MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	159
PROJECT FILE NO.	608298		

TITLE SHEET & INDEX

PLAN AND PROFILE OF

GROVELAND COMMUNITY TRAIL

IN THE TOWN OF

GROVELAND

ESSEX COUNTY

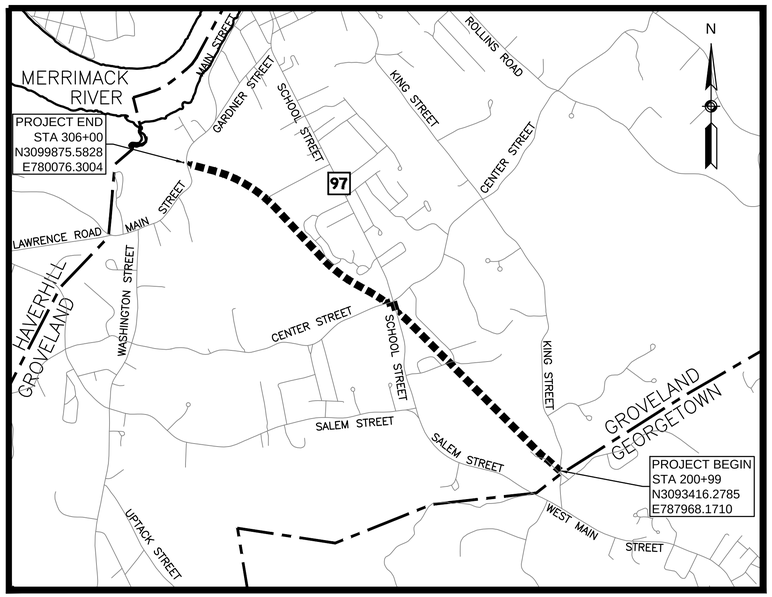
FEDERAL AID PROJECT NO.

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

100% SUBMITTAL

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	GENERAL NOTES
4	KEY PLAN
5 - 6	TYPICAL SECTIONS
7 - 24	CONSTRUCTION PLANS
25 - 35	PROFILES
36 - 53	SURVEY CONTROL PLANS
54 - 59	SIGN AND PAVEMENT MARKING PLANS
60	TRAFFIC SIGN SUMMARY
61	TRAFFIC DETAILS
62	TEMPORARY TRAFFIC CONTROL PLANS
63	LANDSCAPE PLAN
64	LANDSCAPE DETAILS
65 - 67	CONSTRUCTION DETAILS
68 - 69	WHEELCHAIR RAMP DETAILS
70 - 159	CROSS SECTIONS



0 1,500 3,000 4,500 6,000

SCALE: 1" = 1,500'

LENGTH OF PROJECT = 10,501.00 FEET = 1.989 MILES

GROVELAND COMMUNITY TRAIL

DESIGN SPEED	20 MPH
ADT (YYYY)	N/A
ADT (YYYY)	N/A
K	N/A
D	N/A
T (PEAK HOUR)	N/A
T (AVERAGE DAY)	N/A
DHV	N/A
DDHV	N/A
FUNCTIONAL CLASSIFICATION	SHARED USE PATH

DATE	DESCRIPTION	REV #
09-07-2018	100% DESIGN SUBMISSION	0
01-19-2018	75% DESIGN SUBMISSION	0
04-28-2016	25% DESIGN SUBMISSION	0

Stantec
5 BURLINGTON WOODS | BURLINGTON, MA 01803

massDOT Massachusetts Department of Transportation Highway Division

RECOMMENDED FOR APPROVAL

CHIEF ENGINEER **DATE**

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR **DATE**

APPROVED

HIGHWAY ADMINISTRATOR **DATE**

608298_GEI(TITLE SHEET).DWG Plotted on 5-Sep-2018 8:20 PM

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
UPL	UPL	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
x	x	CHAIN LINK OR METAL FENCE
		WOOD FENCE
		COMPOST FILTER TUBES
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

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 - 12" WHITE
	SWL	SOLID WHITE LINE (WIDTH AS SHOWN ON PLANS)
	SYL	SOLID YELLOW LINE (WIDTH AS SHOWN ON PLANS)
	BWL	BROKEN WHITE LINE (WIDTH AS SHOWN ON PLANS)
	BYL	BROKEN YELLOW LINE (WIDTH AS SHOWN ON PLANS)
	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

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
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
BVW	BORDERING VEGETATED WETLAND
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
Δ	DELTA
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LP	LIGHT POLE
LT	LEFT
MAHW	MEAN ANNUAL HIGH WATER
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
OHW	OVERHEAD CABLE/WIRE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	159
PROJECT FILE NO.	608298		

LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL

PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE AND DISCARD
RET	RETAIN
RET WALL	RETAINING WALL
RFA	RIVERFRONT AREA
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL

CAB.	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY DON'T WALK
FDW	FLASHING DON'T WALK
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR AMBER
FYL	FLASHING AMBER LEFT ARROW
FYR	FLASHING AMBER RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILE, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALK
Y	STEADY CIRCULAR AMBER
YL	STEADY AMBER LEFT ARROW

608298_GEI(TITLE SHEET).DWG Plotted on 5-Sep-2018 8:20 PM

GENERAL NOTES

1. EXISTING GROUND SURFACES SHOWN ON PLANS, PROFILES AND CROSS SECTIONS ARE BASED UPON DATA OBTAINED BY FIELD SURVEYS.
2. THE LOCATIONS OF EXISTING SUBSURFACE STRUCTURES, SUCH AS SEWERS, WATER MAINS, DRAINS AND OTHER UTILITIES ARE APPROXIMATE ONLY AND THE ENGINEER DOES NOT GUARANTEE THEIR NUMBER OR LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE EXCAVATING.
3. ALL GAS GATES, ELECTRIC MANHOLES AND TELEPHONE MANHOLES WITHIN THE LIMITS OF WORK SHALL BE ADJUSTED BY THE OWNING AGENCY. ALL GAS, ELECTRIC, TELEPHONE AND CATV WORK SHALL BE DONE BY THE OWNING AGENCY. THE CONTRACTOR SHALL NOTIFY THE OWNING AGENCIES TO ADJUST AND/OR RELOCATE THESE STRUCTURES TO AVOID IMPACTING THE CONTRACTOR'S SCHEDULE OF OPERATIONS.
4. ANY CLEANING OF CATCH BASINS OR DRAIN PIPES NECESSARY FOR THE PROPOSED WORK SHALL BE COMPLETED BY THE CONTRACTOR AND PAID FOR UNDER ITEMS 227.3 & 227.31 THE CONTRACTOR SHALL SUBMIT A REQUEST FOR CLEANING OF DRAINAGE STRUCTURES AND PIPES IN ADVANCE AND PROVIDE AN OPPORTUNITY FOR THE MUNICIPALITY TO RESPOND PRIOR TO EXECUTING WORK UNDER THE CONTRACT ITEMS.
5. ANY DRAINAGE / SEWER / WATER CASTINGS BROKEN THROUGH NO FAULT OF THE CONTRACTOR SHALL BE SUPPLIED BY THE RESPECTIVE MUNICIPALITY FOR ADJUSTMENT UNDER THE CONTRACT ITEMS.
6. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY COMPANIES DOING WORK IN THE SAME AREA THE CONTRACTOR SHALL ALLOW THE UTILITY COMPANIES AND THEIR REPRESENTATIVES TO ADJUST AND/OR INSTALL THEIR SYSTEMS WITHIN TOWN / STATE OWNED STREETS AND EASEMENTS.
7. CURB SHALL BE FURNISHED AND SET AT LOCATIONS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.
8. CONSTRUCT DRIVEWAYS AND WALKS AS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.
9. EXISTING GRANITE CURB AND EDGING SUITABLE FOR REUSE WITHIN THE PROJECT SITE SHALL BE REMOVED AND RESET IN ACCORDANCE WITH THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.
10. SAW CUT EXISTING BITUMINOUS CONCRETE ROADWAYS, CEMENT CONCRETE SIDEWALKS AND BITUMINOUS CONCRETE DRIVEWAYS AS SHOWN ON THE PLANS AND AT THE PROPOSED MATCH LINE.
11. 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.
12. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
13. ALL ACCESSIBLE ROUTES, WALKWAYS, CURB CUTS, RAMPS, SIDEWALKS, DRIVEWAY OPENINGS, CLEARANCES AND SLOPE TOLERANCES SHALL CONFORM WITH THE ARCHITECTURAL ACCESS BOARD (AAB), 521 CMR AND MASSHIGHWAY CONSTRUCTION AND TRAFFIC STANDARD DRAWINGS.
14. ITEMS LABELED "REM" SHALL BE REMOVED AND DISCARDED BY CONTRACTOR.
15. THE CONTRACTOR SHALL PROTECT EXISTING SURVEY MONUMENTS AND SHALL RESET ANY MONUMENTATION DISTURBED BY HIS OPERATIONS.
16. THE CONTRACTOR SHALL INSTALL OTHER NECESSARY TEMPORARY REGULATORY AND WARNING SIGNS DURING CONSTRUCTION AS REQUIRED BY THE ENGINEER FOR OTHER INCIDENTAL CONSTRUCTION ACTIVITIES. ALL SIGNAGE AND TRAFFIC CONTROL DEVICES USED MUST CONFORM TO THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD)
17. THE CONTRACTOR SHALL PERFORM HIS WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT INTERFERENCE WITH AND INCONVENIENCE TO BUSINESS CONCERNS AND ABUTTERS, ON ACCOUNT OF THE CONSTRUCTION WORK, IS KEPT TO A MINIMUM.
18. THE CONTRACTOR SHALL NOT BE ALLOWED TO PARK EQUIPMENT OR STOCKPILE EQUIPMENT OR MATERIAL ON THE TRAVELED WAYS OVERNIGHT OR WHEN NOT IN USE.
19. THE CONTRACTOR SHALL MAINTAIN SAFE AND RESPONSIBLE ACCESS TO AND FROM ABUTTING PROPERTY, PRIVATE WAYS, DRIVEWAYS AND ALL ALLEYS AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
20. ALL DETECTABLE WARNING PANELS SHALL BE MOUNTED IN CEMENT CONCRETE AND INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD DETAIL E107.6.5. DETECTABLE WARNING PANELS SHALL BE "YELLOW" IN COLOR.
21. EXCAVATION AT UTILITY POLES OWNED BY NATIONAL GRID SHALL NOT EXCEED 6 INCHES, UNLESS OTHERWISE APPROVED BY NATIONAL GRID.
22. ALL HOT MIX ASPHALT MIXTURES USED ON THIS PROJECT SHALL BE MODIFIED USING A WARM MIX ASPHALT ADDITIVE IN ACCORDANCE WITH THE SPECIAL PROVISIONS. ALL COSTS INCLUDING THE WARM MIX ASPHALT ADDITIVE, EQUIPMENT, LABOR, MANUFACTURER'S REPRESENTATIVE, PRODUCTION OF SAMPLES AND INCIDENTAL COSTS REQUIRED TO MODIFY THE HOT MIX ASPHALT SHALL BE INCIDENTAL TO THE ASSOCIATED HOT MIX ASPHALT PAY ITEMS WITH NO ADDITIONAL COMPENSATION.

SURVEY NOTES

1. COORDINATES, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983, (2011), Epoch 2010.00, BASED ON THE KeyNet GPS VIRTUAL REFERENCE SYSTEM (VRS).
2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), BASED ON SMC'S OBSERVATIONS OF THE KeyNet GPS VIRTUAL REFERENCE SYSTEM (VRS), USING TRIMBLE R8 GNSS GPS RECEIVERS.
3. UTILITY LINES AND FEATURES, AS SHOWN HEREON, WERE COMPILED FROM FIELD EVIDENCE AND/OR AVAILABLE RECORD INFORMATION (SEE REFERENCES), AND THEIR LOCATIONS ARE ONLY APPROXIMATE.
4. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.
5. SMC ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
6. BEFORE DESIGNING FUTURE CONNECTIONS, THE APPROPRIATE UTILITIES MUST BE CONSULTED.
7. BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED (SEE MASSACHUSETTS GENERAL LAWS, CHAPTER 82 SECTION 40). CALL ''DIG SAFE'' 1-888-DIG-SAFE. (888-344-7233).

UTILITY REFERENCES

1. UTILITY PLANS OBTAINED FROM COMCAST ON DECEMBER 18, 2014. JS33268_GrovelandNorth.pdf & JS33268_GrovelandSouth.pdf.
2. UTILITY PLANS OBTAINED FROM NATIONAL GRID GAS ON DECEMBER 17, 2014.
3. PLANS OBTAINED FROM THE TOWN OF GROVELAND FOR WATER, SEWER AND STORM DRAIN GAS ON JANUARY 14, 2015.

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	159
PROJECT FILE NO.	608298		

GENERAL NOTES

608298_GEITITLE SHEET).DWG Plotted on 5-Sep-2018 8:20 PM

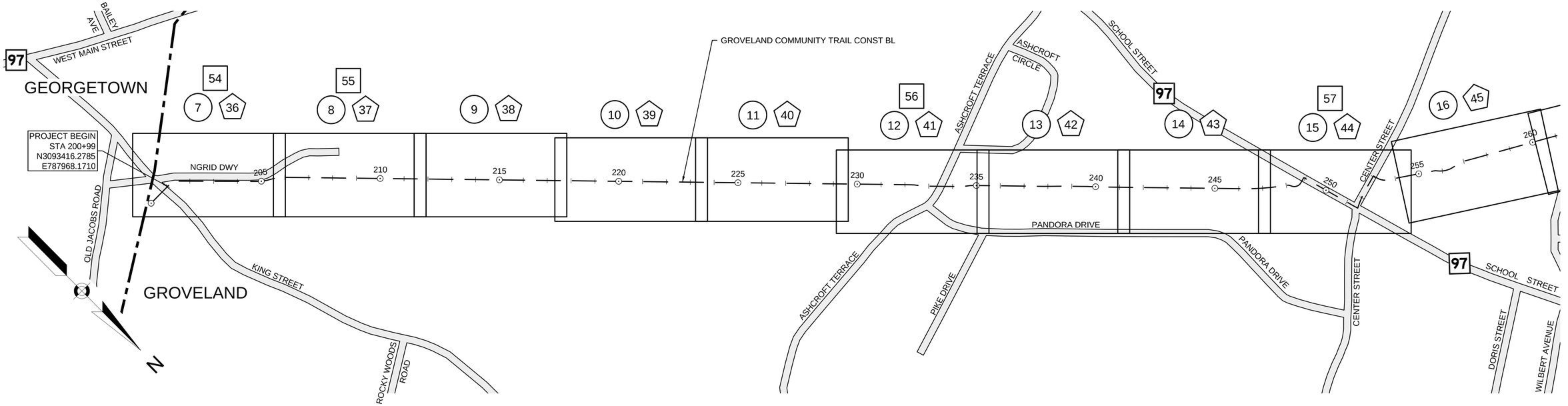
GROVELAND
GROVELAND COMMUNITY TRAIL

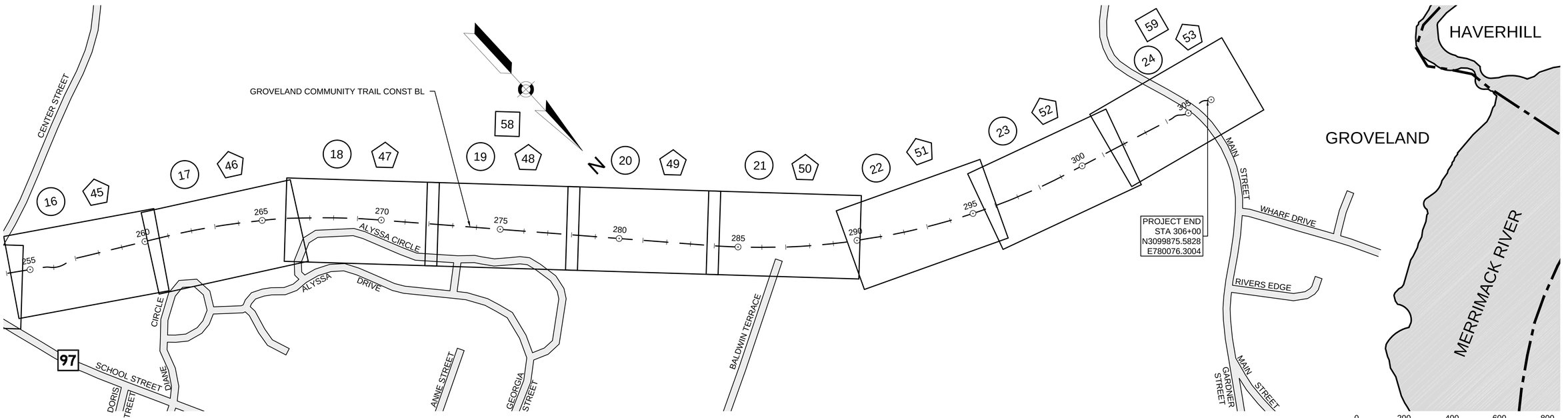
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	159
PROJECT FILE NO.	608298		

KEY PLAN

LEGEND:

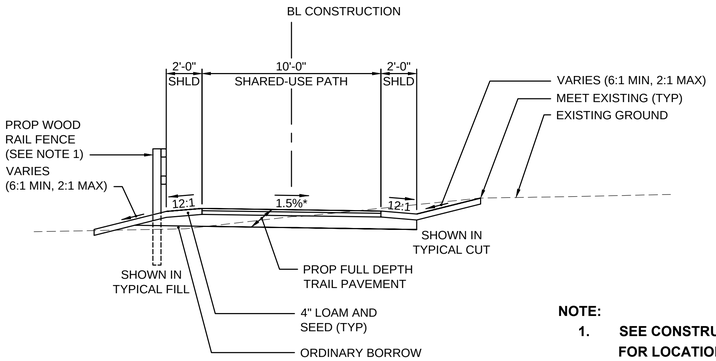
- XX — CONSTRUCTION PLANS
- XX — SIGN AND PAVEMENT MARKING PLANS
- XX — SURVEY CONTROL PLANS





608298_HDI(KEY PLAN).DWG Plotted on 5-Sep-2018 8:21 PM

608298_HD(TYP SECTION).DWG Plotted on 5-Sep-2018 8:21 PM



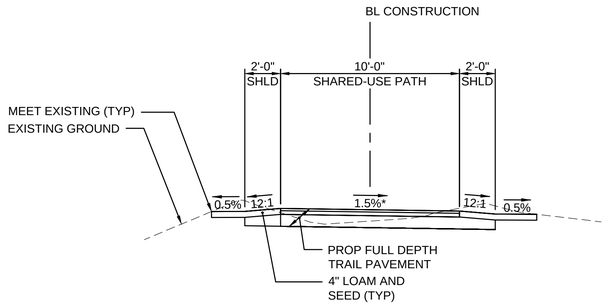
TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 232+24± TO STA 233+39± (ASHCROFT TER.)
STA 233+65± (ASHCROFT TER) TO STA 234+90±
STA 236+15± TO STA 238+45±
STA 239+90± TO STA 247+89±
STA 248+31± TO STA 248+68± (SCHOOL ST)
STA 304+06± TO STA 304+27±
STA 304+72± TO STA 305+11± (MAIN ST)

NOTE:

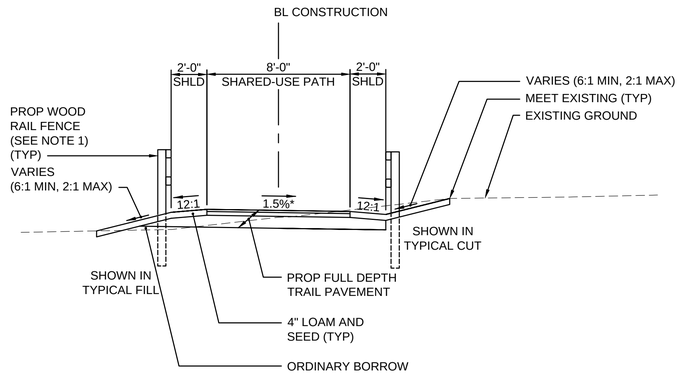
1. **SEE CONSTRUCTION PLANS SHEETS 7 TO 24 FOR LOCATION OF WOOD RAIL FENCE. IN MANY LOCATIONS WOOD RAIL FENCING HAS BEEN PROVIDED TO PREVENT DISTURBANCE OF TURTLE HABITAT AREAS, AS REQUESTED BY NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM.**

*** - TOLERANCE FOR CONSTRUCTION ±0.5% (TYP)**



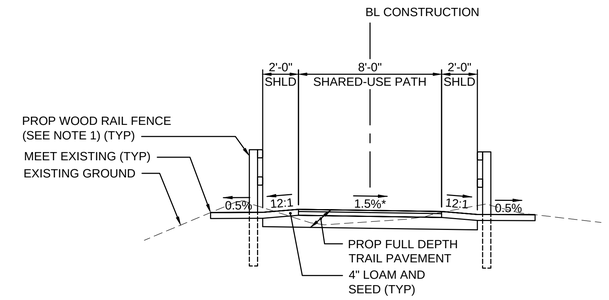
TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 234+90± TO STA 236+15±
STA 238+45± TO STA 239+90±



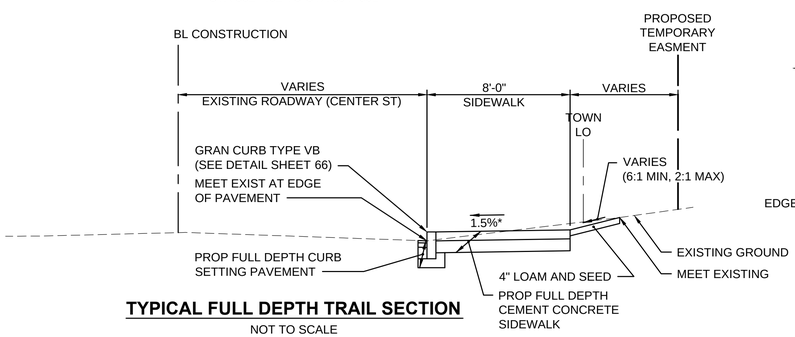
TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 204+70± TO STA 206+47±
STA 208+60± TO STA 232+24±
STA 264+88± TO STA 265+70±
STA 266+80± TO STA 270+30±
STA 275+60± TO STA 276+40±
STA 282+60± TO STA 287+45±
STA 288+55± TO STA 290+20±
STA 302+48± TO STA 304+06±



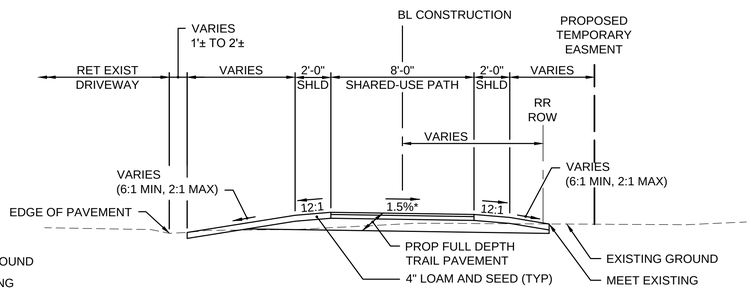
TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 206+47± TO STA 208+60±
STA 265+70± TO STA 266+80±
STA 270+30± TO STA 275+60±
STA 276+40± TO STA 282+60±
STA 287+45± TO STA 288+55±
STA 290+20± TO STA 301+48±



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 252+00± TO STA 253+00±



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 201+26± TO STA 202+28±

PAVEMENT NOTES

PROPOSED FULL DEPTH SHARED-USE PATH SECTIONS & PROPOSED FULL DEPTH HOT MIX ASPHALT DRIVEWAY SECTIONS

SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)

INTERMEDIATE: 2-1/2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)

BASE: 8" (MIN) GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CEMENT CONCRETE SIDEWALK SECTIONS, PROPOSED FULL DEPTH CEMENT CONCRETE WHEELCHAIR RAMP SECTIONS & PROPOSED FULL DEPTH CEMENT CONCRETE SIDEWALK AT DRIVEWAY SECTIONS

SURFACE: 6" CEMENT CONCRETE
(4,000 PSI, 3/4", 610 LBS AIR ENTRAINED)

BASE: 8" (MIN) GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CURB SETTING PAVEMENT SECTIONS

SURFACE: 1-1/2" HMA FOR PATCHING

INTERMEDIATE: 3" HMA FOR PATCHING

BASE: 7.5"± CEMENT CONCRETE
6" (MIN) GRAVEL BORROW, TYPE b

TACK COAT NOTE:
ASPHALT EMULSION FOR TACK COAT SHALL BE GRADE RS-1H, PER THE SPECIFICATIONS. TACK COAT SHALL BE SPRAY APPLIED AT THE RATE OF 0.05 GAL/SY OVER SMOOTH SURFACES AND 0.07 GAL/SY OVER MILLED SURFACES PRIOR TO PAVING.

WARM MIX ASPHALT NOTE:
ALL HOT MIX ASPHALT MIXTURES USED ON THIS PROJECT SHALL BE MODIFIED USING A WARM MIX ASPHALT ADDITIVE IN ACCORDANCE WITH THE SPECIAL PROVISIONS. ALL COSTS, INCLUDING BUT NOT LIMITED TO, WARM MIX ASPHALT ADDITIVE, EQUIPMENT, LABOR, MANUFACTURER'S REPRESENTATIVE, PRODUCTION OF SAMPLES, AND INCIDENTAL COSTS REQUIRED TO MODIFY THE HOT MIX ASPHALT SHALL BE INCIDENTAL TO THE ASSOCIATED HOT MIX ASPHALT PAY ITEMS WITH NO ADDITIONAL COMPENSATION.

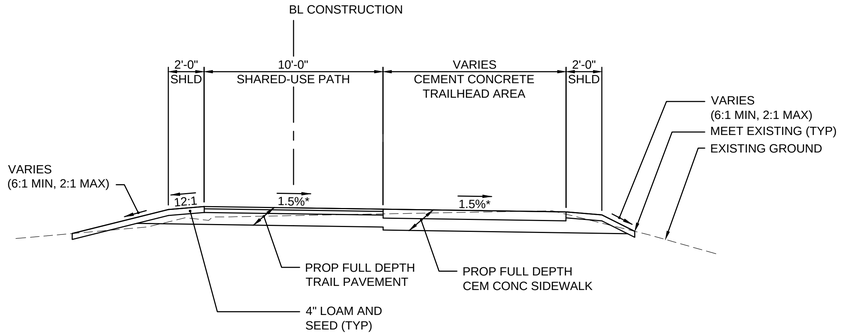
ANCILLARY WORK NOTE:
PREPARATION OF UNDERLYING SURFACE, ASPHALT EMULSION FOR TACK COAT, HMA FOR PATCHING, AND HMA JOINT SEALANT SHALL BE IN ACCORDANCE WITH SECTION 450.

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	159
PROJECT FILE NO.	608298		

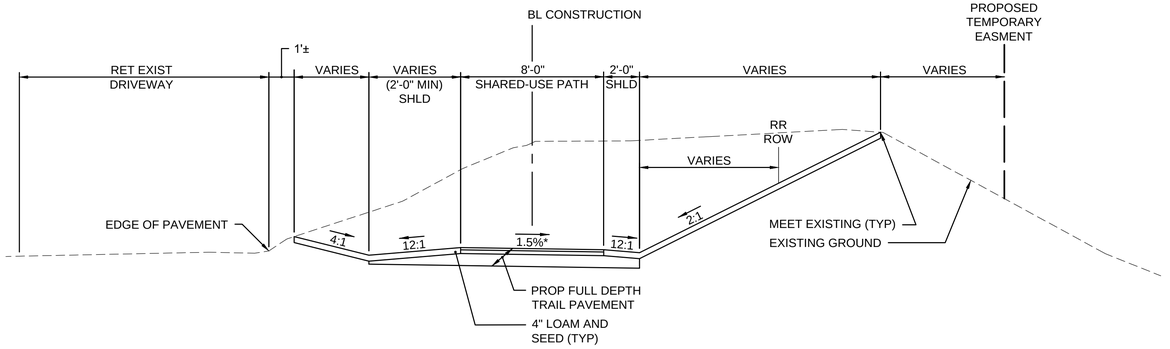
TYPICAL SECTIONS
PART 2 OF 2

608298_HD(TYP SECTION).DWG Plotted on 5-Sep-2018 8:21 PM



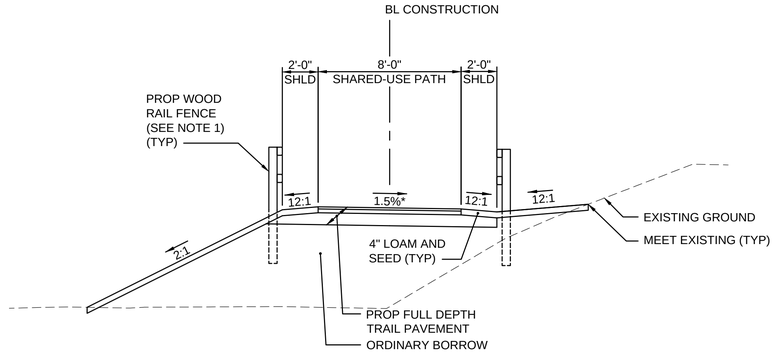
TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 247+89± TO STA 248+31± (SCHOOL STREET TRAILHEAD AREA)
STA 304+27± TO STA 304+72± (MAIN STREET TRAILHEAD AREA)



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 202+28± TO STA 204+70±



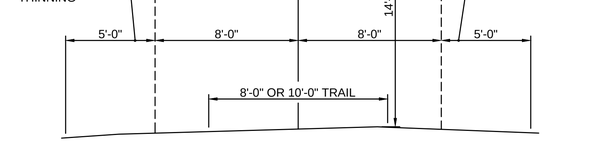
TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 253+23± (CENTER STREET) TO STA 257+00±

NOTE:

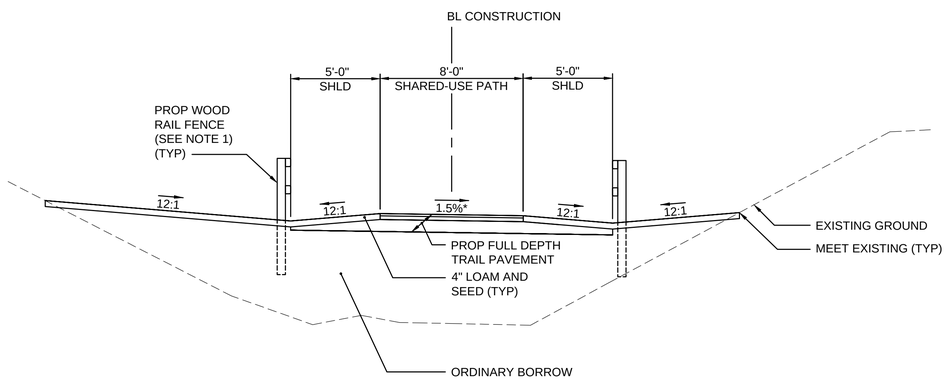
1. **SEE CONSTRUCTION PLANS SHEETS 7 TO 24 FOR LOCATION OF WOOD RAIL FENCE. IN MANY LOCATIONS WOOD RAIL FENCING HAS BEEN PROVIDED TO PREVENT DISTURBANCE OF TURTLE HABITAT AREAS, AS REQUESTED BY NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM.**

*** - TOLERANCE FOR CONSTRUCTION ±0.5% (TYP)**



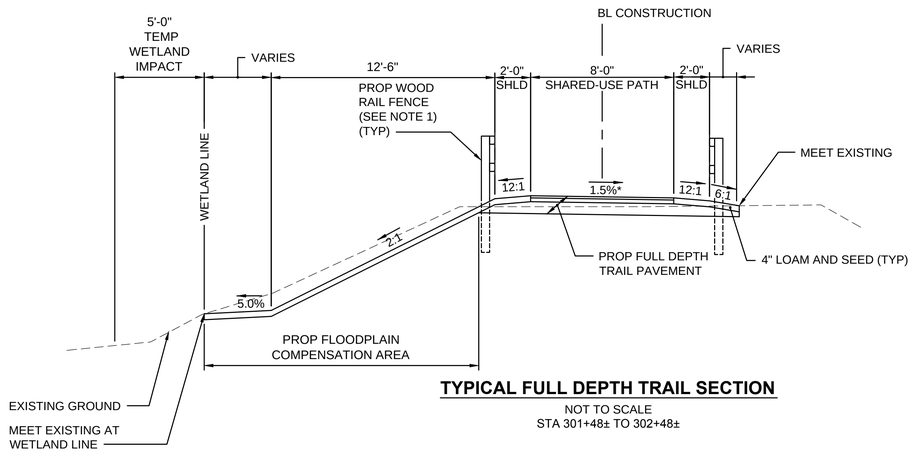
TYPICAL TRAIL CLEARANCE

NOT TO SCALE



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 257+00± TO STA 264+88±



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 301+48± TO 302+48±

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 1 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:40 PM

KING STREET
(PUBLIC 1918)
APPROXIMATE R.O.W.
APPROXIMATE R.O.W.
GEORGETOWN
GROVELAND
GEORGETOWN
GROVELAND
APPROXIMATE R.O.W.
APPROXIMATE R.O.W.
S 86° 53' 36" W 119.76
200+00
N/F
TOWN OF GROVELAND
ELECTRIC DEPARTMENT
MAP 49 PARCEL 20
BOOK 6477 PAGE 499
100' BVW BUFFER
25' NO-CUT ZONE
STONE HEADWALL
TOP ELEV.=87.86
2'x2' STONE BOX
CULVERT
I=85.0
STREAM 6'± WIDE
WF #T6
86.3
WF #T1
87.0
WF #T5
WF #T4
WF #T3
R.O.W. B&M V-7-5 SHEET 2
RET EXIST OHW
RET EXIST CULVERT
RET EXIST GATE
RET EXIST HMA DWY
RET EXIST OHW
APPROX SLOPE LIMITS
EXIST RAILROAD BL
PROP COMPOST
FILTER TUBES (TYP)
PROP 4" LOAM AND SEED
N/F
NEW ENGLAND POWER CO.
MAP 49 PARCEL 22
100' BUFFER
PROP TRAFFIC GATE
PROP MODIFIED ROCKFILL
DRIVEWAY APRON
FOR NATIONAL GRID ACCESS
N/F
MASS ELECTRIC CO.
BOOK 4975 PG 1
MATCH LINE
STA 206+75
PROJECT BEGIN
STA 200+99
N3093416.2785
E787968.1710
PC +19.79
PT +39.77
N 45° 18' 11" W 339.15'
L=19.99' R=25.00'
Δ=45° 48' 13"
REM EXIST
BOULDERS
PROP
TRAILHEAD AREA
(SEE SHEET 63)
PROP CEM
CONC WCR
100' BUFFER
N/F
MASS ELECTRIC CO.
MAP 49 PARCEL 21
PROP PERM EASEMENT LINE
PROP TEMP EASEMENT LINE
PROP 8' HMA TRAIL
GROVELAND COMMUNITY TRAIL CONST BL
APPROX SLOPE LIMITS
PROP TEMP EASEMENT LINE
PROP COMPOST FILTER TUBES
N/F
NEW ENGLAND POWER CO.
MAP 49 PARCEL 22
PC +78.92
L=59.82' R=200.00'
Δ=17° 08' 14"
PRC +38.74
PT +00.00
L=61.26' R=200.00'
Δ=17° 32' 57"
MATCH LINE
STA 205+75
CONTINUED ON
SHEET NO. 8

LEGEND:

[X] - WHEELCHAIR RAMP NUMBER

FOR PROFILE SEE SHEET NO. 25

0 20 50 100
SCALE: 1" = 20'

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

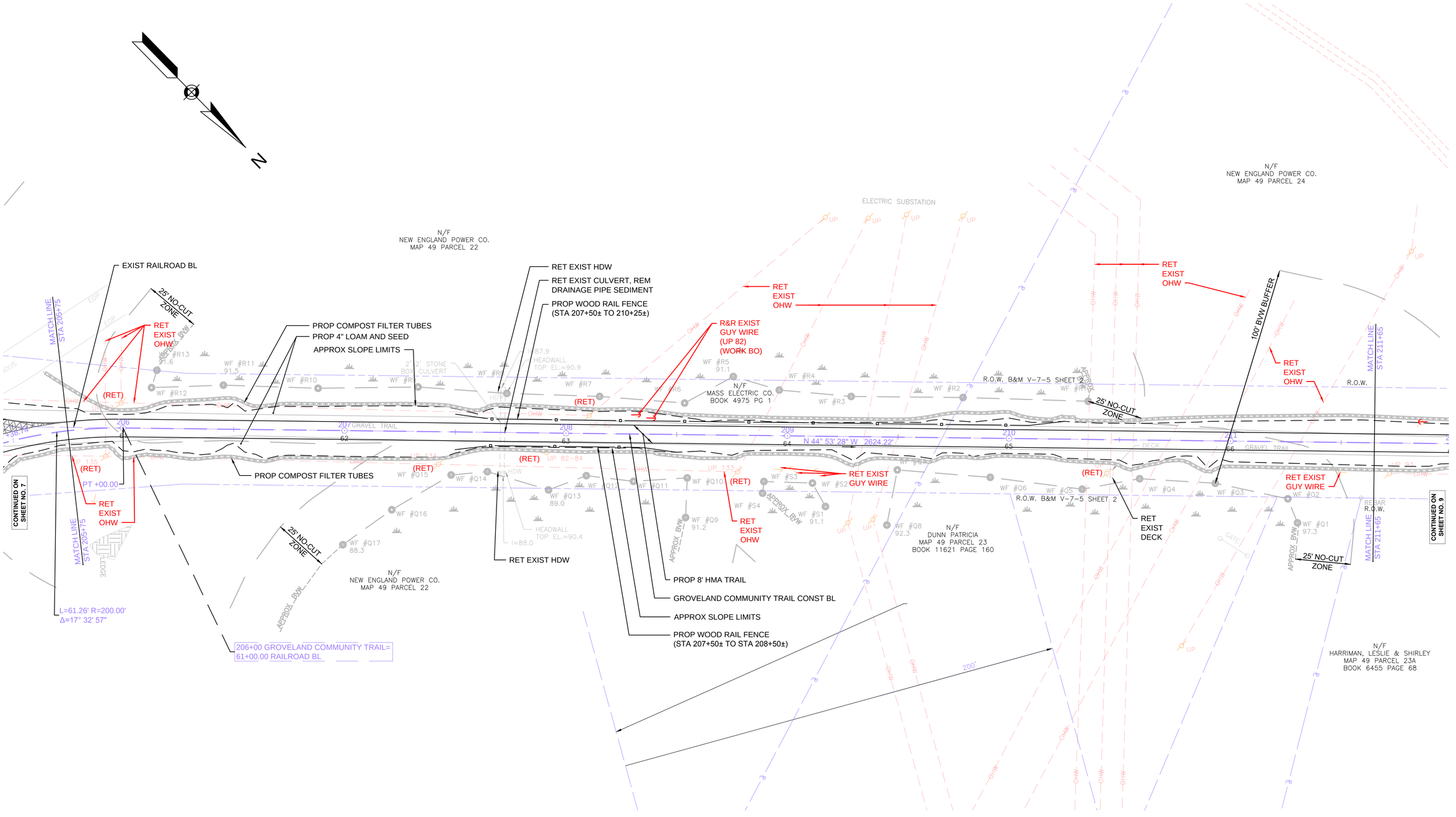
DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 2 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:40 PM



FOR PROFILE SEE SHEET NO. 25 & 26

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 3 OF 18

HIGHWAY GUARD DETAILS
NONE

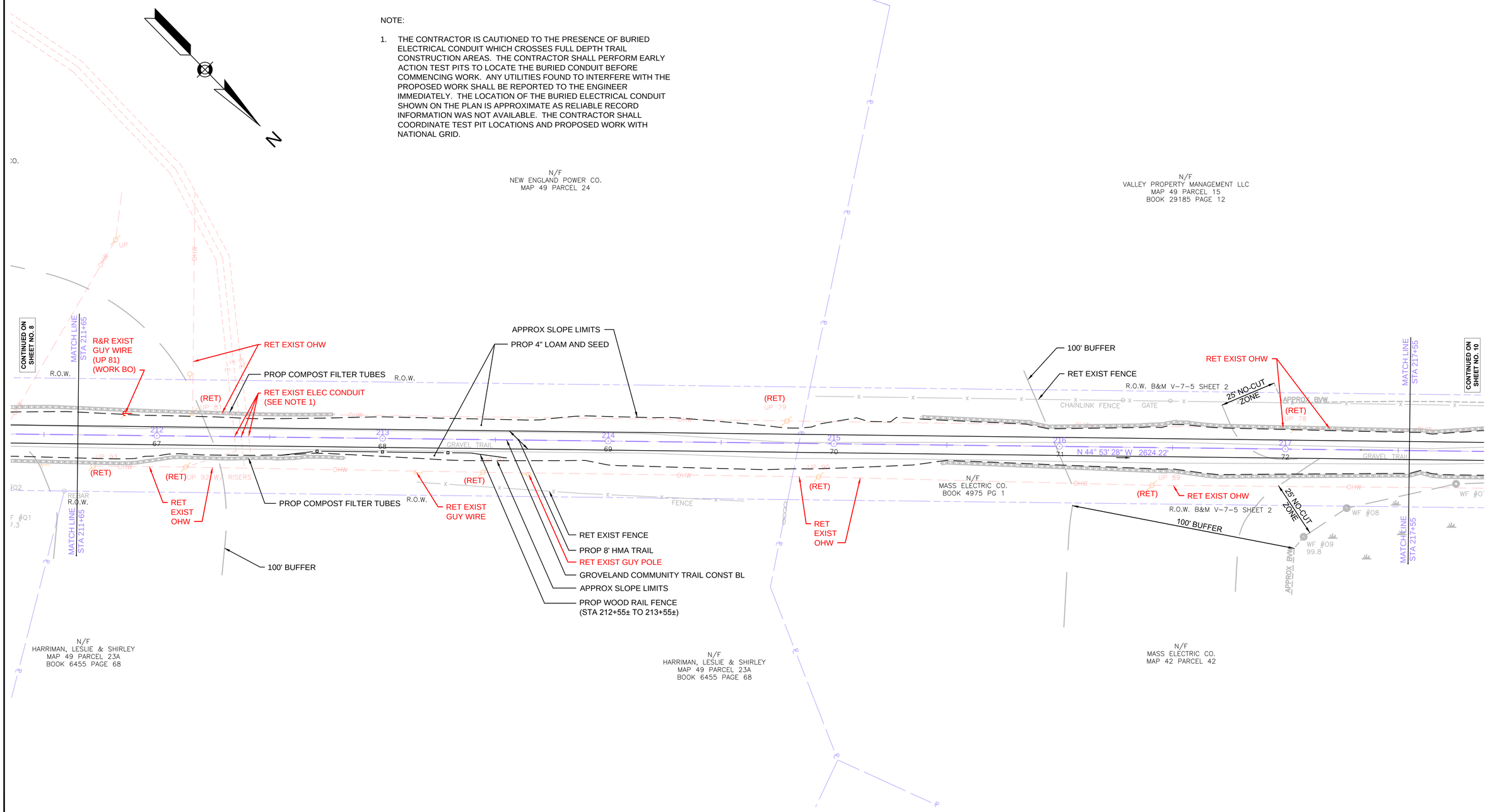
TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE

NOTE:

1. THE CONTRACTOR IS CAUTIONED TO THE PRESENCE OF BURIED ELECTRICAL CONDUIT WHICH CROSSES FULL DEPTH TRAIL CONSTRUCTION AREAS. THE CONTRACTOR SHALL PERFORM EARLY ACTION TEST PITS TO LOCATE THE BURIED CONDUIT BEFORE COMMENCING WORK. ANY UTILITIES FOUND TO INTERFERE WITH THE PROPOSED WORK SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. THE LOCATION OF THE BURIED ELECTRICAL CONDUIT SHOWN ON THE PLAN IS APPROXIMATE AS RELIABLE RECORD INFORMATION WAS NOT AVAILABLE. THE CONTRACTOR SHALL COORDINATE TEST PIT LOCATIONS AND PROPOSED WORK WITH NATIONAL GRID.



FOR PROFILE SEE SHEET NO. 26

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:40 PM

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

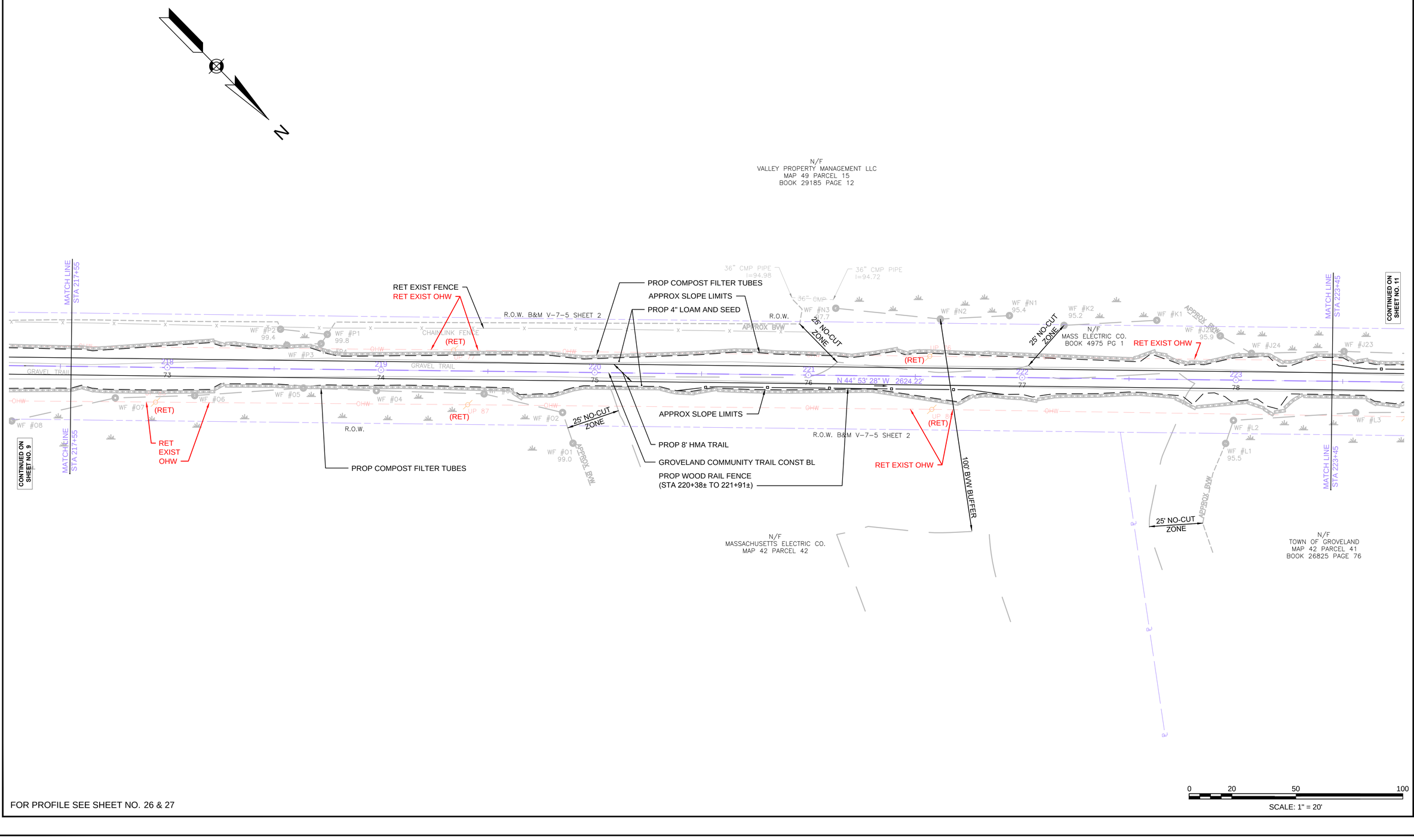
DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 4 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:41 PM



FOR PROFILE SEE SHEET NO. 26 & 27

0 20 50 100
SCALE: 1" = 20'

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

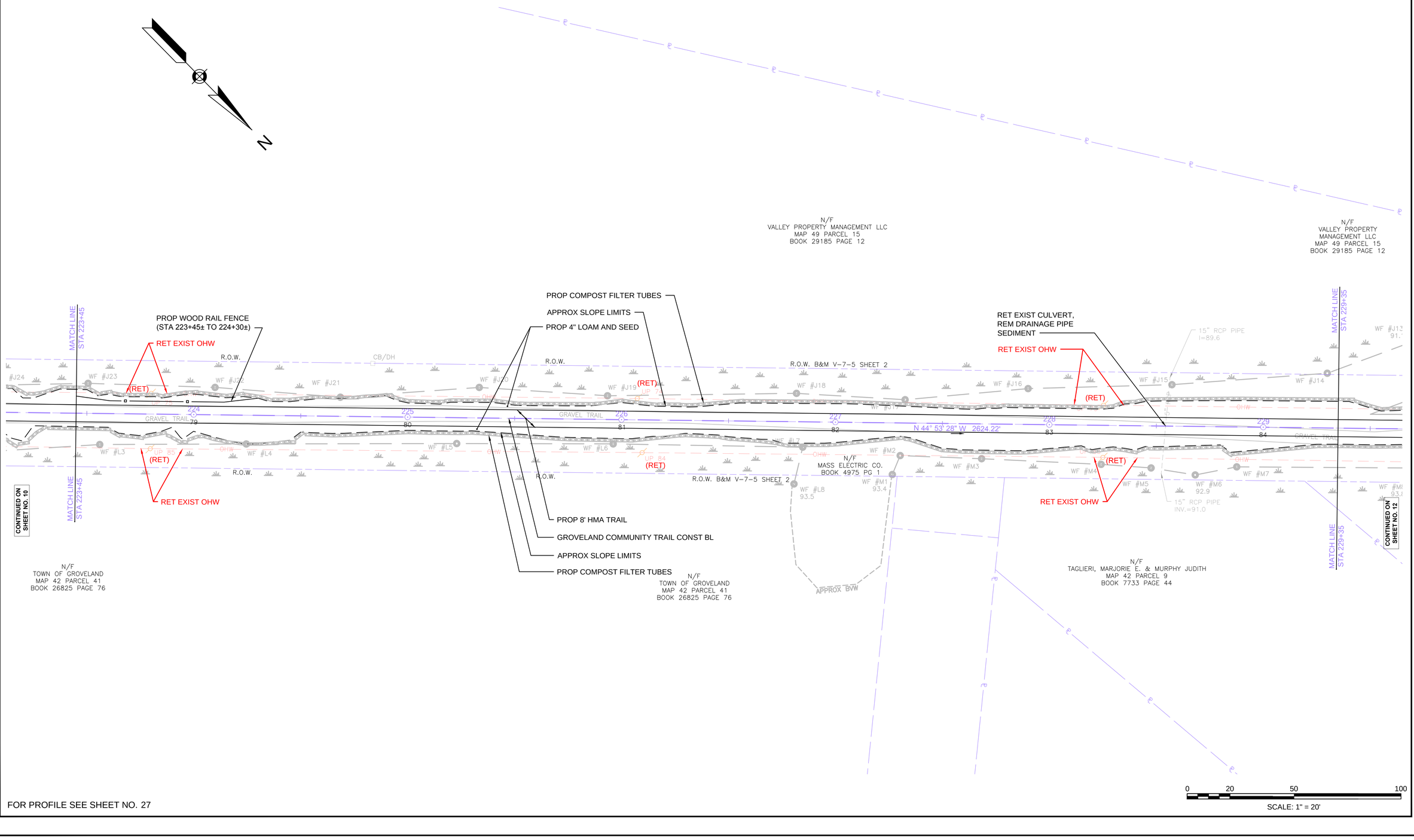
DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 5 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:41 PM



FOR PROFILE SEE SHEET NO. 27

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 6 OF 18

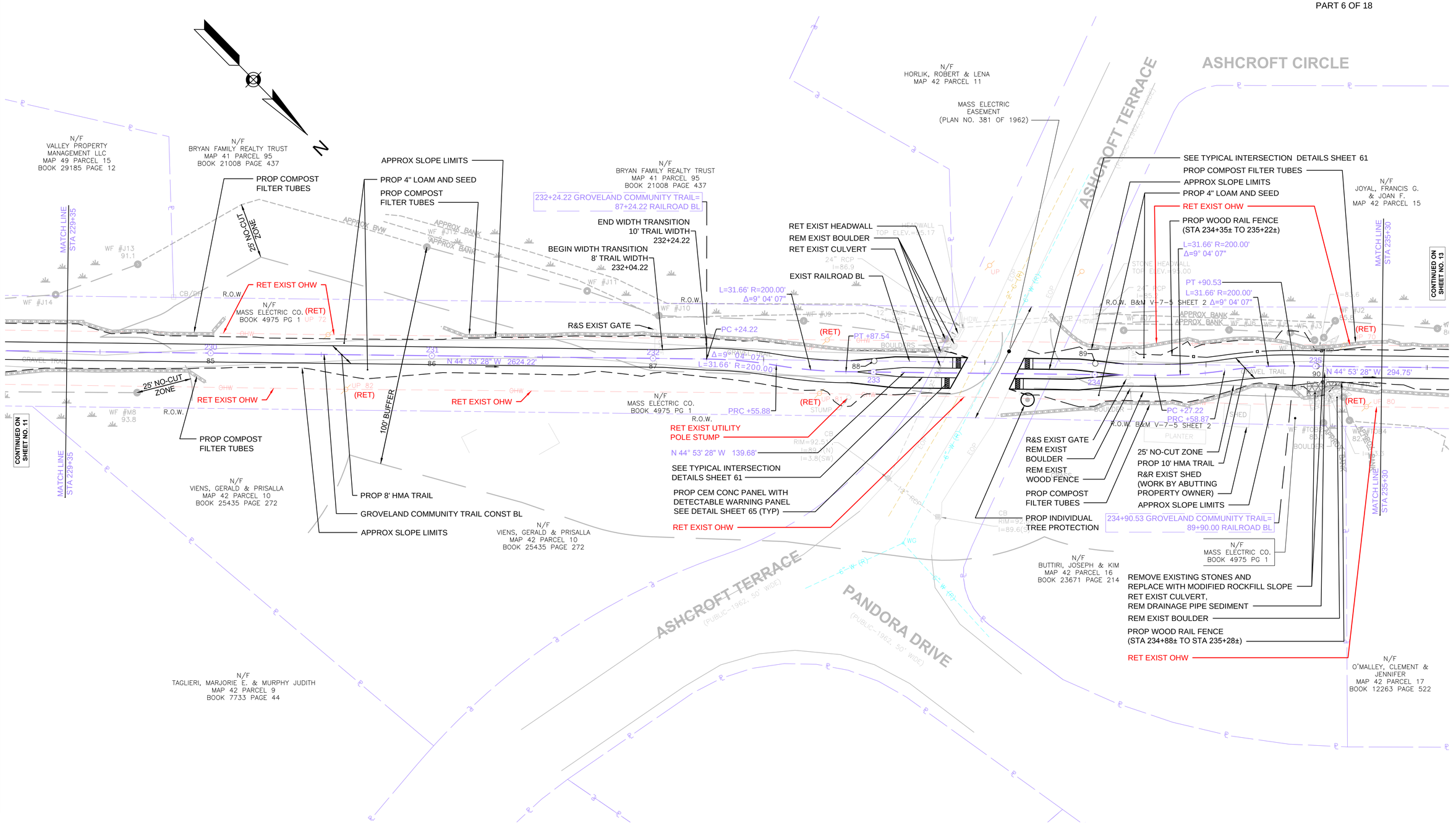
HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:41 PM



FOR PROFILE SEE SHEET NO. 27 & 28

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 7 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:41 PM

ASHCROFT CIRCLE

N/F
JOYAL, FRANCIS G.
& JOAN F.
MAP 42 PARCEL 15

N/F
MASS ELECTRIC CO.
BOOK 4975 PG 1

N/F
BERNARDO ALEXANDER J.
MAP 41 PARCEL 82
BOOK 541434 PAGE 498

N/F
PIRRELLO REVOCABLE TRUST
MAP 41 PARCEL 76
BOOK 31889 PAGE 106

N/F
PIRRELLO REVOCABLE TRUST
MAP 41 PARCEL 76
BOOK 31889 PAGE 106

CONTINUED ON SHEET NO. 12

MATCH LINE STA 235+30

100' BVW BUFFER

20' WIDE DRAIN EASEMENT (CERT 29147A 182)

25' NO-CUT ZONE

APPROX BVW

R.O.W.

PROP COMPOST FILTER TUBES

APPROX SLOPE LIMITS

PROP 4" LOAM AND SEED

RETAINING WALL

R.O.W. B&M V-7-5 SHEET 2

SB/DH

RET EXIST OHW

(RET)

L=38.73' R=1000.00'
Δ=2° 13' 09"

PC +85.28

PRC +24.01

N 44° 53' 28" W 294.75'

GRAVEL TRAIL

EDGE OF TRAIL

OHW

UP 80

UP 79

UP 78

237+85.28 GROVELAND COMMUNITY TRAIL=
92+84.75 RAILROAD BL

R.O.W. B&M V-7-5 SHEET 3

PROP 10' HMA TRAIL

GROVELAND COMMUNITY TRAIL CONST BL

APPROX SLOPE LIMITS

PROP COMPOST FILTER TUBES

PROP WOOD RAIL FENCE (STA 238+66± TO 239+36±)

RET EXIST CULVERT, REM DRAINAGE PIPE

SEDIMENT

EXIST RAILROAD BL

RET EXIST STONE

PT +62.74

N 44° 53' 28" W 100.00'

PC +62.74

L=38.73' R=1000.00'
Δ=2° 13' 09"

PT +40.21

N 44° 53' 28" W 580.20'

PRC +01.48

240+40.21 GROVELAND COMMUNITY TRAIL=
95+39.64 RAILROAD BL

RET EXIST STONE

PROP COMPOST FILTER TUBES

RET EXIST OHW

PROP WOOD RAIL FENCE (STA 238+70± TO 240+10±)

MATCH LINE STA 241+15

CONTINUED ON SHEET NO. 14

N/F
CARLSON, DAVID
MAP 42 PARCEL 18
BOOK 11011 PAGE 523

N/F
SMITH, MICHAEL & KIMBERLY
MAP 42 PARCEL 19
BOOK 30812 PAGE 225

N/F
ETHERIDGE, CYNTHIA LEE
MAP 42 PARCEL 20
BOOK 16254 PAGE 457

N/F
REID, KENNETH & MARIA
MAP 41 PARCEL 71
BOOK 29547 PAGE 283

N/F
O'MALLEY, CLEMENT &
JENNIFER
MAP 42 PARCEL 17
BOOK 12263 PAGE 522

PANDORA DRIVE

FOR PROFILE SEE SHEET NO. 28

0 20 50 100
SCALE: 1" = 20'

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

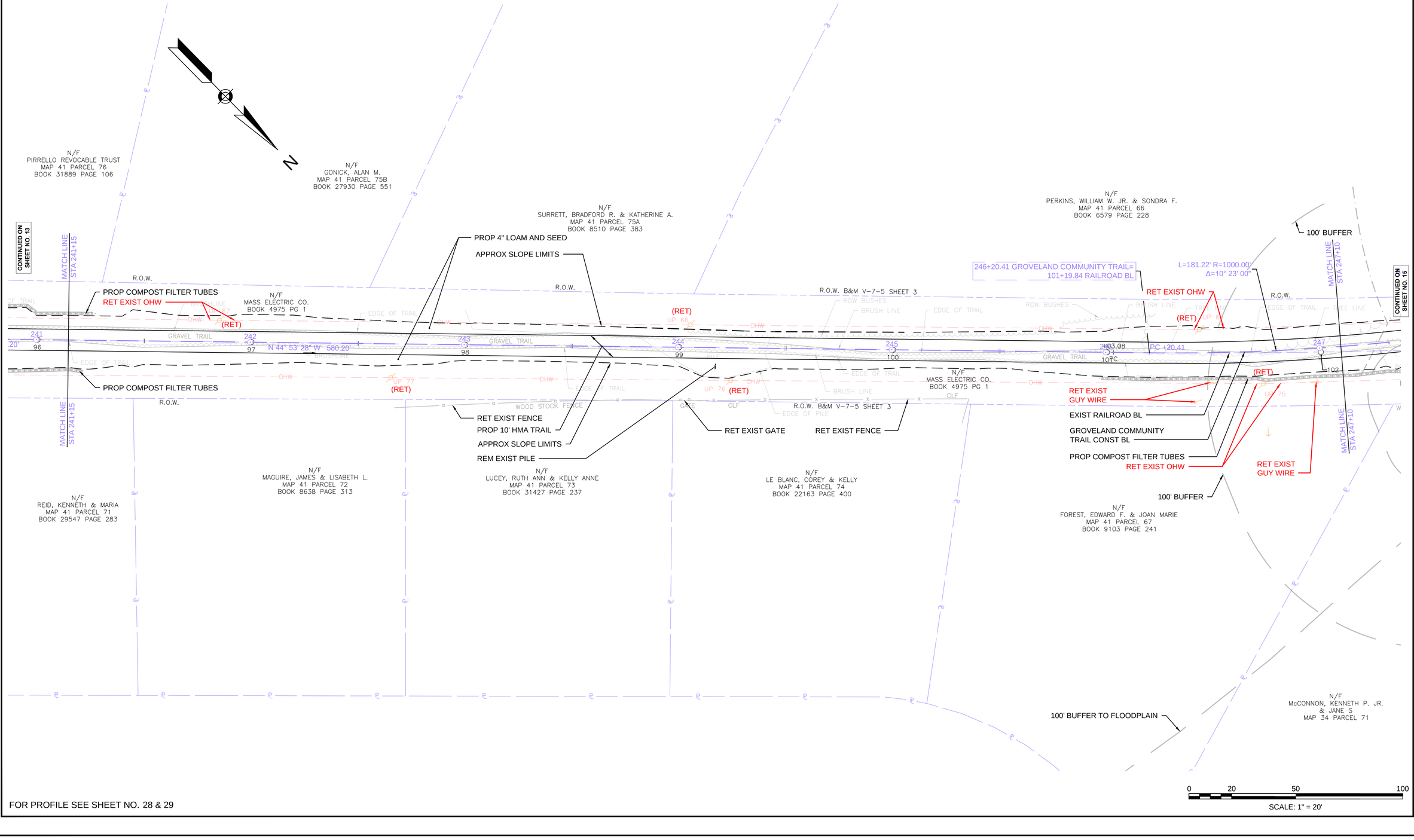
DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 8 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:42 PM



FOR PROFILE SEE SHEET NO. 28 & 29

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE

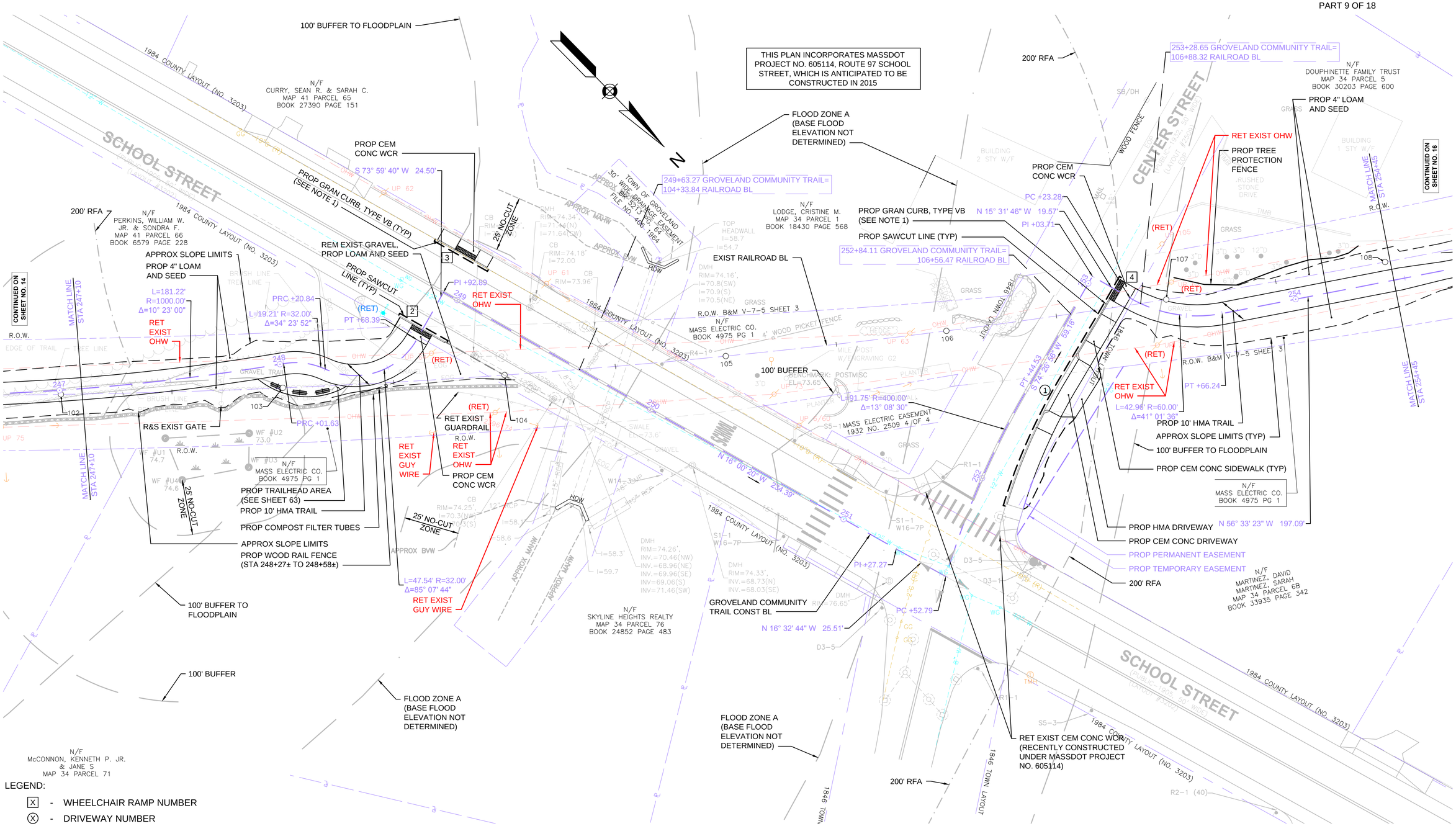
NOTE:

1. FOR METHOD OF SETTING CURB AGAINST EXISTING PAVEMENT SEE DETAIL SHEET 66.

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 9 OF 18



LEGEND:

- X - WHEELCHAIR RAMP NUMBER
- X - DRIVEWAY NUMBER

FOR PROFILE SEE SHEET NO. 29

0 20 50 100
SCALE: 1" = 20'

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:42 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	159
PROJECT FILE NO.	608298		

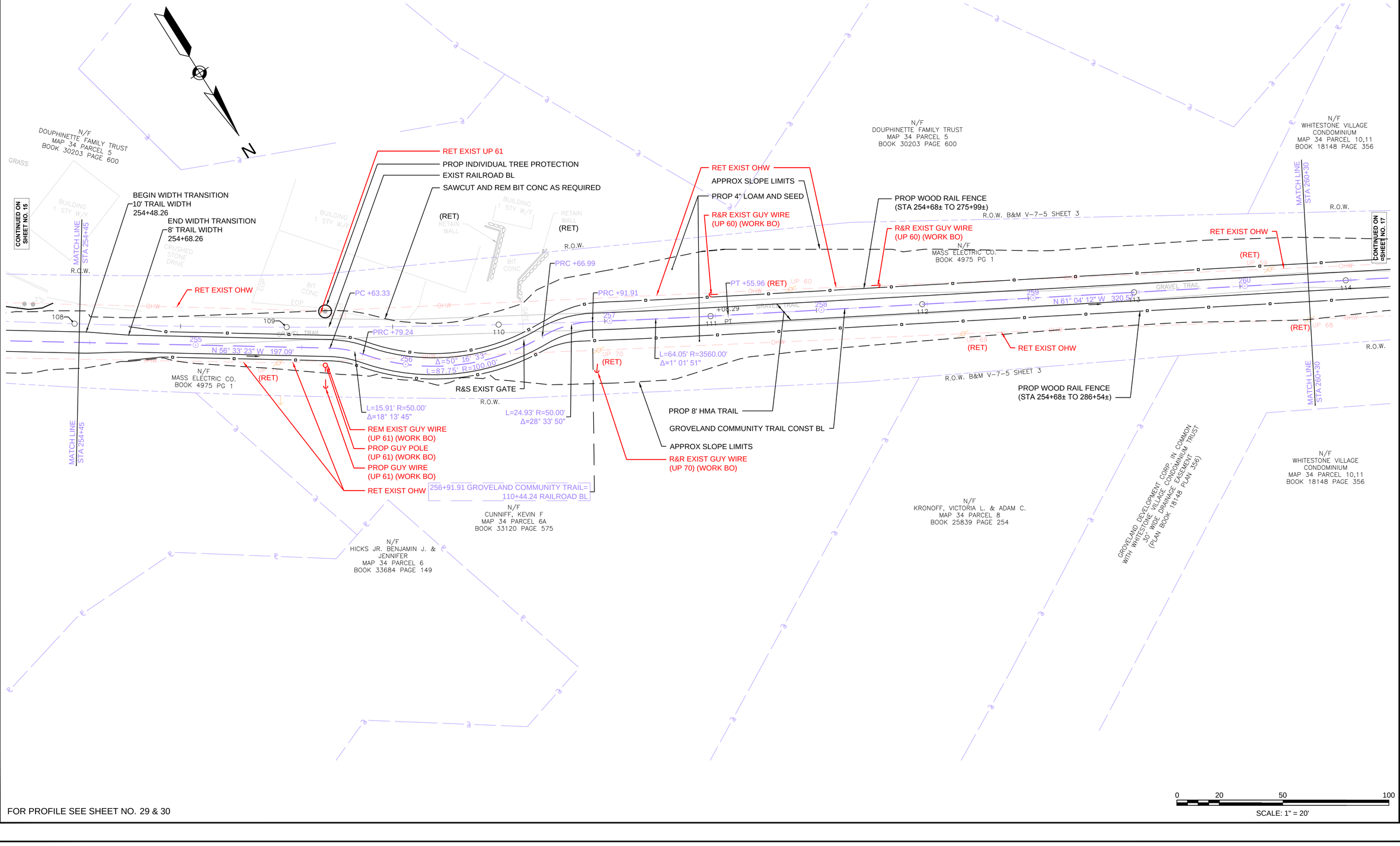
CONSTRUCTION PLANS
PART 10 OF 18

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE



FOR PROFILE SEE SHEET NO. 29 & 30

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:42 PM

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

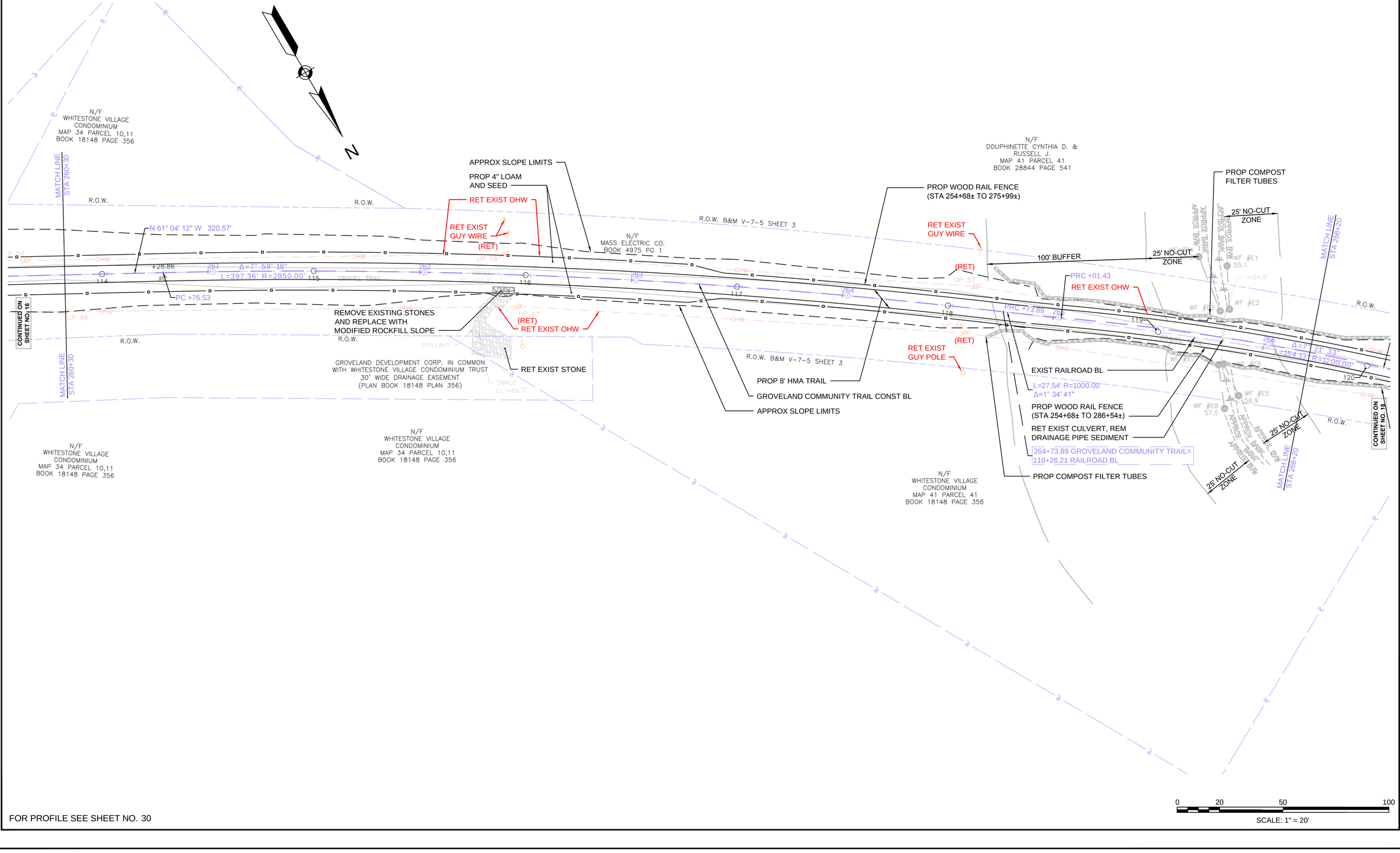
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 11 OF 18



FOR PROFILE SEE SHEET NO. 30

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:43 PM

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

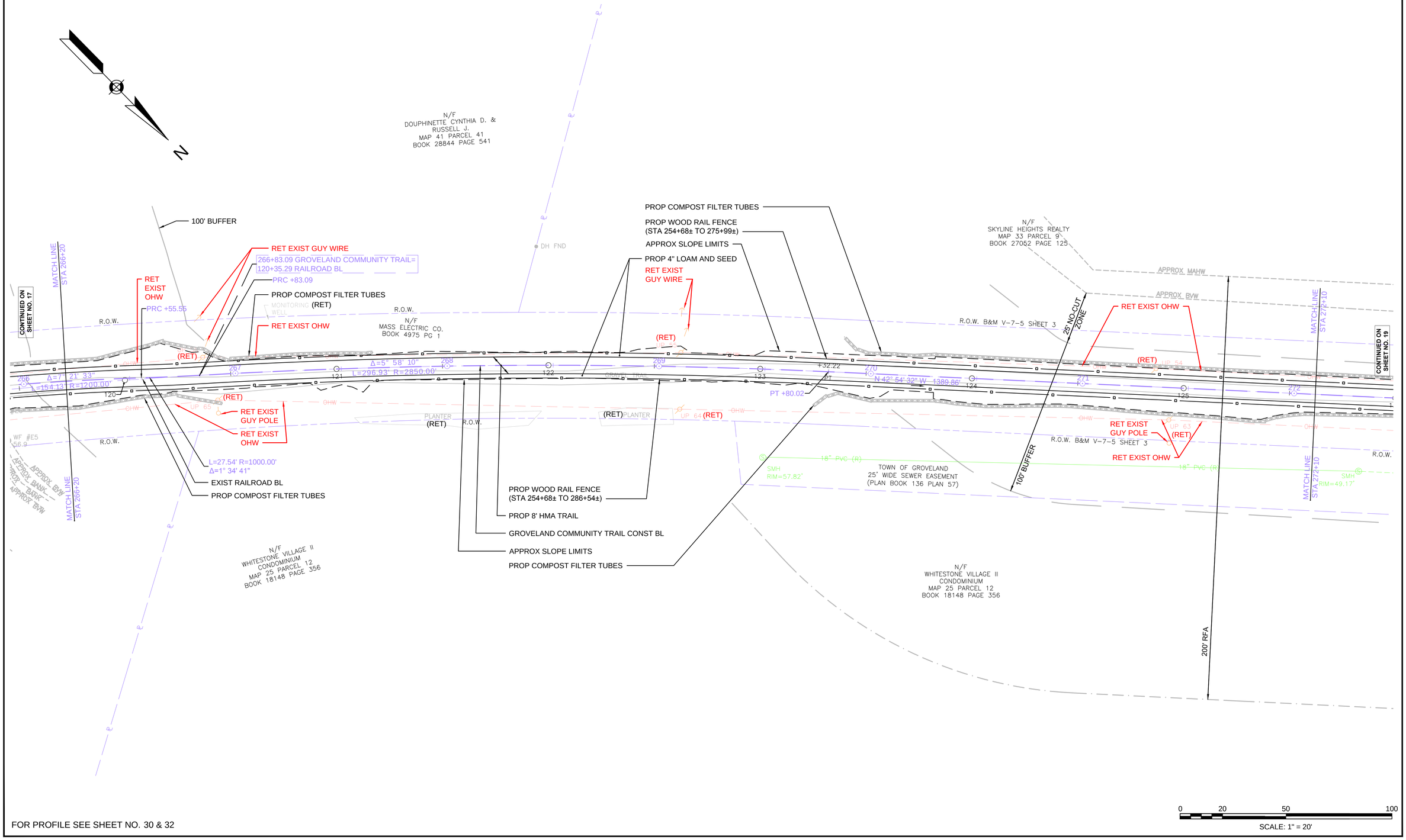
DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	159
PROJECT FILE NO.		608298	

CONSTRUCTION PLANS
PART 12 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:43 PM



FOR PROFILE SEE SHEET NO. 30 & 32

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

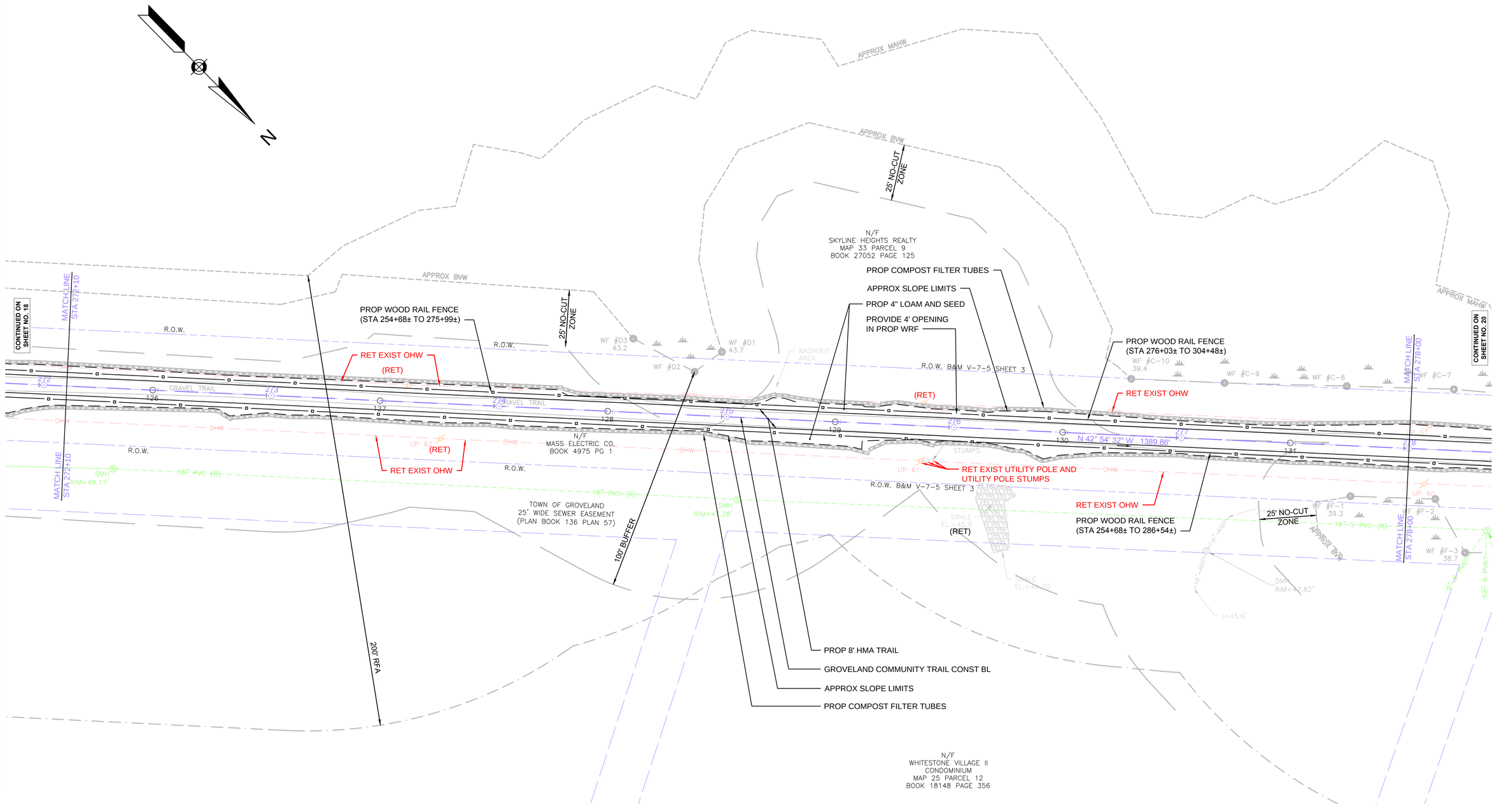
DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	159
PROJECT FILE NO.		608298	

CONSTRUCTION PLANS
PART 13 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:43 PM



FOR PROFILE SEE SHEET NO. 32 & 33

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

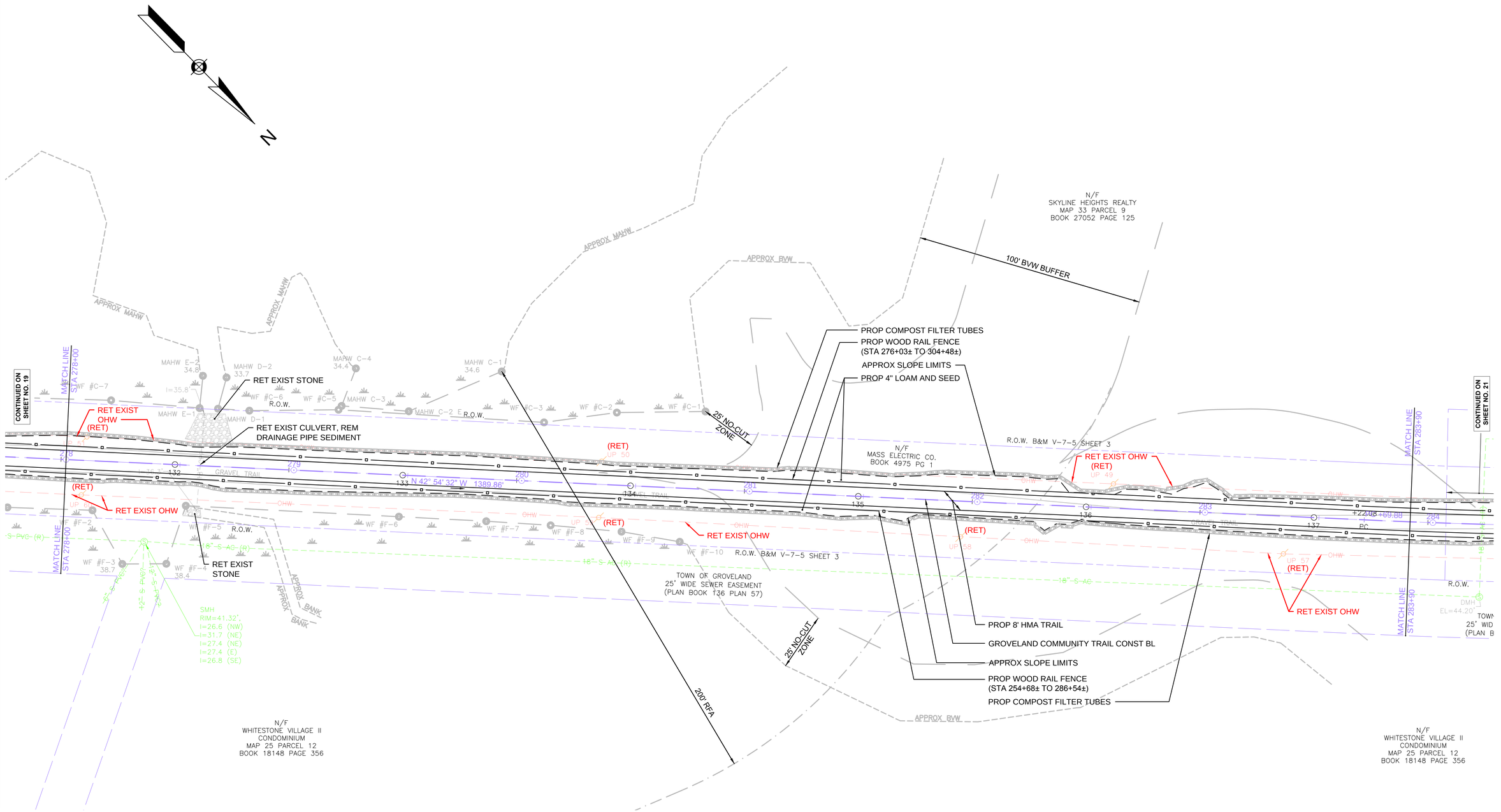
DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 14 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:43 PM



