fine gravel, trace (+) silt, dry		
5'	5/6/6/6	17/24	S-3 (5'-7')	--	Medium dense, very light brown, fine to medium SAND, trace (+) coarse sand, trace (+) silt, trace (-) fine gravel, damp (1" layers of fine sand and silt every 4")		
	4/3/3/2	10/24	S-4 (7'-9')	--	Top 7" : Loose, brown, fine to medium SAND, little coarse sand, trace (+) silt, trace (-) fine gravel, trace (-) organics (roots), damp Bottom 3" : Loose, very dark brown, fine SAND, some silt, trace (-) organics (roots), moist (bottom 1" brown)		
10'	12/13/13/11	6/24	S-5 (10'-12')	--	Top 2" : Medium dense, brown, fine SAND, some silt, moist Bottom 4" : Medium dense, brown, fine to medium SAND, some gravel, trace (+) silt, trace (-) coarse sand, damp (light gray to light brown silt and clay in tip)	12.0 132.5 VARVED SILT AND CLAY	2.
15'	4/4/5/7	23/24	S-6 (15'-17')	TV = 0.22 PP = 0.75	Stiff, light gray to light brown, varved SILT and CLAY, little fine sand, wet (varves 1/8" thick)	129.5	3. 4.
20'	3/5/3/2	20/24	S-7 (20'-22')	TV = 0.35 PP = 1.20	Stiff, gray, clayey SILT, wet	20.0 124.5 CLAYEY SILT 22.0 122.5	
					End of exploration at 22'		
25'							

Remarks:
1. Auger grinding between 0 and 2 feet below ground surface.
2. Encountered stiff soils beginning at 12.5 feet below ground surface, so slow drilling between 12.5 and 20 feet.
3. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ^{2}.
4. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ^{2}.

PROJECT NO. 2950-33-01

LOG OF BORING CC-1 (Cattle Crossing CX3-1)

LOG OF BORING CC-2 (Culvert Crossing C3-1)

PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	27.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	131.0	FOREMAN	Mike K.	CASING	
START DATE	3/18/2024	DISTURBED SAMPLES	8	HELPER	Jeremiah H.	CASE DIAMETER	N/A
FINISH DATE	3/18/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	South of Culvert Crossing C3-1	FIRST (ft)	8.0	SAMPLER	2" O.D. Split Spoon	ROCK CORING INFORMATION	
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES: PENETR. RESIST. (bl / 6 in)	SAMPLES: REC. (in)	SAMPLES: TYPE/ NO.	SAMPLES: FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	5/7/9/10	9/24	S-1 (0'-2')	--	Top 2" : Medium dense, dark brown, fine to medium SAND, some gravel, trace (+) coarse sand, trace (+) silt, trace (-) organics (roots), dry Next 5" : Medium dense, very dark brown, fine to medium SAND, little silt, little fine gravel, trace (+) coarse sand, trace (-) organics (roots), dry Bottom 2" : Medium dense, brown, fine to medium SAND, little coarse sand, trace (+) fine gravel, trace (+) silt, dry	FINE TO MEDIUM SAND (FILL)	1.
	11/9/6/6	15/24	S-2 (2'-4')	--	Top 3" : Medium dense, brown to very dark gray, fine to medium SAND, little coarse sand, trace (+) gravel, trace (+) silt, dry Next 7" : Medium dense, very light brown, fine SAND, little medium sand, trace (+) coarse gravel, trace (-) silt, dry Bottom 5" : Medium dense, light brown, fine to medium SAND, little coarse sand, trace (+) fine gravel, trace (+) silt, dry		
5'	5/6/10/14	0/24	S-3 (5'-7')	--	No recovery	123.0	2. 3.
	2/2/2/2	17/24	S-4 (7'-9')	--	Top 2" : Loose, brown, fine to medium SAND, trace (+) silt, wet Bottom 15" : Loose, very dark brown, PEAT, little silt, wet	PEAT / ORGANIC SILT	
10'	1/1/1/1	13/24	S-5 (10'-12')	--	Very loose, very dark brown, PEAT, little silt, wet (bottom 1" gray with some silt)	12.0 119.0 SILT	4. approximate bottom of footing
15'	3/3/4/4	13/24	S-6 (15'-17')	--	Loose, gray, SILT, some fine sand, wet		
20'	2/4/4/5	14/24	S-7 (20'-22')	TV = 0.16 PP = 1.10	Stiff, gray, clayey SILT, wet	20.0 111.0 CLAYEY SILT	5. 6.
					End of exploration at 27'		
25'	3/5/4/4	17/24	S-8 (25'-27')	TV = 0.11 PP = 1.50	Stiff, gray, SILT and CLAY, wet	25.0 106.0 SILT AND CLAY 27.0 104.0	

Remarks:
1. Auger grinding between 0 and 2 feet below ground surface.
2. Augered down to 8 feet below ground surface before collecting sample S-4.
3. Auger grinding between 7 and 8 feet below ground surface.
4. Approximate bottom of footing based upon proposed invert depth and 4 foot embedment (frost).
5. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ^{2}.
6. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ^{2}.

PROJECT NO. 2950-33-01

LOG OF BORING CC-2 (Culvert Crossing C3-1)

LOG OF BORING CC-3 (Culvert Crossing C3-5)

PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	24.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	130.0	FOREMAN	Mike K.	CASING	
START DATE	3/19/2024	DISTURBED SAMPLES	8	HELPER	Jeremiah H. & Parker J.	CASE DIAMETER	N/A
FINISH DATE	3/19/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	North of Culvert Crossing C3-5	FIRST (ft)	10.0	SAMPLER	2" O.D. Split Spoon	ROCK CORING INFORMATION	
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES: PENETR. RESIST. (bl / 6 in)	SAMPLES: REC. (in)	SAMPLES: TYPE/ NO.	SAMPLES: FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	4/5/5/5	14/24	S-1 (0'-2')	--	Top 7" : Medium dense, very dark gray to very dark brown, fine to medium SAND, little coarse sand, little silt, trace (+) gravel, dry Next 4" : Medium dense, light brown, fine to medium SAND, some coarse sand, little fine gravel, trace (+) silt, dry Bottom 3" : Medium dense, dark brown, fine to medium SAND, little silt, little coarse sand, trace (+) fine gravel, dry	FINE TO MEDIUM SAND (FILL)	
	5/8/7/4	17/24	S-2 (2'-4')	--	Top 7" : Medium dense, dark brown, fine to medium SAND, little coarse sand, little silt, trace (+) fine gravel, dry Next 4" : Medium dense, very light brown, fine SAND, little medium sand, trace (+) coarse sand, trace (-) silt, dry		
5'					Bottom 6" : Medium dense, light brown, fine to medium SAND, little coarse sand, little fine gravel, trace (+) silt, dry (bottom 2" damp with some silt)	5.5 124.5 PEAT	
	2/3/3/2	20/24	S-3 (5'-7')	--	Top 2" : Loose, brown, fine to medium SAND, trace (+) silt, dry Bottom 18" : Loose, dark brown, PEAT, little silt, damp	7.5 122.5	
	8/9/10/14	20/24	S-4 (7'-9')	--	Top 3" : Medium dense, very dark brown, PEAT, little silt, damp Next 5" : Medium dense, dark brown, fine to medium SAND, little silt, trace (-) organics (roots), damp	120.0 FINE TO MEDIUM SAND 10.0 120.0	
10'					Bottom 12" : Medium dense, brown to gray, fine to medium SAND, trace (+) silt, moist	FINE SAND	
	5/7/8/8	9/24	S-5 (10'-12')	--	Medium dense, dark gray, fine SAND, trace (+) medium sand, trace (-) silt, wet		1. approximate bottom of footing
15'	3/3/5/4	9/24	S-6 (15'-17')	TV = 0.25 PP = 1.00	Stiff, gray, clayey SILT, wet	15.0 115.0 CLAYEY SILT	2. 3.
20'	3/5/4/4	0/24	S-7 (20'-22')	--	No recovery	22.0 108.0	
	4/3/5/4	16/24	S-8 (22'-24')	--	Top 4" : Loose, gray, SILT, wet Bottom 12" : Loose, brown, coarse SAND, little medium sand, trace (-) fine gravel, trace (-) silt, wet	COARSE SAND 24.0 106.0	
					End of exploration at 24'		
25'							

Remarks:
1. Approximate bottom of footing based upon proposed invert depth and 4 foot embedment (frost).
2. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ^{2}.
3. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ^{2}.

PROJECT NO. 2950-33-01

LOG OF BORING CC-3 (Culvert Crossing C3-5)

20200785.A30_BORING LOGS.DWG Plotted on 12-Feb-2026 5:05 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#	7	103
PROJECT FILE NO.	613319		

BORING LOGS

20200785.A30_BORING LOGS.DWG Plotted on 12-Feb-2026 5:05 PM

LOG OF BORING CC-4 (Culvert Crossing C3-5)

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PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	22.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	130.0	FOREMAN	Mike K.	CASING	
START DATE	3/19/2024	DISTURBED SAMPLES	7	HELPER	Jeremiah H. & Parker J.	CASE DIAMETER	N/A
FINISH DATE	3/19/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	South of Culvert Crossing C3-5	FIRST (ft)	10.0	SAMPLER	2" O.D. Split Spoon	ROCK CORING INFORMATION	
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES PENETR. RESIST. (bl / 6 in)	SAMPLES REC. (in)	SAMPLES TYPE/ NO.	SAMPLES FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	5/11/6/4	9/24	S-1 (0'-2')	--	Top 1" : ORGANICS (leaves), dry Next 5" : Medium dense, very dark brown, fine to medium SAND, little coarse sand, trace (+) silt, trace (-) fine gravel, dry Bottom 3" : Medium dense, dark brown, fine to medium SAND, little coarse sand, little silt, trace (+) fine gravel, damp	ORGANICS FINE TO MEDIUM SAND (FILL)	
5'	5/5/6/7	13/24	S-2 (2'-4')	--	Top 2" : Medium dense, dark brown, fine to medium SAND, trace (+) coarse sand, trace (+) silt, damp Next 9" : Medium dense, light brown, fine to medium SAND, trace (-) silt, dry Bottom 2" : Medium dense, brown to gray, fine SAND, some silt, damp	5.0 125.0 SILT	
	2/2/2/2	16/24	S-3 (5'-7')	--	Top 9" : Loose, dark gray and dark brown, SILT, some fine sand, damp Bottom 7" : Loose, very dark brown, PEAT, little silt, moist	6.0 124.0 PEAT	
	5/6/6/10	18/24	S-4 (7'-9')	--	Top 6" : Medium dense, very dark brown, PEAT, little silt, trace (-) organics (fibrous roots), moist Next 7" : Medium dense, dark brown to brown, fine to medium SAND, trace (+) silt, trace (+) organics (roots), moist Bottom 5" : Medium dense, gray, SILT, some fine sand, damp	7.5 122.5 FINE TO MEDIUM SAND	
10'	5/5/4/5	13/24	S-5 (10'-12')	--	Loose, gray, fine to medium SAND, trace (-) silt, wet (bottom 1" some silt)	120.0 FINE TO MEDIUM SAND	1. approximate bottom of footing
15'	5/6/8/7	12/24	S-6 (15'-17')	TV = 0.35 PP = 1.50	Stiff, gray, clayey SILT, wet	15.0 115.0 CLAYEY SILT	2. 3.
20'	5/6/8/9	3/24	S-7 (20'-22')	--	Medium dense, gray, SILT and fine SAND, wet	20.0 110.0 SANDY SILT	
					End of exploration at 22'	22.0 108.0	
25'							

Remarks:
1. Approximate bottom of footing based upon proposed invert depth and 4 foot embedment (frost).
2. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ^{2}.
3. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ^{2}.

PROJECT NO. 2950-33-01

LOG OF BORING CC-4 (Culvert Crossing C3-5)

LOG OF BORING CC-5 (Culvert Crossing C3-4)

Page 1 of 1

PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	27.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	126.0	FOREMAN	Mike K.	CASING	
START DATE	3/19/2024	DISTURBED SAMPLES	8	HELPER	Jeremiah H. & Parker J.	CASE DIAMETER	N/A
FINISH DATE	3/19/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	North of Culvert Crossing C3-4	FIRST (ft)	4.0	SAMPLER	2" O.D. Split Spoon	ROCK CORING INFORMATION	
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES PENETR. RESIST. (bl / 6 in)	SAMPLES REC. (in)	SAMPLES TYPE/ NO.	SAMPLES FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	4/5/5/4	13/24	S-1 (0'-2')	--	Top 4" : Medium dense, very dark gray, fine to medium SAND, little coarse sand, little silt, damp Next 5" : Medium dense, brown, fine to medium SAND, some fine gravel, little coarse sand, trace (+) silt, damp Bottom 4" : Medium dense, dark brown, fine to medium SAND, little silt, little coarse gravel, trace (+) fine sand, moist	FINE TO MEDIUM SAND (FILL)	
5'	5/6/5/12	13/24	S-2 (2'-4')	--	Top 9" : Medium dense, brown, medium SAND, little fine gravel, trace (+) coarse sand, trace (+) silt, damp Next 3" : Medium dense, very dark brown, SILT, some fine sand, moist Bottom 1" : Medium dense, light brown, medium SAND, little coarse sand, trace (+) fine gravel, trace (-) silt, wet	122.0	1.
	2/1/1 for 12"	10/24	S-3 (5'-7')	--	Top 7" : Very loose, gray, medium SAND, trace (+) coarse sand, trace (+) silt, trace (-) fine gravel, wet Bottom 3" : Very loose, very dark brown, PEAT, little silt, wet	6.0 120.0 PEAT	
	2/1/2/4	14/24	S-4 (7'-9')	--	Very loose, very dark brown, PEAT, little silt, wet		2. approximate bottom of footing
10'	2/4/5/5	12/24	S-5 (10'-12')	TV = 0.21 PP = 0.75	Stiff, gray, SILT and CLAY, trace (+) fine sand, wet	10.0 116.0 SILT AND CLAY	3. 4.
15'	2/3/3/2	17/24	S-6 (15'-17')	TV = 0.15 PP = 0.50	Medium, gray, SILT and CLAY, wet		
20'	3/4/3/3	18/24	S-7 (20'-22')	TV = 0.06 PP = 0.50	Medium, gray, clayey SILT, wet	20.0 106.0 CLAYEY SILT	
					End of exploration at 27'	27.0 99.0	
25'	3/3/3/4	15/24	S-8 (25'-27')	TV = 0.06 PP = 0.40	Medium, gray, clayey SILT, wet		

Remarks:
1. Auger grinding between 2 and 4 feet below ground surface.
2. Approximate bottom of footing based upon proposed invert depth and 4 foot embedment (frost).
3. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ^{2}.
4. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ^{2}.

PROJECT NO. 2950-33-01

LOG OF BORING CC-5 (Culvert Crossing C3-4)

LOG OF BORING CC-6 (Culvert Crossing C3-4)

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PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	22.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	126.0	FOREMAN	Mike K.	CASING	
START DATE	3/19/2024	DISTURBED SAMPLES	5	HELPER	Jeremiah H. & Parker J.	CASE DIAMETER	N/A
FINISH DATE	3/19/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	South of Culvert Crossing C3-4	FIRST (ft)	4.0	SAMPLER	2" O.D. Split Spoon	ROCK CORING INFORMATION	
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES PENETR. RESIST. (bl / 6 in)	SAMPLES REC. (in)	SAMPLES TYPE/ NO.	SAMPLES FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	7/7/7/8	0/24	S-1 (0'-2')	--	No recovery (From currings: brown, fine to medium SAND, little coarse sand, little silt, trace (+) gravel, damp)	FINE TO MEDIUM SAND (FILL) 2.0 124.0	1.
	7/11/7/9	0/24	S-2 (2'-4')	--	No recovery (From cuttings: brown, medium SAND, little fine sand, little coarse sand, trace (+) gravel, trace (+) silt, moist)	MEDIUM SAND (FILL) 122.0	
5'						5.0 121.0 PEAT	
	3/1/1/1	13/24	S-3 (5'-7')	--	Top 3" : Very loose, brown to gray, medium SAND, little coarse sand, little fine sand, trace (+) silt, trace (-) fine gravel, wet Bottom 10" : Very loose, very dark brown, PEAT, little silt, wet		
	2/1/1/1	11/24	S-4 (7'-9')	--	Very loose, very dark brown, PEAT, little silt, wet (bottom 3" dark brown)		2. approximate bottom of footing
10'	5/6/7/7	0/24	S-5 (10'-12')	--	No recovery	10.0 116.0 SILT AND CLAY	
15'	--	--	--	--	(No sample collected due to blow in during drilling) Likely SILT and CLAY		3.
20'	--	--	--	--	(No sample collected due to blow in during drilling) Likely SILT and CLAY	22.0 104.0	4.
					End of exploration at 22'		
25'							

Remarks:
1. Auger grinding between 0 and 3 feet below ground surface, upon cobbles and gravel.
2. Approximate bottom of footing based upon proposed invert depth and 4 foot embedment (frost).
3. Observed 3 feet of blow in before collecting sample between 15 to 17 feet below ground surface. Unable to collect representative soil sample. Soils likely consist of silt and clay, consistent with nearby boring CC-5.
4. Observed 4 feet of blow in before collecting sample between 20 to 22 feet below ground surface. Unable to collect representative soil sample. Soils likely consist of silt and clay, consistent with nearby boring CC-5.

PROJECT NO. 2950-33-01

LOG OF BORING CC-6 (Culvert Crossing C3-4)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#	8	103
PROJECT FILE NO.	613319		

BORING LOGS

20200785.A30_BORING LOGS.DWG Plotted on 12-Feb-2026 5:05 PM

LOG OF BORING CC-7 (Culvert Crossing C3-3)

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PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	22.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	128.5	FOREMAN	Mike K.	CASING	
START DATE	3/19/2024	DISTURBED SAMPLES	7	HELPER	Jeremiah H. & Parker J.	CASE DIAMETER	N/A
FINISH DATE	3/19/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	South of Culvert Crossing C3-3	FIRST (ft)	10.0	SAMPLER	2" O.D. Split Spoon	ROCK CORING	INFORMATION
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.	FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	5/11/10/6	15/24	S-1 (0'-2')	--	Top 9" : Medium dense, very dark brown, fine to medium SAND, little coarse sand, some silt, little gravel, dry Next 3" : Medium dense, very light brown, fine to medium SAND, some gravel, little coarse sand, little silt, dry Bottom 3" : Medium dense, brown, medium SAND, little coarse sand, little silt, trace (+) fine sand, trace (-) fine gravel, dry	FINE TO MEDIUM SAND (FILL)	
	8/6/6/6	11/24	S-2 (2'-4')	--	Top 8" : Medium dense, brown, fine to medium SAND, little gravel, trace (+) coarse sand, trace (+) silt, dry Next 2" : Medium dense, brown, fine to medium SAND, some silt, trace (-) coarse sand, damp Bottom 1" : Medium dense, very dark brown, SILT, some fine sand, trace (-) organics (roots), damp	4.0 124.5 SANDY SILT (FILL)	1.
5'	2/2/2/2	14/24	S-3 (5'-7')	--	Top 4" : Loose, brown to dark brown, fine to medium SAND and SILT, trace (-) coarse sand, moist Next 9" : Loose, very dark brown, SILT, trace (+) fine sand, trace (-) organics (roots), moist (top 1" gray) Bottom 1" : Loose, gray to brown, SILT, little fine sand, moist	7.0 121.5 SILT	
	11/10/10/10	11/24	S-4 (7'-9')	--	Medium dense, very light brown, SILT, some fine sand, trace (+) medium sand, damp	118.5	2. approximate bottom of footing
10'	6/5/5/6	13/24	S-5 (10'-12')	TV = 0.24 PP = 1.20	Top 7" : Medium dense, orange and light gray, SILT, little fine sand, wet Bottom 6" : Stiff, light gray to brown, clayey SILT, trace (+) fine sand, wet	11.0 117.5 CLAYEY SILT	3. 4.
15'	3/5/5/5	15/24	S-6 (15'-17')	TV = 0.24 PP = 1.00	Stiff, gray, SILT and CLAY, wet	15.0 113.5 SILT AND CLAY	
20'	4/6/6/6	17/24	S-7 (20'-22')	TV = 0.25 PP = 1.00	Stiff, gray, SILT and CLAY, wet	22.0 106.5	
25'					End of exploration at 22'		

Remarks:
1. Auger grinding between 3 and 5 feet below ground surface.
2. Approximate bottom of footing based upon proposed invert depth and 4 foot embedment (frost).
3. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ^{2}.
4. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ^{2}.

PROJECT NO.
2950-33-01

LOG OF BORING
CC-7 (Culvert Crossing C3-3)

LOG OF BORING CC-8 (Culvert Crossing C3-3)

Page 1 of 1

PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	22.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	128.5	FOREMAN	Mike K.	CASING	
START DATE	3/20/2024	DISTURBED SAMPLES	7	HELPER	Jeremiah H. & Parker J.	CASE DIAMETER	N/A
FINISH DATE	3/20/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	North of Culvert Crossing C3-3	FIRST (ft)	10.0	SAMPLER	2" O.D. Split Spoon	ROCK CORING	INFORMATION
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.	FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	5/6/8/7	12/24	S-1 (0'-2')	--	Top 6" : Medium dense, very dark brown, fine to medium SAND, some gravel, little coarse sand, little silt, dry Bottom 6" : Medium dense, light brown, fine to medium SAND, little gravel, trace (+) coarse sand, trace (-) silt, dry	FINE TO MEDIUM SAND (FILL)	
	7/7/6/7	0/24	S-2 (2'-4')	--	No recovery (From cuttings: brown, fine to medium SAND, little silt, trace (+) gravel, trace (+) coarse sand, dry)		
5'	2/1/9/10	3/24	S-3 (5'-7')	--	Medium dense, very light brown to gray, SILT, little fine sand, dry (top 1" coarse gravel piece)	6.0 122.5 SILT	
	9/10/10/10	12/24	S-4 (7'-9')	--	Medium dense, gray to very light brown, SILT, trace (+) fine sand, dry		
10'	3/3/3/3	18/24	S-5 (10'-12')	TV = 0.26 PP = 1.10 TV = 0.22 PP = 0.70	Top 11" : Medium, light brown to gray, clayey SILT, wet Bottom 7" : Medium, gray, SILT and CLAY, wet	118.5 SILT AND CLAY	1. approximate bottom of footing 2. 3.
15'	3/4/4/4	16/24	S-6 (15'-17')	TV = 0.25 PP = 0.75	Stiff, gray, SILT and CLAY, wet		
20'	3/5/7/5	16/24	S-7 (20'-22')	TV = 0.20 PP = 1.50	Stiff, gray, SILT and CLAY, trace (+) fine sand, wet	22.0 106.5	
25'					End of exploration at 22'		

Remarks:
1. Approximate bottom of footing based upon proposed invert depth and 4 foot embedment (frost).
2. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ^{2}.
3. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ^{2}.

PROJECT NO.
2950-33-01

LOG OF BORING
CC-8 (Culvert Crossing C3-3)

LOG OF BORING CC-9 (Culvert Crossing C3-2)

Page 1 of 1

PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	22.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	129.0	FOREMAN	Mike K.	CASING	
START DATE	3/20/2024	DISTURBED SAMPLES	7	HELPER	Jeremiah H. & Parker J.	CASE DIAMETER	N/A
FINISH DATE	3/20/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	North of Culvert Crossing C3-2	FIRST (ft)	15.5	SAMPLER	2" O.D. Split Spoon	ROCK CORING	INFORMATION
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.	FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV	REMARKS/ WELL CONSTRUCTION
	3/4/5/5	12/24	S-1 (0'-2')	--	Top 8" : Loose, very dark gray, fine to medium SAND, some gravel, little silt, little coarse sand, trace (-) organics (roots top 1"), dry Bottom 4" : Loose, brown, fine to medium SAND, little coarse sand, trace (+) fine gravel, trace (+) silt, dry	GRAVELLY SAND (FILL)	1.
	7/5/8/6	6/24	S-2 (2'-4')	--	Top 4" : Medium dense, very dark brown, fine to medium SAND, some gravel, little coarse sand, little silt, dry Bottom 2" : Medium dense, light brown, medium SAND, some coarse sand, trace (-) fine gravel, trace (-) silt, dry	3.0 126.0 MEDIUM SAND (FILL)	2.
5'	8/6/4/2	8/24	S-3 (5'-7')	--	Top 4" : Medium dense, light brown, medium SAND, little coarse sand, trace (+) fine gravel, trace (+) silt, trace (-) fine sand, damp Next 3" : Medium dense, gray, SILT, some fine sand, damp Bottom 1" : Medium dense, dark brown, ORGANICS (wood) and fine to medium SAND, some silt, damp	6.0 123.0 ORGANICS 7.0 122.0 SANDY OR CLAYEY SILT	
	10/8/9/7	20/24	S-4 (7'-9')	--	Top 4" : Medium dense, dark brown, SILT and fine SAND, trace (+) organics (roots), trace (-) gravel, moist Bottom 16" : Medium dense, gray, SILT, little fine sand, trace (-) organics (roots top 4"), damp (bottom 3" moist with trace clay)		
10'	4/6/8/7	19/24	S-5 (10'-12')	-- TV = 0.03 PP = 0.80 TV = 0.03 PP = 0.50	Top 4" : Medium dense, gray, SILT and fine SAND, moist Next 12" : Stiff, light gray and brown, clayey SILT and fine SAND, trace (+) medium sand, damp (bottom 3" orange) Bottom 3" : Stiff, gray, clayey SILT, some fine sand, moist	113.5 VARVED SILT AND CLAY	3. 4. 5. approximate bottom of footing
15'	3/4/5/5	18/24	S-6 (15'-17')	-- TV = 0.11 PP = 0.70	Top 3" : Loose, orange and gray, SILT and fine SAND, moist Bottom 15" : Medium, gray, SILT and CLAY, wet		
20'	3/4/5/4	18/24	S-7 (20'-22')	TV = 0.11 PP = 1.40	Stiff, gray, varved SILT and CLAY, wet (varves 1/8" thick)	22.0 107.0	
25'					End of exploration at 22'		

Remarks:
1. Auger grinding between 0 and 2 feet below ground surface.
2. Auger grinding between 3 and 5 feet below ground surface.
3. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ^{2}.
4. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ^{2}.
5. Approximate bottom of footing based upon proposed invert depth and 4 foot embedment (frost).

PROJECT NO.
2950-33-01

LOG OF BORING
CC-9 (Culvert Crossing C3-2)

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#	9	103
PROJECT FILE NO.	613319		

BORING LOGS

20200785.A30_BORING LOGS.DWG Plotted on 12-Feb-2026 5:05 PM

LOG OF BORING CC-10 (Culvert Crossing C3-2)

Page 1 of 1

PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	22.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	129.0	FOREMAN	Mike K.	CASING	
START DATE	3/20/2024	DISTURBED SAMPLES	7	HELPER	Jeremiah H. & Parker J.	CASE DIAMETER	N/A
FINISH DATE	3/20/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	South of Culvert Crossing C3-2	FIRST (ft)	15.0	SAMPLER	2" O.D. Split Spoon	ROCK CORING INFORMATION	
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES: PENETR. RESIST. (bl / 6 in)	SAMPLES: REC. (in)	SAMPLES: TYPE/ NO.	SAMPLES: FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	4/4/8/3	11/24	S-1 (0'-2')	--	Top 7" : Medium dense, very dark brown, GRAVEL and fine to medium SAND, little coarse sand, little silt, damp Bottom 4" : Medium dense, brown, fine to medium SAND, little coarse sand, trace (+) silt, trace (-) fine gravel, damp	GRAVELLY SAND (FILL)	1.
	11/10/9/7	1/24	S-2 (2'-4')	--	Medium dense, brown, fine to medium SAND, some gravel, trace (-) silt, dry (gravel in tip)	4.0 125.0	
5'						FINE TO MEDIUM SAND (FILL)	
	10/2/2/2	8/24	S-3 (5'-7')	--	Top 3" : Loose, brown, fine to medium SAND, some silt, damp (top 1" gravel) Next 4" : Loose, brown, medium SAND, little coarse sand, trace (-) silt, moist Bottom 1" : Loose, very dark brown, PEAT, little fine to medium sand, little silt, moist	6.0 123.0 PEAT	
	8/9/9/7	11/24	S-4 (7'-9')	--	Top 1" : Medium dense, very dark brown, PEAT, little silt, moist Bottom 10" : Medium dense, gray, SILT, little fine sand, damp	7.5 121.5 SANDY OR CLAYEY SILT	
10'							
	15/8/9/7	11/24	S-5 (10'-12')	TV = 0.04 PP = 0.60	Top 2" : Very stiff, light gray, clayey SILT, little fine sand, damp Bottom 9" : Medium dense, light gray to brown, SILT and fine SAND, moist (bottom 4" orange)		2. 3. 4. approximate bottom of footing
						114.0	
15'	4/5/5/6	0/24	S-6 (15'-17')	--	No recovery	VARVED SILT AND CLAY	
20'	3/4/4/4	15/24	S-7 (20'-22')	TV = 0.14 PP = 1.00	Stiff, varved SILT and CLAY, wet (varves 1/8" thick)	22.0 107.0	
					End of exploration at 22'		
25'							

Remarks:
1. Auger grinding between 0 and 4 feet below ground surface, upon gravel (gravel in cuttings).
2. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ^{2}.
3. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ^{2}.
4. Approximate bottom of footing based upon proposed invert depth and 4 foot embedment (frost).

PROJECT NO. 2950-33-01

LOG OF BORING CC-10 (Culvert Crossing C3-2)

LOG OF BORING CC-11 (Culvert Crossing C3-1)

Page 1 of 1

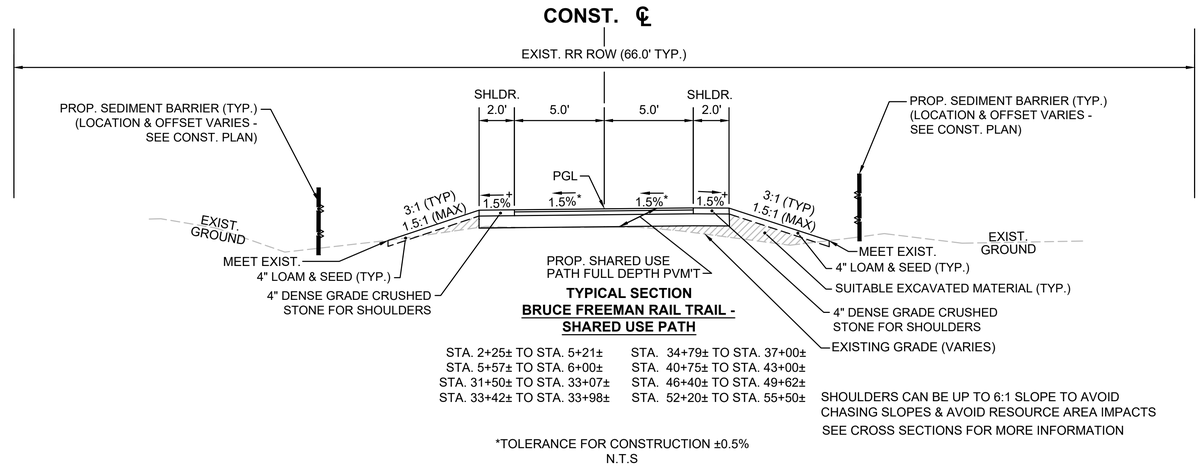
PROJECT	Bruce Freeman Rail Trail Culvert Crossings Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-33-01	FINAL DEPTH (ft)	27.0	DRILLING EQUIPMENT	D-50 Track Mounted Rig		
LOCATION	Sudbury, MA	SURFACE ELEV (ft)	131.0	FOREMAN	Mike K.	CASING	
START DATE	3/20/2024	DISTURBED SAMPLES	8	HELPER	Jeremiah H. & Parker J.	CASE DIAMETER	N/A
FINISH DATE	3/20/2024	UNDISTURBED SAMPLES	0	BIT TYPE	Hollow Stem Auger	HAMMER WGT	N/A
ENGINEER/SCIENTIST	Kaitlyn Sistare	WATER LEVEL		ROD TYPE	A (1 5/8" O.D.)	HAMMER DROP	N/A
BORING LOCATION	North of Culvert Crossing C3-1	FIRST (ft)	8.5	SAMPLER	2" O.D. Split Spoon	ROCK CORING INFORMATION	
		LAST (ft)	N/A	HAMMER TYPE	Automatic	TYPE	N/A
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"	SIZE	N/A

DEPTH (ft)/ SAMPLES	SAMPLES: PENETR. RESIST. (bl / 6 in)	SAMPLES: REC. (in)	SAMPLES: TYPE/ NO.	SAMPLES: FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	4/6/5/7	14/24	S-1 (0'-2')	--	Top 9" : Medium dense, very dark gray, fine to medium SAND, some gravel, little coarse sand, little silt, trace (-) organics (roots top 3"), dry Bottom 5" : Medium dense, brown, fine to medium SAND, some coarse sand, little gravel, trace (+) silt, dry (bottom 2" very dark gray)	FINE TO MEDIUM SAND (FILL)	1.
	6/6/7/8	14/24	S-2 (2'-4')	--	Top 2" : Medium dense, very dark gray, fine to medium SAND, little silt, little fine gravel, trace (+) coarse sand, dry Next 4" : Medium dense, light brown, fine SAND, trace (+) medium sand, trace (-) silt, dry Bottom 8" : Medium dense, light brown, fine to medium SAND, little coarse sand, trace (+) fine gravel, trace (+) silt, dry		
5'							
	6/8/9/10	14/24	S-3 (5'-7')	--	Top 5" : Medium dense, light brown, fine to medium SAND, some silt, trace (+) fine gravel, trace (-) coarse sand, damp Bottom 9" : Medium dense, light brown, medium SAND, little fine gravel, trace (+) coarse sand, trace (-) fine sand, trace (-) silt, dry	6.0 125.0 MEDIUM SAND (FILL)	
	10/9/9/8	11/24	S-4 (7'-9')	--	Medium dense, brown, medium SAND, little coarse sand, little fine gravel, trace (-) fine sand, trace (-) silt, moist (wet bottom 5")	= 122.5	
10'						10.0 121.0 PEAT	
	1/1/2/4	4/24	S-5 (10'-12')	--	Top 3" : Very loose, very dark brown, PEAT, little silt, wet Bottom 1" : Very loose, SILT, little fine sand, wet	11.5 119.5 SILT	2. approximate bottom of footing
15'						15.0 116.0	
	2/3/3/3	11/24	S-6 (15'-17')	TV = 0.16 PP = 0.60	Medium, gray, clayey SILT, little fine sand, wet	CLAYEY SILT	3. 4.
20'						20.0 111.0	
	2/3/3/4	13/24	S-7 (20'-22')	TV = 0.26 PP = 0.70	Medium, gray, SILT and CLAY, wet	SILT AND CLAY	
25'							
	3/3/4/5	17/24	S-8 (25'-27')	TV = 0.22 PP = 1.20	Medium, gray, SILT and CLAY, wet	27.0 104.0	
					End of exploration at 27'		

Remarks:
1. Auger grinding between 0 and 4 feet below ground surface.
2. Approximate bottom of footing based upon proposed invert depth and 4 foot embedment (frost).
3. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ^{2}.
4. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ^{2}.

PROJECT NO. 2950-33-01

LOG OF BORING CC-11 (Culvert Crossing C3-1)

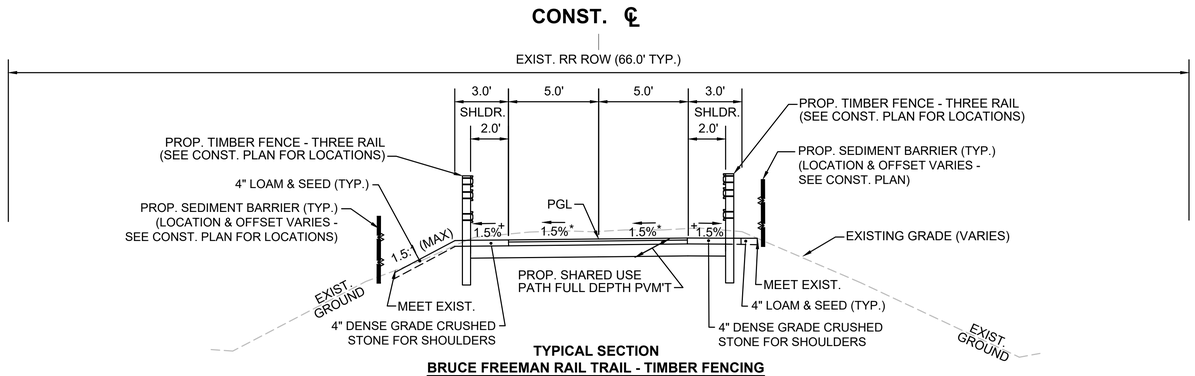


TYPICAL SECTION
BRUCE FREEMAN RAIL TRAIL - SHARED USE PATH

STA. 2+25± TO STA. 5+21±
STA. 5+57± TO STA. 6+00±
STA. 31+50± TO STA. 33+07±
STA. 33+42± TO STA. 33+98±
STA. 34+79± TO STA. 37+00±
STA. 40+75± TO STA. 43+00±
STA. 46+40± TO STA. 49+62±
STA. 52+20± TO STA. 55+50±

SHOULDERS CAN BE UP TO 6:1 SLOPE TO AVOID CHASING SLOPES & AVOID RESOURCE AREA IMPACTS
SEE CROSS SECTIONS FOR MORE INFORMATION

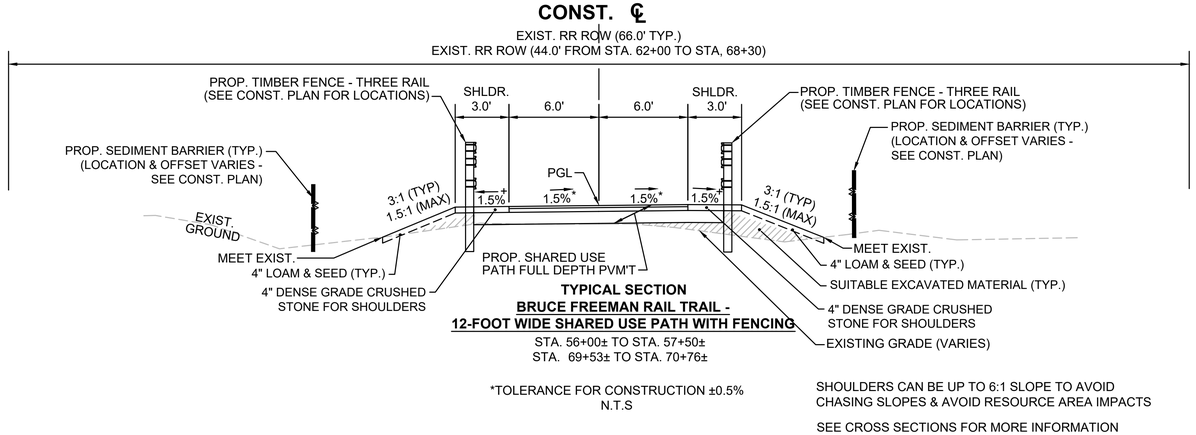
*TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S



TYPICAL SECTION
BRUCE FREEMAN RAIL TRAIL - TIMBER FENCING

STA. 6+00± TO STA. 11+35±
STA. 12+35± TO STA. 18+32±
STA. 18+68± TO STA. 31+50±
STA. 33+98± TO STA. 34+79±
STA. 37+00± TO STA. 37+62±
STA. 38+72± TO STA. 40+75±
STA. 43+00± TO STA. 43+35±
STA. 43+65± TO STA. 46+40±
STA. 49+62± TO STA. 52+20±
STA. 55+50± TO STA. 56+00±

*TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S



TYPICAL SECTION
BRUCE FREEMAN RAIL TRAIL - 12-FOOT WIDE SHARED USE PATH WITH FENCING

STA. 56+00± TO STA. 57+50±
STA. 69+53± TO STA. 70+76±

*TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S

SHOULDERS CAN BE UP TO 6:1 SLOPE TO AVOID CHASING SLOPES & AVOID RESOURCE AREA IMPACTS

SEE CROSS SECTIONS FOR MORE INFORMATION

+ SHOULDERS CAN BE UP TO 6:1 SLOPE TO AVOID CHASING SLOPES & AVOID RESOURCE AREA IMPACTS

SEE CROSS SECTIONS FOR MORE INFORMATION

SEE SHARED USE PATH SLOPING DIAGRAM FOR MORE INFORMATION REGARDING CROSS SLOPE DIRECTION

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	10	103
PROJECT FILE NO.	613319		

TYPICAL SECTIONS

PAVEMENT NOTES:

PROPOSED SHARED-USE PATH

SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5)
INTERMEDIATE: 2-1/2" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0)
SUBBASE: 4" to 8" GRAVEL BORROW, TYPE b (FOR LEVELING) OVER RESHAPED EXISTING RAILROAD BALLAST

NOTE: HMA FOR SHARED-USE PATH SHALL BE PAID FOR UNDER HMA 450 SUPERPAVE ITEMS

PROPOSED PARKING LOT FULL DEPTH PAVEMENT

SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE - POLYMER (SSC - 12.5 - P) - OVER
BASE: 2-1/2" SUPERPAVE INTERMEDIATE COURSE (SIC - 19.0) - OVER
FOUNDATION: 8" GRAVEL BORROW, TYPE b

PROPOSED CEMENT CONCRETE WALK, REST AREA & PEDESTRIAN CURB RAMP

SURFACE: 4" CEMENT CONCRETE AIR ENTRAINED 4000 PSI, 3/4", 610
SUBBASE: 8" GRAVEL BORROW, TYPE b

PROPOSES PAVEMENT MILLING & OVERLAY - BOSTON POST ROAD (ROUTE 20)

2" PAVEMENT MILLING
2" SUPERPAVE SURFACE COURSE - POLYMER (SSC - 12.5 - P)

PROPOSED HOT MIX ASPHALT SIDEWALK & DRIVEWAY

SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE (SSC - 9.5) - OVER 2-1/2" SUPERPAVE INTERMEDIATE COURSE (SIC - 12.5)
FOUNDATION: 8" GRAVEL BORROW, TYPE b

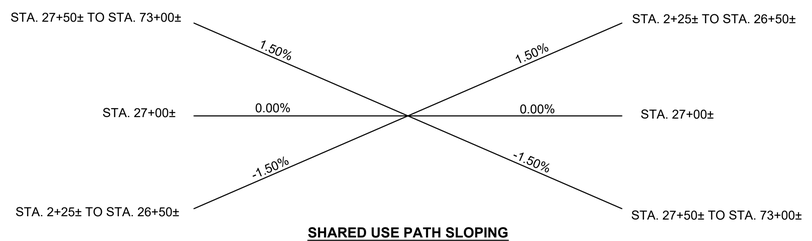
NOTES: EXIST. GRAVEL/BALLAST SUBGROUND MATERIAL DETERMINED BY THE ENGINEER TO BE SUITABLE SHALL REMAIN. THE DEPTH OF THE GRAVEL BORROW WILL BE AS REQUIRED BASED ON THE PROPOSED SUB-BASE ELEVATIONS.

AFTER REMOVAL OF STEEL RAILS AND WOOD TIMBER, ROUGH GRADE AND COMPACT SUBGROUND AREA. THEN PLACE AND COMPACT GRAVEL BORROW SUB-BASE MATERIAL IN MULTIPLE LIFTS.

ASPHALT EMULSION FOR TACK COAT AND HMA JOINT SEALANT SHALL BE APPLIED PER SECTION 450 QA OF THE SPECIAL PROVISIONS.

HMA FOR PATCHING SHALL BE USED FOR ALL PERMANENT, PARTIAL, AND FULL DEPTH PAVEMENT REPAIRS OF UNSOUND PAVEMENT PER SECTION 450 IN AREAS OUTSIDE OF PROPOSED FULL DEPTH RECLAMATION OR RECONSTRUCTION ROADWAY AREAS.

HMA FOR MISCELLANEOUS WORK SHALL BE USED FOR ALL TEMPORARY CONSTRUCTION, TAPER RAMPS, CURB CUT RAMPS, TEMPORARY TRENCH REPAIR, ETC.



SHARED USE PATH SLOPING

20200785.A30_TYPICAL SECTIONS.DWG Plotted on 12-Feb-2026 5:06 PM

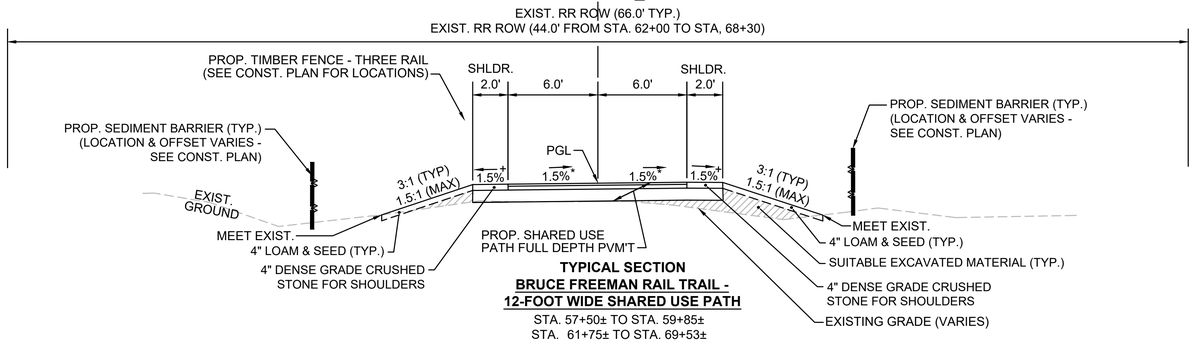
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	11	103
PROJECT FILE NO.	613319		

TYPICAL SECTIONS

20200765.A30_TYPICAL SECTIONS.DWG Plotted on 12-Feb-2026 8:36 PM

CONST. ℄



TYPICAL SECTION
BRUCE FREEMAN RAIL TRAIL - 12-FOOT WIDE SHARED USE PATH

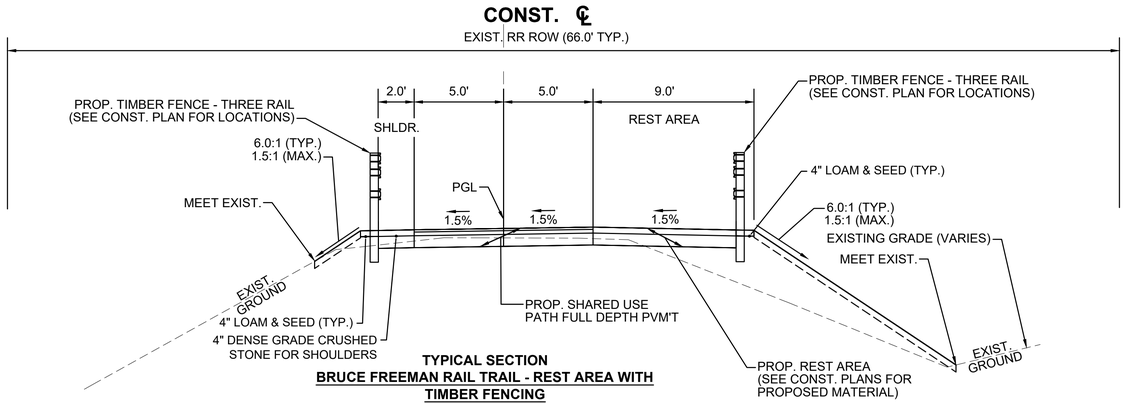
STA. 57+50± TO STA. 59+85±
STA. 61+75± TO STA. 69+53±
STA. 70+76± TO STA. 73+23±

*TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S

SHOULDERS CAN BE UP TO 6:1 SLOPE TO AVOID CHASING SLOPES & AVOID RESOURCE AREA IMPACTS

SEE CROSS SECTIONS FOR MORE INFORMATION

CONST. ℄



TYPICAL SECTION
BRUCE FREEMAN RAIL TRAIL - REST AREA WITH TIMBER FENCING

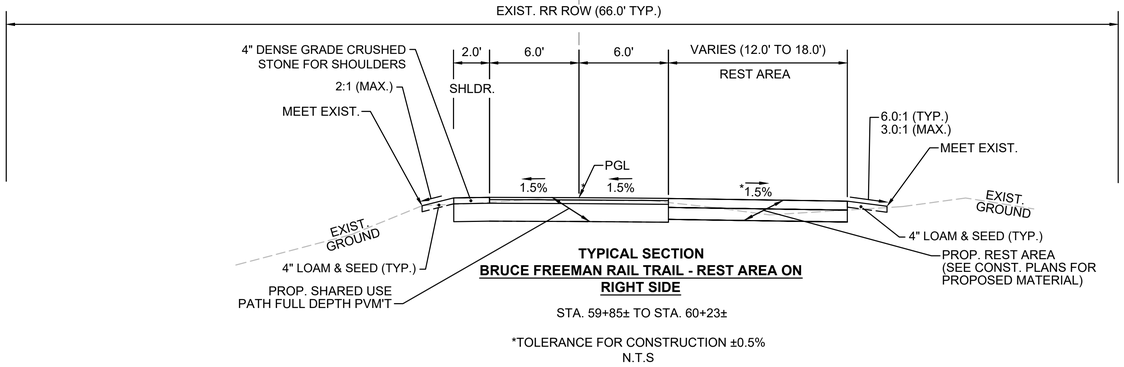
STA. 18+32± TO STA. 18+68±
STA. 43+35± TO STA. 43+65±

*TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S

+SHOULDERS CAN BE UP TO 6:1 SLOPE TO AVOID CHASING SLOPES

SEE CROSS SECTIONS FOR MORE INFORMATION

CONST. ℄



TYPICAL SECTION
BRUCE FREEMAN RAIL TRAIL - REST AREA ON RIGHT SIDE

STA. 59+85± TO STA. 60+23±

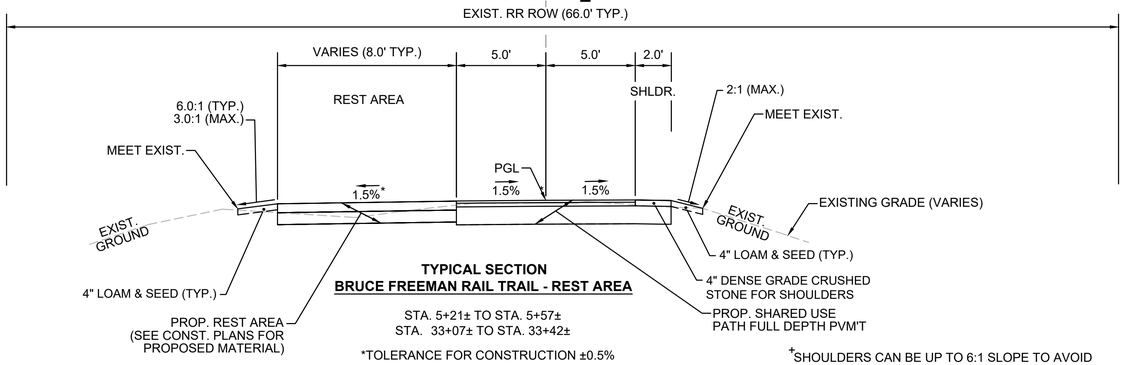
*TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S

+ SHOULDERS CAN BE UP TO 6:1 SLOPE TO AVOID CHASING SLOPES & AVOID RESOURCE AREA IMPACTS

SEE CROSS SECTIONS FOR MORE INFORMATION

SEE SHARED USE PATH SLOPING DIAGRAM FOR MORE INFORMATION REGARDING CROSS SLOPE DIRECTION

CONST. ℄



TYPICAL SECTION
BRUCE FREEMAN RAIL TRAIL - REST AREA

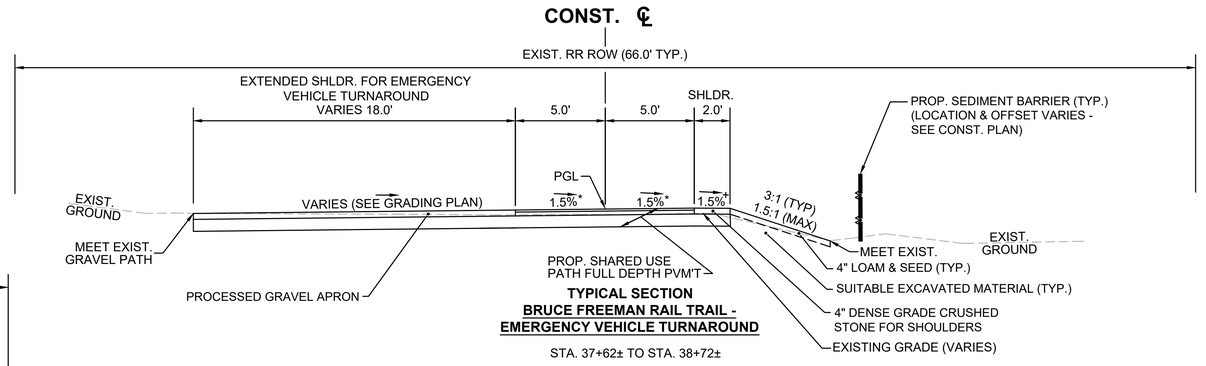
STA. 5+21± TO STA. 5+57±
STA. 33+07± TO STA. 33+42±

*TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S

+SHOULDERS CAN BE UP TO 6:1 SLOPE TO AVOID CHASING SLOPES

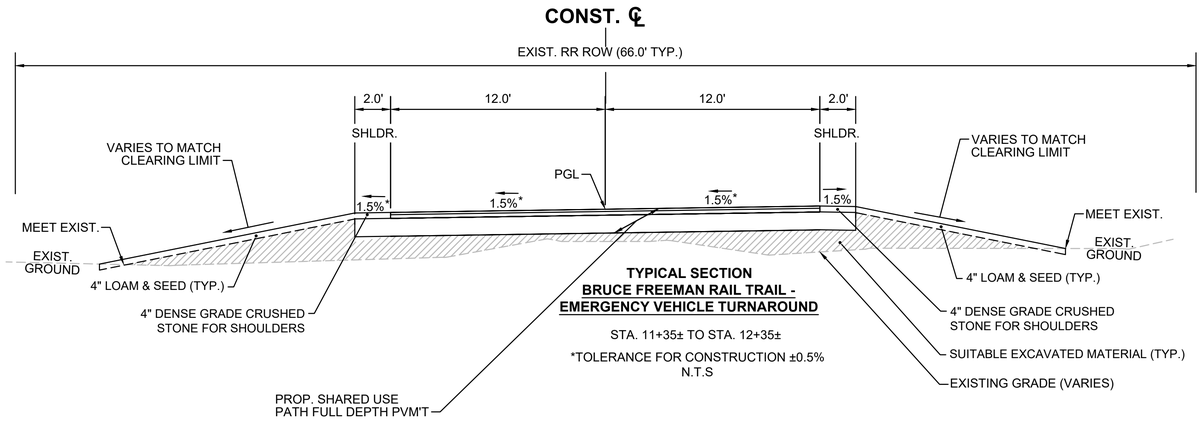
SEE CROSS SECTIONS FOR MORE INFORMATION

CONST. ℄



TYPICAL SECTION
BRUCE FREEMAN RAIL TRAIL - EMERGENCY VEHICLE TURNAROUND

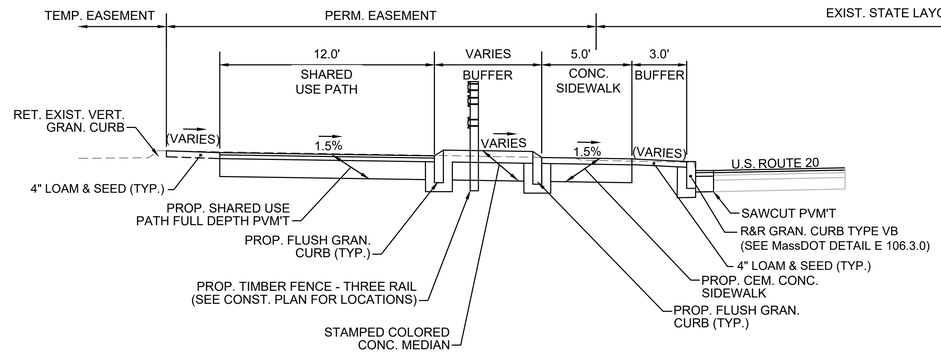
STA. 37+62± TO STA. 38+72±



TYPICAL SECTION
BRUCE FREEMAN RAIL TRAIL -
EMERGENCY VEHICLE TURNAROUND

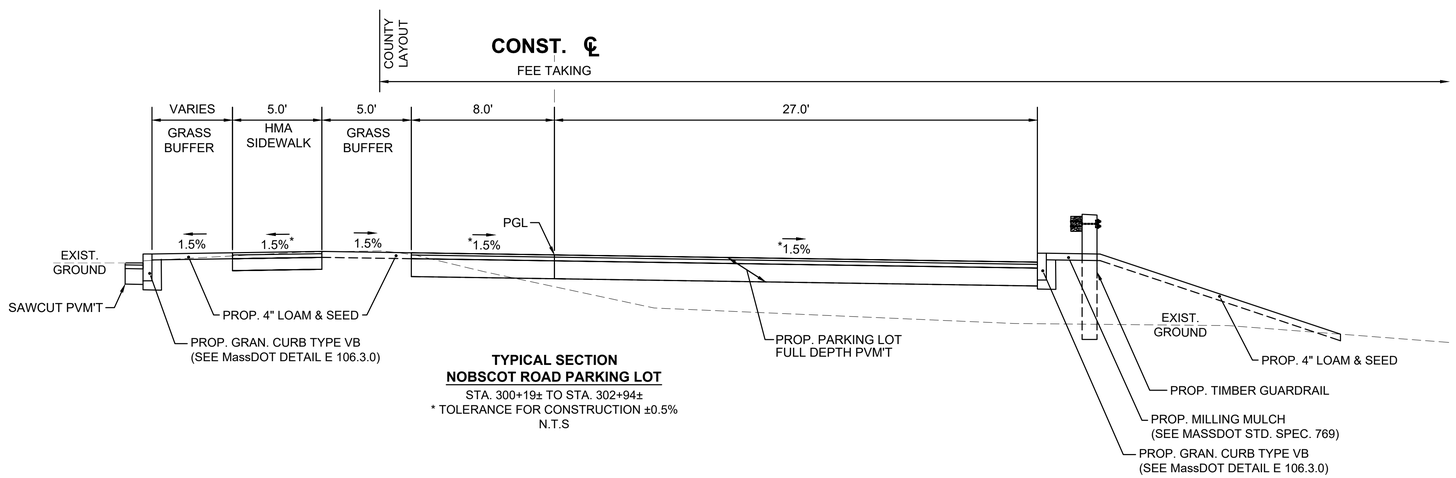
STA. 11+35± TO STA. 12+35±

*TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S



TYPICAL SECTION
SHARED USE PATH - ADJACENT TO BOSTON POST ROAD ROAD

STA. 61+00± TO STA. 61+75±
* TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S



TYPICAL SECTION
NOBSCOT ROAD PARKING LOT

STA. 300+19± TO STA. 302+94±
* TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S

+ SHOULDERS CAN BE UP TO 6:1 SLOPE TO AVOID CHASING SLOPES & AVOID RESOURCE AREA IMPACTS

SEE CROSS SECTIONS FOR MORE INFORMATION

SEE SHARED USE PATH SLOPING DIAGRAM FOR MORE INFORMATION REGARDING CROSS SLOPE DIRECTION

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	12	103
PROJECT FILE NO.	613319		

TYPICAL SECTIONS

20200785.A30_TYPICAL SECTIONS.DWG Plotted on 12-Feb-2026 8:36 PM

FENCING DETAILS

TIMBER FENCE (THREE-RAIL) STA. 6+00 TO STA. 10+32 RT
TIMBER FENCE (THREE-RAIL) STA. 6+00 TO STA. 10+32 LT

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SHEET 59

NOTES:

1. REMOVAL AND HANDLING OF EXISTING RAILS, COMPONENTS AND OTHER MATERIALS WITHIN THE PROJECT LIMIT SHALL BE PAID UNDER THE CORRESPONDING ITEMS:

   129.5* TRACK EXCAVATION
   129.7* HANDLING AND TRANSPORTATION OF RAIL COMPONENTS
   129.71* HANDLING AND TRANSPORTATION OF OTHER TRACK MATERIALS

2. SEE TYPICAL SECTIONS FOR FORMATION OF SHARED USE PATH SHOULDERS AND MATERIAL SPECIFICATIONS.
3. ALL EXISTING STRUCTURES WITHIN CURB RAMP AREAS SHALL BE ADJUSTED TO BE FLUSH WITH CURB RAMP SURFACE.
4. PRIOR TO ANY CLEARING, GRUBBING, OR TREE TRIMMING, THE CONTRACTOR SHALL STAKEOUT OUT THE CLEARING LIMITS AS SHOWN ON THE CONSTRUCTION PLANS. THE CONTRACTOR SHALL THEN PERFORM A SITE WALK WITH MASSDOT DISTRICT 3 PROJECTS OFFICE, RESIDENT ENGINEER, MASSDOT LANDSCAPE ARCHITECT, AND TOWN OF SUDBURY TO CONFIRM THESE CLEARING LIMITS.
5. ALL TREES WITHIN SLOPE LIMITS/CLEARING LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED ON PLANS. PAYMENT FOR TREE REMOVALS WITHIN THE SLOPE LIMITS SHALL BE PAID FOR UNDER CLEARING & GRUBBING ITEM PER STANDARD SPECIFICATIONS.
6. NO CLEARING OUTSIDE OF THE SLOPE LIMITS SHALL OCCUR FOR CONTRACTOR CONVENIENCE WITHOUT PRIOR AUTHORIZATION FROM THE TOWN OF SUDBURY AND THE RESIDENT ENGINEER. THE CONTRACTOR SHALL ONLY BE PAID FOR CLEARING AND GRUBBING FROM SLOPE LIMIT TO SLOPE LIMIT AS SHOWN ON PLANS.
7. PROPOSED PLANTINGS MAY REQUIRE FIELD ADJUSTMENT DUE TO FINAL FIELD CONDITIONS. MASSDOT LANDSCAPE ARCHITECT AND/OR TOWN OF SUDBURY SHALL APPROVE ALL LOCATIONS PRIOR TO PLANTING.
8. ANY CULVERT GRANITE ABUTMENT BLOCKS NOT BEING REMOVED AND RESET FOR USE IN THE SEAT WALL AT APPROX. STA. 60+00 SHALL BE REMOVED AND STACKED AT THE SUDBURY DPW YARD. THE CONTRACTOR SHALL USE ANY GRANITE BLOCKS THAT ARE DEEMED REUSABLE BY THE ENGINEER

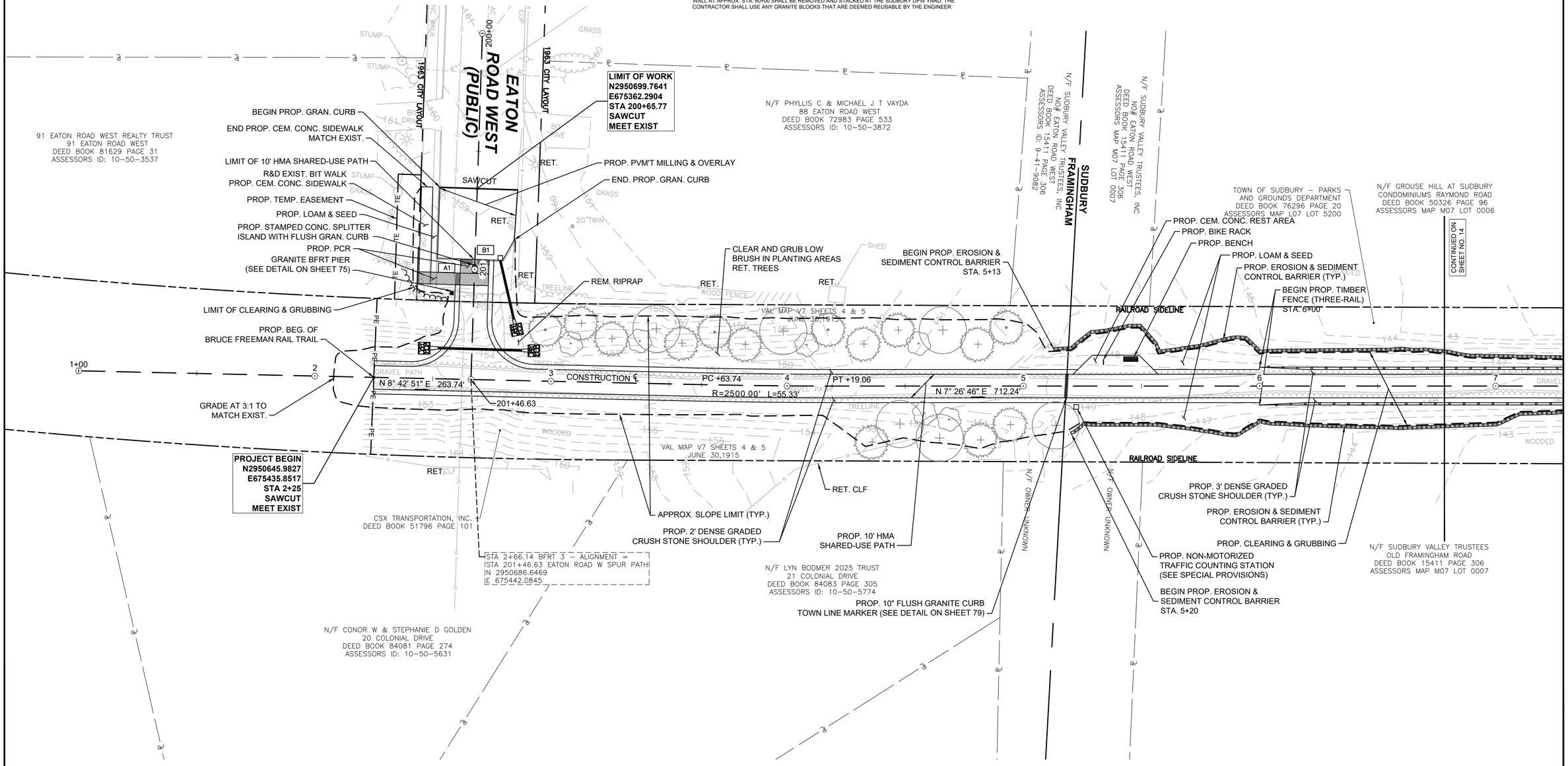
LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL # X#

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	13	103
PROJECT FILE NO.	613319		

CONSTRUCTION PLANS



FOR PROFILE SEE SHEET NO. 21
FOR PLANTING PLAN SEE SHEET NO. 67

20200765.A30_CONSTRUCTION PLANS.DWG Plotted on 12-Feb-2026 7:59 PM

FENCING DETAILS

TIMBER FENCE (THREE-RAIL) STA. 6+00 TO STA. 10+32 RT
TIMBER FENCE (THREE-RAIL) STA. 6+00 TO STA. 10+32 LT
TIMBER FENCE (FOUR-RAIL) STA. 10+32 ST STA. 10+52 RT
TIMBER FENCE (FOUR-RAIL) STA. 10+32 ST STA. 10+52 LT
TIMBER FENCE (THREE-RAIL) STA. 10+52 TO STA. 11+60 LT
TIMBER FENCE (THREE-RAIL) STA. 10+52 TO STA. 11+45 RT
TIMBER FENCE (THREE-RAIL) STA. 12+24 TO STA. 19+28 LT
TIMBER FENCE (THREE-RAIL) STA. 12+24 TO STA. 19+20 RT

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

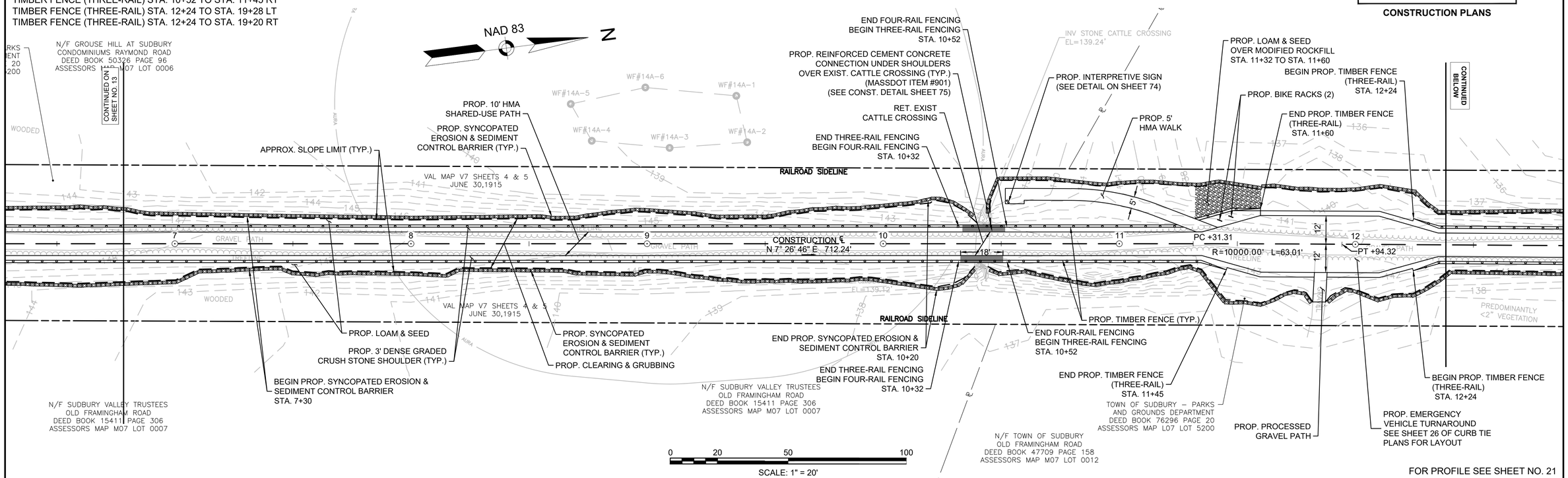
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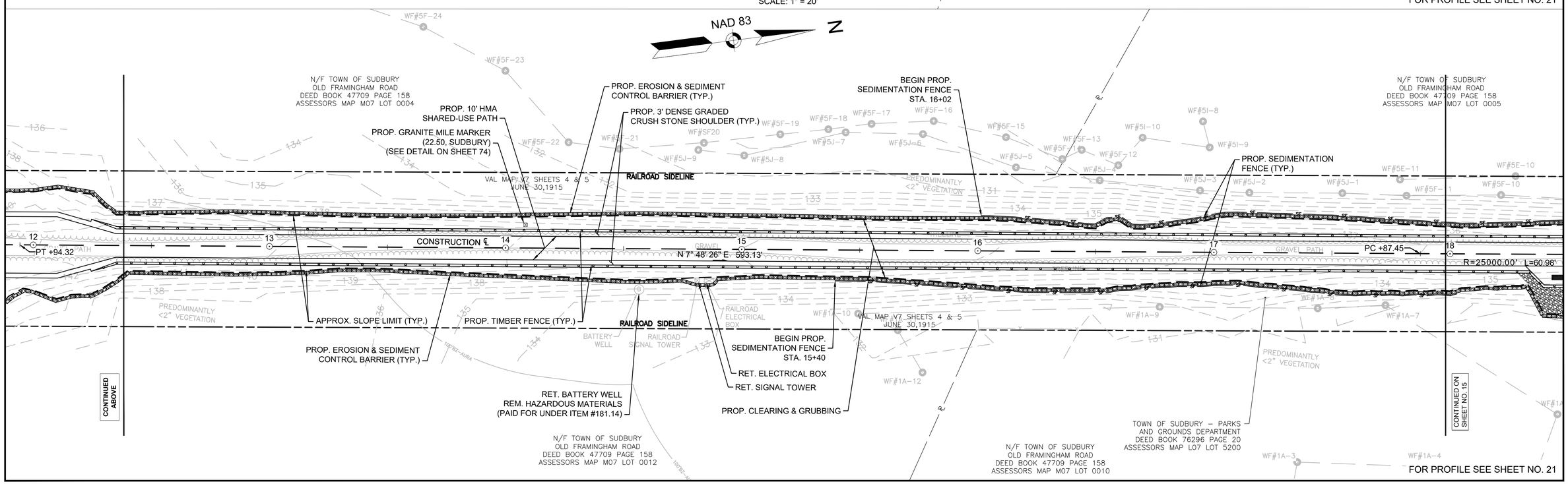
PROPOSED PEDESTRIAN CURB RAMP DETAIL # X#

