

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

WORTHINGTON
ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	1	191
PROJECT FILE NO.		609287	

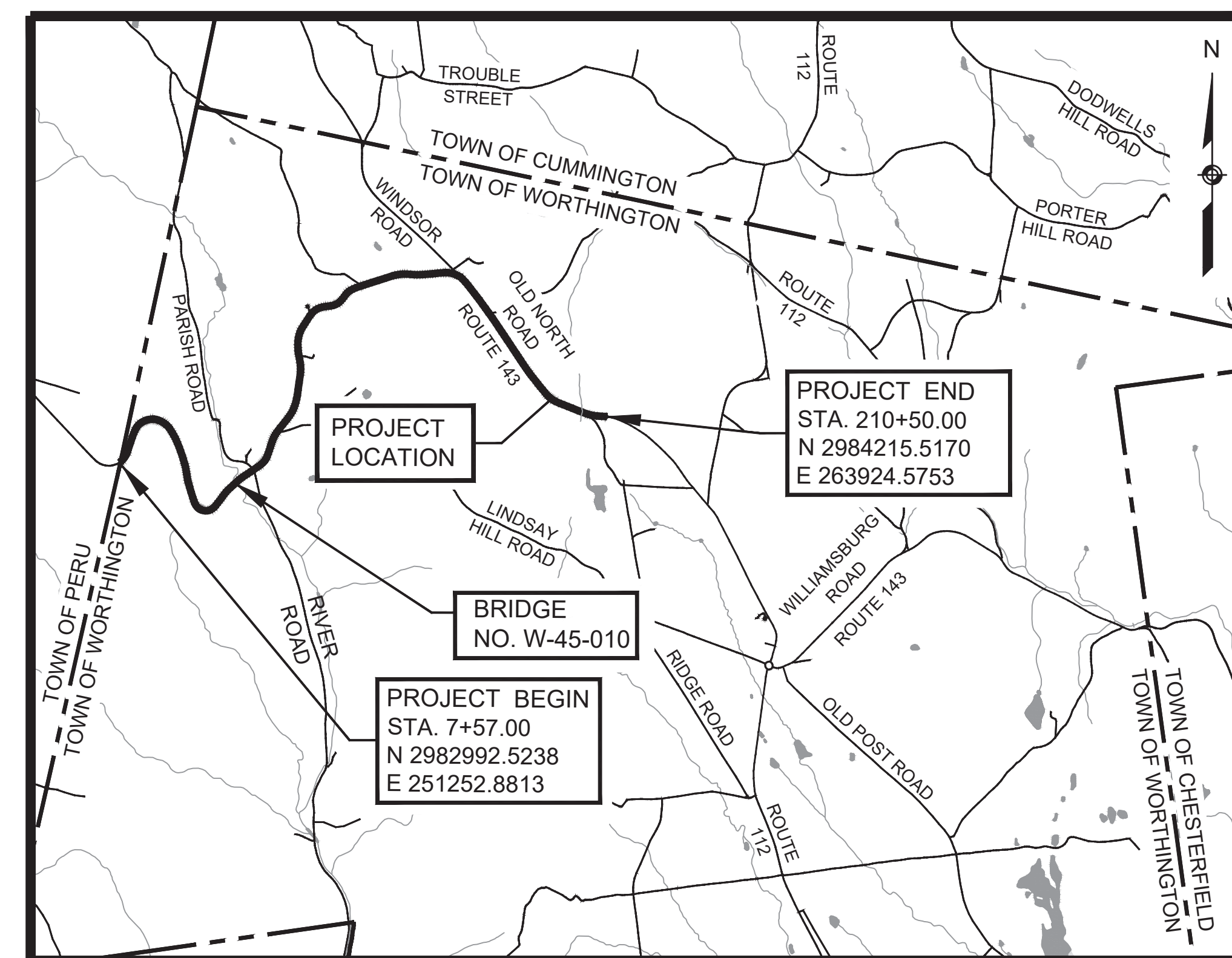
TITLE SHEET & INDEX

PLAN AND PROFILE OF
ROUTE 143 - PHASE II
IN THE TOWN OF
WORTHINGTON
HAMPSHIRE COUNTY

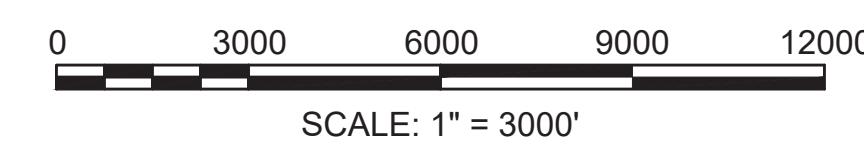
FEDERAL AID PROJECT NO. STP/TAP-0031(018)

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

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DESIGN DESIGNATION (ROUTE 143)	
DESIGN SPEED	45 MPH
ADT (2015)	1,350
ADT (2035)	1,600
K	10%
D	53%
T (PEAK HOUR)	7.1%
T (AVERAGE DAY)	8.3%
DHV	160
DDHV	90 EB
FUNCTIONAL CLASSIFICATION	RURAL MAJOR COLLECTOR



LENGTH OF PROJECT = 20,293.00 FEET = 3.843 MILES

DATE	DESCRIPTION	REV #

John G. Morgan, Jr.
Civil Engineer
No. 46886
Date: 2024.07.08 11:30:15 -0400

141 Longwater Drive, Suite 104
Norwell, MA 02061-1620
781-982-5400 · www.chasolutions.com

APPROVED

Carrie Lavallee, P.E.
Date: 2024.07.08 11:30:15 -0400

CHIEF ENGINEER

07/08/2024

DATE

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER
		CATCH BASIN
		CATCH BASIN CURB INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		IRON PIPE
		REBAR
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		HUMMOCK
		SWAMP / MARSH
		WATER GATE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT CONTROL BARRIER
		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
		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)
		RAILROAD SIGNAL
		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT MARKING LANE USE ARROW - WHITE
		LEGEND "ONLY" - WHITE
		STOP LINE, 12" WHITE LINE
		CROSSWALK, 2 - 12" WHITE LINES (10' WIDE)
		SOLID WHITE LINE
		SOLID YELLOW LINE
		BROKEN WHITE LINE (10' LINE, 30' SPACE)
		BROKEN YELLOW LINE (10' LINE, 30' SPACE)
		DOTTED WHITE LINE (3 FT LINE, 9 FT SPACE)
		DOTTED YELLOW LINE (3 FT LINE, 9 FT SPACE)
		DOUBLE WHITE LINE
		DOUBLE YELLOW LINE

ABBREVIATIONS

GENERAL	DESCRIPTION
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
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
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	GRAD
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
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
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
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY

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MA	STP/TAP-0031(018)	2	191
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LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL	DESCRIPTION
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
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
TWLR	TEMP WETLAND REPLICATION EASEMENT
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 ABBREVIATIONS

CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY UPRAISED HAND
FDW	FLASHING UPRAISED HAND
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW 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, TILT, 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 WALKING PERSON
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW

GENERAL NOTES

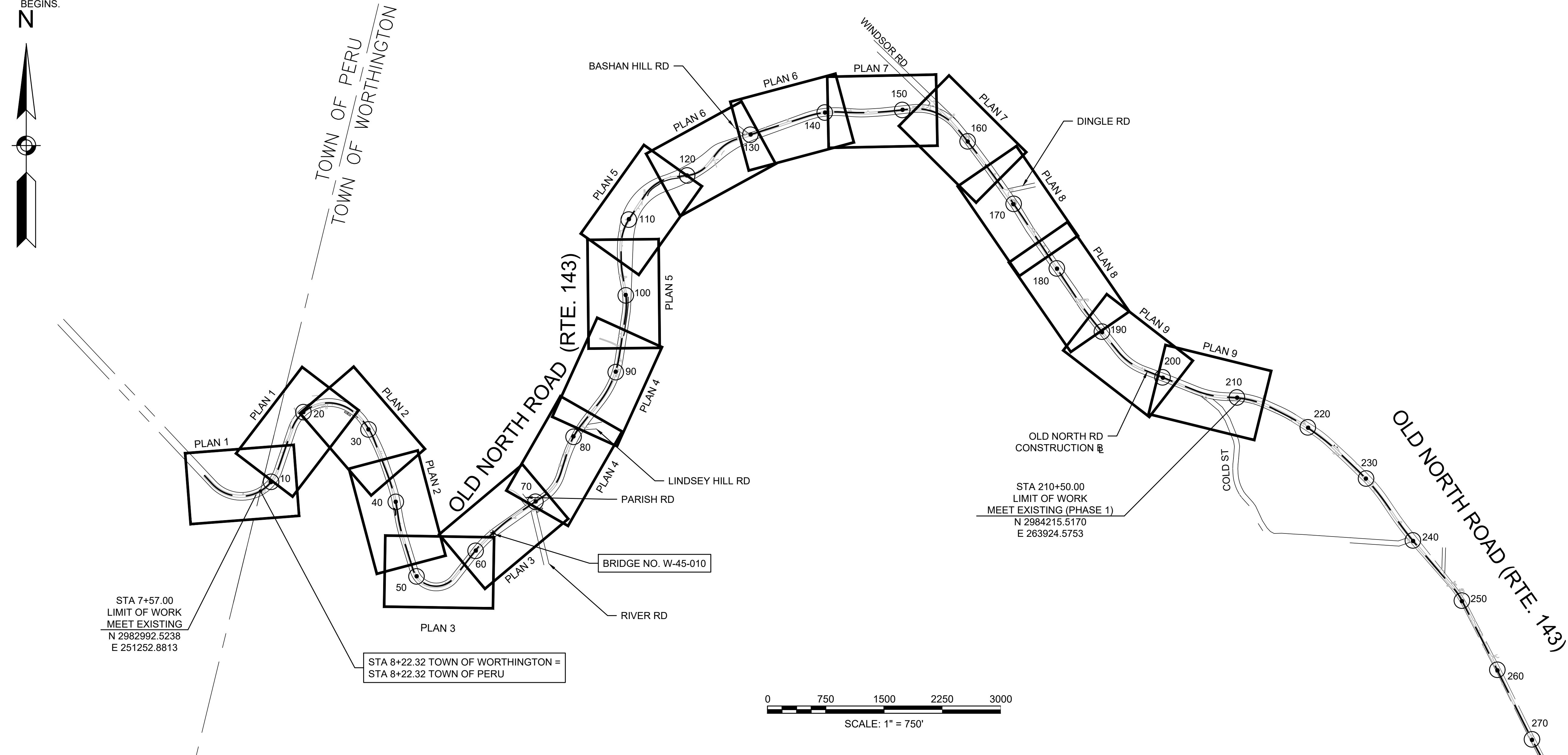
1. ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH MASSDOT STANDARD DETAILS AND SPECIFICATIONS.
2. TOPOGRAPHY DETAIL SHOWN HEREON ARE A RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY CHA CONSULTING, INC. ON OR BETWEEN JULY 20, 2013 AND JANUARY 17, 2014.
3. PROPERTY LINE INFORMATION SHOWN HERE IS COMPILED FROM VARIOUS SOURCES AND DOES NOT REPRESENT A PROPERTY LINE RETRACEMENT SURVEY. DEED REFERENCES ARE TO THE HAMPSHIRE COUNTY REGISTRY OF DEEDS UNLESS OTHERWISE NOTED. THE PROJECT AREA FALLS WITHIN ASSESSOR'S MAPS 403, 406, 407 AND 414.
4. VERTICAL DATUM, RIM, INVERT AND SPOT ELEVATIONS ARE PUBLISHED FOR DESIGN PURPOSES ONLY. VERTICAL BENCHMARKS SHOWN ON THE PLAN ARE TO BE USED FOR CONSTRUCTION EFFORTS. IN THE EVENT THAT BENCHMARKS (TBM'S), ESTABLISHED FOR THIS PROJECT AND PUBLISHED ON THIS SURVEY, ARE DESTROYED, NOT RECOVERABLE OR A DISCREPANCY IS FOUND, THE USER SHOULD NOTIFY THIS FIRM IN WRITING PRIOR TO COMMENCING OR CONTINUING ANY WORK.
5. LOCATIONS OF SUBSURFACE UTILITIES SHOWN HEREON ARE APPROXIMATE AND ADDITIONAL UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THIS PLAN. LOCATIONS ARE COMPILED FROM UTILITY PLANS OF RECORD, DIG-SAFE FIELD MARKINGS, RIM AND INVERT INFORMATION HAS BEEN COMPILED AND FIELD VERIFIED WHERE POSSIBLE. THIS INFORMATION IS NOT TO BE USED FOR CONSTRUCTION. PRIOR TO ANY CONSTRUCTION, CONTACT DIG-SAFE AT (1-800-344-7233) TO FIELD VERIFY LOCATION OF ALL UTILITIES.
6. TOPOGRAPHY, CONTOURS AND BENCHMARKS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). TEMPORARY BENCHMARKS, REFERENCED TO THE DATUM ARE INDICATED ON THE SURVEY CONTROL PLANS. HORIZONTAL DATUM - NAD 83 (2011) EPOCH 2010.00 MASS STATE PLANE MAINLAND US FEET. POINTS WERE ESTABLISHED VIA STATIC GPS. CONTROL POINTS 2 AND 124 WERE HELD FOR THIS PROJECT. A COMBINED SCALE FACTOR OF 0.99990306 WAS USED FOR THIS PROJECT.
7. THE SURVEY LIES WITHIN FLOOD PLAIN ZONE: "A" & "AE" AS SHOWN ON TOWN OF WORTHINGTON FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 2501750009B, EFFECTIVE DATE OF JUNE 19, 1989.
8. ALL INVERTS / STATION & OFFSETS ARE MEASURED AT WHERE THE PIPE END MEETS THE FLARE.
9. THE CONTRACTOR WILL COORDINATE ALL PRIVATE CASTINGS AND POLES THAT ARE TO BE ADJUSTED, RESET OR RELOCATED WITH THE APPROPRIATE UTILITY PURVEYOR. THE RELOCATION, INSTALLATION OR REMOVAL OF PRIVATE UTILITIES SHALL BE ACCOMPLISHED BY THEIR OWNER. THE CONTRACTOR SHALL COOPERATE WITH THE PRIVATE UTILITY PURVEYORS AND ALLOW THEM ADEQUATE TIME TO COMPLETE THEIR WORK IN ADVANCE OF PERFORMING ANY PAVING OPERATIONS OR OTHER FINISH WORK.
10. THE CONTRACTOR SHALL MAKE DETERMINATIONS OF SUBSURFACE CONDITIONS, INCLUDING THE LOCATION OF ROCK AND THE ACTUAL LOCATION OF UTILITIES OR OTHER FEATURES WHICH MAY AFFECT THE WORK.
11. 6' LENGTH GRANITE TRANSITION CURBS SHALL BE INSTALLED WHERE PROPOSED GRANITE CURB ENDS AND HMA BERM OR NO EDGE TREATMENT BEGINS.

12. THE CONTRACTOR SHALL CAUSE AS LITTLE INTERFERENCE AND INCONVENIENCE TO ABUTTERS AS POSSIBLE. THE CONTRACTOR SHALL MAINTAIN SAFE AND CONVENIENT ACCESS TO PRIVATE PROPERTIES AT ALL TIMES.
13. THE FLOW OF TRAFFIC THROUGH CONSTRUCTION ZONES IN EXISTING PUBLIC WAYS SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE SPECIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.
14. ALL PERMANENT PAVEMENT MARKINGS SHALL BE PAINTED.
15. A MINIMUM OF 4" LOAM AND SEED SHALL BE PLACED AS NOTED ON THE PLANS AND ON DISTURBED AREAS.
16. THE WORD "CERTIFY" IS UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE LAND SURVEYOR THAT IS BASED ON HIS BEST KNOWLEDGE, INFORMATION, AND BELIEF, FORMULATED IN ACCORDANCE WITH COMMONLY ACCEPTED PROCEDURES CONSISTENT WITH APPLICABLE STANDARDS OF PRACTICE, AND AS SUCH IT CONSTITUTES NEITHER A GUARANTEE NOR WARRANTY, EITHER EXPRESSED OR IMPLIED. THE CERTIFICATIONS SHOWN ARE NOT CERTIFICATIONS TO THE TITLE OF OWNERSHIP OF THE PROPERTIES SHOWN.
17. PLAN REFERENCES: 1923 OLD NORTH ROAD LAYOUT RECORDED IN PLAN BOOK 9, PAGE 58, 1991 WORTHINGTON ROAD LAYOUT NO. 8698, WILLIAMSBURG ROAD LAYOUT RECORDED IN PLAN BOOK 56, PAGE 75, OLD NORTH ROAD LAYOUT RECORDED IN PLAN BOOK 22, PAGE 16, AND 1929 EAST MAIN STREET LAYOUT TOWN OF PERU.
18. WETLAND FLAGS SHOWN HEREON ARE BASED ON FIELD LOCATIONS BY CHA CONSULTING, INC. ON OR BETWEEN JULY 20, 2013 AND JANUARY 17, 2014 WETLAND FLAGS WERE DELINEATED BY CHA CONSULTING, INC. IN MAY AND JUNE 2013.
19. CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING ANY PROPERTY PINS OR HIGHWAY BOUNDS THAT ARE DAMANGED OR DESTROYED DURING CONSTRUCTION.
20. ALL HOT MIX ASPHALT SHALL BE IN ACCORDANCE WITH SECTION 450 AND SECTION 455 SPECIFICATIONS. ALL HMA SHALL BE PRODUCED WITH WARM MIX ASPHALT TECHNOLOGY.
21. DESIGN OF RETAINING WALLS CONFORMS TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION INCLUDING ALL INTERIM REVISIONS.
22. RELOCATION OF THE UTILITY POLES SHOULD BE CAREFULLY EVALUATED COMPARED TO DRAINAGE NEEDS. ANY POLE HOLDS REQUIRED FOR THE INSTALLATION OR REMOVAL OF UNDERGROUND UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATED AND THERE WILL BE NO COMPENSATION OR TIME EXTENTION FOR WORK RELATED TO POLE HOLDS.
23. FOR OTHER NOTES, REFER TO SPECIFIC PLANS AND DETAILS.

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ROUTE 143**

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KEY PLAN & GENERAL NOTES



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ROUTE 143

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BORING LOG PLAN - 1


BORING B-1 (STA 14+48 LT)
NORTHING: 2983545.1457
EASTING: 251621.4015

BORING B-2 (STA 20+70 LT)
NORTHING: 2984091.9558
EASTING: 251906.1693

BORING B-3 (STA 25+80 LT)
NORTHING: 2984111.9803
EASTING: 252407.1554

BORING B-4 (STA 28+17 RT)
NORTHING: 2983956.8749
EASTING: 252584.8164

BORING LOGS

1. LOCATION OF BORINGS SHOWN ON THE CONSTRUCTION PLANS SHEETS 13-21 THUS: 
2. BORINGS ARE TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
3. WATER LEVELS SHOWN ON THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.
4. REFER TO "LEGEND TO SUBSURFACE LOGS" FOR A DESCRIPTION OF SYMBOLS AND DATA SHOWN ON BORING LOGS.
5. BORING SAMPLES ARE STORED AT A STORAGE FACILITY LOCATED ON ROUTE 114 (219 WINTHROP AVE) IN LAWRENCE, MA. THE CONTRACTOR MAY EXAMINE THE SOIL AND ROCK SAMPLES BY CONTACTING THE MASSDOT GEOTECHNICAL SECTION AT 10 PARK PLAZA, BOSTON, MA.
6. ALL BORINGS WERE MADE BETWEEN OCTOBER 21, 2019 AND NOVEMBER 26, 2019.
7. BORINGS WERE MADE BY:
SEABOARD DRILLING, LLC
154 HILDRETH STREET NORTH
BANGOR, ME 04401
8. THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.

SAMPLING POINT		DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING DEPTH (ft)	HOLE DEPTH (ft)	HOLE DIAMETER (in)	REMARKS ON CHARACTER OF DRILLING WATER RETURN, ETC.	WATER LEVELS AND/OR WELL DATA
NO.	DEPTH (ft)									
S-1	2	10-16-19	10:05	10	10	11.3				
S-2	1	9-9-19	16							
S-3	2	12-7-19	14							
S-4	1	3-22-20	6							
S-5	2	10-15-19	28							
S-6	1	23-7-20	18							
C-1	5	1	10%							

SAMPLING POINT		DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING DEPTH (ft)	HOLE DEPTH (ft)	HOLE DIAMETER (in)	REMARKS ON CHARACTER OF DRILLING WATER RETURN, ETC.	WATER LEVELS AND/OR WELL DATA
NO.	DEPTH (ft)									
S-1	2	12-1-19	3							
S-2	1	2-2-19	3							
S-3	2	12-1-19	3							
S-4	2	4-11-21	22							
S-5	2	6-6-54	11							

SAMPLING POINT		DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING DEPTH (ft)	HOLE DEPTH (ft)	HOLE DIAMETER (in)	REMARKS ON CHARACTER OF DRILLING WATER RETURN, ETC.	WATER LEVELS AND/OR WELL DATA
NO.	DEPTH (ft)									
S-1	2	11-7-19	11							
S-2	1	4-4-5	6							
S-3	2	4-5-52	8							
S-4	2	5-10-14	20							
S-5	2	10-14-15	29							
S-6	2	1-17-52	23							
S-7	2	20-10-20	38							

SAMPLING POINT		DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING DEPTH (ft)	HOLE DEPTH (ft)	HOLE DIAMETER (in)	REMARKS ON CHARACTER OF DRILLING WATER RETURN, ETC.	WATER LEVELS AND/OR WELL DATA
NO.	DEPTH (ft)									
S-1	2	3-10-19	23							
S-2	1	6-19-21	37							
S-3	2	5-5-10	15							
S-4	2	3-3-12	10							
S-5	2	10-17-16	29							
S-6	2	8-8-19	28							
S-7	2	11-8-11	20							
S-8	0	1209	R							

BORING B-5 (STA 32+79 LT)
NORTHING: 2983567.4650
EASTING: 252821.5632

BORING B-6 (STA 33+80 LT)
NORTHING: 2983473.8592
EASTING: 252859.3488

BORING B-7 (STA 34+82 LT)
NORTHING: 2983378.4979
EASTING: 252893.3236

BORING B-8 (STA 35+85 LT)
NORTHING: 2983281.9725
EASTING: 252931.3288

BORING B-9 (STA 36+66 LT)
NORTHING: 2983211.5924
EASTING: 252974.9229

SAMPLING POINT		DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING DEPTH (ft)	HOLE DEPTH (ft)	HOLE DIAMETER (in)	REMARKS ON CHARACTER OF DRILLING WATER RETURN, ETC.	WATER LEVELS AND/OR WELL DATA
NO.	DEPTH (ft)									
S-1	2	10-16-19	31							
S-2	2	10-16-19	63							
S-3	2	10-10-19	21							
S-4	2	10-20-21	29							
S-6	2	17-20-24-40	84							
C-1	5	1.8	0%							

SAMPLING POINT		DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING DEPTH (ft)	HOLE DEPTH (ft)	HOLE DIAMETER (in)	REMARKS ON CHARACTER OF DRILLING WATER RETURN, ETC.	WATER LEVELS AND/OR WELL DATA
NO.	DEPTH (ft)									
S-1	2	10-16-19	33							
S-2	2	10-7-6	12							
S-3	2	5-8-24	18							
S-4	2	7-8-2019	R							
S-5	2	4-3-17	5							

SAMPLING POINT		DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING DEPTH (ft)	HOLE DEPTH (ft)	HOLE DIAMETER (in)	REMARKS ON CHARACTER OF DRILLING WATER RETURN, ETC.	WATER LEVELS AND/OR WELL DATA
NO.	DEPTH (ft)									
S-1	2	4-26-18	40							
S-2	2	7-13-19	28							
S-3	2	20-18-13	31							
S-4	2	6-6-14	19							
S-6	2	13-7-10	14							
S-6	2	9-10-30	40							
S-7	2	0-7-18	22							
S-8	2	43-45-21	66							
S-9	0	0-1201	R							

SAMPLING POINT		DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING DEPTH (ft)	HOLE DEPTH (ft)	HOLE DIAMETER (in)	REMARKS ON CHARACTER OF DRILLING WATER RETURN, ETC.	WATER LEVELS AND/OR WELL DATA
NO.	DEPTH (ft)									
S-1	2	2-22-21	43							
S-2	2	8-7-43	11							
S-3	2	2-9-15	18							
S-4	2	9-12-13	27							
S-5	2	11-8-20	20							
S-6	2	25-28-18	100							
C-1	5	4.3	32%							

SAMPLING POINT		DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING DEPTH (ft)	HOLE DEPTH (ft)	HOLE DIAMETER (in)	REMARKS ON CHARACTER OF DRILLING WATER RETURN, ETC.	WATER LEVELS AND/OR WELL DATA
NO.	DEPTH (ft)									
S-1	2	3-4-21	7							
S-2	2	1-5-18	14							
S-3	1.4	1-10-1209	R							

WORTHINGTON
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MA	STP/TAP-0031(018)	6	191

PROJECT FILE NO. 609287

BORING LOG PLAN - 2

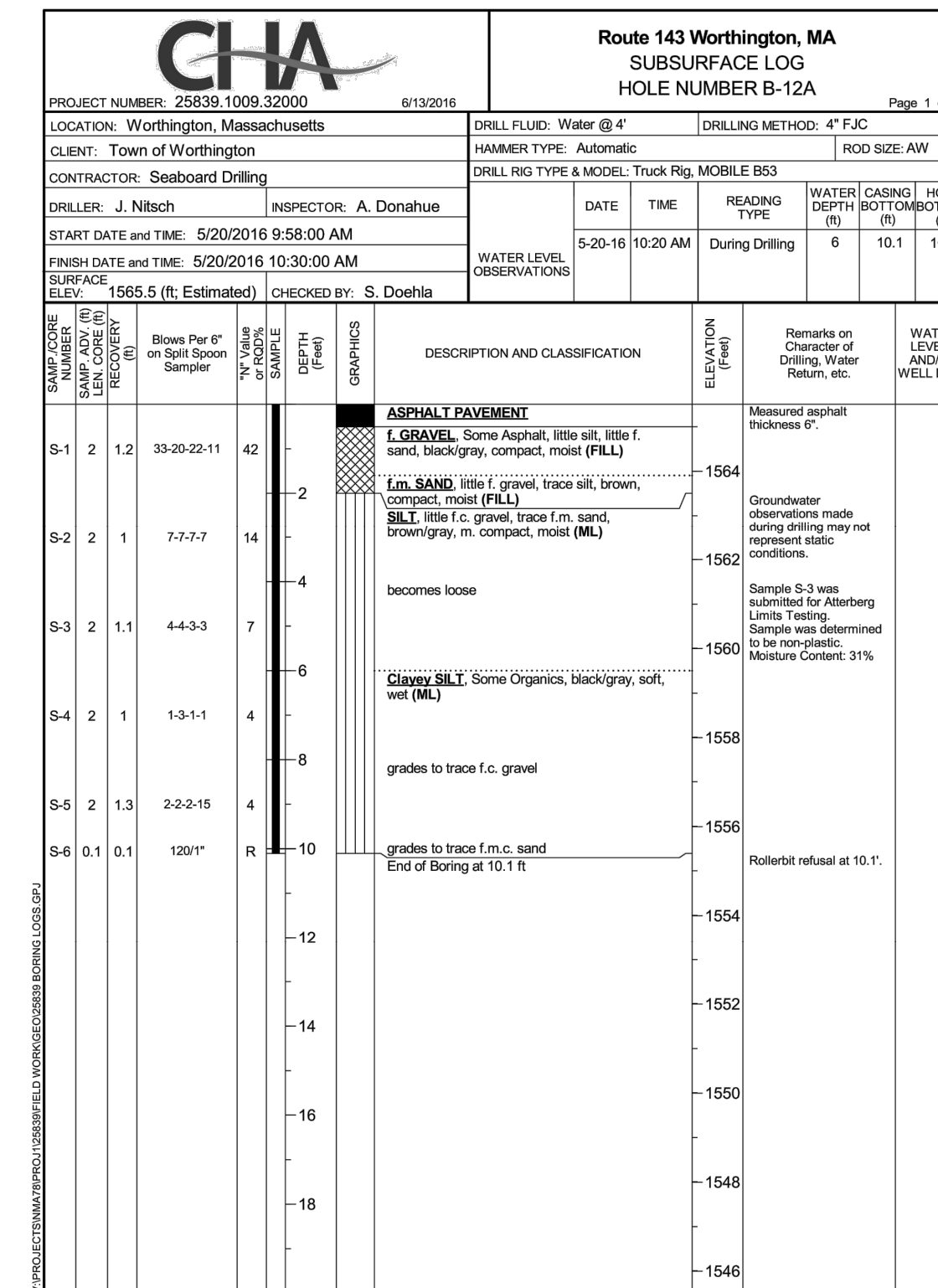
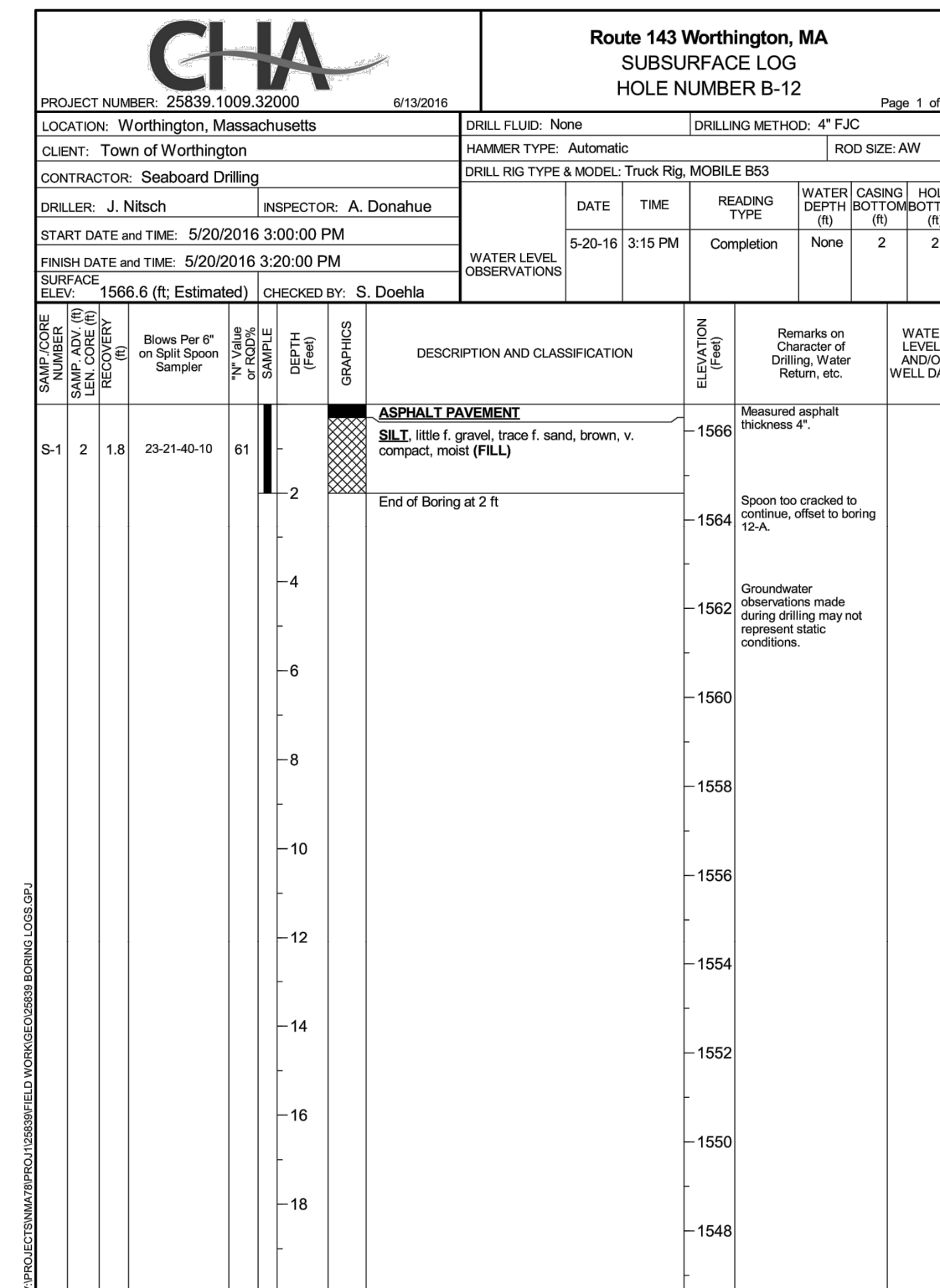
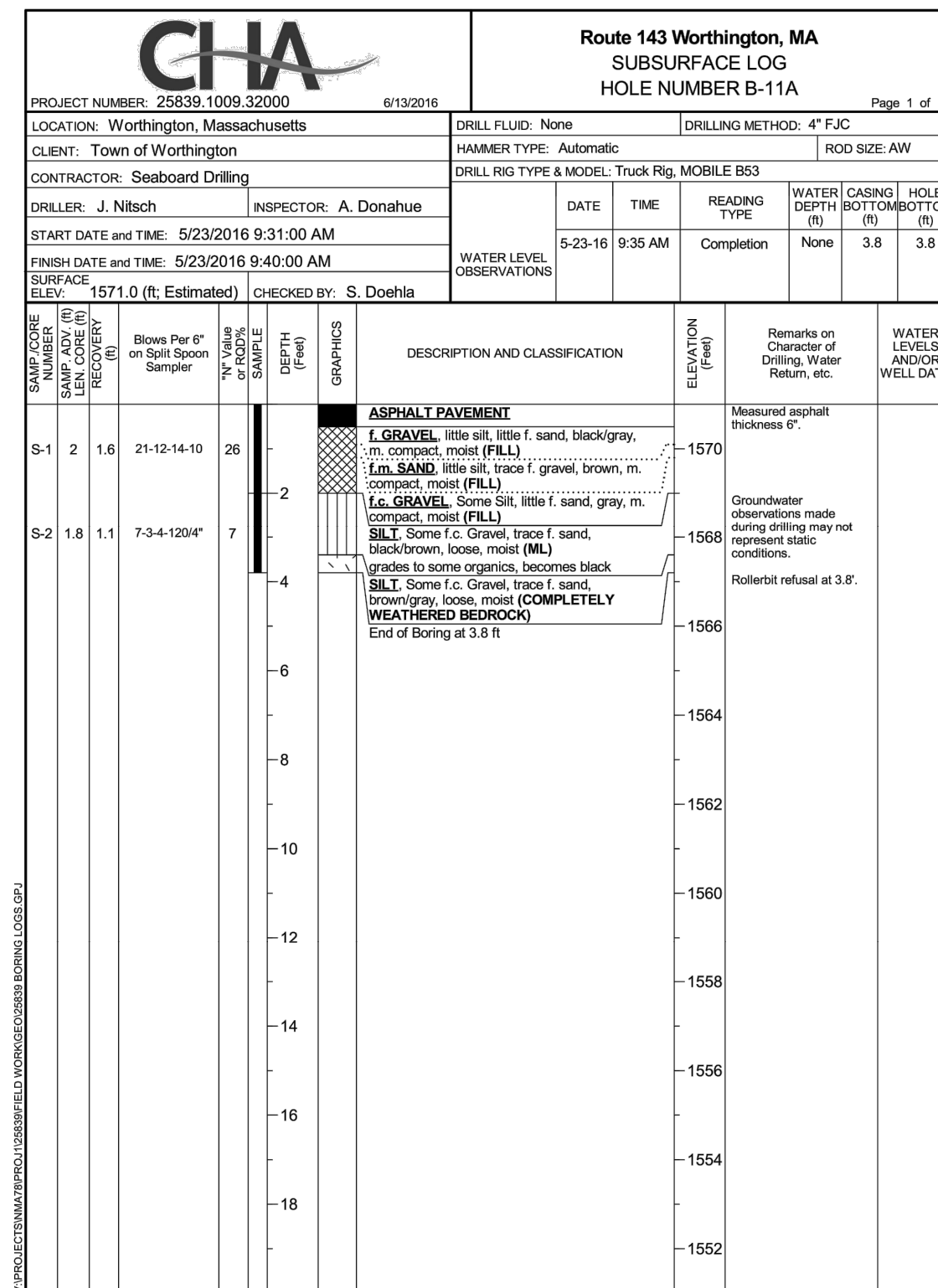
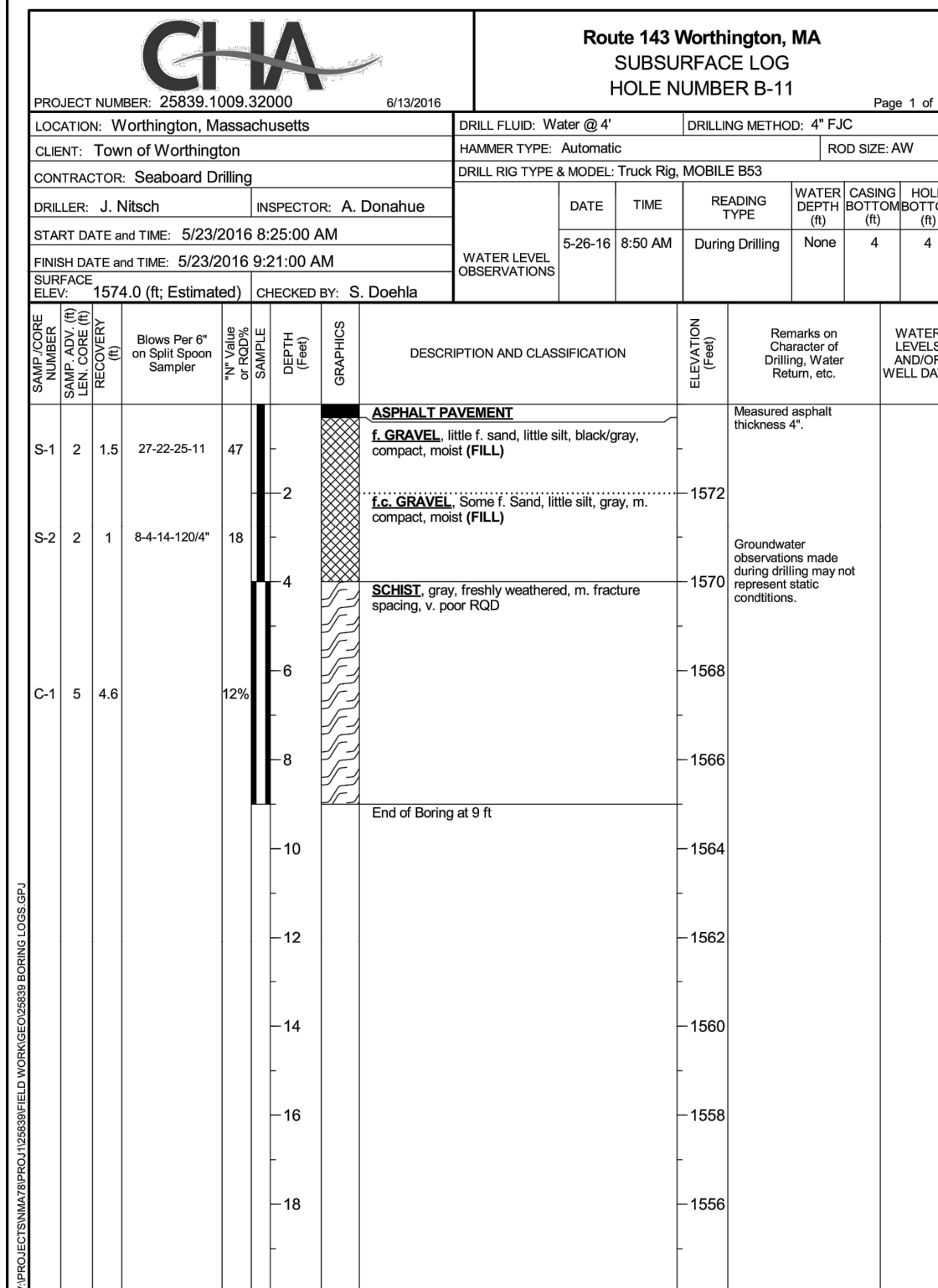
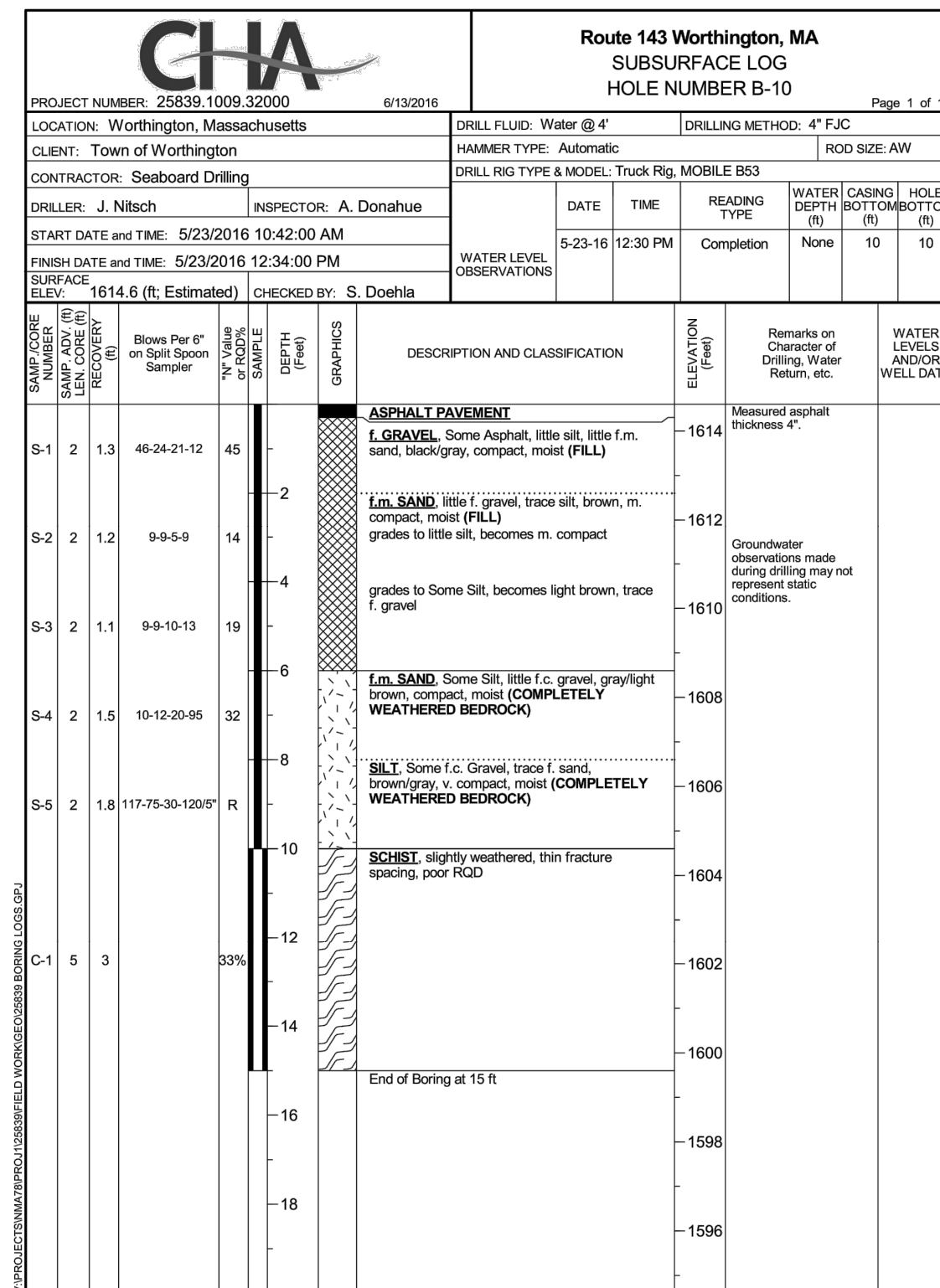
BORING B-10 (STA 39+14 RT)
NORTHING: 2982967.2372
EASTING: 253023.0325

BORING B-11 (STA 43+86 RT)
NORTHING: 2982502.1359
EASTING: 253109.4064

BORING B-11A (STA 43+71 RT)
NORTHING: 2982513.4543
EASTING: 253090.1705

BORING B-12 (STA 44+97 RT)
NORTHING: 2982397.2682
EASTING: 253145.1076

BORING B-12A (STA 44+89 RT)
NORTHING: 2982395.9102
EASTING: 253115.6859



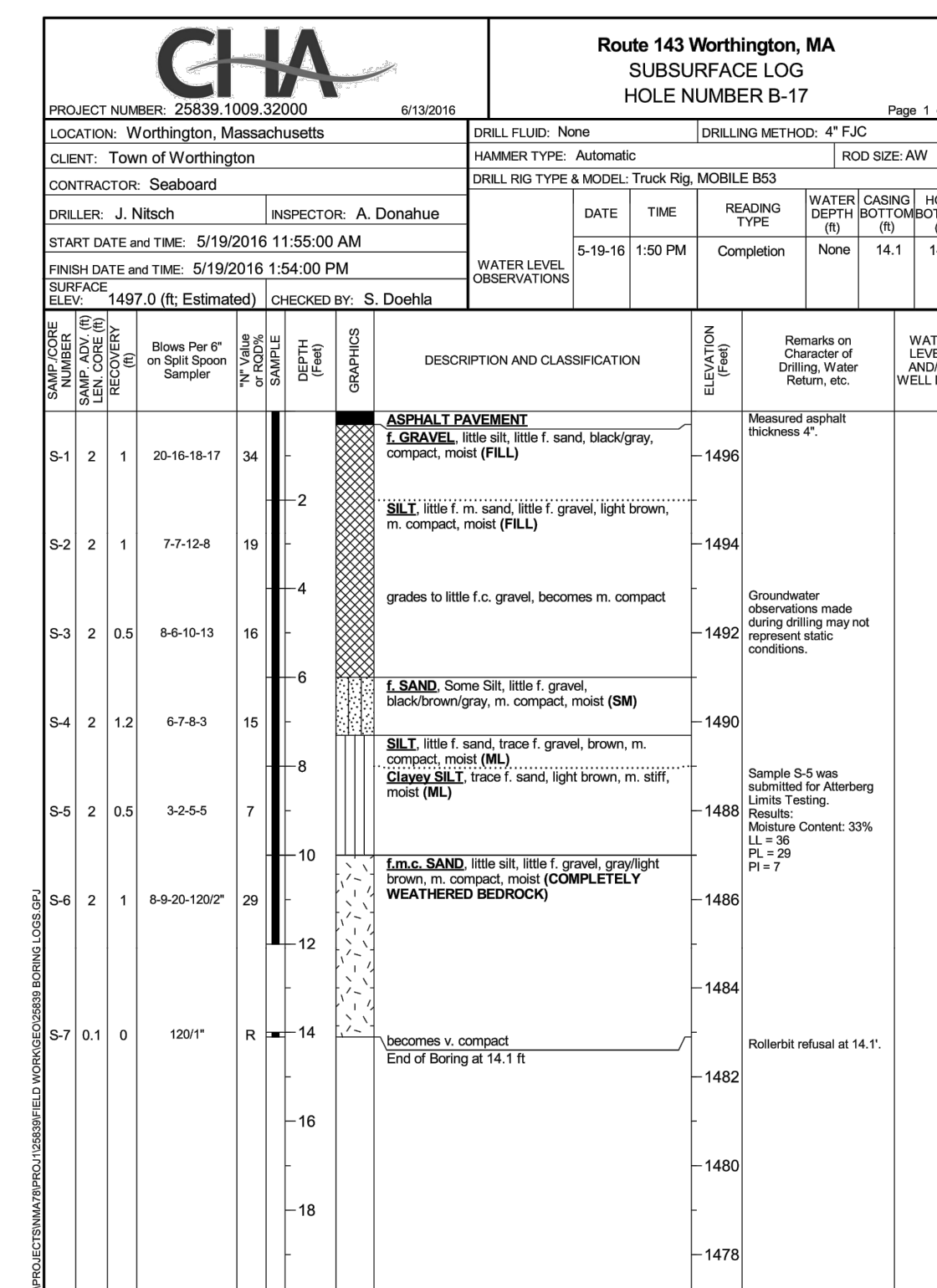
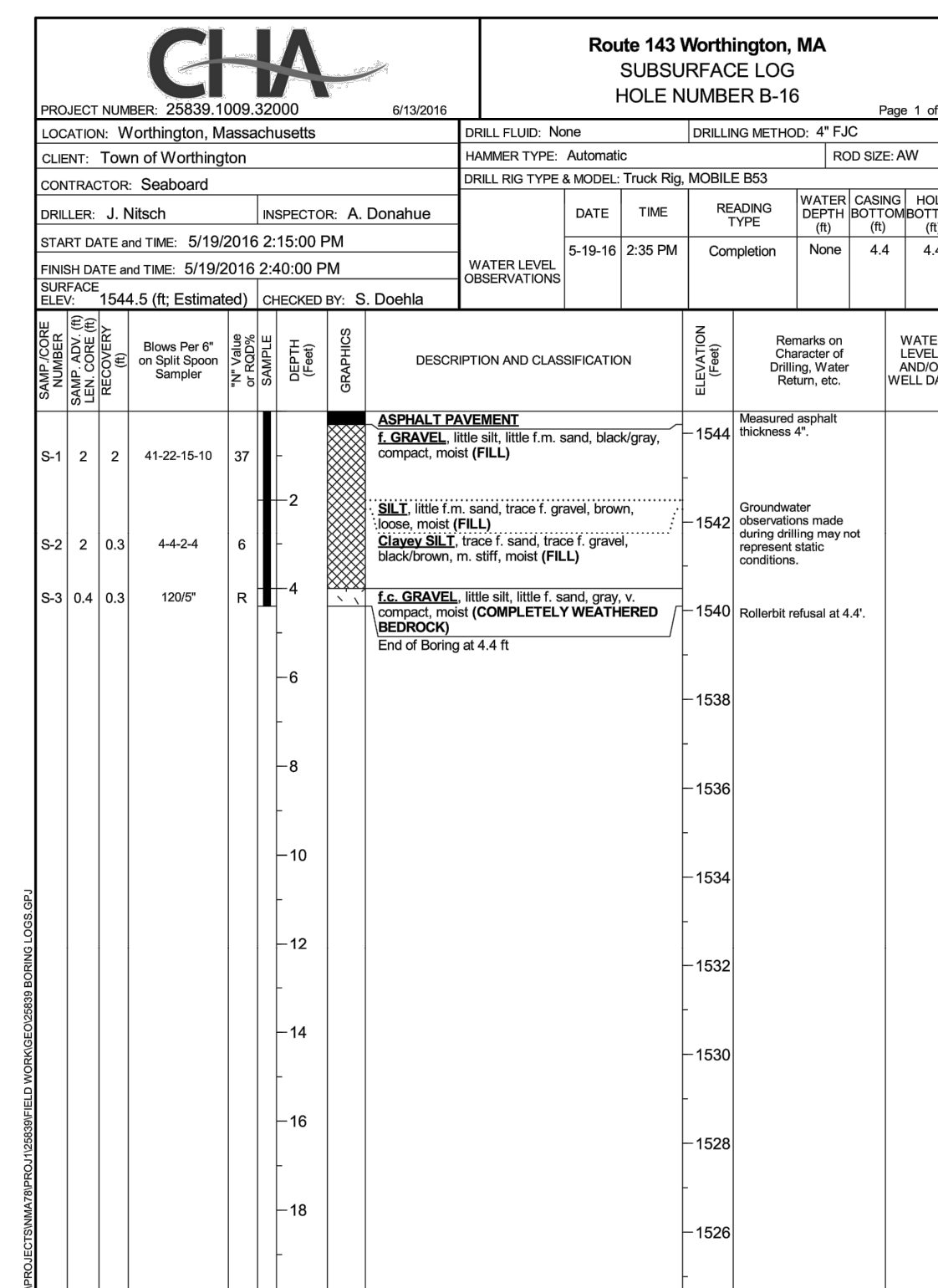
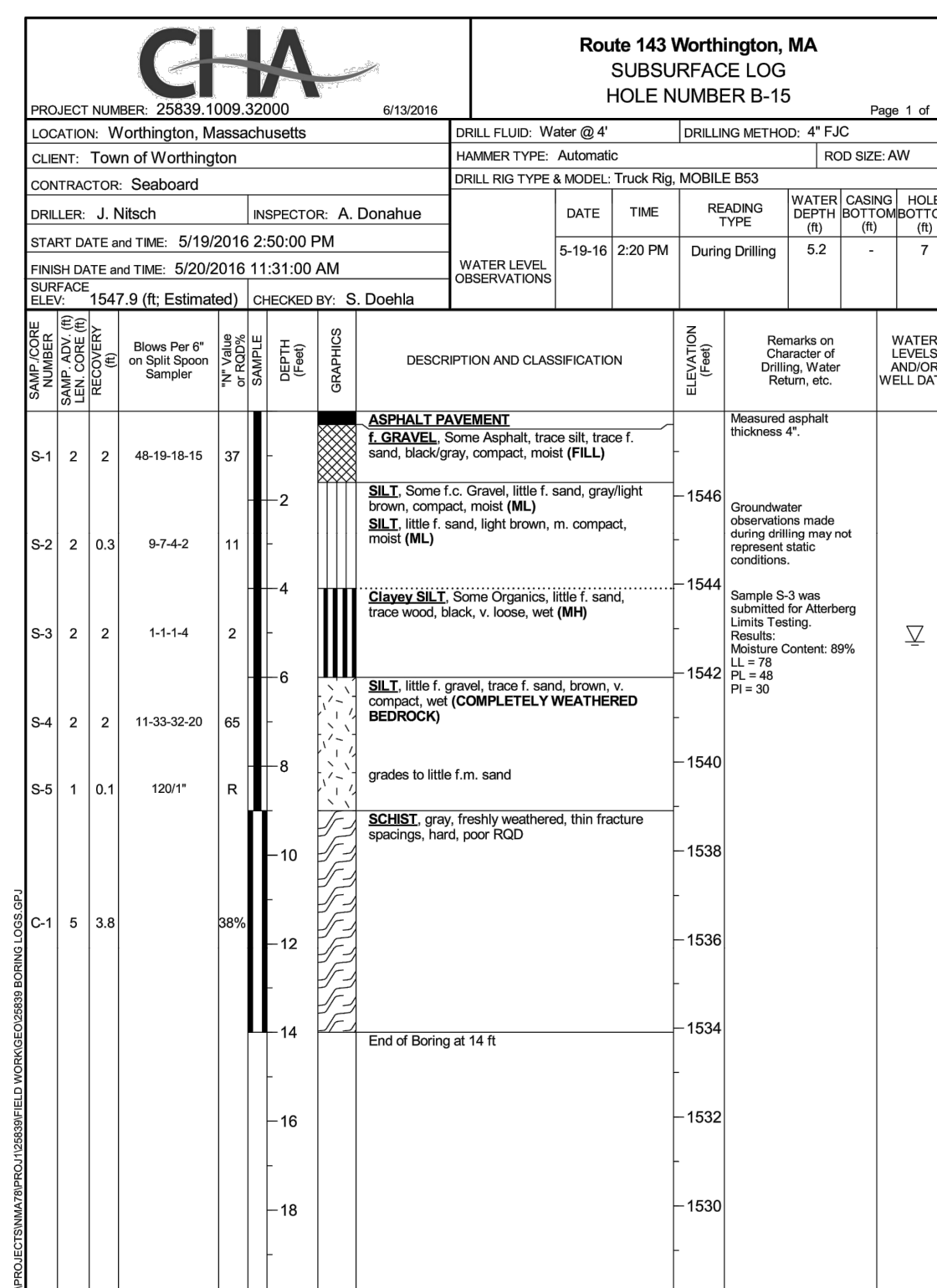
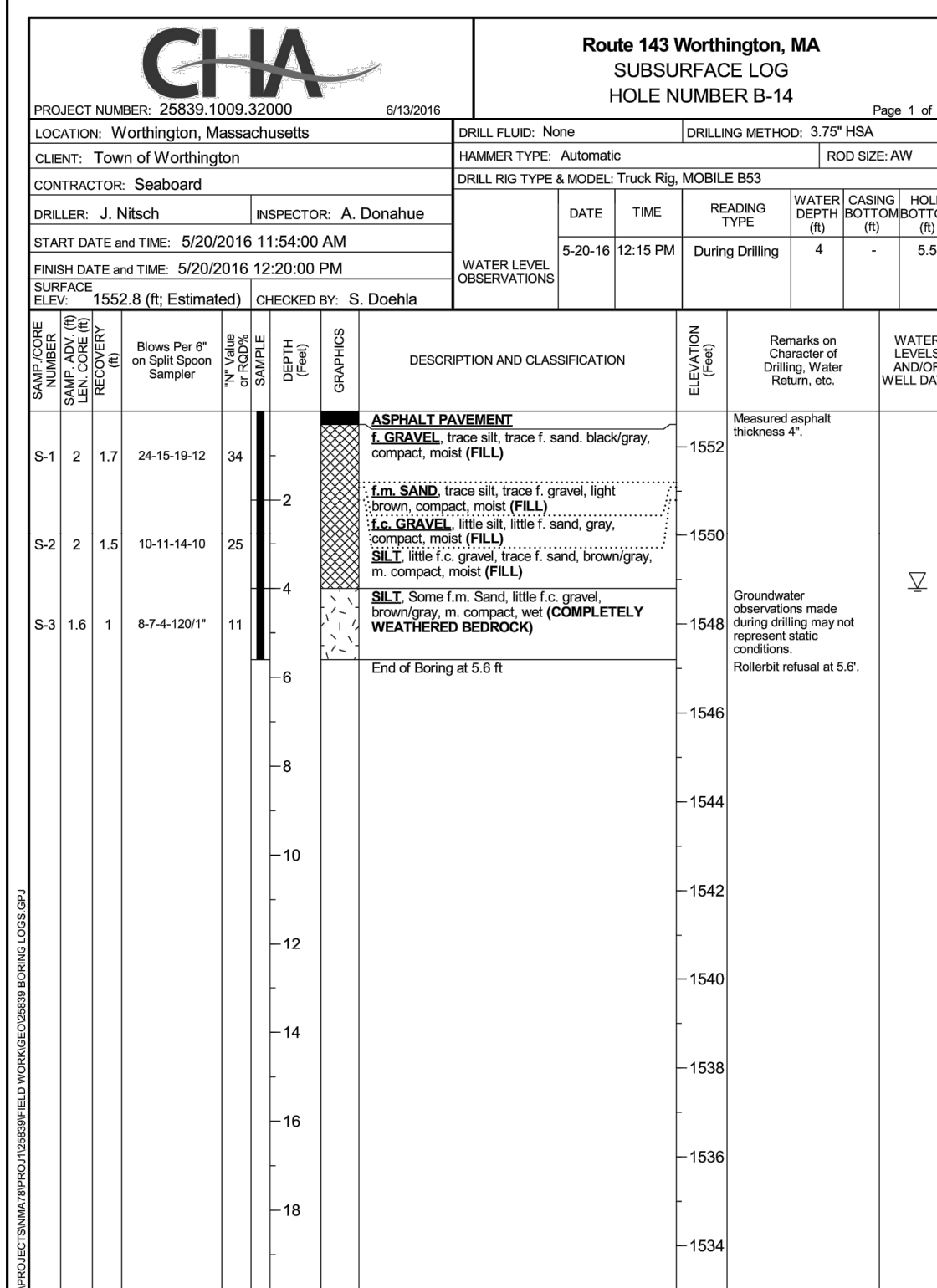
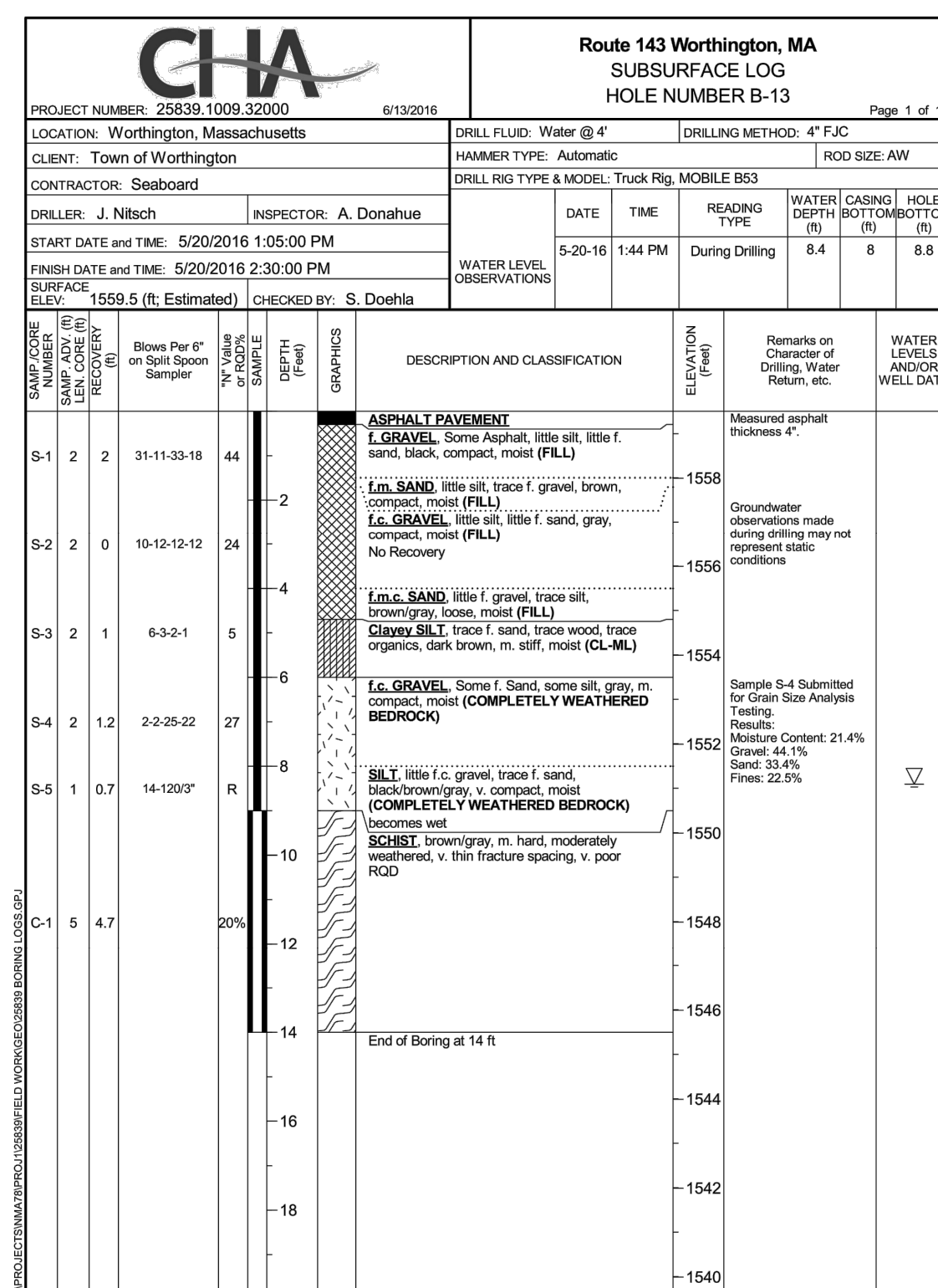
BORING B-13 (STA 46+16 RT)
NORTHING: 2982284.3101
EASTING: 253182.8281

BORING B-14 (STA 47+09 RT)
NORTHING: 2982194.2618
EASTING: 253206.9071

BORING B-15 (STA 47+87 RT)
NORTHING: 2982119.4996
EASTING: 253230.1736

BORING B-16 (STA 48+78 RT)
NORTHING: 2982032.3063
EASTING: 253255.6532

BORING B-17 (STA 55+97 RT)
NORTHING: 2981932.9993
EASTING: 253828.0516



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STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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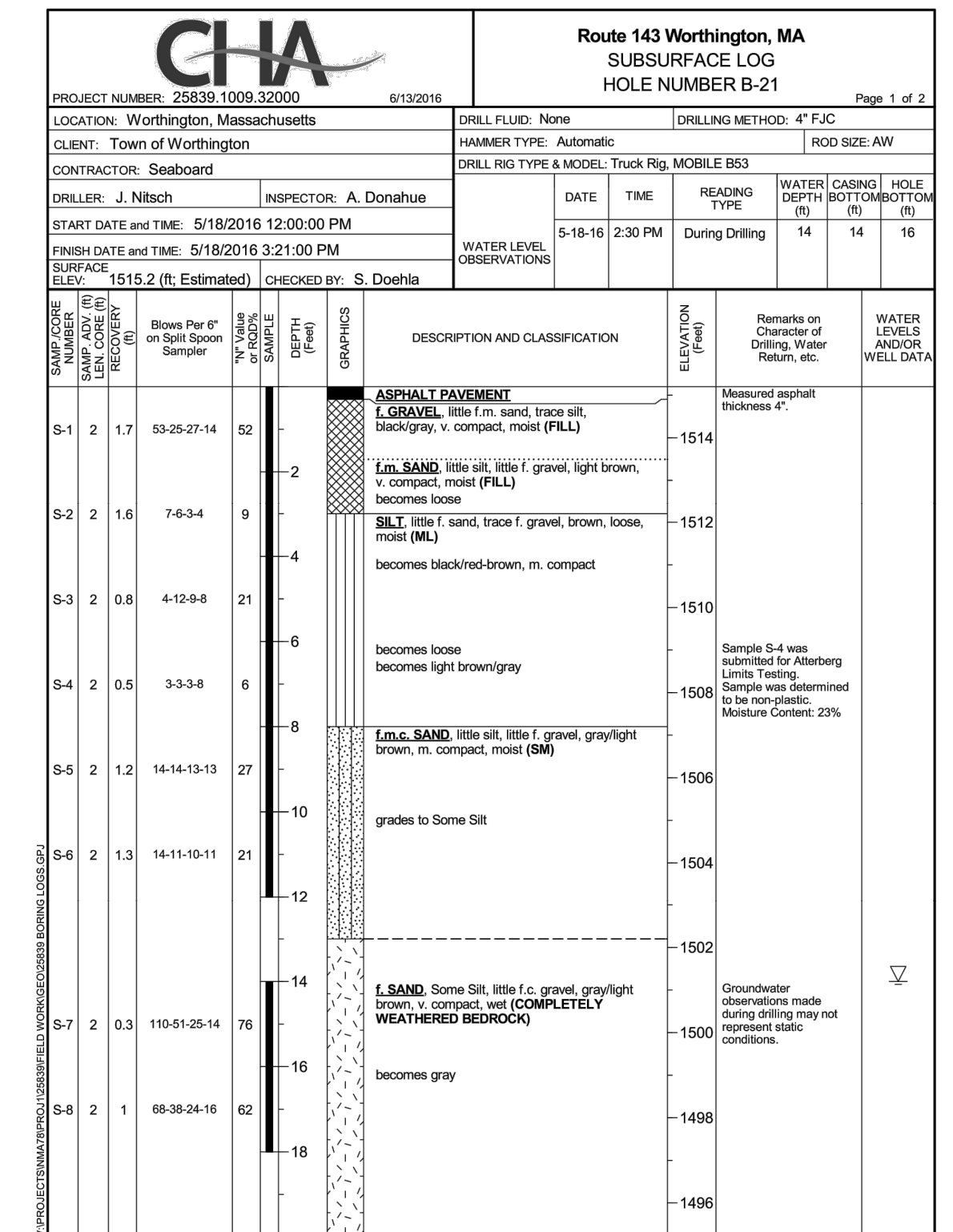
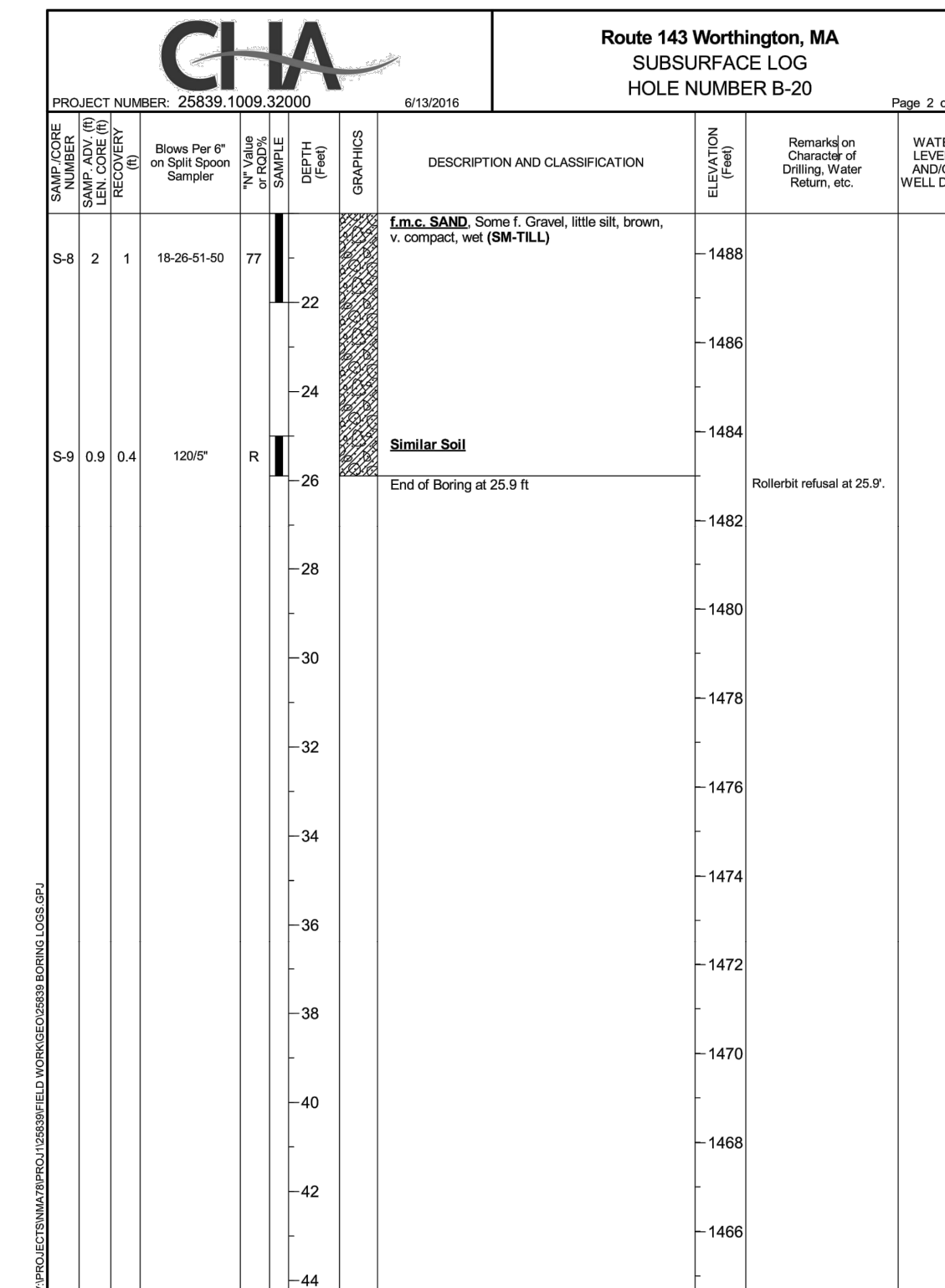
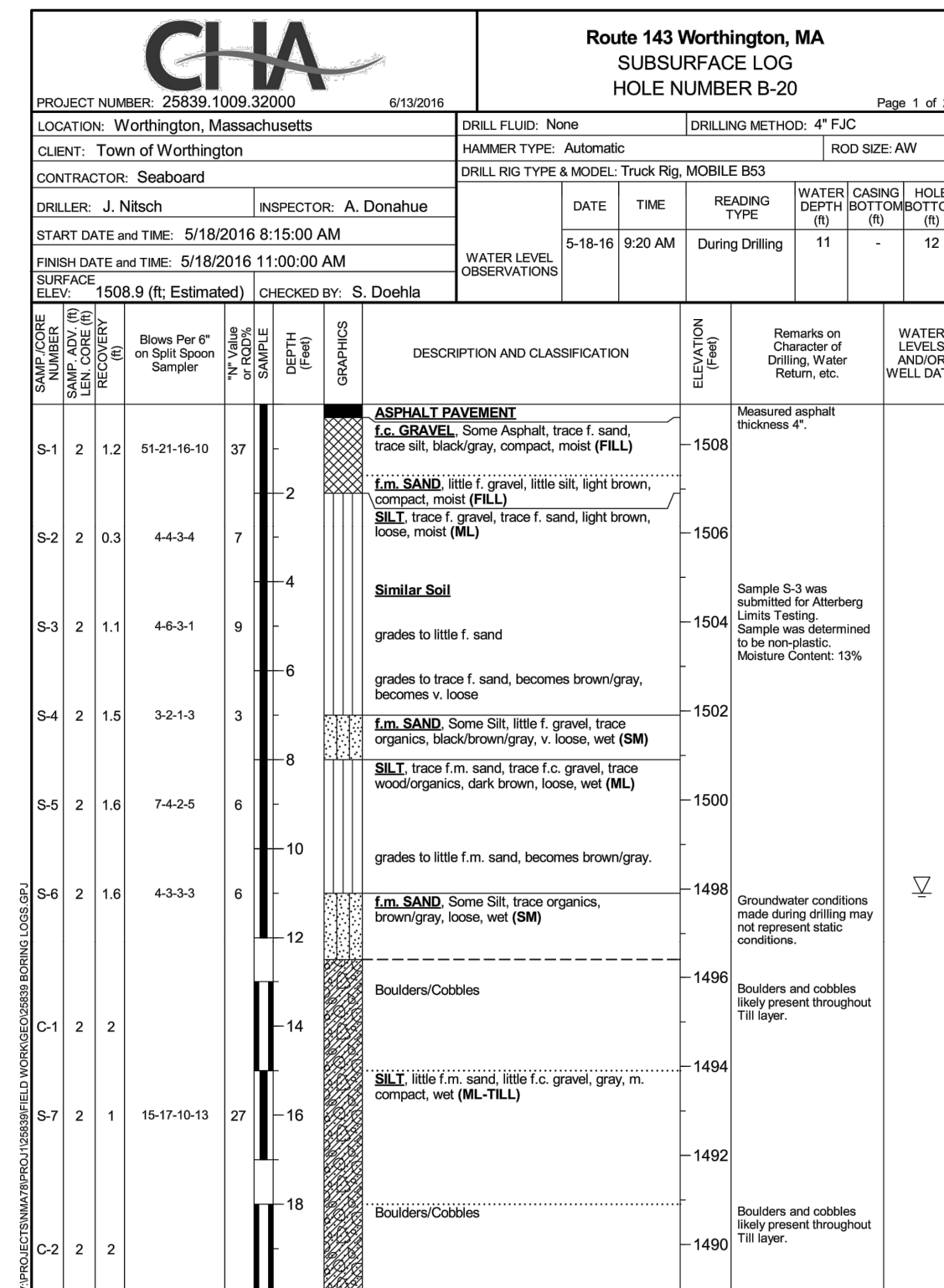
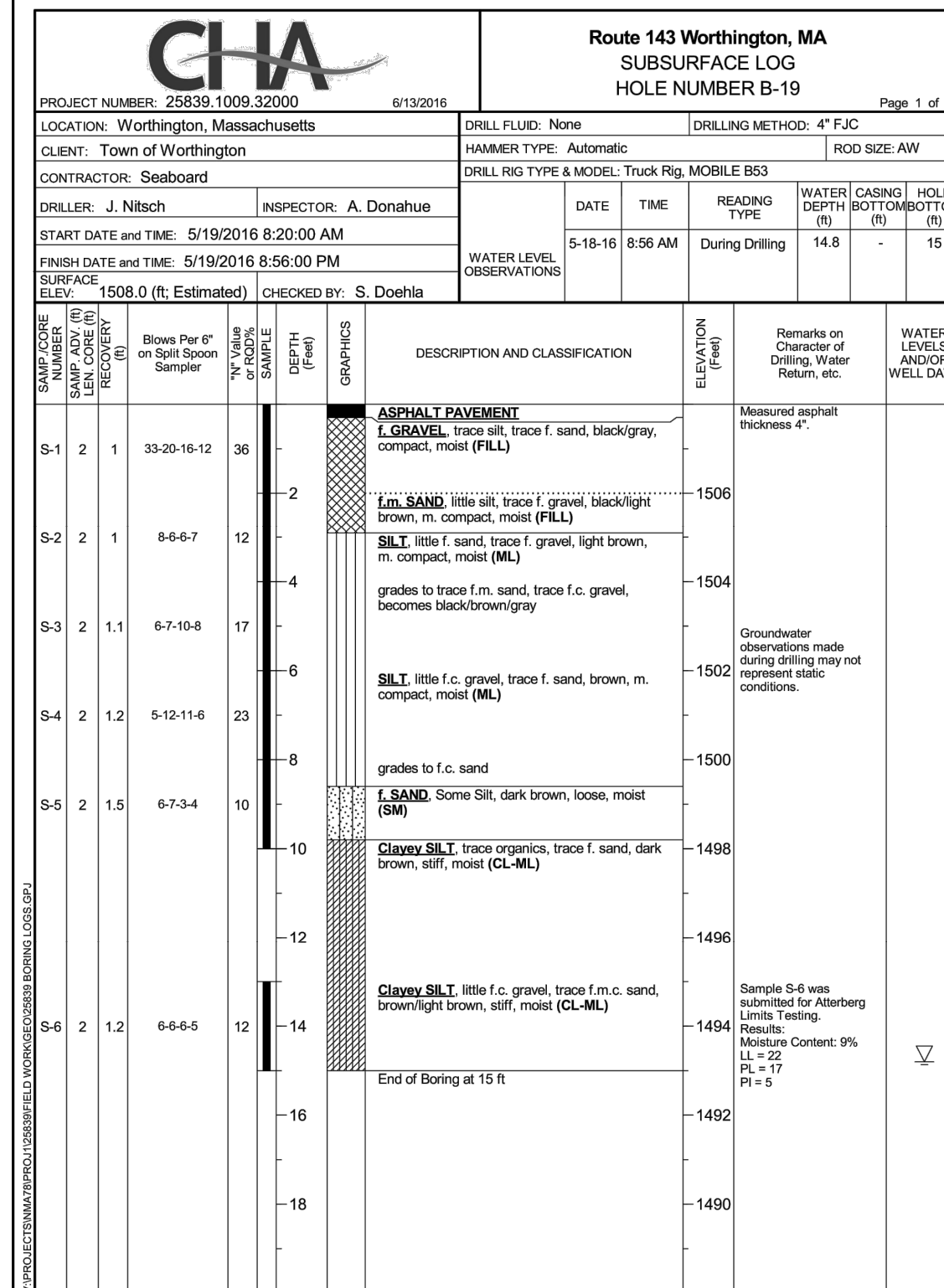
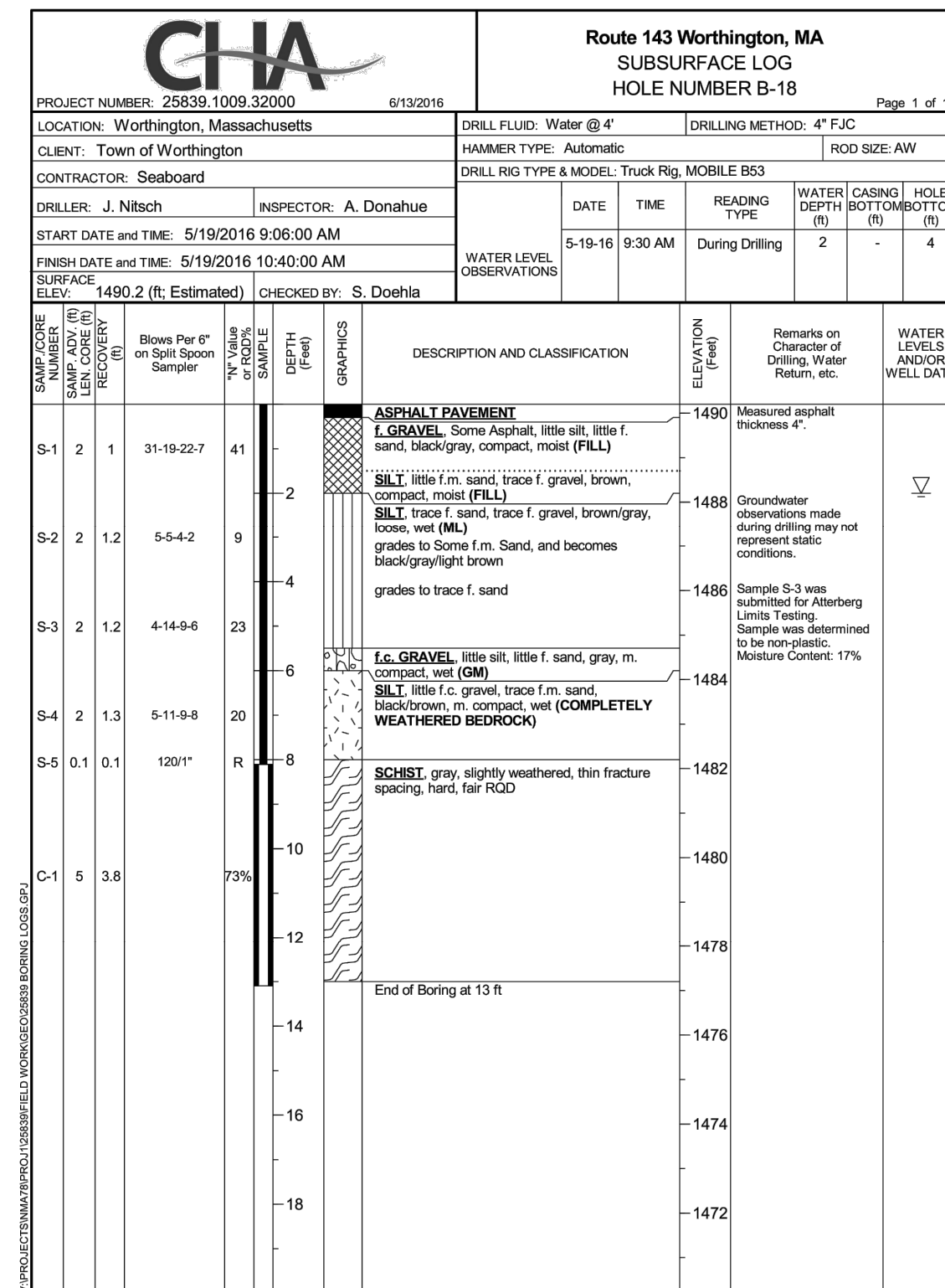
BORING LOG PLAN - 3

BORING B-18 (STA 57+15 RT)
NORTHING: 2982025.3793
EASTING: 253902.0399

BORING B-19 (STA 71+62 RT)
NORTHING: 2982970.9300
EASTING: 254981.9830

BORING B-20 (STA 72+41 LT)
NORTHING: 2983033.1614
EASTING: 255031.5426

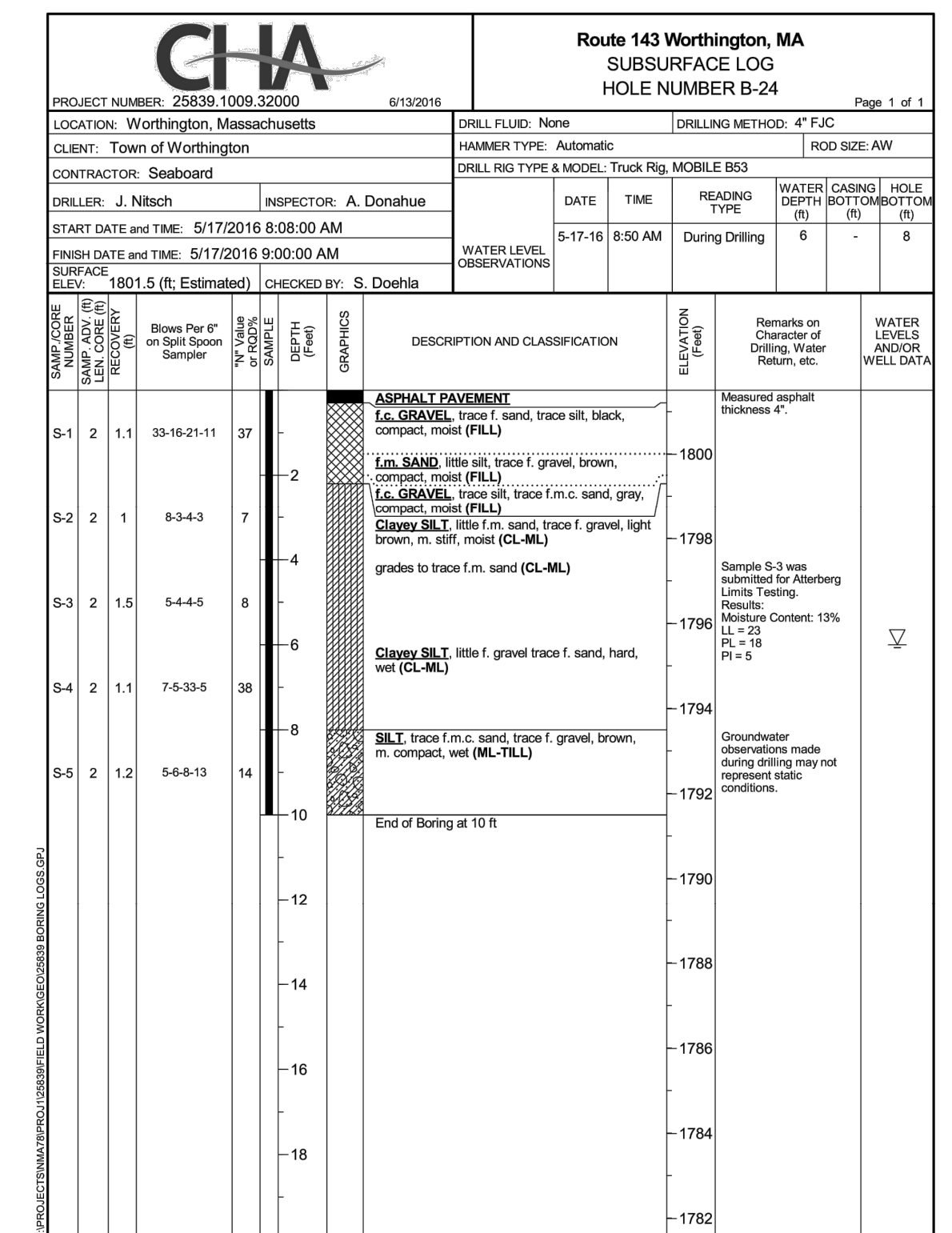
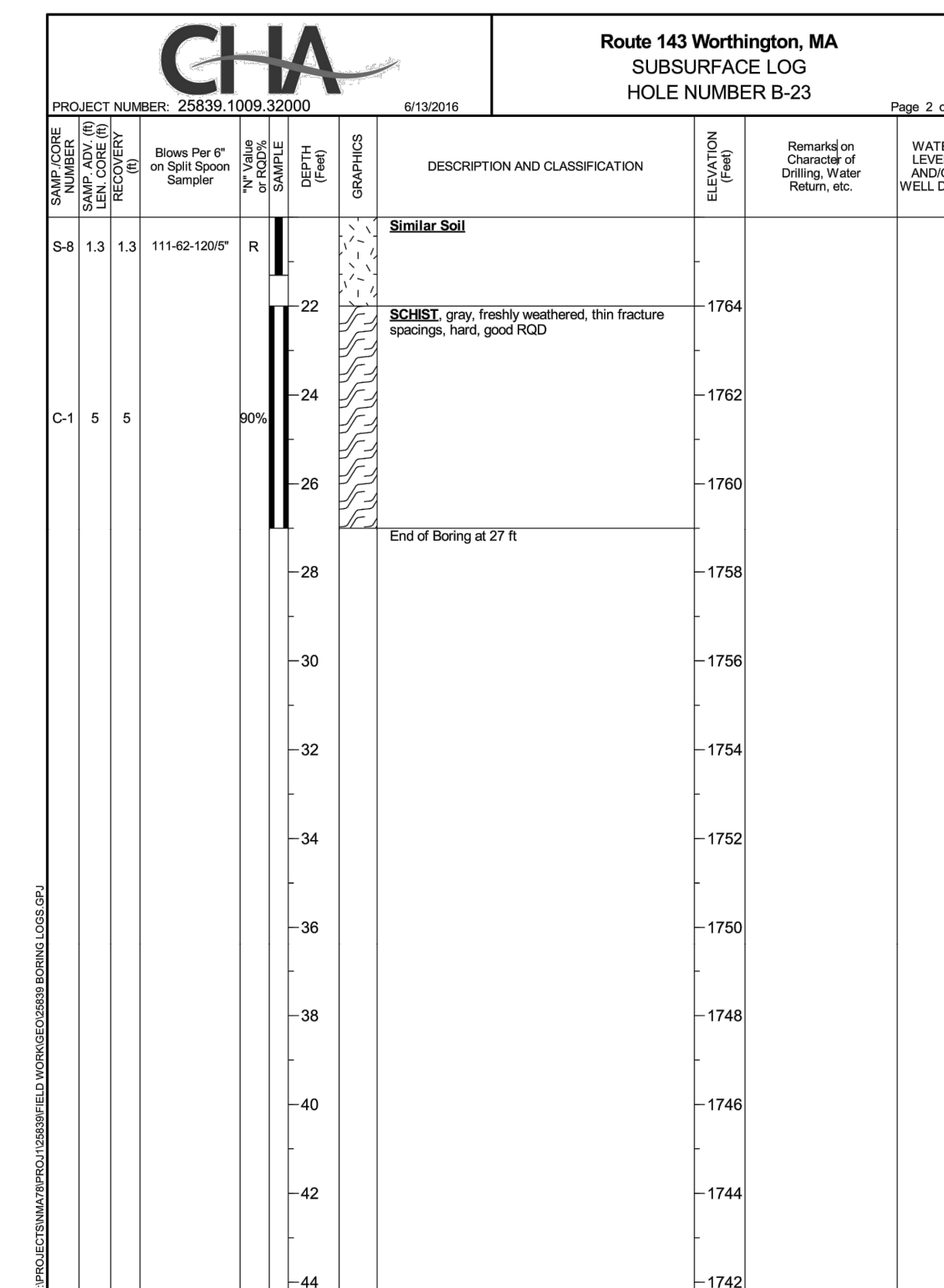
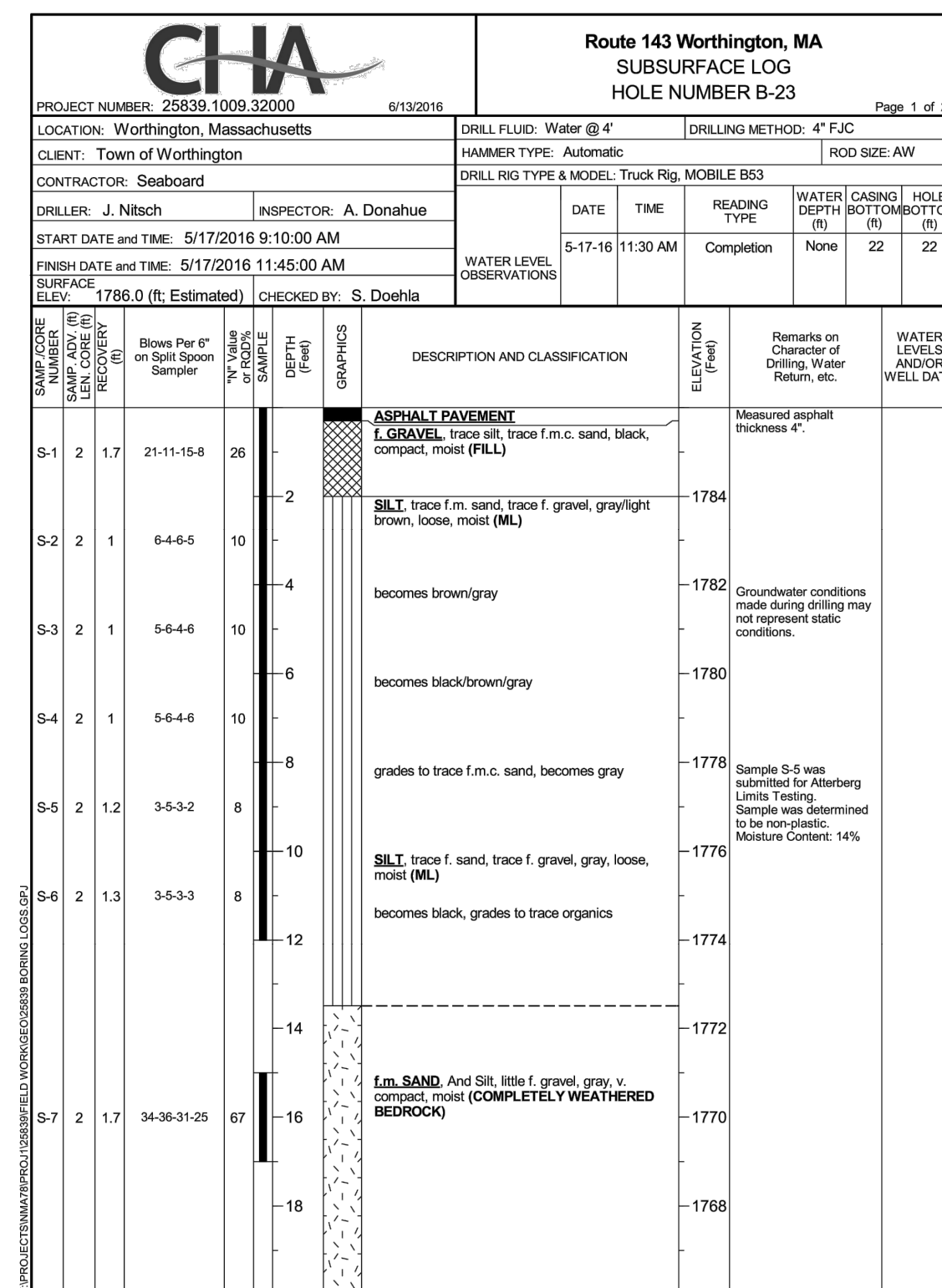
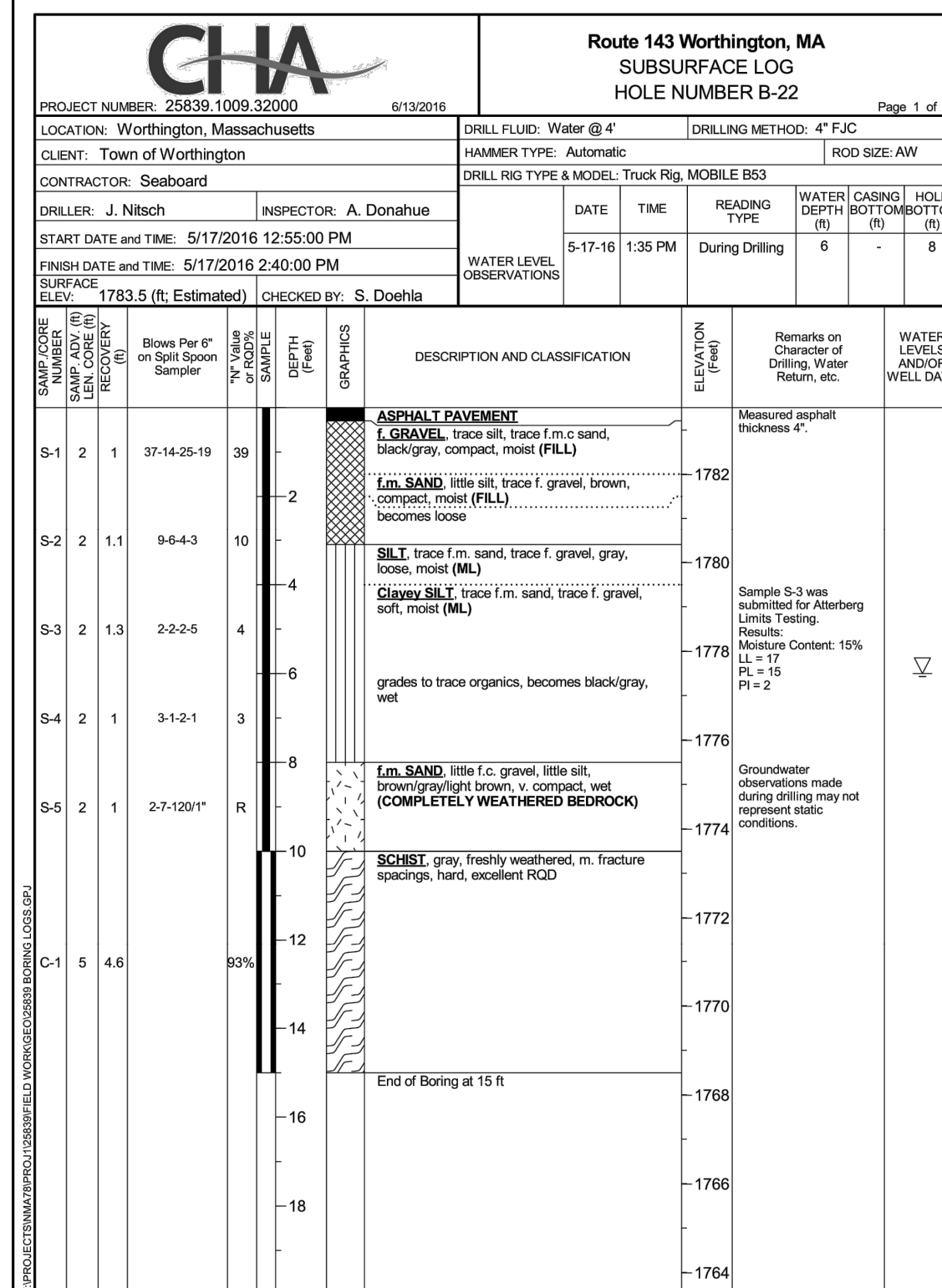
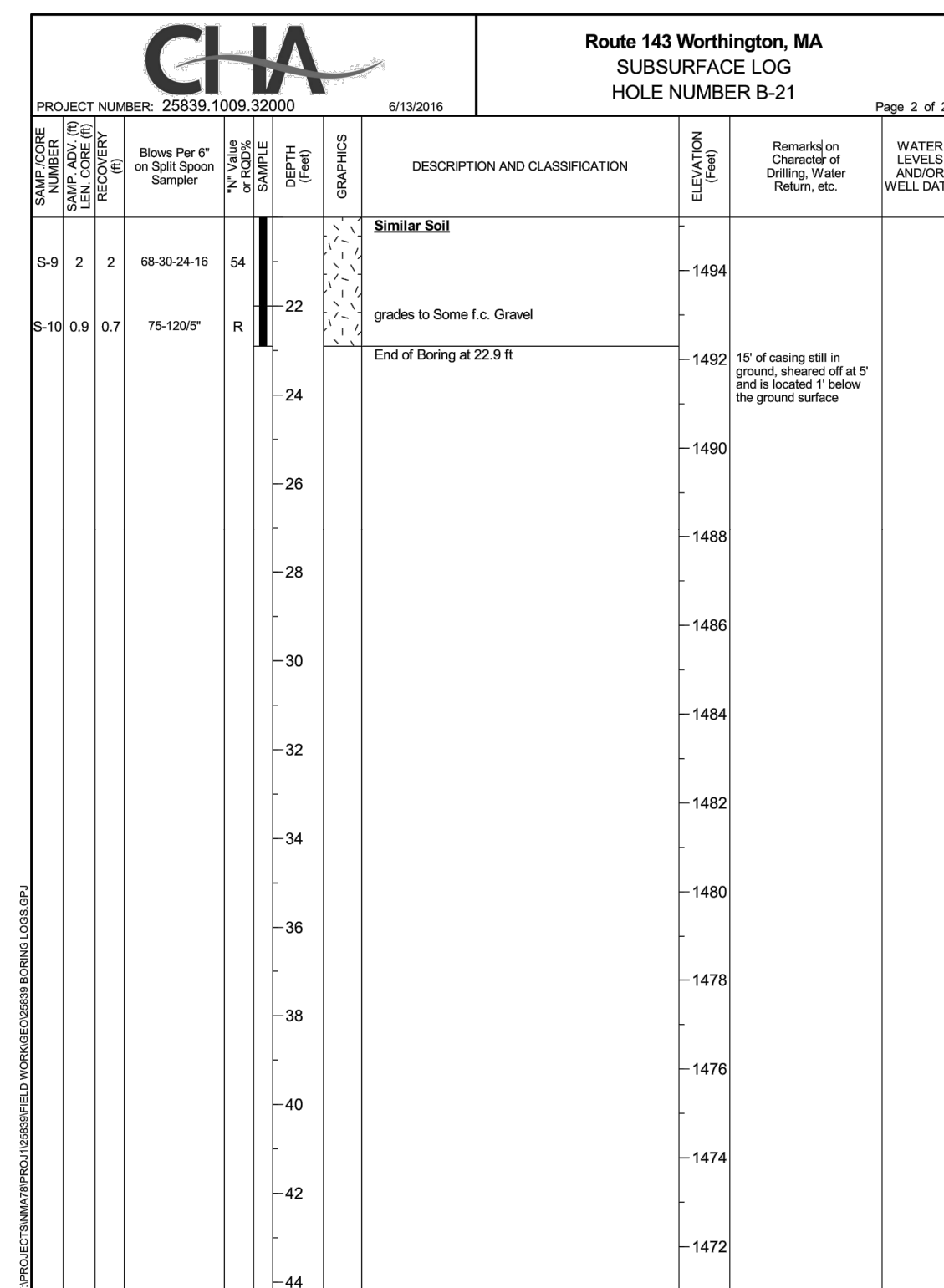
BORING B-21 (STA 73+73 LT)
NORTHING: 2983134.8840
EASTING: 255111.2182



BORING B-22 (STA 124+09 RT)
NORTHING: 2987299.8395
EASTING: 257128.2322

BORING B-23 (STA 125+69 RT)
NORTHING: 2987418.2733
EASTING: 257234.7706

BORING B-24 (STA 127+45 LT)
NORTHING: 2987528.9199
EASTING: 257370.0617



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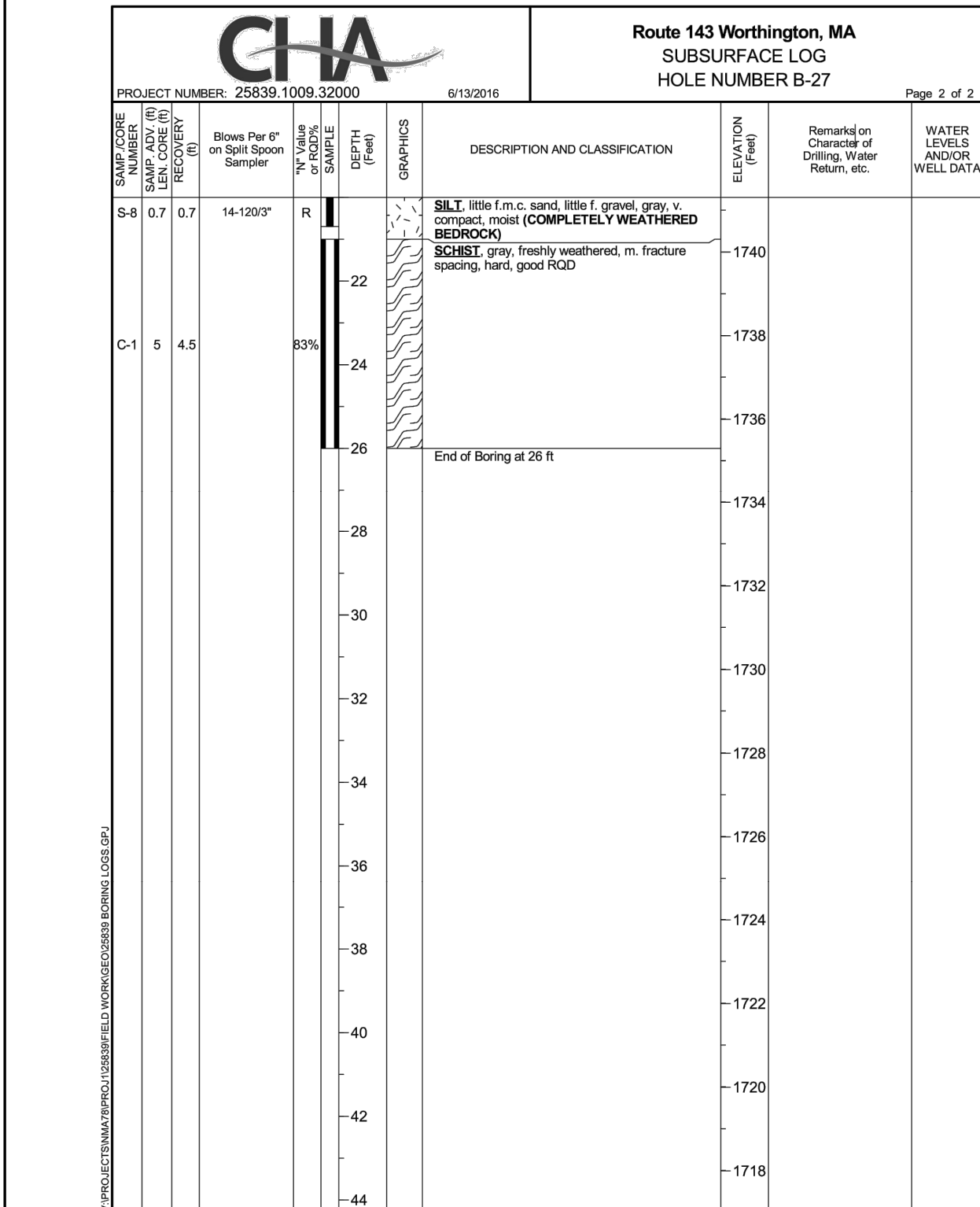
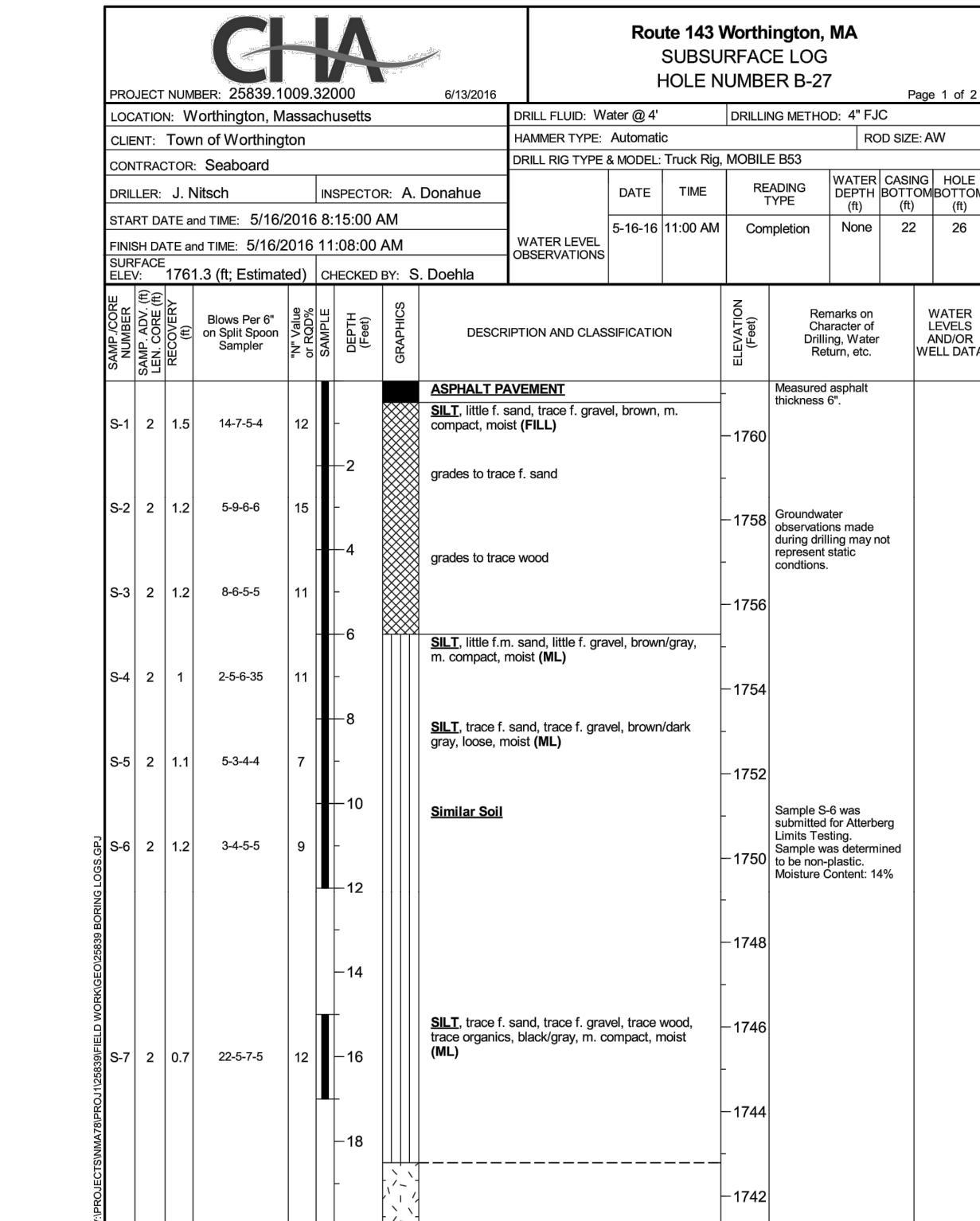
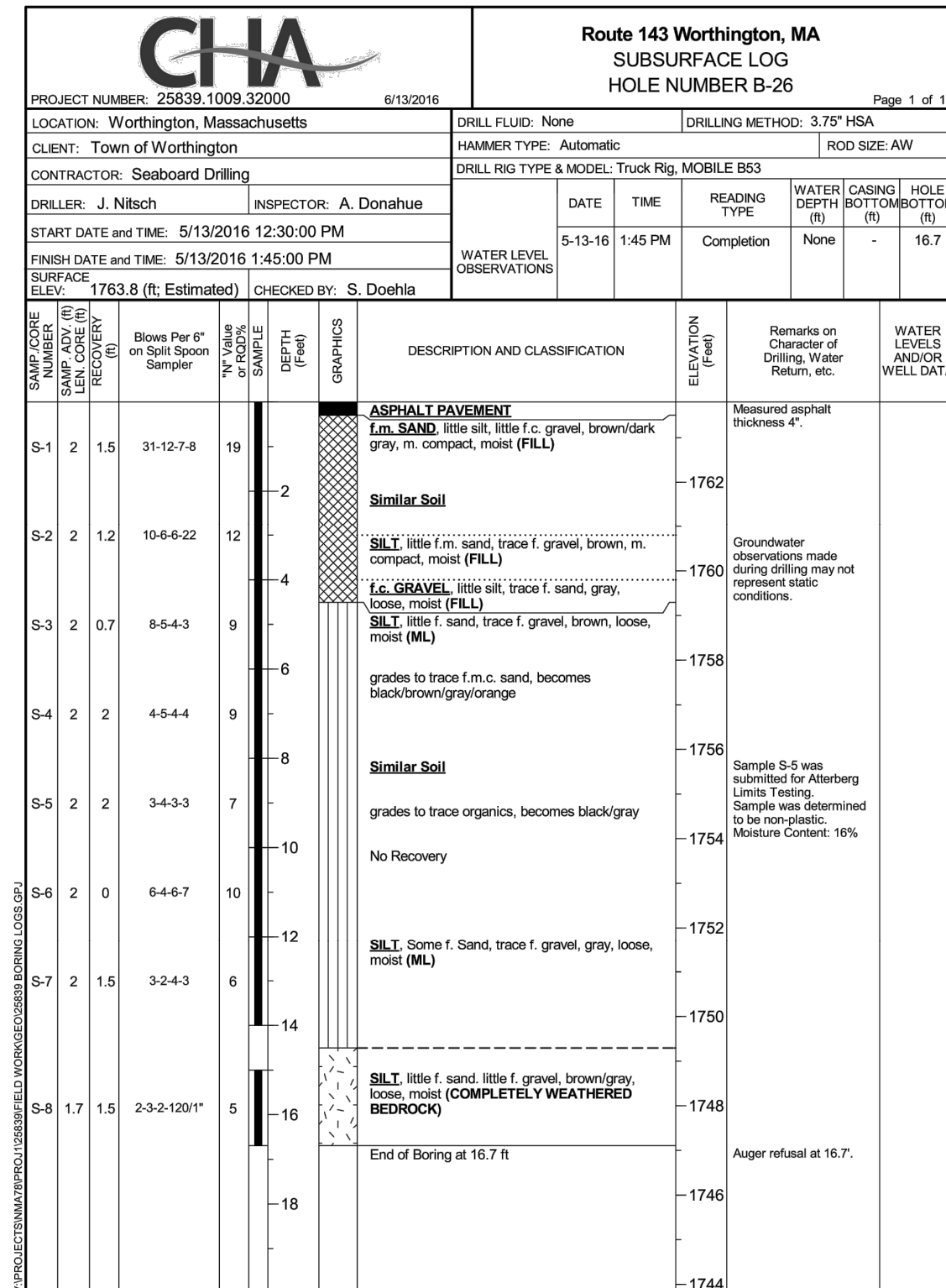
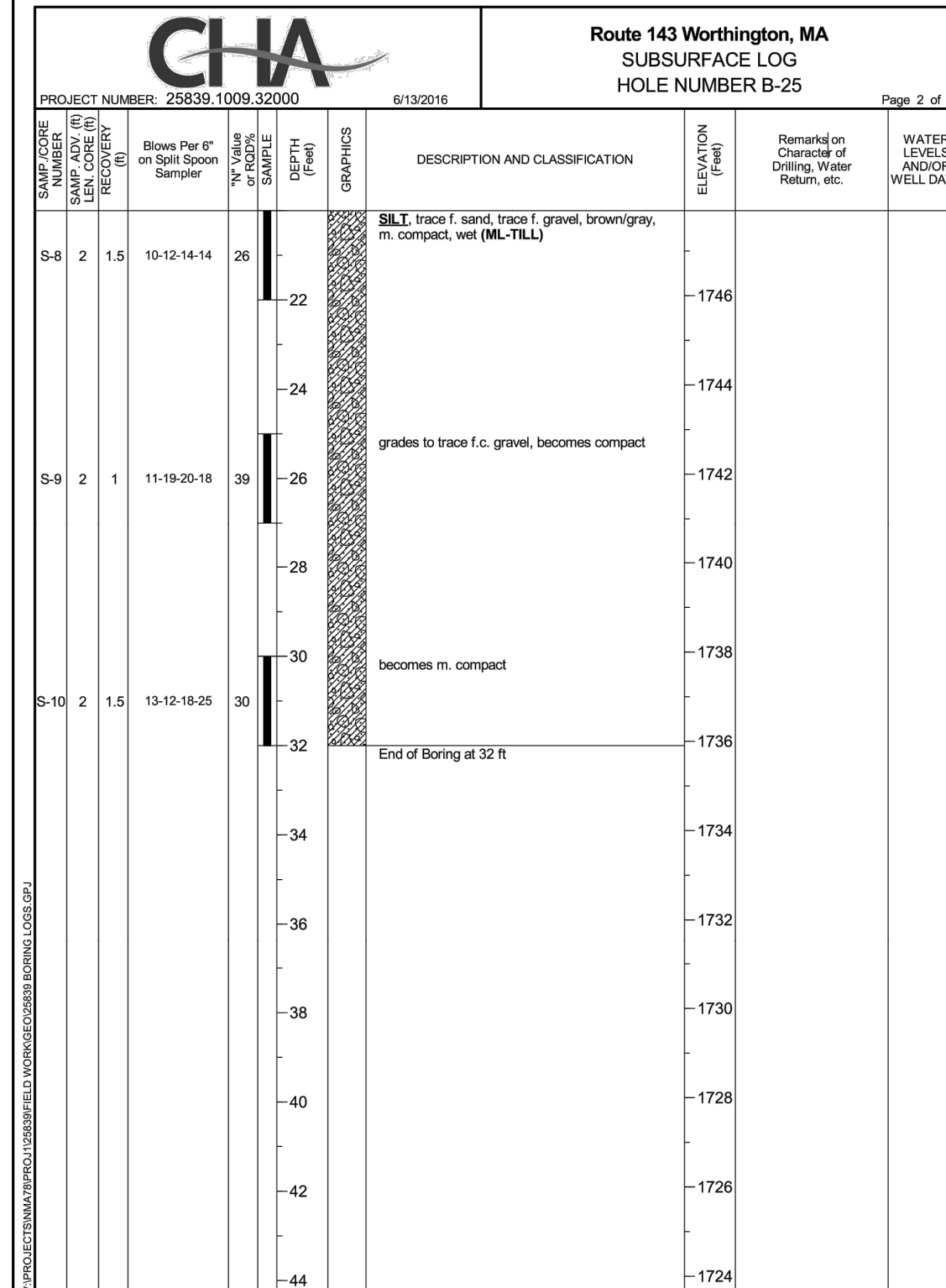
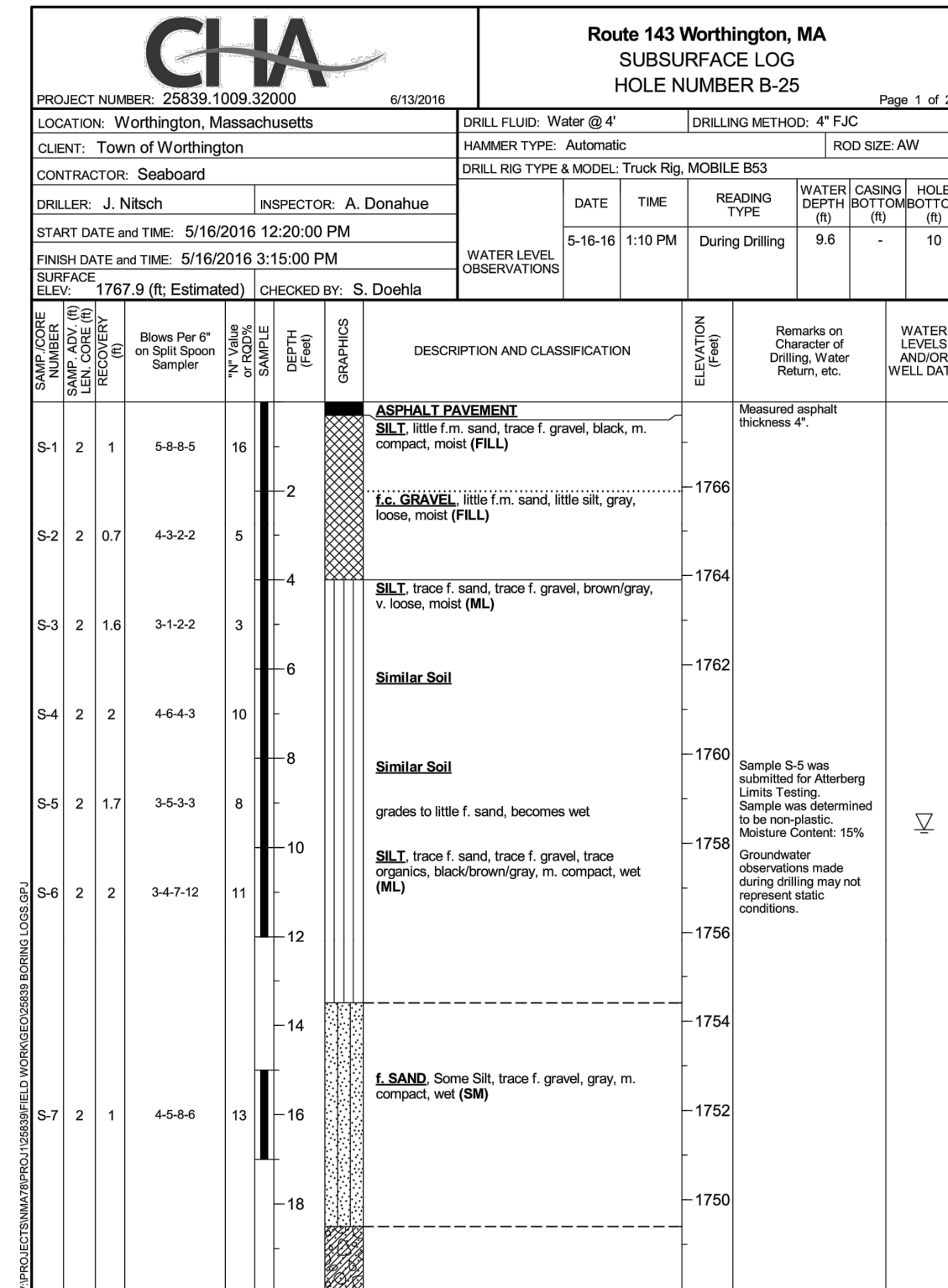
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	7	191
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BORING LOG PLAN - 4

BORING B-25 (STA 138+73 RT)
NORTHING: 2987864.5148
EASTING: 258447.3809

BORING B-26 (STA 139+49 LT)
NORTHING: 2987890.7926
EASTING: 258519.1312

BORING B-27 (STA 139+83 RT)
NORTHING: 2987885.3118
EASTING: 258554.4409



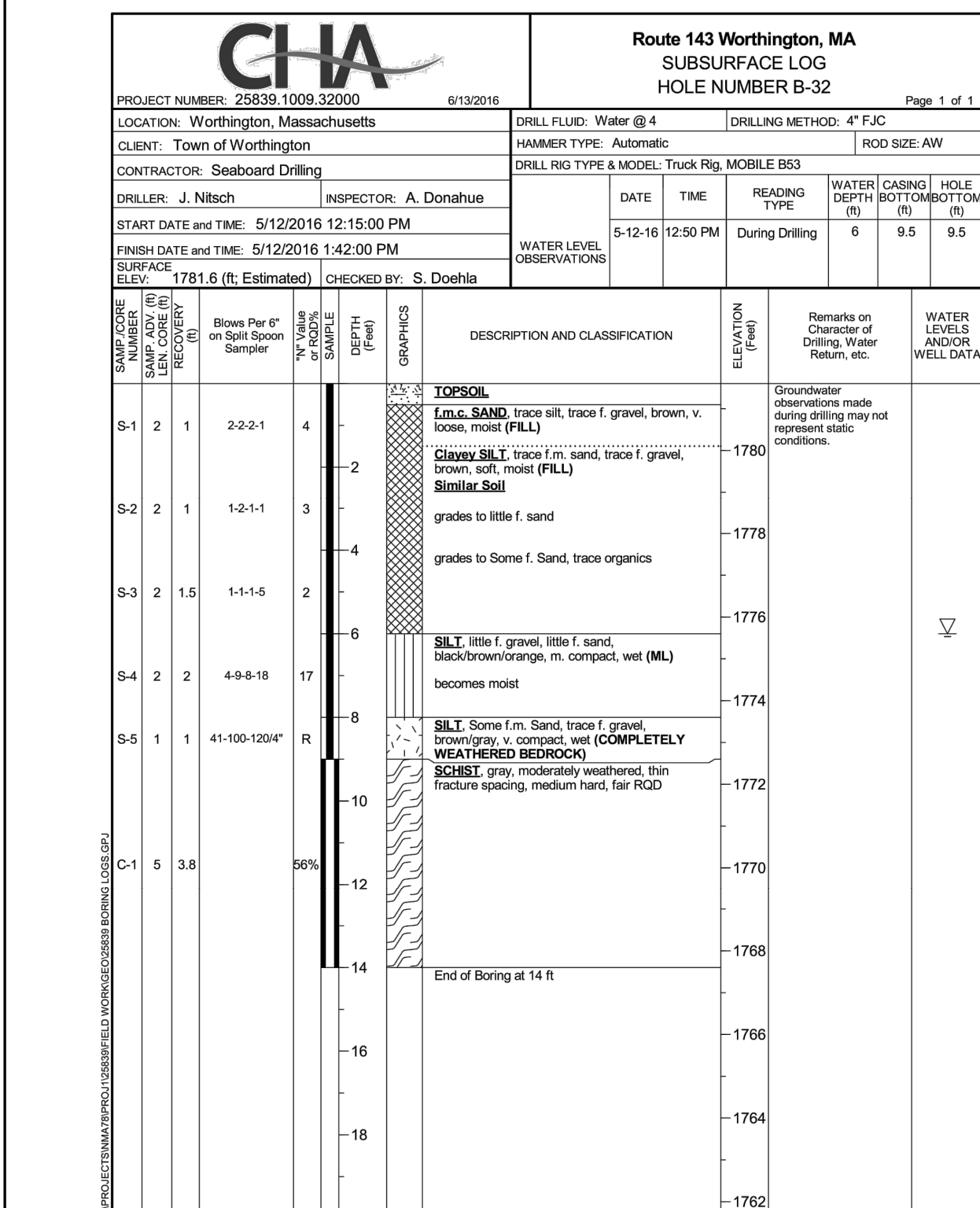
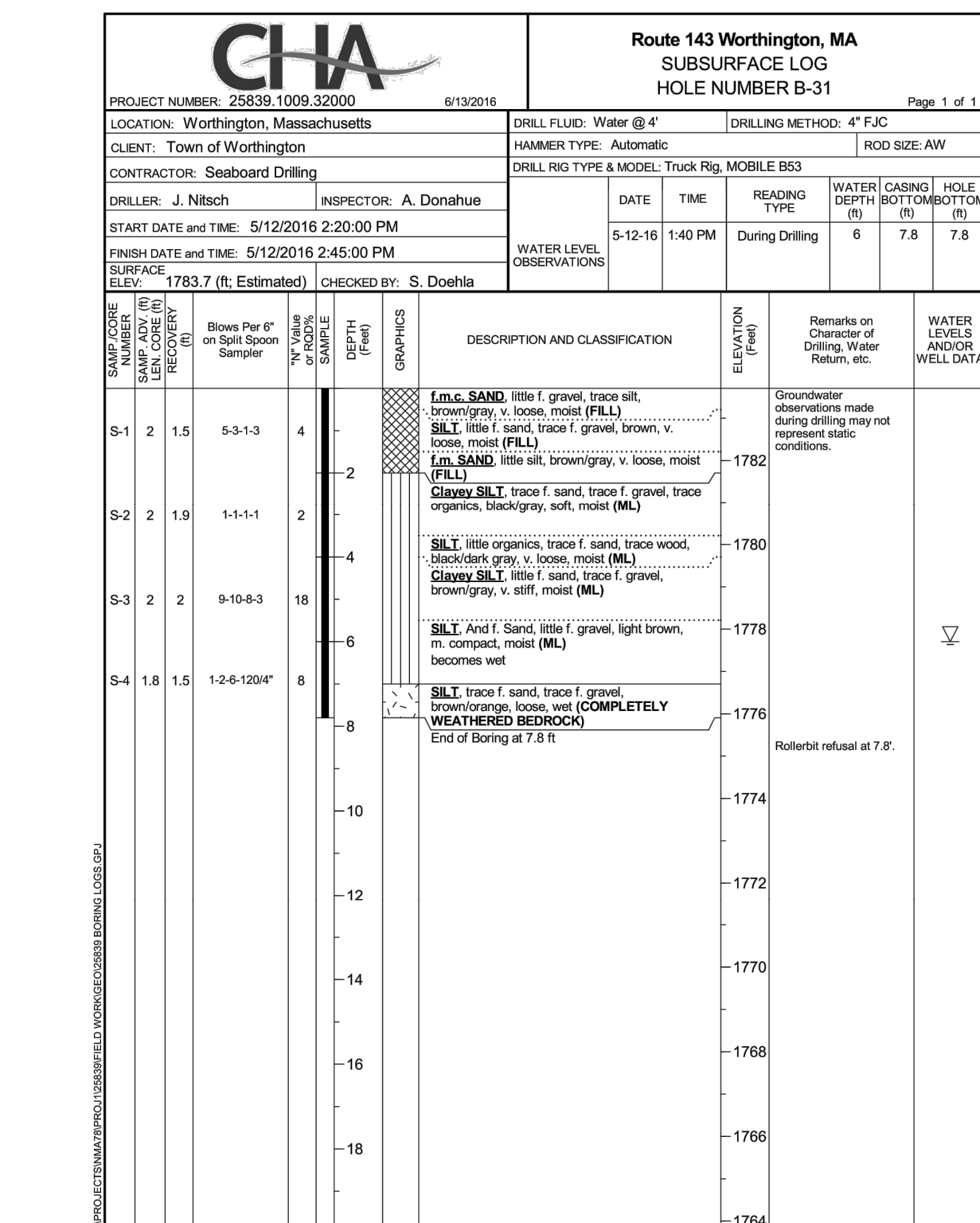
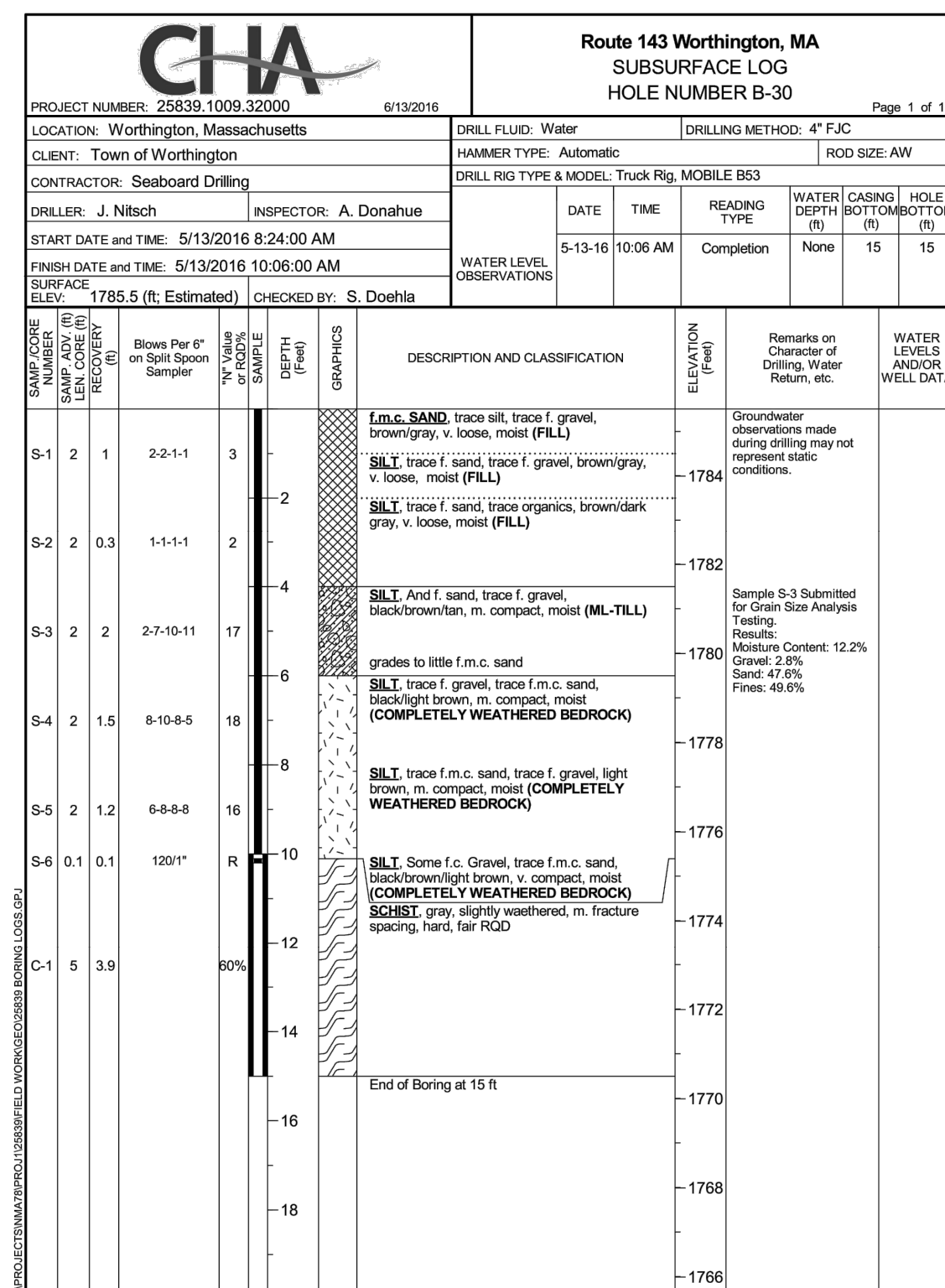
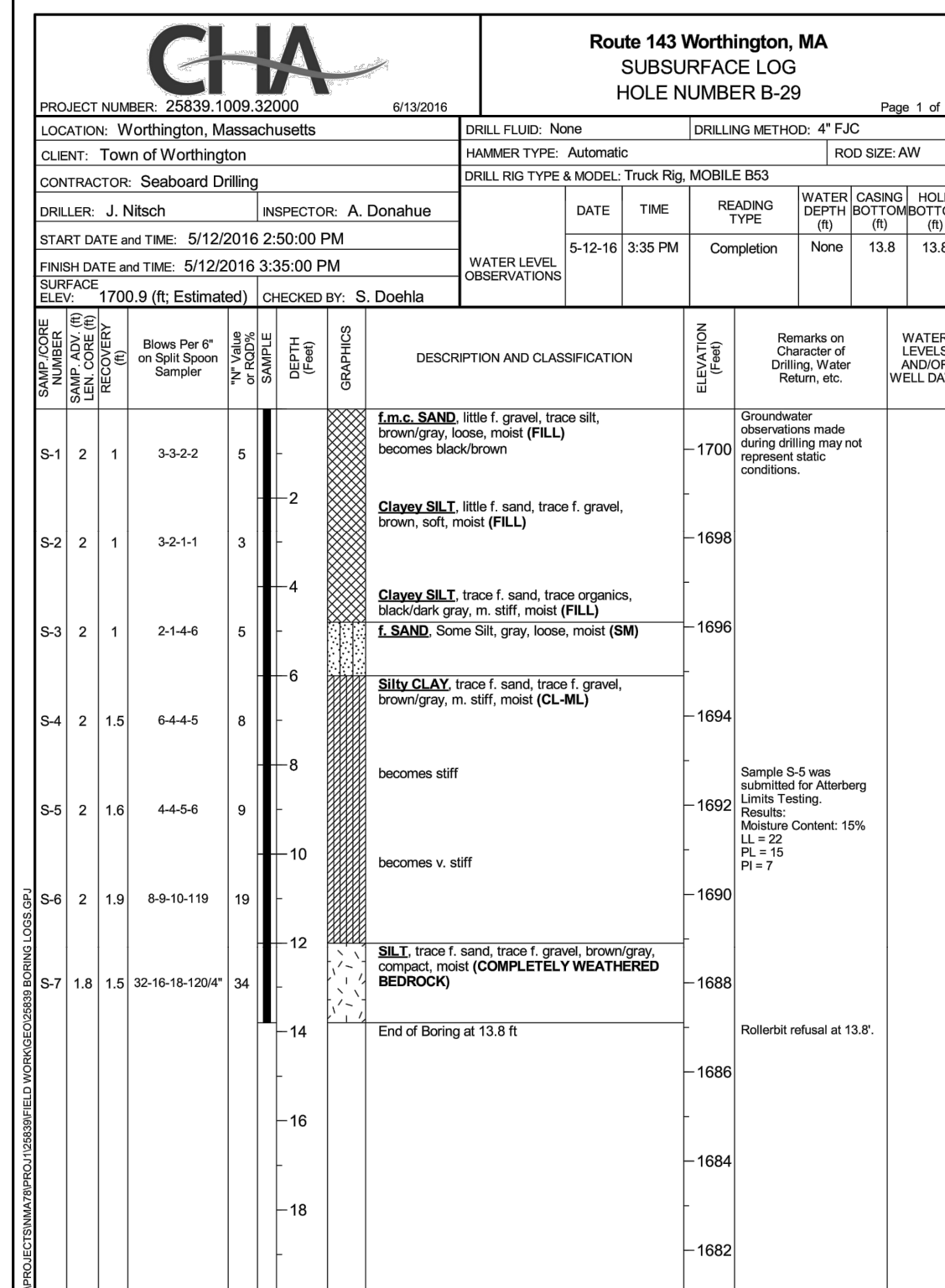
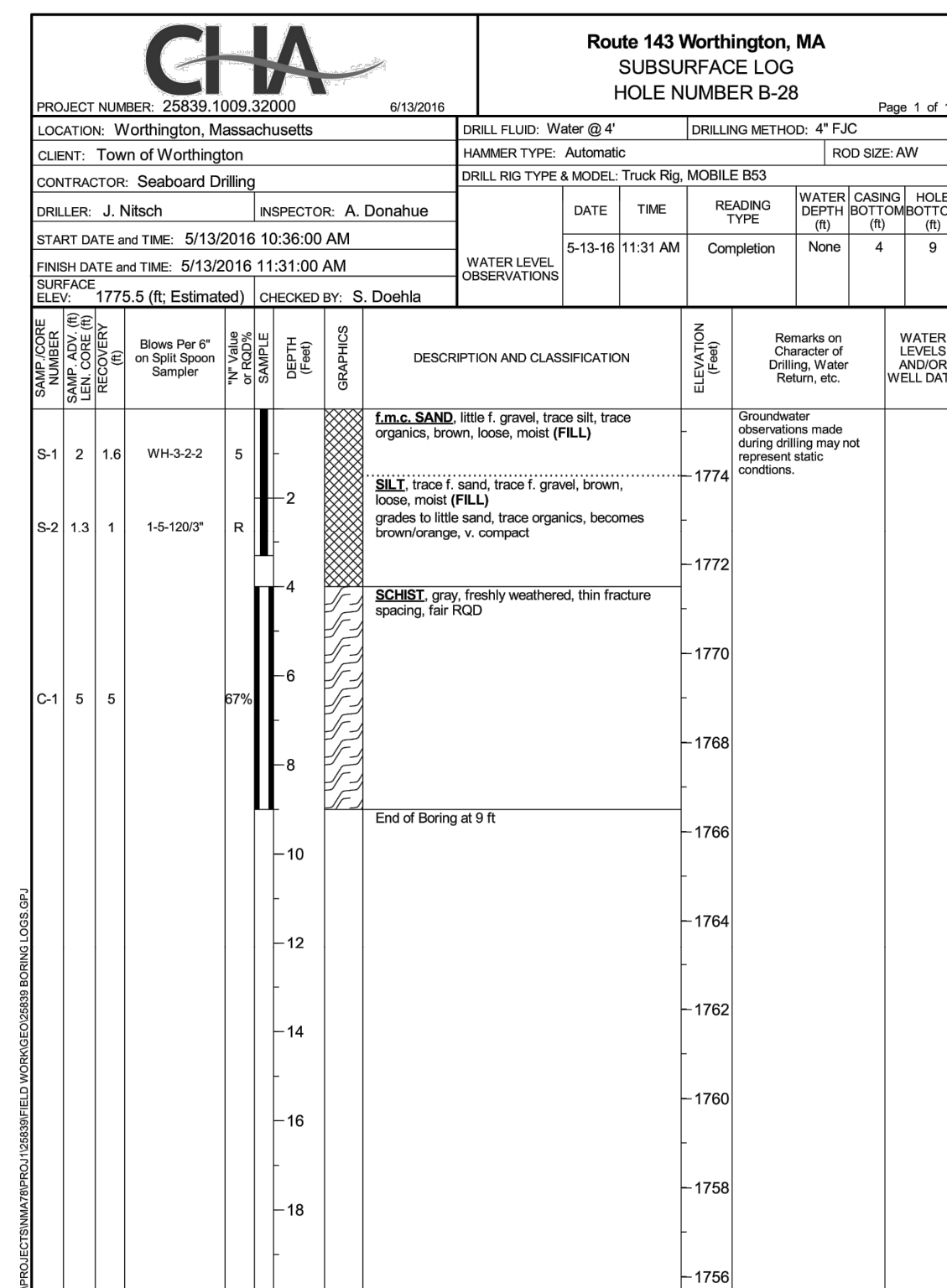
BORING B-28 (STA 166+79 LT)
NORTHING: 2986985.2466
EASTING: 260825.7348

BORING B-29 (STA 191+50 LT)
NORTHING: 2984958.8038
EASTING: 262237.0940

BORING B-30 (STA 192+91 LT)
NORTHING: 2984854.5172
EASTING: 262333.1033

BORING B-31 (STA 193+93 LT)
NORTHING: 2984782.2947
EASTING: 262402.3696

BORING B-32 (STA 195+88 LT)
NORTHING: 2984659.1570
EASTING: 262548.2071



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BORING LOG PLAN - 5

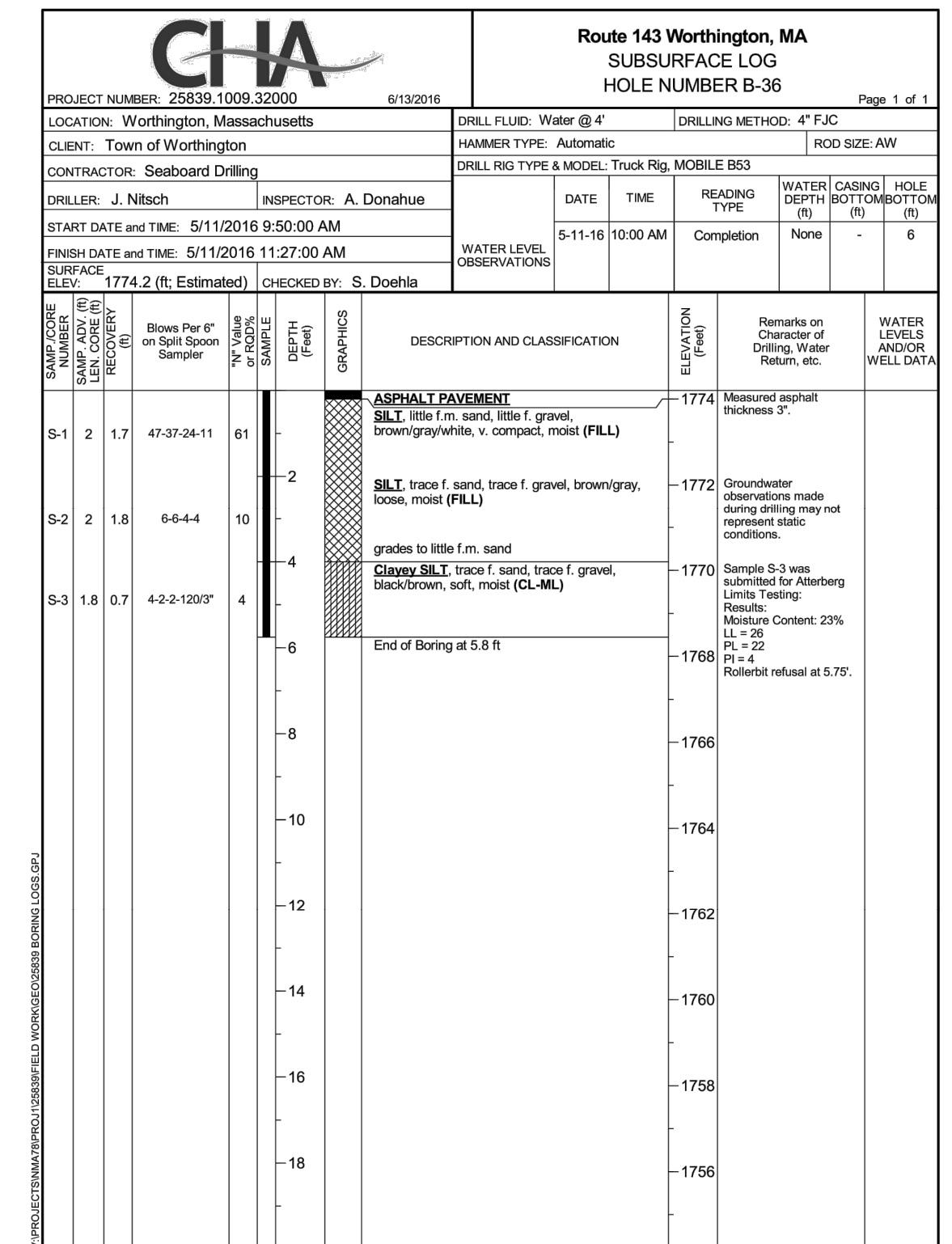
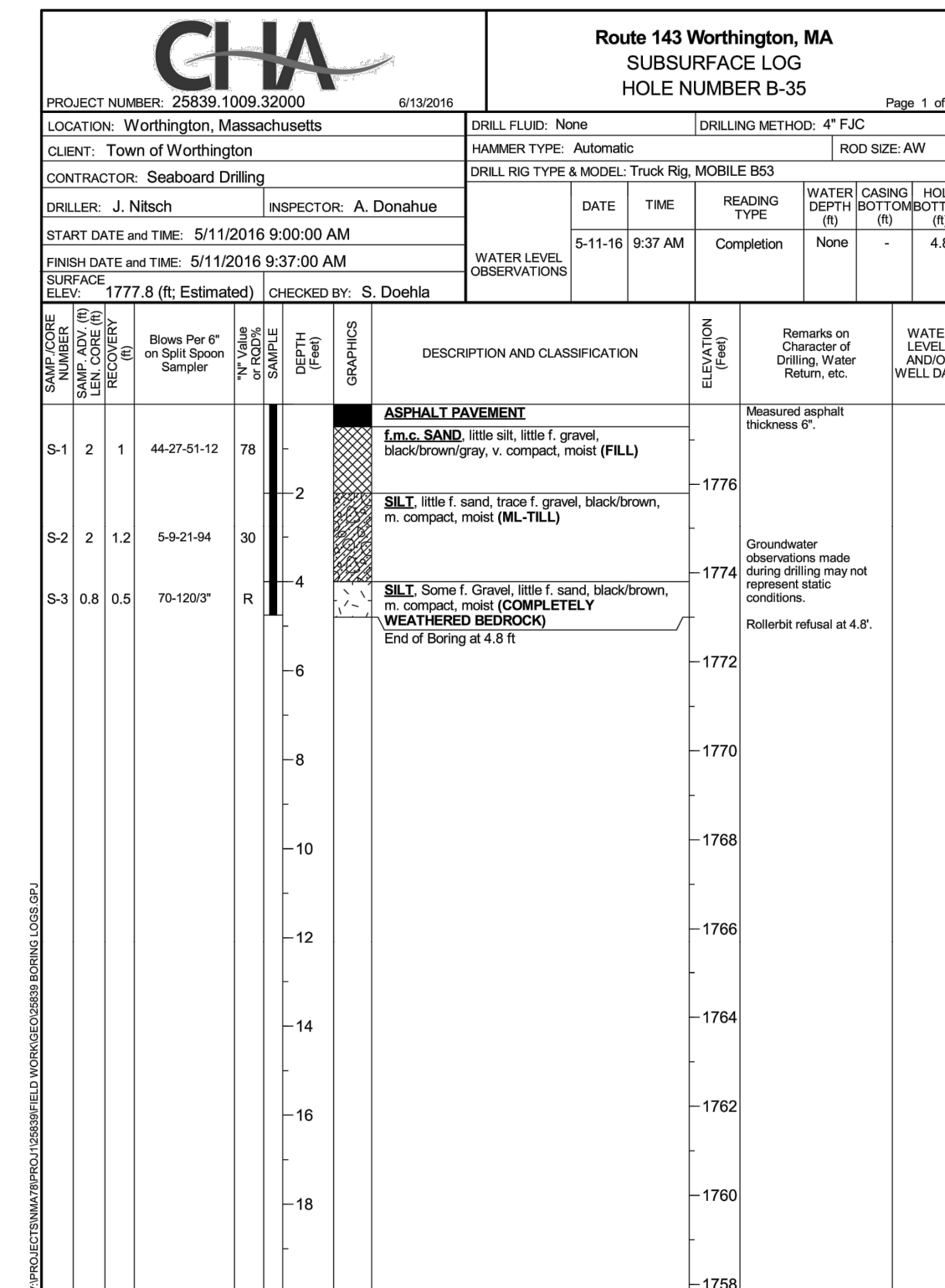
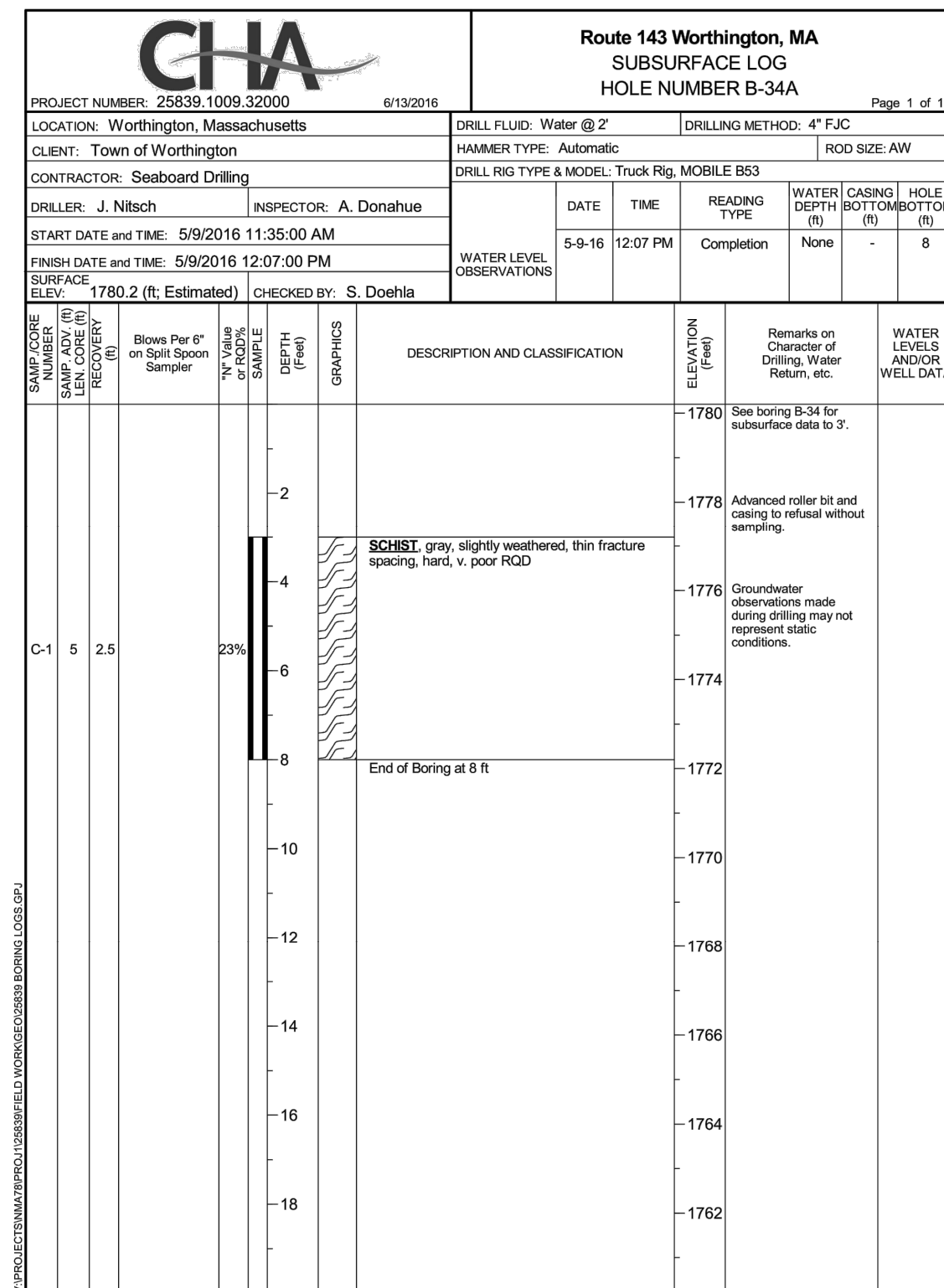
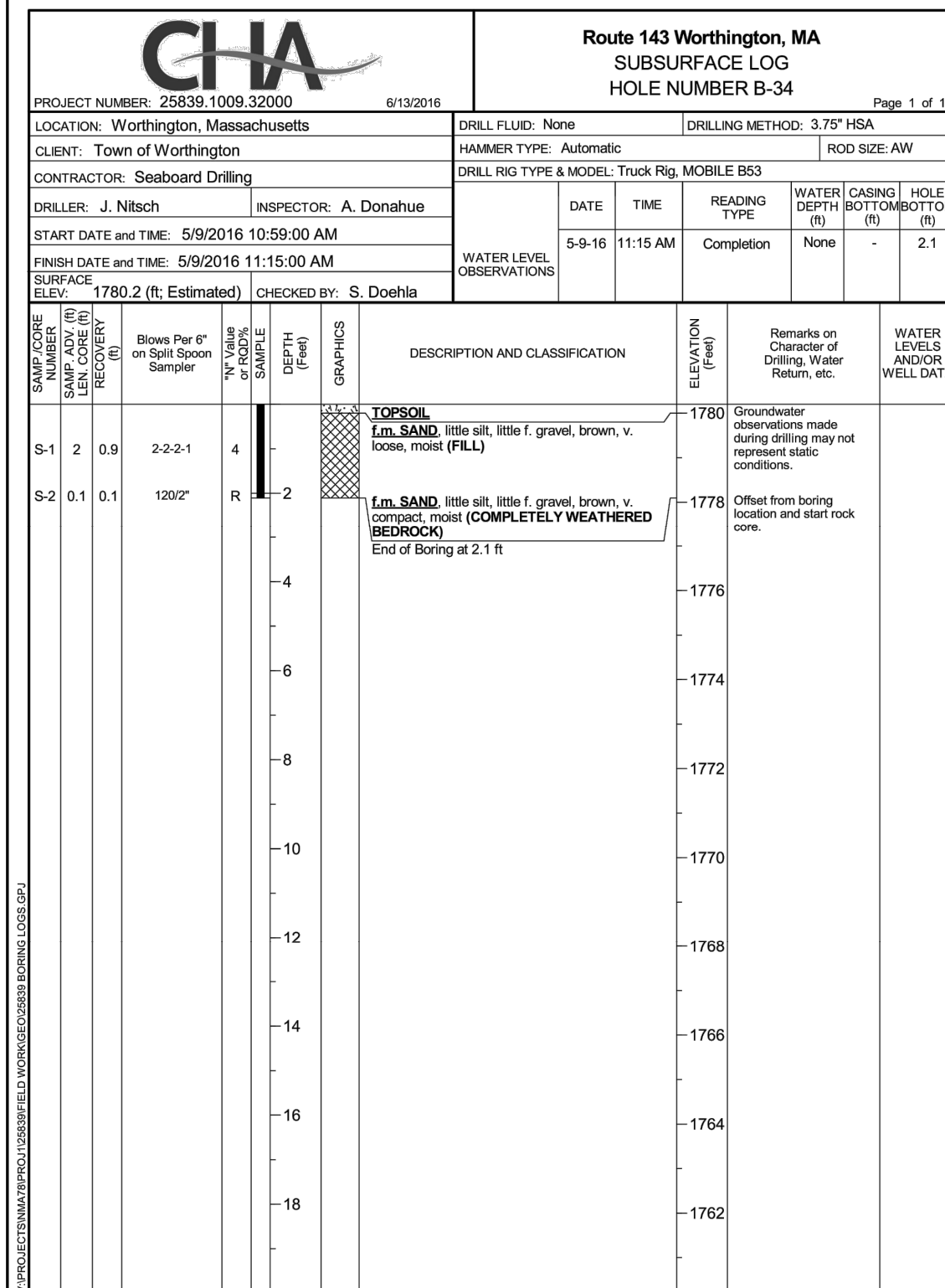
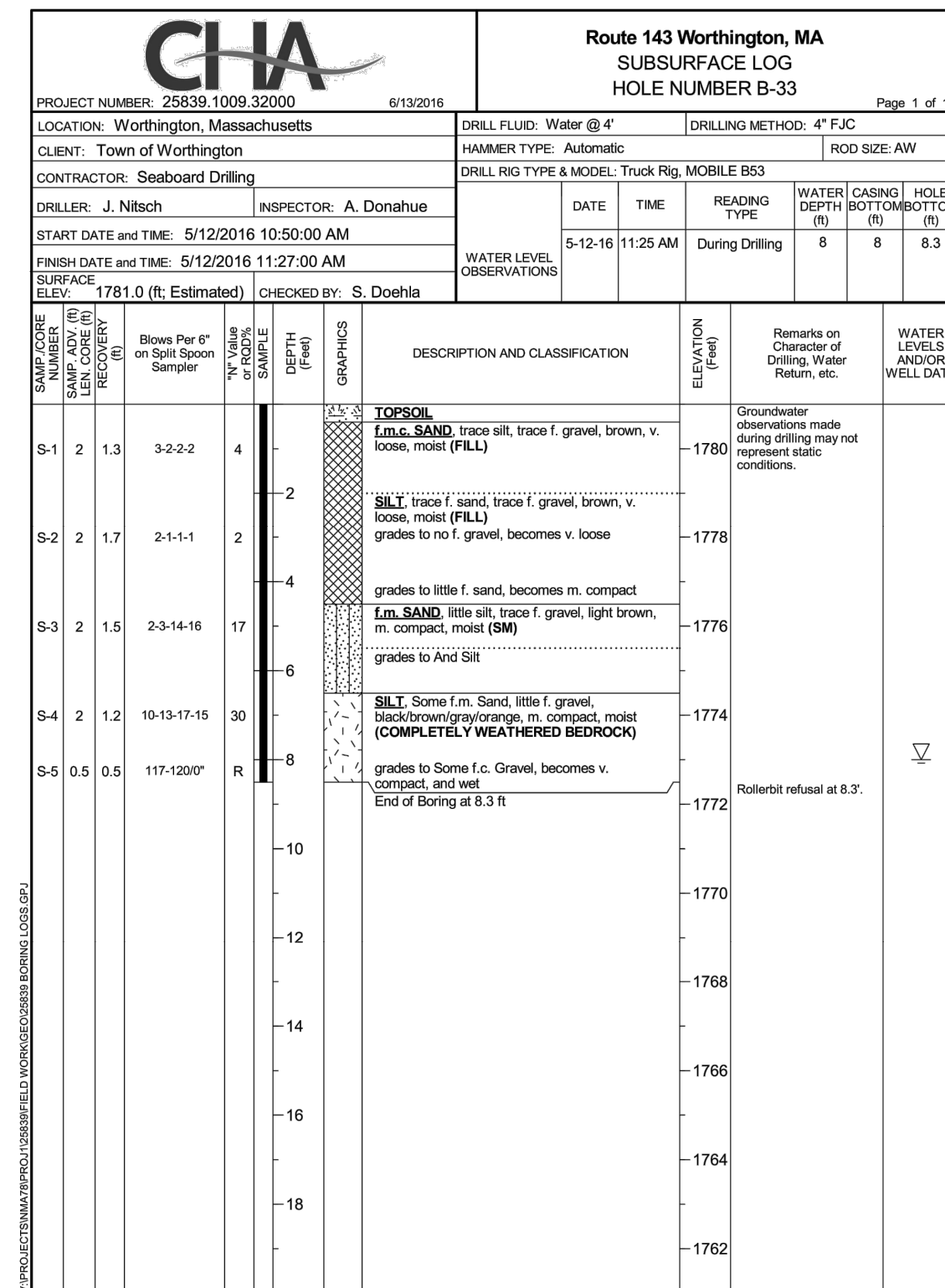
BORING B-33 (STA 196+83 LT)
NORTHING: 2984616.1969
EASTING: 262603.6386

BORING B-34 (STA 197+99 LT)
NORTHING: 2984575.4666
EASTING: 262738.3014

BORING B-34A (STA 198+12 LT)
NORTHING: 2984579.9114
EASTING: 262754.1717

BORING B-35 (STA 198+89 LT)
NORTHING: 2984531.3157
EASTING: 262817.9321

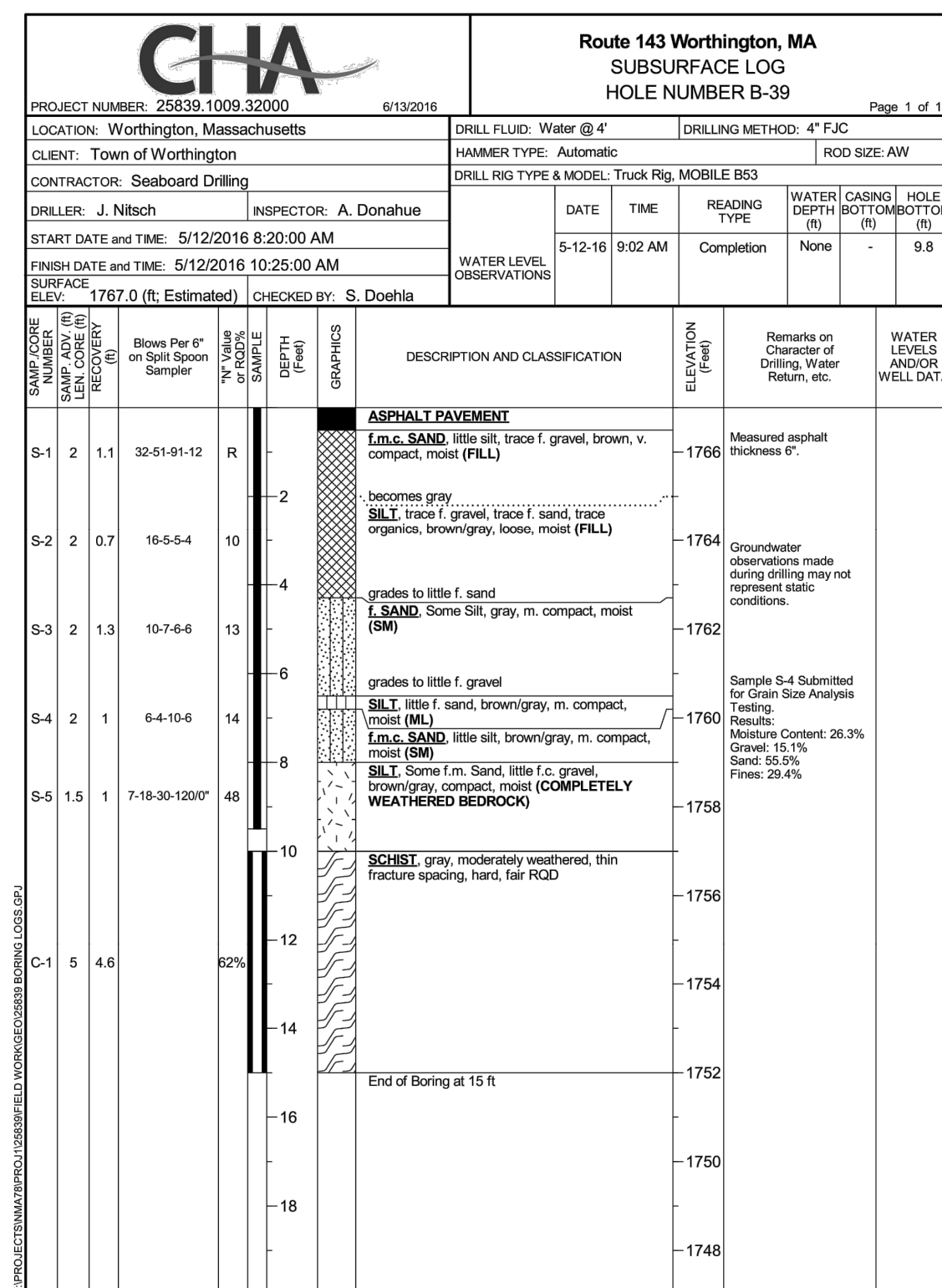
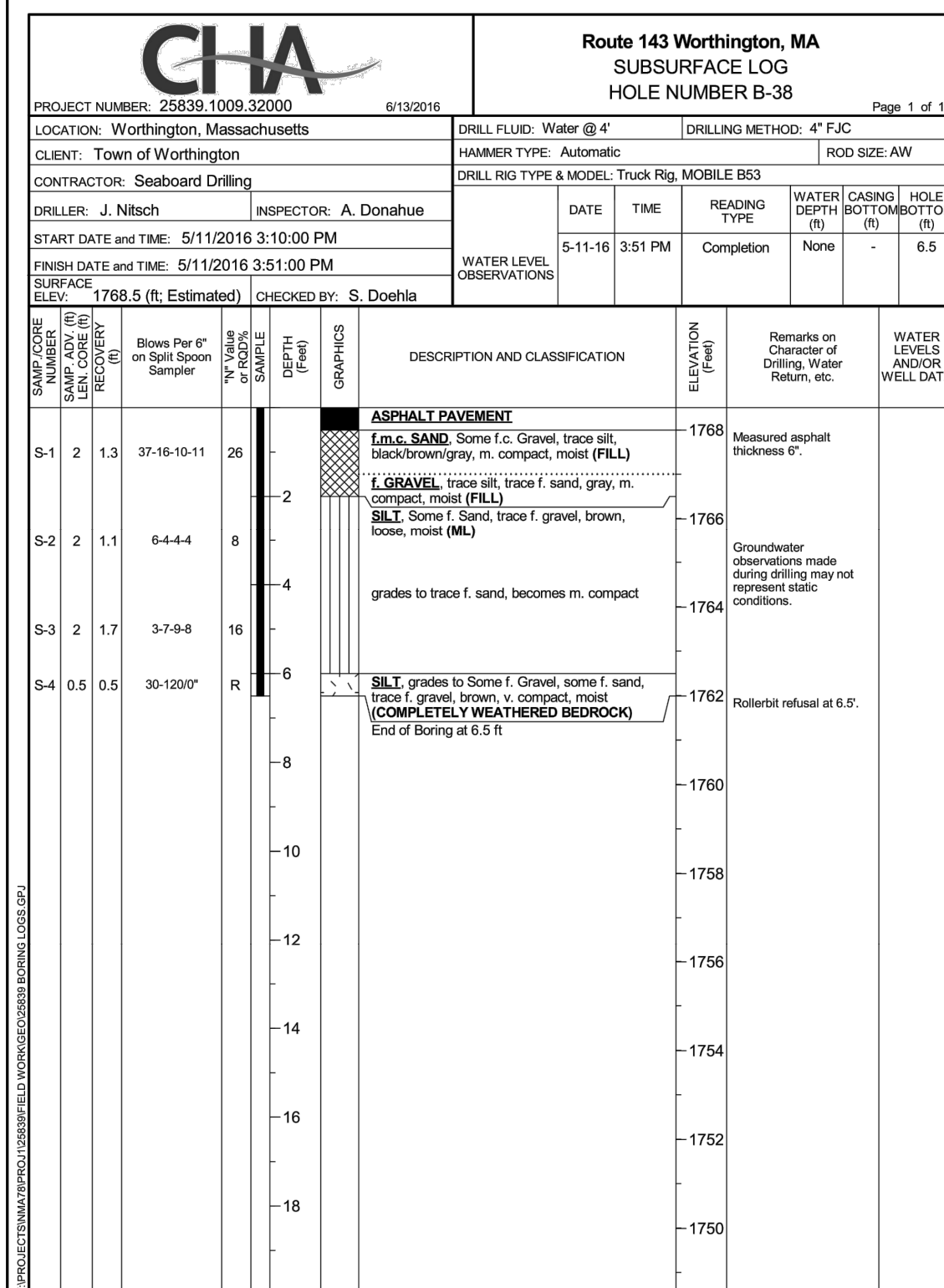
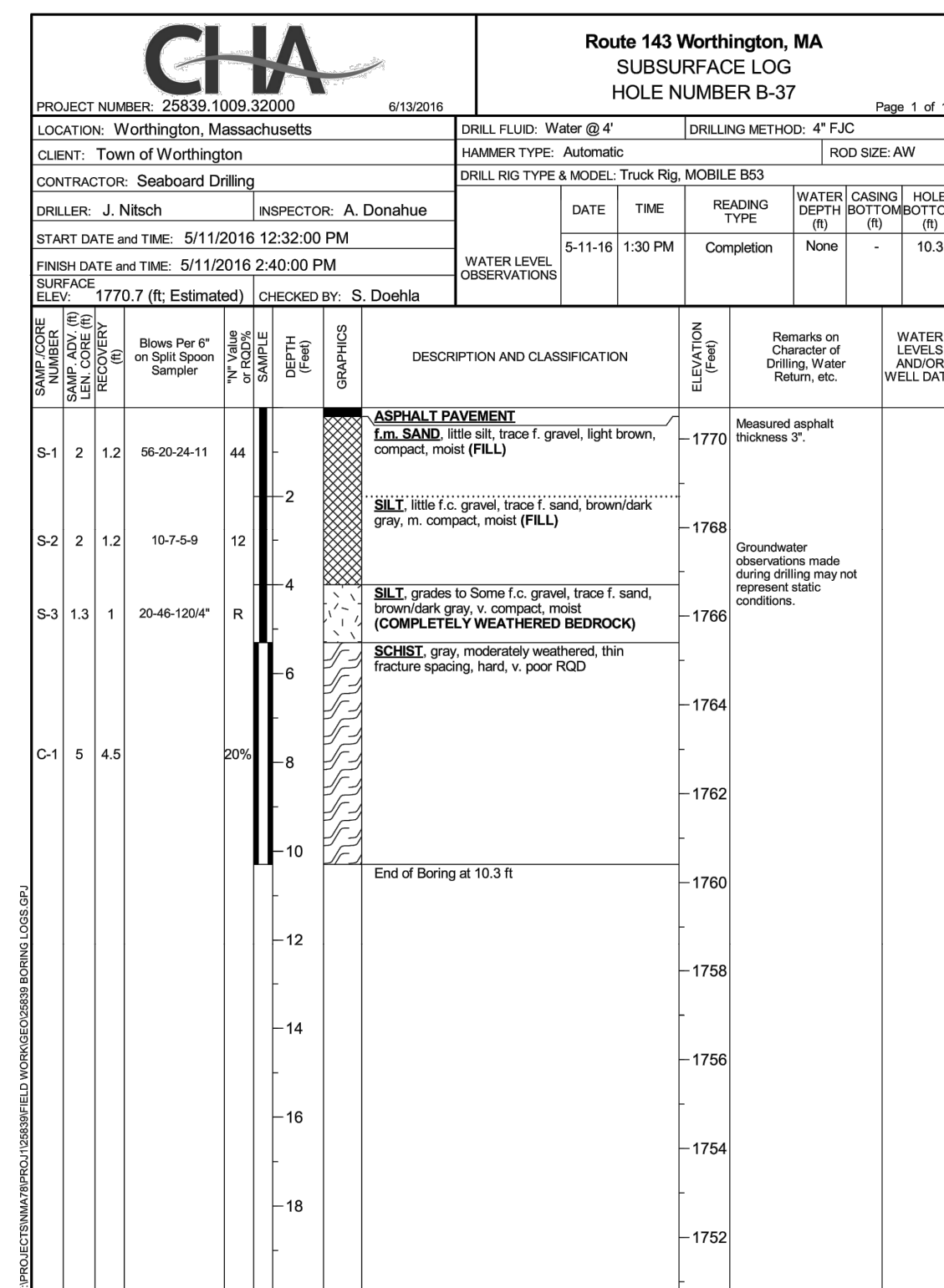
BORING B-36 (STA 199+95 LT)
NORTHING: 2984492.8486
EASTING: 262916.9126



BORING B-37 (STA 200+90 LT)
NORTHING: 2984459.9863
EASTING: 263005.7283

BORING B-38 (STA 202+00 LT)
NORTHING: 2984419.5603
EASTING: 263110.6164

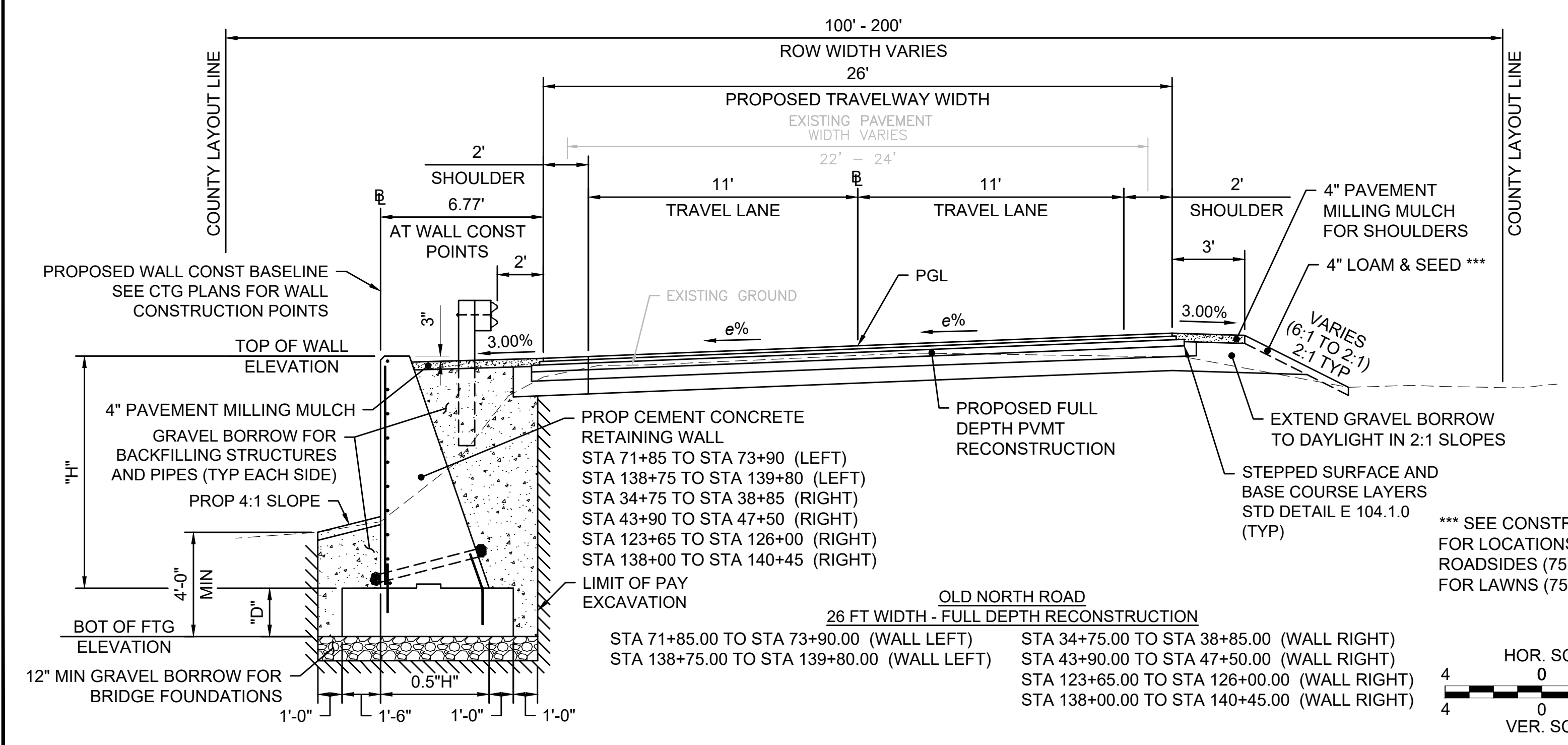
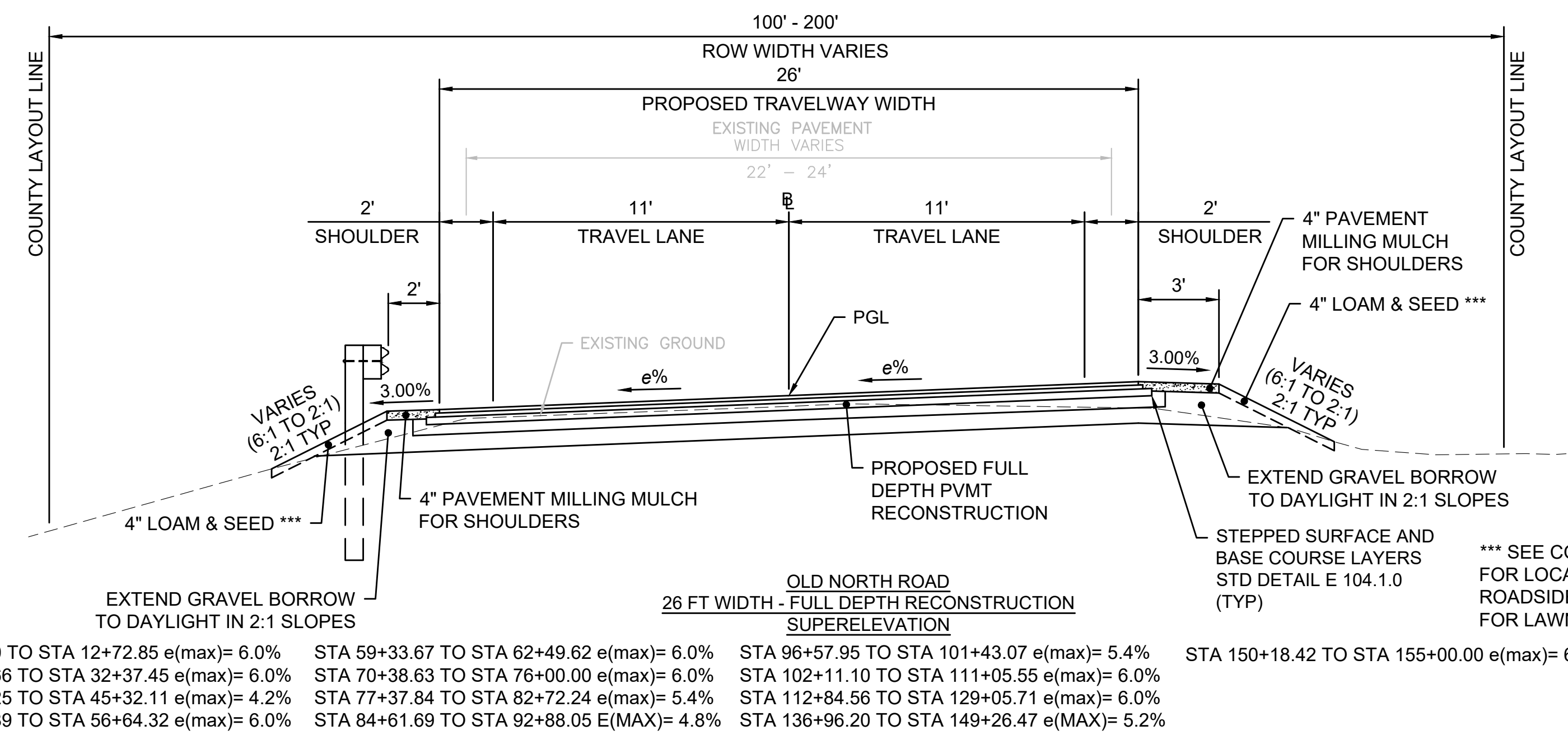
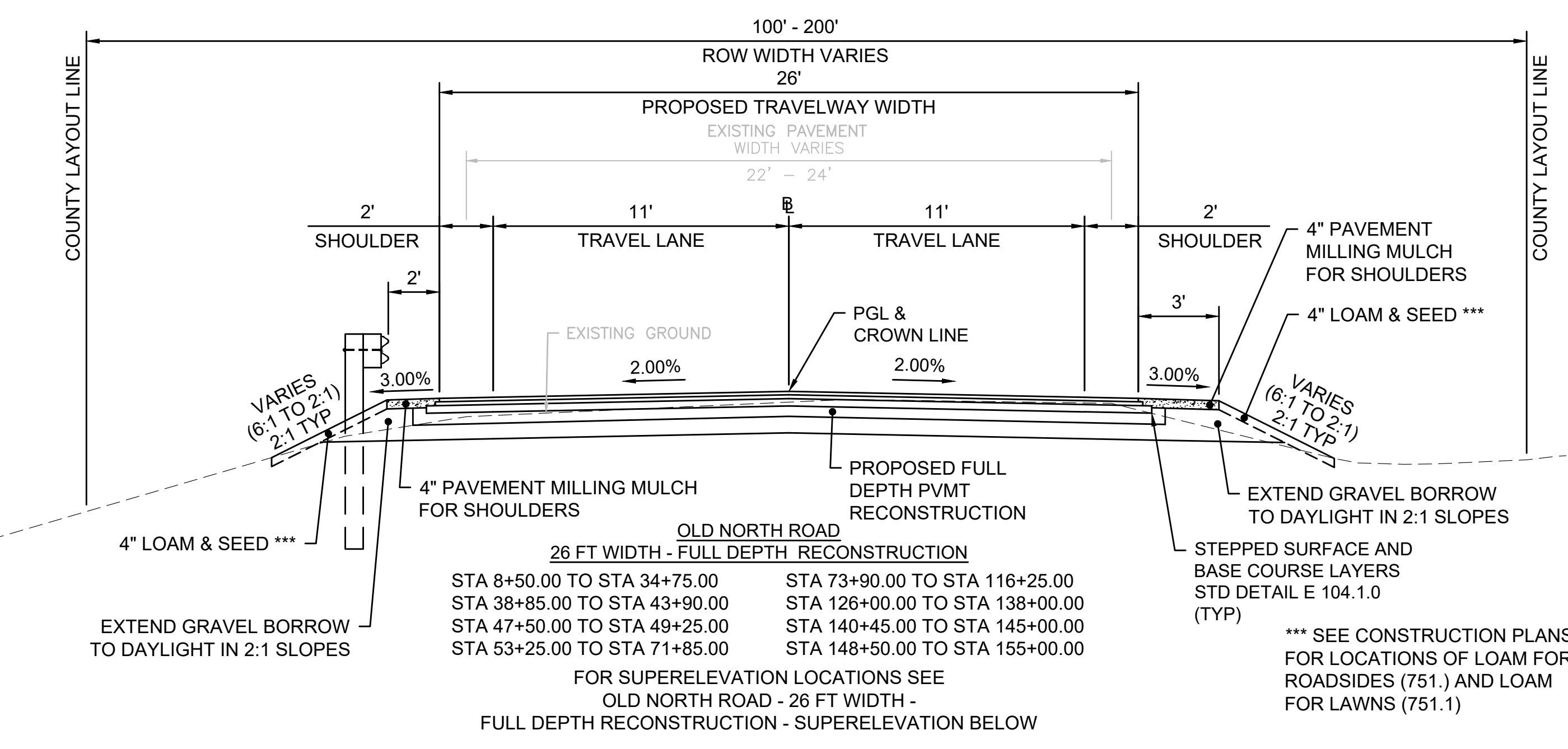
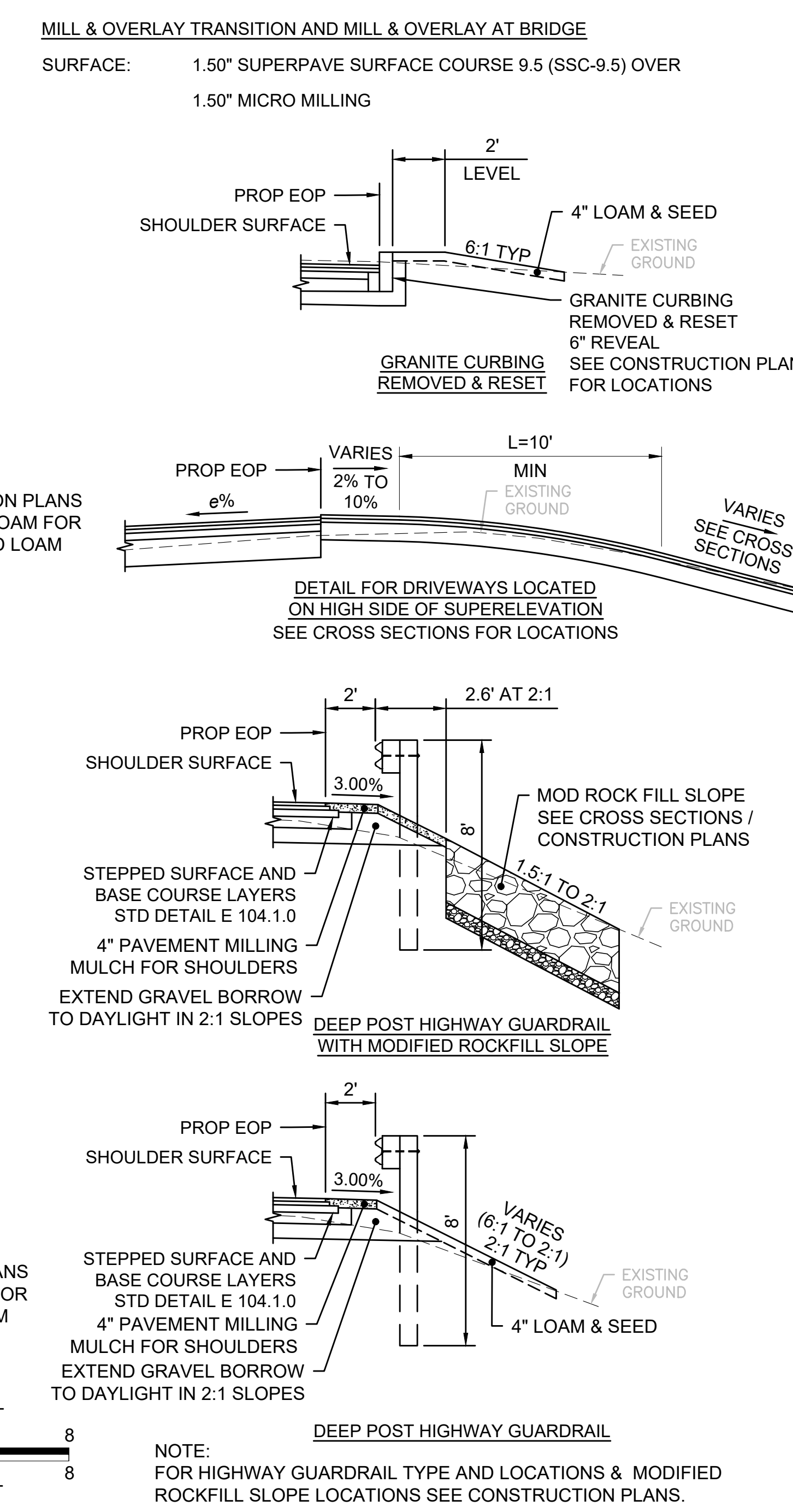
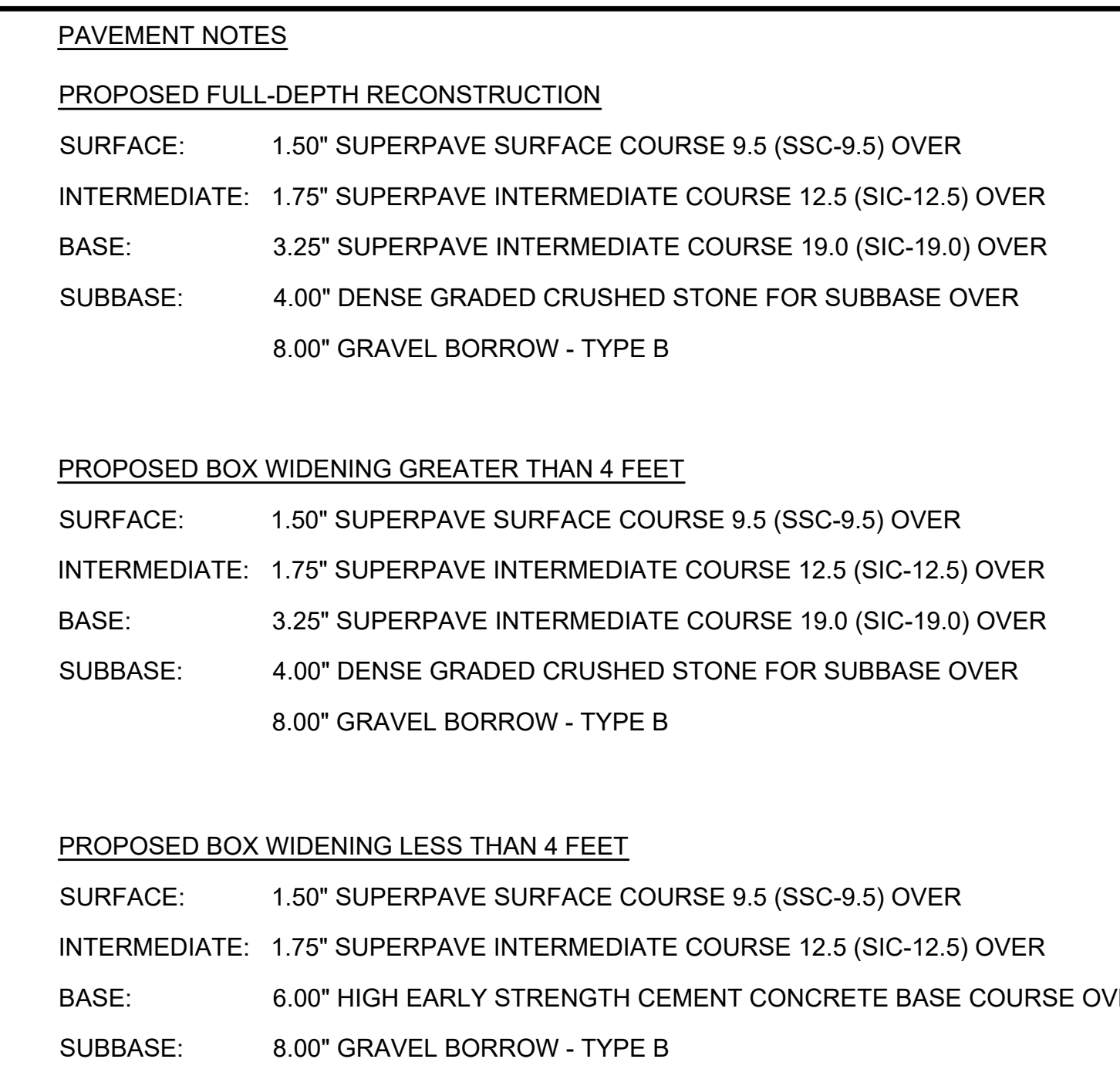
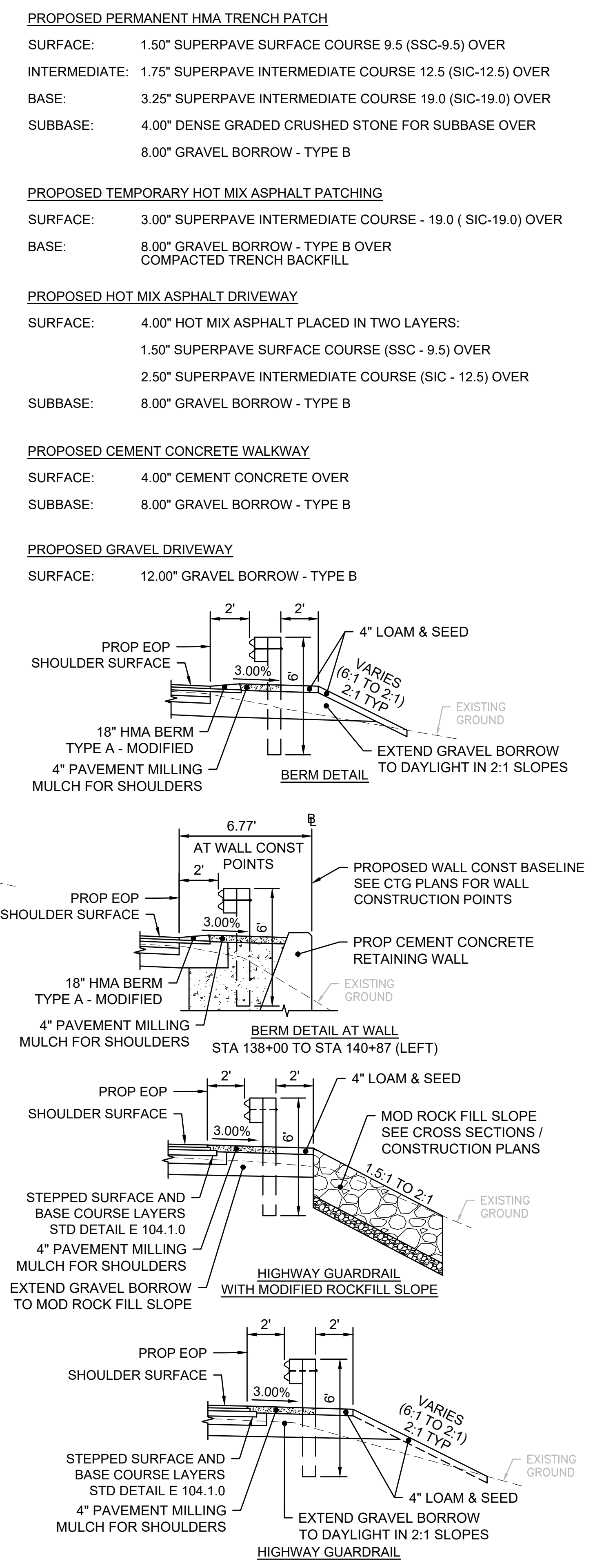
BORING B-39 (STA 203+17 LT)
NORTHING: 2984374.3841
EASTING: 263216.2339



**WORTHINGTON
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TYPICAL SECTIONS - 1

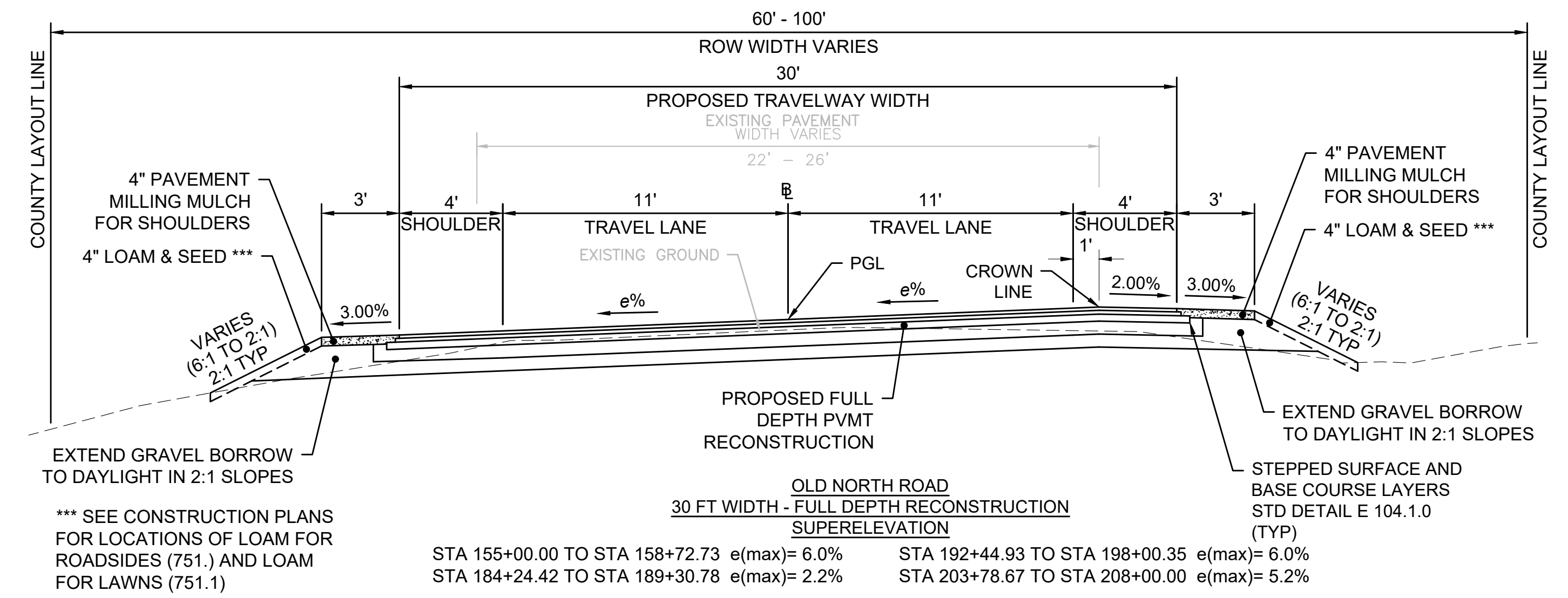
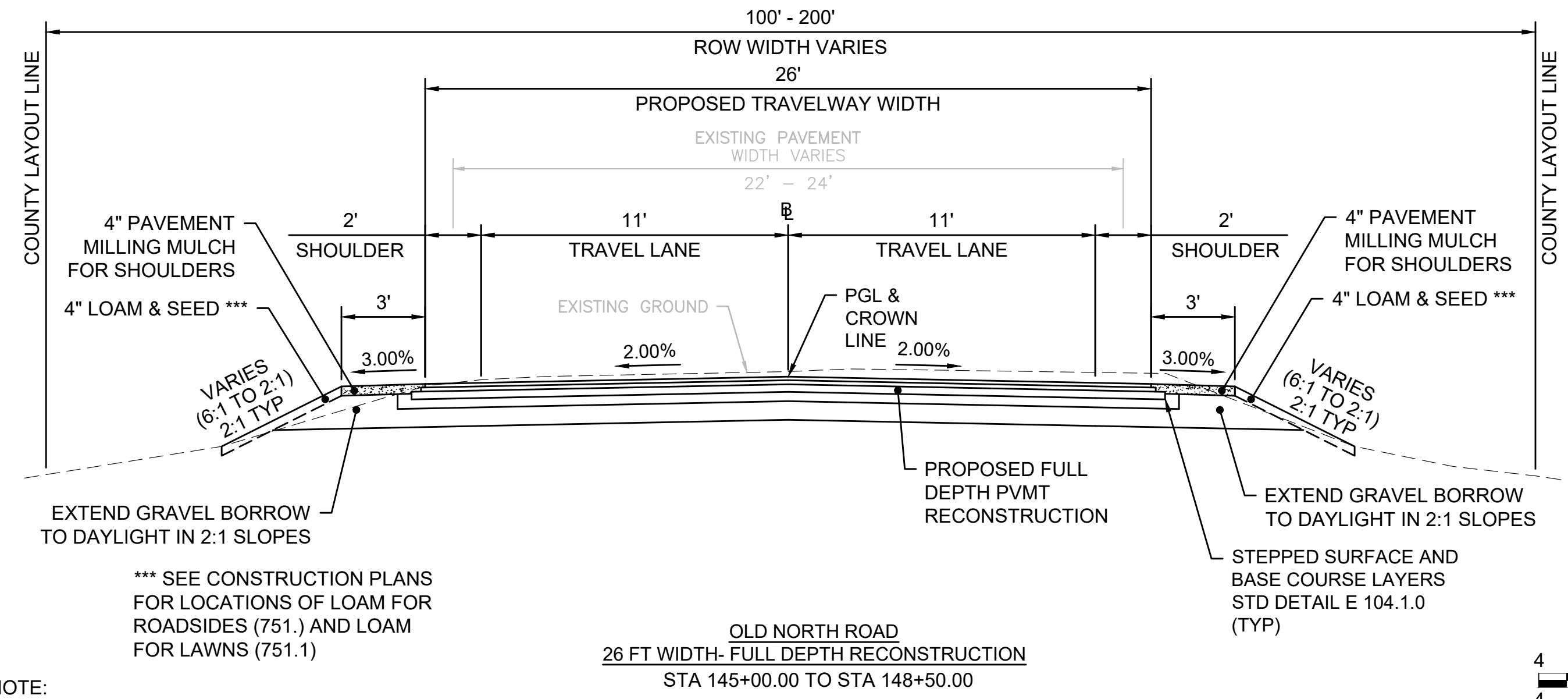
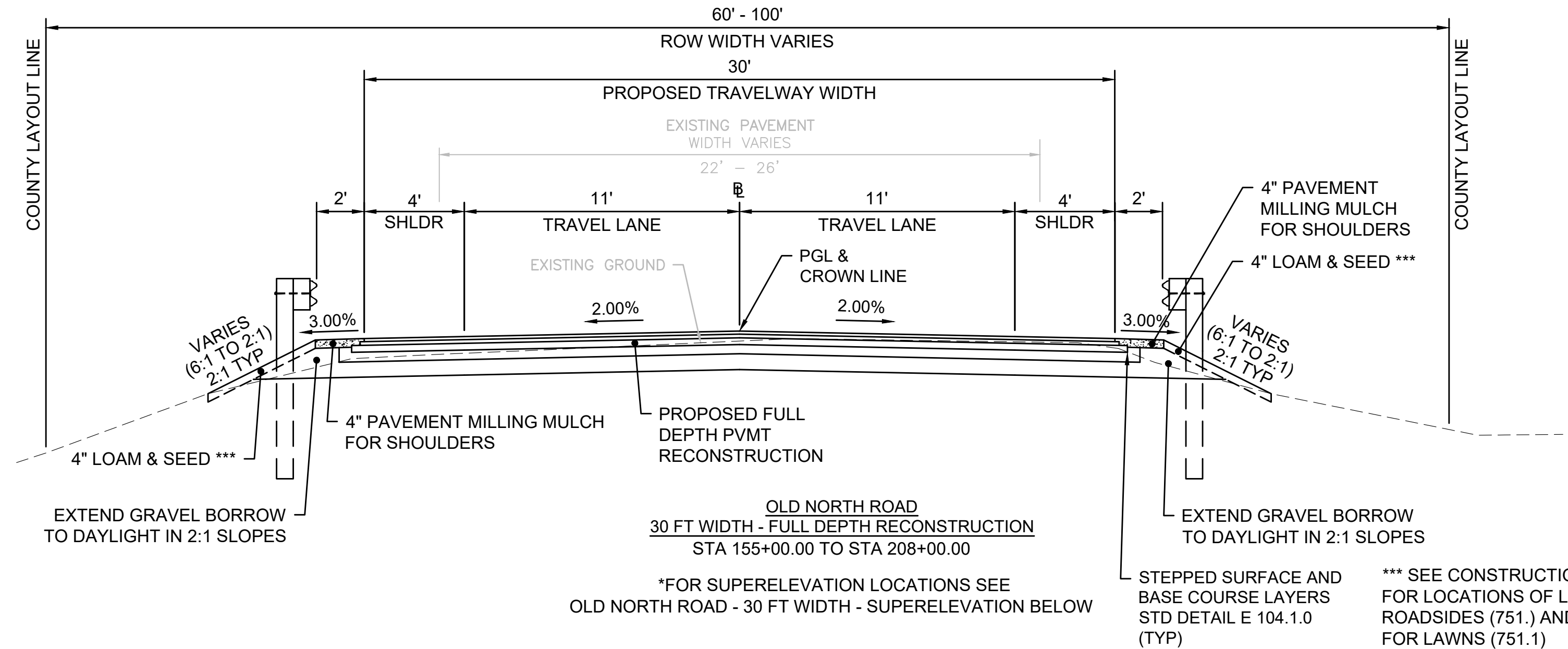
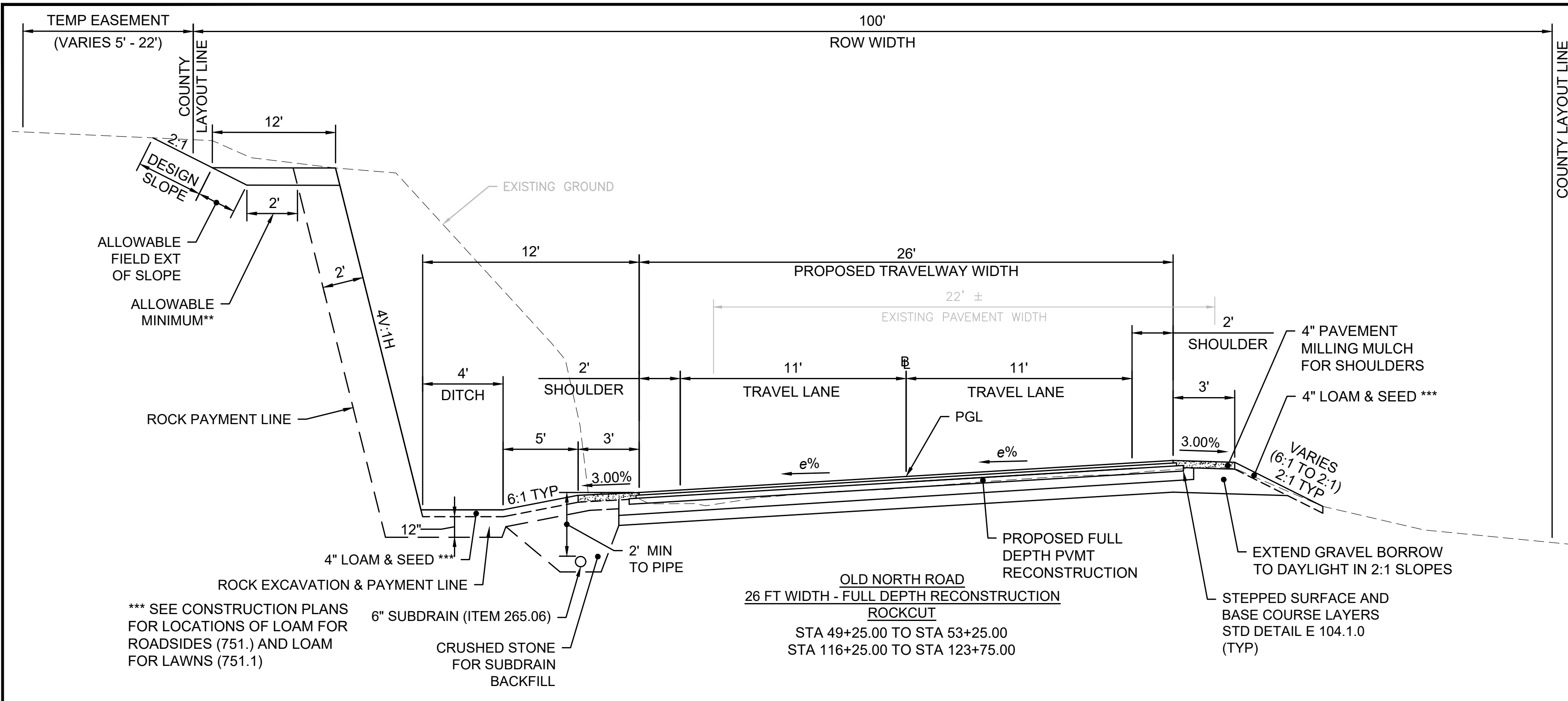


**WORTHINGTON
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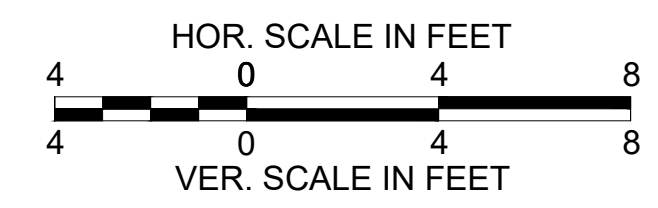
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	10	191
PROJECT FILE NO. 609287			

TYPICAL SECTIONS - 2

- NOTES:
- ONLY ROCK ACTUALLY REMOVED IS PAYABLE. NO PAYMENT WILL BE MADE BEYOND THE ROCK PAYMENT LINE.
 - WHEN THE ROCK CUT IS 10' OR GREATER IN HEIGHT, AND PROPOSED SLOPE IS 1:4 OR STEEPER, ROCK WILL BE PRESPLIT (ITEM 122.) SEE CROSS SECTIONS FOR LOCATIONS.
- ** THE EXTENSION OF THE DESIGN SLOPE IN THE FIELD IS PERMISSIBLE WITHIN THE LIMITS SHOWN (2" SHELFF ON TOP OF THE ROCK), WHEN THE HEIGHT OF THE ROCK CUT IN THE FIELD IS LESS THAN THAT SHOWN ON THE CONSTRUCTION PLANS



NOTE:
FOR HIGHWAY GUARDRAIL TYPE AND LOCATIONS & MODIFIED
ROCKFILL SLOPE LOCATIONS SEE CONSTRUCTION PLANS.



OLD NORTH ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	0+00.00	2983219.503	250591.683		S42° 57' 15"E 143.24'	1+43.24	2983114.666	250689.288
C1	1+43.24	2983114.666	250689.288	R = 505.00' Δ= 118°06'06" L=1040.94' T=842.15'		11+84.18	2983294.835	251536.544
L2	11+84.18	2983294.835	251536.544		N18° 56' 39"E 553.15'	17+37.33	2983818.023	251716.121
C2	17+37.33	2983818.023	251716.121	R = 500.00' Δ= 106°36'45" L=930.37' T=670.95'		26+67.70	2984062.473	252479.791
C3	26+67.70	2984062.473	252479.791	R = 830.00' Δ= 33°18'06" L=482.42' T=248.24'		31+50.11	2983686.595	252771.275
L3	31+50.11	2983686.595	252771.275		S21° 08' 31"E 487.14'	36+37.26	2983232.242	252946.977
C4	36+37.26	2983232.242	252946.977	R = 2300.00' Δ= 13°18'42" L=534.37' T=268.39'		41+71.62	2982716.027	253080.345
C5	41+71.62	2982716.027	253080.345	R = 1800.00' Δ= 9°32'37" L=299.82' T=150.26'		44+71.44	2982423.769	253145.683
L4	44+71.44	2982423.769	253145.683		S17° 22' 25"E 429.12'	49+00.56	2982014.223	253273.821
C6	49+00.56	2982014.223	253273.821	R = 310.00' Δ= 124°46'23" L=675.09' T=592.64'		55+75.65	2981916.561	253814.449
L5	55+75.65	2981916.561	253814.449		N37° 51' 12"E 445.35'	60+21.01	2982268.206	254087.737
C7	60+21.01	2982268.206	254087.737	R = 800.00' Δ= 10°07'06" L=141.28' T=70.82'		61+62.28	2982371.542	254183.805
L6	61+62.28	2982371.542	254183.805		N47° 58' 18"E 258.25'	64+20.53	2982544.441	254375.637
C8	64+20.53	2982544.441	254375.637	R = 1800.00' Δ= 8°03'51" L=253.34' T=126.88'		66+73.88	2982700.273	254575.119
L7	66+73.88	2982700.273	254575.119		N56° 02' 09"E 453.43'	71+27.30	2982953.592	254951.185
C9	71+27.30	2982953.592	254951.185	R = 570.00' Δ= 38°38'05" L=384.35' T=199.81'		75+11.66	2983255.880	255176.654
L8	75+11.66	2983255.880	255176.654		N17° 24' 03"E 307.52'	78+19.18	2983549.331	255268.621
C10	78+19.18	2983549.331	255268.621	R = 1000.00' Δ= 21°17'52" L=371.72' T=188.03'		81+90.90	2983875.501	255442.412
L9	81+90.90	2983875.501	255442.412		N38° 41' 55"E 344.80'	85+35.69	2984144.594	255657.987
C11	85+35.69	2984144.594	255657.987	R = 1300.00' Δ= 29°53'52" L=678.36' T=347.09'		92+14.05	2984758.482	255928.103
L10	92+14.05	2984758.482	255928.103		N8° 48' 04"E 525.24'	97+39.29	2985277.536	256008.466
C12	97+39.29	2985277.536	256008.466	R = 1000.00' Δ= 18°28'28" L=322.44' T=162.63'		100+61.73	2985598.573	256006.022
L11	100+61.73	2985598.573	256006.022		N9° 40' 25"W 230.71'	102+92.44	2985825.999	255967.255
C13	102+92.44	2985825.999	255967.255	R = 1000.00' Δ= 8°56'15" L=155.99' T=78.15'		104+48.43	2985981.187	255953.119
L12	104+48.43	2985981.187	255953.119		N0° 44' 10"W 180.21'	106+28.63	2986161.380	255950.804
C14	106+28.63	2986161.380	255950.804	R = 650.00' Δ= 34°13'21" L=388.24' T=200.11'		110+16.88	2986528.361	256058.639
L13	110+16.88	2986528.361	256058.639		N33° 29' 11"E 356.36'	113+73.23	2986825.569	256255.255
C15	113+73.23	2986825.569	256255.255	R = 540.00' Δ= 49°35'38" L=467.41' T=249.48'		118+40.64	2987063.697	256640.566
L14	118+40.64	2987063.697	256640.566		N83° 04' 49"E 171.96'	120+12.61	2987084.414	256811.275
C16	120+12.61	2987084.414	256811.275	R = 400.00' Δ= 45°42'31" L=319.11' T=168.59'		123+31.71	2987238.707	257080.970
L15	123+31.71	2987238.707	257080.970		N37° 22' 18"E 163.48'	124+95.19	2987368.625	257180.197
C17	124+95.19	2987368.625	257180.197	R = 530.00' Δ= 34°47'39" L=321.85' T=166.06'		128+17.04	2987551.456	257439.076
L16	128+17.04	2987551.456	257439.076		N72° 09' 57"E 960.50'	137+77.54	2987845.622	258353.419
C18	137+77.54	2987845.622	258353.419	R = 1170.00' Δ= 21°23'49" L=436.93' T=221.04'		142+14.47	2987899.584	258784.453

OLD NORTH ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C19	142+14.47	2987899.584	258784.453	R = 4000.00' Δ= 9°42'42" L=678.00' T=339.81'		148+92.47	2987914.867	259461.467
L17	148+92.47	2987914.867	259461.467		N83° 51' 04"E 214.62'	151+07.09	2987937.856	259674.854
C20	151+07.09	2987937.856	259674.854	R = 680.00' Δ= 57°02'25" L=676.97' T=369.52'		157+84.06	2987690.708	260275.338
C21	157+84.06	2987690.708	260275.338	R = 15000.00' Δ= 5°26'16" L=1423.59' T=712.33'		172+07.65	2986545.148	261119.604
L18	172+07.65	2986545.148	261119.604		S33° 40' 16"E 1250.76'	184+58.42	2985504.218	261813.056
C22	184+58.42	2985504.218	261813.056	R = 4500.00' Δ= 5°34'53" L=438.36' T=219.36'		188+96.78	2985151.801	262073.467
L19	188+96.78	2985151.801	262073.467		S39° 15' 09"E 436.82'	193+33.60	2984813.542	262349.860
C23	193+33.60	2984813.542	262349.860	R = 750.00' Δ= 28°52'58" L=378.08' T=193.15'		197+11.68	2984592.046	262651.322
L20	197+11.68	2984592.046	262651.322		S68° 08' 07"E 748.33'	204+60.01	2984313.355	263345.822
C24	204+60.01	2984313.355	263345.822	R = 1150.00' Δ= 17°58'09" L=360.66' T=181.82'		208+20.67	2984233.287	263695.971
L21	208+20.67	2984233.287	263695.971		S86° 06' 16"E 156.68'	209+77.36	2984222.643	263852.292
C25	209+77.36	2984222.643	263852.292	R = 1200.00' Δ= 22°54'22" L=479.74' T=243.12'		214+57.10	2984096.502	264311.851

WORTHINGTON ROUTE 143			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	11	191
PROJECT FILE NO.		609287	

BASELINE DATA TABLE - 1

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	12	191
PROJECT FILE NO.		609287	

BASELINE DATA TABLE - 2

PARISH ROAD BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L47	10+00.00	2982829.712	254767.278		N39° 12' 38"W 136.95'	11+36.95	2982935.821	254680.705

RIVER ROAD BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L48	20+00.00	2982844.863	254789.771		S33° 57' 51"E 14.60'	20+14.60	2982832.755	254797.928
C50	20+14.60	2982832.755	254797.928	R=150.00' Δ=20°27'14" L=53.55' T=27.06'		20+68.15	2982783.997	254819.369
L49	20+68.15	2982783.997	254819.369		S13° 30' 38"E 83.19'	21+51.34	2982703.104	254838.805

LINDSAY HILL ROAD BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L50	30+00.00	2983847.206	255420.564		S53° 29' 55"E 10.45'	30+10.45	2983840.988	255428.967
C51	30+10.45	2983840.988	255428.967	R=50.00' Δ=36°38'48" L=31.98' T=16.56'		30+42.43	2983831.180	255458.836
L51	30+42.43	2983831.180	255458.836		N89° 51' 17"E 47.57'	30+90.00	2983831.301	255506.402

BASHAN HILL ROAD BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L52	40+00.00	2987598.089	257584.025		N51° 03' 18"W 100.00'	41+00.00	2987660.946	257506.249

EAST WINDSOR ROAD EXT BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L53	50+00.00	2987927.644	259885.563		N43° 36' 01"E 110.32'	51+10.32	2988007.537	259961.645

EAST WINDSOR ROAD BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L54	60+00.00	2987847.075	260093.835		N30° 35' 59"E 5.88'	60+05.88	2987852.135	260096.828
C52	60+05.88	2987852.135	260096.828	R=20.00' Δ=75°49'26" L=26.47' T=15.58'		60+32.35	2987876.513	260093.700
L55	60+32.35	2987876.513	260093.700		N45° 13' 28"W 328.55'	63+60.90	2988107.922	259860.471

DINGLE ROAD BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L56	70+00.00	2986876.129	260892.658		N78° 55' 44"E 103.80'	71+03.80	2986896.061	260994.522

HIGHWAY GUARD DETAILS

STA 12+38.0 TO STA 12+76.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 STA 12+76.0 TO STA 12+86.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 12+86.0 TO STA 15+49.0 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
 STA 15+49.0 TO STA 15+59.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 15+59.0 TO STA 15+97.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 R&D EXIST HWY GUARD STA 13+34 TO STA 15+49 RT

STA 18+50.0 TO STA 18+88.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 STA 18+88.0 TO STA 18+98.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 18+98.0 TO STA 22+44.0 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
 STA 22+44.0 TO STA 22+54.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 22+54.0 TO STA 22+92.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 R&D EXIST HWY GUARD STA 18+10 TO STA 22+54 RT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

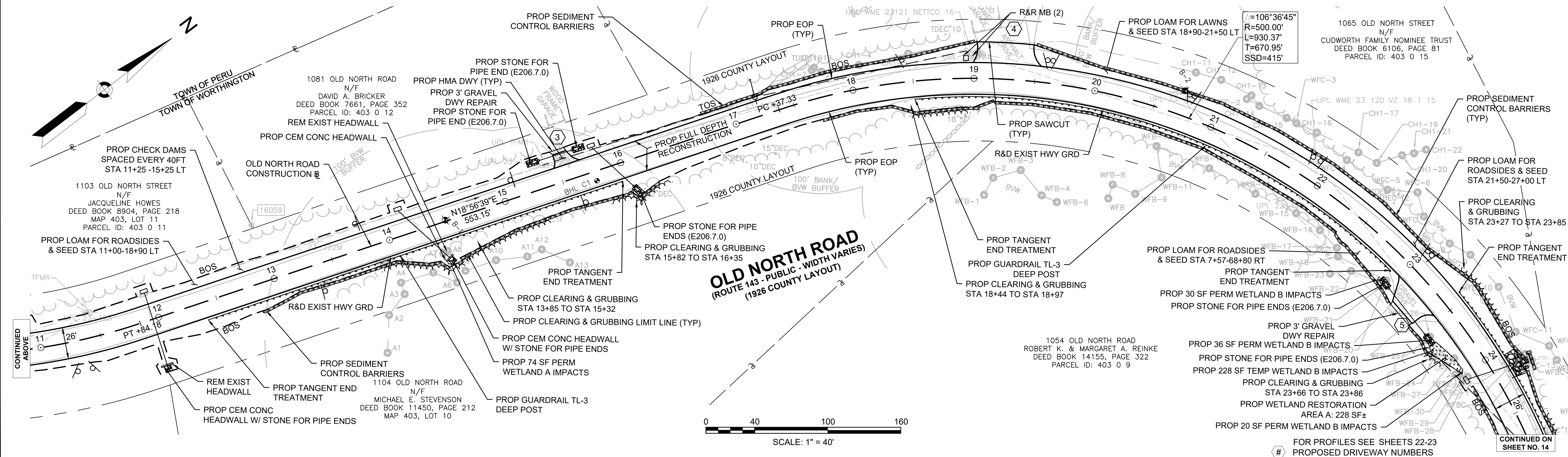
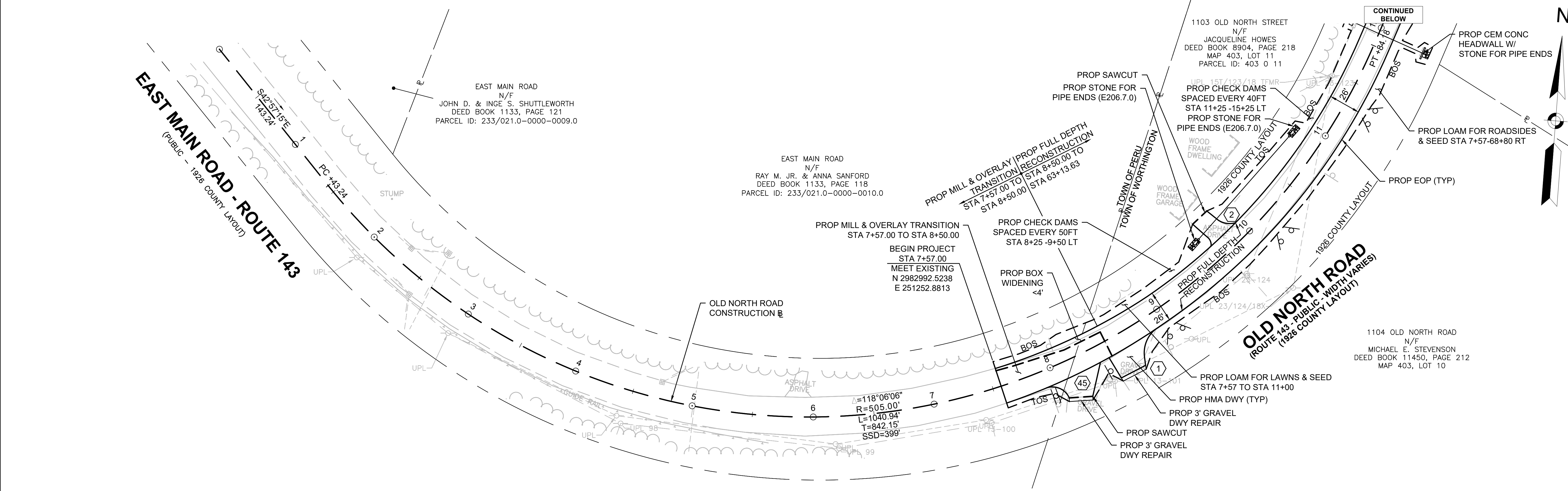
DRAINAGE DETAILS

SEE SHEET 77

WORTHINGTON
ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	13	191
PROJECT FILE NO.		609287	

CONSTRUCTION PLAN - 1



FOR PROFILES SEE SHEETS 22-23
 # PROPOSED DRIVEWAY NUMBERS

HIGHWAY GUARD DETAILS

- STA 23+43.0 TO STA 23+81.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 23+81.0 TO STA 23+91.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 23+91.0 TO STA 26+62.0 LT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
- STA 26+62.0 TO STA 27+14.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 27+14.0 TO STA 27+10.0 LT (GUARDRAIL TRAILING ANCHORAGE)
- R&D EXIST HWY GUARD STA 23+57 TO STA 27+12 LT
- STA 26+31.5 TO STA 26+69.5 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 26+69.5 TO STA 26+79.5 RT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 26+79.5 TO STA 28+97.0 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
- STA 28+97.0 TO STA 29+07.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 29+07.0 TO STA 29+45.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- R&D EXIST HWY GUARD STA 26+84 TO STA 29+50 RT
- STA 30+05.0 TO STA 30+43.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 30+43.0 TO STA 30+53.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 30+53.0 TO STA 34+75.0 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
- STA 34+75.0 TO STA 38+85.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 38+85.0 TO STA 40+97.0 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
- STA 40+97.0 TO STA 41+07.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 41+07.0 TO STA 41+45.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- R&D EXIST HWY GUARD STA 30+63 TO STA 41+50 RT
- STA 42+25.0 TO STA 42+63.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 42+63.0 TO STA 49+74.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 49+74.0 TO STA 50+12.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- R&D EXIST HWY GUARD STA 42+80 TO STA 50+33 RT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

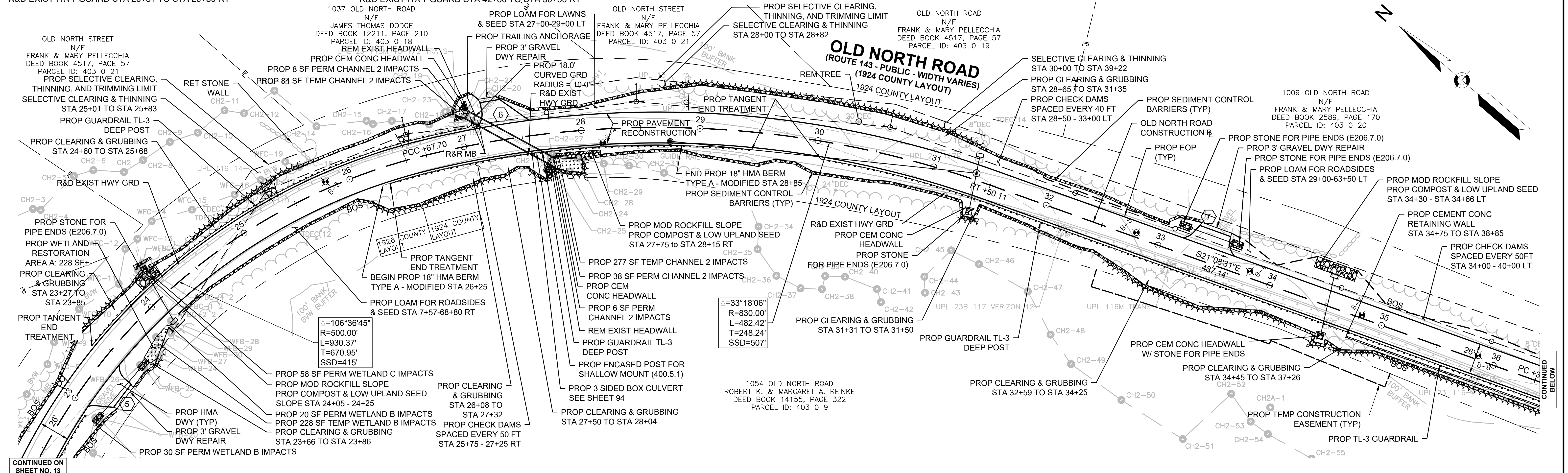
DRAINAGE DETAILS

SEE SHEET 78

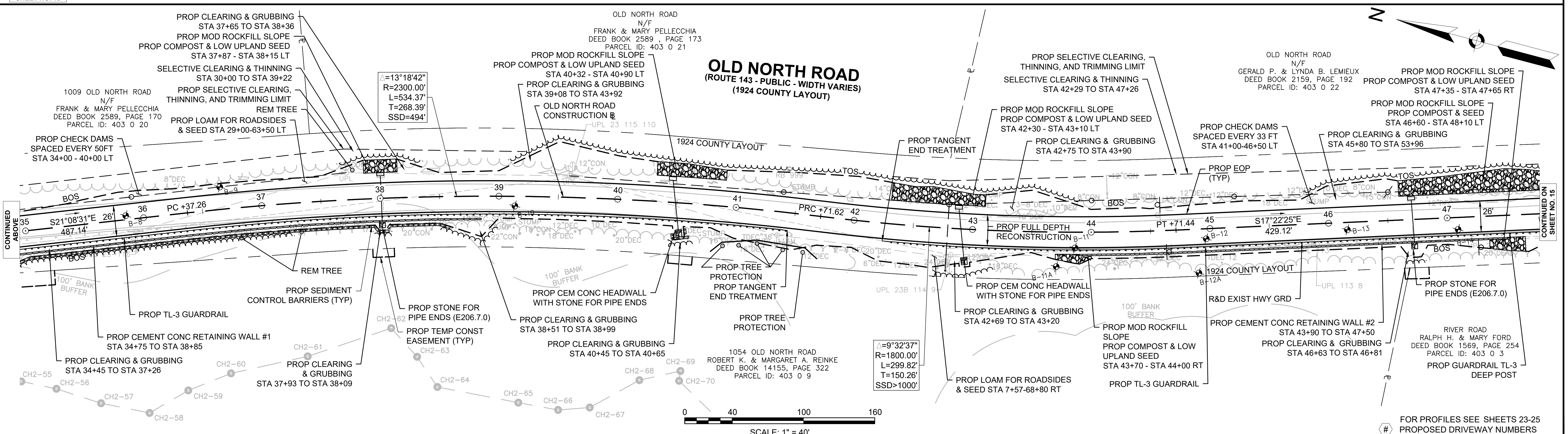
WORTHINGTON ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	14	191
PROJECT FILE NO.		609287	

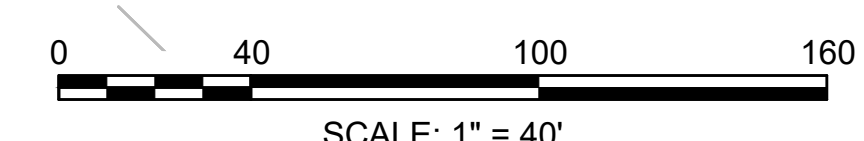
CONSTRUCTION PLAN - 2



CONTINUED ON SHEET NO. 13



CONTINUED ON SHEET NO. 15



FOR PROFILES SEE SHEETS 23-25 PROPOSED DRIVEWAY NUMBERS

WORTHINGTON ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	15	191
PROJECT FILE NO.		609287	

CONSTRUCTION PLAN - 3

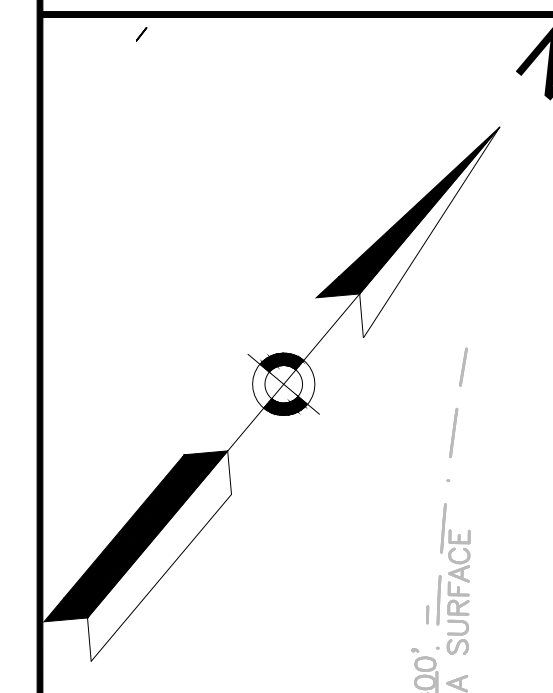
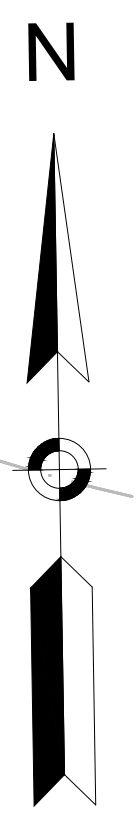
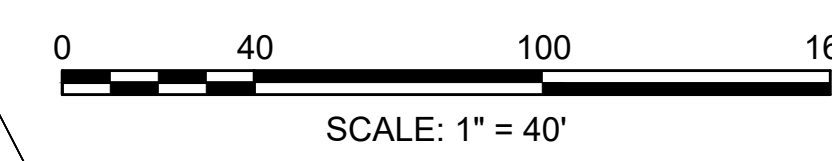
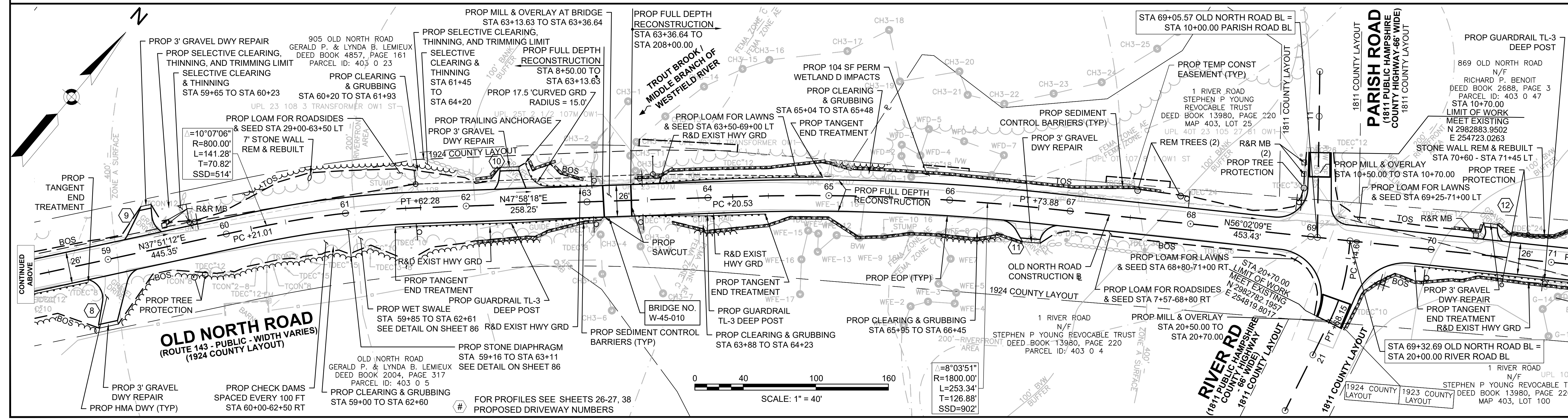
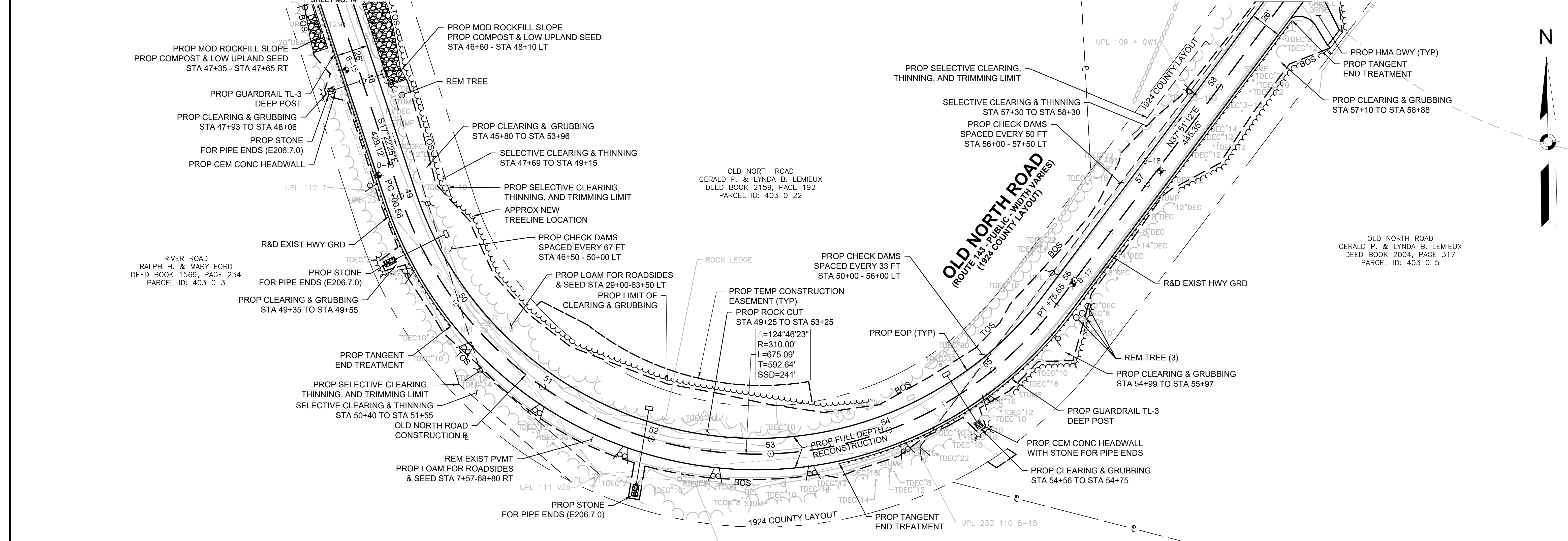
HIGHWAY GUARD DETAILS

STA 53+54.0 TO STA 53+92.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 STA 53+92.0 TO STA 54+02.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 54+02.0 TO STA 58+32.0 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
 STA 58+32.0 TO STA 58+42.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 58+42.0 TO STA 58+80.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 R&D EXIST HWY GUARD STA 52+85 TO STA 58+67 RT
 STA 61+40.5 TO STA 61+78.5 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 STA 61+78.5 TO STA 61+88.5 RT (GUARDRAIL TL-3 (SINGLE FACED))

STA 61+88.5 TO STA 62+89.1 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
 STA 62+89.1 TO STA 63+12.8 RT (TRANSITION TO BRIDGE RAIL)
 R&D EXIST HWY GUARD STA 62+09 TO STA 63+15 RT
 STA 62+50.0 TO STA 62+55.0 LT (GUARDRAIL TRAILING ANCHORAGE)
 STA 62+55.0 TO STA 62+75.3 LT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 62+75.3 TO STA 63+13.3 LT (TRANSITION TO BRIDGE RAIL)
 R&D EXIST HWY GUARD STA 62+65 TO STA 63+15 LT
 STA 63+36.6 TO STA 63+86.6 RT (TRANSITION TO BRIDGE RAIL)

STA 63+86.6 TO STA 64+09.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 64+09.0 TO STA 64+47.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 R&D EXIST HWY GUARD STA 63+35 TO STA 64+23 RT
 STA 63+36.6 TO STA 64+04.4 LT (TRANSITION TO BRIDGE RAIL)
 STA 64+04.4 TO STA 64+57.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 64+57.0 TO STA 64+95.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 R&D EXIST HWY GUARD STA 63+35 TO STA 64+25 LT

TRAFFIC SIGNAL CONDUIT NONE
WATER SUPPLY ALTERATIONS NONE
DRAINAGE DETAILS SEE SHEET 79



CONTINUED ON SHEET NO. 16

CONTINUED ABOVE

HIGHWAY GUARD DETAILS

STA 69+88.0 TO STA 70+26.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 STA 70+26.0 TO STA 70+36.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 70+36.0 TO STA 72+55.5 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
 STA 72+55.5 TO STA 72+65.5 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 72+65.5 TO STA 73+03.5 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 R&D EXIST HWY GUARD STA 70+70 TO STA 73+20 RT

STA 71+14.0 TO STA 71+52.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 STA 71+52.0 TO STA 73+90.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 73+90.0 TO STA 74+36.0 LT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
 STA 74+36.0 TO STA 74+46.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 74+46.0 TO STA 74+84.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 R&D EXIST HWY GUARD STA 71+60 TO STA 74+64 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

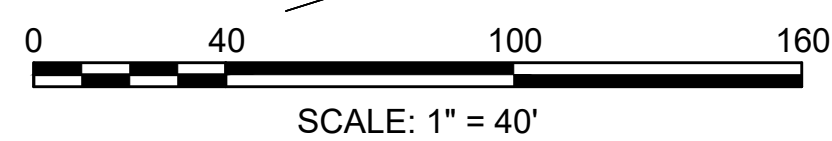
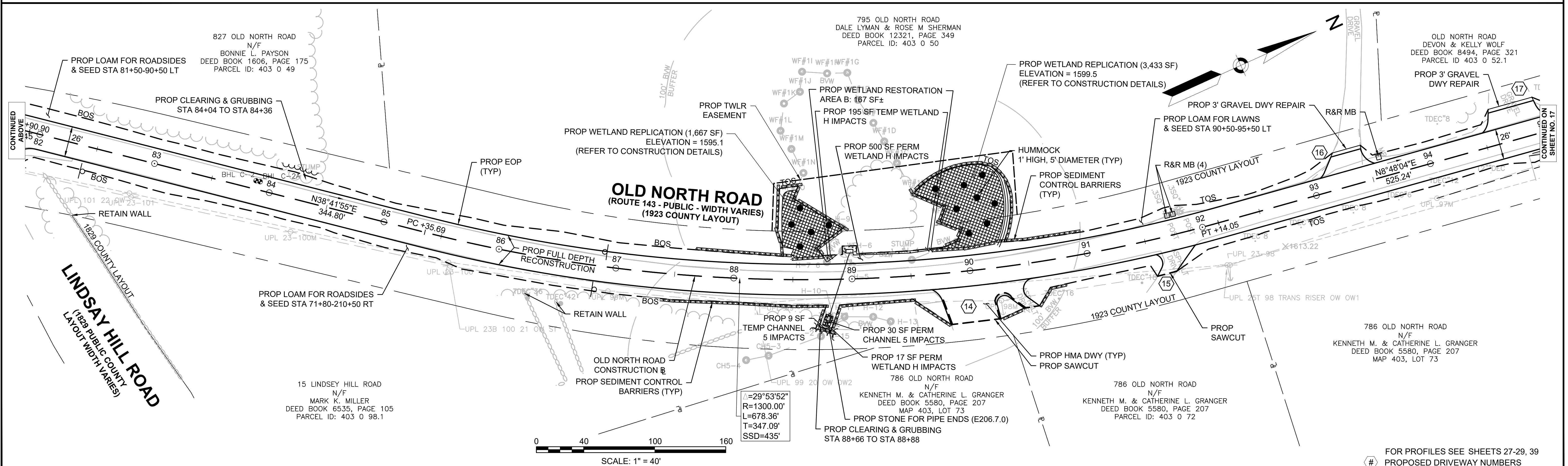
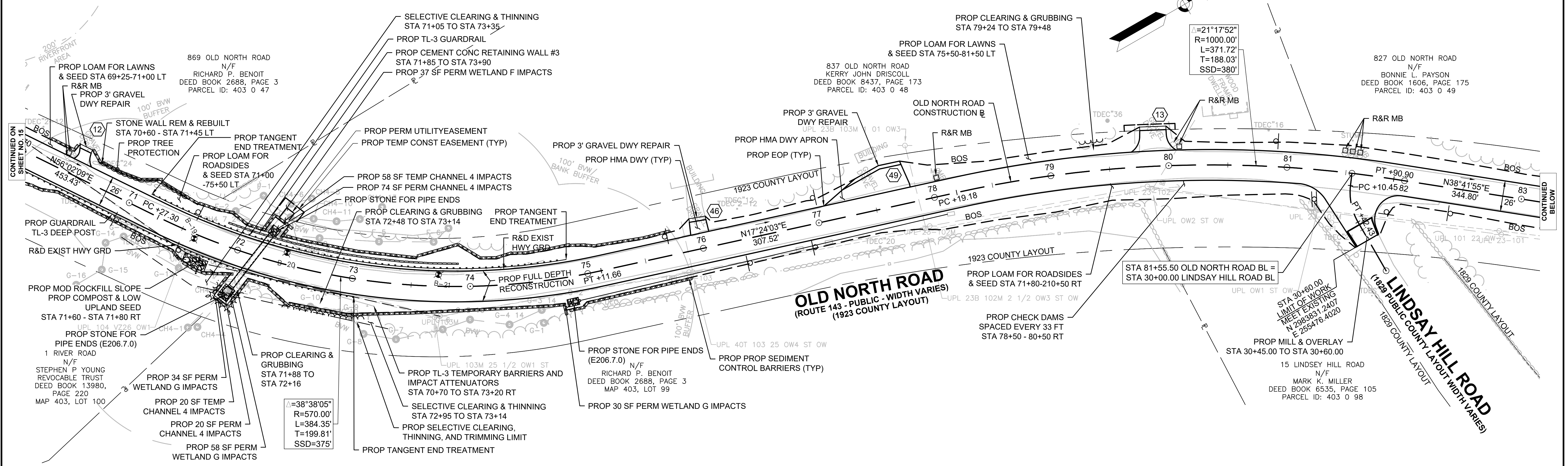
DRAINAGE DETAILS

SEE SHEET 80

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	16	191
PROJECT FILE NO. 609287			

CONSTRUCTION PLAN - 4



FOR PROFILES SEE SHEETS 27-29, 39
 # PROPOSED DRIVEWAY NUMBERS

HIGHWAY GUARD DETAILS

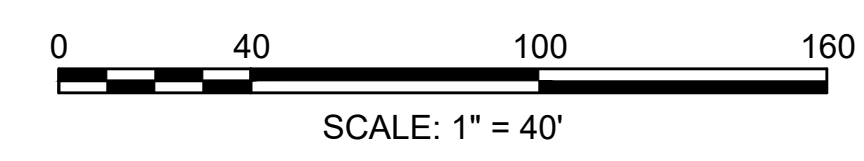
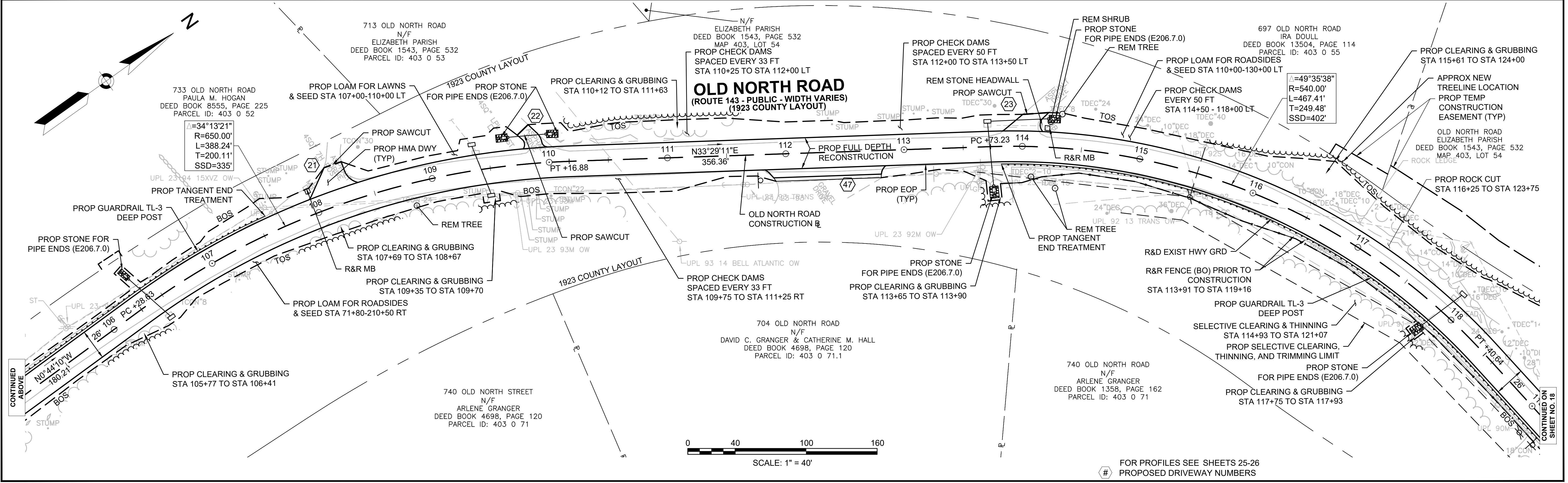
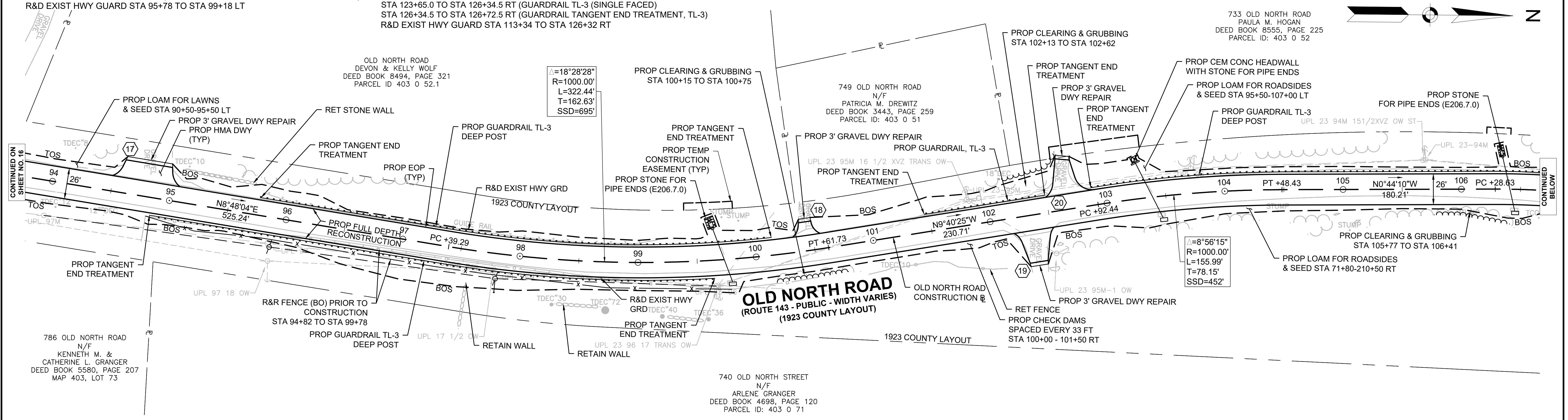
STA 94+85.5 TO STA 95+23.5 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)	STA 101+46.0 TO STA 101+84.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
STA 95+23.5 TO STA 95+33.5 RT (GUARDRAIL TL-3 (SINGLE FACED))	STA 101+84.0 TO STA 102+11.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
STA 95+33.5 TO STA 99+16.0 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))	STA 102+11.0 TO STA 102+49.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
STA 99+16.0 TO STA 99+26.0 RT (GUARDRAIL TL-3 (SINGLE FACED))	STA 102+49.0 TO STA 103+26.5 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
STA 99+26.0 TO STA 99+64.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)	STA 103+26.5 TO STA 103+36.5 LT (GUARDRAIL TL-3 (SINGLE FACED))
R&D EXIST HWY GUARD STA 95+94 TO STA 98+75 RT	STA 103+36.5 TO STA 107+09.5 LT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
STA 95+76.0 TO STA 96+14.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)	STA 107+09.5 TO STA 107+19.5 LT (GUARDRAIL TL-3 (SINGLE FACED))
STA 96+14.0 TO STA 96+24.0 LT (GUARDRAIL TL-3 (SINGLE FACED))	STA 107+19.5 TO STA 107+57.5 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
STA 96+24.0 TO STA 99+66.5 LT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))	STA 113+82.0 TO STA 114+20.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
STA 99+66.5 TO STA 99+76.5 LT (GUARDRAIL TL-3 (SINGLE FACED))	STA 114+20.0 TO STA 114+30.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
STA 99+76.5 TO STA 100+14.5 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)	STA 114+30.0 TO STA 123+65.0 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
R&D EXIST HWY GUARD STA 95+78 TO STA 99+18 LT	STA 123+65.0 TO STA 126+34.5 RT (GUARDRAIL TL-3 (SINGLE FACED))
	STA 126+34.5 TO STA 126+72.5 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
	R&D EXIST HWY GUARD STA 113+34 TO STA 126+32 RT

TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	NONE	SEE SHEET 81

WORTHINGTON ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	17	191
PROJECT FILE NO. 609287			

CONSTRUCTION PLAN - 5



FOR PROFILES SEE SHEETS 25-26
PROPOSED DRIVEWAY NUMBERS

CONTINUED ON SHEET NO. 16

CONTINUED BELOW

CONTINUED ABOVE

CONTINUED ON SHEET NO. 18

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	19	191
PROJECT FILE NO.		609287	

CONSTRUCTION PLAN - 7

HIGHWAY GUARD DETAILS

- STA 149+52.0 TO STA 149+90.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 149+90.0 TO STA 150+00.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 150+00.0 TO STA 152+10.0 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
- STA 152+10.0 TO STA 152+20.0 RT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 152+20.0 TO STA 152+58.0 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 148+90.0 TO STA 149+28.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 149+28.0 TO STA 149+38.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 149+38.0 TO STA 152+08.0 LT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
- STA 152+08.0 TO STA 152+18.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 152+18.0 TO STA 152+56.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 154+33.5 TO STA 154+71.5 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 154+71.5 TO STA 154+81.5 RT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 154+81.5 TO STA 156+09.5 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
- STA 156+09.5 TO STA 156+19.5 RT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 156+19.5 TO STA 156+57.5 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 155+16.0 TO STA 155+54.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
- STA 155+54.0 TO STA 156+20.5 LT (GUARDRAIL TL-3 (SINGLE FACED))
- STA 156+20.5 TO STA 156+20.5 LT (GUARDRAIL TRAILING ANCHORAGE)
- R&D EXIST HWY GUARD STA 155+41 TO STA 156+22 LT

TRAFFIC SIGNAL CONDUIT

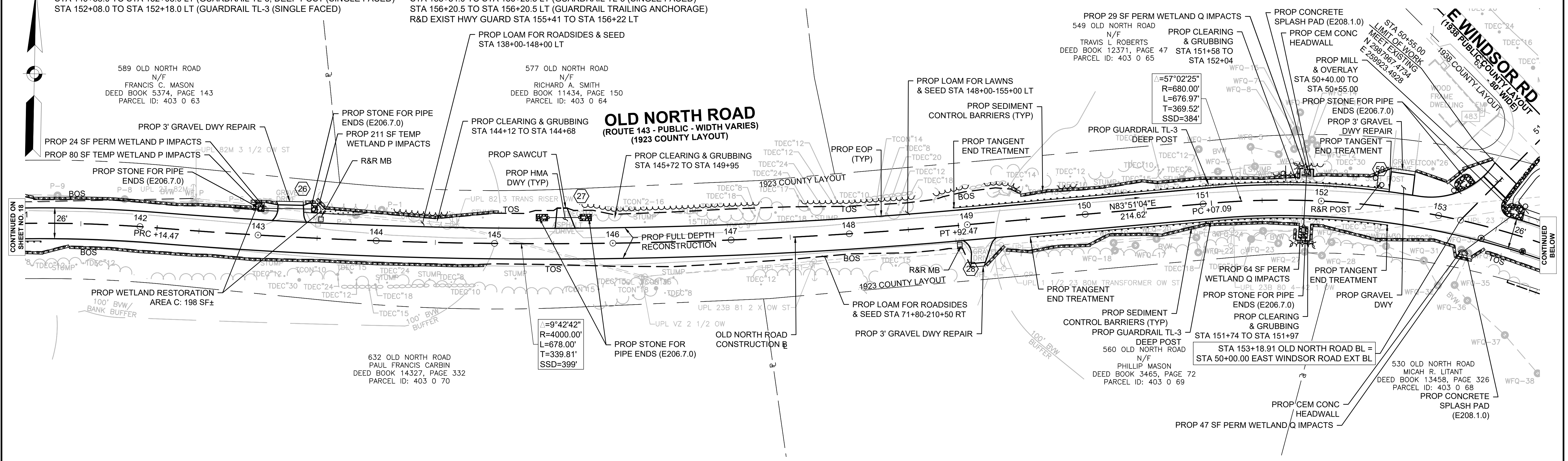
NONE

WATER SUPPLY ALTERATIONS

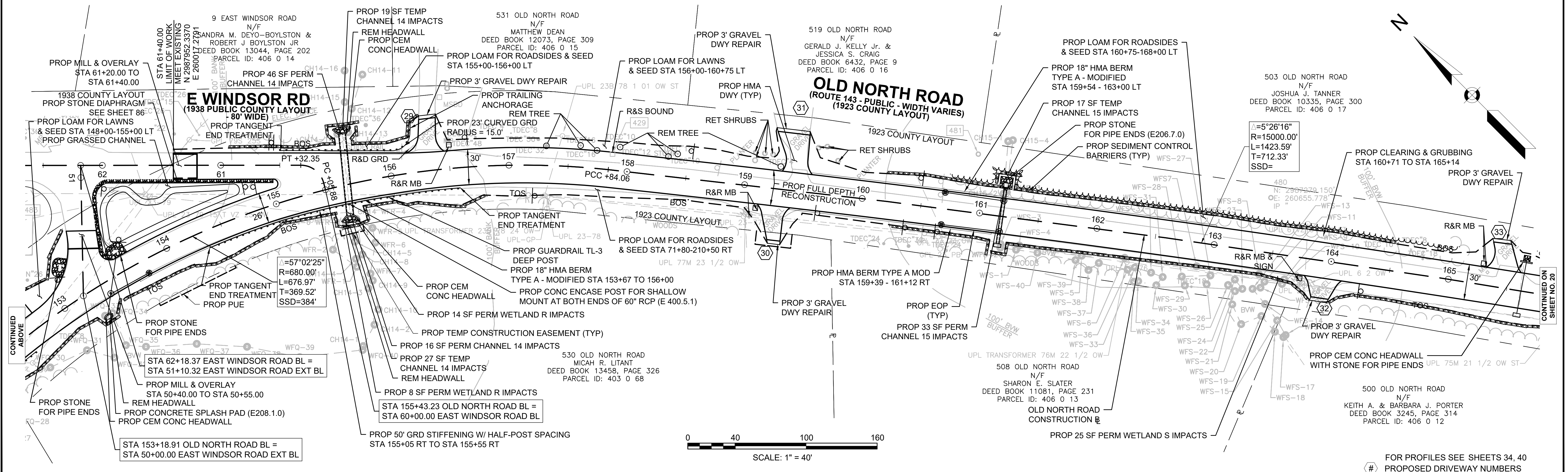
NONE

DRAINAGE DETAILS

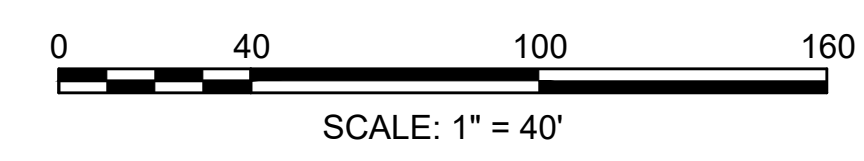
SEE SHEET 83



**OLD NORTH ROAD
(ROUTE 143 - PUBLIC - WIDTH VARIES)
(1923 COUNTY LAYOUT)**



**OLD NORTH ROAD
(ROUTE 143 - PUBLIC - WIDTH VARIES)
(1923 COUNTY LAYOUT)**



FOR PROFILES SEE SHEETS 34, 40
PROPOSED DRIVEWAY NUMBERS

HIGHWAY GUARD DETAILS

STA 185+18.0 TO STA 185+56.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
STA 185+56.0 TO STA 185+66.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
STA 185+66.0 TO STA 187+41.0 LT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
STA 187+41.0 TO STA 187+51.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
STA 187+51.0 TO STA 187+89.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

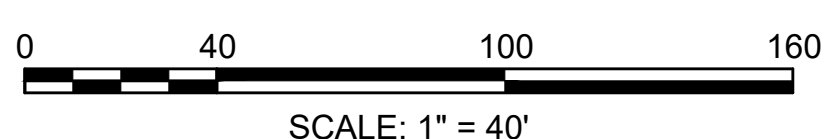
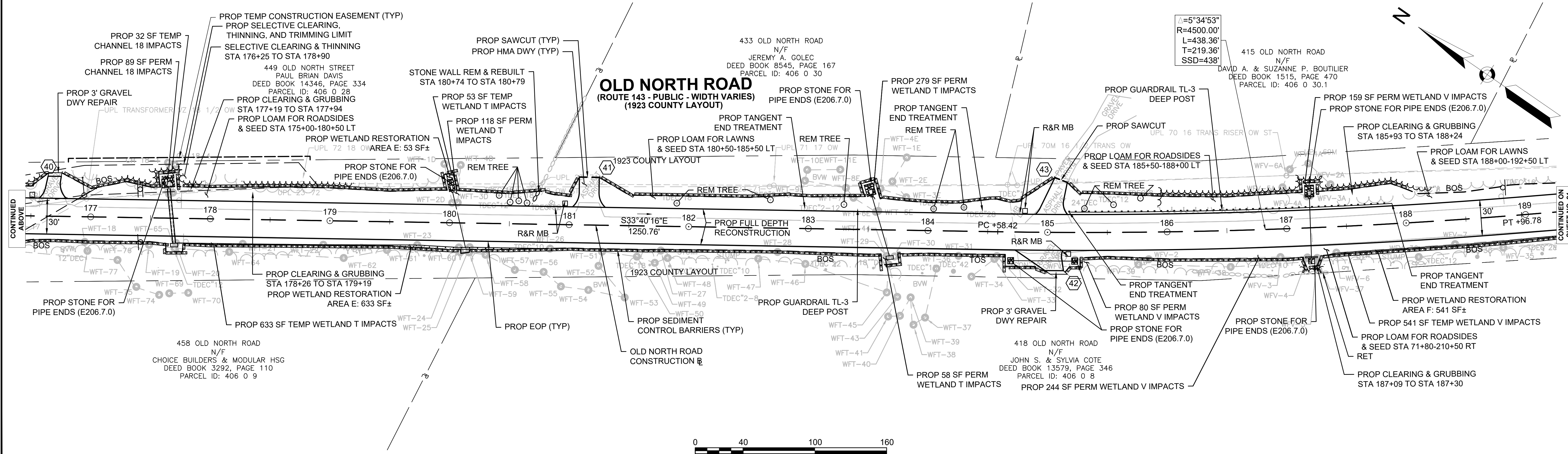
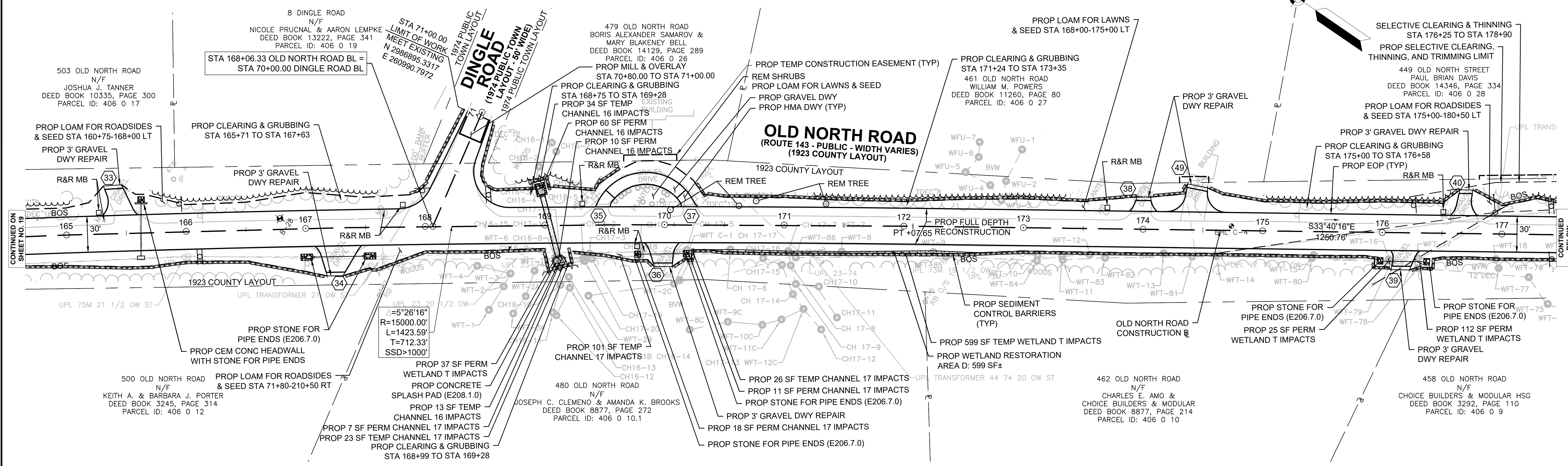
DRAINAGE DETAILS

SEE SHEET 84

WORTHINGTON
ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	20	191
PROJECT FILE NO. 609287			

CONSTRUCTION PLAN - 8



FOR PROFILES SEE SHEETS 34-36, 41
PROPOSED DRIVEWAY NUMBERS

Plotted on 27-Jun-2024 10:05 AM

609287_HDCP.DWG

HIGHWAY GUARD DETAILS

STA 190+18.5 TO STA 190+56.5 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 STA 190+56.5 TO STA 190+66.5 LT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 190+66.5 TO STA 193+22.0 LT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
 STA 193+22.0 TO STA 193+32.0 LT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 193+32.0 TO STA 193+70.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 STA 198+23.5 TO STA 198+61.5 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 STA 198+61.5 TO STA 198+71.5 LT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 198+71.5 TO STA 204+35.0 LT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
 STA 204+35.0 TO STA 204+45.0 LT (GUARDRAIL TL-3 (SINGLE FACED))

STA 204+45.0 TO STA 204+83.0 LT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 R&D EXIST HWY GUARD STA 202+69 TO STA 203+88 LT
 STA 202+30.5 TO STA 202+68.5 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 STA 202+68.5 TO STA 202+78.5 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 202+78.5 TO STA 204+04.5 RT (GUARDRAIL TL-3, DEEP POST (SINGLE FACED))
 STA 204+04.5 TO STA 204+14.5 RT (GUARDRAIL TL-3 (SINGLE FACED))
 STA 204+14.5 TO STA 204+52.5 RT (GUARDRAIL TANGENT END TREATMENT, TL-3)
 R&D EXIST HWY GUARD STA 203+50 TO STA 203+71 RT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

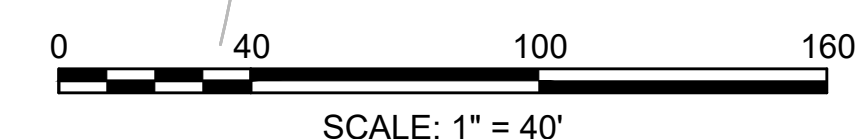
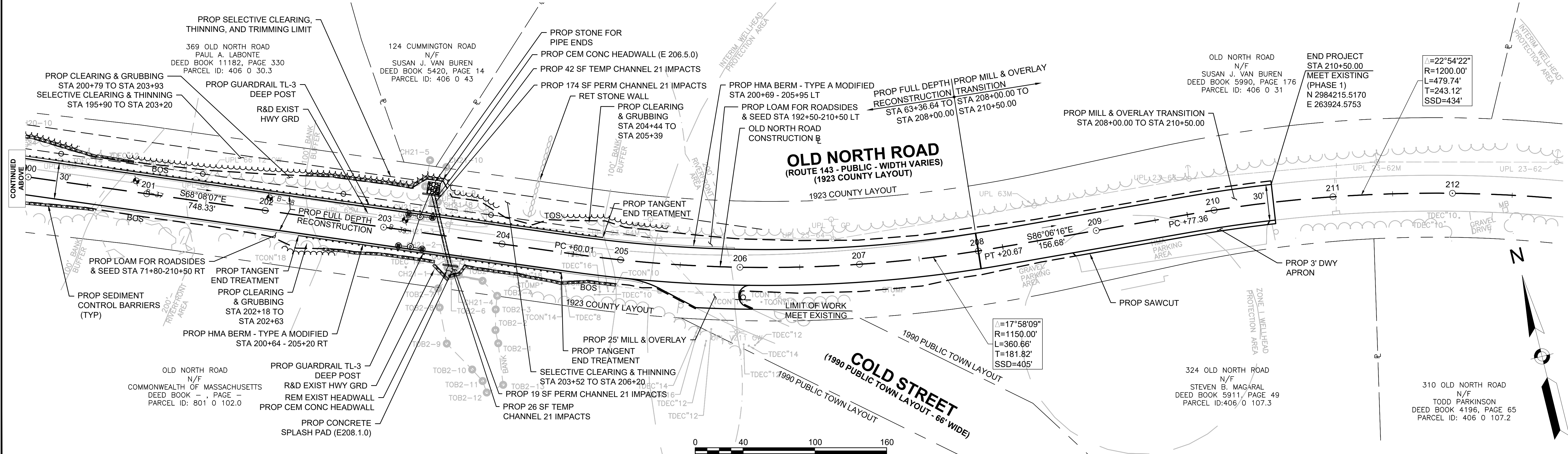
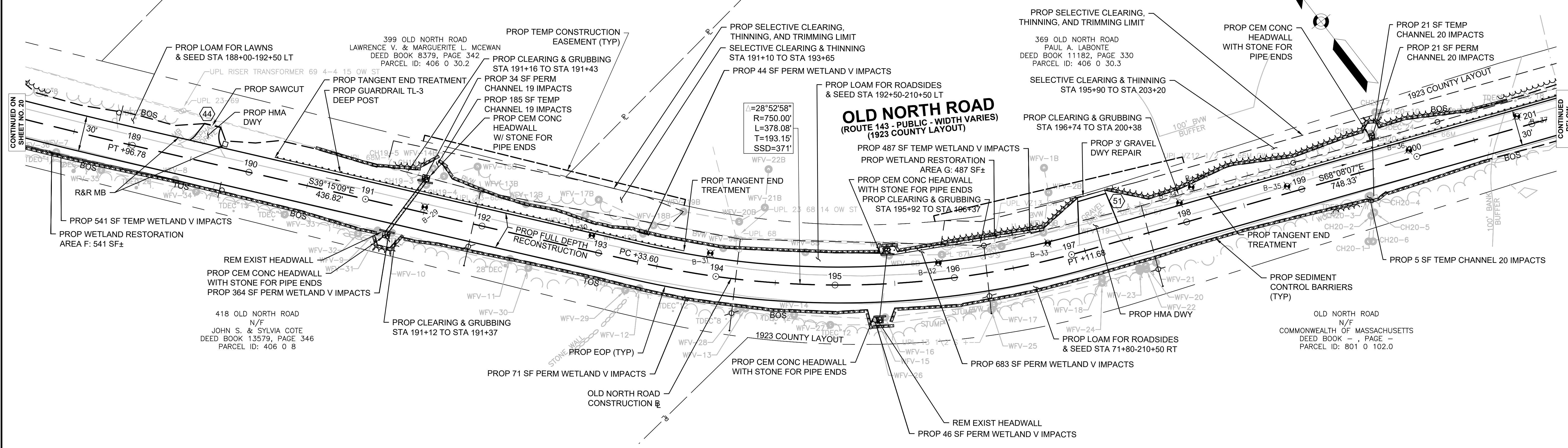
DRAINAGE DETAILS

SEE SHEET 85

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	21	191
PROJECT FILE NO.		609287	

CONSTRUCTION PLAN - 9



FOR PROFILES SEE SHEETS 30-32, 36
 # PROPOSED DRIVEWAY NUMBERS

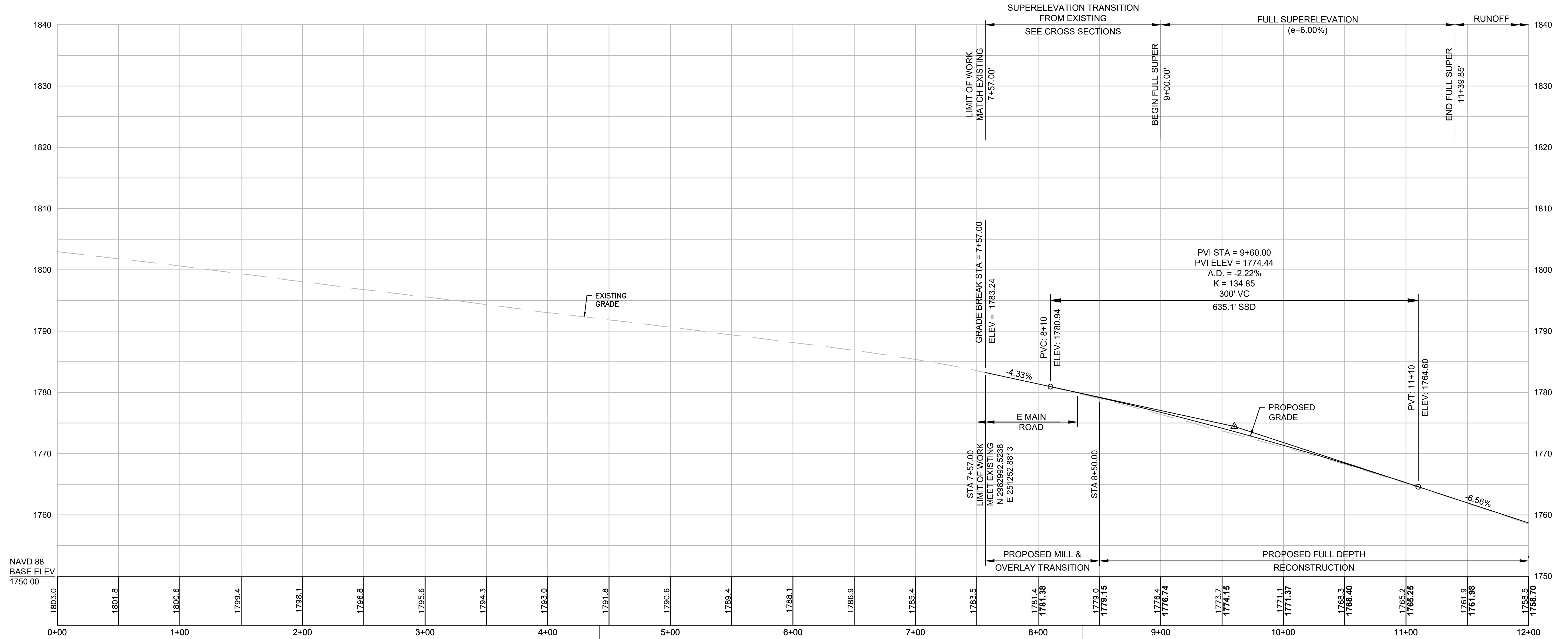
Plotted on 27-Jun-2024 10:06 AM

609287_LHD(CP).DWG

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	22	191
PROJECT FILE NO.		609287	

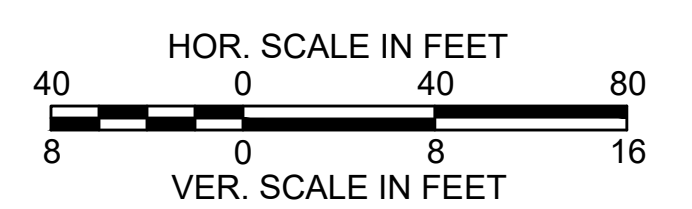
**OLD NORTH ROAD
PROFILE - 1**



NAVD 88
BASE ELEV
1750.00

TBM 80: NAIL SET IN POLE
ELEV.=1793.50' NAVD 1988
STA 4+42.16, 25.57' RT

TBM 79: NAIL SET IN POLE
ELEV.=1780.78' NAVD 1988
STA 8+35.99, 32.06' RT



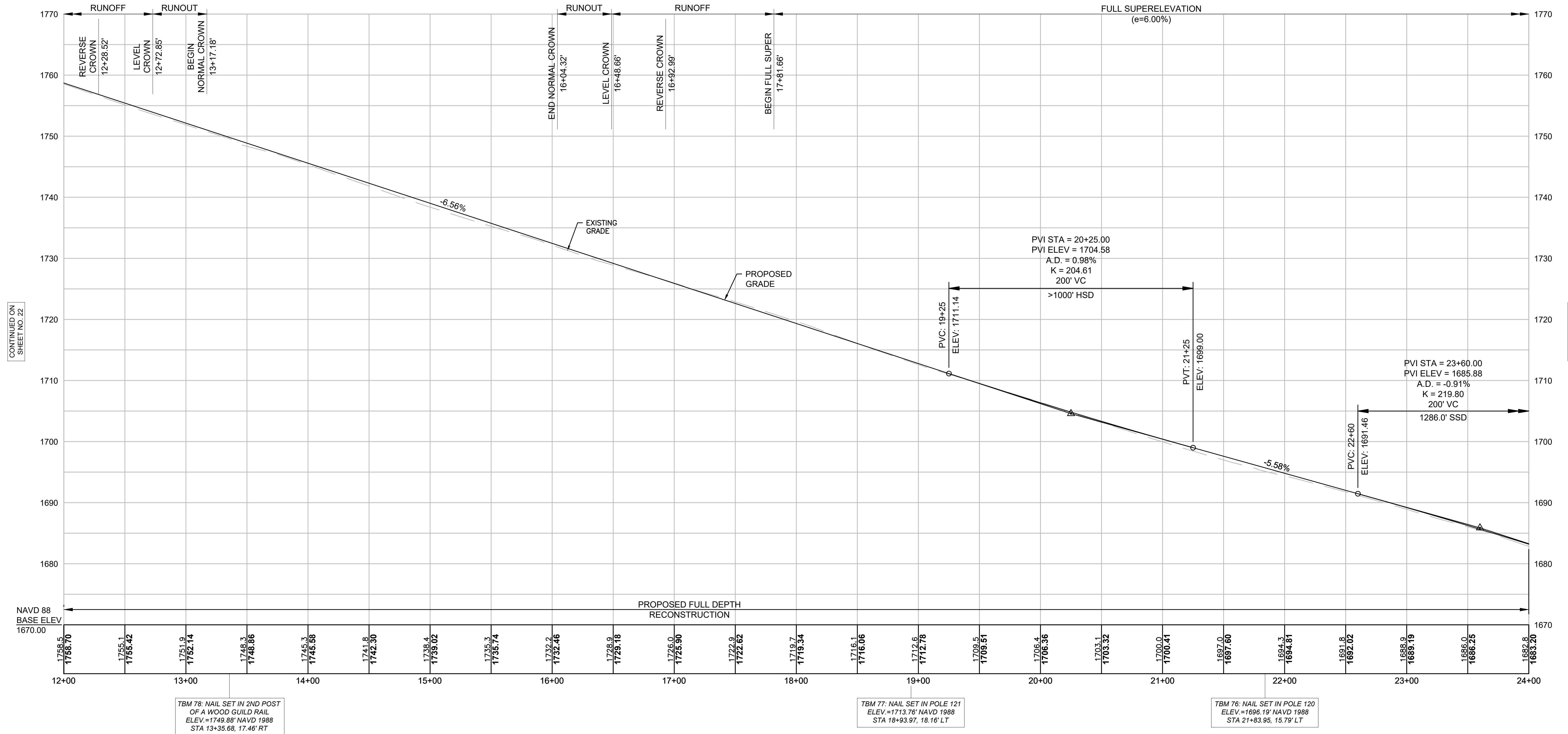
FOR CONSTRUCTION PLANS
SEE SHEET 13

CONTINUED ON
SHEET NO. 23

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	23	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
PROFILE - 2**



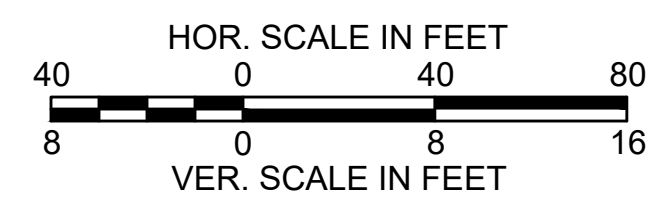
CONTINUED ON
SHEET NO. 22

CONTINUED ON
SHEET NO. 24

TBM 78: NAIL SET IN 2ND POST
OF A WOOD GUILD RAIL
ELEV.=1749.88' NAVD 1988
STA 13+35.68, 17.46' RT

TBM 77: NAIL SET IN POLE 121
ELEV.=1713.76' NAVD 1988
STA 18+93.97, 18.16' LT

TBM 76: NAIL SET IN POLE 120
ELEV.=1696.19' NAVD 1988
STA 21+83.95, 15.79' LT

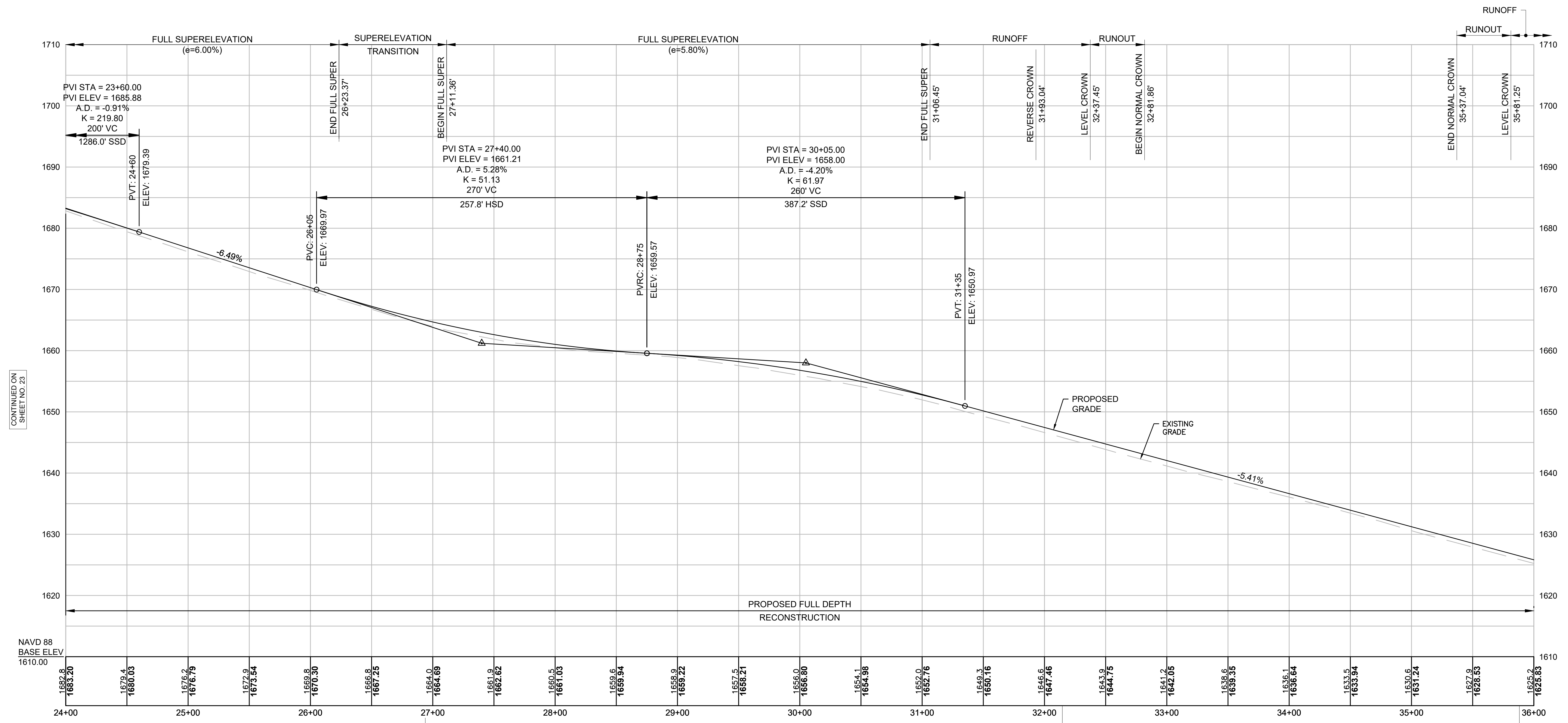


FOR CONSTRUCTION PLANS
SEE SHEET 13-14

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	24	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
PROFILE - 3**