FOR PROFILE SEE SHEET NO. 33

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

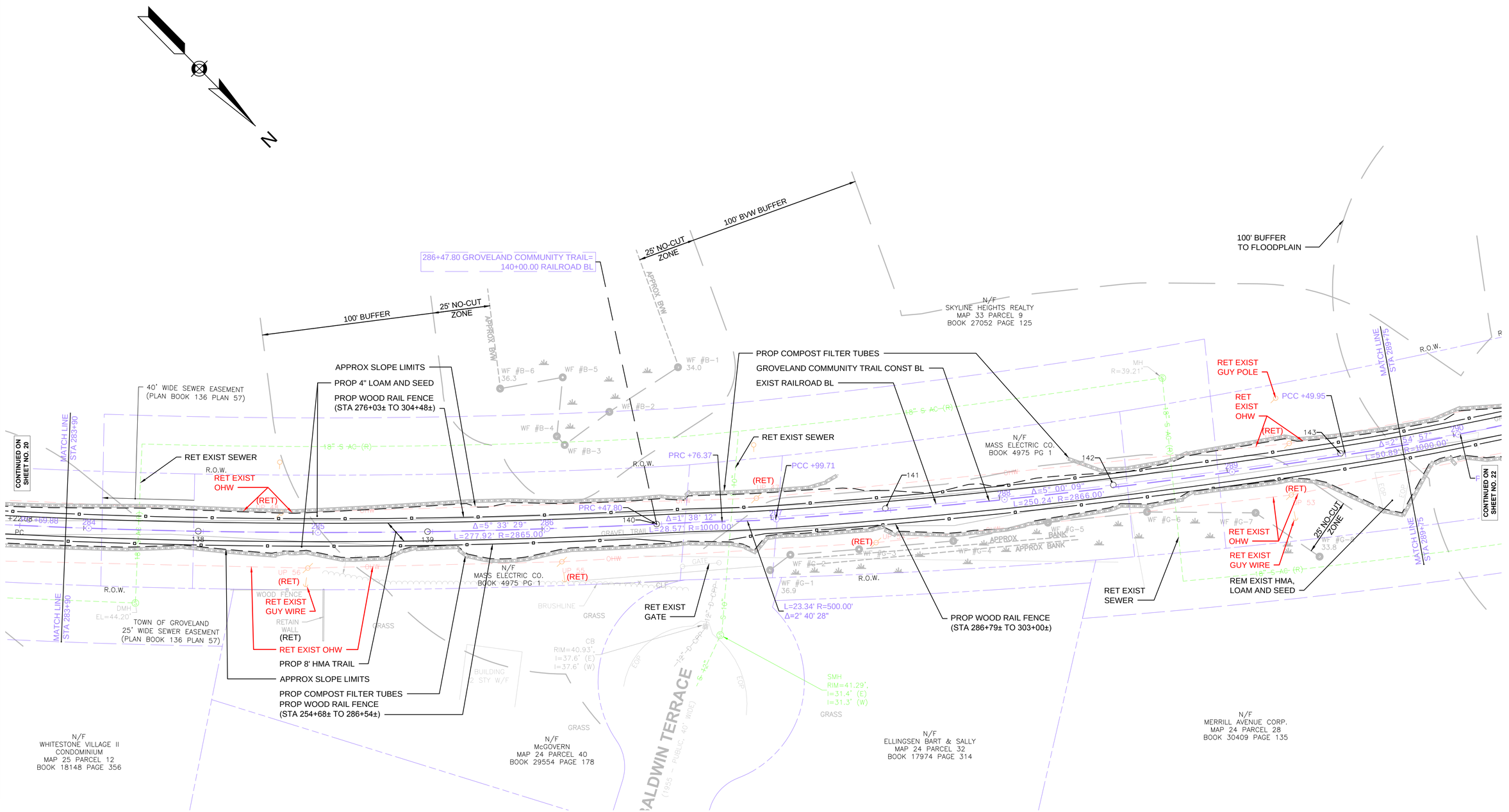
DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	159
PROJECT FILE NO.		608298	

CONSTRUCTION PLANS
PART 15 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:44 PM



FOR PROFILE SEE SHEET NO. 33 & 34

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	159
PROJECT FILE NO.	608298		

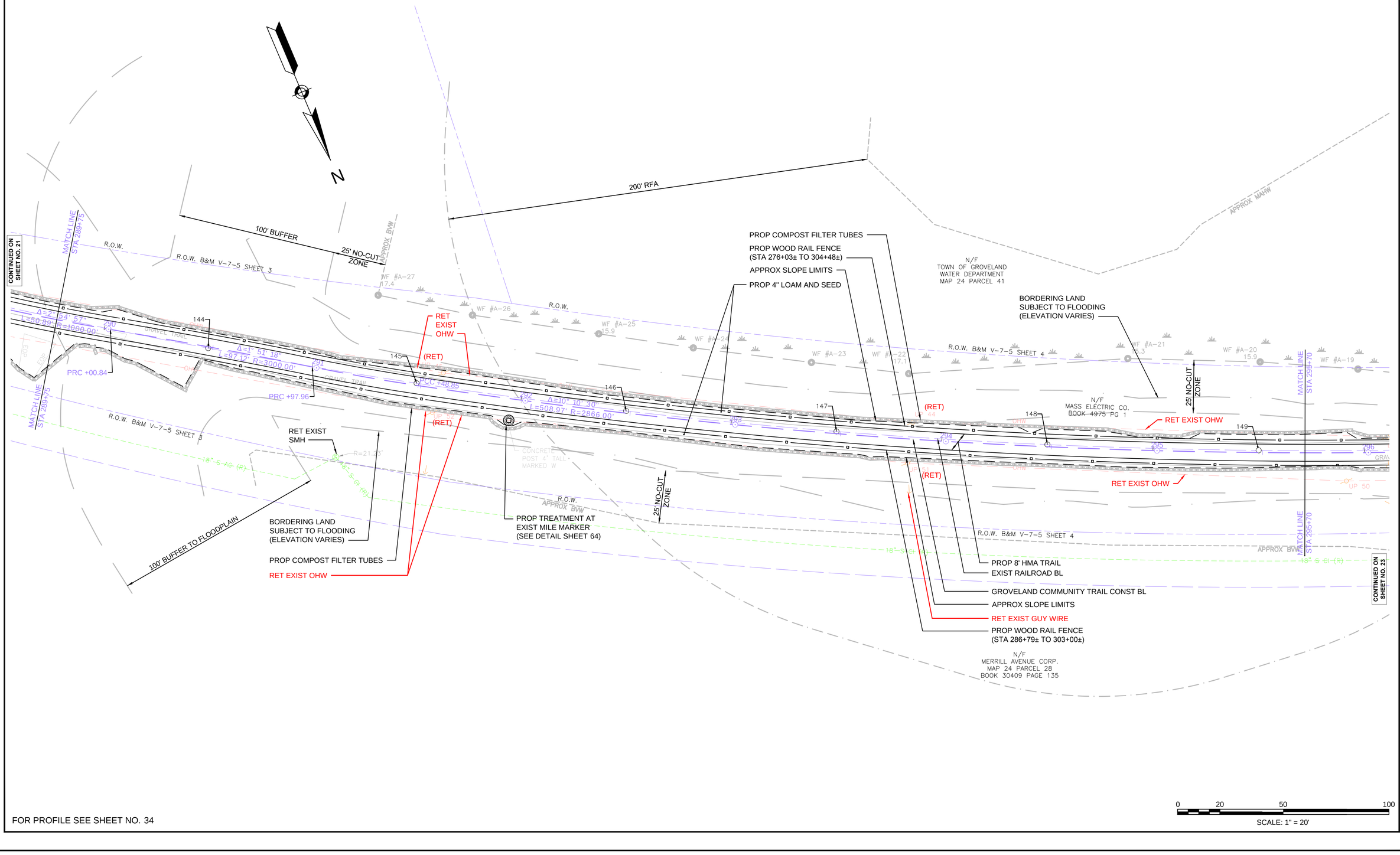
CONSTRUCTION PLANS
PART 16 OF 18

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE



FOR PROFILE SEE SHEET NO. 34

0 20 50 100
SCALE: 1" = 20'

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:44 PM

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

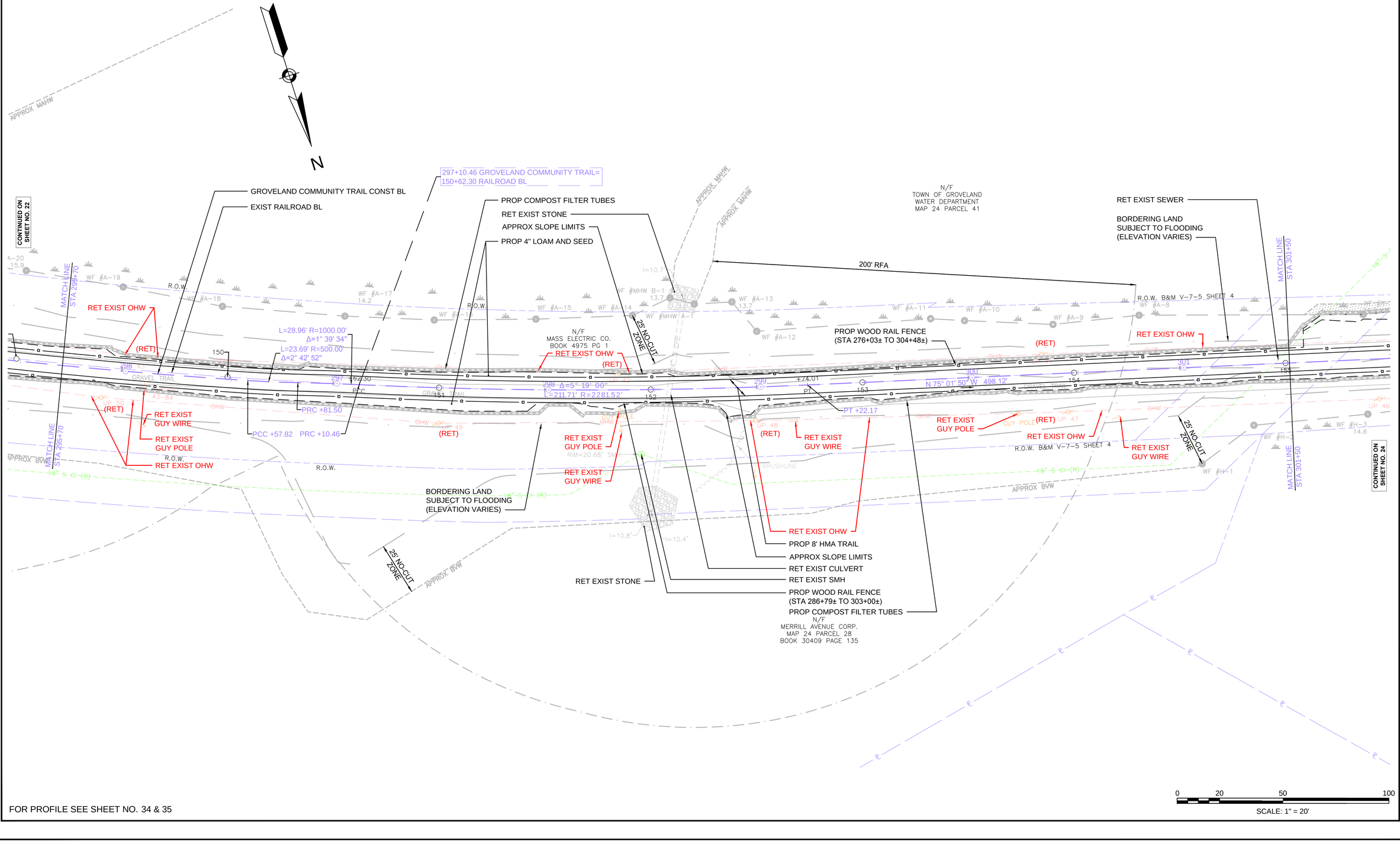
DRAINAGE DETAILS
NONE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	159
PROJECT FILE NO.	608298		

CONSTRUCTION PLANS
PART 17 OF 18

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:44 PM



FOR PROFILE SEE SHEET NO. 34 & 35

0 20 50 100
SCALE: 1" = 20'

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	159
PROJECT FILE NO.	608298		

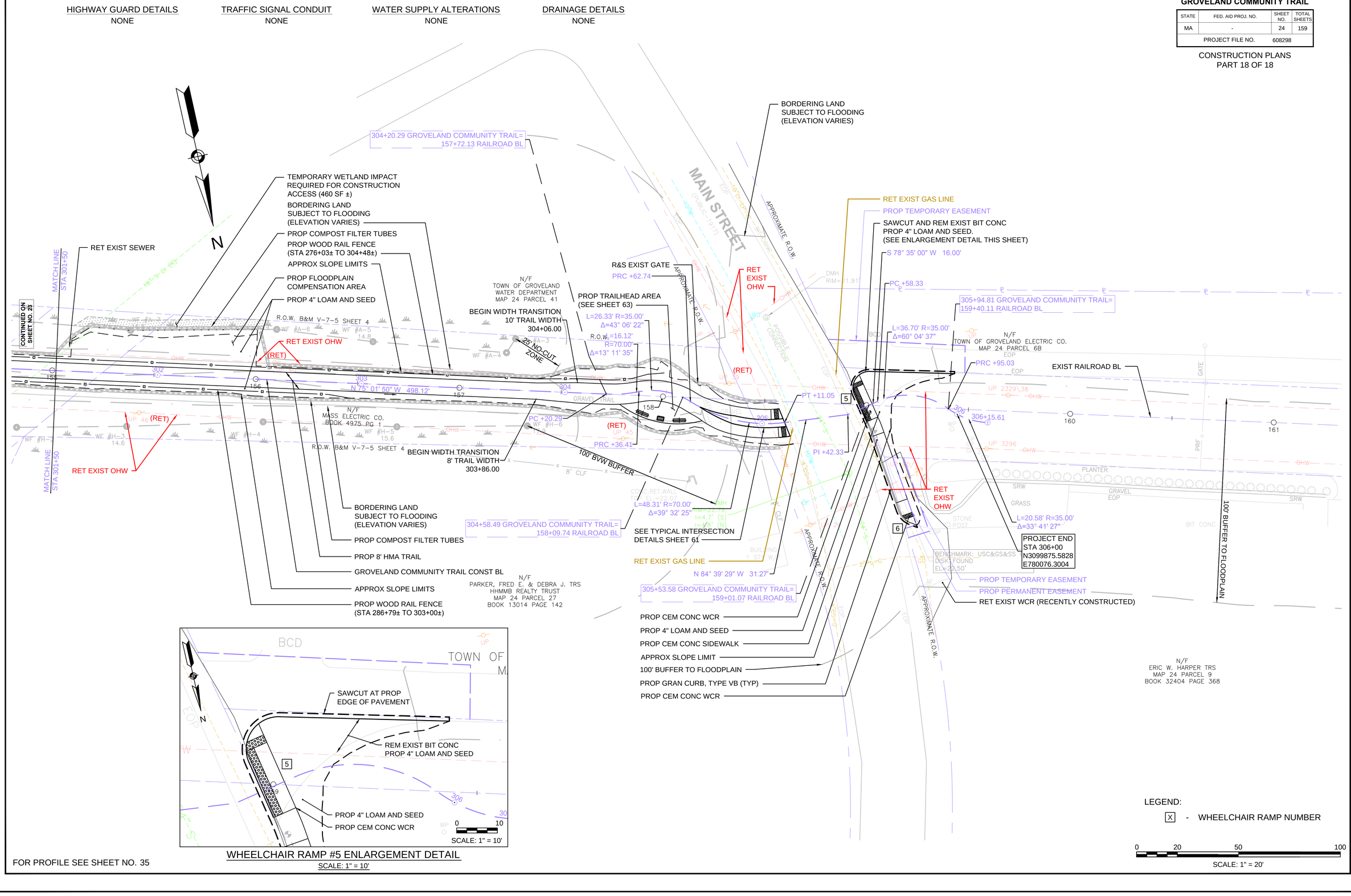
CONSTRUCTION PLANS
PART 18 OF 18

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE



WHEELCHAIR RAMP #5 ENLARGEMENT DETAIL
SCALE: 1" = 10'

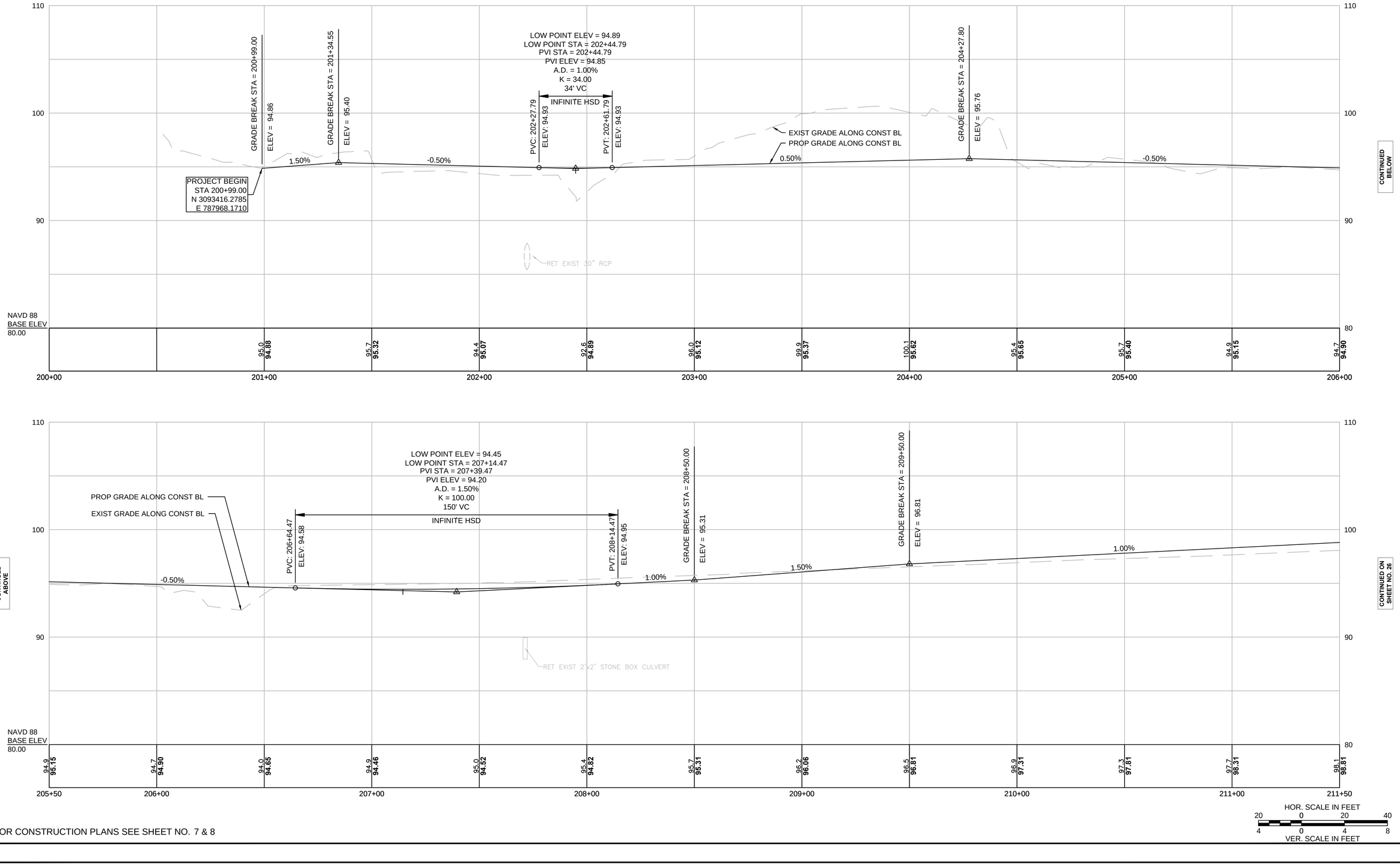
FOR PROFILE SEE SHEET NO. 35

608298_HD(CONST PLANS).DWG Plotted on 6-Sep-2018 2:45 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	159
PROJECT FILE NO.	608298		

PROFILES
PART 1 OF 11



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

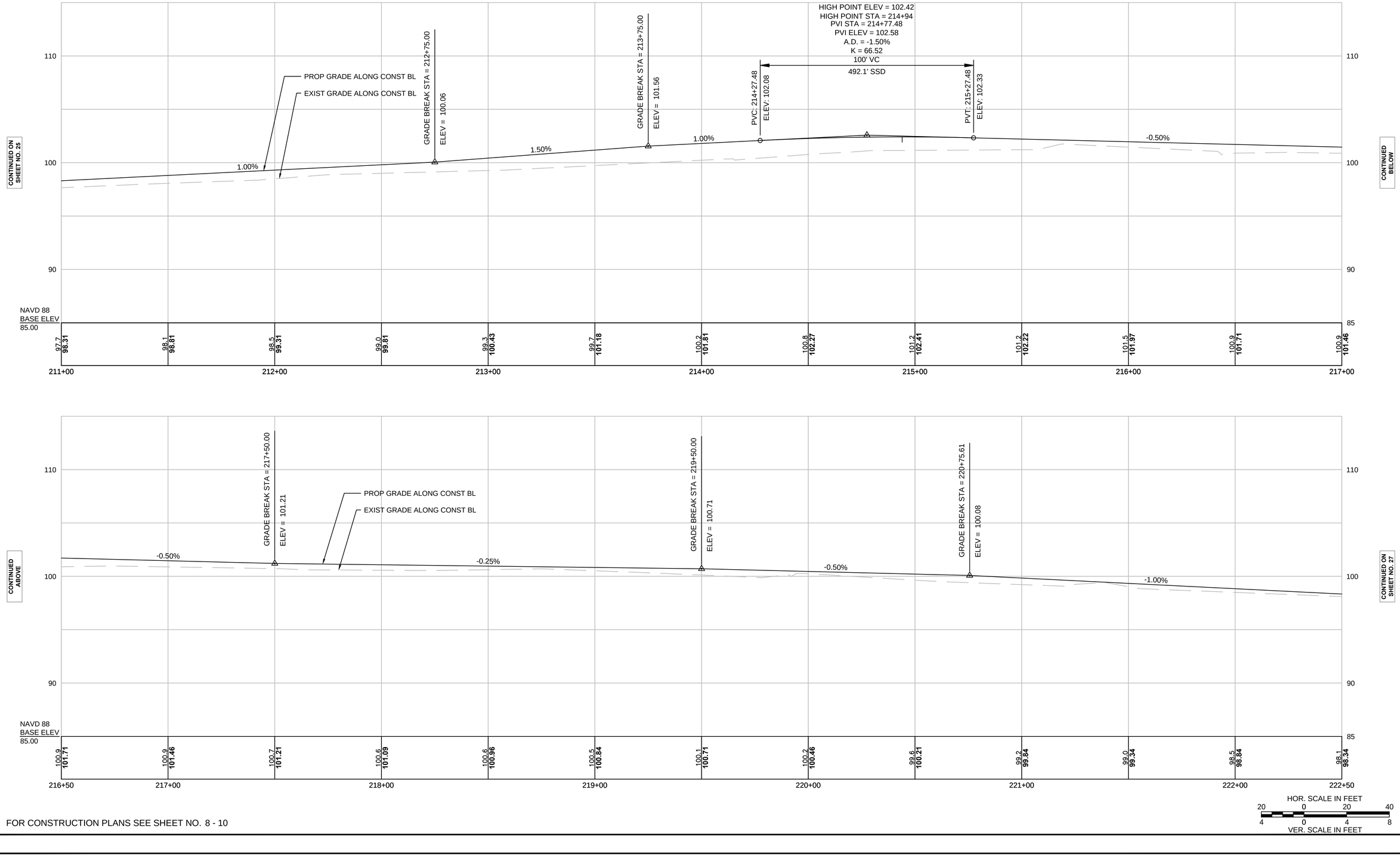
FOR CONSTRUCTION PLANS SEE SHEET NO. 7 & 8

608298_HD(PROFILES).DWG Plotted on 5-Sep-2018 8:37 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	159
PROJECT FILE NO.	608298		

PROFILES
PART 2 OF 11



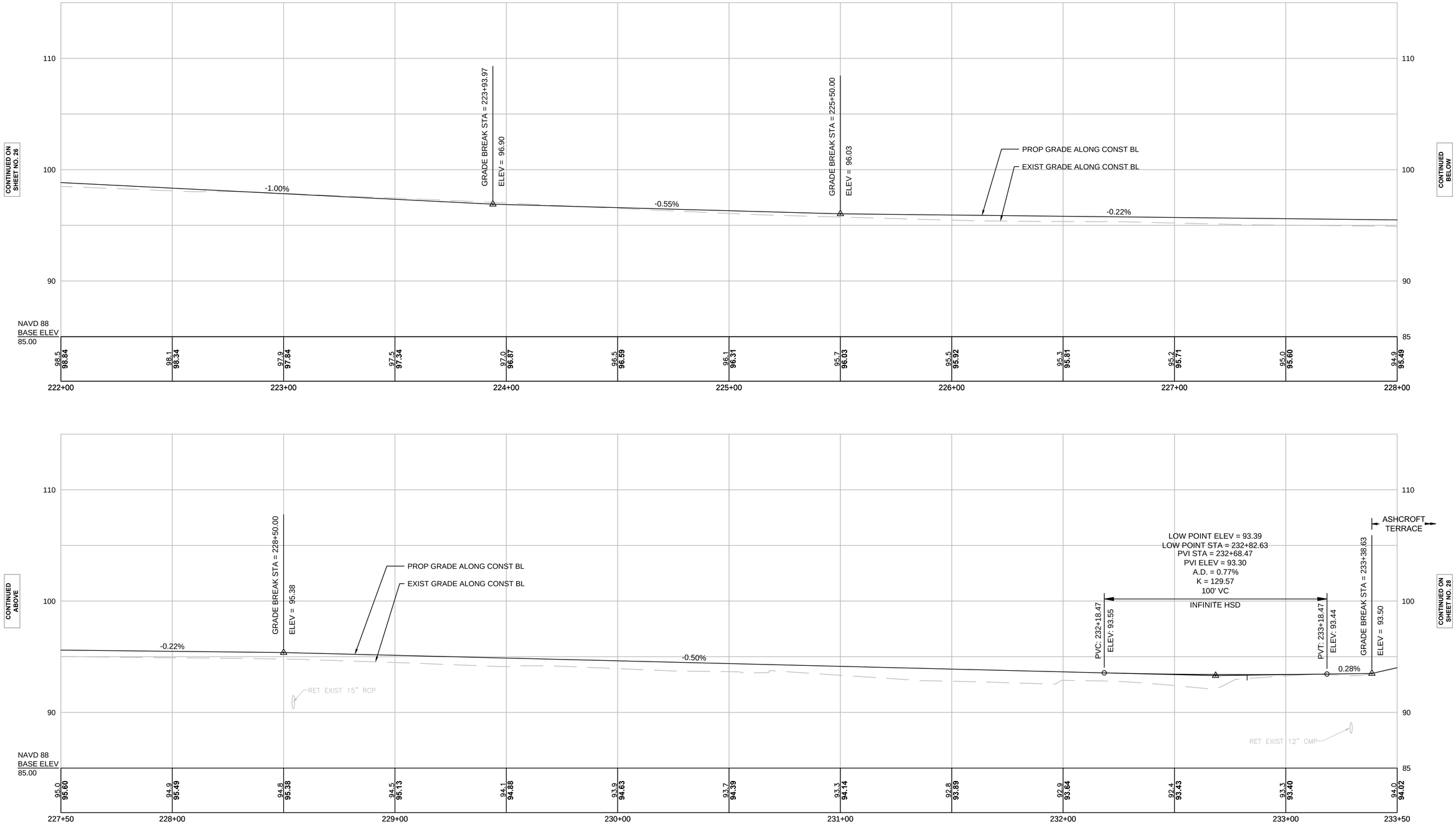
FOR CONSTRUCTION PLANS SEE SHEET NO. 8 - 10

Plotted on 5-Sep-2018 8:37 PM
608298_HD(PROFILES).DWG

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	159
PROJECT FILE NO.	608298		

PROFILES
PART 3 OF 11



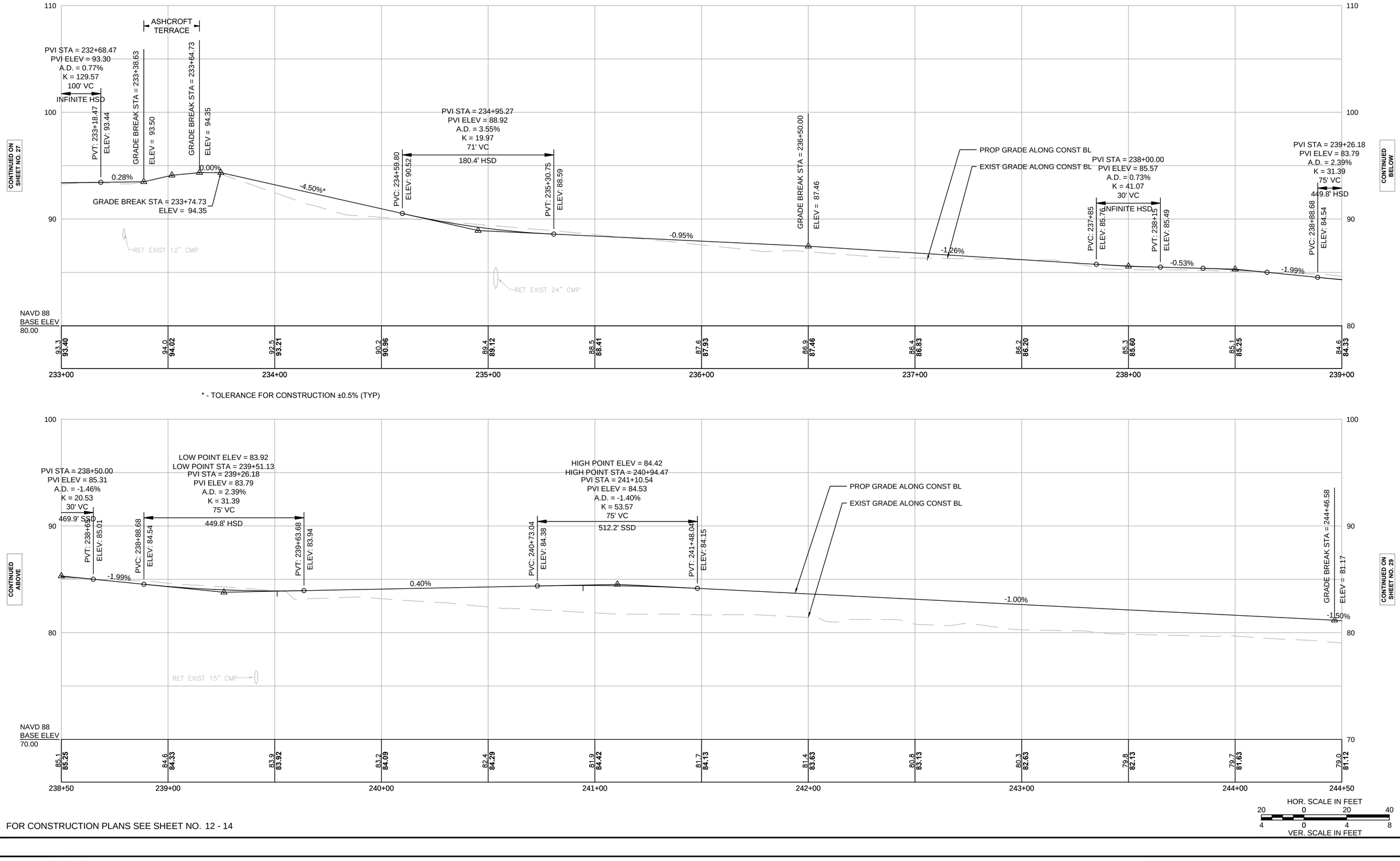
FOR CONSTRUCTION PLANS SEE SHEET NO. 10 - 12

608298_HD(PROFILES).DWG Plotted on 5-Sep-2018 8:37 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	159
PROJECT FILE NO.	608298		

PROFILES
PART 4 OF 11



* - TOLERANCE FOR CONSTRUCTION ±0.5% (TYP)

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

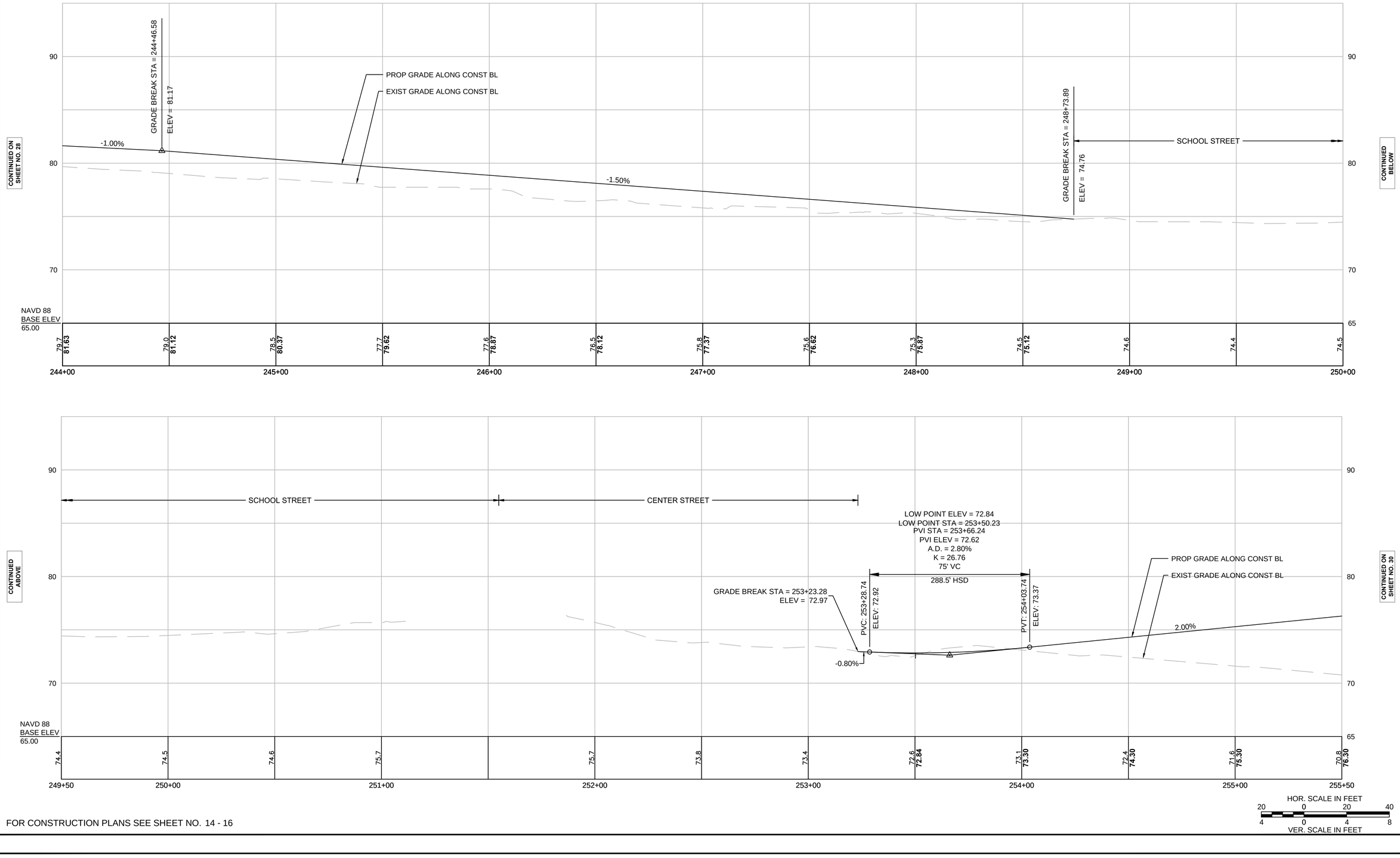
FOR CONSTRUCTION PLANS SEE SHEET NO. 12 - 14

608298_HD(PROFILES).DWG Plotted on 5-Sep-2018 8:37 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	159
PROJECT FILE NO.	608298		

PROFILES
PART 5 OF 11



FOR CONSTRUCTION PLANS SEE SHEET NO. 14 - 16

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

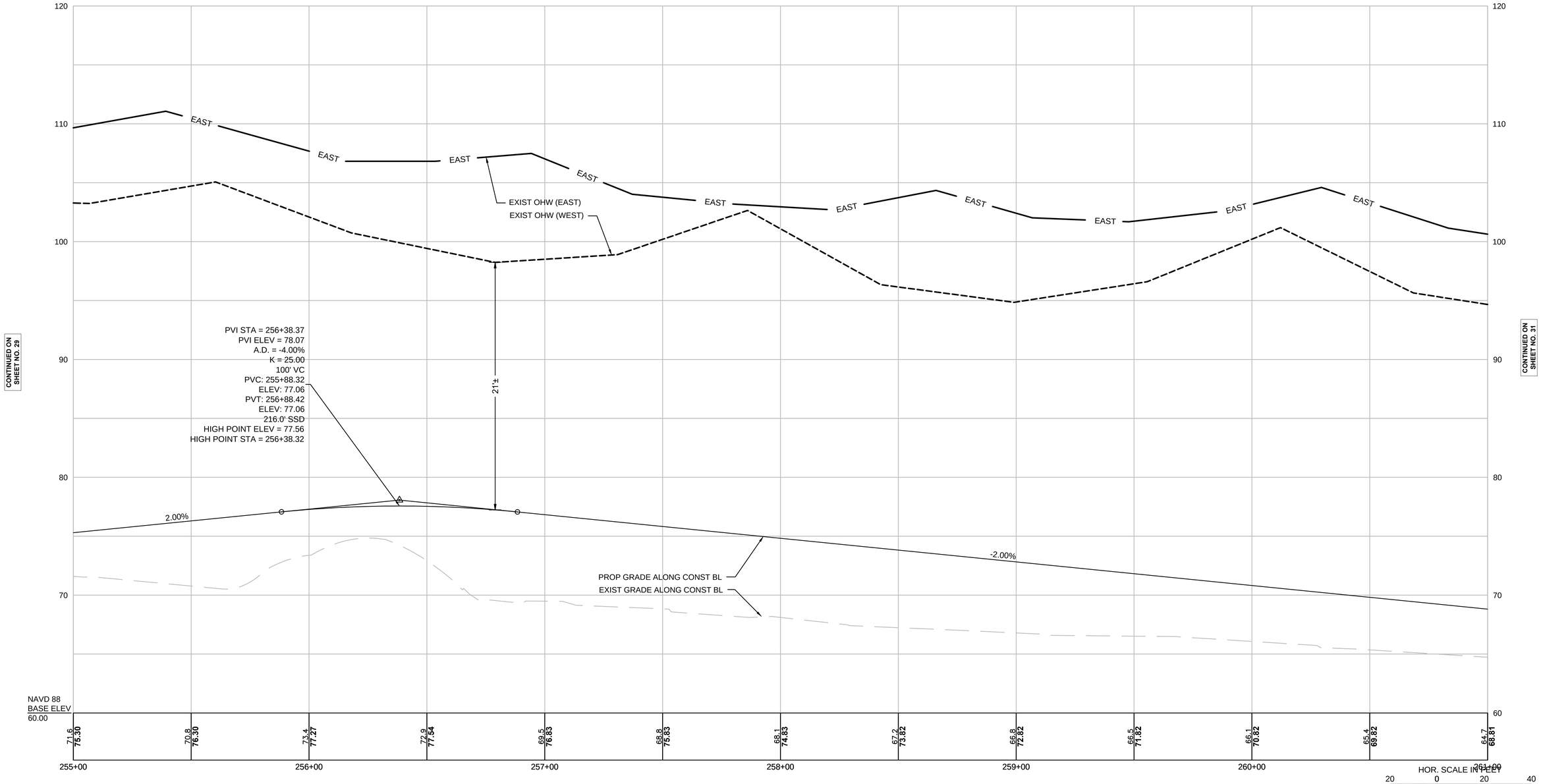
Plotted on 5-Sep-2018 8:37 PM
608298_HD(PROFILES).DWG

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	159
PROJECT FILE NO.	608298		

PROFILES
PART 6 OF 11

608298_HD(PROFILES).DWG Plotted on 5-Sep-2018 8:38 PM



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

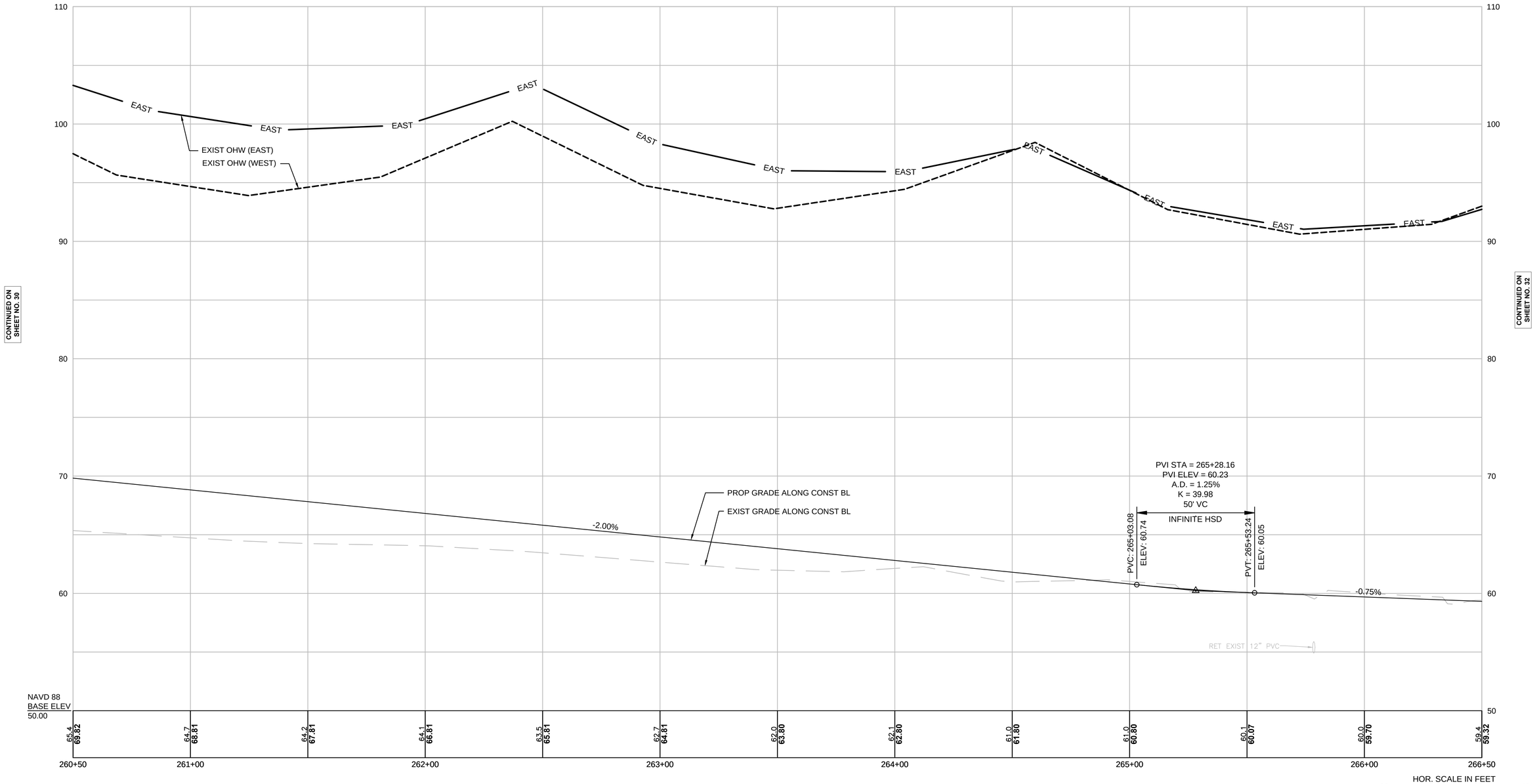
FOR CONSTRUCTION PLANS SEE SHEET NO. 16 - 18

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	159
PROJECT FILE NO.	608298		

PROFILES
PART 7 OF 11

608298_HD(PROFILES).DWG Plotted on 5-Sep-2018 8:38 PM



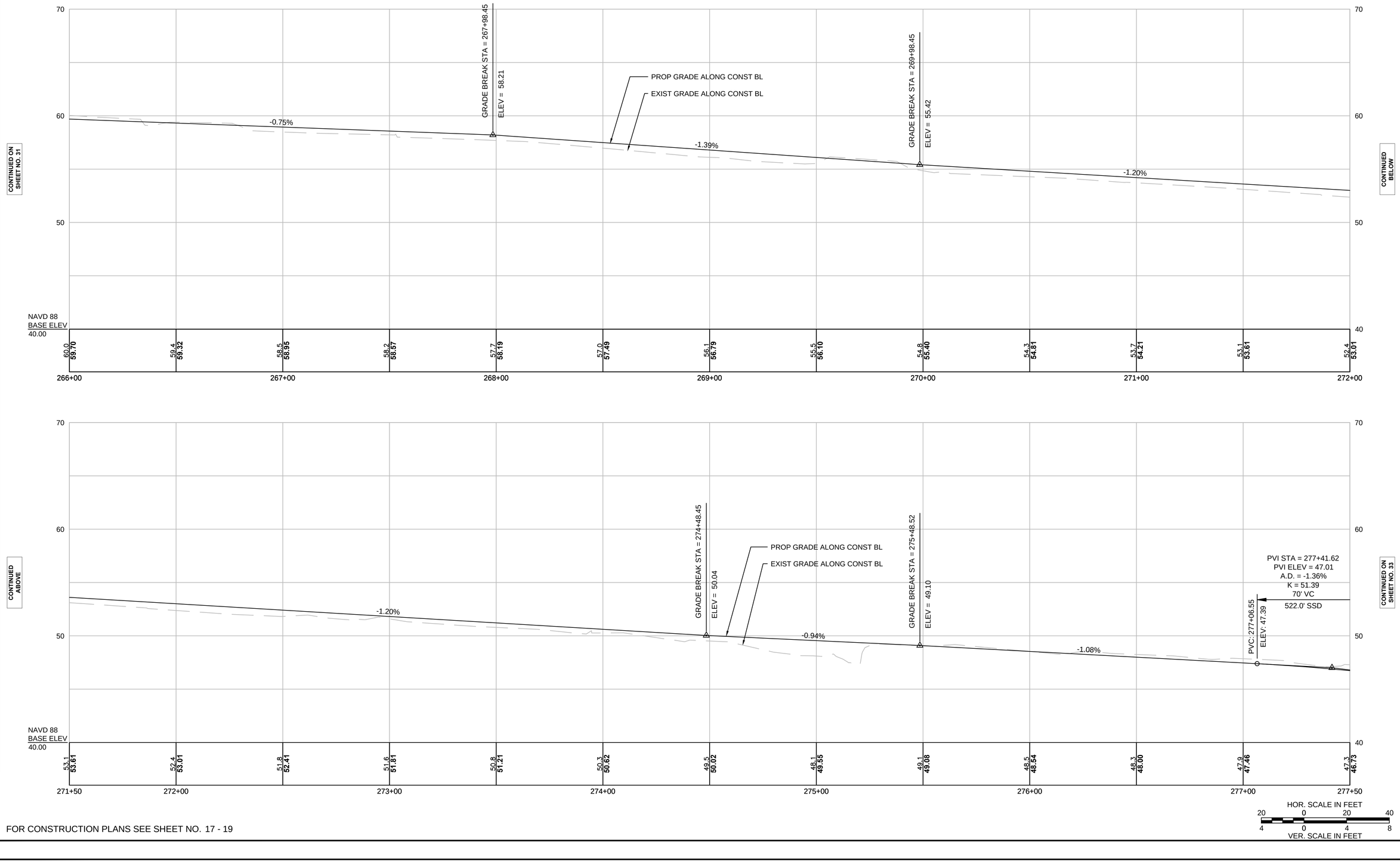
HOR. SCALE IN FEET
20 0 20 40
VER. SCALE IN FEET
4 0 4 8

FOR CONSTRUCTION PLANS SEE SHEET NO. 16 - 18

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	159
PROJECT FILE NO.	608298		

PROFILES
PART 8 OF 11



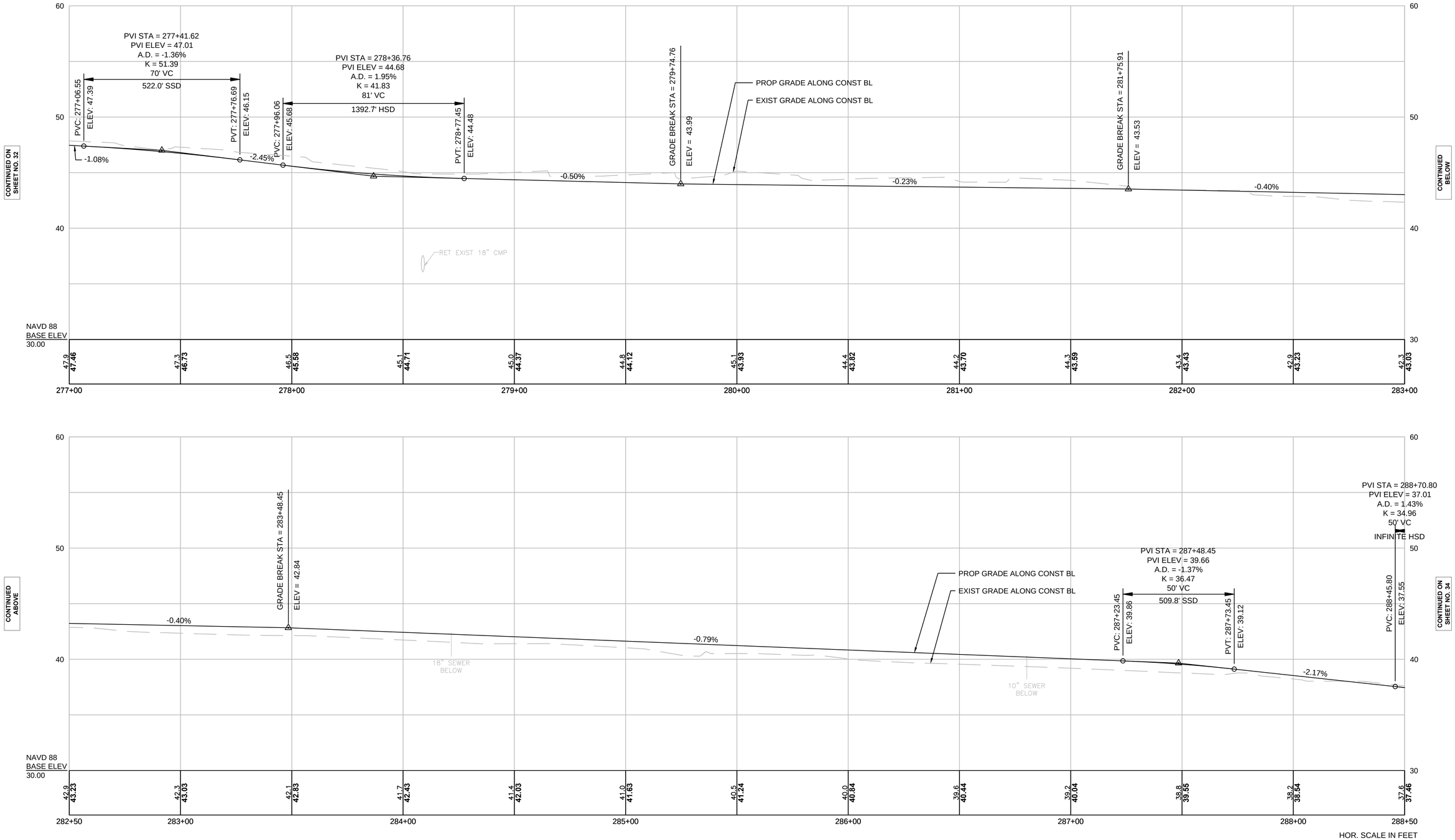
FOR CONSTRUCTION PLANS SEE SHEET NO. 17 - 19

608298_HD(PROFILES).DWG Plotted on 5-Sep-2018 8:38 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	159
PROJECT FILE NO.	608298		

PROFILES
PART 9 OF 11



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

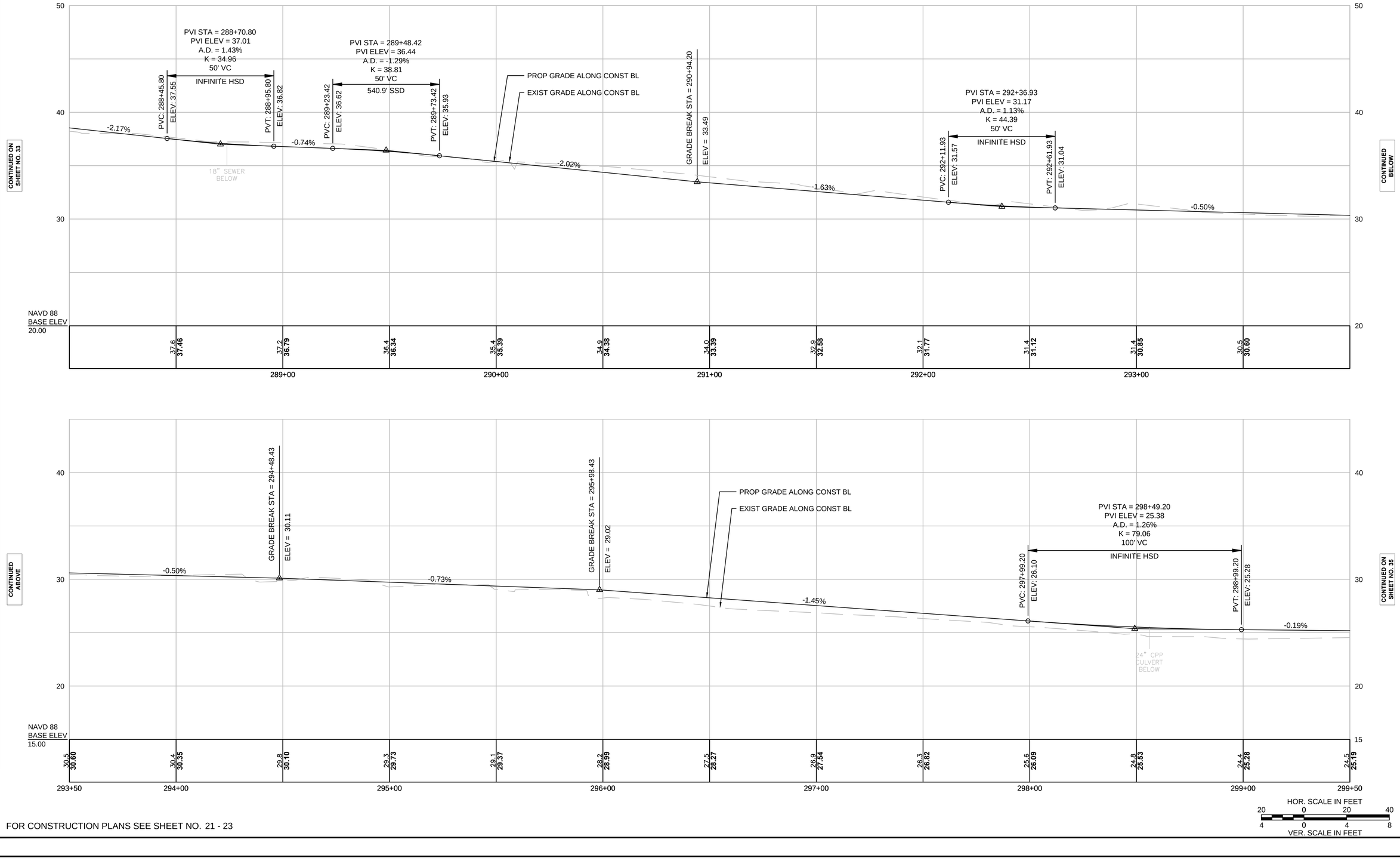
FOR CONSTRUCTION PLANS SEE SHEET NO. 19 - 21

608298_HD(PROFILES).DWG Plotted on 5-Sep-2018 8:38 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	34	159
PROJECT FILE NO.	608298		

PROFILES
PART 10 OF 11



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

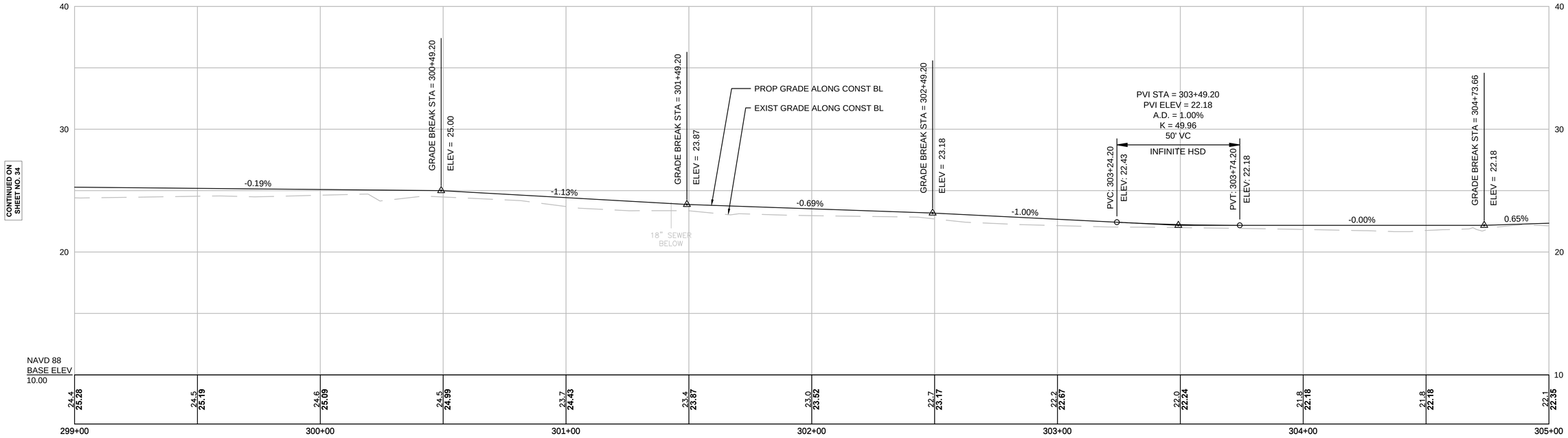
FOR CONSTRUCTION PLANS SEE SHEET NO. 21 - 23

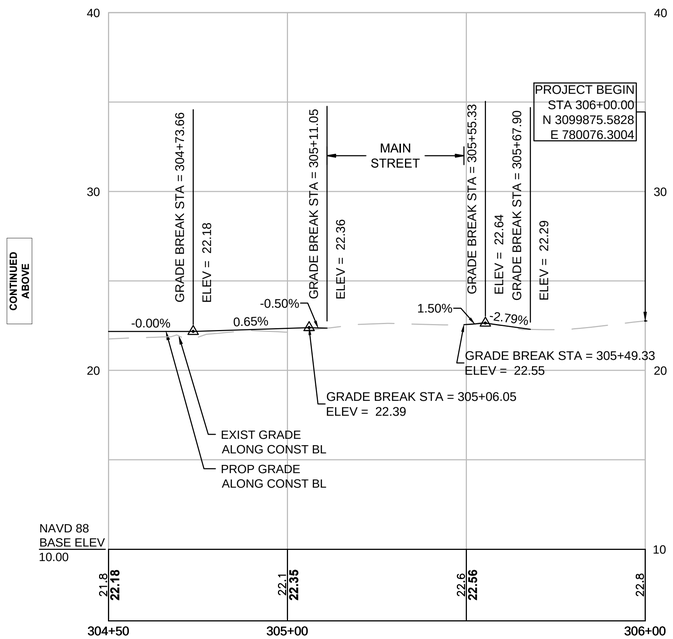
608298_HD(PROFILES).DWG Plotted on 5-Sep-2018 8:38 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	159
PROJECT FILE NO.	608298		

PROFILES
PART 11 OF 11





FOR CONSTRUCTION PLANS SEE SHEET NO. 23 - 24

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

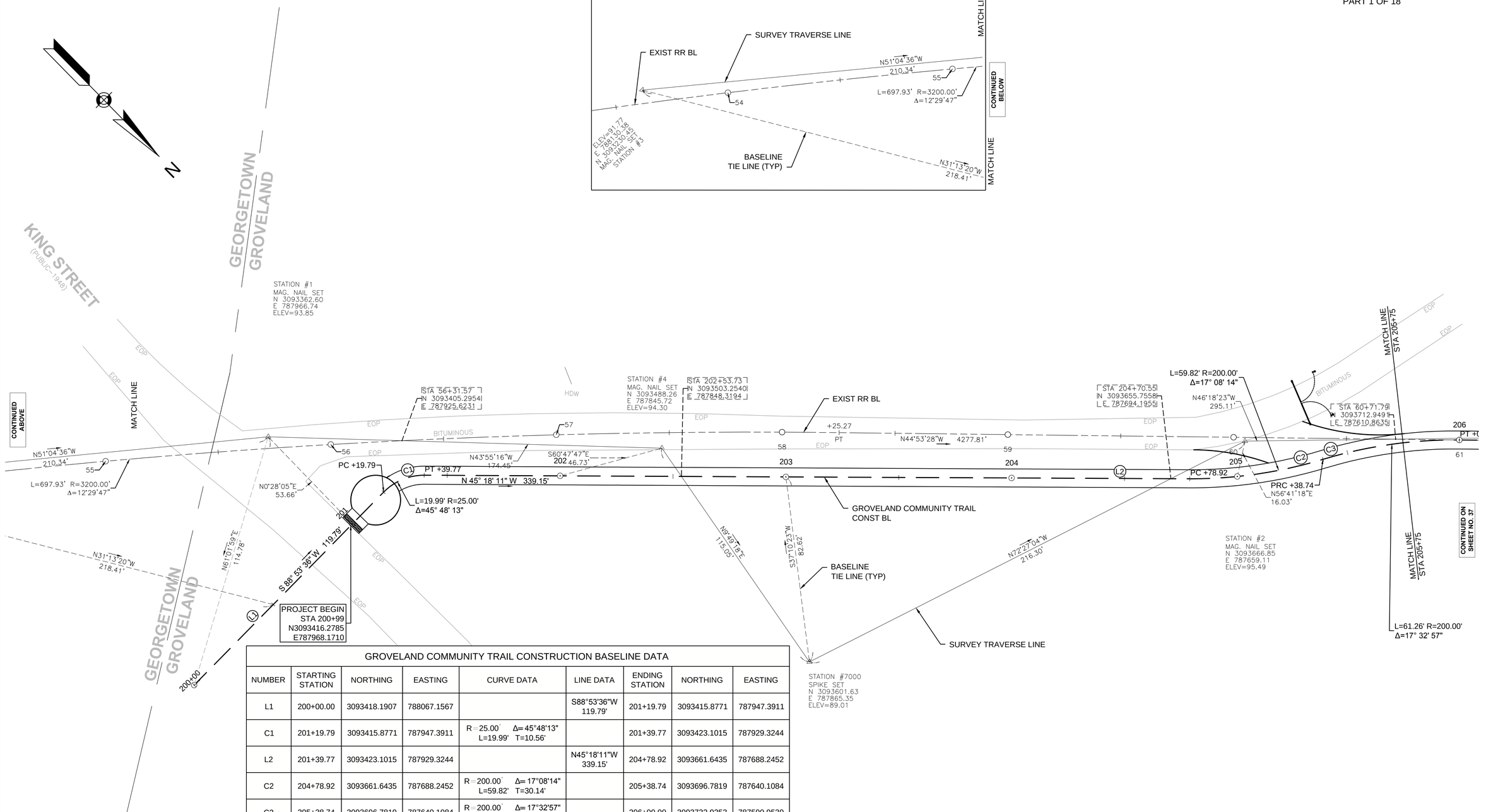
Plotted on 5-Sep-2018 8:38 PM
608298_HD(PROFILES).DWG

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 1 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:40 PM



GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	200+00.00	3093418.1907	788067.1567		S88°53'36"W 119.79'	201+19.79	3093415.8771	787947.3911
C1	201+19.79	3093415.8771	787947.3911	R=25.00' Δ=45°48'13" L=19.99' T=10.56'		201+39.77	3093423.1015	787929.3244
L2	201+39.77	3093423.1015	787929.3244		N45°18'11"W 339.15'	204+78.92	3093661.6435	787688.2452
C2	204+78.92	3093661.6435	787688.2452	R=200.00' Δ=17°08'14" L=59.82' T=30.14'		205+38.74	3093696.7819	787640.1084
C3	205+38.74	3093696.7819	787640.1084	R=200.00' Δ=17°32'57" L=61.26' T=30.87'		206+00.00	3093732.9353	787590.9530

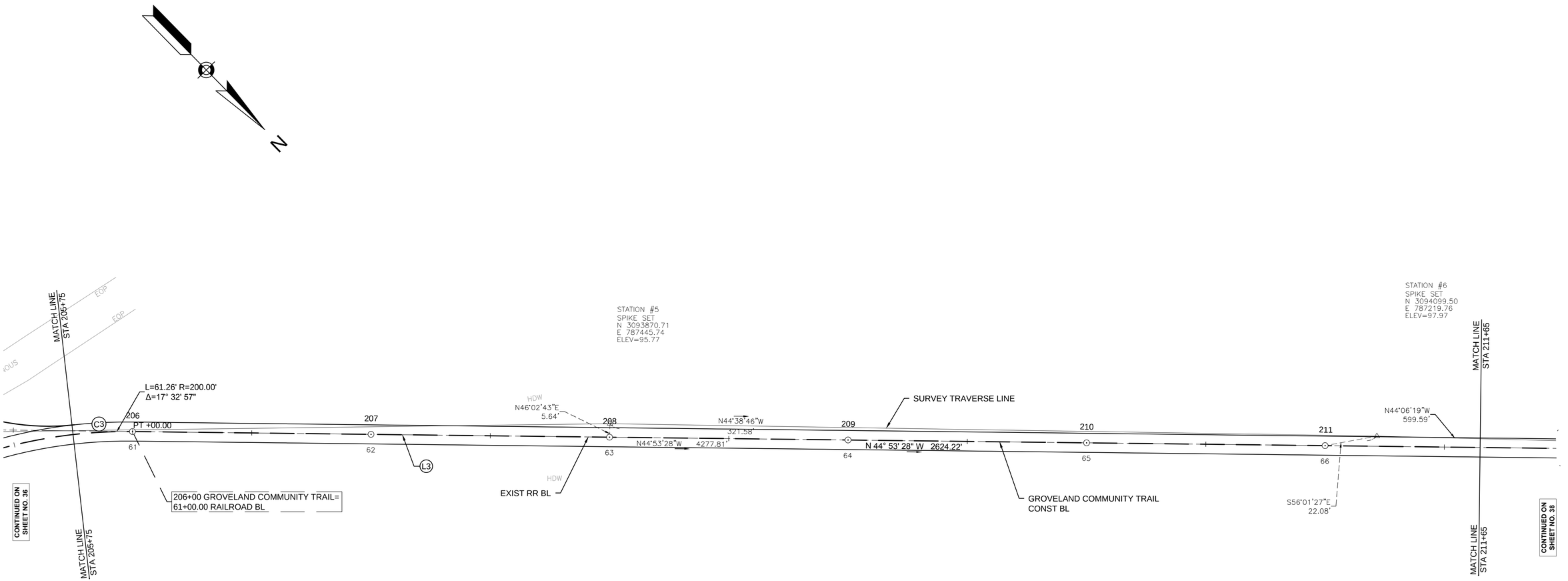
0 20 50 100
SCALE: 1" = 20'

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 2 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:40 PM



GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C3	205+38.74	3093696.7819	787640.1084	R = 200.00' Δ= 17°32'57" L=61.26' T=30.87'		206+00.00	3093732.9353	787590.9530
L3	206+00.00	3093732.9353	787590.9530		N44°53'28"W 2624.22'	232+24.22	3095592.0636	785738.8744

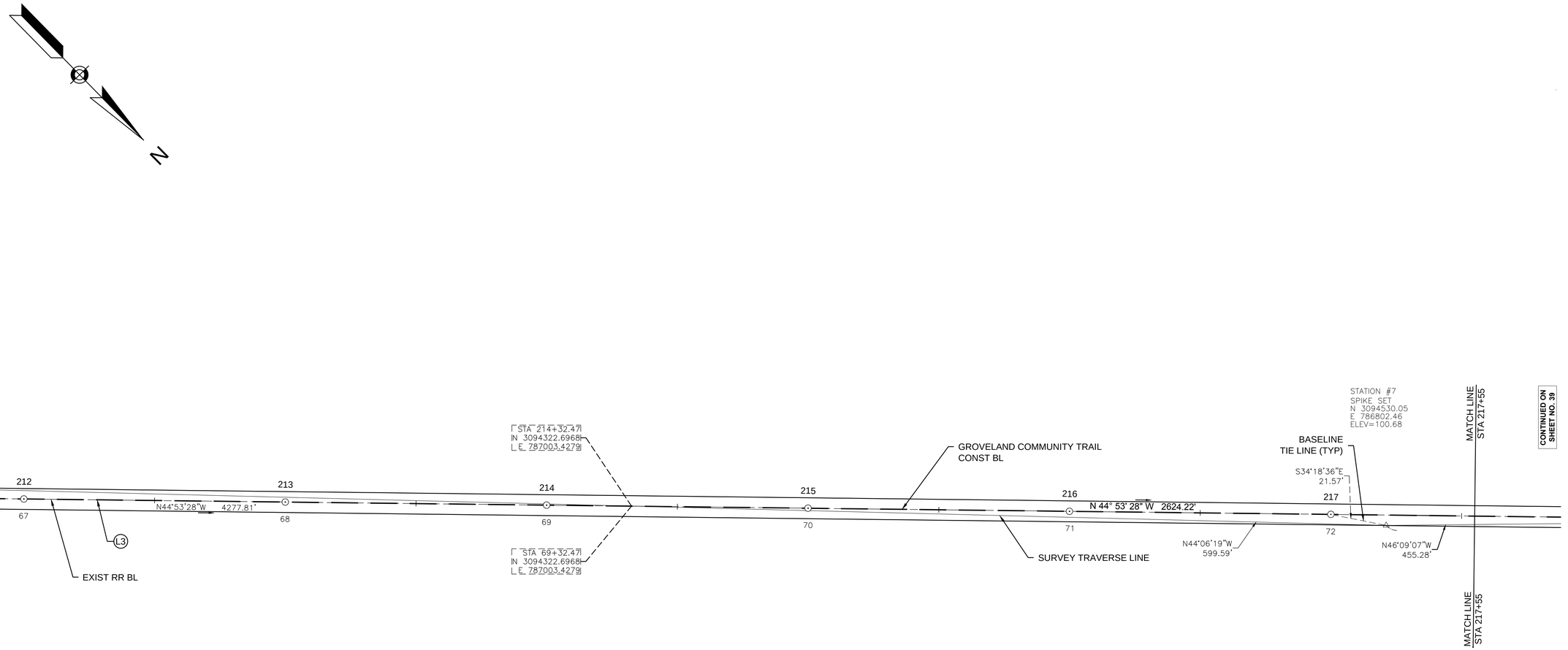
0 20 50 100
SCALE: 1" = 20'

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	38	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 3 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:40 PM



GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L3	206+00.00	3093732.9353	787590.9530		N44°53'28"W 2624.22'	232+24.22	3095592.0636	785738.8744

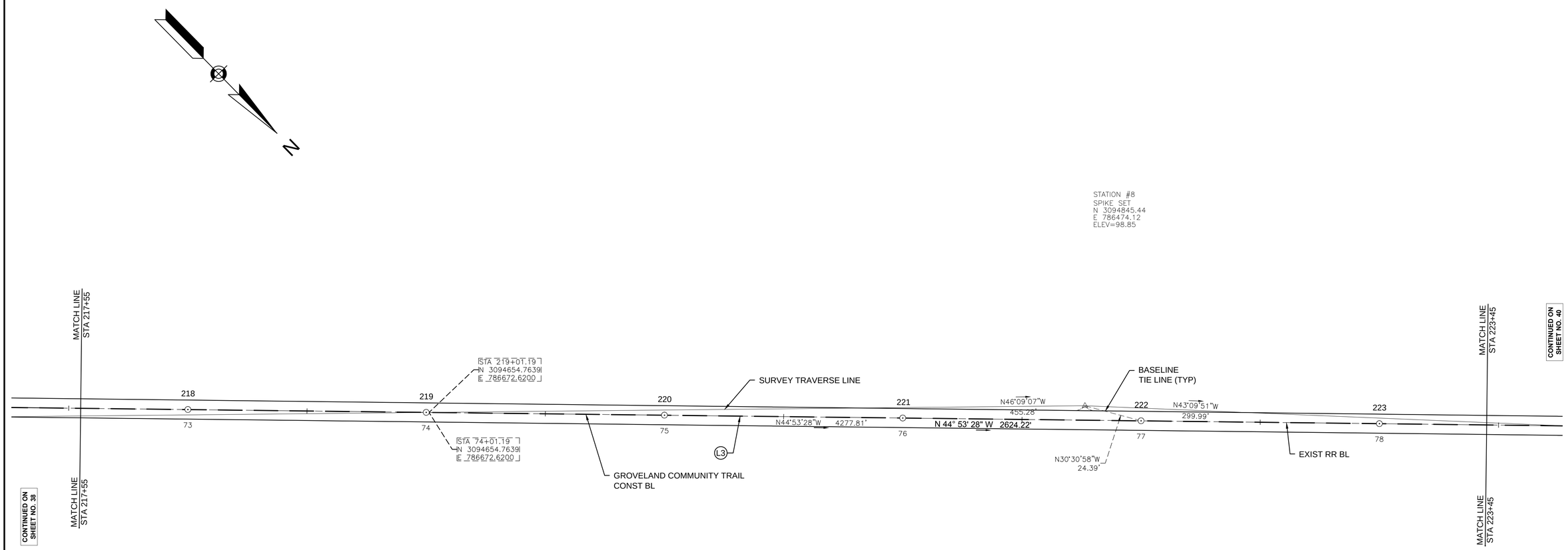
0 20 50 100
SCALE: 1" = 20'

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	39	159
PROJECT FILE NO.		608298	

SURVEY CONTROL PLANS
PART 4 OF 18

608298_HD\SURVEY CONTROL PLANS\.DWG Plotted on 5-Sep-2018 8:40 PM



GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L3	206+00.00	3093732.9353	787590.9530		N44°53'28"W 2624.22'	232+24.22	3095592.0636	785738.8744

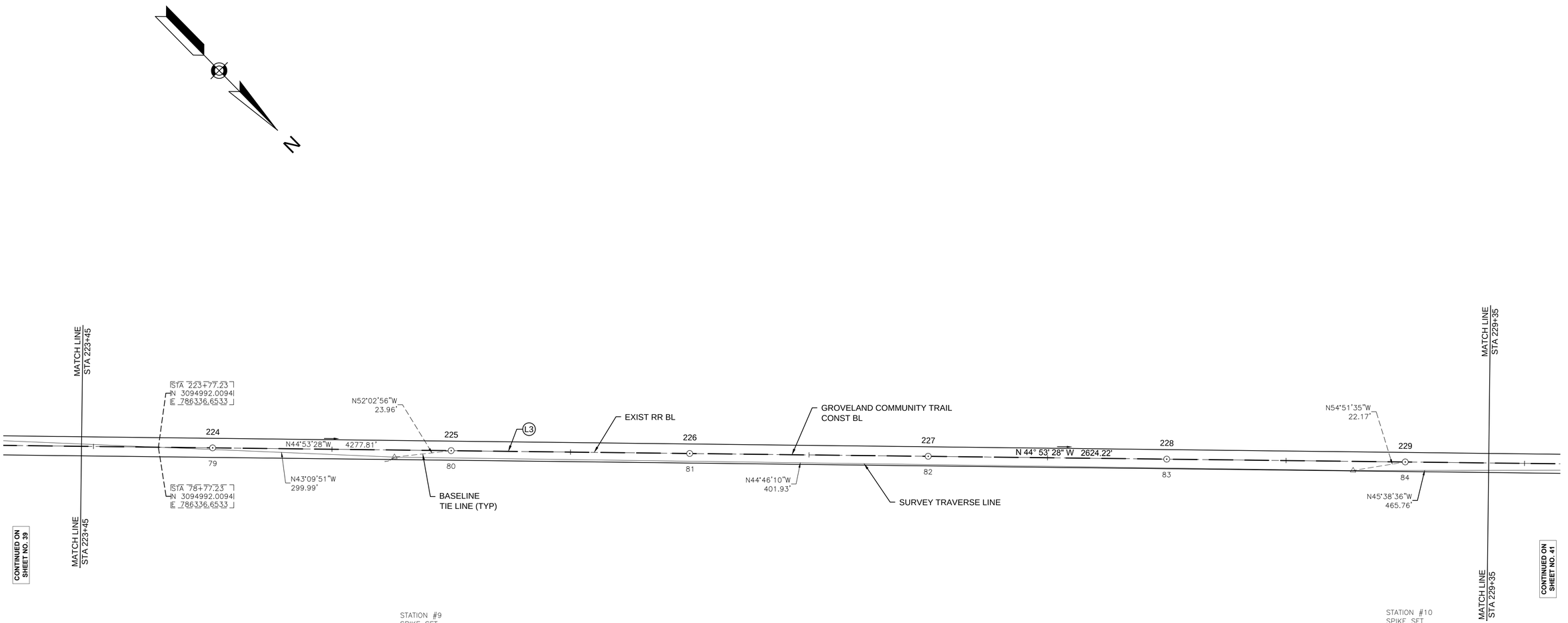
0 20 50 100
SCALE: 1" = 20'

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	40	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 5 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:41 PM



STATION #9
SPIKE SET
N 3095064.26
E 786268.90
ELEV=96.60

STATION #10
SPIKE SET
N 3095349.60
E 785985.83
ELEV=94.67

GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L3	206+00.00	3093732.9353	787590.9530		N44°53'28"W 2624.22'	232+24.22	3095592.0636	785738.8744

0 20 50 100
SCALE: 1" = 20'

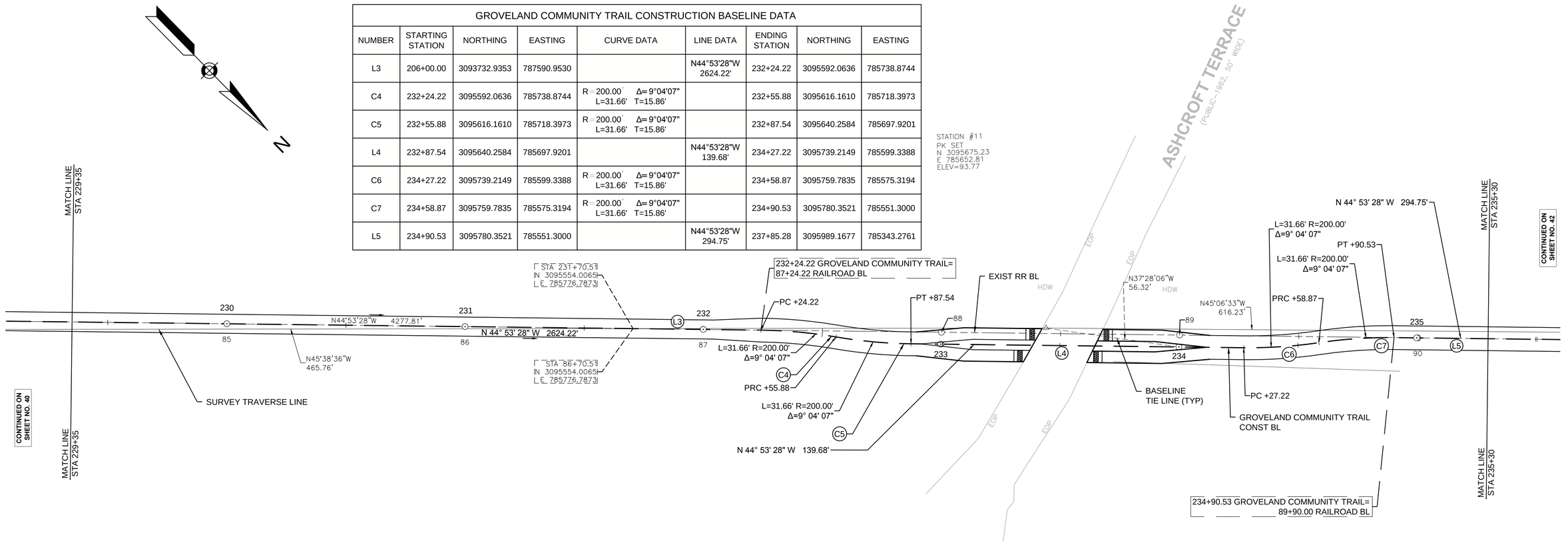
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 6 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:41 PM

GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L3	206+00.00	3093732.9353	787590.9530		N44°53'28"W 2624.22'	232+24.22	3095592.0636	785738.8744
C4	232+24.22	3095592.0636	785738.8744	R=200.00' Δ=9°04'07" L=31.66' T=15.86'		232+55.88	3095616.1610	785718.3973
C5	232+55.88	3095616.1610	785718.3973	R=200.00' Δ=9°04'07" L=31.66' T=15.86'		232+87.54	3095640.2584	785697.9201
L4	232+87.54	3095640.2584	785697.9201		N44°53'28"W 139.68'	234+27.22	3095739.2149	785599.3388
C6	234+27.22	3095739.2149	785599.3388	R=200.00' Δ=9°04'07" L=31.66' T=15.86'		234+58.87	3095759.7835	785575.3194
C7	234+58.87	3095759.7835	785575.3194	R=200.00' Δ=9°04'07" L=31.66' T=15.86'		234+90.53	3095780.3521	785551.3000
L5	234+90.53	3095780.3521	785551.3000		N44°53'28"W 294.75'	237+85.28	3095989.1677	785343.2761

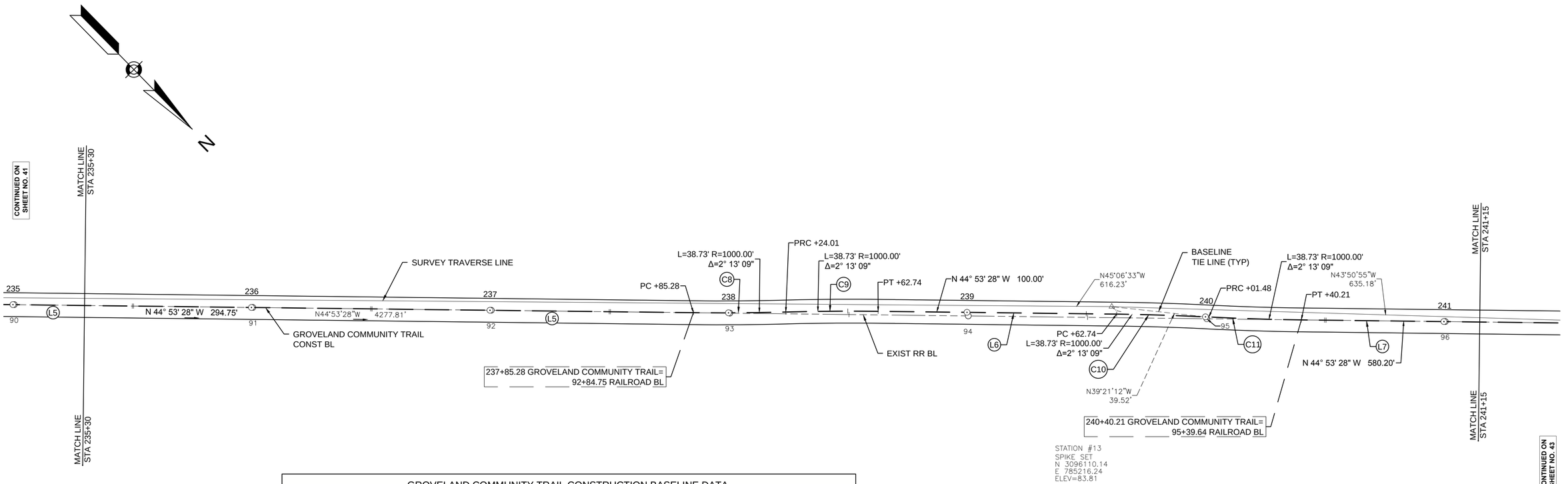


GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 7 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:41 PM



GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA

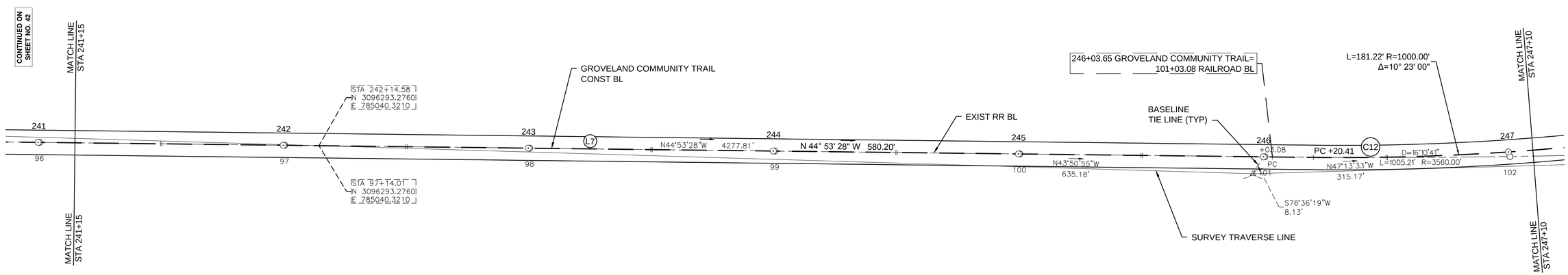
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L5	234+90.53	3095780.3521	785551.3000		N44°53'28"W 294.75'	237+85.28	3095989.1677	785343.2761
C8	237+85.28	3095989.1677	785343.2761	R=1000.00' Δ=2°13'09" L=38.73' T=19.37'		238+24.01	3096016.0714	785315.4159
C9	238+24.01	3096016.0714	785315.4159	R=1000.00' Δ=2°13'09" L=38.73' T=19.37'		238+62.74	3096042.9750	785287.5556
L6	238+62.74	3096042.9750	785287.5556		N44°53'28"W 100.00'	239+62.74	3096113.8199	785216.9794
C10	239+62.74	3096113.8199	785216.9794	R=1000.00' Δ=2°13'09" L=38.73' T=19.37'		240+01.48	3096141.7821	785190.1818
C11	240+01.48	3096141.7821	785190.1818	R=1000.00' Δ=2°13'09" L=38.73' T=19.37'		240+40.21	3096169.7444	785163.3842
L7	240+40.21	3096169.7444	785163.3842		N44°53'28"W 580.20'	246+20.41	3096580.7854	784753.9018

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	43	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 8 OF 18

CONTINUED ON SHEET NO. 42



CONTINUED ON SHEET NO. 44

STATION #14
SPIKE SET
N 3096568.21
E 784776.22
ELEV=77.46

GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L7	240+40.21	3096169.7444	785163.3842		N44°53'28"W 580.20'	246+20.41	3096580.7854	784753.9018
C12	246+20.41	3096580.7854	784753.9018	R=1000.00' Δ=10°23'00" L=181.22' T=90.86'		248+01.63	3096696.9137	784615.0984

0 20 50 100
SCALE: 1" = 20'

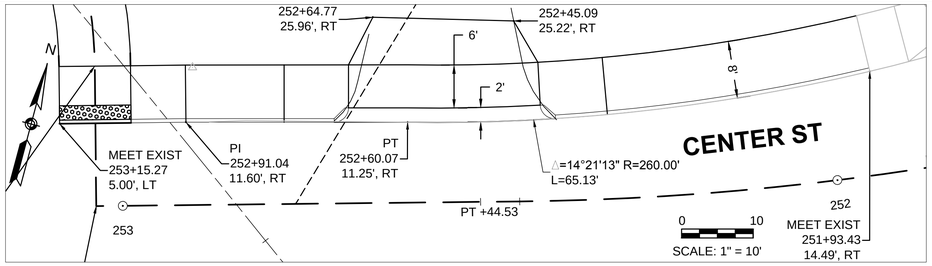
608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:41 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	44	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 9 OF 18