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	14	103
PROJECT FILE NO.	613319		

CONSTRUCTION PLANS





20200785.A30_CONSTRUCTION PLANS.DWG Plotted on 12-Feb-2026 7:59 PM

FENCING DETAILS

TIMBER FENCE (THREE-RAIL) STA. 12+24 TO STA. 19+28 LT
TIMBER FENCE (THREE-RAIL) STA. 19+38 TO STA. 23+74 LT
TIMBER FENCE (FOUR-RAIL) STA. 23+74 TO STA. 23+98 LT
TIMBER FENCE (THREE-RAIL) STA. 23+98 TO STA. 28+52 LT
TIMBER FENCE (FOUR-RAIL) STA. 28+52 TO STA. 28+76 LT
TIMBER FENCE (THREE-RAIL) STA. 28+76 TO STA. 31+50 LT

TIMBER FENCE (THREE-RAIL) STA. 12+24 TO STA. 19+20 RT
TIMBER FENCE (THREE-RAIL) STA. 19+33 TO STA. 23+74 RT
TIMBER FENCE (FOUR-RAIL) STA. 23+74 TO STA. 23+98 RT
TIMBER FENCE (THREE-RAIL) STA. 23+98 TO STA. 28+52 RT
TIMBER FENCE (FOUR-RAIL) STA. 28+52 TO STA. 28+76 RT
TIMBER FENCE (THREE-RAIL) STA. 28+76 TO STA. 31+50 RT

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

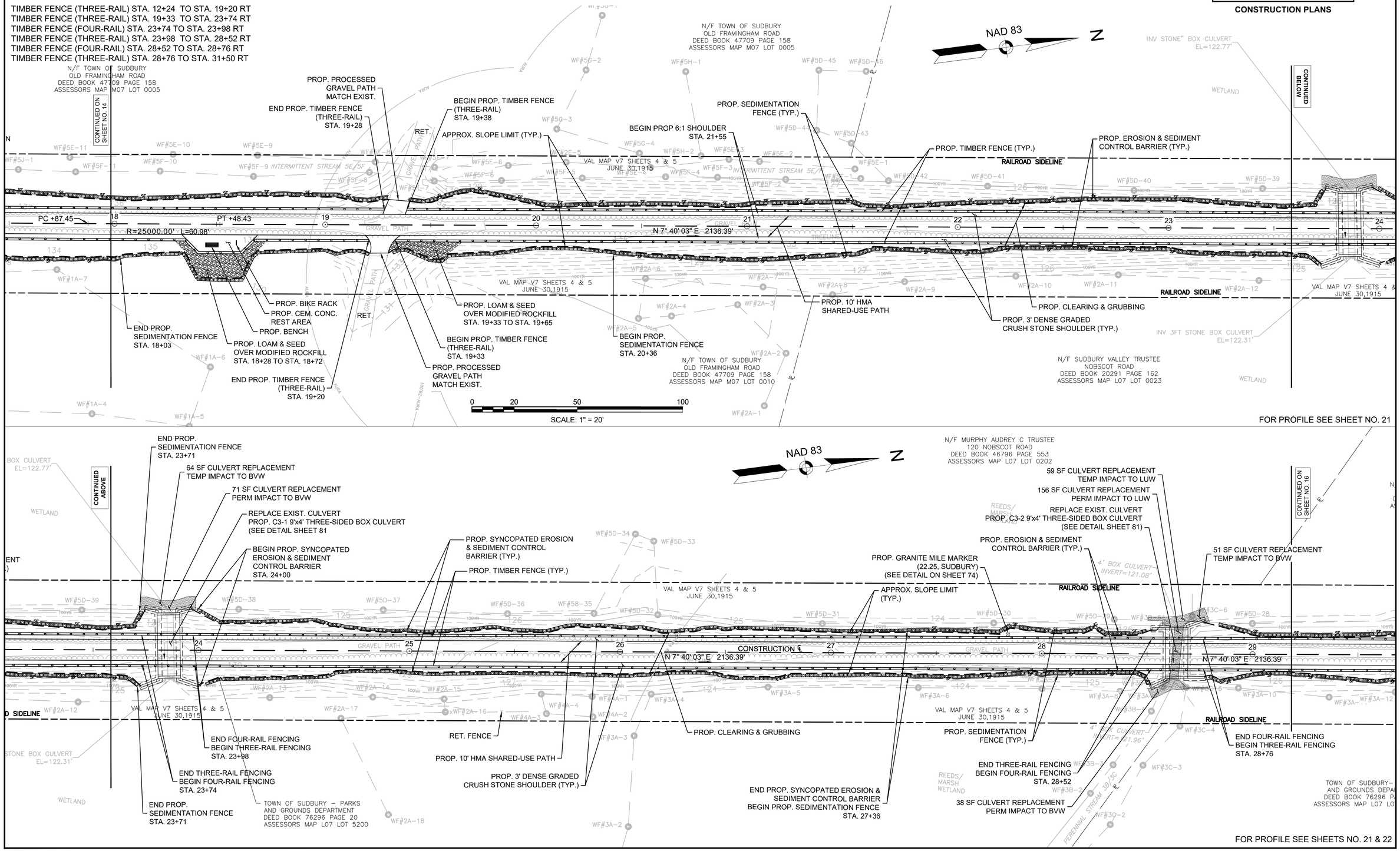
LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL # X#

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	15	103
PROJECT FILE NO.	613319		

CONSTRUCTION PLANS



20200765.A30_CONSTRUCTION PLANS.DWG Plotted on 12-Feb-2026 7:59 PM

FENCING DETAILS

TIMBER FENCE (THREE-RAIL) STA. 28+76 TO STA. 31+50 LT
TIMBER FENCE (FOUR-RAIL) STA. 33+98 TO STA. 34+79 LT
TIMBER FENCE (THREE-RAIL) STA. 39+90 TO STA. 40+75 LT

TIMBER FENCE (THREE-RAIL) STA. 28+76 TO STA. 31+50 RT
TIMBER FENCE (FOUR-RAIL) STA. 33+98 TO STA. 34+79 RT
TIMBER FENCE (THREE-RAIL) STA. 37+00 TO STA. 38+22 RT
TIMBER FENCE (THREE-RAIL) STA. 38+40 TO STA. 40+50 RT

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

LEGEND:

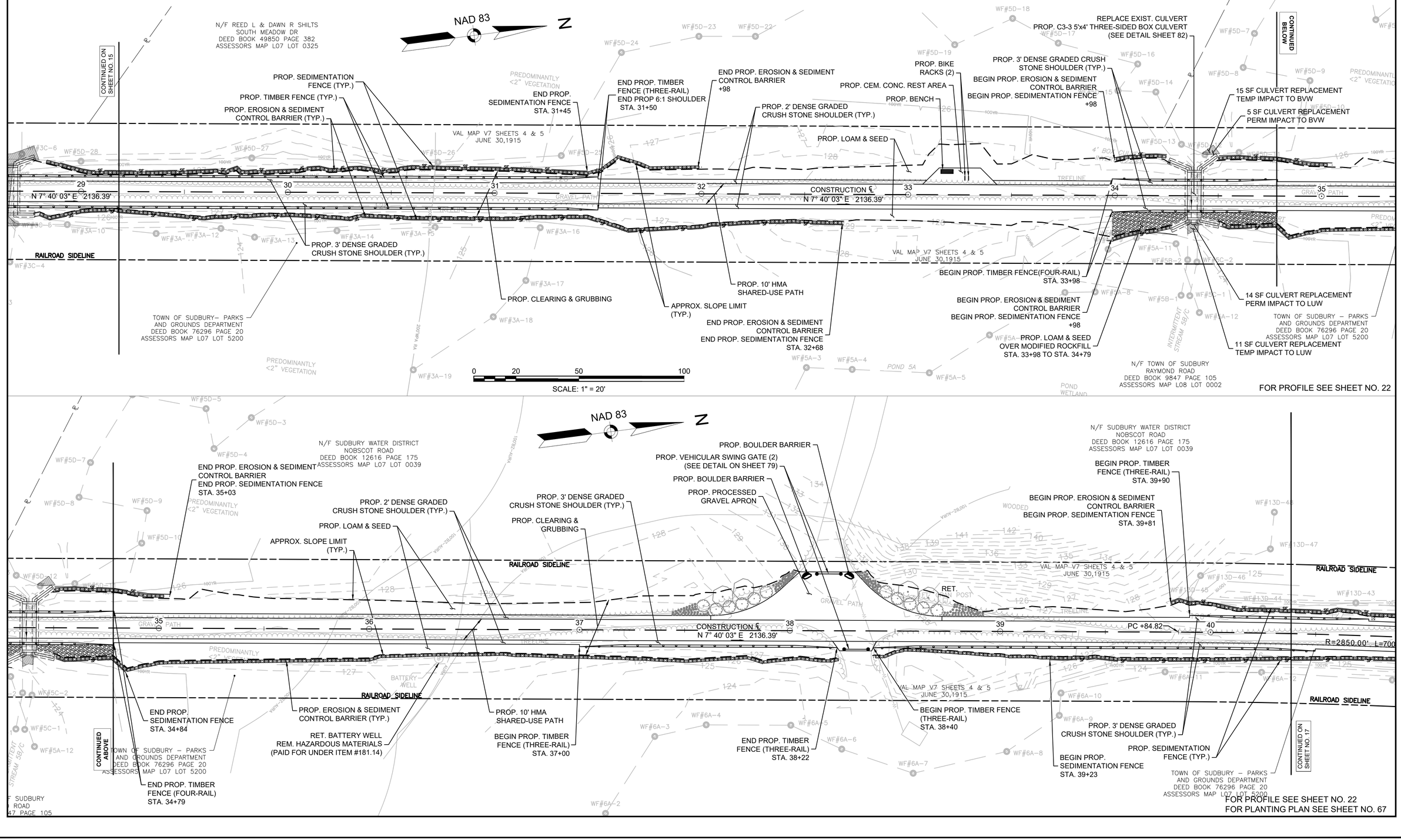
PROPOSED PEDESTRIAN CURB RAMP DETAIL # X#

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	16	103
PROJECT FILE NO.	613319		

CONSTRUCTION PLANS

20200785.A30_CONSTRUCTION PLANS.DWG Plotted on 12-Feb-2026 8:00 PM



FENCING DETAILS

TIMBER FENCE (THREE-RAIL) STA. 39+90 TO STA. 40+75 LT
TIMBER FENCE (THREE-RAIL) STA. 43+70 TO STA. 43+98 LT
TIMBER FENCE (FOUR-RAIL) STA. 43+98 TO STA. 44+22 LT
TIMBER FENCE (THREE-RAIL) STA. 44+22 TO STA. 46+40 LT
TIMBER FENCE (FOUR-RAIL) STA. 49+62 TO STA. 50+16 LT
TIMBER FENCE (THREE-RAIL) STA. 50+16 TO STA. 52+20 LT

TIMBER FENCE (THREE-RAIL) STA. 38+40 TO STA. 40+50 RT
TIMBER FENCE (THREE-RAIL) STA. 43+00 TO STA. 44+75 RT
TIMBER FENCE (FOUR-RAIL) STA. 43+98 TO STA. 44+22 RT
TIMBER FENCE (THREE-RAIL) STA. 44+22 TO STA. 44+75 RT
TIMBER FENCE (FOUR-RAIL) STA. 49+62 TO STA. 50+42 RT

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL # — X#

PLANT QUANTITY AND SPECIES — X / XX

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	17	103
PROJECT FILE NO.	613319		

CONSTRUCTION PLANS

20200785.A30_CONSTRUCTION PLANS.DWG Plotted on 12-Feb-2026 8:00 PM

NAD 83 N

END PROP. TIMBER FENCE (THREE-RAIL) STA. 40+75
PROP. GRANITE MILE MARKER (22.00, SUDBURY) (SEE DETAIL ON SHEET 74)
N/F SUDBURY WATER DISTRICT NOBSCOT ROAD DEED BOOK 12616 PAGE 175 ASSESSORS MAP L07 LOT 0039
N/F SUDBURY WATER DISTRICT NOBSCOT ROAD DEED BOOK 9115 PAGE 555 ASSESSORS MAP L07 LOT 0041
REEDS/ MARSH WETLAND
N/F RAIMO ARNOLD & KATHLEEN LIIAS 186 NOBSCOT ROAD DEED BOOK 79378 PAGE 378 ASSESSORS MAP L07 LOT 0017
BEGIN PROP. TIMBER FENCE (THREE-RAIL) STA. 43+70
END THREE-RAIL FENCING BEGIN FOUR-RAIL FENCING STA. 43+98
N/F RAIMO ARNOLD & KATHLEEN LIIAS 186 NOBSCOT ROAD DEED BOOK 79378 PAGE 378 ASSESSORS MAP L07 LOT 0017
INV 2FT" BY 2FT STONE EL=121.83'
REPLACE EXIST. CULVERT PROP. C3-4 8'x3' THREE-SIDED BOX CULVERT (SEE DETAIL SHEET 82)
PROP. CLEARING & GRUBBING
PROP. LOAM & SEED
PROP. EROSION & SEDIMENT CONTROL BARRIER (TYP.)
CONTINUED BELOW
RAILROAD SIDELINE
VAL MAP V7 SHEETS 4 & 5 JUNE 30,1915
R=2850.00' L=700.57'
CONSTRUCTION ℄
TREELINE
GRAVEL PATH
END PROP. TIMBER FENCE (THREE-RAIL) STA. 40+50
APPROX. SLOPE LIMIT (TYP.)
RET. MONITORING WELLS (2)
PROP. 10' HMA SHARED-USE PATH
PROP. 2' DENSE GRADED CRUSH STONE SHOULDER (TYP.)
PROP. SEDIMENTATION FENCE (TYP.)
BEGIN PROP. TIMBER FENCE (THREE-RAIL) STA. 43+00
PROP. BENCH
PROP. DENSE GRADED CRUSH STONE BIRD WATCHING PLATFORM
PROP. INTERPRETIVE SIGN (SEE DETAIL ON SHEET 74)
PROP. 3' DENSE GRADED CRUSH STONE SHOULDER (TYP.)
PROP. TIMBER FENCE (TYP.)
3 SF CULVERT REPLACEMENT PERM IMPACT TO BVW
42 SF CULVERT REPLACEMENT TEMP IMPACT TO BVW
1 SF CULVERT REPLACEMENT PERM IMPACT TO LUW
9 SF CULVERT REPLACEMENT TEMP IMPACT TO LUW
END FOUR-RAIL FENCING BEGIN BEGIN-RAIL FENCING STA. 44+22
END PROP. TIMBER FENCE (THREE-RAIL) STA. 44+75
PROP. 2' DENSE GRADED CRUSH STONE SHOULDER (TYP.)
CONTINUED ON SHEET NO. 16
N/F TOWN OF SUDBURY RAYMOND ROAD DEED BOOK 9847 PAGE 105 ASSESSORS MAP L08 LOT 0002
TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT DEED BOOK 76296 PAGE 20 ASSESSORS MAP L07 LOT 5200
TREES / OPEN WETLAND
PREDOMINANTLY <2" VEGETATION WITH STREAMS
0 20 50 100
SCALE: 1" = 20'
FOR PROFILE SEE SHEET NO. 22

NAD 83 N

CONTINUED ABOVE
END PROP. TIMBER FENCE (THREE-RAIL) STA. 46+40
N/F HAM MARY ANNE TRS 0 NOBSCOT ROAD DEED BOOK 32298 PAGE 39 ASSESSORS MAP L07 LOT 0009
PROP. 2' DENSE GRADED CRUSH STONE SHOULDER (TYP.)
APPROX. SLOPE LIMIT (TYP.)
VAL MAP V7 SHEETS 4 & 5 JUNE 30,1915
PROP. SEDIMENTATION FENCE (TYP.)
PROP. 10' HMA SHARED-USE PATH
PROP. LOAM & SEED
PROP. 3' DENSE GRADED CRUSH STONE SHOULDER (TYP.)
38 SF CULVERT REPLACEMENT PERM IMPACT TO BVW
REPLACE EXIST. CULVERT PROP. C3-5 9'x4' THREE-SIDED BOX CULVERT (SEE DETAIL SHEET 83)
END PROP. SEDIMENTATION FENCE STA. 49+90
12 SF CULVERT REPLACEMENT TEMP IMPACT TO BVW
48 SF CULVERT REPLACEMENT TEMP IMPACT TO BVW
BEGIN PROP. SYNCOPATED EROSION & SEDIMENT CONTROL BARRIER STA. 50+20
END FOUR-RAIL FENCING BEGIN THREE-RAIL FENCING STA. 50+16
INV 3FT" X3FT STONE CULVERT
POTENTIAL VERNAL POOL WITHIN WETLAND COMPLEX BVW 13D
RAILROAD SIDELINE
PT +85.39
PC +16.74
PT +80.25
PT +14.85
PC +84.32
CONSTRUCTION ℄
N 21° 45' 06" E 231.35'
R=25000.00' L=163.51'
N 21° 22' 36" E 104.07'
R=200.00' L=30.53'
GRAVEL PATH
BATTERY WELL
VAL MAP V7 SHEETS 4 & 5 JUNE 30,1915
PROP. CLEARING & GRUBBING
RET. BATTERY WELL REM. HAZARDOUS MATERIALS (PAID FOR UNDER ITEM #181.14)
PROP. EROSION & SEDIMENT CONTROL BARRIER (TYP.)
BEGIN PROP. TIMBER FENCE (FOUR-RAIL) STA. 49+62
END PROP. SEDIMENTATION FENCE STA. 49+90
5 SF CULVERT REPLACEMENT TEMP IMPACT TO BVW
20 SF CULVERT REPLACEMENT TEMP IMPACT TO LUW
123 SF CULVERT REPLACEMENT PERM IMPACT TO LUW
BEGIN SYNCOPATED EROSION & SEDIMENT CONTROL BARRIER STA. 50+20
END PROP. TIMBER FENCE (FOUR-RAIL) STA. 50+42
PROP. 2' DENSE GRADED CRUSH STONE SHOULDER (TYP.)
INV 3FT" X 3FT STONE EL=122.58'
INTERMITTENT STREAM 6D/E
N/F TOWN OF SUDBURY RAYMOND ROAD DEED BOOK 9847 PAGE 105 ASSESSORS MAP L08 LOT 0002
N/F SUDBURY WATER DISTRICT 199 RAYMOND ROAD DEED BOOK 8682 PAGE 449 ASSESSORS MAP L08 LOT 0001
PREDOMINANTLY <2" VEGETATION WITH STREAMS
CONTINUED ON SHEET NO. 18
FOR PROFILE SEE SHEETS NO. 22 & 23

FENCING DETAILS

TIMBER FENCE (THREE-RAIL) STA. 49+62 TO STA. 52+20 LT
TIMBER FENCE (THREE-RAIL) STA. 55+50 TO STA. 56+00 LT
TIMBER FENCE (THREE-RAIL) STA. 56+14 TO STA. 57+50 LT
TIMBER FENCE (THREE-RAIL) STA. 101+94 TO STA. 102+20 LT

TIMBER FENCE (THREE-RAIL) STA. 55+65 TO STA. 56+00 RT
TIMBER FENCE (THREE-RAIL) STA. 101+94 TO STA. 102+20 RT

HIGHWAY GUARD DETAILS

TIMBER GUARDRAIL STA. 300+33 RT TO 302+60 RT
TL-2 GUARDRAIL STA. 55+75 LT TO 56+98 LT

TRAFFIC SIGNAL CONDUIT

NONE

LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL # X#

WATER SUPPLY ALTERATIONS

SEE SHEET 64

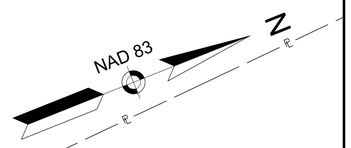
DRAINAGE DETAILS

SEE SHEET 64

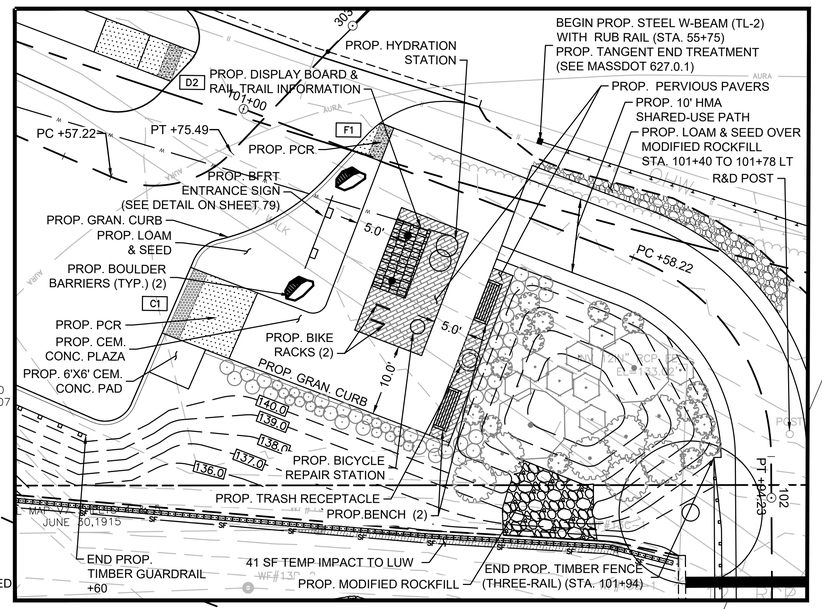
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

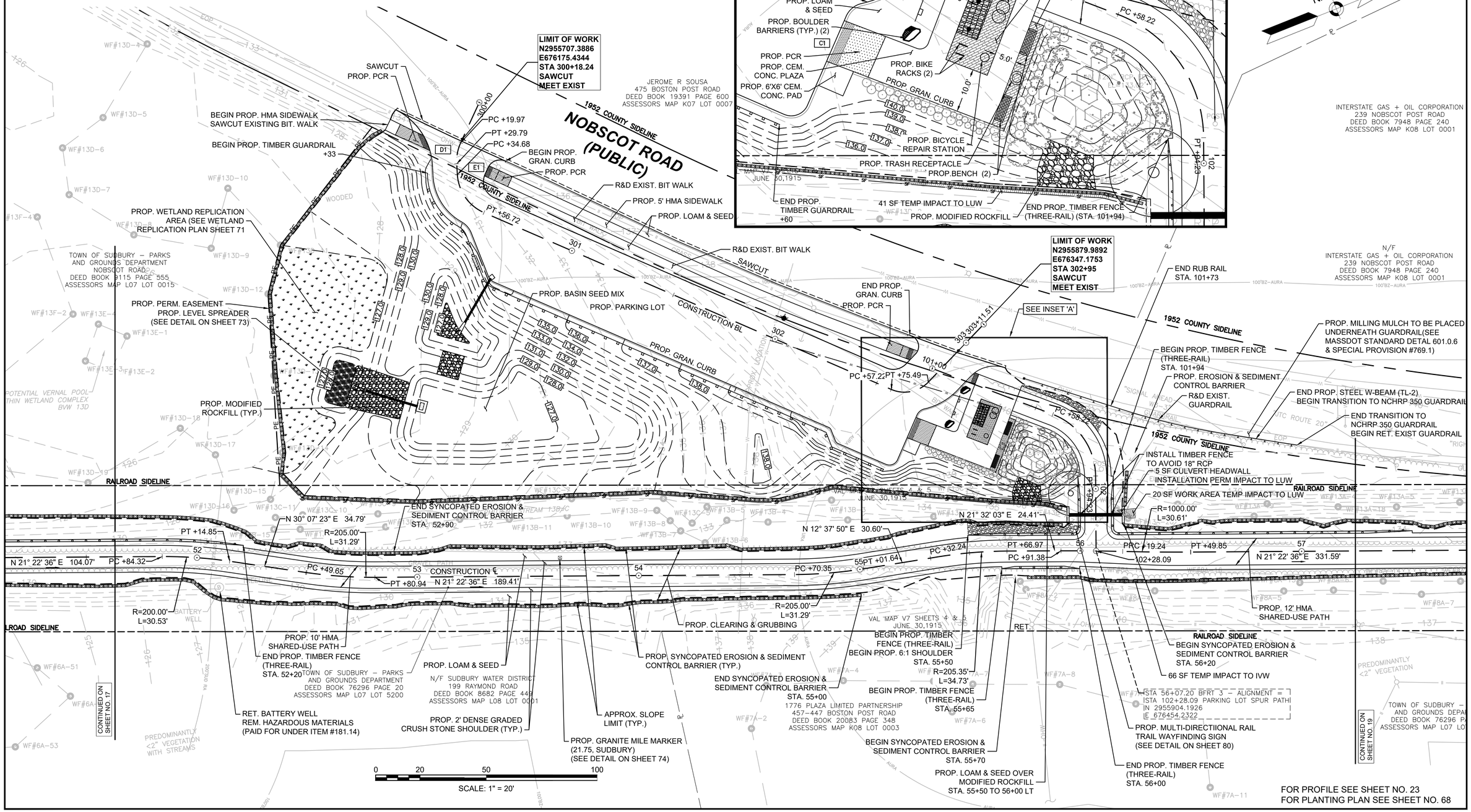
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	18	103
PROJECT FILE NO.	613319		

CONSTRUCTION PLANS



INSET 'A'
1" = 10'





20200785.A30_CONSTRUCTION PLANS.DWG Plotted on 12-Feb-2026 8:00 PM

FENCING DETAILS

TIMBER FENCE (THREE-RAIL) STA. 56+14 TO STA. 57+50 LT
TIMBER FENCE (THREE-RAIL) STA. 61+23 TO STA. 61+77 RT

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

SEE SHEET 51

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL # X#

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	19	103
PROJECT FILE NO.	613319		

CONSTRUCTION PLANS

20200765.A30_CONSTRUCTION PLANS.DWG Plotted on 12-Feb-2026 8:01 PM

INSET 'B'
1" = 10'

BEGIN R&R GRAN CURB MATCH EXIST. CURB
PROP. STAMPED CONC. SPLITTER ISLAND WITH FLUSH GRAN. CURB
SAWCUT MATCH EXIST. SIDEWALK
RECONSTRUCT MASSDOT PCR #11133
R&D EXIST. SIGNAL FOUNDATION
RET. TRAFFIC MAST/SIGNAL
RET. EXIST. MASSDOT PCR #17621
RET. TRAFFIC SIGNAL POST
END PROP. EROSION & SEDIMENT CONTROL BARRIER STA. 60+31
GRANITE BFRT PIER (SEE DETAILS)
RET. CONTROLLER CABINET
END PROP. SEDIMENTATION FENCE STA. 60+10
PROP. MULTI-DIRECTIONAL RAIL TRAIL WAYFINDING SIGN (SEE DETAIL ON SHEET 80)
ADJ. MONITORING WELL
N 13° 21' 25" W 70.19'
PROP. PED PUSH BUTTON
PROP. PED SIGNAL HEAD
R&S PED. SIGNAL
R&D EXIST. SIGNAL POST
G1
PT +31.44
R=25.00'
L=9.91'
PRC +21.54
60
L=40.10'

239 NOBSCOT PO
DEED BOOK 7948
ASSESSORS MAP K0

N/F
INTERSTATE GAS + OIL CO
239 NOBSCOT POST
DEED BOOK 7948 PA
ASSESSORS MAP K08 L

CONTINUED ON SHEET NO. 18

NOBSCOT ROAD (PUBLIC)

"JTC ROUTE 20"

"RIGHT LANE MUST TURN RIGHT"

"KEEP RIGHT"

"20 EAST WAYLAND WALTHAM NOBSCOT FRAMINGHAM"

"BICYCLE STOP ON LANE FOR GREEN"

SEE INSET 'B'

PROP. EROSION & SEDIMENT CONTROL BARRIER (TYP.)

RAILROAD SIDELINE

SEDIMENTATION FENCE (TYP.) — VAL. MAP V7 SHEETS 4 & 5 JUNE 30,1915

N 21° 22' 36" E 331.59'

CONSTRUCTION ℄

N 21° 22' 36" E 331.59'

PROP. 12' HMA SHARED-USE PATH

VAL. MAP V7 SHEETS 4 & 5 JUNE 30,1915

RAILROAD SIDELINE

END PROP. TIMBER FENCE (THREE-RAIL)
END PROP. 6:1 SHOULDER STA. 57+50

END SYNCOPATED EROSION & SEDIMENT CONTROL STA. 57+90

PREDOMINANTLY <2" VEGETATION

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

APPROX. SLOPE LIMIT (TYP.)

PROP. 2' DENSE GRADED CRUSH STONE SHOULDER (TYP.)

PROP. CLEARING & GRUBBING

INSET 'B'

N 13° 21' 25" W 70.19'

PC +81.44

PT +31.44
R=25.00'
L=9.91'
PRC +21.54

R=40.00'
L=40.10'

PROP. BENCH

REM.

PROP. REST AREA
PROP. PERVIOUS PAVERS

PROP. BIKE RACKS (3)

R&R MASONRY CULVERT BLOCKS FOR SEAT WALL (SEE DETAIL ON SHEET 80)

PROP. DISPLAY BOARD & RAIL TRAIL INFORMATION

PROP. CEM. CONC. SW

PROP. LOAM & SEED

REM EXIST. SW

END PROP. EROSION & SEDIMENT CONTROL BARRIER 401+95

MATCH EXIST. CONC. SW

PROP. PVM'T MILLING & OVERLAY OVERLAY

PROP. TEMP. EASEMENT

END R&R GRAN CURB MATCH EXIST. CURB

1776 PLAZA LIMITED PARTNERSHIP
457–447 BOSTON POST ROAD
DEED BOOK 20083 PAGE 348
ASSESSORS MAP K08 LOT 0003

460 BOSTON POST ROAD
DEED BOOK 70761 PAGE 291ASSESSORS
MAP K08 LOT 0062

RET. EXIST. MASSDOT PCR #142

LIMIT OF WORK
N2956327.2509
E676560.1812
STA 401+00
SAWCUT
MEET EXIST

STA 60+63.65 BFRT 3 – ALIGNMENT =
STA 401+15.13 ROUTE 20
N 2956330.8021
E 676574.8835

NAD 83

N

BOSTON POST ROAD (PUBLIC) (ROUTE 20)

1902 SMAO SIDELINE

BEGIN R&R GRAN CURB MATCH EXIST. CURB
RET. EXIST SIGNAL POST
REM. EXIST. PED SIGNAL HEAD
REM. EXIST. PED PUSH BUTTON
RET. TREE & PLANTINGS
REM. BRICK WALK
PROP. PED PUSH BUTTON
PROP. PED SIGNAL HEAD
RECONSTRUCT MASSDOT PCR #333
REM. PLANTINGS
R=8.00'
L=12.51'

"MIDDLESEX SAVINGS BANK PLACE"

RET.

H1
R&R SIGN

PC +01.64

SAWCUT PVM'T

R&R GRAN CURB

CONSTRUCTION ℄

PC +64.66

EXISTING CROSSING EASEMENT

R&R GRAN. CURB

402

CONSTRUCTION ℄

402+00

1902 SMAO SIDELINE

LIMIT OF WORK
N2956356.9255
E676683.0387
STA 402+26.39
SAWCUT
MEET EXIST

PROP. TEMP. EASEMENT
PROP. PERM. EASEMENT
PT +14.15
GRANITE BFRT PIER (SEE DETAILS)
R&D MULCH
PROP. 5' CEM. CONC. SIDEWALK
BEGIN PROP. TIMBER FENCE (THREE-RAIL) STA. 61+23
PROP. STAMPED CONC. WITH SLOPED GRAN. EDGING, TYPE SA
REM. TREE & PLANTINGS
PROP. MULCH (EDGE OF PATH TO BACK OF CURB)
RET. EOP
RET. GC
N 76° 15' 21" E 50.52'
PROP. LOAM & SEED
REM. TREE
END PROP. TIMBER FENCE (THREE-RAIL) STA. 61+77
R=65.00'
L=62.40'
PROP. TACTILE WARNING PANEL

MIDDLESEX SAVINGS BANK
454 BOSTON POST ROAD
DEED BOOK 49392 PAGE 161
ASSESSORS MAP K08 LOT 0065

APPROXIMATE LIMITS OF UNDERGROUND VAULT

PROP. 12' HMA SHARED-USE PATH
PROP. CLEARING & GRUBBING

CONTINUED ON SHEET NO. 20

PT +27.07

N 21° 14' 53" E 298.15'

END PROP. SLOPED GRAN. EDGING, TYPE SA
BEGIN PROP. SLOPED GRAN. EDGING, TYPE SA
PROP. 2' DENSE GRADED CRUSH STONE SHOULDER (TYP.)
PROP. HMA BIKE RAMP (DIRECTIONAL BAR TILE OPTION SEE DETAIL ON SHEET 79)
PROP. TEMP. EASEMENT
END R&R GRAN CURB MATCH EXIST. CURB

"LEFT LANE MUST TURN LEFT"

TWINS HOLDING LLC
450 BOSTON POST ROAD
DEED BOOK 16550 PAGE 422
ASSESSORS MAP K08 LOT 0006

CB RIM=136.92' INV=136.13'
CB RIM=136.26' BOLTED SHUT INV=136.26'

N/F LAW
444 BR
DEED BK
ASSESS

FOR PROFILE SEE SHEET NO. 23
FOR PLANTING PLAN SEE SHEET NO. 69

0 20 50 100
SCALE: 1" = 20'

FENCING DETAILS

TIMBER FENCE (THREE-RAIL) STA. 69+60 TO STA. 70+76 RT

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL # — X#

PLANT QUANTITY AND SPECIES — X / XX

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	20	103
PROJECT FILE NO.	613319		

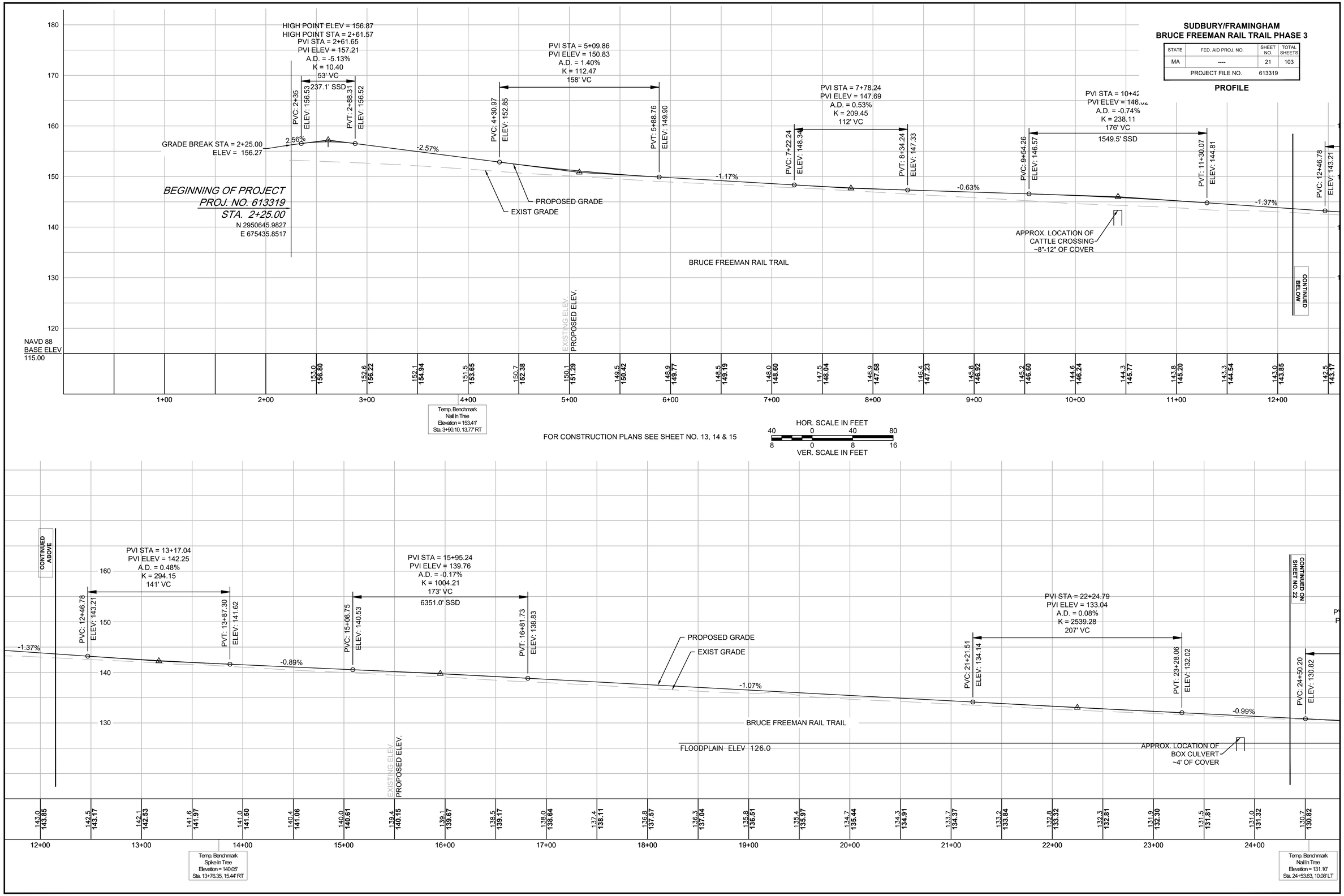
CONSTRUCTION PLANS

20200785.A30_CONSTRUCTION PLANS.DWG Plotted on 12-Feb-2026 8:01 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	21	103
PROJECT FILE NO.	613319		

PROFILE



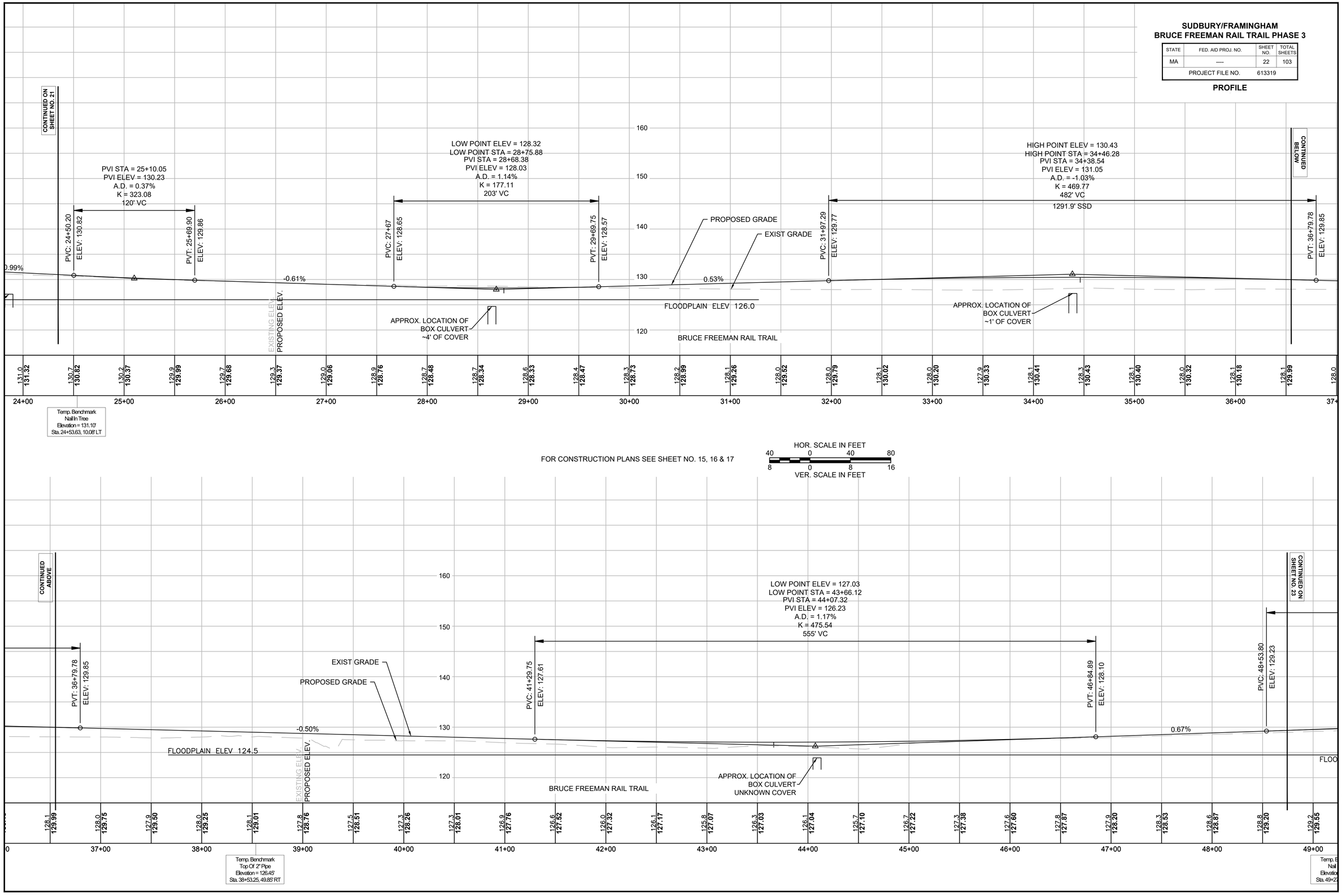
Plotted on 12-Feb-2026 5:13 PM
20200785.A30_PROFILE.DWG

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	22	103
PROJECT FILE NO.	613319		

PROFILE

20200785.A30_PROFILE.DWG Plotted on 12-Feb-2026 5:13 PM



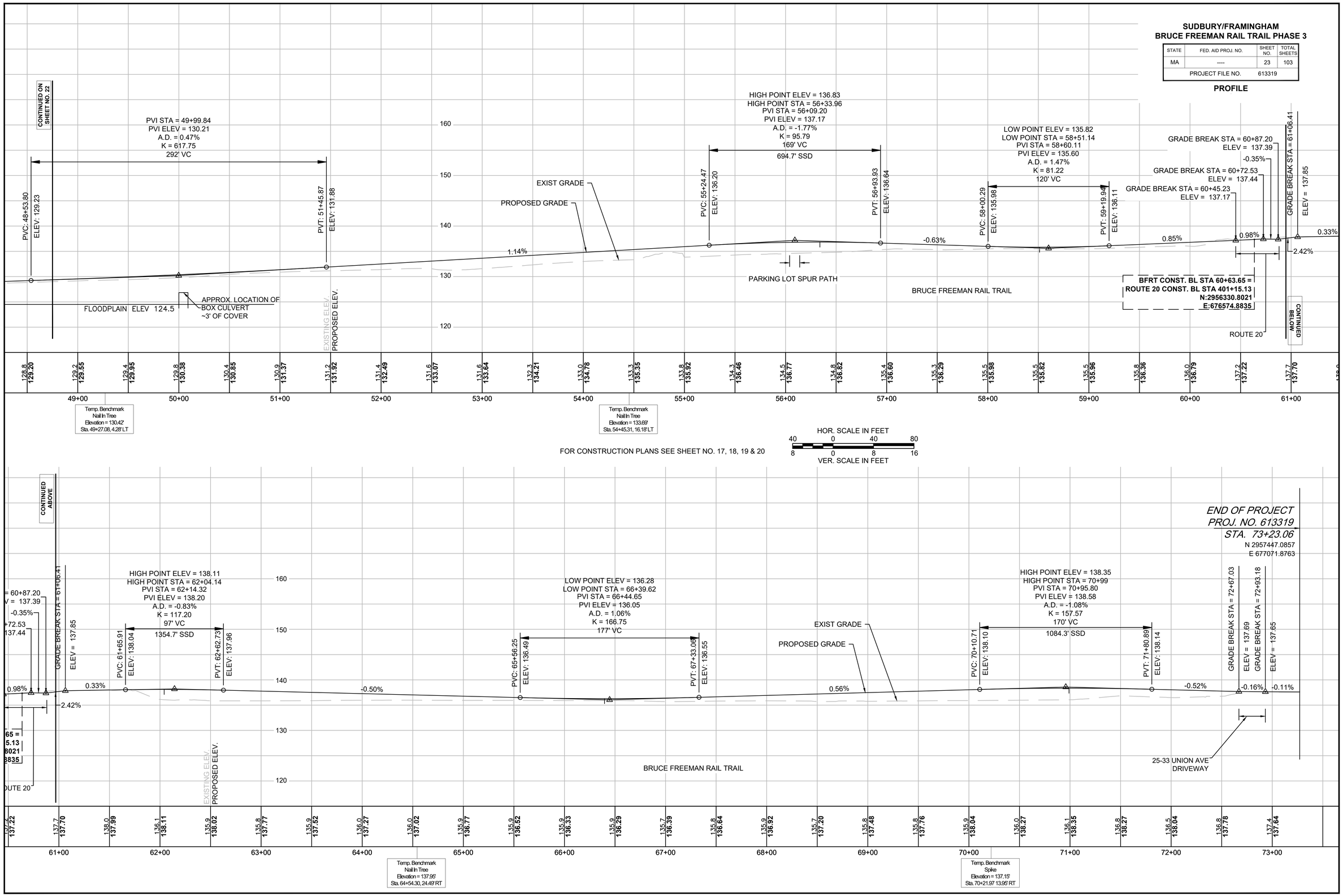
FOR CONSTRUCTION PLANS SEE SHEET NO. 15, 16 & 17

HOR. SCALE IN FEET
40 0 40 80
VER. SCALE IN FEET
8 0 8 16

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	23	103
PROJECT FILE NO.	613319		

PROFILE



FOR CONSTRUCTION PLANS SEE SHEET NO. 17, 18, 19 & 20

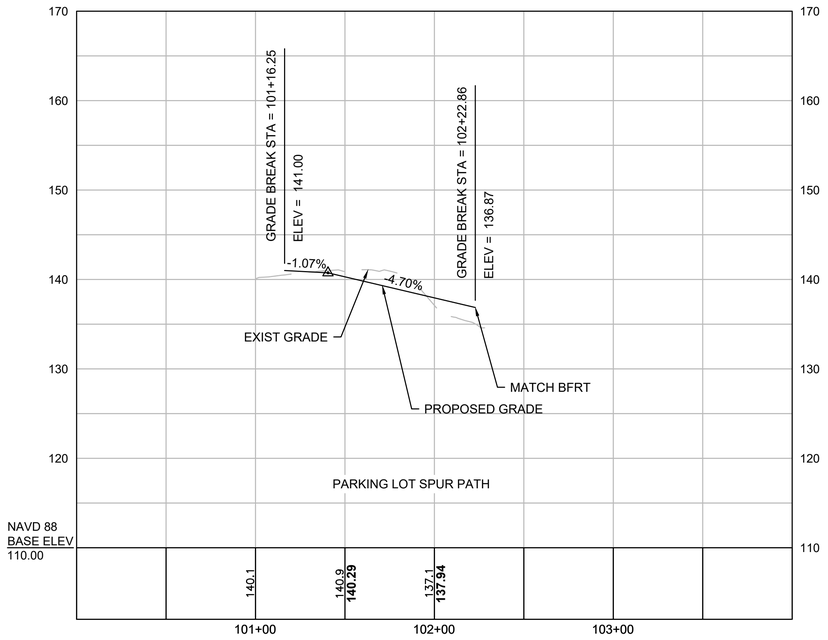
HOR. SCALE IN FEET
40 0 40 80
8 0 8 16
VER. SCALE IN FEET

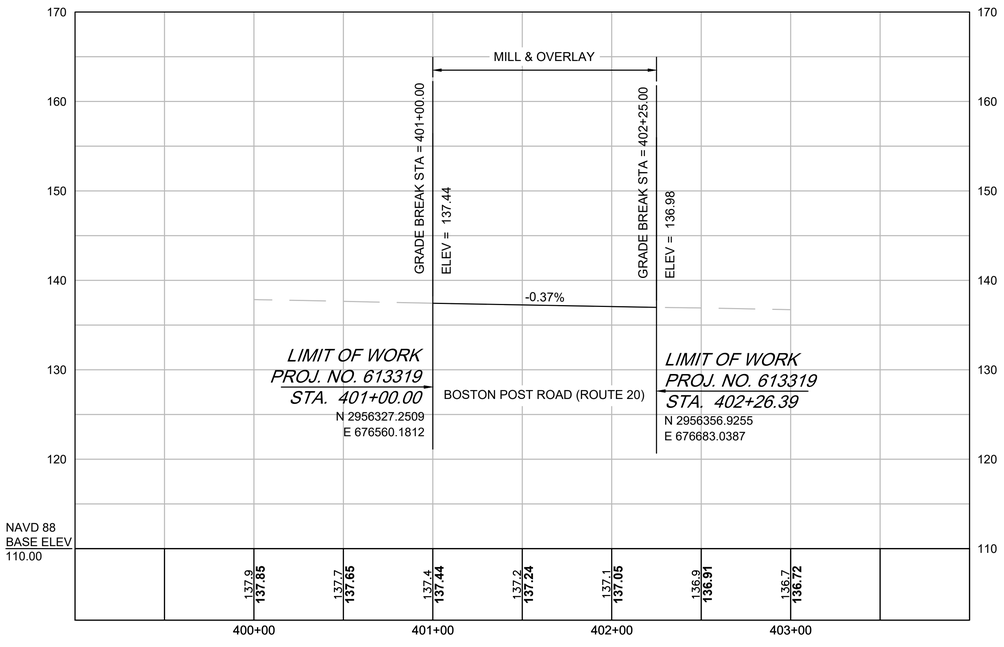
20200785.A30_PROFILE.DWG Plotted on 12-Feb-2026 5:13 PM

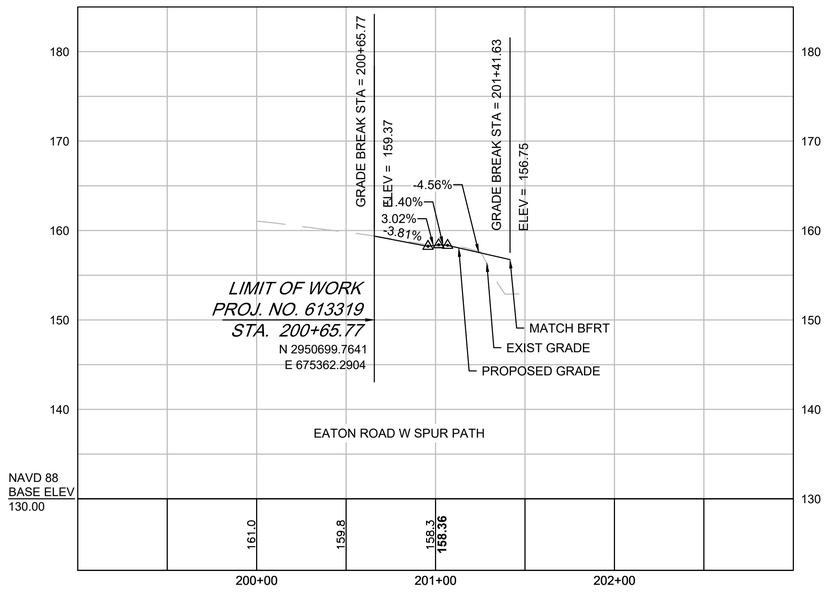
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PARKING LOT

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	######	24	103
PROJECT FILE NO.	613319		

EATON ROAD W & PARKING LOT SPUR PATHS







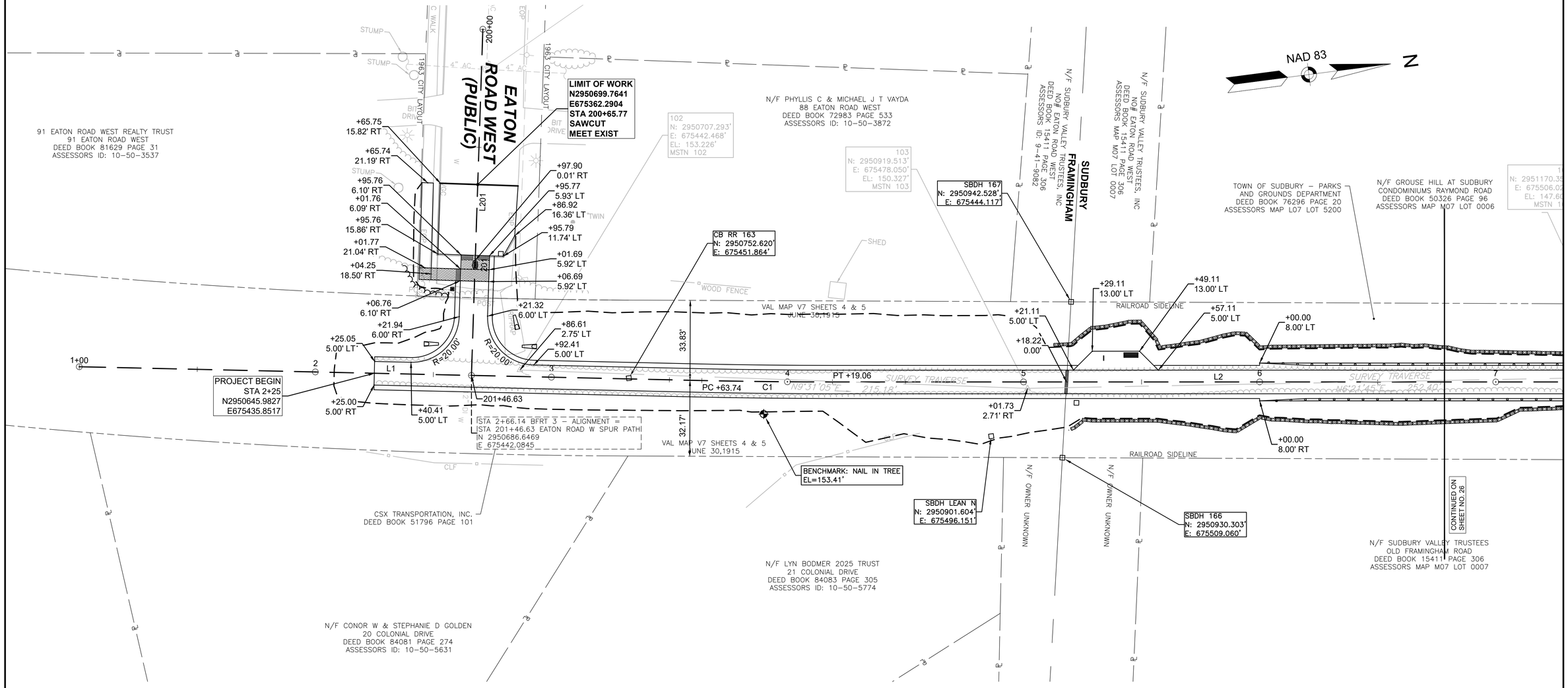
HOR. SCALE IN FEET
40 0 40 80
VER. SCALE IN FEET
8 0 8 16

20200785.A30_PROFILE.DWG Plotted on 12-Feb-2026 5:13 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	25	103
PROJECT FILE NO.	613319		

CURB & BASELINE TIE PLANS



BFRT 3 - ALIGNMENT CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	1+00.00	2950522.426	675416.914		N8°42'51"E 263.74'	3+63.74	2950783.118	675456.871
C1	3+63.74	2950783.118	675456.871	R=2500.00' Δ=1°16'05" L=55.33' T=27.66'		4+19.06	2950837.895	675464.648
L2	4+19.06	2950837.895	675464.648		N7°26'46"E 712.24'	11+31.31	2951544.130	675556.950

EATON ROAD W SPUR PATH CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L201	200+00.00	2950710.432	675297.394		S80°39'53"E 146.63'	201+46.63	2950686.647	675442.084

20200765.A30_CURB AND BASELINE TIE PLAN.DWG Plotted on 12-Feb-2026 5:15 PM

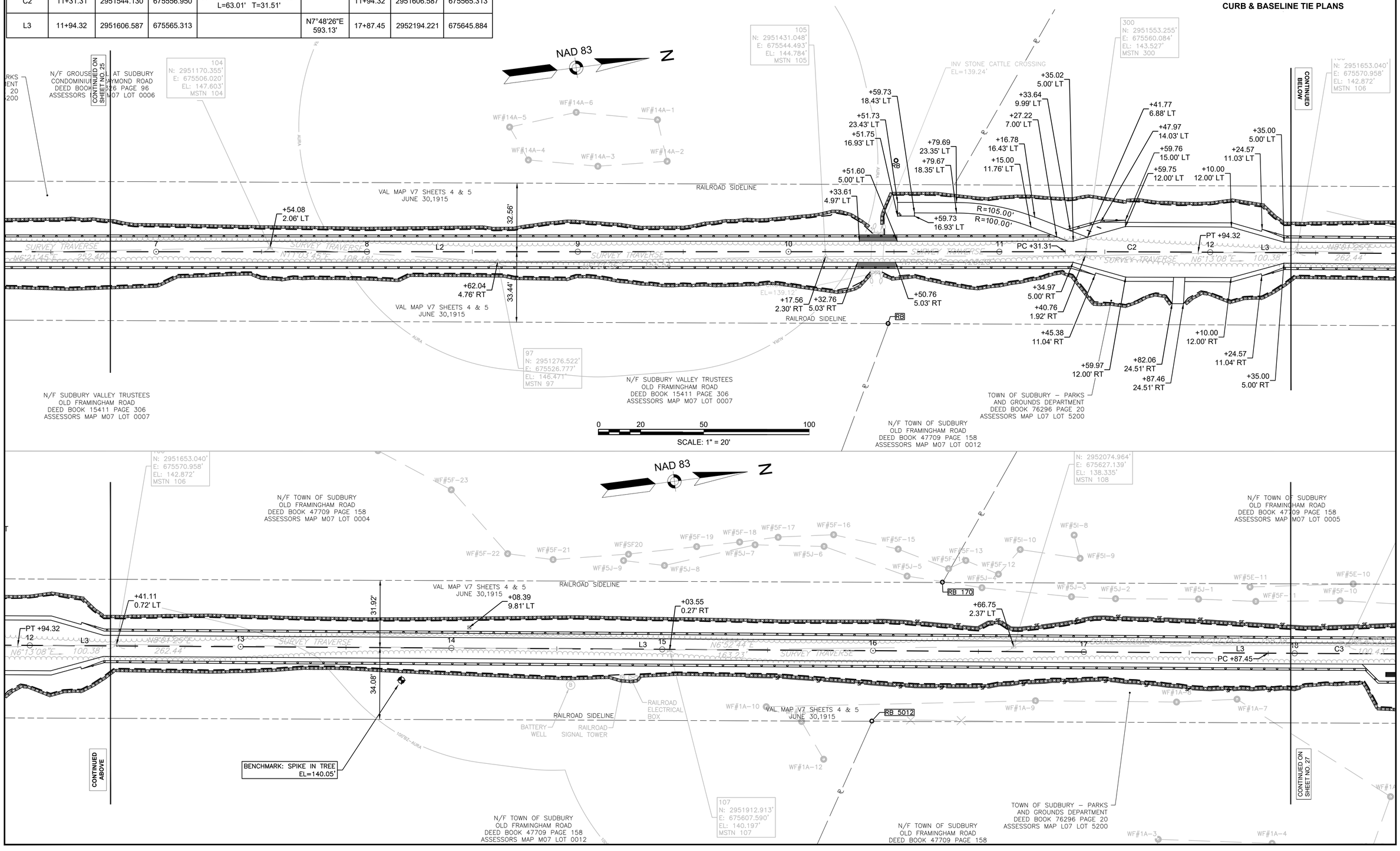
BFRT 3 - ALIGNMENT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L2	4+19.06	2950837.895	675464.648		N7°26'46"E 712.24'	11+31.31	2951544.130	675556.950
C2	11+31.31	2951544.130	675556.950	R=10000.00' Δ=0°21'40" L=63.01' T=31.51'		11+94.32	2951606.587	675565.313
L3	11+94.32	2951606.587	675565.313		N7°48'26"E 593.13'	17+87.45	2952194.221	675645.884

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	26	103
PROJECT FILE NO.	613319		

CURB & BASELINE TIE PLANS

20200765.A30_CURB AND BASELINE TIE PLAN.DWG Plotted on 12-Feb-2026 5:15 PM

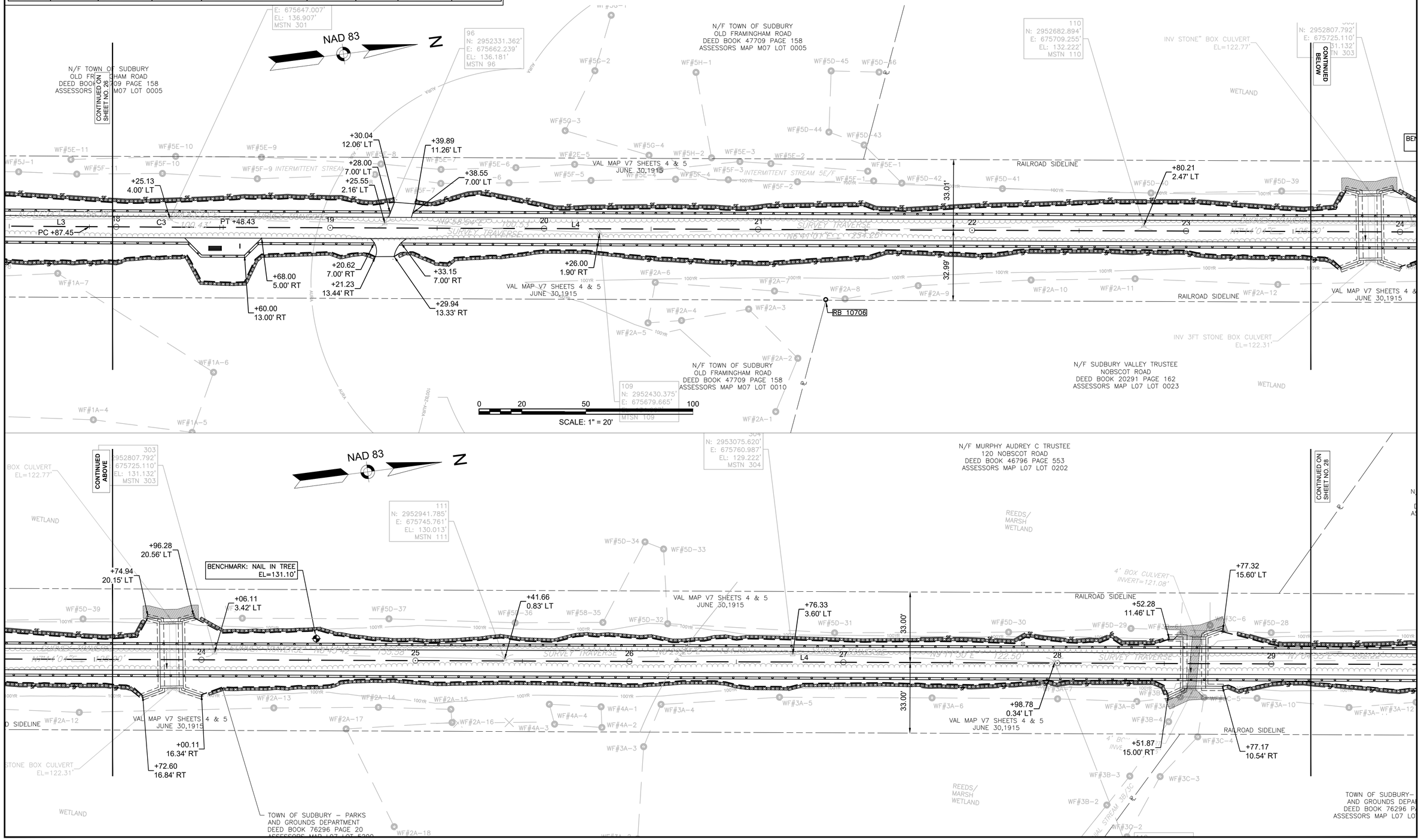


BFRT 3 - ALIGNMENT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C3	17+87.45	2952194.221	675645.884	R=25000.00' Δ=0°08'23" L=60.98' T=30.49'		18+48.43	2952254.644	675654.094
L4	18+48.43	2952254.644	675654.094		N7°40'03"E 2136.39'	39+84.82	2954371.929	675939.137

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	27	103
PROJECT FILE NO.	613319		

CURB & BASELINE TIE PLANS



20200705.A30_CURB AND BASELINE TIE PLAN.DWG Plotted on 12-Feb-2026 5:15 PM

BFRT 3 - ALIGNMENT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L4	18+48.43	2952254.644	675654.094		N7°40'03"E 2136.39'	39+84.82	2954371.929	675939.137

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	28	103
PROJECT FILE NO.	613319		

CURB & BASELINE TIE PLANS

NAD 83 N

CONTINUED ON SHEET NO. 27

N/F REED L & DAWN R SHILTS
SOUTH MEADOW DR
DEED BOOK 49850 PAGE 382
ASSESSORS MAP L07 LOT 0325

BENCHMARK: NAIL IN TREE
EL=129.43'

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

+50.99
2.94' LT

+50.00
8.00' LT

32.99'

+09.00
7.00' LT

+15.00
13.00' LT

+35.00
13.00' LT

+41.00
7.00' LT

+98.69
8.00' LT

+26.29
16.24' LT

RB NO 7

+36.53
3.05' LT

+49.53
18.50' LT

CONTINUED BELOW

RAILROAD SIDELINE

+50.00
8.00' RT

33.01'

+09.98
0.52' LT

+98.69
8.00' RT

+50.06
13.59' RT

+27.44
15.69' RT

SBDH
N: 2953822.6'±
E: 675898.8'±
RTK GPS LOCATED

TOWN OF SUDBURY – PARKS
AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

113
N: 2953446.840'
E: 675811.624'
EL: 128.530'
MSTN 113

114
N: 2953703.199'
E: 675848.580'
EL: 128.269'
MSTN 114

INTERMITTENT STREAM 58/C

N/F TOWN OF SUDBURY
RAYMOND ROAD
DEED BOOK 9847 PAGE 105
ASSESSORS MAP L08 LOT 0002

305
N: 2953828.956'

0 20 50 100
SCALE: 1" = 20'

NAD 83 N

CONTINUED ABOVE

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 12616 PAGE 175
ASSESSORS MAP L07 LOT 0039

95
N: 2954097.858'
E: 675895.897'
EL: 128.206'
MSTN 95

116
N: 2954219.574'
E: 675912.764'
EL: 128.641'
MSTN 116

307
N: 2954352.913'
E: 675933.698'
EL: 127.469'
REB 307

CC BND
N: 2954369.851'
E: 675938.891'

RB 176

RB NO 7

+04.66
27.98' LT

+30.93
27.98' LT

+30.30
5.81' LT

+72.28
7.00' LT

+65.24
2.85' LT

+90.03
8.00' LT

+76.12
0.13' LT

32.98'

+62.35
7.00' LT

+07.43
6.29' LT

R=50.00'

R=50.00'

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

RAILROAD SIDELINE

PC +84.82

+00.00
8.00' RT

33.02'

+20.35
4.90' RT

+22.54
8.00' RT

+23.63
9.50' RT

+41.18
4.90' RT

+39.68
8.00' RT

+38.93
9.50' RT

BENCHMARK: TOP OF 2" PIPE
EL=126.45'

TOWN OF SUDBURY – PARKS
AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

115
N: 2953966.903'
E: 675884.480'
EL: 128.407'
MSTN 115

CONTINUED ON SHEET NO. 29

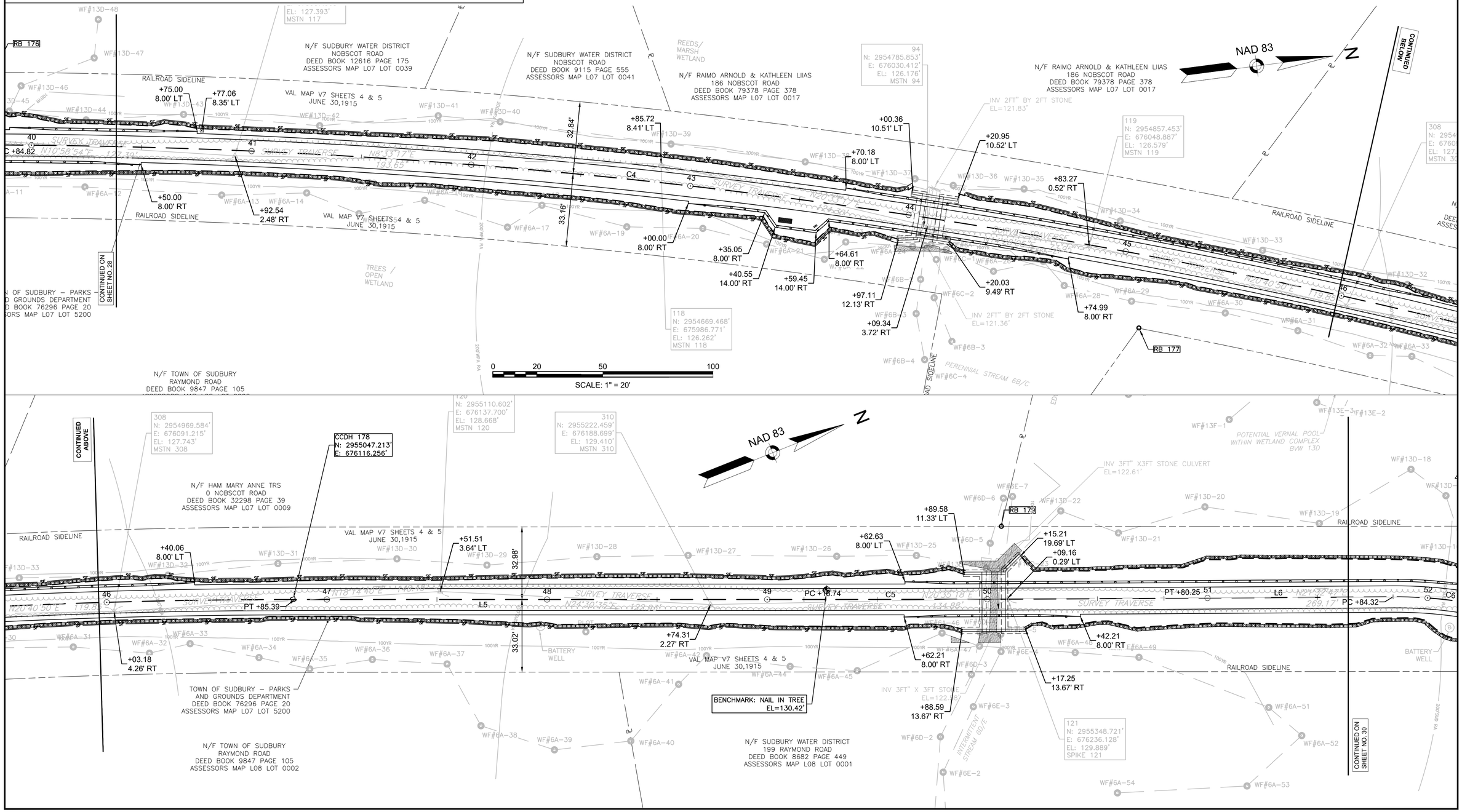
20200705.A30_CURB AND BASELINE TIE PLAN.DWG Plotted on 12-Feb-2026 5:16 PM

