

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

SPRINGFIELD MCKNIGHT COMMUNITY TRAIL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	66
PROJECT FILE NO.		608157	
TITLE SHEET & INDEX			

PLAN AND PROFILE OF
MCKNIGHT COMMUNITY TRAIL
(BRIDGE NO. S-24-027)

Update when Bridge Numbers are
obtained for the other new structures.
Include BIN numbers.

IN THE CITY OF
SPRINGFIELD
HAMPDEN COUNTY

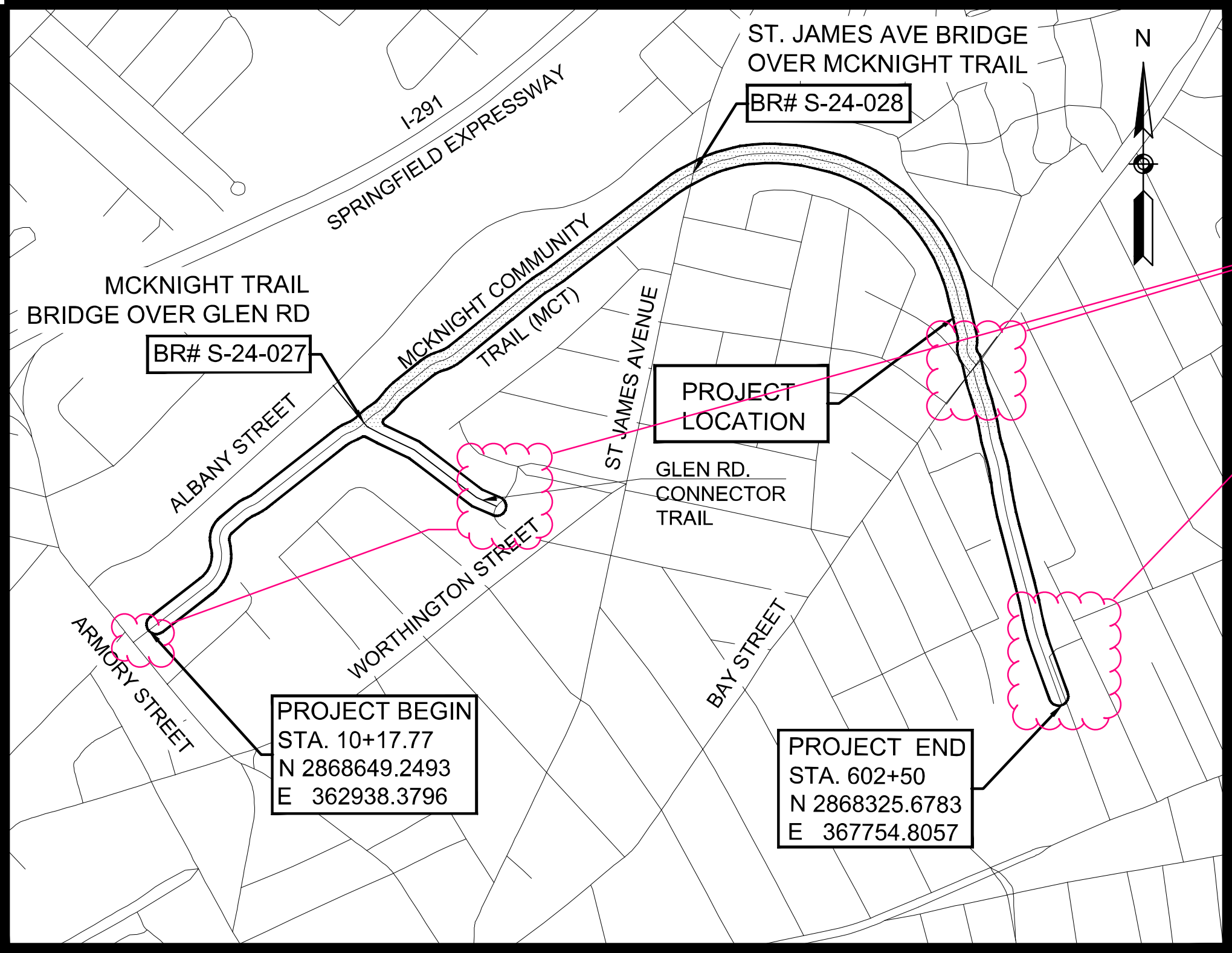
FEDERAL AID PROJECT NO. XXXXX

THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES , THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

D2 ADA commented on pg.: 18, 21, 39

Affected Utilities	Est. Cost	Est. Duration
Sprint	\$250,000	45 days
Costs and Durations Est. by D2 Office		

INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
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46 - 66	CRITICAL CROSS SECTIONS



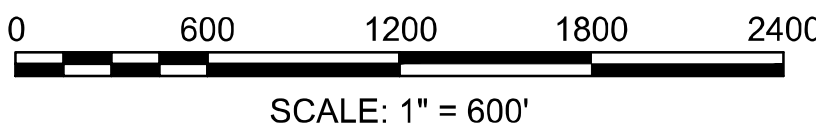
please add more street
names near the path
crossing areas so the
locations are easier to
find.