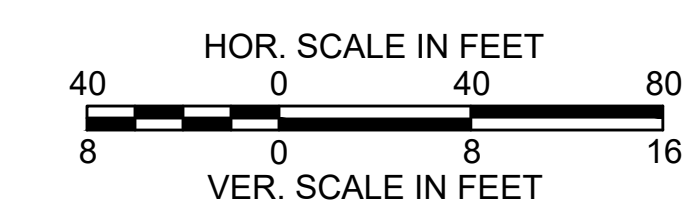
CONTINUED ON
SHEET NO. 23

CONTINUED ON
SHEET NO. 25

TBM 75: NAIL SET IN POLE 118M
ELEV.=1664.20' NAVD 1988
STA 26+93.92, 17.01' LT

TBM 74: NAIL SET IN POLE 117
ELEV.=1646.30' NAVD 1988
STA 32+14.61, 18.83' RT

TBM 73: NAIL SET IN POLE
ELEV.=1626.15' NAVD 1988
STA 35+88.19, 16.93' RT

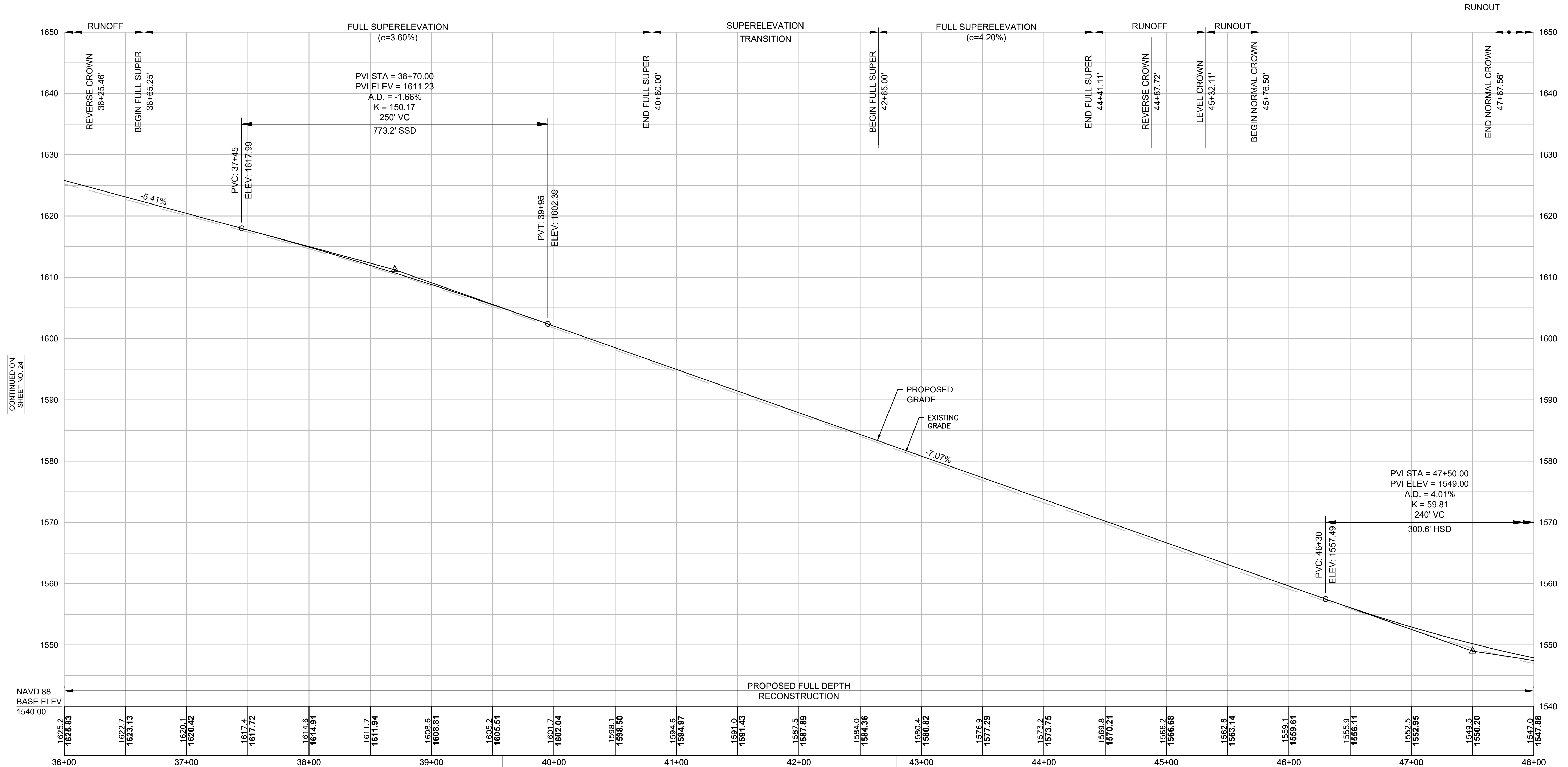


FOR CONSTRUCTION PLANS
SEE SHEETS 14

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	25	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
PROFILE - 4**

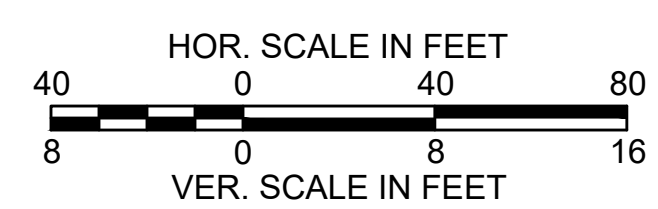


CONTINUED ON
SHEET NO. 24

CONTINUED ON
SHEET NO. 26

TBM 72: NAIL SET IN POLE 115
ELEV.=1605.91' NAVD 1988
STA 39+57.90, 14.19' LT

TBM 71: NAIL SET IN POLE 114
ELEV.=1581.92' NAVD 1988
STA 42+79.53, 21.40' RT

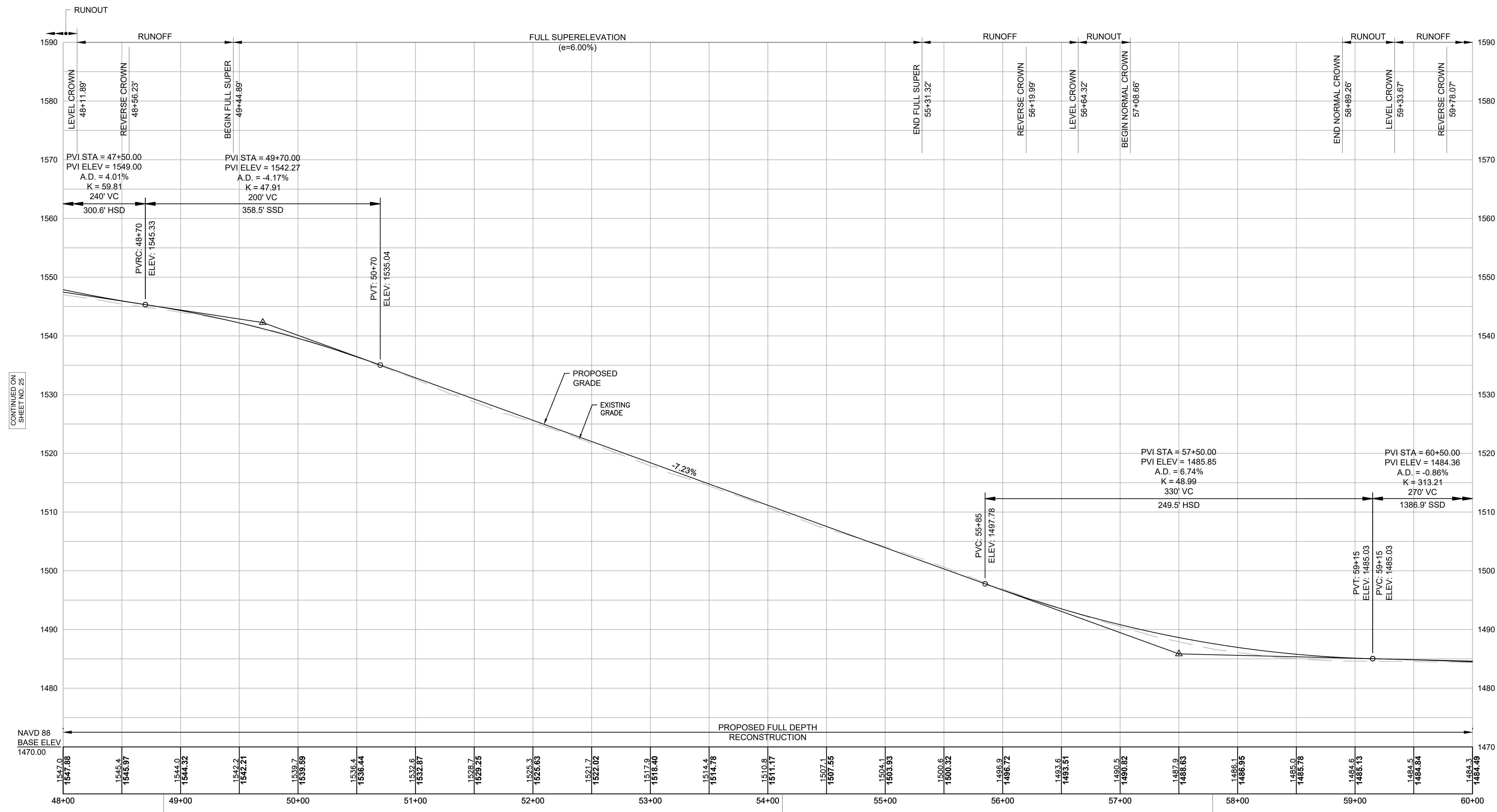


FOR CONSTRUCTION PLANS
SEE SHEETS 14-15

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	26	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
PROFILE - 5**



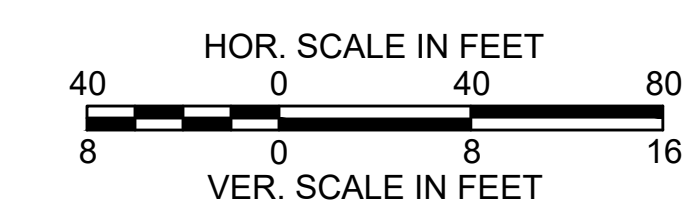
CONTINUED ON
SHEET NO. 25

CONTINUED ON
SHEET NO. 27

TBM 70: NAIL SET IN POLE 112
ELEV = 1544.85' NAVD 1988
STA 48+85.64, 17.61' RT

TBM 69: NAIL SET IN POLE 110
ELEV = 1511.64' NAVD 1988
STA 54+12.38, 22.63' RT

TBM 68: NAIL SET IN POLE 109
ELEV = 1487.37' NAVD 1988
STA 57+78.75, 13.51' LT

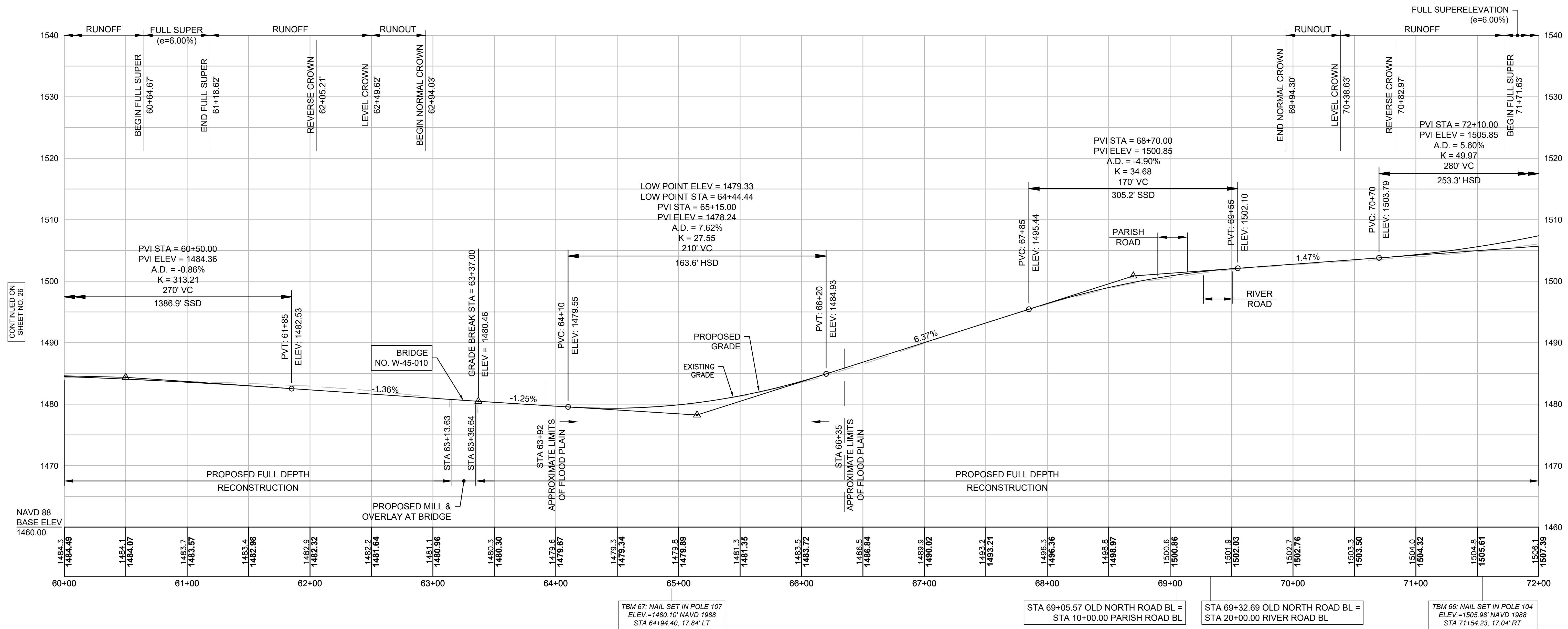


FOR CONSTRUCTION PLANS
SEE SHEET 15

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	27	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
PROFILE - 6**

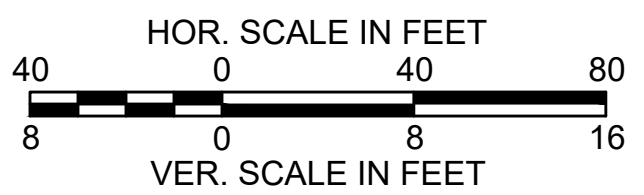


TBM 67: NAIL SET IN POLE 107
ELEV = 1480.10' NAVD 1988
STA 64+94.40, 17.84' LT

STA 69+05.57 OLD NORTH ROAD BL =
STA 10+00.00 PARISH ROAD BL

STA 69+32.69 OLD NORTH ROAD BL =
STA 20+00.00 RIVER ROAD BL

TBM 66: NAIL SET IN POLE 104
ELEV = 1505.98' NAVD 1988
STA 71+54.23, 17.04' RT

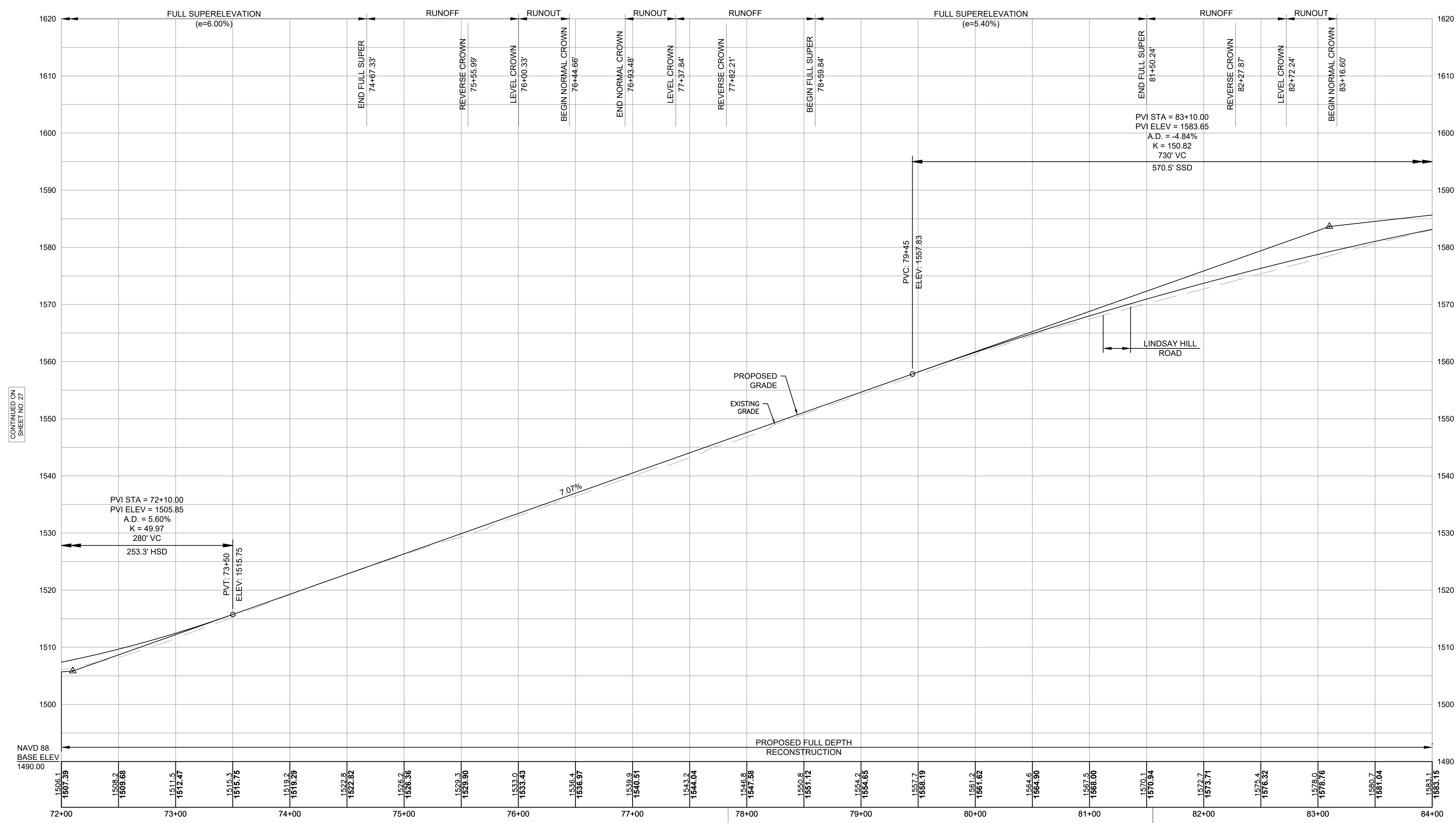


FOR CONSTRUCTION PLANS
SEE SHEETS 15-16

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	28	191
PROJECT FILE NO.		609287	

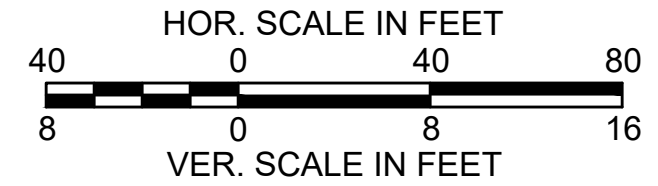
**OLD NORTH ROAD
PROFILE - 7**



CONTINUED ON
SHEET NO. 27

CONTINUED ON
SHEET NO. 29

TBM 65: NAIL SET IN POLE 102
ELEV.=1548.??' NAVD 1988
STA 77+83.66, 25.07' RT
DO NOT USE THIS



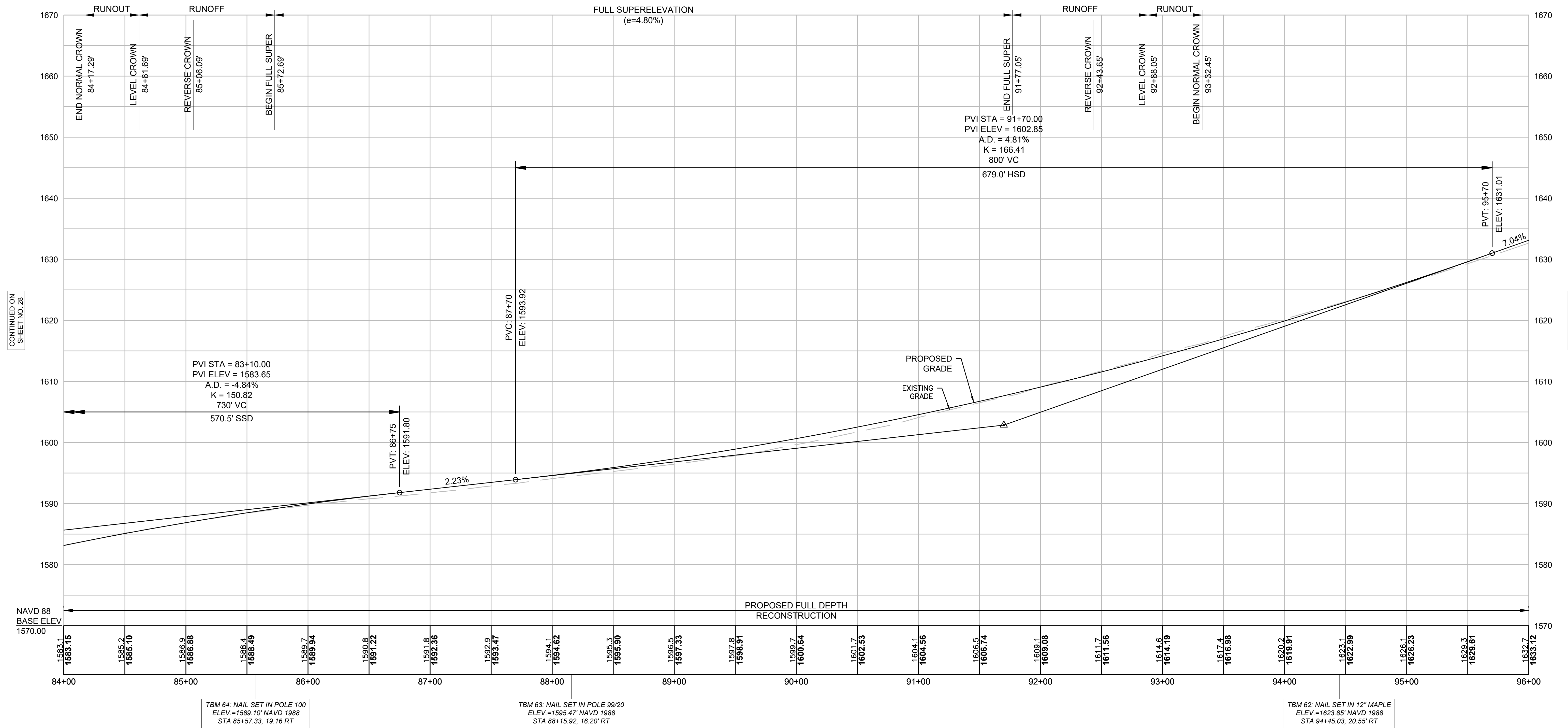
STA 81+55.50 OLD NORTH ROAD BL =
STA 30+00.00 LINDSAY HILL ROAD BL

FOR CONSTRUCTION PLANS
SEE SHEET 16

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	29	191
PROJECT FILE NO.		609287	

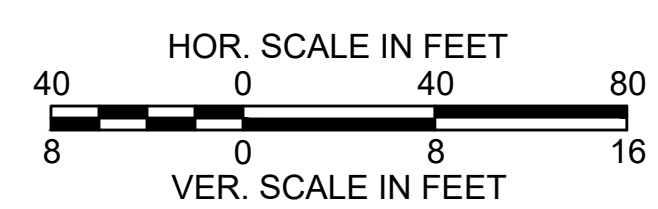
**OLD NORTH ROAD
PROFILE - 8**



TBM 64: NAIL SET IN POLE 100
ELEV.=1589.10' NAVD 1988
STA 85+57.33, 19.16' RT

TBM 63: NAIL SET IN POLE 99/20
ELEV.=1595.47' NAVD 1988
STA 88+15.92, 16.20' RT

TBM 62: NAIL SET IN 12" MAPLE
ELEV.=1623.85' NAVD 1988
STA 94+45.03, 20.55' RT



FOR CONSTRUCTION PLANS
SEE SHEETS 16-17

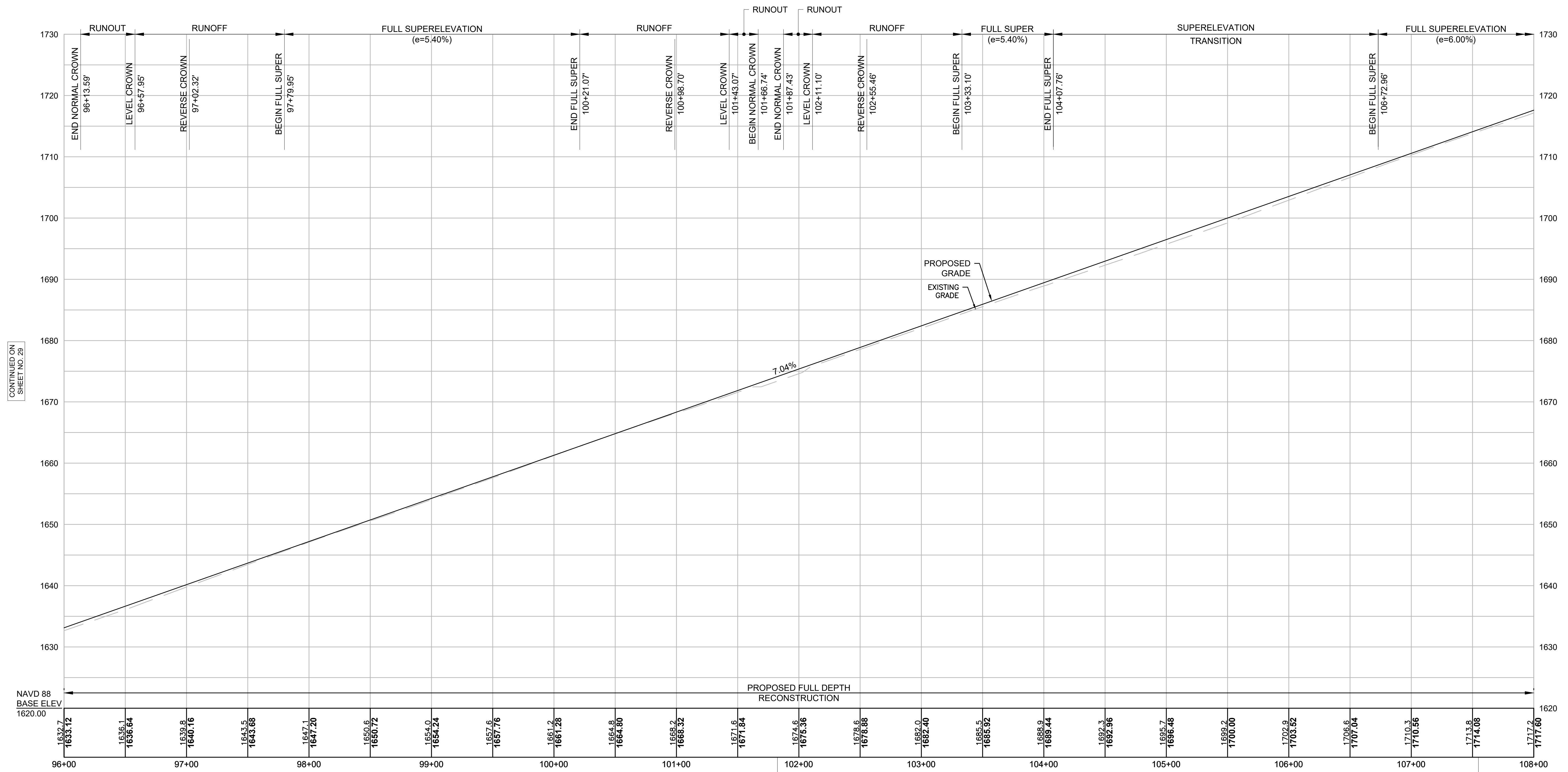
CONTINUED ON
SHEET NO. 28

CONTINUED ON
SHEET NO. 30

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	30	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
PROFILE - 9**

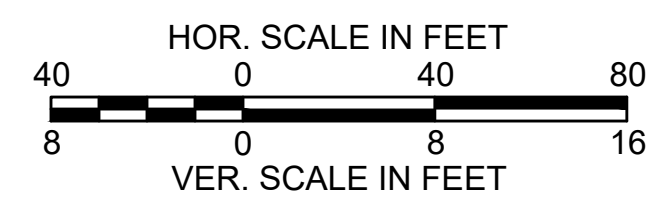


CONTINUED ON
SHEET NO. 29

CONTINUED ON
SHEET NO. 31

TBM 61: NAIL SET IN POLE 95M
ELEV.=1673.65' NAVD 1988
STA 101+82.49, 16.82' LT

TBM 60: NAIL SET IN POLE 94
ELEV.=1715.20' NAVD 1988
STA 107+54.77, 18.52' LT

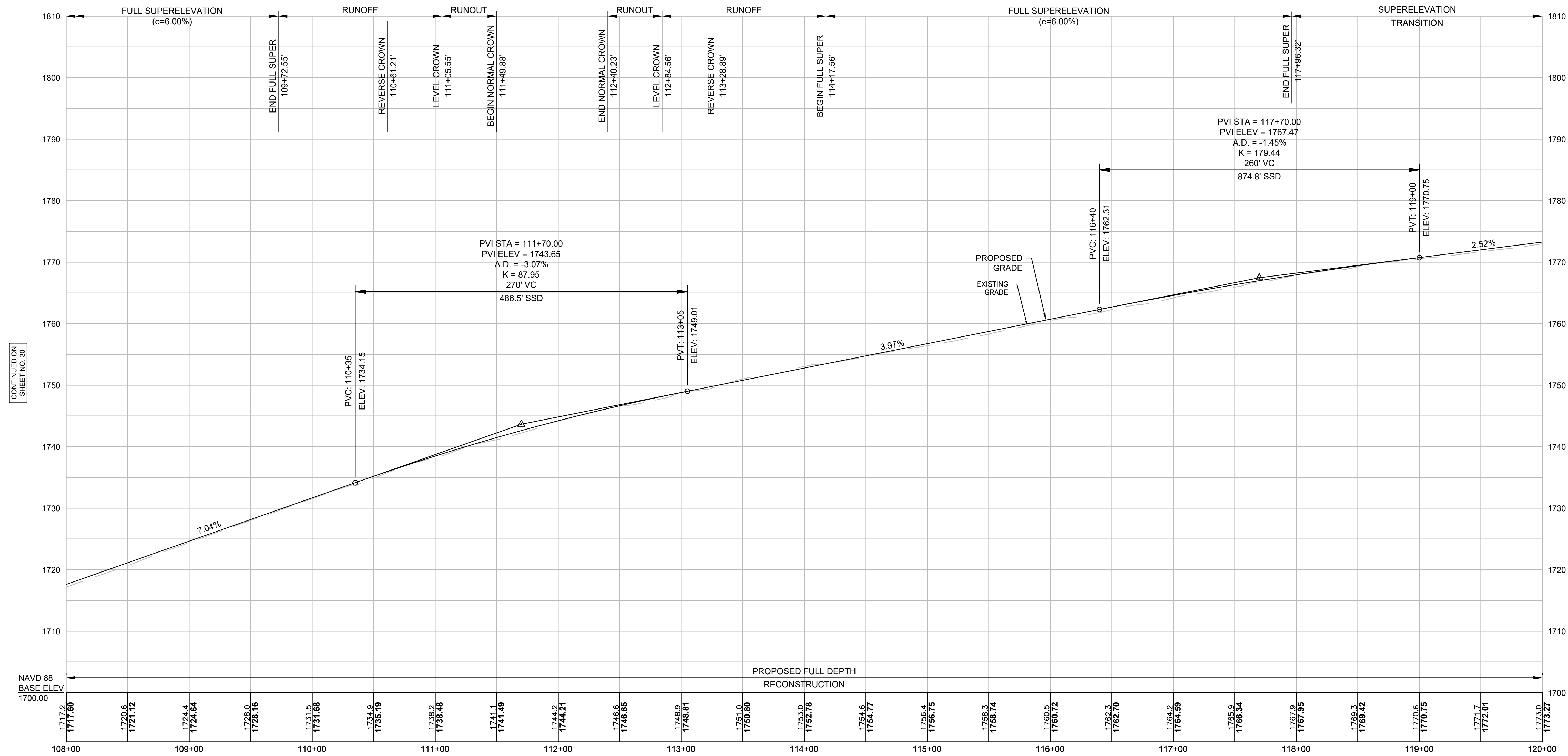


FOR CONSTRUCTION PLANS
SEE SHEET 17

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	31	191
PROJECT FILE NO.		609287	

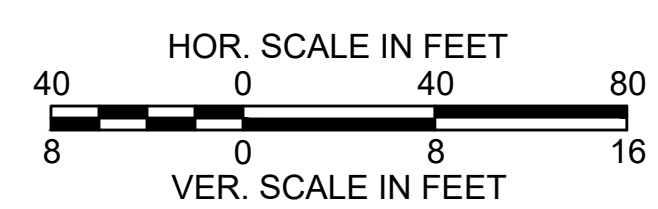
**OLD NORTH ROAD
PROFILE - 10**



CONTINUED ON
SHEET NO. 30

CONTINUED ON
SHEET NO. 32

TBM 59: NAIL SET IN POLE 92
ELEV.=1751.28' NAVD 1988
STA 113+59.83, 20.45' RT

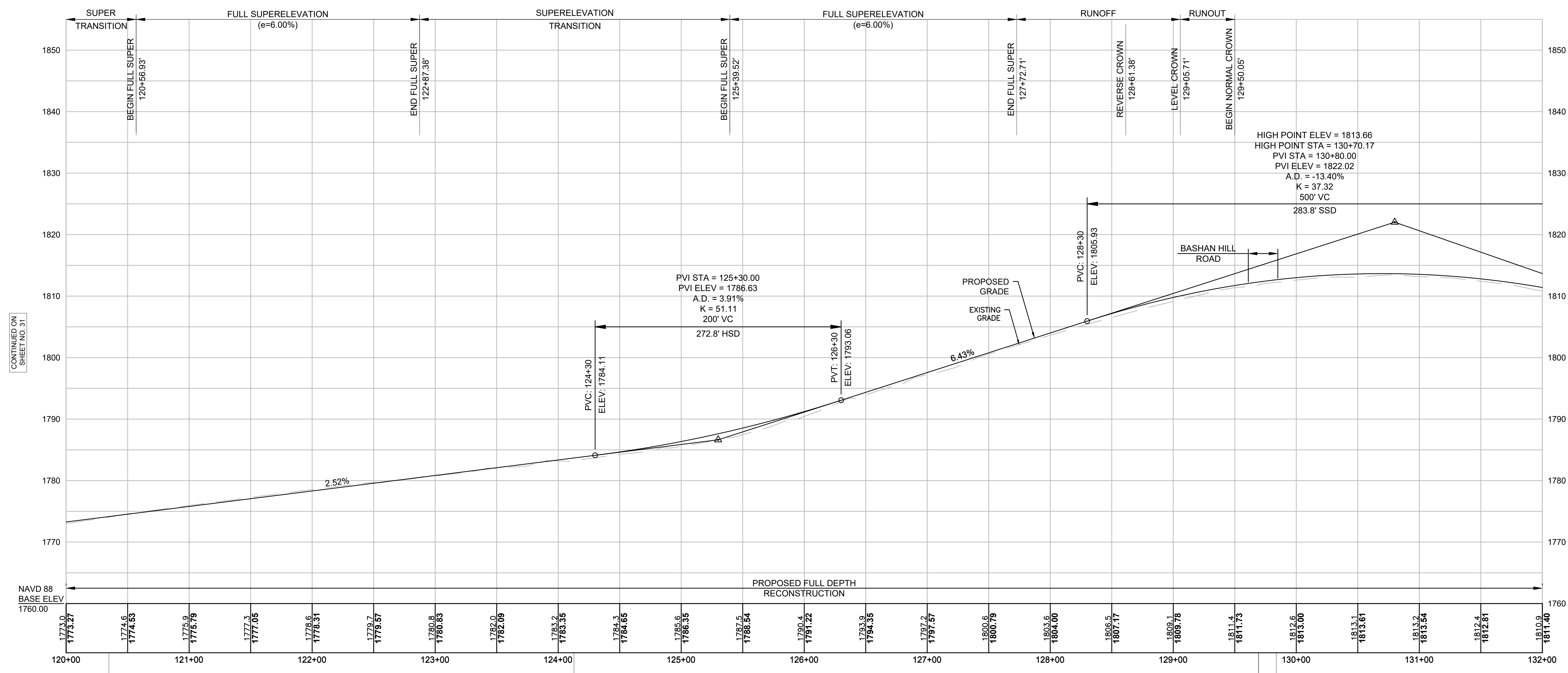


FOR CONSTRUCTION PLANS
SEE SHEETS 17-18

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	32	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
PROFILE - 11**



CONTINUED ON
SHEET NO. 31

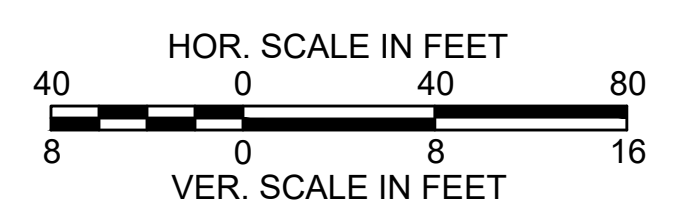
CONTINUED ON
SHEET NO. 33

TBM 58: NAIL SET IN POLE 90
ELEV.=1775.20' NAVD 1988
STA 120+34.82, 18.22' RT

TBM 57: NAIL SET IN POLE
ELEV.=1784.19' NAVD 1988
STA 124+12.84, 16.57' RT

STA 129+69.31 OLD NORTH ROAD BL =
STA 40+00.00 BASHAN HILL ROAD BL

TBM 56: NAIL SET IN POLE 10
ELEV.=1812.78' NAVD 1988
STA 129+83.71, 24.71' RT

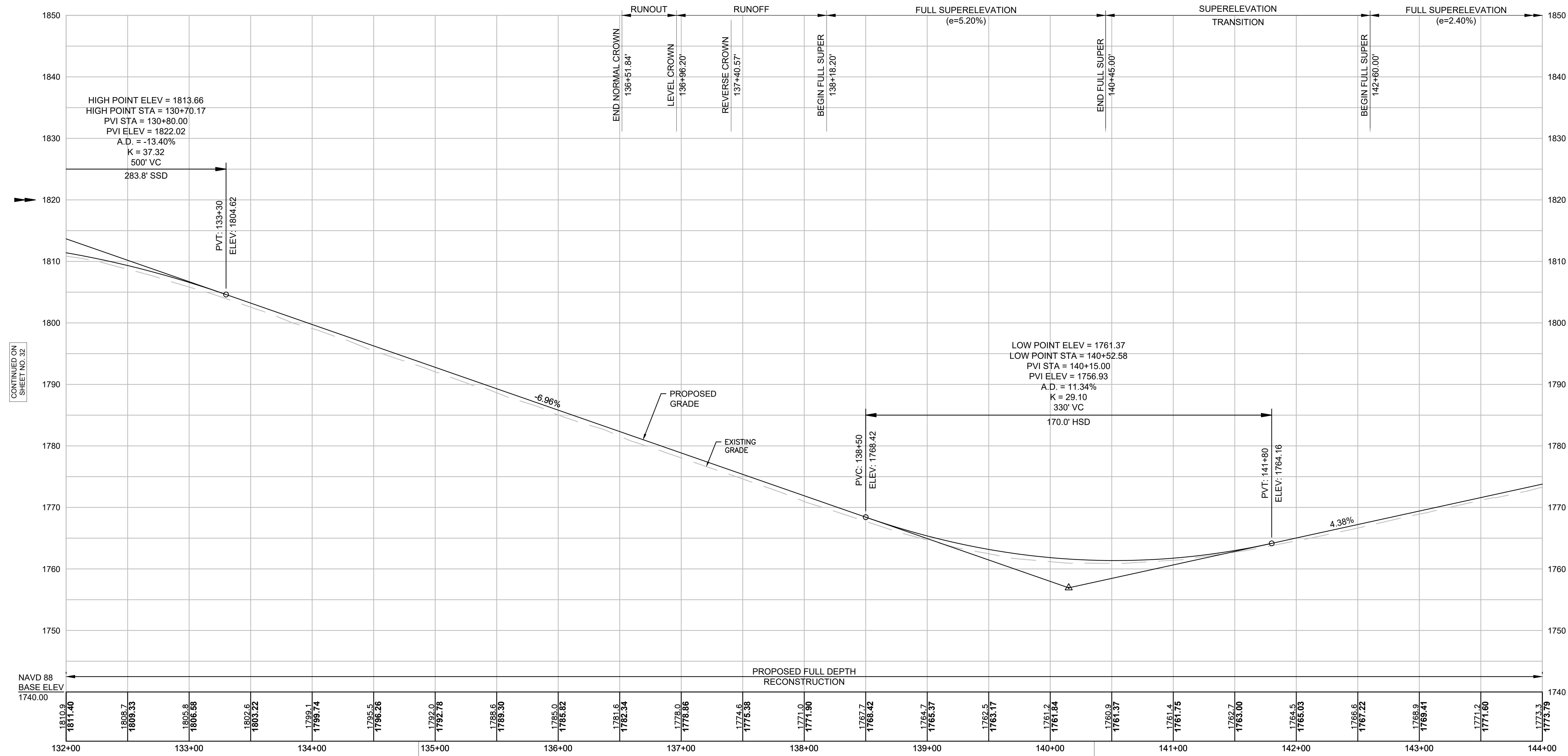


FOR CONSTRUCTION PLANS
SEE SHEET 18

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	33	191
PROJECT FILE NO.		609287	

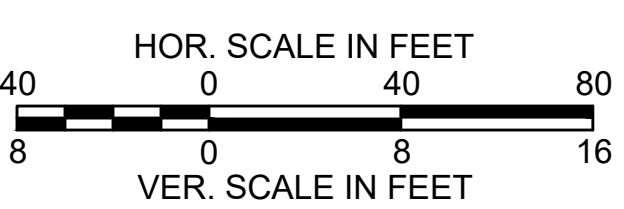
**OLD NORTH ROAD
PROFILE - 12**



CONTINUED ON
SHEET NO. 32

CONTINUED ON
SHEET NO. 34

NAVD 88
BASE ELEV
1740.00



TBM 55: NAIL SET IN POLE 6
ELEV = 1794.29' NAVD 1988
STA 134+86.57, 19.78' LT

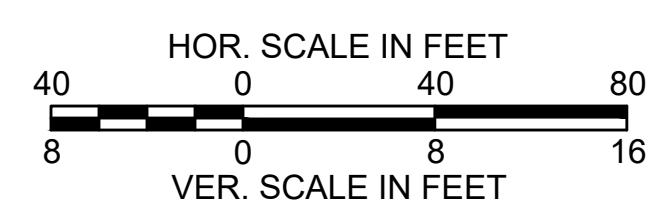
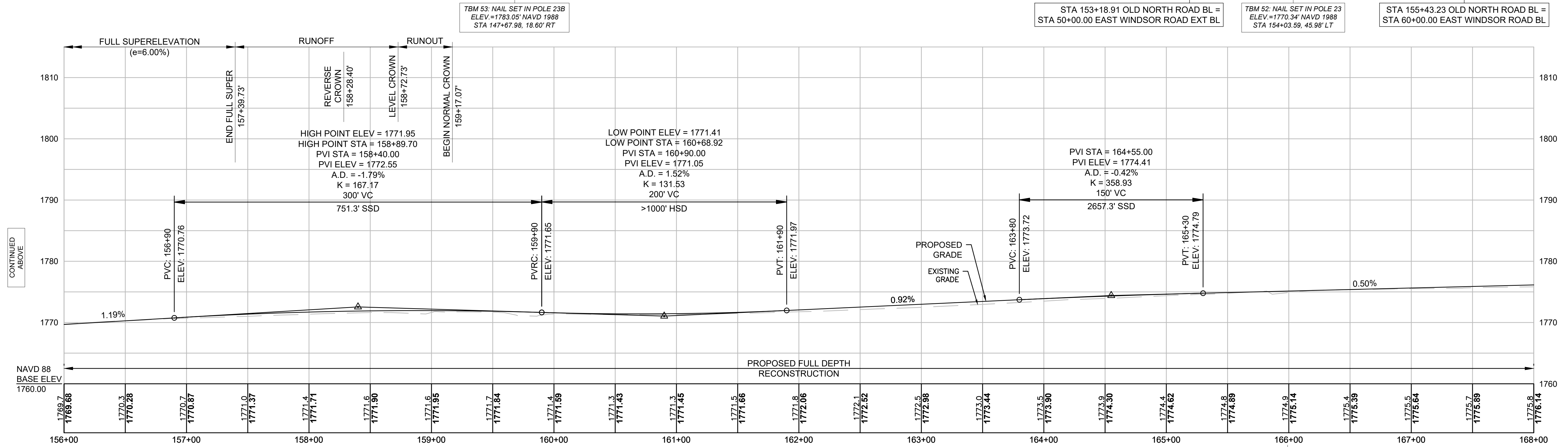
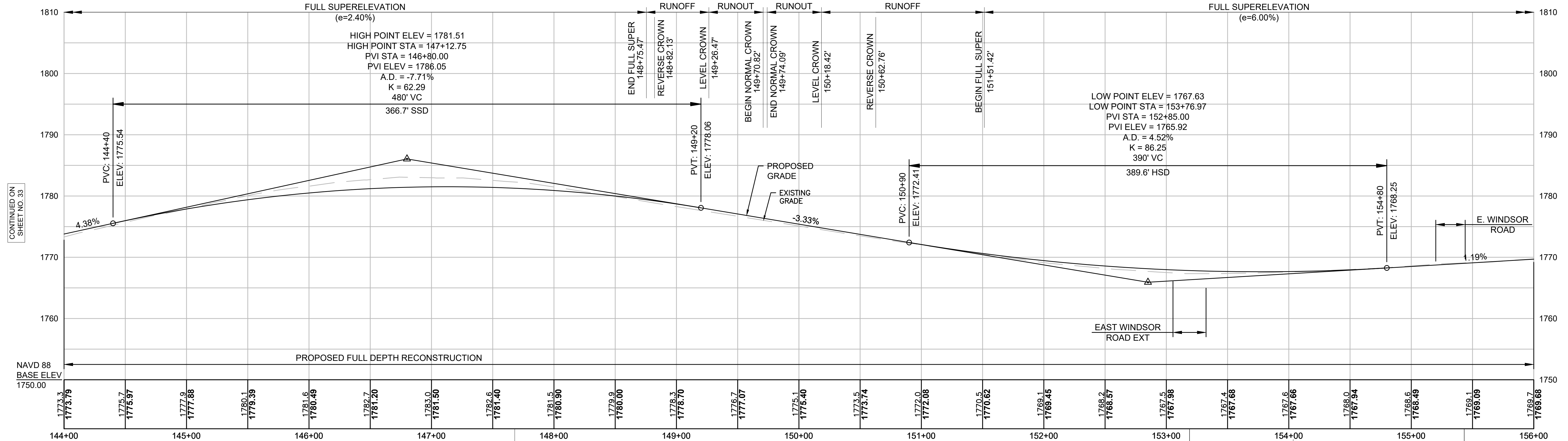
TBM 54: NAIL SET IN 8TH POST
OF METAL GUILD RAIL
ELEV = 1761.54' NAVD 1988
STA 140+35.76, 14.99' RT

FOR CONSTRUCTION PLANS
SEE SHEETS 18-19

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	34	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
PROFILE - 13**



FOR CONSTRUCTION PLANS
SEE SHEETS 19-20

CONTINUED ON
SHEET NO. 33

CONTINUED
BELOW

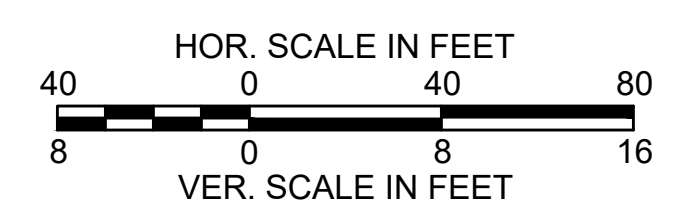
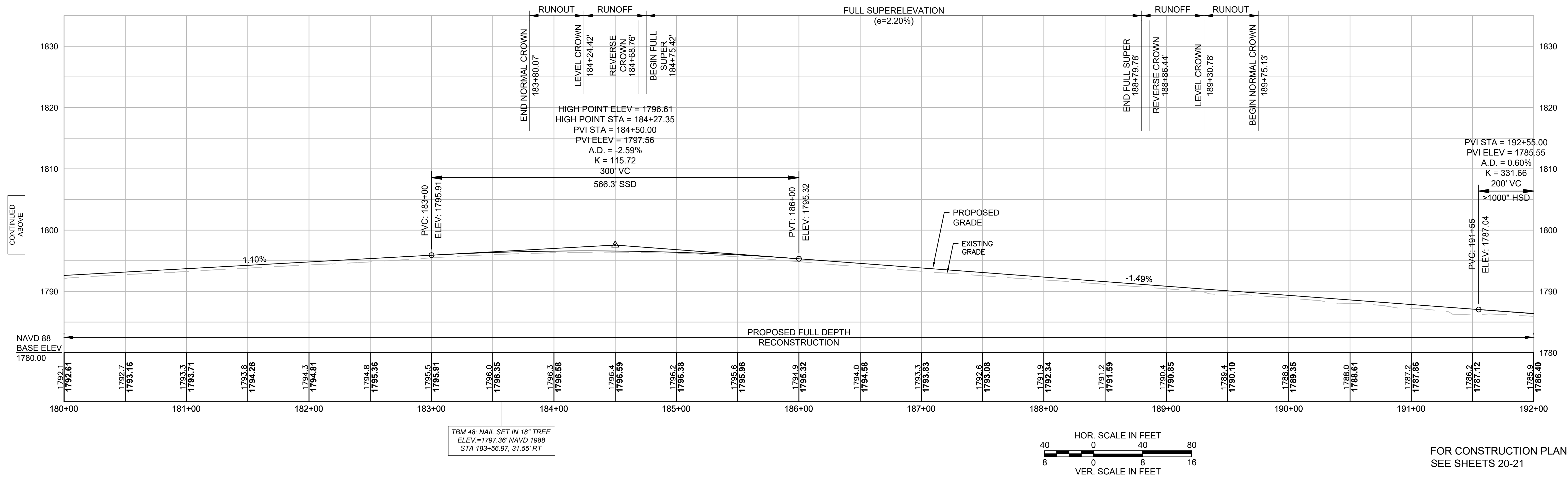
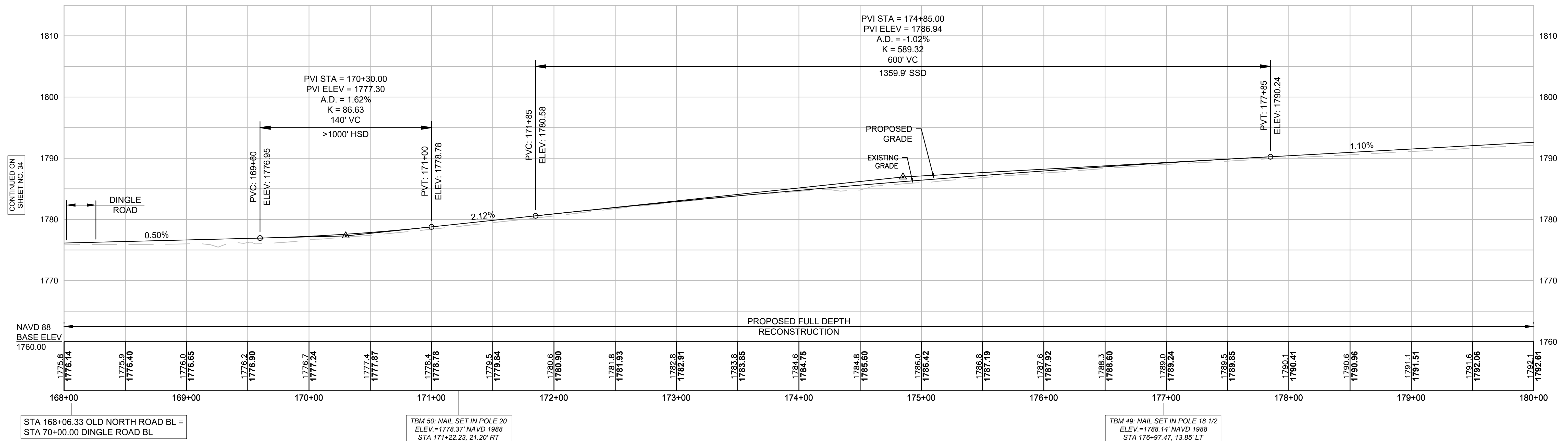
CONTINUED
ABOVE

CONTINUED ON
SHEET NO. 35

WORTHINGTON
ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	35	191
PROJECT FILE NO.		609287	

OLD NORTH ROAD
PROFILE - 14

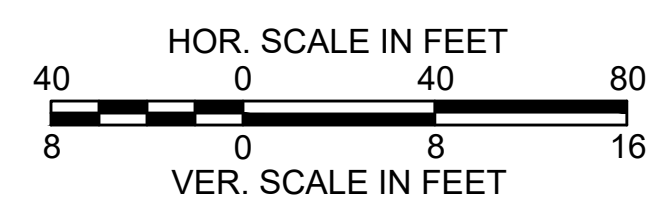
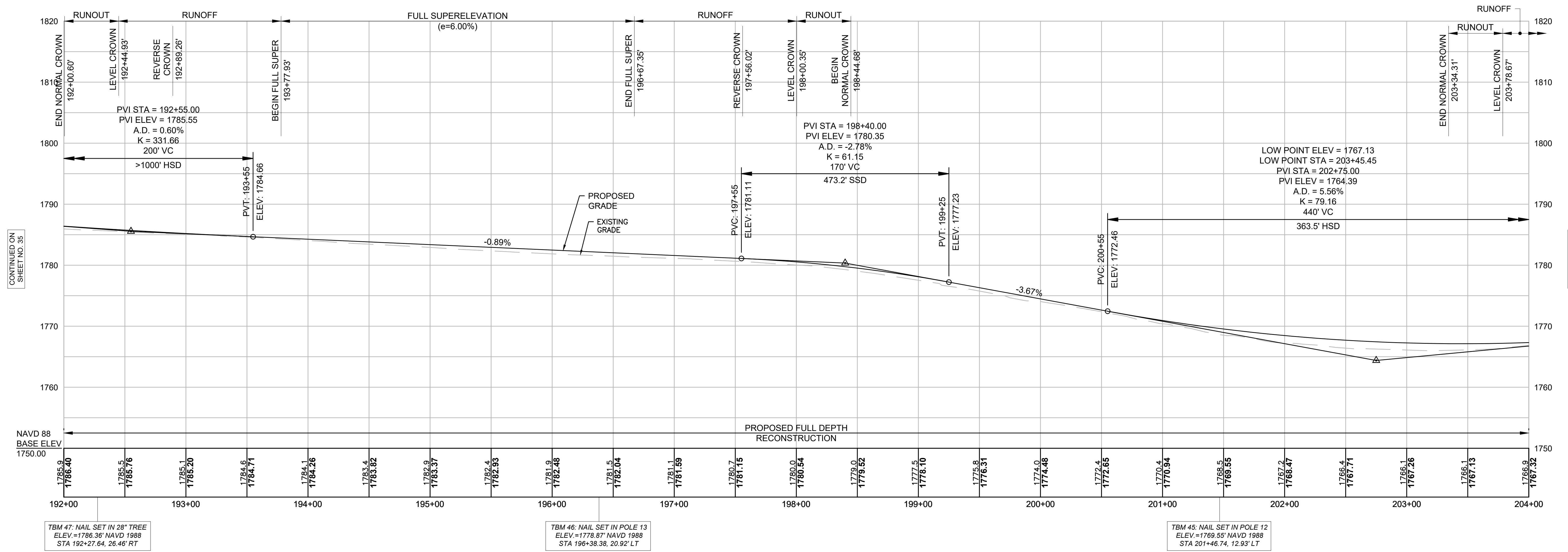


FOR CONSTRUCTION PLANS
SEE SHEETS 20-21

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	36	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
PROFILE - 15**



FOR CONSTRUCTION PLANS
SEE SHEET 21

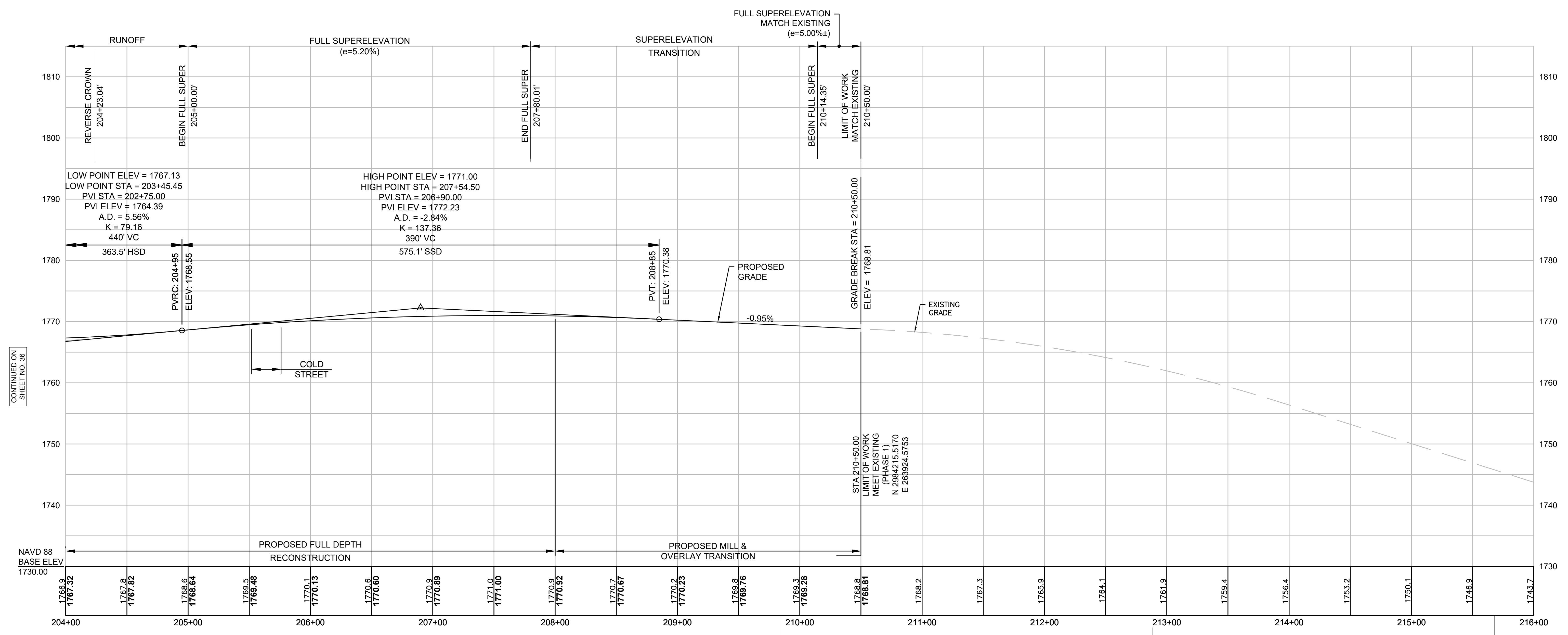
CONTINUED ON
SHEET NO. 35

CONTINUED ON
SHEET NO. 37

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	37	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
PROFILE - 16**

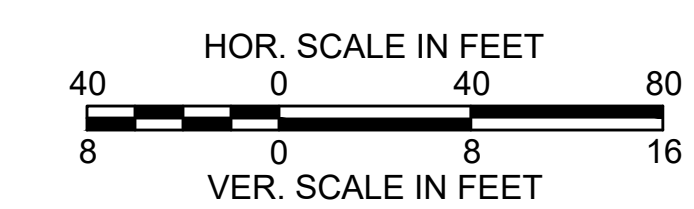


CONTINUED ON
SHEET NO. 36

TBM 44: NAIL SET IN POLE 9
ELEV = 1768.50' NAVD 1988
STA 209+88.37, 22.13' LT

TBM 43: NAIL SET IN POLE 8
ELEV = 1763.89' NAVD 1988
STA 212+88.53, 21.77' LT

TBM 42: NAIL SET IN POLE 61
ELEV = 1746.16' NAVD 1988
STA 215+67.94, 18.75' LT



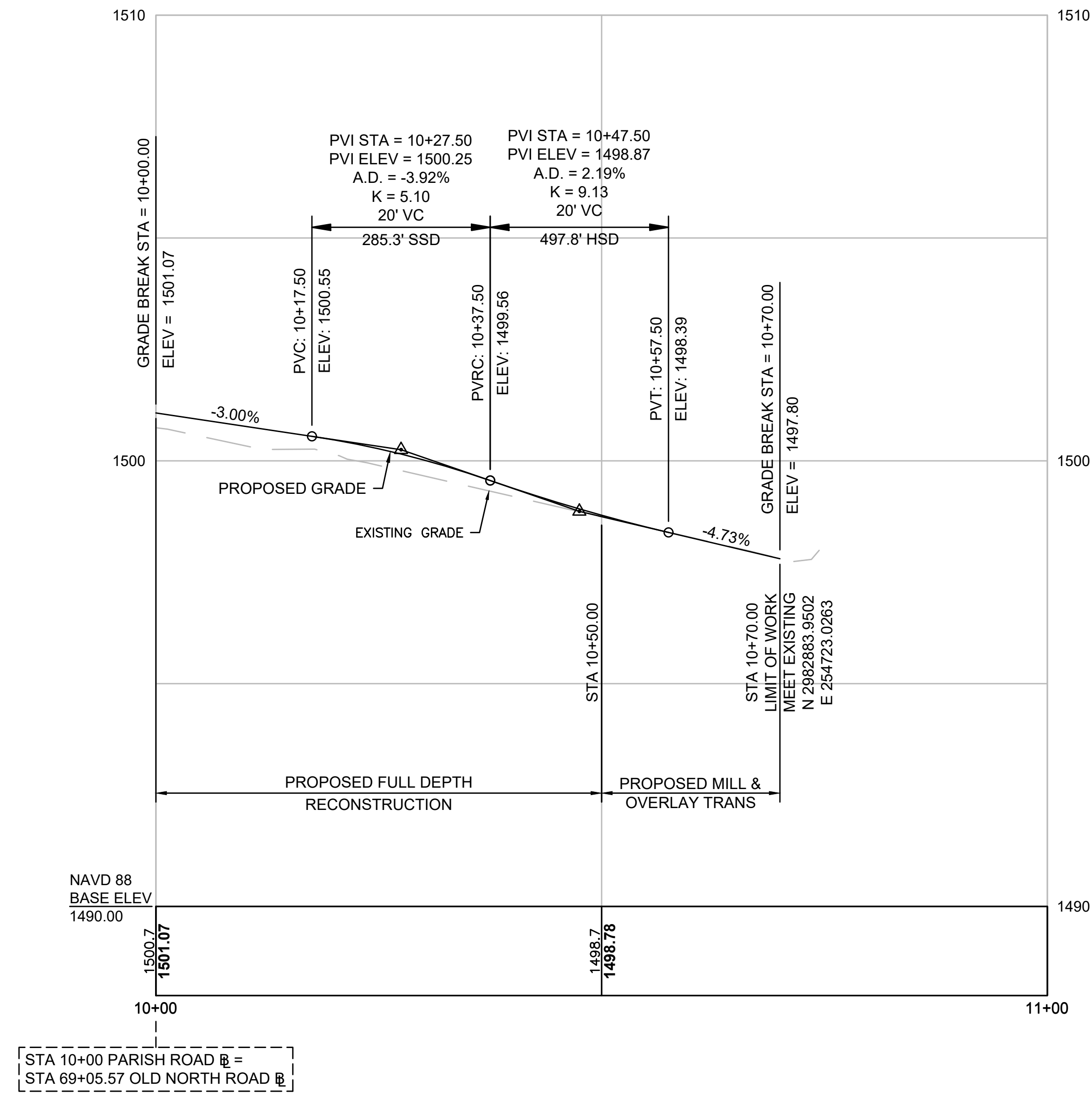
FOR CONSTRUCTION PLANS
SEE SHEETS 21

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	38	191
PROJECT FILE NO.		609287	

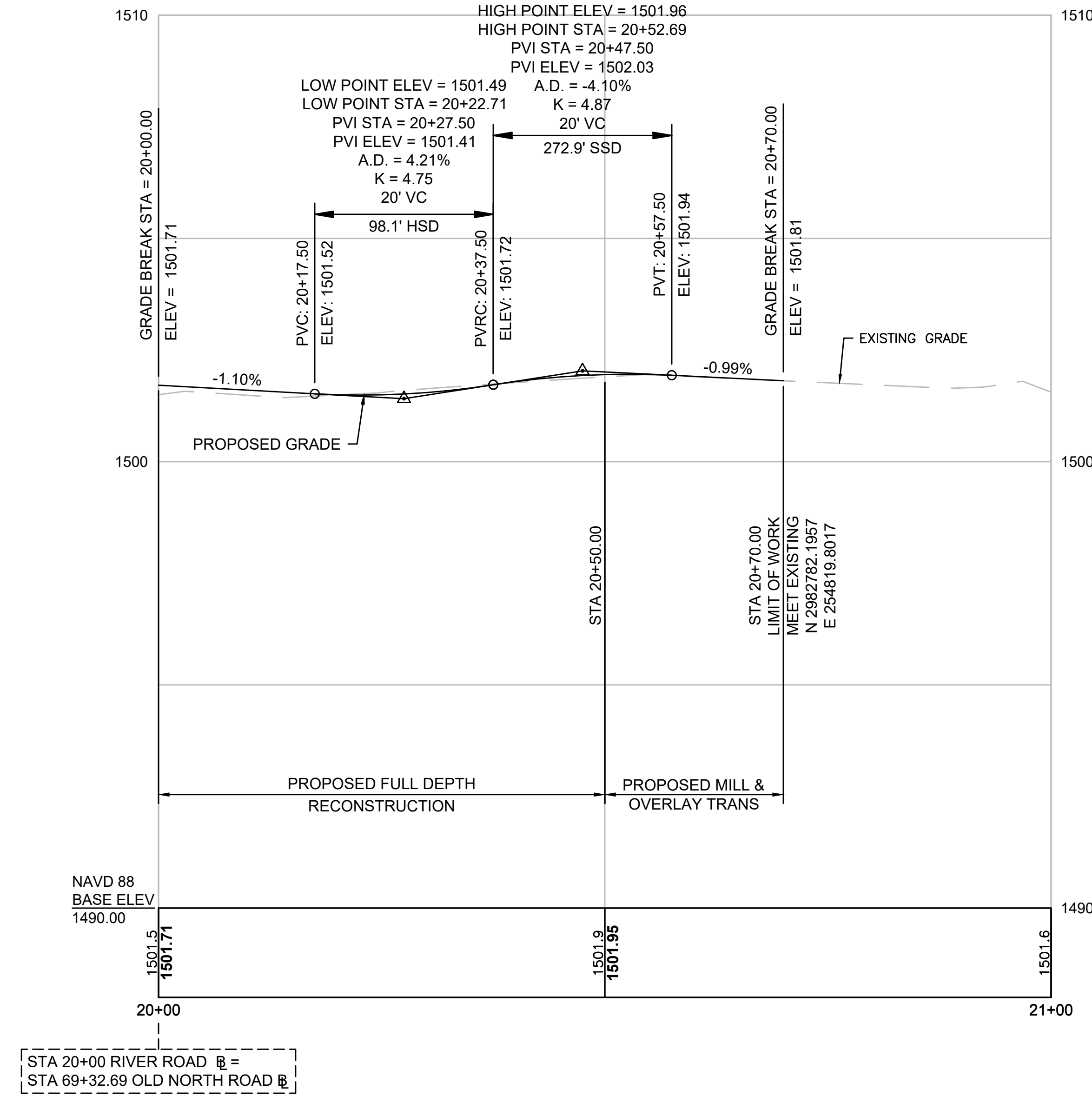
**SIDE STREETS
PROFILE - 1**

PARISH ROAD

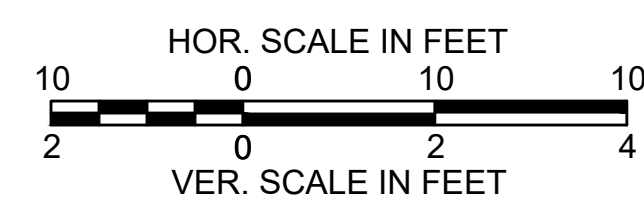


STA 10+00 PARISH ROAD @ =
STA 69+05.57 OLD NORTH ROAD @

RIVER ROAD



STA 20+00 RIVER ROAD @ =
STA 69+32.69 OLD NORTH ROAD @



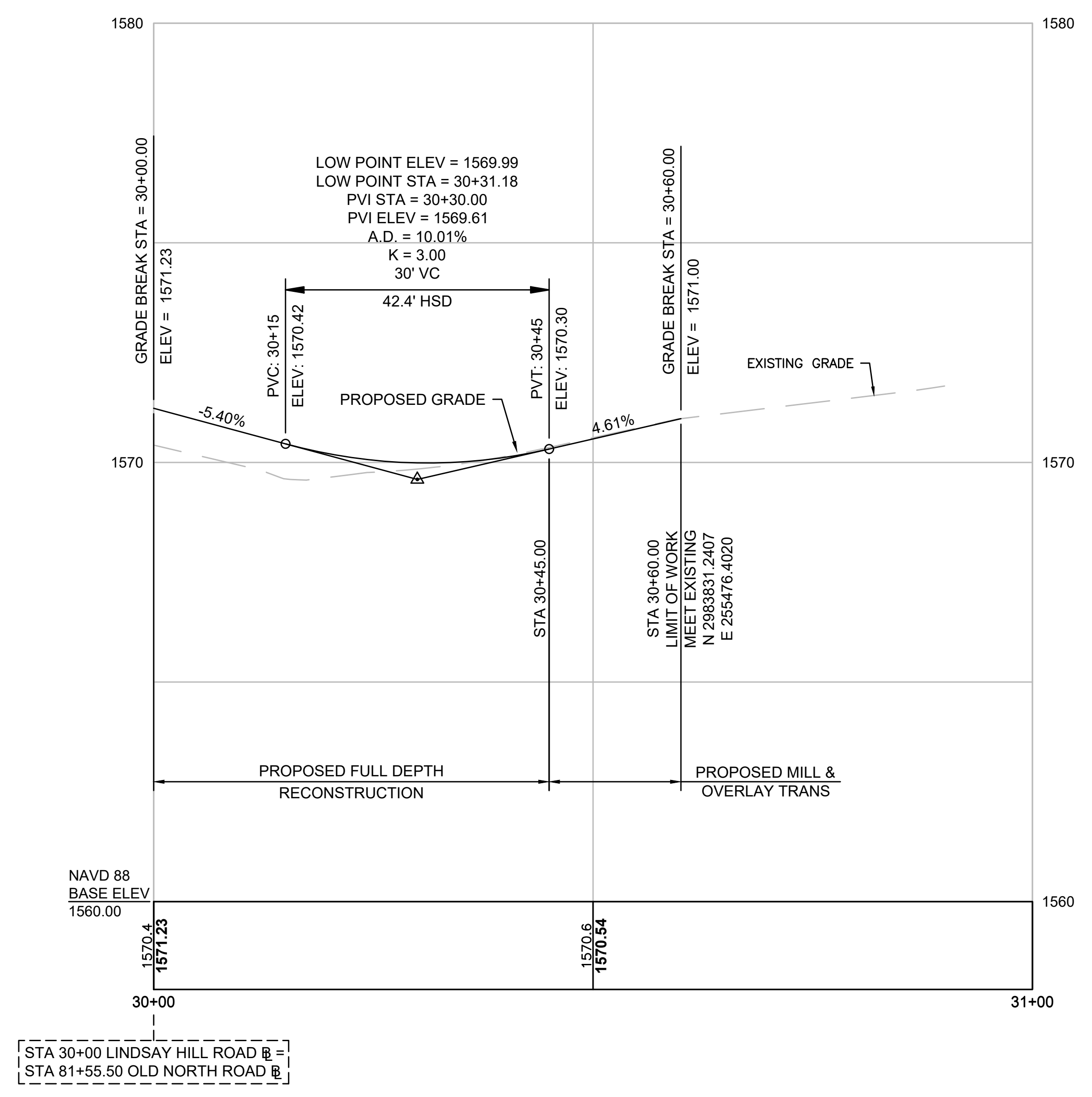
FOR CONSTRUCTION PLANS
SEE SHEET 15

**WORTHINGTON
ROUTE 143**

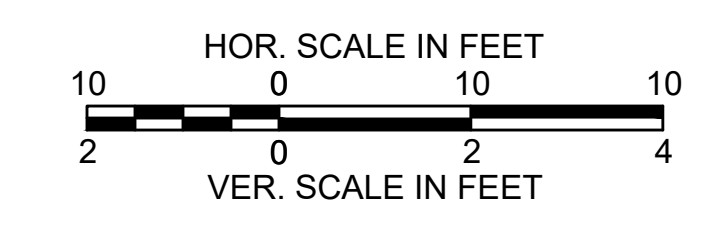
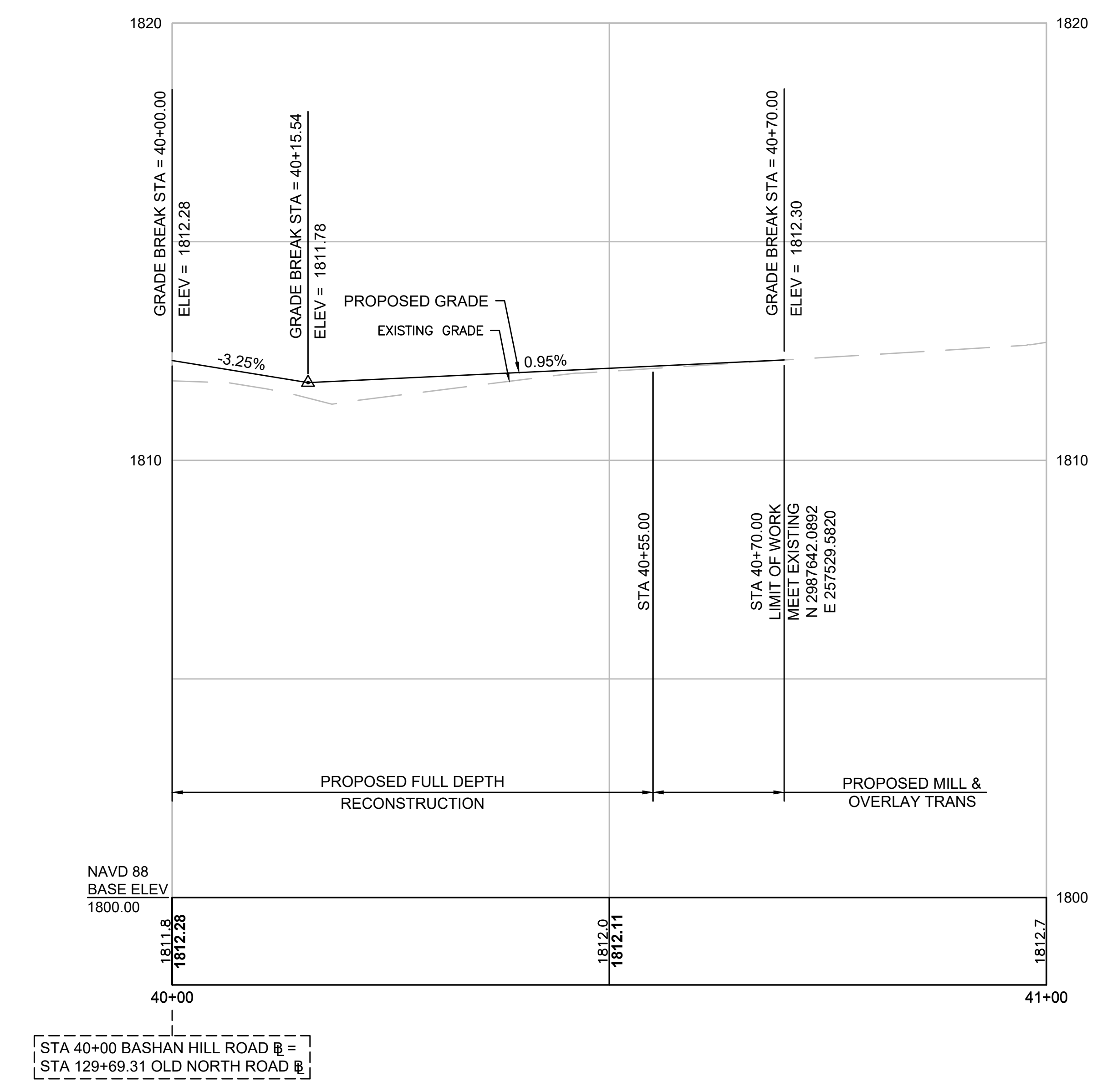
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	39	191
PROJECT FILE NO.		609287	

**SIDE STREETS
PROFILE - 2**

LINDSAY HILL ROAD



BASHAN HILL ROAD



FOR CONSTRUCTION PLANS
SEE SHEETS 16 & 18

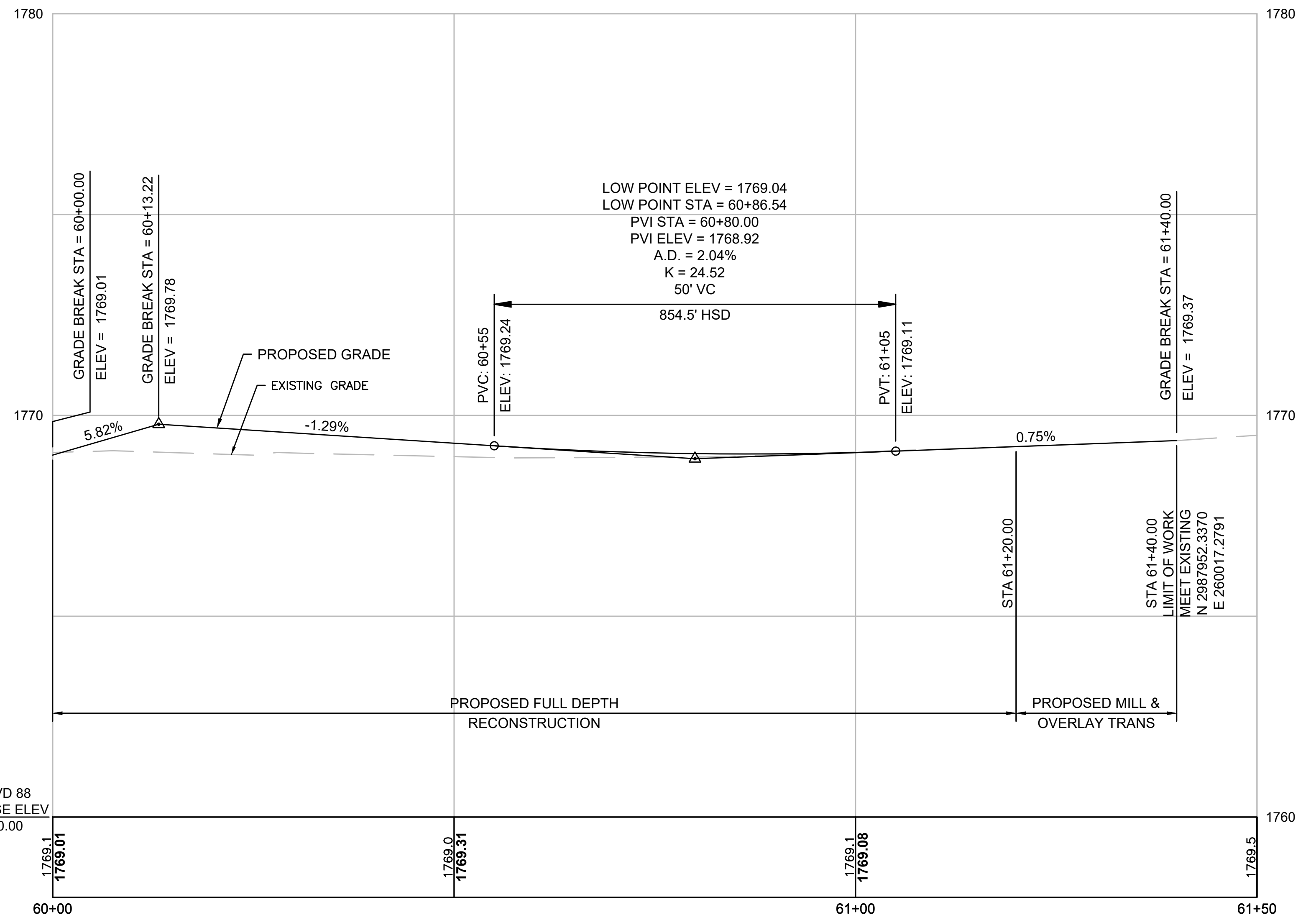
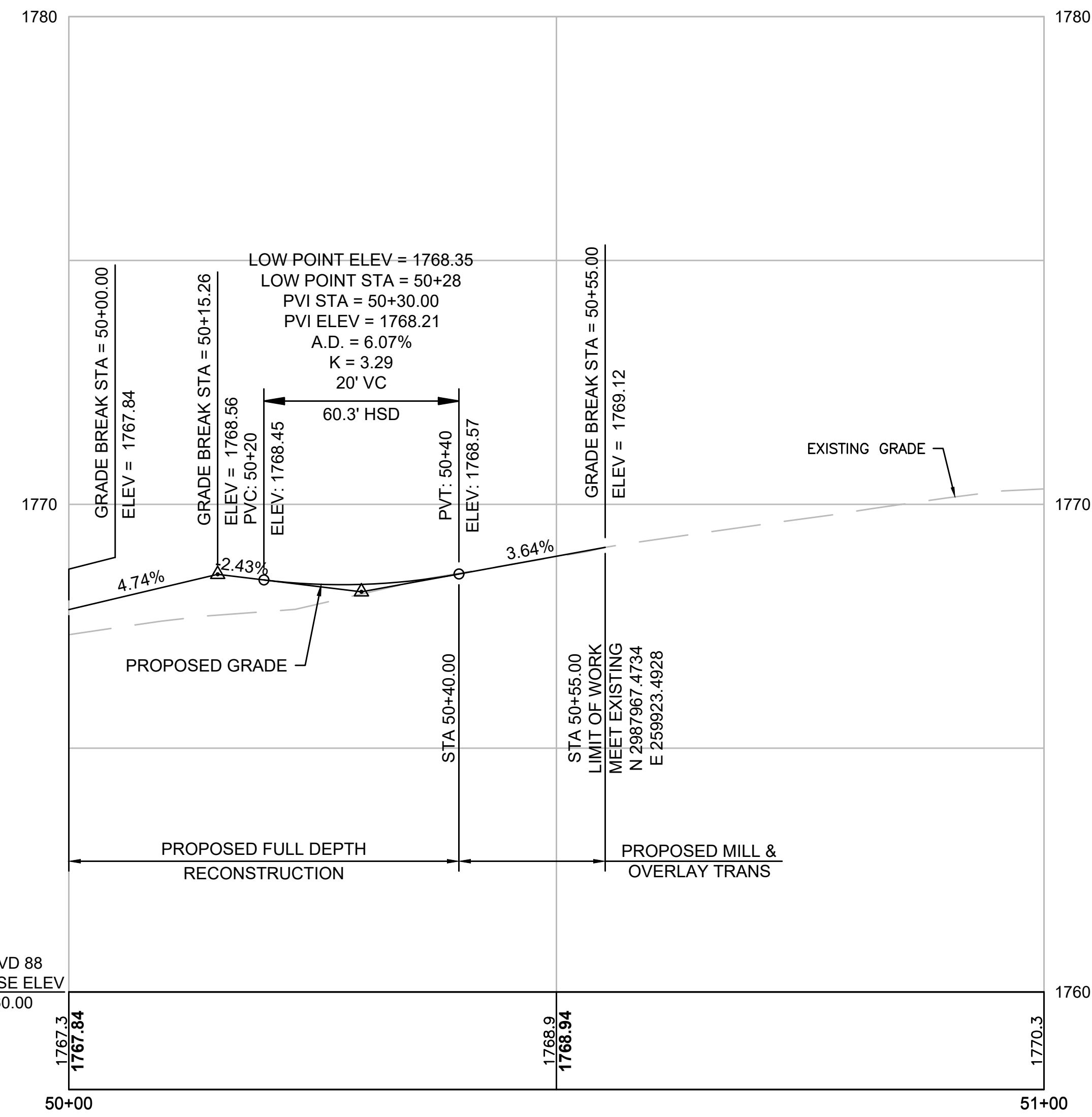
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	40	191
PROJECT FILE NO.		609287	

**SIDE STREETS
PROFILE - 3**

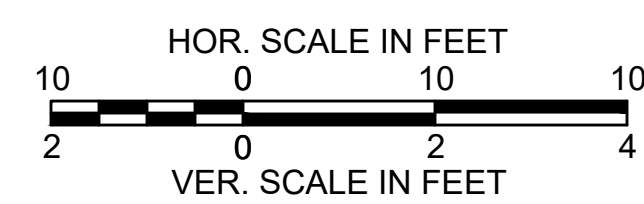
EAST WINDSOR ROAD EXT

EAST WINDSOR ROAD



STA 50+00 EAST WINDSOR ROAD EXT @
STA 153+18.91 OLD NORTH ROAD @

STA 60+00 EAST WINDSOR ROAD @
STA 155+43.23 OLD NORTH ROAD @



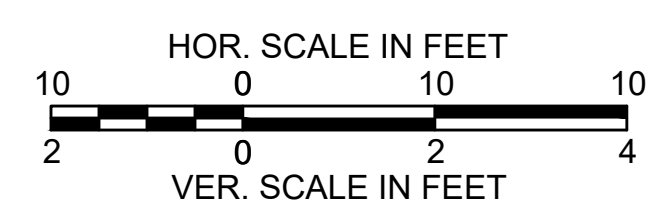
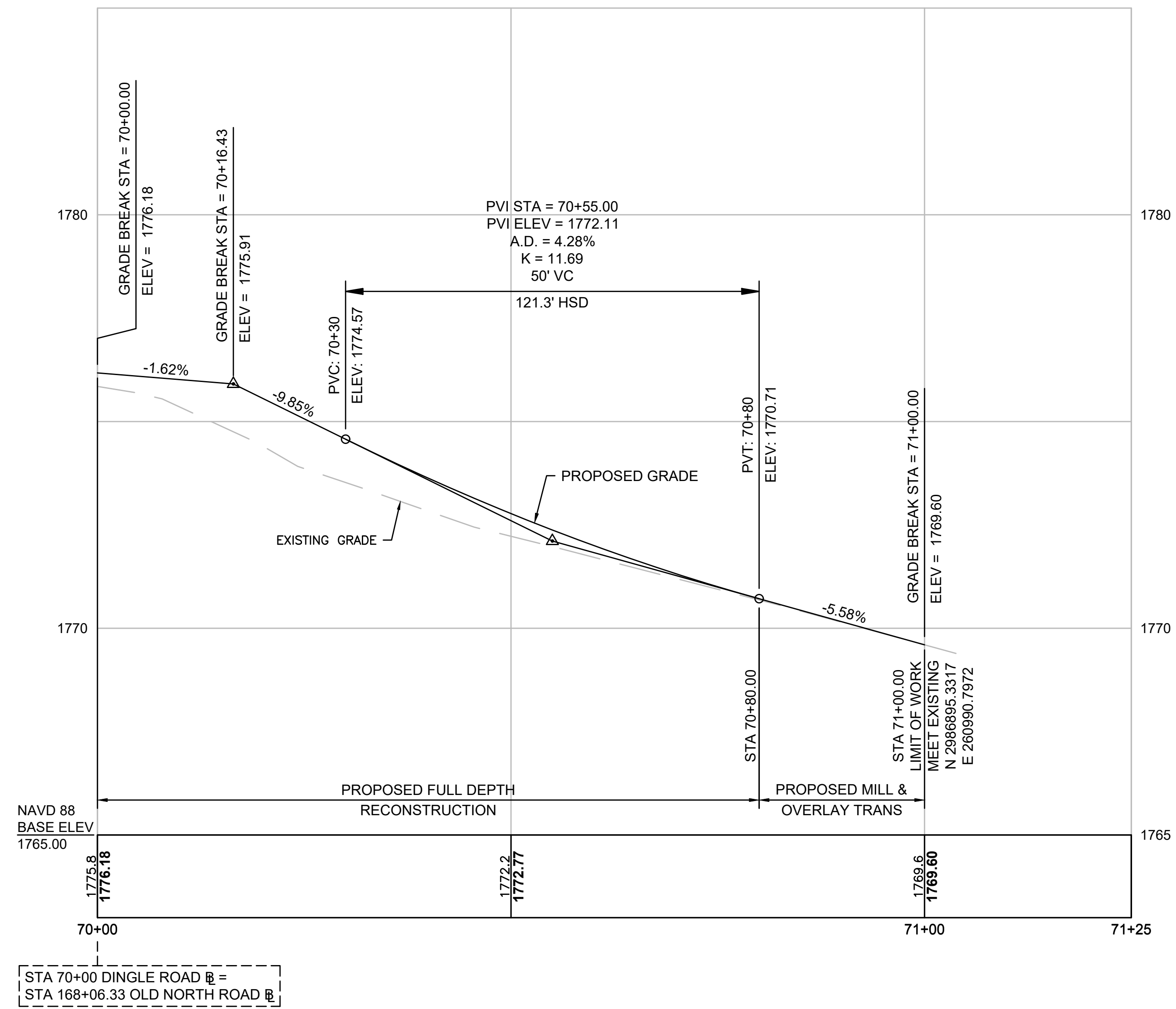
FOR CONSTRUCTION PLANS
SEE SHEET 19

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	41	191
PROJECT FILE NO.		609287	

**SIDE STREETS
PROFILE - 4**

DINGLE ROAD



FOR CONSTRUCTION PLANS
SEE SHEETS 20

SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
124	1802.658'	2983225.832	250608.938	MAG SET
123	1796.060'	2982983.804'	250834.899'	MSTN SET
122	1787.984'	2982941.166'	251143.319'	MSTN SET
121	1780.603'	2983000.307'	251325.967'	MAG SET
120	1758.477'	2983308.603'	251558.082'	MSTN SET
119	1735.040'	2983646.004'	251643.999'	MAG SET
118	1722.588'	2983844.752'	251715.050'	MSTN SET
117	1698.532'	2984115.336'	251962.794'	MSTN SET

NOTE:
SEE BASELINE DATA TABLES SHEETS 6 & 7
FOR CONSTRUCTION BASELINE LAYOUT DATA
AND COORDINATES.

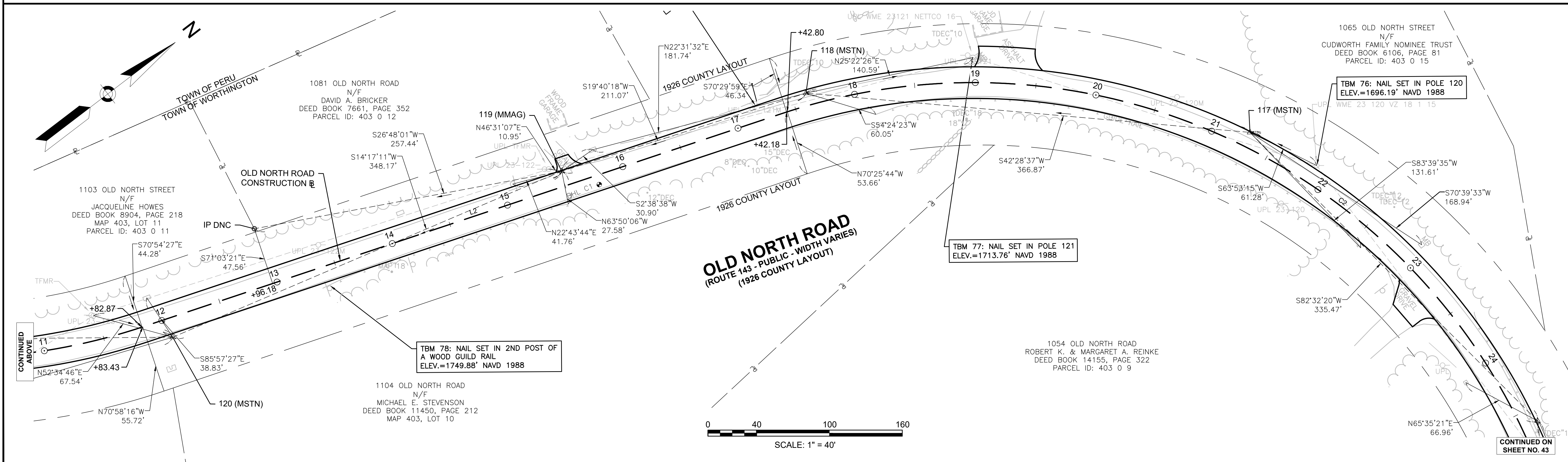
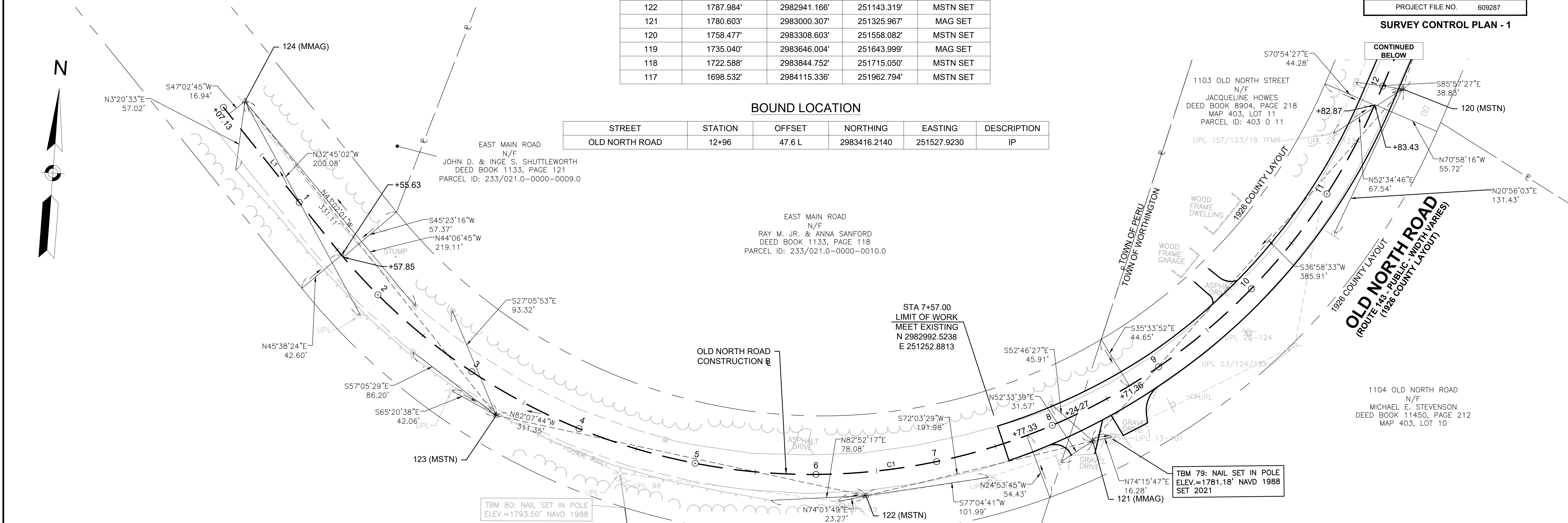
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	42	191
PROJECT FILE NO.		609287	

SURVEY CONTROL PLAN - 1

BOUND LOCATION

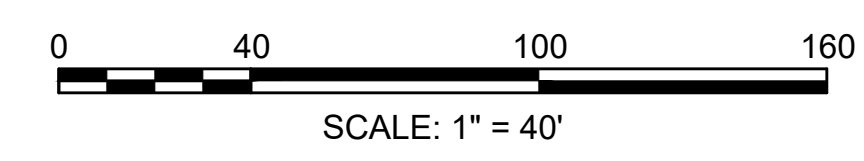
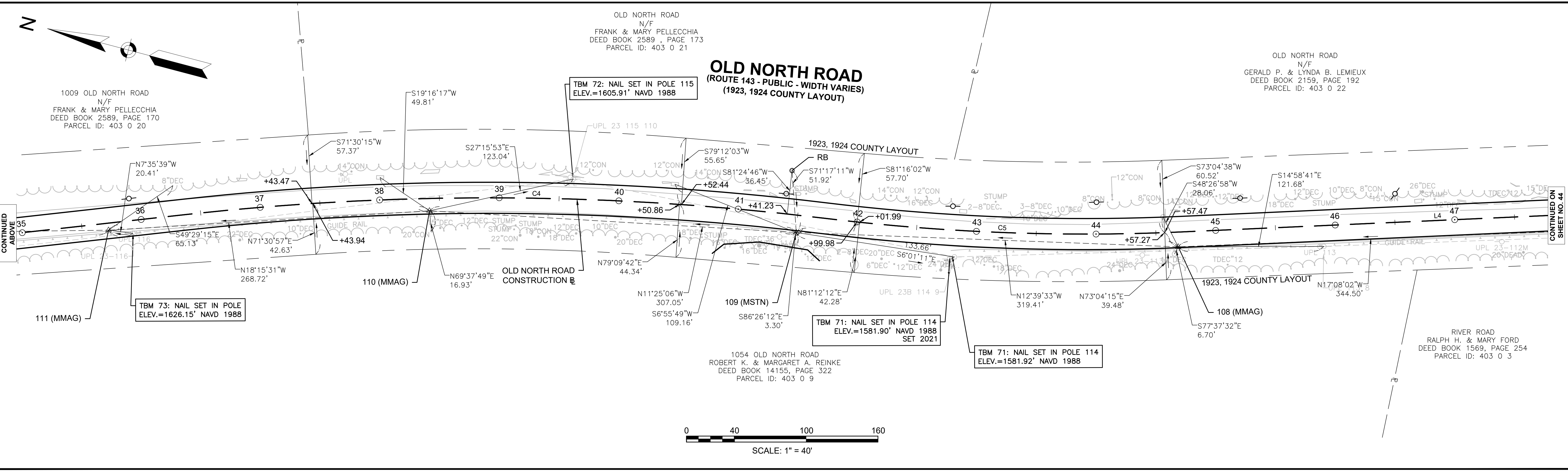
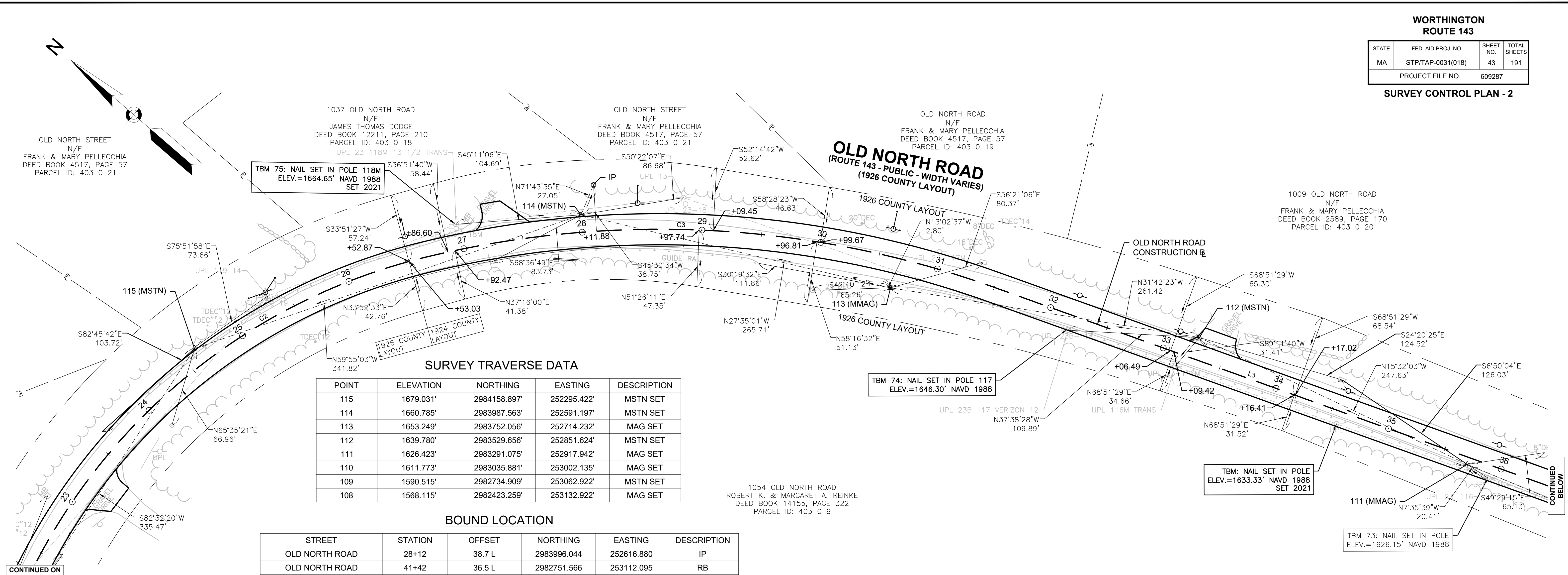
STREET	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
OLD NORTH ROAD	12+96	47.6 L	2983416.2140	251527.9230	IP



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	43	191
PROJECT FILE NO.		609287	

SURVEY CONTROL PLAN - 2



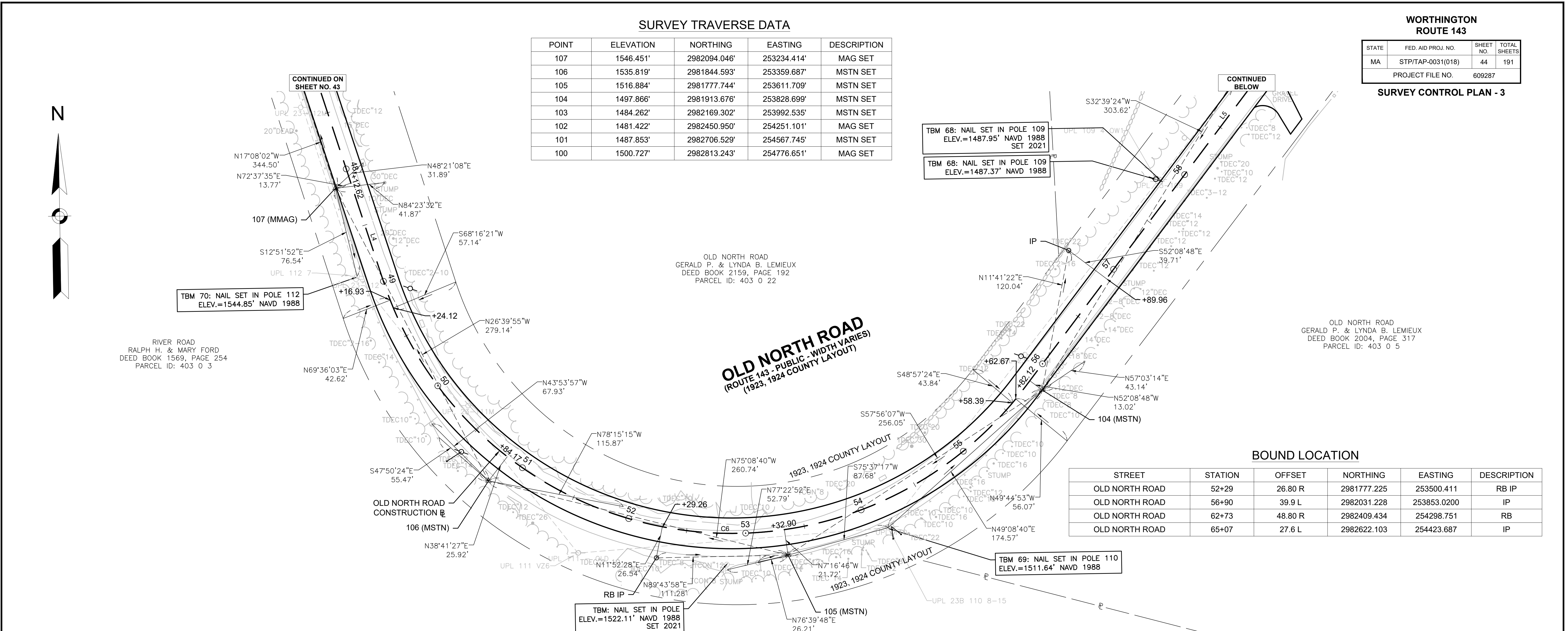
SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
107	1546.451'	2982094.046'	253234.414'	MAG SET
106	1535.819'	2981844.593'	253359.687'	MSTN SET
105	1516.884'	2981777.744'	253611.709'	MSTN SET
104	1497.866'	2981913.676'	253828.699'	MSTN SET
103	1484.262'	2982169.302'	253992.535'	MSTN SET
102	1481.422'	2982450.950'	254251.101'	MAG SET
101	1487.853'	2982706.529'	254567.745'	MSTN SET
100	1500.727'	2982813.243'	254776.651'	MAG SET

WORTHINGTON
ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	44	191
PROJECT FILE NO.		609287	

SURVEY CONTROL PLAN - 3



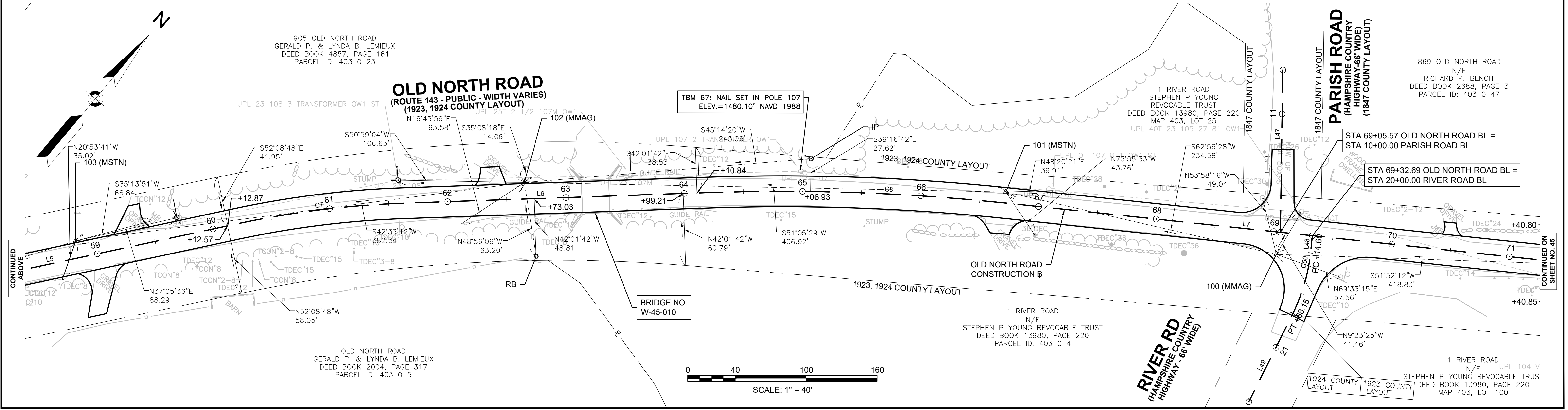
OLD NORTH ROAD
GERALD P. & LYNDY B. LEMIEUX
DEED BOOK 2159, PAGE 192
PARCEL ID: 403 0 22

OLD NORTH ROAD
(ROUTE 143 - PUBLIC - WIDTH VARIES)
(1923, 1924 COUNTY LAYOUT)

OLD NORTH ROAD
GERALD P. & LYNDY B. LEMIEUX
DEED BOOK 2004, PAGE 317
PARCEL ID: 403 0 5

BOUND LOCATION

STREET	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
OLD NORTH ROAD	52+29	26.80 R	2981777.225	253500.411	RB IP
OLD NORTH ROAD	56+90	39.9 L	2982031.228	253853.0200	IP
OLD NORTH ROAD	62+73	48.80 R	2982409.434	254298.751	RB
OLD NORTH ROAD	65+07	27.6 L	2982622.103	254423.687	IP



905 OLD NORTH ROAD
GERALD P. & LYNDY B. LEMIEUX
DEED BOOK 4857, PAGE 161
PARCEL ID: 403 0 23

OLD NORTH ROAD
(ROUTE 143 - PUBLIC - WIDTH VARIES)
(1923, 1924 COUNTY LAYOUT)

TBM 67: NAIL SET IN POLE 107
ELEV.=1480.10' NAVD 1988

1 RIVER ROAD
STEPHEN P. YOUNG REVOCABLE TRUST
DEED BOOK 13980, PAGE 220
MAP 403, LOT 25

869 OLD NORTH ROAD
N/F
RICHARD P. BENOIT
DEED BOOK 2688, PAGE 3
PARCEL ID: 403 0 47

PARISH ROAD
(HAMPSHIRE COUNTY
HIGHWAY-66 WIDE)
(1847 COUNTY LAYOUT)

STA 69+05.57 OLD NORTH ROAD BL =
STA 10+00.00 PARISH ROAD BL

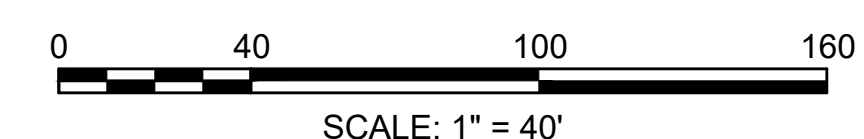
STA 69+32.69 OLD NORTH ROAD BL =
STA 20+00.00 RIVER ROAD BL

BRIDGE NO.
W-45-010

1 RIVER ROAD
N/F
STEPHEN P. YOUNG REVOCABLE TRUST
DEED BOOK 13980, PAGE 220
PARCEL ID: 403 0 4

RIVER RD
(HAMPSHIRE COUNTY
HIGHWAY - 66 WIDE)

1 RIVER ROAD
N/F
STEPHEN P. YOUNG REVOCABLE TRUS
DEED BOOK 13980, PAGE 220
MAP 403, LOT 100



SURVEY TRAVERSE DATA

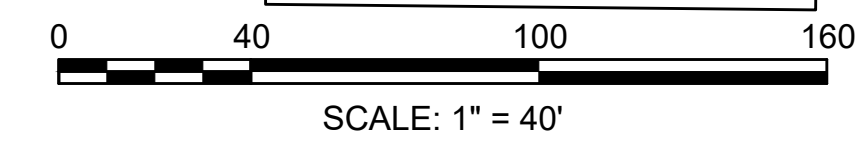
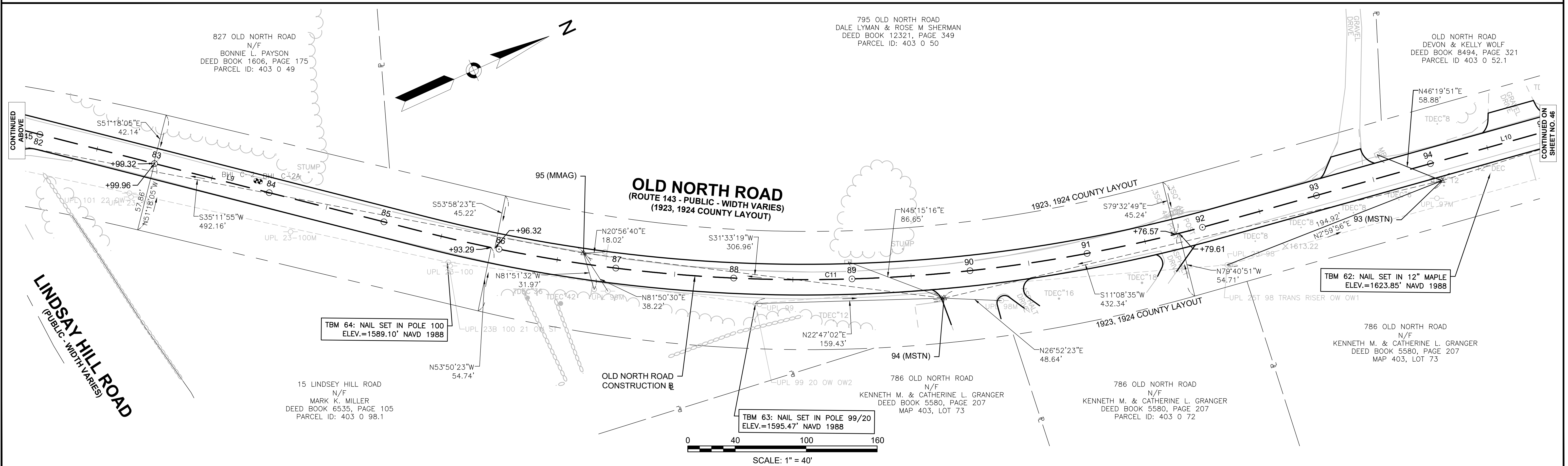
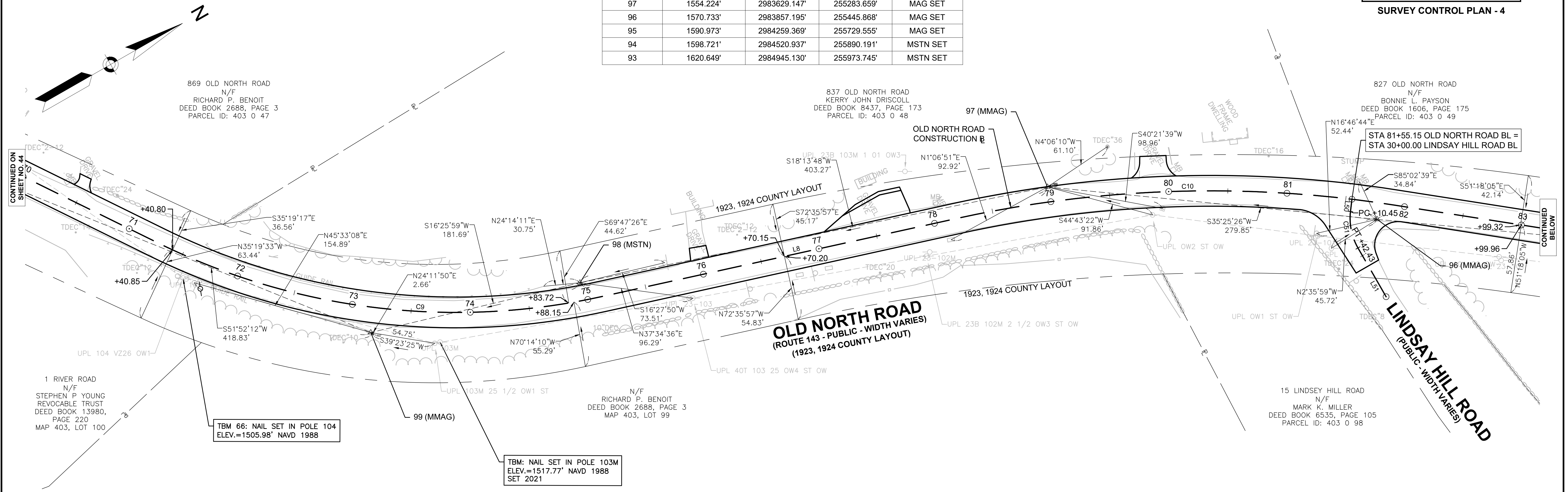
POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
99	1512.840'	2983071.847'	255106.104'	MAG SET
98	1525.885'	2983246.118'	255157.504'	MSTN SET
97	1554.224'	2983629.147'	255283.659'	MAG SET
96	1570.733'	2983857.195'	255445.868'	MAG SET
95	1590.973'	2984259.369'	255729.555'	MAG SET
94	1598.721'	2984520.937'	255890.191'	MSTN SET
93	1620.649'	2984945.130'	255973.745'	MSTN SET

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	45	191

PROJECT FILE NO. 609287

SURVEY CONTROL PLAN - 4



SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
93	1620.649'	2984945.130'	255973.745'	MSTN SET
92	1653.211'	2985425.994'	256031.111'	MSTN SET
91	1678.145'	2985784.262'	255987.590'	MAG SET
90	1708.017'	2986207.517'	255934.648'	MSTN SET
89	1731.907'	2986524.781'	256043.222'	MAG SET
88	1756.802'	2986933.634'	256330.289'	MSTN SET
87	1767.291'	2987042.663'	256603.894'	MAG SET

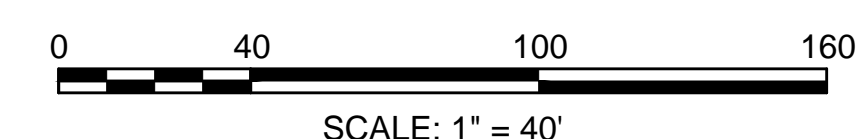
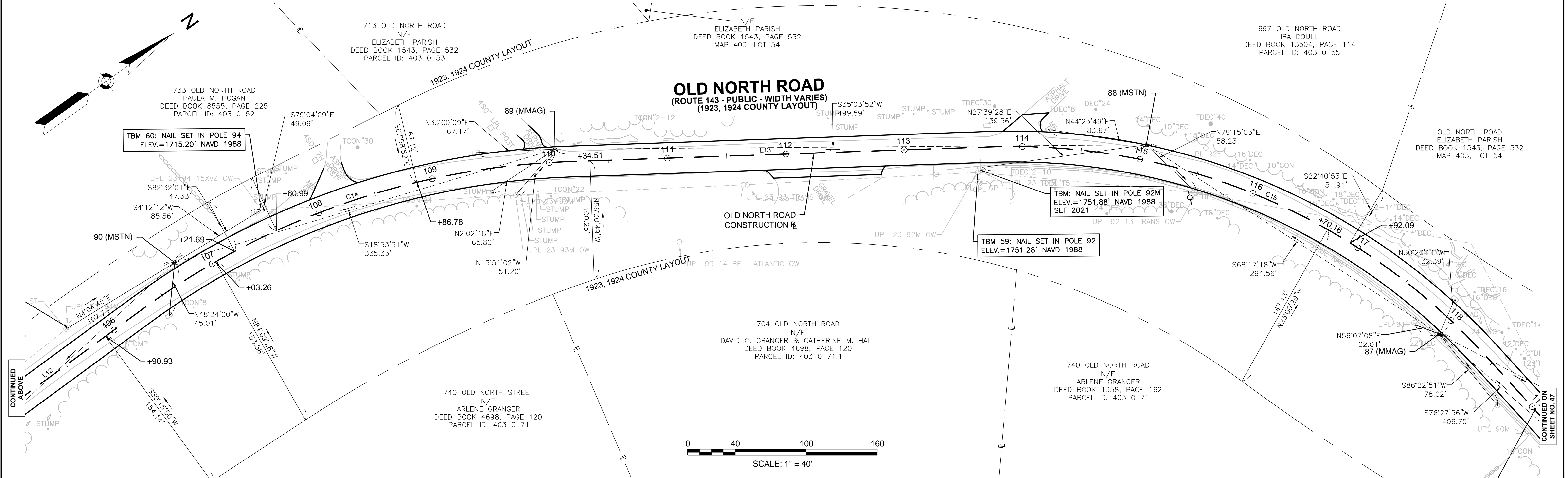
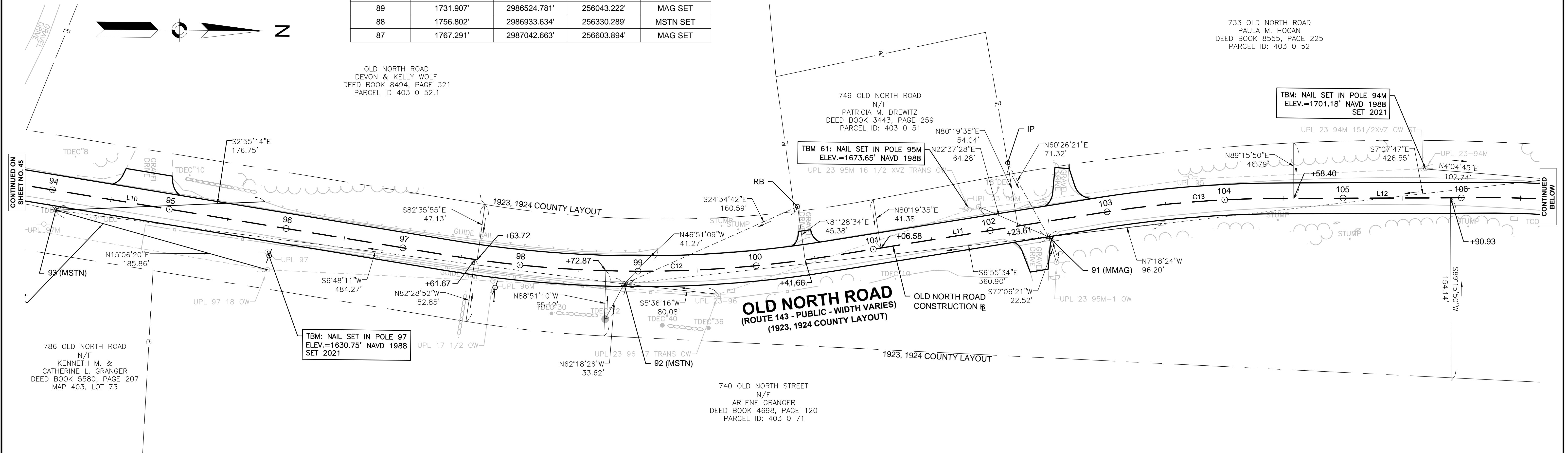
BOUND LOCATION

STREET	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
OLD NORTH ROAD	100+42	45.4 L	2985572.033	255964.316	RB
OLD NORTH ROAD	102+24	54.0 L	2985749.075	255925.550	IP

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	46	191
PROJECT FILE NO.		609287	

SURVEY CONTROL PLAN - 5



SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
87	1767.291'	2987042.663'	256603.894'	MAG SET
86	1779.018'	2987137.856'	256999.350'	MSTN SET
85	1788.659'	2987431.153'	257215.810'	MSTN SET
84	1805.456'	2987565.741'	257450.941'	MSTN SET
83	1812.604'	2987634.577'	257750.874'	MSTN SET
82	1791.966'	2987771.695'	258085.191'	MSTN SET
81	1770.494'	2987867.347'	258382.781'	MSTN SET

BOUND LOCATION

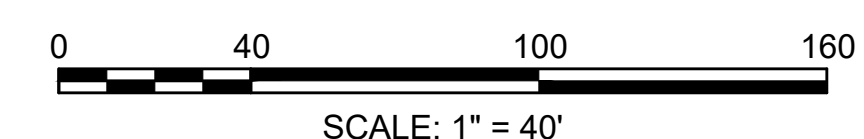
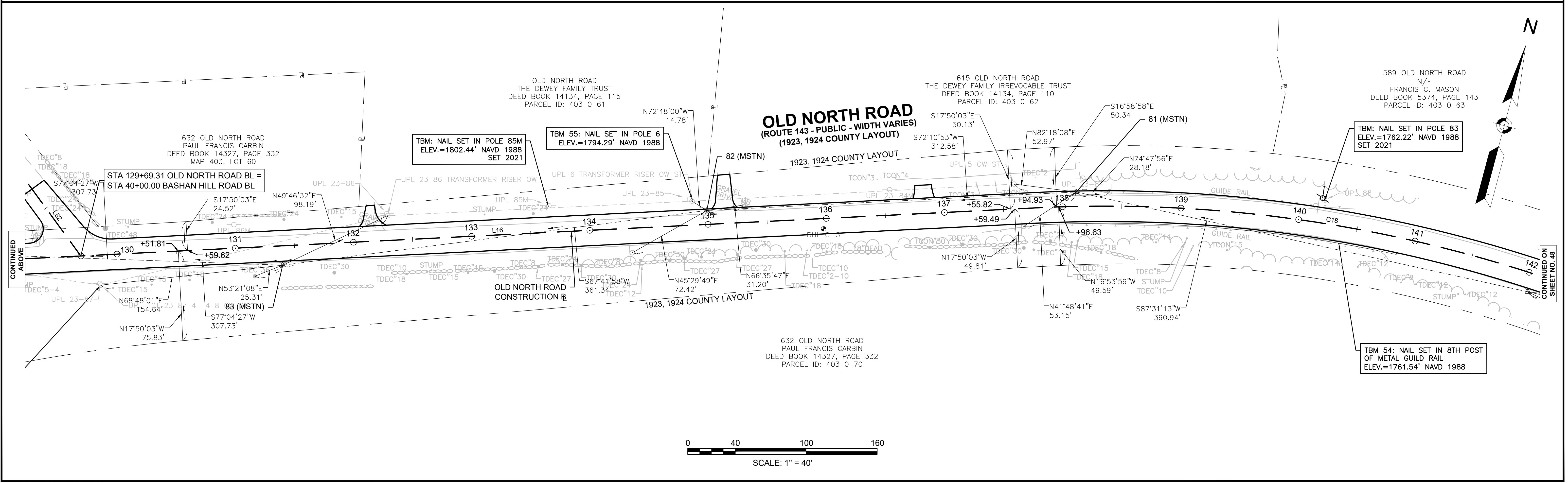
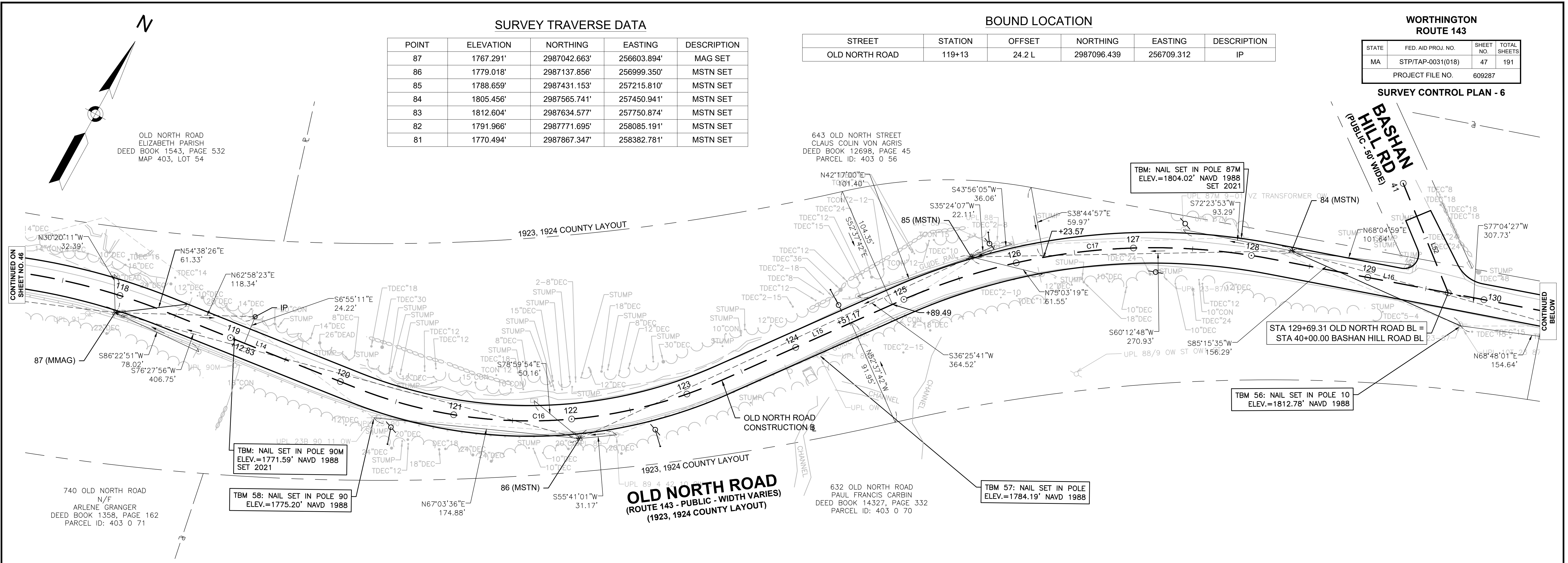
STREET	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
OLD NORTH ROAD	119+13	24.2 L	2987096.439	256709.312	IP

WORTHINGTON ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	47	191

PROJECT FILE NO. 609287

SURVEY CONTROL PLAN - 6



SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
80	1764.018'	2987884.261'	258773.350'	MSTN SET
79	1780.780'	2987900.256'	259141.175'	MAG SET
78	1777.786'	2987900.437'	259472.241'	MAG SET
77	1768.162'	2987953.861'	259824.548'	MSTN SET
76	1769.137'	2987854.785'	260128.216'	MAG SET
75	1771.656'	2987560.585'	260357.187'	MAG SET
74	1773.104'	2987206.690'	260631.938'	MAG SET

BOUND LOCATION

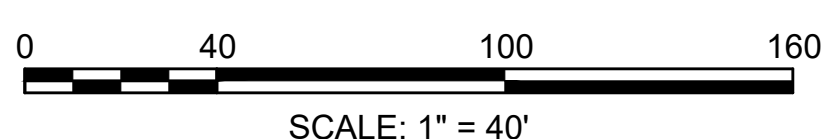
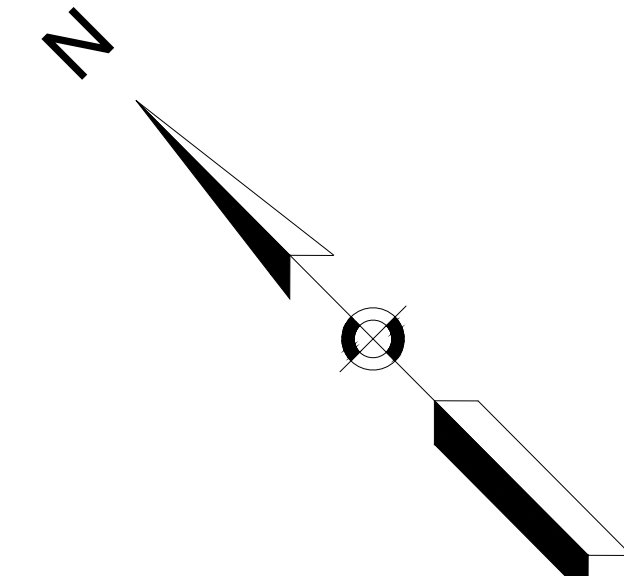
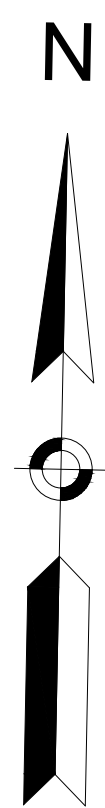
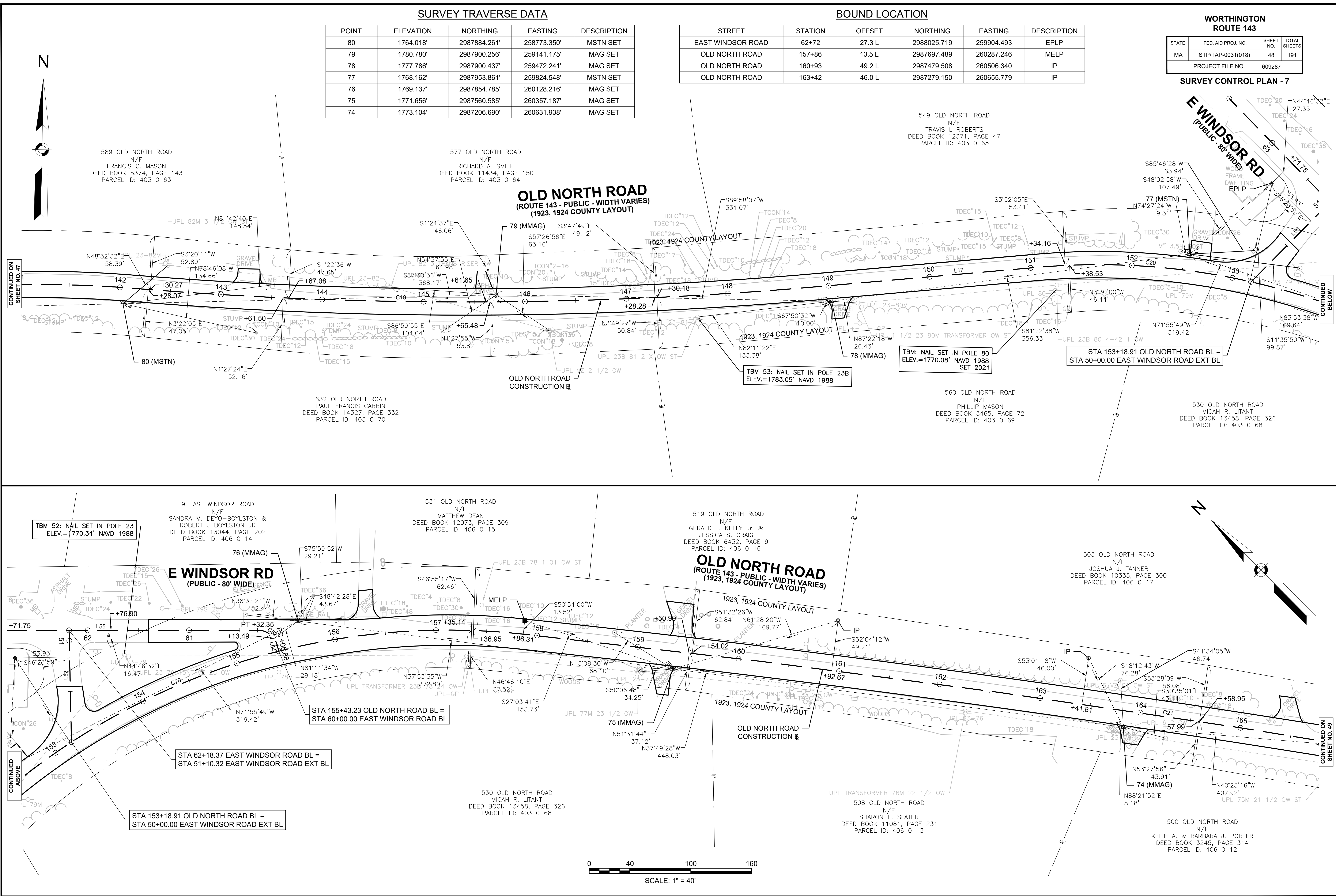
STREET	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
EAST WINDSOR ROAD	62+72	27.3 L	2988025.719	259904.493	EPLP
OLD NORTH ROAD	157+86	13.5 L	2987697.489	260287.246	MELP
OLD NORTH ROAD	160+93	49.2 L	2987479.508	260506.340	IP
OLD NORTH ROAD	163+42	46.0 L	2987279.150	260655.779	IP

WORTHINGTON ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	48	191

PROJECT FILE NO. 609287

SURVEY CONTROL PLAN - 7



CONTINUED ON SHEET NO. 47

CONTINUED BELOW

CONTINUED ABOVE

CONTINUED ON SHEET NO. 48

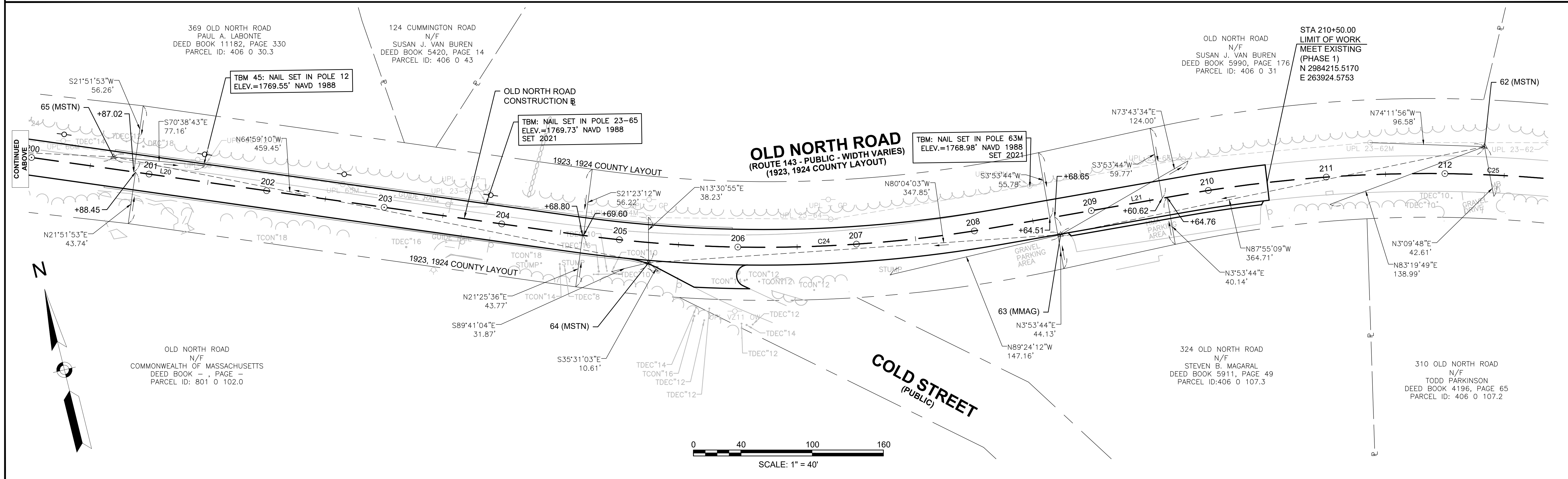
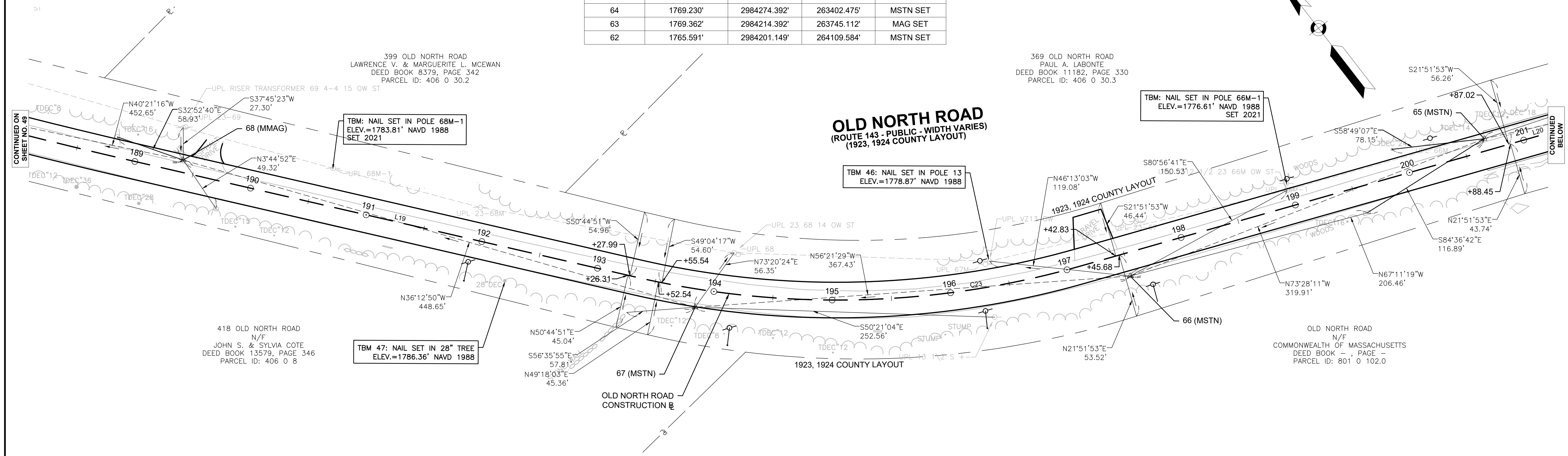
SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
68	1789.610'	2985125.220'	262108.474'	MAG SET
67	1784.462'	2984763.244'	262373.536'	MSTN SET
66	1781.040'	2984559.686'	262679.430'	MSTN SET
65	1771.375'	2984468.666'	262986.114'	MSTN SET
64	1769.230'	2984274.392'	263402.475'	MSTN SET
63	1769.362'	2984214.392'	263745.112'	MAG SET
62	1765.591'	2984201.149'	264109.584'	MSTN SET

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	50	191
PROJECT FILE NO. 609287			

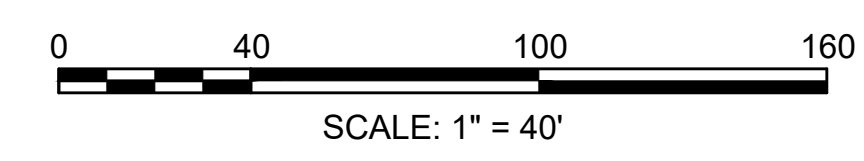
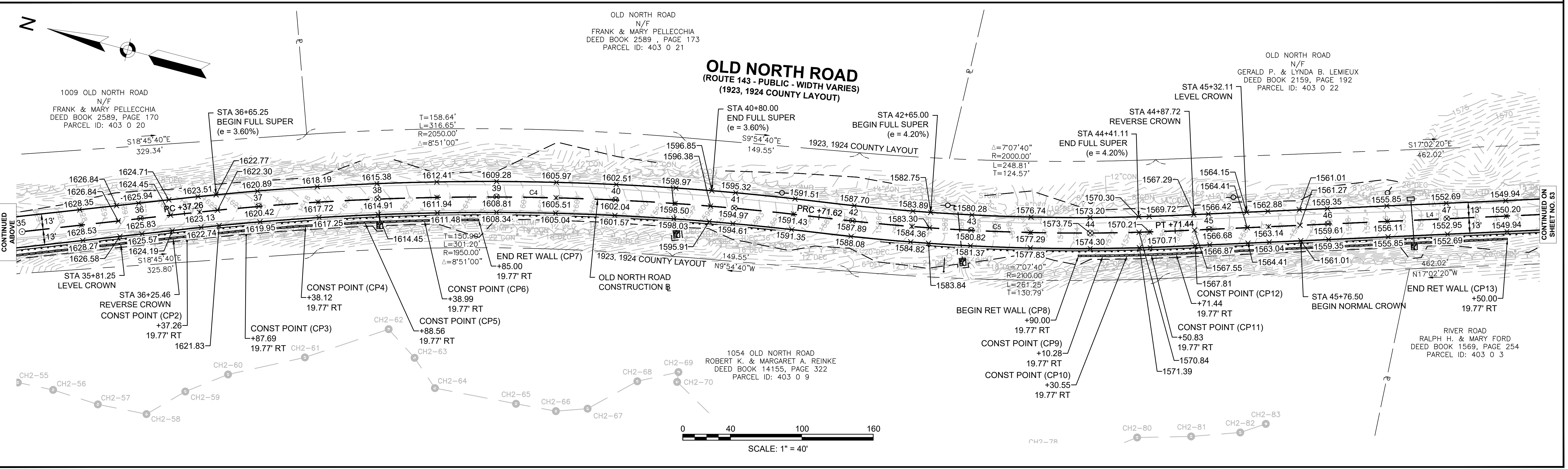
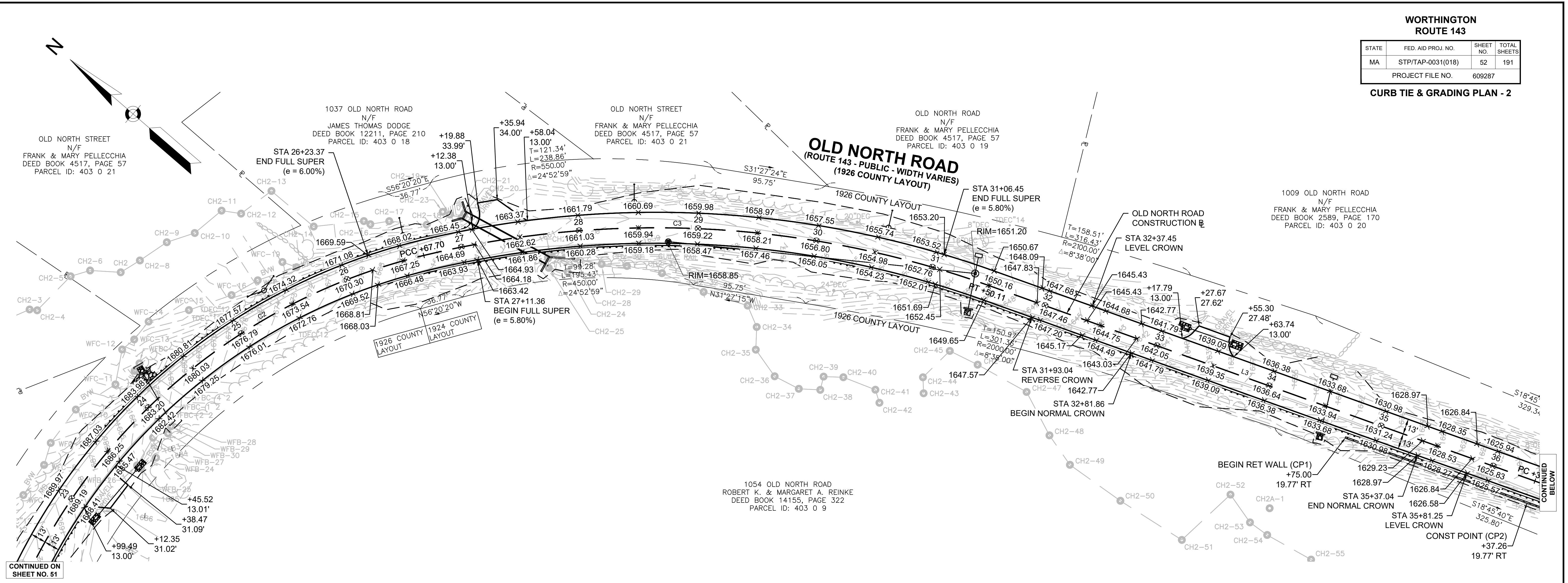
SURVEY CONTROL PLAN - 9



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	52	191
PROJECT FILE NO. 609287			

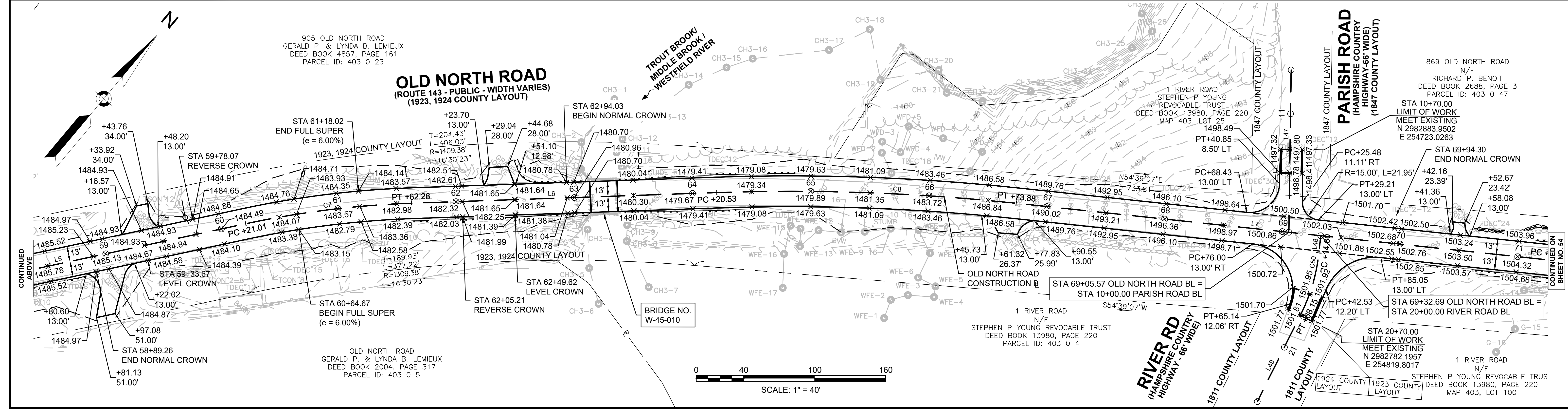
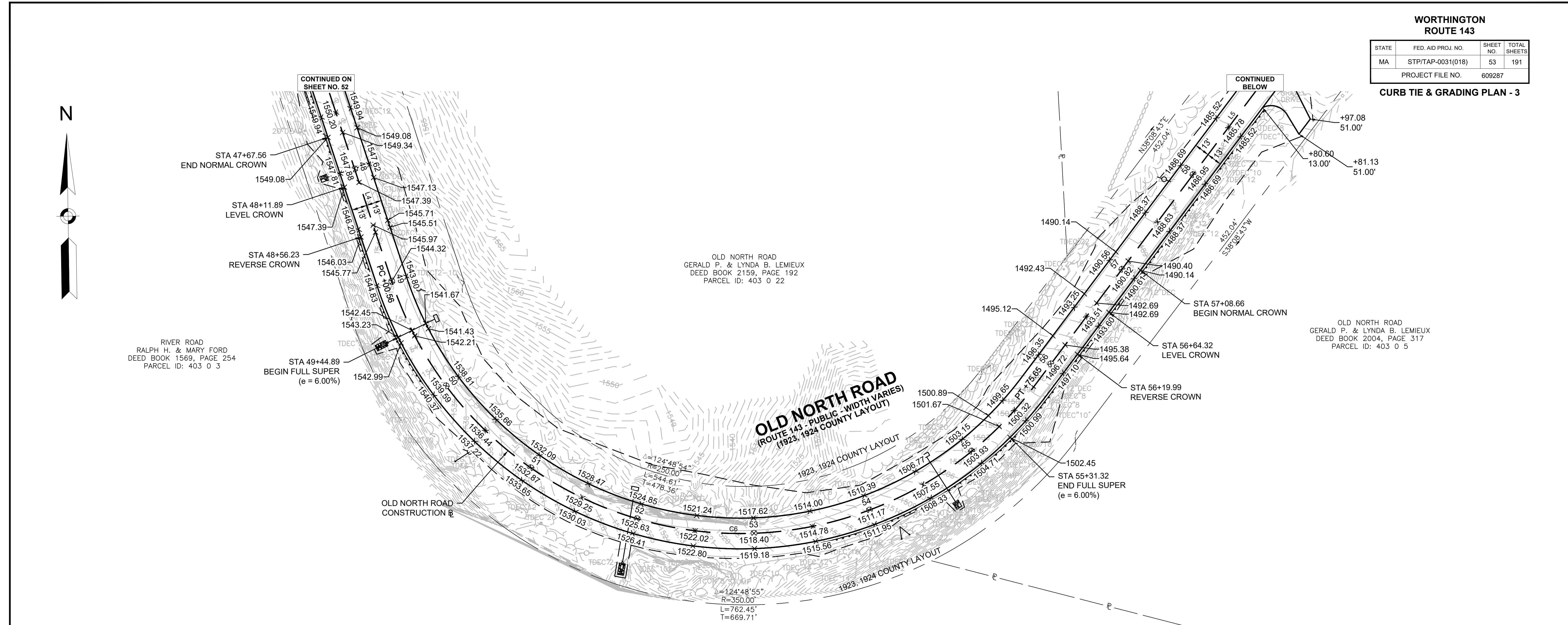
CURB TIE & GRADING PLAN - 2



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	53	191
PROJECT FILE NO.		609287	

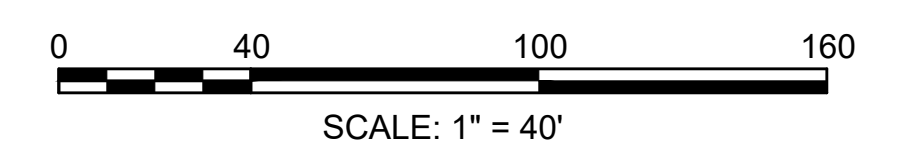
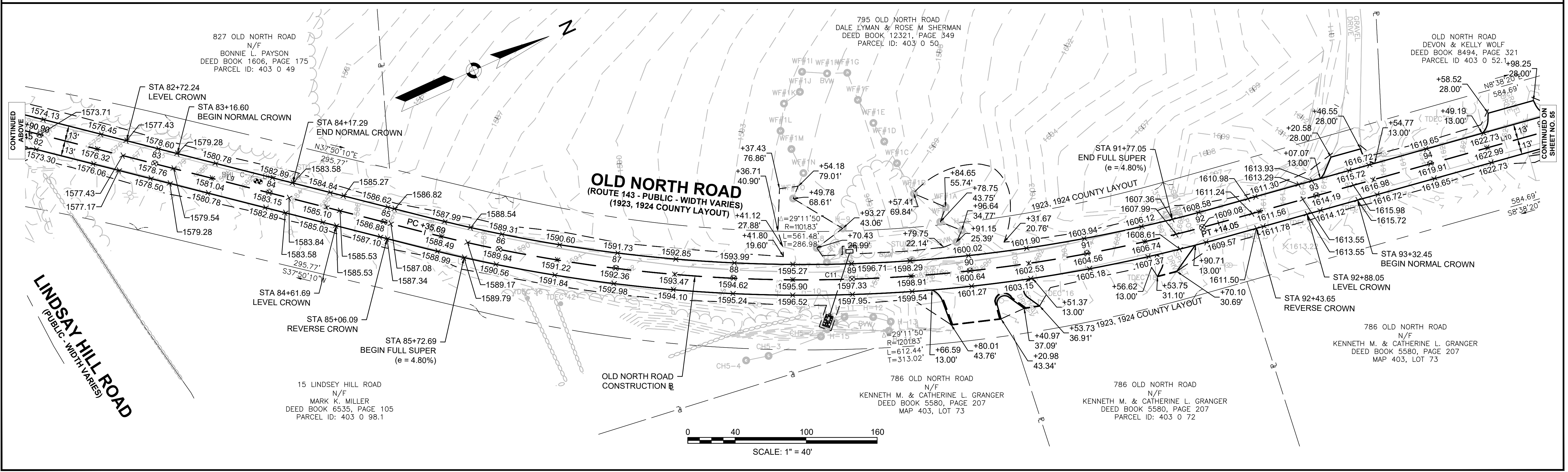
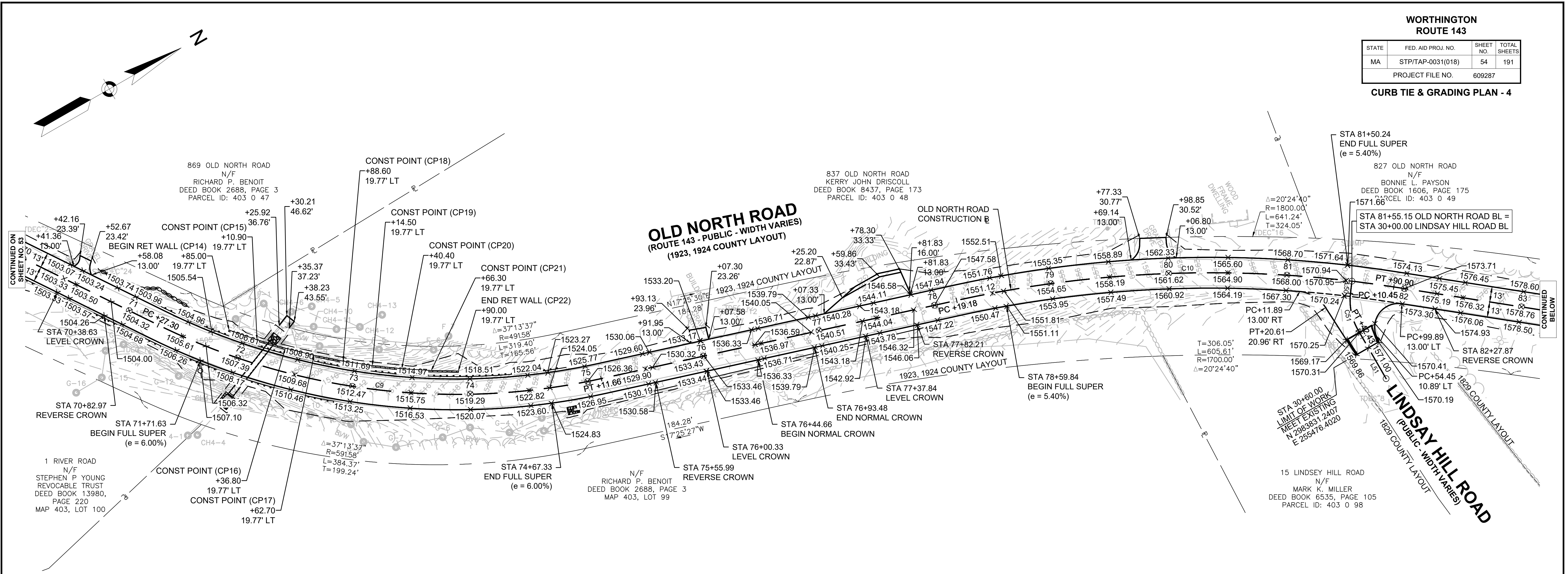
CURB TIE & GRADING PLAN - 3



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	54	191

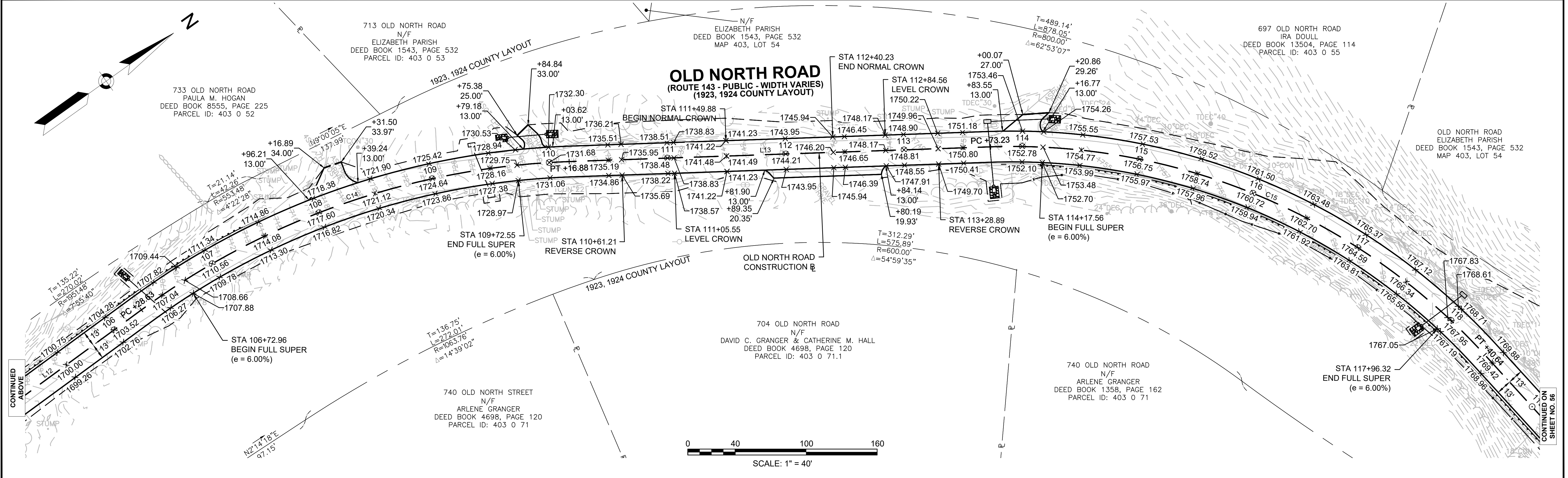
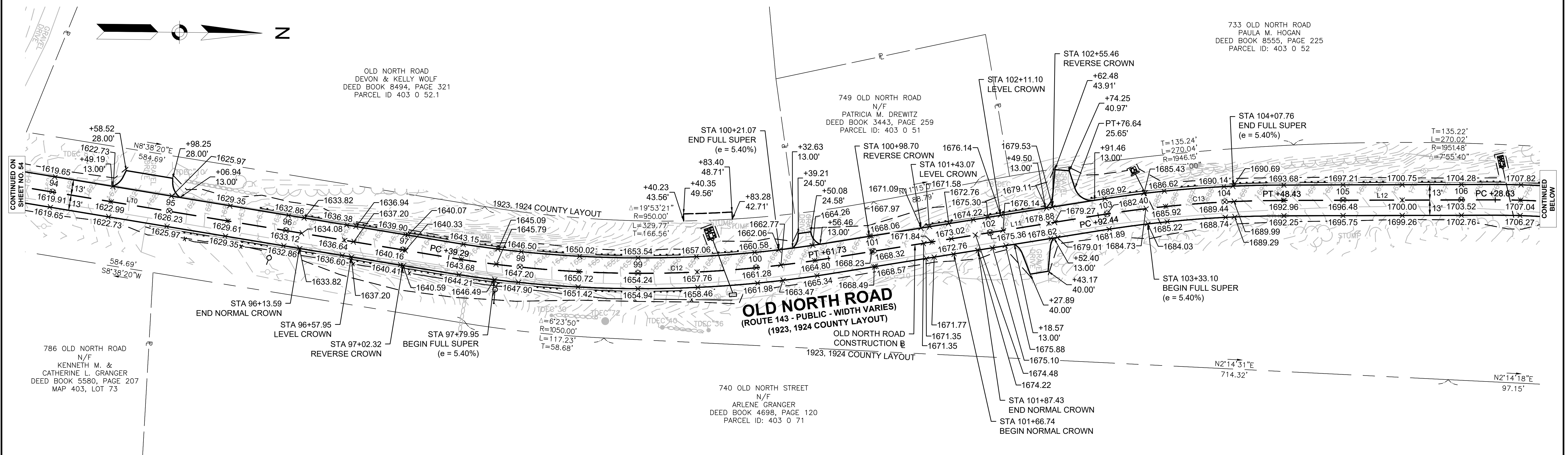
PROJECT FILE NO. 609287
CURB TIE & GRADING PLAN - 4



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	55	191
PROJECT FILE NO.		609287	

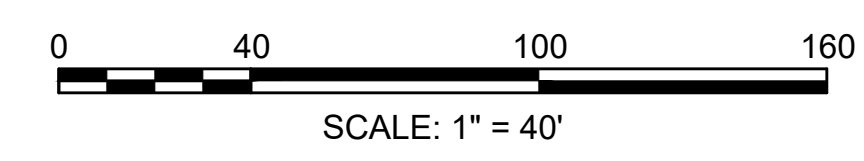
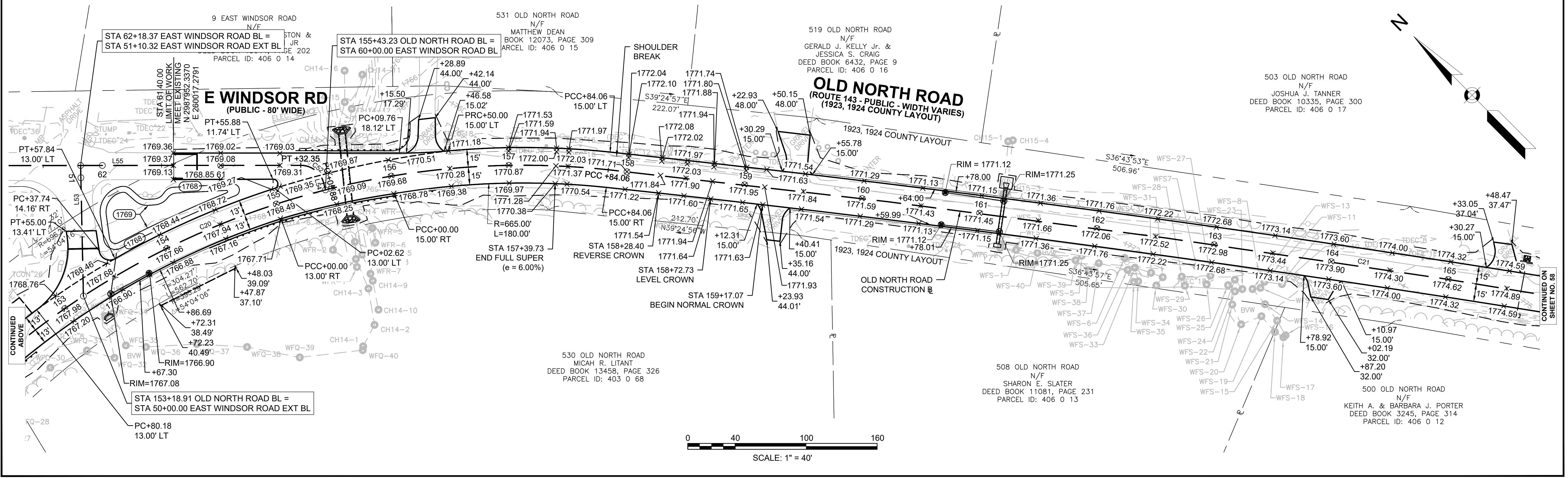
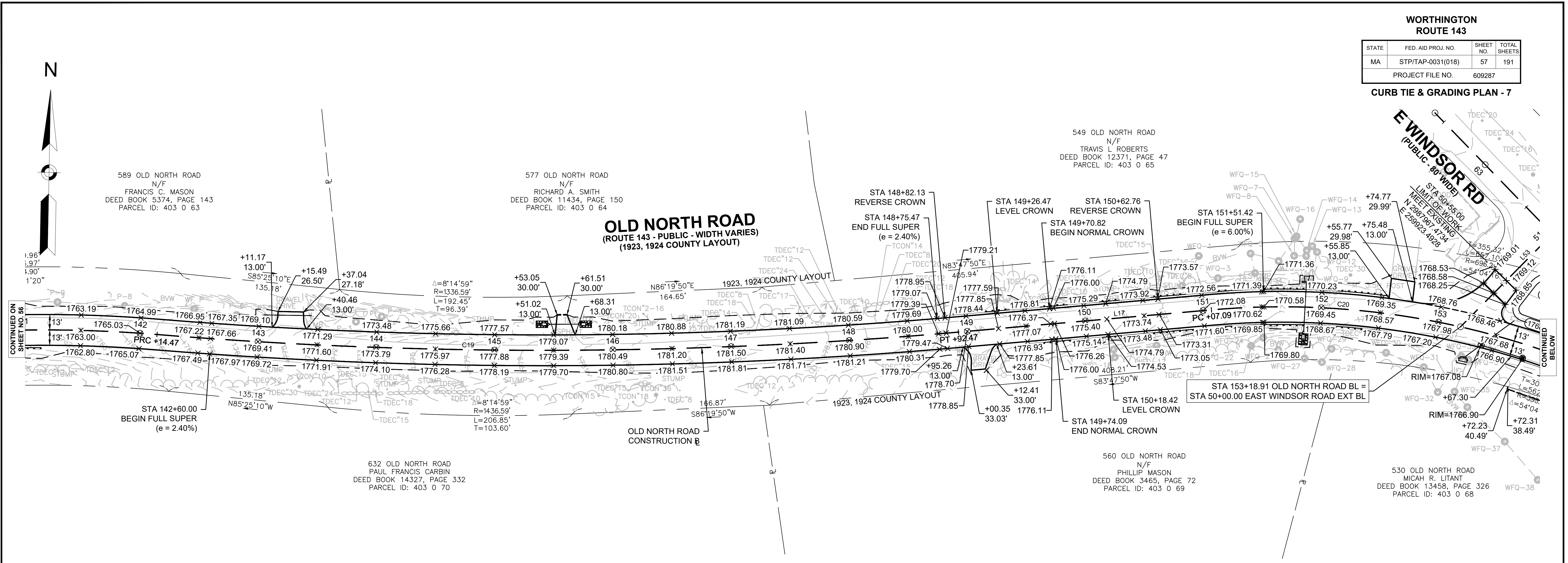
CURB TIE & GRADING PLAN - 5



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	57	191
PROJECT FILE NO.		609287	

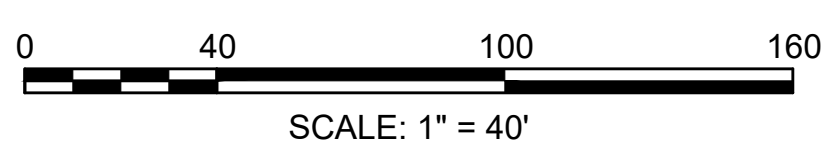
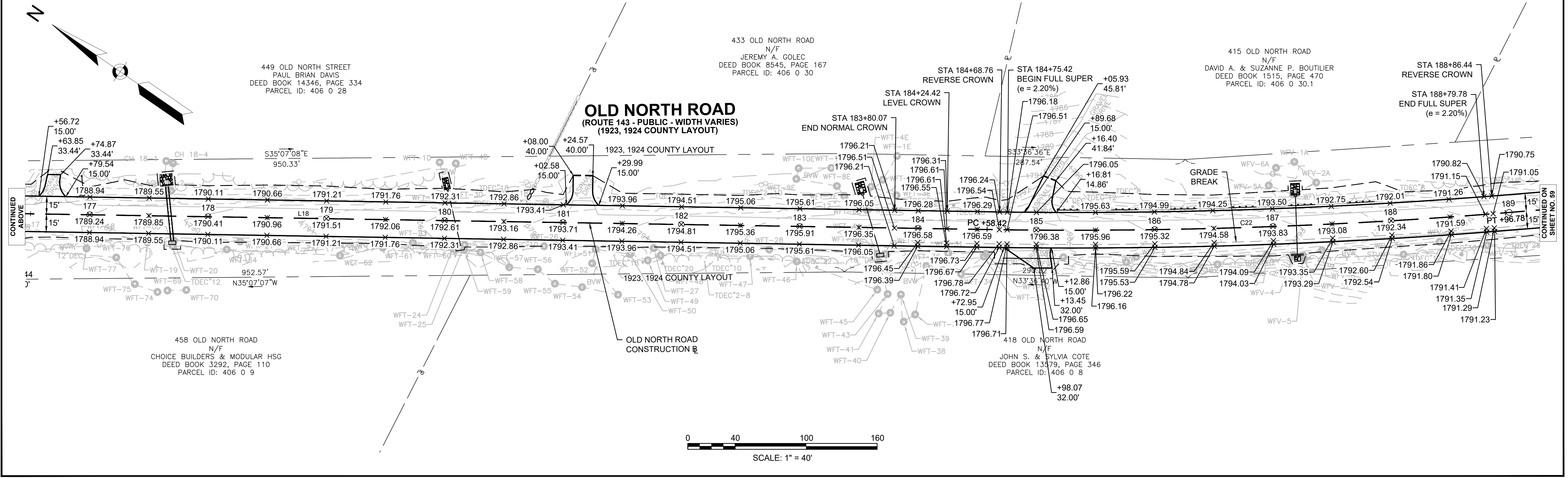
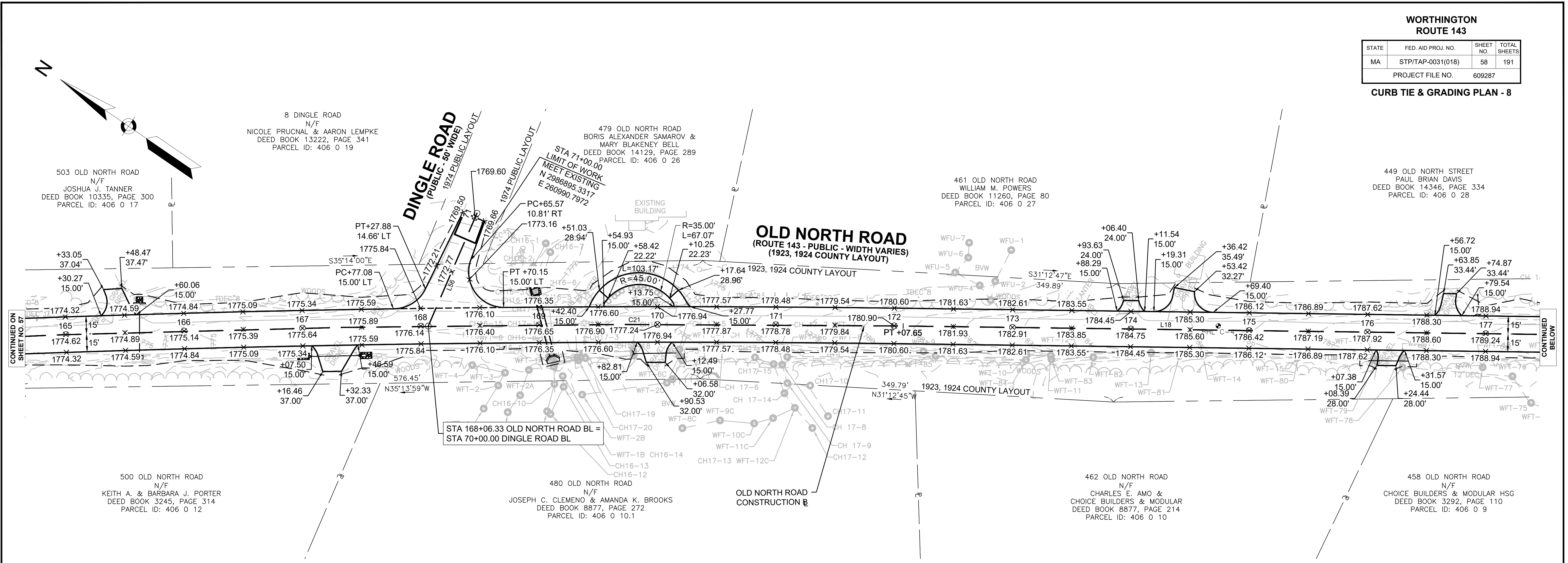
CURB TIE & GRADING PLAN - 7



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	58	191
PROJECT FILE NO. 609287			

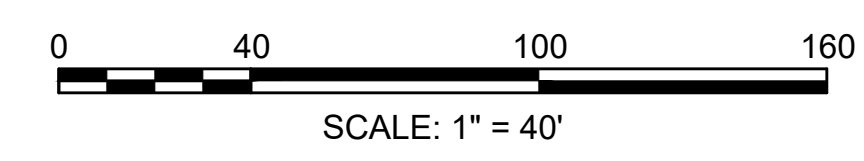
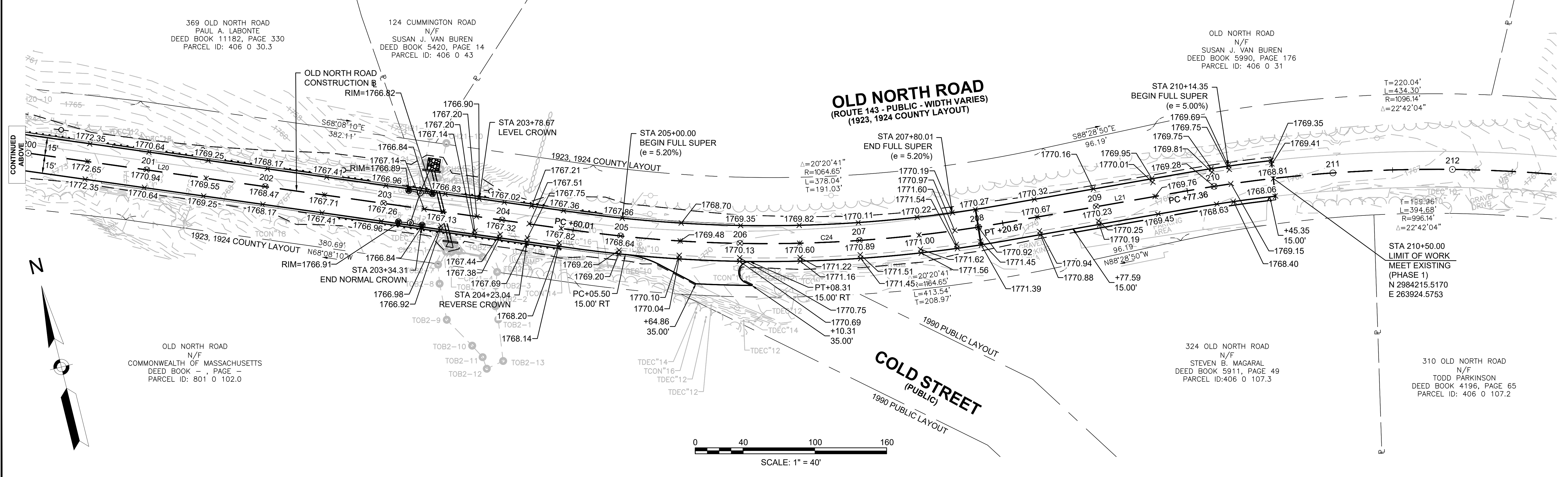
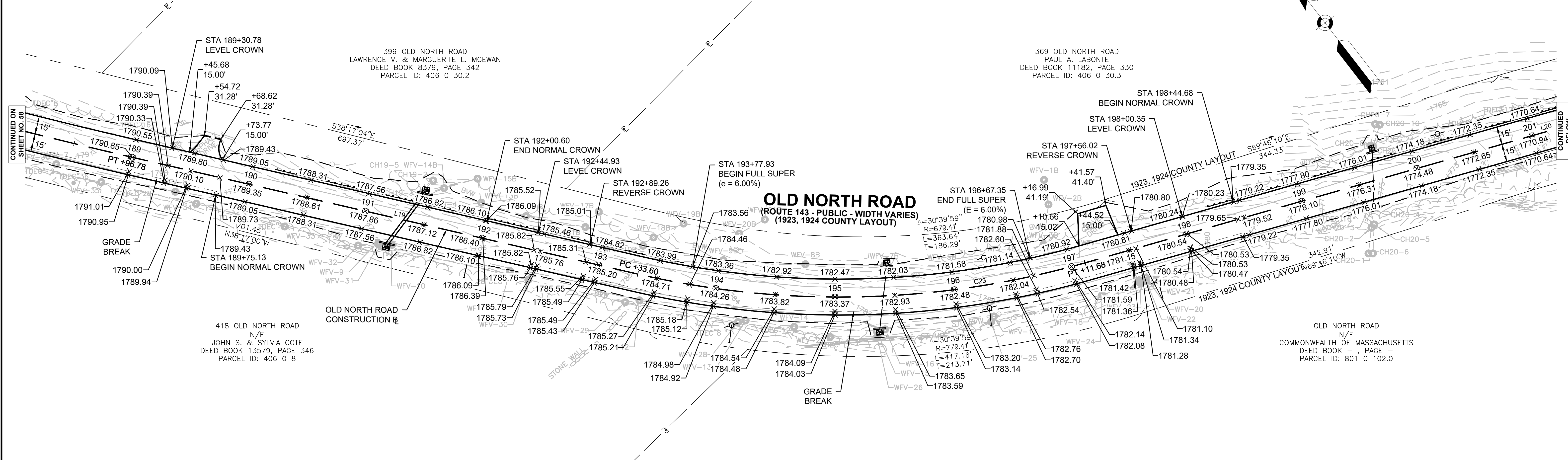
CURB TIE & GRADING PLAN - 8



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	59	191
PROJECT FILE NO. 609287			

CURB TIE & GRADING PLAN - 9

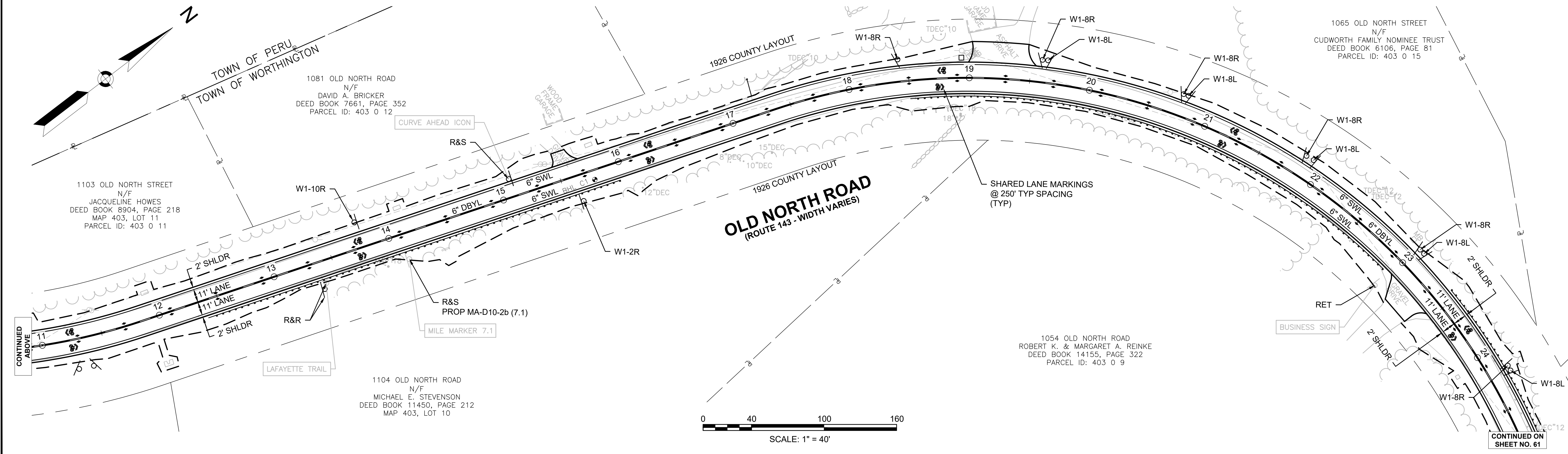
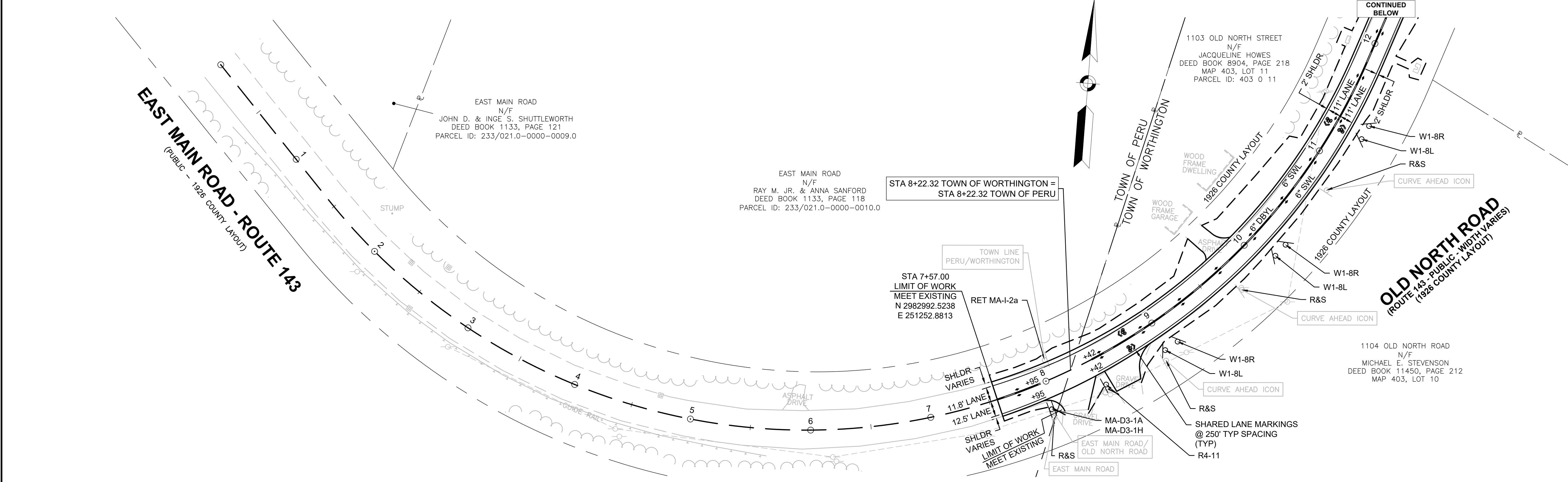


- NOTES:
 1. ► ONE WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.
 2. ◄ TWO WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.

**WORTHINGTON
 ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	60	191
PROJECT FILE NO.		609287	

TRAFFIC SIGN & PAVEMENT MARKINGS - 1



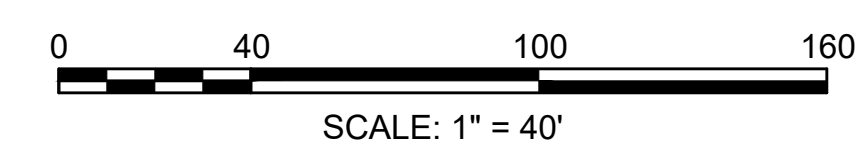
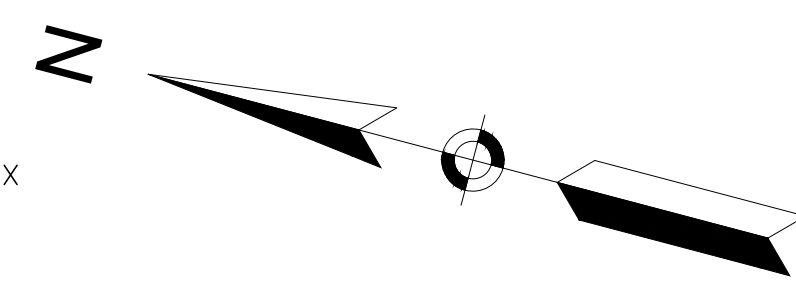
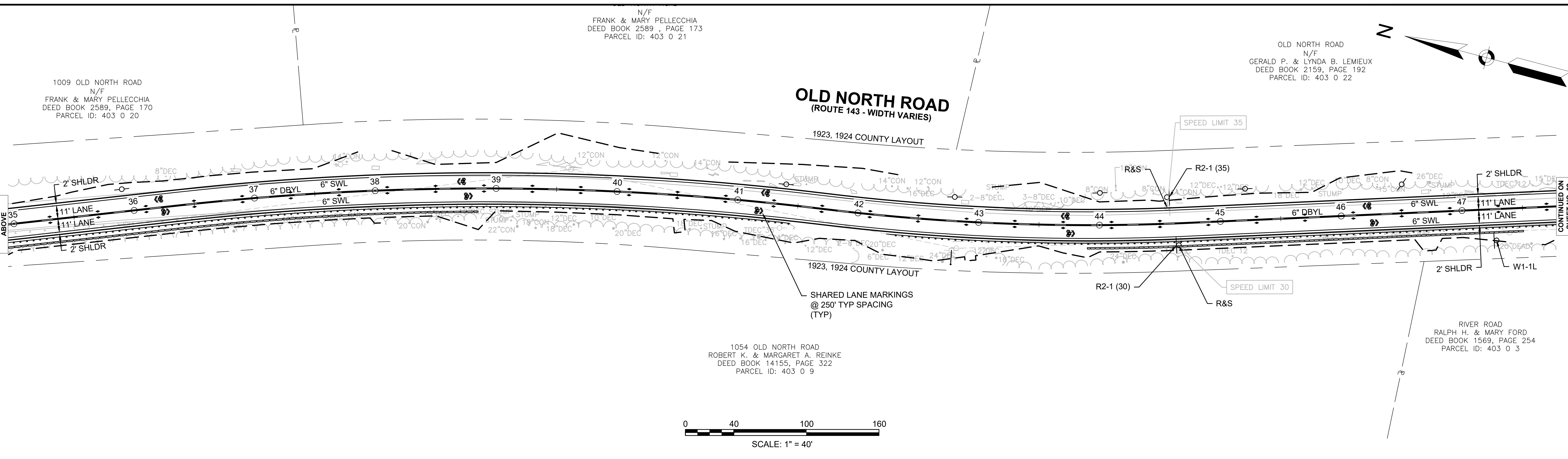
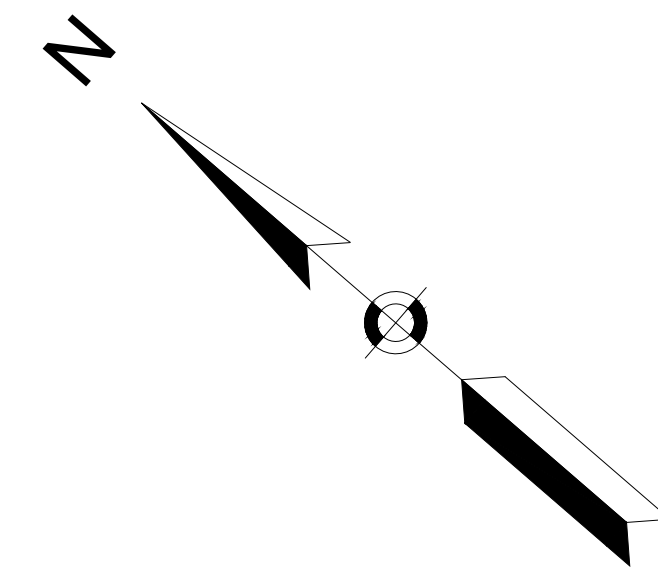
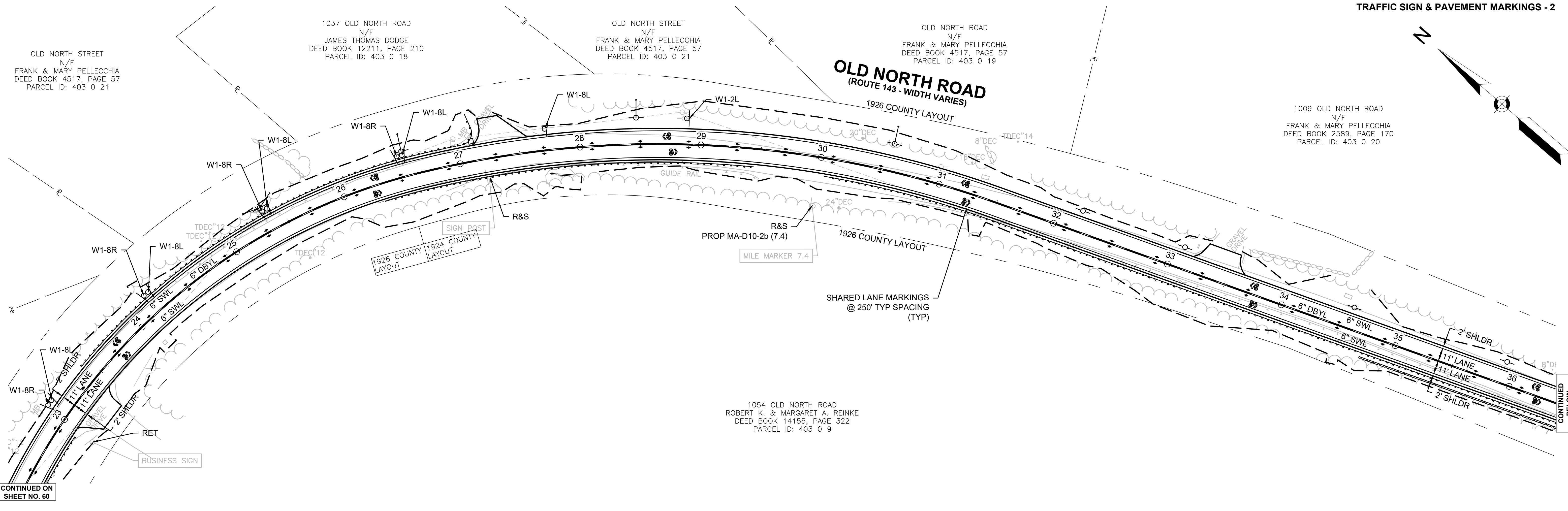
CONTINUED ON SHEET NO. 61

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	61	191
PROJECT FILE NO.		609287	

TRAFFIC SIGN & PAVEMENT MARKINGS - 2

- NOTES:
 1. ► ONE WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.
 2. ◄ TWO WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.



CONTINUED ON SHEET NO. 60

CONTINUED BELOW

CONTINUED ABOVE

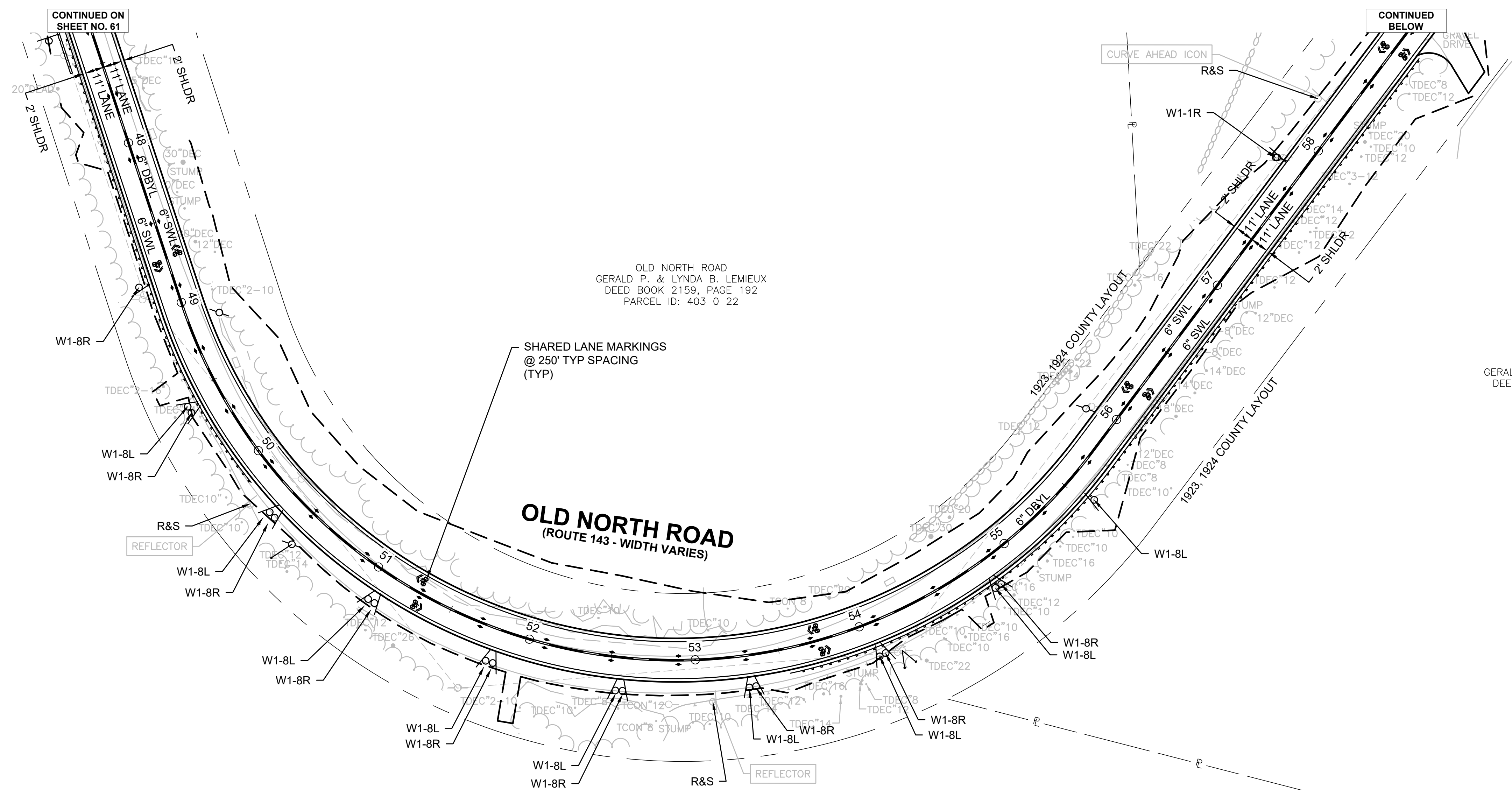
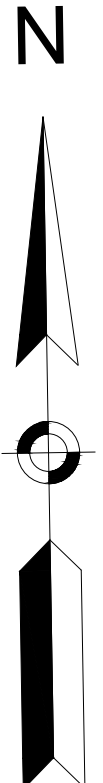
CONTINUED ON SHEET NO. 62

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	62	191
PROJECT FILE NO.		609287	

TRAFFIC SIGN & PAVEMENT MARKINGS - 3

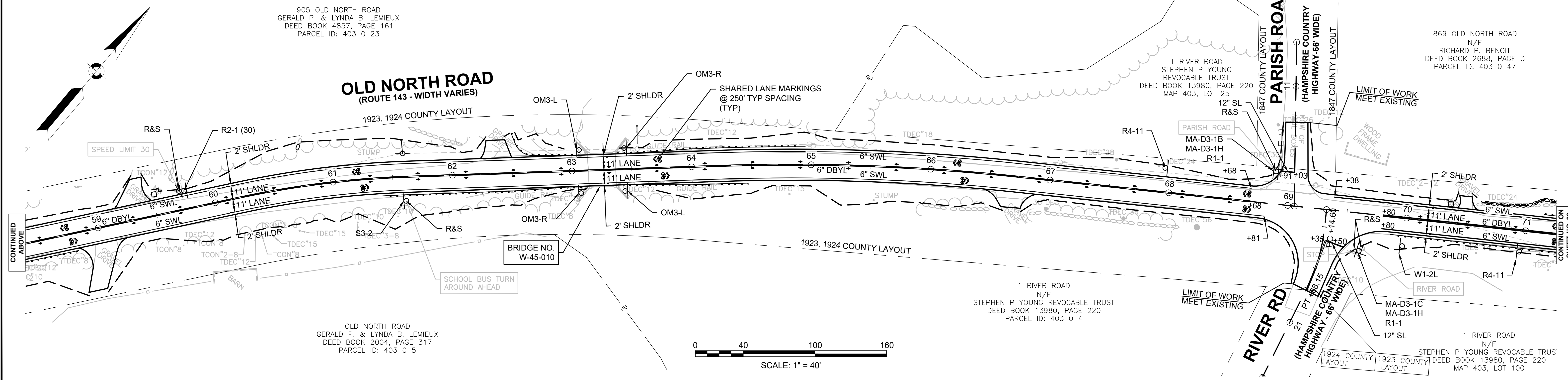
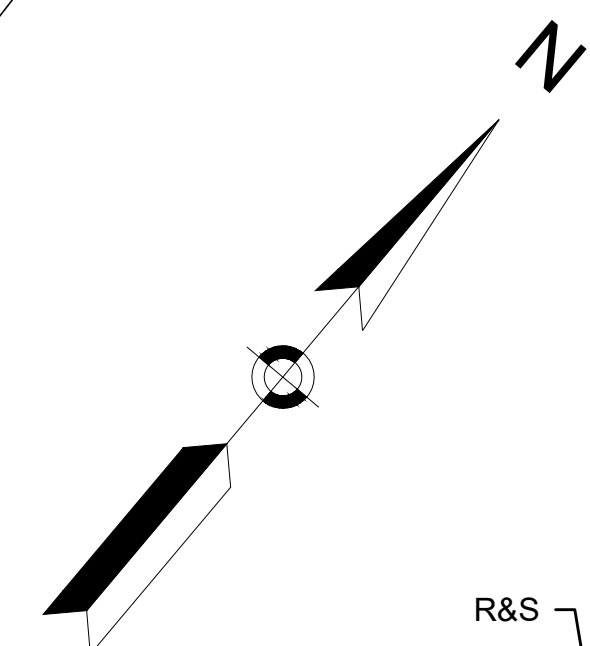
- NOTES:
 1. ► ONE WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.
 2. ◄ TWO WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.



RIVER ROAD
RALPH H. & MARY FORD
DEED BOOK 1569, PAGE 254
PARCEL ID: 403 0 3

OLD NORTH ROAD
GERALD P. & LYNDY B. LEMIEUX
DEED BOOK 2159, PAGE 192
PARCEL ID: 403 0 22

OLD NORTH ROAD
GERALD P. & LYNDY B. LEMIEUX
DEED BOOK 2004, PAGE 317
PARCEL ID: 403 0 5



905 OLD NORTH ROAD
GERALD P. & LYNDY B. LEMIEUX
DEED BOOK 4857, PAGE 161
PARCEL ID: 403 0 23

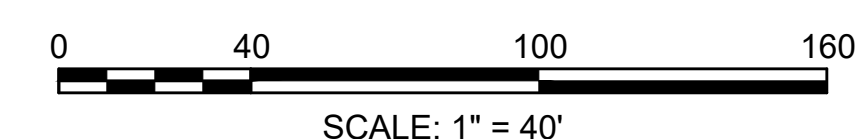
**OLD NORTH ROAD
(ROUTE 143 - WIDTH VARIES)**

BRIDGE NO.
W-45-010

OLD NORTH ROAD
GERALD P. & LYNDY B. LEMIEUX
DEED BOOK 2004, PAGE 317
PARCEL ID: 403 0 5

1 RIVER ROAD
N/F
STEPHEN P. YOUNG REVOCABLE TRUST
DEED BOOK 13980, PAGE 220
PARCEL ID: 403 0 4

869 OLD NORTH ROAD
N/F
RICHARD P. BENOIT
DEED BOOK 2688, PAGE 3
PARCEL ID: 403 0 47

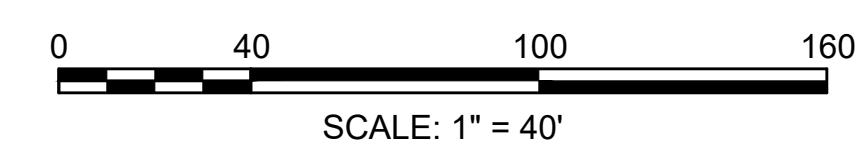
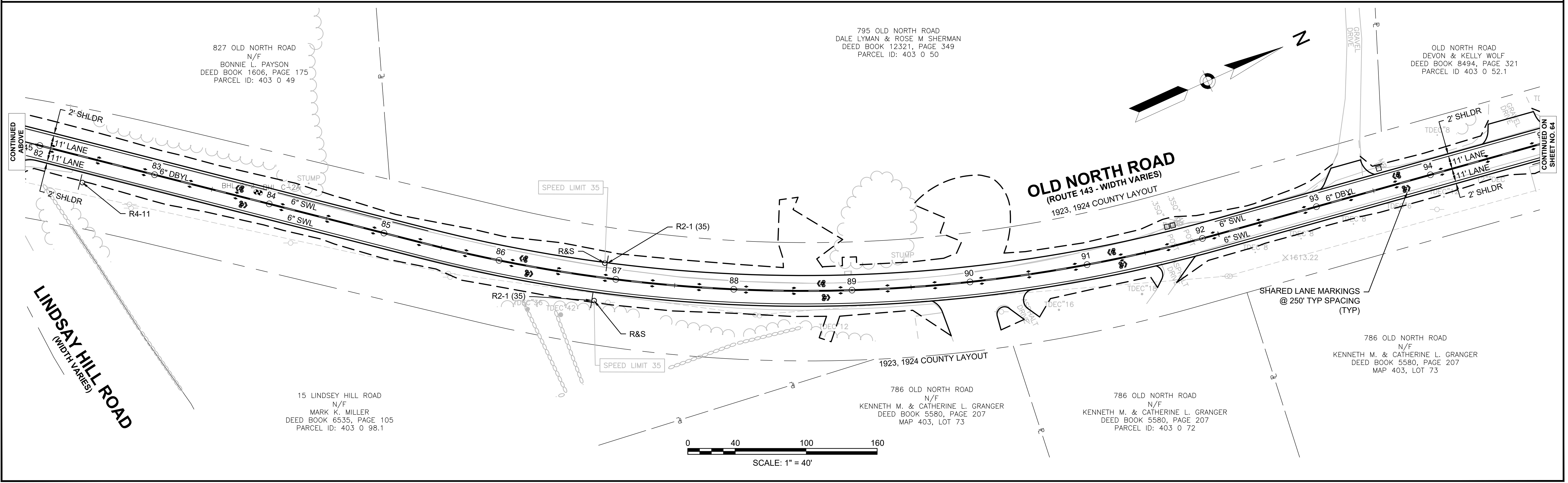
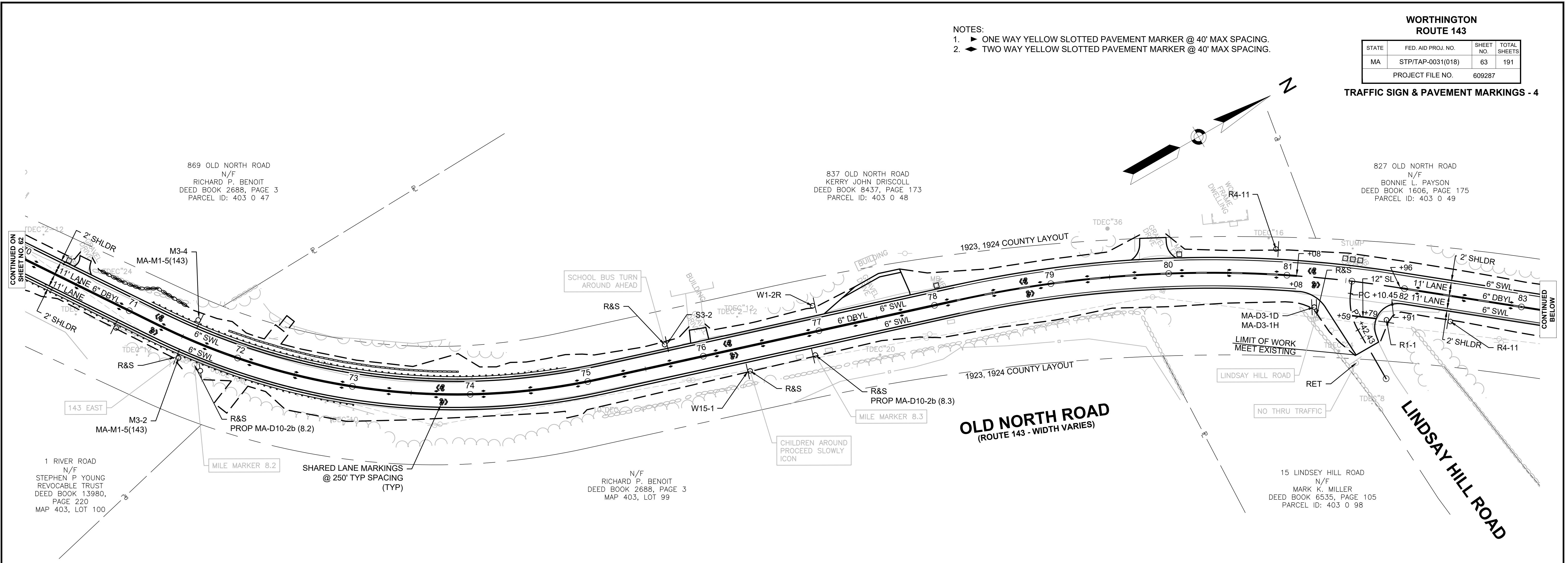


**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	63	191
PROJECT FILE NO.		609287	

TRAFFIC SIGN & PAVEMENT MARKINGS - 4

- NOTES:
 1. ► ONE WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.
 2. ◄ TWO WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.



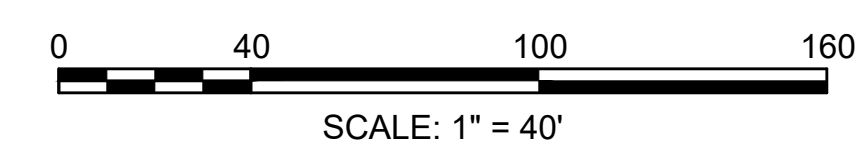
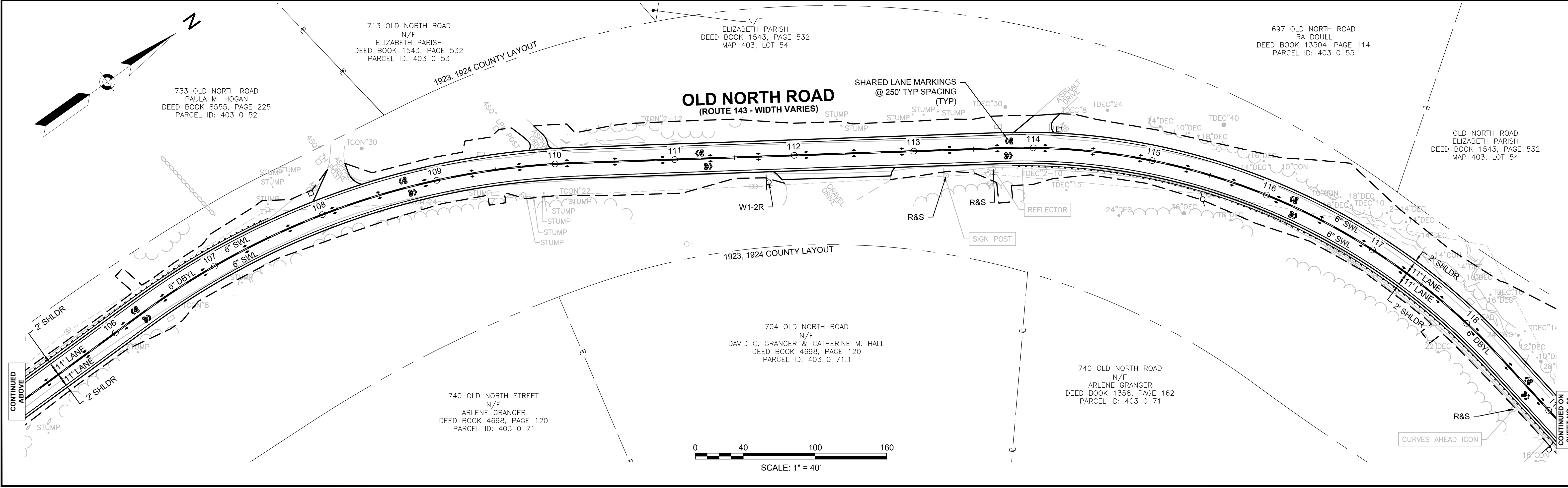
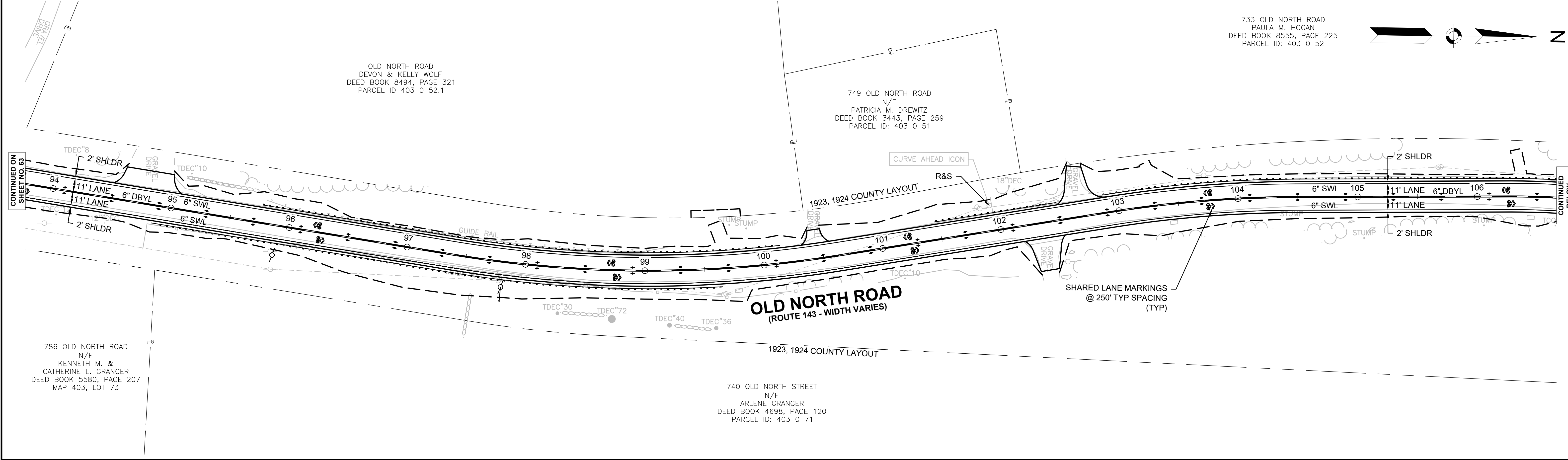
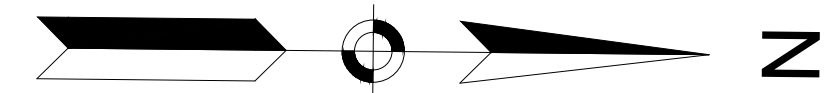
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	64	191
PROJECT FILE NO.		609287	

TRAFFIC SIGN & PAVEMENT MARKINGS - 5

- NOTES:**
- ▶ ONE WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.
 - ◀ TWO WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.

733 OLD NORTH ROAD
PAULA M. HOGAN
DEED BOOK 8555, PAGE 225
PARCEL ID: 403 0 52

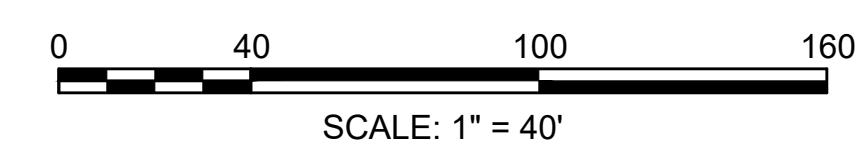
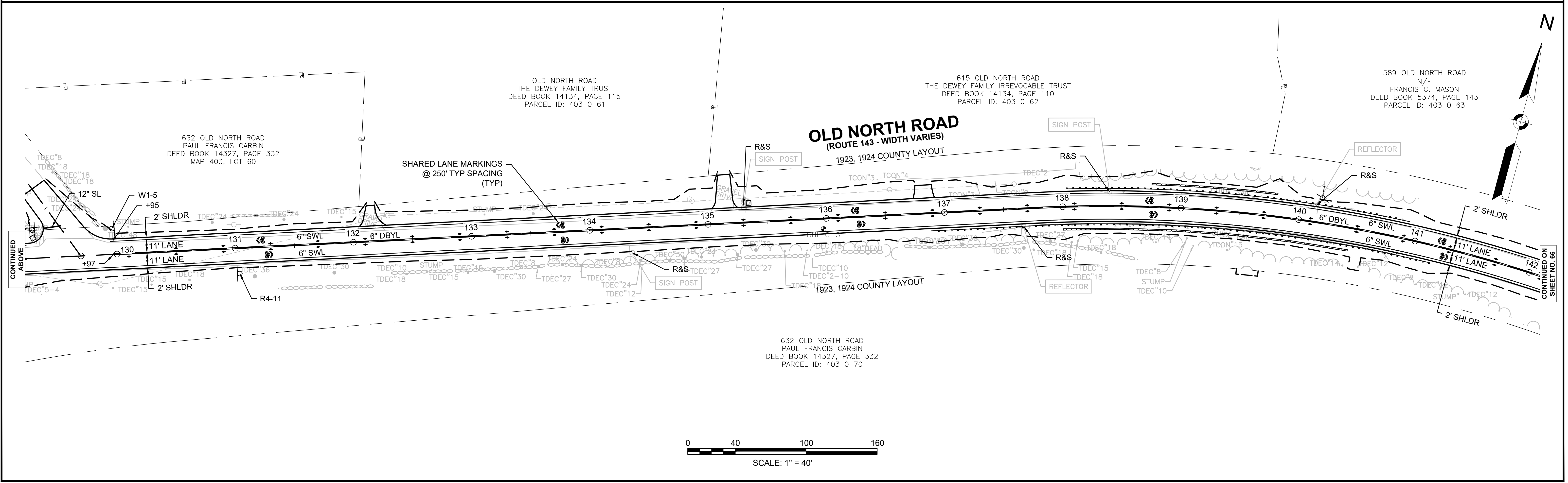
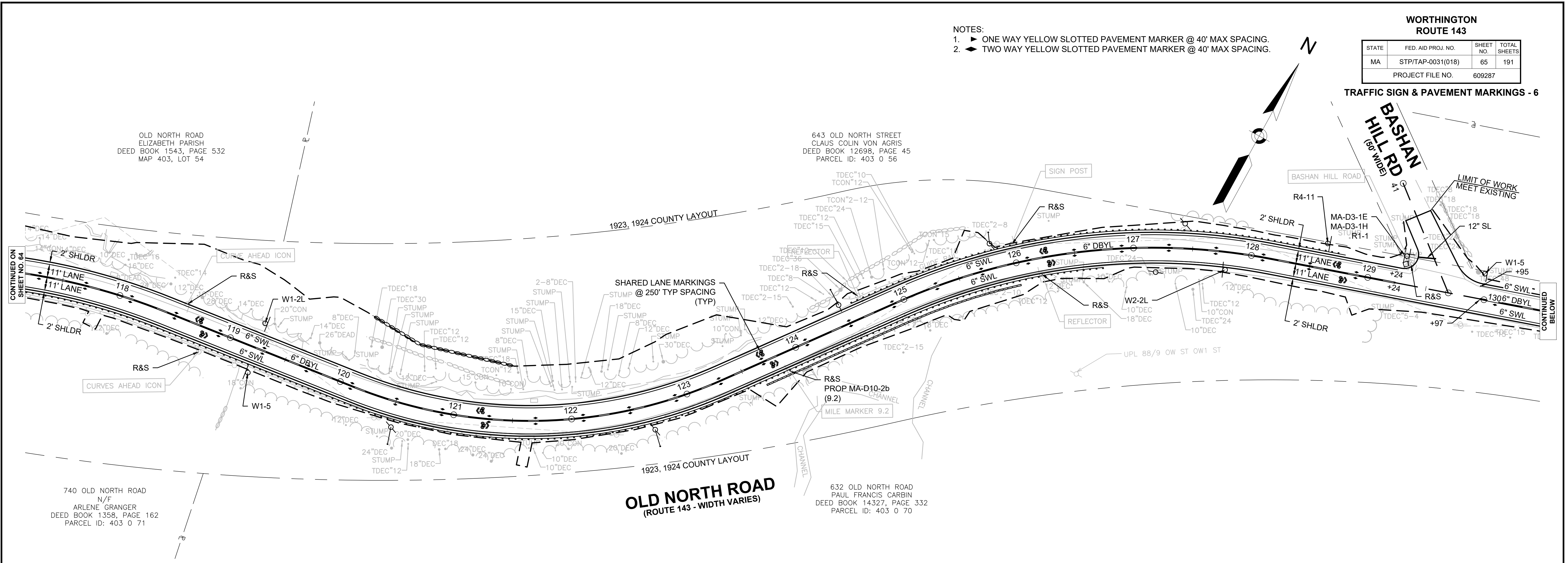


**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	65	191
PROJECT FILE NO.		609287	

TRAFFIC SIGN & PAVEMENT MARKINGS - 6

- NOTES:**
- ▶ ONE WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.
 - ◀ TWO WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.

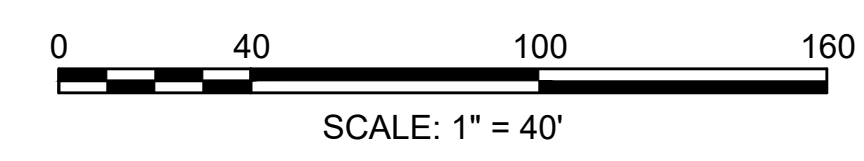
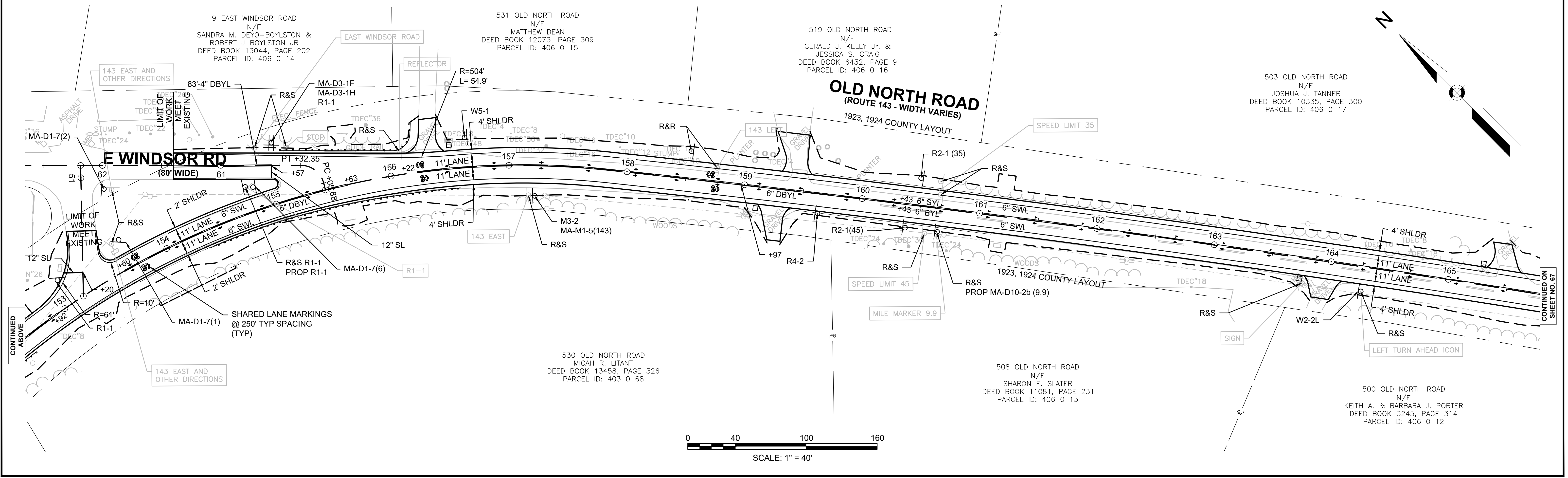
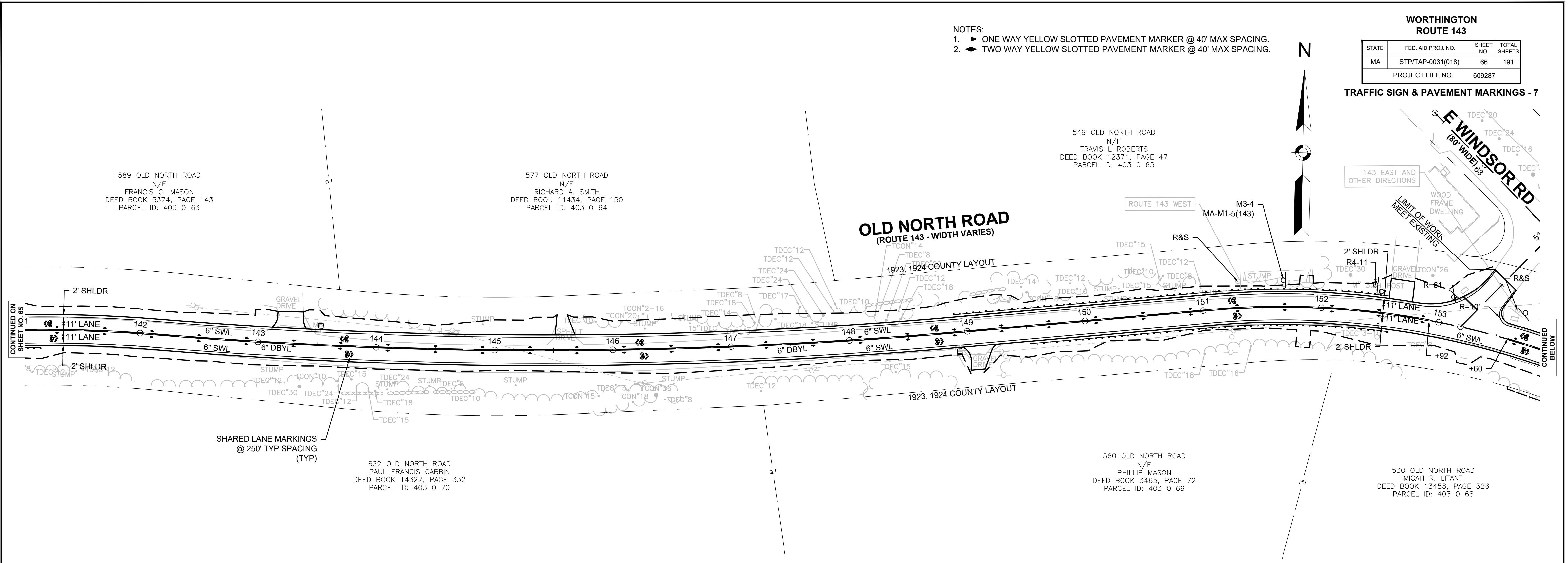


- NOTES:
 1. ► ONE WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.
 2. ◄ TWO WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.

**WORTHINGTON
 ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	66	191
PROJECT FILE NO. 609287			

TRAFFIC SIGN & PAVEMENT MARKINGS - 7

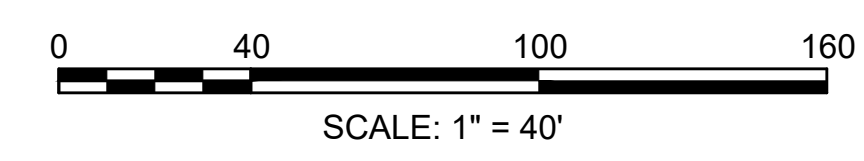
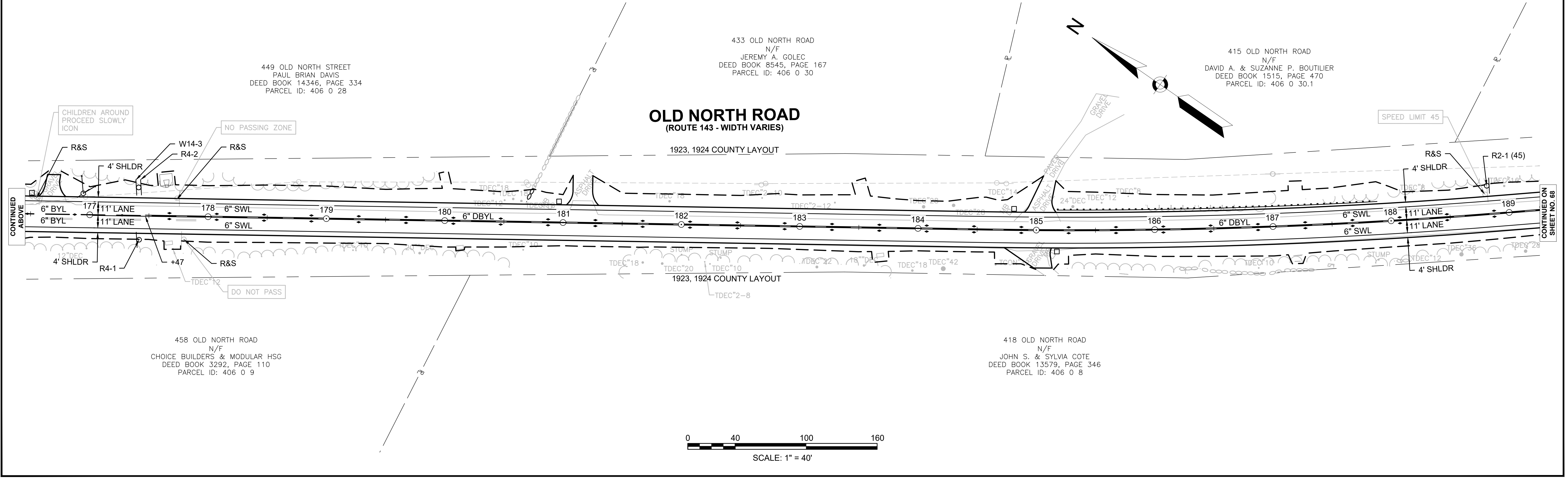
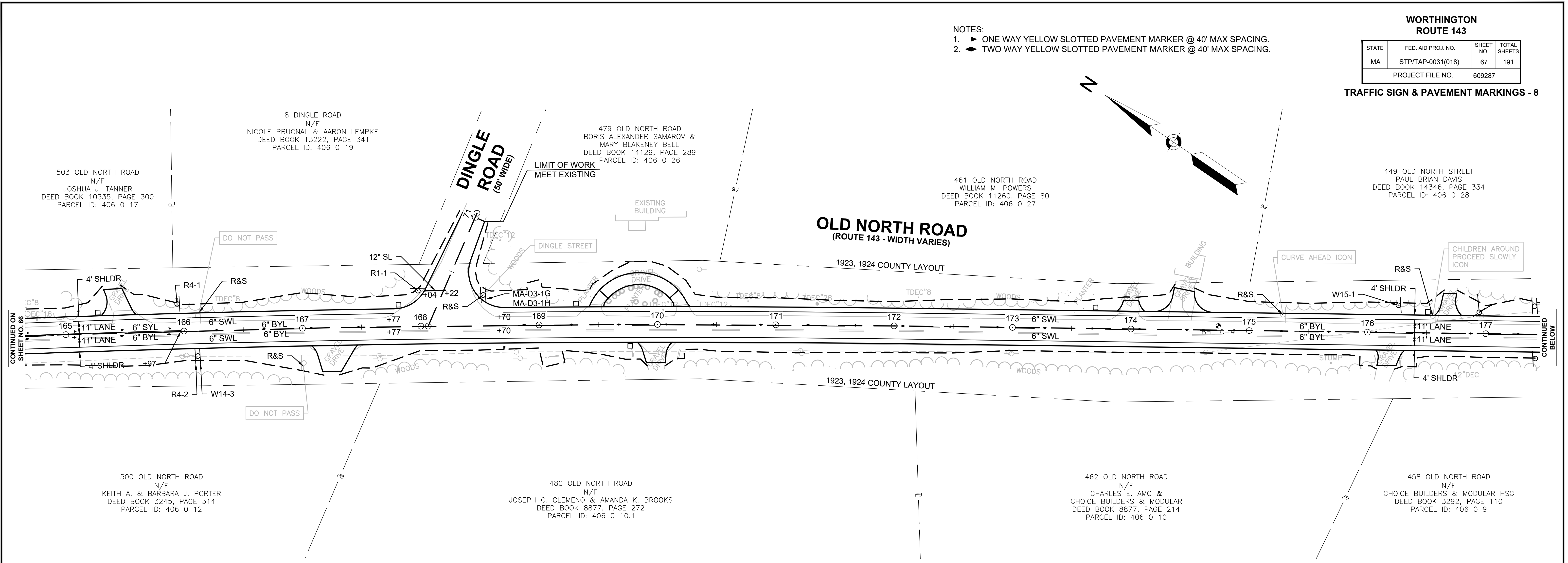
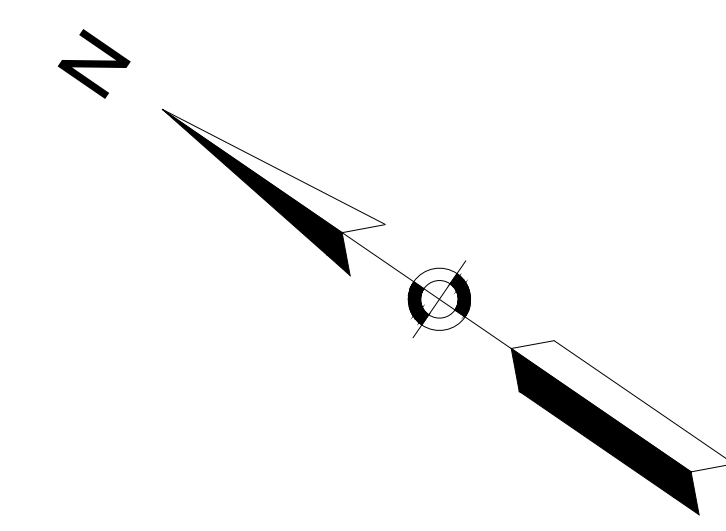


**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	67	191
PROJECT FILE NO.		609287	

TRAFFIC SIGN & PAVEMENT MARKINGS - 8

- NOTES:
 1. ► ONE WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.
 2. ◄ TWO WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.

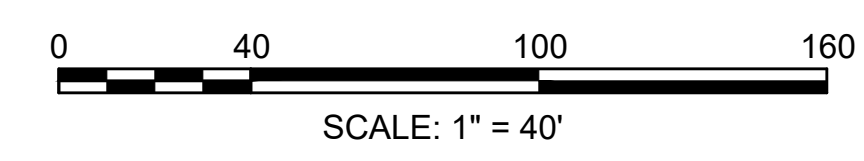
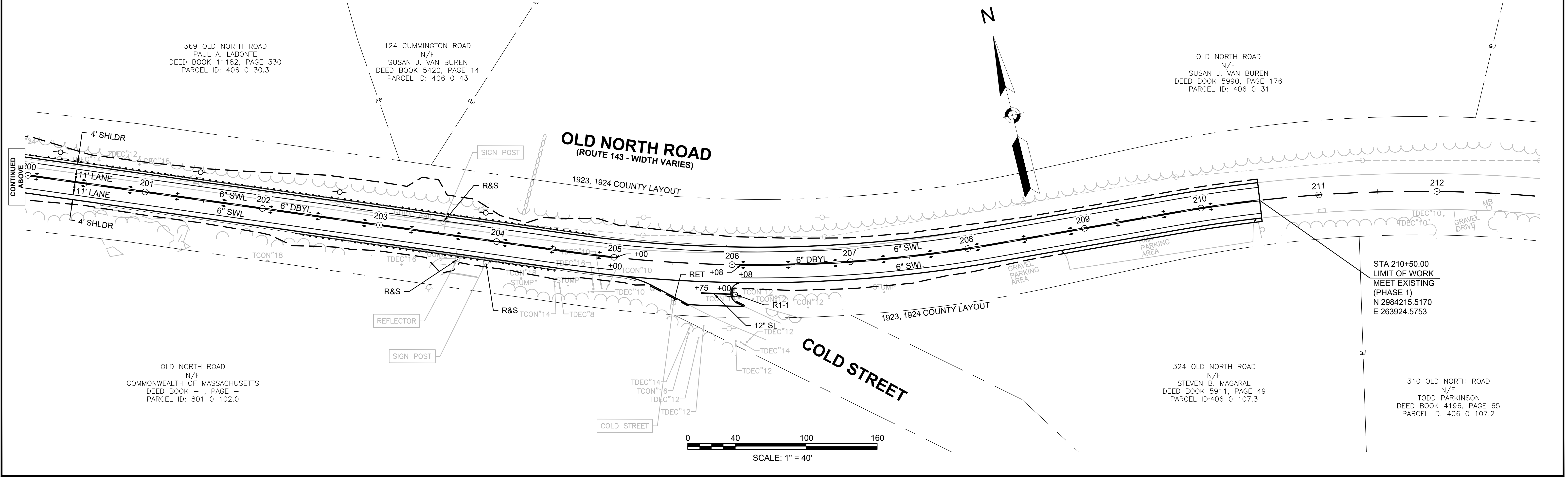
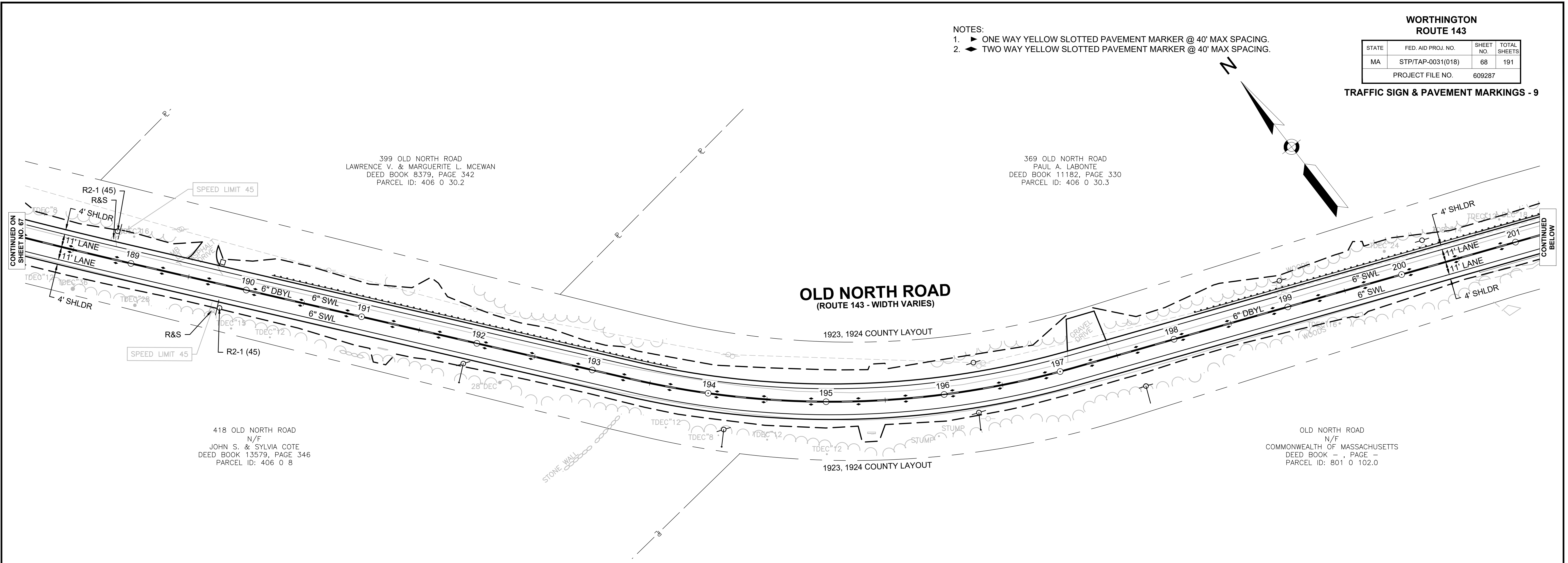
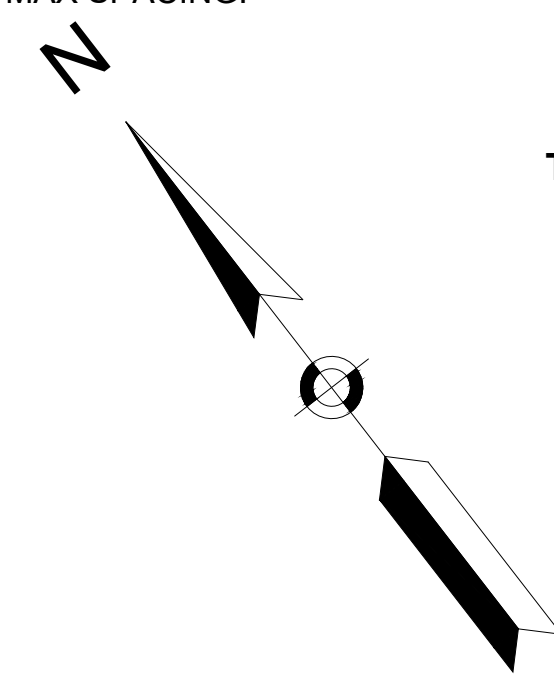


**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	68	191
PROJECT FILE NO.		609287	














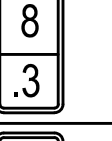
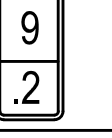
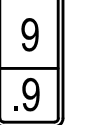
TRAFFIC SIGN & PAVEMENT MARKINGS - 9

- NOTES:
 1. ► ONE WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.
 2. ◄ TWO WAY YELLOW SLOTTED PAVEMENT MARKER @ 40' MAX SPACING.




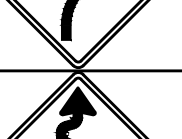
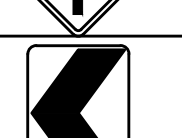


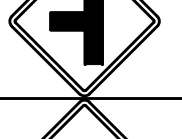
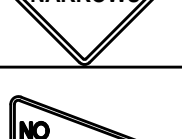
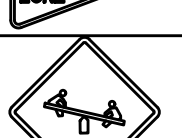
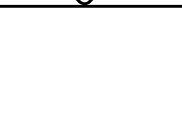



STA 210+50.00
 LIMIT OF WORK
 MEET EXISTING
 (PHASE 1)
 N 2984215.5170
 E 263924.5753

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
MA-M1-5	30"	24"	143				4	WHITE	BLACK	BLACK	P-5 (4 REQ'D)	5.00	20.00
M3-2	24"	12"	EAST				2				(USE SAME POST AS M1-5)	2.00	4.00
M3-4	24"	12"	WEST				2				(USE SAME POST AS M1-5)	2.00	4.00
OM3-L	12"	36"					2	YELLOW	BLACK	-	ATTACH TO BRIDGE	3.00	6.00
OM3-R	12"	36"					2	YELLOW	BLACK	-	ATTACH TO BRIDGE	3.00	6.00
R1-1	30"	30"					9	RED	WHITE	WHITE	P-5 (9 REQ'D)	6.25	56.25
R2-1(30)	24"	30"					2	WHITE	BLACK	BLACK	P-5 (2 REQ'D)	5.00	10.00
R2-1(35)	24"	30"					4				P-5 (4 REQ'D)	5.00	20.00
R2-1(45)	24"	30"					3				P-5 (3 REQ'D)	5.00	15.00
R4-1	24"	30"					2				P-5 (2 REQ'D)	5.00	10.00
R4-2	24"	30"					3				P-5 (3 REQ'D)	5.00	15.00
R4-11	30"	30"					8				P-5 (8 REQ'D)	6.25	50.00
S3-2	36"	36"					2	FLUORESCENT YELLOW/GREEN	BLACK	BLACK	P-5 (2 REQ'D)	9.00	18.00
MA-D10-2b (7.1)	24"	30"					1	GREEN	WHITE	WHITE	P-5 (1-REQ'D)	5.00	5.00
MA-D10-2b (7.4)	24"	30"					1				P-5 (1-REQ'D)	5.00	5.00
MA-D10-2b (8.2)	24"	30"					1				P-5 (1-REQ'D)	5.00	5.00
MA-D10-2b (8.3)	24"	30"					1				P-5 (1-REQ'D)	5.00	5.00
MA-D10-2b (9.2)	24"	30"					1				P-5 (1-REQ'D)	5.00	5.00
MA-D10-2b (9.9)	24"	30"					1				P-5 (1-REQ'D)	5.00	5.00

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
W1-1L	30"	30"					1	YELLOW	BLACK	BLACK	P-5 (1 REQ'D)	6.25	6.25
W1-1R	30"	30"					1				(MOUNT TO UTILITY POLE)	6.25	6.25
W1-2L	30"	30"					3				P-5 (3 REQ'D)	6.25	18.75
W1-2R	30"	30"					3				P-5 (3 REQ'D)	6.25	18.75
W1-5	30"	30"					2				P-5 (2 REQ'D)	6.25	12.50
W1-8L	18"	24"					20	YELLOW	BLACK	-	P-5 (20 REQ'D)	3.00	60.00
W1-8R	18"	24"					20	YELLOW	BLACK	-	P-5 (20 REQ'D)	3.00	60.00
W1-10R	36"	36"					1			BLACK	P-5 (1 REQ'D)	9.00	9.00
W2-2L	30"	30"					2				P-5 (2 REQ'D)	6.25	12.50
W5-1	36"	36"					1	YELLOW	BLACK	BLACK	P-5 (1 REQ'D)	9.00	9.00
W14-3	48" x 48"	36"					2	YELLOW	BLACK	BLACK	(USE SAME POST AS R4-2)	6.00	12.00
W15-1	30"	30"					2	FLUORESCENT YELLOW/GREEN	BLACK	BLACK	P-5 (2 REQ'D)	6.25	12.50

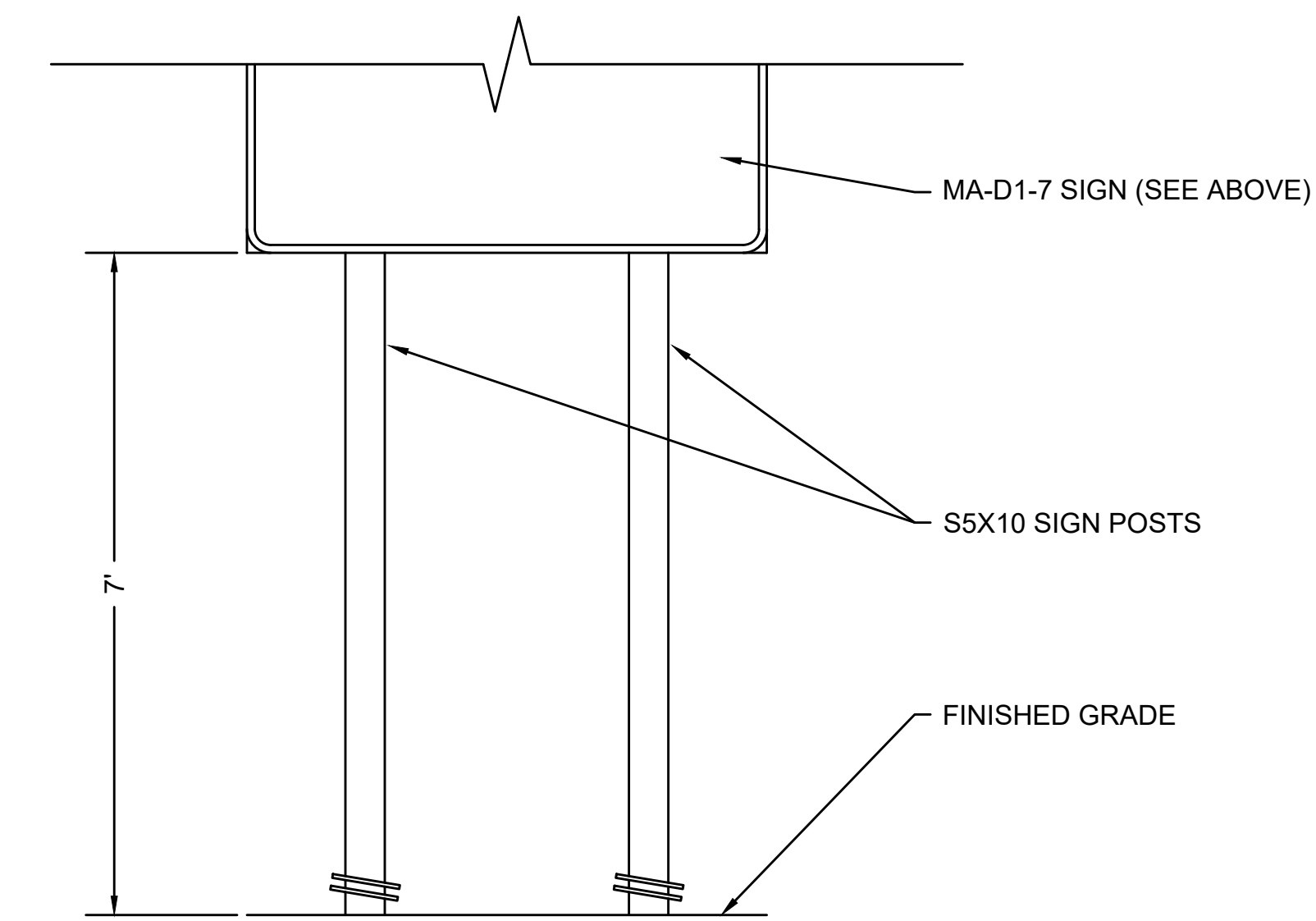
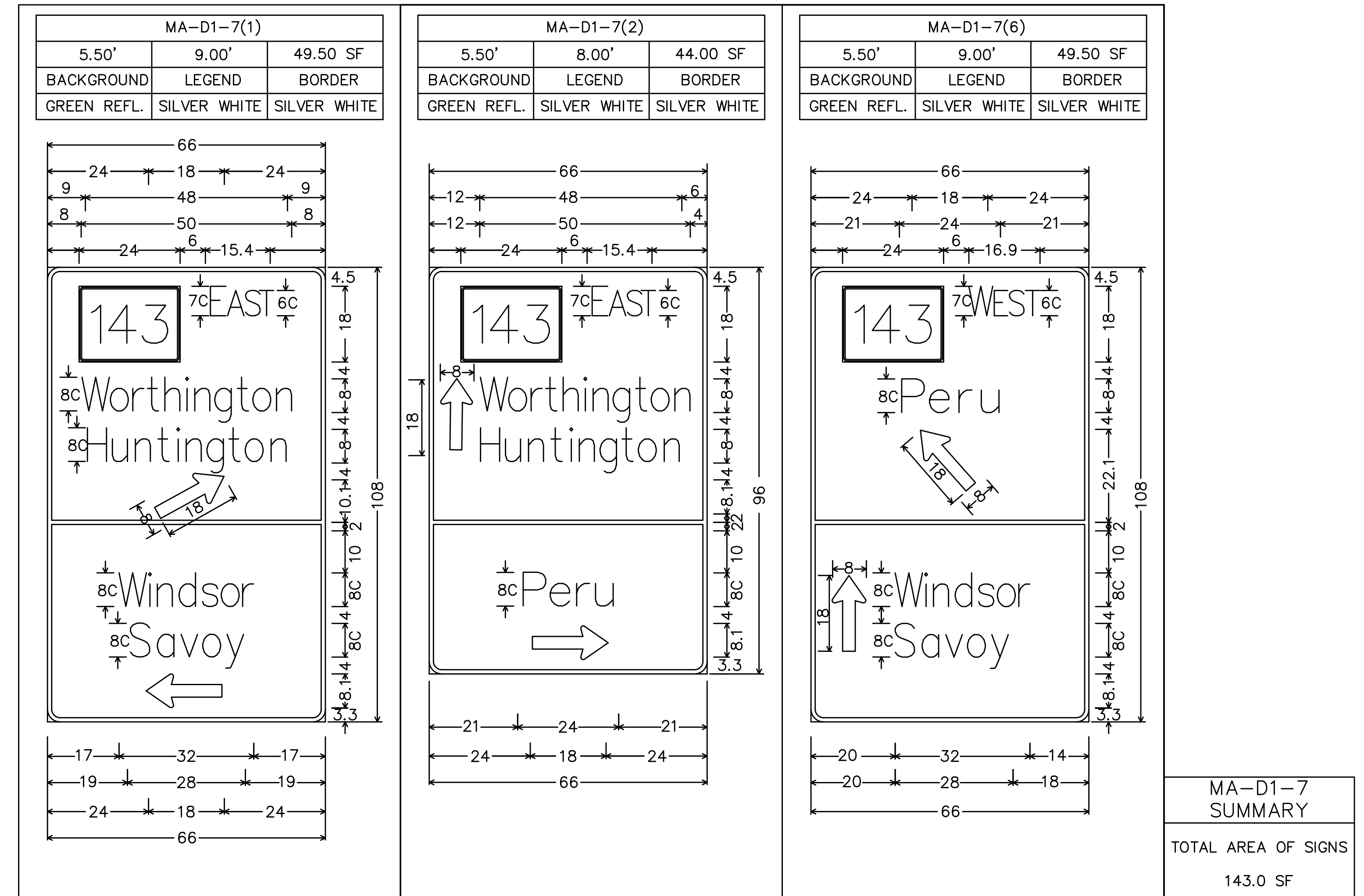
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	70	191
PROJECT FILE NO.		609287	

TRAFFIC SIGN SUMMARY SHEET - 2

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT (EA) PAY UNDER ITEM 874.
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER		
MA-D3-1A	48"	12"	East Main Rd	6D / 4D	3 3	N/A	2	GREEN	WHITE	WHITE	P-5 (2)	EA
MA-D3-1B	36"	12"	Parish Rd	6D / 4D	3 3	N/A	2				MOUNT W/ R1-1	EA
MA-D3-1C	36"	12"	River Rd	6D / 4D	3 3	N/A	2				MOUNT W/ R1-1	EA
MA-D3-1D	60"	12"	Lindsay Hill Rd	6D / 4D	2.75 3.25	N/A	2				P-5 (2)	EA
MA-D3-1E	54"	12"	Bashan Hill Rd	6D / 4D	3 3	N/A	2				P-5 (2)	EA
MA-D3-1F	60"	12"	East Windsor Rd	6D / 4D	3 3	N/A	2				P-5 (2)	EA
MA-D3-1G	42"	12"	Dingle Rd	6D / 4D	2.75 3.25	N/A	2				P-5 (1)	EA
MA-D3-1H	48"	12"	Old North Rd	6D / 4D	3 3	N/A	14	↓	↓	↓	MOUNT W/ OTHER MA-D3 SIGNS	EA



MA D1-7 SIGN POST DETAIL

TEMPORARY TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER		
M1-5	30"	24"	143	SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			29	WHITE	BLACK	BLACK	5.00	145.00
M3-2	24"	12"	EAST				14	WHITE	BLACK	BLACK	2.00	28.00
M3-4	24"	12"	WEST				15	WHITE	BLACK	BLACK	2.00	30.00
M4-8	24"	12"	DETOUR				29	FLUORESCENT ORANGE	BLACK	BLACK	2.00	58.00
M4-8a	24"	18"	END DETOUR				2	FLUORESCENT ORANGE	BLACK	BLACK	3.00	6.00
M4-10L	48"	18"	← DETOUR				1	FLUORESCENT ORANGE	BLACK	BLACK	6.00	6.00
M4-10R	48"	18"	DETOUR →				1	FLUORESCENT ORANGE	BLACK	BLACK	6.00	6.00
M5-1L	21"	15"	↙				2	WHITE	BLACK	BLACK	2.19	4.38
M5-1R	21"	15"	↘				2	WHITE	BLACK	BLACK	2.19	4.38
M6-1L	21"	15"	←				11	WHITE	BLACK	BLACK	2.19	24.09
M6-1R	21"	15"	→				8	WHITE	BLACK	BLACK	2.19	17.52
M6-3	21"	15"	↑				4	WHITE	BLACK	BLACK	2.19	8.76
R4-11	30"	30"	🚲 MAY USE FULL LANE				2*	WHITE	BLACK	BLACK	6.25	12.50
R10-2	9"	12"	CROSS ONLY ON OR SIGNAL				2*	WHITE	BLACK	BLACK	0.75	1.5
R10-6	24"	36"	STOP HERE ON RED				2*	WHITE	BLACK	BLACK	6.00	48.00
R11-2	48"	30"	ROAD CLOSED				2	WHITE	BLACK	BLACK	10.00	20.00
R11-3a	60"	30"	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY				7	WHITE	BLACK	BLACK	12.50	87.50
W1-4L	36"	36"	↘				1	FLUORESCENT ORANGE	BLACK	BLACK	9.00	9.00
W1-4R	36"	36"	↙				1	FLUORESCENT ORANGE	BLACK	BLACK	9.00	9.00
W3-3	36"	36"	🚧				2*	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W5-1	36"	36"	ROAD NARROWS				2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W13-1p	24"	24"	30 M.P.H.	↓	↓	↓	2*	FLUORESCENT ORANGE	BLACK	BLACK	4.00	8.00

WORTHINGTON ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	71	191
PROJECT FILE NO. 609287		609287	

TEMPORARY TRAFFIC CONTROL PLANS - 1

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER		
W20-1	36"	36"	ROAD WORK AHEAD	SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			10	FLUORESCENT ORANGE	BLACK	BLACK	9.00	90.00
W20-2	36"	36"	DETOUR AHEAD				2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W20-3	36"	36"	ROAD CLOSED AHEAD				2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W20-4	36"	36"	ONE LANE ROAD AHEAD				5*	FLUORESCENT ORANGE	BLACK	BLACK	9.00	45.00
W20-7	36"	36"	🚶	↓	↓	↓	2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
MA-W20-7b	36"	36"	POLICE OFFICER AHEAD	SEE MASSDOT STANDARD SIGNS SUPPLEMENT TO THE FHWA STD HWY SIGNS AND MARKINGS			3	FLUORESCENT ORANGE	BLACK	BLACK	9.00	27.00
MA-R2-10a	48"	36"	WORK ZONES SPEEDING FINES DOUBLED				10	WHITE/ FLUORESCENT ORANGE	BLACK	BLACK	12.00	120.00
MA-R2-10e	36"	48"	END ROAD WORK DOUBLE FINES END	↓	↓	↓	10	WHITE/ FLUORESCENT ORANGE	BLACK	BLACK	12.00	120.00

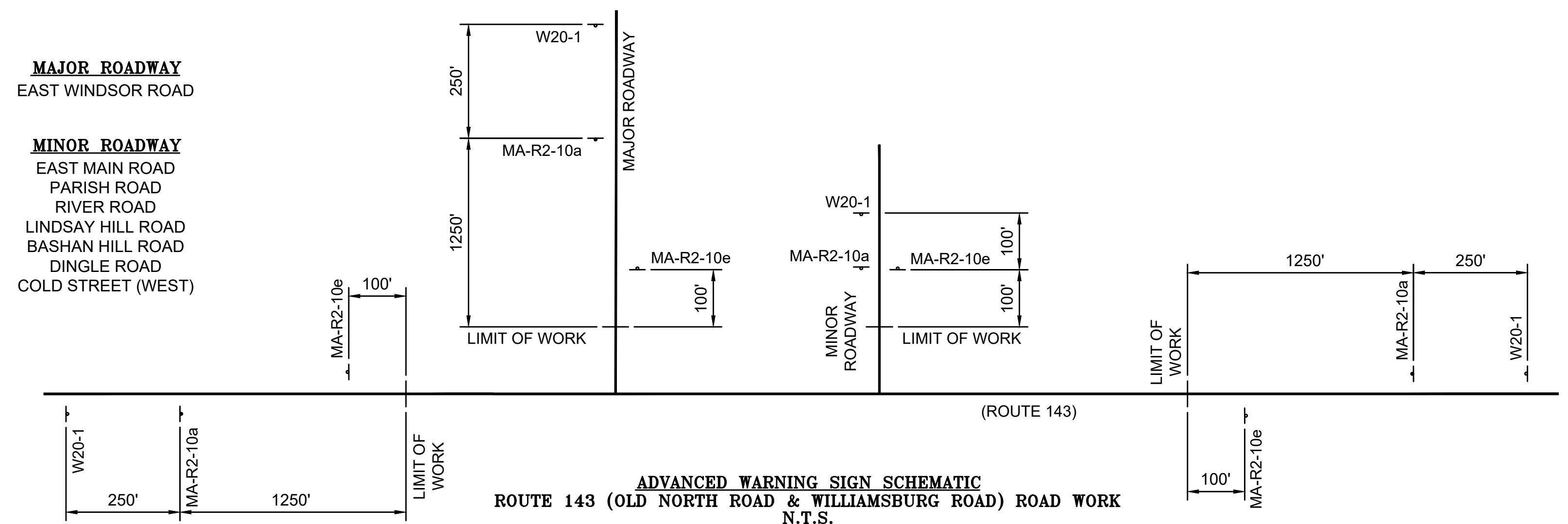
* ASSUMING THE NEED FOR 1 TEMPORARY SIGNAL SETUPS AT A TIME

GENERAL NOTES

- ALL CONSTRUCTION SIGNING, DRUMS, BARRICADES AND OTHER DEVICES SHALL CONFORM WITH PART 6 OF THE LATEST EDITION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
- ALL CHANNELIZING DEVICES SHALL BE SET @ 25' O.C. MAX. UNLESS OTHERWISE NOTED OR ADJUSTED BY THE RESIDENT ENGINEER.
- ALL DRUMS SHALL BE APPROPRIATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS AT ALL TIMES. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN, VEHICULAR AND EMERGENCY TRAFFIC THROUGH THE WORK AREAS, BOTH DURING AND AFTER WORK HOURS, TO MAINTAIN SUCH ACCESS.
- THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
- THE CONTRACTOR SHALL NOTIFY MASSDOT AND THE TOWN OF WORTHINGTON POLICE, FIRE, AND HIGHWAY DEPARTMENT AT LEAST 48 HOURS IN ADVANCE OF LANE CLOSURES.
- GRADE SEPARATIONS IN EXCESS OF 2 INCHES DURING NON-WORKING HOURS WILL REQUIRE DELINEATION BY USE OF DRUMS.
- EXCAVATION EDGES IN EXCESS OF 4 INCHES DEEP SHALL BE PROTECTED DURING NON-WORKING HOURS BY BACKFILLING WITH A WEDGE OF GRAVEL OR SOIL COMPACTED TO A 4:1 SLOPE.
- 11' MINIMUM LANE WIDTHS SHALL BE MAINTAINED DURING CONSTRUCTION.
- NON ESSENTIAL TEMPORARY CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS.
- THE GENERAL SEQUENCE OF WORK IS DEPENDENT UPON THE REMOVAL AND RELOCATION OF THE EXISTING UTILITY POLES AND WIRES THAT ARE FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK, BY THE UTILITY COMPANIES. THE CONTRACTOR SHALL SCHEDULE THE WORK IN EACH AREA TO COORDINATE WITH THE POLE RELOCATION WORK.
- ADVISORY SPEED PLATES (W13-1) SHALL BE USED IF APPROPRIATE AND AS REQUIRED BY THE ENGINEER.
- SUPPORTS FOR ALL TRAFFIC MANAGEMENT SIGNS SHALL BE APPROVED BY THE ENGINEER.

MAJOR ROADWAY EAST WINDSOR ROAD

MINOR ROADWAY EAST MAIN ROAD PARISH ROAD RIVER ROAD LINDSAY HILL ROAD BASHAN HILL ROAD DINGLE ROAD COLD STREET (WEST)

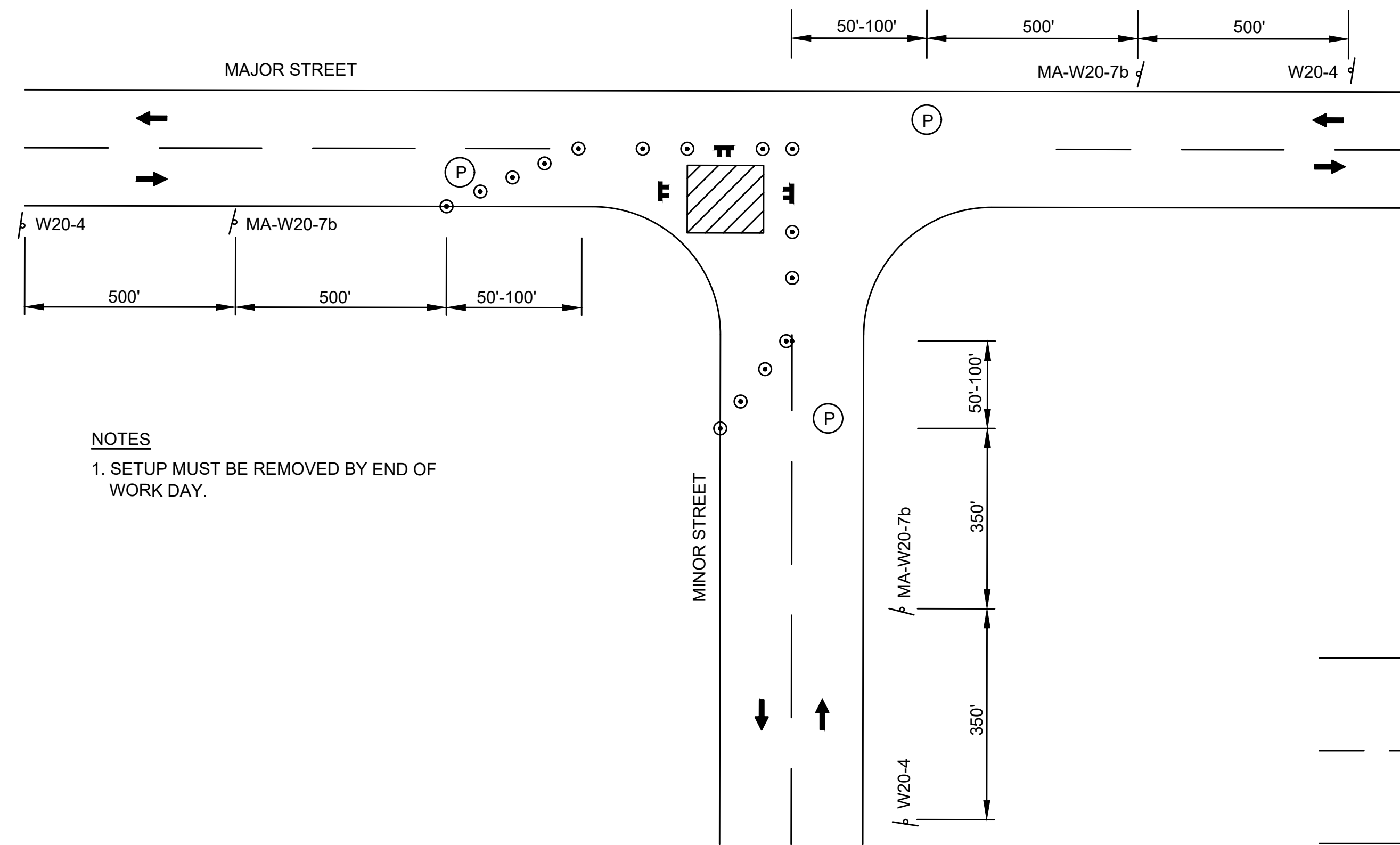


ADVANCED WARNING SIGN SCHEMATIC
ROUTE 143 (OLD NORTH ROAD & WILLIAMSBURG ROAD) ROAD WORK
N.T.S.

**WORTHINGTON
ROUTE 143**

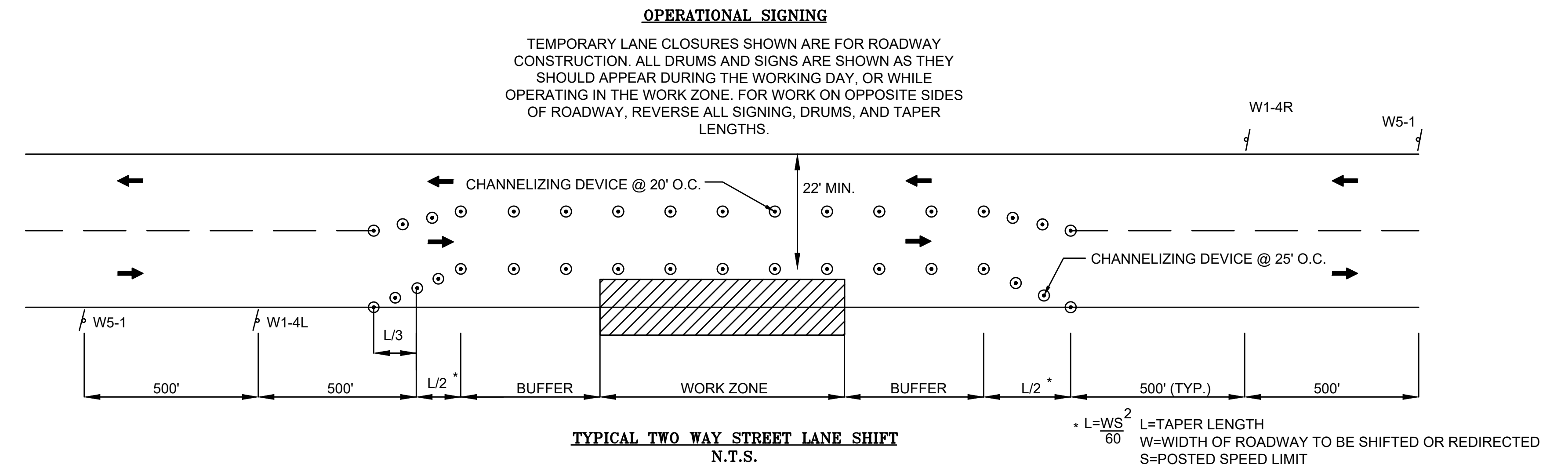
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	72	191
PROJECT FILE NO.		609287	

TEMPORARY TRAFFIC CONTROL PLANS - 2



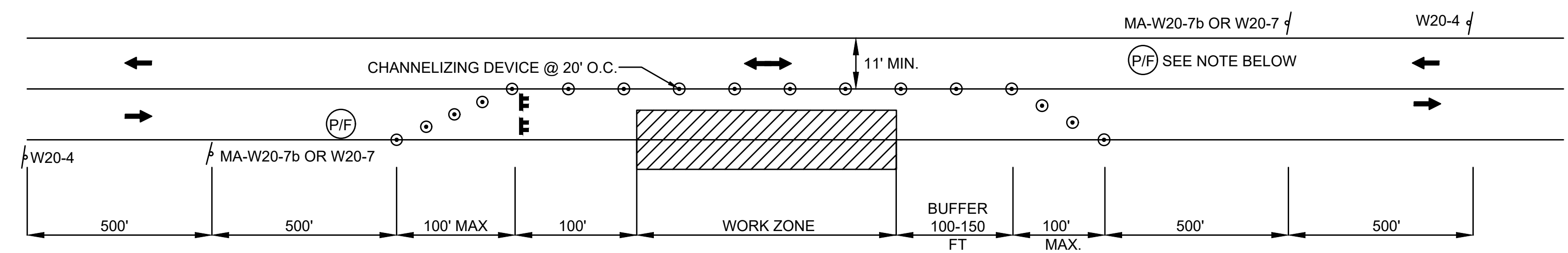
NOTES
1. SETUP MUST BE REMOVED BY END OF WORK DAY.

**TYPICAL INTERSECTION
MOVABLE WORK AREA
"OPERATIONAL" (DAY-TO-DAY) PLAN
N.T.S.**



**TYPICAL TWO WAY STREET LANE SHIFT
N.T.S.**

* $L = \frac{WS^2}{60}$
L=TAPER LENGTH
W=WIDTH OF ROADWAY TO BE SHIFTED OR REDIRECTED
S=POSTED SPEED LIMIT



**TYPICAL TWO LANE ROAD - ONE LANE ALTERNATING TRAFFIC
N.T.S.**

NOTES

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

LEGEND

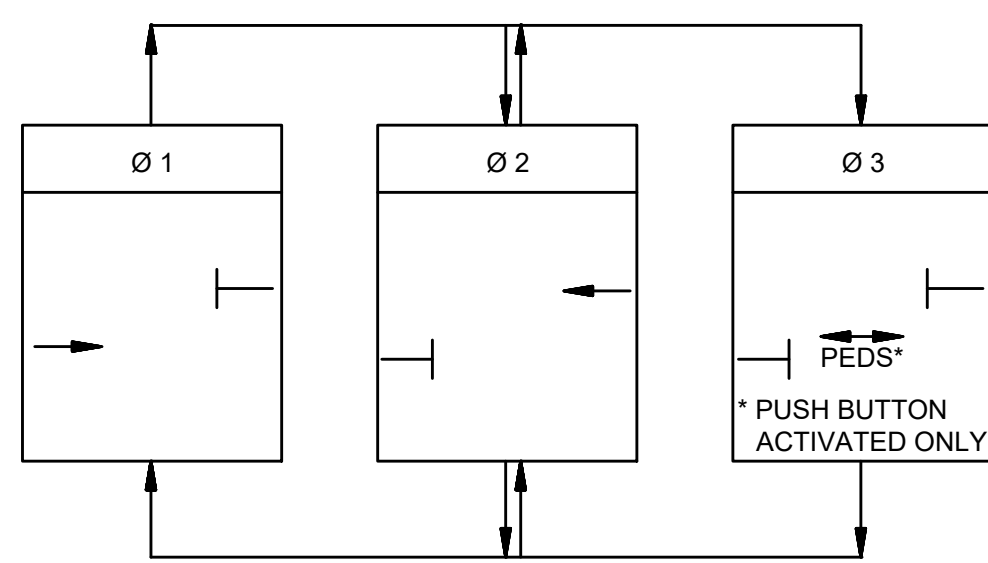
- ▲ REFLECTORIZED CONE
- ⊙ REFLECTORIZED DRUM
- ➔ PROPOSED TRAFFIC FLOW
- ▨ WORK ZONE
- ⊞ TYPE III BARICADE
- Ⓟ POLICE DETAIL
- Ⓡ ROAD FLAGGERS
- ⚠ CONSTRUCTION SIGN
- N.T.S. NOT TO SCALE

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	73	191
PROJECT FILE NO.		609287	

TEMPORARY TRAFFIC CONTROL PLANS - 3

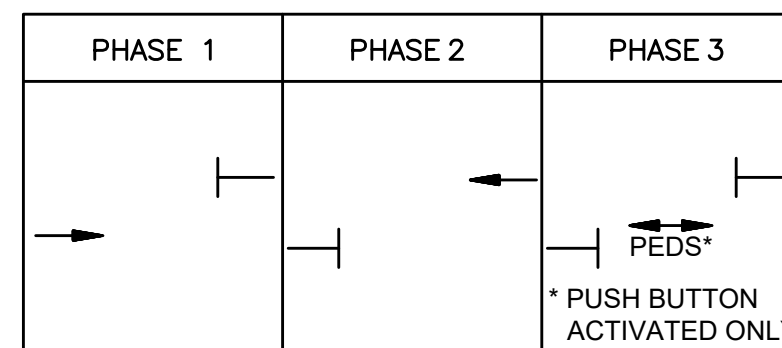
PREFERENTIAL PHASING SEQUENCE



DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR ZONE #	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	8'x50'	1	1	B	-	-
2	8'x50'	2	2	B	-	-



SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (ISOLATED)

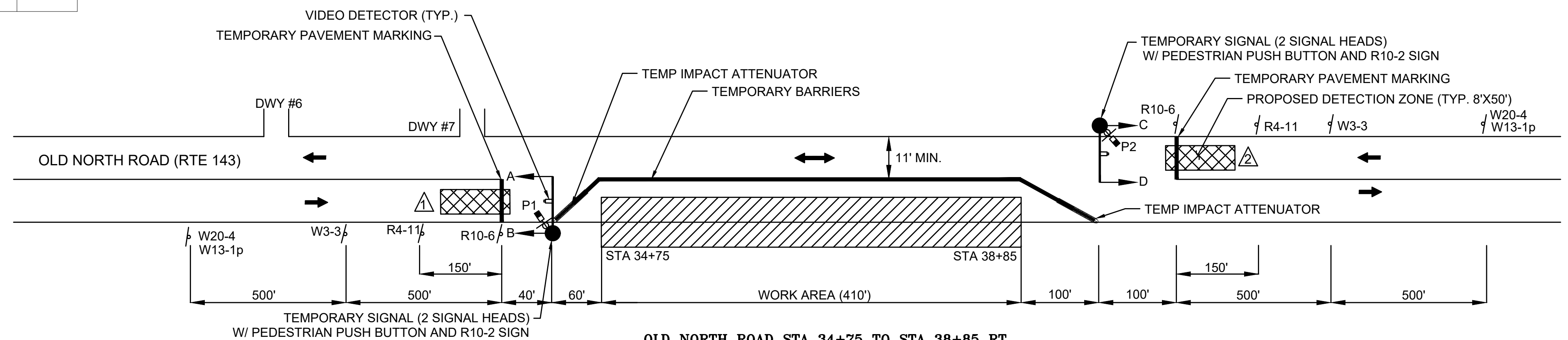
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9
OLD NORTH ROAD	EB	A,B	G	Y	R	R	R	R	R	R	R
OLD NORTH ROAD	WB	C,D	R	R	R	G	Y	R	R	R	R
PEDESTRIAN	EB/WB	P1,P2	R	R	R	R	R	R	W	FDW	DW

TIMING IN SECONDS

MINIMUM GREEN	8.0	8.0									
PASSAGE TIME (VEHICLE)	3.0	3.0									
MAXIMUM GREEN	20.0	20.0									
YELLOW CLEARANCE		3.5		3.5							
DEFAULT RED CLEARANCE (VEHICLES ONLY)			15.5		15.5						
RED CLEARANCE EXTENDED (BICYCLE DETECTED)			32.0*		32.0*						
WALK									7		
PEDESTRIAN CLEARANCE									223**	5**	
RECALL		MIN	MIN	NONE							
MEMORY		NON-LOCK	NON-LOCK	LOCK							

* THE VIDEO DETECTOR CAMERA SHALL HAVE THE ABILITY TO DETECT BOTH VEHICLES AND BICYCLES IN THE DETECTION ZONE. IF ONLY VEHICLES ARE DETECTED, THE DEFAULT RED CLEARANCE TIME SHOULD BE USED. IF BICYCLES ARE DETECTED, THE RED CLEARANCE EXTENDED TIME SHOULD BE USED INSTEAD.

** PER NEMA TS-2 STANDARDS, THE LONGEST PEDESTRIAN CLEARANCE INTERVAL SHALL BE 255 SECONDS. IF MORE TIME IS NECESSARY FOR PEDESTRIANS TO CLEAR THE WORK AREA, THE ALL-RED INTERVAL SHALL CONTAIN THE ADDITIONAL TIME NEEDED.



**OLD NORTH ROAD STA 34+75 TO STA 38+85 RT
ONE LANE ALTERNATING TRAFFIC WITH TEMPORARY TRAFFIC SIGNAL**

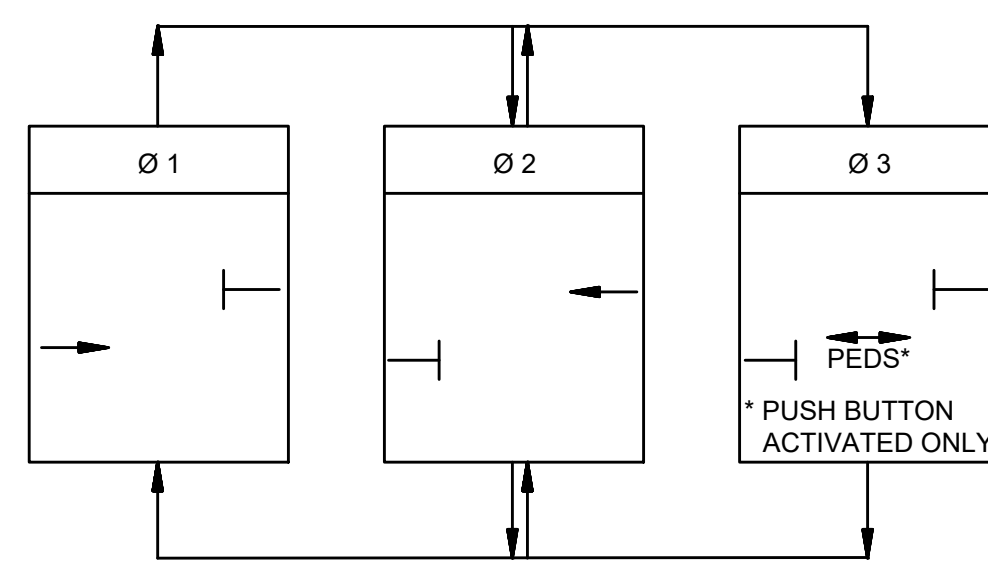
NOTES

- TEMPORARY TRAFFIC CONTROL SIGNALS SHALL BE USED AS DIRECTED BY THE ENGINEER.
- MUST KEEP ACCESS TO ABUTTING DRIVEWAYS AND ROADS AVAILABLE AT ALL TIMES.
- TEMPORARY IMPACT ATTENUATORS SHALL MEET THE QUALITY STANDARDS SET FORTH IN THE QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES PUBLISHED BY ATSSA.
- BICYCLISTS PERMITTED TO TRAVERSE WITHIN ROADWAY WITH VEHICLES DURING PHASES 1 THROUGH 3.
- THE GREEN, YELLOW CLEARANCE, AND RED CLEARANCE INTERVALS SHALL BE CALCULATED FOR EACH TEMPORARY TRAFFIC CONTROL SETUP. FACTORS INCLUDING THE LENGTH OF WORK ZONE AND ROADWAY PROFILE GRADE WILL AFFECT THE REQUIRED INTERVALS. THE INTERVALS SHALL BE CALCULATED PER LATEST MUTCD, MASSDOT, AND ITE GUIDANCE AND SHALL BE DOCUMENTED WITH THE RESIDENT ENGINEER.
- THE TIMINGS PROVIDED ARE BASED OFF A VEHICLE PATH DISTANCE FROM STOP LINE TO STOP LINE AS SHOWN IN THE DIAGRAM. THE DEFAULT RED CLEARANCE INTERVAL IS BASED OFF A SPEED OF 30 MPH FOR VEHICLES, AND THE RED CLEARANCE EXTENDED INTERVAL IS BASED OFF A SPEED OF 15 MPH IN ORDER TO ACCOMMODATE BICYCLISTS IN THE ROADWAY. A 2.5 TO 3.0 FEET PER SECOND PEDESTRIAN WALKING SPEED WAS MEASURED.
- SEE SHEET 71 FOR ADVANCED WARNING SIGN SCHEMATIC TO BE USED WITH THE TEMPORARY TRAFFIC SIGNAL SETUP.

LEGEND

- ▲ REFLECTORIZED CONE
- ⊙ REFLECTORIZED DRUM
- ➔ PROPOSED TRAFFIC FLOW
- ▨ WORK ZONE
- ▣ VIDEO DETECTION ZONE
- VIDEO DETECTION CAMERA
- ⊞ TYPE III BARRICADE
- ⊥ CONSTRUCTION SIGN
- N.T.S. NOT TO SCALE
- ▬ TEMP IMPACT ATTENUATOR

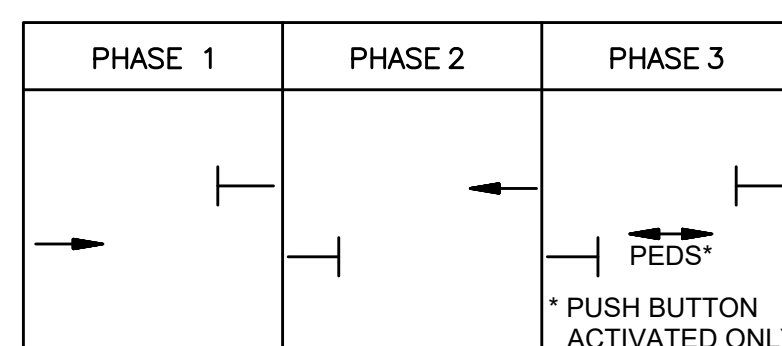
PREFERENTIAL PHASING SEQUENCE



DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR ZONE #	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	8'x50'	1	1	B	-	-
2	8'x50'	2	2	B	-	-



SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (ISOLATED)

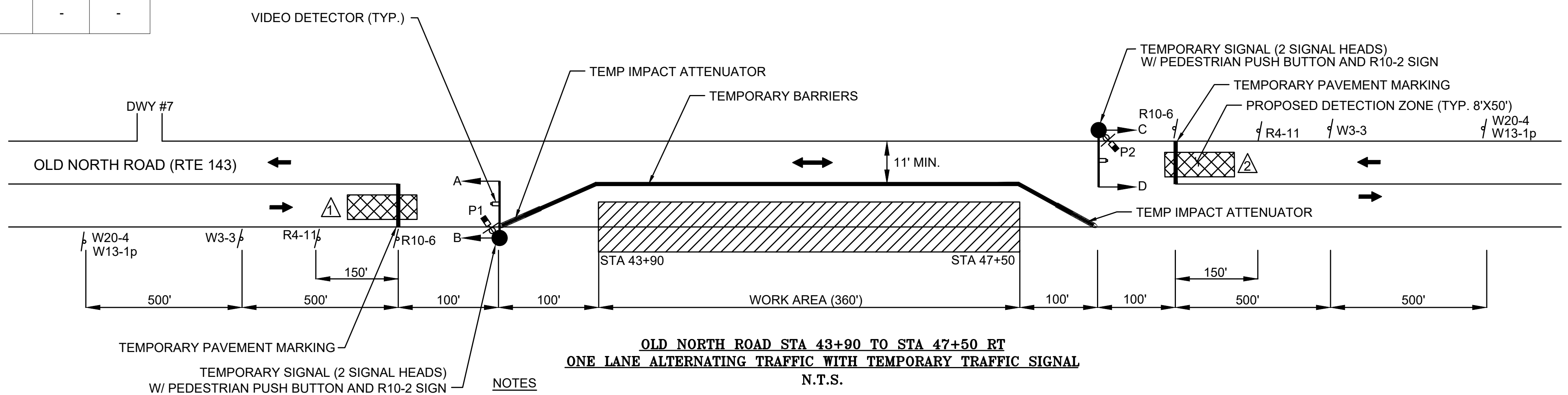
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9
OLD NORTH ROAD	EB	A,B	G	Y	R	R	R	R	R	R	R
OLD NORTH ROAD	WB	C,D	R	R	R	G	Y	R	R	R	R
PEDESTRIAN	EB/WB	P1,P2	R	R	R	R	R	R	W	FDW	DW

TIMING IN SECONDS

MINIMUM GREEN	8.0	8.0									
PASSAGE TIME (VEHICLE)	3.0	3.0									
MAXIMUM GREEN	20.0	20.0									
YELLOW CLEARANCE		4.0		4.0							
DEFAULT RED CLEARANCE (VEHICLES ONLY)			17.0		17.0						
RED CLEARANCE EXTENDED (BICYCLE DETECTED)			34.5*		34.5*						
WALK									7		
PEDESTRIAN CLEARANCE									220**	5**	
RECALL		MIN	MIN	NONE							
MEMORY		NON-LOCK	NON-LOCK	LOCK							

* THE VIDEO DETECTOR CAMERA SHALL HAVE THE ABILITY TO DETECT BOTH VEHICLES AND BICYCLES IN THE DETECTION ZONE. IF ONLY VEHICLES ARE DETECTED, THE DEFAULT RED CLEARANCE TIME SHOULD BE USED. IF BICYCLES ARE DETECTED, THE RED CLEARANCE EXTENDED TIME SHOULD BE USED INSTEAD.