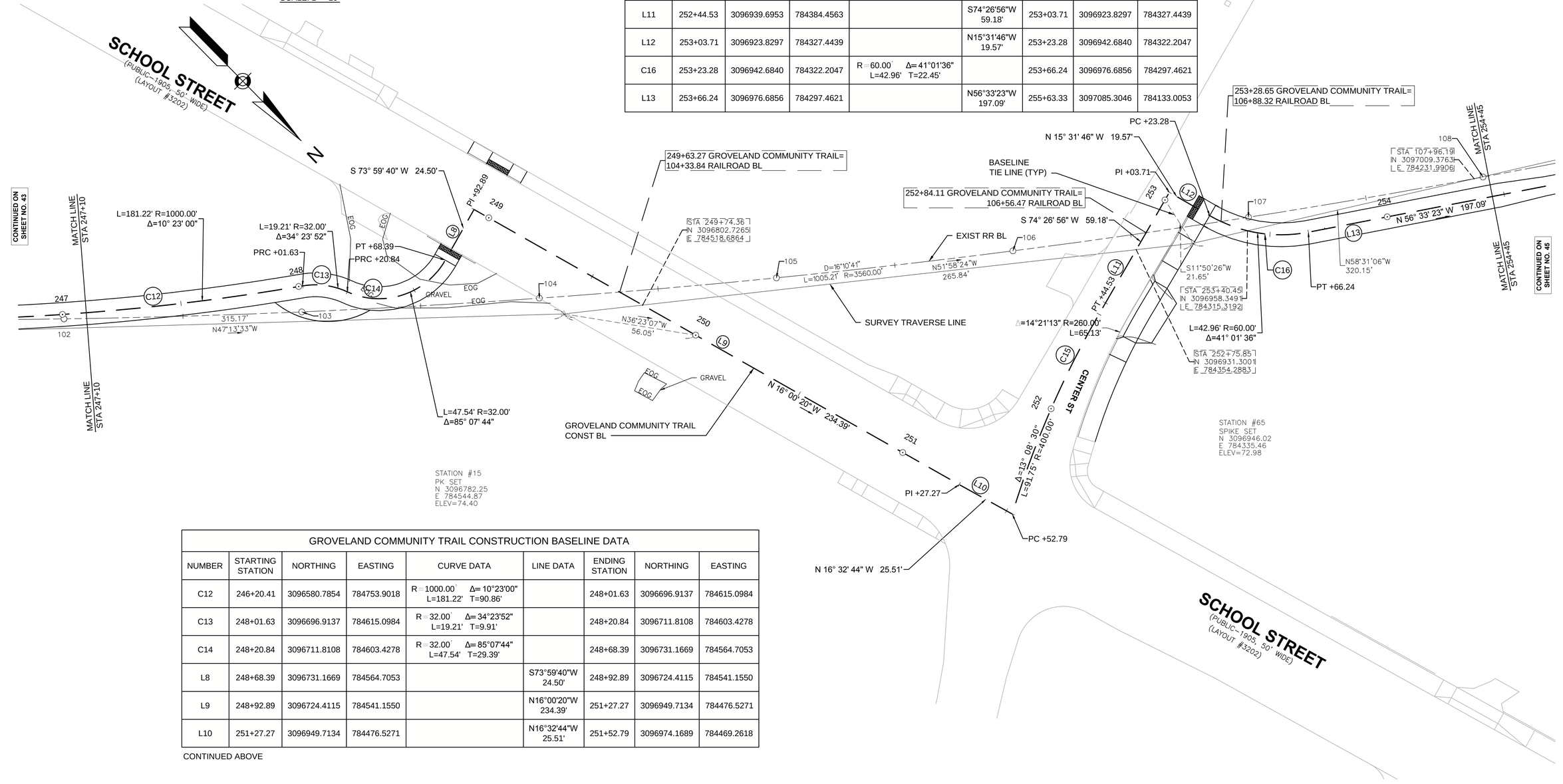
608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:41 PM



CENTER STREET SIDEWALK ENLARGEMENT DETAIL
SCALE: 1" = 10'

CONTINUED BELOW

GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C15	251+52.79	3096974.1689	784469.2618	R=400.00' Δ=13°08'30" L=91.75' T=46.07'		252+44.53	3096939.6953	784384.4563
L11	252+44.53	3096939.6953	784384.4563		S74°26'56"W 59.18'	253+03.71	3096923.8297	784327.4439
L12	253+03.71	3096923.8297	784327.4439		N15°31'46"W 19.57'	253+23.28	3096942.6840	784322.2047
C16	253+23.28	3096942.6840	784322.2047	R=60.00' Δ=41°01'36" L=42.96' T=22.45'		253+66.24	3096976.6856	784297.4621
L13	253+66.24	3096976.6856	784297.4621		N56°33'23"W 197.09'	255+63.33	3097085.3046	784133.0053



GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C12	246+20.41	3096580.7854	784753.9018	R=1000.00' Δ=10°23'00" L=181.22' T=90.86'		248+01.63	3096696.9137	784615.0984
C13	248+01.63	3096696.9137	784615.0984	R=32.00' Δ=34°23'52" L=19.21' T=9.91'		248+20.84	3096711.8108	784603.4278
C14	248+20.84	3096711.8108	784603.4278	R=32.00' Δ=85°07'44" L=47.54' T=29.39'		248+68.39	3096731.1669	784564.7053
L8	248+68.39	3096731.1669	784564.7053		S73°59'40"W 24.50'	248+92.89	3096724.4115	784541.1550
L9	248+92.89	3096724.4115	784541.1550		N16°00'20"W 234.39'	251+27.27	3096949.7134	784476.5271
L10	251+27.27	3096949.7134	784476.5271		N16°32'44"W 25.51'	251+52.79	3096974.1689	784469.2618

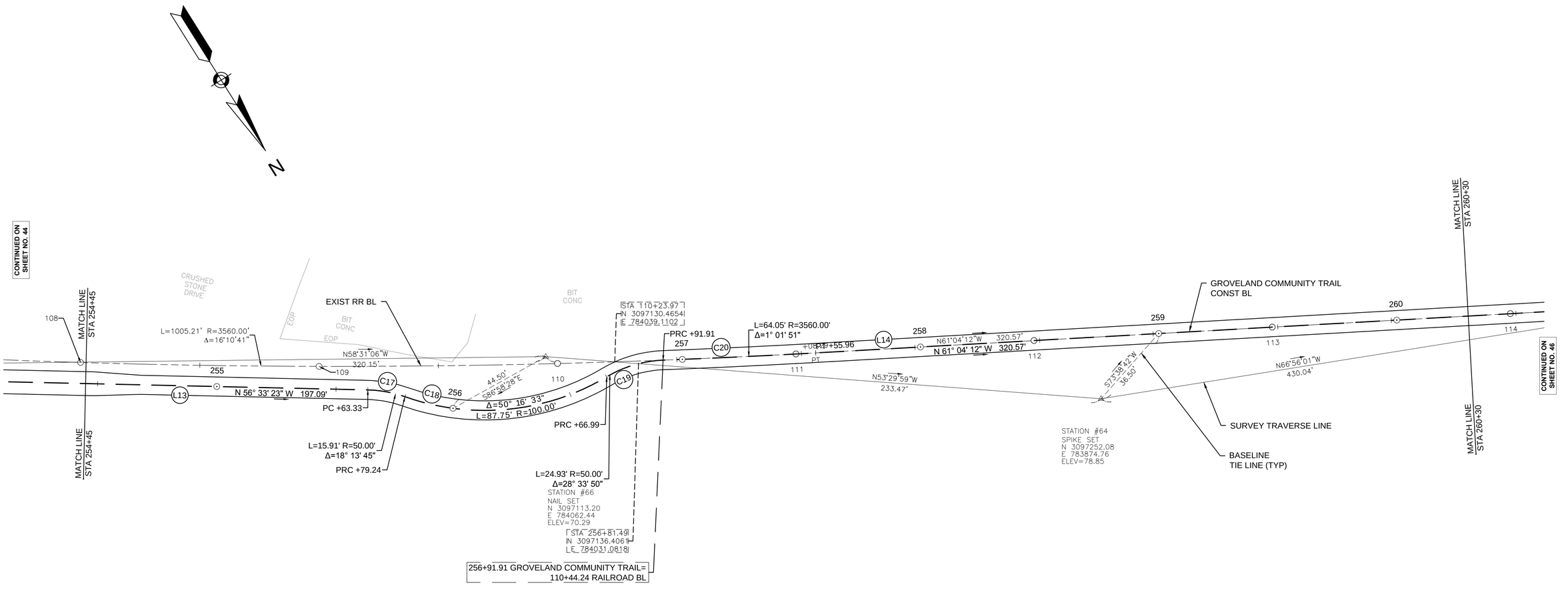
CONTINUED ABOVE

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	45	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 10 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:42 PM



GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA

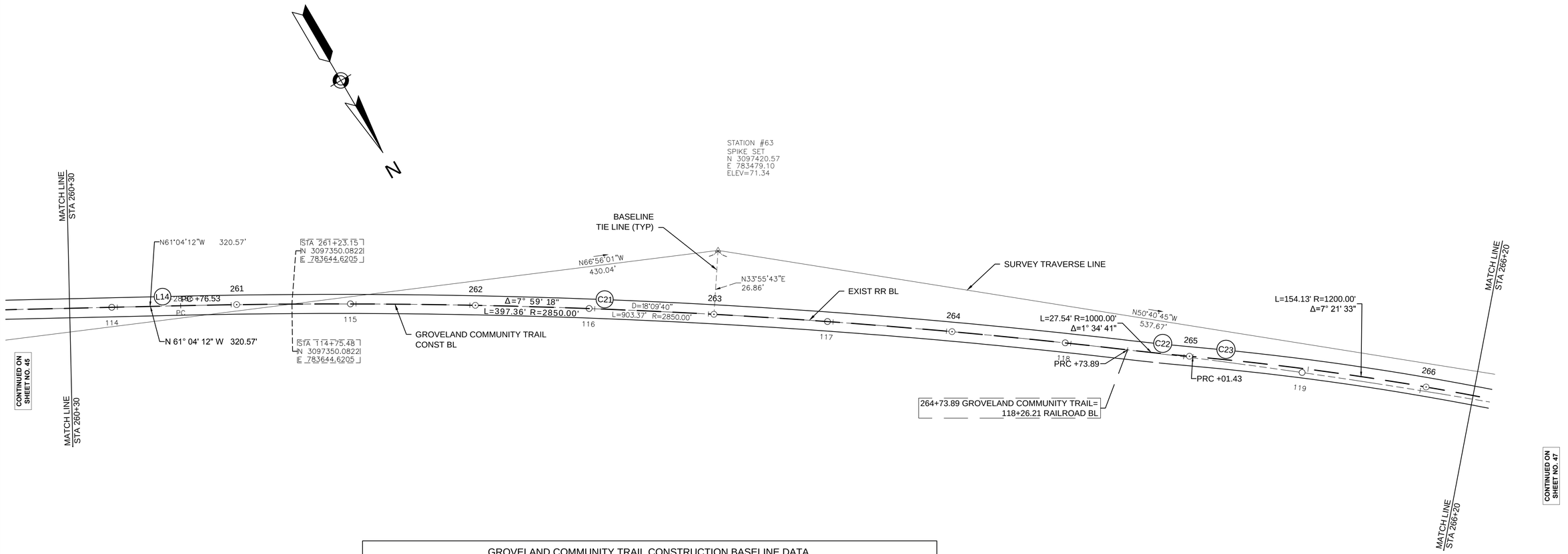
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L13	253+66.24	3096976.6856	784297.4621		N56°33'23"W 197.09'	255+63.33	3097085.3046	784133.0053
C17	255+63.33	3097085.3046	784133.0053	R=50.00' Δ=18°13'45" L=15.91' T=8.02'		255+79.24	3097096.0185	784121.3371
C18	255+79.24	3097096.0185	784121.3371	R=100.00' Δ=50°16'33" L=87.75' T=46.92'		256+66.99	3097133.9736	784045.3266
C19	256+66.99	3097133.9736	784045.3266	R=50.00' Δ=28°33'50" L=24.93' T=12.73'		256+91.91	3097140.6404	784021.5750
C20	256+91.91	3097140.6404	784021.5750	R=3560.00' Δ=1°01'51" L=64.05' T=32.02'		257+55.96	3097172.1251	783965.8020
L14	257+55.96	3097172.1251	783965.8020		N61°04'12"W 320.57'	260+76.53	3097327.1967	783685.2380

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	46	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 11 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:42 PM



GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L14	257+55.96	3097172.1251	783965.8020		N61°04'12"W 320.57'	260+76.53	3097327.1967	783685.2380
C21	260+76.53	3097327.1967	783685.2380	R=2850.00' Δ=7°59'18" L=397.36' T=199.00'		264+73.89	3097542.9971	783351.9705
C22	264+73.89	3097542.9971	783351.9705	R=1000.00' Δ=1°34'41" L=27.54' T=13.77'		265+01.43	3097559.2344	783329.7276
C23	265+01.43	3097559.2344	783329.7276	R=1200.00' Δ=7°21'33" L=154.13' T=77.17'		266+55.55	3097656.2057	783210.0636

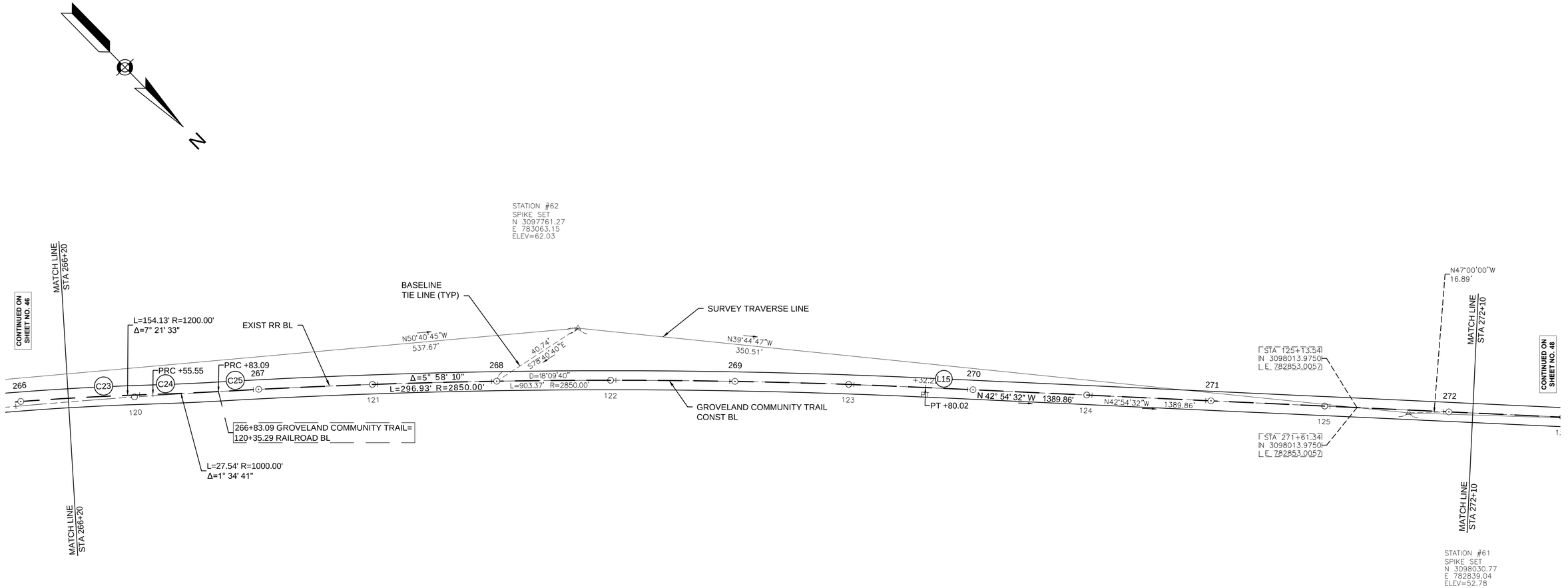
0 20 50 100
SCALE: 1" = 20'

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	47	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 12 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:42 PM



GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C23	265+01.43	3097559.2344	783329.7276	R=1200.00' Δ=7°21'33" L=154.13' T=77.17'		266+55.55	3097656.2057	783210.0636
C24	266+55.55	3097656.2057	783210.0636	R=1000.00' Δ=1°34'41" L=27.54' T=13.77'		266+83.09	3097674.6010	783189.5694
C25	266+83.09	3097674.6010	783189.5694	R=2850.00' Δ=5°58'10" L=296.93' T=148.60'		269+80.02	3097881.1693	782976.4548
L15	269+80.02	3097881.1693	782976.4548		N42°54'32"W 1389.86'	283+69.88	3098899.1523	782030.1918

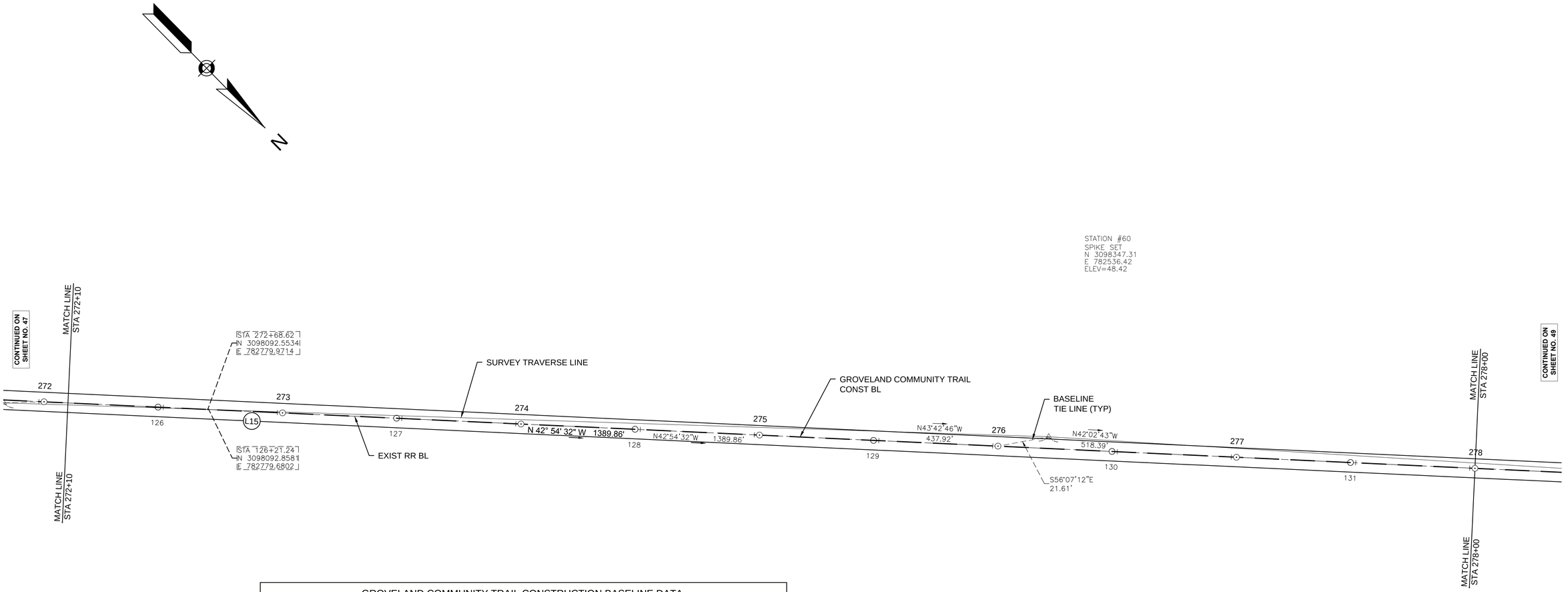
0 20 50 100
SCALE: 1" = 20'

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	48	159
PROJECT FILE NO.		608298	

SURVEY CONTROL PLANS
PART 13 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:42 PM



STATION #60
SPIKE SET
N 3098347.31
E 782536.42
ELEV=48.42

GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L15	269+80.02	3097881.1693	782976.4548		N42°54'32"W 1389.86'	283+69.88	3098899.1523	782030.1918

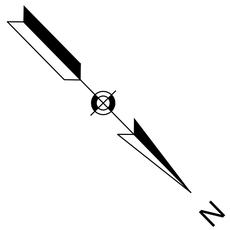
0 20 50 100
SCALE: 1" = 20'

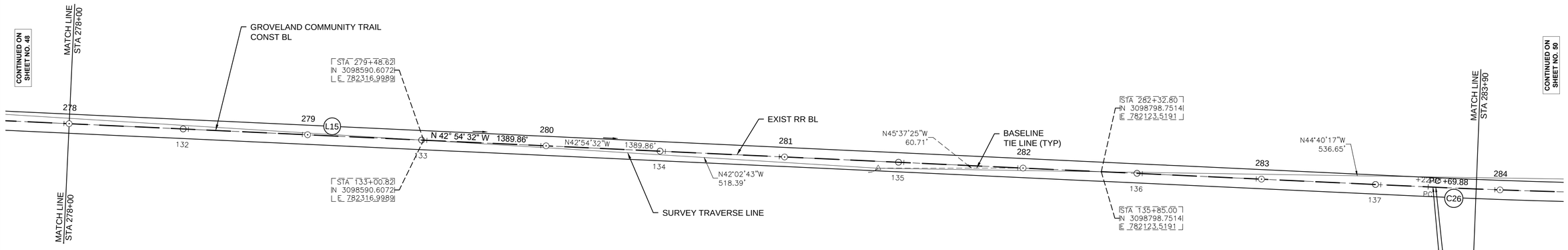
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	49	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 14 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:42 PM





GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L15	269+80.02	3097881.1693	782976.4548		N42°54'32"W 1389.86'	283+69.88	3098899.1523	782030.1918
C26	283+69.88	3098899.1523	782030.1918	R=2865.00' Δ=5°33'29" L=277.92' T=139.07'		286+47.80	3099093.2221	781831.4050

GROVELAND
GROVELAND COMMUNITY TRAIL

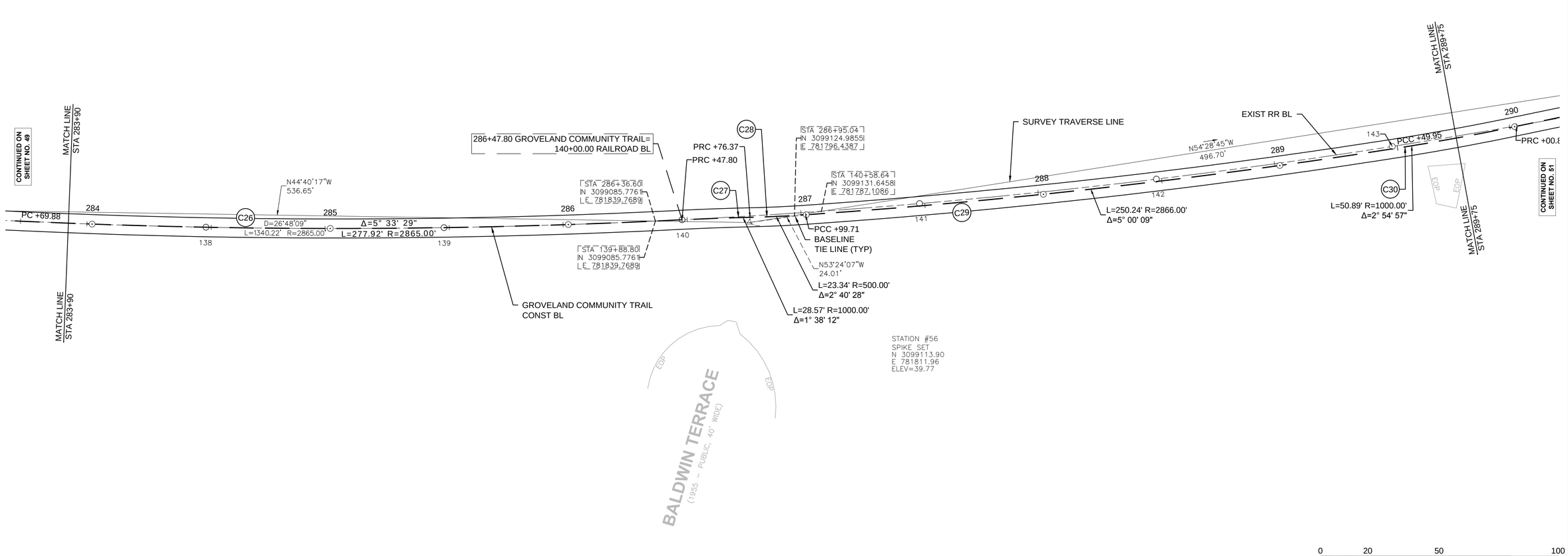
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	50	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 15 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:42 PM

N

GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C26	283+69.88	3098899.1523	782030.1918	R=2865.00' Δ=5°33'29" L=277.92' T=139.07'		286+47.80	3099093.2221	781831.4050
C27	286+47.80	3099093.2221	781831.4050	R=1000.00' Δ=1°38'12" L=28.57' T=14.28'		286+76.37	3099112.4666	781810.2937
C29	286+99.71	3099128.0310	781792.9058	R=2866.00' Δ=5°00'09" L=250.24' T=125.20'		289+49.95	3099282.0233	781595.7634
C30	289+49.95	3099282.0233	781595.7634	R=1000.00' Δ=2°54'57" L=50.89' T=25.45'		290+00.84	3099310.5039	781553.5946



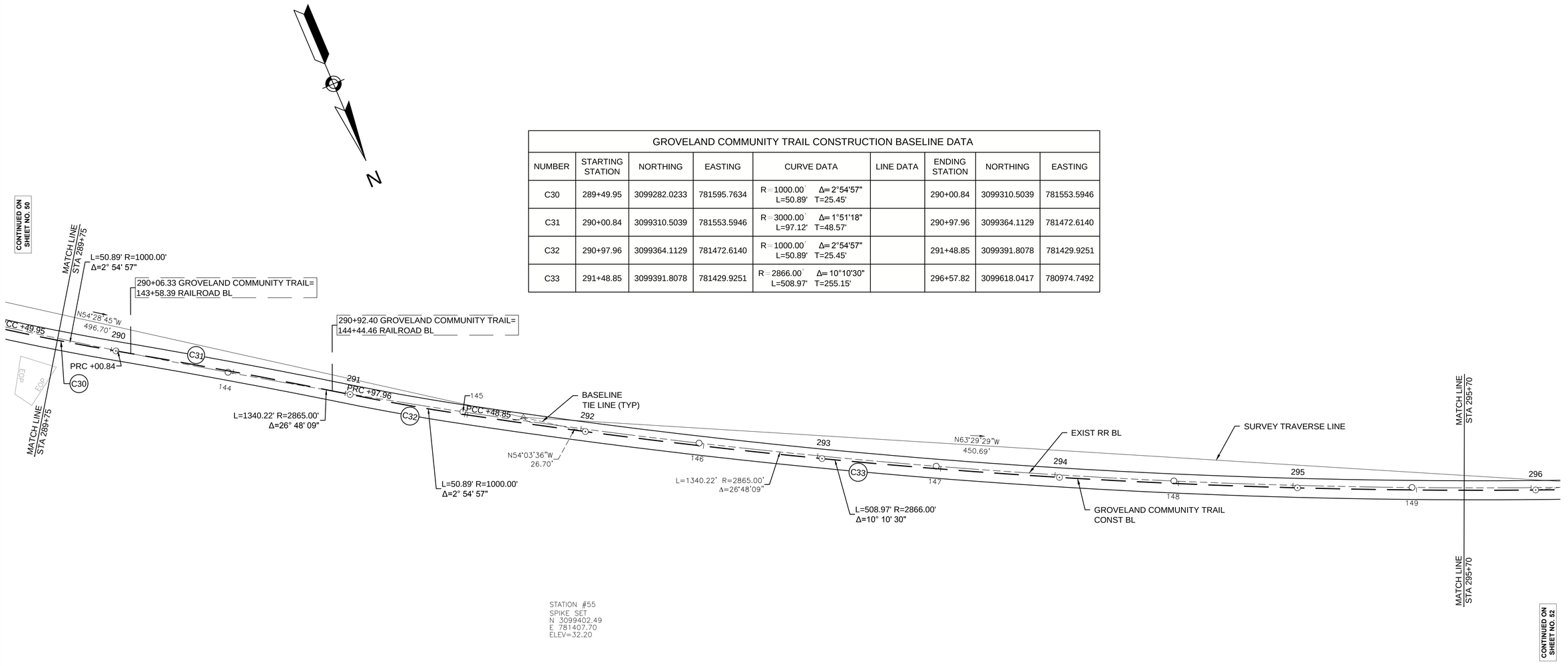
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	51	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 16 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:42 PM

GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C30	289+49.95	3099282.0233	781595.7634	R=1000.00' Δ=2°54'57" L=50.89' T=25.45'		290+00.84	3099310.5039	781553.5946
C31	290+00.84	3099310.5039	781553.5946	R=3000.00' Δ=1°51'18" L=97.12' T=48.57'		290+97.96	3099364.1129	781472.6140
C32	290+97.96	3099364.1129	781472.6140	R=1000.00' Δ=2°54'57" L=50.89' T=25.45'		291+48.85	3099391.8078	781429.9251
C33	291+48.85	3099391.8078	781429.9251	R=2866.00' Δ=10°10'30" L=508.97' T=255.15'		296+57.82	3099618.0417	780974.7492

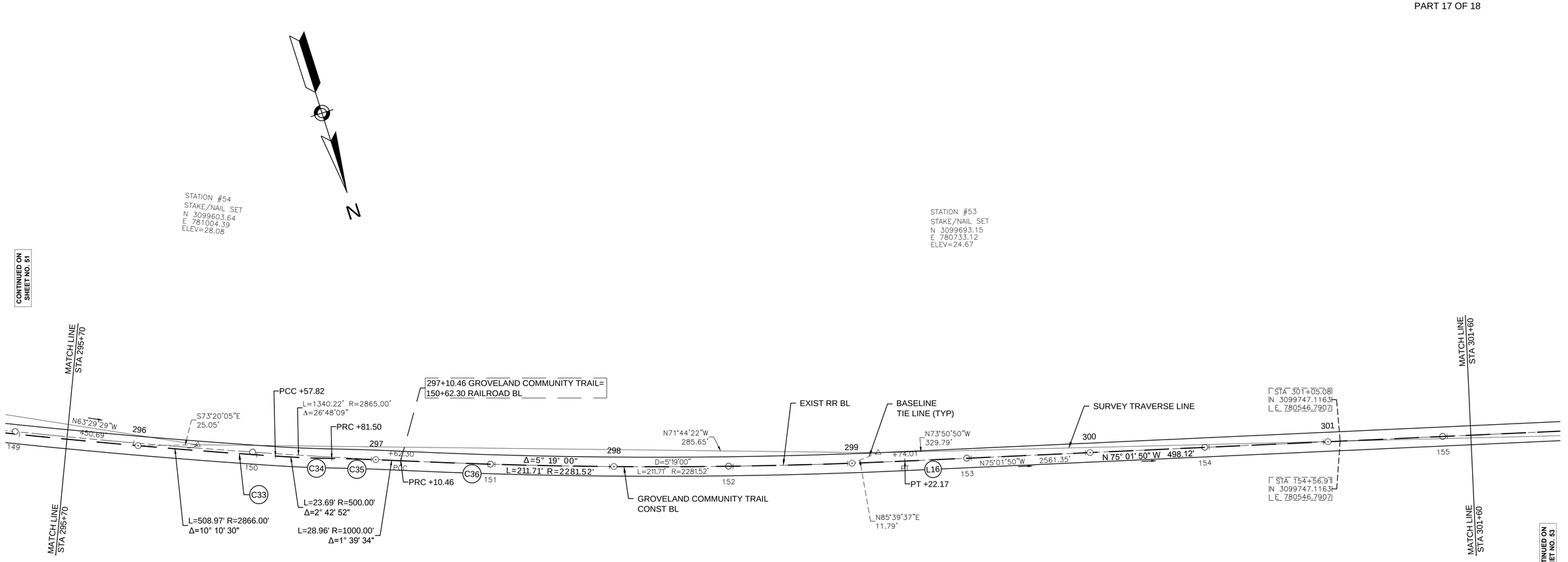


GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	52	159
PROJECT FILE NO.	608298		

SURVEY CONTROL PLANS
PART 17 OF 18

608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 5-Sep-2018 8:43 PM



GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C33	291+48.85	3099391.8078	781429.9251	R=2866.00' Δ=10°10'30" L=508.97' T=255.15'		296+57.82	3099618.0417	780974.7492
C34	296+57.82	3099618.0417	780974.7492	R=500.00' Δ=2°42'52" L=23.69' T=11.85'		296+81.50	3099626.1361	780952.4904
C35	296+81.50	3099626.1361	780952.4904	R=1000.00' Δ=1°39'34" L=28.96' T=14.48'		297+10.46	3099635.7825	780925.1839
C36	297+10.46	3099635.7825	780925.1839	R=2281.52' Δ=5°19'00" L=211.71' T=105.93'		299+22.17	3099699.8718	780723.4872
L16	299+22.17	3099699.8718	780723.4872		N75°01'50"W 498.12'	304+20.29	3099828.5375	780242.2717

0 20 50 100
SCALE: 1" = 20'

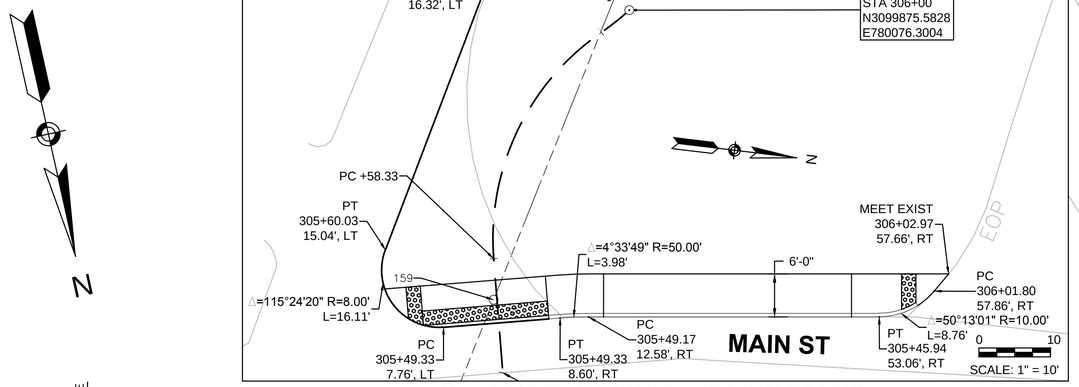
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	53	159
PROJECT FILE NO.	608298		

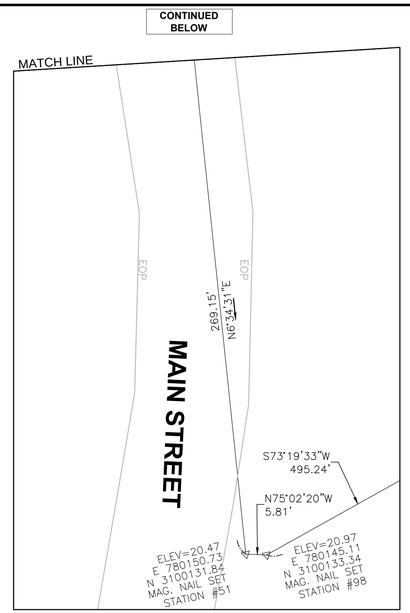
SURVEY CONTROL PLANS
PART 18 OF 18

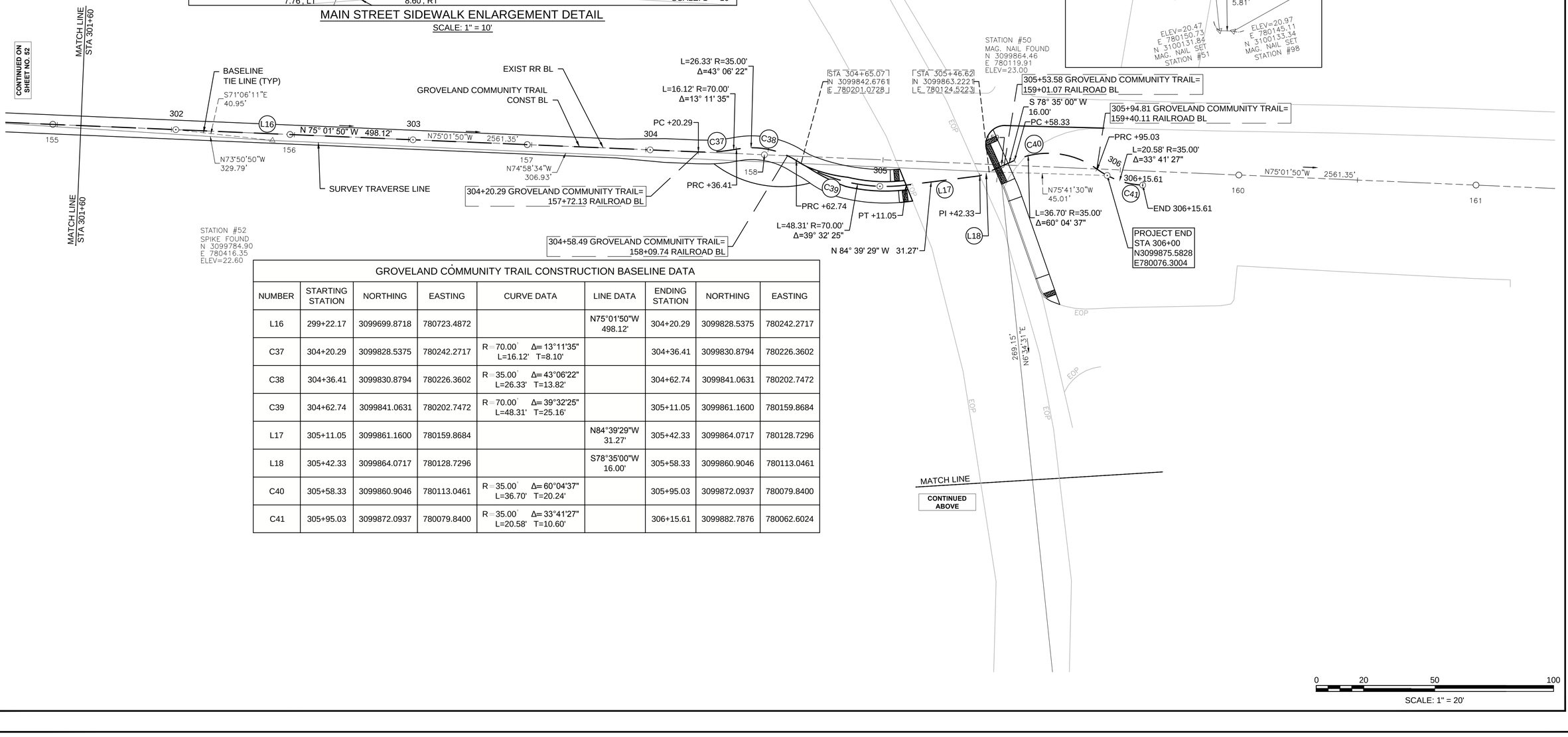
608298_HD\SURVEY CONTROL PLANS).DWG Plotted on 6-Sep-2018 1:00 PM

CONTINUED BELOW



MAIN STREET SIDEWALK ENLARGEMENT DETAIL
SCALE: 1" = 10'





STATION #52
SPIKE FOUND
N 3099784.90
E 780416.35
ELEV=22.60

MATCH LINE
STA 301+60

GROVELAND COMMUNITY TRAIL CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L16	299+22.17	3099699.8718	780723.4872		N75°01'50"W 498.12'	304+20.29	3099828.5375	780242.2717
C37	304+20.29	3099828.5375	780242.2717	R=70.00' Δ=13°11'35" L=16.12' T=8.10'		304+36.41	3099830.8794	780226.3602
C38	304+36.41	3099830.8794	780226.3602	R=35.00' Δ=43°06'22" L=26.33' T=13.82'		304+62.74	3099841.0631	780202.7472
C39	304+62.74	3099841.0631	780202.7472	R=70.00' Δ=39°32'25" L=48.31' T=25.16'		305+11.05	3099861.1600	780159.8684
L17	305+11.05	3099861.1600	780159.8684		N84°39'29"W 31.27'	305+42.33	3099864.0717	780128.7296
L18	305+42.33	3099864.0717	780128.7296		S78°35'00"W 16.00'	305+58.33	3099860.9046	780113.0461
C40	305+58.33	3099860.9046	780113.0461	R=35.00' Δ=60°04'37" L=36.70' T=20.24'		305+95.03	3099872.0937	780079.8400
C41	305+95.03	3099872.0937	780079.8400	R=35.00' Δ=33°41'27" L=20.58' T=10.60'		306+15.61	3099882.7876	780062.6024

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	54	159
PROJECT FILE NO.	608298		

SIGN AND PAVEMENT MARKING PLANS
PART 1 OF 6

608298_TR(SIGN AND PMARK PLANS).DWG Plotted on 5-Sep-2018 8:44 PM

N

KING STREET
(PUBLIC-1948)

GEORGETOWN
GROVELAND

APPROXIMATE R.O.W.

W11-15
W16-9p

D11-1
M6-4

SNK

PROJECT BEGIN
STA 200+99
N3093416.2785
E787968.1710

STATION #1
MAG. NAIL SET
N 3093362.60
E 787966.74
ELEV=93.85

N/F
TOWN OF GROVELAND
ELECTRIC DEPARTMENT
MAP 49 PARCEL 20
BOOK 6477 PAGE 499

STONE HEADWALL
TOP ELEV.=87.86

2'x2' STONE BOX
CULVERT
I=85.0

STREAM 6'± WIDE

WF #T6
86.3

WF #T1
87.0

WF #T2

WF #T5

WF #T4

WF #T3

STATION #4
MAG. NAIL SET
N 3093488.26
E 787845.72
ELEV=94.30

R.O.W. B&M V-7-5 SHEET 2

N/F
NEW ENGLAND POWER CO.
MAP 49 PARCEL 22

N/F
MASS ELECTRIC CO.
BOOK 4975 PG 1

MATCH LINE
STA 205+75

CONTINUED ON
SHEET NO. 55

BITUMINOUS

EDGE

R1-1
D3-1-5 (2)

S1
W3-1

D11-1
D1-1c
M4-6

R5-11

R5-3

4" BYL

4" SYL (TYP)

AHEAD
STOP

202

203

204

205

206

UP 85

UP 84

UP 83

UP 135

UP 136

OHW

EOP

SB

BOULDERS

BIT. PATH

50' ROW

30' ROW

GATE

STATION #2
MAG. NAIL SET
N 3093666.85
E 787659.11
ELEV=95.49

N/F
MASS ELECTRIC CO.
MAP 49 PARCEL 21

D11-1
M6-4

200+00

PROP 8' HMA TRAIL

GROVELAND COMMUNITY TRAIL CONST BL

STATION #7000
SPIKE SET
N 3093601.63
E 787865.35
ELEV=89.01

N/F
NEW ENGLAND POWER CO.
MAP 49 PARCEL 22

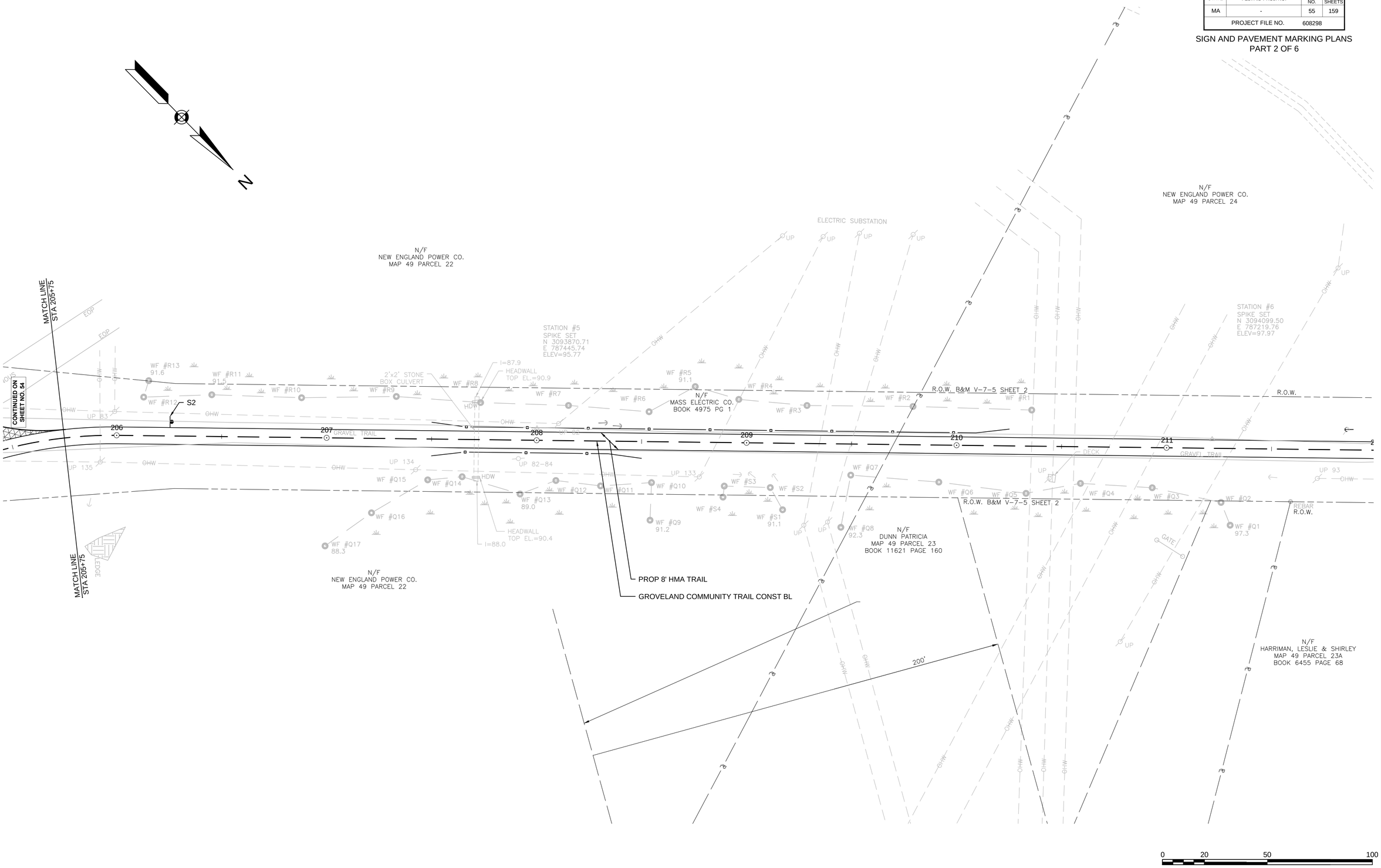
W11-15
W16-9p

0 20 50 100
SCALE: 1" = 20'

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	55	159
PROJECT FILE NO.		608298	

SIGN AND PAVEMENT MARKING PLANS
PART 2 OF 6

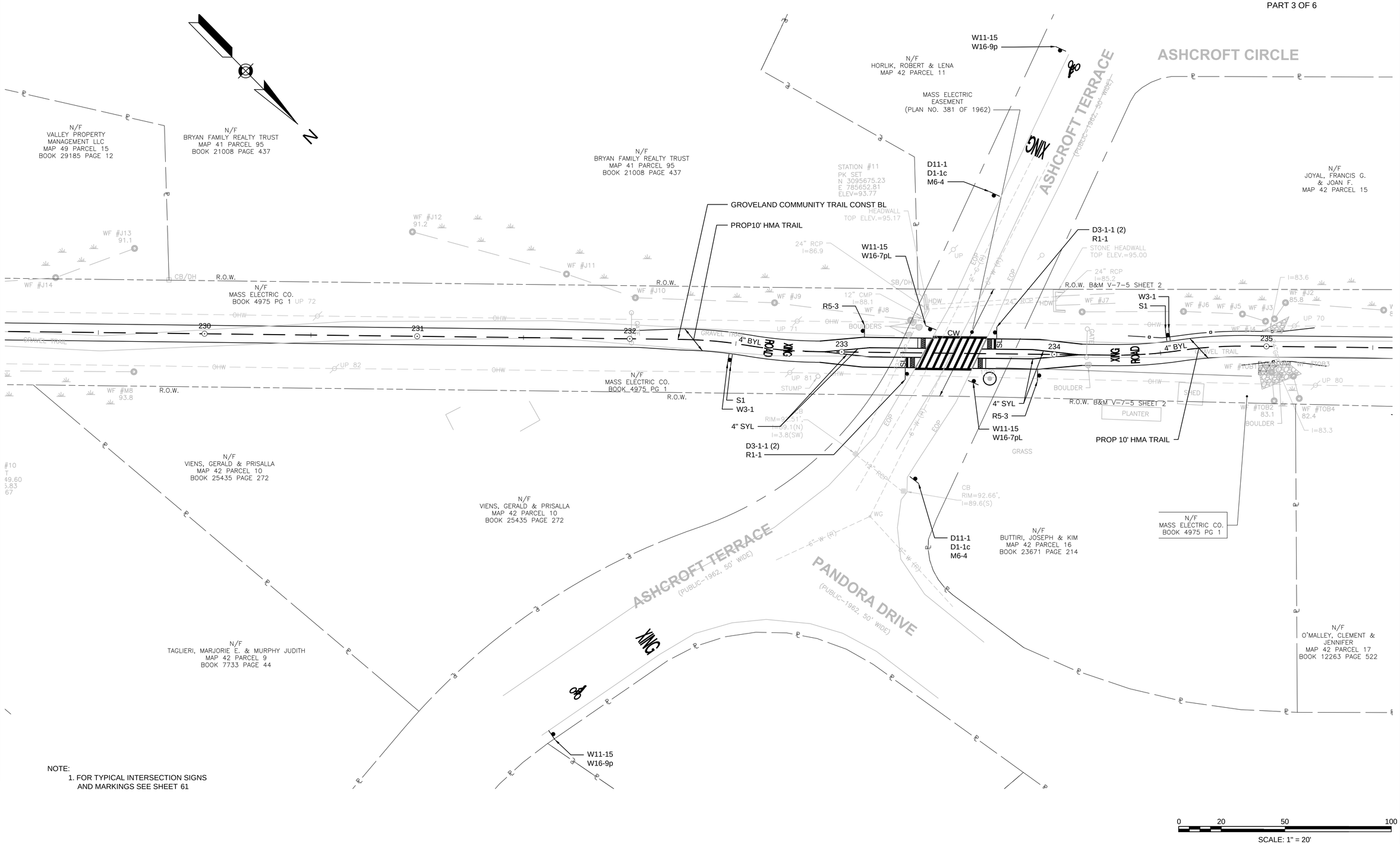


608298_TR(SIGN AND PMARK PLANS).DWG Plotted on 6-Sep-2018 3:09 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	56	159
PROJECT FILE NO.	608298		

SIGN AND PAVEMENT MARKING PLANS
PART 3 OF 6



NOTE:
1. FOR TYPICAL INTERSECTION SIGNS AND MARKINGS SEE SHEET 61

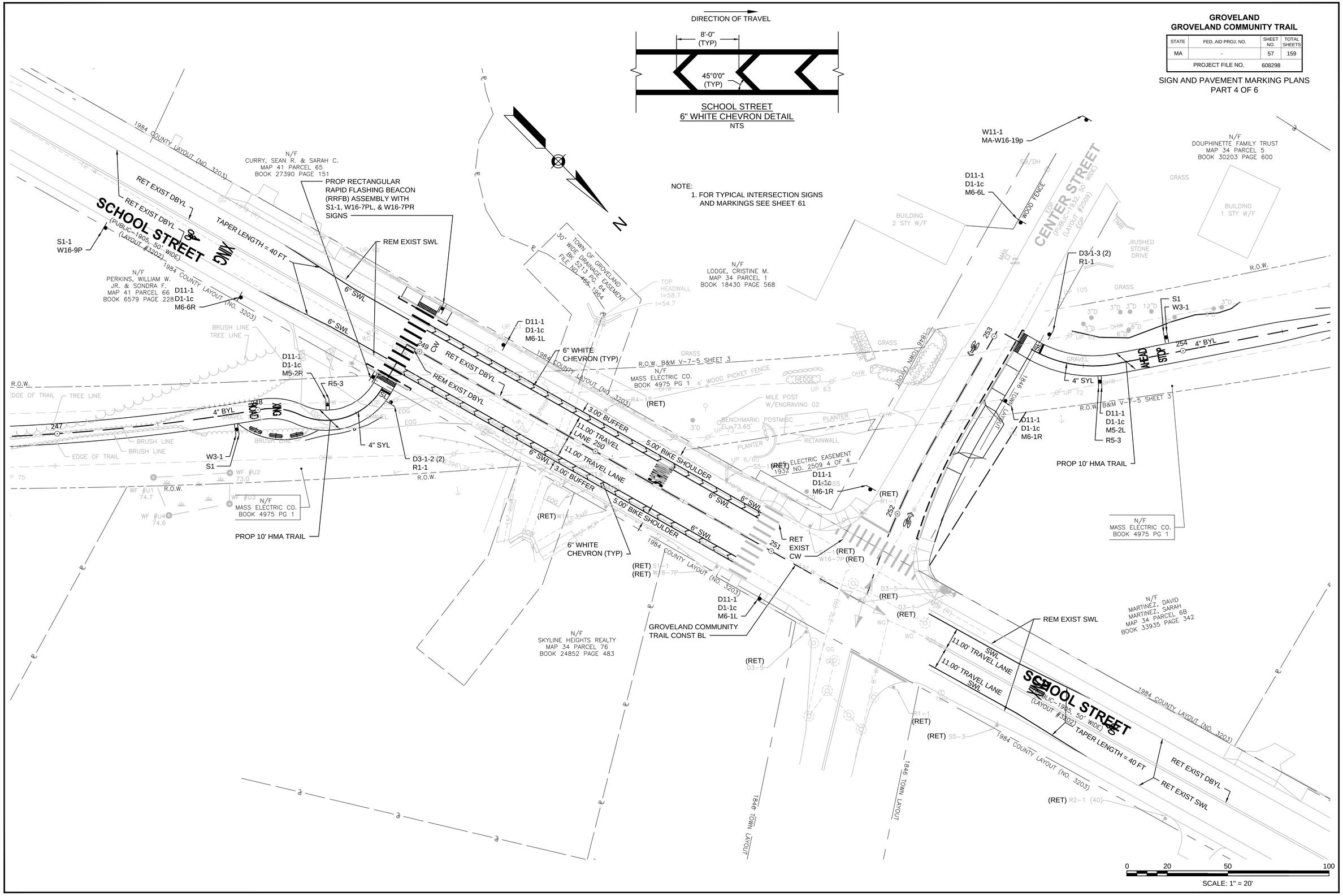
0 20 50 100
SCALE: 1" = 20'

608298_TR(SIGN AND PMARK PLANS).DWG Plotted on 6-Sep-2018 3:09 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	57	159
PROJECT FILE NO.		608298	

SIGN AND PAVEMENT MARKING PLANS
PART 4 OF 6



608298_TR(SIGN AND PMARK PLANS).DWG Plotted on 5-Sep-2018 8:46 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	58	159
PROJECT FILE NO.	608298		

SIGN AND PAVEMENT MARKING PLANS
PART 5 OF 6

608298_TR(SIGN AND PMARK PLANS).DWG Plotted on 5-Sep-2018 8:46 PM

N

N/F
SKYLINE HEIGHTS REALTY
MAP 33 PARCEL 9
BOOK 27052 PAGE 125

STATION #60
SPIKE SET
N 3098347.31
E 782536.42
ELEV=48.42

R.O.W.
R.O.W.
R.O.W.
R.O.W.
R.O.W.
R.O.W. B&M V-7-5 SHEET 3
R.O.W. B&M V-7-5 SHEET 3

OHW
GRAVEL TRAIL
UP 53
UP 62
UP 61
UP 60
272
273
274
275
276
277
278
WF #D3 43.2
WF #D1 43.7
WF #D2
WASHOUT AREA
R5-3 (2)
WF #C-10 39.4
WF #C-9
WF #C-8
WF #C-7
6" STUMPS
SMH RIM=49.17'
18" PVC (R)
SMH RIM=47.28'
N/F
MASS ELECTRIC CO.
BOOK 4975 PG 1
TOWN OF GROVELAND
25' WIDE SEWER EASEMENT
(PLAN BOOK 136 PLAN 57)
SWALE EL.=45.9
SWALE EL.=44.20
WF #F-1 39.3
WF #F-2
WF #F-3 38.7
18" S-PVC (R)
12" RCP
I=41.5'
I=45.6'
DMH RIM=47.82'
12" S-PVC

STATION #61
SPIKE SET
N 3098030.77
E 782839.04
ELEV=52.78

PROP 8' HMA TRAIL
GROVELAND COMMUNITY TRAIL CONST BL

N/F
WHITESTONE VILLAGE II
CONDOMINIUM
MAP 25 PARCEL 12
BOOK 18148 PAGE 356

0 20 50 100
SCALE: 1" = 20'

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	59	159
PROJECT FILE NO.	608298		

SIGN AND PAVEMENT MARKING PLANS
PART 6 OF 6

608298_TR(SIGN AND PMARK PLANS).DWG Plotted on 5-Sep-2018 8:47 PM

N

W11-15
W16-9p

D11-1
D1-1c
M6-1R

MAIN STREET
(PUBLIC-1917)

XING

APPROXIMATE R.O.W.

EOP

16"PVC-CL-C

8IT-CONC

N/F
TOWN OF GROVELAND
WATER DEPARTMENT
MAP 24 PARCEL 41

PROJECT END
STA 306+00
N3099875.5828
E780076.3004

DMH
RIM=21.91'

STATION #50
MAG. NAIL FOUND
N 3099864.46
E 780119.91
ELEV=23.00

R5-3

POSSIBLE CONNECTION

W11-15
W16-7pL/R (BOTH SIDES)

N/F
TOWN OF GROVELAND ELECTRIC CO.
MAP 24 PARCEL 6B

R.O.W. B&M V-7-5 SHEET 4

WF #A-7
16.8

WF #A-6

WF #A-5
14.8

WF #A-4

WF #A-3

R.O.W.

302

303

304

305

306

306+15.61

4" BYL

GRAVEL TRAIL

ROAD

S1
W3-1

4" SYL

D11-1
D1-1c
M4-6

W11-15 WP
W16-7pL/R (BOTH SIDES)

N/F
MASS ELECTRIC CO.
BOOK 4975 PG 1

(RET)

WF #H-2

WF #H-3
14.6

WF #H-4

WF #H-5
15.6

WF #H-6
17.9

R.O.W. B&M V-7-5 SHEET 4

STATION #52
SPIKE FOUND
N 3099784.90
E 780416.35
ELEV=22.60

8" CMP

CONC.RET.WALL
TOP EL.=22.07

SMH
RIM=22.79'
I=4.7' (S)
I=4.8' (N)

8" CLF

40'WW

24" S

UP 2329.38

UP 3296

PLANTER

SRW

GRAVEL
EOP

GRASS

STONE
POST

BIT CONC

BIT CONC
DRIVE

BENCHMARK: USC&GS&SS 69Q
DISK FOUND
EL=22.50'

D3-1-4 (2) BUILDING
R1-1 S/W F

PROP 10' HMA TRAIL

GROVELAND COMMUNITY TRAIL CONST BL

N/F
PARKER, FRED E. & DEBRA J. TRS
HHMMB REALTY TRUST
MAP 24 PARCEL 27
BOOK 13014 PAGE 142

D11-1
D1-1c
M6-1L

W11-15
W16-9P

N/F
ERIC W. HARPER TRS
MAP 24 PARCEL 9
BOOK 32404 PAGE 368

0 20 50 100
SCALE: 1" = 20'

NOTE:
ALL STOP AND YIELD SIGNS, PROPOSED IN THIS CONTRACT, ARE SUBJECT TO FIELD INVESTIGATION BY THE DISTRICT OFFICE OF THE MASSACHUSETTS HIGHWAY DEPARTMENT TO JUSTIFY WARRANTS BEFORE INSTALLATION.

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	60	159
PROJECT FILE NO.	608298		

TRAFFIC SIGN SUMMARY

608298_TR(SIGN SUMMARY).DWG Plotted on 5-Sep-2018 8:47 PM

TRAFFIC SIGN SUMMARY

IDENTIFI-CATION NUMBER	SIZE OF SIGN		UNIT AREA (SF)	TEXT	TEXT DIMENSIONS			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	AREA IN SQUARE FEET
	WIDTH	HEIGHT			LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK-GROUND	LEGEND	BORDER		
D11-1	24"	18"	3.00	BIKE ROUTE	2009 MUTCD	2009 MUTCD	2009 MUTCD	16	GREEN	WHITE	WHITE	1-P5 16	48.00
R1-1	18"	18"	2.25	STOP				6	RED	WHITE	WHITE	1-P5 6	13.50
R5-3	24"	24"	4.00	NO MOTOR VEHICLES				8	WHITE	BLACK	BLACK	1-P5 7	32.00
R5-11	30"	24"	5.00	AUTHORIZED VEHICLES ONLY				1	WHITE	BLACK	BLACK	1-P5 1	5.00
W3-1	18"	18"	2.25					6	YELLOW	BLACK	BLACK	1-P5 6	13.50
W11-1	30"	30"	6.25					1	YELLOW	BLACK	BLACK	1-P5 1	6.25
W11-15	30"	30"	6.25					12	YELLOW	BLACK	BLACK	1-P5 12	75.00
MA-W16-19p	24"	18"	3.00	ON ROADWAY	MASSDOT	MASSDOT	MASSDOT	1	YELLOW	BLACK	BLACK	MOUNT WITH W11-1	3.00
W16-7pL	24"	12"	2.00		2009 MUTCD	2009 MUTCD	2009 MUTCD	6	YELLOW	BLACK	BLACK	MOUNT 4 WITH W11-15 MOUNT 2 WITH S1-1	12.00
W16-7pR	24"	12"	2.00					4	YELLOW	BLACK	BLACK	MOUNT 2 WITH W11-15 MOUNT 2 WITH S1-1	8.00
W16-9P	24"	12"	2.00	AHEAD				7	YELLOW	BLACK	BLACK	MOUNT 6 WITH W11-15 MOUNT 1 WITH S1-1	14.00
S1-1	36"	36"	9.00					5	YELLOW	BLACK	BLACK	MOUNT 4 ON BEACON 1-P5 1	45.00
S1	18"	18"	2.25	UTILITY VEHICLES ON TRAIL	3"	1.5"	-	6	YELLOW	BLACK	BLACK	MOUNT 6 WITH W3-1	13.50
S2	18"	24"	3.00	STAY ON TRAIL	4"	2.5"	-	1	WHITE	BLACK	BLACK	1-P5 1	3.00
M4-6	12"	6"	0.50	END	2009 MUTCD	2009 MUTCD	2009 MUTCD	2	GREEN	WHITE	WHITE	MOUNT 2 WITH D11-1	1.00
M5-2L	12"	9"	0.75					1	GREEN	WHITE	WHITE	MOUNT 1 WITH D11-1	0.75
M5-2R	12"	9"	0.75					1	GREEN	WHITE	WHITE	MOUNT 1 WITH D11-1	0.75

TRAFFIC SIGN SUMMARY

IDENTIFI-CATION NUMBER	SIZE OF SIGN		UNIT AREA (SF)	TEXT	TEXT DIMENSIONS			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	AREA IN SQUARE FEET
	WIDTH	HEIGHT			LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK-GROUND	LEGEND	BORDER		
M6-1 (L/R)	12"	9"	0.75		2009 MUTCD	2009 MUTCD	2009 MUTCD	6	GREEN	WHITE	WHITE	MOUNT 6 WITH D11-1	4.50
M6-4	12"	9"	0.75					4	GREEN	WHITE	WHITE	MOUNT 4 WITH D11-1	3.00
M6-6L	12"	9"	0.75					1	GREEN	WHITE	WHITE	MOUNT 1 WITH D11-1	0.75
M6-6R	12"	9"	0.75					1	GREEN	WHITE	WHITE	MOUNT 1 WITH D11-1	0.75

STREET NAME SIGN SUMMARY

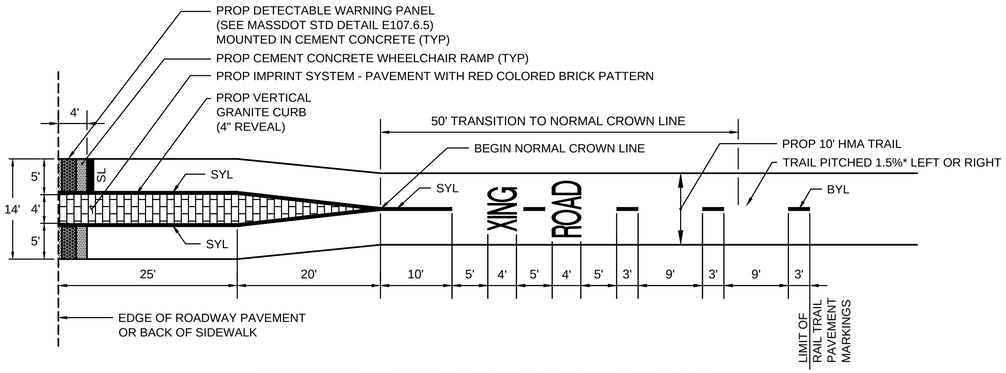
IDENTIFI-CATION NUMBER	SIZE OF SIGN		UNIT AREA (SF)	TEXT	TEXT DIMENSIONS			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	AREA IN SQUARE FEET
	WIDTH	HEIGHT			LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK-GROUND	LEGEND	BORDER		
D1-1c	33"	6"	1.375	Groveland Com Trail	2009 MUTCD	2009 MUTCD	2009 MUTCD	14	GREEN	WHITE	WHITE	MOUNT 13 WITH D11-1 MOUNT 1 WITH R5-3	19.25
D3-1-1	30"	8"	1.67	Ashcroft Ter				4	GREEN	WHITE	WHITE	MOUNT 2 WITH R1-1	6.68
D3-1-2	26"	8"	1.44	School St				2	GREEN	WHITE	WHITE	MOUNT 1 WITH R1-1	2.88
D3-1-3	26"	8"	1.44	Center St				2	GREEN	WHITE	WHITE	MOUNT 1 WITH R1-1	2.88
D3-1-4	20"	8"	1.11	Main St				2	GREEN	WHITE	WHITE	MOUNT 2 WITH R1-1	2.22
D3-1-5	20"	8"	1.11	King St				2	GREEN	WHITE	WHITE	MOUNT 2 WITH R1-1	2.22

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	61	159
PROJECT FILE NO.	608298		

TRAFFIC DETAILS

608298_TR(TRAFFIC DETAILS).DWG Plotted on 5-Sep-2018 8:48 PM



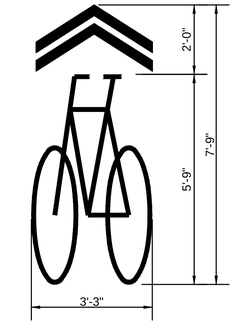
INTERSECTION APPROACH PAVEMENT MARKING DETAIL

NTS

NOTES:

1. WHEELCHAIR RAMPS AND DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD DRAWINGS NUMBERED 107.2.0, 107.2.1, 107.6.0, 107.6.4, 107.6.5, 107.7.0 AND 107.9.0 AND ADA/ MA AAB REQUIREMENTS.
2. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED WHEELCHAIR RAMPS AND ARE TO BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STANDARD 107.6.5. DETECTIBLE WARNING PANELS SHALL BE PLACED PERPENDICULAR TO THE PATH OF TRAVEL AND NOT THE CURB LINE.

* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP)



NOTES:

1. CENTER OF MARKING TO BE LOCATED A MINIMUM OF 4' FROM THE EDGE OF ROADWAY WHERE THERE IS NO PARKING.
2. CENTER OF MARKING TO BE LOCATED A MINIMUM OF 11 FEET FROM THE EDGE OF ROADWAY WHERE PARKING IS PRESENT.

SHARED LANE MARKING DETAIL

NOT TO SCALE

NOTES:

1. THE BEACONS SHALL PROVIDE FLASHING OPERATION UPON PEDESTRIAN ACTUATION.
2. CONTROLLER SHALL BE POLE MOUNTED AND WIRELESS COMMUNICATION BETWEEN EACH FLASHING BEACON.
3. POWER SOURCE SHALL BE SOLAR POWER WITH BATTERY BACKUP
4. UPON ACTUATION, THE FLASHER SHALL FLASH FOR A DURATION OF 15 SECONDS.
5. THE PUSH BUTTON SHALL BE LOCATED AT A MAXIMUM REACH OF 10"

RECTANGULAR RAPID FLASHING BEACON

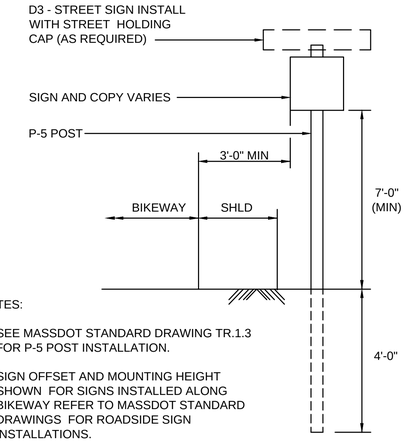
NOT TO SCALE

NOTES:

APPROACH SIGNS AND MARKINGS CONSIST OF W11-2/W16-9p, D11-1/D1-1c/M6-4 SIGN ASSEMBLIES AND "BIKE XING" MARKINGS SHOWN.

TYPICAL INTERSECTION SIGNS AND MARKINGS

NTS

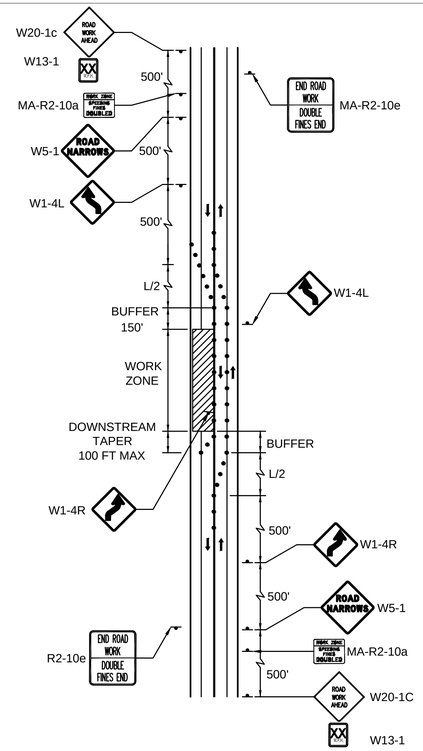


NOTES:

1. SEE MASSDOT STANDARD DRAWING TR.1.3 FOR P-5 POST INSTALLATION.
2. SIGN OFFSET AND MOUNTING HEIGHT SHOWN FOR SIGNS INSTALLED ALONG BIKEWAY REFER TO MASSDOT STANDARD DRAWINGS FOR ROADSIDE SIGN INSTALLATIONS.

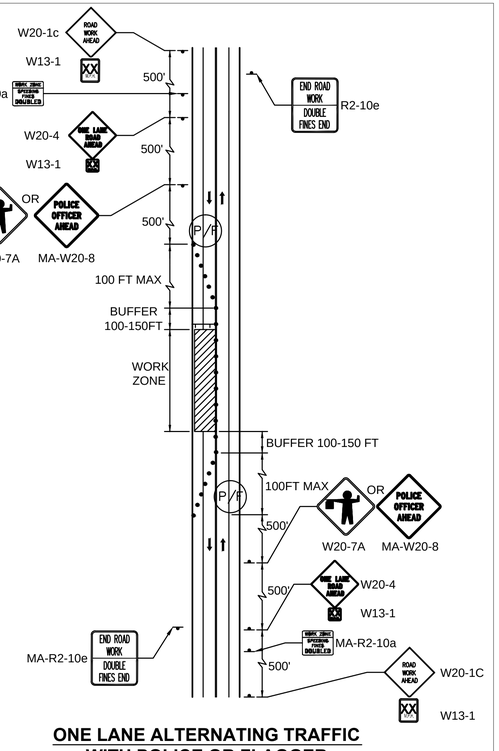
TYPICAL SIGN LOCATION

NOT TO SCALE



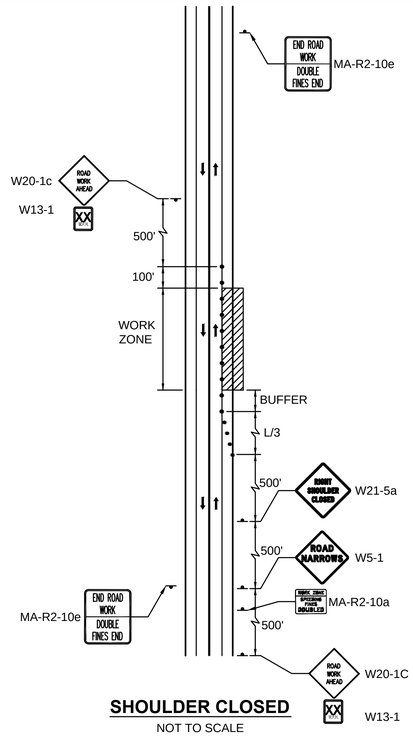
SHOULDER AND TRAVEL LANE CLOSED

NOT TO SCALE



ONE LANE ALTERNATING TRAFFIC WITH POLICE OR FLAGGER

NOT TO SCALE



SHOULDER CLOSED

NOT TO SCALE

NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE 2009 EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND MASSACHUSETTS AMENDMENTS.
2. ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE 2009 MUTCD.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, AND REFLECTORIZED PLASTIC DRUMS WITH LIGHTING DEVICES MOUNTED ON THEM, SHALL PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES."
6. CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
7. THE FIRST TEN PLASTIC REFLECTORIZED DRUMS OF A TAPER SHALL BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
8. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
9. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
10. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
11. MINIMUM LANE WIDTH SHALL BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
12. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
13. ALL TEMPORARY WALKWAYS SHALL MEET ADA/AAB GUIDELINES.
14. NO LANE CLOSURE WILL BE PERMITTED DURING PEAK HOUR TRAFFIC.

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	62	159
PROJECT FILE NO.	608298		

TEMPORARY TRAFFIC CONTROL PLANS

CONSTRUCTION SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK-GROUND	LEGEND	BORDER		
MA-R2-10a	48"	36"	WORK ZONE $SPEEDING FINES DOUBLED	SEE MASSDOT STANDARDS			2	SEE MASSDOT STANDARDS				24.00
MA-R2-10e	36"	18"	END ROAD WORK DOUBLE FINES END	SEE MASSDOT STANDARDS			2	SEE MASSDOT STANDARDS				9.00
W1-4L	36"	36"		SEE 2009 MUTCD			2	SEE 2009 MUTCD				18.00
W1-4R	36'	36"					2					18.00
W13-1	18"	18"	XX MPH				4					9.00
W5-1	36"	36"	ROAD NARROWS				2					18.00
W20-1c	36"	36"	ROAD WORK AHEAD				4					36.00
W20-4c	36"	36"	ONE LANE ROAD AHEAD				2					18.00
W21-5aR	36"	36"	RIGHT SHOULDER CLOSED				1					9.00
W20-7A	36"	36"					2					18.00
OR	OR	OR	OR				OR					OR
MA-W20-8	36"	36"	POLICE OFFICER AHEAD	SEE MASSDOT STANDARDS			2					18.00

LEGEND

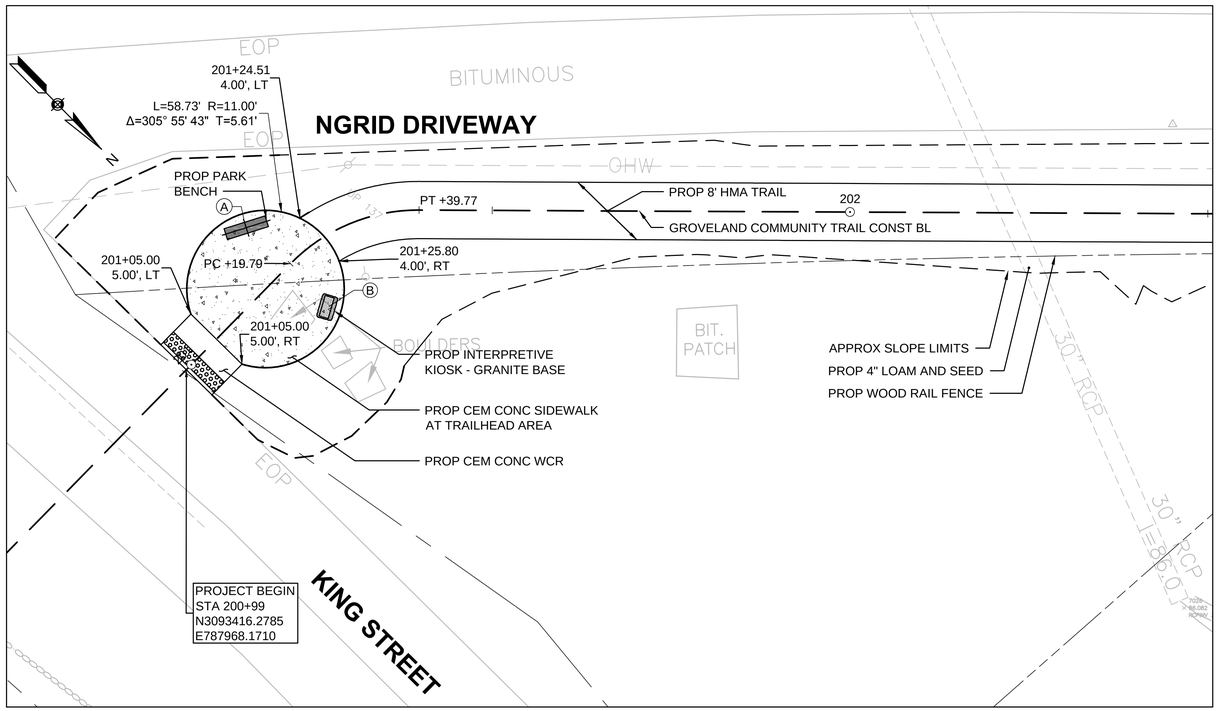
- REFLECTORIZED DRUM
- SIGN ON SUPPORT
- TYPE III BARRICADE WITH WARNING LIGHTS
- WORK ZONE
- P/F — POLICE OFFICER/FLAGGER

608298_TR(TTCP).DWG Plotted on 5-Sep-2018 8:49 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

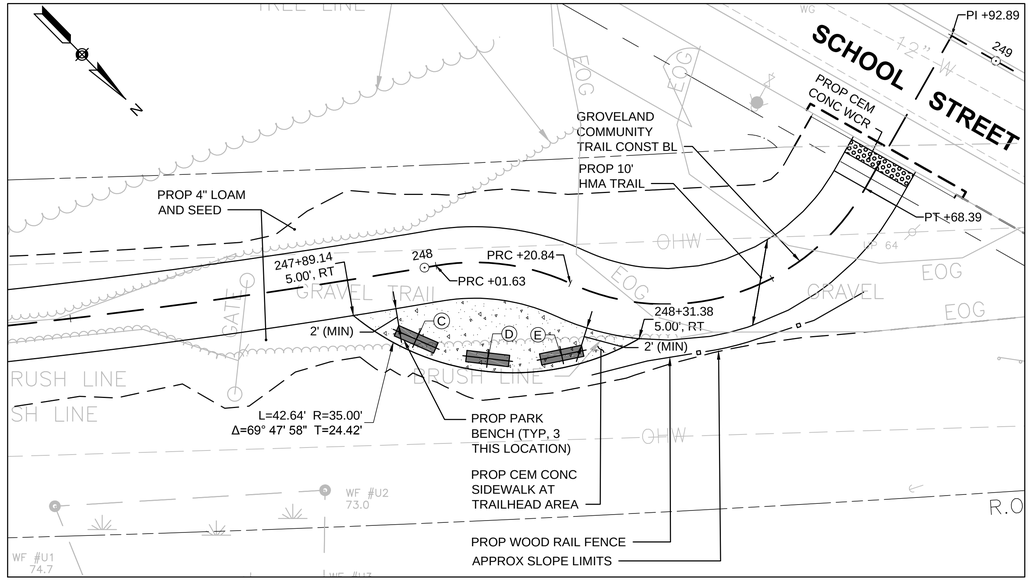
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	63	159
PROJECT FILE NO.	608298		

LANDSCAPE PLAN



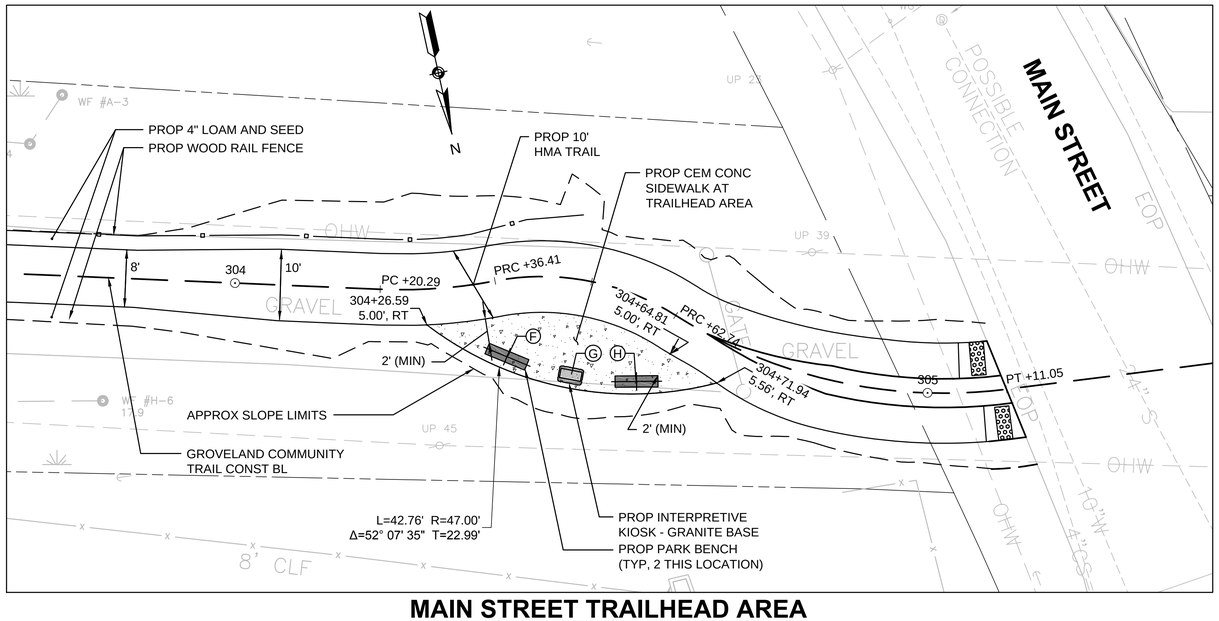
KING STREET TRAILHEAD AREA

SCALE: 1" = 10'



SCHOOL STREET TRAILHEAD AREA

SCALE: 1" = 10'



MAIN STREET TRAILHEAD AREA

SCALE: 1" = 10'

LANDSCAPE SITE FEATURE SCHEDULE

NAME	STATION	OFFSET	SITE FEATURE TYPE
A	201+19.04	7.94', LT	PARK BENCH
B	201+19.04	7.93', RT	INTERPRETIVE KIOSK - GRANITE BASE
C	247+97.20	9.68', RT	PARK BENCH
D	248+10.18	13.34', RT	PARK BENCH
E	248+23.22	9.73', RT	PARK BENCH
F	304+36.12	10.72', RT	PARK BENCH
G	304+49.58	13.44', RT	INTERPRETIVE KIOSK - GRANITE BASE
H	304+63.02	10.73', RT	PARK BENCH

NOTES:

1. STATIONS AND OFFSETS ARE TAKEN AT THE GEOMETRIC CENTER OF THE SITE FEATURE, DEPICTED AS A DOT ON THE PLAN.
2. UNLESS OTHERWISE NOTED, SITE FEATURES SHALL BE ORIENTED PARALLEL TO THE EDGE OF THE PROPOSED CEMENT CONCRETE SIDEWALK AT TRAILHEAD AREA SURFACE.
3. SITE FEATURES SHALL BE INSTALLED AT LEAST 2-FEET FROM THE EDGE OF THE TRAIL PAVEMENT, AS SHOWN ON THE PLANS.

0 10 20 30 40

SCALE: 1" = 10'

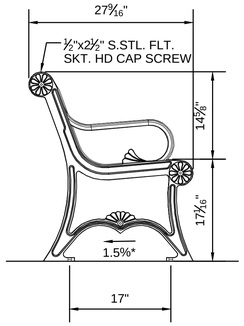
608298_LD(LANDSCAPE PLAN).DWG Plotted on 5-Sep-2018 8:51 PM

GROVELAND
GROVELAND COMMUNITY TRAIL

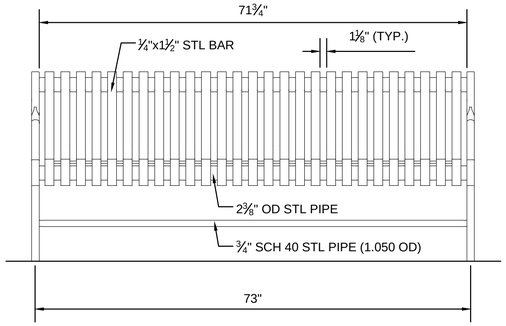
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	64	159
PROJECT FILE NO.	608298		

LANDSCAPE DETAILS

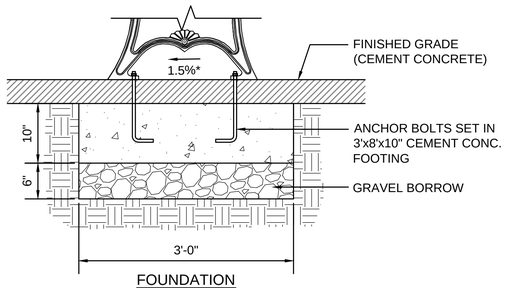
608298_LD(LANDSCAPE DETAILS).DWG Plotted on 5-Sep-2018 8:52 PM



SECTION - SIDE VIEW

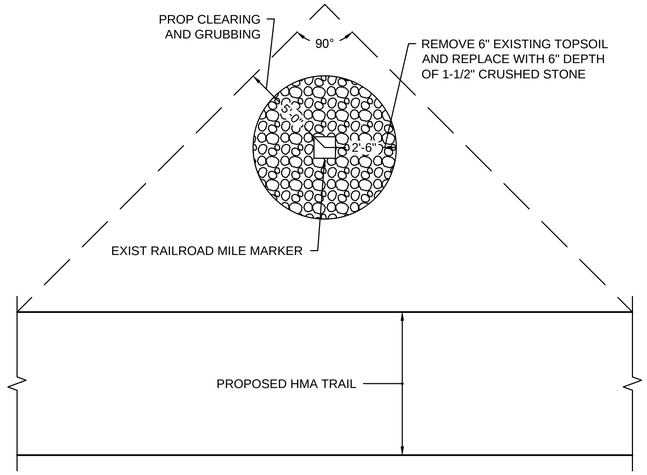


SECTION - FRONT VIEW

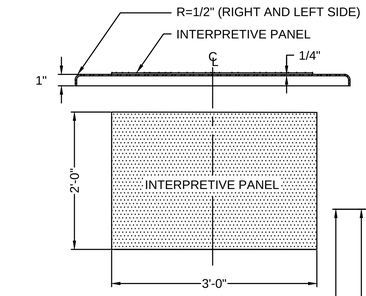


FOUNDATION
SECTION - SIDE VIEW

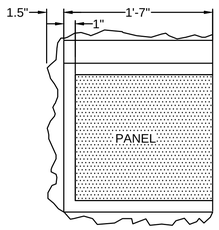
PARK BENCH
NOT TO SCALE

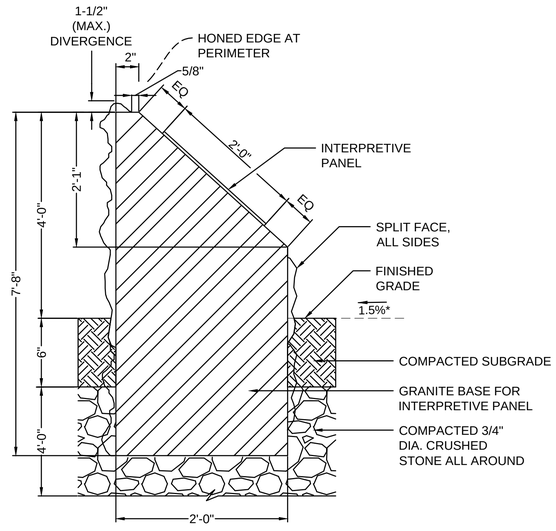


TREATMENT AT EXISTING RAILROAD MILE MARKER
NOT TO SCALE



PLAN VIEW





SECTION VIEW

INTERPRETIVE KIOSK-GRANITE BASE
NOT TO SCALE

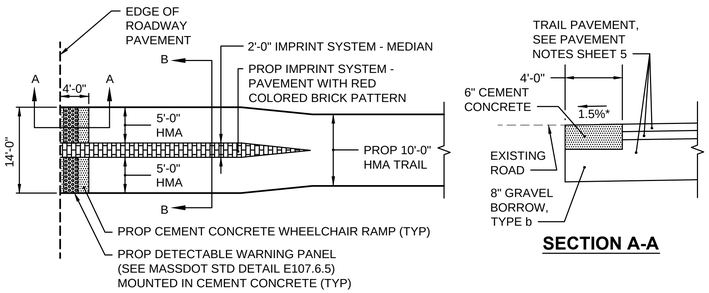
* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)

GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	65	159
PROJECT FILE NO.	608298		

CONSTRUCTION DETAILS
PART 1 OF 3

608298_HD(CONST DETAILS).DWG Plotted on 5-Sep-2018 8:53 PM



PLAN

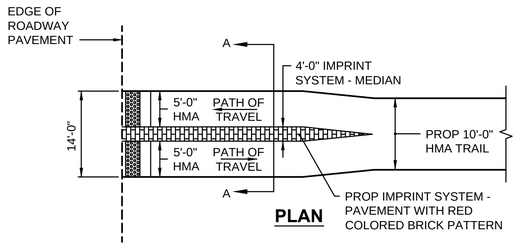
SECTION A-A

NOTES:
1. ALL DETECTABLE WARNING PANELS (PROJECT WIDE) SHALL BE MOUNTED IN CEMENT CONCRETE.
2. DETECTABLE WARNING PANELS SHALL CONFORM TO MASSDOT STANDARD DETAIL E107.6.5.