DESIGN DESIGNATION (MCKNIGHT COMMUNITY TRAIL)

DESIGN SPEED	12 - 20 MPH
MINIMUM HORIZONTAL CURVE RADIUS	50'
MAXIMUM GRADE FOR TRAIL (MCT)	5%




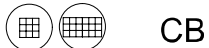











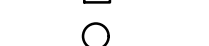















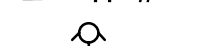

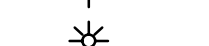





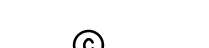

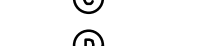

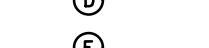

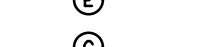



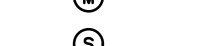

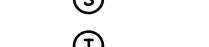







































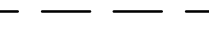

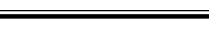

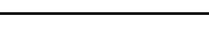

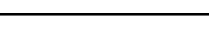

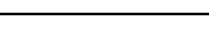

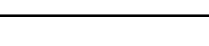

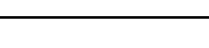

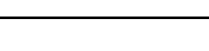

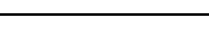

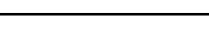

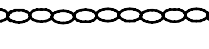

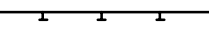

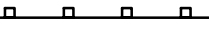

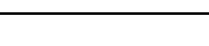

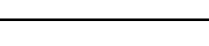
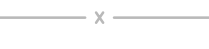
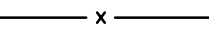

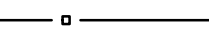

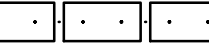



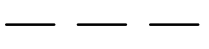



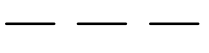








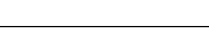

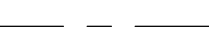

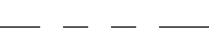
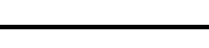
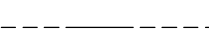
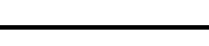
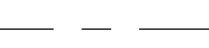

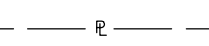

7/23/2021	25% SUBMISSION	0
DATE	DESCRIPTION	REV #



















































Is the Design Engineer information missing from the Title Sheet?




















LENGTH OF PROJECT = 8894 FEET = 1.684 MILES

RECOMMENDED FOR APPROVAL	
_____ CHIEF ENGINEER	_____ DATE
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION APPROVED: _____ DIVISION ADMINISTRATOR	APPROVED HOR. SCALE IN FEET 4 0 4 8 VER. SCALE IN FEET 4 0 4 8 _____ HIGHWAY ADMINISTRATOR
_____ DATE	_____ 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
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		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
		HAY BALES/SILT FENCE
		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 ARROW - WHITE
		LEGEND "ONLY" - WHITE
		STOP LINE - 12"
		CROSSWALK - 24" LINES, 4' O.C. (SEE DETAIL) Add sheet number of detail.
		SOLID WHITE LINE - 6"
		SOLID YELLOW LINE - 6"
		BROKEN WHITE LINE - 6"
		BROKEN YELLOW LINE - 6" (SHARED USE PATH: 3' LINE, 9' GAP)
		

GENERAL NOTES

1.

THIS BASE MAP IS COMPILED FROM AN ACTUAL-ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY GREEN INTERNATIONAL AFFILIATES, INC., BETWEEN 24 SEPTEMBER 2018 AND 18 FEBRUARY 2020.
2.

HORIZONTAL CONTROLS ARE BASED ON THE NORTH AMERICAN DATUM (NAD 83) ENGLISH UNITS.
3.

VERTICAL CONTROLS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988).
4.

THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R & R).
5.

THE ACCURACY AND COMPLETENESS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE, TYPE ETC. OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK. ALL TOWN-OWNED UTILITY STRUCTURES, WITHIN AREAS AFFECTED BY THE WORK SHALL BE ADJUSTED TO NEW LINE AND GRADE AS DIRECTED BY THE ENGINEER. ANY UTILITY POLES AND/OR GUY POLES, WITHIN AREAS AFFECTED BY THE WORK, SHALL BE REMOVED AND RESET BY THE RESPECTIVE UTILITY COMPANY. ALTERATIONS TO UTILITIES NOT OWNED BY THE TOWN SHALL BE MADE BY THE RESPECTIVE UTILITY OWNERS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WORK IN ADVANCE WITH THOSE UTILITY OWNERS.
6.