** PER NEMA TS-2 STANDARDS, THE LONGEST PEDESTRIAN CLEARANCE INTERVAL SHALL BE 255 SECONDS. IF MORE TIME IS NECESSARY FOR PEDESTRIANS TO CLEAR THE WORK AREA, THE ALL-RED INTERVAL SHALL CONTAIN THE ADDITIONAL TIME NEEDED.



**OLD NORTH ROAD STA 43+90 TO STA 47+50 RT
ONE LANE ALTERNATING TRAFFIC WITH TEMPORARY TRAFFIC SIGNAL**

NOTES

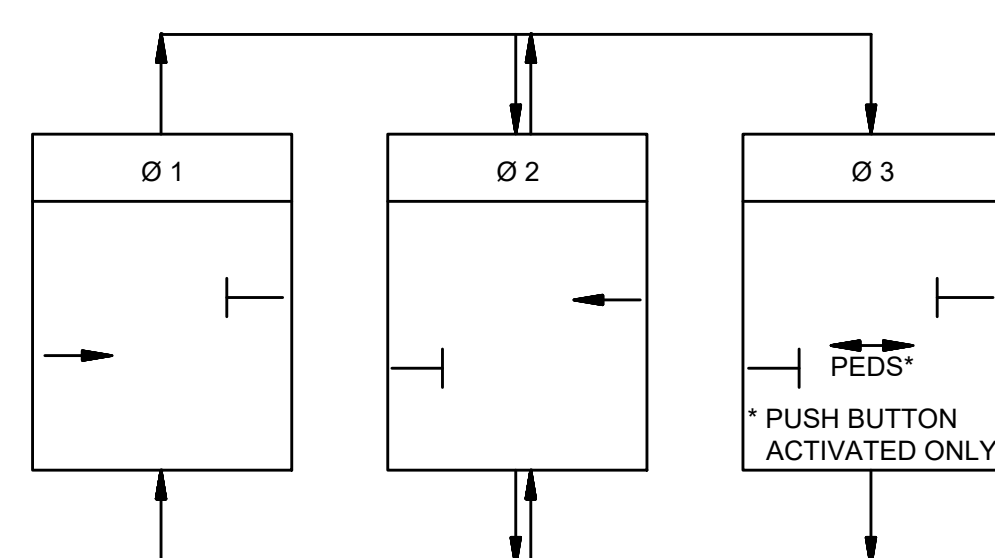
- TEMPORARY TRAFFIC CONTROL SIGNALS SHALL BE USED AS DIRECTED BY THE ENGINEER.
- MUST KEEP ACCESS TO ABUTTING DRIVEWAYS AND ROADS AVAILABLE AT ALL TIMES.
- TEMPORARY IMPACT ATTENUATORS SHALL MEET THE QUALITY STANDARDS SET FORTH IN THE QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES PUBLISHED BY ATSSA.
- BICYCLISTS PERMITTED TO TRAVERSE WITHIN ROADWAY WITH VEHICLES DURING PHASES 1 THROUGH 3.
- THE GREEN, YELLOW CLEARANCE, AND RED CLEARANCE INTERVALS SHALL BE CALCULATED FOR EACH TEMPORARY TRAFFIC CONTROL SETUP. FACTORS INCLUDING THE LENGTH OF WORK ZONE AND ROADWAY PROFILE GRADE WILL AFFECT THE REQUIRED INTERVALS. THE INTERVALS SHALL BE CALCULATED PER LATEST MUTCD, MASSDOT, AND ITE GUIDANCE AND SHALL BE DOCUMENTED WITH THE RESIDENT ENGINEER.
- THE TIMINGS PROVIDED ARE BASED OFF A VEHICLE PATH DISTANCE FROM STOP LINE TO STOP LINE AS SHOWN IN THE DIAGRAM. THE DEFAULT RED CLEARANCE INTERVAL IS BASED OFF A SPEED OF 30 MPH FOR VEHICLES, AND THE RED CLEARANCE EXTENDED INTERVAL IS BASED OFF A SPEED OF 15 MPH IN ORDER TO ACCOMMODATE BICYCLISTS IN THE ROADWAY. A 2.5 TO 3.0 FEET PER SECOND PEDESTRIAN WALKING SPEED WAS MEASURED.
- SEE SHEET 71 FOR ADVANCED WARNING SIGN SCHEMATIC TO BE USED WITH THE TEMPORARY TRAFFIC SIGNAL SETUP.

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	74	191
PROJECT FILE NO.		609287	

TEMPORARY TRAFFIC CONTROL PLANS - 4

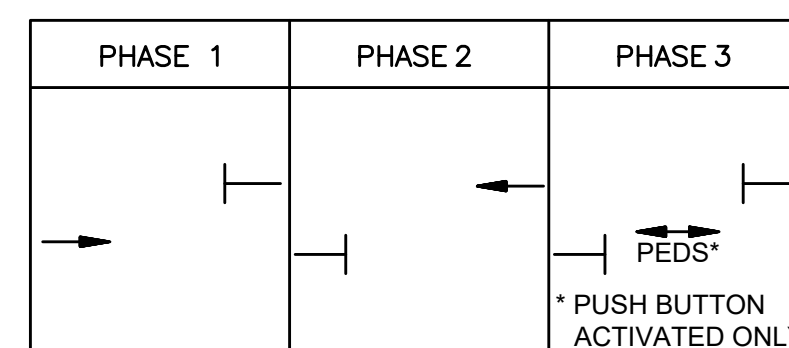
PREFERENTIAL PHASING SEQUENCE



DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR ZONE #	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	8'x50'	1	1	B	-	-
2	8'x50'	2	2	B	-	-



SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (ISOLATED)

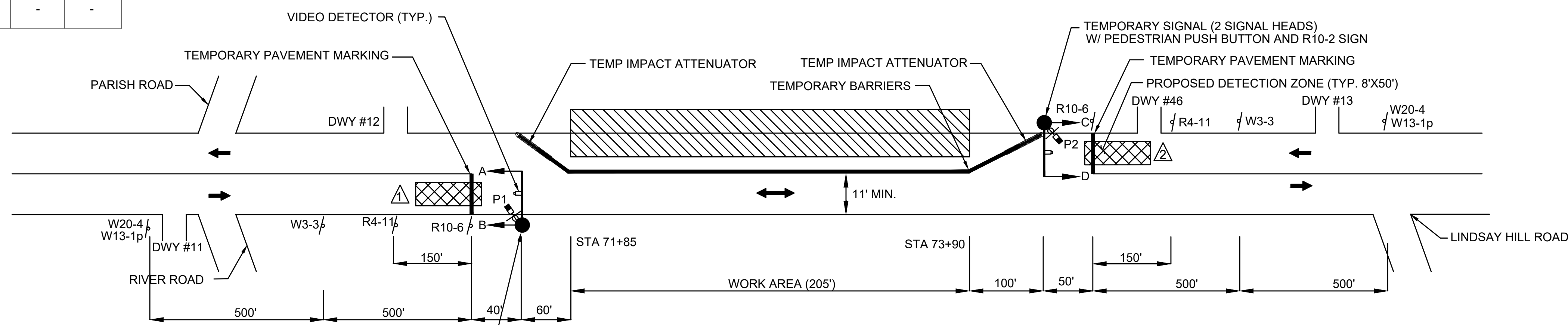
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9
OLD NORTH ROAD	EB	A,B	G	Y	R	R	R	R	R	R	R
OLD NORTH ROAD	WB	C,D	R	R	R	G	Y	R	R	R	R
PEDESTRIAN	EB/WB	P1,P2	R	R	R	R	R	R	W	FDW	DW

TIMING IN SECONDS

	1	2	3	4	5	6	7	8	9	
MINIMUM GREEN	8.0			8.0						
PASSAGE TIME (VEHICLE)	3.0			3.0						
MAXIMUM GREEN	10.0			10.0						
YELLOW CLEARANCE		4.0			4.0					
DEFAULT RED CLEARANCE (VEHICLES ONLY)				10.0				10.0		
RED CLEARANCE EXTENDED (BICYCLE DETECTED)				20.5*				20.5*		
WALK									7	
PEDESTRIAN CLEARANCE									143**	5**

	MIN	MIN	NONE
RECALL			
MEMORY	NON-LOCK	NON-LOCK	LOCK

* THE VIDEO DETECTOR CAMERA SHALL HAVE THE ABILITY TO DETECT BOTH VEHICLES AND BICYCLES IN THE DETECTION ZONE. IF ONLY VEHICLES ARE DETECTED, THE DEFAULT RED CLEARANCE TIME SHOULD BE USED. IF BICYCLES ARE DETECTED, THE RED CLEARANCE EXTENDED TIME SHOULD BE USED INSTEAD.
** PER NEMA TS-2 STANDARDS, THE LONGEST PEDESTRIAN CLEARANCE INTERVAL SHALL BE 255 SECONDS. IF MORE TIME IS NECESSARY FOR PEDESTRIANS TO CLEAR THE WORK AREA, THE ALL-RED INTERVAL SHALL CONTAIN THE ADDITIONAL TIME NEEDED.



**OLD NORTH ROAD STA 71+85 TO STA 73+90 LT
ONE LANE ALTERNATING TRAFFIC WITH TEMPORARY TRAFFIC SIGNAL**

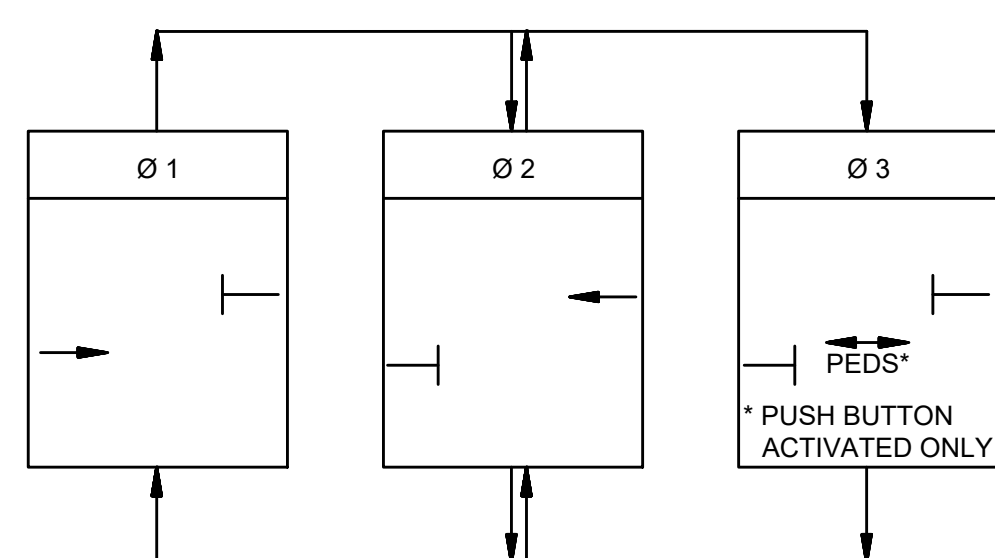
N.T.S.

- NOTES
- TEMPORARY TRAFFIC CONTROL SIGNALS SHALL BE USED AS DIRECTED BY THE ENGINEER.
 - MUST KEEP ACCESS TO ABUTTING DRIVEWAYS AND ROADS AVAILABLE AT ALL TIMES.
 - TEMPORARY IMPACT ATTENUATORS SHALL MEET THE QUALITY STANDARDS SET FORTH IN THE QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES PUBLISHED BY ATSSA.
 - BICYCLISTS PERMITTED TO TRAVERSE WITHIN ROADWAY WITH VEHICLES DURING PHASES 1 THROUGH 3.
 - THE GREEN, YELLOW CLEARANCE, AND RED CLEARANCE INTERVALS SHALL BE CALCULATED FOR EACH TEMPORARY TRAFFIC CONTROL SETUP. FACTORS INCLUDING THE LENGTH OF WORK ZONE AND ROADWAY PROFILE GRADE WILL AFFECT THE REQUIRED INTERVALS. THE INTERVALS SHALL BE CALCULATED PER LATEST MUTCD, MASSDOT, AND ITE GUIDANCE AND SHALL BE DOCUMENTED WITH THE RESIDENT ENGINEER.
 - THE TIMINGS PROVIDED ARE BASED OFF A VEHICLE PATH DISTANCE FROM STOP LINE TO STOP LINE AS SHOWN IN THE DIAGRAM. THE DEFAULT RED CLEARANCE INTERVAL IS BASED OFF A SPEED OF 30 MPH FOR VEHICLES, AND THE RED CLEARANCE EXTENDED INTERVAL IS BASED OFF A SPEED OF 15 MPH IN ORDER TO ACCOMMODATE BICYCLISTS IN THE ROADWAY. A 2.5 TO 3.0 FEET PER SECOND PEDESTRIAN WALKING SPEED WAS MEASURED.
 - SEE SHEET 71 FOR ADVANCED WARNING SIGN SCHEMATIC TO BE USED WITH THE TEMPORARY TRAFFIC SIGNAL SETUP.

LEGEND

- ▲ REFLECTORIZED CONE
- ⊙ REFLECTORIZED DRUM
- ➔ PROPOSED TRAFFIC FLOW
- ▨ WORK ZONE
- ▩ VIDEO DETECTION ZONE
- 📷 VIDEO DETECTION CAMERA
- 🚧 TYPE III BARICADE
- 🚧 CONSTRUCTION SIGN
- N.T.S. NOT TO SCALE
- TEMP IMPACT ATTENUATOR

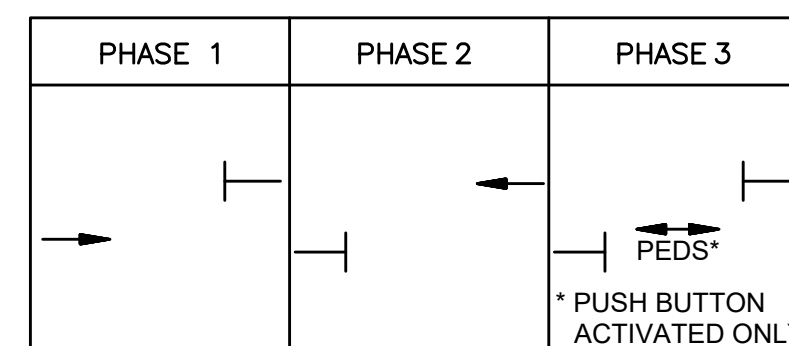
PREFERENTIAL PHASING SEQUENCE



DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR ZONE #	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	8'x50'	1	1	B	-	-
2	8'x50'	2	2	B	-	-



SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (ISOLATED)

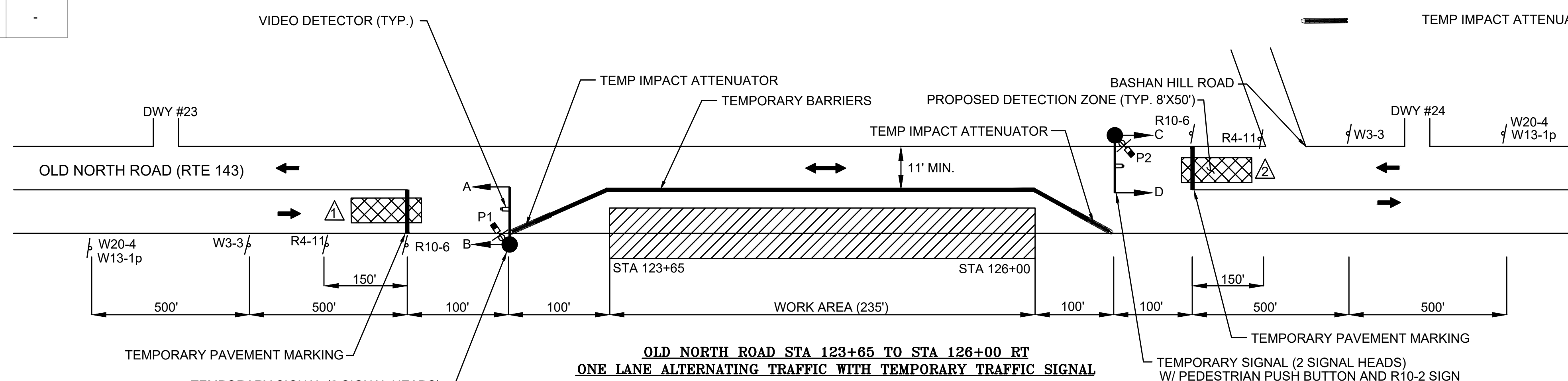
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9
OLD NORTH ROAD	EB	A,B	G	Y	R	R	R	R	R	R	R
OLD NORTH ROAD	WB	C,D	R	R	R	G	Y	R	R	R	R
PEDESTRIAN	EB/WB	P1,P2	R	R	R	R	R	R	W	FDW	DW

TIMING IN SECONDS

	1	2	3	4	5	6	7	8	9	
MINIMUM GREEN	8.0			8.0						
PASSAGE TIME (VEHICLE)	3.0			3.0						
MAXIMUM GREEN	10.5			10.5						
YELLOW CLEARANCE		3.5			3.5					
DEFAULT RED CLEARANCE (VEHICLES ONLY)				14.0				14.0		
RED CLEARANCE EXTENDED (BICYCLE DETECTED)				29.0*				29.0*		
WALK									7	
PEDESTRIAN CLEARANCE									170**	5**

	MIN	MIN	NONE
RECALL			
MEMORY	NON-LOCK	NON-LOCK	LOCK

* THE VIDEO DETECTOR CAMERA SHALL HAVE THE ABILITY TO DETECT BOTH VEHICLES AND BICYCLES IN THE DETECTION ZONE. IF ONLY VEHICLES ARE DETECTED, THE DEFAULT RED CLEARANCE TIME SHOULD BE USED. IF BICYCLES ARE DETECTED, THE RED CLEARANCE EXTENDED TIME SHOULD BE USED INSTEAD.
** PER NEMA TS-2 STANDARDS, THE LONGEST PEDESTRIAN CLEARANCE INTERVAL SHALL BE 255 SECONDS. IF MORE TIME IS NECESSARY FOR PEDESTRIANS TO CLEAR THE WORK AREA, THE ALL-RED INTERVAL SHALL CONTAIN THE ADDITIONAL TIME NEEDED.



**OLD NORTH ROAD STA 123+65 TO STA 126+00 RT
ONE LANE ALTERNATING TRAFFIC WITH TEMPORARY TRAFFIC SIGNAL**

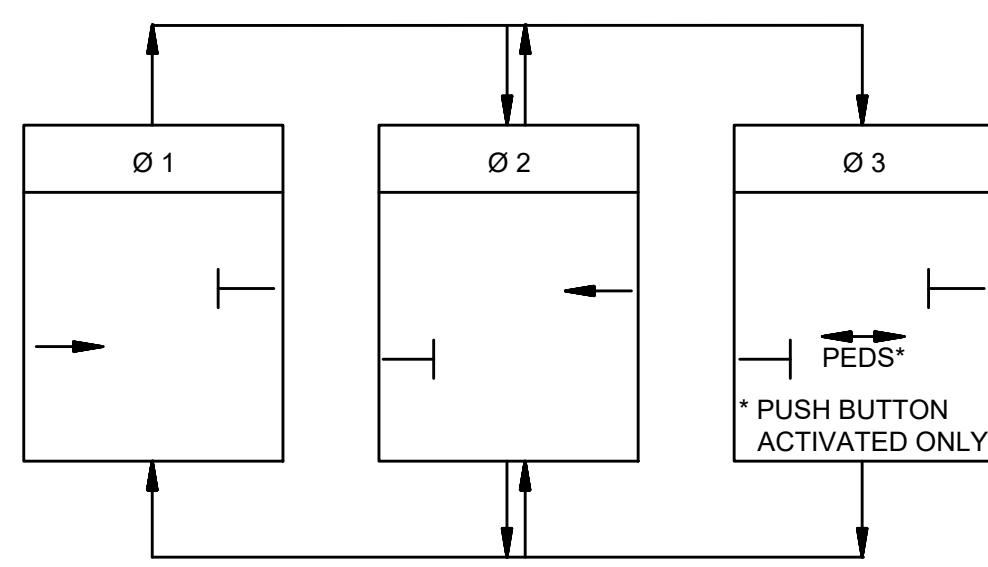
N.T.S.

- NOTES
- TEMPORARY TRAFFIC CONTROL SIGNALS SHALL BE USED AS DIRECTED BY THE ENGINEER.
 - MUST KEEP ACCESS TO ABUTTING DRIVEWAYS AND ROADS AVAILABLE AT ALL TIMES.
 - TEMPORARY IMPACT ATTENUATORS SHALL MEET THE QUALITY STANDARDS SET FORTH IN THE QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES PUBLISHED BY ATSSA.
 - BICYCLISTS PERMITTED TO TRAVERSE WITHIN ROADWAY WITH VEHICLES DURING PHASES 1 THROUGH 3.
 - THE GREEN, YELLOW CLEARANCE, AND RED CLEARANCE INTERVALS SHALL BE CALCULATED FOR EACH TEMPORARY TRAFFIC CONTROL SETUP. FACTORS INCLUDING THE LENGTH OF WORK ZONE AND ROADWAY PROFILE GRADE WILL AFFECT THE REQUIRED INTERVALS. THE INTERVALS SHALL BE CALCULATED PER LATEST MUTCD, MASSDOT, AND ITE GUIDANCE AND SHALL BE DOCUMENTED WITH THE RESIDENT ENGINEER.
 - THE TIMINGS PROVIDED ARE BASED OFF A VEHICLE PATH DISTANCE FROM STOP LINE TO STOP LINE AS SHOWN IN THE DIAGRAM. THE DEFAULT RED CLEARANCE INTERVAL IS BASED OFF A SPEED OF 30 MPH FOR VEHICLES, AND THE RED CLEARANCE EXTENDED INTERVAL IS BASED OFF A SPEED OF 15 MPH IN ORDER TO ACCOMMODATE BICYCLISTS IN THE ROADWAY. A 2.5 TO 3.0 FEET PER SECOND PEDESTRIAN WALKING SPEED WAS MEASURED.
 - SEE SHEET 71 FOR ADVANCED WARNING SIGN SCHEMATIC TO BE USED WITH THE TEMPORARY TRAFFIC SIGNAL SETUP.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	75	191
PROJECT FILE NO.		609287	

TEMPORARY TRAFFIC CONTROL PLANS - 5

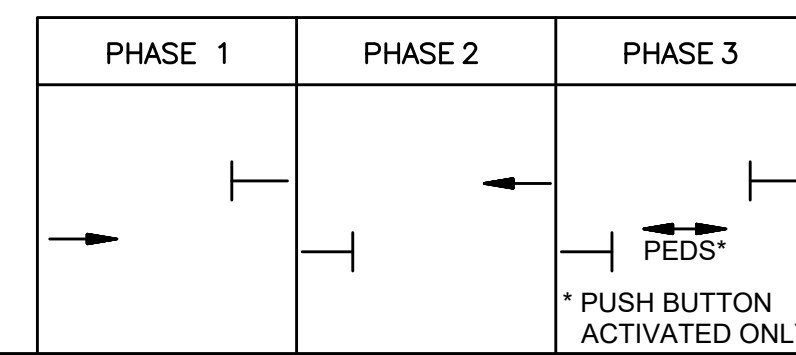
PREFERENTIAL PHASING SEQUENCE



DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR ZONE #	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	8'x50'	1	1	B	-	-
2	8'x50'	2	2	B	-	-

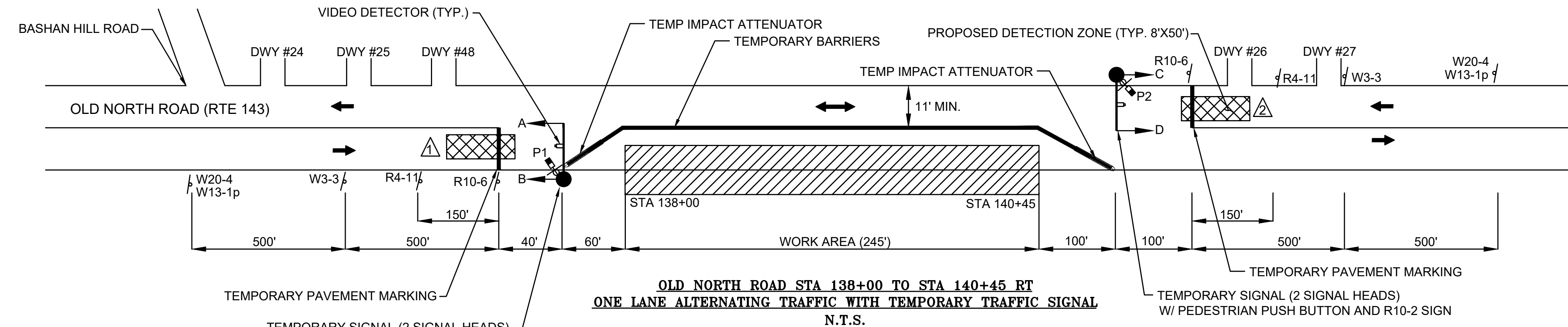


SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (ISOLATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9
OLD NORTH ROAD	EB	A,B	G	Y	R	R	R	R	R	R	R
OLD NORTH ROAD	WB	C,D	R	R	R	G	Y	R	R	R	R
PEDESTRIAN	EB/WB	P1,P2	R	R	R	R	R	R	W	FDW	DW

TIMING IN SECONDS

MINIMUM GREEN	8.0		8.0								
PASSAGE TIME (VEHICLE)	3.0		3.0								
MAXIMUM GREEN	9.0		9.0								
YELLOW CLEARANCE		4.0		4.0							
DEFAULT RED CLEARANCE (VEHICLES ONLY)			12.0		12.0						
RED CLEARANCE EXTENDED (BICYCLE DETECTED)			24.5*		24.5*						
WALK									7		
PEDESTRIAN CLEARANCE									158**	5**	
RECALL			MIN		MIN					NONE	
MEMORY			NON-LOCK		NON-LOCK					LOCK	



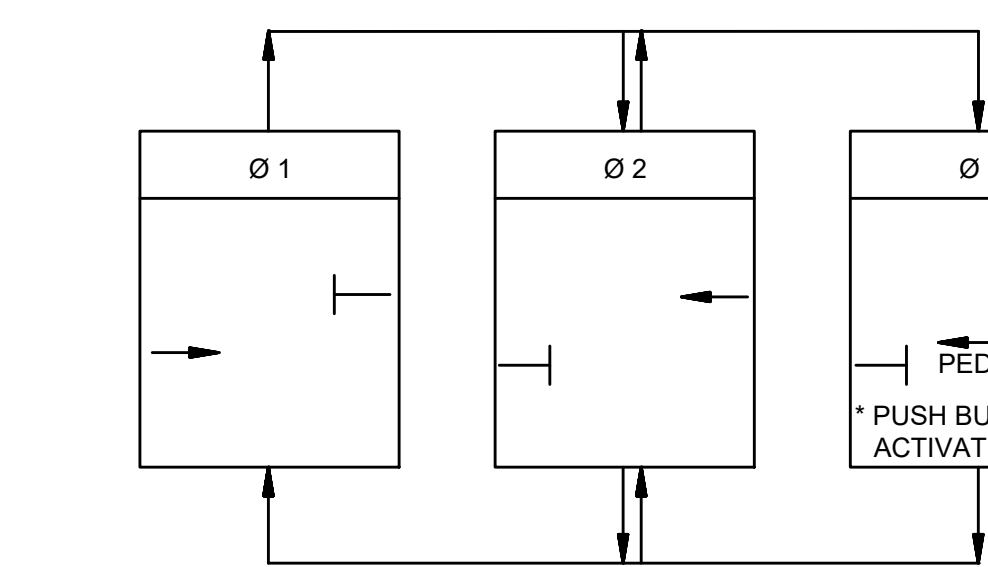
NOTES

- TEMPORARY TRAFFIC CONTROL SIGNALS SHALL BE USED AS DIRECTED BY THE ENGINEER.
- MUST KEEP ACCESS TO ABUTTING DRIVEWAYS AND ROADS AVAILABLE AT ALL TIMES.
- TEMPORARY IMPACT ATTENUATORS SHALL MEET THE QUALITY STANDARDS SET FORTH IN THE QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES PUBLISHED BY ATSSA.
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- SEE SHEET 71 FOR ADVANCED WARNING SIGN SCHEMATIC TO BE USED WITH THE TEMPORARY TRAFFIC SIGNAL SETUP.

LEGEND

- ▲ REFLECTORIZED CONE
- ⊙ REFLECTORIZED DRUM
- ➔ PROPOSED TRAFFIC FLOW
- ▨ WORK ZONE
- ▤ VIDEO DETECTION ZONE
- 📷 VIDEO DETECTION CAMERA
- 🚧 TYPE III BARICADE
- 🚧 CONSTRUCTION SIGN
- N.T.S. NOT TO SCALE
- ▬ TEMP IMPACT ATTENUATOR

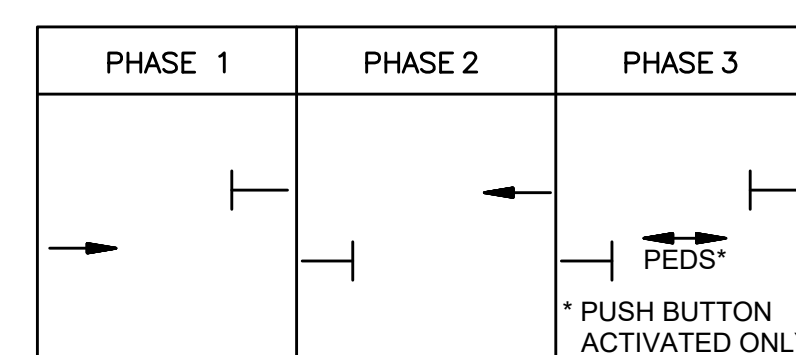
PREFERENTIAL PHASING SEQUENCE



DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR ZONE #	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	8'x50'	1	1	B	-	-
2	8'x50'	2	2	B	-	-

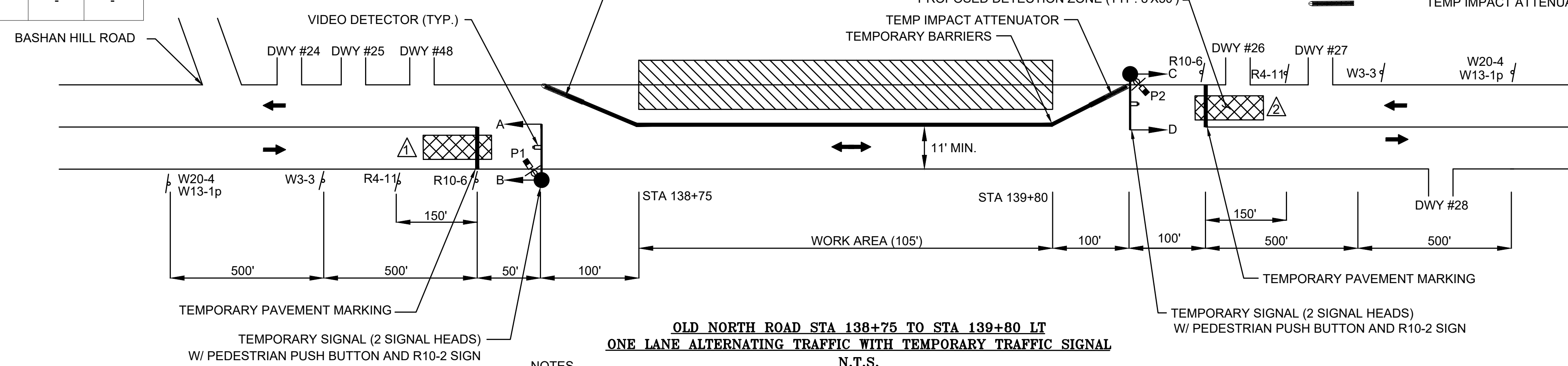


SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (ISOLATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9
OLD NORTH ROAD	EB	A,B	G	Y	R	R	R	R	R	R	R
OLD NORTH ROAD	WB	C,D	R	R	R	G	Y	R	R	R	R
PEDESTRIAN	EB/WB	P1,P2	R	R	R	R	R	R	W	FDW	DW

TIMING IN SECONDS

MINIMUM GREEN	8.0		8.0								
PASSAGE TIME (VEHICLE)	3.0		3.0								
MAXIMUM GREEN	9.0		9.0								
YELLOW CLEARANCE		4.0		4.0							
DEFAULT RED CLEARANCE (VEHICLES ONLY)			10.0		10.0						
RED CLEARANCE EXTENDED (BICYCLE DETECTED)			20.5*		20.5*						
WALK									7		
PEDESTRIAN CLEARANCE									118**	5**	
RECALL			MIN		MIN					NONE	
MEMORY			NON-LOCK		NON-LOCK					LOCK	



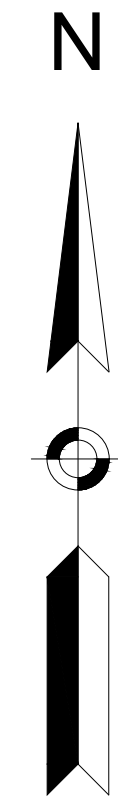
NOTES

- TEMPORARY TRAFFIC CONTROL SIGNALS SHALL BE USED AS DIRECTED BY THE ENGINEER.
- MUST KEEP ACCESS TO ABUTTING DRIVEWAYS AND ROADS AVAILABLE AT ALL TIMES.
- TEMPORARY IMPACT ATTENUATORS SHALL MEET THE QUALITY STANDARDS SET FORTH IN THE QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES PUBLISHED BY ATSSA.
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- THE GREEN, YELLOW CLEARANCE, AND RED CLEARANCE INTERVALS SHALL BE CALCULATED FOR EACH TEMPORARY TRAFFIC CONTROL SETUP. FACTORS INCLUDING THE LENGTH OF WORK ZONE AND ROADWAY PROFILE GRADE WILL AFFECT THE REQUIRED INTERVALS. THE INTERVALS SHALL BE CALCULATED PER LATEST MUTCD, MASSDOT, AND ITE GUIDANCE AND SHALL BE DOCUMENTED WITH THE RESIDENT ENGINEER.
- THE TIMINGS PROVIDED ARE BASED OFF A VEHICLE PATH DISTANCE FROM STOP LINE TO STOP LINE AS SHOWN IN THE DIAGRAM. THE DEFAULT RED CLEARANCE INTERVAL IS BASED OFF A SPEED OF 30 MPH FOR VEHICLES, AND THE RED CLEARANCE EXTENDED INTERVAL IS BASED OFF A SPEED OF 15 MPH IN ORDER TO ACCOMMODATE BICYCLISTS IN THE ROADWAY. A 2.5 TO 3.0 FEET PER SECOND PEDESTRIAN WALKING SPEED WAS MEASURED.
- SEE SHEET 71 FOR ADVANCED WARNING SIGN SCHEMATIC TO BE USED WITH THE TEMPORARY TRAFFIC SIGNAL SETUP.

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	76	191
PROJECT FILE NO.		609287	

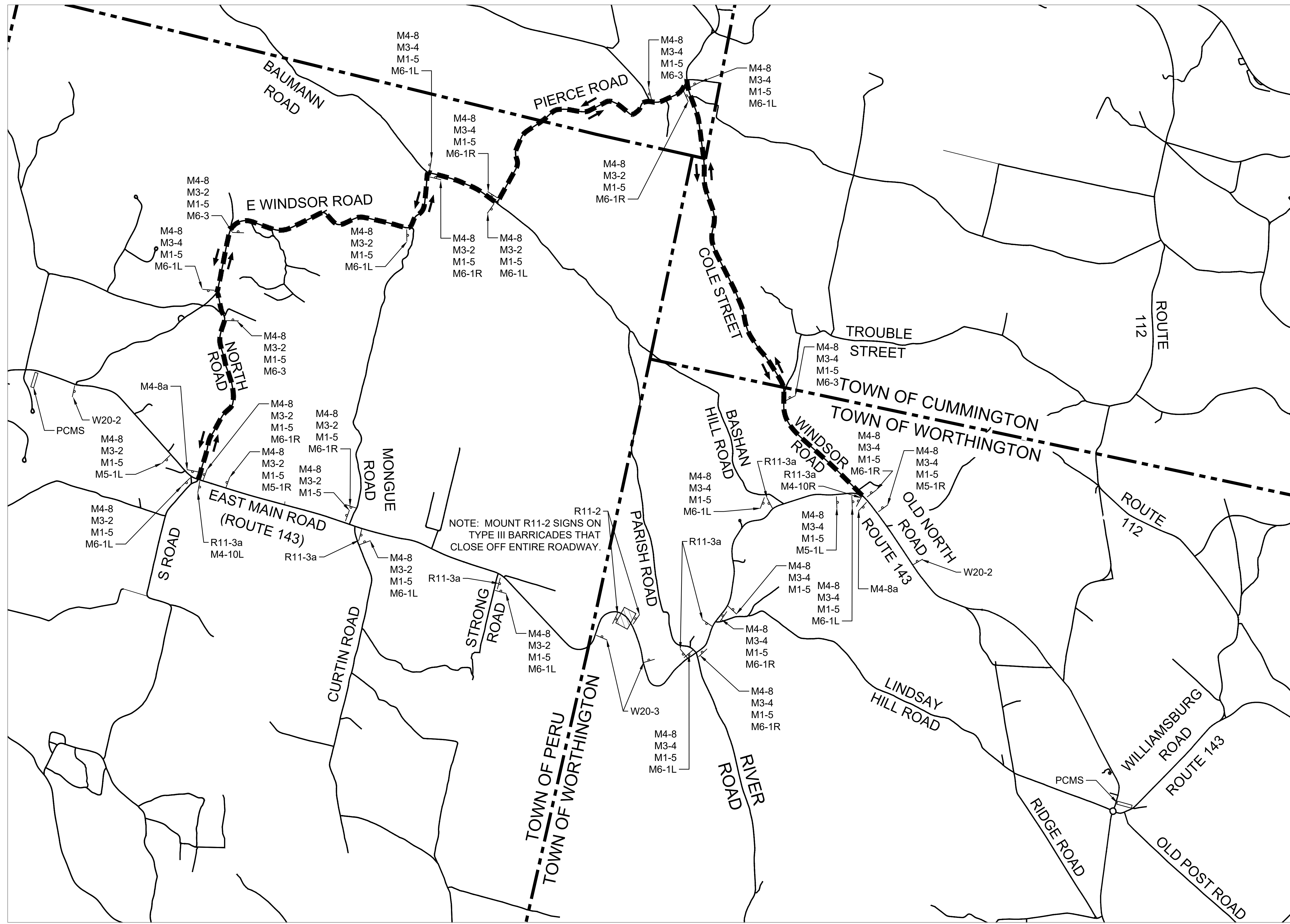
TEMPORARY TRAFFIC CONTROL PLANS - 6



**ROUTE 143
DETOUR
AHEAD**

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

- NOTE:
1. PORTABLE CHANGEABLE MESSAGE (PCMS) SIGNS SHALL BE PLACED PRIOR TO WORK WHICH MAY REQUIRE LANE CLOSURES OR RESTRICTIONS.



NOTE: MOUNT R11-2 SIGNS ON TYPE III BARRICADES THAT CLOSE OFF ENTIRE ROADWAY.

NOTE: SEE SHEET 71 FOR SIGN SUMMARY TABLE

LEGEND

- DETOUR ROUTE
- WORK ZONE
- DETOUR SIGN

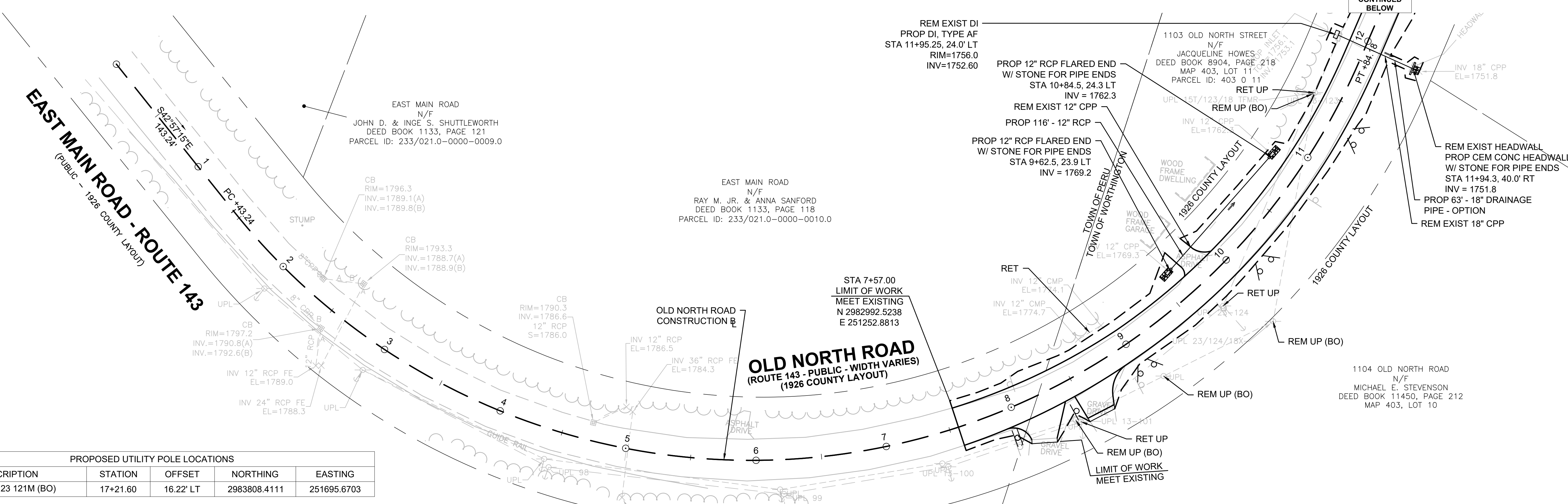
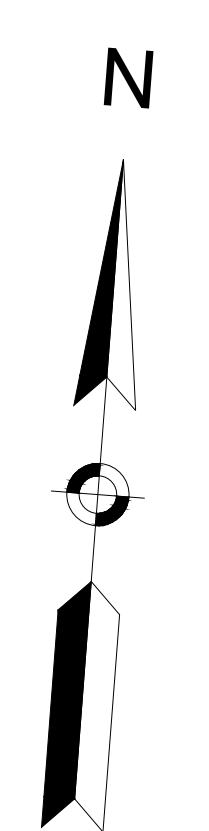
DETOUR PLAN

1"=1500'

**WORTHINGTON
ROUTE 143**

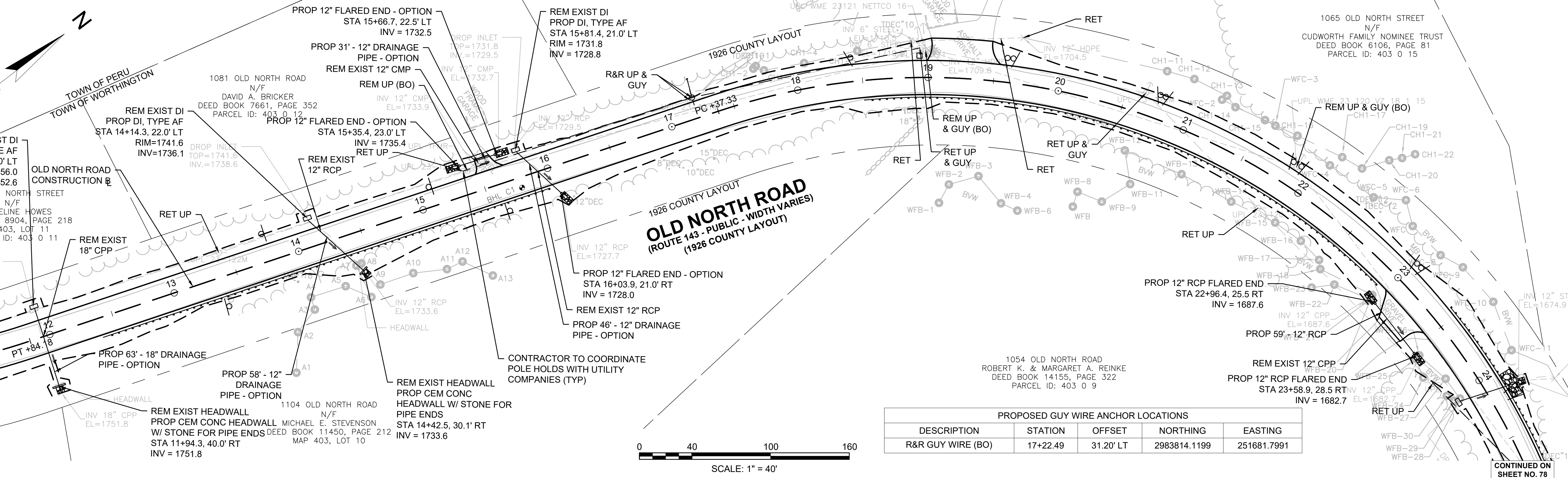
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	77	191
PROJECT FILE NO.		609287	

UTILITY PLAN - 1



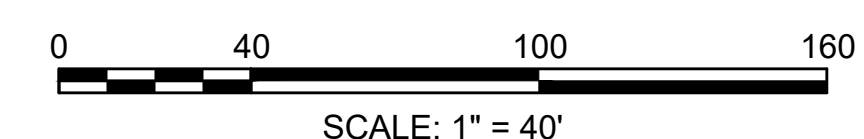
PROPOSED UTILITY POLE LOCATIONS

DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R UPL 23 121M (BO)	17+21.60	16.22' LT	2983808.4111	251695.6703



PROPOSED GUY WIRE ANCHOR LOCATIONS

DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R GUY WIRE (BO)	17+22.49	31.20' LT	2983814.1199	251681.7991



CONTINUED ON SHEET NO. 78

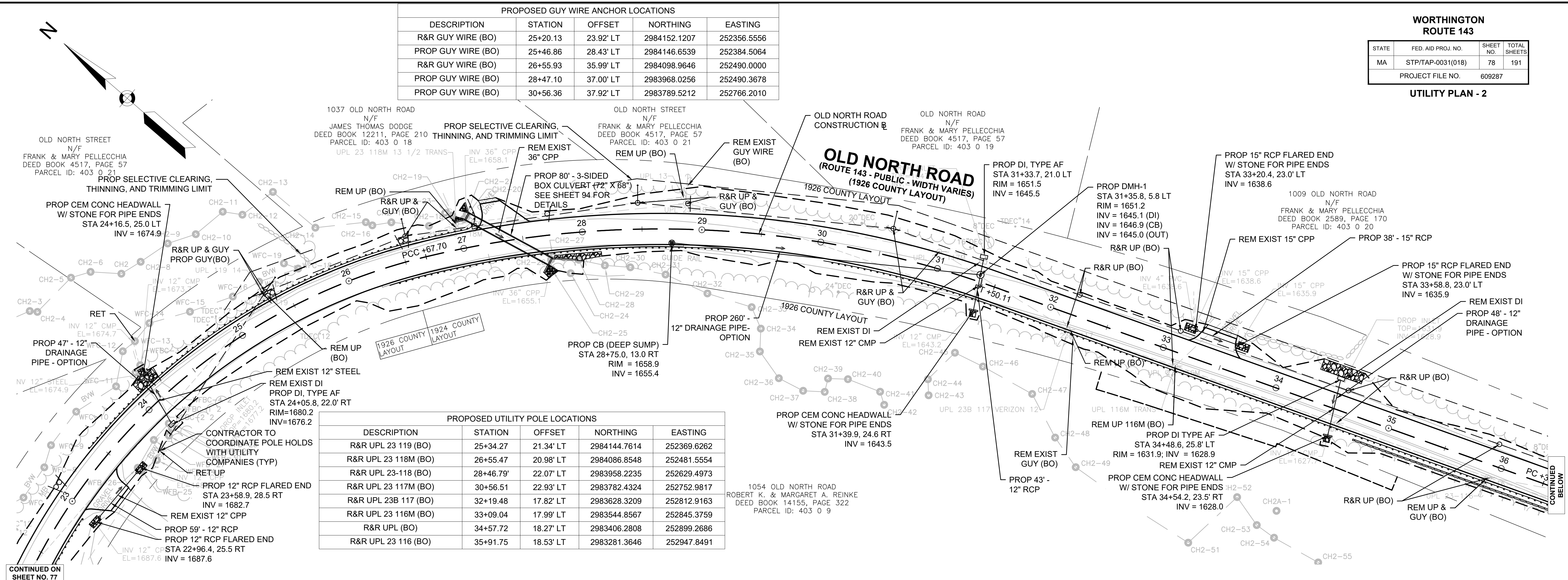
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	78	191
PROJECT FILE NO. 609287			

UTILITY PLAN - 2

PROPOSED GUY WIRE ANCHOR LOCATIONS

DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R GUY WIRE (BO)	25+20.13	23.92' LT	2984152.1207	252356.5556
PROP GUY WIRE (BO)	25+46.86	28.43' LT	2984146.6539	252384.5064
R&R GUY WIRE (BO)	26+55.93	35.99' LT	2984098.9646	252490.0000
PROP GUY WIRE (BO)	28+47.10	37.00' LT	2983968.0256	252490.3678
PROP GUY WIRE (BO)	30+56.36	37.92' LT	2983789.5212	252766.2010

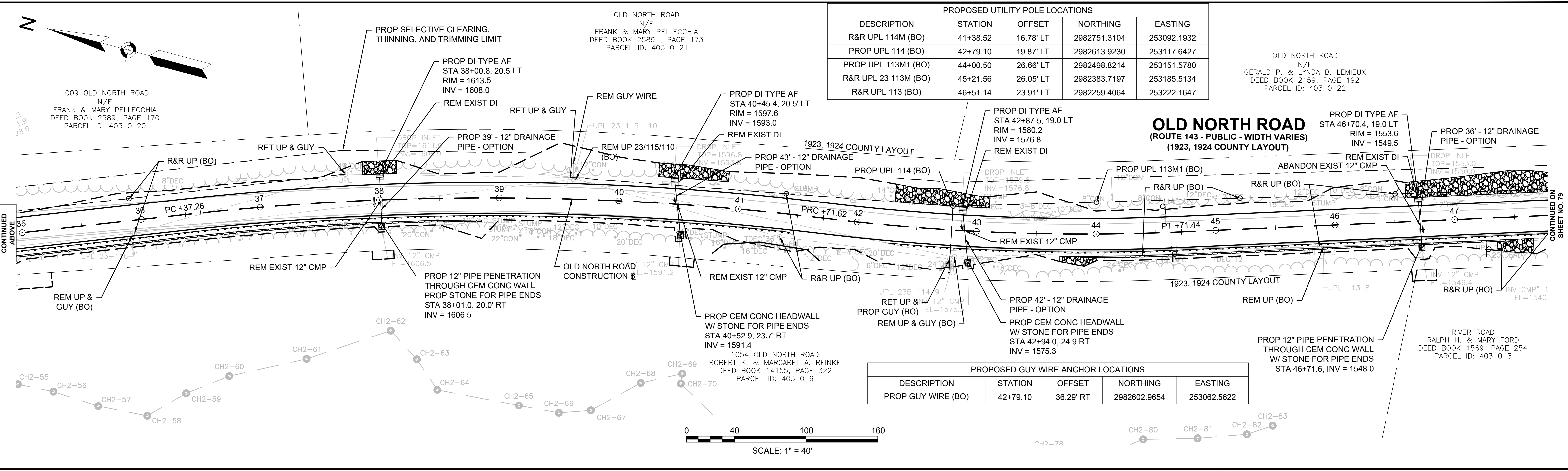


PROPOSED UTILITY POLE LOCATIONS

DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R UPL 23 119 (BO)	25+34.27	21.34' LT	2984144.7614	252369.6262
R&R UPL 23 118M (BO)	26+55.47	20.98' LT	2984086.8548	252481.5554
R&R UPL 23-118 (BO)	28+46.79'	22.07' LT	2983958.2235	252629.4973
R&R UPL 23 117M (BO)	30+56.51	22.93' LT	2983782.4324	252752.9817
R&R UPL 23B 117 (BO)	32+19.48	17.82' LT	2983628.3209	252812.9163
R&R UPL 23 116M (BO)	33+09.04	17.99' LT	2983544.8567	252845.3759
R&R UPL (BO)	34+57.72	18.27' LT	2983406.2808	252899.2686
R&R UPL 23 116 (BO)	35+91.75	18.53' LT	2983281.3646	252947.8491

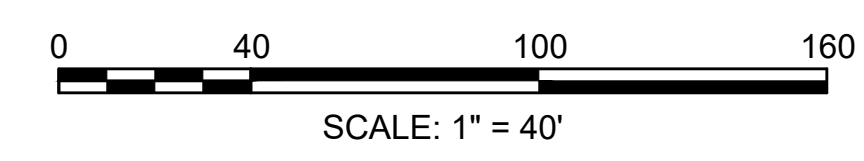
PROPOSED UTILITY POLE LOCATIONS

DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R UPL 114M (BO)	41+38.52	16.78' LT	2982751.3104	253092.1932
PROP UPL 114 (BO)	42+79.10	19.87' LT	2982613.9230	253117.6427
PROP UPL 113M1 (BO)	44+00.50	26.66' LT	2982498.8214	253151.5780
R&R UPL 23 113M (BO)	45+21.56	26.05' LT	2982383.7197	253185.5134
R&R UPL 113 (BO)	46+51.14	23.91' LT	2982259.4064	253222.1647



PROPOSED GUY WIRE ANCHOR LOCATIONS

DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
PROP GUY WIRE (BO)	42+79.10	36.29' RT	2982602.9654	253062.5622



CONTINUED ON SHEET NO. 77

CONTINUED BELOW

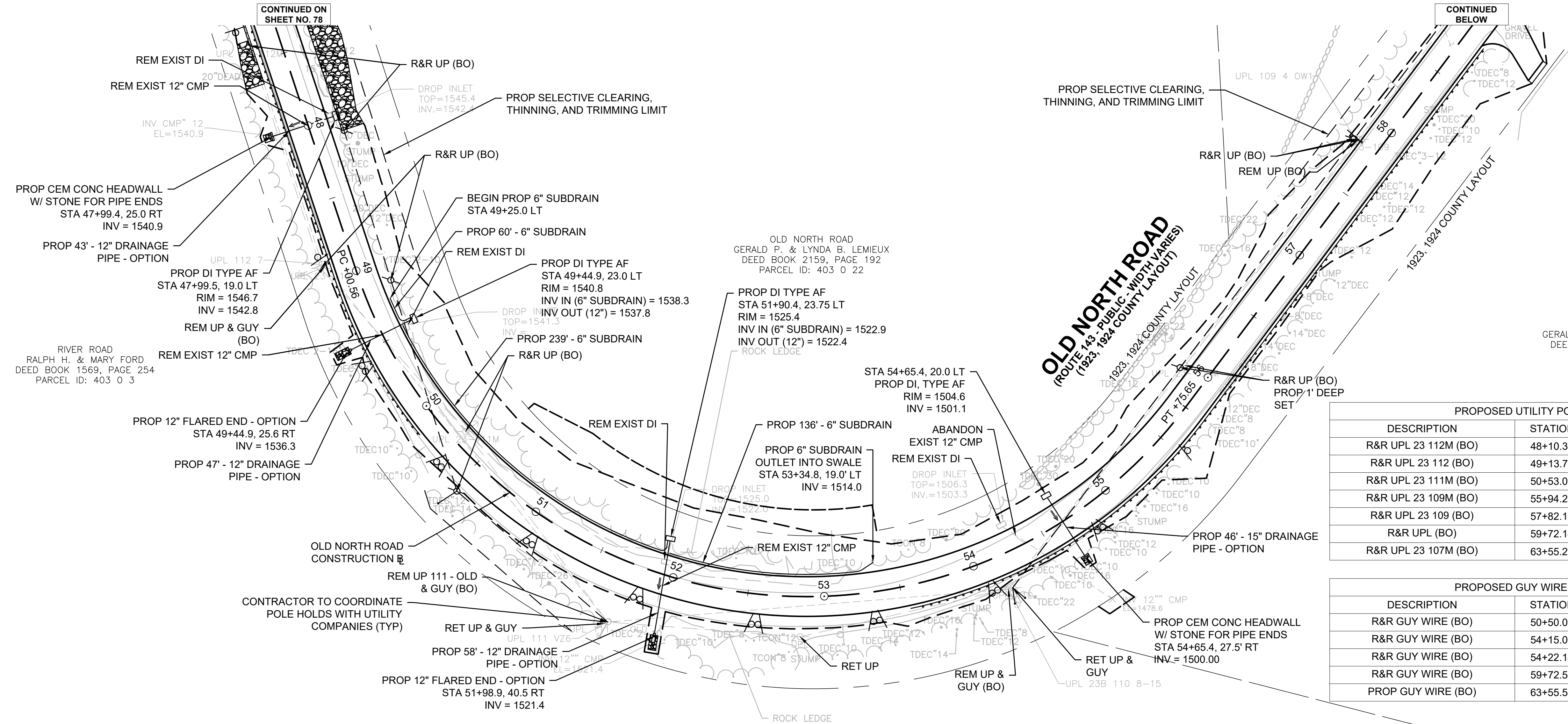
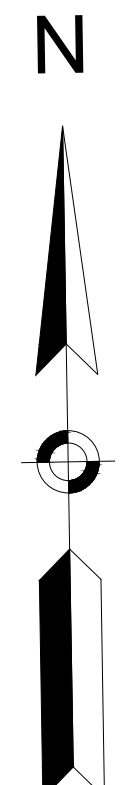
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CONTINUED ON SHEET NO. 79

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	79	191
PROJECT FILE NO.		609287	

UTILITY PLAN - 3

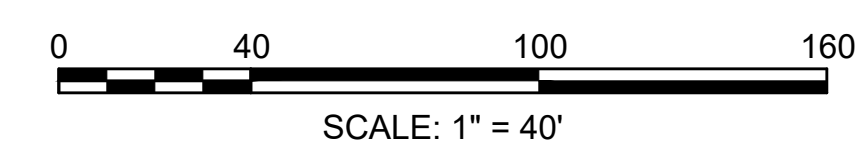
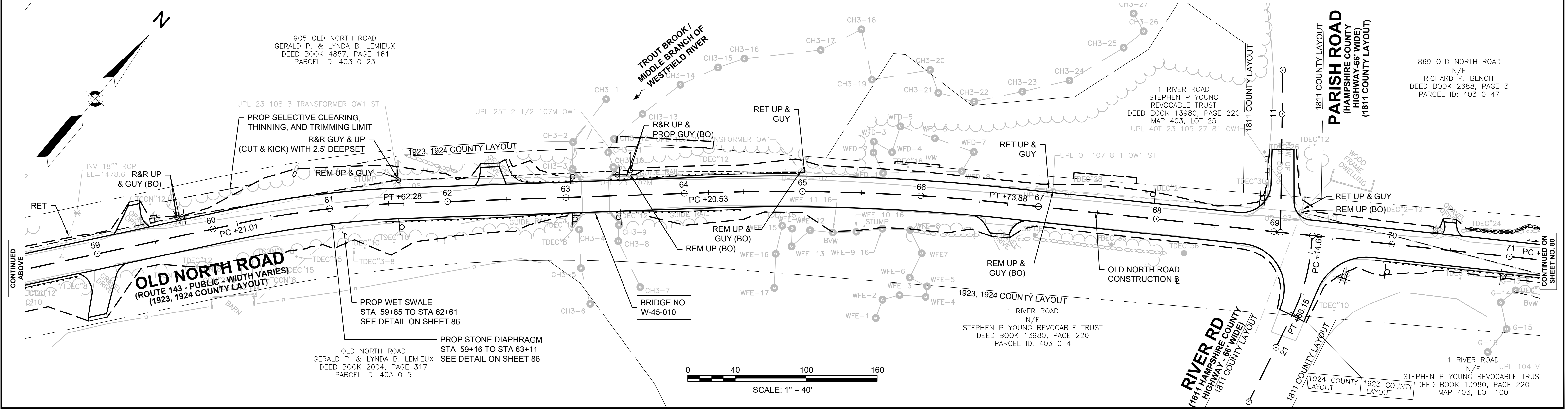


PROPOSED UTILITY POLE & PUSH BRACE LOCATIONS

DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R UPL 23 112M (BO)	48+10.35	21.28' LT	2982106.6745	253267.1946
R&R UPL 23 112 (BO)	49+13.76	19.32' LT	2982008.2631	253296.2092
R&R UPL 23 111M (BO)	50+53.09	22.21' RT	2981869.5830	253337.0962
R&R UPL 23 109M (BO)	55+94.28	18.41' LT	2981942.5634	253811.3464
R&R UPL 23 109 (BO)	57+82.16	17.24' LT	2982090.1967	253927.5658
R&R UPL (BO)	59+72.14	16.05' LT	2982239.4739	254045.0793
R&R UPL 23 107M (BO)	63+55.29	21.00' LT	2982516.3582	254313.1129

PROPOSED GUY WIRE & IN LINE ANCHOR LOCATIONS

DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R GUY WIRE (BO)	50+50.00	36.82' RT	2981861.5778	253324.4109
R&R GUY WIRE (BO)	54+15.06	33.20' RT	2981789.6294	253700.7688
R&R GUY WIRE (BO)	54+22.14	32.52' RT	2981792.3646	253707.7341
R&R GUY WIRE (BO)	59+72.52	31.05' LT	2982248.9708	254033.4686
PROP GUY WIRE (BO)	63+55.58	36.00' LT	2982527.6956	254303.2839



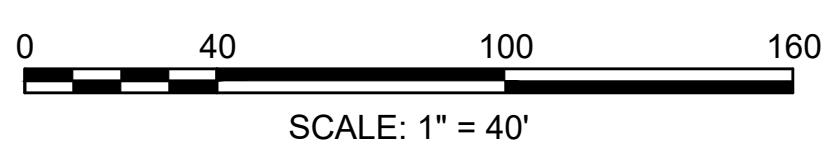
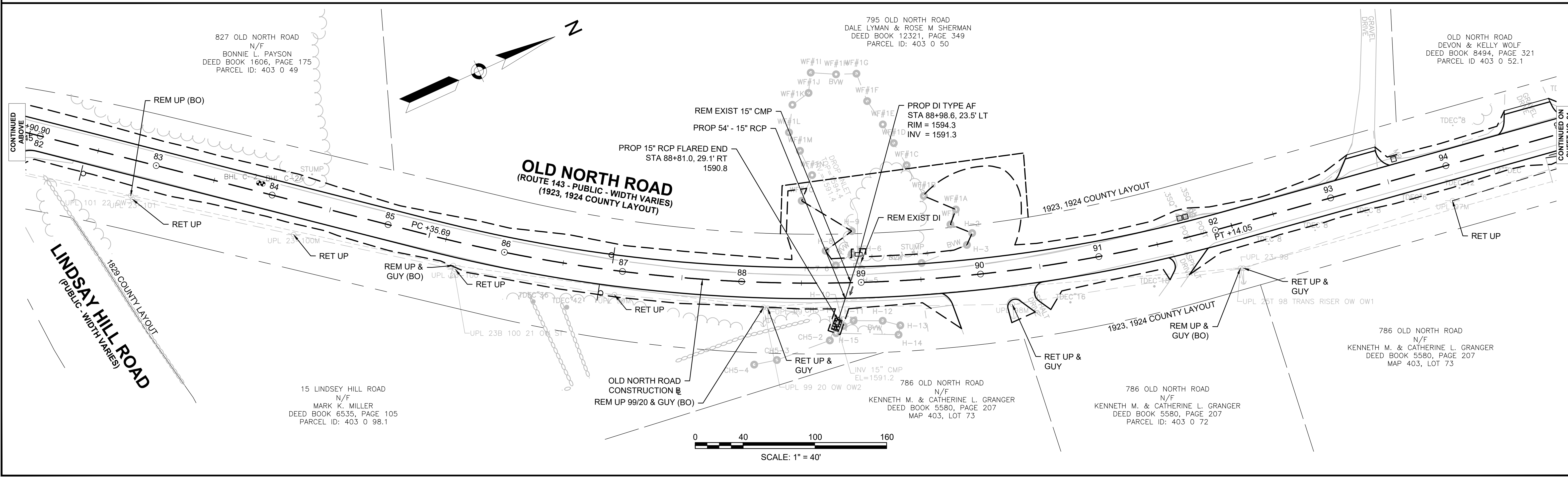
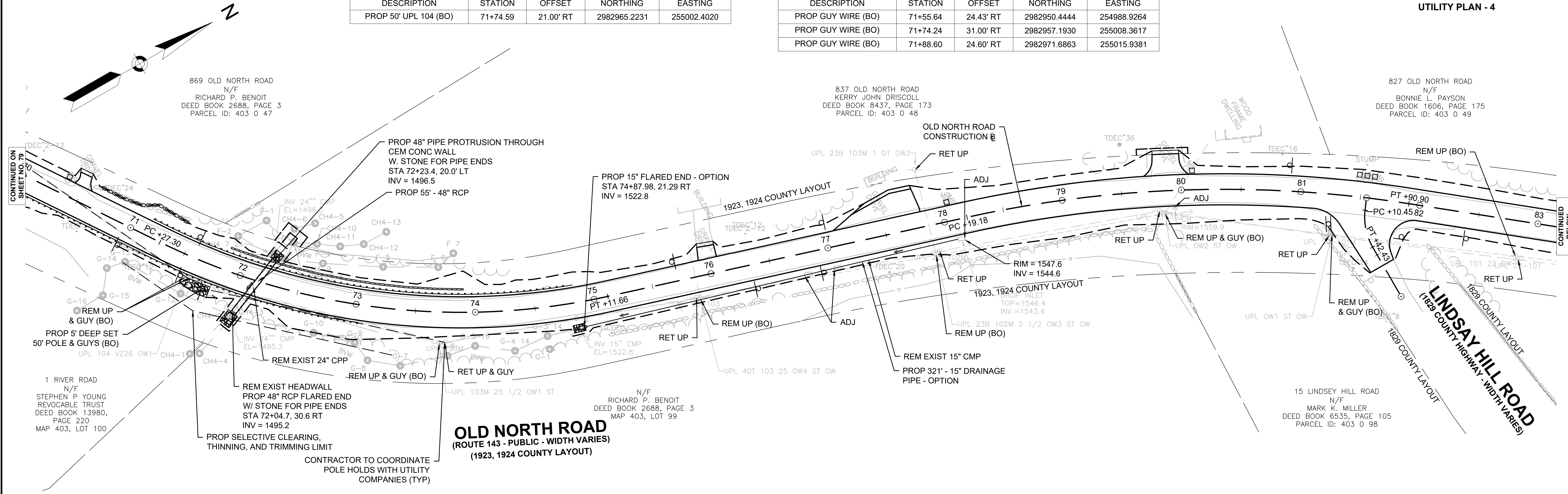
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	80	191
PROJECT FILE NO.		609287	

UTILITY PLAN - 4

PROPOSED UTILITY POLE LOCATIONS				
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
PROP 50' UPL 104 (BO)	71+74.59	21.00' RT	2982965.2231	255002.4020

PROPOSED GUY WIRE ANCHOR LOCATIONS				
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
PROP GUY WIRE (BO)	71+55.64	24.43' RT	2982950.4444	254988.9264
PROP GUY WIRE (BO)	71+74.24	31.00' RT	2982957.1930	255008.3617
PROP GUY WIRE (BO)	71+88.60	24.60' RT	2982971.6863	255015.9381



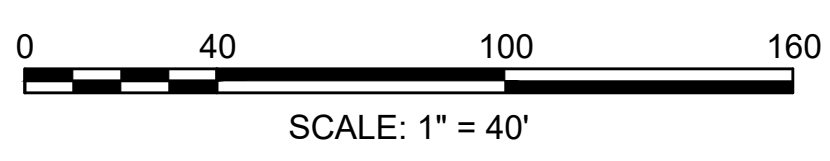
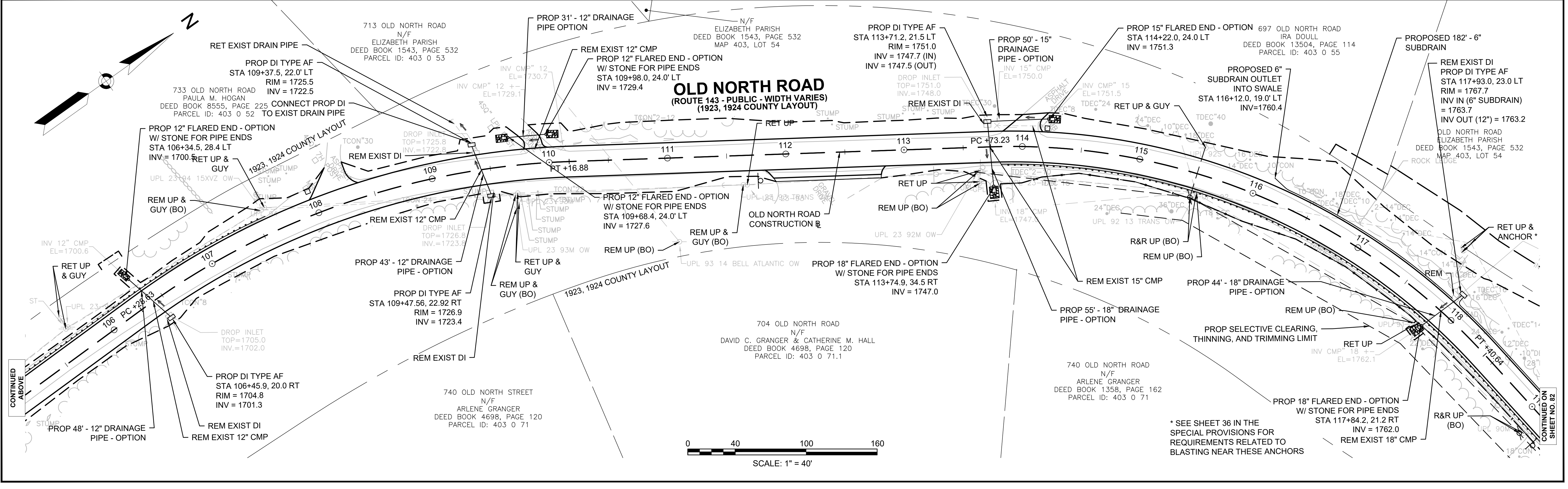
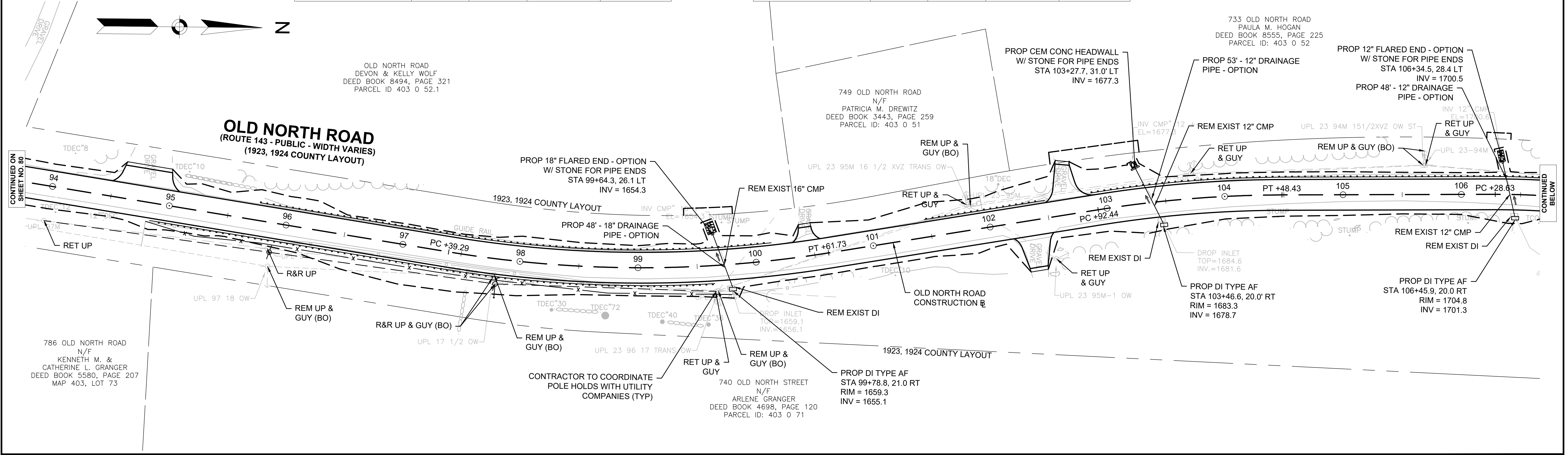
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	81	191
PROJECT FILE NO.		609287	

UTILITY PLAN - 5

PROPOSED UTILITY POLE LOCATIONS				
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R UPL 97 (BO)	95+89.60	25.02' RT	2985125.7791	256010.2836
R&R UPL 96M (BO)	97+81.51	21.22' RT	2985317.0219	256035.1335
R&R UPL 92 (BO)	115+49.86	21.00' RT	2986937.8710	256387.7197
R&R UPL 90M (BO)	119+09.16	23.06' RT	2987049.0555	256711.3601

PROPOSED GUY WIRE ANCHOR LOCATIONS				
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R GUY WIRE (BO)	97+81.83	33.22' RT	2985316.0193	256047.0915



* SEE SHEET 36 IN THE SPECIAL PROVISIONS FOR REQUIREMENTS RELATED TO BLASTING NEAR THESE ANCHORS

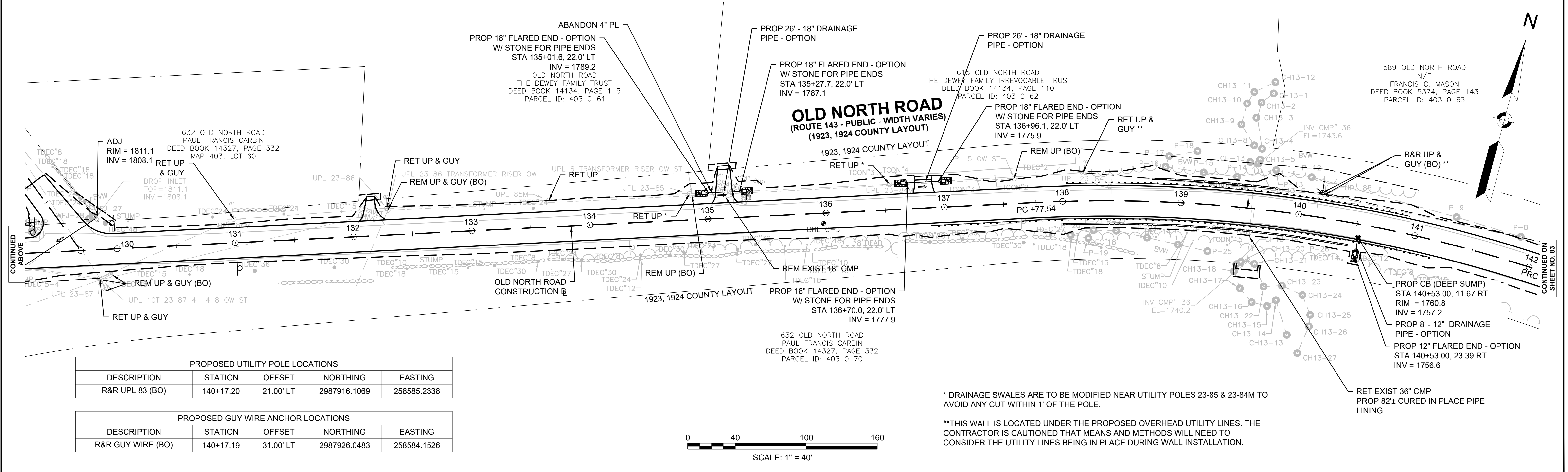
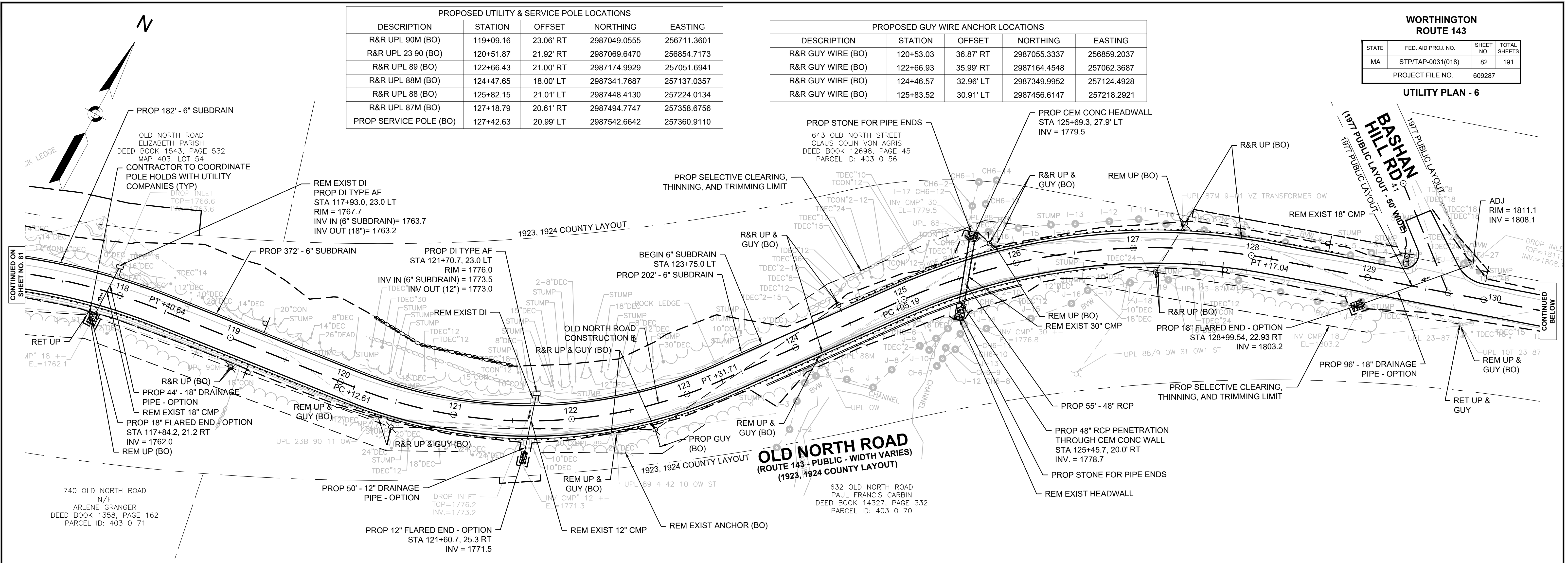
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	82	191
PROJECT FILE NO.		609287	

UTILITY PLAN - 6

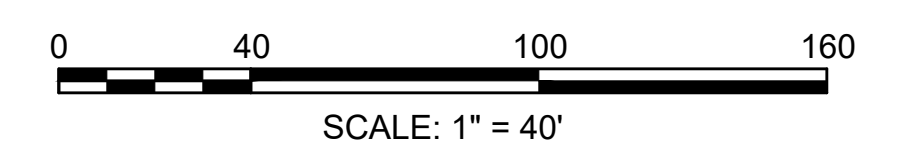
PROPOSED UTILITY & SERVICE POLE LOCATIONS				
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R UPL 90M (BO)	119+09.16	23.06' RT	2987049.0555	256711.3601
R&R UPL 23 90 (BO)	120+51.87	21.92' RT	2987069.6470	256854.7173
R&R UPL 89 (BO)	122+66.43	21.00' RT	2987174.9929	257051.6941
R&R UPL 88M (BO)	124+47.65	18.00' LT	2987341.7687	257137.0357
R&R UPL 88 (BO)	125+82.15	21.01' LT	2987448.4130	257224.0134
R&R UPL 87M (BO)	127+18.79	20.61' RT	2987494.7747	257358.6756
PROP SERVICE POLE (BO)	127+42.63	20.99' LT	2987542.6642	257360.9110

PROPOSED GUY WIRE ANCHOR LOCATIONS				
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R GUY WIRE (BO)	120+53.03	36.87' RT	2987055.3337	256859.2037
R&R GUY WIRE (BO)	122+66.93	35.99' RT	2987164.4548	257062.3687
R&R GUY WIRE (BO)	124+46.57	32.96' LT	2987349.9952	257124.4928
R&R GUY WIRE (BO)	125+83.52	30.91' LT	2987456.6147	257218.2921



PROPOSED UTILITY POLE LOCATIONS				
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R UPL 83 (BO)	140+17.20	21.00' LT	2987916.1069	258585.2338

PROPOSED GUY WIRE ANCHOR LOCATIONS				
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R GUY WIRE (BO)	140+17.19	31.00' LT	2987926.0483	258584.1526



* DRAINAGE SWALES ARE TO BE MODIFIED NEAR UTILITY POLES 23-85 & 23-84M TO AVOID ANY CUT WITHIN 1' OF THE POLE.

**THIS WALL IS LOCATED UNDER THE PROPOSED OVERHEAD UTILITY LINES. THE CONTRACTOR IS CAUTIONED THAT MEANS AND METHODS WILL NEED TO CONSIDER THE UTILITY LINES BEING IN PLACE DURING WALL INSTALLATION.

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	84	191
PROJECT FILE NO.		609287	

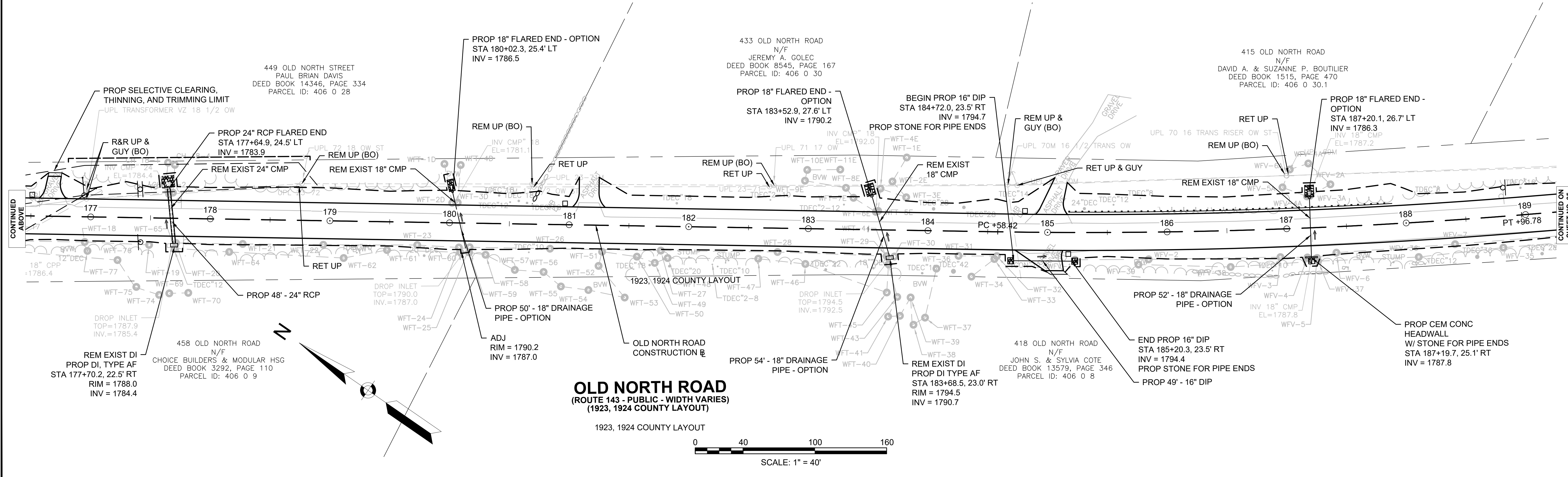
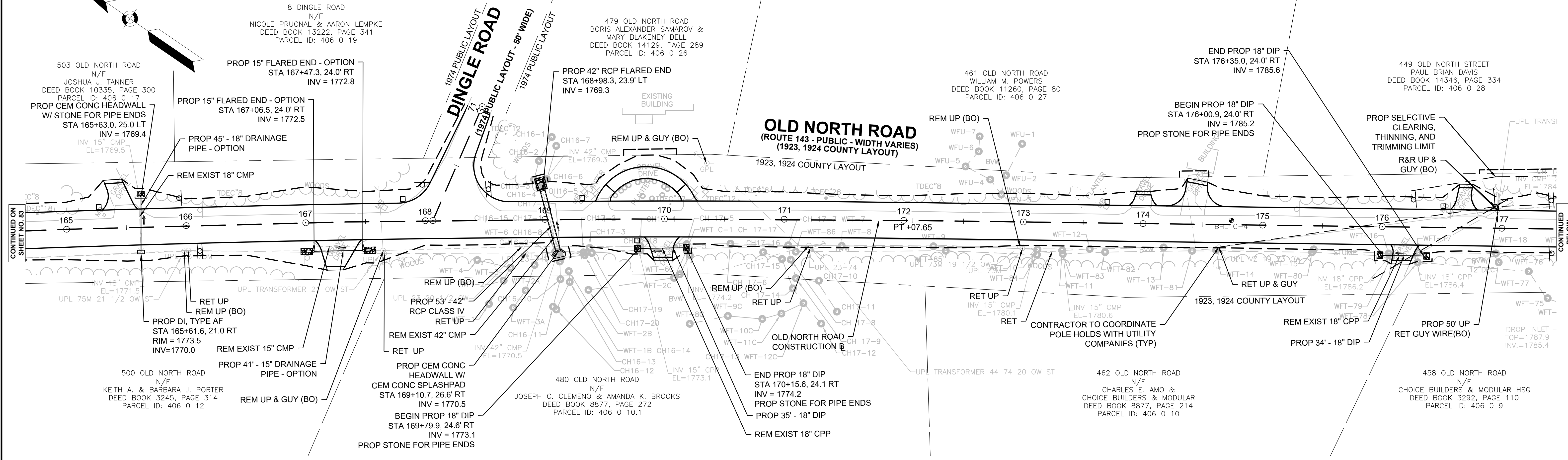
UTILITY PLAN - 8

PROPOSED UTILITY POLE LOCATIONS

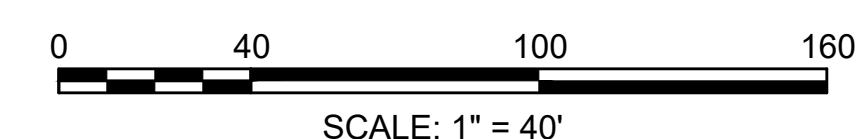
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R UPL TRANSFORMER VZ 18 1/2 OW	176+94.23	18.00' LT	2986150.1800	261404.3540

PROPOSED GUY WIRE ANCHOR LOCATIONS

DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
R&R GUY WIRE (BO)	177+04.49	24.23' LT	2986145.0966	261415.2241

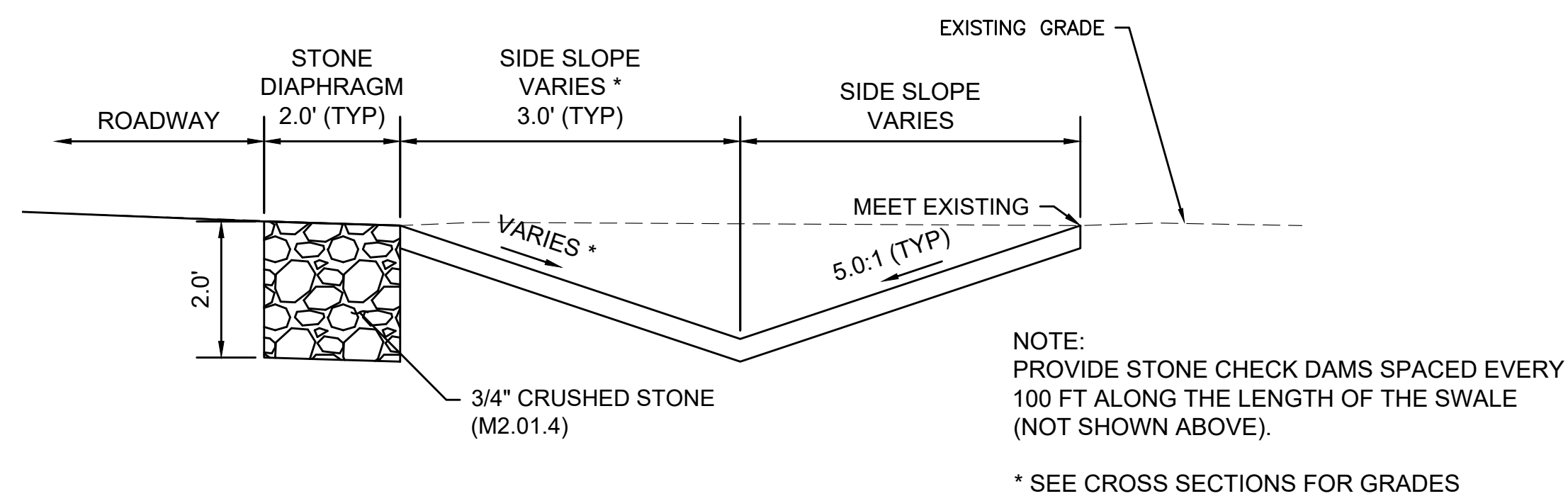


**OLD NORTH ROAD
(ROUTE 143 - PUBLIC - WIDTH VARIES)
(1923, 1924 COUNTY LAYOUT)**

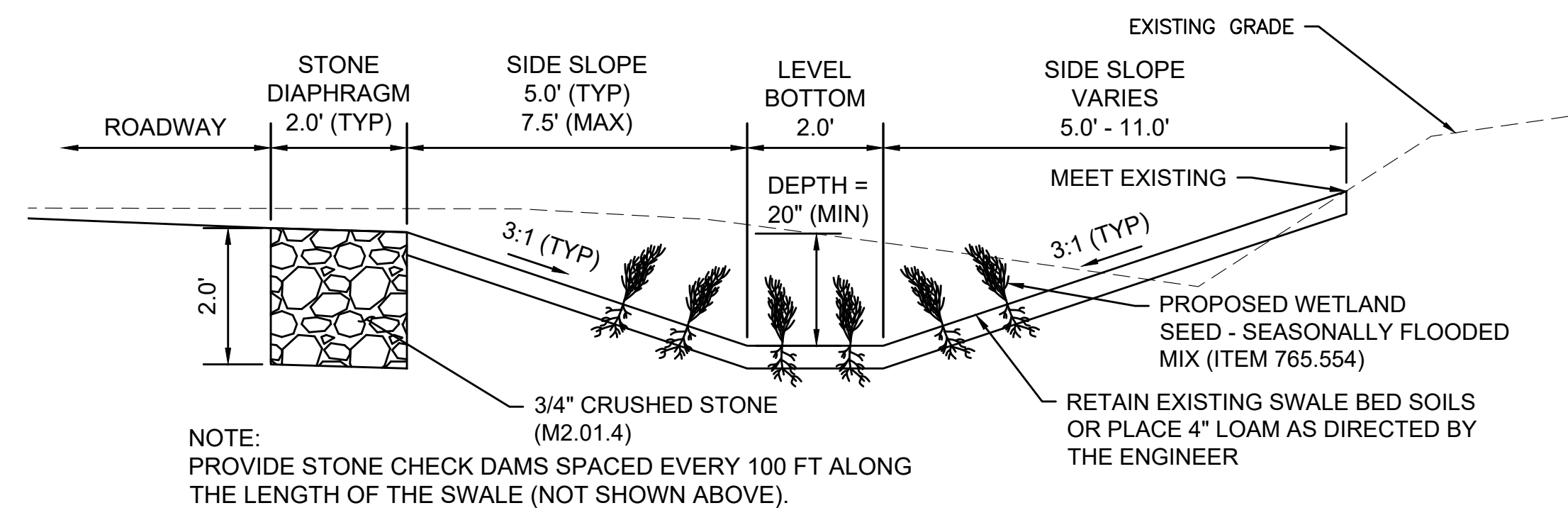


STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	86	191
PROJECT FILE NO.		609287	

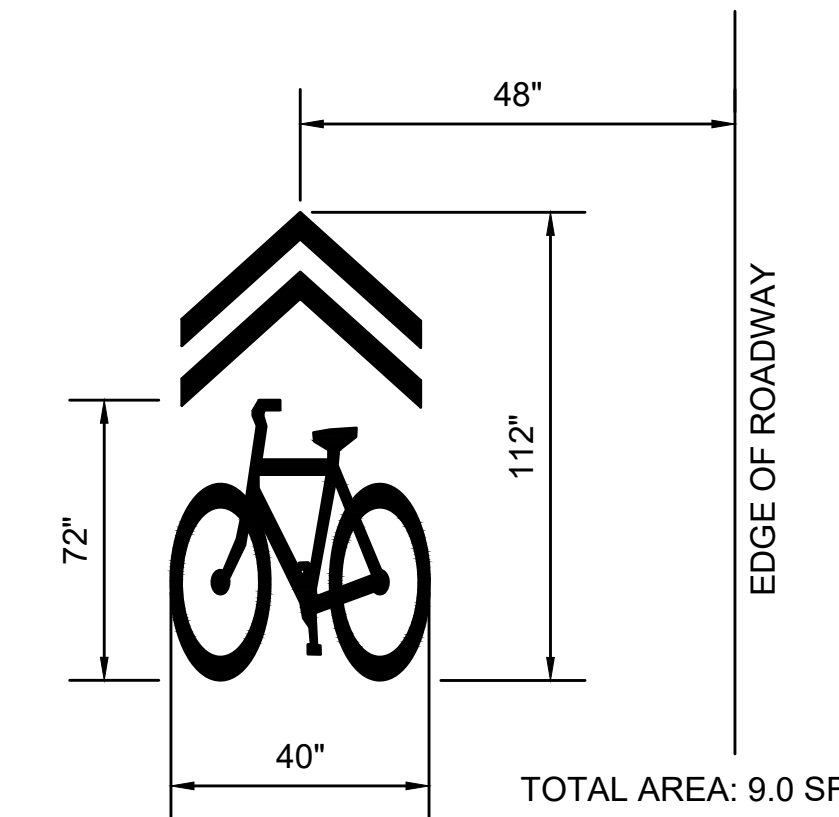
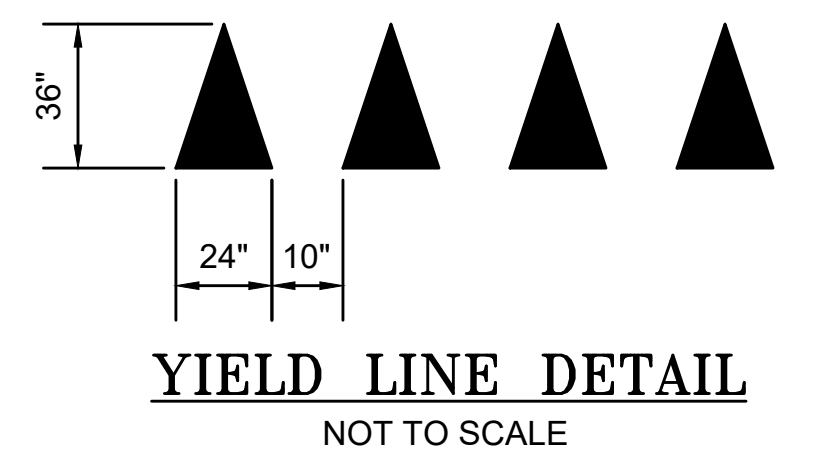
CONSTRUCTION DETAILS - 1



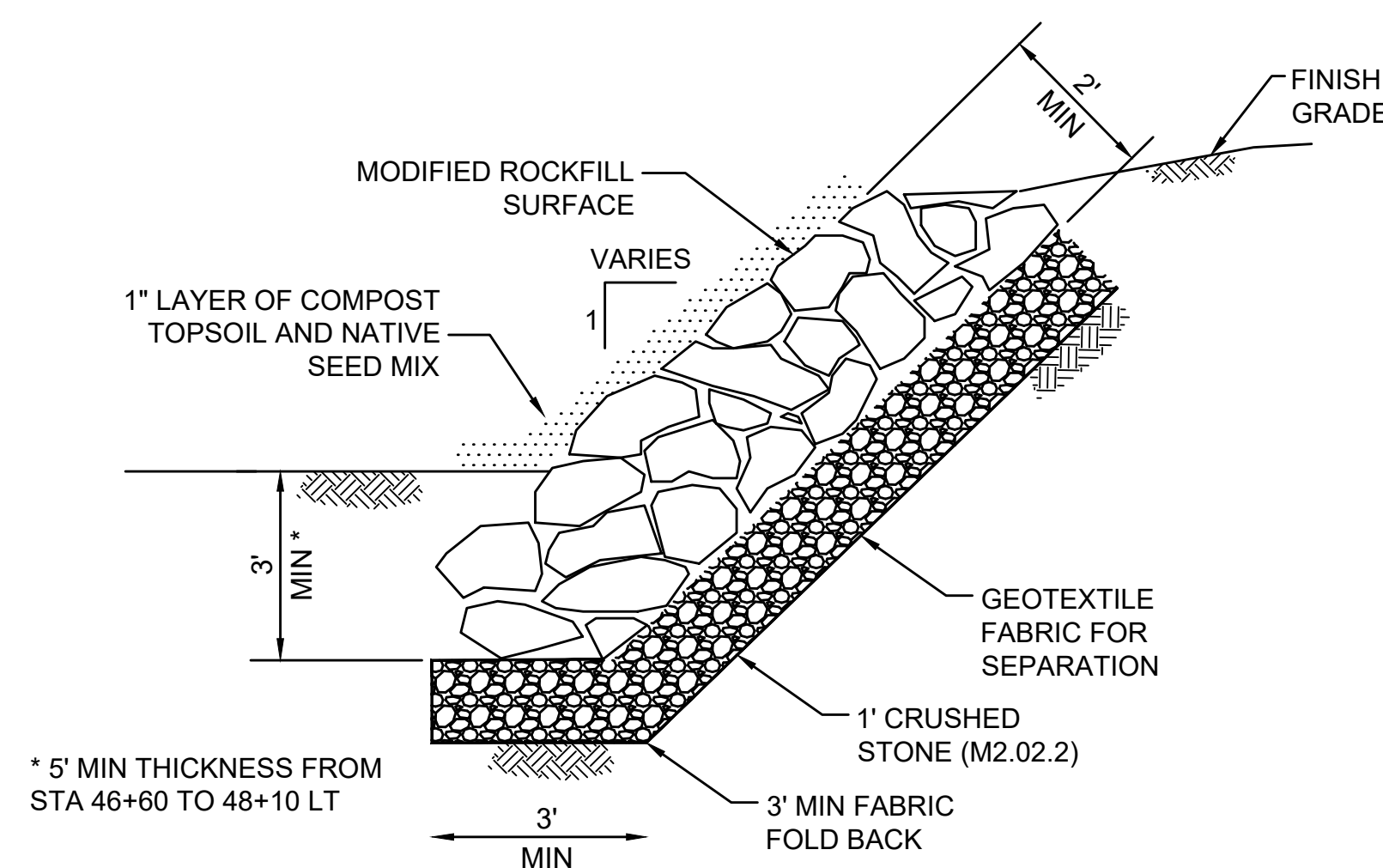
GRASSED CHANNEL WITH STONE DIAPHRAGM DETAIL
EAST WINDSOR ROAD STA 60+55 TO STA 62+10
NOT TO SCALE



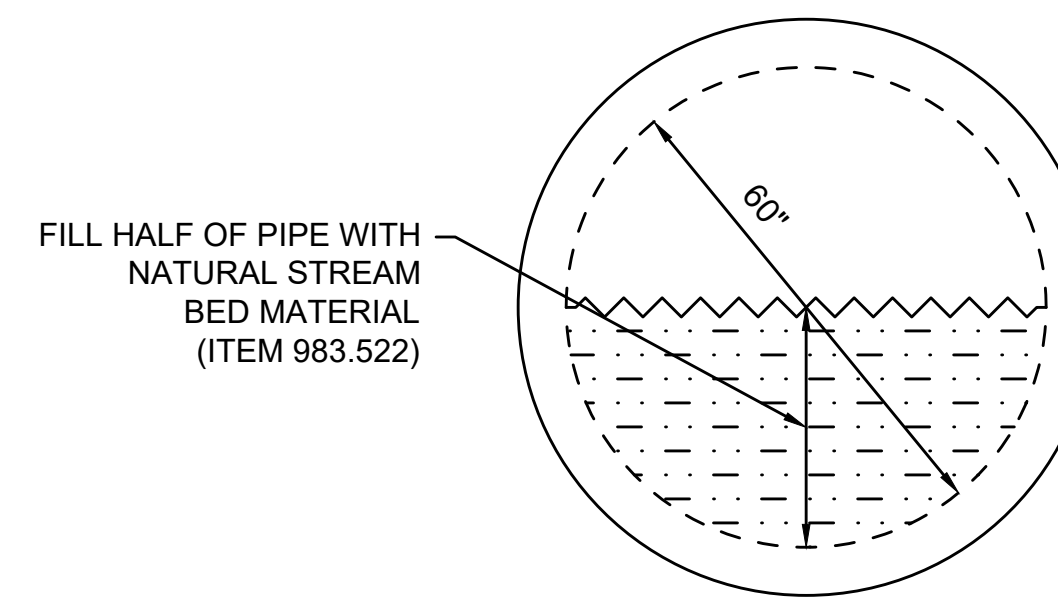
WET SWALE WITH STONE DIAPHRAGM DETAIL
OLD NORTH ROAD STA 59+85 TO STA 62+61
NOT TO SCALE



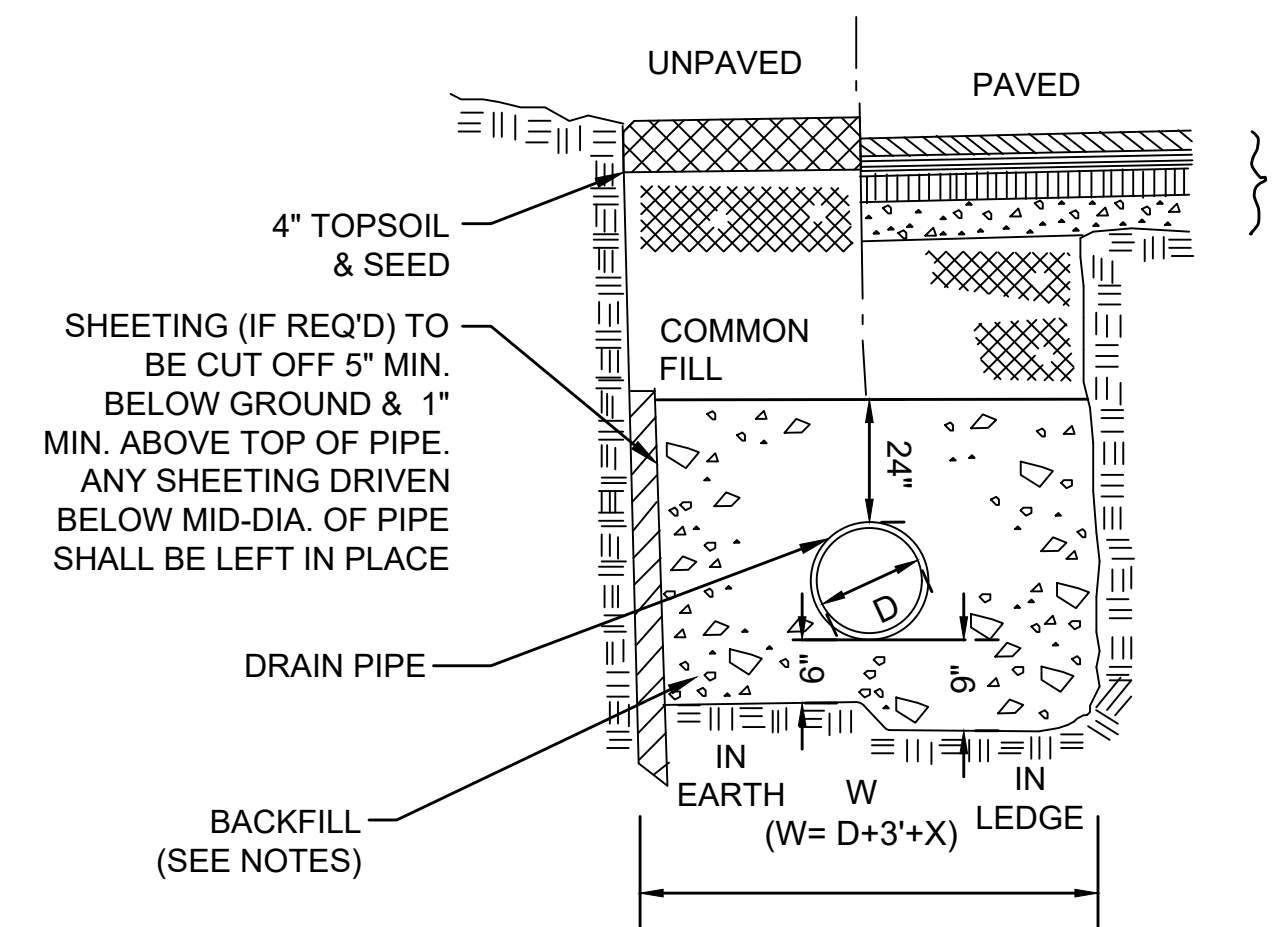
"SHARROW" PAVEMENT MARKING DETAIL
NOT TO SCALE



MODIFIED ROCKFILL SLOPE PROTECTION DETAIL
NOT TO SCALE



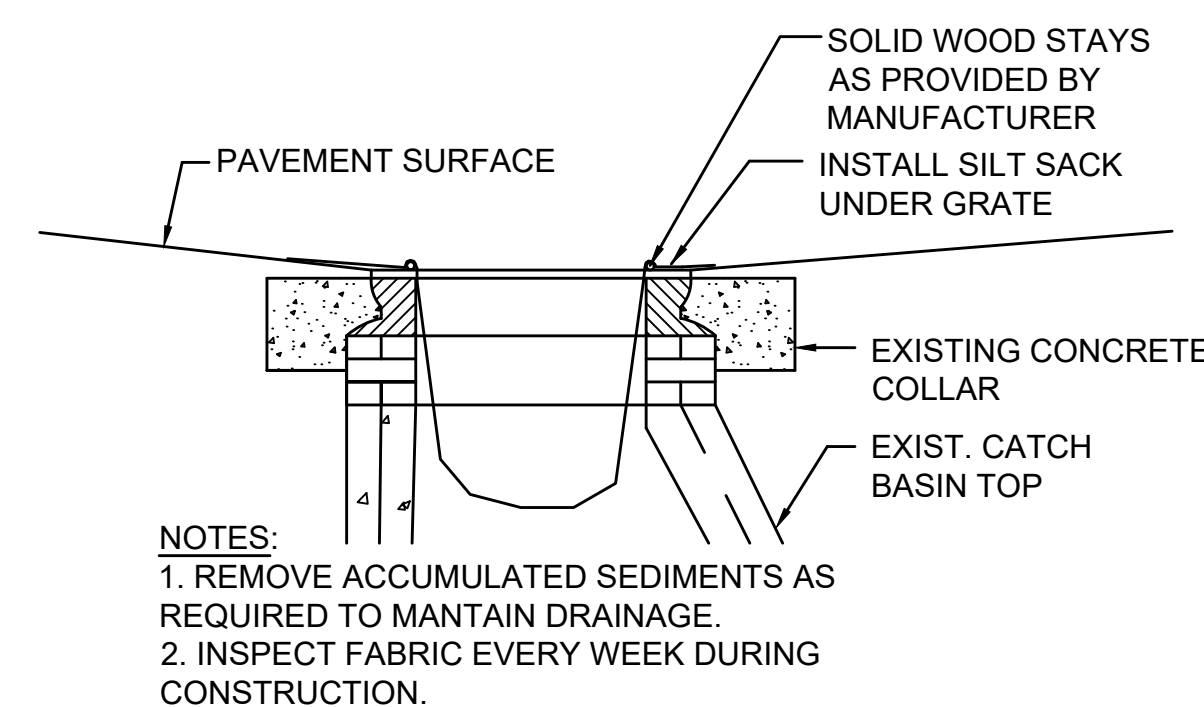
60" BURIED RCP
OLD NORTH ROAD STA 155+60±
NOT TO SCALE



- NOTES:
1. ALL TRENCH CONSTRUCTION TO CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
2. COMPACT FILL AND TAMP PIPE TO 93% MAX. DENSITY UNLESS OTHERWISE SPECIFIED.

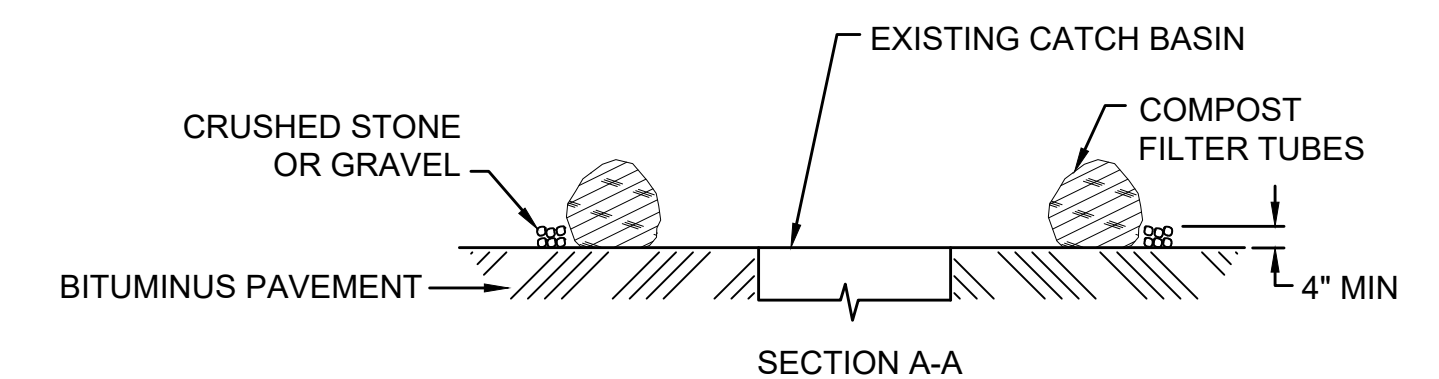
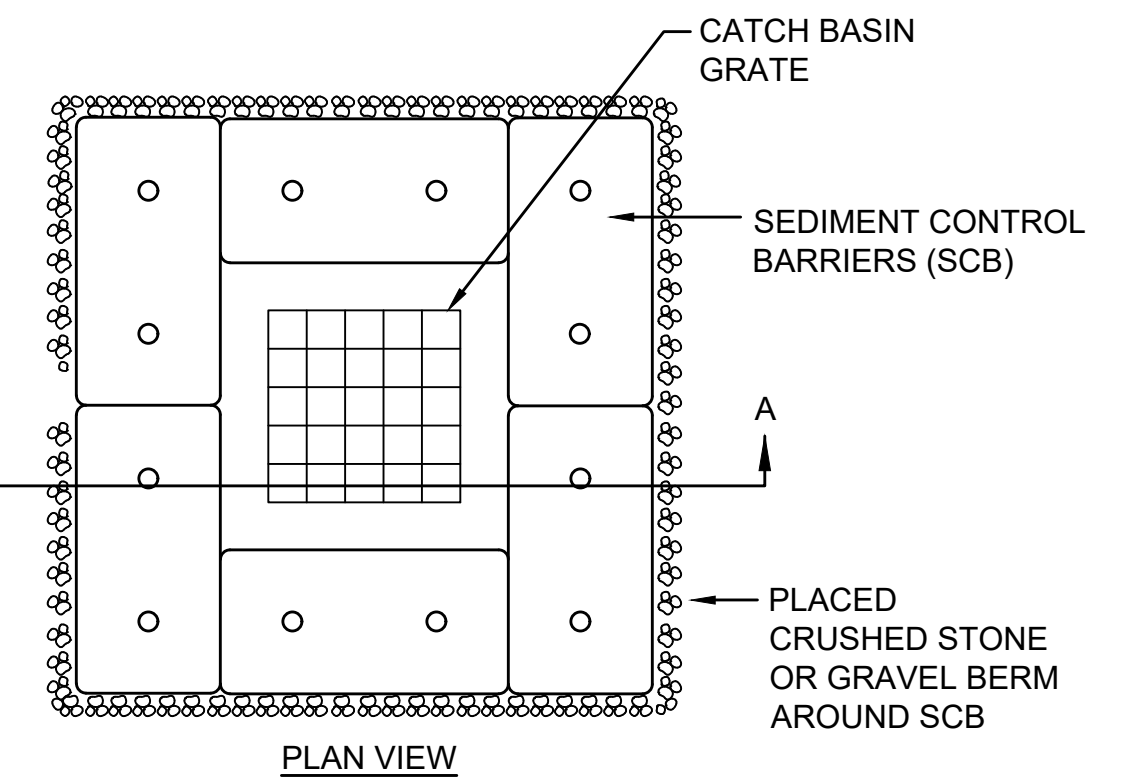
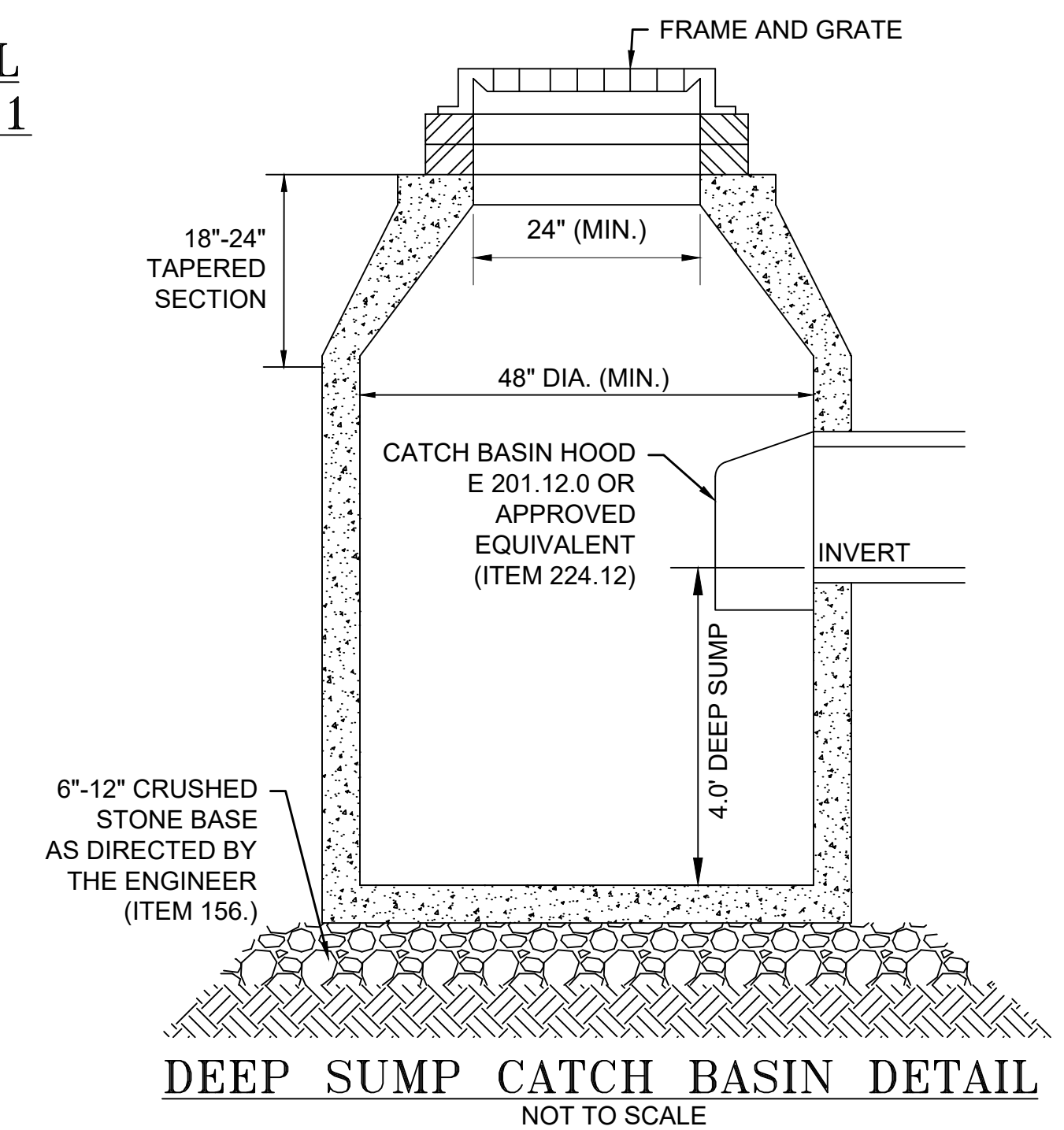
PERMANENT TRENCH PATCH
NOT TO SCALE

- NOTES:
1. COMMON FILL MATERIAL TO CONSIST OF GRANULAR MATERIAL CONTAINING NO STONES LARGER THAN 6" IN GREATEST DIMENSION.
2. MATERIAL USED FOR BACKFILLING TO A POINT 2FT OVER THE PIPE SHALL CONTAIN NO STONES LARGER THAN 3 INCHES IN GREATEST DIMENSIONS, EXCEPT MATERIAL USED TO BACK CORRUGATED PLASTIC PIPE SHALL CONSIST OF GRAVEL BORROW MEETING THE REQUIREMENTS OF M1.03.0: GRAVEL BORROW, TYPE D, TO DEPTH OF 2FT OVER THE TOP OF PIPE.
3. PROVIDE SCREENED GRAVEL BEDDING TO MID PIPE DIAMETER WHERE GROUNDWATER IS ENCOUNTERED AS DIRECTED BY THE ENGINEER.
4. REMOVE UNSUITABLE MATERIAL BELOW GRADE IF ENCOUNTERED, TO SUITABLE DEPTHS AS DIRECTED BY ENGINEER AND REPLACE WITH CLEAN GRANULAR FILL.
5. PAYMENT FOR PERMANENT HMA TRENCH PATCHING SHALL BE PAID FOR UNDER ITEM 451. TEMPORARY HMA FOR PATCHING SHALL BE PAID FOR UNDER ITEM 472.



- NOTES:
1. REMOVE ACCUMULATED SEDIMENTS AS REQUIRED TO MAINTAIN DRAINAGE.
2. INSPECT FABRIC EVERY WEEK DURING CONSTRUCTION.

SILT SACK
NOT TO SCALE



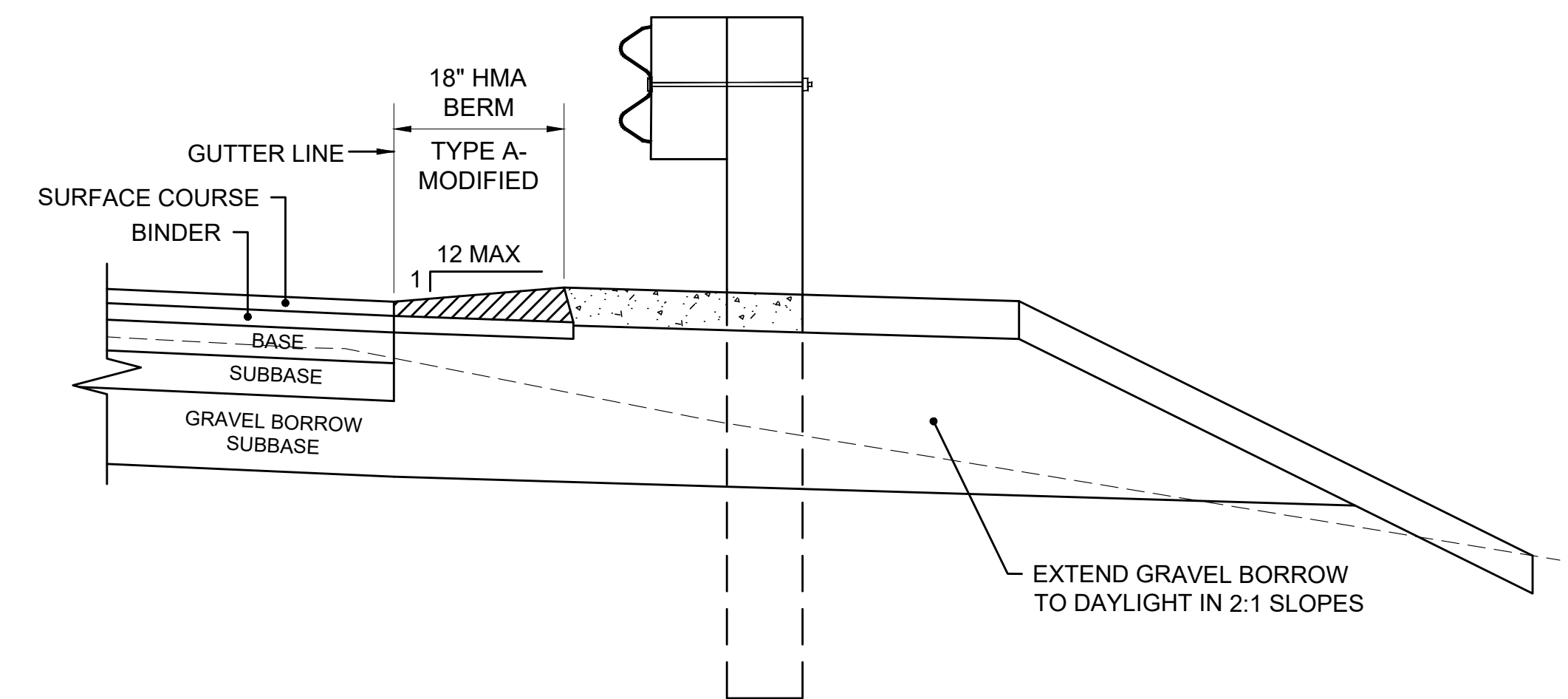
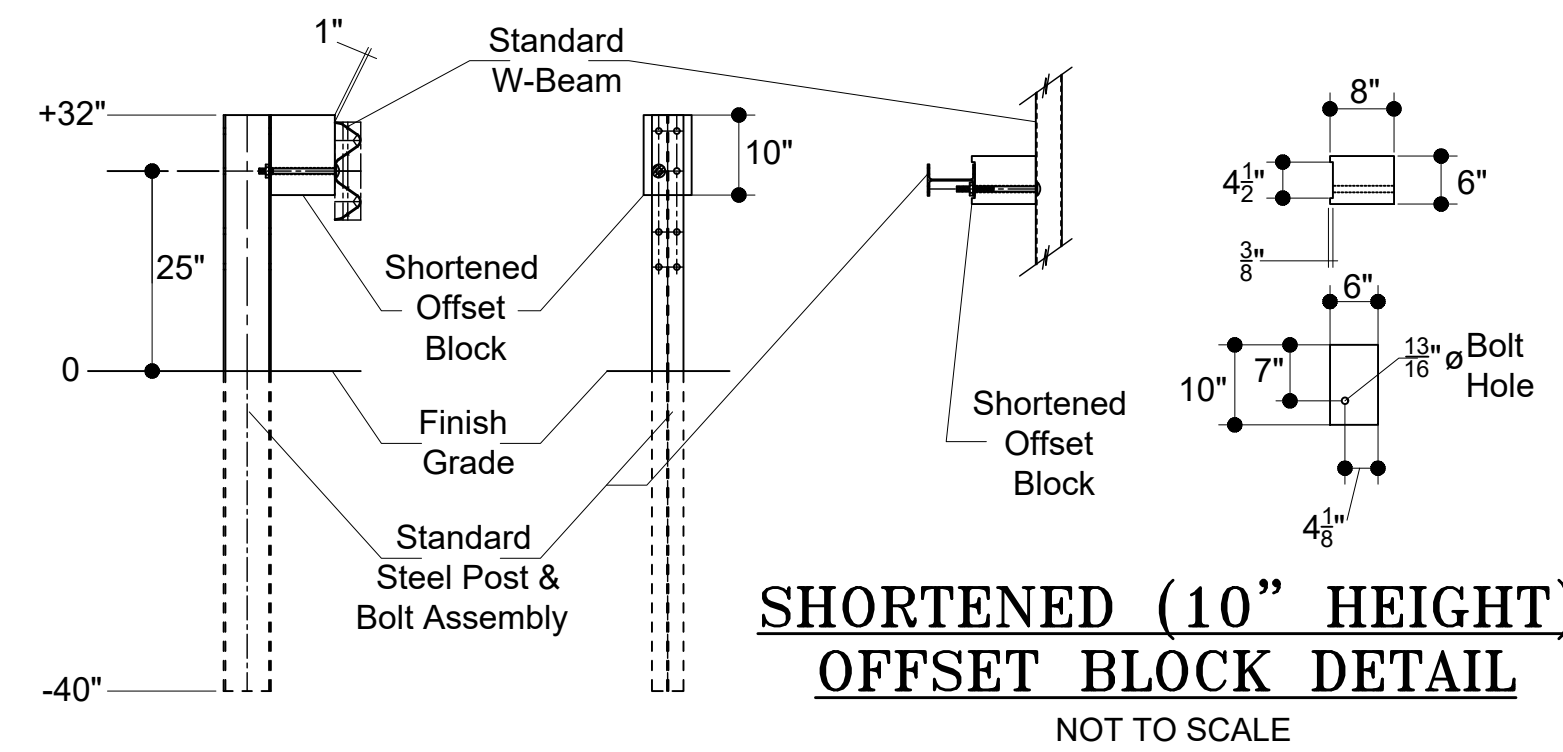
- NOTES:
1. SURROUND STREET DRAINAGE STRUCTURE INLET WITH MULCH FILTER TUBES PRIOR TO CONSTRUCTION AND MAINTAIN UNTIL CONSTRUCTION IS COMPLETED. ACCUMULATED SEDIMENTS SHALL BE REMOVED.
2. 4" MIN GRAVEL BERM AROUND BOTTOM OF MULCH FILTER TUBES.

OFF ROADWAY CATCH BASIN/DROP INLET
EROSION CONTROL MEASURE
NOT TO SCALE

WORTHINGTON
ROUTE 143

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	87	191
PROJECT FILE NO. 609287			

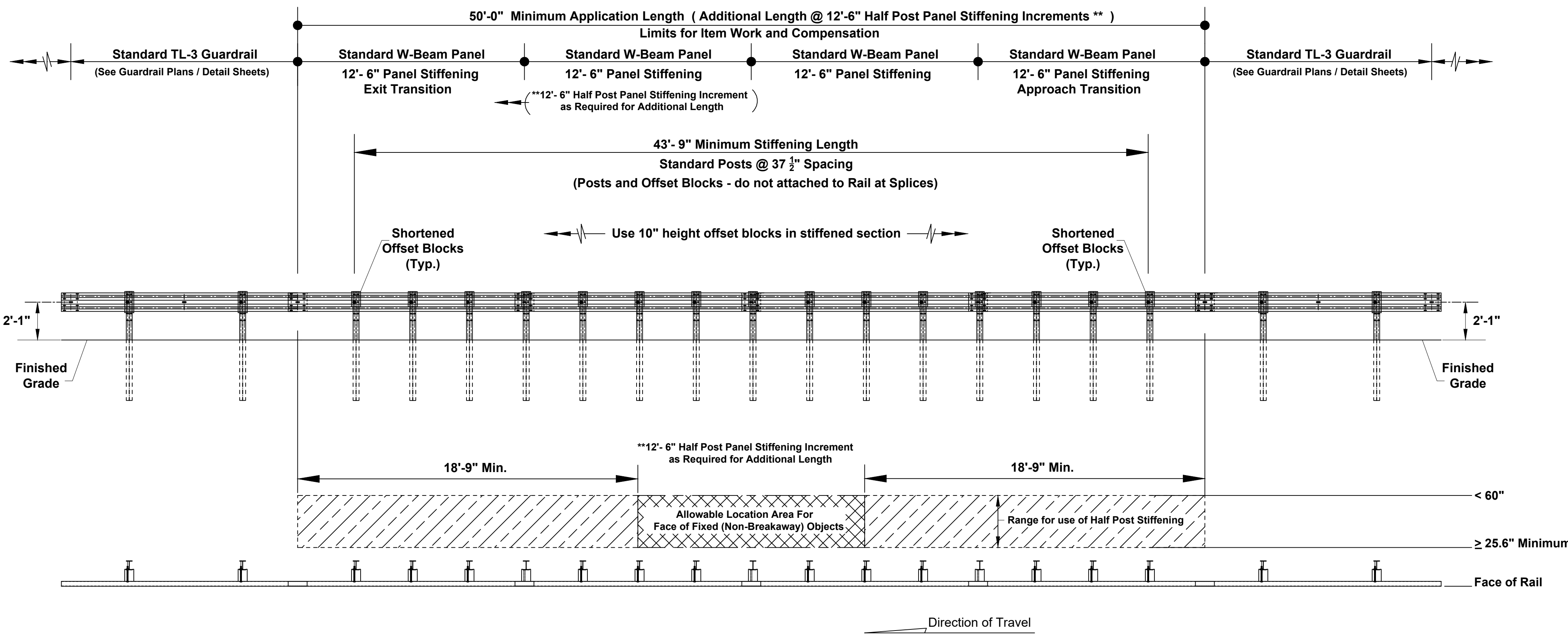
CONSTRUCTION DETAILS - 2



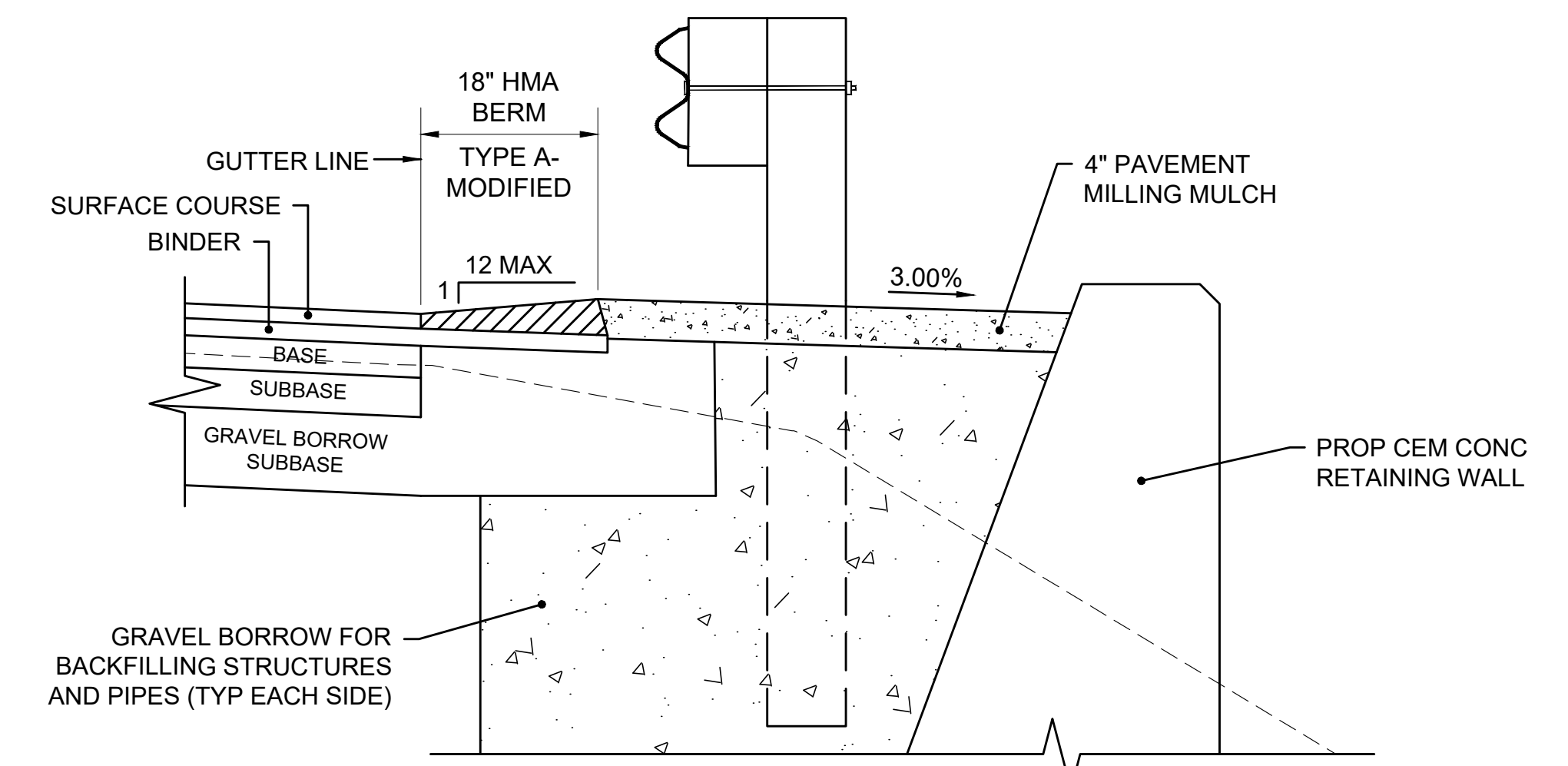
- NOTES:
- FOR ALL OTHER DIMENSIONS, SEE MASSDOT E 106.1.0
 - SEE CONSTRUCTION PLANS FOR GUARDRAIL LOCATIONS.

HOT MIX ASPHALT BERM, TYPE A - MODIFIED

STA 26+25 TO STA 28+85 (RIGHT)
STA 153+67 TO STA 156+00 (RIGHT)
STA 159+39 TO STA 161+12 (RIGHT)
STA 159+54 TO STA 163+00 (LEFT)
STA 200+64 TO STA 205+20 (RIGHT)
STA 200+69 TO STA 205+95 (LEFT)
NOT TO SCALE



GUARDRAIL, TL-3 STIFFENING WITH HALF POST SPACING
OLD NORTH ROAD STA 155+05 RT TO STA 155+55 RT
NOT TO SCALE



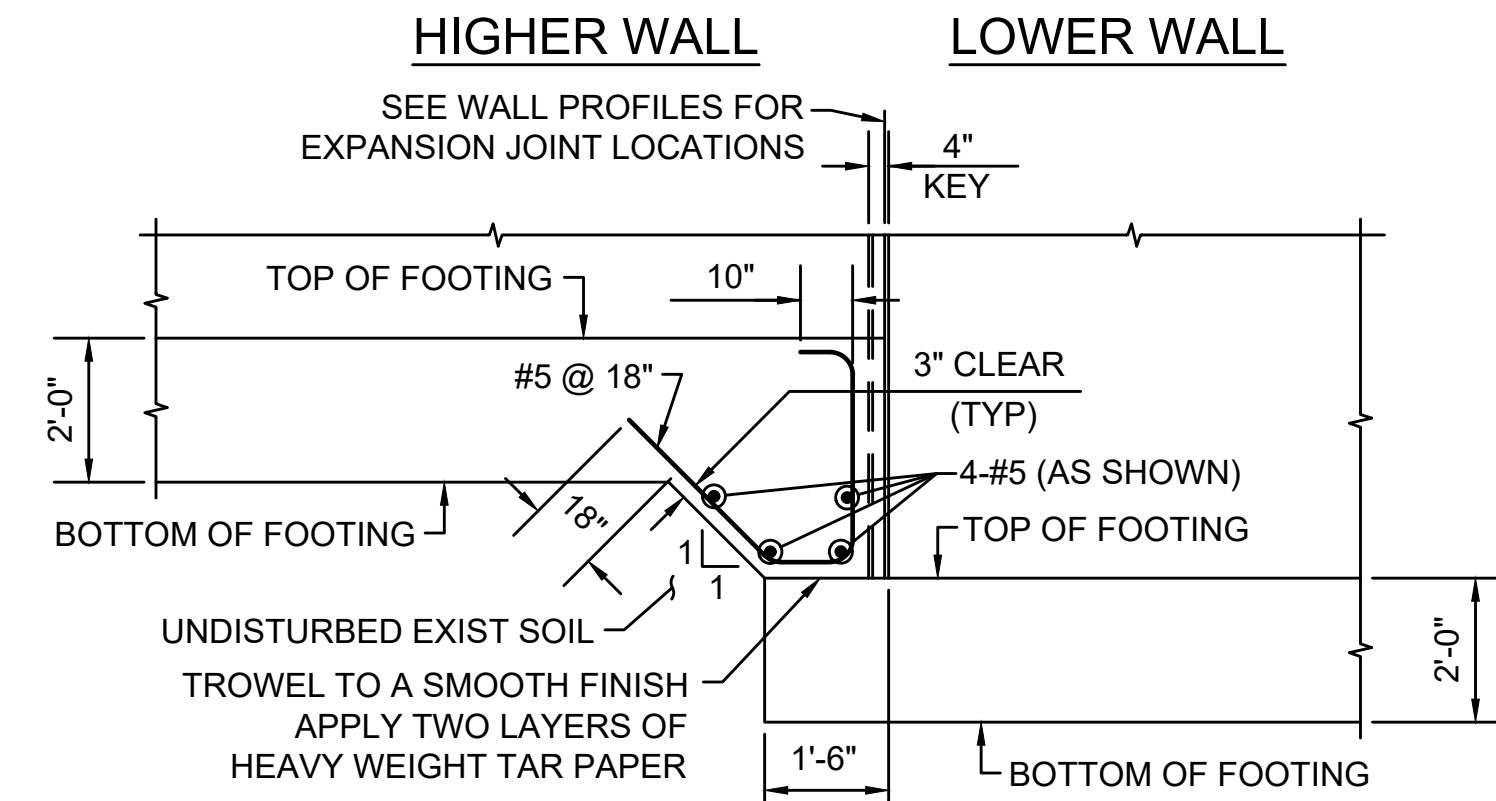
- NOTES:
- FOR ALL OTHER DIMENSIONS, SEE MASSDOT E 106.1.0
 - SEE CONSTRUCTION PLANS FOR GUARDRAIL LOCATIONS.

HOT MIX ASPHALT BERM, TYPE A - MODIFIED AT RET WALL

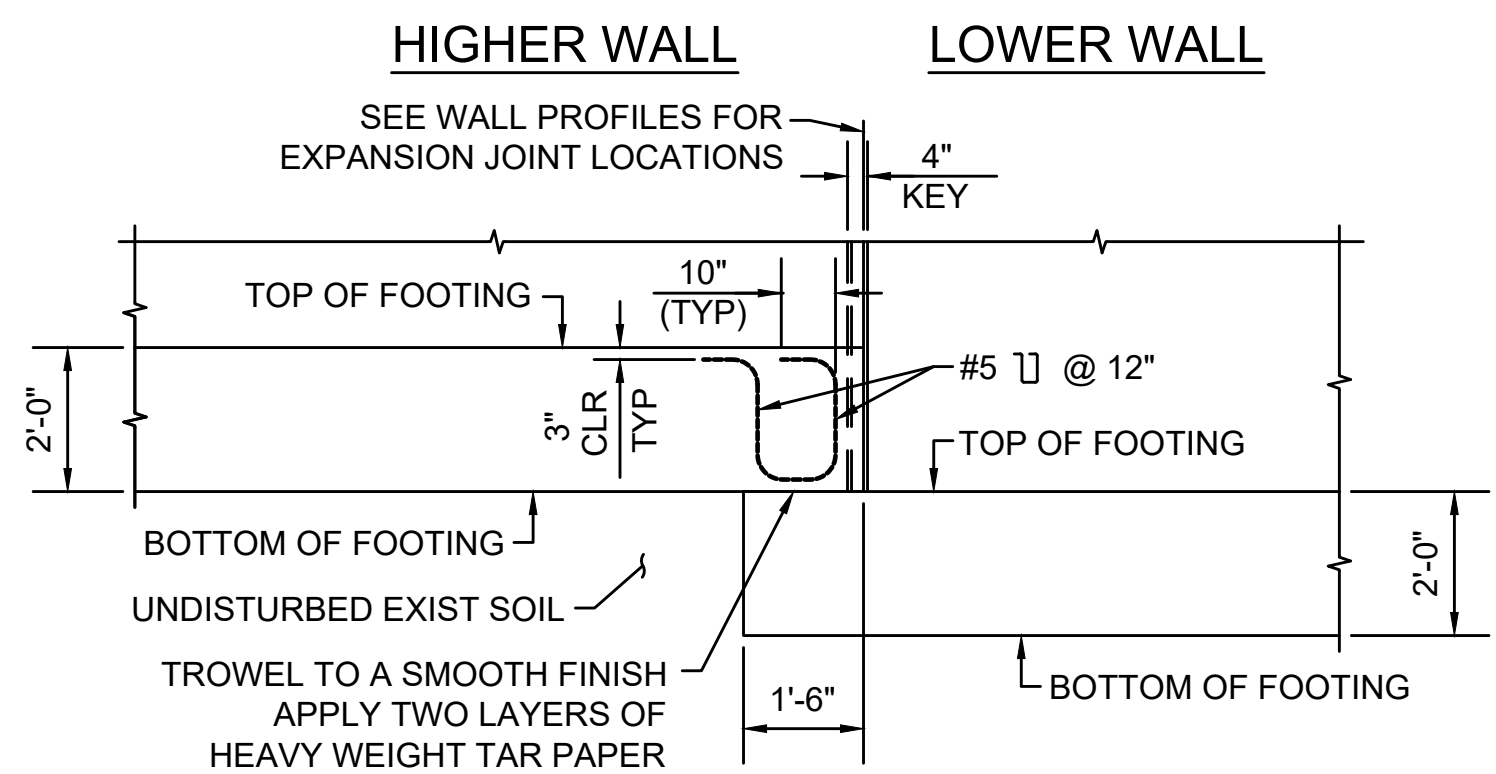
STA 137+75 TO STA 140+87 (RIGHT)
NOT TO SCALE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	88	191
PROJECT FILE NO.		609287	

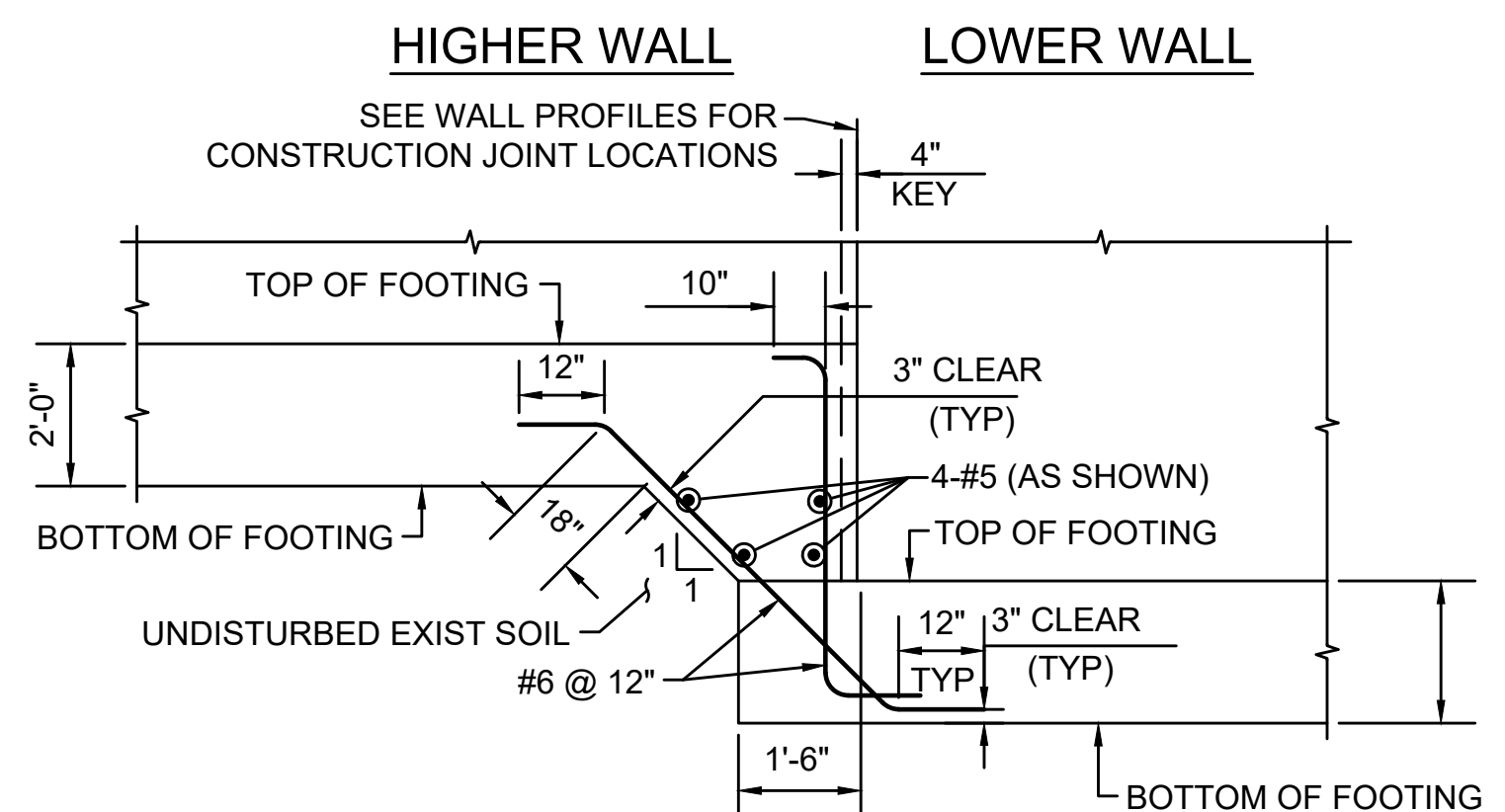
CONSTRUCTION DETAILS - 3



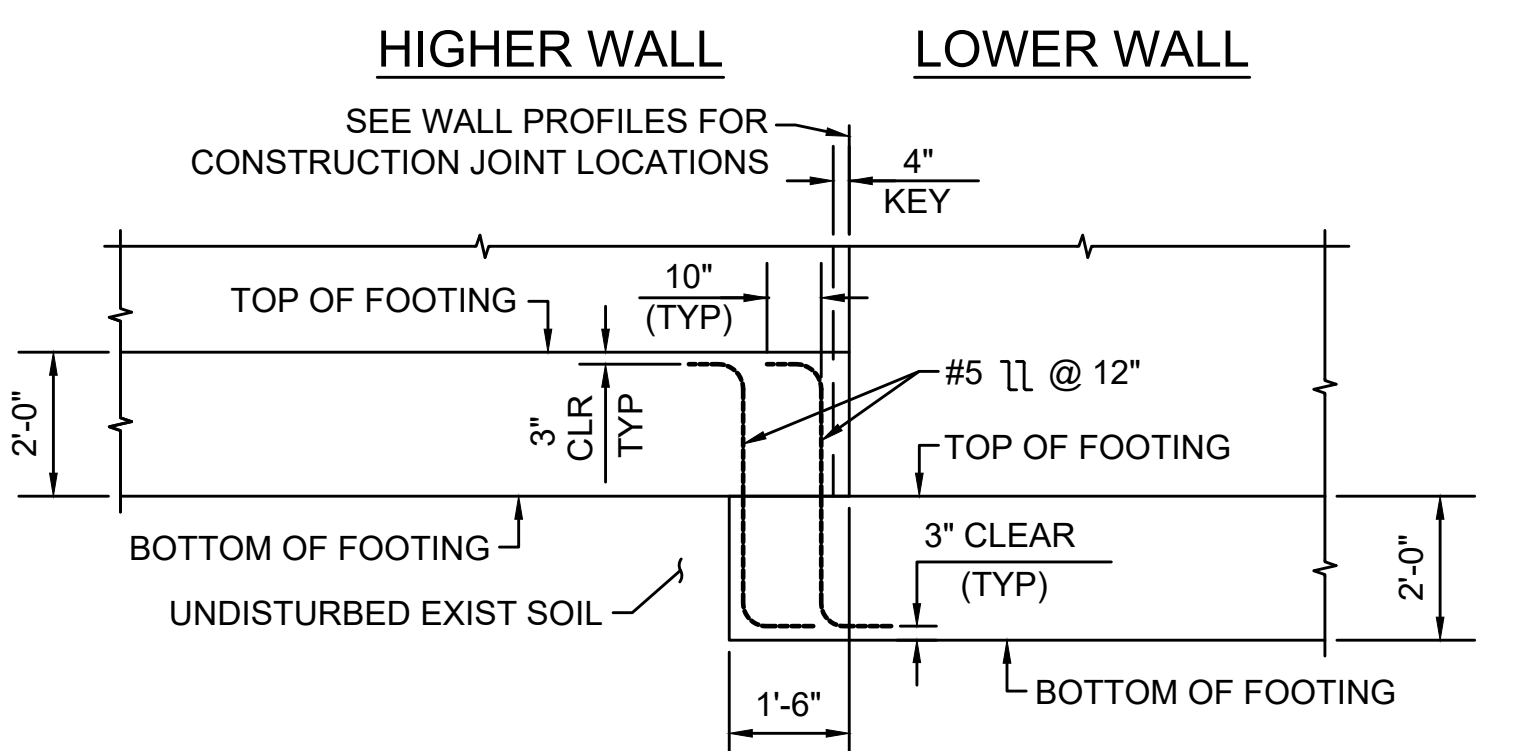
STEPPED-UP FOOTING DETAIL AT EXPANSION JOINT
UPPER FOOTING ABOVE LOWER FOOTING
NOT TO SCALE



STEPPED-UP FOOTING DETAIL AT EXPANSION JOINT
UPPER FOOTING ON LOWER FOOTING
NOT TO SCALE



STEPPED-UP FOOTING DETAIL AT CONSTRUCTION JOINT
UPPER FOOTING ABOVE LOWER FOOTING
NOT TO SCALE



STEPPED-UP FOOTING DETAIL AT CONSTRUCTION JOINT
UPPER FOOTING ON LOWER FOOTING
NOT TO SCALE

CEMENT CONCRETE RETAINING WALL #1 SIZE CHART								
ALIGNMENT	STATION	OFFSET	TOP OF WALL ELEVATION	BOTTOM OF FOOTING ELEVATION	"A" (FT)	"B" (FT)	"H" (FT)	"D" (FT)
OLD NORTH ROAD	34+75.00	RT	1632.37	1622.25	1.00	1.50	8.12	2.00
OLD NORTH ROAD	34+98.00	RT	1631.13	1618.50	1.00	1.50	10.63	2.00
OLD NORTH ROAD	35+21.00	RT	1629.89	1615.50	1.00	1.50	12.39	2.00
OLD NORTH ROAD	35+44.00	RT	1628.64	1615.50	1.00	1.50	11.14	2.00
OLD NORTH ROAD	35+67.00	RT	1627.40	1615.50	1.00	1.50	9.90	2.00
OLD NORTH ROAD	35+90.00	RT	1626.16	1613.50	1.00	1.50	10.66	2.00
OLD NORTH ROAD	36+13.00	RT	1624.91	1613.50	1.00	1.50	9.41	2.00
OLD NORTH ROAD	36+37.26	RT	1623.54	1613.50	1.00	1.50	8.04	2.00
OLD NORTH ROAD	36+62.26	RT	1622.03	1611.50	1.00	1.50	8.53	2.00
OLD NORTH ROAD	36+87.26	RT	1620.67	1611.50	1.00	1.50	7.17	2.00
OLD NORTH ROAD	37+12.26	RT	1619.30	1609.50	1.00	1.50	7.80	2.00
OLD NORTH ROAD	37+37.26	RT	1617.94	1607.50	1.00	1.50	8.44	2.00
OLD NORTH ROAD	37+62.26	RT	1616.55	1605.50	1.00	1.50	9.05	2.00
OLD NORTH ROAD	37+87.26	RT	1615.15	1603.50	1.00	1.50	12.65	2.00
OLD NORTH ROAD	38+12.26	RT	1613.68	1603.50	1.00	1.50	11.18	2.00
OLD NORTH ROAD	38+37.26	RT	1612.19	1603.50	1.00	1.50	6.89	2.00
OLD NORTH ROAD	38+60.26	RT	1610.77	1601.50	1.00	1.50	7.27	2.00
OLD NORTH ROAD	38+83.03	RT	1609.34	1601.50	1.00	1.50	5.84	2.00

CEMENT CONCRETE RETAINING WALL #2 SIZE CHART								
ALIGNMENT	STATION	OFFSET	TOP OF WALL ELEVATION	BOTTOM OF FOOTING ELEVATION	"A" (FT)	"B" (FT)	"H" (FT)	"D" (FT)
OLD NORTH ROAD	43+90.00	RT	1575.06	1565.90	1.00	1.50	7.16	2.00
OLD NORTH ROAD	44+10.50	RT	1573.62	1562.40	1.00	1.50	9.22	2.00
OLD NORTH ROAD	44+31.00	RT	1572.18	1562.40	1.00	1.50	7.78	2.00
OLD NORTH ROAD	44+51.50	RT	1570.70	1560.40	1.00	1.50	8.30	2.00
OLD NORTH ROAD	44+72.33	RT	1569.11	1558.40	1.00	1.50	8.71	2.00
OLD NORTH ROAD	44+95.58	RT	1567.33	1555.50	1.00	1.50	9.83	2.00
OLD NORTH ROAD	45+18.83	RT	1565.56	1555.50	1.00	1.50	8.06	2.00
OLD NORTH ROAD	45+42.08	RT	1563.78	1553.50	1.00	1.50	8.28	2.00
OLD NORTH ROAD	45+65.33	RT	1562.00	1551.50	1.00	1.50	8.50	2.00
OLD NORTH ROAD	45+88.58	RT	1560.26	1548.50	1.00	1.50	9.76	2.00
OLD NORTH ROAD	46+11.83	RT	1558.62	1548.50	1.00	1.50	8.12	2.00
OLD NORTH ROAD	46+35.08	RT	1556.98	1546.50	1.00	1.50	8.48	2.00
OLD NORTH ROAD	46+58.33	RT	1555.41	1544.00	1.00	1.50	9.41	2.00
OLD NORTH ROAD	46+81.58	RT	1553.91	1544.00	1.00	1.50	7.91	2.00
OLD NORTH ROAD	47+04.92	RT	1552.50	1542.00	1.00	1.50	8.50	2.00
OLD NORTH ROAD	47+28.08	RT	1551.19	1542.00	1.00	1.50	7.19	2.00
OLD NORTH ROAD	47+50.89	RT	1549.99	1542.00	1.00	1.50	5.99	2.00

CEMENT CONCRETE RETAINING WALL #3 SIZE CHART								
ALIGNMENT	STATION	OFFSET	TOP OF WALL ELEVATION	BOTTOM OF FOOTING ELEVATION	"A" (FT)	"B" (FT)	"H" (FT)	"D" (FT)
OLD NORTH ROAD	71+85.00	LT	1506.07	1496.75	2.00	1.50	7.32	2.00
OLD NORTH ROAD	72+10.00	LT	1507.12	1493.75	2.00	1.50	11.37	2.00
OLD NORTH ROAD	72+35.00	LT	1508.30	1493.75	2.00	1.50	12.55	2.00
OLD NORTH ROAD	72+60.00	LT	1509.61	1496.75	2.00	1.50	10.86	2.00
OLD NORTH ROAD	72+85.00	LT	1511.05	1498.75	2.00	1.50	10.30	2.00
OLD NORTH ROAD	73+10.00	LT	1512.63	1500.75	2.00	1.50	9.88	2.00
OLD NORTH ROAD	73+35.00	LT	1514.35	1502.75	2.00	1.50	9.60	2.00
OLD NORTH ROAD	73+60.00	LT	1516.17	1502.75	2.00	1.50	11.42	2.00
OLD NORTH ROAD	73+82.87	LT	1517.85	1506.25	2.00	1.50	9.60	2.00

CEMENT CONCRETE RETAINING WALL #4 SIZE CHART								
ALIGNMENT	STATION	OFFSET	TOP OF WALL ELEVATION	BOTTOM OF FOOTING ELEVATION	"A" (FT)	"B" (FT)	"H" (FT)	"D" (FT)
OLD NORTH ROAD	123+65.00	RT	1782.82	1775.17	1.00	1.50	5.65	2.00
OLD NORTH ROAD	123+86.67	RT	1783.23	1773.17	1.00	1.50	8.06	2.00
OLD NORTH ROAD	124+08.33	RT	1783.64	1773.17	1.00	1.50	8.48	2.00
OLD NORTH ROAD	124+30.00	RT	1784.05	1773.17	1.00	1.50	8.88	2.00
OLD NORTH ROAD	124+51.67	RT	1784.51	1773.17	1.00	1.50	9.34	2.00
OLD NORTH ROAD	124+73.33	RT	1785.06	1773.17	1.00	1.50	9.89	2.00
OLD NORTH ROAD	124+95.19	RT	1785.71	1773.17	1.00	1.50	10.54	2.00
OLD NORTH ROAD	125+15.19	RT	1786.41	1775.17	1.00	1.50	9.24	2.00
OLD NORTH ROAD	125+35.19	RT	1787.20	1775.17	1.00	1.50	10.03	2.00
OLD NORTH ROAD	125+55.19	RT	1788.18	1775.17	2.75	2.75	11.01	2.00
OLD NORTH ROAD	125+75.19	RT	1789.26	1777.83	2.75	2.75	9.43	2.00
OLD NORTH ROAD	125+96.08	RT	1790.49	1779.83	2.75	2.75	8.66	2.00

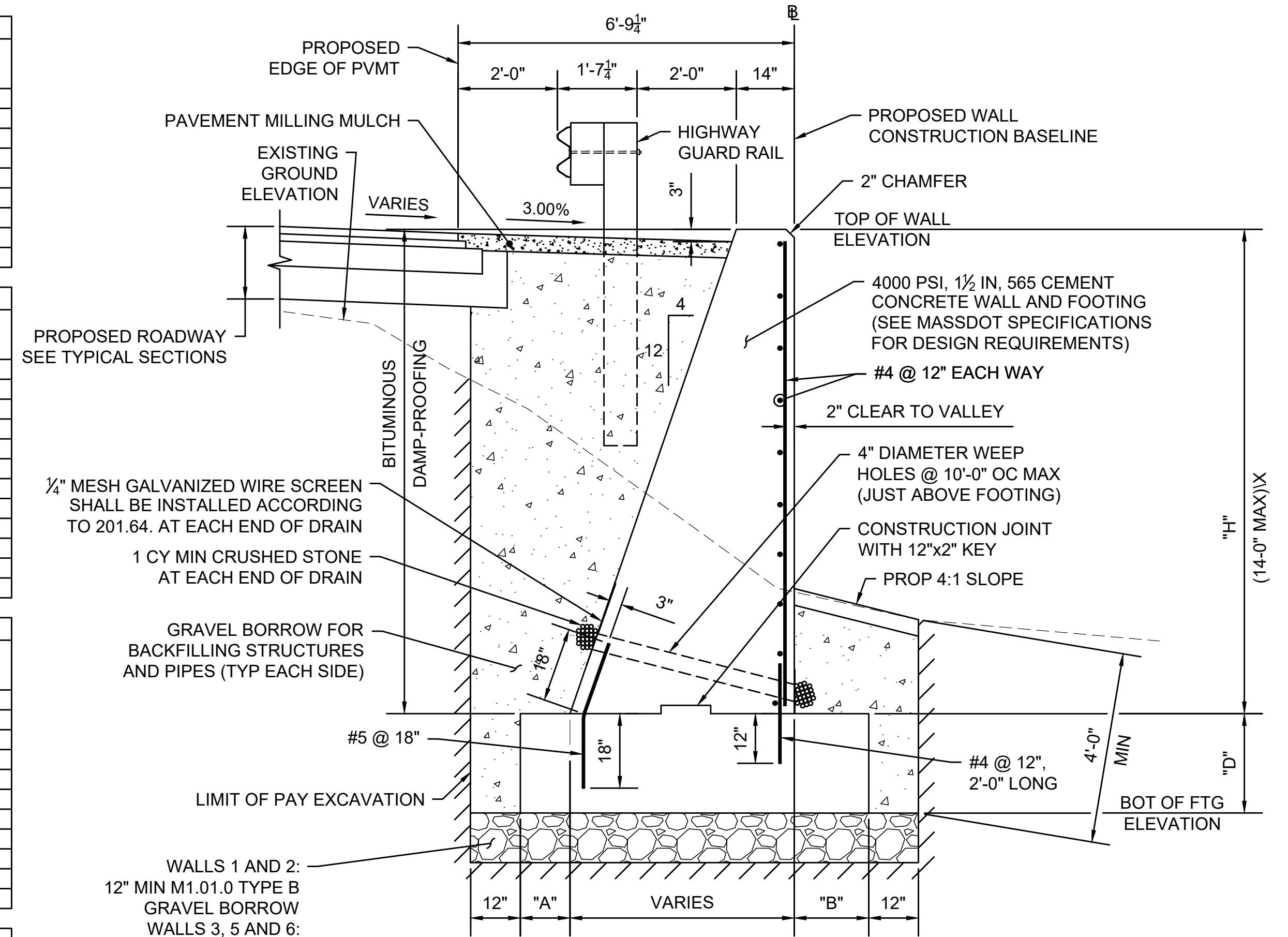
CEMENT CONCRETE RETAINING WALL #5 SIZE CHART								
ALIGNMENT	STATION	OFFSET	TOP OF WALL ELEVATION	BOTTOM OF FOOTING ELEVATION	"A" (FT)	"B" (FT)	"H" (FT)	"D" (FT)
OLD NORTH ROAD	138+00.00	RT	1771.49	1761.25	2.50	2.00	8.24	2.00
OLD NORTH ROAD	138+24.00	RT	1769.69	1758.75	2.50	2.00	8.94	2.00
OLD NORTH ROAD	138+48.00	RT	1767.98	1755.75	2.50	2.00	10.24	2.00
OLD NORTH ROAD	138+72.00	RT	1766.39	1755.75	2.50	2.00	8.64	2.00
OLD NORTH ROAD	138+96.00	RT	1764.99	1752.75	2.50	2.00	10.24	2.00
OLD NORTH ROAD	139+20.00	RT	1763.79	1752.75	2.50	2.00	9.04	2.00
OLD NORTH ROAD	139+44.00	RT	1762.81	1752.75	2.50	2.00	8.06	2.00
OLD NORTH ROAD	139+68.00	RT	1762.02	1752.75	2.50	2.00	7.27	2.00
OLD NORTH ROAD	139+92.00	RT	1761.43	1752.75	2.50	2.00	6.68	2.00
OLD NORTH ROAD	140+16.00	RT	1761.06	1752.75	2.50	2.00	6.31	2.00
OLD NORTH ROAD	140+40.84	RT	1760.89	1752.75	2.50	2.00	6.14	2.00

CEMENT CONCRETE RETAINING WALL #6 SIZE CHART								
ALIGNMENT	STATION	OFFSET	TOP OF WALL ELEVATION	BOTTOM OF FOOTING ELEVATION	"A" (FT)	"B" (FT)	"H" (FT)	"D" (FT)
OLD NORTH ROAD	138+75.00	LT	1767.51	1756.50	3.00	2.00	9.01	2.00
OLD NORTH ROAD	138+96.33	LT	1766.32	1751.50	3.00	2.00	12.82	2.00
OLD NORTH ROAD	139+17.67	LT	1765.28	1749.50	3.00	2.00	13.78	2.00
OLD NORTH ROAD	139+39.00	LT	1764.37	1749.50	3.00	2.00	12.87	2.00
OLD NORTH ROAD	139+60.33	LT	1763.62	1749.50	3.00	2.00	12.12	2.00
OLD NORTH ROAD	139+81.77	LT	1763.01	1749.50	3.00	2.00	11.51	2.00

NOTES:

1. THE WALL IS TO BE CONSTRUCTED ON CHORDS. SEE WALL PROFILES, CONSTRUCTION PLANS, CURB TIE AND GRADING PLANS, AND RETAINING WALL DETAILS / TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS, AND ELEVATIONS.
2. GRAVITY WALLS BASED ON MASSDOT 2013 LRFD BRIDGE MANUAL STANDARD PLATE 3.2.1.

WALL	STATION	OFFSET	STRENGTH I CALCULATED MAXIMUM FACTORED BEARING PRESSURE	STRENGTH LIMIT STATE FACTORED BEARING RESISTANCE	STRENGTH LIMIT STATE BEARING RESISTANCE FACTOR	FORESLOPE REDUCTION FACTOR
1	34+75.00 - 38+85.00	RT	3.4	5.9	0.45	0.640
2	43+90.00 - 47+50.00	RT	2.6	6.7	0.45	0.432
3	71+85.00 - 73+90.00	LT	3.0	3.6	0.45	0.720
4	123+65.00 - 125+55.19	RT	3.3	6.1	0.45	0.564
	125+55.19 - 126+00.00	RT	2.2	4.4	0.45	1.000
5	138+00.00 - 140+45.00	RT	2.3	2.4	0.45	0.419
6	138+75.00 - 139+80.00	LT	3.1	3.3	0.45	0.470

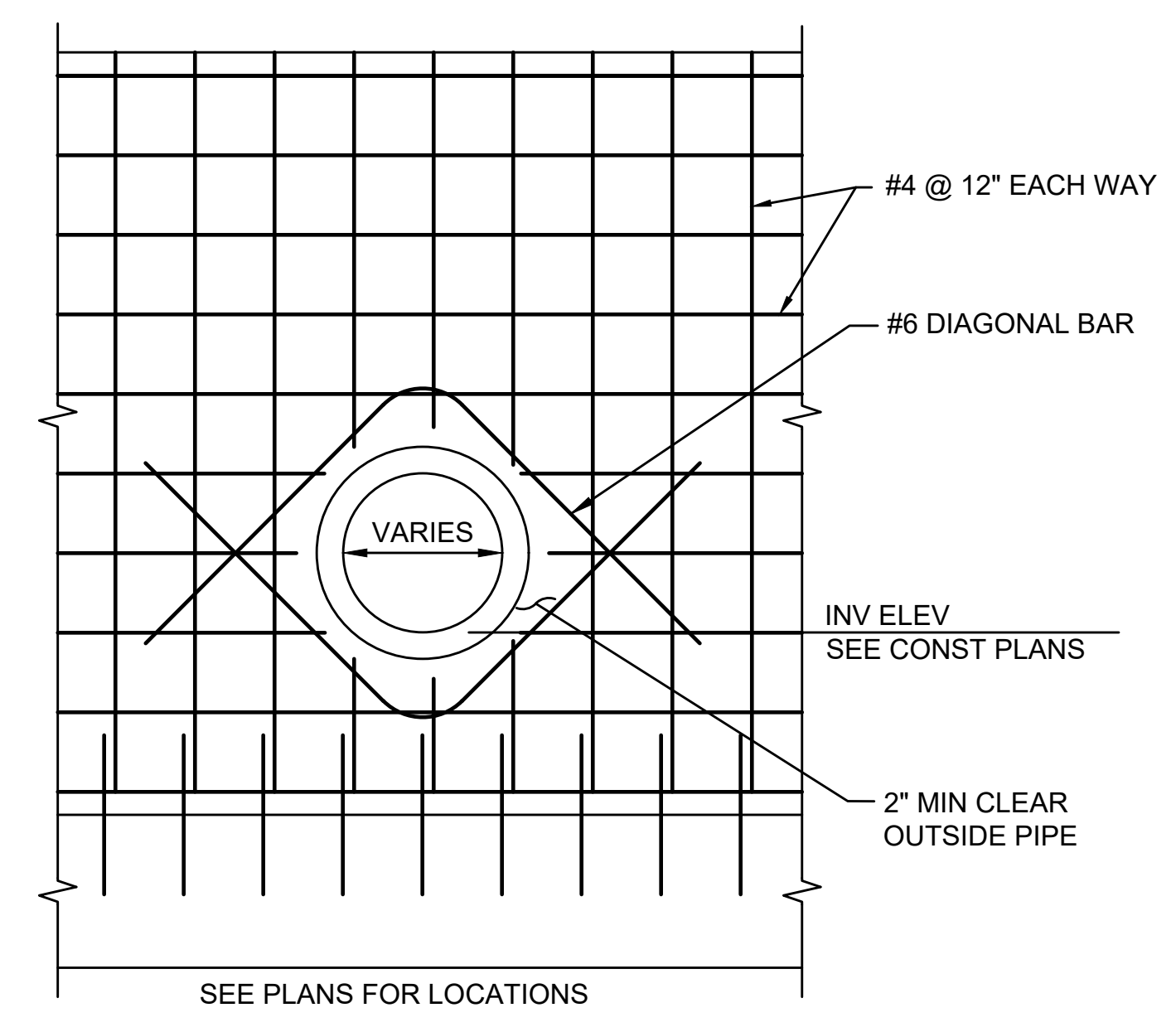


CEMENT CONCRETE RETAINING WALL
NOT TO SCALE

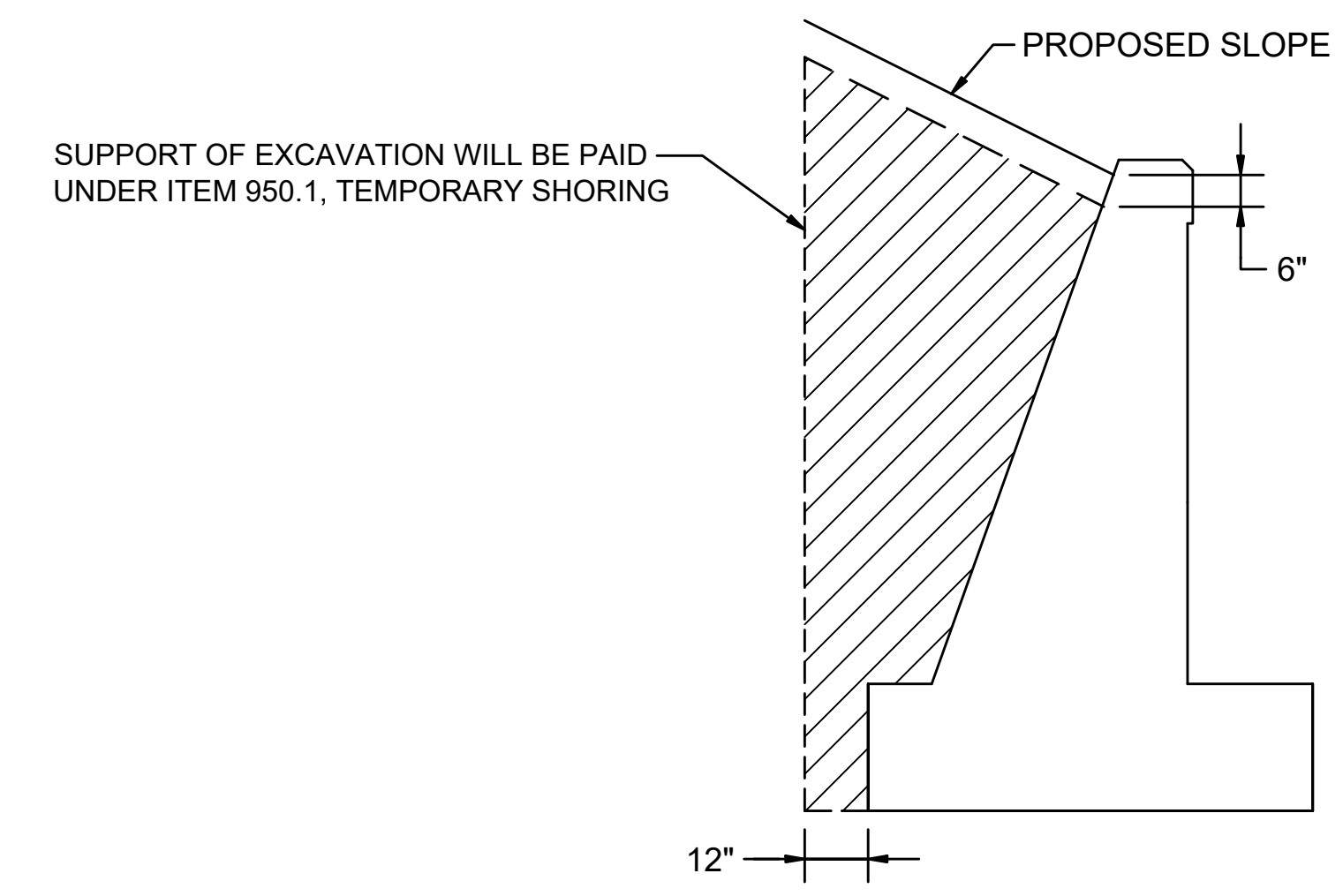
- WALLS 1 AND 2:
12" MIN M1.01.0 TYPE B GRAVEL BORROW
WALLS 3, 5 AND 6:
12" MIN M2.01.3 STONE
WALL 4:
12" MIN M2.01.3 STONE
OR 6" MIN 4000 psi-3/4 in-610 CONCRETE MUD MAT WHEN BEARING ON BEDROCK OR COMPLETELY WEATHERED BEDROCK
- NOTES:
1. THE BACK BATTER SHALL BE CONSTANT.
 2. ALL DIMENSIONS SHOWN ARE MINIMUM.
 3. TO BE FOUNDED ON SUITABLE SOIL. A MINIMUM OF 12 INCHES OF GRAVEL BORROW FOR BRIDGE FOUNDATIONS SHALL BE PLACED BELOW THE FOOTING.
 4. SEE TABLE TO THE LEFT FOR DIMENSIONS.
 5. SEE WALL ELEVATIONS FOR FOOTING STEP AND JOINT LOCATIONS.
 6. IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION, CRUSHED STONE FOR BRIDGE FOUNDATIONS SHALL BE USED IN PLACE OF GRAVEL BORROW.

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PROJECT FILE NO. 609287			

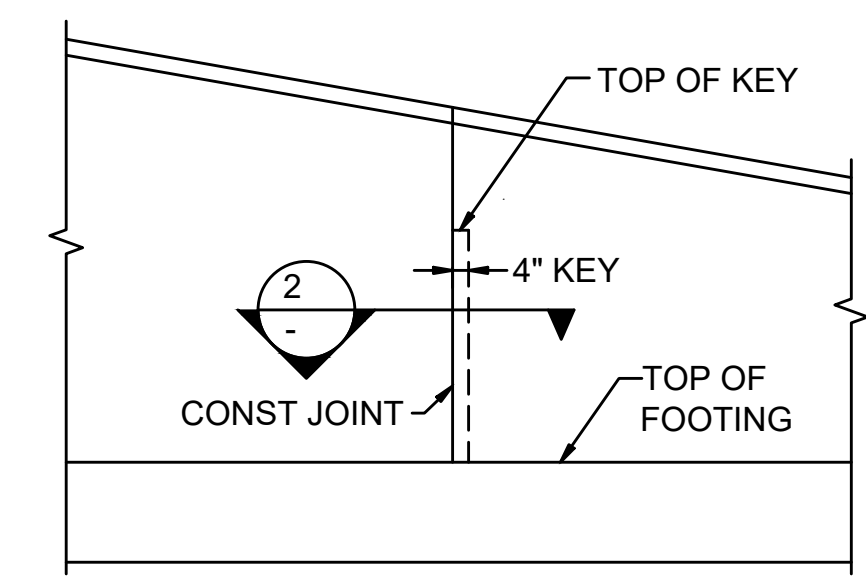
CONSTRUCTION DETAILS - 4



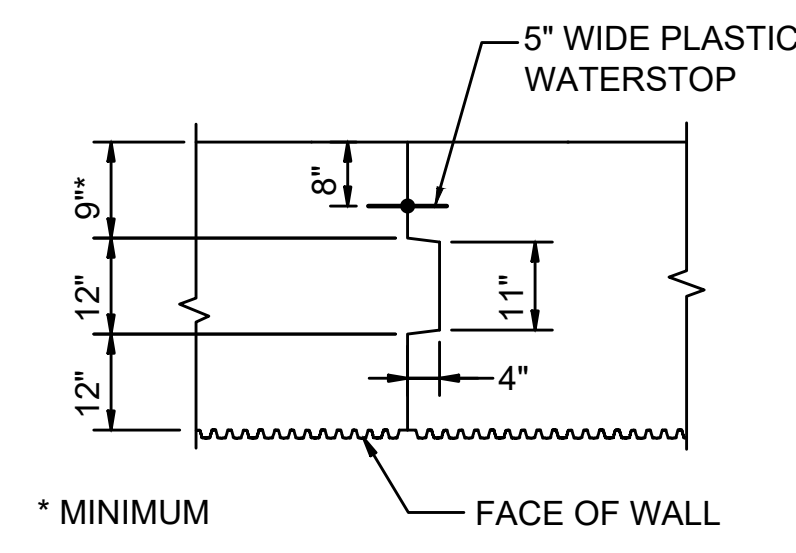
CULVERT PIPE PENETRATION THROUGH CEMENT CONCRETE RETAINING WALL
NOT TO SCALE



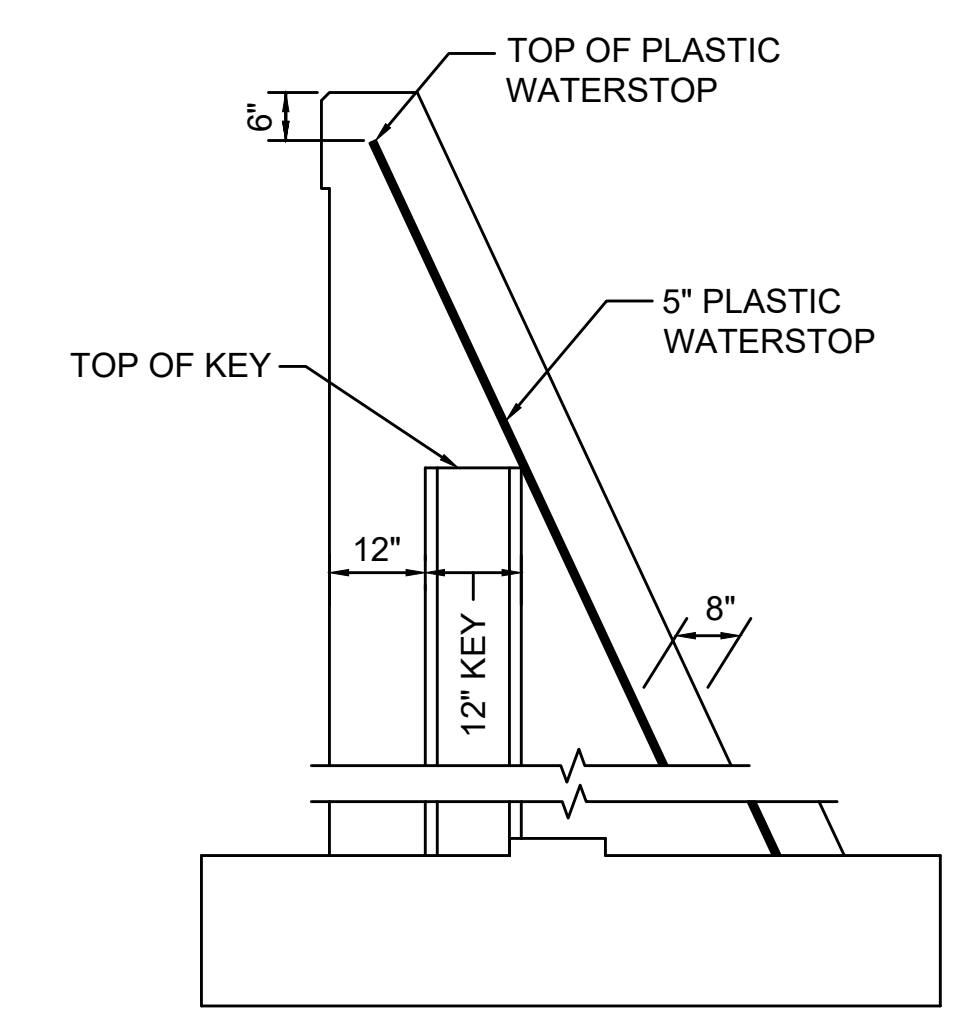
LIMITS OF GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES
NOT TO SCALE



WALL ELEVATION

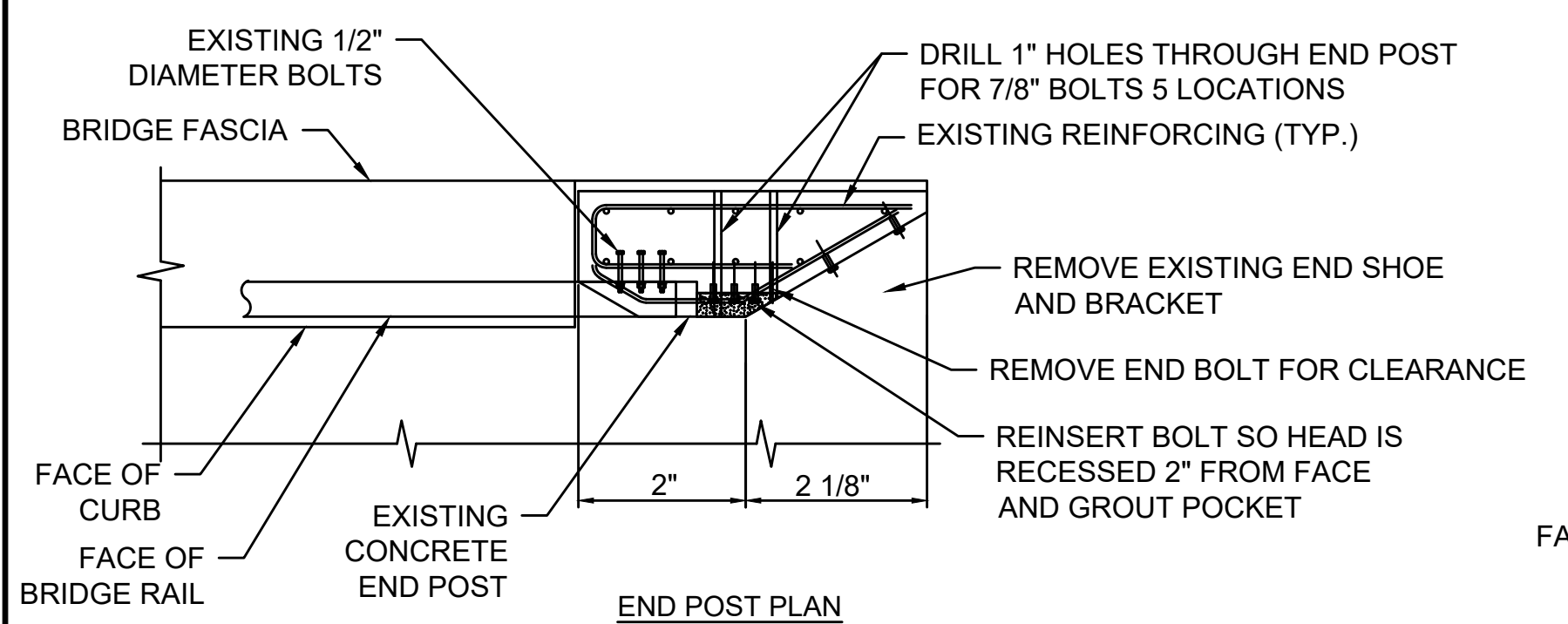


SECTION 2

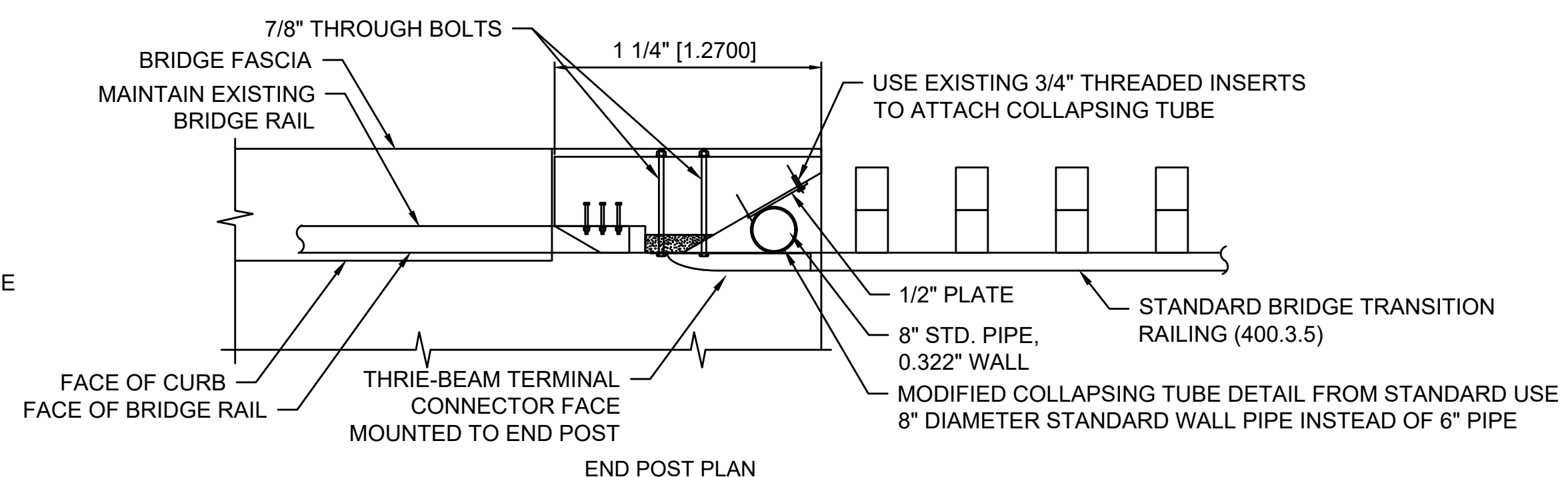


WALL SECTION

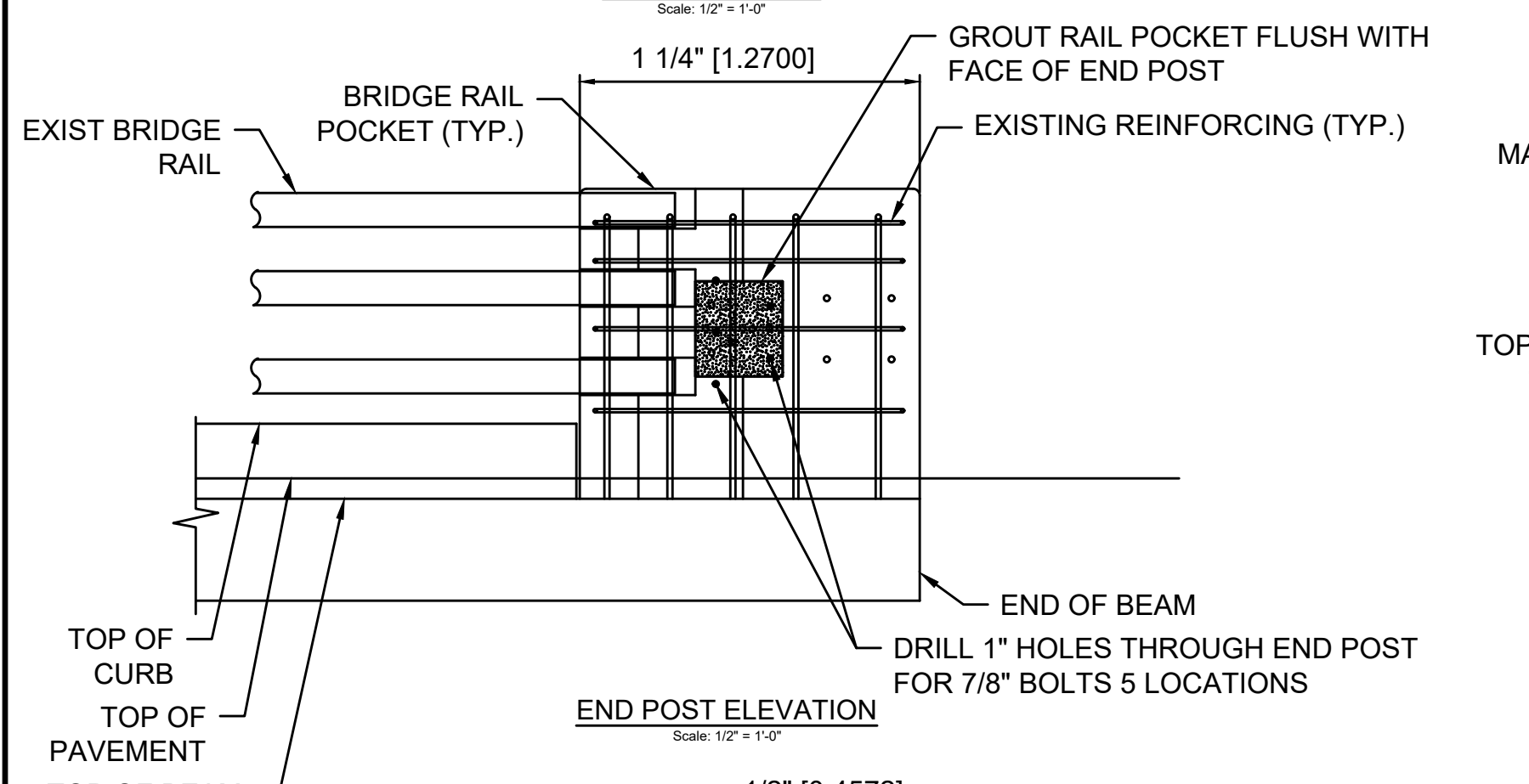
TYPICAL CONSTRUCTION JOINT
NOT TO SCALE



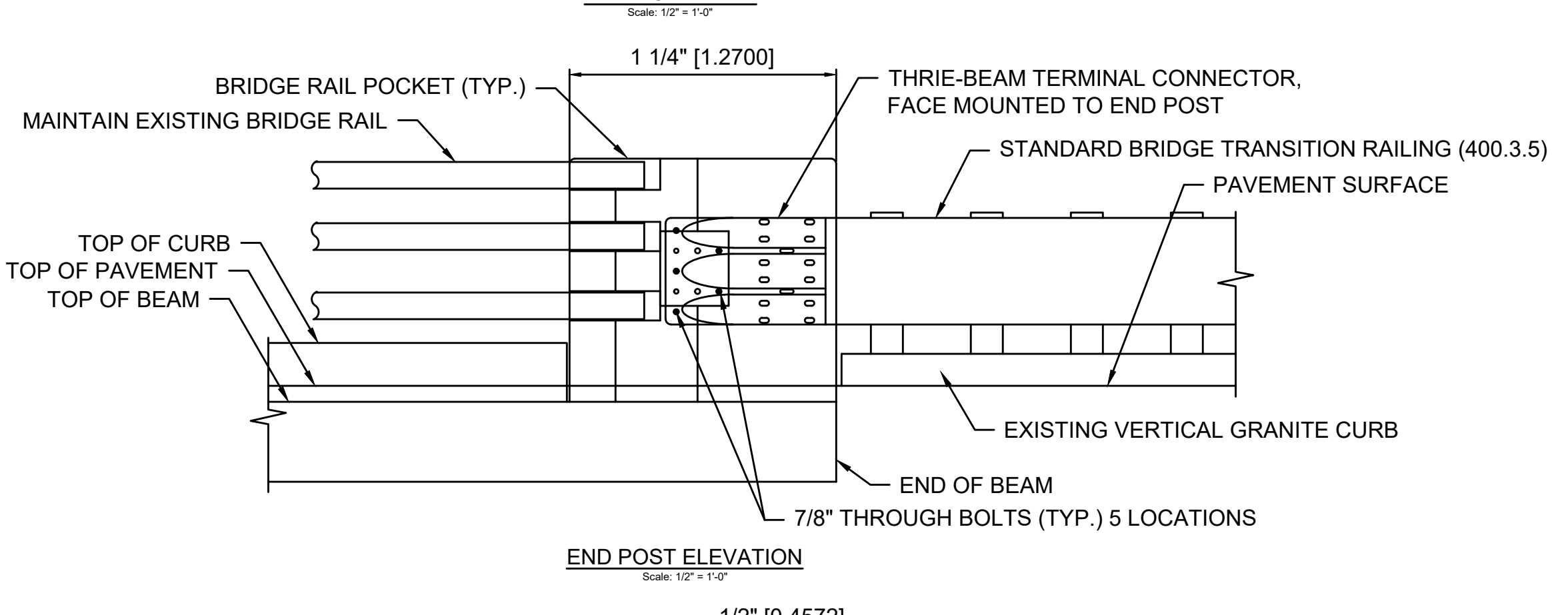
END POST PLAN
Scale: 1/2" = 1'-0"



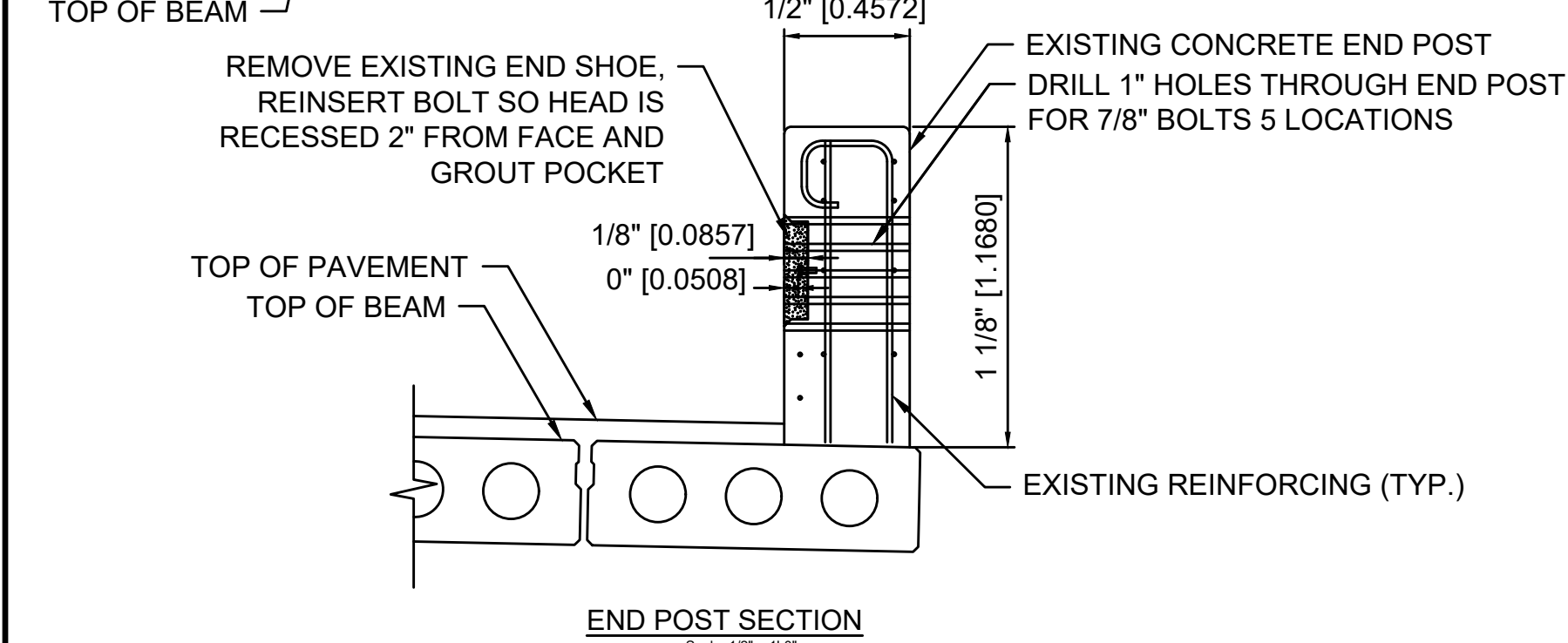
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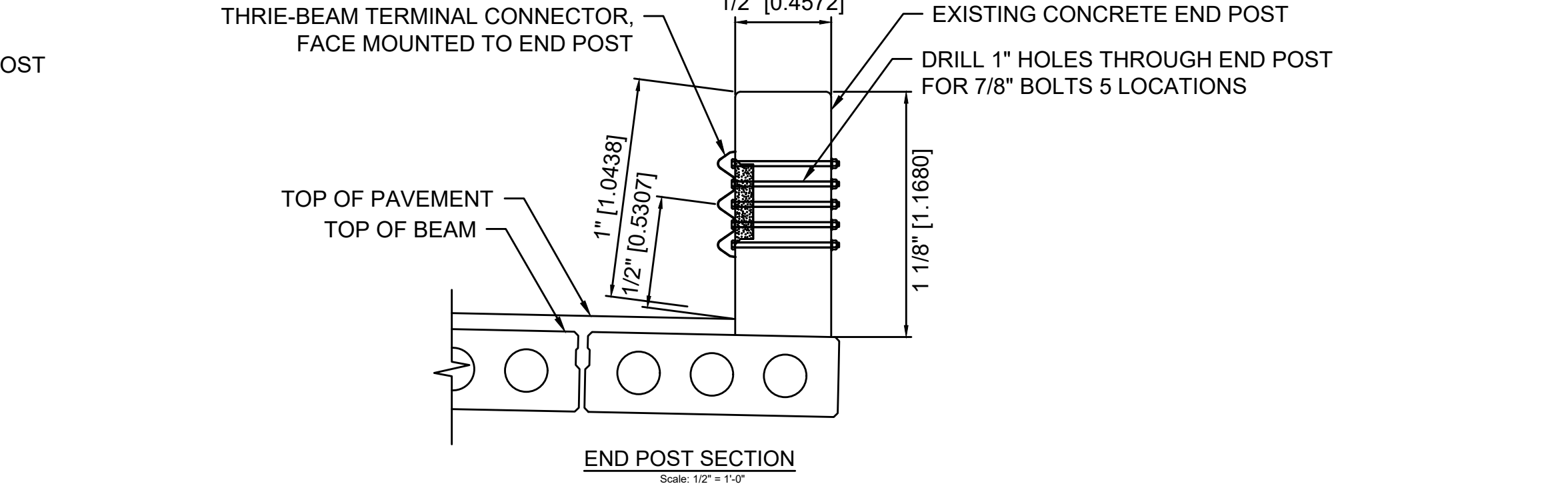
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END POST ELEVATION
Scale: 1/2" = 1'-0"



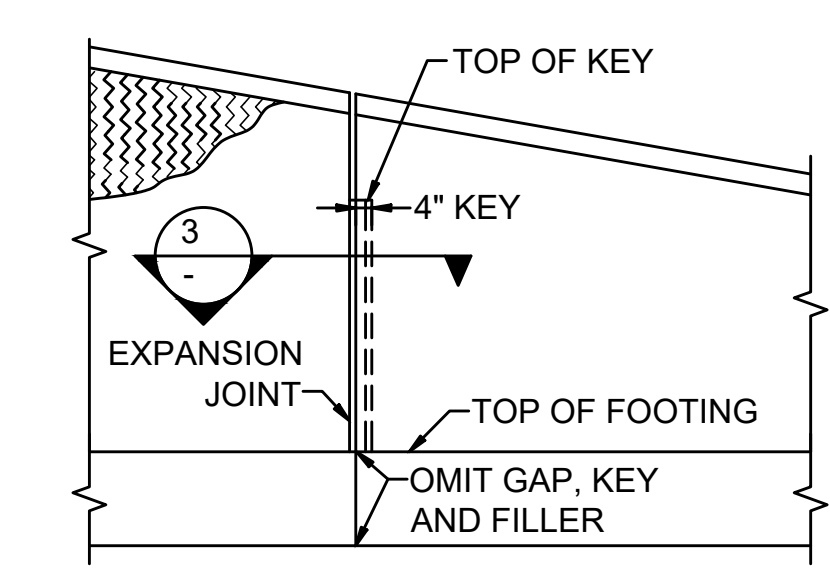
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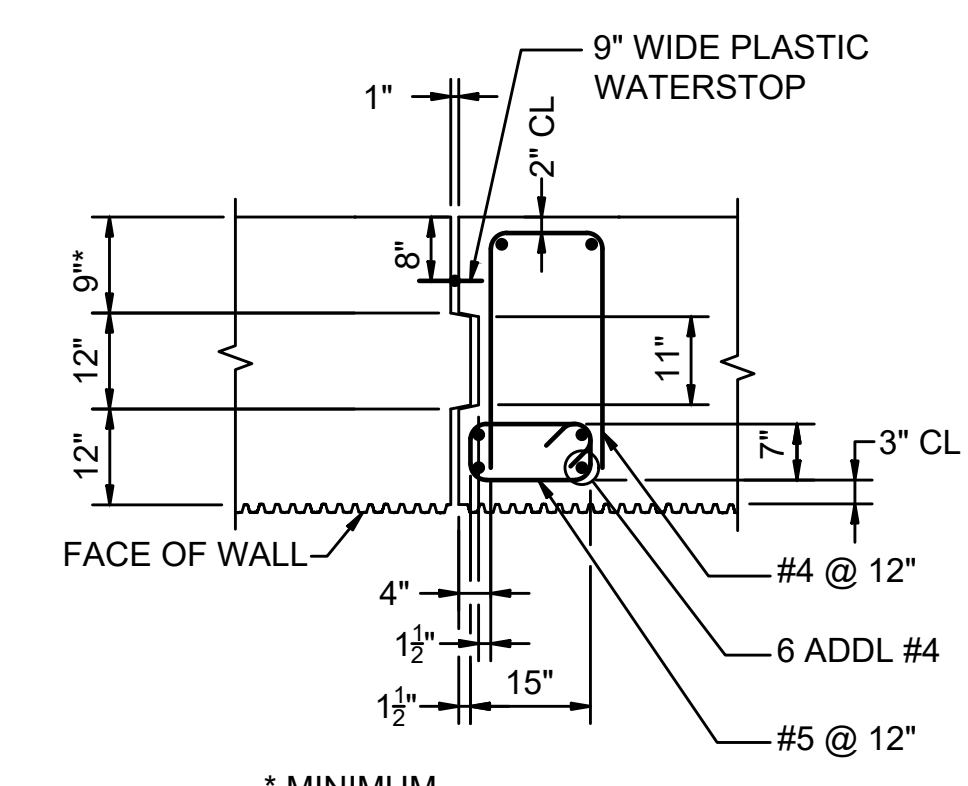
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BRIDGE #W-45-010 CUSTOM TRANSITION TO BRIDGE RAIL (ITEM 628.241) DEMOLITION OF EXISTING ATTACHMENT
NOT TO SCALE

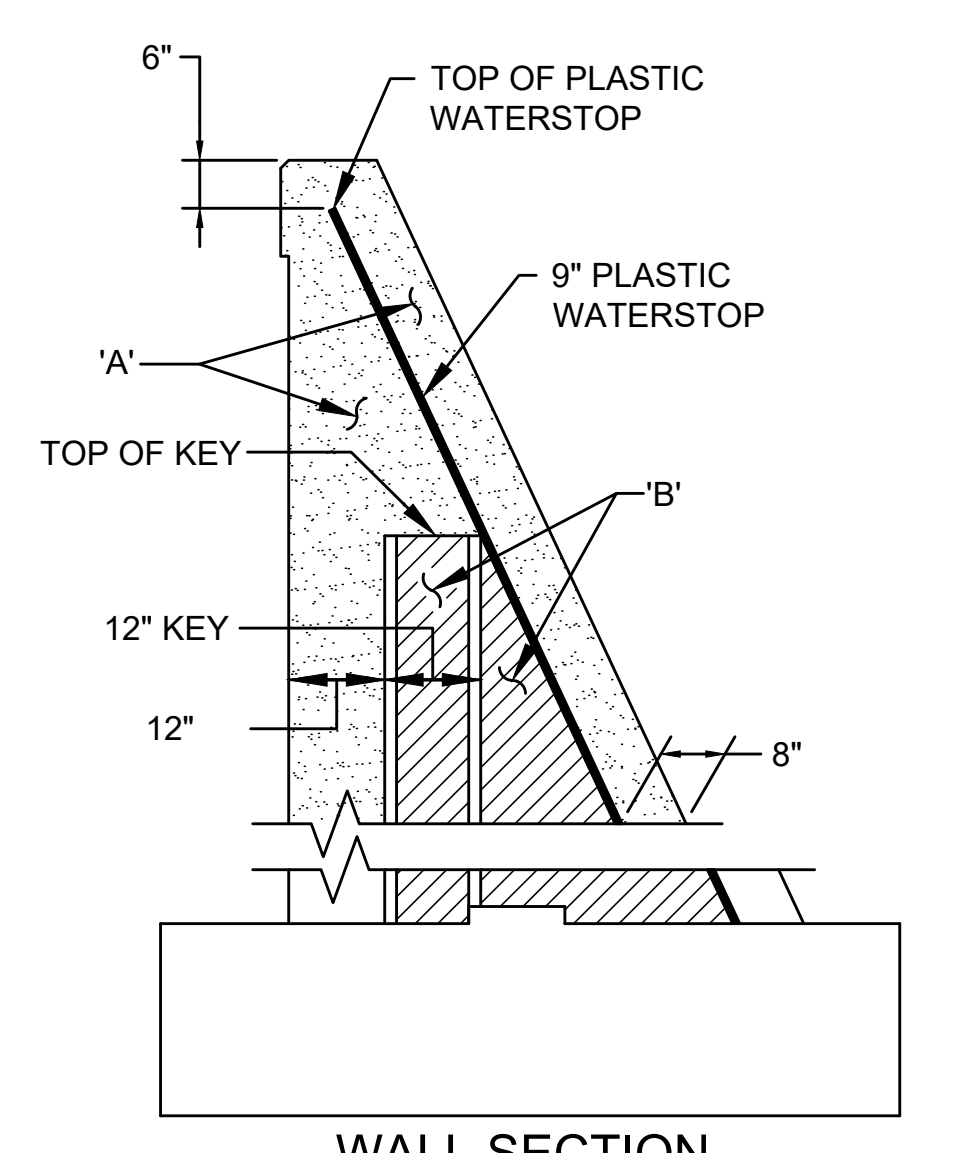
BRIDGE #W-45-010 CUSTOM TRANSITION TO BRIDGE RAIL (ITEM 628.241) PROPOSED NEW CONSTRUCTION
NOT TO SCALE



WALL ELEVATION



SECTION 3



WALL SECTION

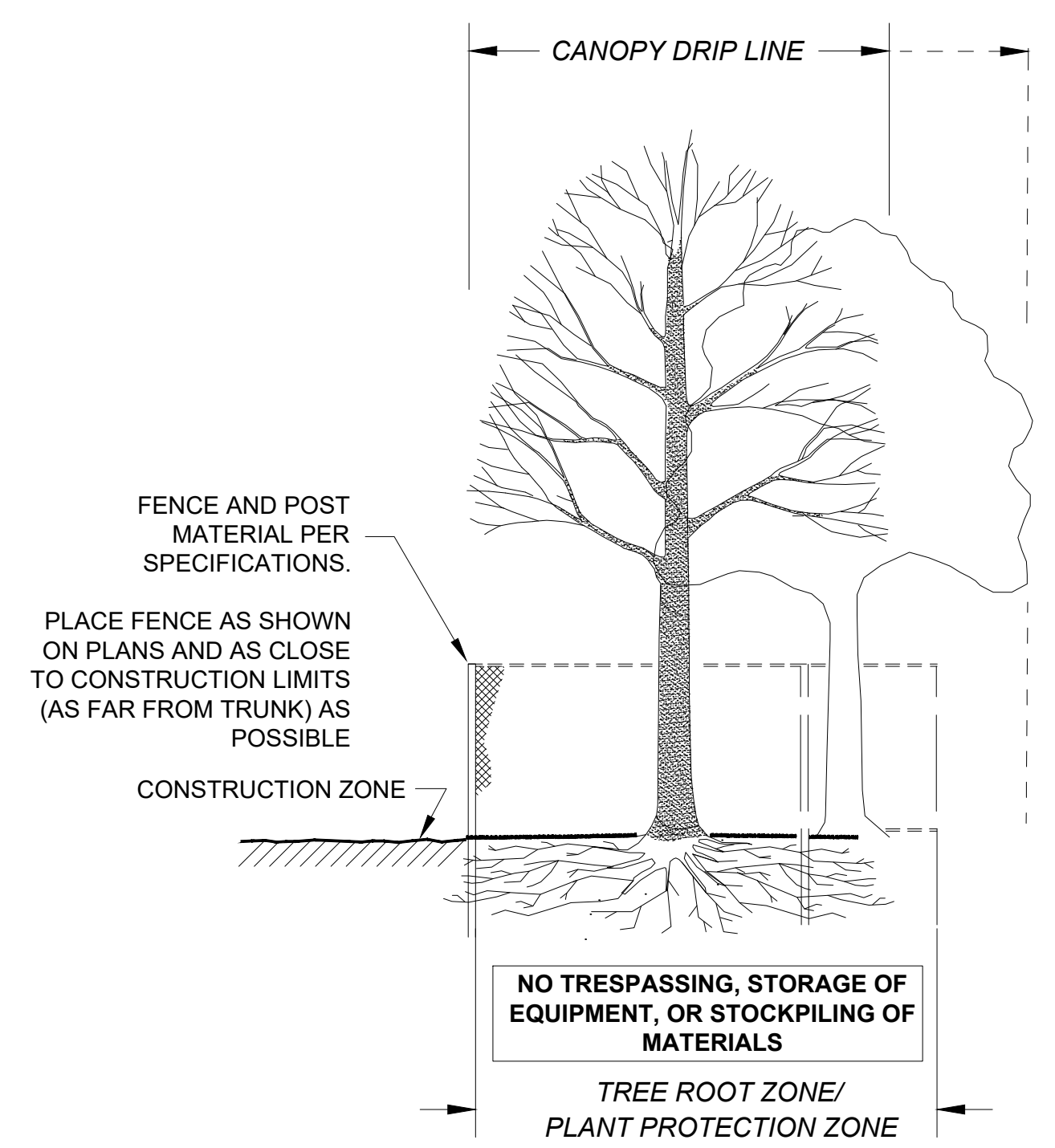
EXPANSION JOINT NOTES:

- LONGITUDINAL REINFORCEMENT SHALL END 2" CLEAR OF EXPANSION JOINT.
- 'A' - PREFORMED FILLER (IN ACCORDANCE WITH M9.14.0).
'B' - PREFORMED FILLER (IN ACCORDANCE WITH M3.05.3 BITUMINOUS JOINT FILLER).
- FILLER MATERIAL SHALL BE FASTENED SECURELY TO ONE SIDE OF JOINT.

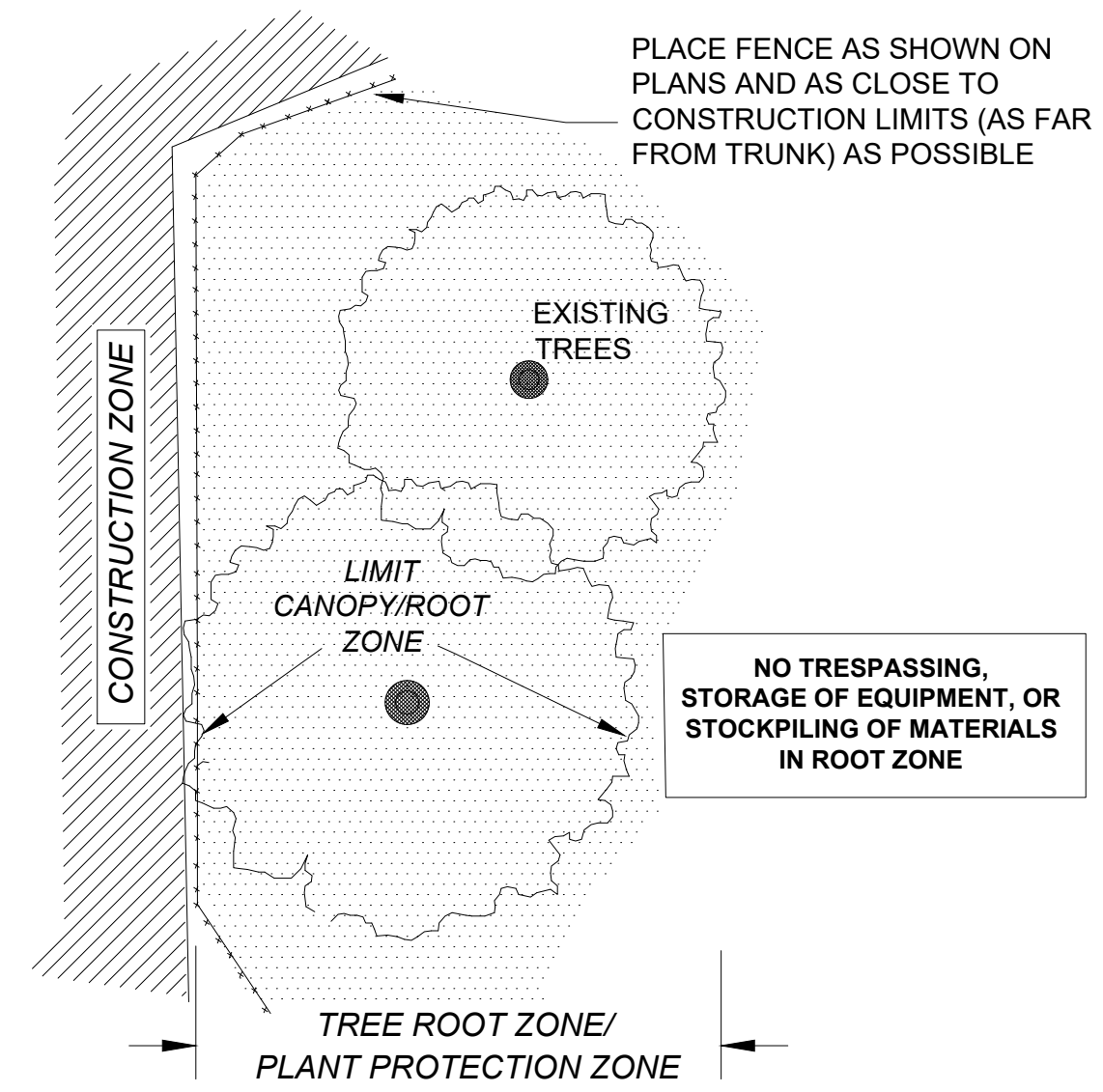
TYPICAL EXPANSION JOINT
NOT TO SCALE

WORTHINGTON ROUTE 143			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	90	191
PROJECT FILE NO.		609287	

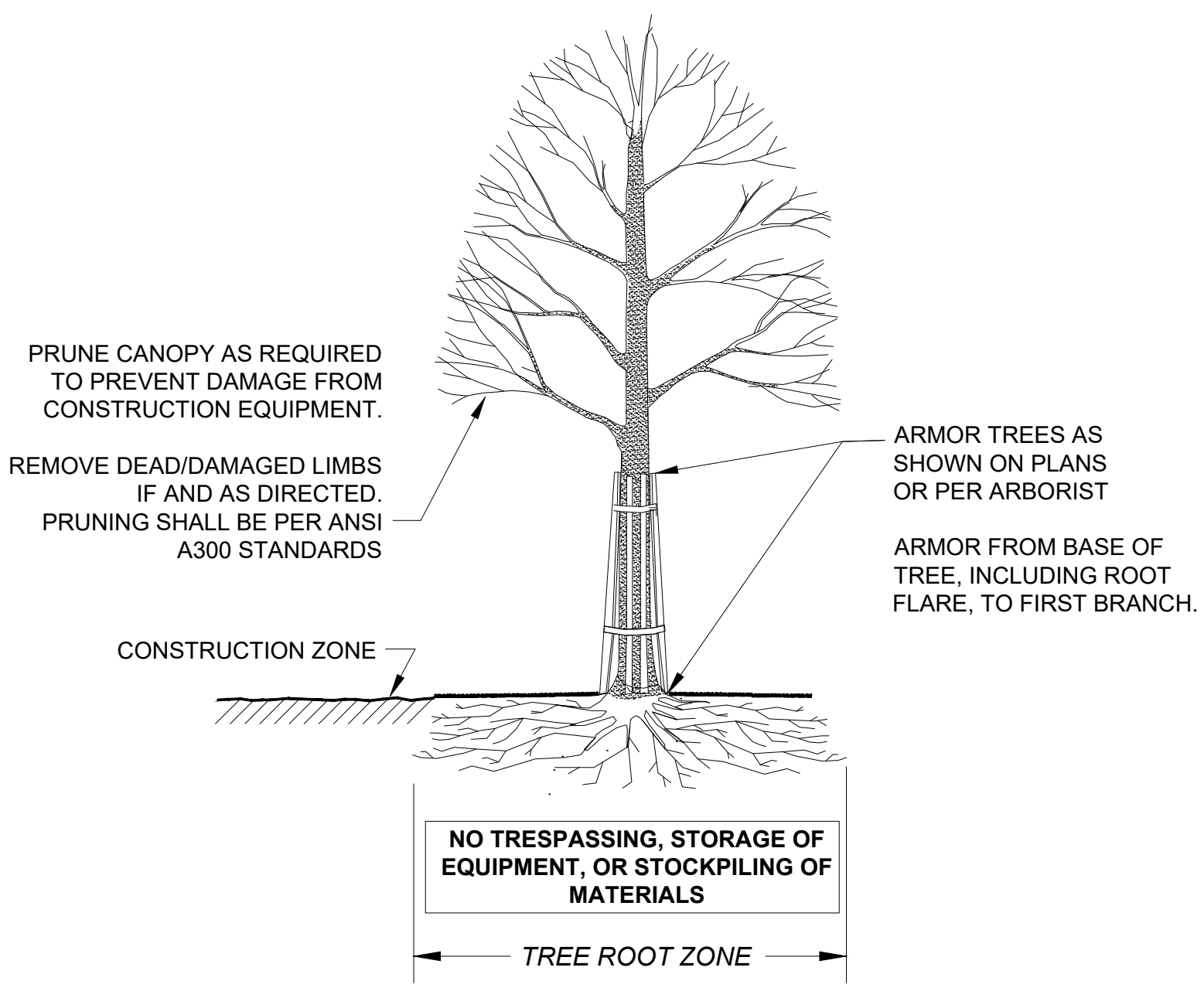
CONSTRUCTION DETAILS - 5



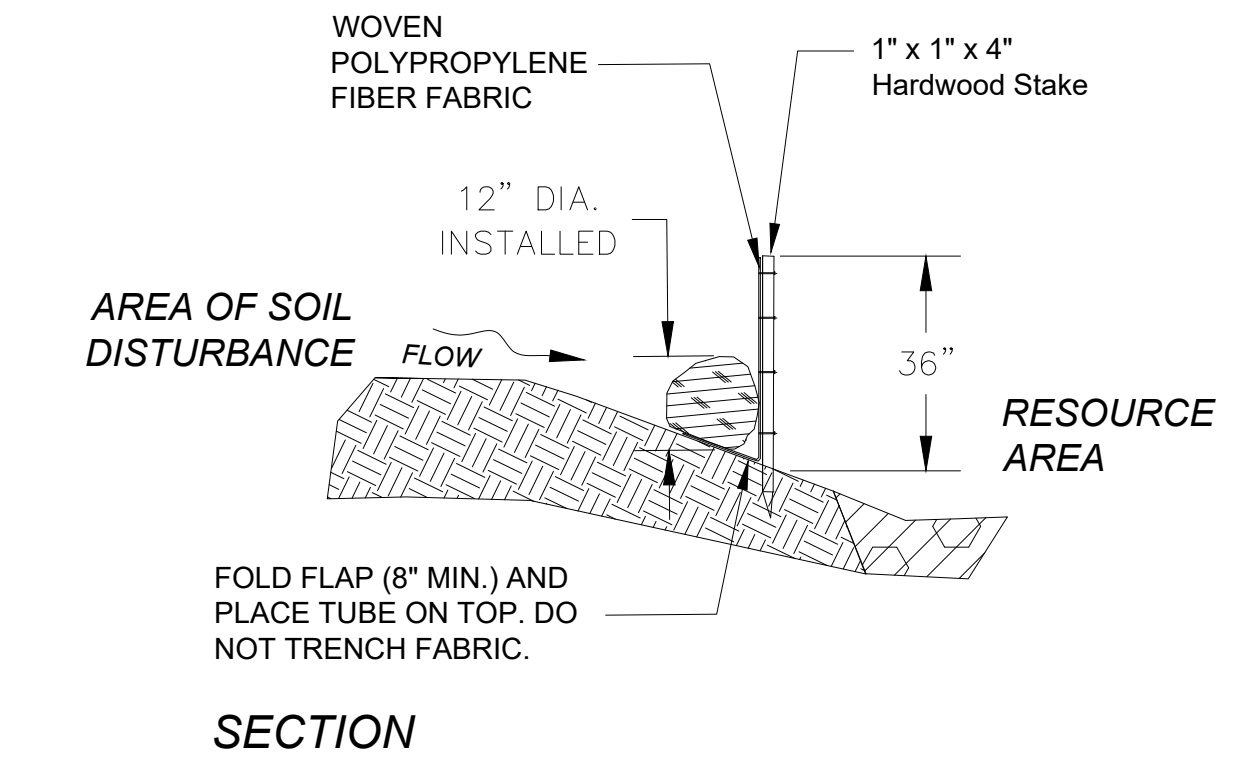
SECTION - FENCE PROTECTION OF ROOT ZONE



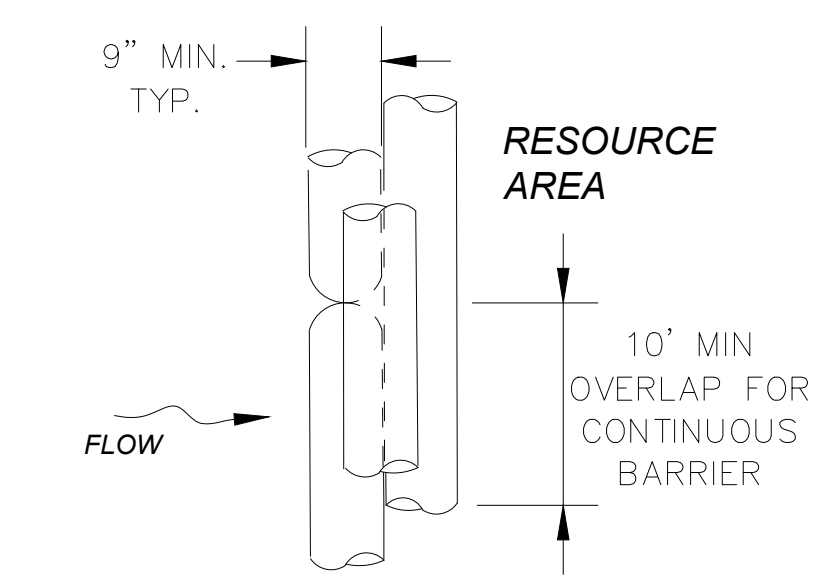
PLAN VIEW - FENCE PROTECTION OF ROOT ZONE



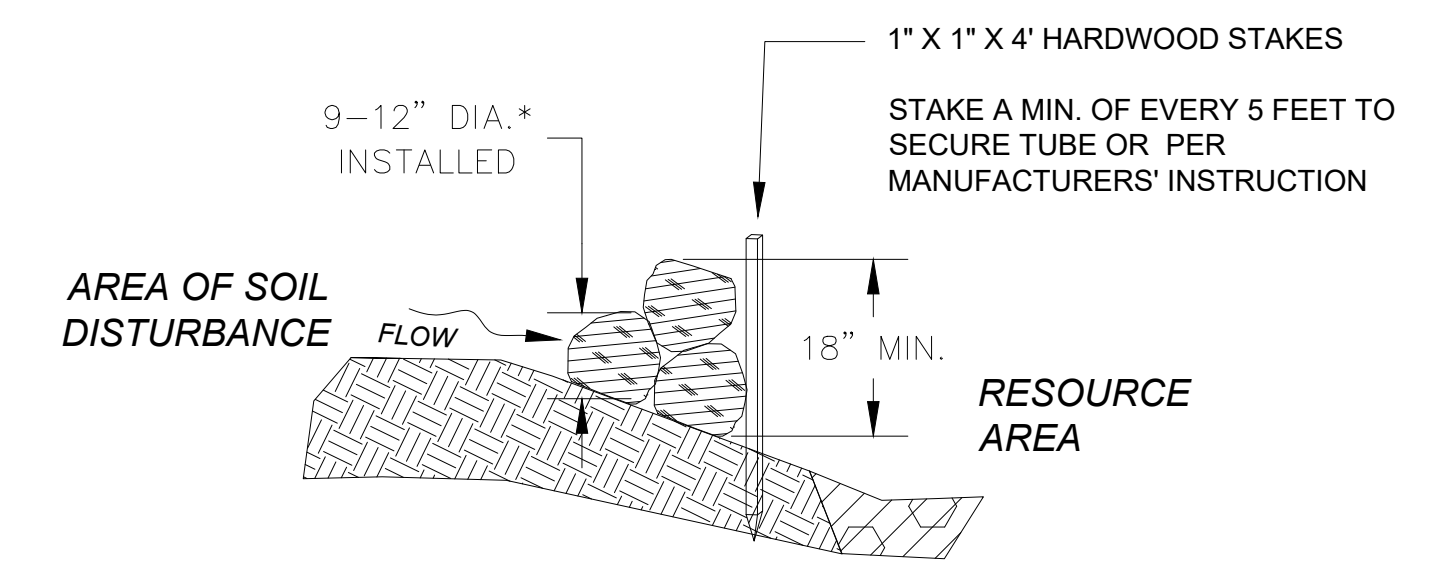
SECTION - TRUNK ARMORING & PRUNING



SECTION
COMPOST FILTER TUBE & SILT FENCE
NOT TO SCALE

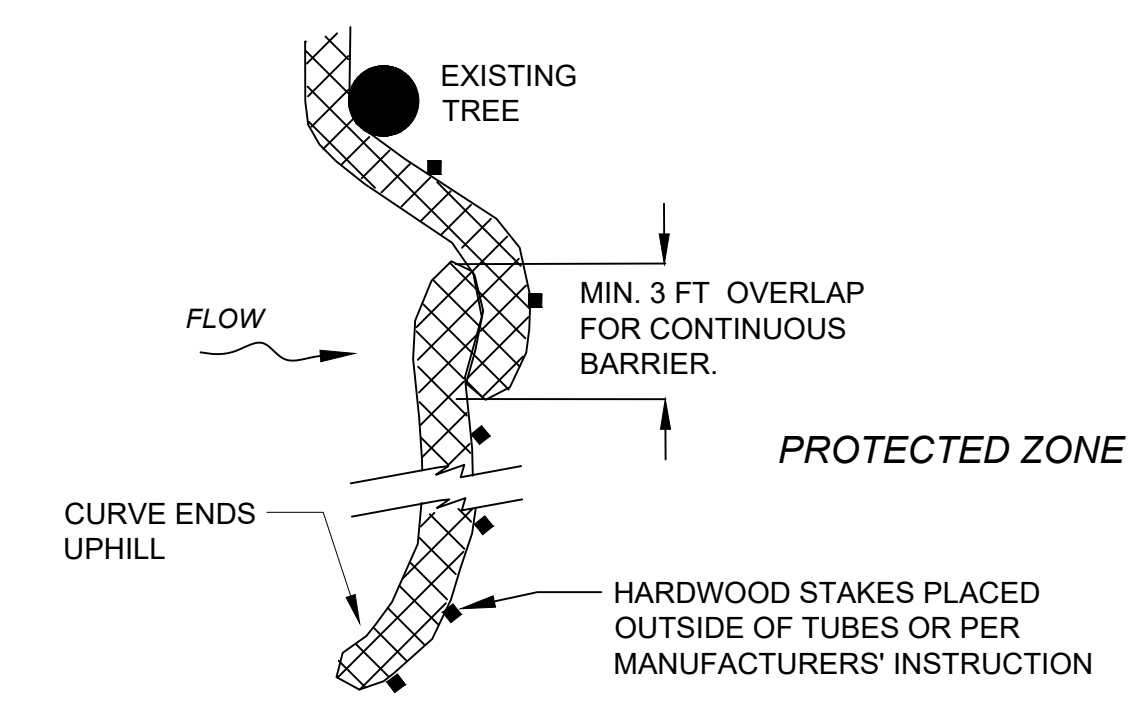


PLAN VIEW



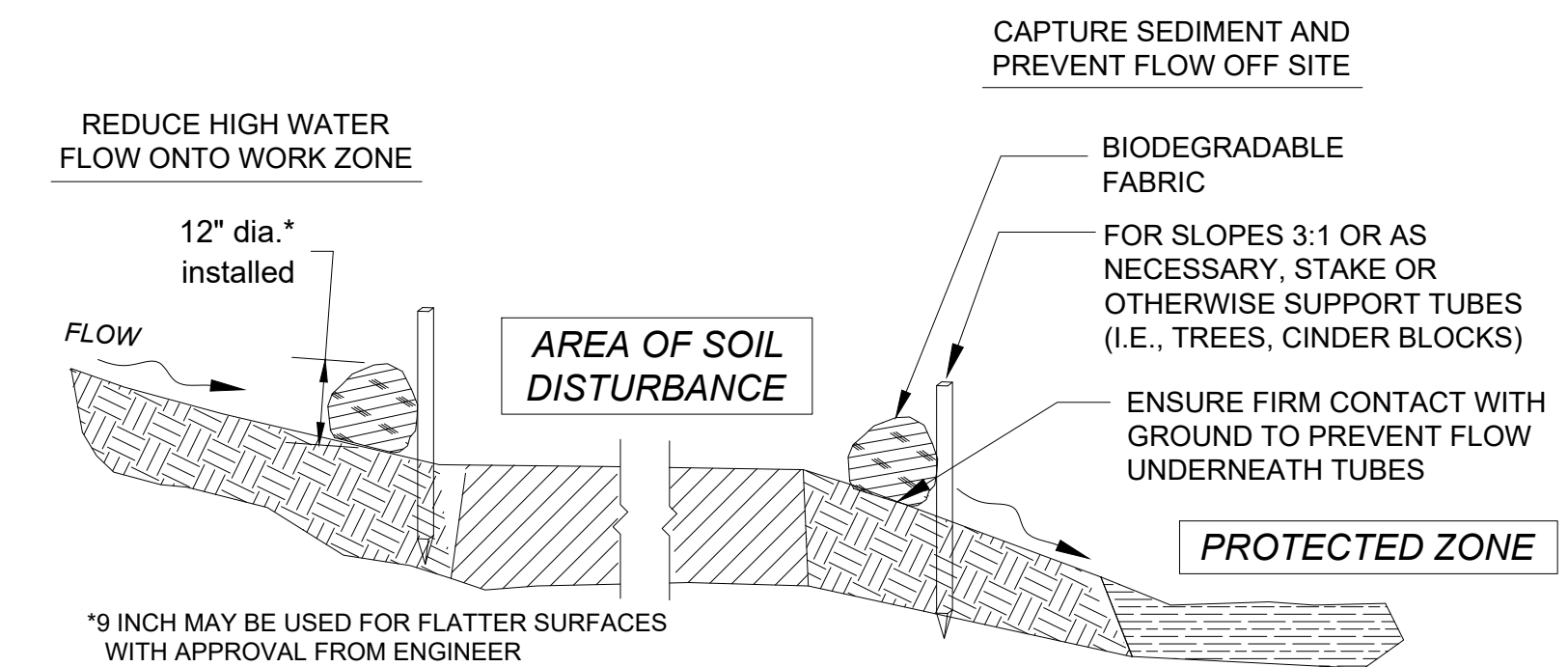
SECTION
COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)
NOT TO SCALE

TREE PROTECTION - ROOT ZONE
NOT TO SCALE



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

PLAN VIEW



SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBE
NOT TO SCALE

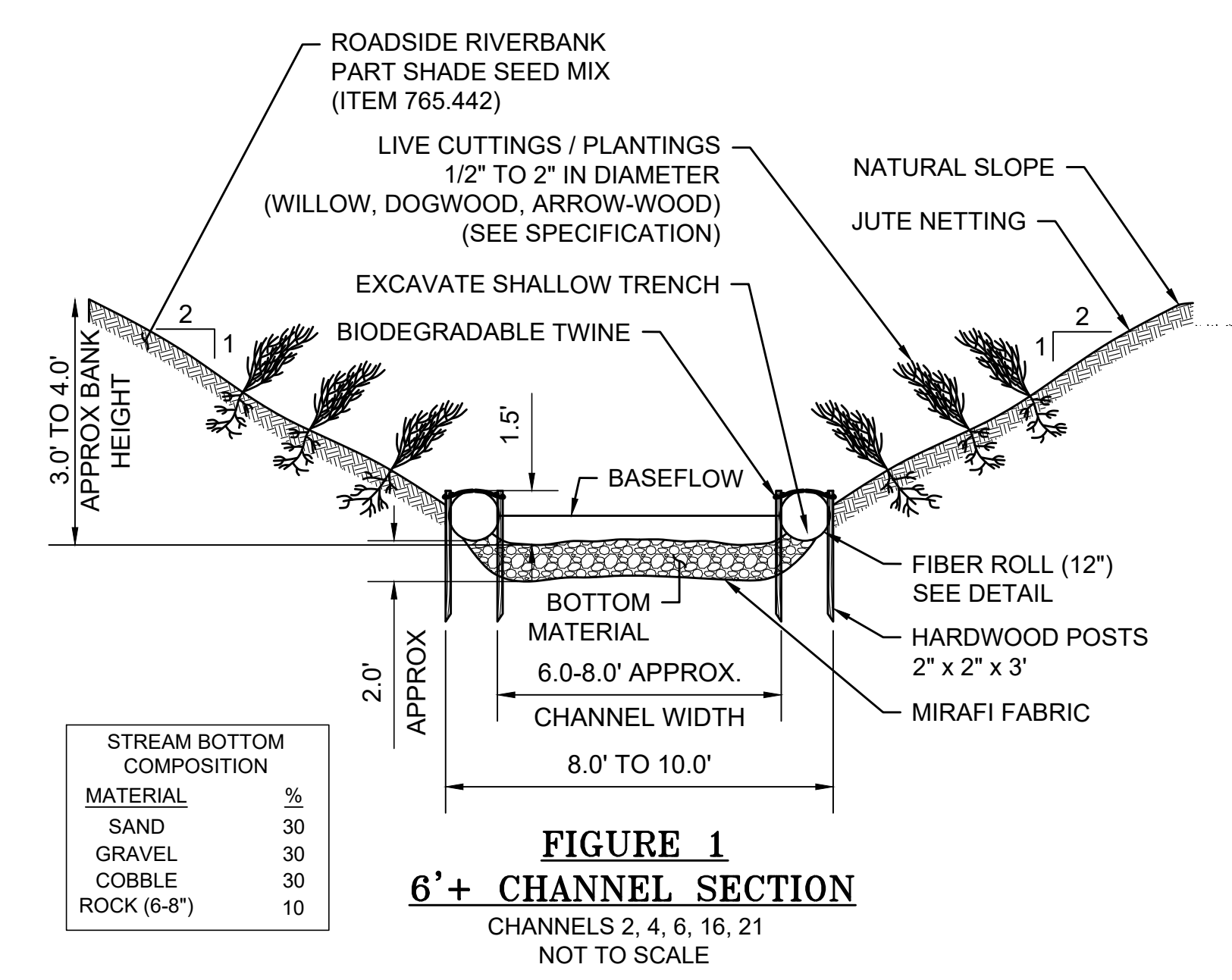


FIGURE 1
6'+ CHANNEL SECTION
CHANNELS 2, 4, 6, 16, 21
NOT TO SCALE

STREAM BOTTOM COMPOSITION	
MATERIAL	%
SAND	30
GRAVEL	30
COBBLE	30
ROCK (6-8")	10

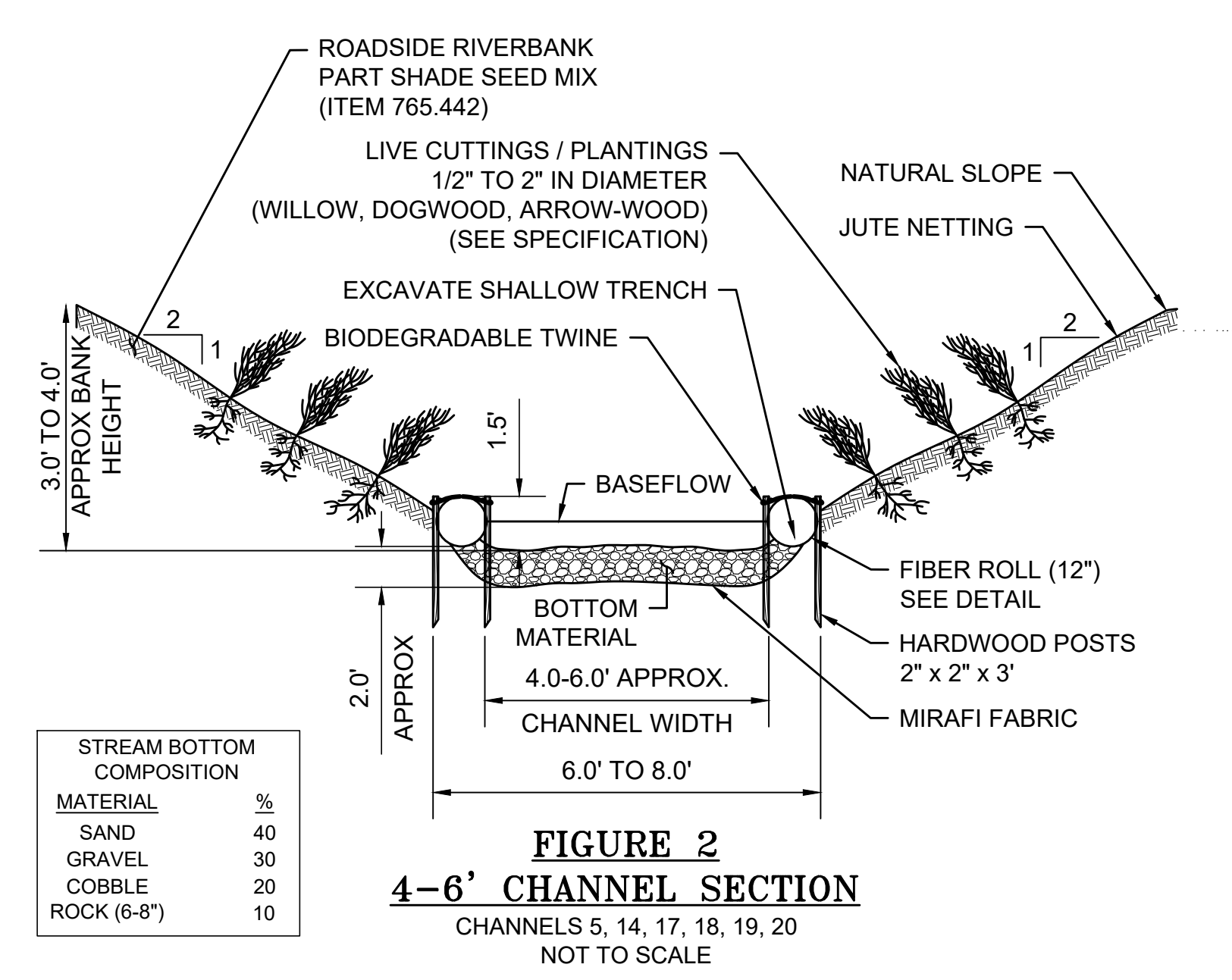


FIGURE 2
4-6' CHANNEL SECTION
CHANNELS 5, 14, 17, 18, 19, 20
NOT TO SCALE

STREAM BOTTOM COMPOSITION	
MATERIAL	%
SAND	40
GRAVEL	30
COBBLE	20
ROCK (6-8")	10

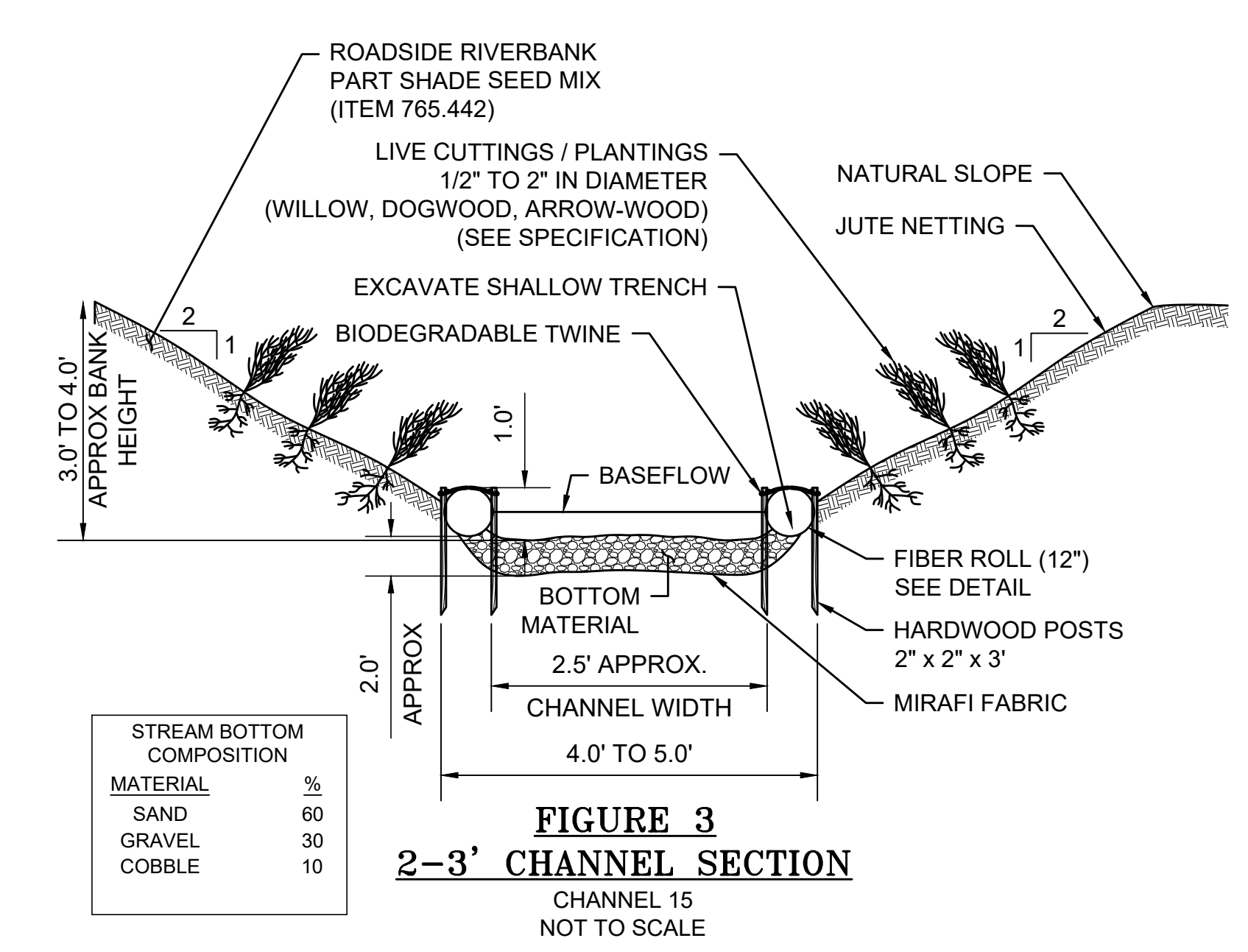
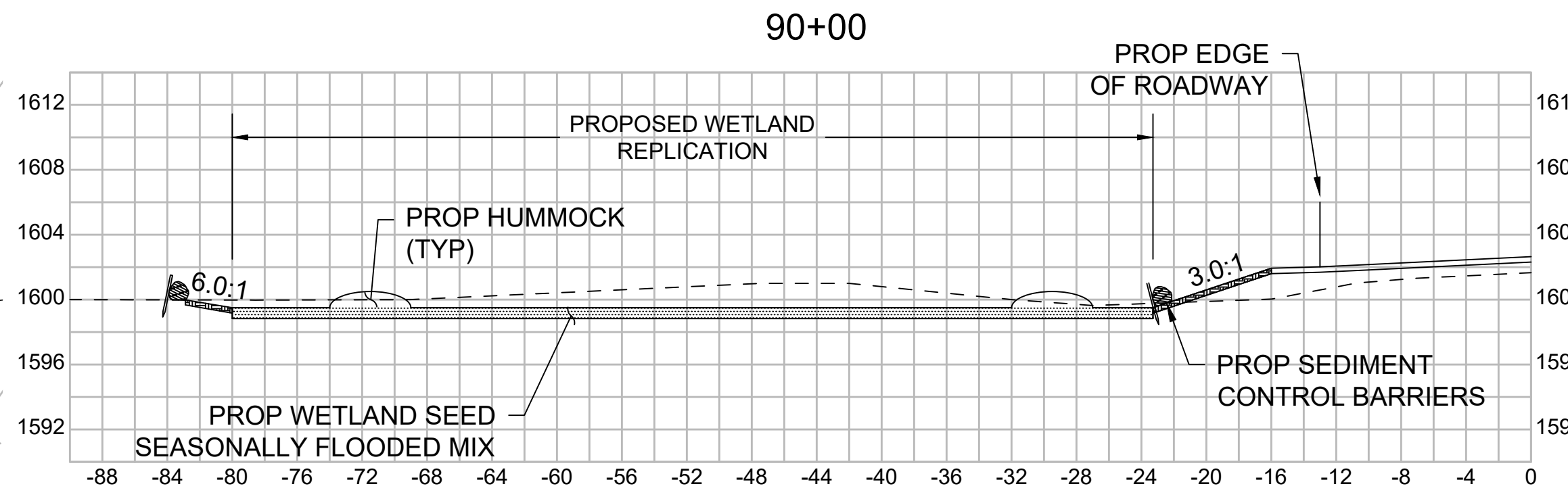
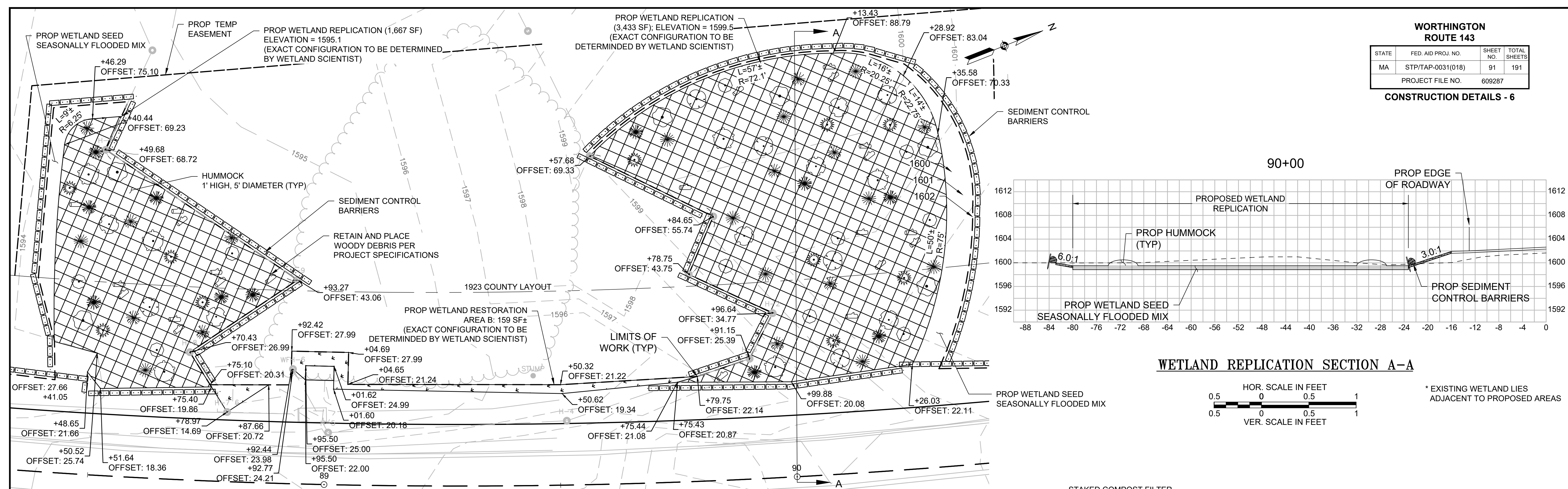
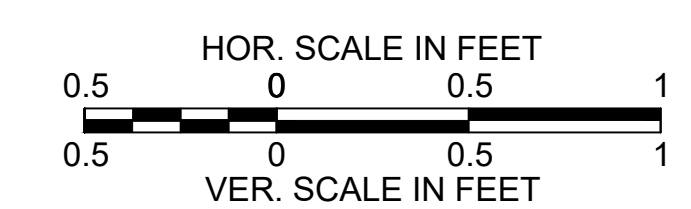


FIGURE 3
2-3' CHANNEL SECTION
CHANNEL 15
NOT TO SCALE

STREAM BOTTOM COMPOSITION	
MATERIAL	%
SAND	60
GRAVEL	30
COBBLE	10



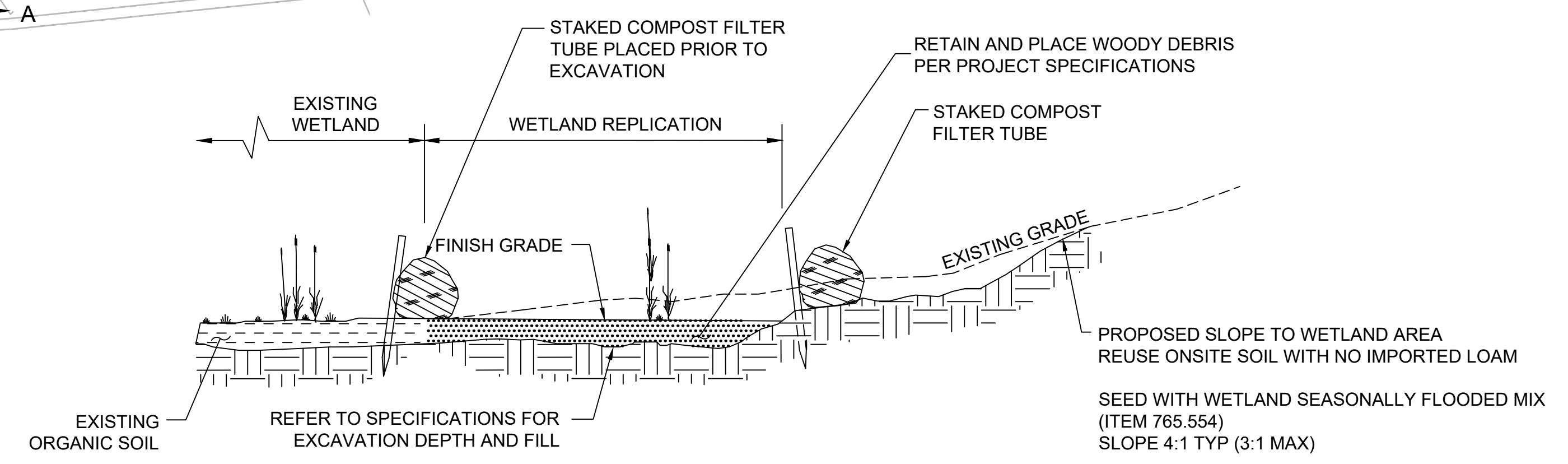
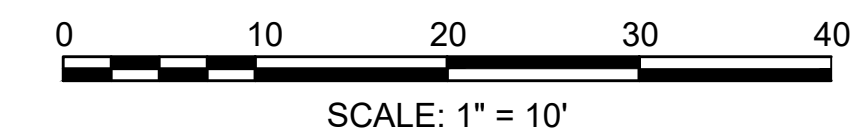
WETLAND REPLICATION SECTION A-A



* EXISTING WETLAND LIES ADJACENT TO PROPOSED AREAS

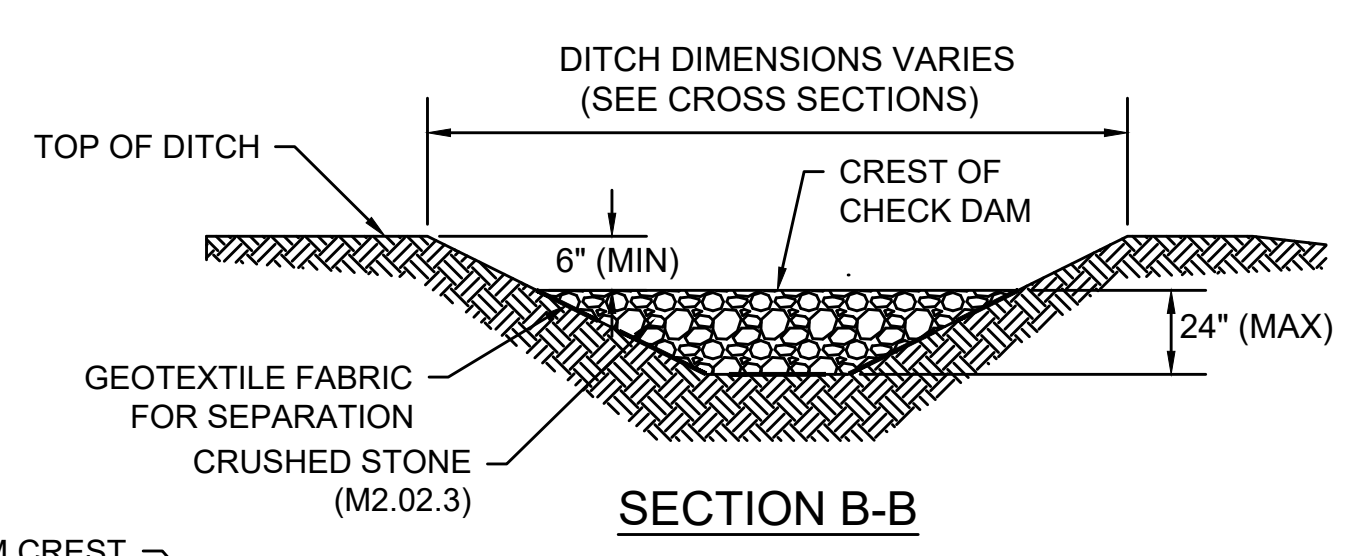
NOTE: ADJUSTMENTS IN THE FIELD AFTER PERMITTING IS APPROVED WILL REQUIRE MASSDOT APPROVAL.

**WETLAND H REPLICATION/RESTORATION AREA
STA 89+50 LT OLD NORTH ROAD**

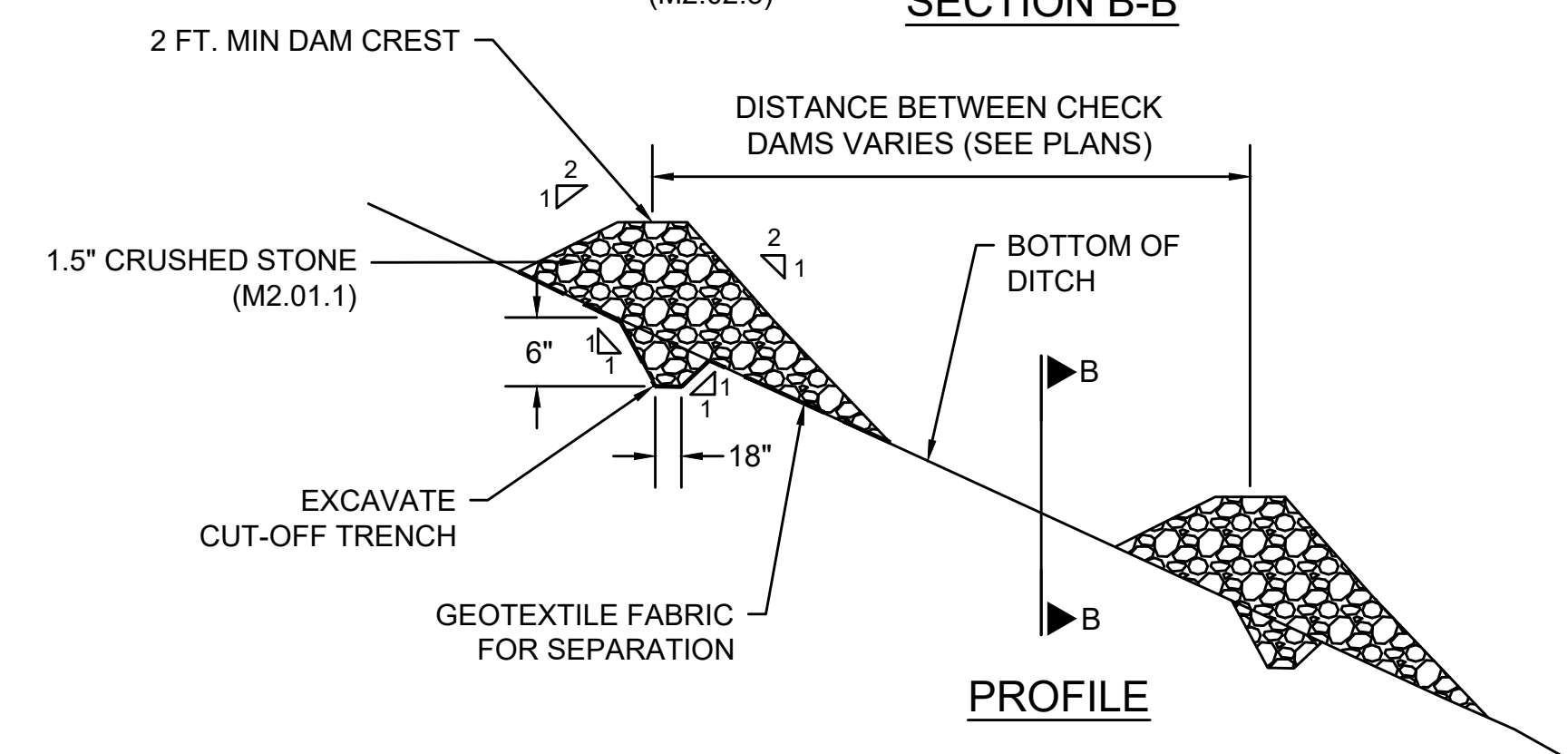


WETLAND REPLICATION DETAIL

NOT TO SCALE



SECTION B-B



PROFILE

STONE CHECK DAM

NOT TO SCALE

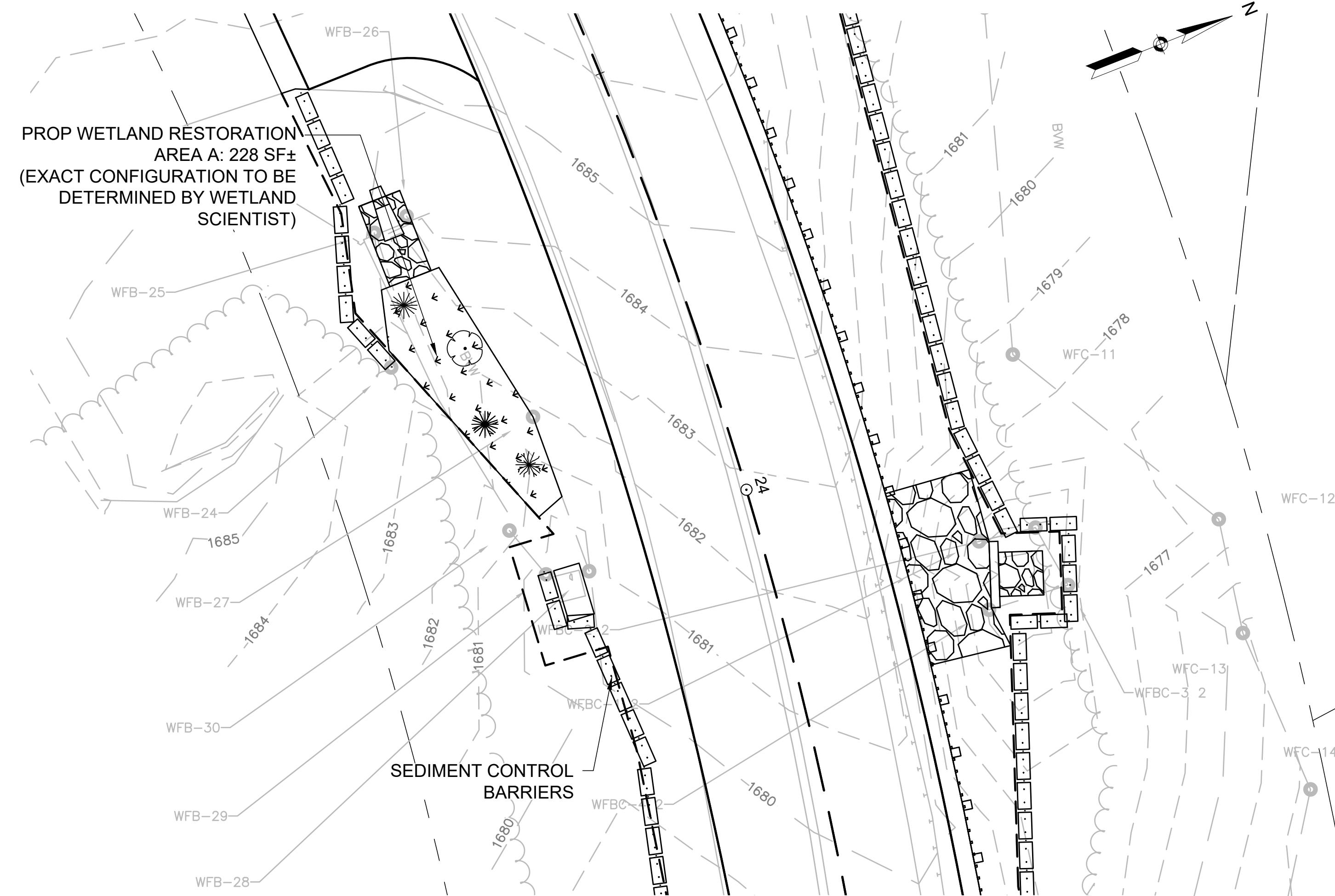
WETLAND H REPLICATION PLANTING PLAN

WETLAND H REPLICATION PLANTING PLAN					
TREES / SHRUBS					
COMMON NAME	LATIN NAME	STATUS	PLANTING DENSITY/COMMENTS	SIZE	AMOUNT
RED MAPLE	Acer Rubrum	FAC	1 PLANT/225 SF - PROVIDES FOOD, SHELTER, AND NESTING FOR WILDLIFE	48"-60" HT	6
YELLOW BIRCH	Betula alleghaniensis	FAC	1 PLANT/225 SF - PROVIDES FOOD, SHELTER, AND NESTING FOR WILDLIFE	48"-60" HT	6
GREEN ASH	Fraxinus pennsylvanica	FACW	1 PLANT/225 SF - PROVIDES FOOD, SHELTER, AND NESTING FOR WILDLIFE	48"-60" HT	6
SLIPPERY ELM	Ulmus rubra	FAC	1 PLANT/225 SF - PROVIDES FOOD, SHELTER, AND NESTING FOR WILDLIFE	48"-60" HT	6
NORTHERN ARROW-WOOD	Viburnum dentatum	FAC	1 PLANT/100 SF - PROVIDES FOOD AND COVER FOR WILDLIFE	24"-36" HT	11
HIGHBUSH BLUEBERRY	Vaccinium corymbosum	FACW-	1 PLANT/100 SF - PROVIDES FOOD, COVER, AND NESTING FOR WILDLIFE	24"-36" HT	11
SILKY DOGWOOD	Cornus amomum	FACW	1 PLANT/100 SF - PROVIDES FOOD, COVER, AND NESTING FOR WILDLIFE	24"-36" HT	10
COMMON WINTERBERRY	Ilex verticillata	FACW+	1 PLANT/100 SF - PROVIDES FOOD, COVER, AND NESTING FOR WILDLIFE	24"-36" HT	10
SPECKLED ALDER	Alnus rugosa	FACW+	1 PLANT/100 SF - PROVIDES FOOD, COVER, AND NESTING FOR WILDLIFE	24"-36" HT	10
GROUND COVER					
WETLAND SEED - SEASONALLY FLOODED MIX			SPECIES AND INDICATOR STATUS VARIABLE (1 LB / 2,175 FT ²)		2.0 LBS

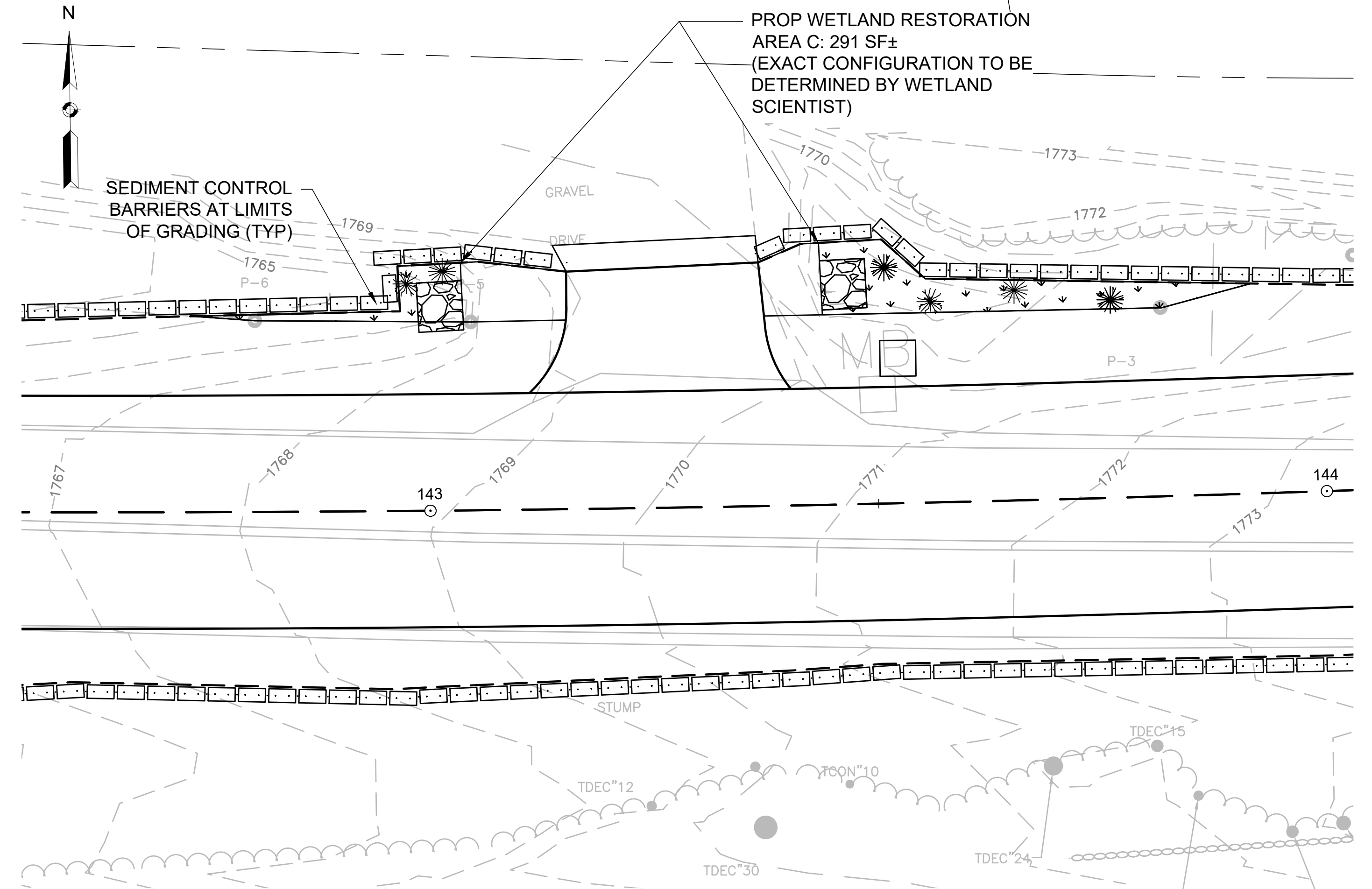
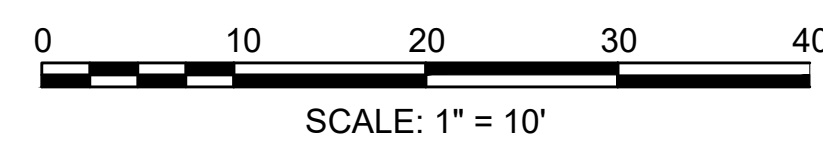
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	92	191
PROJECT FILE NO. 609287			

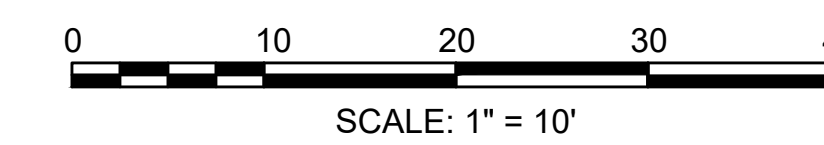
CONSTRUCTION DETAILS - 7



**AREA A: WETLAND B RESTORATION
STA 23+75 RT OLD NORTH ROAD**



**AREA C: WETLAND P RESTORATION
STA 143+50 LT OLD NORTH ROAD**



WETLAND B RESTORATION PLANTING PLAN

TREES/SHRUBS

COMMON NAME	LATIN NAME	STATUS	PLANTING DENSITY/COMMENTS	SIZE	AMOUNT
YELLOW BIRCH	Betula alleghaniensis	FAC	1 PLANT/225 SF - PROVIDES FOOD, SHELTER, AND NESTING FOR WILDLIFE	48"-60" HT	1
NOTHERN ARROW-WOOD	Viburnum dentatum	FAC	1 PLANT/225 SF - PROVIDES FOOD AND COVER FOR WILDLIFE	24"-36" HT	1
HIGHBUSH BLUEBERRY	Vaccinium corymbosum	FACW-	1 PLANT/225 SF - PROVIDES FOOD, COVER, AND NESTING FOR WILDLIFE	24"-36" HT	1
SILKY DOGWOOD	Cornus amomum	FACW	1 PLANT/225 SF - PROVIDES FOOD, COVER, AND NESTING FOR WILDLIFE	24"-36" HT	1

GROUND COVER

WETLAND SEED - RIPARIAN MIX	SPECIES AND INDICATOR STATUS VARIABLE (1 LB / 2,175 FT2)		0.05 LBS
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WETLAND P RESTORATION PLANTING PLAN

TREES/SHRUBS

COMMON NAME	LATIN NAME	STATUS	PLANTING DENSITY/COMMENTS	SIZE	AMOUNT
YELLOW BIRCH	Betula alleghaniensis	FAC	1 PLANT/225 SF - PROVIDES FOOD, SHELTER, AND NESTING FOR WILDLIFE	48"-60" HT	1
NOTHERN ARROW-WOOD	Viburnum dentatum	FAC	1 PLANT/225 SF - PROVIDES FOOD AND COVER FOR WILDLIFE	24"-36" HT	1
HIGHBUSH BLUEBERRY	Vaccinium corymbosum	FACW-	1 PLANT/225 SF - PROVIDES FOOD, COVER, AND NESTING FOR WILDLIFE	24"-36" HT	2
SILKY DOGWOOD	Cornus amomum	FACW	1 PLANT/225 SF - PROVIDES FOOD, COVER, AND NESTING FOR WILDLIFE	24"-36" HT	2

GROUND COVER

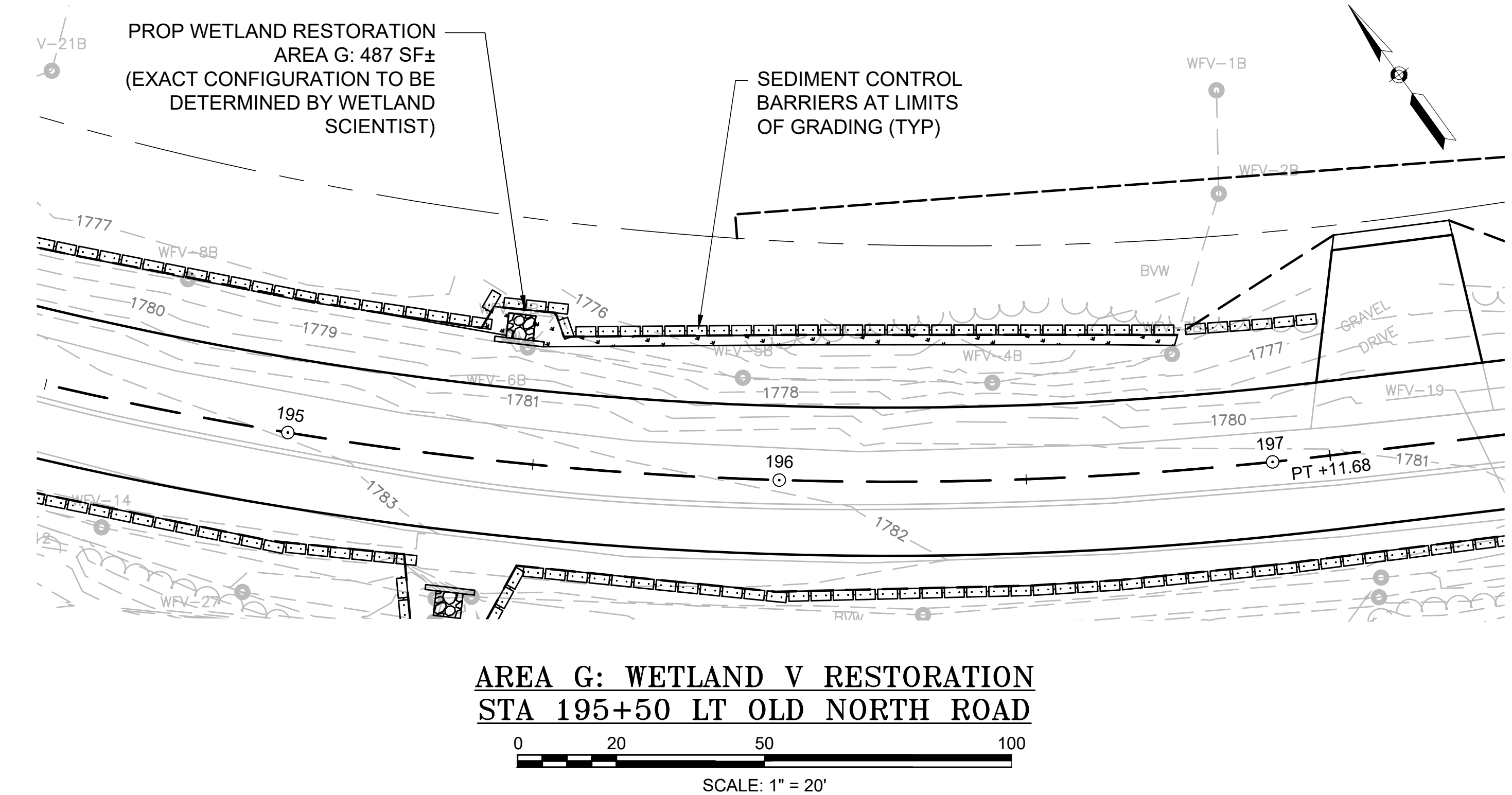
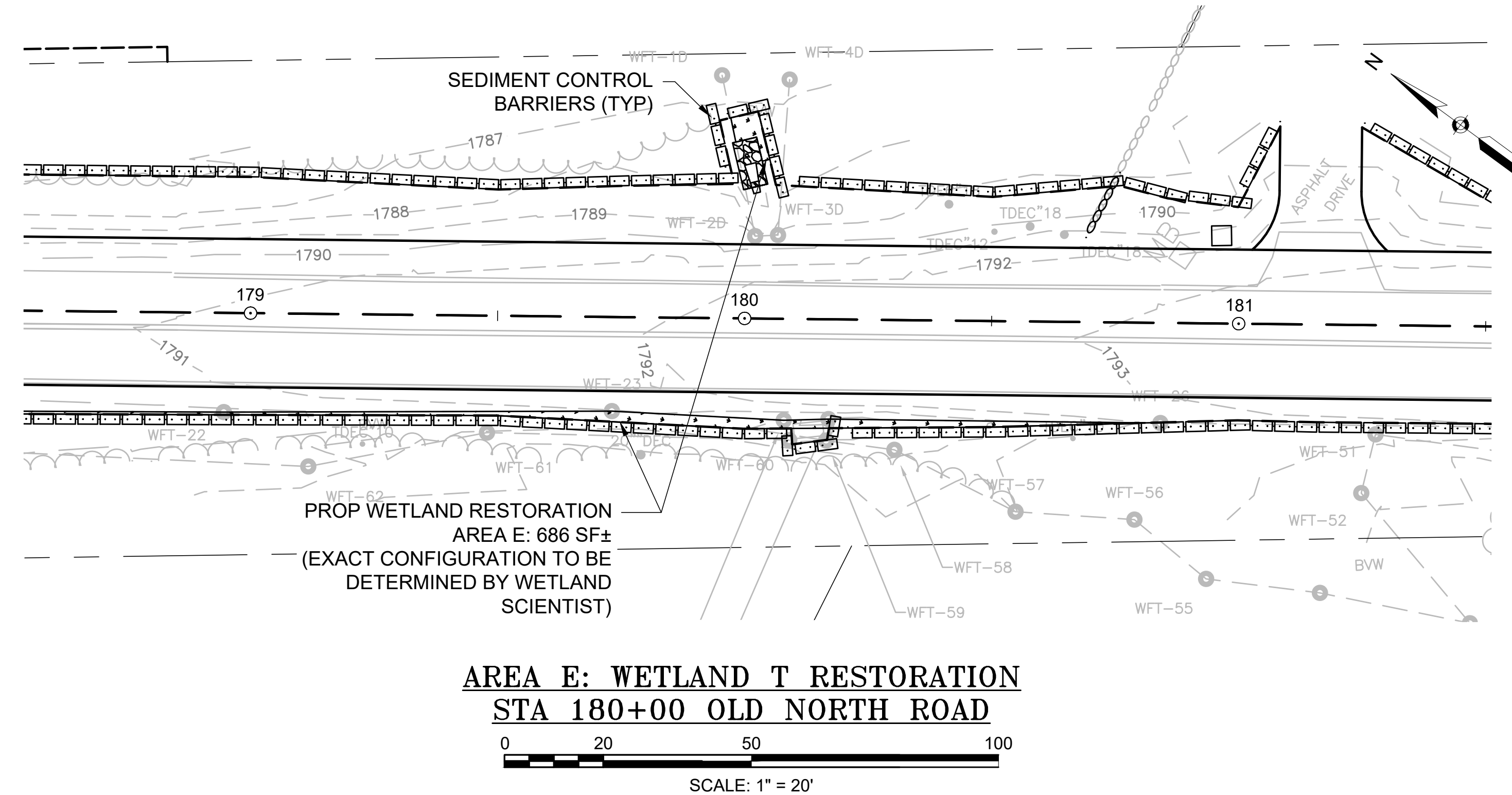
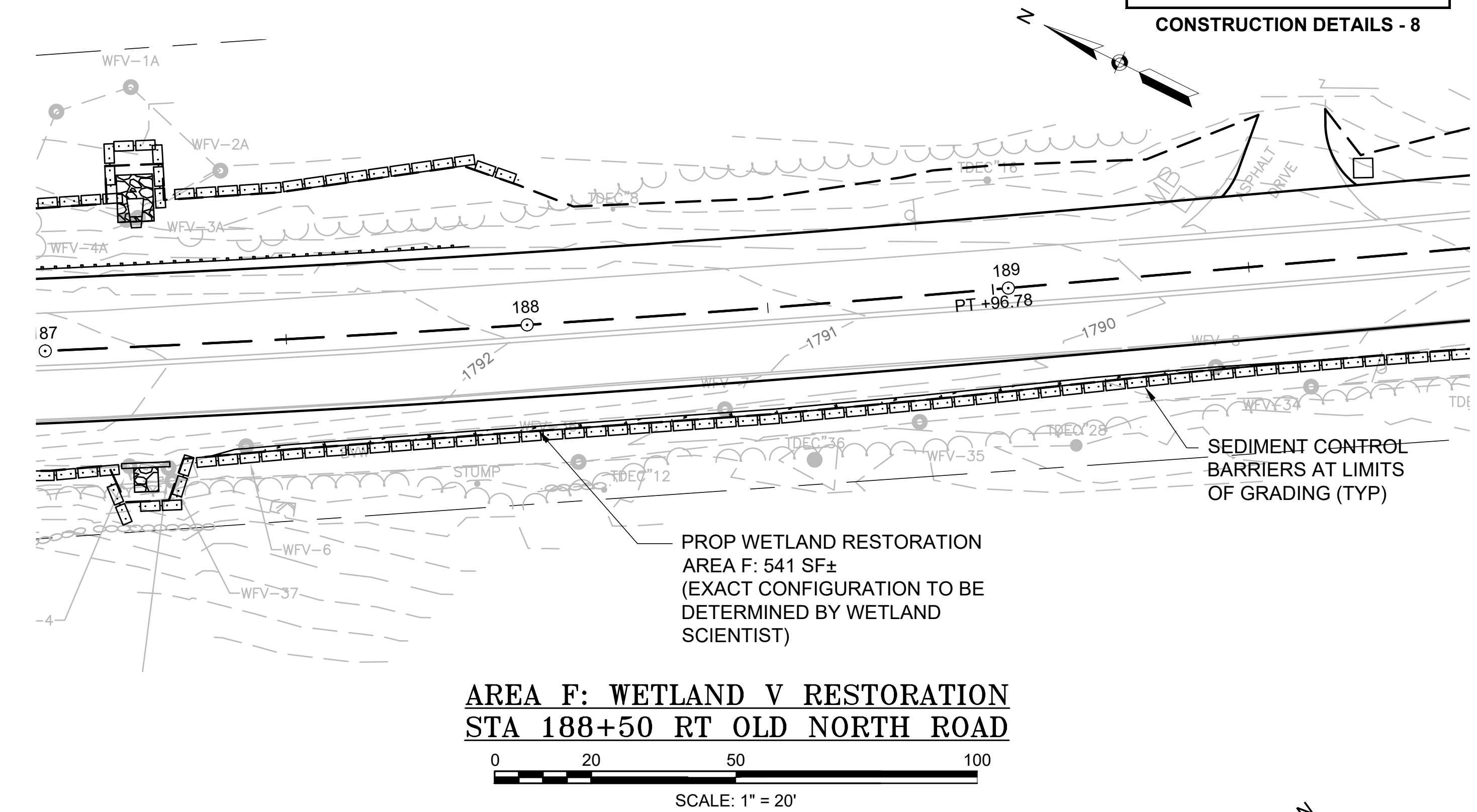
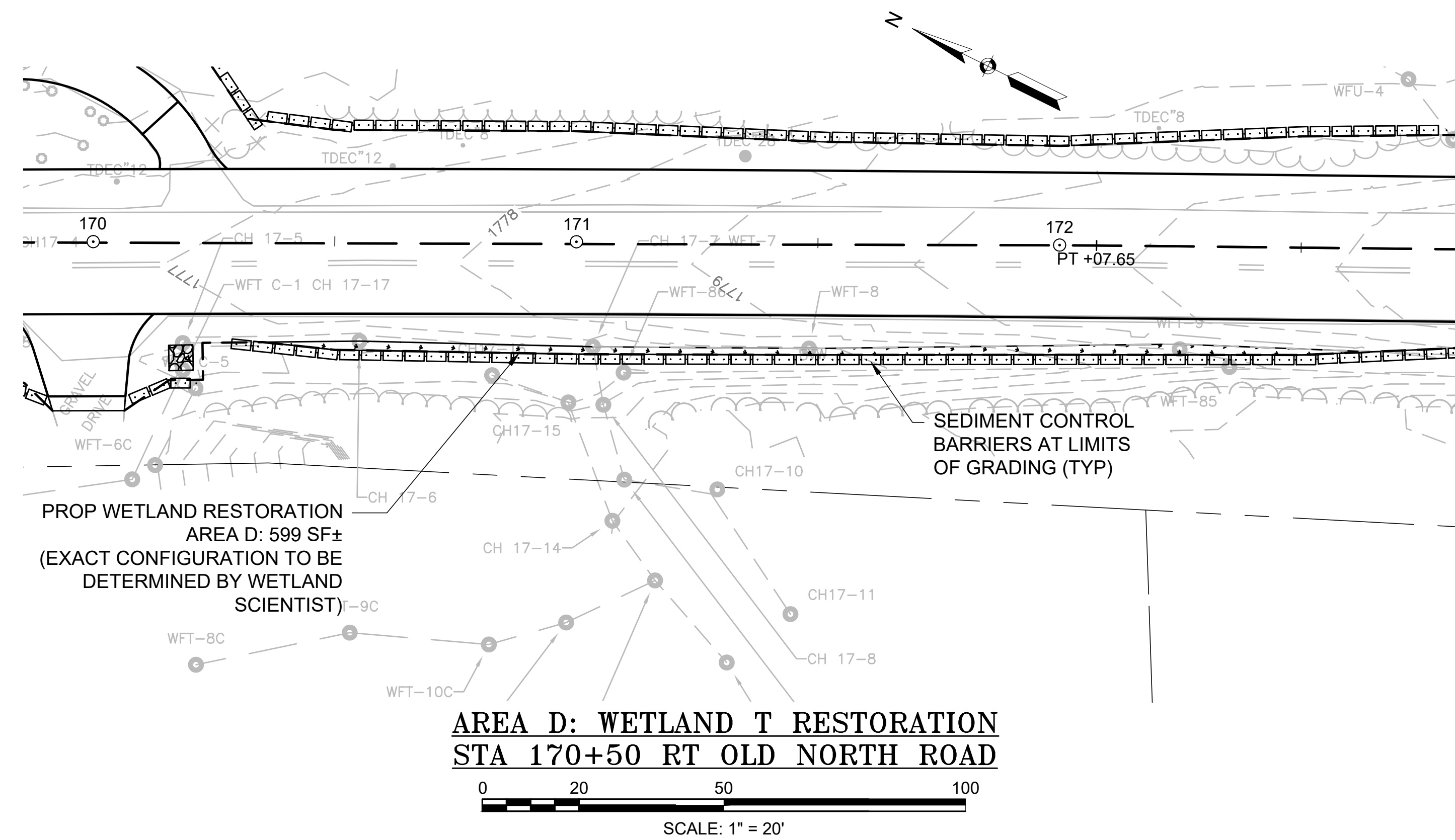
WETLAND SEED - RIPARIAN MIX	SPECIES AND INDICATOR STATUS VARIABLE (1 LB / 2,175 FT2)		0.15 LBS
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NOTE: ADJUSTMENTS IN THE FIELD AFTER PERMITTING IS APPROVED WILL REQUIRE MASSDOT APPROVAL.