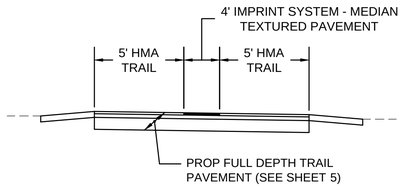
* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)

DETECTABLE WARNING PANEL AT TRAIL INTERSECTION

NOT TO SCALE



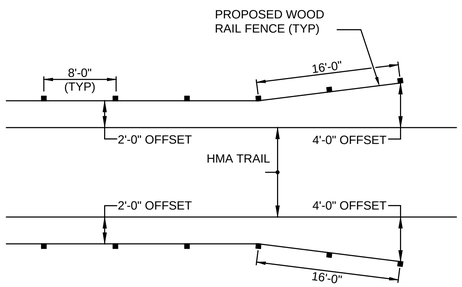
PLAN



SECTION A-A

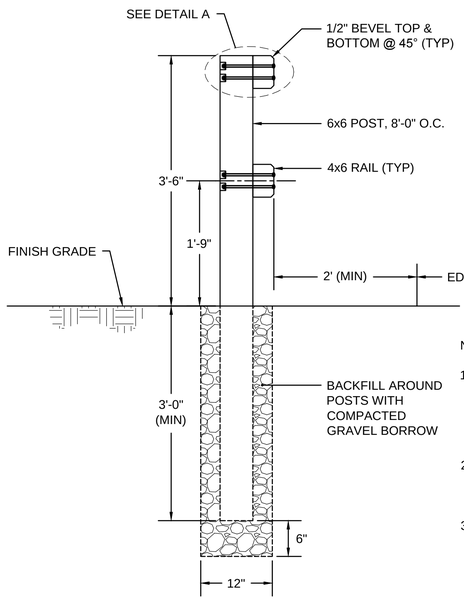
IMPRINT SYSTEM - MEDIAN

NOT TO SCALE

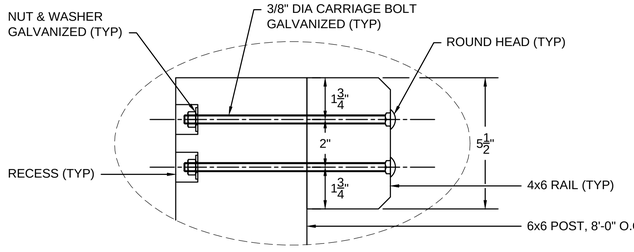


WOOD RAIL FENCE FLARED-END TREATMENT

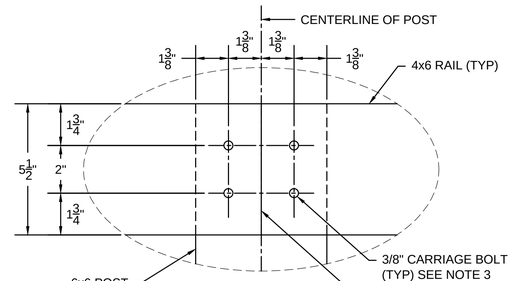
NOT TO SCALE



SECTION A-A
NOT TO SCALE

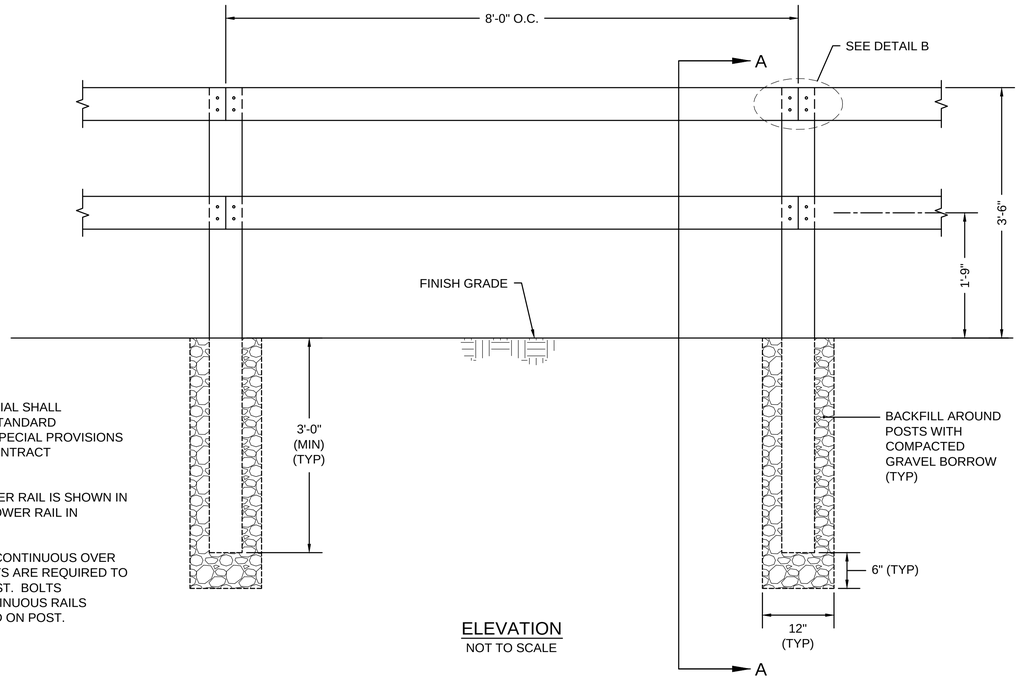


DETAIL A
NOT TO SCALE



DETAIL B
NOT TO SCALE

NOTES:
1. ALL FENCING MATERIAL SHALL CONFORM TO THE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. MOUNTING FOR UPPER RAIL IS SHOWN IN DETAIL A. MOUNT LOWER RAIL IN SIMILAR FASHION.
3. IF A RAIL TIMBER IS CONTINUOUS OVER A POST ONLY 2 BOLTS ARE REQUIRED TO ATTACH RAIL TO POST. BOLTS INSTALLED ON CONTINUOUS RAILS SHALL BE CENTERED ON POST.



ELEVATION
NOT TO SCALE

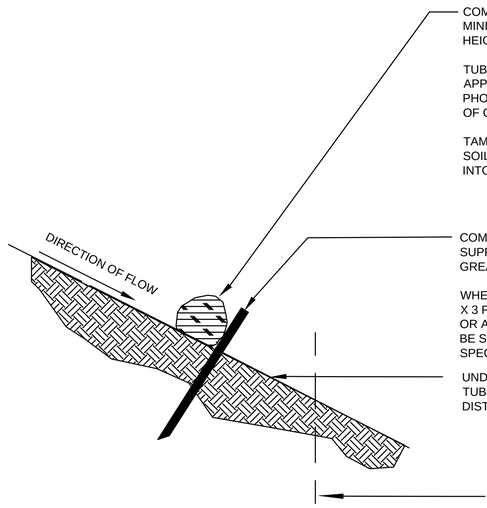
WOOD RAIL FENCE
NOT TO SCALE

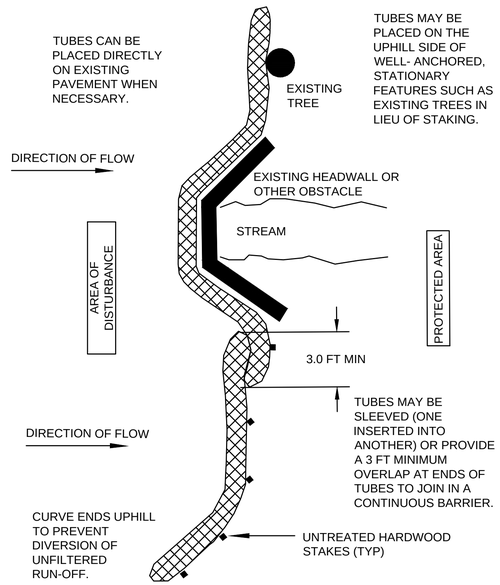
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	66	159
PROJECT FILE NO.	608298		

CONSTRUCTION DETAILS
PART 2 OF 3

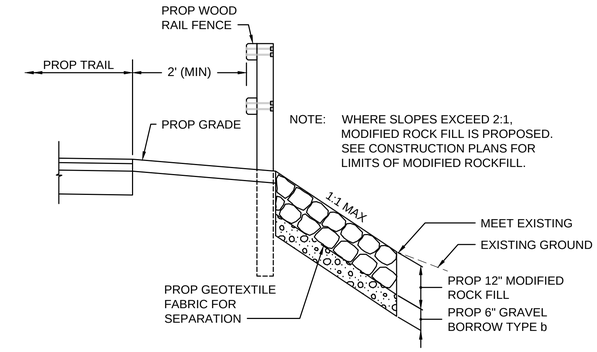
608298_HD(CONST DETAILS).DWG Plotted on 5-Sep-2018 8:53 PM



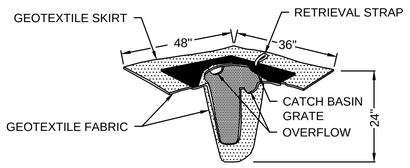


NOTES:
1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES (300mm) FOR SLOPES UP TO 50 FEET (15.24m) IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. TUBE LOCATION MAY BE SHIFTED TO ADJUST TO LANDSCAPE FEATURES, BUT SHALL PROTECT UNDISTURBED AREA AND VEGETATION TO MAXIMUM EXTENT POSSIBLE.
4. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
5. ADDITIONAL TUBES SHALL BE USED AT THE DIRECTION OF THE ENGINEER.
6. ADDITIONAL STAKING SHALL BE USED AT THE DIRECTION OF THE ENGINEER.

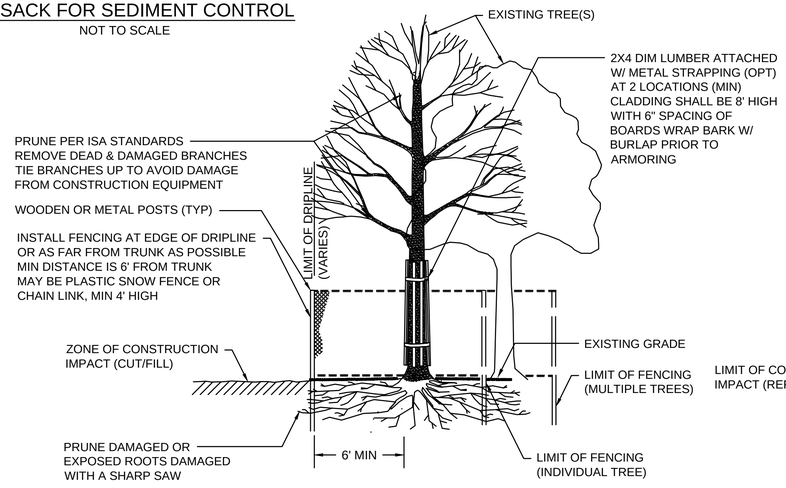
12" COMPOST FILTER TUBE DETAILS
NOT TO SCALE

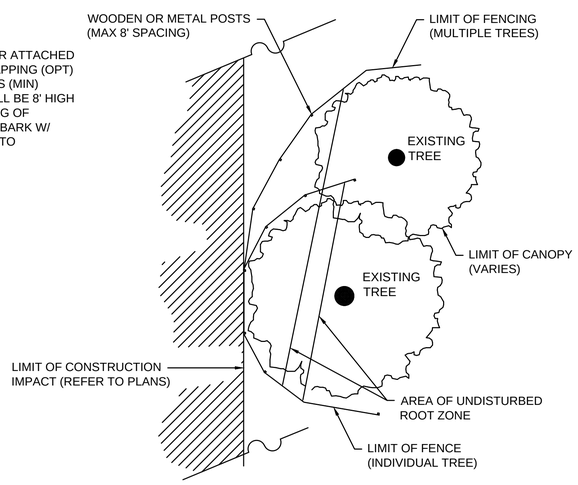


MODIFIED ROCK FILL DETAIL
NOT TO SCALE

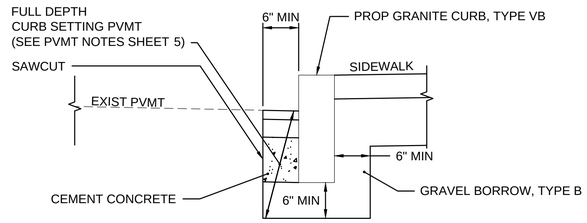


SILT SACK FOR SEDIMENT CONTROL
NOT TO SCALE



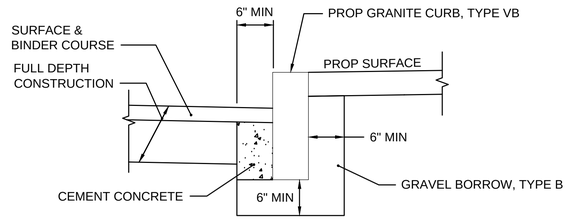


TREE PROTECTION - EXISTING TREE(S)
NOT TO SCALE



NOTES:
1. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED; ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE FOR CEMENT CONCRETE.
2. SAWCUTTING EXISTING PAVEMENT SHALL BE INCLUDED IN THE PRICE BID FOR PROPOSED OR RESET GRANITE CURB.
3. CURB SETTING SHALL CONFORM TO MASSDOT STANDARD DETAIL E106.3.0.

METHOD OF SETTING GRANITE CURB (AGAINST EXISTING PAVEMENT)
NOT TO SCALE



NOTES:
1. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED; ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE FOR CEMENT CONCRETE.
2. CURB SETTING SHALL CONFORM TO MASSDOT STANDARD DETAIL E106.3.0.

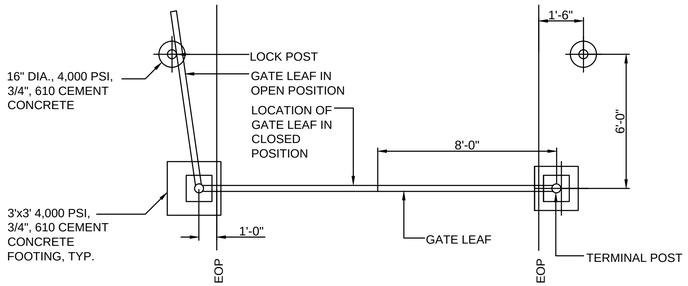
METHOD OF SETTING GRANITE CURB (AGAINST FULL DEPTH CONSTRUCTION)
NOT TO SCALE

GROVELAND
GROVELAND COMMUNITY TRAIL

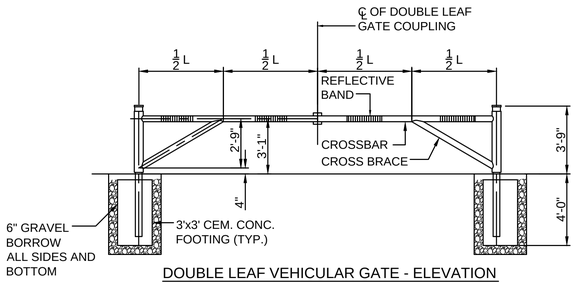
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	67	159
PROJECT FILE NO.		608298	

CONSTRUCTION DETAILS
PART 3 OF 3

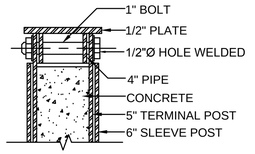
608298_HD(CONST DETAILS).DWG Plotted on 5-Sep-2018 8:53 PM



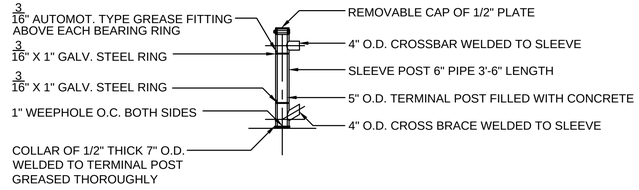
DOUBLE LEAF VEHICULAR GATE - PLAN VIEW



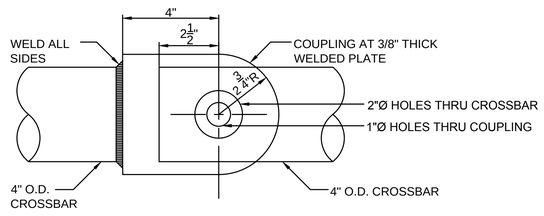
DOUBLE LEAF VEHICULAR GATE - ELEVATION



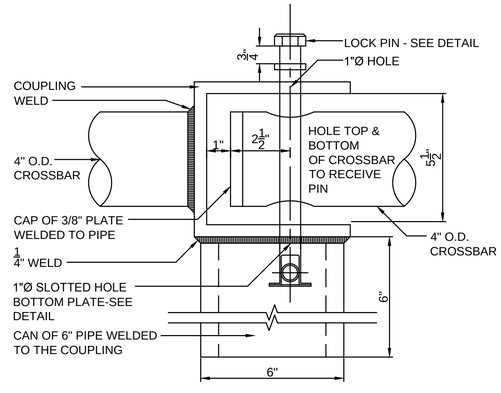
NTS



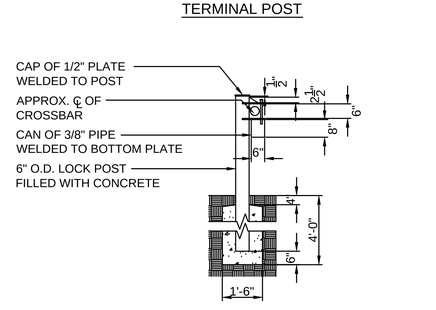
TERMINAL POST



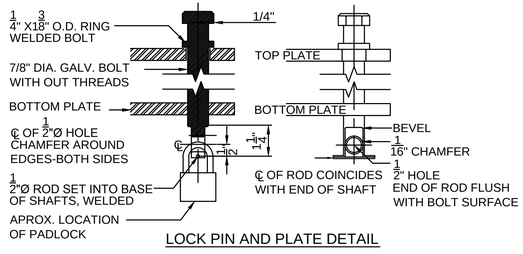
PLAN



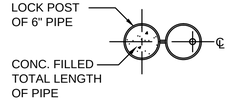
COUPLING AND LOCK DETAIL



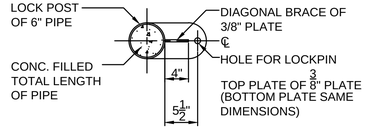
LOCK POST
NTS



LOCK PIN AND PLATE DETAIL



CAN @ LOCK POST - CROSS SECTION



TOP PLATE - CROSS SECTION

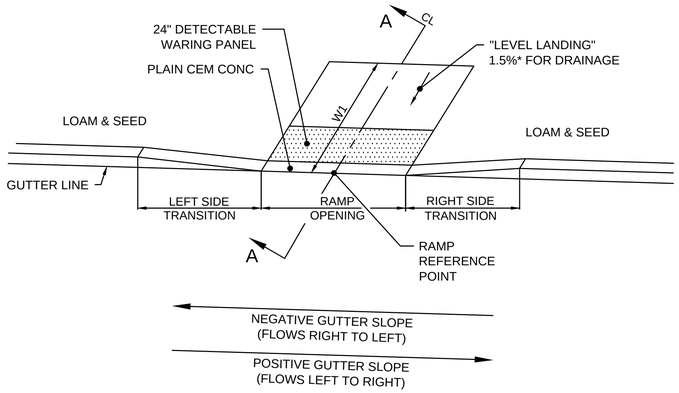
VEHICULAR GATE - DOUBLE LEAF - PIPE
NOT TO SCALE

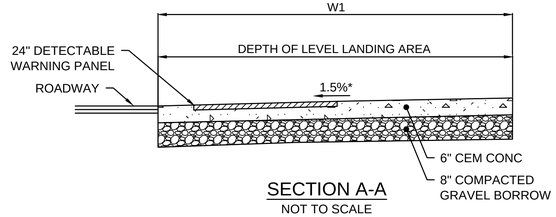
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	68	159
	PROJECT FILE NO.	608298	

WHEELCHAIR RAMP DETAILS
PART 1 OF 2

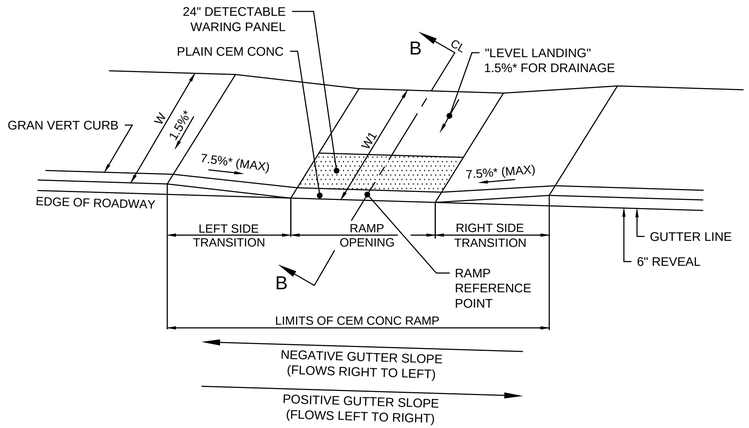
608298_HD(WCR DETAILS).DWG Plotted on 5-Sep-2018 8:54 PM

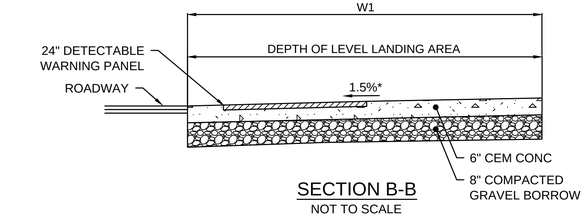




SECTION A-A
NOT TO SCALE

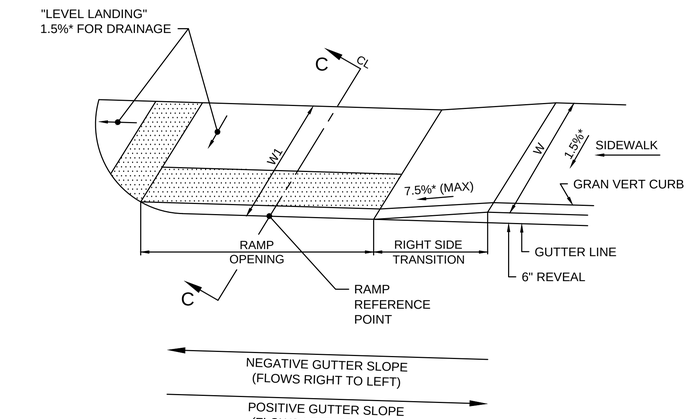
WHEELCHAIR RAMP DETAIL - TYPE A
NOT TO SCALE

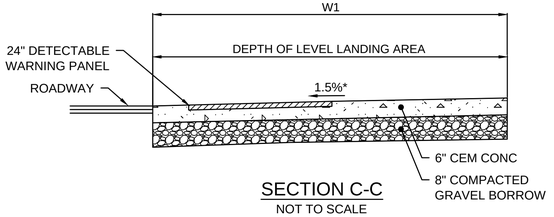




SECTION B-B
NOT TO SCALE

WHEELCHAIR RAMP DETAIL - TYPE B
NOT TO SCALE





SECTION C-C
NOT TO SCALE

WHEELCHAIR RAMP DETAIL - TYPE C
NOT TO SCALE

NOTES:

1. WHEELCHAIR RAMPS AND DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD DRAWINGS NUMBERED 107.2.0, 107.2.1, 107.6.0, 107.6.4, 107.6.5, 107.7.0 AND 107.9.0 AND ADA/ MA AAB REQUIREMENTS.
2. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED WHEELCHAIR RAMPS AND ARE TO BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STANDARD 107.6.5. DETECTIBLE WARNING PANELS SHALL BE PLACED PERPENDICULAR TO THE PATH OF TRAVEL AND NOT THE CURB LINE.

* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)

WHEELECHAIR RAMPS

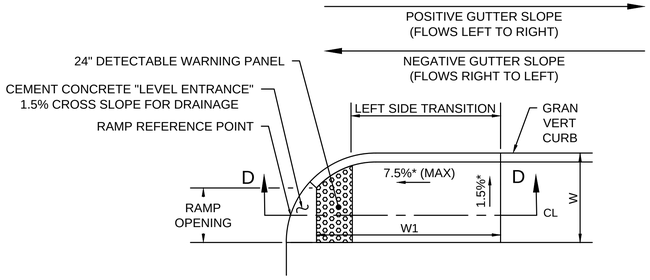
WCR #	TYPE	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF RAMP OPENING	DEPTH OF LEVEL LANDING	ROADWAY GUTTER SLOPE	RAMP MATERIAL	TRANSITION LENGTH	
		BASELINE	STATION	OFFSET							LEFT SIDE	RIGHT SIDE
1	E	GROVELAND COMMUNITY TRAIL	200+99.00	0.00'	6'-0"	N/A	10'-0"	6'-0"	-1.44%	CEM CONC	N/A	N/A
2	A	GROVELAND COMMUNITY TRAIL	248+73.85	0.00'	5'-6"	N/A	10'-0"	5'-6"	2.23%	CEM CONC	N/A	N/A
3	B	GROVELAND COMMUNITY TRAIL	248+92.85	18.96', LT	6'-0"	6'-0"	10'-0"	6'-0"	1.26%	CEM CONC	9'-0"	6'-6"
4	B	GROVELAND COMMUNITY TRAIL	253+15.24	0.00'	8'-0"	8'-0"	10'-0"	8'-0"	-0.28%	CEM CONC	N/A	7'-8"
5	C	GROVELAND COMMUNITY TRAIL	305+49.33	0.00'	6'-0"	6'-0"	14'-0"	6'-0"	-0.47%	CEM CONC	N/A	7'-8"
6	D	GROVELAND COMMUNITY TRAIL	306+01.21	55.77', RT	9'-0"	6'-0"	4'-0"	4'-6"	-1.47%	CEM CONC	9'-0"	N/A

GROVELAND
GROVELAND COMMUNITY TRAIL

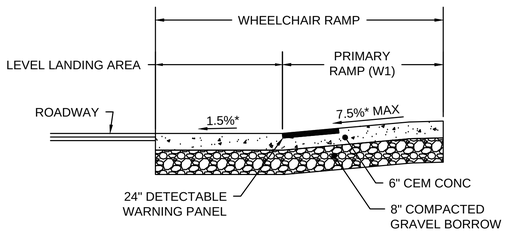
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	69	159
PROJECT FILE NO.	608298		

WHEELCHAIR RAMP DETAILS
PART 2 OF 2

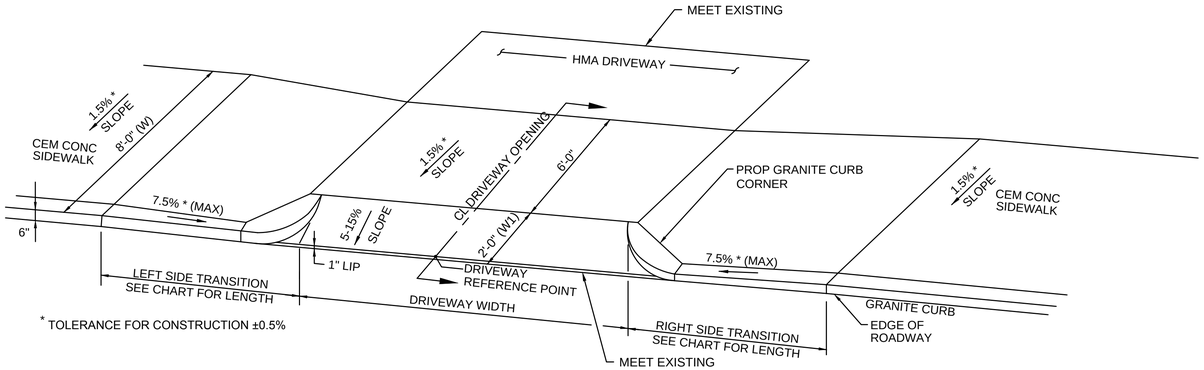
608298_HD\WCR DETAILS).DWG Plotted on 5-Sep-2018 8:54 PM



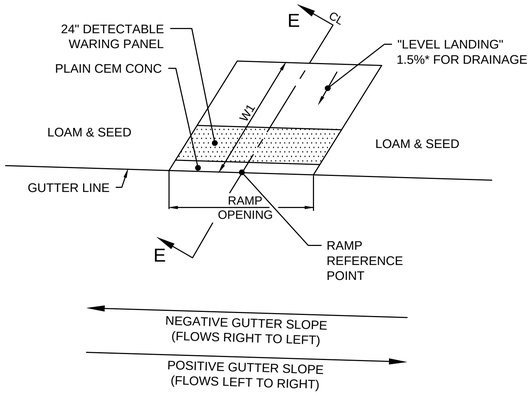
WHEELCHAIR RAMP DETAIL - TYPE D
NOT TO SCALE

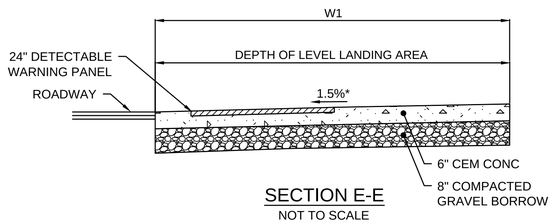


SECTION D-D
NOT TO SCALE



DRIVEWAY DETAIL A - CEMENT CONCRETE SIDEWALK THROUGH OPENING
NOT TO SCALE





SECTION E-E
NOT TO SCALE

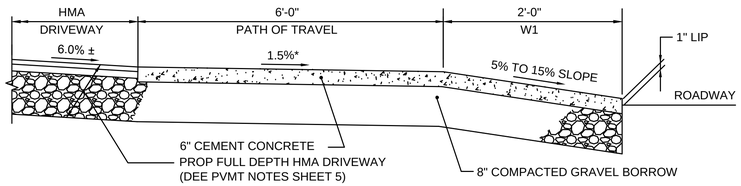
WHEELCHAIR RAMP DETAIL - TYPE E
NOT TO SCALE

NOTES:

1. WHEELCHAIR RAMPS AND DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD DRAWINGS NUMBERED 107.2.0, 107.2.1, 107.6.0, 107.6.4, 107.6.5, 107.7.0 AND 107.9.0 AND ADA/ MA AAB REQUIREMENTS.

2. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED WHEELCHAIR RAMPS AND ARE TO BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STANDARD 107.6.5. DETECTIBLE WARNING PANELS SHALL BE PLACED PERPENDICULAR TO THE PATH OF TRAVEL AND NOT THE CURB LINE.

* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)



DRIVEWAY DETAIL A SECTION
NOT TO SCALE

DRIVEWAYS

DW #	TYPE	RAMP REFERENCE POINT			WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	WIDTH OF SIDEWALK (W)	WIDTH OF RAMP (W1)	DEPTH OF PATH OF TRAVEL	TRANSITION LENGTH		DRIVEWAY MATERIAL	
		BASELINE	STATION	OFFSET						LEFT SIDE	RIGHT SIDE	APRON	DRIVEWAY
1	A	GROVELAND COMMUNITY TRAIL	252+54.87	11.16, RT	30'-11"	-3.64%	8'-0"	2'-0"	6'-0"	6'-6"	14'-0"	CM CONC	HMA

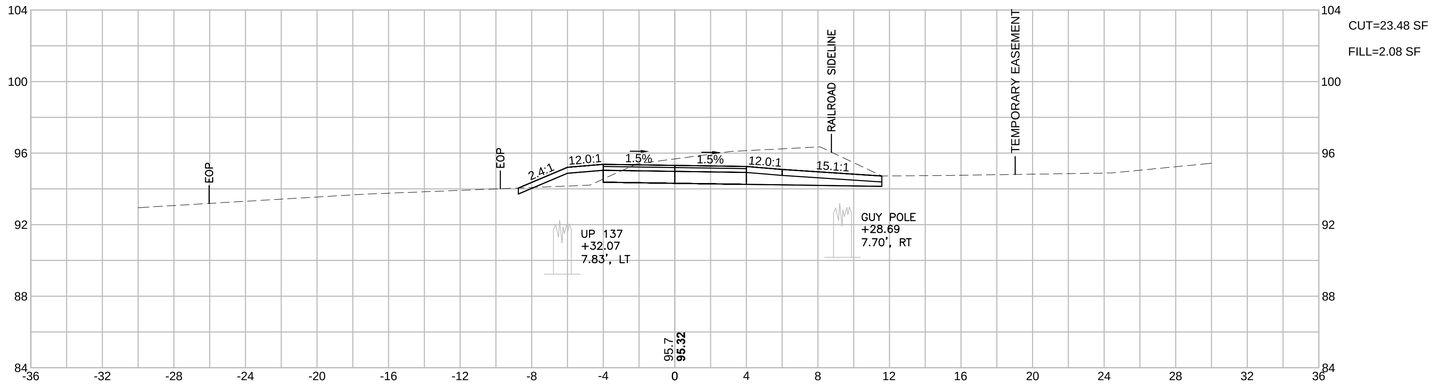
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	70	159
PROJECT FILE NO.	608298		

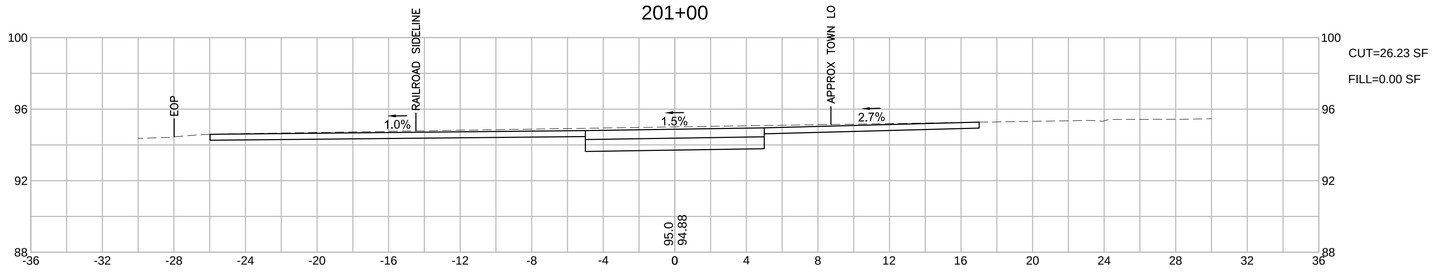
CROSS SECTIONS
PART 1 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:09 PM

201+50



201+00



MEET EXIST
AT 200+99

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

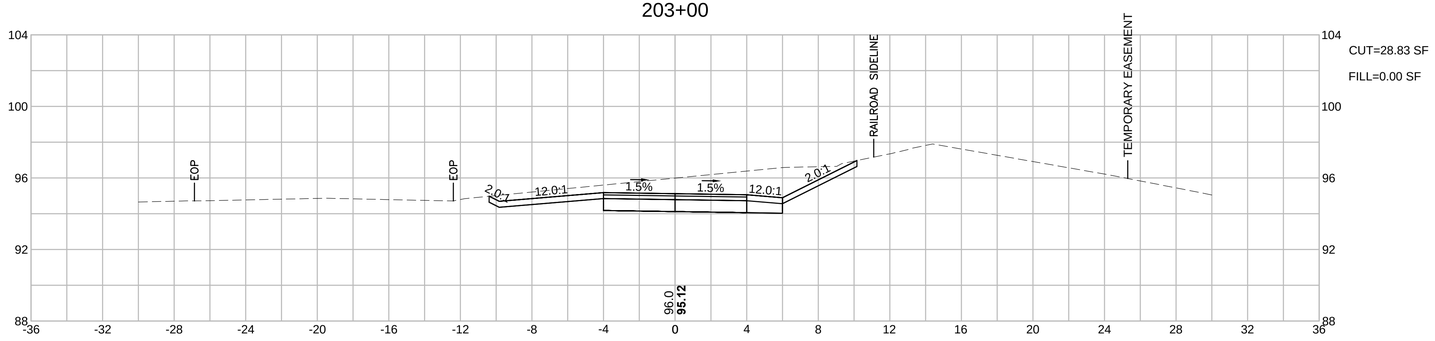
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	71	159
PROJECT FILE NO.	608298		

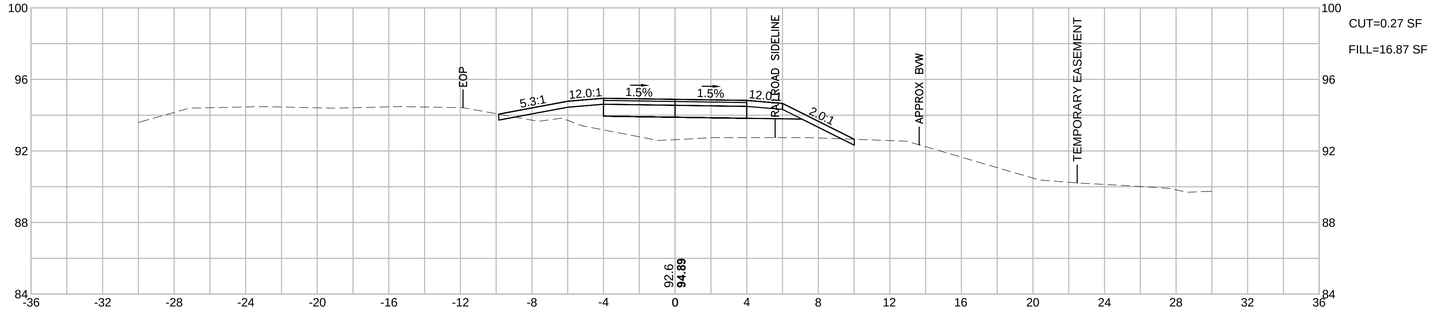
CROSS SECTIONS
PART 2 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:10 PM

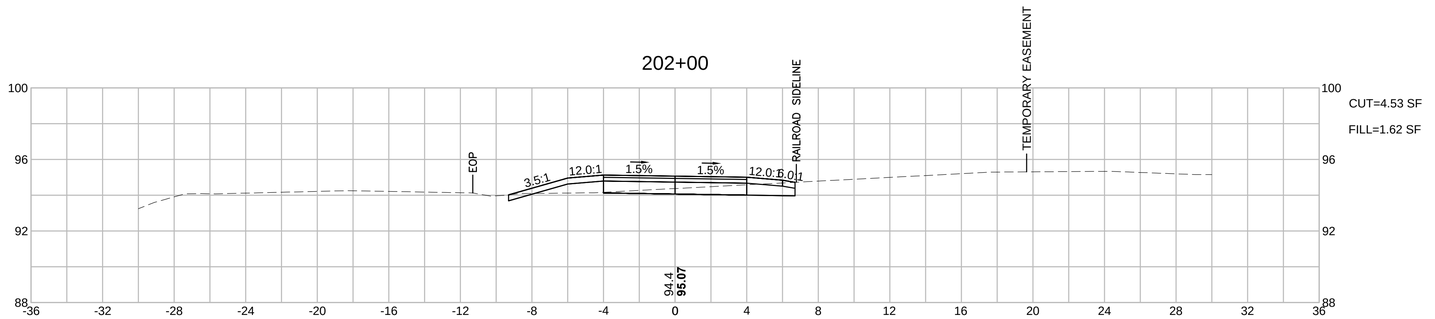
203+00



202+50



202+00



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

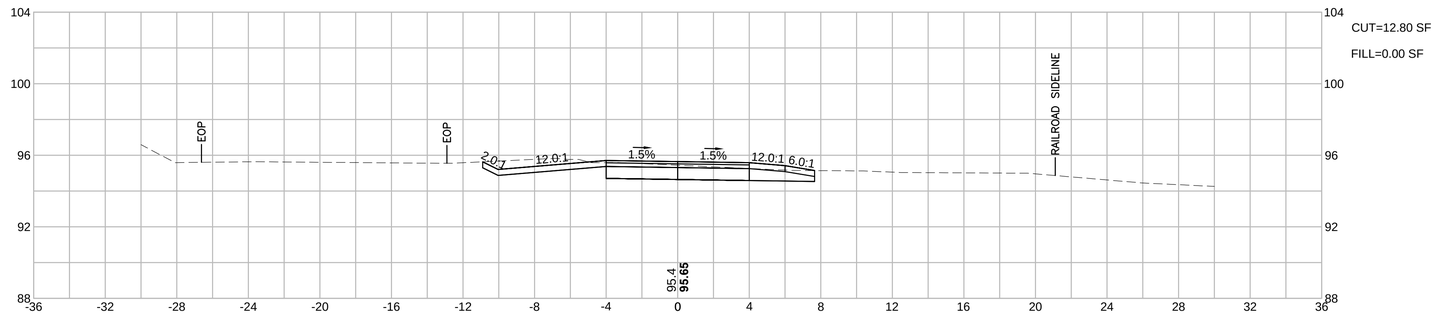
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	72	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 3 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:10 PM

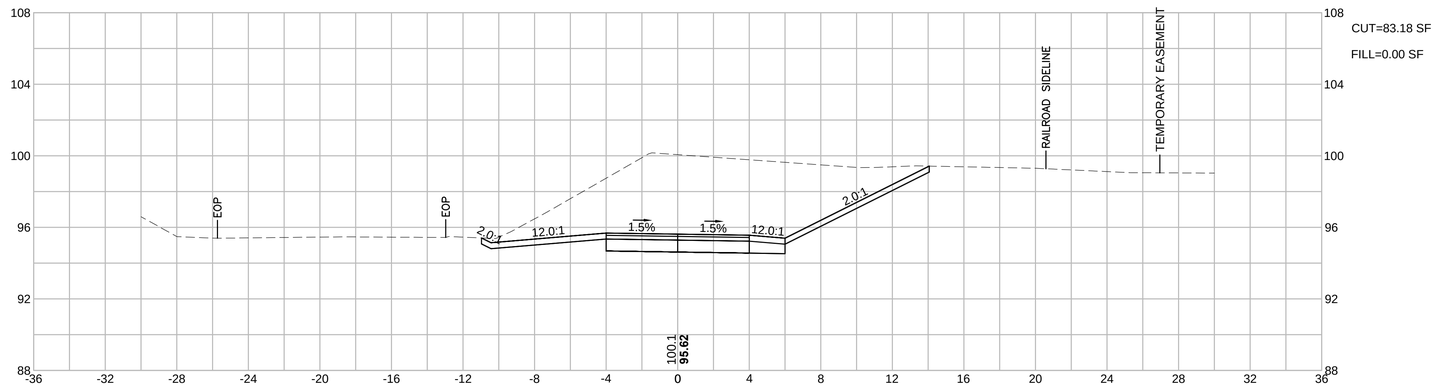
204+50



CUT=12.80 SF

FILL=0.00 SF

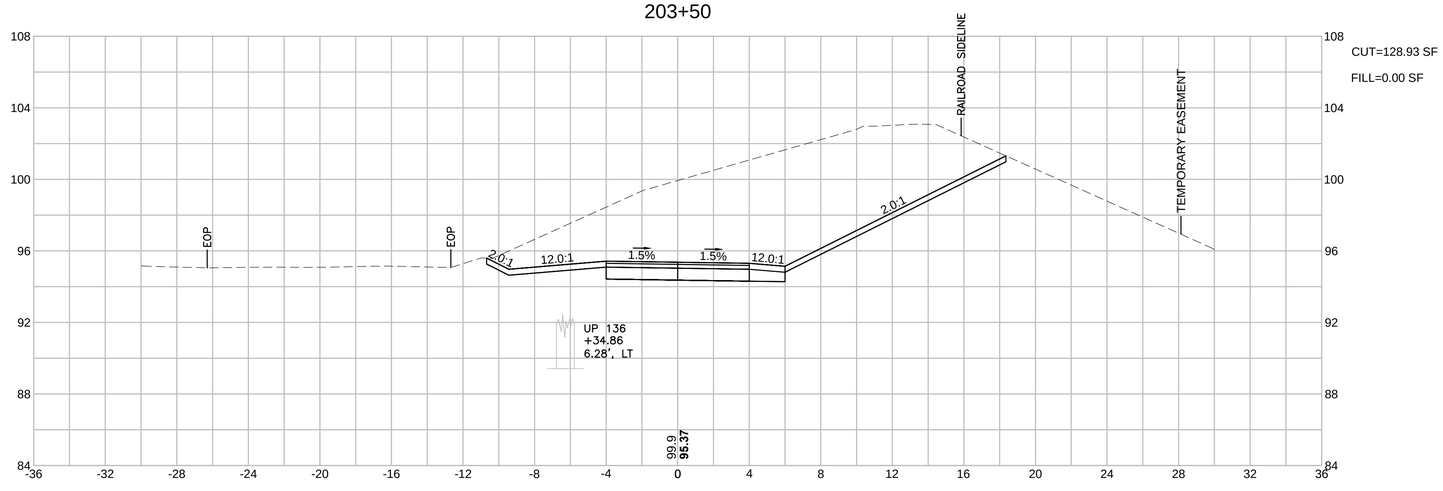
204+00



CUT=83.18 SF

FILL=0.00 SF

203+50



CUT=128.93 SF

FILL=0.00 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

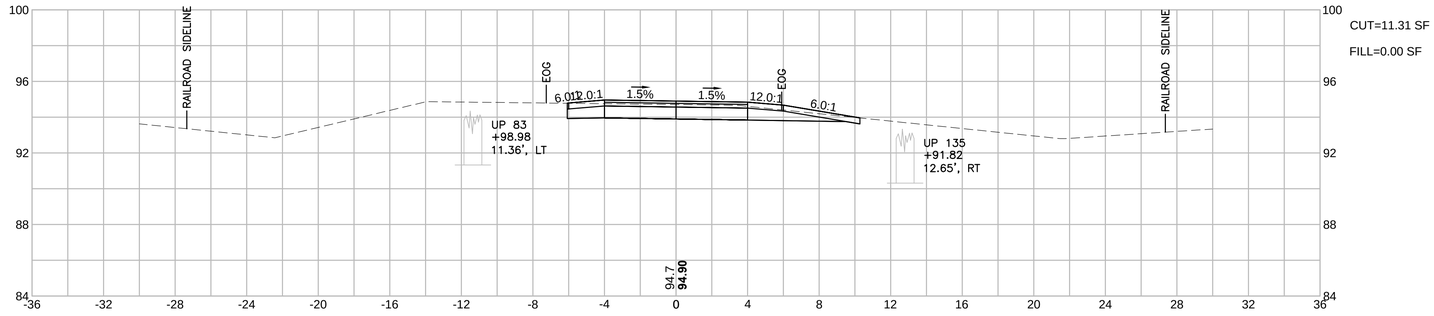
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	73	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 4 OF 90

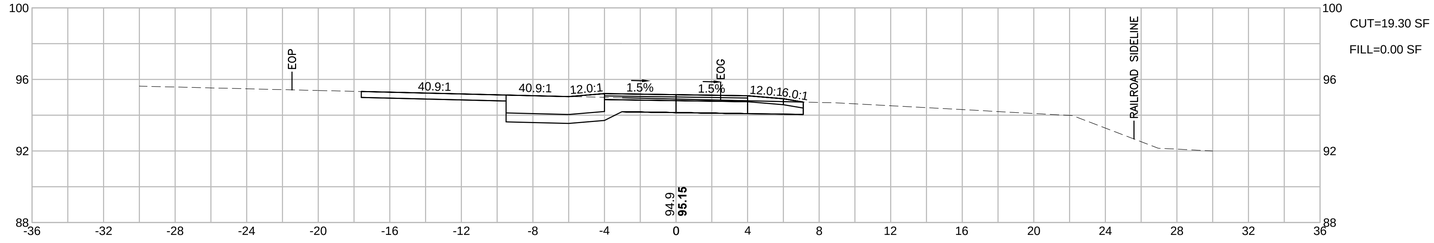
608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:10 PM

206+00



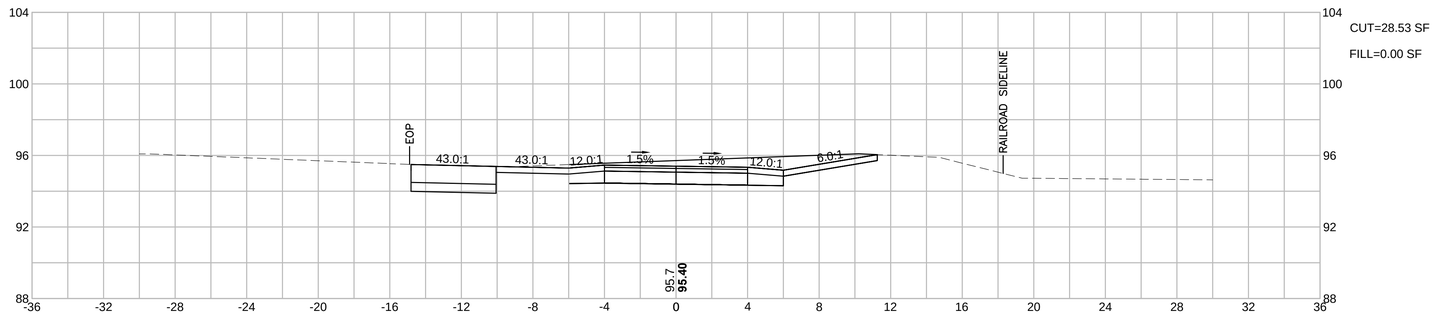
CUT=11.31 SF
FILL=0.00 SF

205+50



CUT=19.30 SF
FILL=0.00 SF

205+00



CUT=28.53 SF
FILL=0.00 SF

HOR. SCALE IN FEET
4 0 4 8

4 0 4 8
VER. SCALE IN FEET

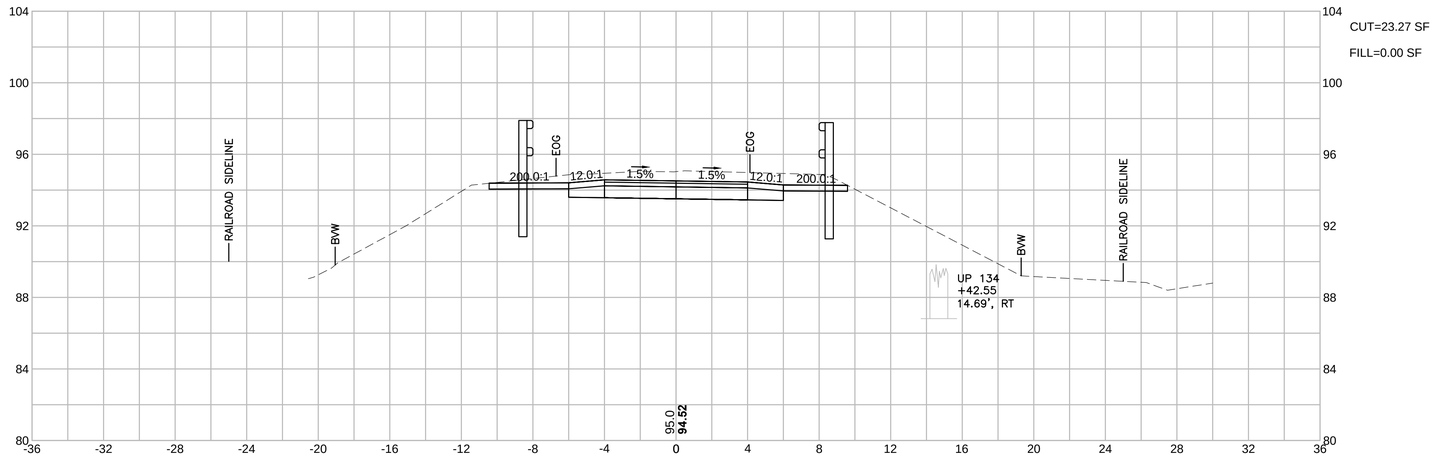
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	74	159
PROJECT FILE NO.	608298		

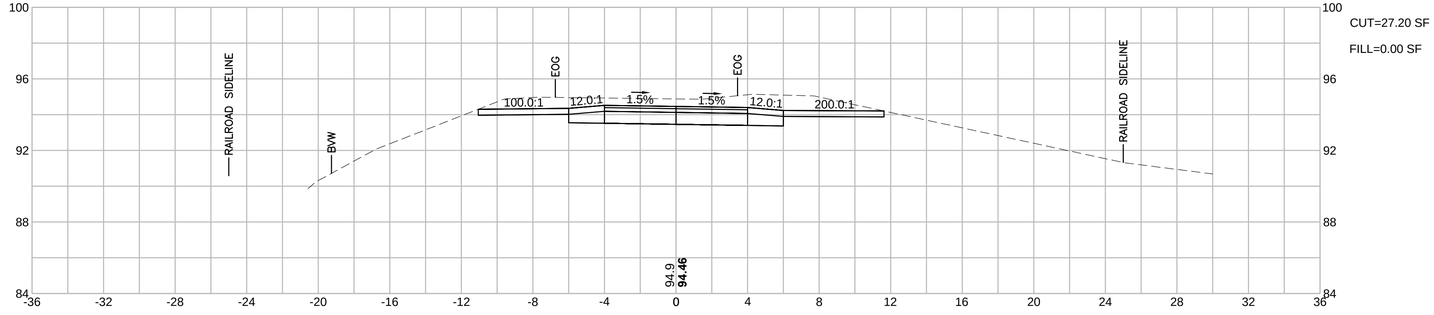
CROSS SECTIONS
PART 5 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:11 PM

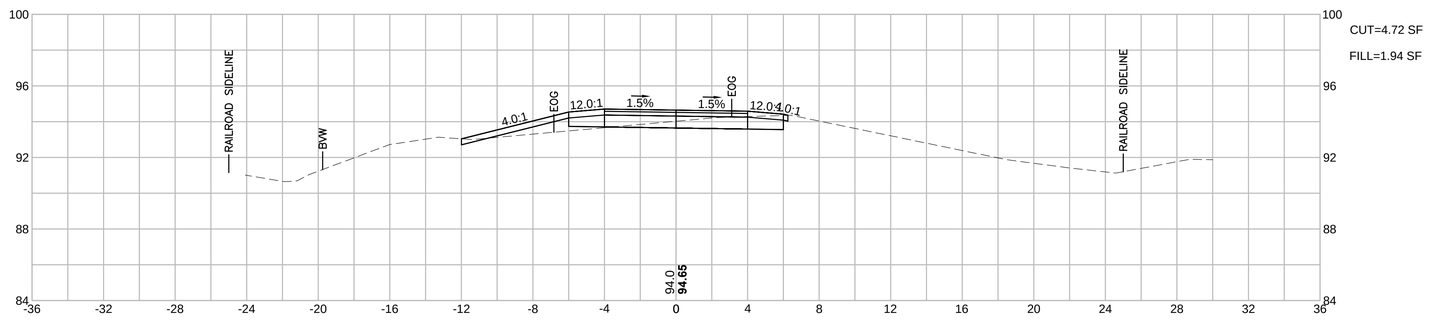
207+50



207+00



206+50



HOR. SCALE IN FEET
VER. SCALE IN FEET

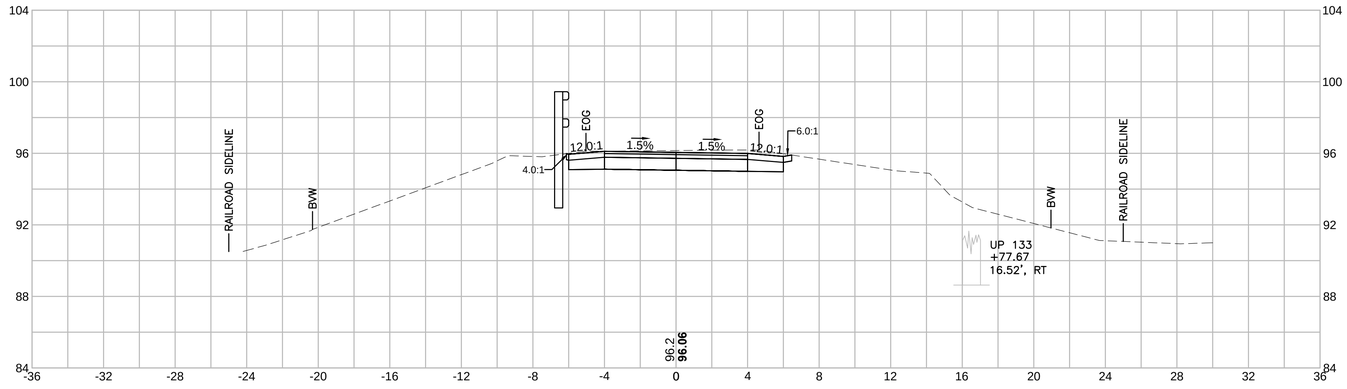
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	75	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 6 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:11 PM

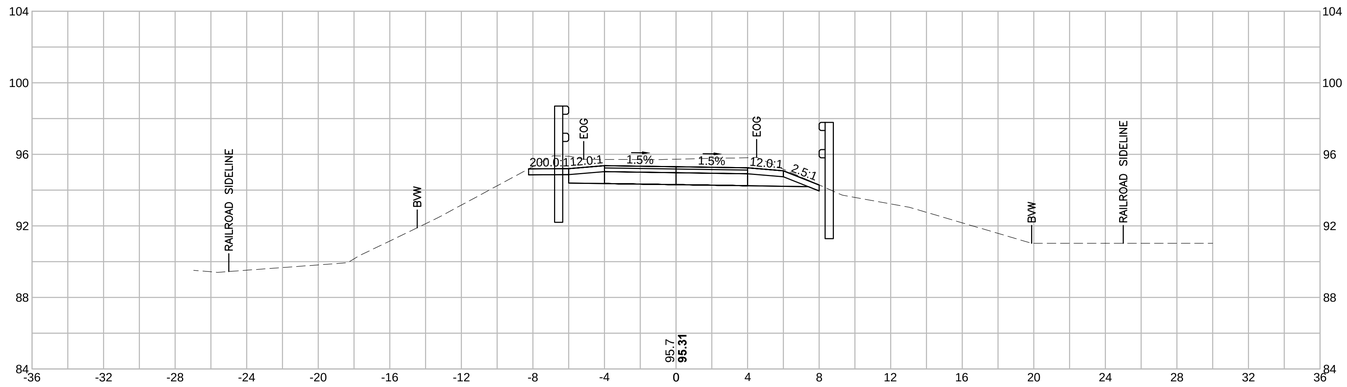
209+00



CUT=13.29 SF

FILL=0.00 SF

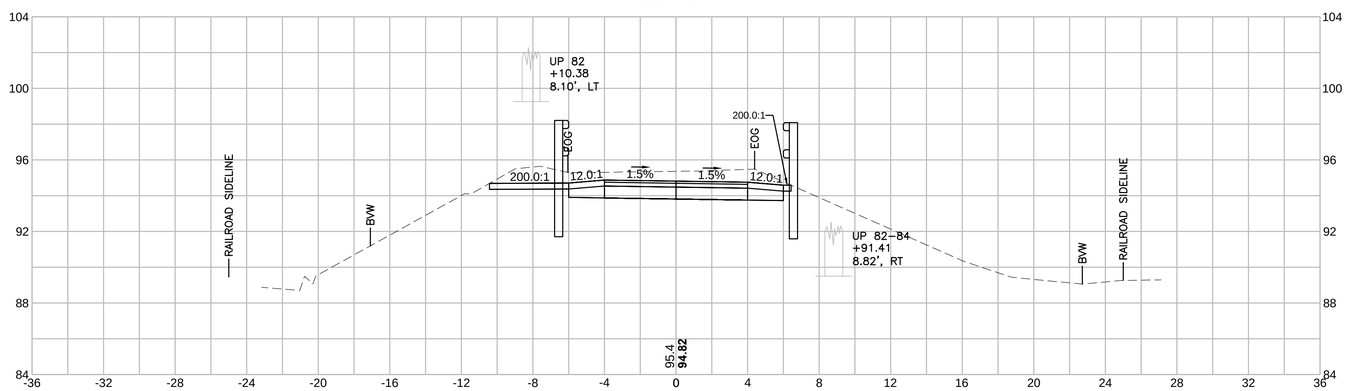
208+50



CUT=19.96 SF

FILL=0.00 SF

208+00



CUT=22.87 SF

FILL=0.00 SF

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

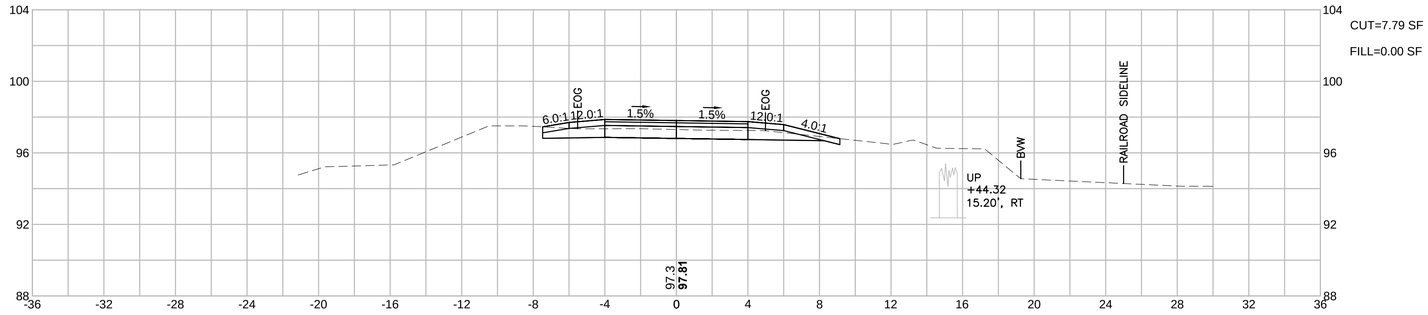
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	76	159
PROJECT FILE NO.	608298		

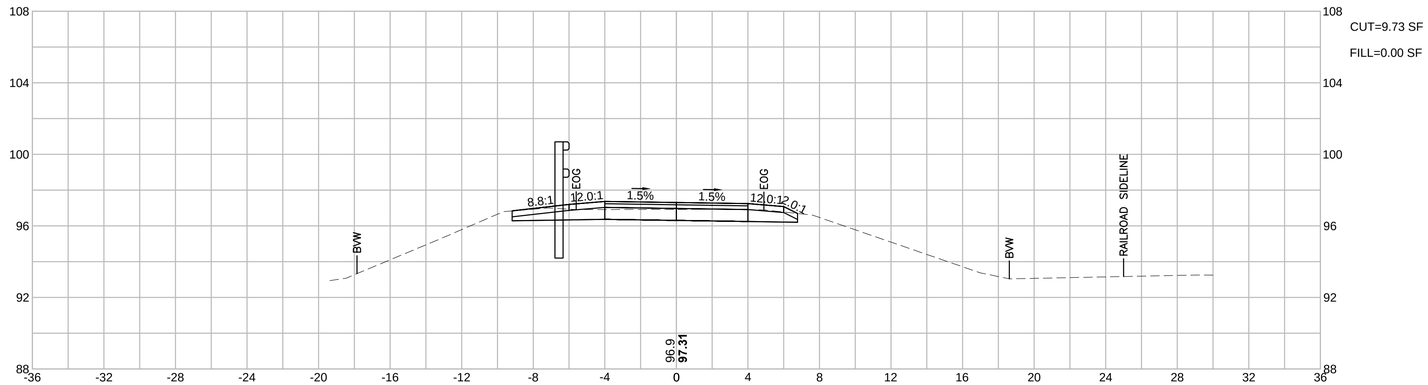
CROSS SECTIONS
PART 7 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:11 PM

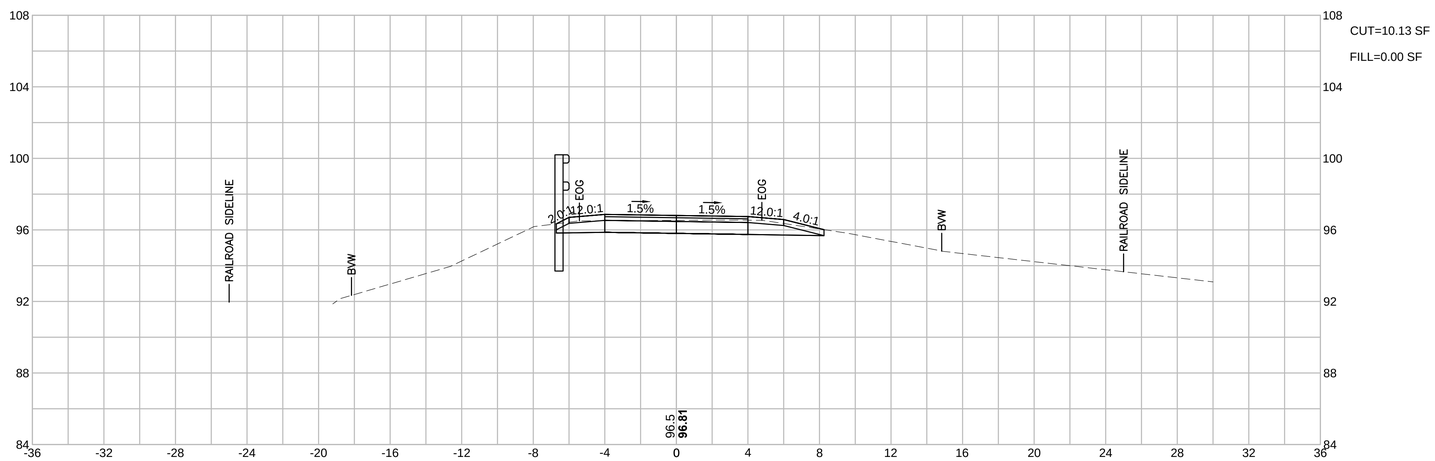
210+50



210+00



209+50



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

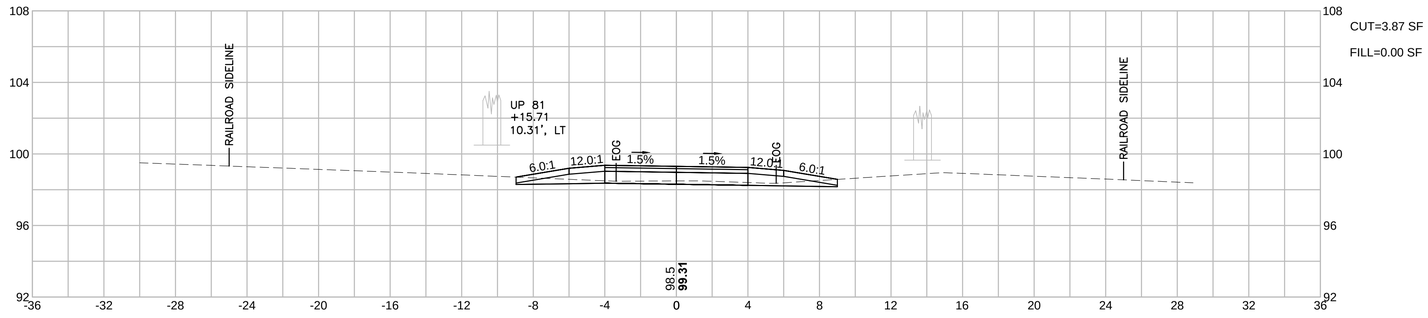
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	77	159
PROJECT FILE NO.	608298		

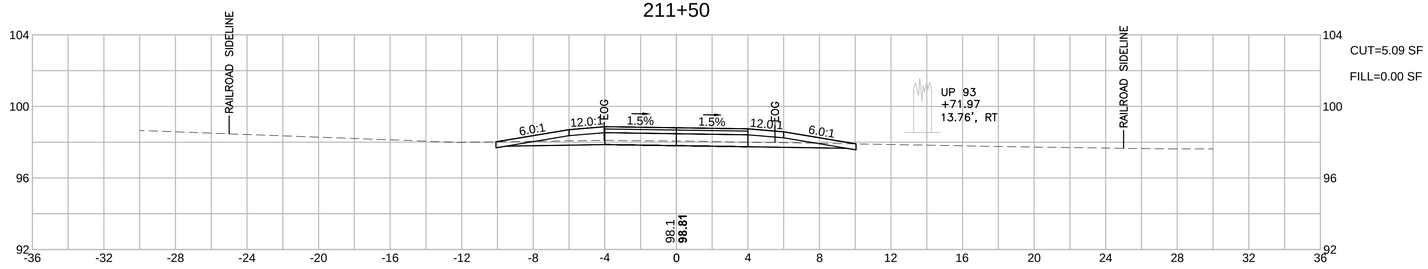
CROSS SECTIONS
PART 8 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:12 PM

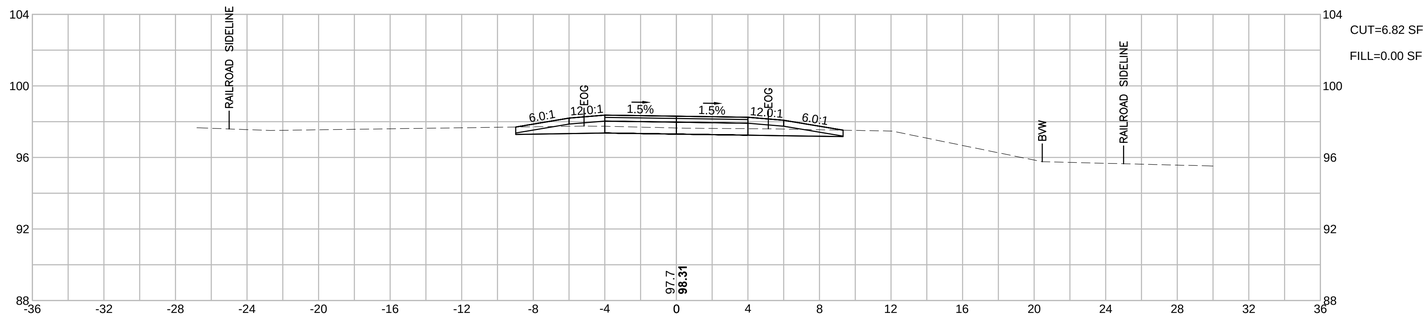
212+00



211+50



211+00



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

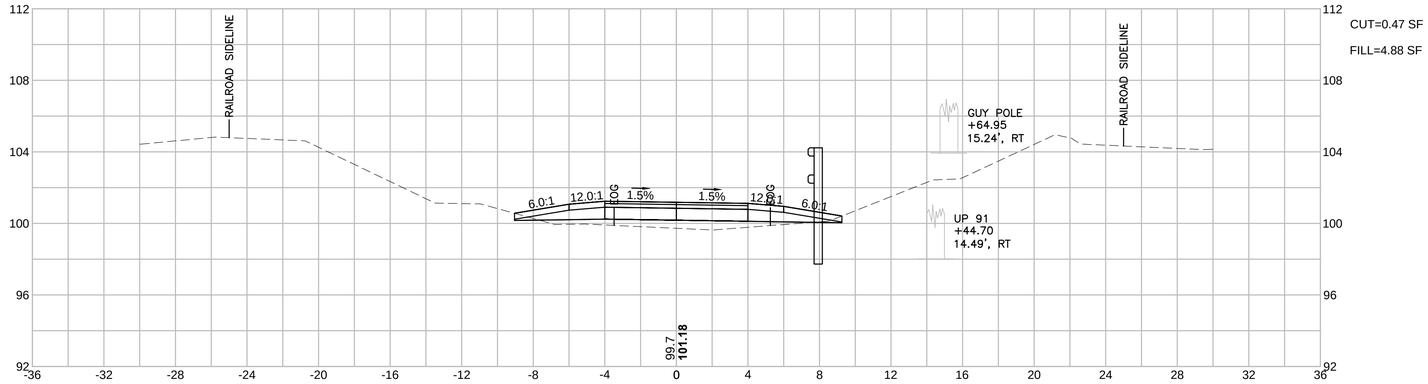
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	78	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 9 OF 90

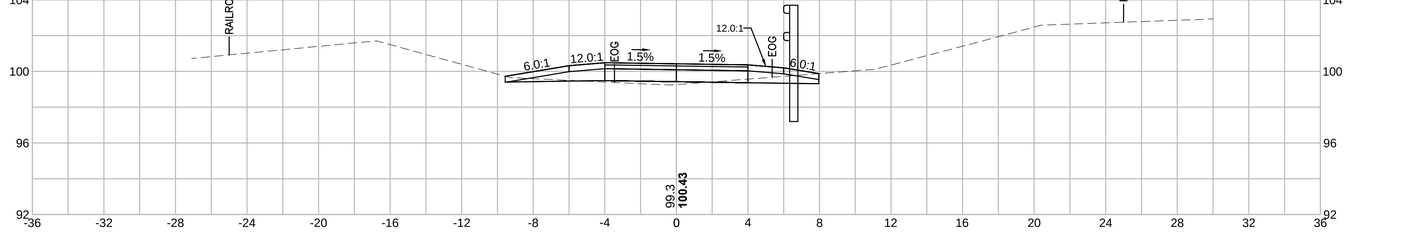
608298_HDI(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:12 PM

213+50



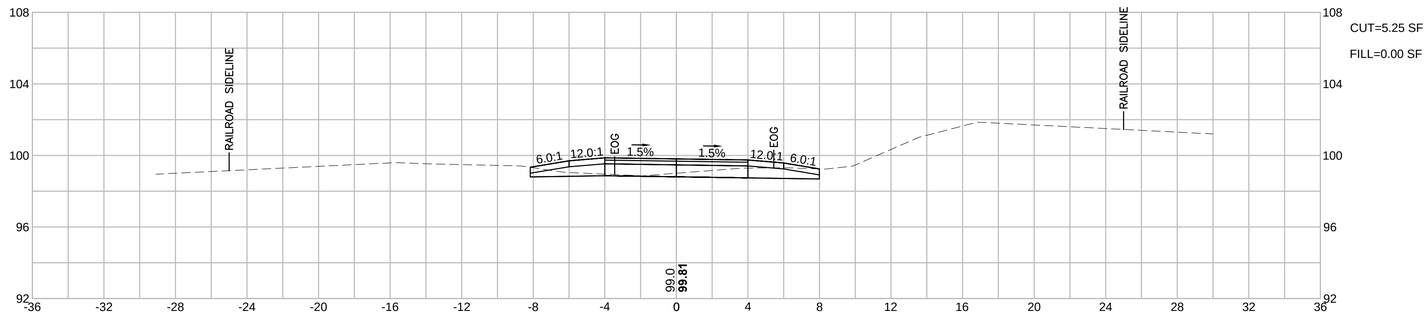
CUT=0.47 SF
FILL=4.88 SF

213+00



CUT=2.31 SF
FILL=0.77 SF

212+50



CUT=5.25 SF
FILL=0.00 SF

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

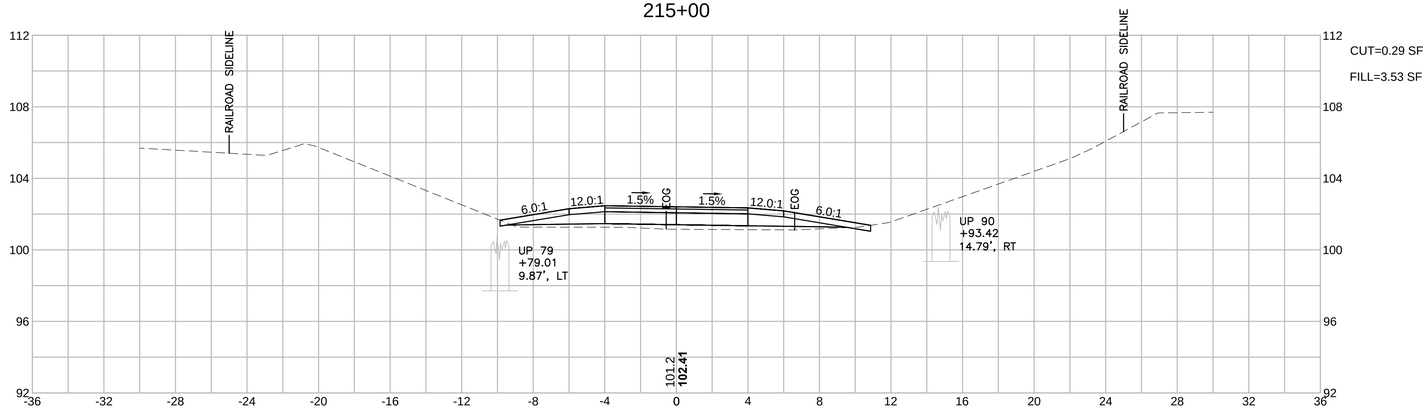
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	79	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 10 OF 90

608298_HD\CROSS SECTIONS\.DWG Plotted on 5-Sep-2018 5:13 PM

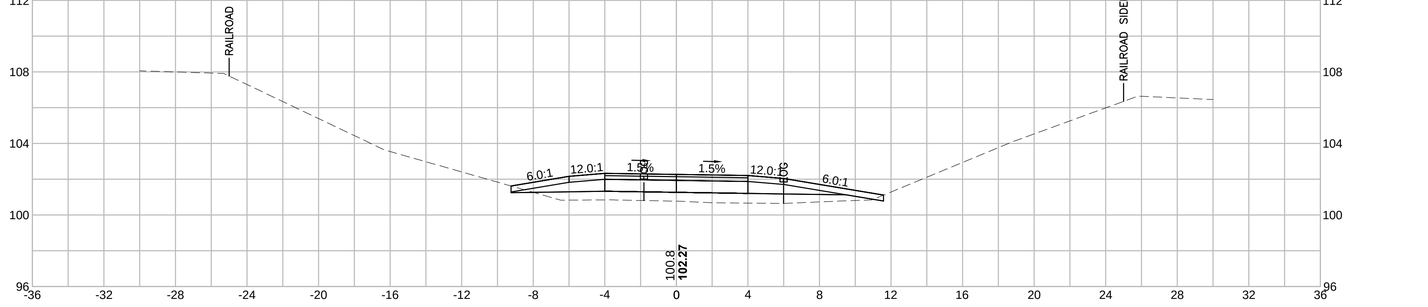
215+00



CUT=0.29 SF

FILL=3.53 SF

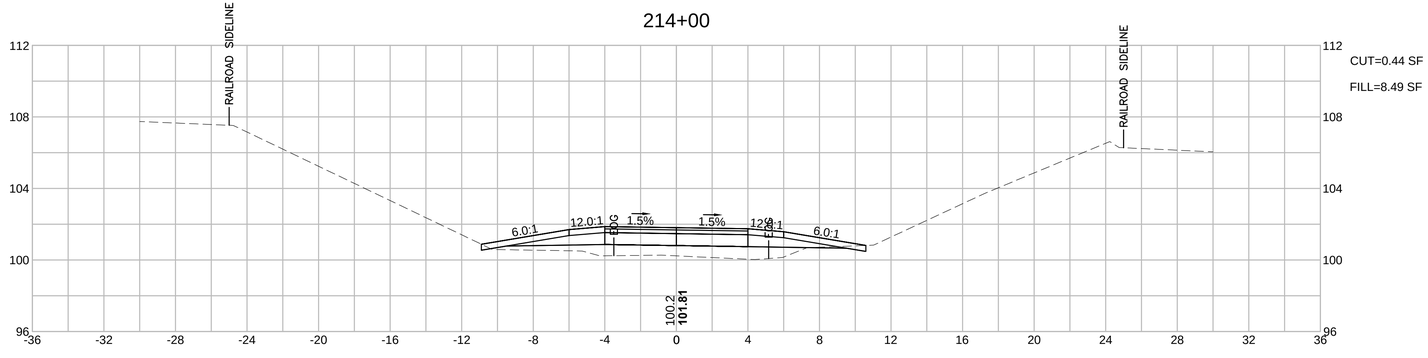
214+50



CUT=0.33 SF

FILL=8.46 SF

214+00



CUT=0.44 SF

FILL=8.49 SF

HOR. SCALE IN FEET
4 0 4 8

VER. SCALE IN FEET
4 0 4 8

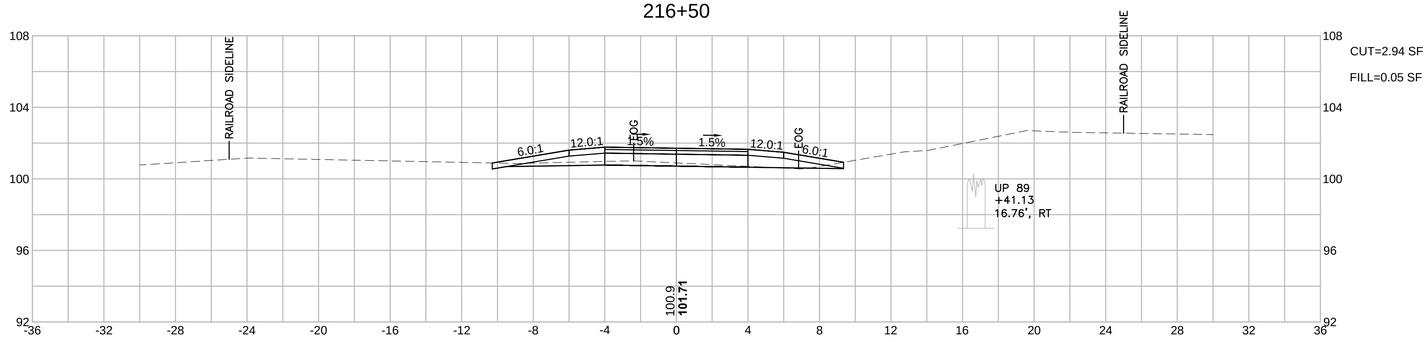
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	80	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 11 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:13 PM

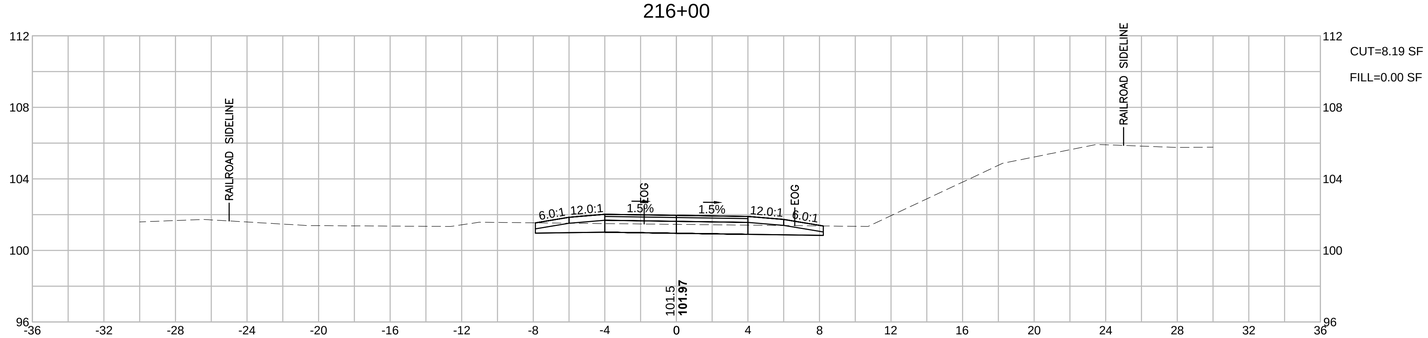
216+50



CUT=2.94 SF

FILL=0.05 SF

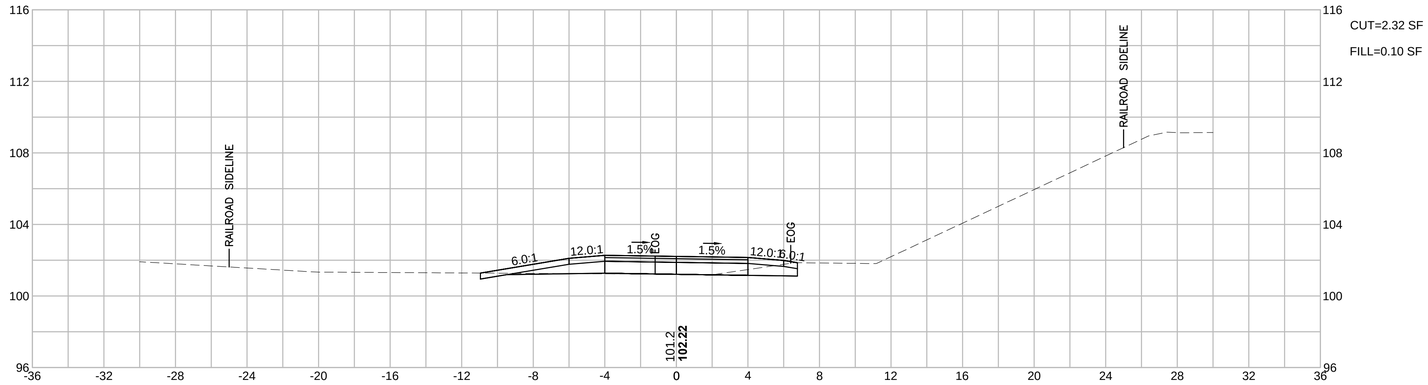
216+00



CUT=8.19 SF

FILL=0.00 SF

215+50



CUT=2.32 SF

FILL=0.10 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

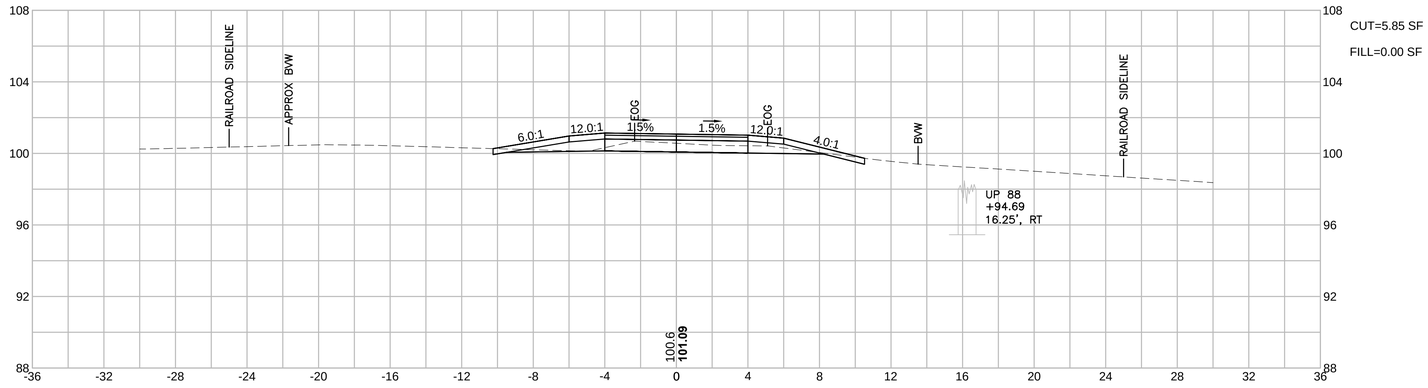
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	81	159
PROJECT FILE NO.	608298		