BFRT 3 - ALIGNMENT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C4	39+84.82	2954371.929	675939.137	R=2850.00' Δ=14°05'03" L=700.57' T=352.06'		46+85.39	2955047.833	676116.576
L5	46+85.39	2955047.833	676116.576		N21°45'06"E 231.35'	49+16.74	2955262.714	676202.312
C5	49+16.74	2955262.714	676202.312	R=25000.00' Δ=0°22'29" L=163.51' T=81.76'		50+80.25	2955414.784	676262.411
L6	50+80.25	2955414.784	676262.411		N21°22'36"E 104.07'	51+84.32	2955511.693	676300.344

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	29	103
PROJECT FILE NO.	613319		

CURB & BASELINE TIE PLANS



20200765.A30_CURB AND BASELINE TIE PLAN.DWG Plotted on 12-Feb-2026 8:13 PM

BFRT 3 - ALIGNMENT CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L6	50+80.25	2955414.784	676262.411		N21°22'36"E 104.07'	51+84.32	2955511.693	676300.344
C6	51+84.32	2955511.693	676300.344	R=200.00' Δ=8°44'46" L=30.53' T=15.29'		52+14.85	2955539.165	676313.594
L7	52+14.85	2955539.165	676313.594		N30°07'23"E 34.79'	52+49.65	2955569.259	676331.056
C7	52+49.65	2955569.259	676331.056	R=205.00' Δ=8°44'46" L=31.29' T=15.68'		52+80.94	2955597.417	676344.637
L8	52+80.94	2955597.417	676344.637		N21°22'36"E 189.41'	54+70.35	2955773.797	676413.678
C8	54+70.35	2955773.797	676413.678	R=205.00' Δ=8°44'46" L=31.29' T=15.68'		55+01.64	2955803.693	676422.820
L9	55+01.64	2955803.693	676422.820		N12°37'50"E 30.60'	55+32.24	2955833.551	676429.511
C9	55+32.24	2955833.551	676429.511	R=205.35' Δ=9°41'25" L=34.73' T=17.41'		55+66.97	2955866.816	676439.349
L10	55+66.97	2955866.816	676439.349		N21°32'03"E 24.41'	55+91.38	2955889.521	676448.308
C10	55+91.38	2955889.521	676448.308	R=1000.00' Δ=1°35'47" L=27.86' T=13.93'		56+19.24	2955915.294	676458.895
C11	56+19.24	2955915.294	676458.895	R=1000.00' Δ=1°45'13" L=30.61' T=15.31'		56+49.85	2955943.621	676470.486
L11	56+49.85	2955943.621	676470.486		N21°22'36"E 331.59'	59+81.44	2956252.396	676591.350

NOBSCOT ROAD PARKING LOT CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L301	300+00.00	2955720.630	676162.889		S43°27'14"E 19.97'	300+19.97	2955706.135	676176.622
C301	300+19.97	2955706.135	676176.622	R=20.00' Δ=28°09'12" L=9.83' T=5.01'		300+29.79	2955700.912	676184.830
L302	300+29.79	2955700.912	676184.830		S71°36'26"E 4.88'	300+34.68	2955699.372	676189.461
C302	300+34.68	2955699.372	676189.461	R=20.00' Δ=63°09'52" L=22.05' T=12.30'		300+56.72	2955704.152	676209.858
L303	300+56.72	2955704.152	676209.858		N45°13'42"E 200.50'	302+57.22	2955845.360	676352.196
C303	302+57.22	2955845.360	676352.196	R=15.00' Δ=69°45'34" L=18.26' T=10.46'		302+75.49	2955862.236	676355.277
L304	302+75.49	2955862.236	676355.277		N24°31'52"W 36.02'	303+11.51	2955895.009	676340.320

PARKING LOT SPUR PATH - ALIGNMENT CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L101	101+00.00	2955866.063	676350.263		N42°36'42"E 58.22'	101+58.22	2955908.912	676389.680
C101	101+58.22	2955908.912	676389.680	R=30.00' Δ=68°45'55" L=36.01' T=20.53'		101+94.23	2955916.537	676422.694
L102	101+94.23	2955916.537	676422.694		S68°37'24"E 33.87'	102+28.09	2955904.193	676454.232

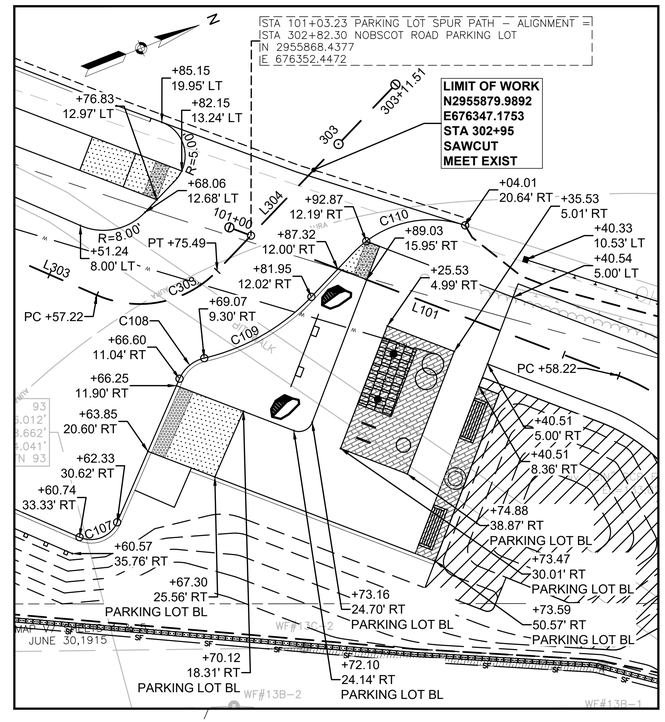
Curve Table			
Curve #	Delta	Radius	Length
C101	12°51'57"	30.00	6.74
C102	57°25'26"	25.16	25.21
C103	39°21'44"	10.00	6.87
C104	45°00'00"	5.00	3.93
C105	45°00'00"	2.00	1.57
C106	45°00'00"	2.00	1.57
C107	90°00'00"	4.00	6.28
C108	53°27'18"	5.00	4.66
C109	33°24'54"	30.00	17.50
C110	54°29'03"	15.00	14.26

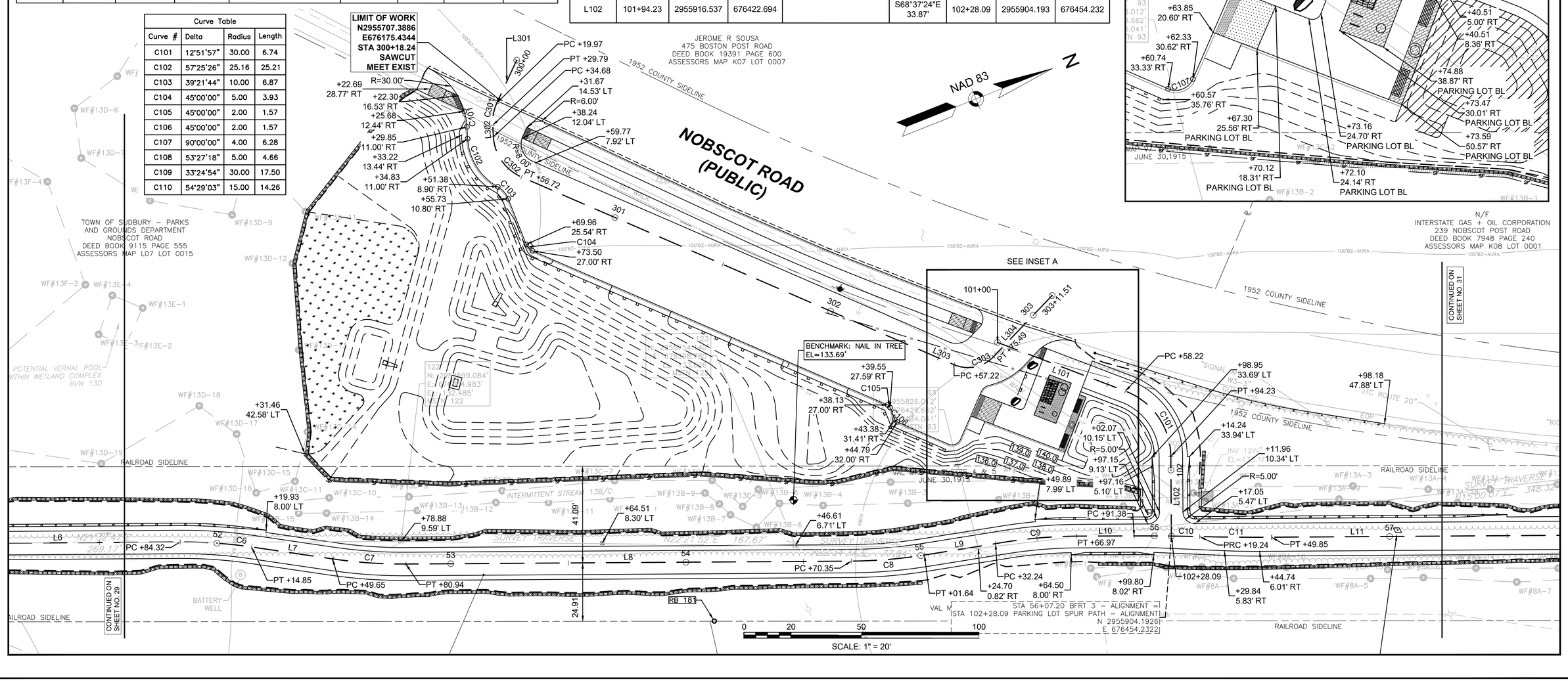
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	30	103
PROJECT FILE NO.	613319		

CURB & BASELINE TIE PLANS

INSET 'A'
1" = 10'





20200765.A30_CURB AND BASELINE TIE PLAN.DWG Plotted on 12-Feb-2026 5:17 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	31	103
PROJECT FILE NO.	613319		

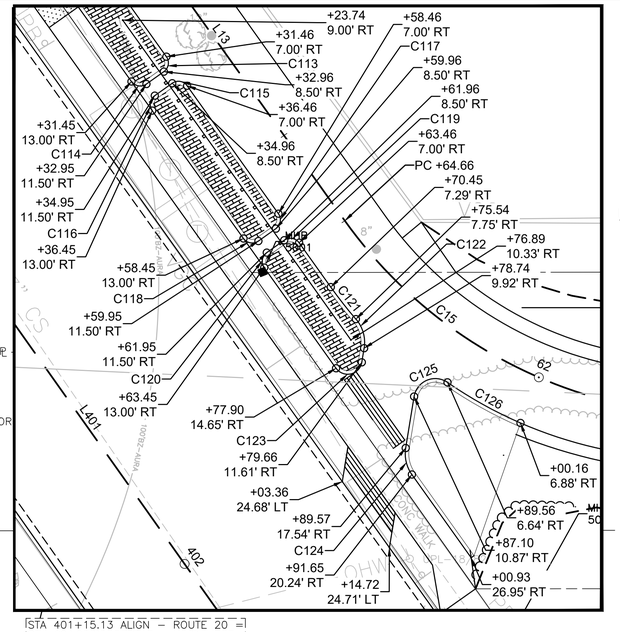
CURB & BASELINE TIE PLANS

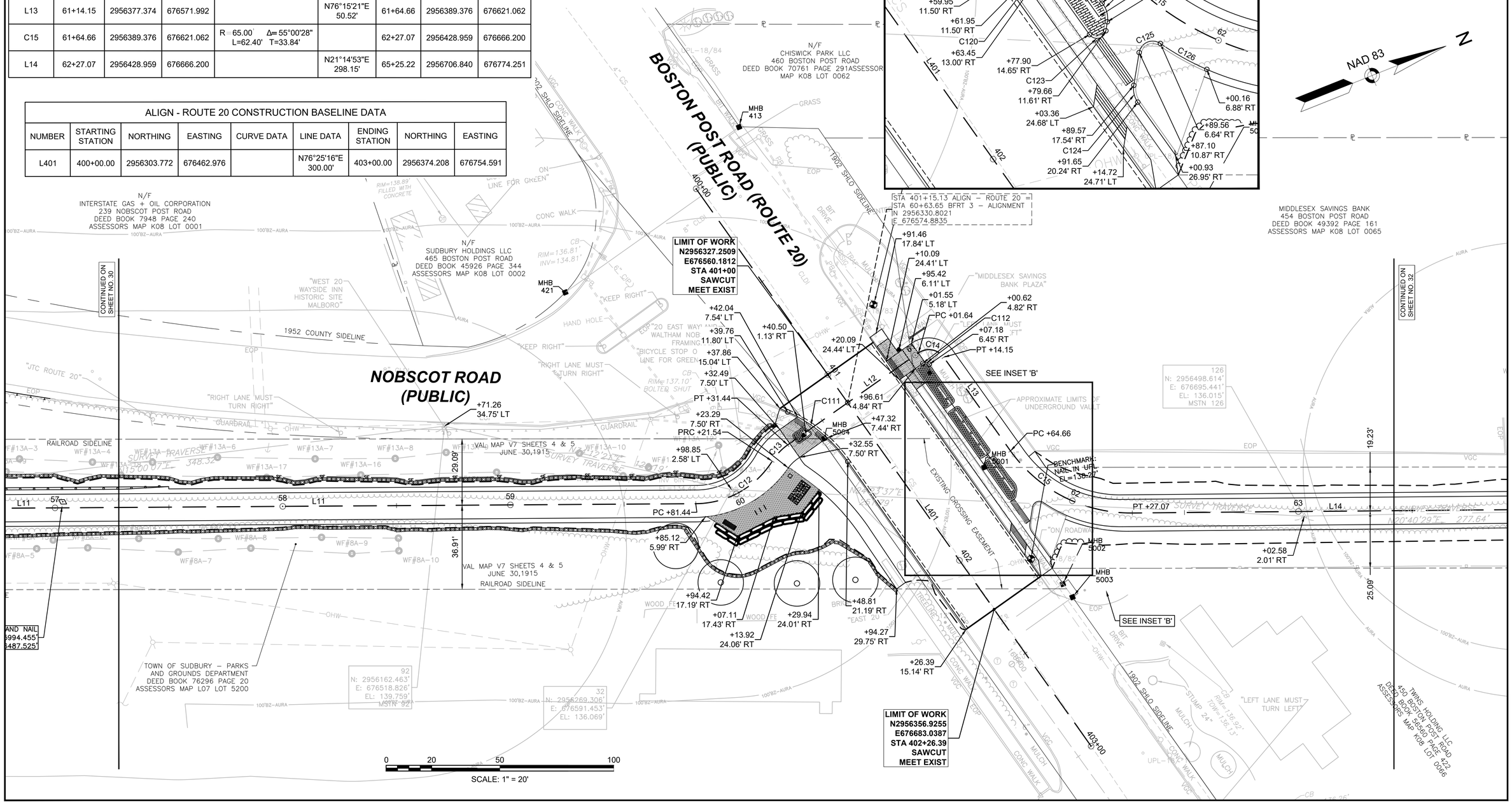
BFRT 3 - ALIGNMENT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L11	56+49.85	2955943.621	676470.486		N21°22'36"E 331.59'	59+81.44	2956252.396	676591.350
C12	59+81.44	2956252.396	676591.350	R=40.00' Δ=57°26'05" L=40.10' T=21.92'		60+21.54	2956290.520	676586.439
C13	60+21.54	2956290.520	676586.439	R=25.00' Δ=22°42'05" L=9.91' T=5.02'		60+31.44	2956299.460	676582.325
L12	60+31.44	2956299.460	676582.325		N13°21'25"W 70.19'	61+01.64	2956367.755	676566.110
C14	61+01.64	2956367.755	676566.110	R=8.00' Δ=89°36'46" L=12.51' T=7.95'		61+14.15	2956377.374	676571.992
L13	61+14.15	2956377.374	676571.992		N76°15'21"E 50.52'	61+64.66	2956389.376	676621.062
C15	61+64.66	2956389.376	676621.062	R=65.00' Δ=55°00'28" L=62.40' T=33.84'		62+27.07	2956428.959	676666.200
L14	62+27.07	2956428.959	676666.200		N21°14'53"E 298.15'	65+25.22	2956706.840	676774.251

ALIGN - ROUTE 20 CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L401	400+00.00	2956303.772	676462.976		N76°25'16"E 300.00'	403+00.00	2956374.208	676754.591

Curve Table			
Curve #	Delta	Radius	Length
C111	30°30'19"	65.00	34.61
C112	89°50'06"	2.00	3.14
C113	90°09'54"	1.50	2.36
C114	89°50'06"	1.50	2.35
C115	89°50'06"	1.50	2.35
C116	90°09'54"	1.50	2.36
C117	90°09'54"	1.50	2.36
C118	89°50'06"	1.50	2.35

Curve Table			
Curve #	Delta	Radius	Length
C119	89°50'06"	1.50	2.35
C120	90°09'54"	1.50	2.36
C121	5°15'54"	62.00	5.70
C122	50°02'40"	5.00	4.37
C123	135°13'16"	2.00	4.72
C124	44°46'44"	5.00	3.91
C125	115°24'15"	3.00	6.04
C126	11°10'57"	60.00	11.71





20200765.A30_CURB AND BASELINE TIE PLAN.DWG Plotted on 12-Feb-2026 5:18 PM

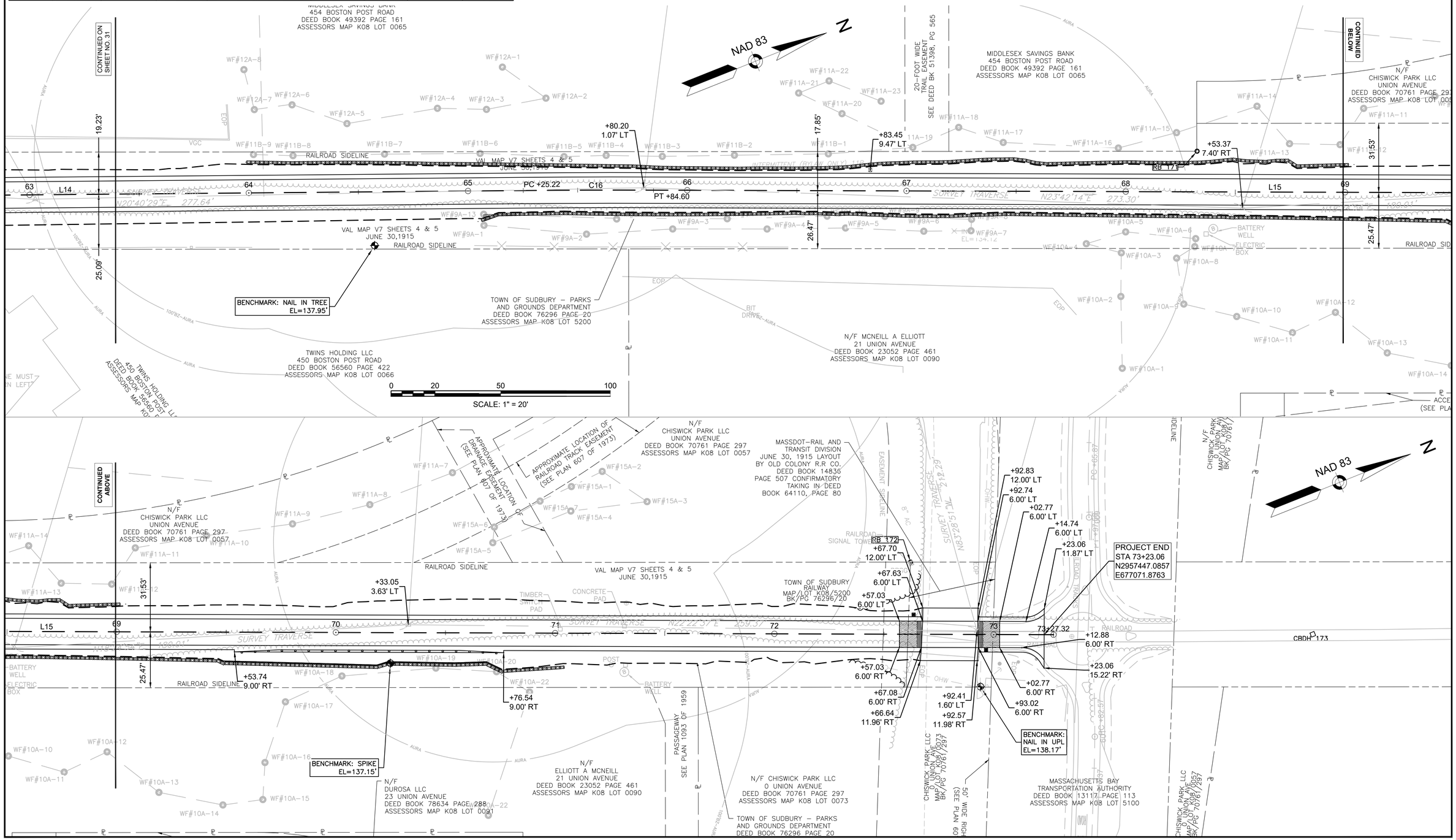
BFRT 3 - ALIGNMENT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L14	62+27.07	2956428.959	676666.200		N21°14'53"E 298.15'	65+25.22	2956706.840	676774.251
C16	65+25.22	2956706.840	676774.251	R=5000.00' Δ=0°40'50" L=59.39' T=29.69'		65+84.60	2956762.060	676796.101
L15	65+84.60	2956762.060	676796.101		N21°55'43"E 742.72'	73+27.32	2957451.042	677073.469

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	32	103
PROJECT FILE NO. 613319			

CURB & BASELINE TIE PLANS

20200765.A30_CURB AND BASELINE TIE PLAN.DWG Plotted on 12-Feb-2026 5:18 PM



SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	33	103
PROJECT FILE NO.	613319		

GRADING PLANS

20200785.A30_GRADING PLANS.DWG Plotted on 12-Feb-2026 5:20 PM

NAD 83 N

91 EATON ROAD WEST REALTY TRUST
91 EATON ROAD WEST
DEED BOOK 81629 PAGE 31
ASSESSORS ID: 10-50-3537

EATON ROAD WEST (PUBLIC)

LIMIT OF WORK
N2950699.7641
E675362.2904
STA 200+65.77
SAWCUT
MEET EXIST

PROJECT BEGIN
STA 2+25
N2950645.9827
E675435.8517

N/F PHYLLIS C & MICHAEL J T VAYDA
88 EATON ROAD WEST
DEED BOOK 72983 PAGE 533
ASSESSORS ID: 10-50-3872

N/F SUDBURY VALLEY TRUSTEES, INC
NO# EATON ROAD WEST
DEED BOOK 15411 PAGE 306
ASSESSORS ID: 9-41-9082

SUDBURY
FRAMINGHAM

N/F SUDBURY VALLEY TRUSTEES, INC
NO# EATON ROAD WEST
DEED BOOK 15411 PAGE 306
ASSESSORS MAP M07 LOT 0007

TOWN OF SUDBURY - PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F GROUSE HILL AT SUDBURY CONDOMINIUMS RAYMOND ROAD
DEED BOOK 50326 PAGE 96
ASSESSORS MAP M07 LOT 0006

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

CSX TRANSPORTATION, INC.
DEED BOOK 51796 PAGE 101

N/F CONOR W & STEPHANIE D GOLDEN
20 COLONIAL DRIVE
DEED BOOK 84081 PAGE 274
ASSESSORS ID: 10-50-5631

N/F LYN BODMER 2025 TRUST
21 COLONIAL DRIVE
DEED BOOK 84083 PAGE 305
ASSESSORS ID: 10-50-5774

N/F OWNER UNKNOWN

N/F OWNER UNKNOWN

N/F SUDBURY VALLEY TRUSTEES
OLD FRAMINGHAM ROAD
DEED BOOK 15411 PAGE 306
ASSESSORS MAP M07 LOT 0007

CONTINUED ON SHEET NO. 34

0 20 50 100
SCALE: 1" = 20'

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	34	103
PROJECT FILE NO.	613319		

GRADING PLANS

20200785.A30_GRADING PLANS.DWG Plotted on 12-Feb-2026 5:20 PM

NAD 83 N

SCALE: 1" = 20'

N/F GROUSE HILL AT SUDBURY CONDOMINIUMS RAYMOND ROAD
DEED BOOK 50326 PAGE 96
ASSESSORS MAP M07 LOT 0006

CONTINUED ON SHEET NO. 33

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

N/F SUDBURY VALLEY TRUSTEES
OLD FRAMINGHAM ROAD
DEED BOOK 15411 PAGE 306
ASSESSORS MAP M07 LOT 0007

GRAVEL PATH

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0012

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

CONTINUED BELOW

CONTINUED ABOVE

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0004

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0005

RAILROAD ELECTRICAL BOX

BATTERY WELL

RAILROAD SIGNAL TOWER

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0010

CONTINUED ON SHEET NO. 35

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	35	103
PROJECT FILE NO.	613319		

GRADING PLANS

20200785.A30_GRADING PLANS.DWG Plotted on 12-Feb-2026 5:20 PM

NAD 83 N

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0005

CONTINUED ON SHEET NO. 34

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0005

CONTINUED BELOW

WETLAND

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0010

N/F SUDBURY VALLEY TRUSTEE
NOBSCOT ROAD
DEED BOOK 20291 PAGE 162
ASSESSORS MAP L07 LOT 0023

WETLAND

0 20 50 100
SCALE: 1" = 20'

NAD 83 N

CONTINUED ABOVE

WETLAND

N/F MURPHY AUDREY C TRUSTEE
120 NOBSCOT ROAD
DEED BOOK 46796 PAGE 553
ASSESSORS MAP L07 LOT 0202

REEDS/
MARSH
WETLAND

CONTINUED ON SHEET NO. 36

4' BOX CULVERT
INVERT=121.06

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

4' BOX CULVERT
INVERT=121.96

REEDS/
MARSH
WETLAND

PERENNIAL STREAM 35/3C

TOWN OF SUDBURY – PARKS
AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

TOWN OF SUDBURY–
AND GROUNDS DEPA
DEED BOOK 76296 PA
ASSESSORS MAP L07 LO

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	36	103
PROJECT FILE NO.	613319		

GRADING PLANS

Plotted on 12-Feb-2026 5:21 PM
20200785.A30_GRADING PLANS.DWG

NAD 83 N

N/F REED L & DAWN R SHILTS
SOUTH MEADOW DR
DEED BOOK 49850 PAGE 382
ASSESSORS MAP L07 LOT 0325

CONTINUED ON SHEET NO. 35

CONTINUED BELOW

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

TOWN OF SUDBURY– PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F TOWN OF SUDBURY
RAYMOND ROAD
DEED BOOK 9847 PAGE 105
ASSESSORS MAP L08 LOT 0002

SCALE: 1" = 20'

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 12616 PAGE 175
ASSESSORS MAP L07 LOT 0039

CONTINUED ABOVE

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

CONTINUED ON SHEET NO. 37

F SUDBURY
ROAD
47 PAGE 105

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	37	103
PROJECT FILE NO.	613319		

GRADING PLANS

20200785.A30_GRADING PLANS.DWG Plotted on 12-Feb-2026 5:21 PM

NAD 83 N

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 12616 PAGE 175
ASSESSORS MAP L07 LOT 0039

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 9115 PAGE 555
ASSESSORS MAP L07 LOT 0041

N/F RAIMO ARNOLD & KATHLEEN LIIAS
186 NOBSCOT ROAD
DEED BOOK 79378 PAGE 378
ASSESSORS MAP L07 LOT 0017

N/F RAIMO ARNOLD & KATHLEEN LIIAS
186 NOBSCOT ROAD
DEED BOOK 79378 PAGE 378
ASSESSORS MAP L07 LOT 0017

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

REEDS/ MARSH WETLAND

CONTINUED BELOW

CONTINUED ON SHEET NO. 36

N OF SUDBURY – PARKS
D GROUNDS DEPARTMENT
D BOOK 76296 PAGE 20
SORS MAP L07 LOT 5200

N/F TOWN OF SUDBURY
RAYMOND ROAD
DEED BOOK 9847 PAGE 105
ASSESSORS MAP L08 LOT 0002

TREES / OPEN WETLAND

GRAVEL PATH

PERENNIAL STREAM 6B/C

TOWN OF SUDBUR
AND GROUNDS
DEED

0 20 50 100
SCALE: 1" = 20'

NAD 83 N

CONTINUED ABOVE

N/F HAM MARY ANNE TRS
0 NOBSCOT ROAD
DEED BOOK 32298 PAGE 39
ASSESSORS MAP L07 LOT 0009

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

TOWN OF SUDBURY – PARKS
AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F TOWN OF SUDBURY
RAYMOND ROAD
DEED BOOK 9847 PAGE 105
ASSESSORS MAP L08 LOT 0002

N/F SUDBURY WATER DISTRICT
199 RAYMOND ROAD
DEED BOOK 8682 PAGE 449
ASSESSORS MAP L08 LOT 0001

BATTERY WELL

GRAVEL PATH

INTERMITTENT STREAM 6D/E

POTENTIAL VERNAL POOL WITHIN WETLAND COMPLEX BVW 13D

CONTINUED ON SHEET NO. 38

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	38	103
PROJECT FILE NO.	613319		

GRADING PLANS

20200785.A30_GRADING PLANS.DWG Plotted on 12-Feb-2026 5:21 PM

JEROME R SOUSA
475 BOSTON POST ROAD
DEED BOOK 19391 PAGE 600
ASSESSORS MAP K07 LOT 0007

LIMIT OF WORK
N2955707.3886
E676175.4344
STA 300+18.24
SAWCUT
MEET EXIST

JEROME R SOUSA
475 BOSTON POST ROAD
DEED BOOK 19391 PAGE 600
ASSESSORS MAP K07 LOT 0007

NOBSCOT ROAD (PUBLIC)

INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

N/F
INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

TOWN OF SUDBURY – PARKS
AND GROUNDS DEPARTMENT
NOBSCOT ROAD
DEED BOOK 9115 PAGE 555
ASSESSORS MAP L07 LOT 0015

LIMIT OF WORK
N2955879.9892
E676347.1753
STA 302+95
SAWCUT
MEET EXIST

TOWN OF SUDBURY – PARKS
AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F SUDBURY WATER DISTRICT
199 RAYMOND ROAD
DEED BOOK 8682 PAGE 449
ASSESSORS MAP L08 LOT 0001

1776 PLAZA LIMITED PARTNERSHIP
457–447 BOSTON POST ROAD
DEED BOOK 20083 PAGE 348
ASSESSORS MAP K08 LOT 0003

TOWN OF SUDBURY –
AND GROUNDS DEPAR
DEED BOOK 76296 PA
ASSESSORS MAP L07 LOT

CONTINUED ON SHEET NO. 37

CONTINUED ON SHEET NO. 39

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

INTERMITTENT STREAM 13B/C

POTENTIAL VERNAL POOL
WITHIN WETLAND COMPLEX
BVW 13D

BATTERY WELL

0 20 50 100
SCALE: 1" = 20'

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	39	103
PROJECT FILE NO.	613319		

GRADING PLANS

20200785.A30_GRADING PLANS.DWG Plotted on 12-Feb-2026 5:22 PM

INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

SUDBURY HOLDINGS LLC
465 BOSTON POST ROAD
DEED BOOK 45926 PAGE 344
ASSESSORS MAP K08 LOT 0002

N/F
INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

N/F
SUDBURY HOLDINGS LLC
465 BOSTON POST ROAD
DEED BOOK 45926 PAGE 344
ASSESSORS MAP K08 LOT 0002

N/F
CHISWICK PARK LLC
460 BOSTON POST ROAD
DEED BOOK 70761 PAGE 291ASSESSORS
MAP K08 LOT 0062

MIDDLESEX SAVINGS BANK
454 BOSTON POST ROAD
DEED BOOK 49392 PAGE 161
ASSESSORS MAP K08 LOT 0065

BOSTON POST ROAD (ROUTE 20) (PUBLIC)

NOBSCOT ROAD (PUBLIC)

NAD 83 N

LIMIT OF WORK
N2956327.2509
E676560.1812
STA 401+00
SAWCUT
MEET EXIST

LIMIT OF WORK
N2956356.9255
E676683.0387
STA 402+26.39
SAWCUT
MEET EXIST

CONTINUED ON SHEET NO. 38

CONTINUED ON SHEET NO. 40

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

1776 PLAZA LIMITED PARTNERSHIP
457–447 BOSTON POST ROAD
DEED BOOK 20083 PAGE 348
ASSESSORS MAP K08 LOT 0003

4SS TWINS HOLDING LLC
450 BOSTON POST ROAD
DEED BOOK 35550 PAGE 422
ASSESSORS MAP K08 LOT 0066

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

0 20 50 100
SCALE: 1" = 20'

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	40	103
PROJECT FILE NO.	613319		

GRADING PLANS

20200785.A30_GRADING PLANS.DWG Plotted on 12-Feb-2026 5:22 PM

NAD 83 N

SCALE: 1" = 20'

CONTINUED ON SHEET NO. 39

MIDDLESEX SAVINGS BANK
454 BOSTON POST ROAD
DEED BOOK 49392 PAGE 161
ASSESSORS MAP K08 LOT 0065

BIT PARKING LOT

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

20-FOOT WIDE TRAIL EASEMENT SEE DEED BK 51398, PG 565

CONTINUED BELOW

N/F
CHISWICK PARK LLC
UNION AVENUE
DEED BOOK 70761 PAGE 297
ASSESSORS MAP K08 LOT 0057

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP K08 LOT 5200

N/F MCNEILL A ELLIOTT
21 UNION AVENUE
DEED BOOK 23052 PAGE 461
ASSESSORS MAP K08 LOT 0090

TWINS HOLDING LLC
450 BOSTON POST ROAD
DEED BOOK 56560 PAGE 422
ASSESSORS MAP K08 LOT 0066

BATTERY WELL
ELECTRIC BOX

WOOD FENCE

BIT DRIVE

APPROXIMATE LOCATION OF DRAINAGE EASEMENT (SEE PLAN 607 OF 1973)

APPROXIMATE LOCATION OF RAILROAD TRACK EASEMENT (SEE PLAN 607 OF 1973)

MASSDOT–RAIL AND TRANSIT DIVISION
JUNE 30, 1915 LAYOUT BY OLD COLONY R.R CO.
DEED BOOK 14836 PAGE 507 CONFIRMATORY TAKING IN DEED BOOK 64110, PAGE 80

EASEMENT SIDELINE

RAILROAD SIGNAL TOWER

TOWN OF SUDBURY RAILWAY
MAP/LOT K08/5200
BK/PG 76296/20

RAILROAD TRACKS

PROJECT END
STA 73+23.06
N2957447.0857
E677071.8763

CONTINUED ABOVE

N/F
CHISWICK PARK LLC
UNION AVENUE
DEED BOOK 70761 PAGE 297
ASSESSORS MAP K08 LOT 0057

ACCESS EASEMENT
(SEE PLAN 416 OF 1984)

N/F
DUROSA LLC
23 UNION AVENUE
DEED BOOK 78634 PAGE 288
ASSESSORS MAP K08 LOT 0091

N/F
ELLIOTT A MCNEILL
21 UNION AVENUE
DEED BOOK 23052 PAGE 461
ASSESSORS MAP K08 LOT 0090

PASSAGEWAY
SEE PLAN 1093 OF 1959

N/F CHISWICK PARK LLC
0 UNION AVENUE
DEED BOOK 70761 PAGE 297
ASSESSORS MAP K08 LOT 0073

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP K08 LOT 5200

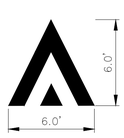
CHISWICK PARK LLC
MAP/LOT K08/0073
BK/PG 70761/297

5.0' WIDE RIGHT OF
(SEE PLAN 607 OF

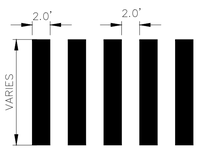
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
DEED BOOK 13117 PAGE 113
ASSESSORS MAP K08 LOT 5100

CHISWICK PARK LLC
0 UNION AVE
MAP/LOT K08/0057
BK/PG 70761/297

1. ALL EXISTING SIGNS TO REMAIN UNLESS OTHERWISE NOTED ON PLANS.
2. ALL PAVEMENT MARKINGS ON RAIL TRAIL AND PARKING LOT SHALL BE REFLECTORIZED PAINT.
3. ALL PROPOSED PAVEMENT MARKING LINES ON ROADWAYS SHALL BE 6" WIDE, EXCEPT STOP BARS WHICH SHALL BE 12" WIDE. ALL MARKINGS SHALL BE REFLECTORIZED THERMOPLASTIC.
4. SIGN SUPPORTS FOR SHARED-USE PATH SHALL BE 4"x4" PRESSURE TREATED WOOD POSTS AND PLACED AS SHOWN ON THE "TYPICAL SIGN PLACEMENT DETAIL" IN THE CONSTRUCTION DETAILS.
5. ANY SIGN LABELED WITH AN " * " SHALL BE MOUNTED ON A STANDARD P-5 POST AT STANDARD MUTCD HEIGHT UNLESS OTHERWISE SHOWN ON PLANS.
6. ALL P-5 POSTS SHALL BE FACTORY COATED GLOSS BLACK.
7. EXISTING PAVEMENT MARKING REMOVAL WILL BE REQUIRED TO INSTALL THE PROPOSED PAVEMENT MARKINGS IN CONFLICTING AREAS PER PLAN.
8. ALL "DS" WAYFINDING SIGNS SHALL BE MOUNTED ON TIMBER SPECIAL CANTILEVER POST. SEE CONSTRUCTION DETAILS.



RAISED CROSSWALK CHEVRON DETAIL
N.T.S



CROSSWALK DETAIL
N.T.S



TRAIL CROSSING DETAIL AT TRAIL ROUNDABOUT
N.T.S



ROAD CROSSING DETAIL ON TRAIL
N.T.S



ACCESSIBILITY PARKING SPACE MARKING
N.T.S



STANDARD LANE MARKINGS
N.T.S

MARKING LEGEND	
	PROPOSED SIGN
SL	PROPOSED 12" WHITE STOP LINE
CW	PROPOSED 24" WHITE CROSS WALK
SWL	PROPOSED 6" SINGLE WHITE EDGE LINE
SWLL	PROPOSED 6" SINGLE WHITE LANE LINE
SYCL	PROPOSED 6" SINGLE YELLOW CENTER LINE
BYCL	PROPOSED 6" BROKEN YELLOW CENTER LINE (2' MARK - 6' SKIP)
DYCL	PROPOSED 6" DOUBLE YELLOW CENTER LINE
WGL	WHITE GORE LINE - 6" SOLID WHITE LINE (3.5' O.C.) @ 45 DEGREES

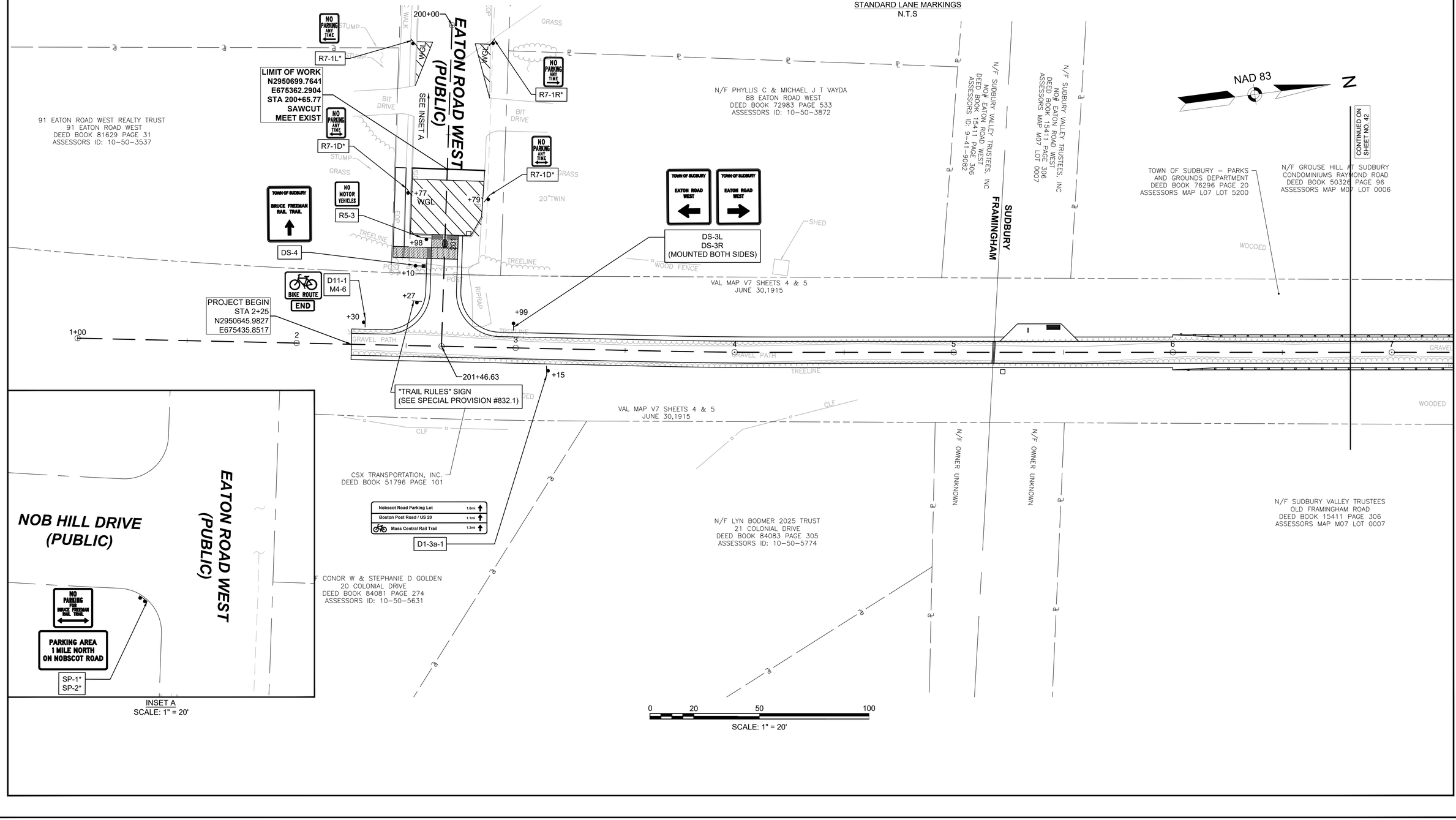
XXXX PROPOSED SIGN DESIGNATION

XXXX EXISTING SIGN DESIGNATION

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	41	103
PROJECT FILE NO.		613319	

PAVEMENT MARKING & SIGNING PLANS



20200785.A30_PAVEMENT MARKING PLANS.DWG Plotted on 12-Feb-2026 5:23 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	42	103
PROJECT FILE NO.	613319		

PAVEMENT MARKING & SIGNING PLANS

20200785.A30_PAVEMENT MARKING PLANS.DWG Plotted on 12-Feb-2026 5:24 PM

N/F GROUSE ... AT SUDBURY CONDOMINIUM ... YMOND ROAD
DEED BOOK ... 26 PAGE 96
ASSESSORS M... 07 LOT 0006

CONTINUED ON SHEET NO.41

RKS
ENT
20
200

WOODED

NAD 83 N

WF#14A-6
WF#14A-5
WF#14A-4
WF#14A-3
WF#14A-2
WF#14A-1

AURA

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

INV STONE CATTLE CROSSING
EL=139.24'

PROP INTERPRETIVE SIGN (TYP.)

CONTINUED BELOW

TREELINE

7 8 9 10 11 12

GRAVEL PATH

INV STONE CATTLE CROSSING
EL=139.12'

WOODED

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

GRAVEL

PREDOMINANTLY <2" VEGETATION

N/F SUDBURY VALLEY TRUSTEES
OLD FRAMINGHAM ROAD
DEED BOOK 15411 PAGE 306
ASSESSORS MAP M07 LOT 0007

N/F SUDBURY VALLEY TRUSTEES
OLD FRAMINGHAM ROAD
DEED BOOK 15411 PAGE 306
ASSESSORS MAP M07 LOT 0007

TOWN OF SUDBURY – PARKS
AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0012

0 20 50 100
SCALE: 1" = 20'

CONTINUED ABOVE

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0004

NAD 83 N

WF#5F-24
WF#5F-23
WF#5F-22
WF#5F-21
WF#5F20
WF#5F-19
WF#5F-18
WF#5F-17
WF#5F-16
WF#5F-15
WF#5F-13
WF#5F-14
WF#5F-12
WF#5I-8
WF#5I-10
WF#5I-9
WF#5J-9
WF#5J-8
WF#5J-7
WF#5J-6
WF#5J-5
WF#5J-4
WF#5J-3
WF#5J-2
WF#5J-1
WF#5E-11
WF#5E-10
WF#5F-1
WF#5F-10

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0005

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

MILE MARKER

PREDOMINANTLY <2" VEGETATION

12 13 14 15 16 17 18

GRAVEL PATH

TREELINE

BATTERY WELL
RAILROAD SIGNAL TOWER
RAILROAD ELECTRICAL BOX

WF#1A-10
WF#1A-9
WF#1A-8
WF#1A-7
WF#1A-12
WF#1A-3
WF#1A-4
WF#1A-5

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

100'BZ-AURA

PREDOMINANTLY <2" VEGETATION

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0012

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0010

TOWN OF SUDBURY – PARKS
AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

CONTINUED ON SHEET NO.43

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	43	103
PROJECT FILE NO.	613319		

PAVEMENT MARKING & SIGNING PLANS

Plotted on 12-Feb-2026 5:24 PM
20200785.A30_PAVEMENT MARKING PLANS.DWG

NAD 83

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0005

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0005

CONTINUED BELOW

WETLAND

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

GRAVEL PATH

TREELINE

CONTINUED ON SHEET NO. 42

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0010

N/F SUDBURY VALLEY TRUSTEE
NOBSCOT ROAD
DEED BOOK 20291 PAGE 162
ASSESSORS MAP L07 LOT 0023

SCALE: 1" = 20'

N/F MURPHY AUDREY C TRUSTEE
120 NOBSCOT ROAD
DEED BOOK 46796 PAGE 553
ASSESSORS MAP L07 LOT 0202

CONTINUED ON SHEET NO. 44

REEDS/ MARSH WETLAND

MILE MARKER

CONTINUED ABOVE

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	44	103
PROJECT FILE NO.	613319		

PAVEMENT MARKING & SIGNING PLANS

Plotted on 12-Feb-2026 5:24 PM

20200785.A30_PAVEMENT MARKING PLANS.DWG

N/F REED L & DAWN R SHILTS
SOUTH MEADOW DR
DEED BOOK 49850 PAGE 382
ASSESSORS MAP L07 LOT 0325

NAD 83 N

TOWN OF SUDBURY
FRAMINGHAM
0.5 MILES

DS-6

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

PREDOMINANTLY <2" VEGETATION

TREELINE

GRAVEL PATH

+59

29 30 31 32 33 34 35

TOWN OF SUDBURY
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

CONTINUED ON SHEET NO. 43

CONTINUED BELOW

+81

"PUBLIC DRINKING WATER SUPPLY STAY ON TRAIL"

N/F TOWN OF SUDBURY
RAYMOND ROAD
DEED BOOK 9847 PAGE 105
ASSESSORS MAP L08 LOT 0002

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

0 20 50 100
SCALE: 1" = 20'

SPRING HOUSE POND (PRIVATE)

NOBSCOT ROAD (PUBLIC)

"PUBLIC DRINKING WATER SUPPLY NO TRESPASSING"

INSET B
SCALE: 1" = 20'

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 12616 PAGE 175
ASSESSORS MAP L07 LOT 0039

SEE INSET B

"AUTHORIZED PERSONNEL ONLY NO TRESPASSING"

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 12616 PAGE 175
ASSESSORS MAP L07 LOT 0039

NAD 83 N

CONTINUED ON SHEET NO. 45

WOODED

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

+34

15" GRAN POST

GRAVEL PATH

TREELINE

35 36 37 38 39 40

+81

+21

PREDOMINANTLY <2" VEGETATION

BATTERY WELL

"AUTHORIZED PERSONNEL ONLY NO TRESPASSING"

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

CONTINUED ABOVE

N OF SUDBURY – PARKS
D GROUNDS DEPARTMENT
D BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

SUDBURY
ROAD
47 PAGE 105

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	45	103
PROJECT FILE NO.	613319		

PAVEMENT MARKING & SIGNING PLANS

Plotted on 12-Feb-2026 5:24 PM
20200785.A30_PAVEMENT MARKING PLANS.DWG

NAD 83 N

SCALE: 1" = 20'

MILE MARKER

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 12616 PAGE 175
ASSESSORS MAP L07 LOT 0039

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 9115 PAGE 555
ASSESSORS MAP L07 LOT 0041

N/F RAIMO ARNOLD & KATHLEEN LIIAS
186 NOBSCOT ROAD
DEED BOOK 79378 PAGE 378
ASSESSORS MAP L07 LOT 0017

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

"PUBLIC DRINKING WATER SUPPLY STAY ON TRAIL"

CONTINUED ON SHEET NO.44

CONTINUED BELOW

N/F TOWN OF SUDBURY
RAYMOND ROAD
DEED BOOK 9847 PAGE 105
ASSESSORS MAP L08 LOT 0002

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F HAM MARY ANNE TRS
0 NOBSCOT ROAD
DEED BOOK 32298 PAGE 39
ASSESSORS MAP L07 LOT 0009

CONTINUED ABOVE

CONTINUED ON SHEET NO.46

N/F SUDBURY WATER DISTRICT
199 RAYMOND ROAD
DEED BOOK 8682 PAGE 449
ASSESSORS MAP L08 LOT 0001

INV 2FT" BY 2FT STONE EL=121.83'

INV 2FT" BY 2FT STONE EL=121.36'

INV 3FT" X3FT STONE CULVERT EL=122.61'

INV 3FT" X 3FT STONE EL=122.58'

TREELINE

GRAVEL PATH

PLOT

BATTERY WELL

TREES / OPEN WETLAND

REEDS/ MARSH WETLAND

PREDOMINANTLY <2" VEGETATION WITH STREAMS

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	46	103
PROJECT FILE NO.	613319		

PAVEMENT MARKING & SIGNING PLANS

Plotted on 12-Feb-2026 5:25 PM
20200785.A30_PAVEMENT MARKING PLANS.DWG

NAD 83
N

JEROME R SOUSA
475 BOSTON POST ROAD
DEED BOOK 19391 PAGE 600
ASSESSORS MAP K07 LOT 0007

JEROME R SOUSA
475 BOSTON POST ROAD
DEED BOOK 19391 PAGE 600
ASSESSORS MAP K07 LOT 0007

INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

N/F
INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
NOBSCOT ROAD
DEED BOOK 9113 PAGE 555
ASSESSORS MAP L07 LOT 0015

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F SUDBURY WATER DISTRICT
199 RAYMOND ROAD
DEED BOOK 8682 PAGE 449
ASSESSORS MAP L08 LOT 0001

1776 PLAZA LIMITED PARTNERSHIP
457–447 BOSTON POST ROAD
DEED BOOK 20083 PAGE 348
ASSESSORS MAP K08 LOT 0003

TOWN OF SUDBURY – PARKS AND GROUNDS DEPAR
DEED BOOK 76296 PA
ASSESSORS MAP L07 LOT

NOBSCOT ROAD
(PUBLIC)

LIMIT OF WORK
N2955707.3886
E676175.4344
STA 300+18.24
SAWCUT
MEET EXIST

LIMIT OF WORK
N2955879.9892
E676347.1753
STA 302+95
SAWCUT
MEET EXIST

NOBSCOT ROAD PARKING LOT
PROP. 14 PARKING SPACES

DS-2L
DS-2R
(MOUNTED BOTH SIDES)

R7-1D*

R1-1a*

R5-1*
R6-1L*
R6-1R*

BRUCE FREEMAN RAIL
TRAIL ENTRANCE SIGN
(SEE DETAILS ON SHEET 79)

"TRAIL RULES" SIGN
(SEE SPECIAL PROVISION #832.1)

R7-8*
R7-8P

R5-3

PROP. MULTI-DIRECTIONAL
RAIL TRAIL WAYFINDING SIGN
(SEE DETAIL ON SHEET 80)

R1-1b

DS-5

MILE MARKER

CONTINUED ON SHEET NO. 45

CONTINUED ON SHEET NO. 47

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

0 20 50 100
SCALE: 1" = 20'

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	47	103
PROJECT FILE NO.	613319		

PAVEMENT MARKING & SIGNING PLANS

20200785.A30_PAVEMENT MARKING PLANS.DWG Plotted on 12-Feb-2026 5:25 PM

NAD 83 N

INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

SUDBURY HOLDINGS LLC
465 BOSTON POST ROAD
DEED BOOK 45926 PAGE 344
ASSESSORS MAP K08 LOT 0002

N/F
CHISWICK PARK LLC
460 BOSTON POST ROAD
DEED BOOK 70761 PAGE 291ASSESSORS
MAP K08 LOT 0062

MIDDLESEX SAVINGS BANK
454 BOSTON POST ROAD
DEED BOOK 49392 PAGE 161
ASSESSORS MAP K08 LOT 0065

BOSTON POST ROAD (ROUTE 20) (PUBLIC)

NOBSCOT ROAD (PUBLIC)

TRAIL X-ING AHEAD
W11-15*
W11-15p*
W16-9P*

LEFT TURN YIELD ON FLASHING
MA-R10-12a (OVERHEAD)

NO TURN ON RED
R10-11b*

USE PED SIGNAL
R9-5 (MOUNTED ON SIGNAL POST)

LIMIT OF WORK
N2956327.2509
E676560.1812
STA 401+00
SAWCUT
MEET EXIST

"MIDDLESEX SAVINGS BANK PLAZA" R&R

"MIDDLESEX SAVINGS BANK PLAZA"

TOWN OF SUDBURY
BRUCE FREEMAN RAIL TRAIL
DS-4L

"LEFT LANE MUST TURN LEFT"

R5-3
NO MOTOR VEHICLES
R3-7L R&R

APPROXIMATE LIMITS OF UNDERGROUND VAULT

TOWN OF SUDBURY
BRUCE FREEMAN RAIL TRAIL
DS-4R

W1-2

AHEAD
W3-3
W16-9p

"BOSTON POST ROAD" ENGRAVED ON GRANITE PIER - TYP. (SEE CONST DETAILS)

"BICYCLE STOP ON LINE FOR GREEN"

"RIGHT LANE MUST TURN RIGHT"

"KEEP RIGHT"

"WEST 20 WAYSIDE INN HISTORIC SITE MALBORO"

"UTC ROUTE 20"

TOWN OF SUDBURY
BRUCE FREEMAN RAIL TRAIL
DS-4

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

SEE "STOP AHEAD" DETAIL ON SHEET 41

AHEAD
W3-3
W16-9p

PROP. MULTI-DIRECTIONAL RAIL TRAIL WAYFINDING SIGN (SEE DETAIL ON SHEET 80)

R9-5 (MOUNTED ON SIGNAL POST)

MATCH EXISTING MARKINGS

LIMIT OF WORK
N2956356.9255
E676683.0387
STA 402+26.39
SAWCUT
MEET EXIST

MATCH EXISTING MARKINGS

TOWN OF SUDBURY
BRUCE FREEMAN RAIL TRAIL
DS-4L

W11-1
"ON ROADWAY"
R&R

TRAIL X-ING AHEAD
W11-15*
W11-15p*
W16-9P*

"LEFT LANE MUST TURN LEFT"

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

1776 PLAZA LIMITED PARTNERSHIP
457–447 BOSTON POST ROAD
DEED BOOK 20083 PAGE 348
ASSESSORS MAP K08 LOT 0003

452 TWINS HOLDING LLC
452 BOSTON POST ROAD
DEED BOOK 26560 PAGE 422
ASSESSORS MAP K08 LOT 0066

CONTINUED ON SHEET NO. 46

CONTINUED ON SHEET NO. 48

0 20 50 100
SCALE: 1" = 20'

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	48	103
PROJECT FILE NO.	613319		

PAVEMENT MARKING & SIGNING PLANS

20200785.A30_PAVEMENT MARKING PLANS.DWG Plotted on 12-Feb-2026 8:16 PM

NAD 83 N

MIDDLESEX SAVINGS BANK
454 BOSTON POST ROAD
DEED BOOK 49392 PAGE 161
ASSESSORS MAP K08 LOT 0065

BIT PARKING LOT

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

MILE MARKER

20-FOOT WIDE TRAIL EASEMENT SEE DEED BK 51398, PG 565

PREDOMINANTLY <2" VEGETATION

TREELINE

GRAVEL PATH

WOOD FENCE

CLF

EOP

BIT DRIVE

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP K08 LOT 5200

N/F MCNEILL A ELLIOTT
21 UNION AVENUE
DEED BOOK 23052 PAGE 461
ASSESSORS MAP K08 LOT 0090

TWINS HOLDING LLC
450 BOSTON POST ROAD
DEED BOOK 56560 PAGE 422
ASSESSORS MAP K08 LOT 0066

CONTINUED ON SHEET NO.47

CONTINUED BELOW

N/F
CHISWICK PARK LLC
UNION AVENUE
DEED BOOK 70761 PAGE 297
ASSESSORS MAP K08 LOT 005

BATTERY WELL

ELECTRIC BOX

0 20 50 100
SCALE: 1" = 20'

APPROXIMATE LOCATION OF DRAINAGE EASEMENT (SEE PLAN 607 OF 1973)

APPROXIMATE LOCATION OF RAILROAD TRACK EASEMENT (SEE PLAN 607 OF 1973)

N/F
CHISWICK PARK LLC
UNION AVENUE
DEED BOOK 70761 PAGE 297
ASSESSORS MAP K08 LOT 0057

Boston Post Road / US 20 0.2mi
Nobscot Road Parking Lot 0.3mi
Sudbury-Framingham Town Line 1.3mi

D1-3a-2

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

WOODED

TIMBER SWITCH PAD

CONCRETE PAD

TOWN OF SUDBURY
RAILWAY
MAP/LOT K08/5200
BK/PG 76296/20

MASSDOT–RAIL AND TRANSIT DIVISION
JUNE 30, 1915 LAYOUT
BY OLD COLONY R.R CO.
DEED BOOK 14836
PAGE 507 CONFIRMATORY
TAKING IN DEED
BOOK 64110, PAGE 80

RAISED CROSSWALK AHEAD
SP-3*
W16-9p*

W11-15*
W16-7pL*

NO MOTOR VEHICLES
R5-3

STOP
R1-1b

MASS CENTRAL RAIL TRAIL

12' CW

SYCL

PROP. RAISED CROSSWALK

PROJECT END
STA 73+27.32
N2957447.0857
E677071.8763

BRUCE FREEMAN RAIL TRAIL
PHASE 2D

TOWN OF SUDBURY
MASS. CENTRAL RAIL TRAIL

DS-1

W3-1

PASSAGEWAY
SEE PLAN 1093 OF 1959

N/F
ELLIOTT A MCNEILL
21 UNION AVENUE
DEED BOOK 23052 PAGE 461
ASSESSORS MAP K08 LOT 0090

N/F CHISWICK PARK LLC
0 UNION AVENUE
DEED BOOK 70761 PAGE 297
ASSESSORS MAP K08 LOT 0073

50' WIDE R/C (SEE PLAN 607 OF

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
DEED BOOK 13117 PAGE 113
ASSESSORS MAP K08 LOT 5100

CONTINUED ABOVE

N/F
DUROSA LLC
23 UNION AVENUE
DEED BOOK 78634 PAGE 288
ASSESSORS MAP K08 LOT 0091

ACCESS EASEMENT
(SEE PLAN 416 OF 1984)

NOTES:
HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE 1990 MDPW "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS", AND ALL ADMENDMENTS WILL GOVERN.

ALL P5 SIGN POSTS SHALL BE 2" SQUARE POSTS FACTORY COATED GLOSS BLACK UNLESS OTHERWISE NOTED
(PBS) = PAINTED BOTH SIDES

ALL TIMBER SIGN POSTS SHALL BE 8' TALL PRESSURE TREATED WHITE PINE 4"x4".

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	49	103
PROJECT FILE NO.	613319		

SIGN SUMMARY SHEET

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH (IN)	SIZE OF SIGN HEIGHT (IN)	TEXT	TEXT DIMENSIONS (in) LETTER HEIGHT	TEXT DIMENSIONS (in) VERTICAL SPACING	TEXT DIMENSIONS (in) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACK-GROUND	COLOR LEGEND	COLOR BORDER	POST SIZE AND NUMBER REQUIRED	SIGN FACE AREA (S.F.)	TOTAL AREA (S.F.)
R1-1a	30	30	STOP	SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (INCLUDING LATEST REVISION)			1	RED	WHITE	WHITE	P-5 1 REQ'D	6.25	6.25
R1-1b	18	18	STOP				3	RED	WHITE	WHITE	WOOD POST 3 REQ'D	2.25	6.75
R5-1	30	30	DO NOT ENTER				2	WHITE	WHITE	RED	P-5 4 REQ'D	6.25	12.50
R5-3	24	24	NO MOTOR VEHICLES				6	WHITE	BLACK	BLACK	P-5 6 REQ'D	4.00	24.00
R6-1L	36	12	ONE WAY				2	BLACK	BLACK	WHITE	MOUNTED WITH R5-1 SEE PLANS	3.00	6.00
R6-1R	36	12	ONE WAY				2	BLACK	BLACK	WHITE	MOUNTED WITH R5-1 SEE PLANS	3.00	6.00
R7-1D	12	18	NO PARKING ANY TIME				3	WHITE	RED	RED	P-5 3 REQ'D	1.50	4.50
R7-1L	12	18	NO PARKING ANY TIME				1	WHITE	RED	RED	P-5 1 REQ'D	1.50	1.50
R7-1R	12	18	NO PARKING ANY TIME				1	WHITE	RED	RED	P-5 1 REQ'D	1.50	1.50
R7-8	12	18	RESERVED PARKING				1	WHITE	GREEN	GREEN	WOOD POST 1 REQ'D	1.50	1.50
R7-8P	18	9	VAN ACCESSIBLE				1	WHITE	GREEN	GREEN	MOUNTED WITH R7-8 SEE PLANS	1.13	1.13
R9-5	12	18	USE PED SIGNAL				2	WHITE	BLACK	BLACK	MOUNTED ON SIGNAL POST	1.50	3.00
R10-11b	24	24	NO TURN ON RED				1	WHITE	BLACK	BLACK	P-5 1 REQ'D	4.00	4.00
W1-2	18	18					1	YELLOW	BLACK	BLACK	P-5 1 REQ'D	2.25	2.25
W3-1	18	18					1	YELLOW	BLACK	BLACK	WOOD POST 1 REQ'D	2.25	2.25
W3-3	18	18					2	YELLOW	BLACK	BLACK	WOOD POST 2 REQ'D	2.25	4.50
W11-15	30	30					4	FLOUR. YELLOW/ GREEN	BLACK	BLACK	P-5 4 REQ'D	6.25	25.00
W11-15p	24	18	TRAIL X-ING	SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (INCLUDING LATEST REVISION)			2	FLOUR. YELLOW/ GREEN	BLACK	BLACK	2 MOUNTED WITH W11-15	3.00	6.00
W16-7pL	21	15					2	FLOUR. YELLOW/ GREEN	BLACK	BLACK	2 MOUNTED WITH W11-15	2.19	4.38
W16-9p	24	12	AHEAD				6	FLOUR. YELLOW/ GREEN	BLACK	BLACK	4 MOUNTED W/ W11-15 & SP-3 2 MOUNTED W/ W3-3	2.00	12.00
MA-R10-12a	30	36	LEFT TURN YIELD ON FLASHING	MASSDOT STANDARD SIGN BOOK			1	WHITE	BLACK	BLACK	1 MOUNTED ON MAST ARM	7.50	7.50
D11-1	24	18	BIKE ROUTE	SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (INCLUDING LATEST REVISION)			1	GREEN	WHITE	WHITE	WOOD POST 1 REQ'D	3.00	3.00
M4-6	24	12	END				1	GREEN	WHITE	WHITE	MOUNTED WITH D11-1 SEE PLANS	2.00	2.00
DS-1	27	34	TOWN OF SUDBURY MASS. CENTRAL RAIL TRAIL	(SEE SPECIAL PROVISION)			1	(SEE SPECIAL PROVISION)				-	EACH
DS-2L	27	34	TOWN OF SUDBURY NOBSCOT ROAD PARKING LOT				1					-	EACH
DS-2R	27	34	TOWN OF SUDBURY NOBSCOT ROAD PARKING LOT				1					-	EACH
DS-3L	27	34	TOWN OF SUDBURY EATON ROAD WEST				1					-	EACH
DS-3R	27	34	TOWN OF SUDBURY EATON ROAD WEST				1					-	EACH

20200785.A30_TRAFFIC SIGN SUMMARY.DWG Plotted on 12-Feb-2026 5:26 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	50	103
PROJECT FILE NO.	613319		

SIGN SUMMARY SHEET

IDENTIFI-CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	SIGN FACE AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
DS-4	27	34	TOWN OF SUDBURY BRUCE FREEMAN RAIL TRAIL	(SEE SPECIAL PROVISION)			3	(SEE SPECIAL PROVISION)				-	EACH
DS-4L	27	34	TOWN OF SUDBURY BRUCE FREEMAN RAIL TRAIL				2					-	EACH
DS-4R	27	34	TOWN OF SUDBURY BRUCE FREEMAN RAIL TRAIL				1					-	EACH
DS-5	27	34	TOWN OF SUDBURY CONCORD MASS CENTRAL RT FRAMINGHAM				1					-	EACH
DS-6	27	34	TOWN OF SUDBURY FRAMINGHAM 0.5 MILES				1					-	EACH
SEE PLANS	18	24	PUBLIC WARNING WATER SUPPLY KEEP OUT SIGN				2					-	EACH
SEE PLANS	18	24	PUBLIC WARNING WATER SUPPLY DO NOT SWIM				1					-	EACH
SEE PLANS	18	24	WATERSHED PROTECTION AREA ONLY DO NOT SWIM				2					-	EACH
D1-3a-1	36	22	Nobscot Road Parking Lot 1.0mi Boston Post Road/US 20 1.1mi Mass Central Rail Trail 1.3mi	4D/3D	3 2 2 3	4x3 @ 90° 4x3 @ 90° 4x3 @ 90°	1	GREEN	WHITE	WHITE	WOOD POST 2 REQ'D	5.50	5.50
D1-3a-2	36	22	Boston Post Road / US 20 0.2mi Nobscot Road Parking Lot 0.3mi Sudbury-Framingham Town Line 1.3mi	4D/3D	3 2 2 3	4x3 @ 90° 4x3 @ 90° 4x3 @ 90°	1	GREEN	WHITE	WHITE	WOOD POST 2 REQ'D	5.50	5.50
SP-1	24	24	NO PARKING BRUCE FREEMAN RAIL TRAIL	3C 3B 2C 2C 2C	0.875 0.625 0.625 0.625	19x3 @ 0°	1	WHITE	RED	RED	P-5 2 REQ'D	4.00	4.00

IDENTIFI-CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	SIGN FACE AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
SP-2	42	24	PARKING AREA 1 MILE NORTH ON NOBSCOT ROAD	3D 3D 3D	0.875 0.875	-	1	WHITE	BLACK	BLACK	1 MOUNTED WITH SP-1	7.00	7.00
SP-3	30	30	RAISED CROSSWALK	5D 5D	3	-	2	YELLOW	BLACK	BLACK	P-5 2 REQ'D	6.25	12.50
SP-C4	24	18	TRAIL RULES SIGN (REF. SPEC 832.1)				2	WHITE	BLACK	BLACK	P-5 2 REQ'D 1 MOUNTED WITH R5-3	PAY UNDER ITEM 832.1	

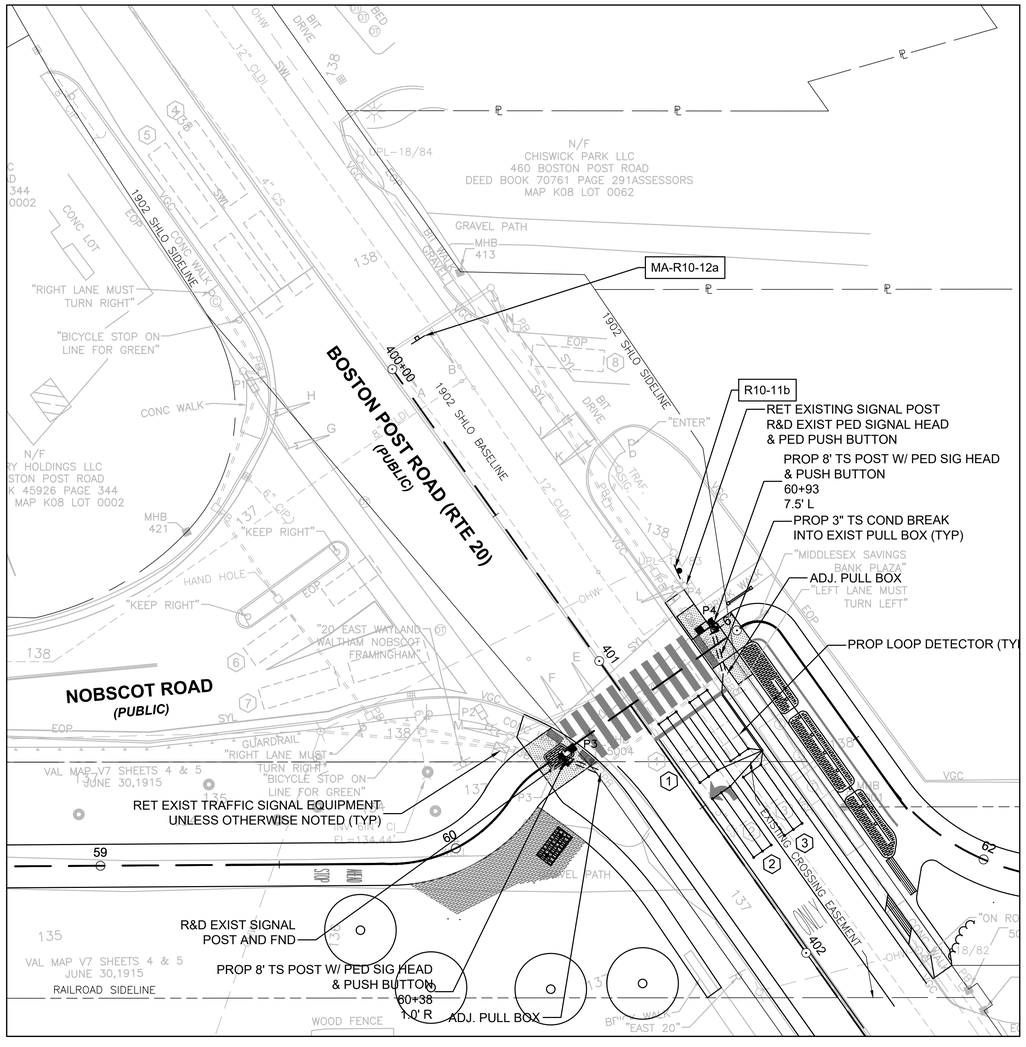
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SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	51	103
PROJECT FILE NO.	613319		

TRAFFIC SIGNAL PLAN
BOSTON POST RD & NOBSCOT RD
LOCATION NO. 1

20200785.A30_TRAFFIC SIGNAL PLAN.DWG Plotted on 12-Feb-2026 5:56 PM



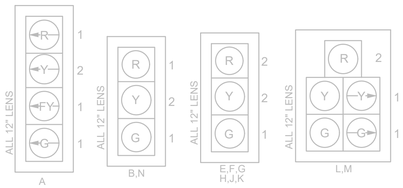
NAD 83 N

LEGEND

- EXISTING MAST ARM & POLE
- EXISTING SIGNAL POST
- A EXISTING SIGNAL HEAD
- P1 EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING LOOP DETECTOR LOCATIONS
- PROPOSED TRAFFIC SIGNAL POST
- P1 PROPOSED PEDESTRIAN HEAD
- PROPOSED PEDESTRIAN PUSH BUTTON
- ==== PROPOSED 3" PVC CONDUIT TYPE NM
- PROPOSED LOOP DETECTOR LOCATIONS

EXISTING SIGNAL IDENTIFICATION

1: LED 2: INCANDESCENT





P1
ONE SECTION
16" DISPLAY WITH COUNTDOWN



P2-P4
ONE SECTION
12" DUAL DISPLAY

PROPOSED PEDESTRIAN SIGNAL EQUIPMENT

P3-P4



ALL COUNTDOWN PEDESTRIAN SIGNAL DISPLAYS SHALL BE EQUIPPED W/L.E.D. MODULES (16 INCH DISPLAY).