**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	93	191
PROJECT FILE NO.		609287	

CONSTRUCTION DETAILS - 8



WETLAND T RESTORATION PLANTING PLAN

GROUND COVER			
COMMON NAME	PLANTING DENSITY/COMMENTS	KEY	AMOUNT
WETLAND SEED - RIPARIAN MIX	SPECIES AND INDICATOR STATUS VARIABLE (1 LB / 2,175 FT ²)	•••••	0.1 LBS
ROADSIDE RIVERBANK - PART SHADE SEED MIX	SPECIES AND INDICATOR STATUS VARIABLE (1 LB / 2,175 FT ²)	-	0.1 LBS

WETLAND T RESTORATION PLANTING PLAN

GROUND COVER			
COMMON NAME	PLANTING DENSITY/COMMENTS	KEY	AMOUNT
WETLAND SEED - RIPARIAN MIX	SPECIES AND INDICATOR STATUS VARIABLE (1 LB / 2,175 FT ²)	•••••	0.5 LBS
ROADSIDE RIVERBANK - PART SHADE SEED MIX	SPECIES AND INDICATOR STATUS VARIABLE (1 LB / 2,175 FT ²)	-	0.5 LBS

NOTE: ADJUSTMENTS IN THE FIELD AFTER PERMITTING IS APPROVED WILL REQUIRE MASSDOT APPROVAL.

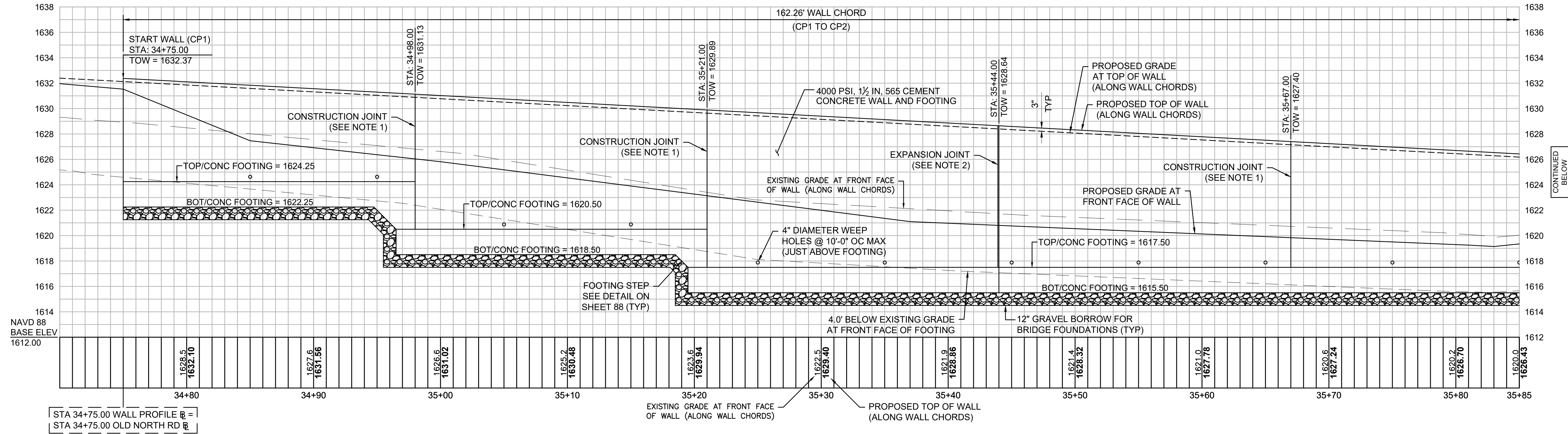
- NOTES:
- FOR CONSTRUCTION JOINT DETAILS AND EXPANSION JOINT DETAILS, SEE CONSTRUCTION DETAIL SHEET 89.
 - THE WALL IS TO BE CONSTRUCTED ON CHORDS, SEE WALL PROFILES AND RETAINING WALL DETAIL/TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
 - FOR WALL FOOTING DIMENSIONS, SEE DETAIL AND TABLES ON CONSTRUCTION DETAIL SHEET 88.

**WORTHINGTON
ROUTE 143**

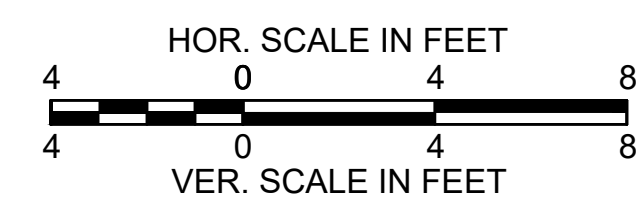
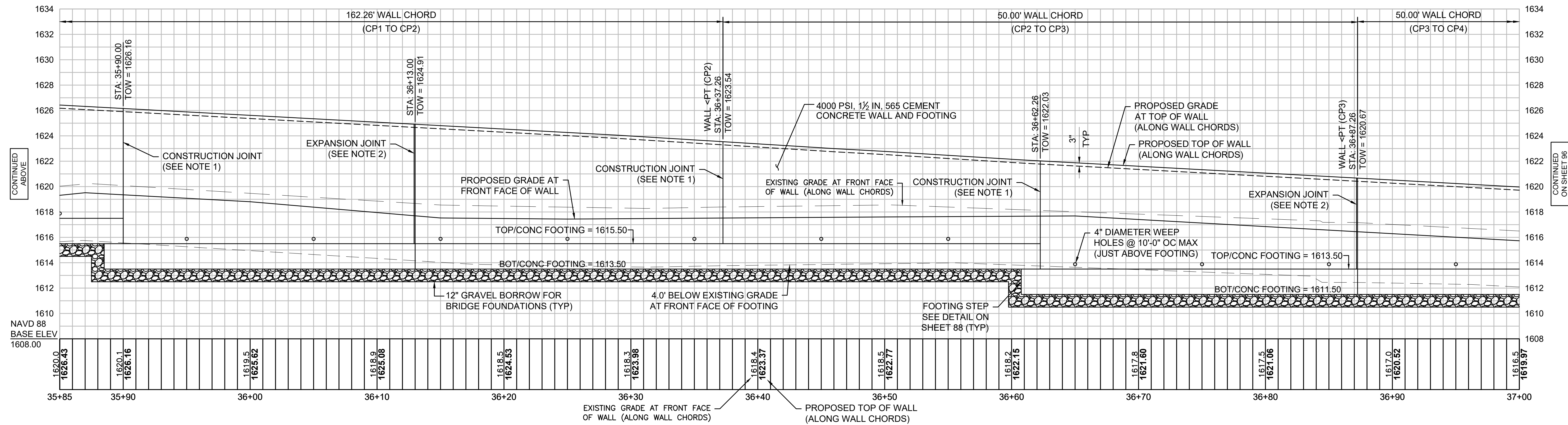
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	95	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
RETAINING WALL PROFILE - 1**

**WALL #1 (OLD NORTH ROAD)
STA 34+75 RT TO STA 38+85 RT**



**WALL #1 (OLD NORTH ROAD)
STA 34+75 RT TO STA 38+85 RT**



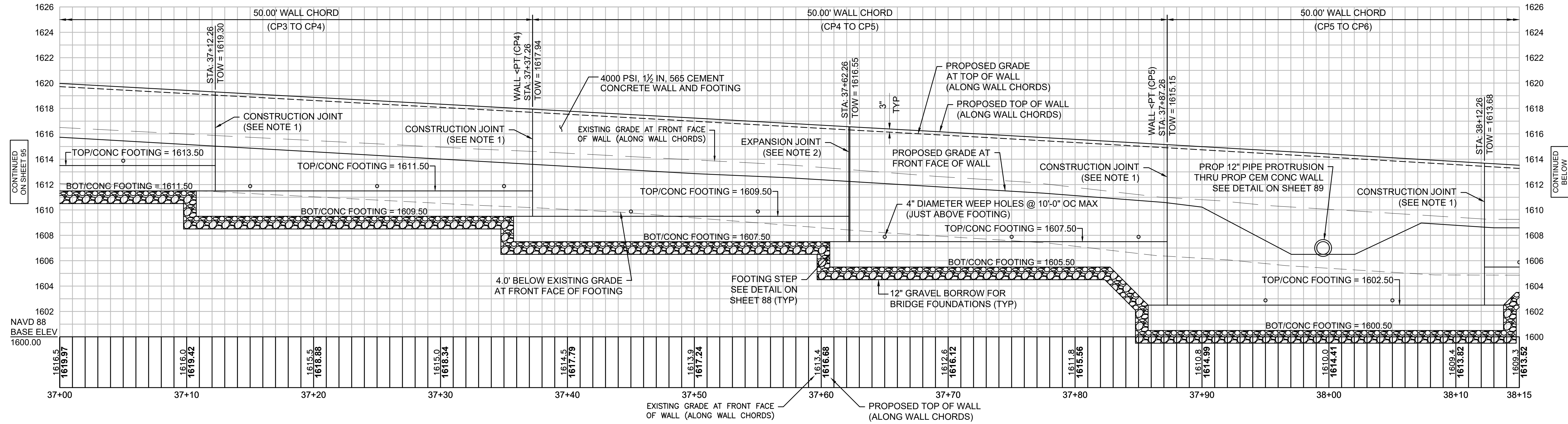
- NOTES:
- FOR CONSTRUCTION JOINT DETAILS AND EXPANSION JOINT DETAILS, SEE CONSTRUCTION DETAIL SHEET 89.
 - THE WALL IS TO BE CONSTRUCTED ON CHORDS, SEE WALL PROFILES AND RETAINING WALL DETAIL/TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
 - FOR WALL FOOTING DIMENSIONS, SEE DETAIL AND TABLES ON CONSTRUCTION DETAIL SHEET 88.

**WORTHINGTON
ROUTE 143**

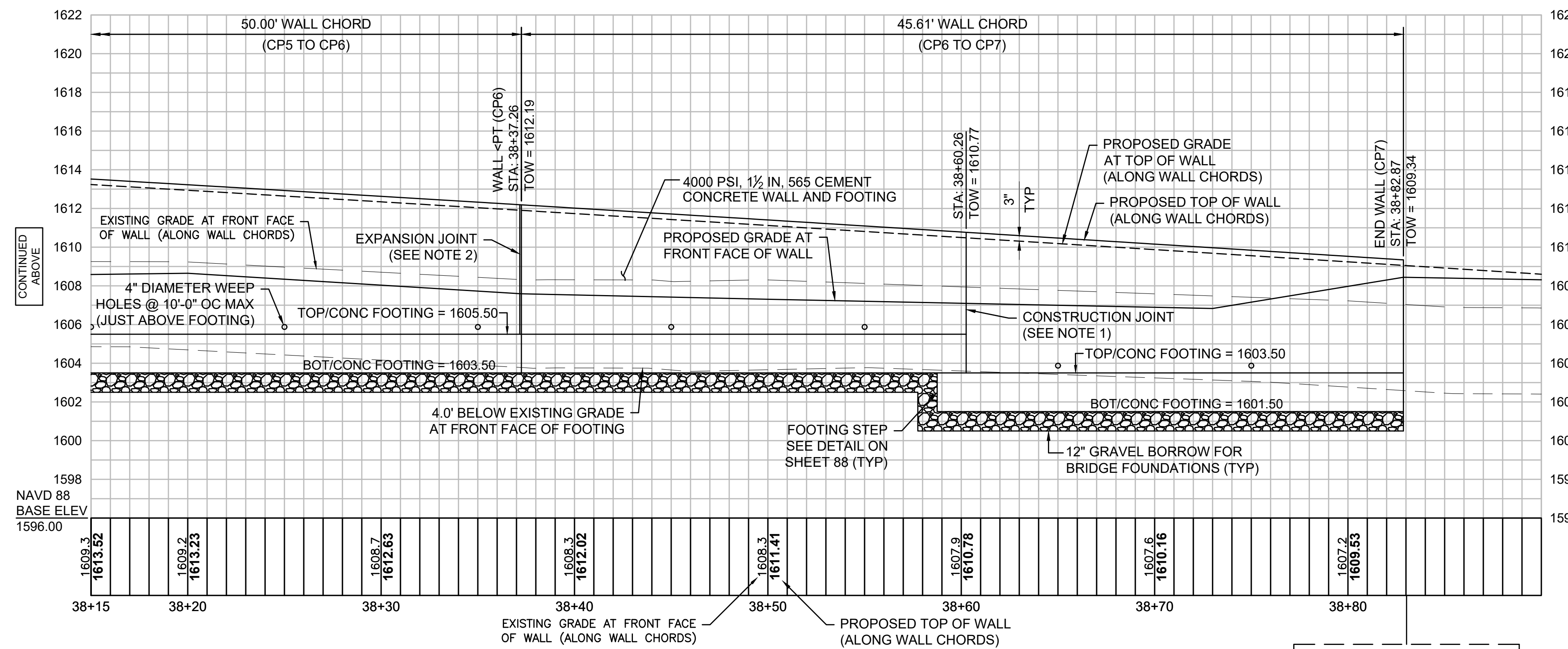
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	96	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
RETAINING WALL PROFILE - 2**

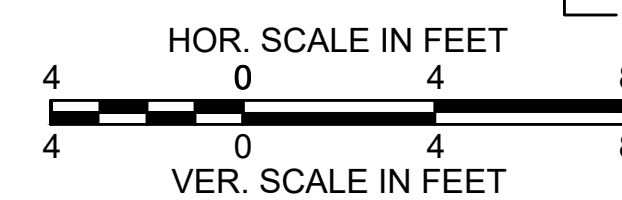
**WALL #1 (OLD NORTH ROAD)
STA 34+75 RT TO STA 38+85 RT**



**WALL #1 (OLD NORTH ROAD)
STA 34+75 RT TO STA 38+85 RT**



STA 38+83.03 WALL PROFILE @ =
STA 38+85.00 OLD NORTH RD @



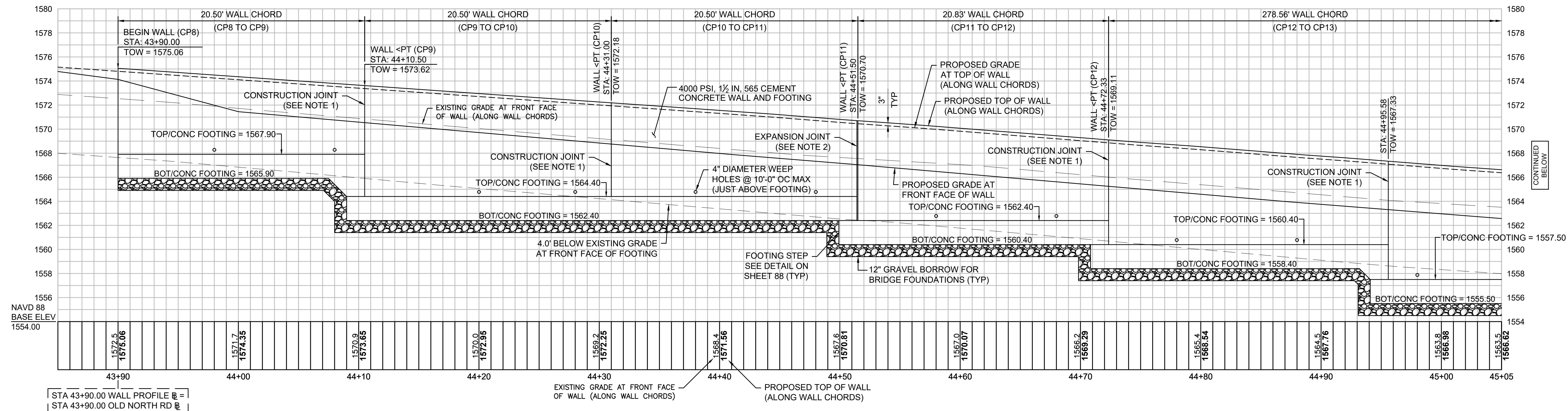
- NOTES:
- FOR CONSTRUCTION JOINT DETAILS AND EXPANSION JOINT DETAILS, SEE CONSTRUCTION DETAIL SHEET 89.
 - THE WALL IS TO BE CONSTRUCTED ON CHORDS, SEE WALL PROFILES AND RETAINING WALL DETAIL/TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
 - FOR WALL FOOTING DIMENSIONS, SEE DETAIL AND TABLES ON CONSTRUCTION DETAIL SHEET 88.

**WORTHINGTON
ROUTE 143**

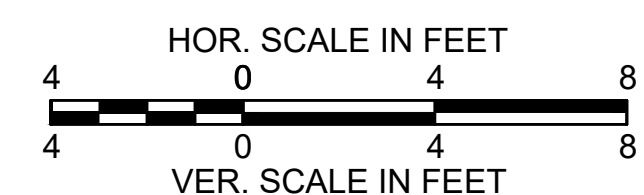
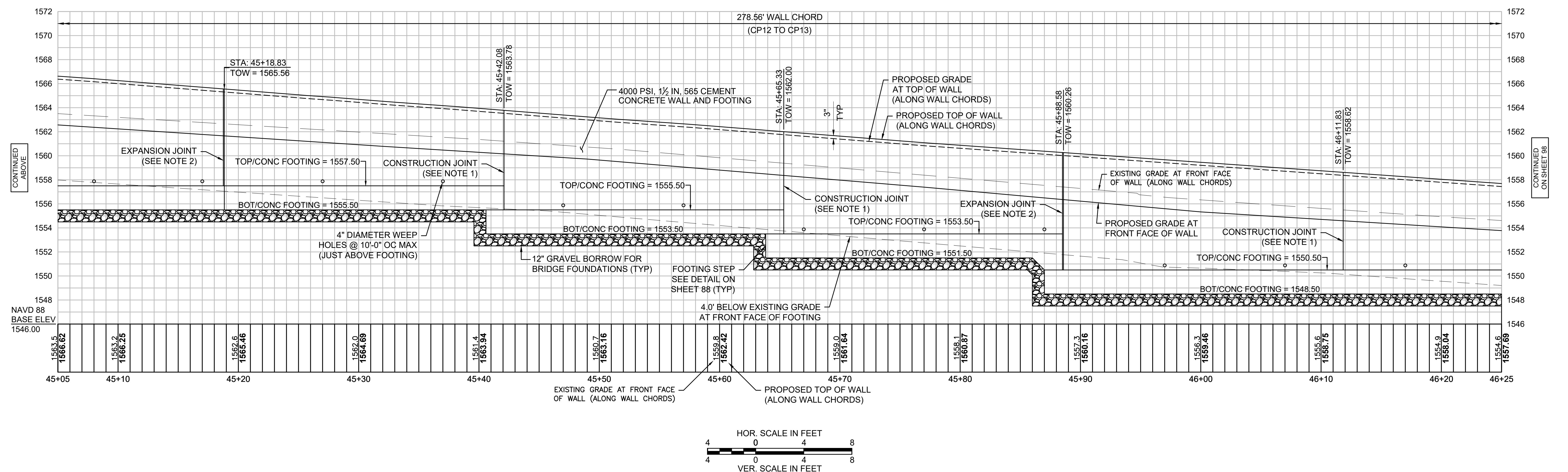
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	97	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
RETAINING WALL PROFILE - 3**

**WALL #2 (OLD NORTH ROAD)
STA 43+90 RT TO STA 47+50 RT**



**WALL #2 (OLD NORTH ROAD)
STA 43+90 RT TO STA 47+50 RT**



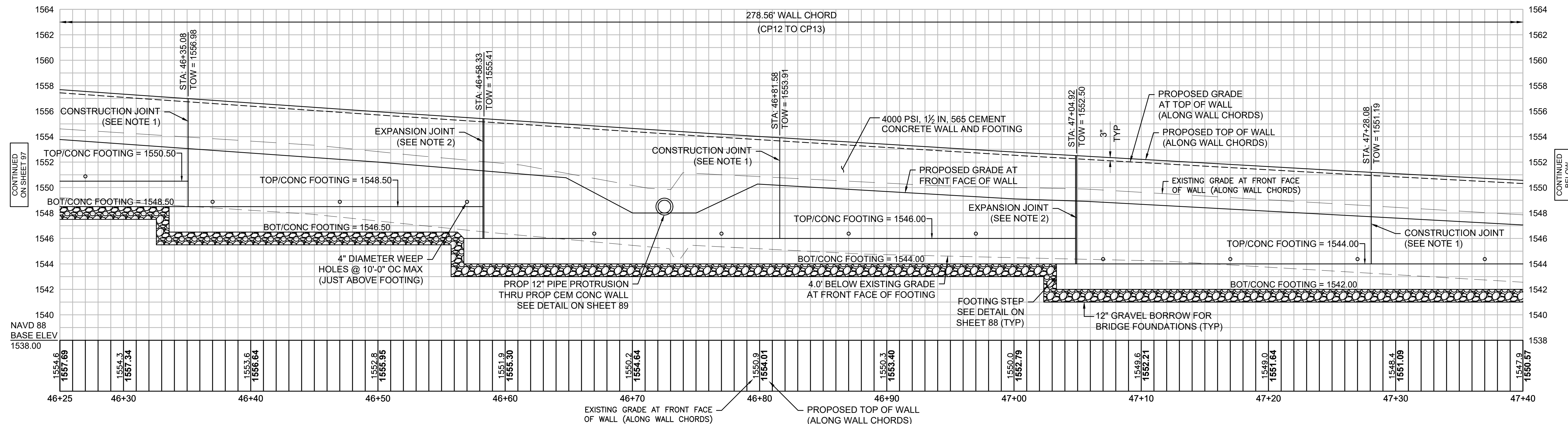
- NOTES:
- FOR CONSTRUCTION JOINT DETAILS AND EXPANSION JOINT DETAILS, SEE CONSTRUCTION DETAIL SHEET 89.
 - THE WALL IS TO BE CONSTRUCTED ON CHORDS, SEE WALL PROFILES AND RETAINING WALL DETAIL/TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
 - FOR WALL FOOTING DIMENSIONS, SEE DETAIL AND TABLES ON CONSTRUCTION DETAIL SHEET 88.

**WORTHINGTON
ROUTE 143**

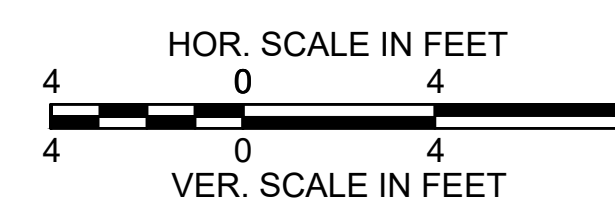
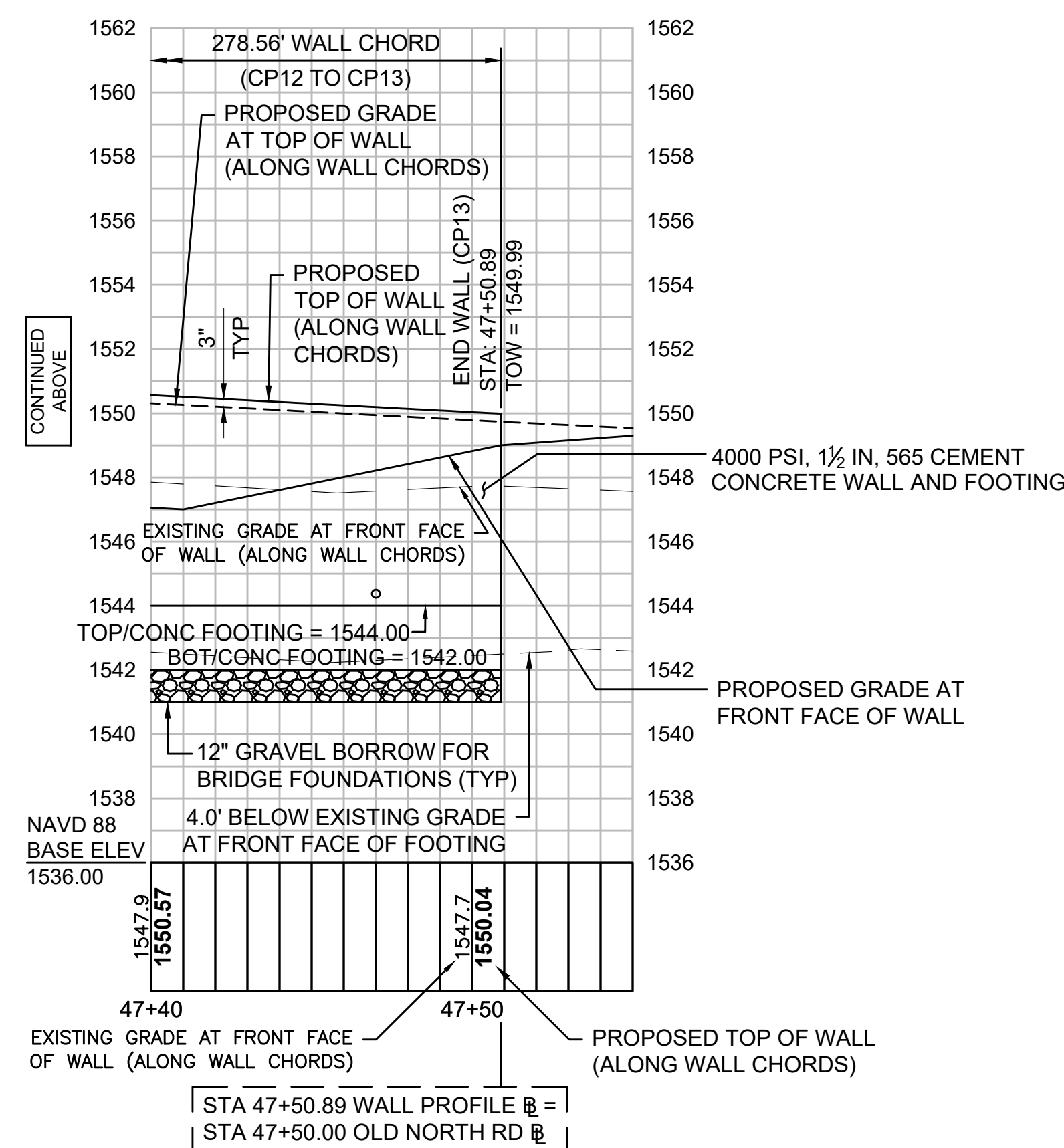
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	98	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
RETAINING WALL PROFILE - 4**

**WALL #2 (OLD NORTH ROAD)
STA 43+90 RT TO STA 47+50 RT**



**WALL #2 (OLD NORTH ROAD)
STA 43+90 RT TO STA 47+50 RT**

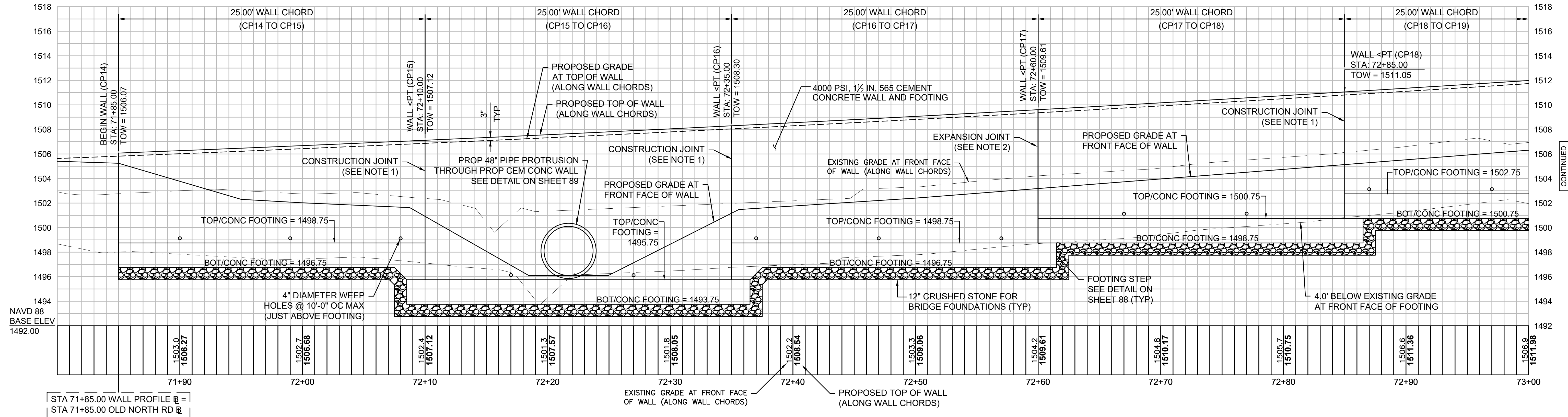


- NOTES:
- FOR CONSTRUCTION JOINT DETAILS AND EXPANSION JOINT DETAILS, SEE CONSTRUCTION DETAIL SHEET 89.
 - THE WALL IS TO BE CONSTRUCTED ON CHORDS, SEE WALL PROFILES AND RETAINING WALL DETAIL/TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
 - FOR WALL FOOTING DIMENSIONS, SEE DETAIL AND TABLES ON CONSTRUCTION DETAIL SHEET 88.

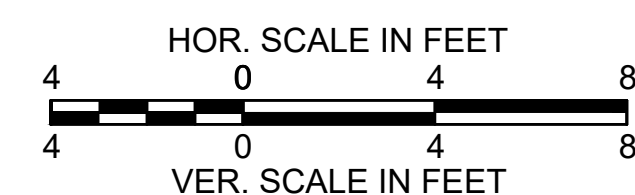
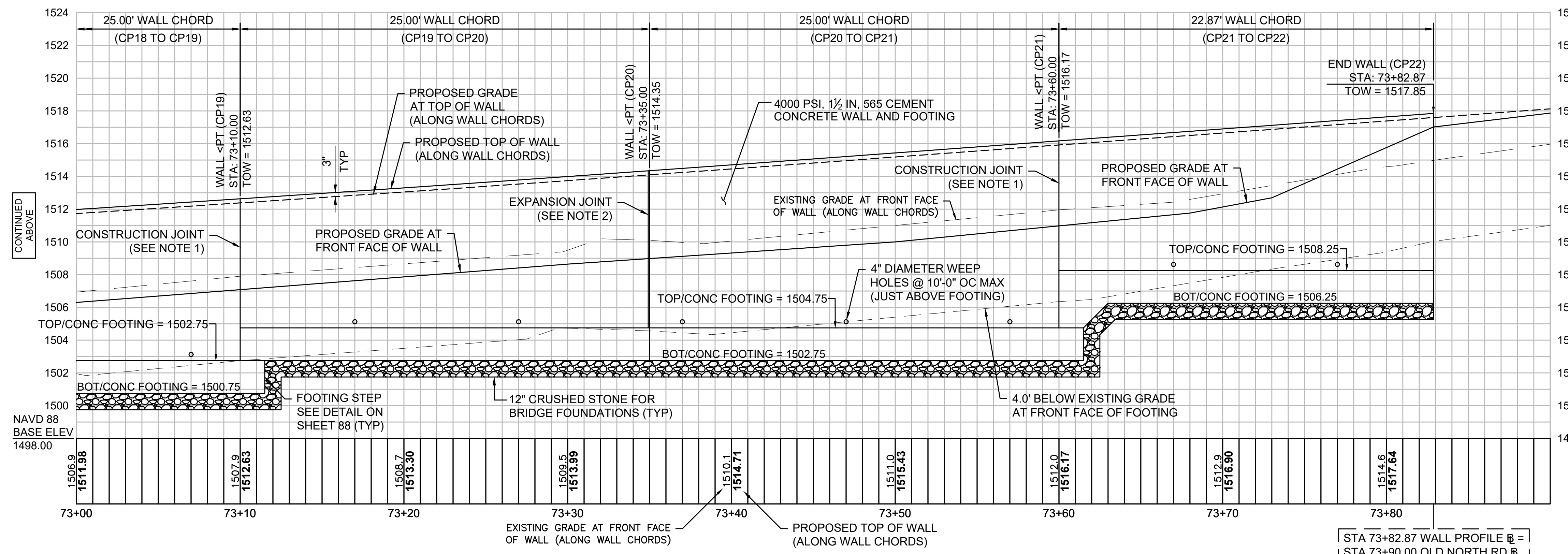
WORTHINGTON ROUTE 143			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	99	191
PROJECT FILE NO. 609287			

WALL #3 (OLD NORTH ROAD) STA 71+85 LT TO STA 73+90 LT

OLD NORTH ROAD RETAINING WALL PROFILE - 5



WALL #3 (OLD NORTH ROAD) STA 71+85 LT TO STA 73+90 LT

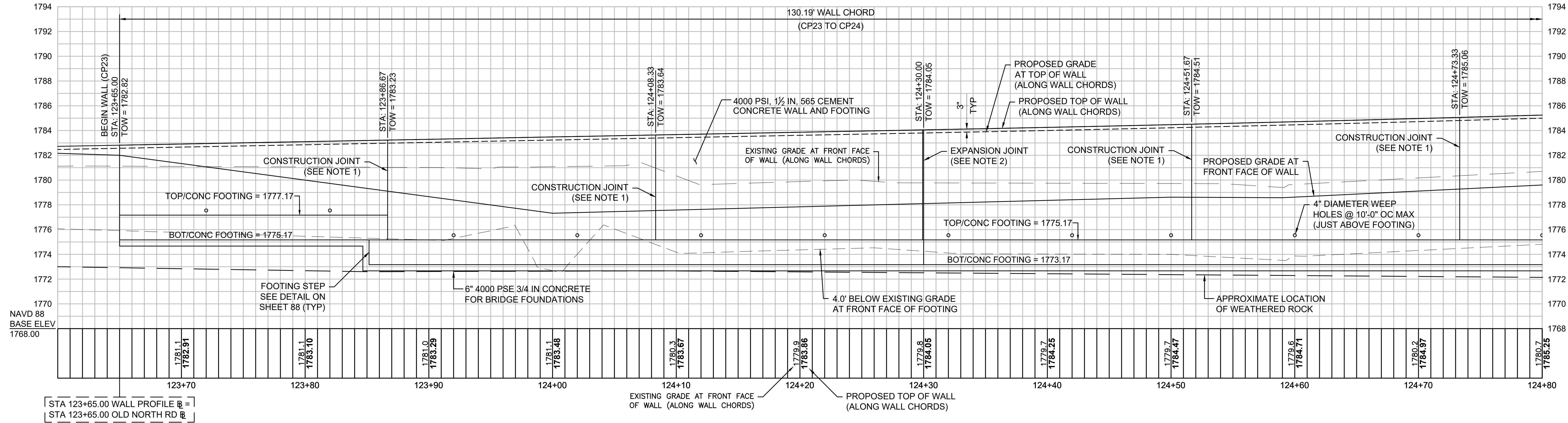


- NOTES:
- FOR CONSTRUCTION JOINT DETAILS AND EXPANSION JOINT DETAILS, SEE CONSTRUCTION DETAIL SHEET 89.
 - THE WALL IS TO BE CONSTRUCTED ON CHORDS, SEE WALL PROFILES AND RETAINING WALL DETAIL/TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
 - FOR WALL FOOTING DIMENSIONS, SEE DETAIL AND TABLES ON CONSTRUCTION DETAIL SHEET 88.

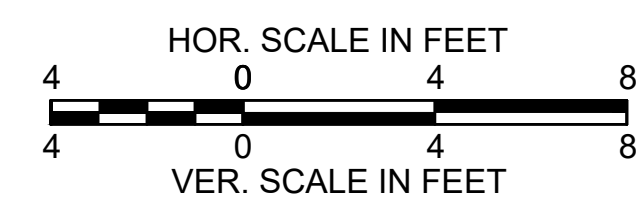
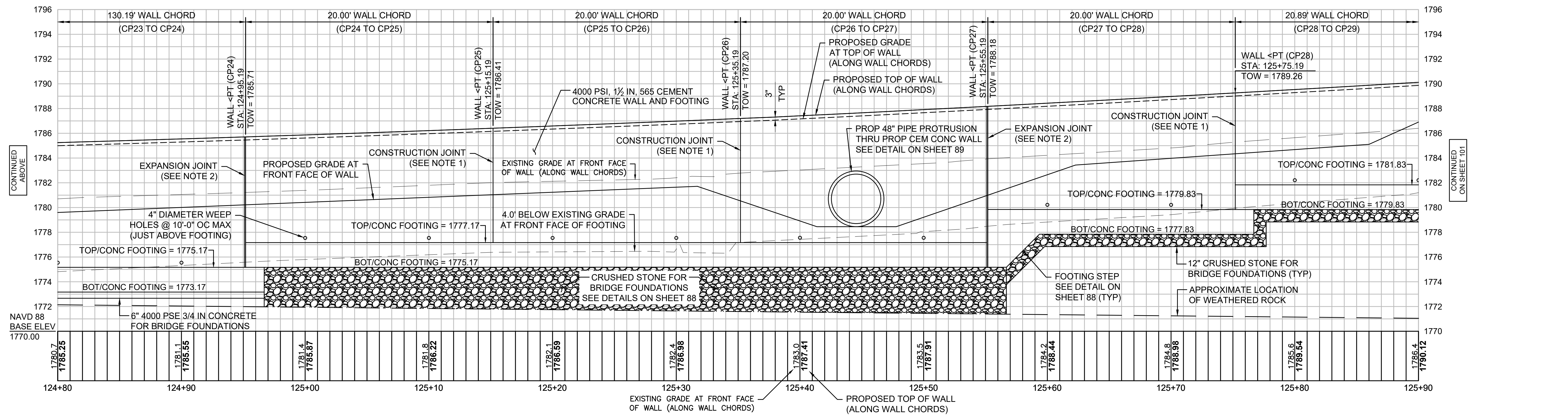
WORTHINGTON ROUTE 143			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	100	191
PROJECT FILE NO.		609287	

WALL #4 (OLD NORTH ROAD) STA 123+65 RT TO STA 126+00 RT

OLD NORTH ROAD
RETAINING WALL PROFILE - 6



WALL #4 (OLD NORTH ROAD) STA 123+65 RT TO STA 126+00 RT



CONTINUED BELOW

CONTINUED ABOVE

CONTINUED ON SHEET 101

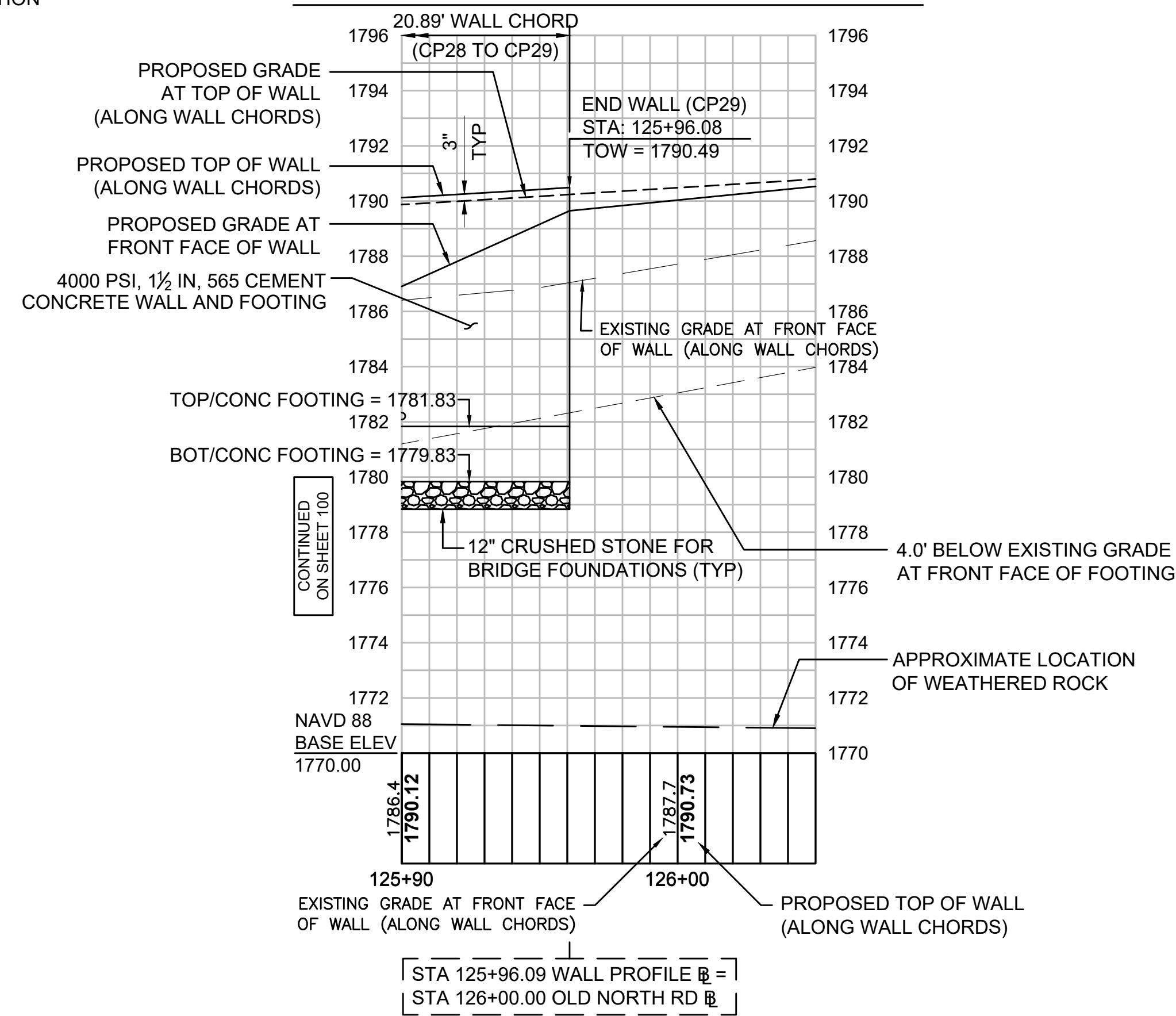
- NOTES:
- FOR CONSTRUCTION JOINT DETAILS AND EXPANSION JOINT DETAILS, SEE CONSTRUCTION DETAIL SHEET 89.
 - THE WALL IS TO BE CONSTRUCTED ON CHORDS, SEE WALL PROFILES AND RETAINING WALL DETAIL/TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
 - FOR WALL FOOTING DIMENSIONS, SEE DETAIL AND TABLES ON CONSTRUCTION DETAIL SHEET 88.

**WORTHINGTON
ROUTE 143**

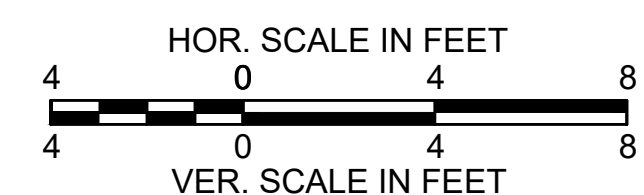
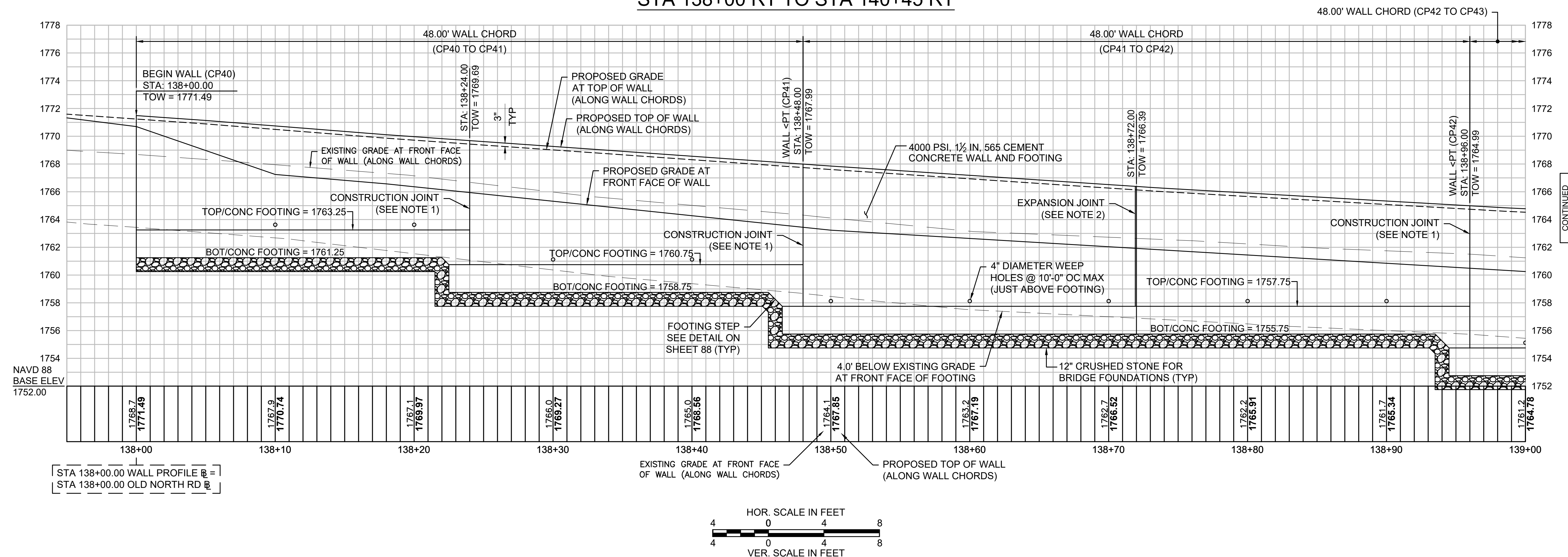
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	101	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
RETAINING WALL PROFILE - 7**

**WALL #4 (OLD NORTH ROAD)
STA 123+65 RT TO STA 126+00 RT**



**WALL #5 (OLD NORTH ROAD)
STA 138+00 RT TO STA 140+45 RT**



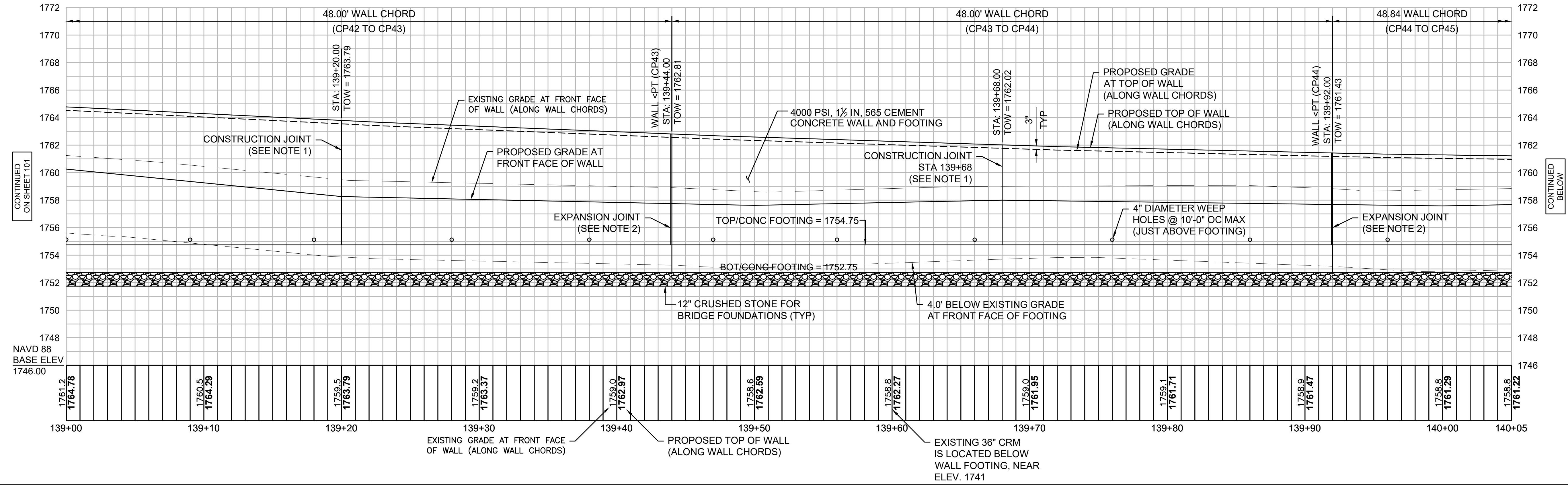
- NOTES:
- FOR CONSTRUCTION JOINT DETAILS AND EXPANSION JOINT DETAILS, SEE CONSTRUCTION DETAIL SHEET 89.
 - THE WALL IS TO BE CONSTRUCTED ON CHORDS, SEE WALL PROFILES AND RETAINING WALL DETAIL/TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
 - FOR WALL FOOTING DIMENSIONS, SEE DETAIL AND TABLES ON CONSTRUCTION DETAIL SHEET 88.

**WORTHINGTON
ROUTE 143**

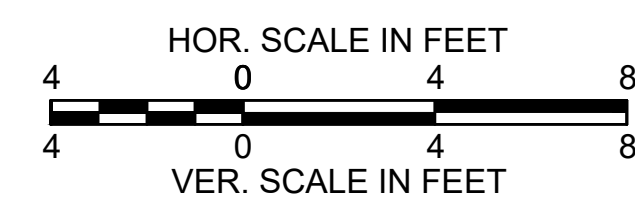
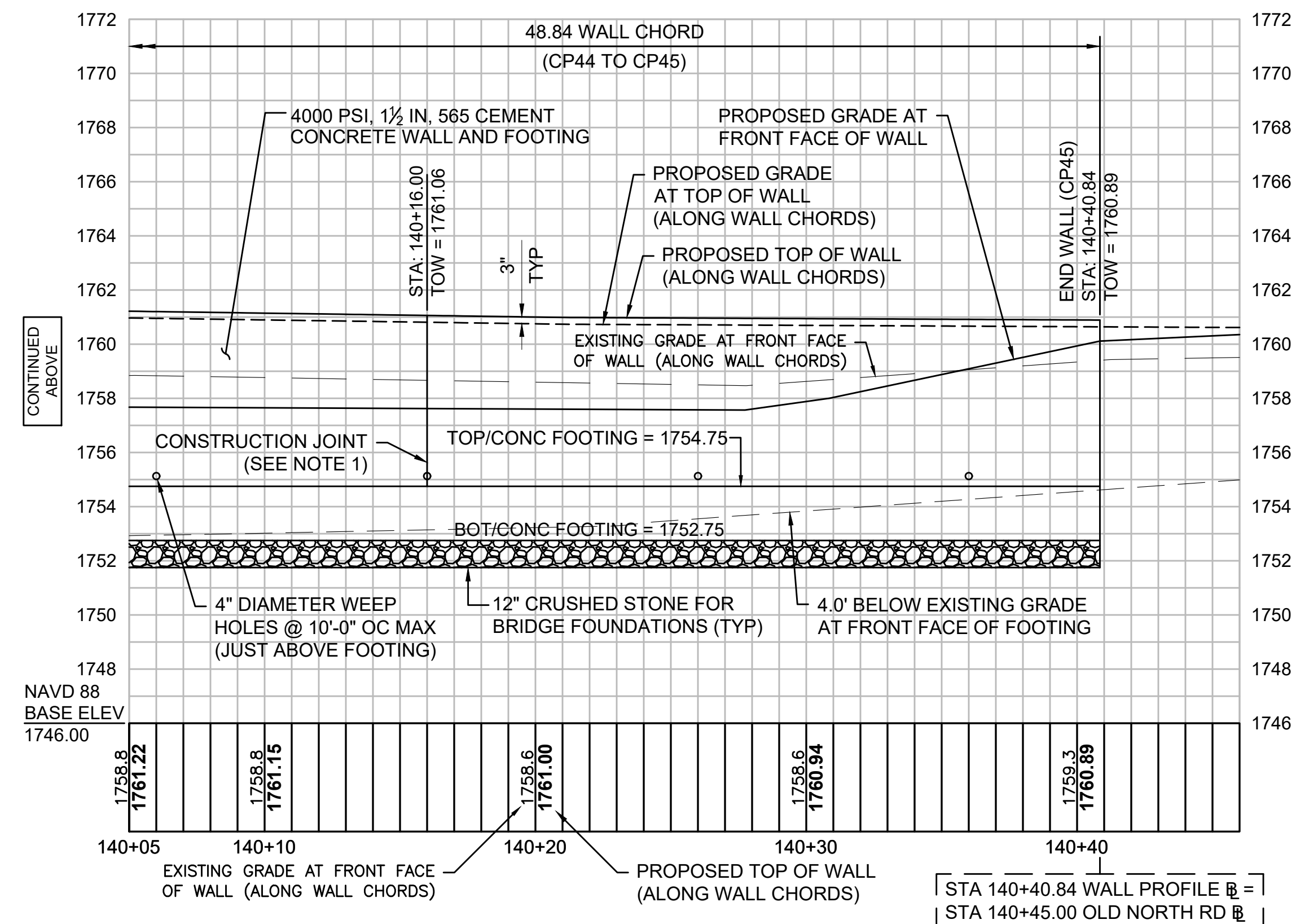
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	102	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
RETAINING WALL PROFILE - 8**

**WALL #5 (OLD NORTH ROAD)
STA 138+00 RT TO STA 140+45 RT**



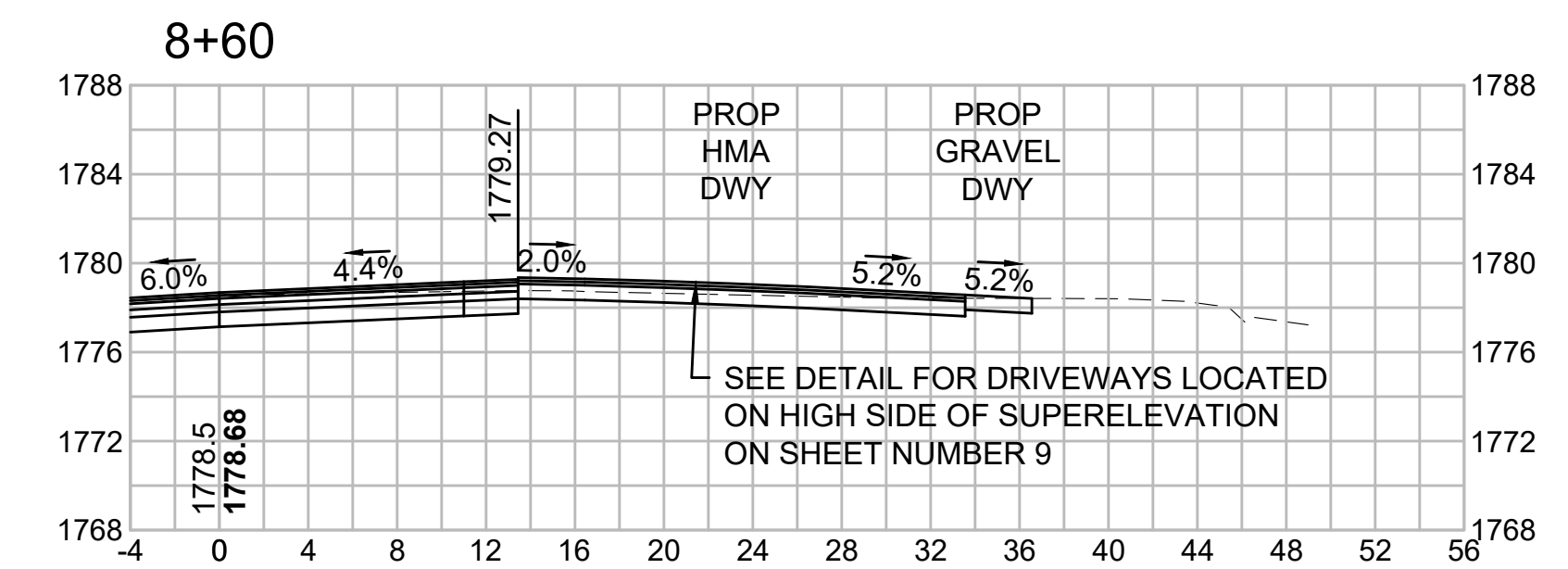
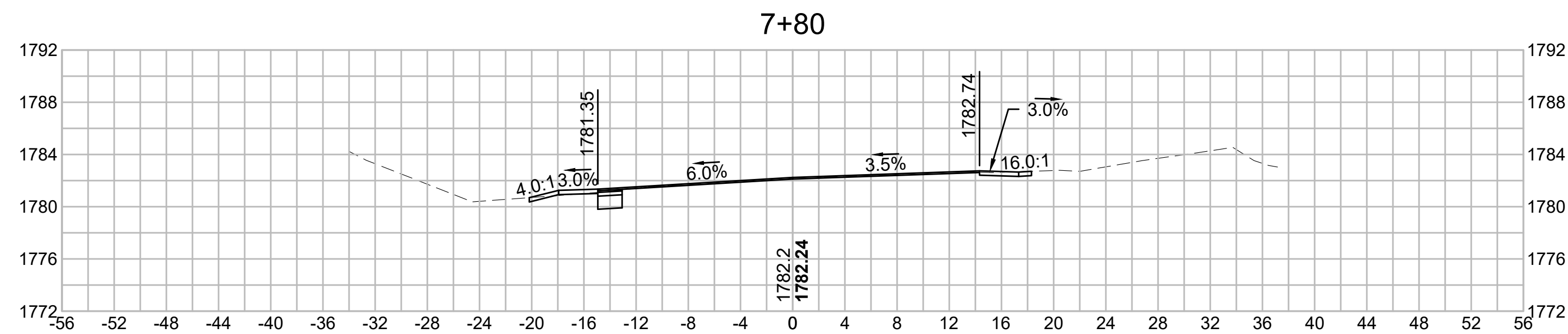
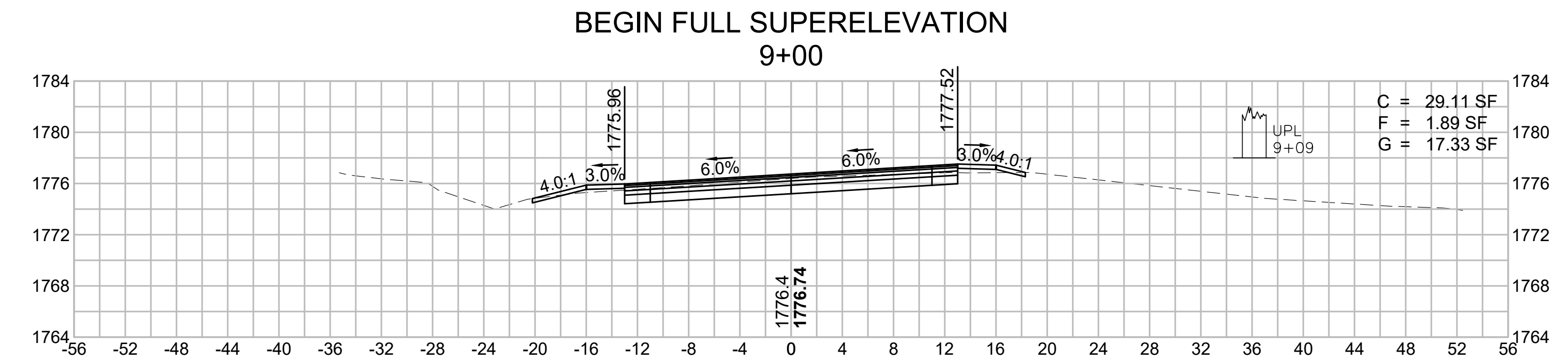
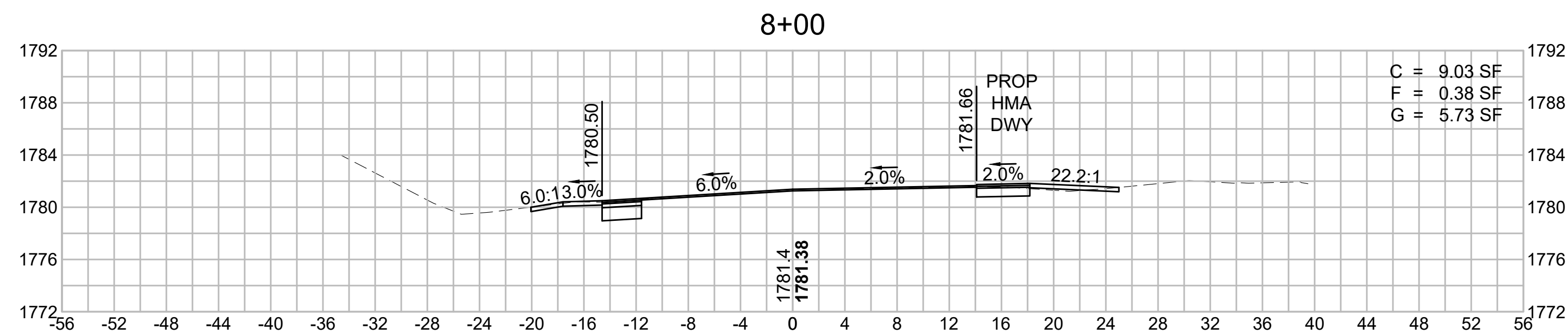
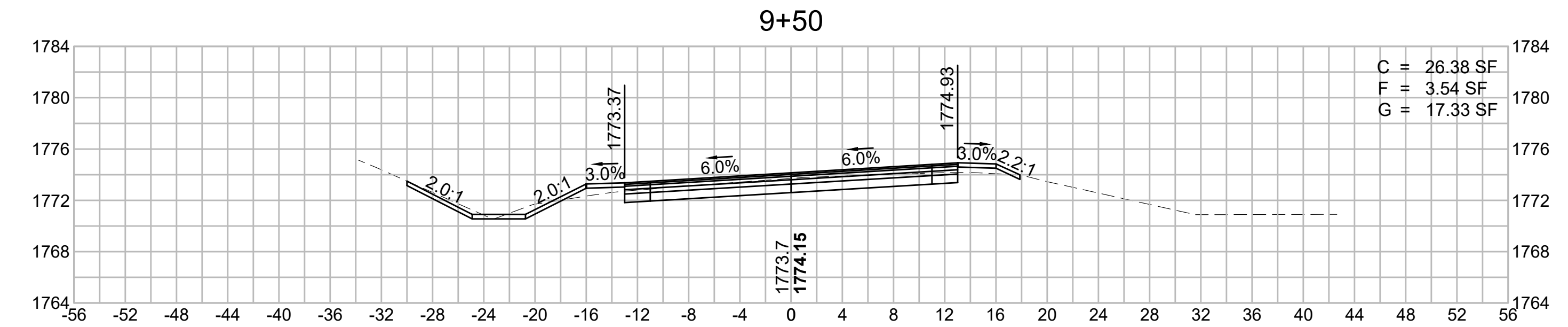
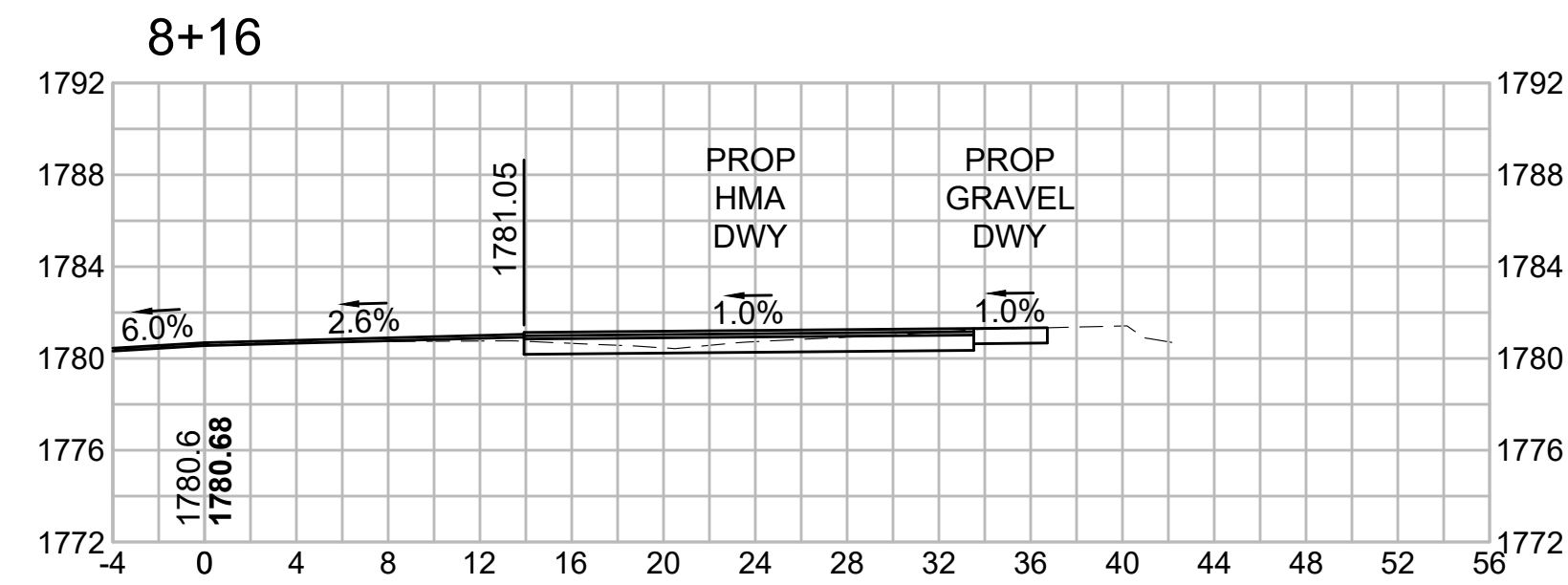
**WALL #5 (OLD NORTH ROAD)
STA 138+00 RT TO STA 140+45 RT**



**WORTHINGTON
ROUTE 143**

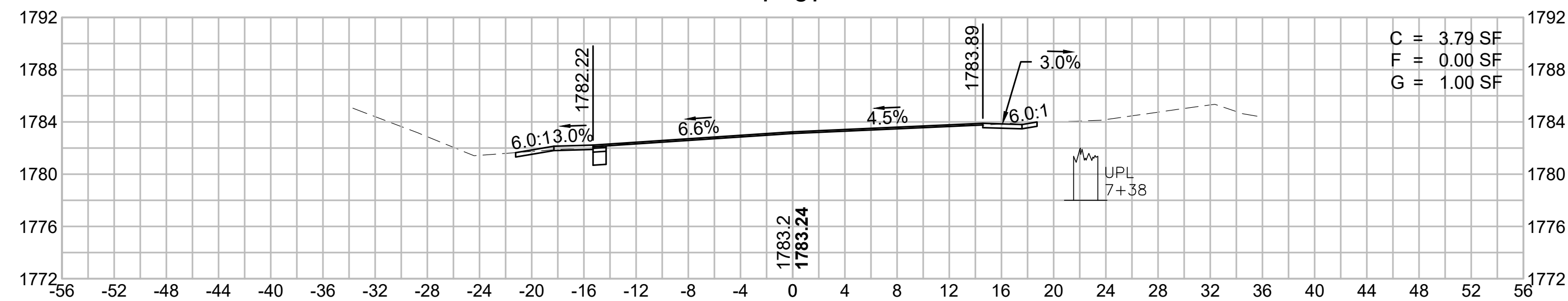
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	104	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 1**

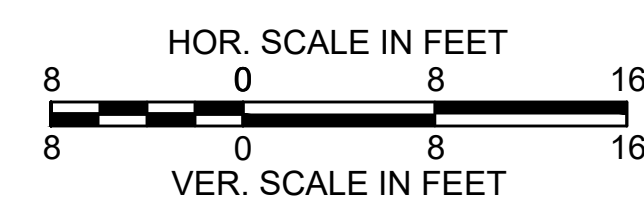
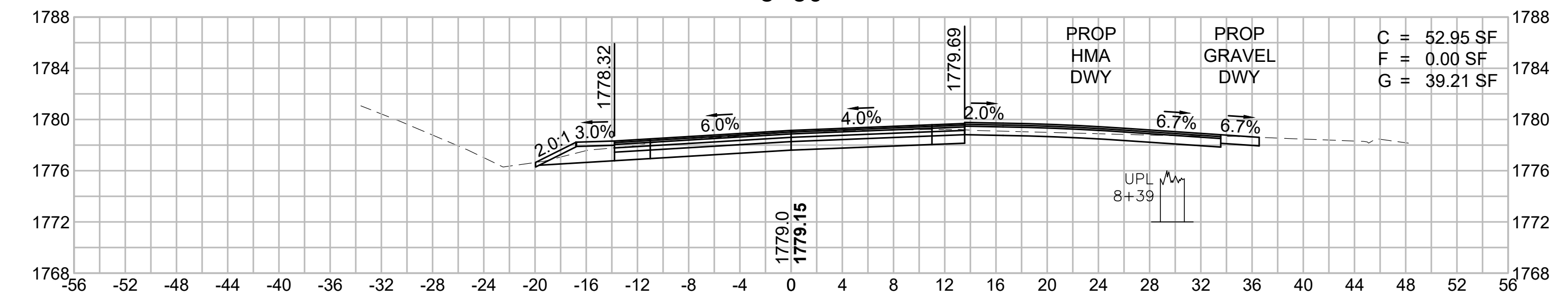


**BEGIN PAVEMENT MILL & OVERLAY
7+57**

SUPERELEVATION:
PC STA = 1+43.24
R = 505.00'
BANK = 6.00%



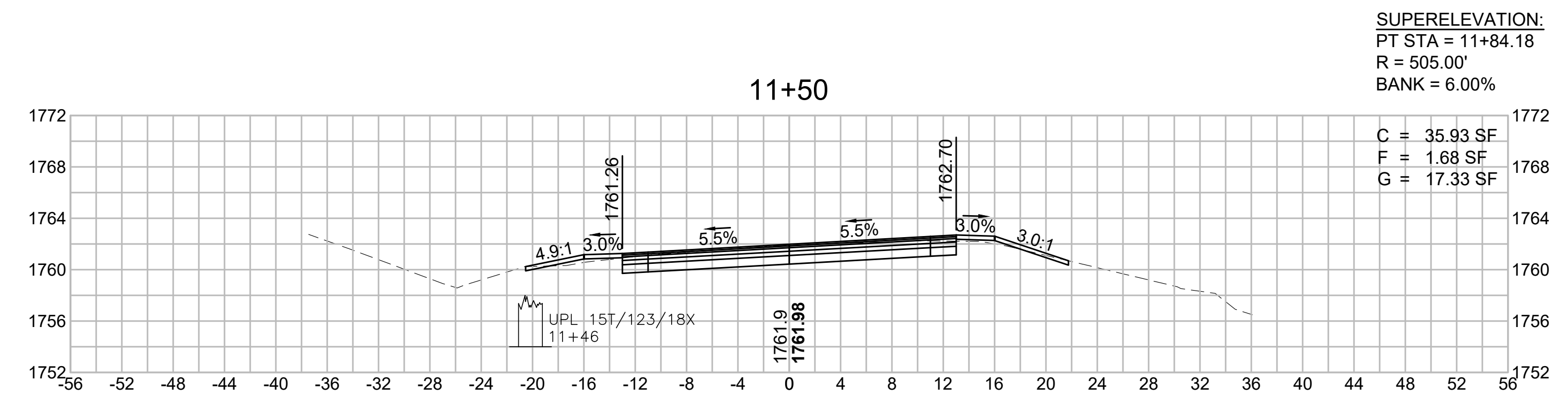
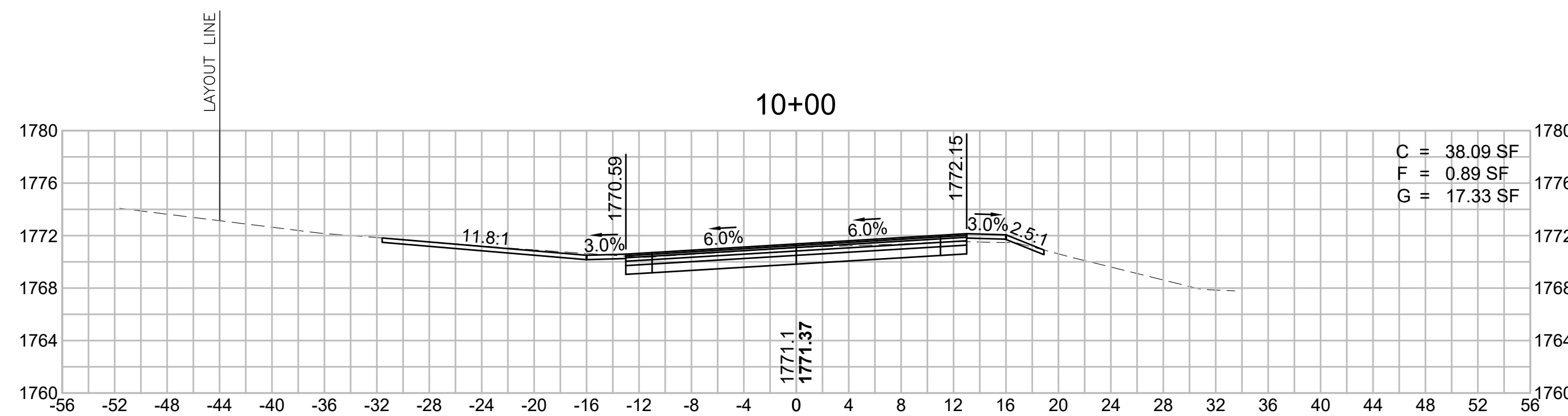
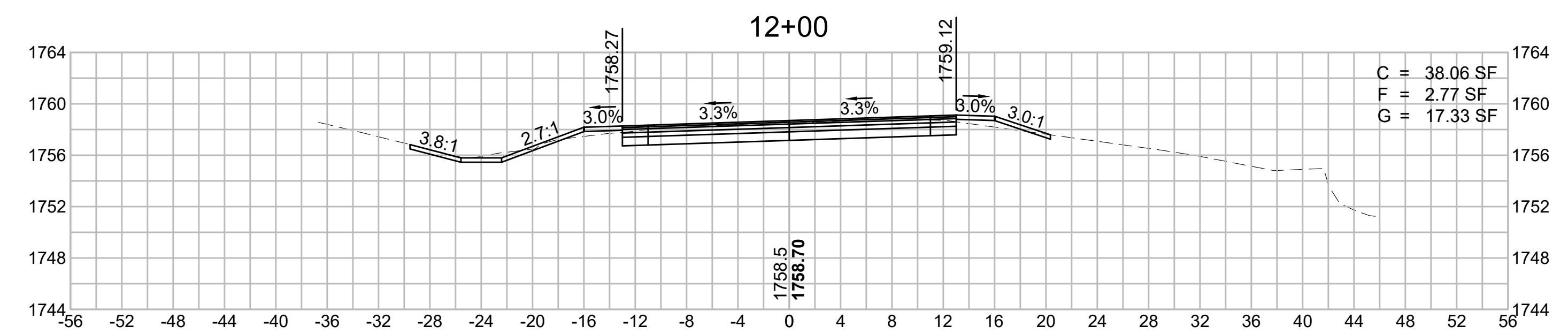
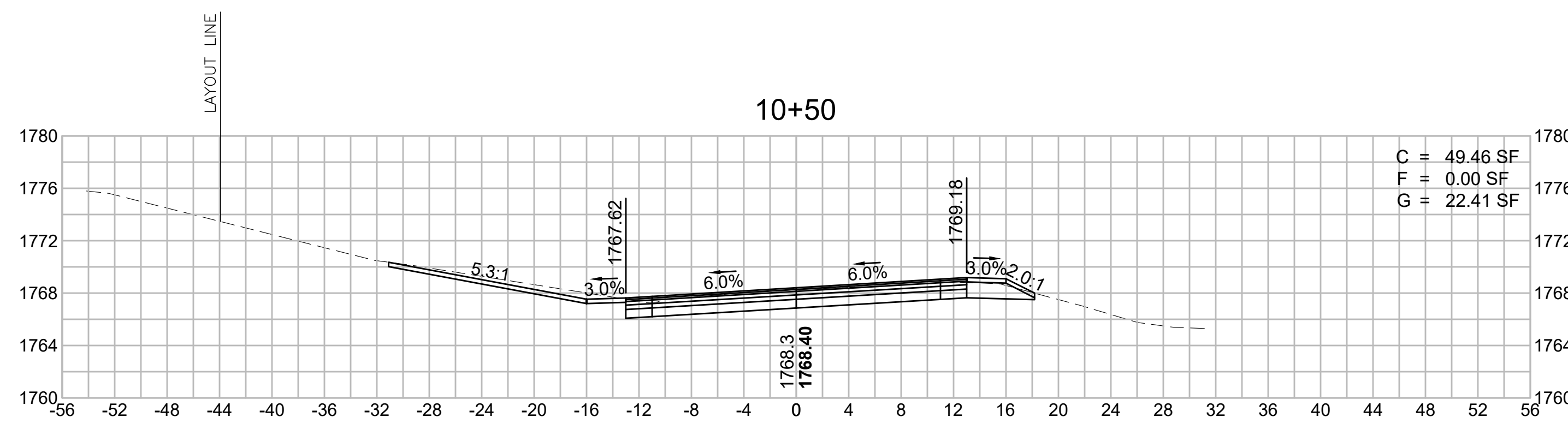
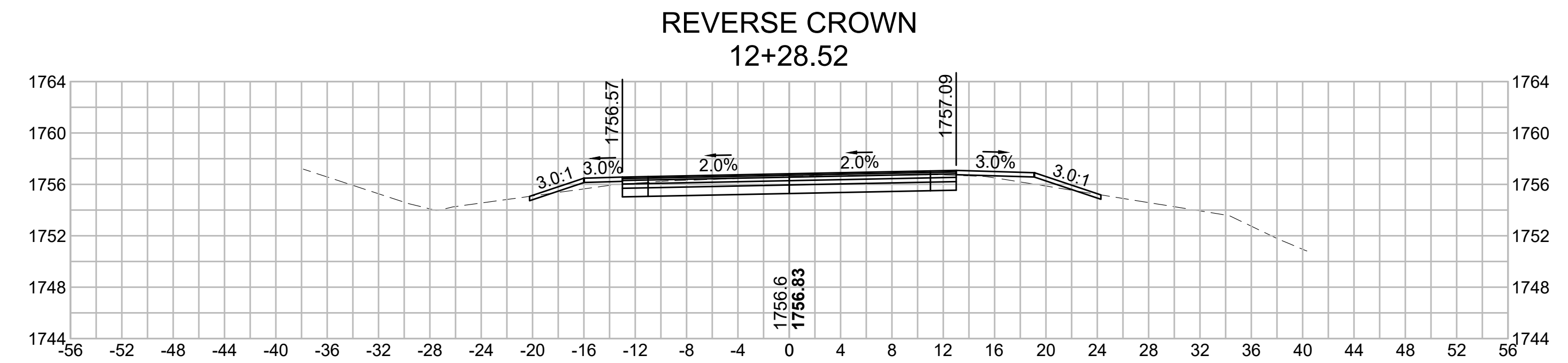
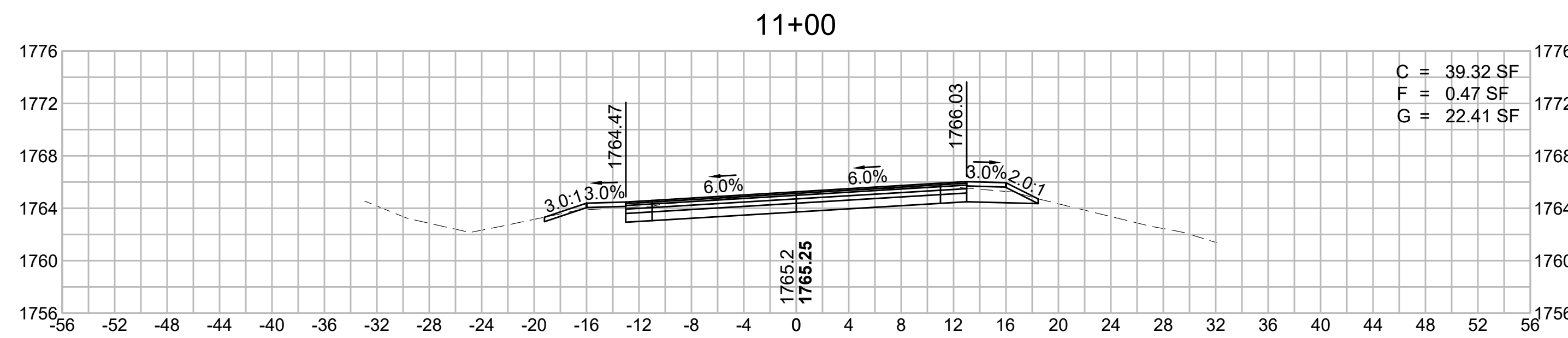
**END PAVEMENT MILL & OVERLAY
BEGIN FULL DEPTH RECONSTRUCTION
8+50**



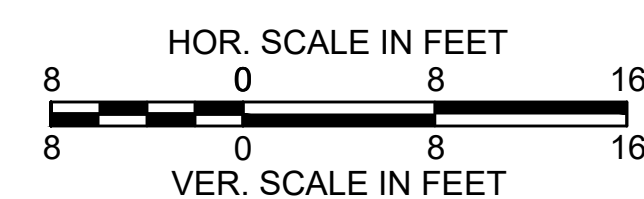
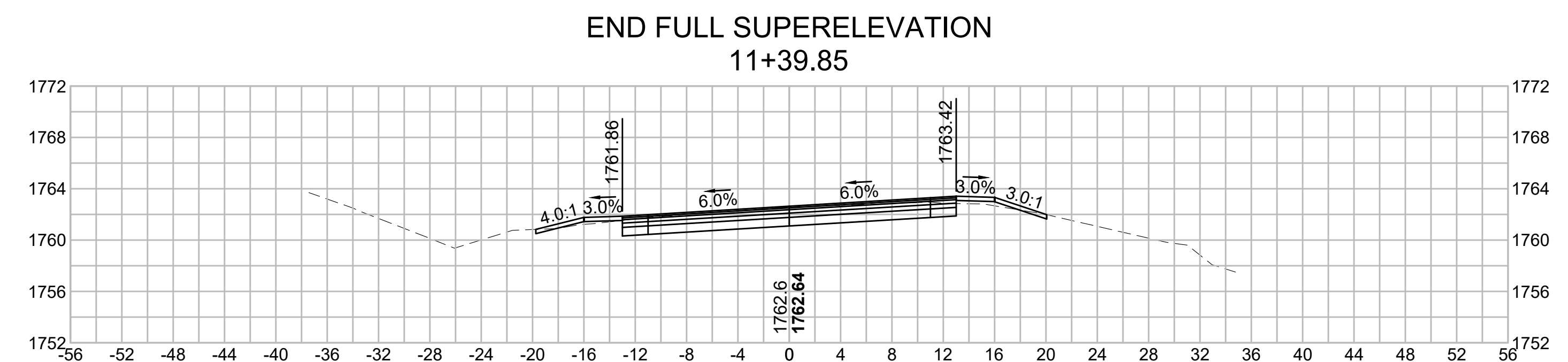
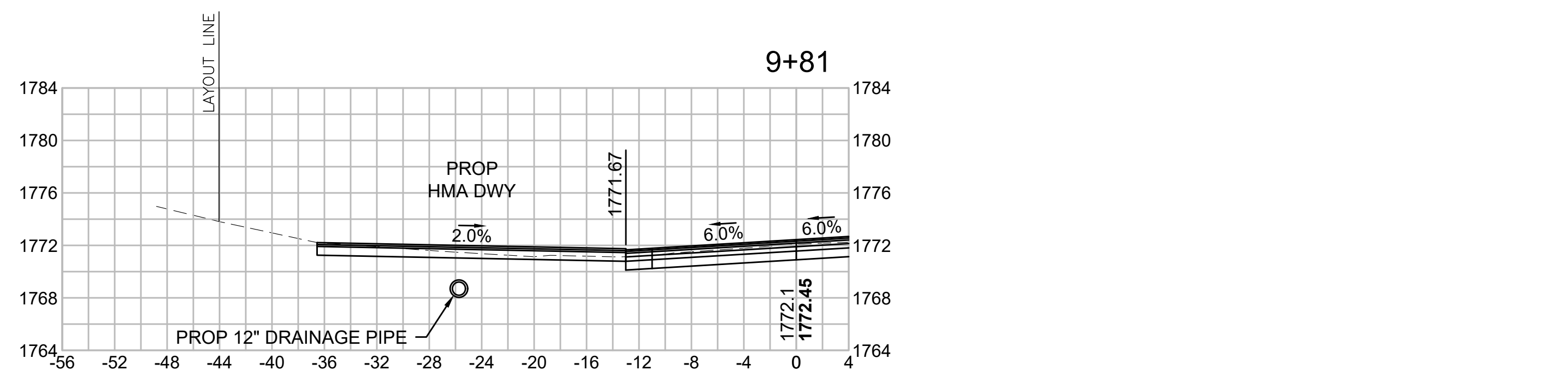
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	105	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 2**



SUPERELEVATION:
PT STA = 11+84.18
R = 505.00'
BANK = 6.00%

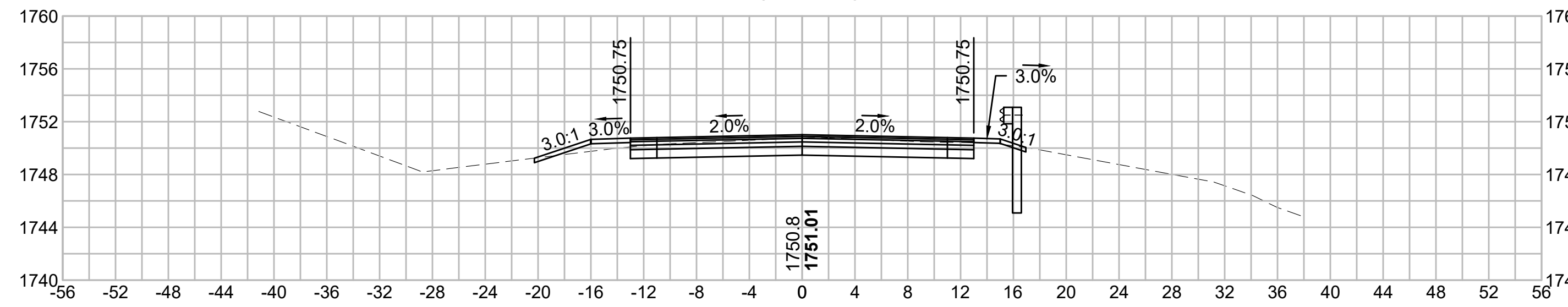


**WORTHINGTON
ROUTE 143**

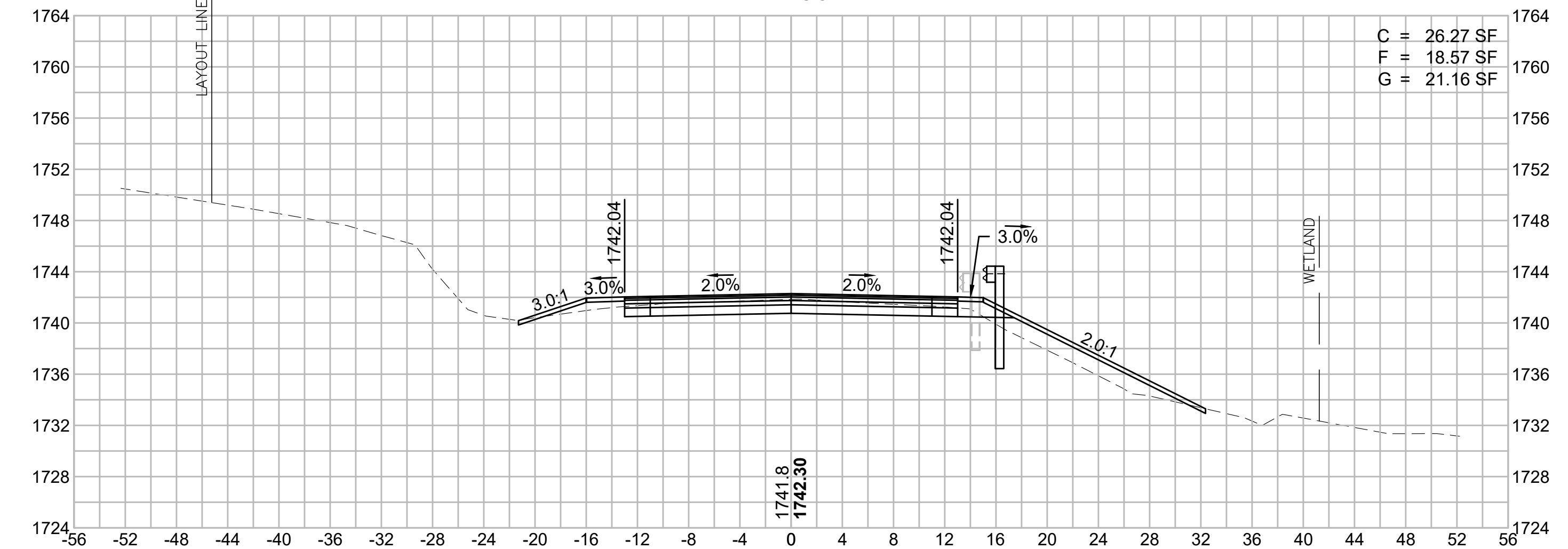
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	106	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 3**

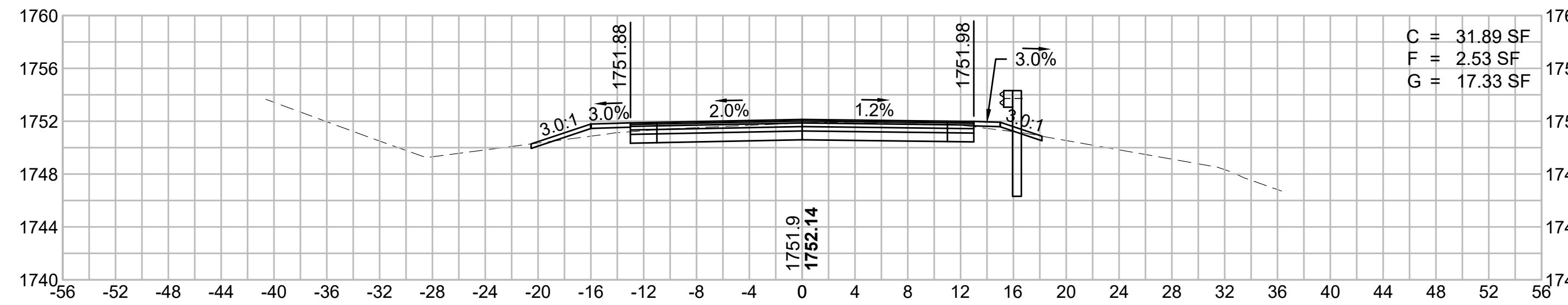
**BEGIN NORMAL CROWN
13+17.18**



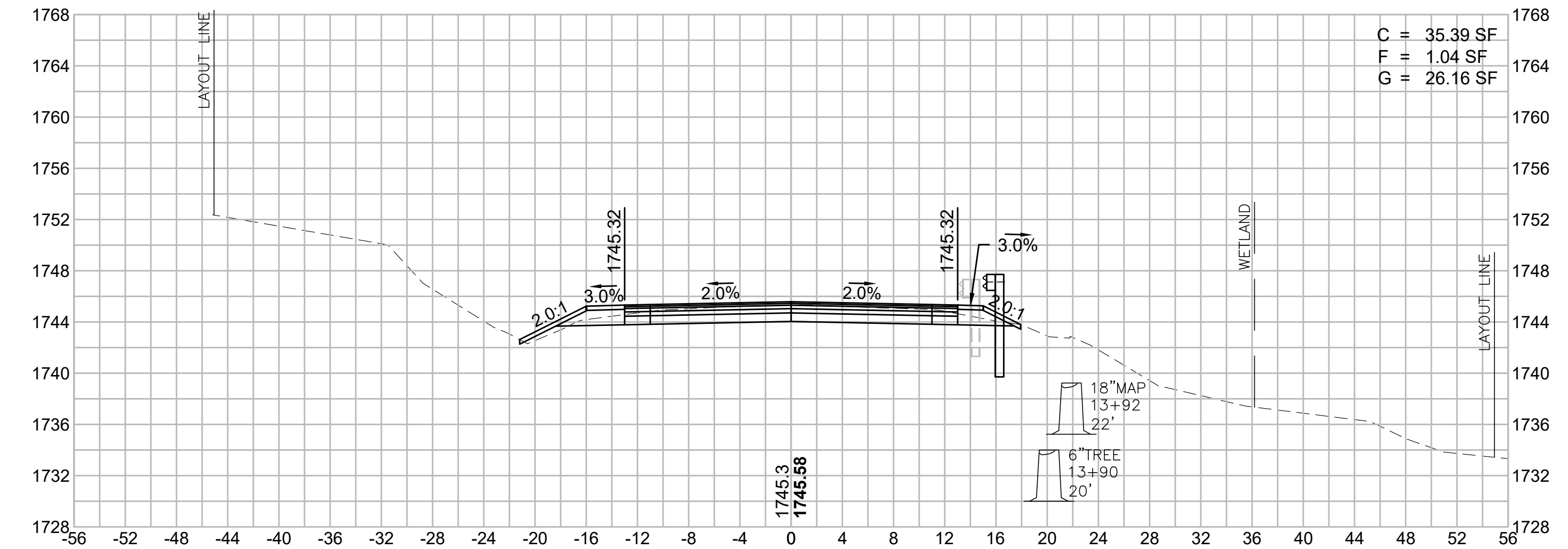
14+50



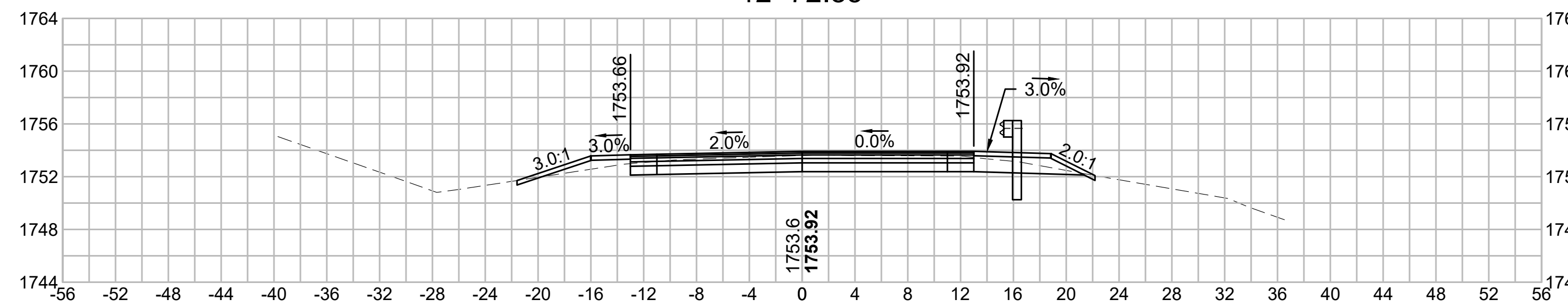
13+00



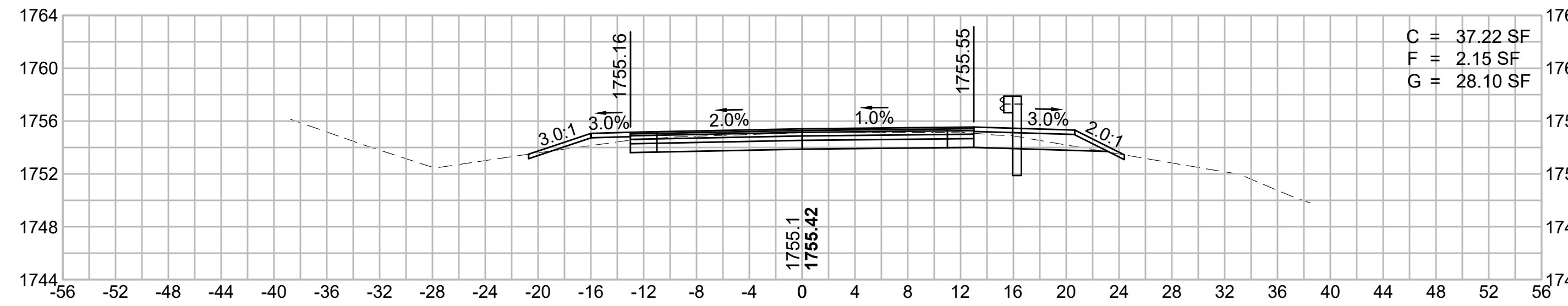
14+00



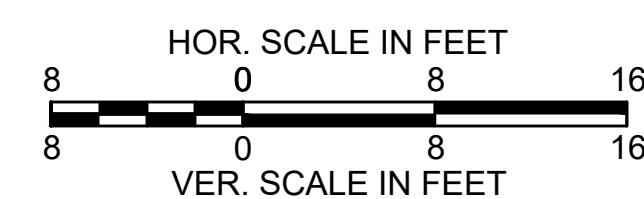
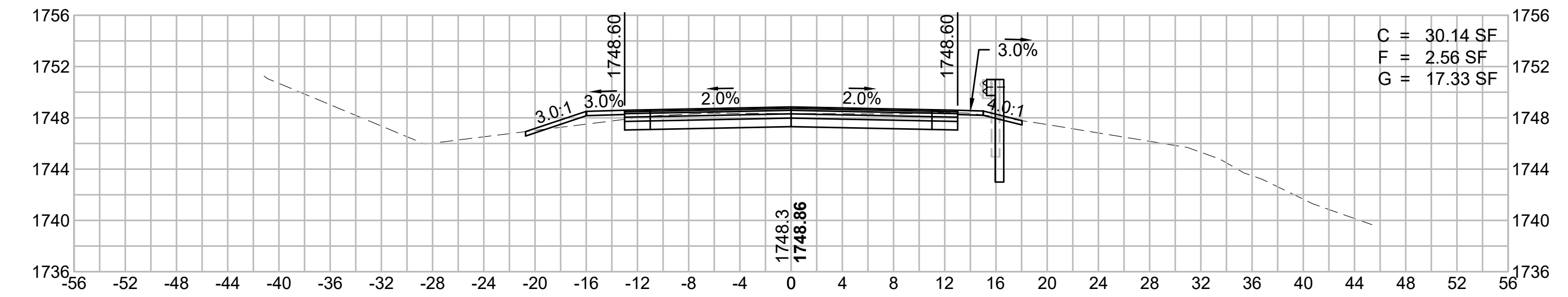
**LEVEL CROWN
12+72.85**



12+50



13+50

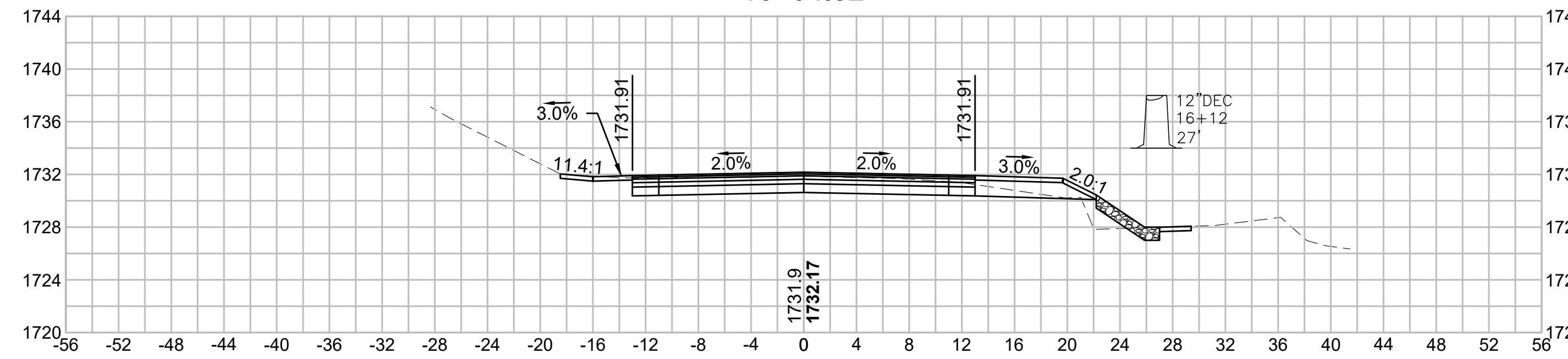


**WORTHINGTON
ROUTE 143**

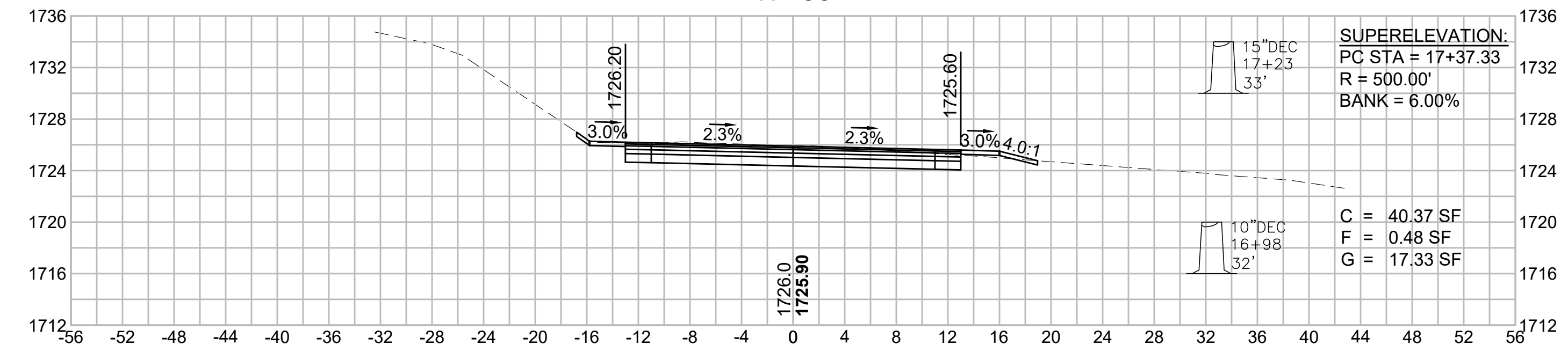
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	107	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 4**

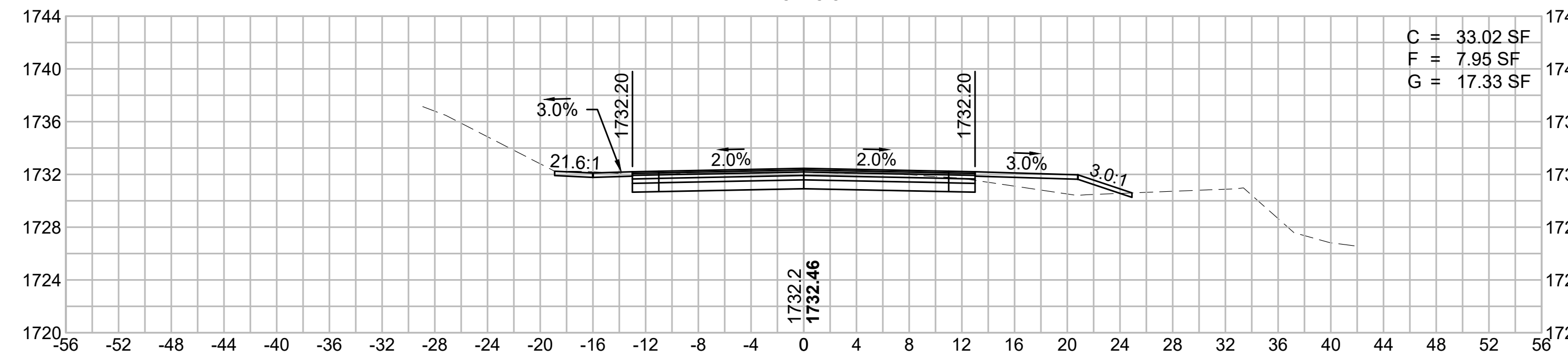
**END NORMAL CROWN
16+04.32**



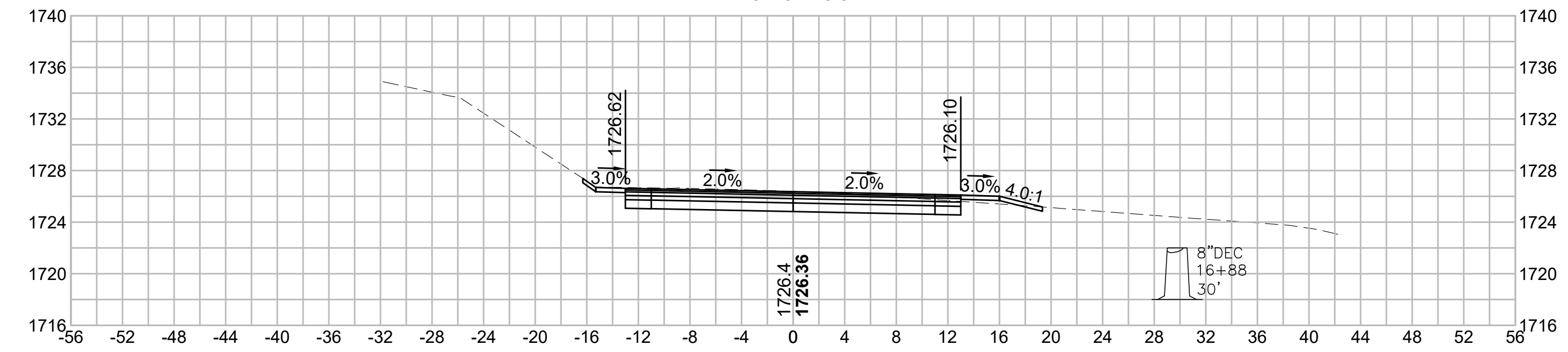
17+00



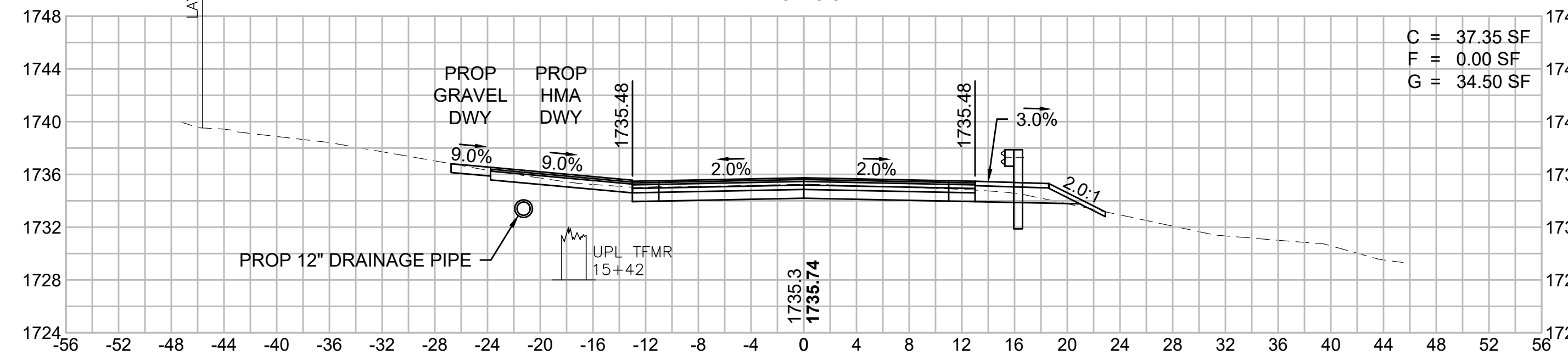
16+00



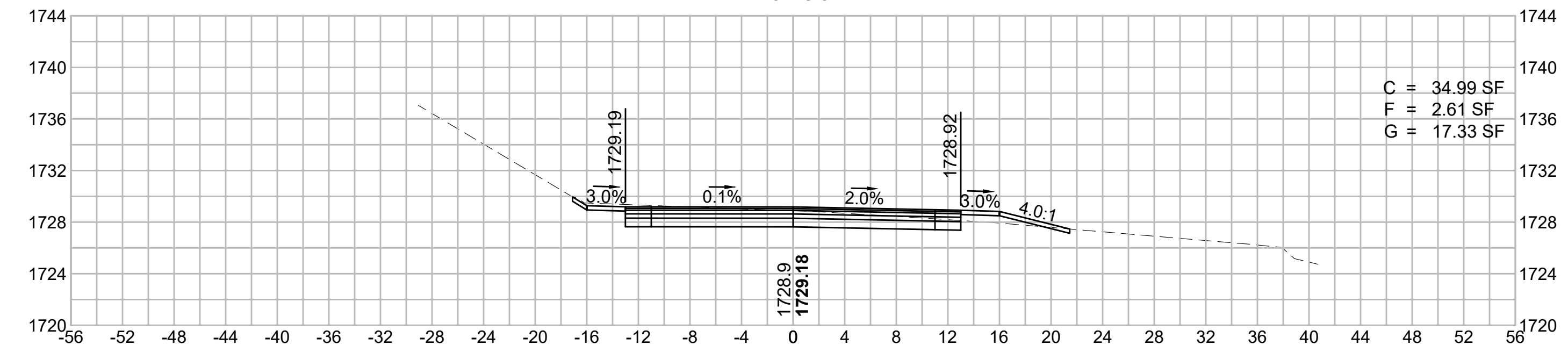
**REVERSE CROWN
16+92.99**



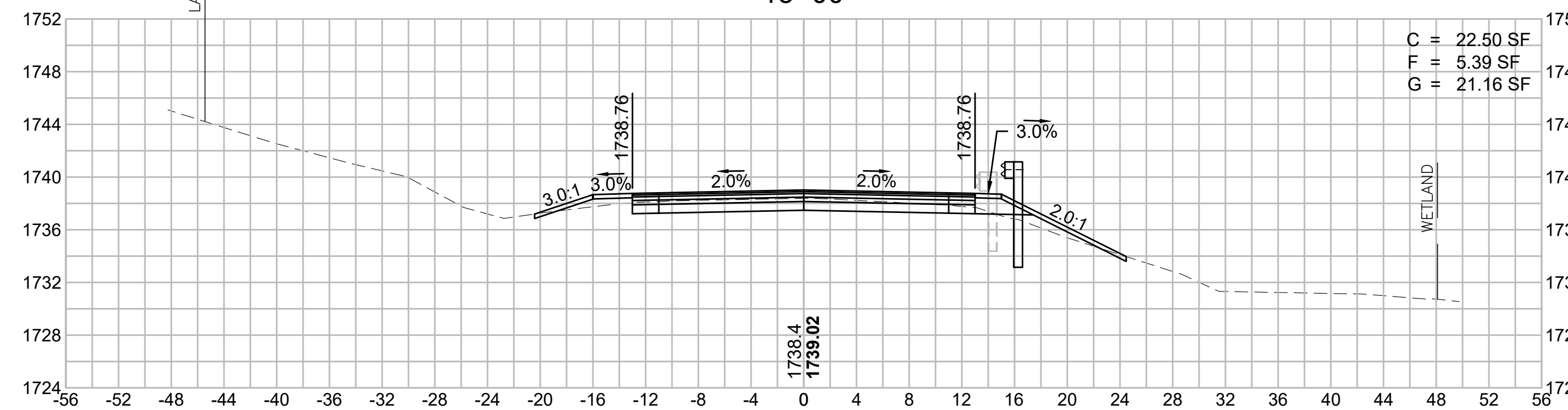
15+50



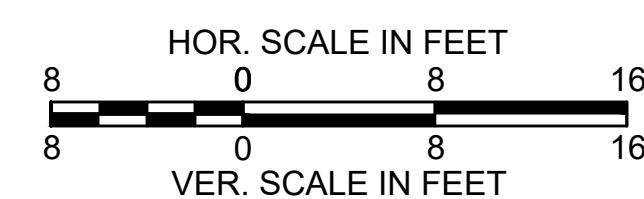
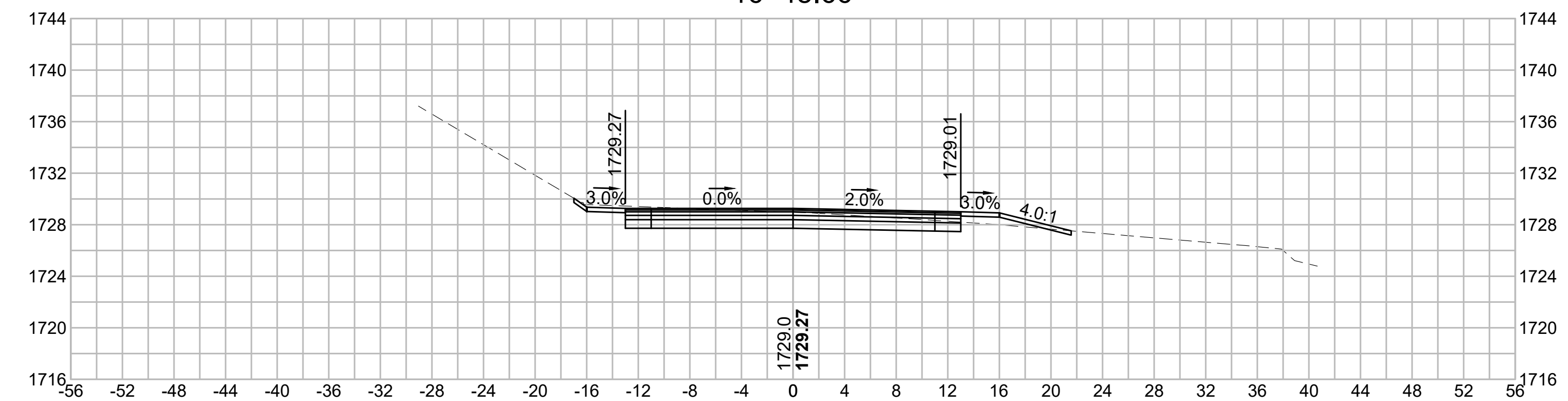
16+50



15+00



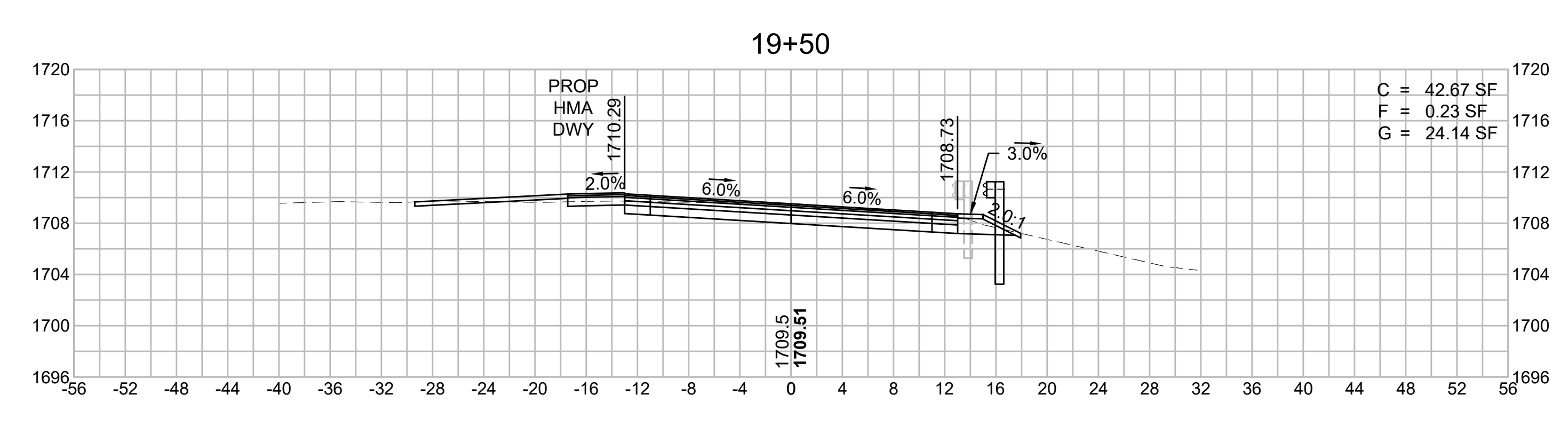
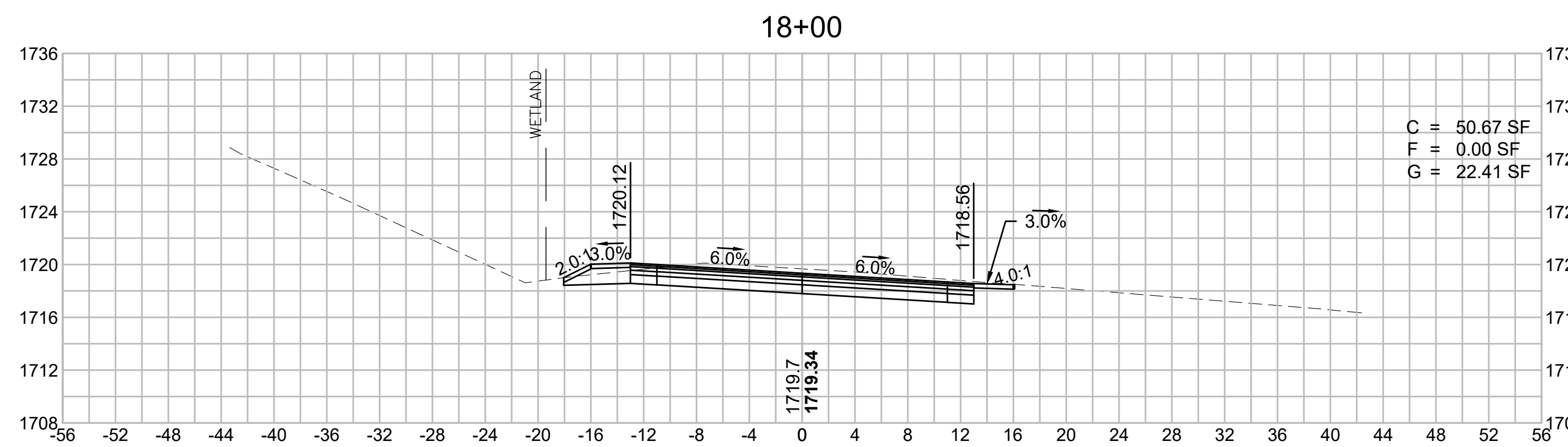
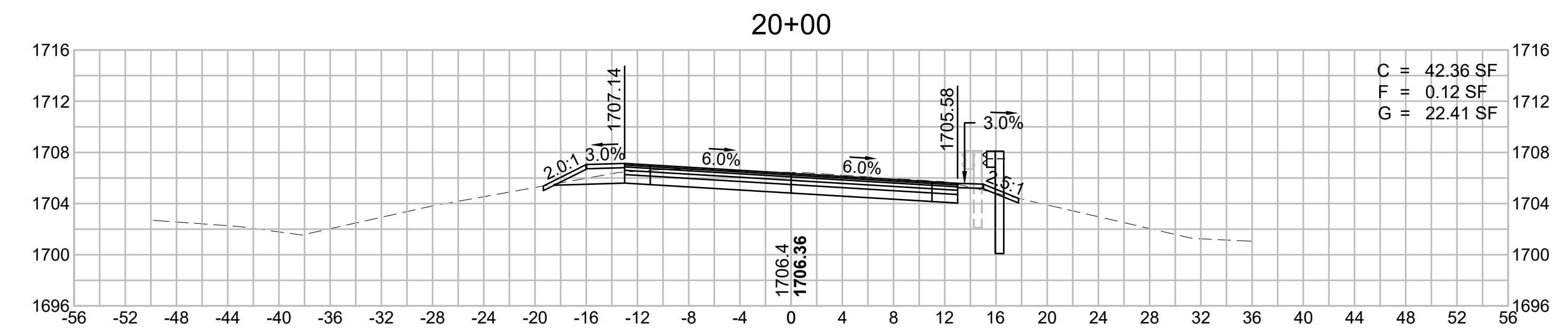
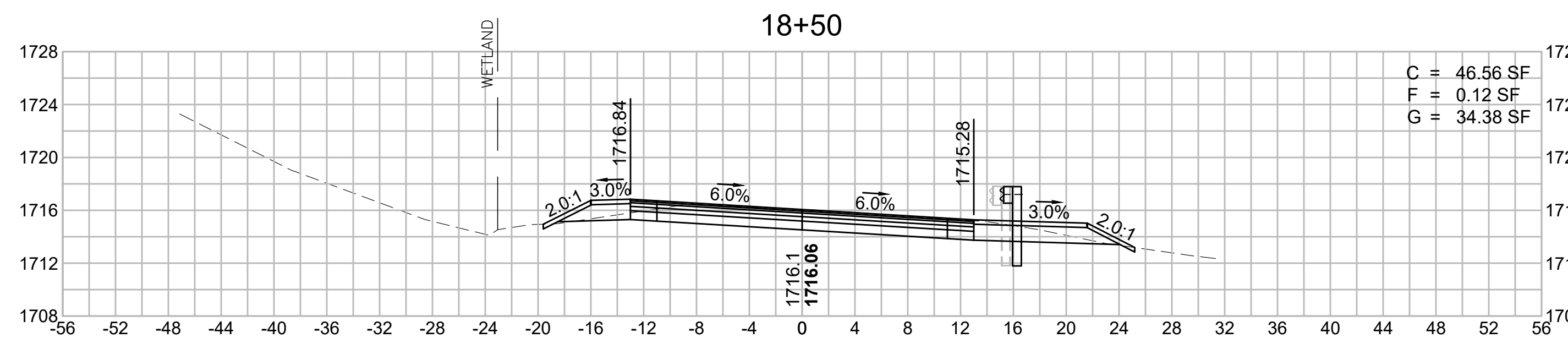
**LEVEL CROWN
16+48.66**



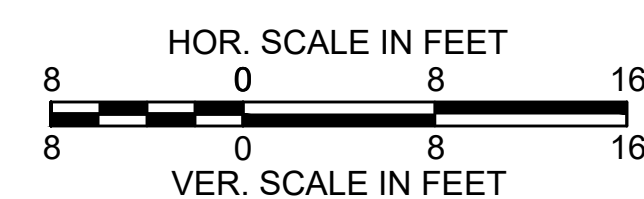
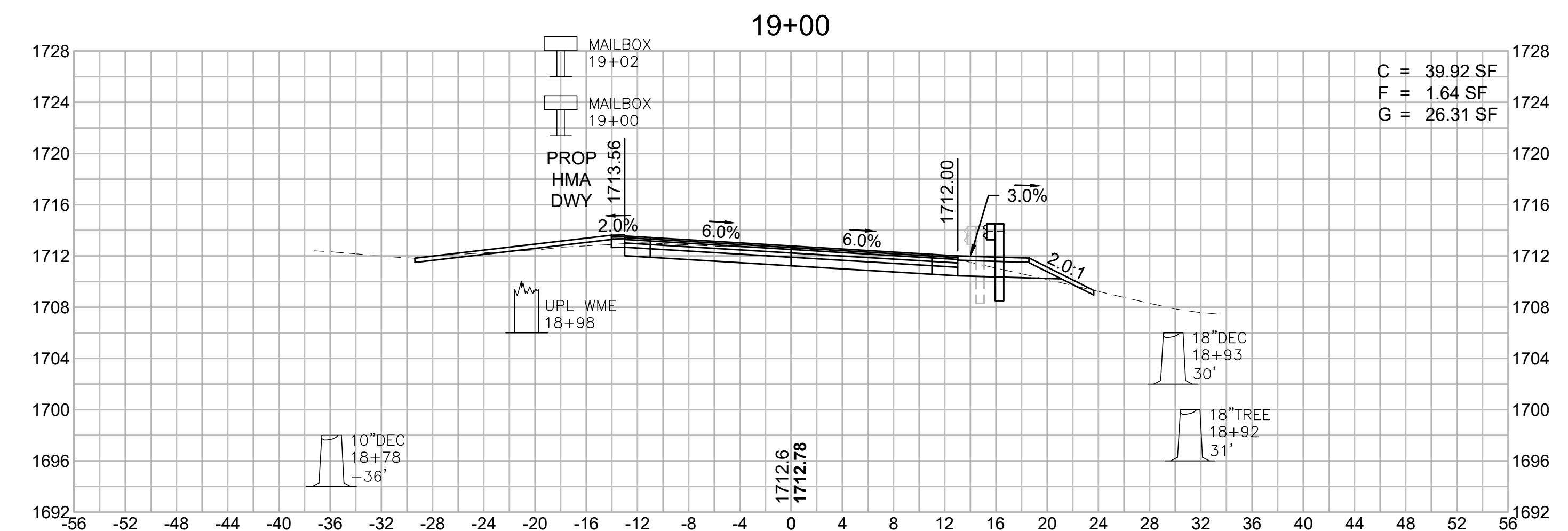
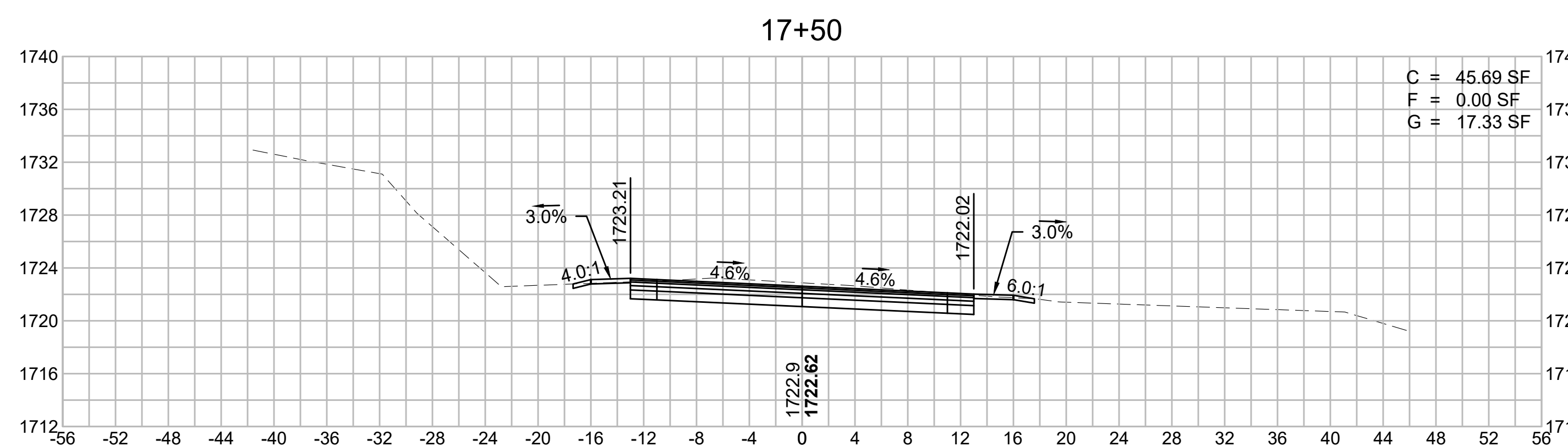
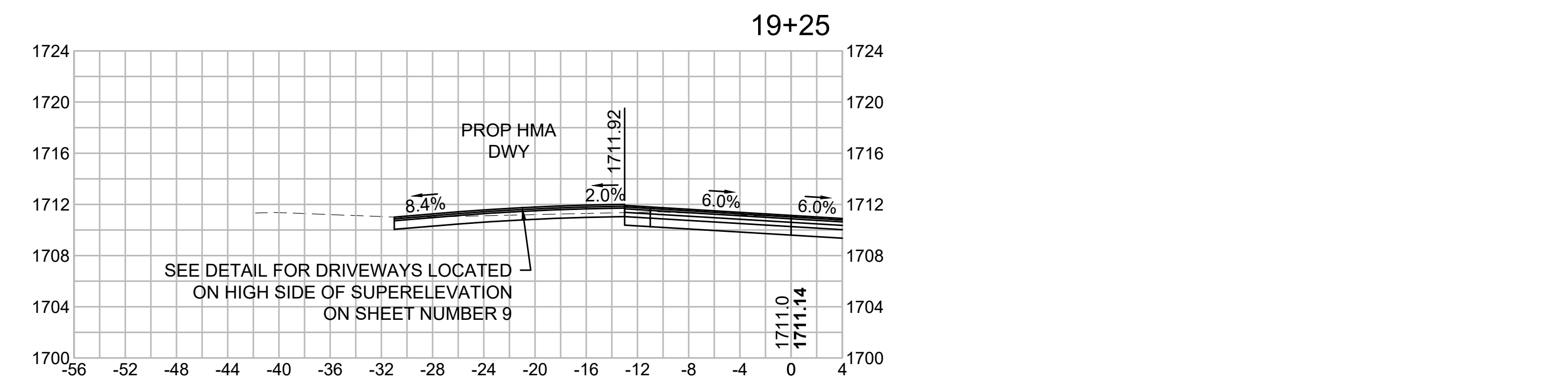
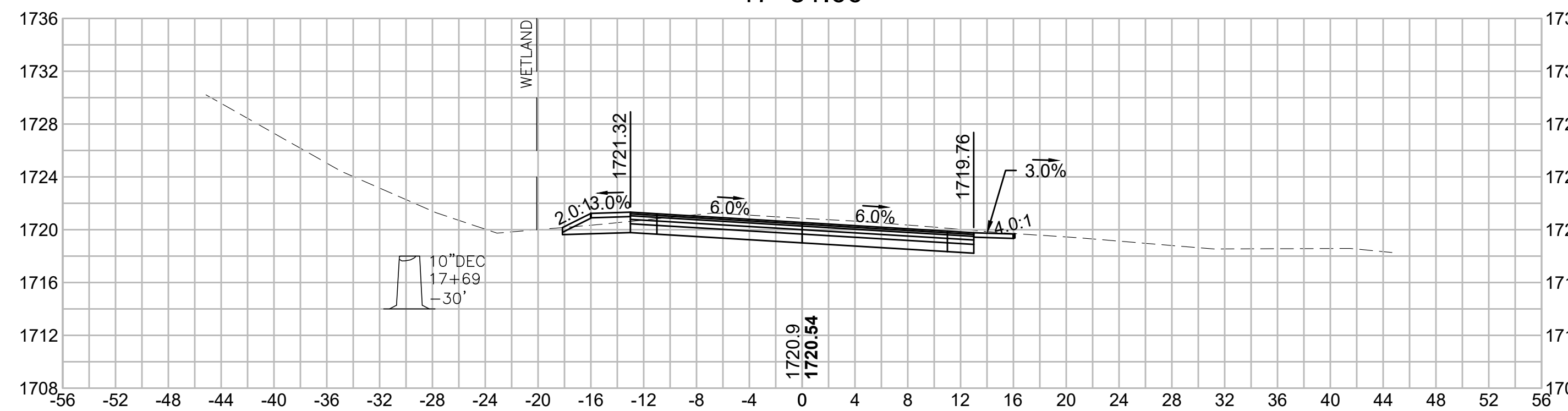
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	108	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 5**



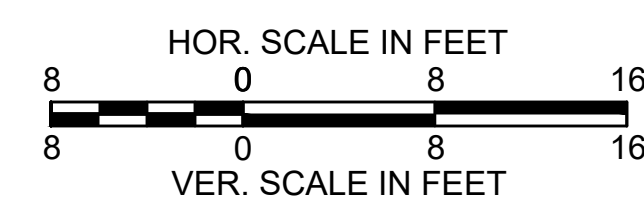
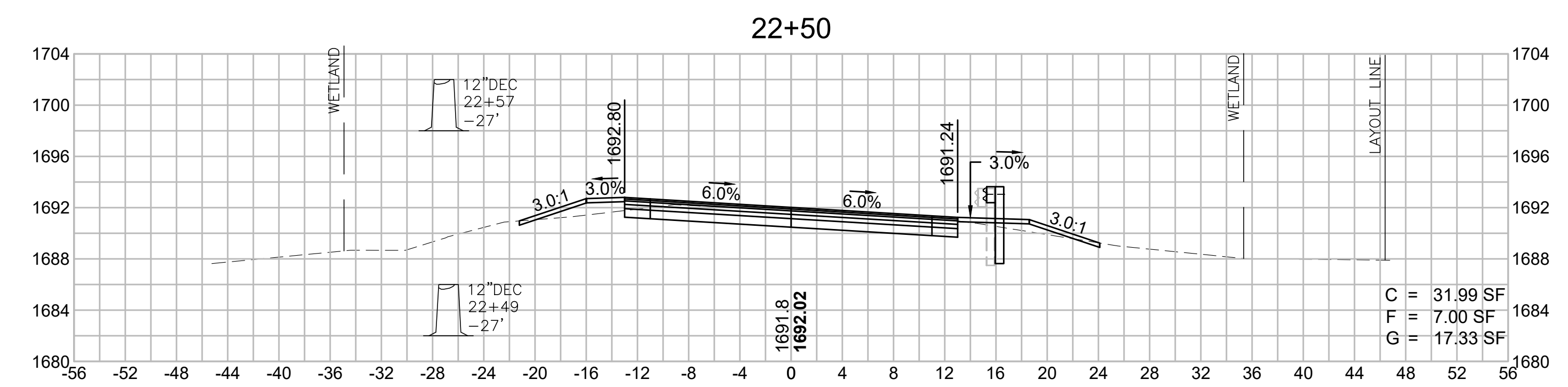
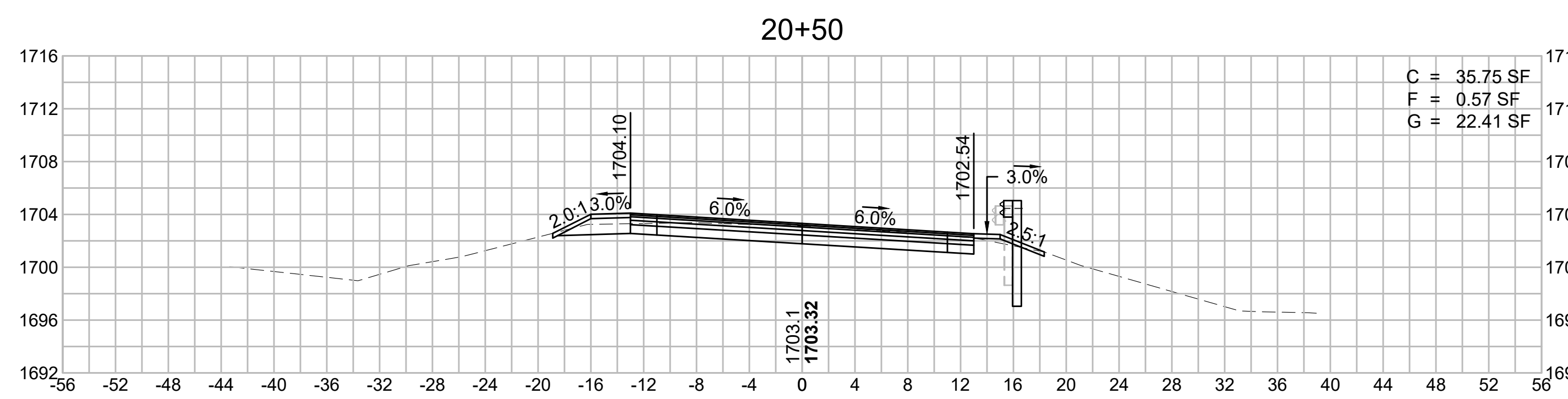
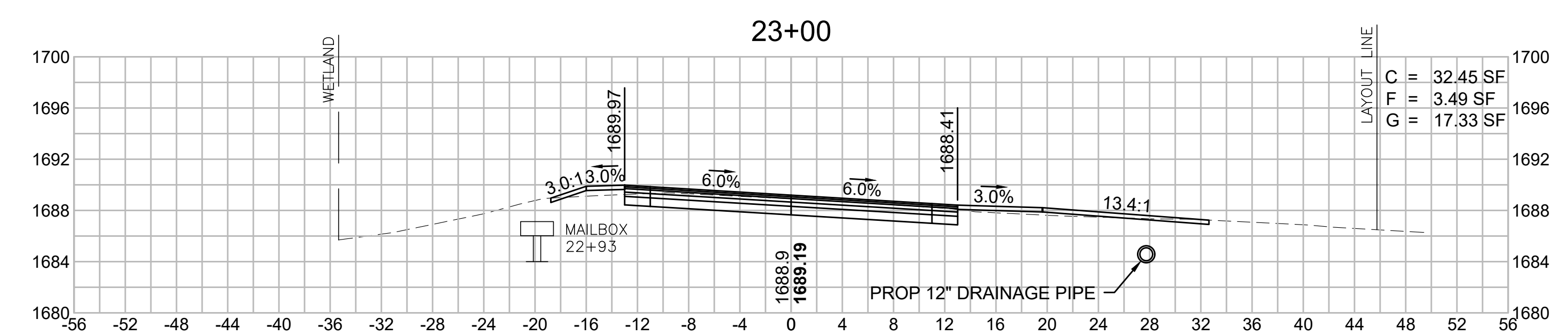
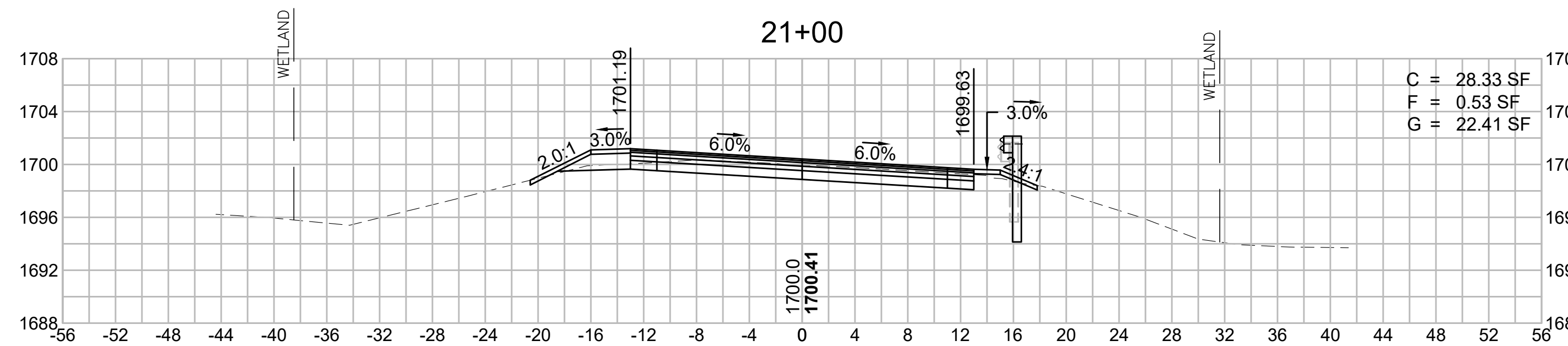
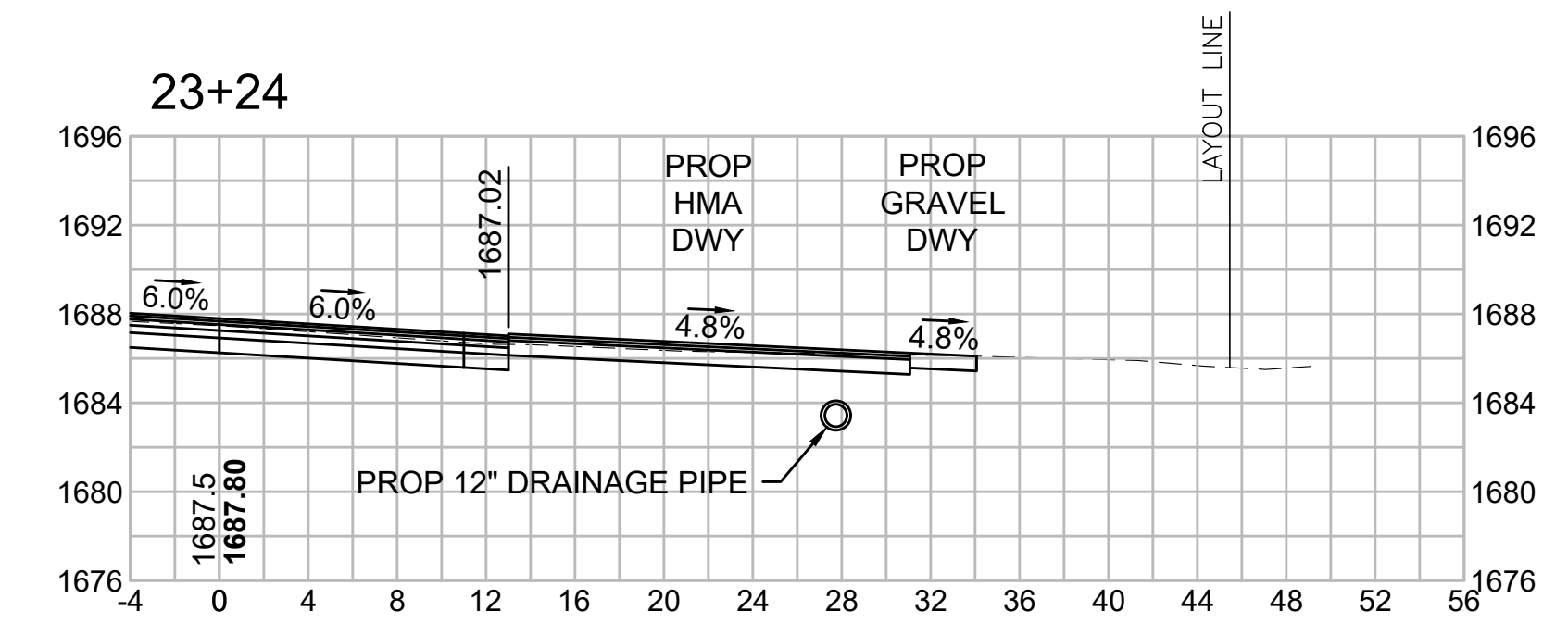
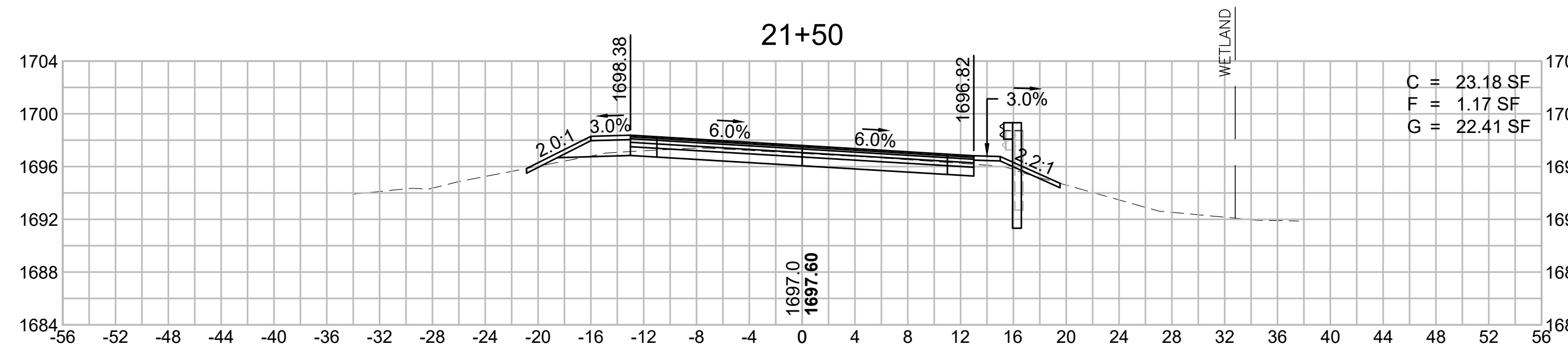
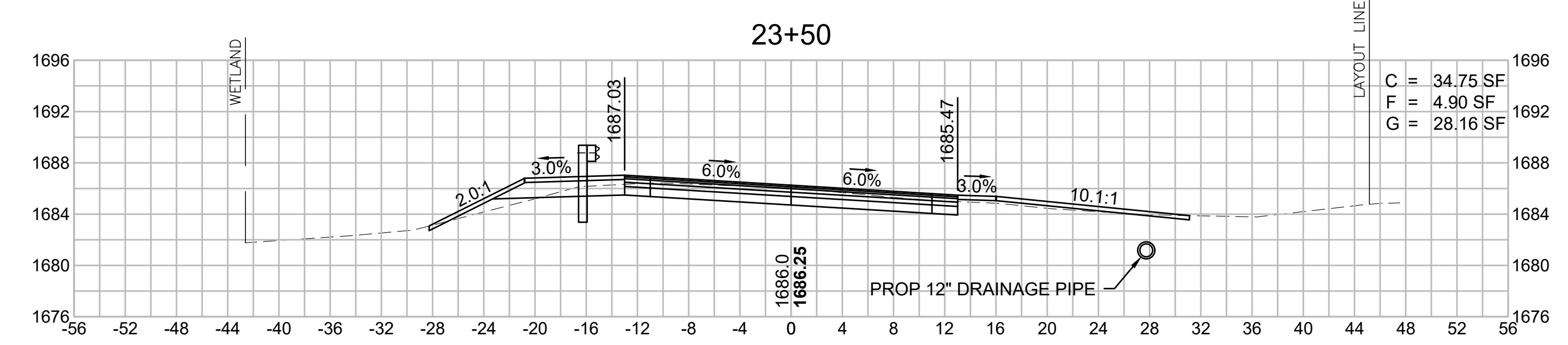
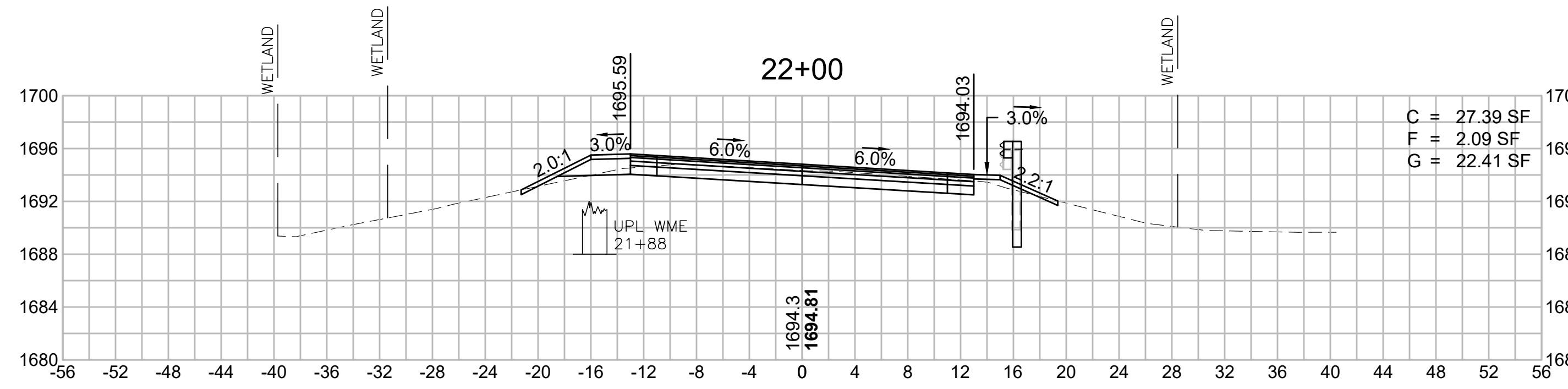
**BEGIN FULL SUPERELEVATION
17+81.66**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	109	191
PROJECT FILE NO. 609287			

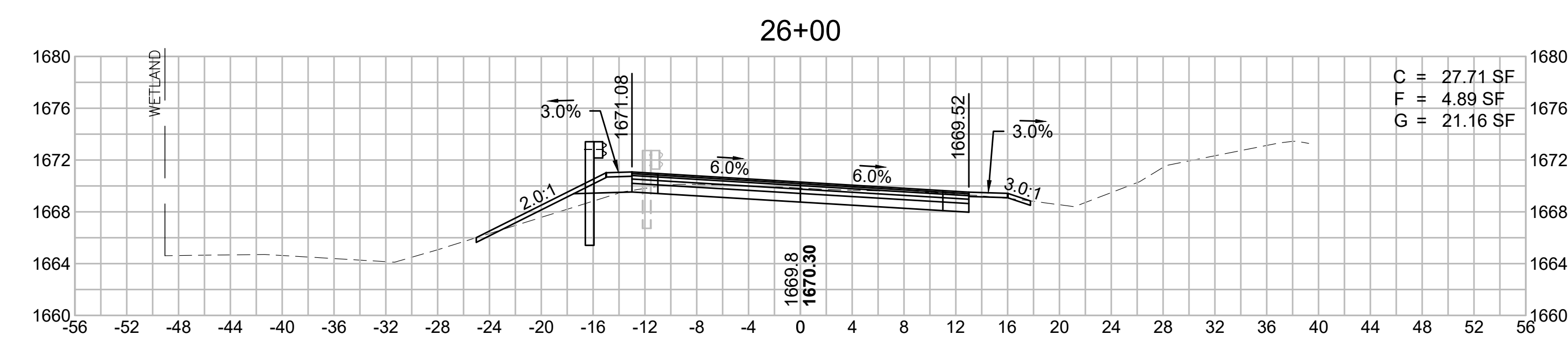
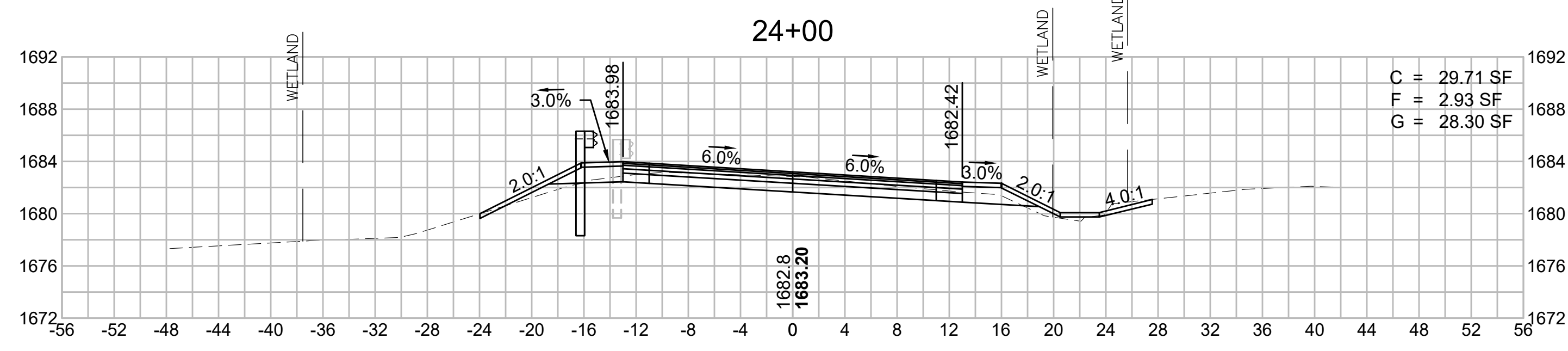
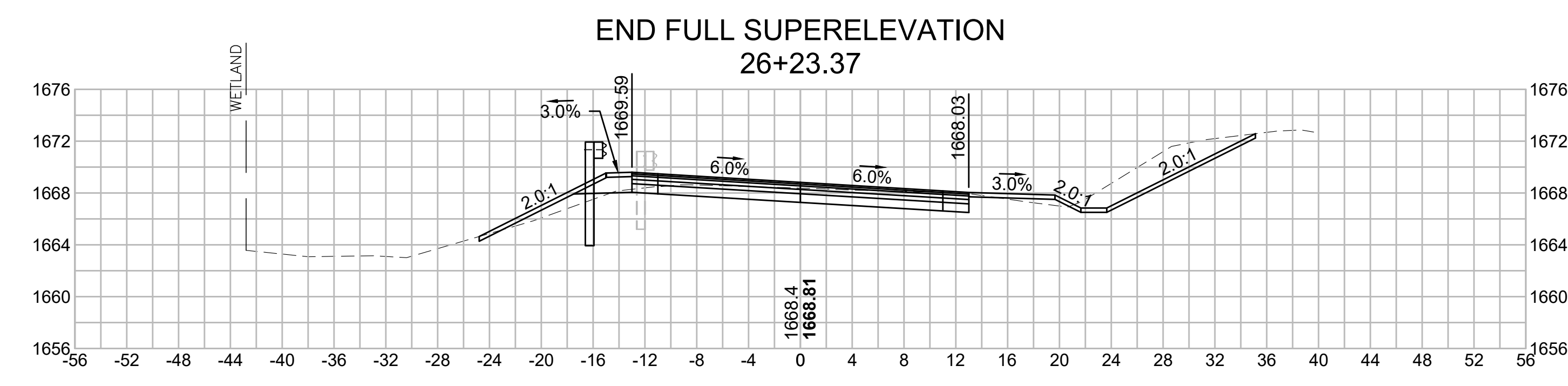
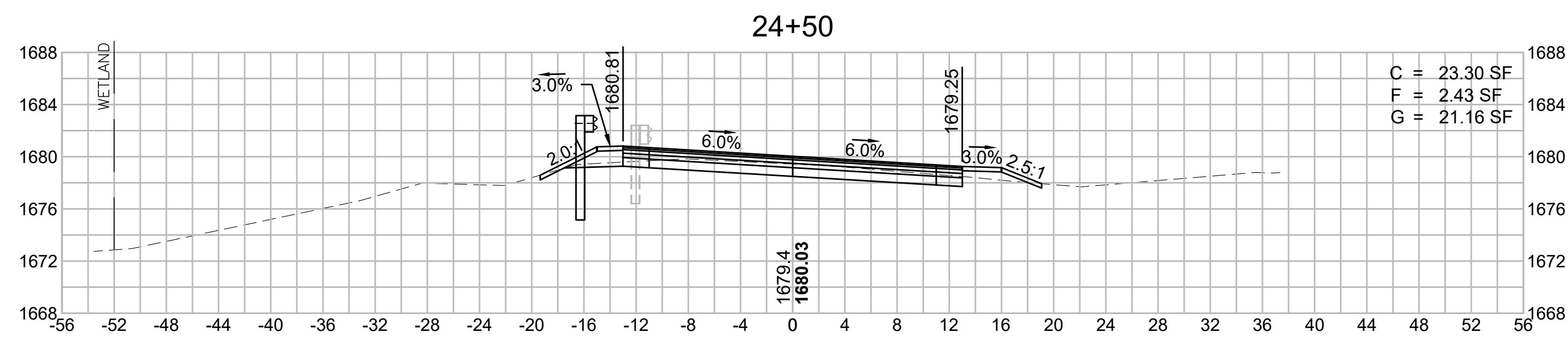
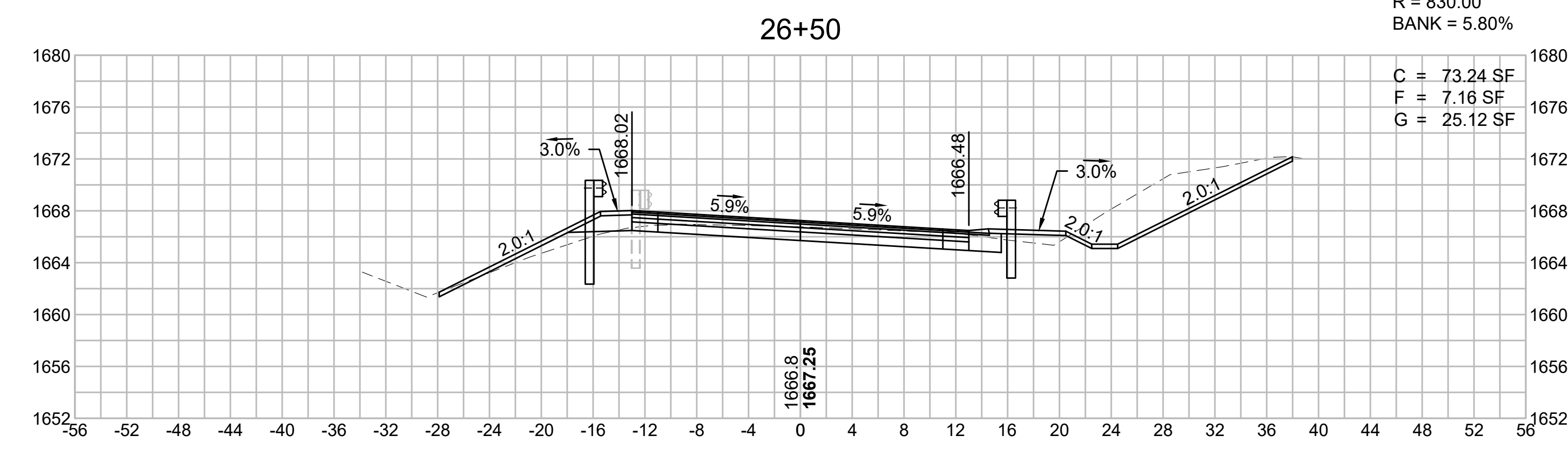
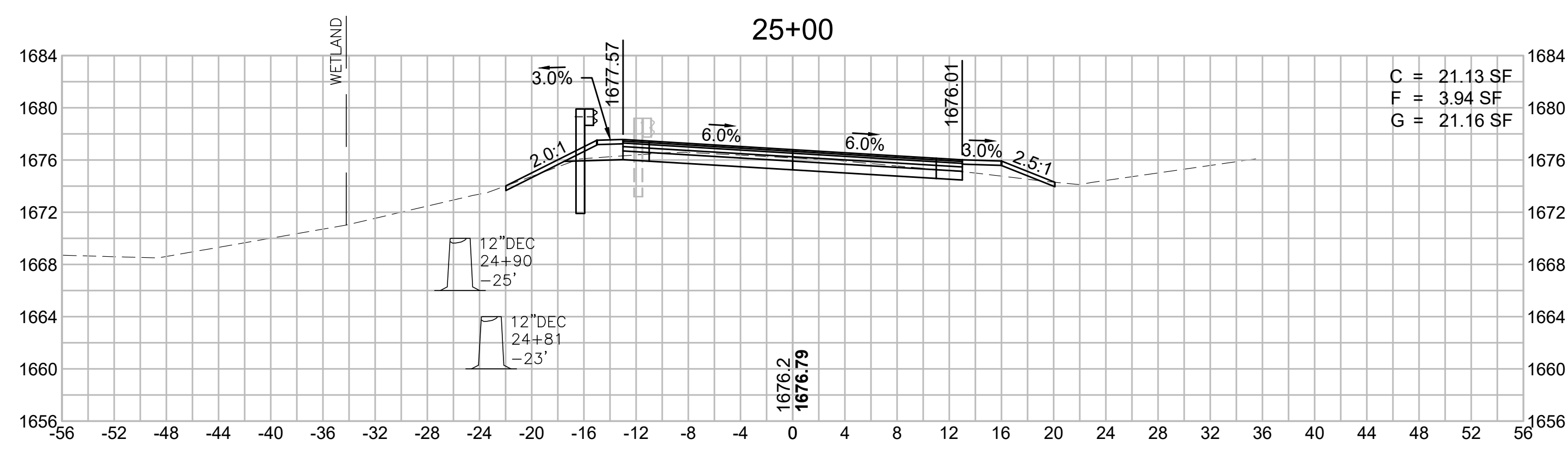
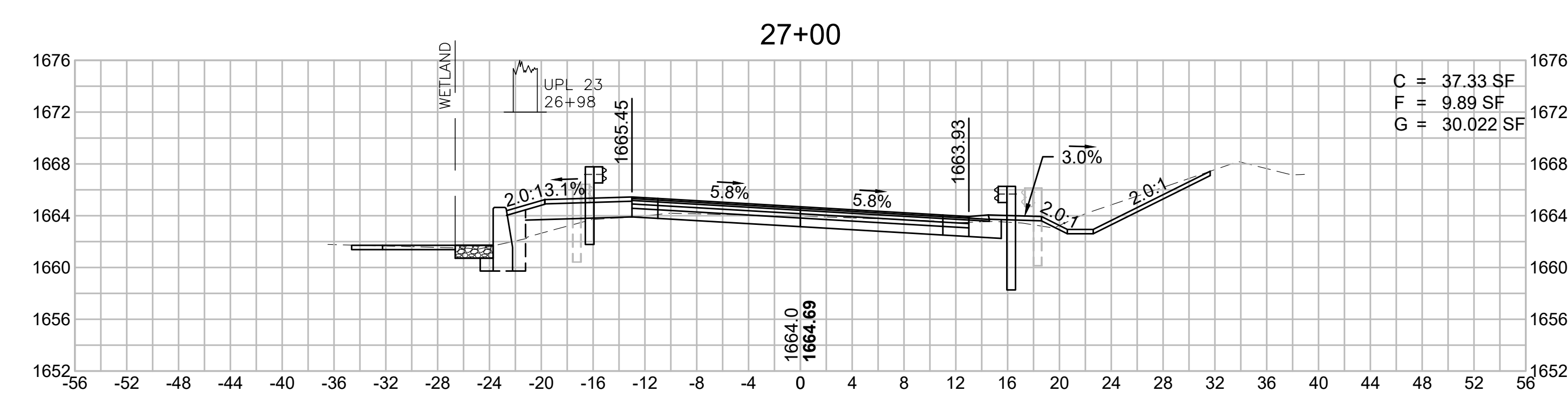
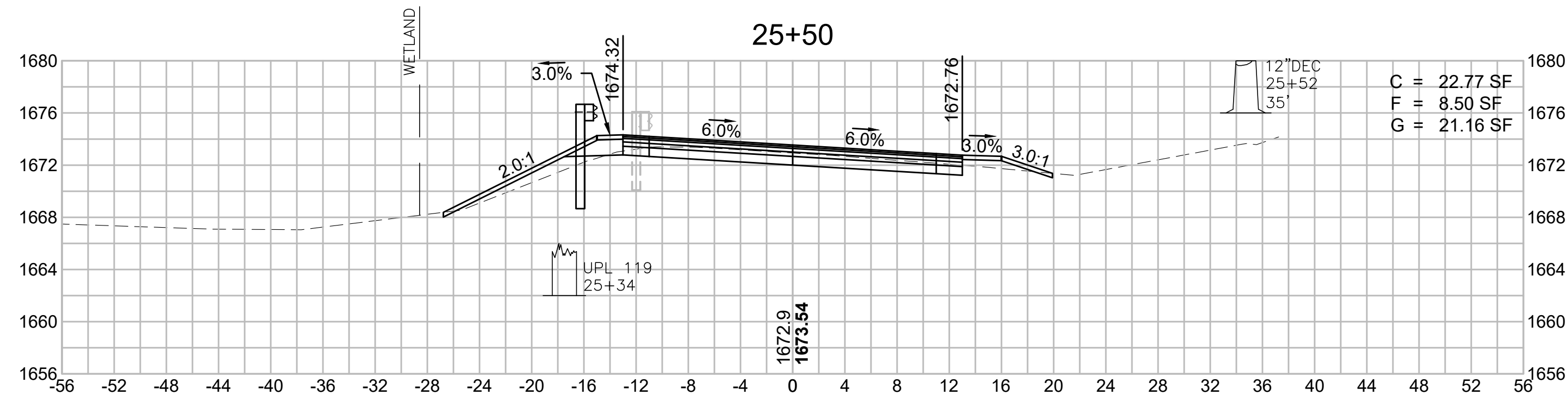
**OLD NORTH ROAD
CROSS SECTIONS - 6**



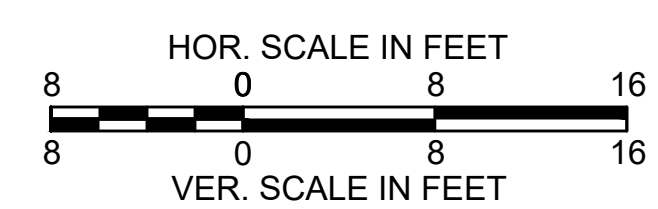
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	110	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 7**



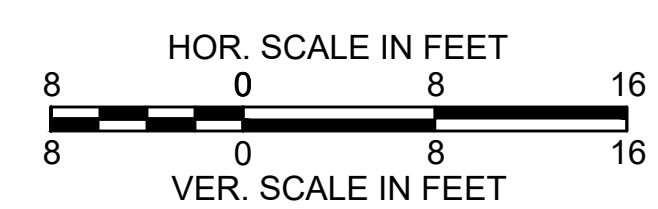
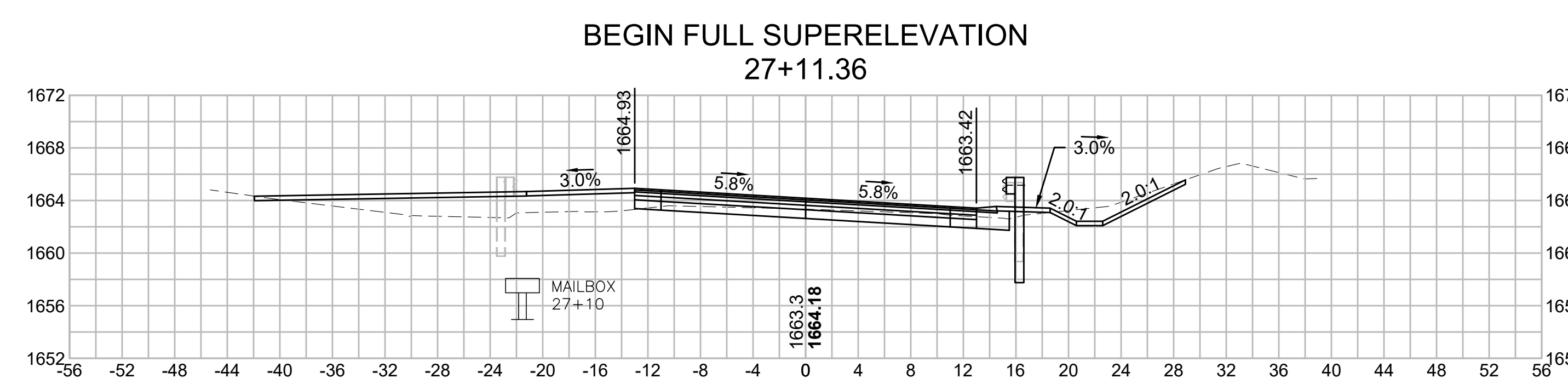
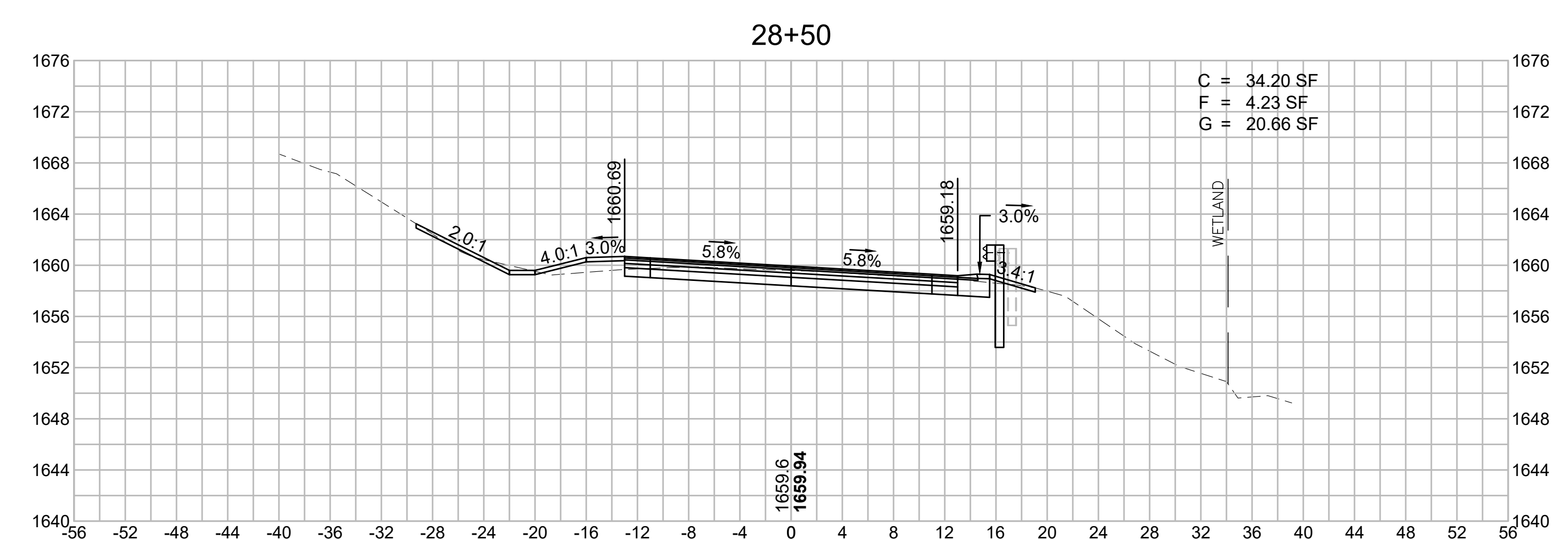
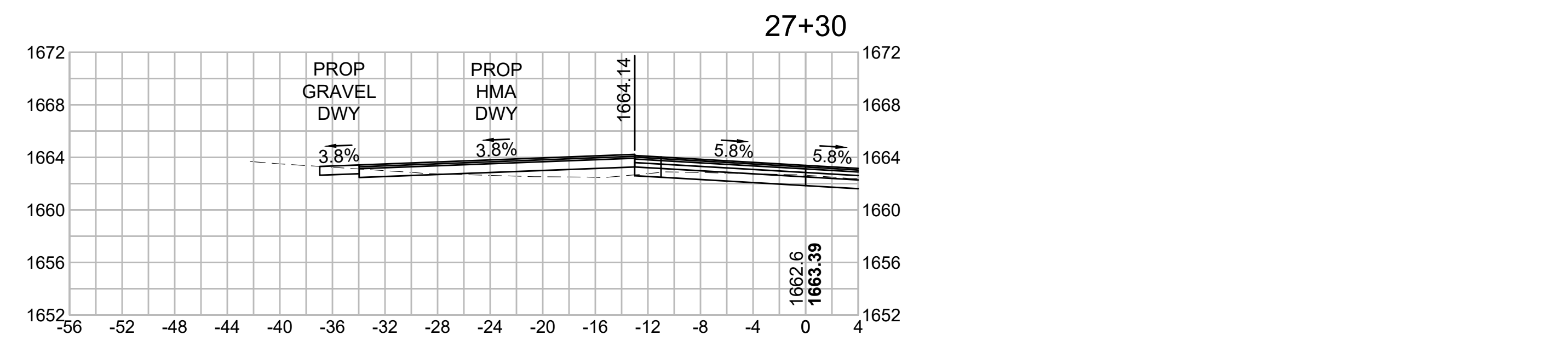
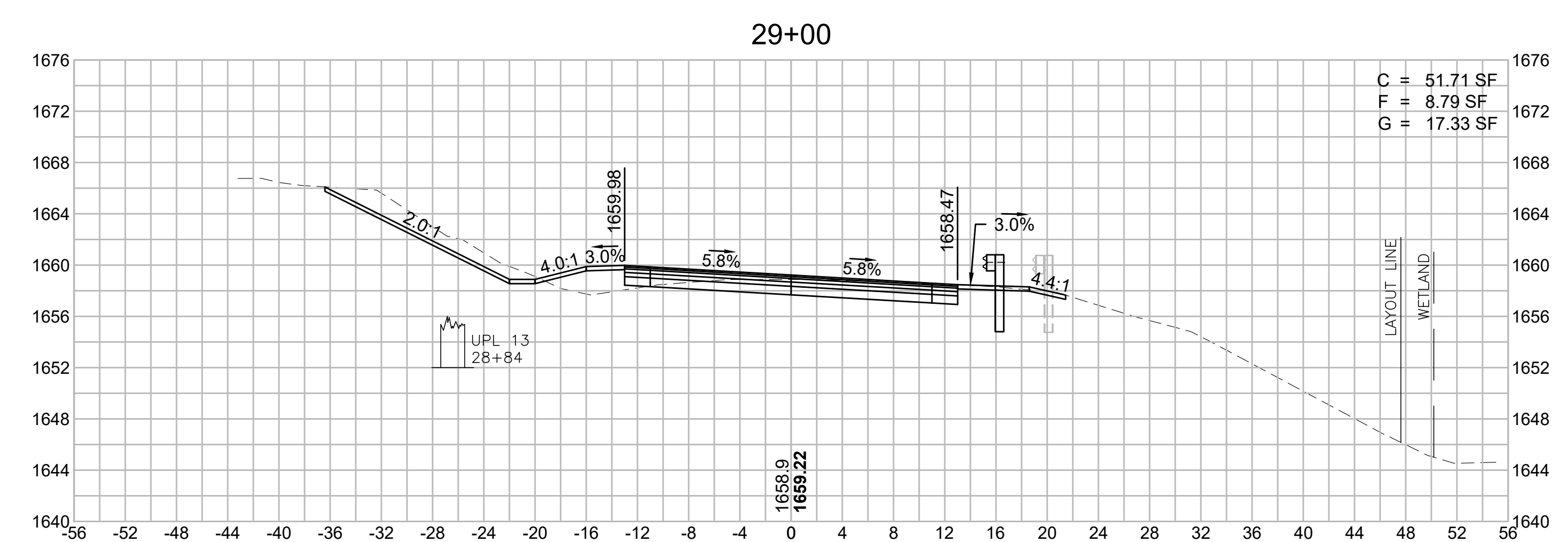
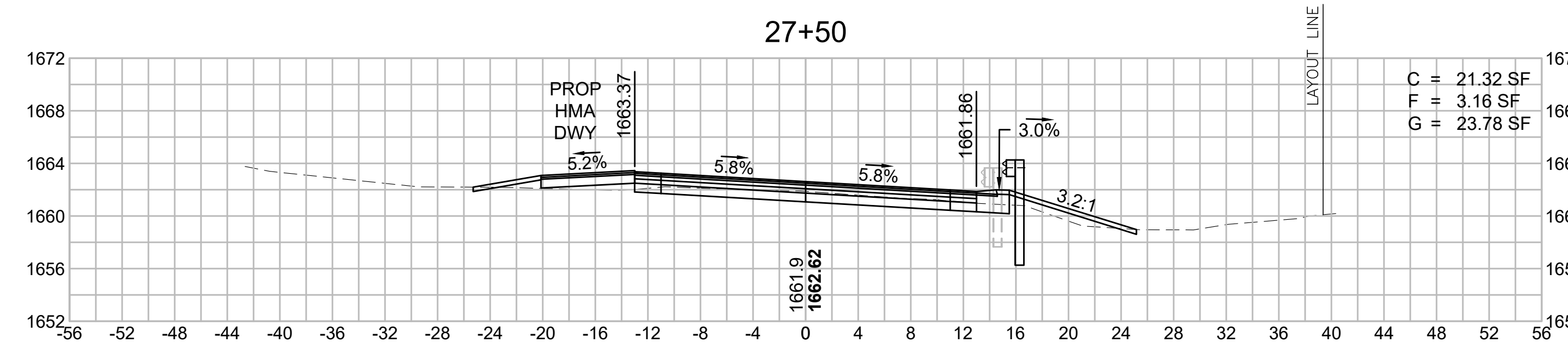
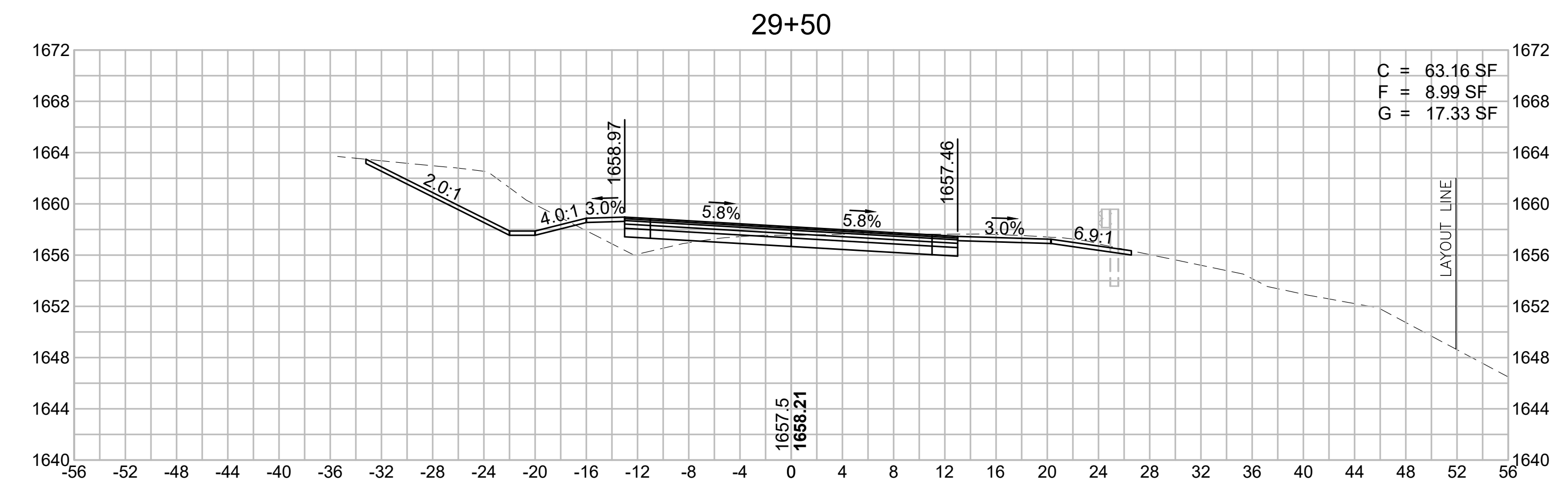
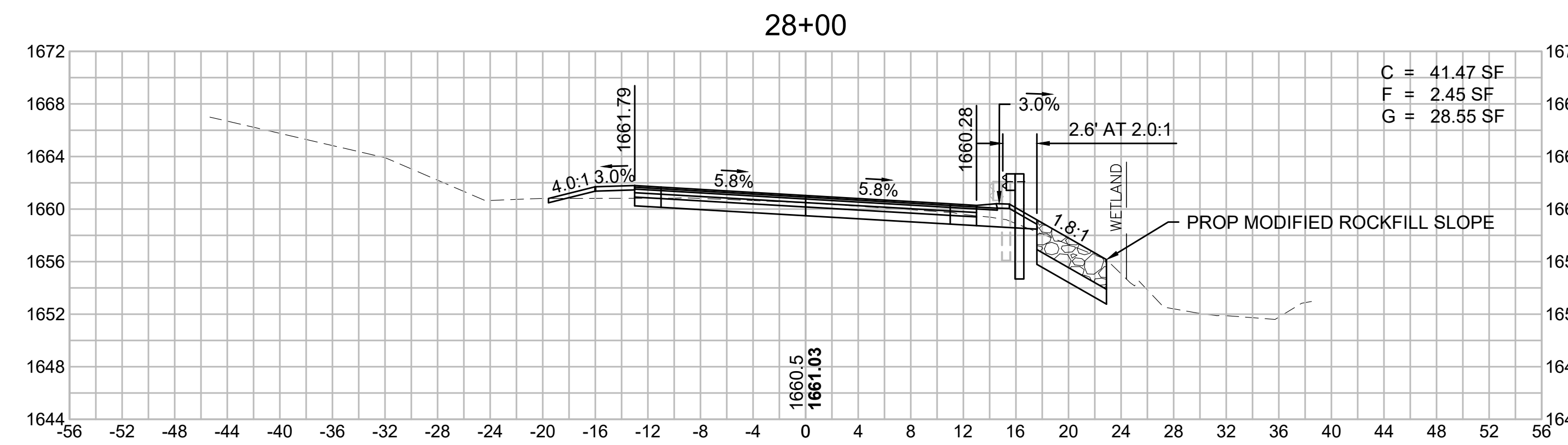
SUPERELEVATION:
PCC STA = 26+67.70
R = 830.00'
BANK = 5.80%



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	111	191

**OLD NORTH ROAD
CROSS SECTIONS - 8**

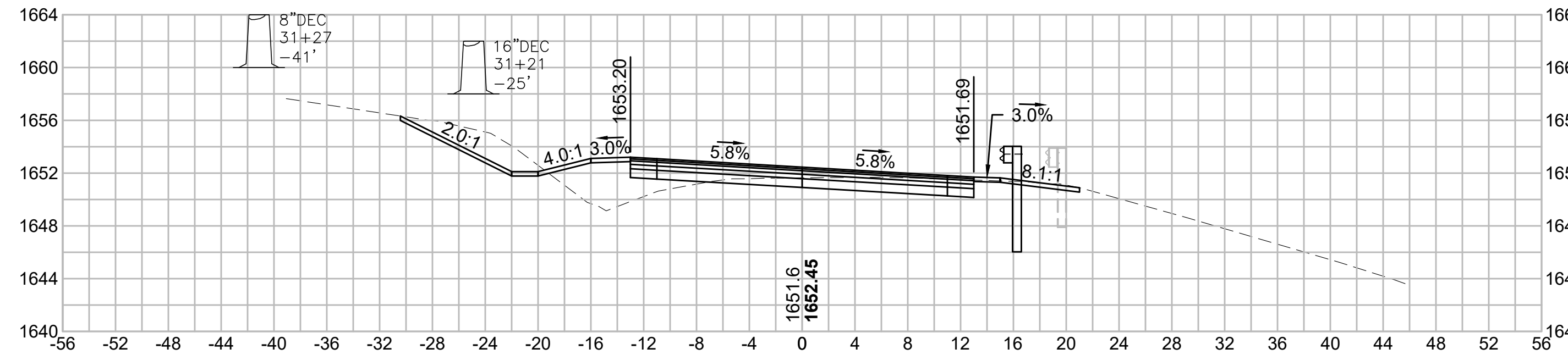


**WORTHINGTON
ROUTE 143**

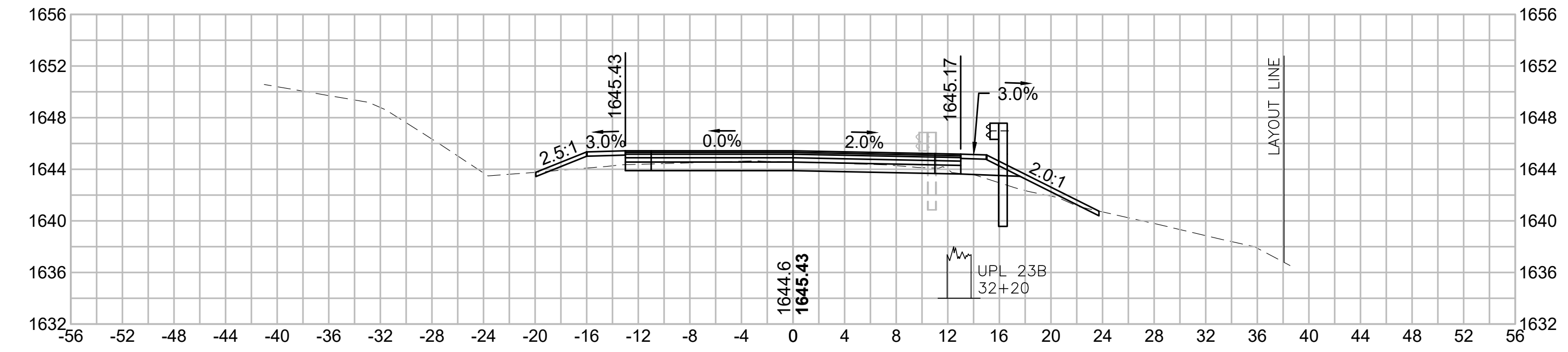
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	112	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 9**

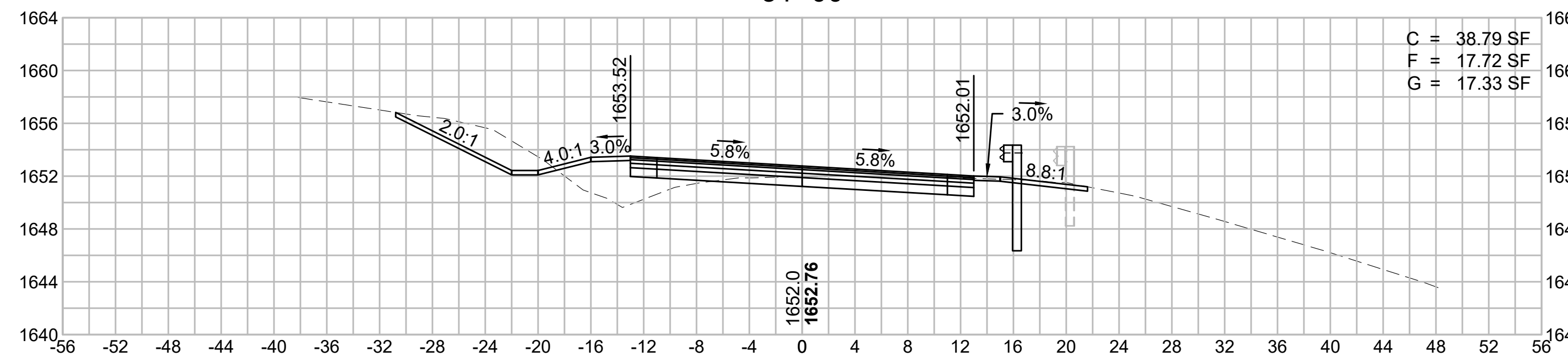
**END FULL SUPERELEVATION
31+06.45**



**LEVEL CROWN
32+37.45**

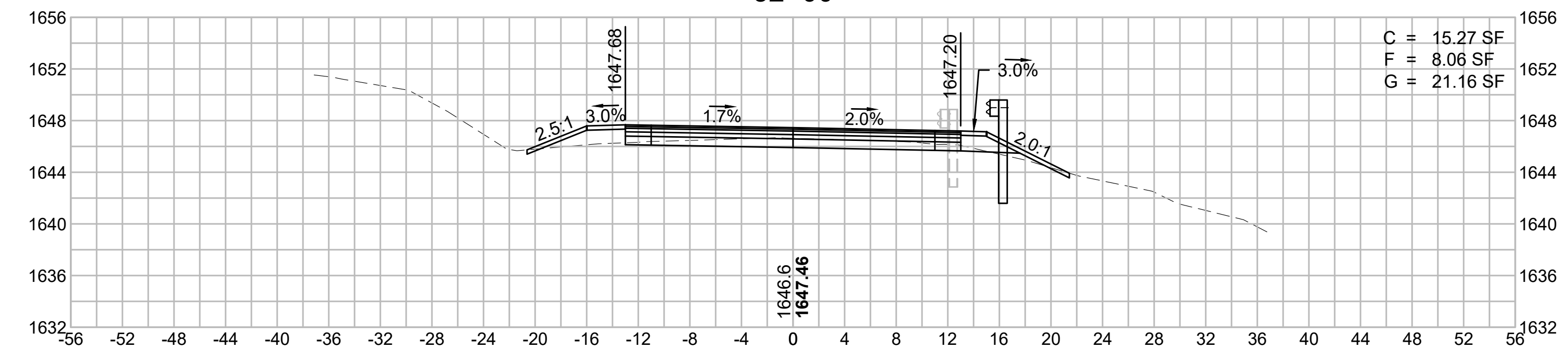


31+00



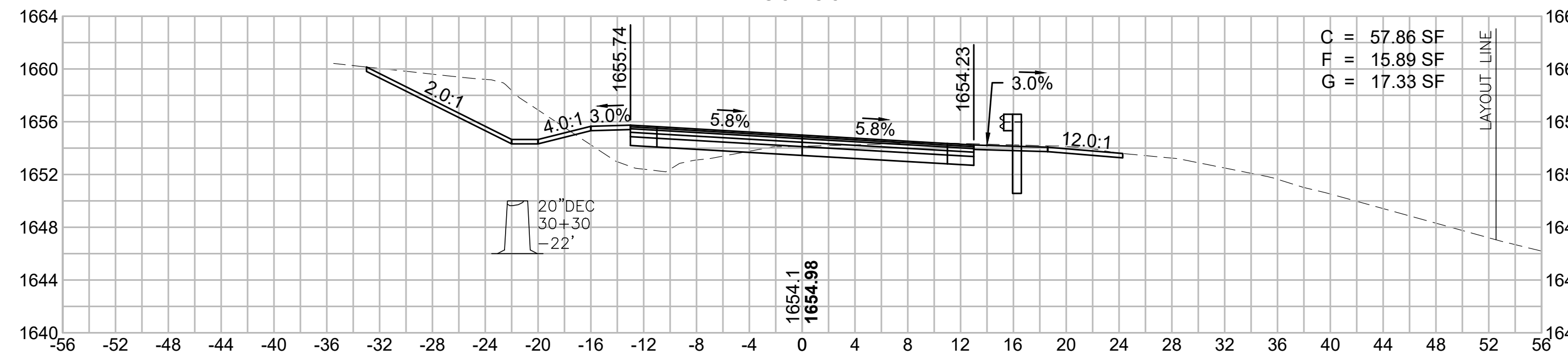
C = 38.79 SF
F = 17.72 SF
G = 17.33 SF

32+00



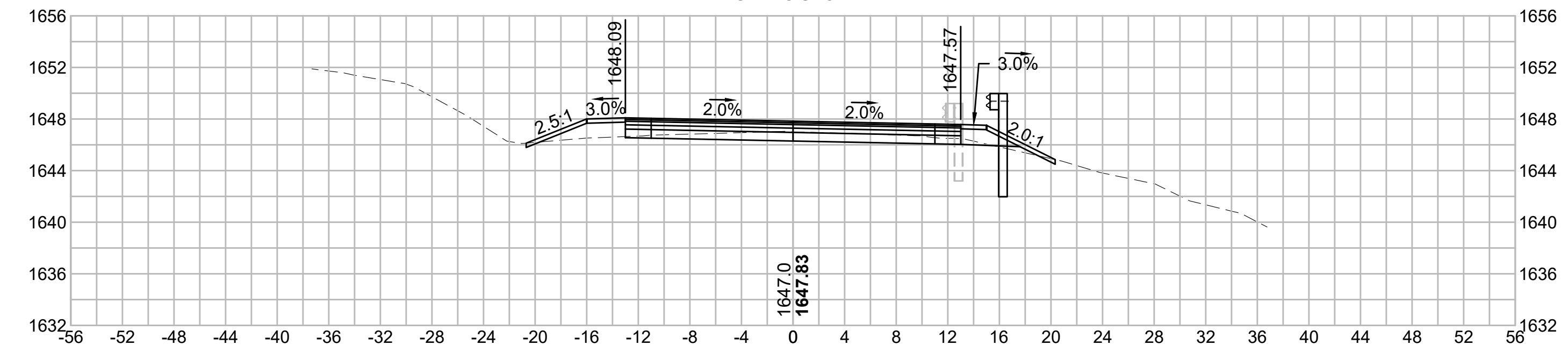
C = 15.27 SF
F = 8.06 SF
G = 21.16 SF

30+50

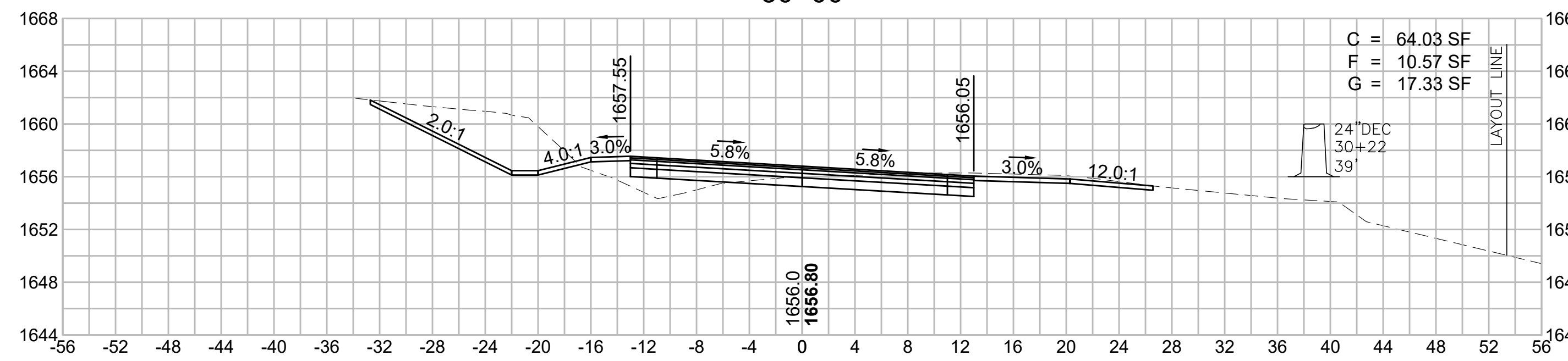


C = 57.86 SF
F = 15.89 SF
G = 17.33 SF

**REVERSE CROWN
31+93.04**

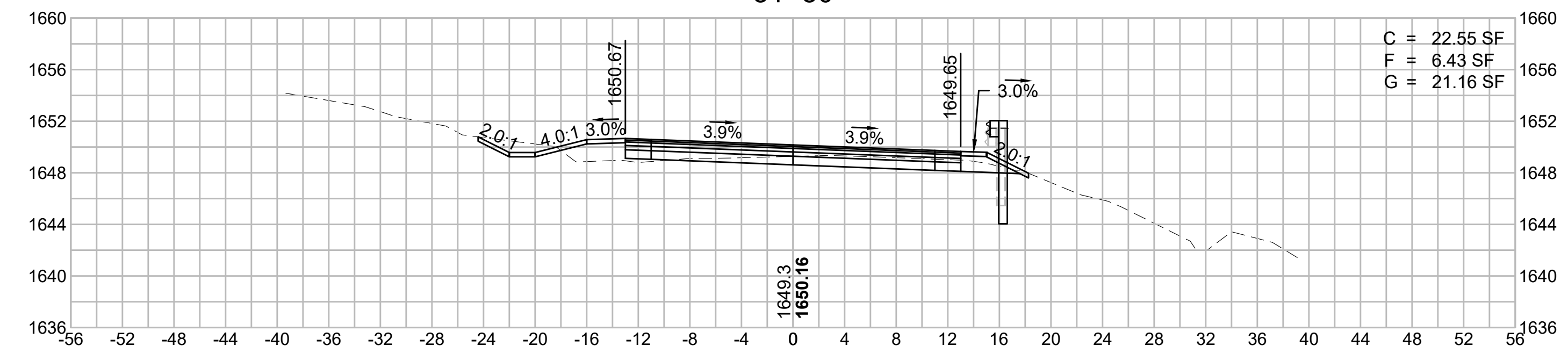


30+00



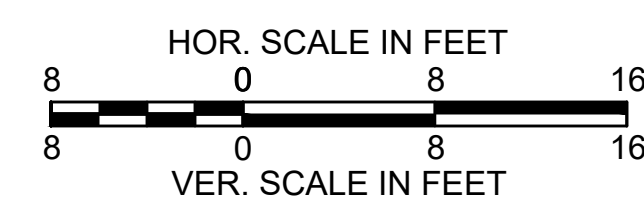
C = 64.03 SF
F = 10.57 SF
G = 17.33 SF

31+50



C = 22.55 SF
F = 6.43 SF
G = 21.16 SF

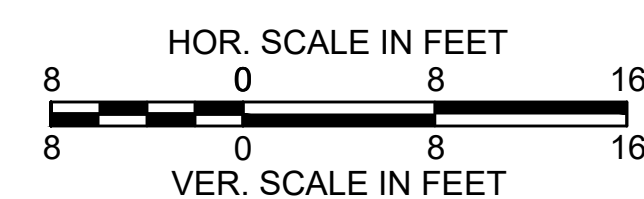
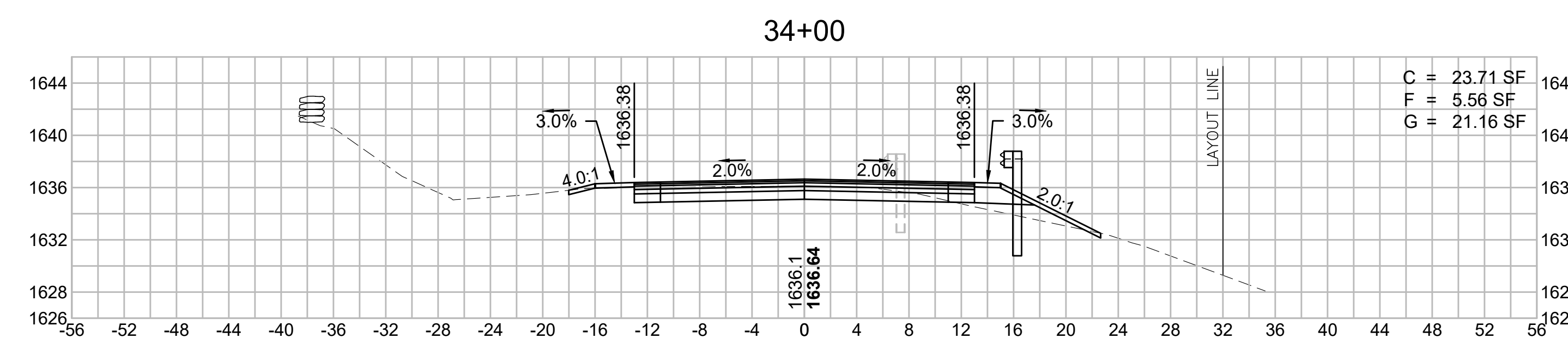
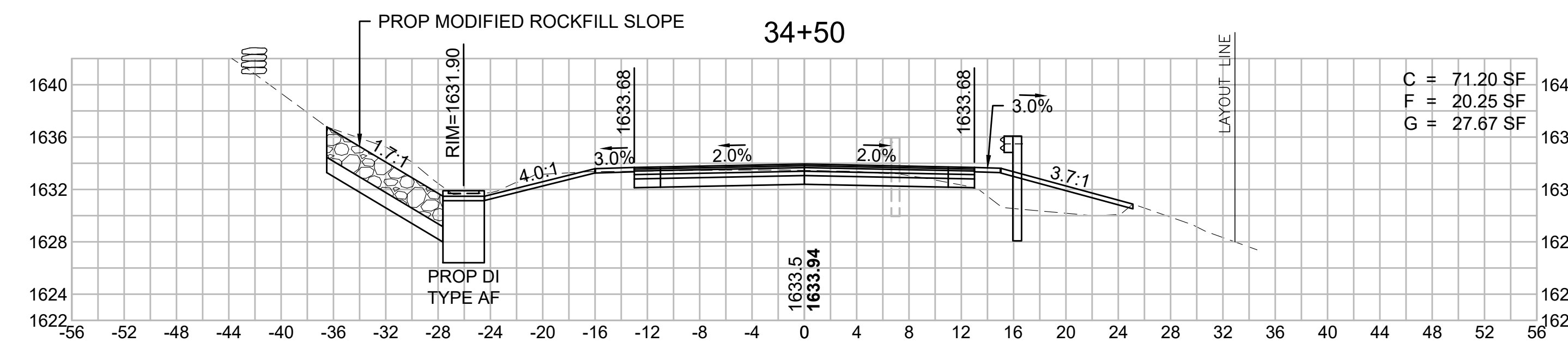
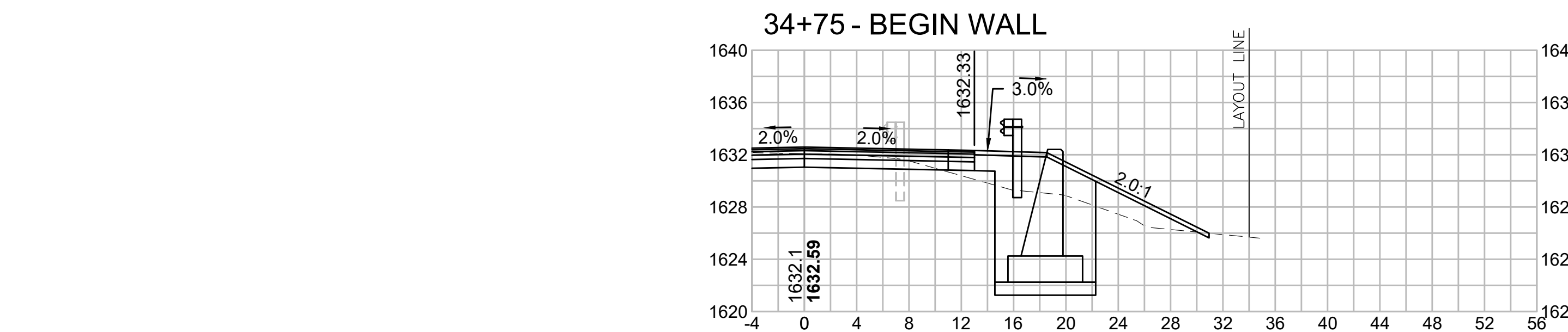
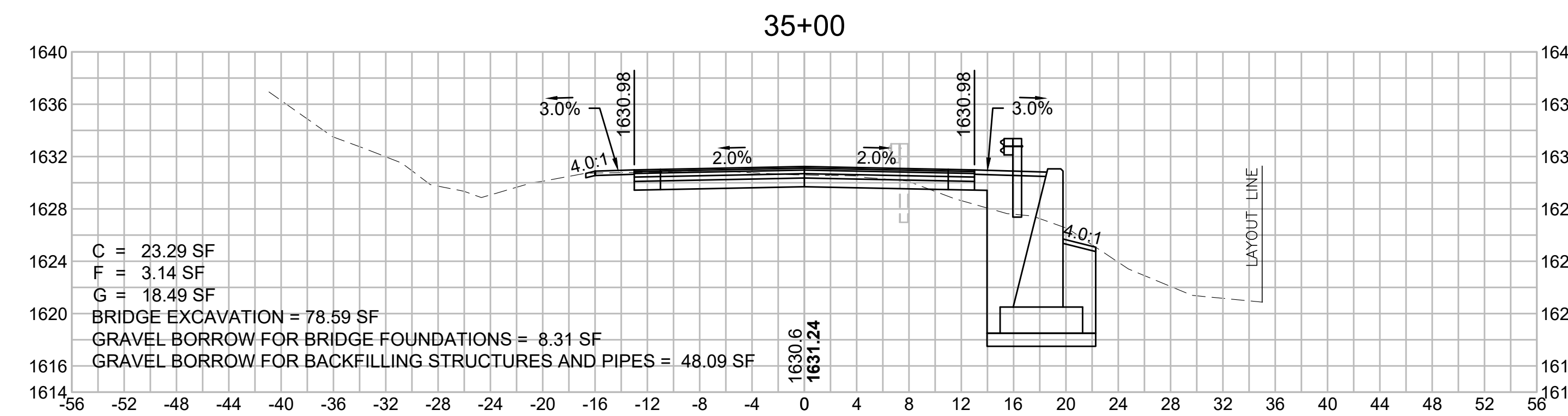
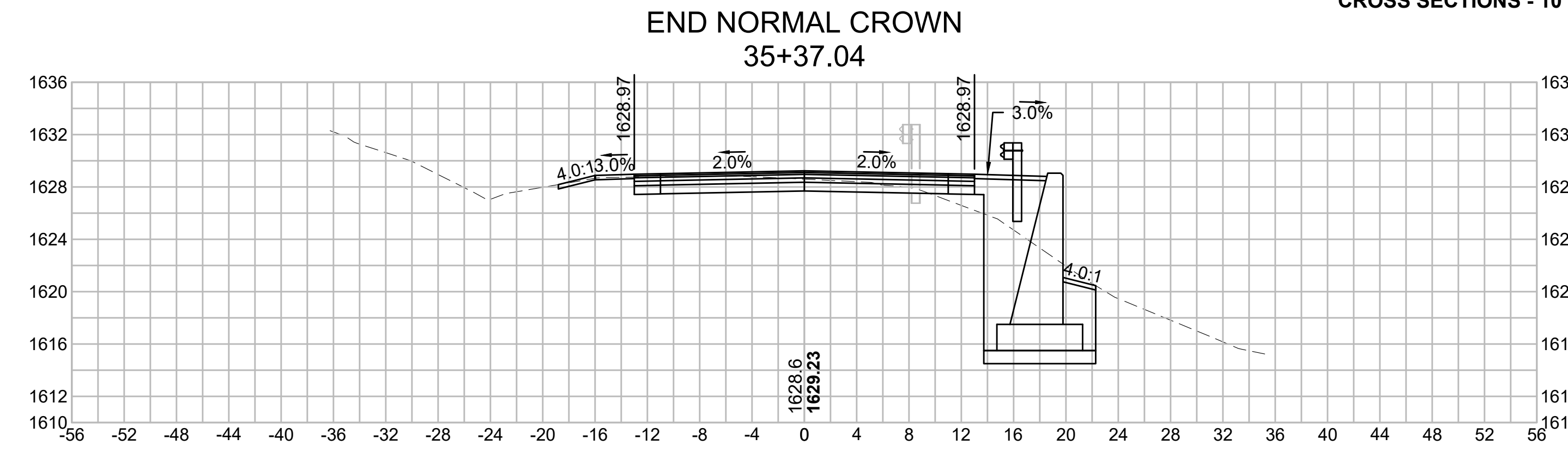
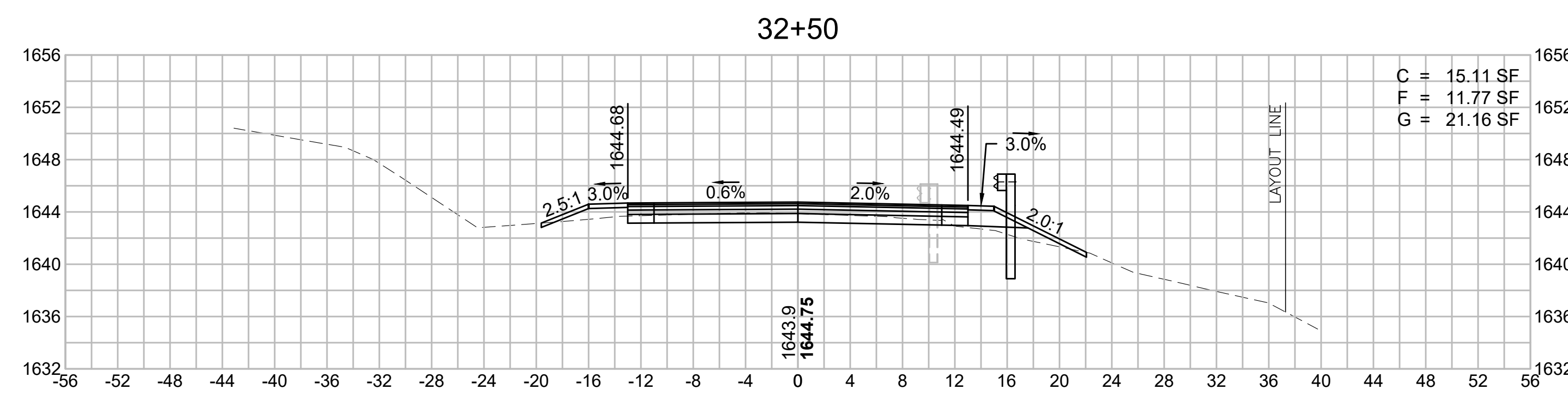
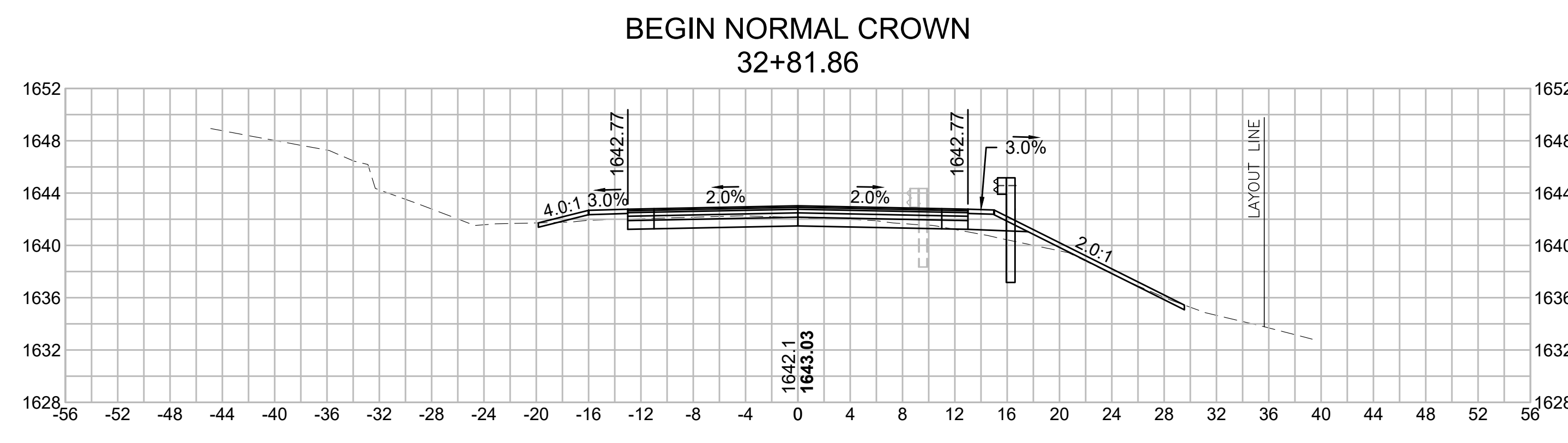
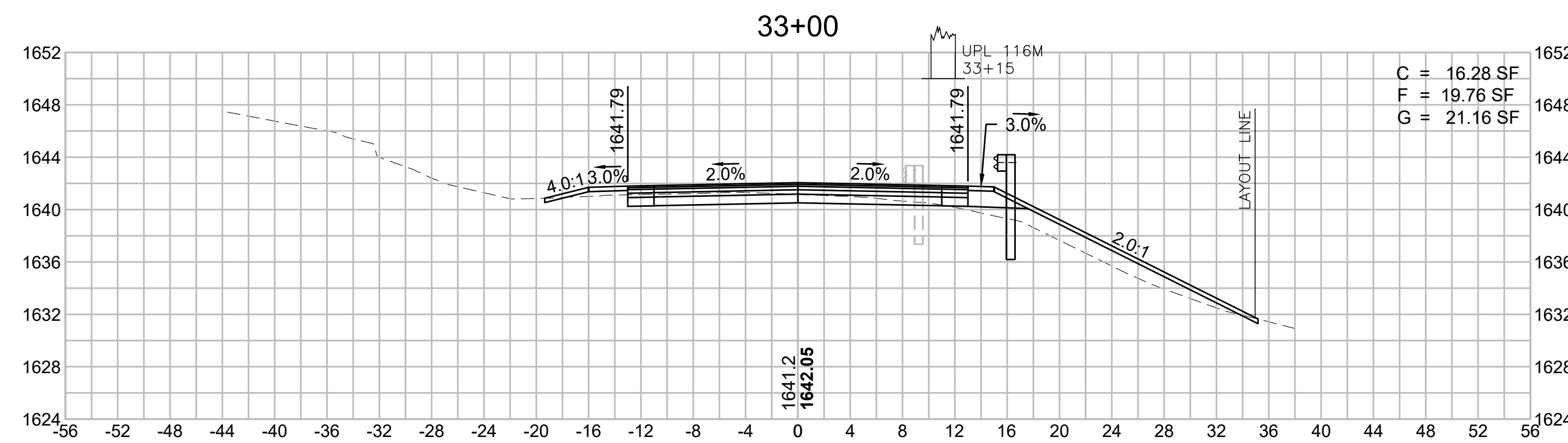
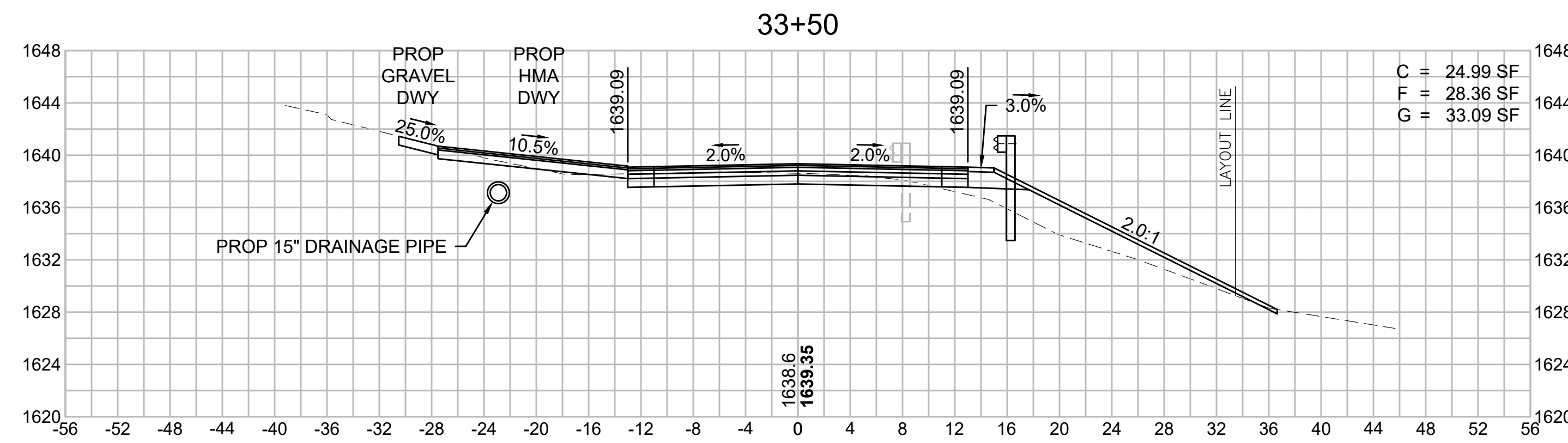
SUPERELEVATION:
PT STA = 31+50.11
R = 830.00'
BANK = 5.80%



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	113	191

**OLD NORTH ROAD
CROSS SECTIONS - 10**

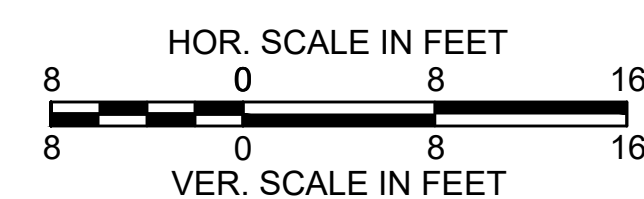
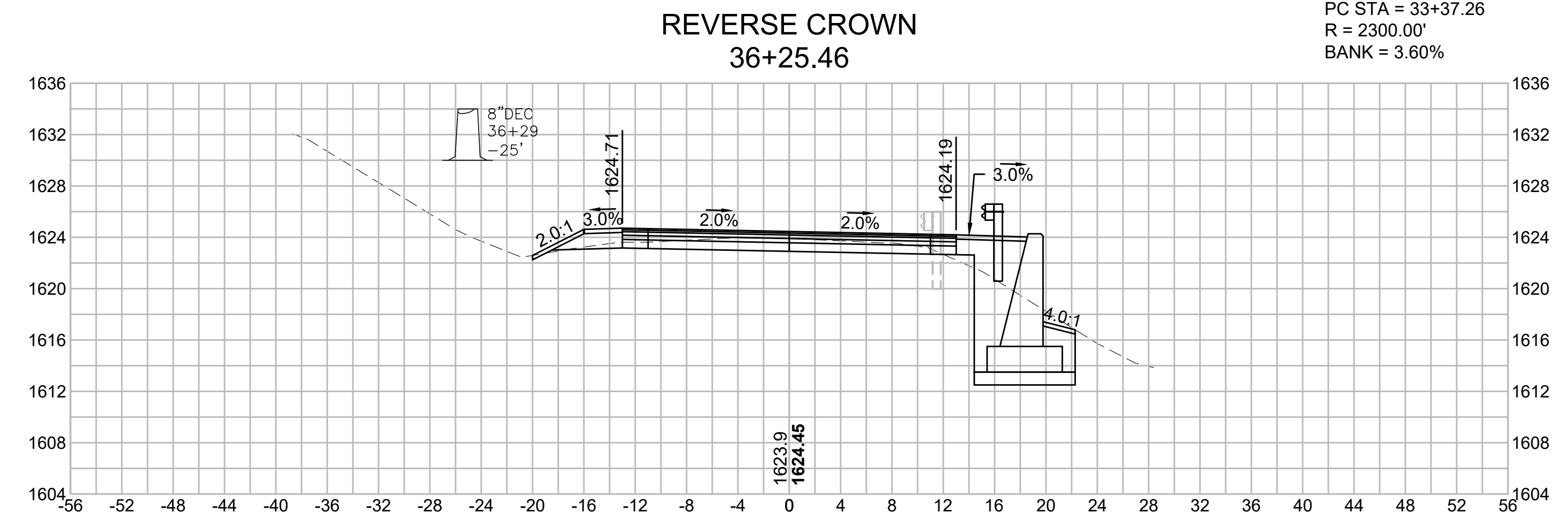
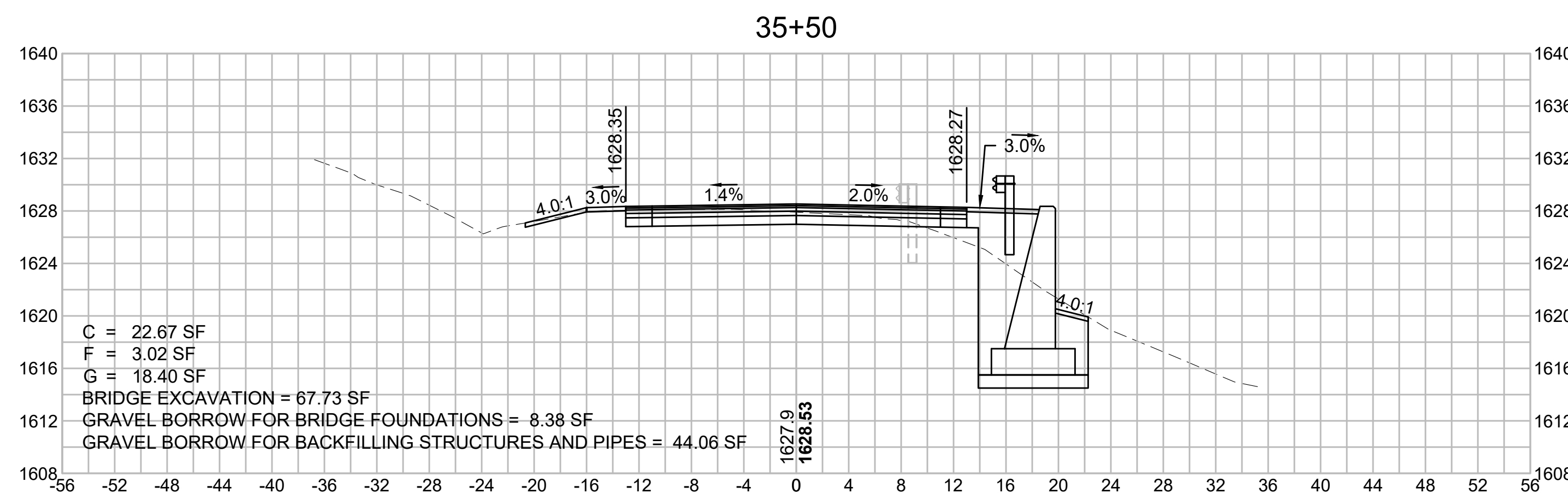
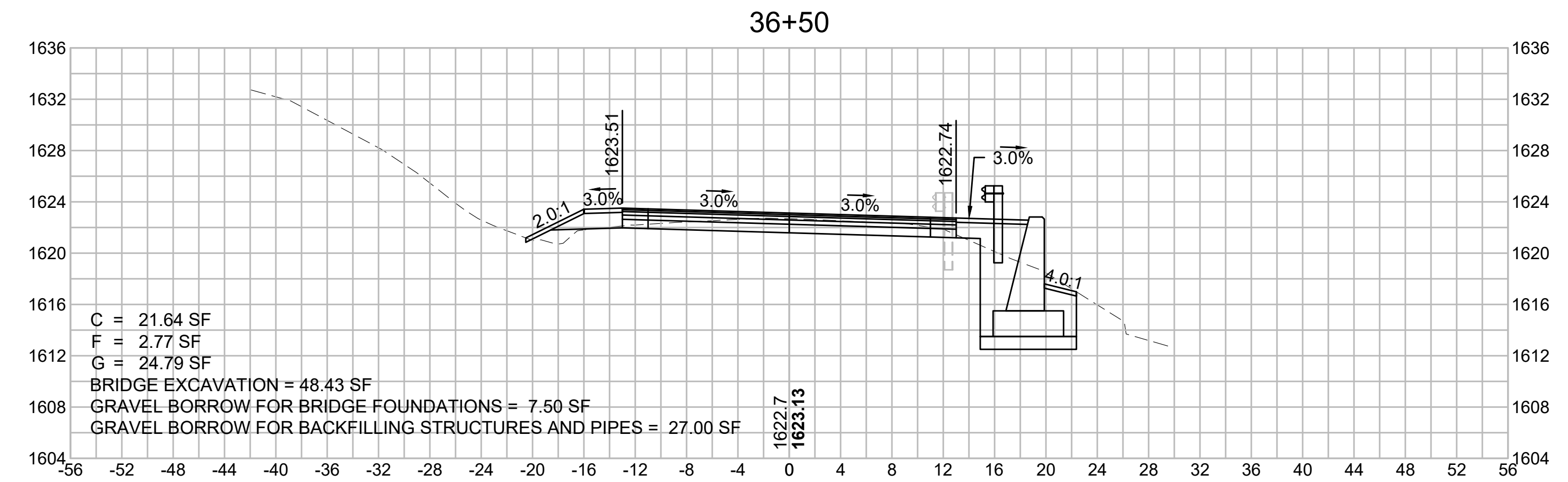
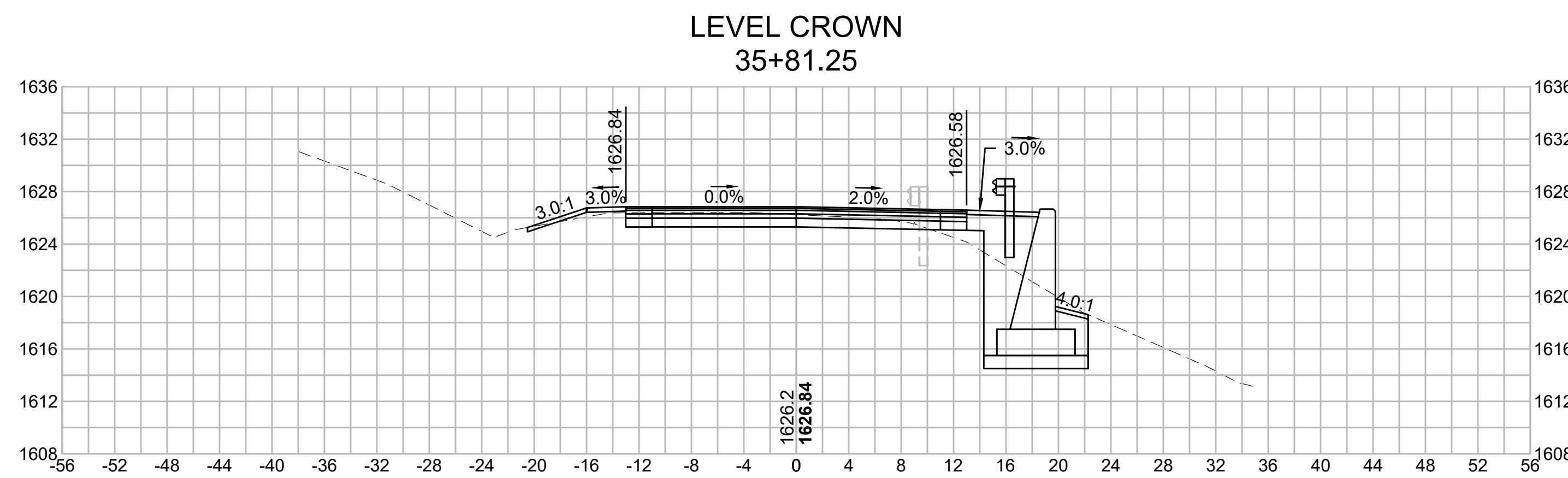
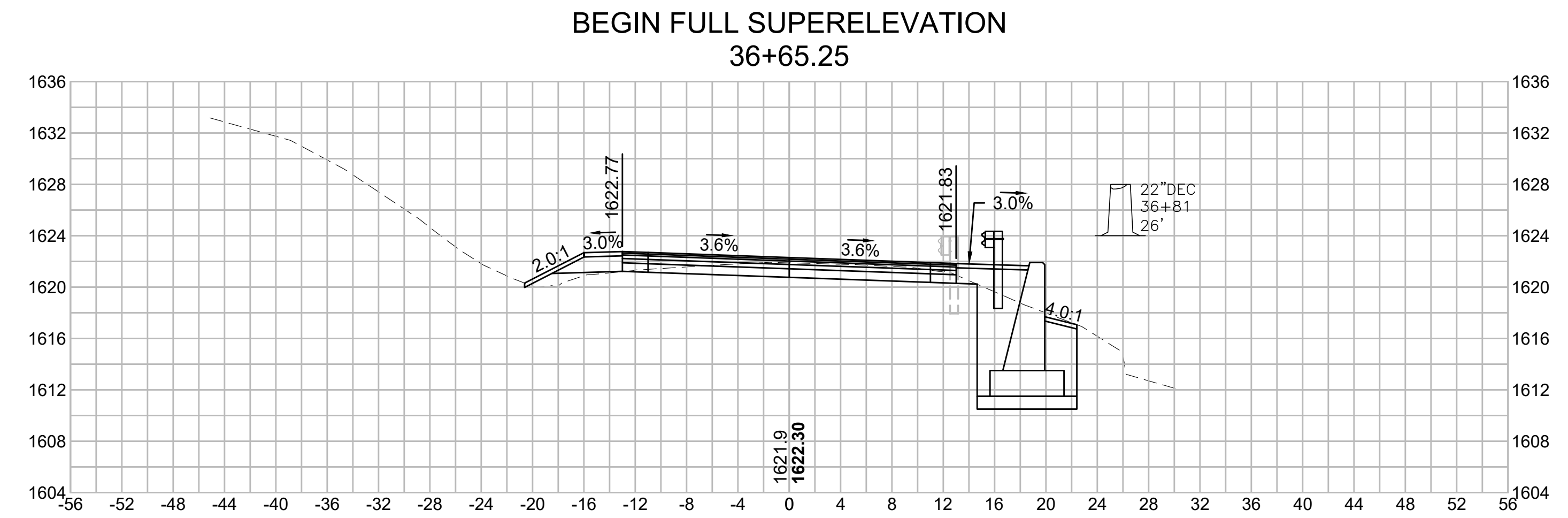
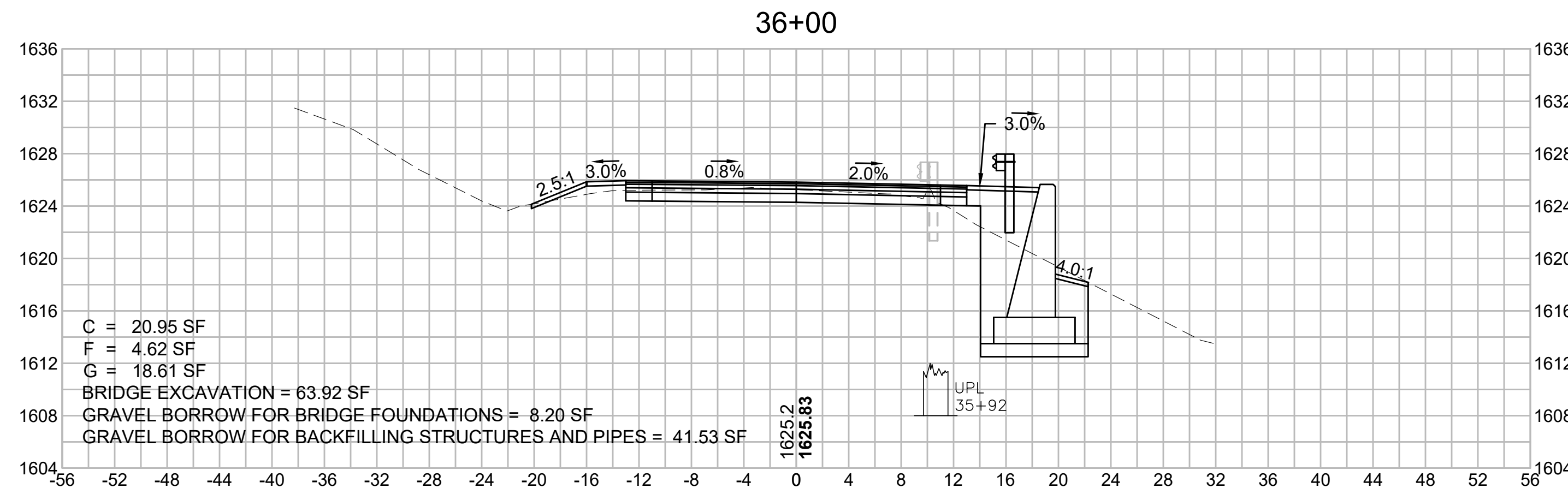


**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	114	191

**OLD NORTH ROAD
CROSS SECTIONS - 11**

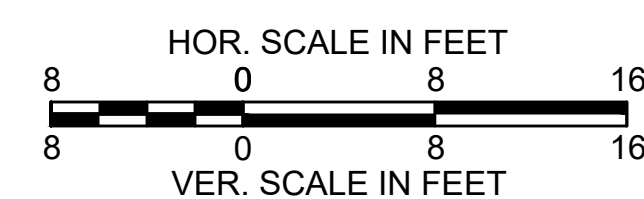
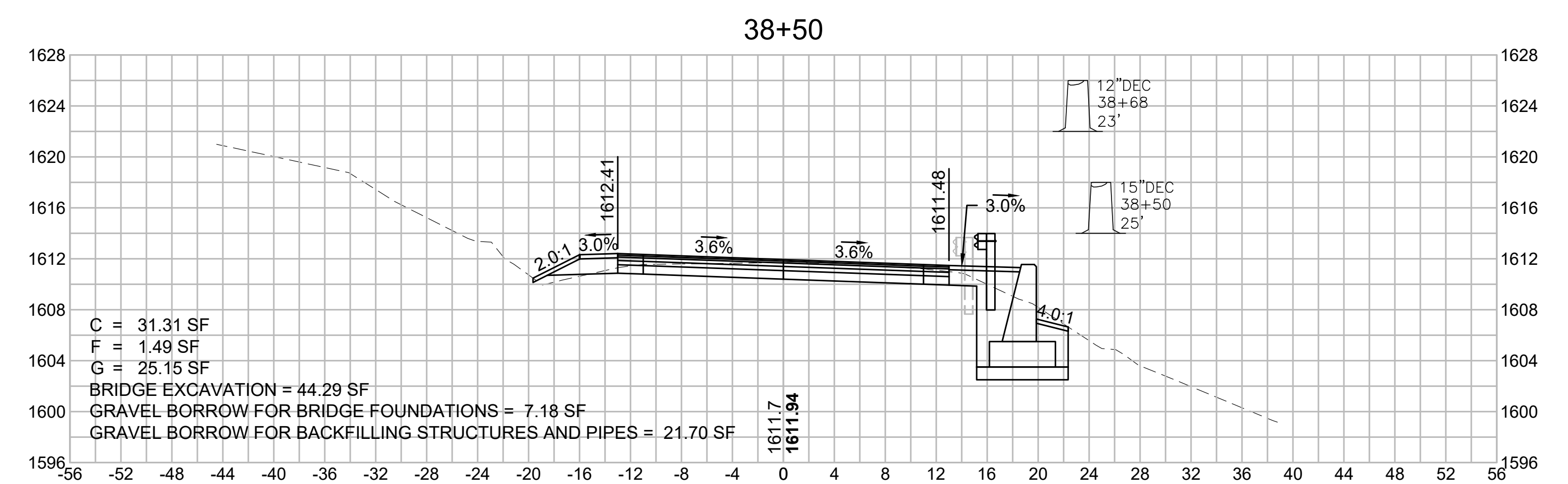
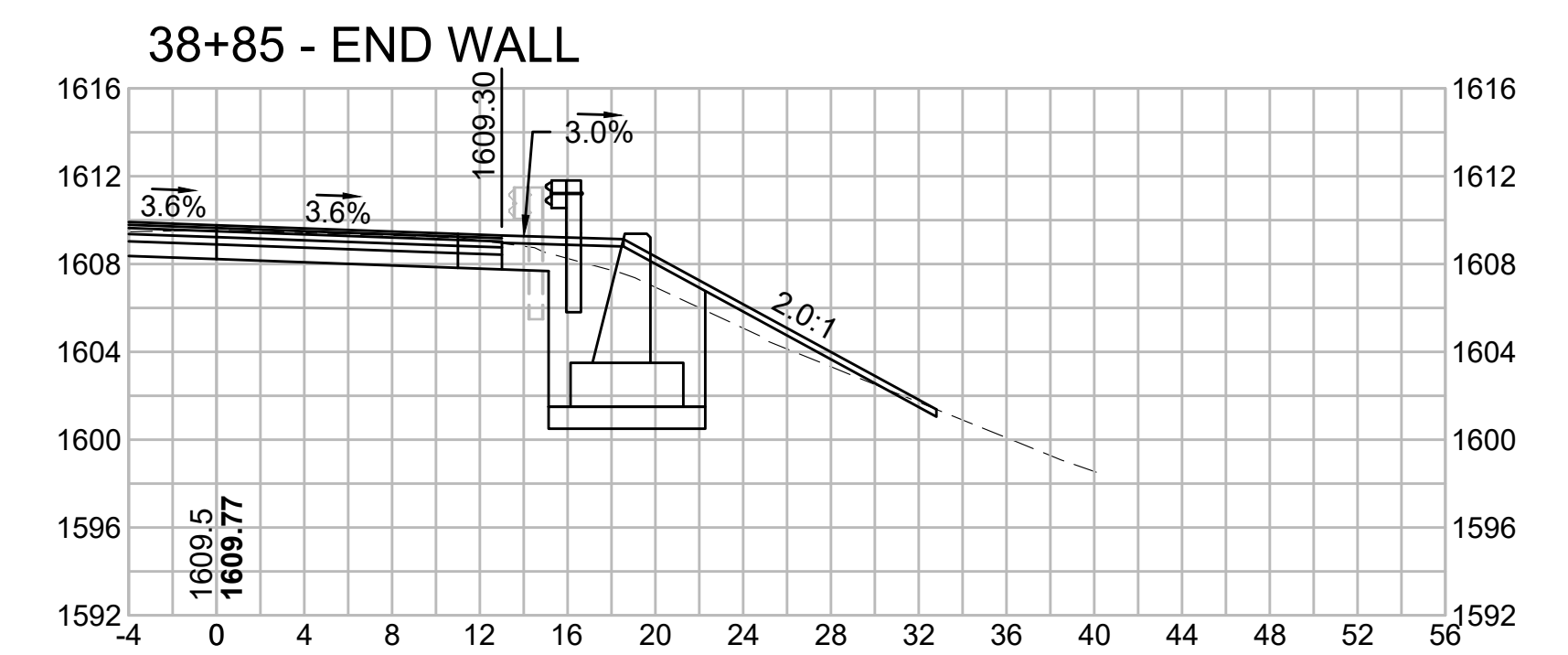
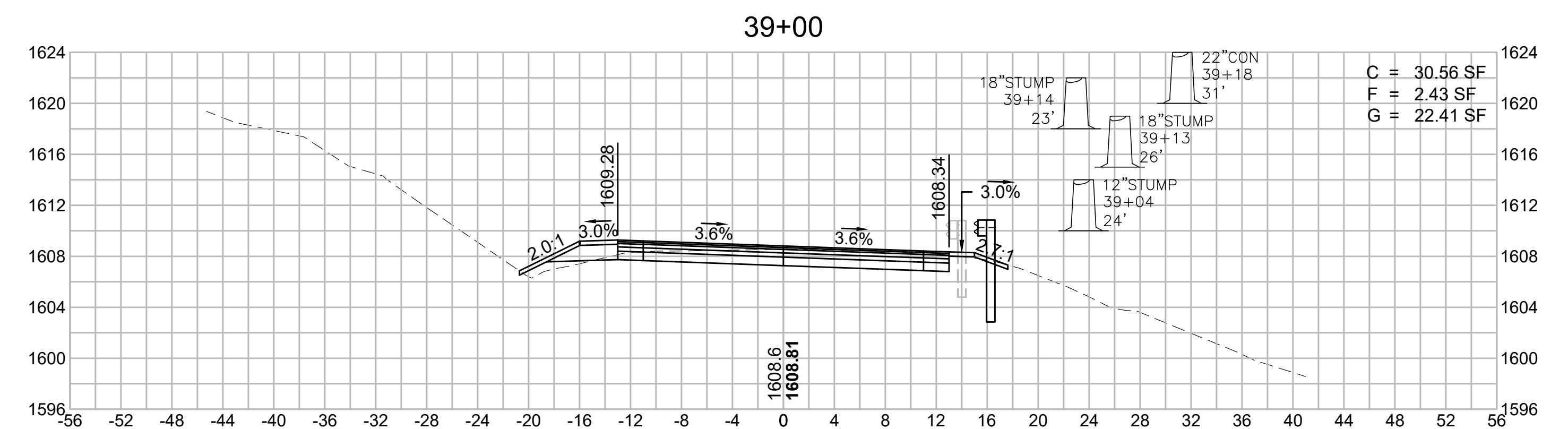
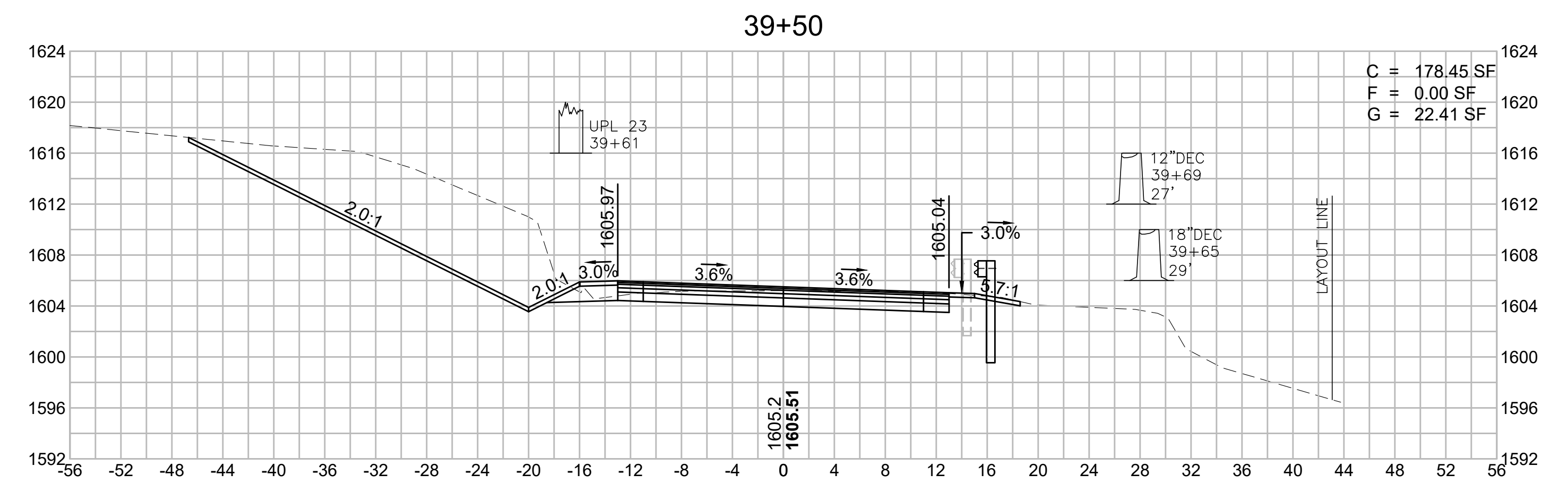
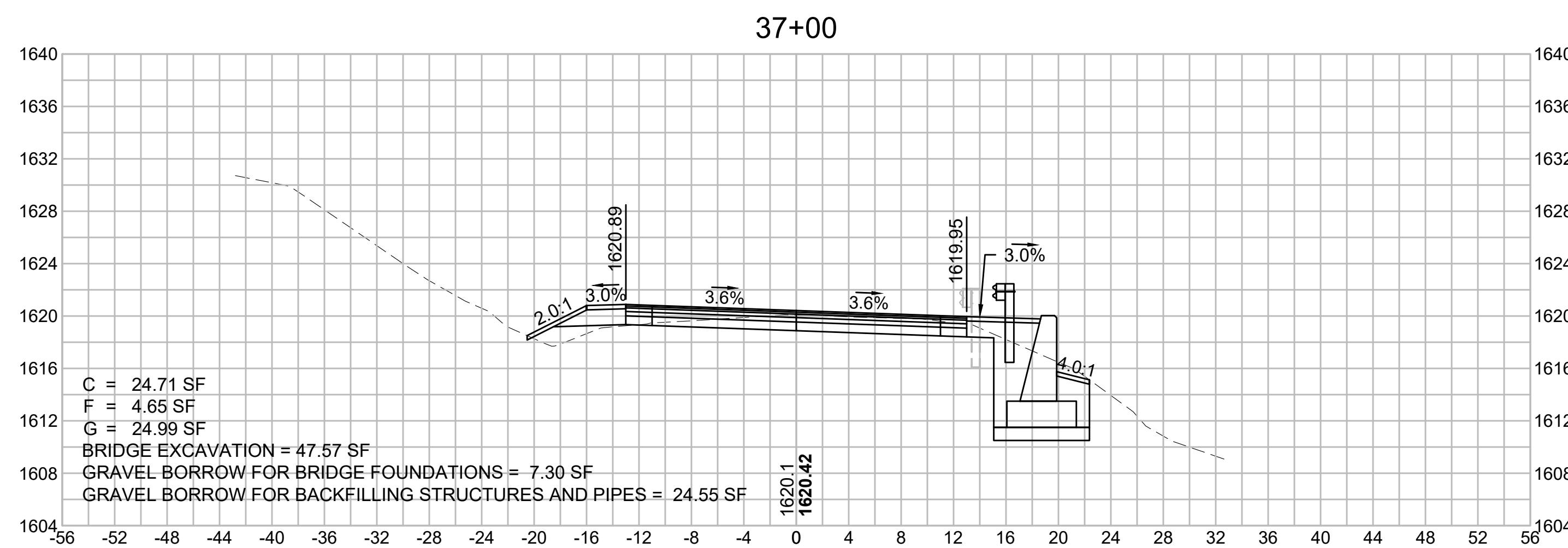
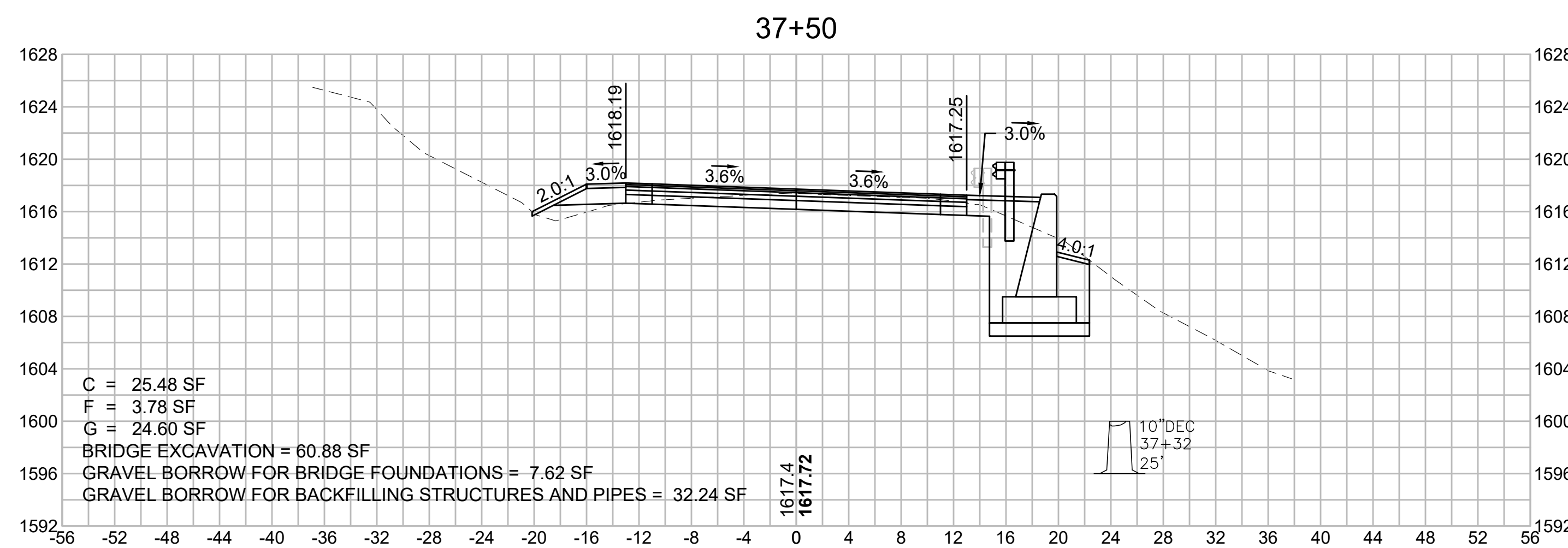
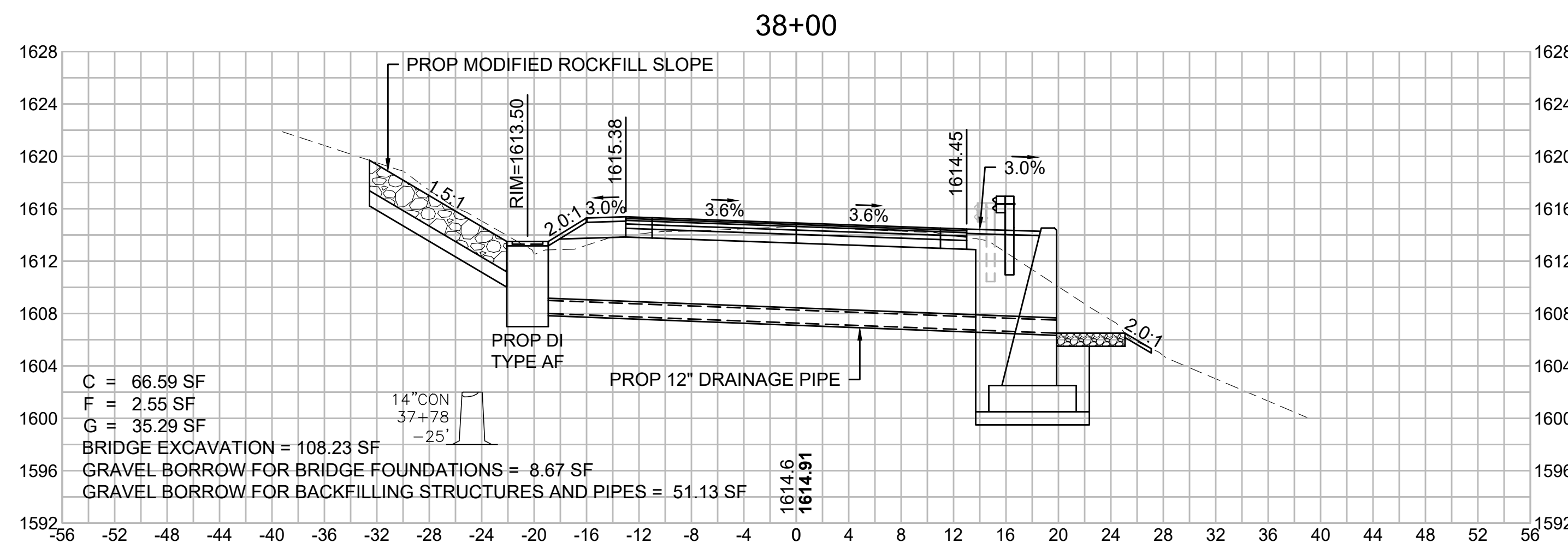
SUPERELEVATION:
PC STA = 33+37.26
R = 2300.00'
BANK = 3.60%



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	115	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 12**

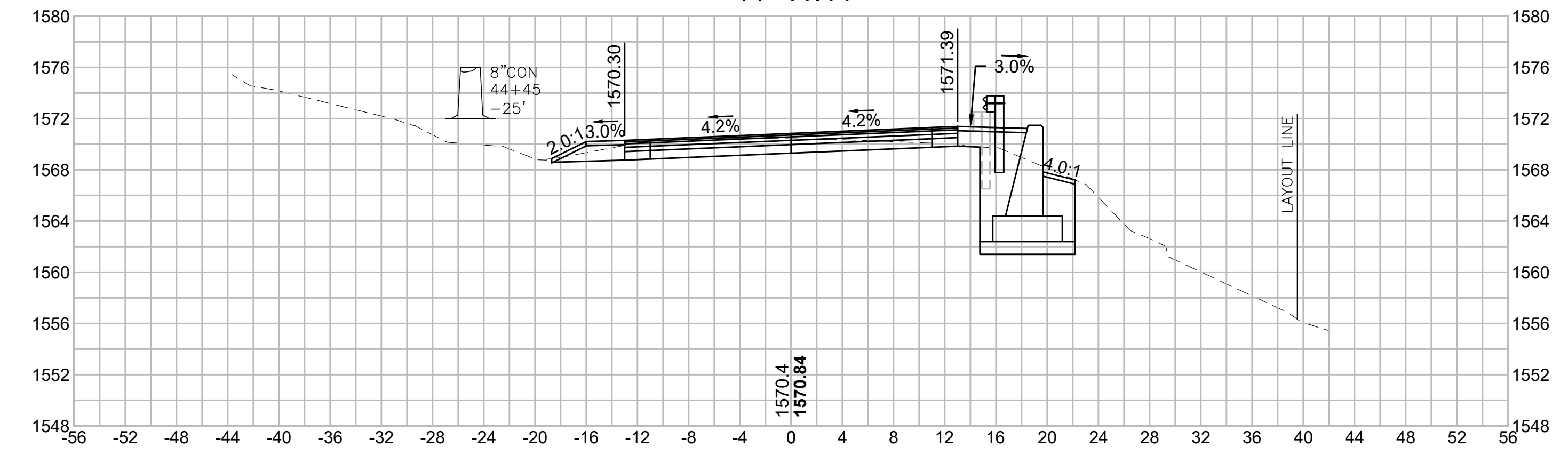


**WORTHINGTON
ROUTE 143**

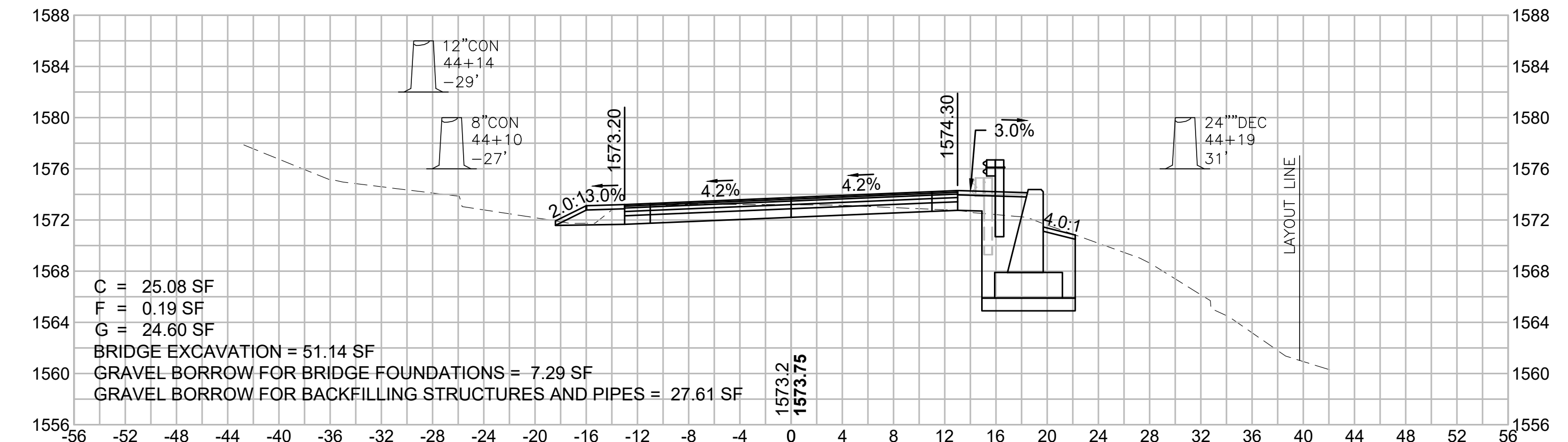
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	117	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 14**

**END FULL SUPERELEVATION
44+41.11**

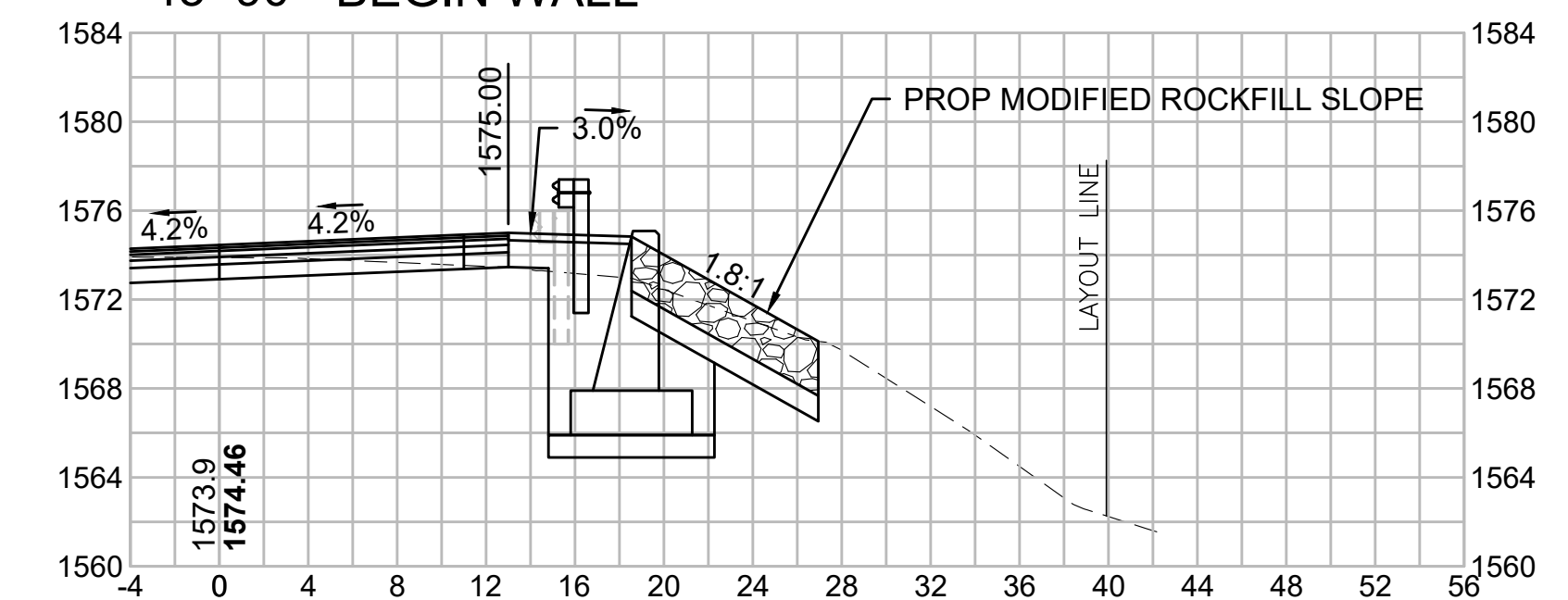


44+00

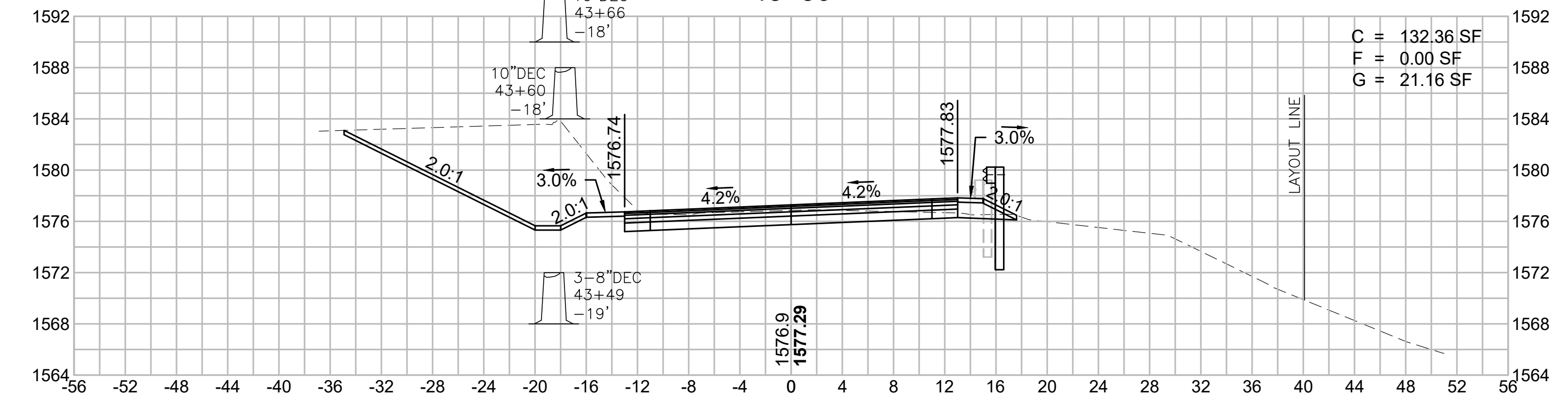


C = 25.08 SF
F = 0.19 SF
G = 24.60 SF
BRIDGE EXCAVATION = 51.14 SF
GRAVEL BORROW FOR BRIDGE FOUNDATIONS = 7.29 SF
GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES = 27.61 SF

43+90 - BEGIN WALL

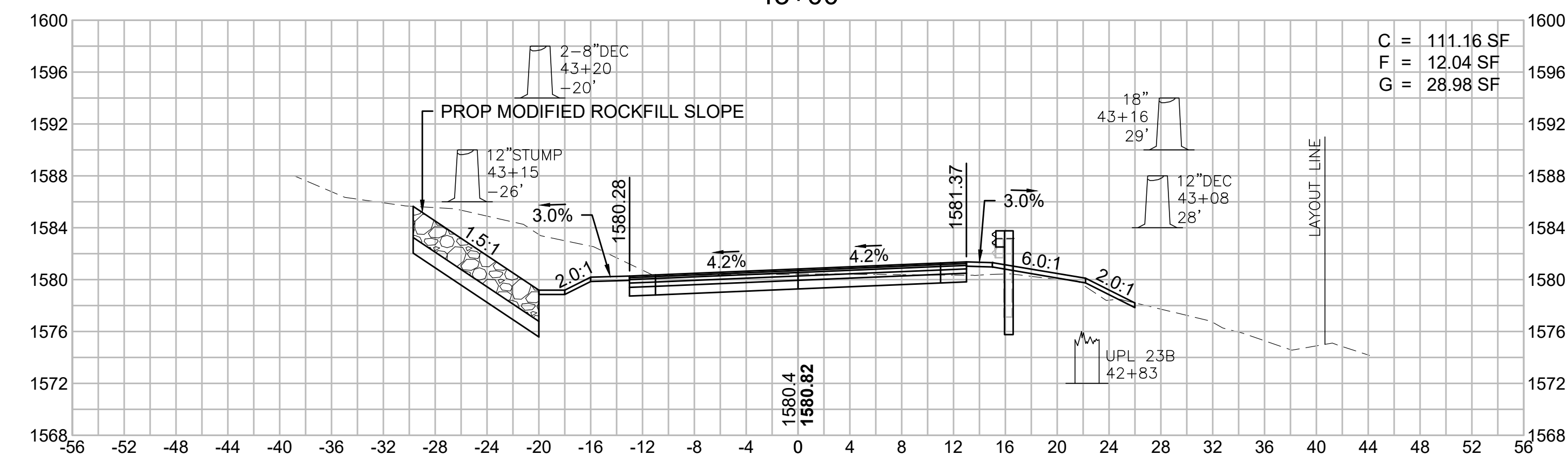


43+50



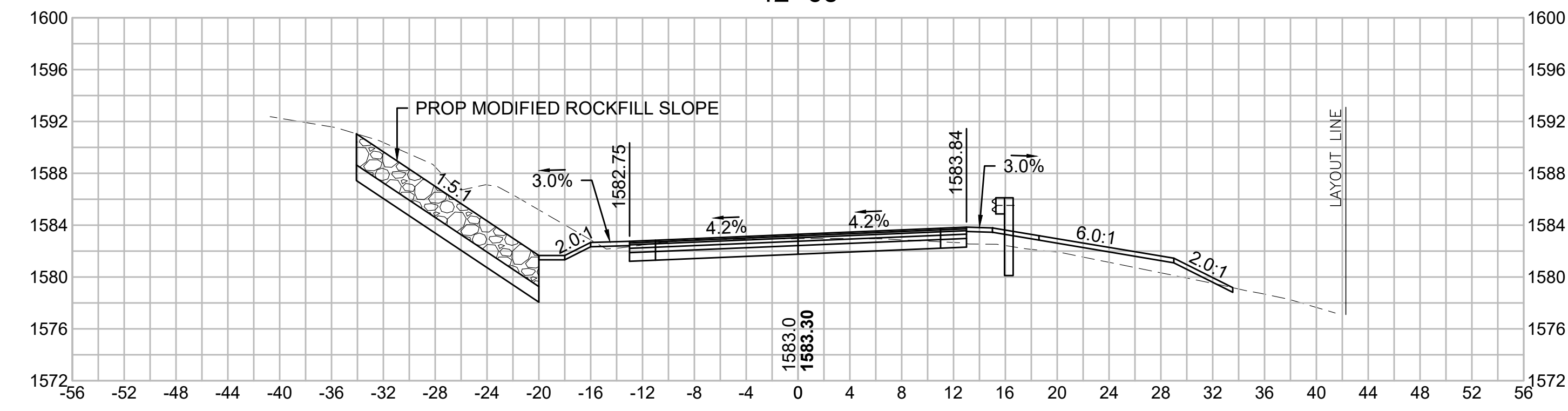
C = 132.36 SF
F = 0.00 SF
G = 21.16 SF

43+00

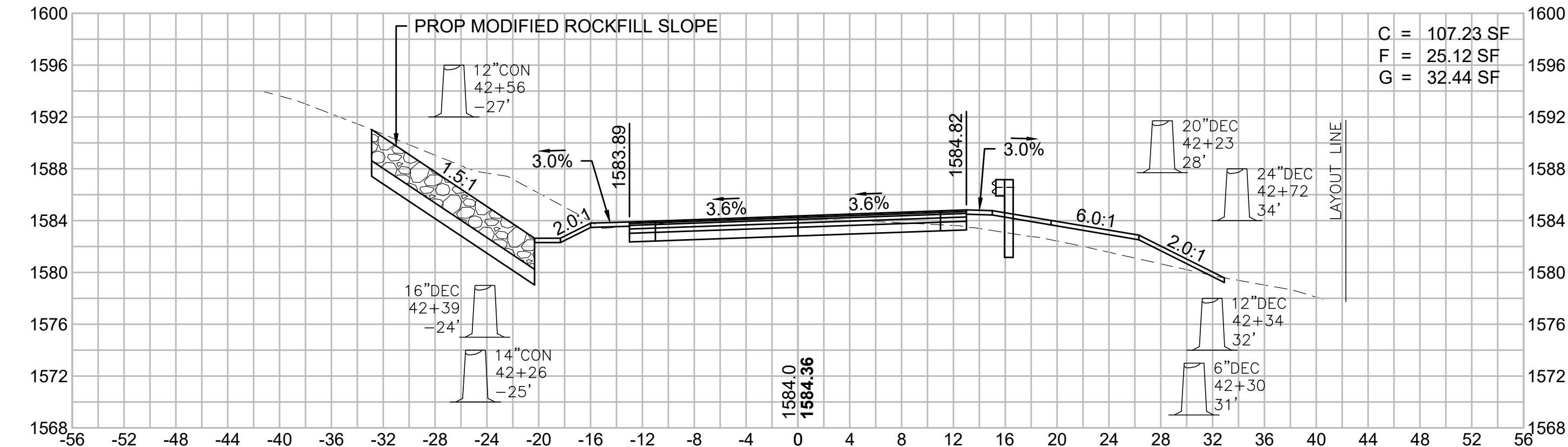


C = 111.16 SF
F = 12.04 SF
G = 28.98 SF

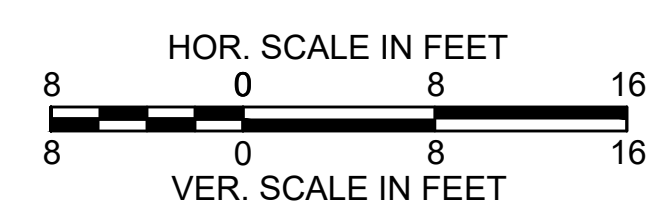
**BEGIN FULL SUPERELEVATION
42+65**



42+50



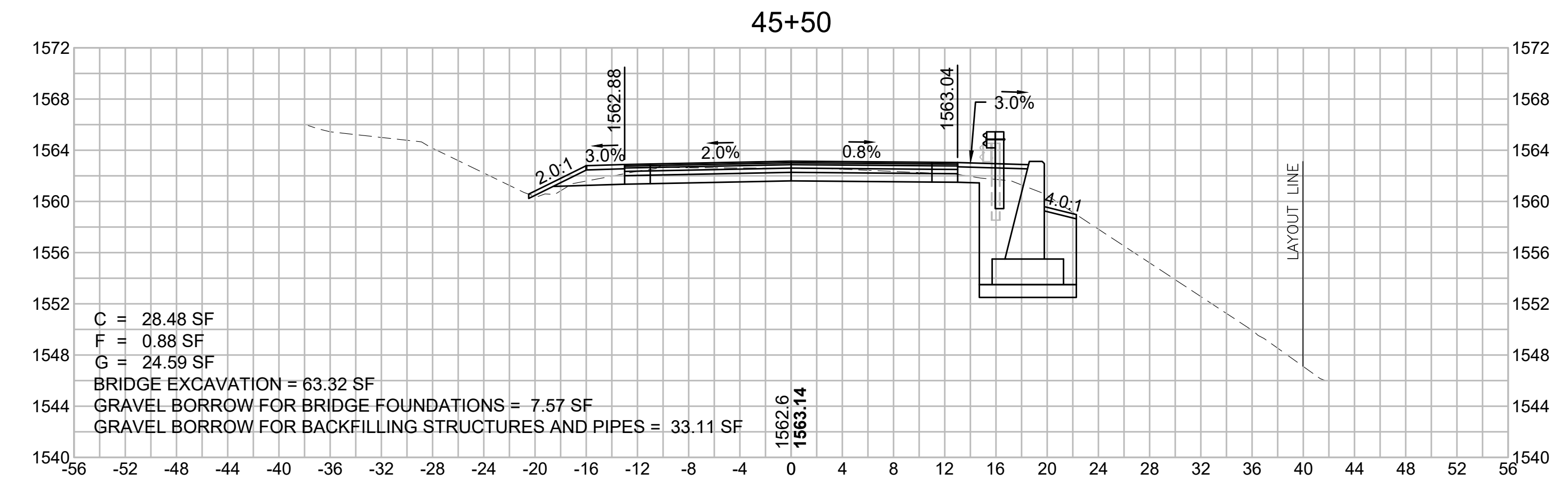
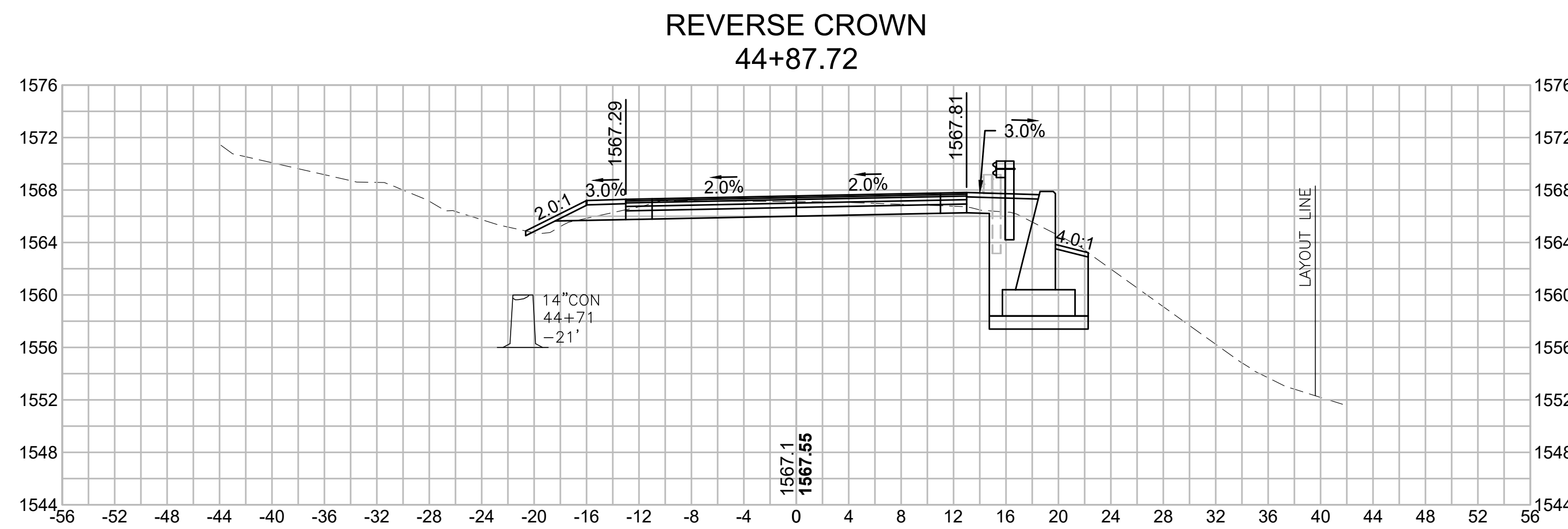
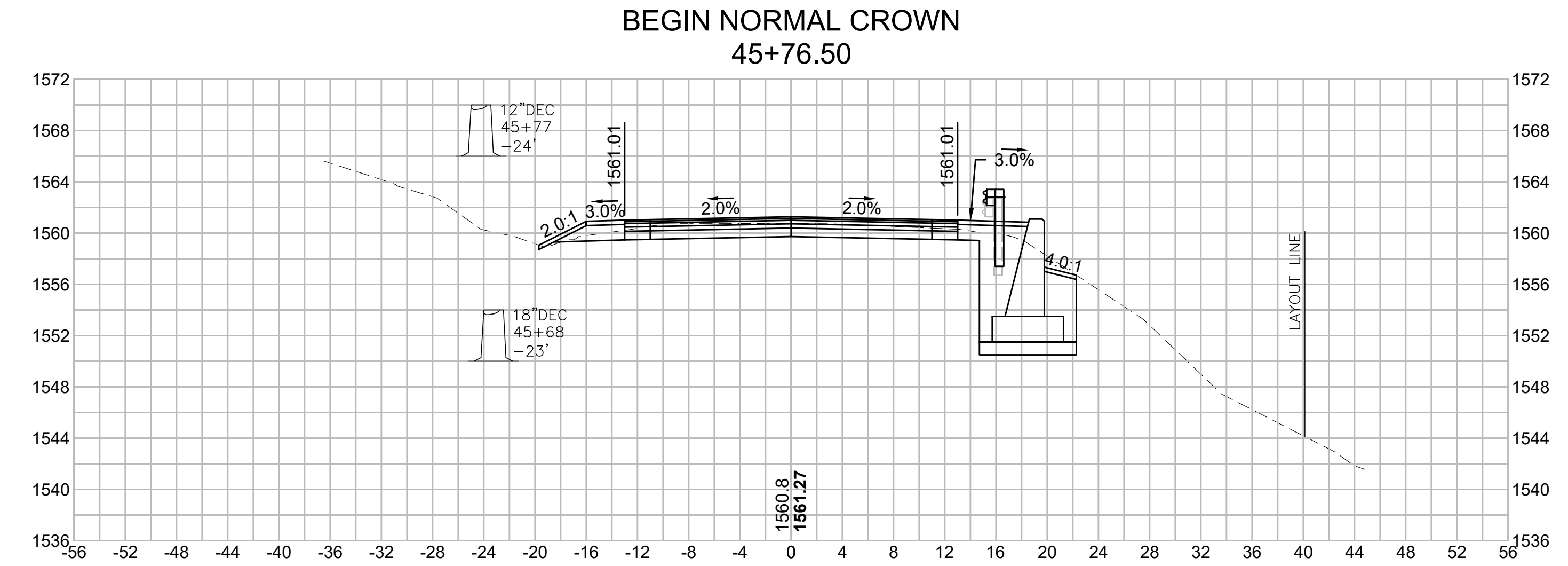
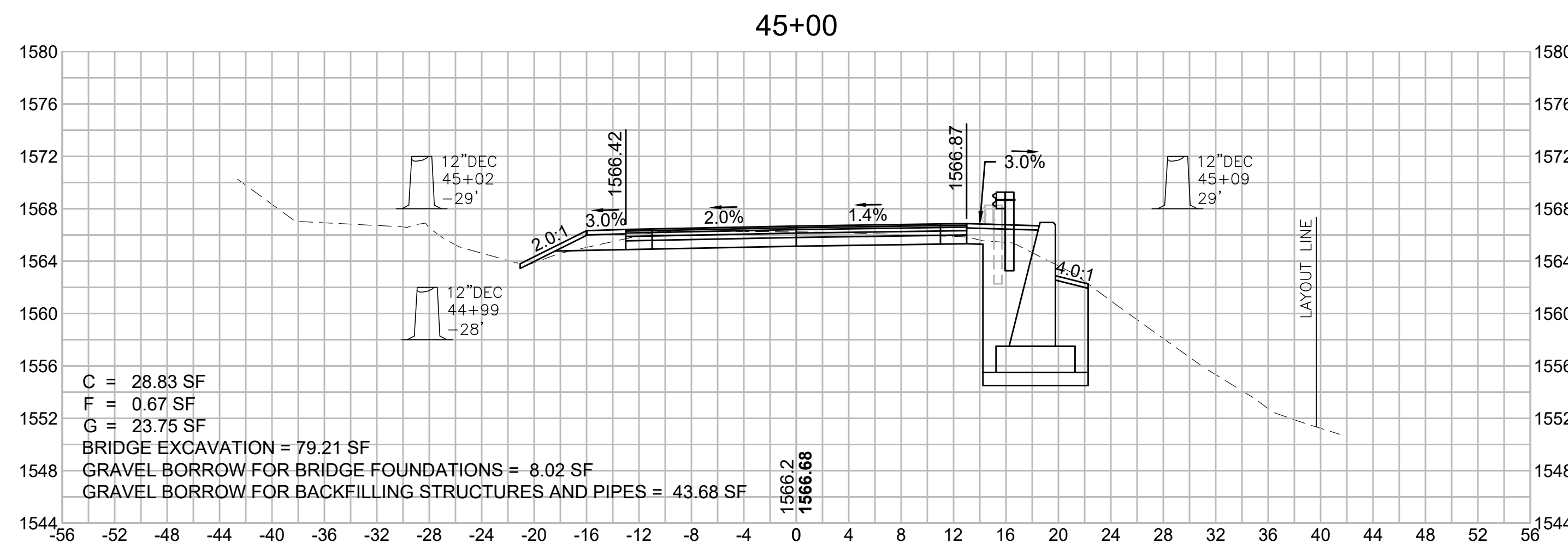
C = 107.23 SF
F = 25.12 SF
G = 32.44 SF