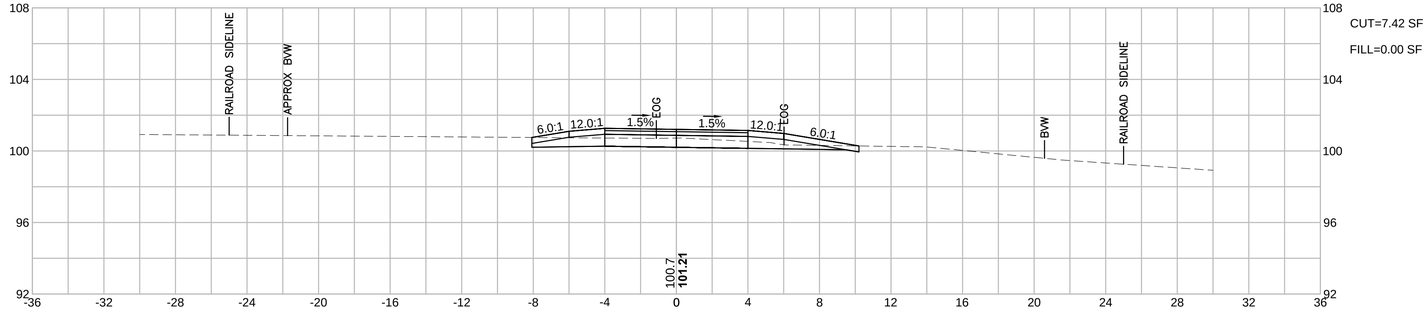
CROSS SECTIONS
PART 12 OF 90

608298_HD\CROSS SECTIONS\.DWG Plotted on 5-Sep-2018 5:14 PM

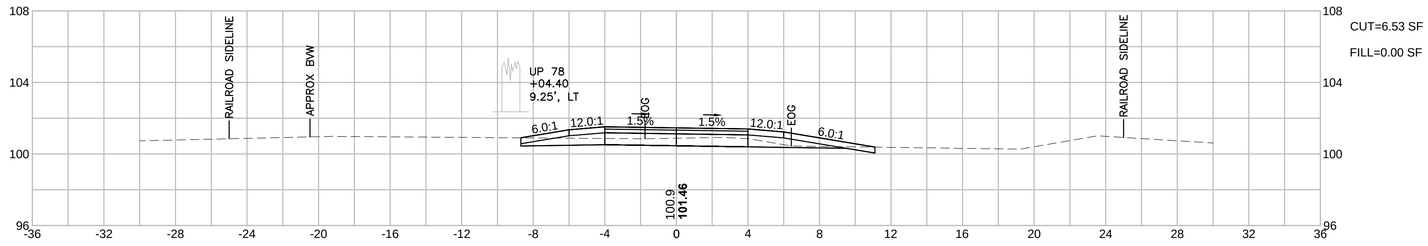
218+00



217+50



217+00



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

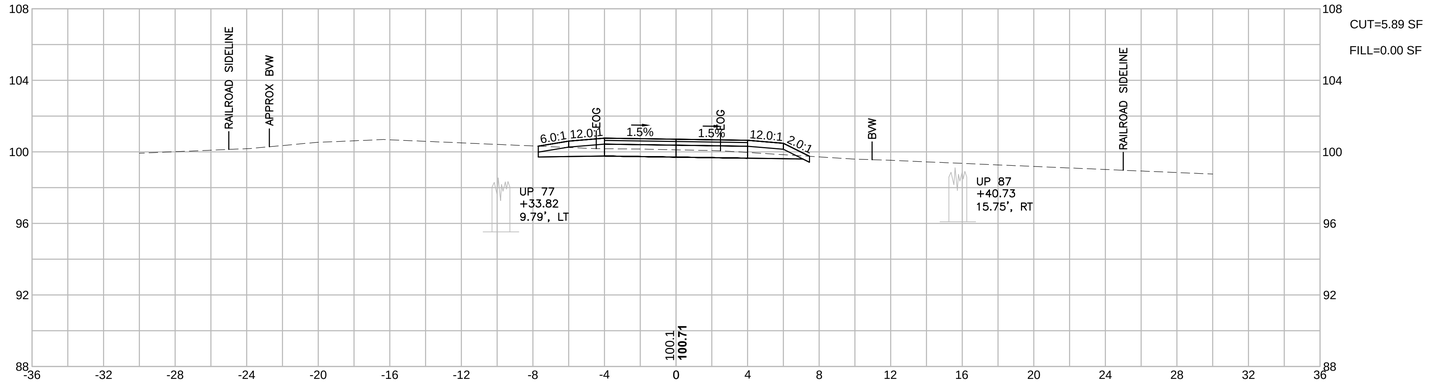
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	82	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 13 OF 90

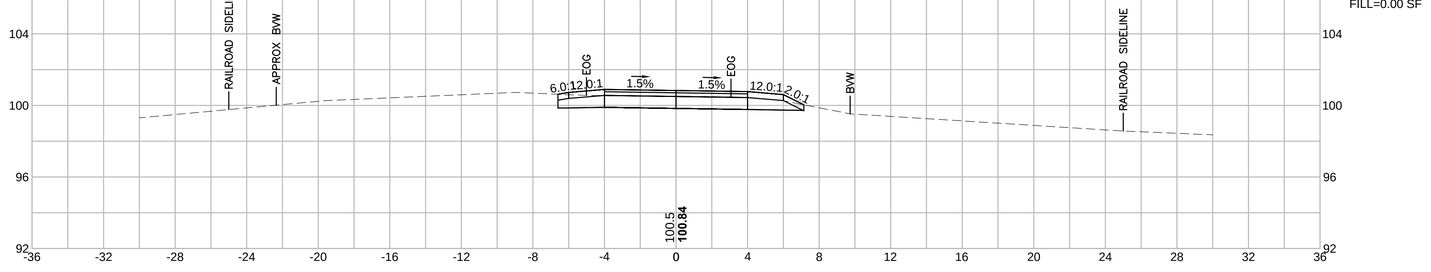
Plotted on 5-Sep-2018 5:14 PM
608298_HD(CROSS SECTIONS).DWG

219+50



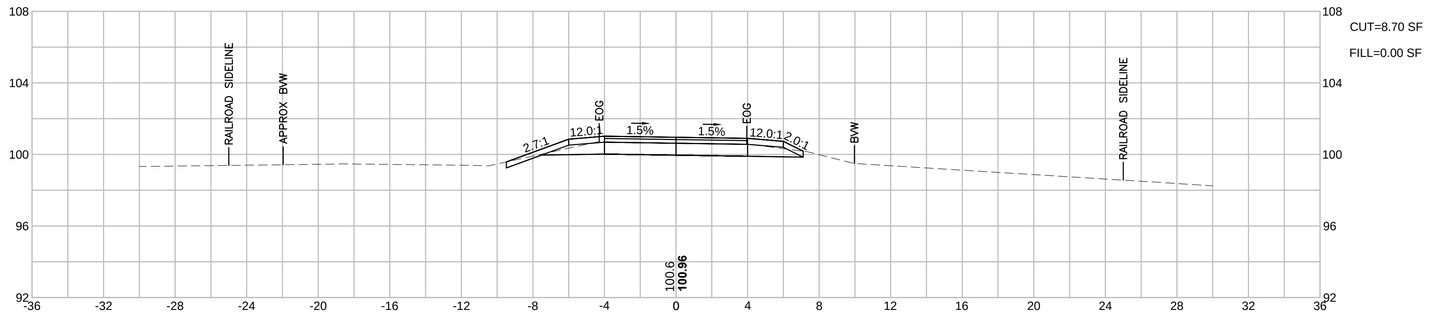
CUT=5.89 SF
FILL=0.00 SF

219+00



CUT=8.90 SF
FILL=0.00 SF

218+50



CUT=8.70 SF
FILL=0.00 SF

HOR. SCALE IN FEET
VER. SCALE IN FEET

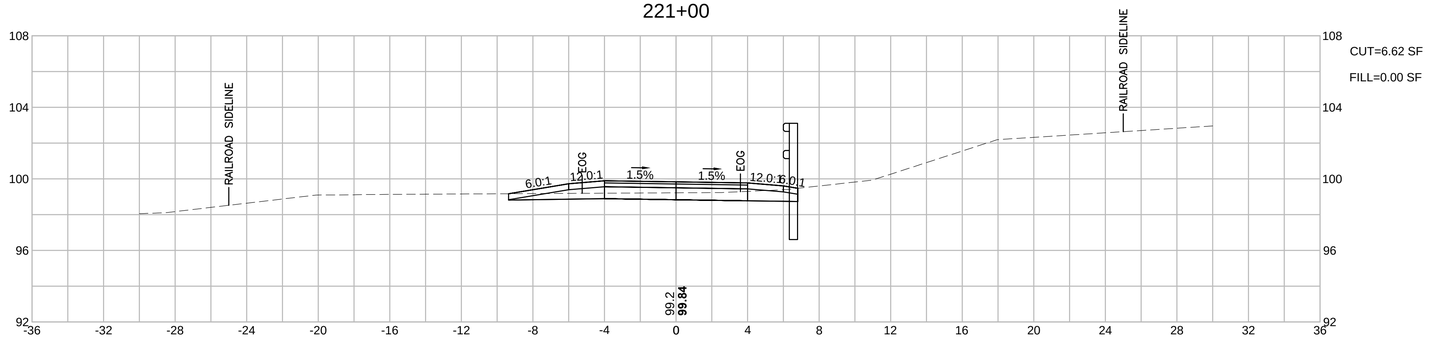
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	83	159
PROJECT FILE NO.	608298		

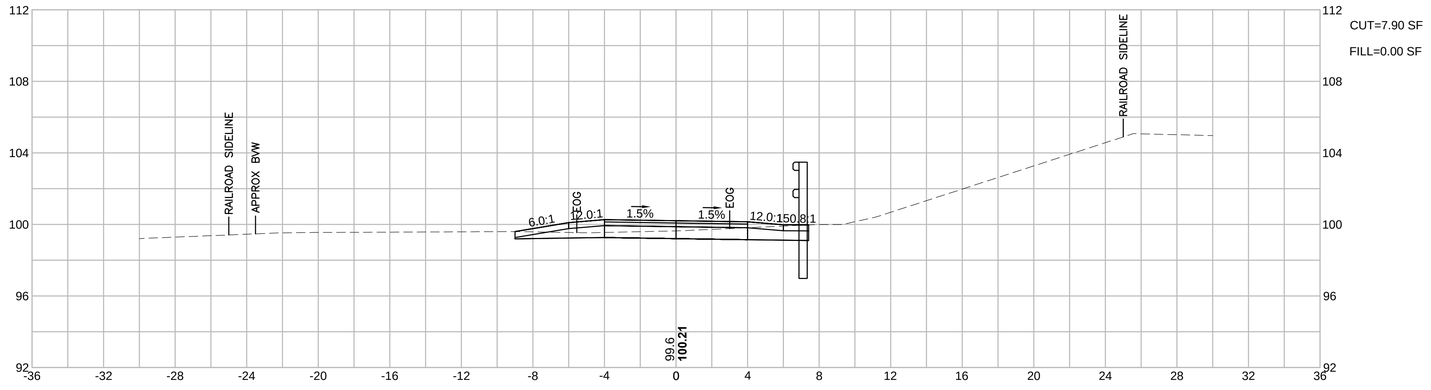
CROSS SECTIONS
PART 14 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:14 PM

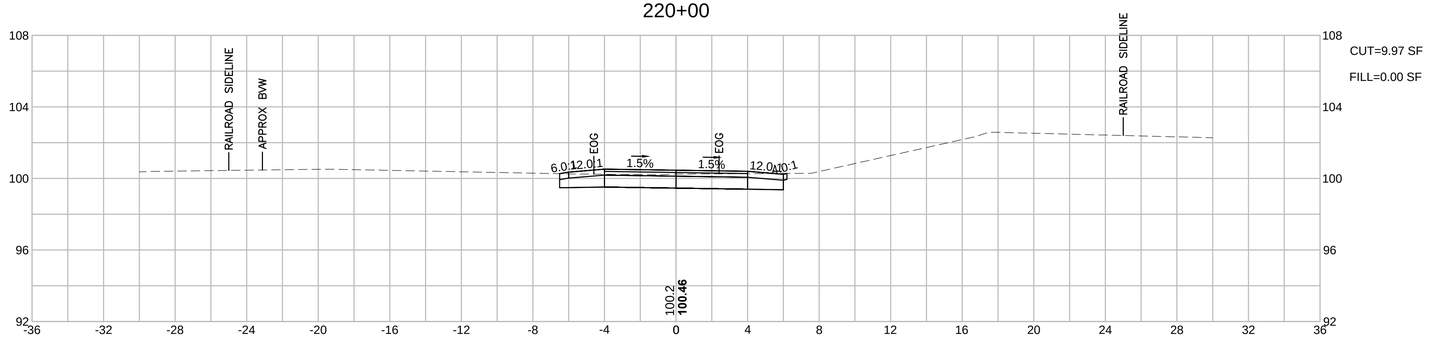
221+00



220+50



220+00



HOR. SCALE IN FEET
VER. SCALE IN FEET

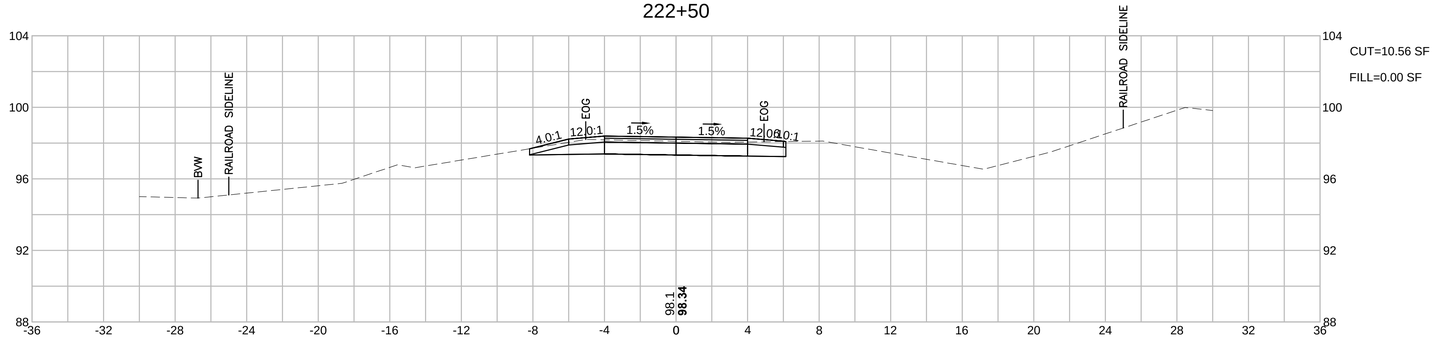
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	84	159
PROJECT FILE NO.	608298		

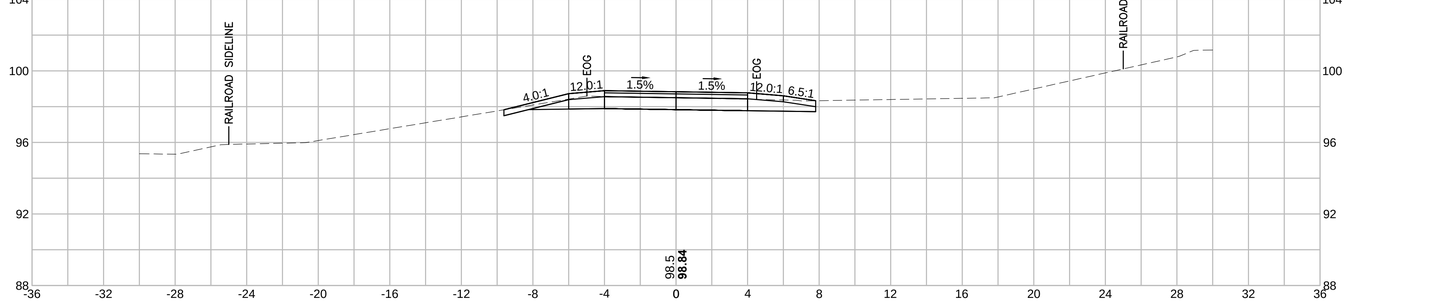
CROSS SECTIONS
PART 15 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:15 PM

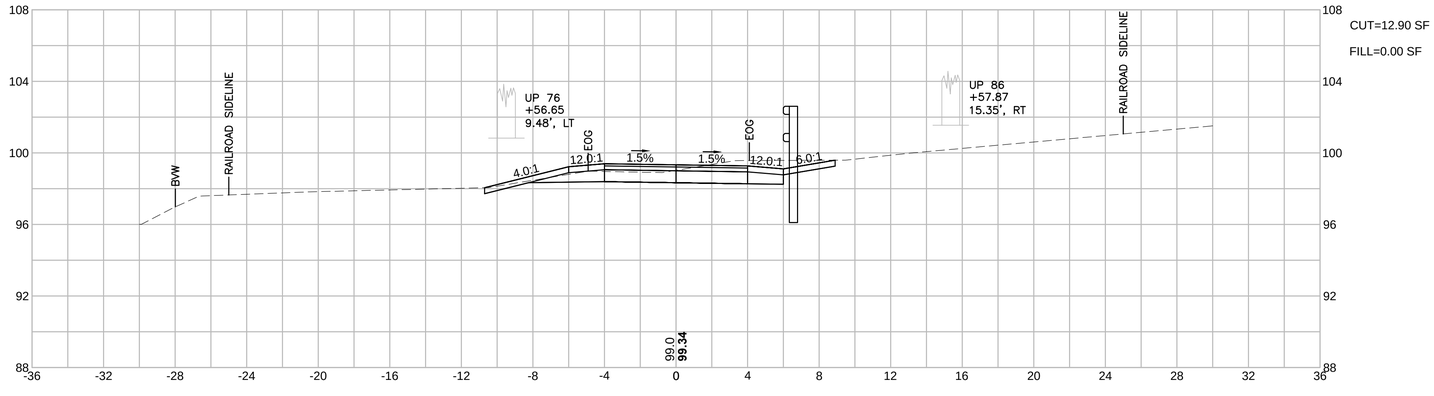
222+50



222+00



221+50



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

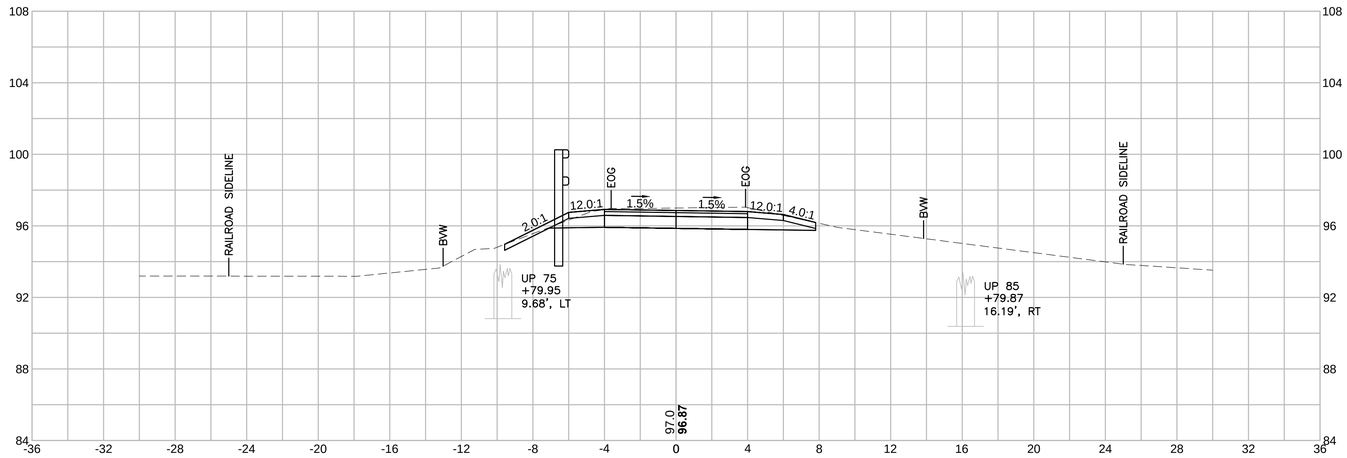
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	85	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 16 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:15 PM

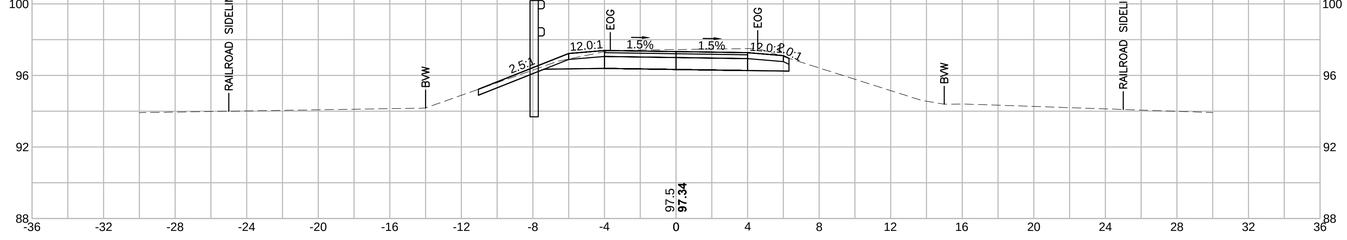
224+00



CUT=14.47 SF

FILL=0.00 SF

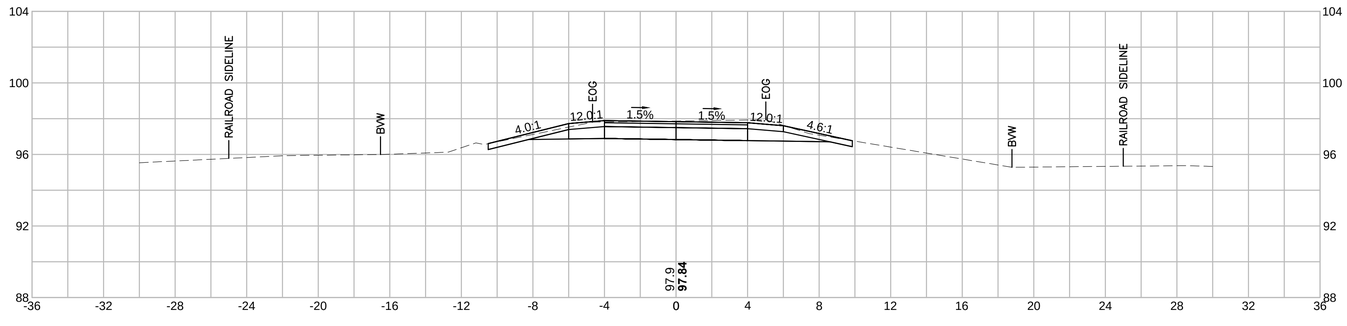
223+50



CUT=14.23 SF

FILL=0.00 SF

223+00



CUT=14.92 SF

FILL=0.00 SF

HOR. SCALE IN FEET

VER. SCALE IN FEET

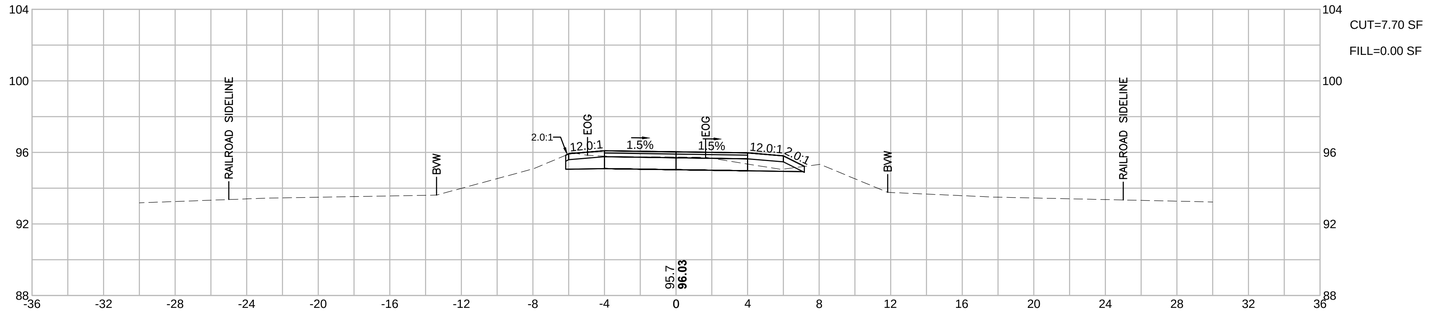
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	86	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 17 OF 90

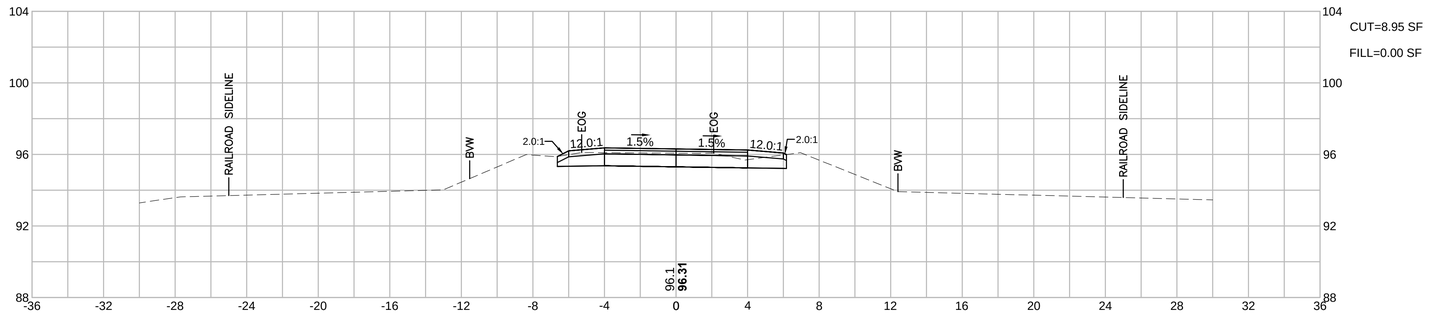
608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:16 PM

225+50



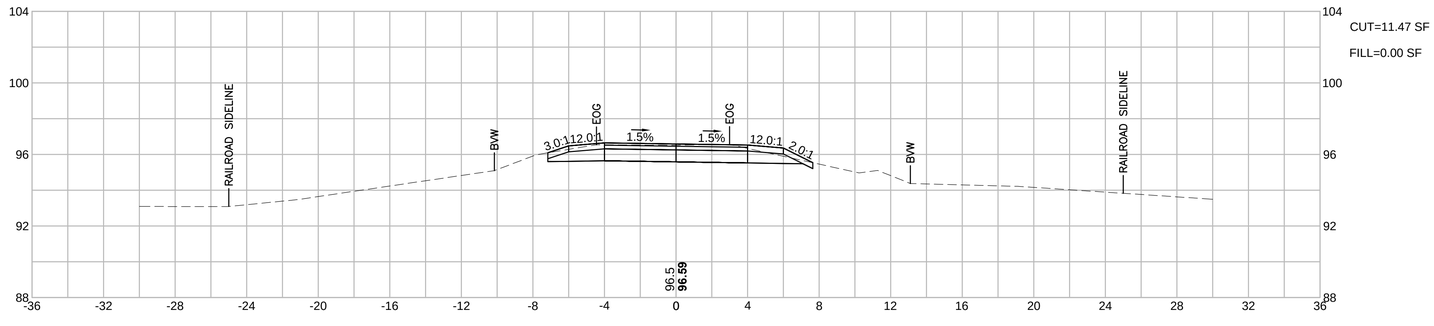
CUT=7.70 SF
FILL=0.00 SF

225+00



CUT=8.95 SF
FILL=0.00 SF

224+50



CUT=11.47 SF
FILL=0.00 SF

HOR. SCALE IN FEET
4 0 4 8

4 0 4 8
VER. SCALE IN FEET

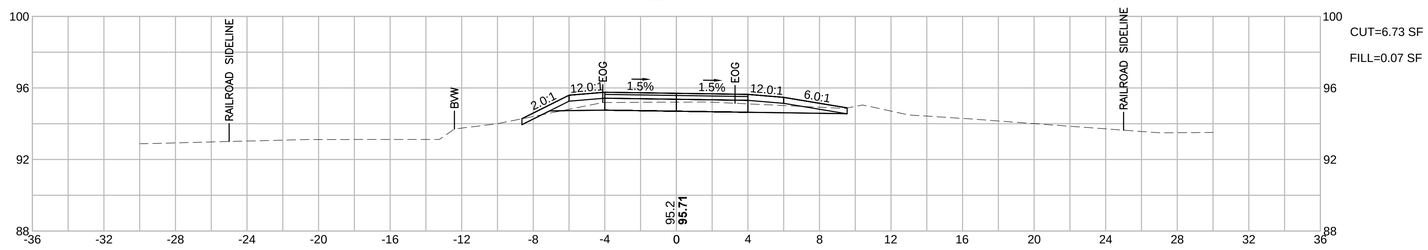
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	87	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 18 OF 90

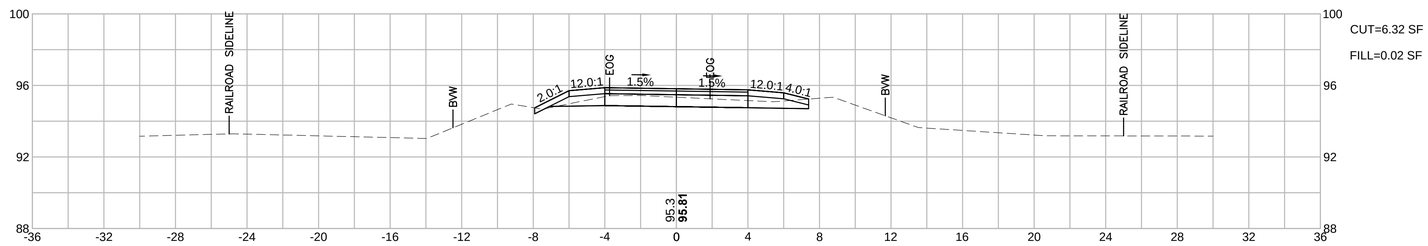
608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:16 PM

227+00



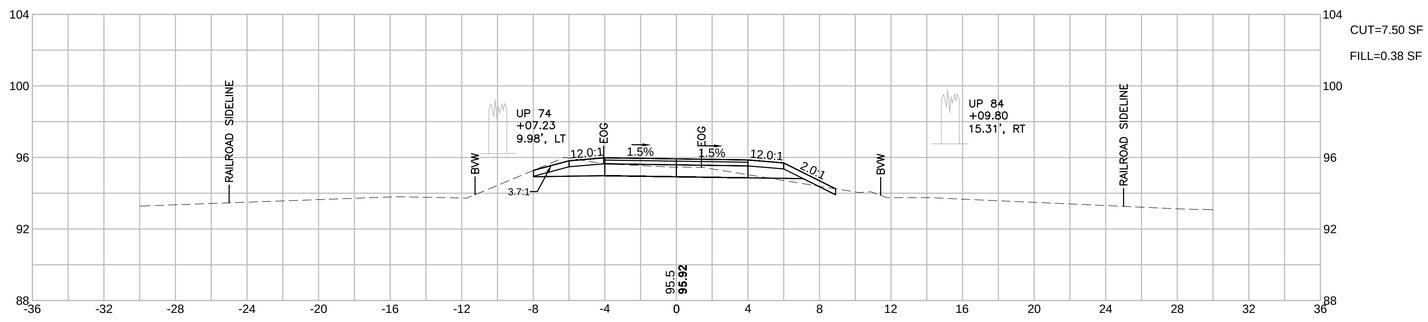
CUT=6.73 SF
FILL=0.07 SF

226+50



CUT=6.32 SF
FILL=0.02 SF

226+00



CUT=7.50 SF
FILL=0.38 SF

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

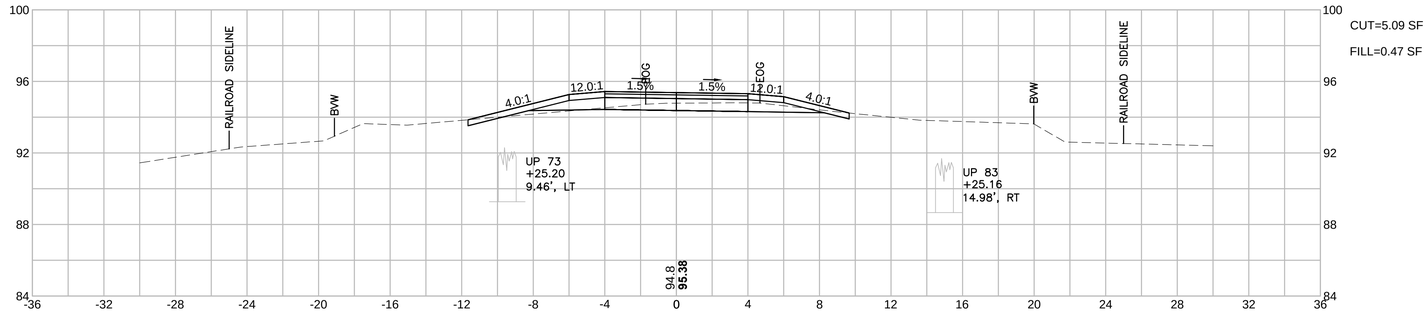
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	88	159
PROJECT FILE NO.	608298		

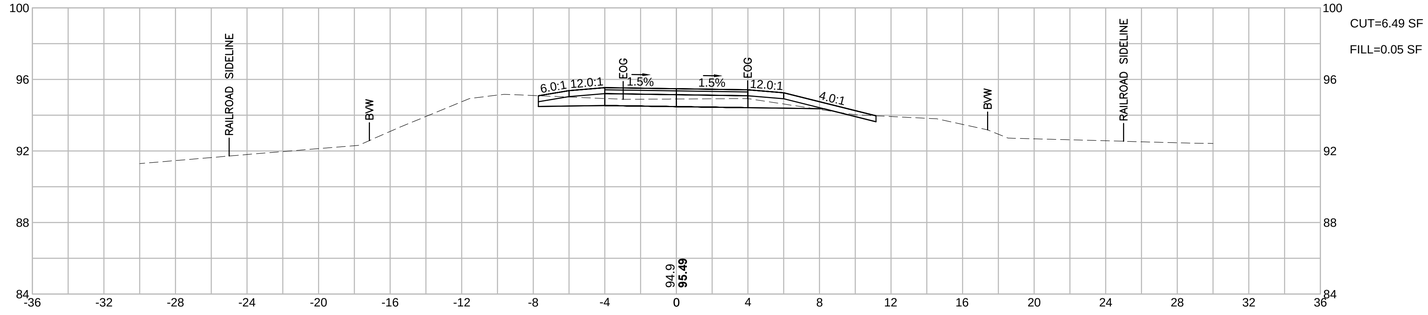
CROSS SECTIONS
PART 19 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:17 PM

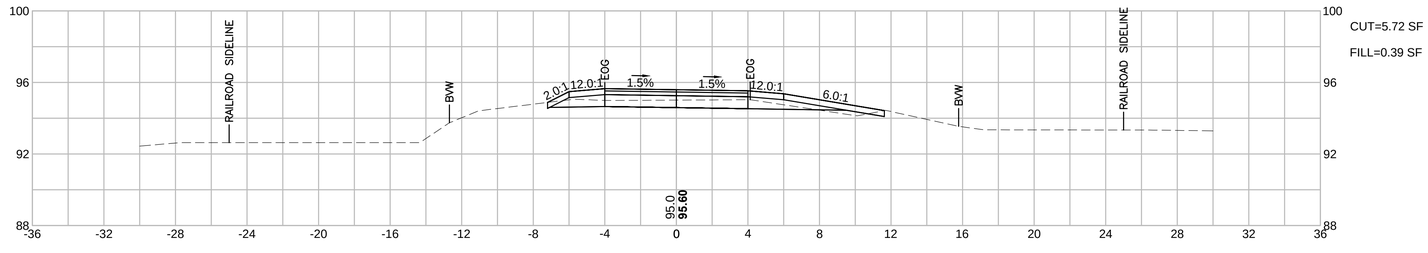
228+50



228+00



227+50



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

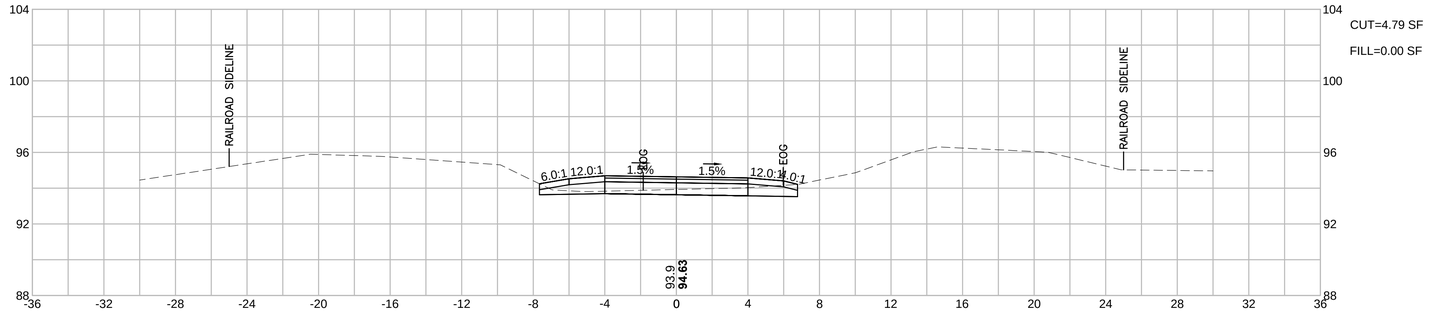
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	89	159
PROJECT FILE NO.	608298		

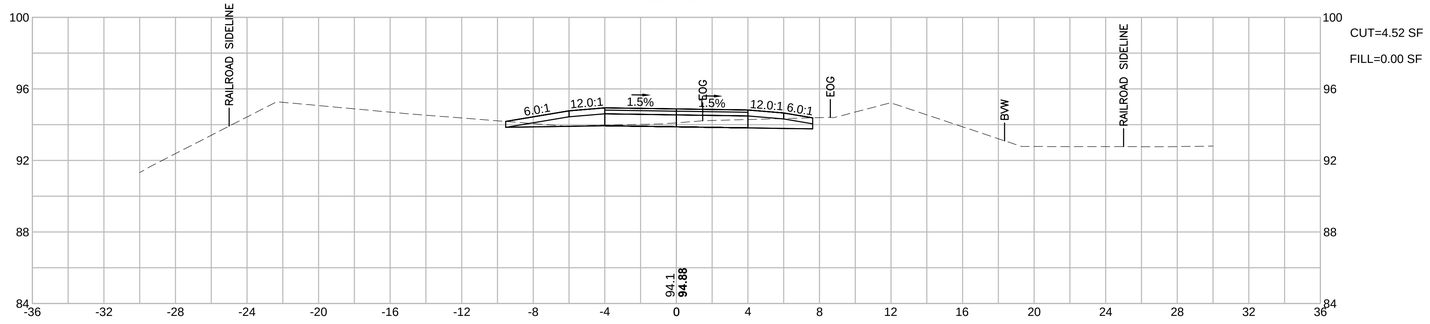
CROSS SECTIONS
PART 20 OF 90

Plotted on 5-Sep-2018 5:17 PM
608298_HD(CROSS SECTIONS).DWG

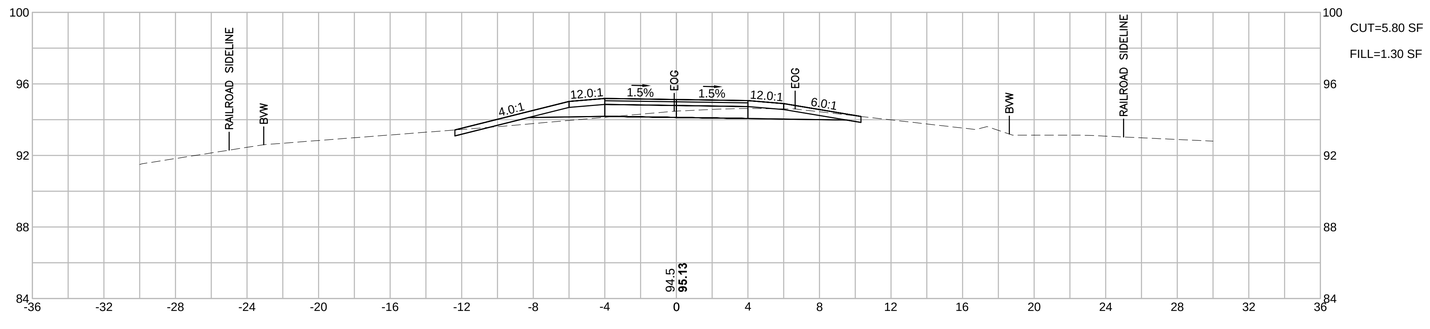
230+00



229+50



229+00



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

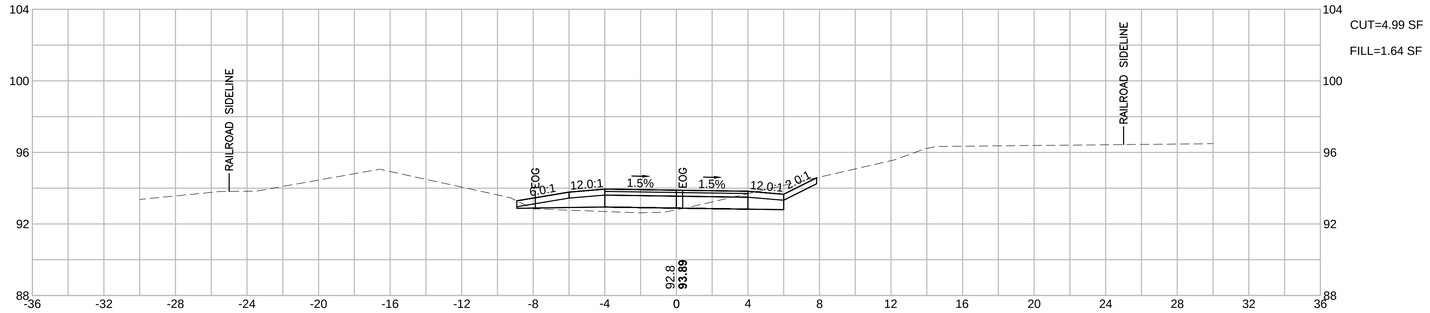
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	90	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 21 OF 90

608298_HDI(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:17 PM

231+50



CUT=4.99 SF
FILL=1.64 SF

231+00

CUT=5.36 SF
FILL=0.00 SF

230+50

CUT=5.09 SF
FILL=0.00 SF

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

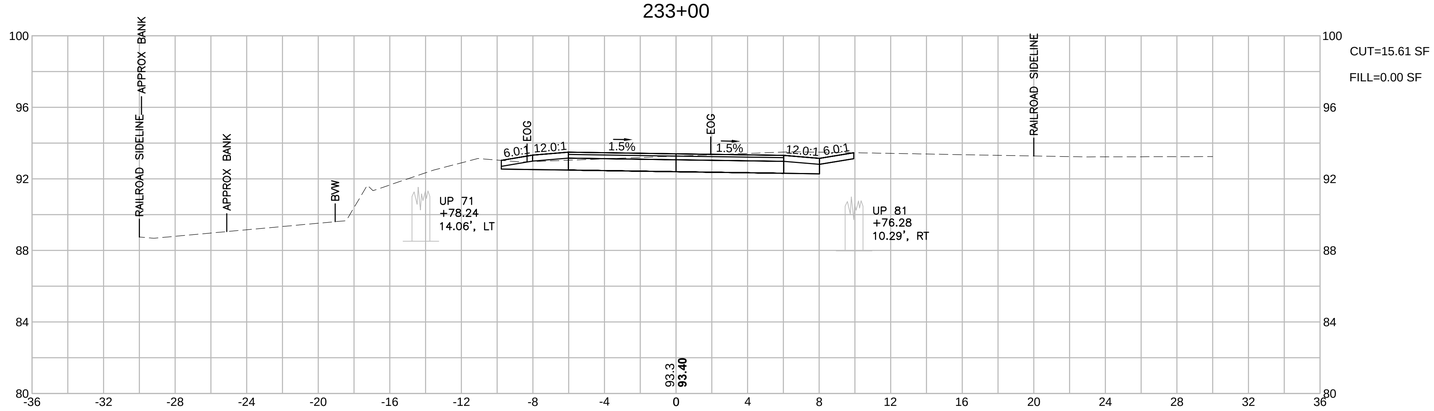
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	91	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 22 OF 90

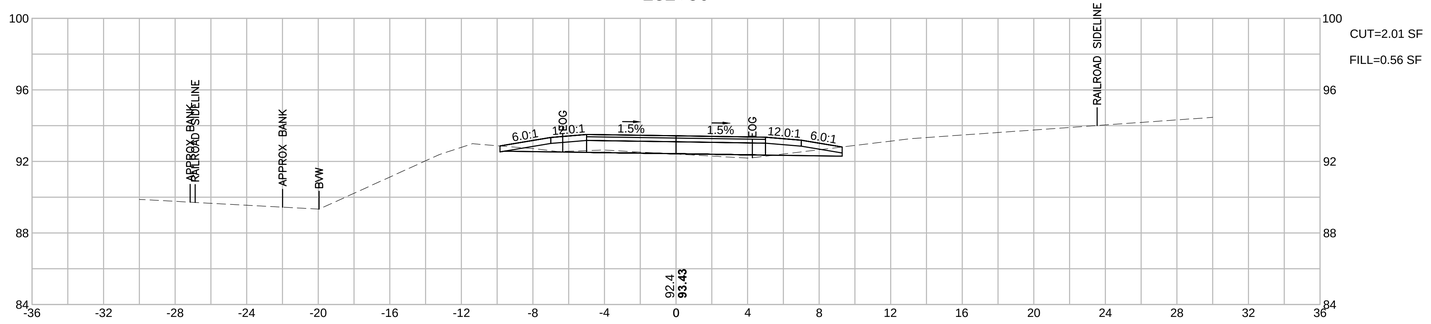
608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:18 PM

233+00



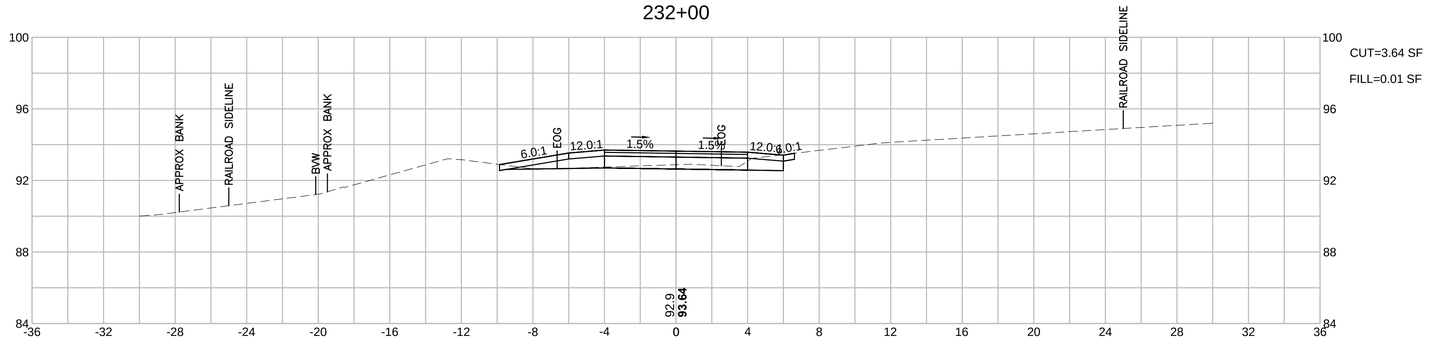
CUT=15.61 SF
FILL=0.00 SF

232+50



CUT=2.01 SF
FILL=0.56 SF

232+00



CUT=3.64 SF
FILL=0.01 SF

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

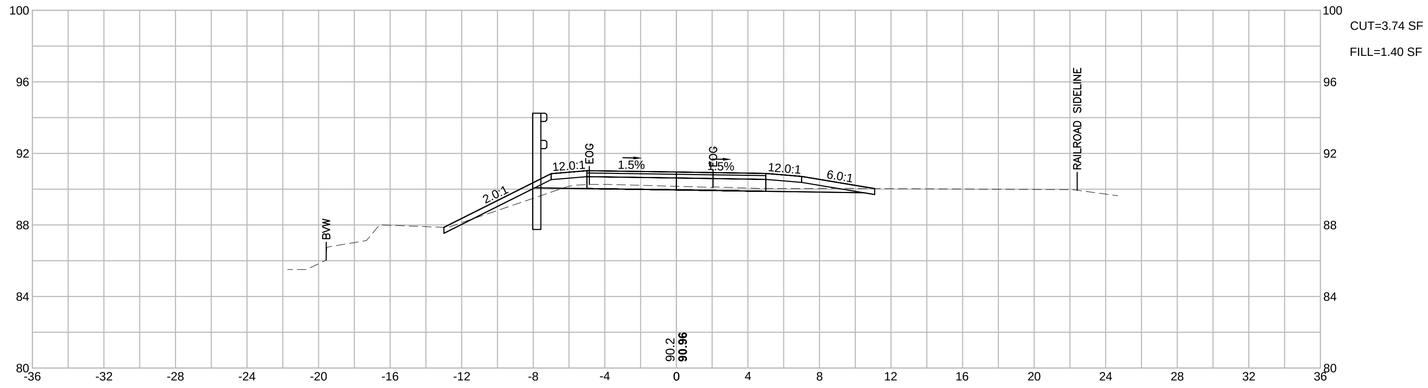
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	92	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 23 OF 90

Plotted on 5-Sep-2018 5:18 PM
608298_HD\CROSS SECTIONS\.DWG

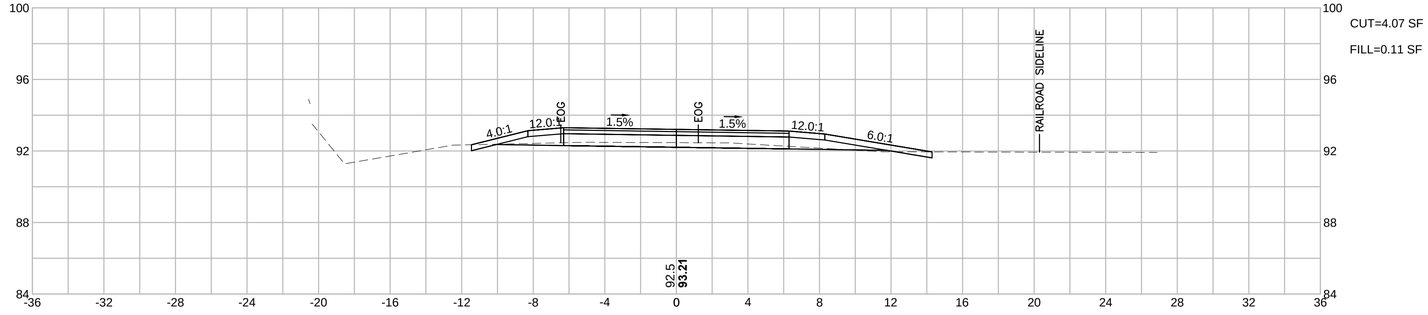
234+50



CUT=3.74 SF

FILL=1.40 SF

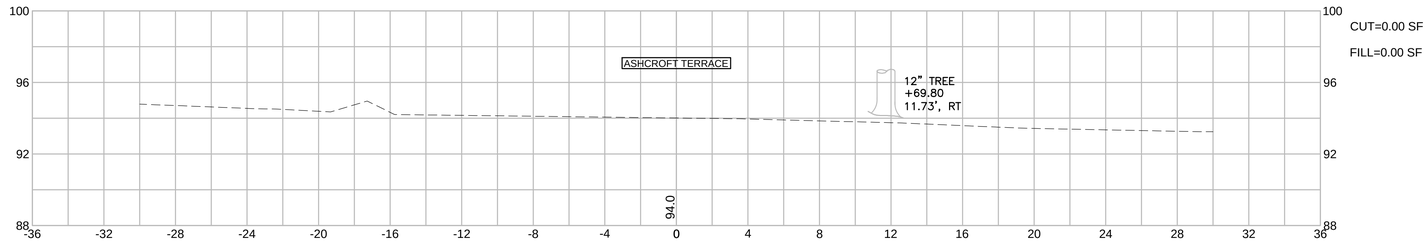
234+00



CUT=4.07 SF

FILL=0.11 SF

233+50



CUT=0.00 SF

FILL=0.00 SF

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

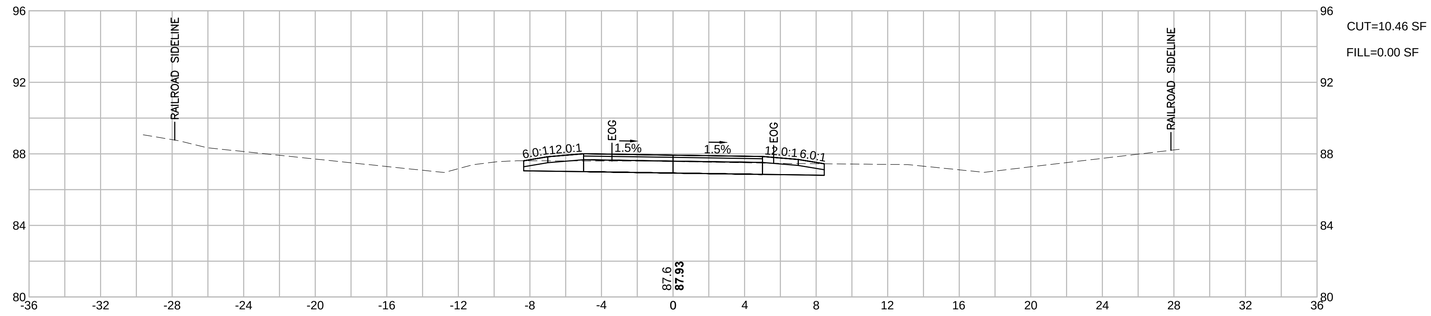
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	93	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 24 OF 90

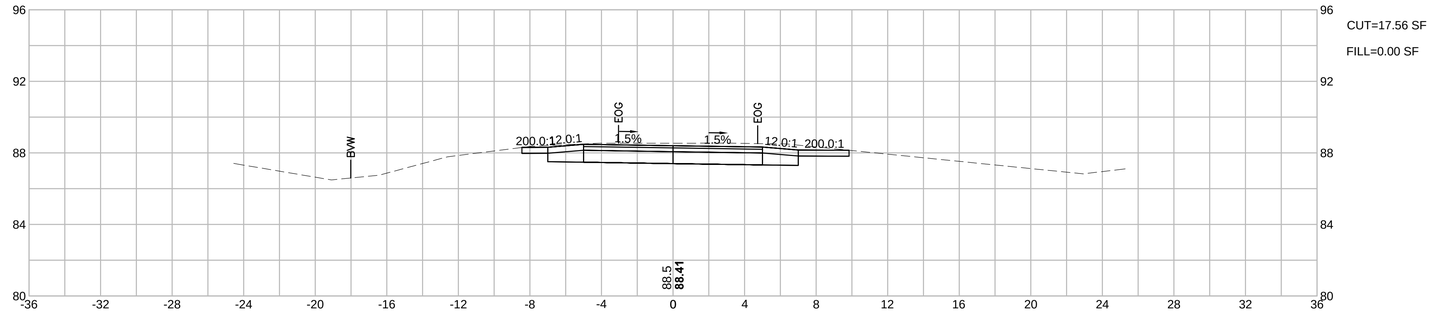
608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:19 PM

236+00



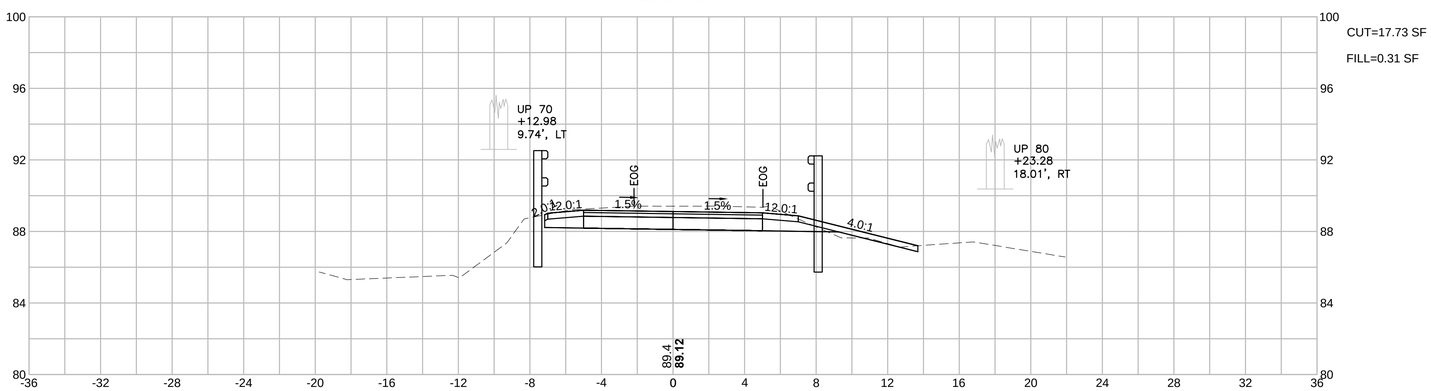
CUT=10.46 SF
FILL=0.00 SF

235+50



CUT=17.56 SF
FILL=0.00 SF

235+00



CUT=17.73 SF
FILL=0.31 SF

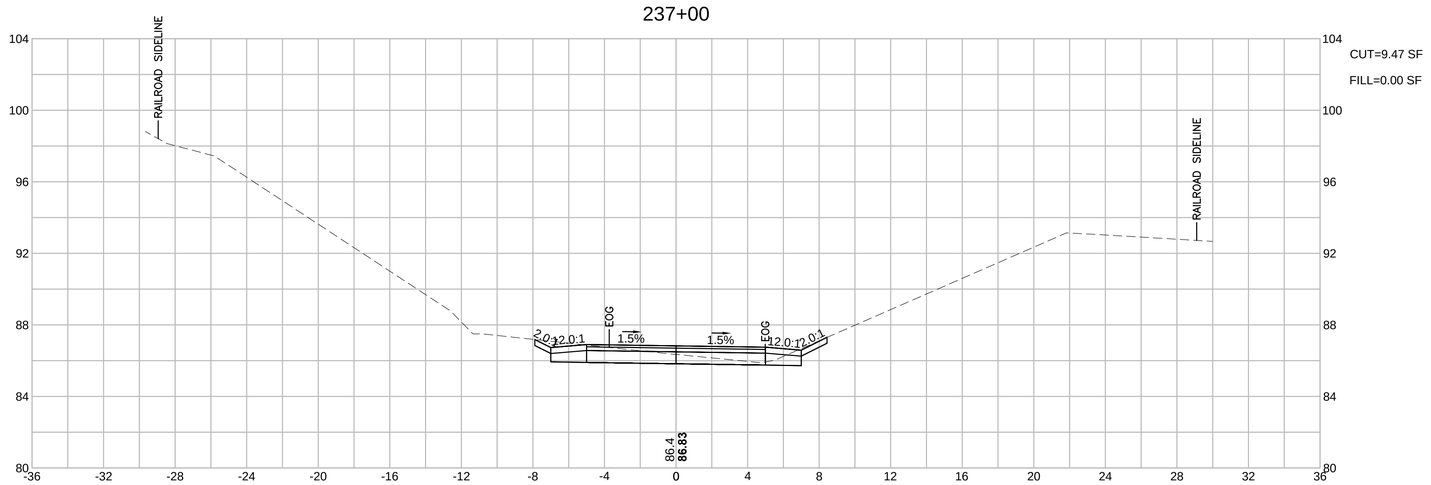
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

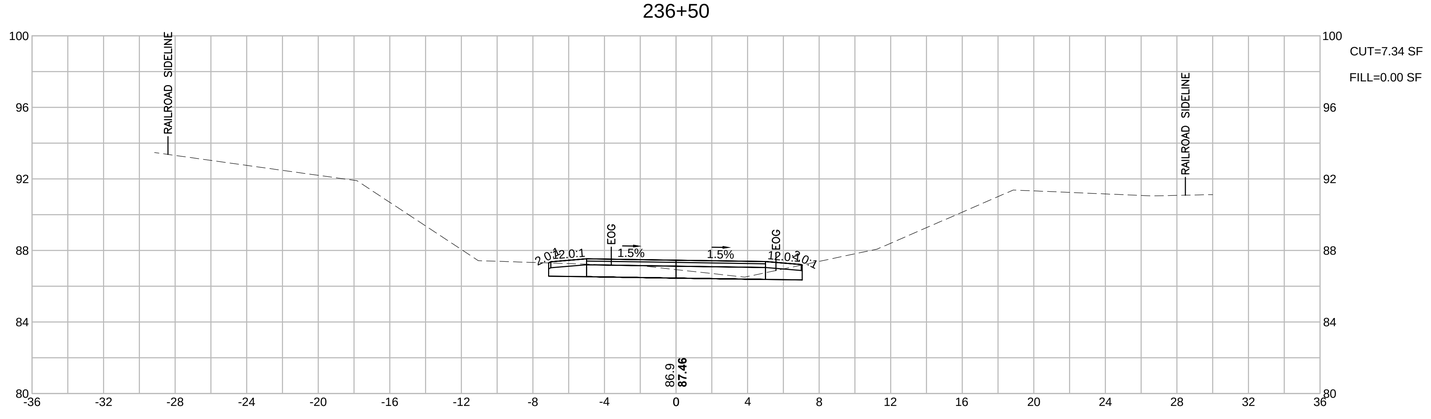
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	94	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 25 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:19 PM





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

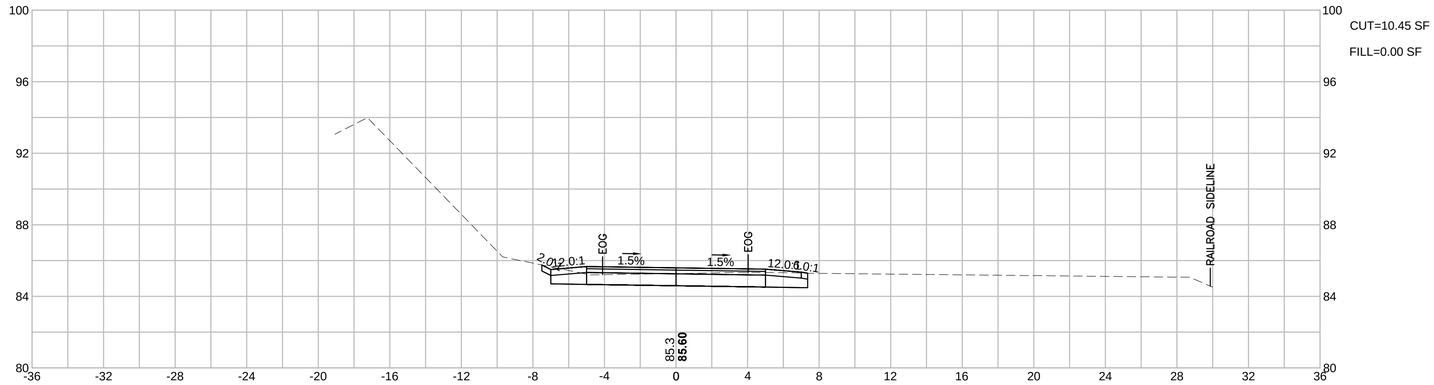
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	95	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 26 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:19 PM

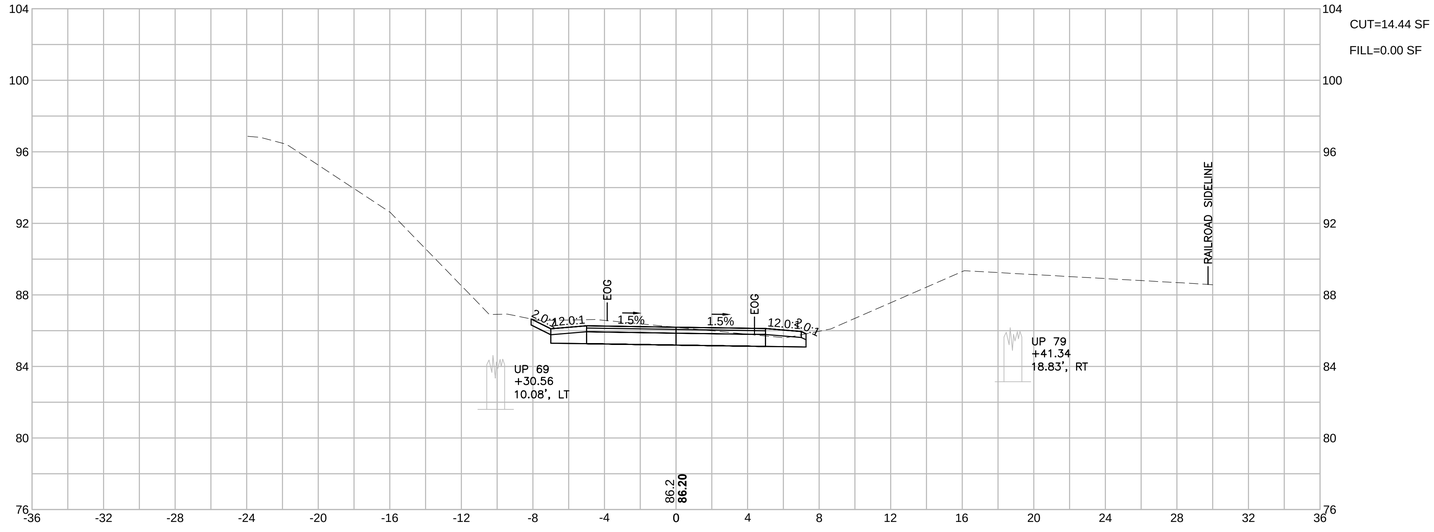
238+00



CUT=10.45 SF

FILL=0.00 SF

237+50



CUT=14.44 SF

FILL=0.00 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

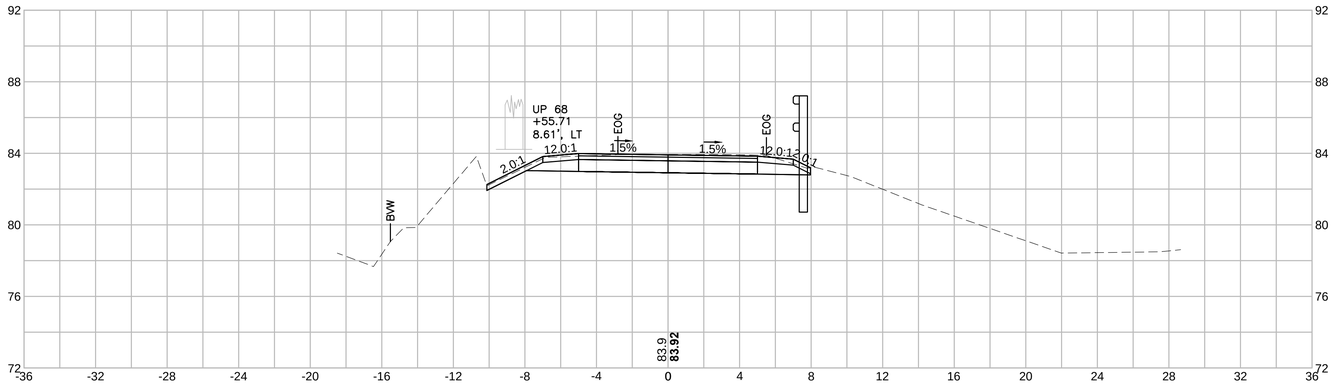
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	96	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 27 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:20 PM

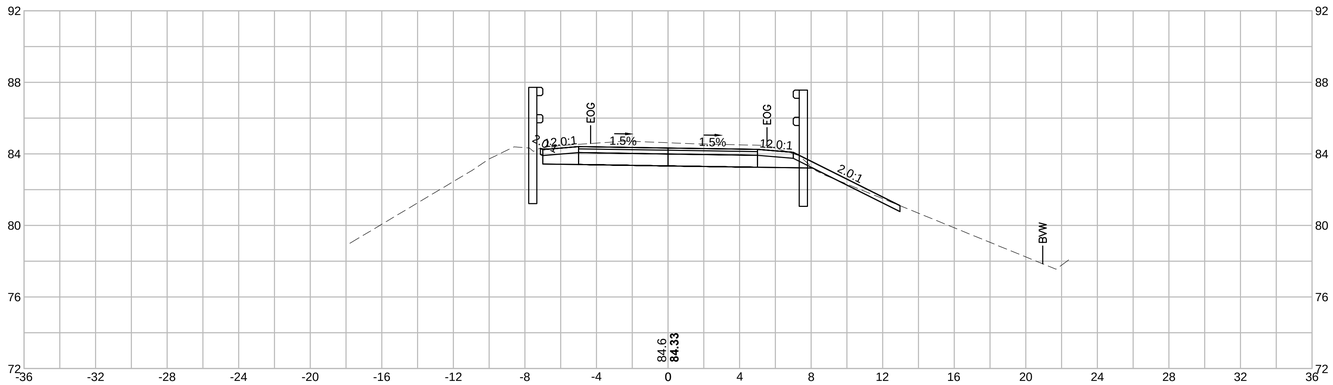
239+50



CUT=14.86 SF

FILL=0.00 SF

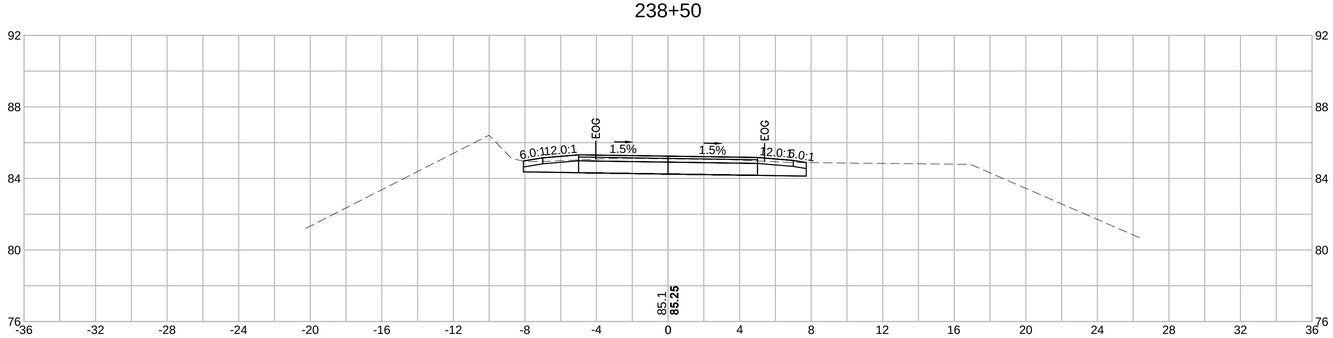
239+00



CUT=17.99 SF

FILL=0.05 SF

238+50



CUT=12.33 SF

FILL=0.00 SF

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

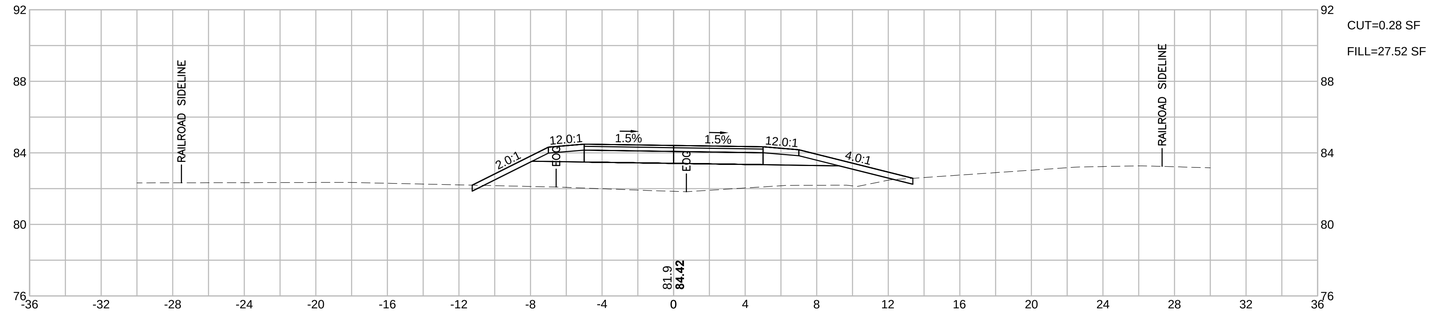
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	97	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 28 OF 90

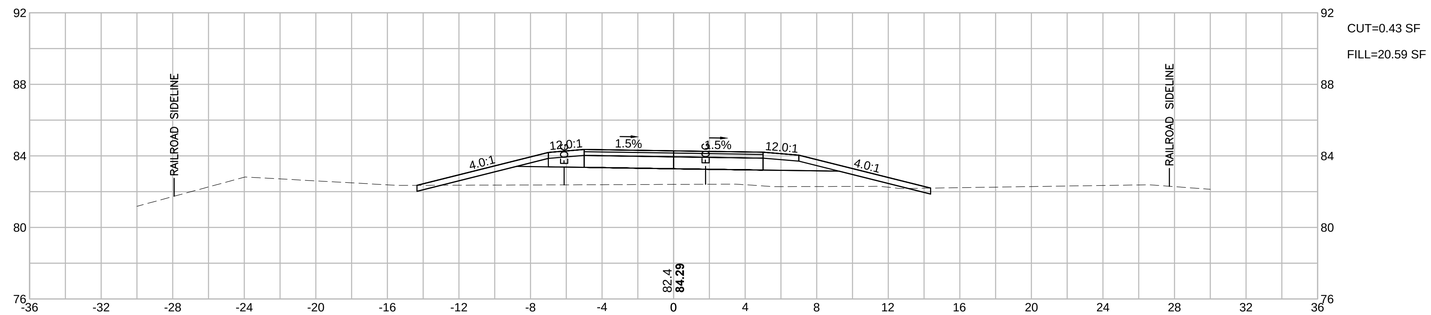
Plotted on 5-Sep-2018 5:20 PM
608298_HD(CROSS SECTIONS).DWG

241+00



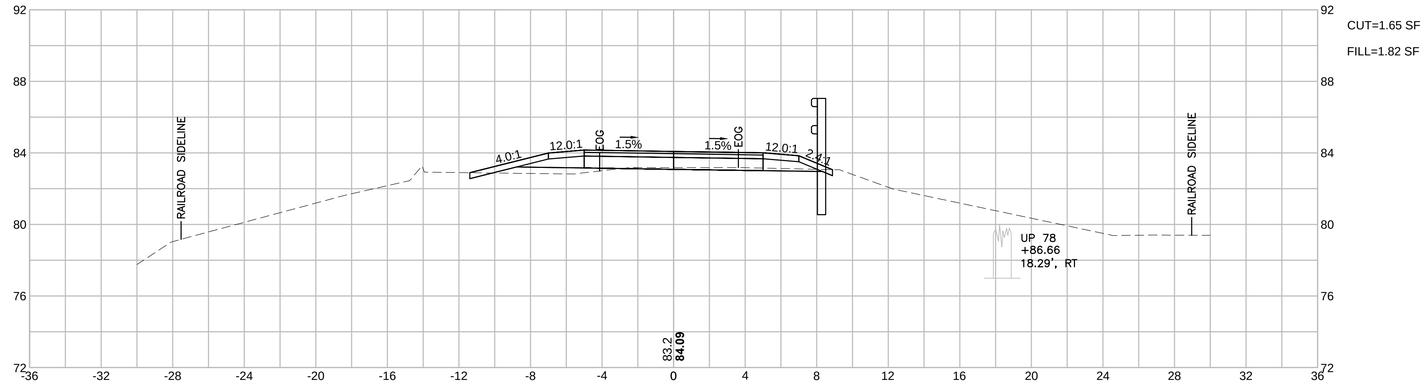
CUT=0.28 SF
FILL=27.52 SF

240+50



CUT=0.43 SF
FILL=20.59 SF

240+00



CUT=1.65 SF
FILL=1.82 SF

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

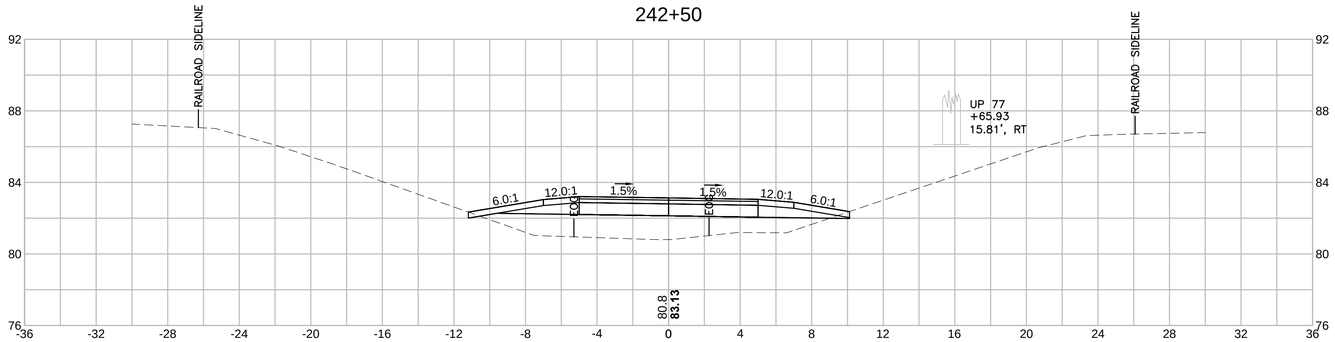
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	98	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 29 OF 90

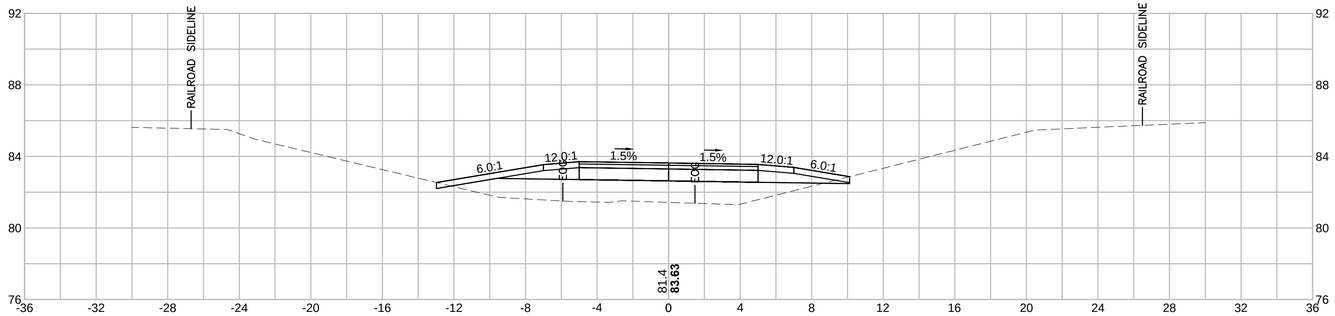
608298_HD\CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:21 PM

242+50



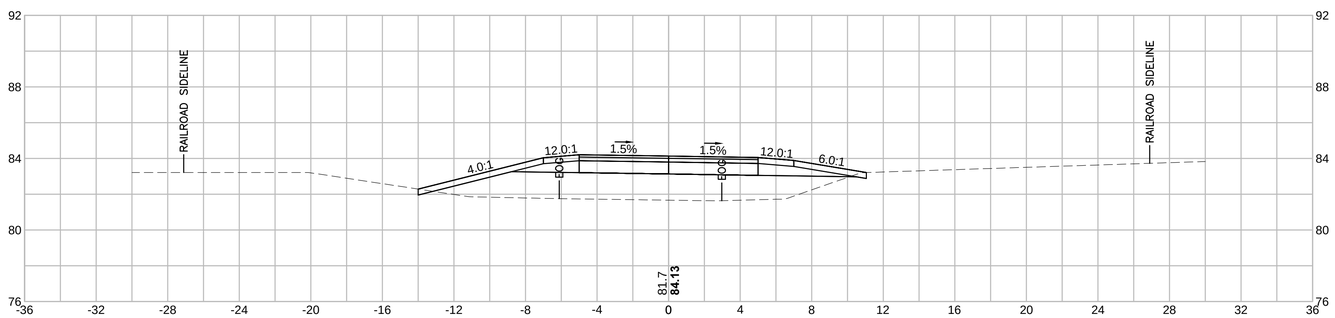
CUT=0.32 SF
FILL=19.31 SF

242+00



CUT=0.42 SF
FILL=20.47 SF

241+50



CUT=0.31 SF
FILL=27.93 SF

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

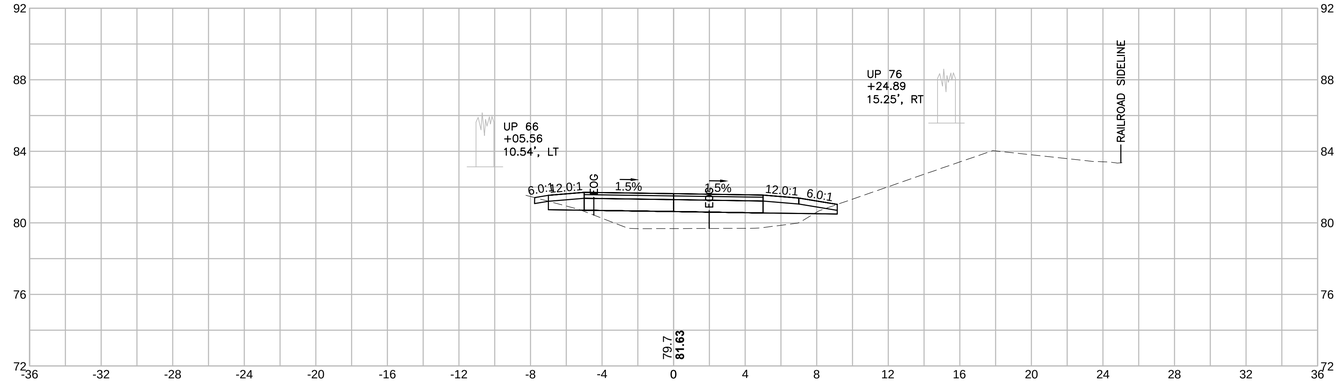
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	99	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 30 OF 90

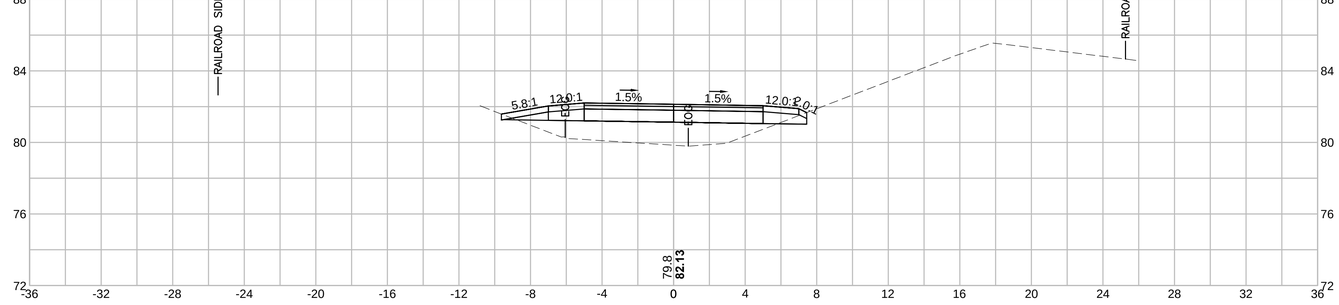
608298_HDI(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:21 PM

244+00



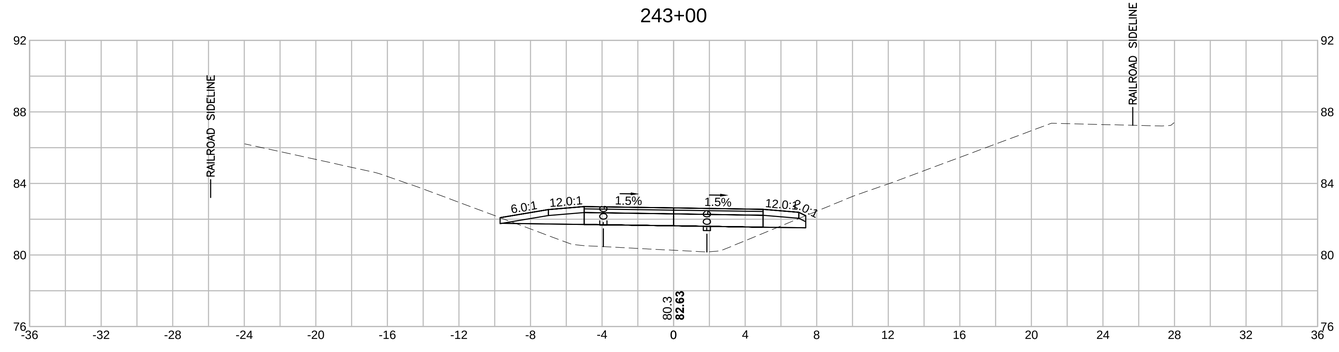
CUT=0.24 SF
FILL=12.22 SF

243+50



CUT=0.63 SF
FILL=14.12 SF

243+00



CUT=0.67 SF
FILL=14.76 SF

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

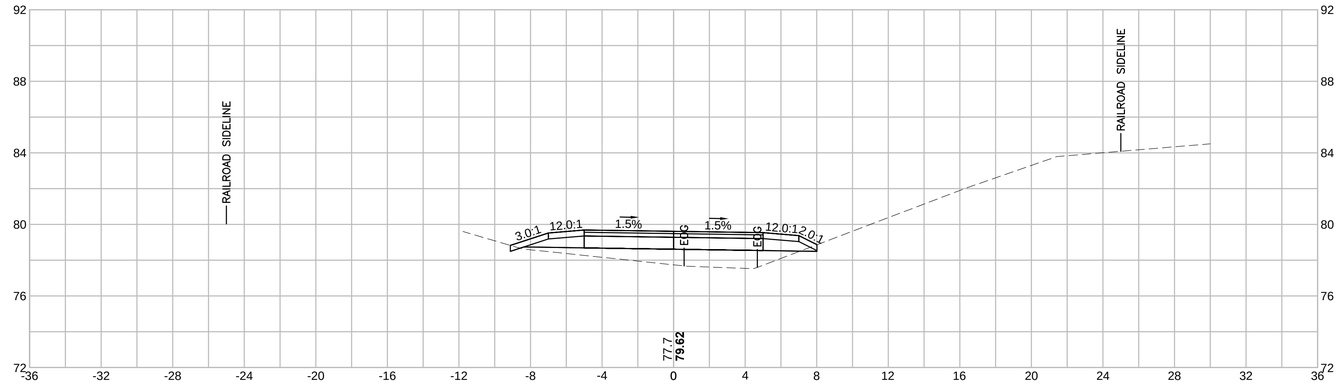
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	100	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 31 OF 90

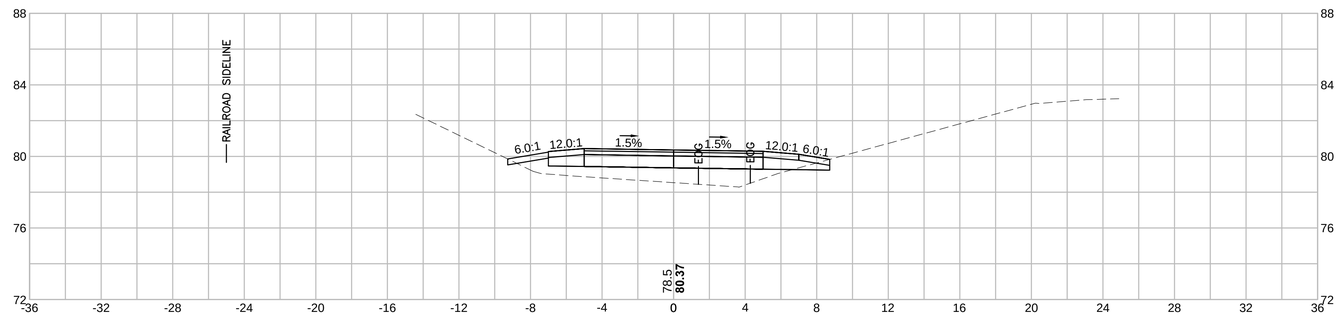
608298_HDI(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:21 PM