PROPOSED R10-3E

TO BE MOUNTED WITH EACH PROPOSED ACCESSIBLE PEDESTRIAN SIGNAL.

SIGNAL HEAD NOTES

1. ALL PROPOSED PEDESTRIAN SIGNAL HEADS SHALL DISPLAY INTERNATIONAL SYMBOLS - (HAND)/(PERSON WALKING) WITH COUNTDOWN DISPLAYS
2. ALL PROPOSED PEDESTRIAN HEADS AHLL HAVE 16" LED LENSES AND SUN VISORS

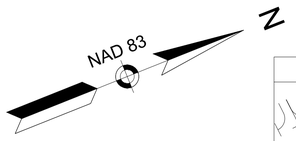
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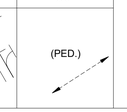
1. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE RETAINED UNLESS OTHERWISE NOTED ON THE PLAN.
2. EXISTING LOOP DETECTION OPERATION SHALL BE RETAINED UNLESS OTHERWISE NOTED ON THE PLANS. SHOULD DETECTION BE DAMAGED AS PART OF CONSTRUCTION ACTIVITY, VEHICLE DETECTION SHOULD BE REPAIRED TO WORKING ORDER AT THE CONTRACTOR'S EXPENSE.
3. LOCATION OF EXISTING TRAFFIC SIGNAL EQUIPMENT AND LOOP DETECTORS ARE BASED ON RECORD PLANS. THE CONTRACTOR SHOULD VERIFY LOCATIONS OF ALL FEATURES PRIOR TO CONSTRUCTION.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	52	103
PROJECT FILE NO.	613319		

TRAFFIC SIGNAL DATA
BOSTON POST RD & NOBSCOT RD
LOCATION NO. 1

20200785.A30_TRAFFIC SIGNAL PLAN.DWG Plotted on 12-Feb-2026 5:56 PM



Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9
		PHASE NOT USED		PHASE NOT USED		PHASE NOT USED		

SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (COORDINATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	FLASH OPER.
BOSTON POST ROAD (ROUTE 20)	WB	A	G	Y	R	R	R	R				R	R	R				FY	Y	R				R	R	R	R	R	R	FY
BOSTON POST ROAD (ROUTE 20)	WB	B,N	R	R	R	R	R	R				R	R	R				G	Y	R				R	R	R	R	R	R	FY
BOSTON POST ROAD (ROUTE 20)	EB	E,F	R	R	R	G	Y	R				R	R	R				R	R	R				R	R	R	R	R	R	FY
NOBSCOT ROAD	NB	J,K	R	R	R	R	R	R				G	Y	R				R	R	R				R	R	R	R	R	R	FR
NOBSCOT ROAD	NB	L,M	R	R	R	R	R	R				G	Y	R				R	R	R				R	R	R	R	R	R	FR
DRIVEWAY	SB	G,H	R	R	R	R	R	R				R	R	R				R	R	R				G	Y	R	R	R	R	FR
PEDESTRIAN	E/W	P1-P2	DW	DW	DW	W	FDW	DW				DW	DW	DW				DW	DW	DW				DW	DW	DW	DW	DW	DW	OFF
PEDESTRIAN	N/S	P3-P4	DW	DW	DW	DW	DW	DW				DW	DW	DW				DW	DW	DW				DW	DW	DW	W	FDW	DW	OFF
TIMING IN SECONDS																														
MINIMUM GREEN (INITIAL)			5			10						5						10						5						
PASSAGE TIME (VEHICLE)			2			4						2						4						2						
MAXIMUM 1			6			43						7						57						7						
MAXIMUM 2			6			44						6						58						6						
YELLOW CLEARANCE				3.5			3.5						4.5						3.5						4.5					
RED CLEARANCE					5			3						4.5						3						4.5				
WALK (W)						7																					7			
PEDESTRIAN CLEARANCE							35	4																				9	4	
RECALL			NONE			MIN						NONE						MIN						NONE			NONE			
MEMORY			NON-LOCK			NON-LOCK						NON-LOCK						NON-LOCK						NON-LOCK			LOCK			

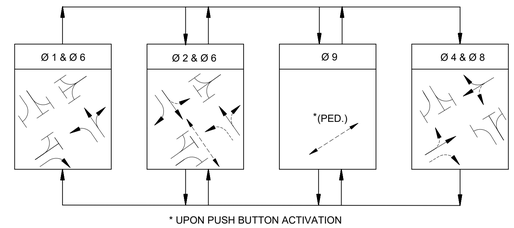
EMERGENCY ONLY

COORDINATION DATA			COORDINATION PHASE TIMING								
TIMING PLAN	CYCLE LENGTH	REF/OFFSET	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.
PLAN 1	100 SECONDS	0 SECONDS	14	50		16		64		16	20
PLAN 2	100 SECONDS	0 SECONDS	14	51		15		65		15	20
PLAN 3	110 SECONDS	0 SECONDS	19	51		20		70		20	20

SEQUENCE AND TIMING NOTES:

1. 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 TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
2. 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 INTERVALS.
3. FLASHING OPERATION IS FOR EMERGENCY OPERATION ONLY. THE SIGNAL SHALL PROVIDE STOP AND GO OPERATION 24 HOURS DAILY.
4. PEDESTRIAN INDICATIONS SHALL BE ACTIVATED BY PEDESTRIAN PUSH BUTTON ONLY.
5. PEDESTRIAN PUSH BUTTONS AND SIGNS SHALL BE LOCATED IN ACCORDANCE WITH ADA/MAAB STANDARDS WITH VIBROTACTILE ARROWS POINTED PARALLEL TO THE CROSSWALK

PREFERENTIAL PHASING SEQUENCE



COORDINATION NOTES:

1. INTERSECTION TO BE TIME BASE COORDINATED WITH INTERSECTION OF ROUTE 20 AT UNION AVENUE.
2. EXISTING MASTER LOCATED AT ROUTE 20 AT BAY DRIVE/HIGHLAND AVENUE TO REMAIN INACTIVE.
3. INTERSECTION OF ROUTE 20 AT NOBSCOT ROAD SHALL SERVE AS NEW MASTER LOCATION.
4. OFFSET TO Ø2+Ø6 (EAST/WEST) BEGINNING OF YELLOW.
5. ALL COORDINATION SPLIT TIMES INCLUDE YELLOW AND RED CLEARANCE TIME.

MASTER SCHEDULE

	PLAN 1	PLAN 2	PLAN 3	FREE
MON-FRI	0600-0900	1500-1900		0900-1500 1900-0600
SAT-SUN			1000-1400	0000-0999 1401-2399

EXISTING AND PROPOSED LOOP DETECTOR DATA

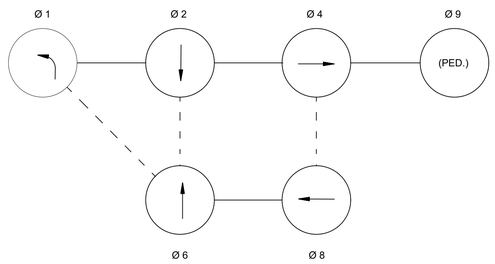
SEE PLAN SHEET-LOOP DETECTOR DETAILS FOR LOOP CONSTRUCTION, SPLICING, DETAILS & NOTES. DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR NUMBER	NUMBER OF SEGMENTS	LOOP SIZE	NUM. OF TURNS	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	1	QUADROPOLE 6'X20'	2-4-2	Ø 1	Ø 1	B	0	0
2	1	QUADROPOLE 6'X20'	2-4-2	Ø 6	Ø 6	B	0	0
3	2	QUADROPOLE 6'X20'	2-4-2	Ø 6	Ø 6	B	0	0
4	2	QUADROPOLE 6'X20'	2-4-2	Ø 2	Ø 2	B	0	0
5	2	QUADROPOLE 6'X20'	2-4-2	Ø 2	Ø 2	B	0	0
6	2	QUADROPOLE 6'X20'	2-4-2	Ø 4	Ø 4	B	0	0
7	2	QUADROPOLE 6'X20'	2-4-2	Ø 4	Ø 4	B	0	0
8	1	6'X15'	2	Ø 8	Ø 8	B	0	0

LOOP DETECTOR NOTES:

1. EXISTING LOOP DETECTION AND PROGRAMMING SETTINGS SHALL BE RETAINED UNLESS OTHERWISE NOTED

NEMA DUAL RING PHASING NOTES:



NEMA DUAL RING PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS
4. 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 TRAFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED

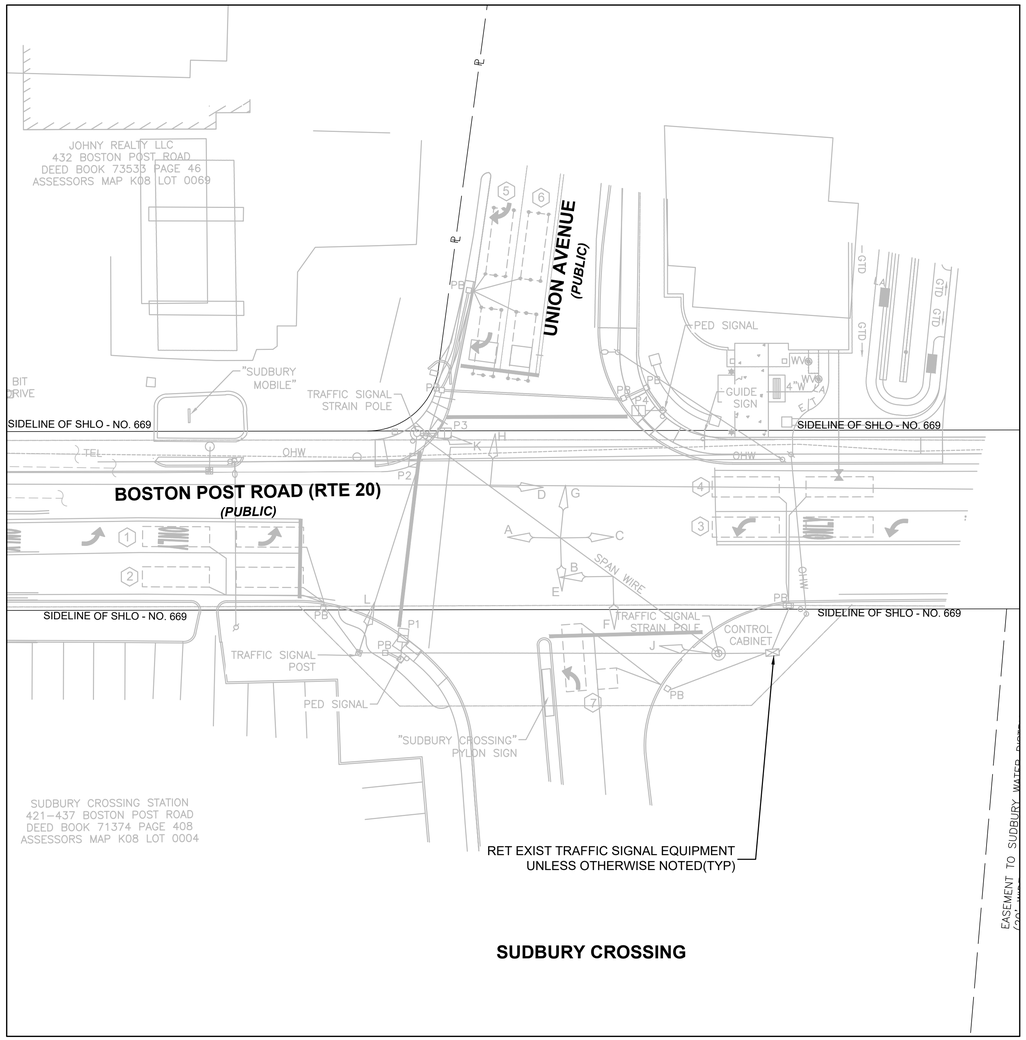
	MAJOR ITEMS REQUIRED	
PAY ITEM	QUANTITY	ITEM
804.3	30 FT	3 INCH ELECTRICAL CONDUIT TYPE NM - PLASTIC - (UL)
816.01	2	8' SIGNAL POST AND BASE STANDARD - INCL FOUNDATION
	2	16" LED PEDESTRIAN SIGNAL HEAD
	2	ACCESSIBLE PEDESTRIAN PUSH BUTTON, SIGN, AND SADDLE
	65 FT	6X20 WIRE LOOPS - TYPE Q WITH LEADS
		Plus all necessary duct, cable, labor, miscellaneous material and equipment to complete the installation.

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	53	103
PROJECT FILE NO.	613319		

TRAFFIC SIGNAL PLAN
BOSTON POST RD & UNION AVE
LOCATION NO. 2

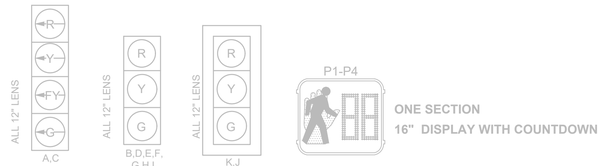
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LEGEND

- EXISTING TRAFFIC SIGNAL STRAIN POLE
- EXISTING PEDESTRIAN SIGNAL POST
- EXISTING TRAFFIC SIGNAL POST
- A EXISTING SIGNAL HEAD
- P1 EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING LOOP DETECTOR LOCATIONS

EXISTING SIGNAL IDENTIFICATION



GENERAL NOTES:

1. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE RETAINED UNLESS OTHERWISE NOTED ON THE PLAN.
2. EXISTING LOOP DETECTION OPERATION SHALL BE RETAINED. SHOULD DETECTION BE DAMAGED AS PART OF CONSTRUCTION ACTIVITY, VEHICLE DETECTION SHOULD BE REPAIRED TO WORKING ORDER AT THE CONTRACTOR'S EXPENSE.

N

NAD 83

Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9
PHASE NOT USED		PHASE NOT USED				PHASE NOT USED		(PED.)

SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (COORDINATED)

	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	FLASH OPER.
BOSTON POST ROAD (ROUTE 20)	EB	A				FY	Y	R				R	R	R	G	Y	R	R	R	R				R	R	R	R	R	R	FY
BOSTON POST ROAD (ROUTE 20)	EB	B,J				G	Y	R				R	R	R	R	R	R	R	R	R				R	R	R	R	R	R	FY
BOSTON POST ROAD (ROUTE 20)	WB	C				R	R	R				R	R	R	R	R	R	FY	Y	R				R	R	R	R	R	R	FY
BOSTON POST ROAD (ROUTE 20)	WB	D,K				R	R	R				R	R	R	R	R	R	G	Y	R				R	R	R	R	R	R	FY
PLAZA DRIVEWAY	NB	E,F				R	R	R				G	Y	R	R	R	R	R	R	R				R	R	R	R	R	R	FR
UNION AVENUE	SB	G,H,L				R	R	R				R	R	R	R	R	R	R	R	R				G	Y	R	R	R	R	FR
PEDESTRIAN	ALL	P1-P4				DW	DW	DW				DW	DW	DW	DW	DW	DW	DW	DW	DW				DW	DW	DW	W	FDW	DW	OFF
TIMING IN SECONDS																														
MINIMUM GREEN (INITIAL)						10						6			6			10						5						EMERGENCY ONLY
PASSAGE TIME (VEHICLE)						4						2			2			5						2						
MAXIMUM 1						40						20			20			40						20						
MAXIMUM 2						60						20			25			60						20						
YELLOW CLEARANCE							4						4			4			4						4					
RED CLEARANCE								1						1			1			1						1				
WALK (W)																											7			
PEDESTRIAN CLEARANCE																												14	4	
RECALL						MIN						NONE			MAX			MIN						NONE						
MEMORY						NON-LOCK						NON-LOCK			NON-LOCK			NON-LOCK						NON-LOCK						

COORDINATION DATA			COORDINATION PHASE TIMING											
TIMING PLAN	CYCLE LENGTH	REF/OFFSET	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.
PLAN 1	100 SECONDS	0 SECONDS		71		29	26	45		29				
PLAN 2	100 SECONDS	0 SECONDS		71		29	19	52		29				
PLAN 3	110 SECONDS	2 SECONDS		78		32	19	59		32				

COORDINATION NOTES:

1. INTERSECTION TO BE TIME BASE COORDINATED WITH ROUTE 20 AT NOBSCOT ROAD.
2. EXISTING MASTER LOCATED AT ROUTE 20 AT BAY DRIVE/HIGHLAND AVENUE TO REMAIN INACTIVE.
3. INTERSECTION OF ROUTE 20 AT NOBSCOT ROAD SHALL SERVE AS NEW MASTER LOCATION.
4. OFFSET TO Ø2+Ø6 (EAST/WEST) BEGINNING OF YELLOW.
5. ALL COORDINATION SPLIT TIMES INCLUDE YELLOW AND RED CLEARANCE TIME.

MASTER SCHEDULE

	PLAN 1	PLAN 2	PLAN 3	FREE
MON-FRI	0600-0900	1500-1900		0900-1500 1900-0600
SAT-SUN			1000-1400	0000-0999 1401-2399

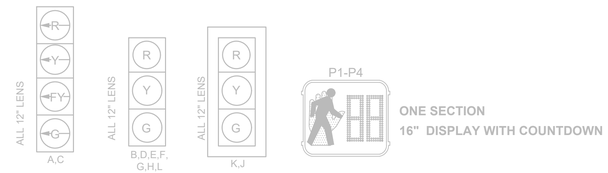
LOOP DETECTOR DATA

SEE PLAN SHEET-LOOP DETECTOR DETAILS FOR LOOP CONSTRUCTION, SPLICING, DETAILS & NOTES. DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR NUMBER	NUMBER OF SEGMENTS	LOOP SIZE	NUM. OF TURNS	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	2	QUADROPOLE 6'X16'	2-4-2	Ø 5	Ø 5	B	0	0
2	2	QUADROPOLE 6'X20'	2-4-2	Ø 2	Ø 2	B	0	0
3	2	QUADROPOLE 6'X20'	2-4-2	Ø 6	Ø 6	B	0	0
4	2	QUADROPOLE 6'X20'	2-4-2	Ø 6	Ø 6	B	0	0
5	2	QUADROPOLE 6'X20'	2-4-2	Ø 8	Ø 8	B	0	0
6	2	QUADROPOLE 6'X20'	2-4-2	Ø 8	Ø 8	B	0	0
7	1 1	6'X20' 8'X6'	2 2	Ø 4	Ø 4	B	0	0

NOTE: ALL LOOP DETECTOR DATA IS FROM EXISTING CONDITIONS AND SHALL NOT BE CHANGED.

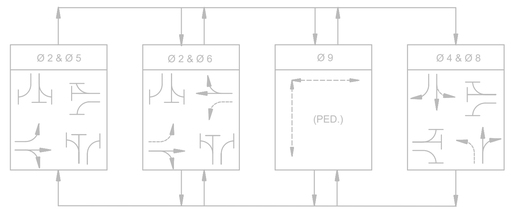
EXISTING SIGNAL IDENTIFICATION



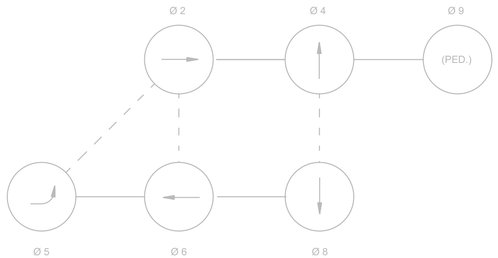
SIGNAL IDENTIFICATION NOTES:

1. ALL SIGNAL LENSES ARE 12" DIA.

PREFERENTIAL PHASING SEQUENCE



NEMA DUAL RING PHASING NOTES:



NEMA DUAL RING PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. 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 TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

SEQUENCE AND TIMING NOTES

1. EXCLUSIVE PEDESTRIAN PHASE TO BE ACTIVATED ONLY BY PEDESTRIAN ACTUATED PUSH BUTTON.
2. PHASES Ø1, Ø3, AND Ø7 ARE NOT USED

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	54	103
PROJECT FILE NO.	613319		

TRAFFIC SIGNAL DATA
BOSTON POST RD & UNION AVE
LOCATION NO. 2

MAJOR ITEMS REQUIRED		
PAY ITEM	QUANTITY	ITEM
816.02	1	UPDATING TRAFFIC SIGNAL TIMINGS
		Plus all necessary duct, cable, labor, miscellaneous material and equipment to complete the installation.

20200785.A30_TRAFFIC SIGNAL PLAN.DWG Plotted on 12-Feb-2026 5:57 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	######	55	103
PROJECT FILE NO.	611979		

TRAFFIC SIGNAL DATA
TIME SPACE DIAGRAMS

20200785.A30_TRAFFIC SIGNAL PLAN.DWG Plotted on 12-Feb-2026 5:57 PM

ROUTE 20 AT NOBSCOT ROAD			
	PLAN 1 (SEC.)	PLAN 2 (SEC.)	PLAN 3 (SEC.)
Ø1	14	14	19
Ø2	50	51	51
Ø4	16	15	20
Ø6	64	65	70
Ø8	16	15	20
Ø9	20	20	20
CYCLE LENGTH	100	100	110
OFFSET*	0	0	0

ROUTE 20 AT UNION AVENUE			
	PLAN 1 (SEC.)	PLAN 2 (SEC.)	PLAN 3 (SEC.)
Ø2	71	71	78
Ø4	29	29	32
Ø5	29	19	19
Ø6	45	52	59
Ø8	29	29	32
CYCLE LENGTH	100	100	110
OFFSET*	7	91	2

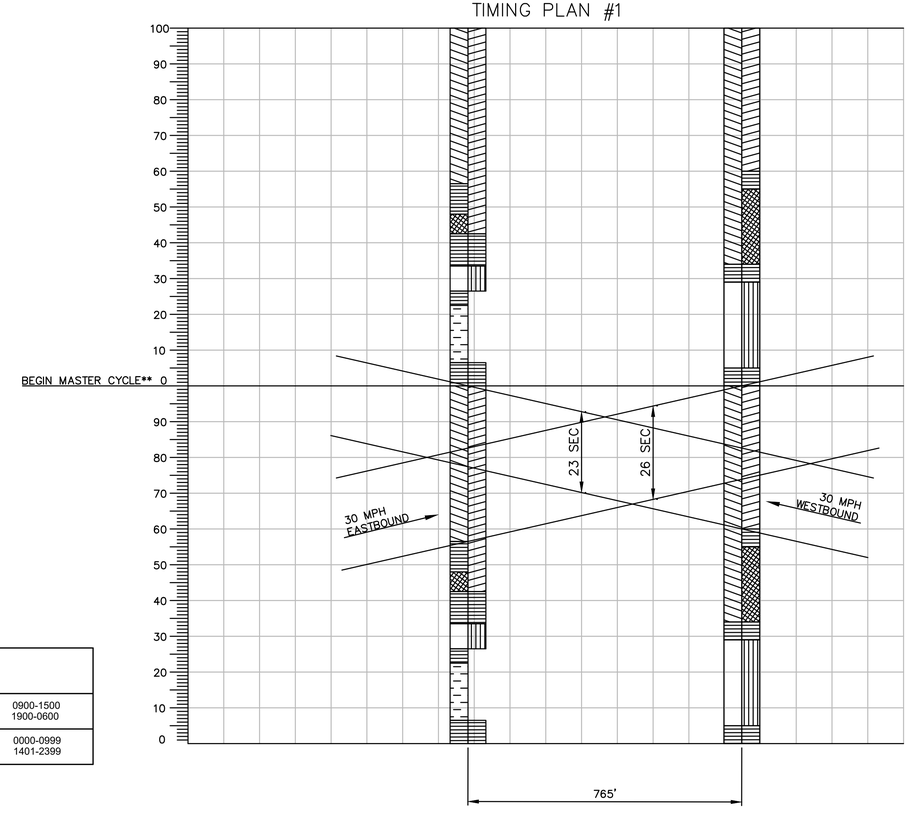
COORDINATION NOTES:

1. ROUTE 20 AT NOBSCOT ROAD AND ROUTE 20 AT UNION AVENUE SHALL BE TIME BASE COORDINATED.
2. EXISTING MASTER LOCATED AT ROUTE 20 AT BAY DRIVE/HIGHLAND AVENUE TO REMAIN INACTIVE.
3. OFFSET TO Ø2+Ø6 (EAST/WEST) BEGINNING OF YELLOW.
4. ALL COORDINATION SPLIT TIMES INCLUDE YELLOW AND RED CLEARANCE TIME.
5. FIXED FORCE OFFS AND MAX INHIBIT SHALL BE ENABLED.
6. COORDINATION PATTERN AT UNION AVENUE DOES NOT INCLUDE PEDESTRIAN PHASE. IF CALLED, CONTROLLER WILL ENTER A PERIOD OF TRANSITION.
7. COORDINATION PATTERN AT NOBSCOT ROAD INCLUDES PEDESTRIAN PHASE. IF UNCALLED, CONTROLLER SHALL ASSIGN TIME TO SIDE STREET PHASE BEFORE RETURNING TO COORDINATION PHASES.

MASTER SCHEDULE

	PLAN 1	PLAN 2	PLAN 3	
MON-FRI	0600-0900	1500-1900		0900-1500 1900-0600
SAT-SUN			1000-1400	0000-0999 1401-2399

TIMING PLAN #1



LEGEND

- YELLOW AND RED CLEARANCE INTERVAL
- EASTBOUND GREEN TIME (ø2)
- WESTBOUND GREEN TIME (ø6)
- LEFT TURN PHASE GREEN TIME (ø1 OR ø5)
- SOUTH GREEN TIME (ø8)
- NORTH GREEN TIME (ø4)
- PEDESTRIAN WALK TIME (ø9)
- 100' X 10 SEC.
- BANDWIDTH SLOPE = 30 MPH OR 44 FT/SEC

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	######	56	103
PROJECT FILE NO.	611979		

TRAFFIC SIGNAL DATA
TIME SPACE DIAGRAMS

20200785.A30_TRAFFIC SIGNAL PLAN.DWG Plotted on 12-Feb-2026 5:57 PM

ROUTE 20 AT NOBSCOT ROAD			
	PLAN 1 (SEC.)	PLAN 2 (SEC.)	PLAN 3 (SEC.)
Ø1	14	14	19
Ø2	50	51	51
Ø4	16	15	20
Ø6	64	65	70
Ø8	16	15	20
Ø9	20	20	20
CYCLE LENGTH	100	100	110
OFFSET*	0	0	0

ROUTE 20 AT UNION AVENUE			
	PLAN 1 (SEC.)	PLAN 2 (SEC.)	PLAN 3 (SEC.)
Ø2	71	71	78
Ø4	29	29	32
Ø5	29	19	19
Ø6	45	52	59
Ø8	29	29	32
CYCLE LENGTH	100	100	110
OFFSET*	0	0	2

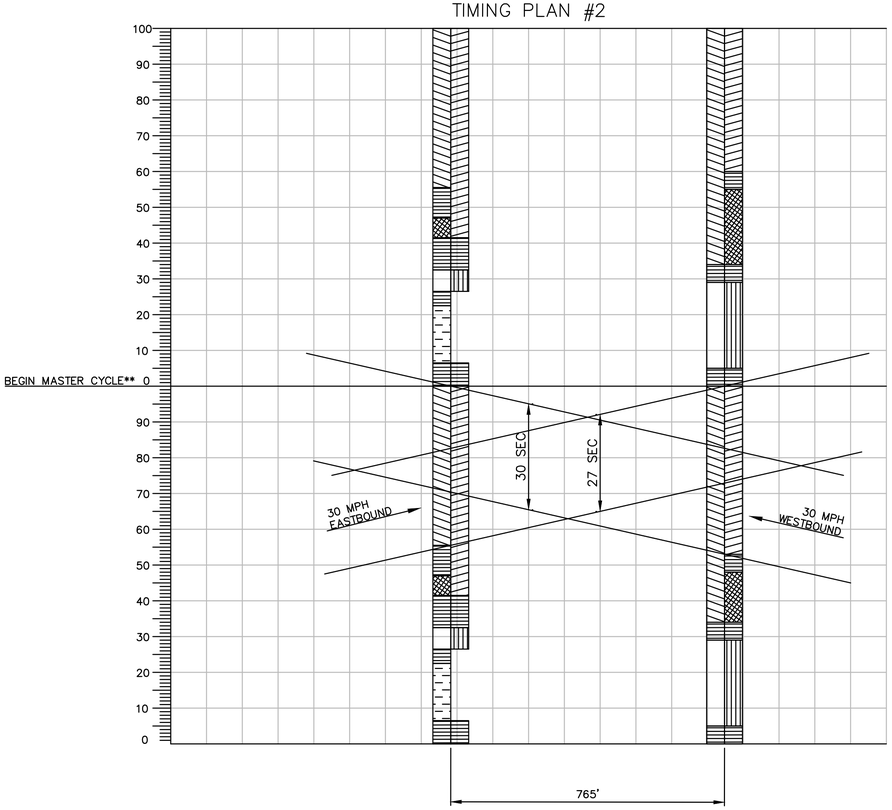
COORDINATION NOTES:

1. ROUTE 20 AT NOBSCOT ROAD AND ROUTE 20 AT UNION AVENUE SHALL BE TIME BASE COORDINATED.
2. EXISTING MASTER LOCATED AT ROUTE 20 AT BAY DRIVE/HIGHLAND AVENUE TO REMAIN INACTIVE.
3. OFFSET TO Ø2+Ø6 (EAST/WEST) BEGINNING OF YELLOW.
4. ALL COORDINATION SPLIT TIMES INCLUDE YELLOW AND RED CLEARANCE TIME.
5. FIXED FORCE OFFS AND MAX INHIBIT SHALL BE ENABLED.
6. COORDINATION PATTERN AT UNION AVENUE DOES NOT INCLUDE PEDESTRIAN PHASE. IF CALLED, CONTROLLER WILL ENTER A PERIOD OF TRANSITION.
7. COORDINATION PATTERN AT NOBSCOT ROAD INCLUDES PEDESTRIAN PHASE. IF UNCALLED, CONTROLLER SHALL ASSIGN TIME TO SIDE STREET PHASE BEFORE RETURNING TO COORDINATION PHASES.

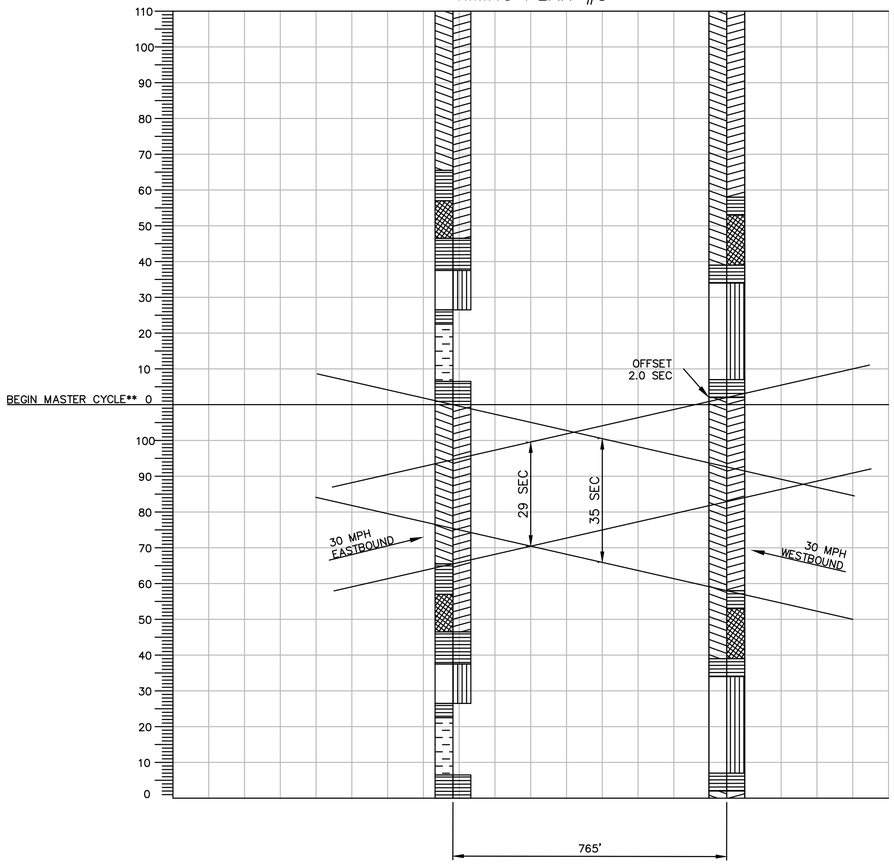
MASTER SCHEDULE

	PLAN 1	PLAN 2	PLAN 3	
MON-FRI	0600-0900	1500-1900		0900-1500 1900-0600
SAT-SUN			1000-1400	0000-0999 1401-2399

TIMING PLAN #2



TIMING PLAN #3



LEGEND

- YELLOW AND RED CLEARANCE INTERVAL
- EASTBOUND GREEN TIME (ø2)
- WESTBOUND GREEN TIME (ø6)
- LEFT TURN PHASE GREEN TIME (ø1 OR ø5)
- SOUTH GREEN TIME (ø8)
- NORTH GREEN TIME (ø4)
- PEDESTRIAN WALK TIME (ø9)
- 100' X 10 SEC.
- BANDWIDTH SLOPE = 30 MPH OR 44 FT/SEC

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			COLOR			SIGN FACE AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER	
R3-7L	30	30	LEFT LANE MUST TURN LEFT	SEE FHWA 2004 STANDARD HIGHWAY SIGNS MANUAL & 2012 SUPPLEMENT (ENGLISH VERSION)			WHITE	BLACK	BLACK	6.25
R3-7R	30	30	RIGHT LANE MUST TURN RIGHT				WHITE	BLACK	BLACK	6.25
R9-8	36	18	PEDESTRIAN CROSSWALK				WHITE	BLACK	BLACK	4.5
R9-9	24	12	SIDEWALK CLOSED				WHITE	BLACK	BLACK	2
R9-10	24	12	SIDEWALK CLOSED USE OTHER SIDE				WHITE	BLACK	BLACK	2
R9-11L	24	18	SIDEWALK CLOSED AHEAD CROSS HERE				WHITE	BLACK	BLACK	3
R9-11R	24	18	SIDEWALK CLOSED AHEAD CROSS HERE				WHITE	BLACK	BLACK	3
R9-11aL	24	18	SIDEWALK CLOSED CROSS HERE				WHITE	BLACK	BLACK	3
R9-11aR	24	18	SIDEWALK CLOSED CROSS HERE				WHITE	BLACK	BLACK	3
W1-4L	36	36					FLRSCNT. ORANGE	BLACK	BLACK	9
W1-4R	36	36					FLRSCNT. ORANGE	BLACK	BLACK	9
W4-2L	36	36					FLRSCNT. ORANGE	BLACK	BLACK	9
MA-W4-7L	36	36	THRU TRAFFIC MERGE LEFT	SEE MASSDOT 2016 STANDARD SIGNS BOOK			FLRSCNT. ORANGE	BLACK	BLACK	9
W5-1	36	36	ROAD NARROWS	SEE FHWA 2004 STANDARD HIGHWAY SIGNS MANUAL & 2012 SUPPLEMENT (ENGLISH VERSION)			FLRSCNT. ORANGE	BLACK	BLACK	9
W8-3	36	36	PAVEMENT ENDS				FLRSCNT. ORANGE	BLACK	BLACK	9
W11-2	30	30					FLRSCNT. YELLOW /GREEN	BLACK	BLACK	6.25
W13-1	24	24	XX M.P.H.				FLRSCNT. ORANGE	BLACK	BLACK	4

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			COLOR			SIGN FACE AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER	
W16-7PL	24	12		SEE FHWA 2004 STANDARD HIGHWAY SIGNS MANUAL & 2012 SUPPLEMENT (ENGLISH VERSION)			FLRSCNT. YELLOW /GREEN	BLACK	BLACK	2
W16-9P	24	12	AHEAD				FLRSCNT. YELLOW /GREEN	BLACK	BLACK	2
W20-4	36	36	ONE LANE ROAD AHEAD				FLRSCNT. ORANGE	BLACK	BLACK	9
W20-5L	36	36	LEFT LANE CLOSED AHEAD				FLRSCNT. ORANGE	BLACK	BLACK	9
W20-5R	36	36	RIGHT LANE CLOSED AHEAD				FLRSCNT. ORANGE	BLACK	BLACK	9
W20-7a	36	36					FLRSCNT. ORANGE	BLACK	BLACK	9
MA-W20-7b	36	36	POLICE OFFICER AHEAD	SEE MASSDOT 2016 STANDARD SIGNS BOOK			FLRSCNT. ORANGE	BLACK	BLACK	9
W21-5aR	36	36	RIGHT SHOULDER CLOSED	SEE FHWA 2004 STANDARD HIGHWAY SIGNS MANUAL & 2012 SUPPLEMENT (ENGLISH VERSION)			FLRSCNT. ORANGE	BLACK	BLACK	9

FIXED CONSTRUCTION WARNING SIGN PLAN

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	QUANTITY	TEXT DIMENSIONS (in)			COLOR			POST SIZE AND NUMBER REQUIRED	SIGN FACE AREA (S.F.)	TOTAL AREA NEEDED (S.F.)
	WIDTH (IN)	HEIGHT (IN)			LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER			
MA-D3-1	40	18	BRUCE FREEMAN RAIL TRAIL	3	5C	3	N/A	FLRSCNT. ORANGE	BLACK	BLACK	MOUNTED W/ W20-1	5	15
MA-R2-10a	48	36	WORK ZONES SPEEDING FINES DOUBLED	3	SEE MASSDOT 2016 STANDARD SIGNS BOOK			FLRSCNT. ORANGE WHITE	BLACK BLACK	BLACK BLACK	U-CHAN. 15 REQ'D	12	36
MA-R2-10e	36	48	END ROAD WORK DOUBLE FINES END	3	SEE MASSDOT 2016 STANDARD SIGNS BOOK			FLRSCNT. ORANGE/ WHITE	BLACK	BLACK	U-CHAN. 28 REQ'D	12	36
W20-1c	36	36	ROAD WORK AHEAD	4	5C	3	N/A	FLRSCNT. ORANGE	BLACK	BLACK	U-CHAN. 14 REQ'D	9	36

TYPICAL CONSTRUCTION SIGNING

N.T.S.

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	57	103
PROJECT FILE NO.	613319		

TRAFFIC MANAGEMENT PLANS
SIGN SUMMARY



W20-1 WITH MA-D3-1 DETAIL

N.T.S.

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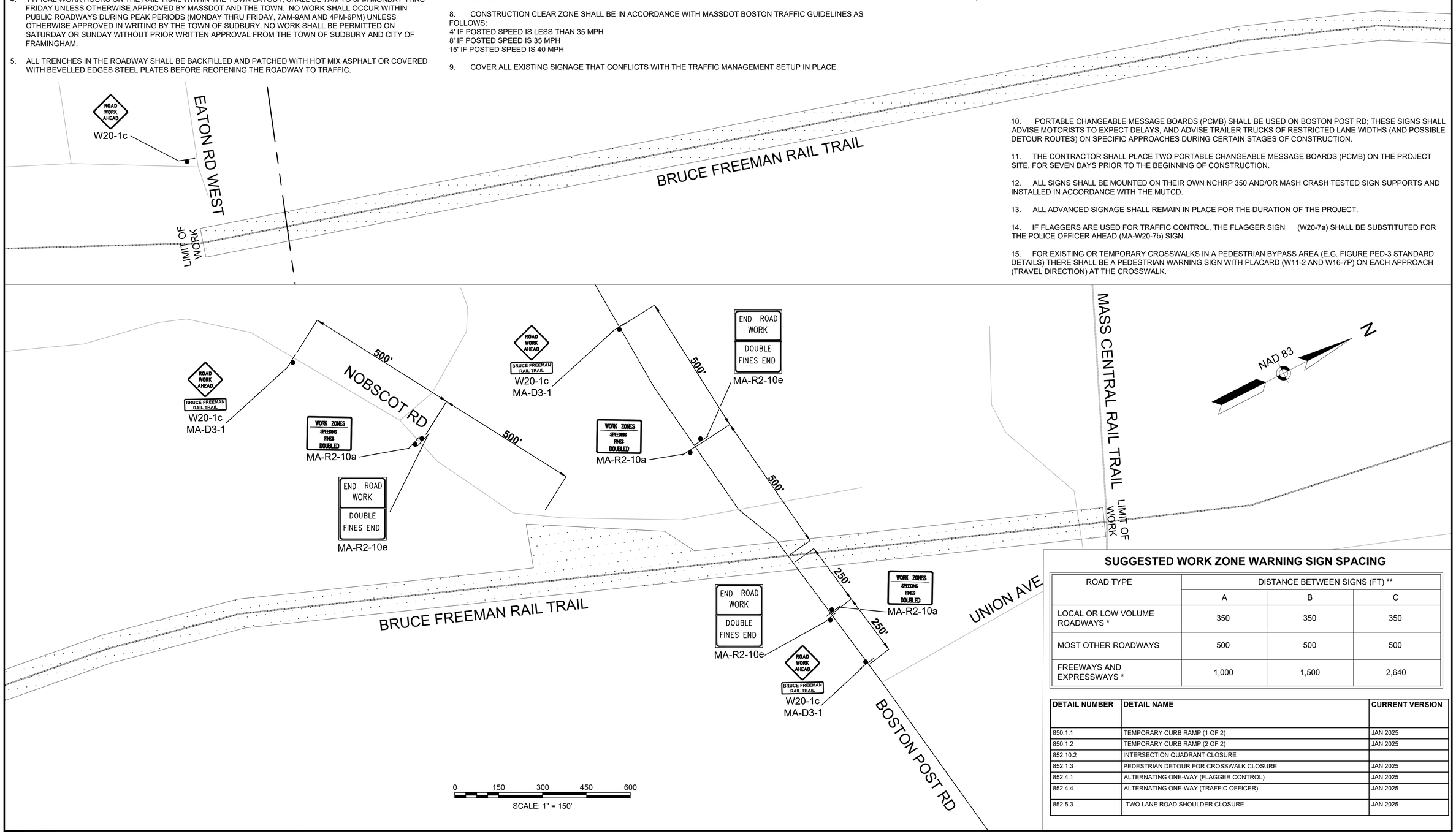
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	58	103
PROJECT FILE NO.	613319		

TRAFFIC MANAGEMENT PLANS
FIXED CONSTRUCTION WARNING SIGNS

GENERAL NOTES:

1. IF ANY STAGE REQUIRES MODIFICATION OF THE TRAFFIC SIGNAL OPERATION, THE CONTRACTOR SHALL SUBMIT A REVISED SIGNAL TIMING AND PHASING PLAN TO THE TOWN OF SUDBURY FOR APPROVAL BEFORE MODIFYING THE TRAFFIC SIGNAL.
2. CONTRACTOR SHALL CONSTRUCT SIDEWALK IN SMALL SECTION IN ORDER TO MAINTAIN ACCESS TO BUILDINGS. THE CONTRACTOR SHALL COORDINATE WITH BUSINESS AND PROPERTY OWNERS ON ALL WORK IN FRONT OF THEIR BUILDINGS.
3. ALL TRAFFIC MANAGEMENT CONFIGURATIONS SHALL CONFORM TO THE STANDARD MASSDOT DETAILS ON THE FOLLOWING SHEETS AND APPLY TO ALL LOCATIONS INCLUDED IN THE CONTRACT.
4. TYPICAL WORK HOURS ON THE RAIL TRAIL WITHIN THE TOWN LAYOUT, SHALL BE 7AM TO 3PM MONDAY THRU FRIDAY UNLESS OTHERWISE APPROVED BY MASSDOT AND THE TOWN. NO WORK SHALL OCCUR WITHIN PUBLIC ROADWAYS DURING PEAK PERIODS (MONDAY THRU FRIDAY, 7AM-9AM AND 4PM-6PM) UNLESS OTHERWISE APPROVED IN WRITING BY THE TOWN OF SUDBURY. NO WORK SHALL BE PERMITTED ON SATURDAY OR SUNDAY WITHOUT PRIOR WRITTEN APPROVAL FROM THE TOWN OF SUDBURY AND CITY OF FRAMINGHAM.
5. ALL TRENCHES IN THE ROADWAY SHALL BE BACKFILLED AND PATCHED WITH HOT MIX ASPHALT OR COVERED WITH BEVELLED EDGES STEEL PLATES BEFORE REOPENING THE ROADWAY TO TRAFFIC.
6. FOR DROP-OFFS 4" OR LESS WITHIN THE CLEAR ZONE: CONDITION MAY BE MITIGATED WITH W8-9 (LOW SHOULDER) SIGN OR TEMPORARY CHANNELIZATION DEVICES. FOR DROP-OFFS GREATER THAN 4" BUT NO MORE THAN 12", DETERMINE WHETHER IT IS MORE COST EFFECTIVE TO INSTALL BOTH TEMPORARY CHANNELIZATION DEVICES AND A 1V:4H (MIN) TO 1V:6H (DESIRED) WEDGE OR TO SHIELD IT. FOR DROP-OFFS GREATER THAN 12" BUT NO MORE THAN 24", DETERMINE WHETHER IT IS MORE COST EFFECTIVE TO MAINTAIN AN ADDITIONAL 5' OF SHOULDER WIDTH AND INSTALL BOTH TEMPORARY CHANNELIZATION DEVICES AND A 1V:6H (DESIRE) WEDGE OR TO SHIELD IT. FOR DROP-OFFS 24" OR GREATER USE BARRIER IN ACCORDANCE WITH MASSDOT WORK ZONE POSITIVE PROTECTION GUIDELINES.
7. CONTRACTOR SHALL STAGE WORK SUCH THAT A DROP-OFF OF NO MORE THAN 12" AT THE END OF EACH WORK DAY EXISTS WITHIN THE CLEAR ZONE AT ANY TIME AND ENSURE DROP-OFF IS MITIGATED WITHOUT BARRIER PER NOTE 11.
8. CONSTRUCTION CLEAR ZONE SHALL BE IN ACCORDANCE WITH MASSDOT BOSTON TRAFFIC GUIDELINES AS FOLLOWS:
   4' IF POSTED SPEED IS LESS THAN 35 MPH
   8' IF POSTED SPEED IS 35 MPH
   15' IF POSTED SPEED IS 40 MPH
9. COVER ALL EXISTING SIGNAGE THAT CONFLICTS WITH THE TRAFFIC MANAGEMENT SETUP IN PLACE.
10. PORTABLE CHANGEABLE MESSAGE BOARDS (PCMB) SHALL BE USED ON BOSTON POST RD; THESE SIGNS SHALL ADVISE MOTORISTS TO EXPECT DELAYS, AND ADVISE TRAILER TRUCKS OF RESTRICTED LANE WIDTHS (AND POSSIBLE DETOUR ROUTES) ON SPECIFIC APPROACHES DURING CERTAIN STAGES OF CONSTRUCTION.
11. THE CONTRACTOR SHALL PLACE TWO PORTABLE CHANGEABLE MESSAGE BOARDS (PCMB) ON THE PROJECT SITE, FOR SEVEN DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
12. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN NCHRP 350 AND/OR MASH CRASH TESTED SIGN SUPPORTS AND INSTALLED IN ACCORDANCE WITH THE MUTCD.
13. ALL ADVANCED SIGNAGE SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
14. IF FLAGGERS ARE USED FOR TRAFFIC CONTROL, THE FLAGGER SIGN (W20-7a) SHALL BE SUBSTITUTED FOR THE POLICE OFFICER AHEAD (MA-W20-7b) SIGN.
15. FOR EXISTING OR TEMPORARY CROSSWALKS IN A PEDESTRIAN BYPASS AREA (E.G. FIGURE PED-3 STANDARD DETAILS) THERE SHALL BE A PEDESTRIAN WARNING SIGN WITH PLACARD (W11-2 AND W16-7P) ON EACH APPROACH (TRAVEL DIRECTION) AT THE CROSSWALK.



SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS (FT) **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS *	350	350	350
MOST OTHER ROADWAYS	500	500	500
FREEWAYS AND EXPRESSWAYS *	1,000	1,500	2,640

DETAIL NUMBER	DETAIL NAME	CURRENT VERSION
850.1.1	TEMPORARY CURB RAMP (1 OF 2)	JAN 2025
850.1.2	TEMPORARY CURB RAMP (2 OF 2)	JAN 2025
852.10.2	INTERSECTION QUADRANT CLOSURE	
852.1.3	PEDESTRIAN DETOUR FOR CROSSWALK CLOSURE	JAN 2025
852.4.1	ALTERNATING ONE-WAY (FLAGGER CONTROL)	JAN 2025
852.4.4	ALTERNATING ONE-WAY (TRAFFIC OFFICER)	JAN 2025
852.5.3	TWO LANE ROAD SHOULDER CLOSURE	JAN 2025

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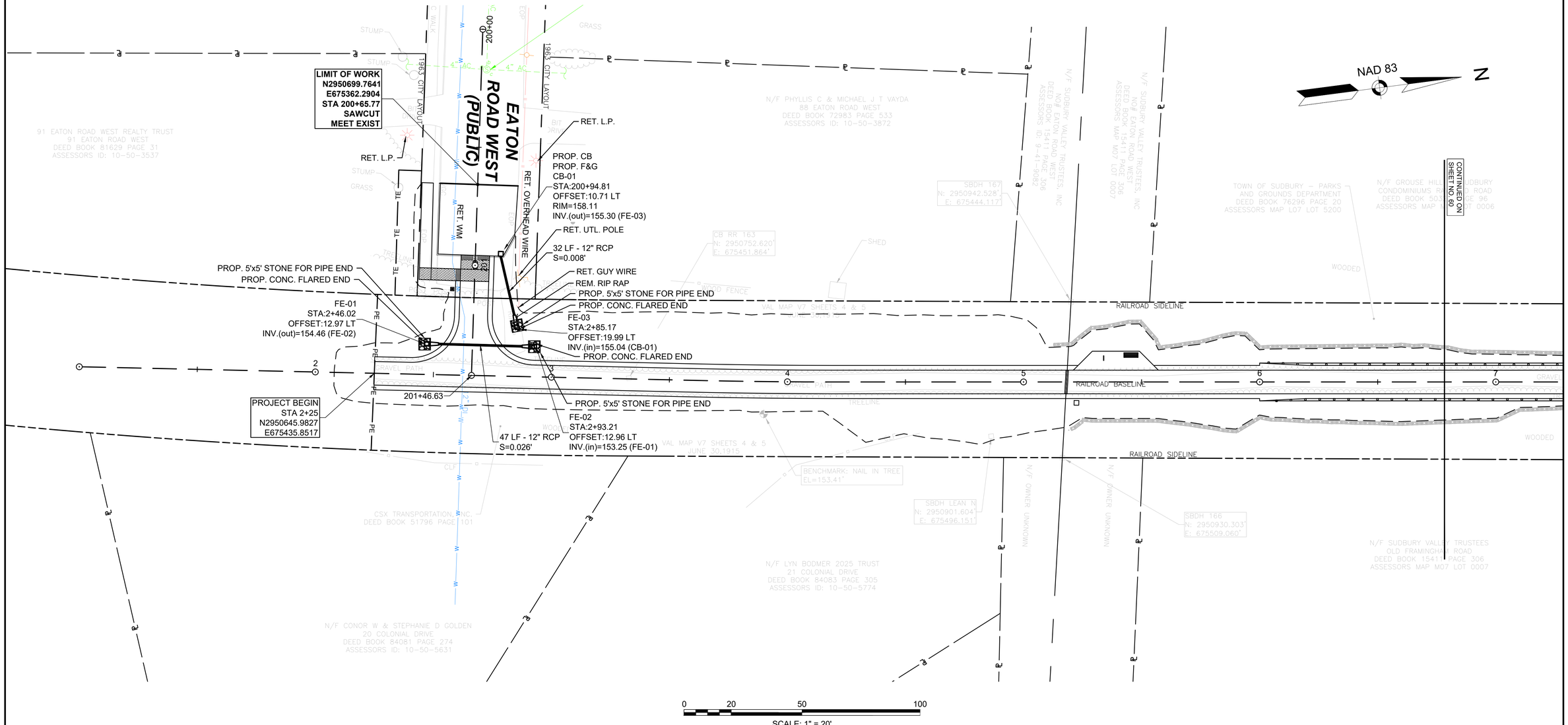
DRAINAGE AND UTILITY NOTES:

1. PROP. CONCRETE HEADWALLS SHALL CONFORM TO MASSDOT DETAIL 230.0.1
2. ALL CATCH BASIN FRAME AND GRATES TO BE MASSDOT CASCADE TYPE.

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	59	103
PROJECT FILE NO.	613319		

DRAINAGE & UTILITY PLANS



20200785.A30_DRAINAGE AND UTILITY PLANS.DWG Plotted on 12-Feb-2026 6:10 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	60	103
PROJECT FILE NO.	613319		

DRAINAGE & UTILITY PLANS

Plotted on 12-Feb-2026 6:11 PM
20200785.A30_DRAINAGE AND UTILITY PLANS.DWG

NAD 83 N

N/F GROUSE HILL AT SUDBURY CONDOMINIUMS RAYMOND ROAD DEED BOOK 50776 PAGE 96 ASSESSORS MAP M07 LOT 0006

WOODED

WF#14A-6 WF#14A-1 WF#14A-5 WF#14A-4 WF#14A-3 WF#14A-2

VAL MAP V7 SHEETS 4 & 5 JUNE 30,1915

RAILROAD SIDELINE

INV. STONE CATTLE CROSSING EL=139.24'

RB

CONTINUED BELOW

7 8 9 10 11 12

GRAVEL PATH

RAILROAD BASELINE

TREELINE

EL=139.12'

WOODED

VAL MAP V7 SHEETS 4 & 5 JUNE 30,1915

RAILROAD SIDELINE

PREDOMINANTLY <2" VEGETATION

IRF

CONTINUED ON SHEET NO. 59

N/F SUDBURY VALLEY TRUSTEES OLD FRAMINGHAM ROAD DEED BOOK 15411 PAGE 306 ASSESSORS MAP M07 LOT 0007

N/F SUDBURY VALLEY TRUSTEES OLD FRAMINGHAM ROAD DEED BOOK 15411 PAGE 306 ASSESSORS MAP M07 LOT 0007

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT DEED BOOK 76296 PAGE 20 ASSESSORS MAP L07 LOT 5200

N/F TOWN OF SUDBURY OLD FRAMINGHAM ROAD DEED BOOK 47709 PAGE 158 ASSESSORS MAP M07 LOT 0012

0 20 50 100

SCALE: 1" = 20'

NAD 83 N

CONTINUED ABOVE

N/F TOWN OF SUDBURY OLD FRAMINGHAM ROAD DEED BOOK 47709 PAGE 158 ASSESSORS MAP M07 LOT 0004

WF#5F-24 WF#5F-23 WF#5F-22 WF#5F-21 WF#SF20 WF#5F-19 WF#5F-18 WF#5F-17 WF#5F-16 WF#5F-15 WF#5F-13 WF#5F-12 WF#5J-9 WF#5J-8 WF#5J-7 WF#5J-6 WF#5J-5 WF#5J-4

VAL MAP V7 SHEETS 4 & 5 JUNE 30,1915

RAILROAD SIDELINE

PREDOMINANTLY <2" VEGETATION

RB 170

N/F TOWN OF SUDBURY OLD FRAMINGHAM ROAD DEED BOOK 47709 PAGE 158 ASSESSORS MAP M07 LOT 0005

WF#5I-8 WF#5I-10 WF#5I-9 WF#5E-11 WF#5E-10 WF#5E-12 WF#5E-1 WF#5E-9

12 13 14 15 16 17 18

GRAVEL PATH

RAILROAD BASELINE

PREDOMINANTLY <2" VEGETATION

BENCHMARK: SPIKE IN TREE EL=140.05'

RAILROAD SIDELINE

BATTERY WELL

RAILROAD SIGNAL TOWER

RAILROAD ELECTRICAL BOX

WF#1A-10 WF#1A-9 WF#1A-8 WF#1A-7 WF#1A-12

VAL MAP V7 SHEETS 4 & 5 JUNE 30,1915

RB 5012

PREDOMINANTLY <2" VEGETATION

CONTINUED ON SHEET NO. 61

N/F TOWN OF SUDBURY OLD FRAMINGHAM ROAD DEED BOOK 47709 PAGE 158 ASSESSORS MAP M07 LOT 0012

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT DEED BOOK 76296 PAGE 20 ASSESSORS MAP L07 LOT 5200

N/F TOWN OF SUDBURY OLD FRAMINGHAM ROAD DEED BOOK 47709 PAGE 158 ASSESSORS MAP M07 LOT 0010

WF#1A-3 WF#1A-4 WF#1A-5

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	61	103
PROJECT FILE NO.	613319		

DRAINAGE & UTILITY PLANS

Plotted on 12-Feb-2026 6:11 PM
20200785.A30_DRAINAGE AND UTILITY PLANS.DWG

NAD 83 N

CONTINUED ON SHEET NO. 60

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0005

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0005

INV STONE" BOX CULVERT
EL=122.77'

CONTINUED BELOW

WETLAND

WF#5E-11 WF#5E-10 WF#5E-9 WF#5E-6 WF#5E-4 WF#5E-3 WF#5E-1
WF#5F-11 WF#5F-10 WF#5F-9 INTERMITTENT STREAM 5E/5F WF#5F-8 WF#5F-7 WF#5F-6 WF#5F-5 WF#5F-4 WF#5F-3 INTERMITTENT STREAM 5E/F WF#5F-2 WF#5F-1
WF#5J-1
WF#5G-2 WF#5G-3 WF#5G-4 WF#5H-1 WF#5H-2
WF#5D-45 WF#5D-46 WF#5D-44 WF#5D-43 WF#5D-42 WF#5D-41 WF#5D-40 WF#5D-39

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

RAILROAD SIDELINE
RAILROAD BASELINE
RAILROAD SIDELINE

GRAVEL PATH

18 19 20 21 22 23 24

WF#1A-7 WF#1A-6 WF#1A-4 WF#1A-5
WF#2A-6 WF#2A-7 WF#2A-8 WF#2A-9 WF#2A-10 WF#2A-11 WF#2A-12
WF#2A-4 WF#2A-3 WF#2A-5 WF#2A-2 WF#2A-1

RB 10706

N/F TOWN OF SUDBURY
OLD FRAMINGHAM ROAD
DEED BOOK 47709 PAGE 158
ASSESSORS MAP M07 LOT 0010

INV 3FT STONE BOX CULVERT
EL=122.31'

N/F SUDBURY VALLEY TRUSTEE
NOBSCOT ROAD
DEED BOOK 20291 PAGE 162
ASSESSORS MAP L07 LOT 0023

WETLAND

0 20 50 100
SCALE: 1" = 20'

NAD 83 N

BOX CULVERT
EL=122.77'

CONTINUED ABOVE

WETLAND

N/F MURPHY AUDREY C TRUSTEE
120 NOBSCOT ROAD
DEED BOOK 46796 PAGE 553
ASSESSORS MAP L07 LOT 0202

REEDS/
MARSH
WETLAND

CONTINUED ON SHEET NO. 62

REPLACE EX. CULVERT
PROP. C3-1 9'x4' THREE-SIDED BOX CULVERT
(SEE DETAIL SHEET 81)

BENCHMARK: NAIL IN TREE
EL=131.10'

REPLACE EX. CULVERT
PROP. C3-2 9'x4' THREE-SIDED BOX CULVERT
(SEE DETAIL SHEET 81)

4' BOX CULVERT
INVERT=121.08'

WF#5D-39 WF#5D-38 WF#5D-37 WF#5D-36 WF#58-35 WF#5D-34 WF#5D-33 WF#5D-32 WF#5D-31 WF#5D-30 WF#5D-29 WF#3B-6 WF#3C-6 WF#5D-28

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

RAILROAD SIDELINE

GRAVEL PATH

24 25 26 27 28 29

RAILROAD BASELINE

WF#2A-12 WF#2A-13 WF#2A-14 WF#2A-15 WF#2A-16 WF#2A-17 WF#2A-18
WF#4A-1 WF#4A-2 WF#4A-3 WF#4A-4 WF#3A-4 WF#3A-3 WF#3A-2 WF#3A-5 WF#3A-6 WF#3A-7 WF#3A-8 WF#3A-9 WF#3A-10 WF#3A-11 WF#3A-12
WF#3B-4 WF#3C-5 WF#3C-4 WF#3B-3 WF#3C-3 WF#3B-2 WF#3C-2 WF#3Q-2

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

RAILROAD SIDELINE

4' BOX CULVERT
INVERT=121.96'

STONE BOX CULVERT
EL=122.31'

WETLAND

TOWN OF SUDBURY -- PARKS
AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

REEDS/
MARSH
WETLAND

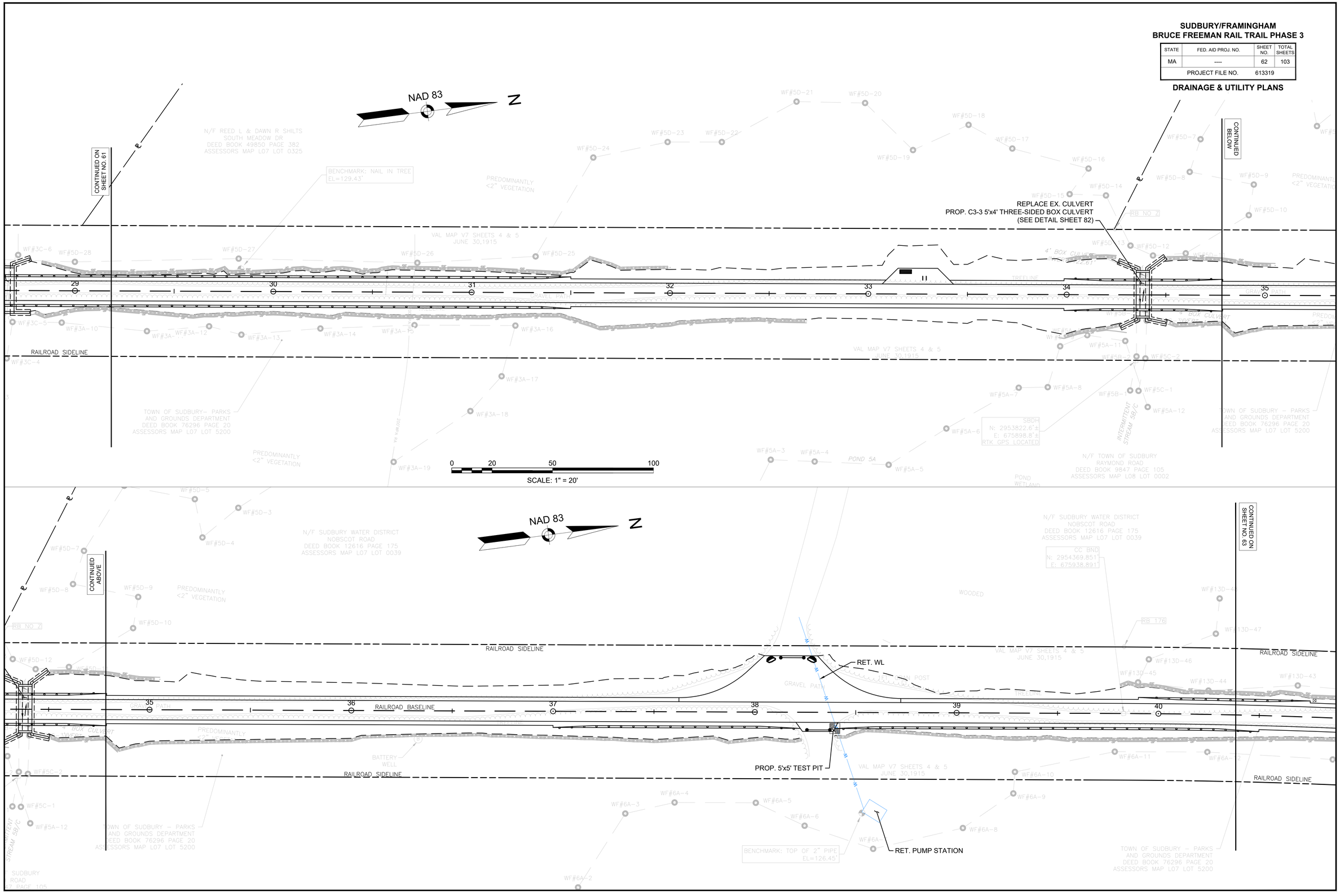
PERENNIAL STREAM 3B/3C

TOWN OF SUDBURY -
AND GROUNDS DEPA
DEED BOOK 76296 P
ASSESSORS MAP L07 LO

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	62	103
PROJECT FILE NO.	613319		

DRAINAGE & UTILITY PLANS



20200785.A30_DRAINAGE AND UTILITY PLANS.DWG Plotted on 12-Feb-2026 6:11 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	63	103
PROJECT FILE NO.	613319		

DRAINAGE & UTILITY PLANS

NAD 83 N

RAILROAD SIDELINE

RAILROAD BASELINE

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

RET. MONITORING WELLS (2)

REPLACE EX. CULVERT
PROP. C3-4 8'x3' THREE-SIDED BOX CULVERT
(SEE DETAIL SHEET 82)

INV 2FT" BY 2FT STONE
EL=121.83'

INV 2FT" BY 2FT STONE
EL=121.36'

CONTINUED ON SHEET NO. 62

CONTINUED ABOVE

CONTINUED ON SHEET NO. 64

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 12616 PAGE 175
ASSESSORS MAP L07 LOT 0039

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 9115 PAGE 555
ASSESSORS MAP L07 LOT 0041

N/F RAIMO ARNOLD & KATHLEEN LIIAS
186 NOBSCOT ROAD
DEED BOOK 79378 PAGE 378
ASSESSORS MAP L07 LOT 0017

N/F TOWN OF SUDBURY
RAYMOND ROAD
DEED BOOK 9847 PAGE 105
ASSESSORS MAP L08 LOT 0002

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F HAM MARY ANNE TRS
0 NOBSCOT ROAD
DEED BOOK 32298 PAGE 39
ASSESSORS MAP L07 LOT 0009

N/F SUDBURY WATER DISTRICT
199 RAYMOND ROAD
DEED BOOK 8682 PAGE 449
ASSESSORS MAP L08 LOT 0001

REEDS/ MARSH/ WETLAND

TREES / OPEN WETLAND

PERENNIAL STREAM 6B/C

INTERMITTENT STREAM 6D/E

PREDOMINANTLY <2" VEGETATION WITH STREAMS

BATTERY WELL

BENCHMARK: NAIL IN TREE
EL=130.42'

CCDH 178
N: 2955047.213'
E: 676116.256'

RB 176 RB 177 RB 179

0 20 50 100
SCALE: 1" = 20'

20200785.A30_DRAINAGE AND UTILITY PLANS.DWG Plotted on 12-Feb-2026 6:12 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	64	103
PROJECT FILE NO.	613319		

DRAINAGE & UTILITY PLANS

20200765.A30_DRAINAGE AND UTILITY PLANS.DWG Plotted on 12-Feb-2026 6:12 PM

NAD 83 N

NOBSCOT ROAD (PUBLIC)

LIMIT OF WORK
N2955707.3886
E676175.4344
STA 300+18.24
SAWCUT
MEET EXIST

LIMIT OF WORK
N2955879.9892
E676347.1753
STA 302+95
SAWCUT
MEET EXIST

PROP. CB
PROP. F&G
CB-02
STA:300+71.60
OFFSET:25.38 RT
RIM=134.05
INV.(out)=128.75 (FE-04)

PROP. MODIFIED ROCKFILL FOREBAY
BOT. ELEV. = 127.00'

FE-04
STA:300+67.93
OFFSET:54.94 RT
INV.(in)=127.00 (CB-02)

29 LF - 12" HDPE
S=0.059'

PROP. CPP FLARED END

PROP. INFILTRATION BASIN
BOT. ELEV. - 127.00'

31 LF - 12" HDPE
S=0.009'

PROP. MODIFIED ROCKFILL
FOR EMERGENCY SPILLWAY
ELEV. = 129.50'

PROP. LEVEL SPREADER
(SEE DETAIL ON SHEET 73)

FE-05
STA:300+52.89
OFFSET:98.02 RT
INV.(in)=126.70 (STORMWATER BASIN OUTLET CONTROL-01)

PROP. CPP FLARED END
STORMWATER BASIN OUTLET CONTROL-01
STA:300+65.67
OFFSET:91.38 RT
RIM=129.35
INV.(out)=127.00 (FE-05)

PROP. MODIFIED ROCKFILL BERM
ELEV. = 129.00'

STORMWATER BASIN OUTLET
CONTROL STRUCTURE

RET. UTL. POLE

RET. OVERHEAD WIRE

PROP. 1" CORPORATION

PROP. 1" POLYETHYLENE WATER LINE

RET. UTL. POLE

PROP. WATER GATE AND CONNECTION TO HYDRANT
RET. WG

R&R. HYDRANT

RET. WATER LINE

PROP. CURB STOP

PROP. HYDRATION STATION

PROP. MODIFIED ROCKFILL
FOR EMERGENCY SPILLWAY
ELEV. = 139.50'

R&D POST

RET. UTL. POLE & GUY WIRE
AND PUSH POLE

RET. WG

PROP. CONC. HEADWALL
(MASSDOT CONST. STD 230.0.1)

RET. WATER LINE

RET. UTL. POLE

PROP. CONC. HEADWALL
(MASSDOT CONST.
STD 230.0.1)

HW-02
STA:102+11.73
OFFSET:12.42 LT
INV.(in)=133.18 (HW-01)

HW-01
STA:102+11.60
OFFSET:12.38 RT
INV.(out)=133.02 (HW-02)

RET. UTL. POLE &
GUY WIRE

24 LF - 18" RCP
S=-0.006'

REM. EXIST 12" RCP

RET. OVERHEAD WIRE

1952 COUNTY SIDELINE

RAILROAD SIDELINE

ROAD SIDELINE

JEROME R SOUSA
475 BOSTON POST ROAD
DEED BOOK 19391 PAGE 600
ASSESSORS MAP K07 LOT 0007

INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

TOWN OF SUDBURY – PARK AND GROUNDS DEPARTMENT
NOBSCOT ROAD
DEED BOOK 1115 PAGE 55
ASSESSORS MAP L07 LOT 0001

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F SUDBURY WATER DISTRICT
199 RAYMOND ROAD
DEED BOOK 8682 PAGE 449
ASSESSORS MAP L08 LOT 0001

1776 PLAZA LIMITED PARTNERSHIP
457–447 BOSTON POST ROAD
DEED BOOK 20083 PAGE 348
ASSESSORS MAP K08 LOT 0003

INTERMITTENT STREAM 13B/C

PREDOMINANTLY <2" VEGETATION WITH STREAMS

PREDOMINANTLY <2" VEGETATION

BATTERY WELL

CONTINUED ON SHEET NO. 63

CONTINUED ON SHEET NO. 65

0 20 50 100
SCALE: 1" = 20'

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	65	103
PROJECT FILE NO.	613319		

DRAINAGE & UTILITY PLANS

20200785.A30_DRAINAGE AND UTILITY PLANS.DWG Plotted on 12-Feb-2026 6:12 PM

NAD 83 N

BOSTON POST ROAD (PUBLIC) (ROUTE 20)

NOBSCOT ROAD (PUBLIC)

1902 SHLO SIDELINE

1952 COUNTY SIDELINE

RAILROAD SIDELINE

EXISTING CROSSING EASEMENT

CONTINUED ON SHEET NO. 64

CONTINUED ON SHEET NO. 66

LIMIT OF WORK
N2956327.2509
E676560.1812
STA 401+00
SAWCUT
MEET EXIST

LIMIT OF WORK
N2956356.9255
E676683.0387
STA 402+26.39
SAWCUT
MEET EXIST

RET. OVERHEAD WIRE
RET. UTL. POLE
RET. WG
RET. CB
RET. OUTLET
RET. WATER LINE
RET. GAS LINE
RET.
ADJ. WG
ADJ. (B.O)
ADJ. PB'S
ADJ. MONITORING WELL

INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

SUDBURY HOLDINGS LLC
465 BOSTON POST ROAD
DEED BOOK 45926 PAGE 344
ASSESSORS MAP K08 LOT 0002

CHISWICK PARK LLC
460 BOSTON POST ROAD
DEED BOOK 70761 PAGE 291ASSESSORS
MAP K08 LOT 0062

MIDDLESEX SAVINGS BANK
454 BOSTON POST ROAD
DEED BOOK 49392 PAGE 161
ASSESSORS MAP K08 LOT 0065

"WEST 20 WAYSIDE INN HISTORIC SITE MALBORO"

"MIDDLESEX SAVINGS BANK PLAZA"

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

1776 PLAZA LIMITED PARTNERSHIP
457–447 BOSTON POST ROAD
DEED BOOK 20083 PAGE 348
ASSESSORS MAP K08 LOT 0003

0 20 50 100
SCALE: 1" = 20'

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	66	103
PROJECT FILE NO.	613319		

DRAINAGE & UTILITY PLANS

Plotted on 12-Feb-2026 6:12 PM
20200785.A30_DRAINAGE AND UTILITY PLANS.DWG

NAD 83 N

CONTINUED ON SHEET NO. 65

CONTINUED ABOVE

CONTINUED BELOW

20-FOOT WIDE TRAIL EASEMENT SEE DEED BK 51398, Pg 565

MIDDLESEX SAVINGS BANK
454 BOSTON POST ROAD
DEED BOOK 49392 PAGE 161
ASSESSORS MAP K08 LOT 0065

CHISWICK PARK LLC
UNION AVENUE
DEED BOOK 70761 PAGE 297
ASSESSORS MAP K08 LOT 0057

N/F MCNEILL A ELLIOTT
21 UNION AVENUE
DEED BOOK 23052 PAGE 461
ASSESSORS MAP K08 LOT 0090

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP K08 LOT 5200

TWINS HOLDING LLC
450 BOSTON POST ROAD
DEED BOOK 56560 PAGE 422
ASSESSORS MAP K08 LOT 0066

N/F CHISWICK PARK LLC
UNION AVENUE
DEED BOOK 70761 PAGE 297
ASSESSORS MAP K08 LOT 0057

MASSDOT–RAIL AND TRANSIT DIVISION
JUNE 30, 1915 LAYOUT
BY OLD COLONY R.R CO.
DEED BOOK 14836
PAGE 507 CONFIRMATORY
TAKING IN DEED
BOOK 64110, PAGE 80

N/F CHISWICK PARK LLC
0 UNION AVENUE
DEED BOOK 70761 PAGE 297
ASSESSORS MAP K08 LOT 0073

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
DEED BOOK 13117, PAGE 113
ASSESSORS MAP K08 LOT 5100

N/F DUROSA LLC
23 UNION AVENUE
DEED BOOK 78634 PAGE 88
ASSESSORS MAP K08 LOT 0022

N/F ELLIOTT A MCNEILL
21 UNION AVENUE
DEED BOOK 23052 PAGE 461
ASSESSORS MAP K08 LOT 0090

PREDOMINANTLY <2" VEGETATION

RAILROAD SIGNAL TOWER

RAILROAD SIDELINE

RAILROAD BASELINE

VAL MAP V7 SHEETS 4 & 5 JUNE 30,1915

INTERMITTENT (BYLAW ONLY) 11B

TREELINE

EOP

VGC

CLF

BIT. DRIVE

WOODED

CONCRETE PAD

TIMBER PAD

GRAVEL PAD

BATTERY

RET.