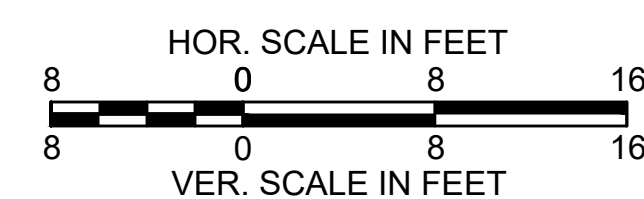
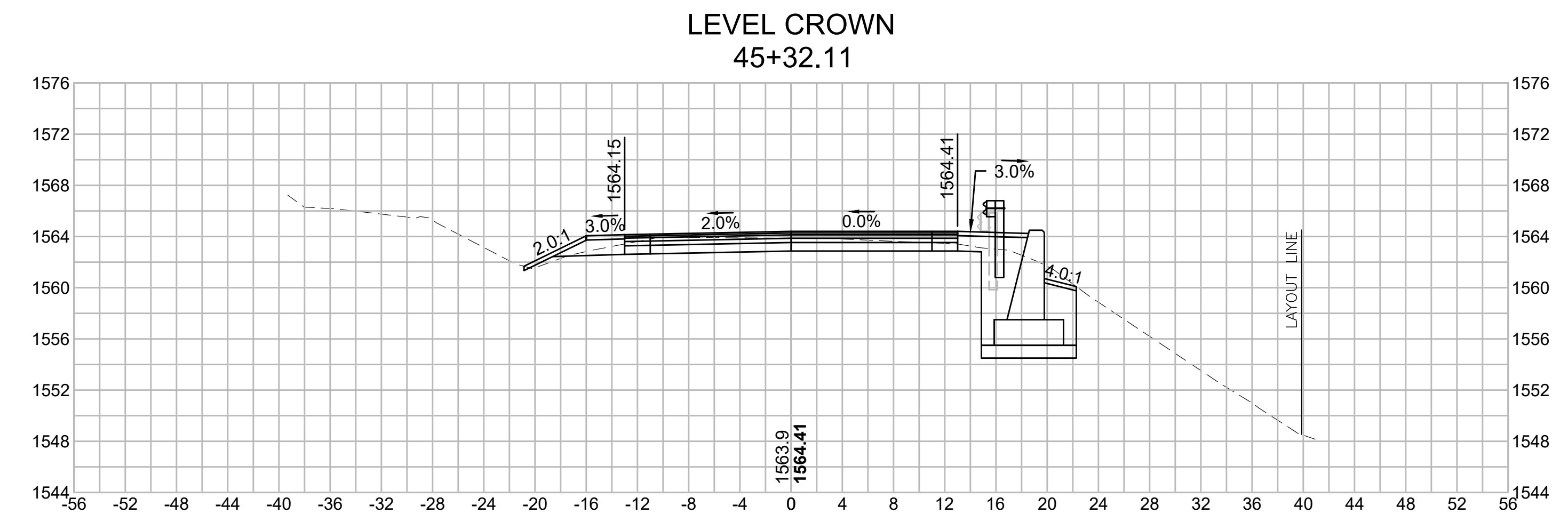
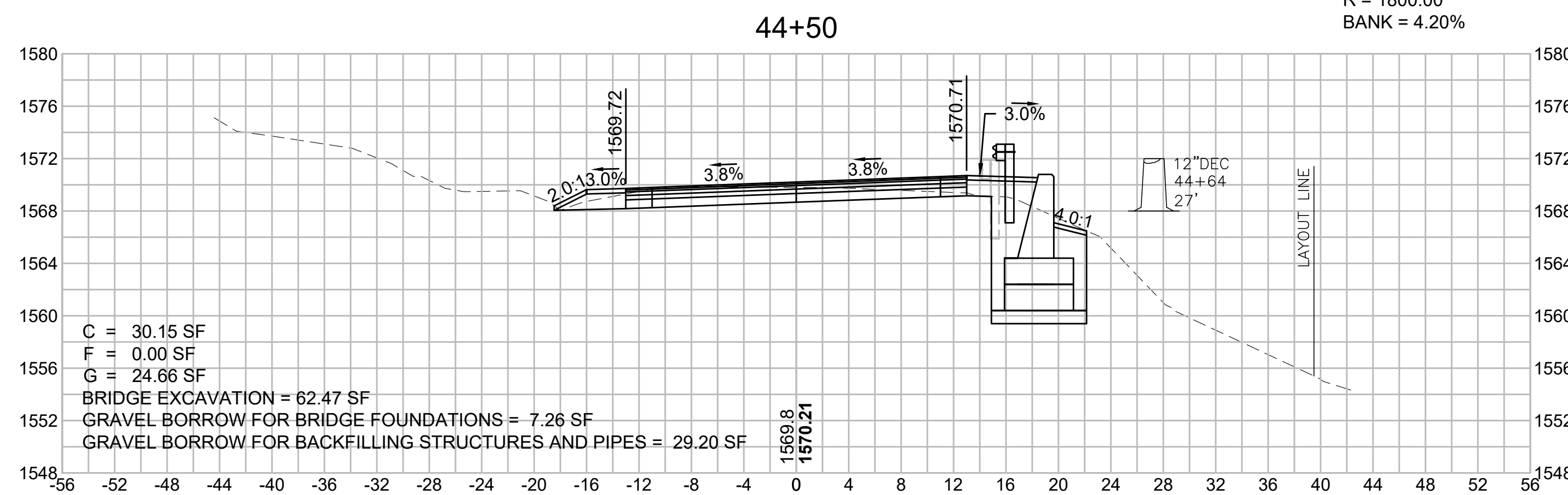
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	118	191

**OLD NORTH ROAD
CROSS SECTIONS - 15**



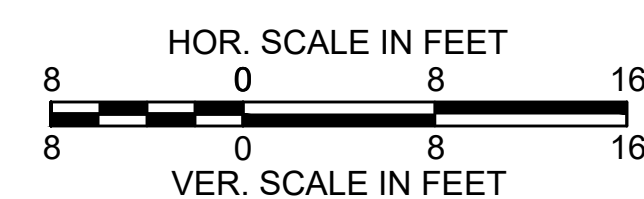
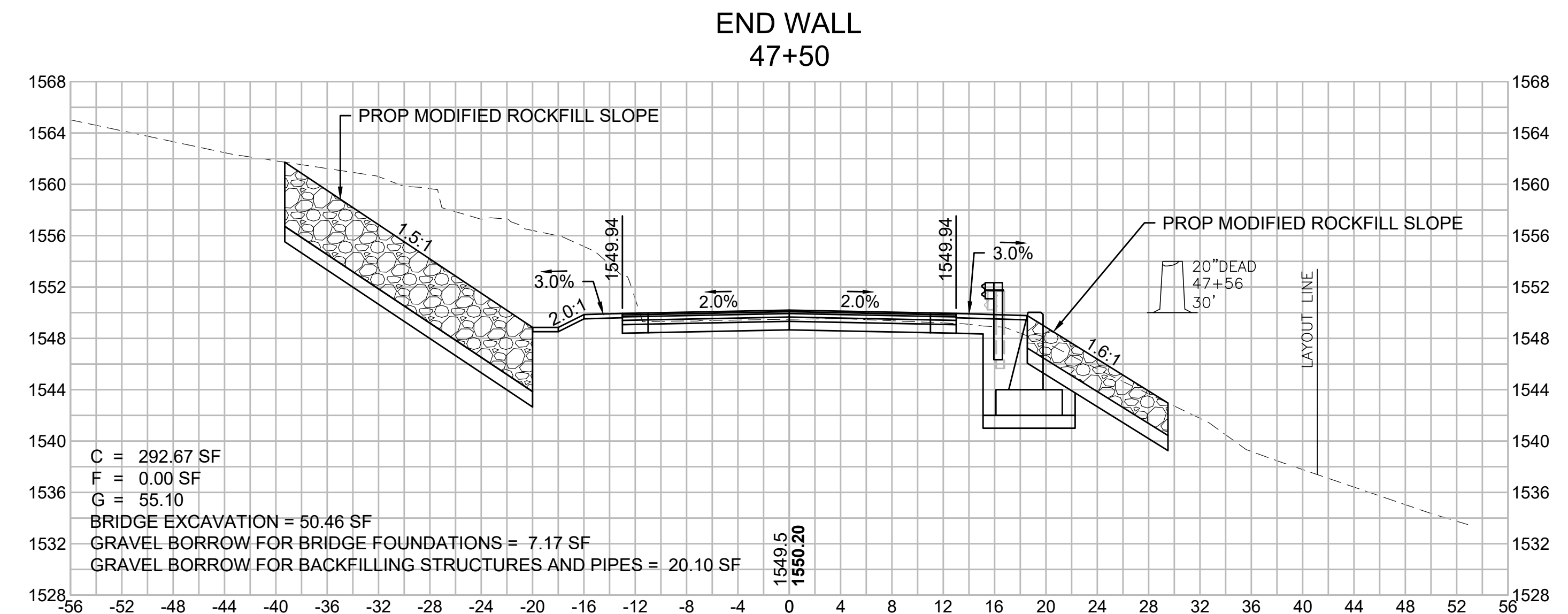
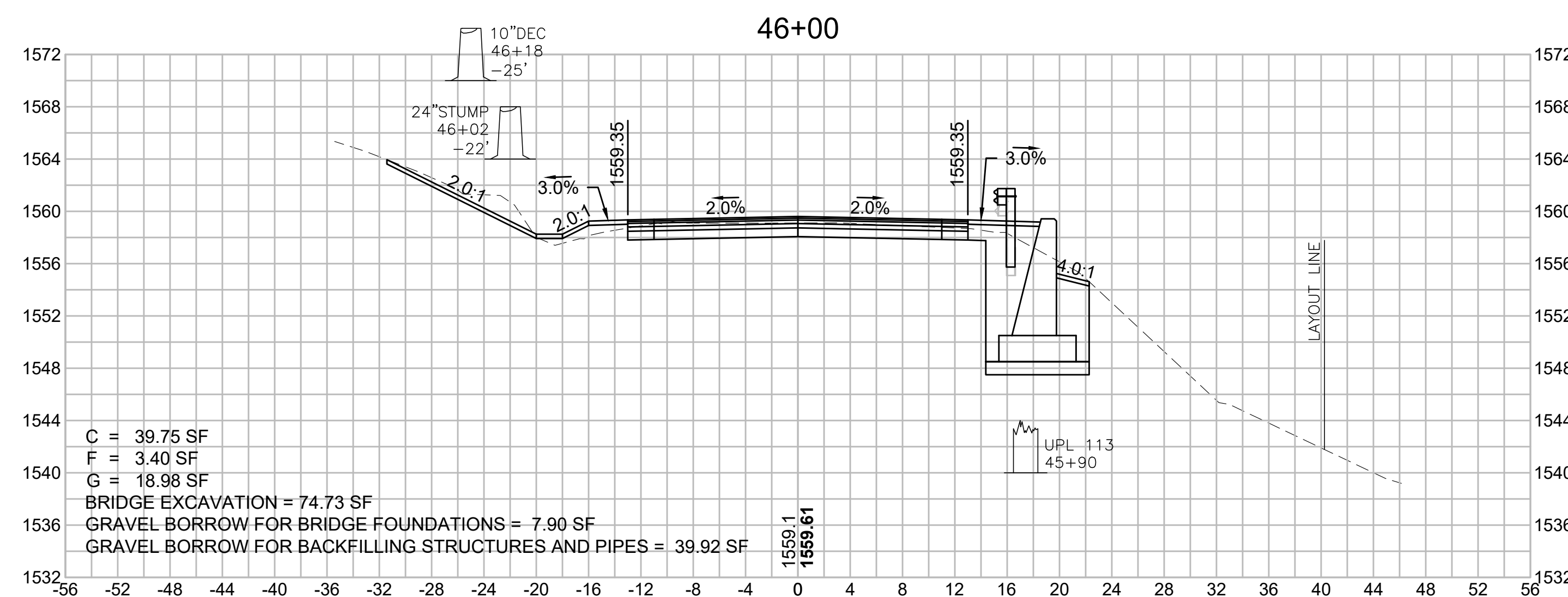
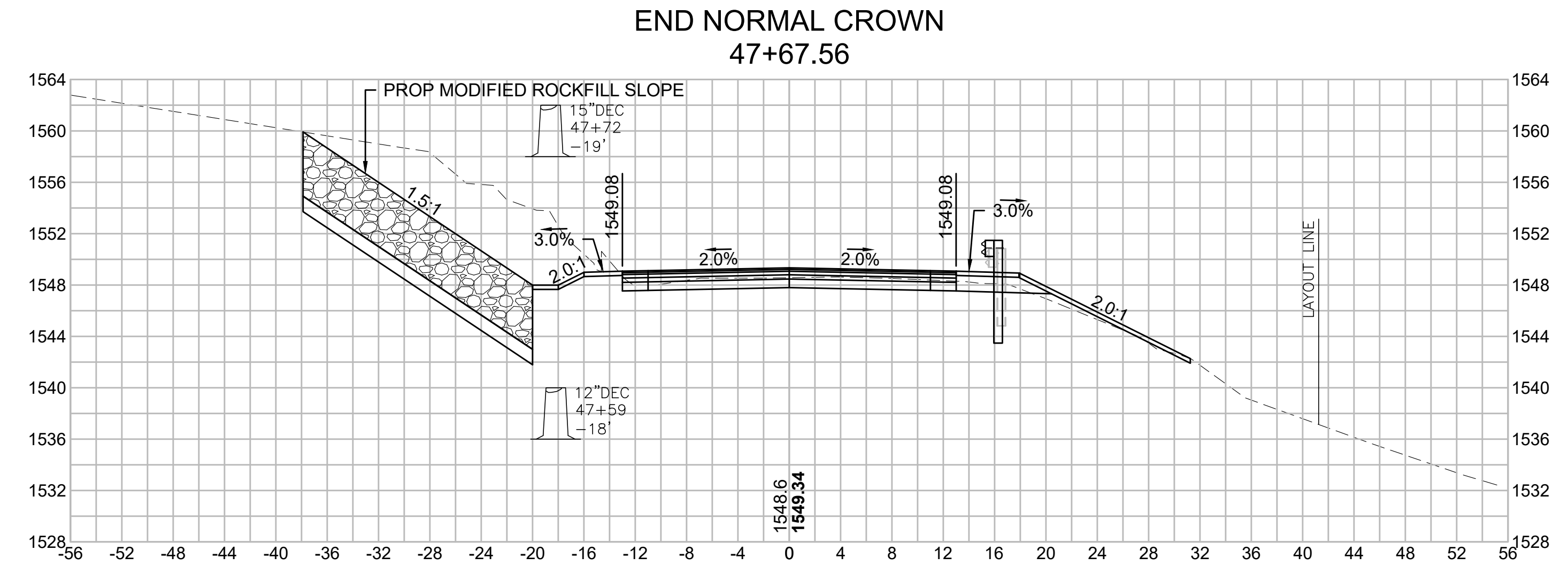
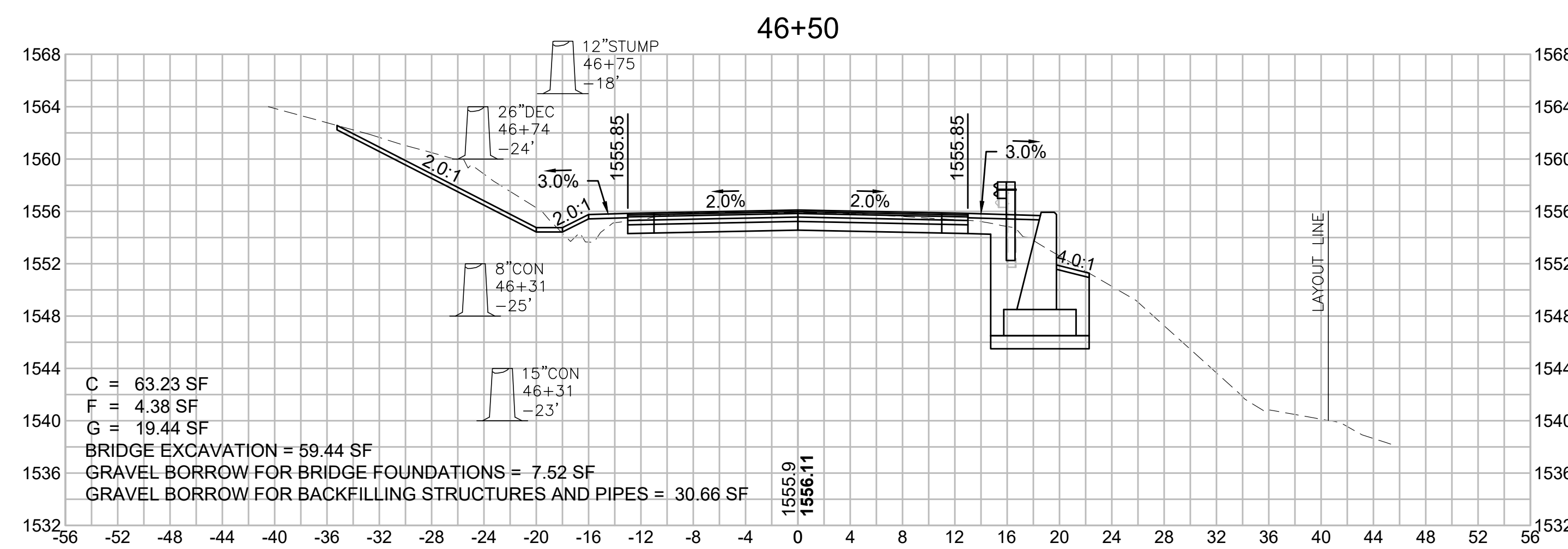
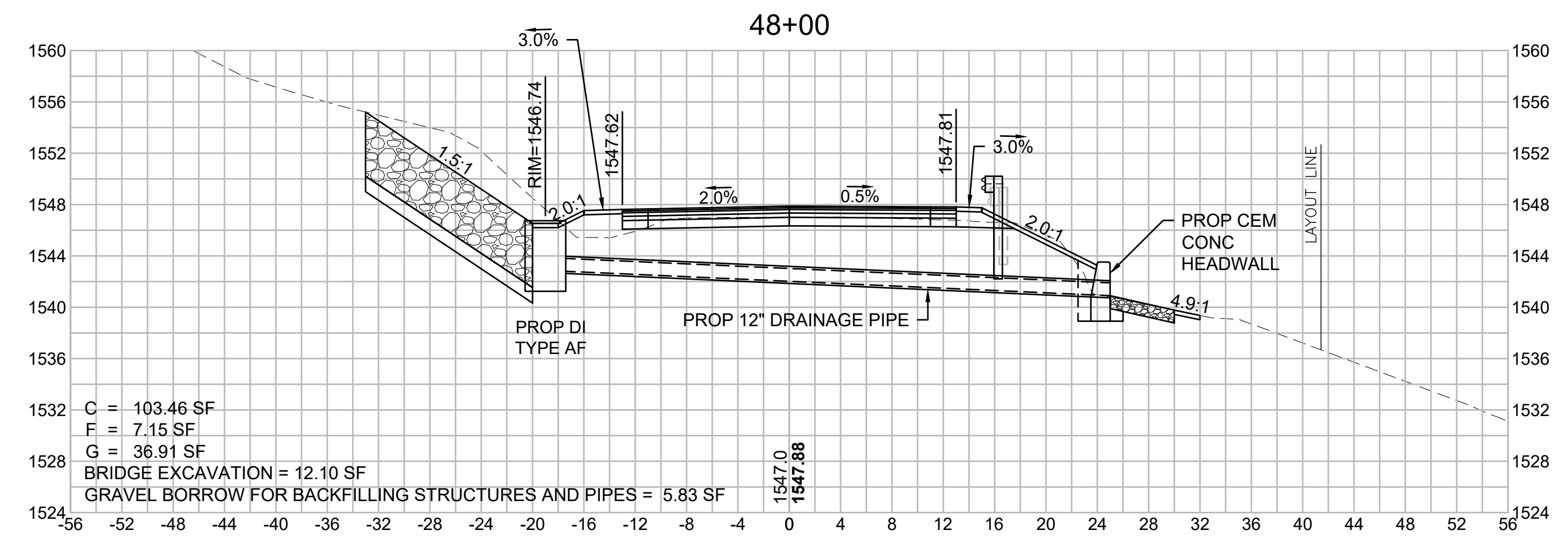
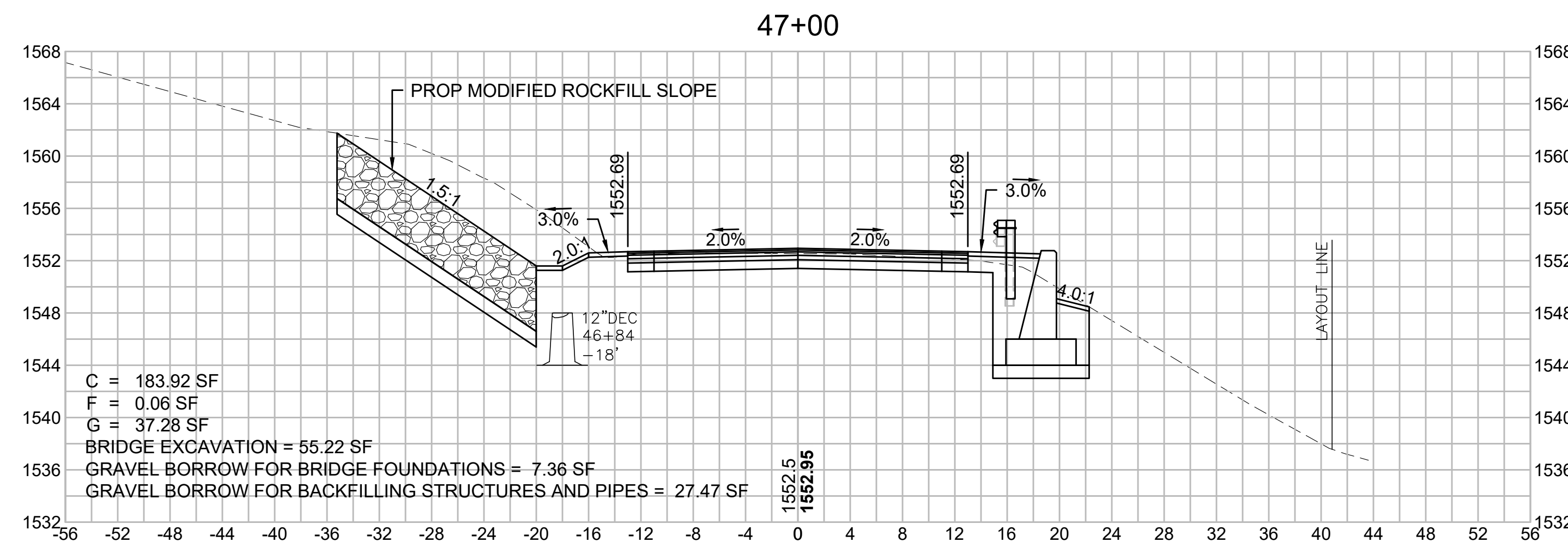
SUPERELEVATION:
PT STA = 44+71.44
R = 1800.00'
BANK = 4.20%



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	119	191

**OLD NORTH ROAD
CROSS SECTIONS - 16**

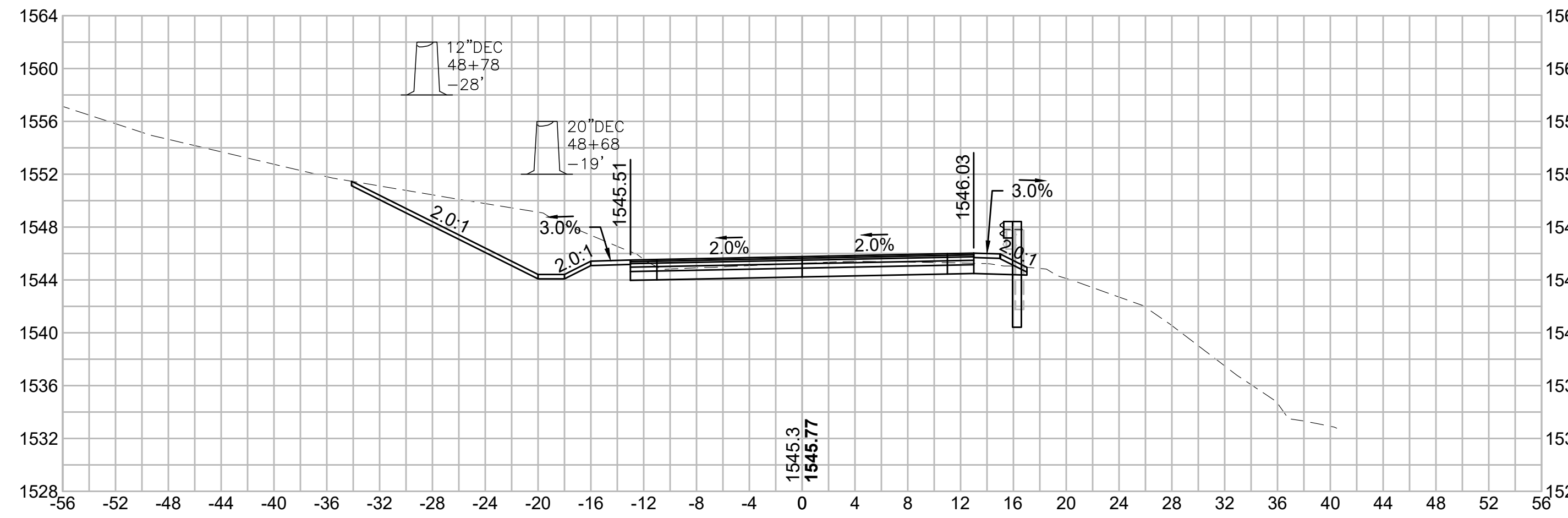


**WORTHINGTON
ROUTE 143**

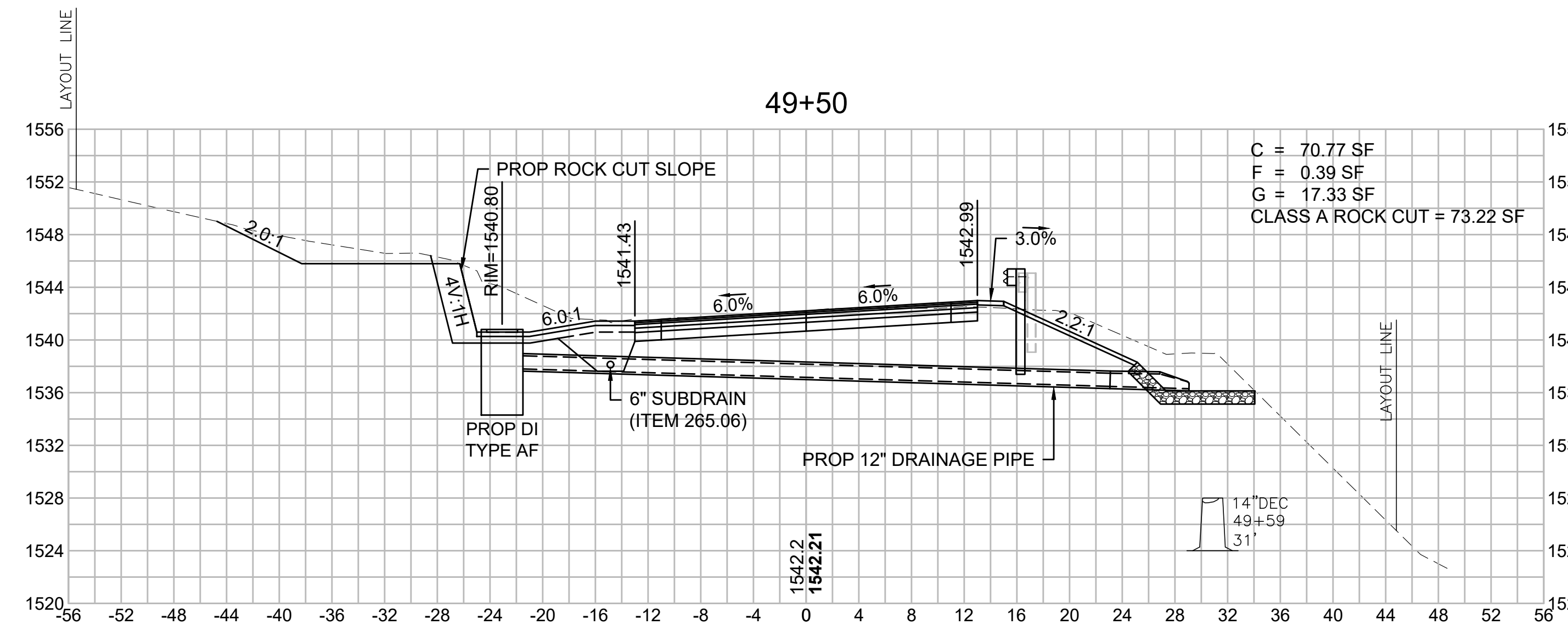
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	120	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 17**

**REVERSE CROWN
48+56.23**

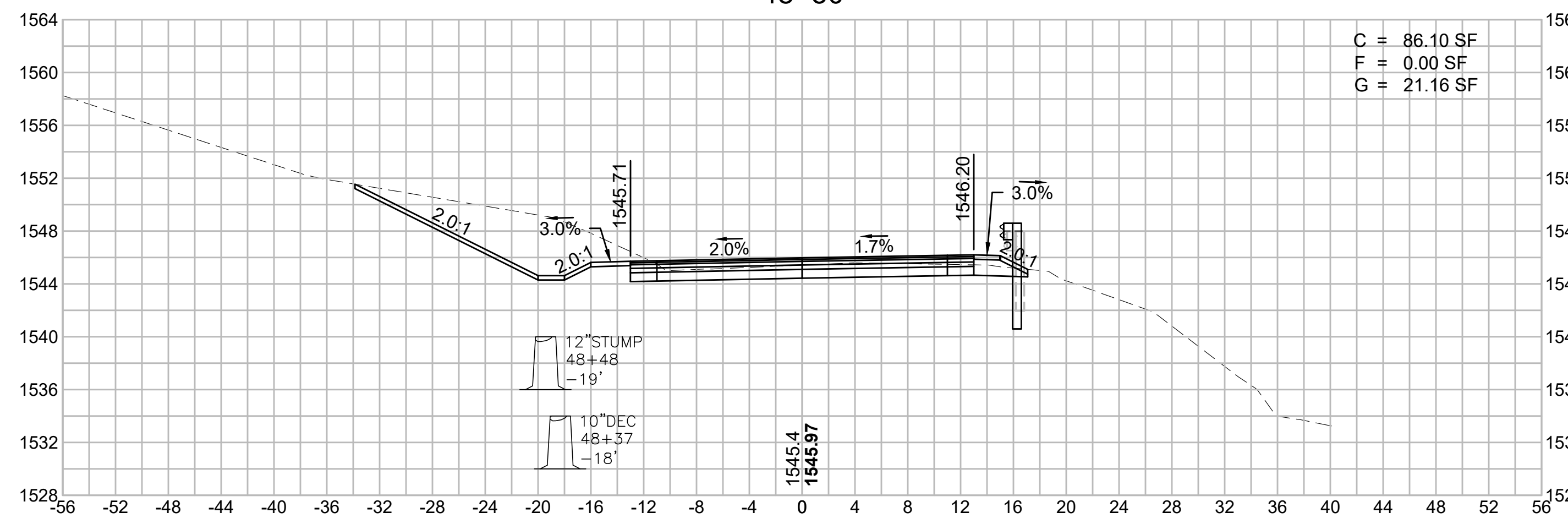


49+50



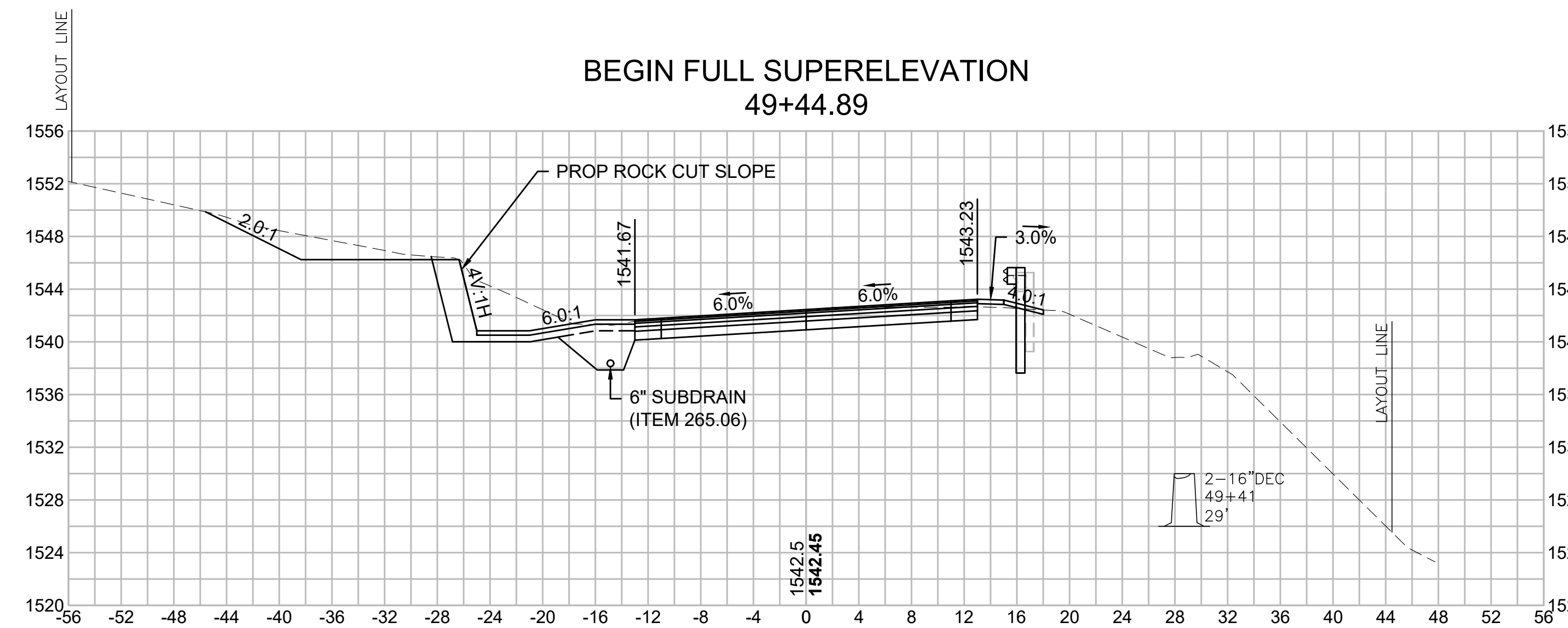
C = 70.77 SF
F = 0.39 SF
G = 17.33 SF
CLASS A ROCK CUT = 73.22 SF

48+50



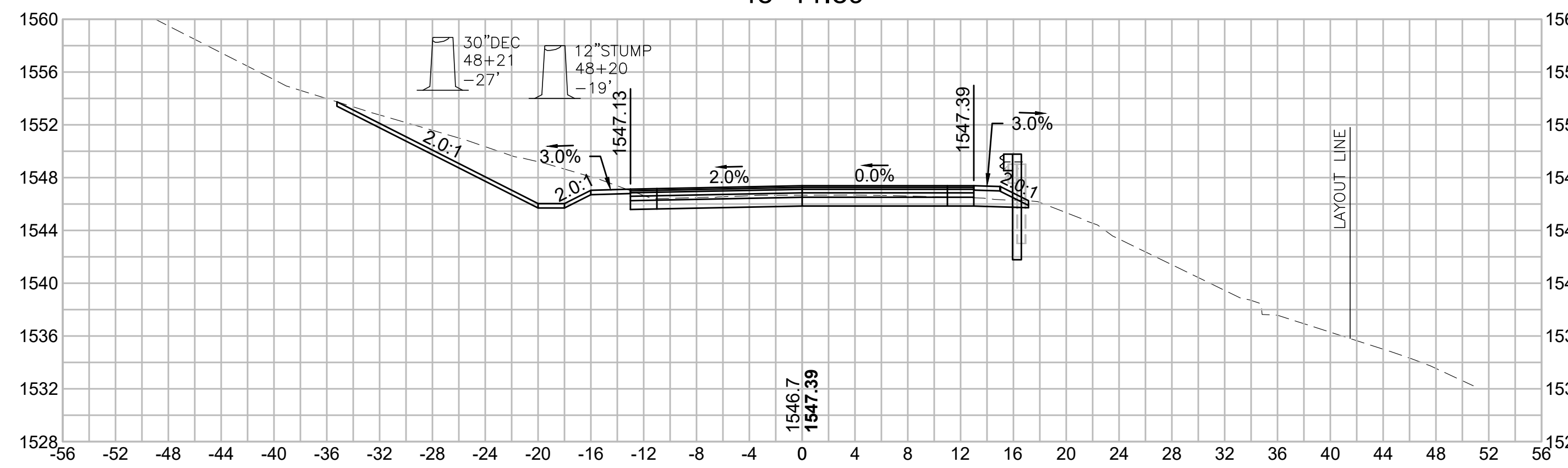
C = 86.10 SF
F = 0.00 SF
G = 21.16 SF

**BEGIN FULL SUPERELEVATION
49+44.89**

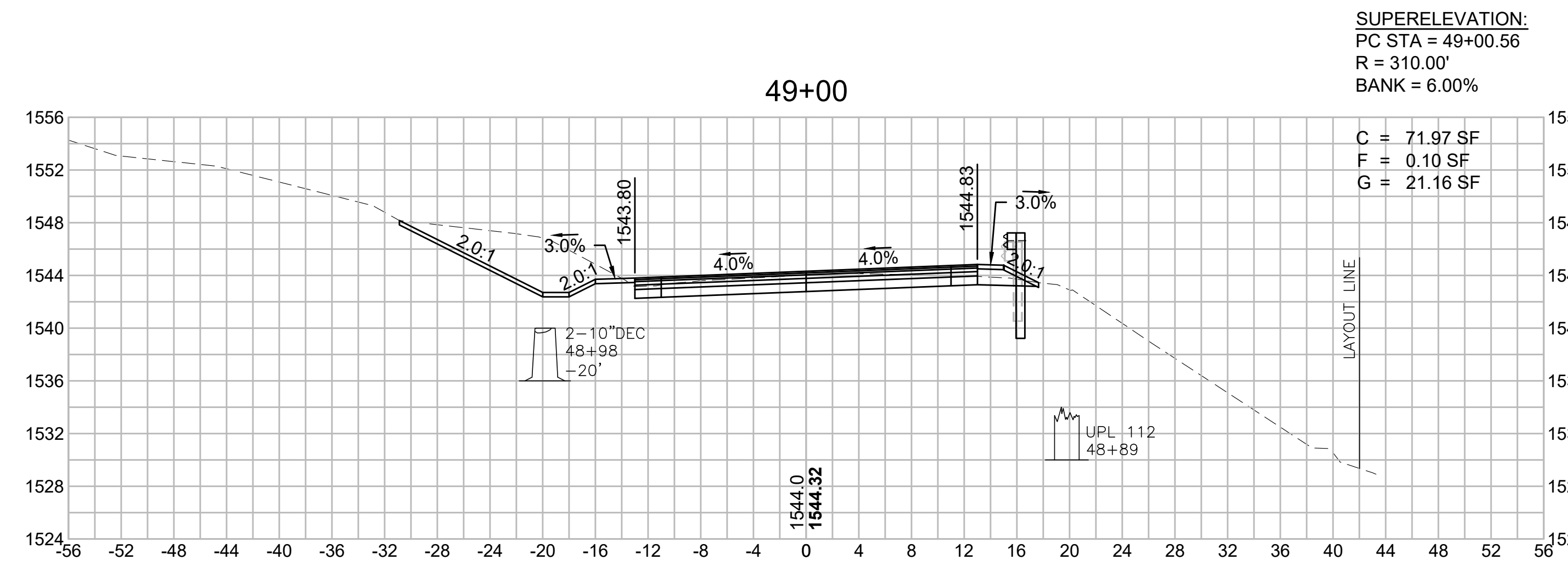


2-16\"/>

**LEVEL CROWN
48+11.89**

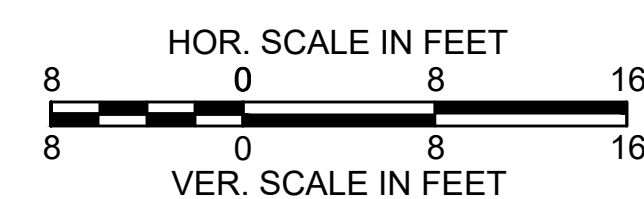


49+00



SUPERELEVATION:
PC STA = 49+00.56
R = 310.00'
BANK = 6.00%

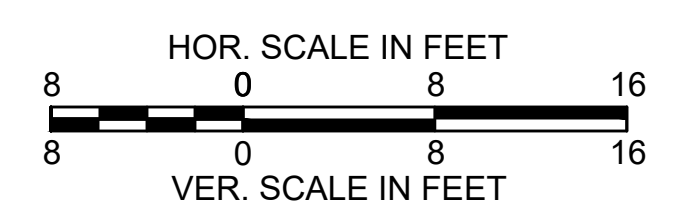
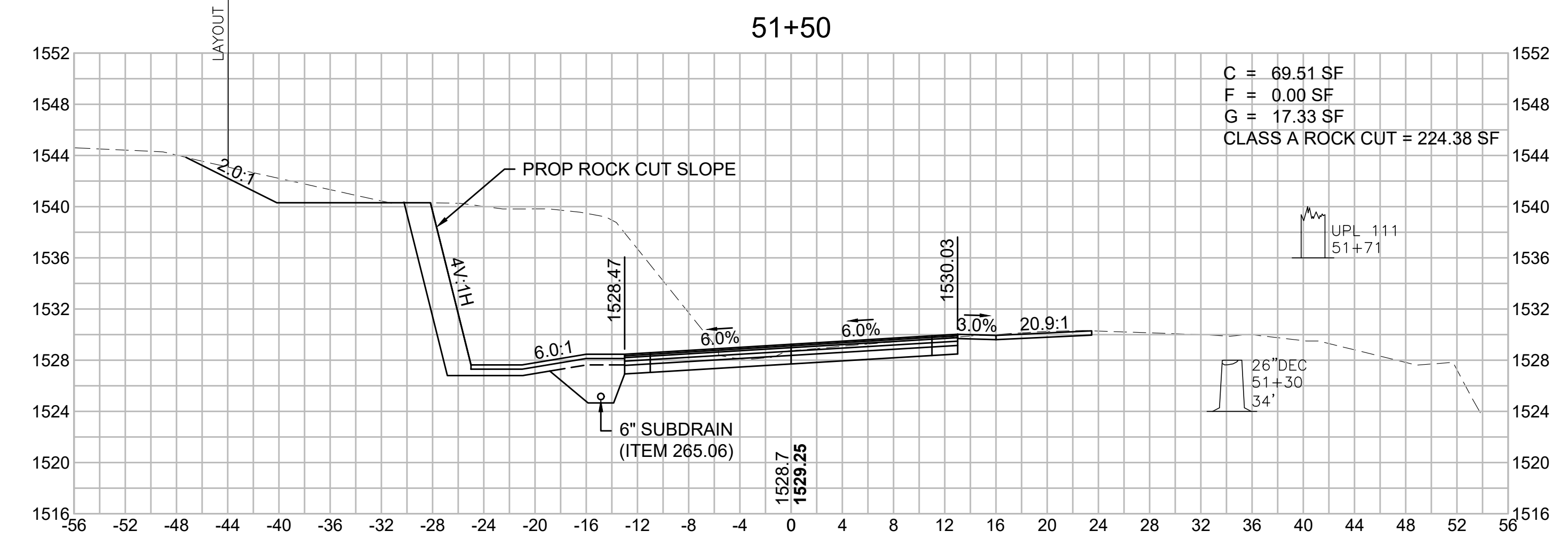
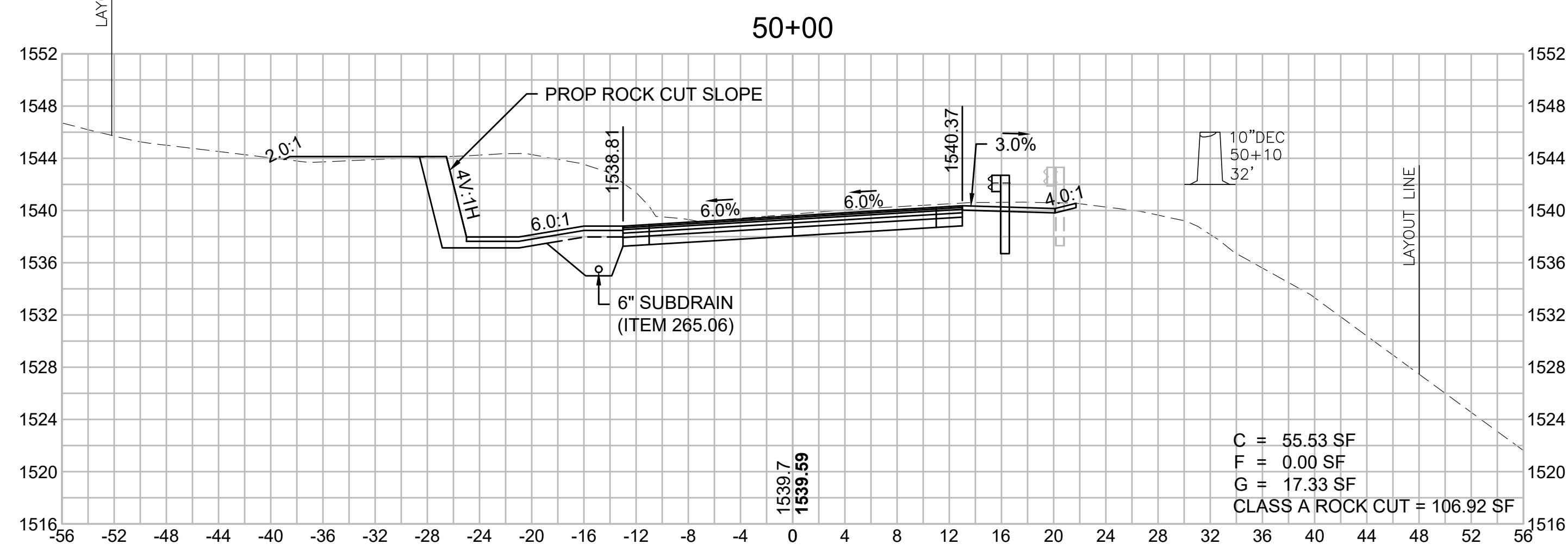
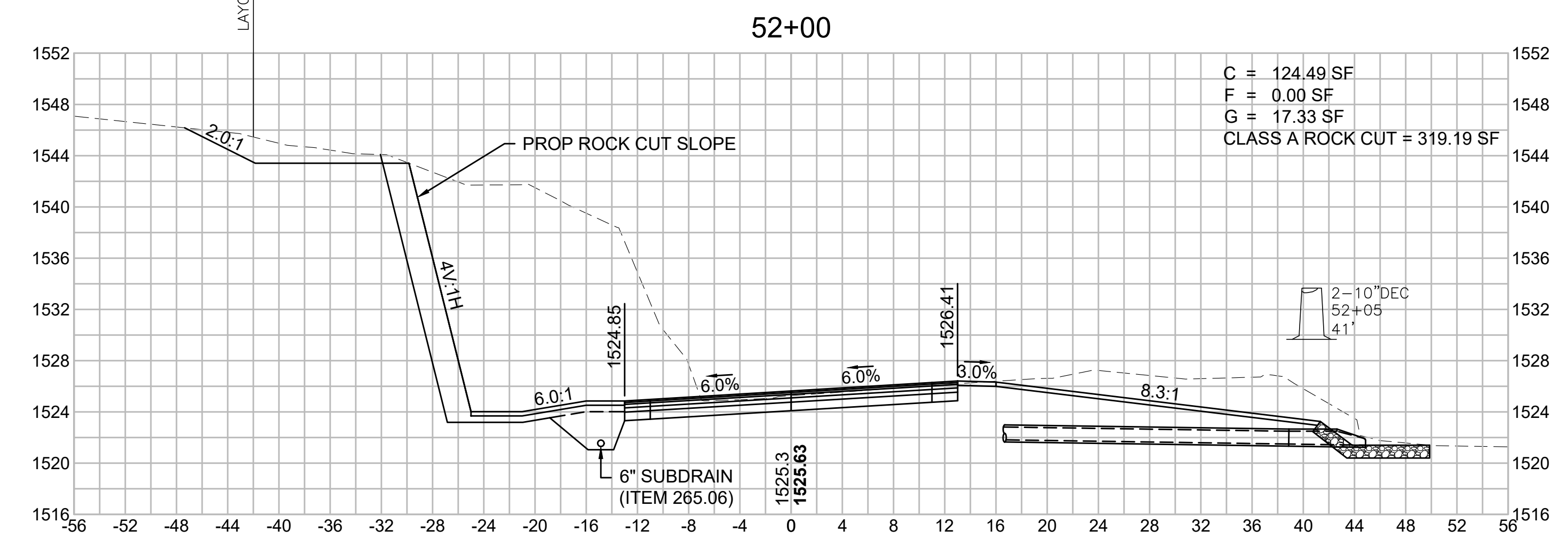
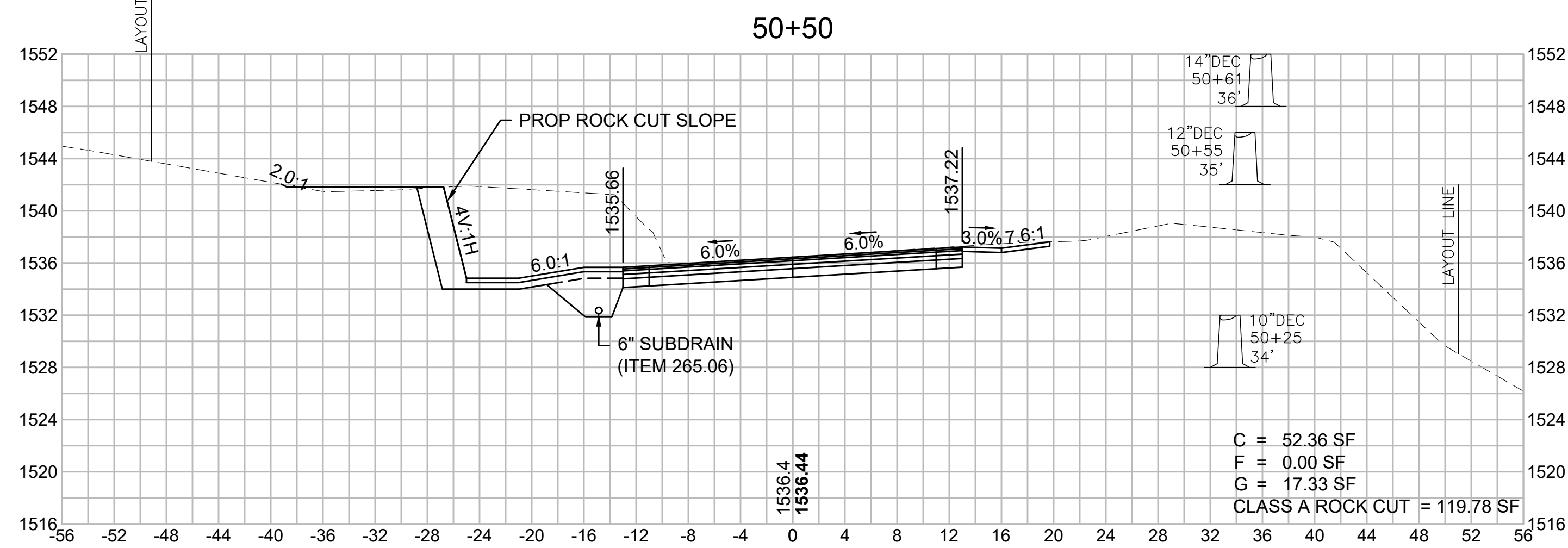
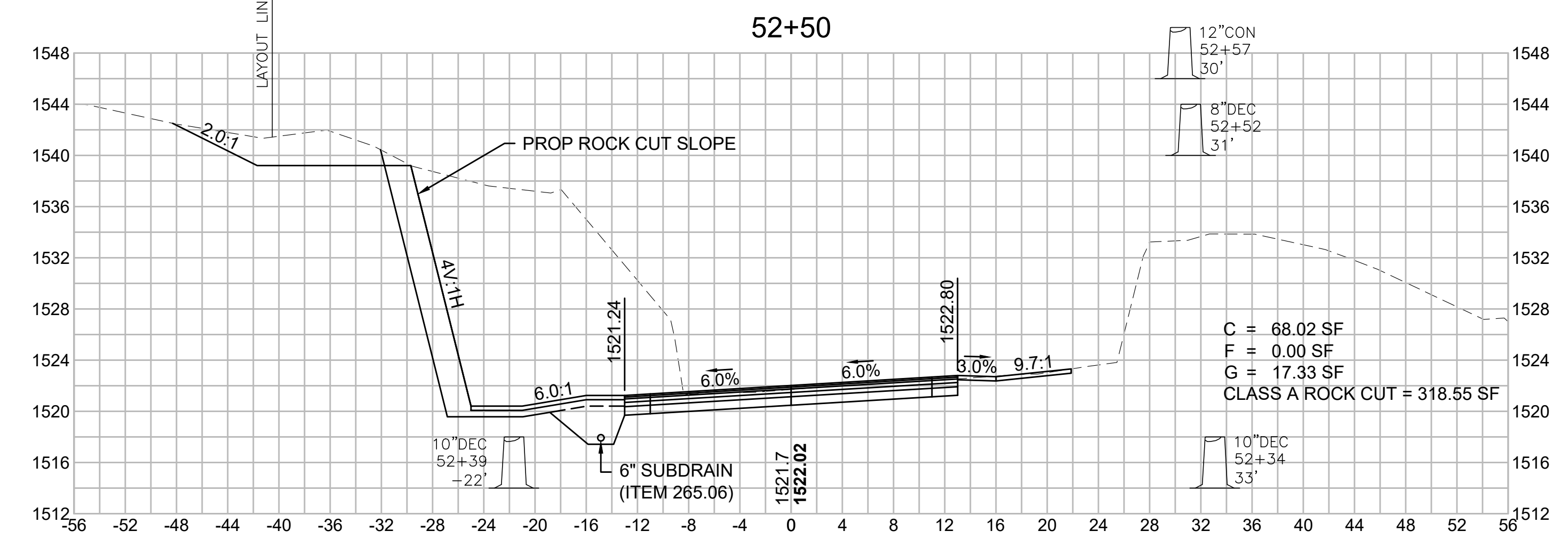
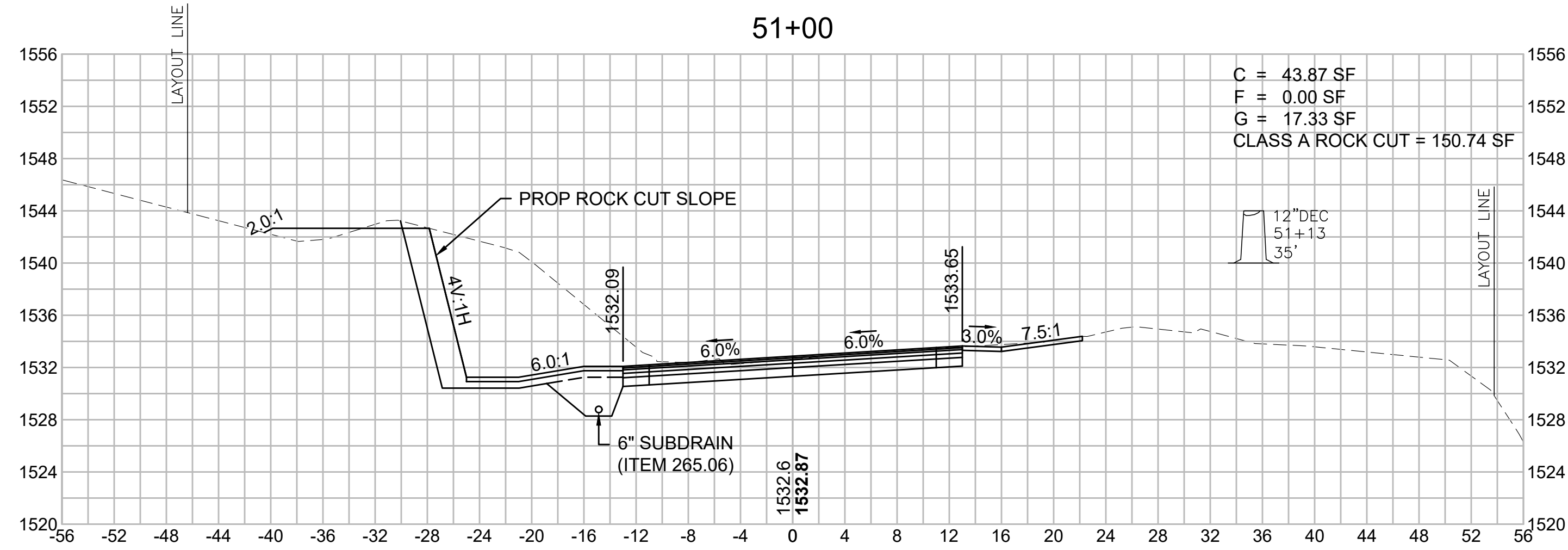
C = 71.97 SF
F = 0.10 SF
G = 21.16 SF



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	121	191
PROJECT FILE NO. 609287			

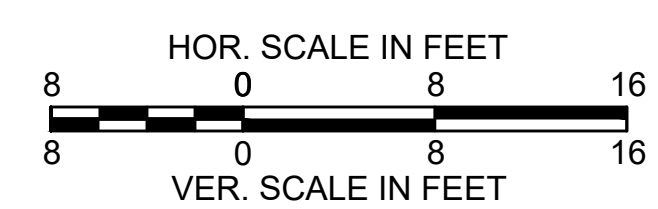
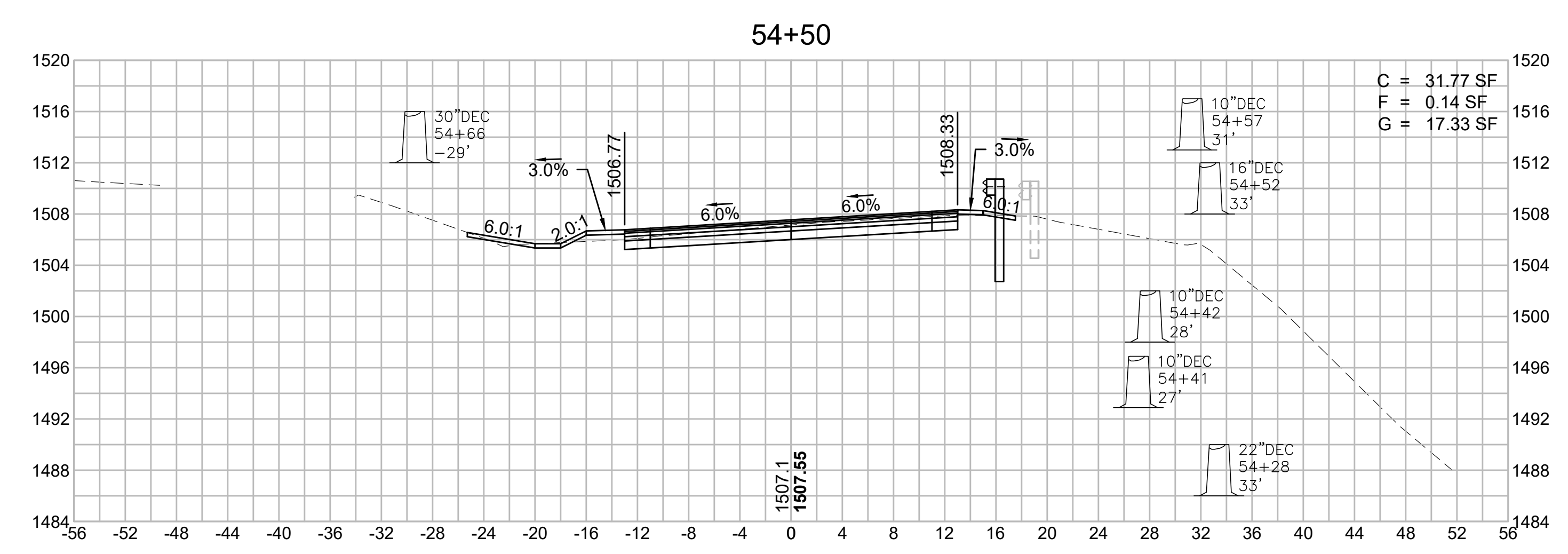
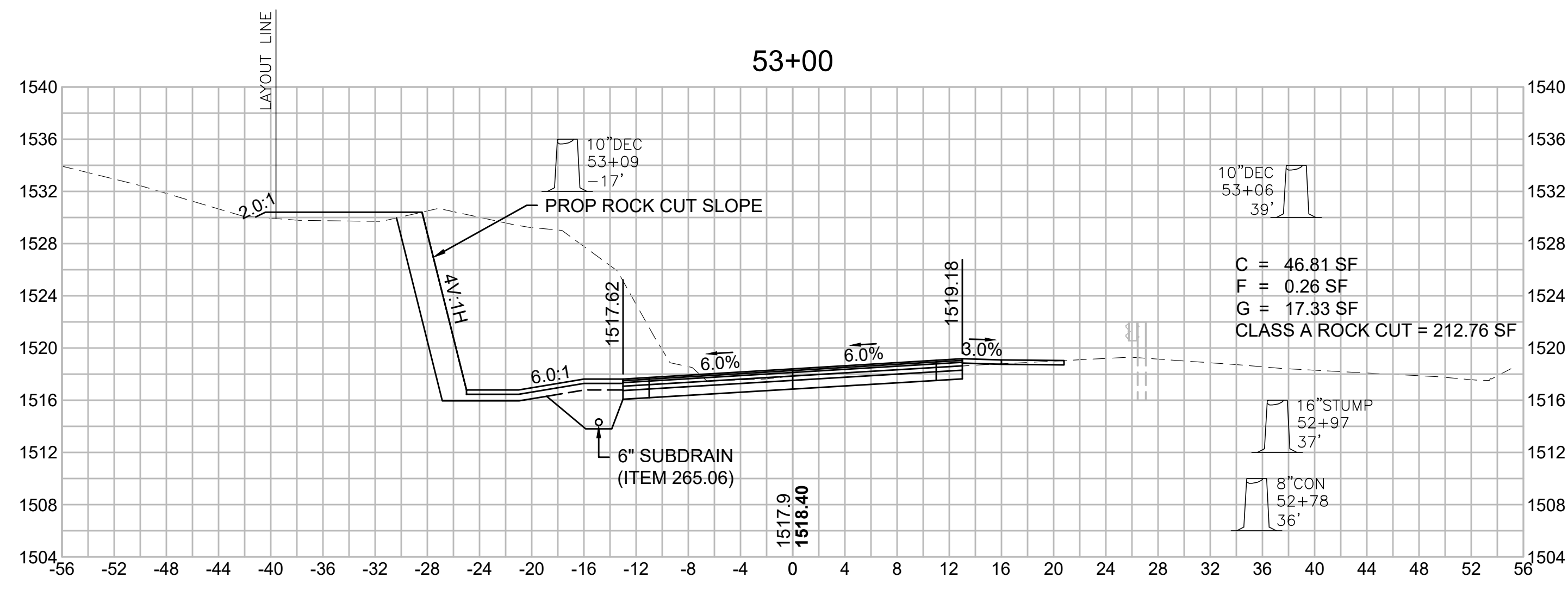
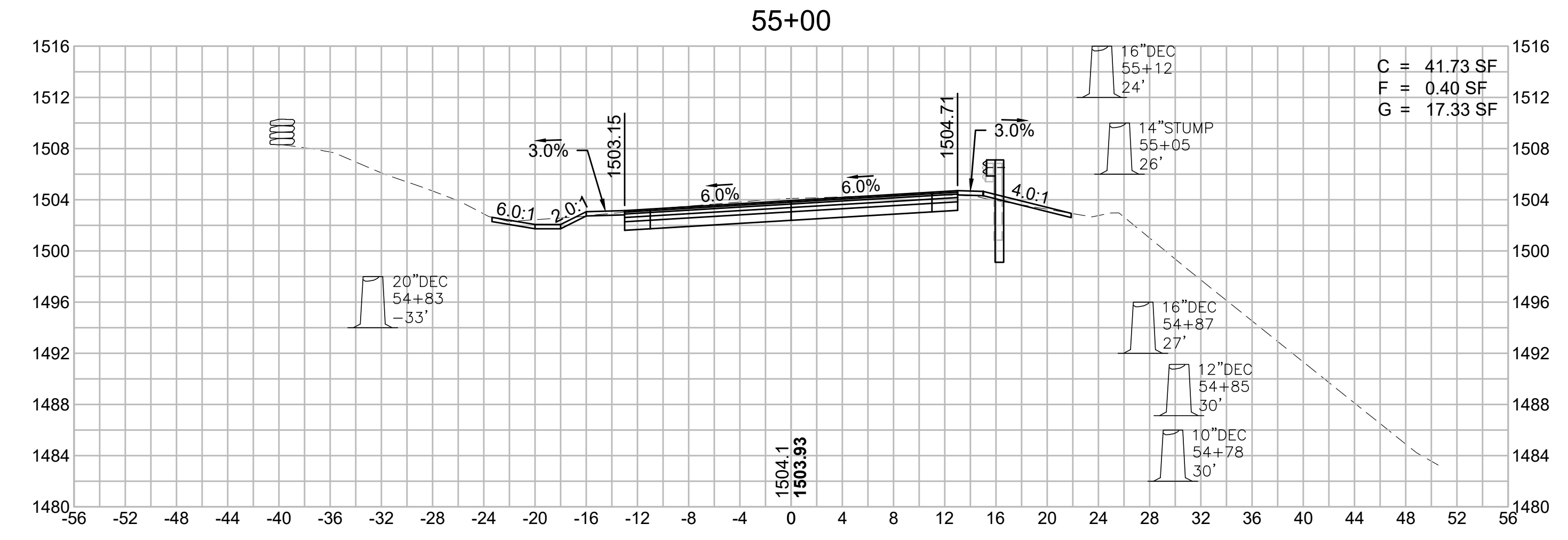
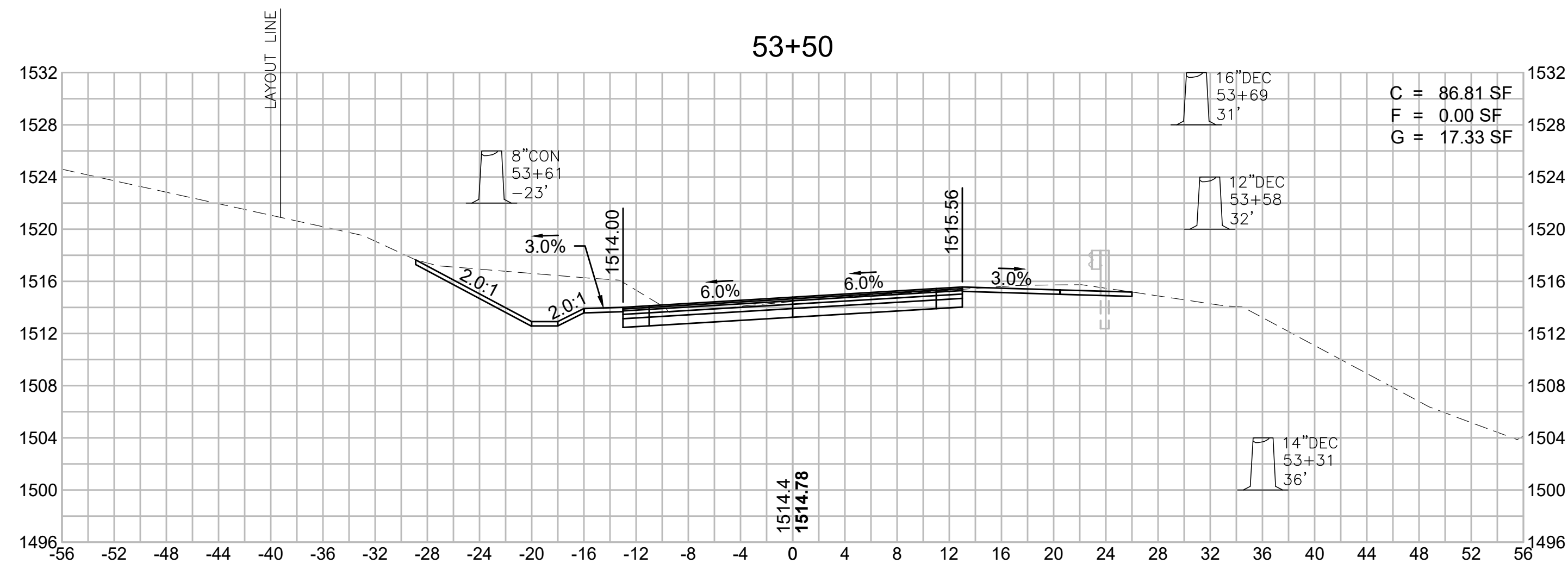
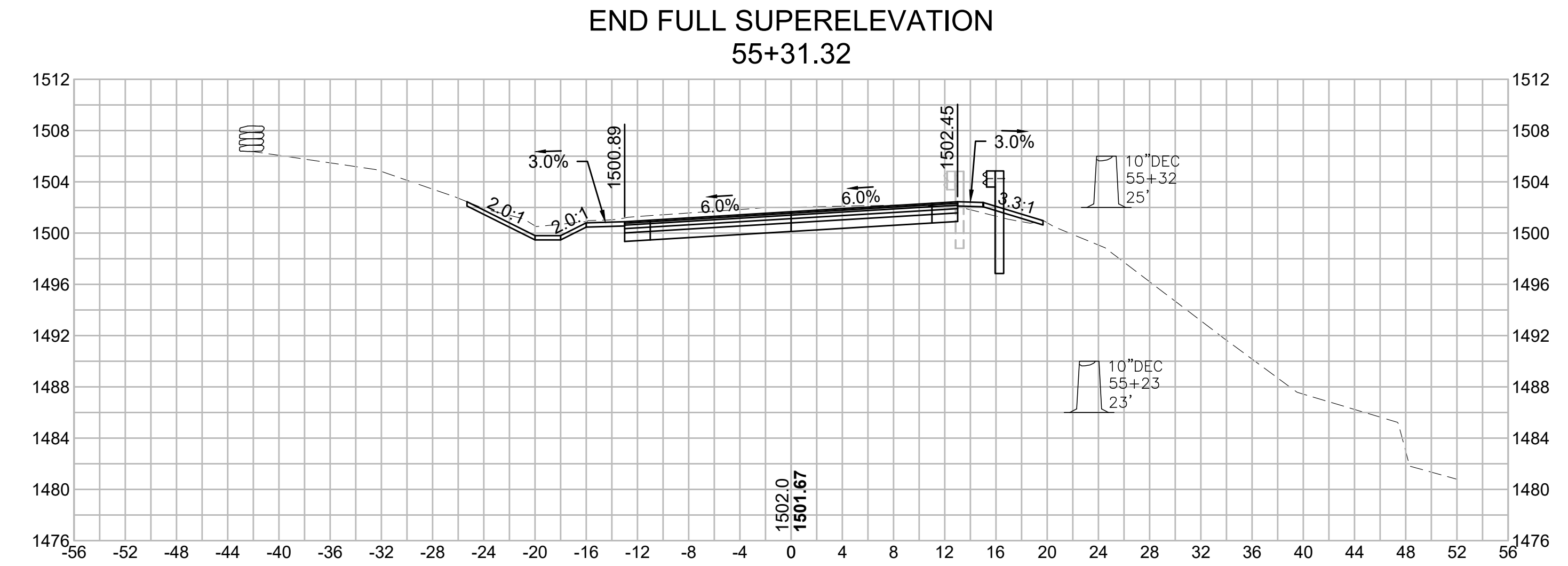
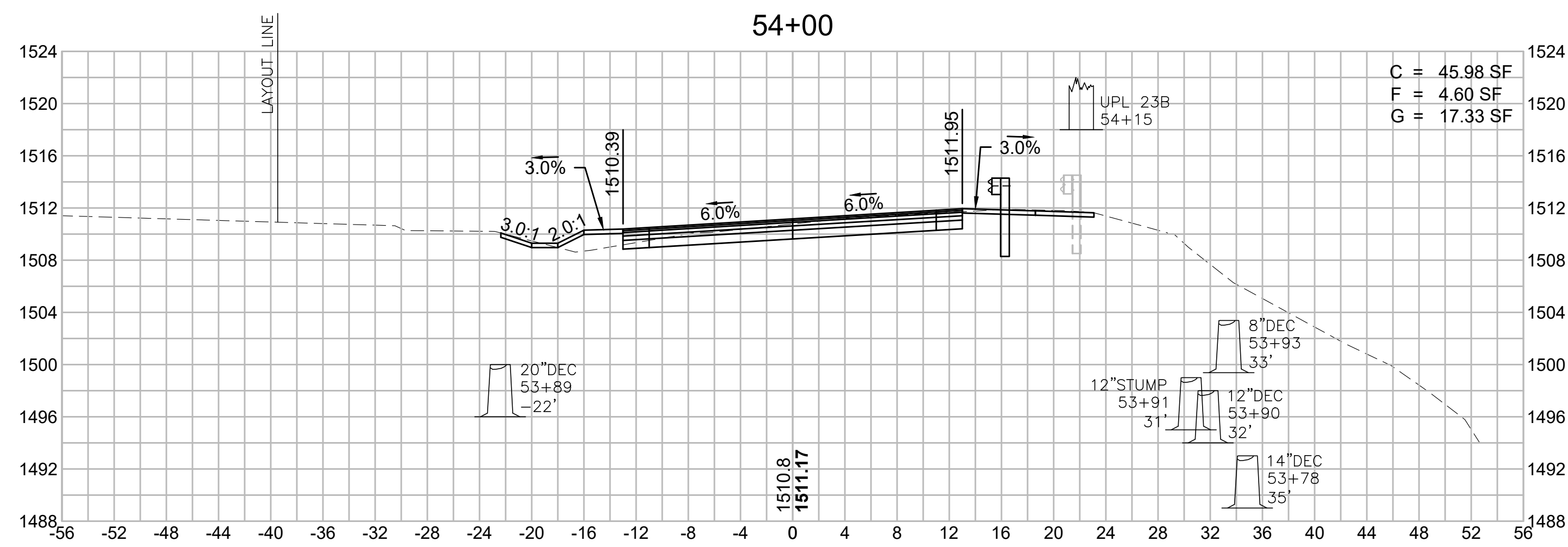
**OLD NORTH ROAD
CROSS SECTIONS - 18**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	122	191

**OLD NORTH ROAD
CROSS SECTIONS - 19**

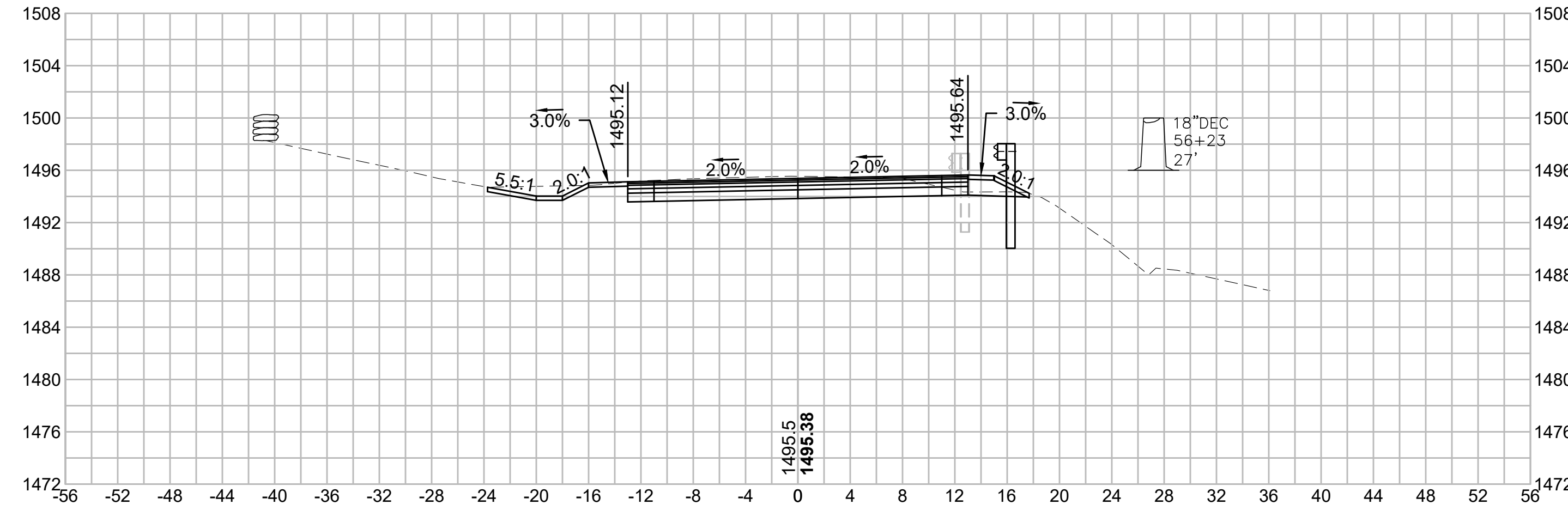


**WORTHINGTON
ROUTE 143**

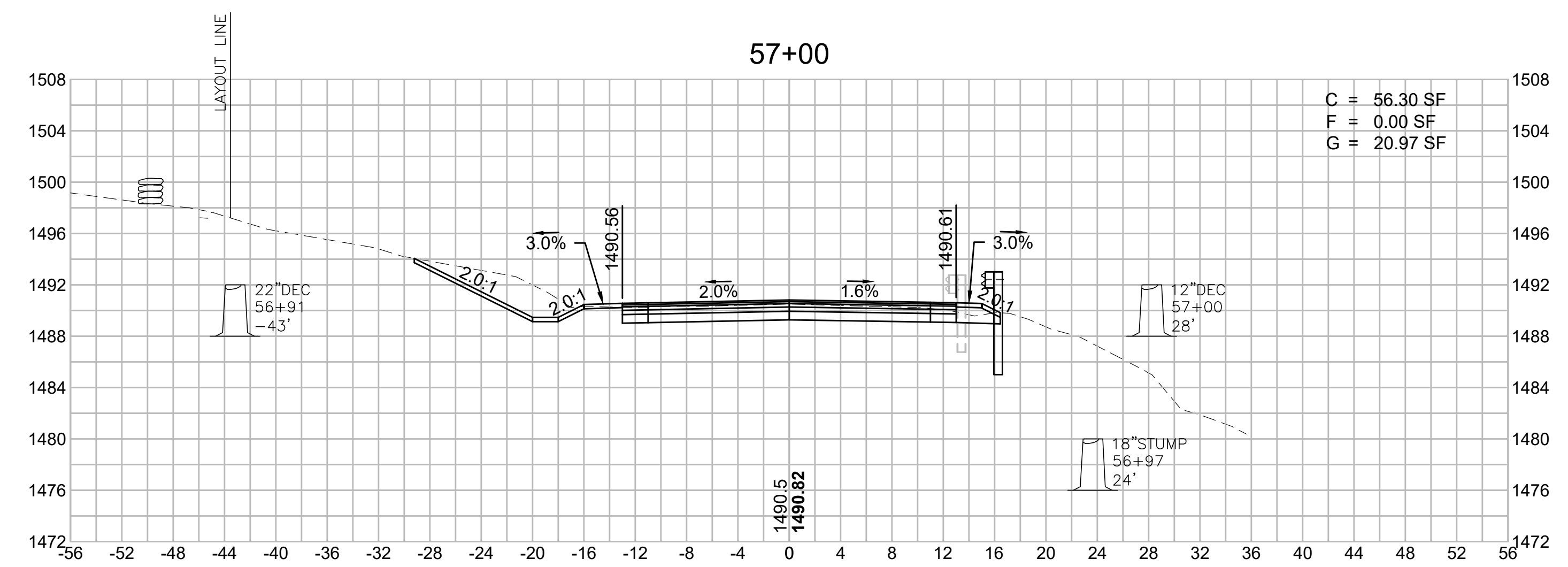
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	123	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 20**

**REVERSE CROWN
56+19.99**

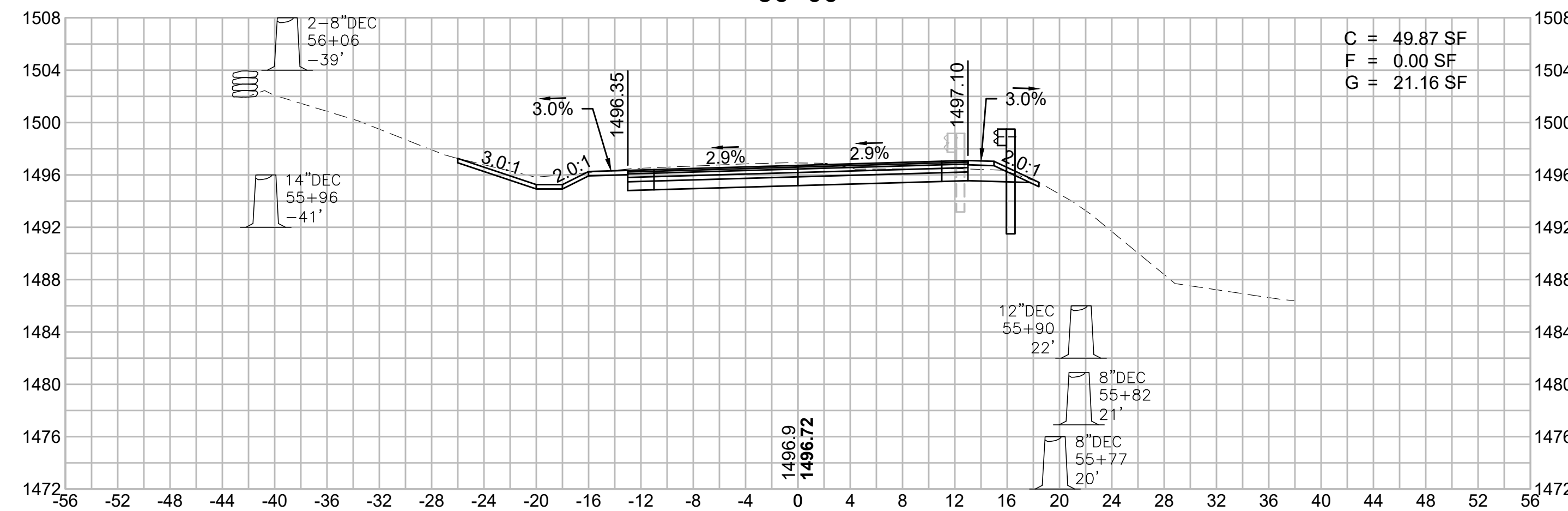


57+00



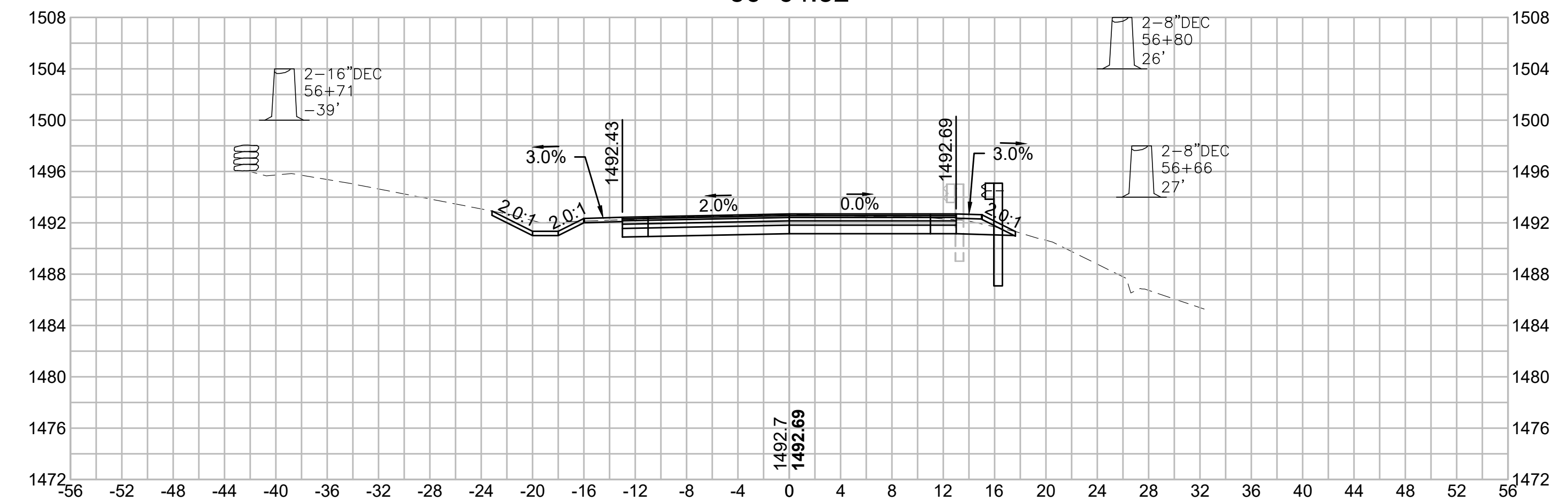
C = 56.30 SF
F = 0.00 SF
G = 20.97 SF

56+00



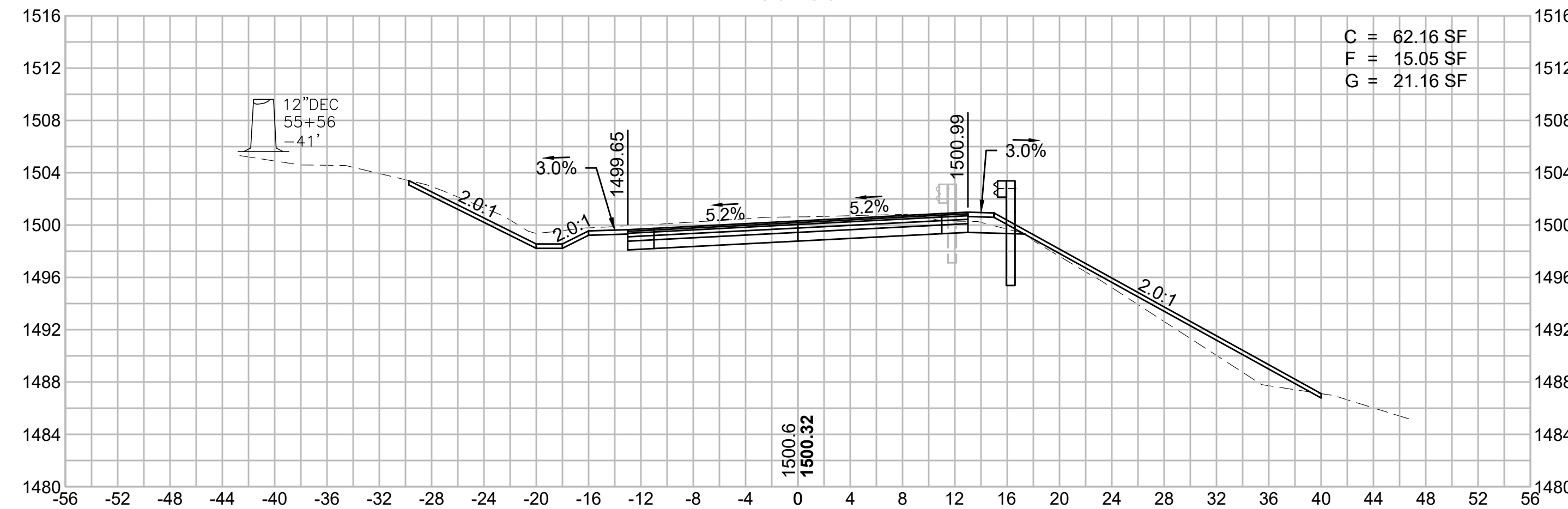
C = 49.87 SF
F = 0.00 SF
G = 21.16 SF

**LEVEL CROWN
56+64.32**



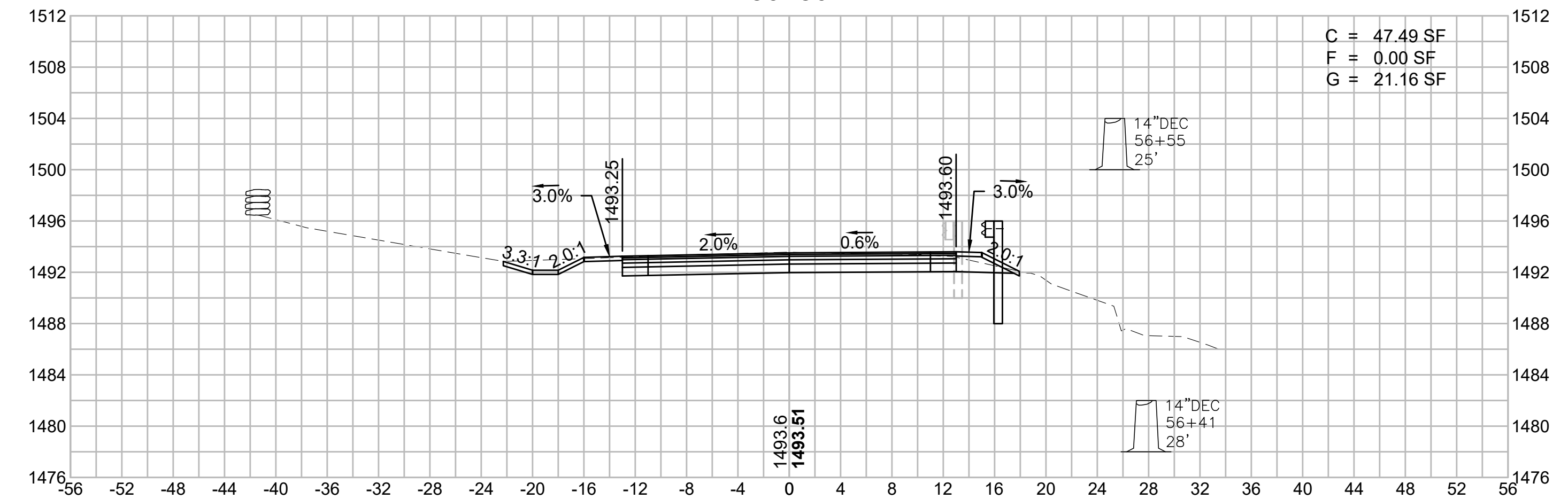
SUPERELEVATION:
PT STA = 55+75.65
R = 310.00'
BANK = 6.00%

55+50

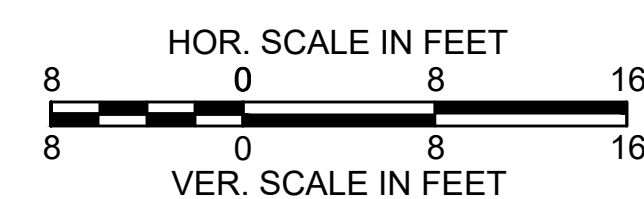


C = 62.16 SF
F = 15.05 SF
G = 21.16 SF

56+50



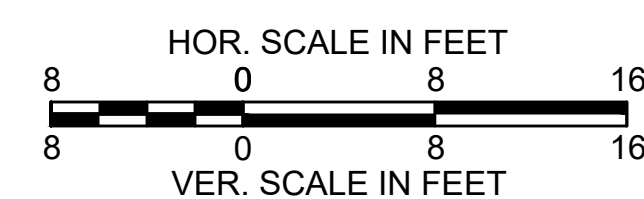
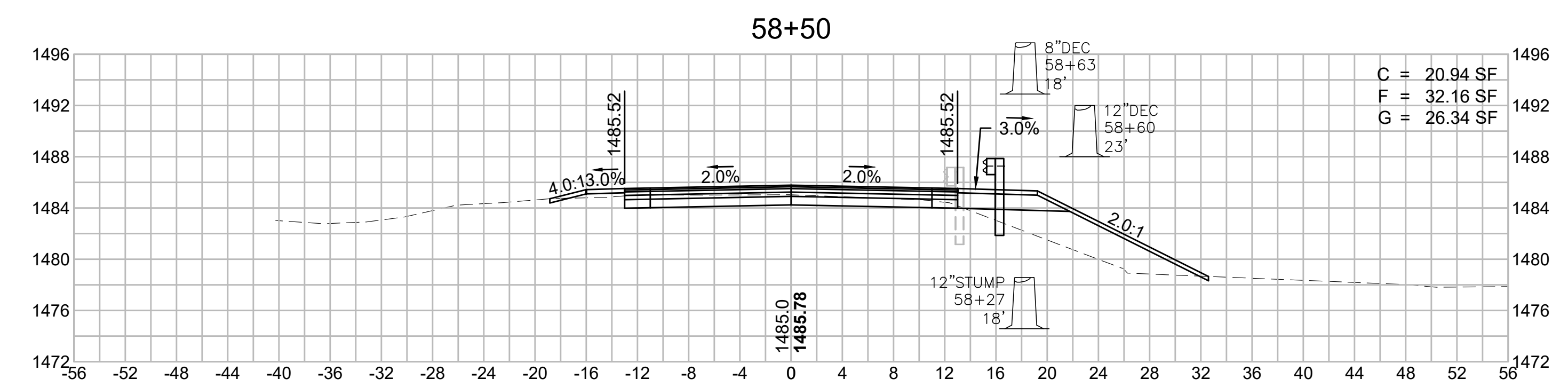
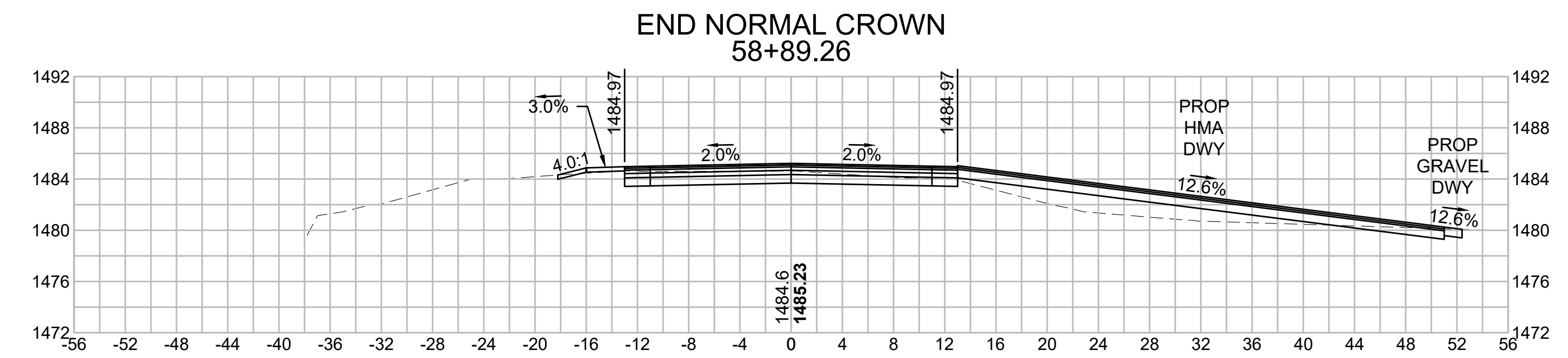
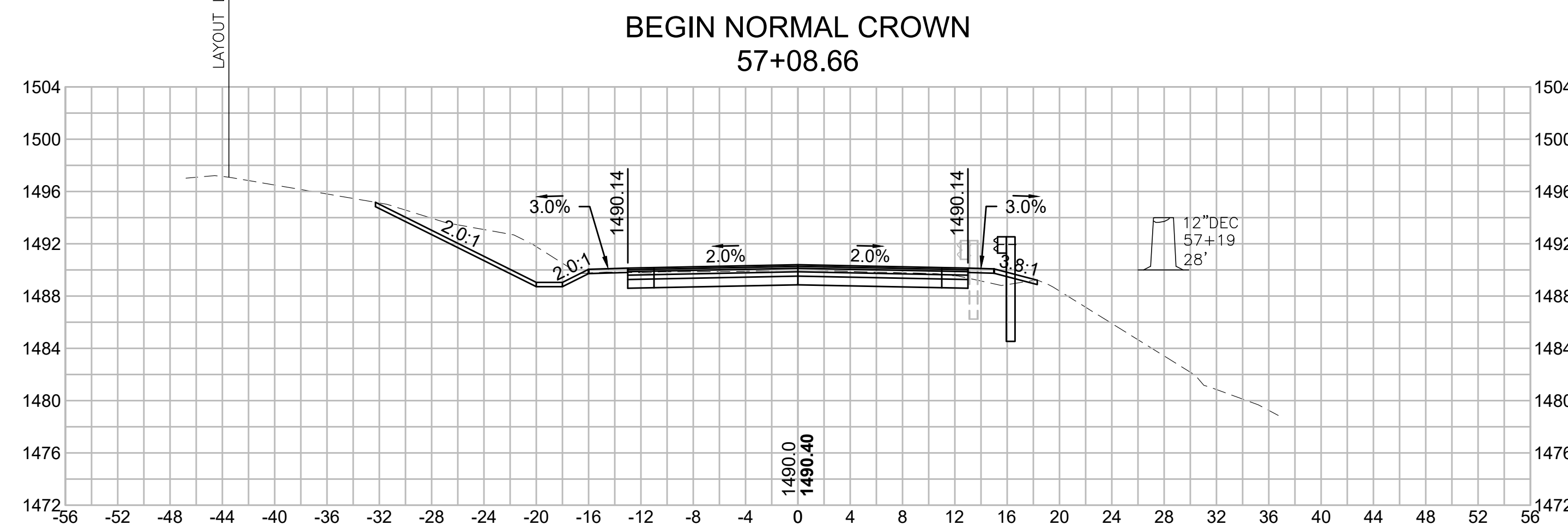
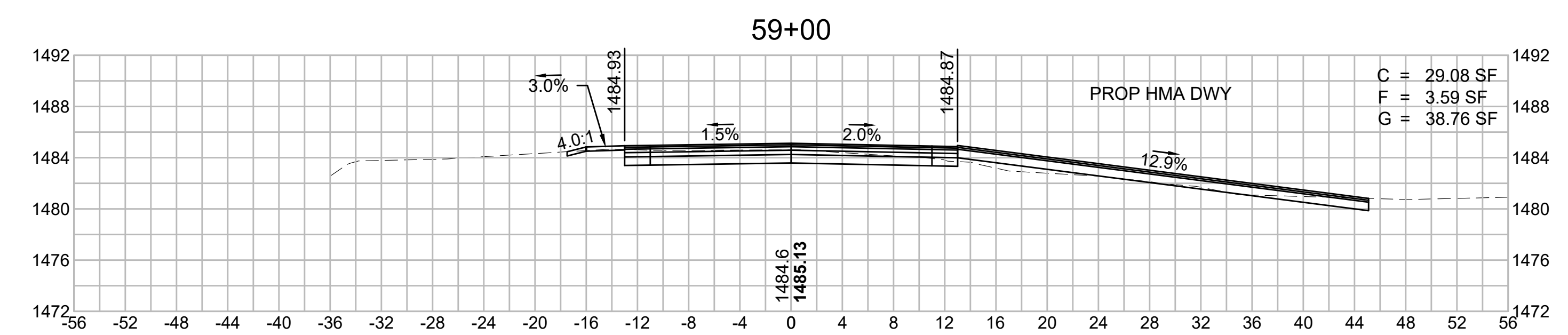
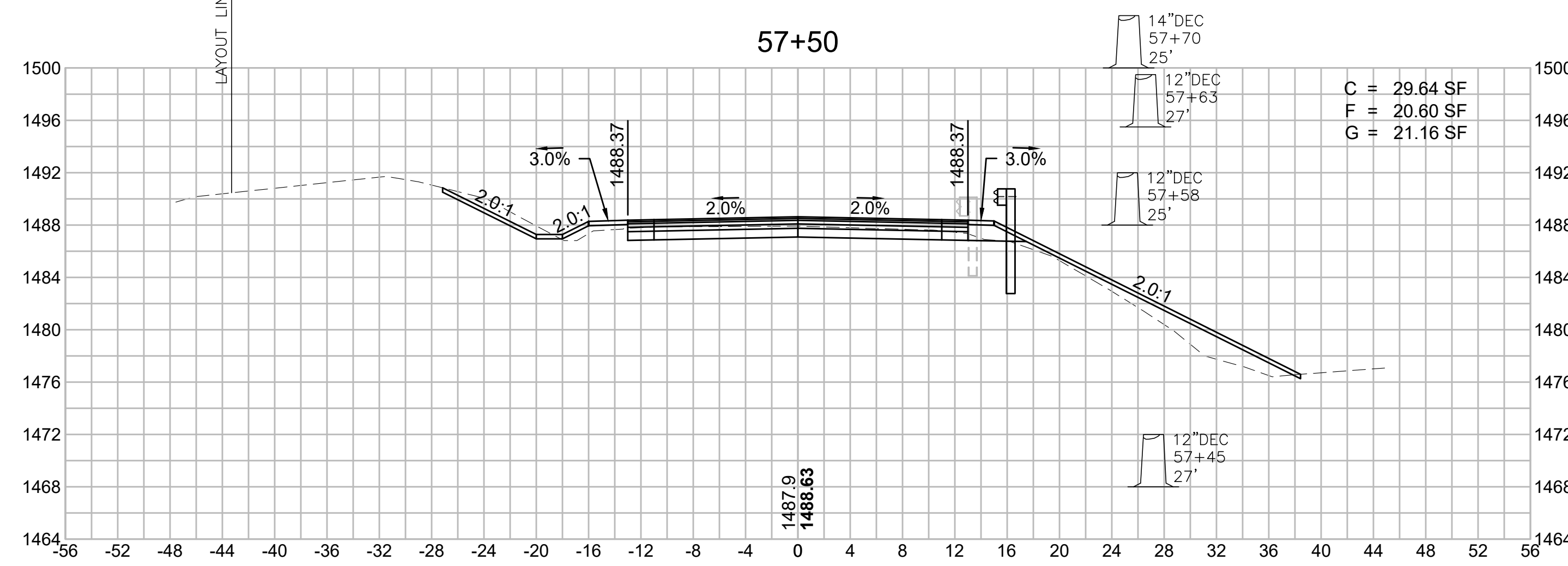
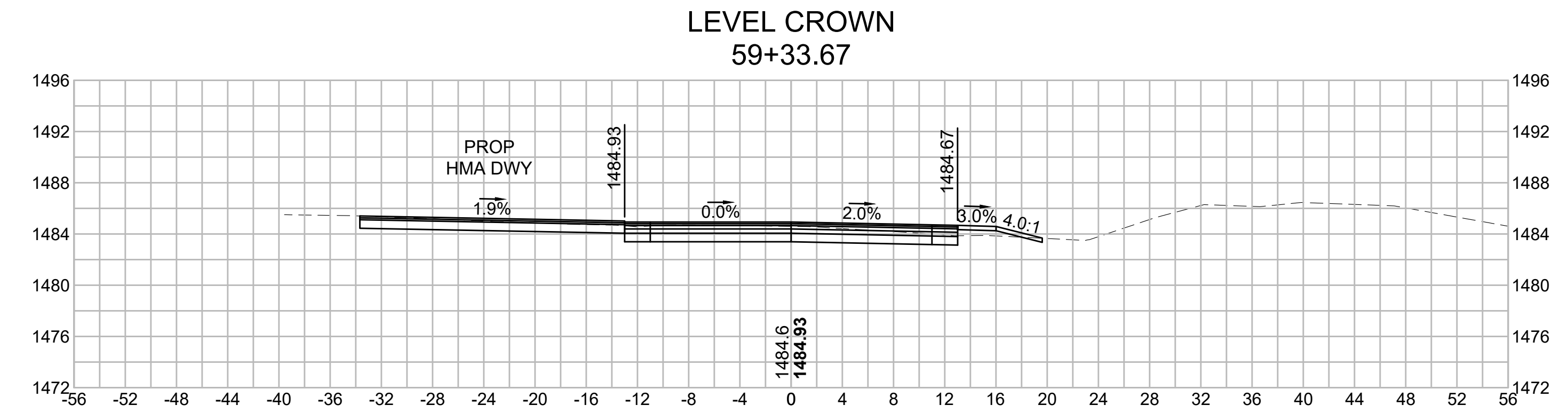
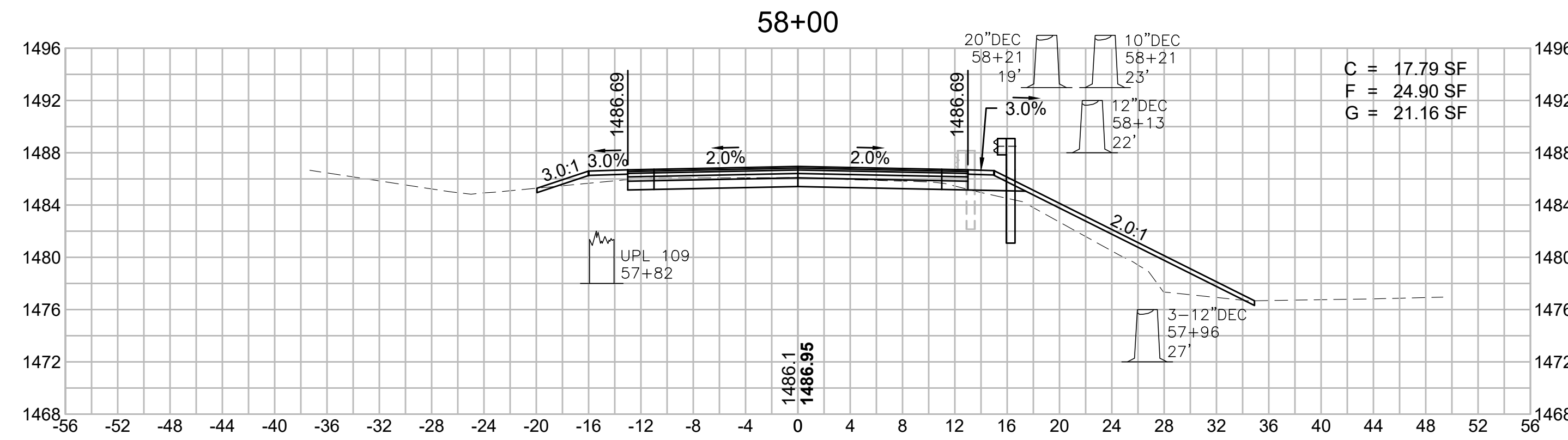
C = 47.49 SF
F = 0.00 SF
G = 21.16 SF



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	124	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 21**

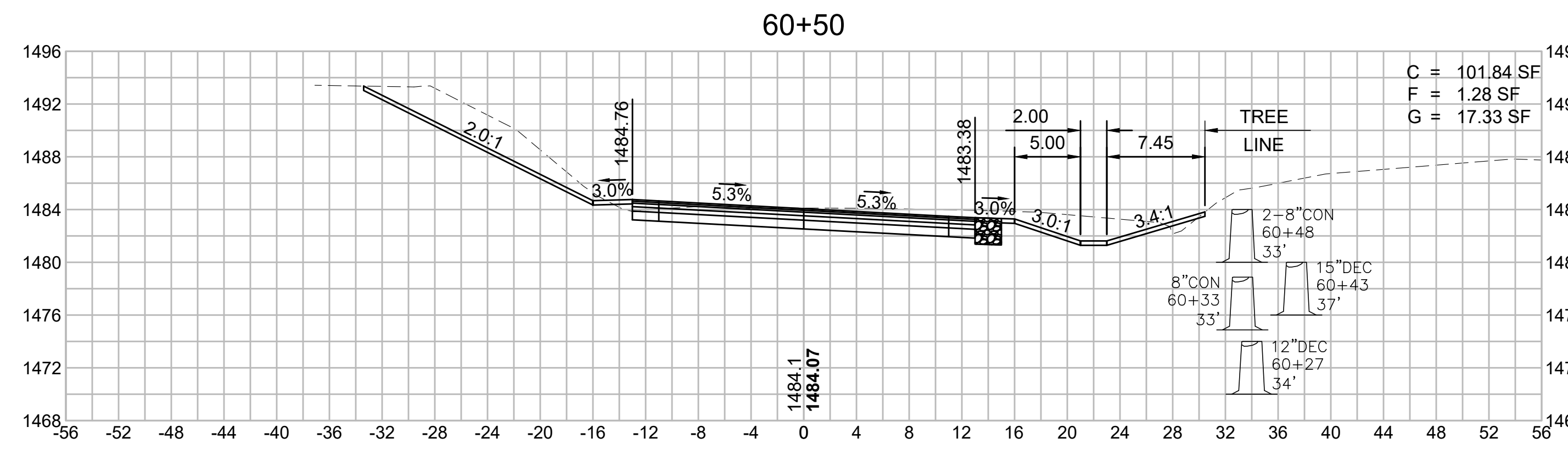


**WORTHINGTON
ROUTE 143**

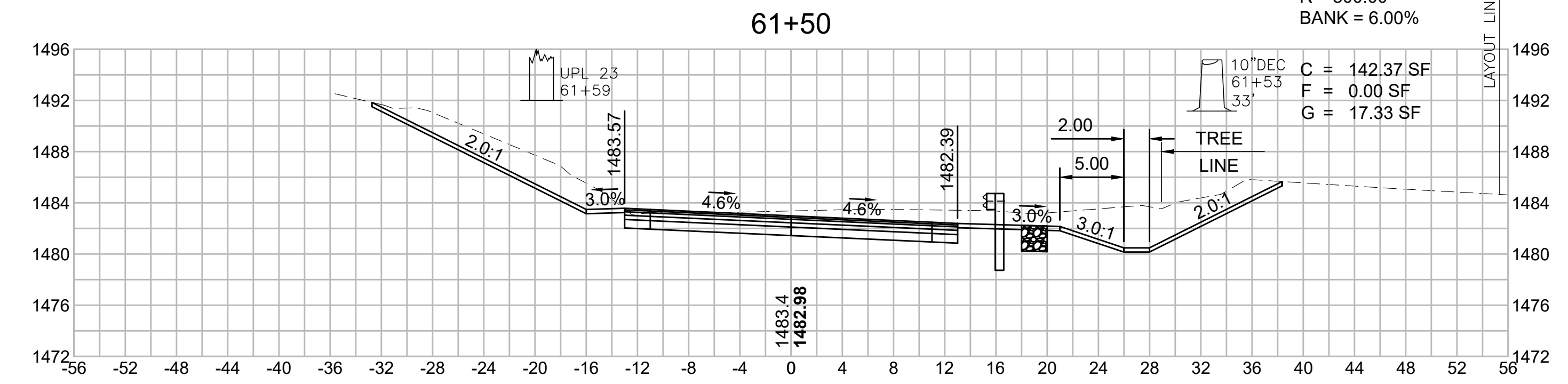
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	125	191

**OLD NORTH ROAD
CROSS SECTIONS - 22**

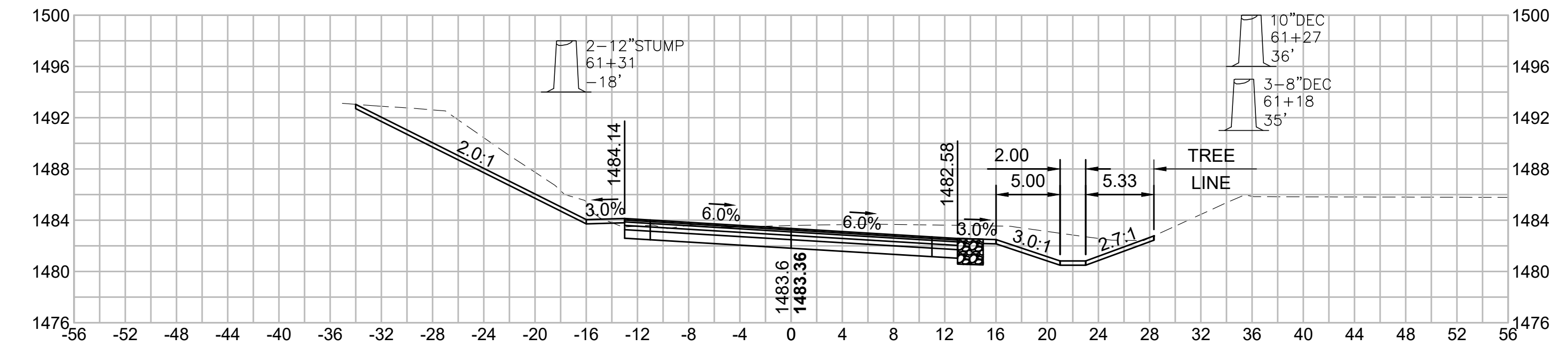
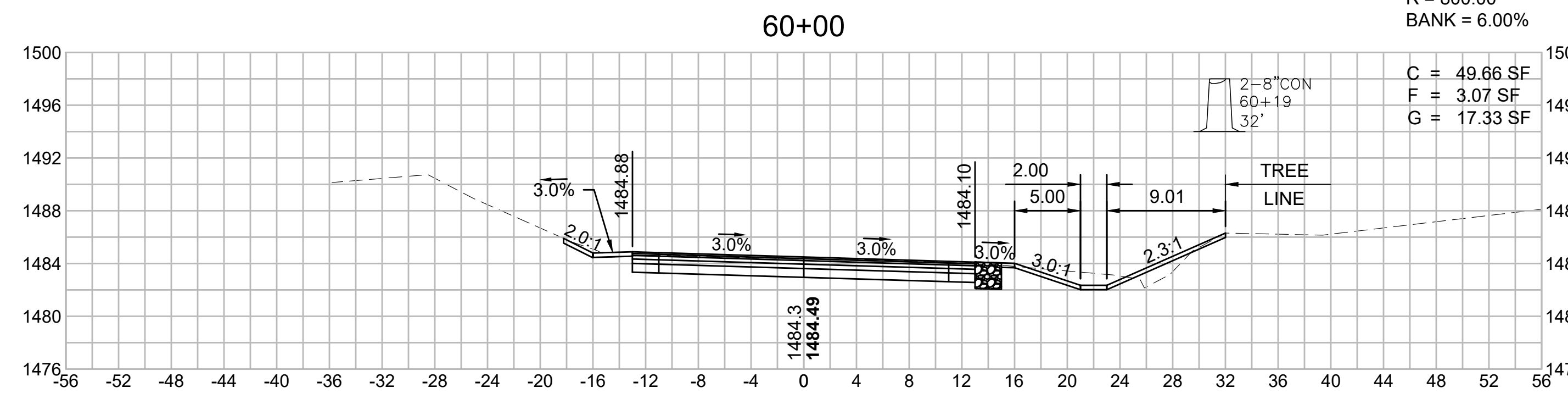
SUPERELEVATION:
PT STA = 61+62.28
R = 800.00'
BANK = 6.00%



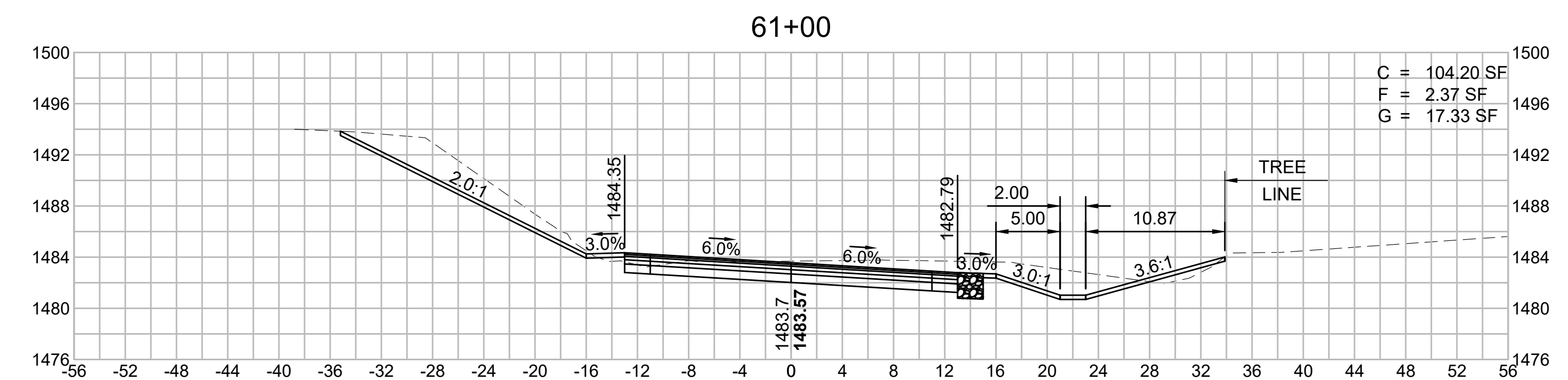
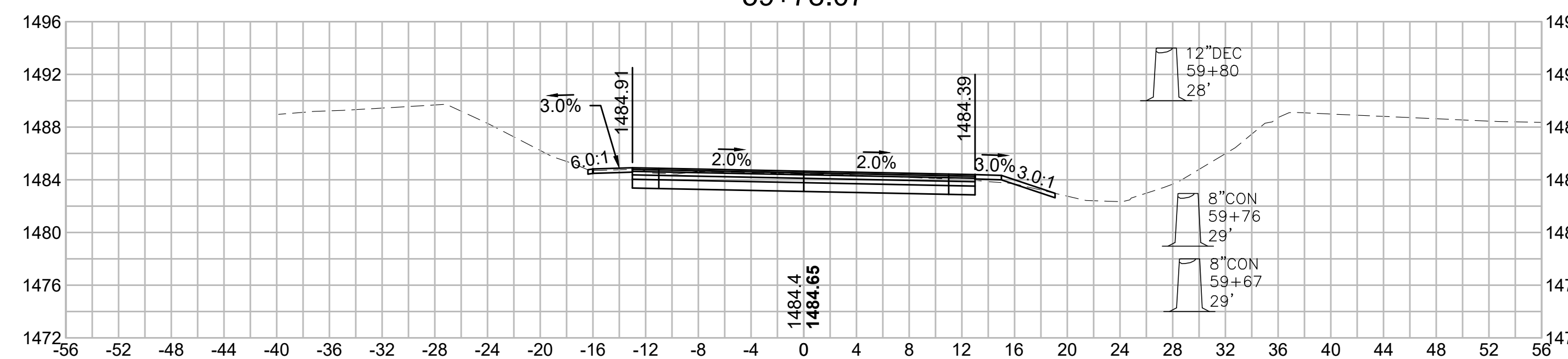
SUPERELEVATION:
PC STA = 60+21.01
R = 800.00'
BANK = 6.00%



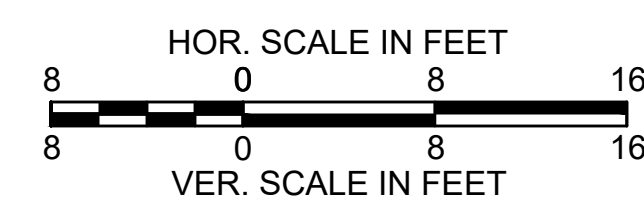
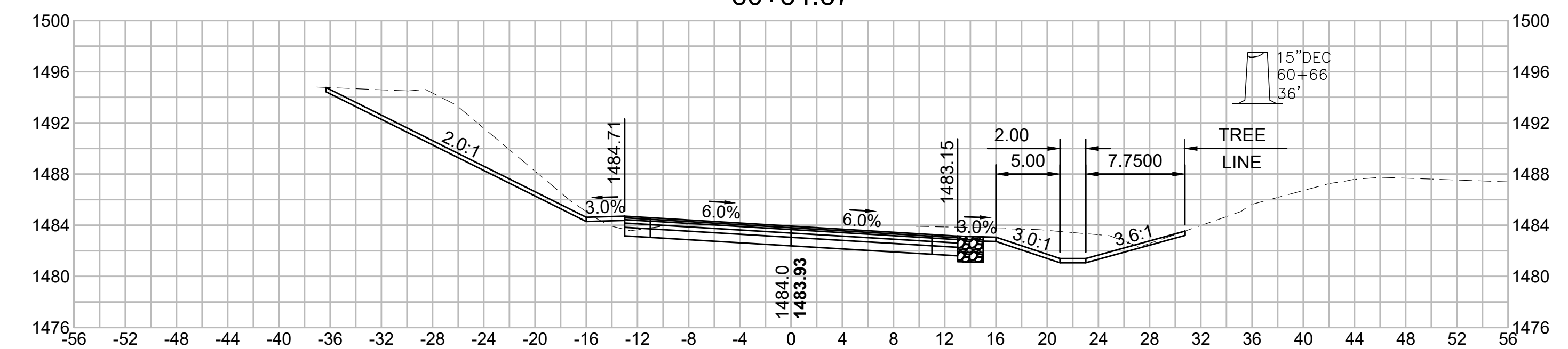
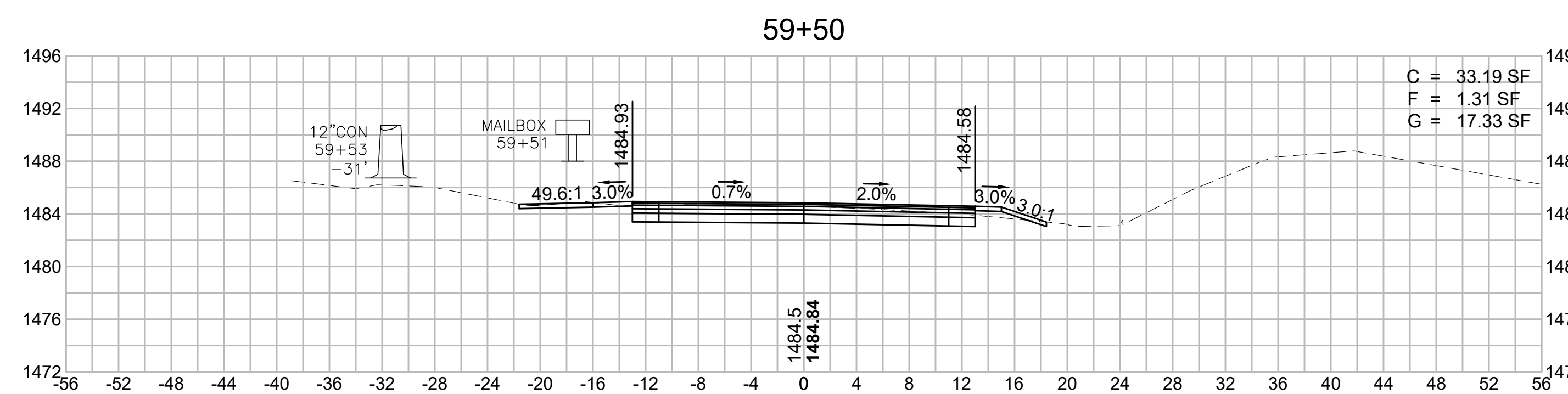
**END FULL SUPERELEVATION
61+18.62**



**REVERSE CROWN
59+78.07**



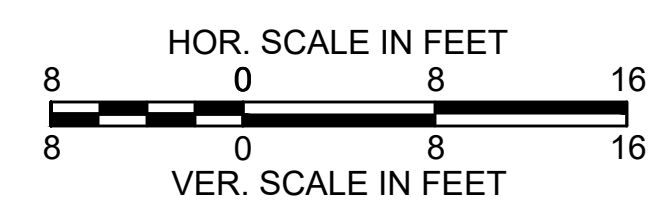
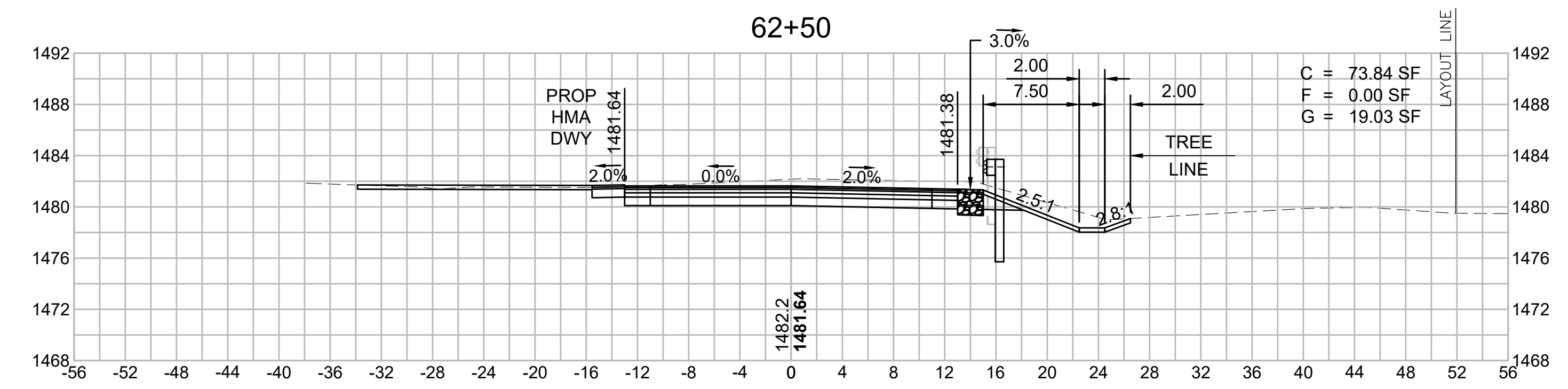
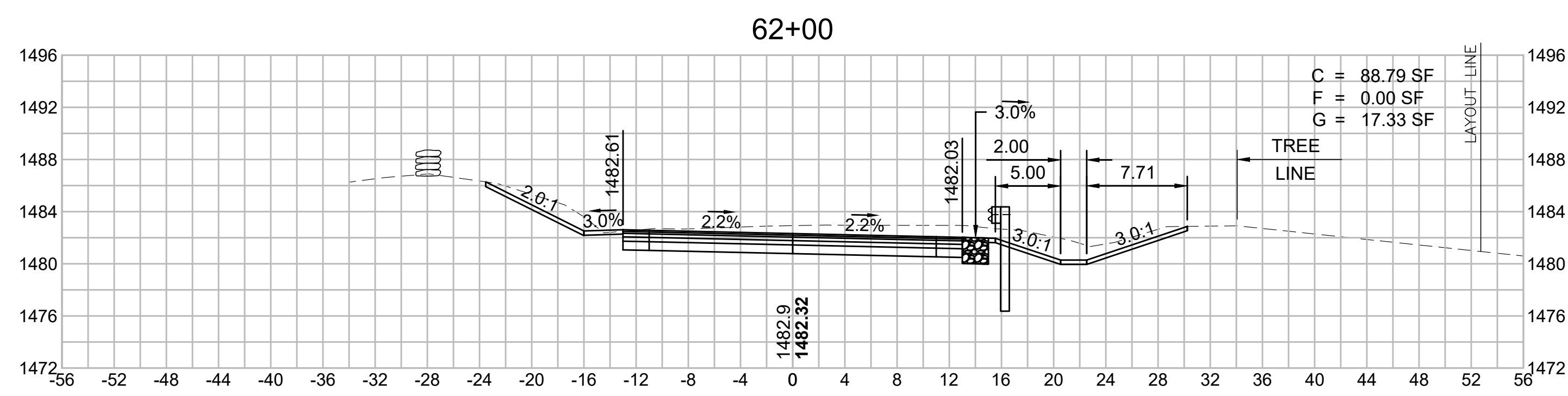
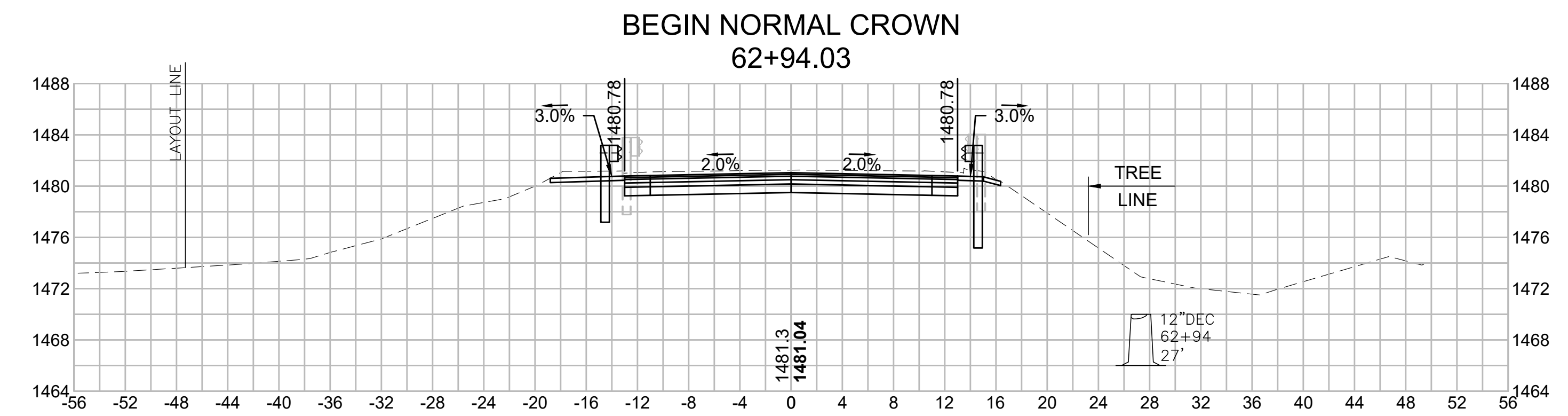
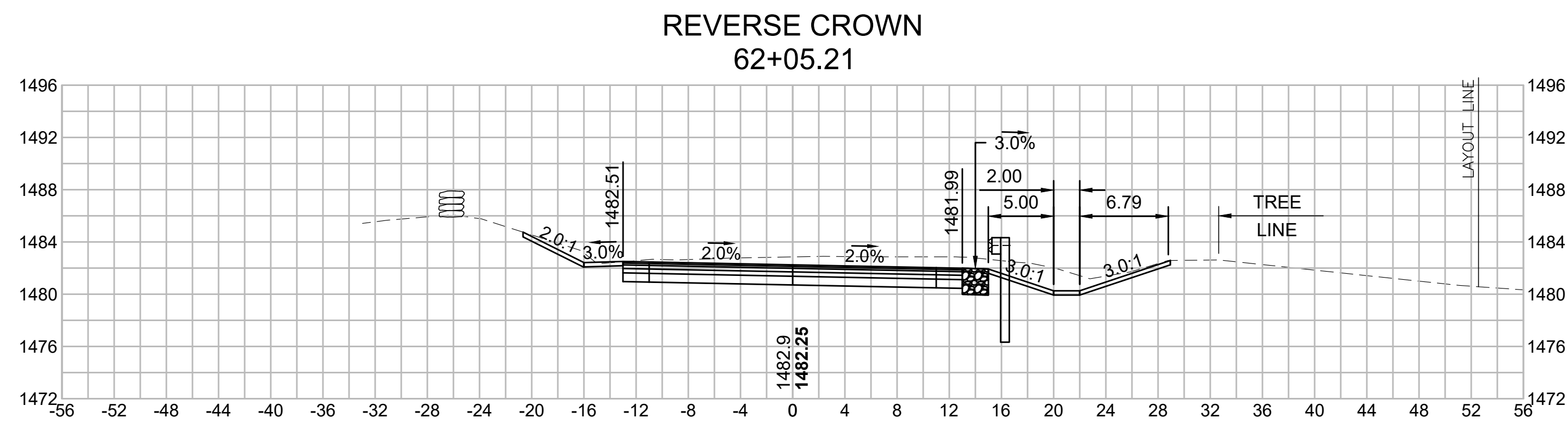
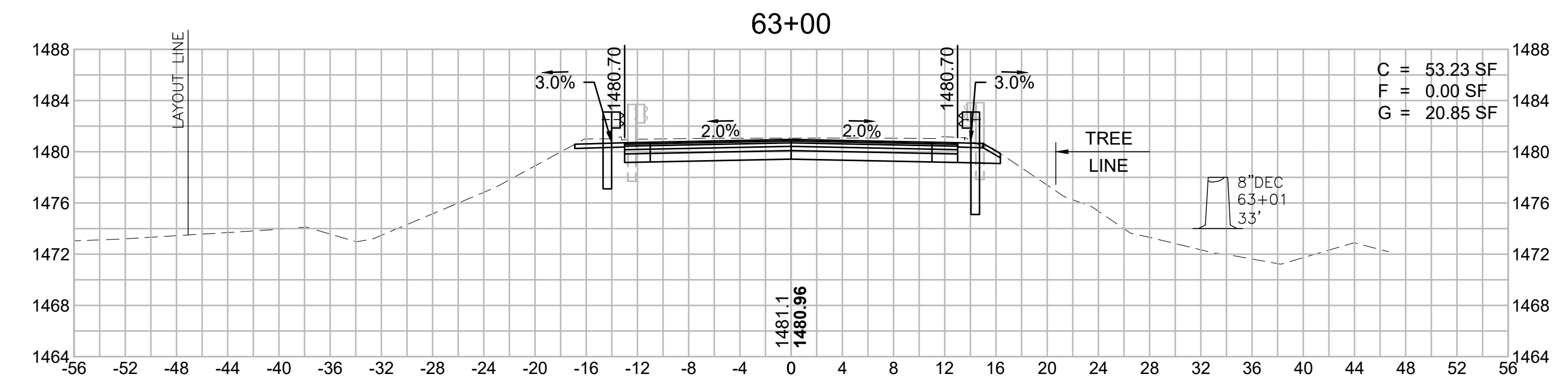
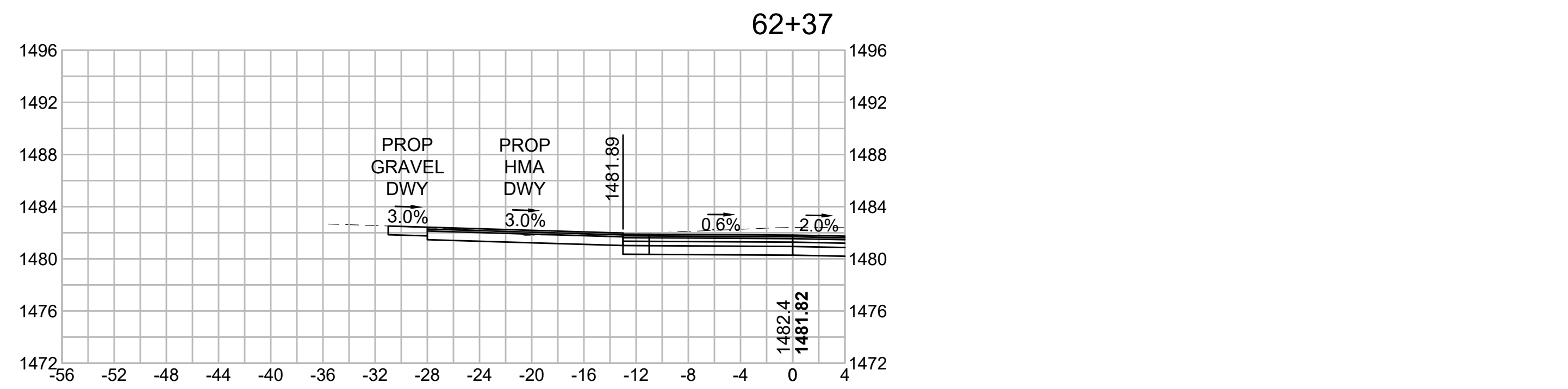
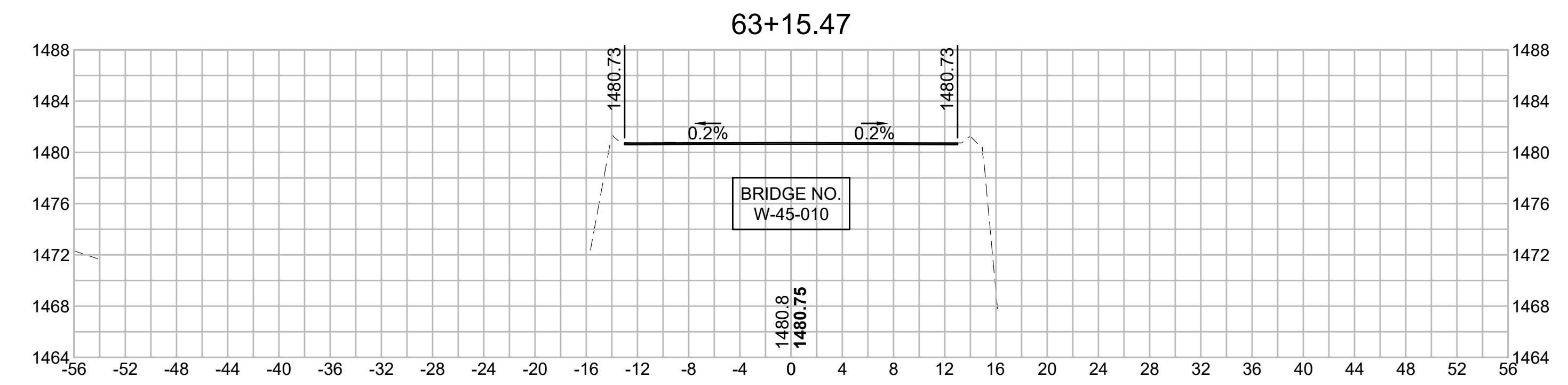
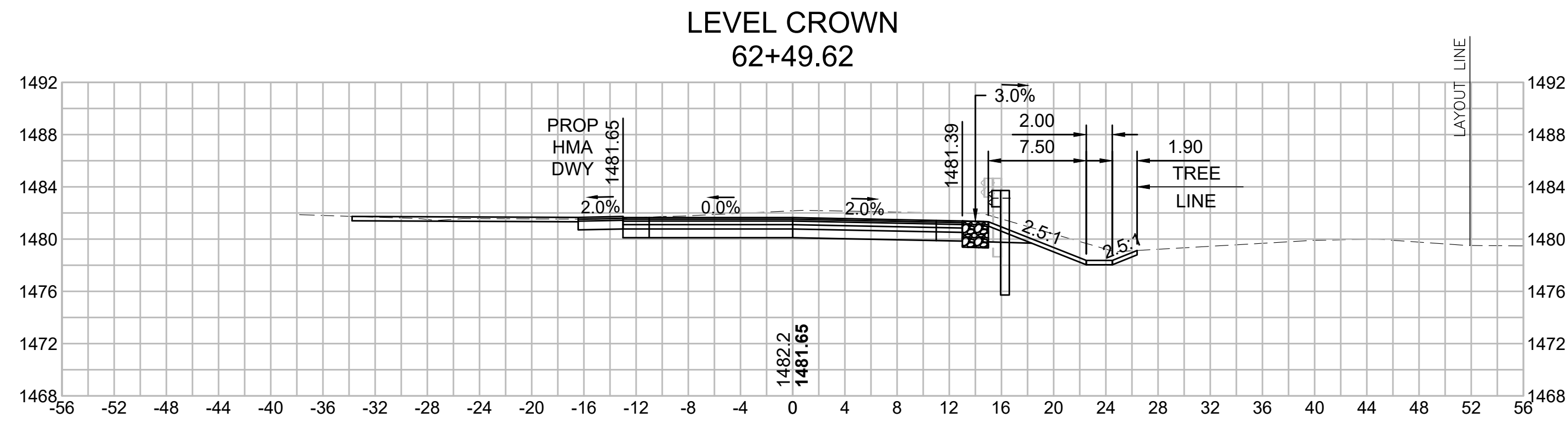
**BEGIN FULL SUPERELEVATION
60+64.67**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	126	191
PROJECT FILE NO.		609287	

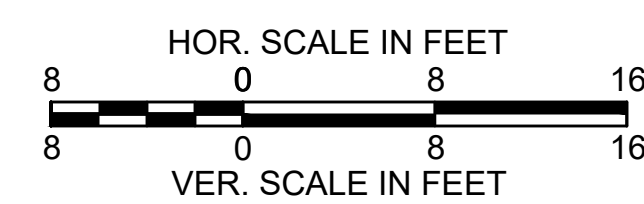
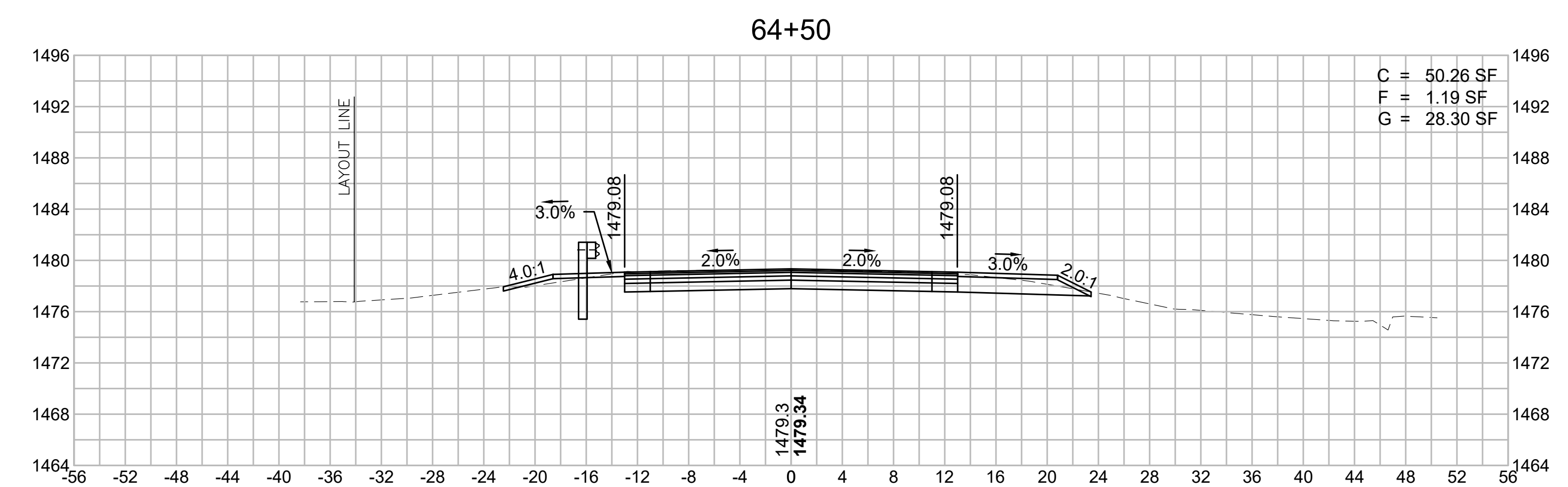
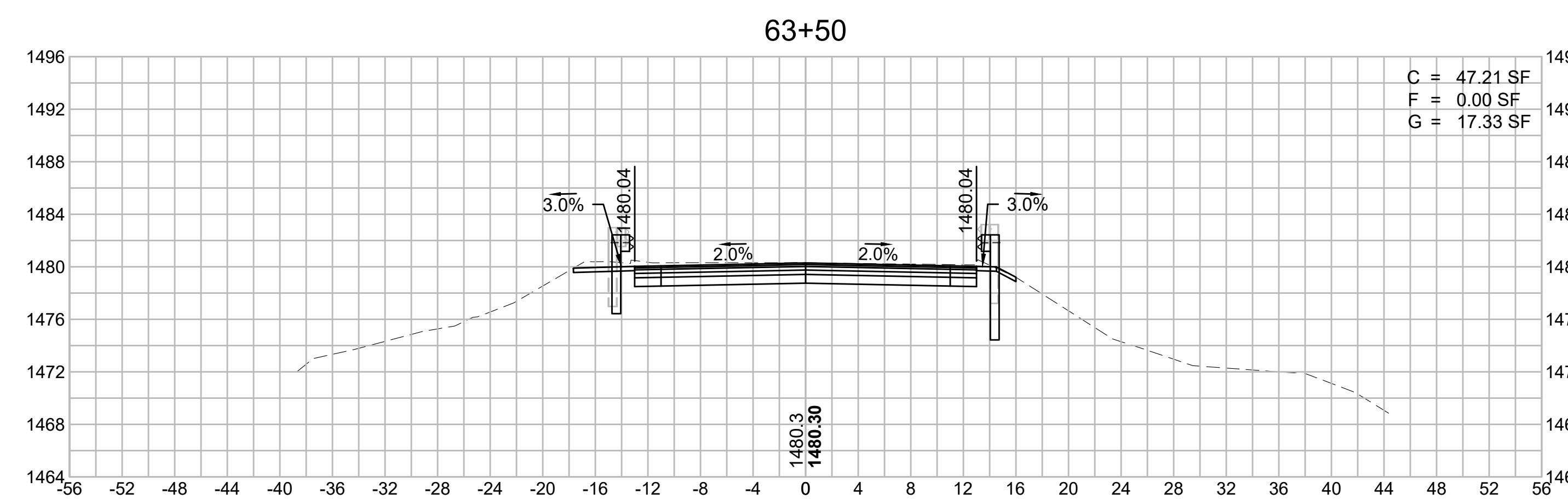
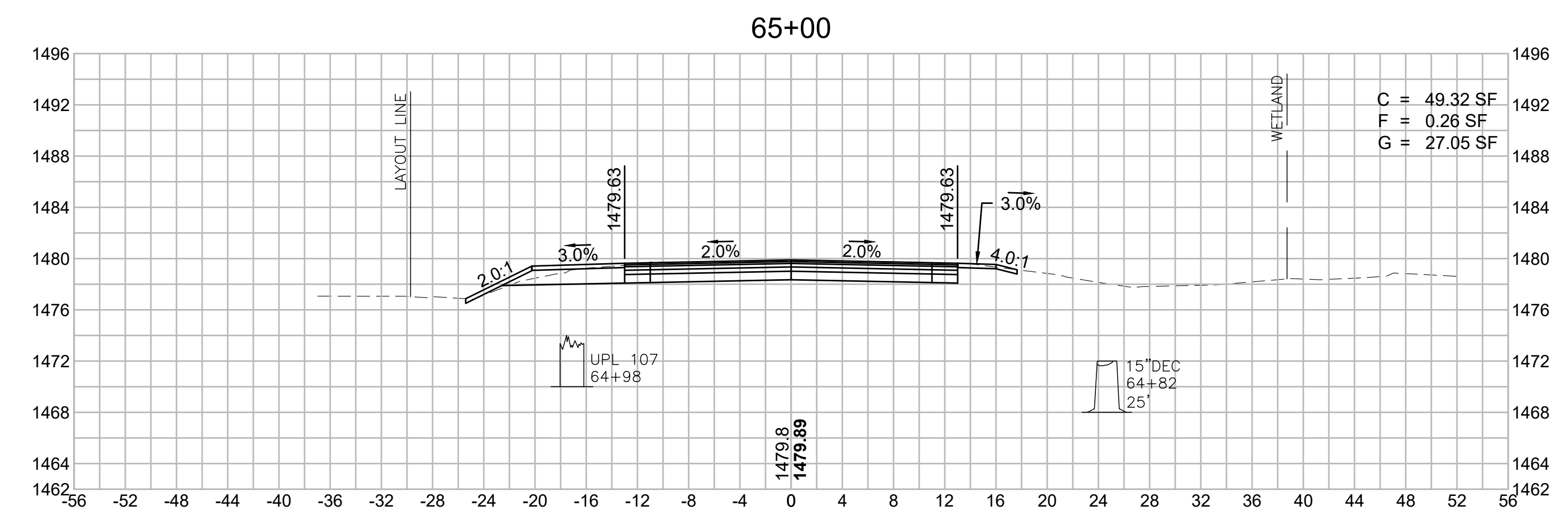
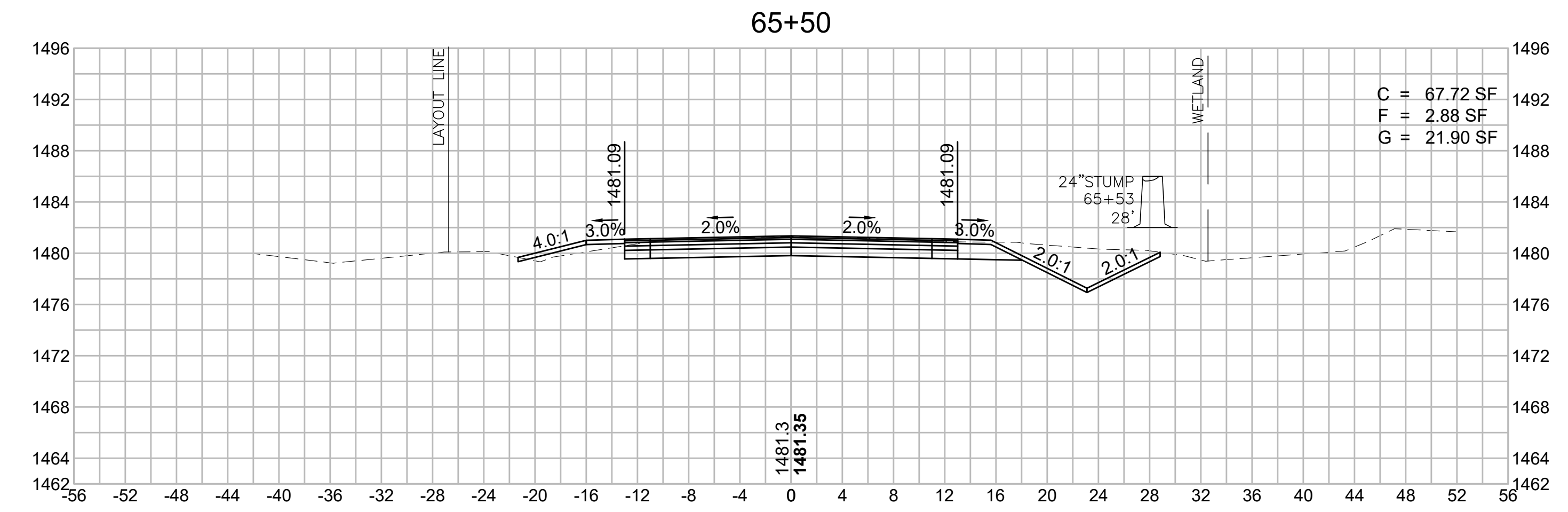
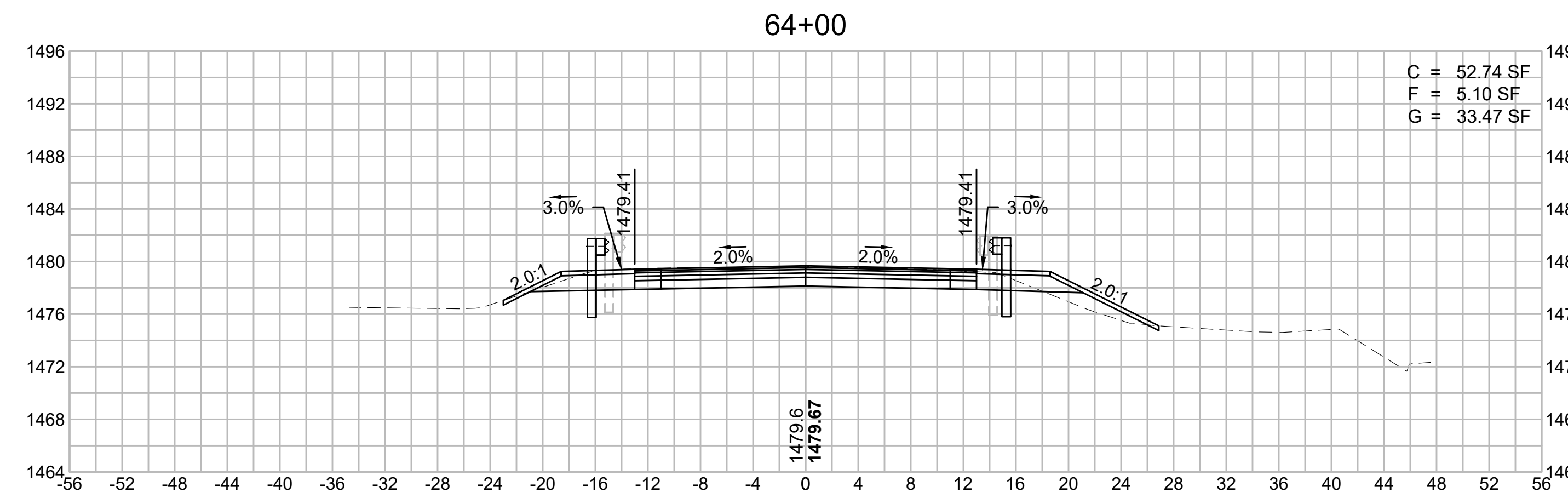
**OLD NORTH ROAD
CROSS SECTIONS - 23**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	127	191

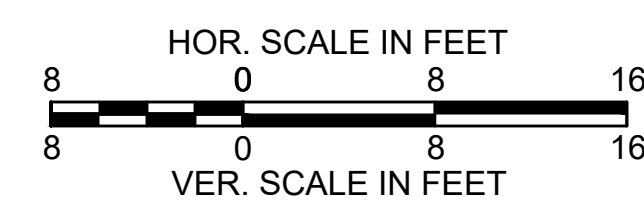
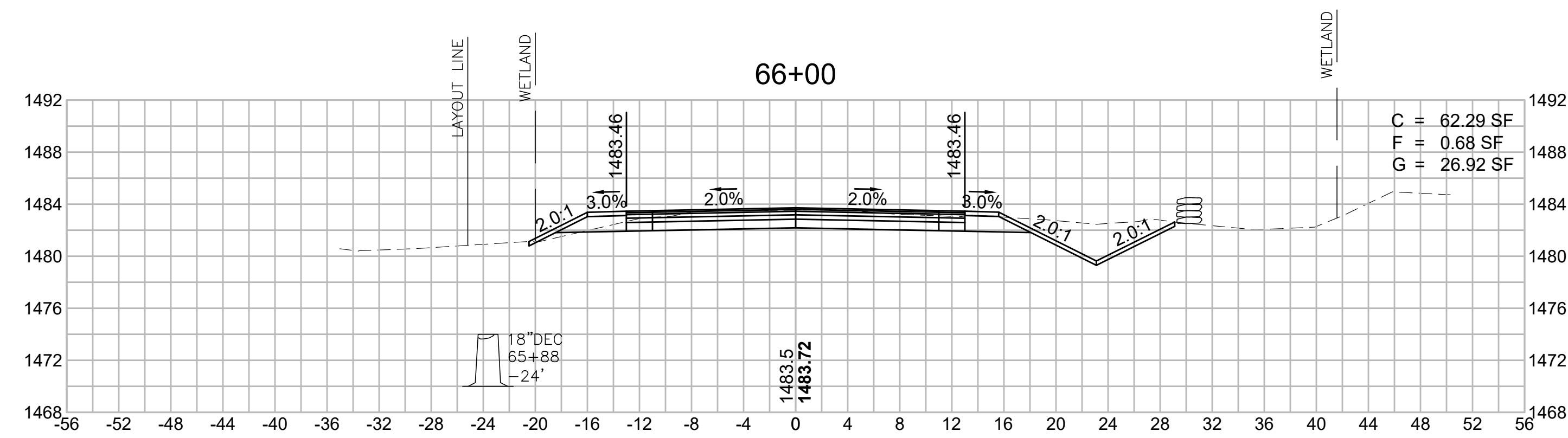
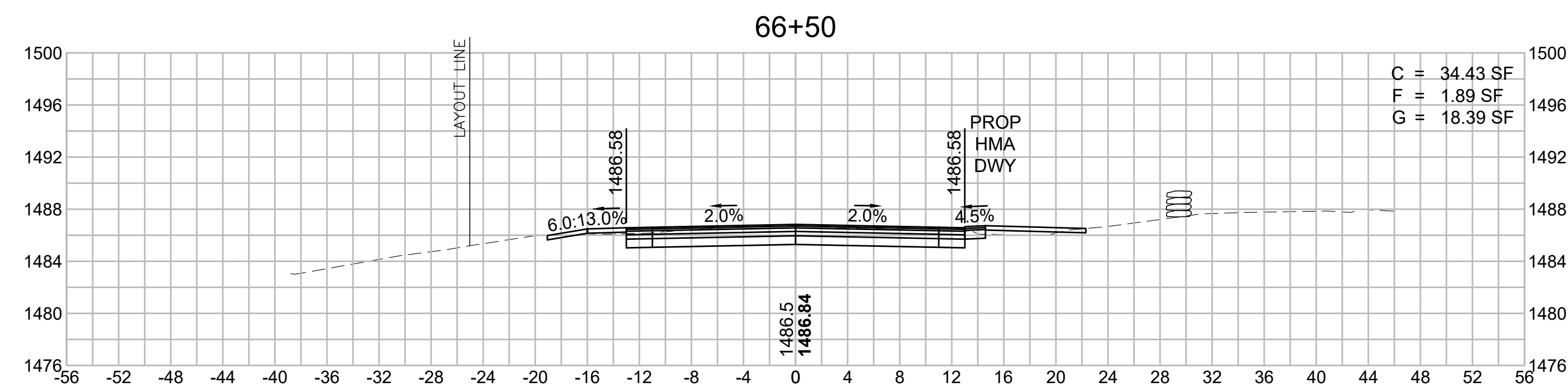
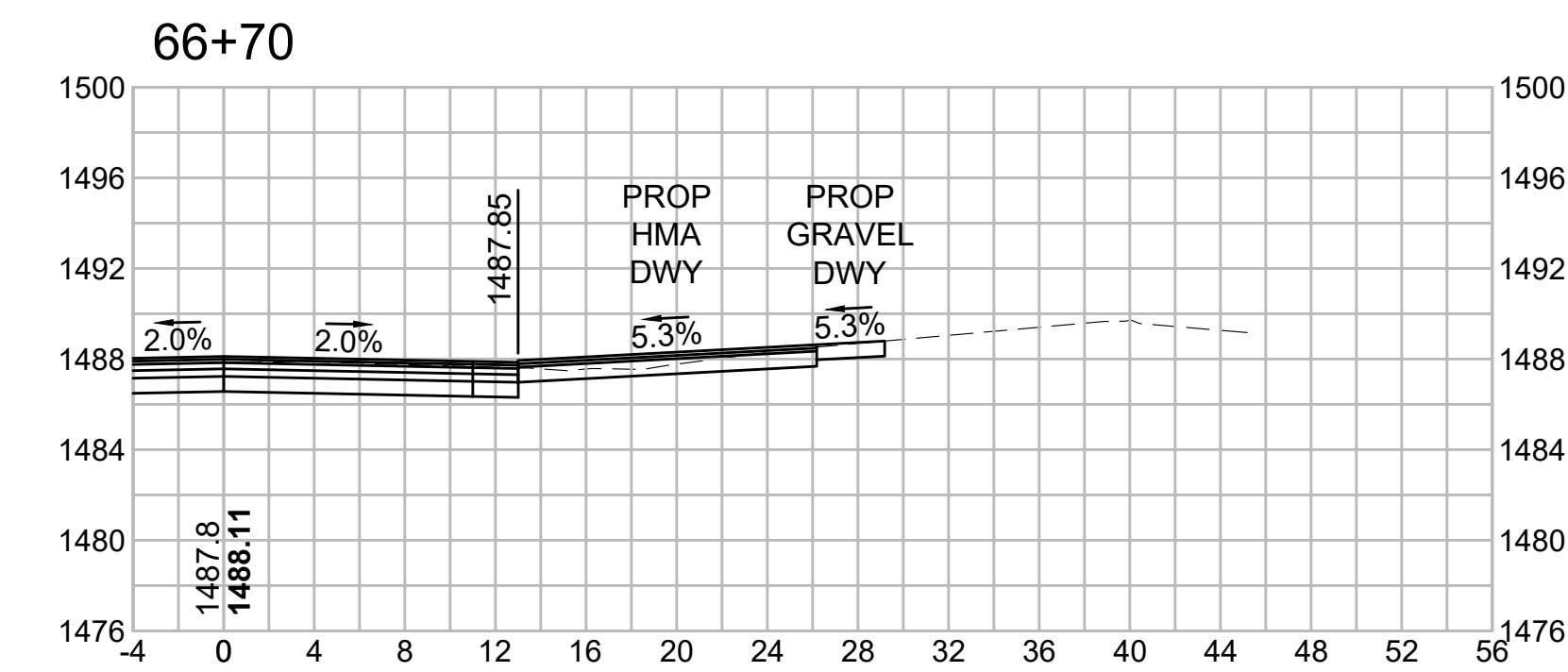
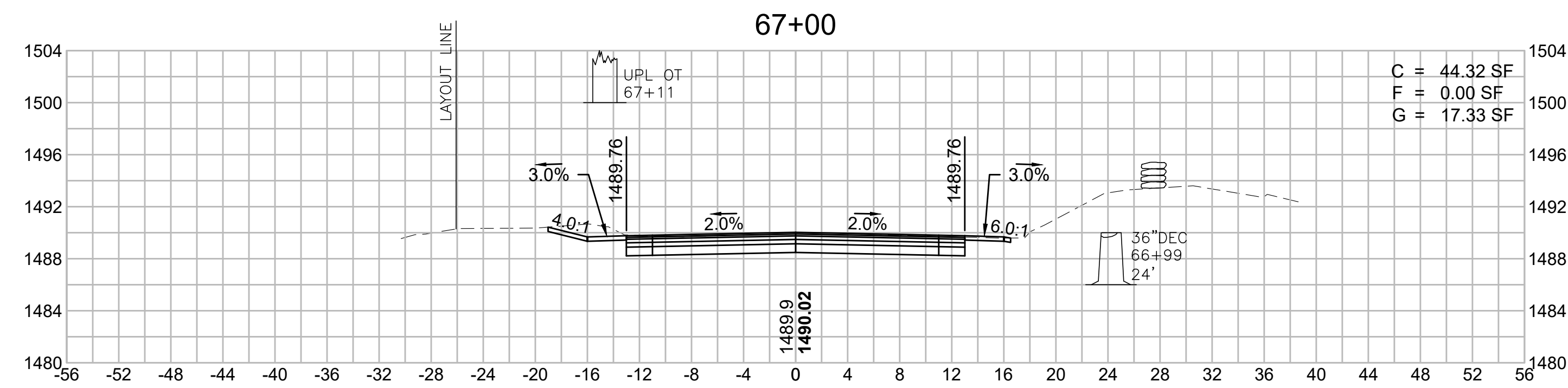
**OLD NORTH ROAD
CROSS SECTIONS - 24**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	128	191
PROJECT FILE NO.		609287	

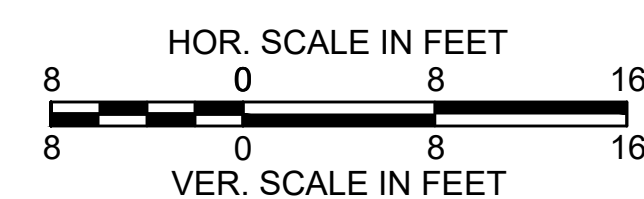
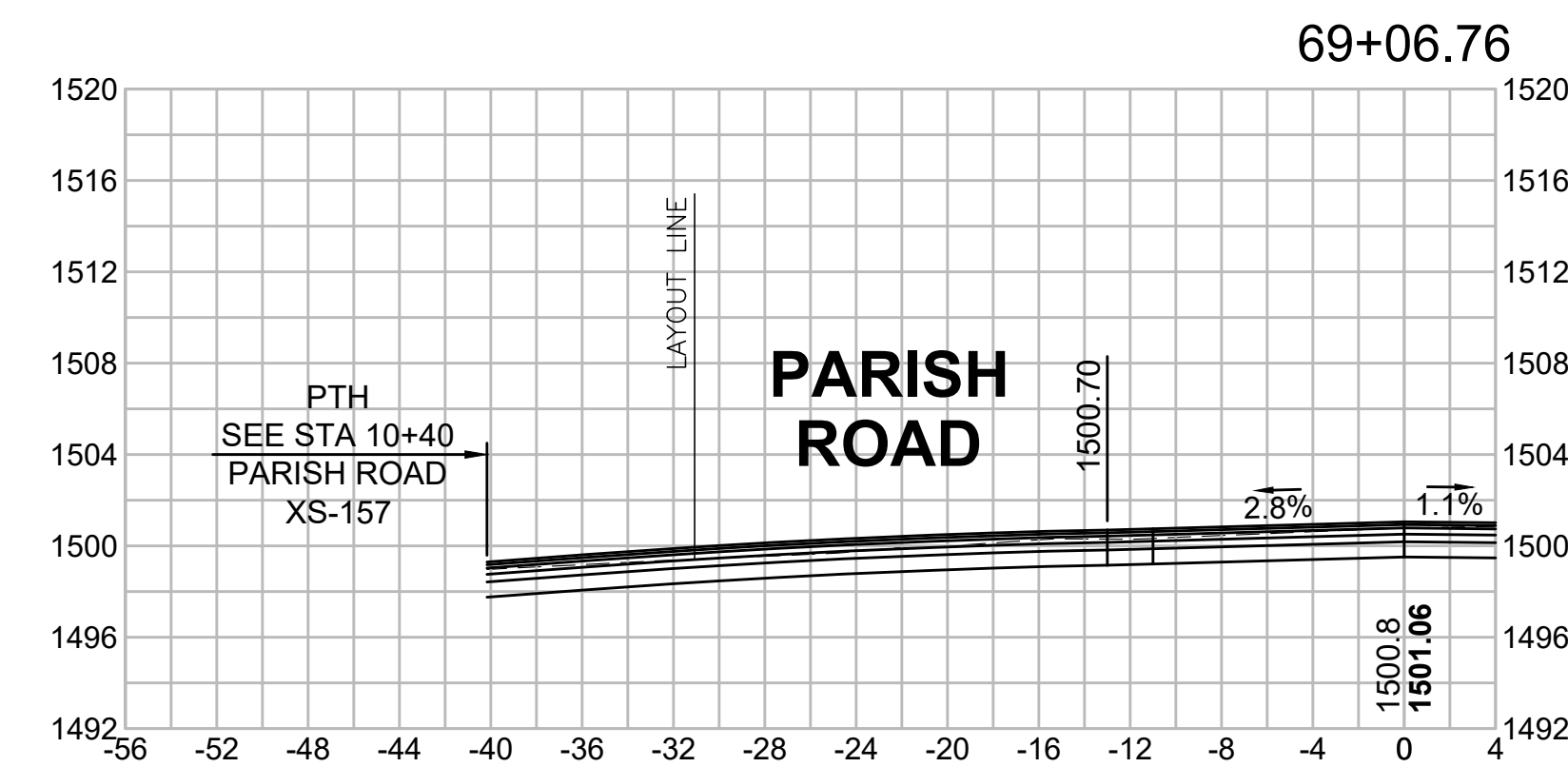
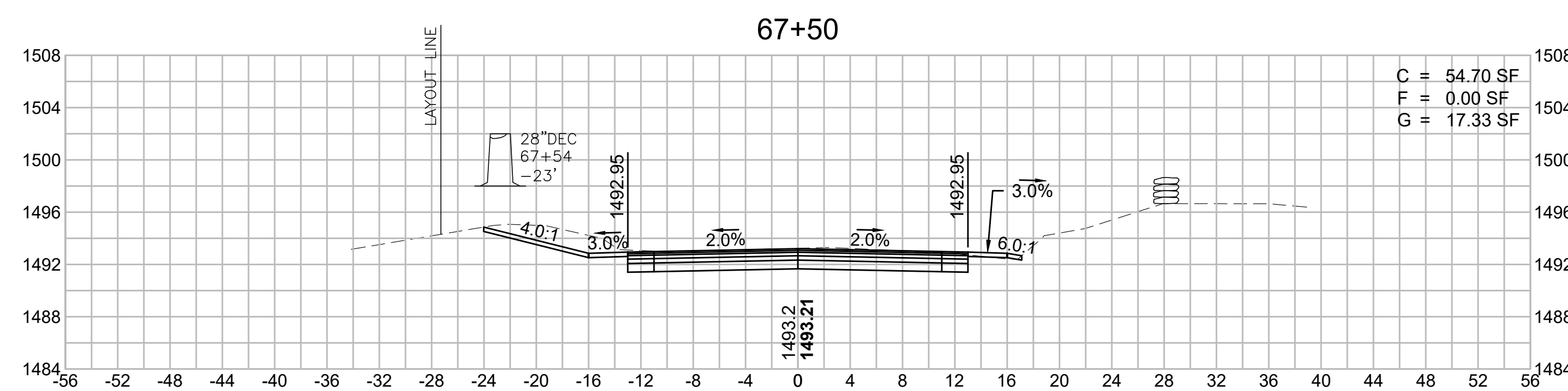
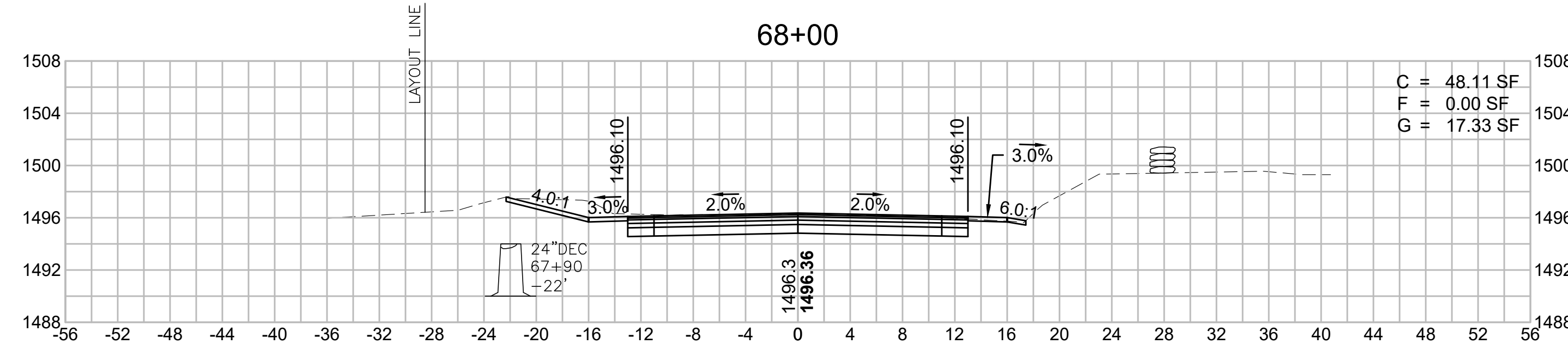
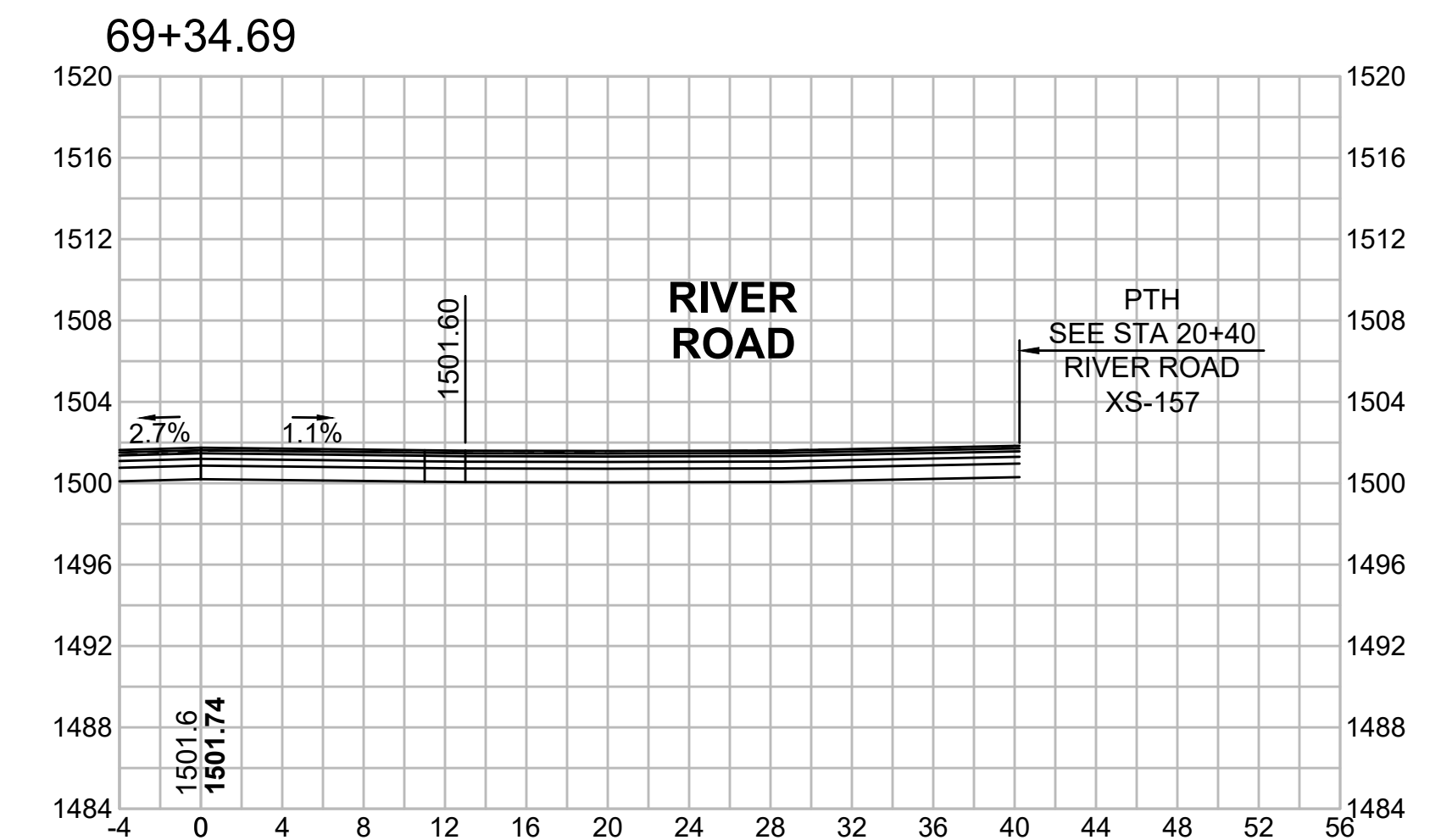
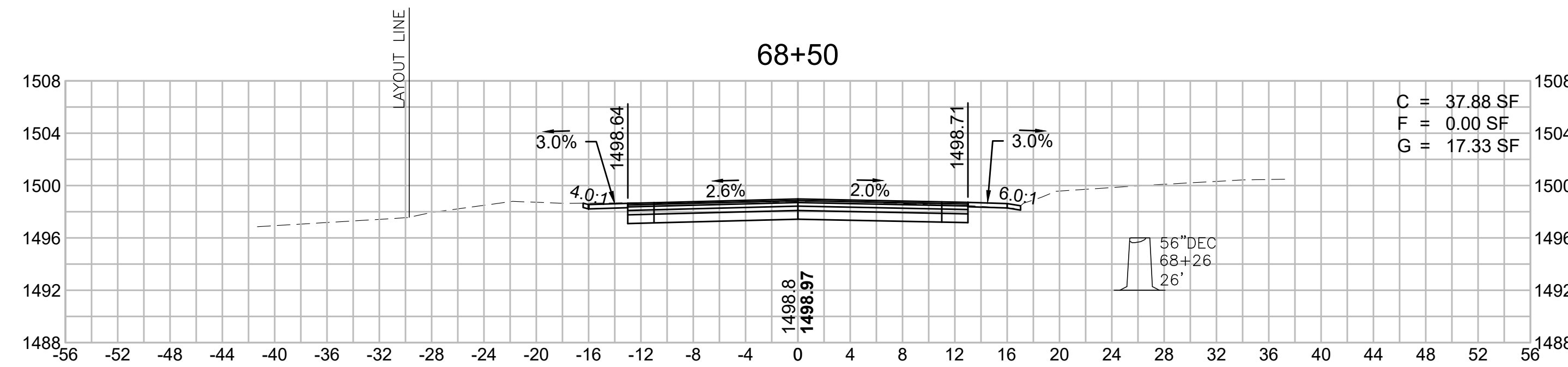
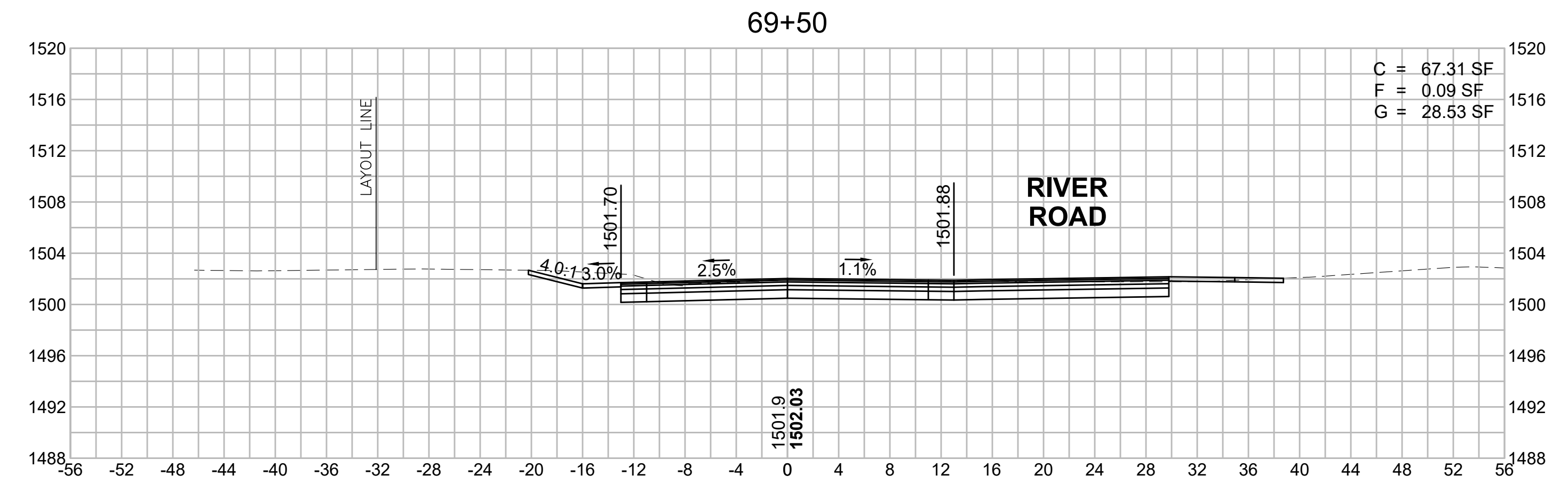
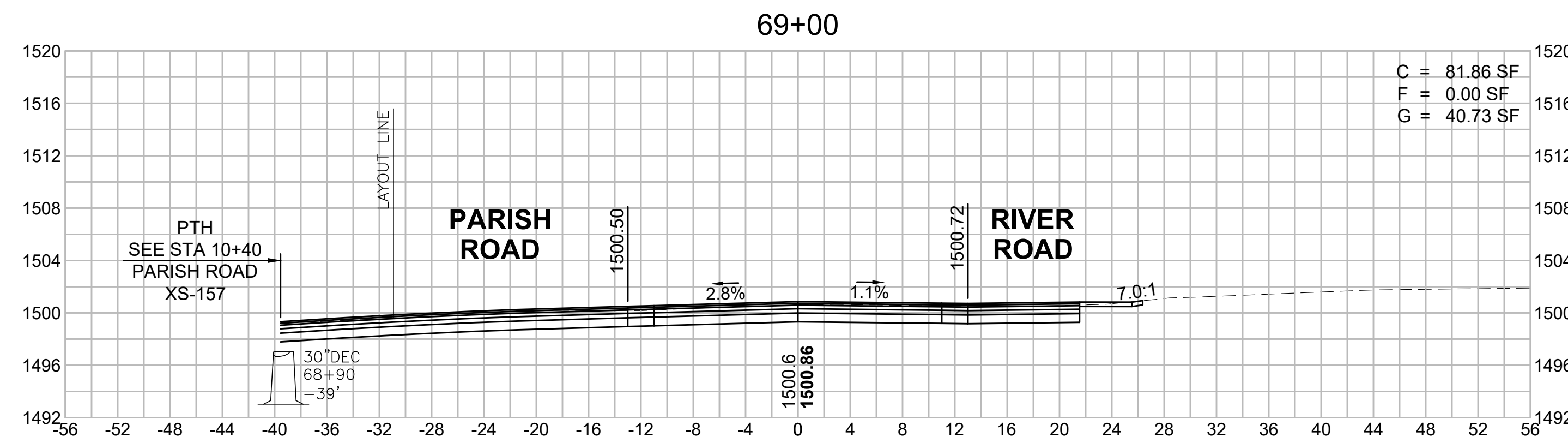
**OLD NORTH ROAD
CROSS SECTIONS - 25**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	129	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 26**

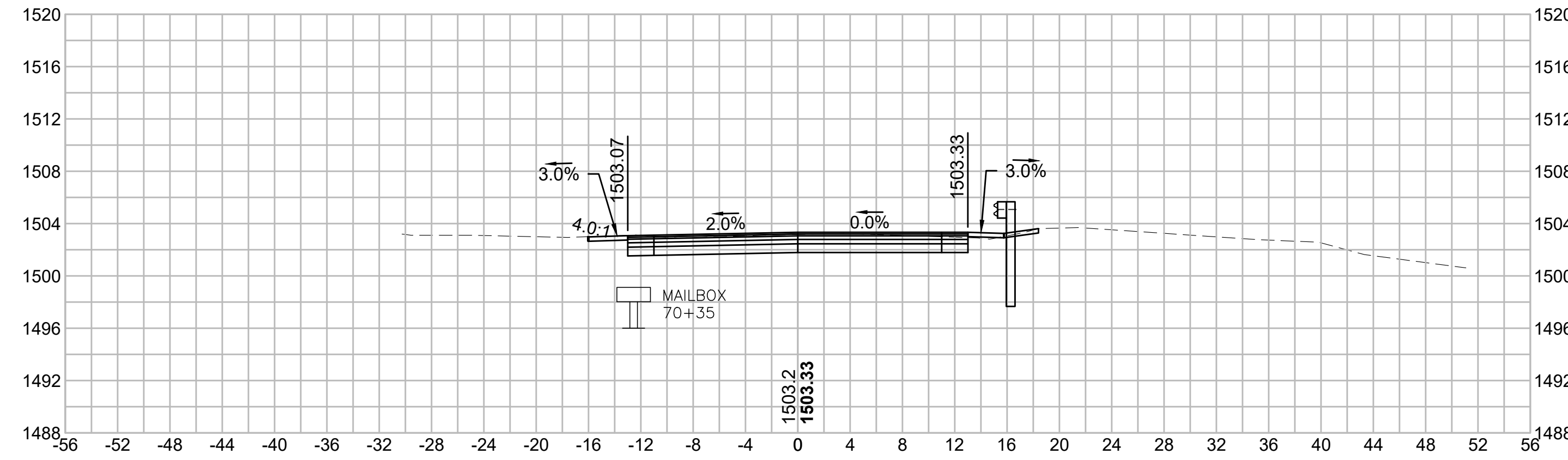


**WORTHINGTON
ROUTE 143**

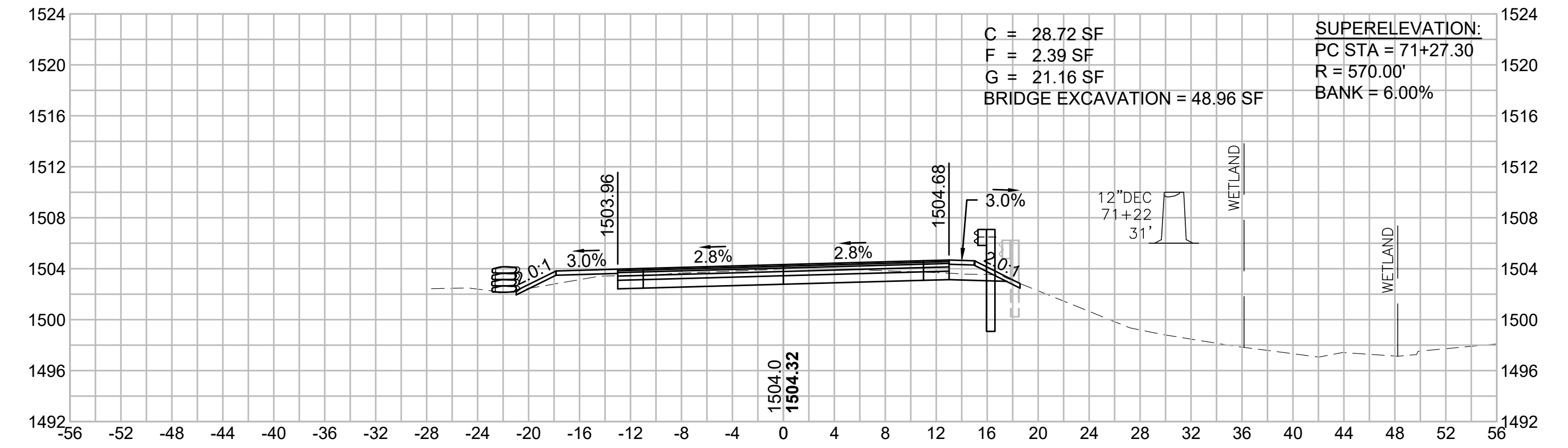
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	130	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 27**

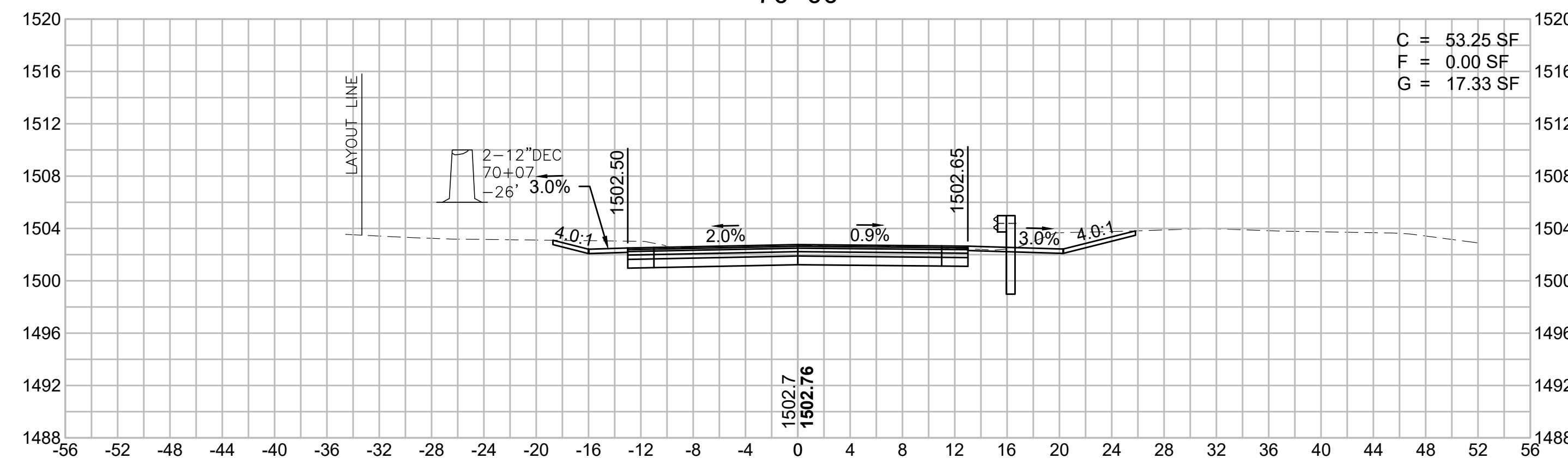
**LEVEL CROWN
70+38.63**



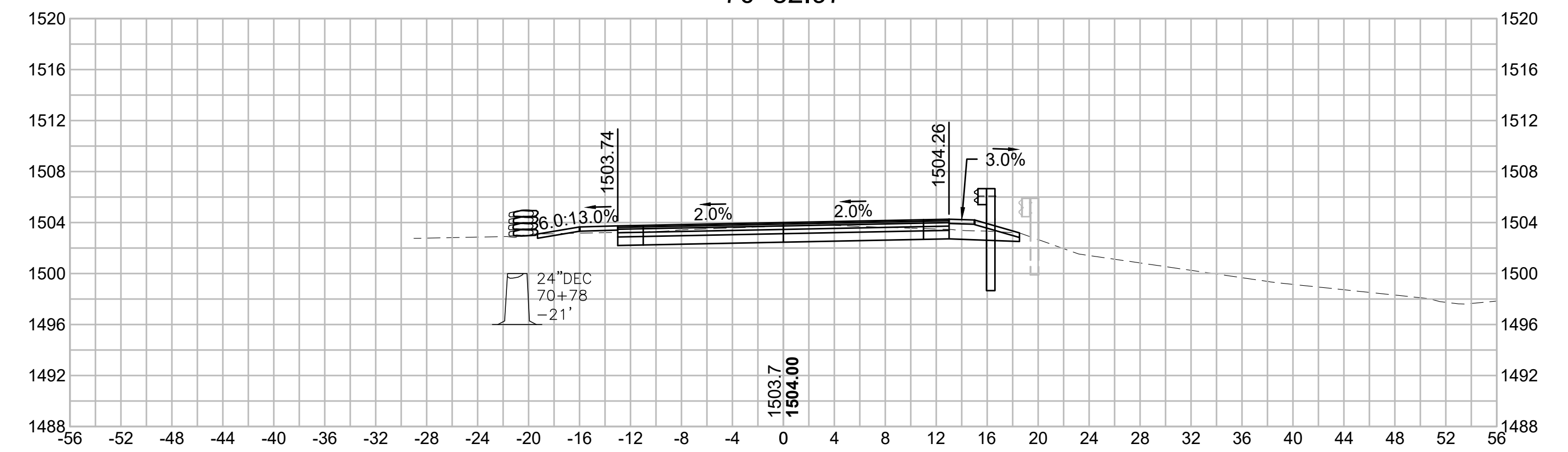
71+00



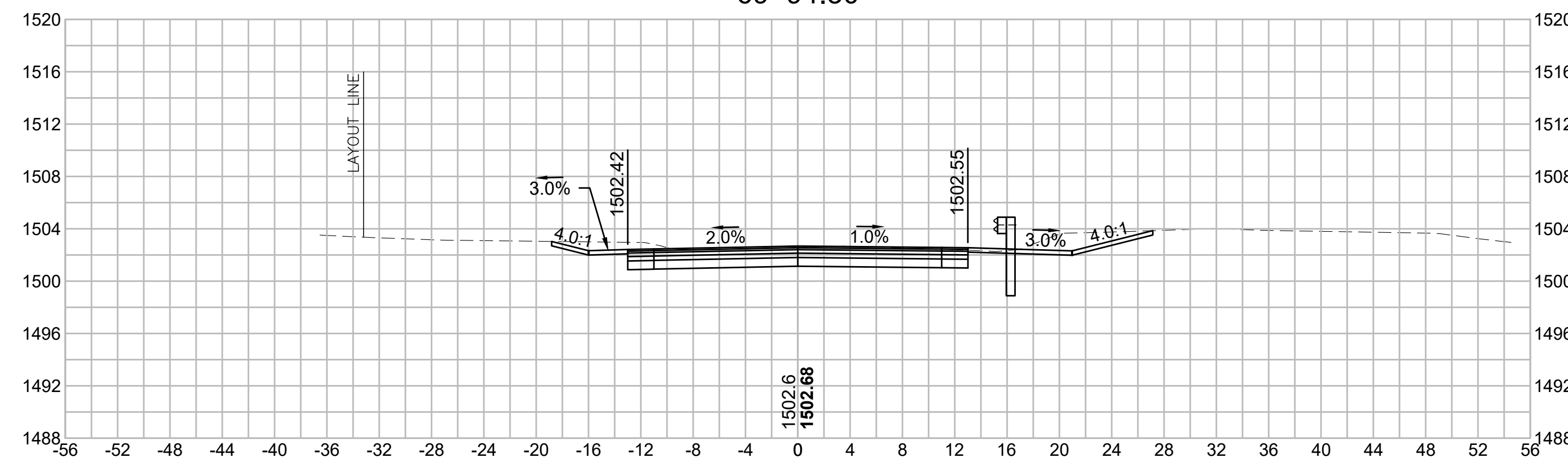
70+00



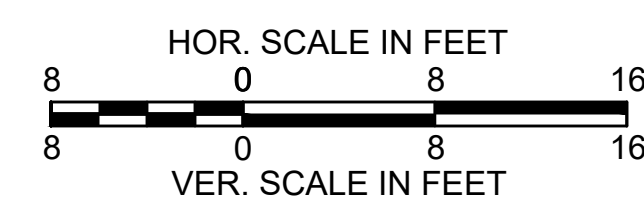
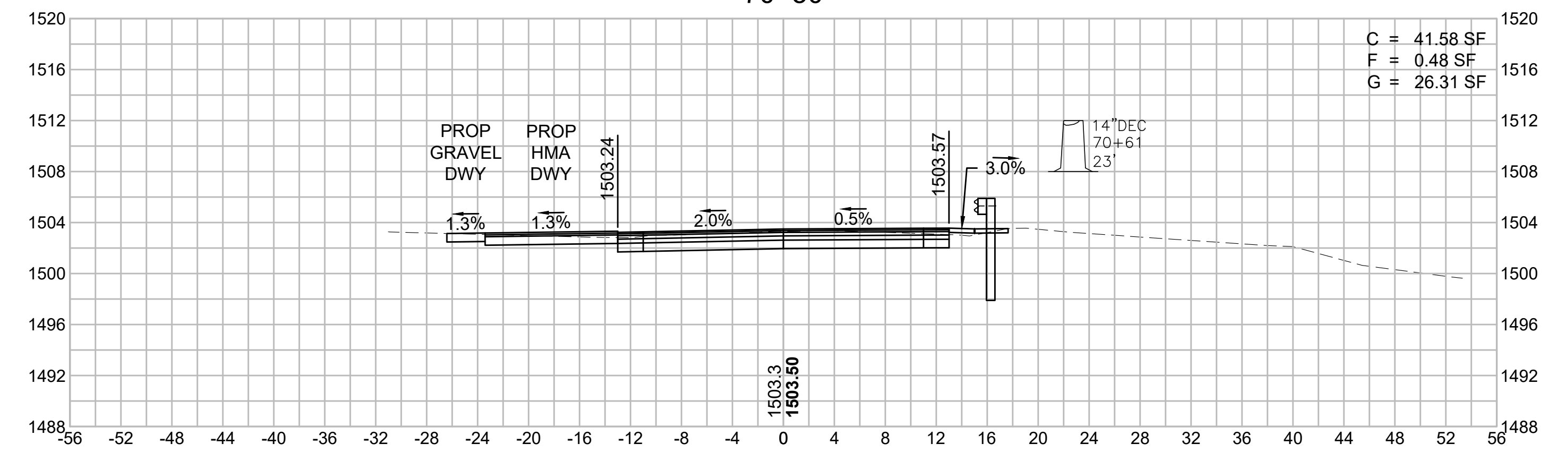
**REVERSE CROWN
70+82.97**



**END NORMAL CROWN
69+94.30**



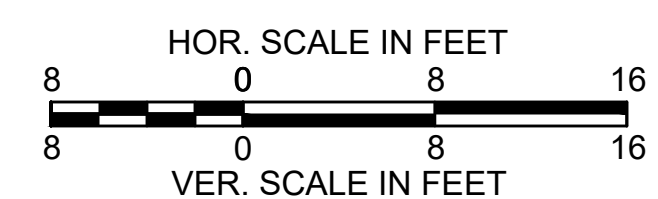
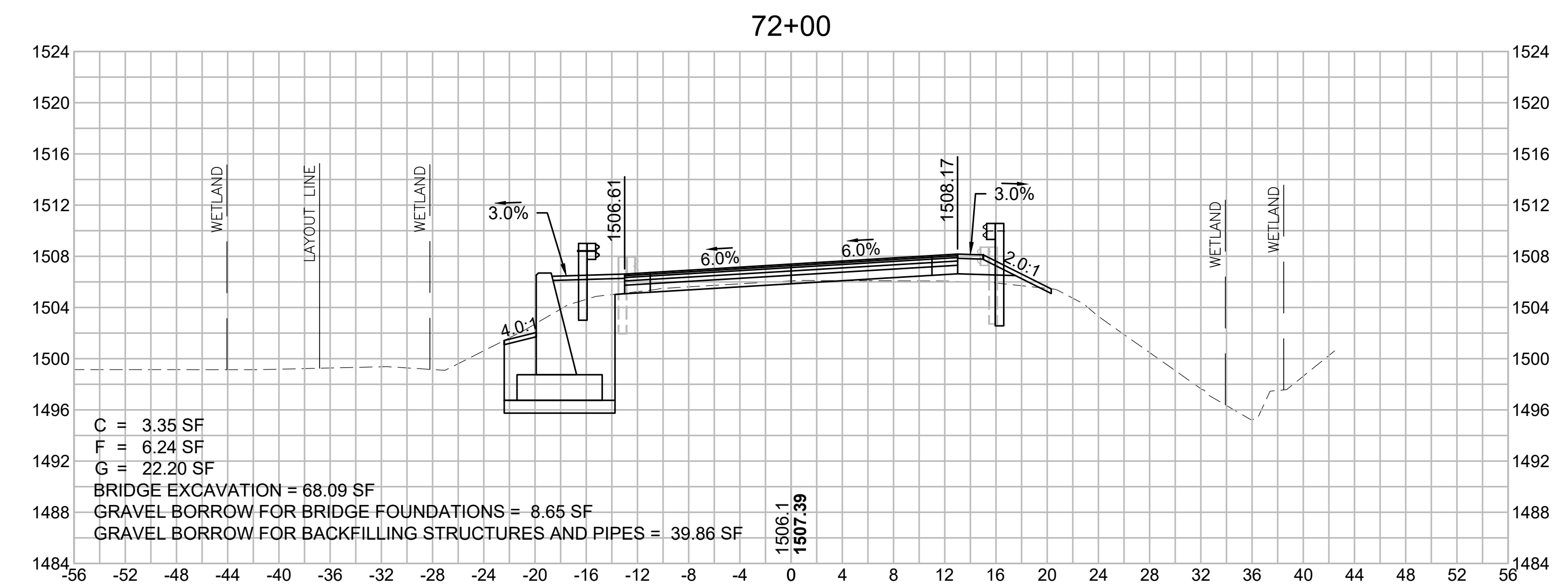
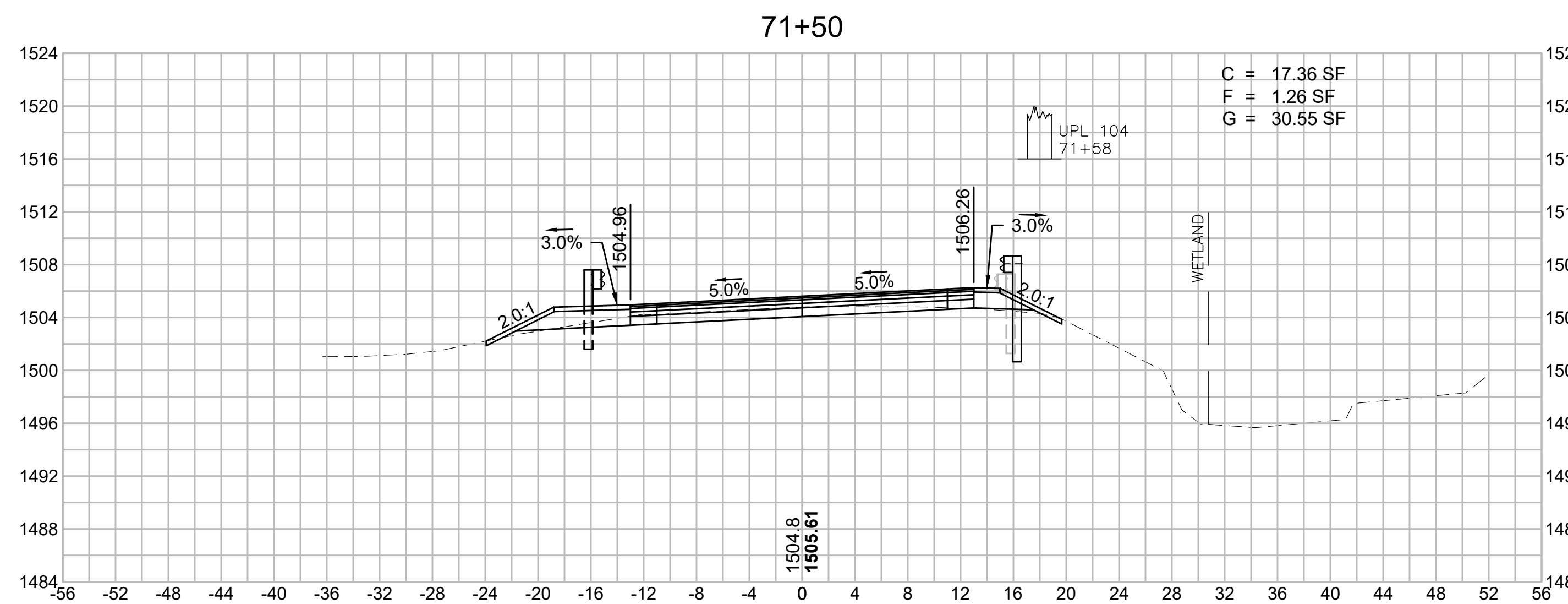
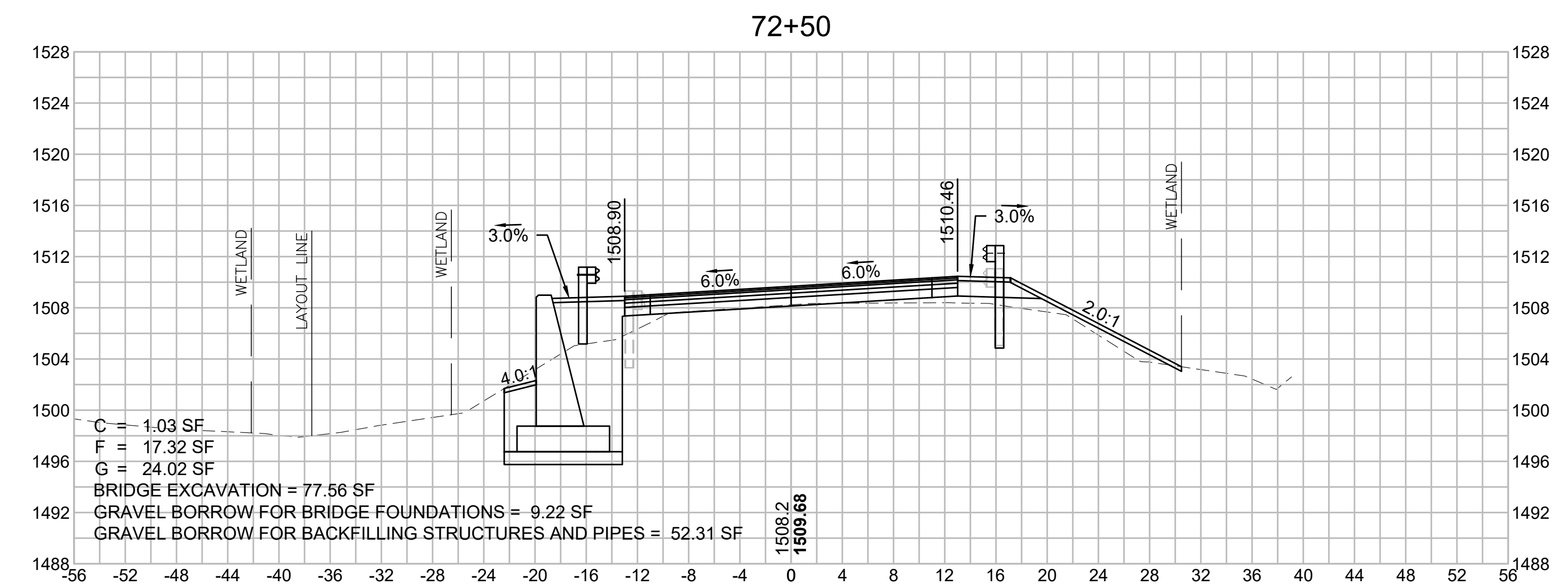
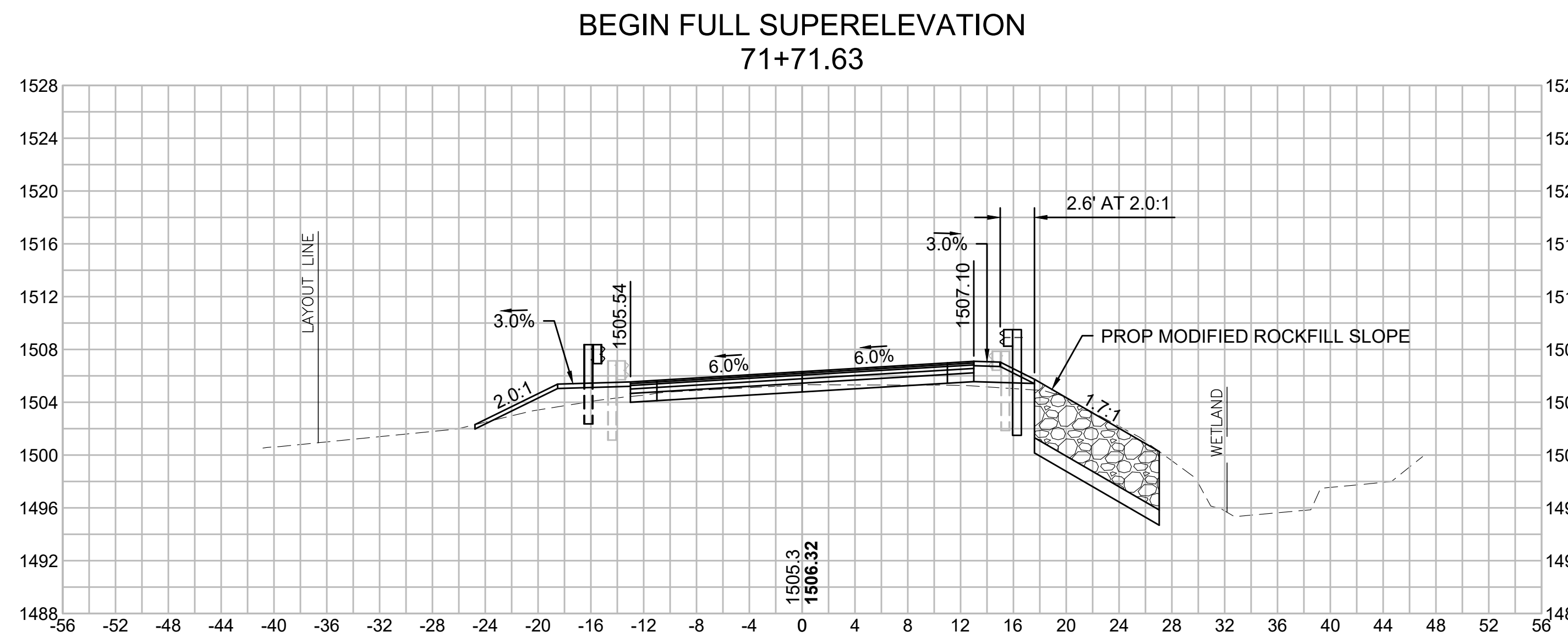
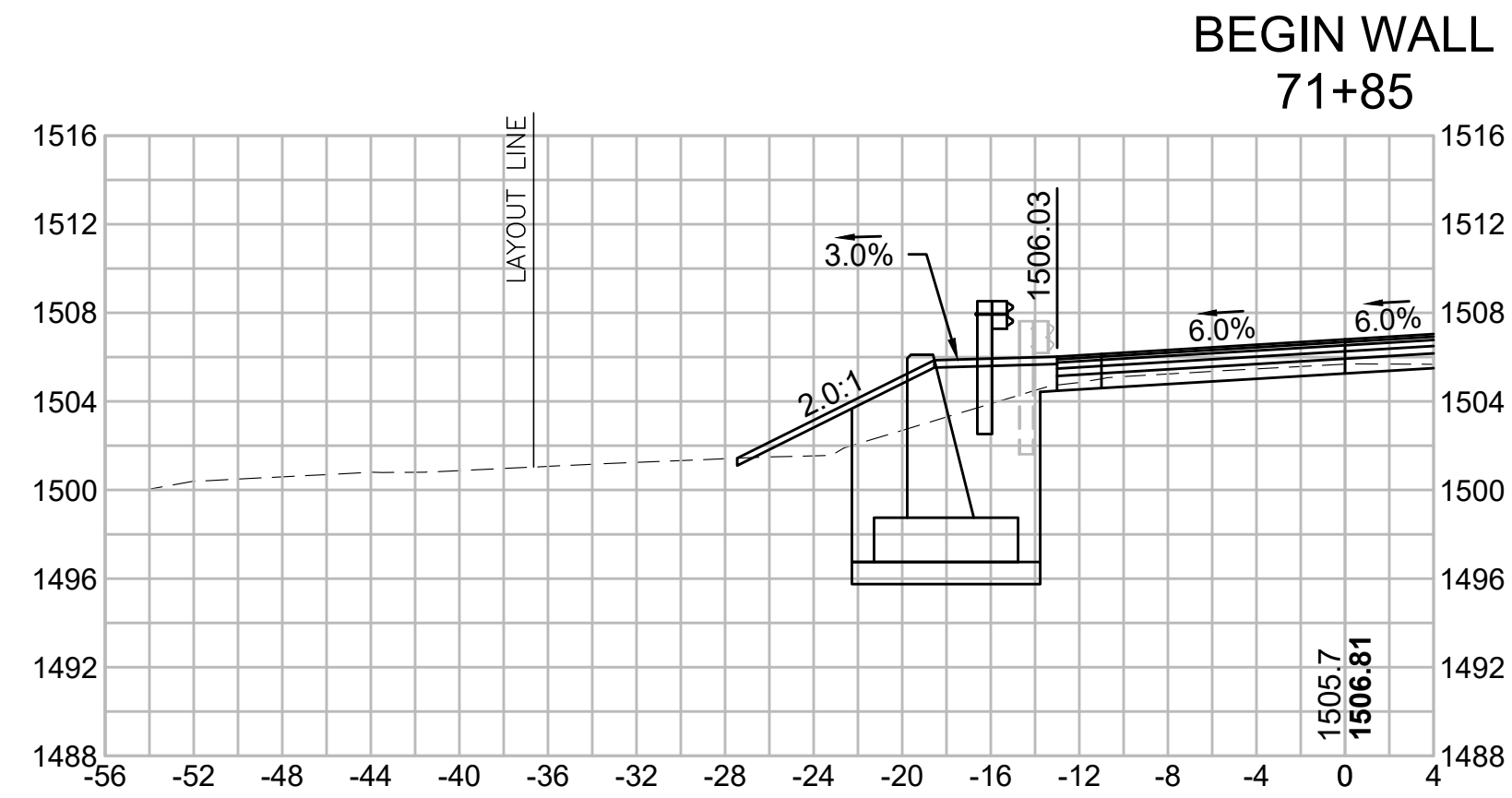
70+50



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	131	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 28**

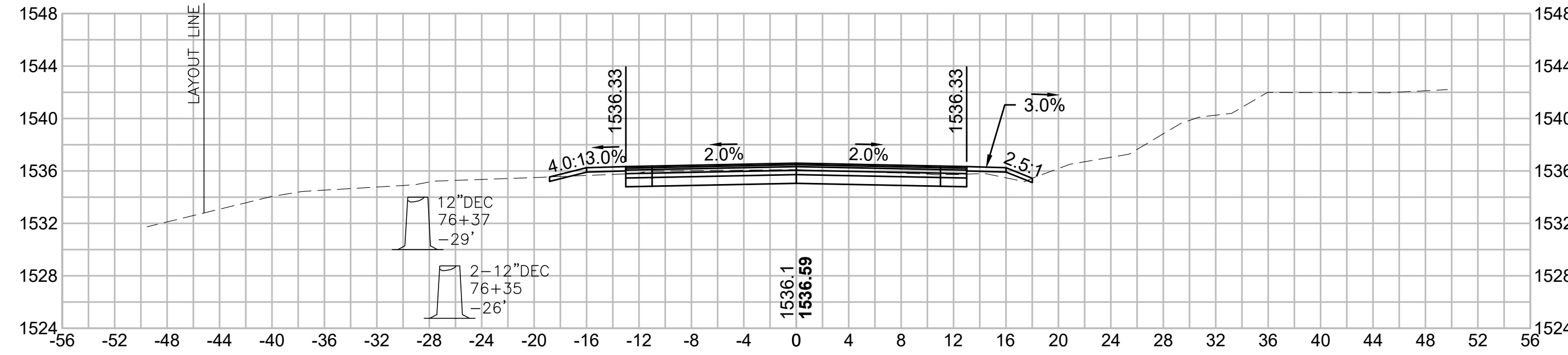


**WORTHINGTON
ROUTE 143**

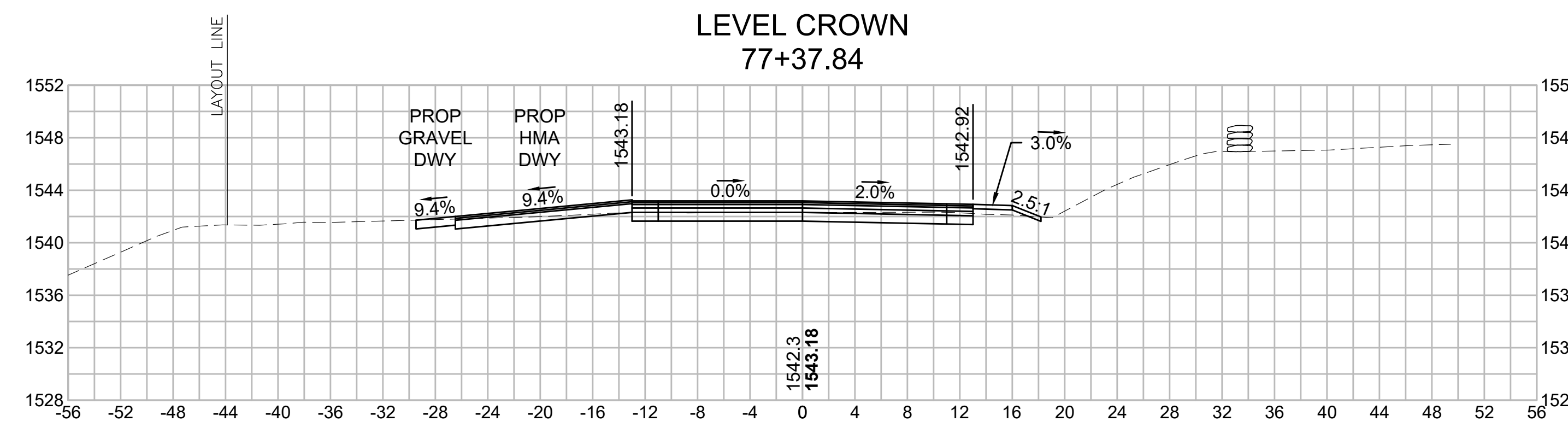
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	133	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 30**

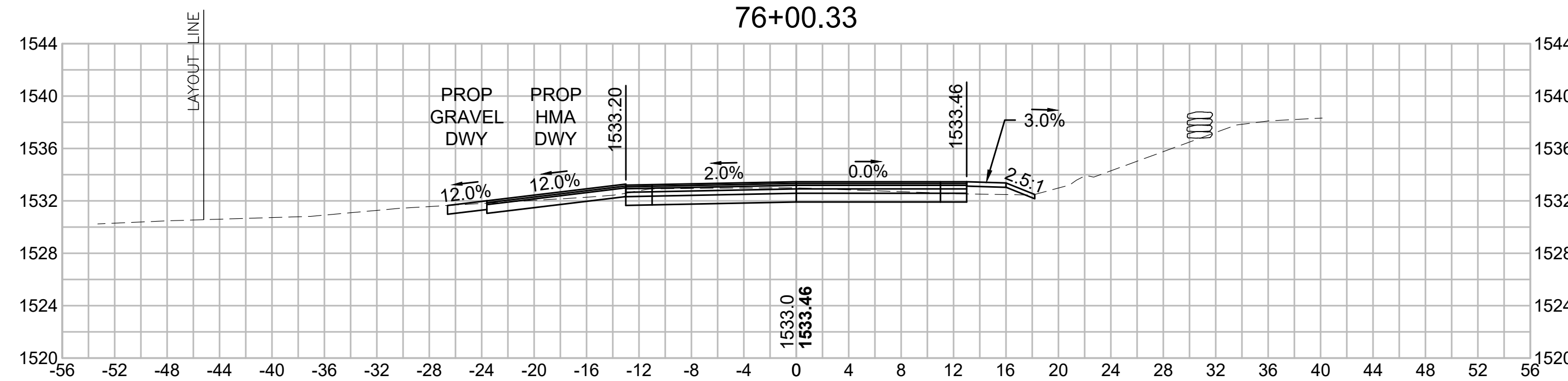
**BEGIN NORMAL CROWN
76+44.66**



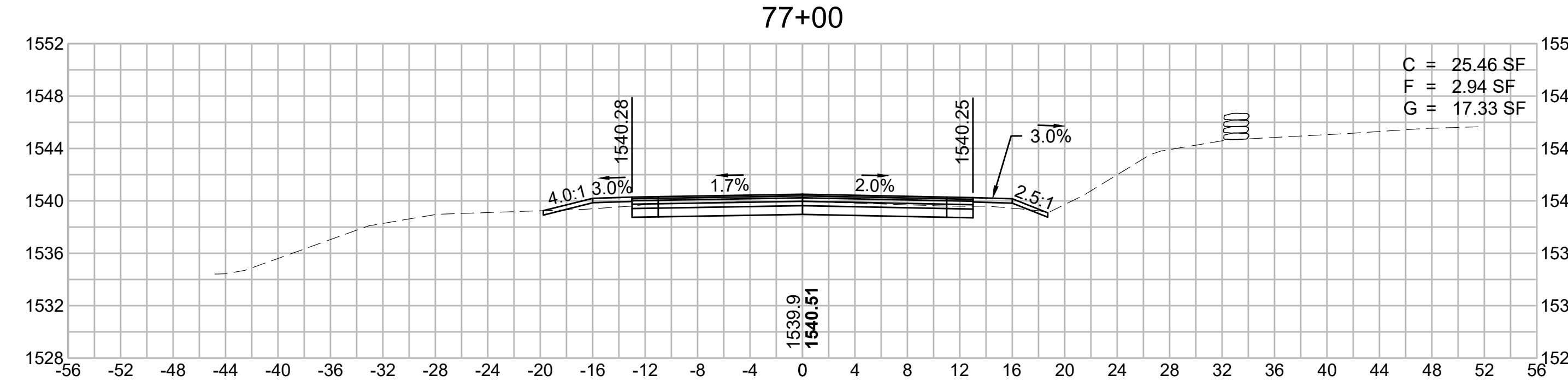
**LEVEL CROWN
77+37.84**



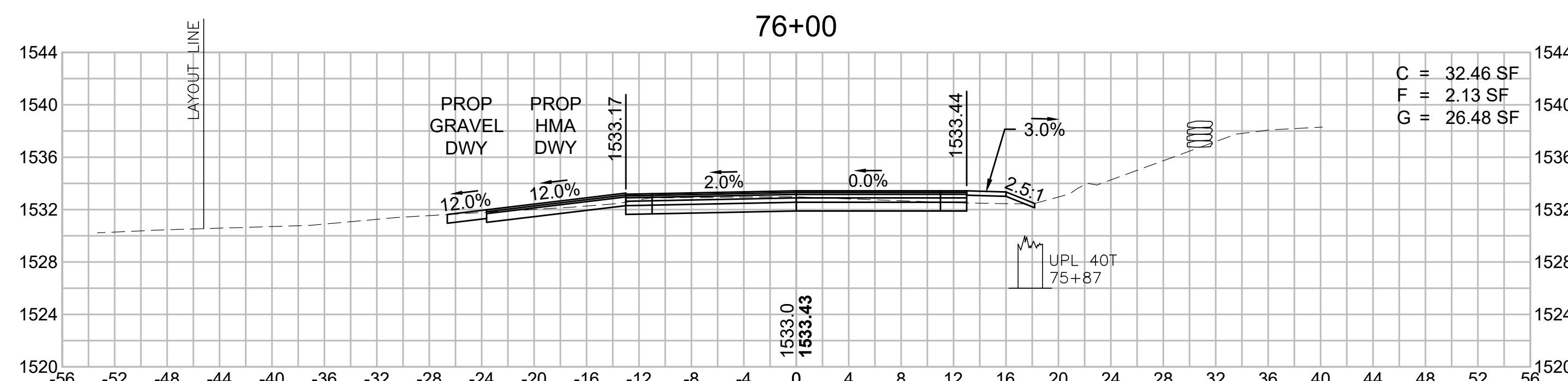
**LEVEL CROWN
76+00.33**



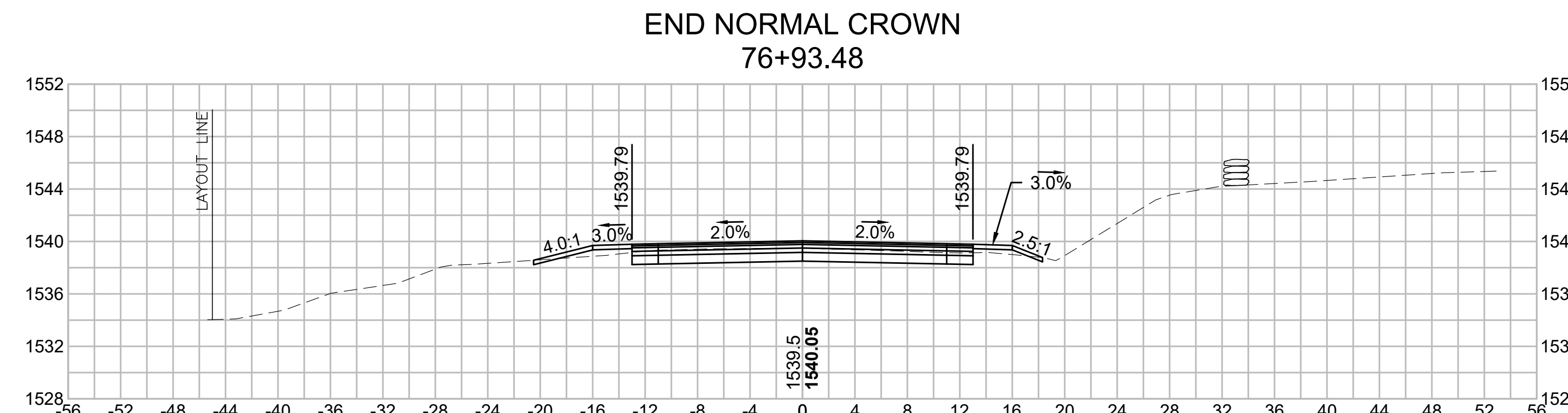
77+00



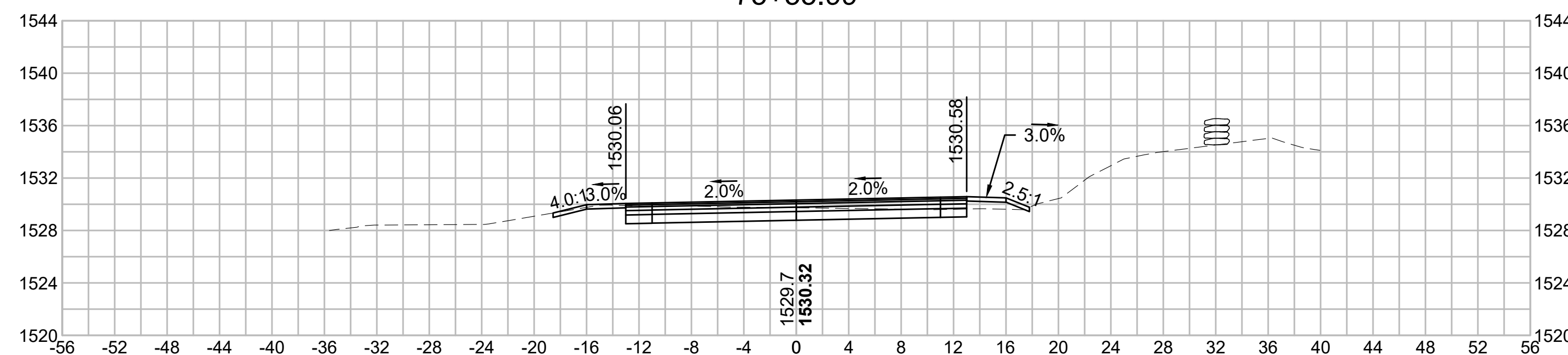
76+00



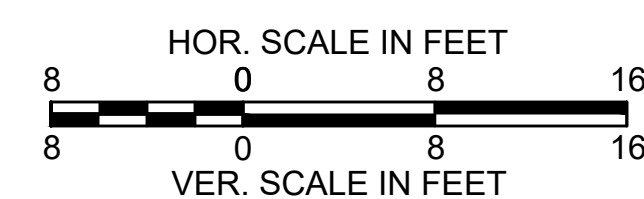
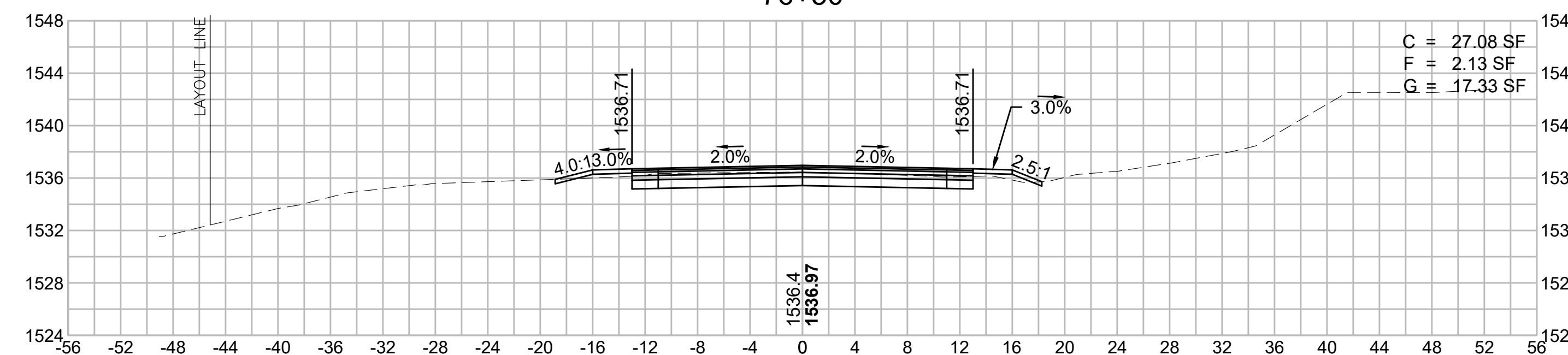
**END NORMAL CROWN
76+93.48**



**REVERSE CROWN
75+55.99**



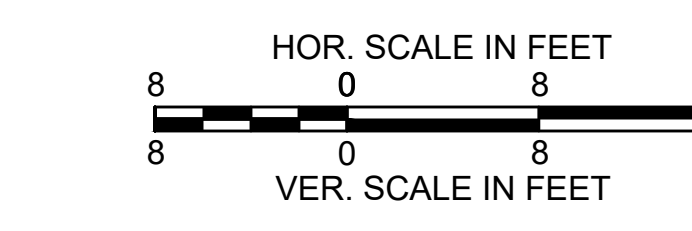
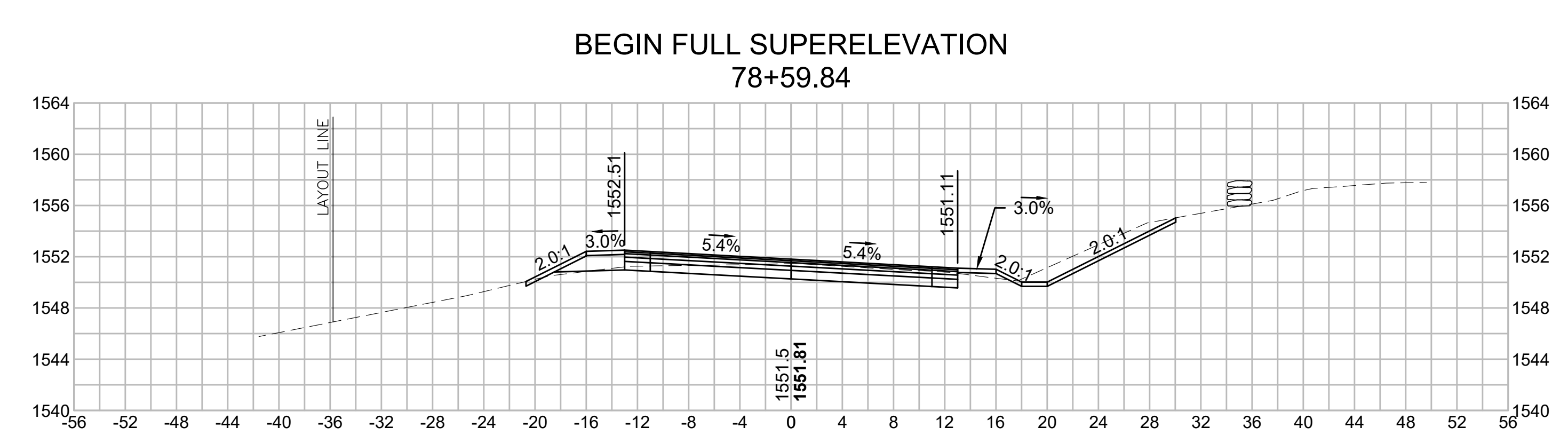
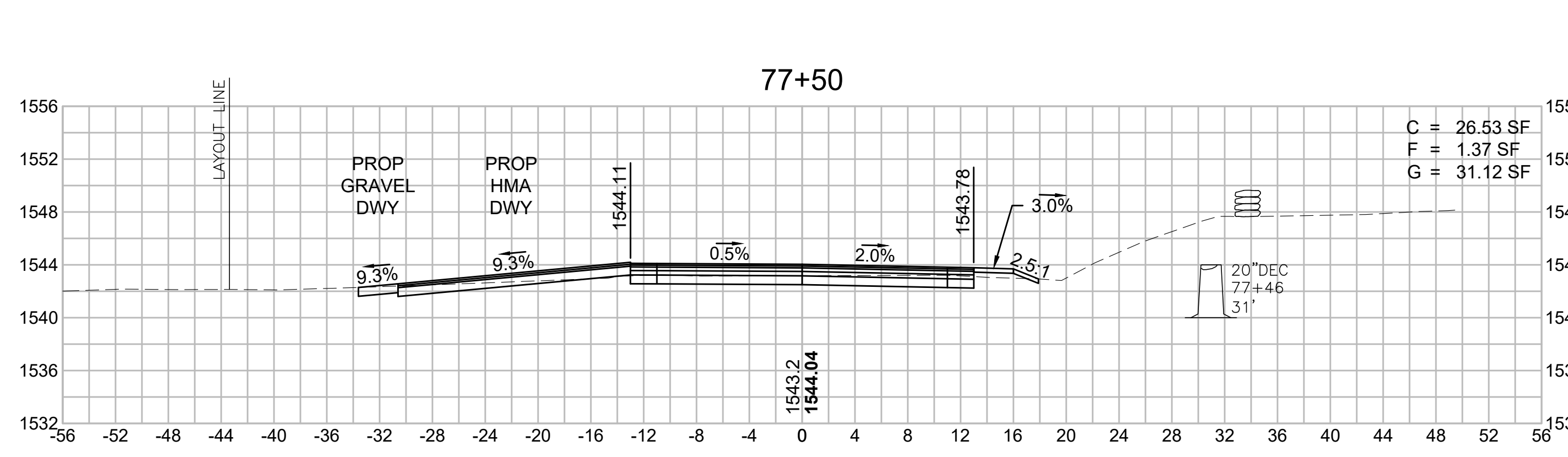
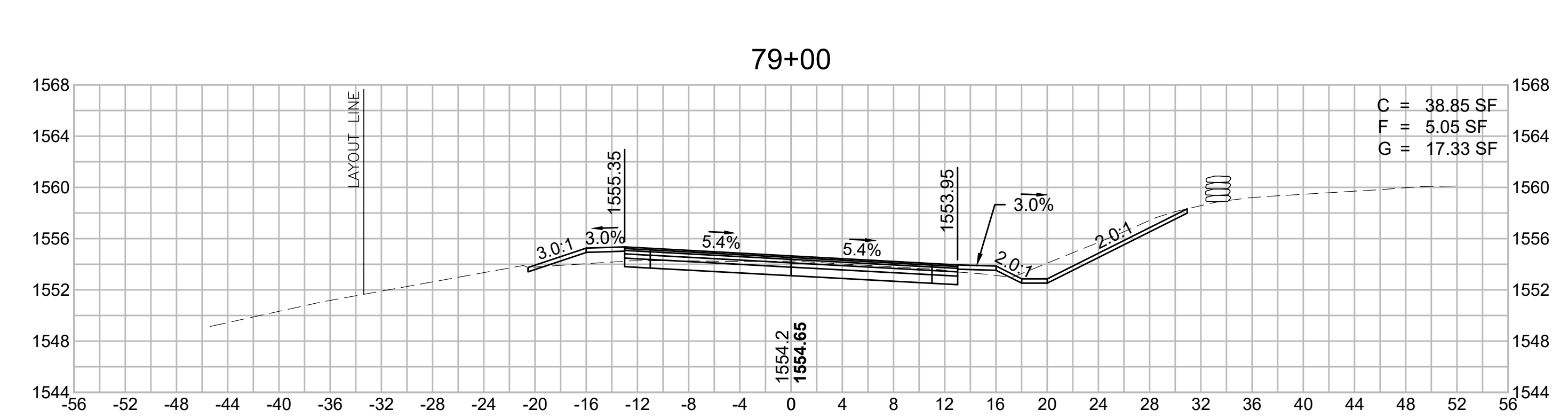
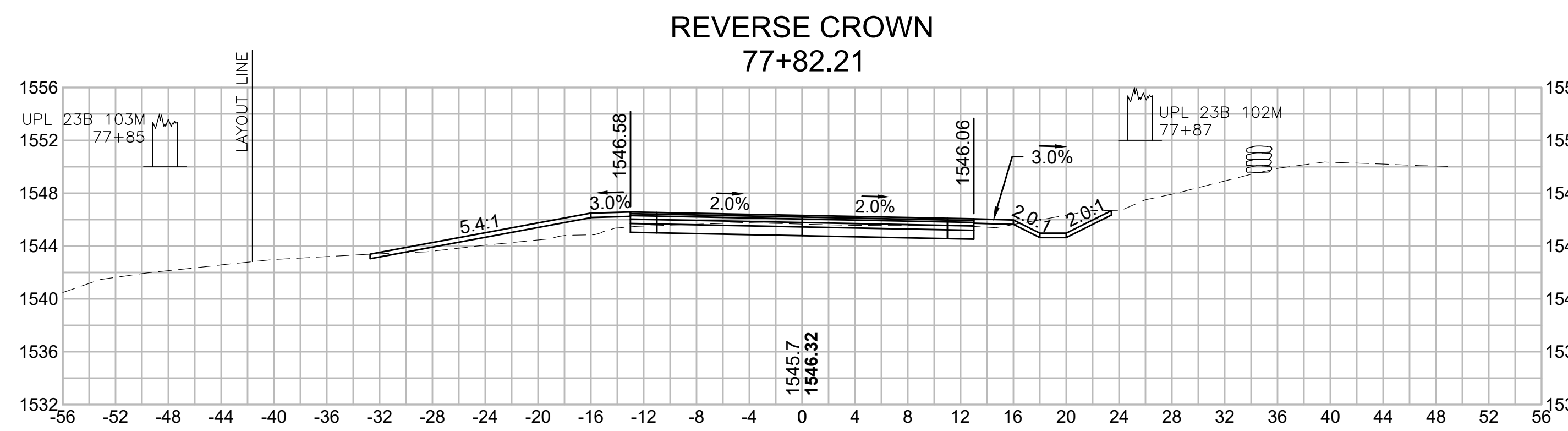
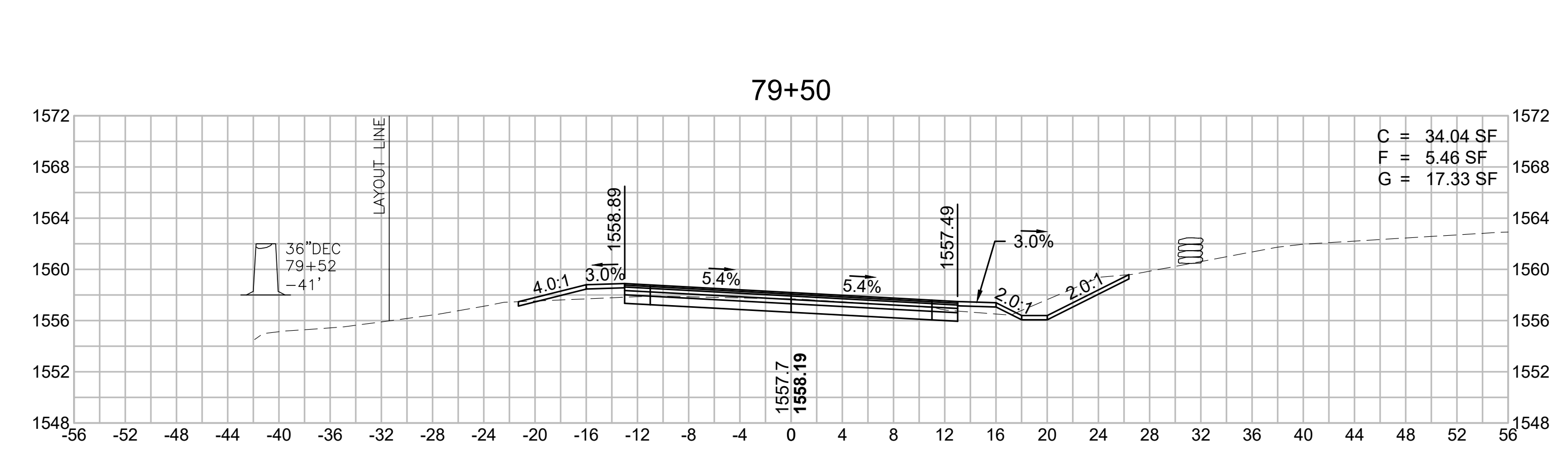
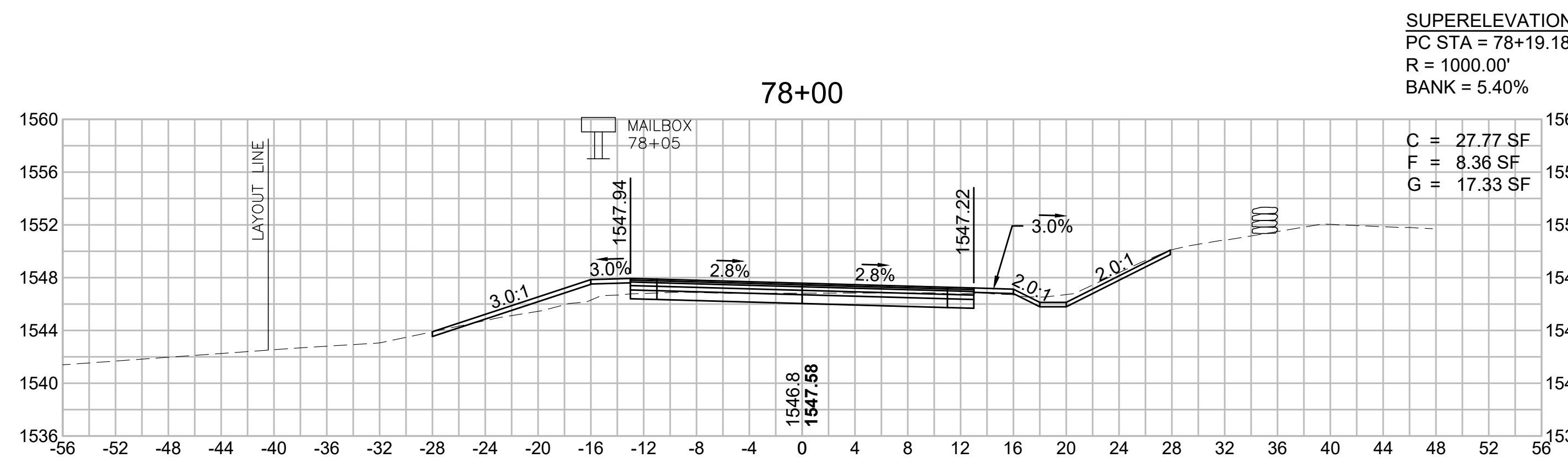
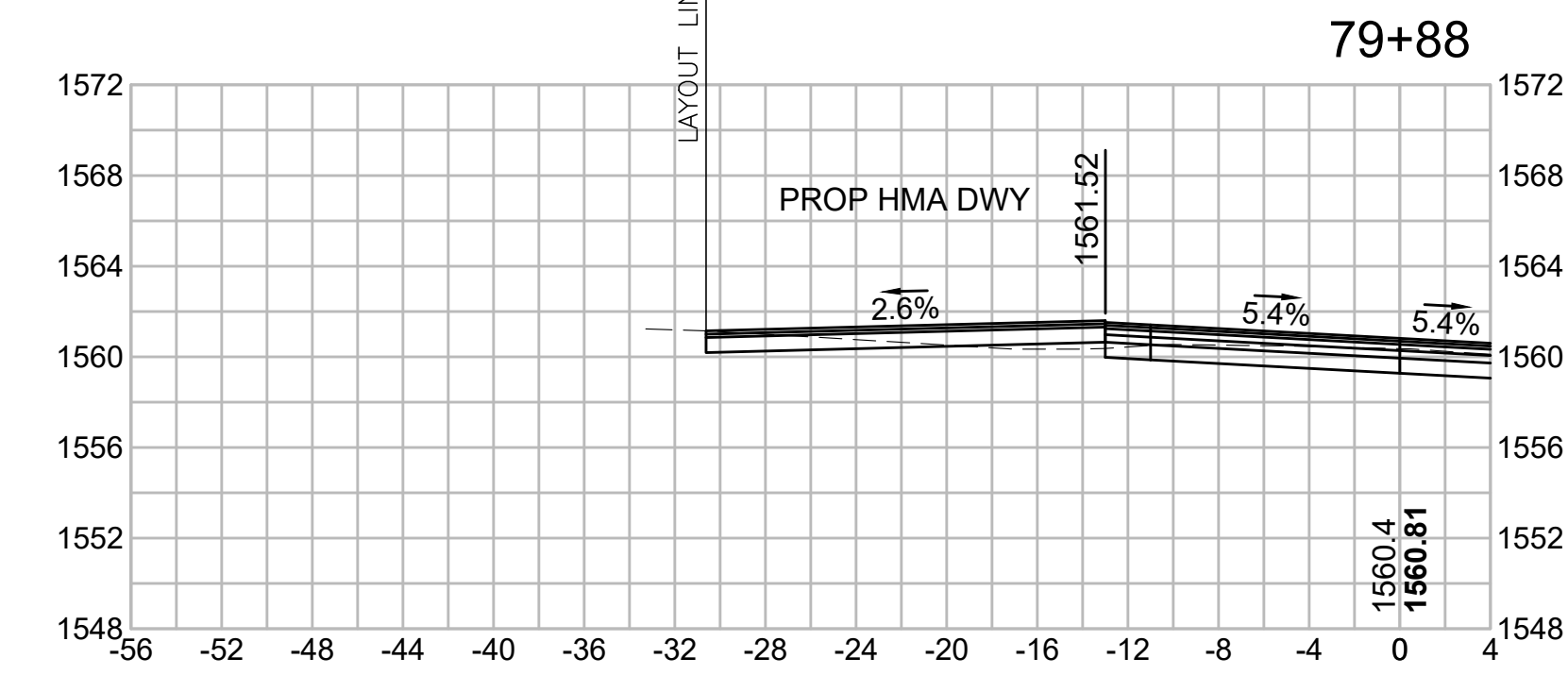
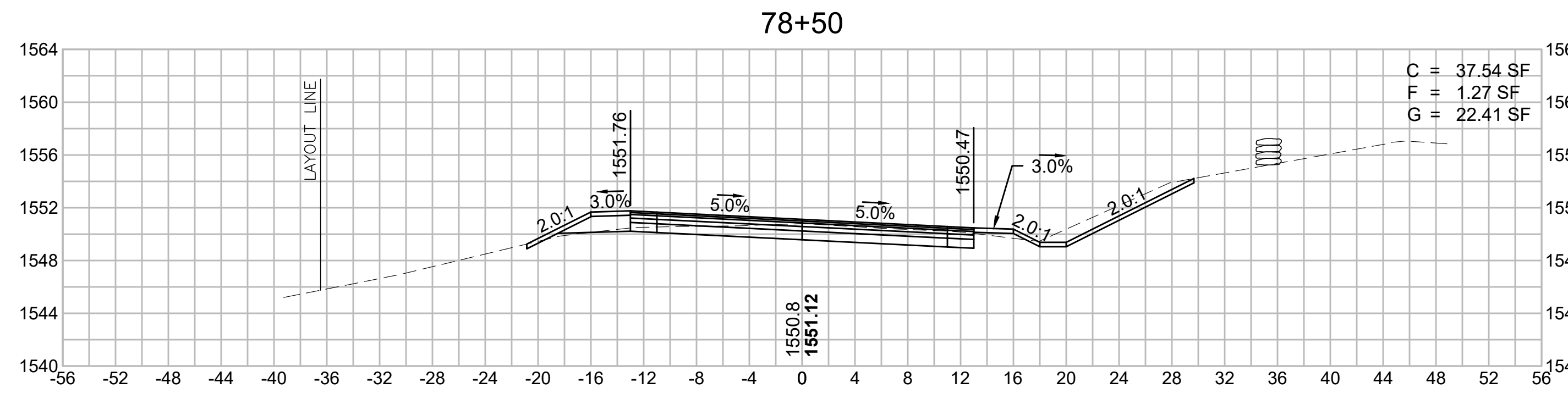
76+50



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	134	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 31**

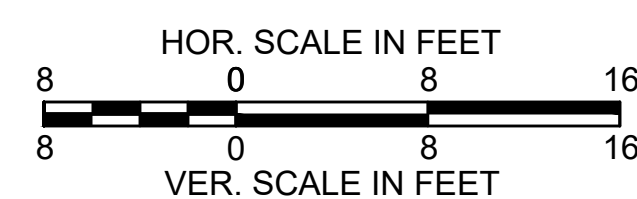
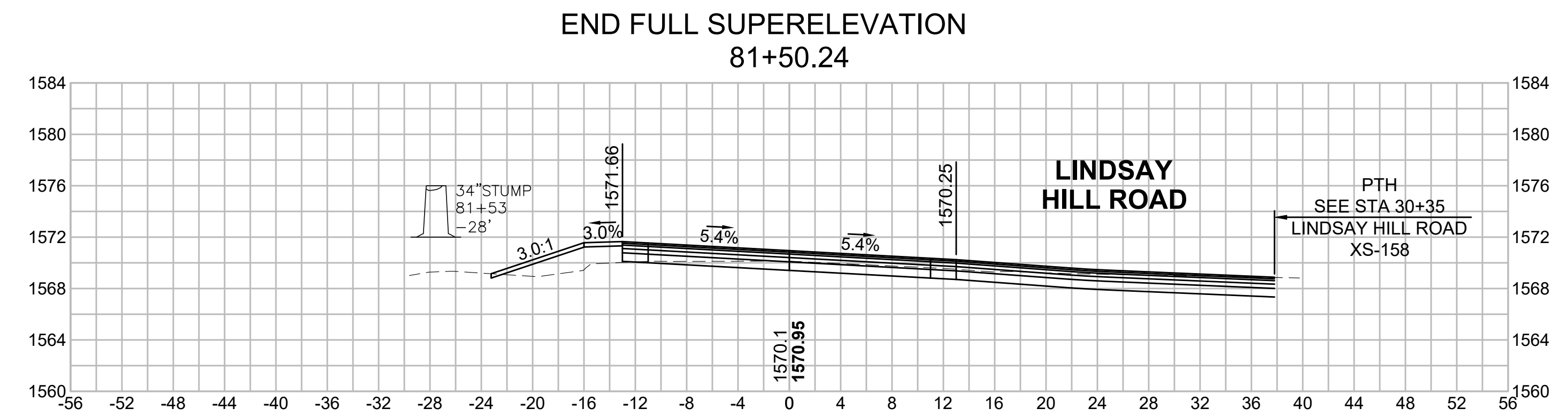
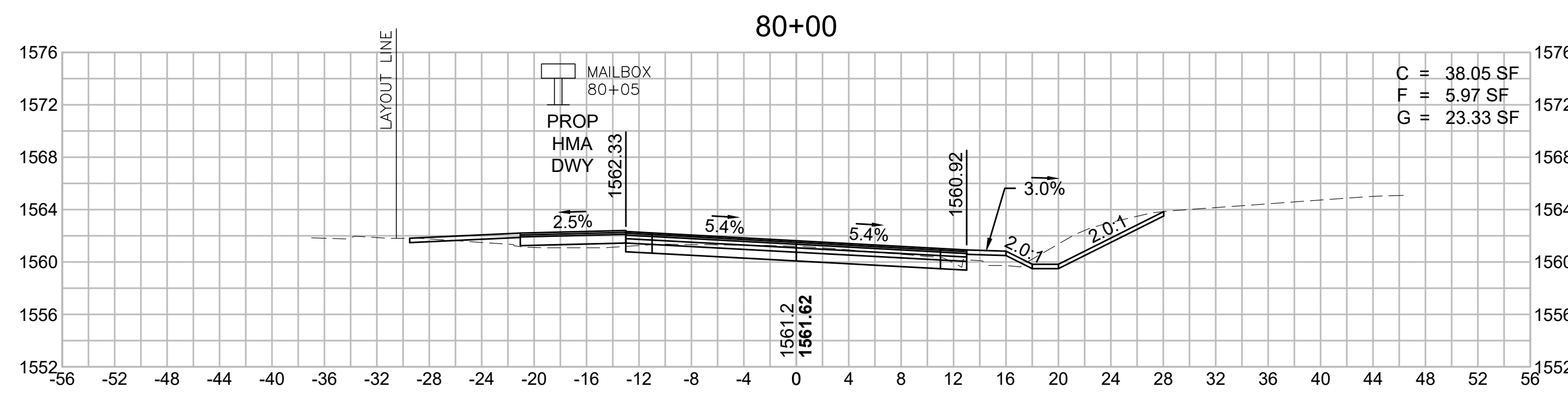
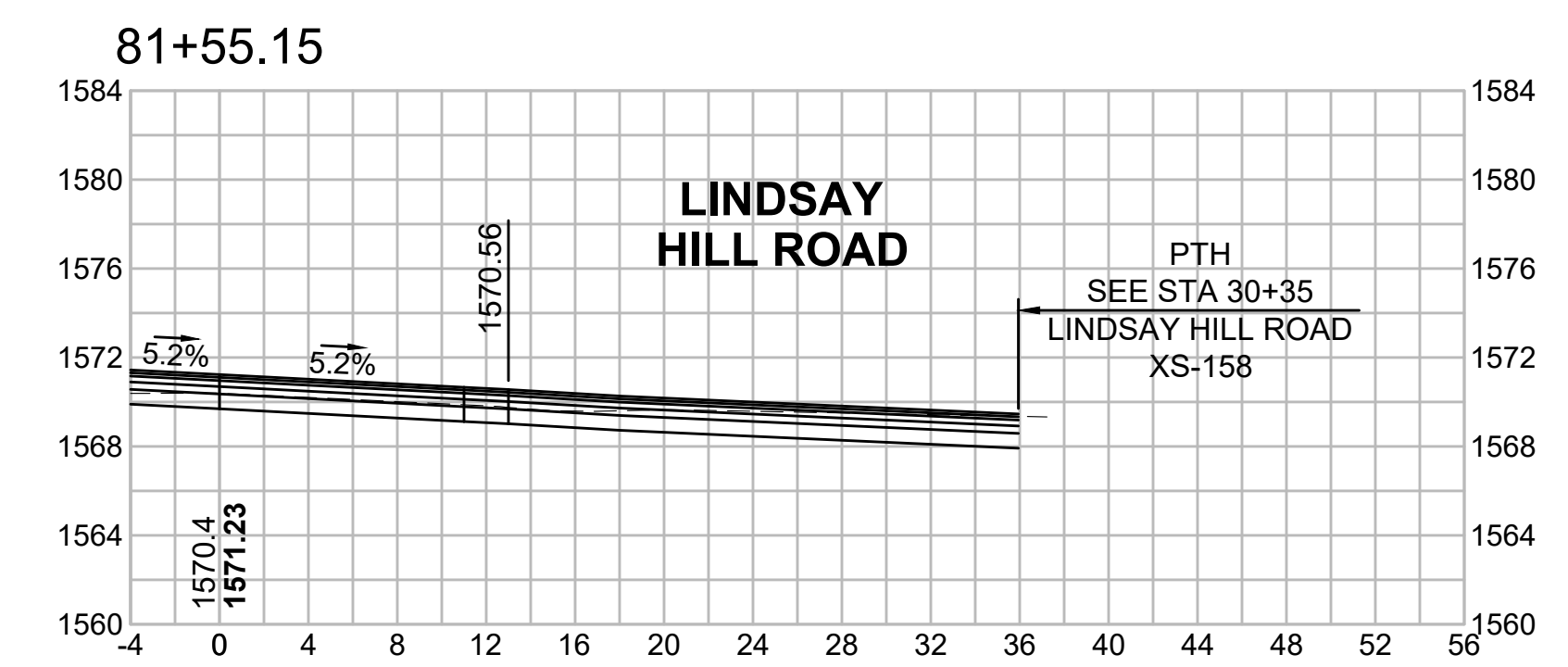
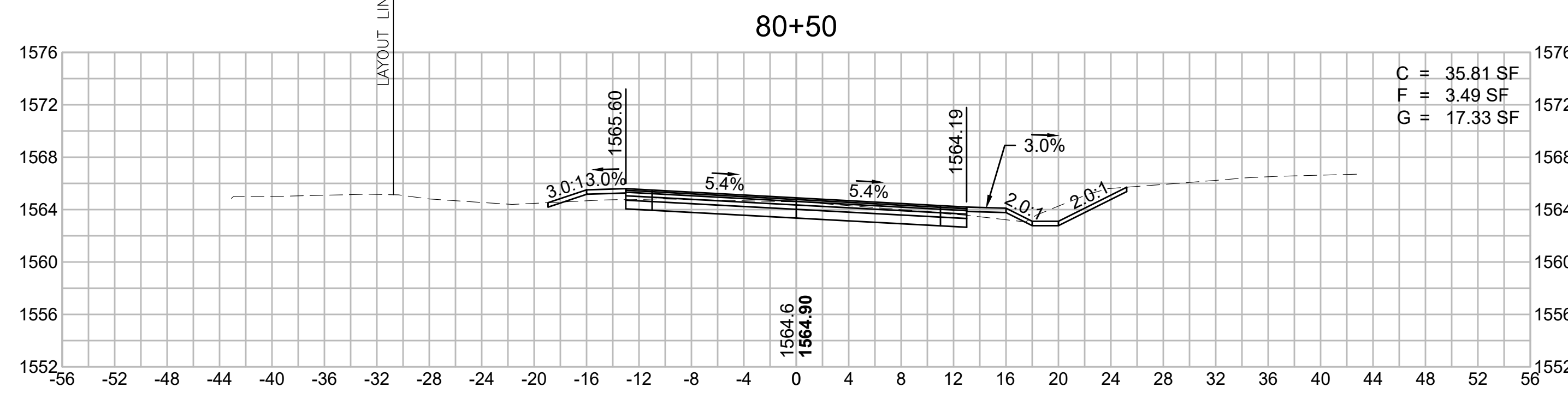
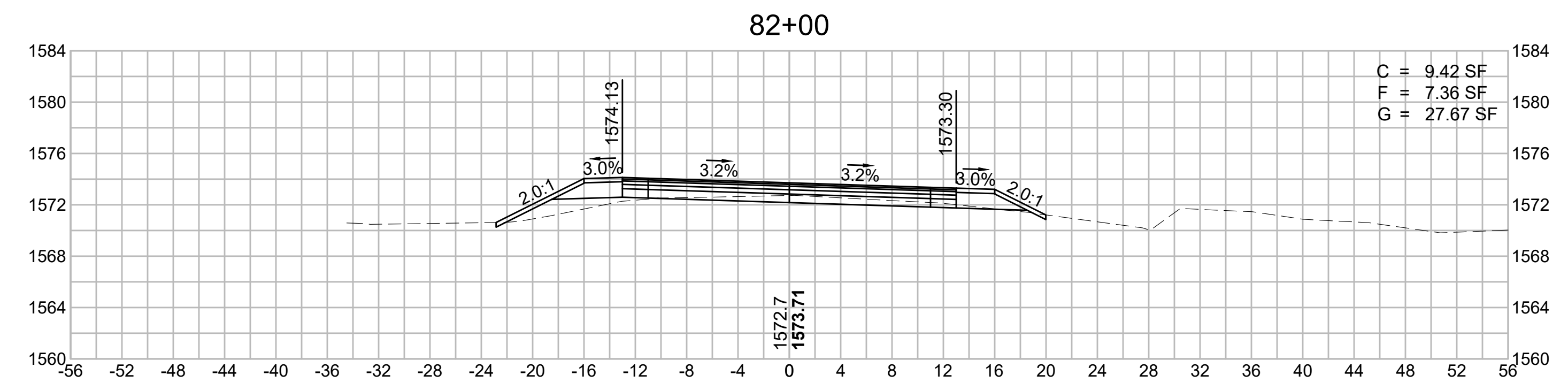
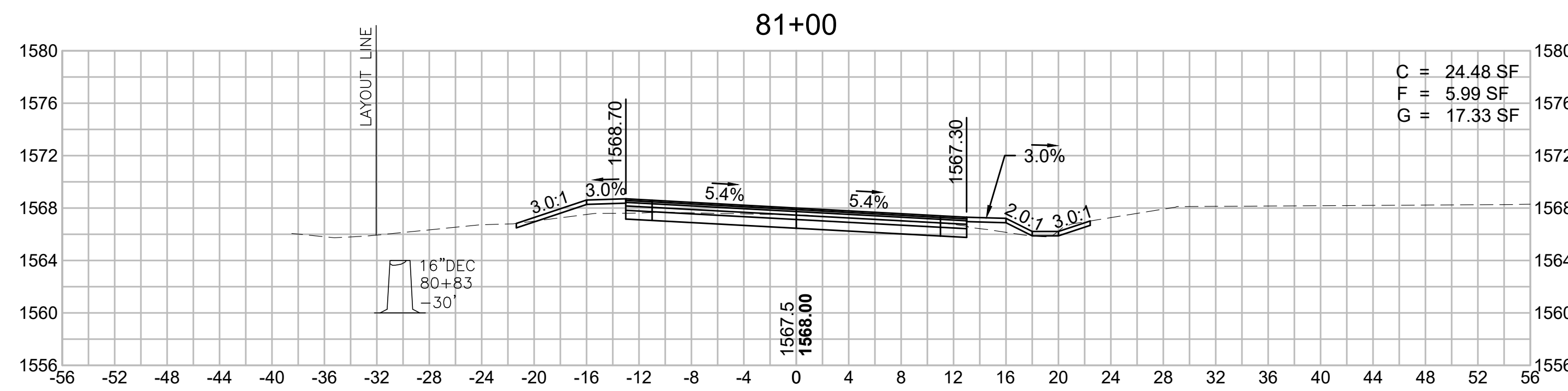
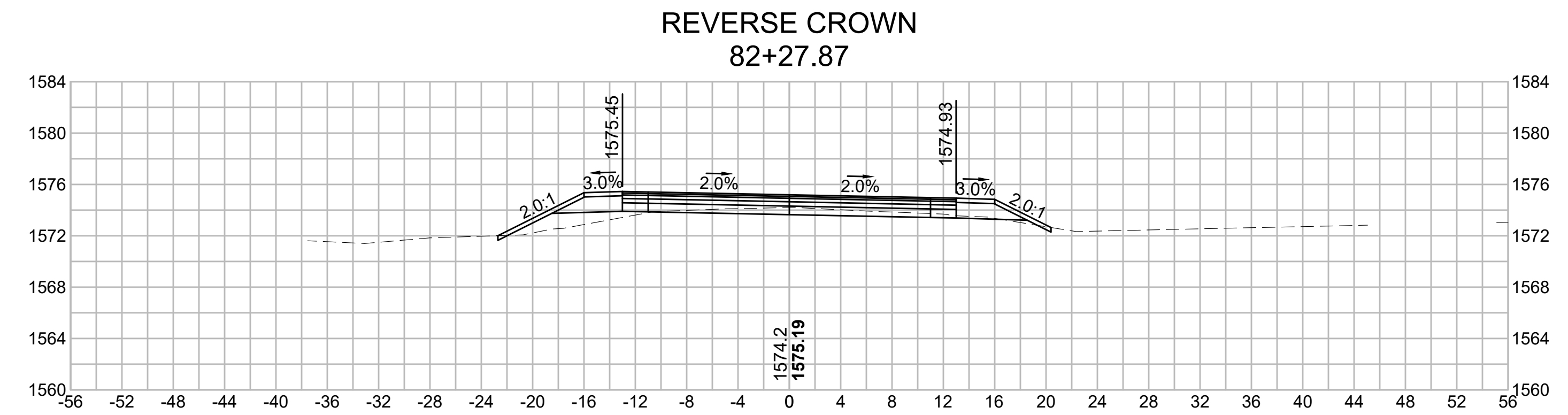
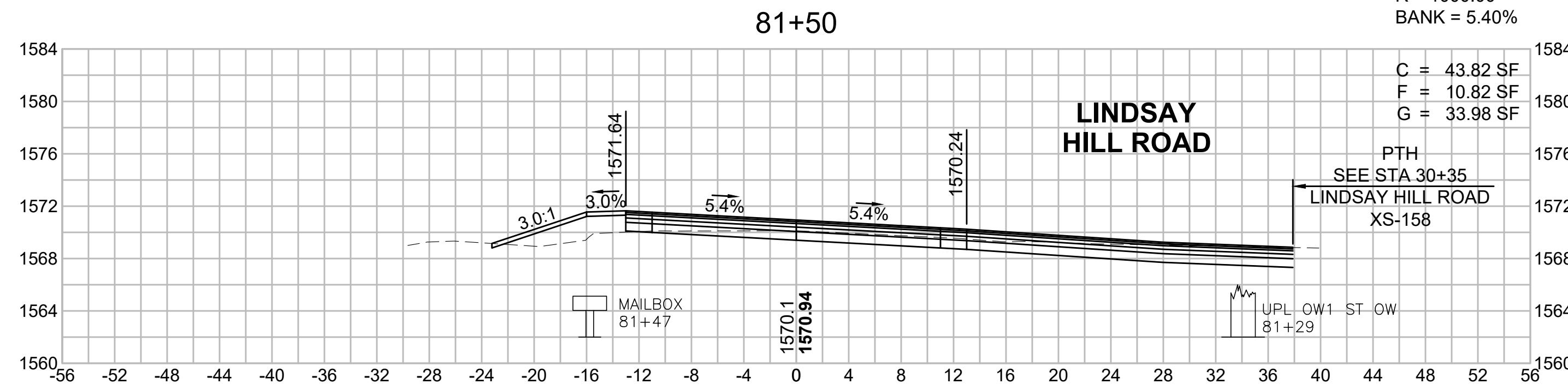


**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	135	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 32**

SUPERELEVATION:
PT STA = 81+90.90
R = 1000.00'
BANK = 5.40%

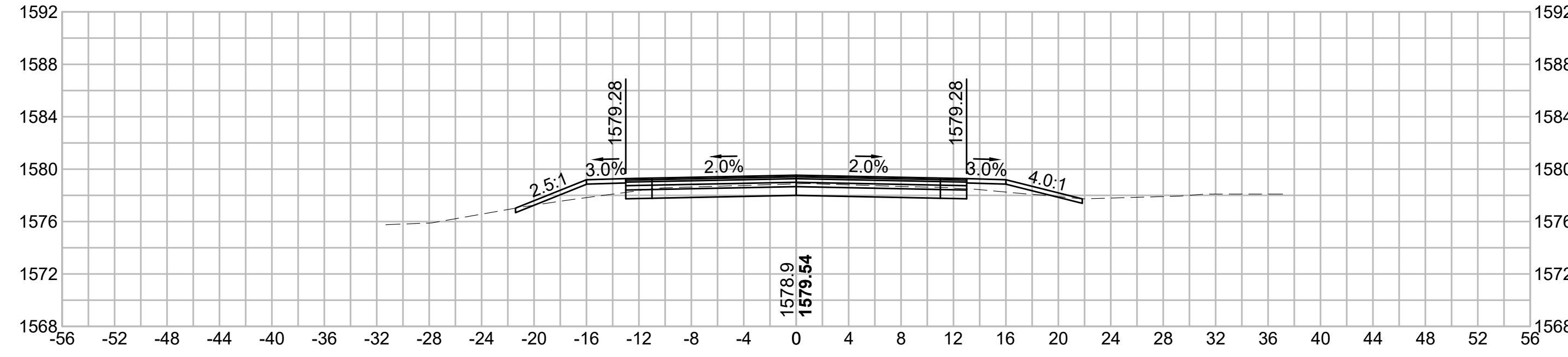


**WORTHINGTON
ROUTE 143**

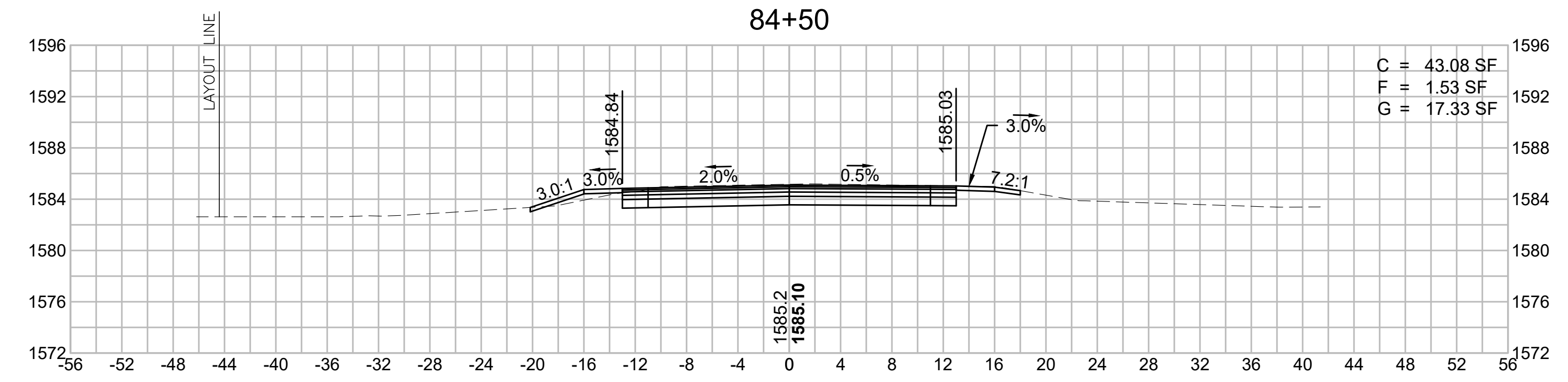
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	136	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 33**

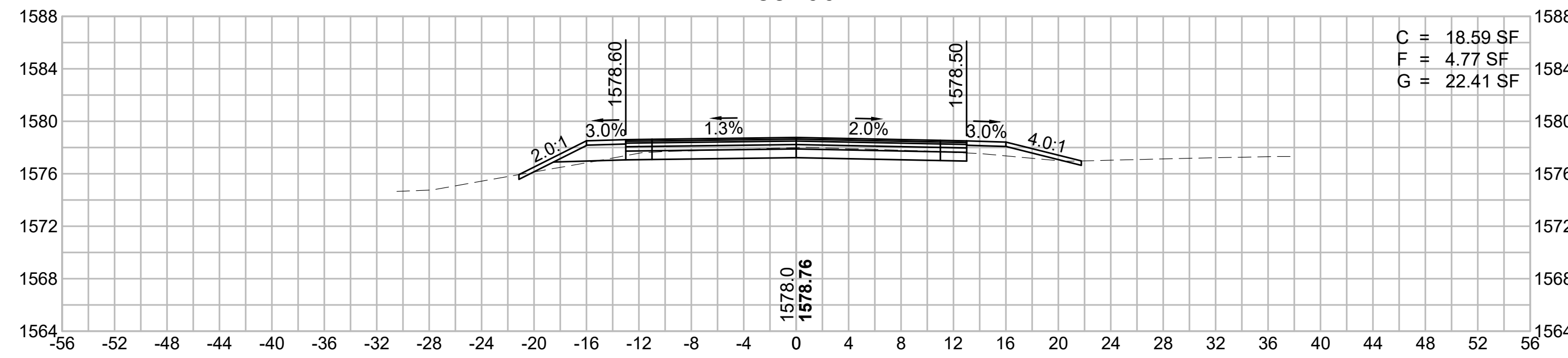
**BEGIN NORMAL CROWN
83+16.60**



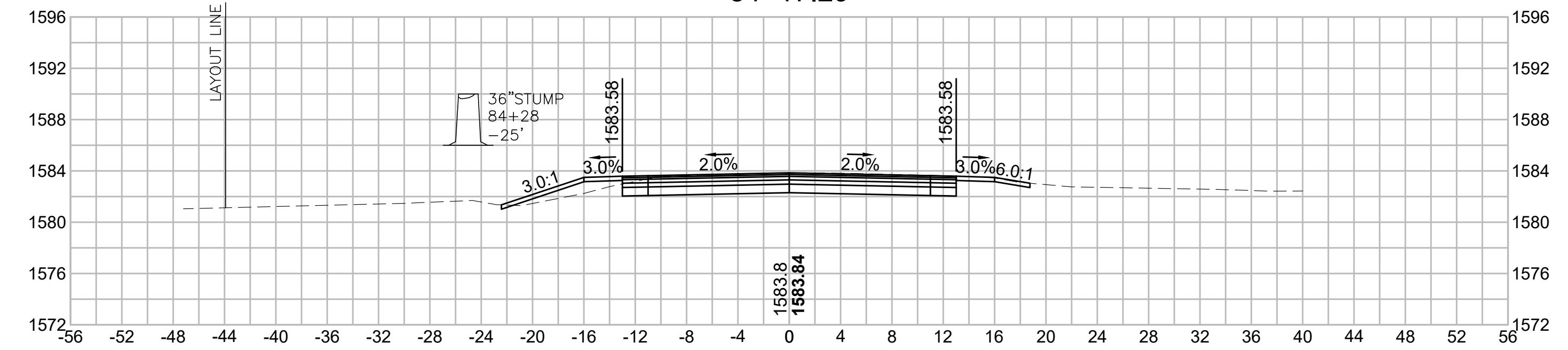
84+50



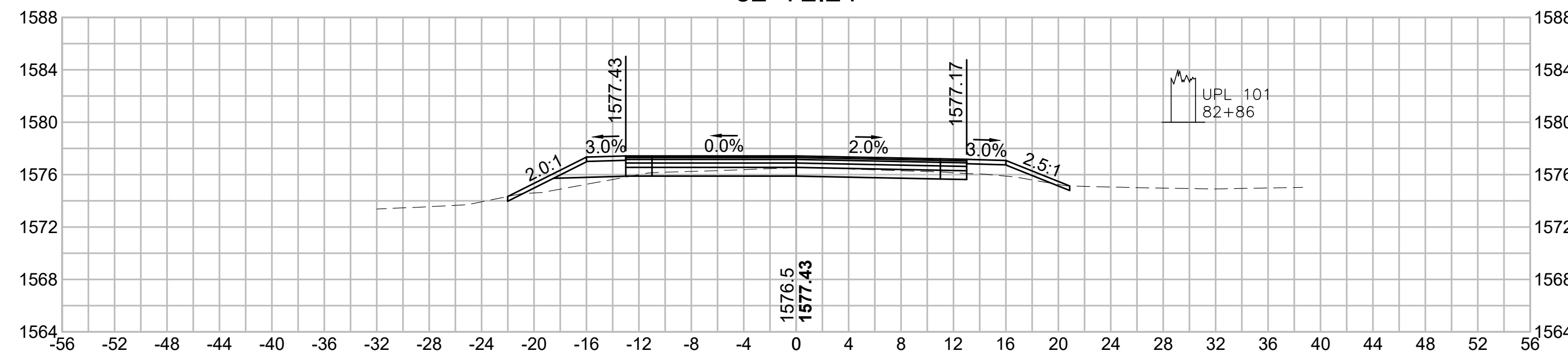
83+00



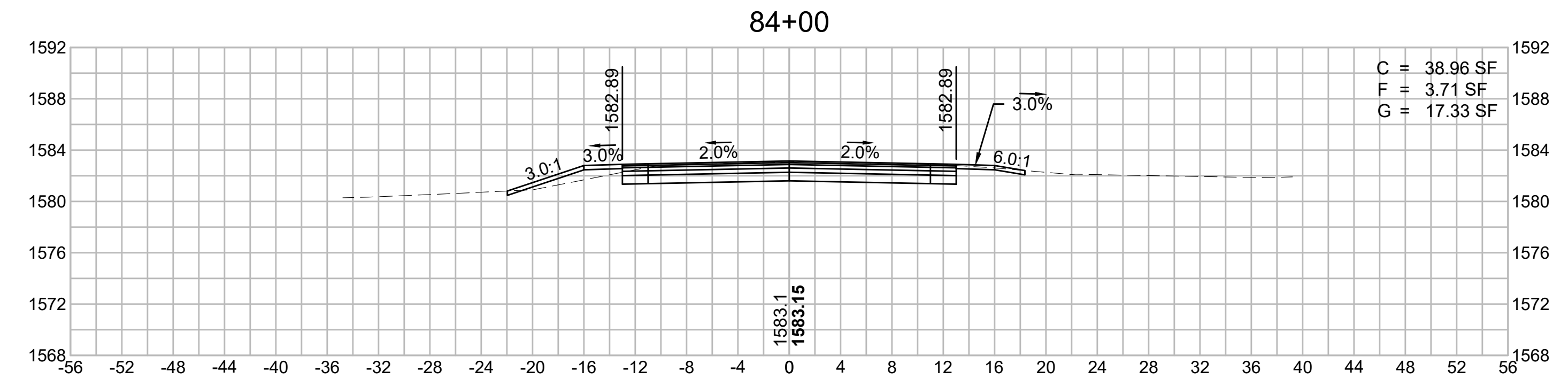
**END NORMAL CROWN
84+17.29**



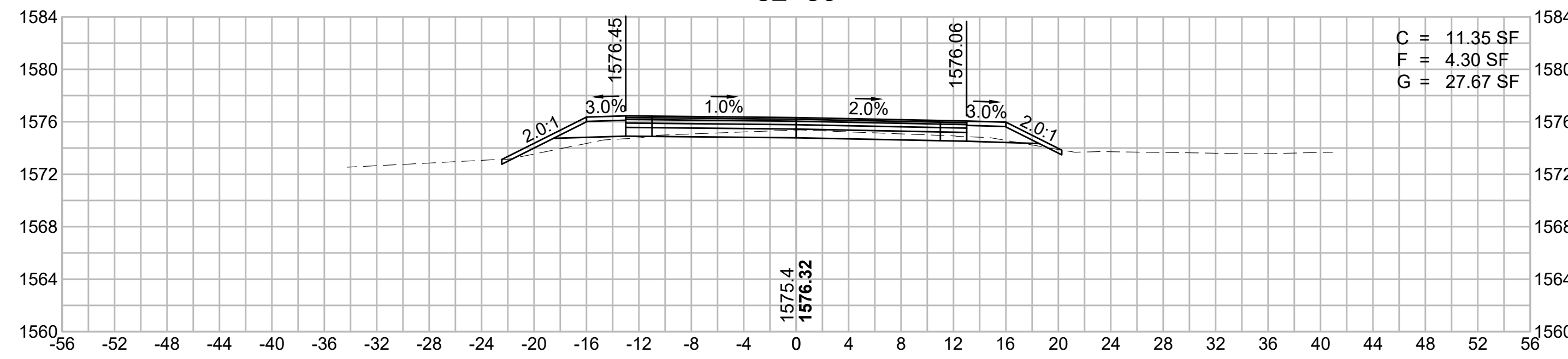
**LEVEL CROWN
82+72.24**



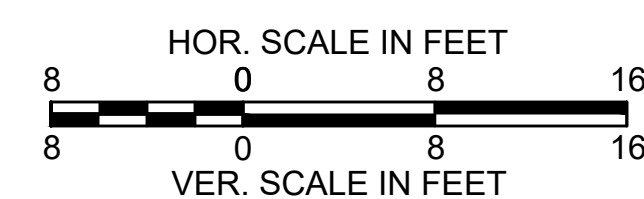
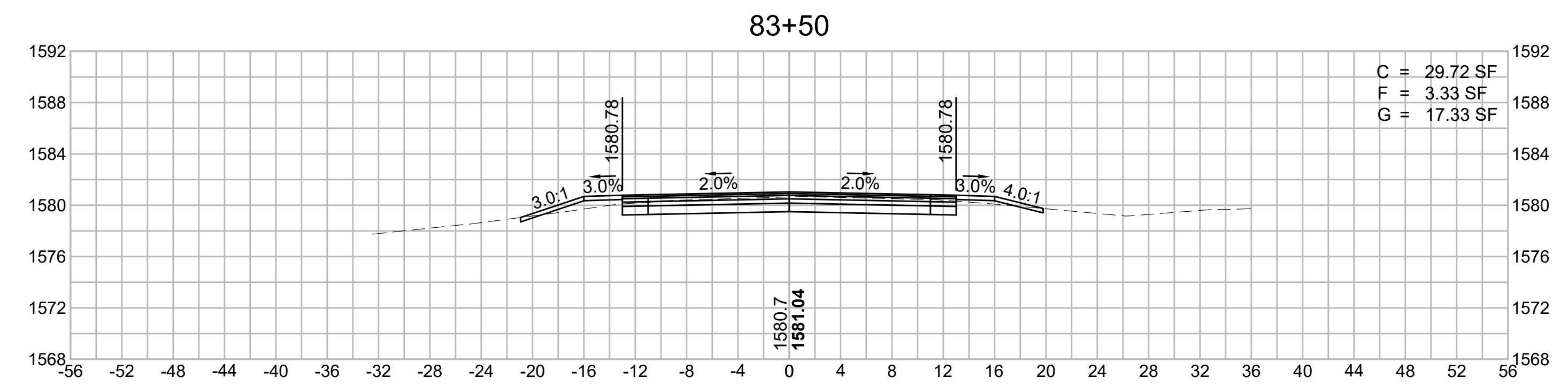
84+00