245+50



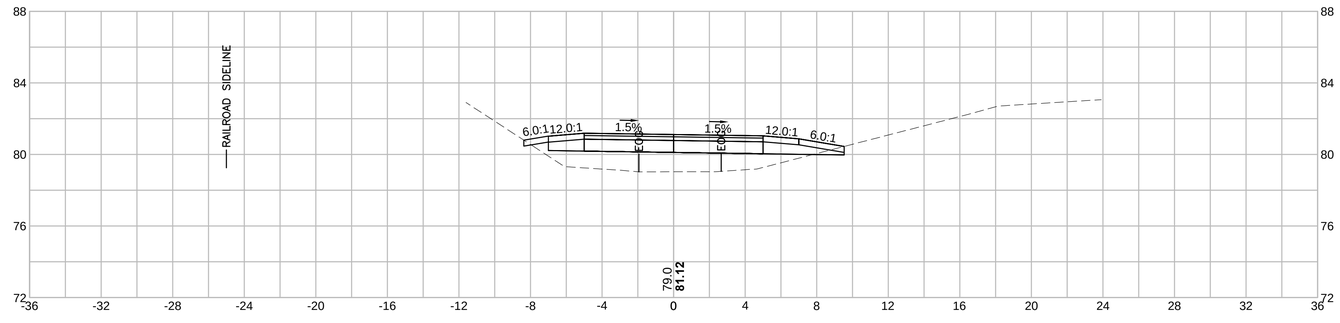
CUT=0.26 SF
FILL=9.82 SF

245+00



CUT=0.22 SF
FILL=12.33 SF

244+50



CUT=0.20 SF
FILL=16.20 SF

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

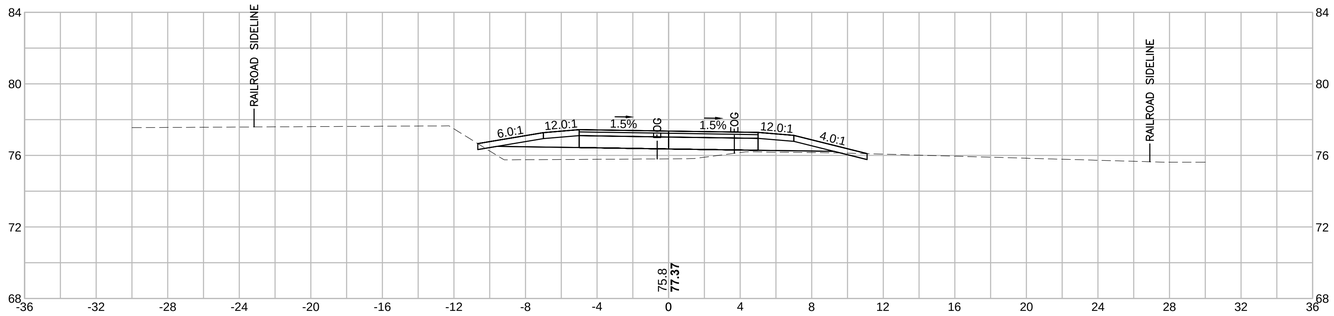
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	101	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 32 OF 90

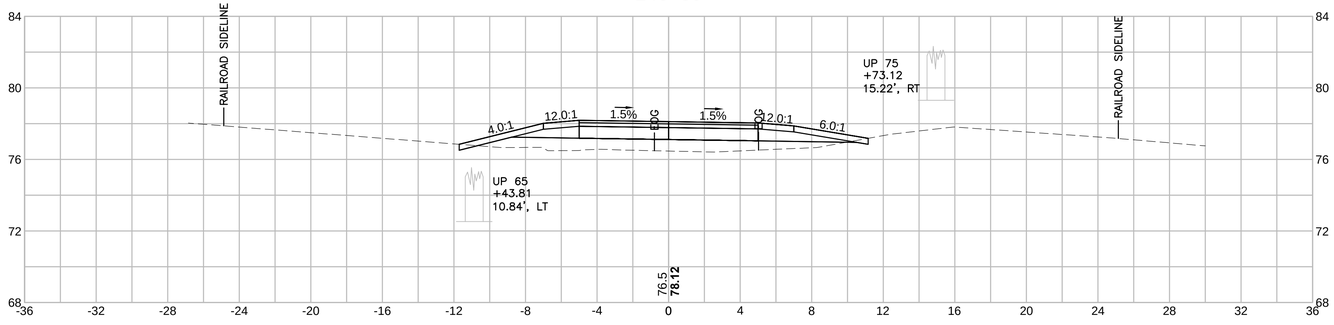
Plotted on 5-Sep-2018 5:22 PM
608298_HD\CROSS SECTIONS\.DWG

247+00



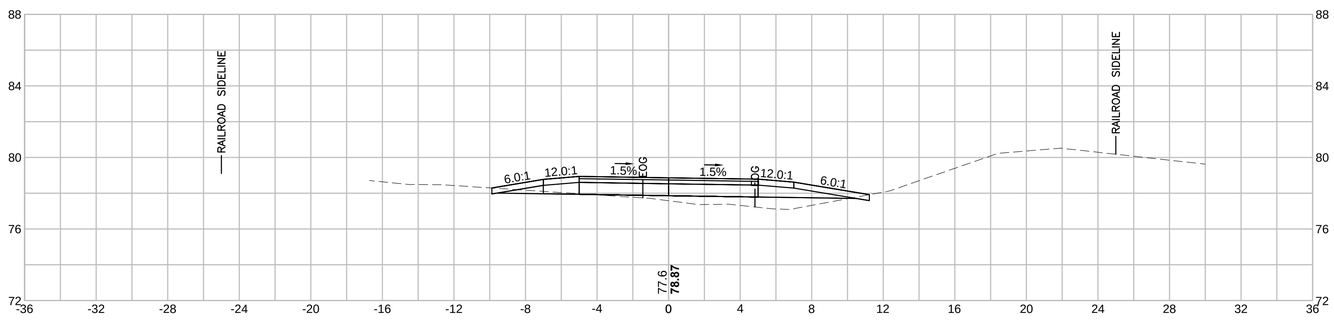
CUT=0.32 SF
FILL=8.54 SF

246+50



CUT=0.34 SF
FILL=10.90 SF

246+00



CUT=0.58 SF
FILL=5.22 SF

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

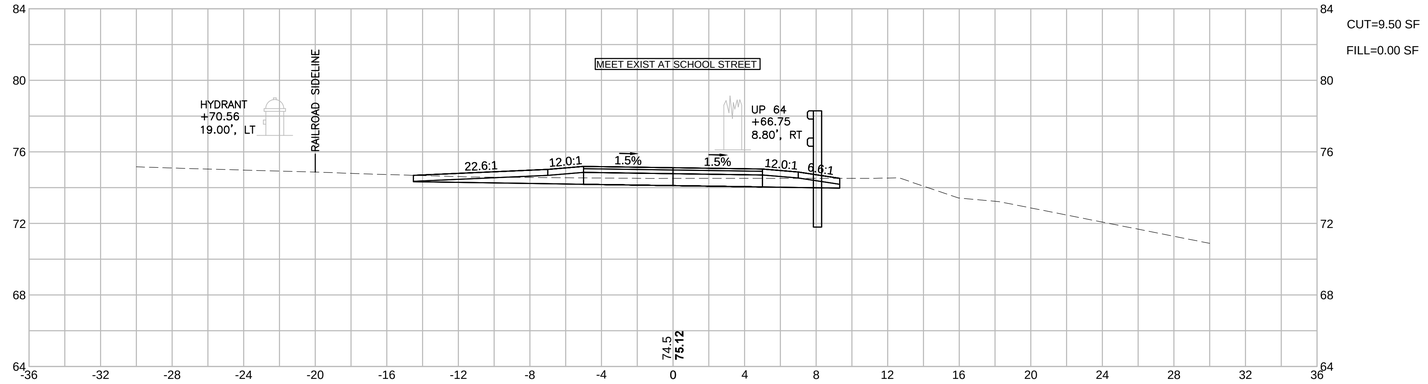
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	102	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 33 OF 90

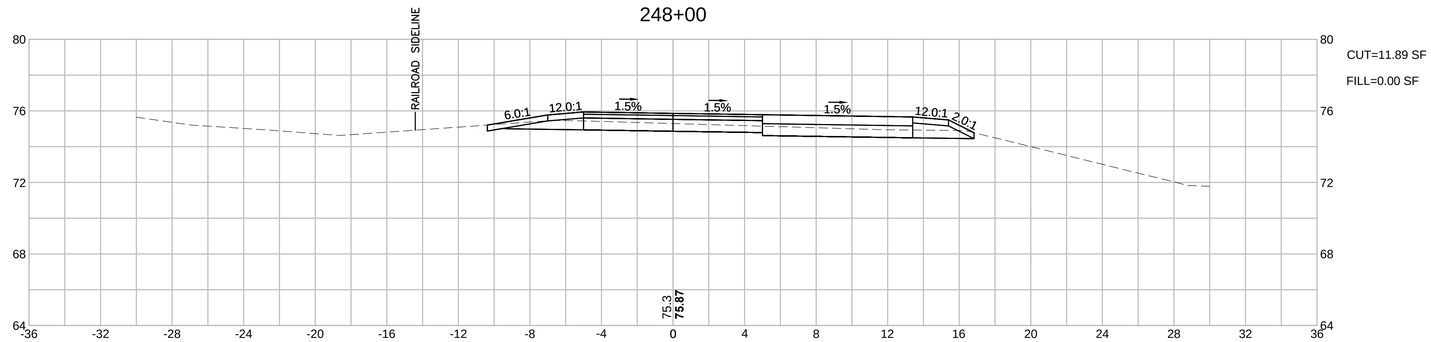
Plotted on 6-Sep-2018 10:57 AM
608298_HD(CROSS SECTIONS).DWG

248+50



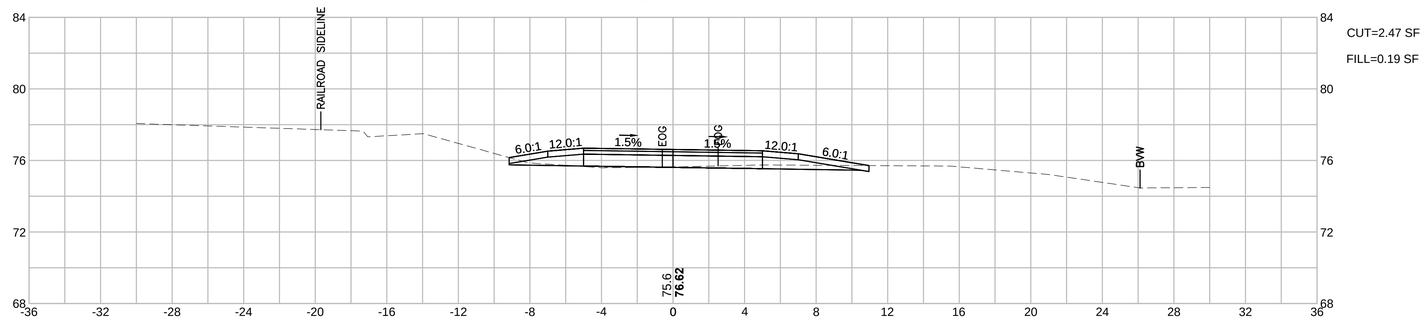
CUT=9.50 SF
FILL=0.00 SF

248+00



CUT=11.89 SF
FILL=0.00 SF

247+50



CUT=2.47 SF
FILL=0.19 SF

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

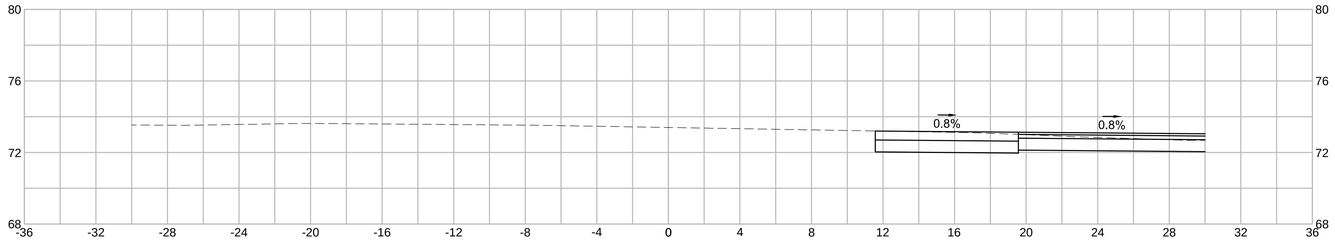
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	103	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 34 OF 90

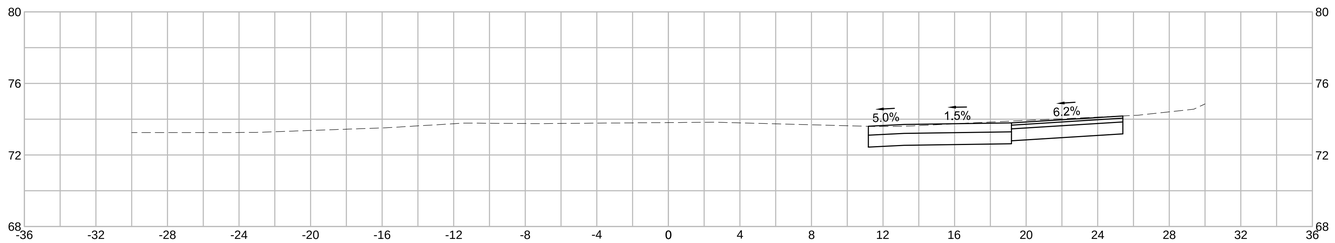
608298_HD(CROSS SECTIONS).DWG Plotted on 6-Sep-2018 7:53 AM

253+00



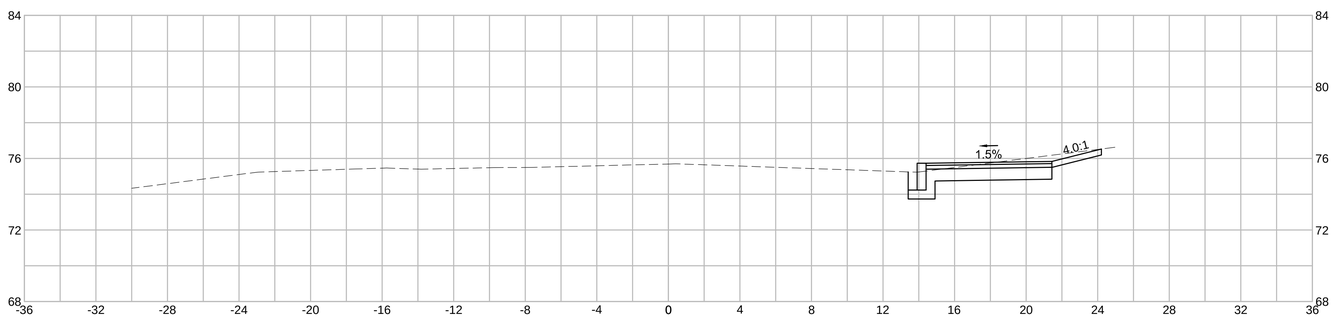
CUT=16.60 SF
FILL=0.00 SF

252+50



CUT=15.78 SF
FILL=0.00 SF

252+00



CUT=10.12 SF
FILL=0.00 SF

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

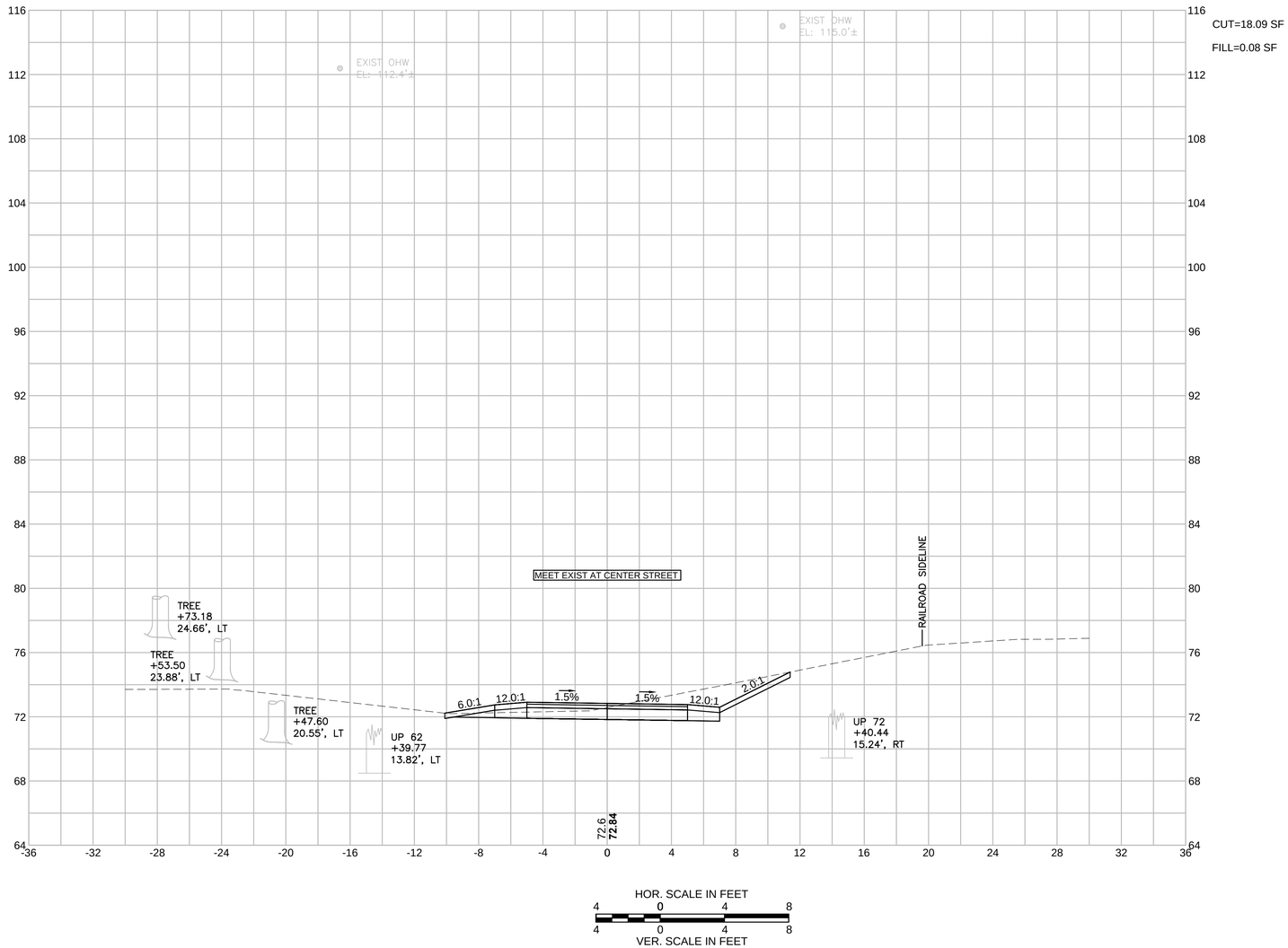
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	104	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 35 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:23 PM

253+50



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

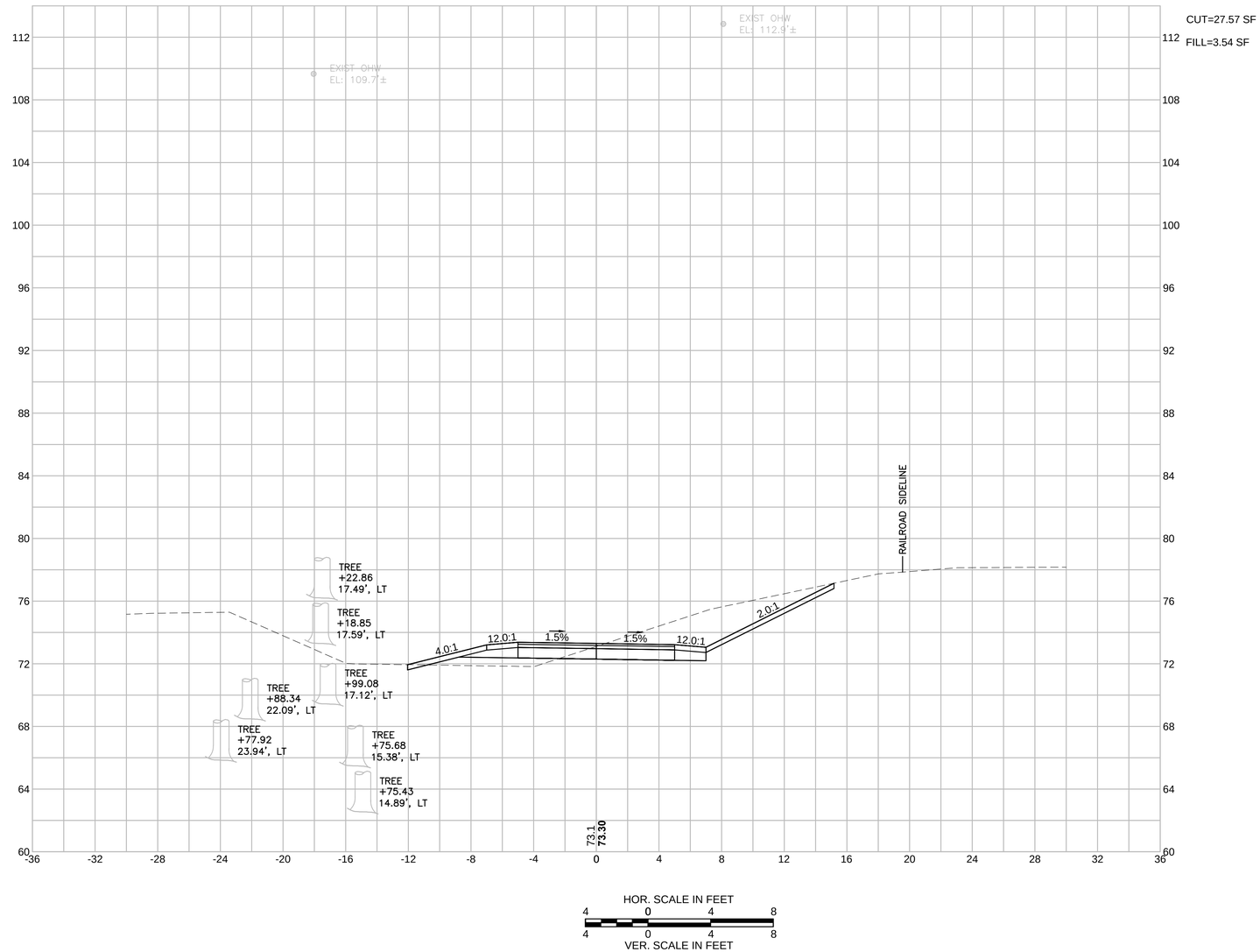
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	105	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 36 OF 90

608298_HD\CROSS SECTIONS\.DWG Plotted on 5-Sep-2018 5:23 PM

254+00



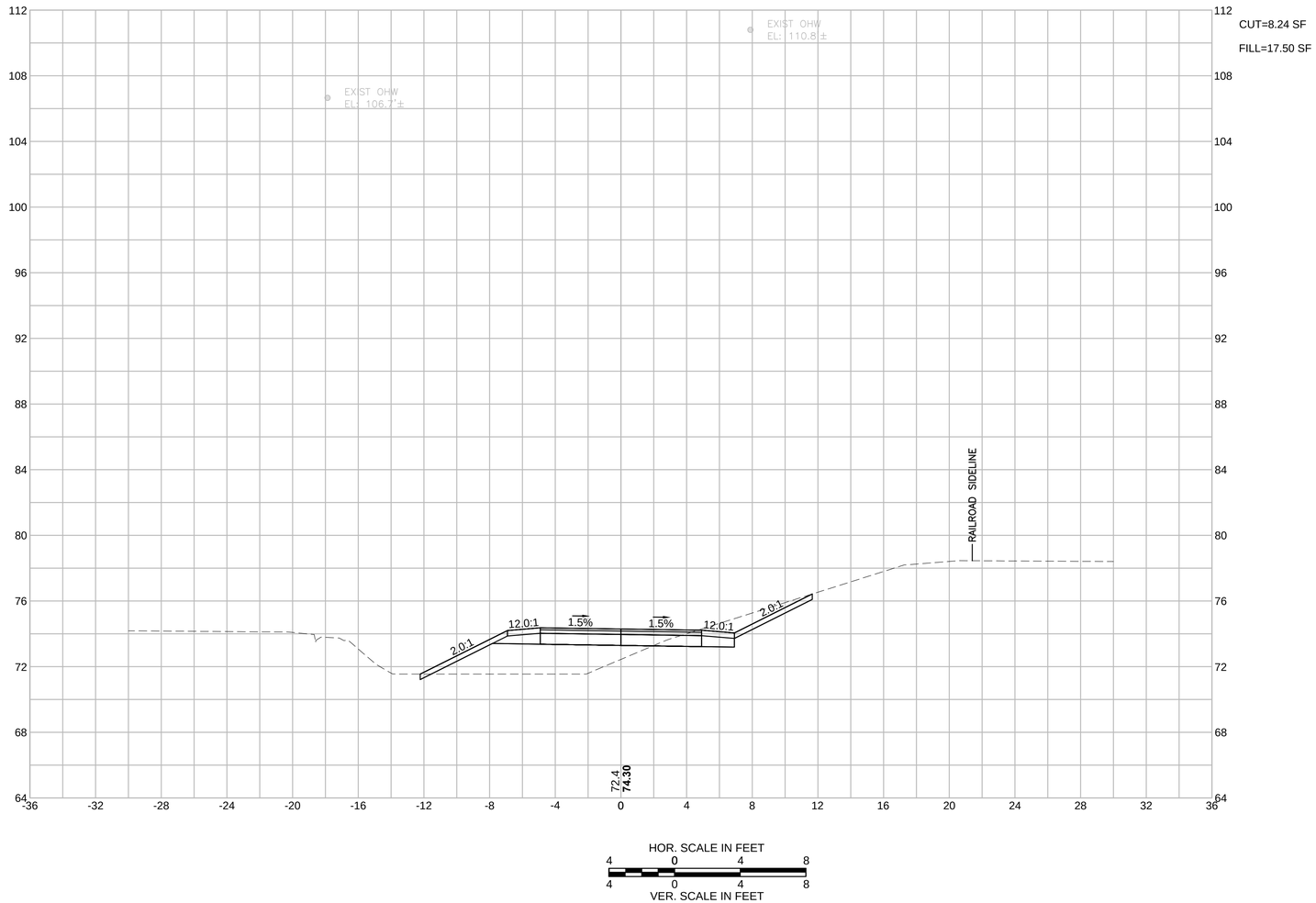
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	106	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 37 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:24 PM

254+50



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

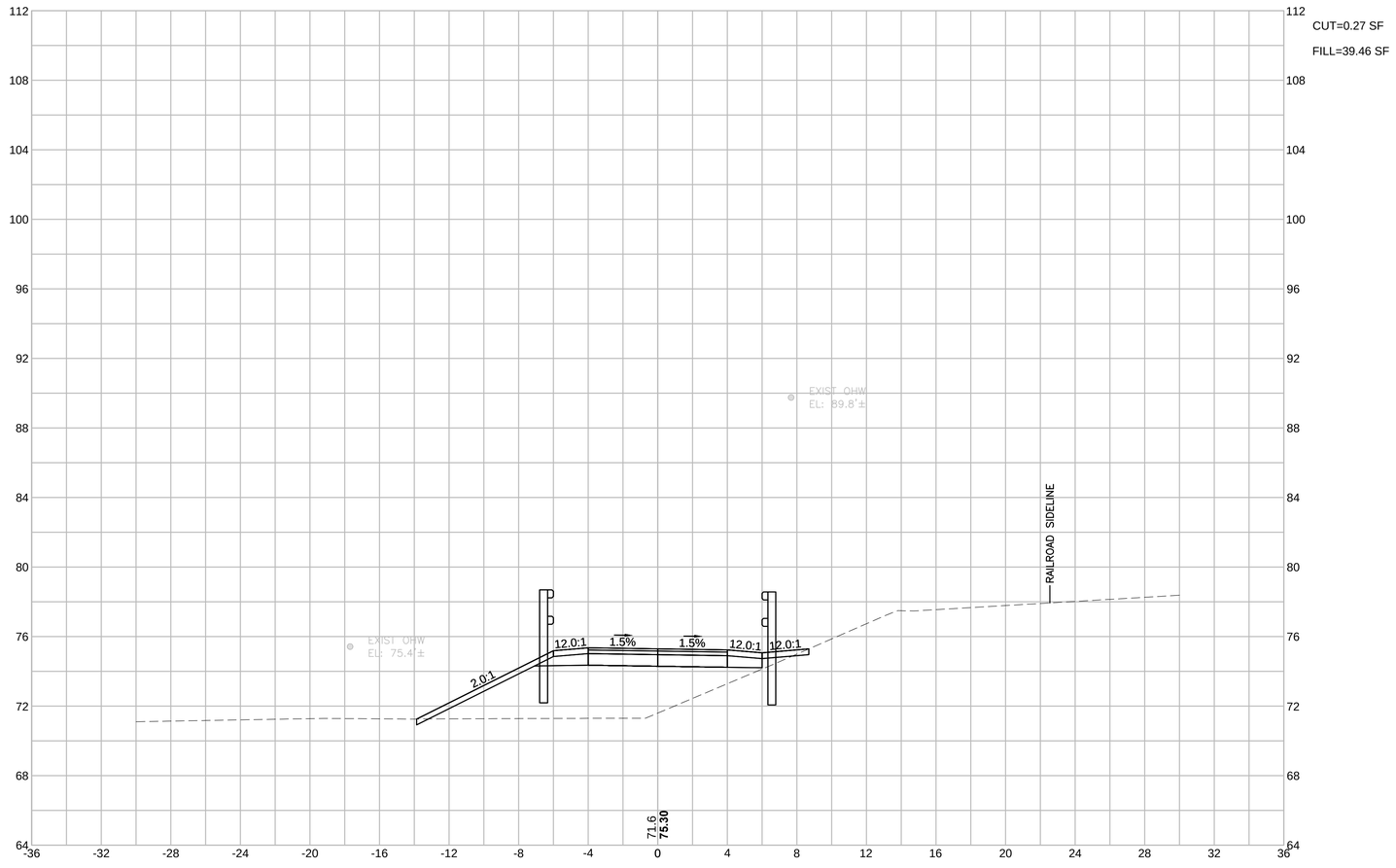
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	107	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 38 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 6-Sep-2018 12:04 PM

255+00



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

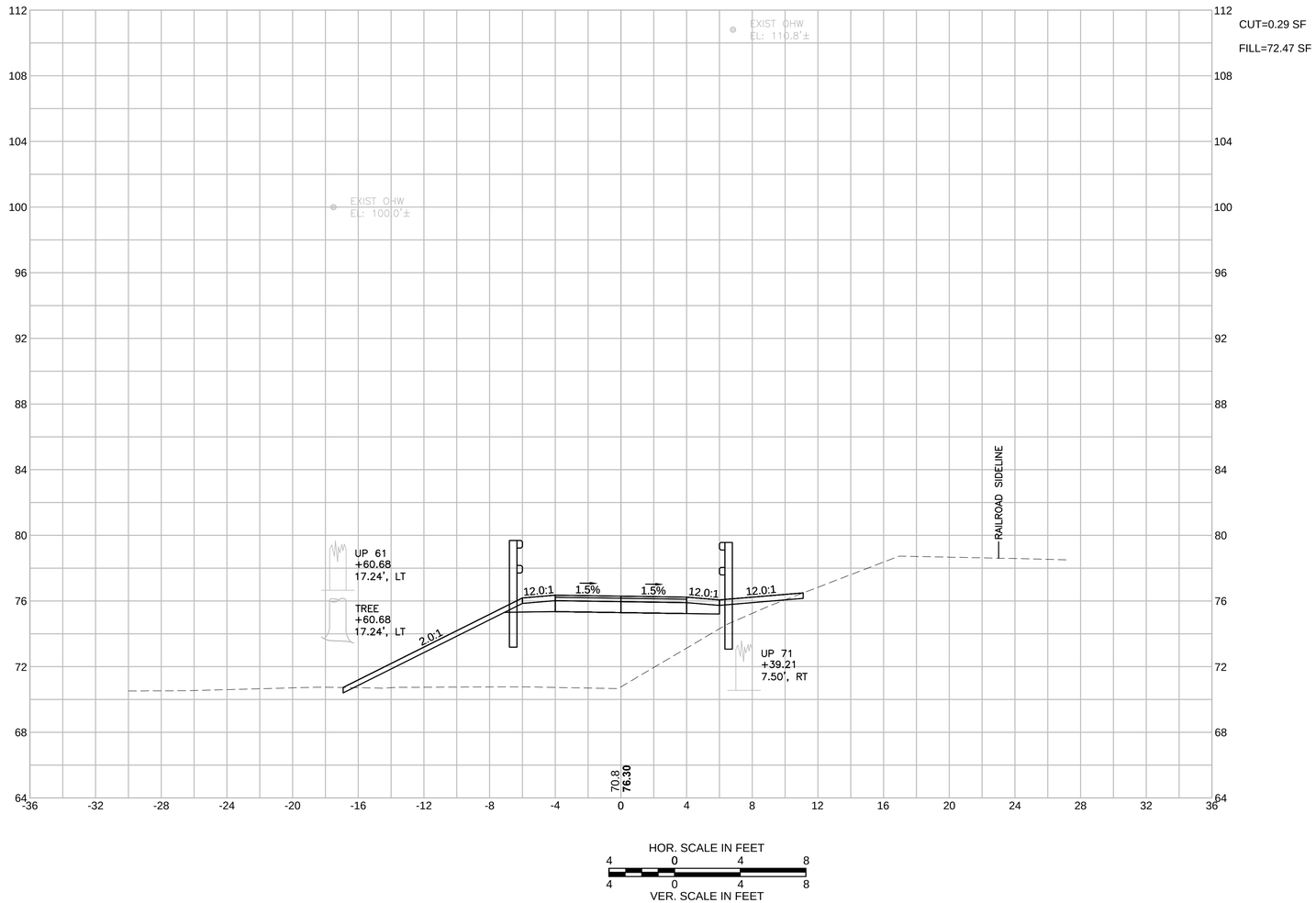
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	108	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 39 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 6-Sep-2018 12:04 PM

255+50



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

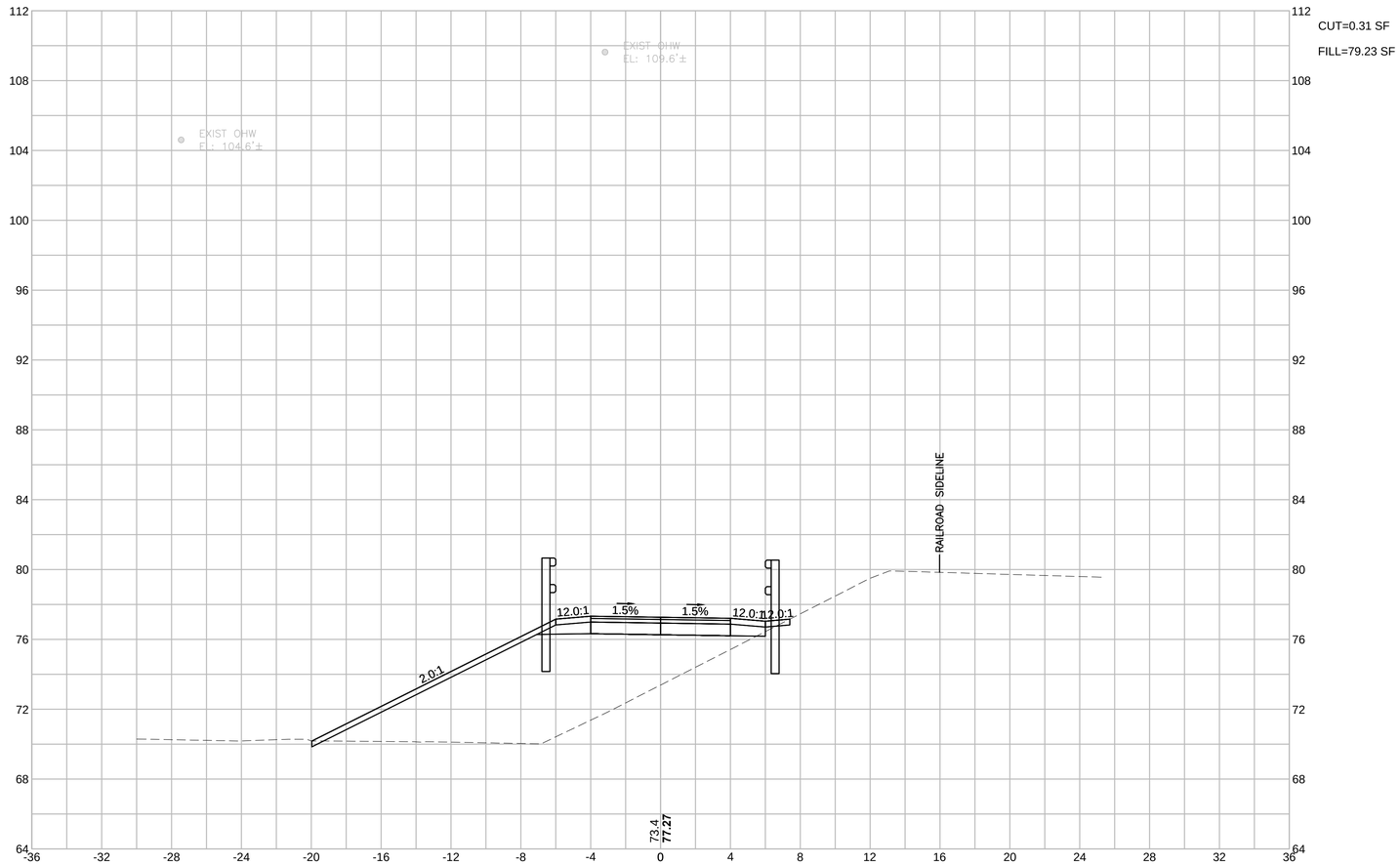
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	109	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 40 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 6-Sep-2018 12:05 PM

256+00



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

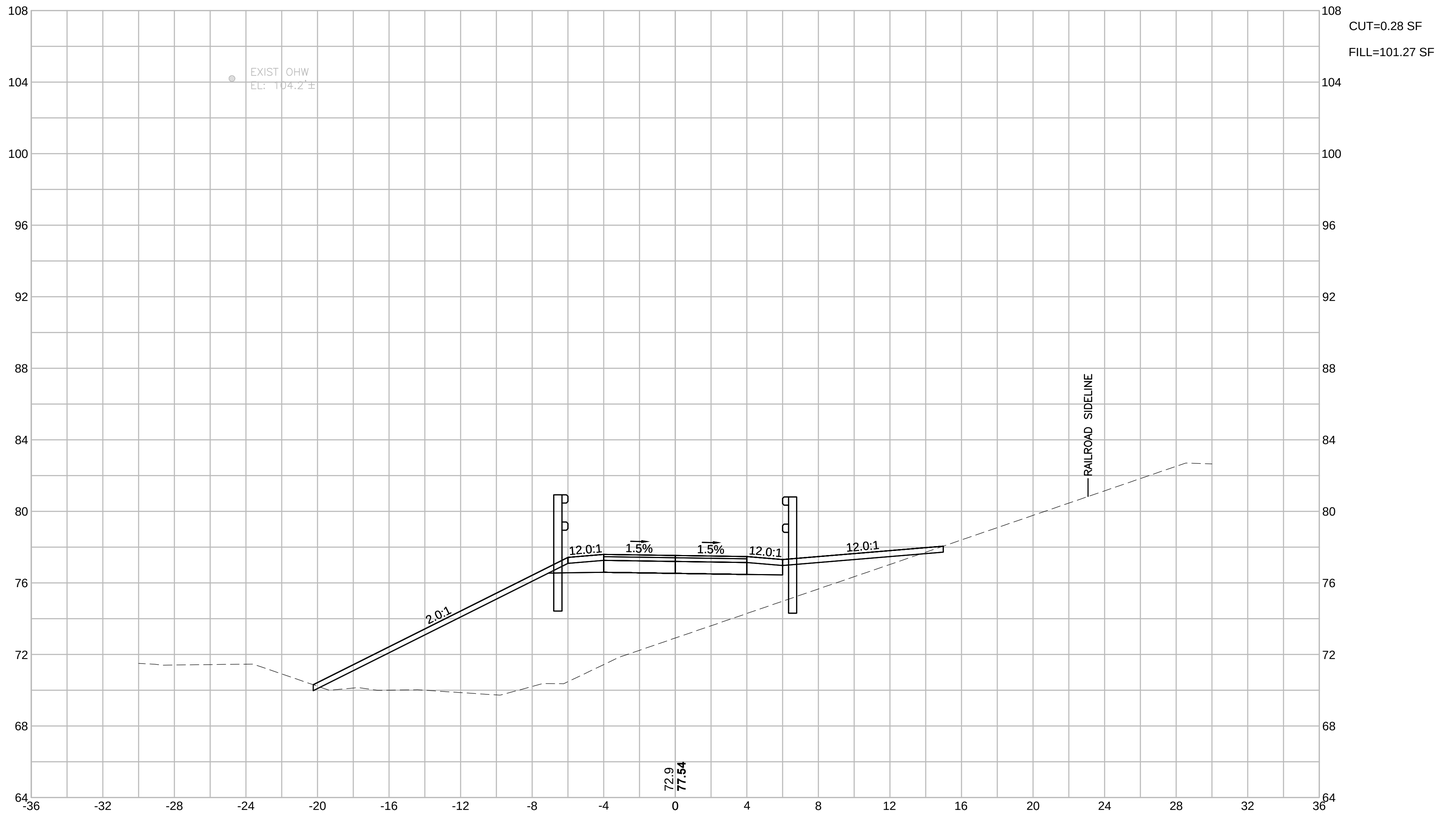
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	110	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 41 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 6-Sep-2018 12:05 PM

256+50



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

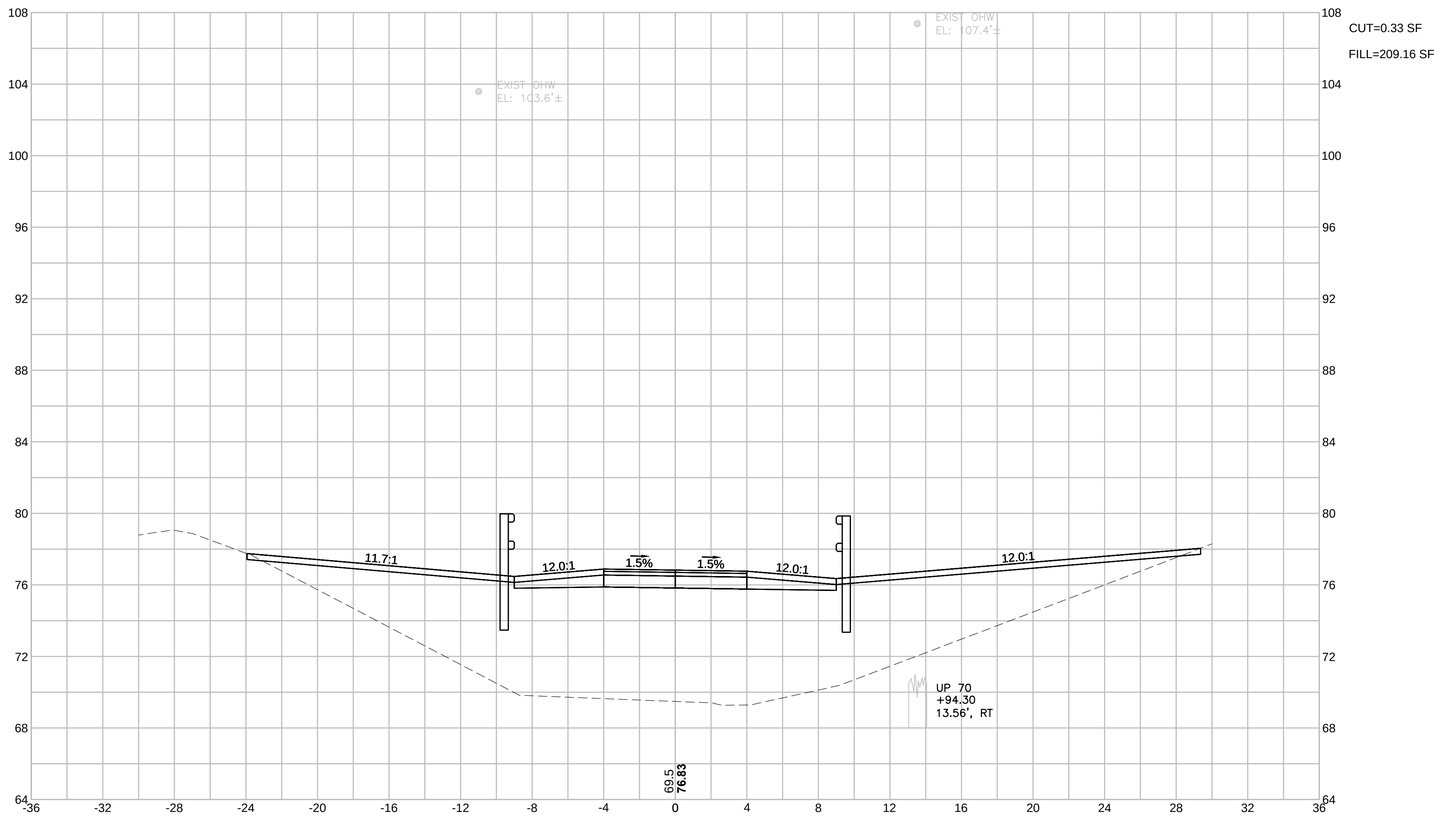
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	110	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 41 OF 90

608298_HD\CROSS SECTIONS\.DWG Plotted on 6-Sep-2018 12:05 PM

257+00



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

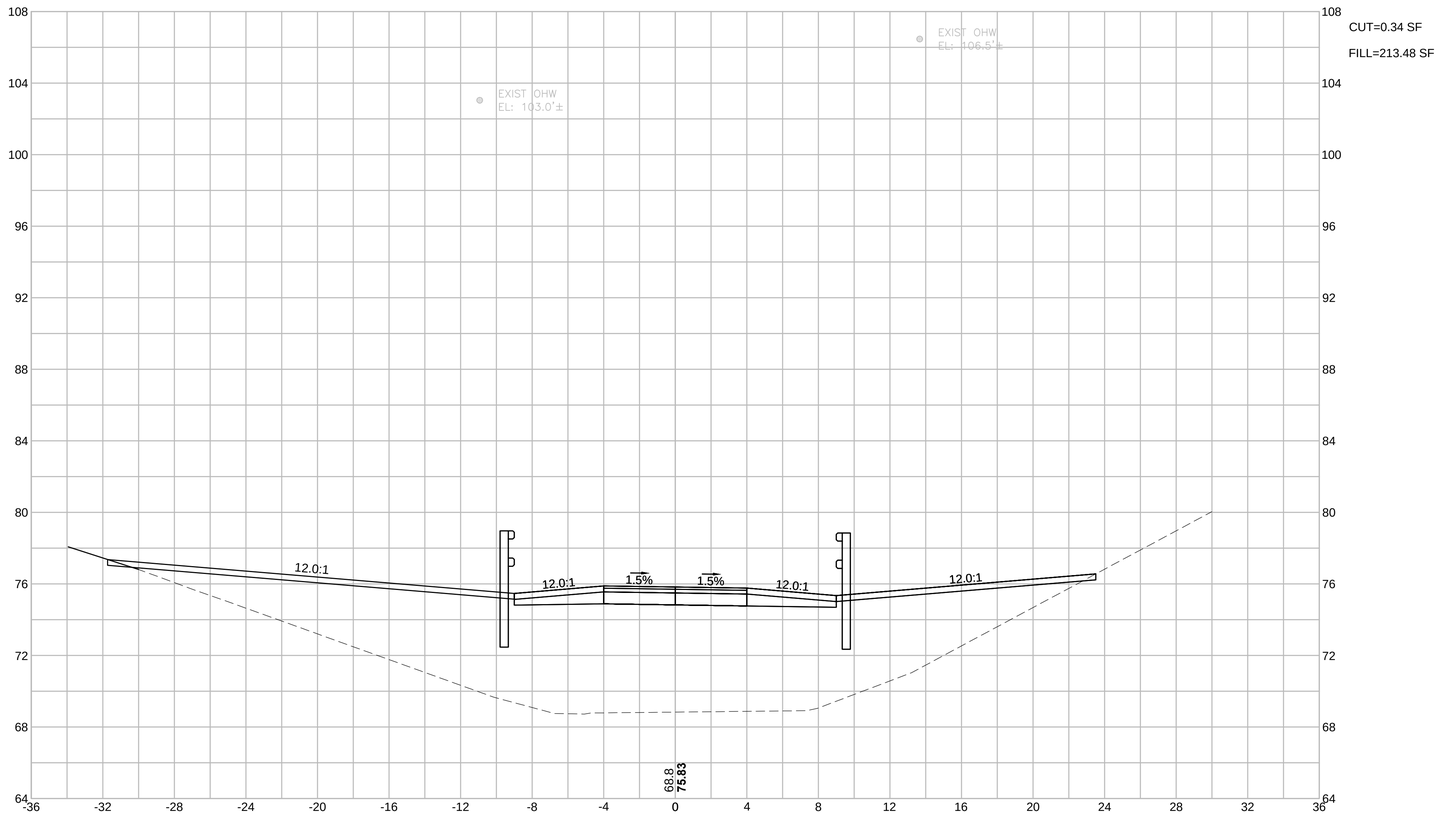
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	112	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 43 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 6-Sep-2018 12:06 PM

257+50



CUT=0.34 SF

FILL=213.48 SF

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

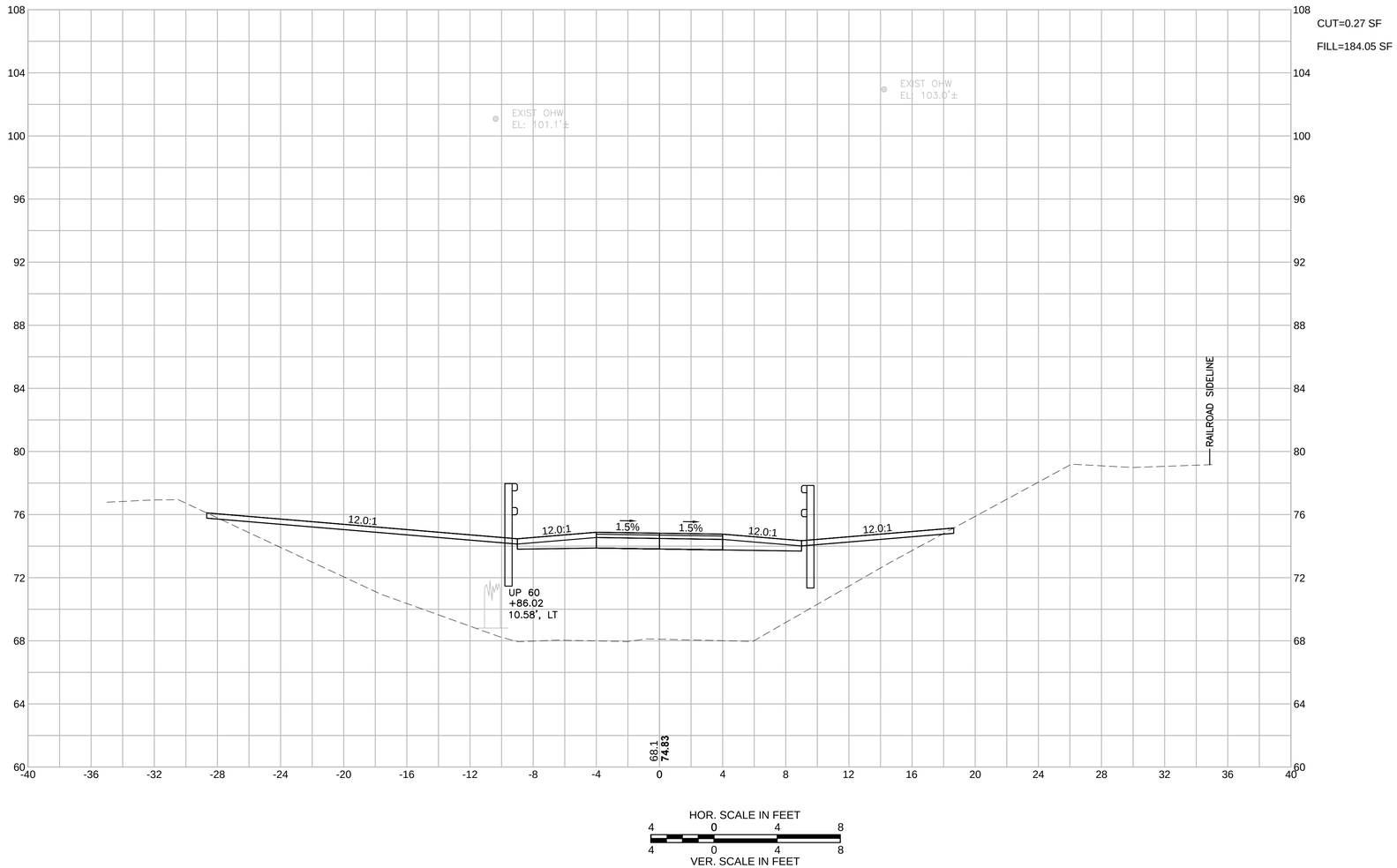
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	113	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 44 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 6-Sep-2018 7:58 AM

258+00



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

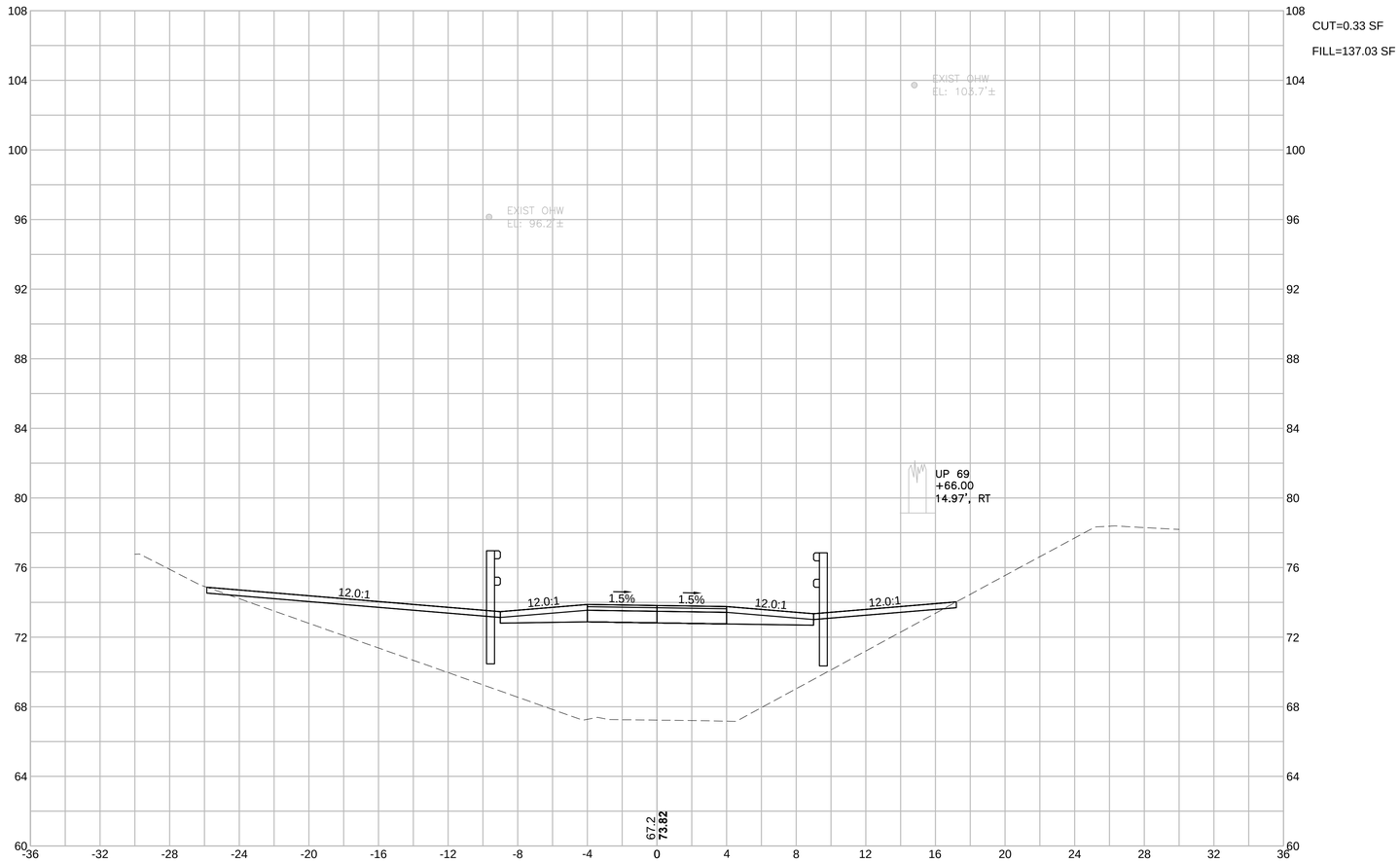
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	114	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 45 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:27 PM

258+50



CUT=0.33 SF

FILL=137.03 SF

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

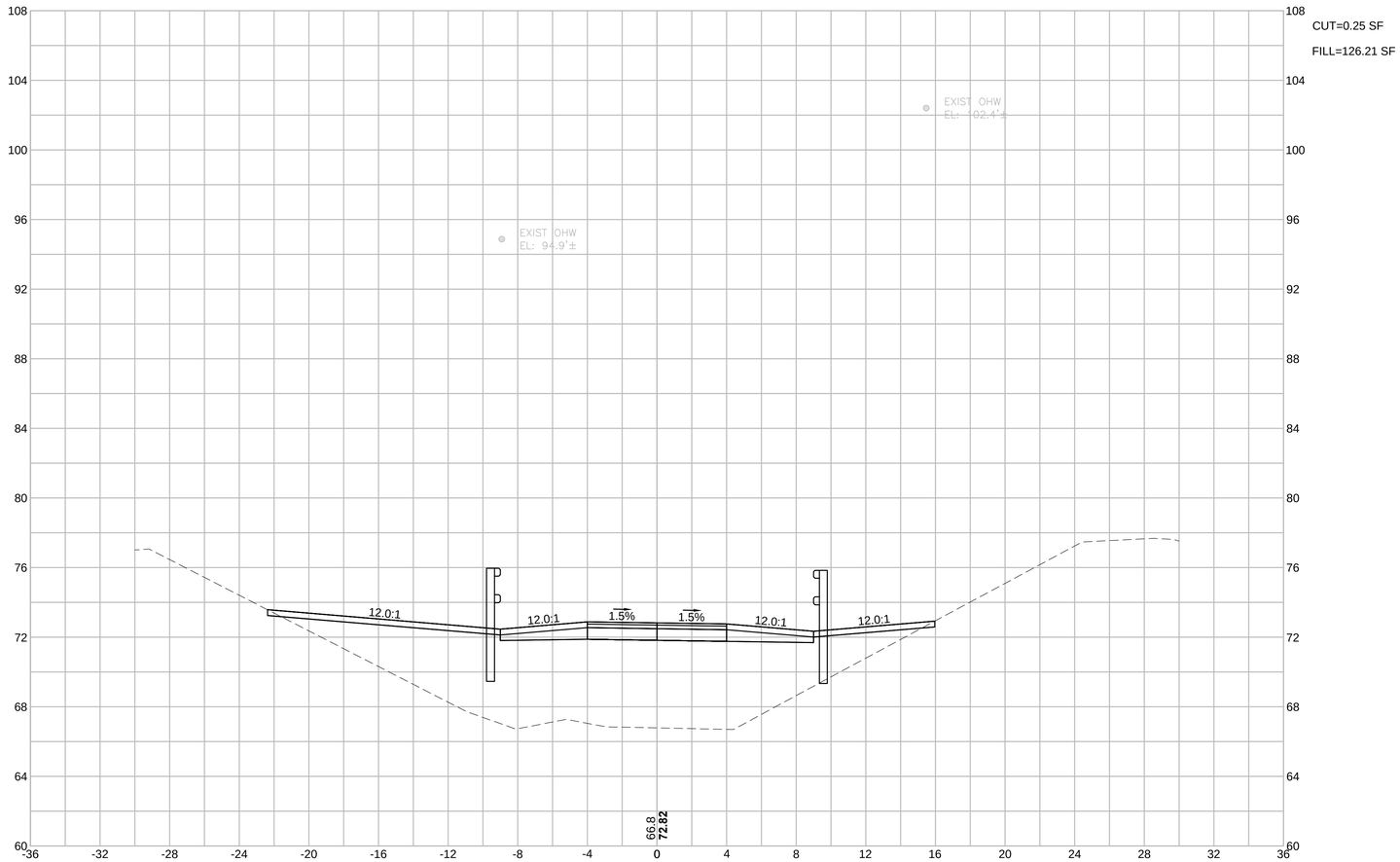
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	115	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 46 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:27 PM

259+00



CUT=0.25 SF

FILL=126.21 SF

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

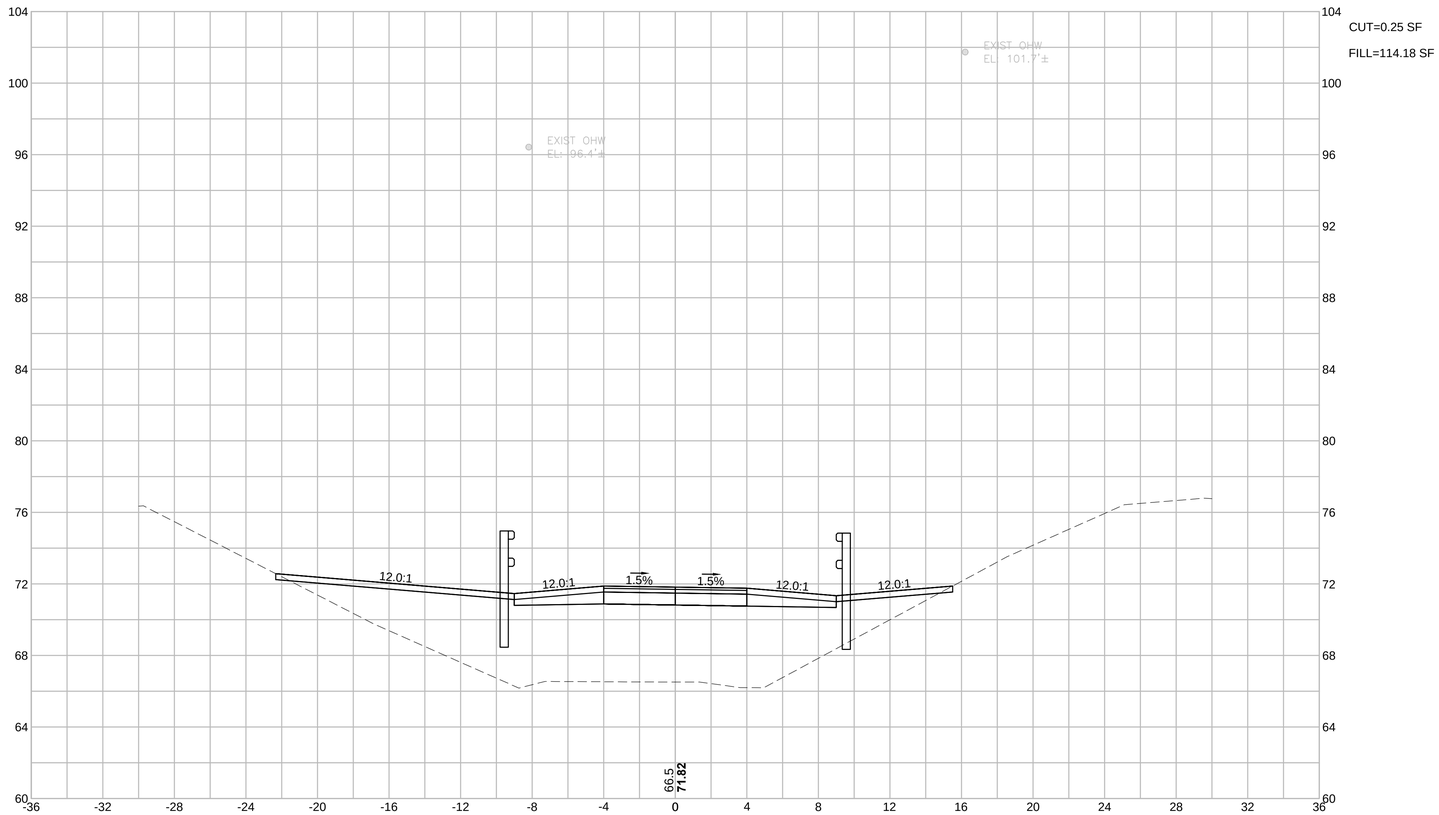
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	116	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 47 OF 90

608298_HD\CROSS SECTIONS\.DWG Plotted on 5-Sep-2018 5:28 PM

259+50



CUT=0.25 SF

FILL=114.18 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

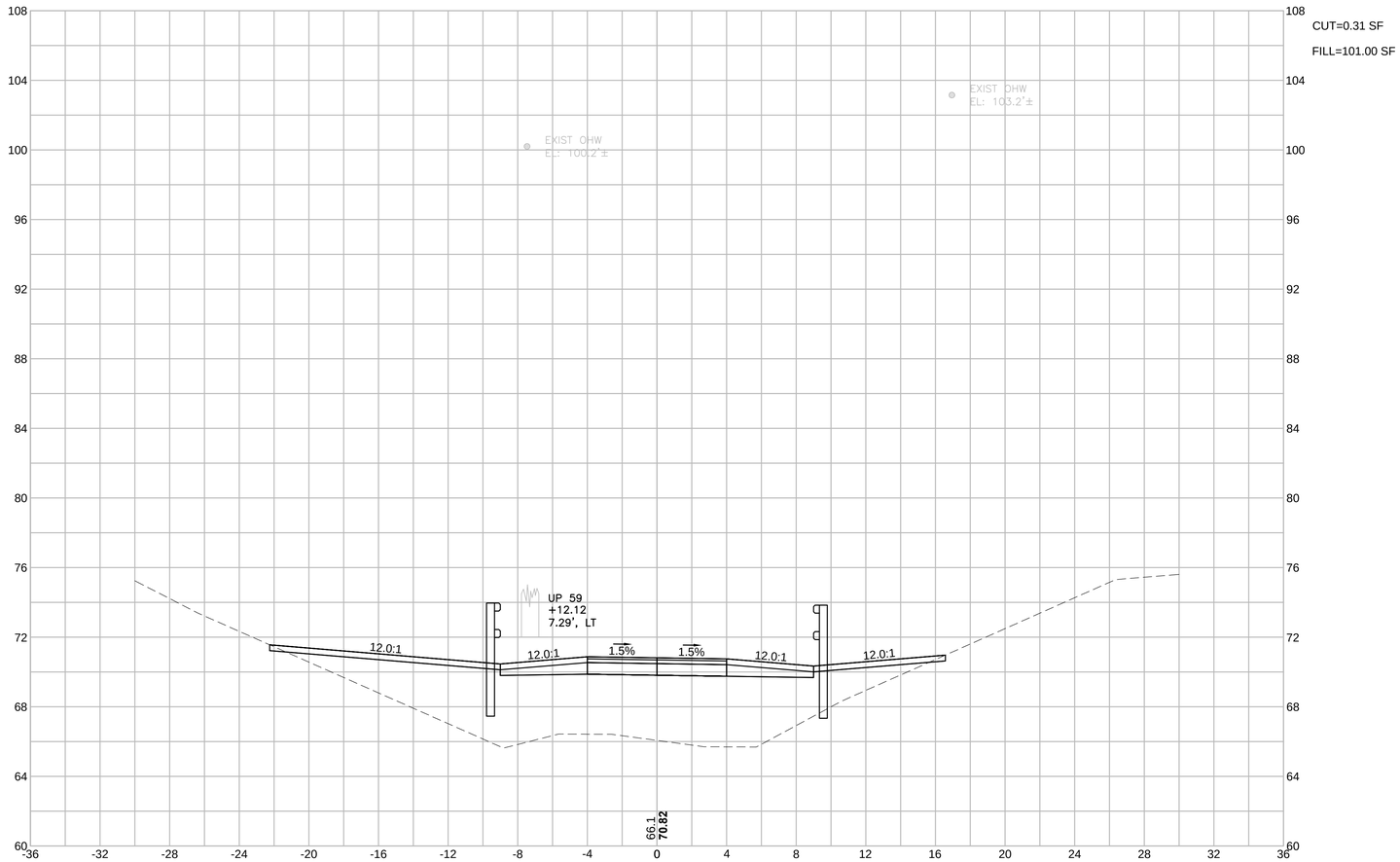
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	117	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 48 OF 90

608298_HD\CROSS SECTIONS\DWG Plotted on 5-Sep-2018 5:28 PM

260+00



CUT=0.31 SF

FILL=101.00 SF

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

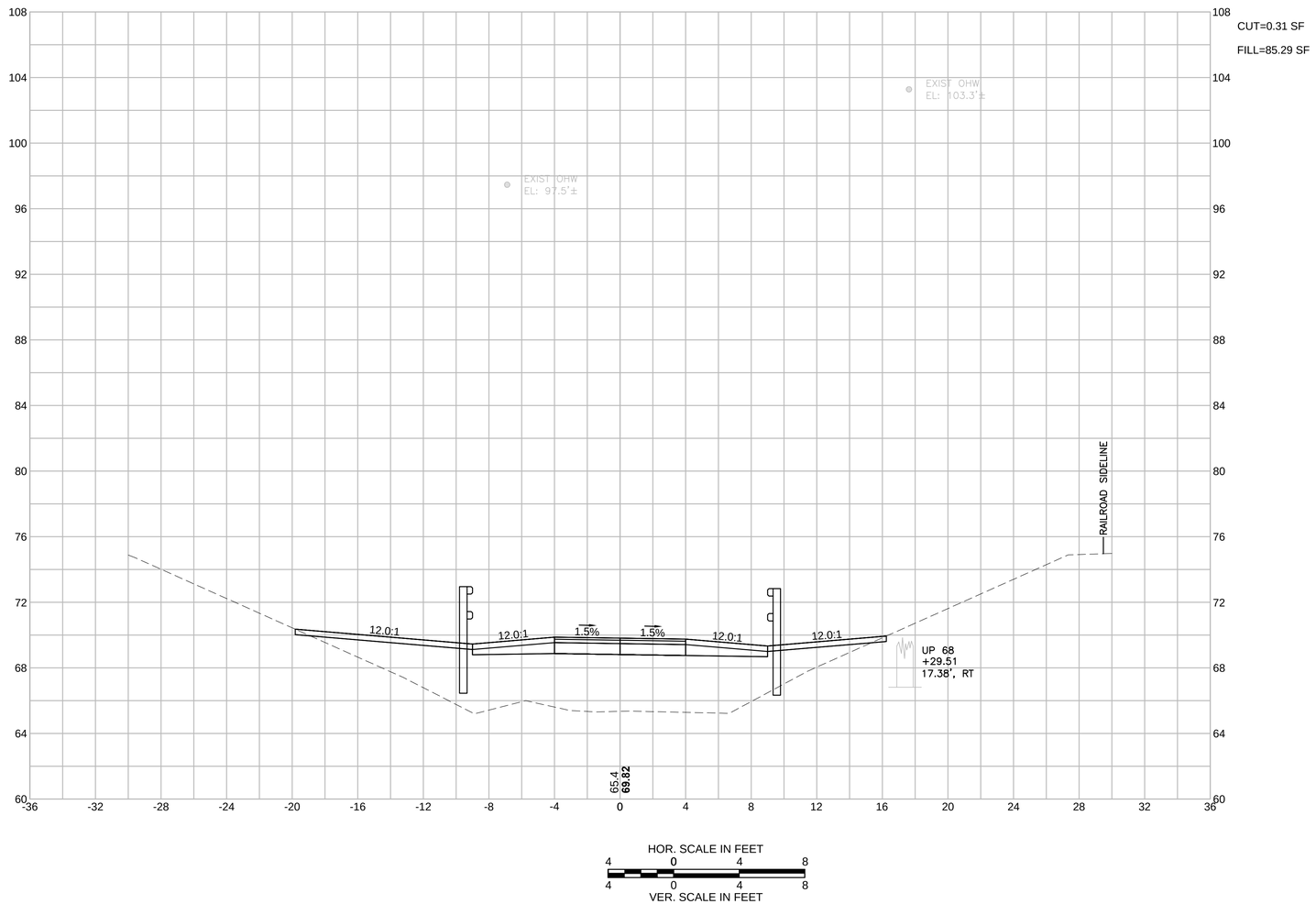
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	118	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 49 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:29 PM

260+50



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

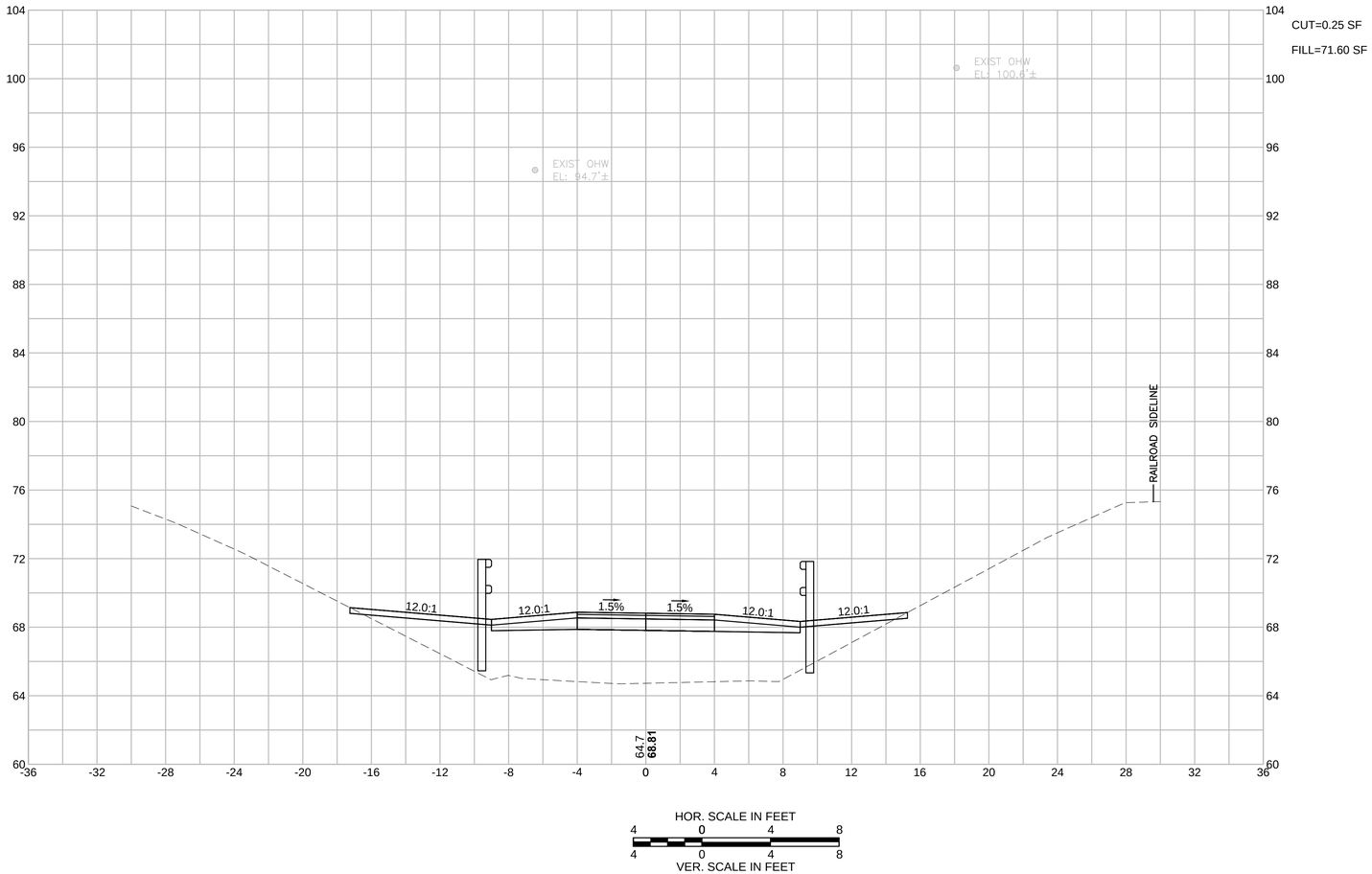
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	119	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 50 OF 90

608298_HD\CROSS SECTIONS\.DWG Plotted on 5-Sep-2018 5:29 PM

261+00



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

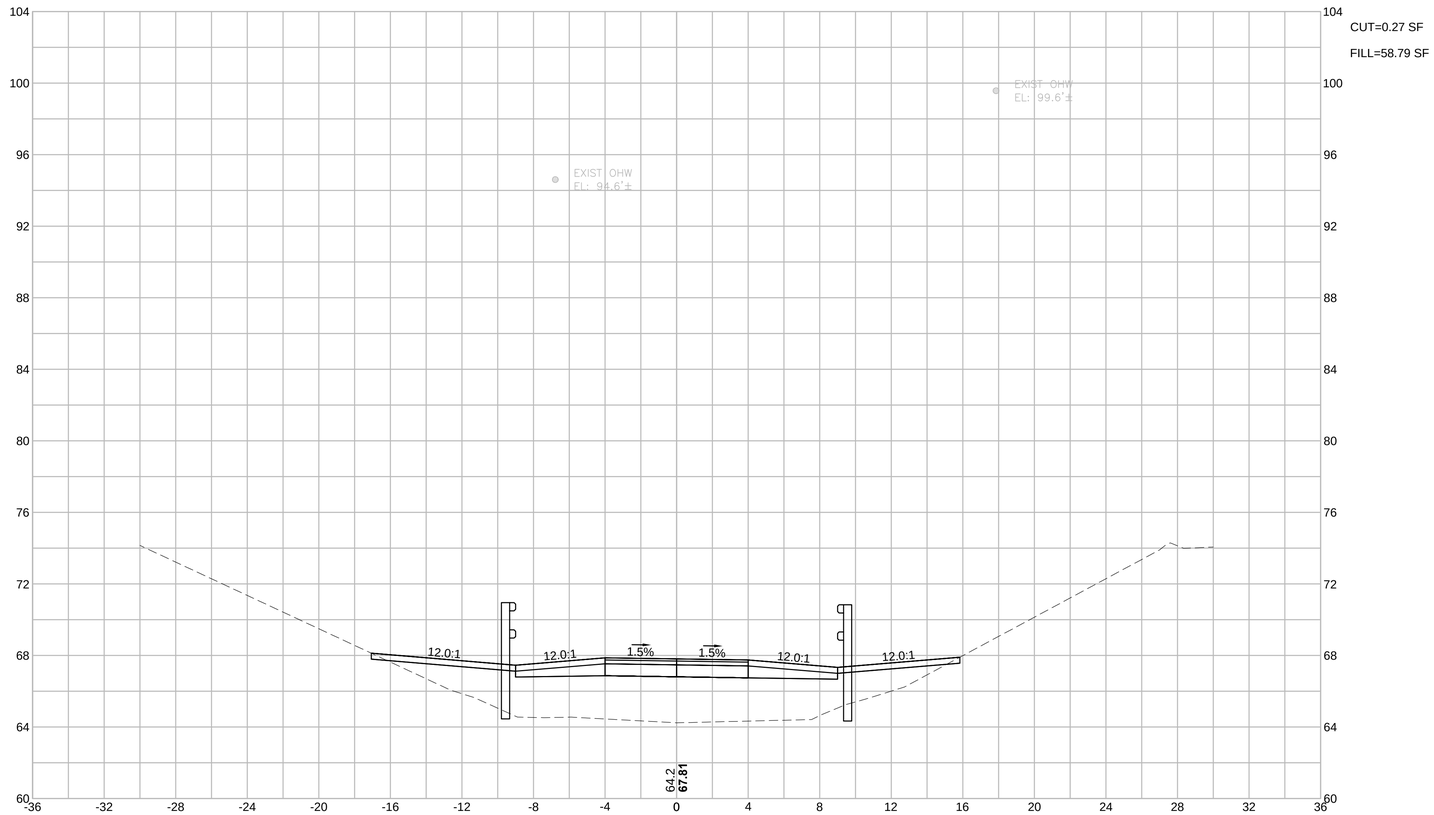
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	120	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 51 OF 90

608298_HD\CROSS SECTIONS\.DWG Plotted on 5-Sep-2018 5:29 PM

261+50



CUT=0.27 SF

FILL=58.79 SF

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

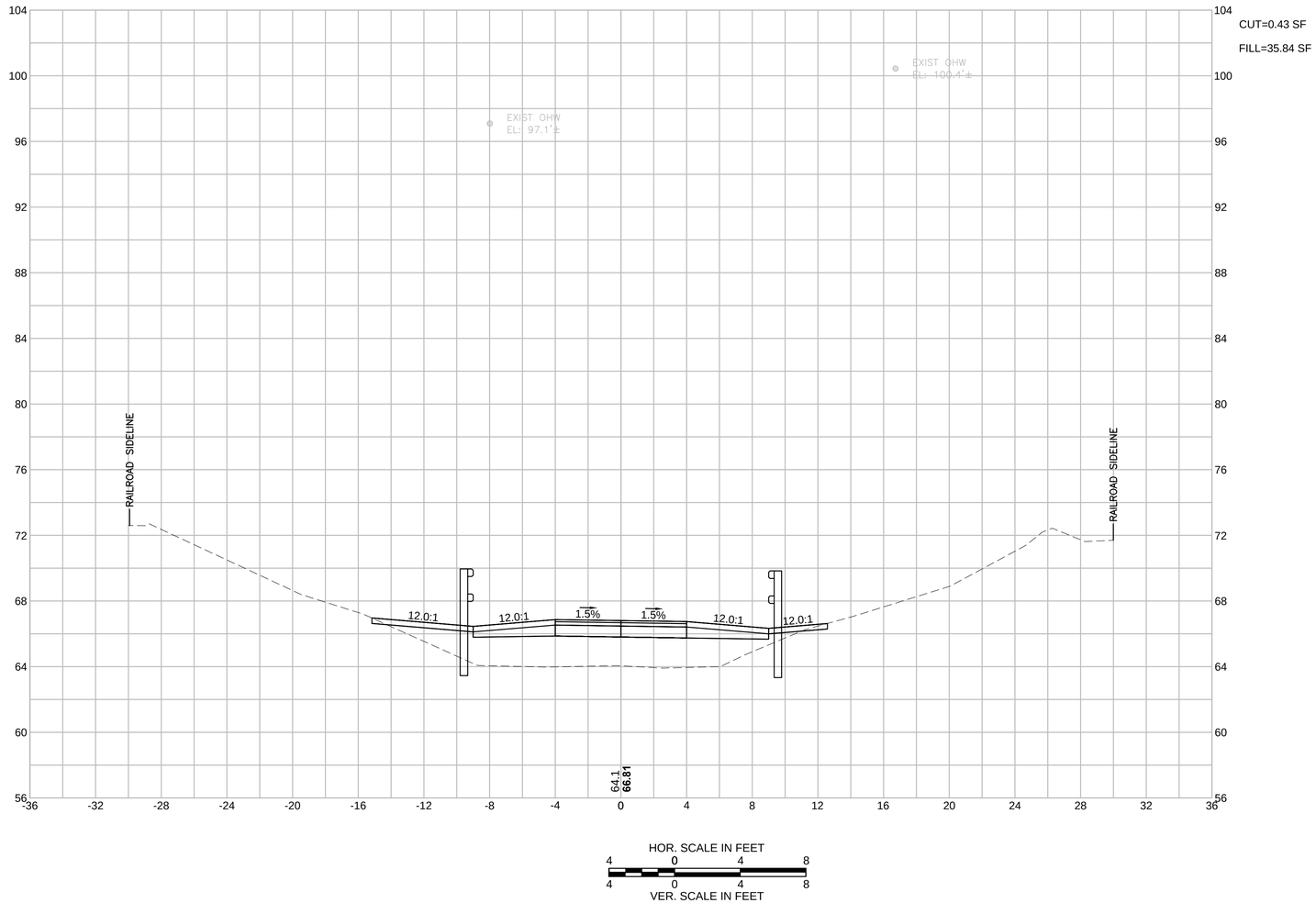
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	121	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 52 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:30 PM

262+00



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

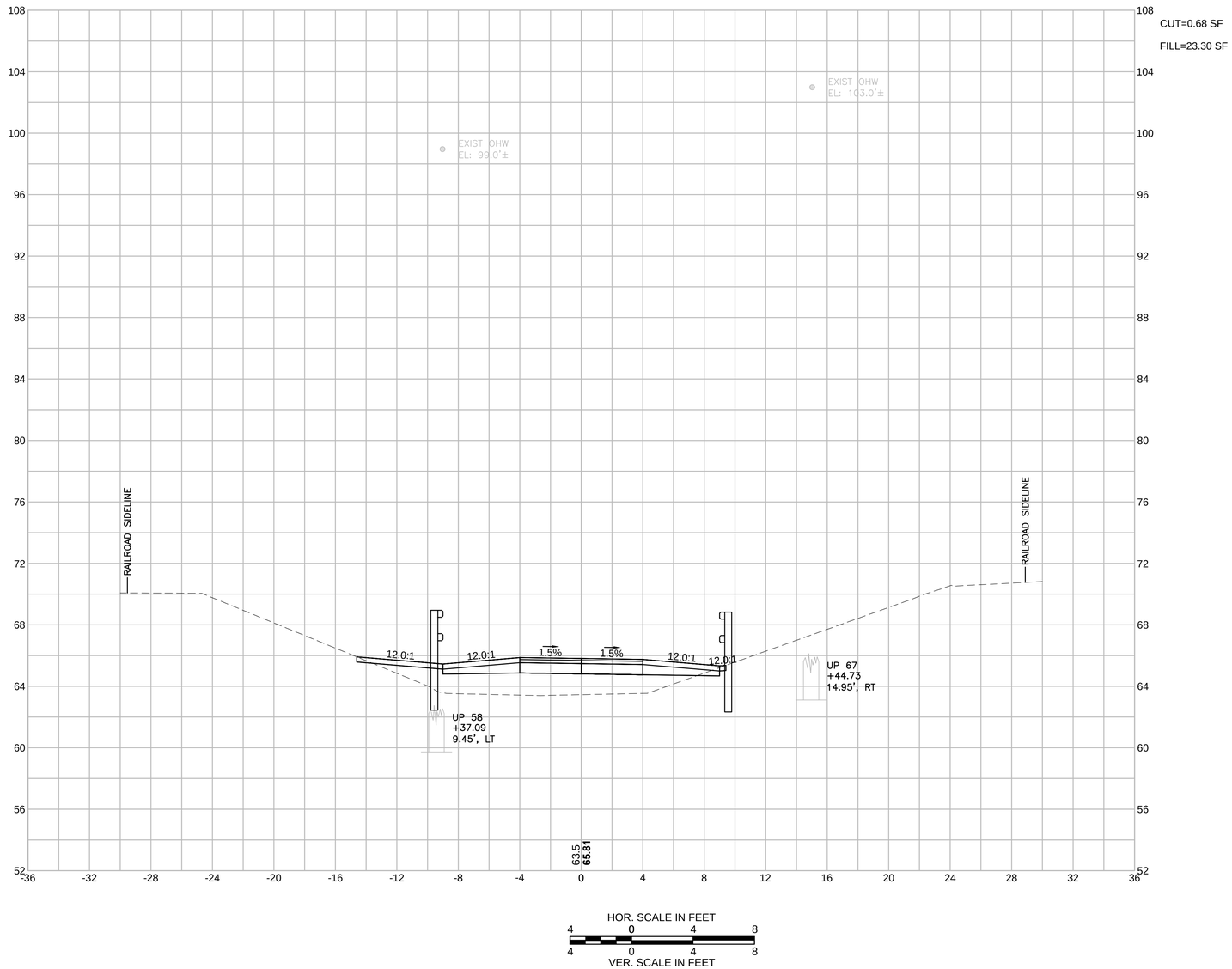
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	121	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 52 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:30 PM