CATCH BASIN AND MANHOLE FRAMES AND GRATES/COVERS SHALL EXACTLY ALIGN WITH THE OPENINGS IN THE PRECAST STRUCTURES AND THE GRADE OF THE PROPOSED ROADWAY.
7.

ALL EXISTING DRAINAGE LINES TO BE REPLACED SHALL BE ABANDONED IN PLACE UNLESS OTHERWISE NOTED. IF SAID LINES CONFLICT WITH THE PROPOSED DRAINAGE, THEY SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
8.

WHERE DRAINAGE PIPES OR STRUCTURES ARE ABANDONED IN PLACE, THE CONTRACTOR SHALL MAKE SURE THAT ALL CONNECTING PIPES, INLETS AND OUTLETS ARE PLUGGED. ALL LIVE CONNECTIONS SHALL BE CONNECTED TO THE NEW SYSTEM.
9.

ALL CURB TIE DIMENSIONS ARE TO FACE OF THE CURB.
10.

TOP OF CURB SHALL BE 6 INCHES ABOVE GUTTER GRADE UNLESS OTHERWISE NOTED.
11.

CONTRACTOR SHALL VERIFY EXISTING GRADES. IF ANY ADJUSTMENT IS REQUIRED DUE TO DIFFERENT EXISTING GRADES FOUND IN THE FIELD, THE CONTRACTOR SHALL NOTIFY AND SEEK THE APPROVAL OF THE ENGINEER PRIOR TO PERFORMING THE WORK.
12.

IN AREAS OF NEW SIDEWALK, NEW EDGE OF PAVEMENT OR CURB WITHOUT SIDEWALK OR ANY WORK ADJACENT TO EXISTING GRASS AREAS, EVEN WHEN NO SLOPE-MATCHING OR GRADING IS NECESSARY AND THE EXISTING GRADE IS MET, LOAM AND SEED SHALL BE PROVIDED AS NECESSARY TO REPAIR AND COMPLETE ANY DAMAGE TO THE GRADE CAUSED BY THE CONSTRUCTION PROCESS.
13.

TREES TO BE RETAINED WHICH RESTRICT SIGHT DISTANCE OR RESTRICT HORIZONTAL OR VERTICAL CLEARANCES SHALL BE TRIMMED AS REQUIRED BY THE ENGINEER.
14.

WHEN WORKING NEXT TO EXISTING TREES, WALLS OR FENCES, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DISTURB THE EXISTING WALL, TREE OR FENCE. IF THE CONTRACTOR DAMAGES EXISTING TREES, WALLS OR FENCES AS A RESULT OF THE CONSTRUCTION PROCESS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ALL DAMAGES AS DIRECTED BY THE ENGINEER. ALL WORK ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF EXISTING TREES, WALLS OR FENCES SHALL BE CONSIDERED AS INCLUDED IN THE BID PRICE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED THEREFORE.
15.

THE CONTRACTOR SHALL CALL DIGSAFE (1-800-322-4844) A MINIMUM OF 72 HOURS PRIOR TO THE START OF ANY WORK.
16.

DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5' SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5' WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.

17.

ANY ADJUSTMENTS MADE TO MUNICIPALLY OWNED SANITARY AND WATER MANHOLES, HYDRANTS, GATE BOXES, ETC... SHALL MEET APPLICABLE MUNICIPAL STANDARDS AND CRITERIA.
18.

TREES AND SHRUBS NOT NOTED TO BE REMOVED, AND TREE SHRUBS NOTED "RET" ON THE DRAWINGS, SHALL BE PROTECTED BY THE CONTRACTOR DURING CONSTRUCTION OPERATIONS. TREES OR SHRUBS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN-KIND BY THE CONTRACTOR AT HIS OR HER OWN EXPENSE.
19.

ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS NOTED OTHERWISE.
20.

ALL PROPOSED PERMANENT MARKINGS SHALL BE THERMOPLASTIC.
21.

THE CONTRACTOR IS HEREBY NOTIFIED THAT ADDITIONAL WORK WITHIN THE PROJECT LIMITS MAY BE PERFORMED BY OTHERS.
22.

THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH OTHER CONTRACTORS PERFORMING WORK WITHIN AND AT THE PROJECT LIMITS.
23.

THE CONTRACTOR MAY BE REQUIRED TO PERFORM ITEMS OF WORK OUT OF NORMAL SEQUENCE AND SCHEDULE, AS REQUIRED BY THE ENGINEER, IN ORDER TO MEET THE OVERALL PROJECT SCHEDULE.
24.