ELECTRIC BOX

BENCHMARK: NAIL IN TREE EL=137.95'

BENCHMARK: SPIKE EL=137.15'

BENCHMARK: NAIL IN UTIL EL=138.17'

IN EL=134.12

63 64 65 66 67 68 69 70 71 72 73 73+27.32

0 20 50 100
SCALE: 1" = 20'

APPROXIMATE LOCATION OF DRAINAGE EASEMENT (SEE PLAN 607 OF 1973)

APPROXIMATE LOCATION OF RAILROAD TRACK EASEMENT (SEE PLAN 607 OF 1973)

ACCESS EASEMENT (SEE PLAN 416 OF 1984)

PASSAGEWAY SEE PLAN 1093 OF 1959

50' WIDE RIGHT OF (SEE PLAN 607 OF

RET. OVERHEAD WIRE

RET. GAS LINE

RET. WATER LINE

RET. MONITORING WELL

RET. ELEC. STRUCTURE

RET. UTL. POLE

RET. OVERHEAD WIRE

RET. UTL. POLE & GUY WIRE

PROJECT END
STA 73+23.06
N2957447.0857
E677071.8763

8" AC

4" PE

12" CMP

TE

G

W

OHW

PROJECT SUMMARY PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
	TRESS			
AC	ABIES CONCOLOR	WHITE FIR	4	6' HT.
AS	ACER SACCHARUM	SUGAR MAPLE	5	2.5" CAL.
CC	CERCIS CANADENSIS	EASTERN REDBUD MULTI-TRUNK	6	5' HT.
JV	JUNIPERUS VIRGIANA	EASTERN REDCEDAR	10	2.5" CAL.
QR	QUERCUS RUBRA	NORTHERN RED OAK	6	2.5" CAL.
	SHRUBS			
CA	CEANOTHUS AMERICANUS	NEW JERSEY TEA	37	2 GAL.
CA2	CLETHRA ALNIFOLIA 'RUBY SPICE'	RUBY SPICE SUMMERSWEET	30	2 GAL.
CS	CORNUS SERICEA	RED TWIG DOGWOOD	23	3 GAL.
HV	HAMAMEUS VERNALIS	OZARK WITCHHAZEL	6	3 GAL.
IG	ILEX GLABRA	INKBERRY HOLLY	11	2 GAL.
IG2	ILEX GLABRA	INKBERRY HOLLY MALE	2	2 GAL.
RM	RHODODENDRON MAXIMUM	ROSEBAY RHODODENDRON	6	3 GAL.
	PERENNIALS			
AT	AMSONIA TABERNAEMONTANA	EASTERN BLUESTAR	15	1 GAL.
BA	BOLTONIA ASTEROIDES	FALSE ASTERW	25	1 GAL.
EP	ECHINACEA PURPUREA	CONEFLOWER	45	1 GAL.
EP2	ECHINACEA PURPUREA 'PAS702918'	POWWOW® WHITE CONEFLOWER	62	1 GAL.
ED	EUPATORIUM DUBIUM 'BABY JOE'	BABY JOE PYE WEED	7	1 GAL.
LS	LIATRIS SPICATA	BLAZING STAR	48	1 GAL.
MD	MONARDA DIDYMA	BEE BALM	68	1 GAL.
PD	PENSTEMON DIGITALIS	BEARDTONGUE	29	1 GAL.
RH	RUDBECKIA HIRTA	BLACK-EYED SUSAN	61	1 GAL.
TN	THELYPTERIS NOVERBORACENSIS	NEW YORK FERN	160	2" PLUG

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
	TREES			
AC	ABIES CONCOLOR	WHITE FIR	4	6' HT.
JV	JUNIPERUS VIRGIANA	EASTERN REDCEDAR	10	2.5" CAL.
QR	QUERCUS RUBRA	NORTHERN RED OAK	6	2.5" CAL.
	SHRUBS			
RM	RHODODENDRON MAXIMUM	ROSEBAY RHODODENDRON	6	3 GAL.

LEGEND:

PLANT QUANTITY AND SPECIES (X / XX)

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	67	103
PROJECT FILE NO.	613319		

PLANTING PLANS

PROJECT BEGIN
N2950645.9827
E675435.8517
STA 2+25
SAWCUT
MEET EXIST

NAD 83 N

CSX TRANSPORTATION, INC.
DEED BOOK 51796 PAGE 101

STA 2+66.14 BRT 3 – ALIGNMENT =
STA 201+46.63 EATON ROAD W SPUR PATH
N 2950686.6469
E 675442.0845

0 20 50 100
SCALE: 1" = 20'

CLEAR AND GRUB LOW BRUSH IN PLANTING AREAS RET. TREES

N/F LYN BODMER 2025 TRUST
21 COLONIAL DRIVE
DEED BOOK 84083 PAGE 305
ASSESSORS ID: 10–50–5774

CLEAR AND GRUB LOW BRUSH IN PLANTING AREAS RET. TREES

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F GROUSE HILL AT SUDBURY CONDOMINIUMS RAYMOND ROAD
DEED BOOK 50326 PAGE 96
ASSESSORS MAP M07 LOT 0006

PROP. LOAM & SEED

RAILROAD SIDELINE

CONSTRUCTION ℄

201+46.63

RET.

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

N/F OWNER UNKNOWN

N/F SUDBURY VALLEY TRUSTEES
OLD FRAMINGHAM ROAD
DEED BOOK 15411 PAGE 306
ASSESSORS MAP M07 LOT 0007

FOR CONSTRUCTION PLAN SEE SHEET NO. 13

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
	SHRUBS			
CS	CORNUS SERICEA	RED TWIG DOGWOOD	11	3 GAL.
HV	HAMAMEUS VERNALIS	OZARK WITCHHAZEL	4	3 GAL.
	PERENNIALS			
TN	THELYPTERIS NOVERBORACENSIS	NEW YORK FERN	160	2" PLUG

NAD 83 N

N/F SUDBURY WATER DISTRICT
NOBSCOT ROAD
DEED BOOK 12616 PAGE 175
ASSESSORS MAP L07 LOT 0039

PROP. LOAM & SEED

RAILROAD SIDELINE

CONSTRUCTION ℄

RET.

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

F SUDBURY
ROAD
47 PAGE 105

FOR CONSTRUCTION PLAN SEE SHEET NO. 16

20200785.A30_PLANTING PLANS.DWG Plotted on 12-Feb-2026 5:33 PM

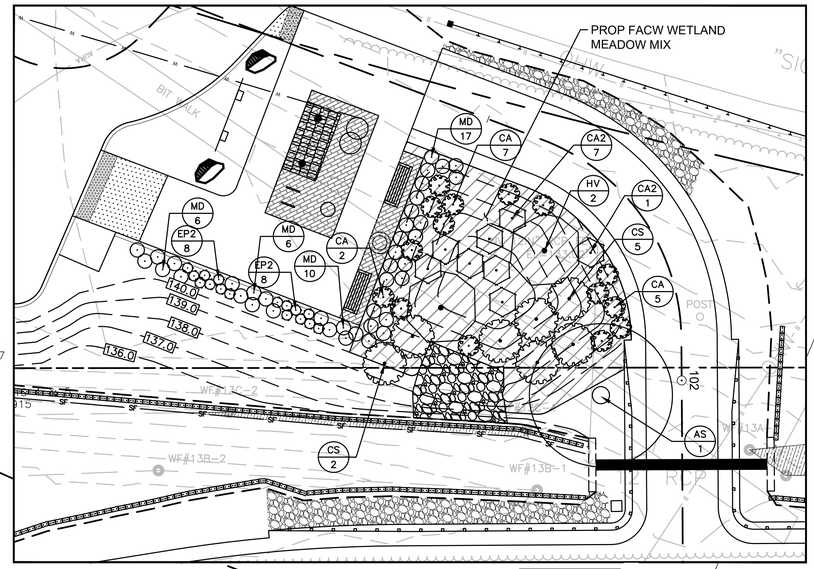
FOR CONSTRUCTION PLAN SEE SHEET NO. 18

LEGEND:

PLANT QUANTITY AND SPECIES

X
XX

INSET 'A'
1" = 10'



SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	68	103
PROJECT FILE NO.	613319		

PLANTING PLANS

NAD 83

JEROME R SOUSA
475 BOSTON POST ROAD
DEED BOOK 19391 PAGE 600
ASSESSORS MAP K07 LOT 0007

JEROME R SOUSA
475 BOSTON POST ROAD
DEED BOOK 19391 PAGE 600
ASSESSORS MAP K07 LOT 0007

INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

N/F
INTERSTATE GAS + OIL CORPORATION
239 NOBSCOT POST ROAD
DEED BOOK 7948 PAGE 240
ASSESSORS MAP K08 LOT 0001

LIMIT OF WORK
N2955707.3886
E676175.4344
STA 300+18.24
SAWCUT
MEET EXIST

LIMIT OF WORK
N2955879.9892
E676347.1753
STA 302+95
SAWCUT
MEET EXIST

NOBSCOT ROAD (PUBLIC)

1952 COUNTY SIDELINE

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
NOBSCOT ROAD
DEED BOOK 9115 PAGE 555
ASSESSORS MAP L07 LOT 0015

PROP. WETLAND REPLICATION AREA (SEE WETLAND REPLICATION PLAN SHEET 71

PROP. WETLAND SEED MIX

PROP. LOAM & SEED (WETLAND MIX) FOR BASINS

SEE INSET 'A'

RAILROAD SIDELINE

CONSTRUCTION ℄

VAL MAP V7 SHEETS 4 & 5
JUNE 30,1915

STA 56+07.20 BFRT 3 – ALIGNMENT =
STA 102+28.09 PARKING LOT SPUR PATH
N 2955904.1926
E 676454.2322

TOWN OF SUDBURY – PARKS AND GROUNDS DEPARTMENT
DEED BOOK 76296 PAGE 20
ASSESSORS MAP L07 LOT 5200

N/F SUDBURY WATER DISTRICT
199 RAYMOND ROAD
DEED BOOK 8682 PAGE 449
ASSESSORS MAP L08 LOT 0001

1776 PLAZA LIMITED PARTNERSHIP
457–447 BOSTON POST ROAD
DEED BOOK 20083 PAGE 348
ASSESSORS MAP K08 LOT 0003

PREDOMINANTLY <2" VEGETATION WITH STREAMS

PREDOMINANTLY <2" VEGETATION

TOWN OF SUDBURY – AND GROUNDS DEPAR
DEED BOOK 76296 PA
ASSESSORS MAP L07 LOT

0 20 50 100
SCALE: 1" = 20'

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
	TREES			
AS	ACER SACCHARUM	SUGAR MAPLE	1	2.5" CAL.
	SHRUBS			
CA	CEANOTHUS AMERICANUS	NEW JERSEY TEA	14	2 GAL.
CA2	CLETHRA ALNIFOLIA 'RUBY SPICE'	RUBY SPICE SUMMERSWEET	8	2 GAL.
CS	CORNIUS SERICEA	RED TWIG DOGWOOD	7	3 GAL.
HV	HAMAMELIS VERNALIS	OZARK WITCHHAZEL	2	3 GAL.
	PERENNIALS	BUTTERFLY WEED	11	PLUG
EP2	ECHINACEA PURPUREA 'PAS702918'	POWWOW® WHITE CONEFLOWER	16	1 GAL.
MD	MONARDA DIDYMA	BEE BALM	39	1 GAL.

20200785.A30_PLANTING PLANS.DWG Plotted on 12-Feb-2026 5:33 PM

FOR CONSTRUCTION PLAN SEE SHEET NO. 19

LEGEND:

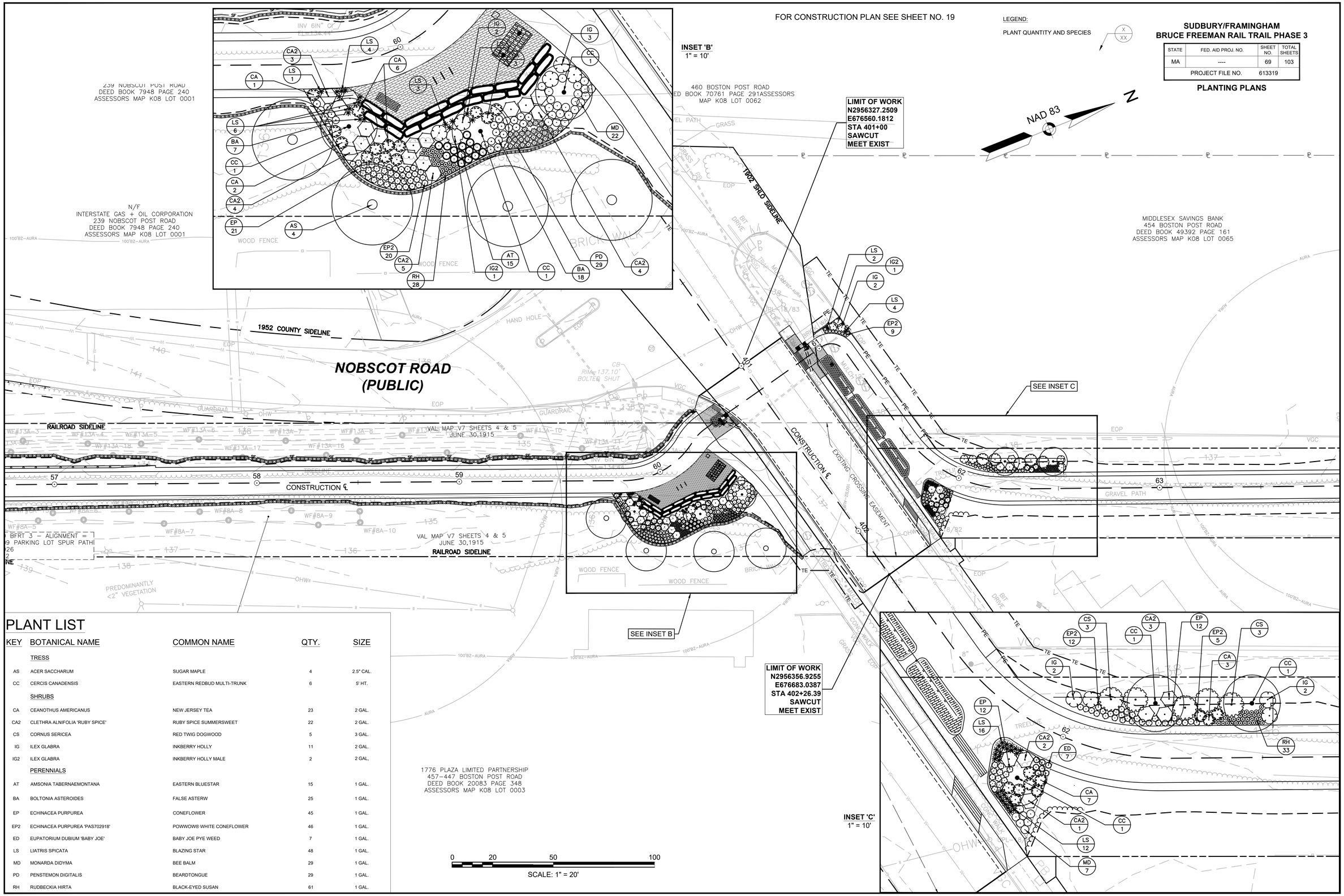
PLANT QUANTITY AND SPECIES

X
XX

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	69	103
PROJECT FILE NO.	613319		

PLANTING PLANS



PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
	TRESS			
AS	ACER SACCHARUM	SUGAR MAPLE	4	2.5" CAL.
CC	CERCIS CANADENSIS	EASTERN REDBUD MULTI-TRUNK	6	5' HT.
	SHRUBS			
CA	CEANOTHUS AMERICANUS	NEW JERSEY TEA	23	2 GAL.
CA2	CLETHRA ALNIFOLIA 'RUBY SPICE'	RUBY SPICE SUMMERSWEET	22	2 GAL.
CS	CORNUS SERICEA	RED TWIG DOGWOOD	5	3 GAL.
IG	ILEX GLABRA	INKBERRY HOLLY	11	2 GAL.
IG2	ILEX GLABRA	INKBERRY HOLLY MALE	2	2 GAL.
	PERENNIALS			
AT	AMSONIA TABERNAEMONTANA	EASTERN BLUESTAR	15	1 GAL.
BA	BOLTONIA ASTEROIDES	FALSE ASTERW	25	1 GAL.
EP	ECHINACEA PURPUREA	CONEFLOWER	45	1 GAL.
EP2	ECHINACEA PURPUREA 'PAS702918'	POWWOW® WHITE CONEFLOWER	46	1 GAL.
ED	EUPATORIUM DUBIUM 'BABY JOE'	BABY JOE PYE WEED	7	1 GAL.
LS	LIATRIS SPICATA	BLAZING STAR	48	1 GAL.
MD	MONARDA DIDYMA	BEE BALM	29	1 GAL.
PD	PENSTEMON DIGITALIS	BEARDTONGUE	29	1 GAL.
RH	RUDBECKIA HIRTA	BLACK-EYED SUSAN	61	1 GAL.

20200785.A30_PLANTING PLANS.DWG Plotted on 12-Feb-2026 5:34 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	70	103
PROJECT FILE NO.	613319		

WETLAND REPLICATION PLANS

WETLAND REPLICATION PLAN NOTES

GENERAL NOTES

1. THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ALSO PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE ENGINEER AND ARCHITECT AS REQUIRED.
2. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS.
3. LIMIT OF WORK SHALL BE EROSION CONTROL BARRIERS, LIMIT OF GRADING AND SITE PROPERTY LINES AND/OR AS INDICATED ON DRAWINGS.
4. ANY ALTERATION TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE APPROVED BY THE MASSDOT ENGINEER AND BE RECORDED BY THE CONTRACTOR ON RECORD DOCUMENTS.
5. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
6. EXISTING TREES AND SHRUBS OUTSIDE THE LIMITS OF GRADING SHALL NOT BE REMOVED UNLESS APPROVAL IS GRANTED BY THE TREE WARDEN/LANDSCAPE/CONCOMM.
7. FOR DRAWING LEGIBILITY, ALL EXISTING TOPOGRAPHIC FEATURES, EXISTING UTILITIES, PROPERTY BOUNDARIES, EASEMENTS, ETC. MAY NOT BE SHOWN ON ALL DRAWINGS. REFER TO ALL REFERENCED DRAWINGS AND OTHER DRAWINGS IN THIS SET FOR ADDITIONAL INFORMATION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL PERMIT CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTINC, SECURING AND COMPLIANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT, AS ADMINISTERED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

EROSION CONTROL AND SEDIMENTATION NOTES

1. CONTRACTOR SHALL MAINTAIN ANY EROSION CONTROL MEASURES DURING THE ENTIRE CONSTRUCTION PERIOD.
2. ANY SEDIMENT TRACKED ONTO THE PUBLIC RIGHT-OF-WAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY.
3. ALL DEBRIS GENERATED DURING SITE PREPARATION ACTIVITIES SHALL BE LEGALLY DISPOSED OF OFF SITE.
4. SITE ELEMENTS TO REMAIN MUST BE PROTECTED FOR DURATION OF PROJECT.
5. ADDITIONAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE (E.G., PROFESSIONAL ENGINEER, WETLAND SCIENTITST, CERTIFIED ECOLOGICAL RESTORATION PRACTIONER).
6. THE WETLAND REPLICATION SITE WILL BE ACCESSED FROM THE BRUCE FREEMAN RAIL TRAIL. ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS.
7. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING WETLAND LOCATED OUTSIDE THE LIMIT OF WORK AND OFF PROPERTY.
8. ADDITIONAL EROSION CONTROLS SHALL BE INSTALLED AS REQUIRED, IN COMPLIANCE WITH THE SWPPP, AND LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER OR THEIR REPRESENTATIVE.

LAYOUT AND MATERIALS NOTES

1. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
2. CONTRACTOR SHALL REPORT SIGNIFICANT CONFLICTS TO THE OWNER AND THE ENGINEER FOR RESOLUTION.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN SITE PLAN DIMENSIONS AND BUILDING PLANS BEFORE PROCEEDING WITH ANY PORTION OF SITE WORK WHICH MAY BE AFFECTED SO THAT PROPER ADJUSTMENTS TO THE SITE LAYOUT CAN BE MADE IF NECESSARY.
4. PROTECT EXISTING PROPERTY MONUMENTS AND ABUTTING PROPERTIES DURING CONSTRUCTION ACTIVITIES.

GRADING, DRAINAGE AND UTILITY NOTES

1. UNDERGROUND UTILITIES WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES, ARE APPROXIMATE AND ASSUMED. BEFORE COMMENCING SITE WORK IN ANY AREA, CONTACT "DIG SAFE" AT 1-888-344-7233 AND THE OWNER TO ACCURATELY LOCATE UNDERGROUND UTILITIES. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO EXCAVATION SHALL BE DONE UNTIL UTILITY COMPANIES AND THE OWNER ARE PROPERLY NOTIFIED IN ADVANCE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED.
3. ALL WORK PERFORMED AND ALL MATERIALS FURNISHED SHALL CONFORM WITH THE LINES, GRADES AND OTHER SPECIFIC REQUIREMENTS OR SPECIFICATIONS FOR THE PROJECT AS SHOWN ON THE PLANS.
4. THE CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER OR CERTIFIED ECOLOGICAL RESTORATION PROACTITIONER. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES, AS REQUIRED. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE OWNER AND ENGINEER FOR RESOLUTION.
5. THE CONTRACTOR SHALL REMOVE ALL EROSION CONTROL BARRIERS AFTER REVEGETATION OF DISTURBED AREAS AND AFTER APPROVAL OF THE CONSERVATION COMMISSION AND WETLAND SPECIALIST OR CERTIFIED ECOLOGICAL RESTORATION PROACTITIONER.
6. PITCH EVENLY BETWEEN SPOT GRADES.

WETLAND CONSTRUCTION NOTES

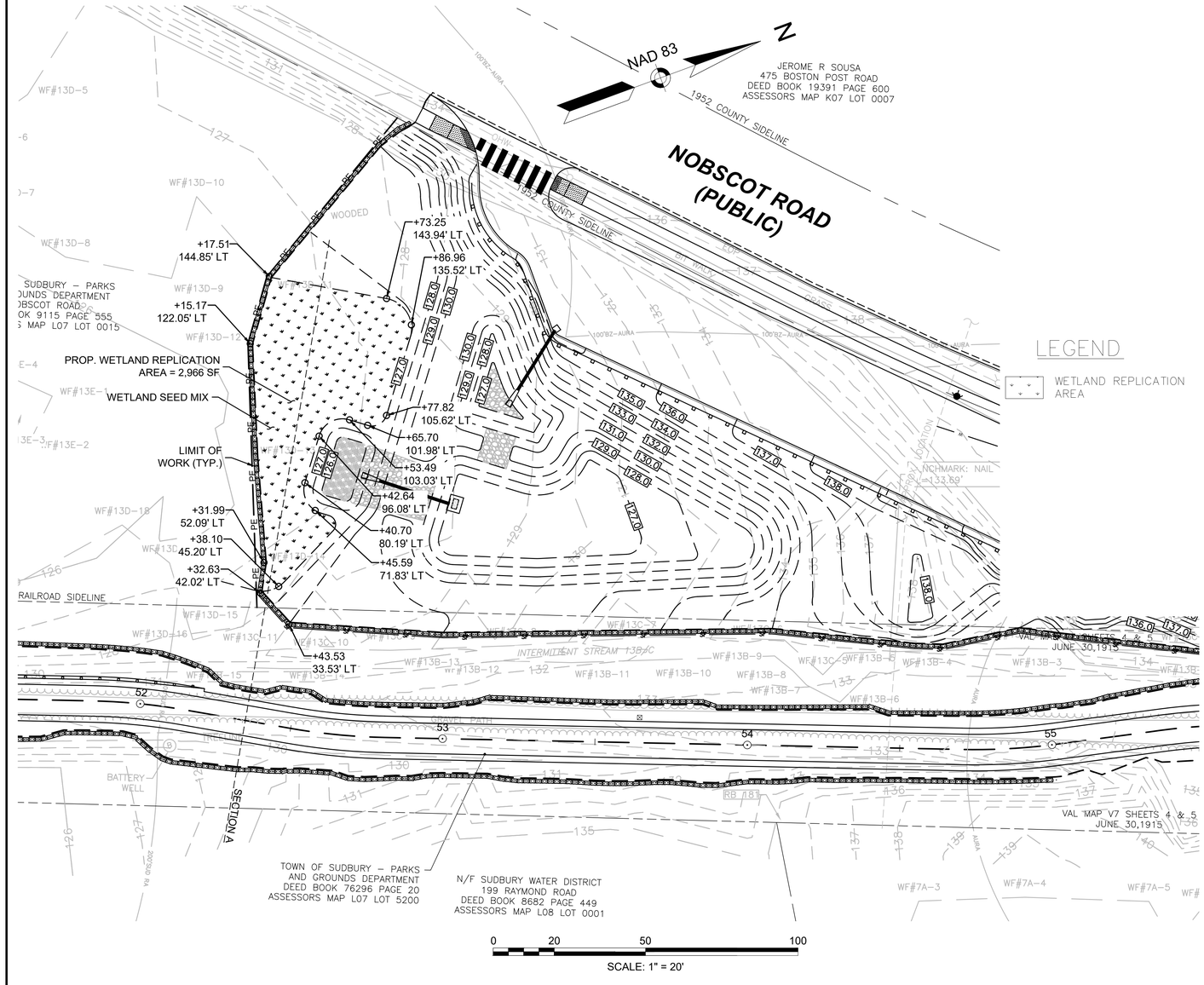
1. A PRECONSTRUCTION MEETING SHALL BE HELD BEFORE INITIATING CONSTRUCTION. THE PRECONSTRUCTION MEETING SHALL BE ATTENDED BY THE DESIGNATED PROFESSIONAL WETLAND SCIENTIST, SITE ENGINEER, CONSTRUCTION GENERAL MANAGER, SITE CONTRACTOR, LANDSCAPE CONTRACTOR, CONCOMM, RESIDENT ENGINEER, AND ANY OTHER CONTRACTOR INVOLVED IN THE REPLICATION ACTIVITY.
2. WETLAND REPLICATION SHALL BE CONDUCTED IN ACCORDANCE WITH THESE DRAWINGS, SPECIAL PROVISIONS AND REQUIREMENTS OUTLINED IN THE ORDER OF CONDITIONS AS ISSUED BY THE TOWN OF SUDBURY CONSERVATION COMMISSION.
3. ALL EXISTING WETLAND DELINEATION WITHIN 100 FEET OF THE WORK AREA WILL BE RE-FLAGGED EVERY 25 FEET.
4. EROSION CONTROLS SHALL BE INSTALLED PER EROSION CONTROL PLAN, REPAIRED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD OF WETLAND MITIGATION AND UNTIL THE SITE IS FULLY STABILIZED BY VEGETATION (SEED MIX). EROSION CONTROLS SHALL THEN BE REMOVED FROM THE SITE.
5. A WETLAND SCIENTIST SHALL BE ON SITE TO MONITOR PLANTING AND GRADING OF THE WETLAND REPLICATION AREA TO ENSURE COMPLIANCE WITH APPROVED PLANS.
6. INVASIVE NON-NATIVE PLANT SPECIES IN OR IMMEDIATELY ADJACENT TO REPLICATION AREA SHALL BE IDENTIFIED AND TAGGED FOR ERADICATION OR REMOVAL.
7. IF USED, HERBICIDE SELECTION AND TIMING FOR INVASIVE SPECIES CONTROL SHALL BE APPROVED BY A PROFESSIONAL WETLAND SCIENTIST OR OTHER AS DESIGNATED IN THE APPROVED IPMS.
8. IF USED, HERBICIDE APPLICATION FOR INVASIVE SPECIES CONTROL SHALL BE PERFORMED PER THE IPMS. DOCUMENTATION OF CERTIFICATION SHALL BE SUBMITTED TO THE SITE CONSTRUCTION GENERAL MANAGER.
9. GRADING AND PLANTINGS WILL NOT BE CONDUCTED DURING PERIODS OF HIGH WATER. CONSTRUCTION OF THE REPLICATION AREA WILL CONTINUE UNINTERUPTED TO AVOID EROSION AND THE SILTATION OF WETLANDS.
10. COMPACTION OF SOILS IN THE WETLAND REPLICATION AREA SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE BY THE USE OF LOW-GROUND PRESSURE MACHINERY.
11. SHOULD COMPACTION OCCUR, SOILS SHALL BE TILLED OR DISKED IN TWO DIRECTIONS TO RE-FRACTURE A MINIMUM OF TWELVE (12) INCHES BELOW FINISHED GRADE.
12. BURIED ORGANIC WETLAND SOILS ENCOUNTERED DURING EXCAVATION MAY BE LEFT IN PLACE. IF TEMPORARY STOCKPILING OF WETLAND SOIL IS NECESSARY, MATERIAL MUST BE COVERED TO PREVENT LEACHING, MOISTURE LOSS AND SEDIMENT TRANSPORT.
13. GRADING LINES DEPICTED ON THE PLAN ARE DRAWN SMOOTHLY. ACTUAL SURFACE GRADES ACROSS WETLAND 'FLOOR' SHALL REFLECT HUMMOCK AND HOLLOW TOPOGRAPHY OF NATURAL WETLANDS.
14. THE SUBGRADE OF WETLAND REPLACEMENT AREAS WILL BE GRADED A MINIMUM OF ONE FOOT BELOW THE ADJACENT WETLANDS. NO GRADING WILL BE PERMITTED WITHIN THE EXISTING WETLAND AREAS EXCEPT TO CUT OPENIINGS IN BERMS TO ESTABLISH HYDRAULIC CONDUCTIVITY BETWEEN THE REPLACEMENT WETLAND AND THE WETLAND REPLICATION.
15. FINAL SUB-GRADES SHALL BE REVIEWED AND APPROVED BY A PROFESSIONAL WETLAND SCIENTIST AFTER REVIEW OF SEASONAL, LOCAL HIGH GROUNDWATER MONITORING DATA AND FIELD CONDITIONS. MODIFICATIONS OF FINAL GRADES MAY BE MADE IN THE FIELD AS DIRECTED BY A PROFESSIONAL WETLAND SCIENTIST OR CERTIFIED ECOLOGICAL RESTORATION PRACTITIONER.
16. A TWELVE-INCH LAYER OF NATURAL ORGANIC SOIL OR MIXTURE OF GOOD QUALITY TOPSOIL AND CLEAN LEAF COMPOST PER THE SOIL SPECIFICATIONS OF ITEM 755.35 WILL BE PLACED IN THE BOTTOM OF THE REPLACEMENT AREA. SOIL AND COMPOST SHOULD BE CERTIFIED FREE OF INVASIVE PLANT SEEDS OR OTHER ARTIFICIAL MATERIAL.
17. SIDE SLOPES OF NON-WETLAND (UPLAND) AREAS SHALL BE GRADED WITH A MINIMUM OF FOUR INCHES OF THE SOIL MIXTURE AS DESCRIBED ABOVE.
18. NO SOIL AMENDMENT OR FERTILIZER SHALL BE APPLIED OR ADDED UNLESS DIRECTED BY A PROFESSIONAL WETLAND SCIENTIST.
19. WHERE CALLED FOR, REPLICATION AREAS SHALL BE SEEDED IMMEDIATELY FOLLOWING PLACEMENT AND FINAL GRADING INCLUDING MICROTOPOGRAPHY. SPRING SEEDING SHOULD OCCUR AFTER THE GROUND THAWS AND BEFORE JUNE 30. FALL SEEDING SHOULD OCCUR AFTER OCTOBER 15 AND BEFORE THE SOIL FREEZES.
20. ALL WETLAND AREAS SHALL BE SEEDED USING THE SEED MIX SPECIFIED IN ITEM 765.554 WETLAND MIX/BASIN MIX AND SHALL BE APPLIED AT A RATE ACCORDING TO THE ITEM SPECIFICATION.
21. UPLAND AREAS SHALL BE SEEDED USING THE SEED MIX SPECIFIED IN ITEM 765.453. UPLAND SHADE MIX AND SHALL BE APPLIED AT A RATE ACCORDING TO THE ITEM SPECIFICATION.
22. SEED SHALL BE FRESH, RECLEANED SEED OF THE LATEST CROP. SEED SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL CONTAINERS WHICH SHALL BEAR THE VENDOR'S GUARANTEE OF ANALYSIS.
23. DEVIATIONS FROM THE PLANTING SCHEDULE AND/OR APPROVED PLANTING LIST MUST BE APPROVED IN ADVANCE BY A PROFESSIONAL WETLAND SCIENTIST OR CERTIFIED ECOLOGICAL RESTORATION PRACTITIONER.
24. THE LANDSCAPE CONTRACTOR SHALL CLEAN UP AND REMOVE ANY DEBRIS FROM THE SITE CAUSED BY THE LANDSCAPE CONTRACTOR.
25. PLANT LISTS MAY BE ALTERED BASED ON FIELD CONDITIONS AS DIRECTED BY A PROFESSIONAL WETLAND SCIENTIST.
26. ALL PLANT MATERIALS SHALL CARRY A FULL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE TO INCLUDE PROMPT TREATMENT OR REMOVAL AND REPLACEMENT OF ANY PLANTS FOUND TO BE IN AN UNHEALTHY CONDITION BY THE WETLAND SPECIALIST OR LANDSCAPE ARCHITECT. ALL REPLACEMENTS SHALL BE OF THE SAME KINDS AND SIZE OF PLANTS SPECIFIED IN THE PLANT LIST.
27. WETLAND REPLICATION AREAS WILL BE INSPECTED IN ACCORDANCE WITH THE SPECIFICATIONS OF ITEM 755.35 INLAND WETLAND REPLICATION AND ITEM 755.76 WETLAND MONITORING REPORTS TO IDENTIFY INVASIVE SPECIES AND A REPORT DETAILING TO RELATIVE SUCCESS OF THE MITIGATION PLAN IN TERMS OF BOTH THE HEALTH AND SURVIVAL OF WETLAND PLANTINGS SHALL BE PREPARED.
28. DURING AND AFTER THE FIRST AND SECOND GROWING SEASON, THE SUCCESS OF THE VEGETATIVE GROWTH WILL BE REVIEWED AND EVALUATED. ADDITIONAL VEGETATION WILL BE PLANTED AS NECESSARY TO REPLACE STRESSED OR MISSING VEGETATION AND TO ACHIEVE THE 75% SURVIVAL RATE SPECIFIED IN THE SPECIAL PROVISIONS.

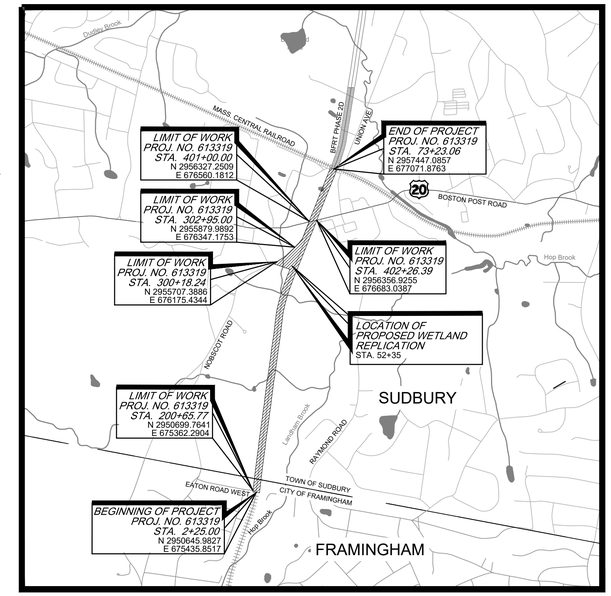
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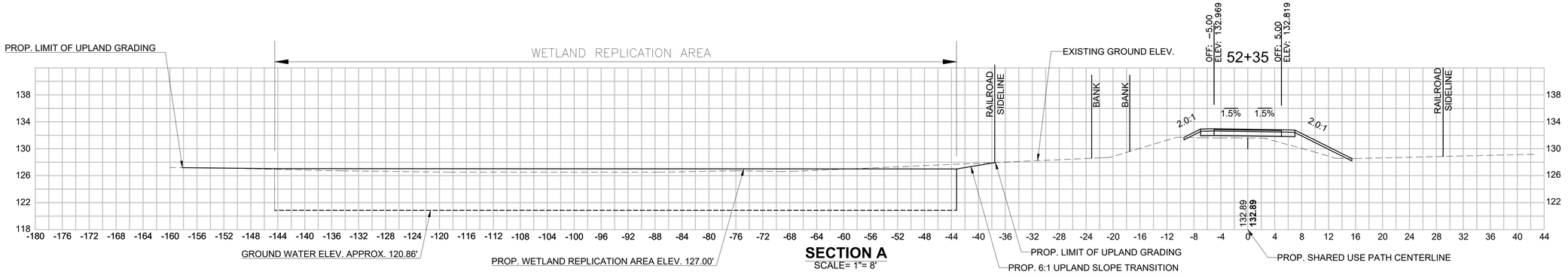
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	71	103
PROJECT FILE NO.	613319		

WETLAND REPLICATION PLANS







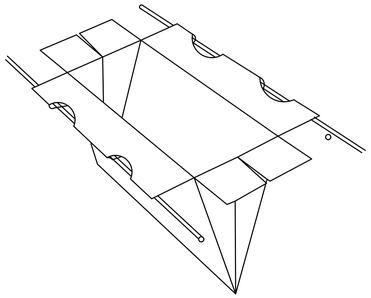
SECTION A
SCALE= 1"= 8'

20200785.A30_WETLAND REPLICATION PLANS.DWG Plotted on 12-Feb-2026 5:35 PM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	72	103
PROJECT FILE NO.	613319		

CONSTRUCTION DETAILS

20200785.A30_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:37 PM

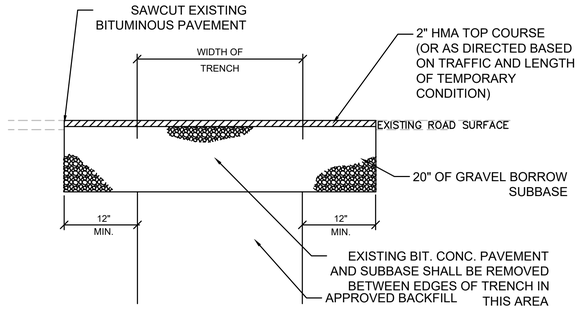


NOTES:

1. SIZED TO FIT ANY SIZE OR SHAPE CATCH BASIN.
2. ALL SEAMS DOUBLE STITCHED.
3. PERMEABILITY - REGULAR FLOW SILTSACK - 40 gal./min./sq. ft.
   HI - FLOW SILTSACK - 200 gal./min./sq. ft.

1 CATCH BASIN SILT SACK

SCALE: N.T.S.

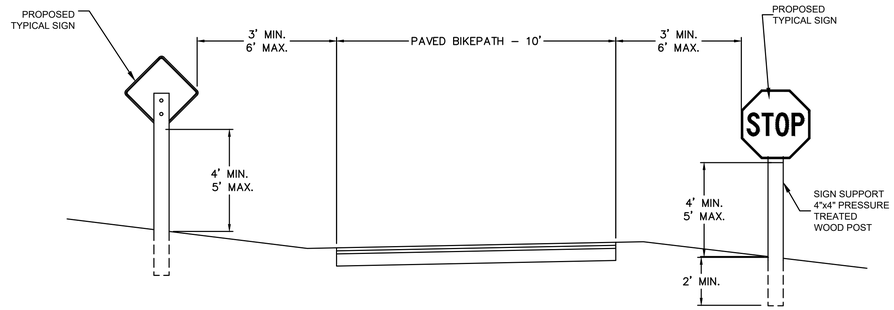


NOTES:
THE TEMPORARY PAVEMENT TRENCH REPAIR SHALL BE USED DURING THE TIME BETWEEN COMPLETION OF THE UTILITY CONSTRUCTION AND CONSTRUCTION OF THE PROPOSED ROADWAY PAVEMENT STRUCTURE OR PERMANENT PAVEMENT TRENCH REPAIR.

TEMPORARY ASPHALT SHALL BE PAID FOR UNDER ITEM #472

2 TEMPORARY PAVEMENT TRENCH REPAIR

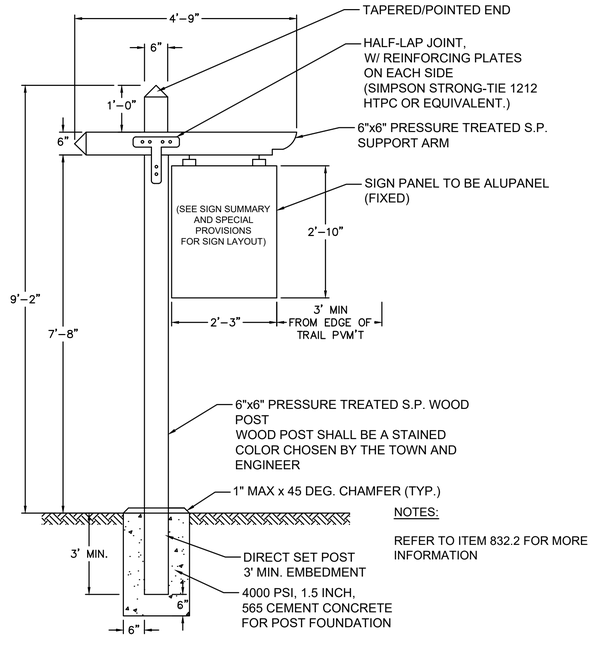
SCALE: N.T.S.



3 SHARED–USE PATH TYPICAL SIGN PLACEMENT

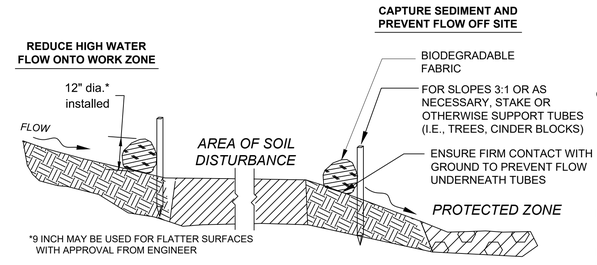
SCALE: N.T.S.

NOTES:
1. ALL HARDWARE SHALL BE GALVANIZED.
2. WOOD POSTS SHALL BE PAID FOR UNDER ITEM 847.11*.



4 WAYFINDING SIGNS TYPE DS

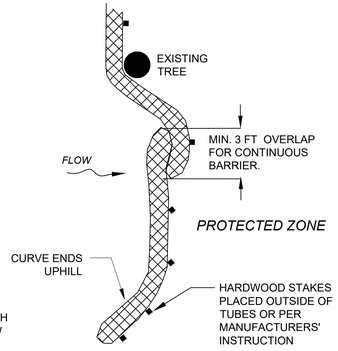
SCALE: N.T.S.



SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBES

NOT TO SCALE



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

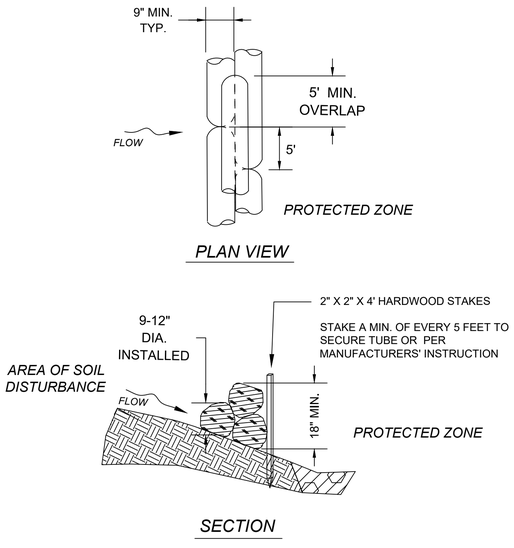
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

PLAN VIEW

COMPOST FILTER TUBE

NOT TO SCALE



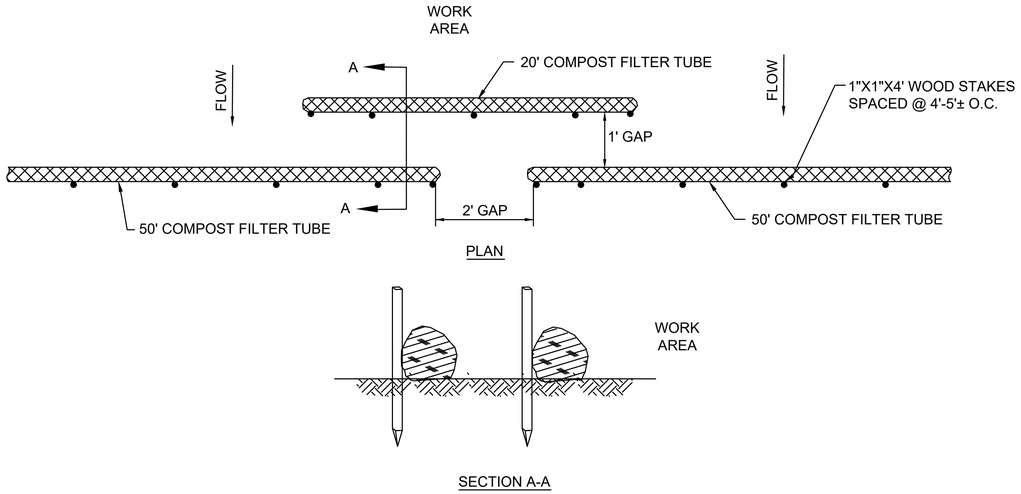
COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

NOT TO SCALE

5 EROSION & SEDIMENT CONTROL BARRIER

SCALE: N.T.S.

20200785.A00_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:37 PM

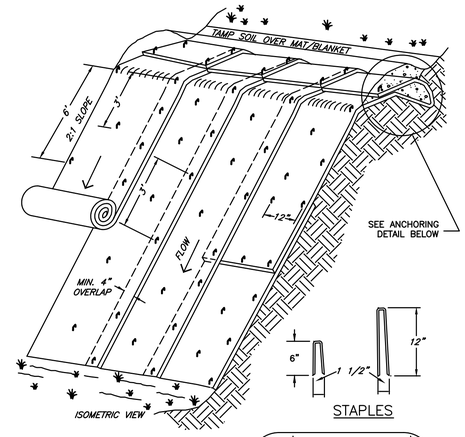


NOTES:

1. SYNCOPATED COMPOST FILTER TUBES SHALL BE USED WHEN BORDERING VERNAL POOLS AS SHOWN ON THE PLANS.

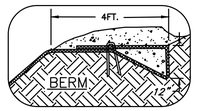
6 SYNCOPATED SEDIMENT CONTROL BARRIER

SCALE: N.T.S.



TYPICAL SLOPE SOIL STABLIZATION

STAPLES



ANCHORING DETAIL

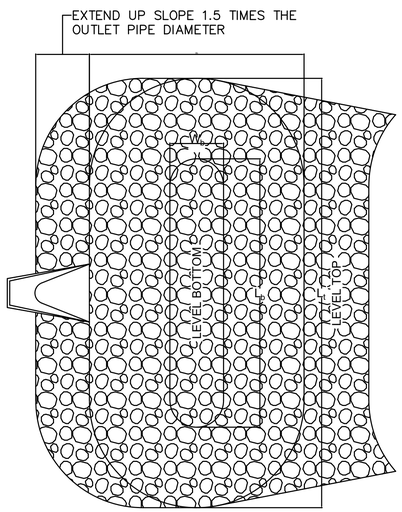
NOTES:

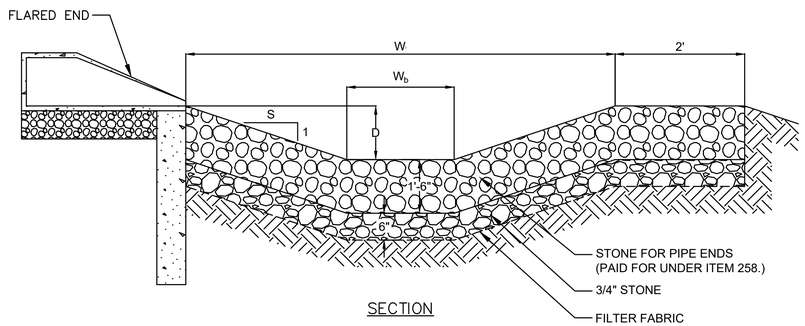
1. MATTING FOR EROSION CONTROL MUST BE MADE FROM 100% BIODEGRADEABLE MATERIAL.

2. STAPLES OR STAKES MAY BE USED TO SECURE THE MATTING. THE STAPLES OR STAKES MUST BE MADE FROM A 100% BIODEGRADEABLE MATERIAL.

7 MATTING FOR EROSION CONTROL

SCALE: N.T.S.





NOTES:
1. $W_b = W_t - SxDx2$
2. $L_b = L_t - SxDx2$

8 LEVEL SPREADER

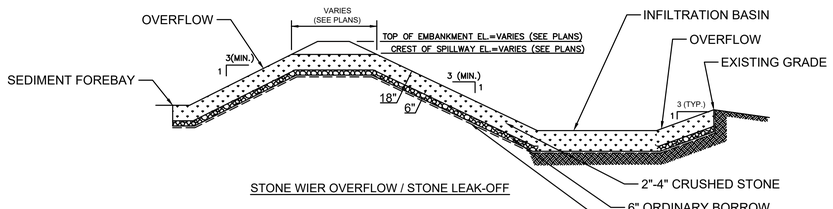
SCALE: N.T.S.

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	74	103
PROJECT FILE NO.	613319		

CONSTRUCTION DETAILS

20200785.A00_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:37 PM



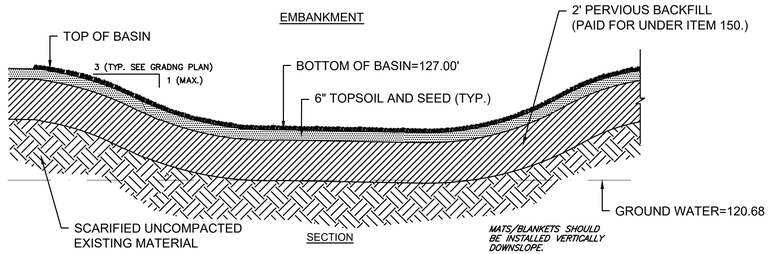
STONE WIER OVERFLOW / STONE LEAK-OFF

NOTES:

1. IMPERVIOUS MATERIAL FOR USE IN BASIN EMBANKMENT AREAS AND WHERE SHOWN ON THE PLANS SHALL BE COMPOSED OF CLAYS, SILTY CLAYS, OR CLAYEY SILTS. THE SOIL SHALL BE FREE OF RUBBISH, ICE, VEGETATIVE MATTER, LOAM, OR OTHER DEBRIS AND HAVE THE FOLLOWING GRADATION AS DEFINED BY A STANDARD SIEVE TEST (ASTM D422):

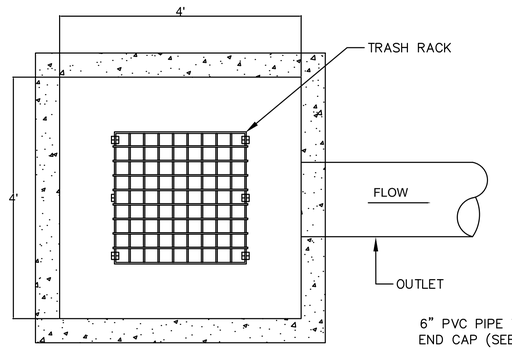
MIN. PERCENT PASSING (BY WT).	SEIVE SIZE
100	3.5"
80-100	3/4"
40-90	No. 4
30-85	No. 40
25-75	No. 200

2. PERVIOUS BACKFILL MATERIAL FOR USE IN FILL AREAS ASSOCIATED WITH BASIN EMBANKMENTS SHALL BE COMPOSED OF ORDINARY BORROW MATERIAL (ITEM 150.) OR EXCAVATED MATERIAL FROM THE SITE DEEMED RE-USEABLE BY THE ENGINEER. SATISFACTORY ON-SITE MATERIAL SHALL HAVE SOIL CLASSIFICATION GROUPS OF GW, GP, GM, SW, SP, AND SM ACCORDING TO ASTM D 2487, OR A COMBINATION OF THESE GROUPS AND SHALL BE FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES (75 MM) IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATTER.

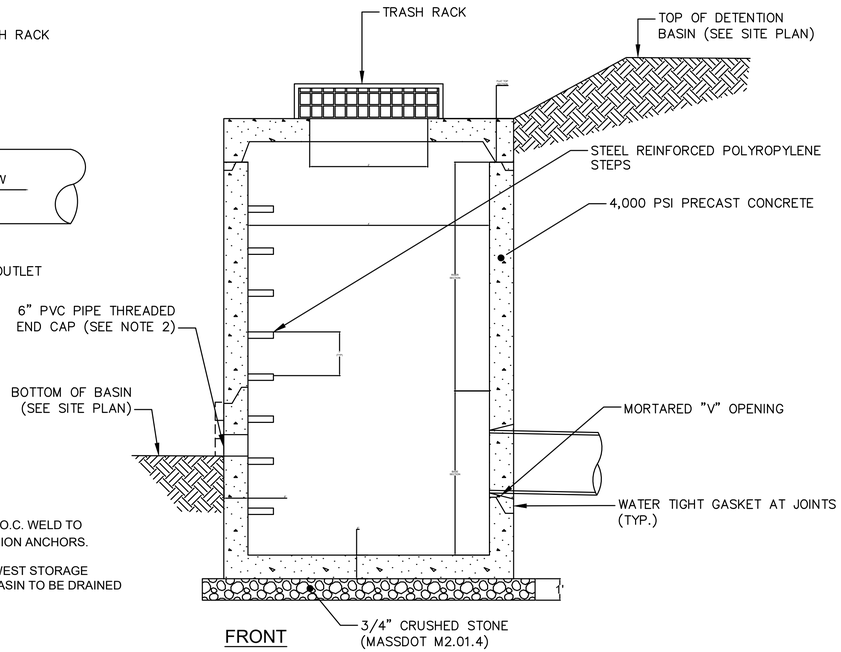


9 INFILTRATION BASIN

SCALE: N.T.S.



TOP



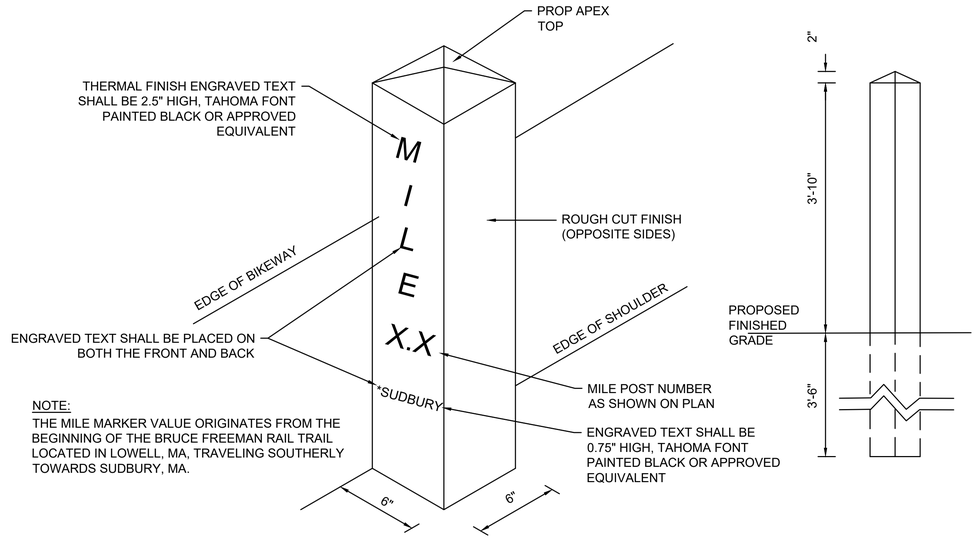
FRONT

NOTES

1. CONSTRUCT ORIFICE GRATES OVER OPENINGS. #3 BARS AT 6" O.C. WELD TO ANGLES 2"X2"X1/4" AND BOLT TO STRUCTURE USING $\frac{3}{8}$" EXPANSION ANCHORS. TACK WELD BARS.
2. FOR STRUCTURES THAT DO NOT HAVE AN ORIFICE AT THE LOWEST STORAGE ELEVATION, PROVIDE A 6" PVC PIPE AND END CAP TO ALLOW BASIN TO BE DRAINED MANUALLY.

10 SPECIAL CATCH BASIN – STORMWATER BASIN OUTLET CONTROL STRUCTURE

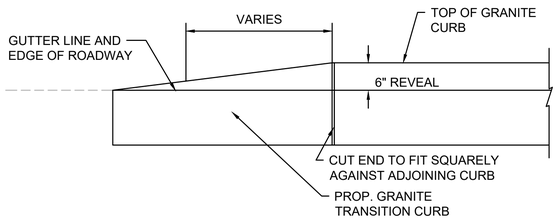
SCALE: N.T.S.



NOTE:
THE MILE MARKER VALUE ORIGINATES FROM THE BEGINNING OF THE BRUCE FREEMAN RAIL TRAIL LOCATED IN LOWELL, MA, TRAVELING SOUTHERLY TOWARDS SUDBURY, MA.

11 GRANITE MILE MARKER

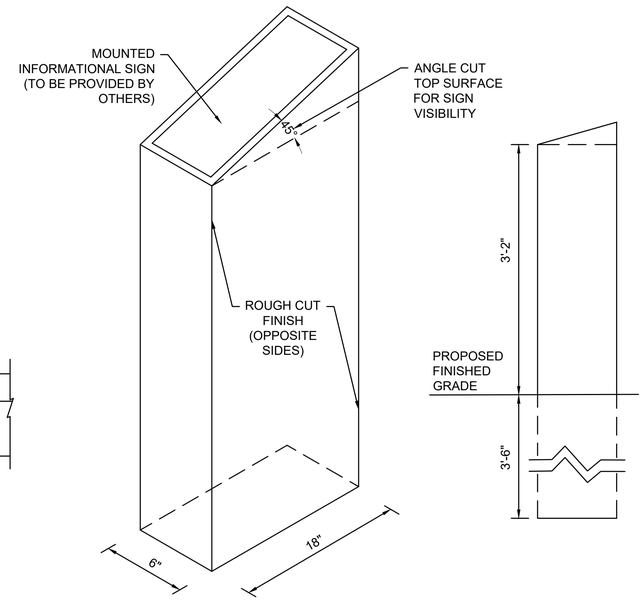
SCALE: N.T.S.



TO BE USED AT ALL LOCATIONS WHERE VERTICAL GRANITE CURB ENDS

12 TRANSITION CURB DETAIL

SCALE: N.T.S.



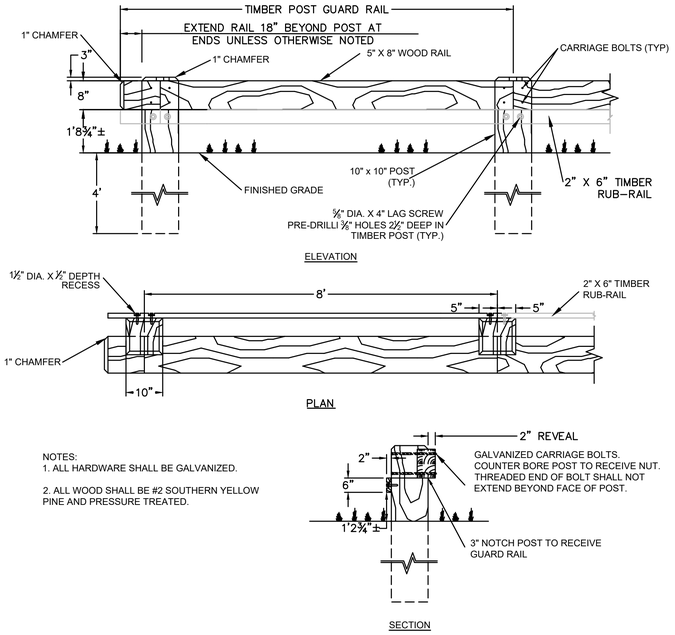
13 GRANITE POST INTERPRETIVE SIGN

SCALE: N.T.S.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	75	103
PROJECT FILE NO.	613319		

CONSTRUCTION DETAILS

20200785.A30_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:37 PM

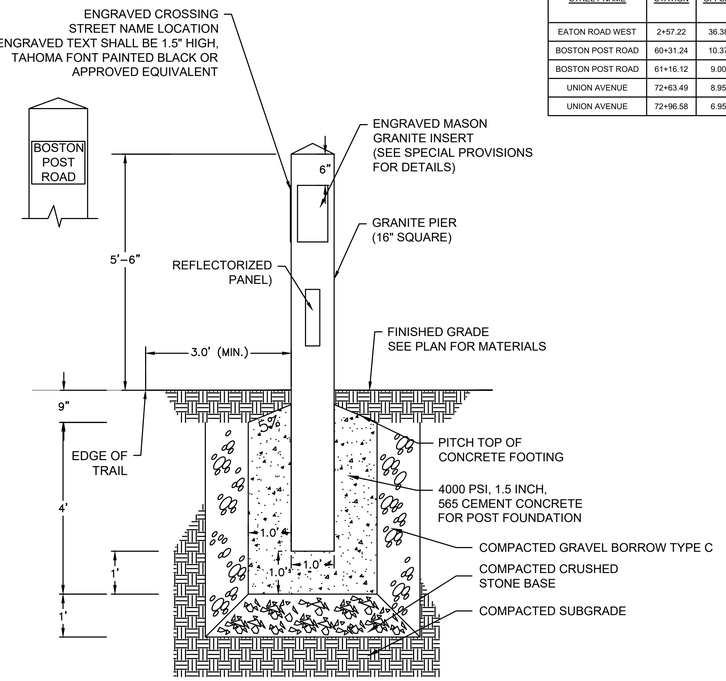


NOTES:
1. ALL HARDWARE SHALL BE GALVANIZED.

2. ALL WOOD SHALL BE #2 SOUTHERN YELLOW PINE AND PRESSURE TREATED.

14 TIMBER POST GUARDRAIL

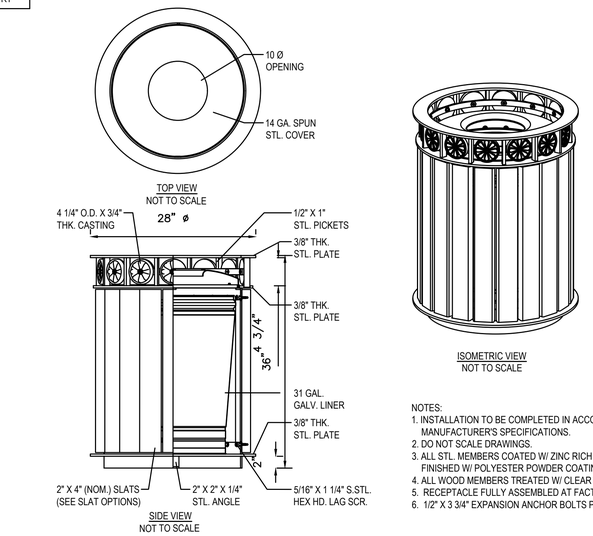
SCALE: N.T.S.



GRANITE PIER LOCATIONS			
STREET NAME	STATION	OFFSET	SIDE
EATON ROAD WEST	2+57.22	36.38'	LT
BOSTON POST ROAD	60+31.24	10.37'	LT
BOSTON POST ROAD	61+16.12	9.00'	RT
UNION AVENUE	72+63.49	8.95'	LT
UNION AVENUE	72+96.58	6.95'	RT

15 GRANITE BRUCE FREEMAN RAIL TRAIL PIER

SCALE: N.T.S.

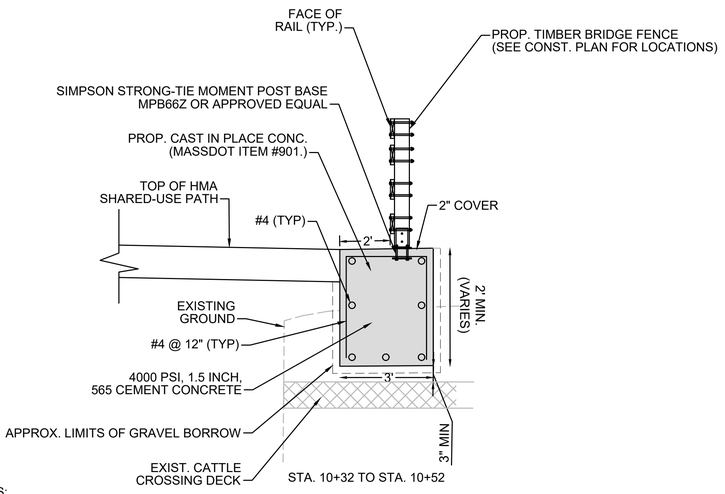


ISOMETRIC VIEW
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
4. ALL WOOD MEMBERS TREATED W/ CLEAR PRESERVATIVE.
5. RECEPTACLE FULLY ASSEMBLED AT FACTORY.
6. 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED.

16 TRASH RECEPTACLE

SCALE: N.T.S.

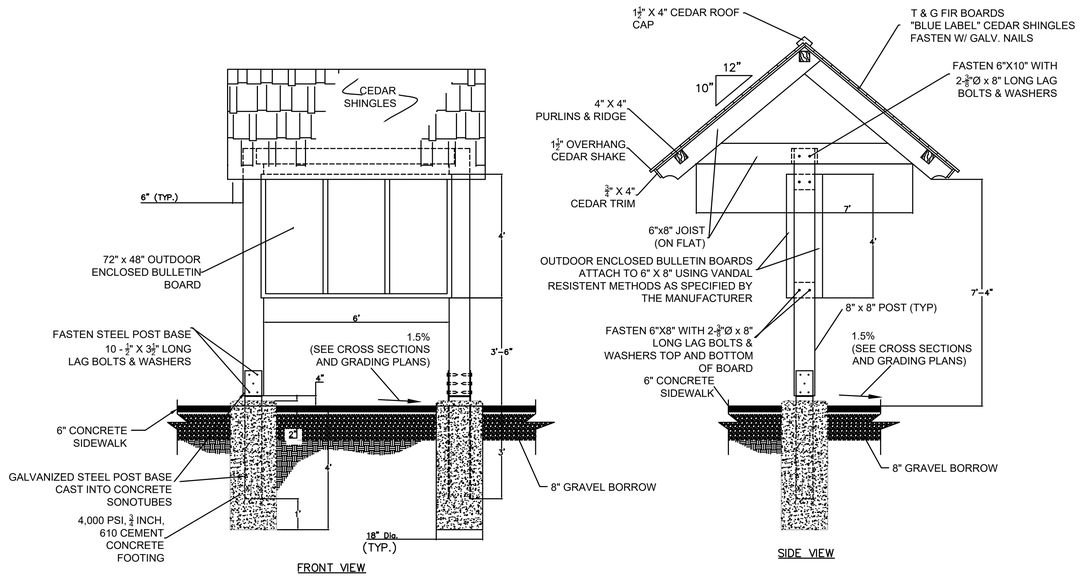


NOTES:

1) THE REINFORCED CATTLE CROSSING FOUNDATION SHALL EXTEND 4' BEYOND THE LIMITS OF THE EXISTING CATTLE CROSSING STRUCTURE.
2) SPECIFIED STATIONING APPLIES TO BOTH SIDES OF TRAIL.