262+50



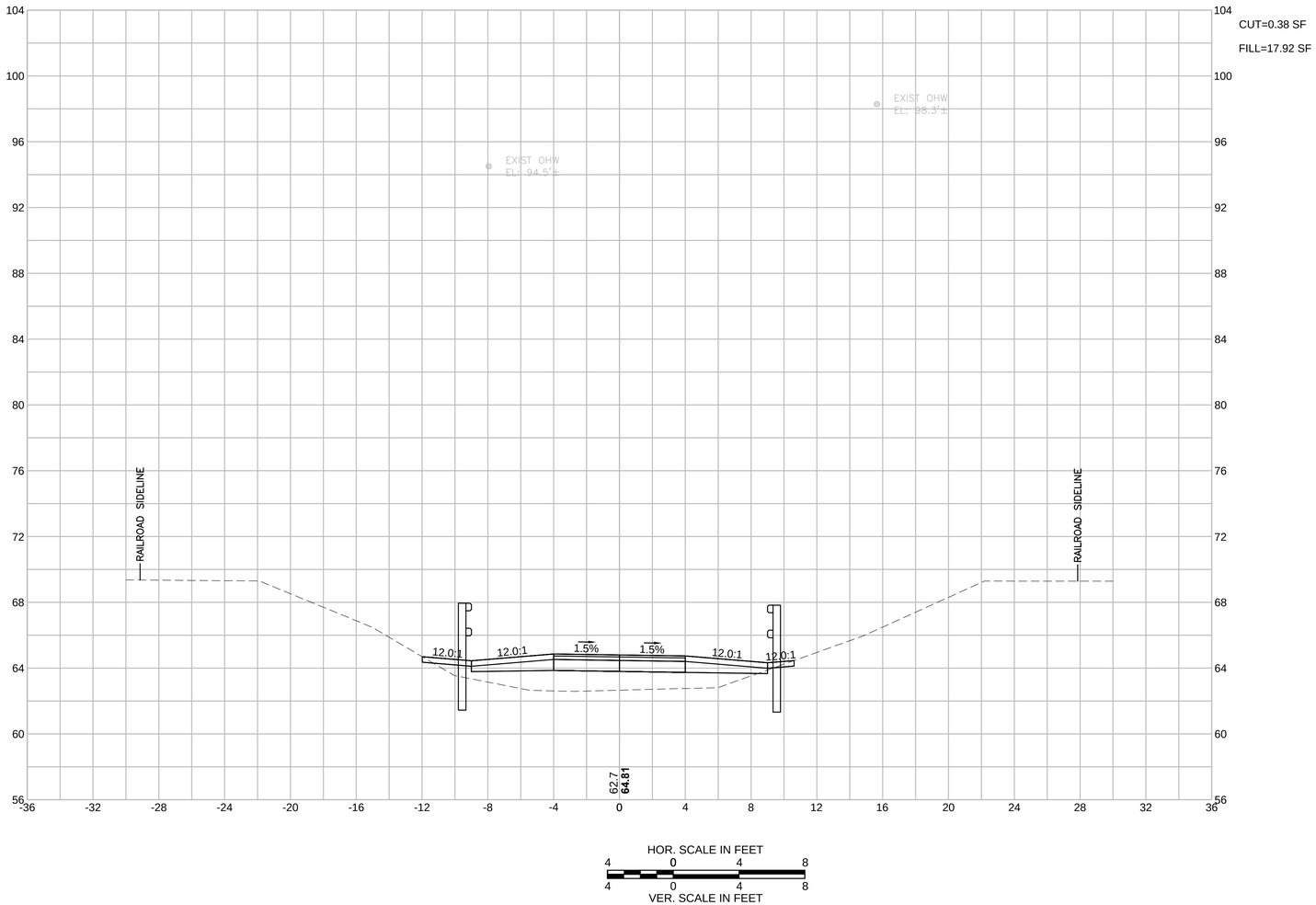
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	123	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 54 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:30 PM

263+00



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

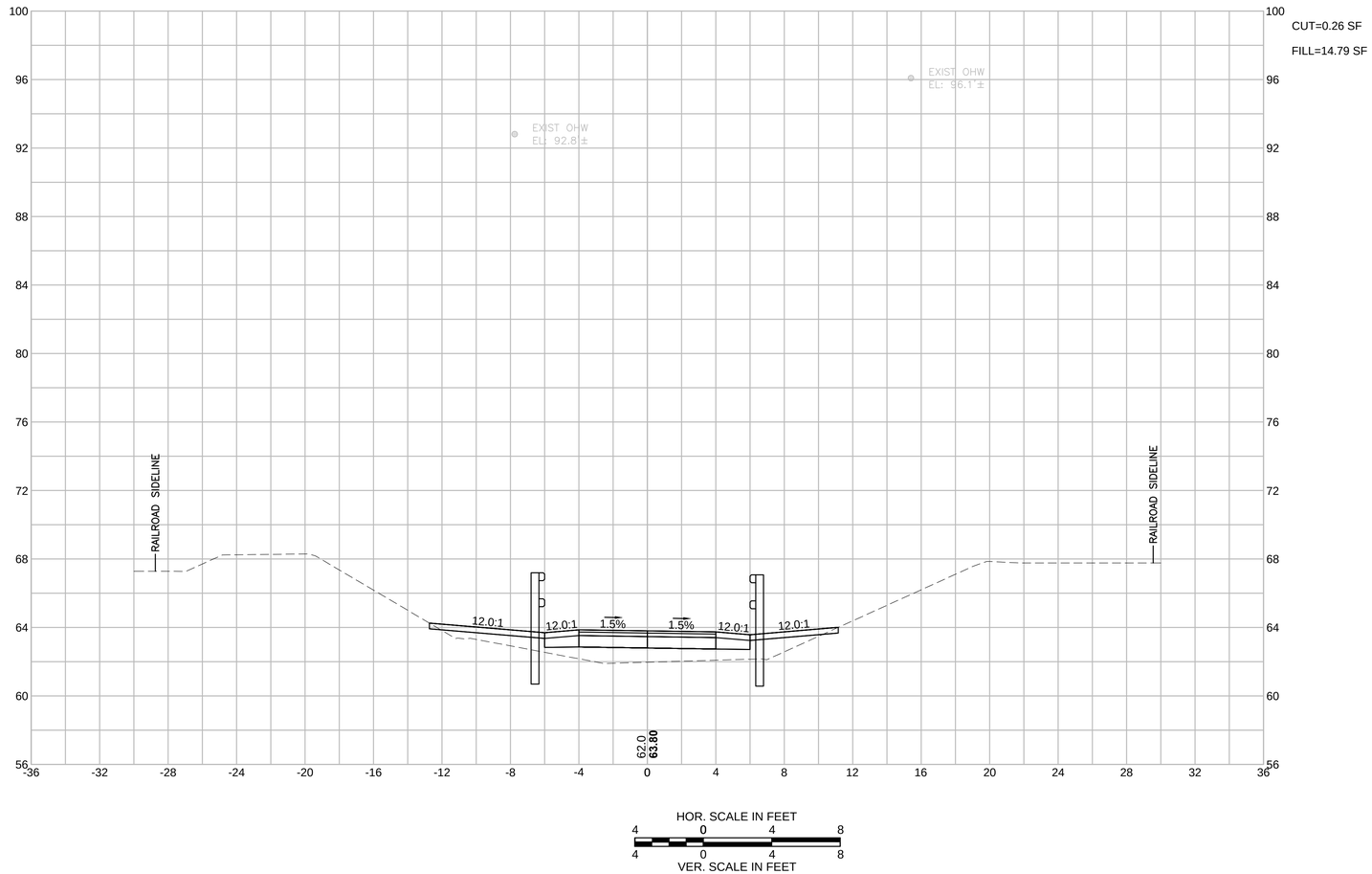
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	124	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 55 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:31 PM

263+50



CUT=0.26 SF

FILL=14.79 SF

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

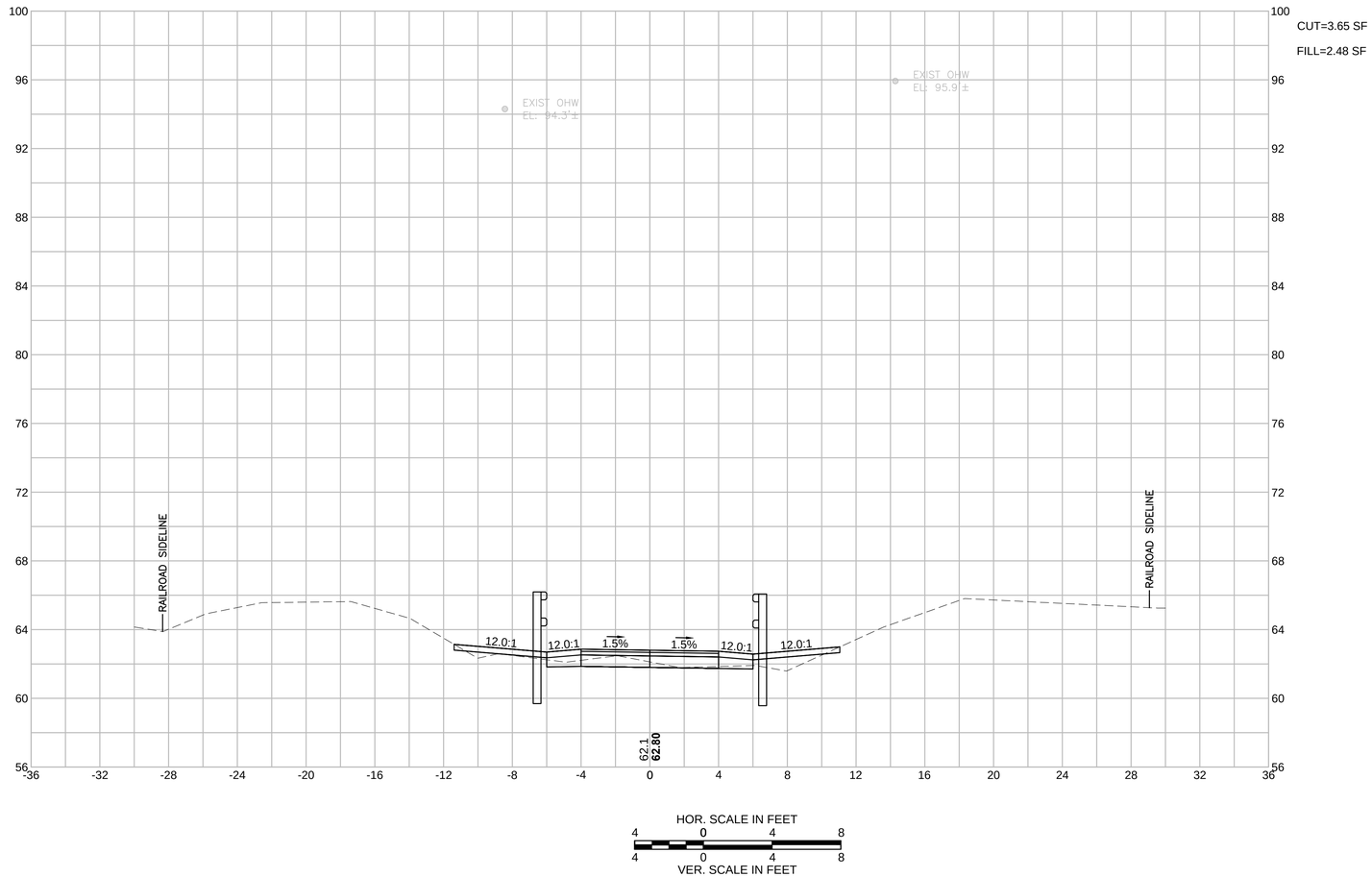
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	125	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 56 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:31 PM

264+00



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

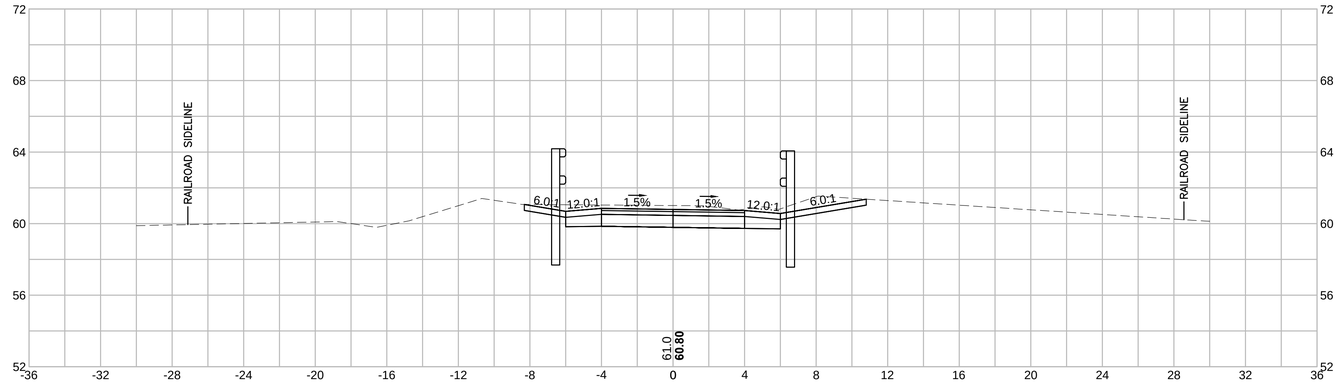
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	126	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 57 OF 90

Plotted on 5-Sep-2018 5:32 PM
608298_HD(CROSS SECTIONS).DWG

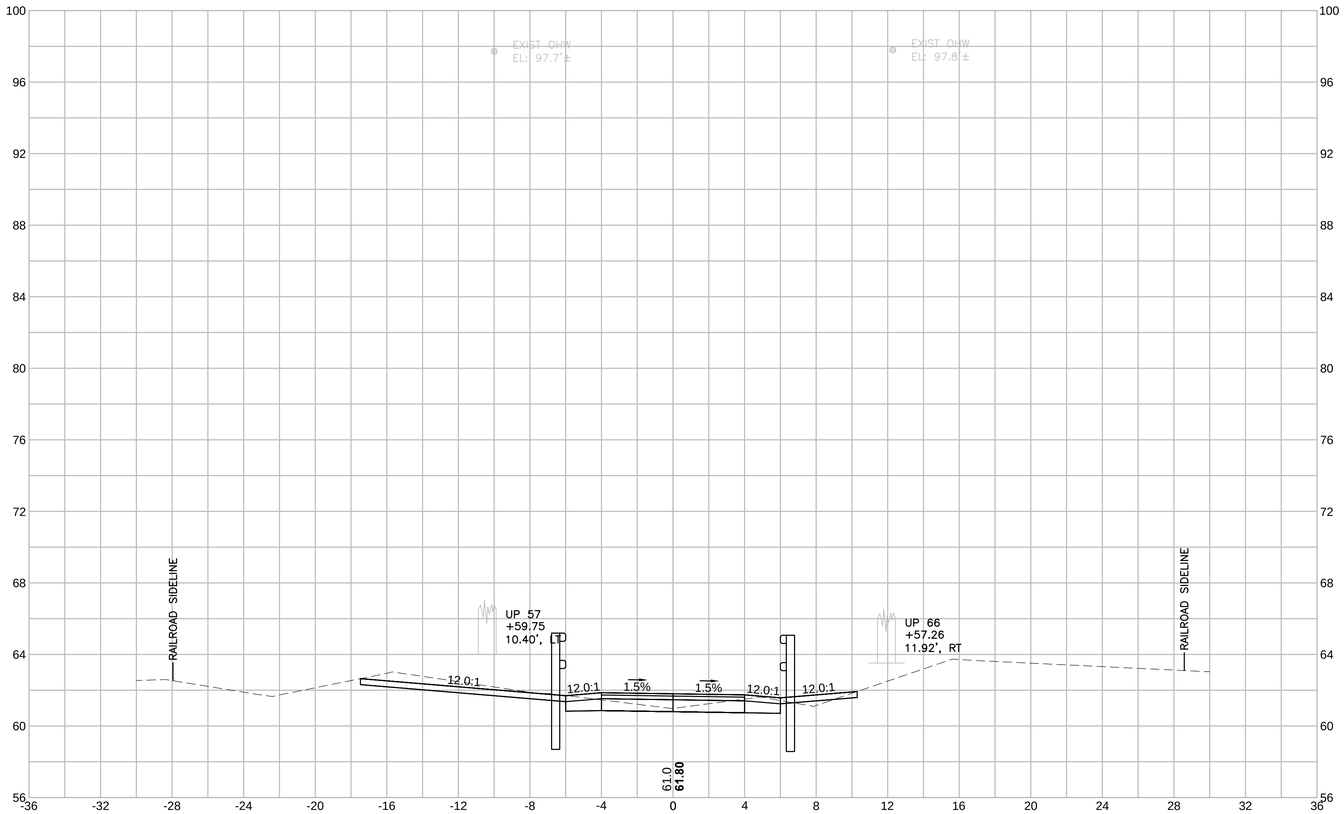
265+00



CUT=18.74 SF

FILL=0.00 SF

264+50



CUT=13.32 SF

FILL=0.34 SF

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

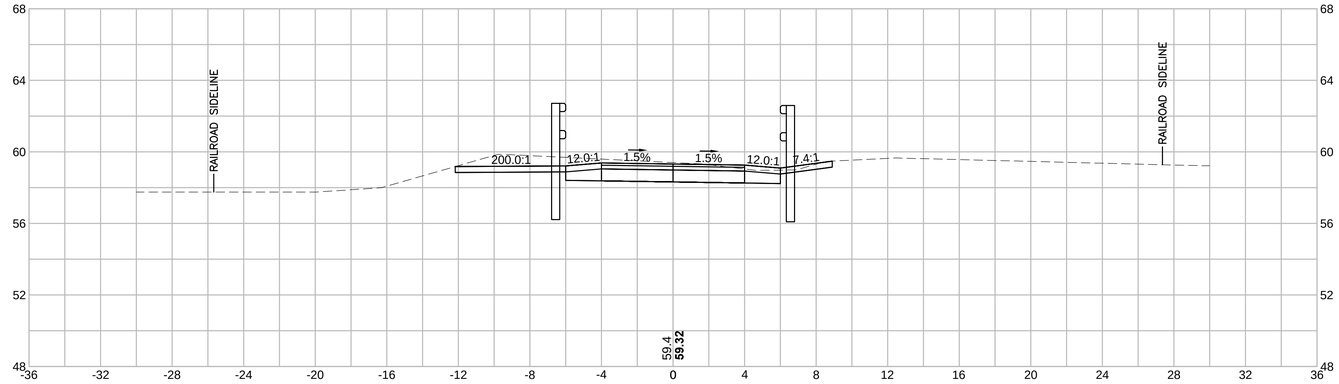
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	127	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 58 OF 90

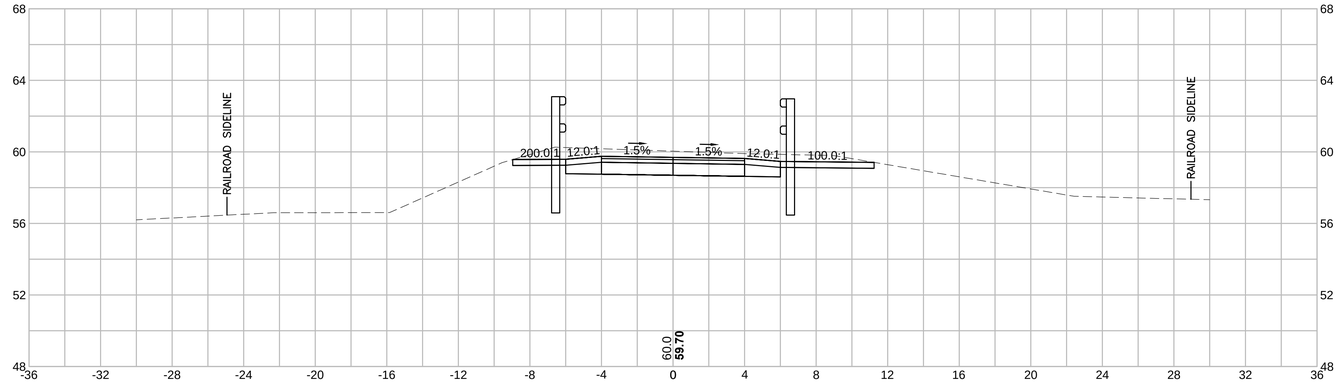
608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:32 PM

266+50



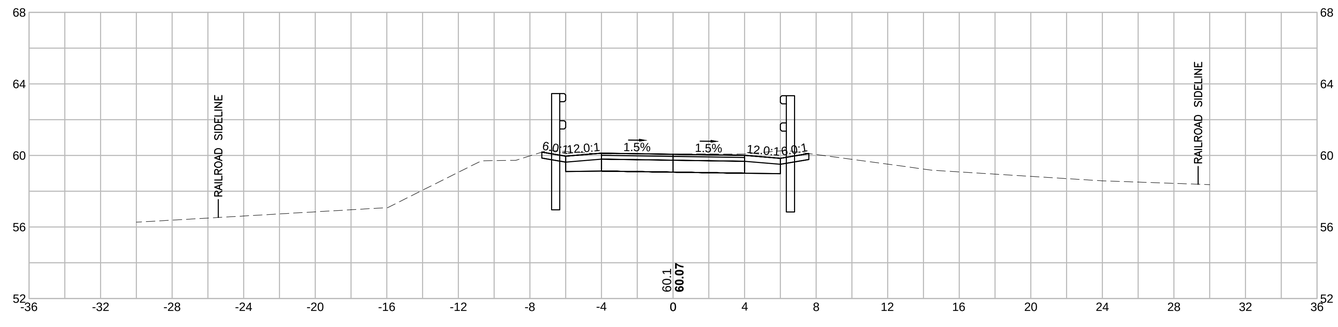
CUT=18.20 SF
FILL=0.00 SF

266+00



CUT=21.66 SF
FILL=0.00 SF

265+50



CUT=14.14 SF
FILL=0.00 SF

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

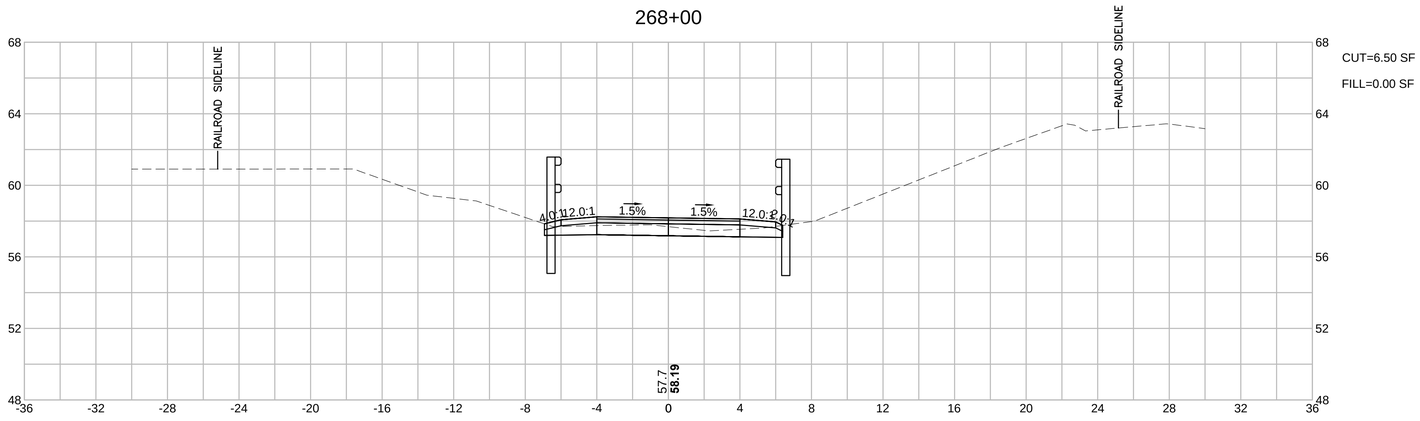
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	128	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 59 OF 90

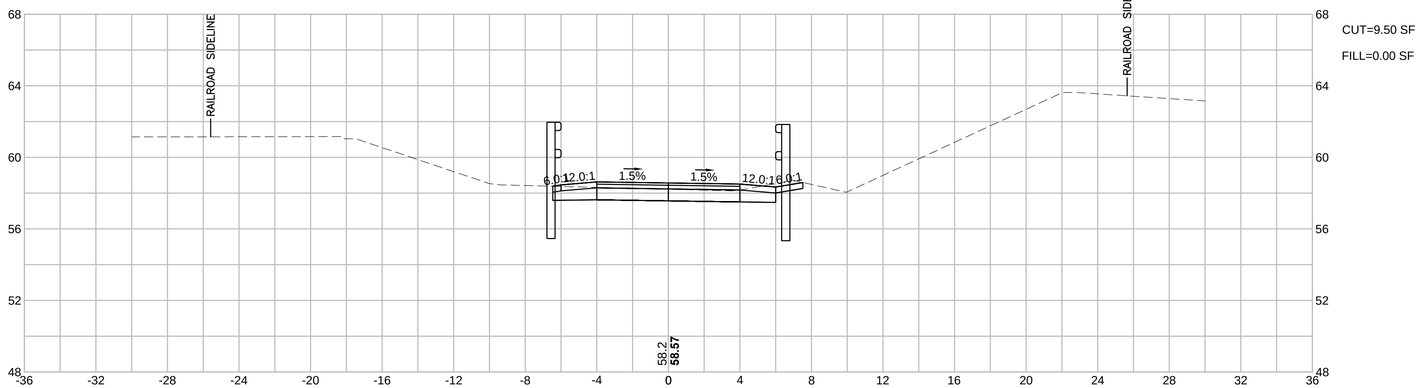
608298_HD\CROSS SECTIONS\.DWG Plotted on 5-Sep-2018 5:32 PM

268+00



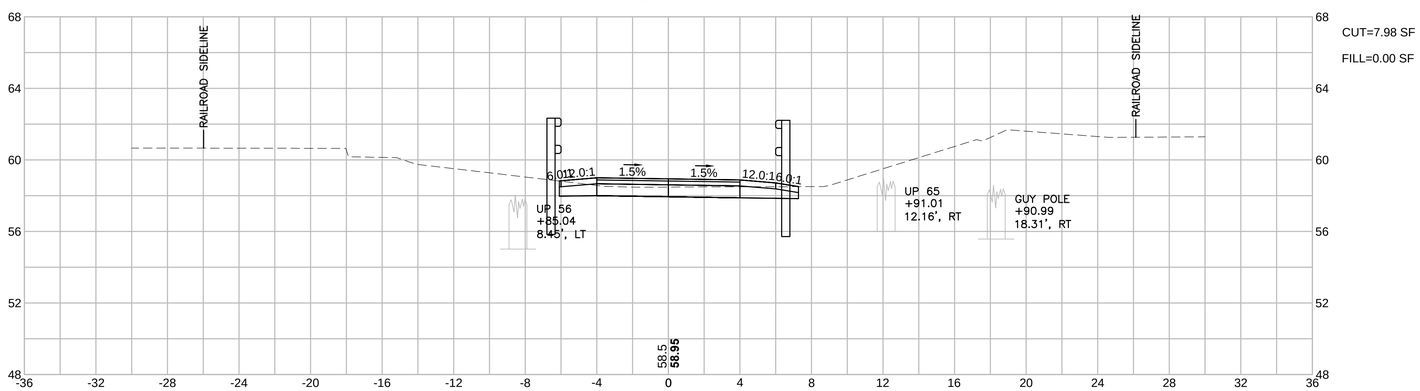
CUT=6.50 SF
FILL=0.00 SF

267+50



CUT=9.50 SF
FILL=0.00 SF

267+00



CUT=7.98 SF
FILL=0.00 SF

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

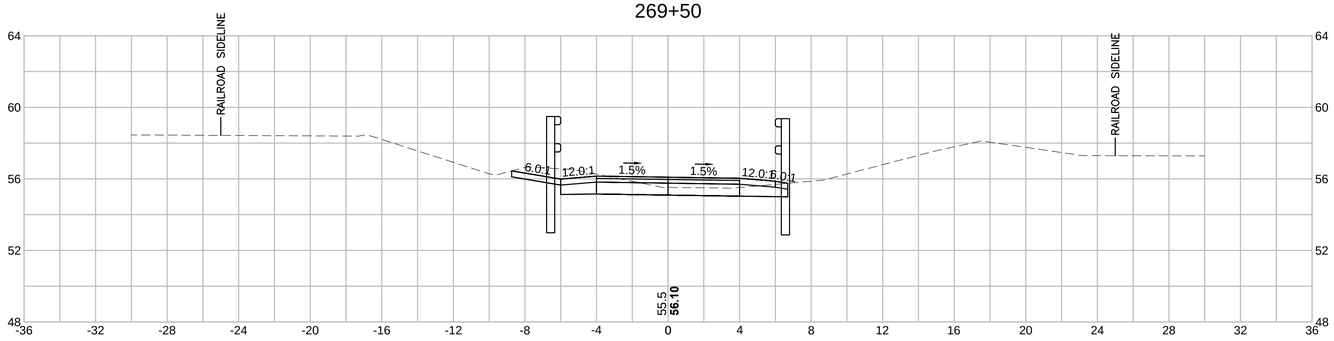
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	129	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 60 OF 90

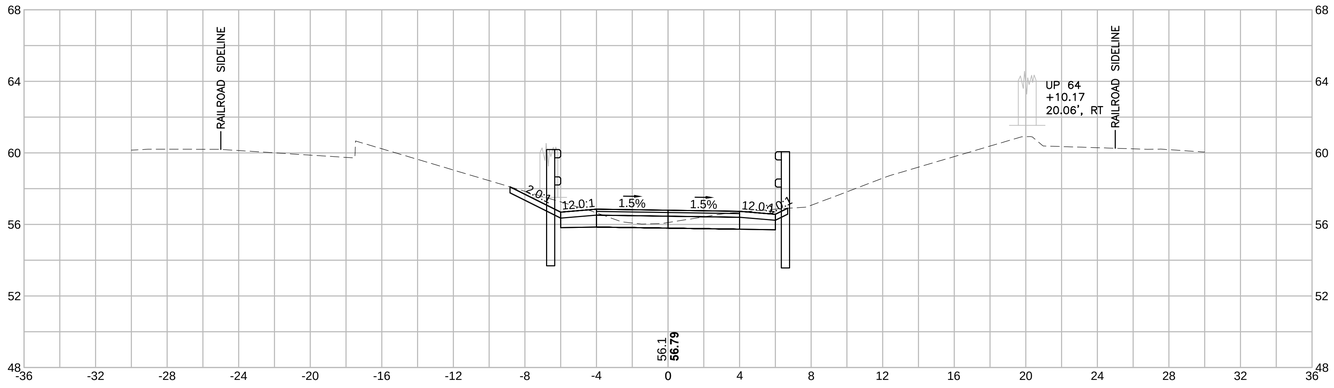
608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:33 PM

269+50



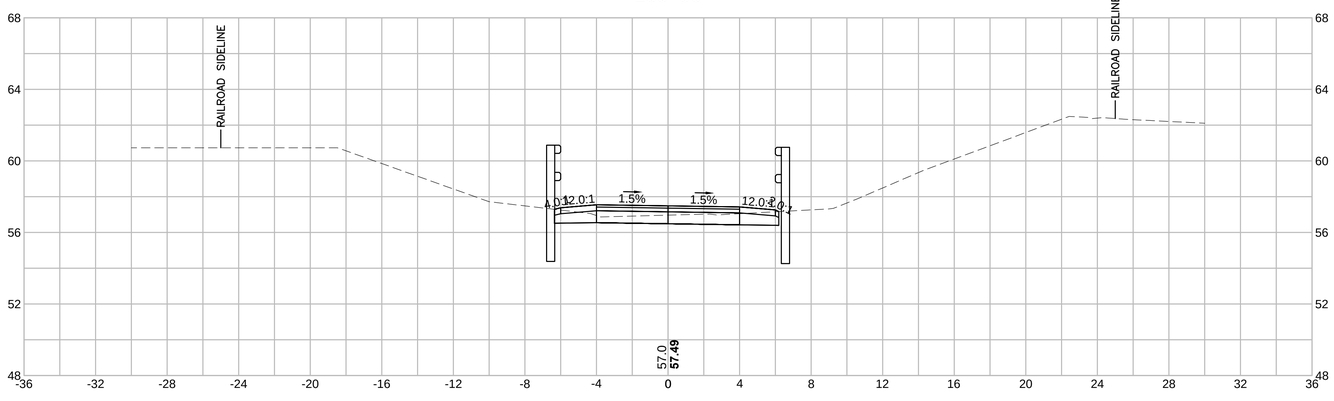
CUT=10.96 SF
FILL=0.00 SF

269+00



CUT=10.51 SF
FILL=0.00 SF

268+50



CUT=6.77 SF
FILL=0.00 SF

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

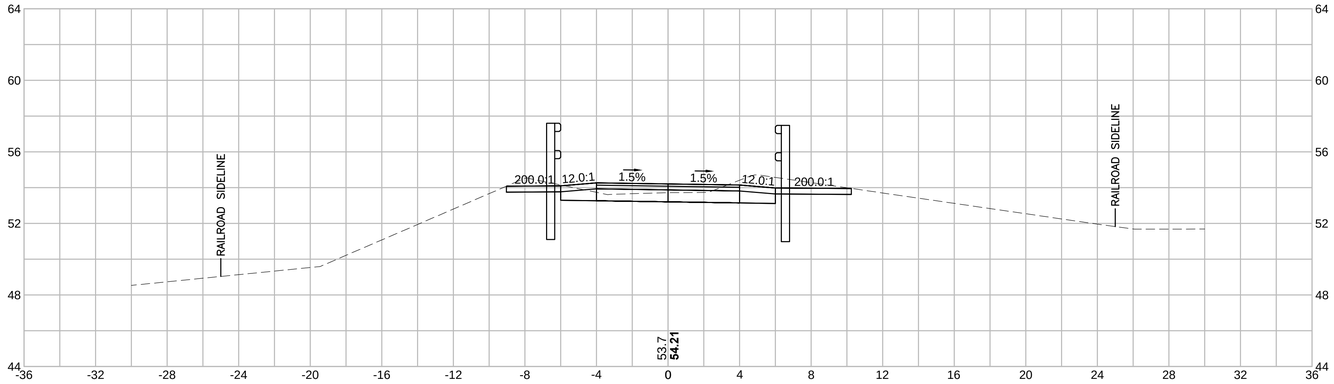
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	130	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 61 OF 90

608298_HDI(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:33 PM

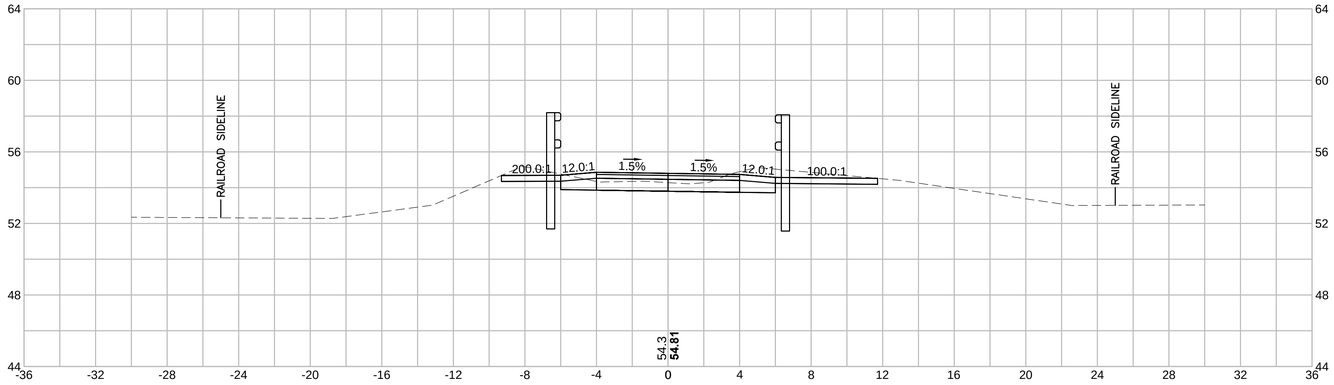
271+00



CUT=13.30 SF

FILL=0.00 SF

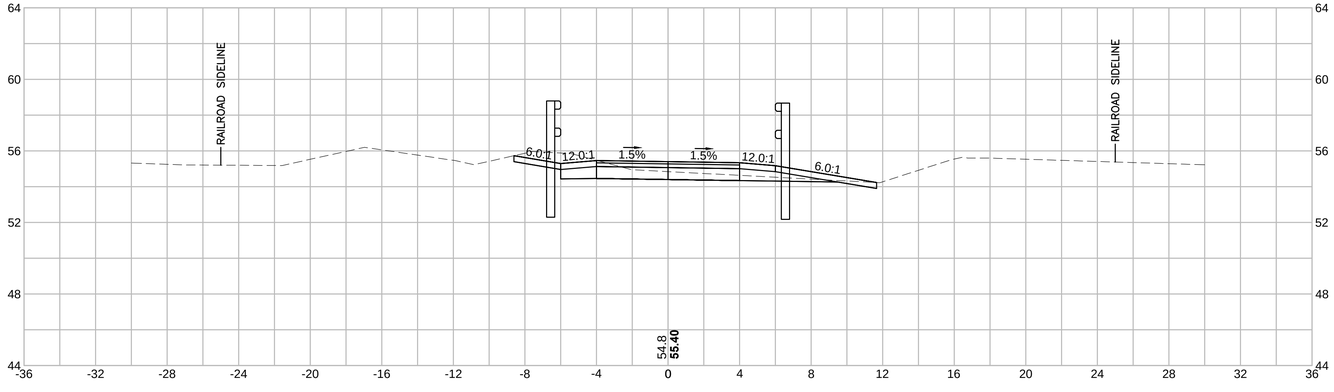
270+50



CUT=13.77 SF

FILL=0.00 SF

270+00



CUT=9.87 SF

FILL=0.00 SF

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

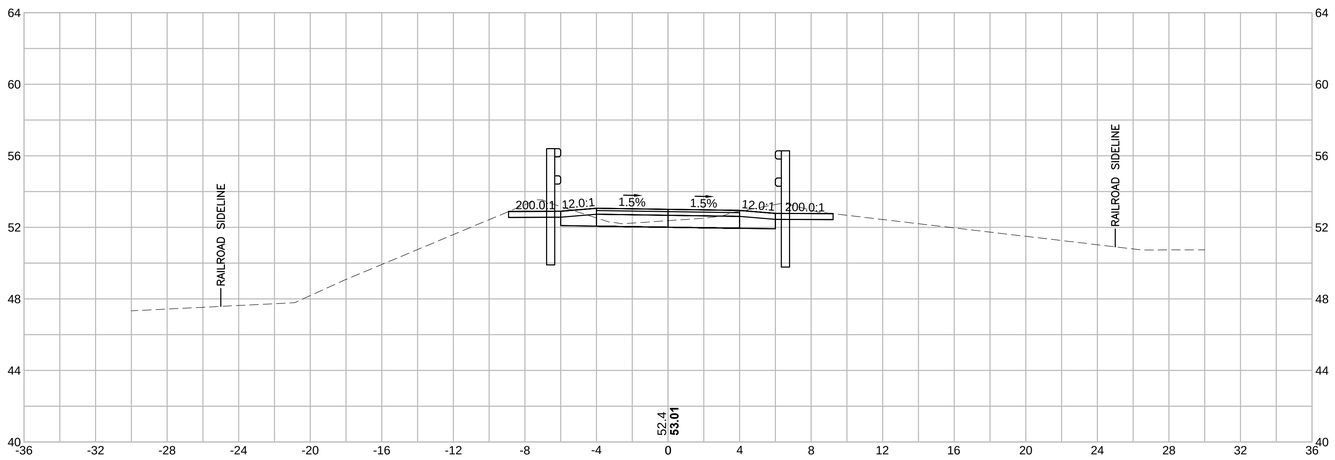
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	131	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 62 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:34 PM

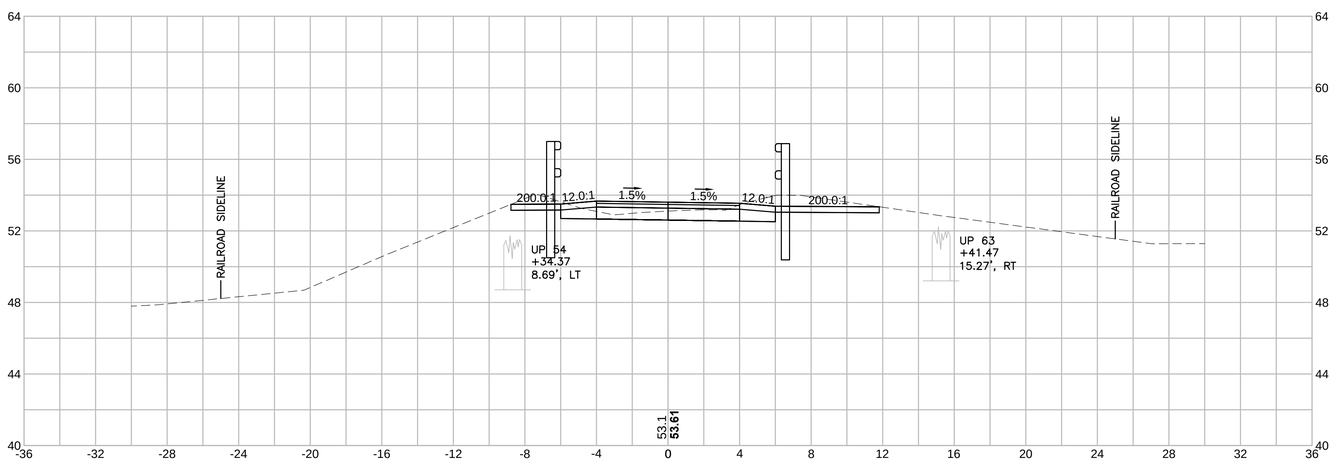
272+00



CUT=11.38 SF

FILL=0.00 SF

271+50



CUT=13.62 SF

FILL=0.00 SF

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

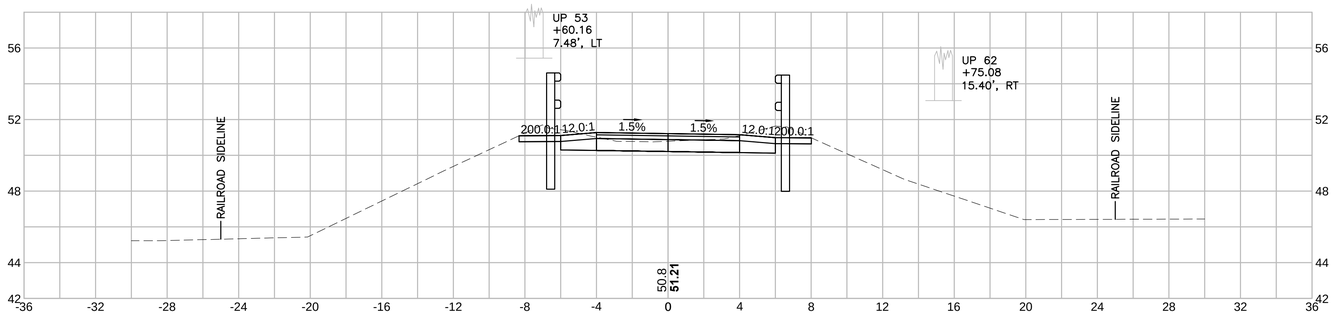
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	132	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 63 OF 90

608298_HDI(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:34 PM

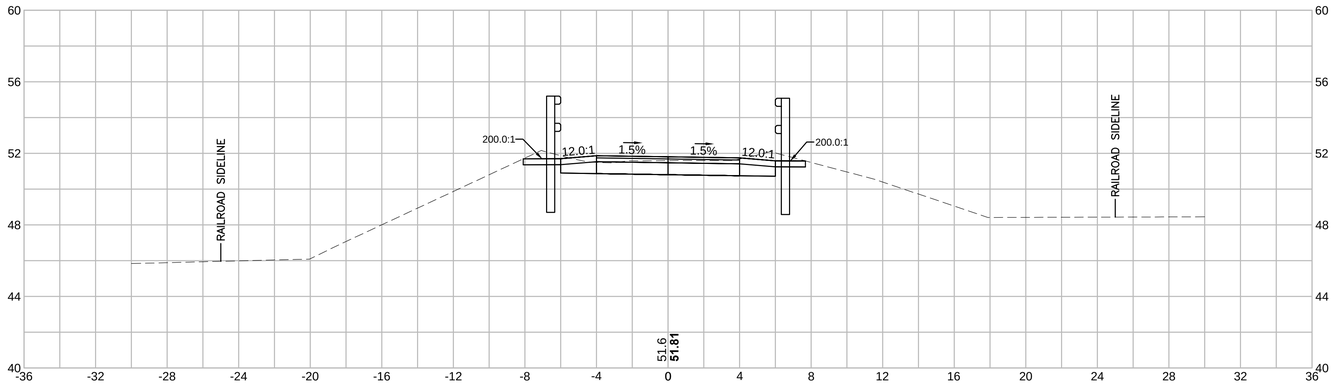
273+50



CUT=12.52 SF

FILL=0.00 SF

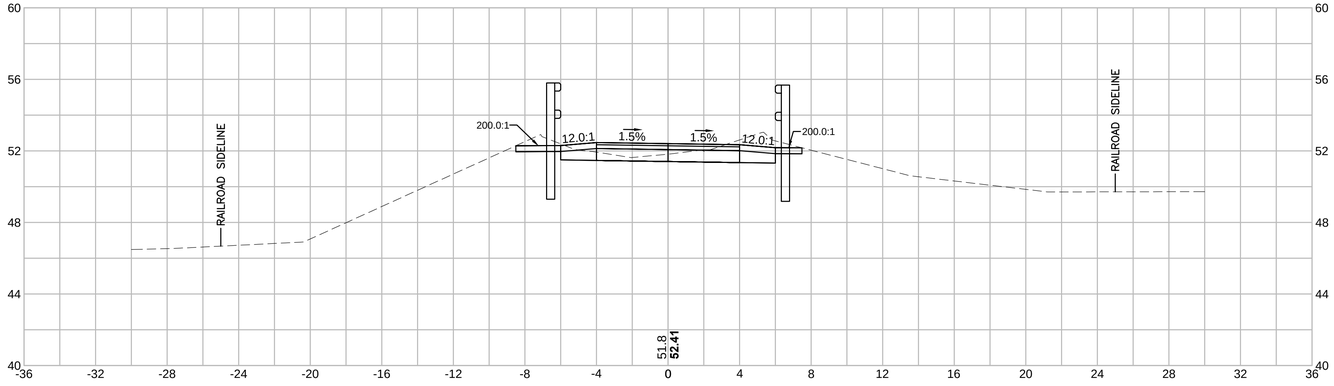
273+00



CUT=12.18 SF

FILL=0.00 SF

272+50



CUT=10.75 SF

FILL=0.00 SF

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

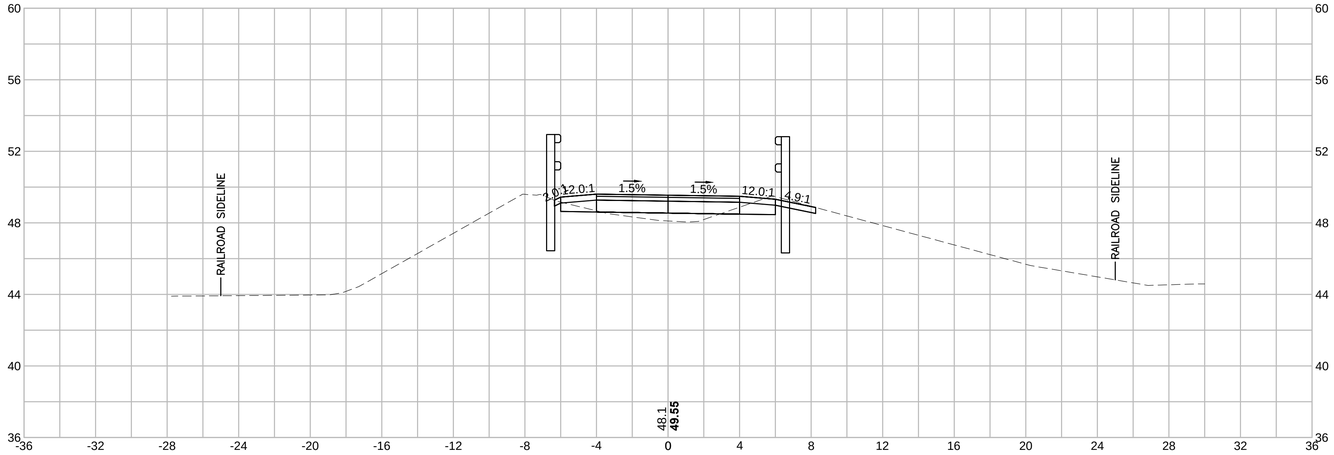
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	133	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 64 OF 90

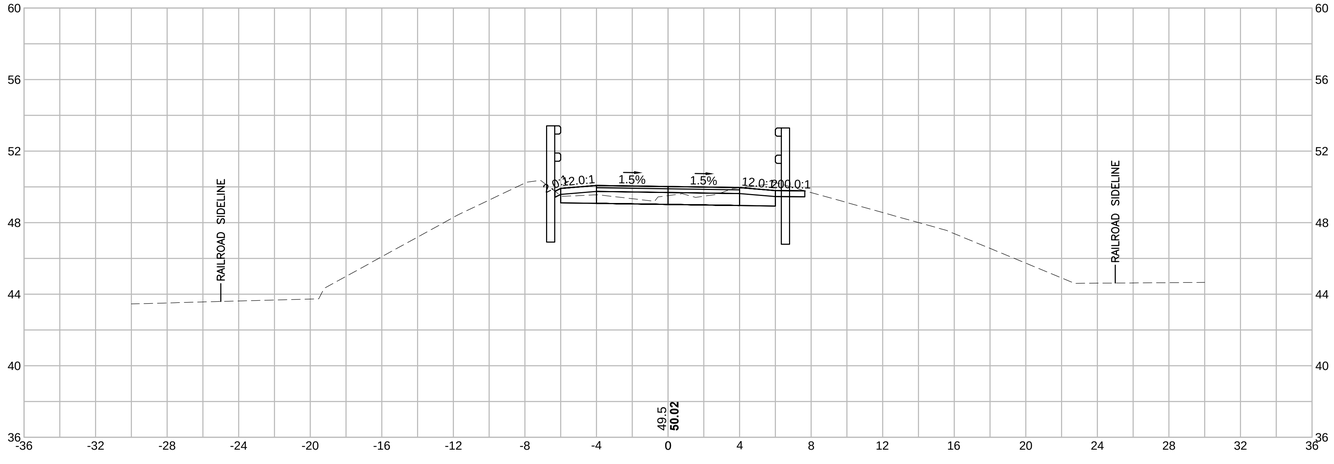
Plotted on 5-Sep-2018 5:34 PM
608298_HD(CROSS SECTIONS).DWG

275+00



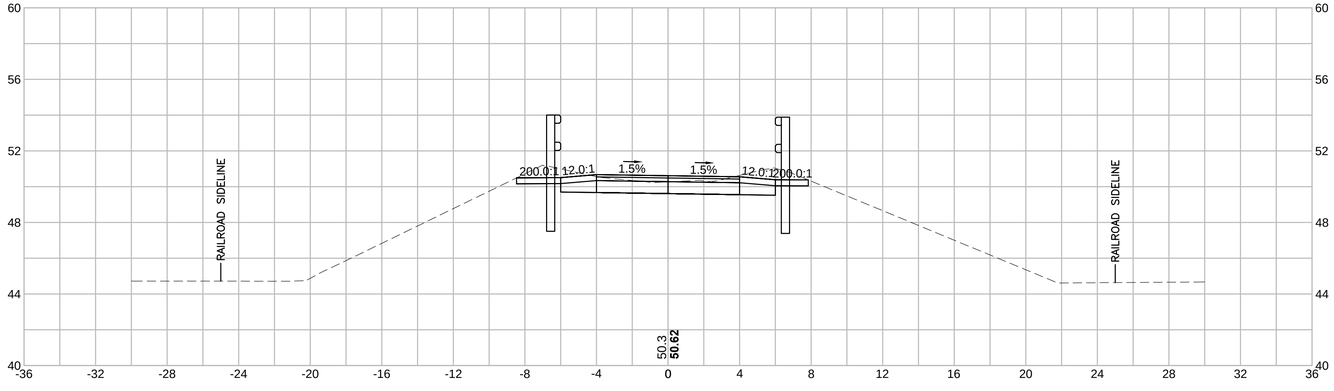
CUT=3.28 SF
FILL=2.02 SF

274+50



CUT=7.94 SF
FILL=0.00 SF

274+00



CUT=14.00 SF
FILL=0.00 SF

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

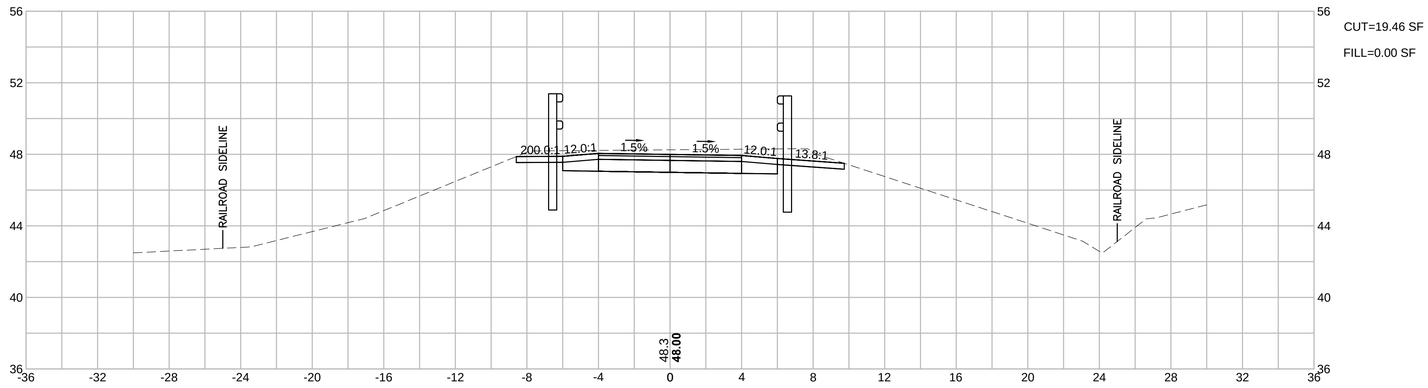
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	134	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 65 OF 90

Plotted on 5-Sep-2018 5:35 PM
608298_HD\CROSS SECTIONS\.DWG

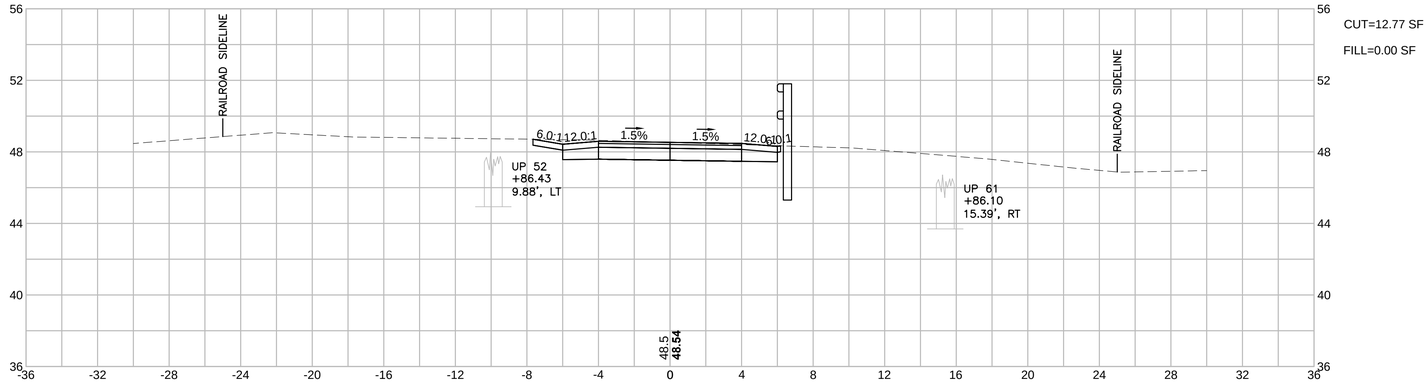
276+50



CUT=19.46 SF

FILL=0.00 SF

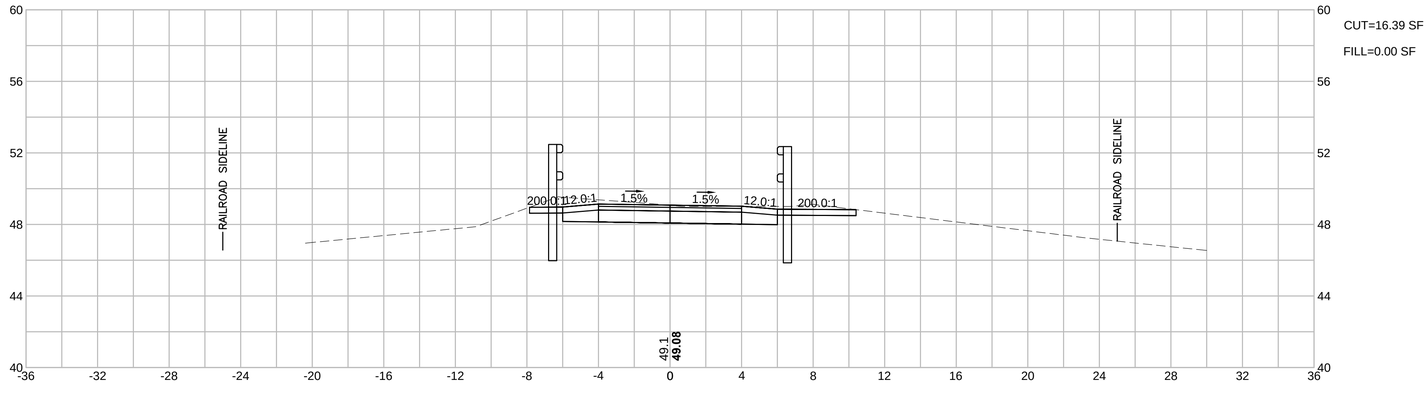
276+00



CUT=12.77 SF

FILL=0.00 SF

275+50



CUT=16.39 SF

FILL=0.00 SF

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

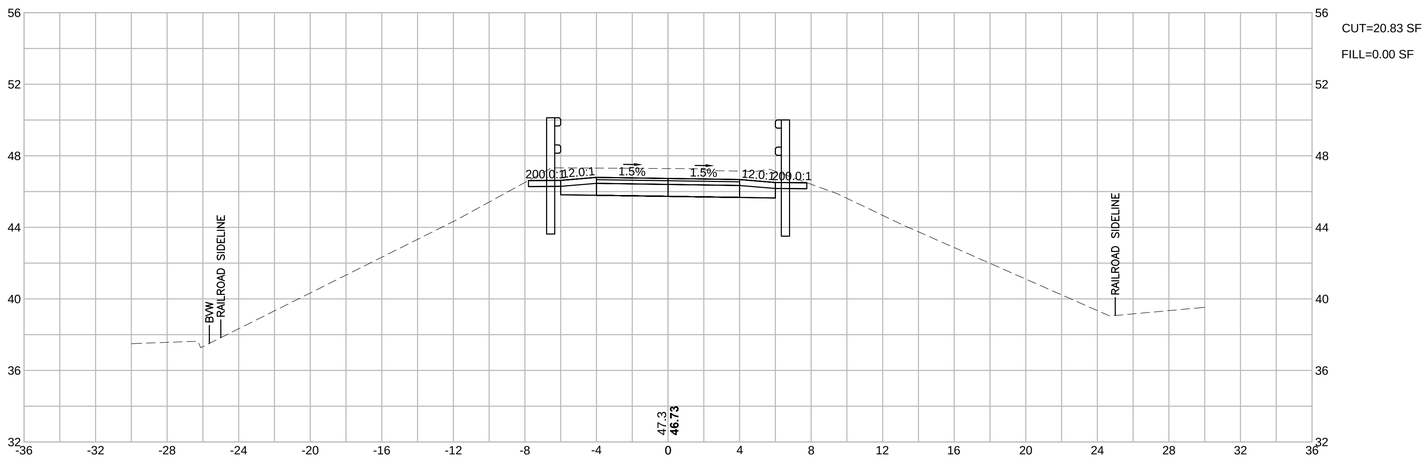
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	135	159
PROJECT FILE NO.	608298		

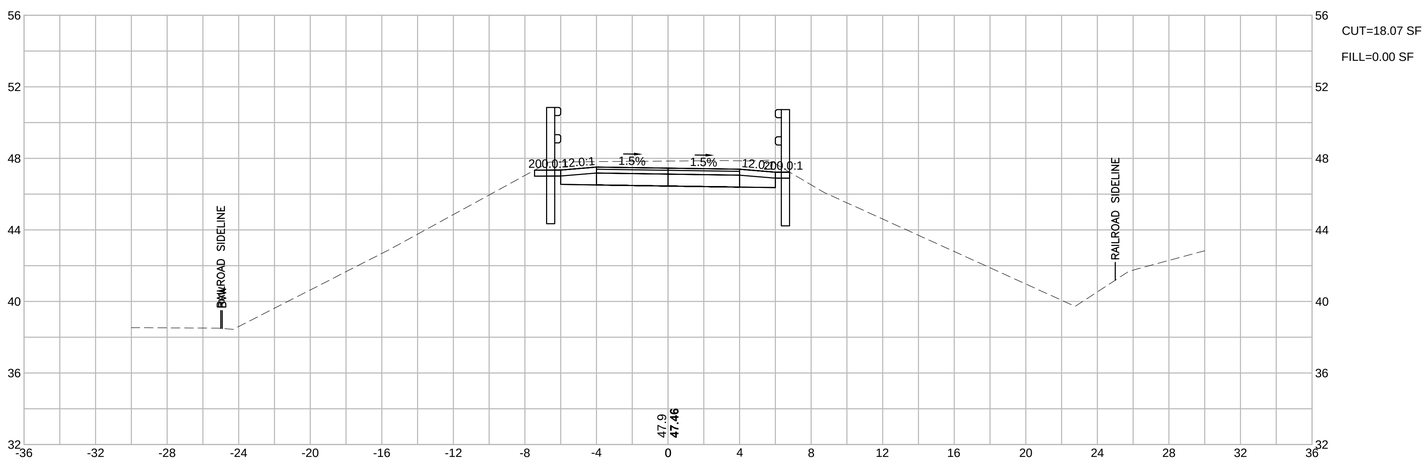
CROSS SECTIONS
PART 66 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:35 PM

277+50



277+00



HOR. SCALE IN FEET
VER. SCALE IN FEET

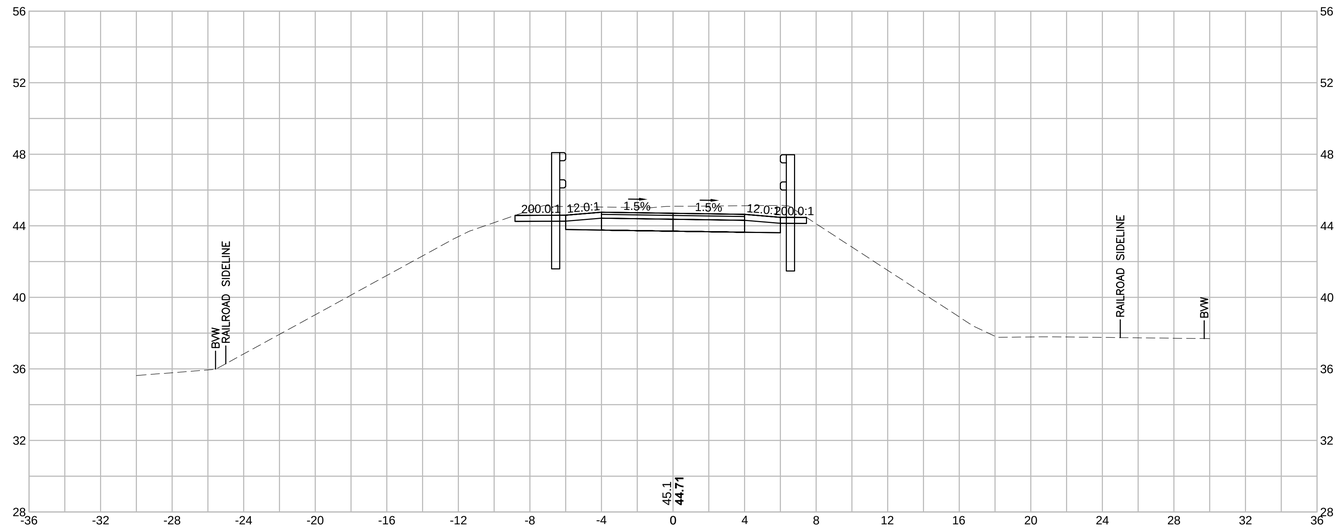
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	136	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 67 OF 90

608298_HD\CROSS SECTIONS\DWG Plotted on 5-Sep-2018 5:36 PM

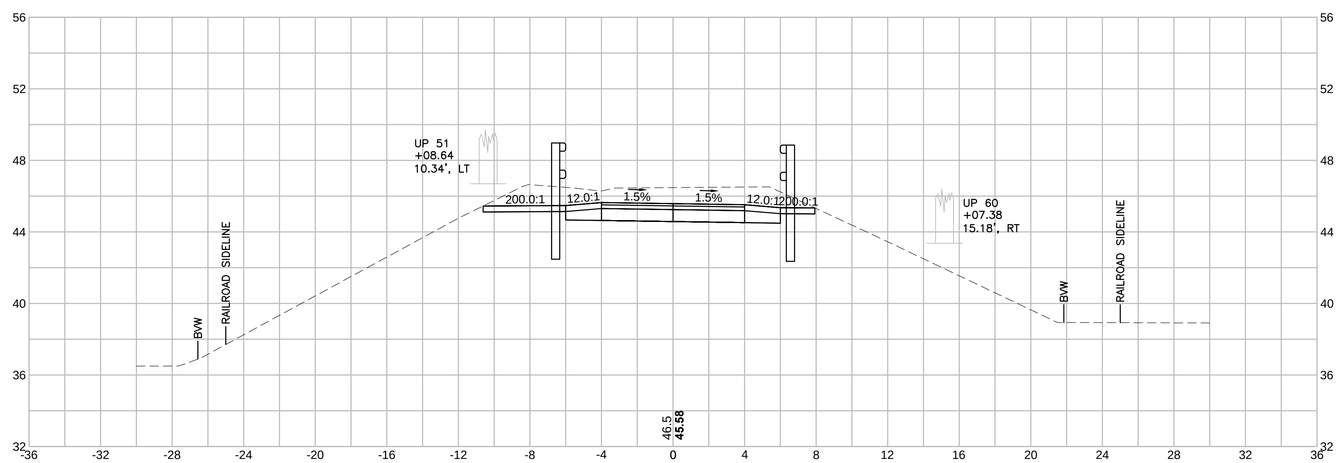
278+50



CUT=19.65 SF

FILL=0.00 SF

278+00



CUT=29.41 SF

FILL=0.00 SF

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

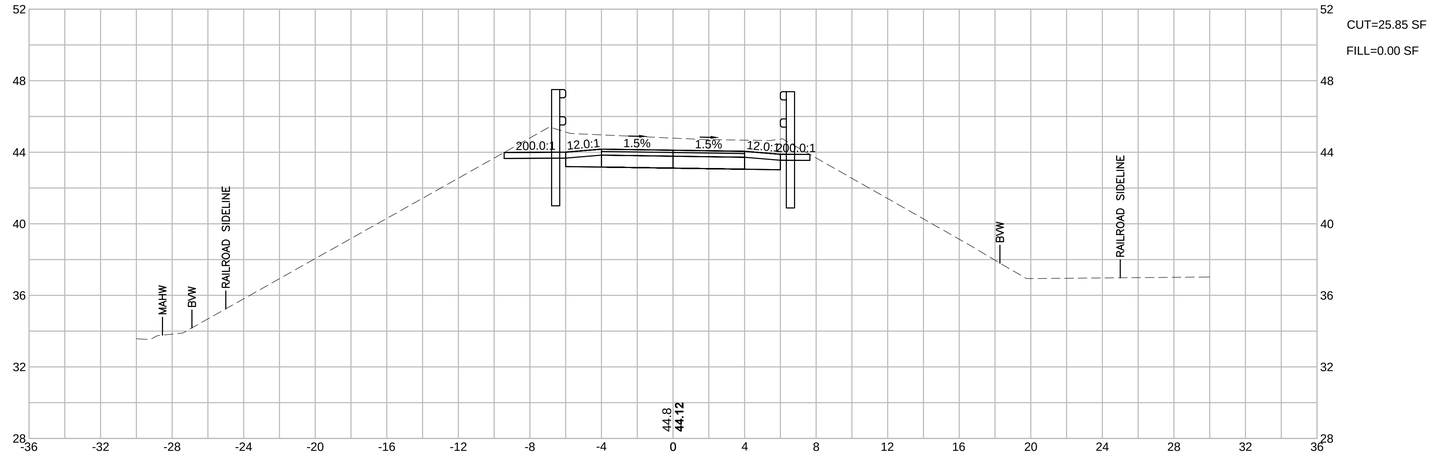
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	137	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 68 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:36 PM

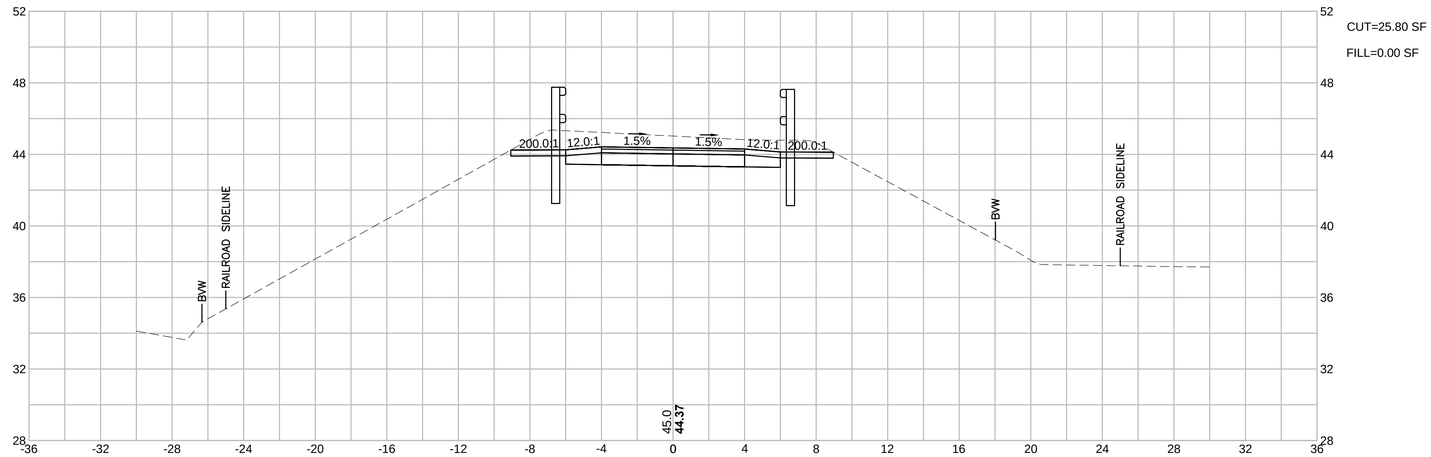
279+50



CUT=25.85 SF

FILL=0.00 SF

279+00



CUT=25.80 SF

FILL=0.00 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

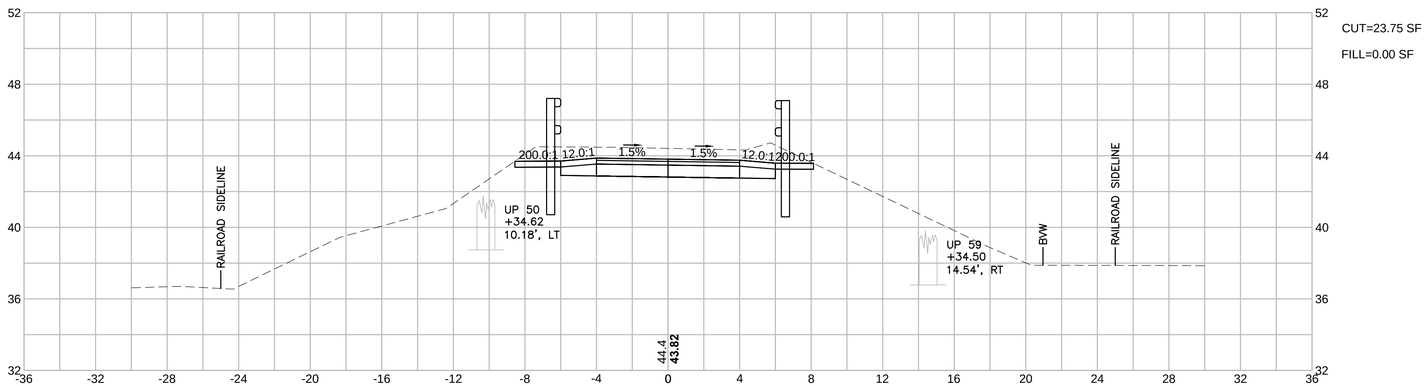
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	138	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART69 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:37 PM

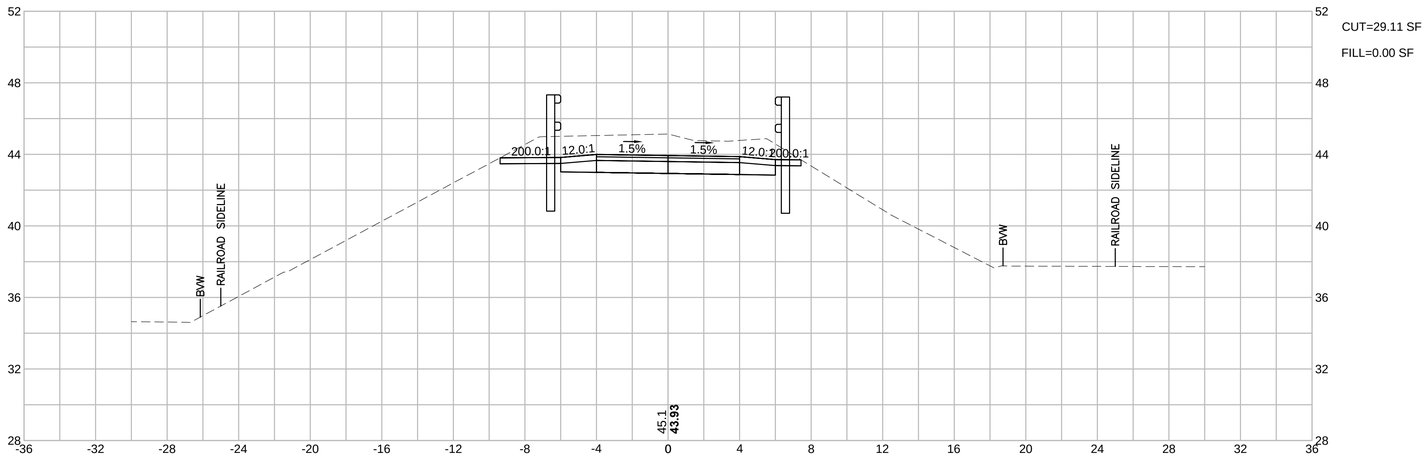
280+50



CUT=23.75 SF

FILL=0.00 SF

280+00



CUT=29.11 SF

FILL=0.00 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

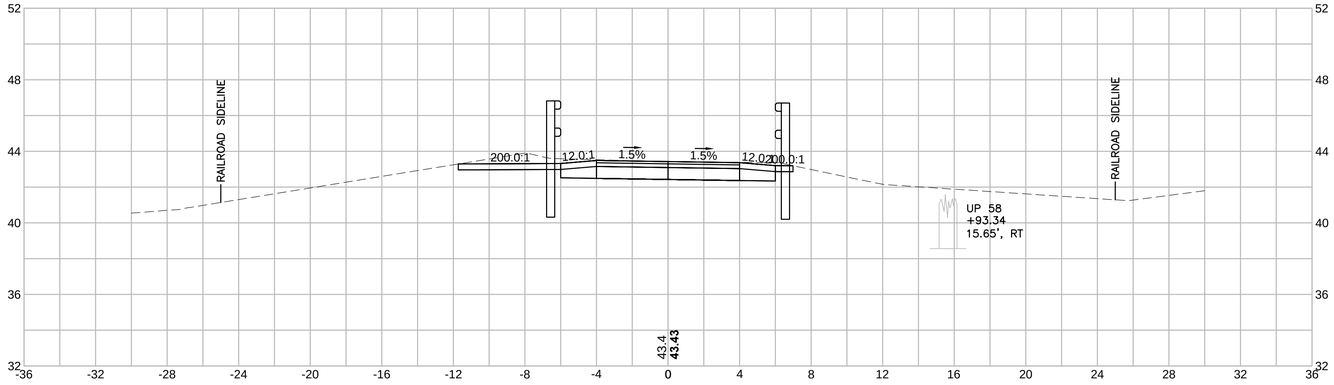
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	139	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 70 OF 90

Plotted on 5-Sep-2018 5:37 PM
608298_HD(CROSS SECTIONS).DWG

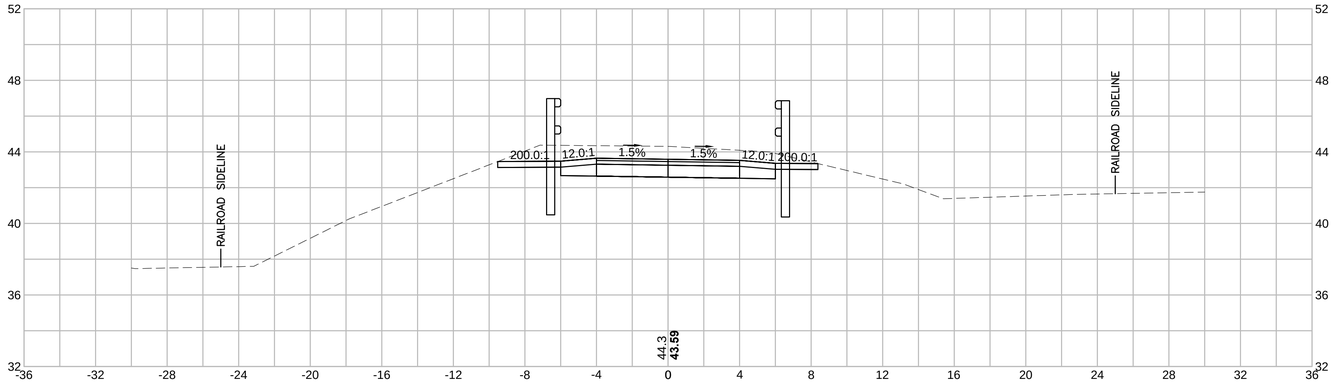
282+00



CUT=16.46 SF

FILL=0.00 SF

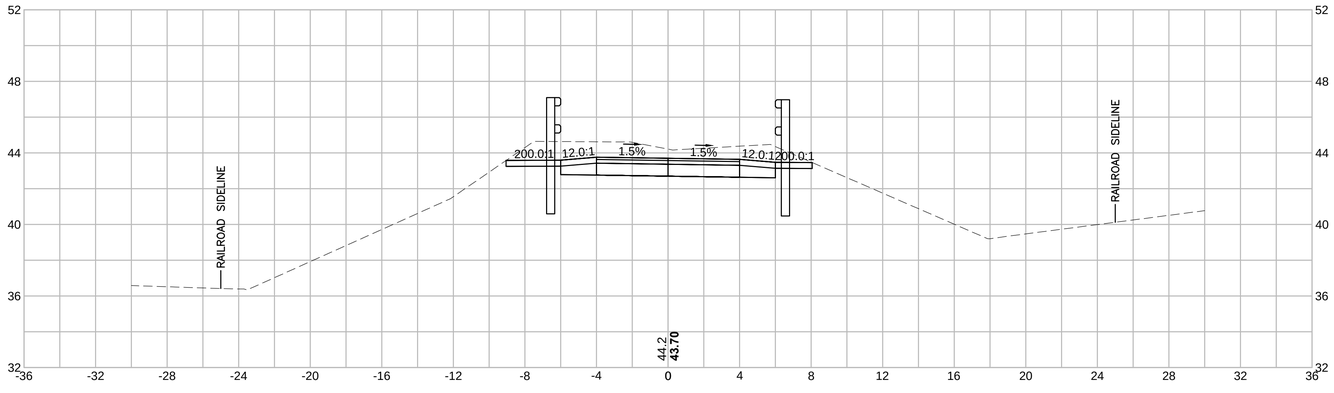
281+50



CUT=24.60 SF

FILL=0.00 SF

281+00



CUT=25.81 SF

FILL=0.00 SF

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

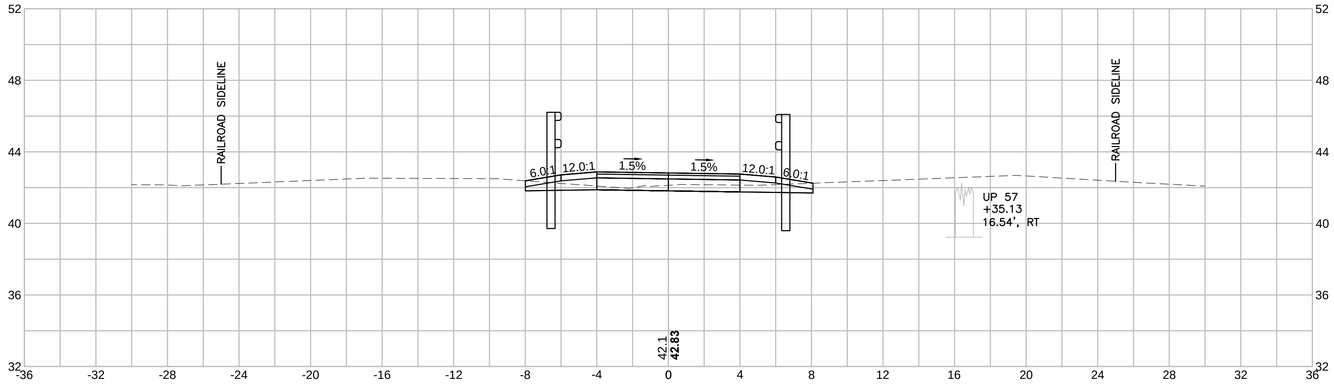
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	140	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 71 OF 90

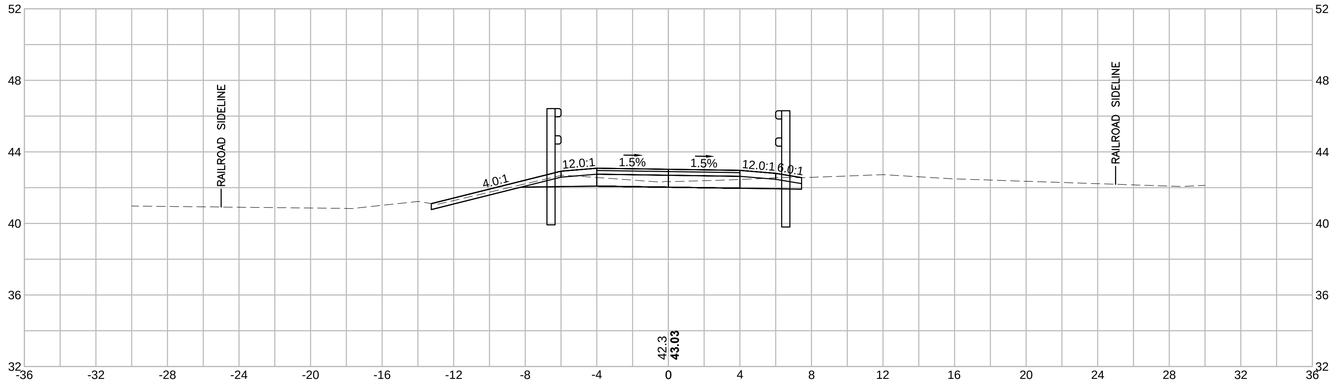
608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:37 PM

283+50



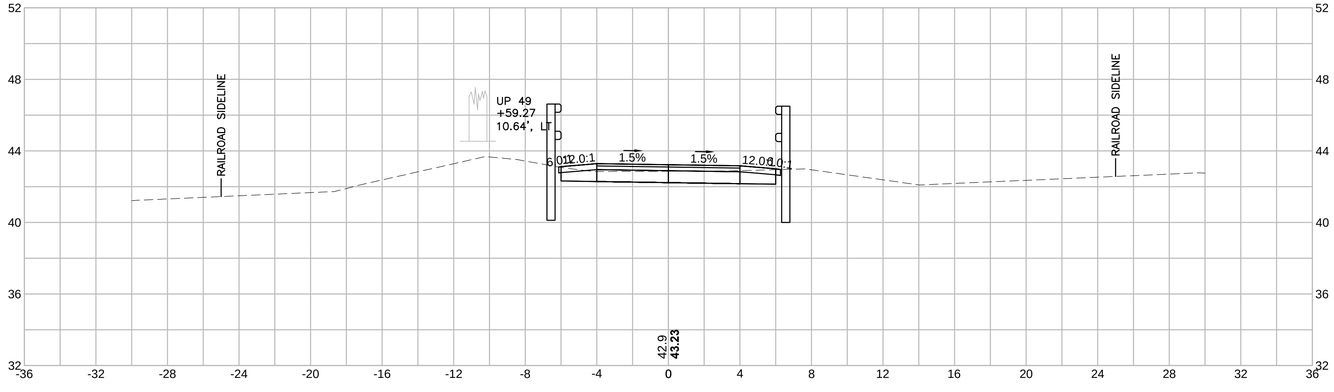
CUT=5.61 SF
FILL=0.00 SF

283+00



CUT=7.93 SF
FILL=0.00 SF

282+50



CUT=8.04 SF
FILL=0.00 SF

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

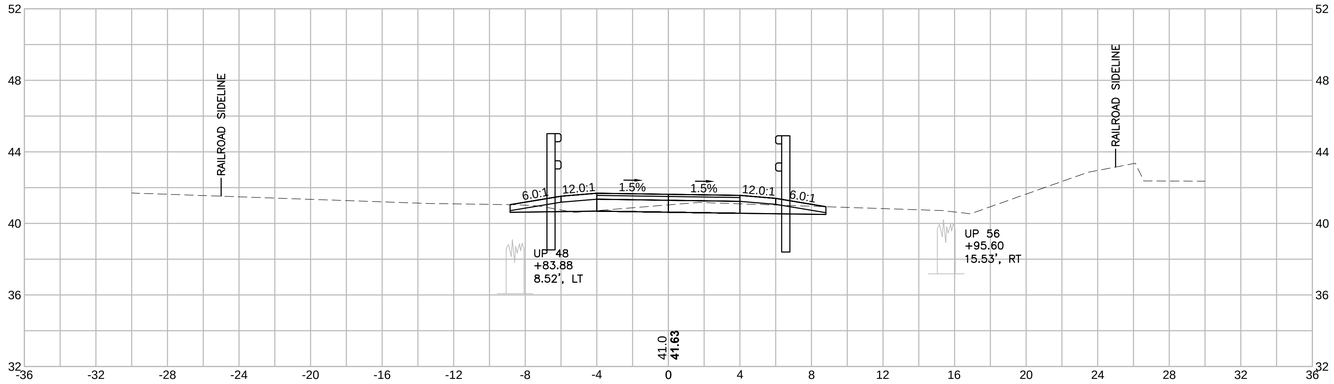
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	140	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 71 OF 90