THE CONTRACTOR SHALL BE REQUIRED TO PROCURE RELATED ITEMS WITHOUT ADVERSELY IMPACTING THE PROJECT SCHEDULE; THEREFORE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT THE APPROPRIATE SHOP DRAWINGS WITH SUFFICIENT LEAD TIME FOR PROCESSING IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
25.

WETLAND RESOURCES MUST BE PROTECTED FROM SILTATION THROUGHOUT THE PROJECT. ALL EROSION CONTROLS MUST BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO ANY CONSTRUCTION OR EARTHWORK.
26.

THE CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND SILTATION BARRIERS TO PROTECT ALL RESOURCE AREAS AND BUFFER ZONES AS APPLICABLE.
27.

ALL EROSION CONTROLS BUST BE CHECKED/REPAIRED, AND ANY SILTATION REMOVED AFTER EACH RAIN EVENT.
28.

ALL PROPOSED PAVEMENT MARKINGS SHALL MATCH EXISTING MARKINGS AT THE LIMITS OF WORK.
29.

PRIOR WRITTEN NOTICE OF AT LEAST 48 HOURS SHALL BE GIVEN BY THE CONTRACTOR TO AFFECTED MUNICIPAL WATER AND FIRE DEPARTMENTS, WITH A COPY OF SUCH NOTICE SUBMITTED TO THE ENGINEER, BEFORE ANY WATER MAIN IS SHUT OFF AND IN NO CASE SHALL A GATE OR HYDRANT BE OPENED OR SHUT WITHOUT PROPER AUTHORIZATION.
30.

THE CONTRACTOR SHALL COORDINATE ALL ARRANGEMENTS FOR THE ALTERATION AND/OR ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITY THROUGH THE MASSDOT HIGHWAY DIVISION UTILITY SECTION.
31.

WITHIN AREAS OF RESURFACING OR RECONSTRUCTION, ALL EXISTING DRAINAGE MANHOLES, CATCH BASINS, SEWER MANHOLES, AND WATER GATES SHALL BE ADJUSTED TO PROPOSED LINE AND GRADE UNLESS OTHERWISE NOTED ON THE PLANS.
32.

SHOP DRAWINGS OF ALL CASTINGS, PRECAST CONCRETE STRUCTURES, PIPE, AND OTHER MANUFACTURED ITEMS SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER, IN CONFORMANCE WITH CONTRACT SPECIFICATIONS, AND SAID APPROVAL SHALL BE REQUIRED PRIOR TO INITIATING PROCUREMENT OF MATERIALS.
33.

ALL DRAINAGE STRUCTURES TO BE ABANDONED SHALL BE FILLED WITH GRAVEL AND ALL CONNECTIONS SHALL BE PLUGGED AT THE PIPE LOCATIONS WITH A CEMENT CONCRETE MASONRY PLUG.
34.

FINAL LOCATION OF TRAFFIC SIGNS AND SUPPORTS AS SHOWN IN THE PLANS SHALL BE FIELD-CONFIRMED BY THE ENGINEER PRIOR TO INSTALLATION.

WHEELCHAIR RAMP NOTES

1.

ALL WHEELCHAIR RAMPS SHALL CONFORM TO THE REQUIREMENTS OF THE ARCHITECTURAL ACCESS BOARD (A.A.B) AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.).
2.

ALL PROPOSED CURB FOR WHEELCHAIR RAMP TRANSITIONS SHALL BE CUT AND TRANSITIONED AS NECESSARY TO PROVIDE THE CORRECT TRANSITION LENGTHS FOR EACH WHEELCHAIR RAMP, AS SHOWN ON WHEELCHAIR RAMP DETAILS OR AS REQUIRED BY THE ENGINEER. ANY EXISTING CURB INLETS IN AREAS OF NEW WHEELCHAIR RAMP TRANSITIONS, SHALL BE REMOVED AND REPLACED WITH APPROPRIATE TRANSITION CURB, AS DIRECTED BY THE ENGINEER.
3.

IN NO CASE, EXCEPT MAXIMUM LENGTH HIGH SIDE TRANSITIONS, SHALL ANY TRANSITION SLOPE OF ANY WHEELCHAIR RAMP EXCEED 7.5%. PROPOSED WHEELCHAIR RAMP SLOPES, ESPECIALLY HIGH SIDE TRANSITIONS, SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO POURING OF CONCRETE, AND ADJUSTED, IF NECESSARY, AS REQUIRED BY THE ENGINEER.
4.

IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET, IS WITHIN THE ACTUAL WHEELCHAIR RAMP PATH, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OF THE STRUCTURE COVER SHALL BE FLUSH WITH THE RAMP SURFACE AND SHALL MATCH THE SLOPE OF THE NEW WHEELCHAIR RAMP EXACTLY, AS REQUIRED BY THE ENGINEER.
5.