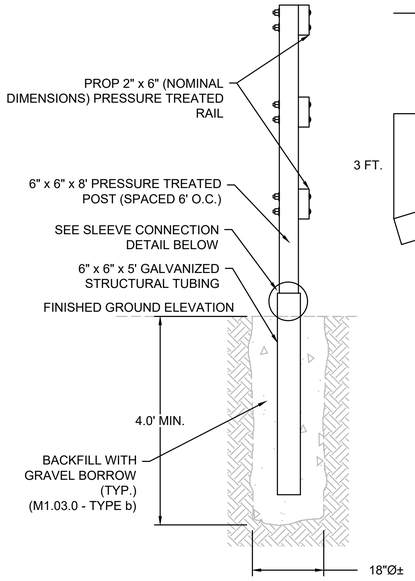
17 REINFORCED TIMBER CONNECTION AT CATTLE CROSSING

SCALE: N.T.S.



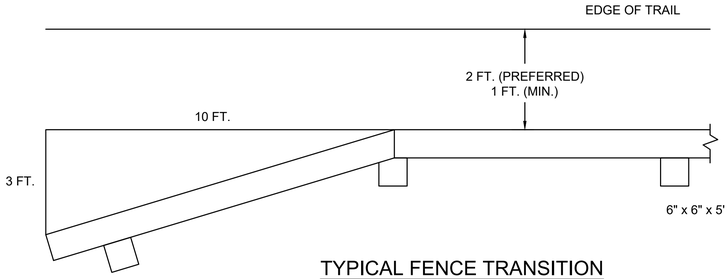
18 DISPLAY BOARD

SCALE: N.T.S.



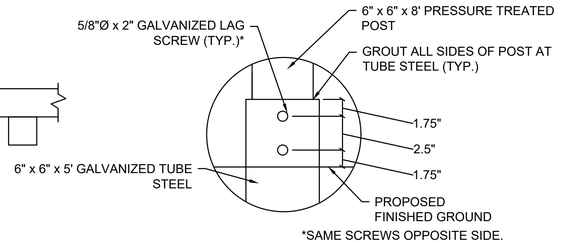
TIMBER FENCE TUBE STEEL SLEEVE (FOR USE IN SATURATED LOCATIONS)

N.T.S.



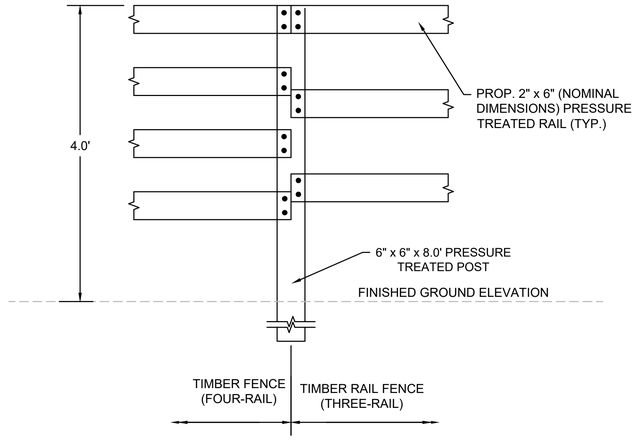
TYPICAL FENCE TRANSITION AT FENCE APPROACHES

N.T.S.



SLEEVE CONNECTION DETAIL

N.T.S.

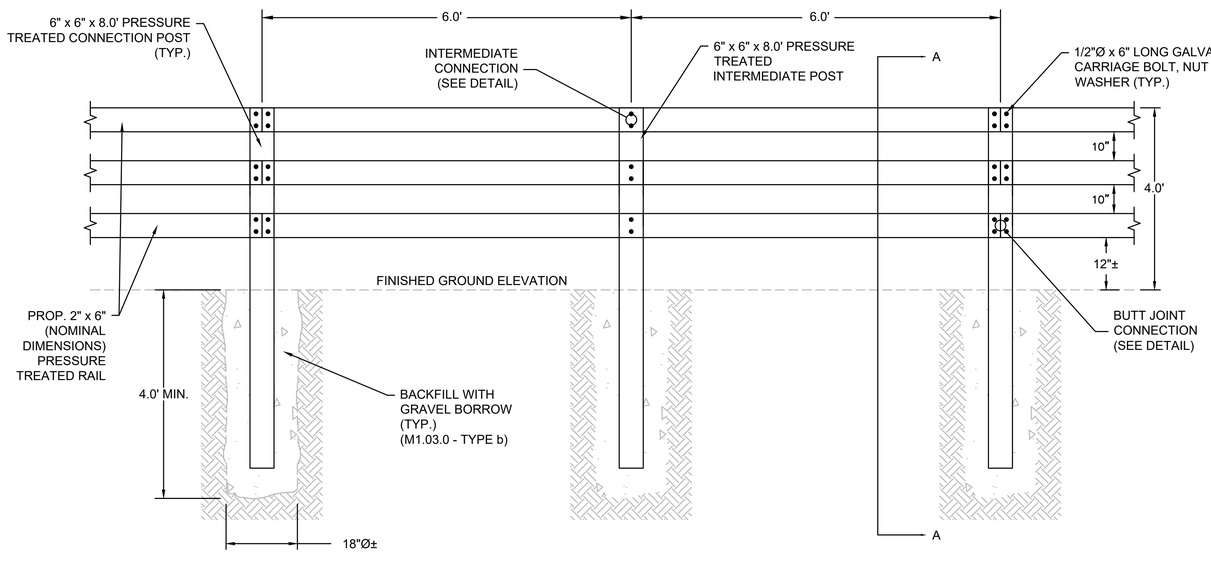


TIMBER FENCE (FOUR-RAIL) TRANSITION TO TIMBER FENCE (THREE-RAIL)

SECTION A-A

SUGGESTED TIMBER RAIL FENCE CONSTRUCTION SEQUENCE

1. AUGER OR DIG POST HOLE TO REQUIRED DIMENSIONS.
2. IF GROUND IS SATURATED, USE TUBE STEEL SLEEVE. SEE DETAIL ON THIS SHEET.
3. BACKFILL BOTTOM 6"± OF HOLE WITH GRAVEL AND COMPACT THOROUGHLY.
4. SET POST AND HOLD PLUMB DURING BACKFILLING.
5. BACKFILL WITH GRAVEL IN 12" LIFTS. COMPACT EACH LIFT THOROUGHLY.
6. CLAMP RAILS TO POSTS AND FIELD DRILL BOLT HOLES.
7. SET BOLTS, WASHERS AND NUTS.



TIMBER FENCE (THREE-RAIL) ELEVATION

N.T.S.

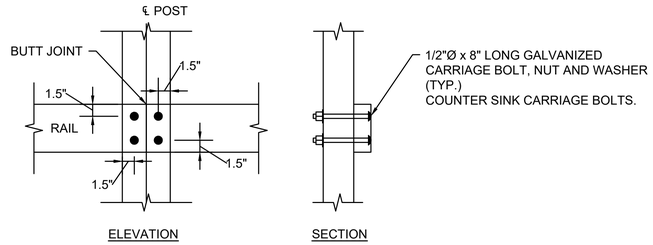
NOTES:
1. FOR RADII LESS THAN 165', USE CONNECTION POSTS SET AT 6.0' O.C. AND SHORTEN RAILS ACCORDINGLY.

NOTES:
1. TIMBER PRESERVATIVES SHALL BE USED ON ALL WOOD TIMBER.
2. ALL CUT ENDS SHALL BE PAINTED WITH PRESERVATIVE IN THE FIELD PER MANUFACTURERS DIRECTION.

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	76	103
PROJECT FILE NO.	613319		

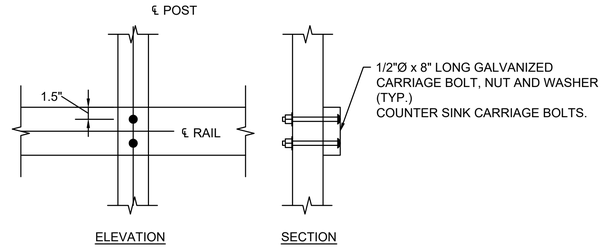
CONSTRUCTION DETAILS



ELEVATION SECTION

BUTT JOINT CONNECTION

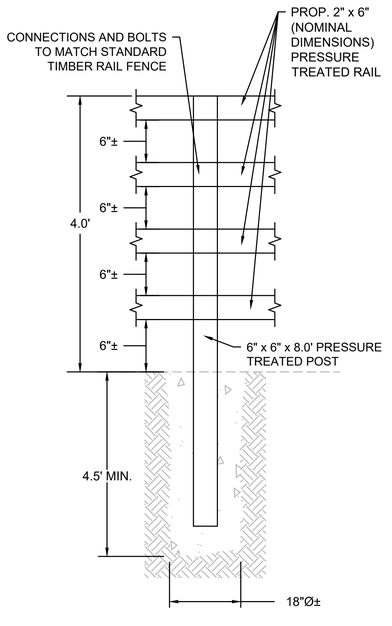
N.T.S.



ELEVATION SECTION

INTERMEDIATE CONNECTION

N.T.S.



TIMBER FENCE (FOUR-RAIL) ELEVATION

19 TIMBER FENCE

SCALE: N.T.S.

SEE PLANS FOR LOCATIONS

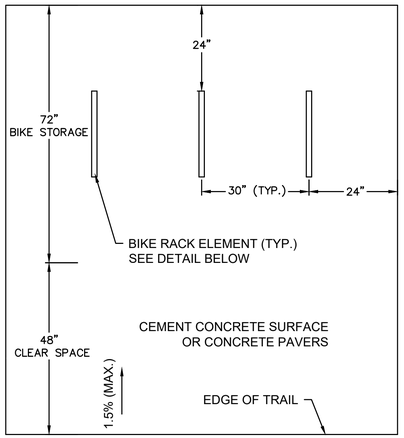
20200785.A30_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:37 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	77	103
PROJECT FILE NO.	613319		

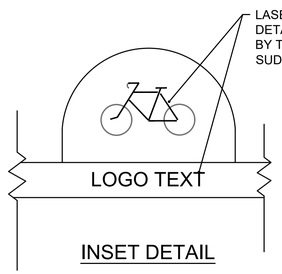
CONSTRUCTION DETAILS

20200785.A30_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:37 PM



NOTES:
- SEE PLANS FOR QUANTITY OF BIKE RACK ELEMENTS

BICYCLE RACK PLACEMENT



INSET DETAIL

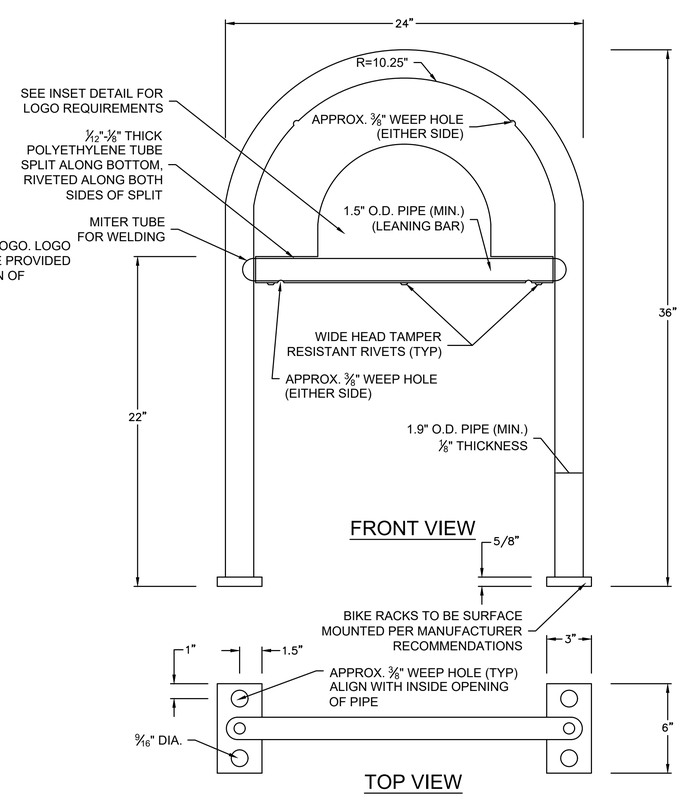
NOTES:

1. EACH BIKE RACK SHALL INCLUDE A LASER-CUT LOGO. LOGO DETAIL TO BE PROVIDED BY THE TOWN OF SUDBURY.

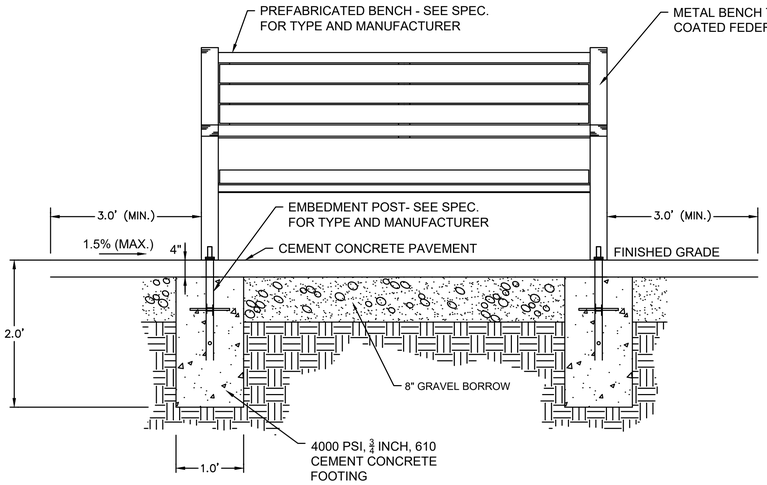
2. DIMENSIONS ARE APPROXIMATE AND WILL BE DETERMINED IN COORDINATION WITH THE MANUFACTURER. BIKE RACK ELEMENTS TO BE OF THE INVERTED "U".

3. EACH BIKE RACK SHALL ACCOMMODATE TWO BICYCLES.

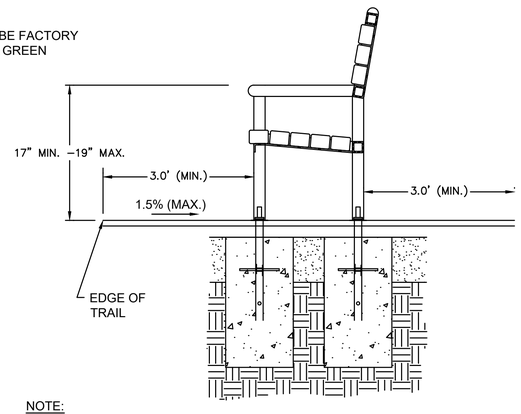
4. ALL POSTS AND HARDWARE SHALL BE FACTORY COATED FEDERAL GREEN (SEE SPECIAL PROVISIONS)



20 BICYCLE RACK
SCALE: N.T.S.



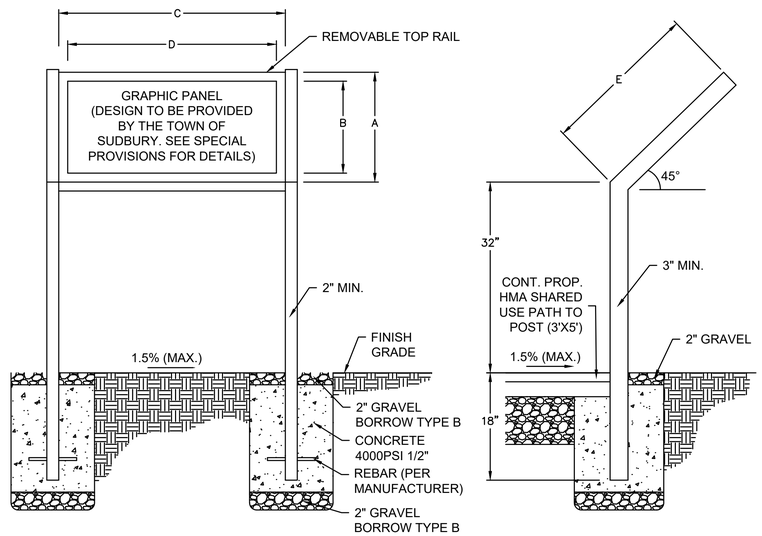
21 BENCH
SCALE: N.T.S.



NOTE:
MINIMUM SETBACK OF 3' FROM TRAIL SURFACE

NOTE:

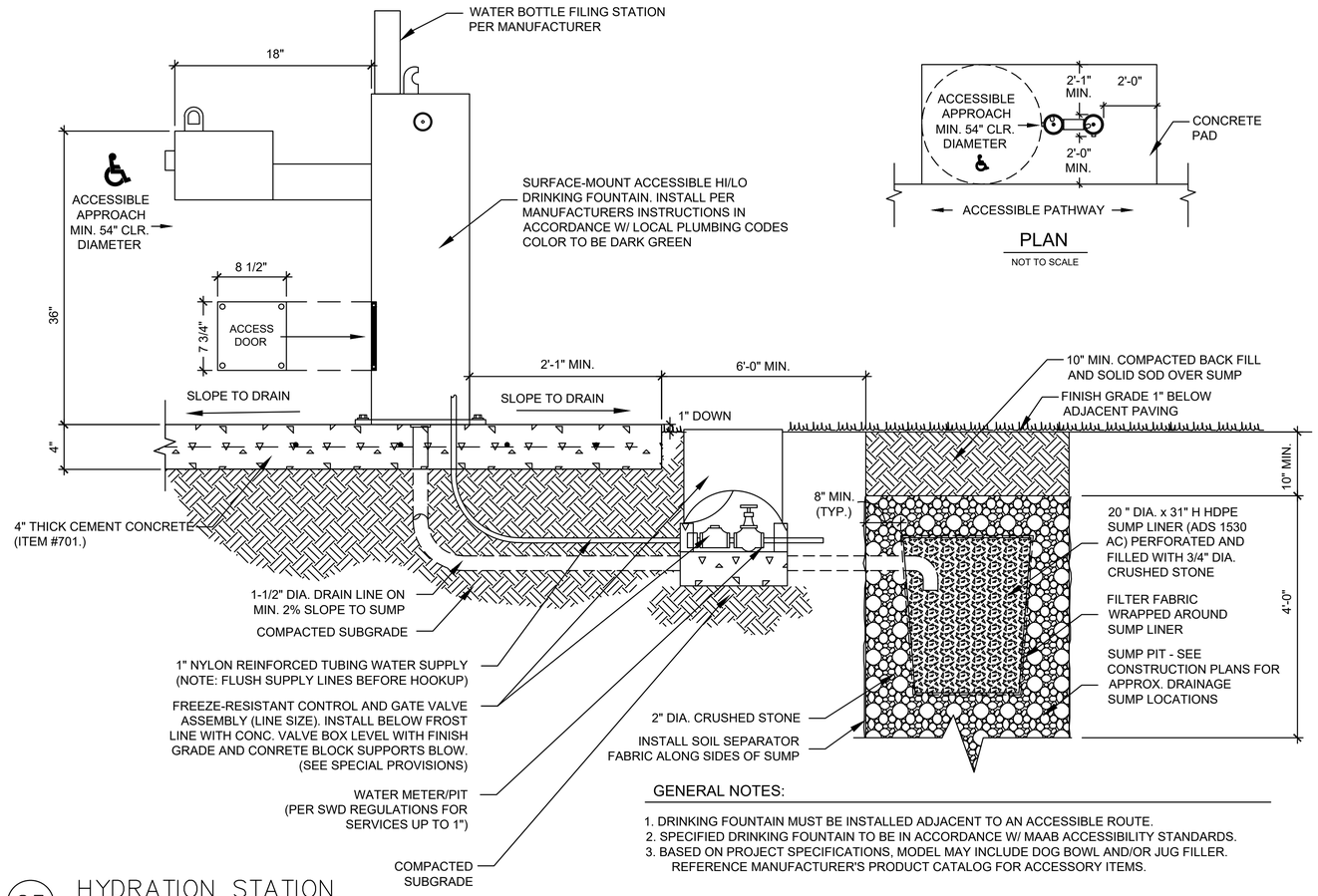
INTERPRETATIVE PANEL SHALL BE SQUARE METAL POSTS AND IS INTENDED TO MATCH THE MASSACHUSETTS DCR STANDARDS.



DIMENSION TABLE					
SIGN TYPE	HEIGHT		WIDTH		DEPTH
	A	B	C	D	E
26" x 38"	26"	23"	38"	35"	26.5"

22 INTERPRETIVE SIGN
SCALE: N.T.S.

20200785.A30_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:37 PM



PLAN

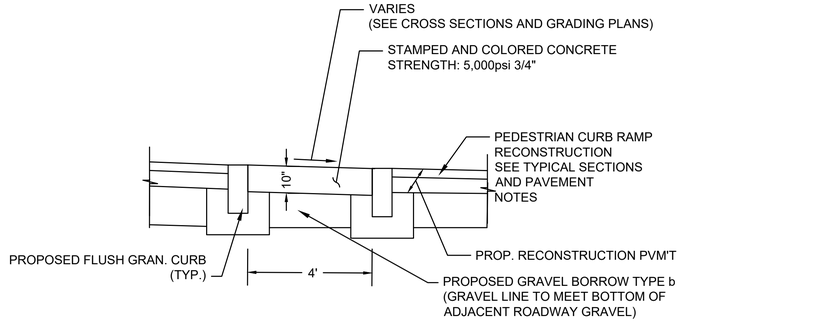
NOT TO SCALE

GENERAL NOTES:

1. DRINKING FOUNTAIN MUST BE INSTALLED ADJACENT TO AN ACCESSIBLE ROUTE.
2. SPECIFIED DRINKING FOUNTAIN TO BE IN ACCORDANCE W/ MAAB ACCESSIBILITY STANDARDS.
3. BASED ON PROJECT SPECIFICATIONS, MODEL MAY INCLUDE DOG BOWL AND/OR JUG FILLER. REFERENCE MANUFACTURER'S PRODUCT CATALOG FOR ACCESSORY ITEMS.

23 HYDRATION STATION

SCALE: N.T.S.



NOTES:
1) THIS ITEM IS INTENDED TO BE USED AT WHEEL CHAIR RAMPS DESIGNATED AS "STAMPED CONCRETE SPLITTER ISLAND" ON THE CONSTRUCTION PLANS.

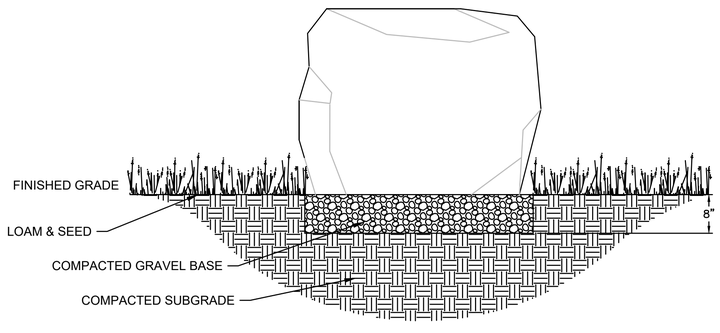
2) MEDIANS SHALL BE INSTALLED IN A SINGLE CONCRETE POUR WITH NO CONSTRUCTION (COLD) JOINTS IN THE CONCRETE.

3) SAWN CONTRACTION JOINTS SHALL BE INSTALLED EVERY 20' (MAXIMUM). SEE SPECIAL PROVISIONS FOR MATERIALS AND METHOD OF JOINT INSTALLATION.

4) A 2" TOOLED EDGE SHALL BE INSTALLED TO MAKE A SMOOTH TRANSITION TO THE ADJACENT PAVEMENT

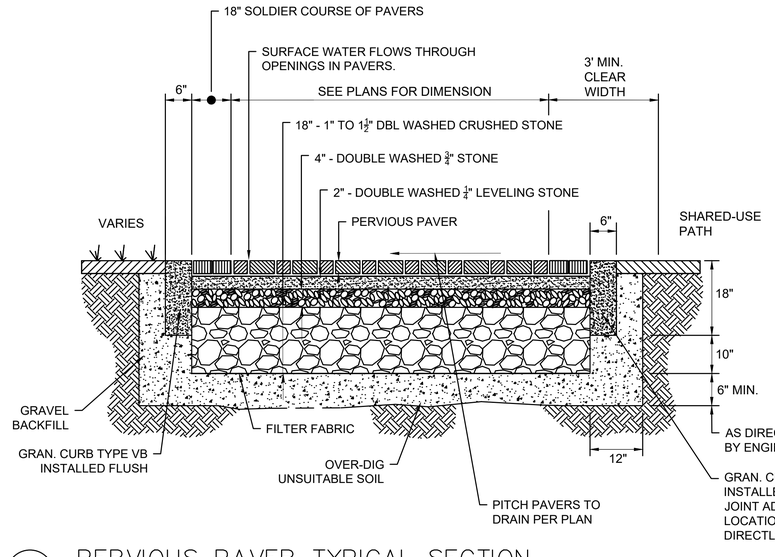
24 STAMPED & COLORED CONCRETE MEDIAN – COLONIAL RED (SPLITTER ISLAND)

SCALE: N.T.S.



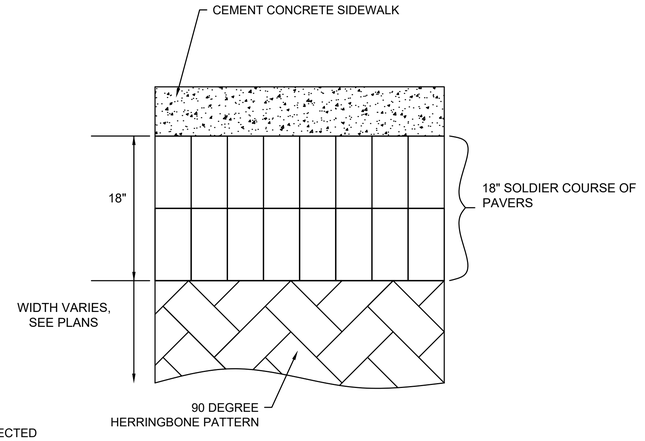
25 BOULDER BARRIERS

SCALE: N.T.S.



26 PERVIOUS PAVER TYPICAL SECTION

SCALE: N.T.S.



PAVER LAYOUT DETAIL

NOT TO SCALE

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

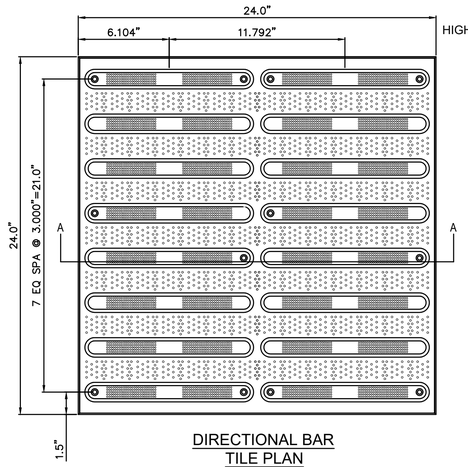
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	79	103
PROJECT FILE NO.	613319		

CONSTRUCTION DETAILS

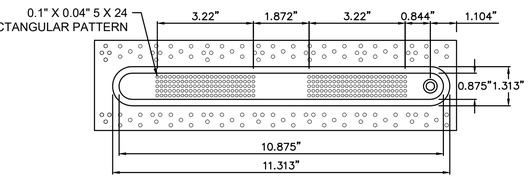
20200785.A30_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:37 PM



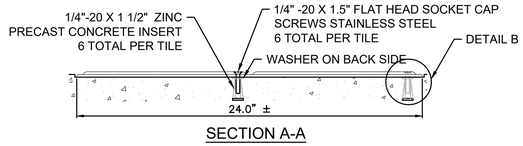
27 GRANITE TOWN LINE MARKER
SCALE: N.T.S.



DIRECTIONAL BAR TILE PLAN

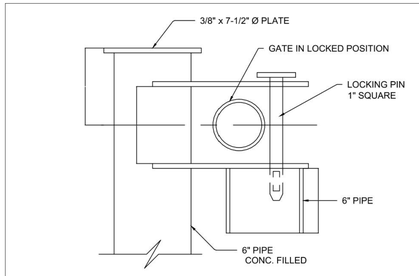


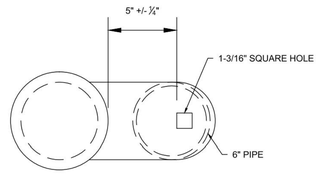
DETAIL A

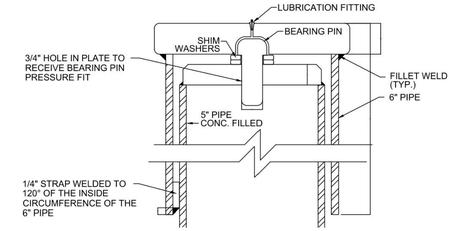


SECTION A-A

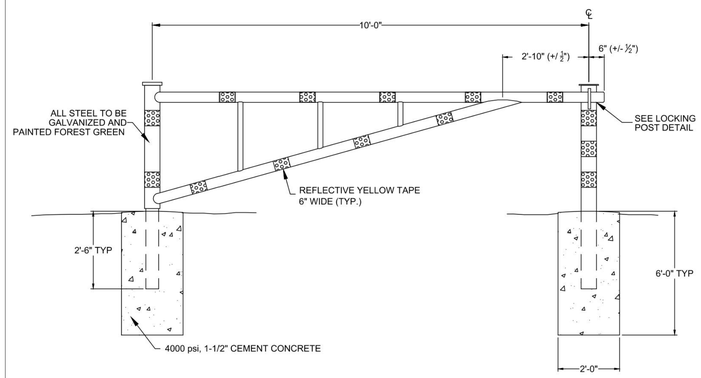
28 DIRECTIONAL BAR TILE
SCALE: N.T.S.

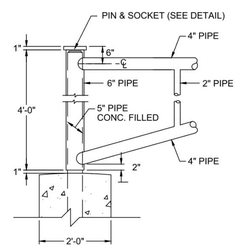






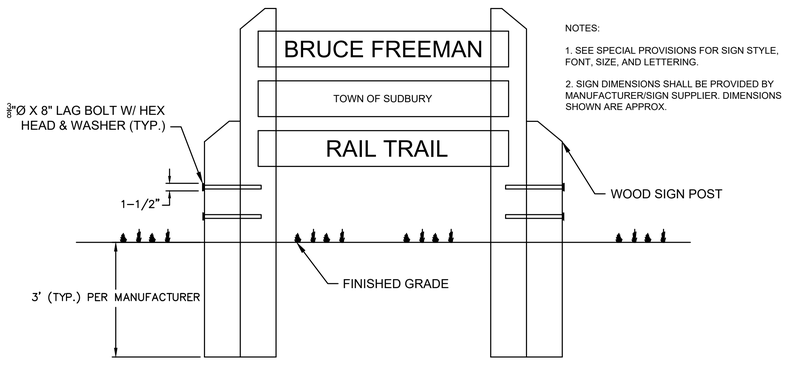
VEHICULAR GATE - LOCK DETAILS
NTS





VEHICULAR GATE ELEVATION VIEW
NTS

30 VEHICULAR SWING GATE
SCALE: N.T.S.



NOTES:

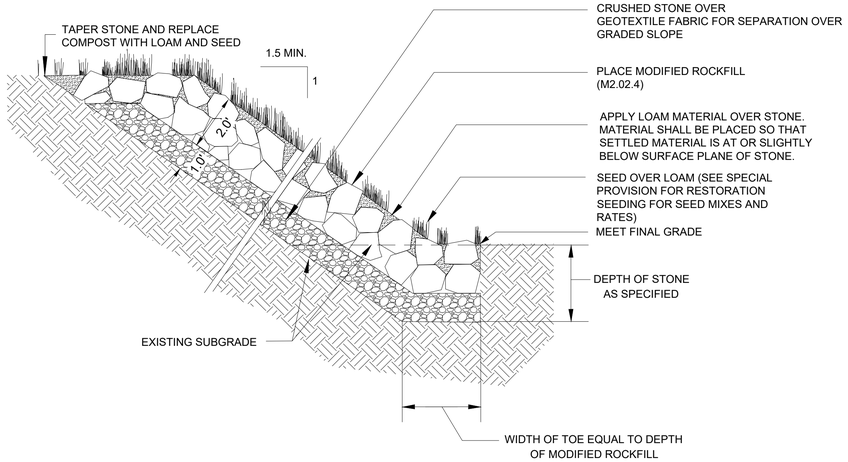
1. SEE SPECIAL PROVISIONS FOR SIGN STYLE, FONT, SIZE, AND LETTERING.

2. SIGN DIMENSIONS SHALL BE PROVIDED BY MANUFACTURER/SIGN SUPPLIER. DIMENSIONS SHOWN ARE APPROX.

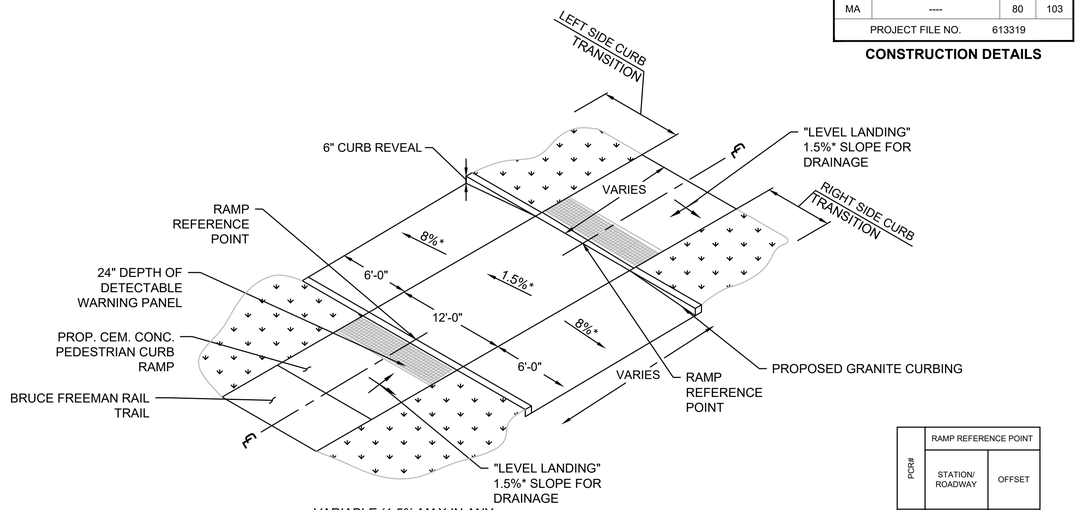
29 BRUCE FREEMAN RAIL TRAIL ENTRANCE SIGN
SCALE: N.T.S.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	80	103
PROJECT FILE NO.	613319		

CONSTRUCTION DETAILS

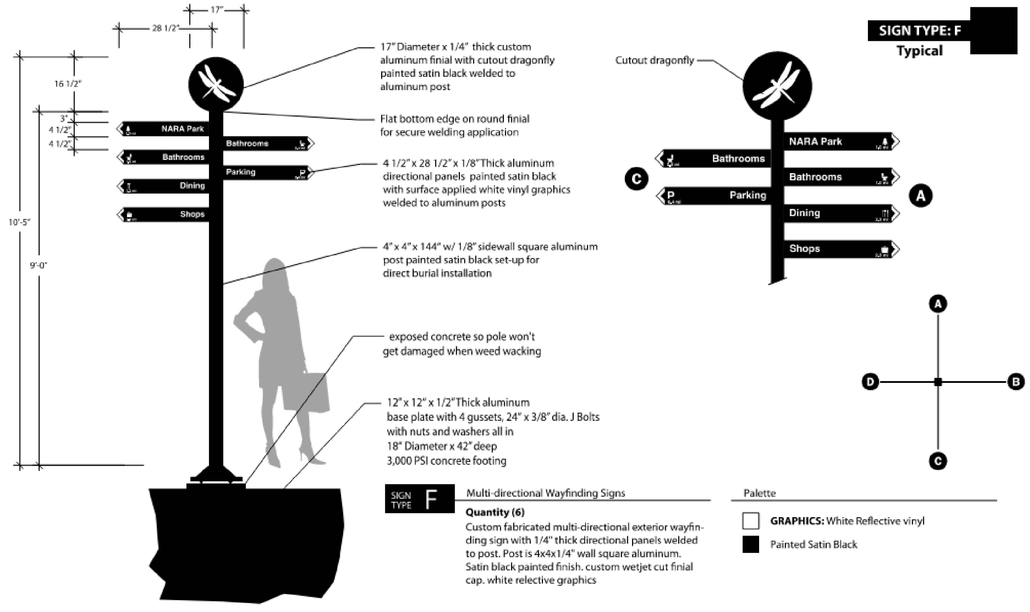


31 LOAM AND SEED OVER MODIFIED ROCKFILL
SCALE: N.T.S.

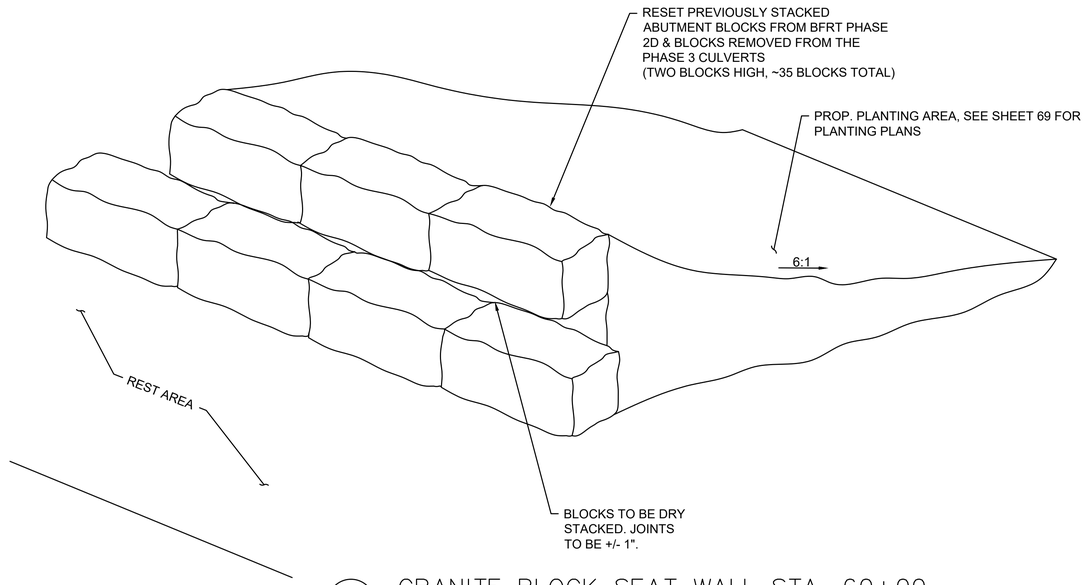


PCR#	RAMP REFERENCE POINT	
	STATION/ ROADWAY	OFFSET
C2	72+67.36	0.00'
C3	72+92.88	0.00'

32 RAISED CROSSWALK
SCALE: N.T.S.



33 MULTI–DIRECTIONAL RAIL TRAIL WAYFINDING SIGN
SCALE: N.T.S.



34 GRANITE BLOCK SEAT WALL STA. 60+00
SCALE: N.T.S.

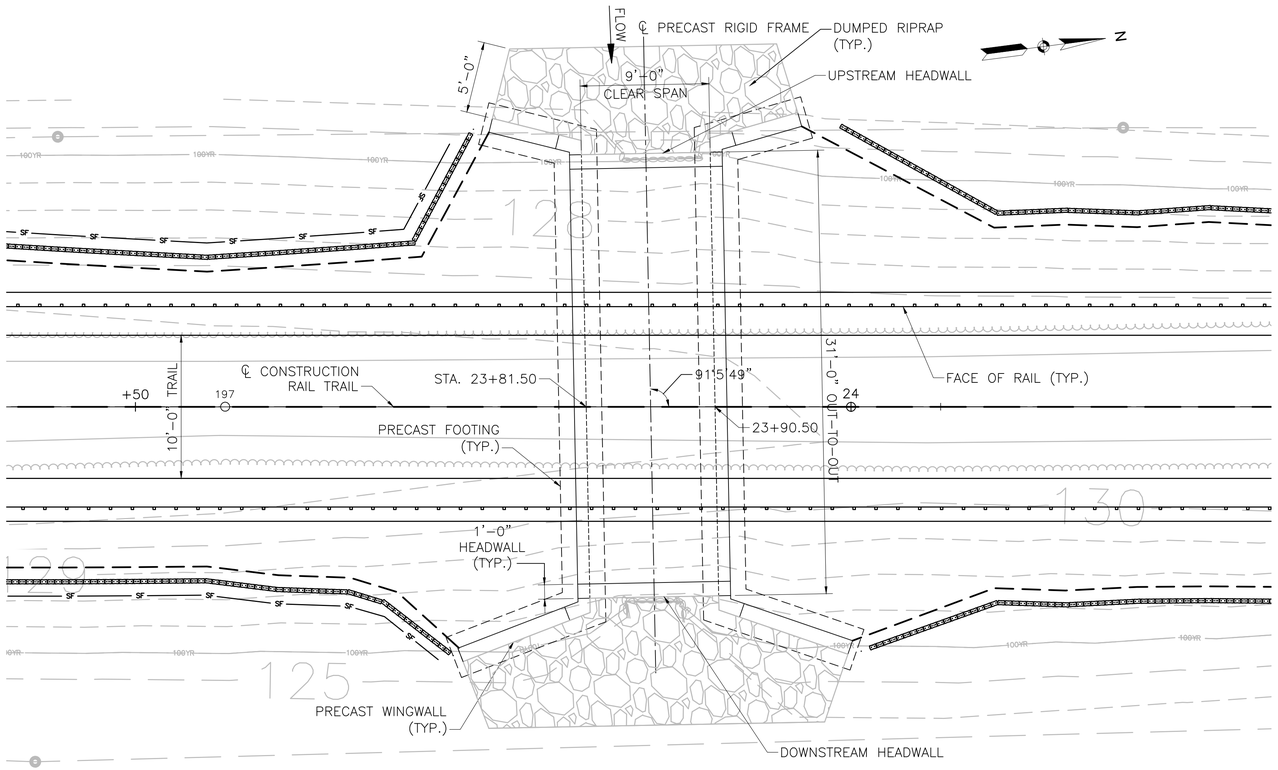
20200785.A30_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:38 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

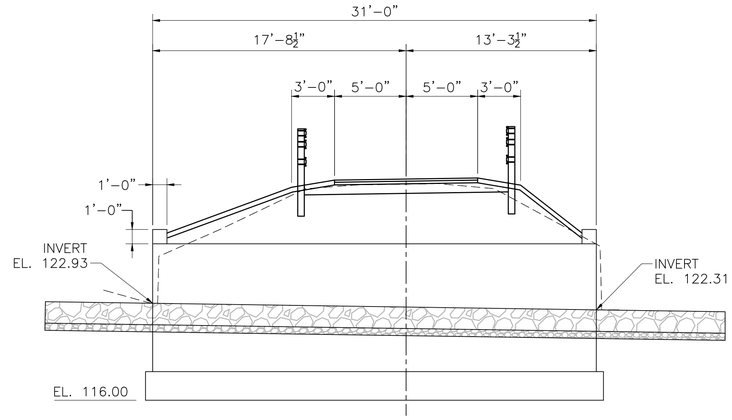
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	######	81	103
PROJECT FILE NO.	613319		

CULVERT DETAILS

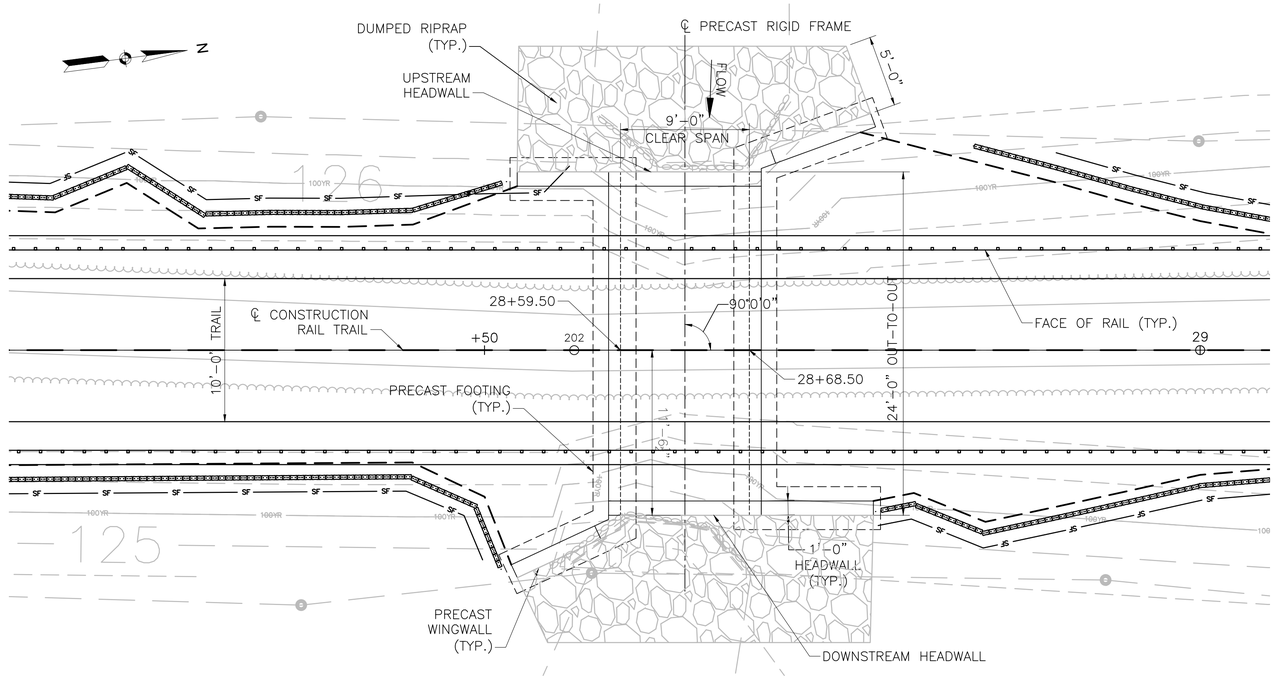
20200785.A30_BR01GENPLAN.DWG Plotted on 12-Feb-2026 6:19 PM



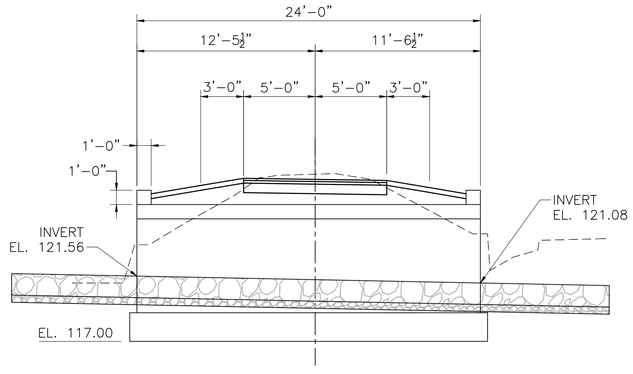
C3-1 GENERAL PLAN
SCALE: 1" = 5'-0"



C3-1 LONGITUDINAL SECTION
SCALE: 1" = 5'-0"



C3-2 GENERAL PLAN
SCALE: 1" = 5'-0"



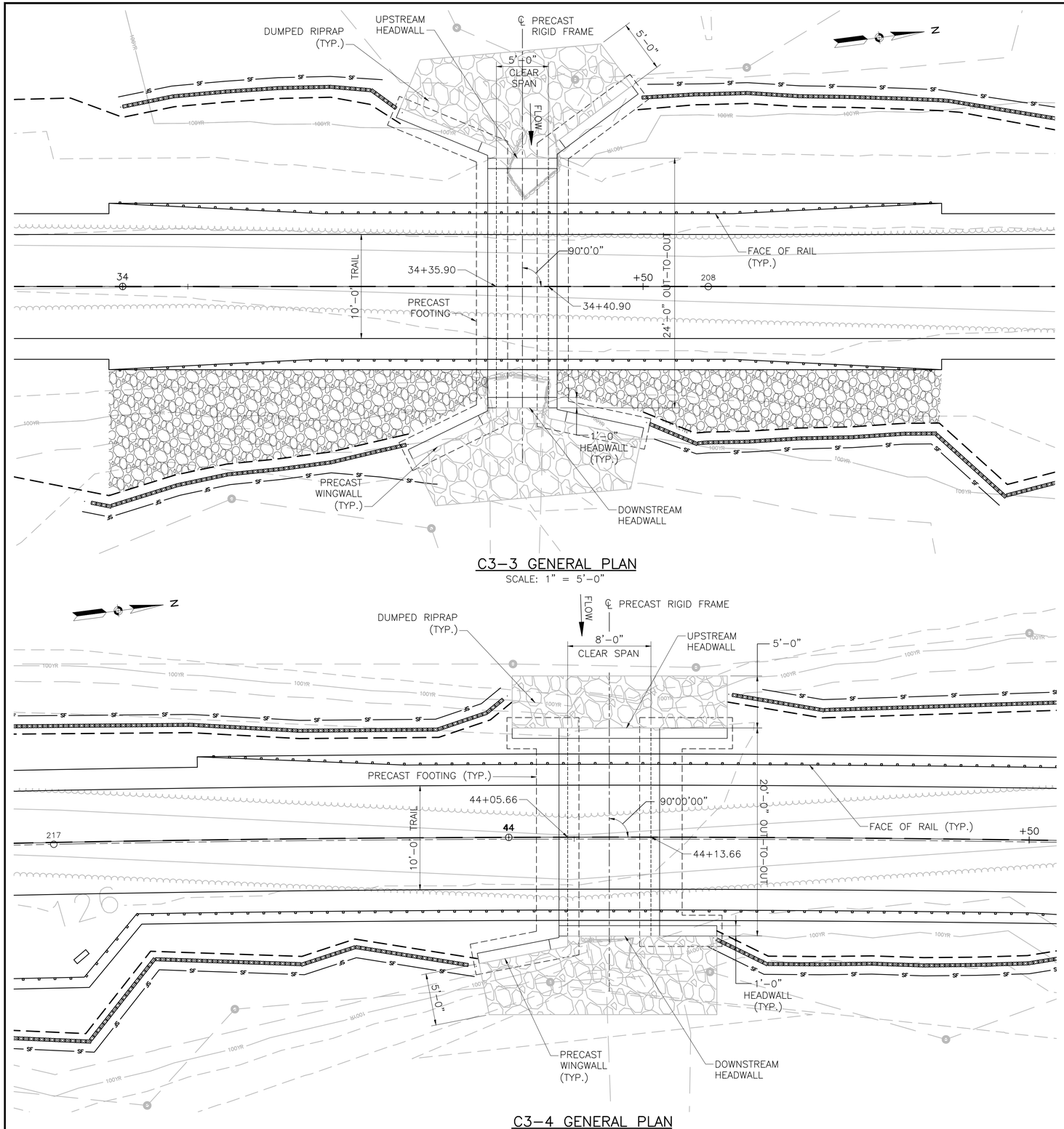
C3-2 LONGITUDINAL SECTION
SCALE: 1" = 5'-0"

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

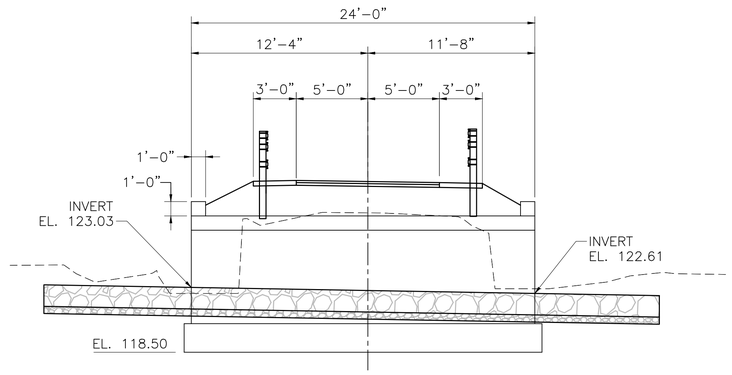
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#######	82	103
PROJECT FILE NO.	613319		

CULVERT DETAILS

20200785.A30_BR01GENPLAN.DWG Plotted on 12-Feb-2026 6:21 PM

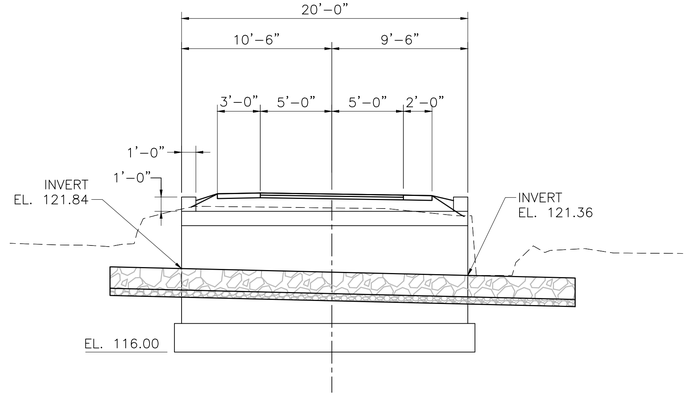


C3-3 GENERAL PLAN
SCALE: 1" = 5'-0"



C3-3 LONGITUDINAL SECTION
SCALE: 1" = 5'-0"

C3-4 GENERAL PLAN
SCALE: 1" = 5'-0"

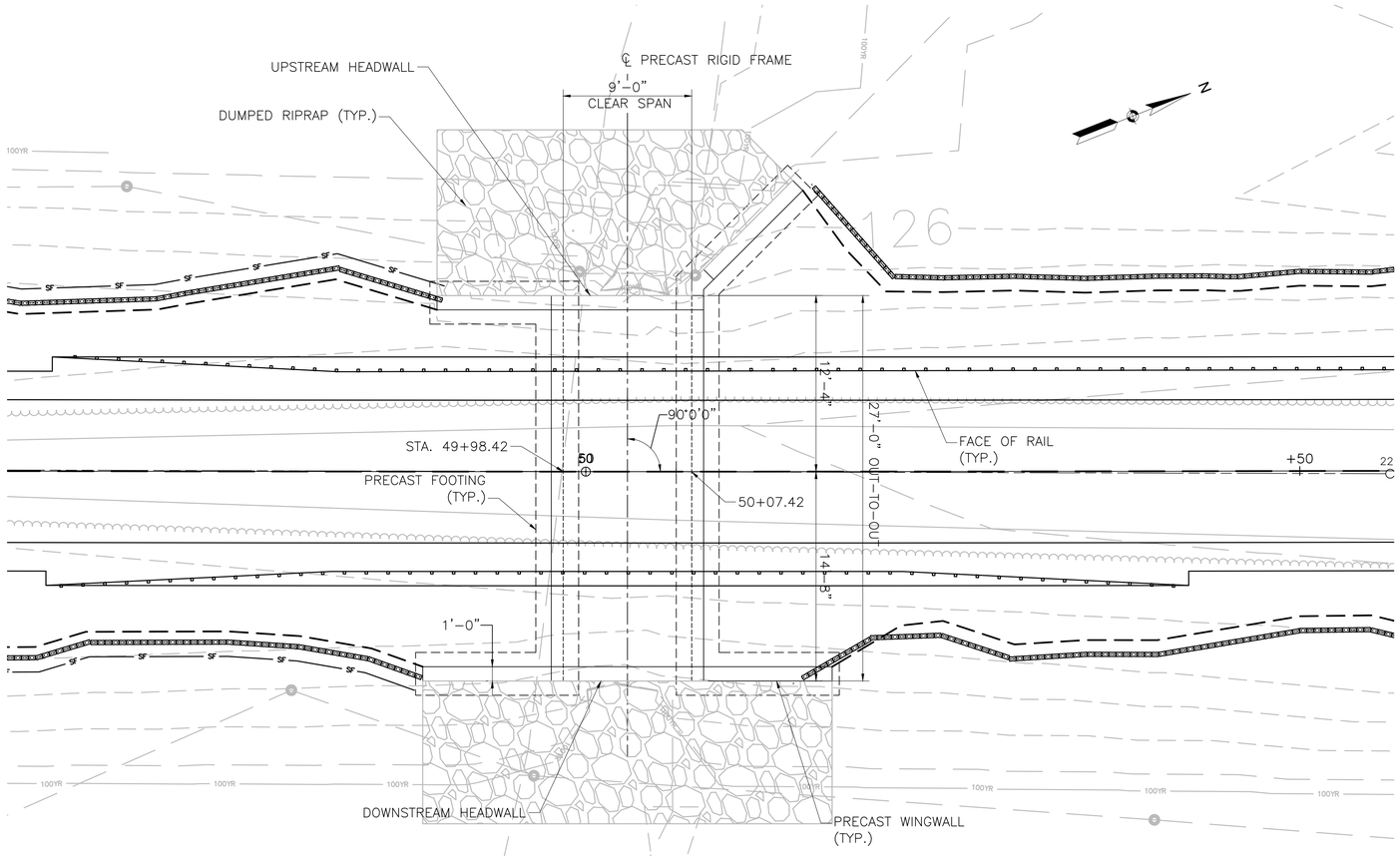


C3-4 LONGITUDINAL SECTION
SCALE: 1" = 5'-0"

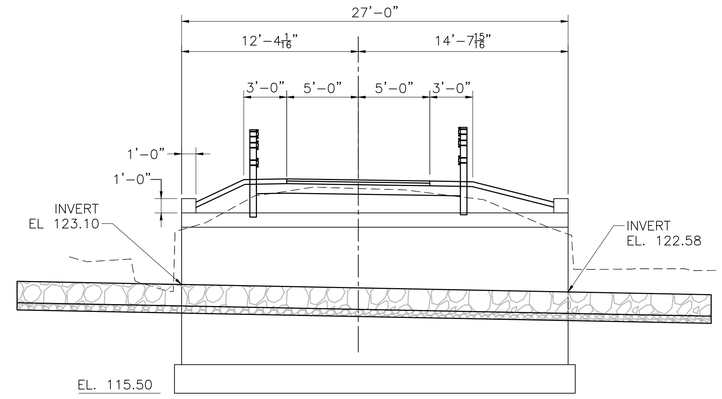
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	######	83	103
PROJECT FILE NO.	613319		

CULVERT DETAILS

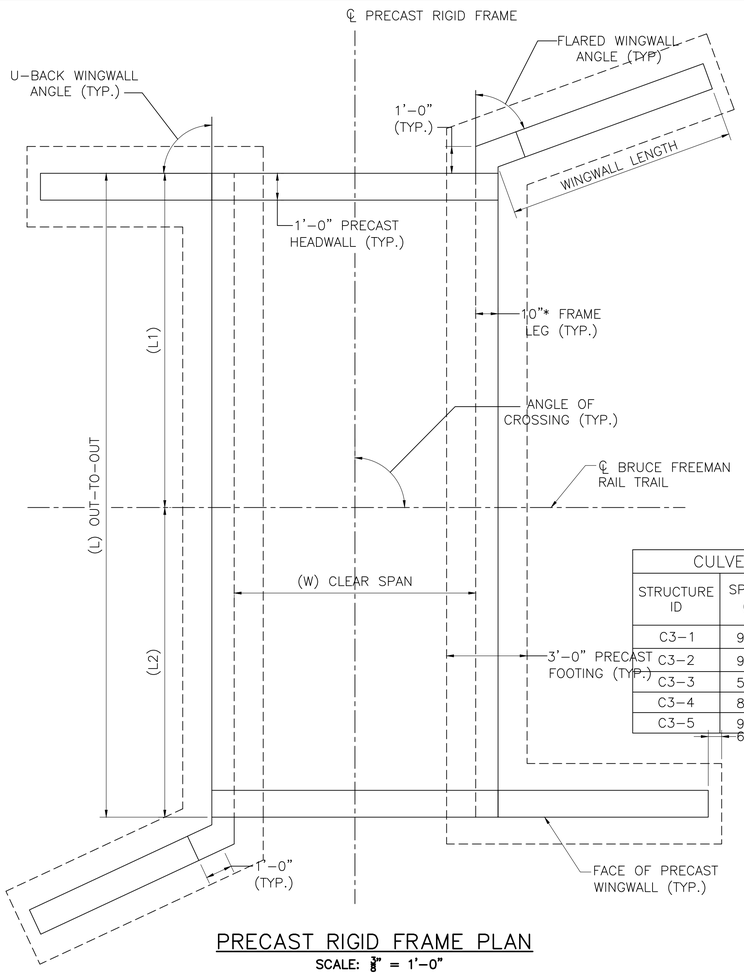


C3-5 GENERAL PLAN
SCALE: 1" = 5'-0"



C3-5 LONGITUDINAL SECTION
SCALE: 1" = 5'-0"

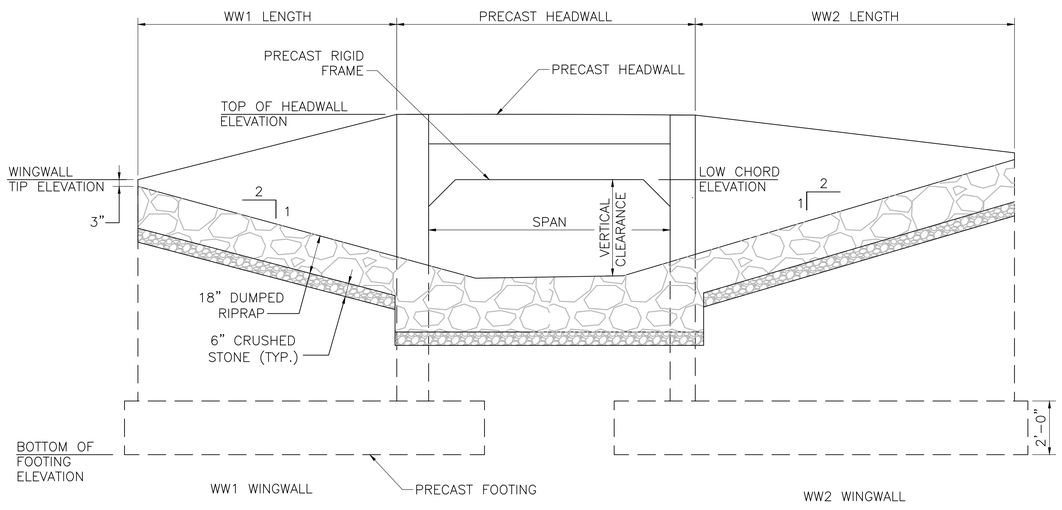
20200785.A30_BR01GENPLAN.DWG Plotted on 12-Feb-2026 6:22 PM



PRECAST RIGID FRAME PLAN

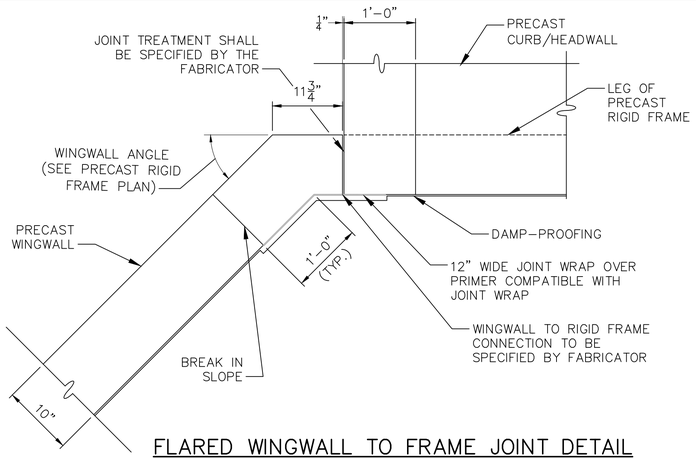
SCALE: $\frac{3}{8}$" = 1'–0"

CULVERT LAYOUT DIMENSIONS				
STRUCTURE ID	SPAN W (FT)	L1 (FT)	L2 (FT)	TOTAL LENGTH (FT)
C3–1	9'–0"	17'–8½"	13'–3½"	31'–0"
C3–2	9'–0"	12'–5½"	11'–6½"	24'–0"
C3–3	5'–0"	12'–4"	11'–8"	24'–0"
C3–4	8'–0"	10'–6"	9'–6"	20'–0"
C3–5	9'–0"	12'–4"	14'–8"	27'–0"



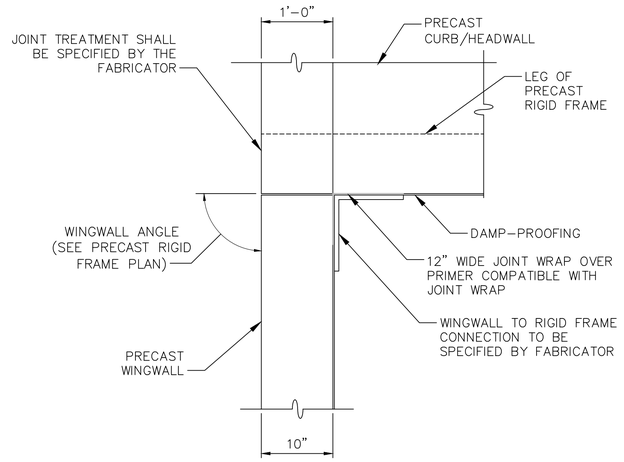
PRECAST RIGID FRAME ELEVATION

SCALE: $\frac{3}{8}$" = 1'–0"



FLARED WINGWALL TO FRAME JOINT DETAIL

SCALE: 1" = 1'–0"



U–BACK WINGWALL TO FRAME JOINT DETAIL

SCALE: 1" = 1'–0"

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	######	84	103
PROJECT FILE NO.	613319		

CULVERT DETAILS

PRECAST CONCRETE ELEMENT NOTES:

1. THE CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS FOR THE RIGID FRAME BRIDGE AND WINGWALL ELEMENTS, INCLUDING THE HEADWALL CONNECTION TO THE TO THE RIGID FRAME AND WINGWALL FOOTINGS, AND THE WINGWALL ANCHORS IN ACCORDANCE WITH THE LATEST AASHTO LRFD DESIGN SPECIFICATIONS AND THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION'S LRFD BRIDGE DESIGN MANUAL FOR HL–93 DESIGN LOADING FOR APPROVAL OF THE ENGINEER. THE DESIGN COMPUTATIONS SHALL CONSIDER ALL LOADINGS AS APPROPRIATE DURING FABRICATION, SHIPMENT, ERECTION, CONSTRUCTION, AND AFTER COMPLETION OF CONSTRUCTION BASED ON THESE CONSTRUCTION DRAWINGS.
2. THE RIGID FRAME DIMENSIONS PROVIDED ARE SHOWN TO MAINTAIN A MINIMUM LOW CHORD AND SPAN LENGTH AS SHOWN IN TABLE. THE WIDTHS AND THICKNESSES OF EACH RIGID FRAME MAY VARY DEPENDING ON THE MANUFACTURER'S SPECIFICATIONS. A RIGID FRAME TYPE STRUCTURE SHALL BE REQUIRED. THE CONTRACTOR, AT NO ADDITIONAL COMPENSATION, HAS THE OPTION TO PROPOSE AN ALTERNATE RIGID FRAME DESIGN WITH THE SAME OR LARGER OPENING AREA.
3. THE PRECAST CONCRETE STRIP FOOTING IS PER CONTRACTOR DESIGN. THEREFORE, THE FACTORED BEARING PRESSURE WILL BE DETERMINED BY THE CONTRACTOR. SLIDING AND OVERTURNING OF THE PRECAST STRIP FOOTING SHALL ALSO BE CHECKED IN THE CONTRACTOR'S DESIGN USING THE INFORMATION PROVIDED IN THE GEOTECHNICAL REPORT.
4. THE FOLLOWING GEOTECHNICAL PROPERTIES SHALL BE USED IN DESIGNING THE STRIP FOOTING PER THE GEOTECHNICAL REPORT PREPARED BY FUSS & O'NEILL DATED JUNE 2025:
   - NOMINAL BEARING RESISTANCE = 15 KSF
   - RESISTANCE FACTOR – STRENGTH LIMIT CASE = 0.45
   - FACTORED BEARING RESISTANCE = 6.7 KSF
   - COEFFICIENT OF SLIDING FRICTION SOIL = 0.5
5. THE CONTRACTOR, AT NO ADDITIONAL COMPENSATION, HAS THE OPTION TO PROVIDE CAST–IN–PLACE CONCRETE FOOTINGS, HEADWALLS, AND/OR WINGWALLS, AND SHALL SUBMIT THE FINAL DESIGN OF THE CAST–IN–PLACE CONCRETE ELEMENTS.
6. THE PRECAST ELEMENTS ARE TO BE PARALLEL AND ALIGNED WITH THE REFERENCE LINE AS SHOWN ON THESE CONSTRUCTION DRAWINGS.
7. THE BOTTOM OF FOOTING ELEVATION SHALL BE AS SHOWN IN TABLES FOR ANY DESIGN ALTERNATIVES.
8. THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF LIFT HOOKS FOR ALL PRECAST ELEMENTS. PLANS PROVIDING SPACING AND LOCATION OF LIFTING DEVICES AND HANDLING STRESS CALCULATIONS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OF THE PRECAST ELEMENTS.
9. SHOP DRAWING AND DESIGN CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS.
10. PRECAST CONCRETE ELEMENTS SHALL CONFORM TO THE APPLICABLE PARTS OF SECTION 901 OF THE SPECIFICATIONS.
11. ALL TOLERANCES FOR JOINTS BETWEEN PRECAST ELEMENTS SHALL BE DETERMINED BY THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH PCI REQUIREMENTS.
12. ALL STEEL ELEMENTS SHALL BE AASHTO M 270 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASSHTO M 111M/M 111.