82+50



83+50

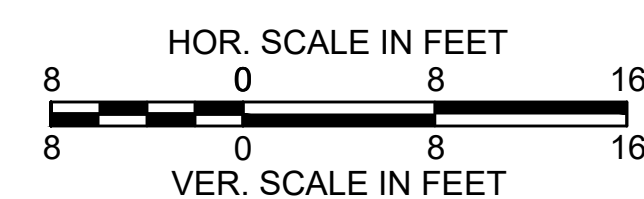
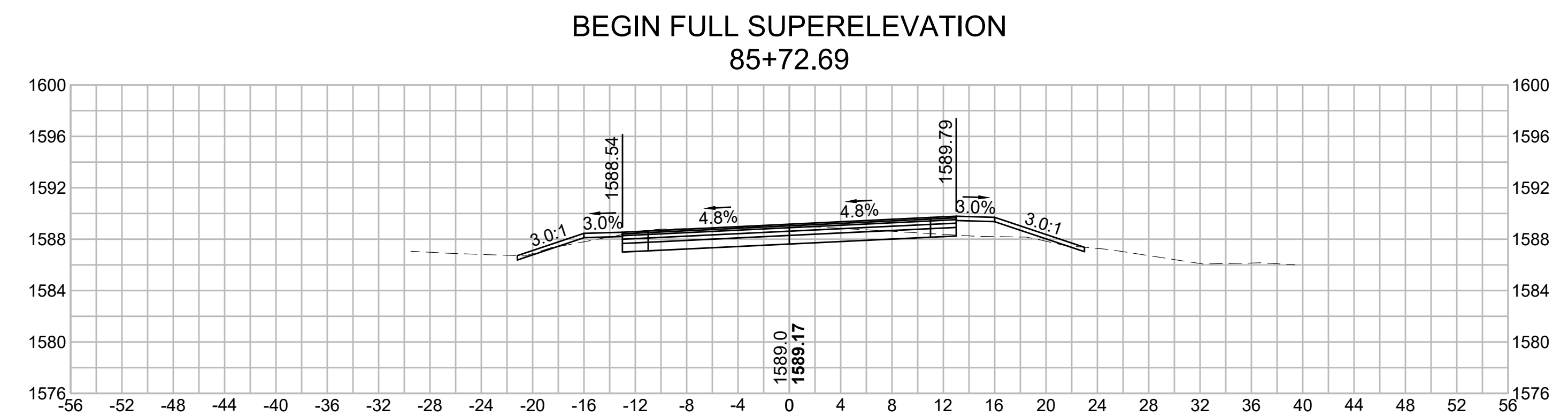
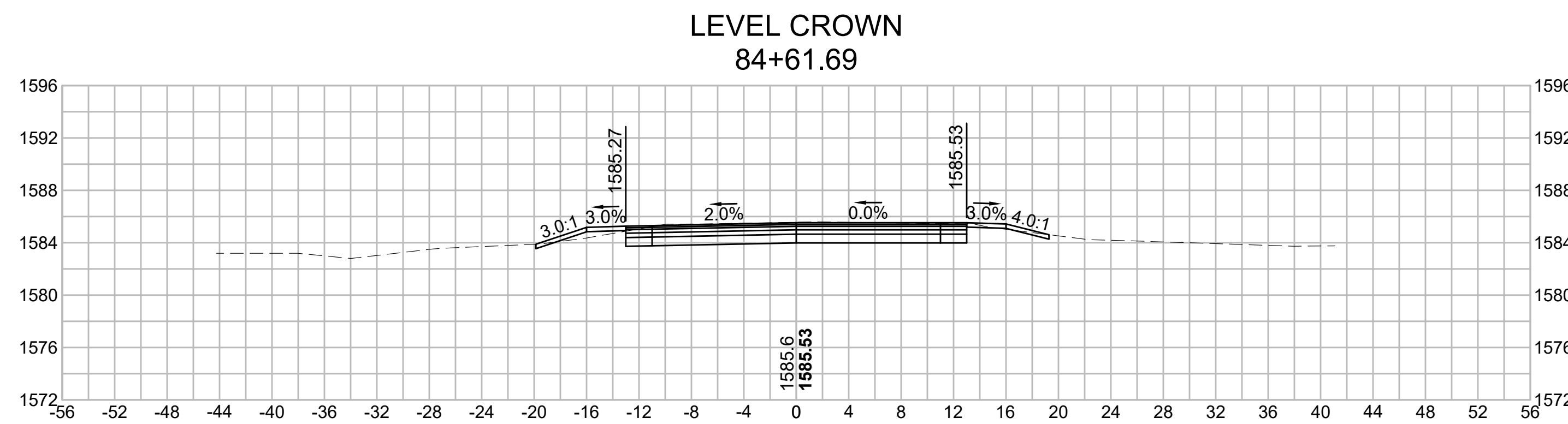
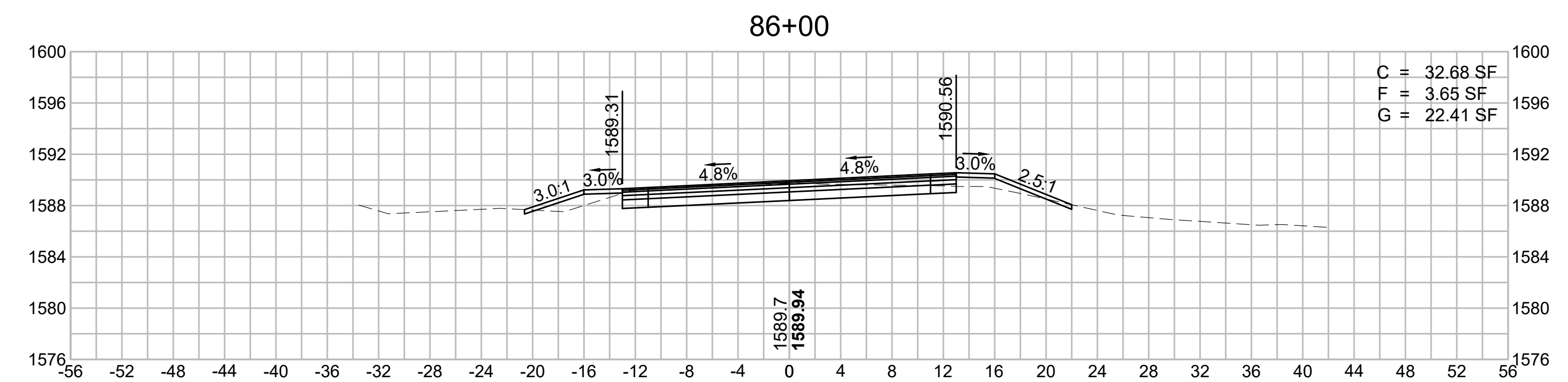
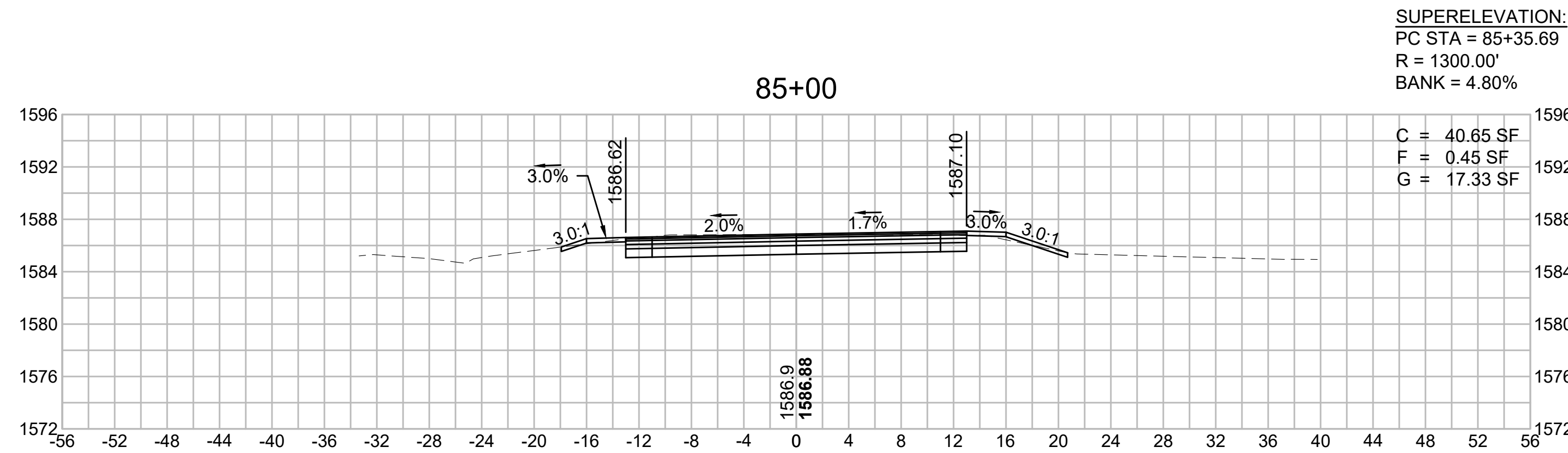
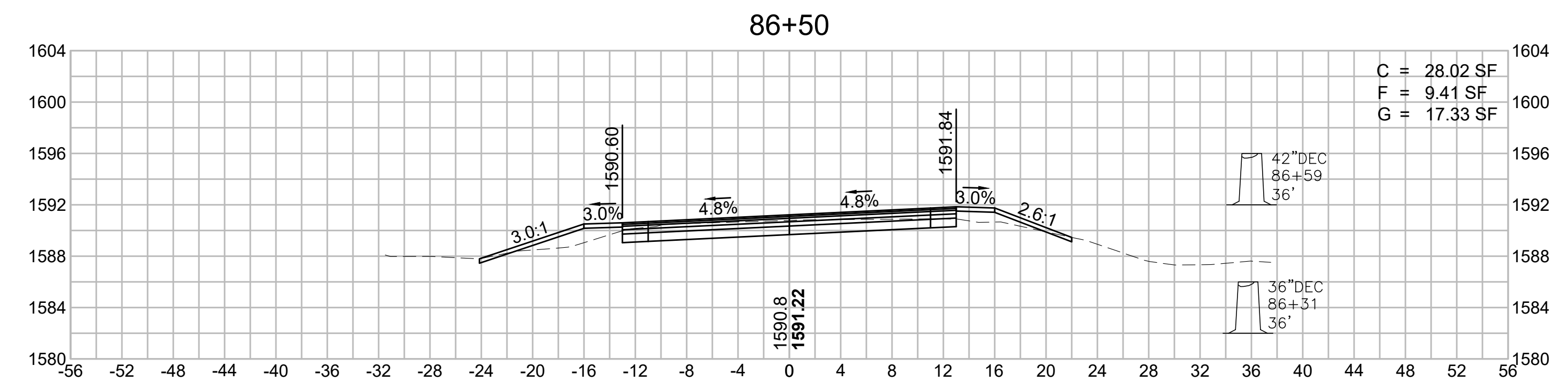
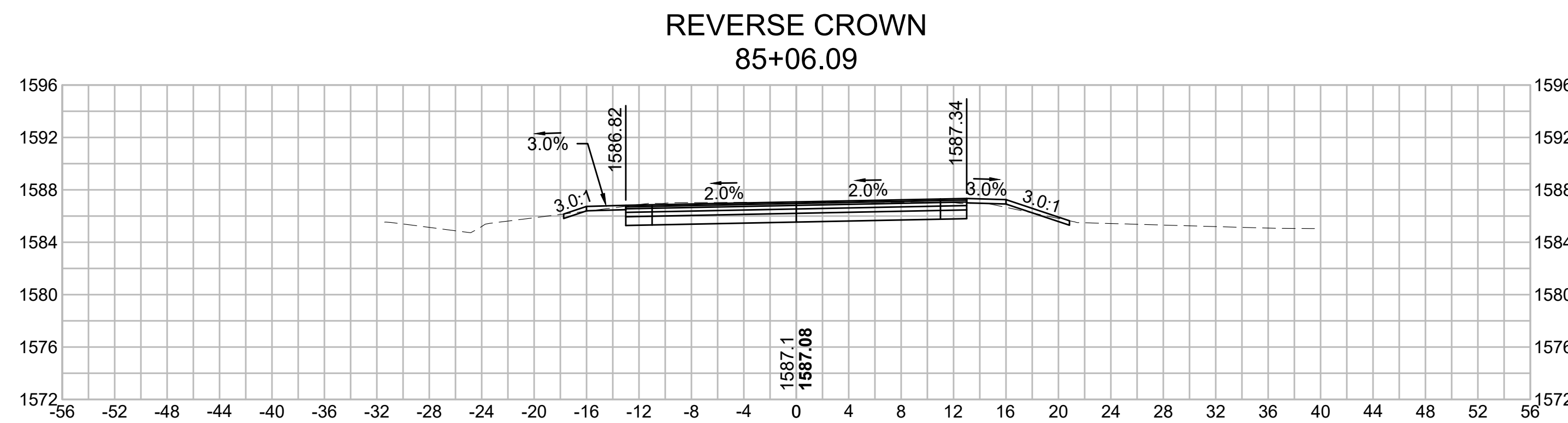
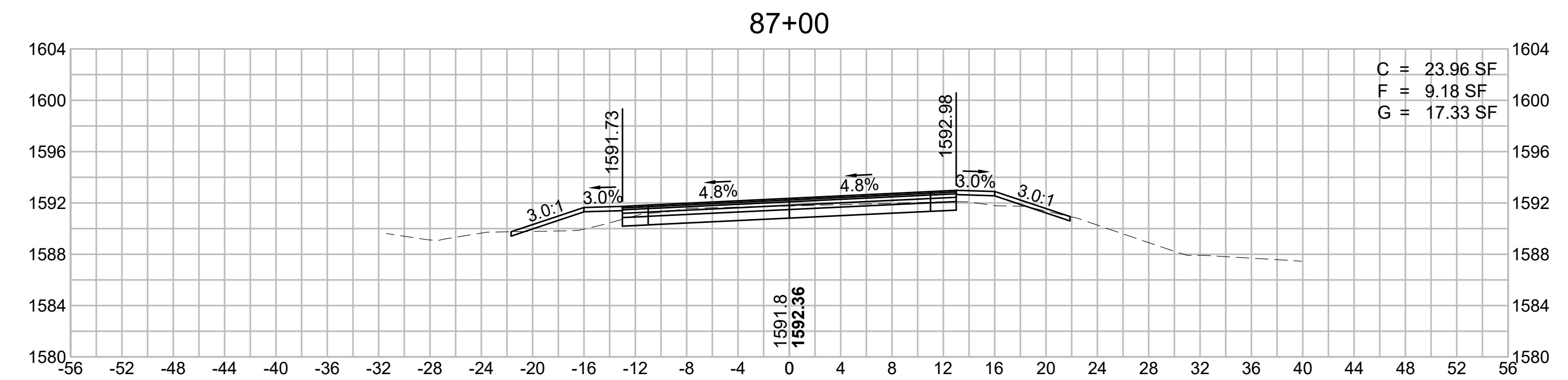
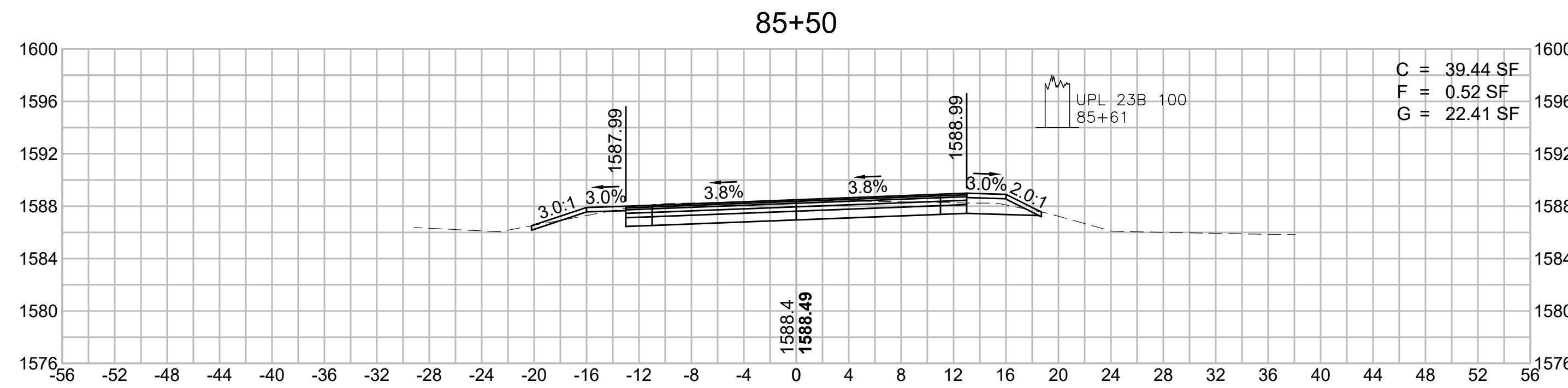


**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	137	191

**OLD NORTH ROAD
CROSS SECTIONS - 34**

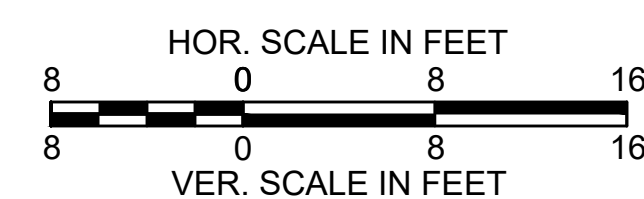
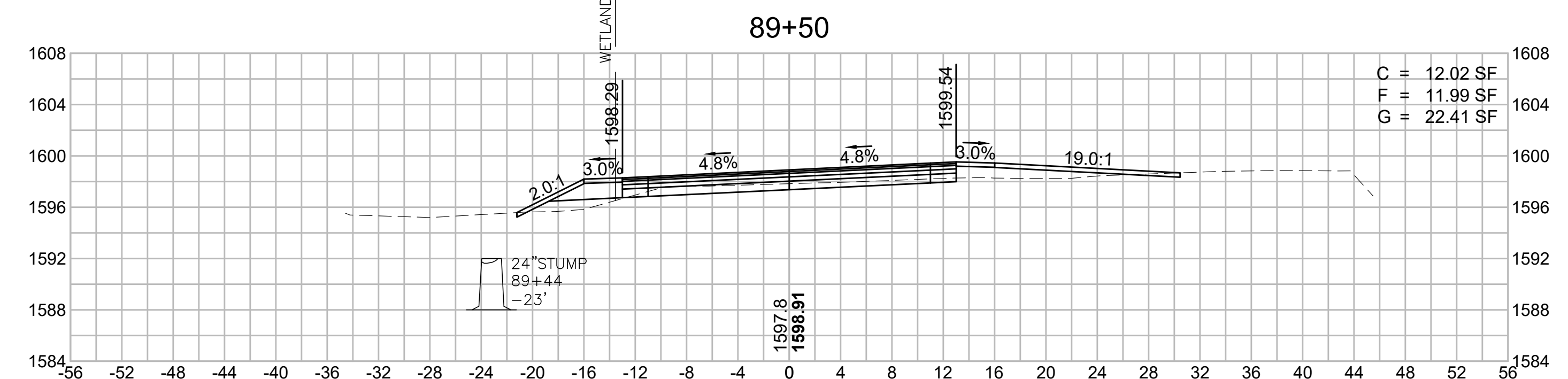
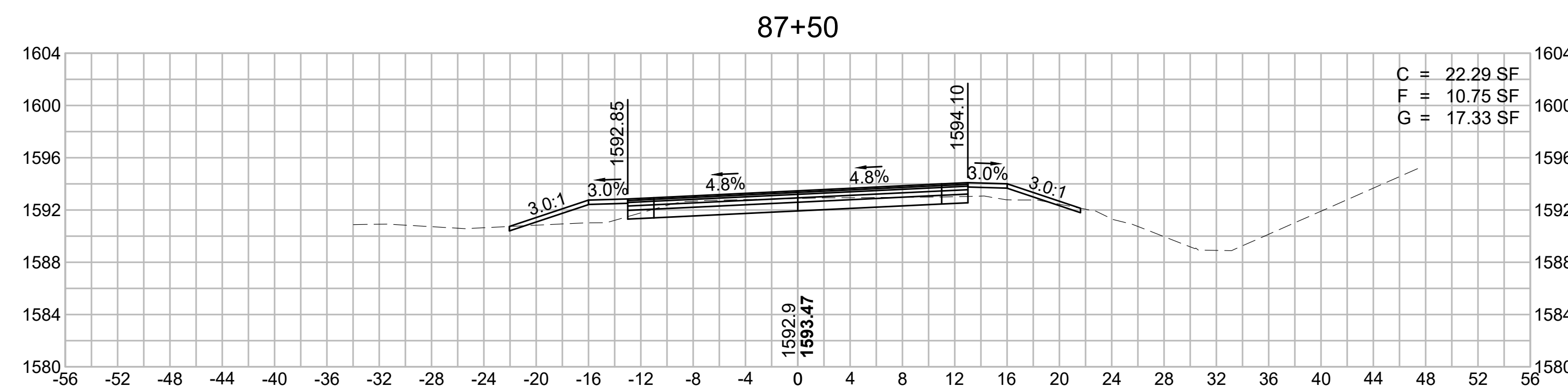
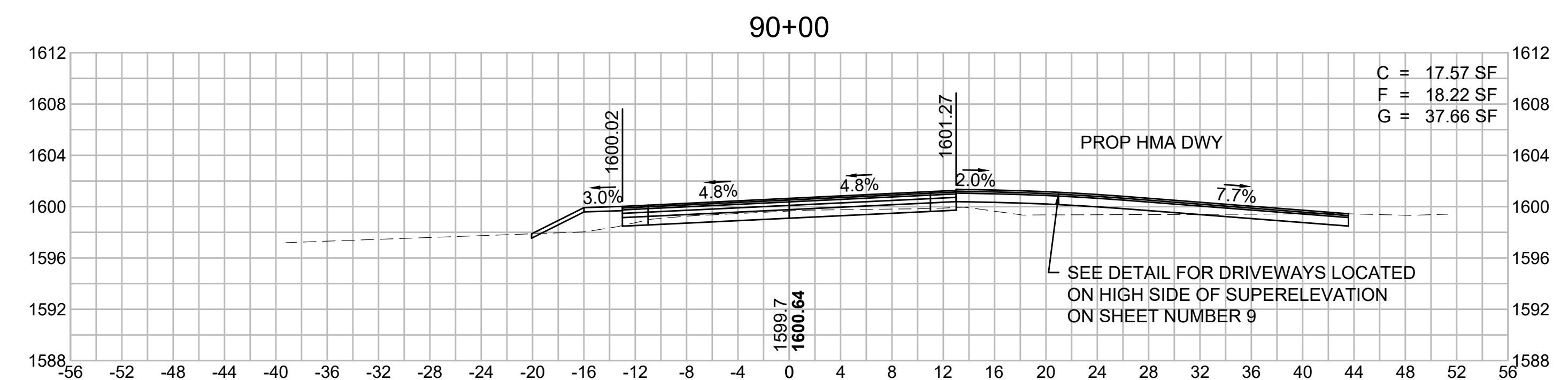
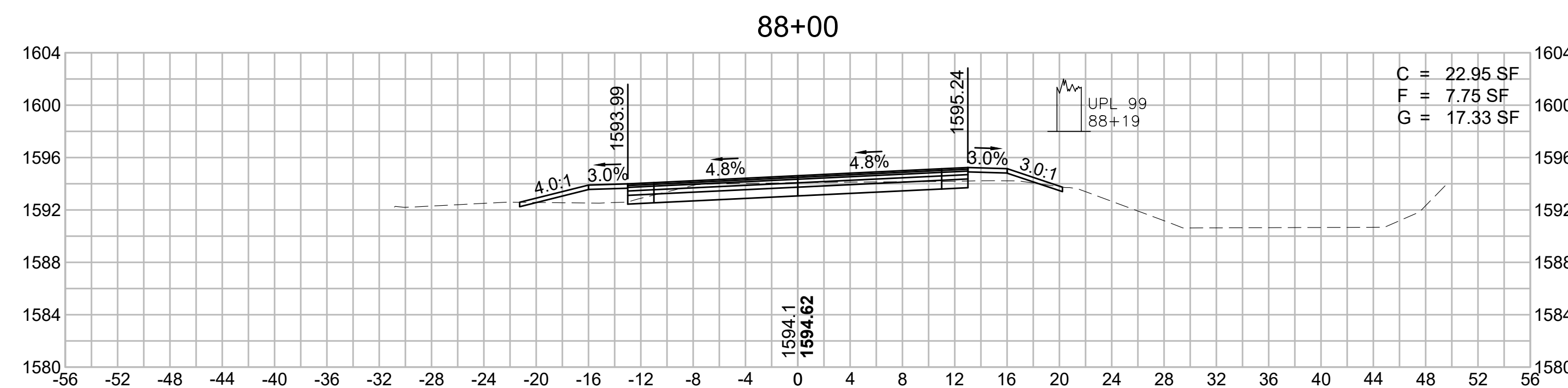
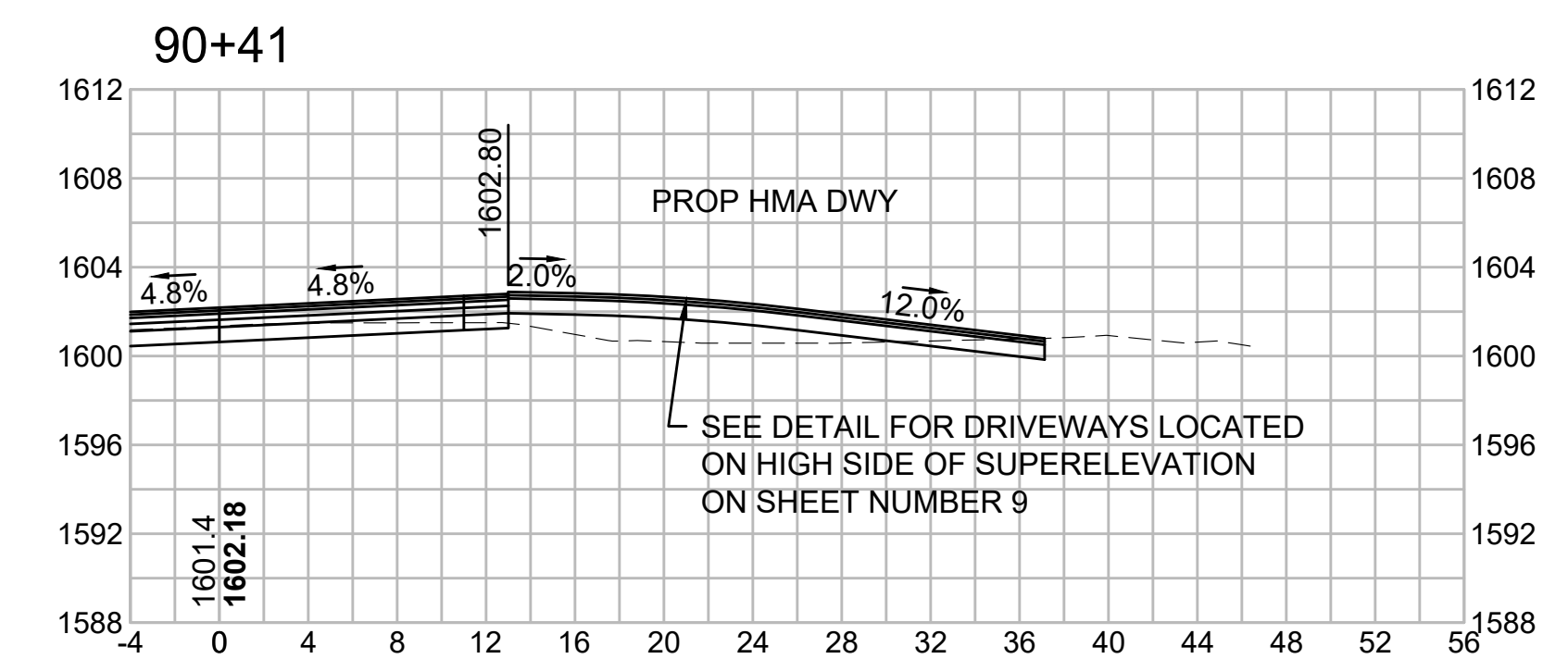
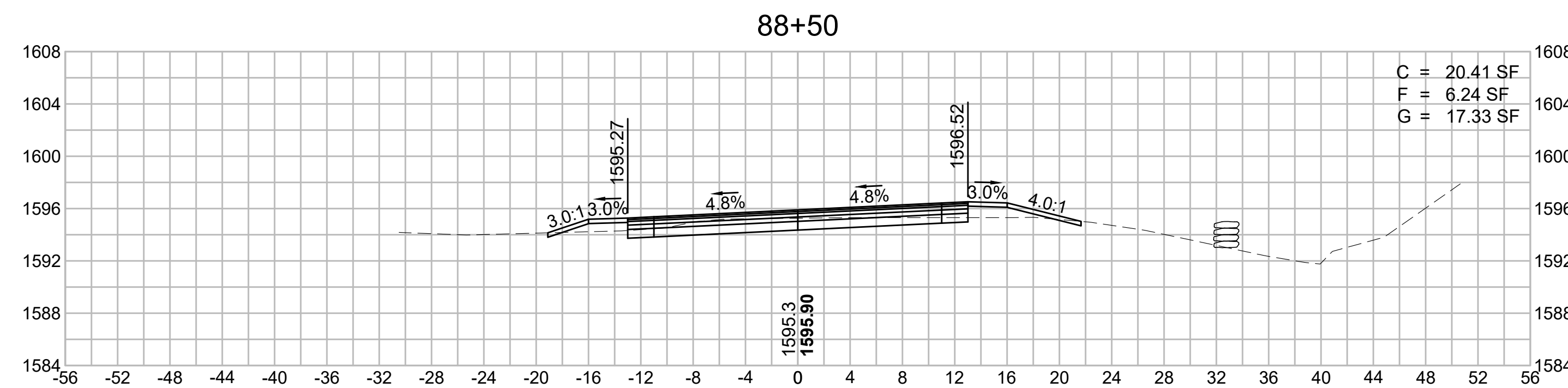
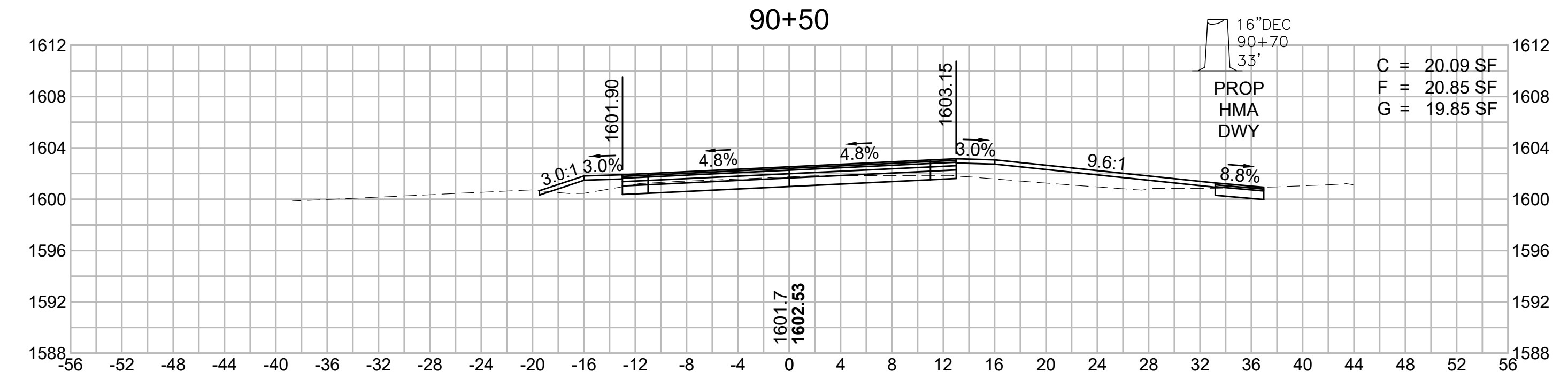
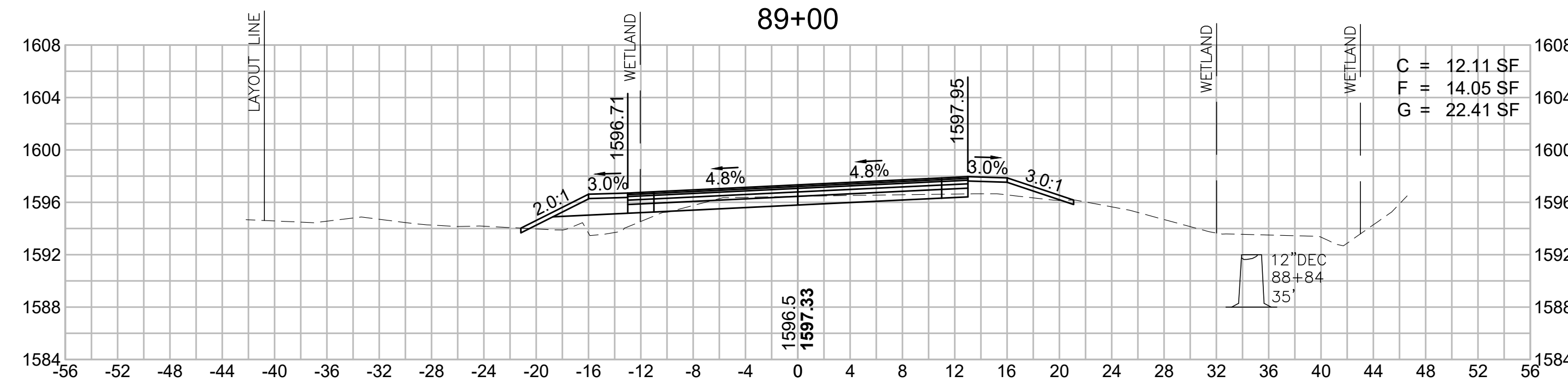
609287_HD\VS-CORRIDOR 2.DWG
Plotted on 27-Jun-2024 11:52 AM



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	138	191

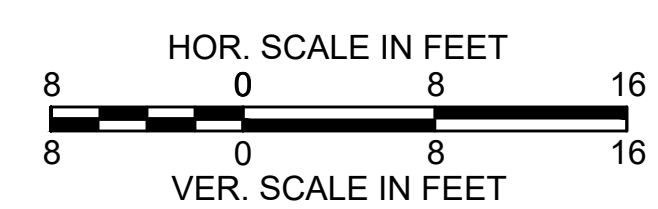
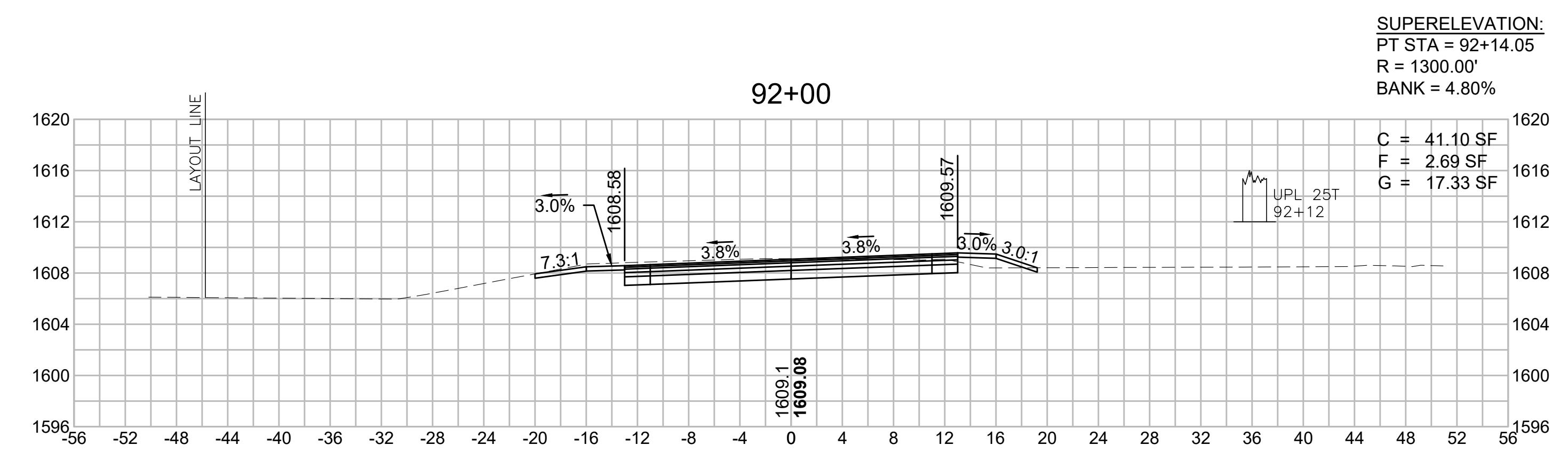
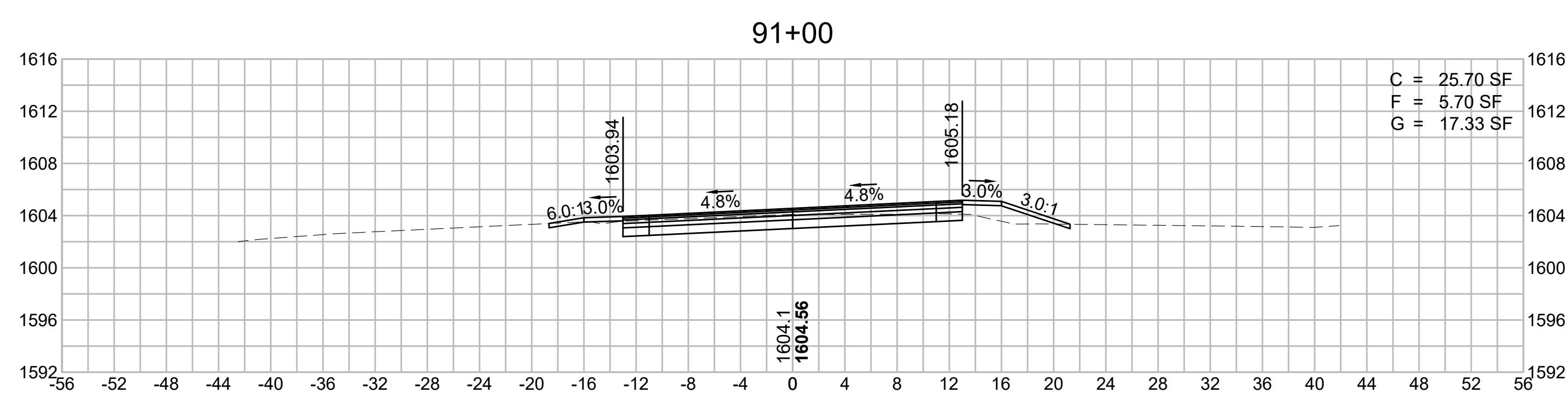
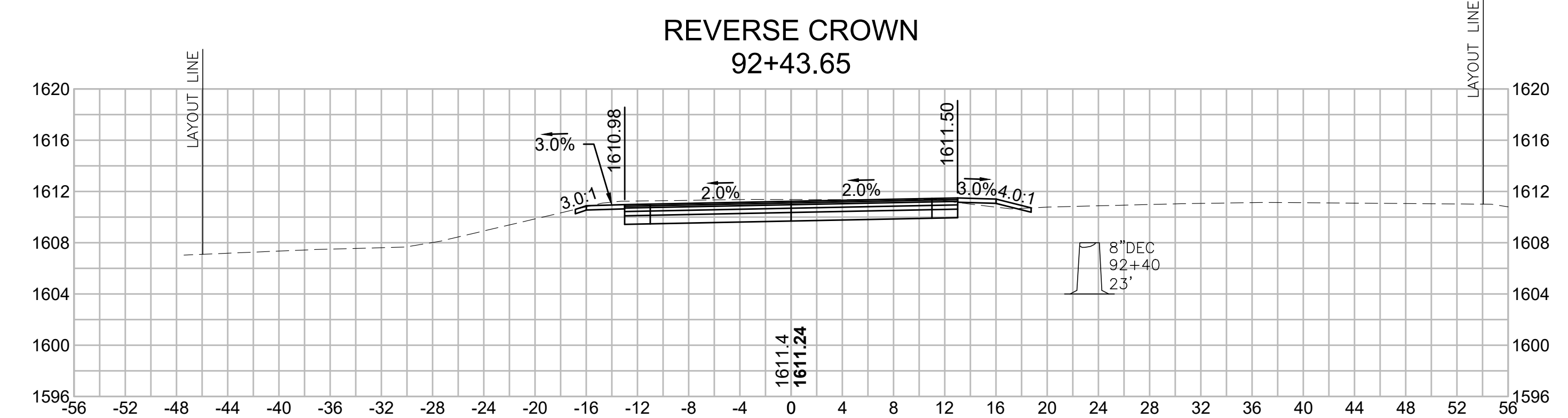
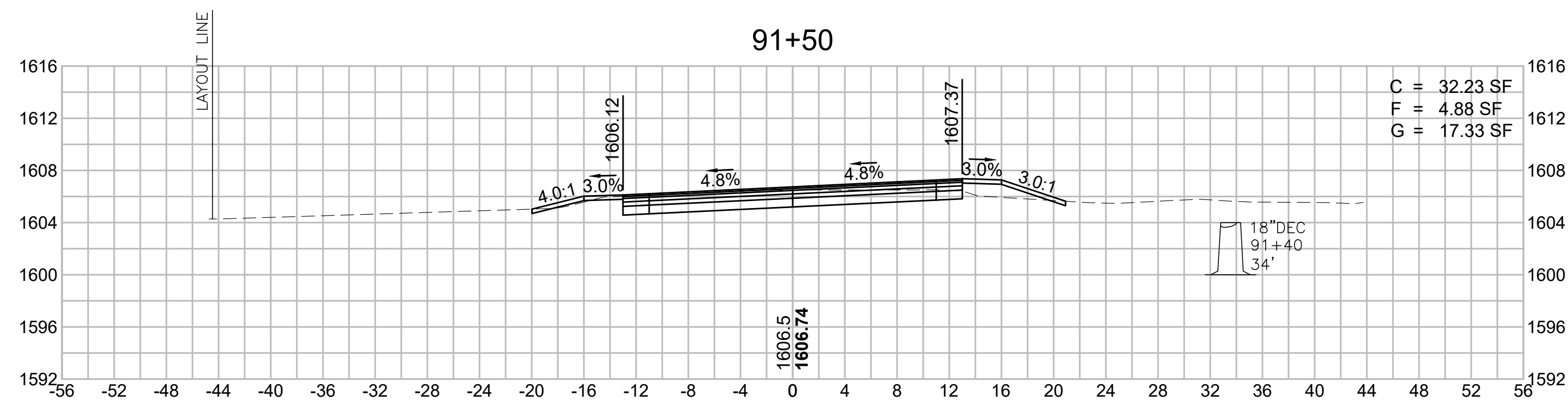
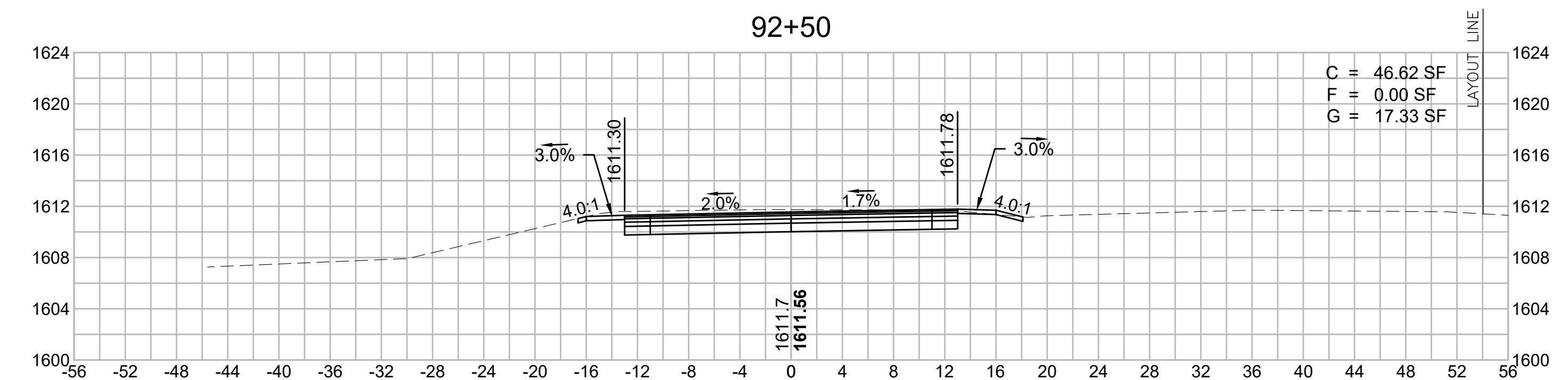
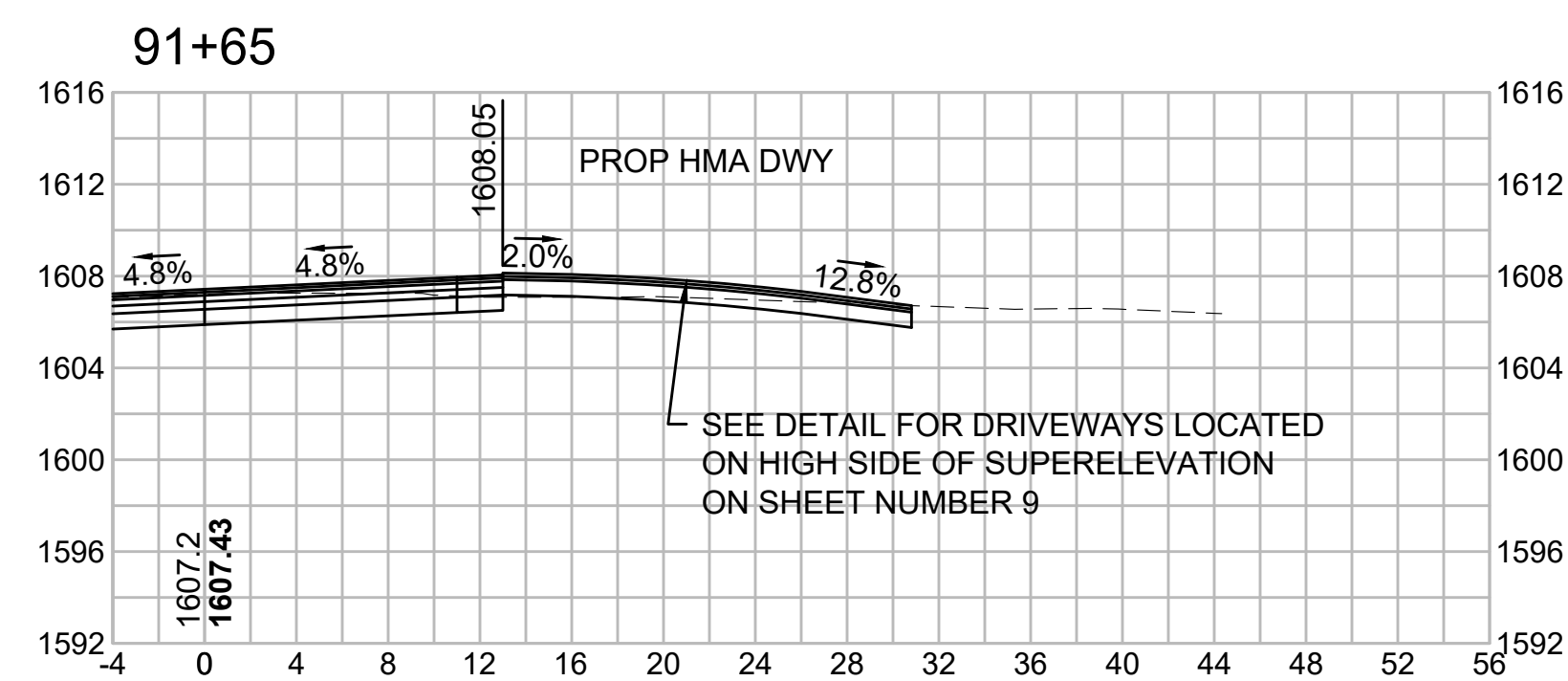
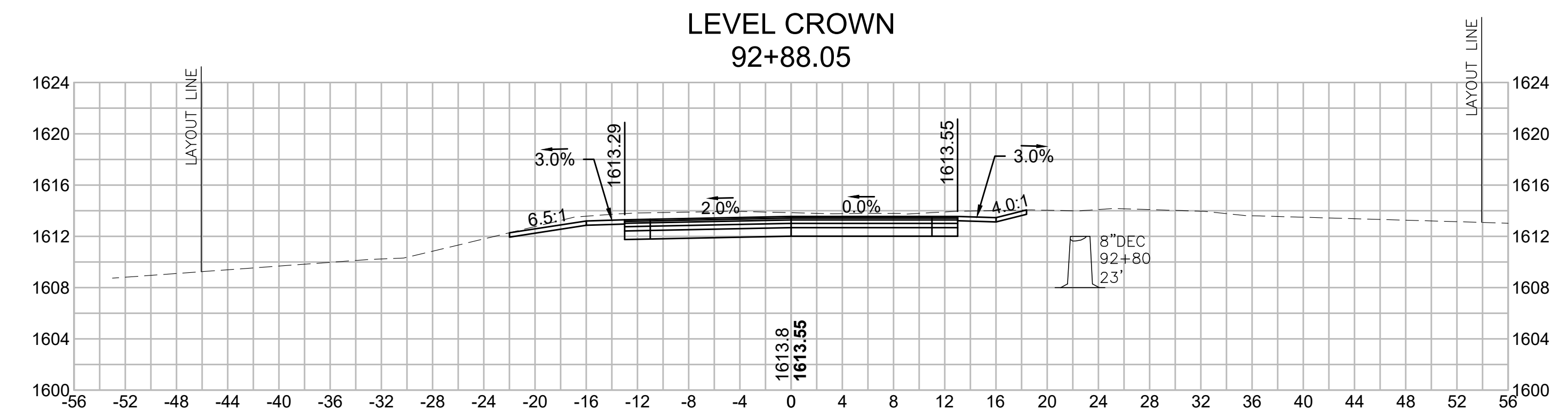
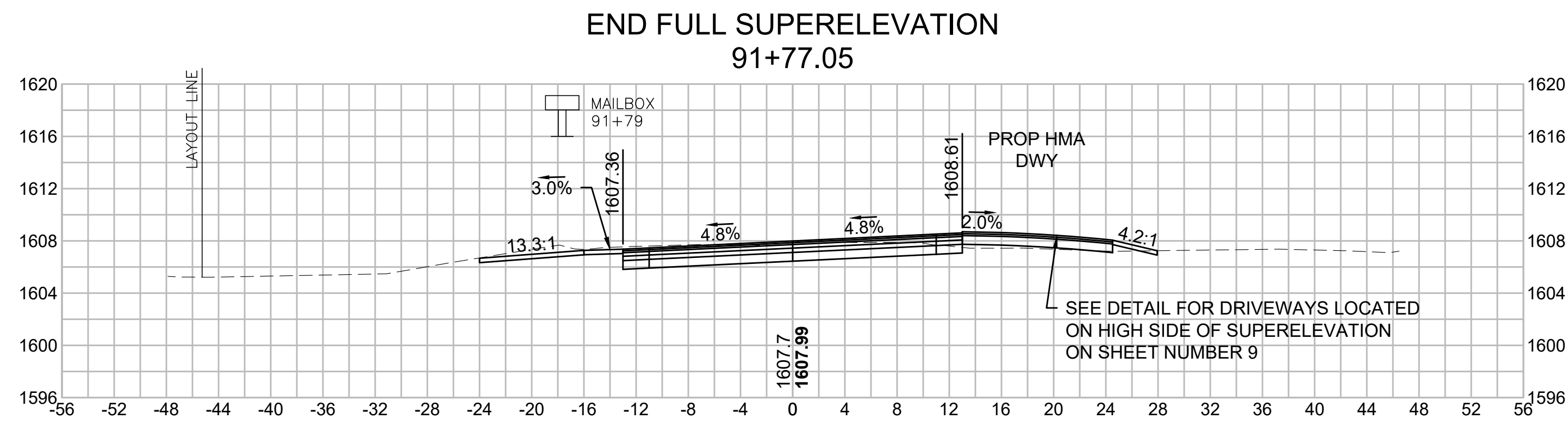
**OLD NORTH ROAD
CROSS SECTIONS - 35**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	139	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 36**

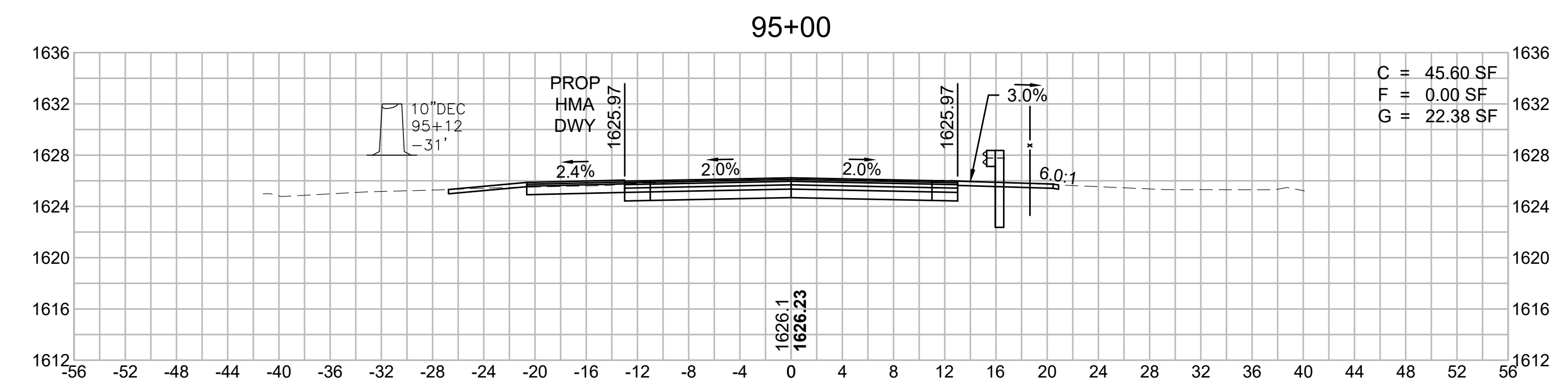
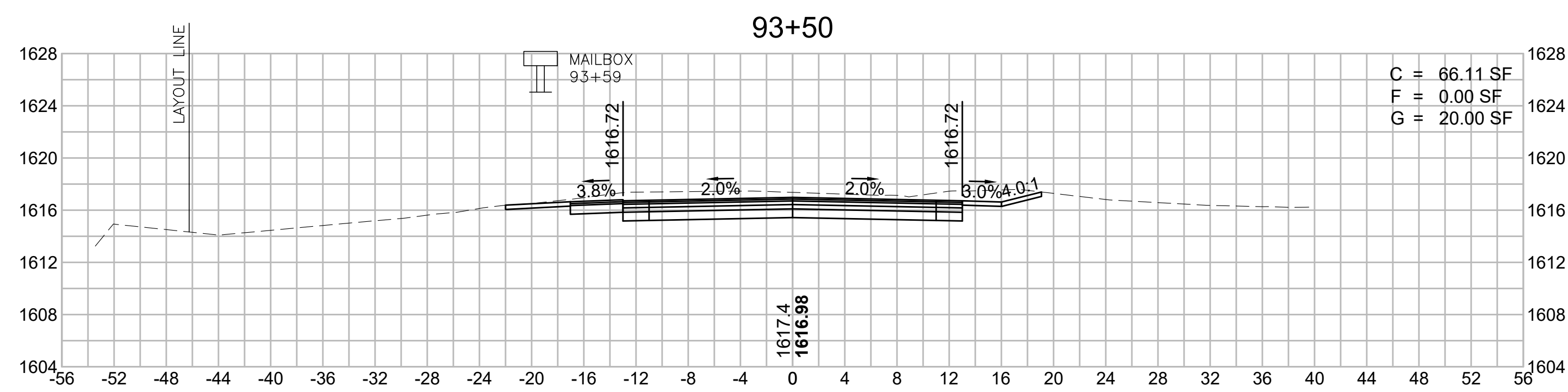
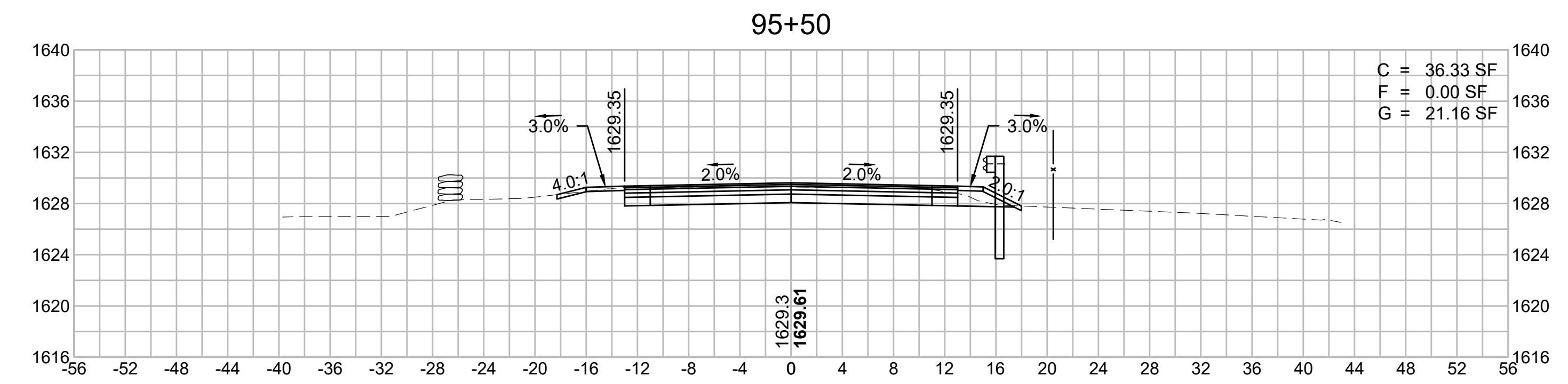
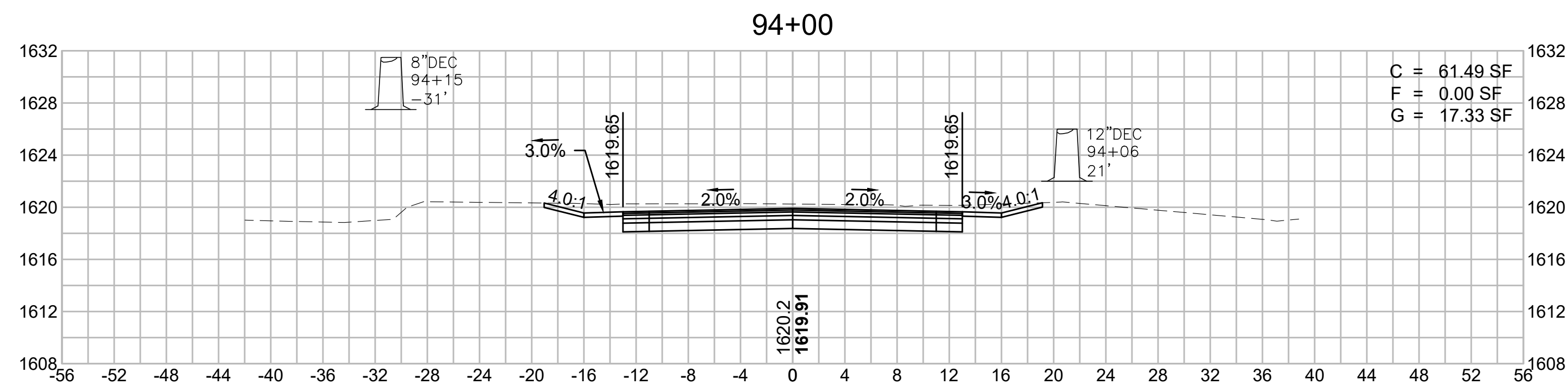


SUPERELEVATION:
PT STA = 92+14.05
R = 1300.00'
BANK = 4.80%

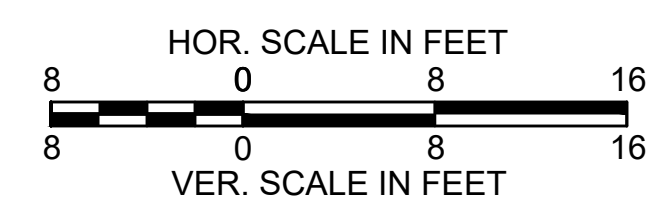
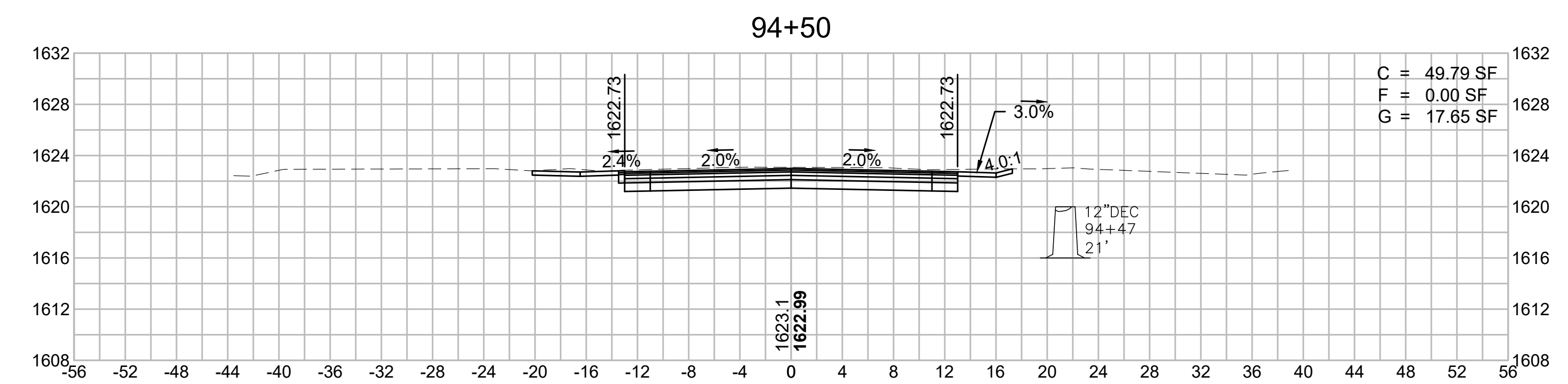
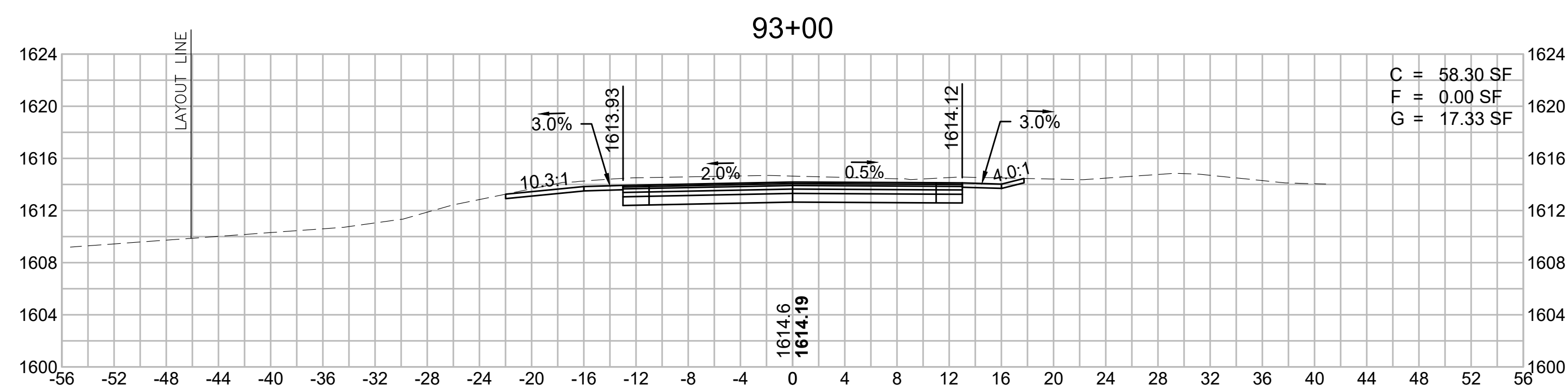
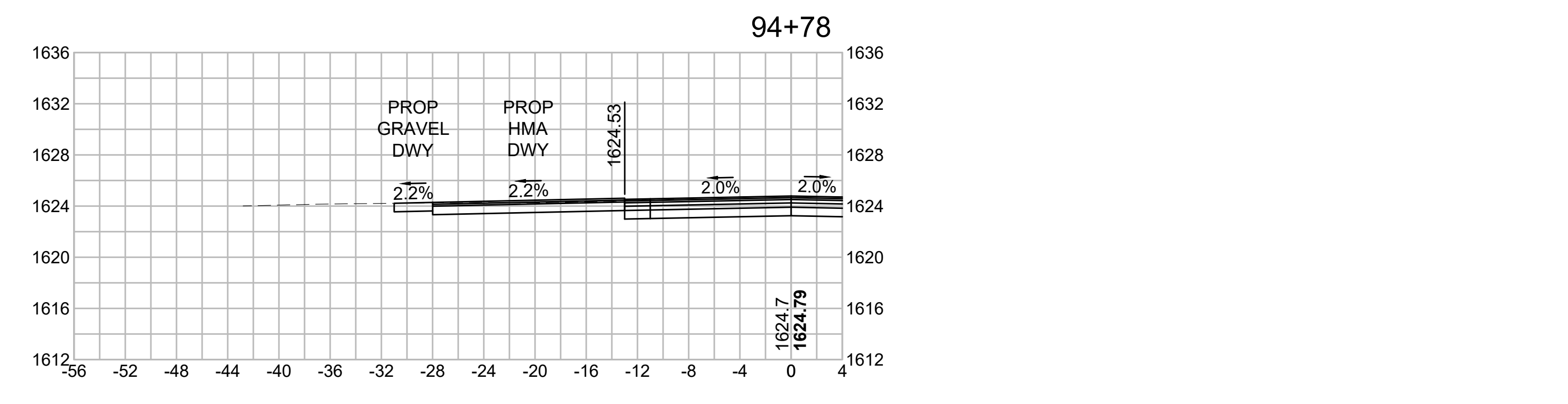
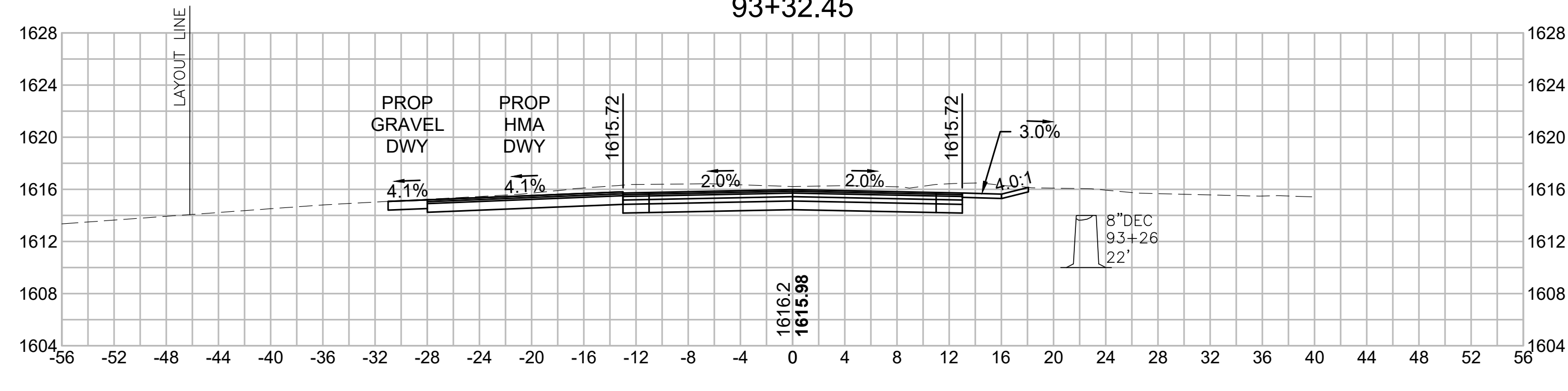
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	140	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 37**



**BEGIN NORMAL CROWN
93+32.45**

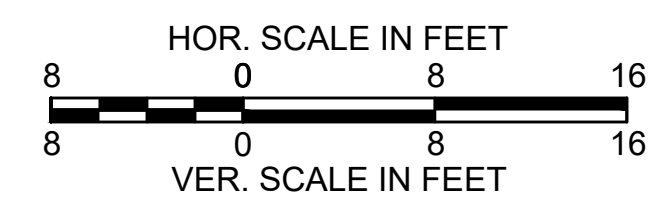
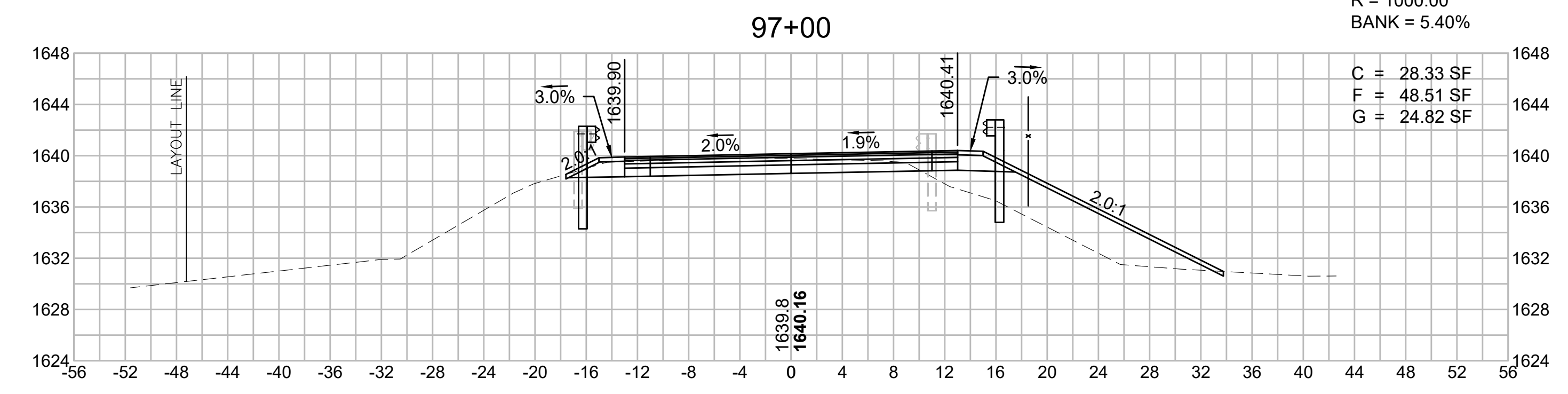
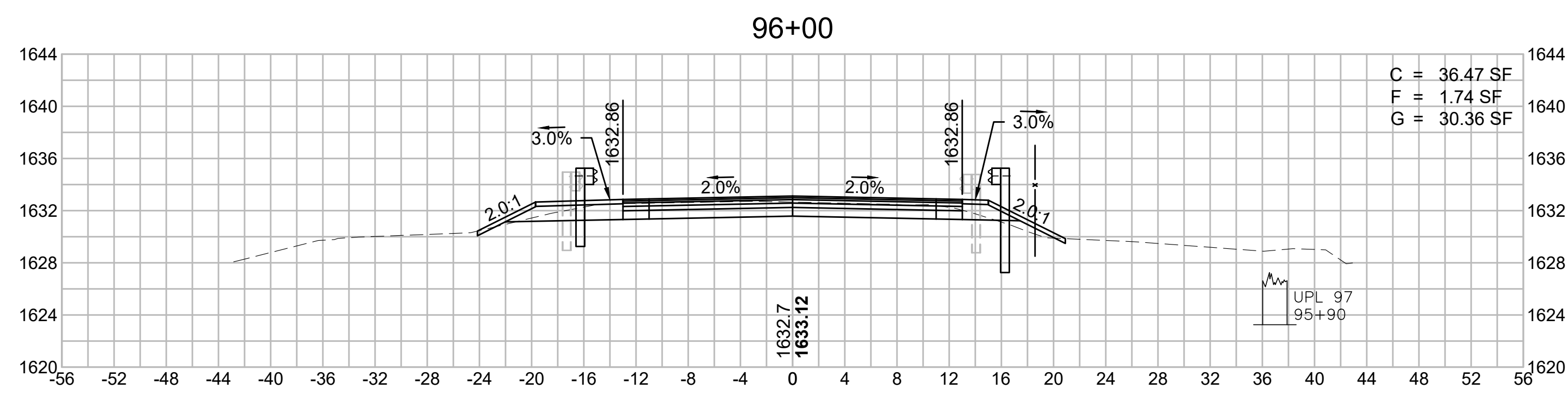
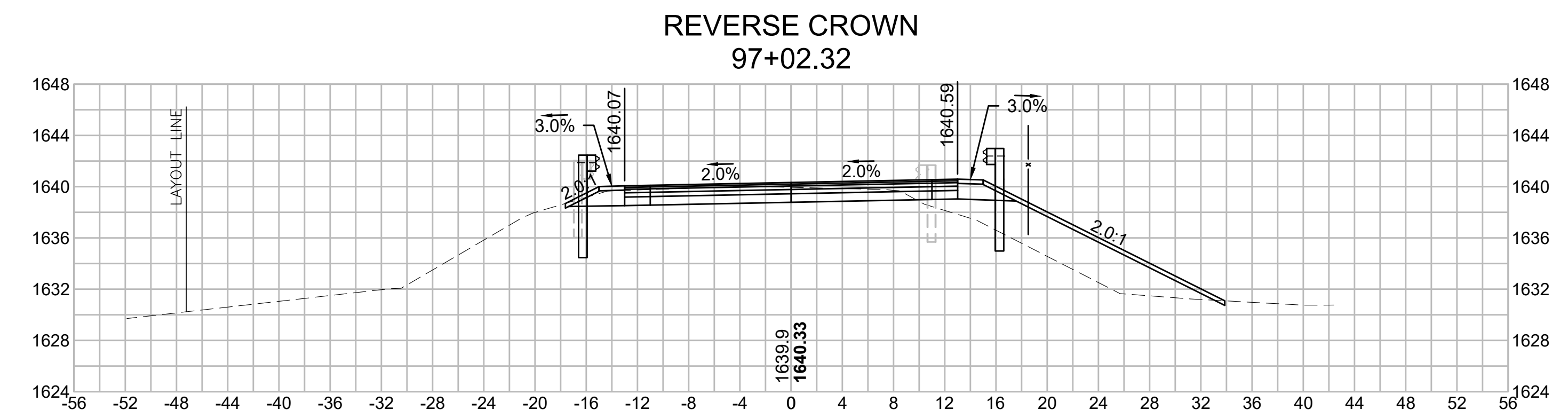
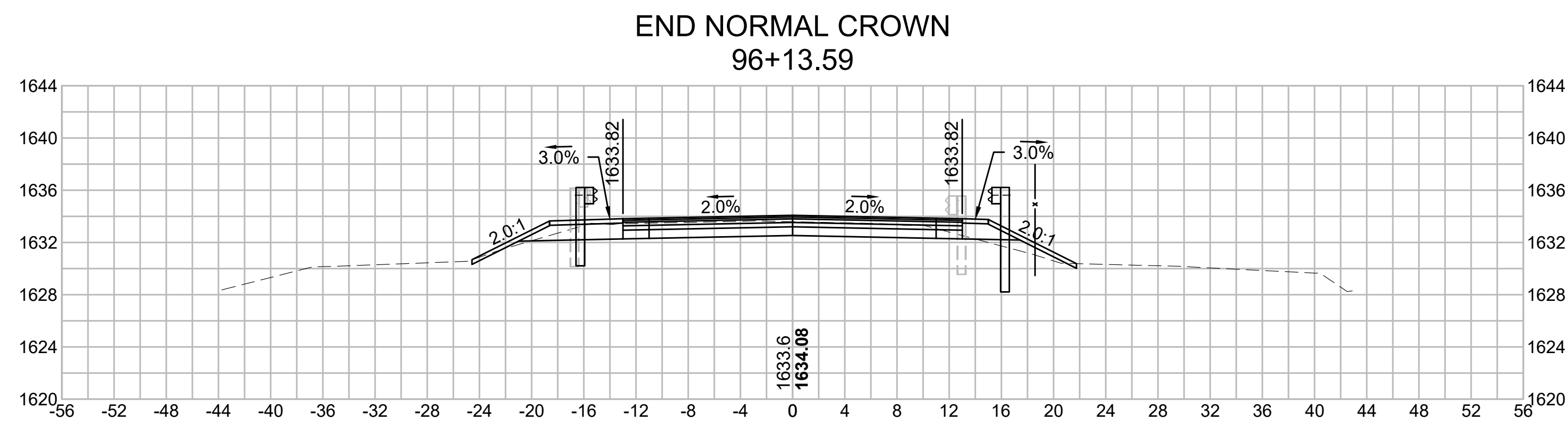
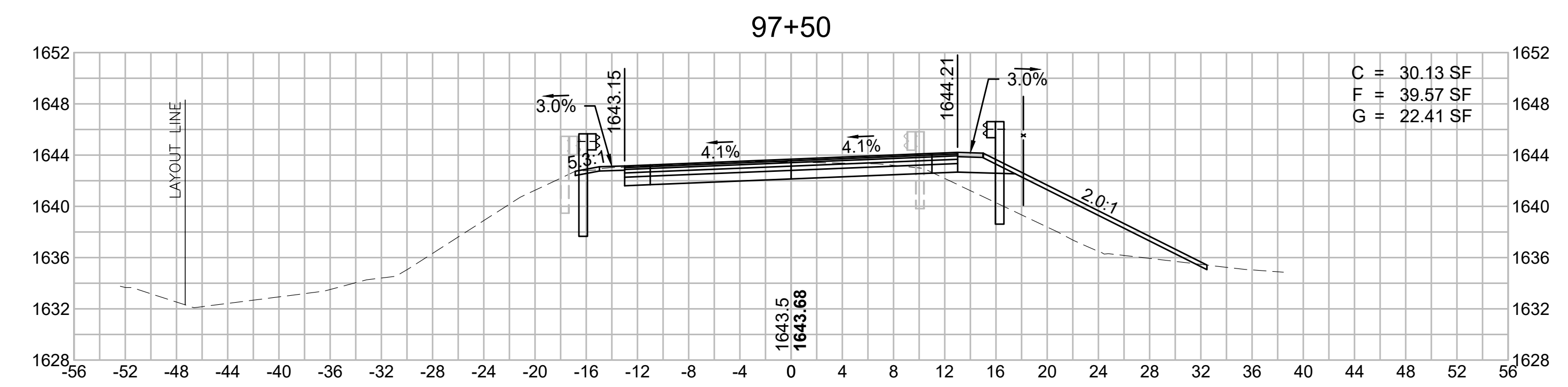
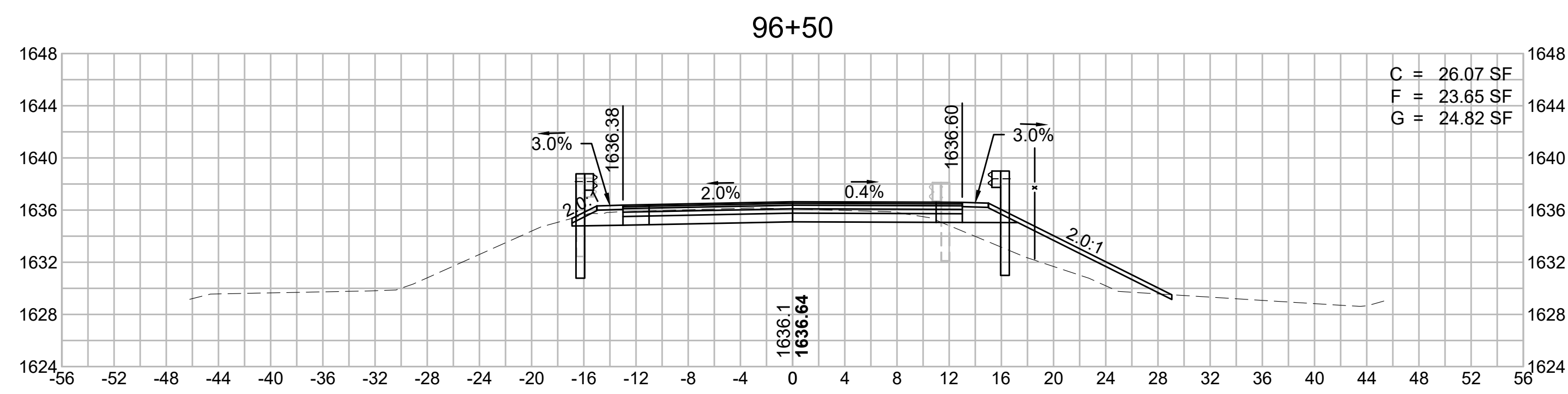
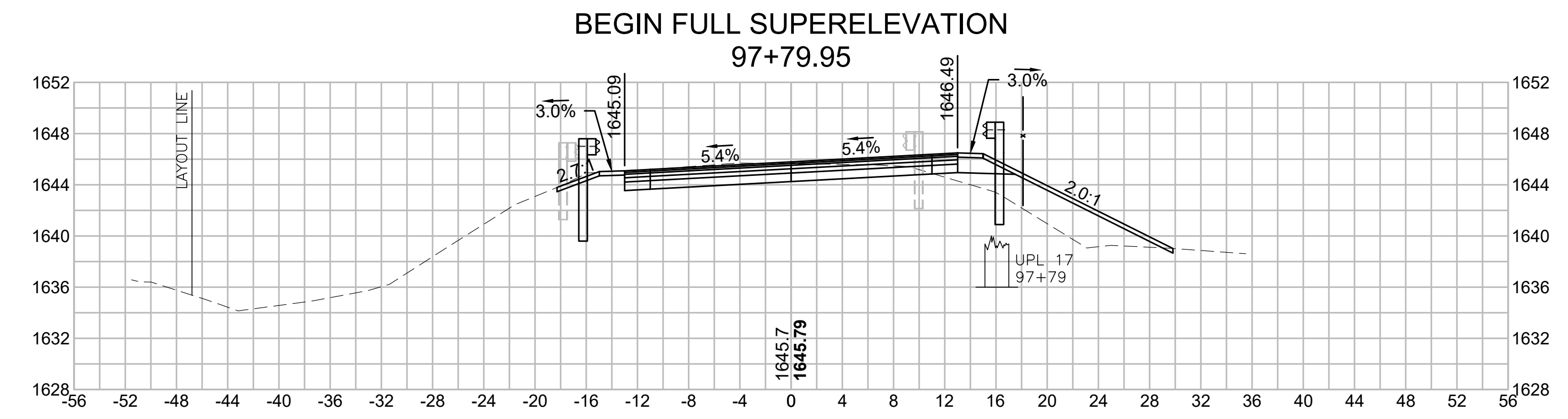
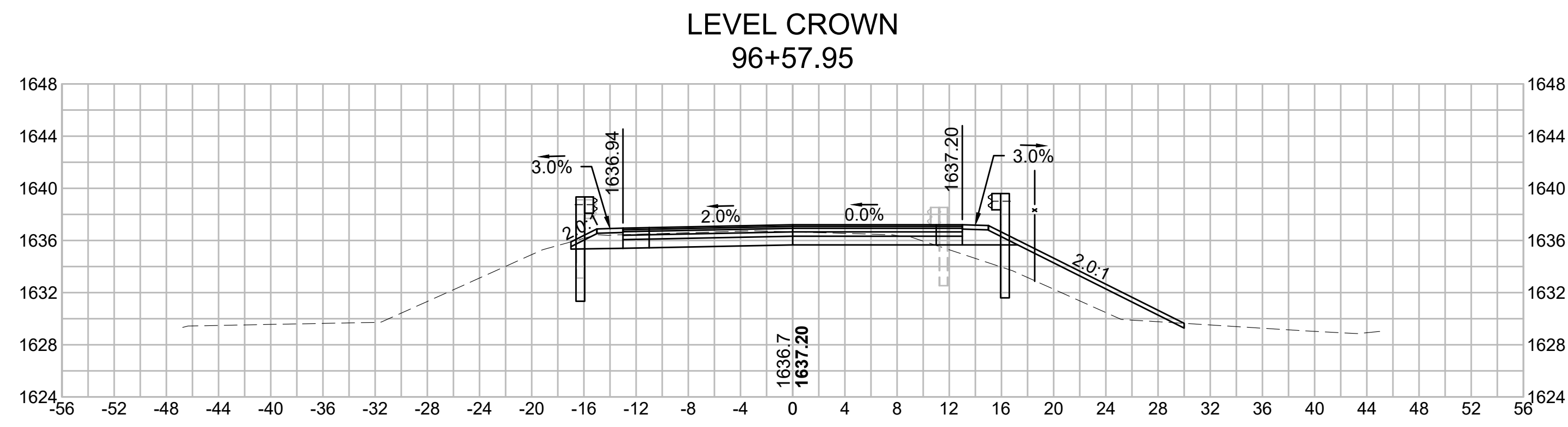


**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	141	191

**OLD NORTH ROAD
CROSS SECTIONS - 38**

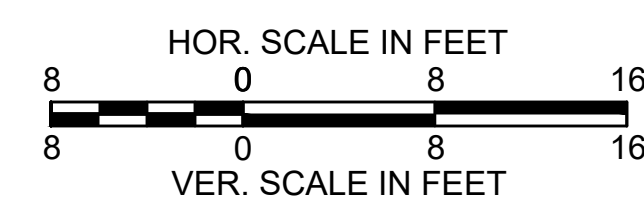
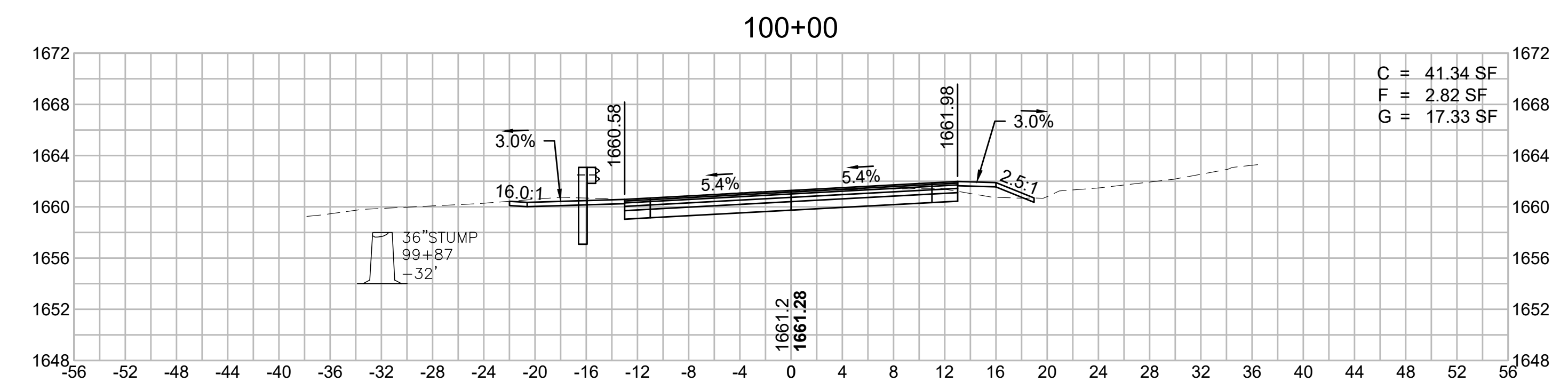
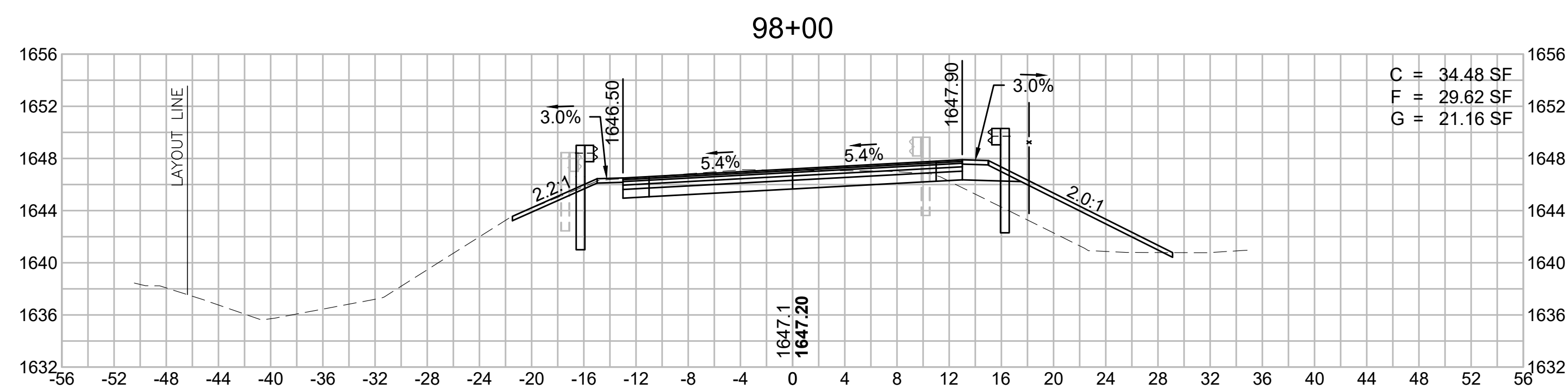
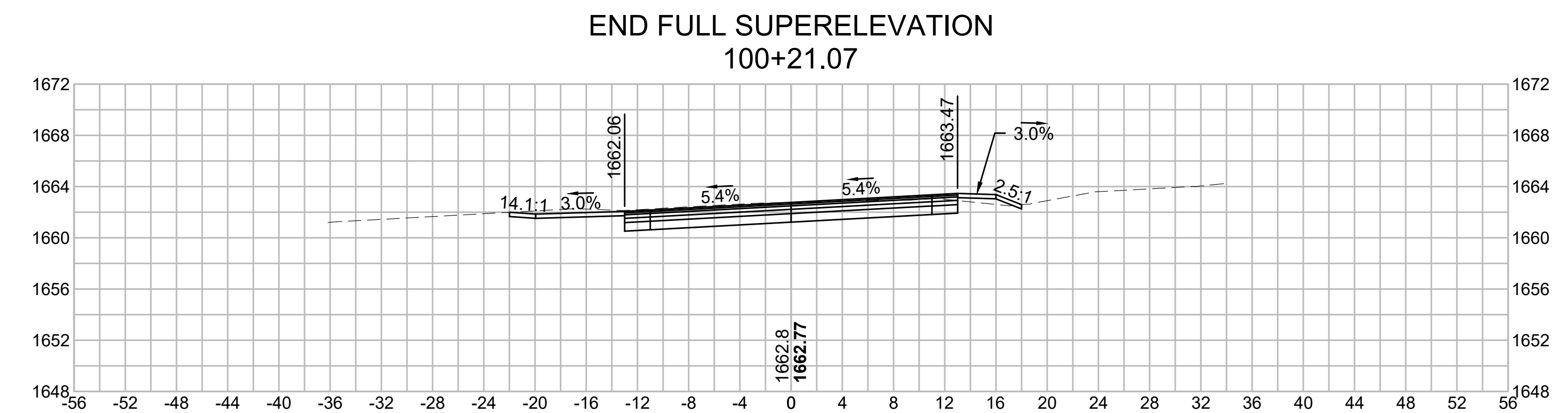
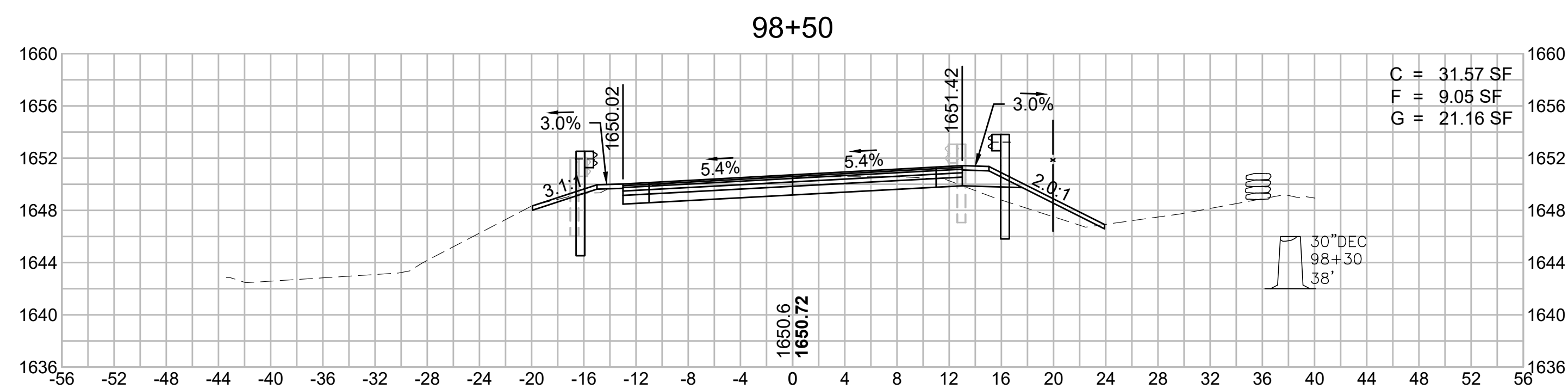
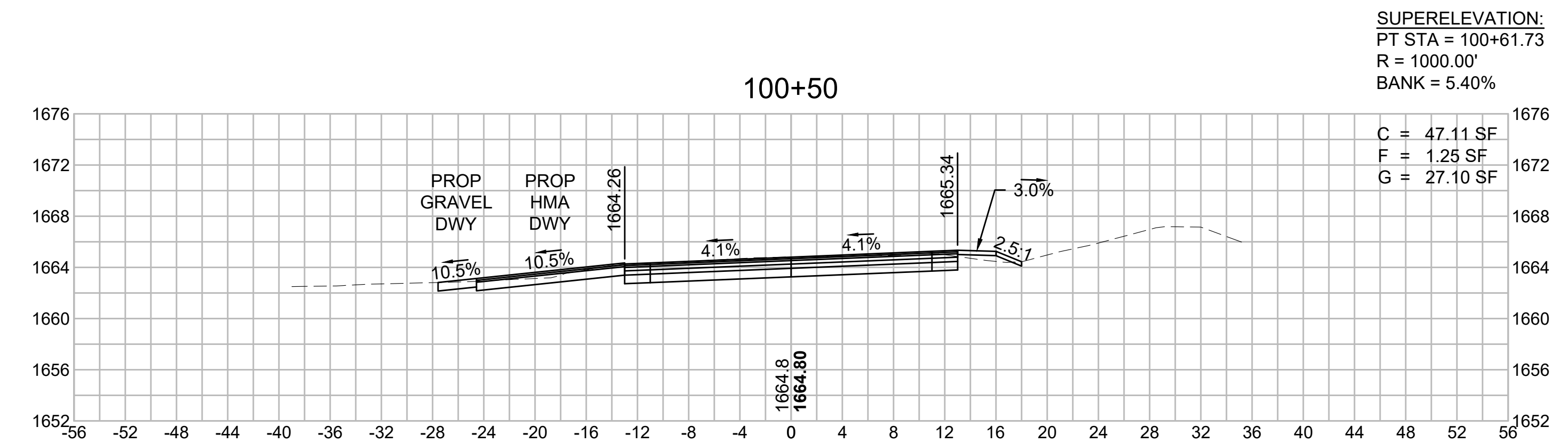
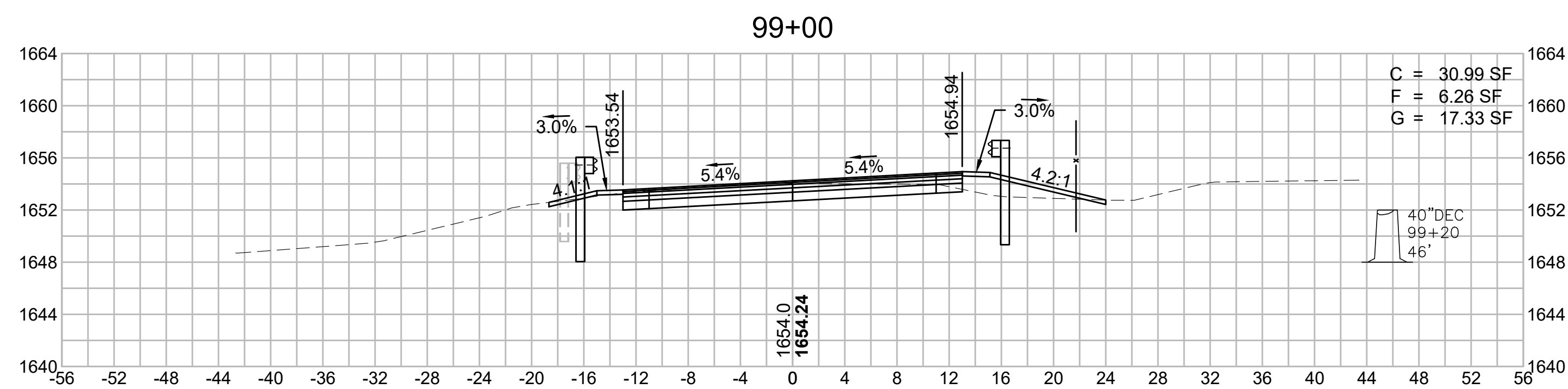
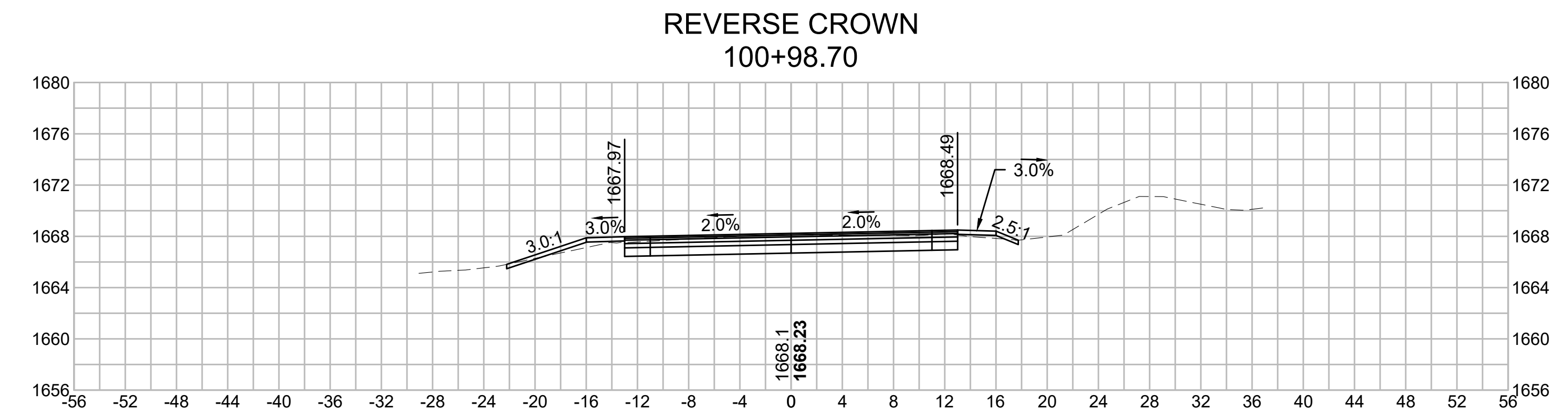
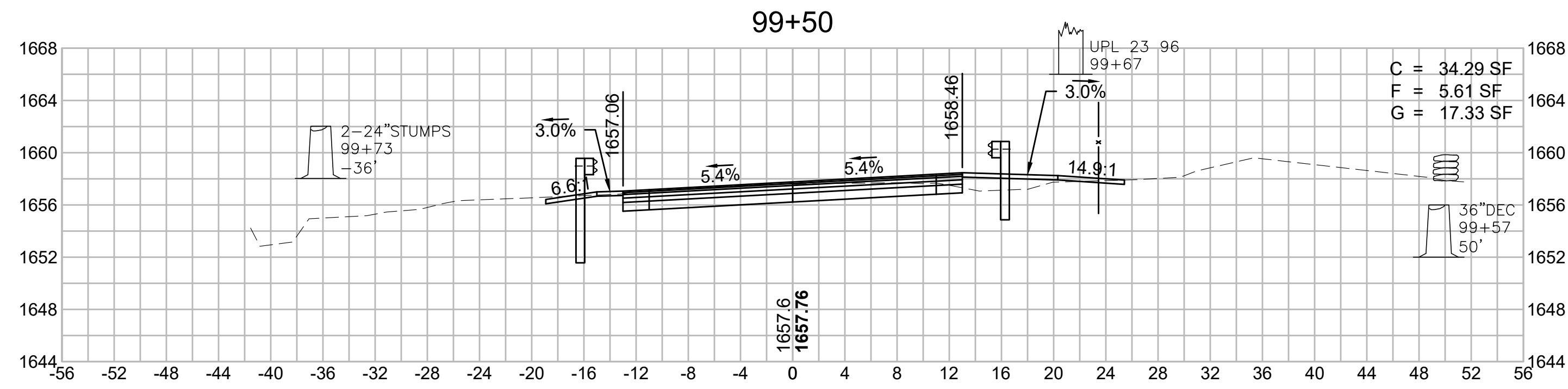
SUPERELEVATION:
PC STA = 97+39.29
R = 1000.00'
BANK = 5.40%



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	142	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 39**

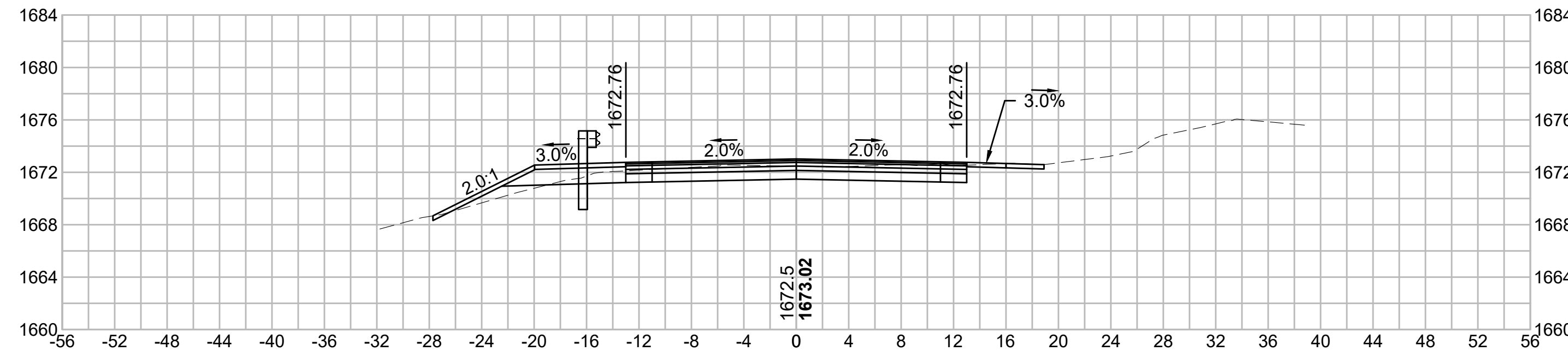


**WORTHINGTON
ROUTE 143**

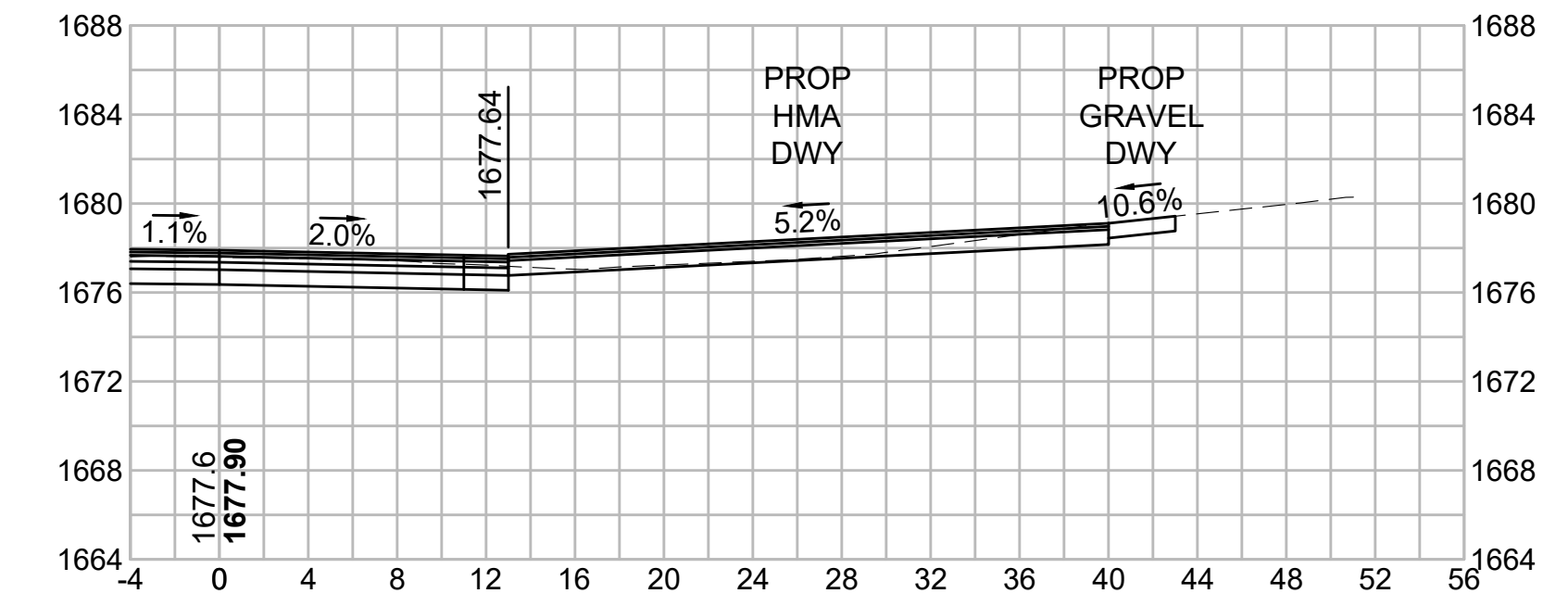
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	143	191

**OLD NORTH ROAD
CROSS SECTIONS - 40**

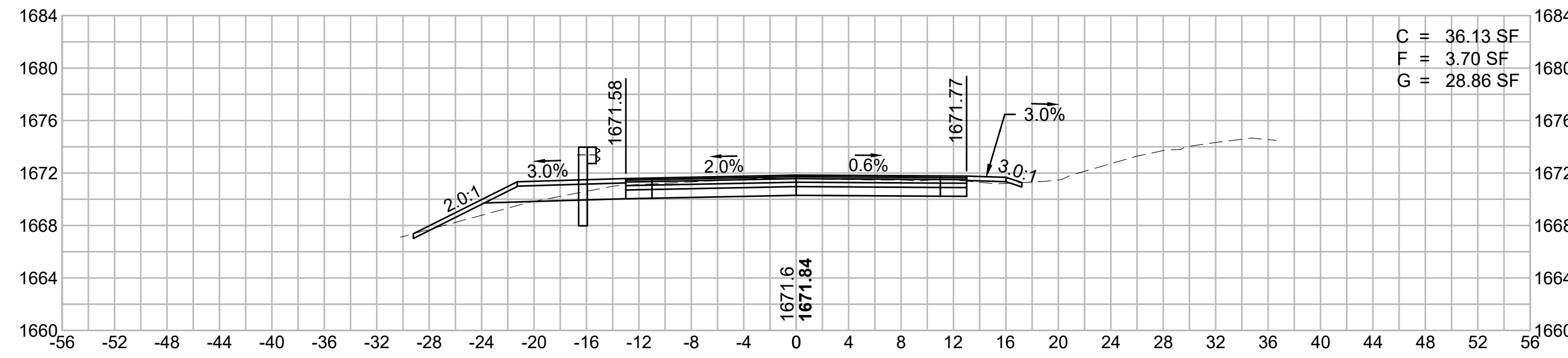
**BEGIN NORMAL CROWN
101+66.74**



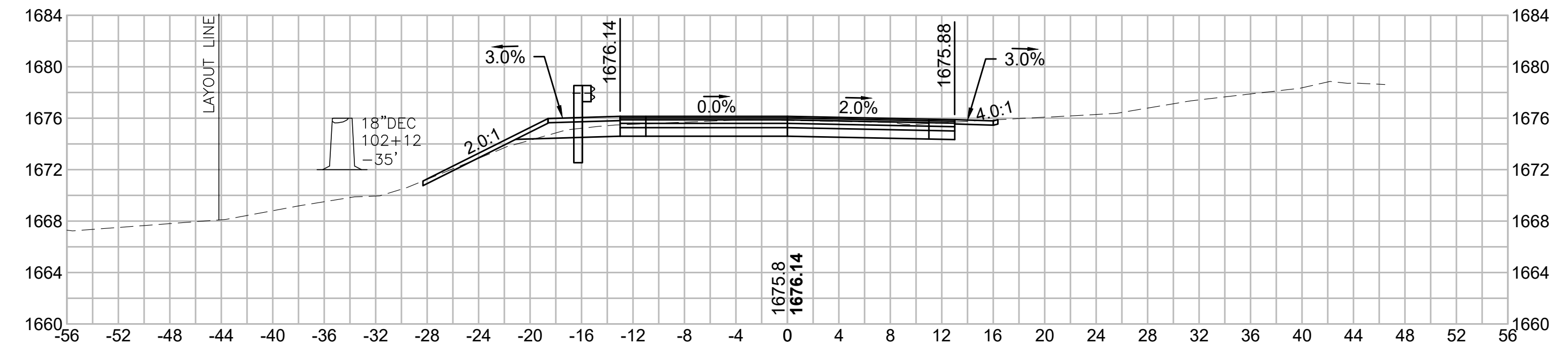
102+36



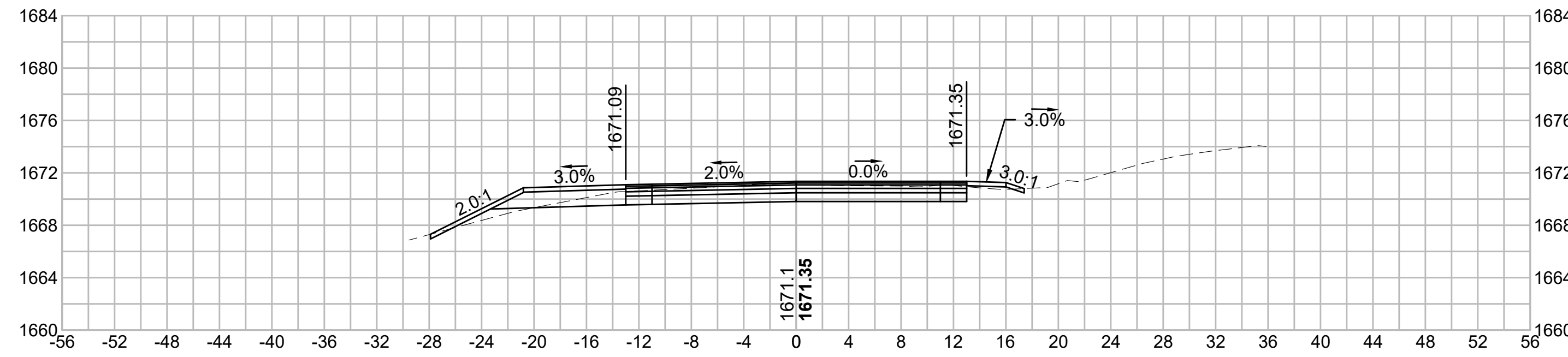
101+50



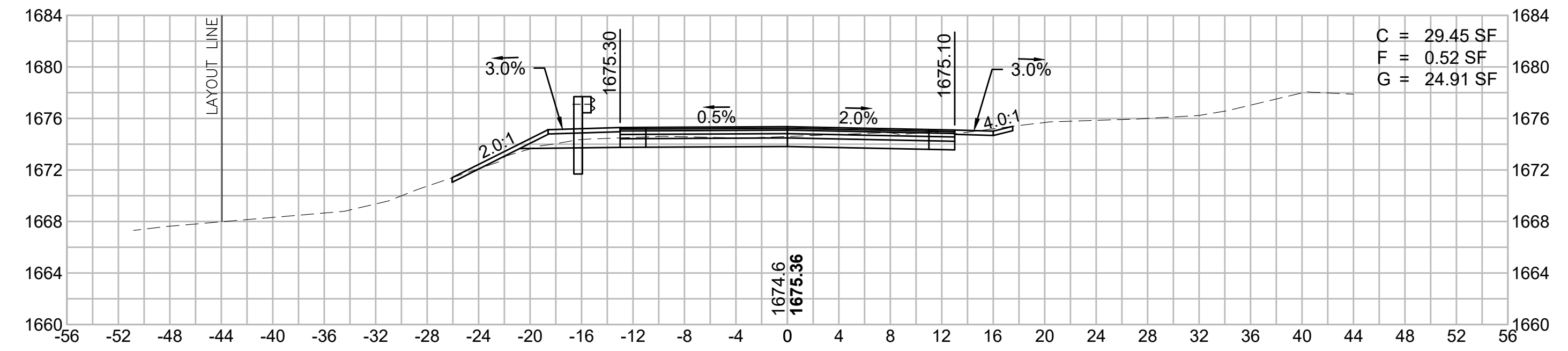
**LEVEL CROWN
102+11.10**



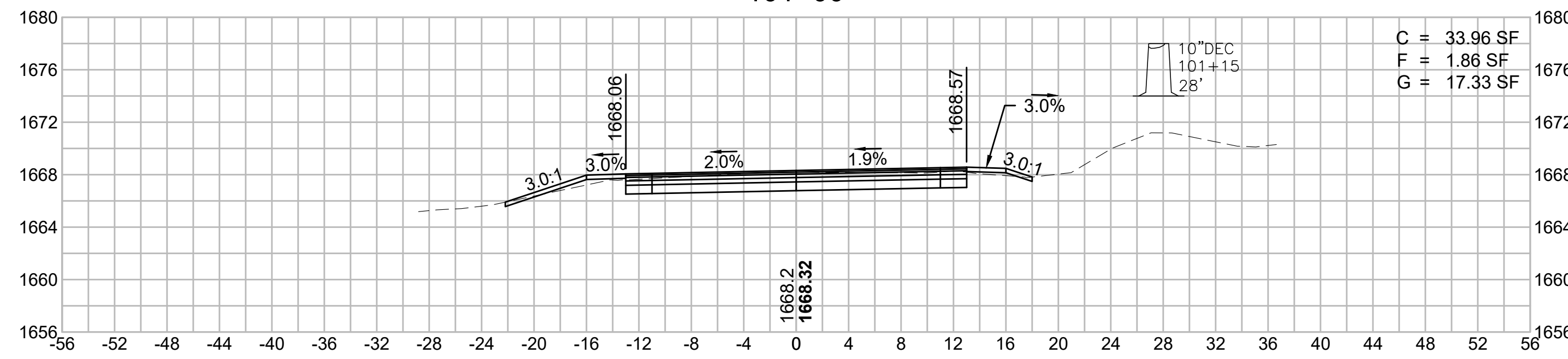
**LEVEL CROWN
101+43.07**



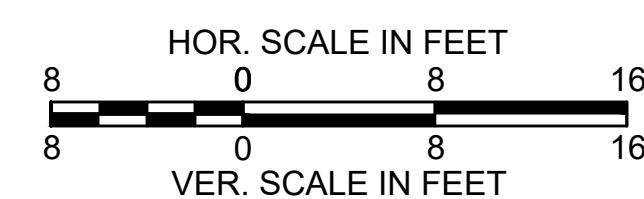
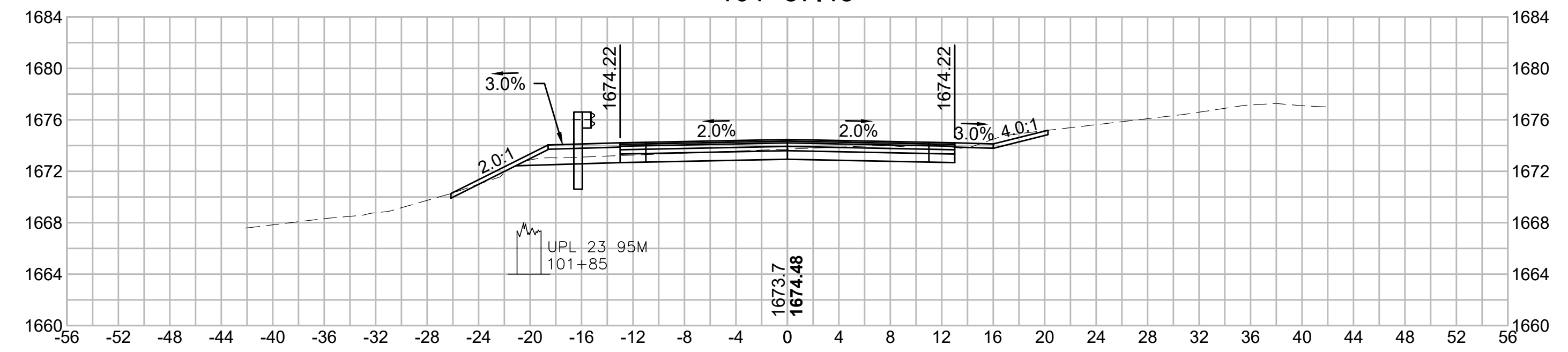
102+00



101+00



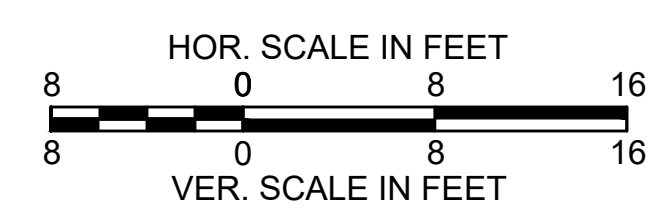
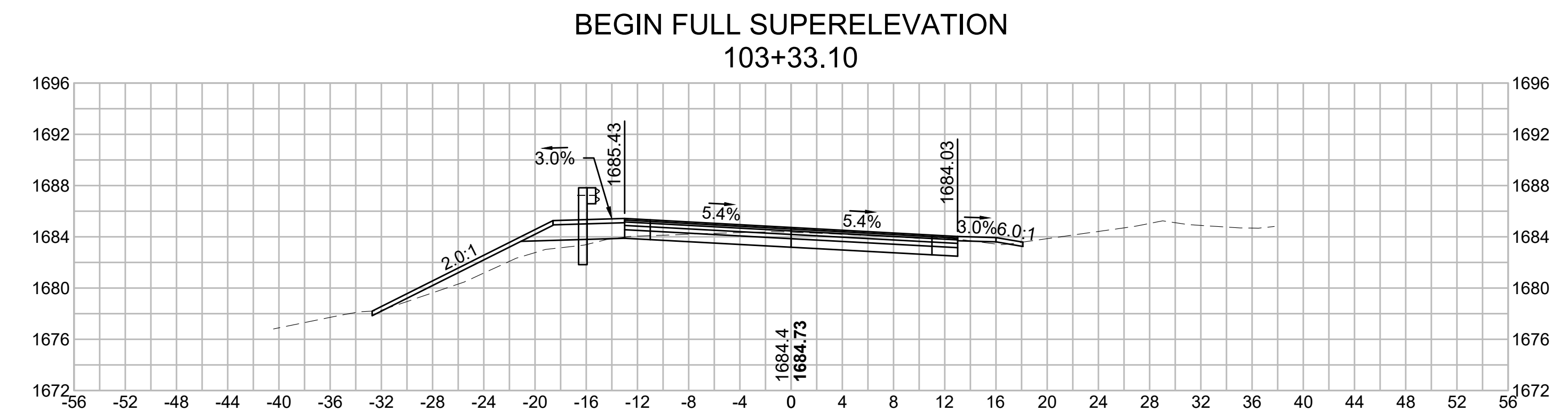
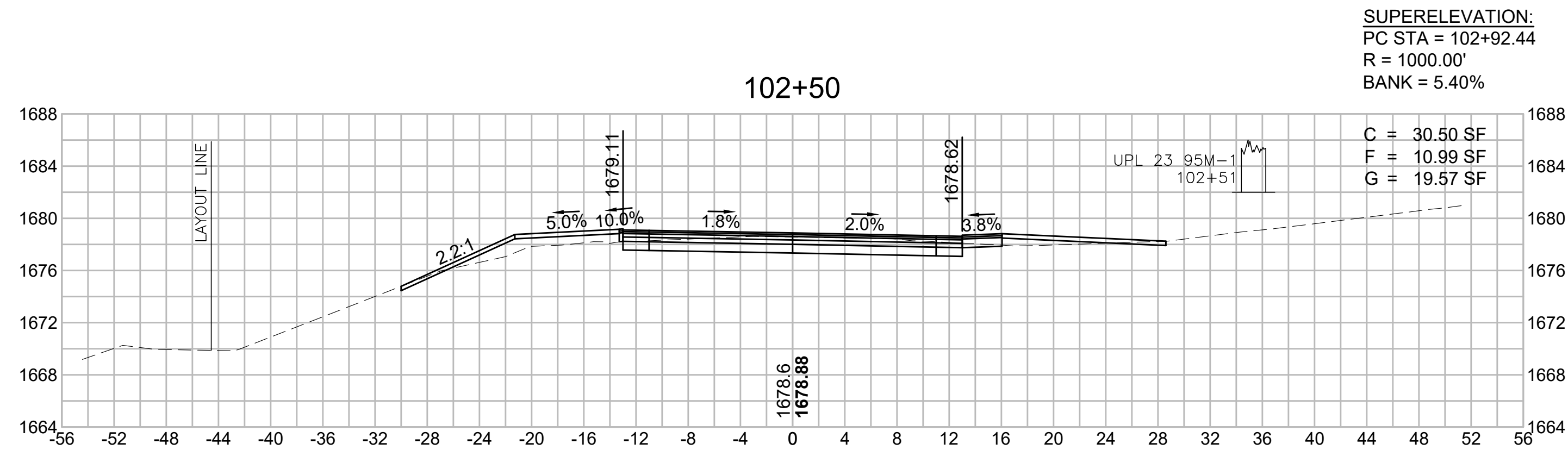
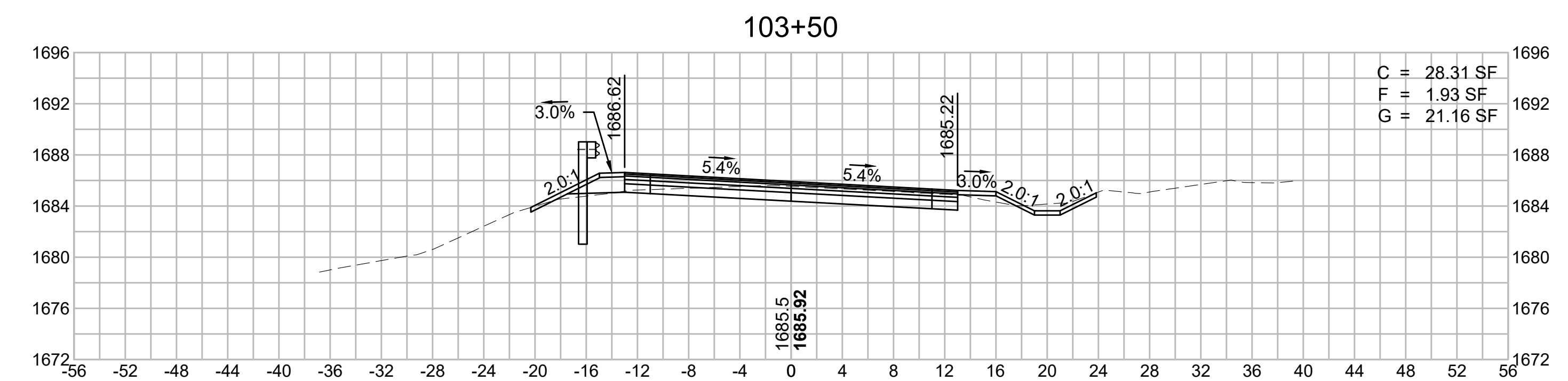
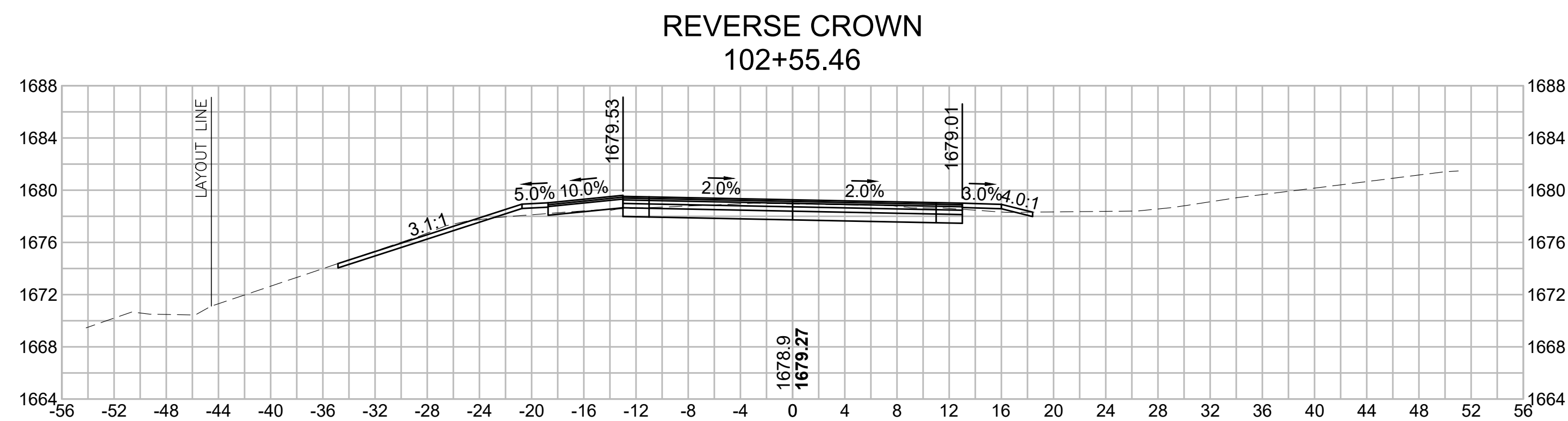
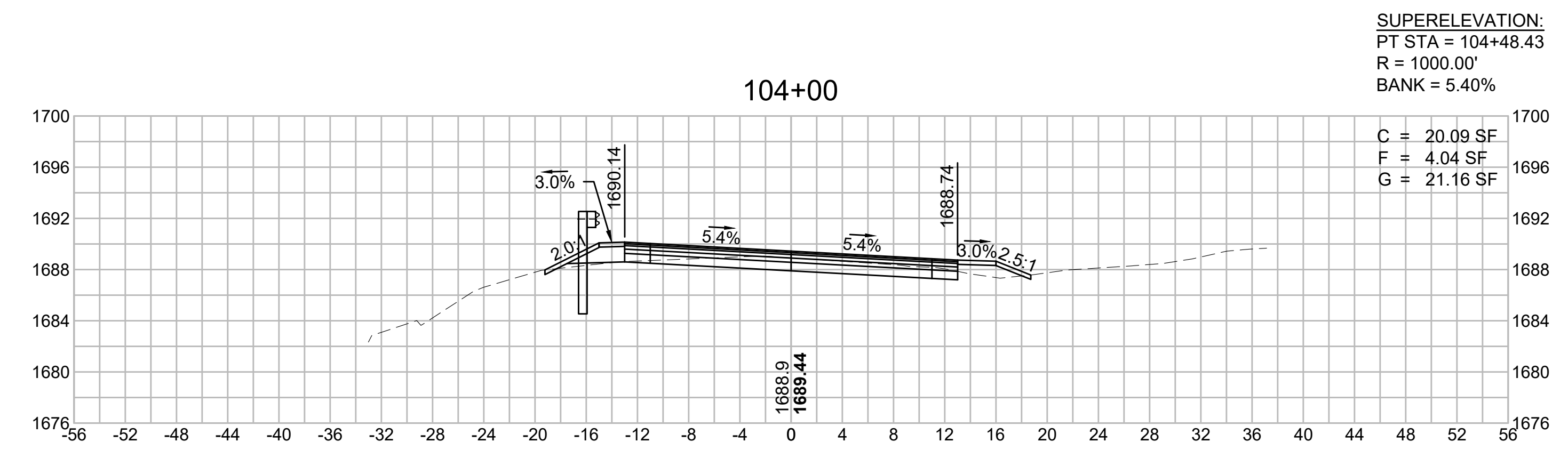
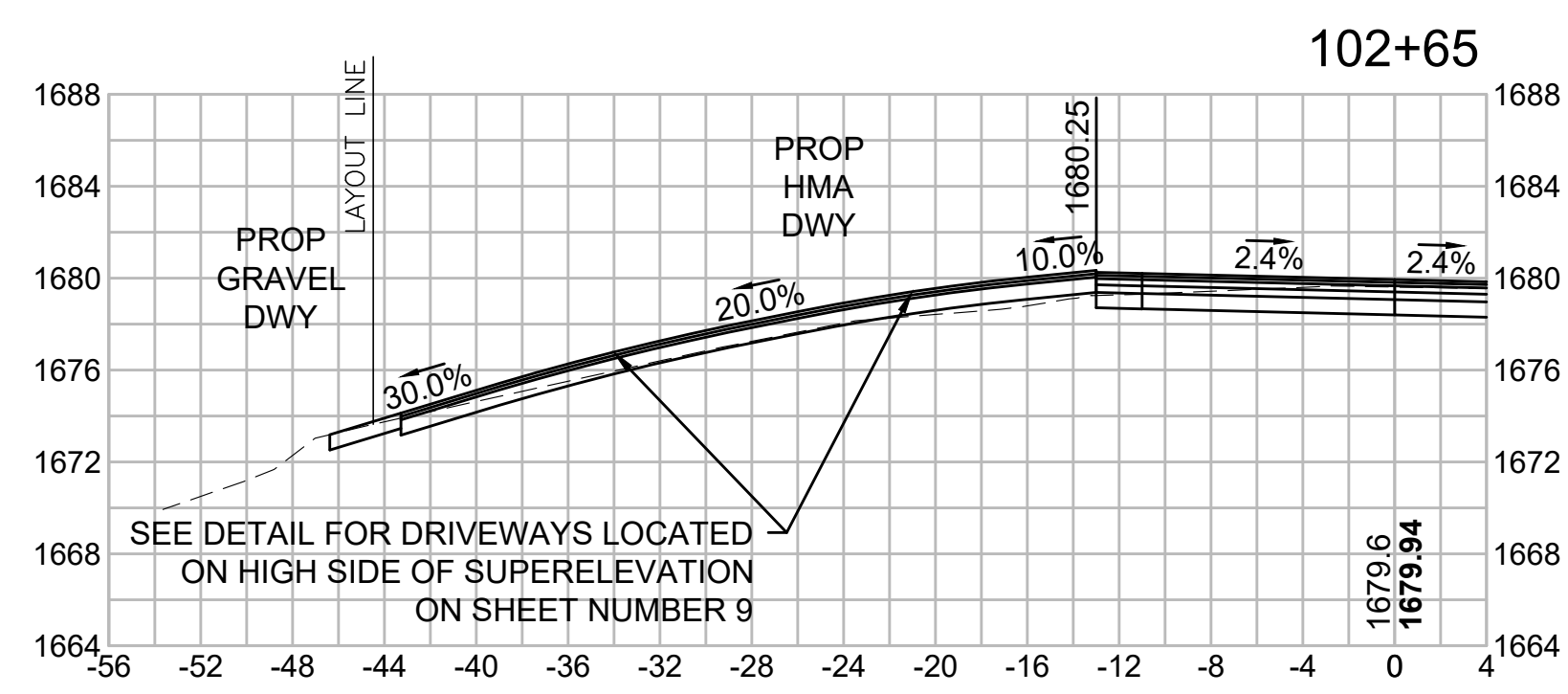
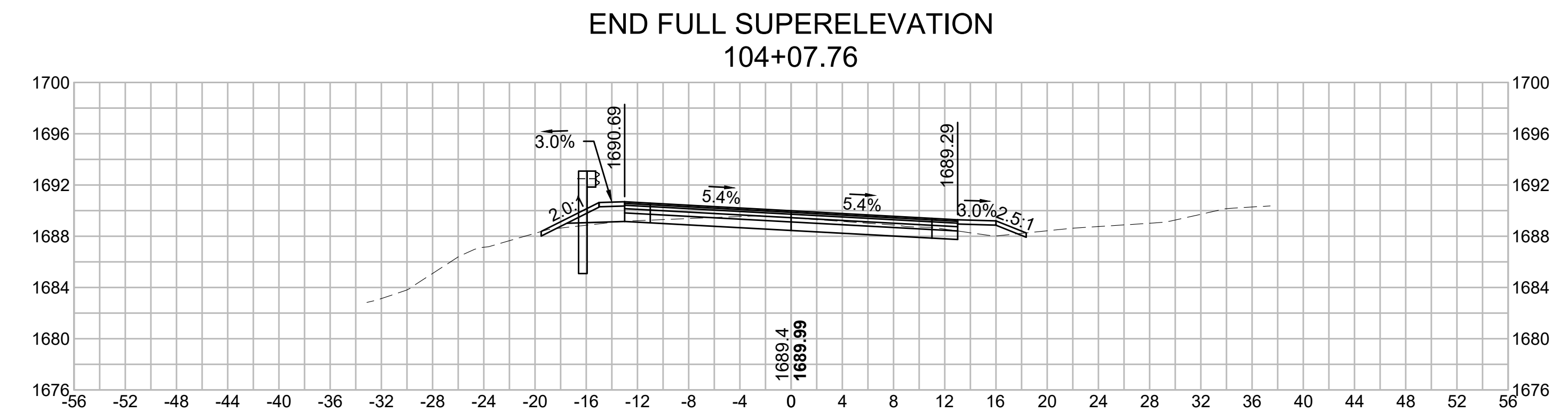
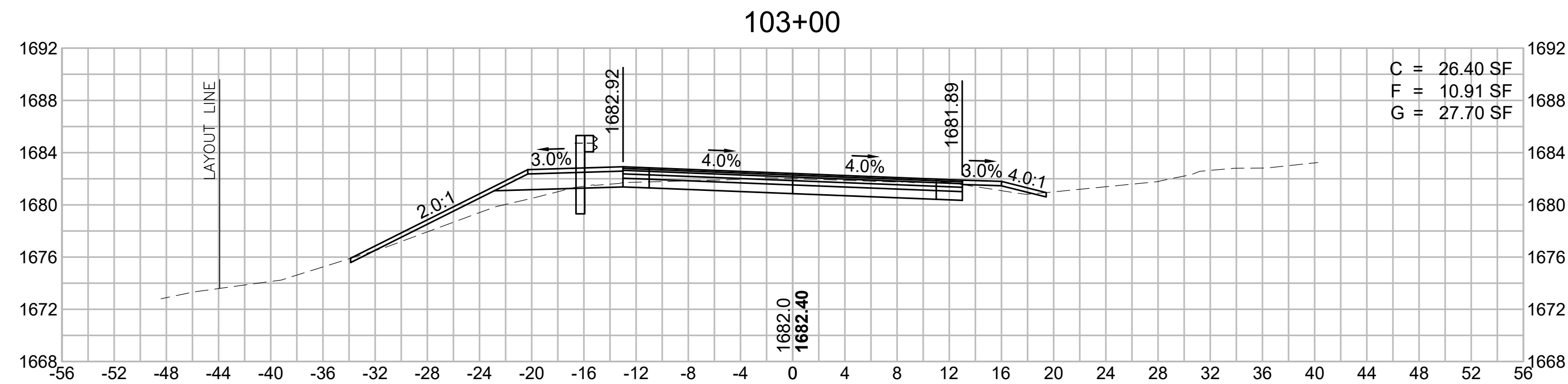
**END NORMAL CROWN
101+87.43**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	144	191

**OLD NORTH ROAD
CROSS SECTIONS - 41**

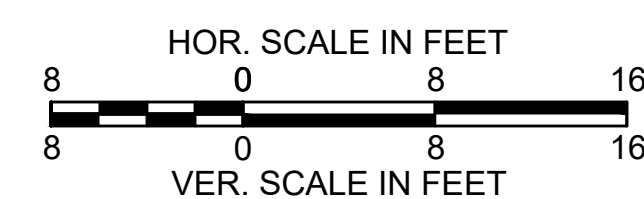
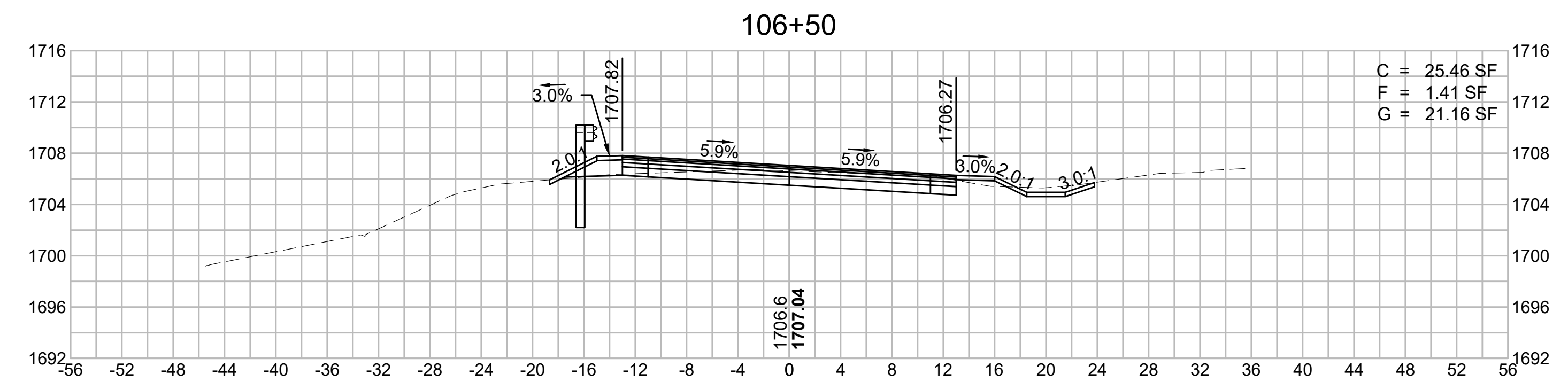
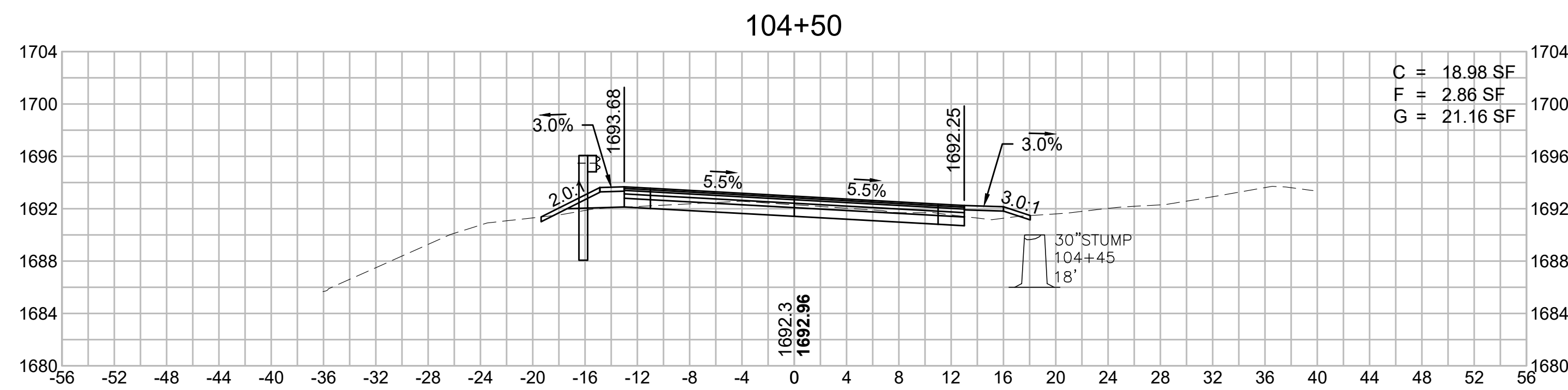
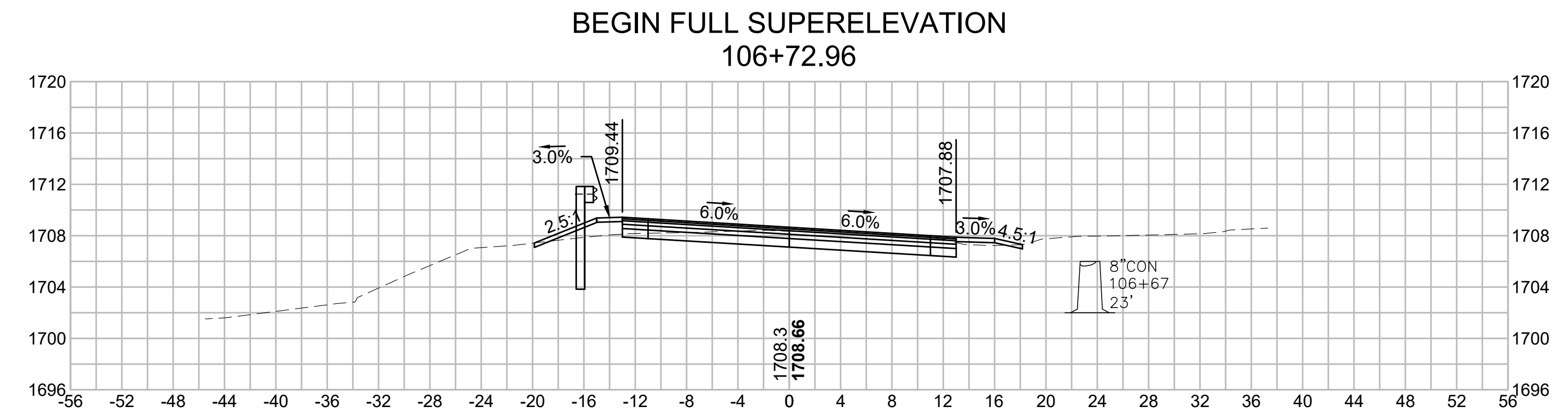
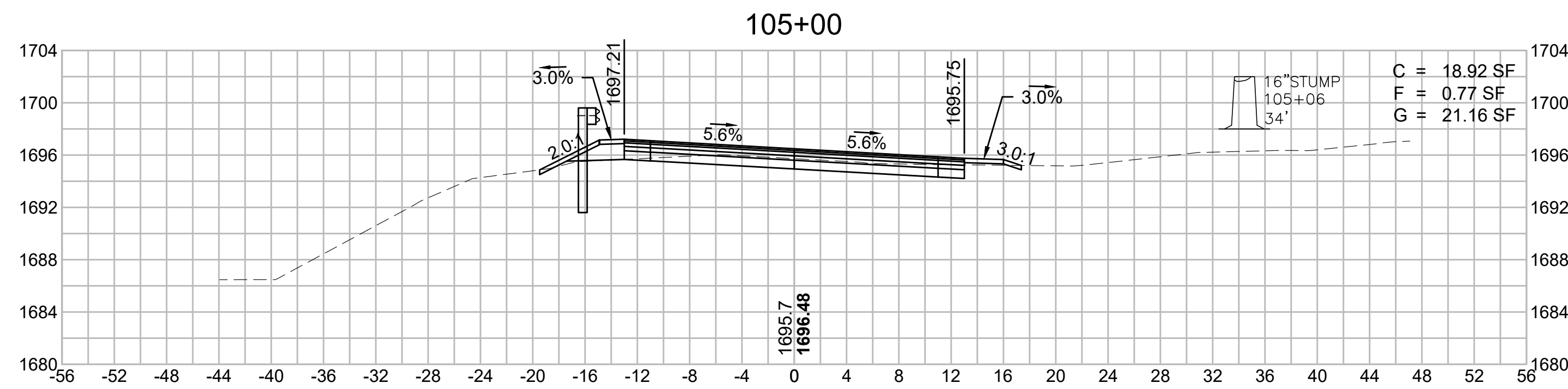
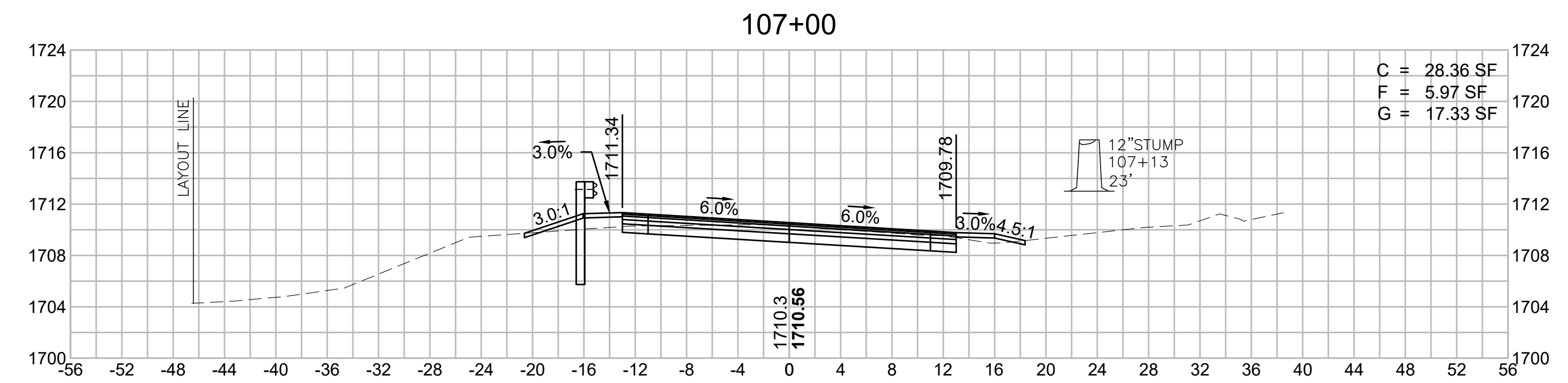
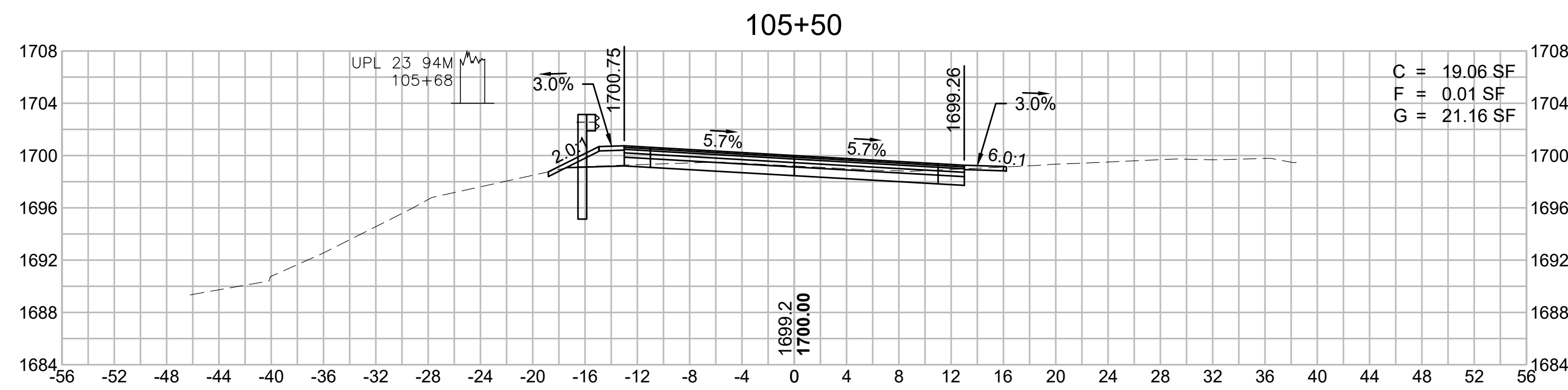
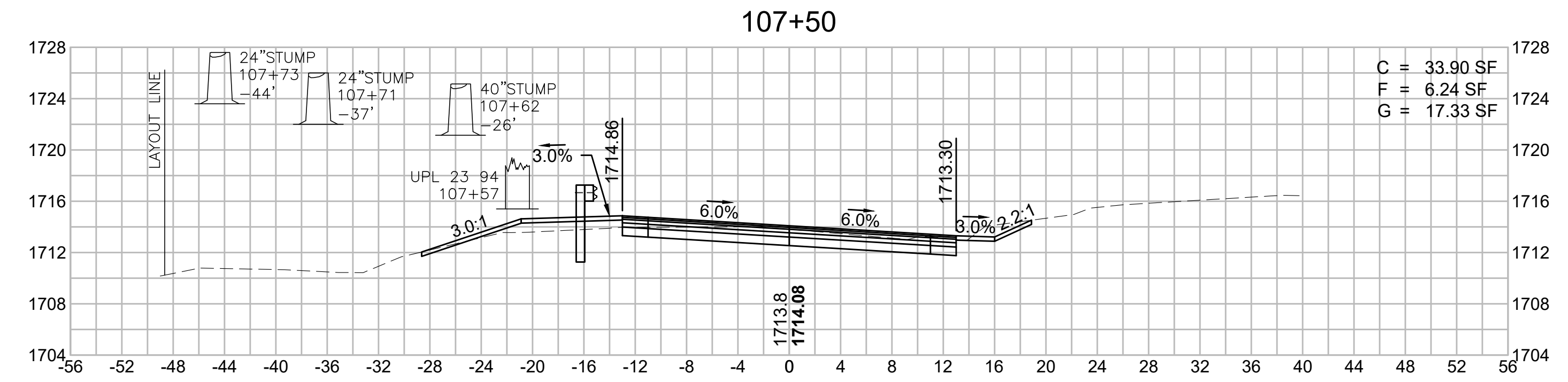
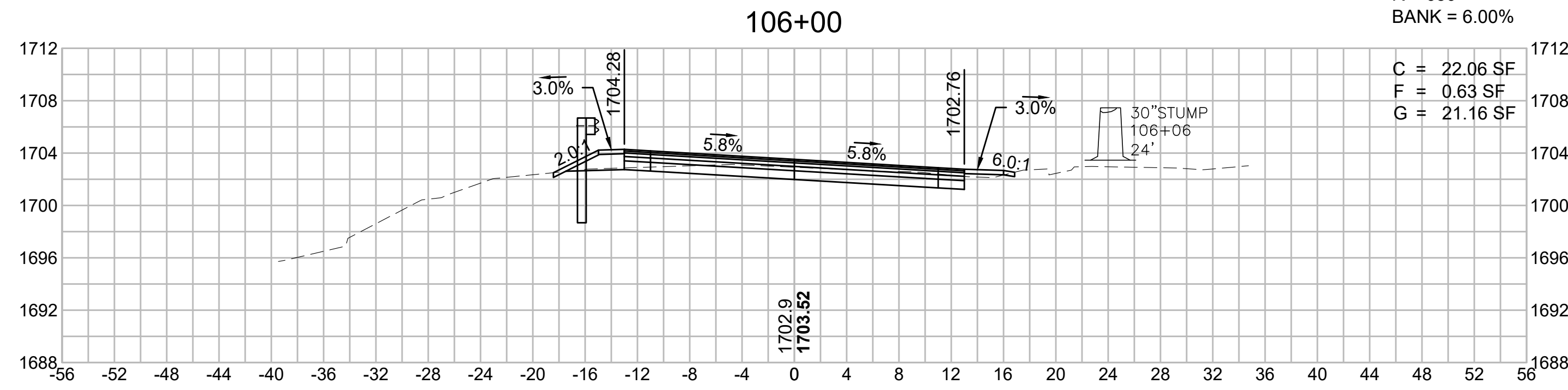


**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	145	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 42**

SUPERELEVATION:
PC STA = 106+28.63
R = 650'
BANK = 6.00%



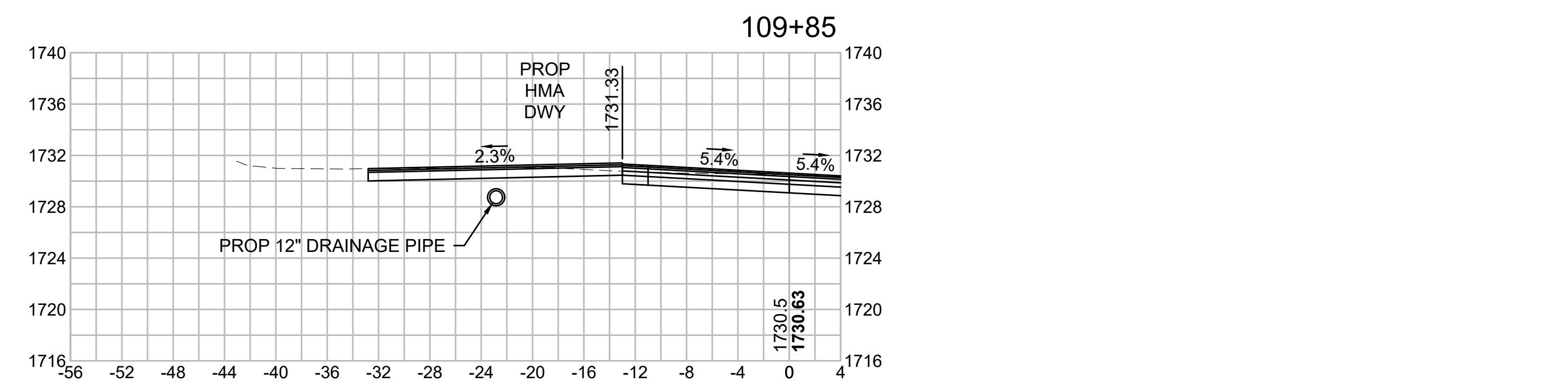
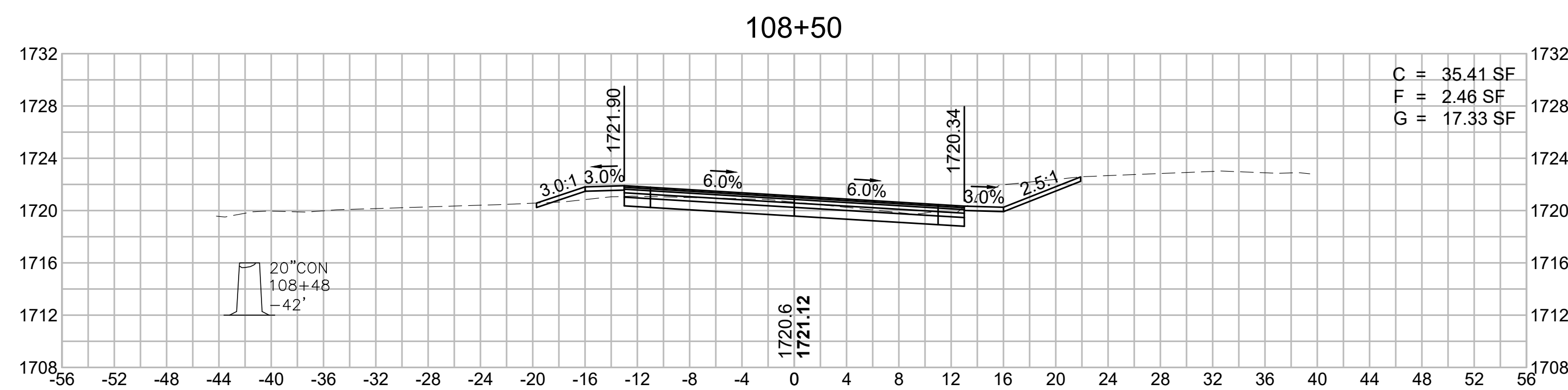
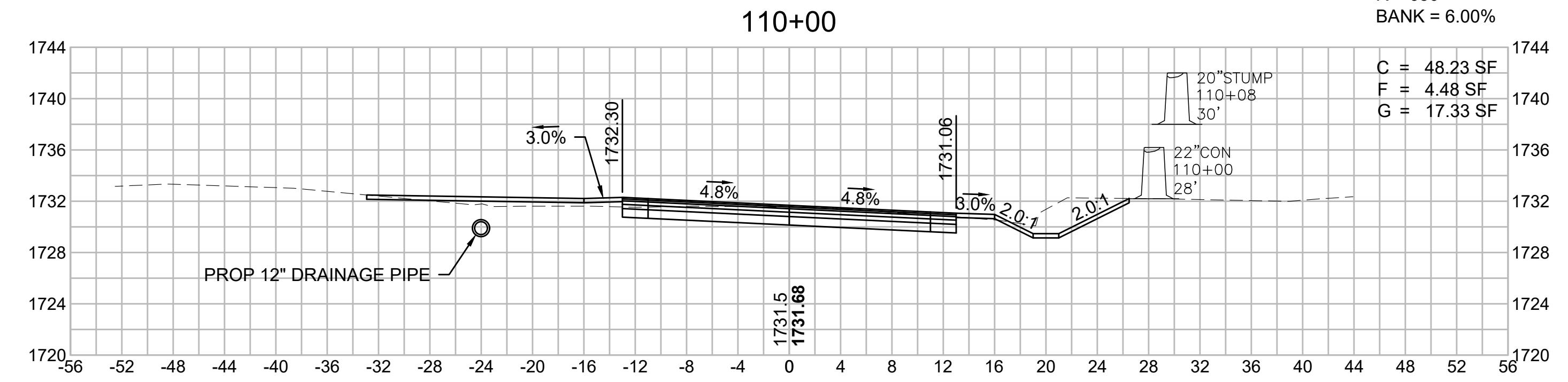
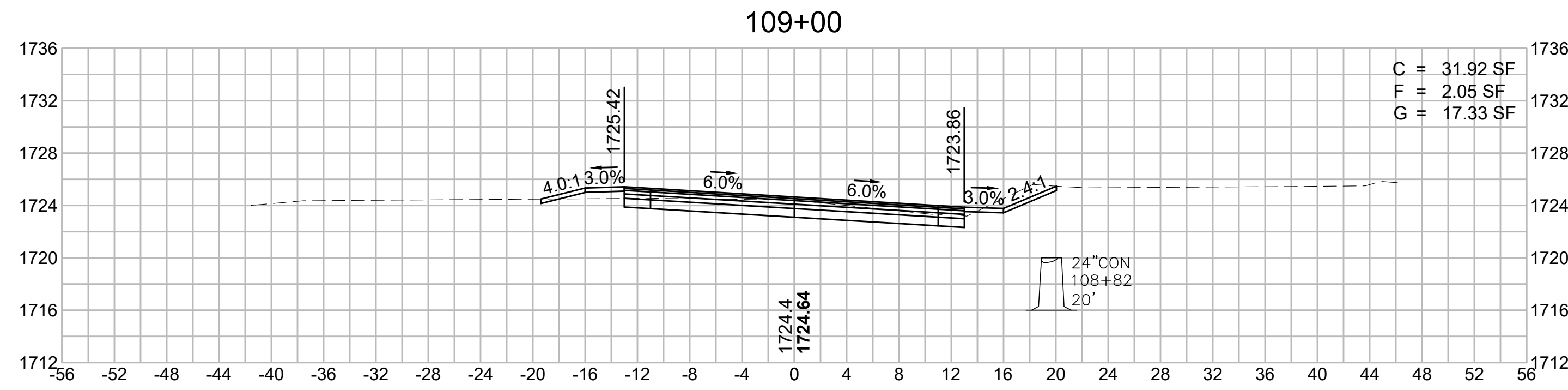
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	146	191
PROJECT FILE NO. 609287			

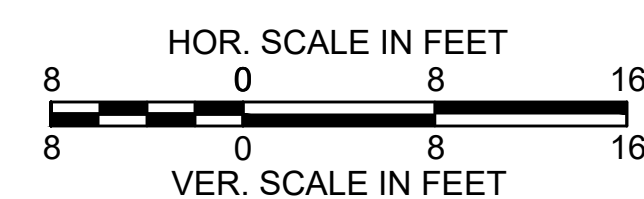
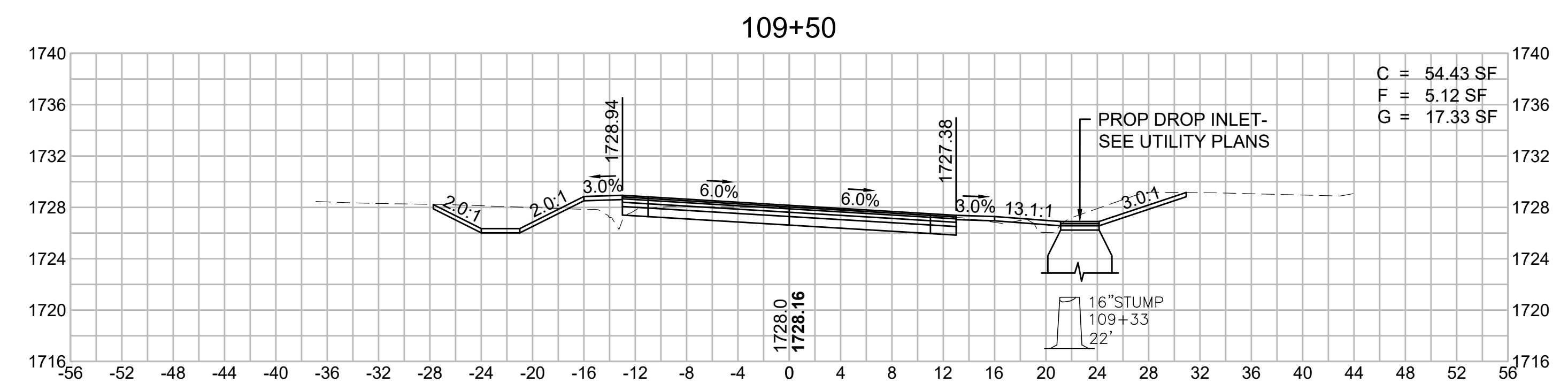
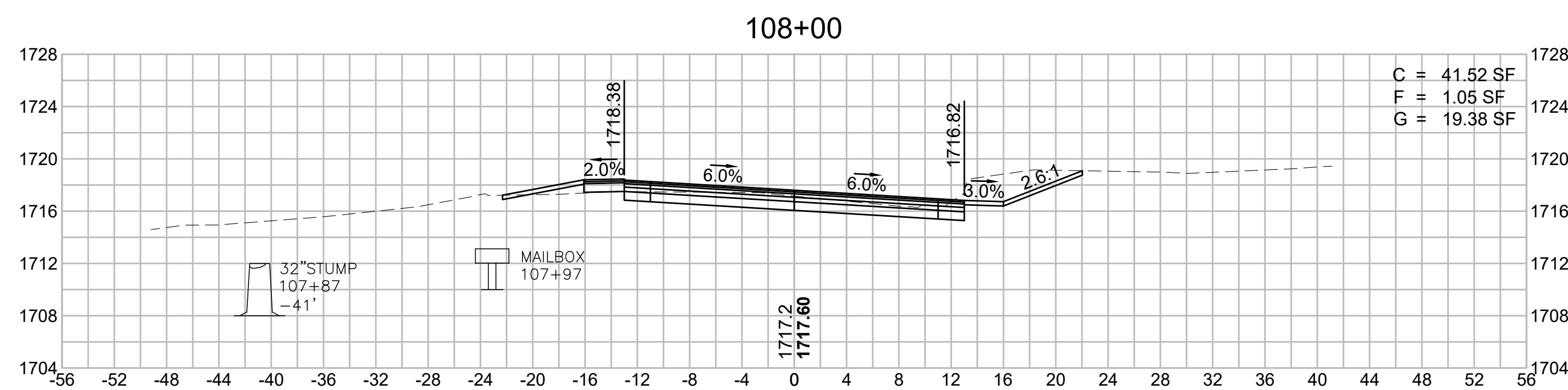
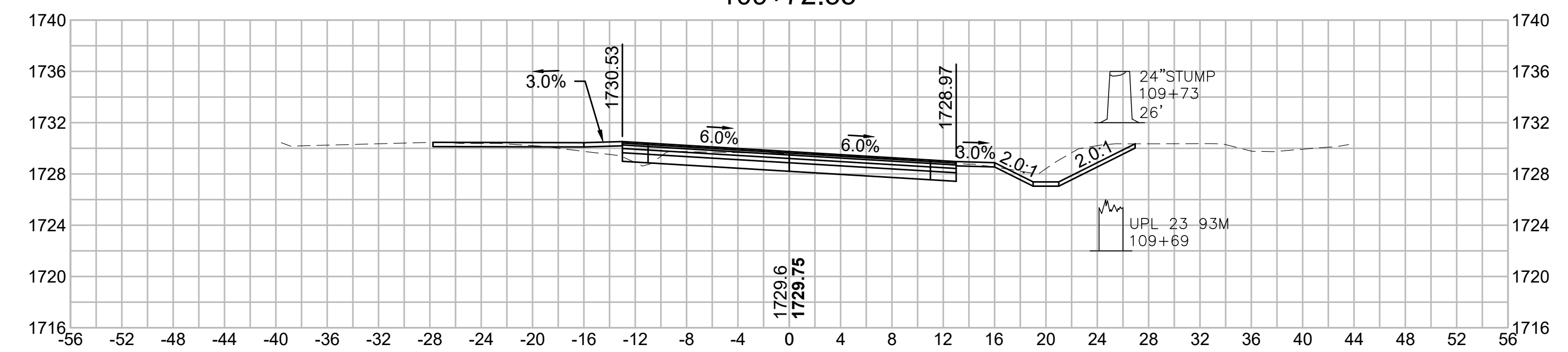
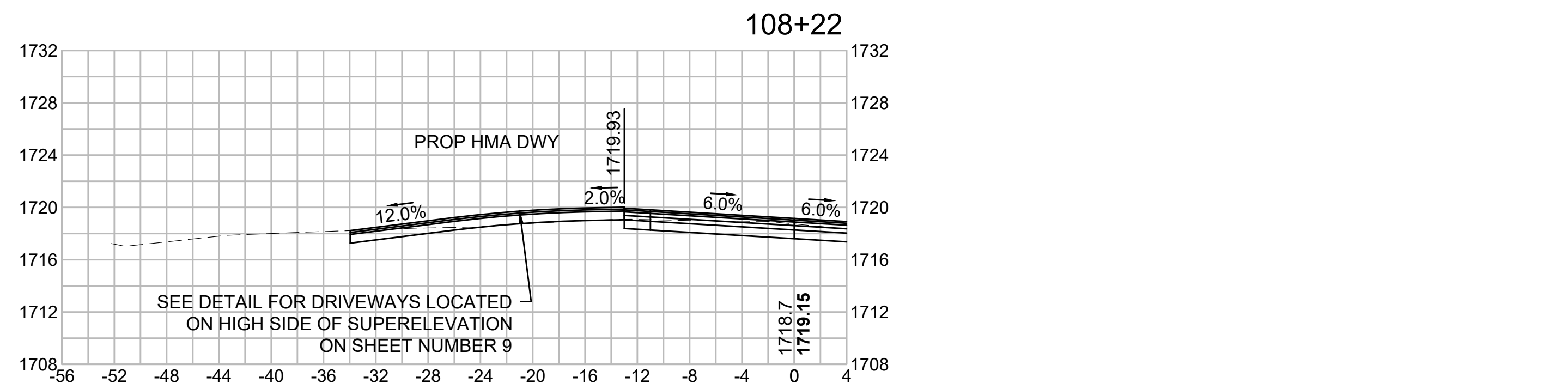
**OLD NORTH ROAD
CROSS SECTIONS - 43**

SUPERELEVATION:
PT STA = 110+16.88
R = 650'
BANK = 6.00%

C = 48.23 SF
F = 4.48 SF
G = 17.33 SF



**END FULL SUPERELEVATION
109+72.55**

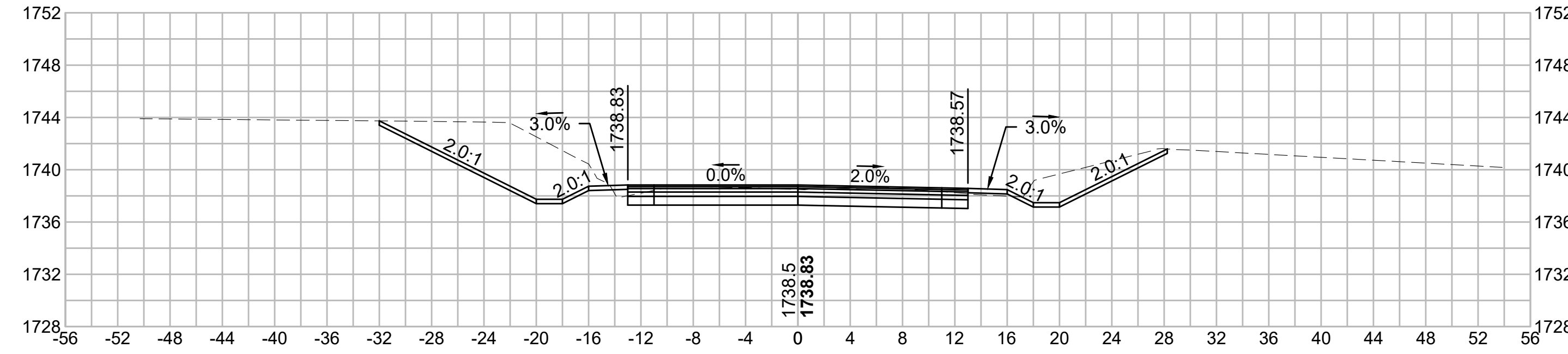


**WORTHINGTON
ROUTE 143**

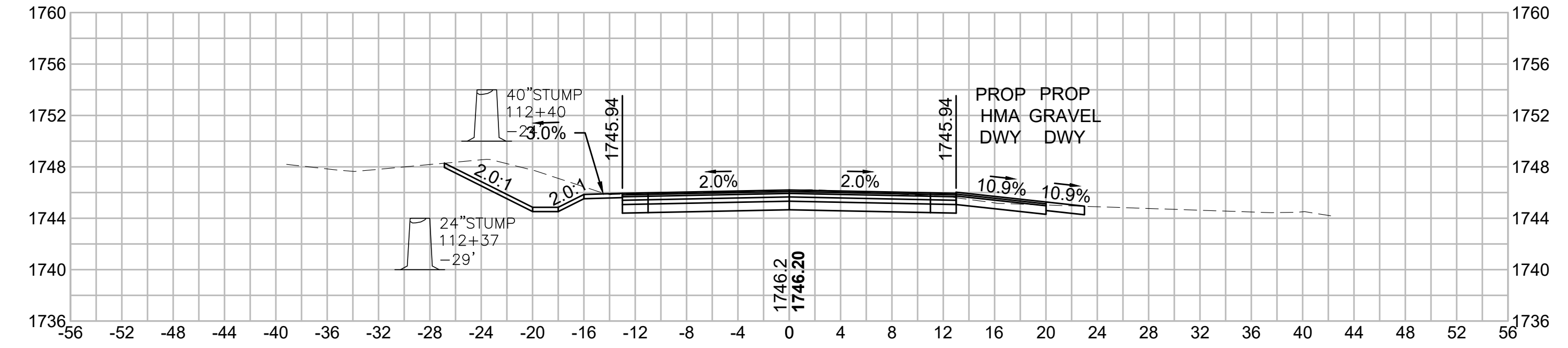
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	147	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 44**

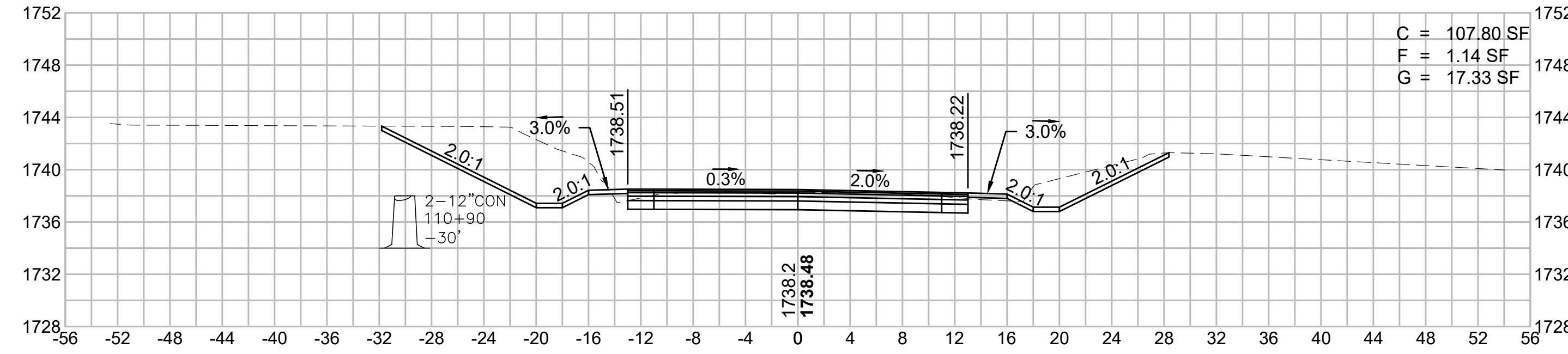
**LEVEL CROWN
111+05.55**



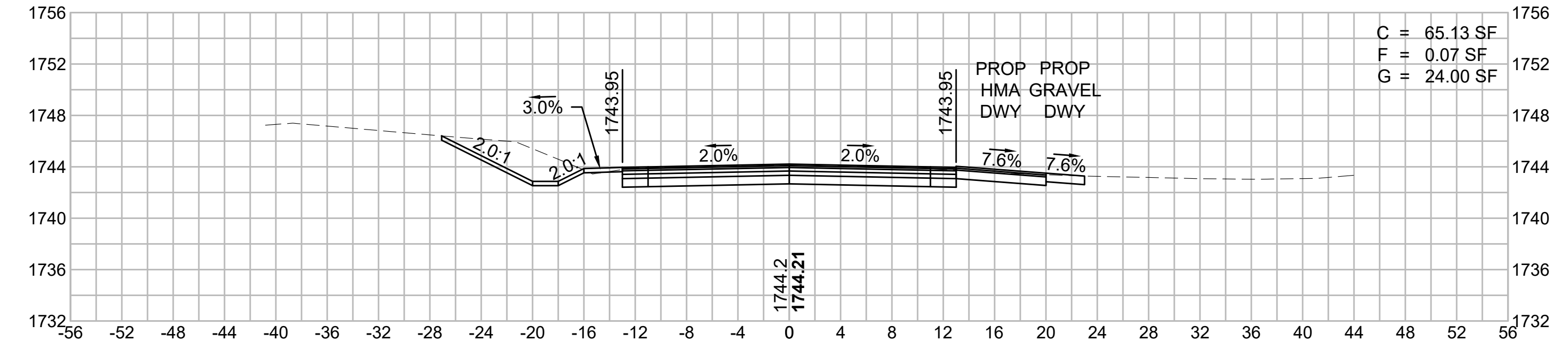
**END NORMAL CROWN
112+40.23**



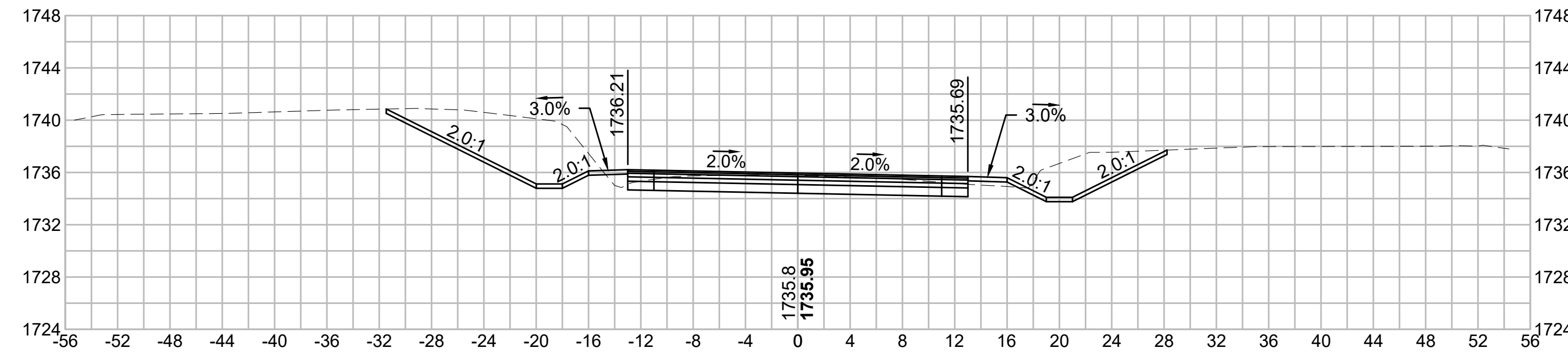
111+00



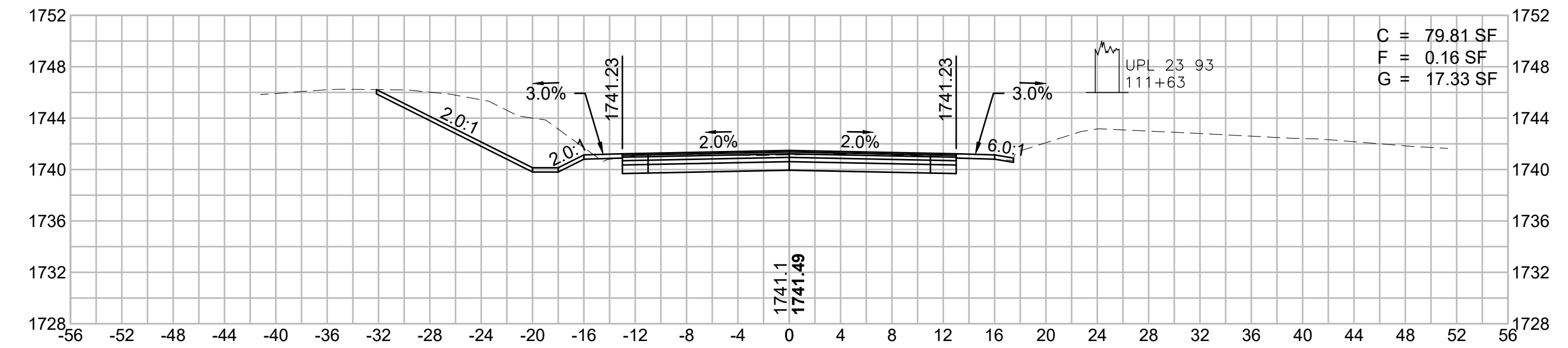
112+00



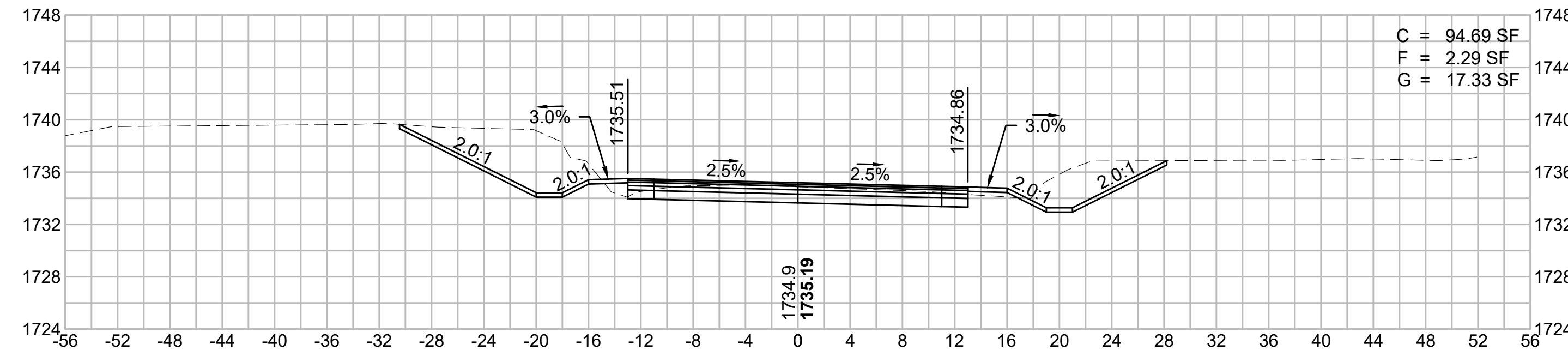
**REVERSE CROWN
110+61.21**



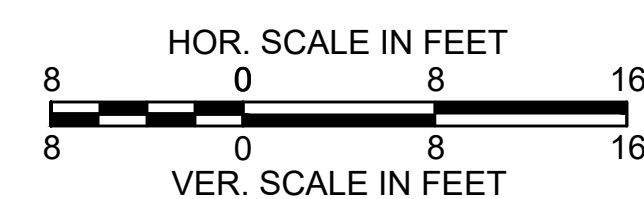
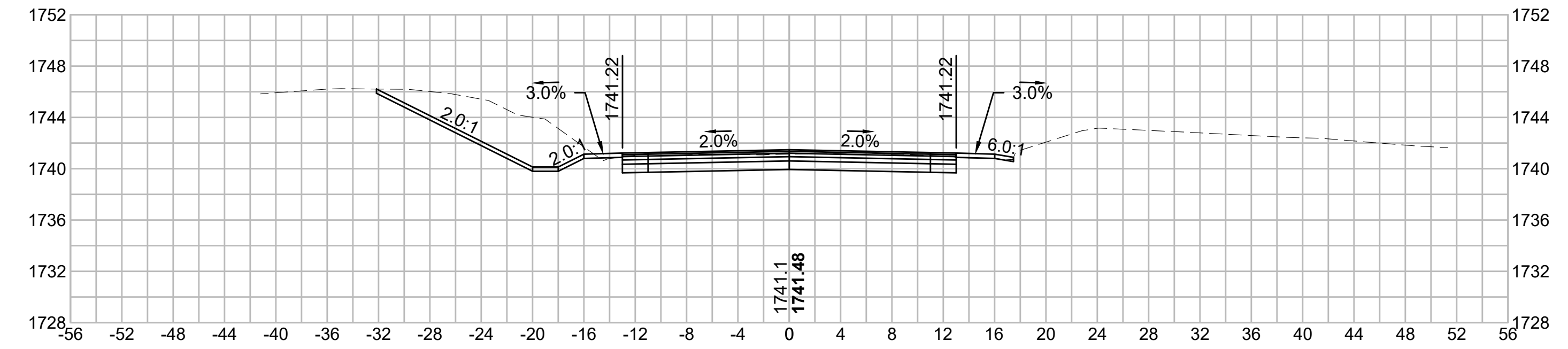
111+50



110+50



**BEGIN NORMAL CROWN
111+49.88**

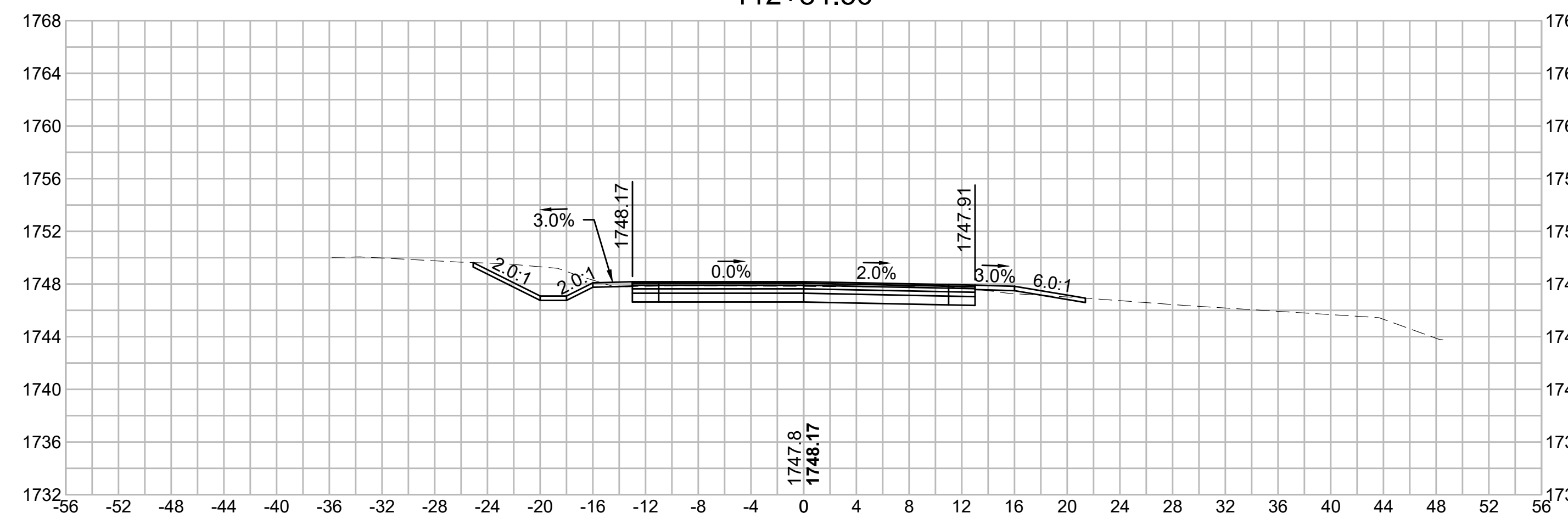


**WORTHINGTON
ROUTE 143**

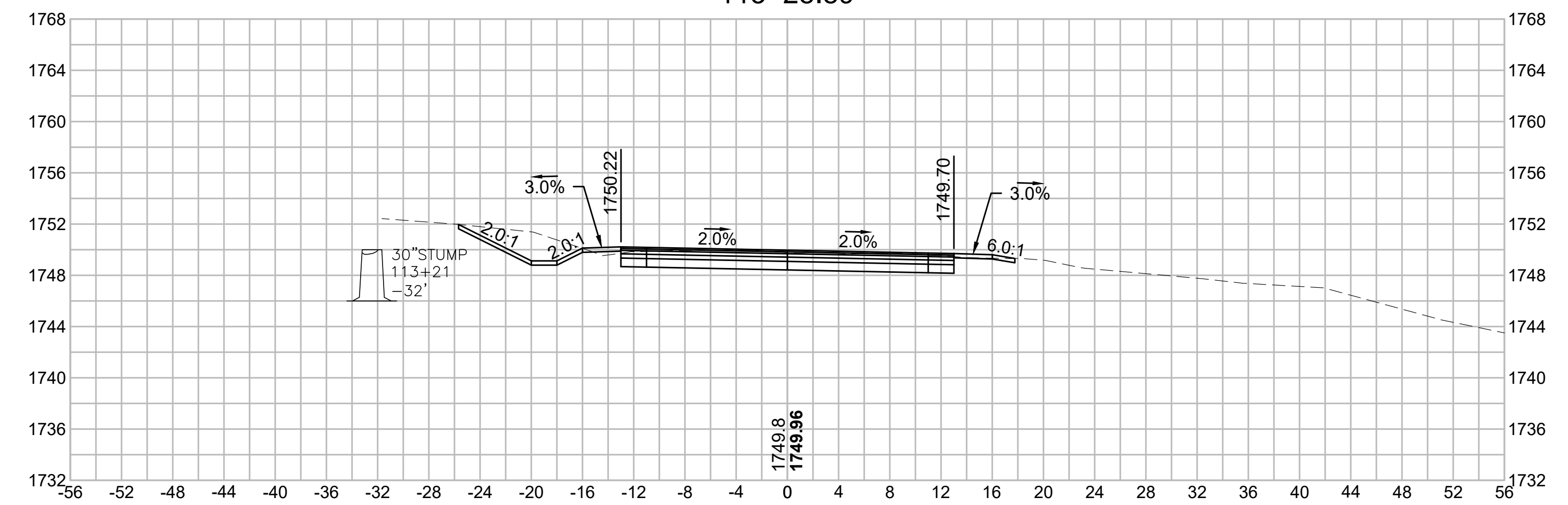
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	148	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 45**

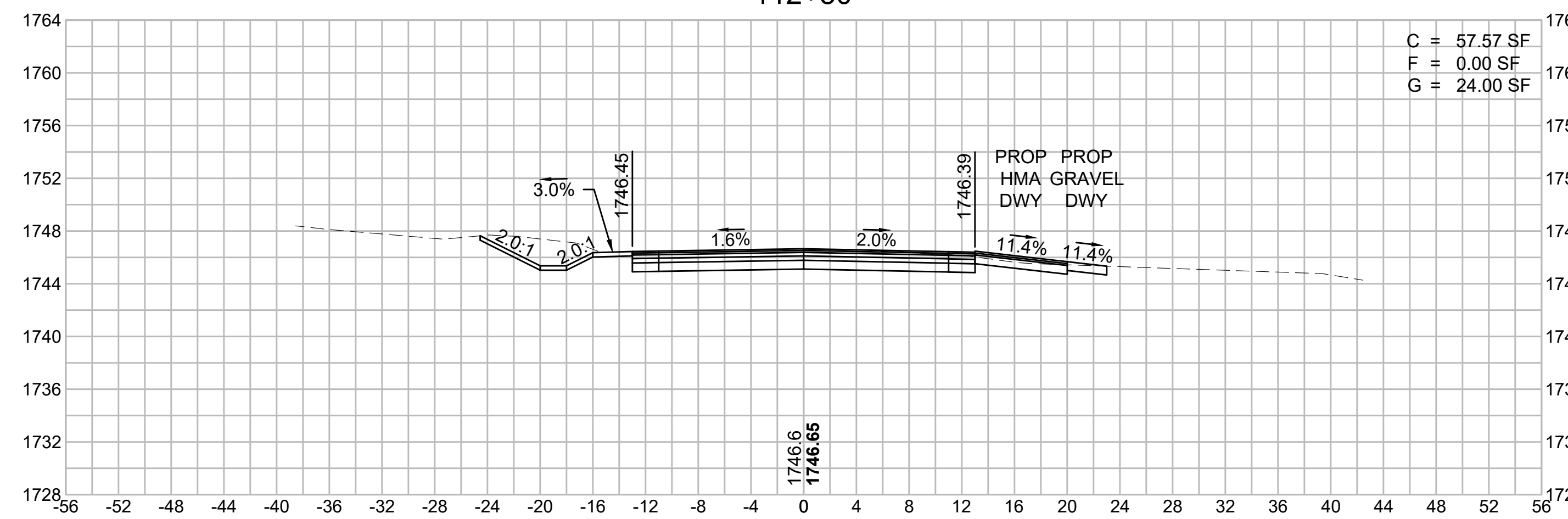
**LEVEL CROWN
112+84.56**



**REVERSE CROWN
113+28.89**

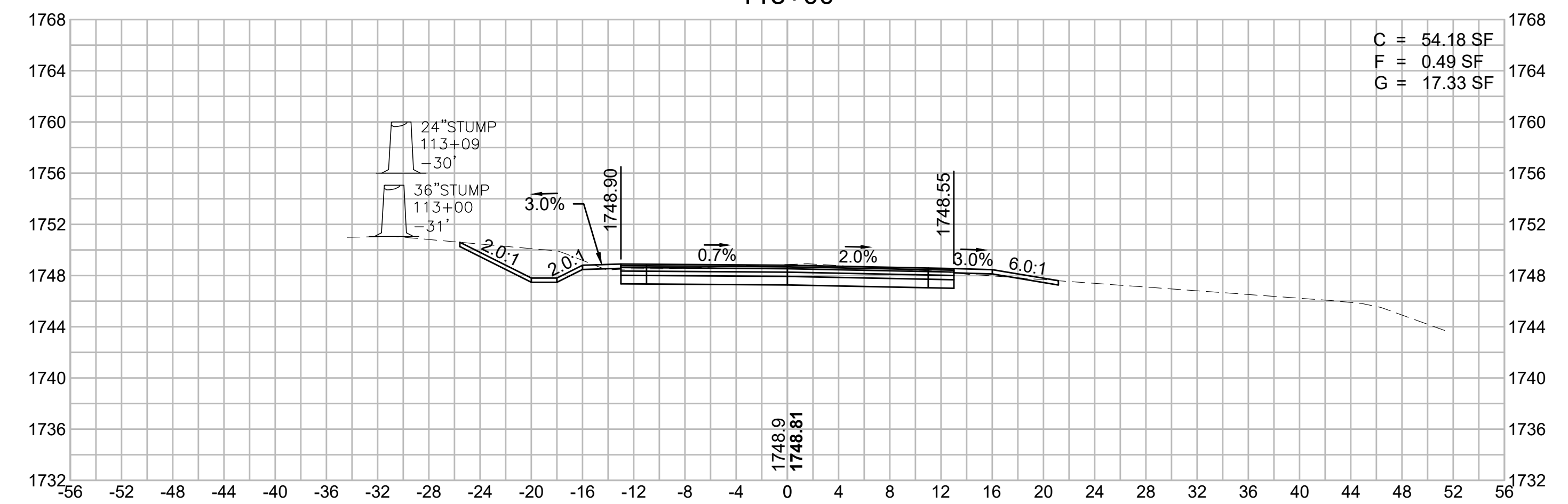


112+50

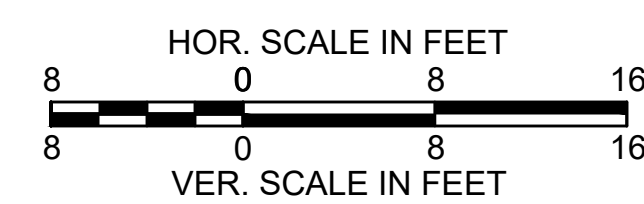


C = 57.57 SF
F = 0.00 SF
G = 24.00 SF

113+00



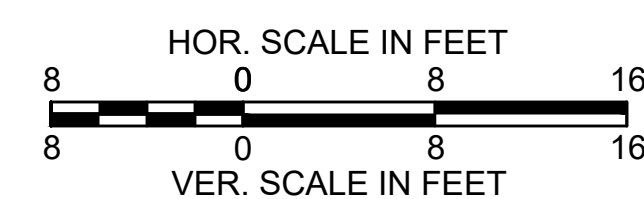
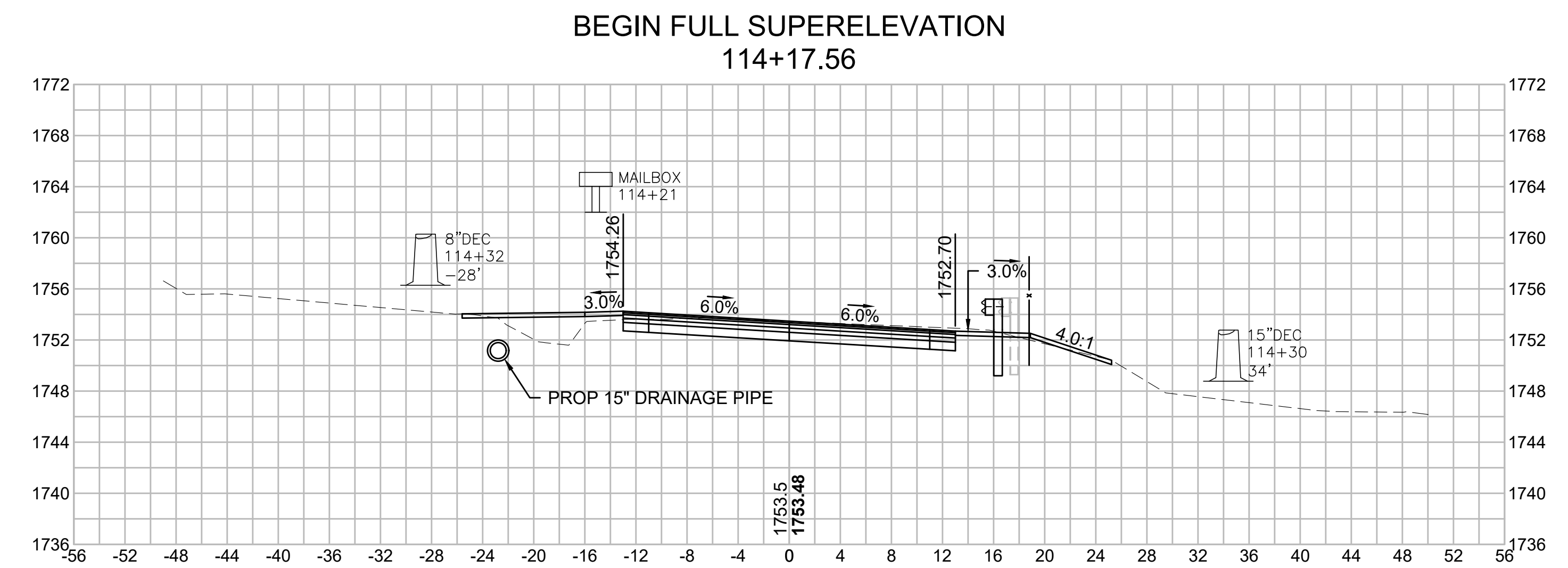
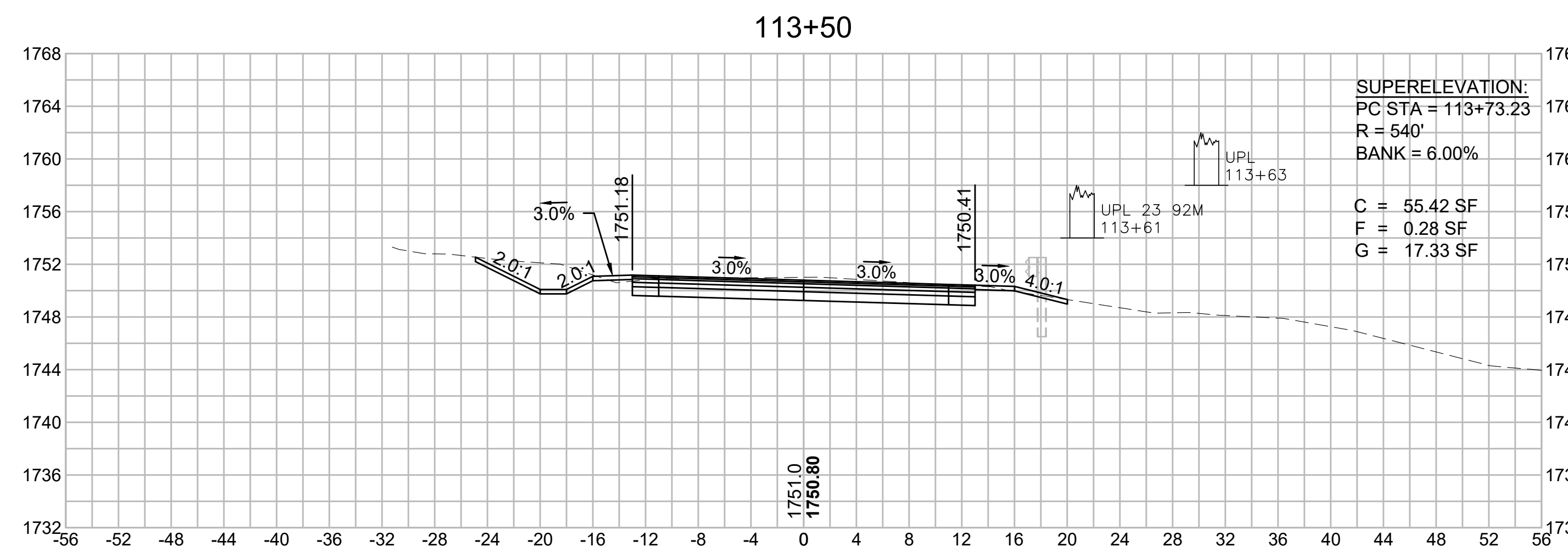
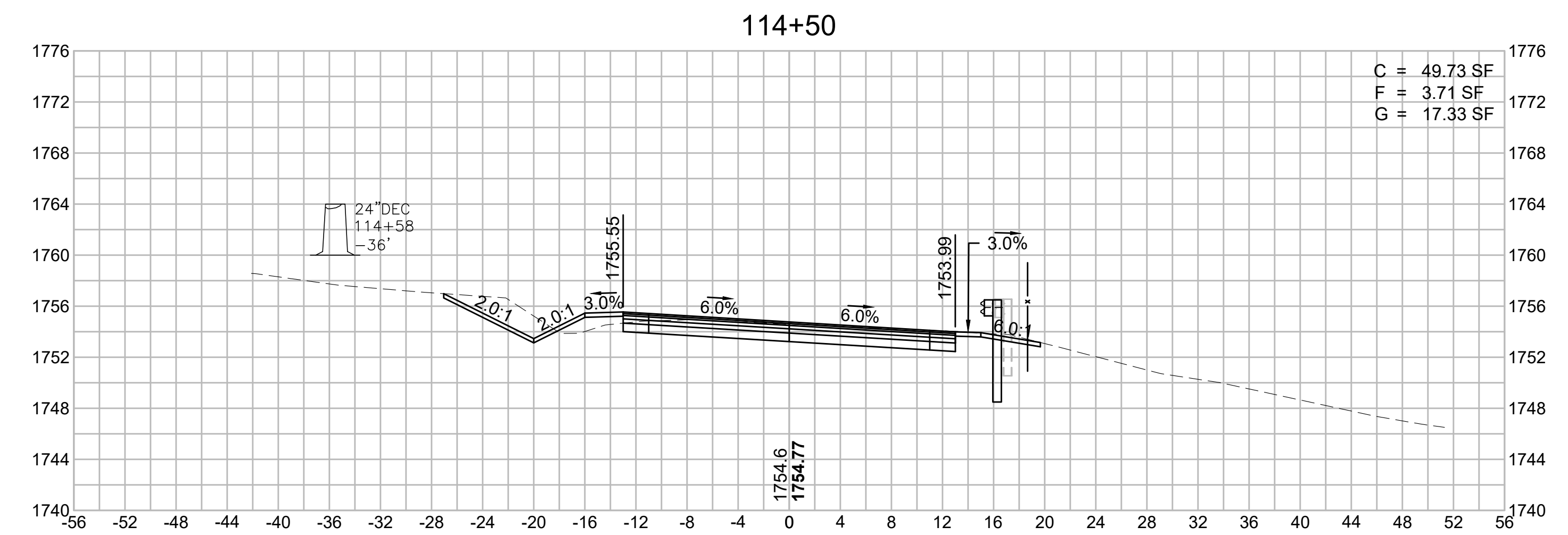
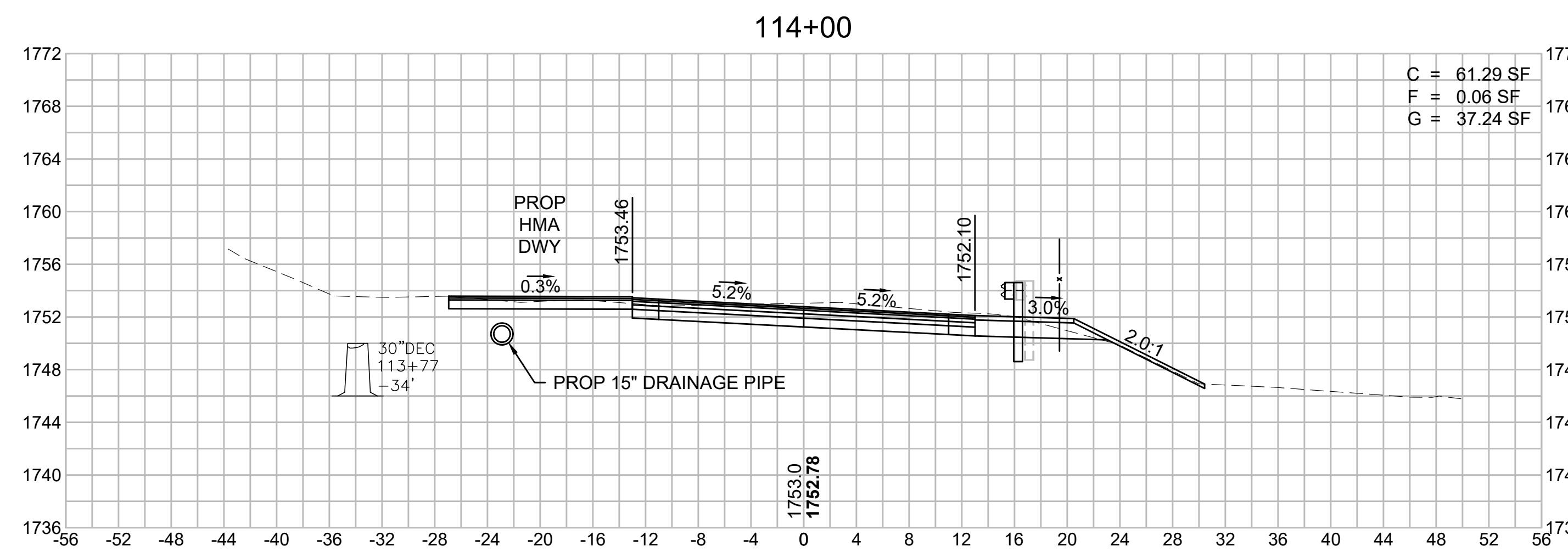
C = 54.18 SF
F = 0.49 SF
G = 17.33 SF



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	149	191
PROJECT FILE NO.		609287	

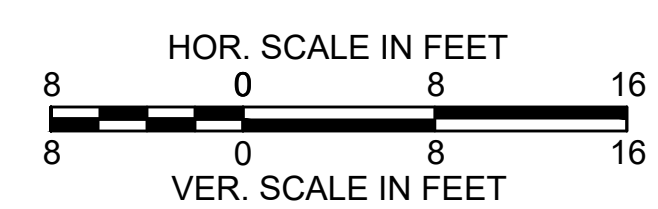
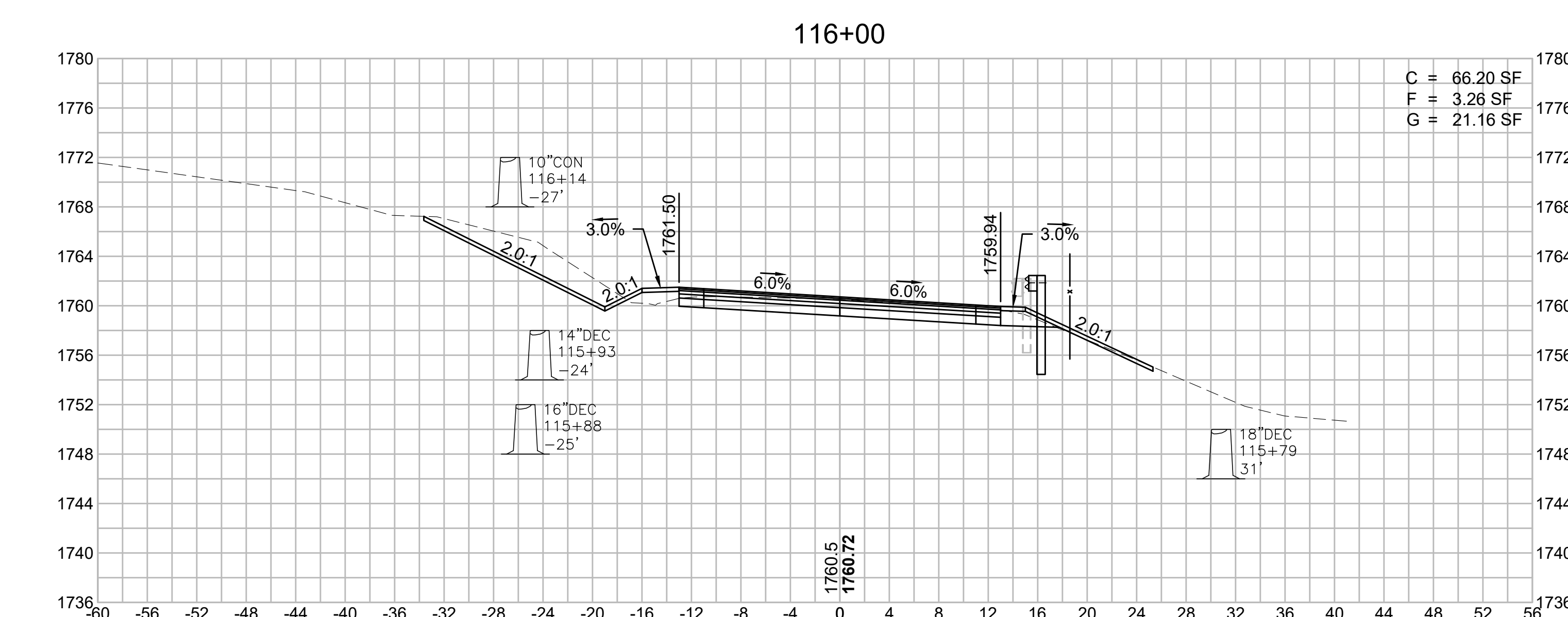
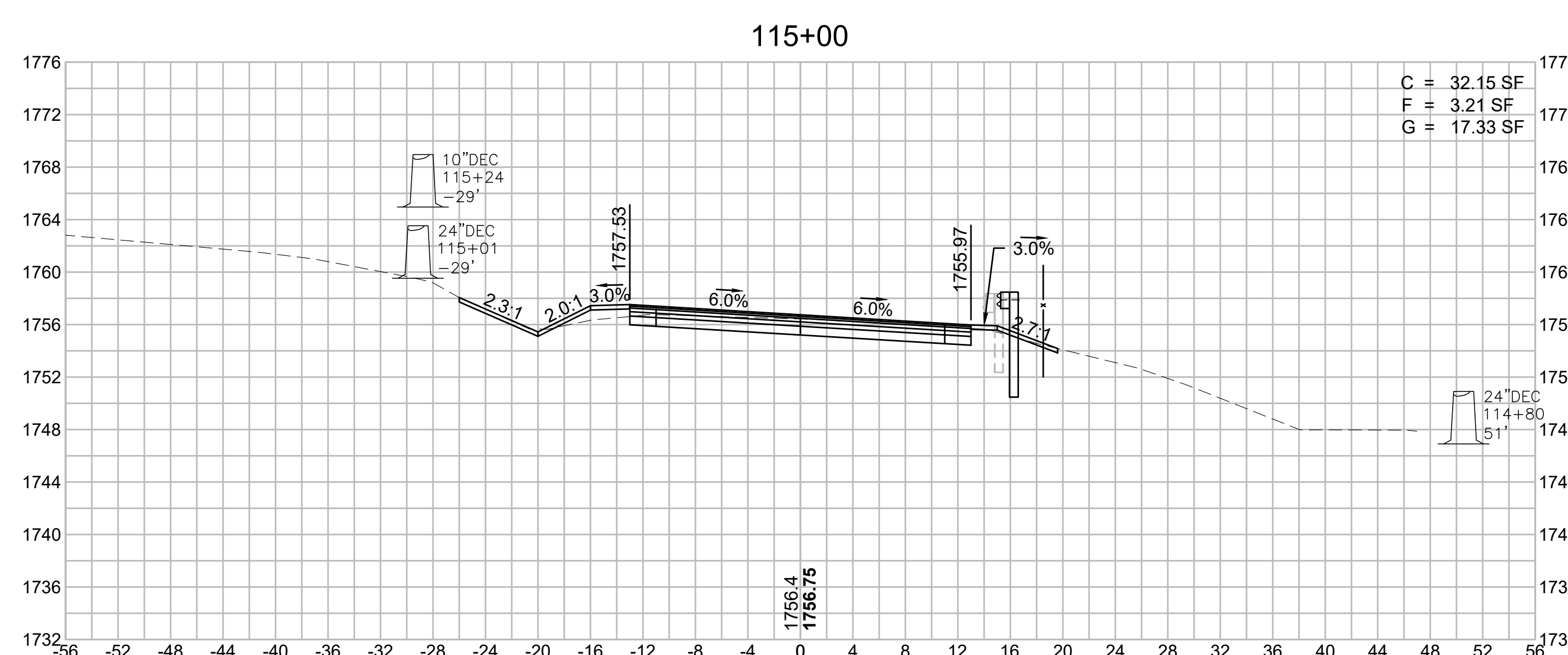
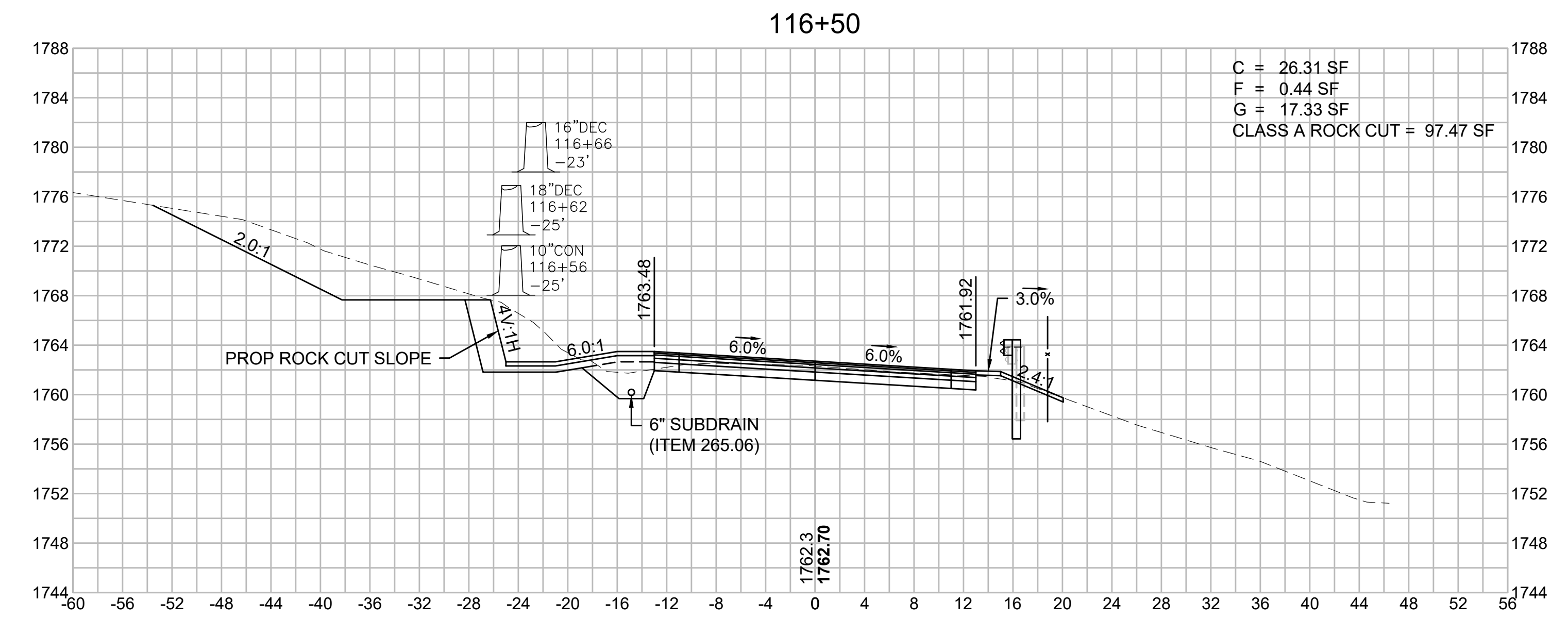
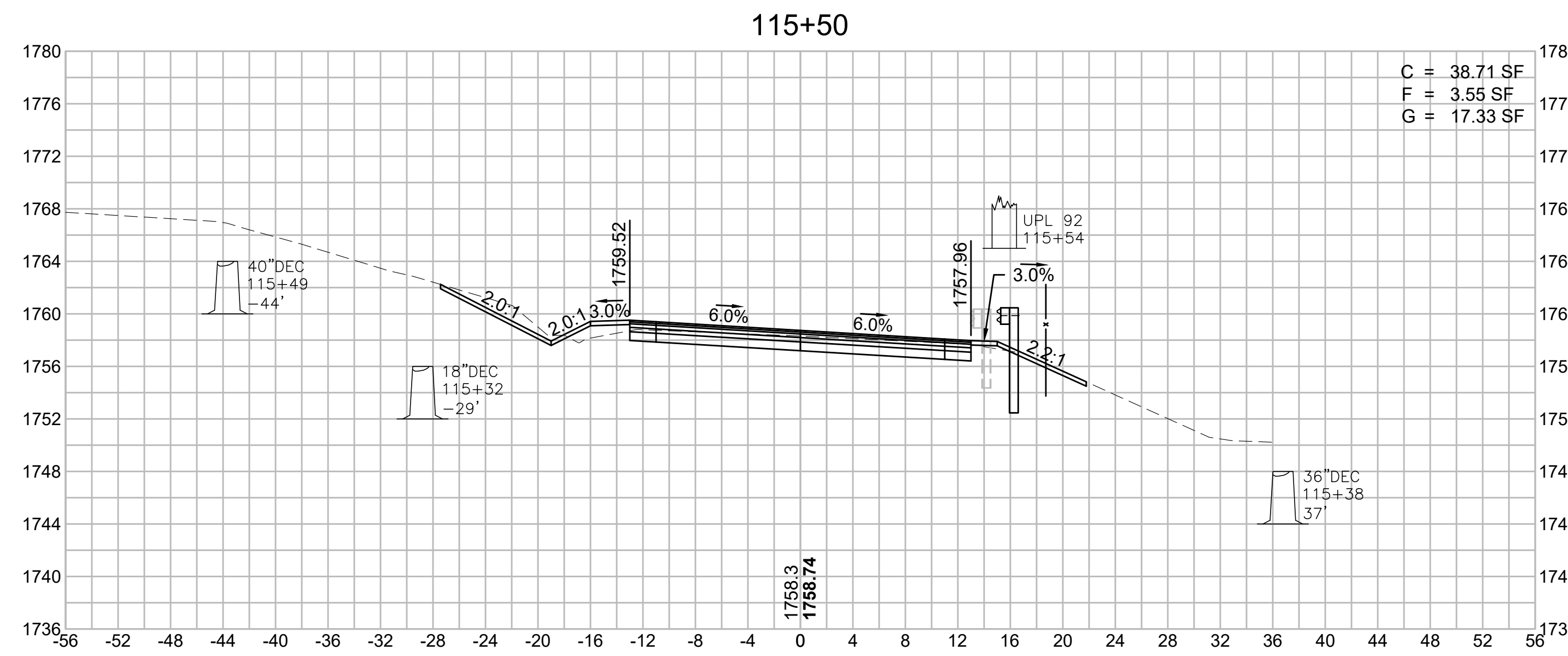
**OLD NORTH ROAD
CROSS SECTIONS - 46**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	150	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 47**



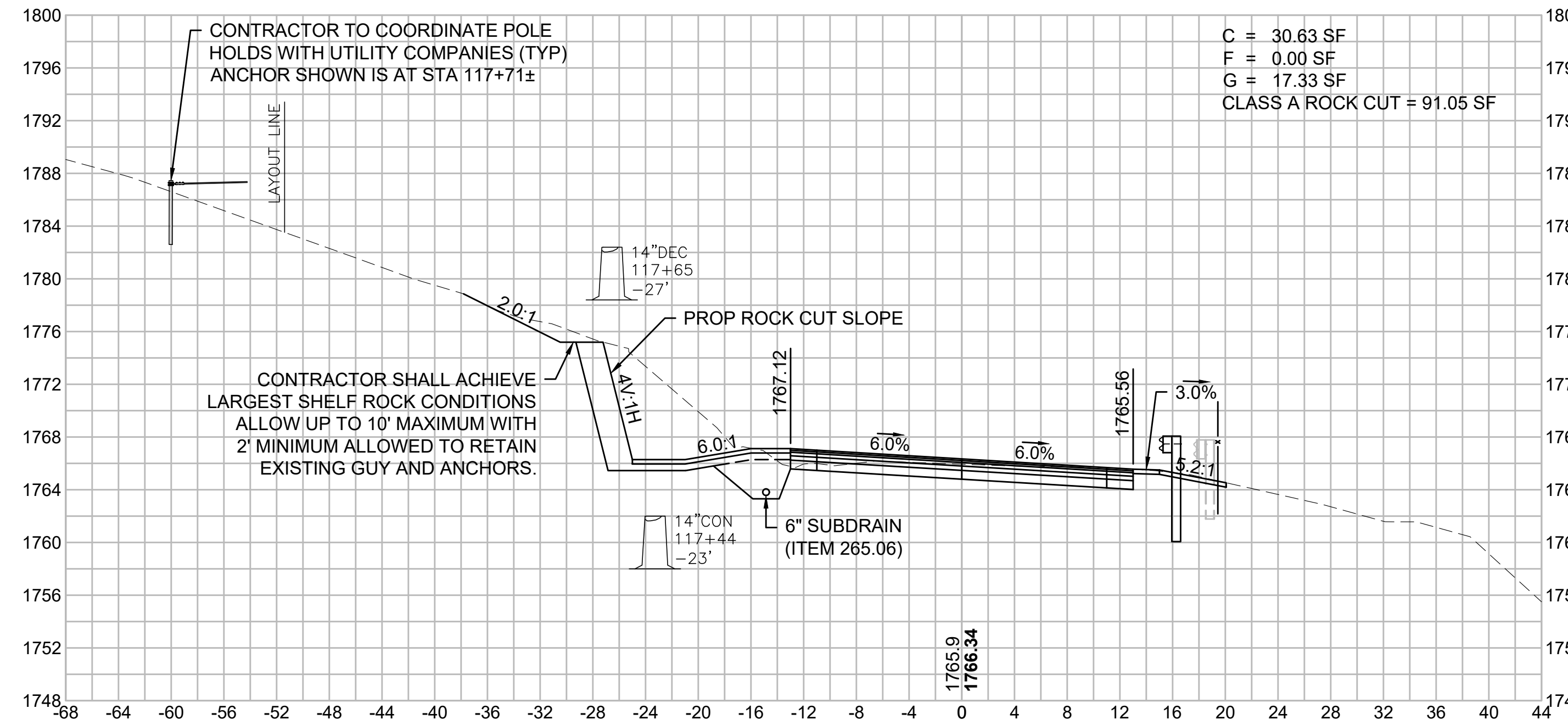
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	151	191
PROJECT FILE NO. 609287			

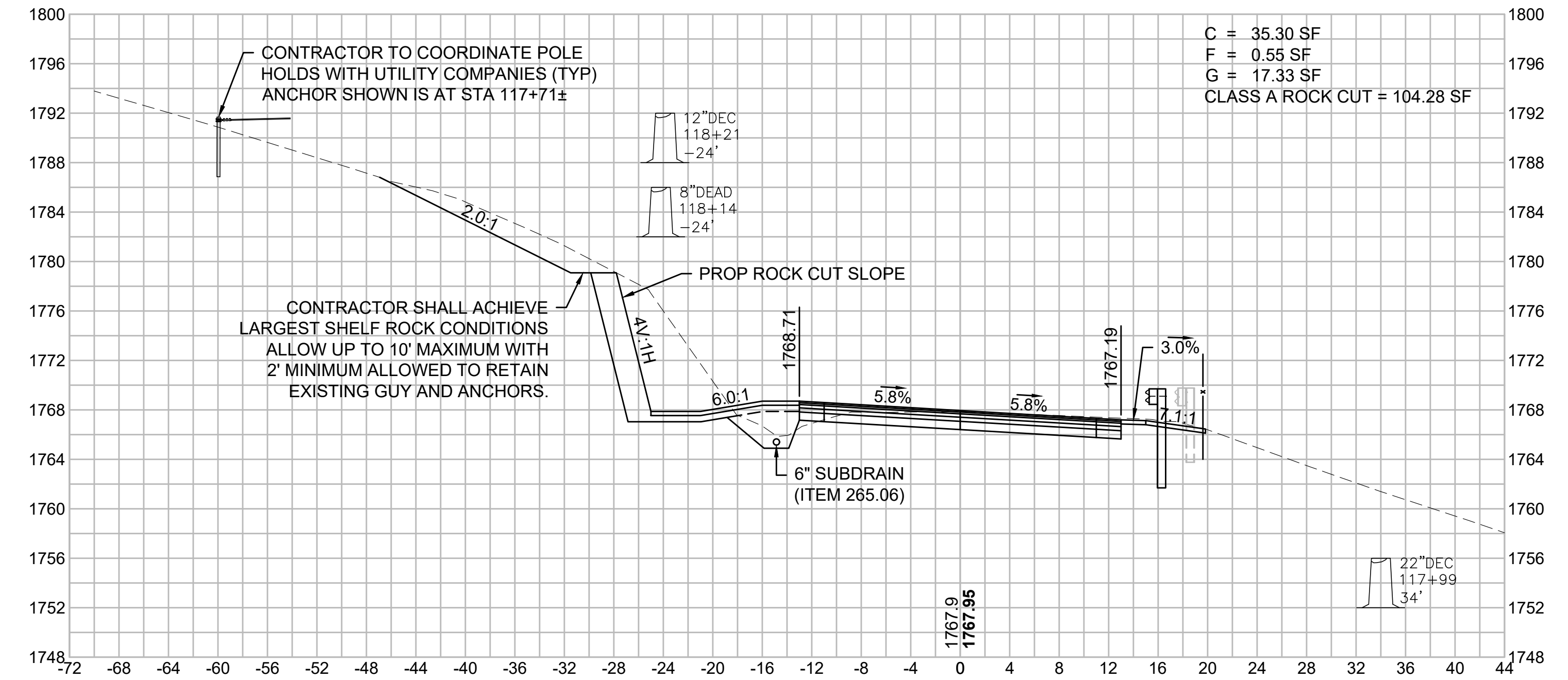
**OLD NORTH ROAD
CROSS SECTIONS - 48**

SUPERELEVATION:
PT STA = 118+40.64
R = 540'
BANK = 6.00%

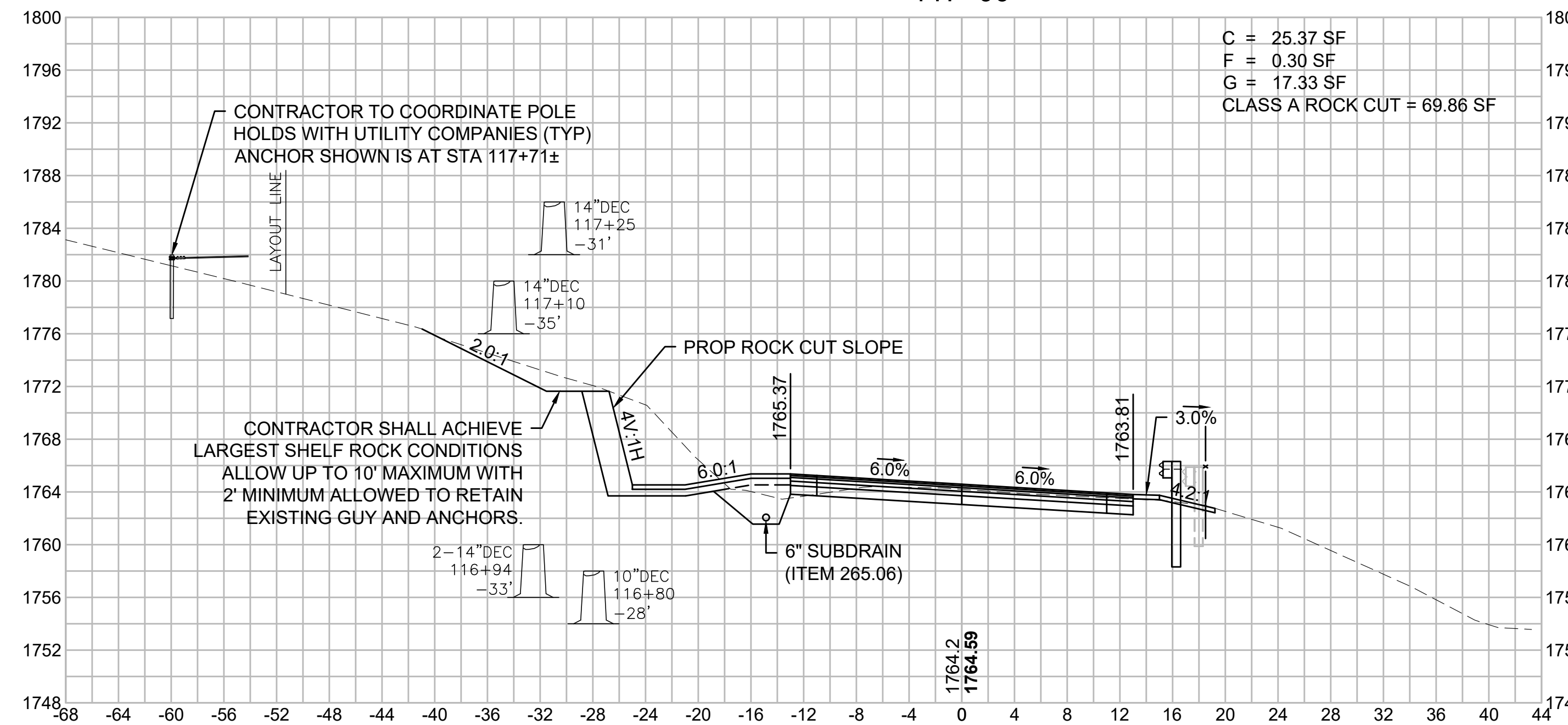
117+50



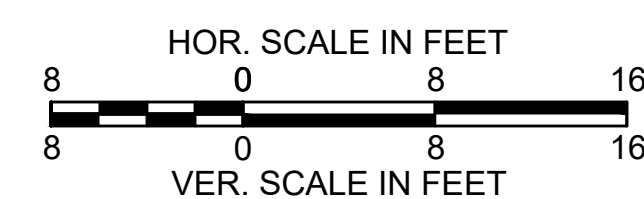
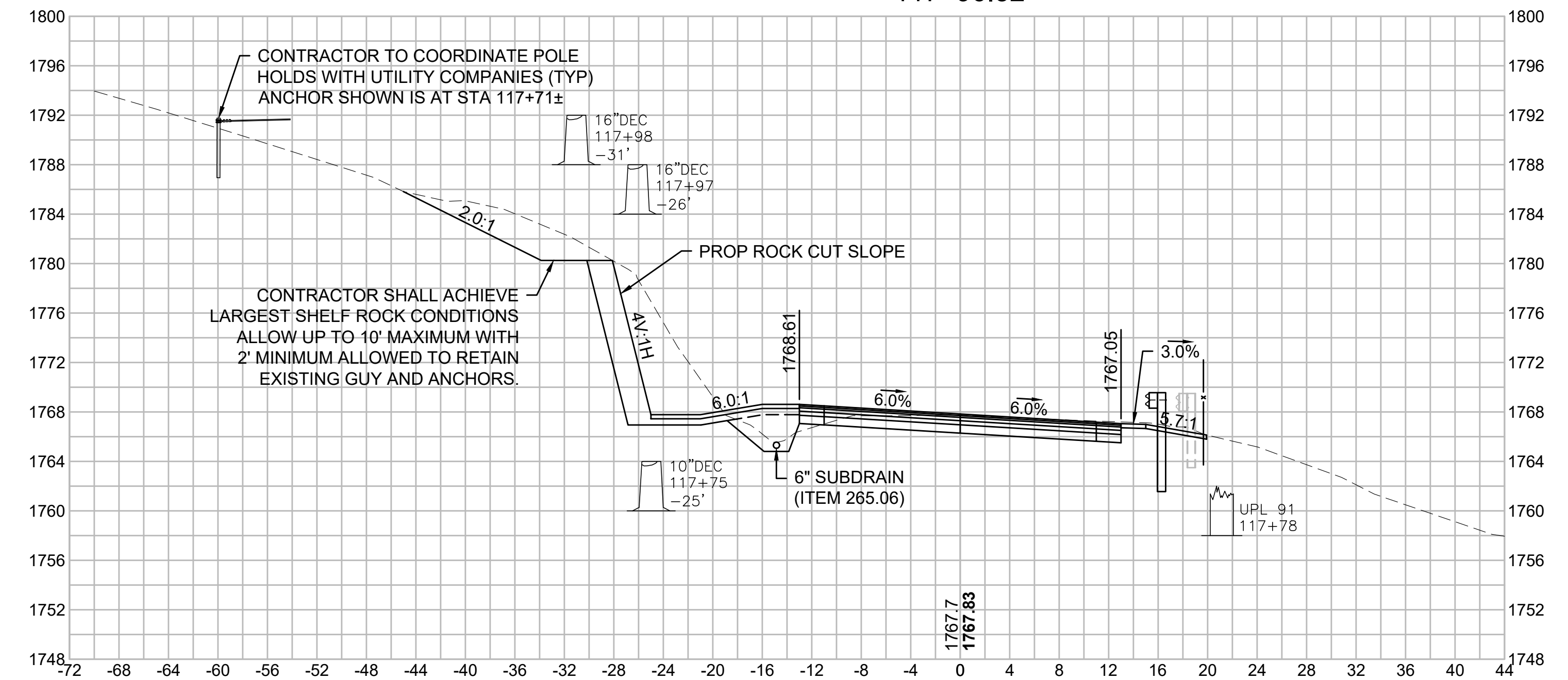
118+00



117+00



**END FULL SUPERELEVATION
117+96.32**

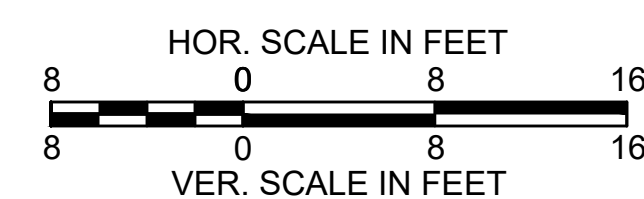
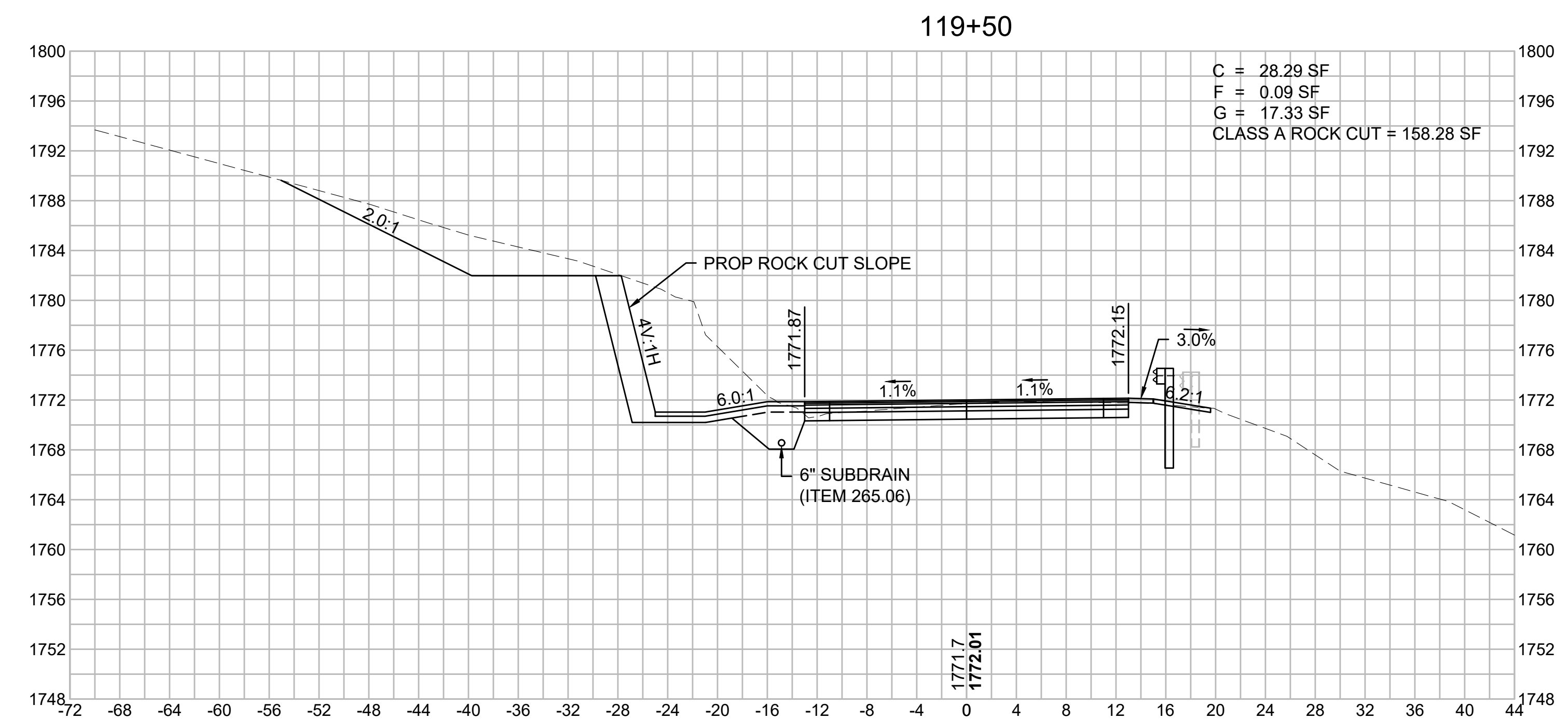
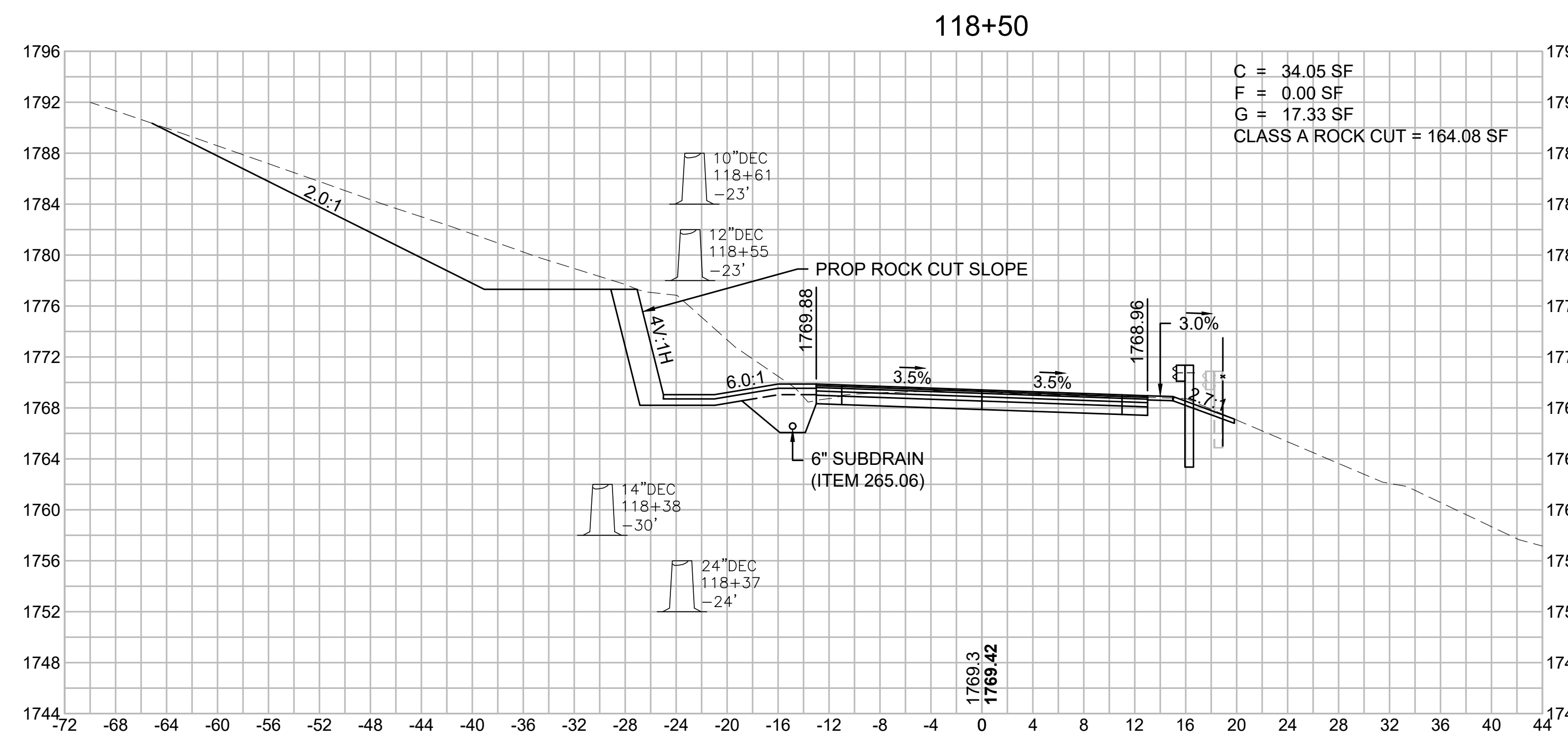
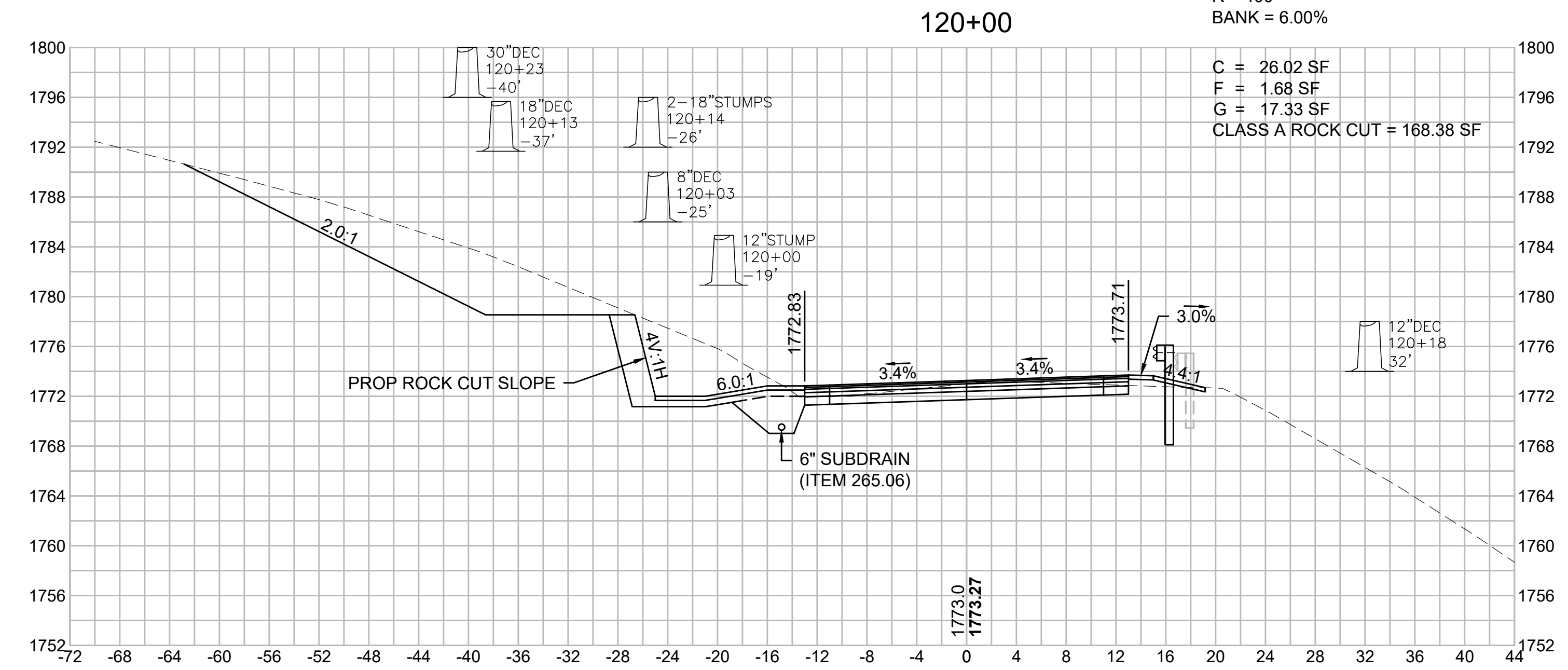
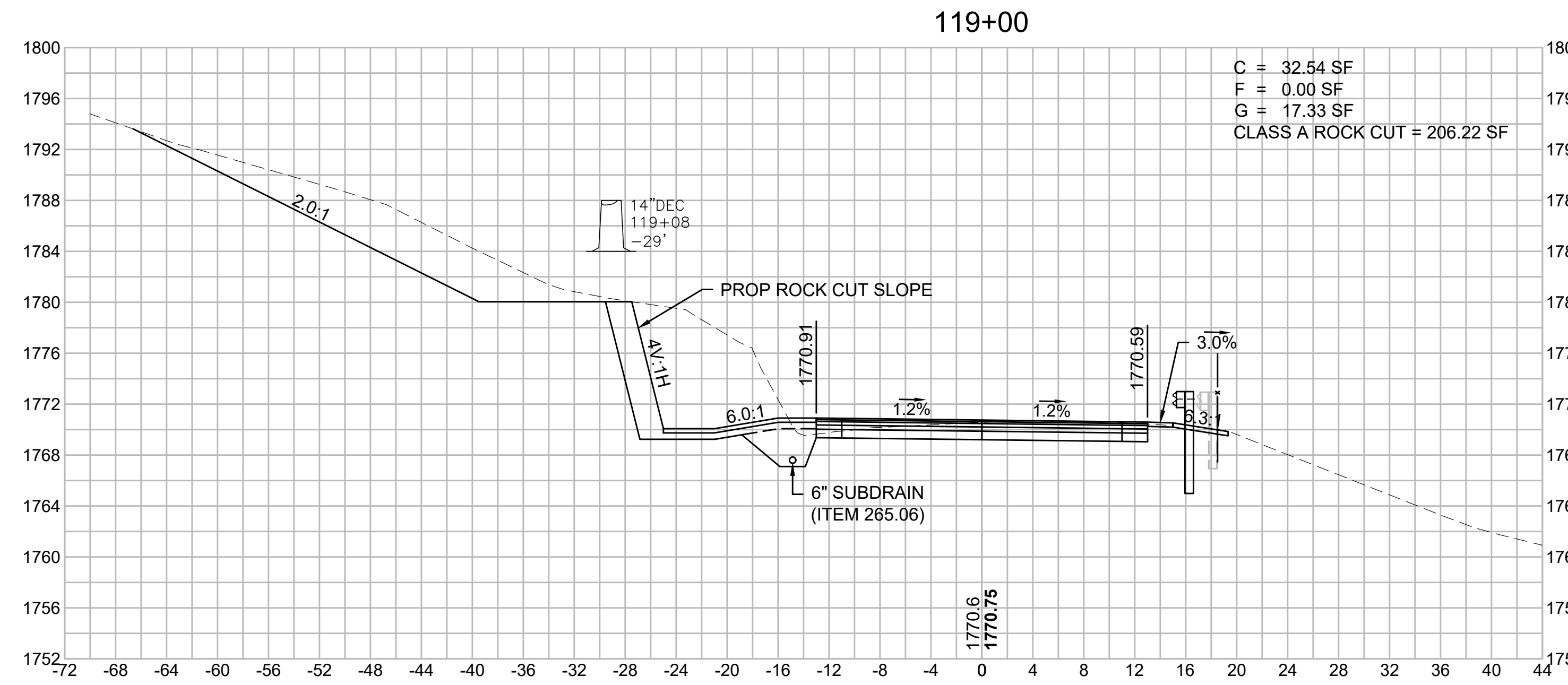


**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	152	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 49**

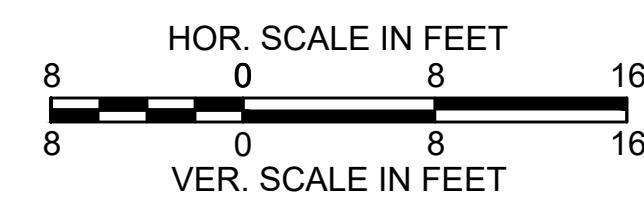
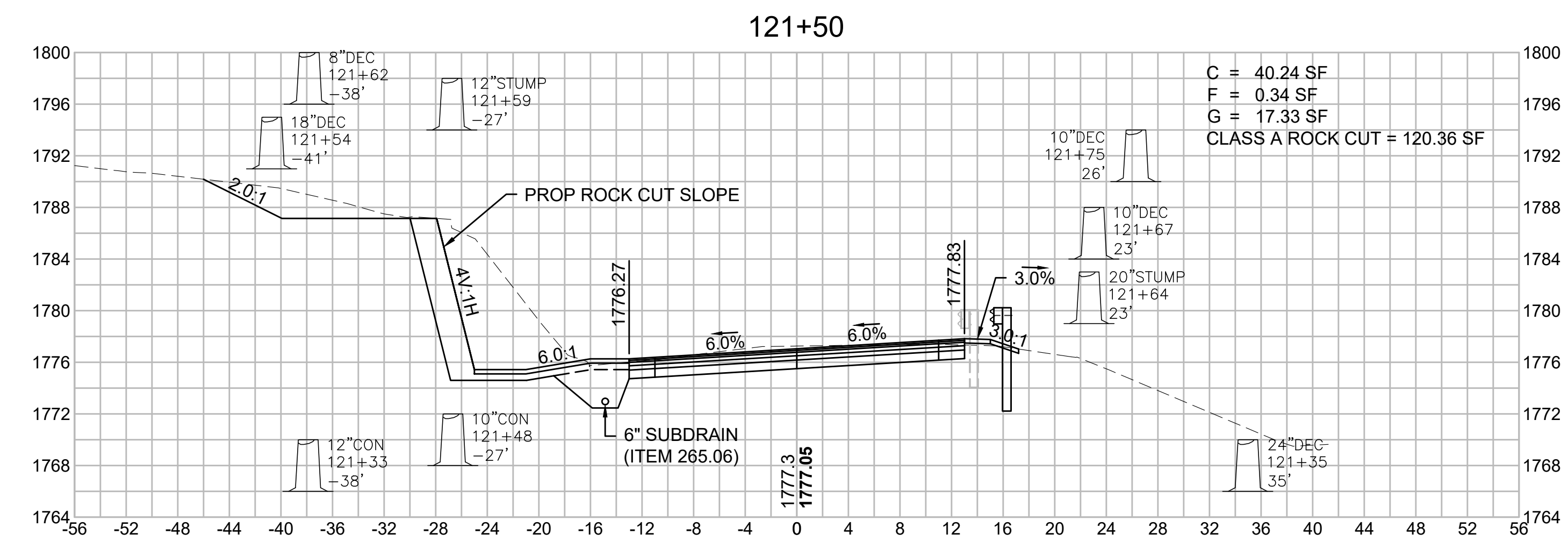
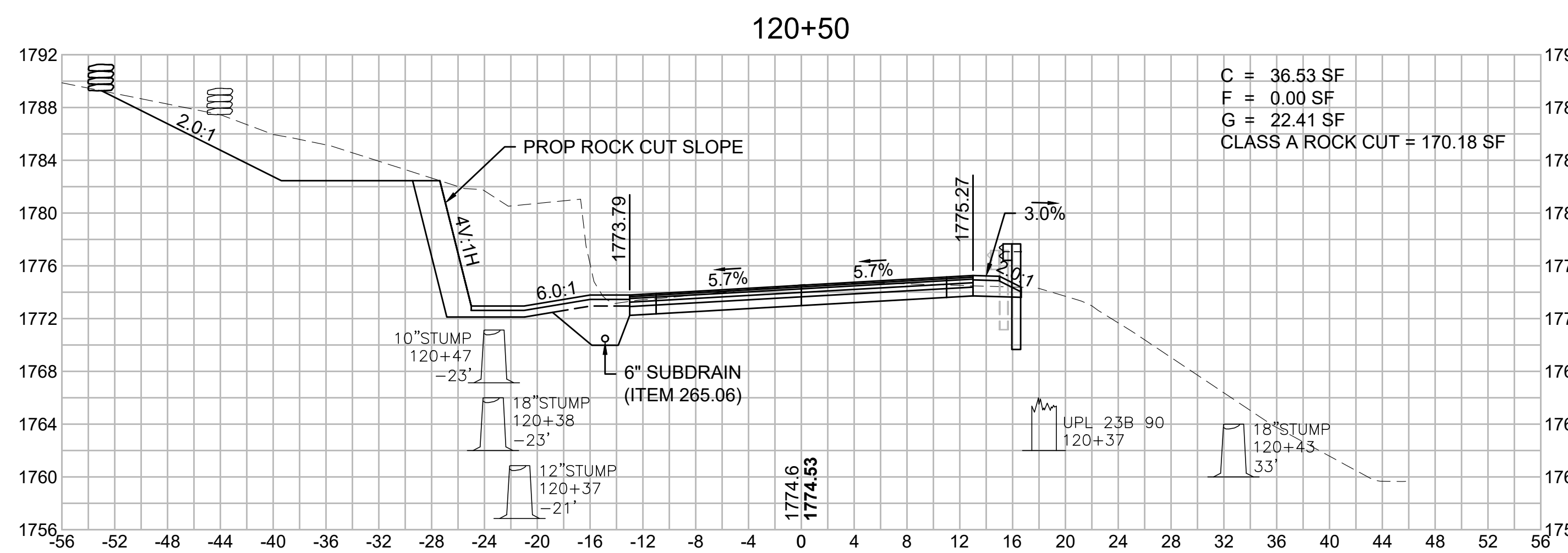
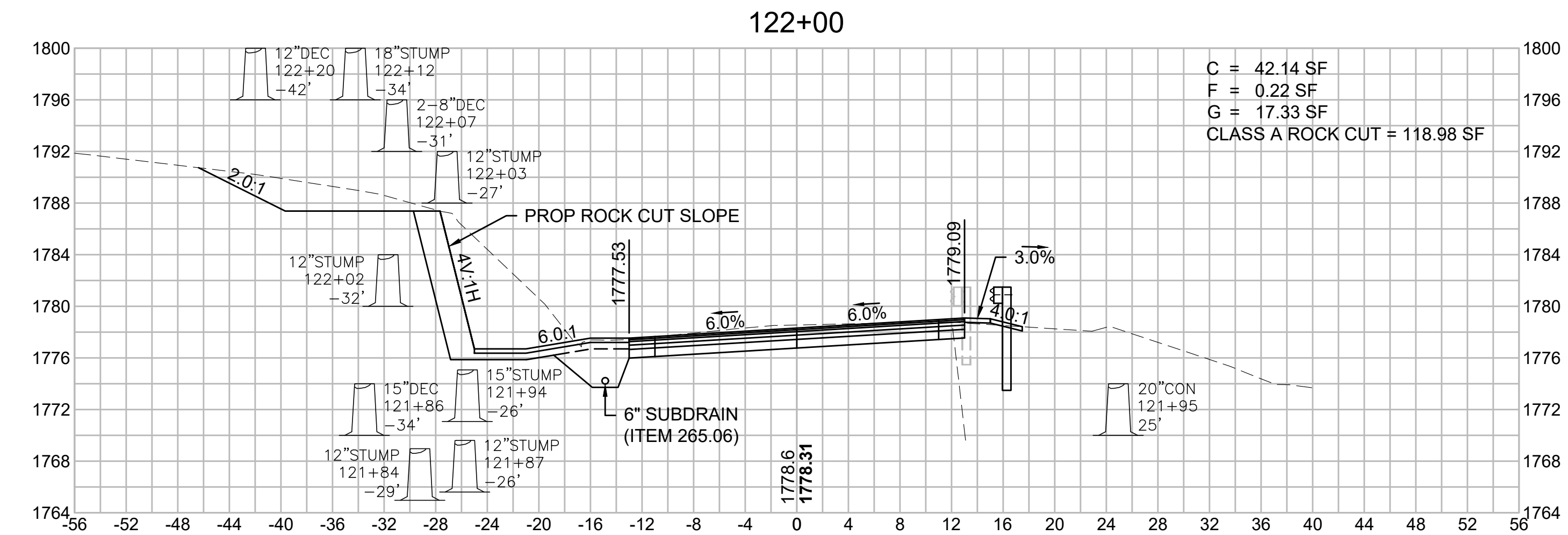
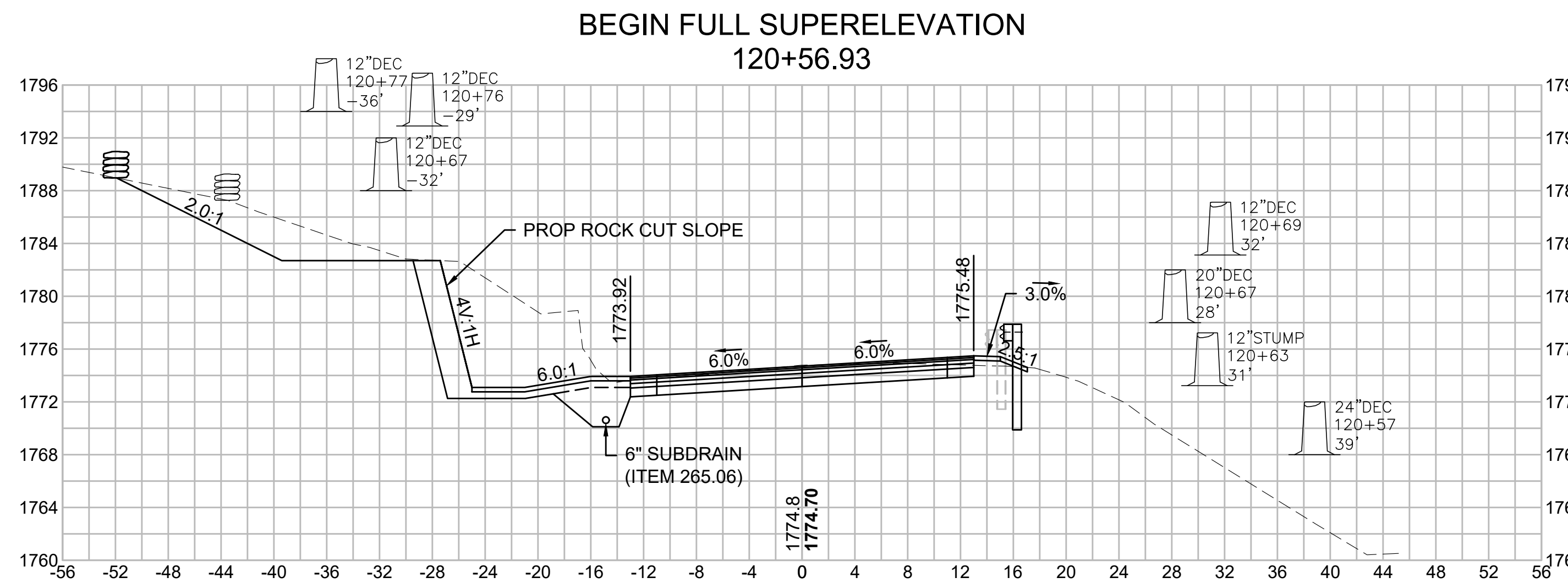
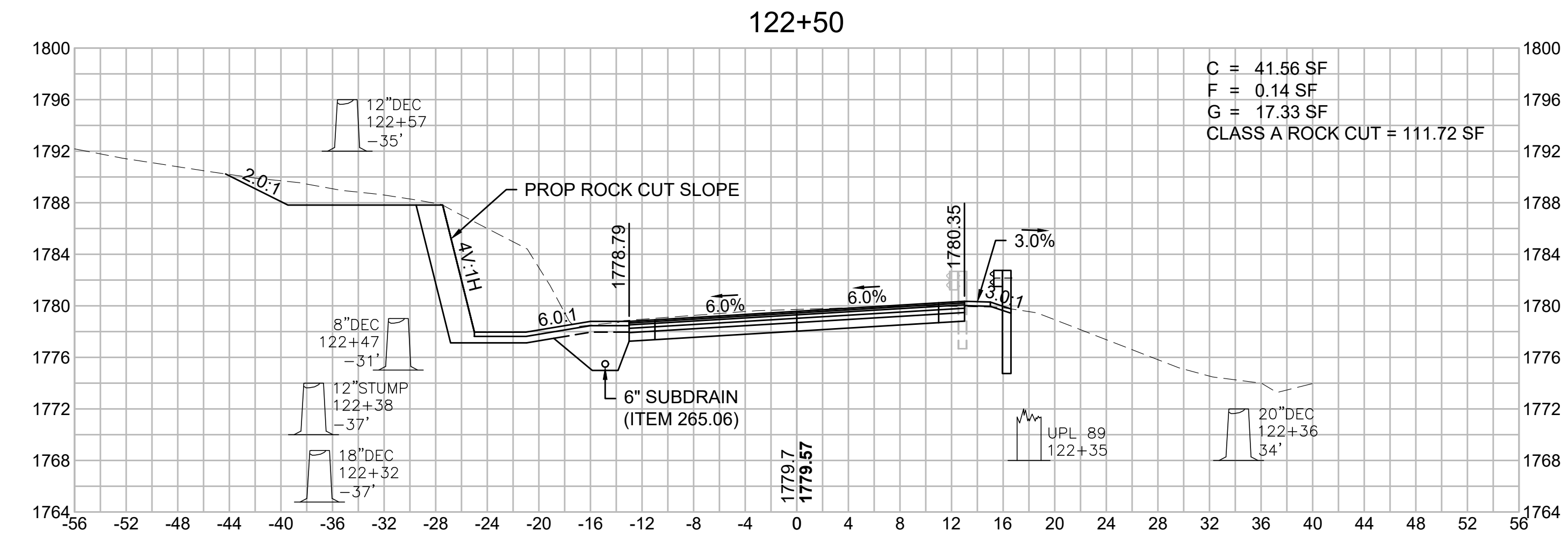
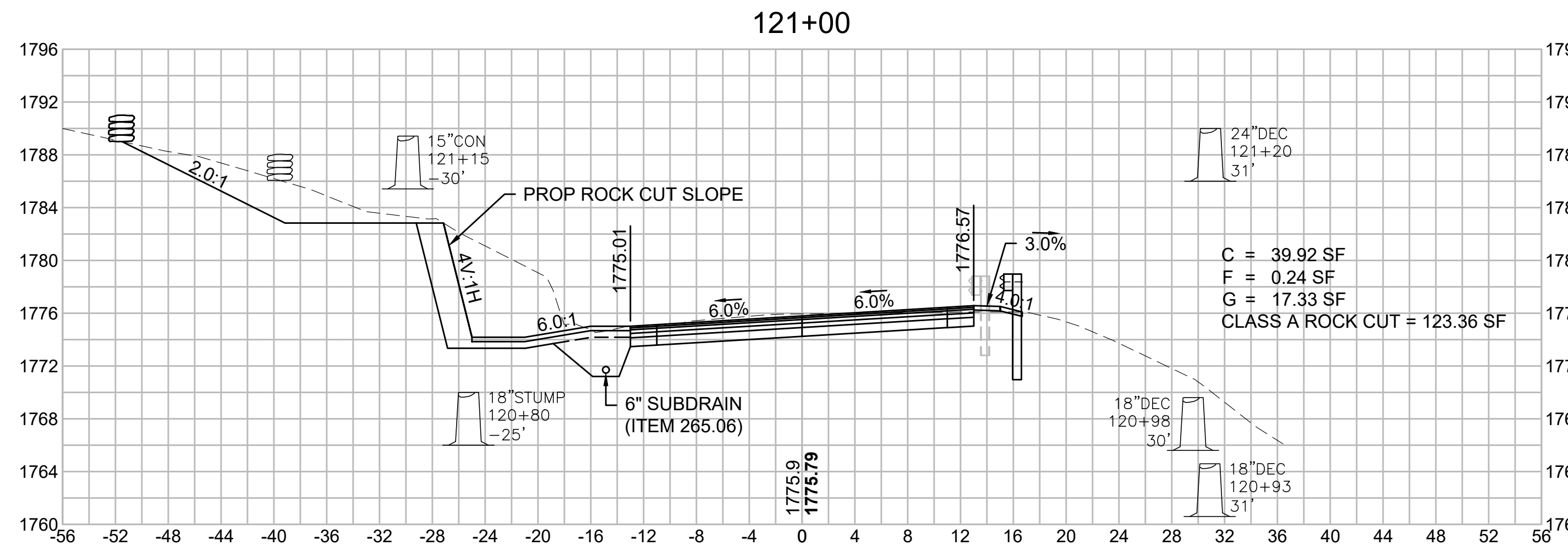
SUPERELEVATION:
PC STA = 120+12.61
R = 400'
BANK = 6.00%



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	153	191

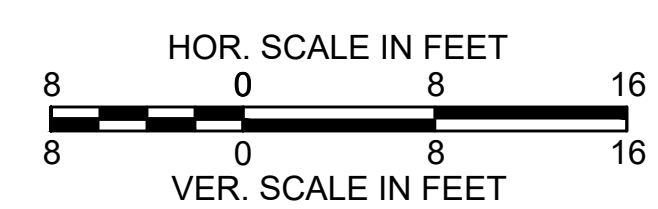
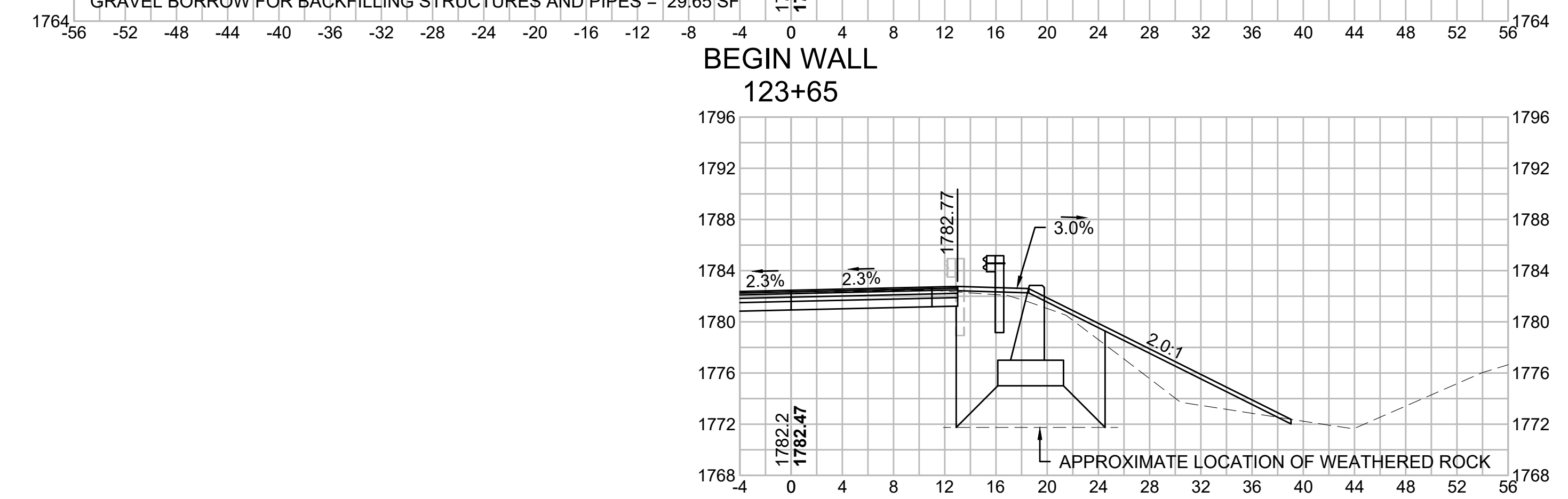
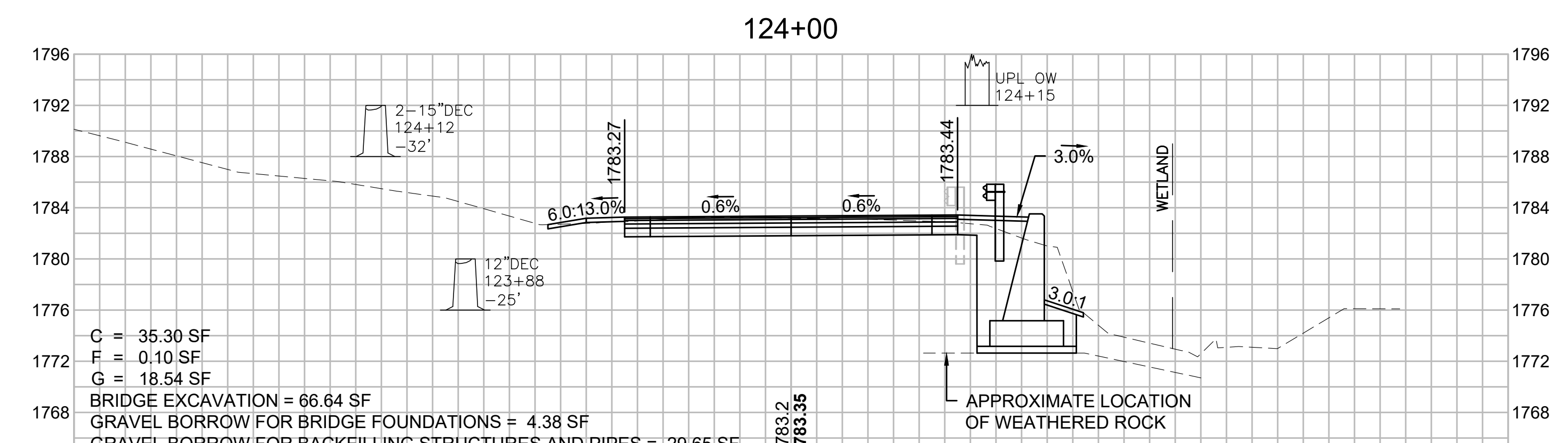
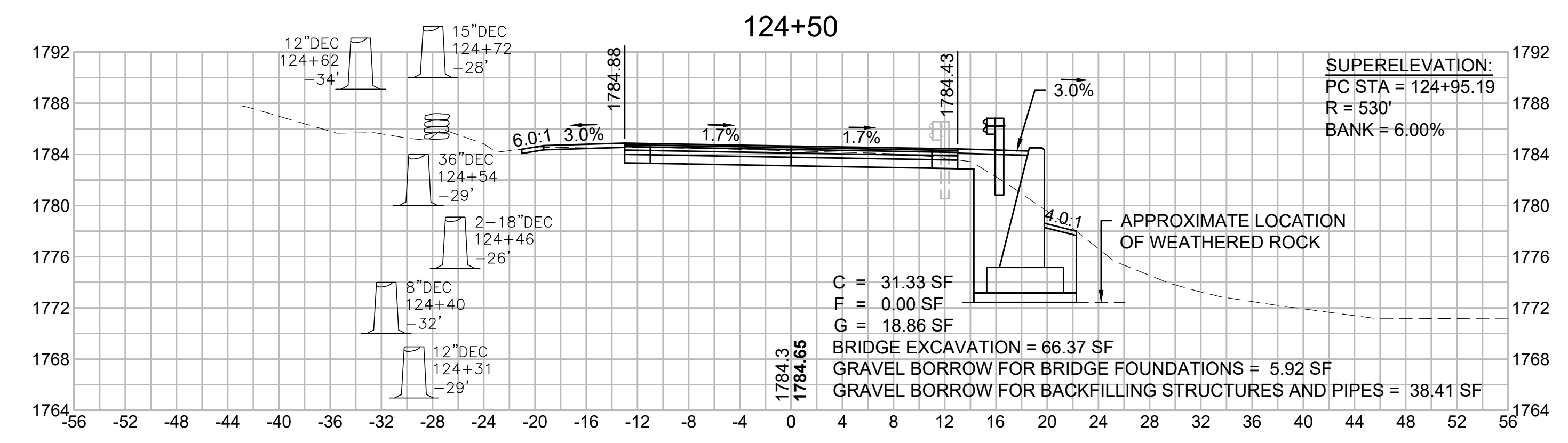
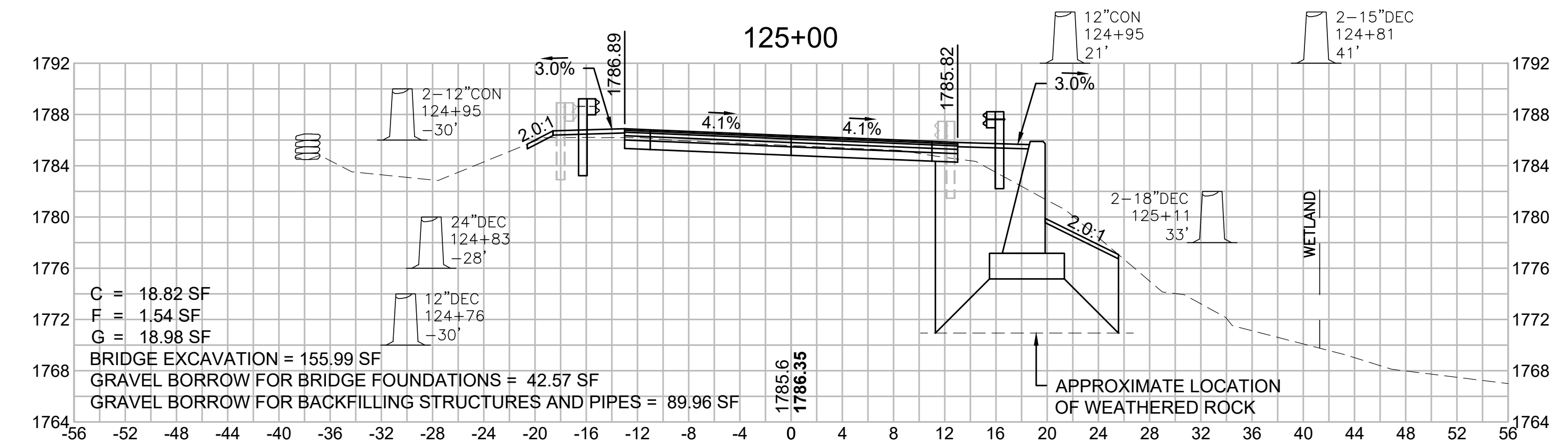
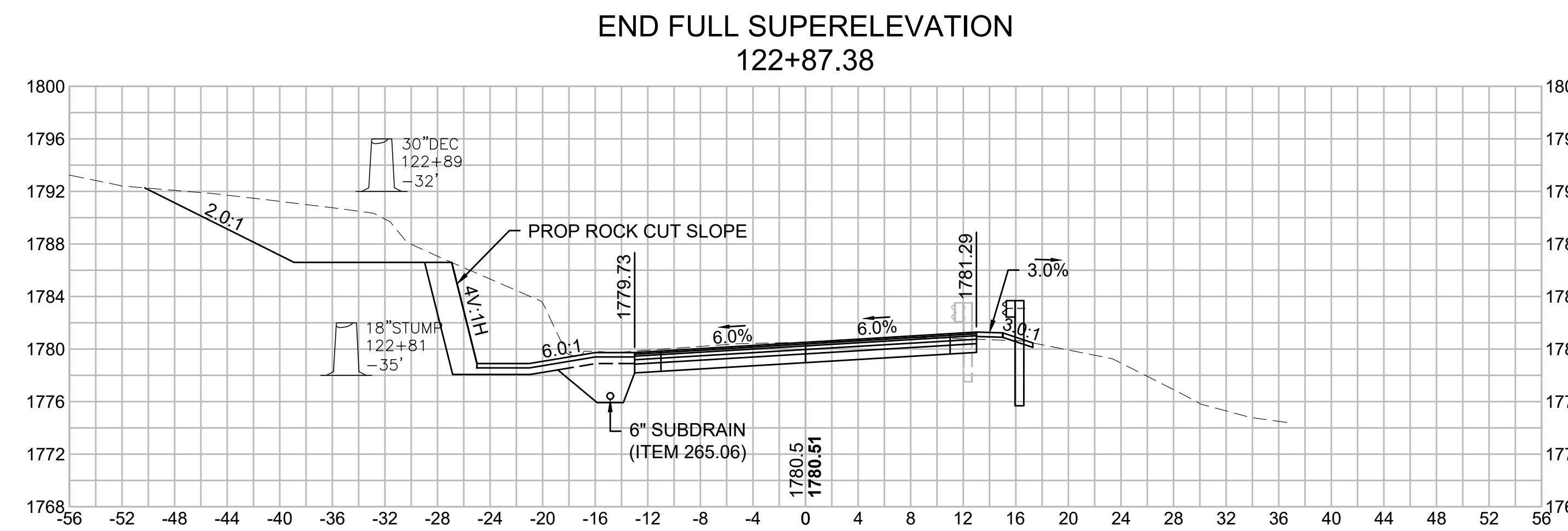
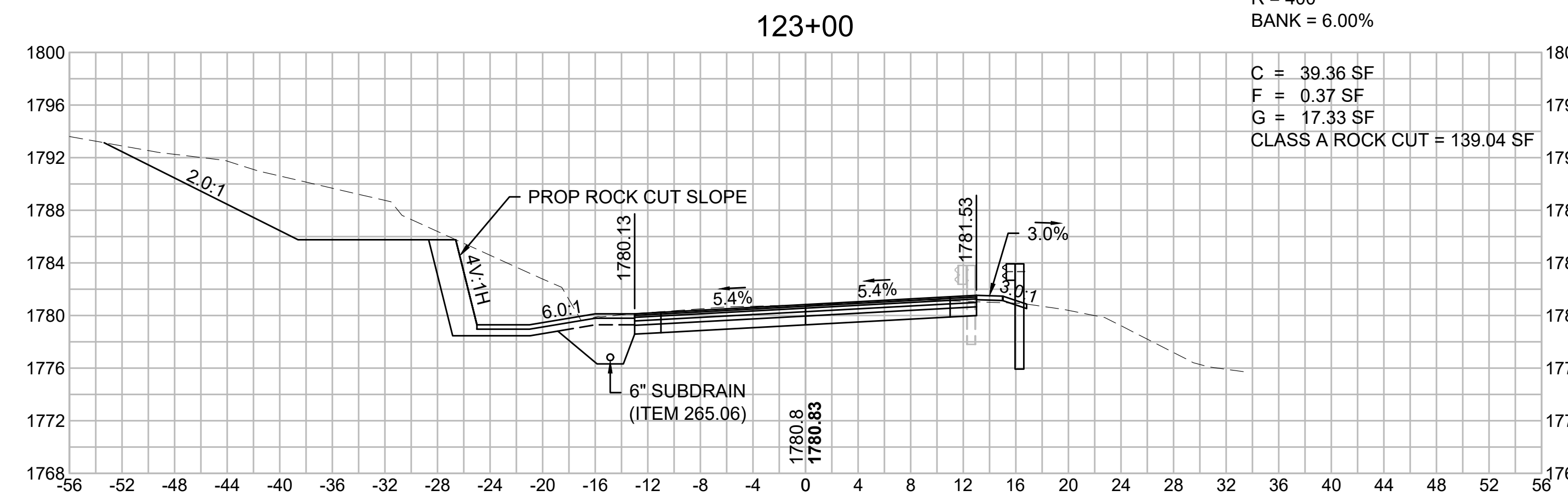
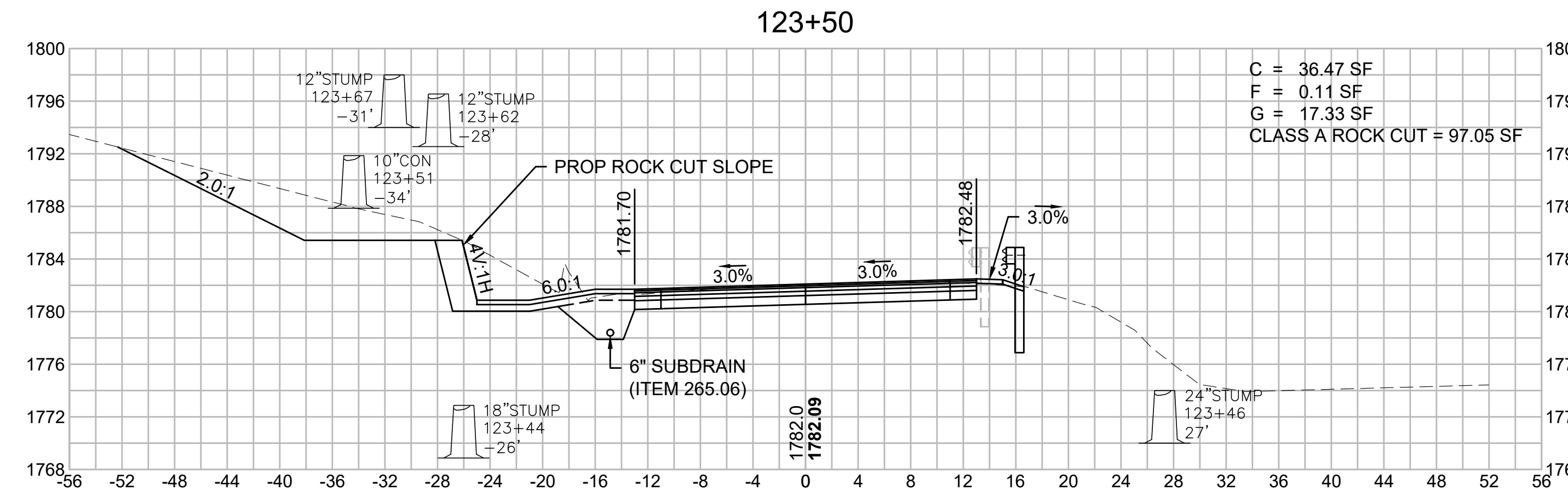
**PROJECT FILE NO. 609287
OLD NORTH ROAD
CROSS SECTIONS - 50**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	154	191