THE LOCATION OF PROPOSED WHEELCHAIR RAMPS ARE SHOWN ON CONSTRUCTION PLANS AND THE WHEELCHAIR RAMP DETAILS. EXACT LOCATIONS MAY BE ADJUSTED, IF REQUIRED, BY THE ENGINEER IN THE FIELD.
6.

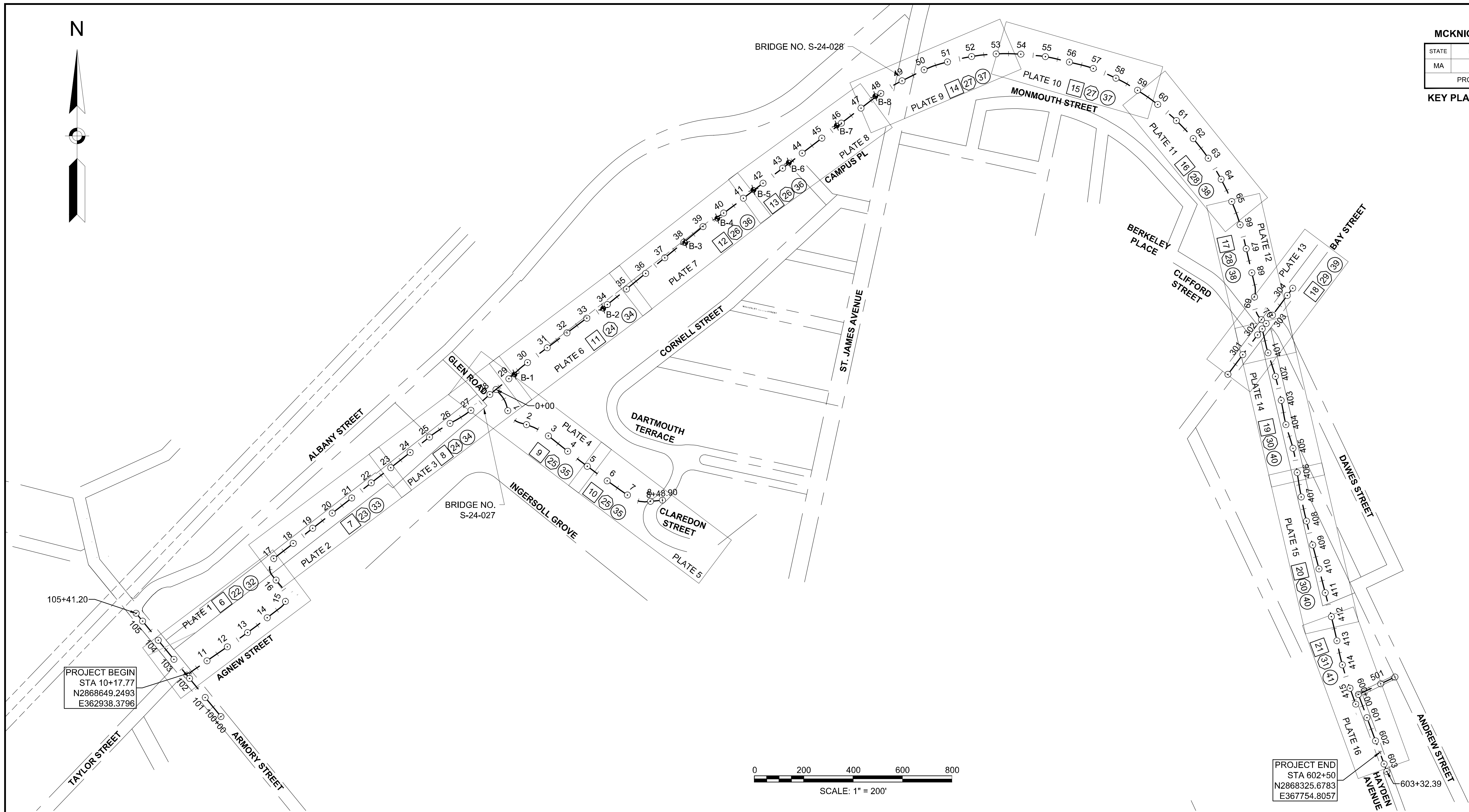
ALL PROPOSED WHEEL CHAIR RAMPS SHALL HAVE DETECTABLE WARNING PANELS INSTALLED IN ACCORDANCE WITH MASSDOT STANDARD DRAWING E 107.6.5.