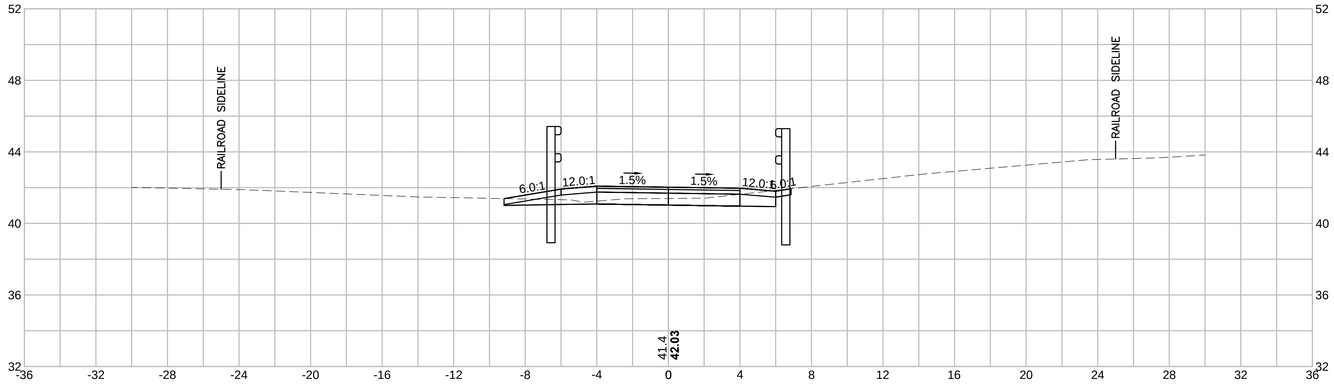
608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:38 PM

285+00



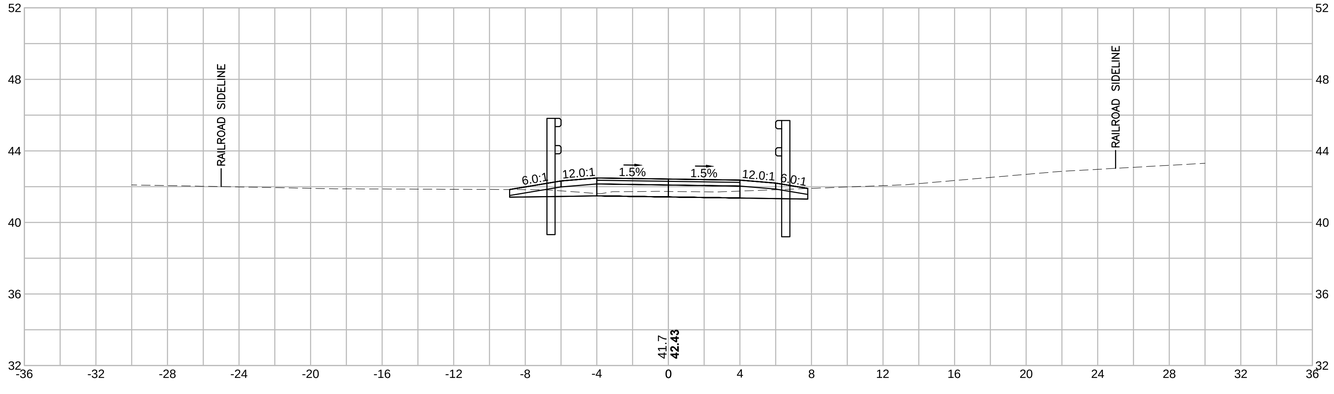
CUT=6.17 SF
FILL=0.03 SF

284+50



CUT=6.35 SF
FILL=0.00 SF

284+00



CUT=5.77 SF
FILL=0.00 SF

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

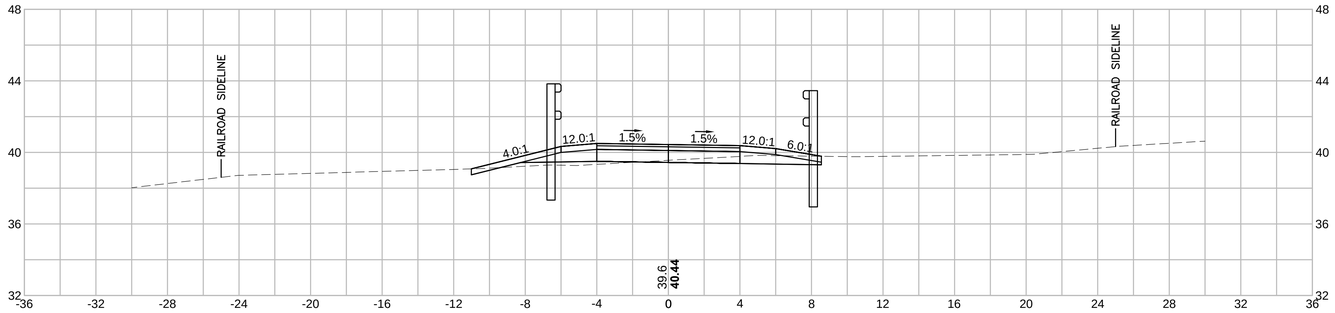
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	141	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 73 OF 90

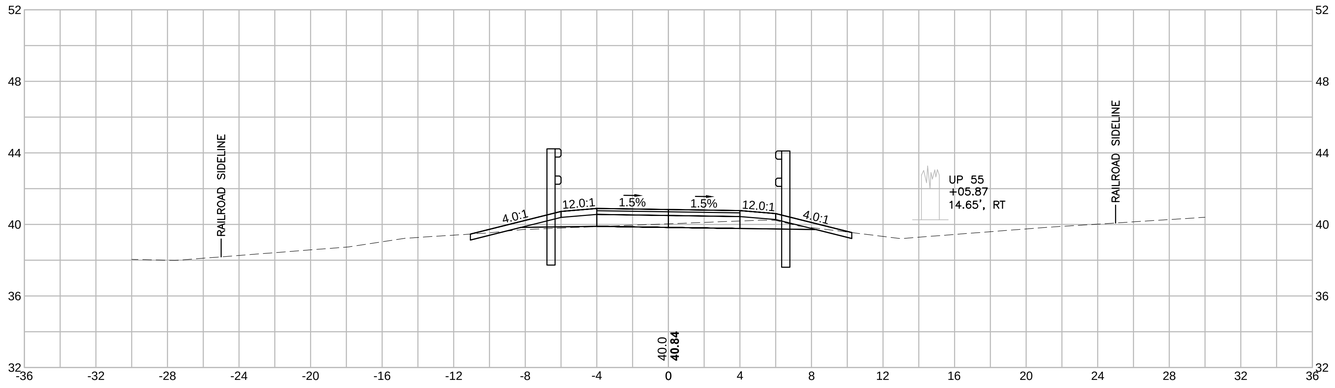
608298_HDI(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:38 PM

286+50



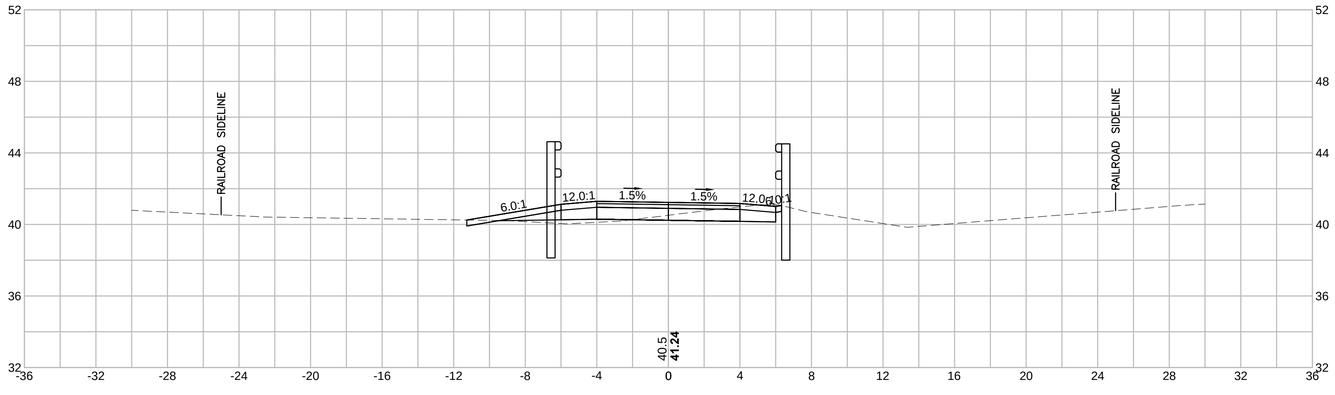
CUT=3.53 SF
FILL=1.11 SF

286+00



CUT=3.82 SF
FILL=0.35 SF

285+50



CUT=4.74 SF
FILL=1.84 SF

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

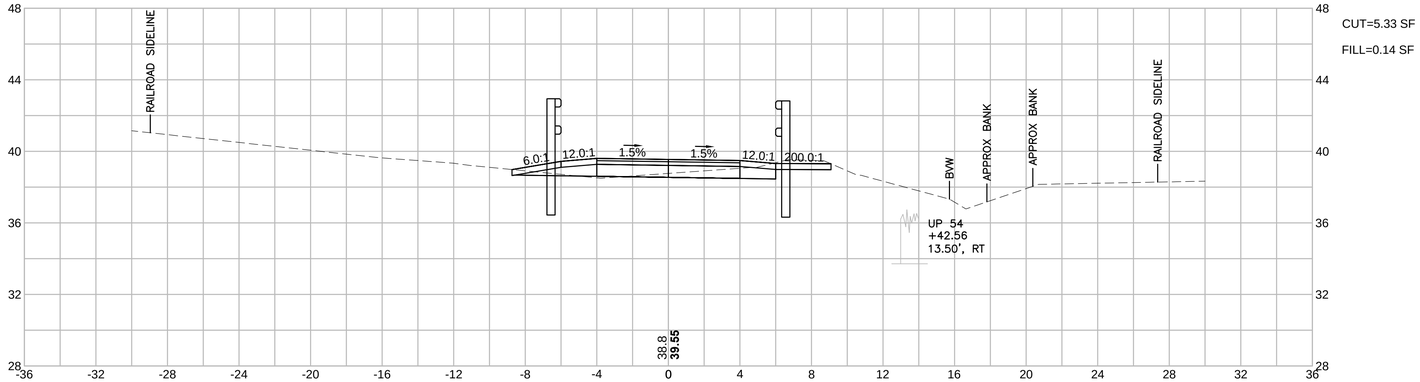
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	142	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 74 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:39 PM

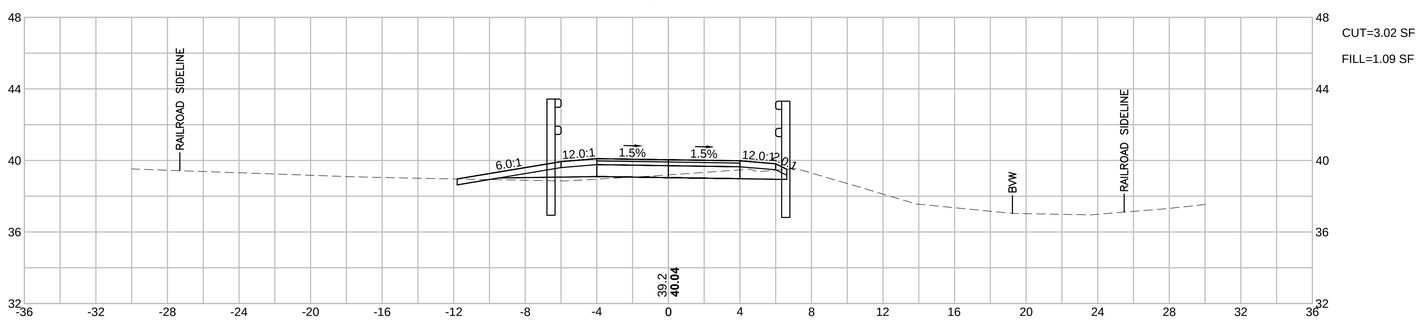
287+50



CUT=5.33 SF

FILL=0.14 SF

287+00



CUT=3.02 SF

FILL=1.09 SF

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

GROVELAND
GROVELAND COMMUNITY TRAIL

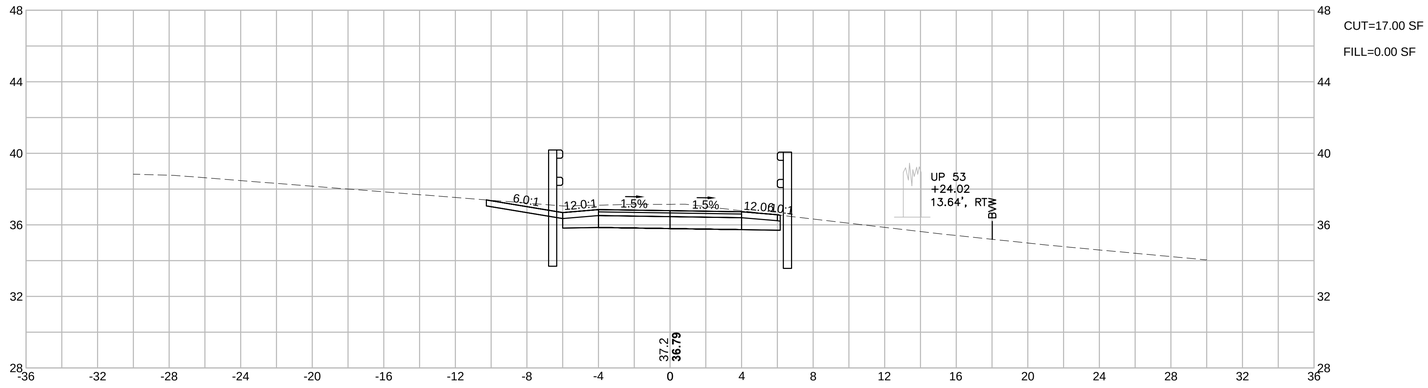
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	143	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 75 OF 90

Plotted on 5-Sep-2018 5:39 PM

608298_HD(CROSS SECTIONS).DWG

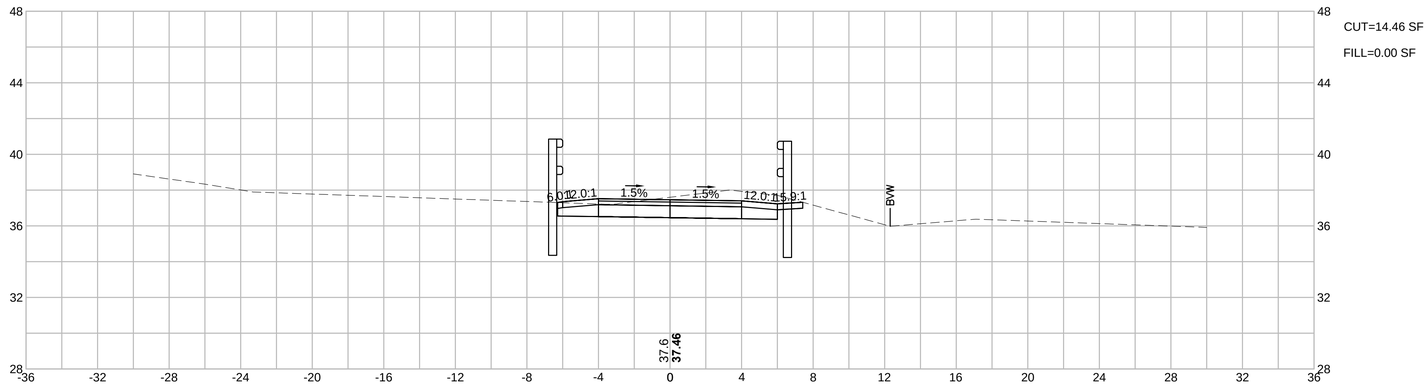
289+00



CUT=17.00 SF

FILL=0.00 SF

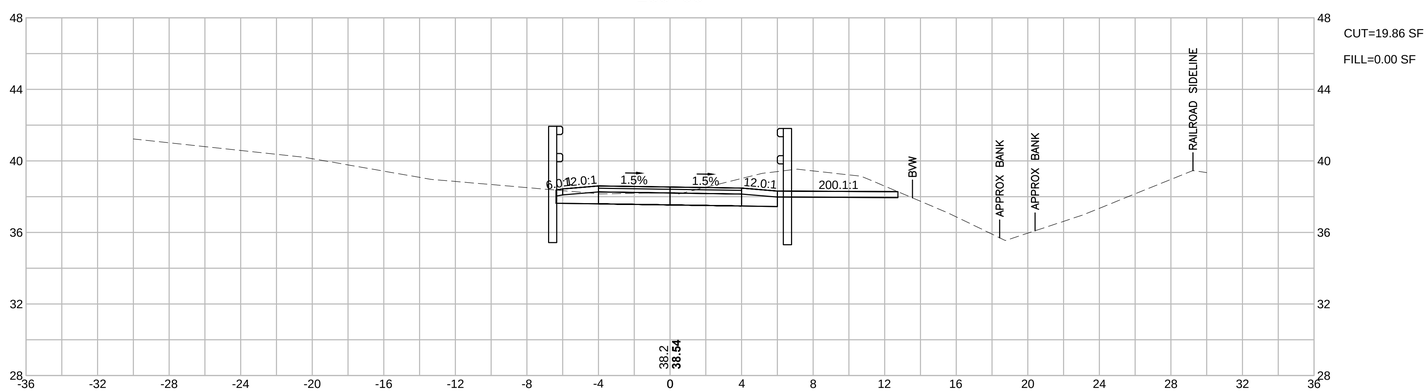
288+50



CUT=14.46 SF

FILL=0.00 SF

288+00



CUT=19.86 SF

FILL=0.00 SF

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

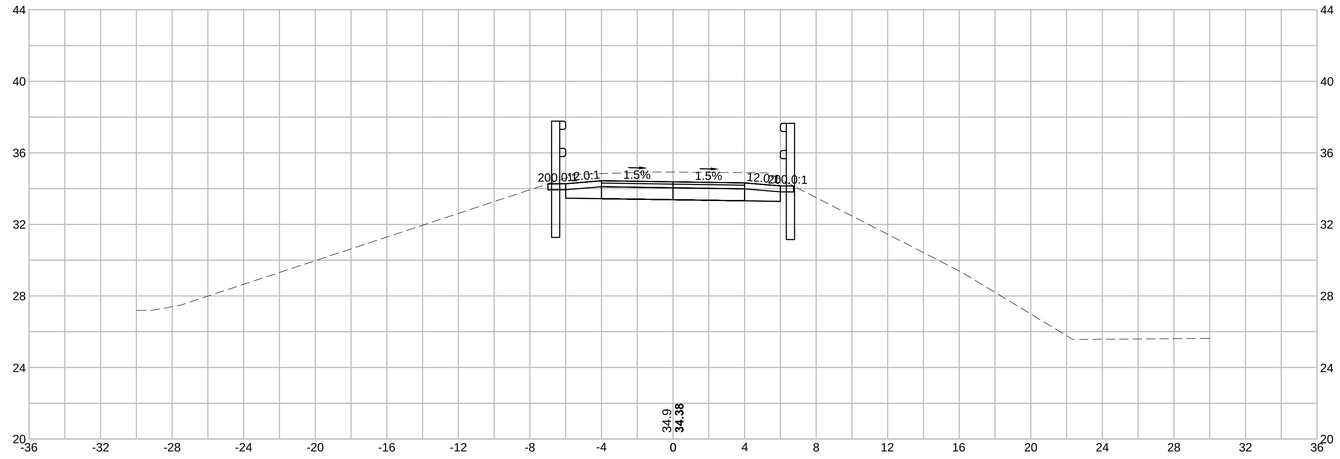
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	145	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 76 OF 90

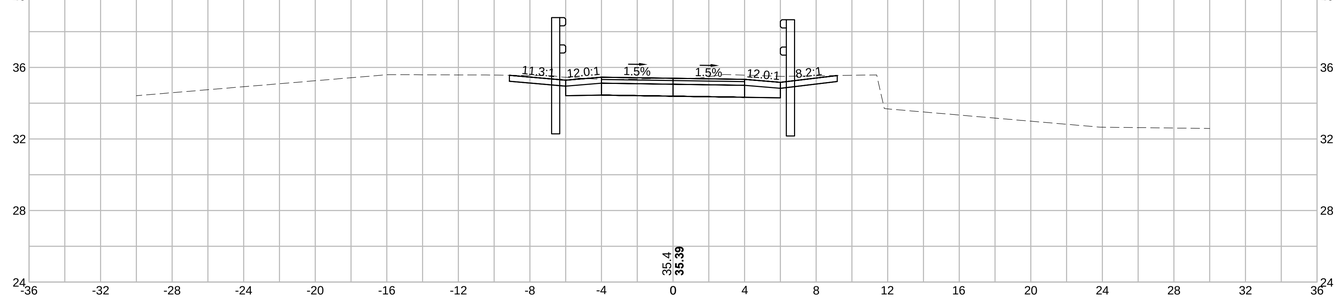
608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:39 PM

290+50



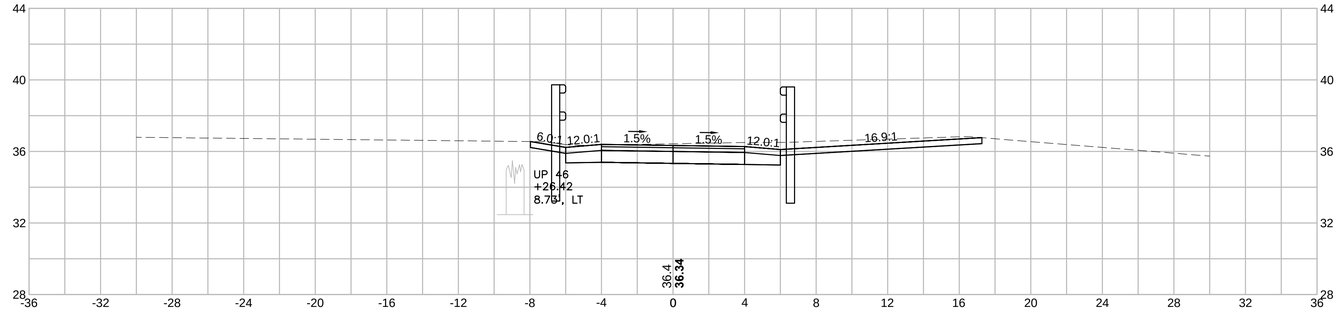
CUT=18.76 SF
FILL=0.00 SF

290+00



CUT=15.57 SF
FILL=0.00 SF

289+50



CUT=20.51 SF
FILL=0.00 SF

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

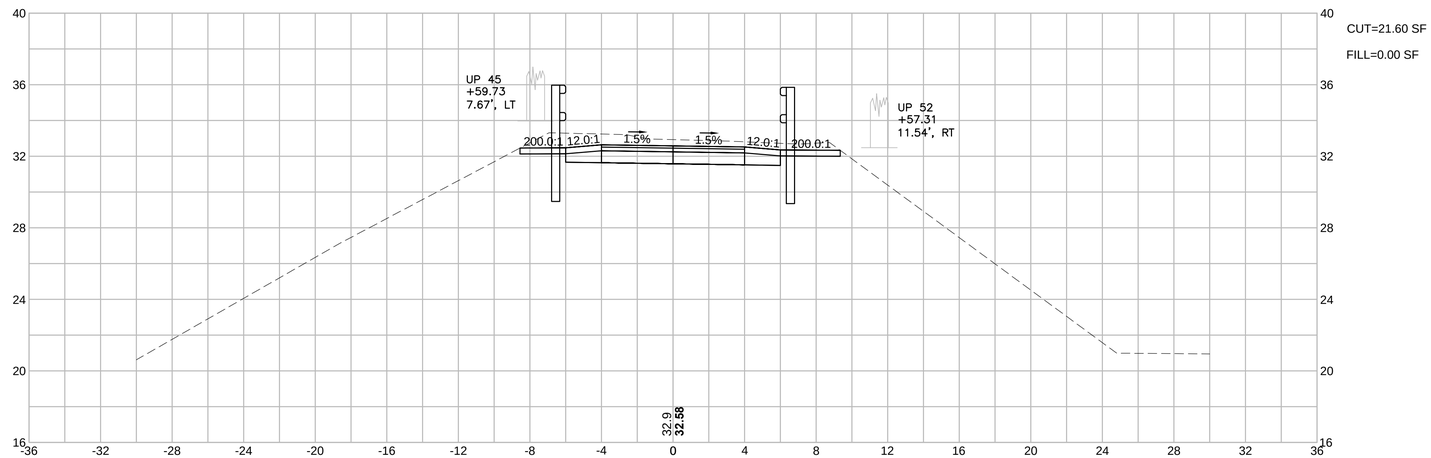
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	146	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 77 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:40 PM

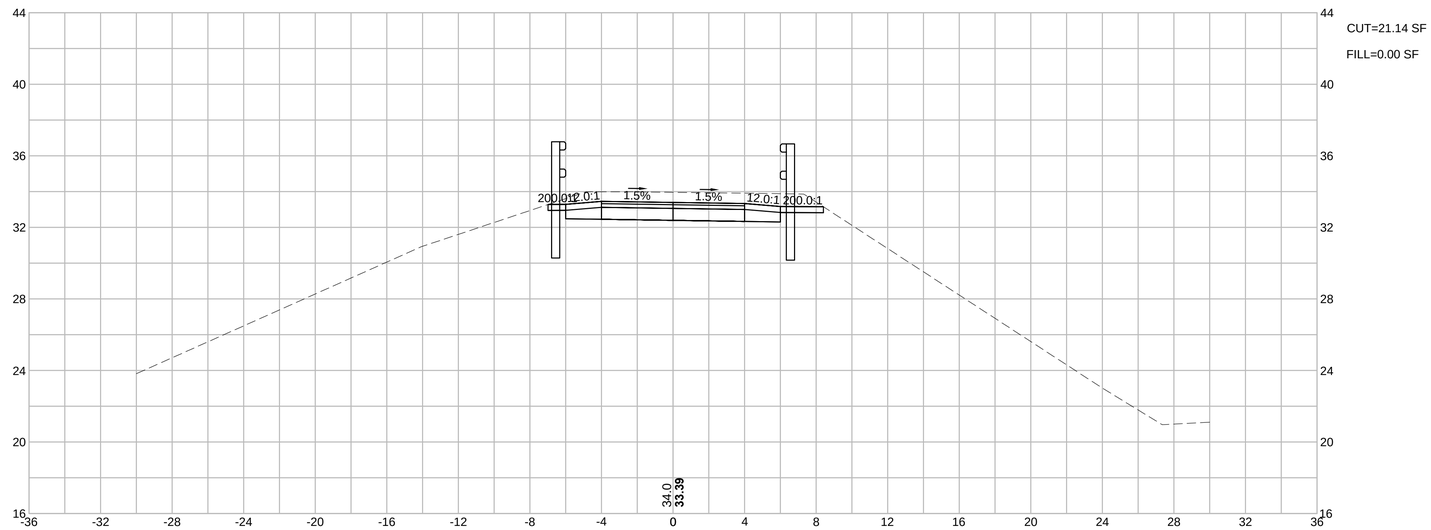
291+50



CUT=21.60 SF

FILL=0.00 SF

291+00



CUT=21.14 SF

FILL=0.00 SF

HOR. SCALE IN FEET

VER. SCALE IN FEET

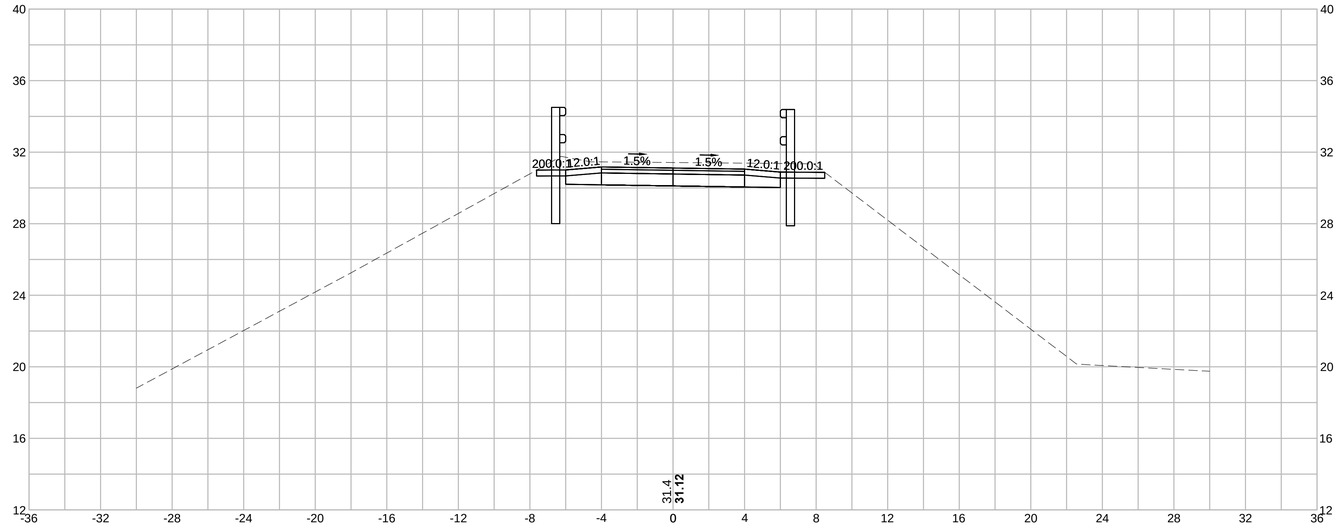
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	147	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 78 OF 90

608298_HD\CROSS SECTIONS\.DWG Plotted on 6-Sep-2018 10:34 AM

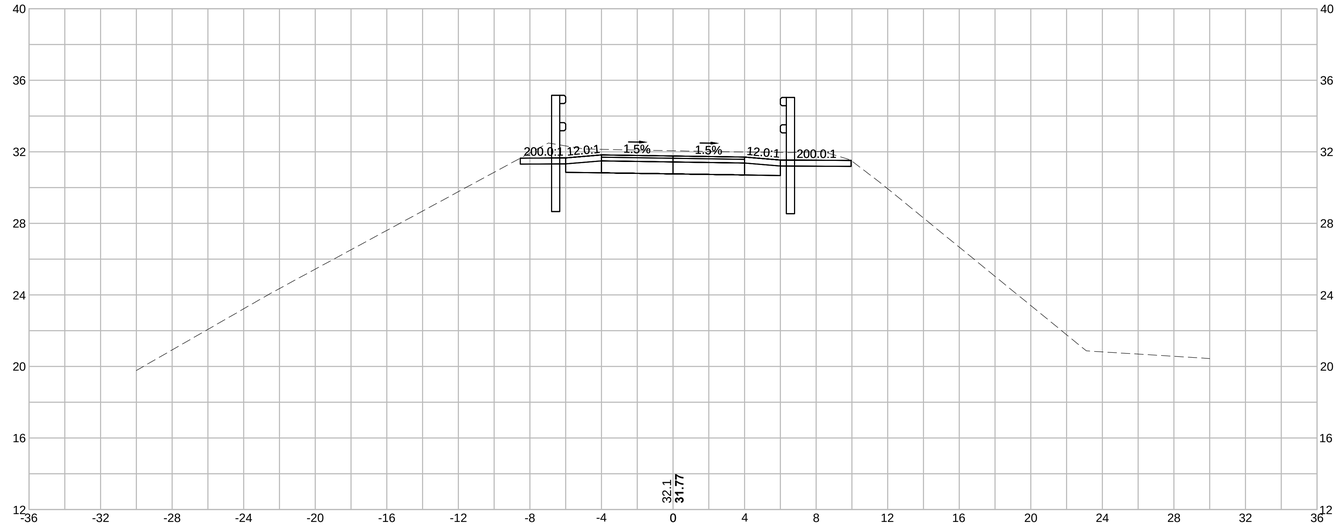
292+50



CUT=18.95 SF

FILL=0.00 SF

292+00



CUT=20.72 SF

FILL=0.00 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

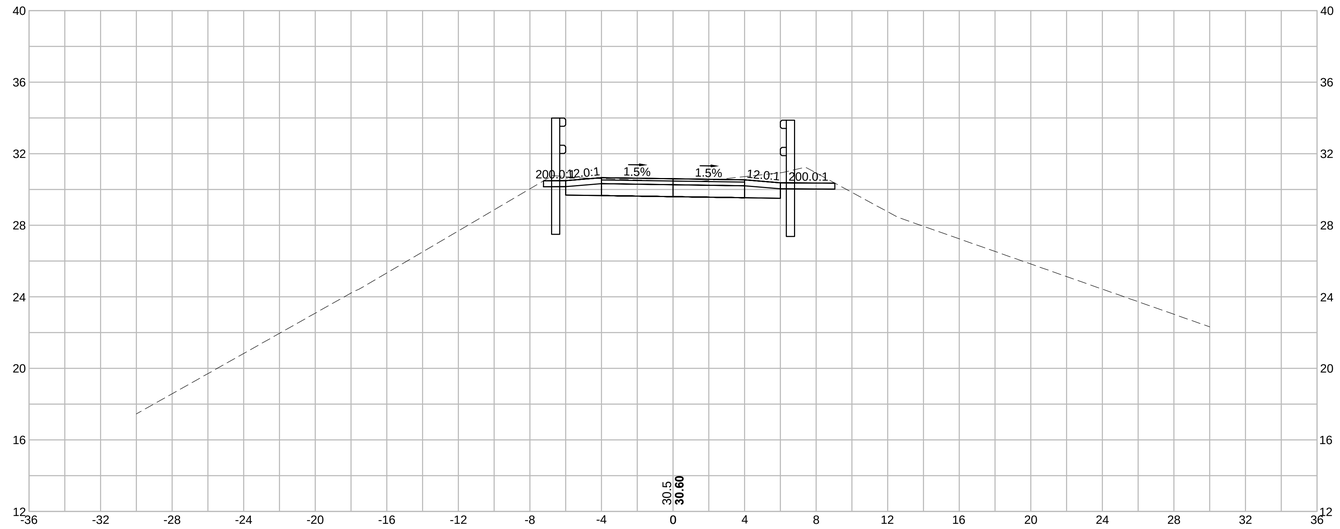
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	148	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 79 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:41 PM

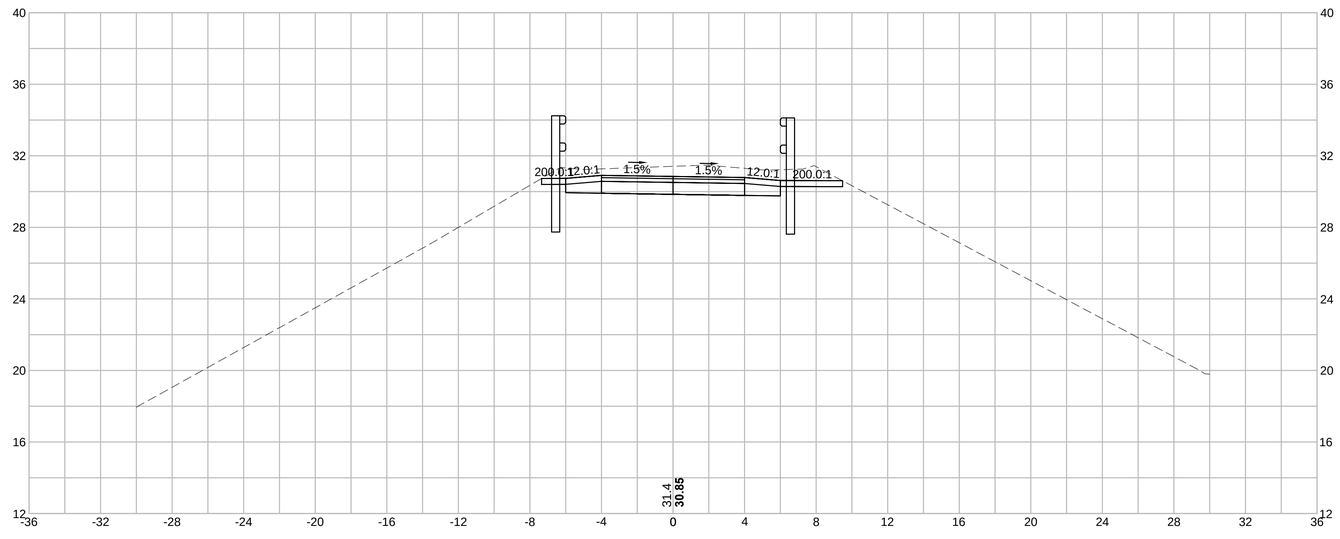
293+50



CUT=15.50 SF

FILL=0.00 SF

293+00



CUT=21.91 SF

FILL=0.00 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

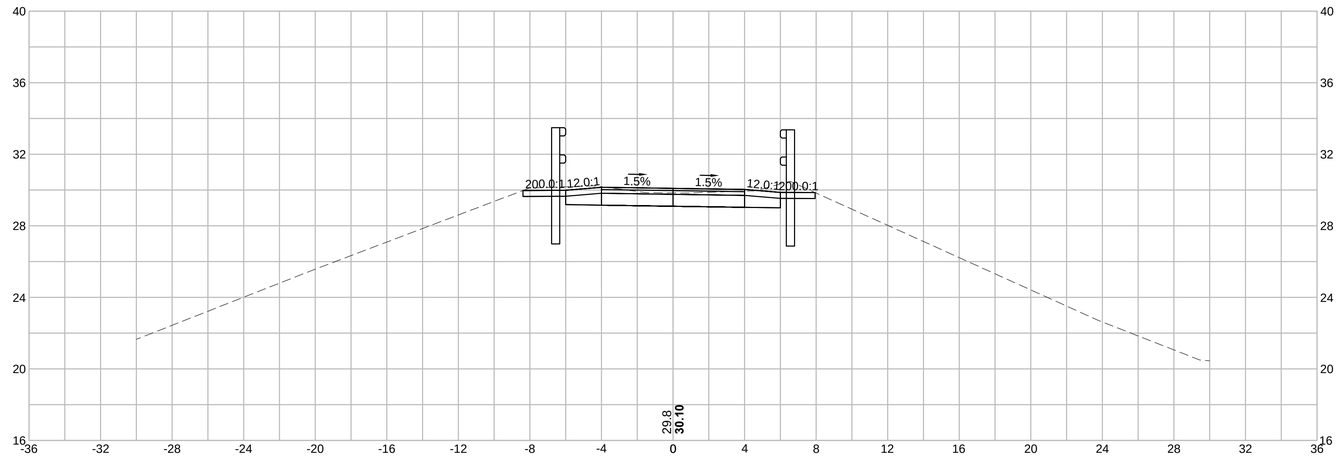
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	149	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 80 OF 90

608298_HD\CROSS SECTIONS\.DWG Plotted on 5-Sep-2018 5:41 PM

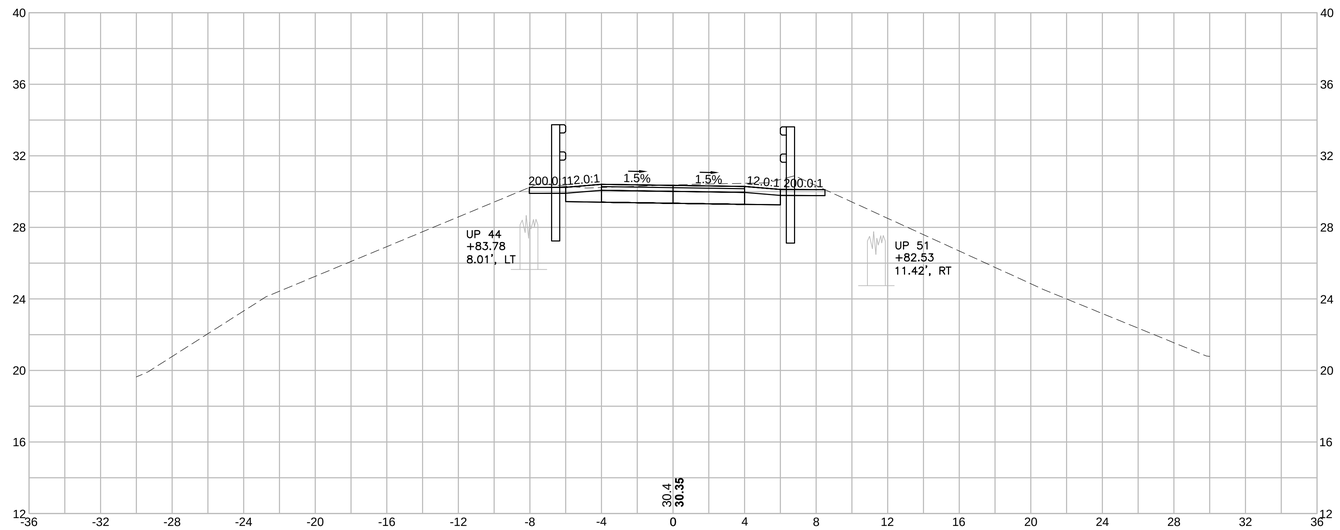
294+50



CUT=13.32 SF

FILL=0.00 SF

294+00



CUT=15.17 SF

FILL=0.00 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

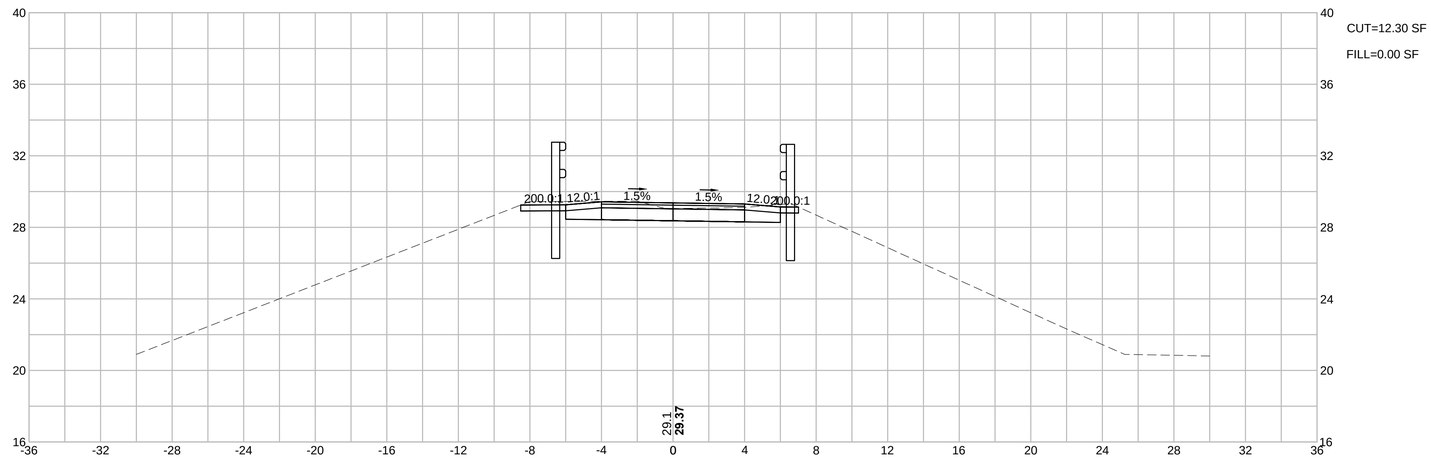
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	150	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 81 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:41 PM

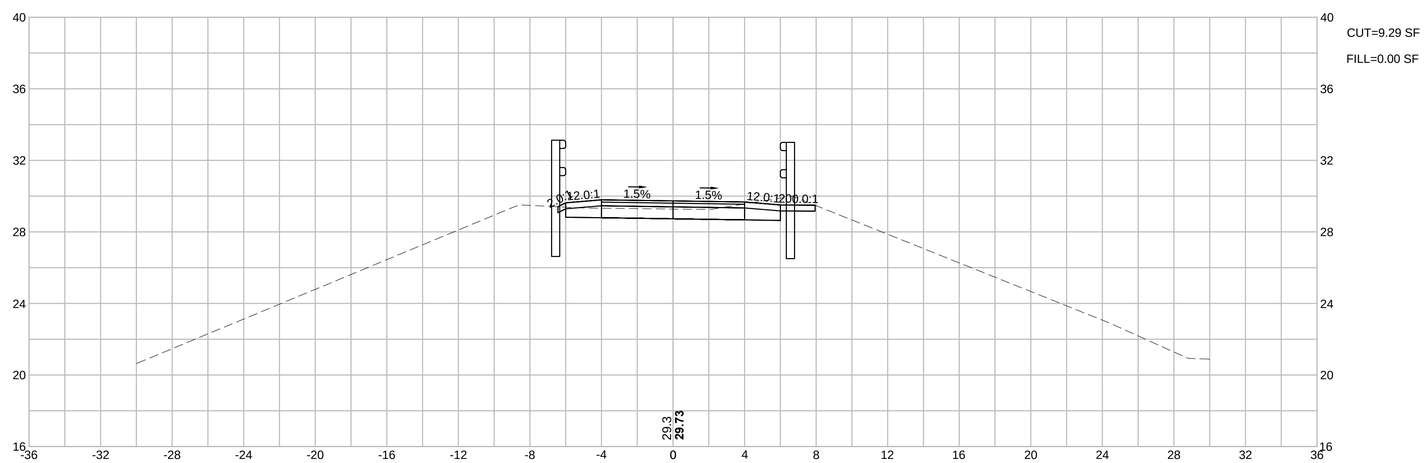
295+50



CUT=12.30 SF

FILL=0.00 SF

295+00



CUT=9.29 SF

FILL=0.00 SF

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

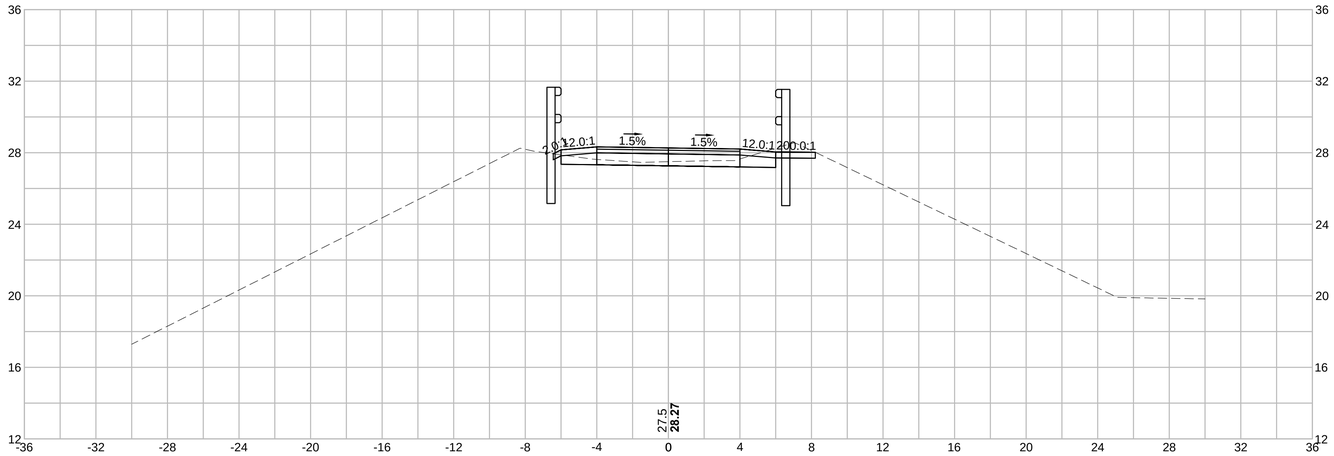
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	151	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 82 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:42 PM

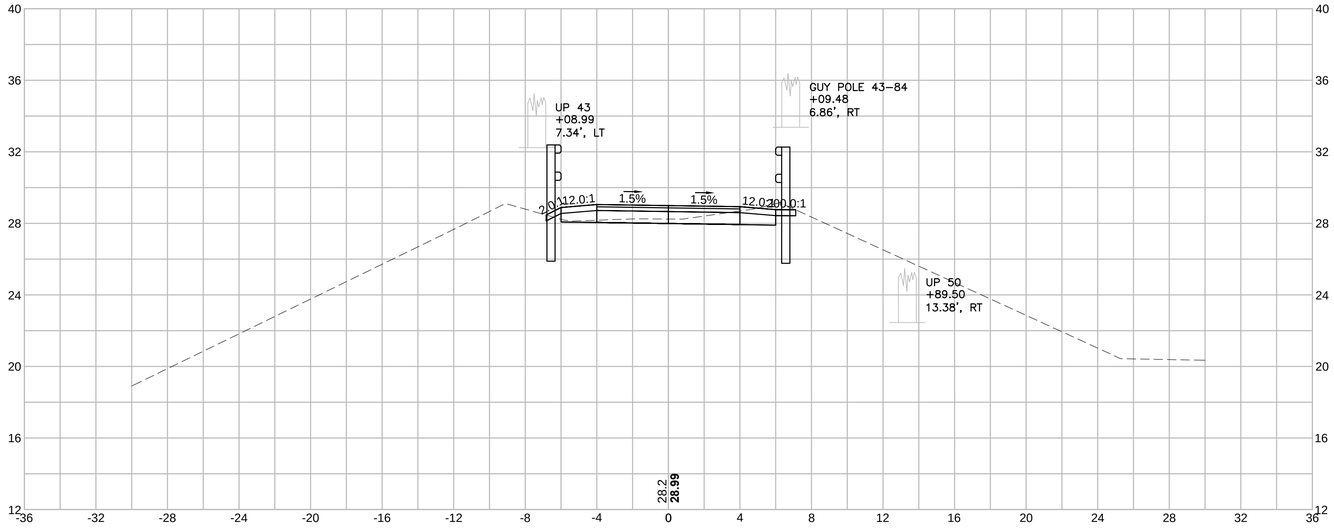
296+50



CUT=5.98 SF

FILL=0.00 SF

296+00



CUT=5.47 SF

FILL=0.07 SF

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

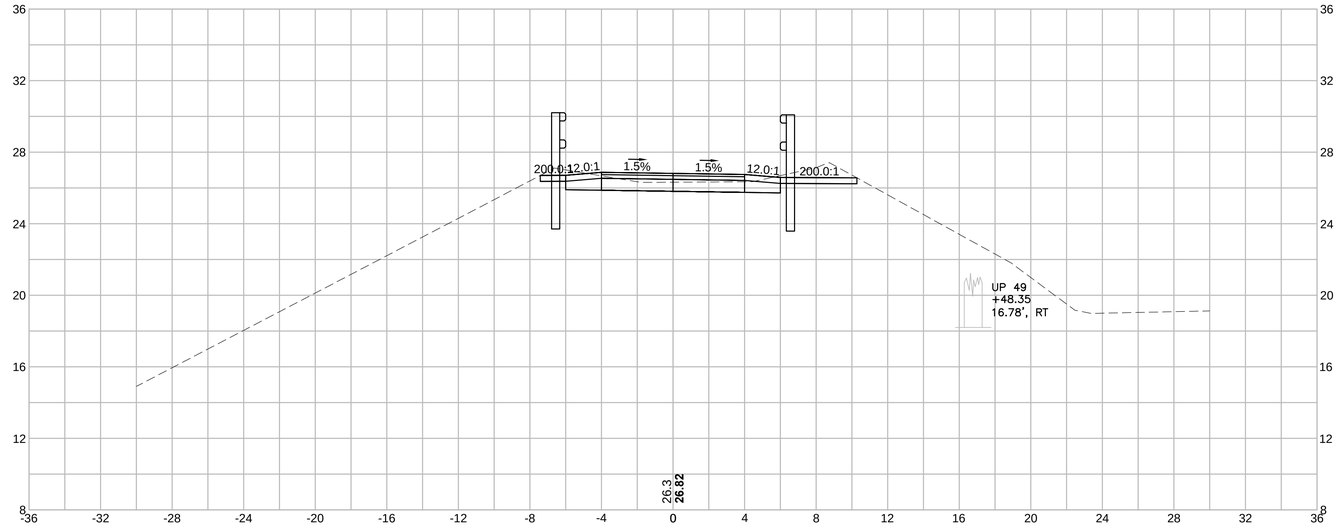
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	152	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 83 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:42 PM

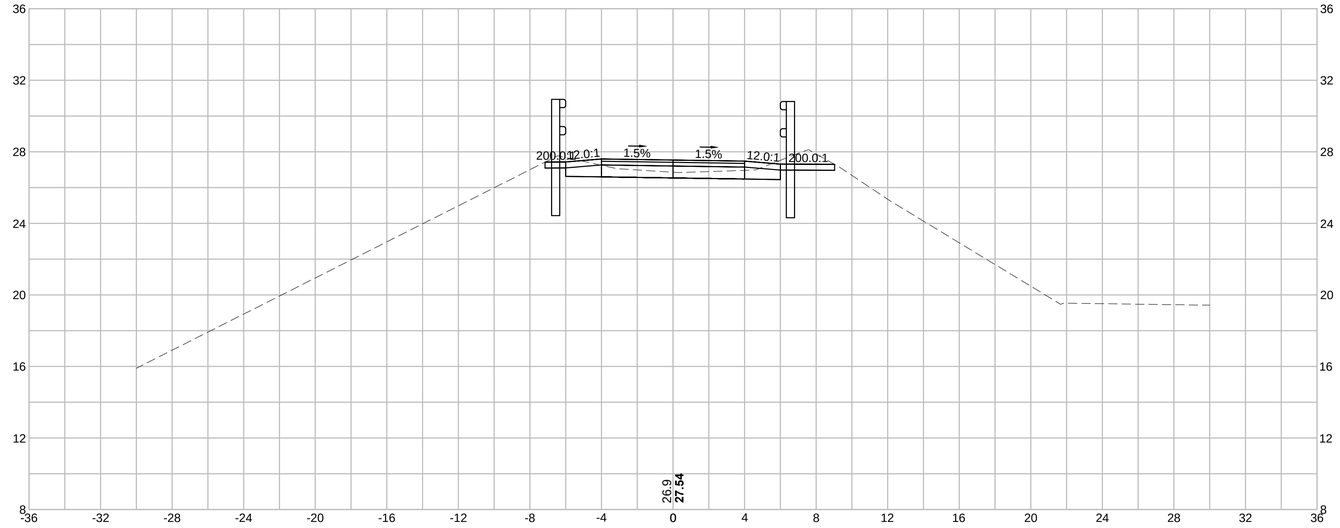
297+50



CUT=12.01 SF

FILL=0.00 SF

297+00



CUT=9.48 SF

FILL=0.00 SF

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

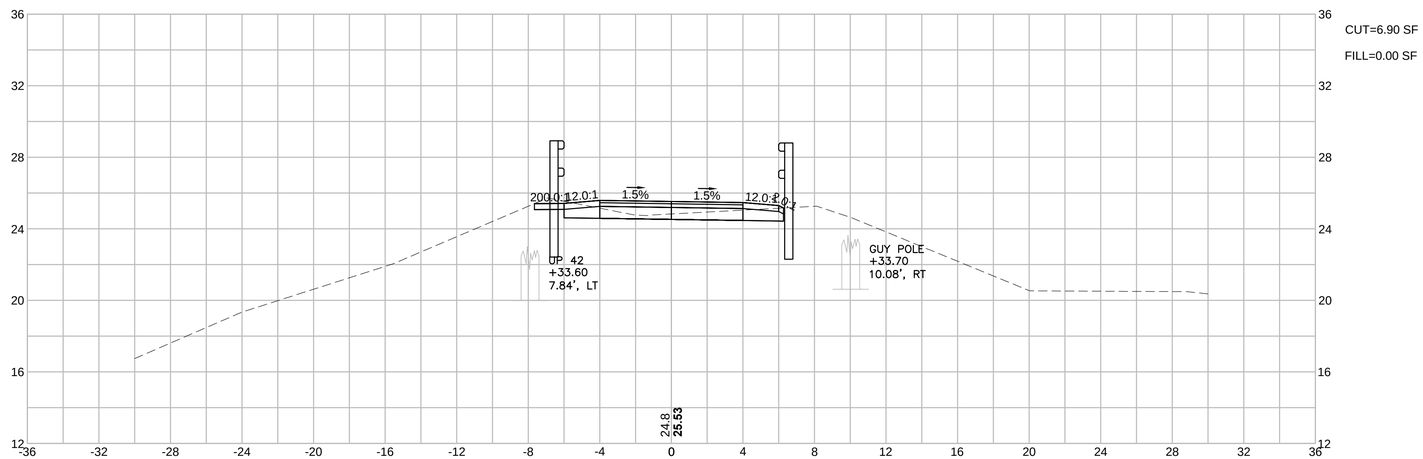
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	153	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 84 OF 90

608298_HD\CROSS SECTIONS\DWG Plotted on 5-Sep-2018 5:43 PM

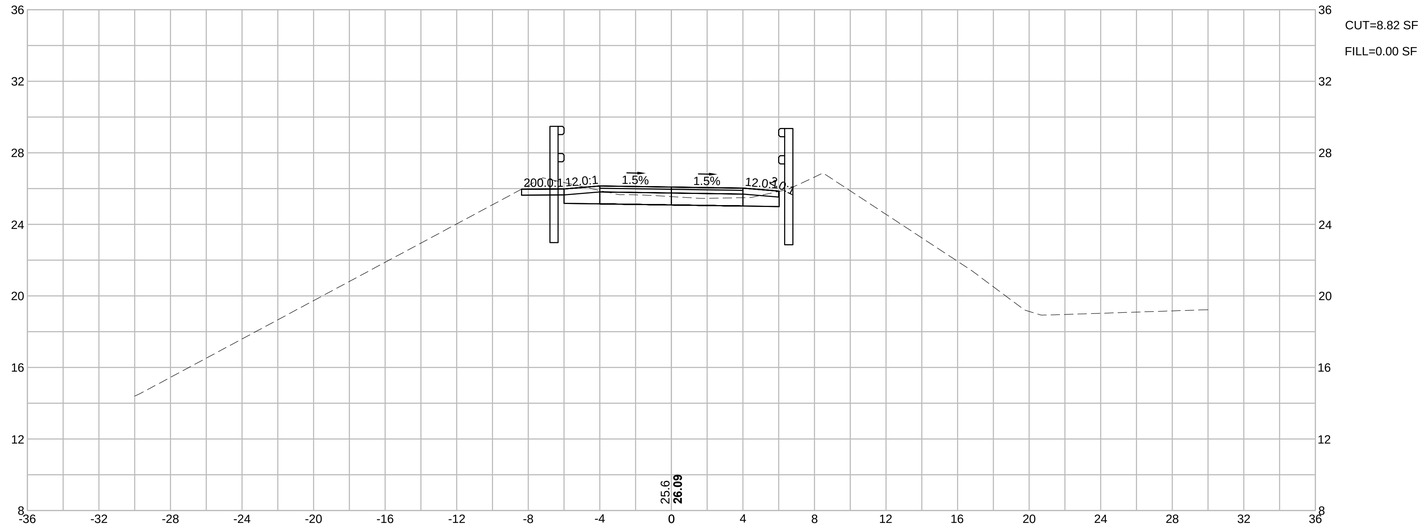
298+50



CUT=6.90 SF

FILL=0.00 SF

298+00



CUT=8.82 SF

FILL=0.00 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

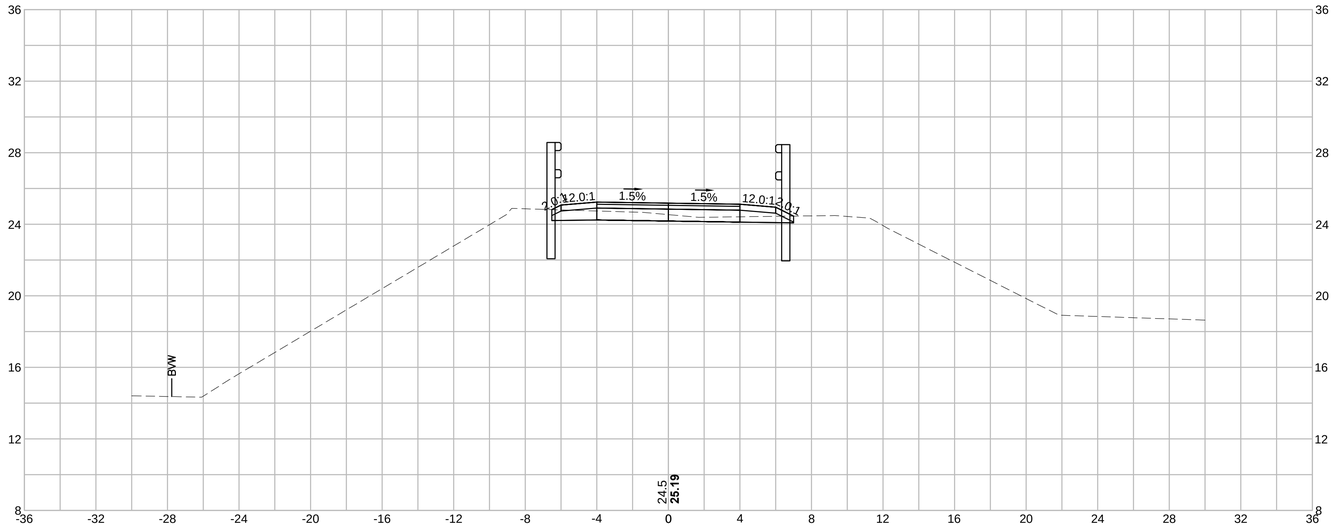
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	154	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 85 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:43 PM

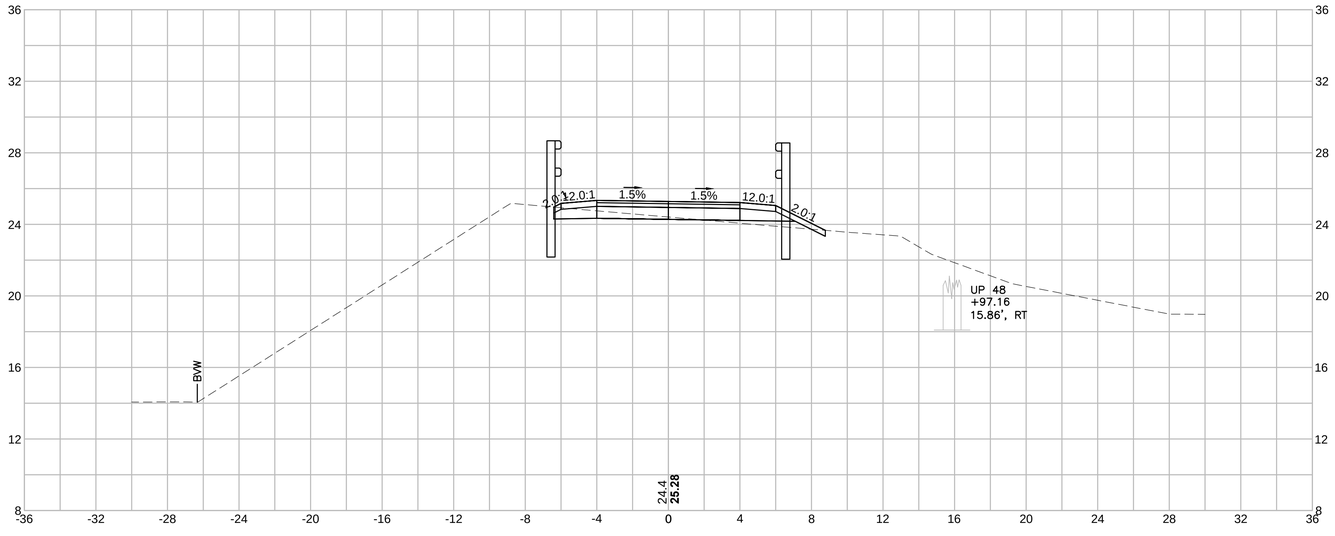
299+50



CUT=5.33 SF

FILL=0.00 SF

299+00



CUT=2.67 SF

FILL=1.12 SF

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

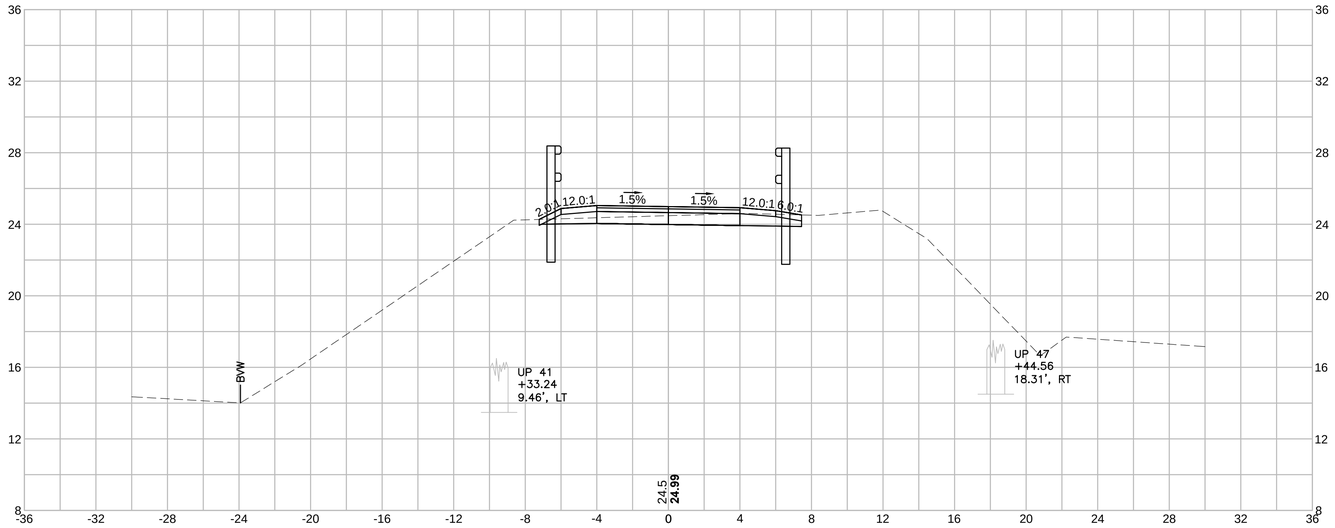
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	155	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 86 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:43 PM

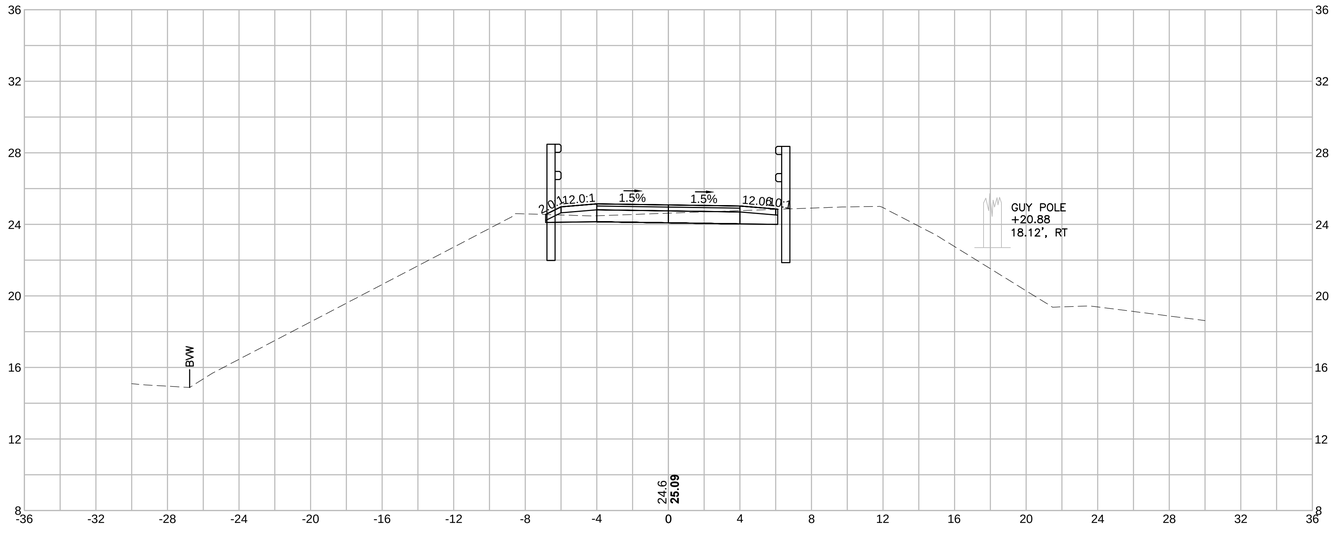
300+50



CUT=7.18 SF

FILL=0.00 SF

300+00



CUT=7.04 SF

FILL=0.00 SF

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

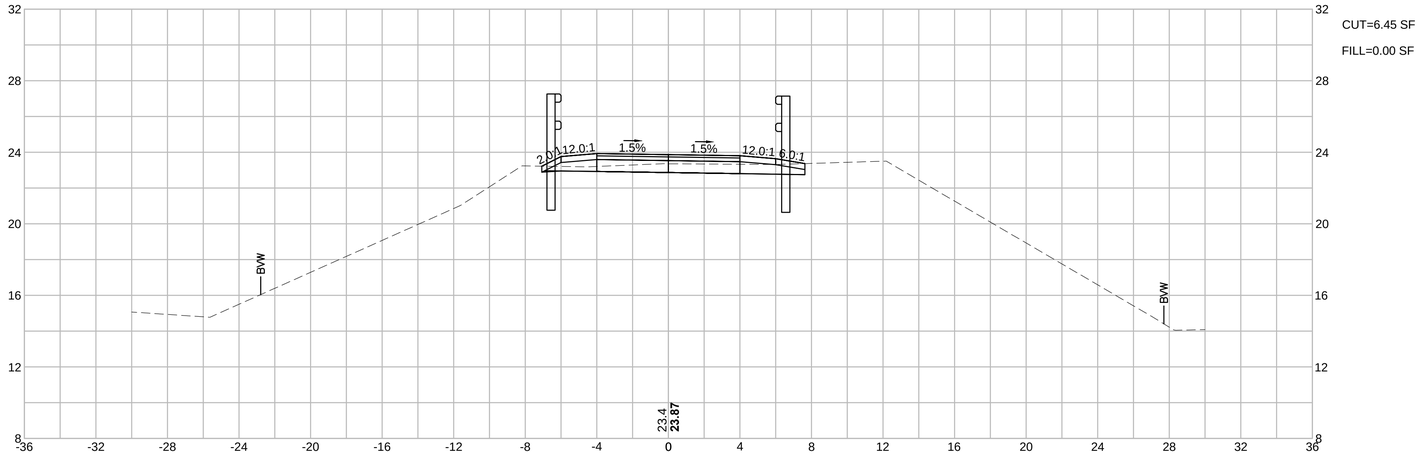
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	156	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 87 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:44 PM

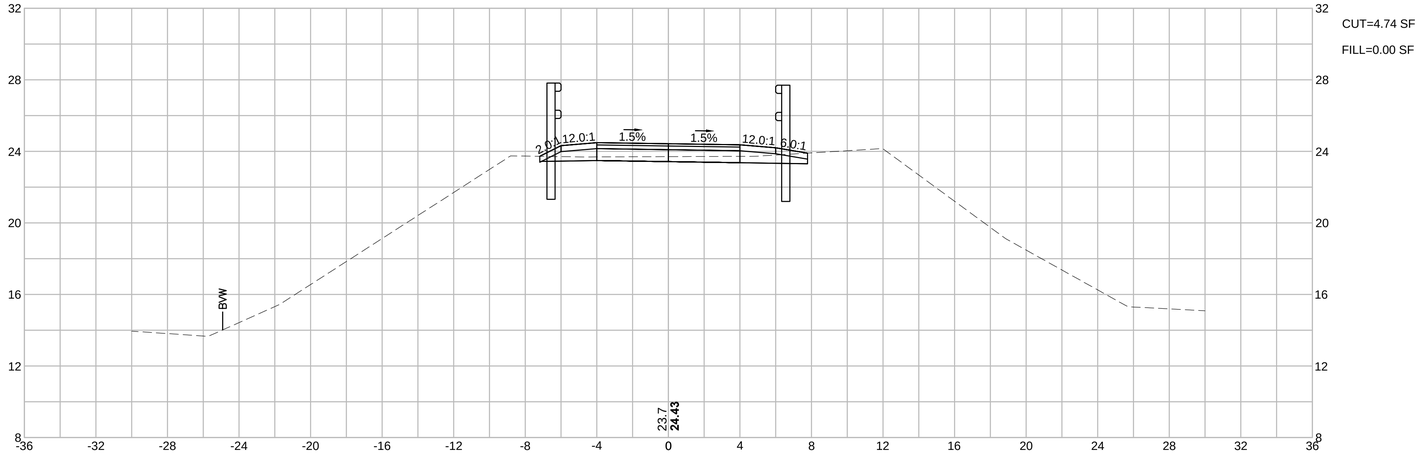
301+50



CUT=6.45 SF

FILL=0.00 SF

301+00



CUT=4.74 SF

FILL=0.00 SF

HOR. SCALE IN FEET

4 0 4 8

4 0 4 8

VER. SCALE IN FEET

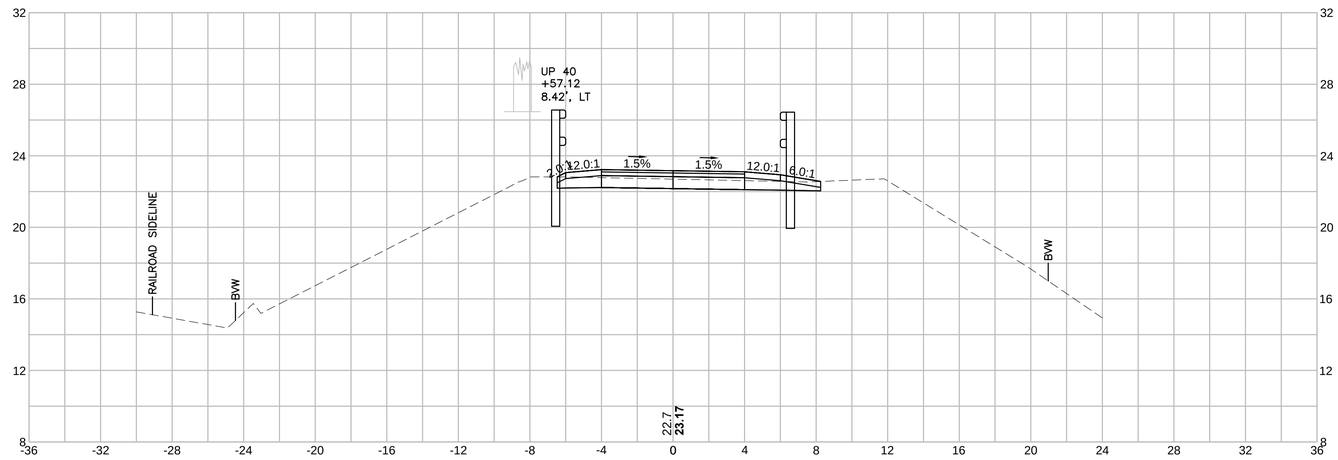
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	157	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 88 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:44 PM

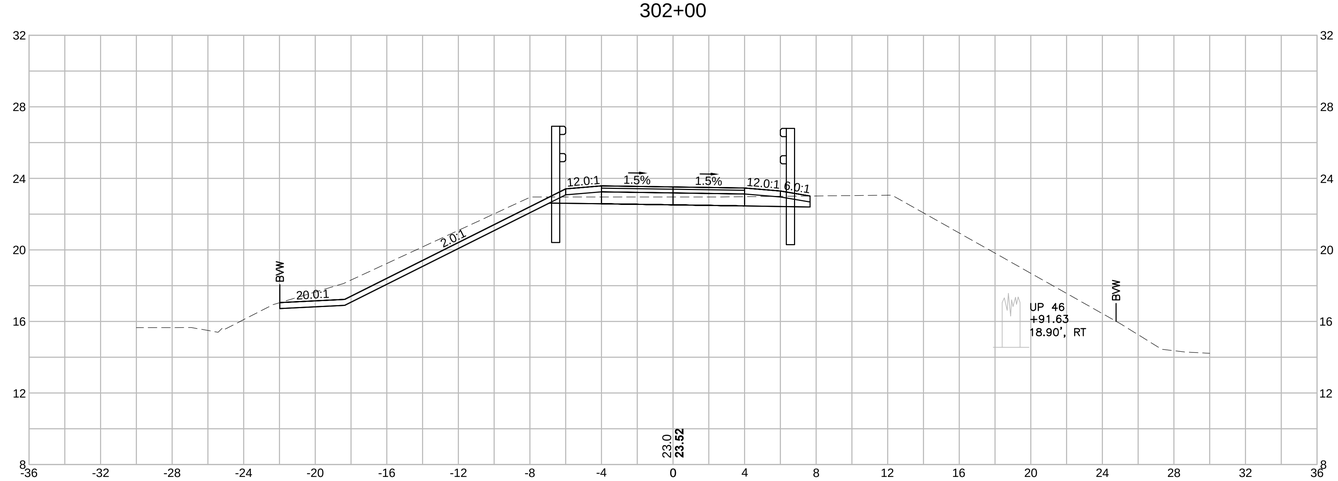
302+50



CUT=7.81 SF

FILL=0.00 SF

302+00



CUT=21.18 SF

FILL=0.00 SF

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

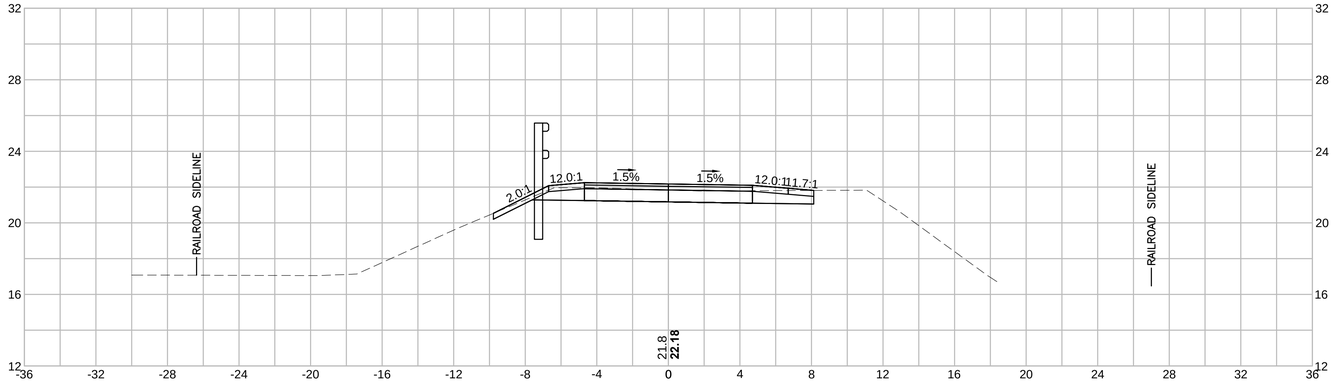
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	158	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 89 OF 90

608298_HD\CROSS SECTIONS\.DWG Plotted on 5-Sep-2018 5:44 PM

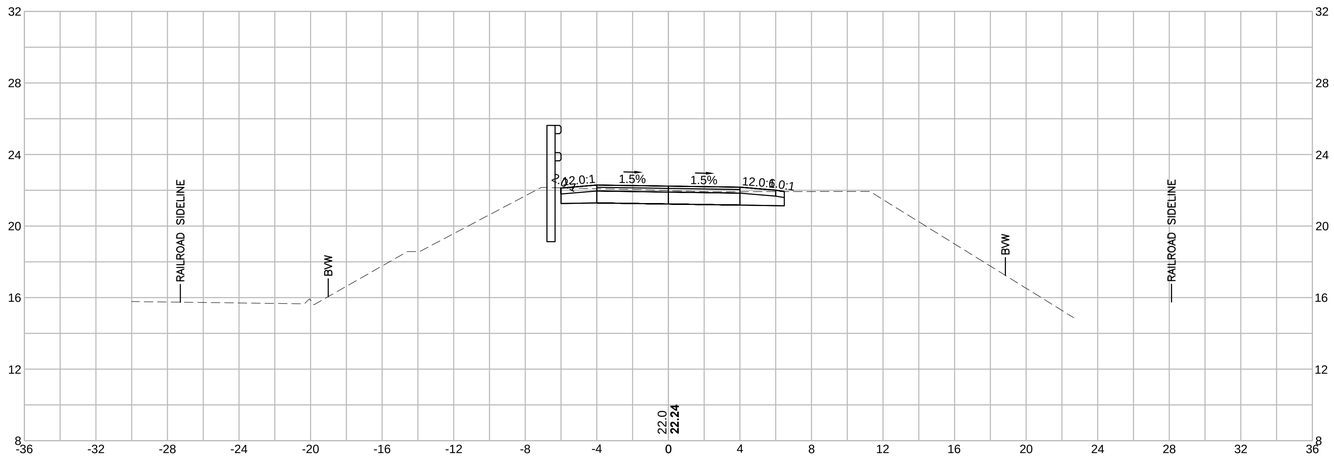
304+00



CUT=11.11 SF

FILL=0.00 SF

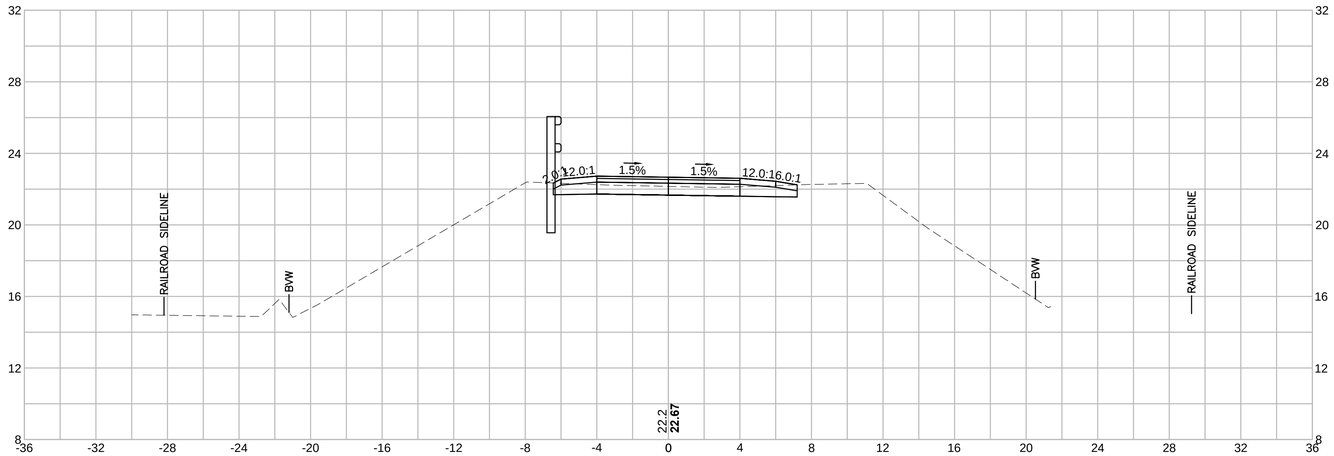
303+50



CUT=9.63 SF

FILL=0.00 SF

303+00



CUT=7.31 SF

FILL=0.00 SF

HOR. SCALE IN FEET

VER. SCALE IN FEET

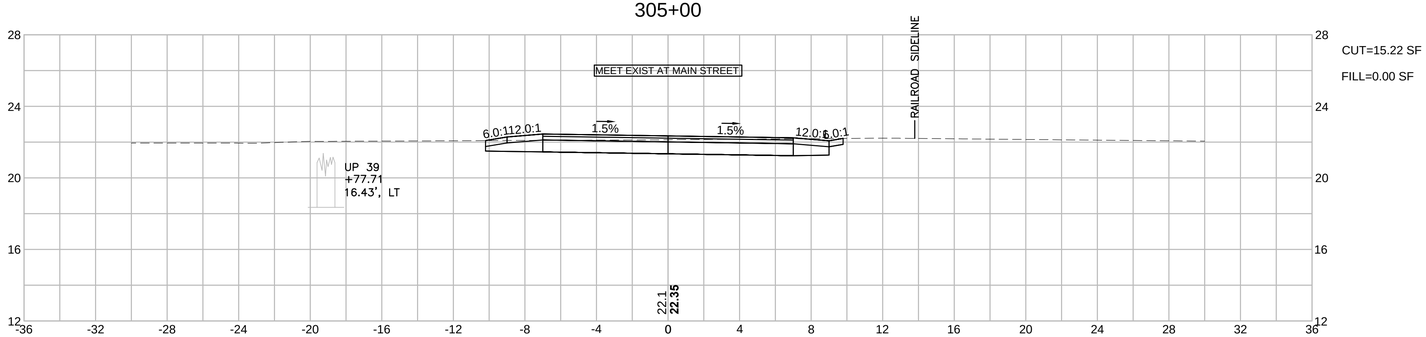
GROVELAND
GROVELAND COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	159	159
PROJECT FILE NO.	608298		

CROSS SECTIONS
PART 90 OF 90

608298_HD(CROSS SECTIONS).DWG Plotted on 5-Sep-2018 5:45 PM

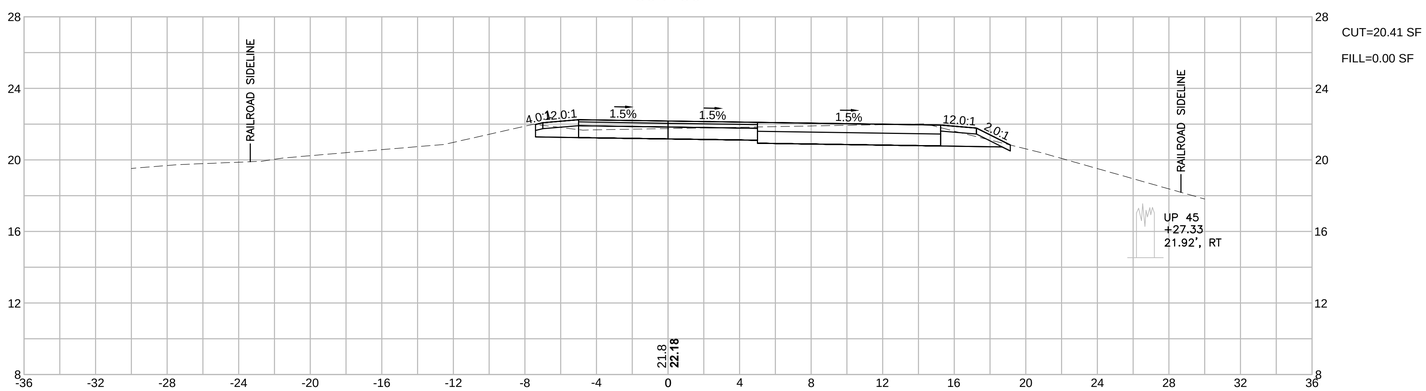
305+00



CUT=15.22 SF

FILL=0.00 SF

304+50



CUT=20.41 SF

FILL=0.00 SF

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