UPSTREAM WINGWALL TABLE														
					NORTHWEST WINGWALL					SOUTHWEST WINGWALL				
STRUCTURE ID	VERTICAL CLEARANCE H (FT)	LOW CHORD EL.	TOP OF HEADWALL EL.	BOTTOM OF FOOTING EL.	LENGTH (FT)	BEGIN STA.	END STA.	TIP OF WW EL.	ANGLE (XX°–XX'–XX")	LENGTH (FT)	BEGIN STA.	END STA.	TIP OF WW EL.	ANGLE (XX°–XX'–XX")
C3–1	4	126.93	127.94	116.00	5'–9½"	23+79.35	23+91.95	125.25	75°–00'–00"	5'–9½"	23+74.70	23+96.55	124.72	70°–00'–00"
C3–2	4	125.56	127.56	117.00	6'–4½"	28+58.67	28+70.00	126.25	90°–00'–00"	8'–6"	28+52.28	28+76.98	124.25	90°–00'–00"
C3–3	4	127.03	129.02	118.50	9'–6"	34+34.54	34+41.95	127.25	67°–30'–00"	9'–8½"	34+34.06	34+48.94	127.25	53°–23'–00"
C3–4	3	124.84	126.83	116.00	4'–6"	44+04.83	44+14.49	125.25	90°–00'–00"	6'–6"	43+99.64	44+21.03	125.25	90°–00'–00"
C3–5	4	127.10	129.10	115.50	8'–0"	49+97.59	50+08.26	127.00	90°–00'–00"	8'–10"	49+89.58	50+14.49	125.50	45°–00'–00"

DOWNSTREAM WINGWALL TABLE														
					NORTHEAST WINGWALL					SOUTHEAST WINGWALL				
STRUCTURE ID	VERTICAL CLEARANCE H (FT)	LOW CHORD EL.	TOP OF HEADWALL EL.	BOTTOM OF FOOTING EL.	LENGTH (FT)	BEGIN STA.	END STA.	TIP OF WW EL.	ANGLE (XX°–XX'–XX")	LENGTH (FT)	BEGIN STA.	END STA.	TIP OF WW EL.	ANGLE (XX°–XX'–XX")
C3–1	4	126.93	127.94	116.00	9'–0"	23+79.99	23+92.54	126.25	70°–00'–00"	9'–0"	23+90.38	24+00.10	126.25	70°–00'–00"
C3–2	4	125.56	127.56	117.00	7'–6"	28+58.12	28+69.33	124.25	65°–00'–00"	7'–10"	28+52.29	28+77.17	126.25	90°–00'–00"
C3–3	4	127.03	129.02	118.50	8'–6"	34+34.61	34+42.52	127.25	64°–00'–00"	8'–6"	34+27.86	34+49.85	127.25	78°–00'–00"
C3–4	3	124.84	126.83	116.00	8'–0"	44+04.00	44+14.49	125.25	79°–00'–00"	5'–6"	43+97.13	43+97.13	124.25	90°–00'–00"
C3–5	4	127.10	129.10	115.50	9'–0"	50+17.26	50+08.26	127.25	90°–00'–00"	9'–0"	49+89.59	50+17.26	127.25	90°–00'–00"

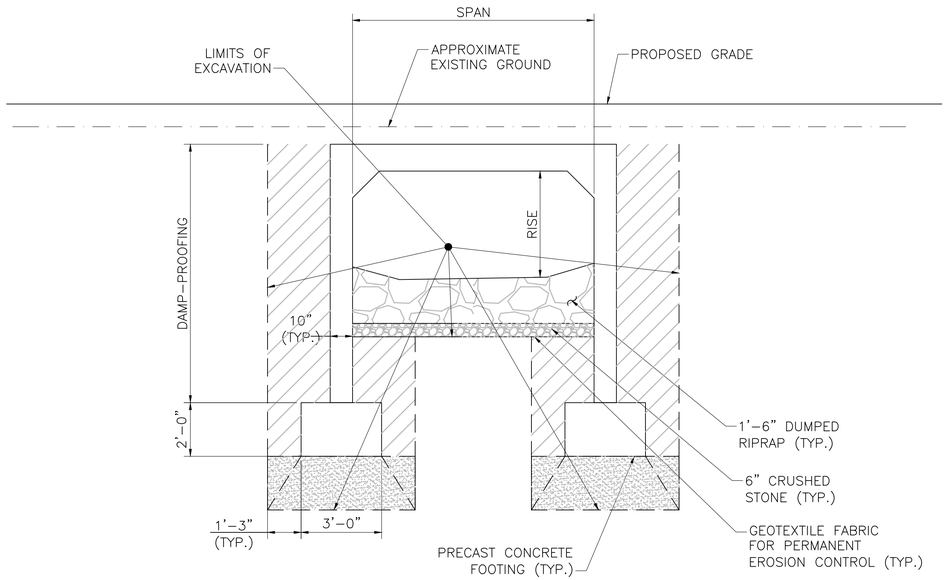
20200765.A30_BRIDETAILS.DWG Plotted on 12-Feb-2026 6:22 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

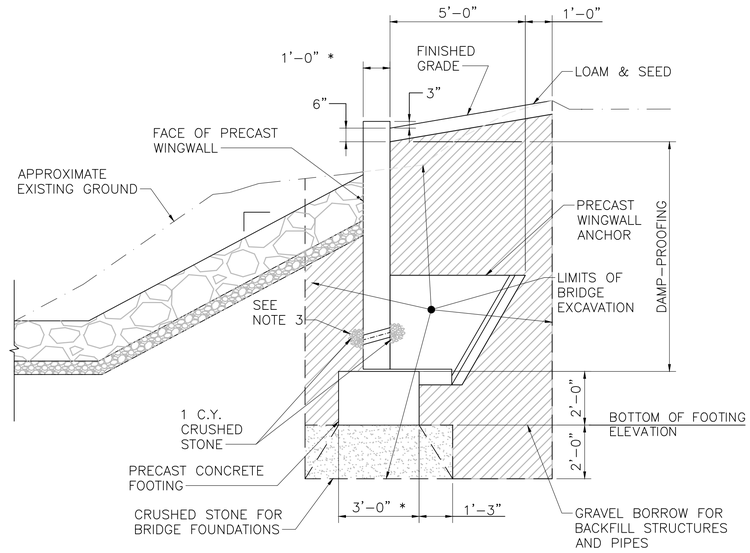
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	######	85	103
PROJECT FILE NO.	613319		

CULVERT DETAILS

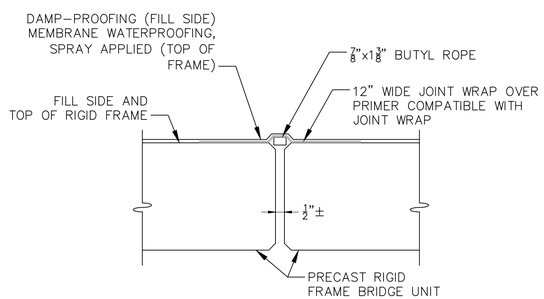
20200765.A30_BR02DETAILS.DWG Plotted on 12-Feb-2026 6:22 PM



TYPICAL FRAME EARTHWORK SECTION
SCALE: $\frac{3}{8}$" = 1'-0"



WINGWALL EARTHWORK DETAIL
SCALE: $\frac{3}{8}$" = 1'-0"



TYPICAL JOINT SEAL DETAIL
SCALE: 1$\frac{1}{2}$" = 1'-0"

NOTES:
1. ALL RAMPS ARE TO BE CONSTRUCTED WITH 4" THICKNESS OF CEMENT CONCRETE.
2. DETECTABLE WARNING PANELS SHALL BE PLASTIC - COLORED BRICK RED.
3. SEE CONSTRUCTION STANDARD 701.2.1 AND 701.2.3

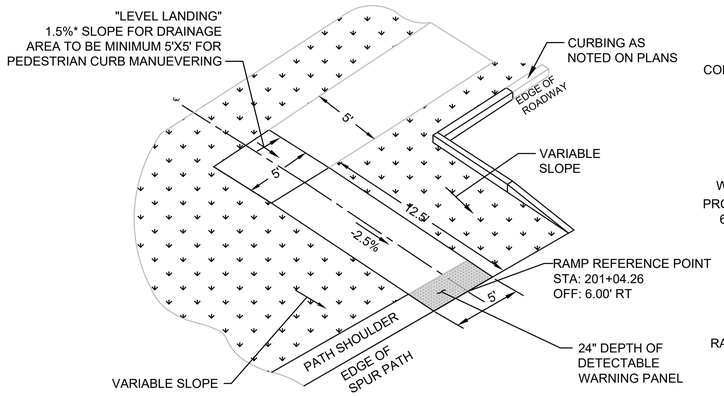
* CONSTRUCTION TOLERANCE ± 0.5%

SUDBURY/FRAMINGHAM
SUDBURY BRUCE FREEMAN RAIL TRAIL PHASE 3

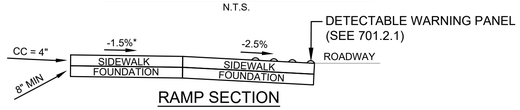
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	86	103
PROJECT FILE NO.	613319		

PEDESTRIAN CURB RAMP DETAILS

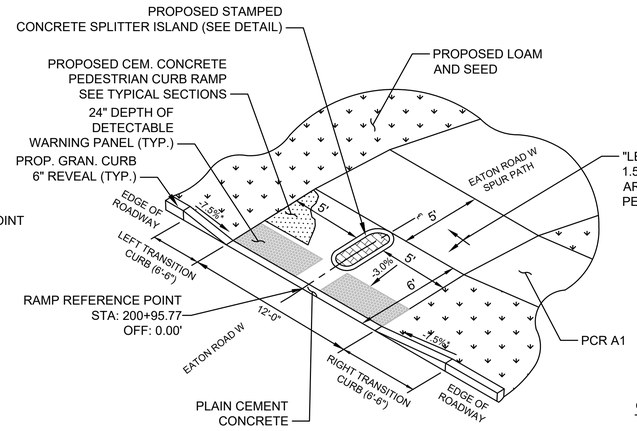
20200785.A30_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:44 PM



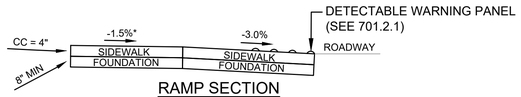
TYPE A1 PEDESTRIAN CURB RAMP
N.T.S.



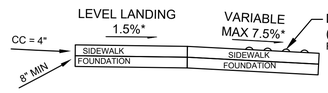
RAMP SECTION
N.T.S.

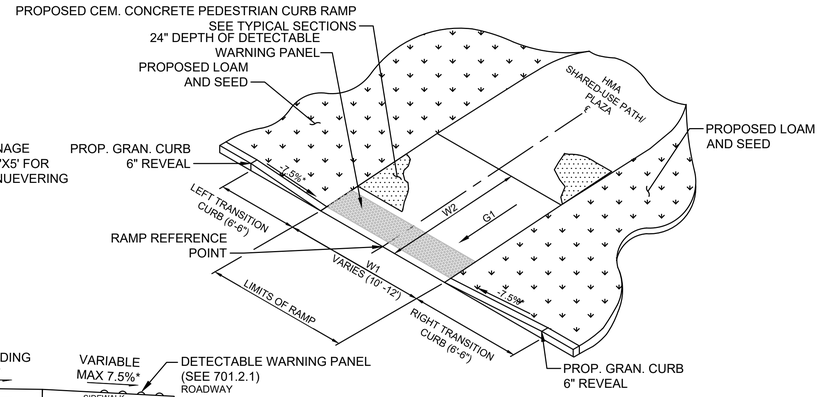


TYPE B1 SHARED USE PATH
ENTRANCE/EXIT RAMP AT EATON ROAD W
N.T.S.



RAMP SECTION
N.T.S.



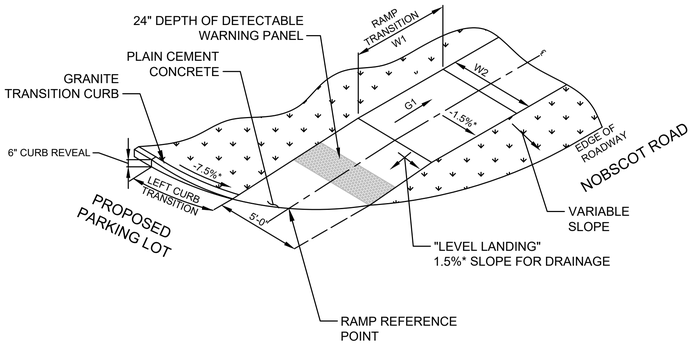


TYPE C PEDESTRIAN CURB RAMP
SHARED-USE PATH ENTRANCE/EXIT
N.T.S.

PCR#	RAMP REFERENCE POINT		WIDTH OF RAMP ENTRANCE (W1)	LENGTH OF PRIMARY RAMP (W2)	SLOPE OF PRIMARY RAMP (G1)	LEFT TRANSITION				RIGHT TRANSITION			
	STATION/ ROADWAY	OFFSET				CURVE LENGTH	STRAIGHT LENGTH	PC/PT CURB REVEAL	ROADWAY GUTTER GRADE	CURVE LENGTH	STRAIGHT LENGTH	PC/PT CURB REVEAL	ROADWAY GUTTER GRADE
C1	302+64.89	16.17' RT	10'-0"	10'-0"	1.0%	0'-0"	6'-6"	-	1.5%	5'-6"	1'-0"	1"	-1.5%
C2	72+67.36	0.0'	12'-0"	10'-0"	-0.6%	0'-0"	6'-0"	-	-9.8%	0'-0"	6'-0"	-	-8.3%
C3	72+92.82	0.0'	12'-0"	10'-0"	-1.5%	0'-0"	6'-0"	-	-7.8%	0'-0"	6'-0"	-	-9.0%

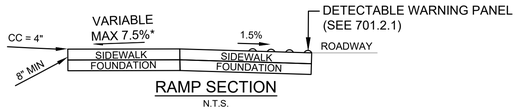
(-) REPRESENTS THE LOW SIDE TRANSITION

NOTE: PCR'S C2 AND C3 ARE LOCATED AT A PROPOSED RAISED CROSSING.
SEE RAISED CROSSING DETAIL FOR CURB ORIENTATION

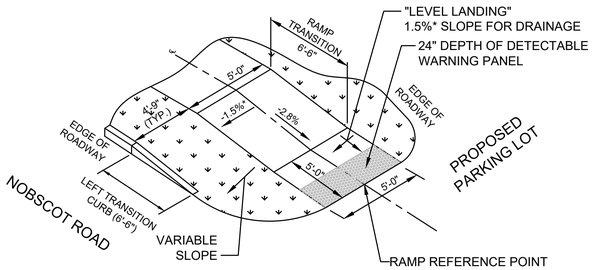


TYPE D PEDESTRIAN CURB RAMP
CONTINUOUS DIRECTION TRAVEL WITH GRASS BUFFER STRIP
N.T.S.

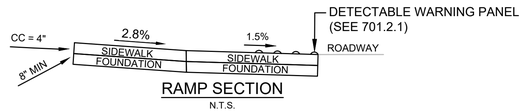
PCR#	RAMP REFERENCE POINT		RAMP TRANSITION LENGTH (W1)	WIDTH OF SIDEWALK (W2)	RAMP TRANSITION GRADE (G1)	CORNER RADIUS	LEFT SIDE CURB TRANSITION				
	STATION/ ROADWAY	OFFSET					CURVE LENGTH	STRAIGHT LENGTH	PC/PT CURB REVEAL	ROADWAY GUTTER GRADE	CURB REVEAL
D1	300+23.84	14.22 RT	6'-6"	5'-4"	-3.9%	30'	6'-6"	0'-0"	6"	0.6%	6"
D2	302+79.54	12.98 LT	6'-6"	5'-0"	-2.8%	-	-	-	-	-	-



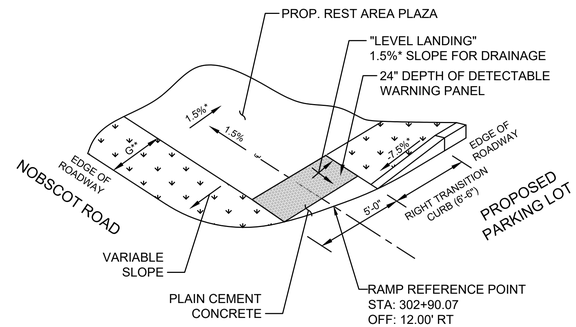
RAMP SECTION
N.T.S.



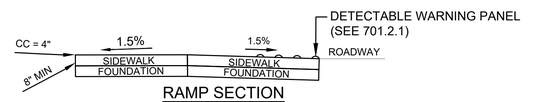
TYPE E1 PEDESTRIAN CURB RAMP
CONTINUOUS DIRECTION TRAVEL WITH BUFFER STRIP
N.T.S.



RAMP SECTION
N.T.S.



TYPE F1 PEDESTRIAN CURB RAMP
CONTINUOUS DIRECTION TRAVEL WITH BUFFER STRIP
N.T.S.



RAMP SECTION
N.T.S.

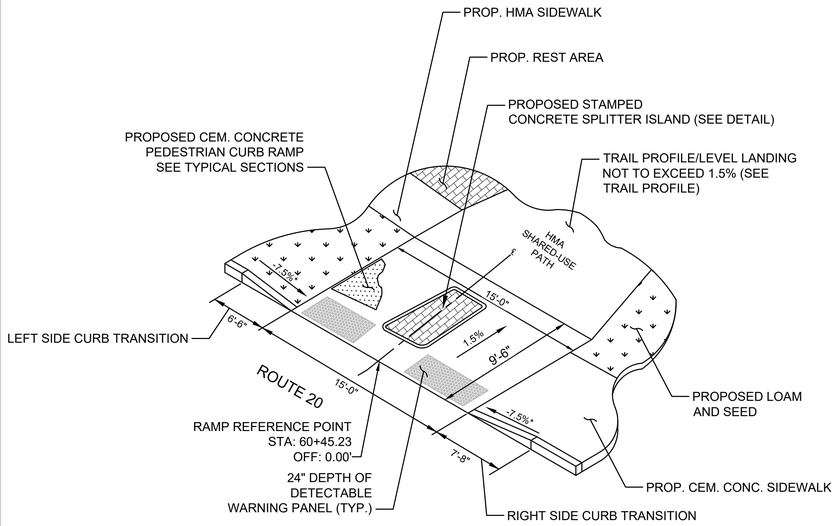
NOTES:
1. ALL RAMPS ARE TO BE CONSTRUCTED WITH 4" THICKNESS OF CEMENT CONCRETE.
2. DETECTABLE WARNING PANELS SHALL BE PLASTIC - COLORED BRICK RED.
3. SEE CONSTRUCTION STANDARD 701.2.1 AND 701.2.3

* CONSTRUCTION TOLERANCE ± 0.5%

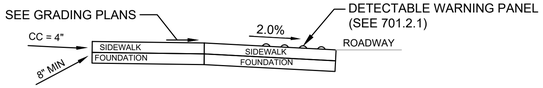
SUDBURY/FRAMINGHAM
SUDBURY BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	87	103
PROJECT FILE NO.	613319		

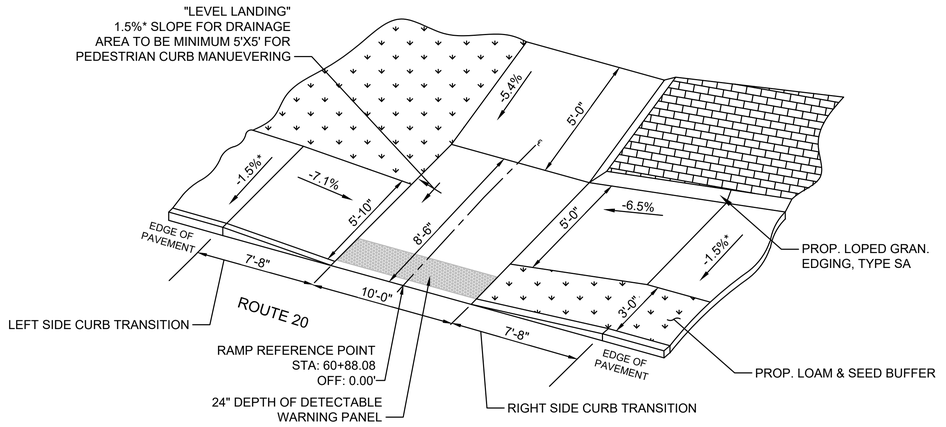
PEDESTRIAN CURB RAMP DETAILS



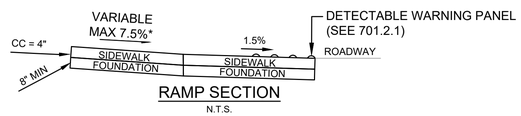
TYPE G1 SHARED USE PATH
SHARED-USE PATH ENTRANCE/EXIT RAMP SOUTH OF ROUTE 20
N.T.S.



SECTION
N.T.S.



TYPE H1 PEDESTRIAN CURB RAMP
SHARED-USE PATH ENTRANCE/EXIT RAMP NORTH OF ROUTE 20
N.T.S.



RAMP SECTION
N.T.S.

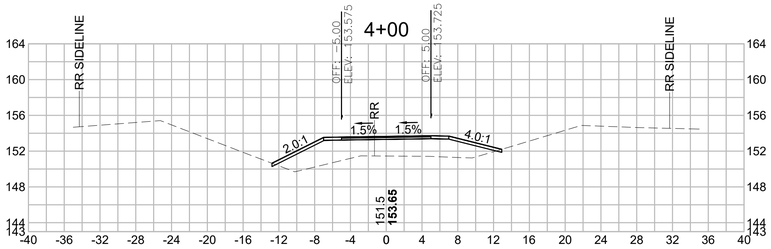
20200785.A30_CONSTRUCTION DETAILS.DWG Plotted on 12-Feb-2026 5:44 PM

NOTE: SEE EARTHWORK QUANTITY SHEET IN DESIGN CALCULATION BOOK
FOR CUMULATIVE CUT/FILL VOLUMES

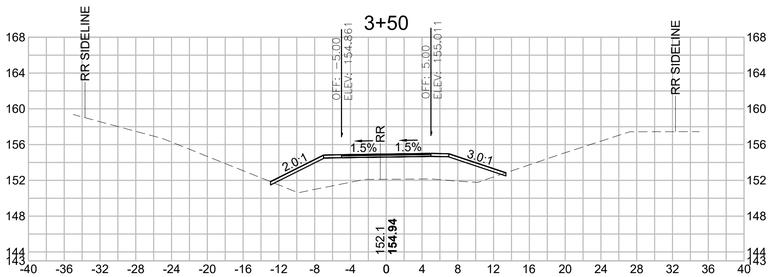
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	88	103
PROJECT FILE NO.	613319		

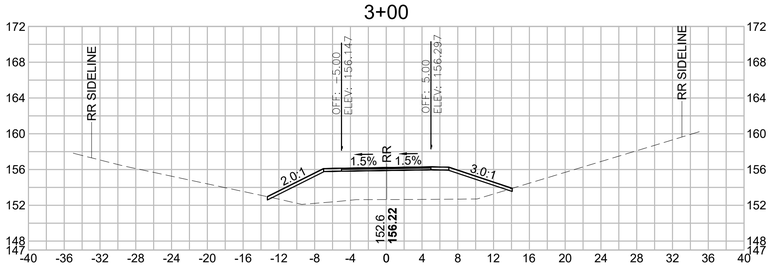
CROSS SECTIONS



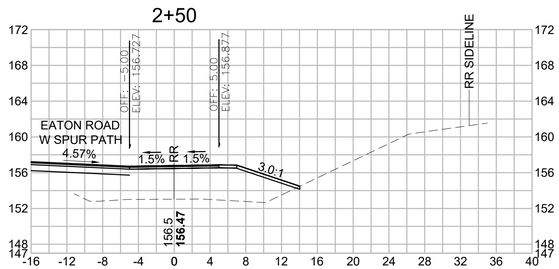
Total Volume at Station 4+00.00	
Cut Area	0.186
Fill Area	44.049
Cut Vol	0.328
Fill Vol	94.2



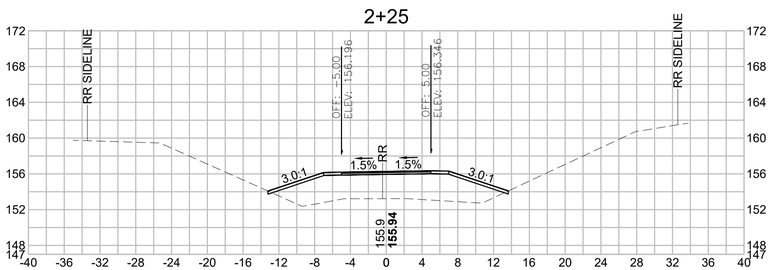
Total Volume at Station 3+50.00	
Cut Area	0.167
Fill Area	57.637
Cut Vol	0.334
Fill Vol	117.5



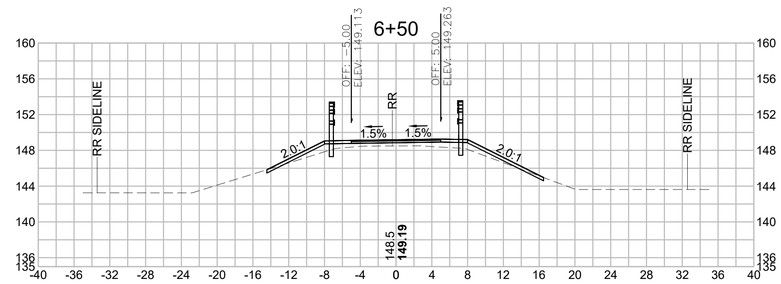
Total Volume at Station 3+00.00	
Cut Area	0.193
Fill Area	69.218
Cut Vol	0.249
Fill Vol	116.6



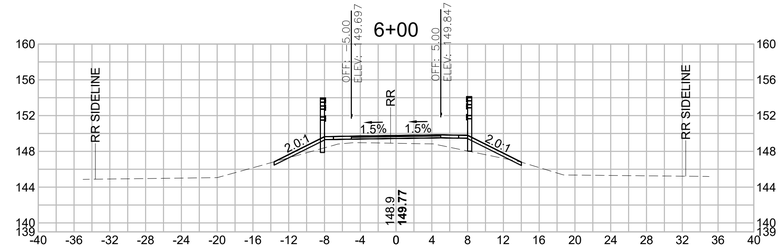
Total Volume at Station 2+50.00	
Cut Area	0.076
Fill Area	56.695
Cut Vol	0.108
Fill Vol	55.0



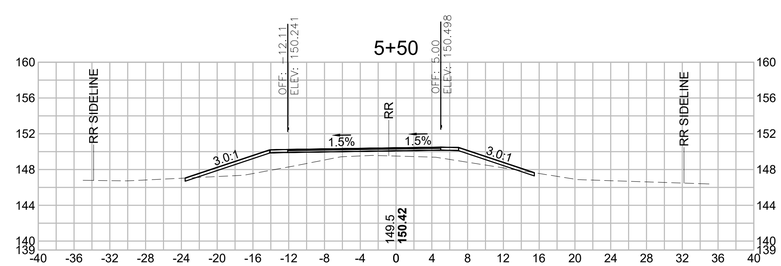
Total Volume at Station 2+25.00	
Cut Area	0.156
Fill Area	62.034
Cut Vol	0.000
Fill Vol	0.0



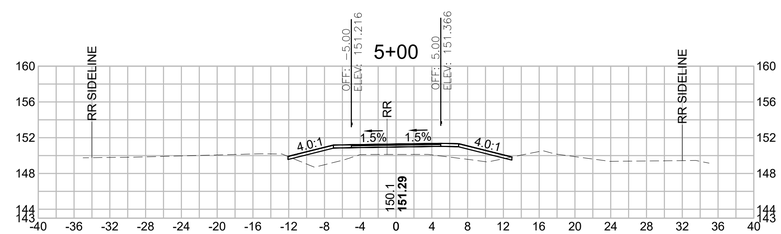
Total Volume at Station 6+50.00	
Cut Area	0.880
Fill Area	11.403
Cut Vol	2.097
Fill Vol	23.9



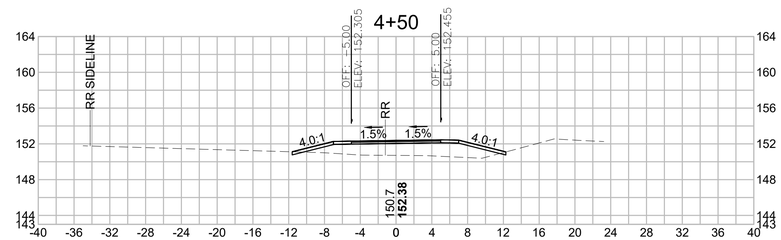
Total Volume at Station 6+00.00	
Cut Area	1.384
Fill Area	14.444
Cut Vol	1.807
Fill Vol	42.8



Total Volume at Station 5+50.00	
Cut Area	0.567
Fill Area	31.773
Cut Vol	0.729
Fill Vol	51.1



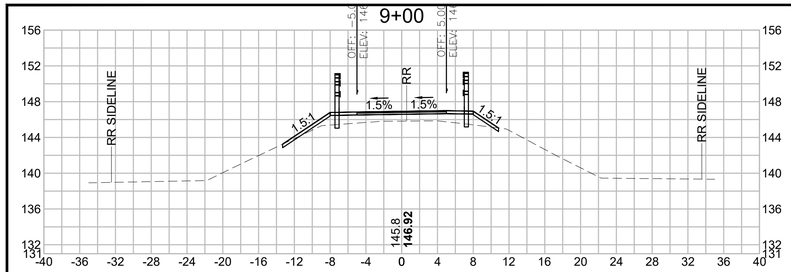
Total Volume at Station 5+00.00	
Cut Area	0.220
Fill Area	23.444
Cut Vol	0.507
Fill Vol	44.5



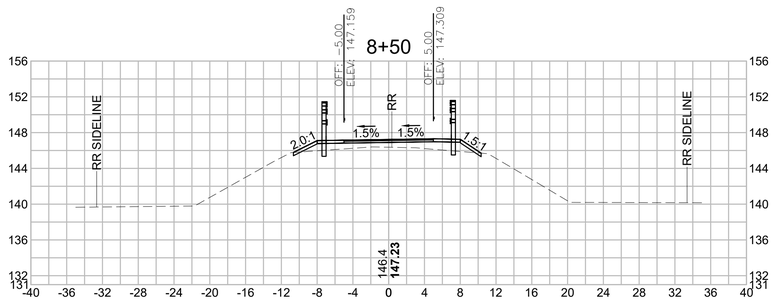
Total Volume at Station 4+50.00	
Cut Area	0.327
Fill Area	24.607
Cut Vol	0.476
Fill Vol	63.6

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

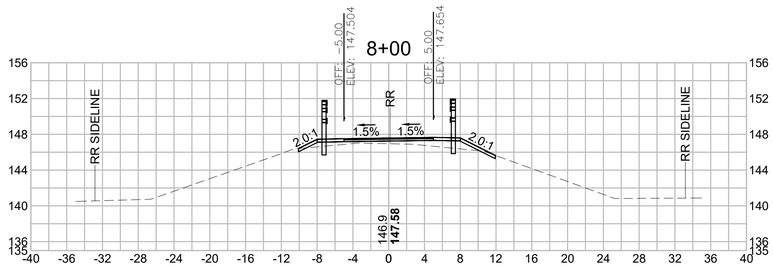
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:46 PM



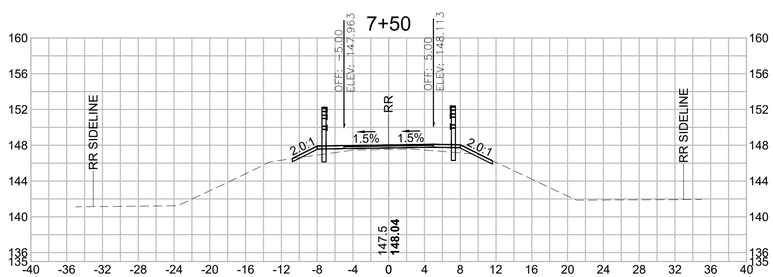
Total Volume at Station 9+00.00	
Cut Area	0.555
Fill Area	16.453
Cut Vol	0.785
Fill Vol	26.8



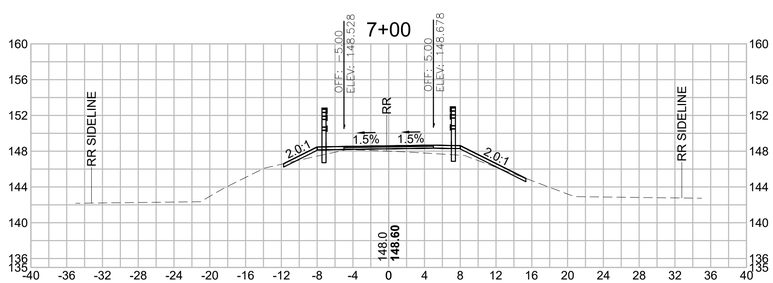
Total Volume at Station 8+50.00	
Cut Area	0.293
Fill Area	12.460
Cut Vol	0.805
Fill Vol	19.0



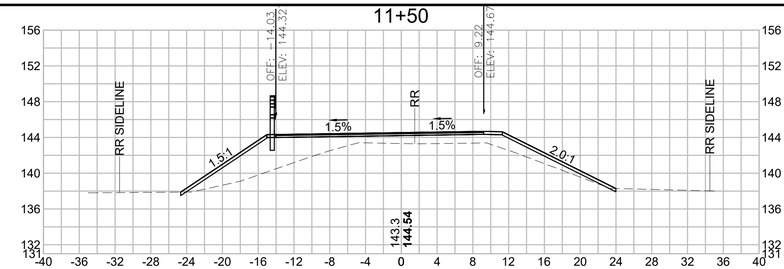
Total Volume at Station 8+00.00	
Cut Area	0.576
Fill Area	8.100
Cut Vol	1.297
Fill Vol	13.0



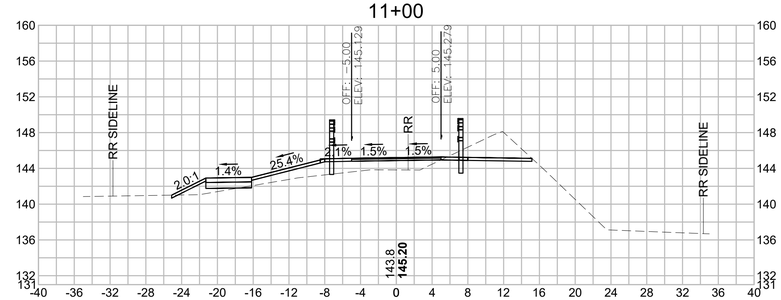
Total Volume at Station 7+50.00	
Cut Area	0.824
Fill Area	5.896
Cut Vol	2.707
Fill Vol	12.2



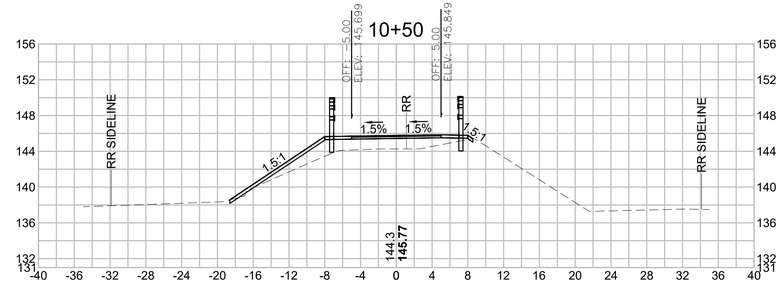
Total Volume at Station 7+00.00	
Cut Area	2.099
Fill Area	7.300
Cut Vol	2.758
Fill Vol	17.3



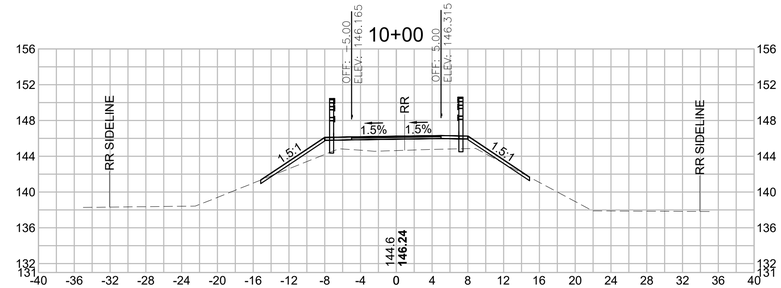
Total Volume at Station 11+50.00	
Cut Area	0.298
Fill Area	66.864
Cut Vol	16.796
Fill Vol	85.5



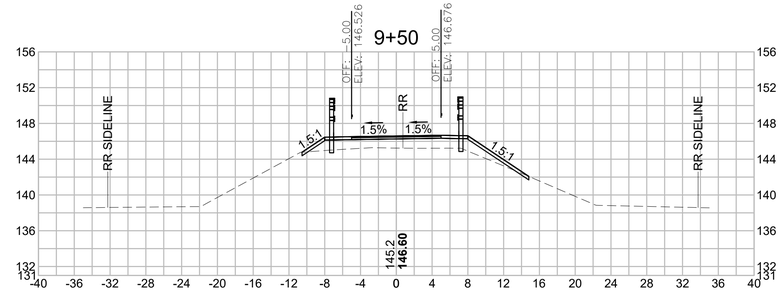
Total Volume at Station 11+00.00	
Cut Area	17.841
Fill Area	25.436
Cut Vol	16.748
Fill Vol	47.2



Total Volume at Station 10+50.00	
Cut Area	0.247
Fill Area	25.534
Cut Vol	1.050
Fill Vol	46.5



Total Volume at Station 10+00.00	
Cut Area	0.886
Fill Area	24.705
Cut Vol	1.247
Fill Vol	42.7



Total Volume at Station 9+50.00	
Cut Area	0.459
Fill Area	21.417
Cut Vol	0.939
Fill Vol	35.1

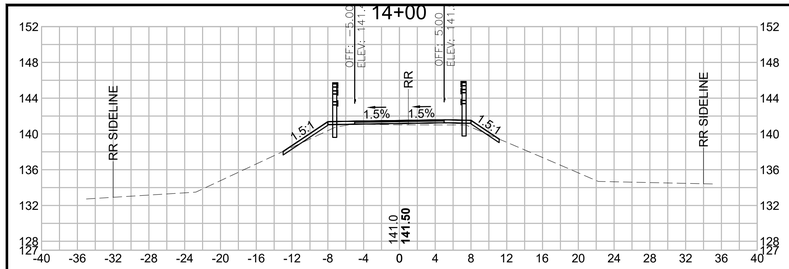
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

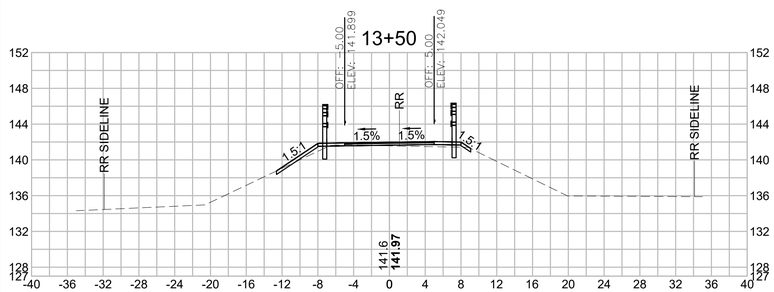
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	89	103
PROJECT FILE NO.	613319		

CROSS SECTIONS

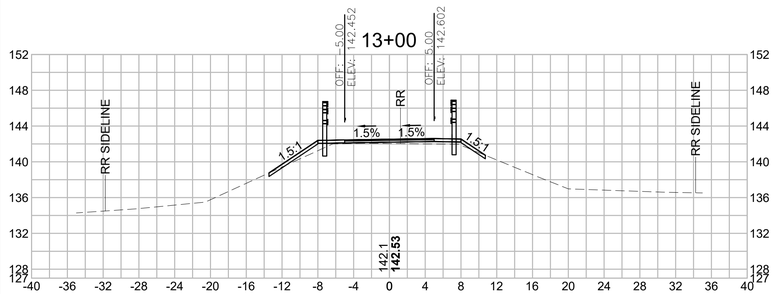
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:46 PM



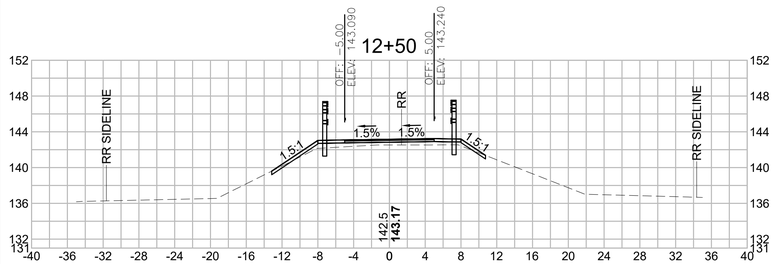
Total Volume at Station 14+00.00	
Cut Area	0.714
Fill Area	3.984
Cut Vol	1.596
Fill Vol	6.1



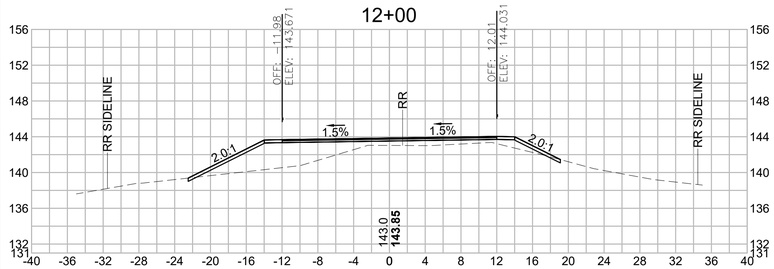
Total Volume at Station 13+50.00	
Cut Area	1.009
Fill Area	2.589
Cut Vol	1.564
Fill Vol	6.8



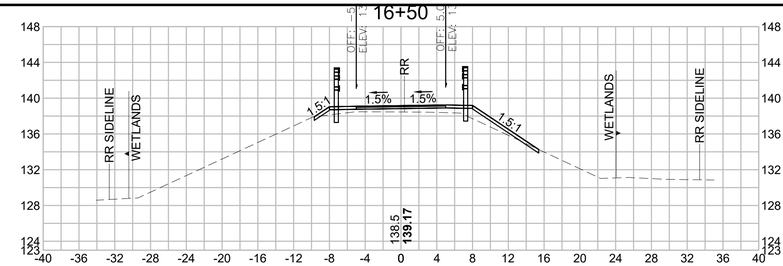
Total Volume at Station 13+00.00	
Cut Area	0.680
Fill Area	4.729
Cut Vol	1.322
Fill Vol	10.7



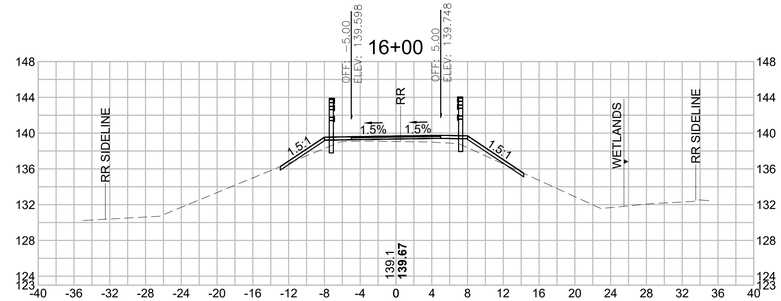
Total Volume at Station 12+50.00	
Cut Area	0.747
Fill Area	6.822
Cut Vol	1.129
Fill Vol	46.9



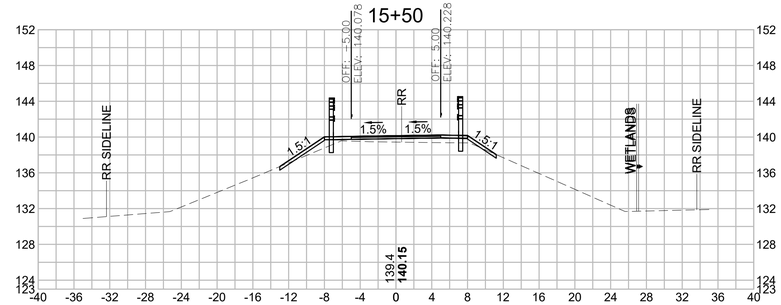
Total Volume at Station 12+00.00	
Cut Area	0.472
Fill Area	43.784
Cut Vol	0.714
Fill Vol	102.5



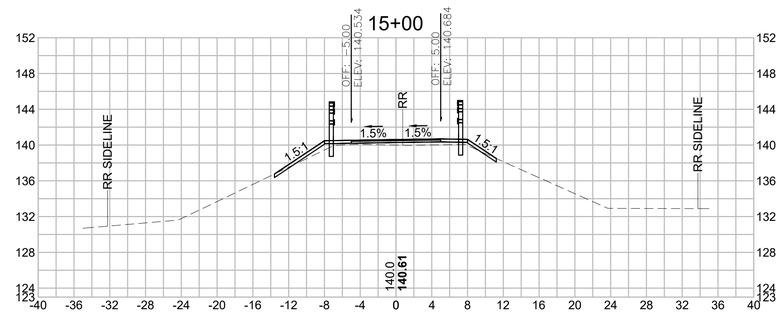
Total Volume at Station 16+50.00	
Cut Area	0.542
Fill Area	10.357
Cut Vol	1.134
Fill Vol	18.4



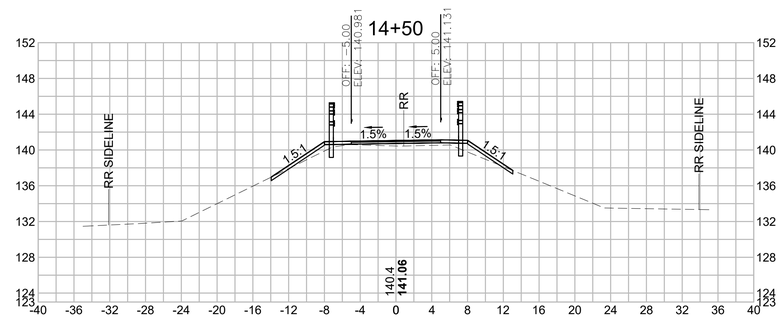
Total Volume at Station 16+00.00	
Cut Area	0.682
Fill Area	9.478
Cut Vol	1.248
Fill Vol	16.3



Total Volume at Station 15+50.00	
Cut Area	0.665
Fill Area	8.151
Cut Vol	1.347
Fill Vol	12.8



Total Volume at Station 15+00.00	
Cut Area	0.790
Fill Area	5.640
Cut Vol	1.428
Fill Vol	11.9



Total Volume at Station 14+50.00	
Cut Area	0.752
Fill Area	7.210
Cut Vol	1.357
Fill Vol	10.4

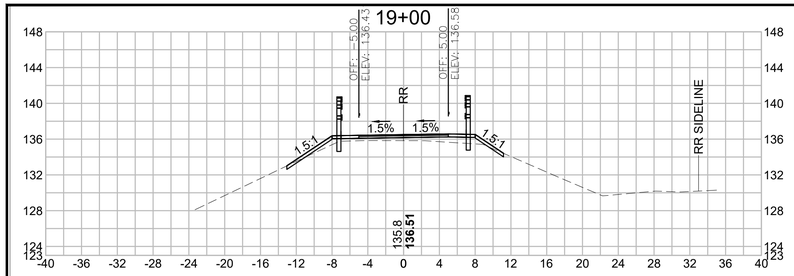
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	90	103
PROJECT FILE NO.		613319	

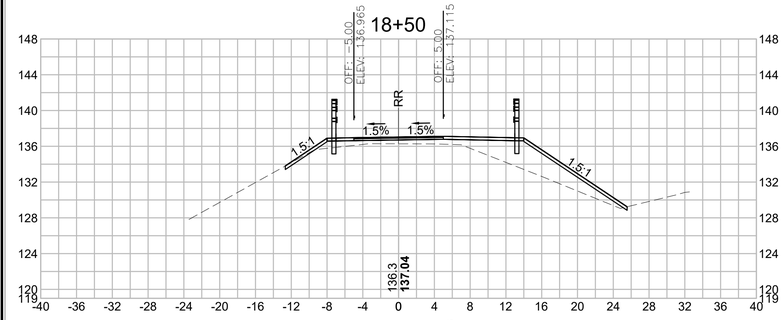
CROSS SECTIONS

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

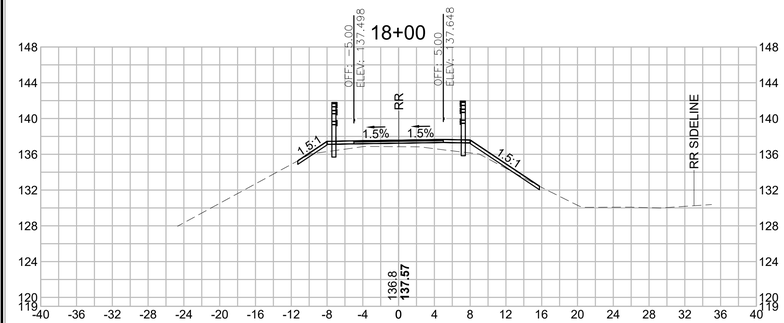
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:47 PM



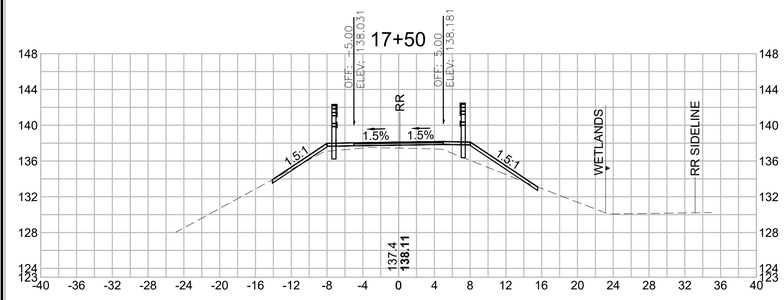
Total Volume at Station 19+00.00	
Cut Area	0.753
Fill Area	7.950
Cut Vol	1.428
Fill Vol	44.0



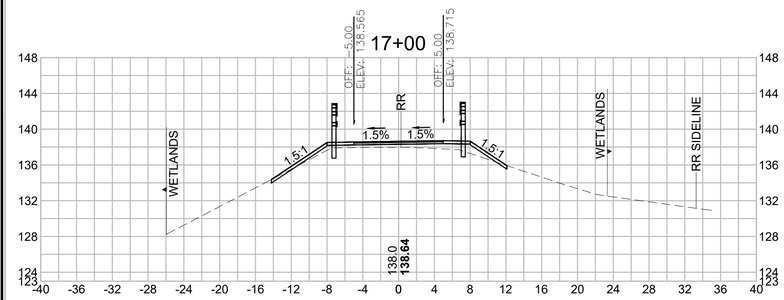
Total Volume at Station 18+50.00	
Cut Area	0.788
Fill Area	39.578
Cut Vol	1.732
Fill Vol	47.3



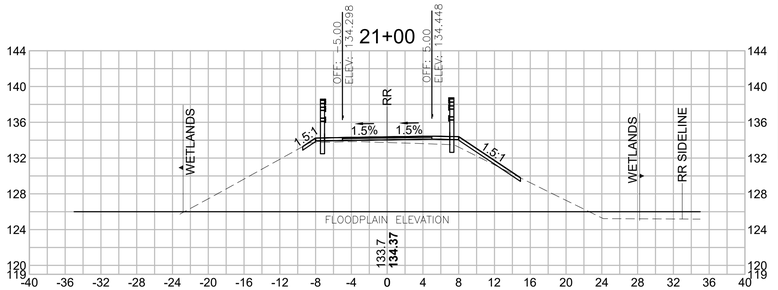
Total Volume at Station 18+00.00	
Cut Area	1.082
Fill Area	11.520
Cut Vol	1.857
Fill Vol	23.6



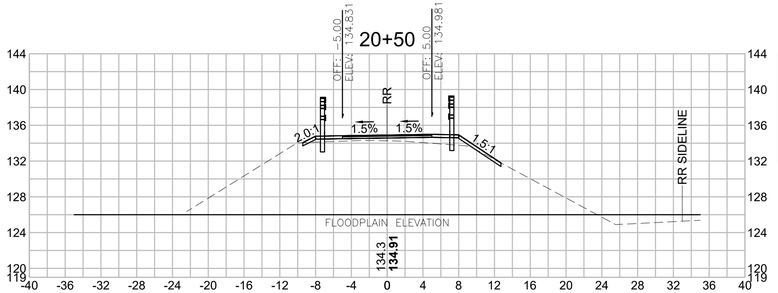
Total Volume at Station 17+50.00	
Cut Area	0.923
Fill Area	13.948
Cut Vol	1.577
Fill Vol	21.4



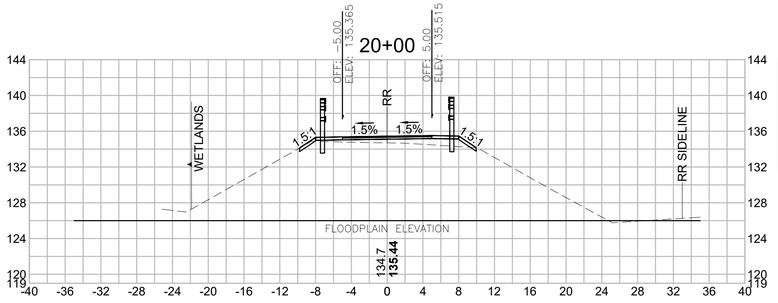
Total Volume at Station 17+00.00	
Cut Area	0.780
Fill Area	9.112
Cut Vol	1.224
Fill Vol	18.0



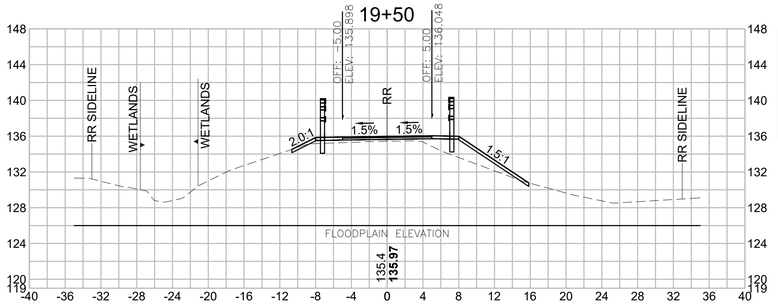
Total Volume at Station 21+00.00	
Cut Area	0.810
Fill Area	7.079
Cut Vol	1.427
Fill Vol	13.4



Total Volume at Station 20+50.00	
Cut Area	0.731
Fill Area	7.398
Cut Vol	1.254
Fill Vol	14.0



Total Volume at Station 20+00.00	
Cut Area	0.623
Fill Area	7.686
Cut Vol	1.143
Fill Vol	20.9



Total Volume at Station 19+50.00	
Cut Area	0.611
Fill Area	14.902
Cut Vol	1.264
Fill Vol	21.2

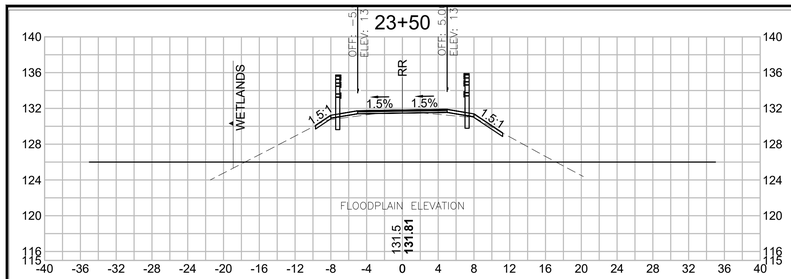
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	91	103
PROJECT FILE NO.	613319		

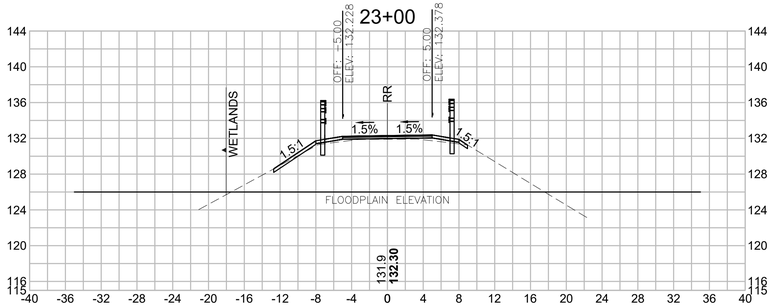
CROSS SECTIONS

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

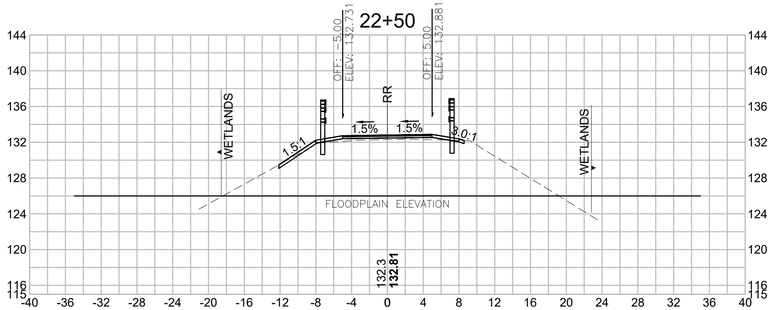
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:47 PM



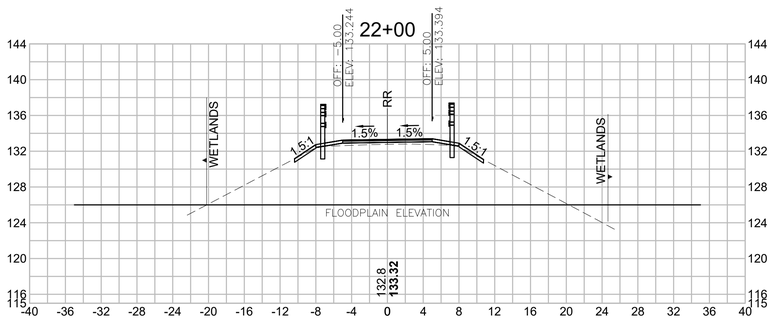
Total Volume at Station 23+50.00	
Cut Area	1.058
Fill Area	2.060
Cut Vol	1.716
Fill Vol	4.3



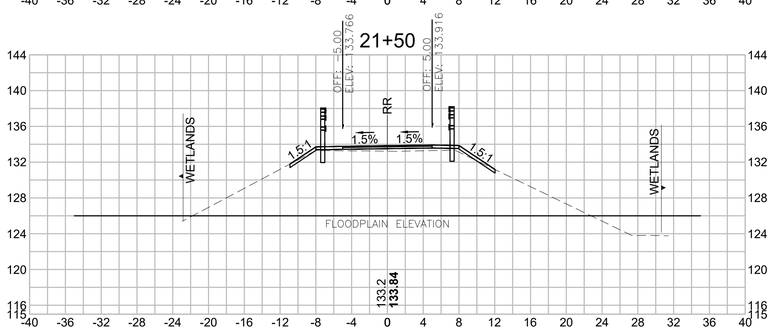
Total Volume at Station 23+00.00	
Cut Area	0.794
Fill Area	2.556
Cut Vol	1.607
Fill Vol	4.8



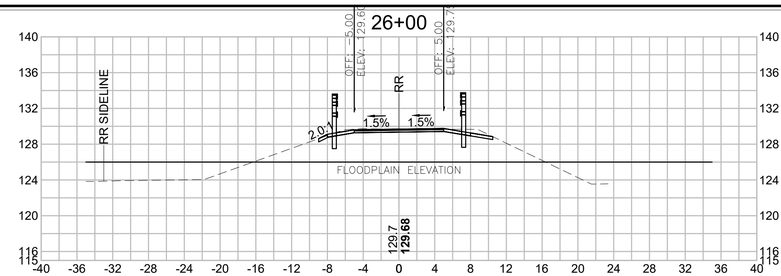
Total Volume at Station 22+50.00	
Cut Area	0.941
Fill Area	2.675
Cut Vol	1.938
Fill Vol	5.4



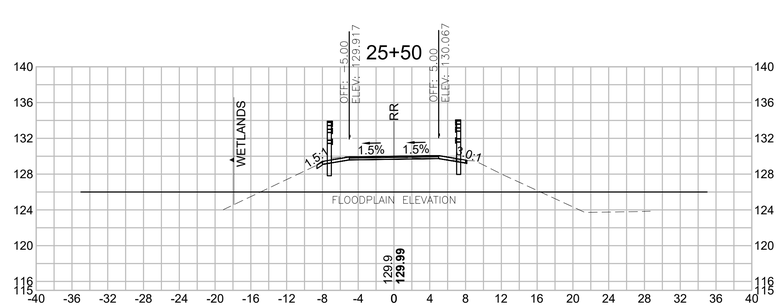
Total Volume at Station 22+00.00	
Cut Area	1.151
Fill Area	3.159
Cut Vol	1.993
Fill Vol	6.6



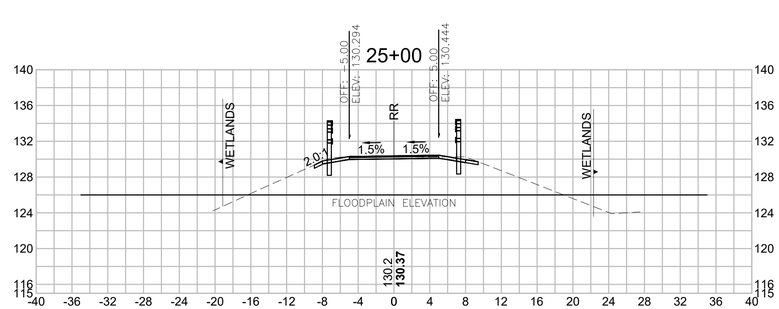
Total Volume at Station 21+50.00	
Cut Area	1.000
Fill Area	4.010
Cut Vol	1.677
Fill Vol	10.3



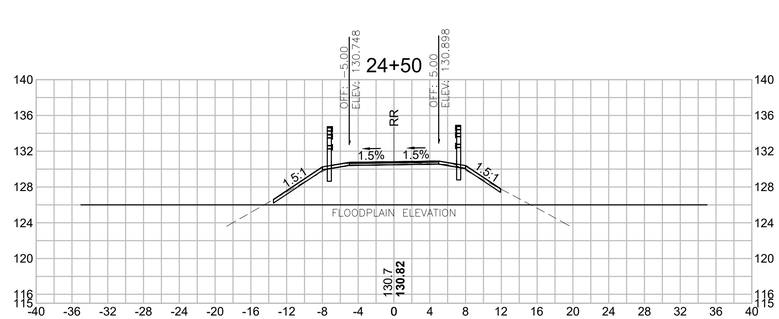
Total Volume at Station 26+00.00	
Cut Area	17.311
Fill Area	0.000
Cut Vol	28.264
Fill Vol	0.0



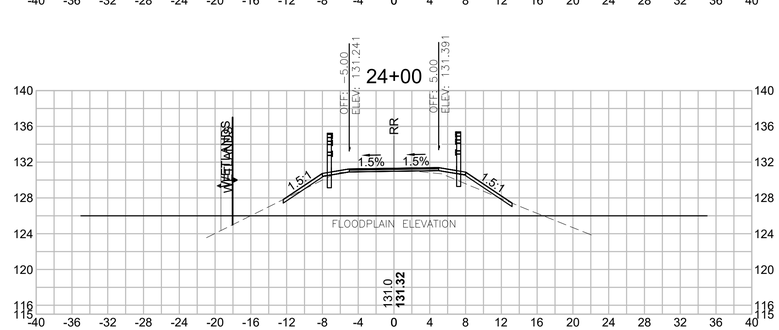
Total Volume at Station 25+50.00	
Cut Area	13.214
Fill Area	0.000
Cut Vol	26.086
Fill Vol	0.0



Total Volume at Station 25+00.00	
Cut Area	14.958
Fill Area	0.000
Cut Vol	26.072
Fill Vol	0.264



Total Volume at Station 24+50.00	
Cut Area	3.819
Fill Area	0.286
Cut Vol	4.364
Fill Vol	4.6



Total Volume at Station 24+00.00	
Cut Area	0.894
Fill Area	4.712
Cut Vol	1.808
Fill Vol	6.3

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	92	103
PROJECT FILE NO.		613319	

CROSS SECTIONS

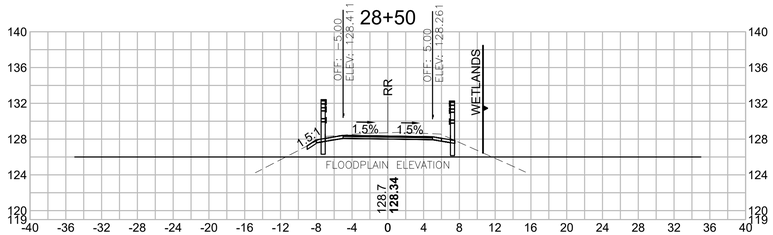
HOR. SCALE IN FEET
4 0 4 8
VER. SCALE IN FEET
4 0 4 8

613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:48 PM

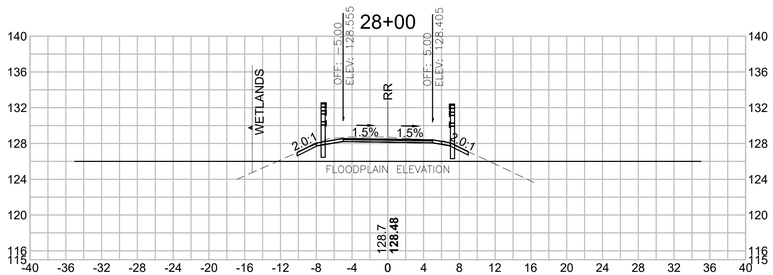
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	93	103
PROJECT FILE NO.	613319		

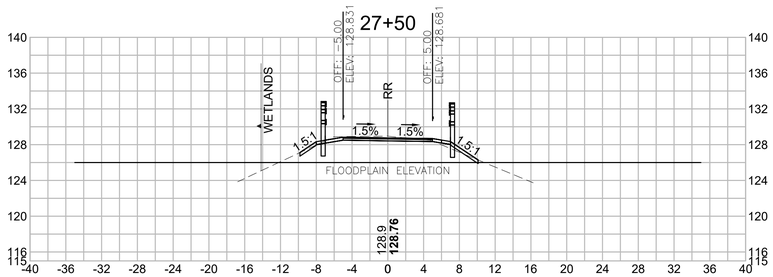
CROSS SECTIONS



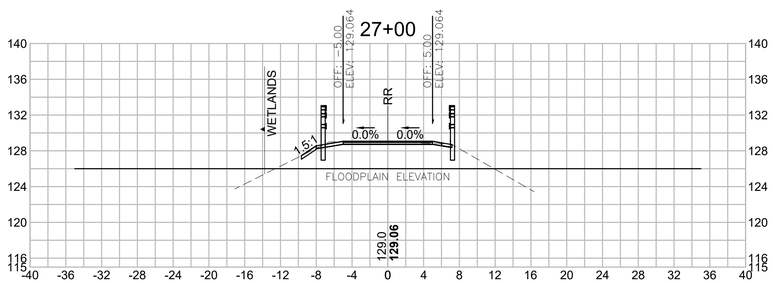
Total Volume at Station 28+50.00	
Cut Area	18.323
Fill Area	0.000
Cut Vol	32.722
Fill Vol	0.0



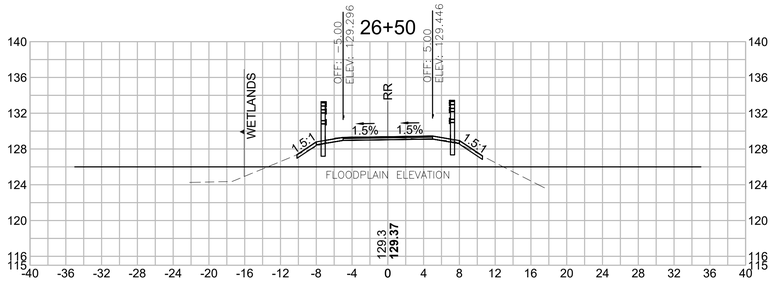
Total Volume at Station 28+00.00	
Cut Area	17.017
Fill Area	0.000
Cut Vol	28.987
Fill Vol	0.575



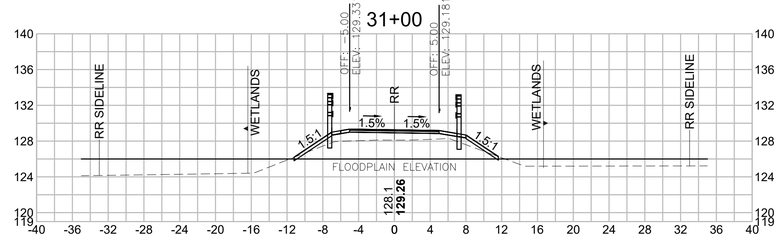
Total Volume at Station 27+50.00	
Cut Area	14.289
Fill Area	0.621
Cut Vol	25.381
Fill Vol	0.575



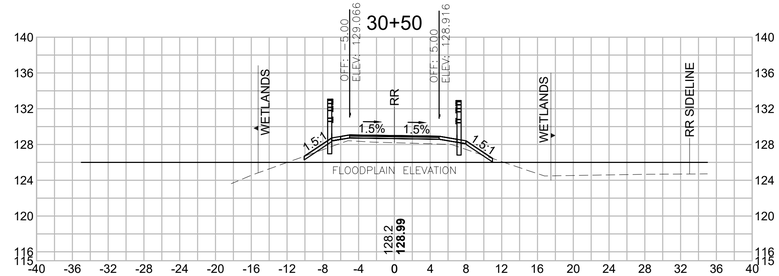
Total Volume at Station 27+00.00	
Cut Area	13.122
Fill Area	0.000
Cut Vol	24.554
Fill Vol	0.108



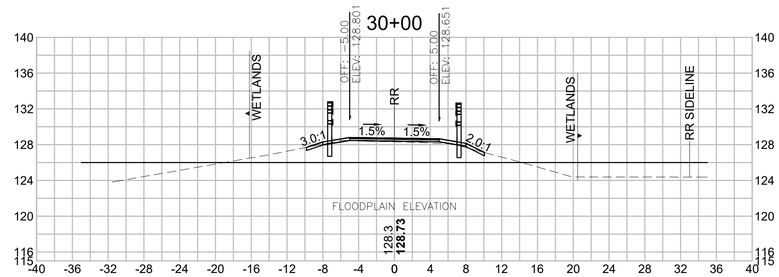
Total Volume at Station 26+50.00	
Cut Area	13.397
Fill Area	0.108
Cut Vol	28.433
Fill Vol	0.108



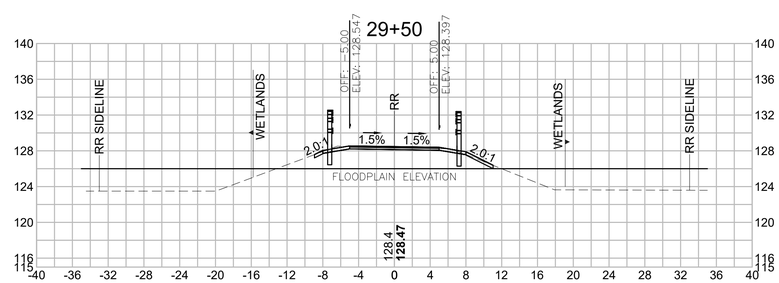
Total Volume at Station 31+00.00	
Cut Area	0.549
Fill Area	13.290
Cut Vol	0.968
Fill Vol	19.5



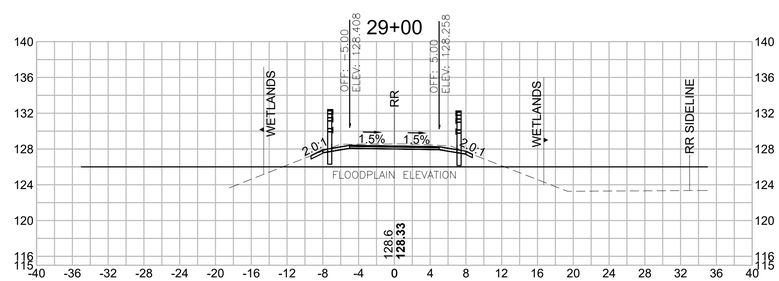
Total Volume at Station 30+50.00	
Cut Area	0.496
Fill Area	7.807
Cut Vol	1.375
Fill Vol	8.3



Total Volume at Station 30+00.00	
Cut Area	0.988
Fill Area	1.149
Cut Vol	6.037
Fill Vol	1.1



Total Volume at Station 29+50.00	
Cut Area	14.911
Fill Area	0.000
Cut Vol	30.639
Fill Vol	0.0



Total Volume at Station 29+00.00	
Cut Area	18.179
Fill Area	0.000
Cut Vol	33.798
Fill Vol	0.0

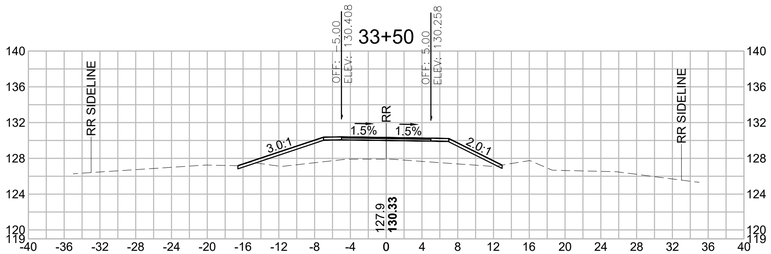
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:48 PM

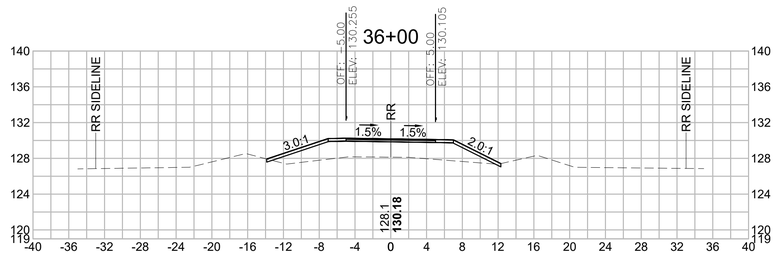
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	94	103
PROJECT FILE NO.	613319		