BUCKEYE ROW TEST PIT SUMMARY					
TEST PIT #	DATE	LOCATION	APPROX. STATION	APPROX. EXIST. GROUND SURFACE ELEVATION	APPROX. DEPTH TO TOP OF PIPE BELOW GRADE
TP-1	4/7/2021	AGNEW ST.	STA 705+47 6' RT	151.5	30"
TP-2	4/8/2021	AGNEW ST.	STA 705+70 9' LT	150.8	51"
TP-3A	4/7/2021	MCKNIGHT TRAIL WEST	STA 16+93 9' RT	145.8	NOT LOCATED: >72" *
TP-4A	4/8/2021	MCKNIGHT TRAIL WEST	STA 16+98 10' LT	145.3	NOT LOCATED: >72"
TP-5	4/7/2021	MCKNIGHT TRAIL WEST	STA 17+63 11' RT	147.0	NOT LOCATED: >72" *
TP-6	4/7/2021	MCKNIGHT TRAIL WEST	STA 18+60 0' RT	147.7	48"
TP-7	4/7/2021	MCKNIGHT TRAIL WEST	STA 20+12 5.5' LT	149.7	42"
TP-8	4/7/2021	MCKNIGHT TRAIL WEST	STA 20+75 8' LT	150.6	26"
TP-9	4/7/2021	MCKNIGHT TRAIL WEST	STA 26+75 4' LT	159.3	36" *
TP-10A	4/8/2021	MCKNIGHT TRAIL WEST	STA 26+20 5' LT	159.0	57"
TP 11-13 OMITTED FROM PROJECT					
TP-14A	4/8/2021	MCKNIGHT TRAIL WEST	STA 69+77 36' LT	205.7	35"
TP-14B	4/8/2021	MCKNIGHT TRAIL WEST	STA 69+75 32' LT	205.7	27"
TP-15A	4/8/2021	MCKNIGHT TRAIL EAST	STA 400+19 30' LT	205.5	39"
TP-15B	4/8/2021	MCKNIGHT TRAIL EAST	STA 400+19 27' LT	205.5	36"
TP-15C	4/8/2021	MCKNIGHT TRAIL EAST	STA 400+19 23' LT	205.5	35"
TP-16	4/8/2021	MCKNIGHT TRAIL EAST	STA 414+95 8' LT	205.1	43"
TP-17	4/8/2021	HAYDEN AVENUE	STA 600+71 30' RT	204.7	34"

* ORANGE WARNING MESH MARKER OBSERVED IN TEST PIT. BUCKEYE PIPELINE REPRESENTATIVE INDICATED THE MARKER WAS INSTALLED IN SOME AREAS OF THE PIPELINE



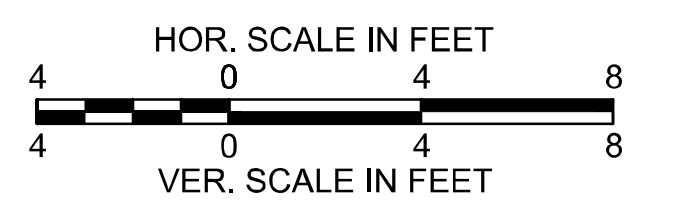
SPRINGFIELD MCKNIGHT COMMUNITY TRAIL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	66
PROJECT FILE NO.		608157	
KEY PLAN & BORING LOCATIONS			



SHEET NUMBER LEGEND

- XX CONSTRUCTION PLAN
- XX CURB TIE PLAN
- XX GRADING PLAN
- XX DRAINAGE & UTILITY PLAN
- XX SIGN & PAVEMENT MARKING PLAN
- C - # CORING LOCATION
- B - # BORING LOCATION

	PLATE 1	PLATE 2	PLATE 3	PLATE 4	PLATE 5	PLATE 6	PLATE 7	PLATE 8	PLATE 9	PLATE 10	PLATE 11	PLATE 12	PLATE 13	PLATE 14	PLATE 15	PLATE 16
CONSTRUCTION PLANS & PROFILES	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
UTILITY PLANS	22	23	24	25	25	24	26	26	27	27	28	28	29	30	30	31
SIGN & PAVEMENT MARKING PLANS	32	33	34	35	35	34	36	36	37	37	38	38	39	40	40	41
TRAFFIC SIGNAL PLAN	-	-	-	-	-	-	-	-	-	-	-	-	42	-	-	-



SPRINGFIELD MCKNIGHT COMMUNITY TRAIL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	66
PROJECT FILE NO. 608157			

TYPICAL SECTIONS

PAVEMENT NOTES

SHARED USE PATH (HMA)

SURFACE COURSE: 1 1/2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER

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

SUBBASE: 8" GRAVEL BORROW, TYPE B OVER 24" SPECIAL BORROW (AS REQUIRED IN AREAS OF WETLANDS AND OTHER UNSUITABLE MATERIAL)

PROPOSED MICROMILLING & OVERLAY

SURFACE COURSE: 1 3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER

PAVEMENT MILLING: 1 3/4" ± 3/4" MIN. PAVEMENT MICROMILLING

PROPOSED FULL DEPTH PAVEMENT (GREATER THAN 4' WIDE)