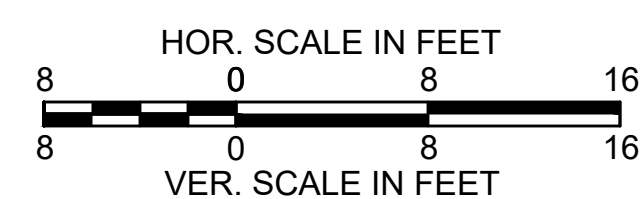
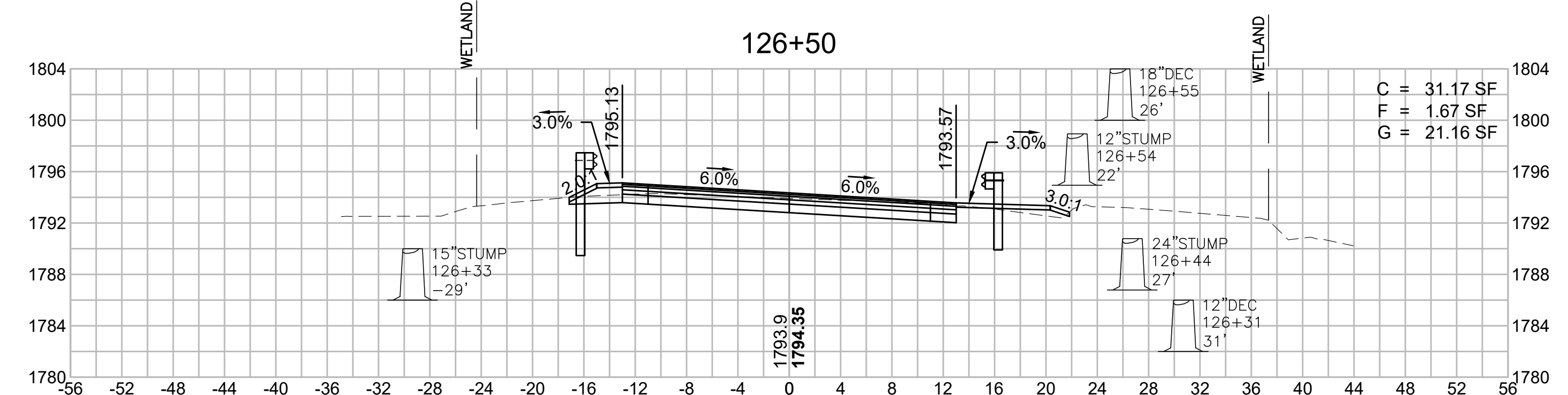
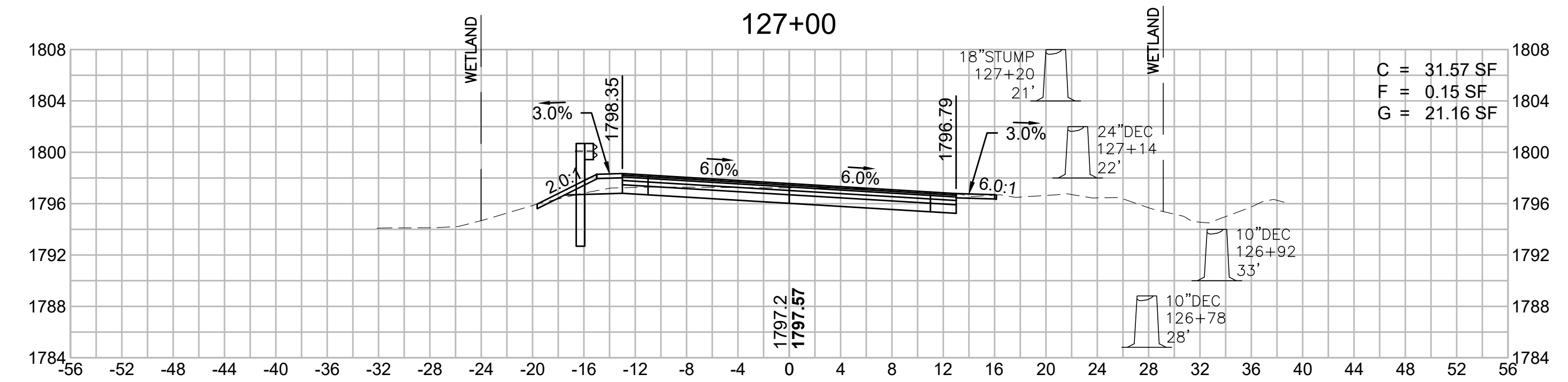
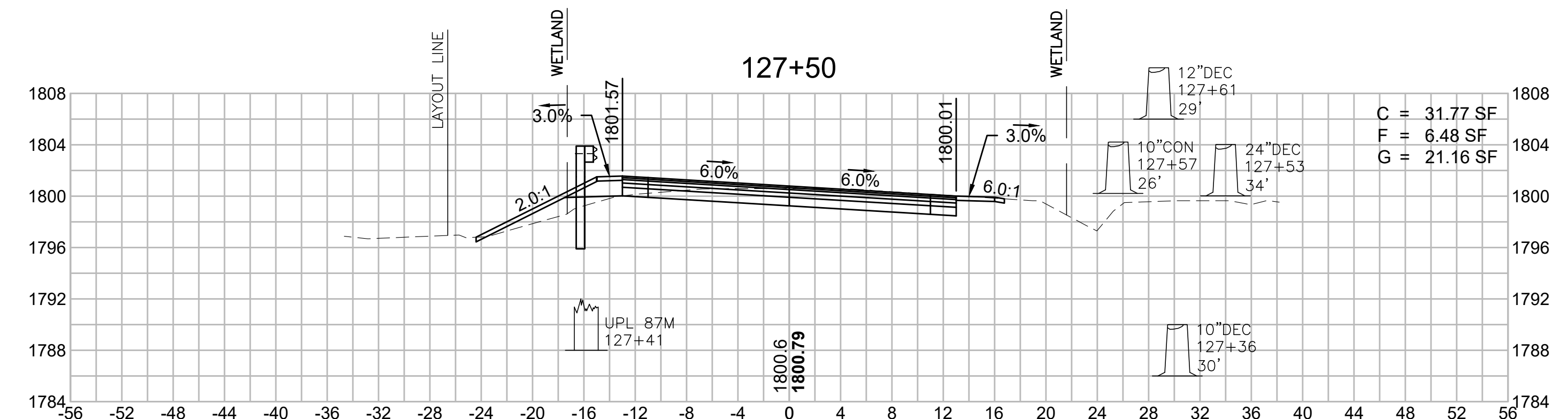
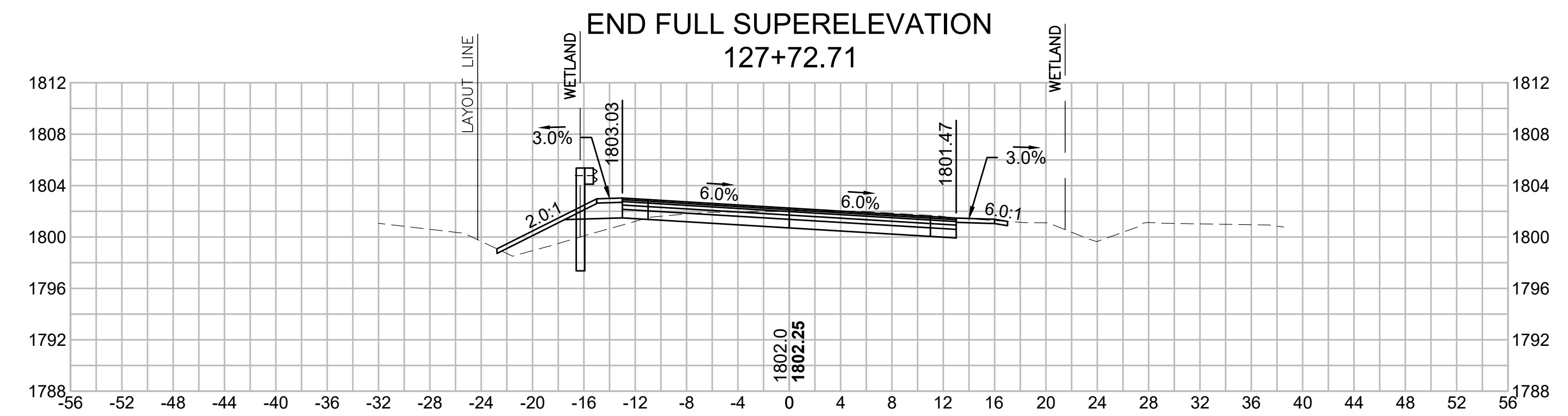
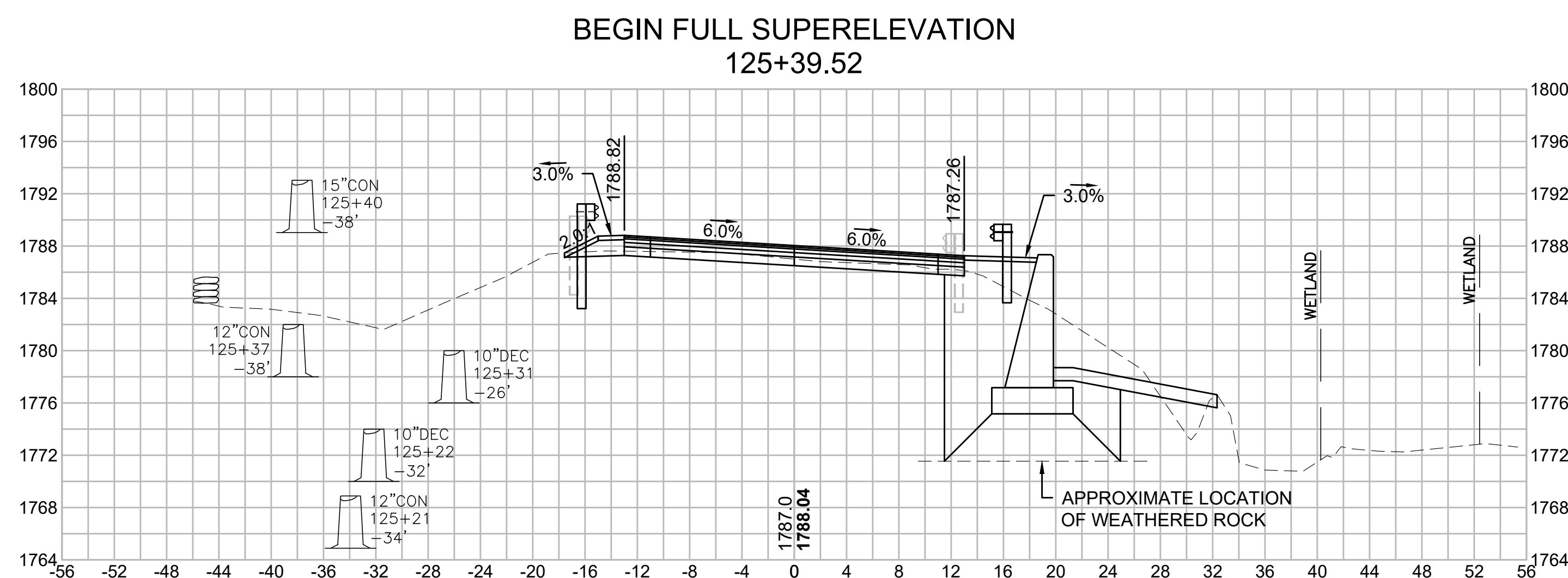
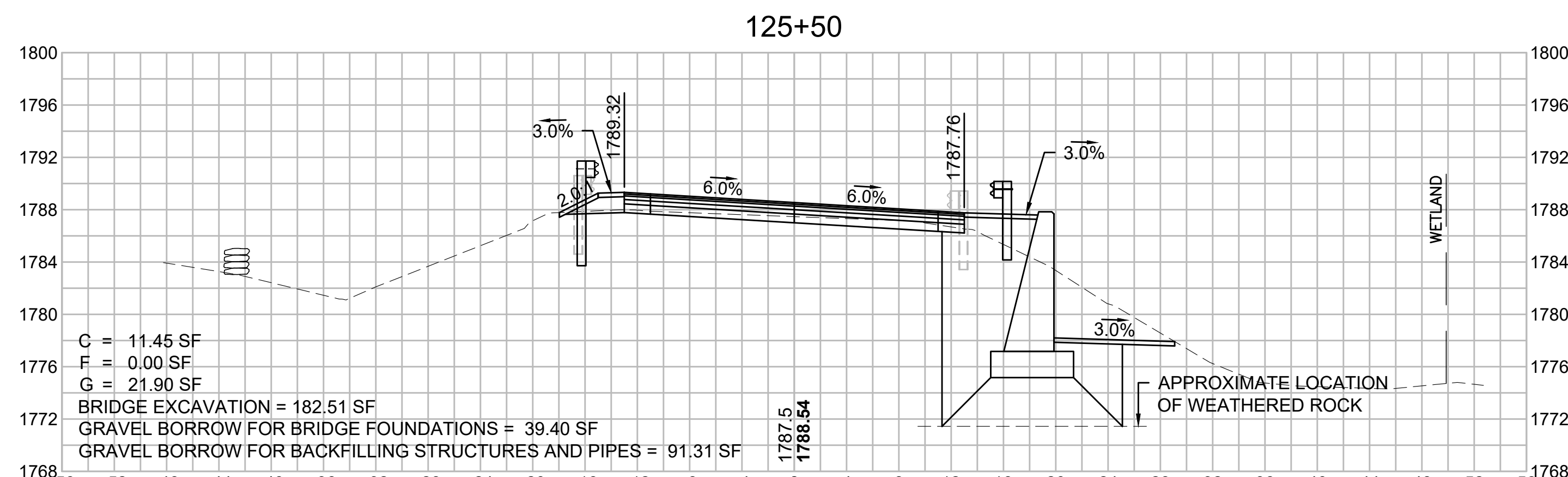
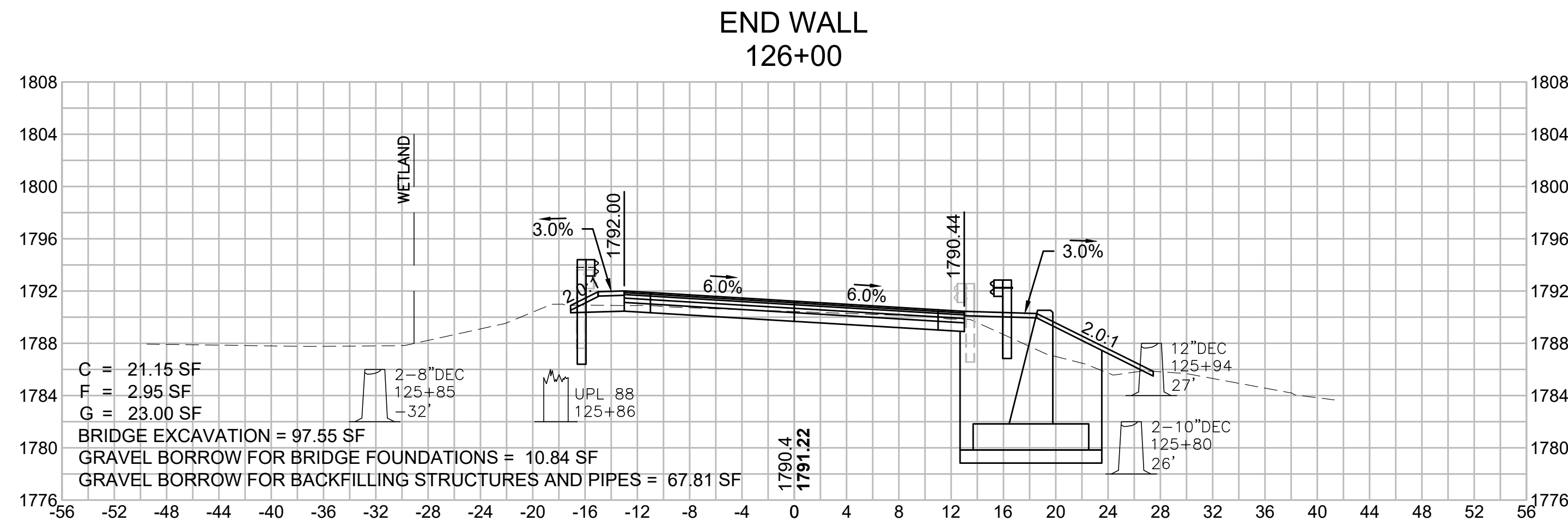
**OLD NORTH ROAD
CROSS SECTIONS - 51**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	155	191
PROJECT FILE NO. 609287			

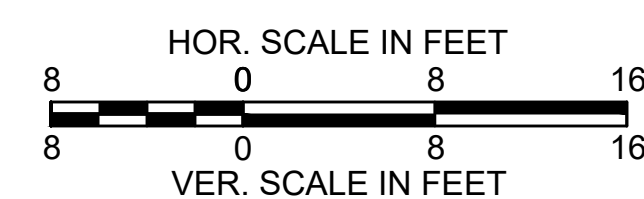
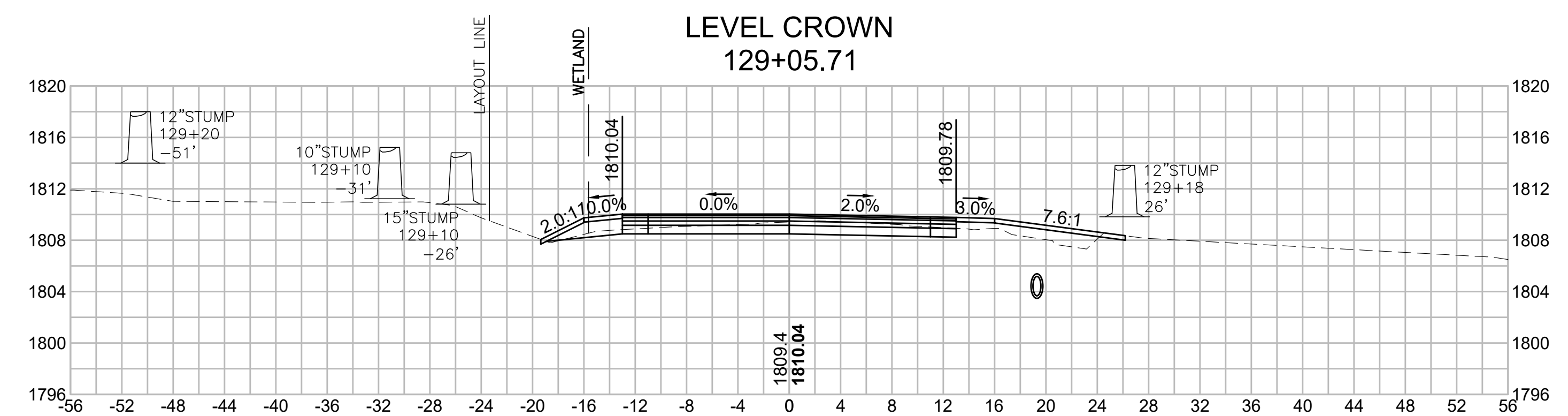
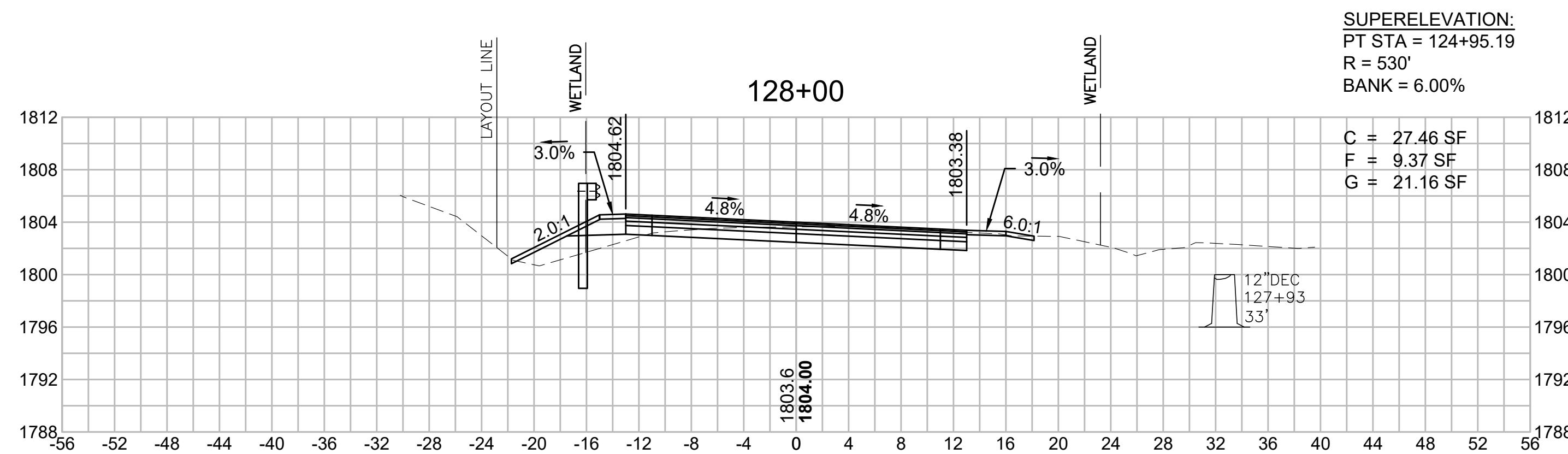
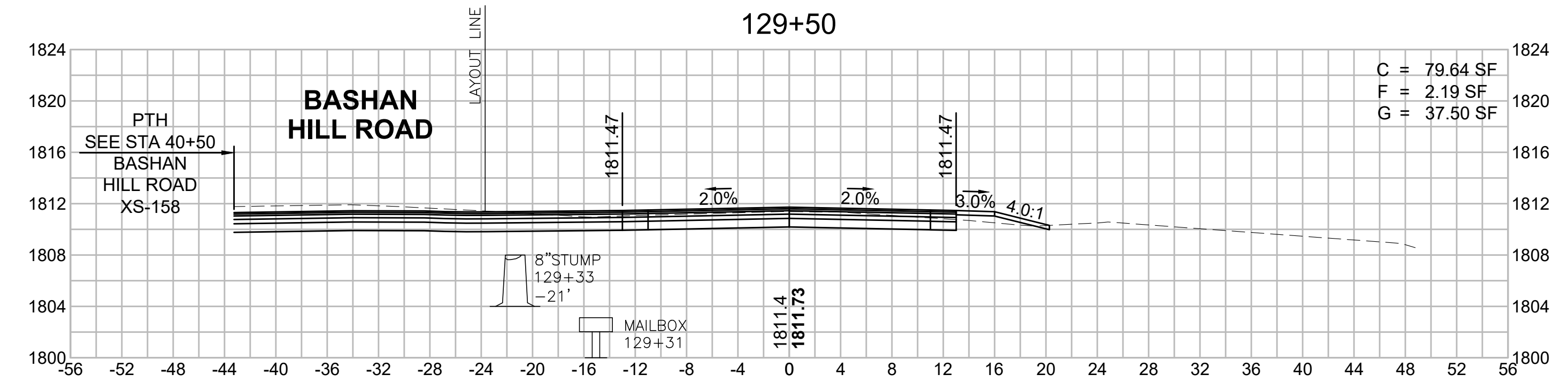
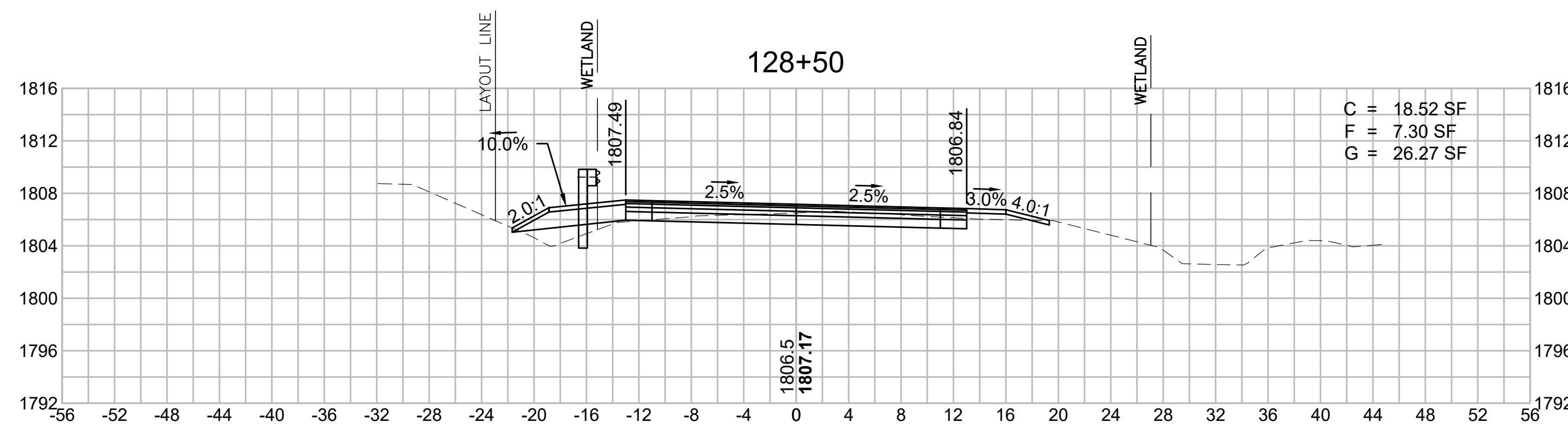
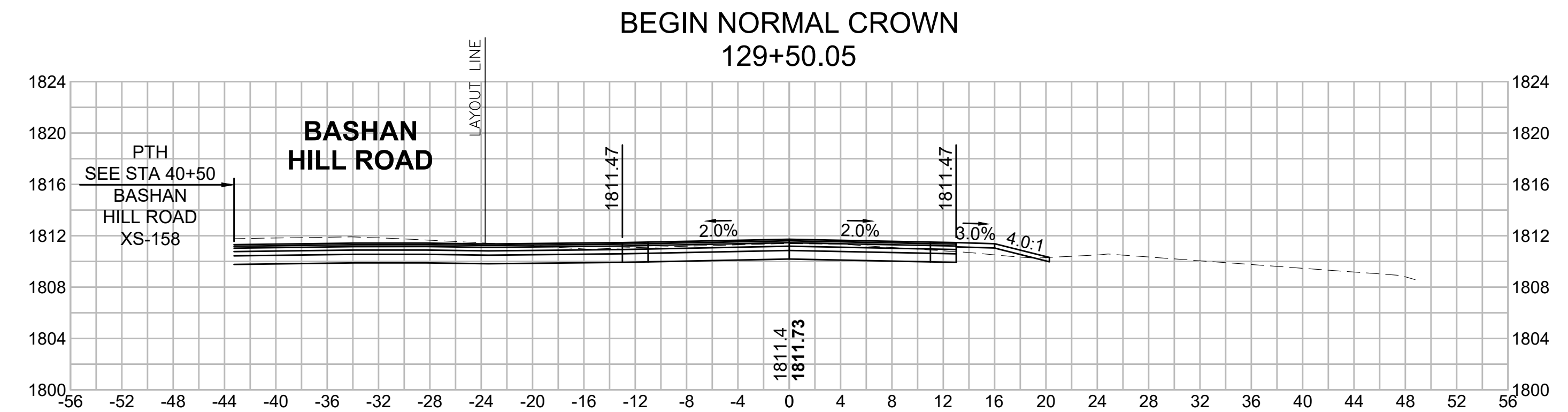
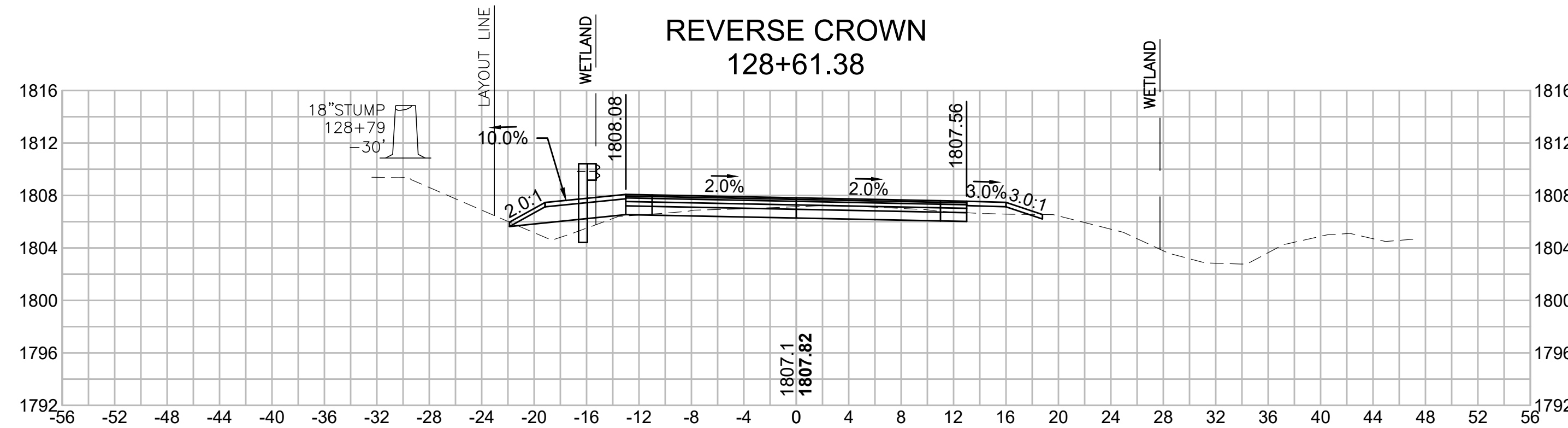
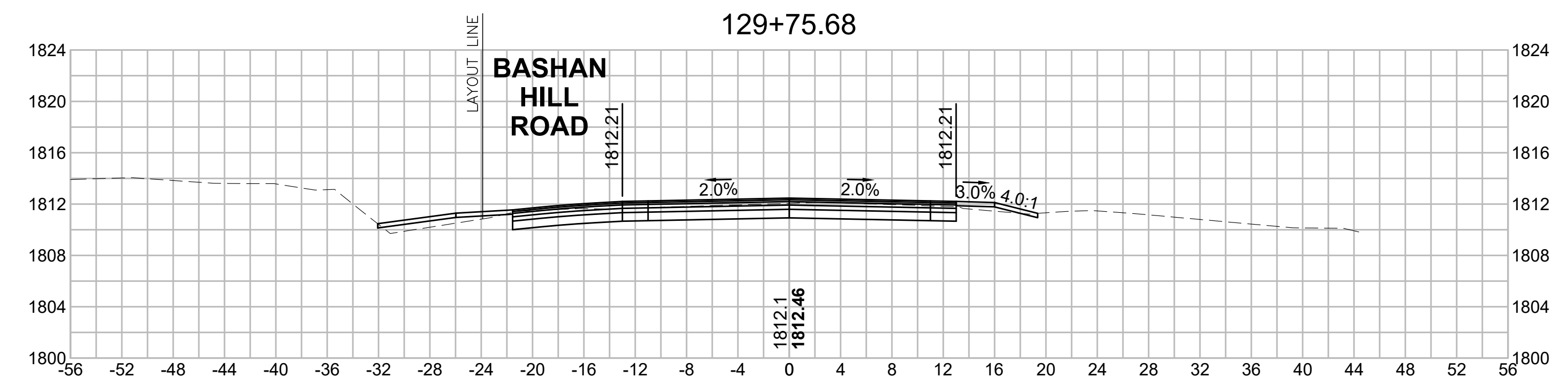
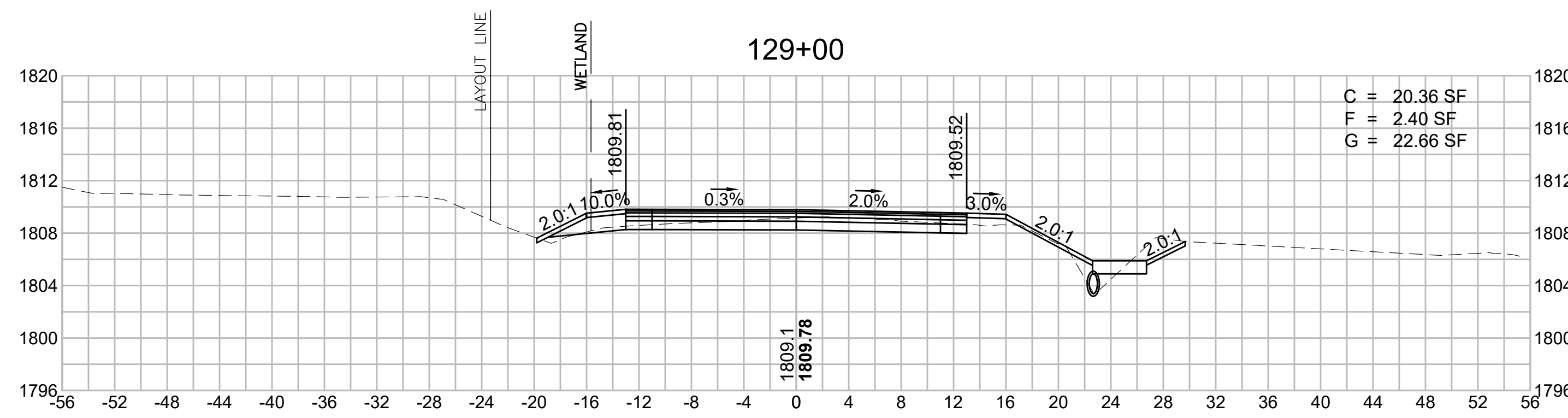
**OLD NORTH ROAD
CROSS SECTIONS - 52**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	156	191

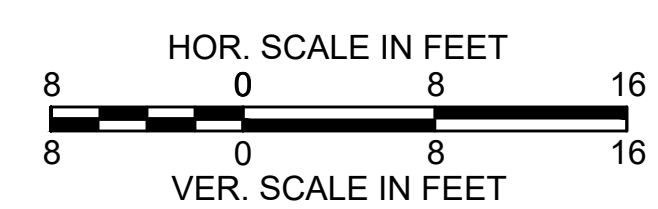
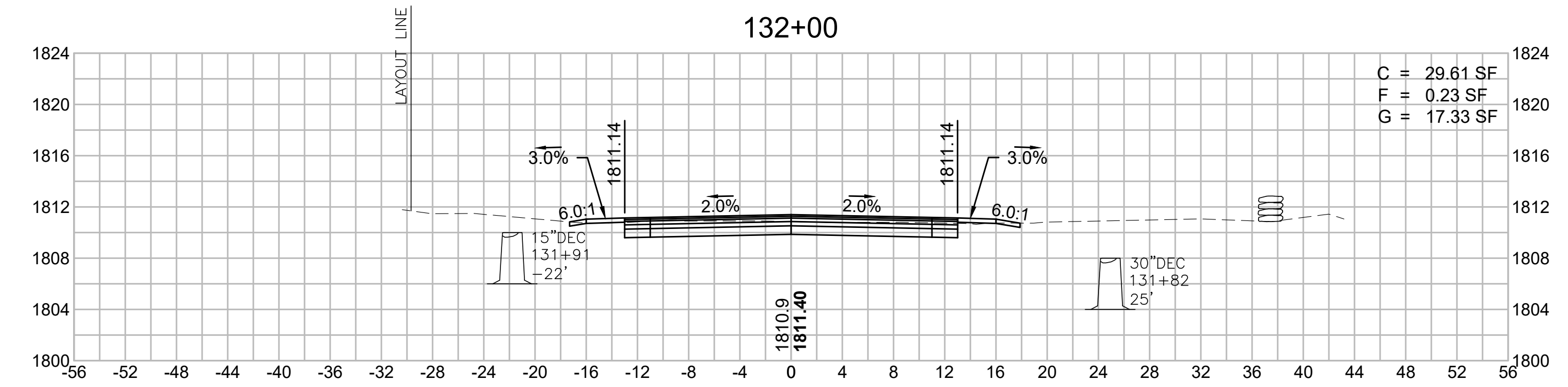
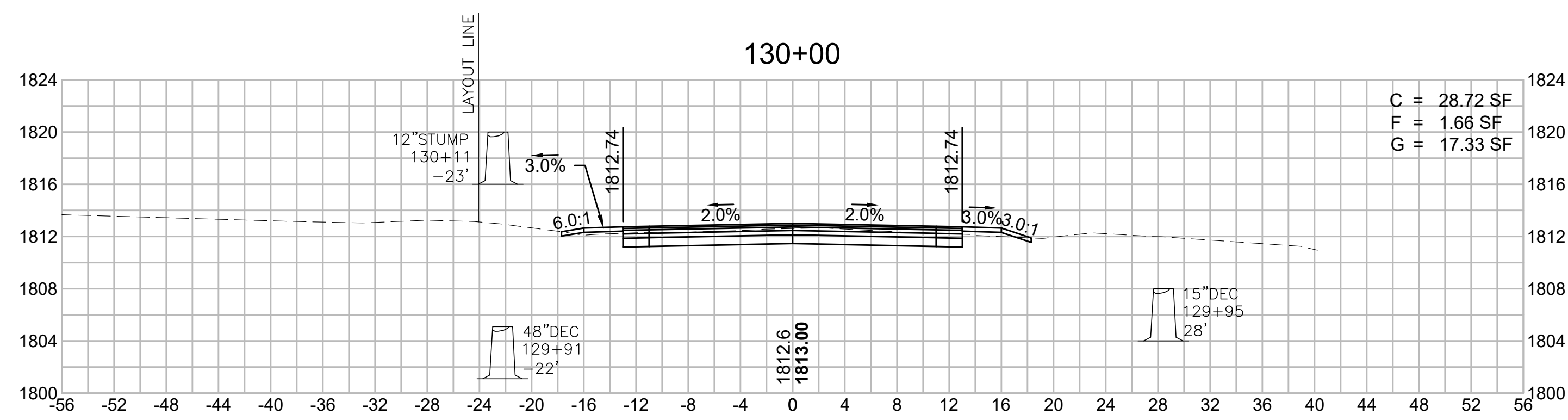
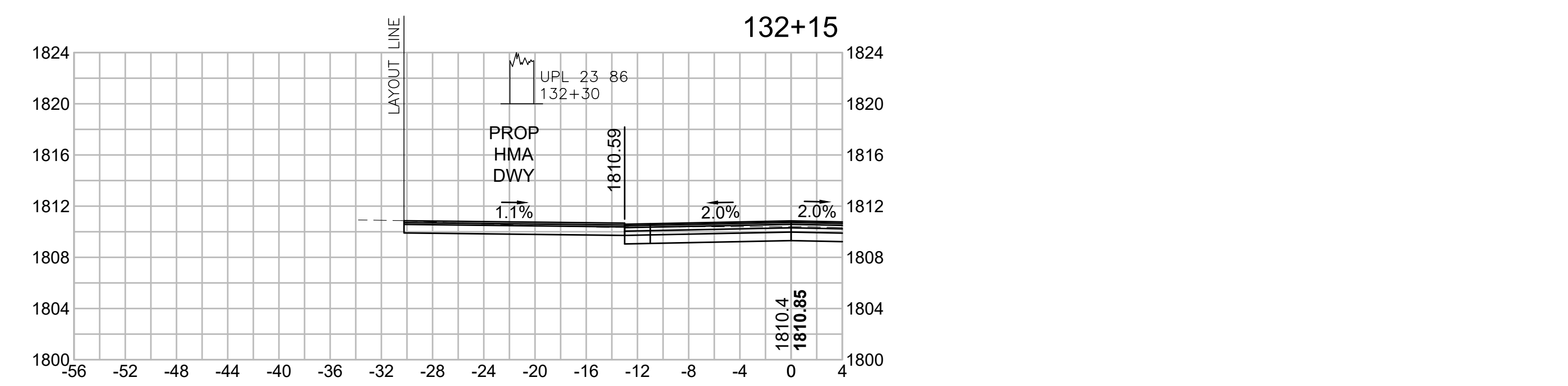
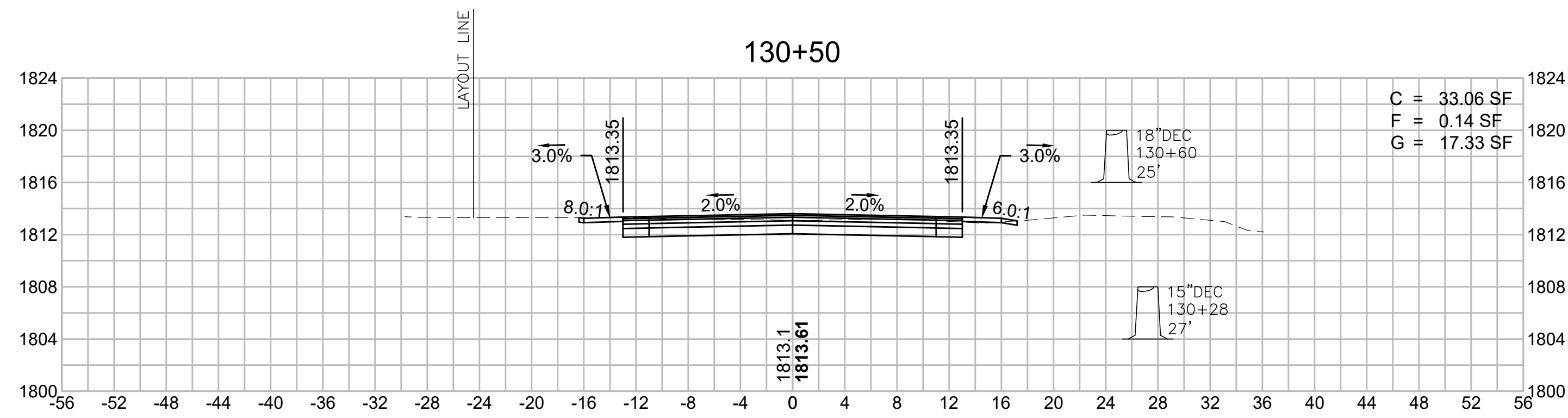
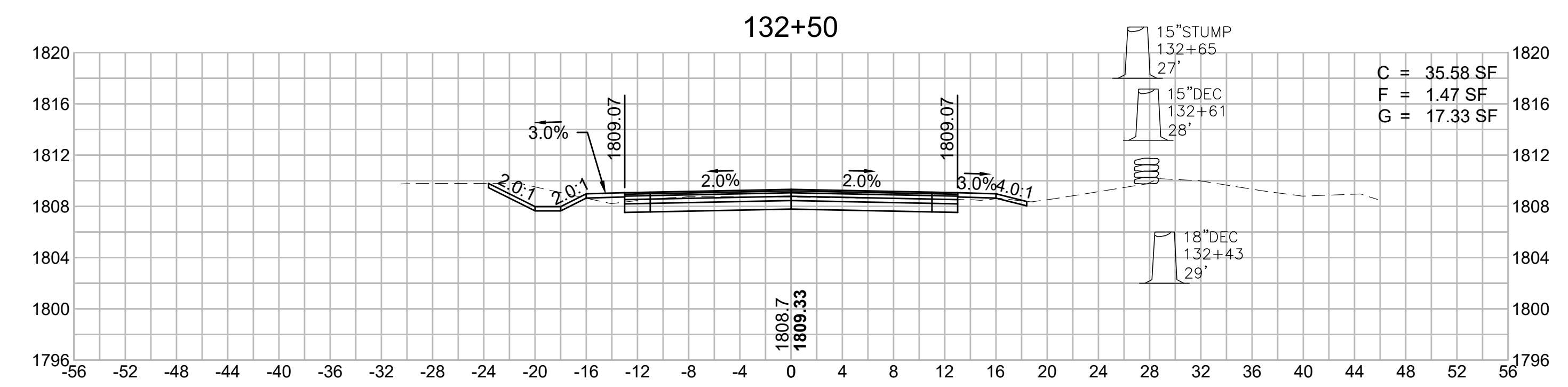
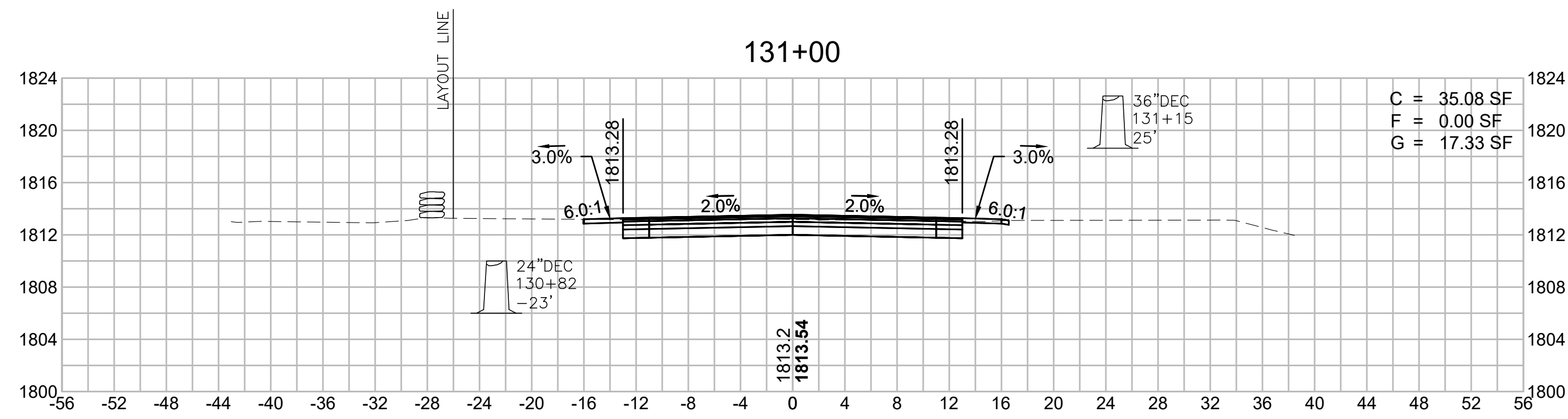
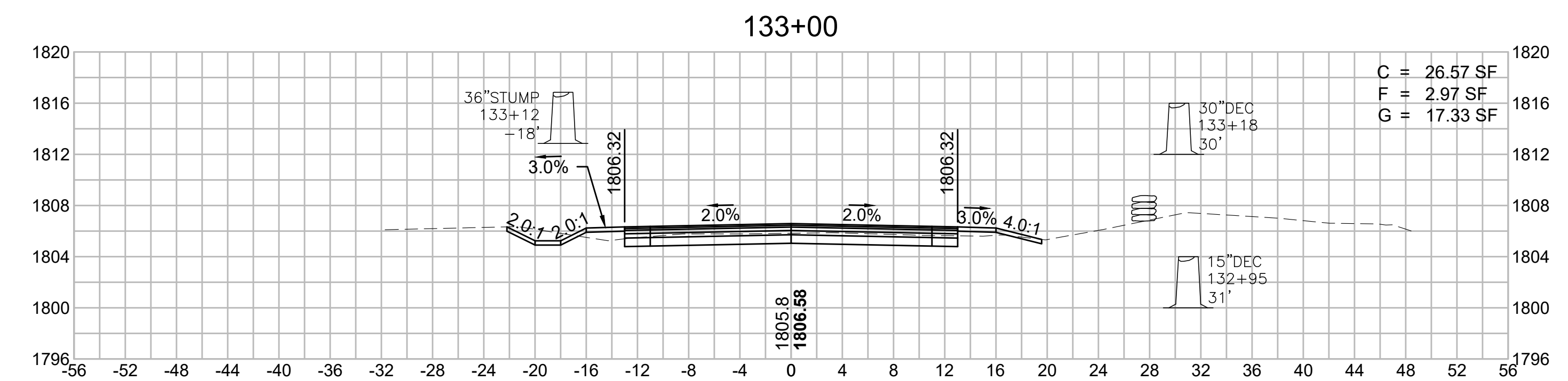
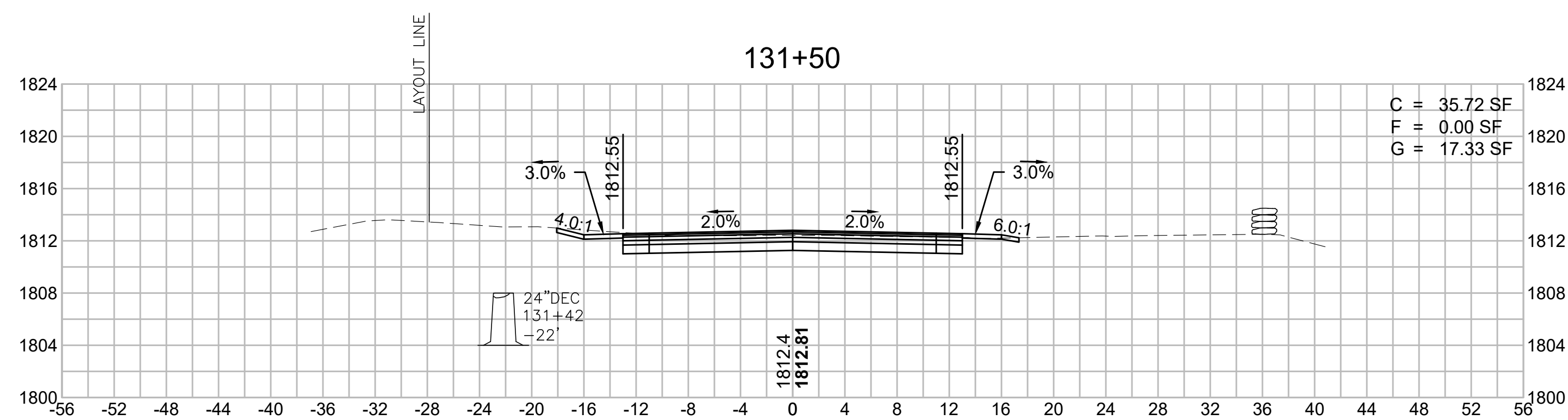
**OLD NORTH ROAD
CROSS SECTIONS - 53**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	157	191
PROJECT FILE NO.		609287	

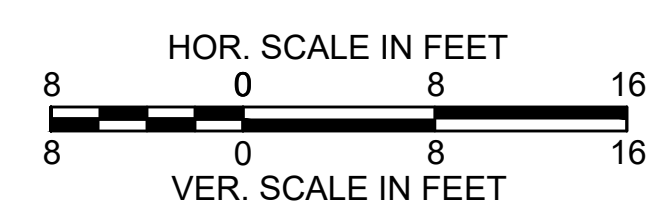
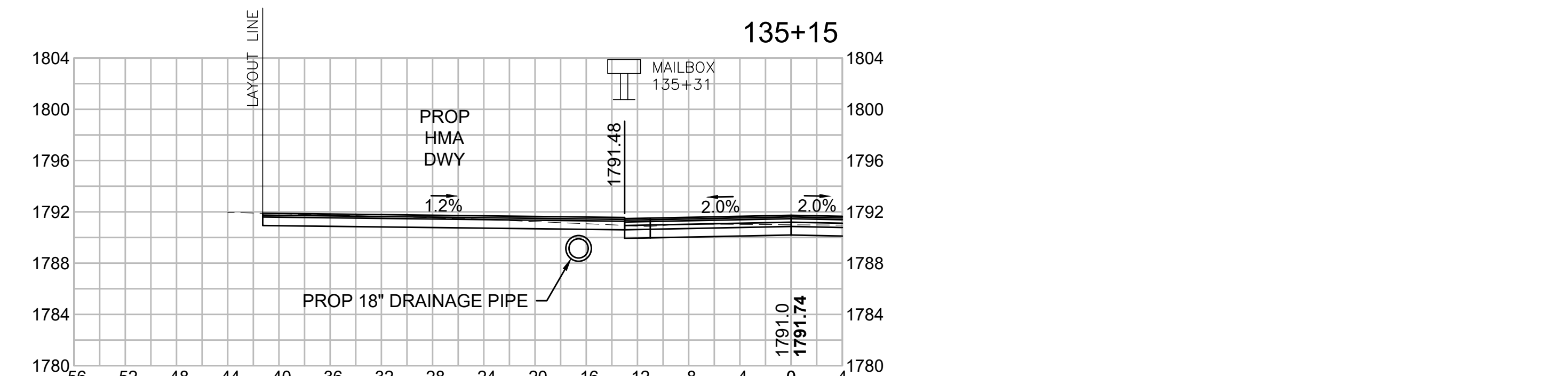
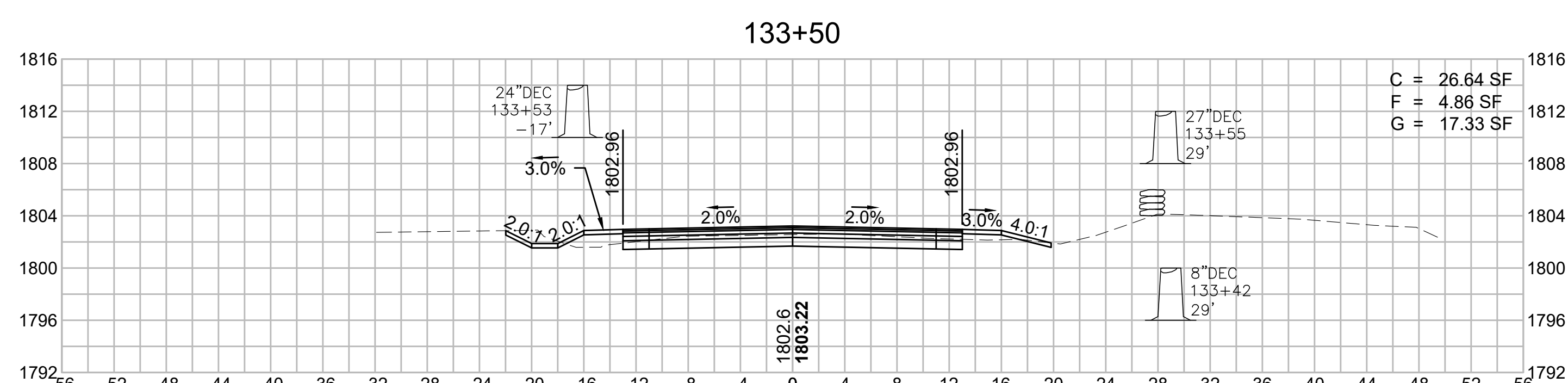
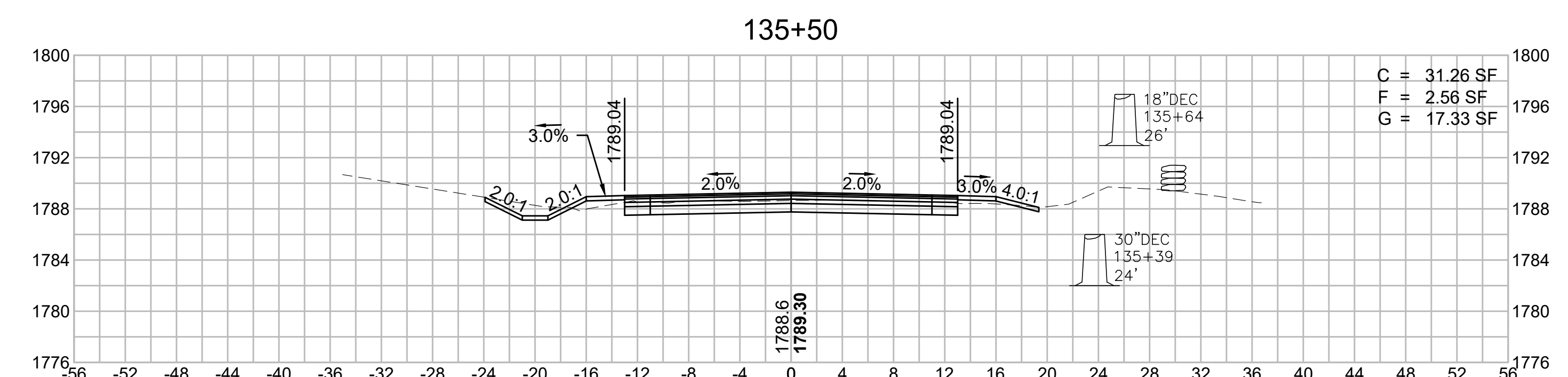
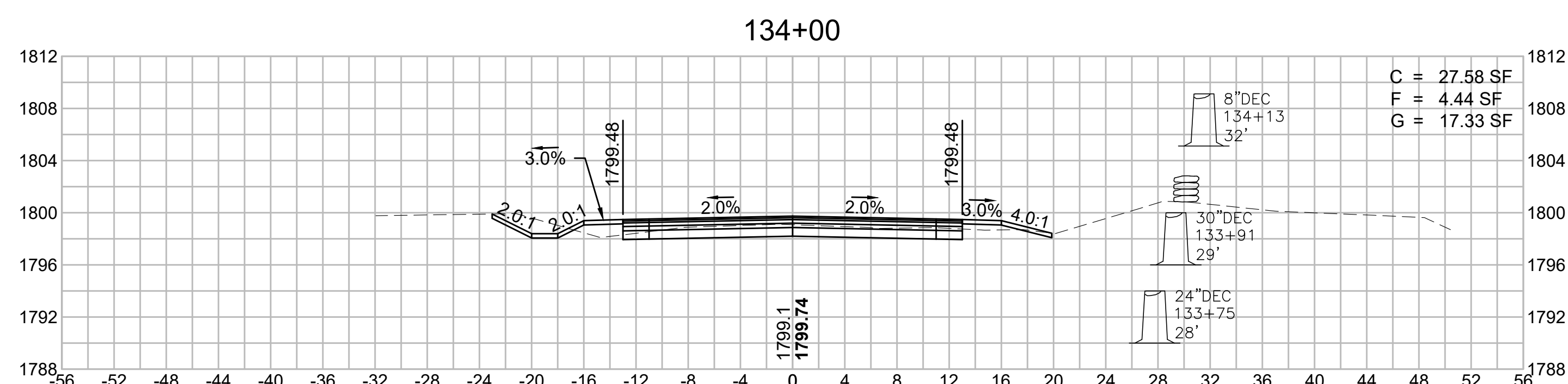
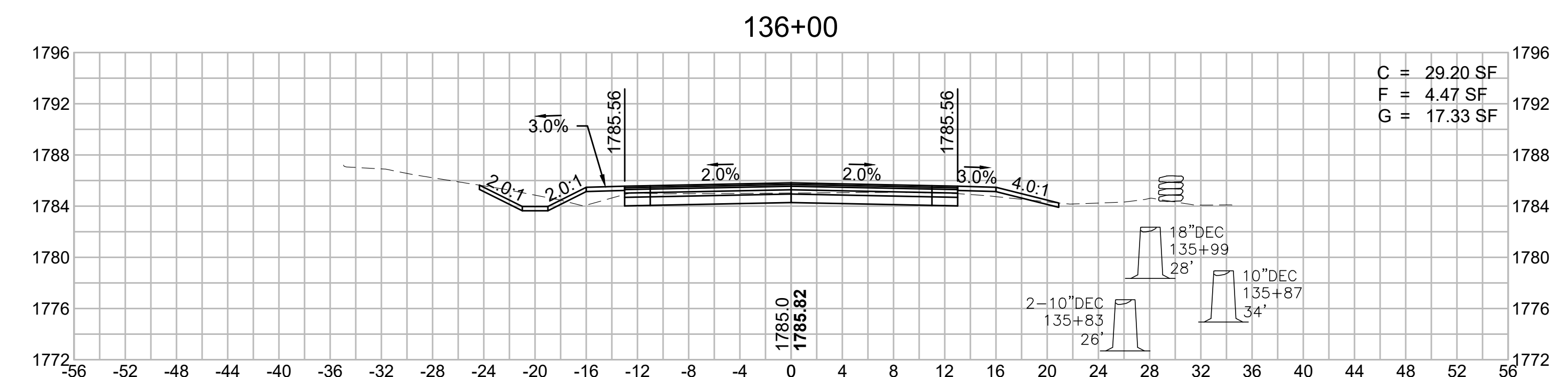
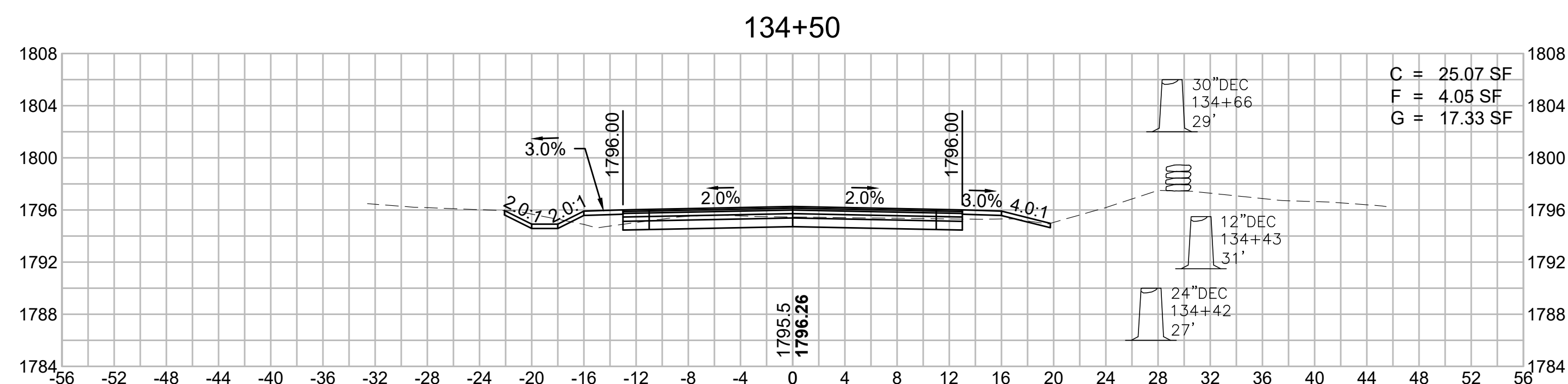
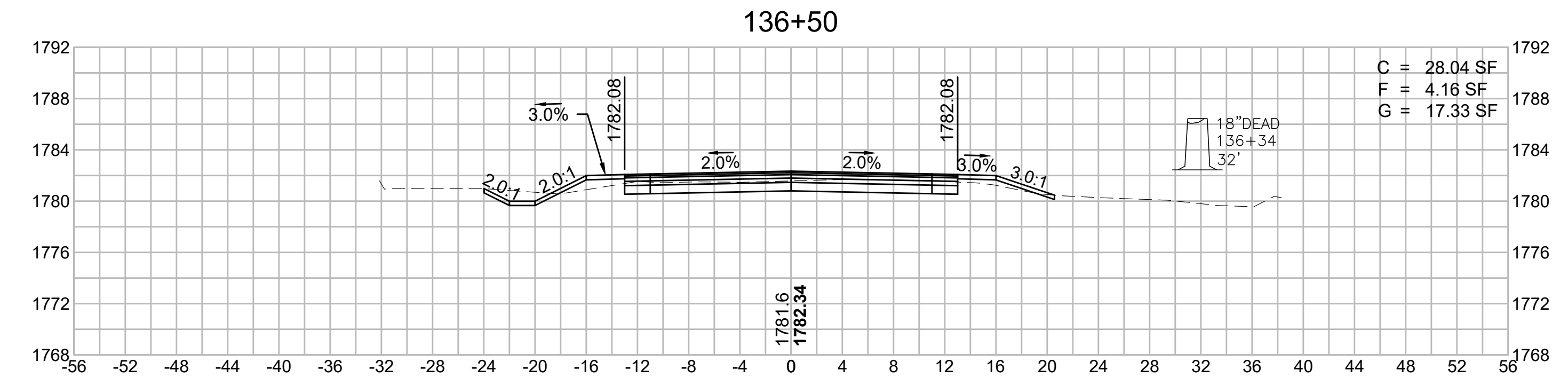
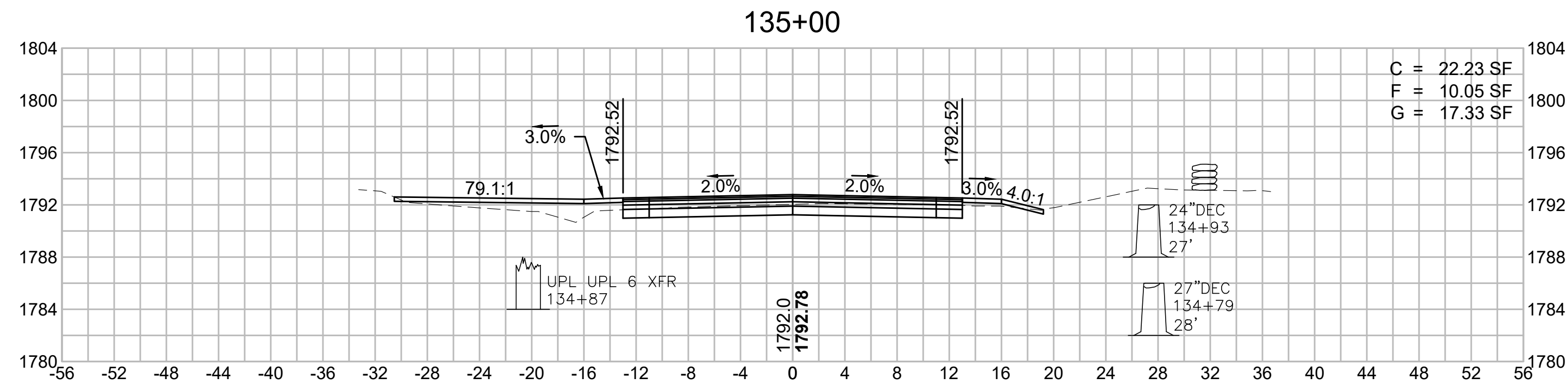
**OLD NORTH ROAD
CROSS SECTIONS - 54**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	158	191
PROJECT FILE NO. 609287			

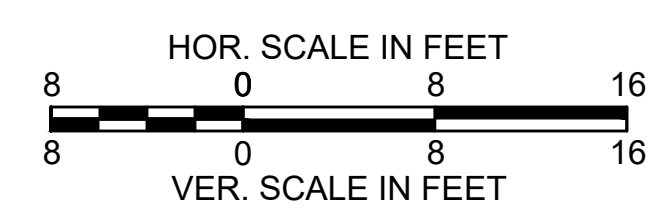
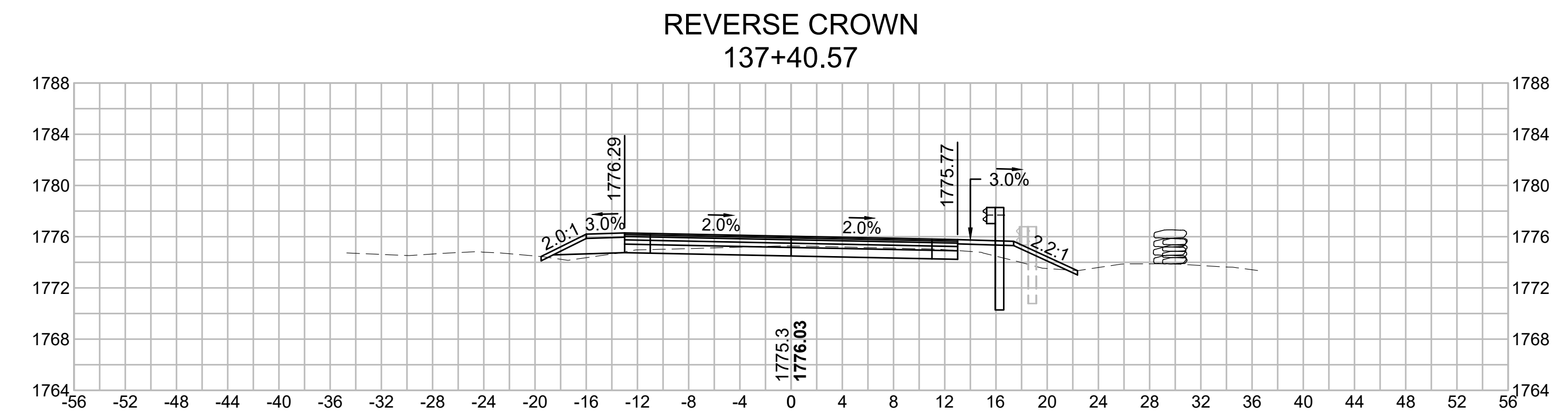
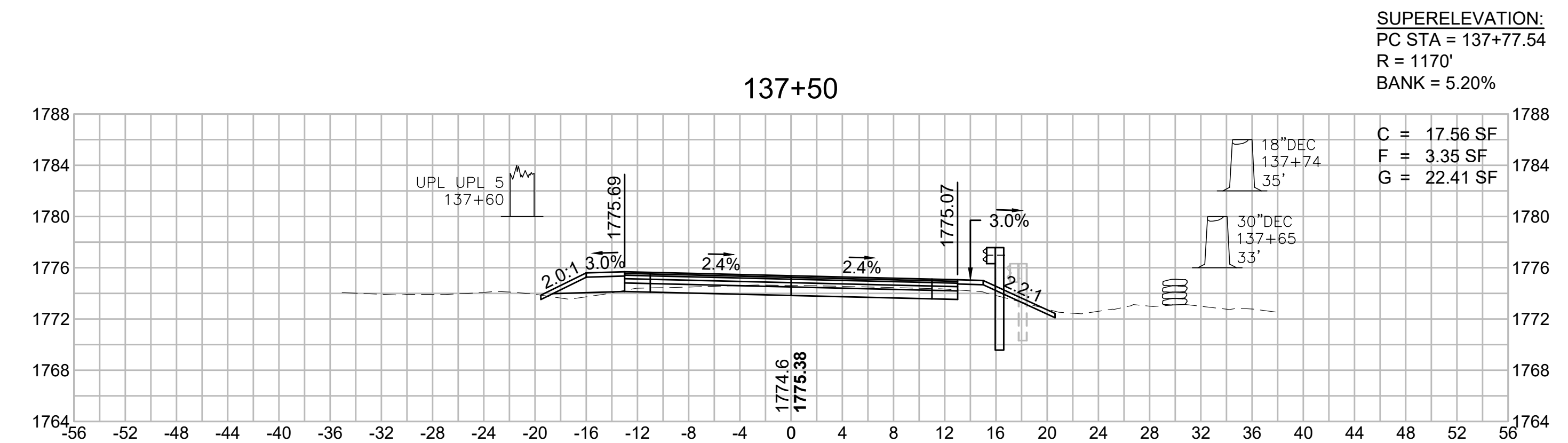
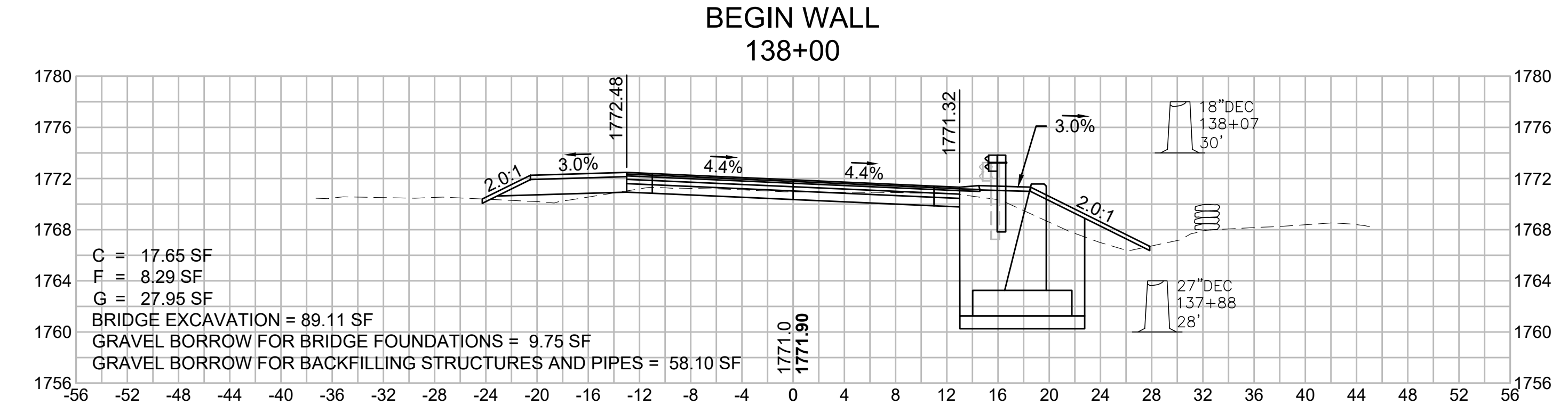
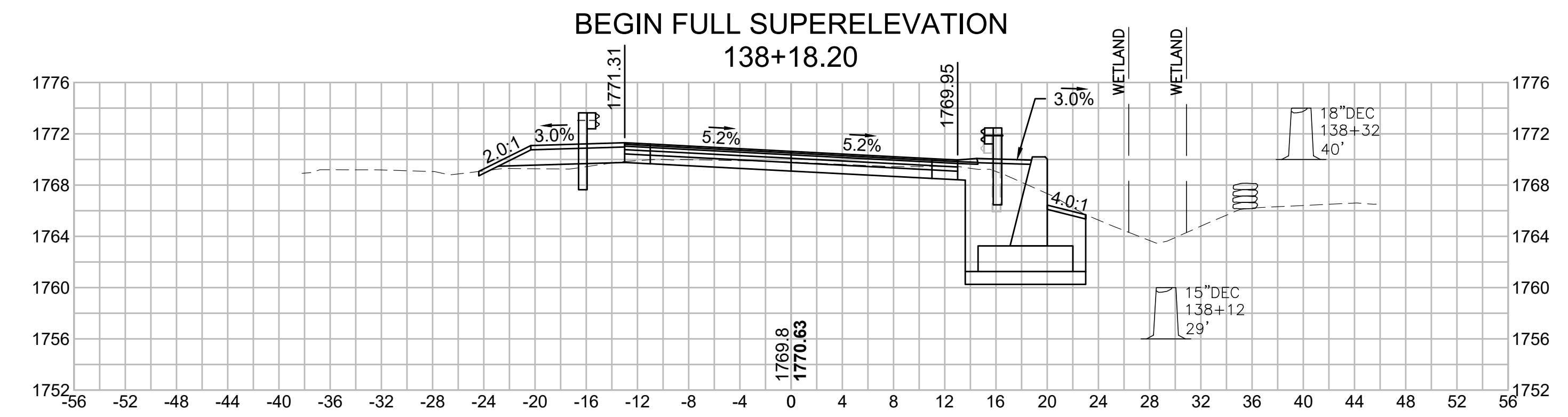
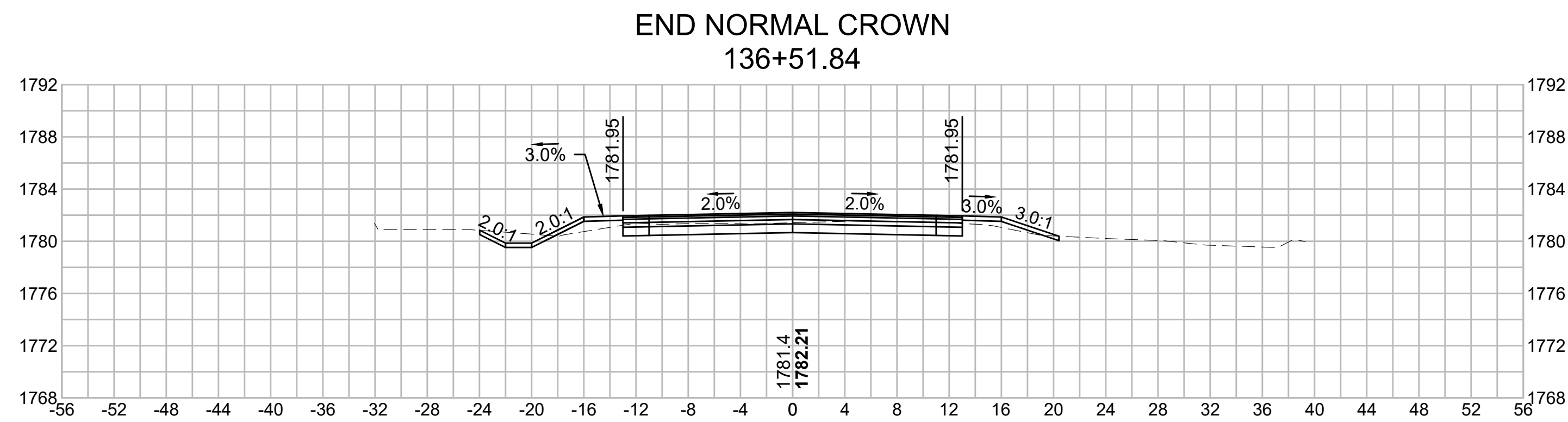
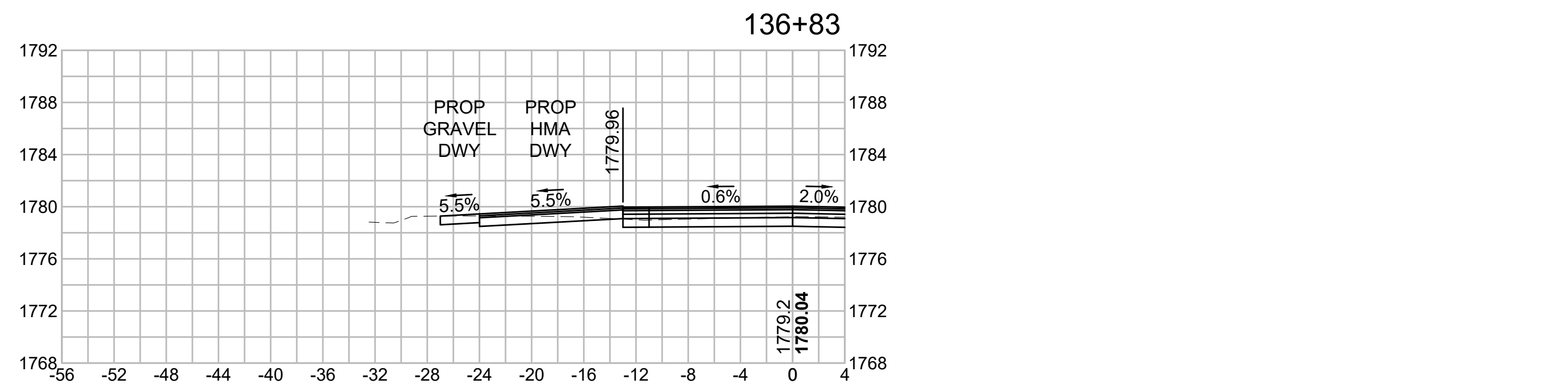
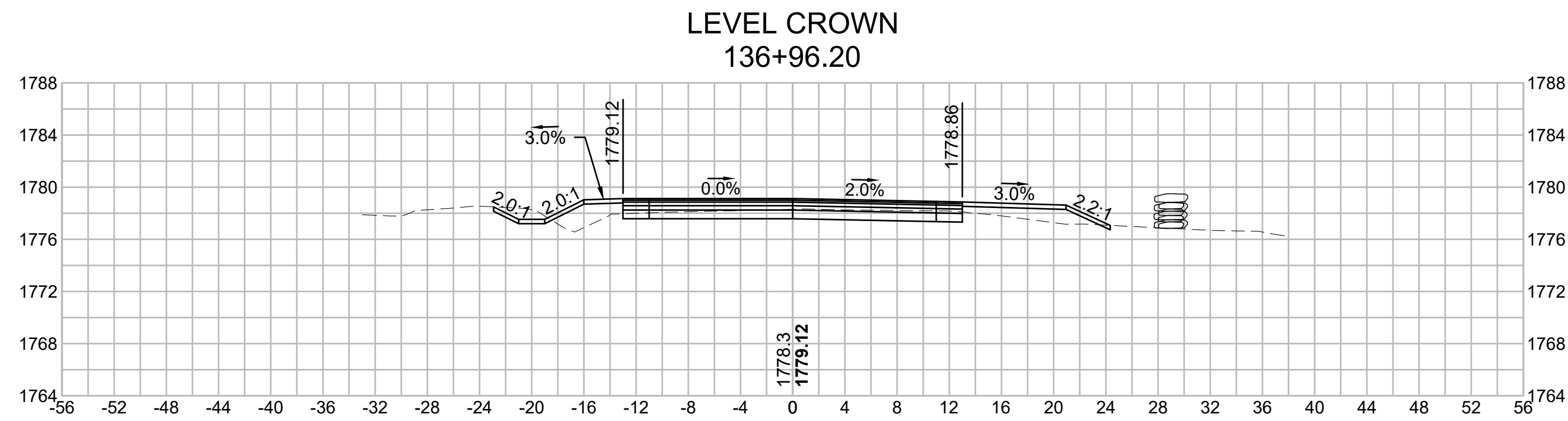
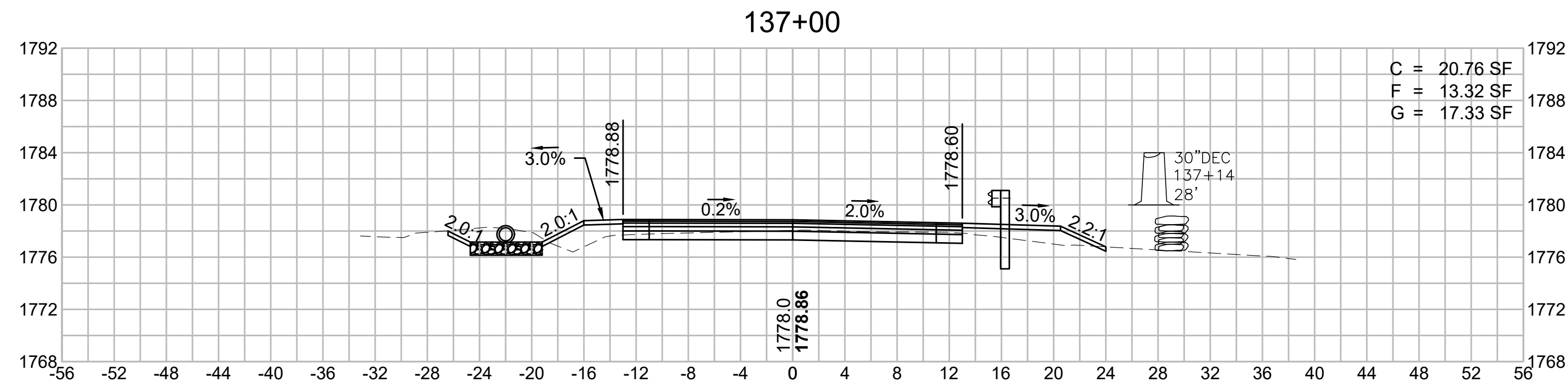
**OLD NORTH ROAD
CROSS SECTIONS - 55**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	159	191
PROJECT FILE NO.		609287	

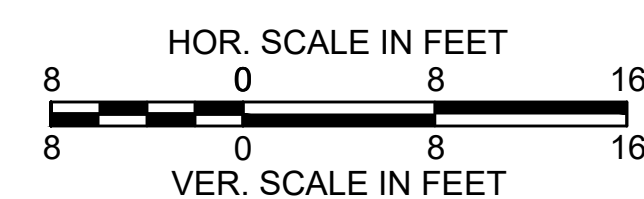
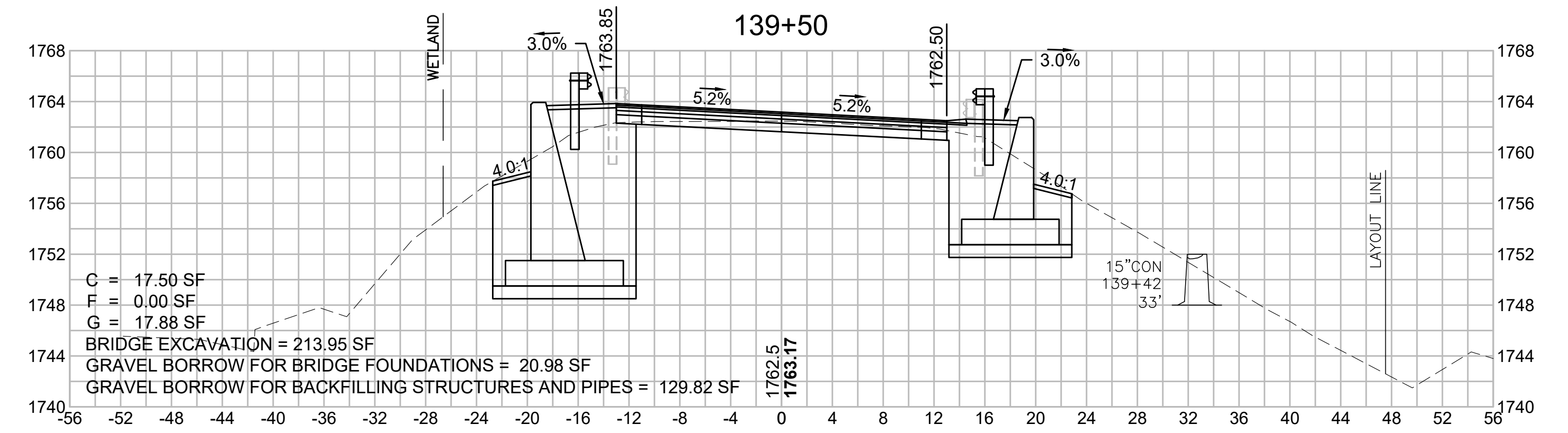
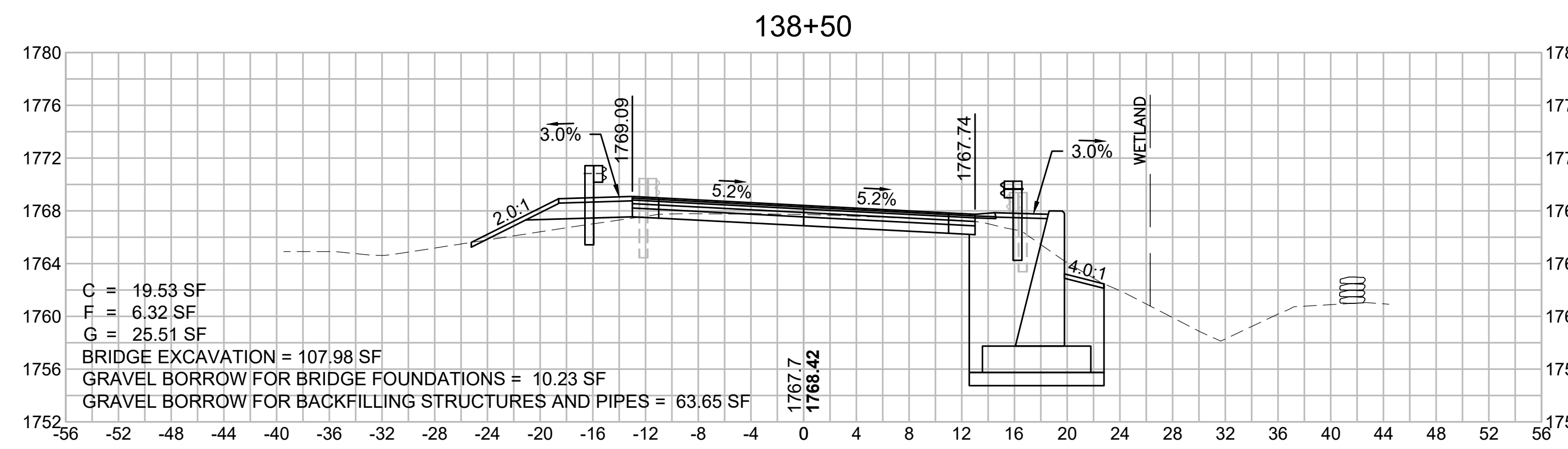
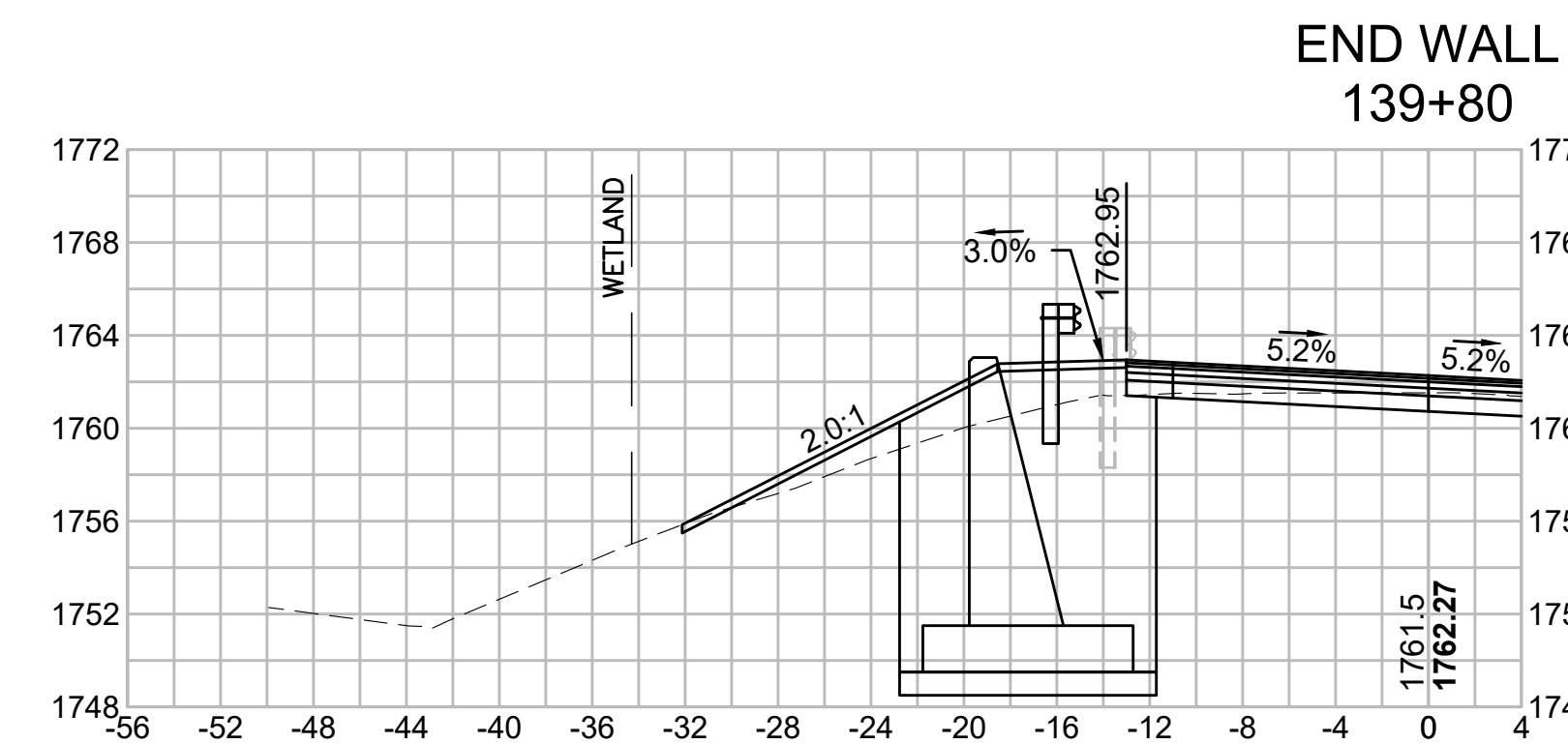
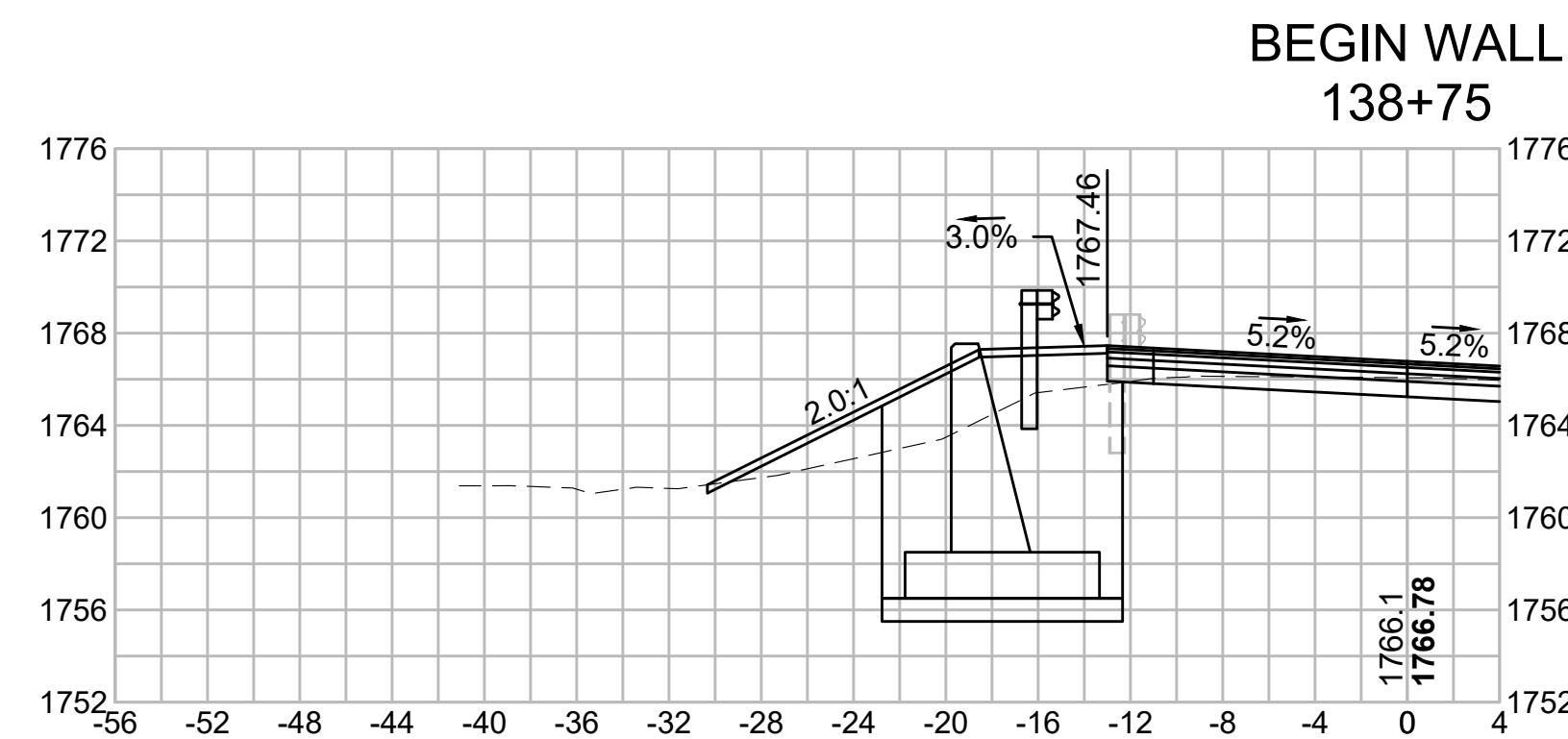
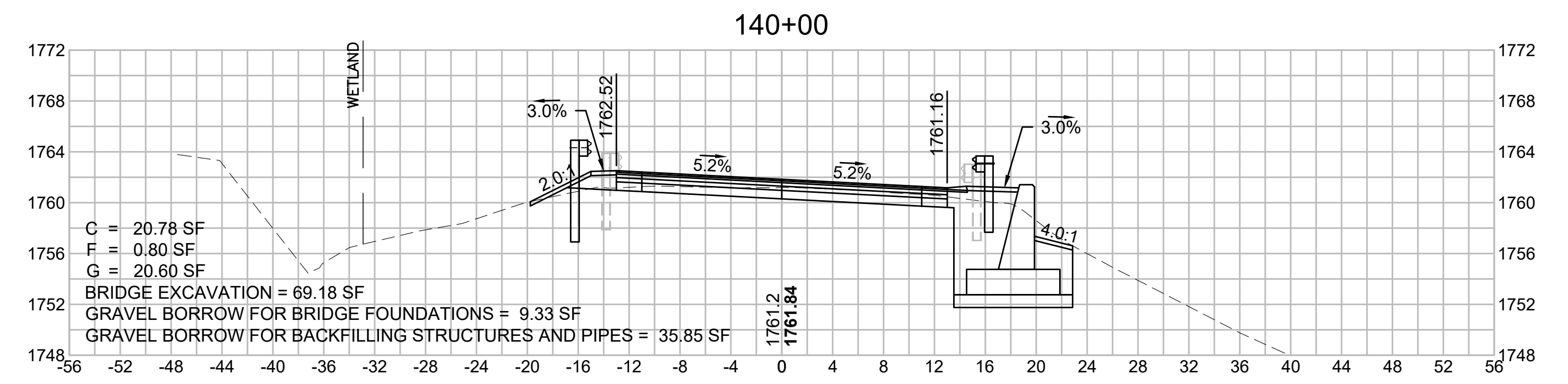
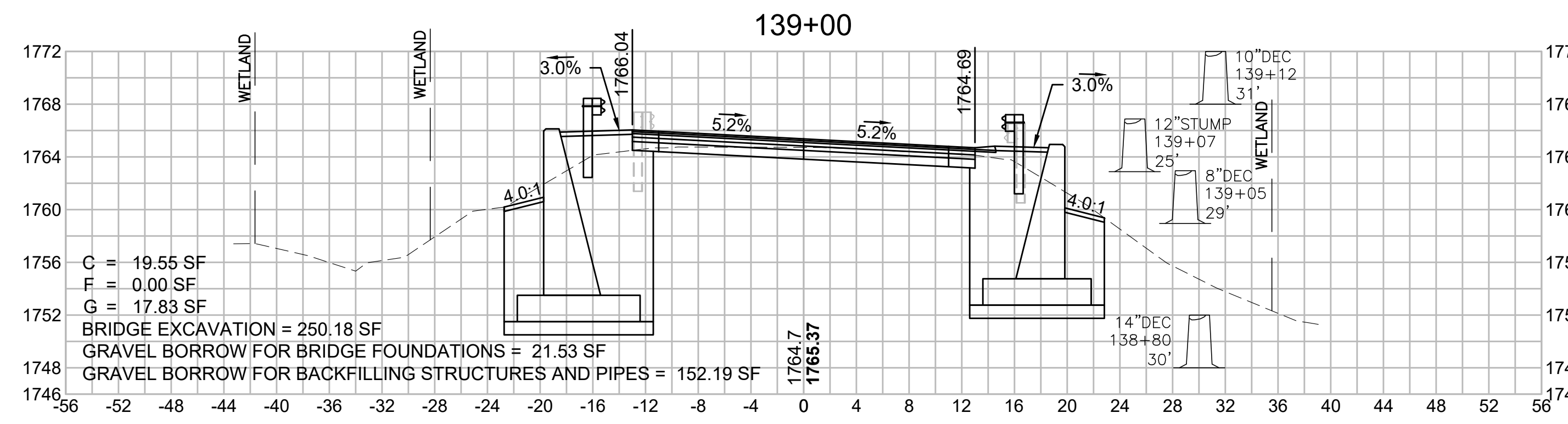
**OLD NORTH ROAD
CROSS SECTIONS - 56**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	160	191
PROJECT FILE NO.		609287	

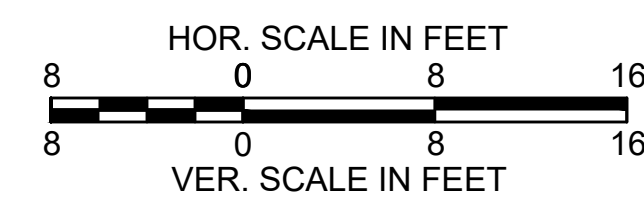
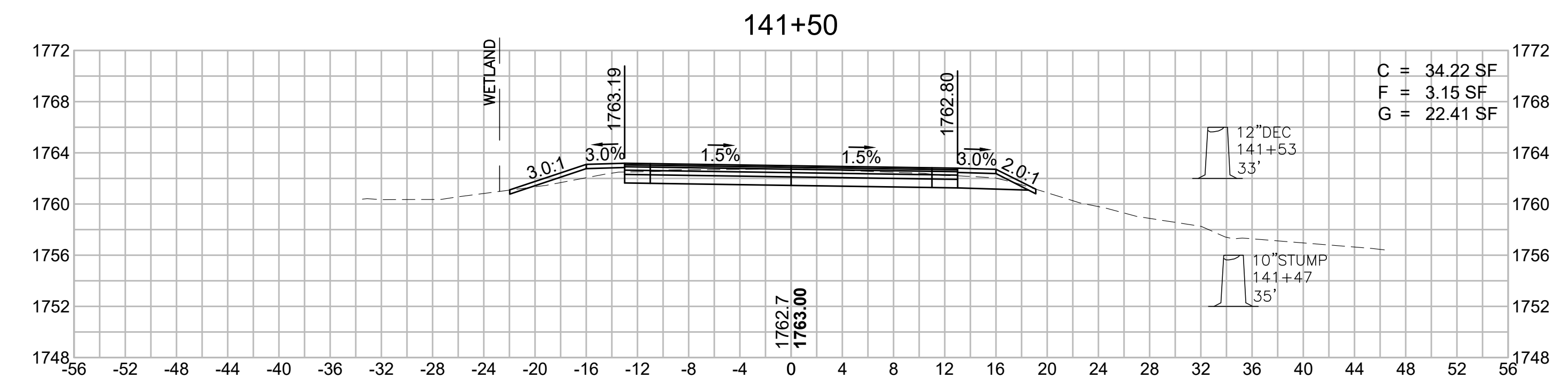
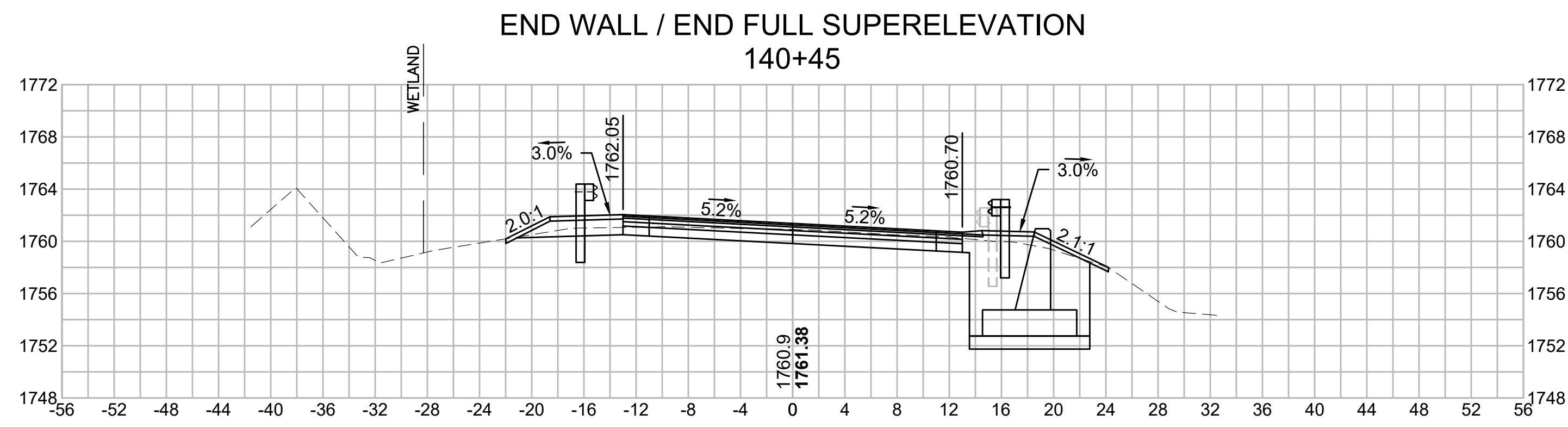
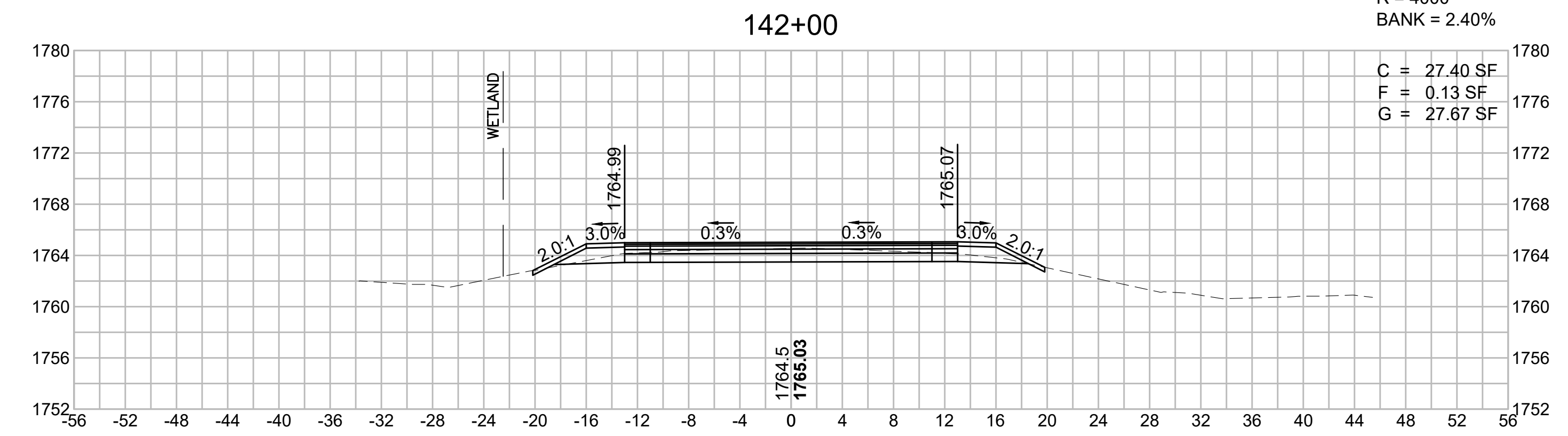
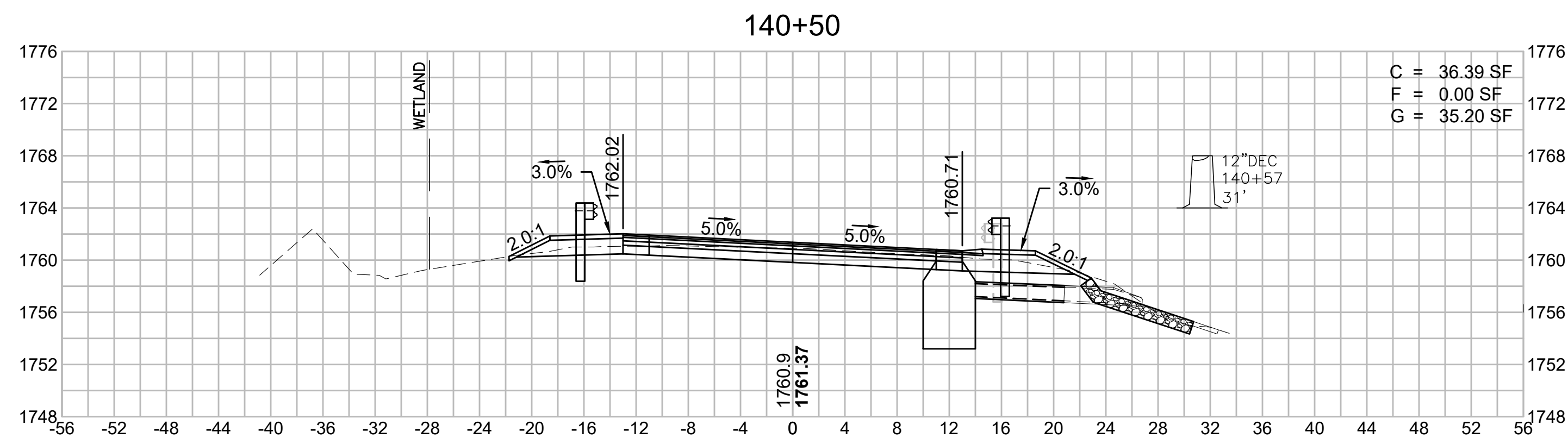
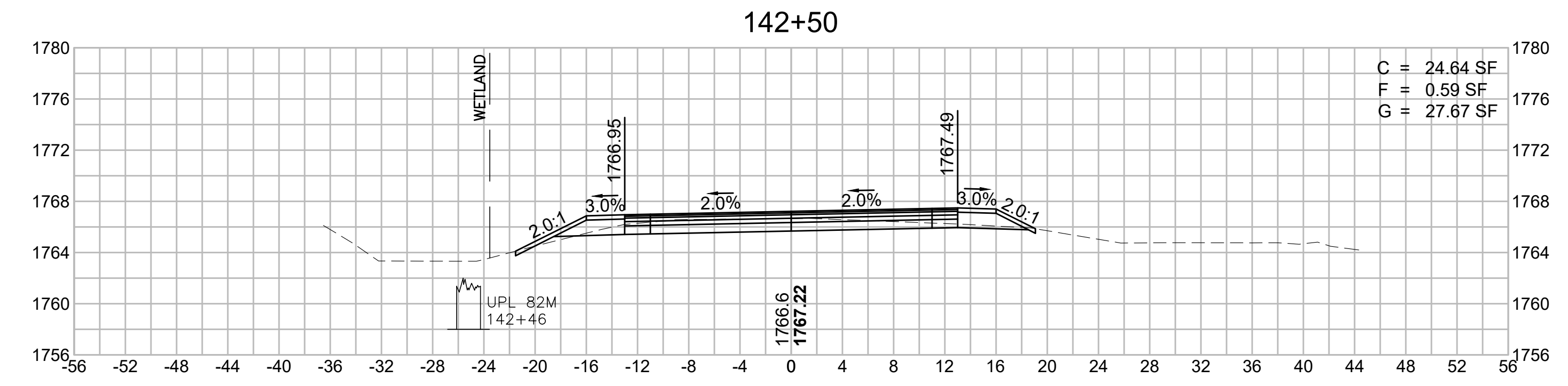
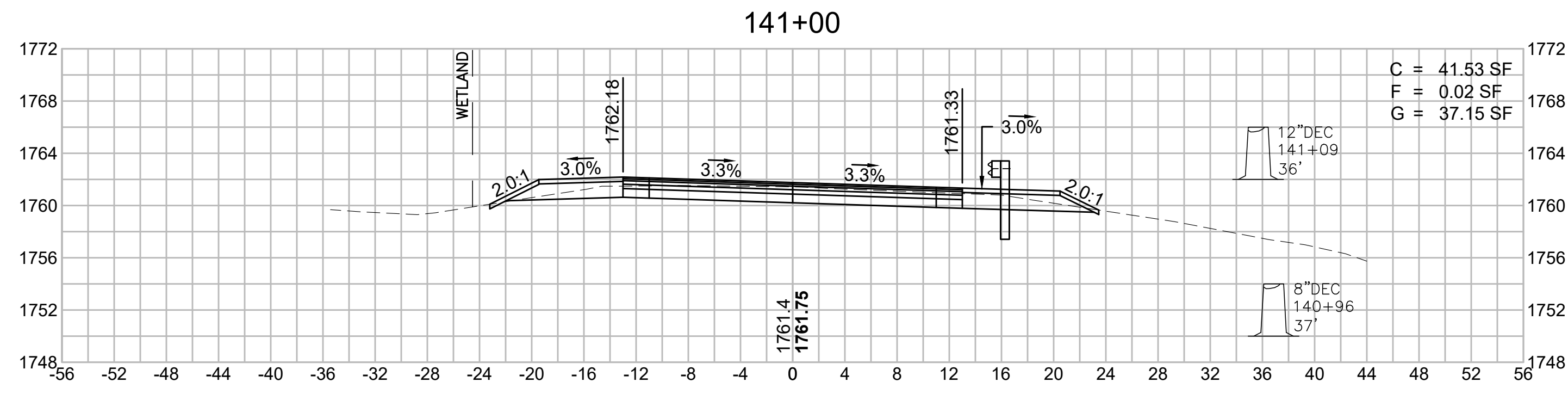
**OLD NORTH ROAD
CROSS SECTIONS - 57**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	161	191
PROJECT FILE NO. 609287			

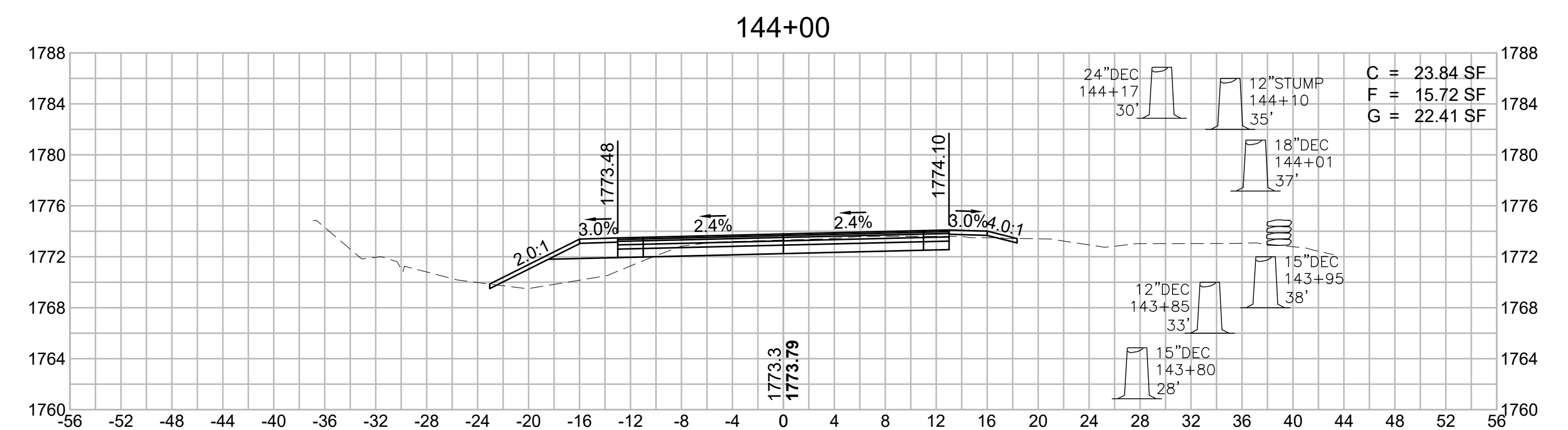
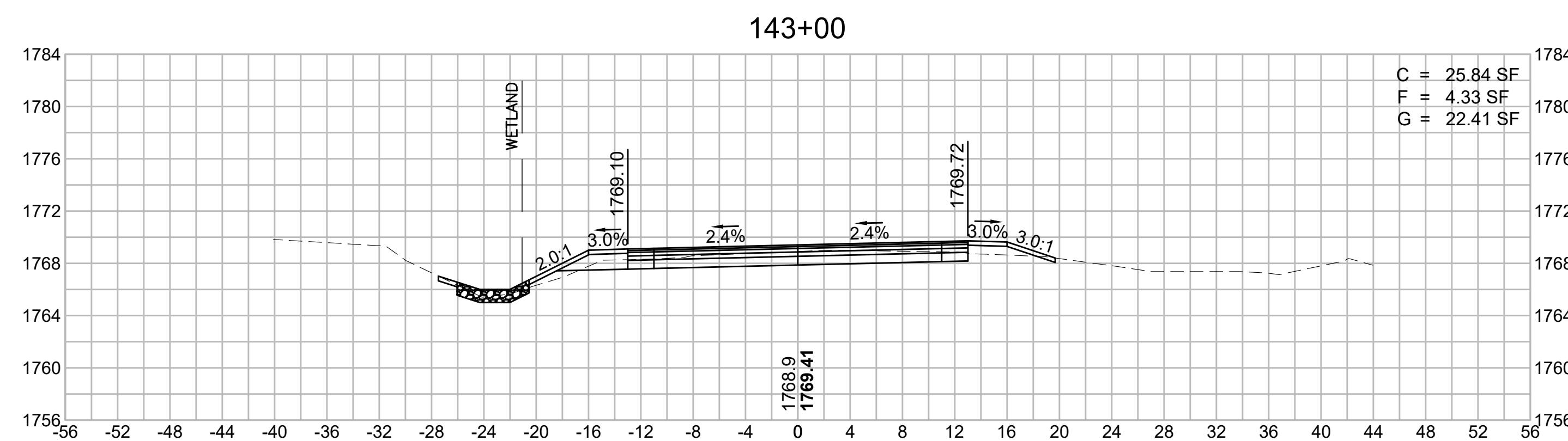
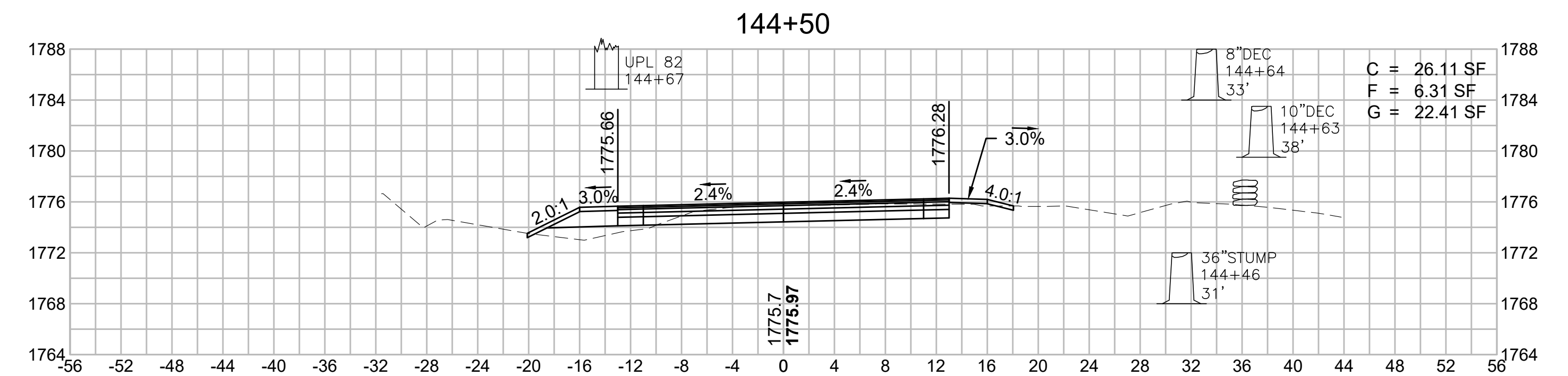
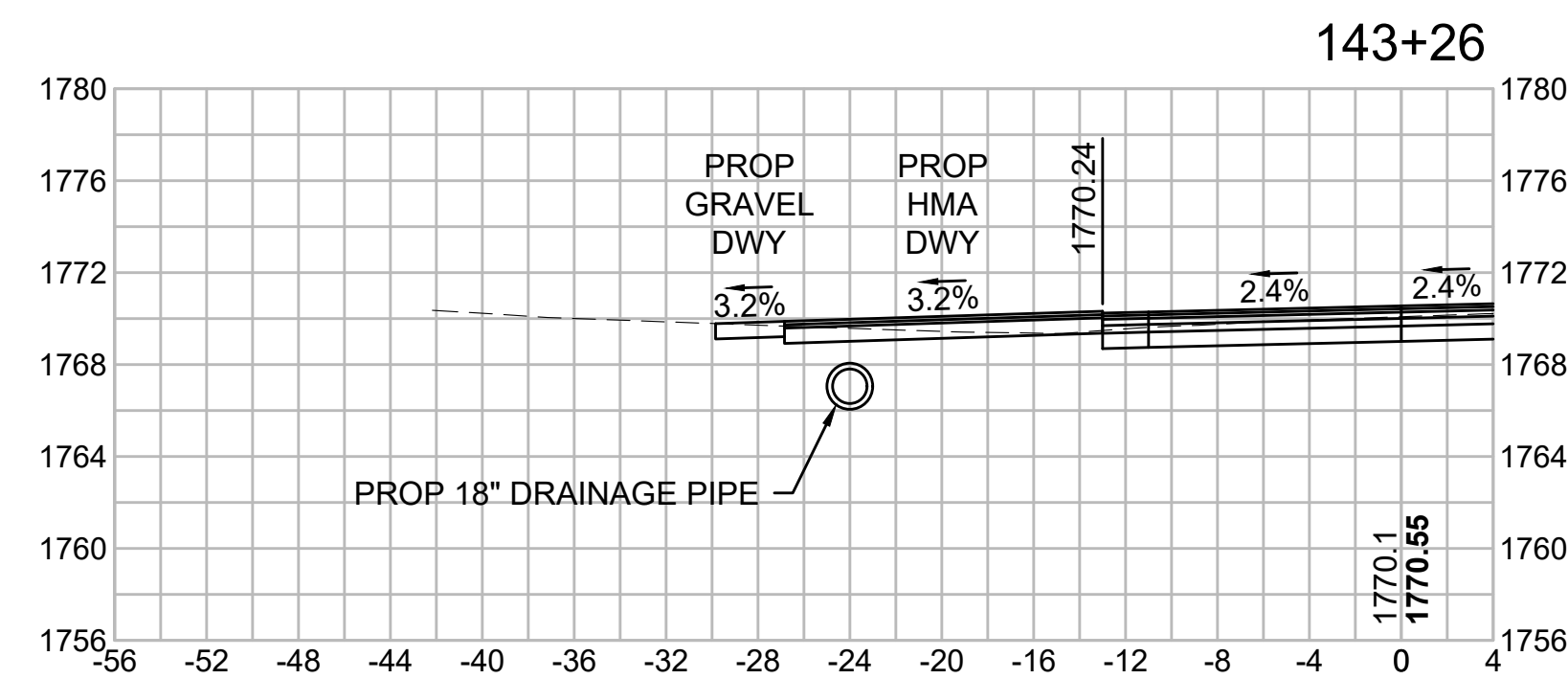
**OLD NORTH ROAD
CROSS SECTIONS - 58**



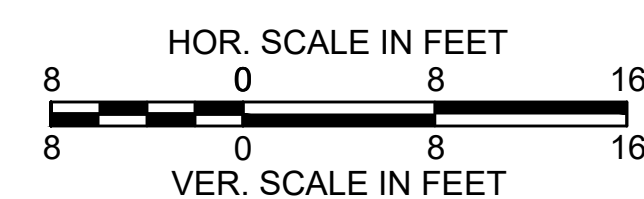
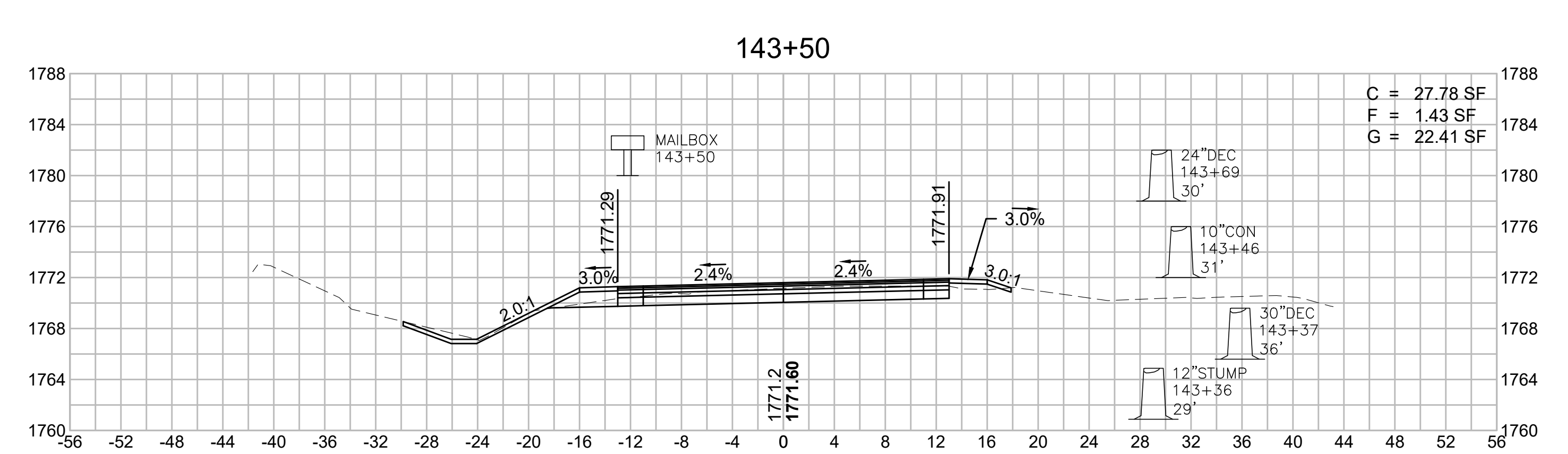
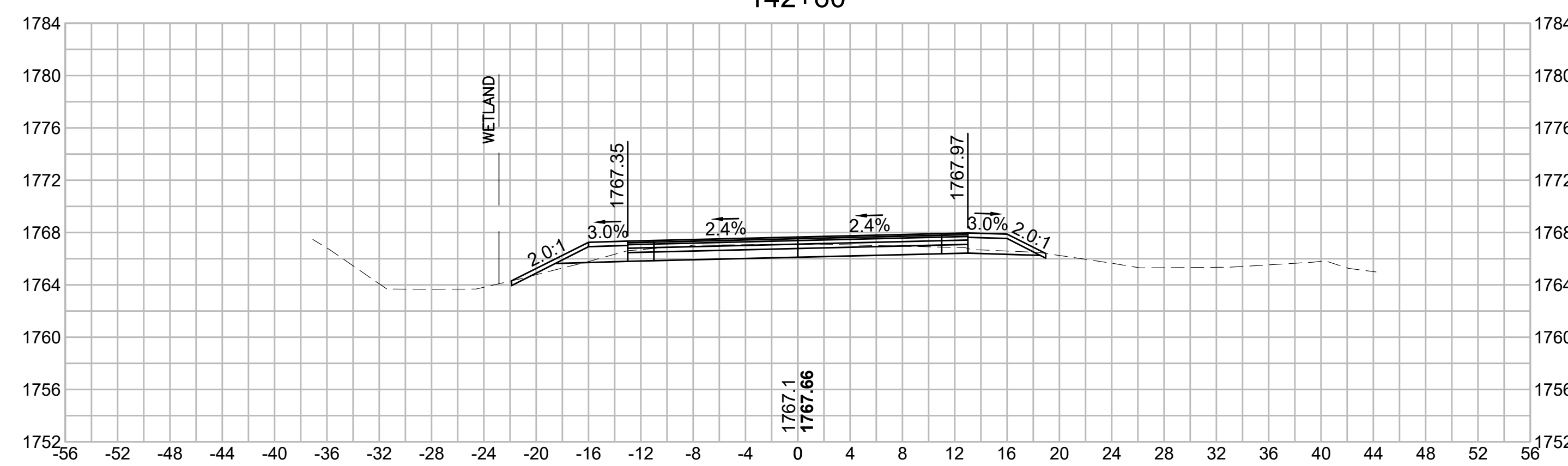
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	162	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 59**



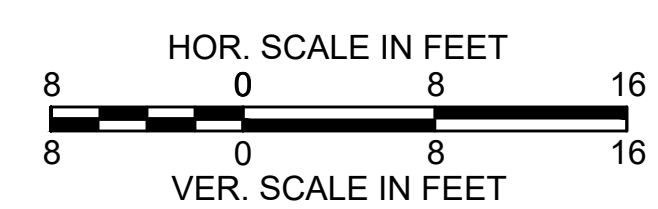
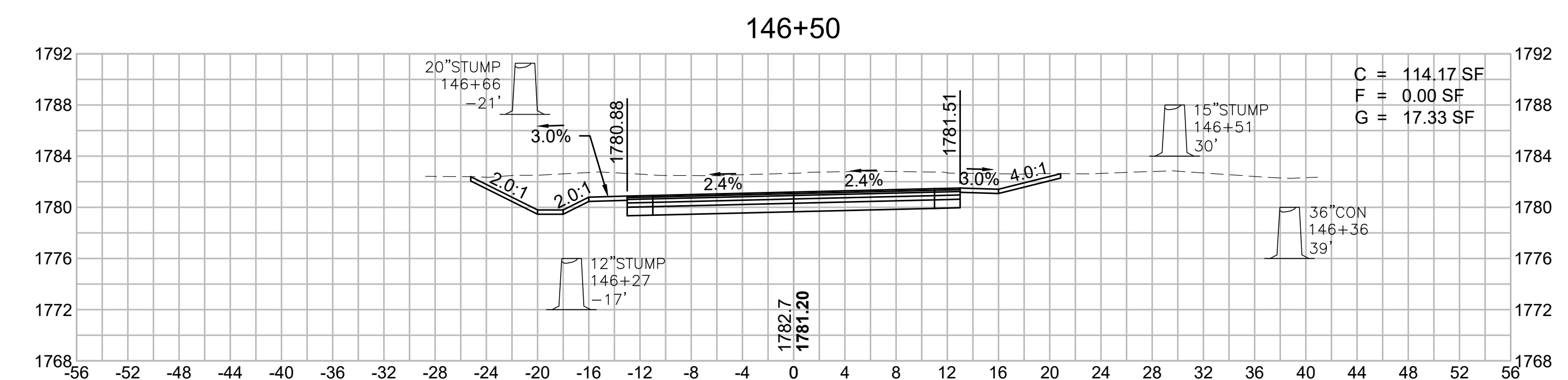
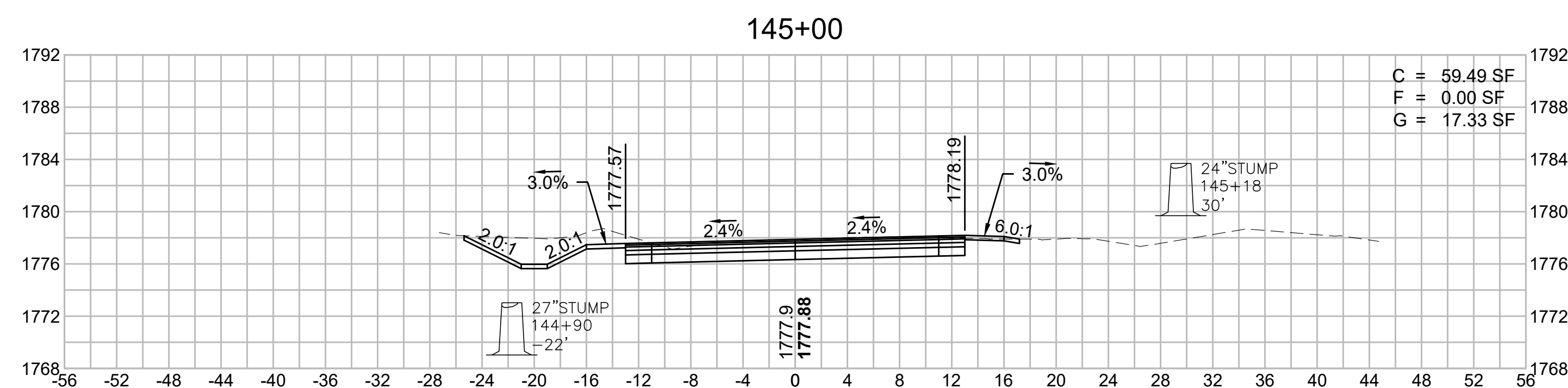
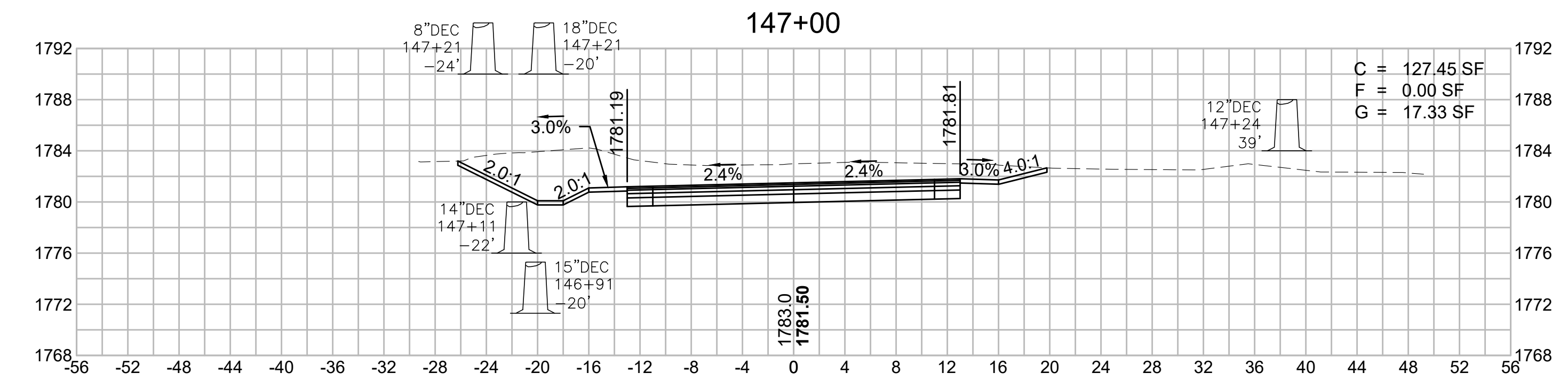
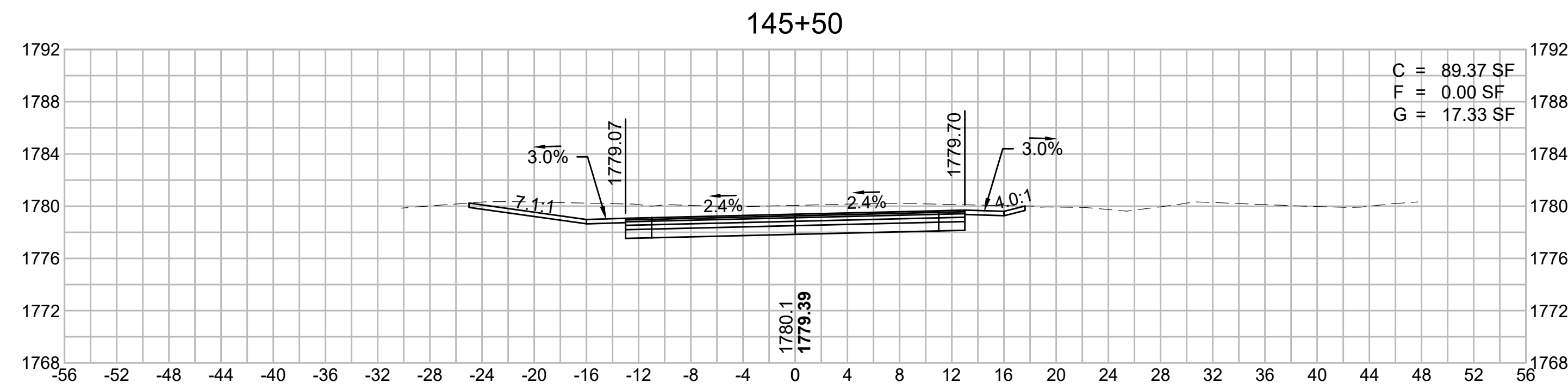
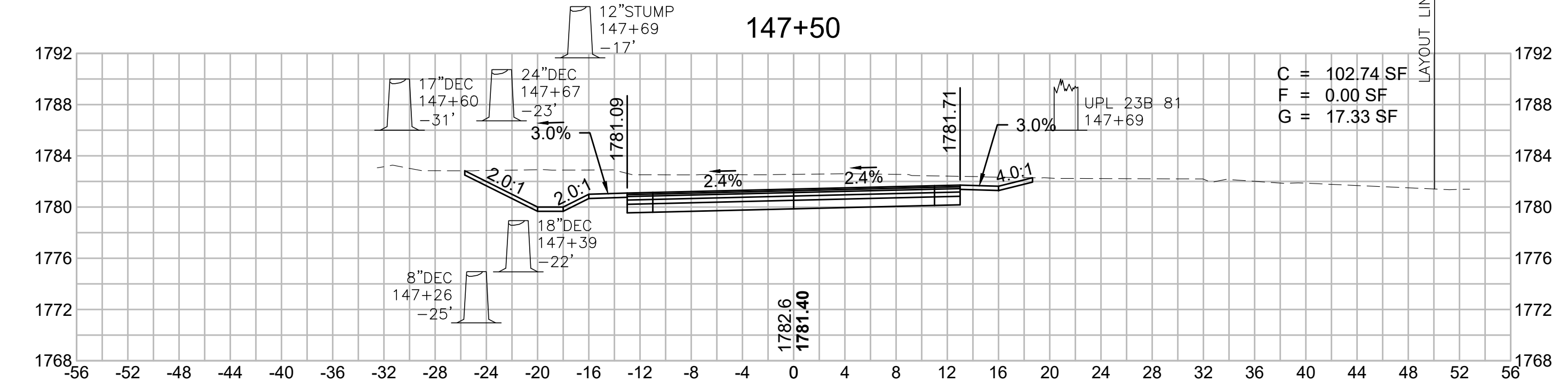
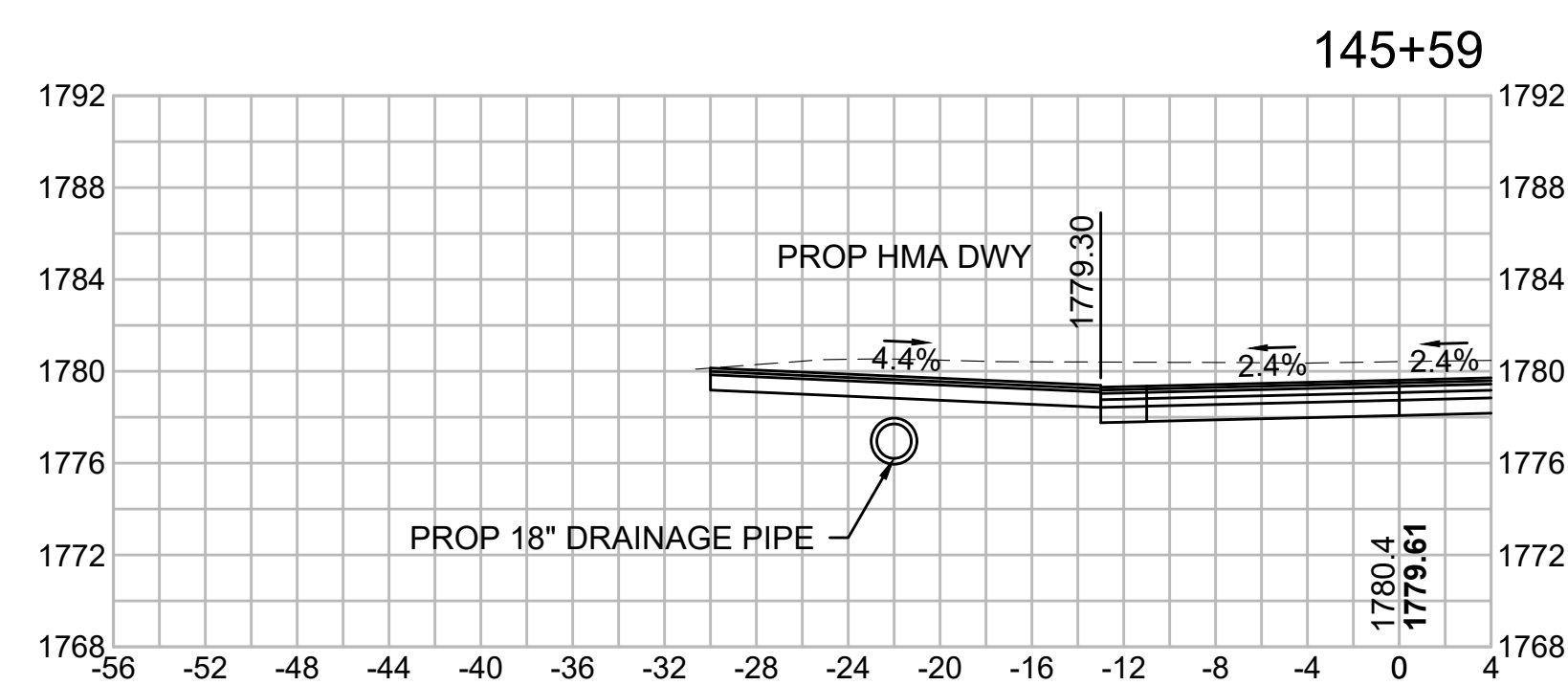
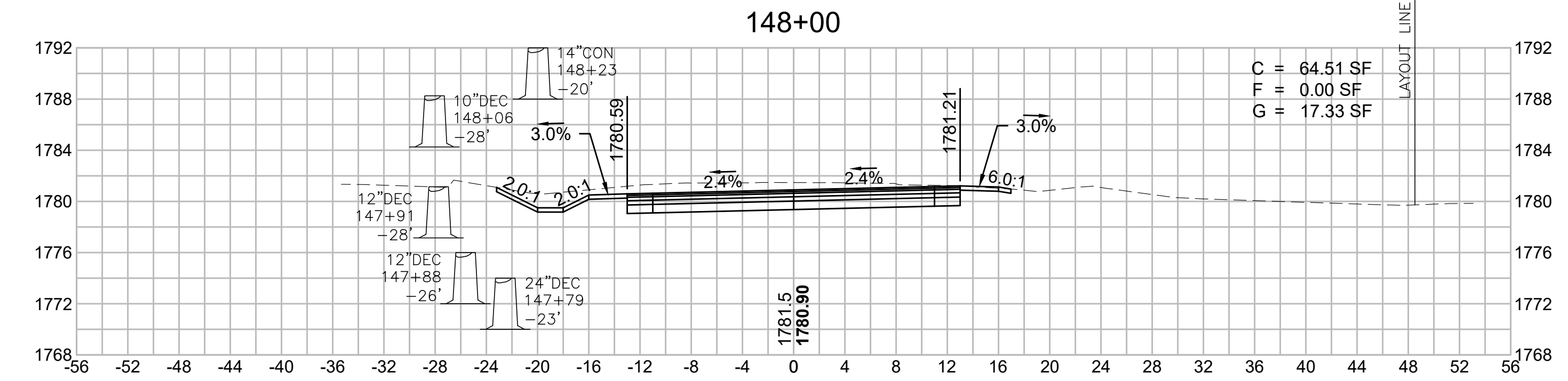
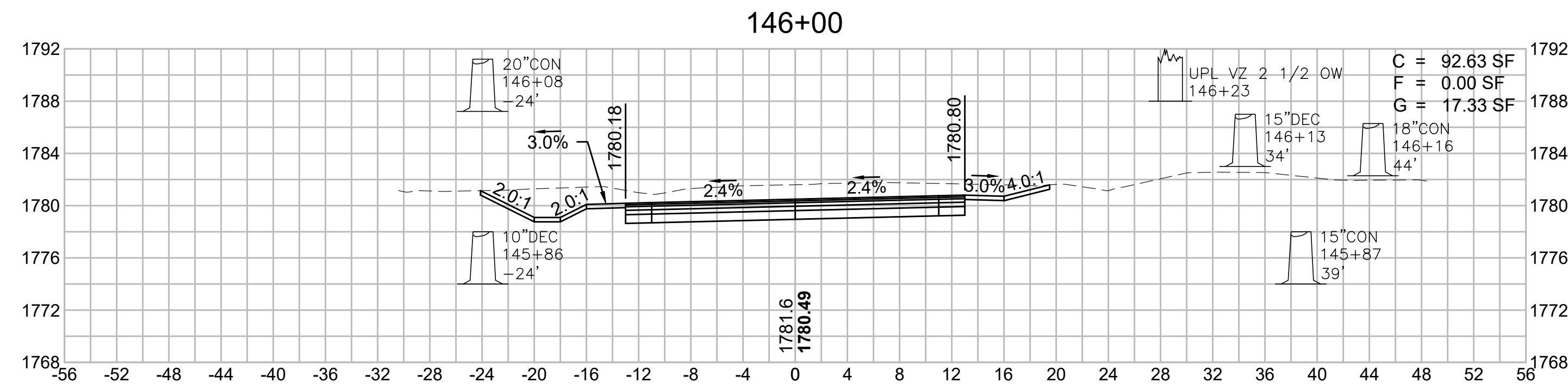
**BEGIN FULL SUPERELEVATION
142+60**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	163	191
PROJECT FILE NO.		609287	

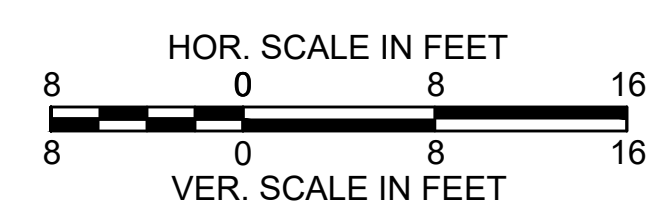
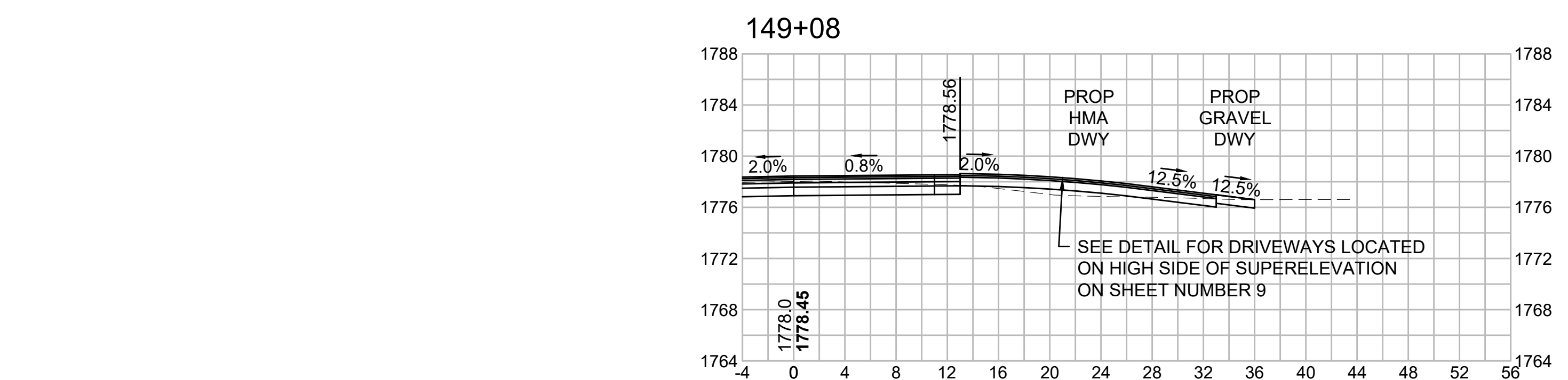
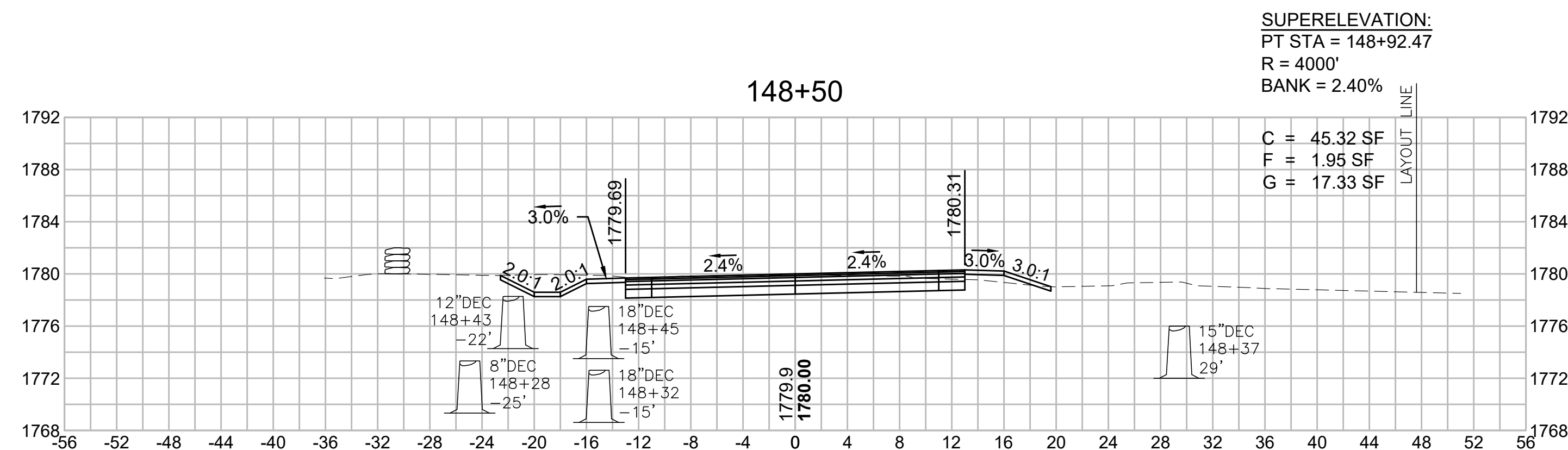
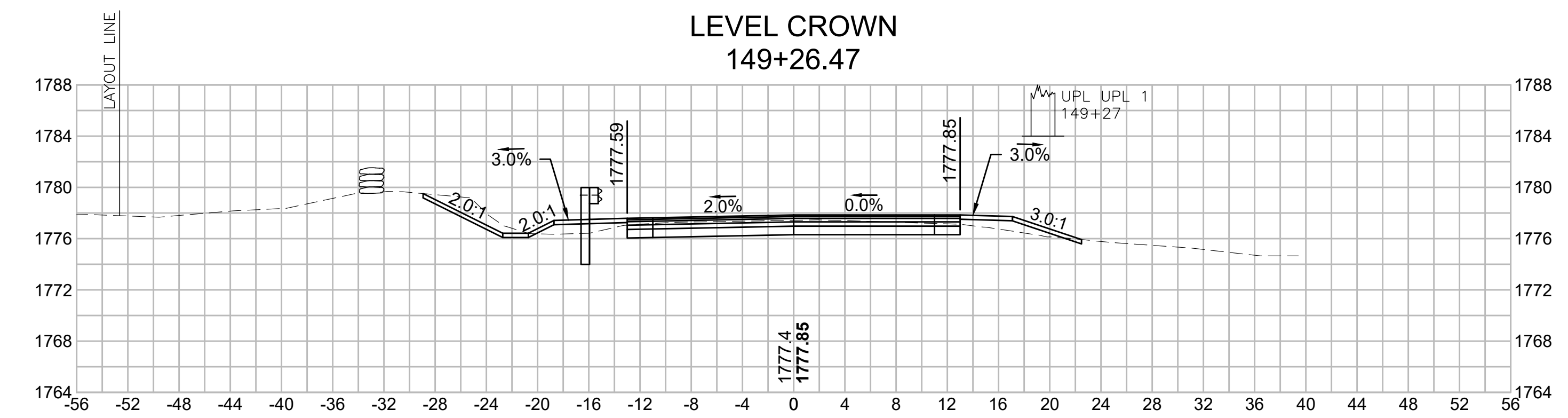
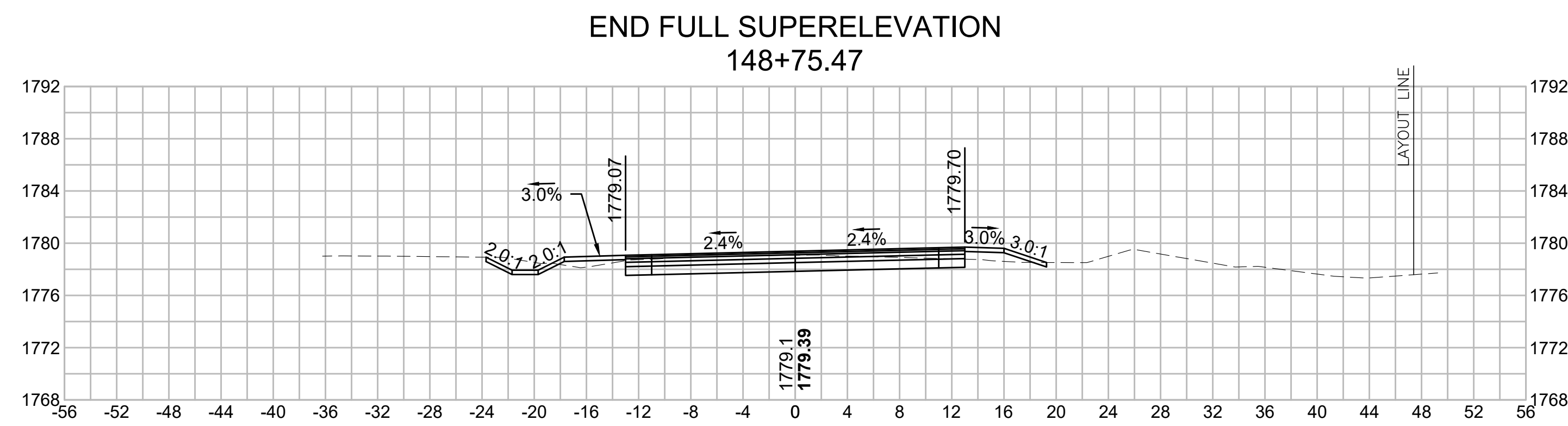
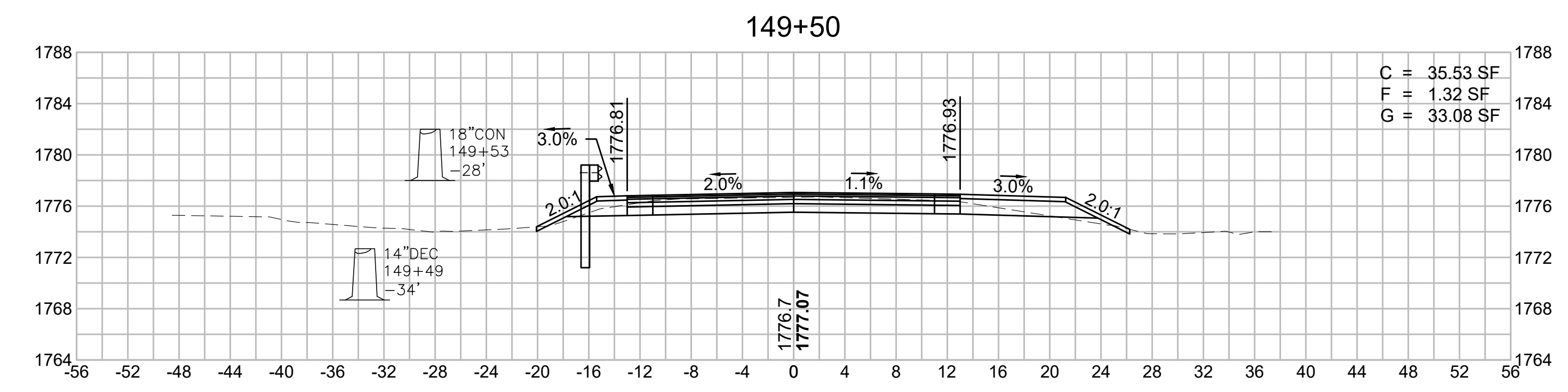
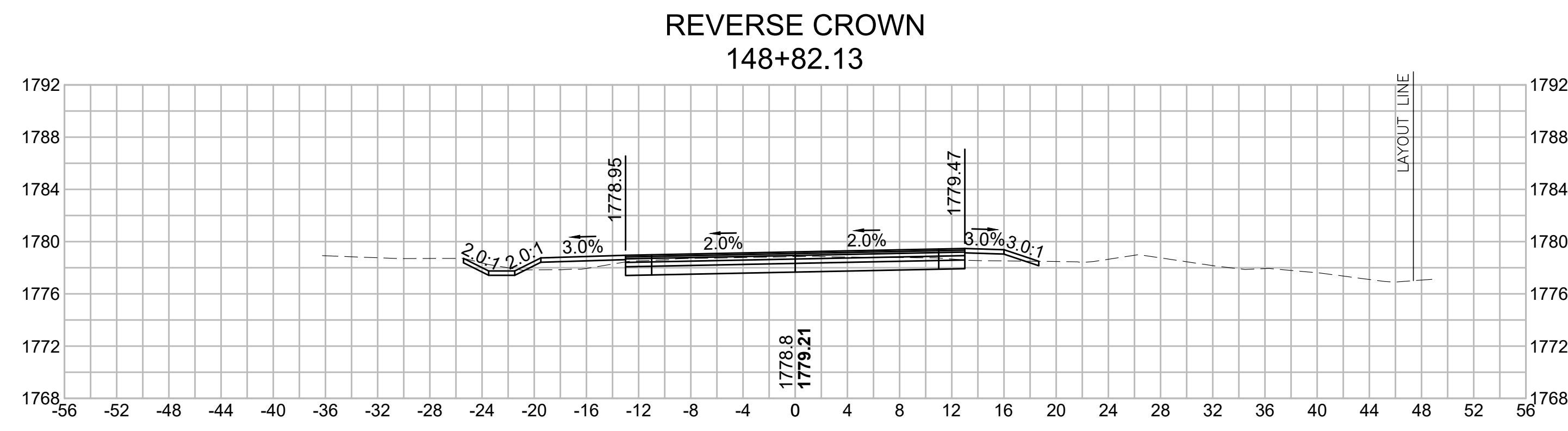
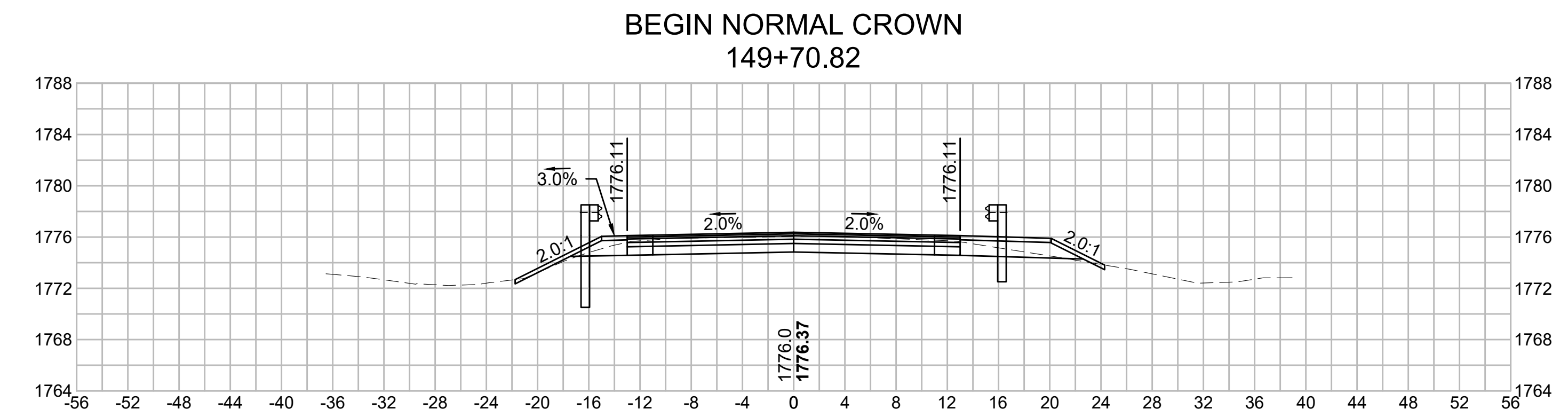
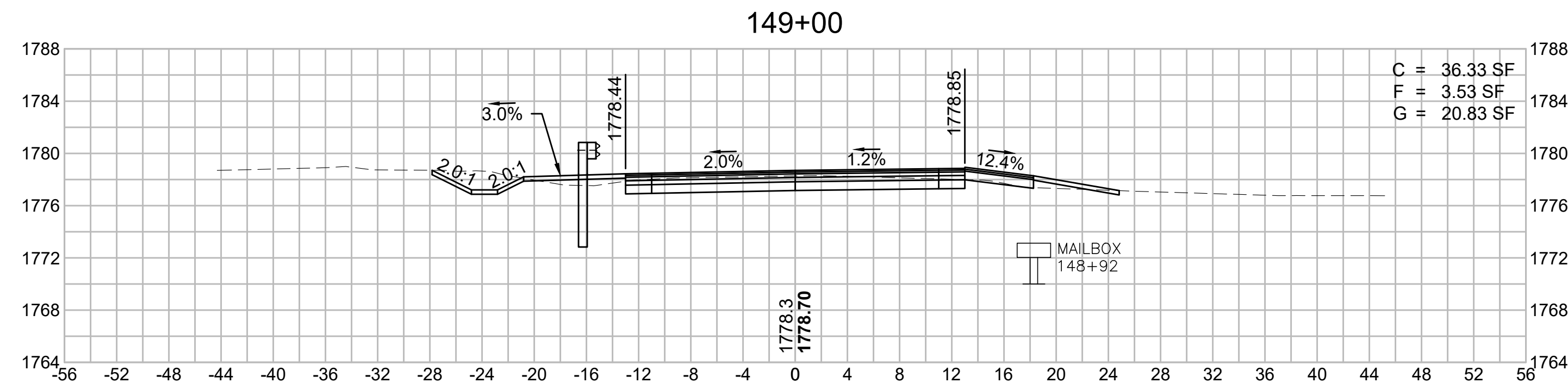
**OLD NORTH ROAD
CROSS SECTIONS - 60**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	164	191
PROJECT FILE NO. 609287			

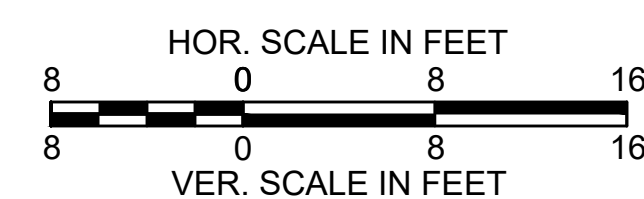
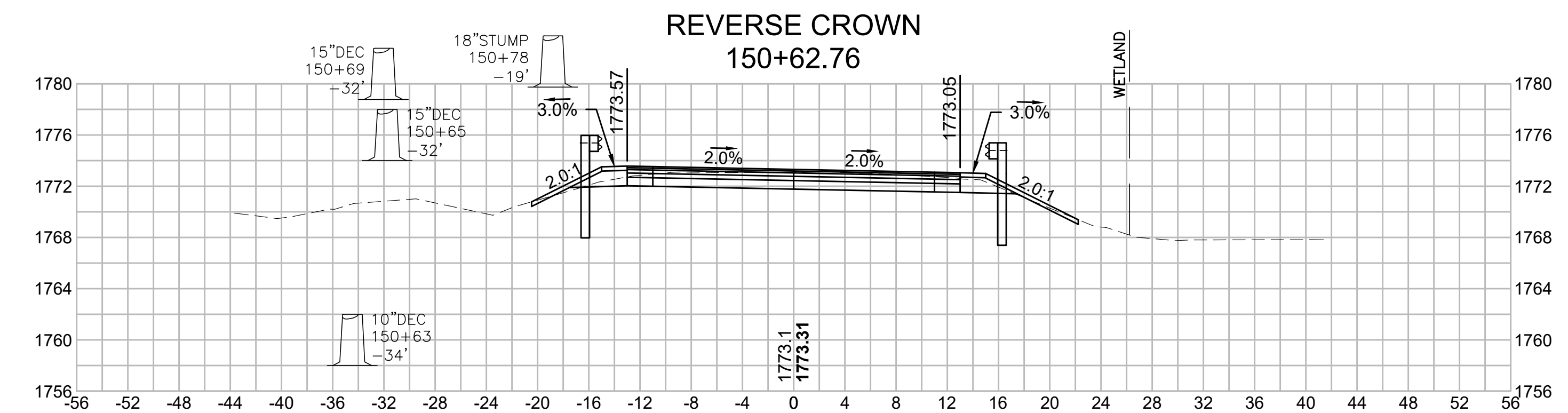
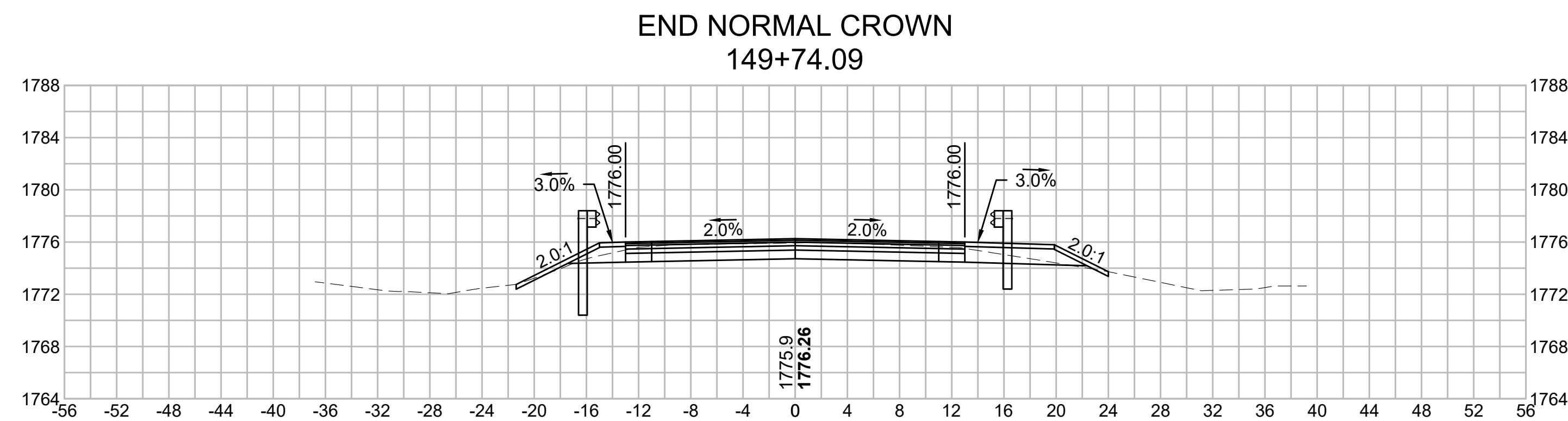
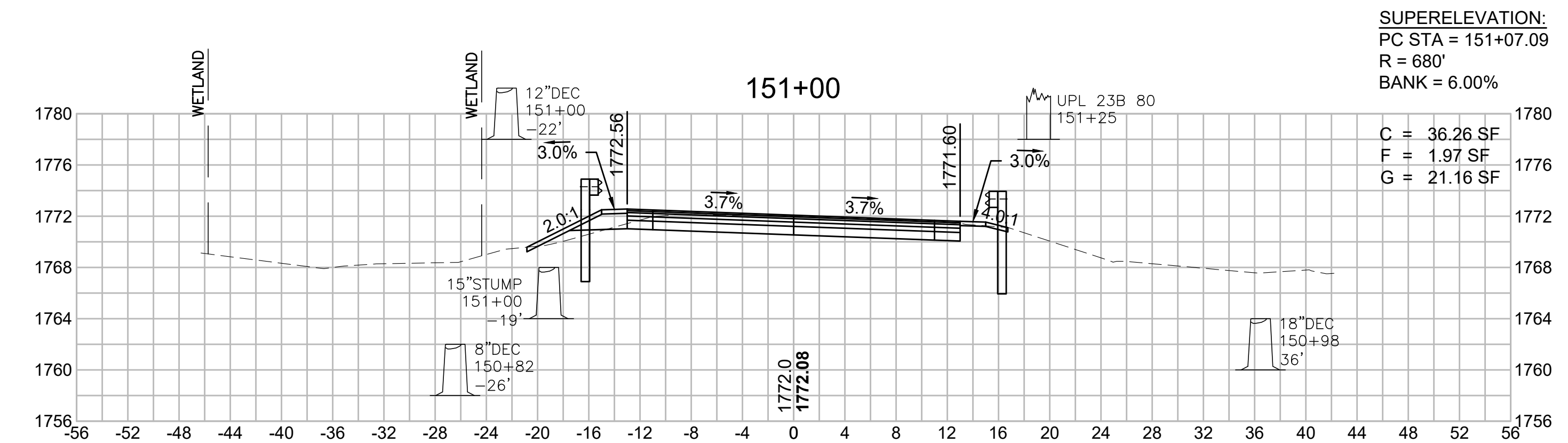
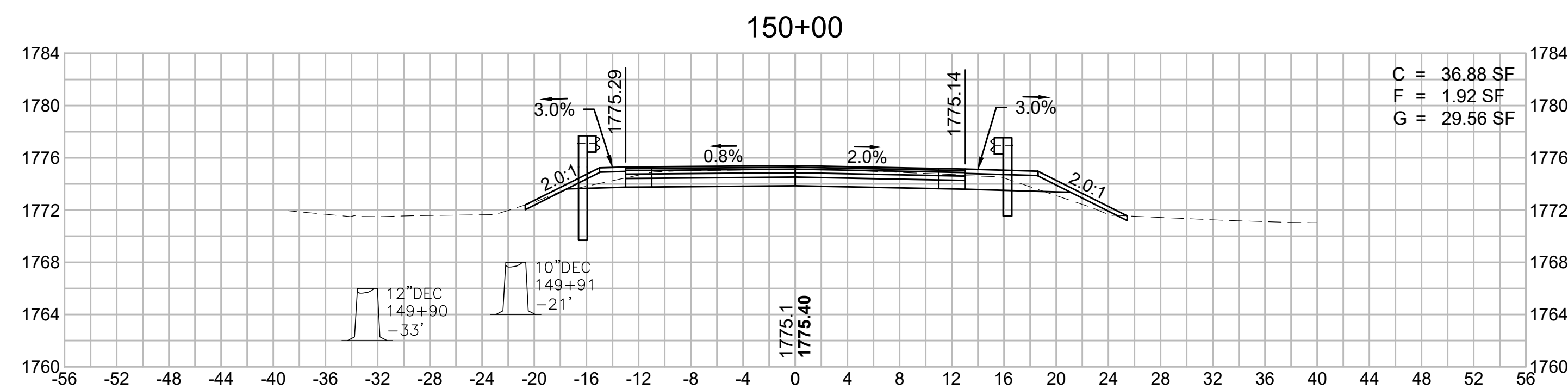
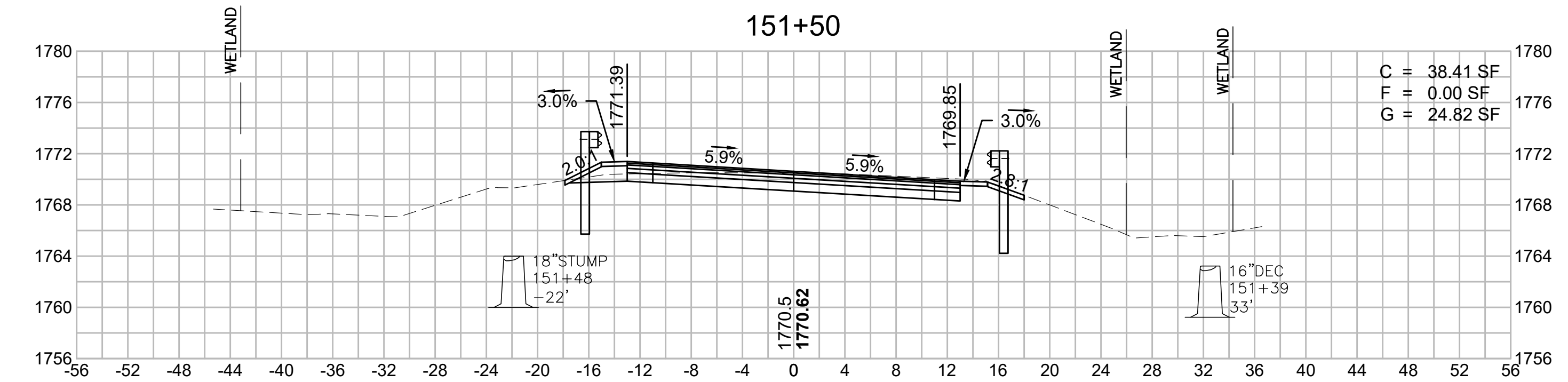
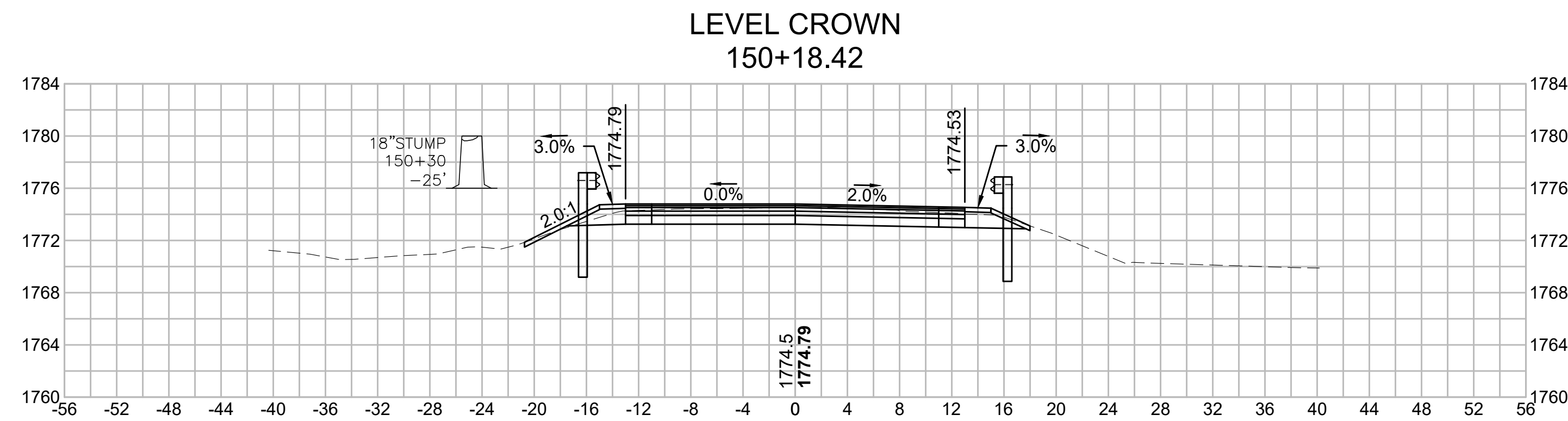
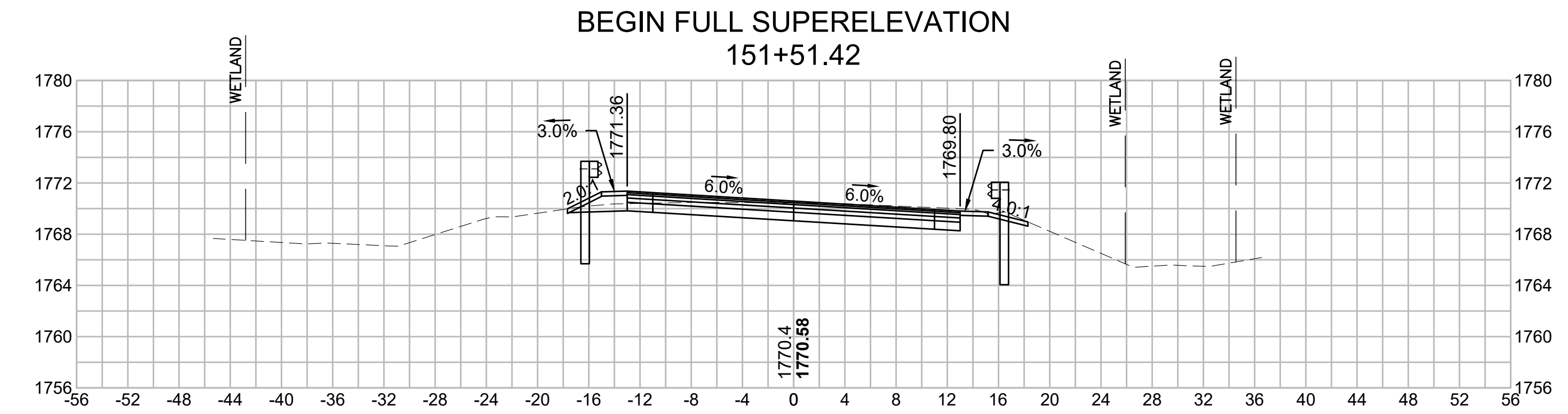
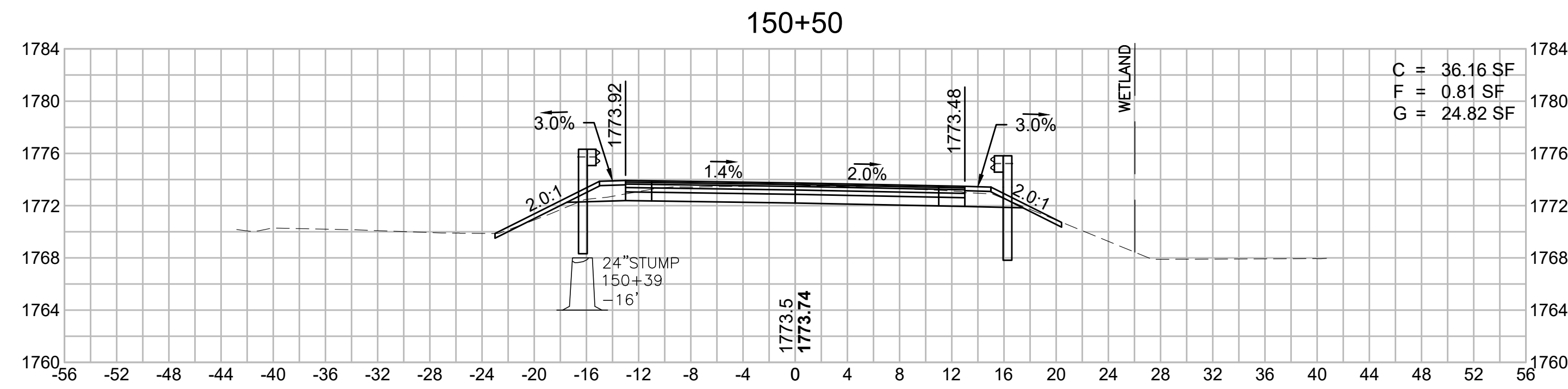
**OLD NORTH ROAD
CROSS SECTIONS - 61**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	165	191
PROJECT FILE NO.		609287	

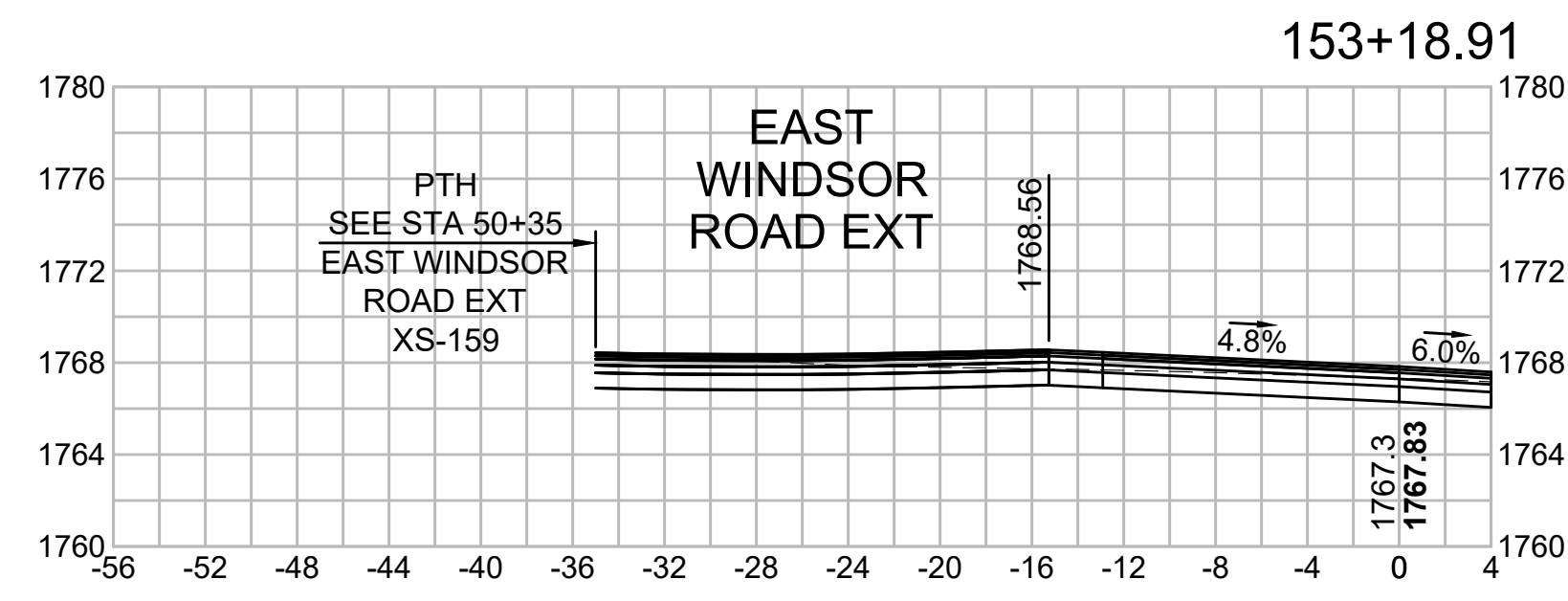
**OLD NORTH ROAD
CROSS SECTIONS - 62**



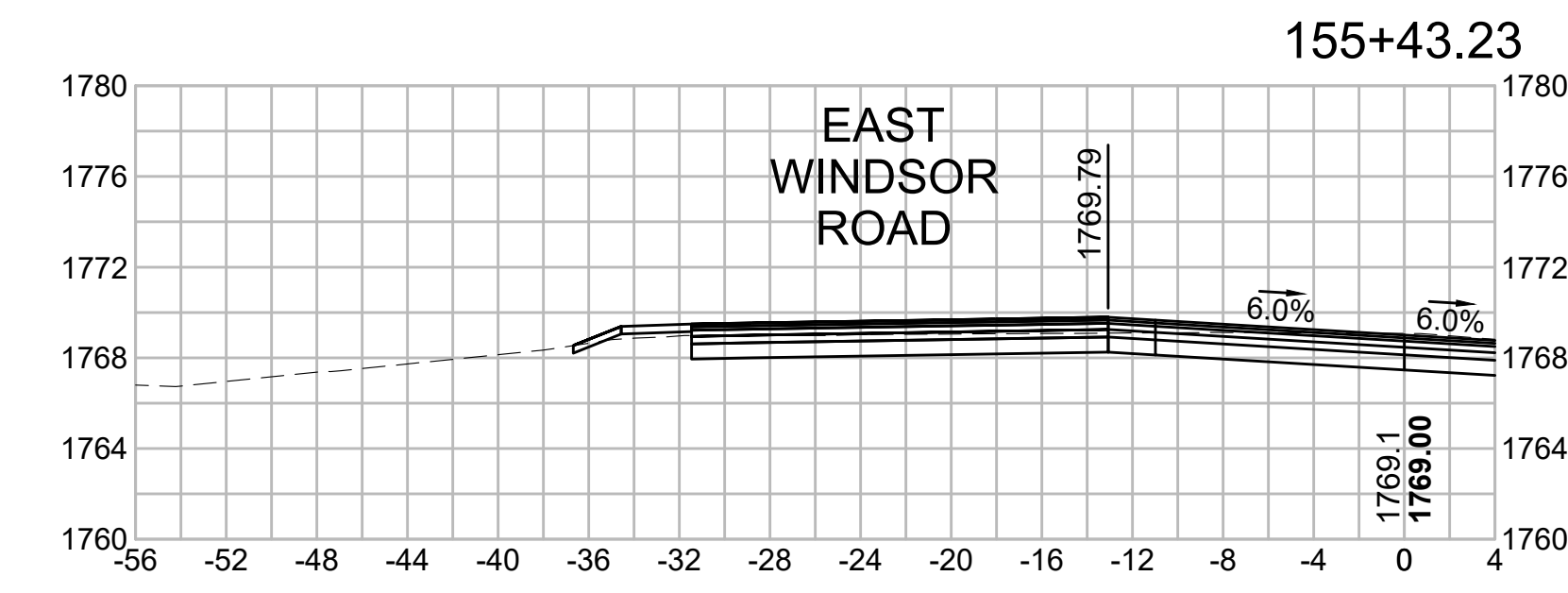
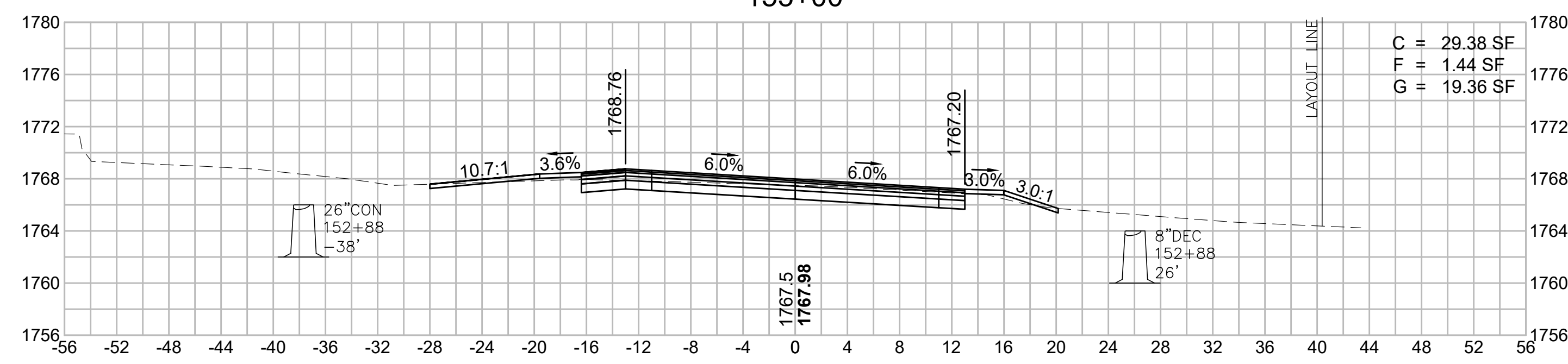
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	166	191

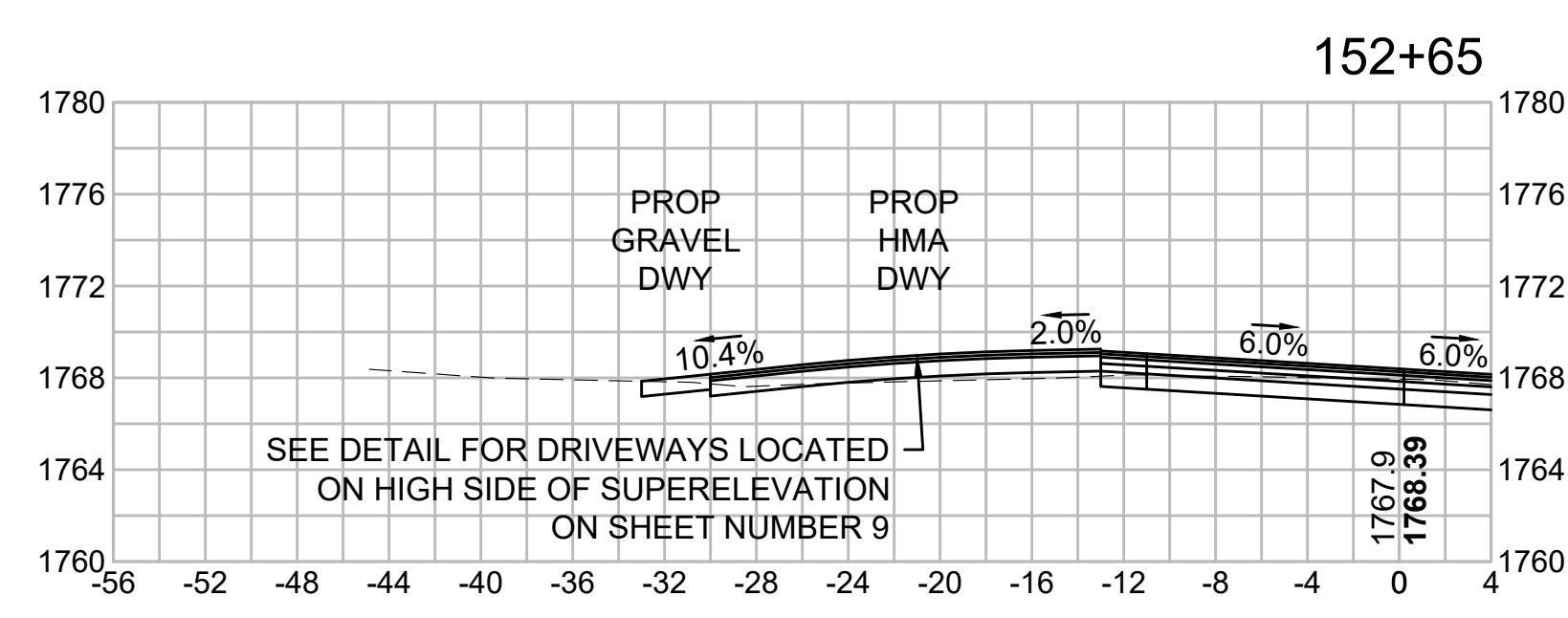
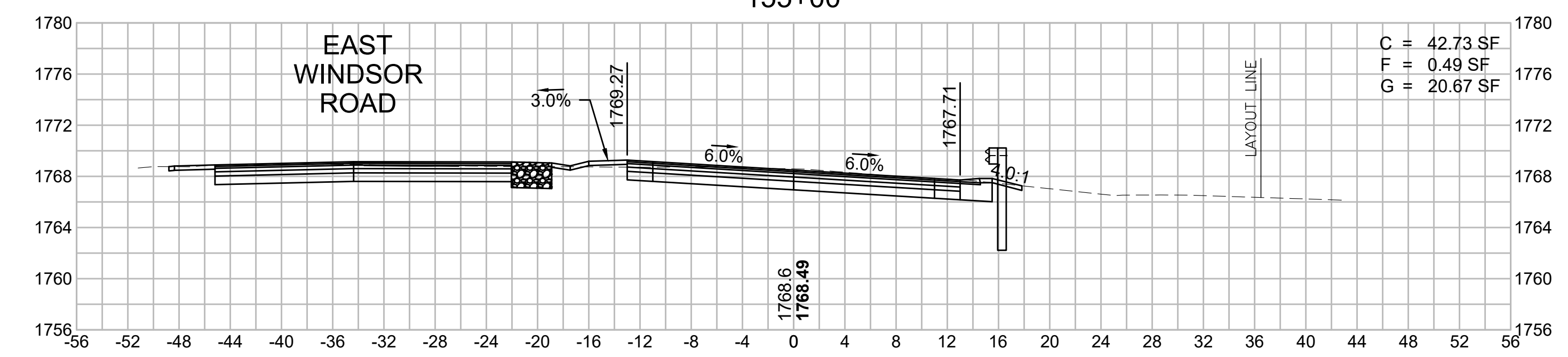
**OLD NORTH ROAD
CROSS SECTIONS - 63**



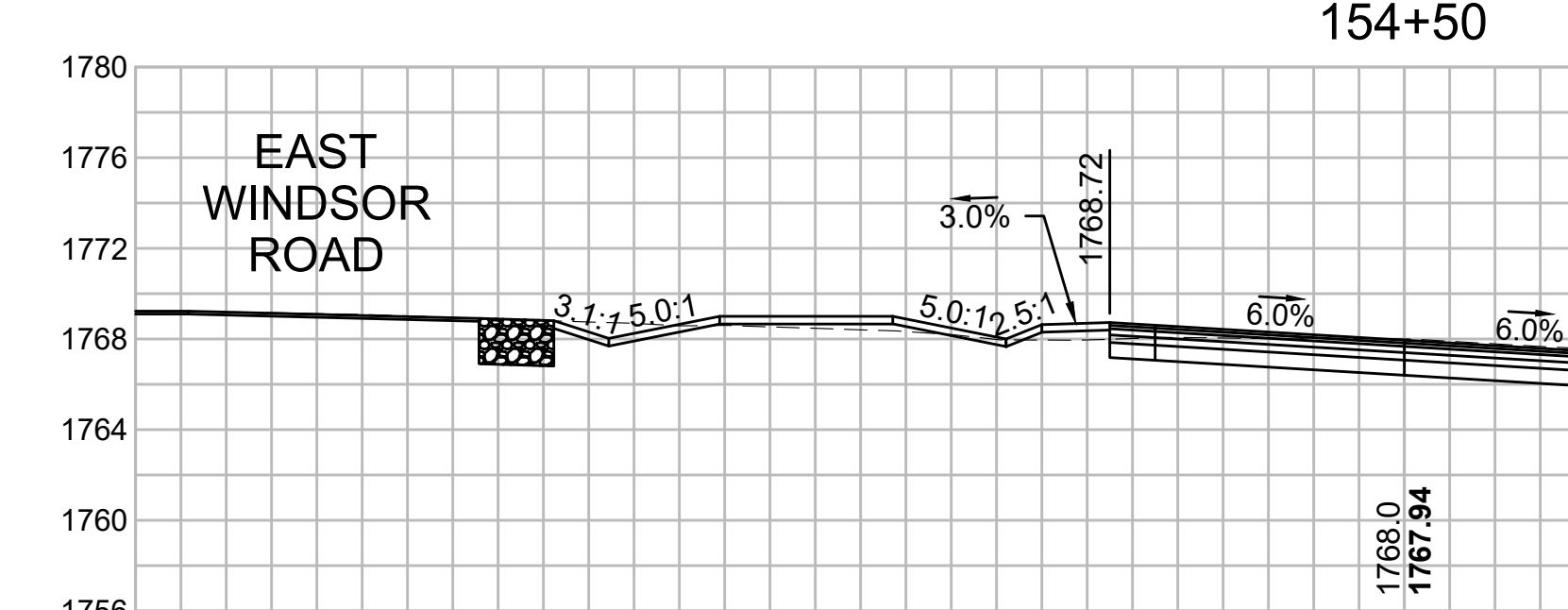
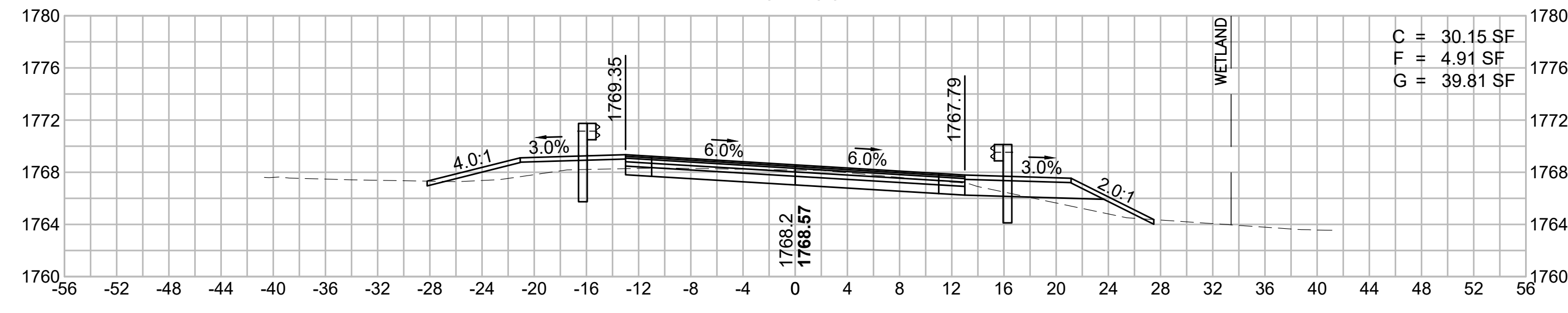
153+00



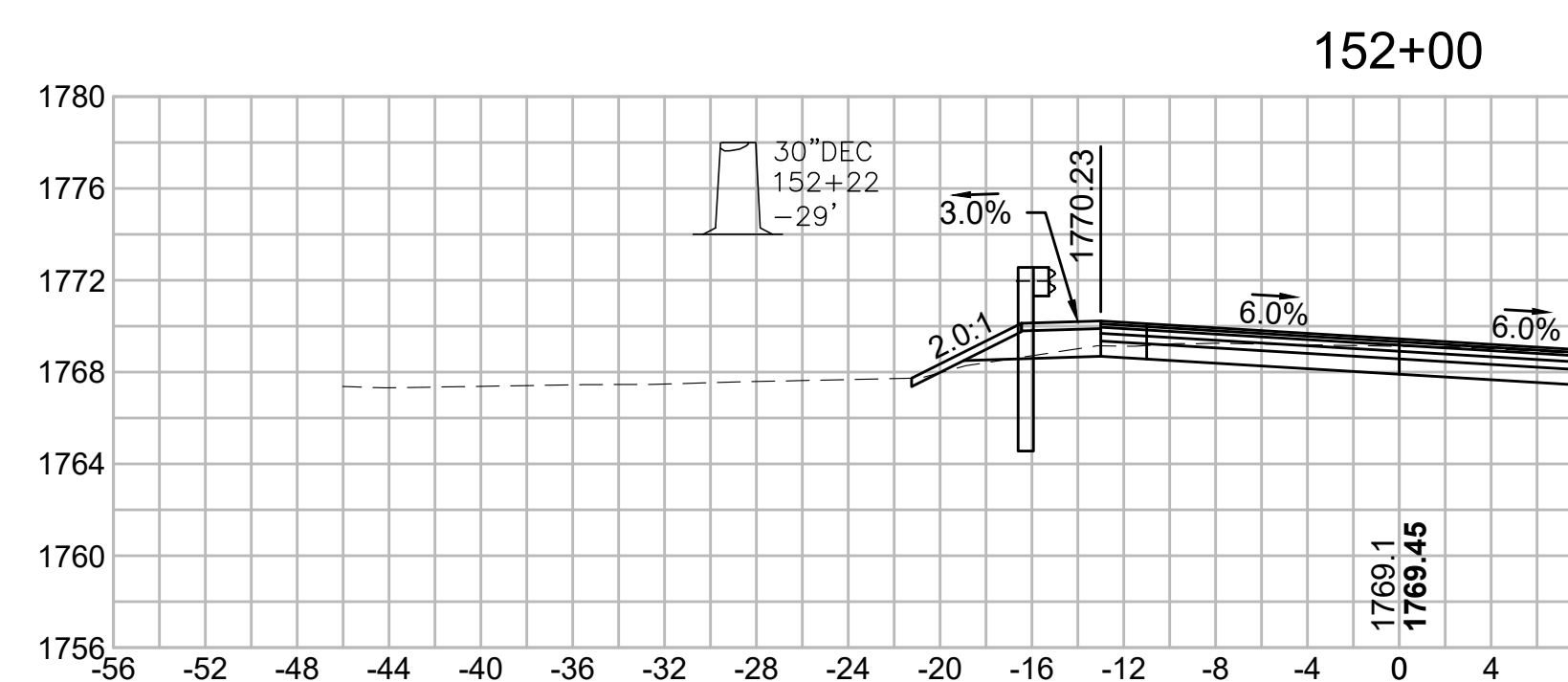
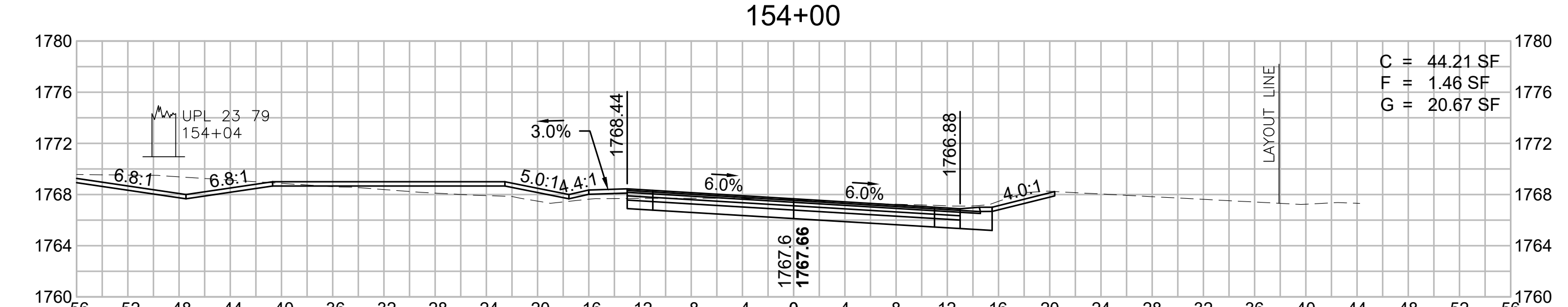
155+00



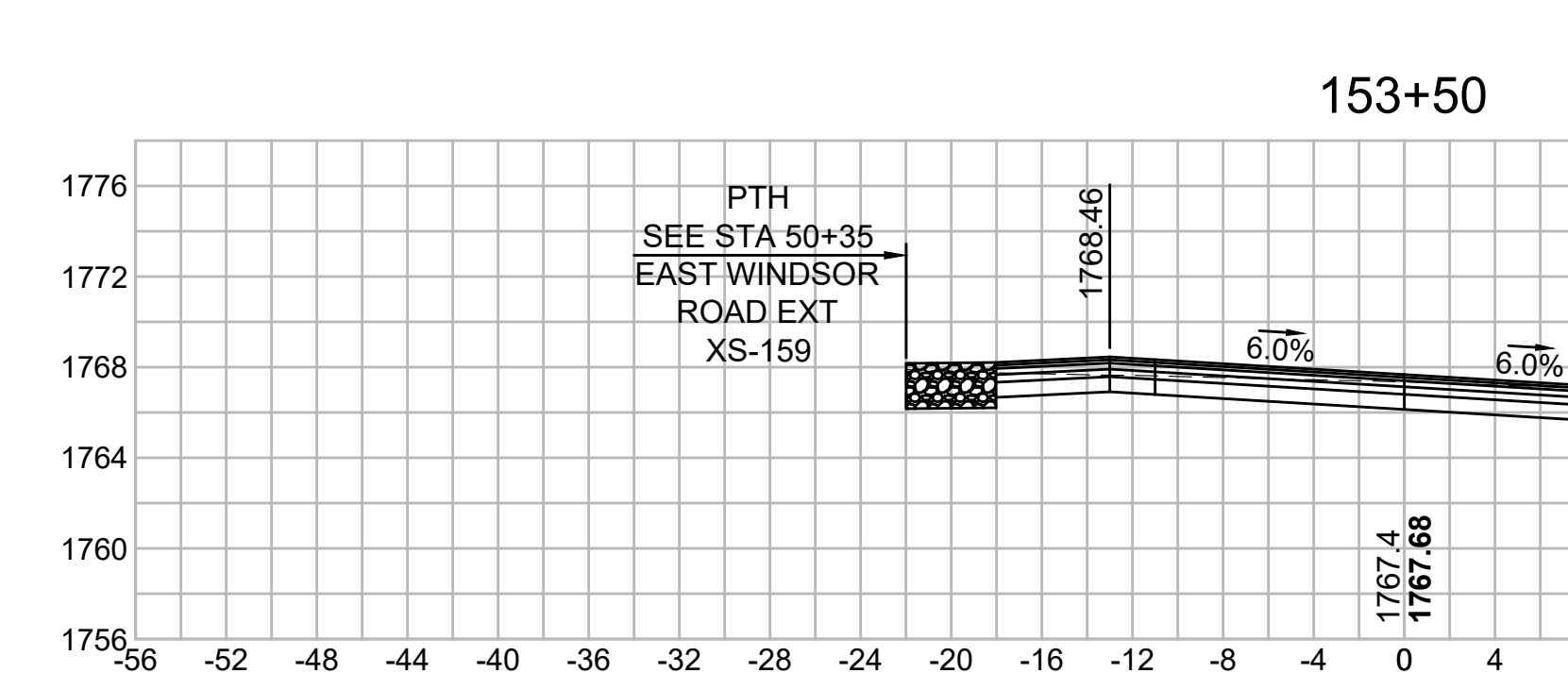
152+50



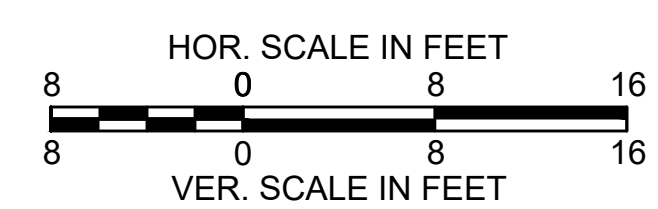
154+00



152+00



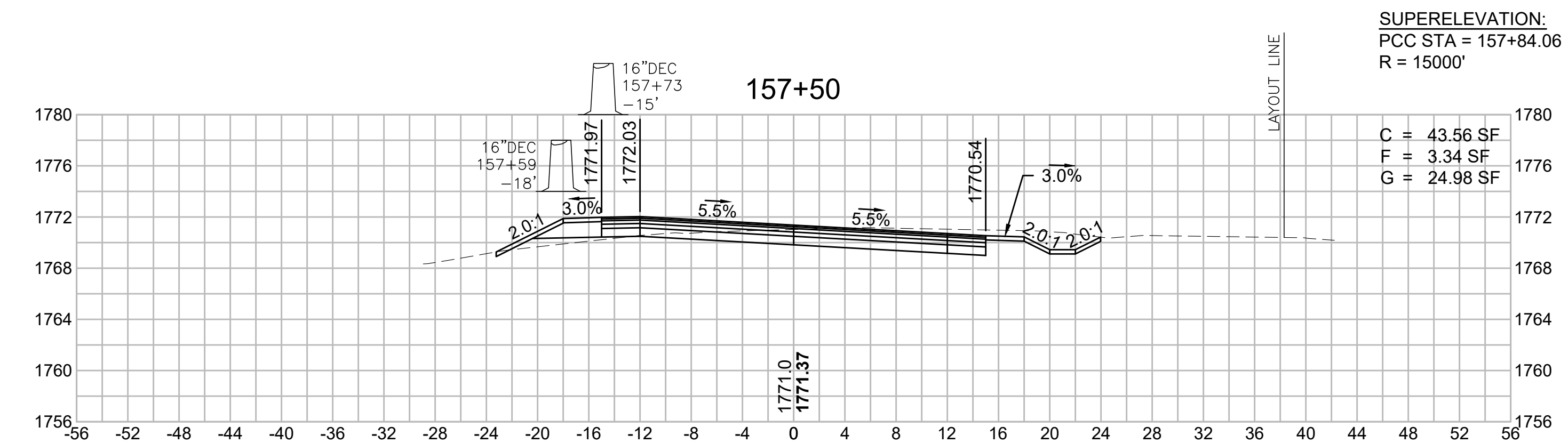
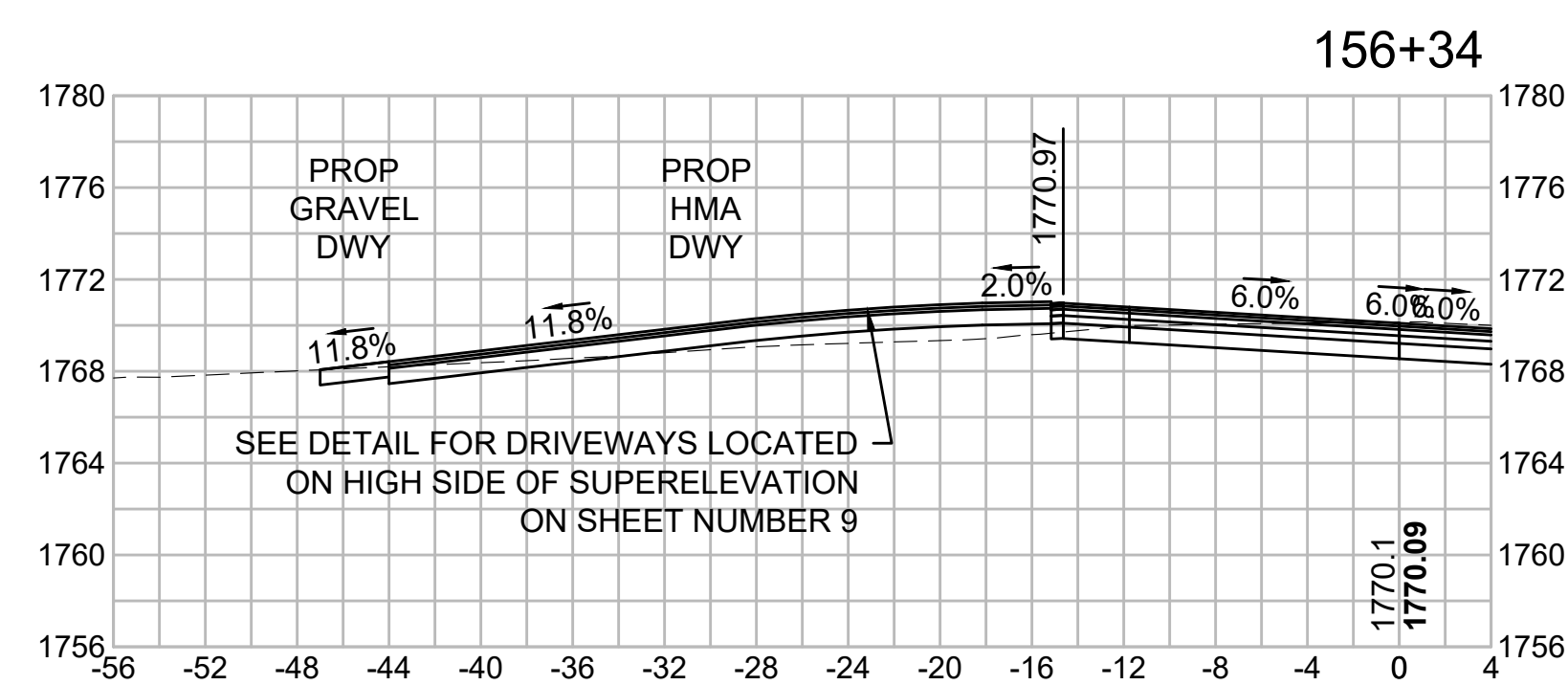
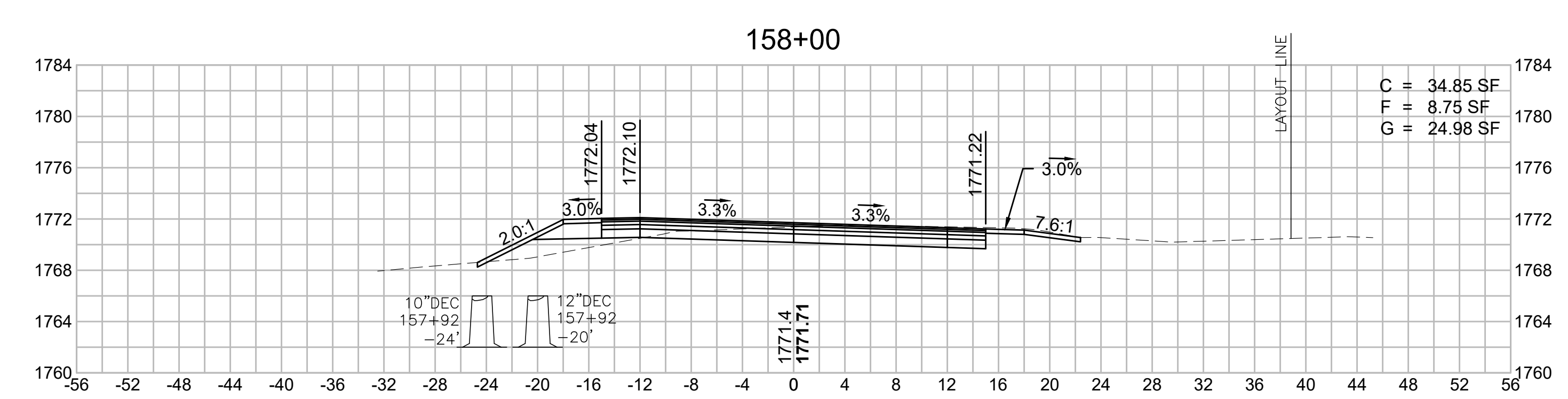
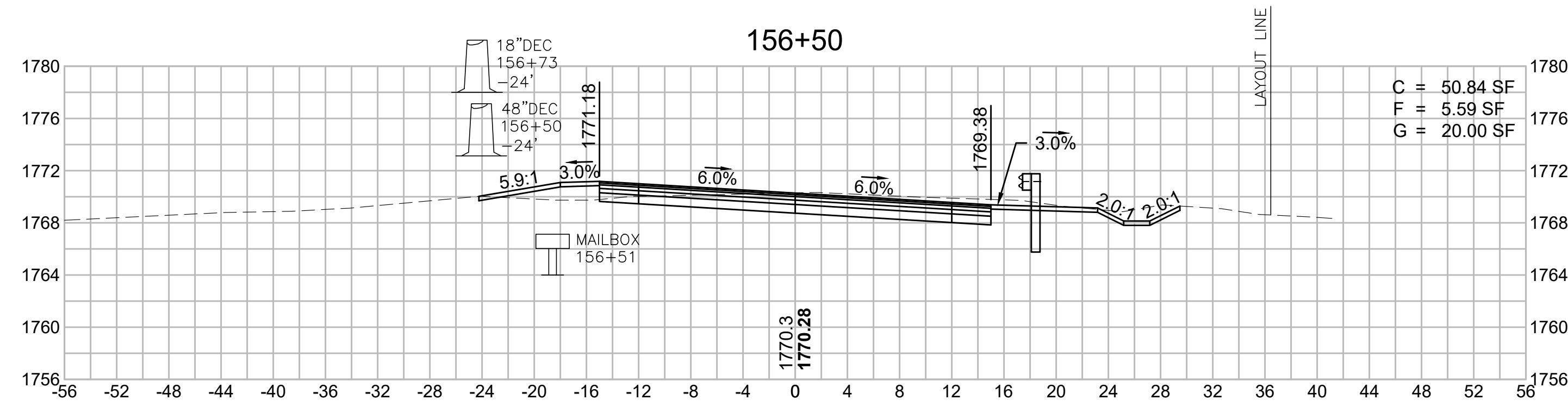
153+50



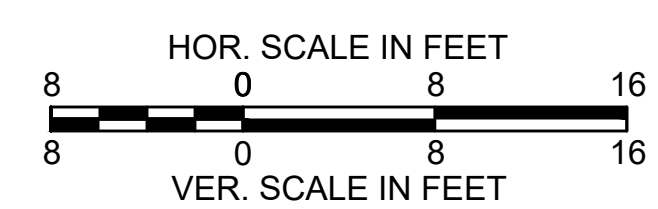
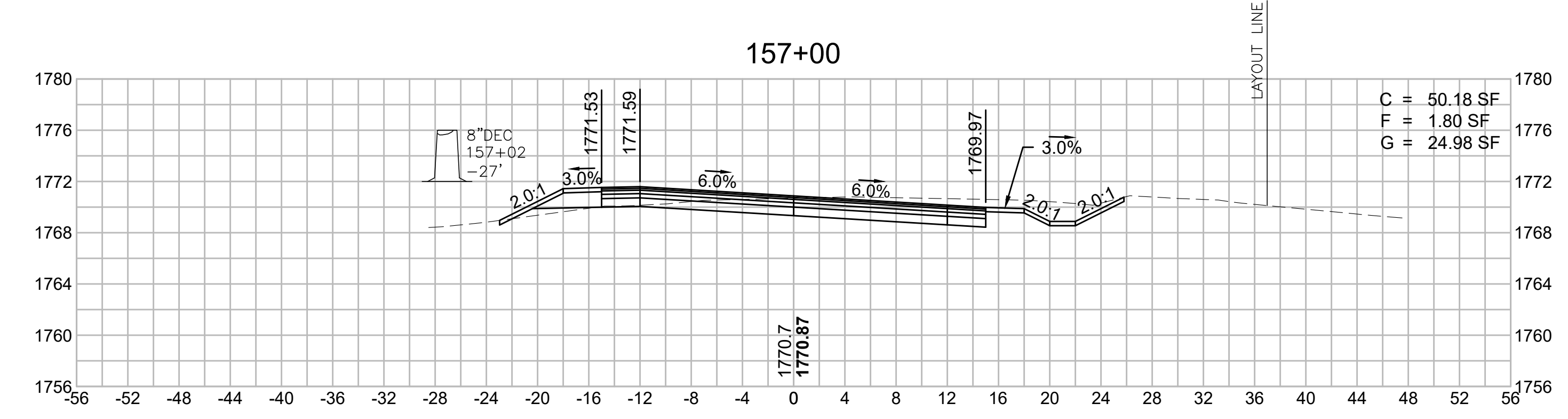
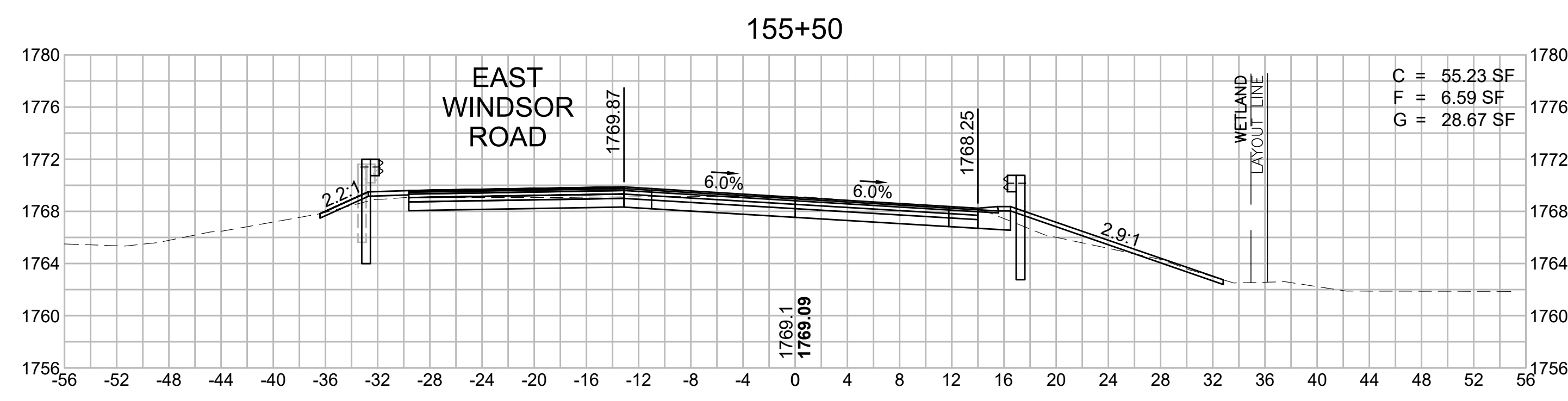
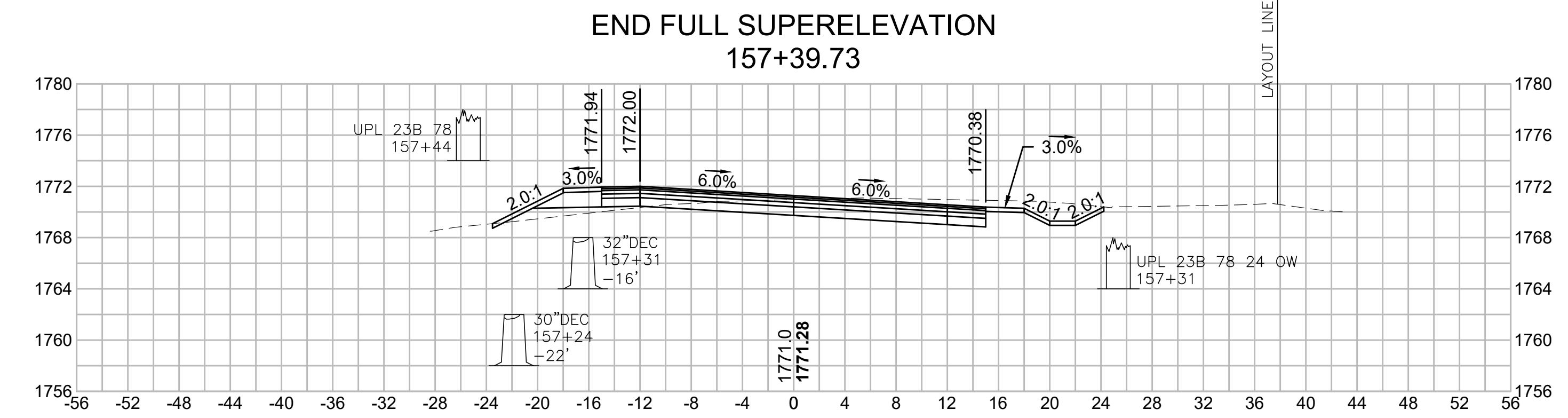
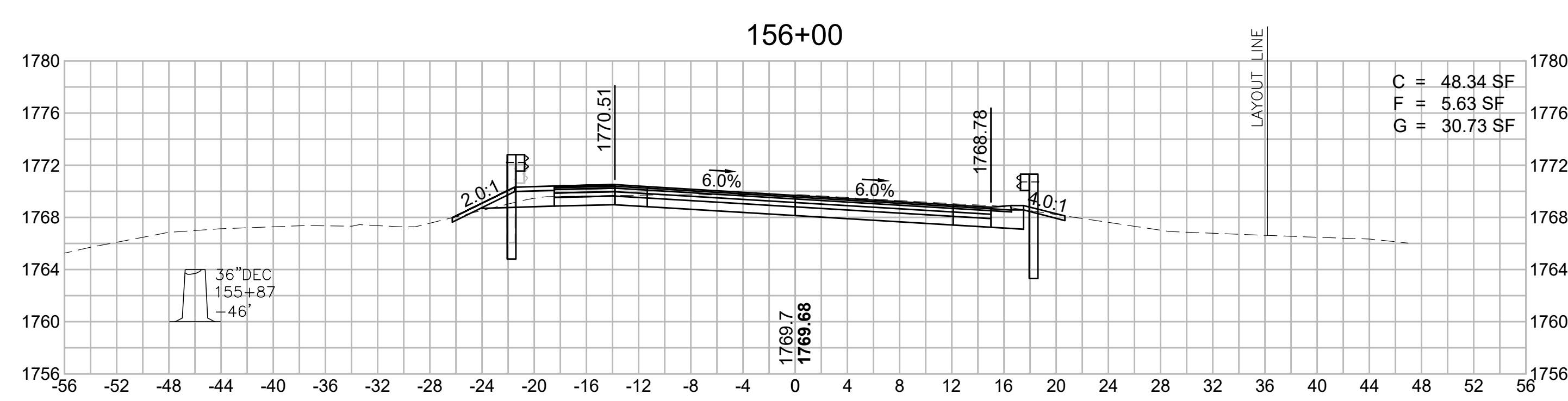
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	167	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 64**



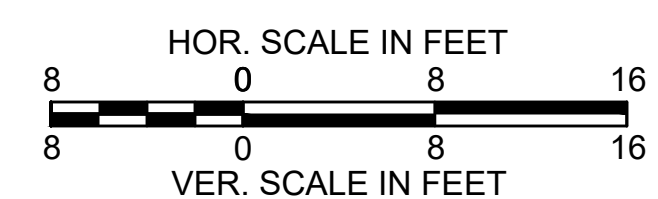
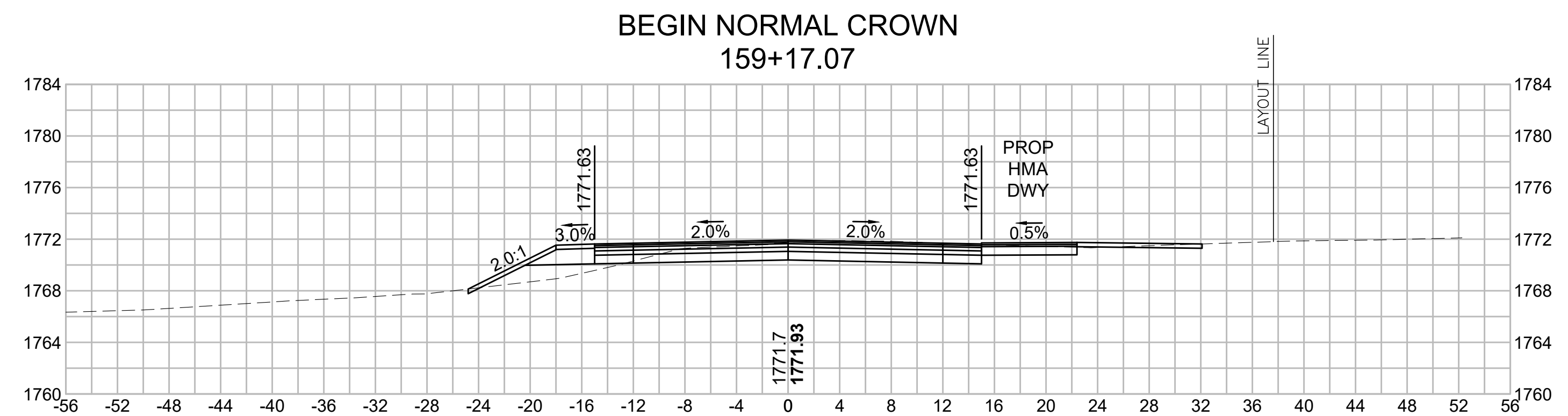
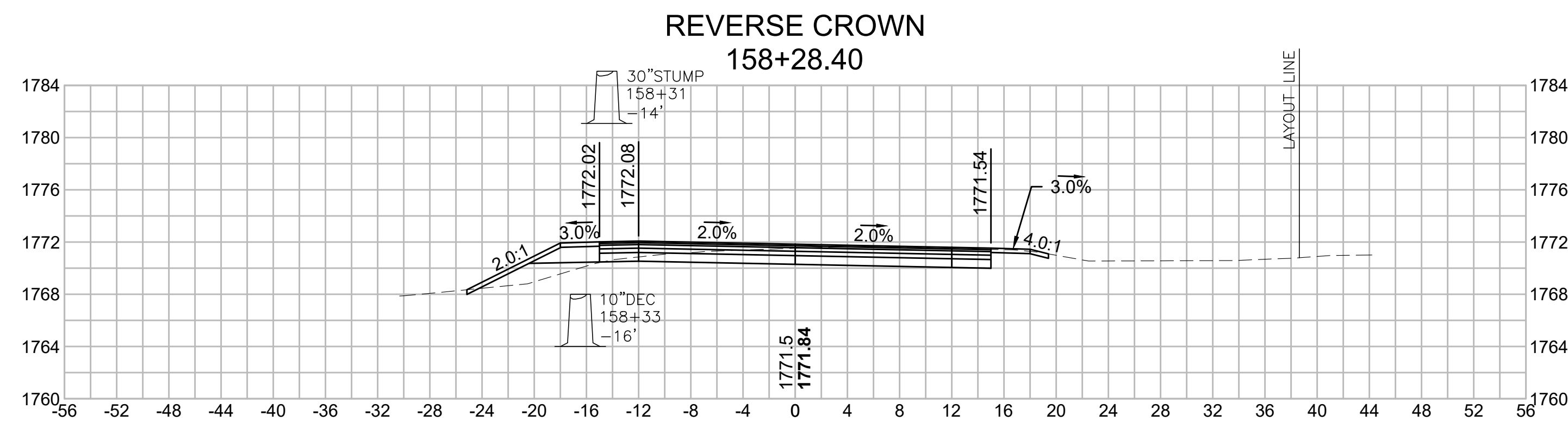
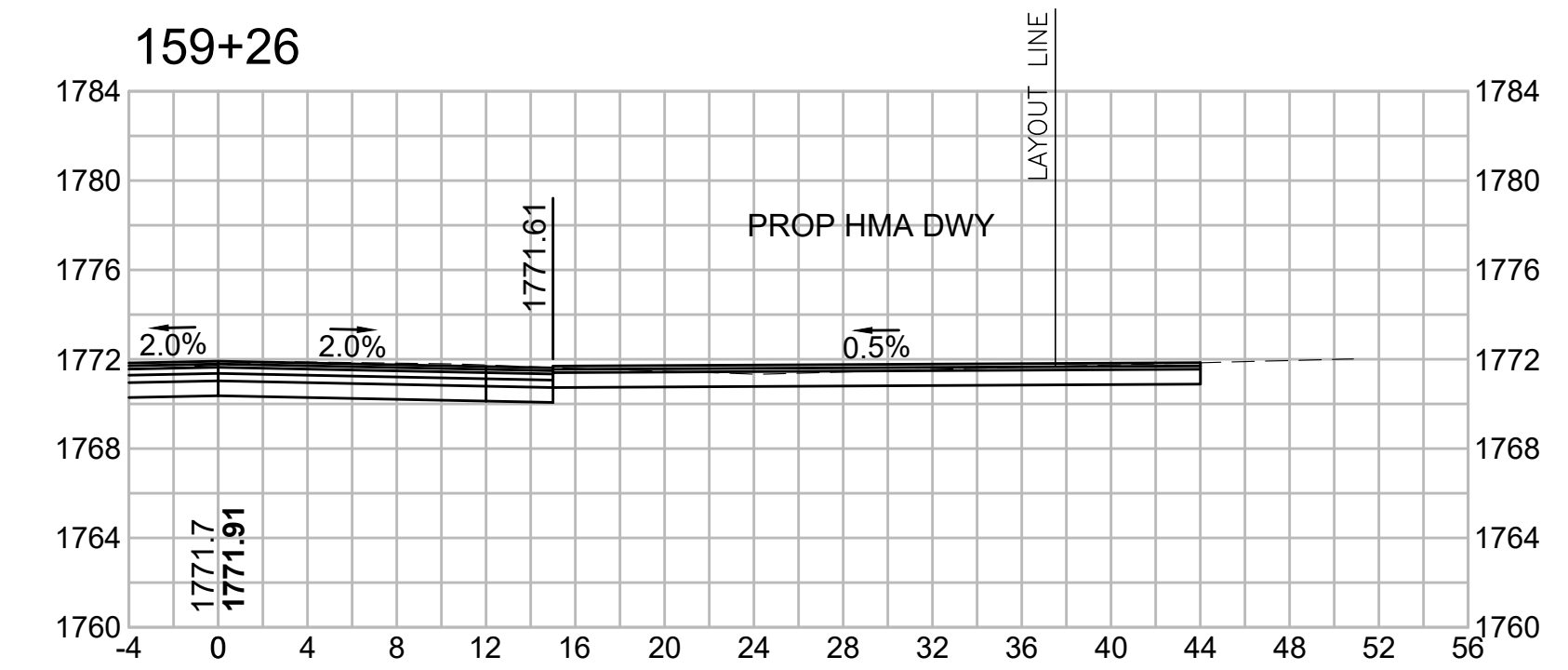
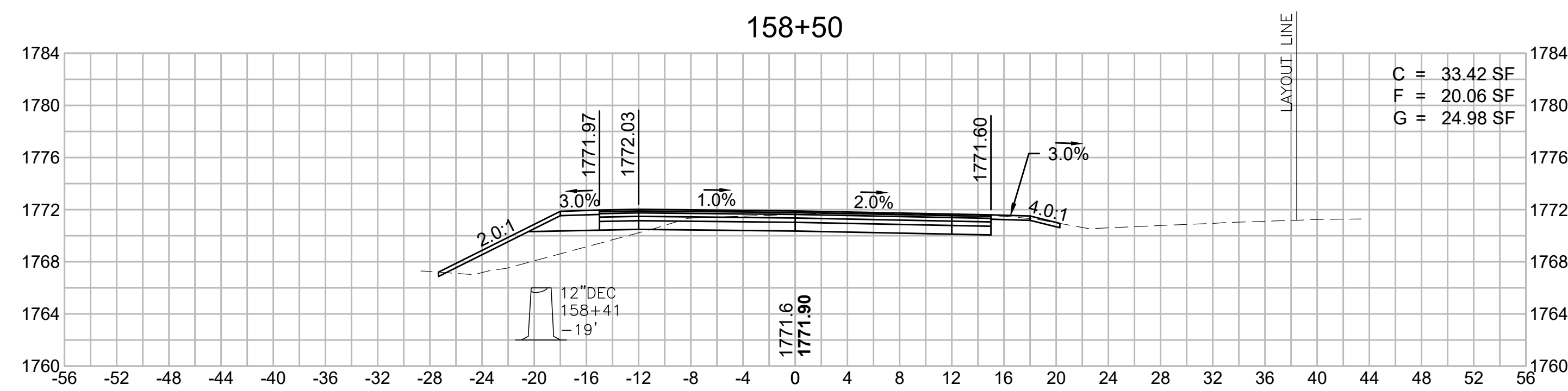
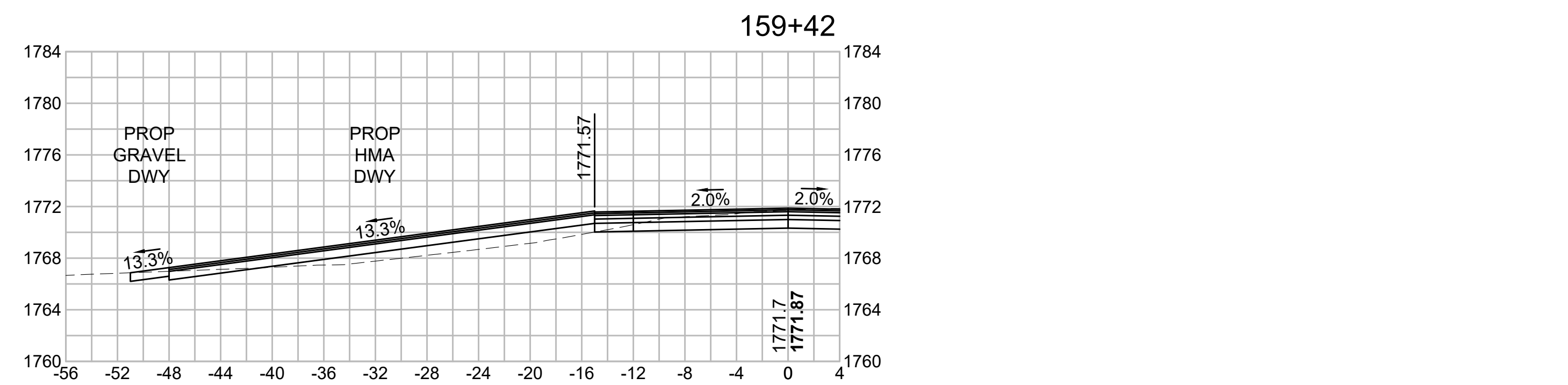
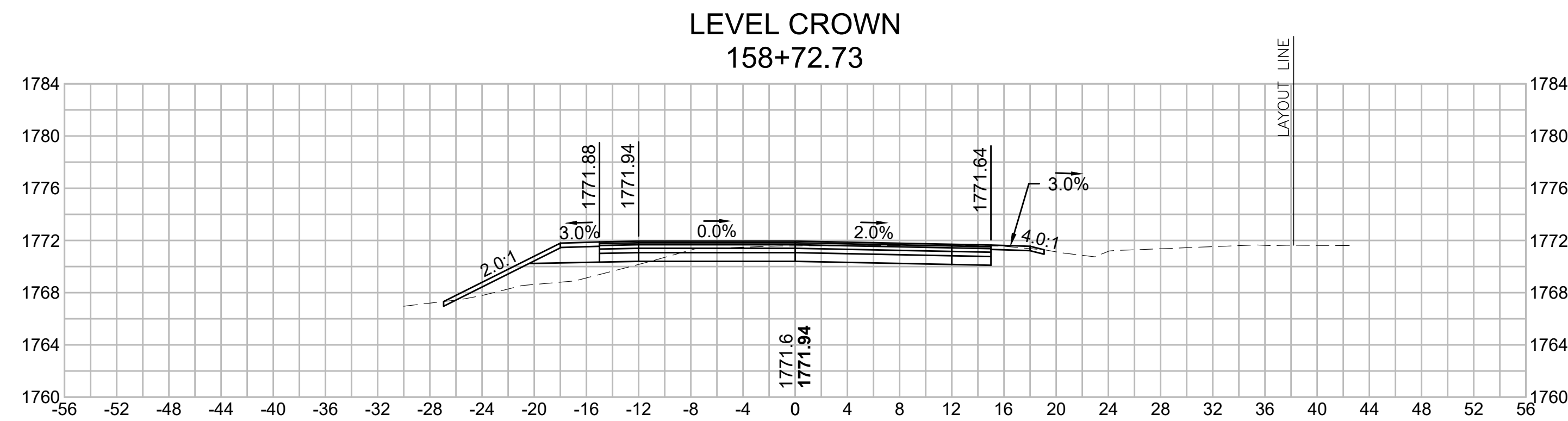
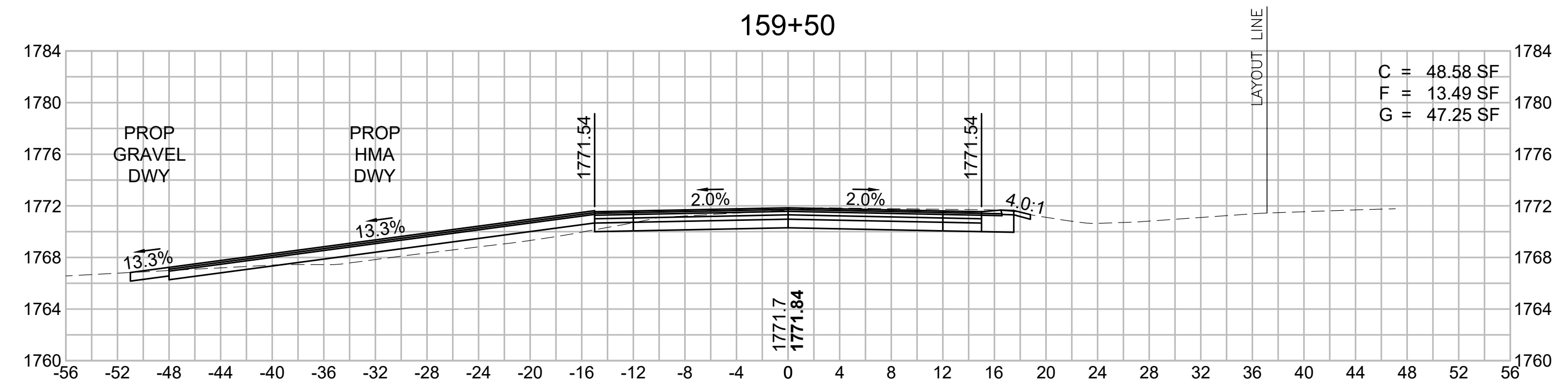
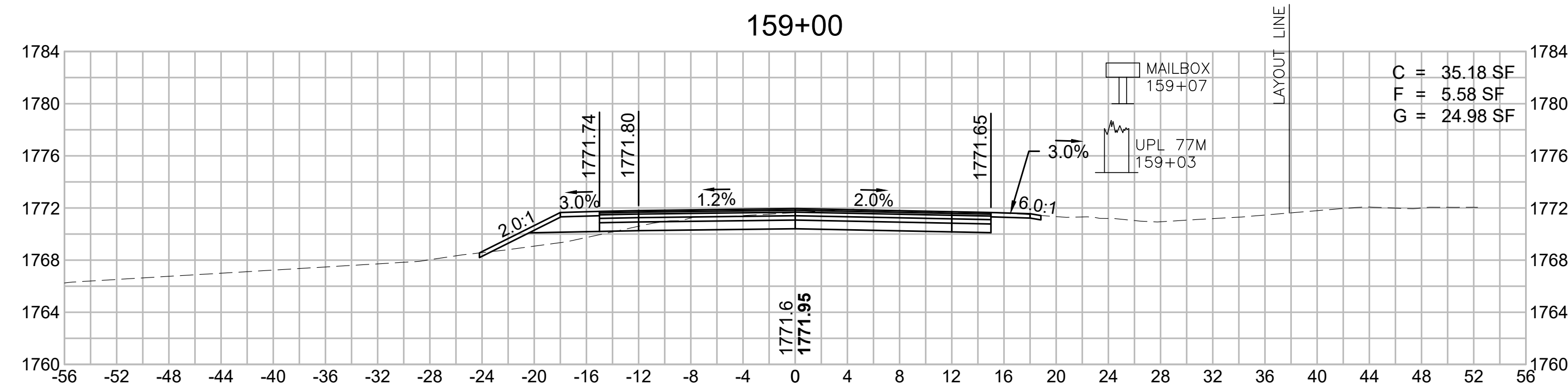
SUPERELEVATION:
PCC STA = 157+84.06
R = 15000'



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	168	191
PROJECT FILE NO.		609287	

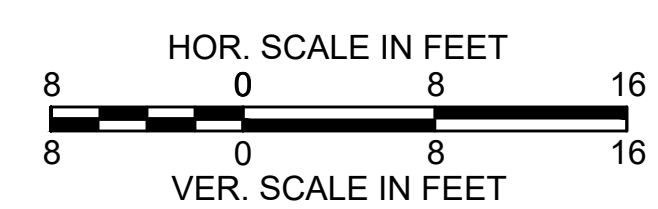
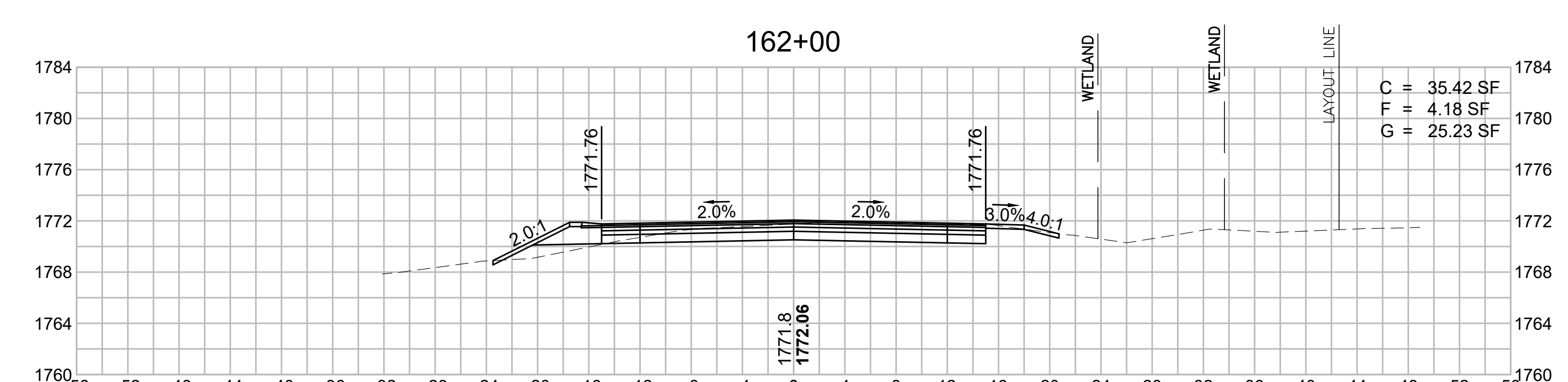
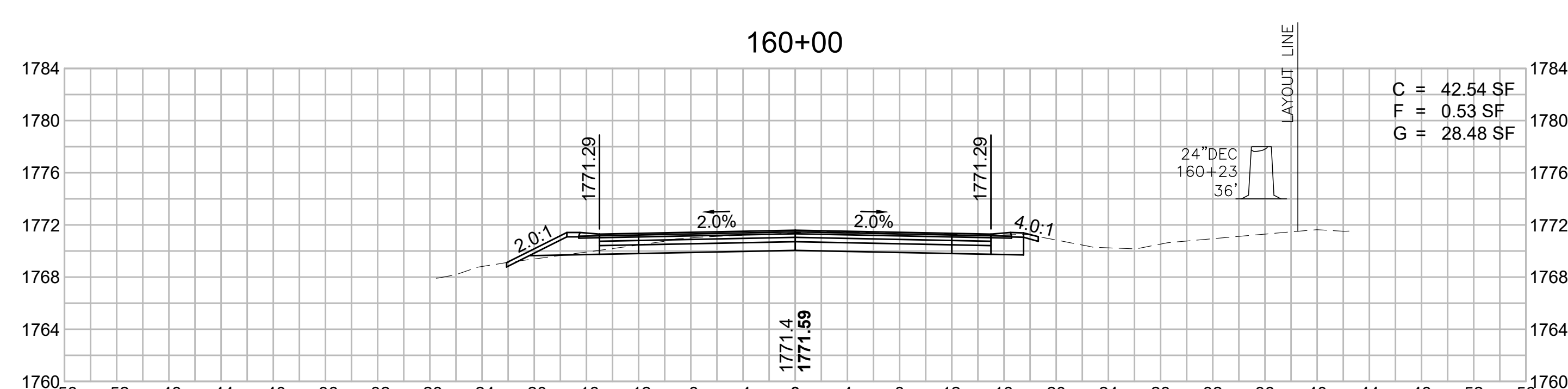
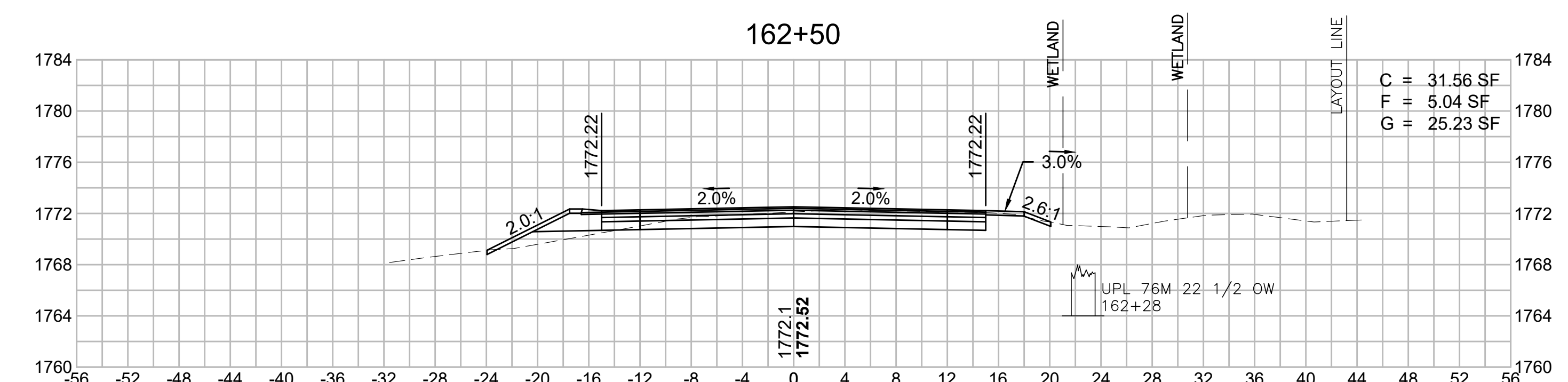
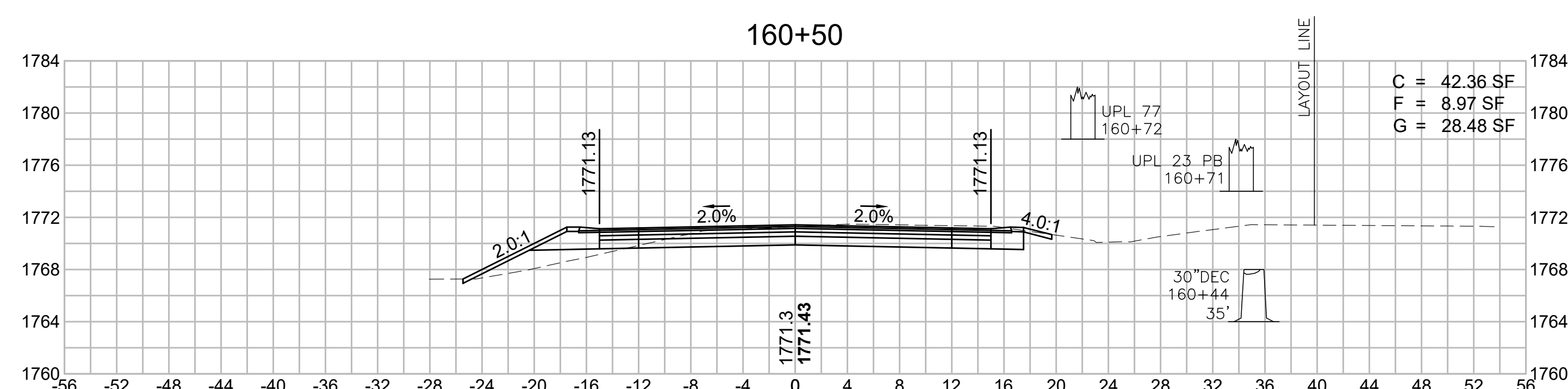
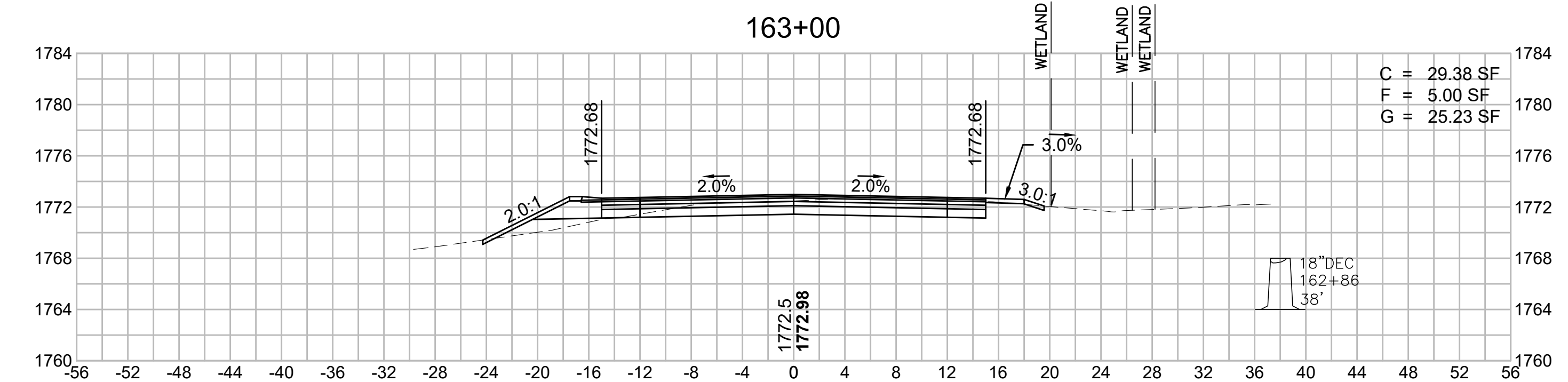
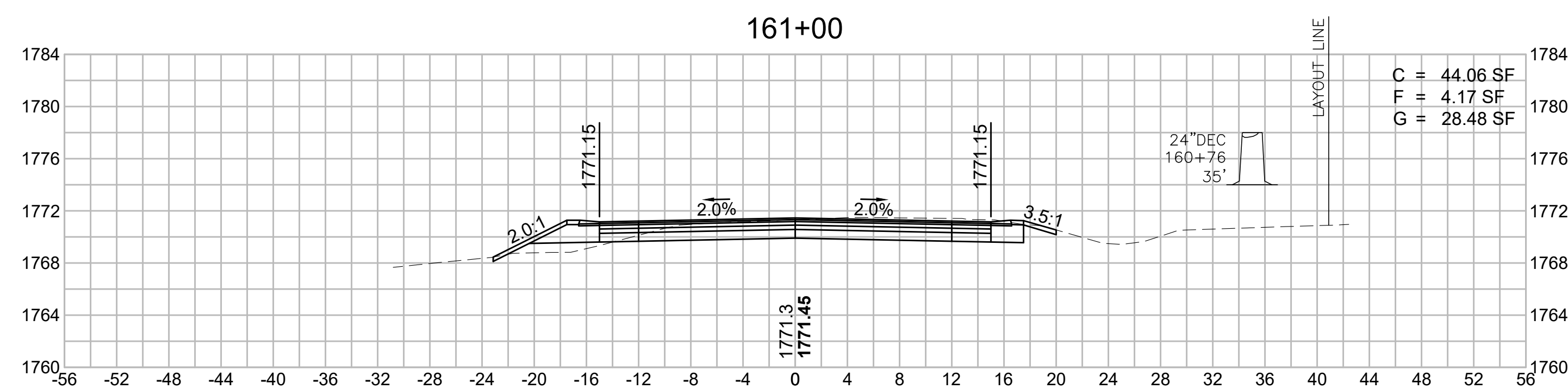
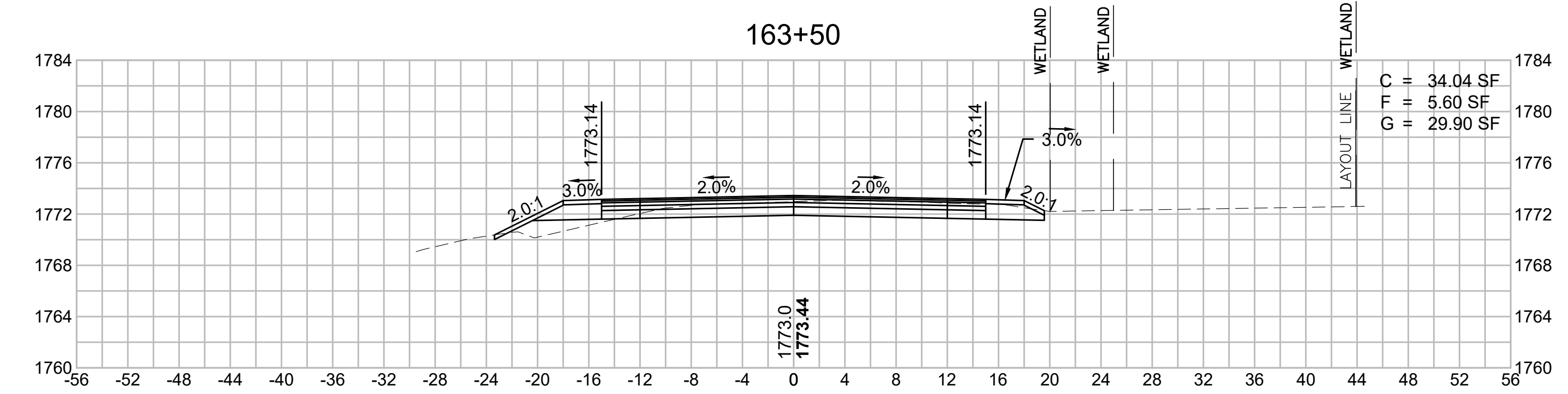
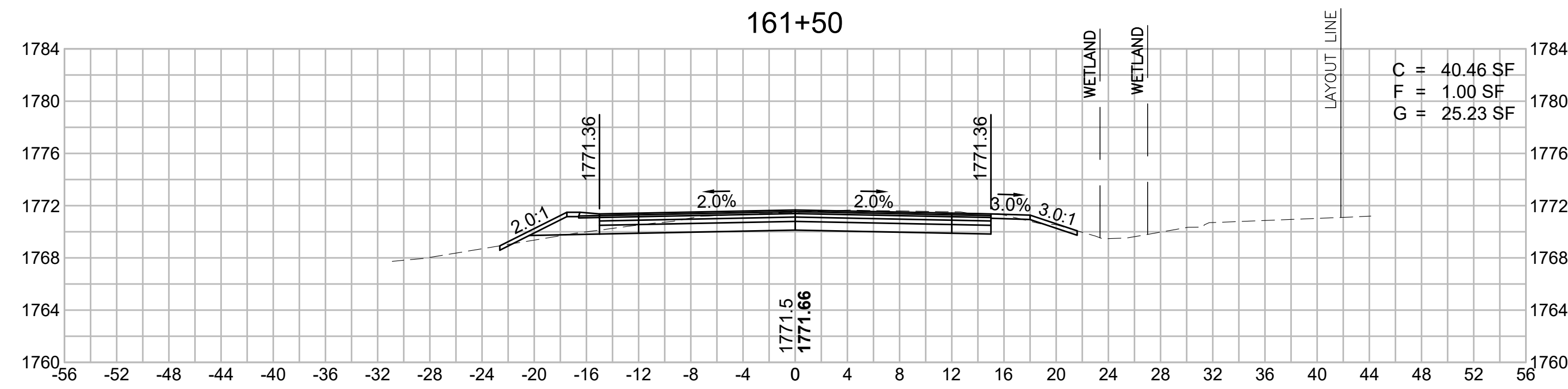
**OLD NORTH ROAD
CROSS SECTIONS - 65**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	169	191
PROJECT FILE NO.		609287	

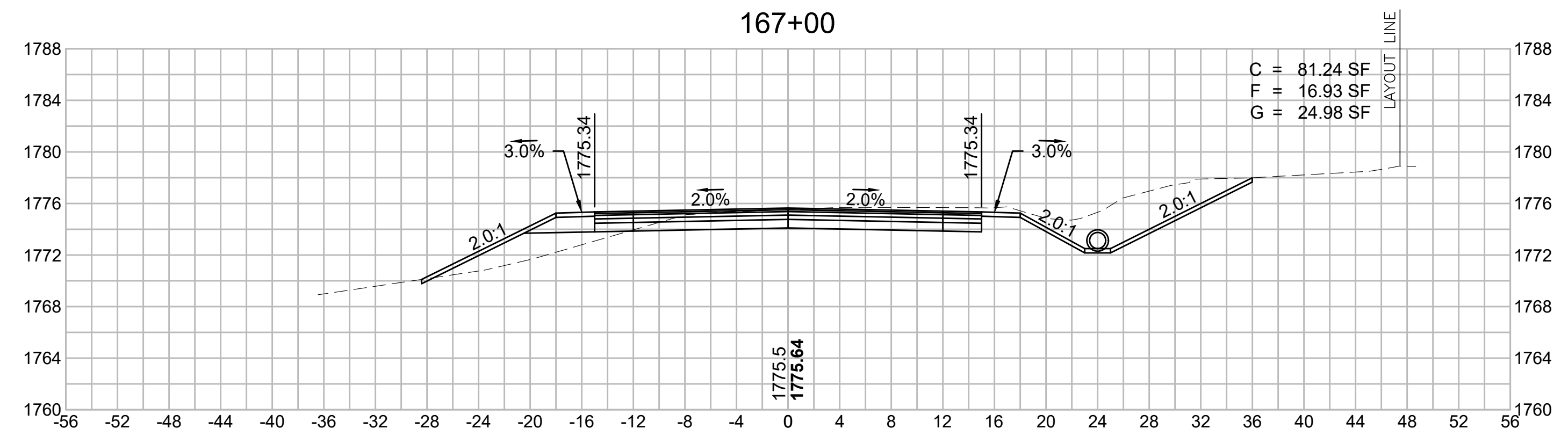
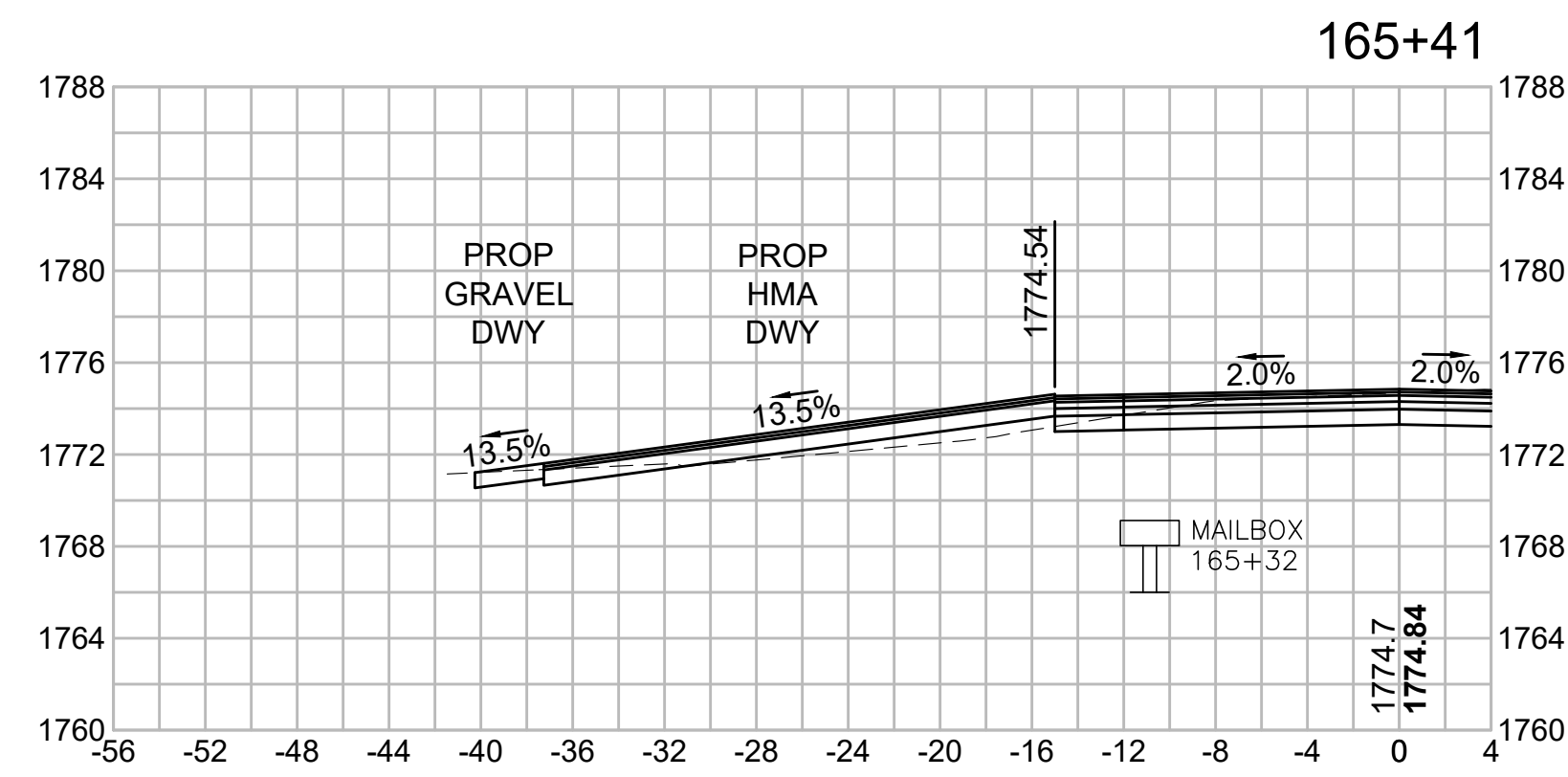
**OLD NORTH ROAD
CROSS SECTIONS - 66**



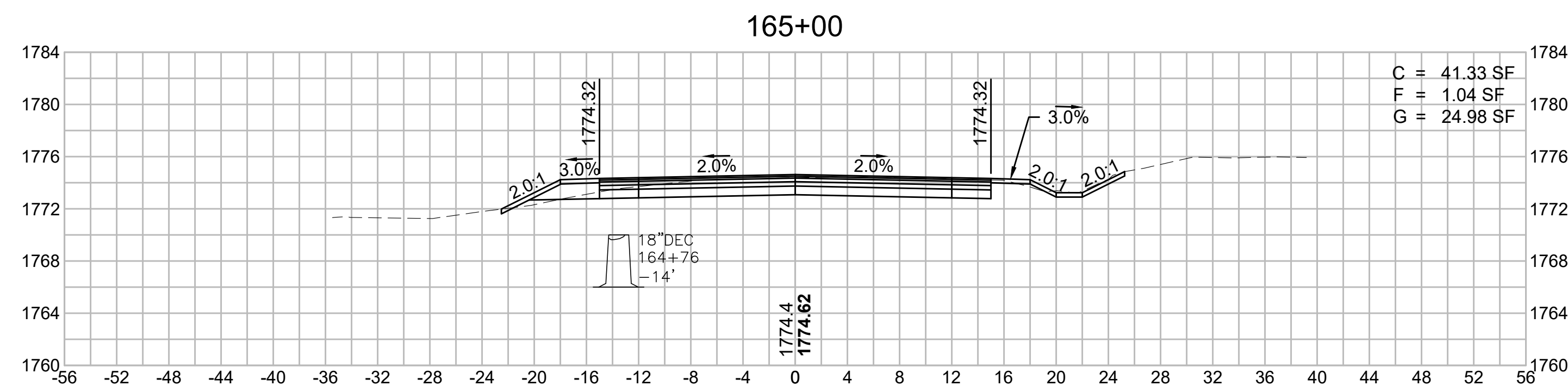
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	170	191
PROJECT FILE NO.		609287	

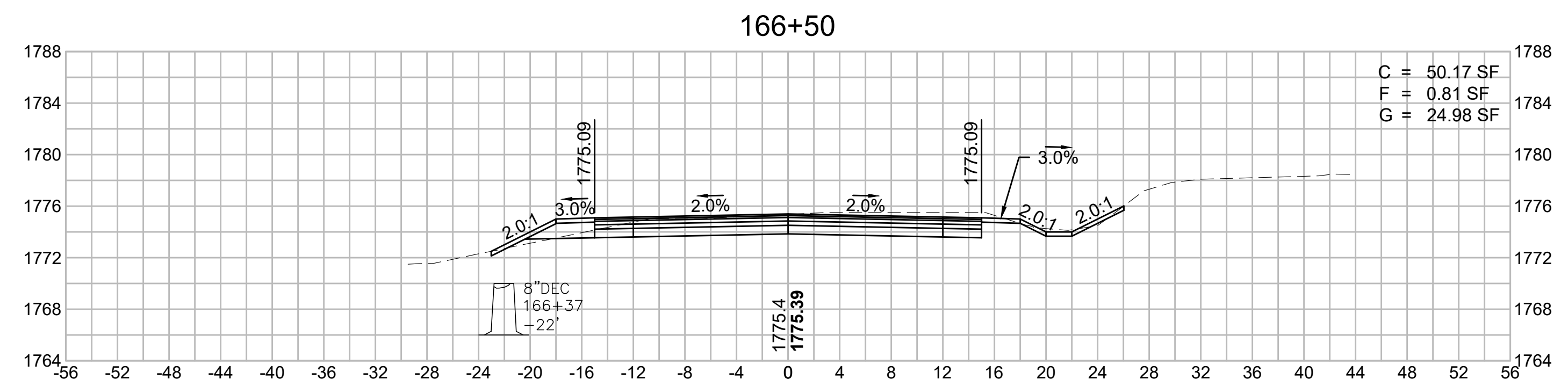
**OLD NORTH ROAD
CROSS SECTIONS - 67**



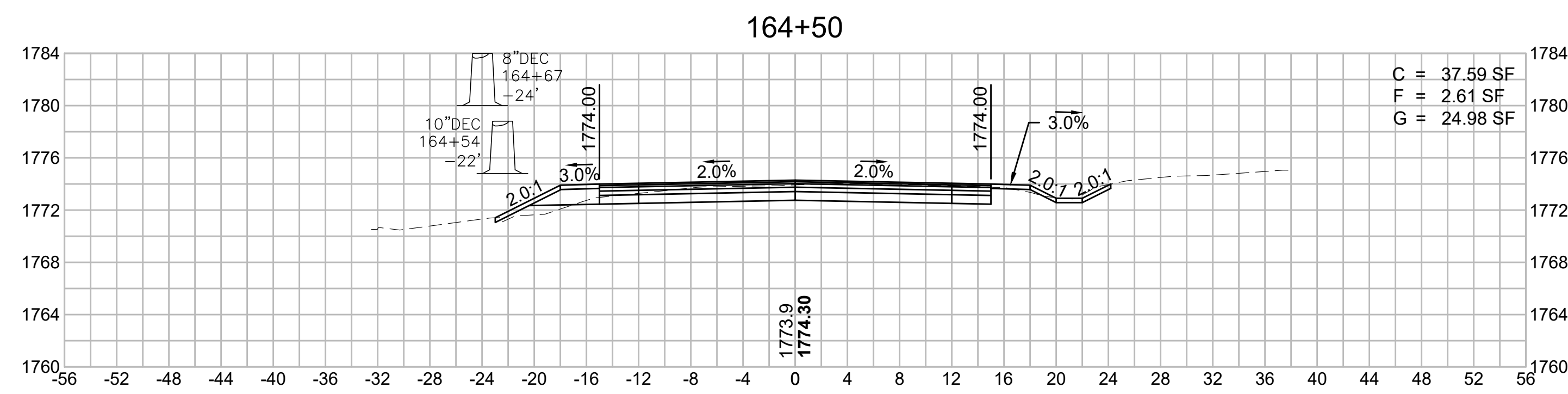
C = 81.24 SF
F = 16.93 SF
G = 24.98 SF



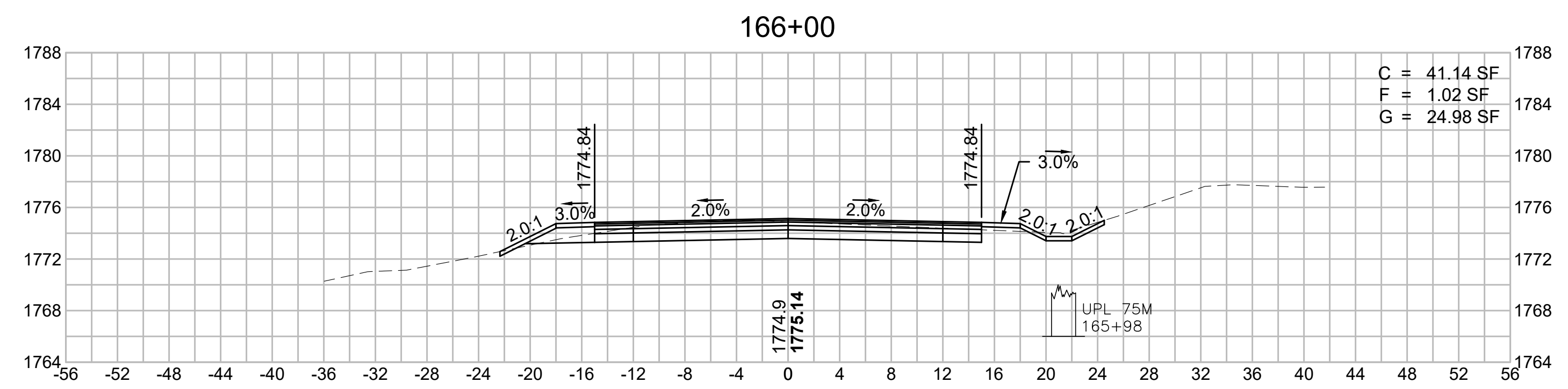
C = 41.33 SF
F = 1.04 SF
G = 24.98 SF



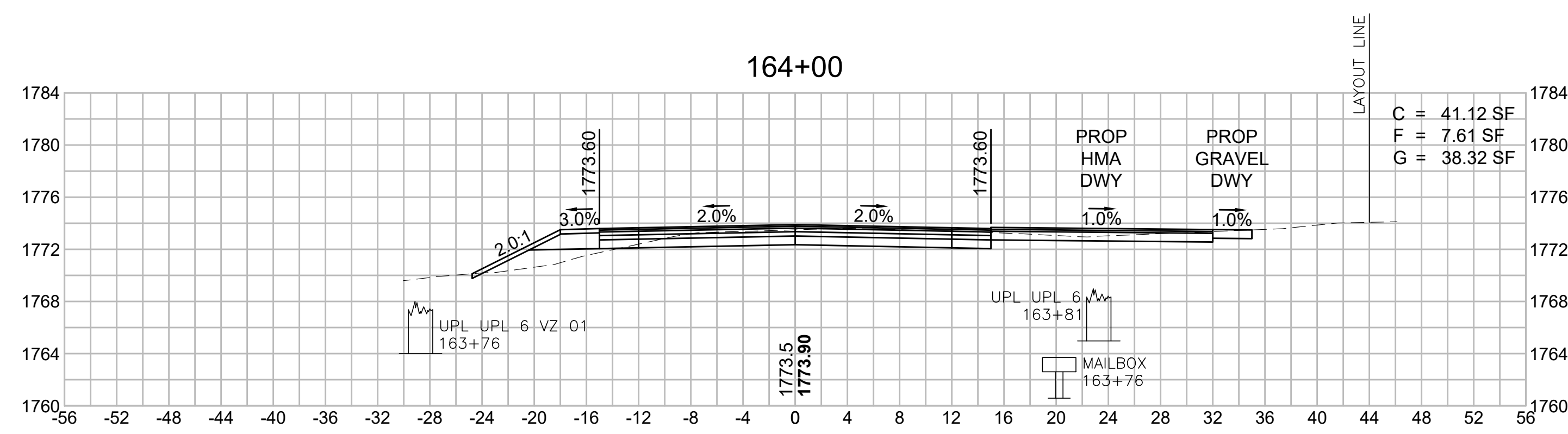
C = 50.17 SF
F = 0.81 SF
G = 24.98 SF



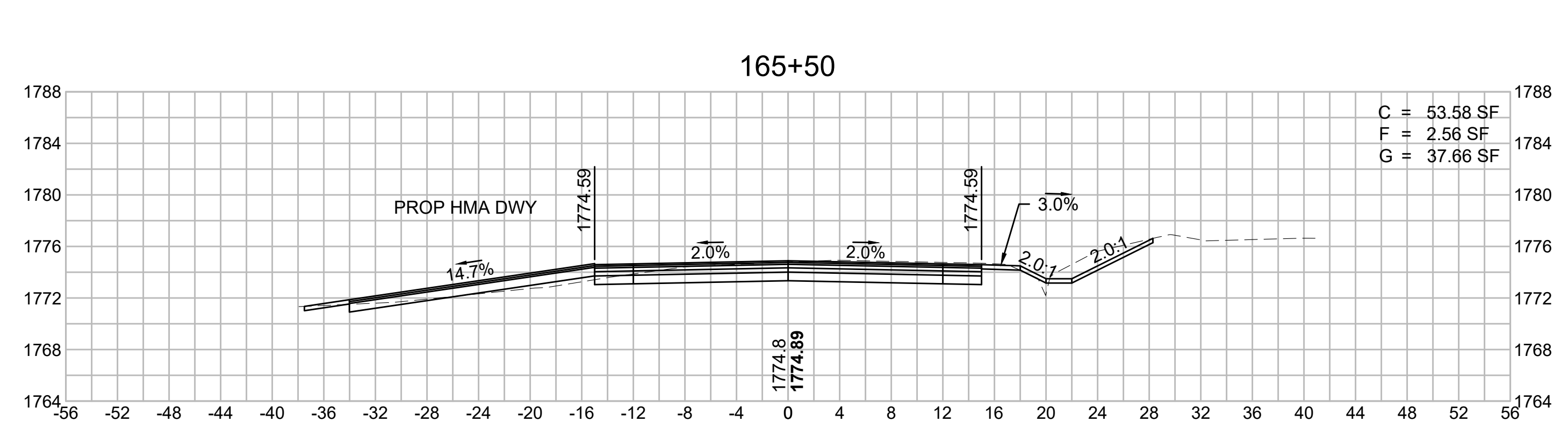
C = 37.59 SF
F = 2.61 SF
G = 24.98 SF



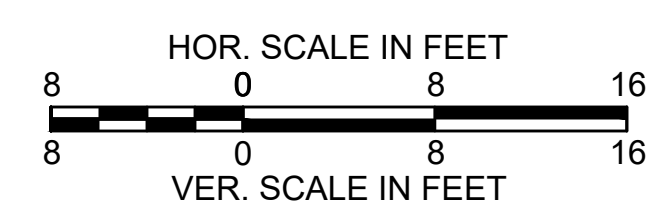
C = 41.14 SF
F = 1.02 SF
G = 24.98 SF



C = 41.12 SF
F = 7.61 SF
G = 38.32 SF



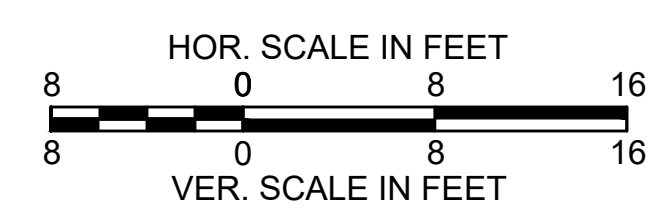
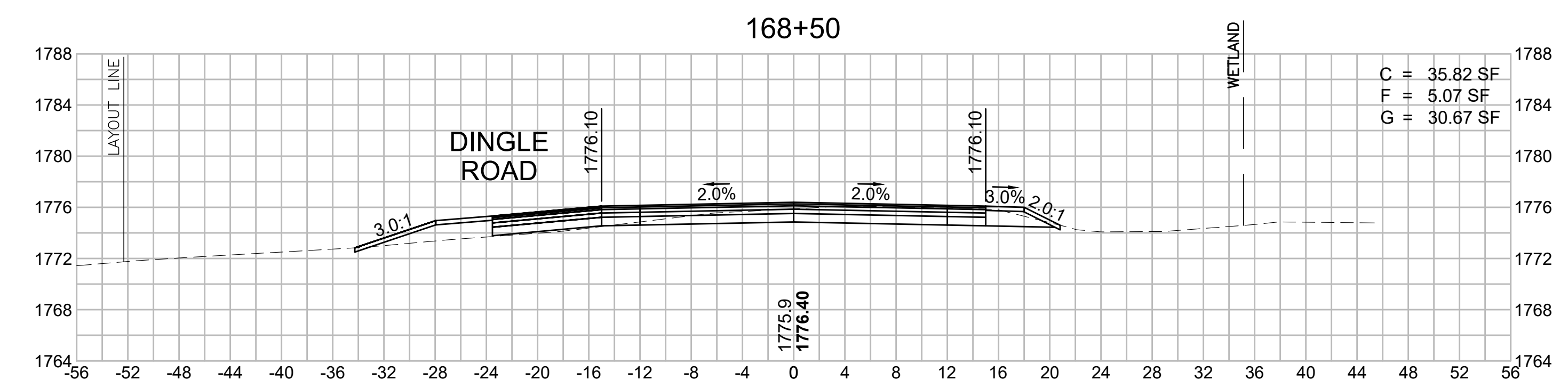
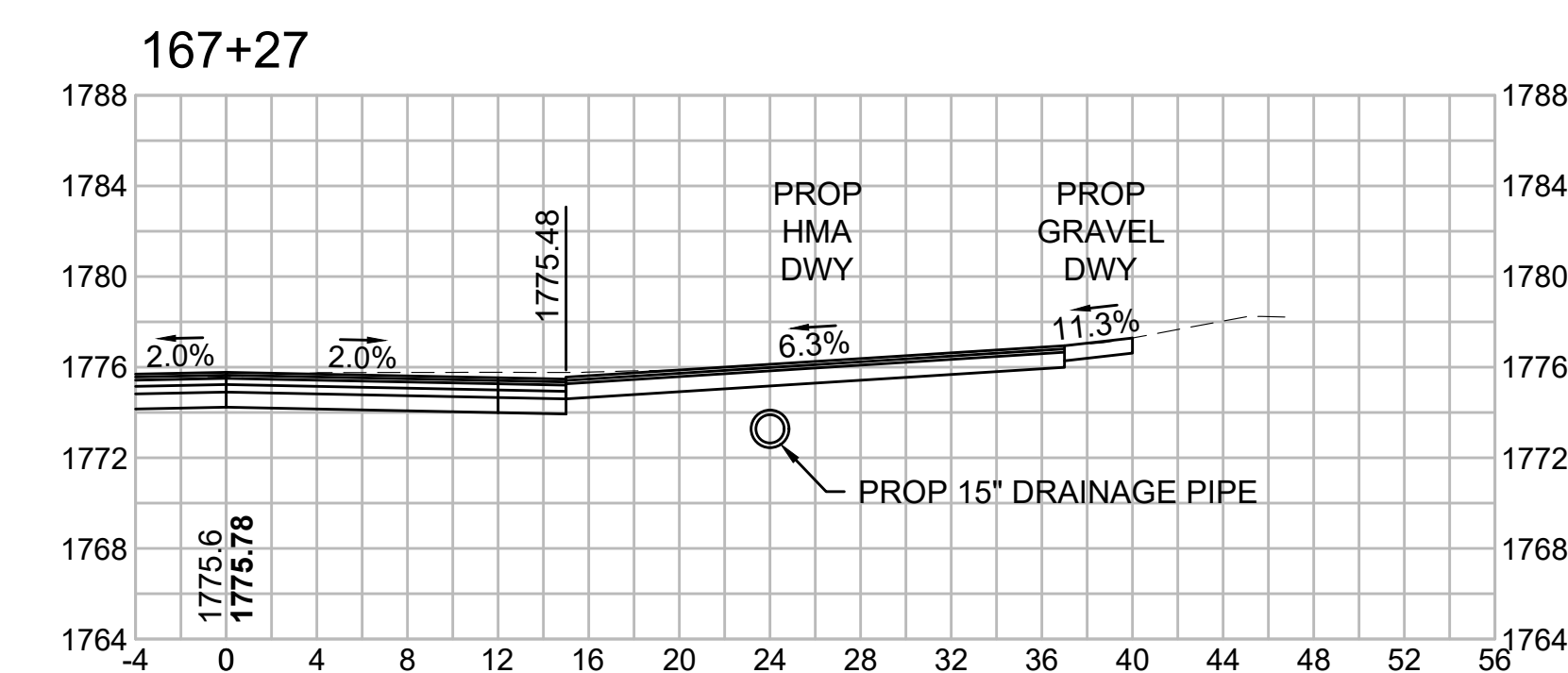
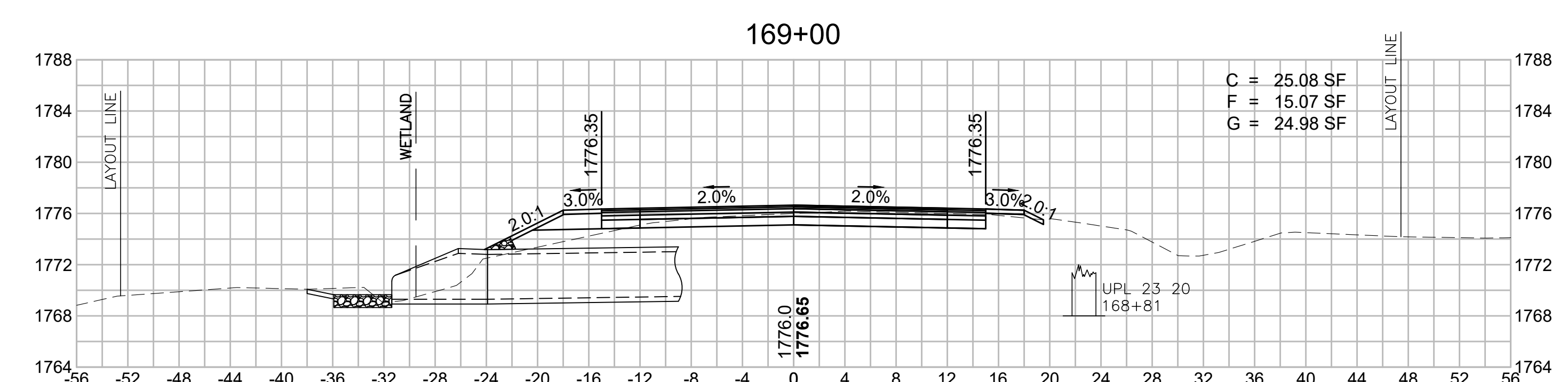
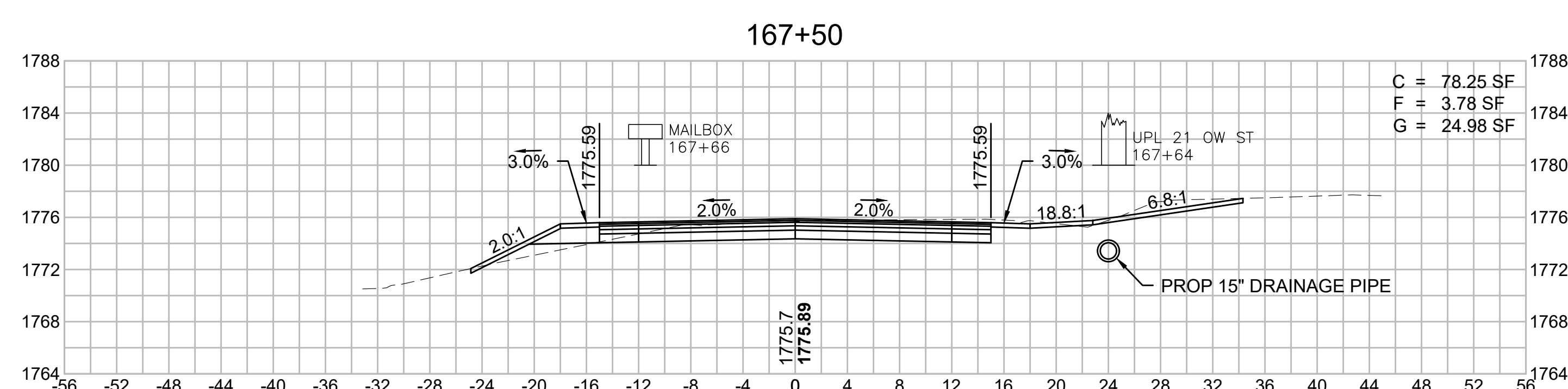
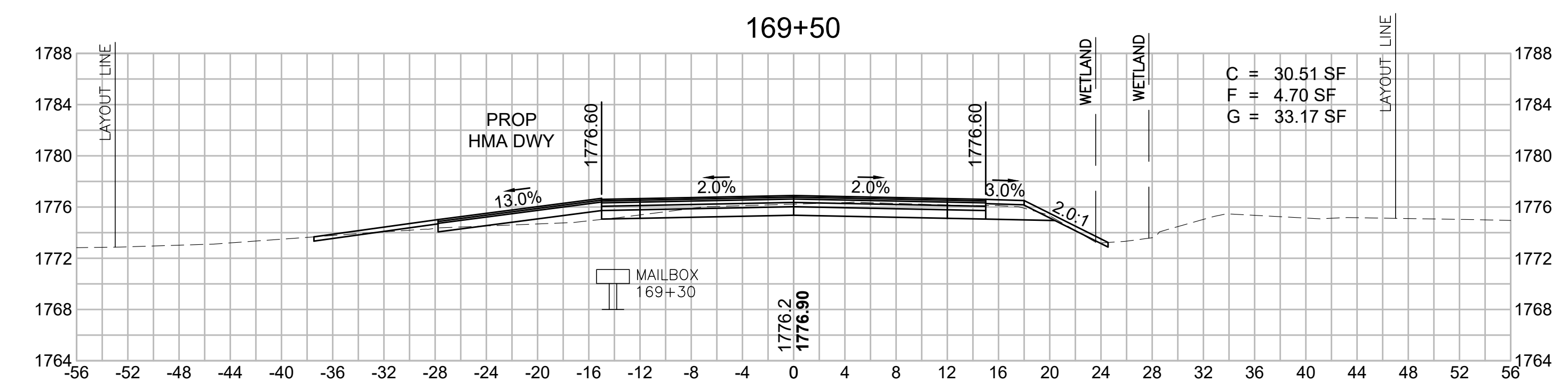
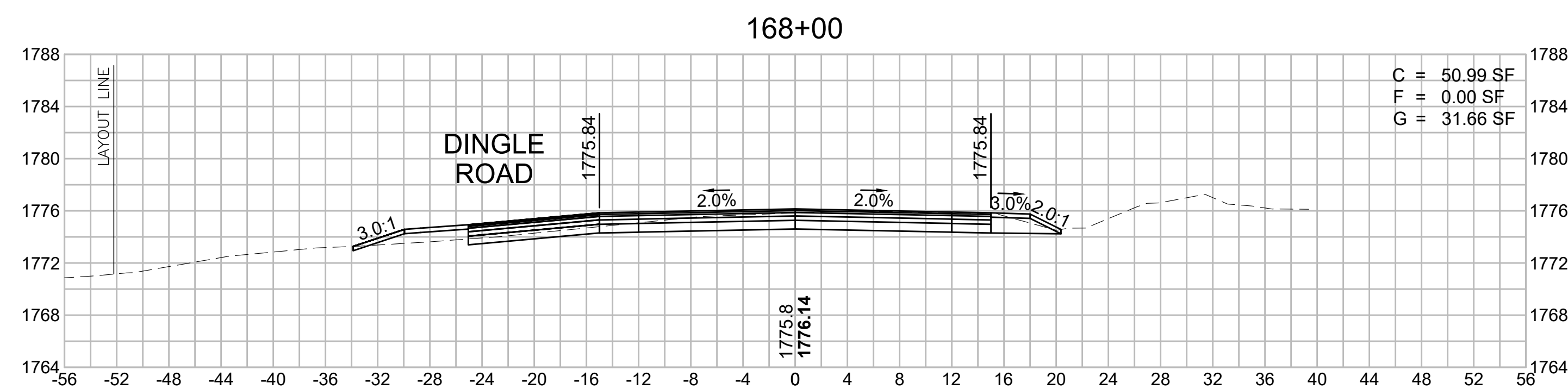
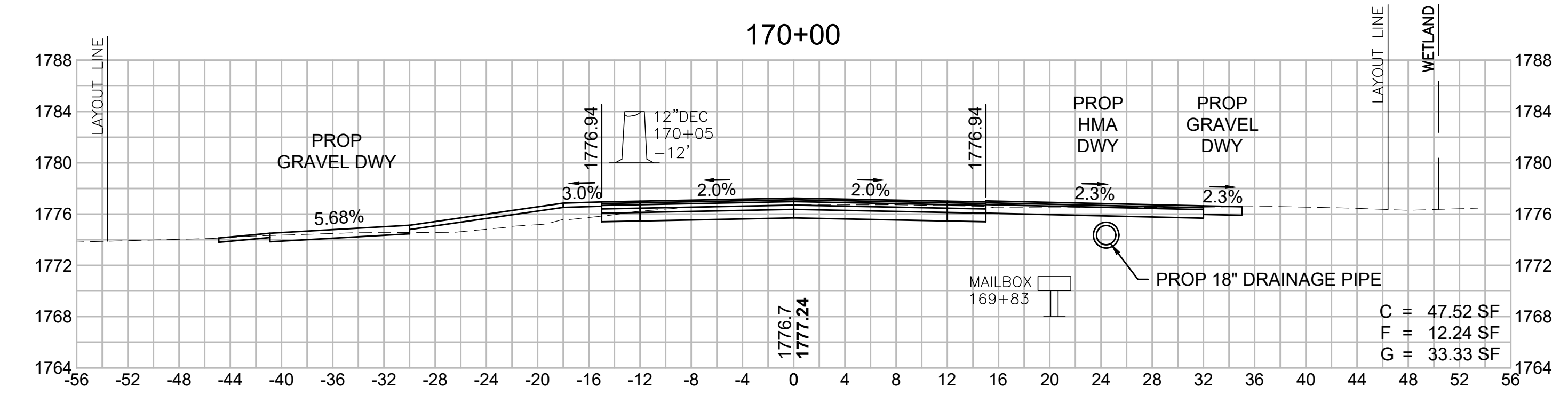
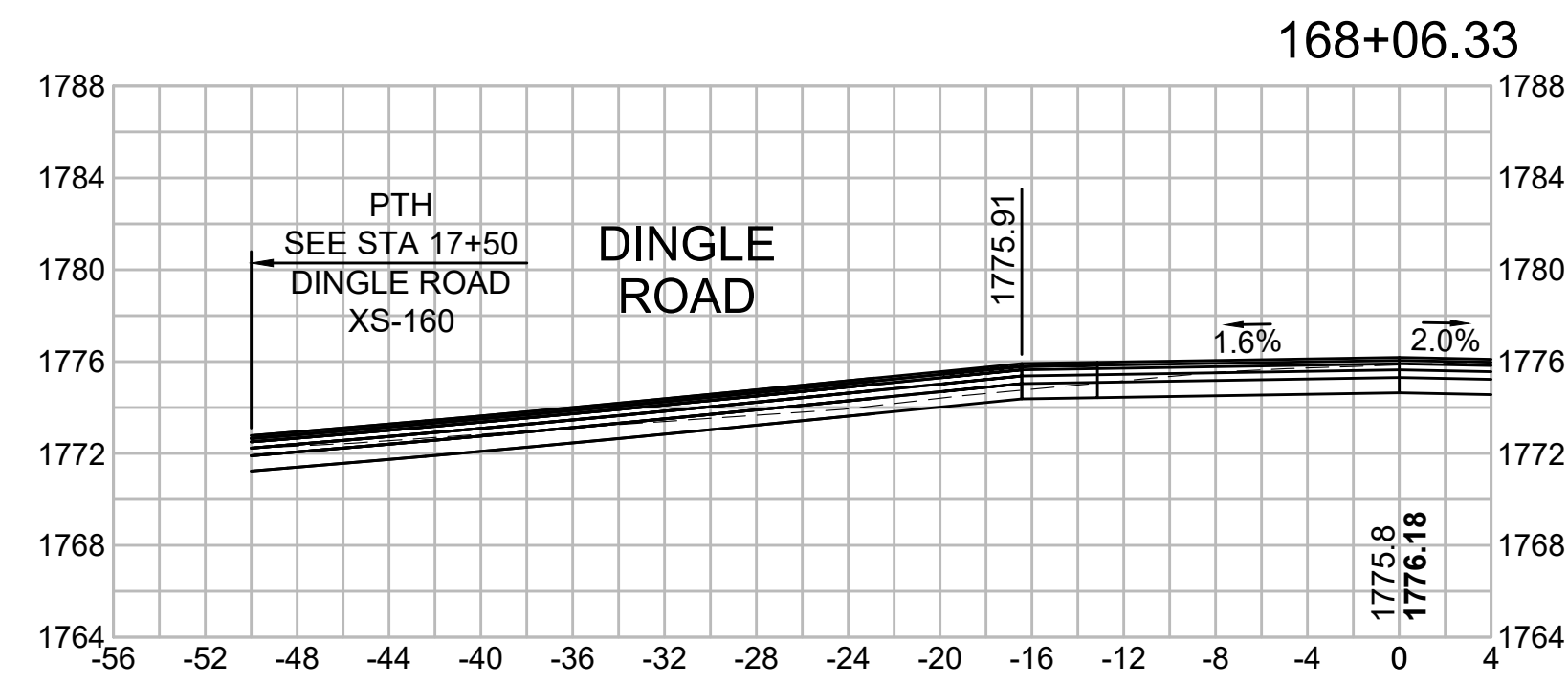
C = 53.58 SF
F = 2.56 SF
G = 37.66 SF