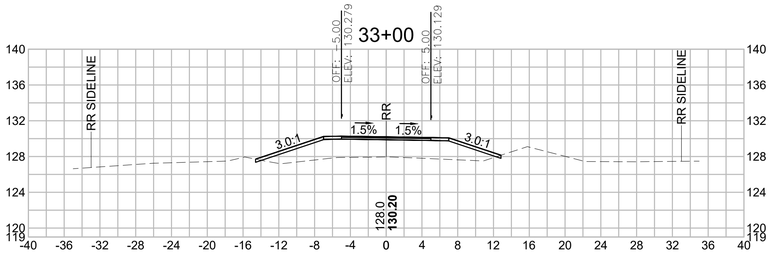
CROSS SECTIONS



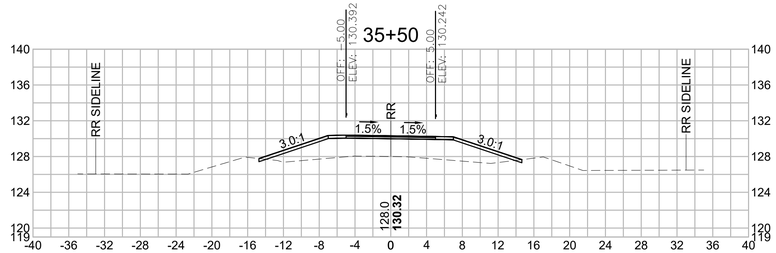
Total Volume at Station 33+50.00	
Cut Area	0.603
Fill Area	48.541
Cut Vol	0.753
Fill Vol	85.3



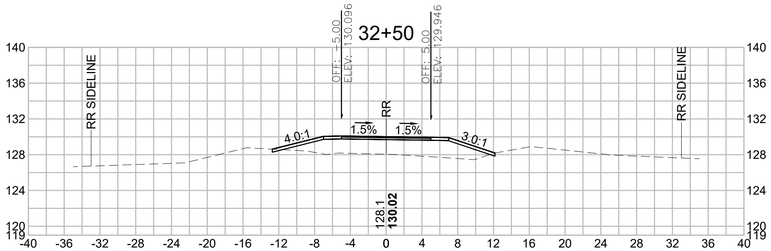
Total Volume at Station 36+00.00	
Cut Area	0.206
Fill Area	37.280
Cut Vol	0.447
Fill Vol	77.9



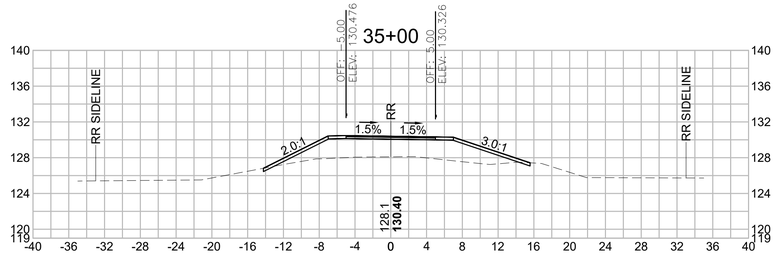
Total Volume at Station 33+00.00	
Cut Area	0.209
Fill Area	43.612
Cut Vol	0.468
Fill Vol	70.5



Total Volume at Station 35+50.00	
Cut Area	0.276
Fill Area	46.828
Cut Vol	0.665
Fill Vol	84.5

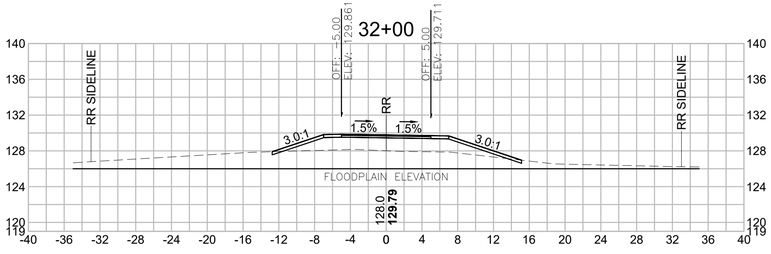


Total Volume at Station 32+50.00	
Cut Area	0.295
Fill Area	32.578
Cut Vol	0.722
Fill Vol	56.1

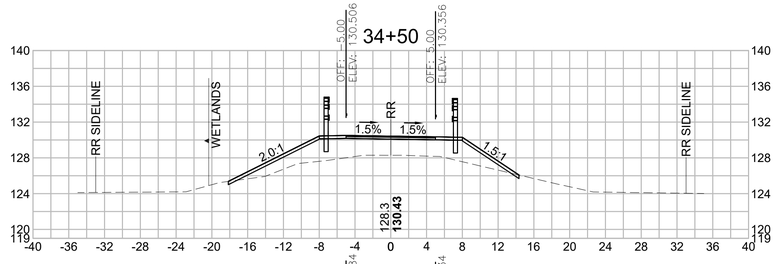


Total Volume at Station 35+00.00	
Cut Area	0.441
Fill Area	44.387
Cut Vol	0.750
Fill Vol	87.0

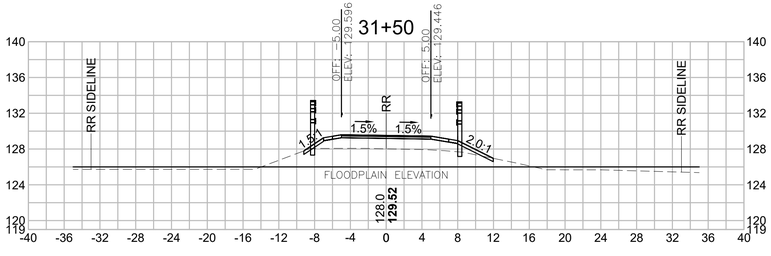
HOR. SCALE IN FEET
4 0 4 8
VER. SCALE IN FEET
4 0 4 8



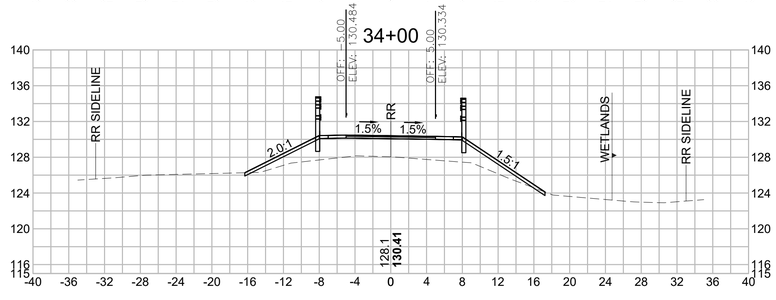
Total Volume at Station 32+00.00	
Cut Area	0.484
Fill Area	28.037
Cut Vol	0.764
Fill Vol	43.5



Total Volume at Station 34+50.00	
Cut Area	0.368
Fill Area	49.545
Cut Vol	0.726
Fill Vol	93.9



Total Volume at Station 31+50.00	
Cut Area	0.340
Fill Area	18.963
Cut Vol	0.824
Fill Vol	29.9



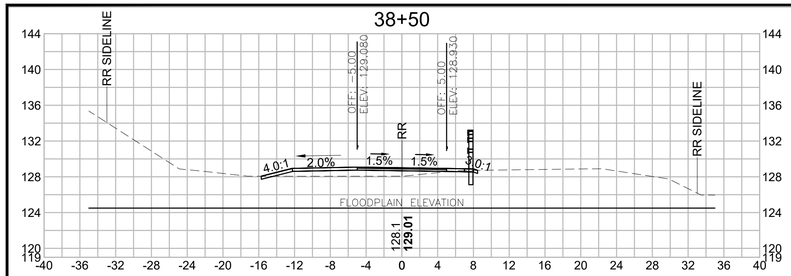
Total Volume at Station 34+00.00	
Cut Area	0.415
Fill Area	51.874
Cut Vol	0.943
Fill Vol	93.0

613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:49 PM

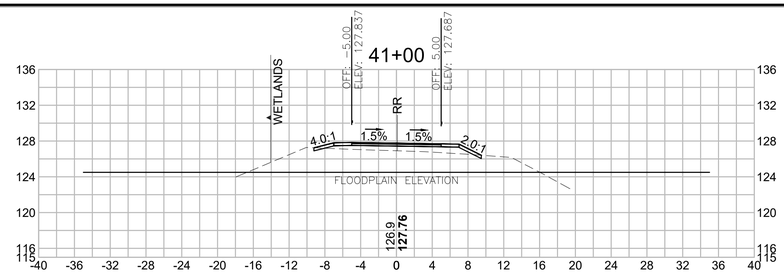
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	95	103
PROJECT FILE NO.	613319		

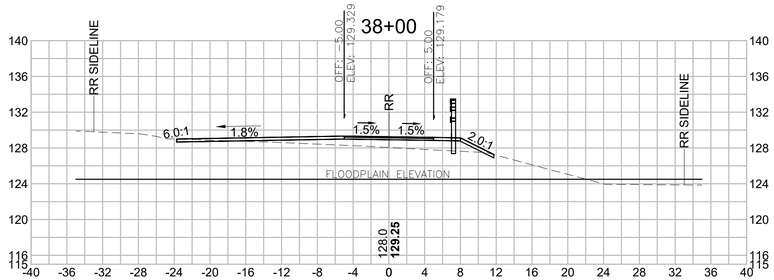
CROSS SECTIONS



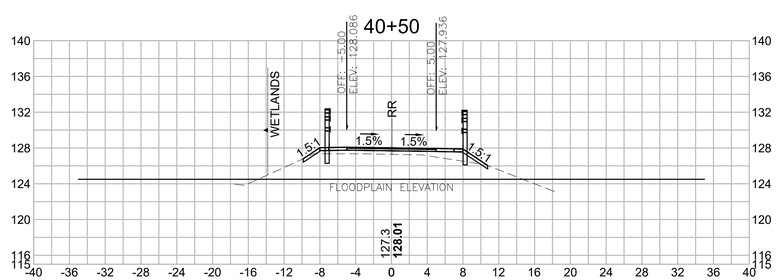
Total Volume at Station 38+50.00	
Cut Area	0.678
Fill Area	9.860
Cut Vol	2.035
Fill Vol	23.6



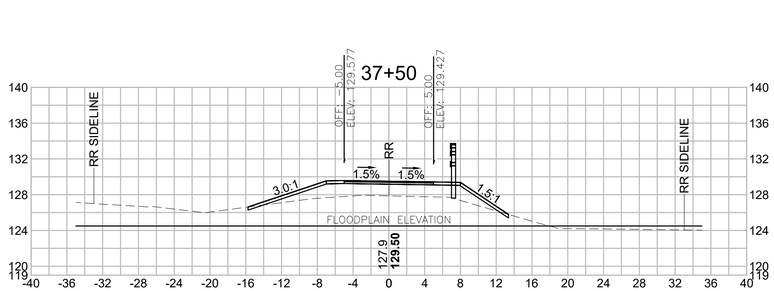
Total Volume at Station 41+00.00	
Cut Area	0.361
Fill Area	8.152
Cut Vol	0.822
Fill Vol	15.6



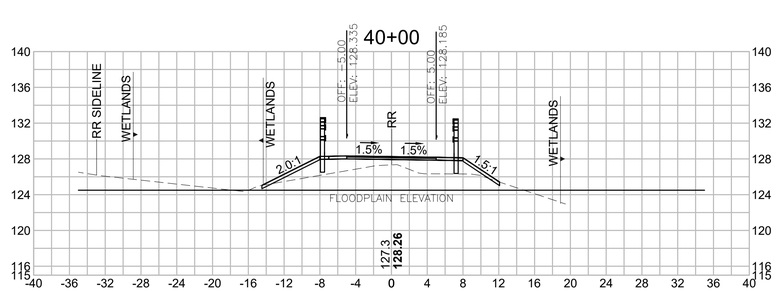
Total Volume at Station 38+00.00	
Cut Area	1.519
Fill Area	15.626
Cut Vol	1.881
Fill Vol	41.4



Total Volume at Station 40+50.00	
Cut Area	0.527
Fill Area	8.720
Cut Vol	0.900
Fill Vol	31.9

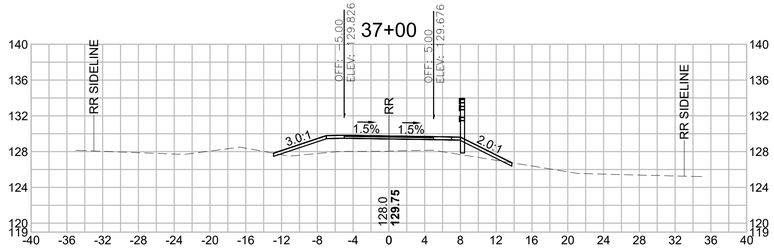


Total Volume at Station 37+50.00	
Cut Area	0.512
Fill Area	29.066
Cut Vol	0.770
Fill Vol	53.8

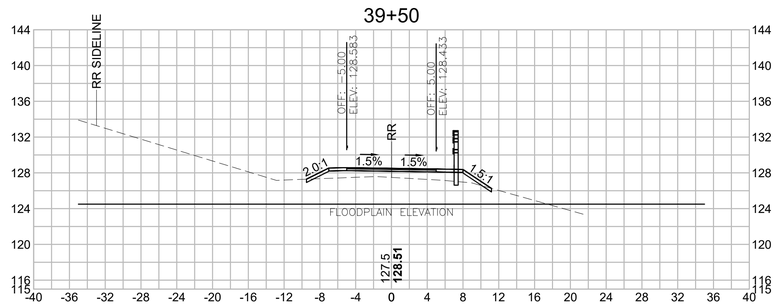


Total Volume at Station 40+00.00	
Cut Area	0.445
Fill Area	25.780
Cut Vol	0.737
Fill Vol	36.4

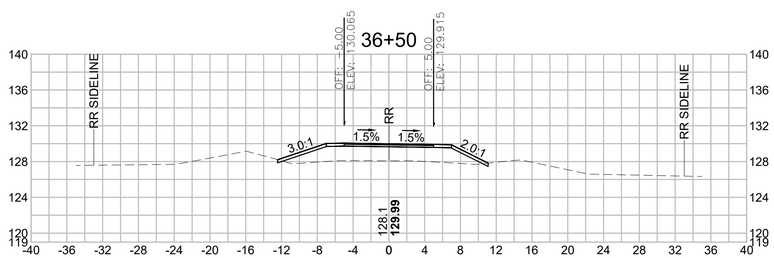
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET



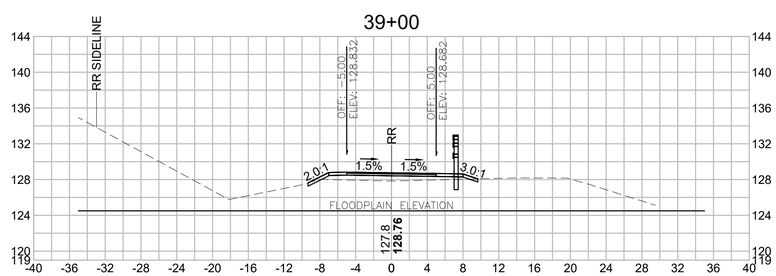
Total Volume at Station 37+00.00	
Cut Area	0.319
Fill Area	29.057
Cut Vol	0.494
Fill Vol	54.9



Total Volume at Station 39+50.00	
Cut Area	0.351
Fill Area	13.536
Cut Vol	0.791
Fill Vol	19.4



Total Volume at Station 36+50.00	
Cut Area	0.214
Fill Area	30.187
Cut Vol	0.389
Fill Vol	62.5



Total Volume at Station 39+00.00	
Cut Area	0.503
Fill Area	7.448
Cut Vol	1.095
Fill Vol	16.0

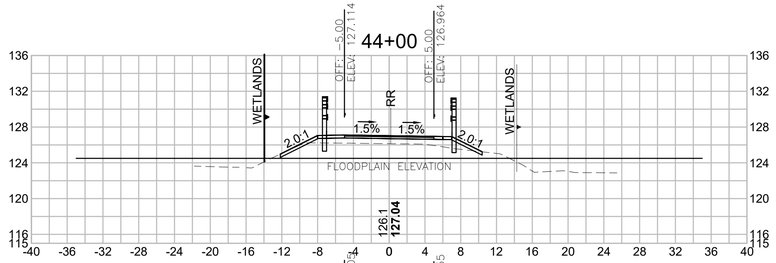
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:49 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

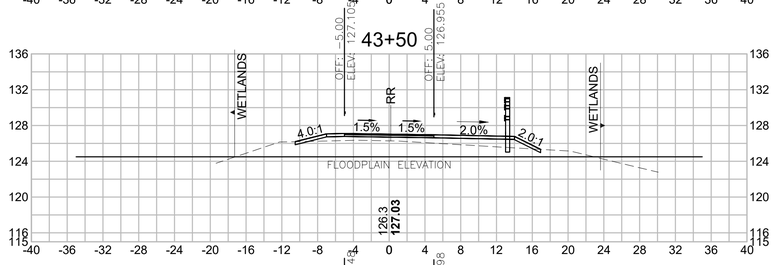
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	96	103
PROJECT FILE NO.	613319		

CROSS SECTIONS

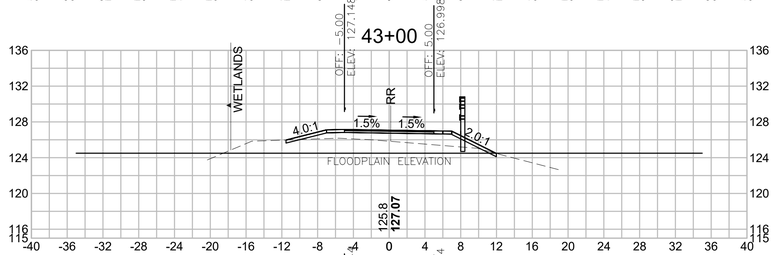
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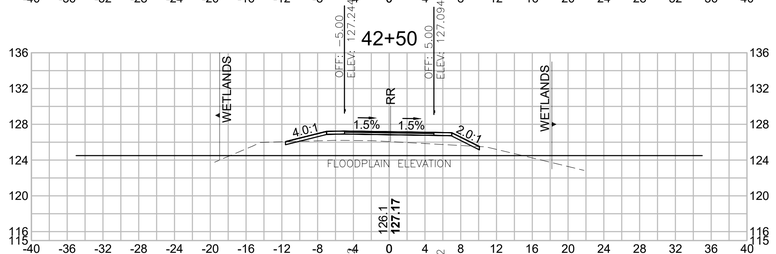
Total Volume at Station 44+00.00	
Cut Area	1.108
Fill Area	10.340
Cut Vol	1.407
Fill Vol	22.4



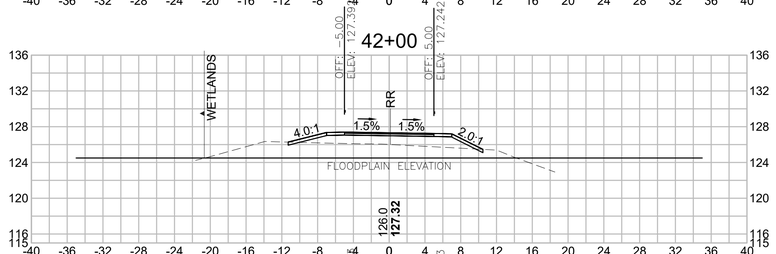
Total Volume at Station 43+50.00	
Cut Area	0.411
Fill Area	13.838
Cut Vol	0.911
Fill Vol	27.7



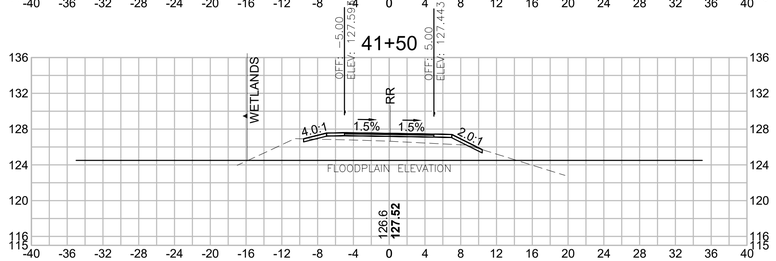
Total Volume at Station 43+00.00	
Cut Area	0.573
Fill Area	16.048
Cut Vol	0.917
Fill Vol	27.4



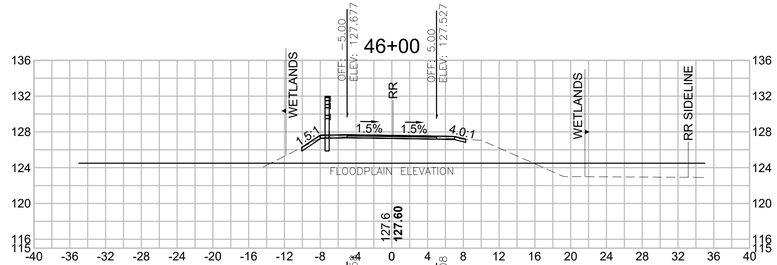
Total Volume at Station 42+50.00	
Cut Area	0.417
Fill Area	13.491
Cut Vol	0.726
Fill Vol	28.3



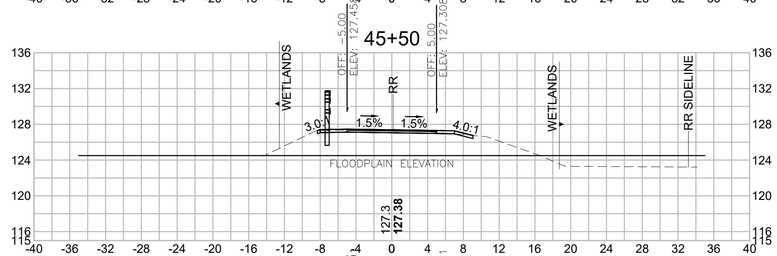
Total Volume at Station 42+00.00	
Cut Area	0.367
Fill Area	17.066
Cut Vol	0.867
Fill Vol	23.9



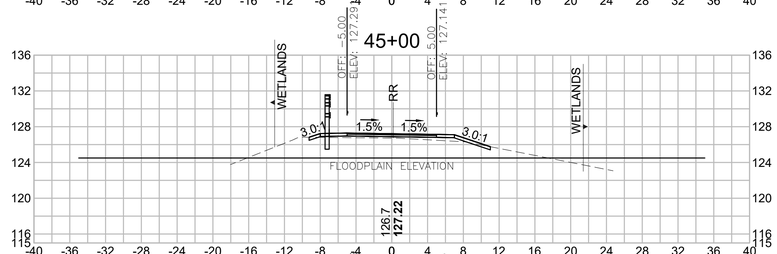
Total Volume at Station 41+50.00	
Cut Area	0.569
Fill Area	8.782
Cut Vol	0.861
Fill Vol	15.7



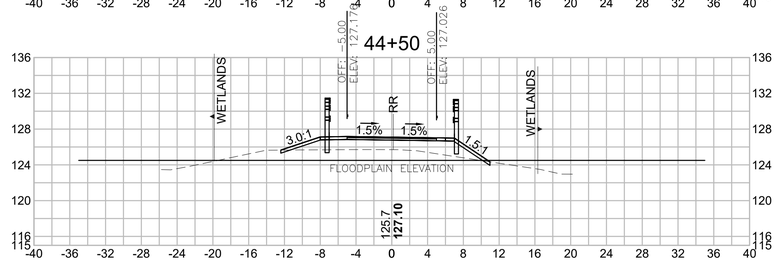
Total Volume at Station 46+00.00	
Cut Area	13.612
Fill Area	0.000
Cut Vol	24.876
Fill Vol	0.0



Total Volume at Station 45+50.00	
Cut Area	3.875
Fill Area	0.000
Cut Vol	4.163
Fill Vol	3.2



Total Volume at Station 45+00.00	
Cut Area	0.620
Fill Area	3.415
Cut Vol	0.888
Fill Vol	23.9



Total Volume at Station 44+50.00	
Cut Area	0.339
Fill Area	22.441
Cut Vol	1.340
Fill Vol	30.4

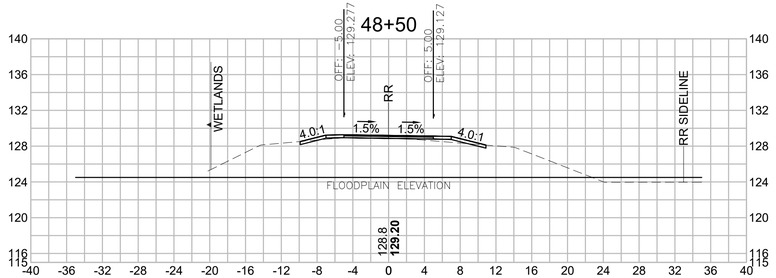
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

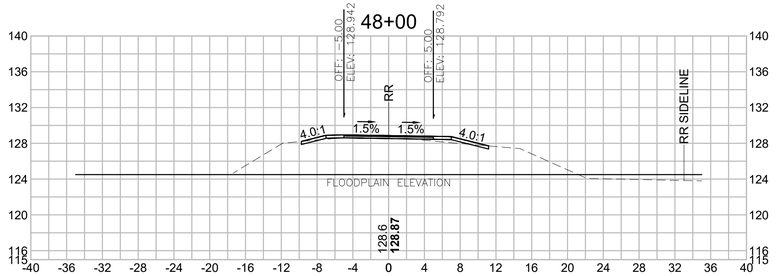
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	97	103
PROJECT FILE NO.	613319		

CROSS SECTIONS

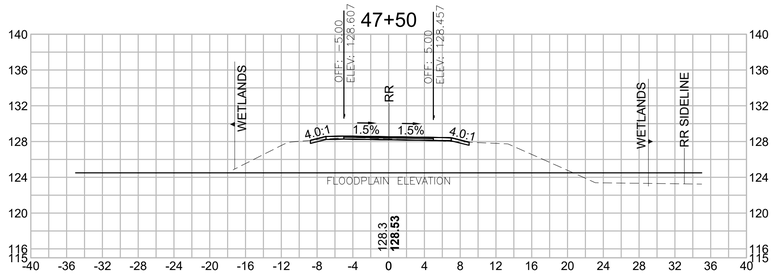
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:50 PM



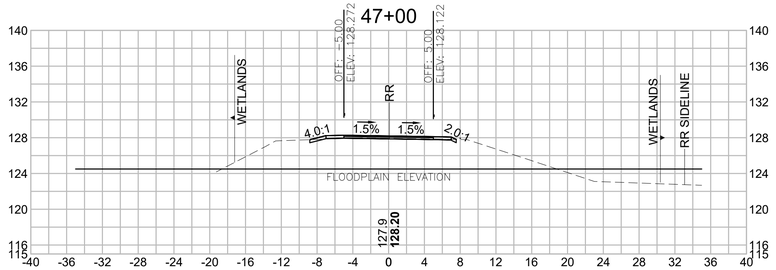
Total Volume at Station 48+50.00	
Cut Area	0.711
Fill Area	1.491
Cut Vol	1.608
Fill Vol	2.6



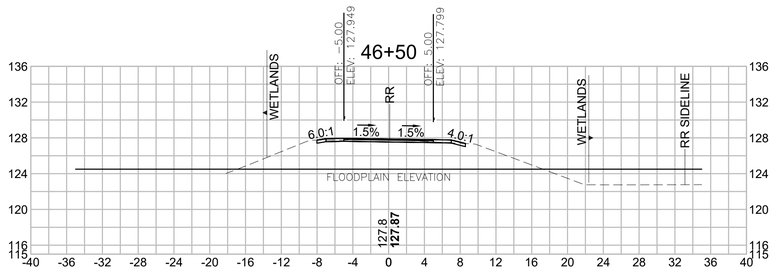
Total Volume at Station 48+00.00	
Cut Area	9.473
Fill Area	0.396
Cut Vol	18.915
Fill Vol	0.378



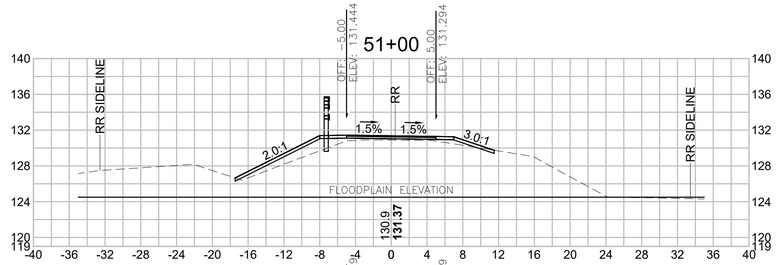
Total Volume at Station 47+50.00	
Cut Area	10.955
Fill Area	0.012
Cut Vol	19.806
Fill Vol	0.016



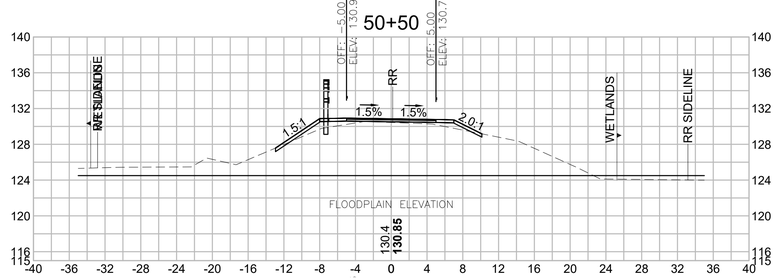
Total Volume at Station 47+00.00	
Cut Area	10.436
Fill Area	0.005
Cut Vol	20.915
Fill Vol	0.005



Total Volume at Station 46+50.00	
Cut Area	12.153
Fill Area	0.000
Cut Vol	23.856
Fill Vol	0.0



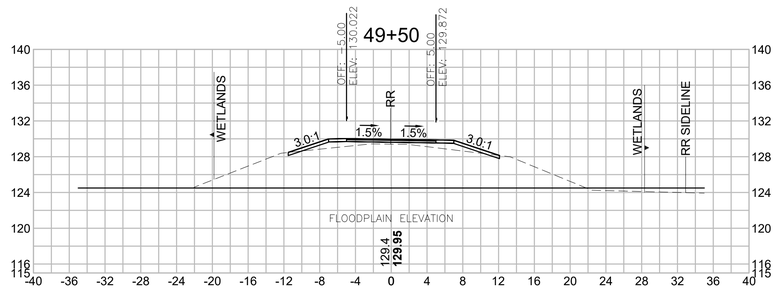
Total Volume at Station 51+00.00	
Cut Area	0.442
Fill Area	12.284
Cut Vol	0.922
Fill Vol	16.6



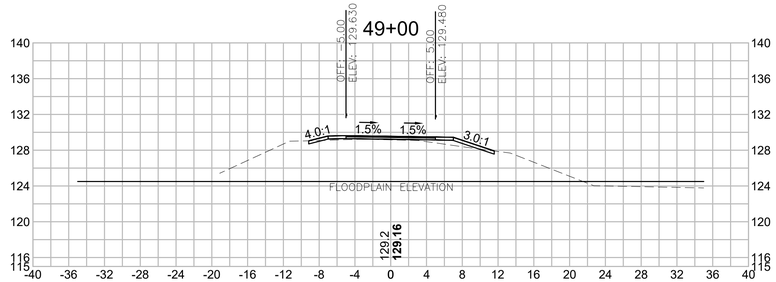
Total Volume at Station 50+50.00	
Cut Area	0.552
Fill Area	5.674
Cut Vol	0.933
Fill Vol	17.1

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

SEE SHEET 83 FOR CULVERT DETAIL AT STA. 50+00



Total Volume at Station 49+50.00	
Cut Area	0.561
Fill Area	7.923
Cut Vol	1.041
Fill Vol	10.1



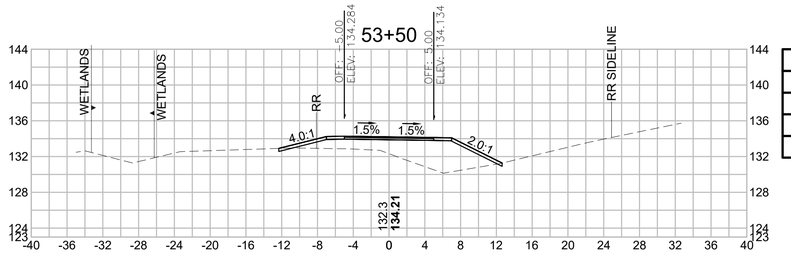
Total Volume at Station 49+00.00	
Cut Area	0.563
Fill Area	2.965
Cut Vol	1.180
Fill Vol	4.1

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

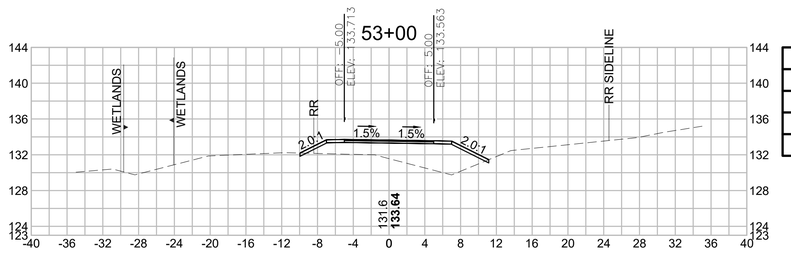
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	98	103
PROJECT FILE NO.	613319		

CROSS SECTIONS

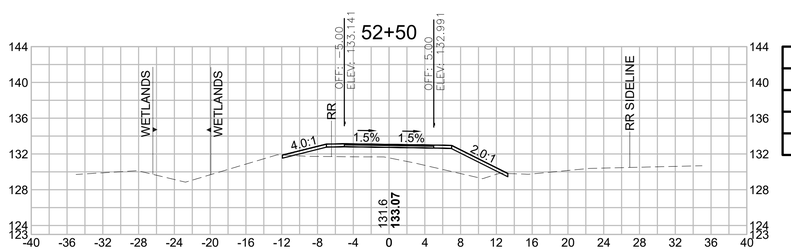
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:51 PM



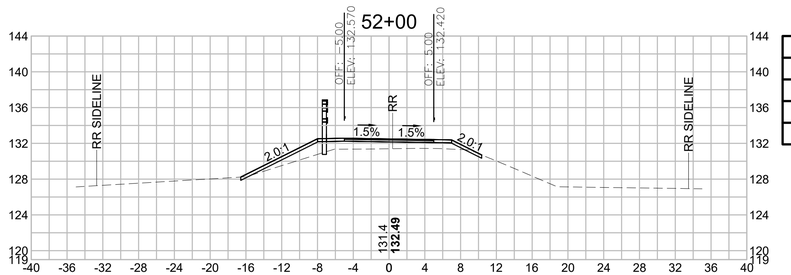
Total Volume at Station 53+50.00	
Cut Area	0.364
Fill Area	37.774
Cut Vol	0.527
Fill Vol	67.8



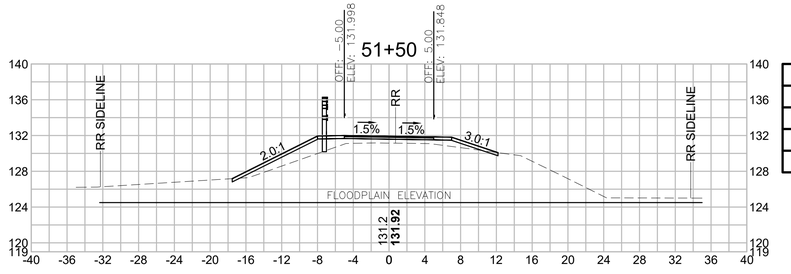
Total Volume at Station 53+00.00	
Cut Area	0.204
Fill Area	35.406
Cut Vol	0.512
Fill Vol	62.0



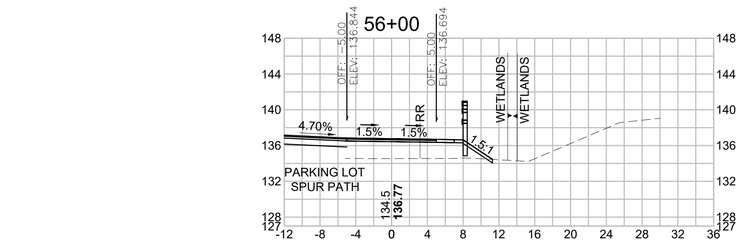
Total Volume at Station 52+50.00	
Cut Area	0.348
Fill Area	31.555
Cut Vol	0.932
Fill Vol	45.7



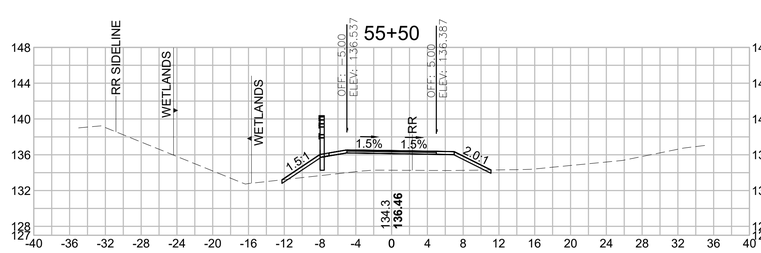
Total Volume at Station 52+00.00	
Cut Area	0.658
Fill Area	17.800
Cut Vol	1.043
Fill Vol	33.4



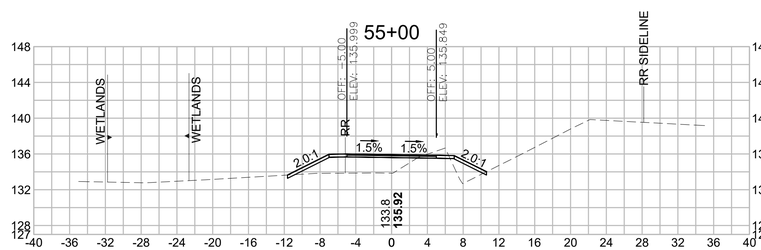
Total Volume at Station 51+50.00	
Cut Area	0.467
Fill Area	18.324
Cut Vol	0.843
Fill Vol	28.3



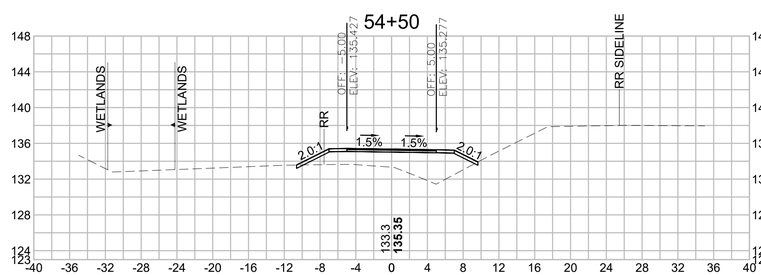
Total Volume at Station 56+00.00	
Cut Area	0.129
Fill Area	26.671
Cut Vol	0.374
Fill Vol	57.5



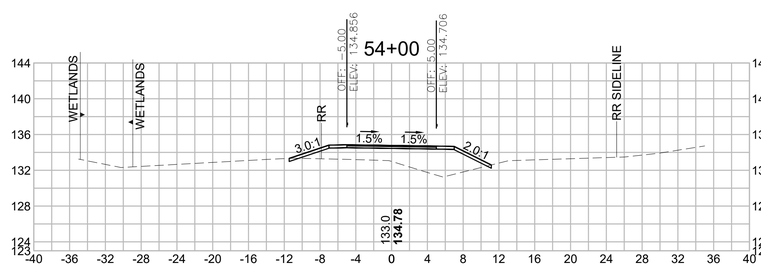
Total Volume at Station 55+50.00	
Cut Area	0.274
Fill Area	35.413
Cut Vol	2.472
Fill Vol	53.9



Total Volume at Station 55+00.00	
Cut Area	2.395
Fill Area	22.797
Cut Vol	2.410
Fill Vol	52.5



Total Volume at Station 54+50.00	
Cut Area	0.207
Fill Area	33.946
Cut Vol	0.463
Fill Vol	62.1



Total Volume at Station 54+00.00	
Cut Area	0.293
Fill Area	33.125
Cut Vol	0.608
Fill Vol	65.6



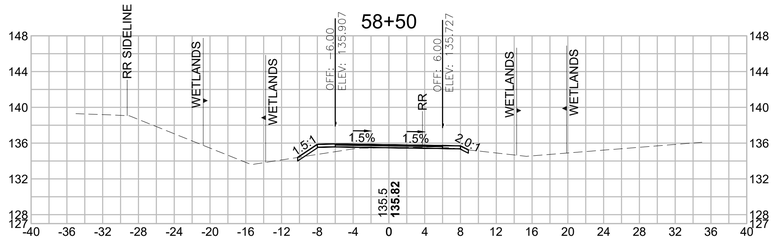
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	99	103
PROJECT FILE NO.	613319		

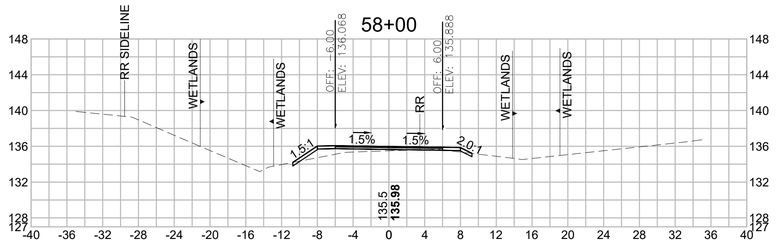
CROSS SECTIONS

613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:51 PM

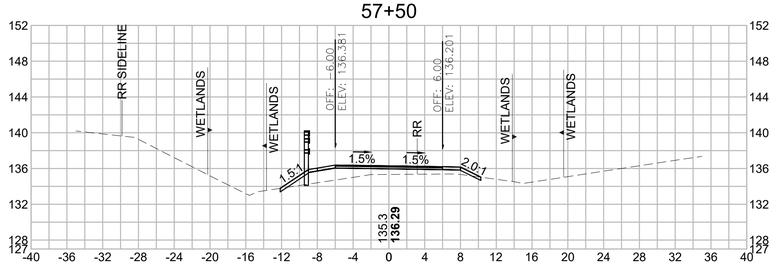
SEE SHEET 103 FOR BOSTON POST ROAD/BFRT CROSS SECTIONS



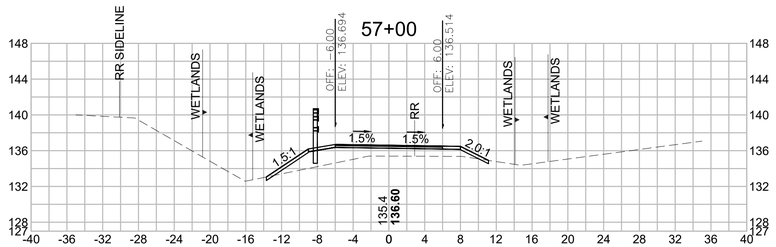
Total Volume at Station 58+50.00	
Cut Area	1.082
Fill Area	2.875
Cut Vol	1.487
Fill Vol	7.0



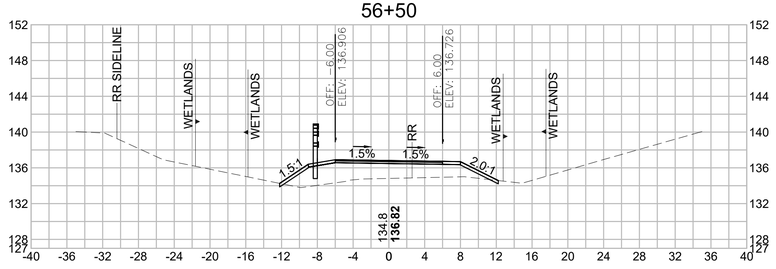
Total Volume at Station 58+00.00	
Cut Area	0.523
Fill Area	4.730
Cut Vol	0.927
Fill Vol	18.4



Total Volume at Station 57+50.00	
Cut Area	0.478
Fill Area	15.188
Cut Vol	0.780
Fill Vol	35.6

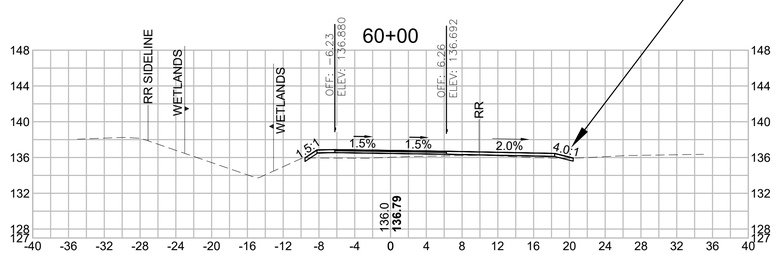


Total Volume at Station 57+00.00	
Cut Area	0.364
Fill Area	23.260
Cut Vol	0.584
Fill Vol	54.1

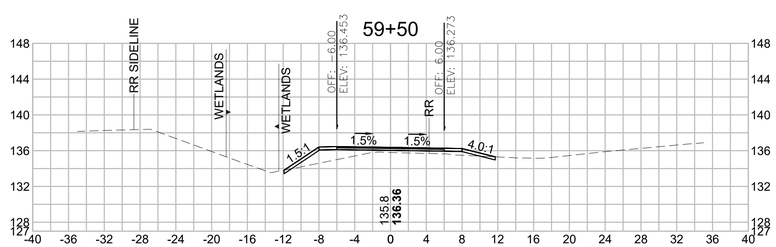


Total Volume at Station 56+50.00	
Cut Area	0.266
Fill Area	35.191
Cut Vol	0.367
Fill Vol	57.3

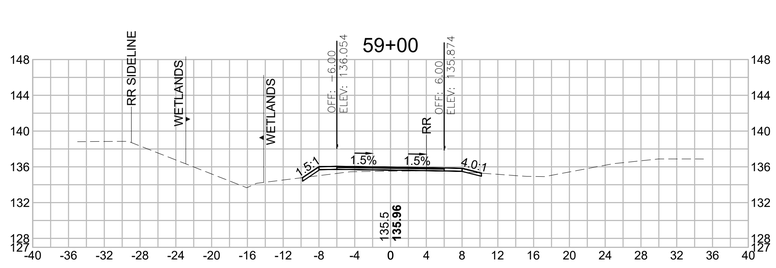
SEE CONSTRUCTION DETAIL
SHEET 80 FOR SEAT WALL DETAIL



Total Volume at Station 60+00.00	
Cut Area	0.342
Fill Area	8.114
Cut Vol	0.739
Fill Vol	17.4



Total Volume at Station 59+50.00	
Cut Area	0.455
Fill Area	10.720
Cut Vol	0.918
Fill Vol	12.8



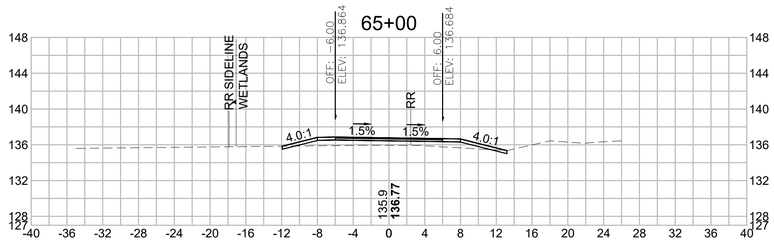
Total Volume at Station 59+00.00	
Cut Area	0.536
Fill Area	3.081
Cut Vol	1.499
Fill Vol	5.5



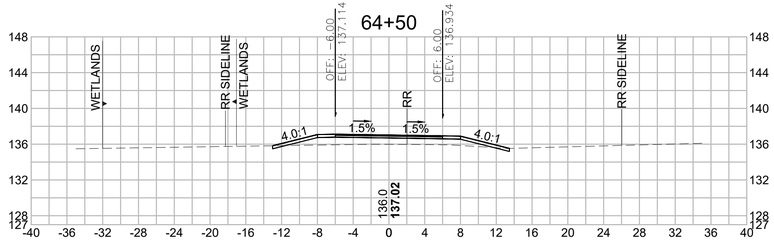
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	100	103
PROJECT FILE NO.	613319		

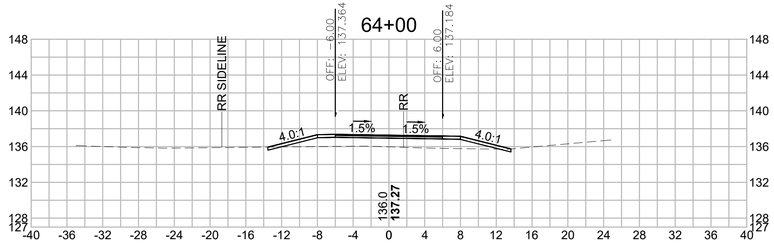
CROSS SECTIONS



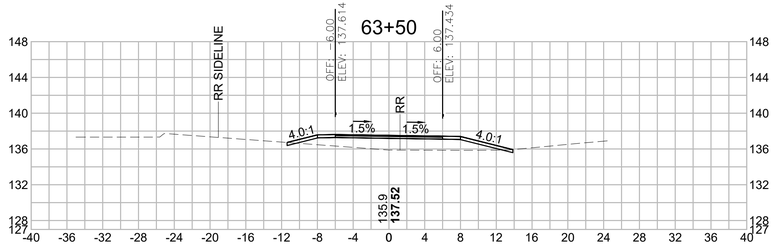
Total Volume at Station 65+00.00	
Cut Area	0.540
Fill Area	10.680
Cut Vol	0.992
Fill Vol	23.4



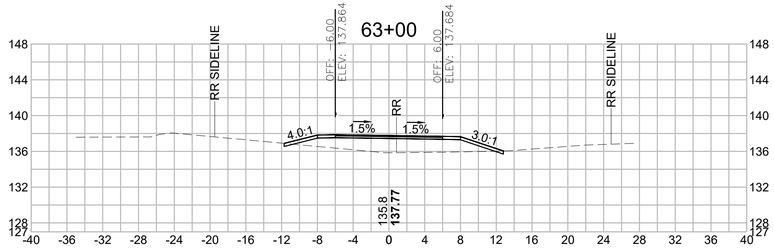
Total Volume at Station 64+50.00	
Cut Area	0.531
Fill Area	14.560
Cut Vol	0.909
Fill Vol	32.2



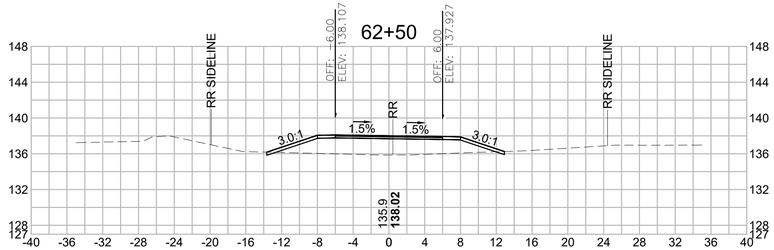
Total Volume at Station 64+00.00	
Cut Area	0.450
Fill Area	20.262
Cut Vol	0.757
Fill Vol	39.5



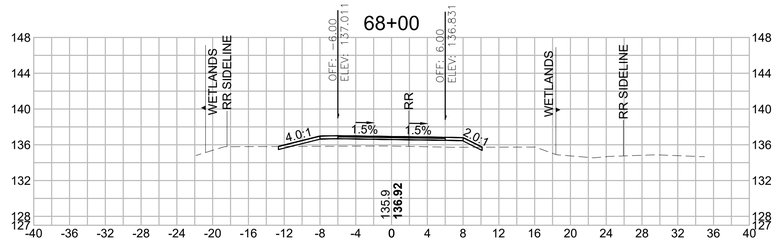
Total Volume at Station 63+50.00	
Cut Area	0.367
Fill Area	22.345
Cut Vol	0.659
Fill Vol	45.0



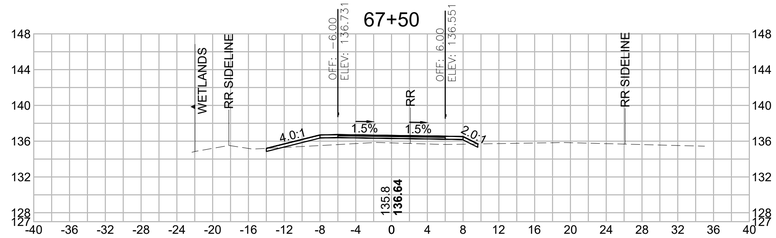
Total Volume at Station 63+00.00	
Cut Area	0.345
Fill Area	26.276
Cut Vol	0.635
Fill Vol	56.3



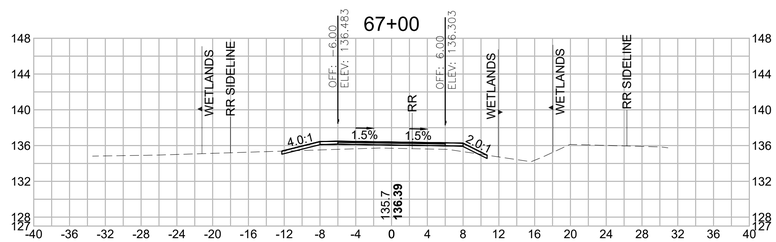
Total Volume at Station 62+50.00	
Cut Area	0.341
Fill Area	34.509
Cut Vol	2.137
Fill Vol	58.7



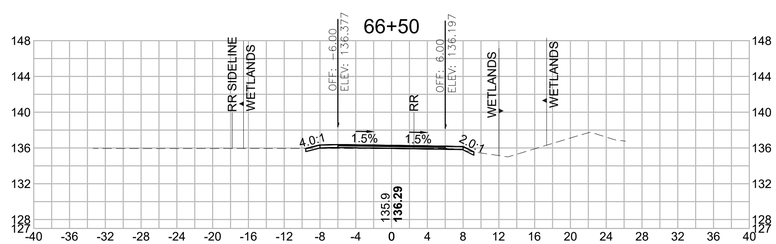
Total Volume at Station 68+00.00	
Cut Area	0.376
Fill Area	14.076
Cut Vol	0.746
Fill Vol	23.7



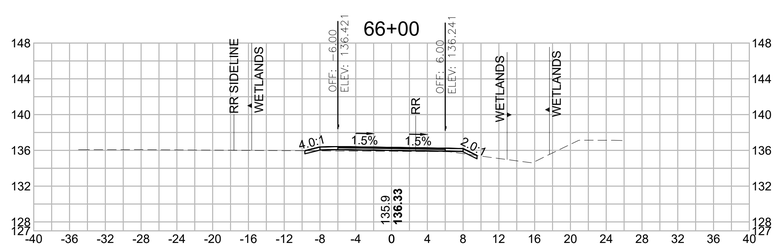
Total Volume at Station 67+50.00	
Cut Area	0.429
Fill Area	11.572
Cut Vol	0.828
Fill Vol	18.4



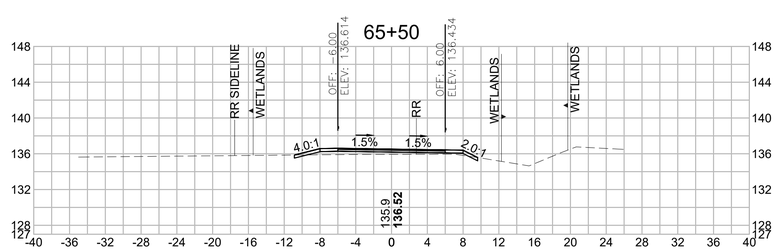
Total Volume at Station 67+00.00	
Cut Area	0.464
Fill Area	8.309
Cut Vol	1.153
Fill Vol	8.2



Total Volume at Station 66+50.00	
Cut Area	0.781
Fill Area	0.545
Cut Vol	1.109
Fill Vol	2.2



Total Volume at Station 66+00.00	
Cut Area	0.416
Fill Area	1.812
Cut Vol	0.791
Fill Vol	5.8



Total Volume at Station 65+50.00	
Cut Area	0.437
Fill Area	4.402
Cut Vol	0.905
Fill Vol	14.0

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

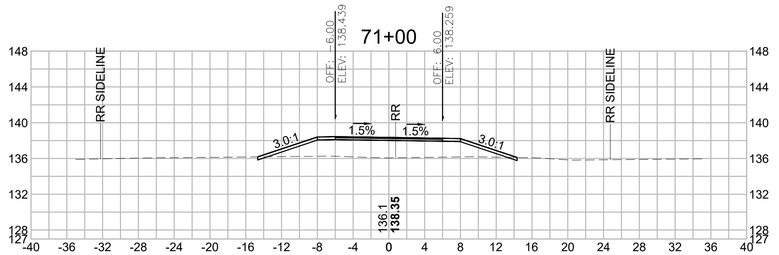
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:51 PM

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PHASE 3

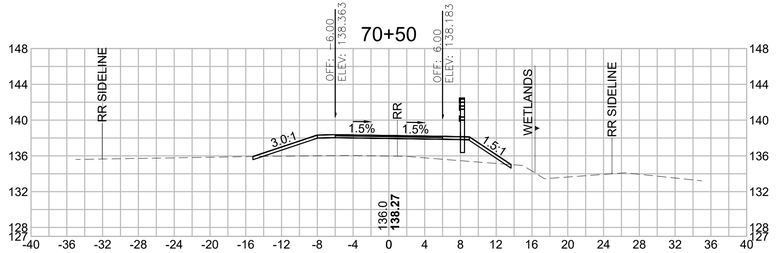
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	101	103
PROJECT FILE NO.	613319		

CROSS SECTIONS

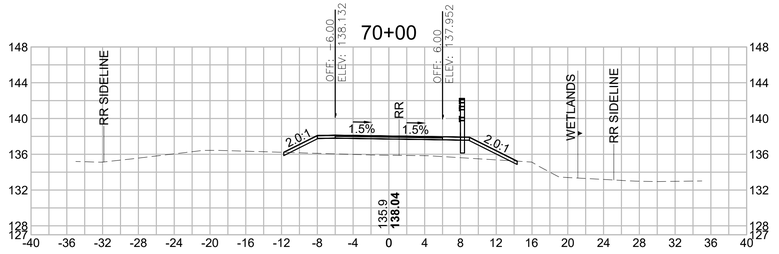
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:52 PM



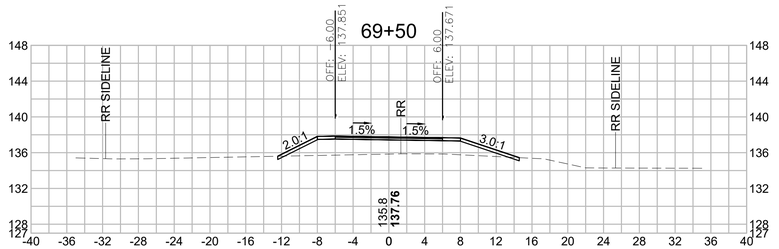
Total Volume at Station 71+00.00	
Cut Area	0.386
Fill Area	39.259
Cut Vol	0.660
Fill Vol	78.7



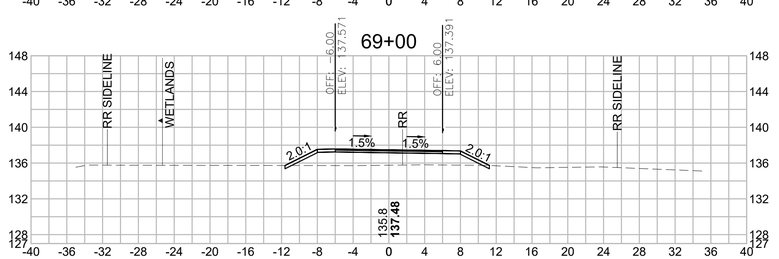
Total Volume at Station 70+50.00	
Cut Area	0.327
Fill Area	45.780
Cut Vol	0.566
Fill Vol	77.4



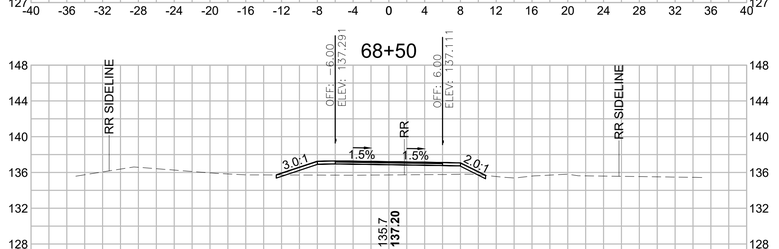
Total Volume at Station 70+00.00	
Cut Area	0.284
Fill Area	37.844
Cut Vol	1.023
Fill Vol	65.7



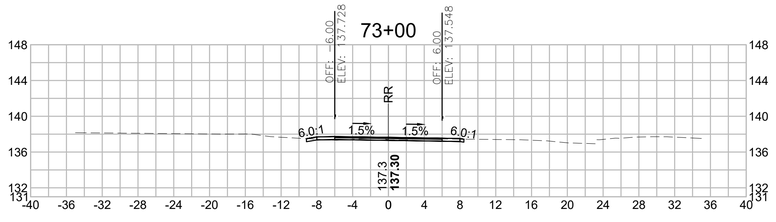
Total Volume at Station 69+50.00	
Cut Area	0.821
Fill Area	33.065
Cut Vol	1.020
Fill Vol	54.5



Total Volume at Station 69+00.00	
Cut Area	0.280
Fill Area	25.772
Cut Vol	0.587
Fill Vol	43.4

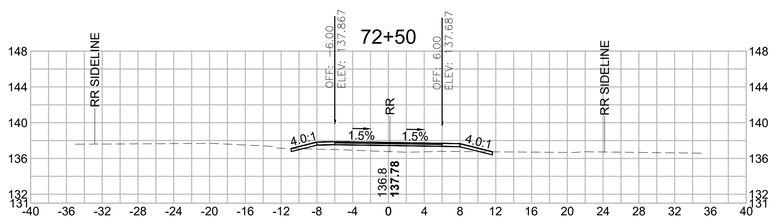


Total Volume at Station 68+50.00	
Cut Area	0.353
Fill Area	21.057
Cut Vol	0.676
Fill Vol	32.5

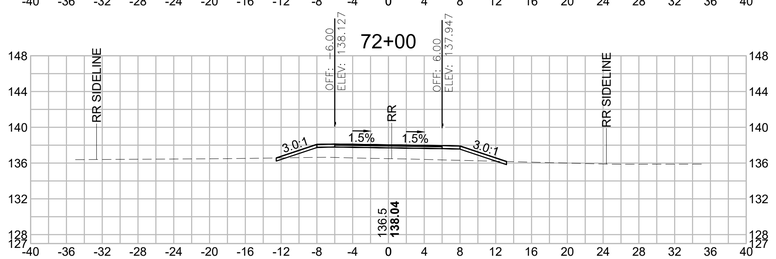


Total Volume at Station 73+00.00	
Cut Area	2.705
Fill Area	0.105
Cut Vol	2.930
Fill Vol	10.0

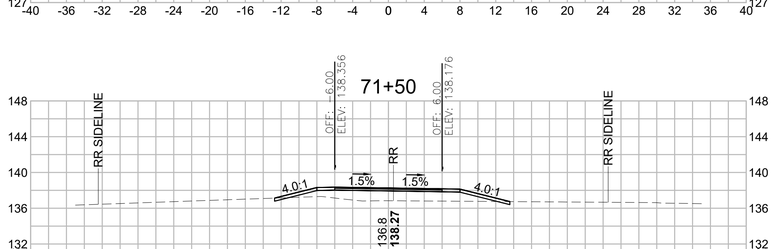
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET



Total Volume at Station 72+50.00	
Cut Area	0.459
Fill Area	10.688
Cut Vol	0.790
Fill Vol	31.9



Total Volume at Station 72+00.00	
Cut Area	0.394
Fill Area	23.750
Cut Vol	0.845
Fill Vol	40.1



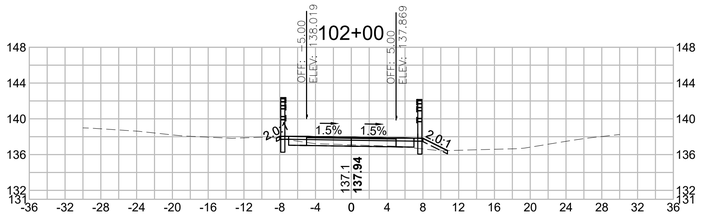
Total Volume at Station 71+50.00	
Cut Area	0.518
Fill Area	19.602
Cut Vol	0.837
Fill Vol	54.5

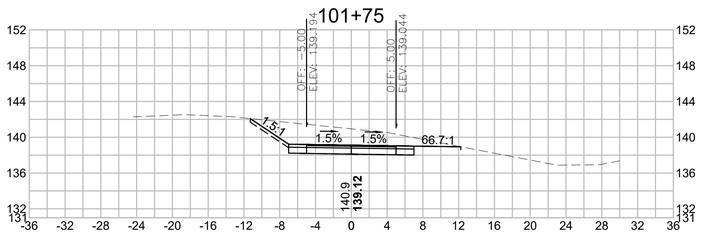
SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PARKING LOT

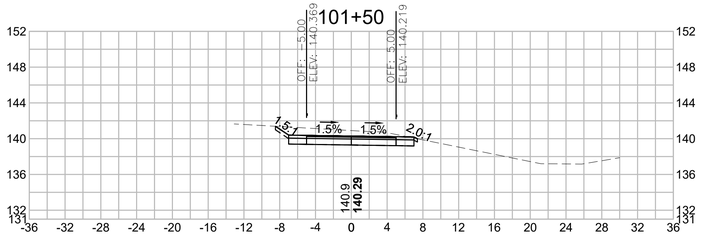
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	102	103
PROJECT FILE NO.	613319		

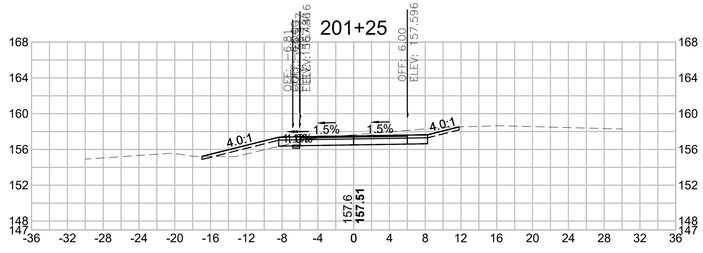
CROSS SECTIONS

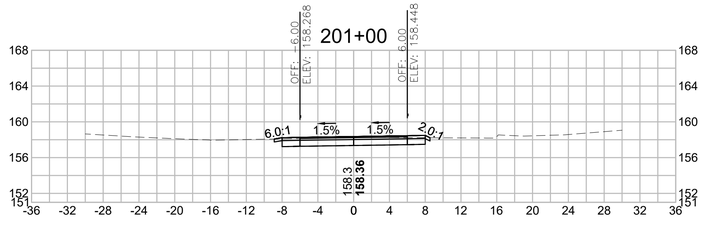
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:53 PM











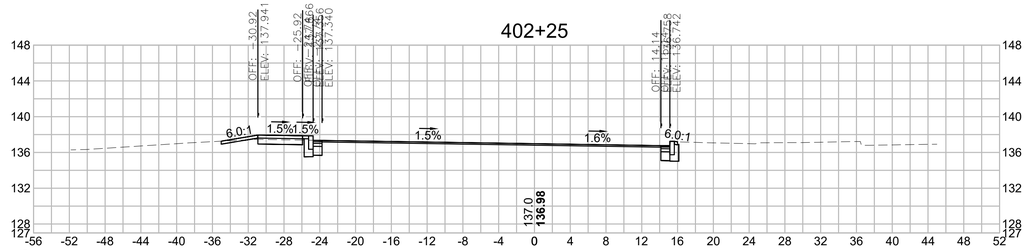
HOR. SCALE IN FEET
4 0 4 8
VER. SCALE IN FEET
4 0 4 8

SUDBURY/FRAMINGHAM
BRUCE FREEMAN RAIL TRAIL PARKING LOT

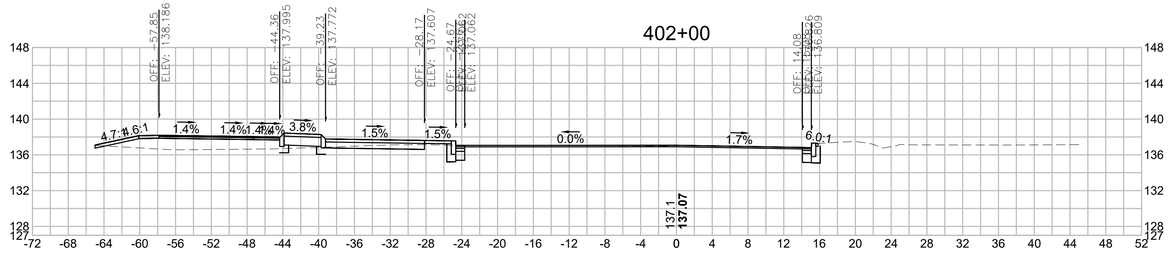
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	103	103
PROJECT FILE NO.		613319	

CROSS SECTIONS

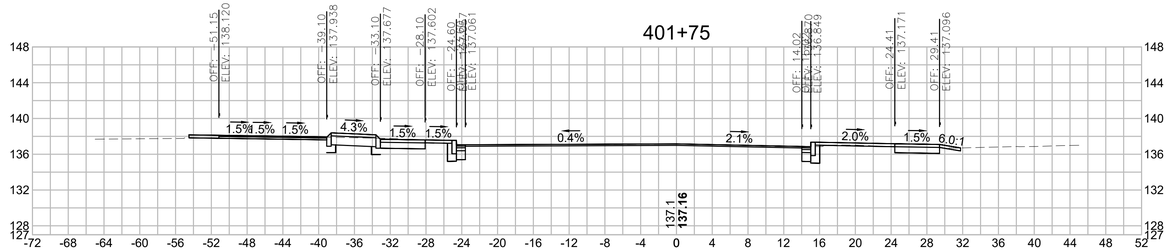
613319_HD(XSEC).DWG Plotted on 12-Feb-2026 5:53 PM



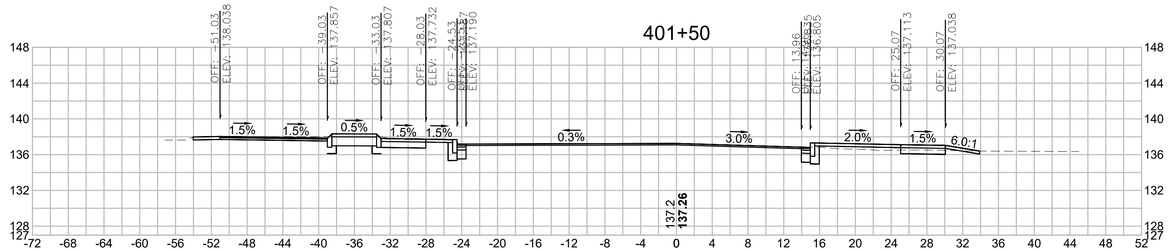
Total Volume at Station 402+25.00	
Cut Area	16.413
Fill Area	0.000
Cut Vol	26.663
Fill Vol	0.0



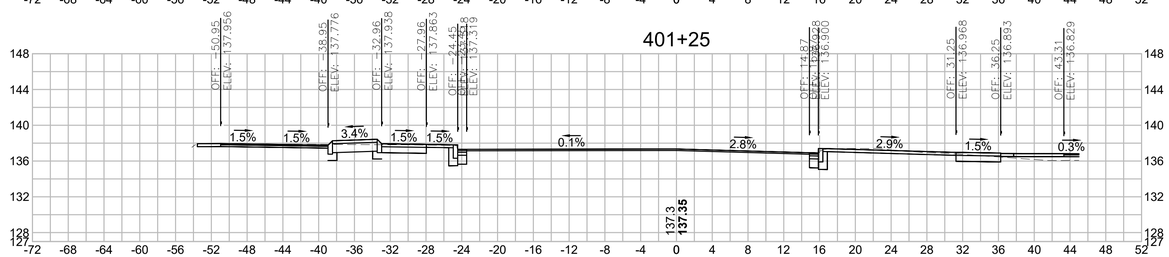
Total Volume at Station 402+00.00	
Cut Area	41.177
Fill Area	0.000
Cut Vol	39.161
Fill Vol	0.0



Total Volume at Station 401+75.00	
Cut Area	43.410
Fill Area	0.000
Cut Vol	41.231
Fill Vol	0.0



Total Volume at Station 401+50.00	
Cut Area	45.648
Fill Area	0.000
Cut Vol	47.647
Fill Vol	0.0



Total Volume at Station 401+25.00	
Cut Area	57.269
Fill Area	0.000
Cut Vol	0.000
Fill Vol	0.0

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