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	171	191
PROJECT FILE NO.		609287	

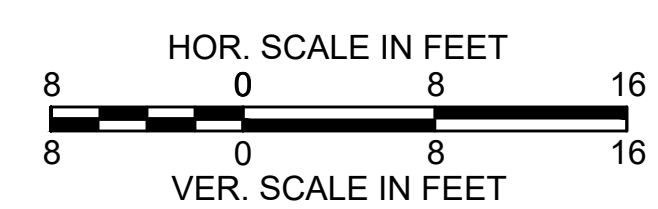
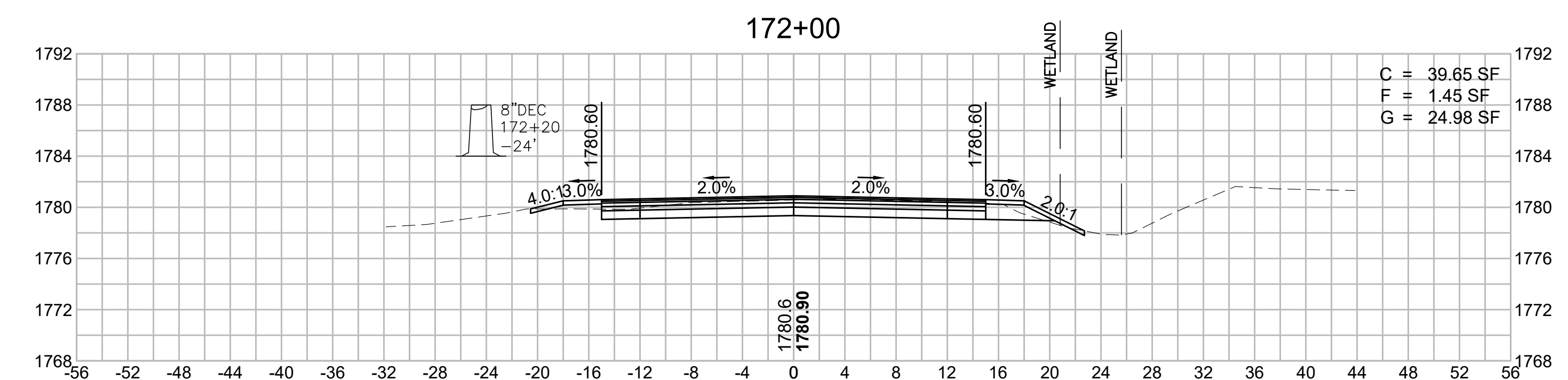
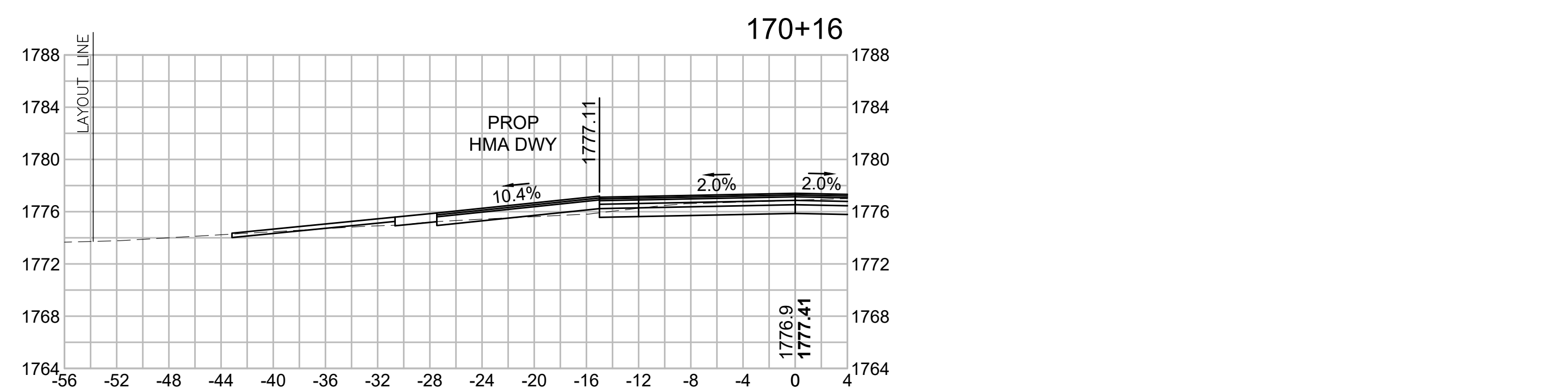
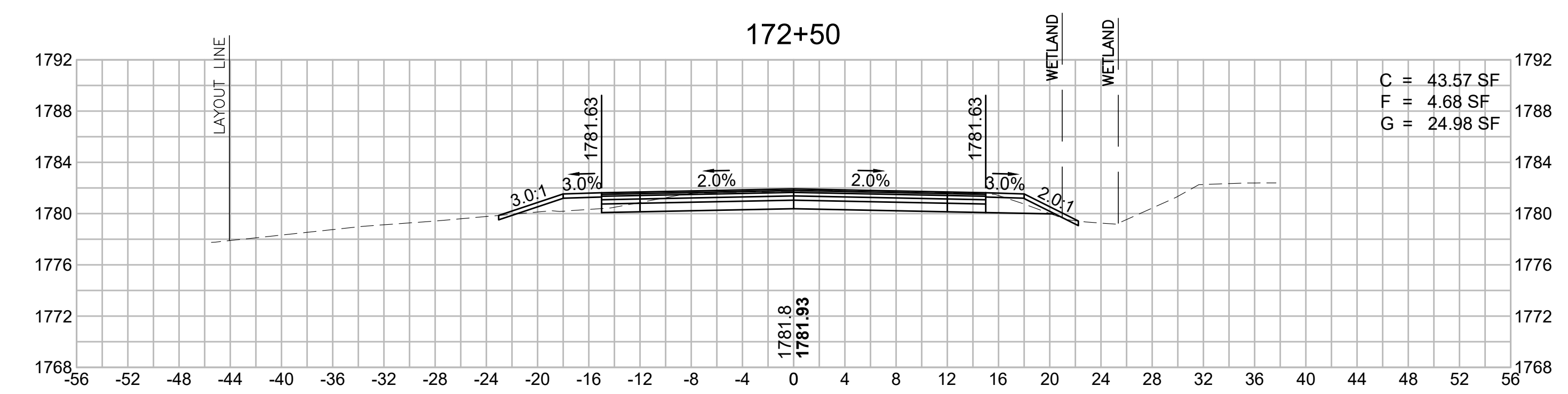
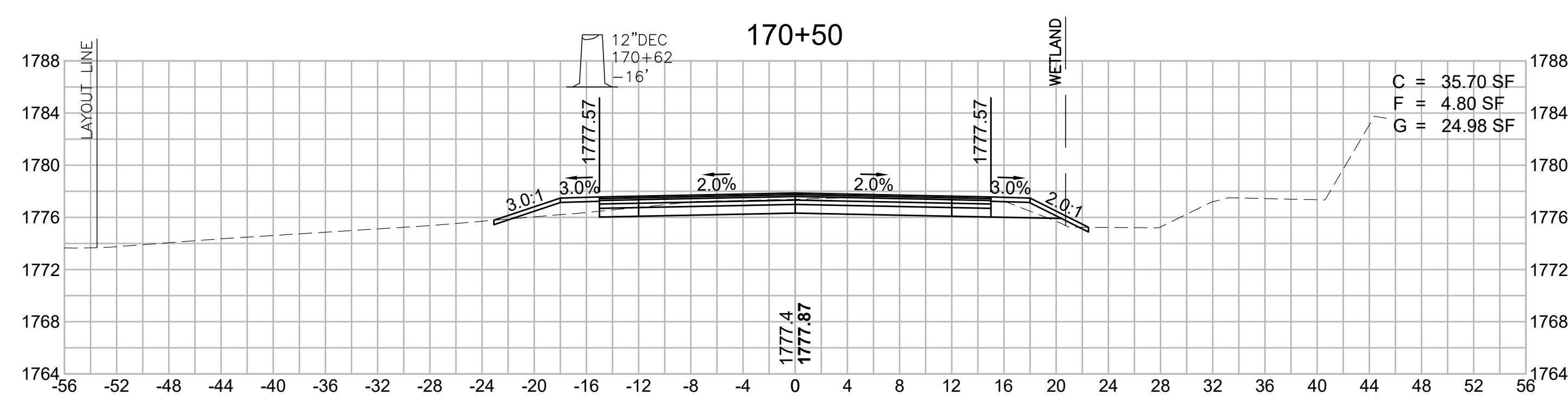
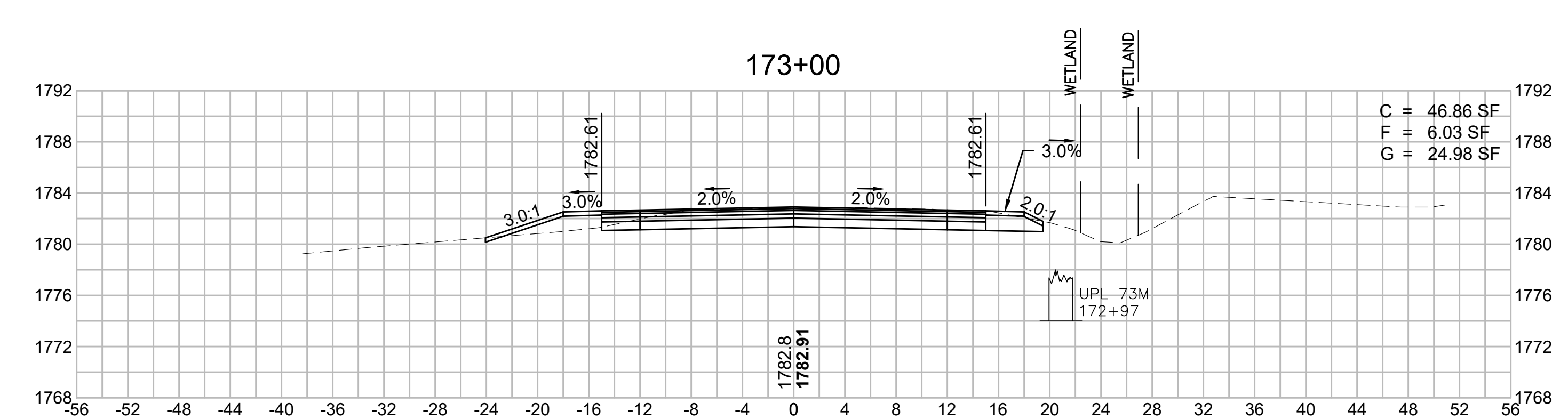
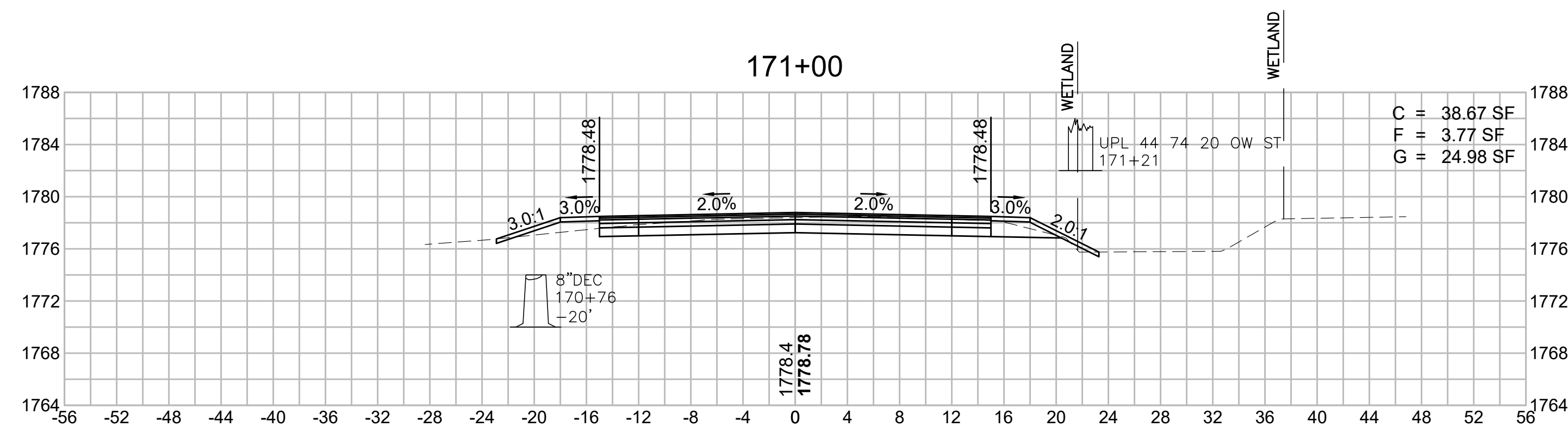
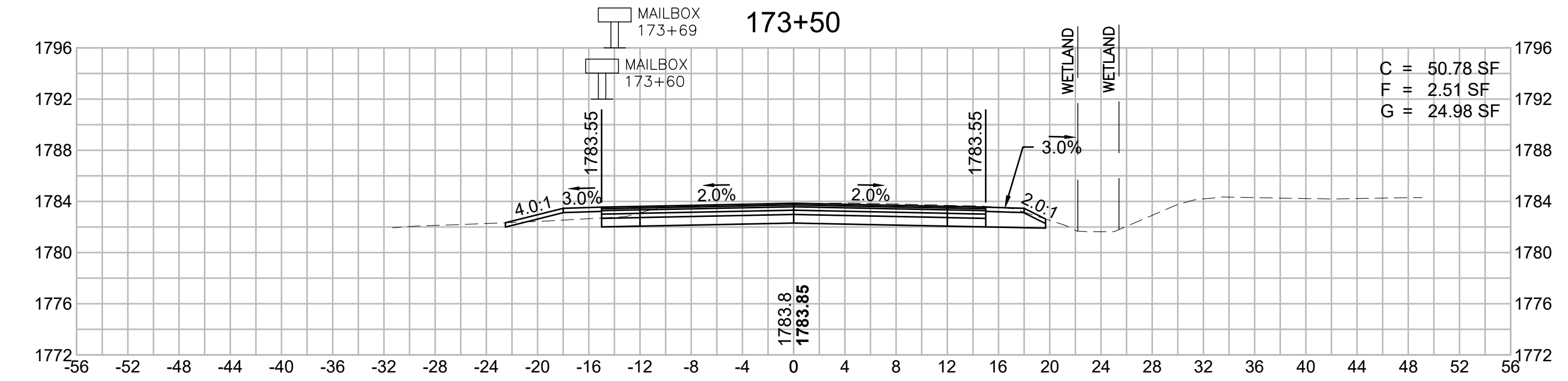
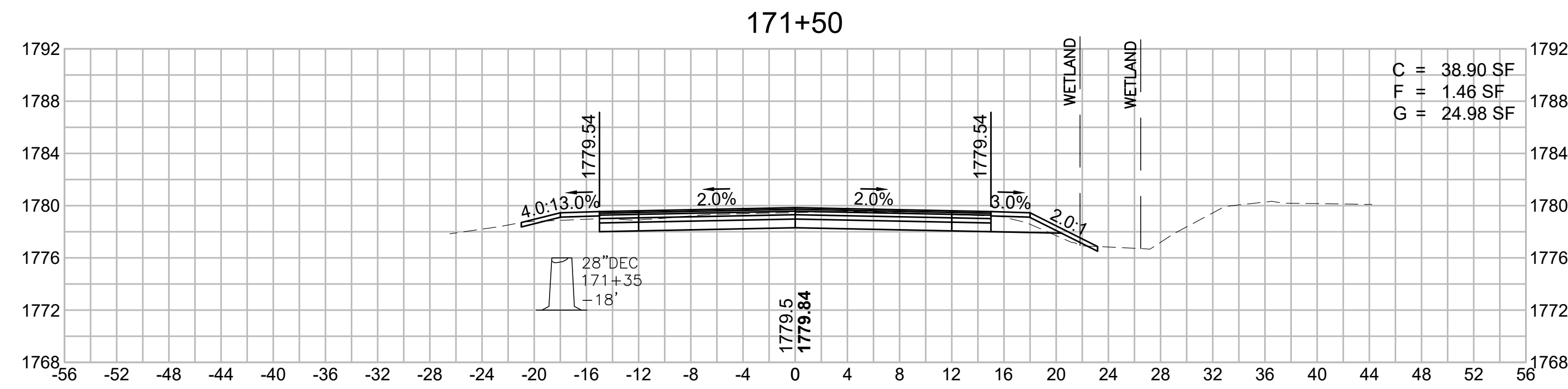
**OLD NORTH ROAD
CROSS SECTIONS - 68**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	172	191
PROJECT FILE NO.		609287	

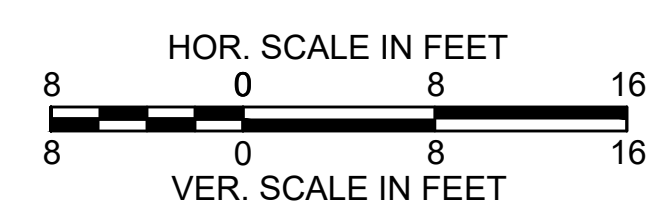
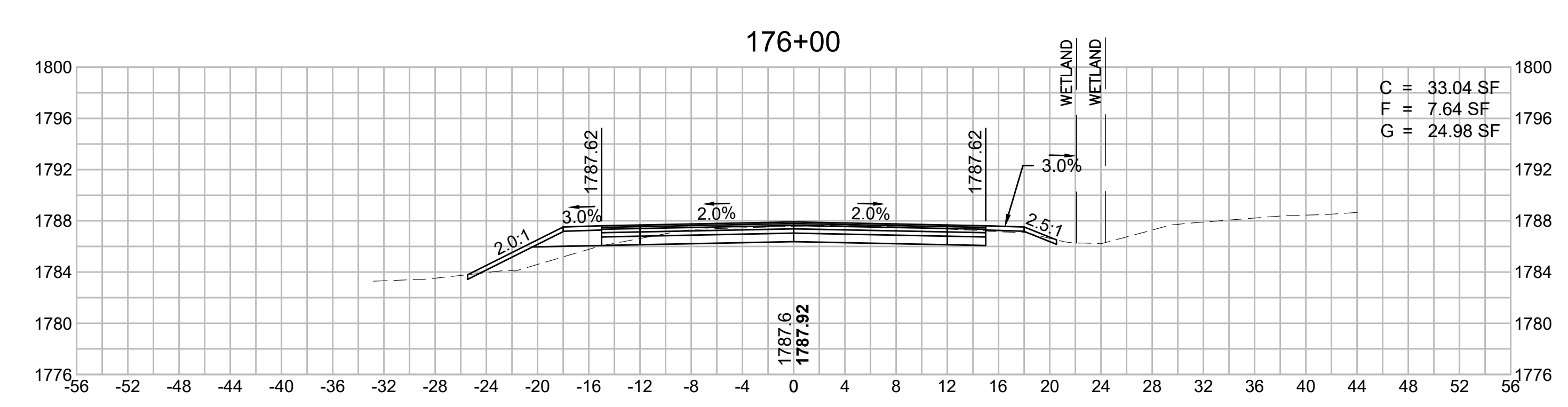
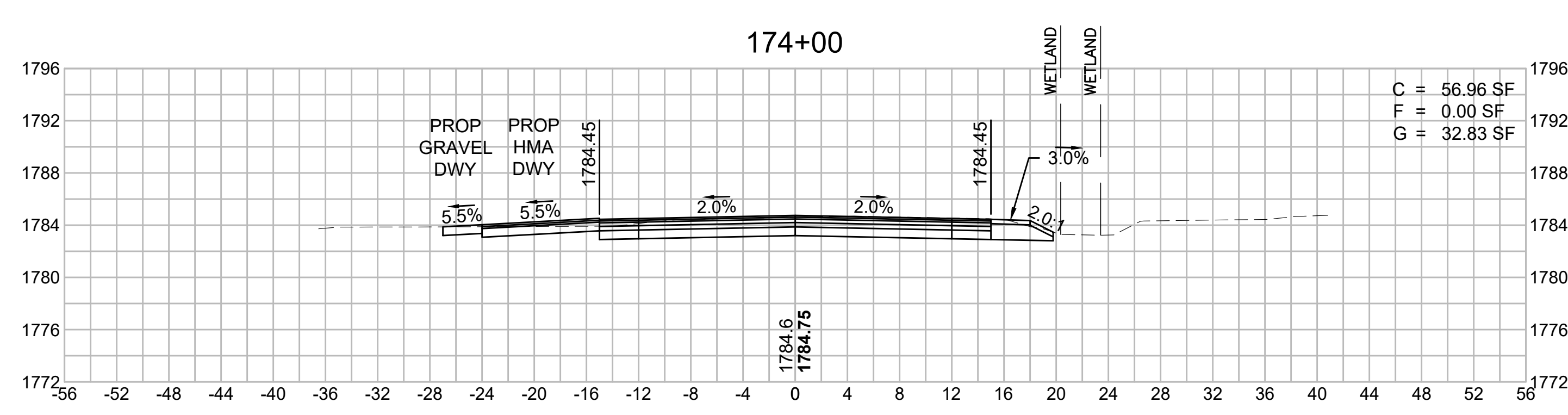
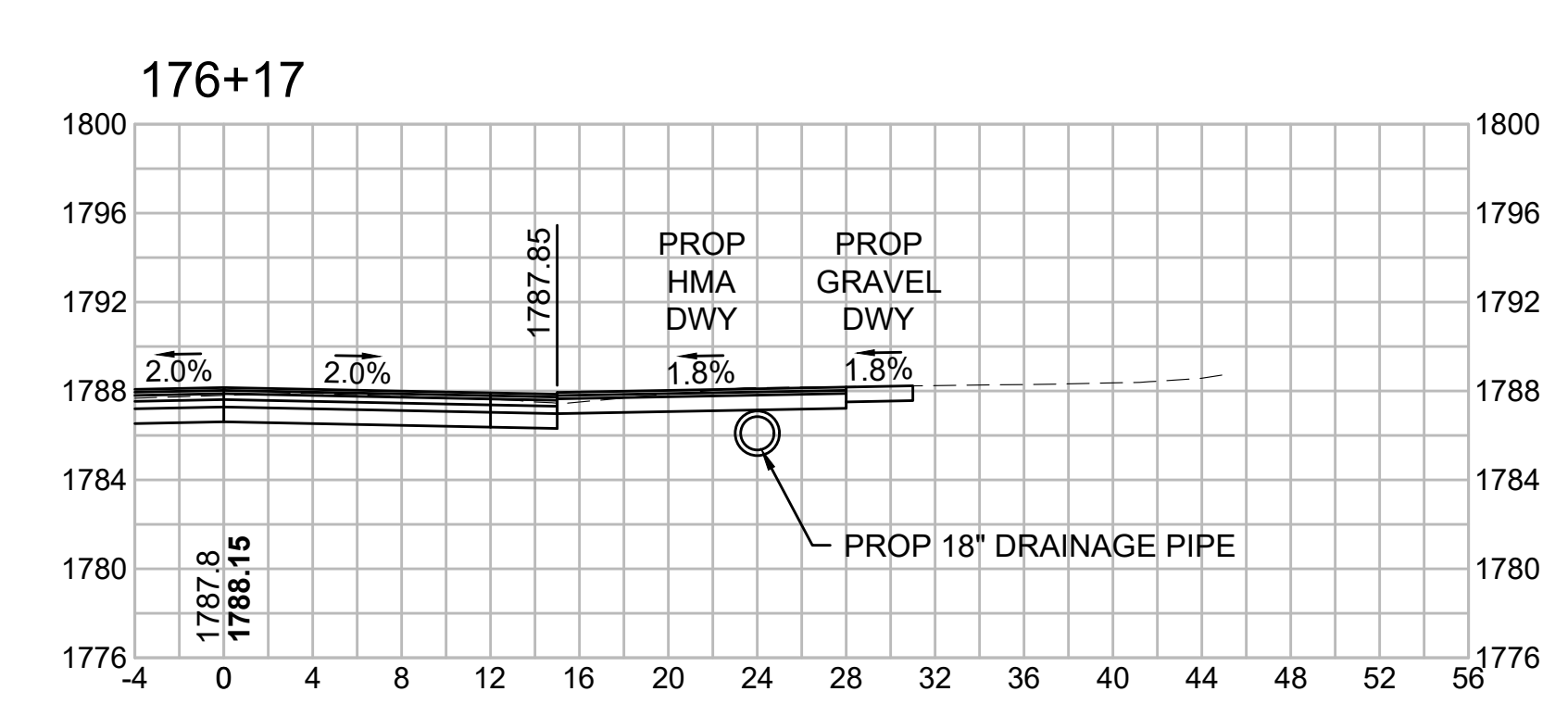
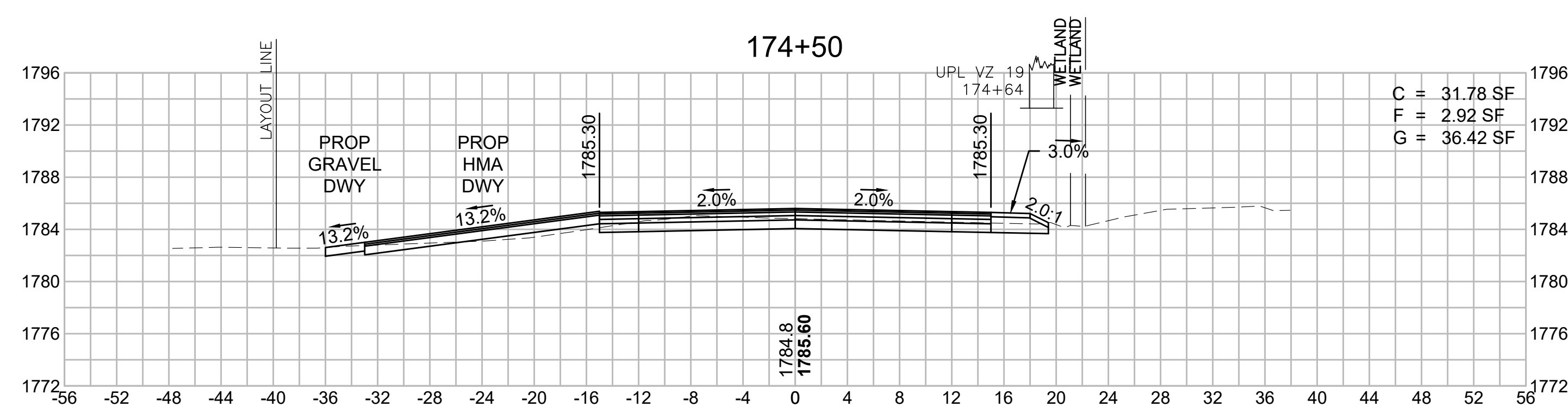
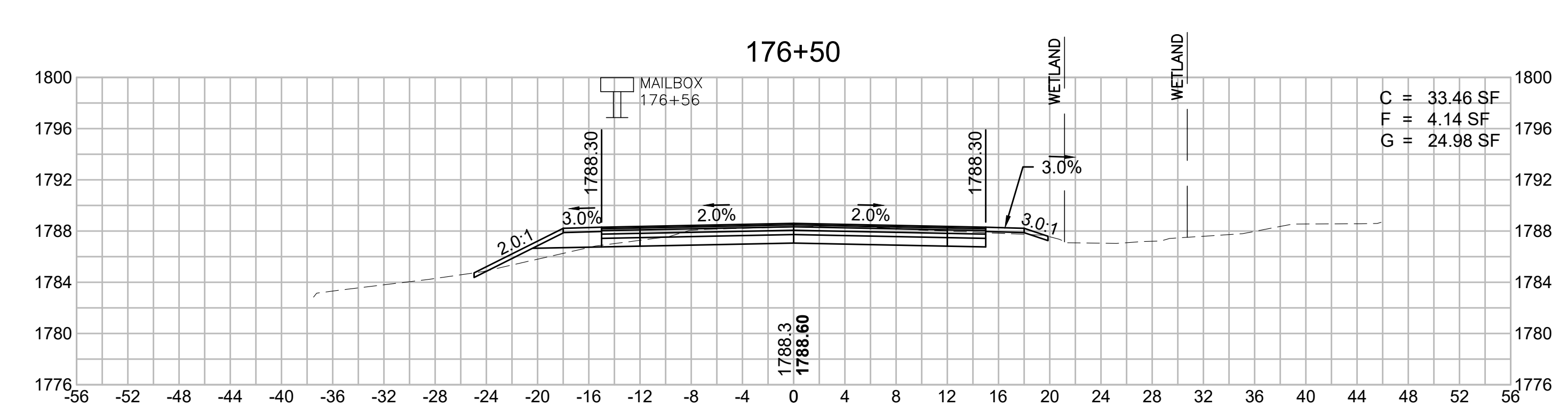
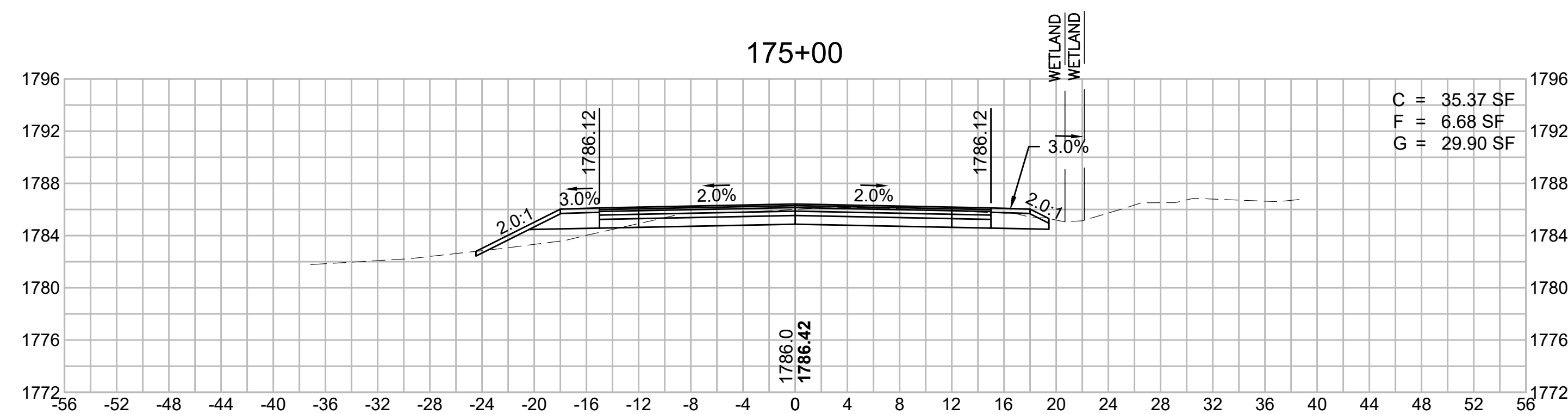
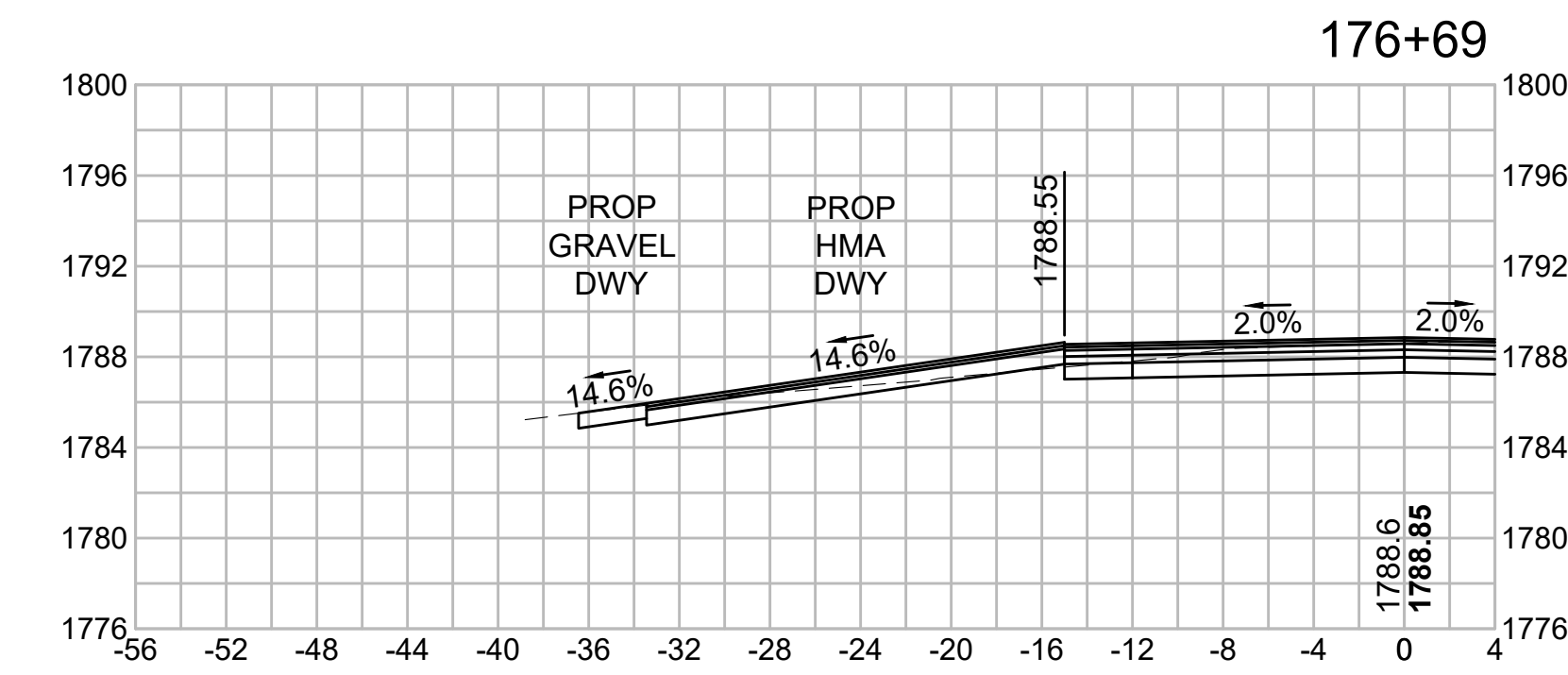
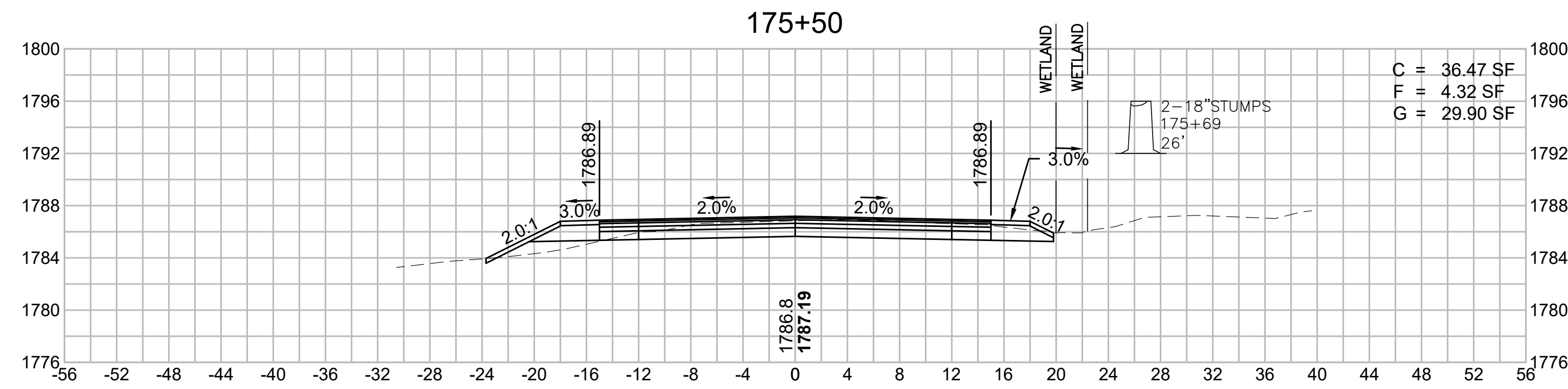
**OLD NORTH ROAD
CROSS SECTIONS - 69**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	173	191
PROJECT FILE NO.		609287	

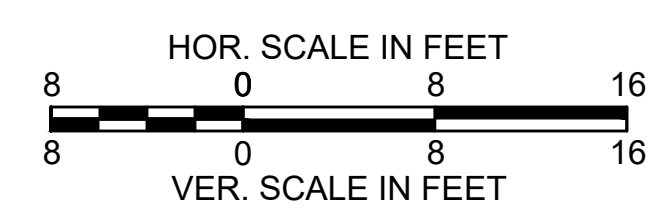
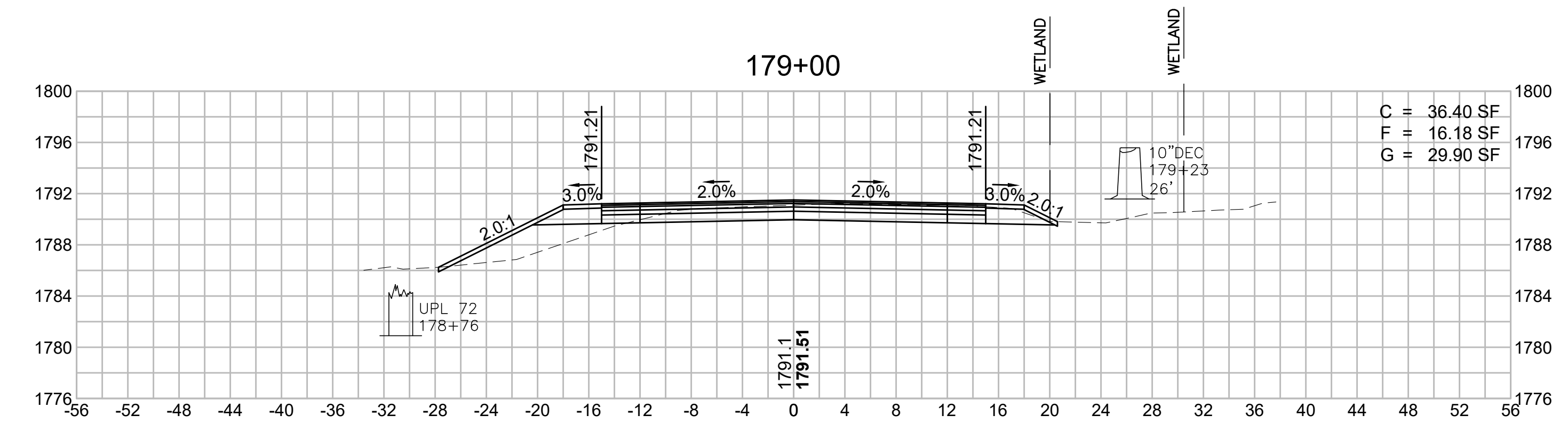
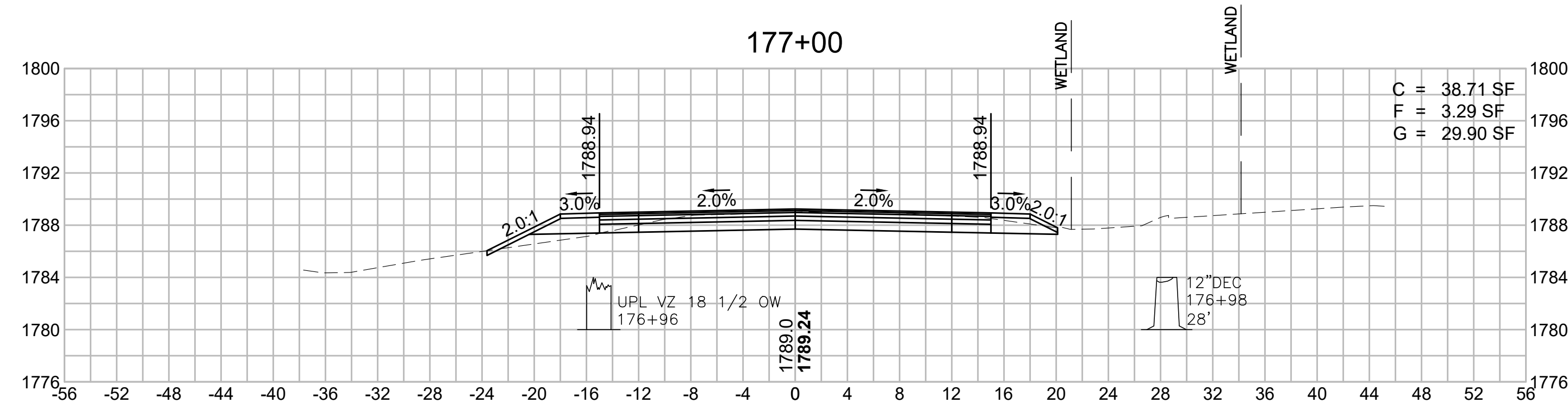
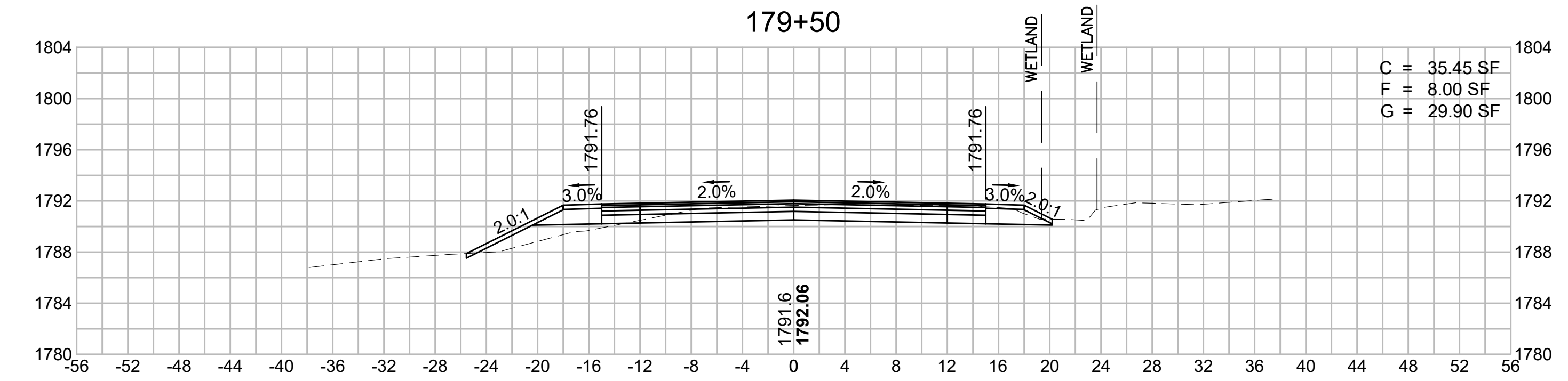
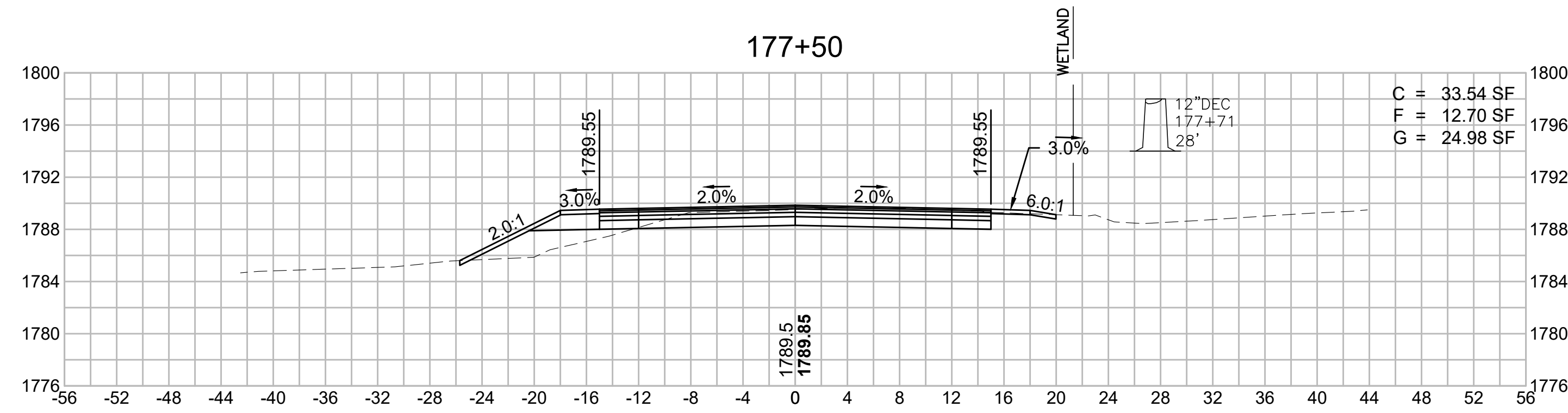
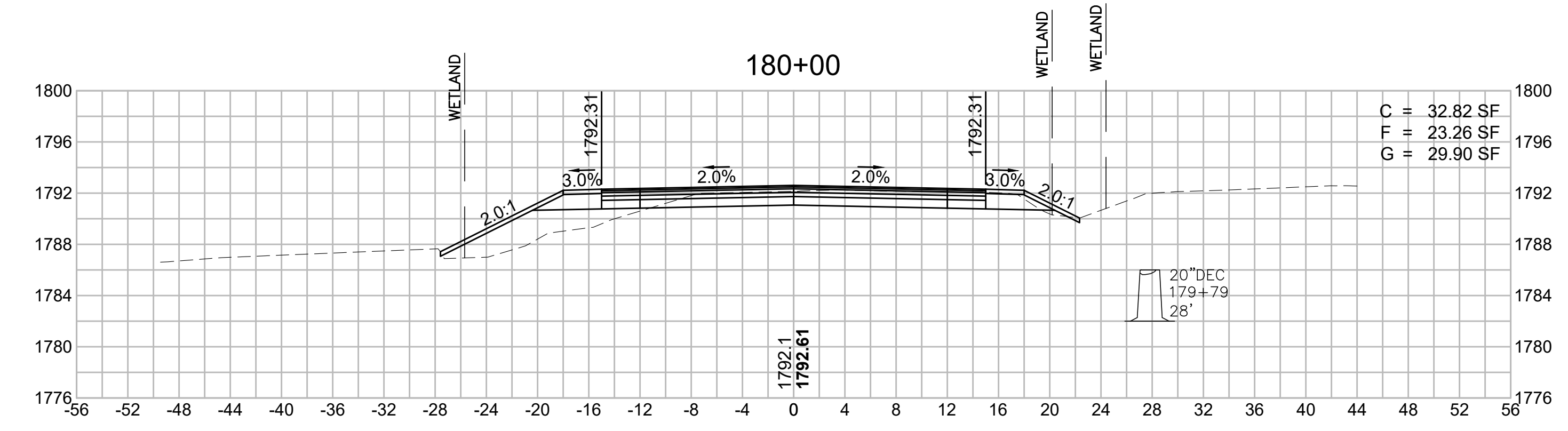
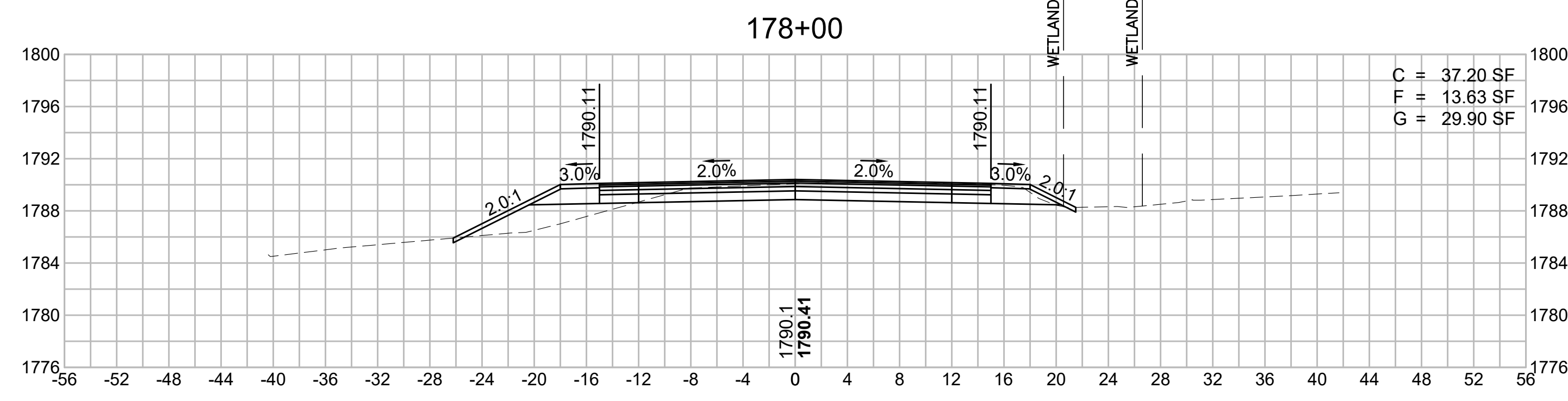
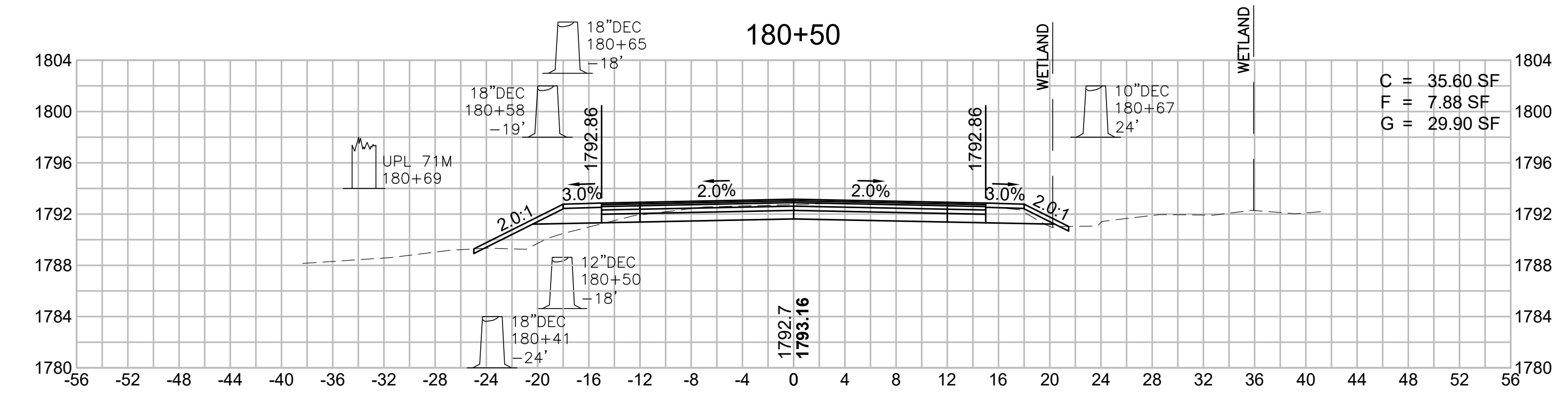
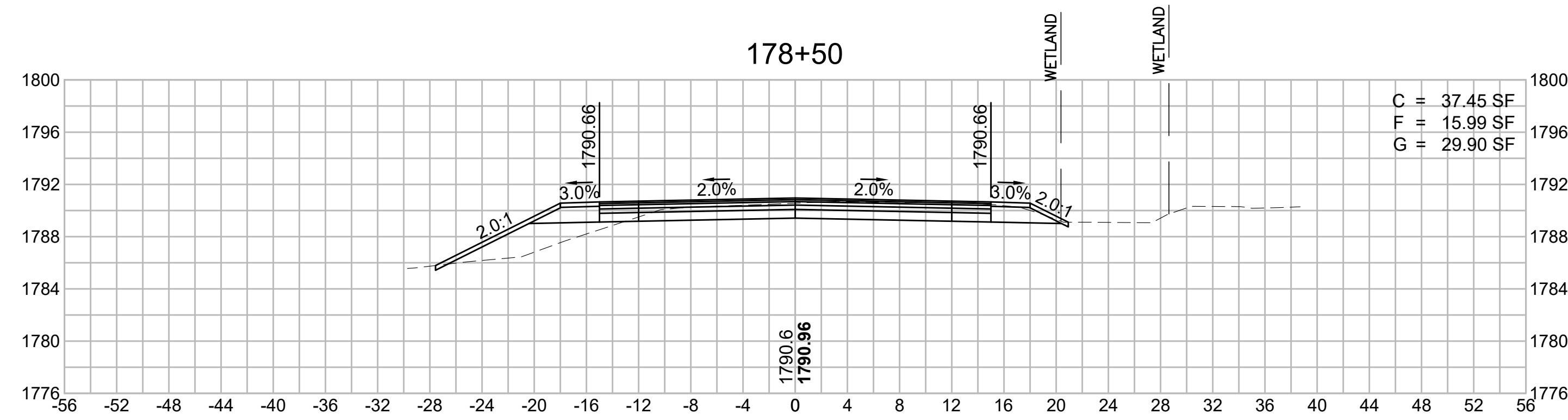
**OLD NORTH ROAD
CROSS SECTIONS - 70**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	174	191
PROJECT FILE NO.		609287	

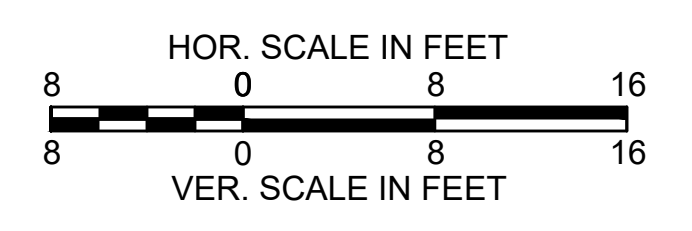
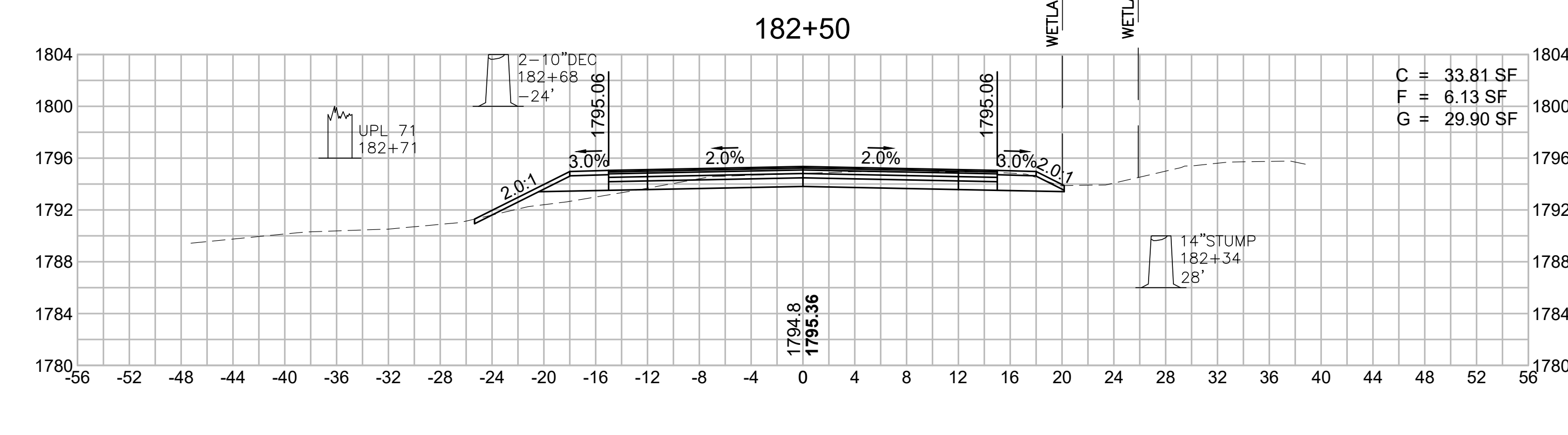
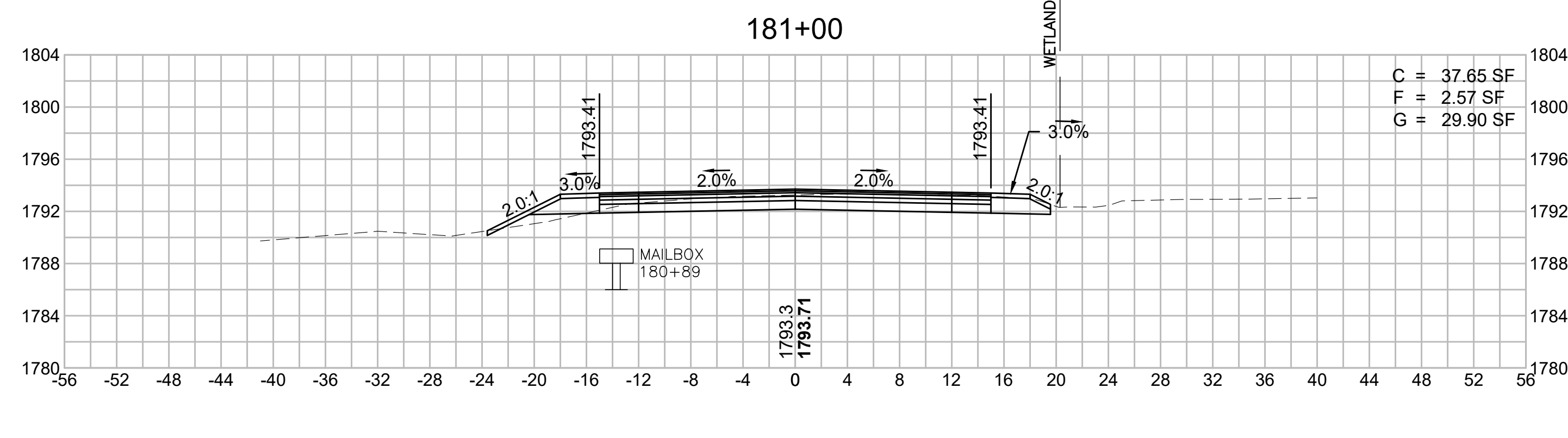
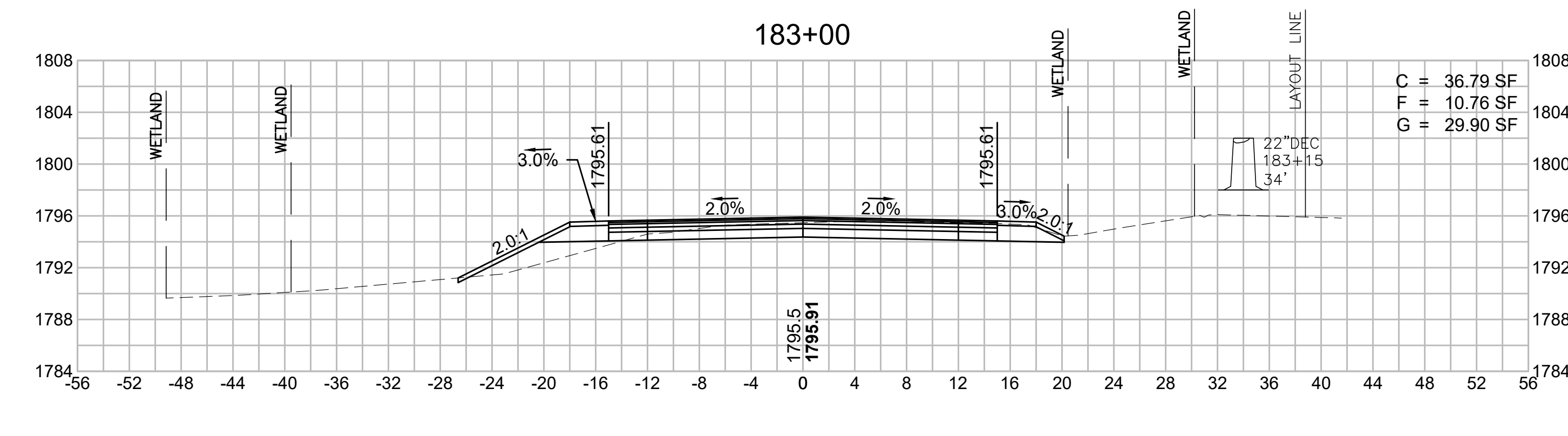
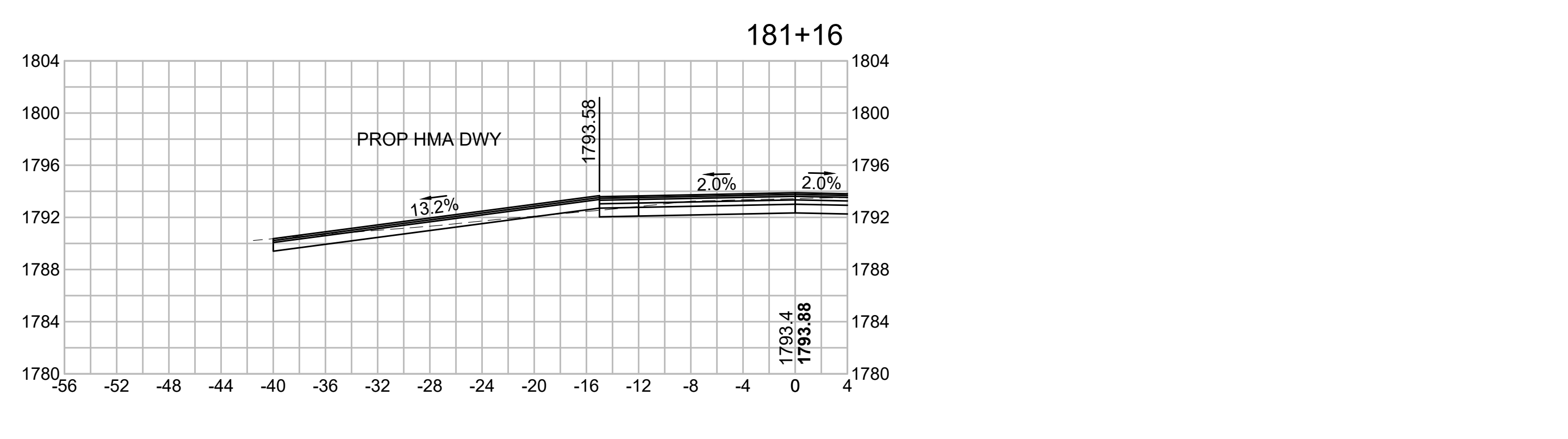
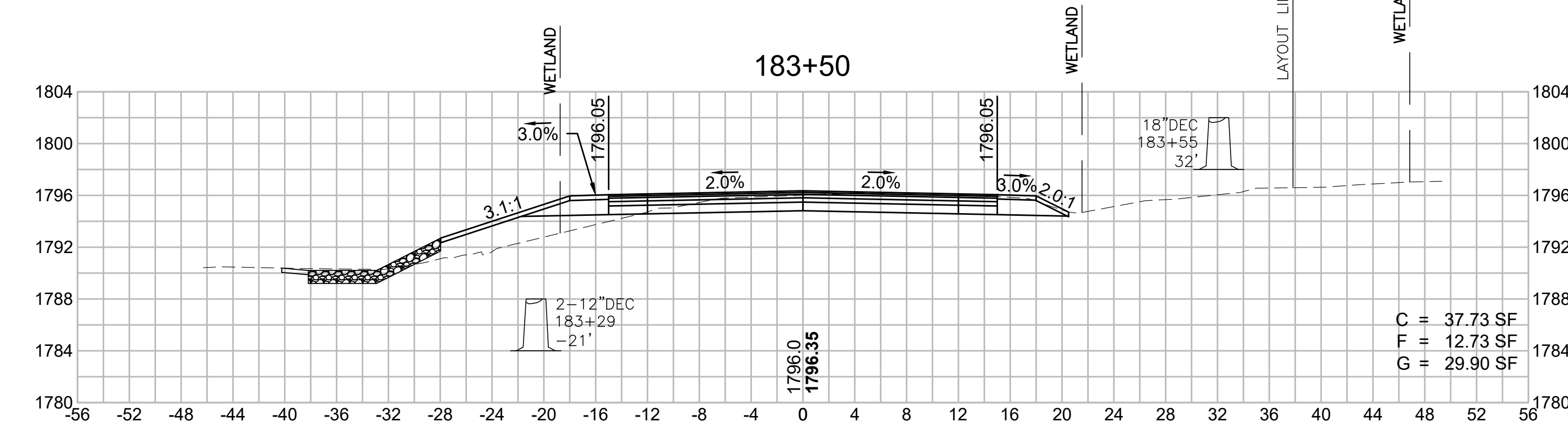
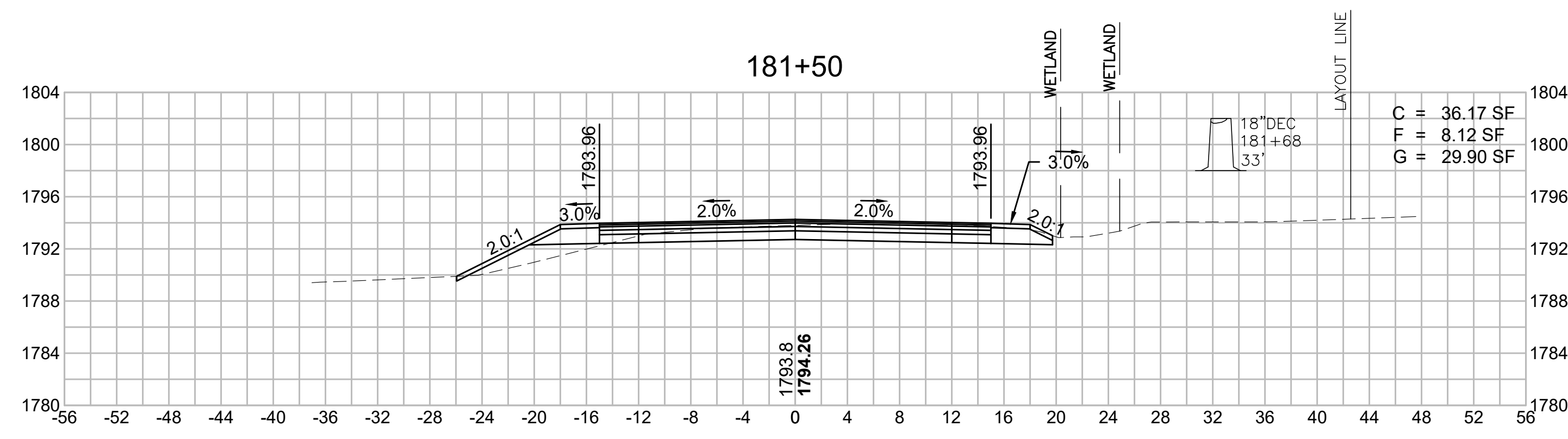
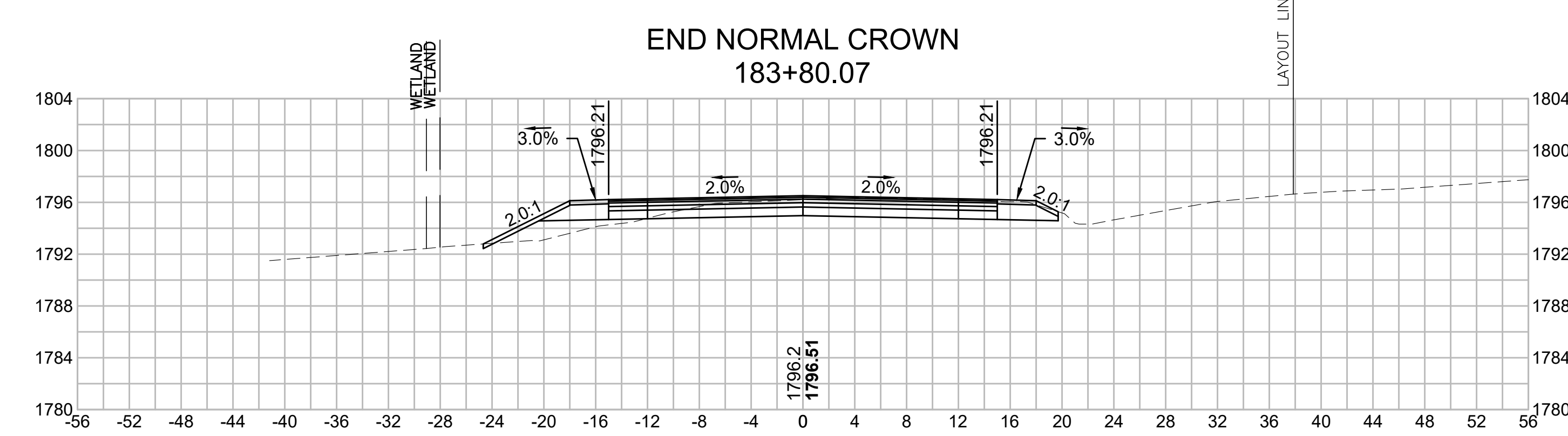
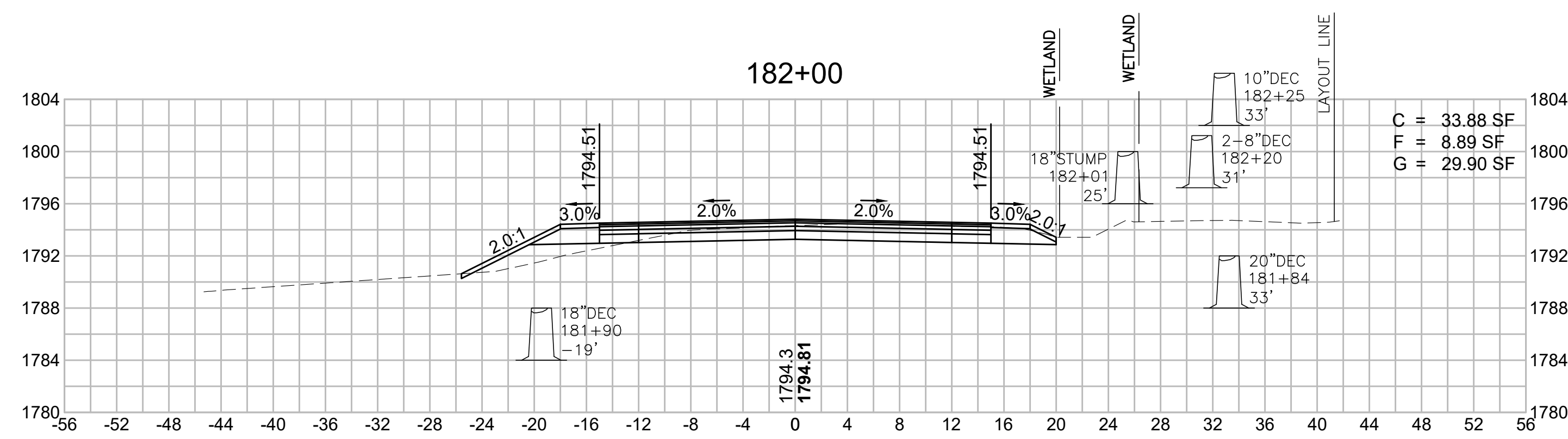
**OLD NORTH ROAD
CROSS SECTIONS - 71**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	175	191
PROJECT FILE NO.		609287	

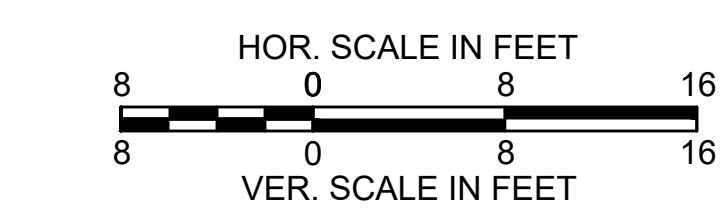
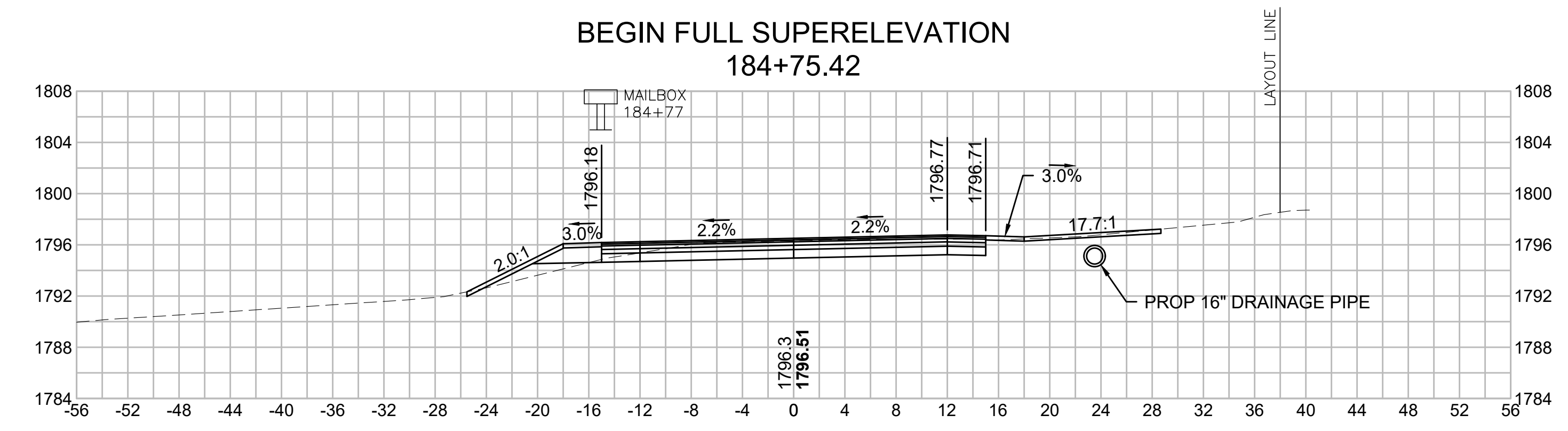
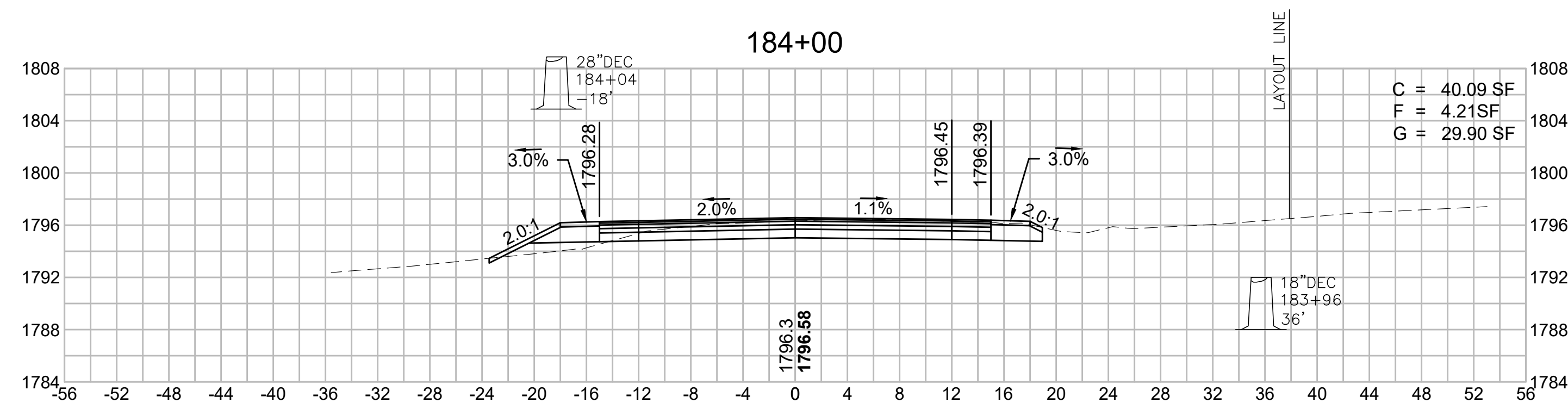
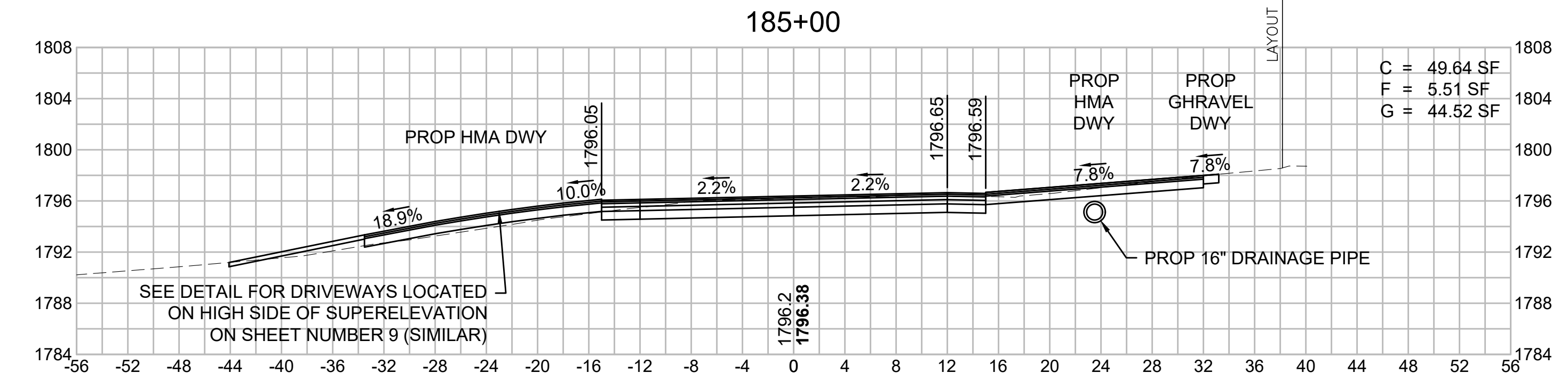
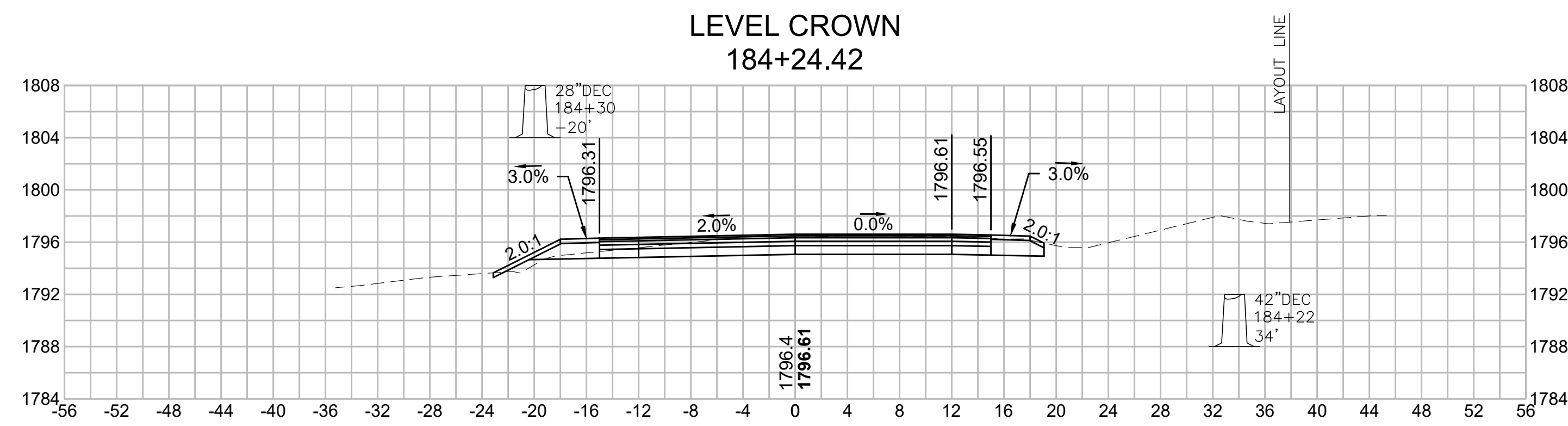
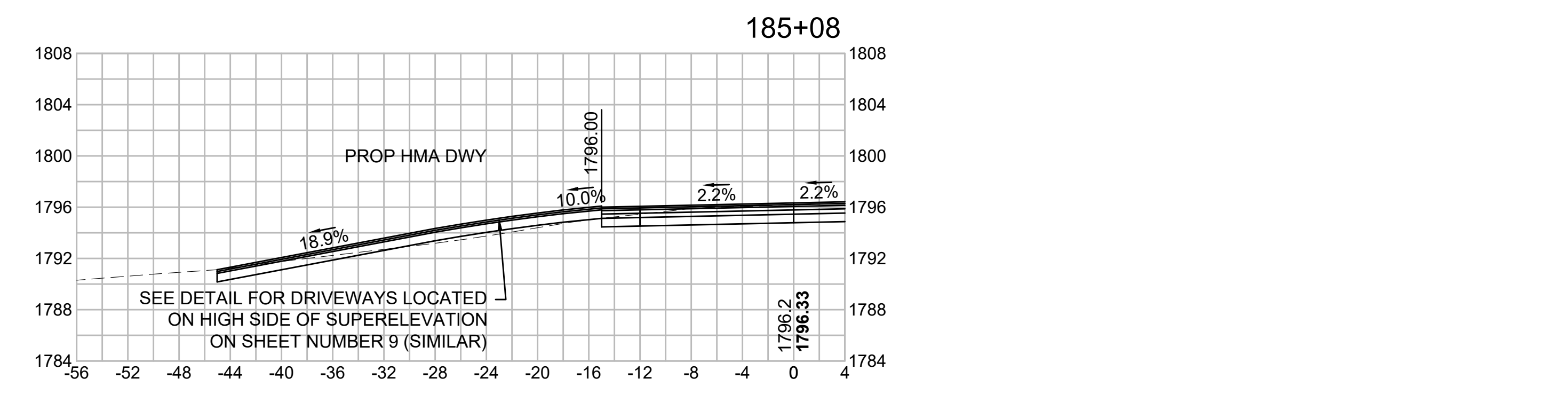
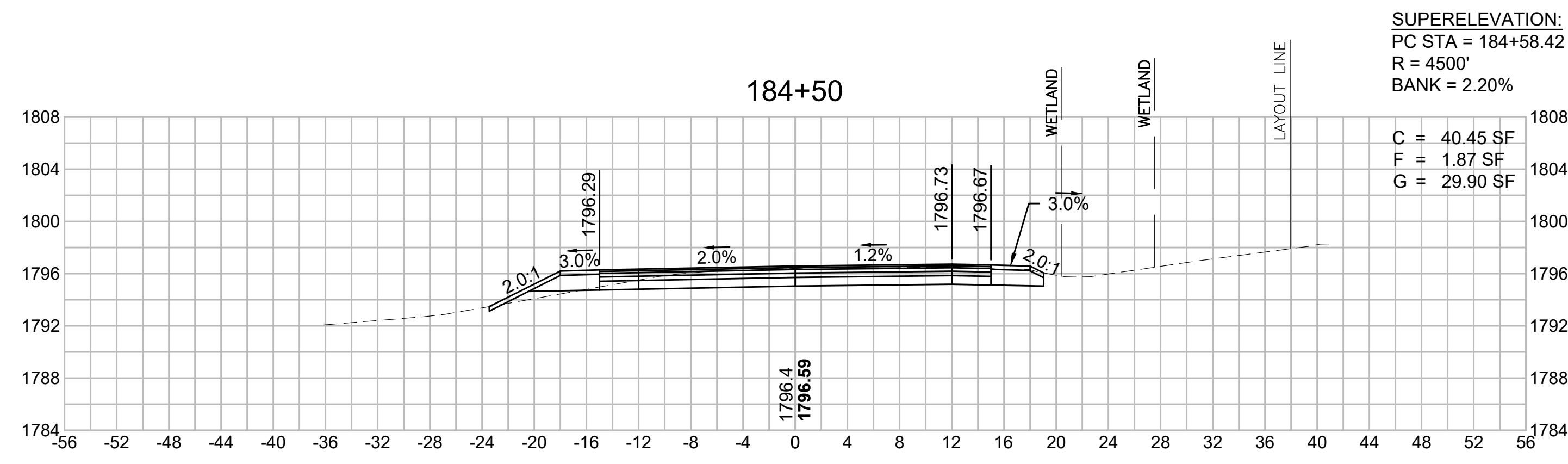
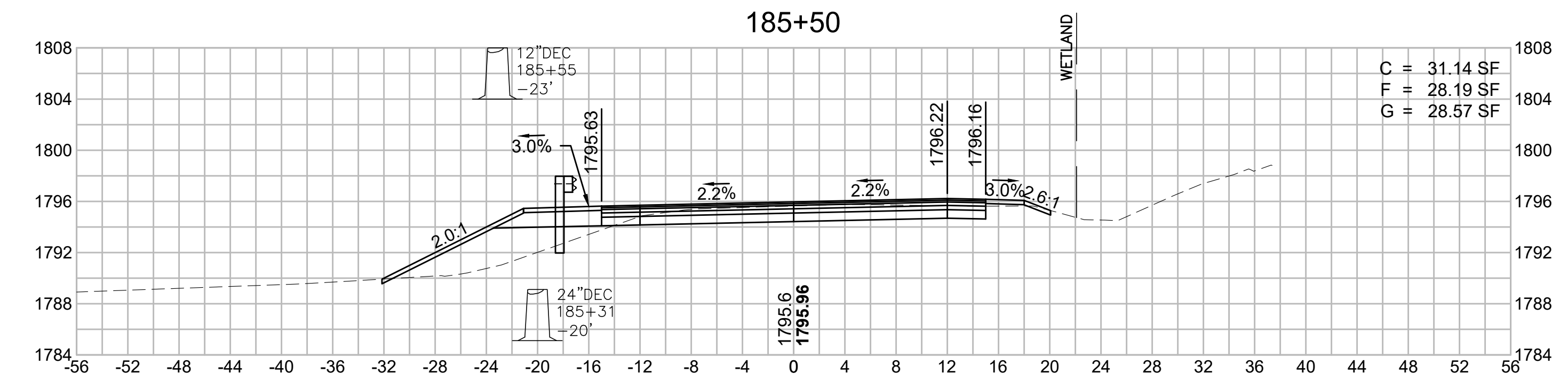
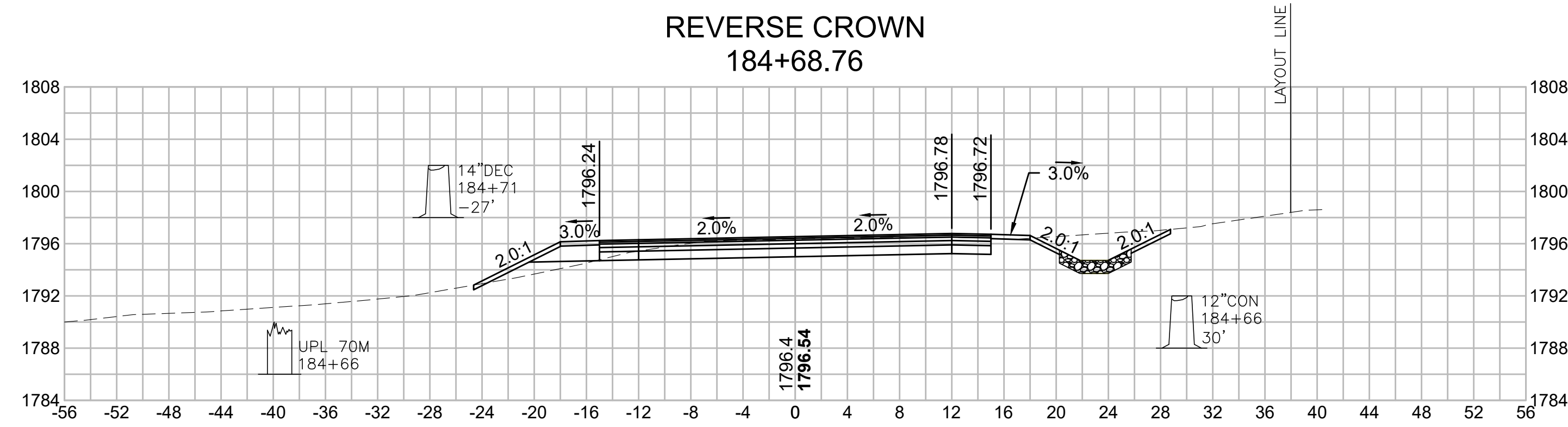
**OLD NORTH ROAD
CROSS SECTIONS - 72**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	176	191
PROJECT FILE NO.		609287	

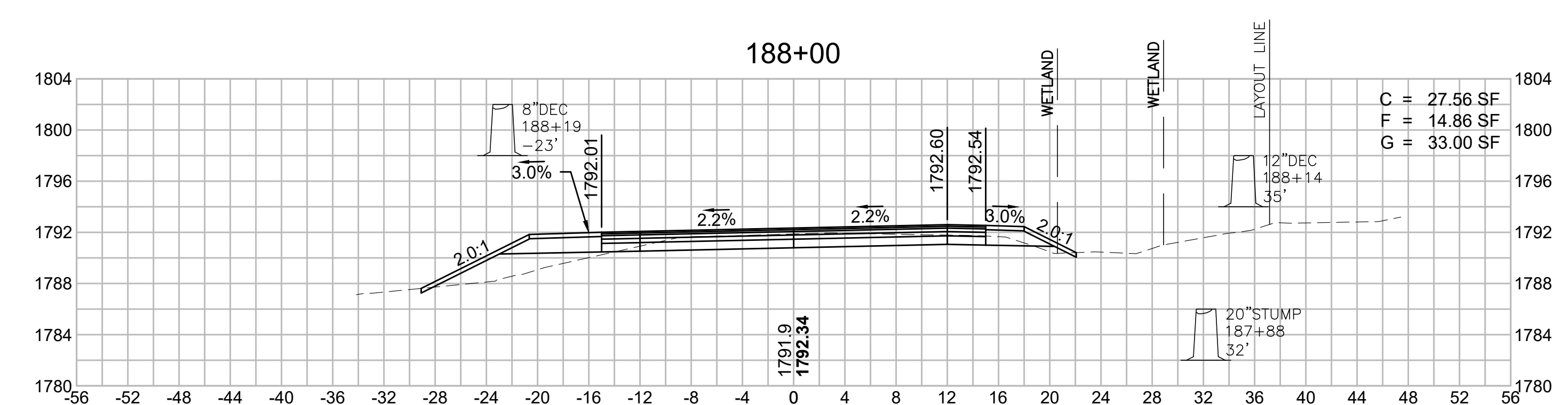
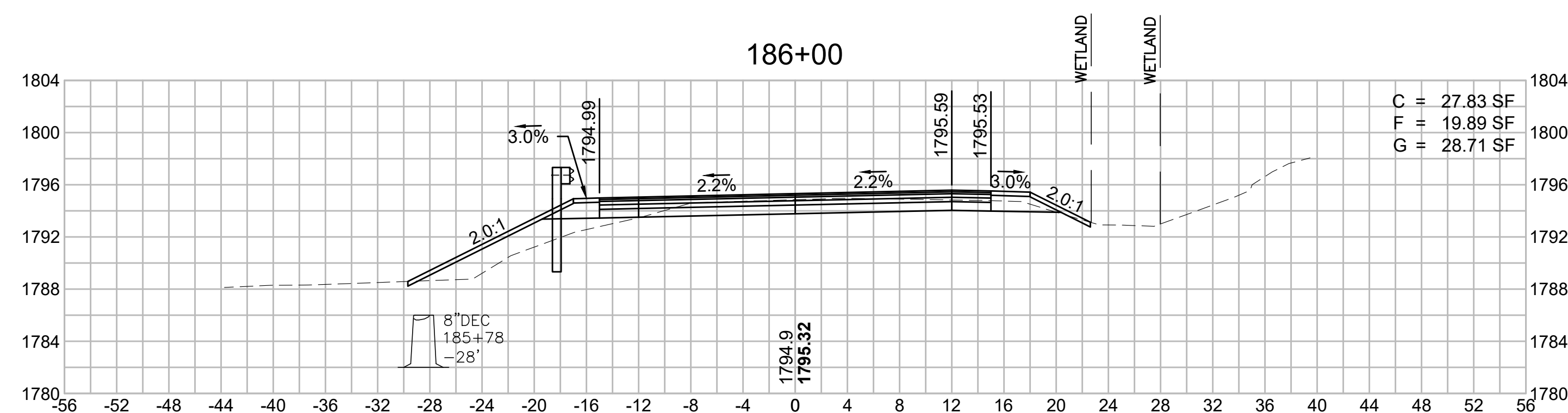
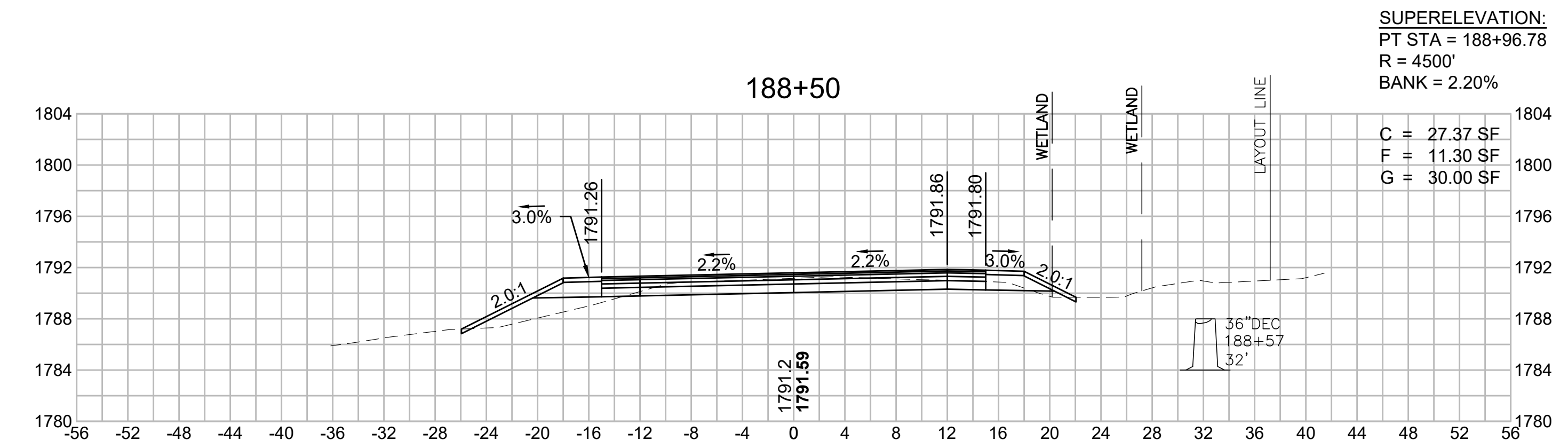
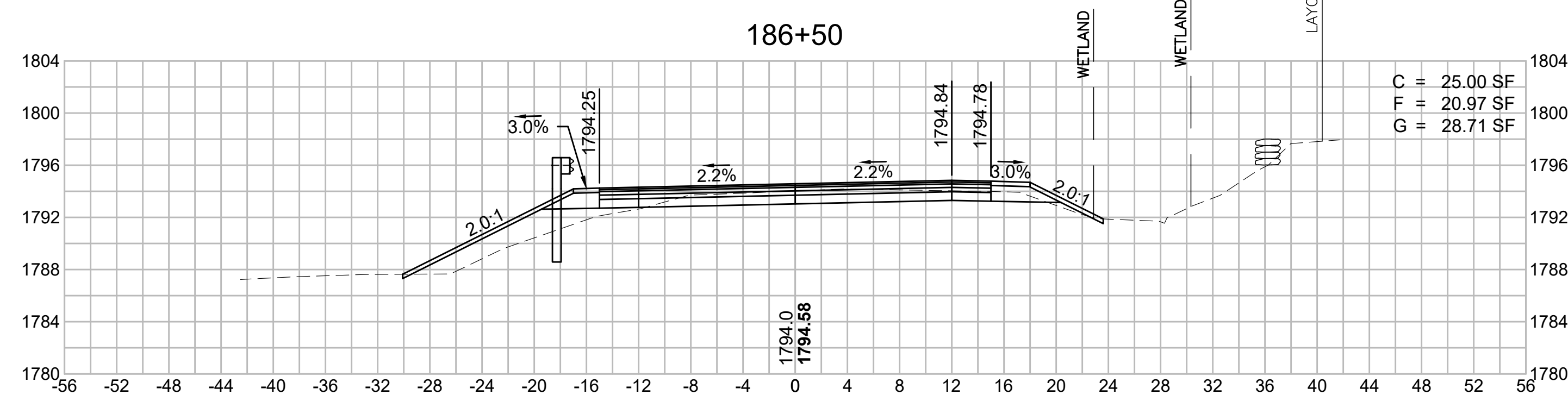
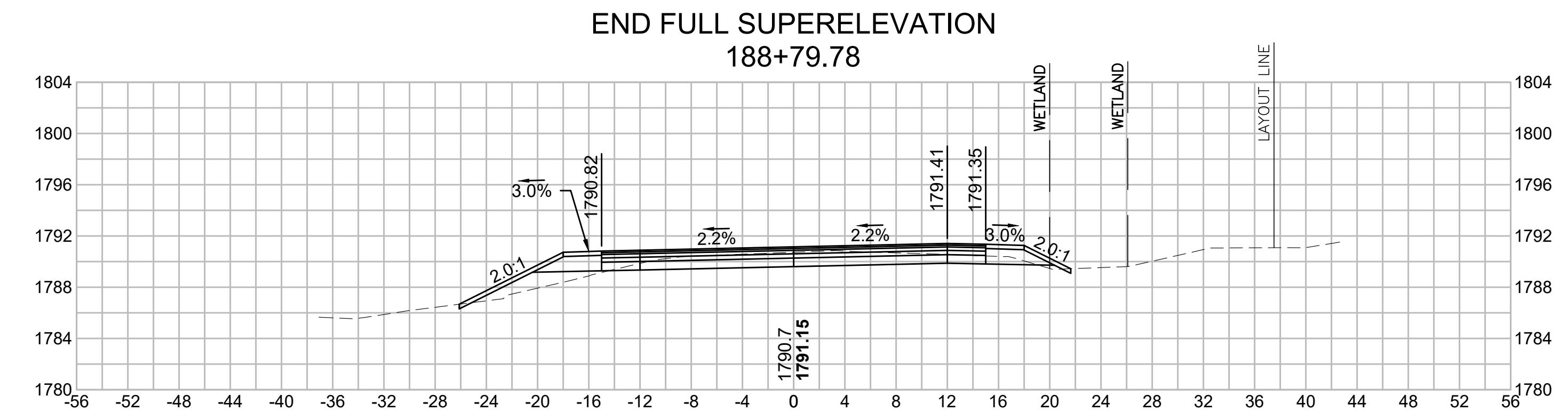
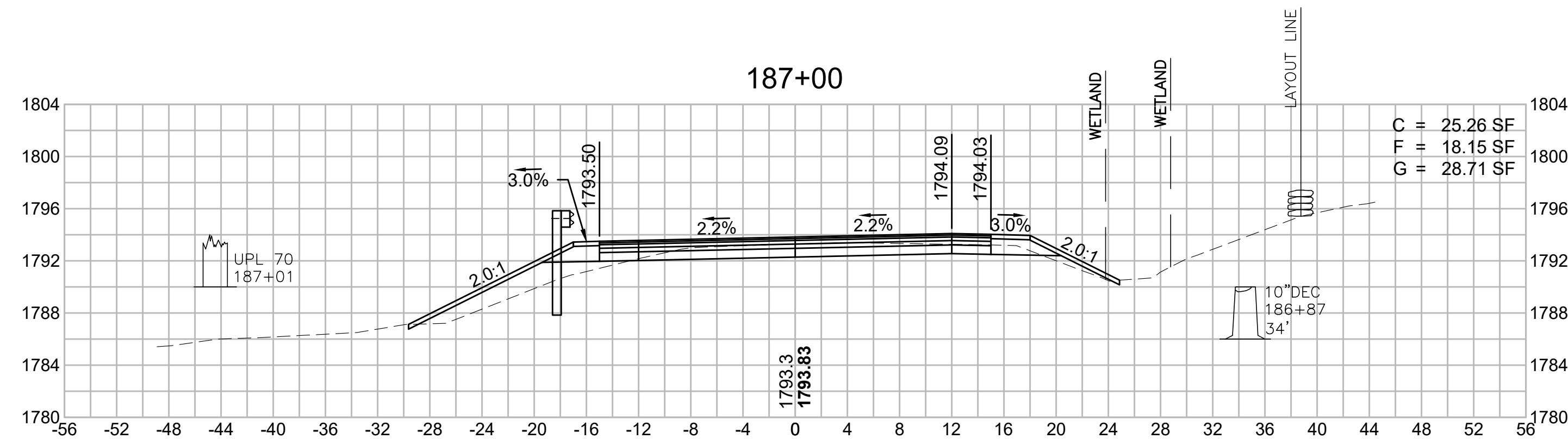
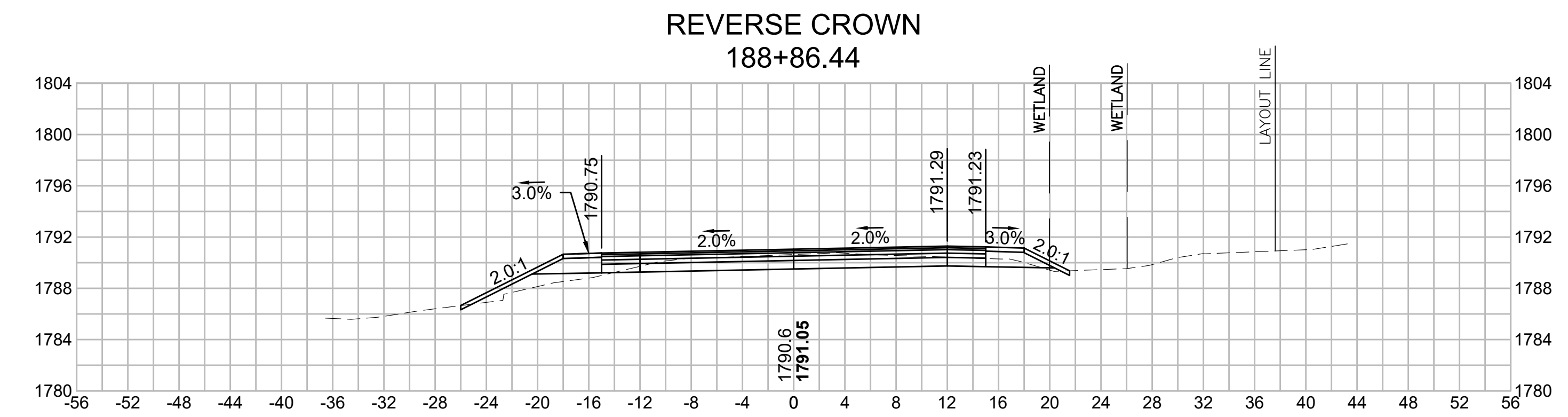
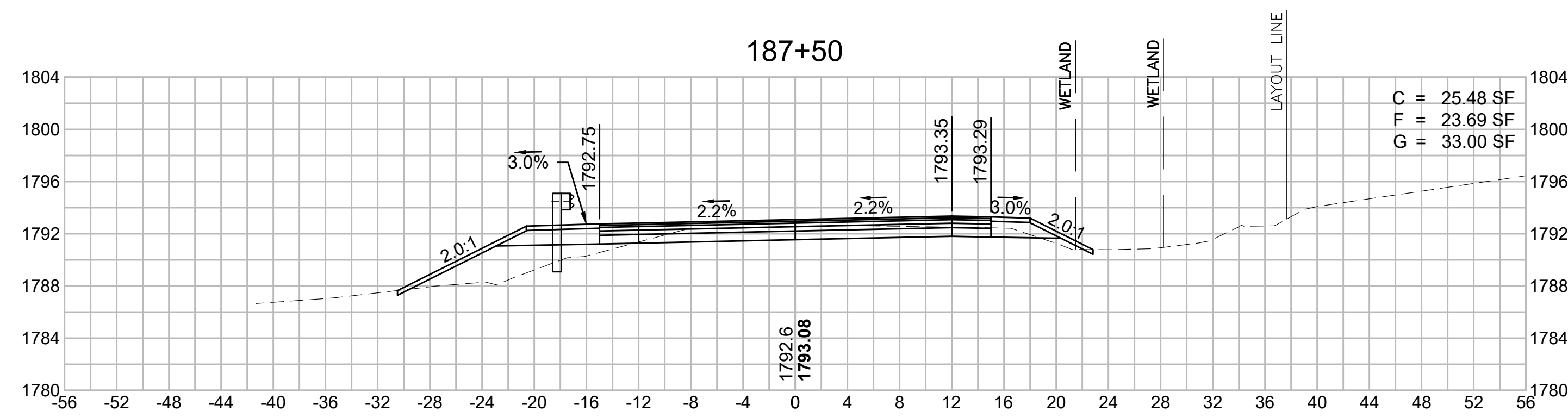
**OLD NORTH ROAD
CROSS SECTIONS - 73**



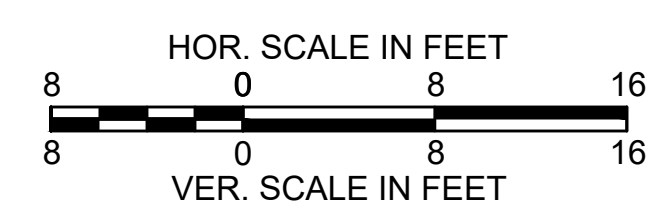
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	177	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 74**



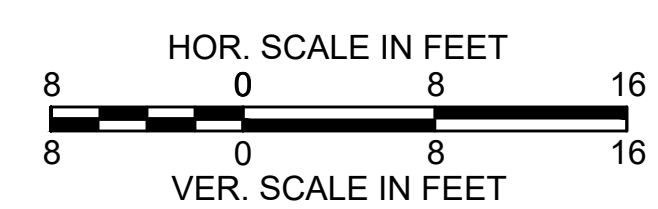
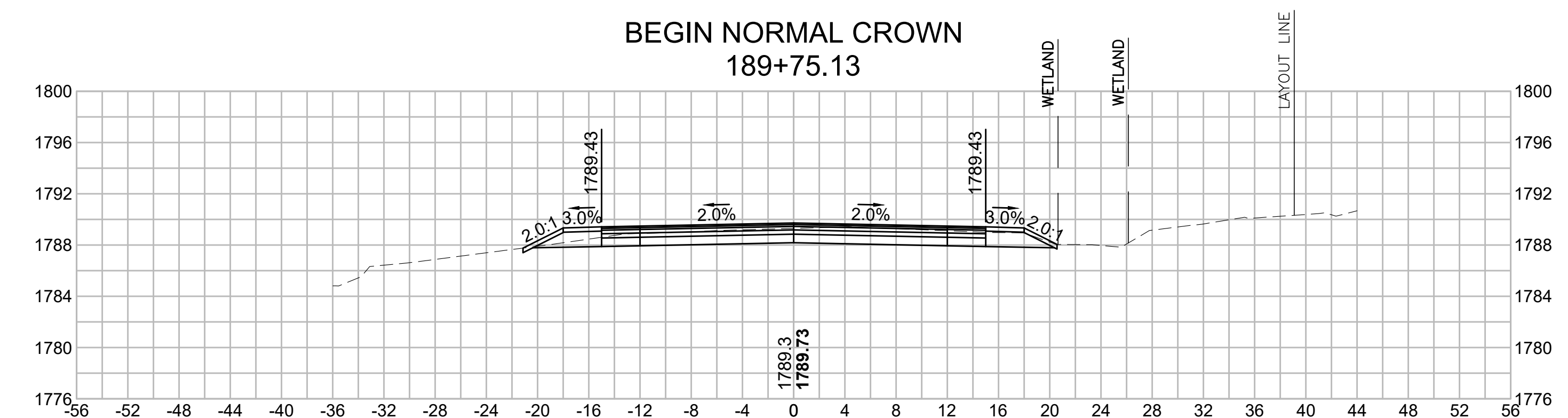
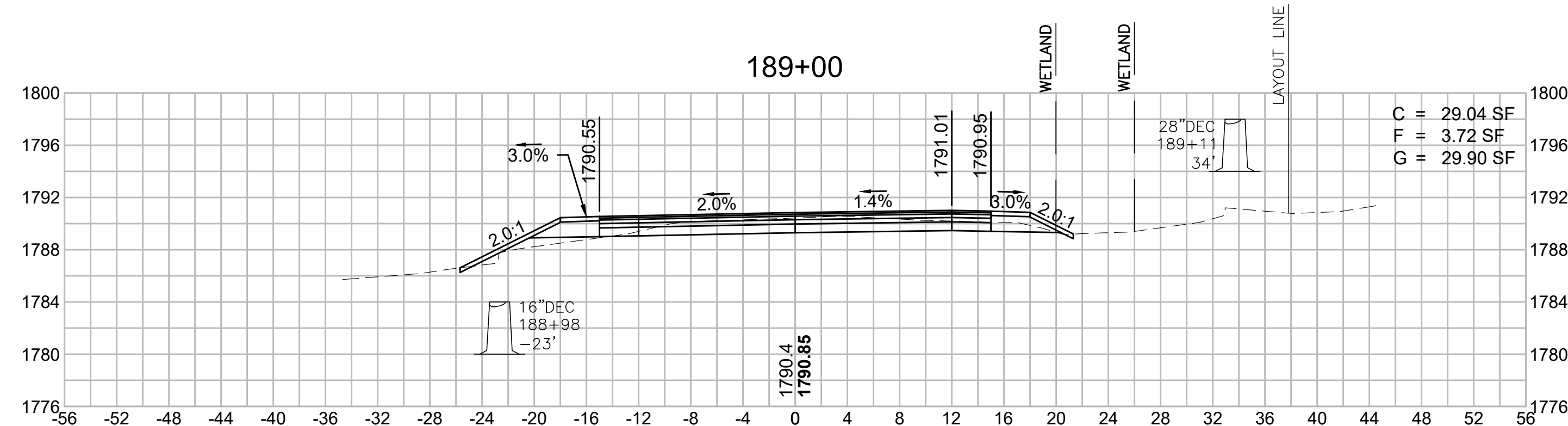
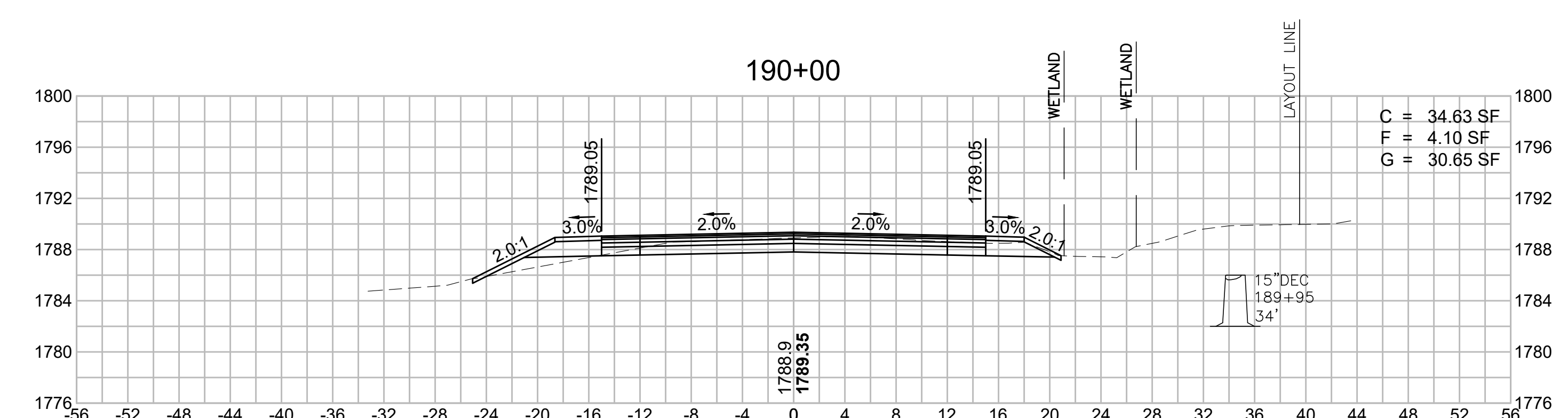
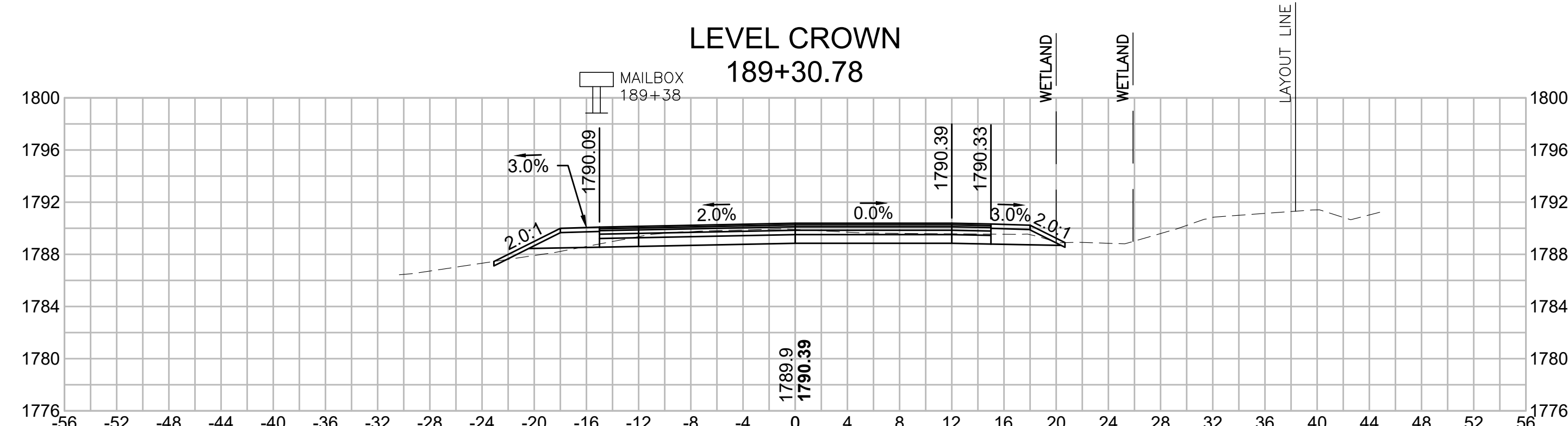
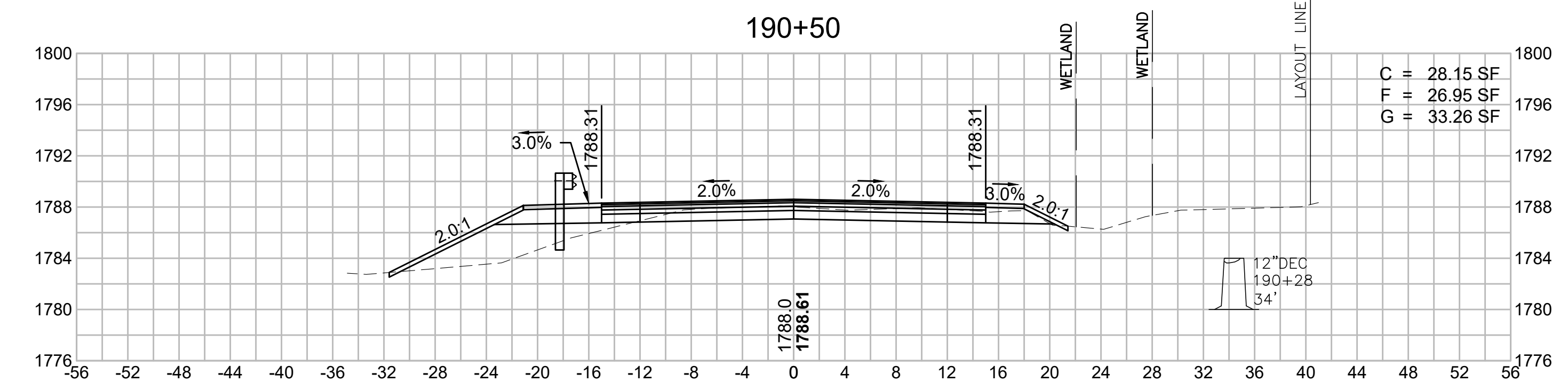
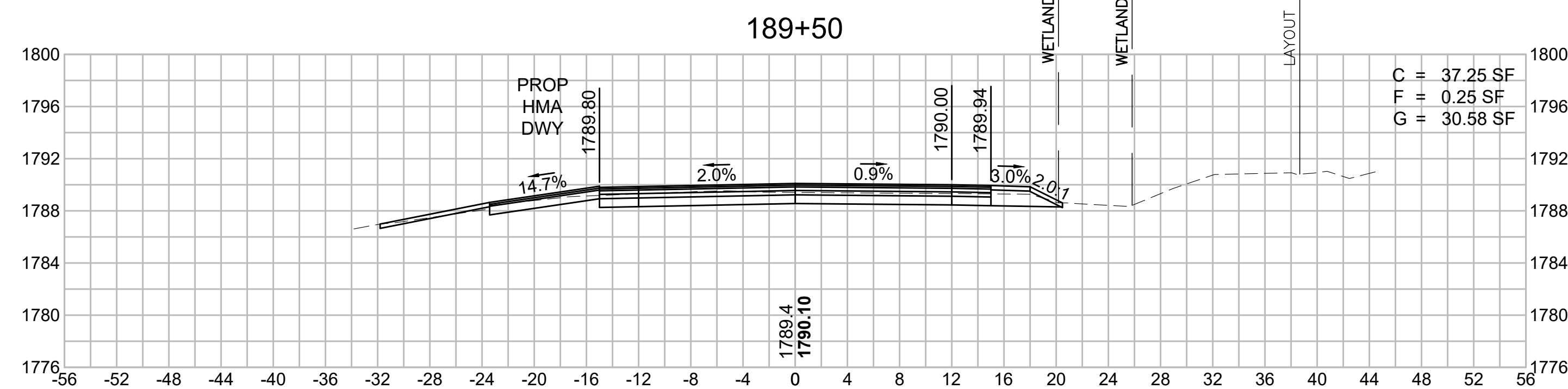
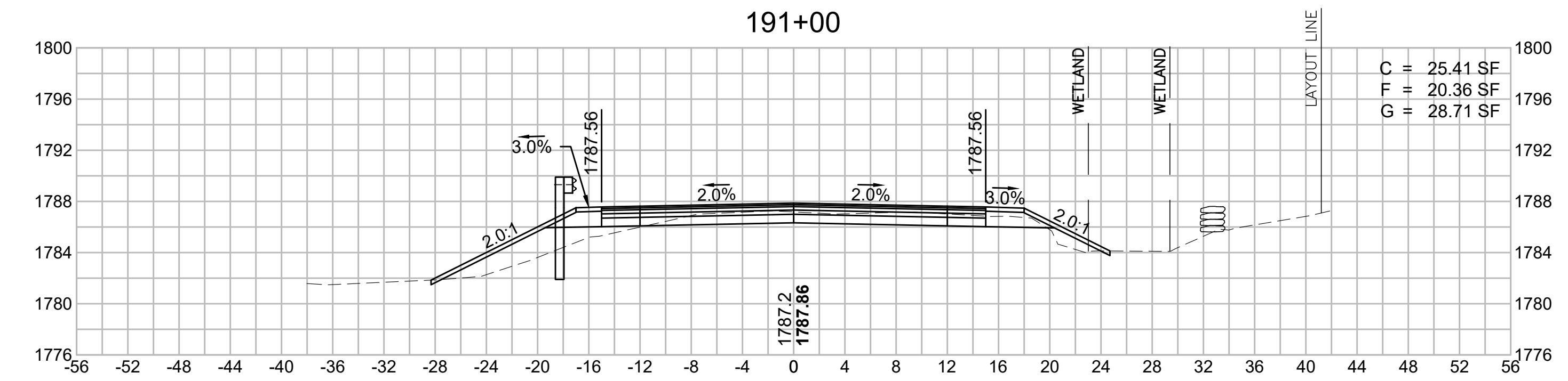
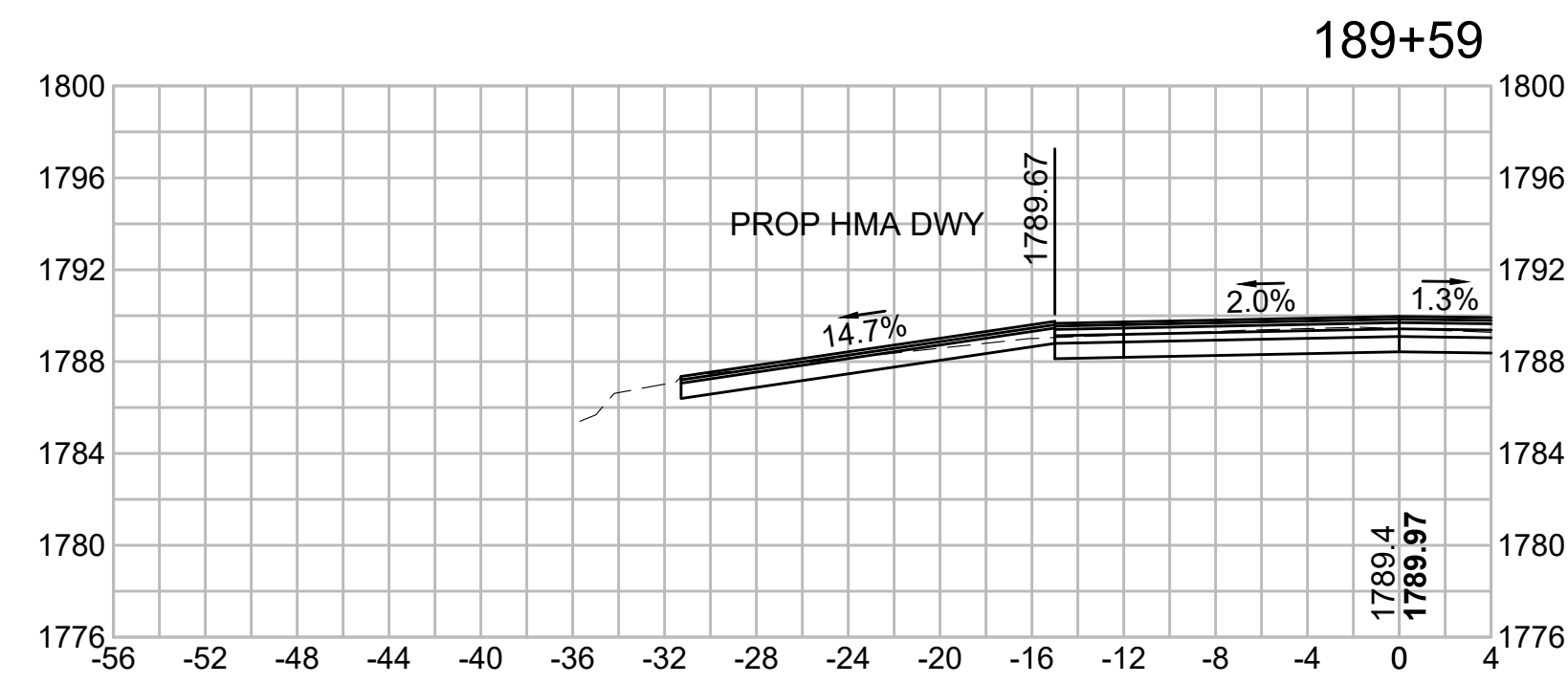
SUPERELEVATION:
PT STA = 188+96.78
R = 4500'
BANK = 2.20%



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	178	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 75**

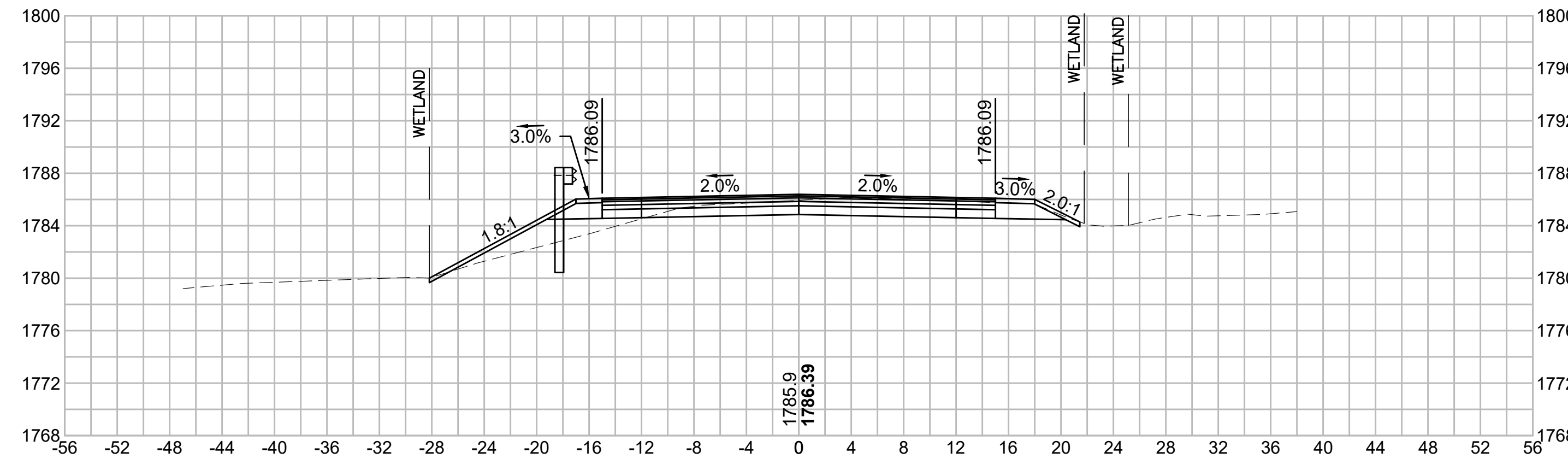


**WORTHINGTON
ROUTE 143**

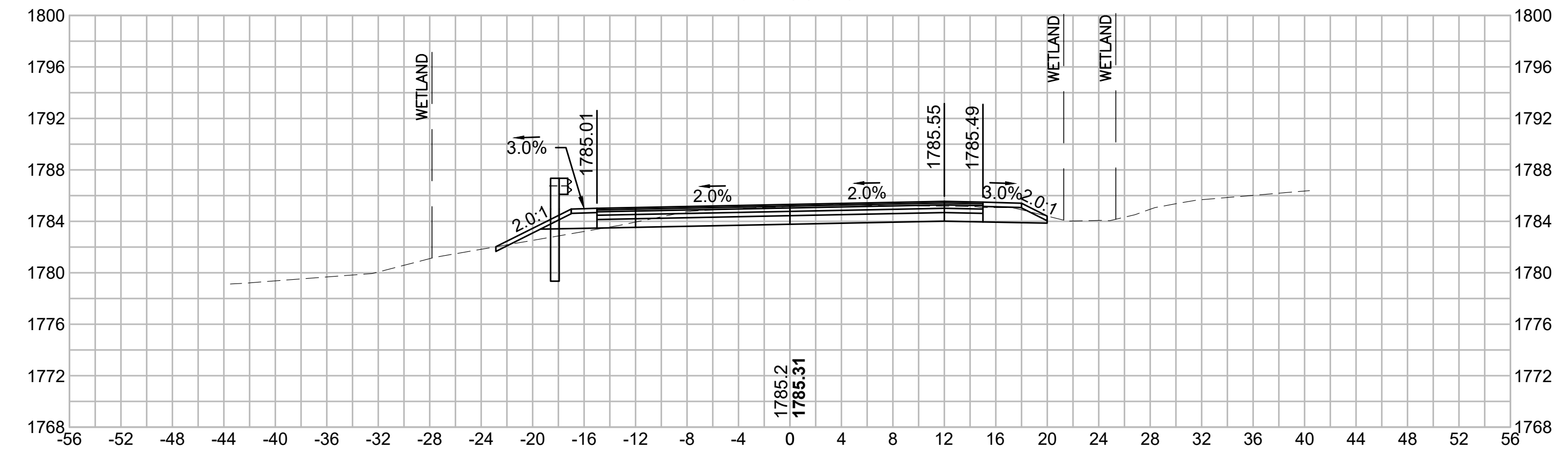
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	179	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 76**

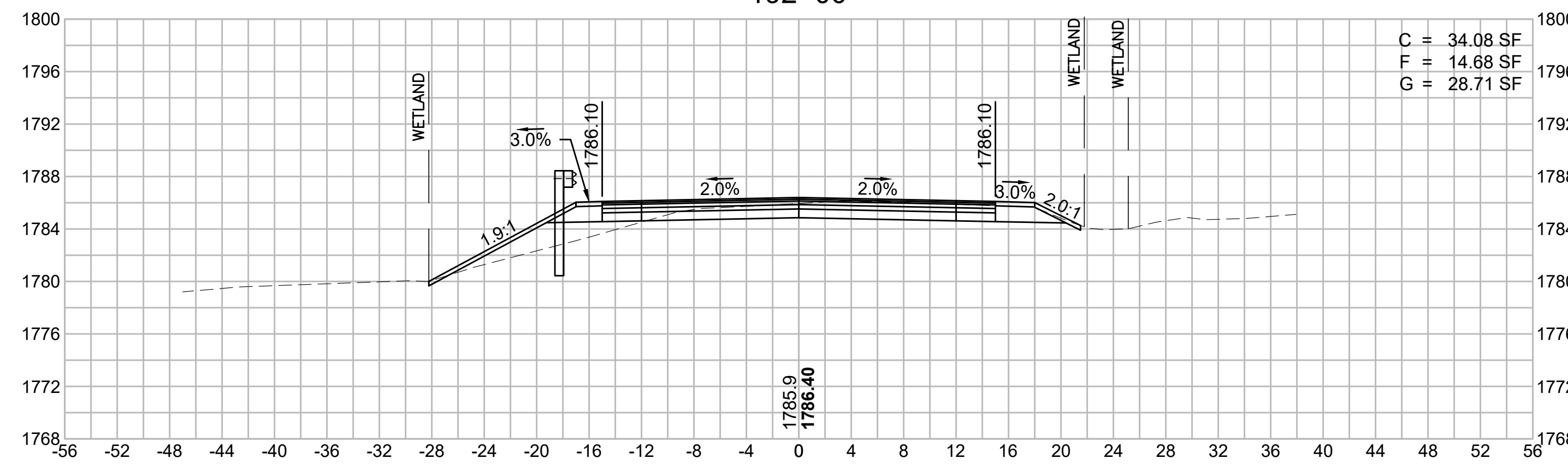
**END NORMAL CROWN
192+00.60**



**REVERSE CROWN
192+89.26**

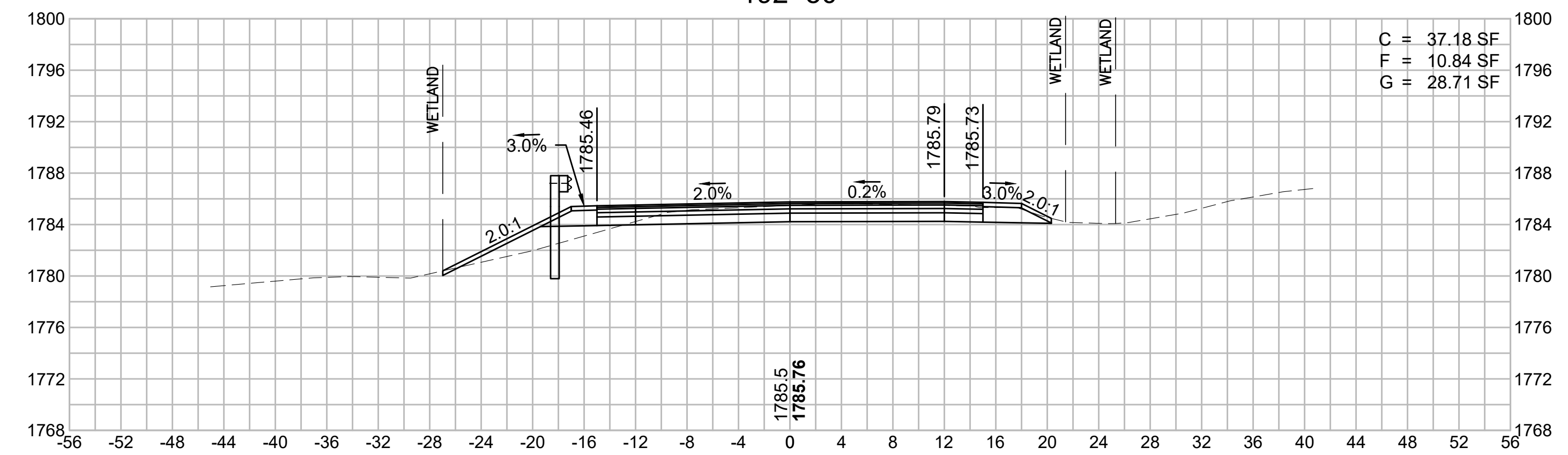


192+00



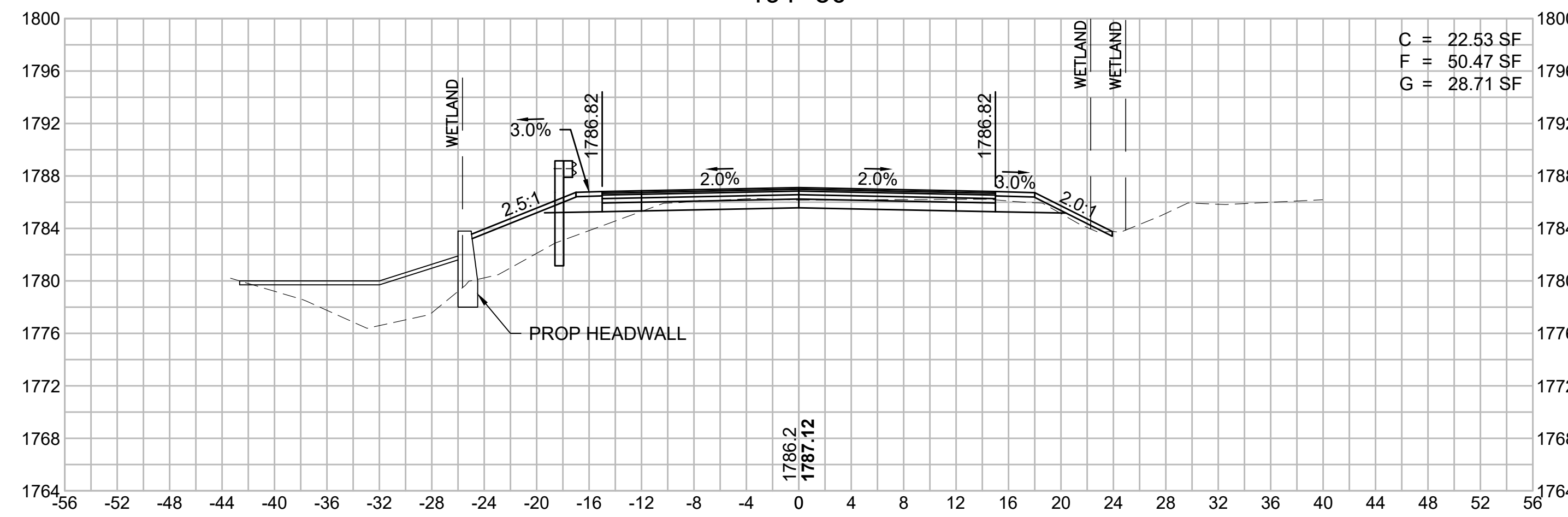
C = 34.08 SF
F = 14.68 SF
G = 28.71 SF

192+50



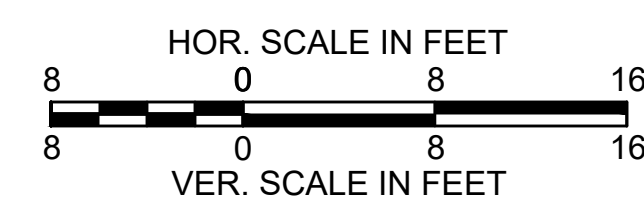
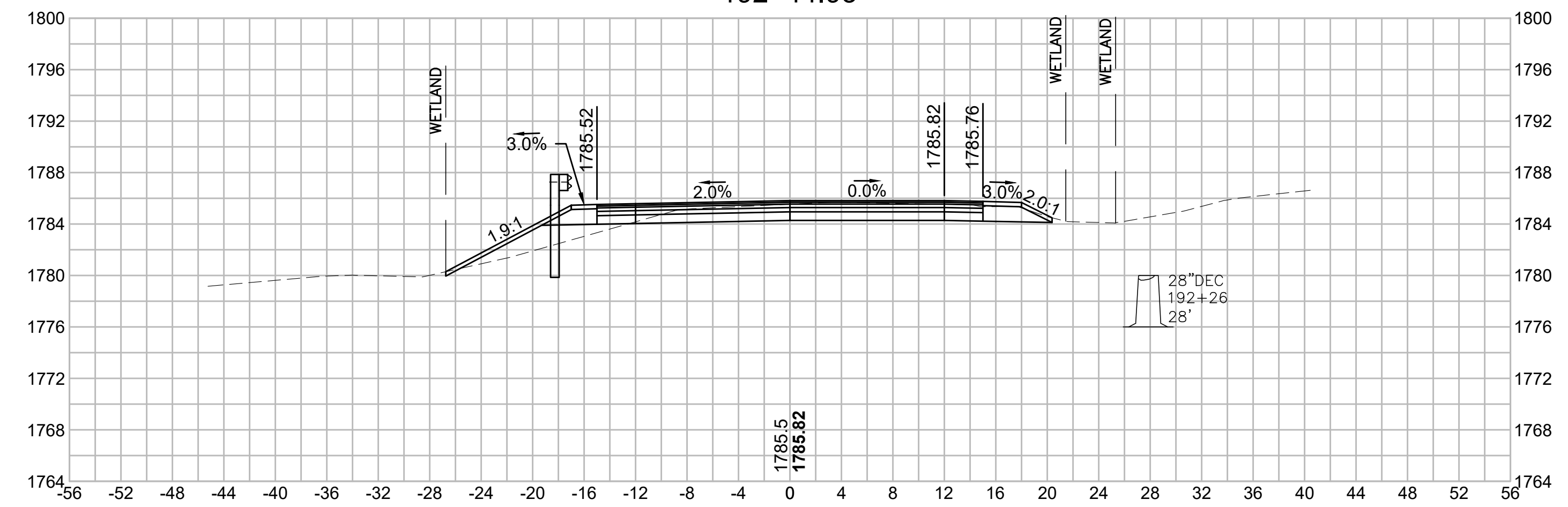
C = 37.18 SF
F = 10.84 SF
G = 28.71 SF

191+50



C = 22.53 SF
F = 50.47 SF
G = 28.71 SF

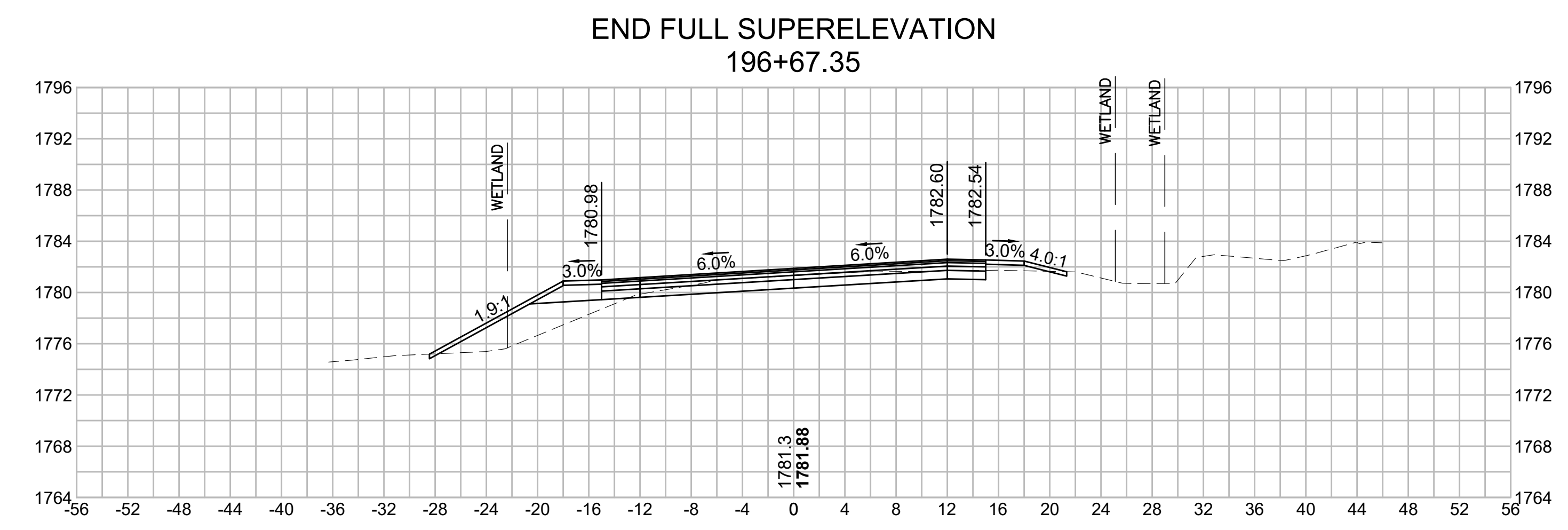
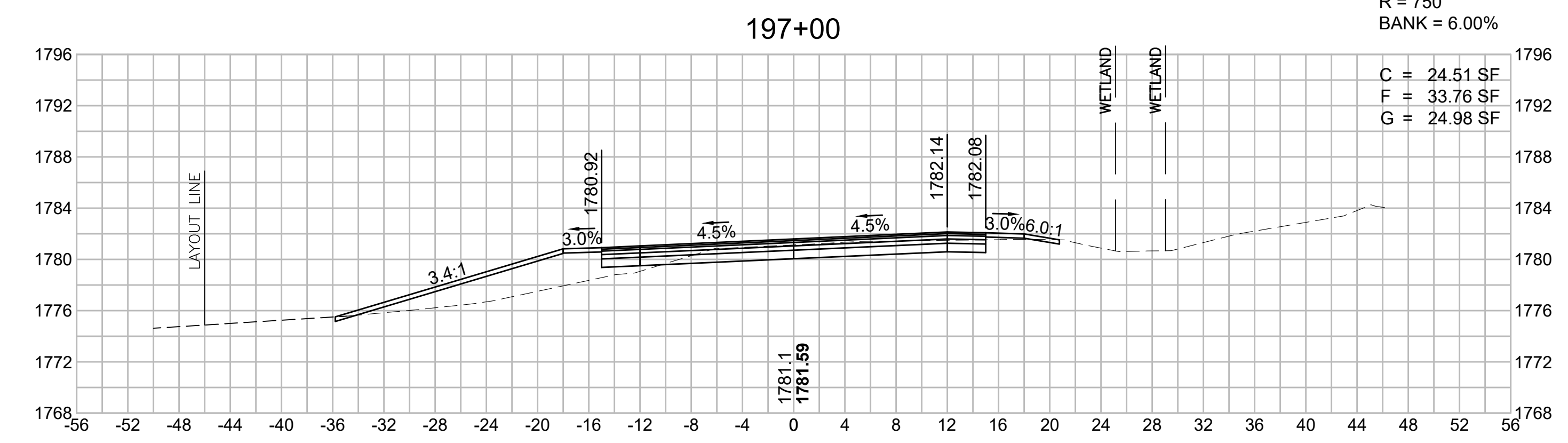
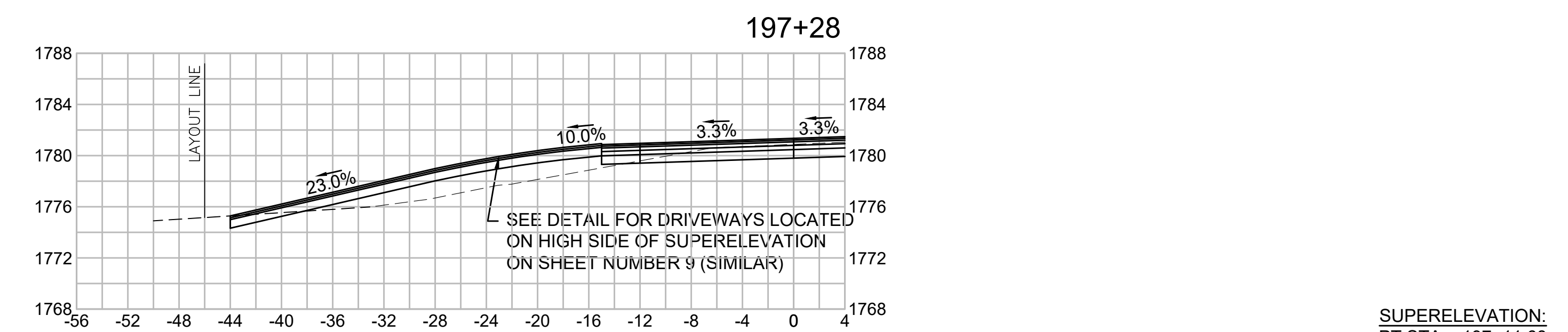
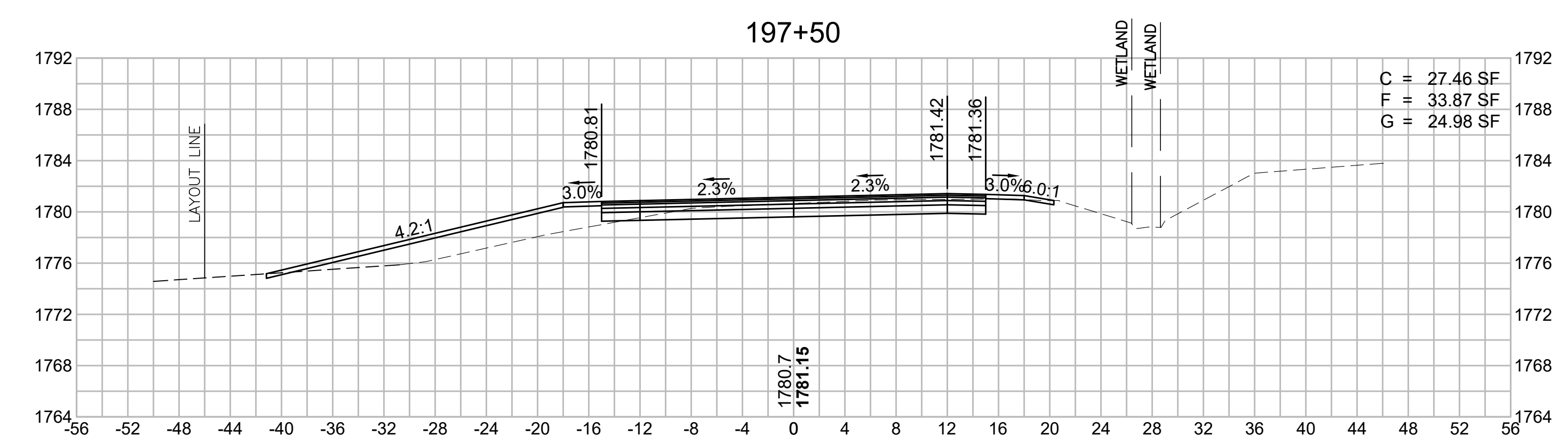
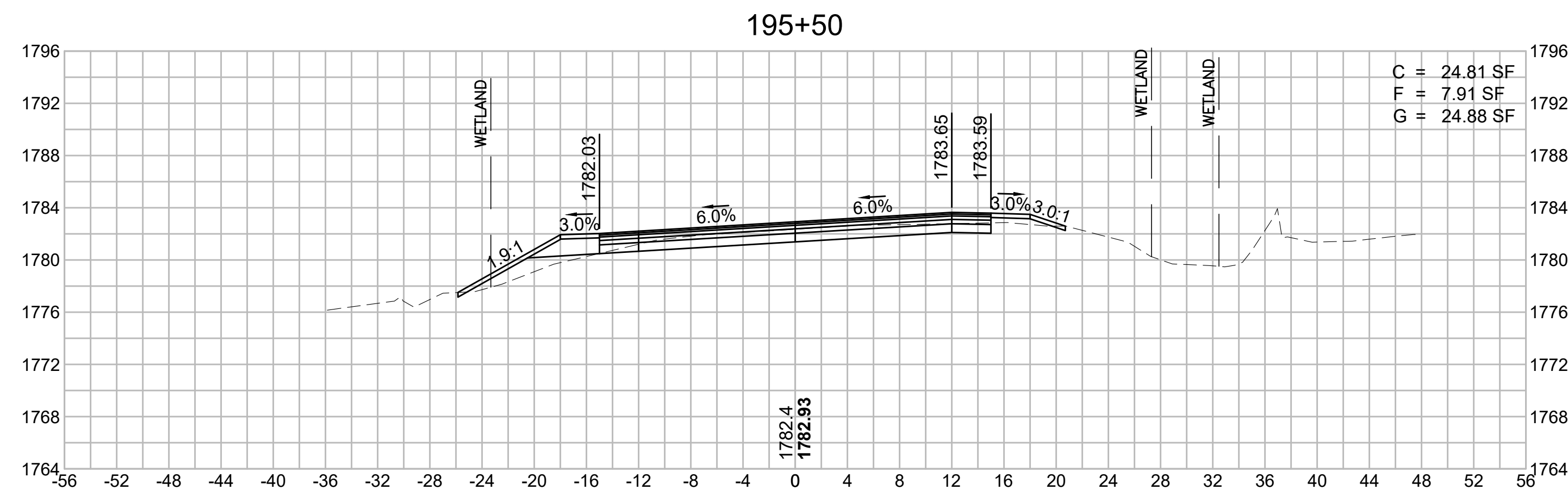
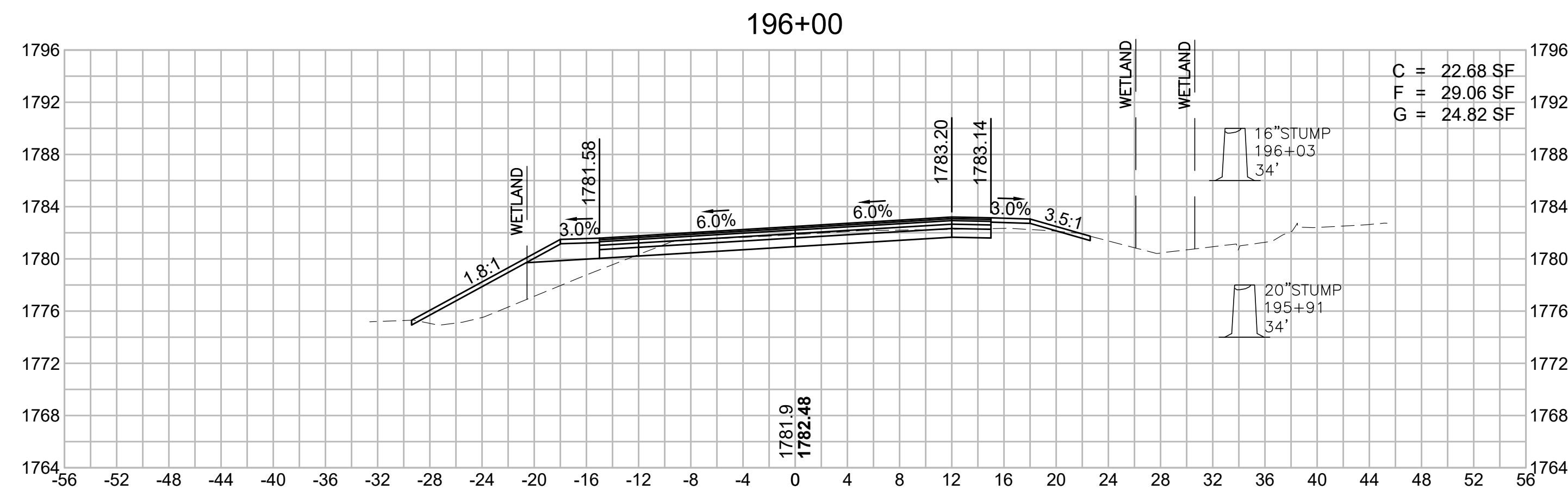
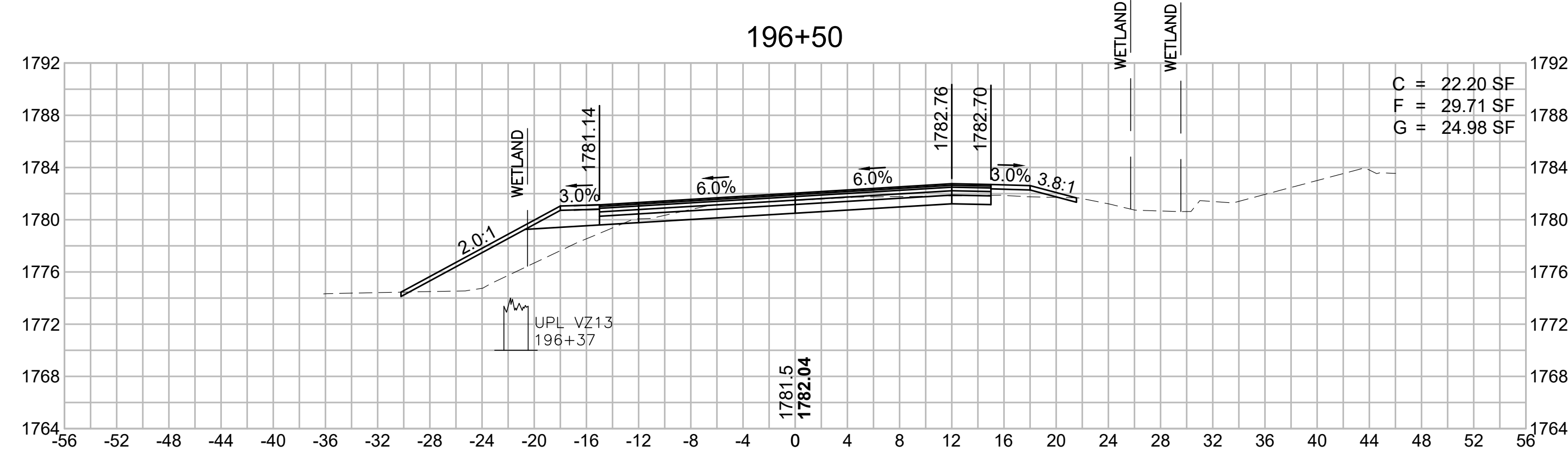
**LEVEL CROWN
192+44.93**



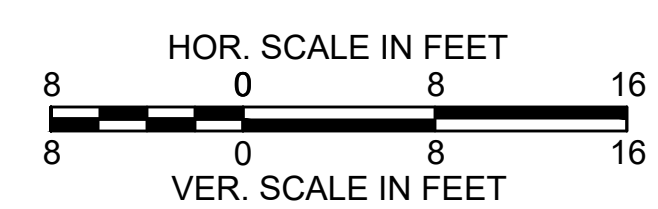
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	181	191

**OLD NORTH ROAD
CROSS SECTIONS - 78**



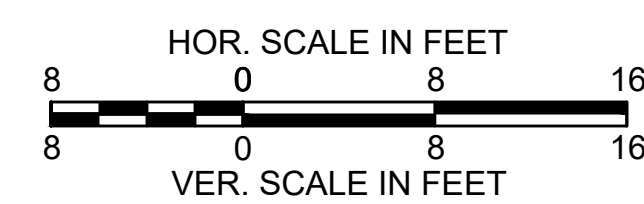
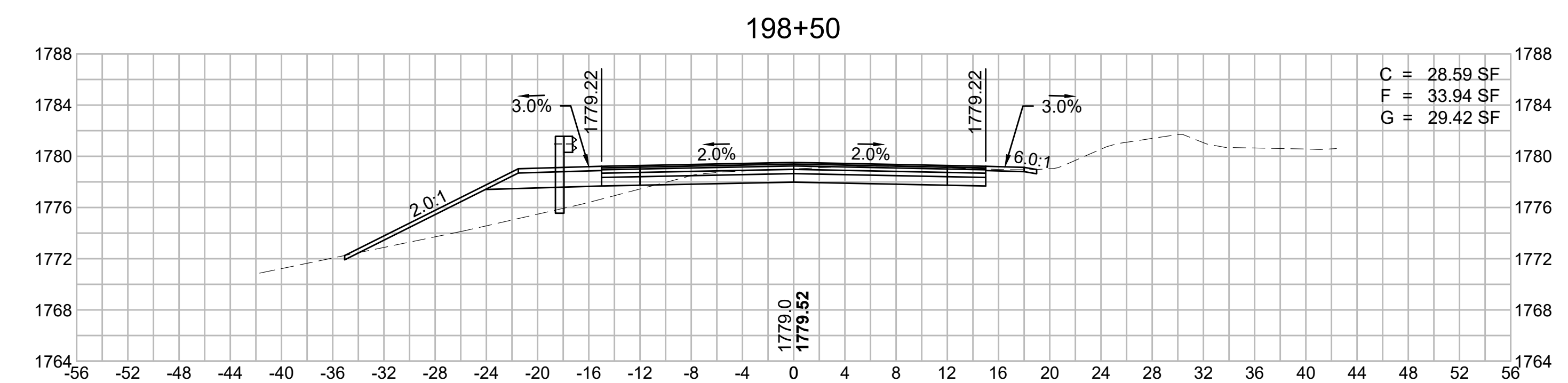
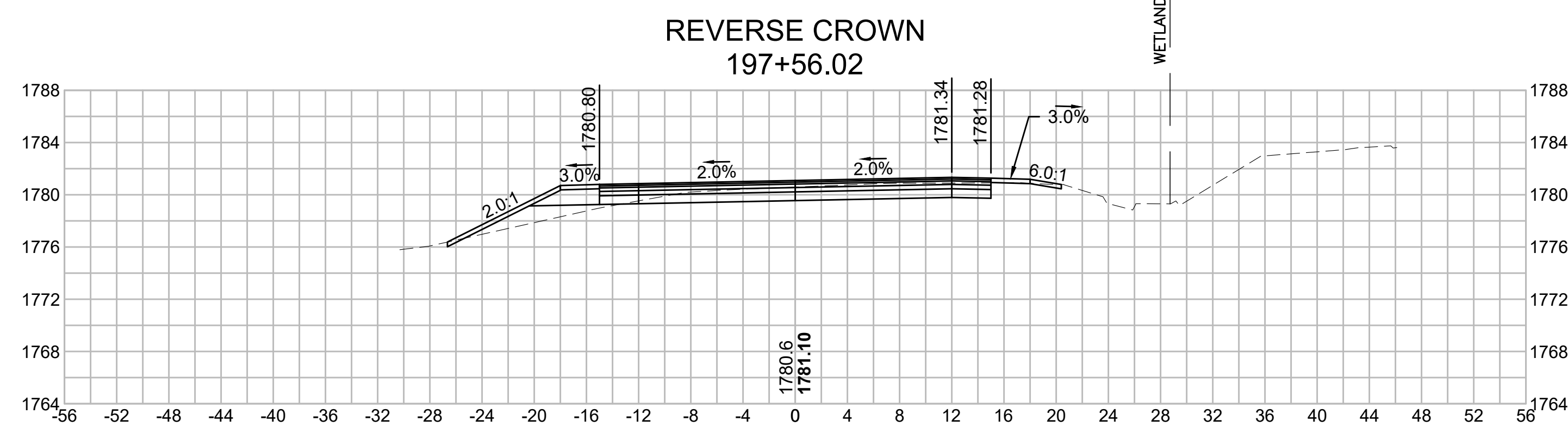
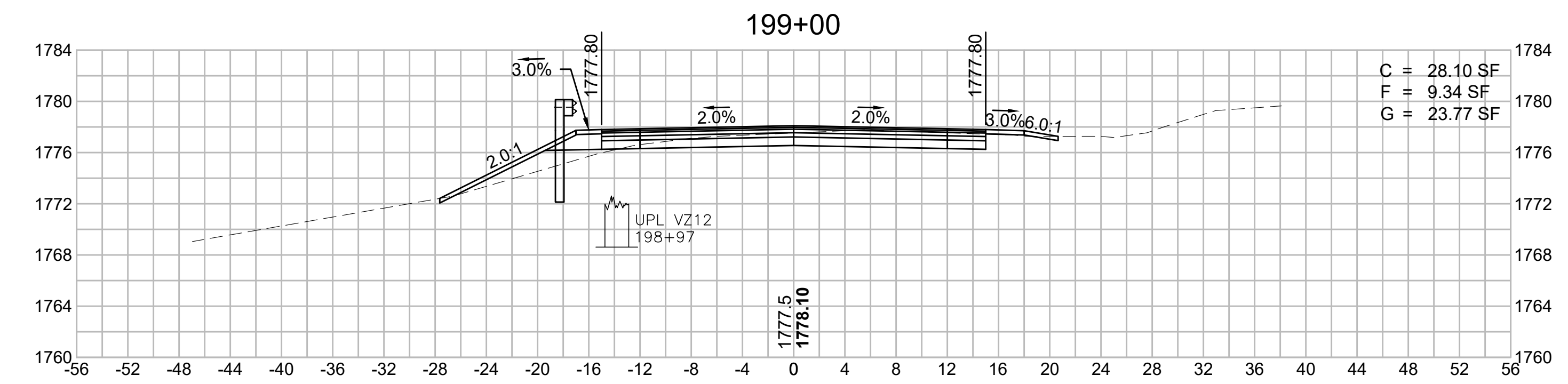
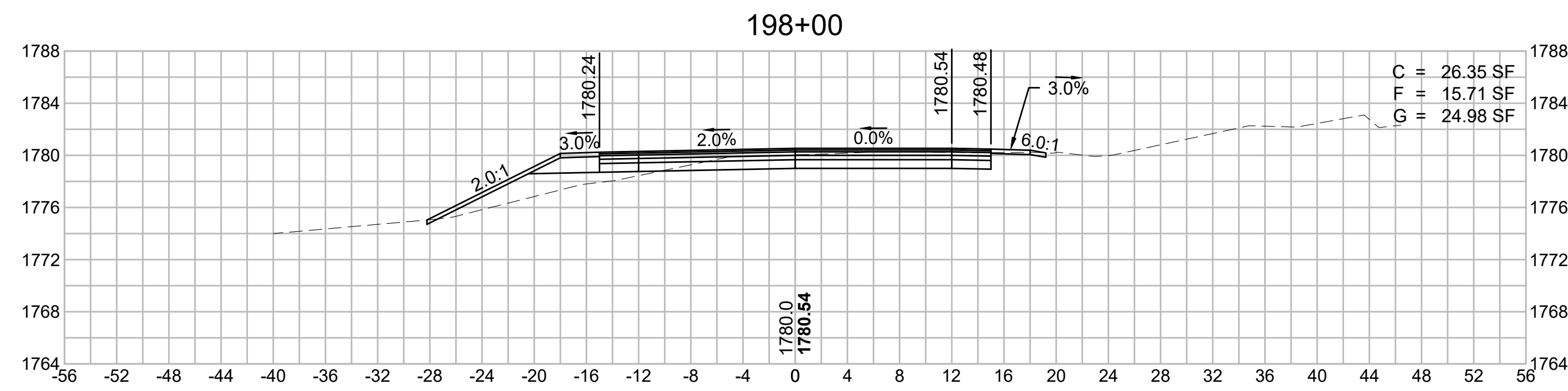
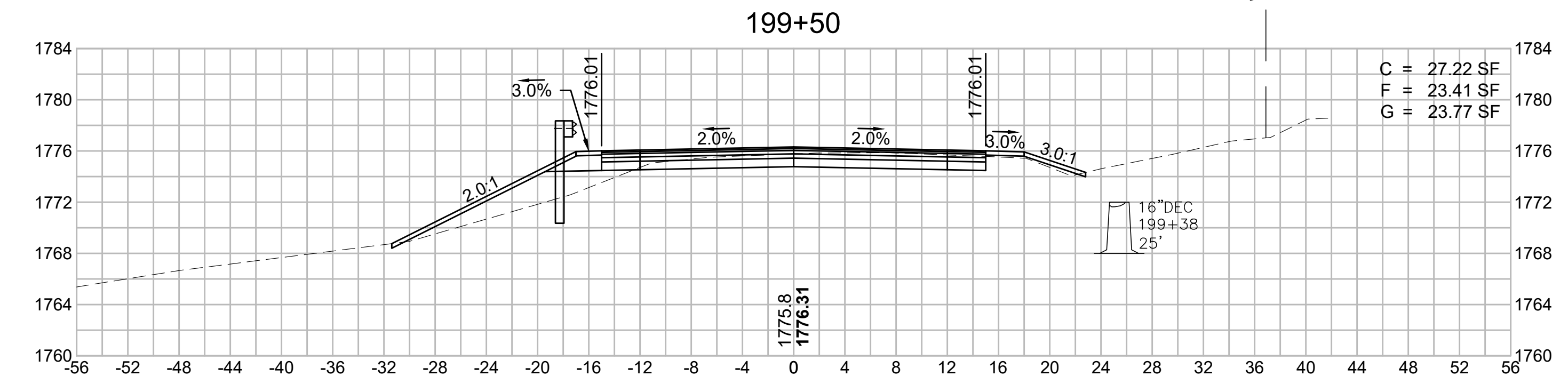
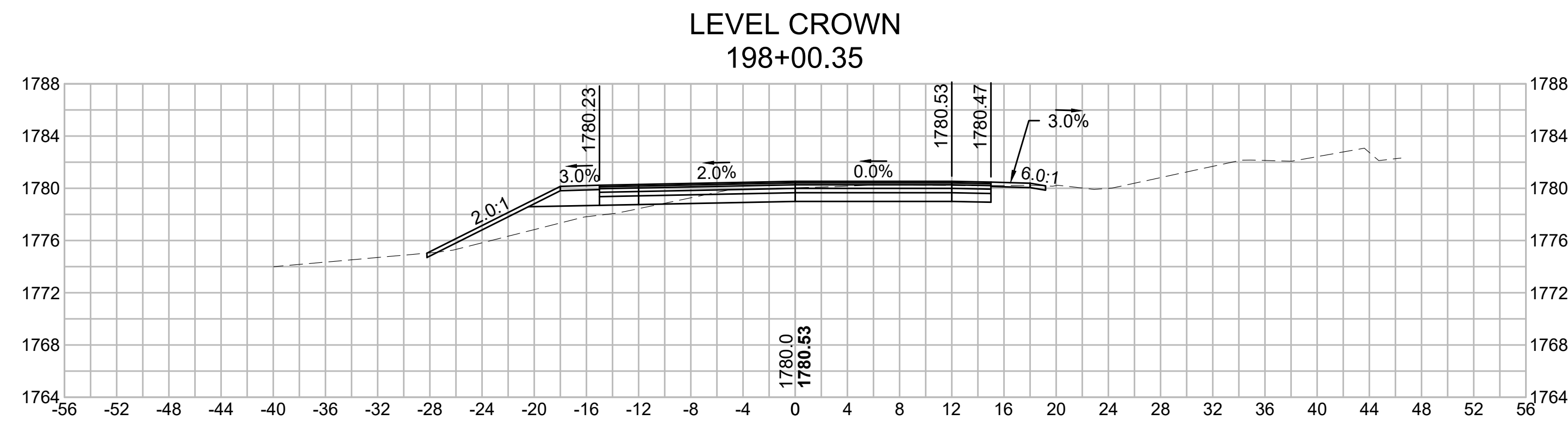
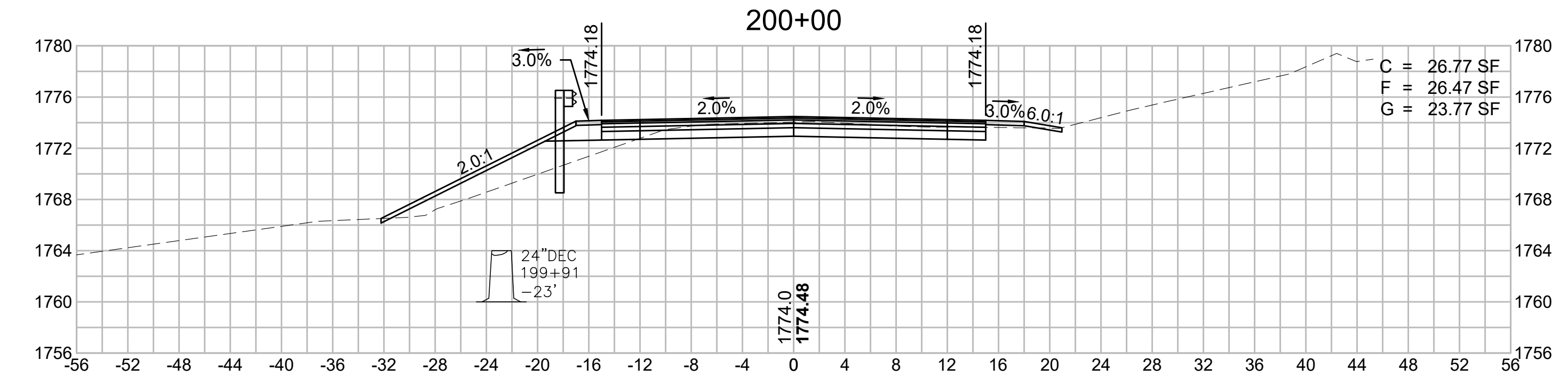
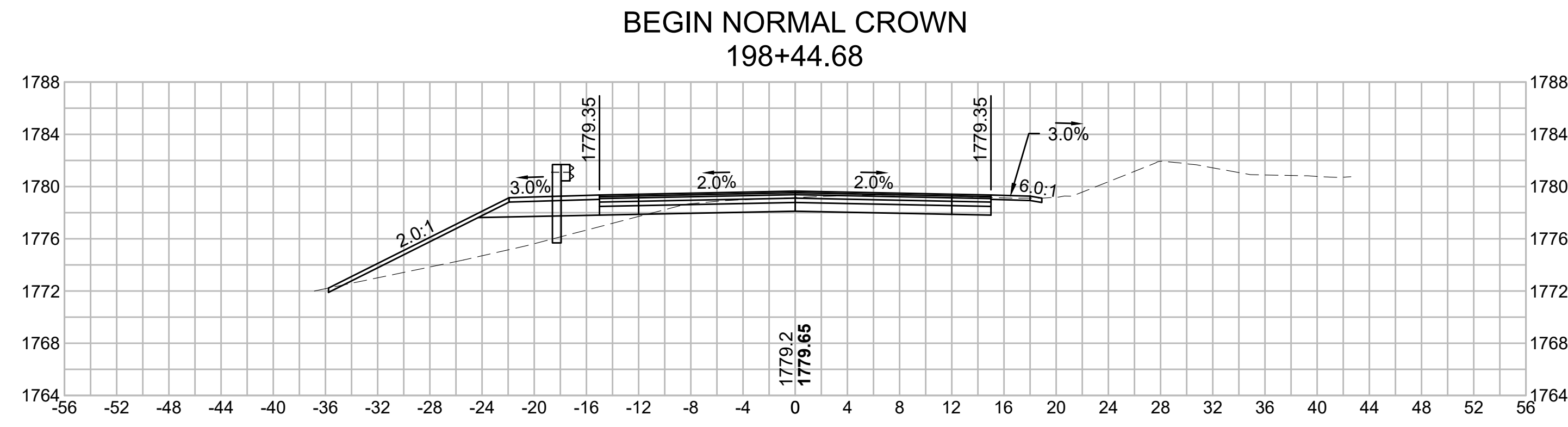
SUPERELEVATION:
PT STA = 197+11.68
R = 750'
BANK = 6.00%



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	182	191
PROJECT FILE NO.		609287	

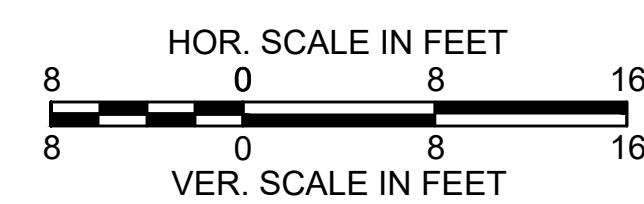
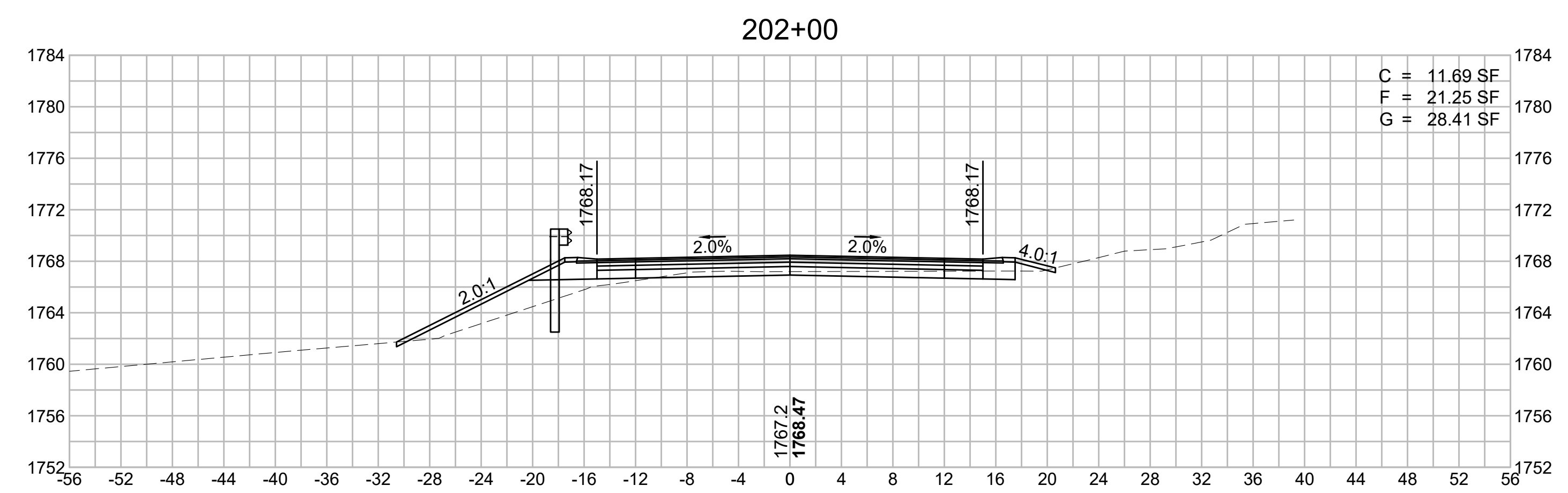
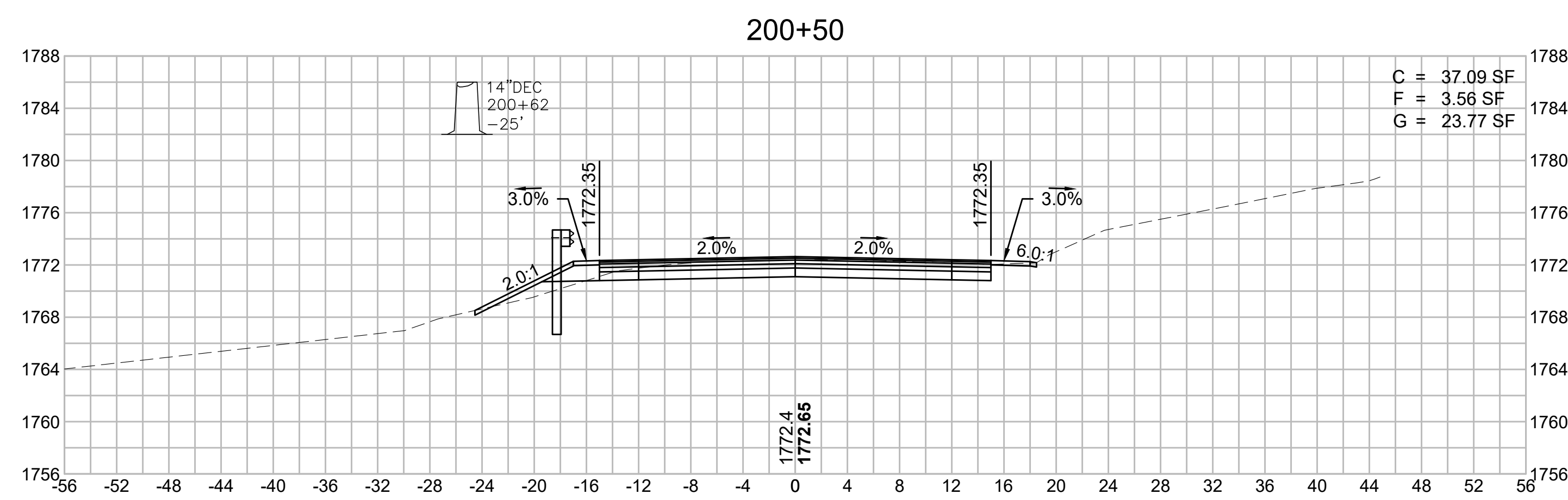
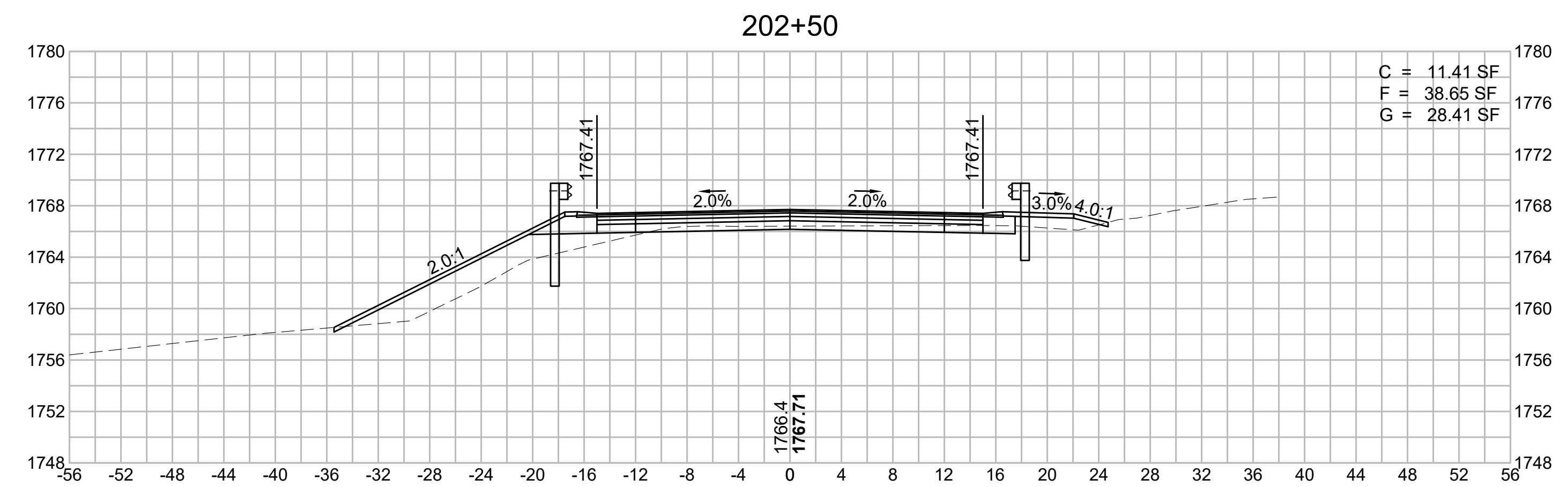
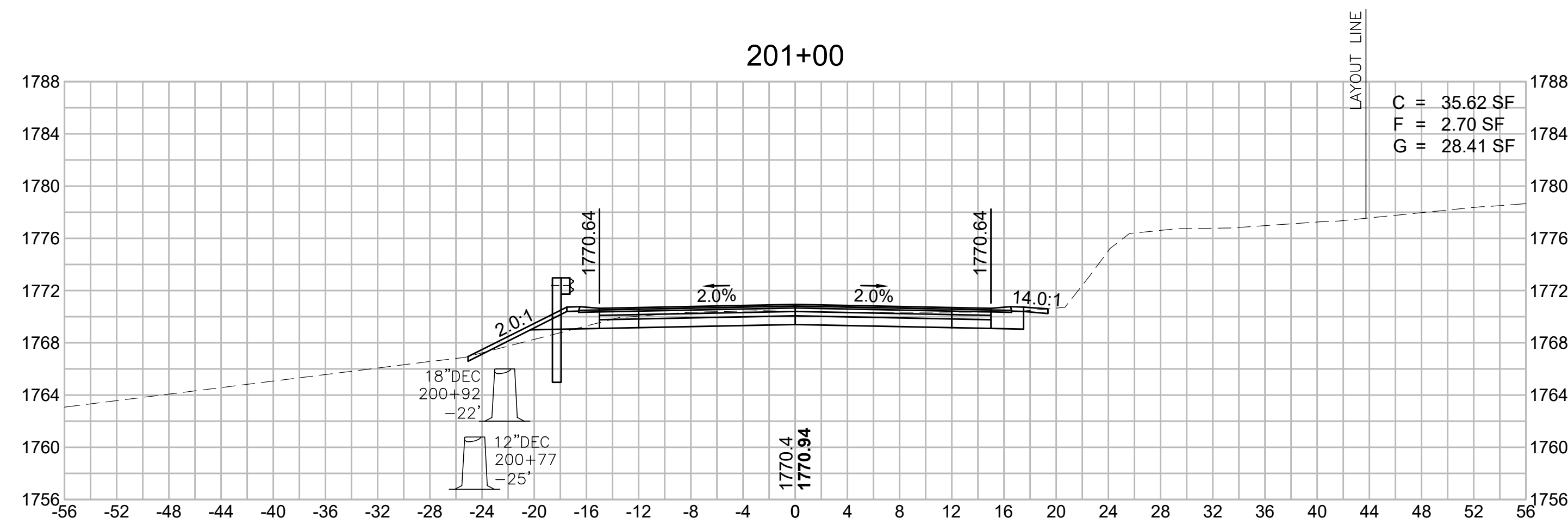
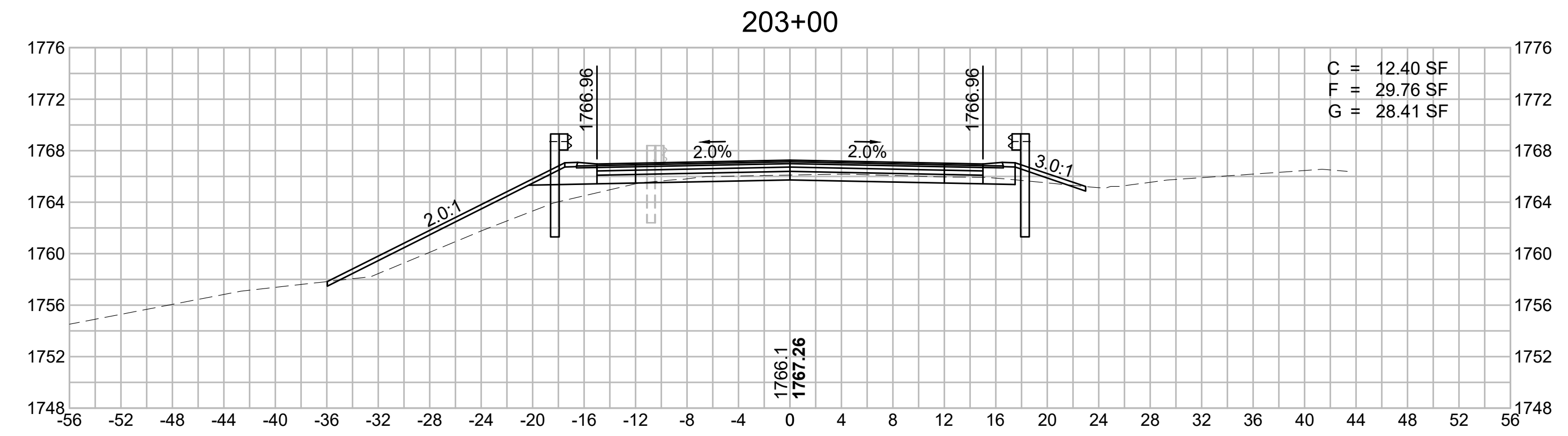
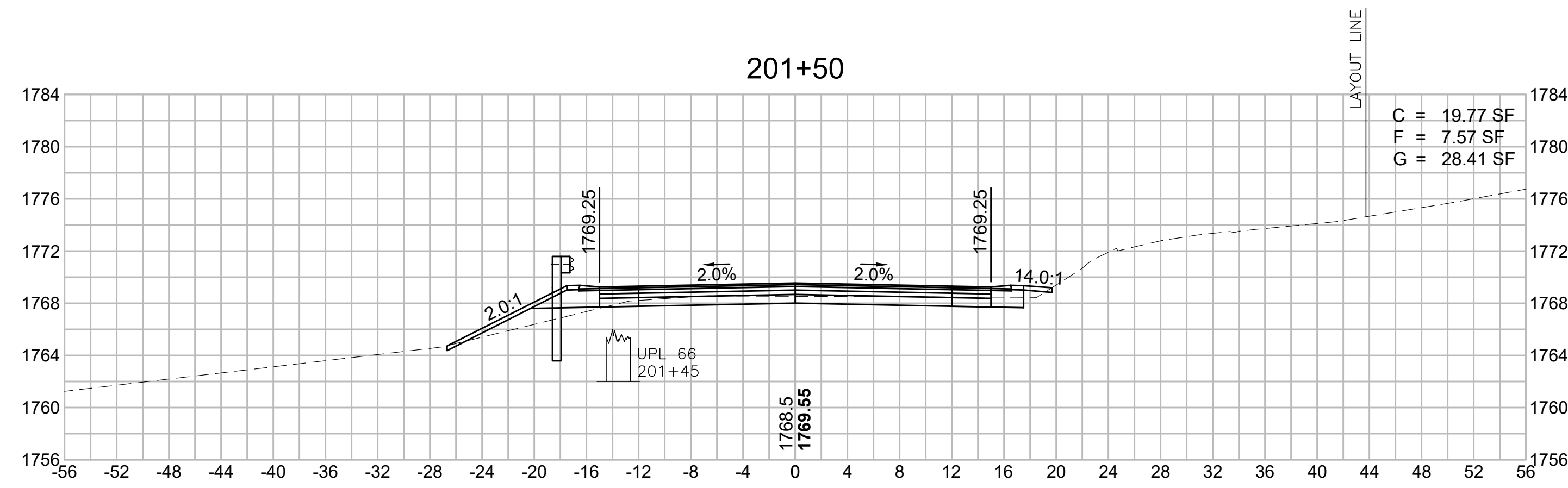
**OLD NORTH ROAD
CROSS SECTIONS - 79**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	183	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 80**



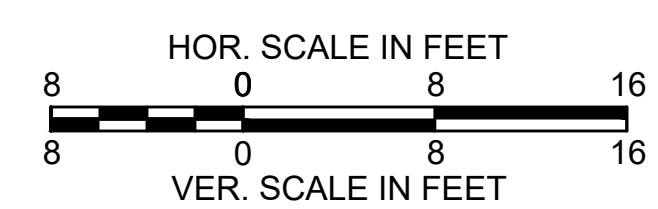
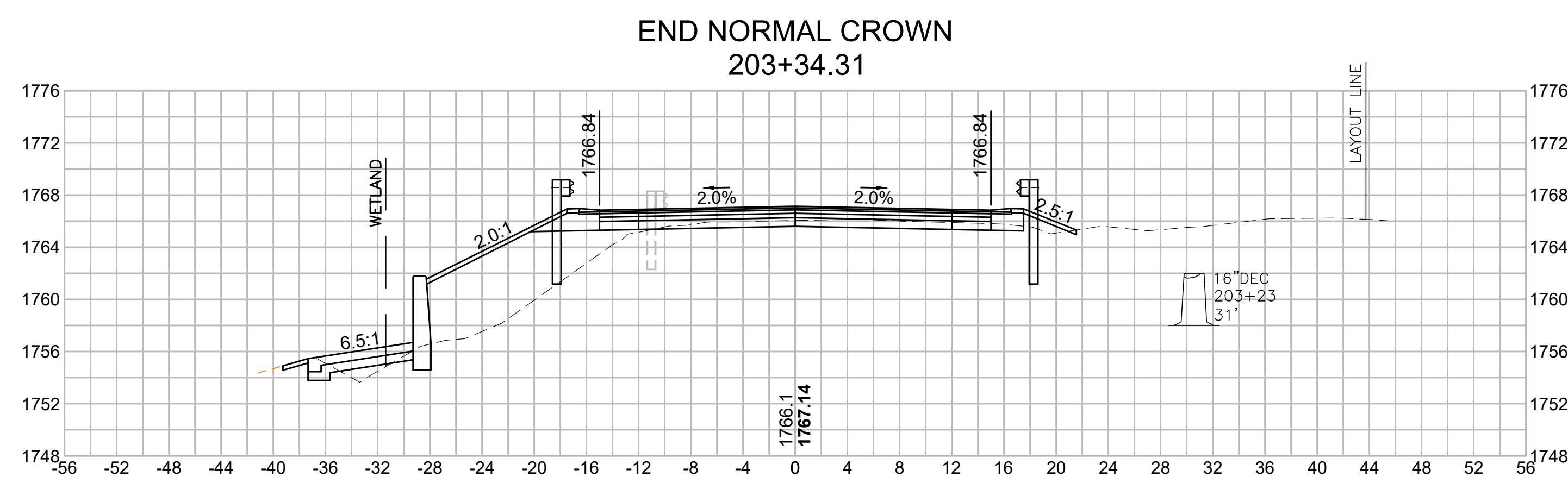
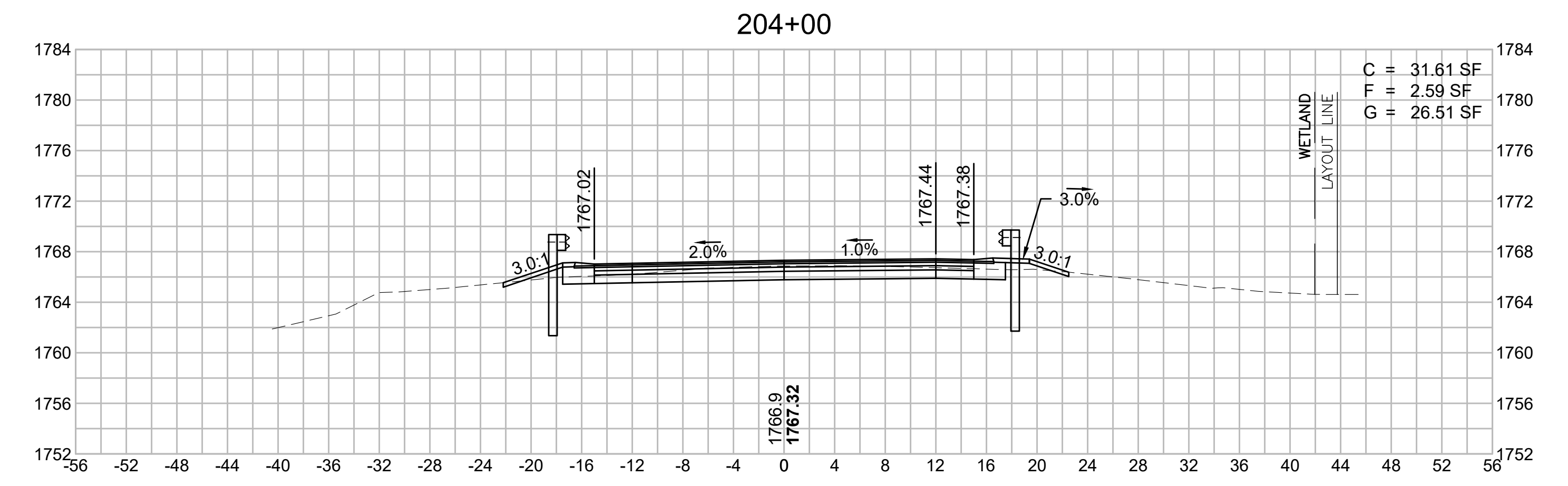
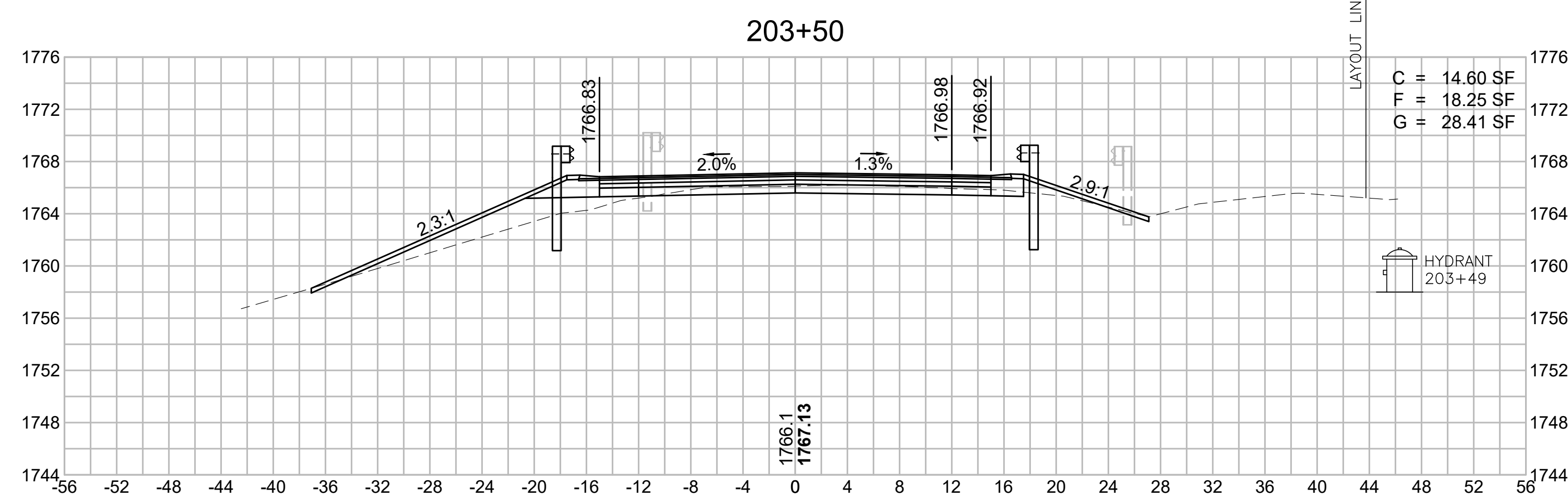
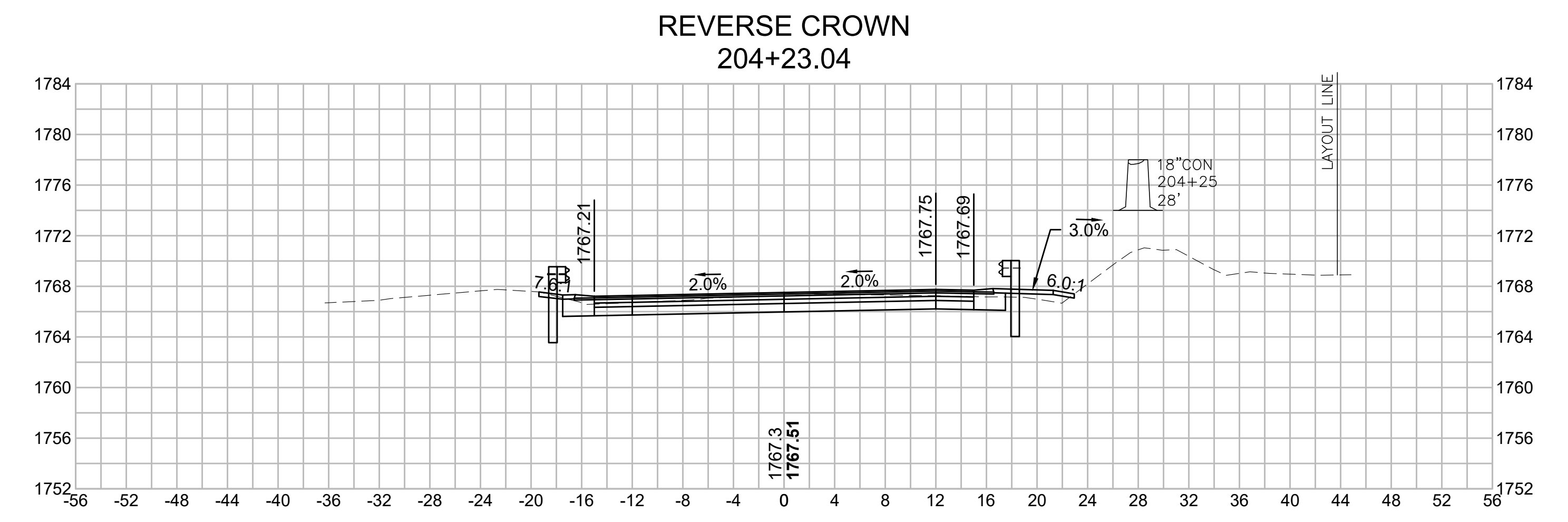
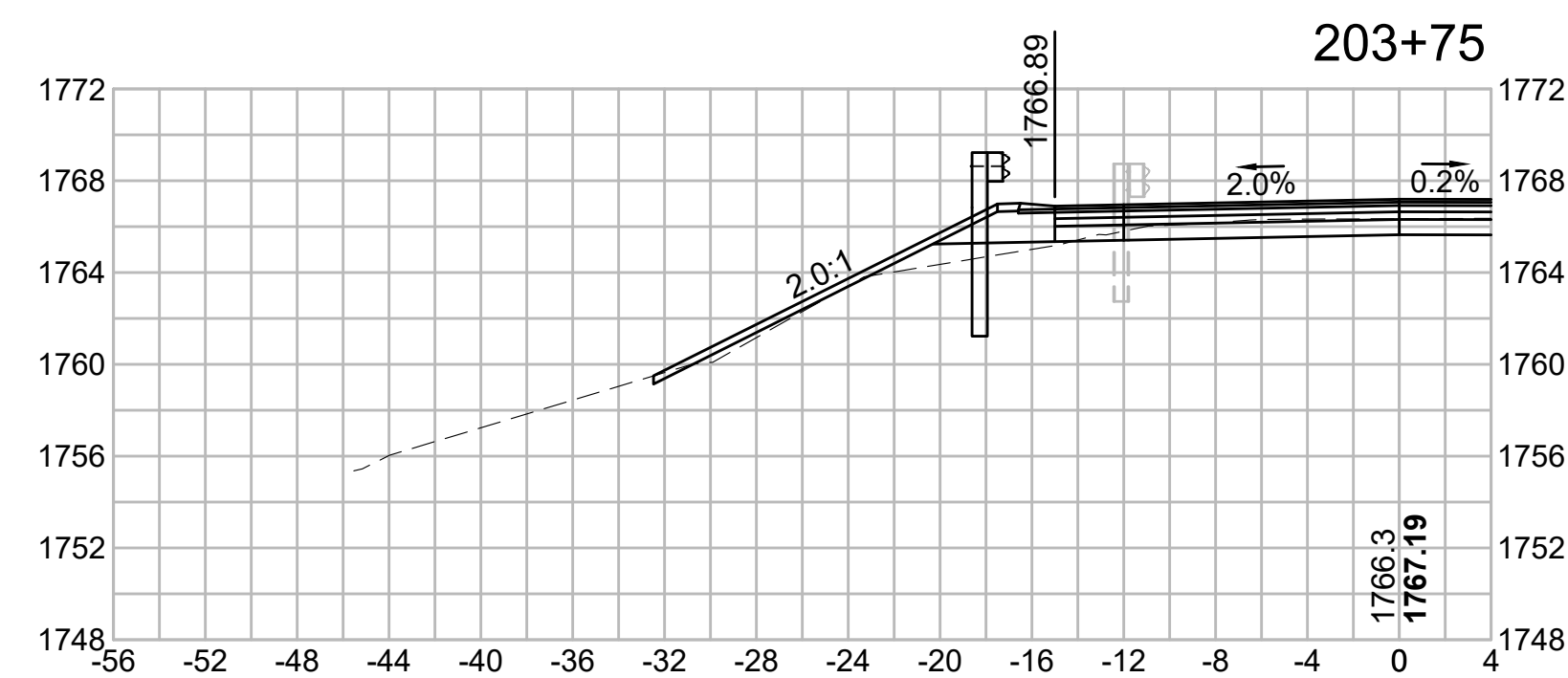
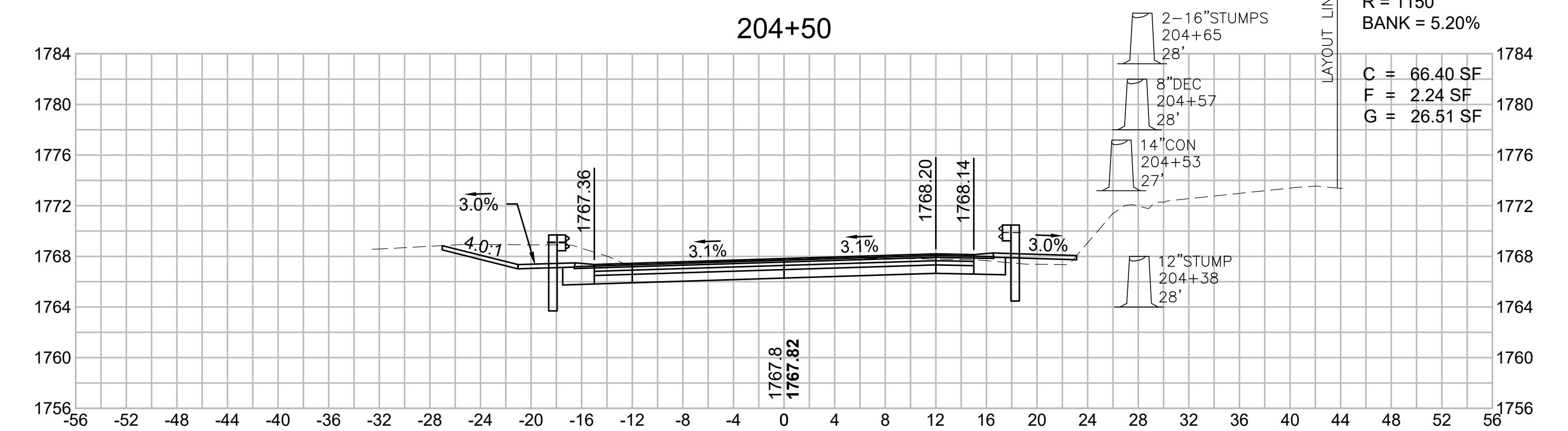
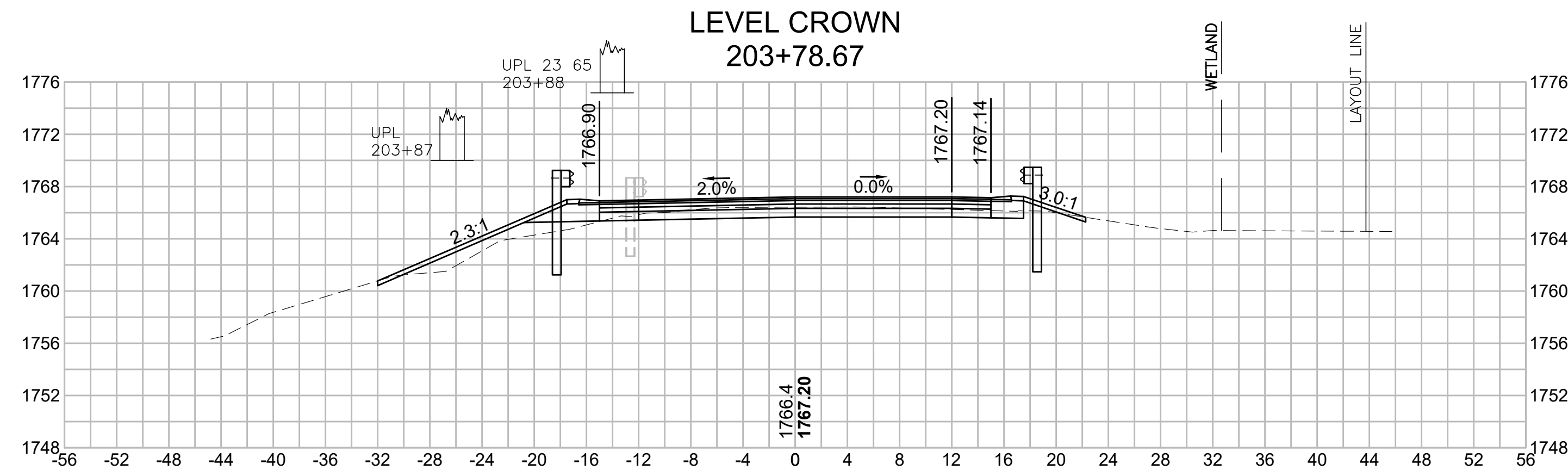
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	184	191
PROJECT FILE NO. 609287			

**OLD NORTH ROAD
CROSS SECTIONS - 81**

SUPERELEVATION:
PC STA = 204+60.01
R = 1150'
BANK = 5.20%

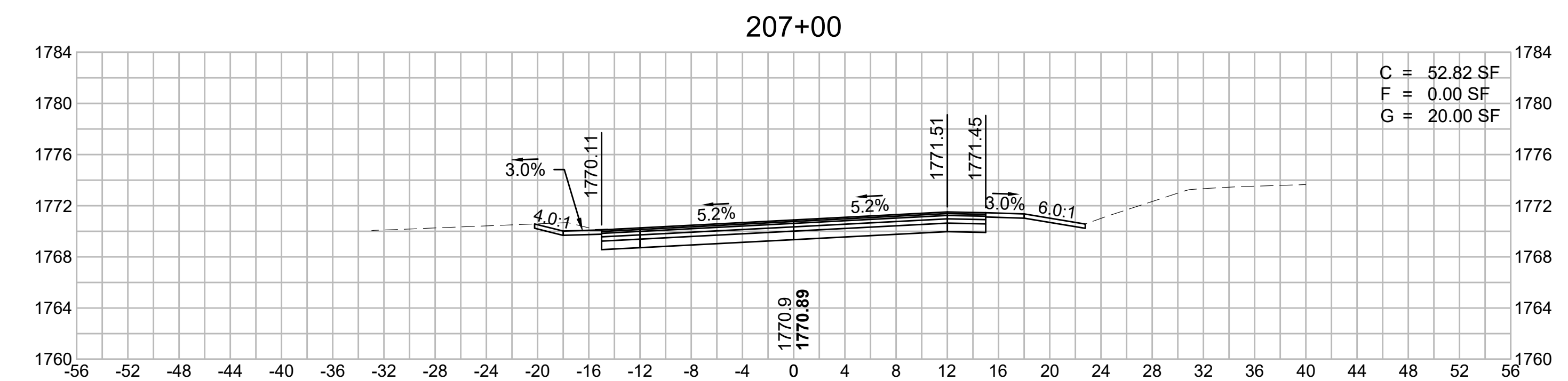
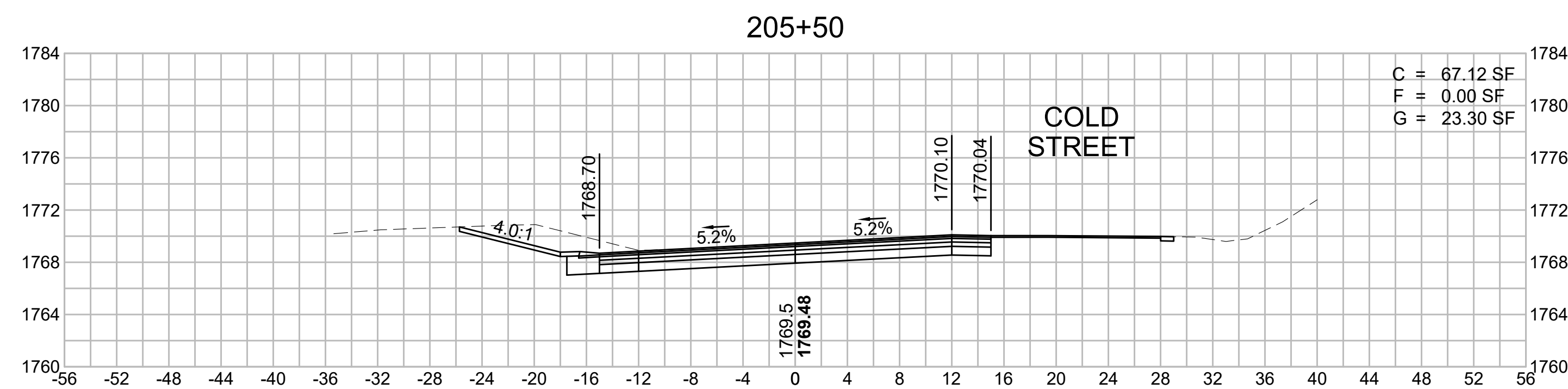
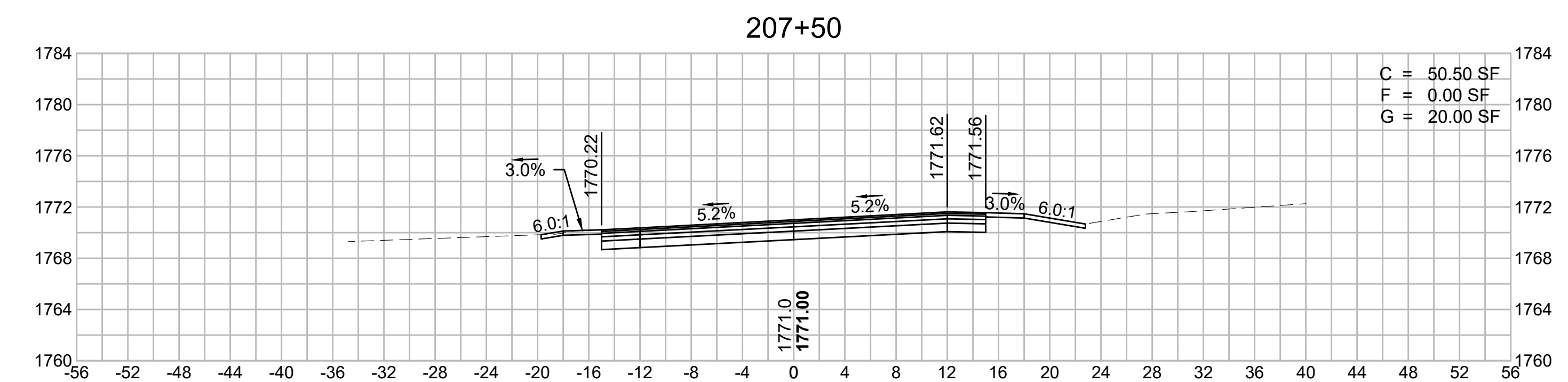
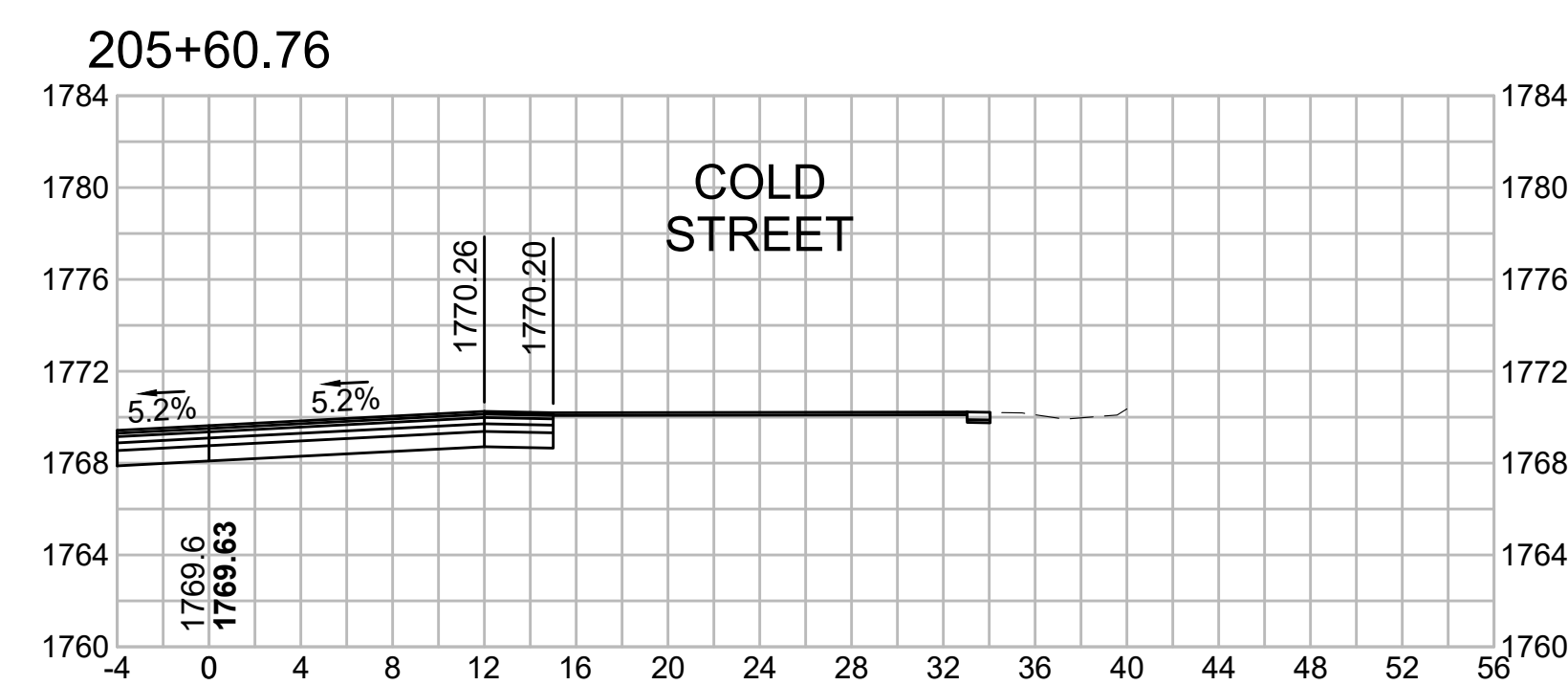
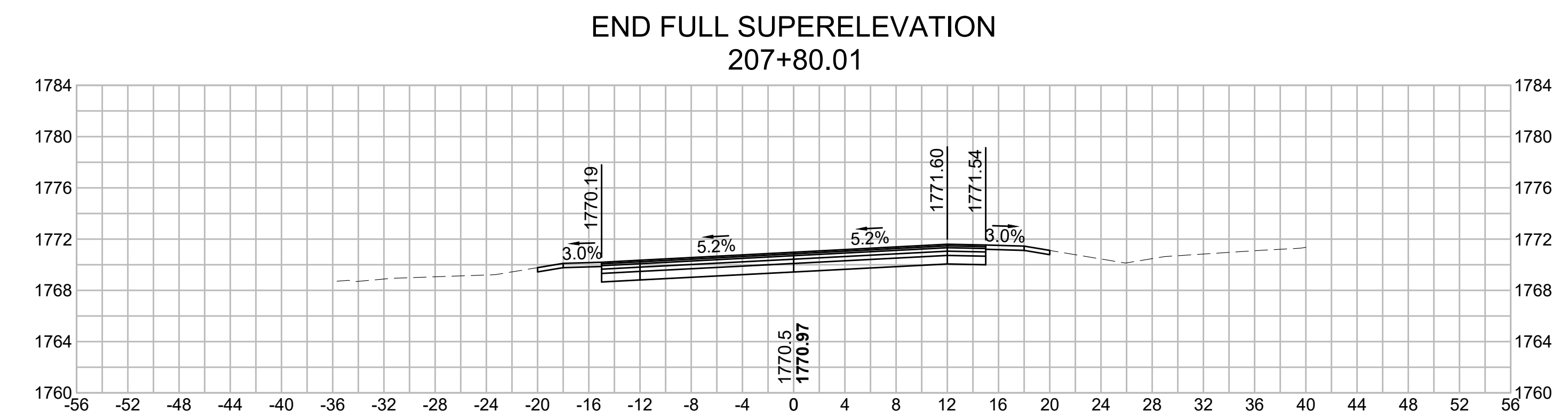
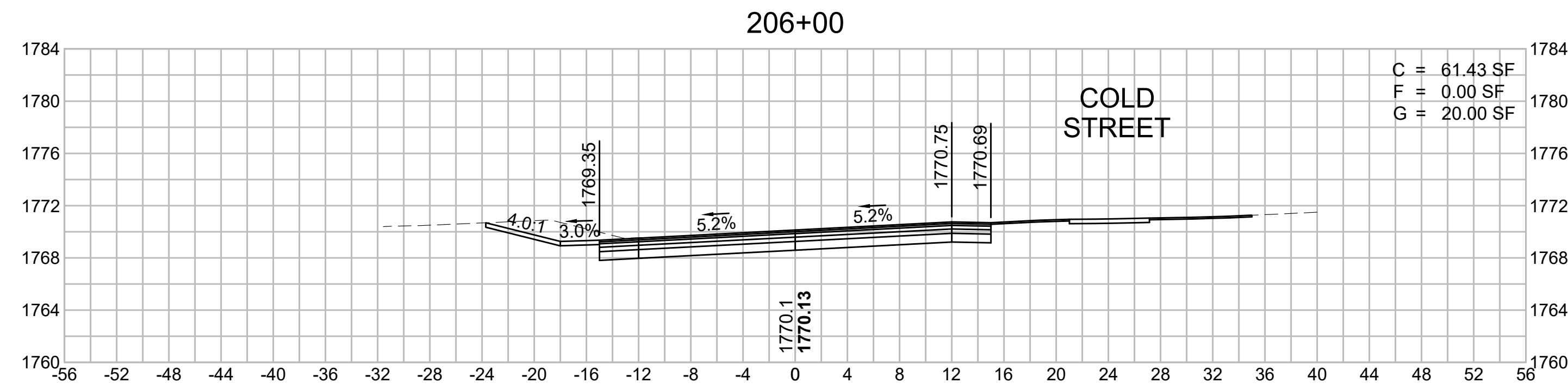
C = 66.40 SF
F = 2.24 SF
G = 26.51 SF



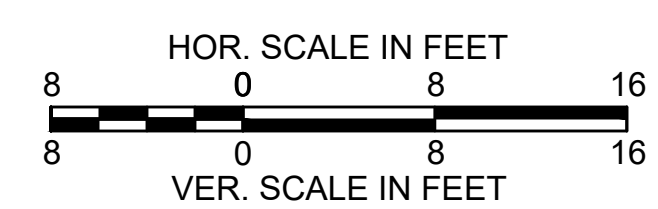
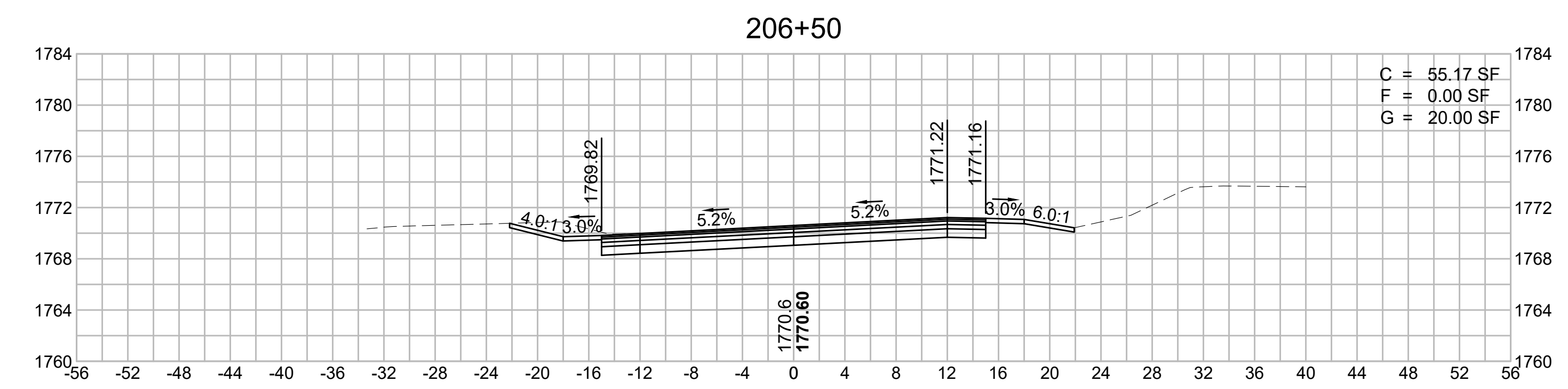
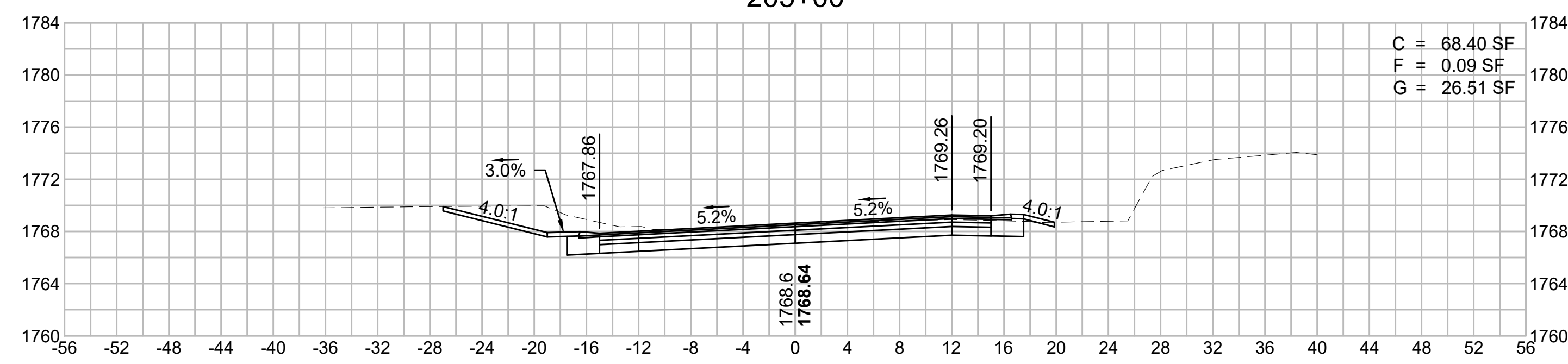
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	185	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 82**



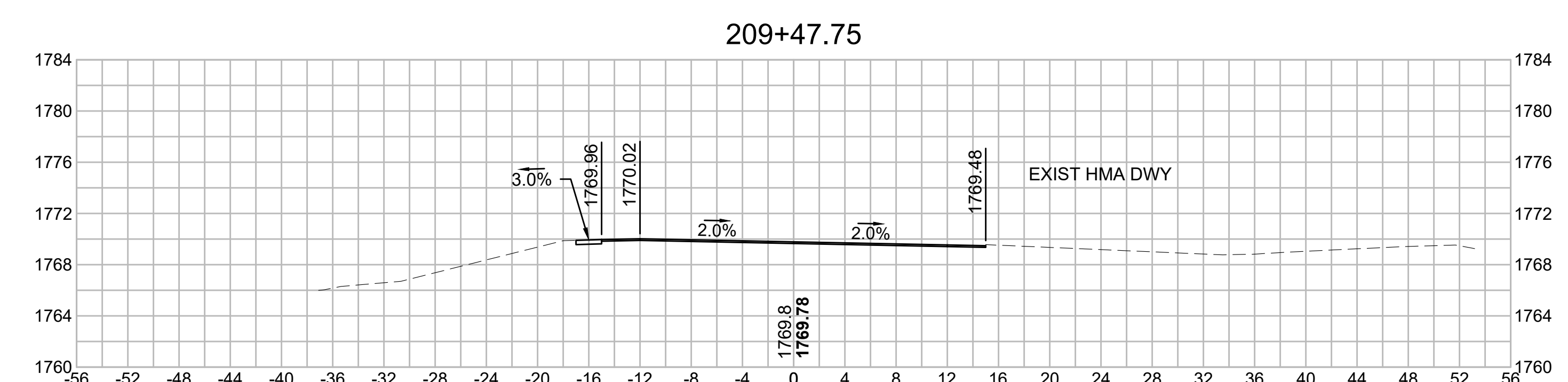
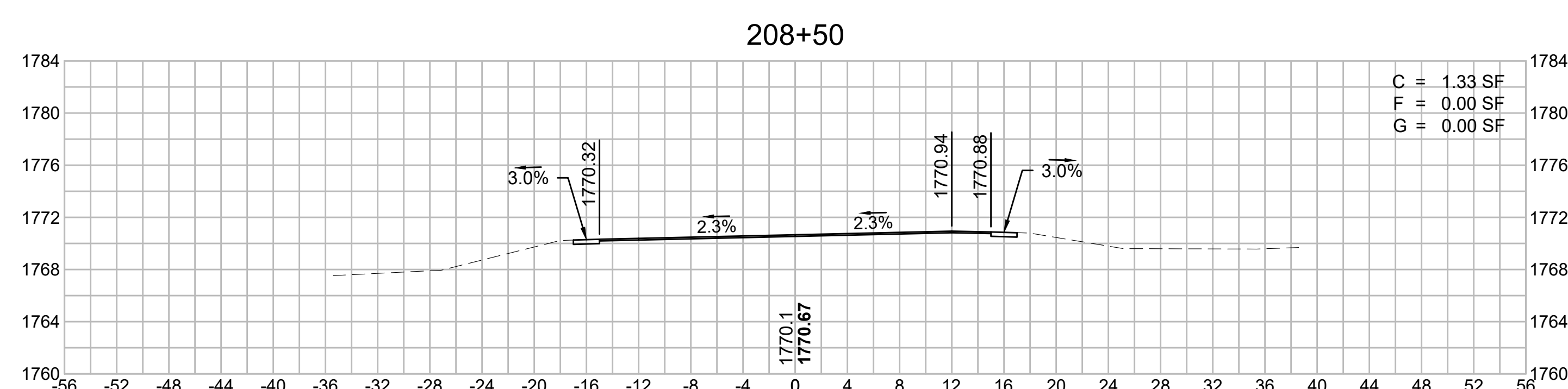
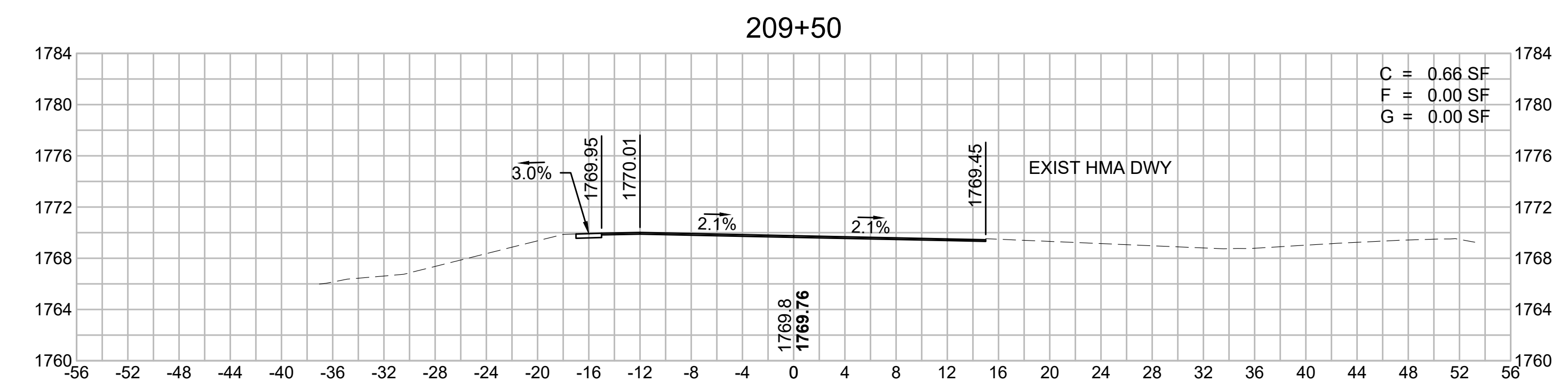
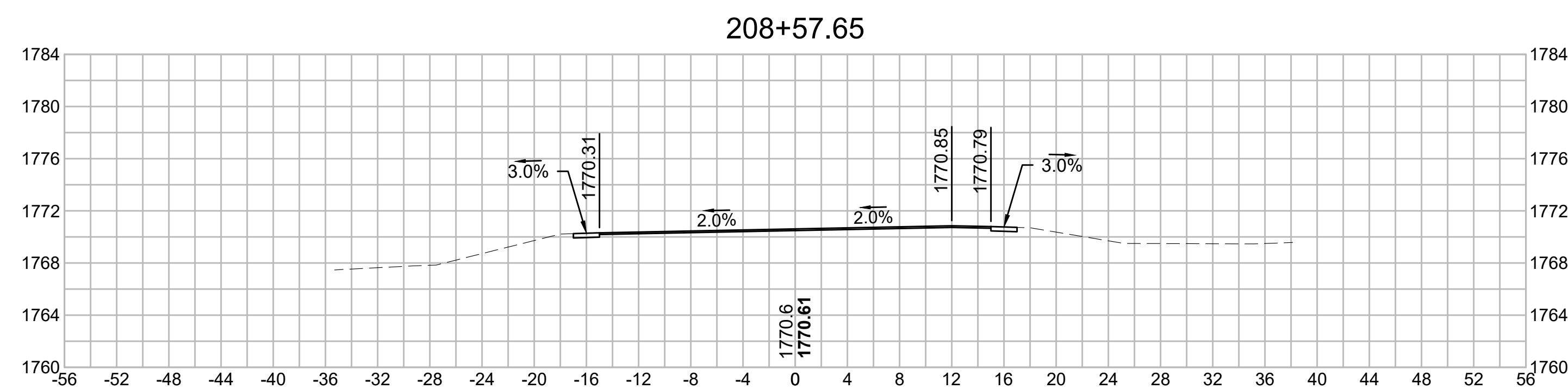
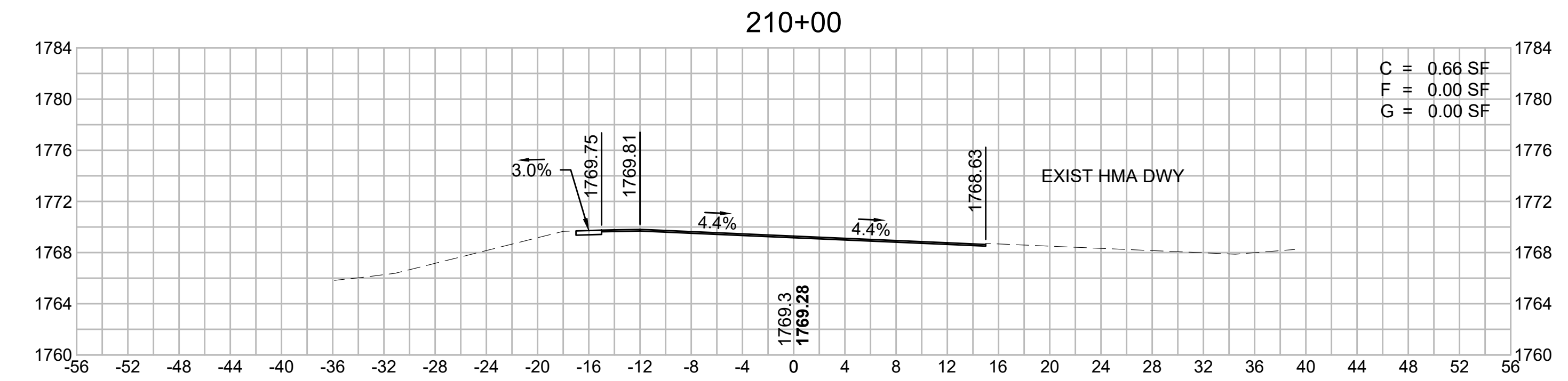
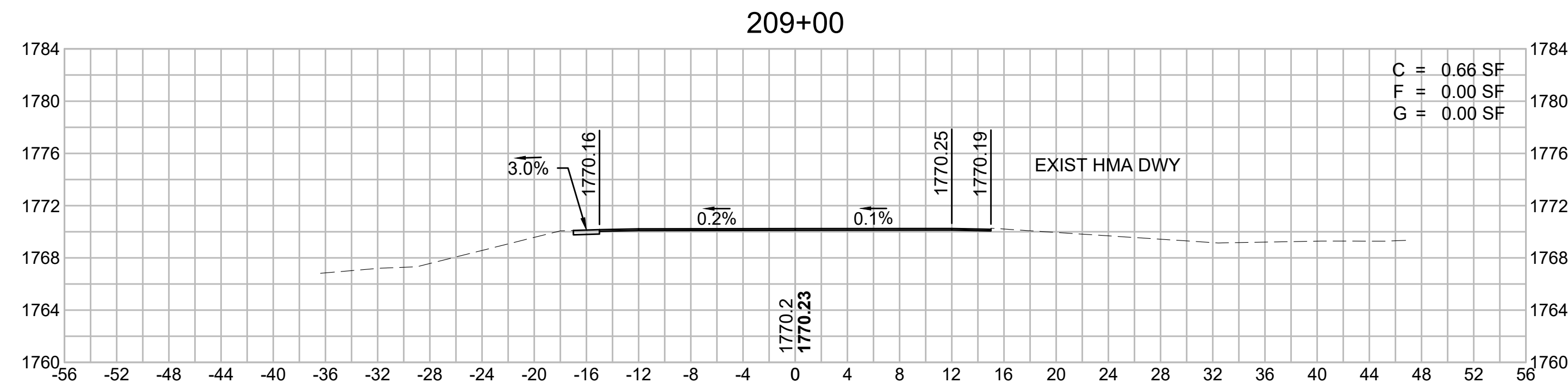
**BEGIN FULL SUPERELEVATION
205+00**



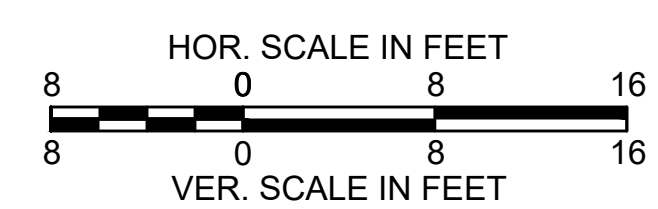
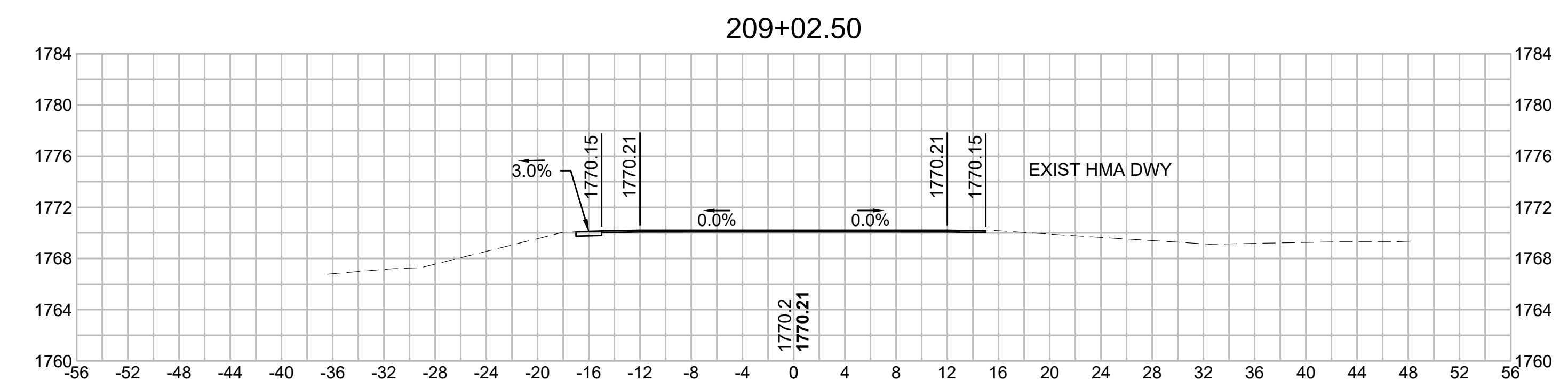
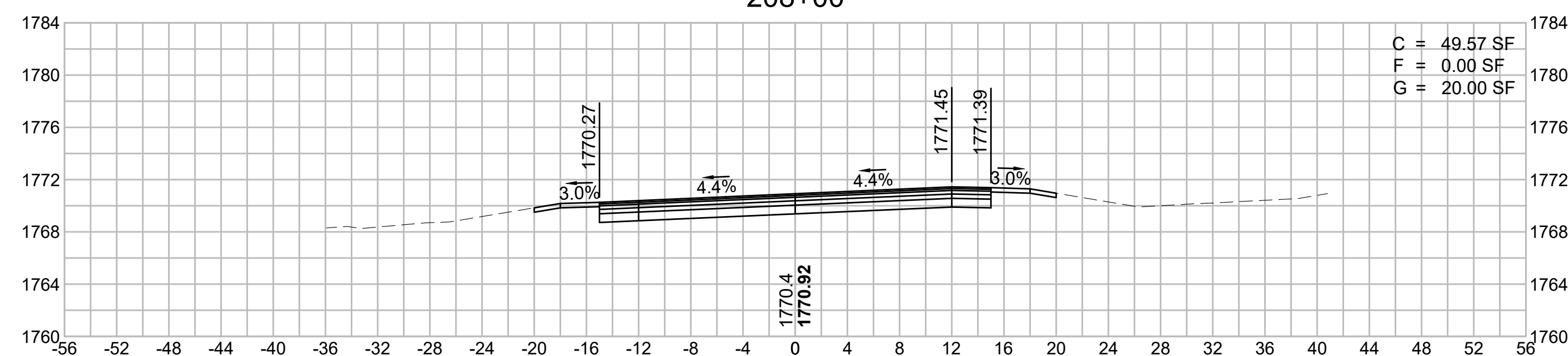
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	186	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 83**



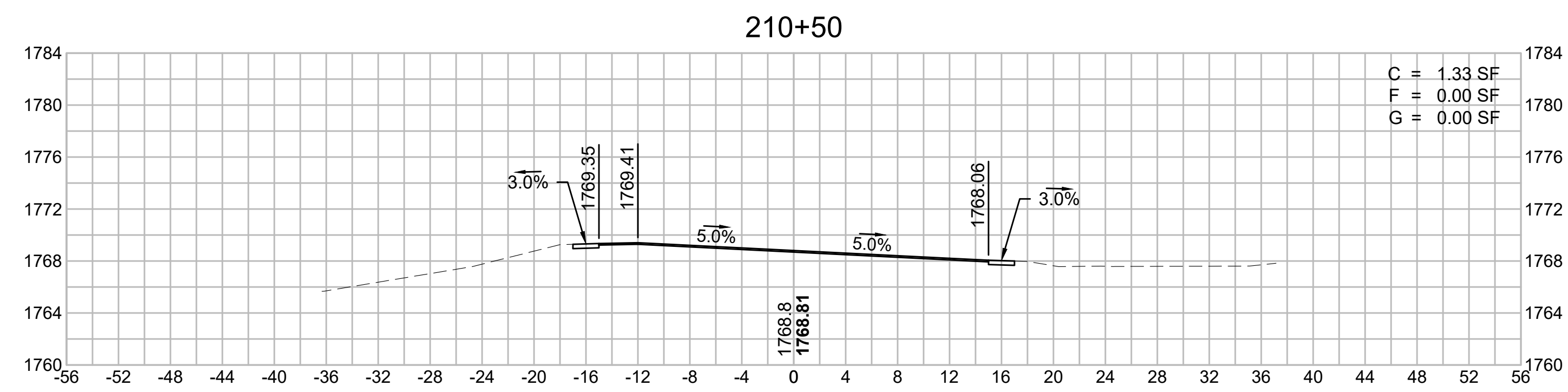
**END FULL DEPTH RECONSTRUCTION
BEGIN PAVEMENT MILL & OVERLAY
208+00**



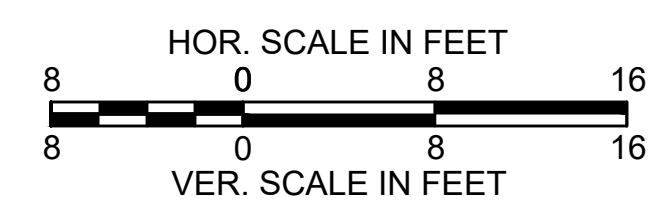
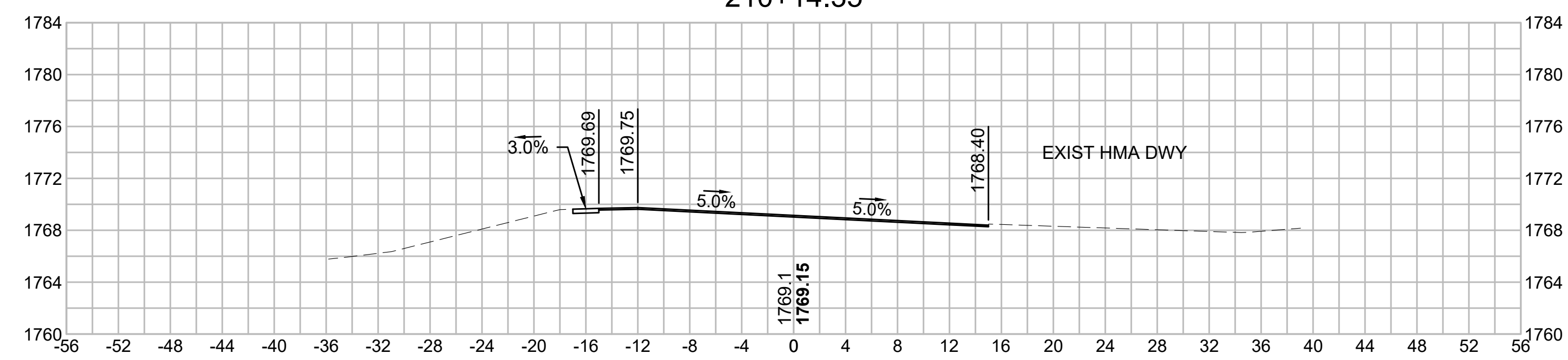
**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	187	191
PROJECT FILE NO.		609287	

**OLD NORTH ROAD
CROSS SECTIONS - 84**



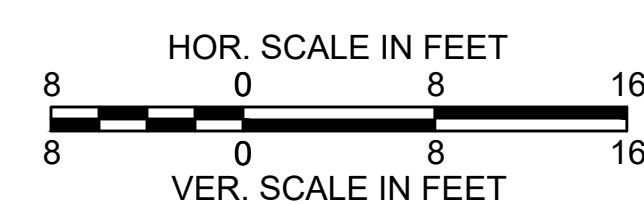
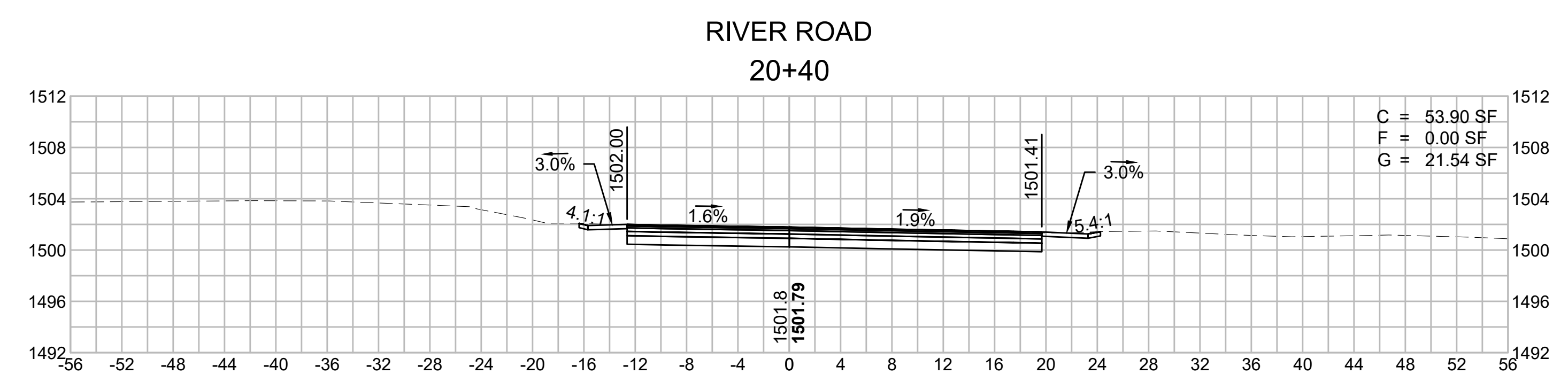
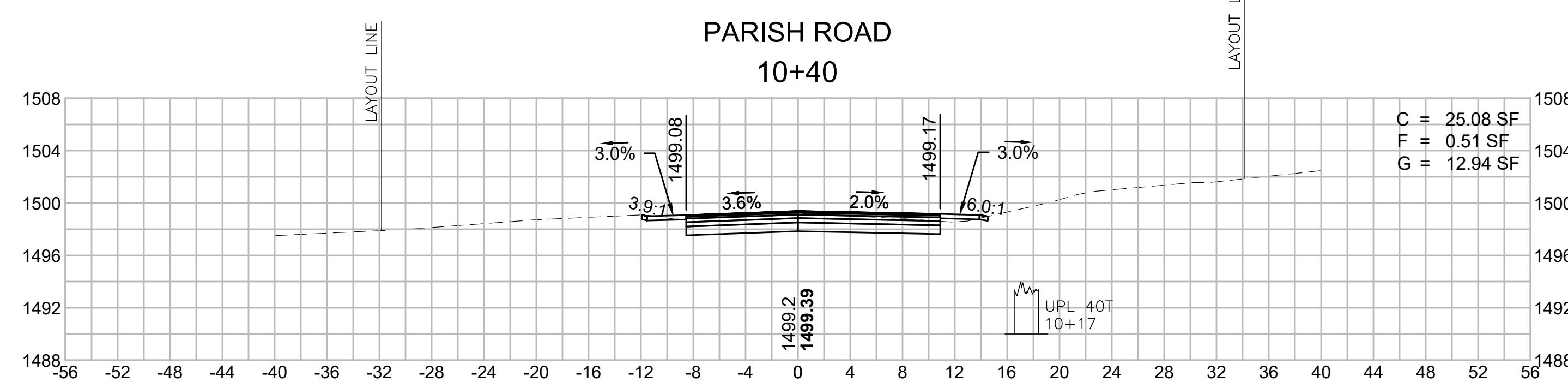
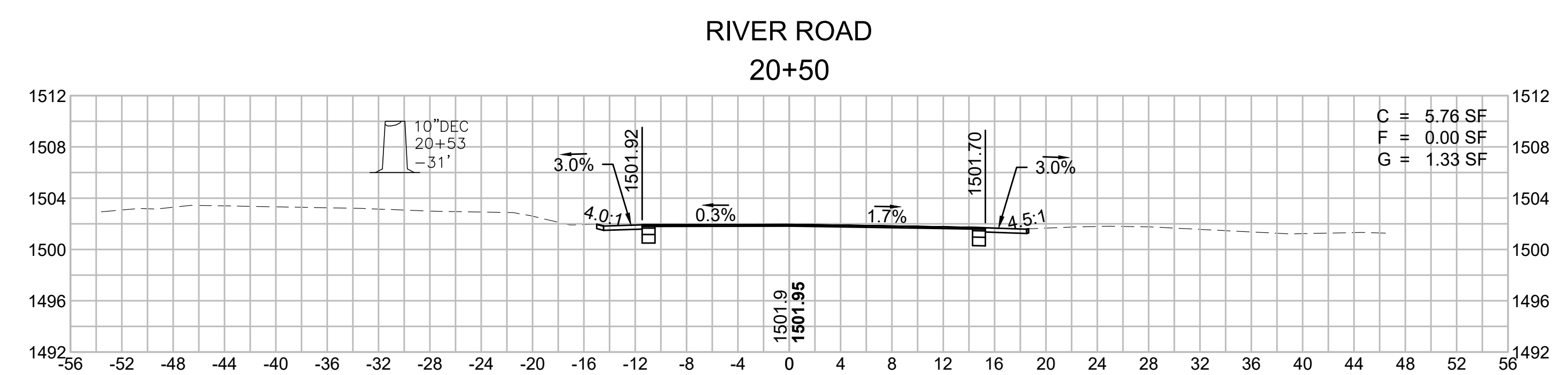
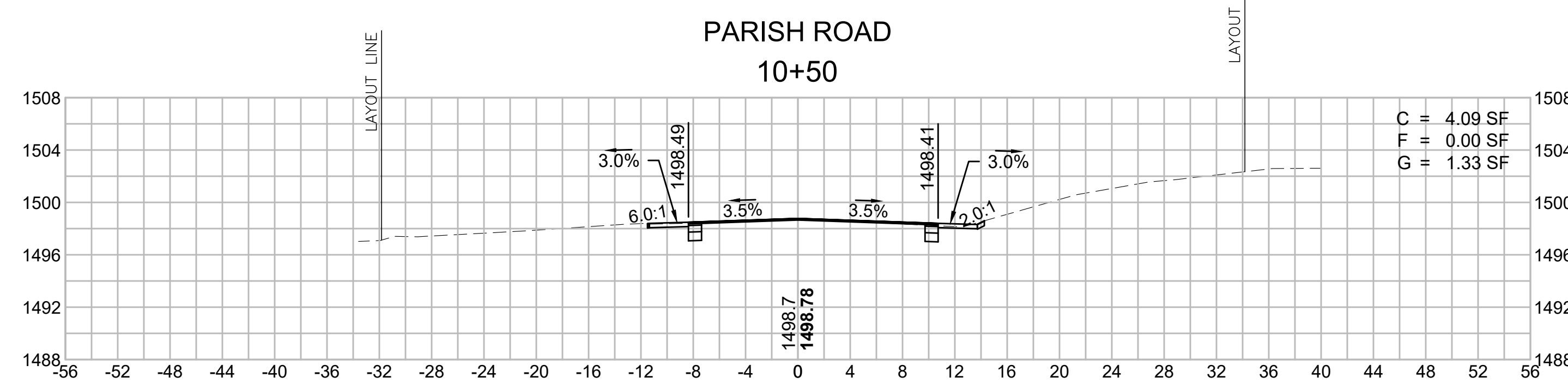
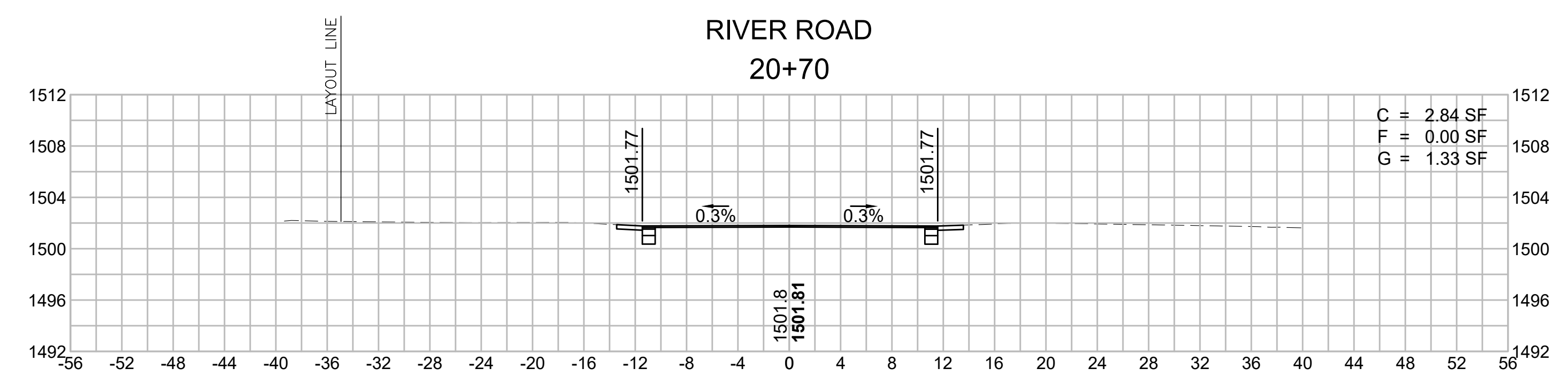
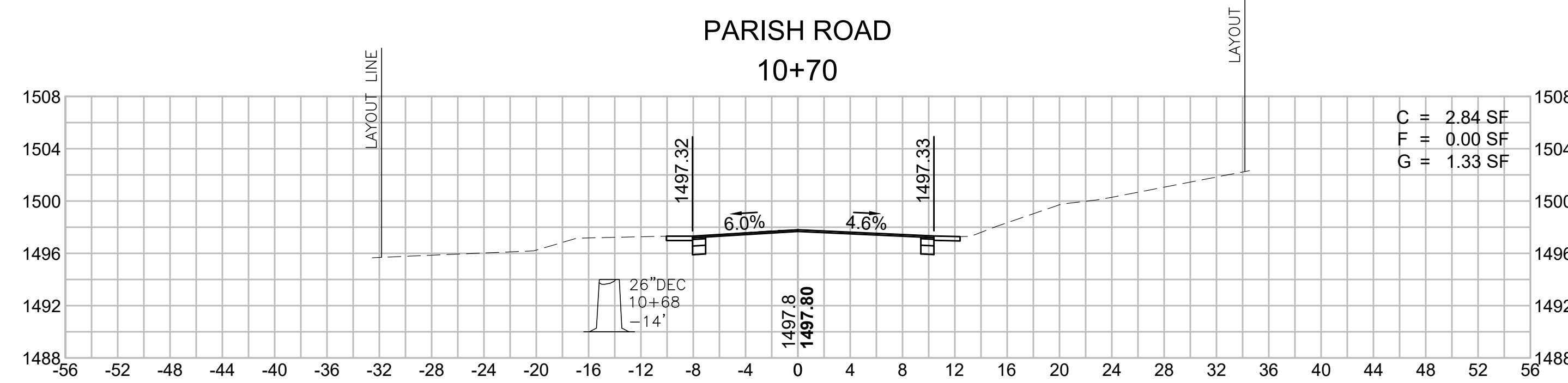
**BEGIN FULL SUPERELEVATION
210+14.35**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	188	191
PROJECT FILE NO.		609287	

**SIDE STREET
CROSS SECTIONS - 85**

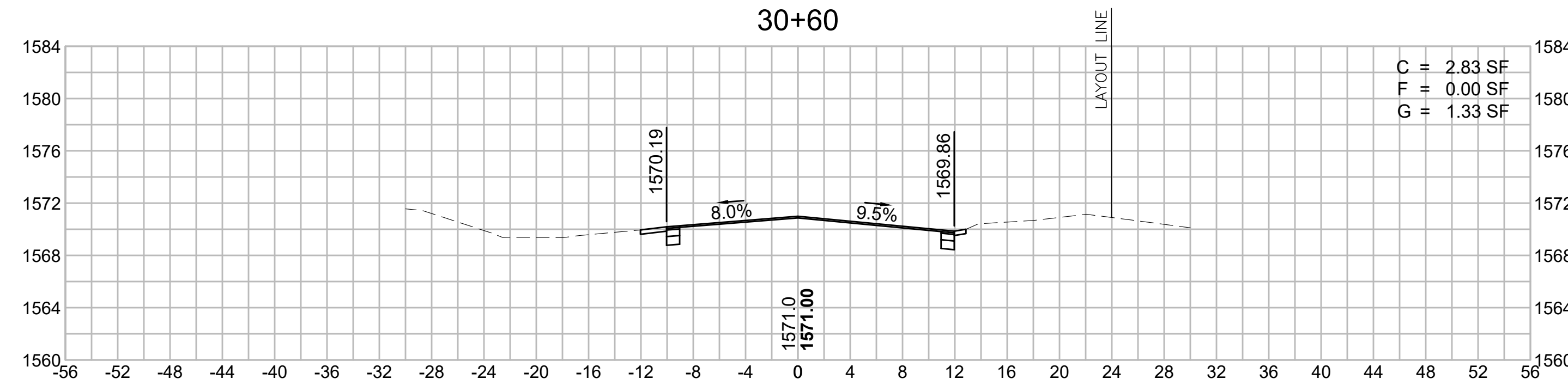


**WORTHINGTON
ROUTE 143**

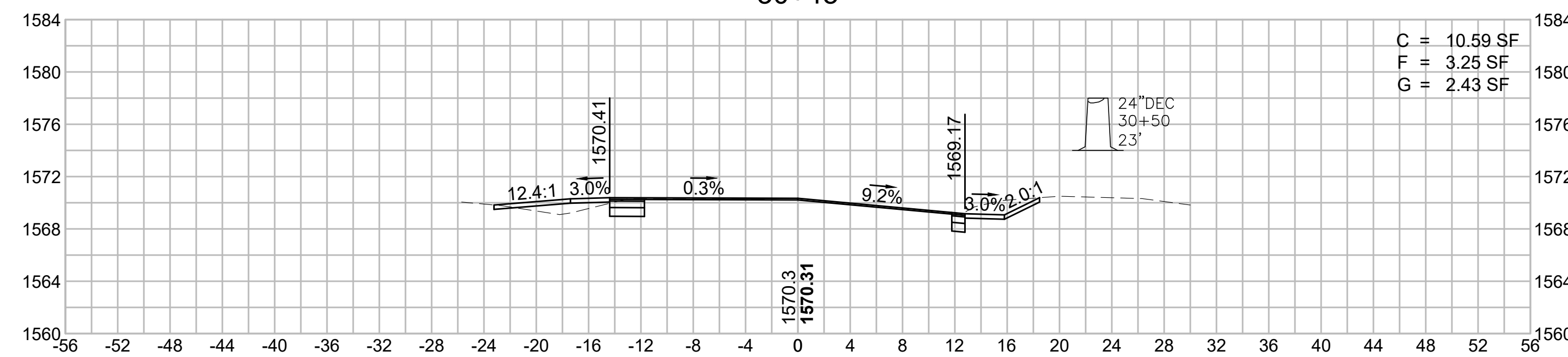
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	189	191
PROJECT FILE NO.		609287	

**SIDE STREET
CROSS SECTIONS - 86**

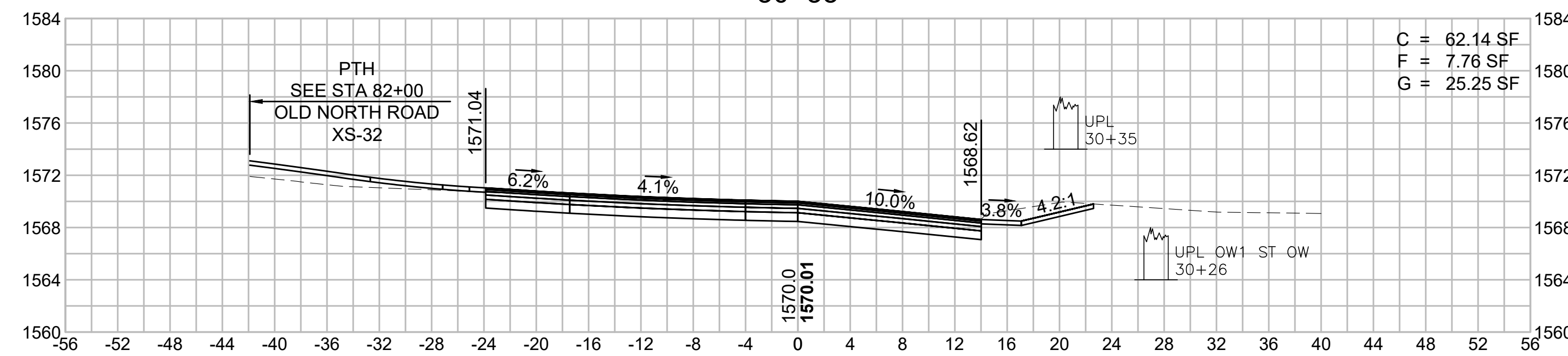
**LINDSAY HILL ROAD
30+60**



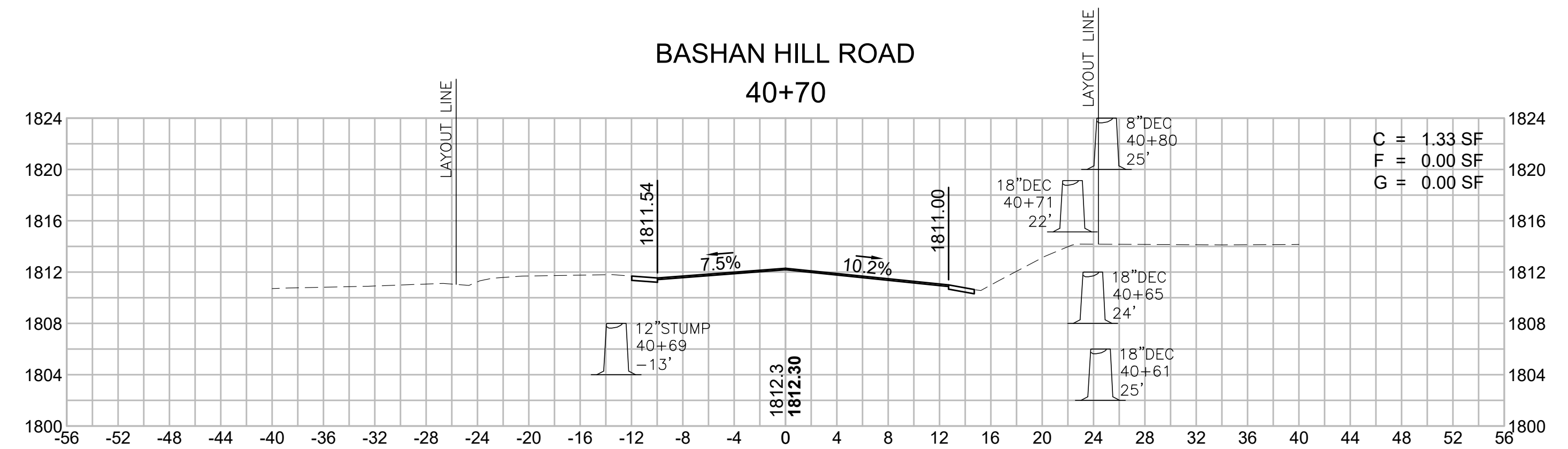
**LINDSAY HILL ROAD
30+45**



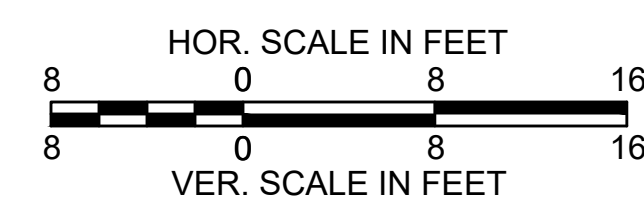
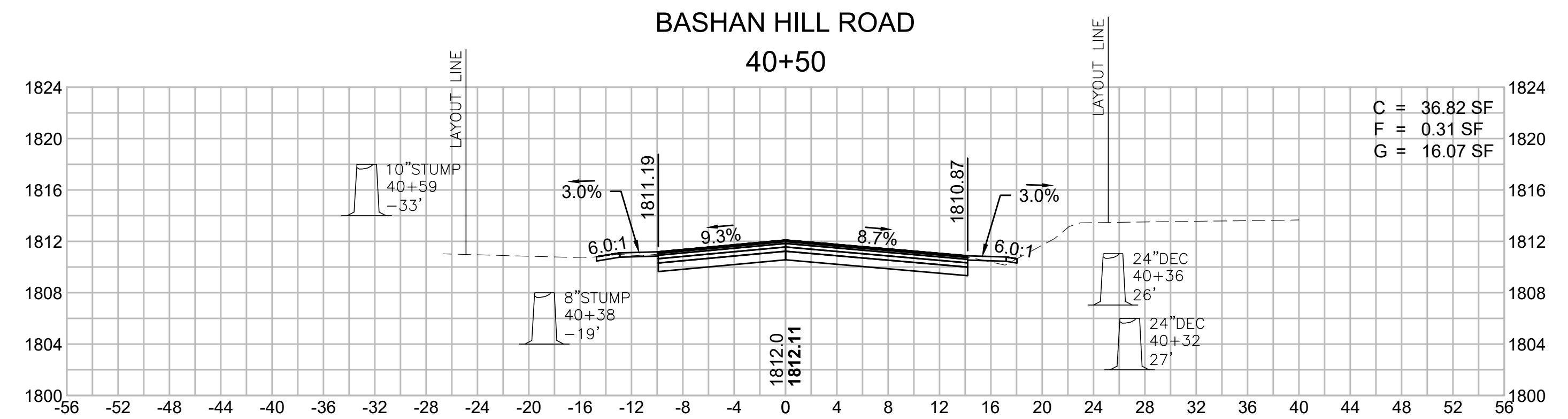
**LINDSAY HILL ROAD
30+35**



**BASHAN HILL ROAD
40+70**



**BASHAN HILL ROAD
40+50**

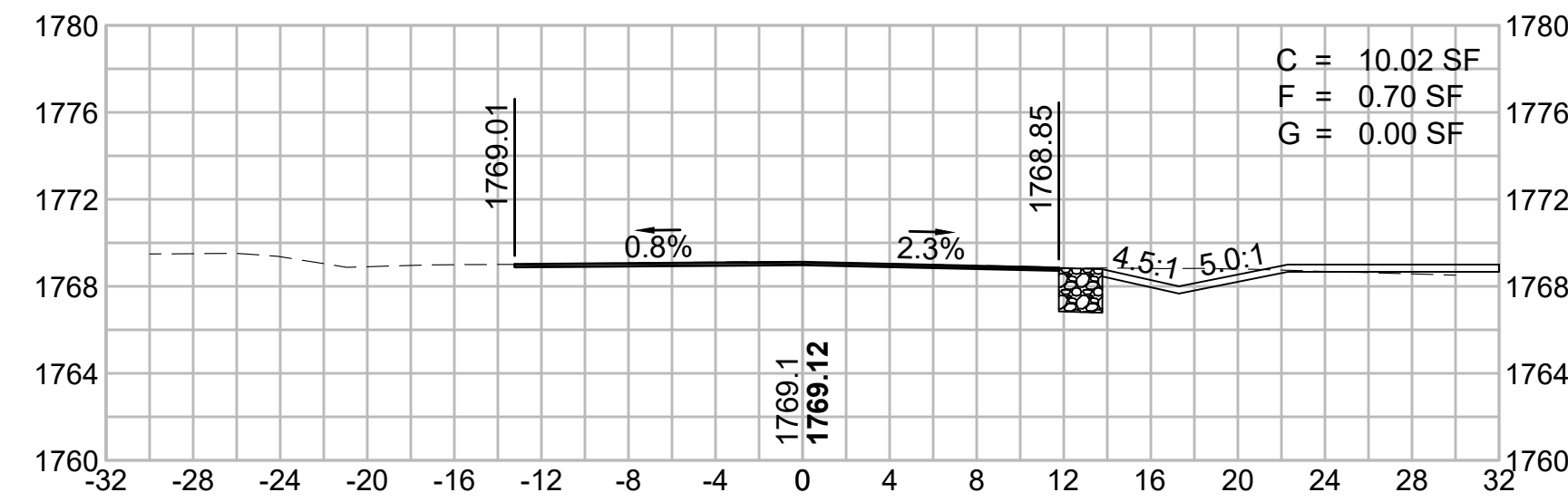


**WORTHINGTON
ROUTE 143**

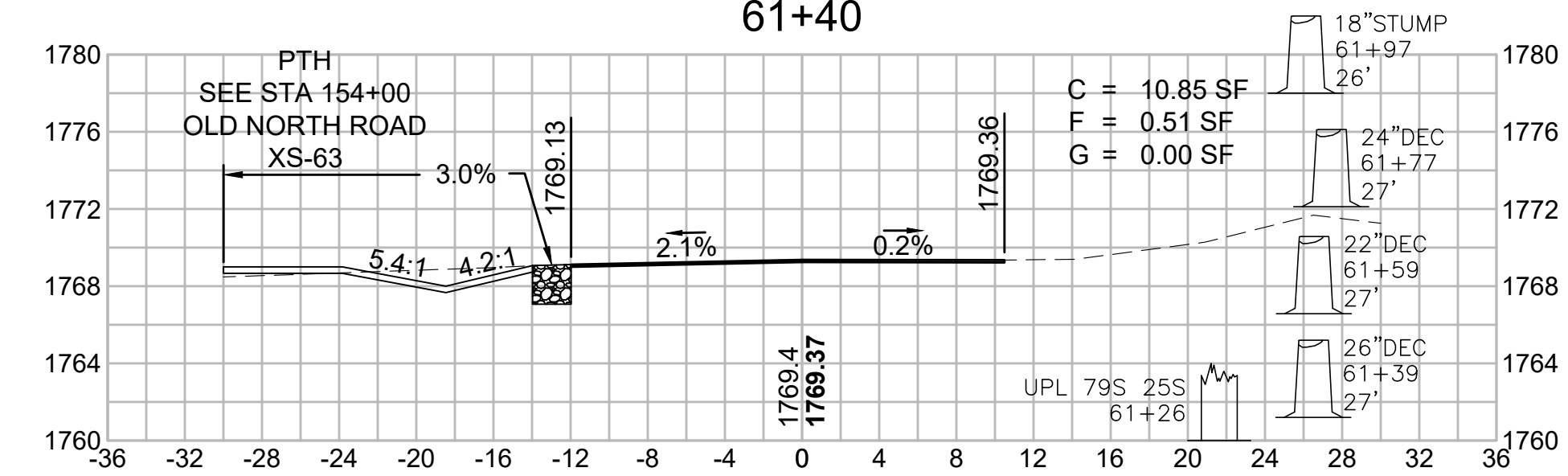
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	190	191
PROJECT FILE NO.		609287	

**SIDE STREET
CROSS SECTIONS - 87**

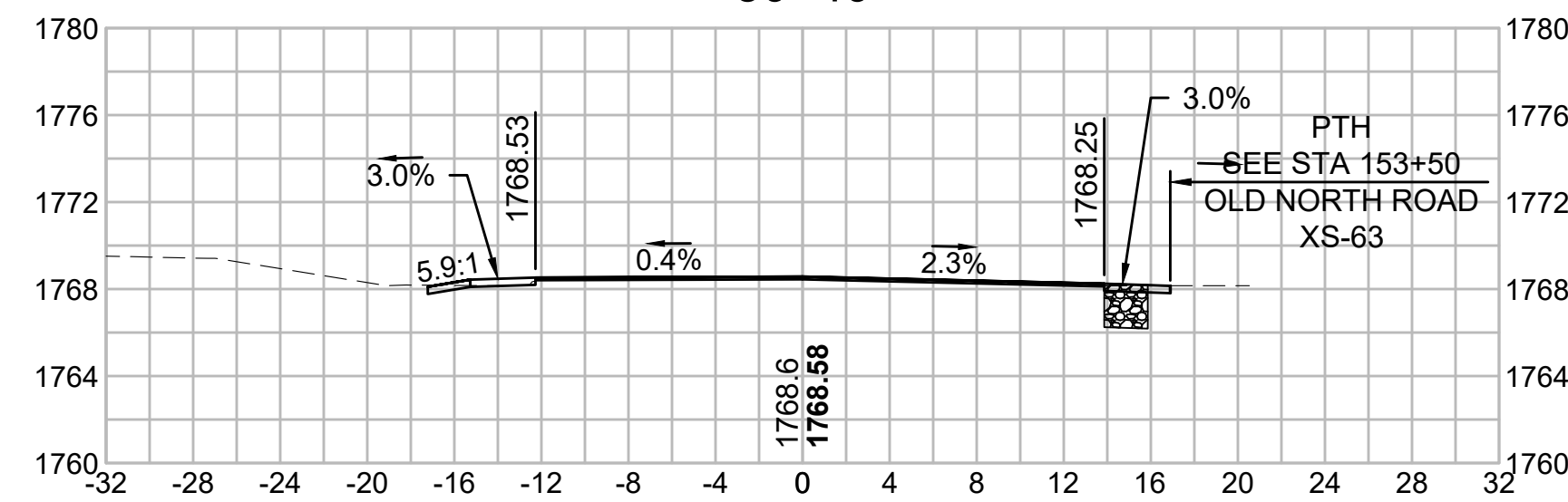
**EAST WINDSOR ROAD EXT
50+55**



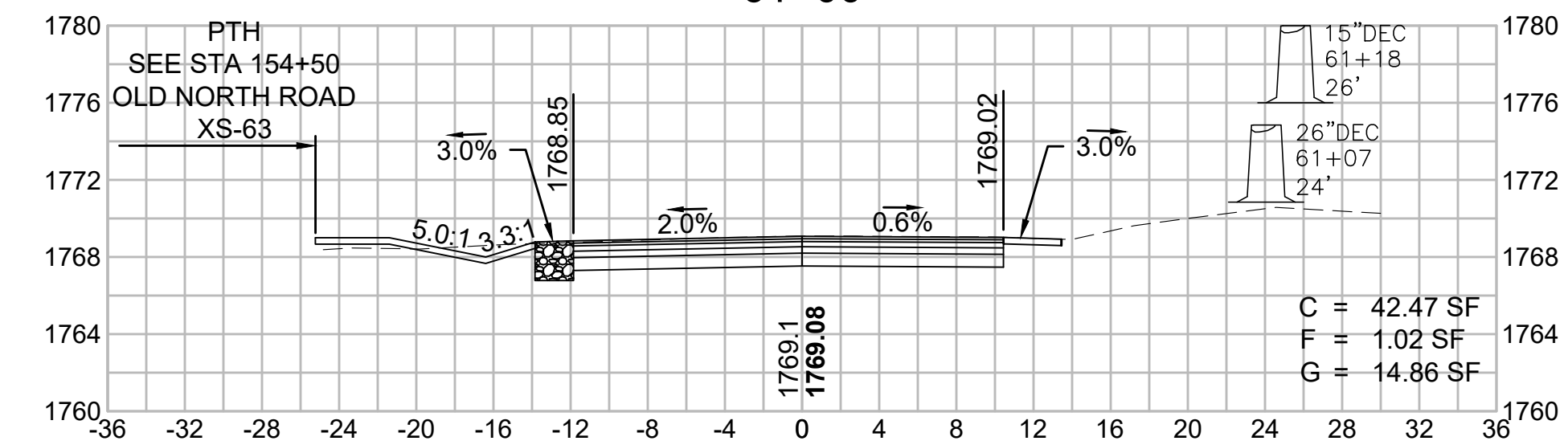
**EAST WINDSOR ROAD
61+40**



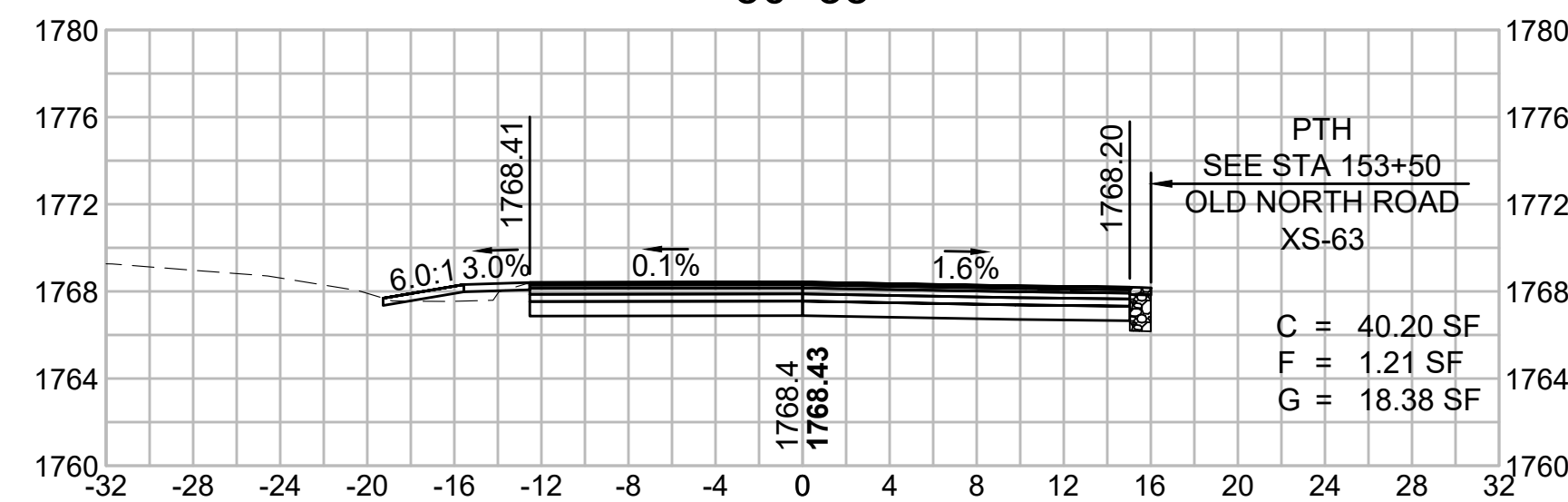
**EAST WINDSOR ROAD EXT
50+40**



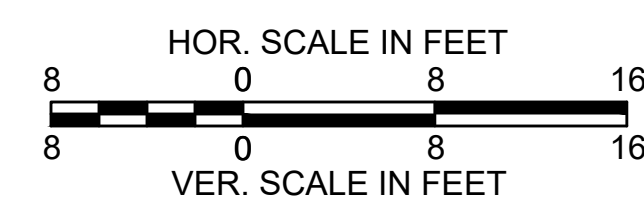
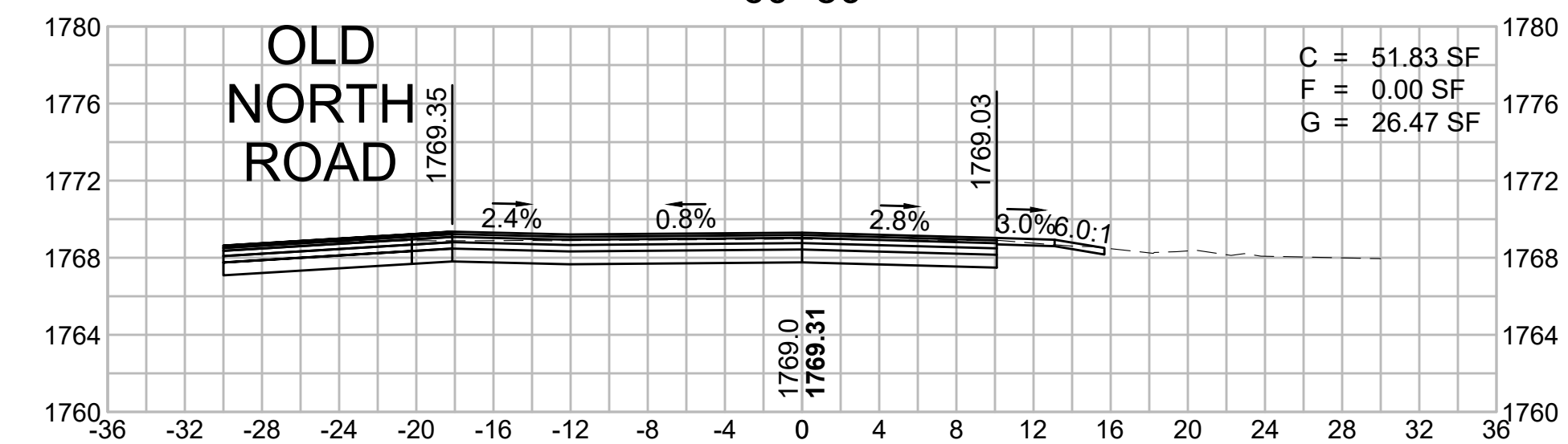
**EAST WINDSOR ROAD
61+00**



**EAST WINDSOR ROAD EXT
50+35**



**EAST WINDSOR ROAD
60+50**



**WORTHINGTON
ROUTE 143**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0031(018)	191	191
PROJECT FILE NO.		609287	

**SIDE STREET
CROSS SECTIONS - 88**