SURFACE COURSE: 1 3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER

INTERMEDIATE COURSE: 2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

BASE COURSE: 4" SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5)

SUBBASE: 8" GRAVEL BORROW (TYPE B)

PROPOSED FULL DEPTH PAVEMENT (LESS THAN 4' WIDE)

SURFACE COURSE: 1 3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER

INTERMEDIATE COURSE: 2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

BASE COURSE: 6" HIGH EARLY STRENGTH CEMENT CONCRETE OVER

SUBBASE: 8" GRAVEL BORROW (TYPE B)

PROPOSED HMA WALK

SURFACE COURSE: 1" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER

INTERMEDIATE COURSE: 1 1/2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

SUBBASE: 8" GRAVEL BORROW, TYPE B

PROPOSED CEMENT CONCRETE WHEELCHAIR RAMPS

SURFACE COURSE: 4" CEMENT CONCRETE OVER

SUBBASE: 8" GRAVEL BORROW, TYPE B

PROPOSED HMA DRIVEWAY AND HMA PARKING

SURFACE COURSE: 1 1/2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER

INTERMEDIATE COURSE: 2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5)

SUBBASE: 8" GRAVEL BORROW, TYPE B

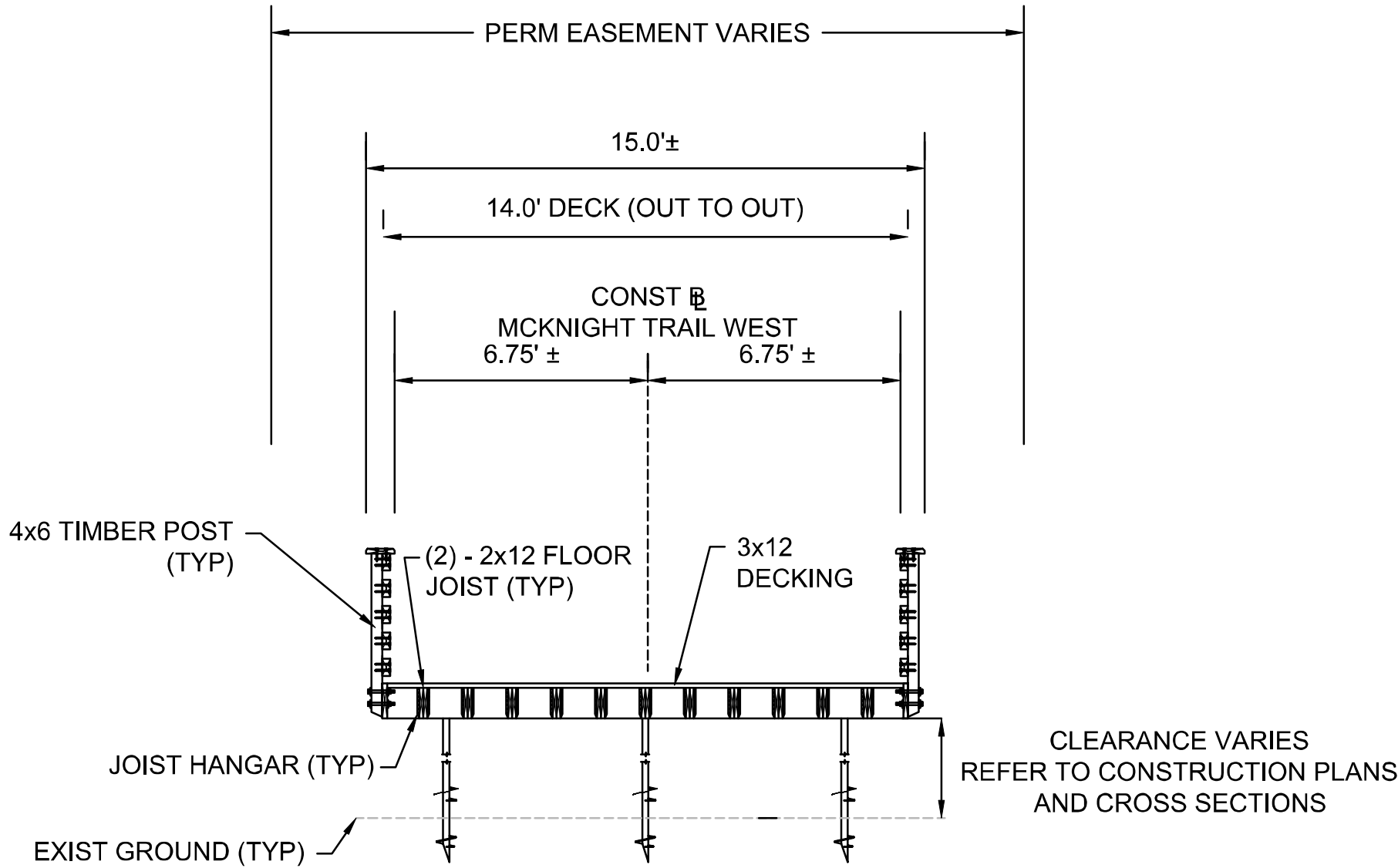
GRAVEL PARKING

SURFACE COURSE: 8" GRAVEL BORROW, TYPE B

NOTES:

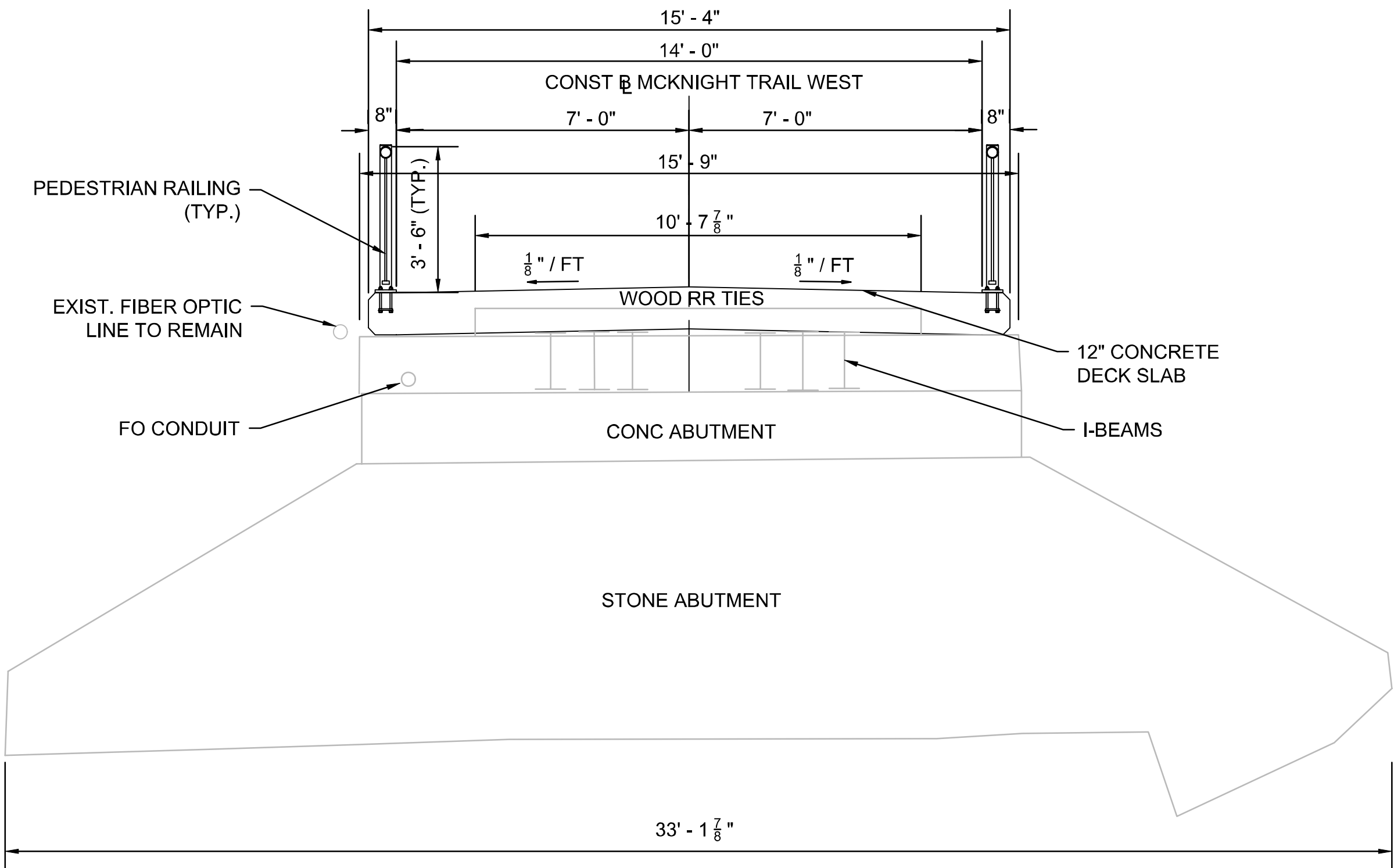
1. ASPHALT EMULSION FOR TACK COAT AT 0.07 GAL/SY OVER MICROMILLED SURFACE AND AT 0.05 GAL/SY OVER SMOOTH PAVEMENTS

These tack rates are outdated. See Section 450.43G(2) of the Standard Specifications



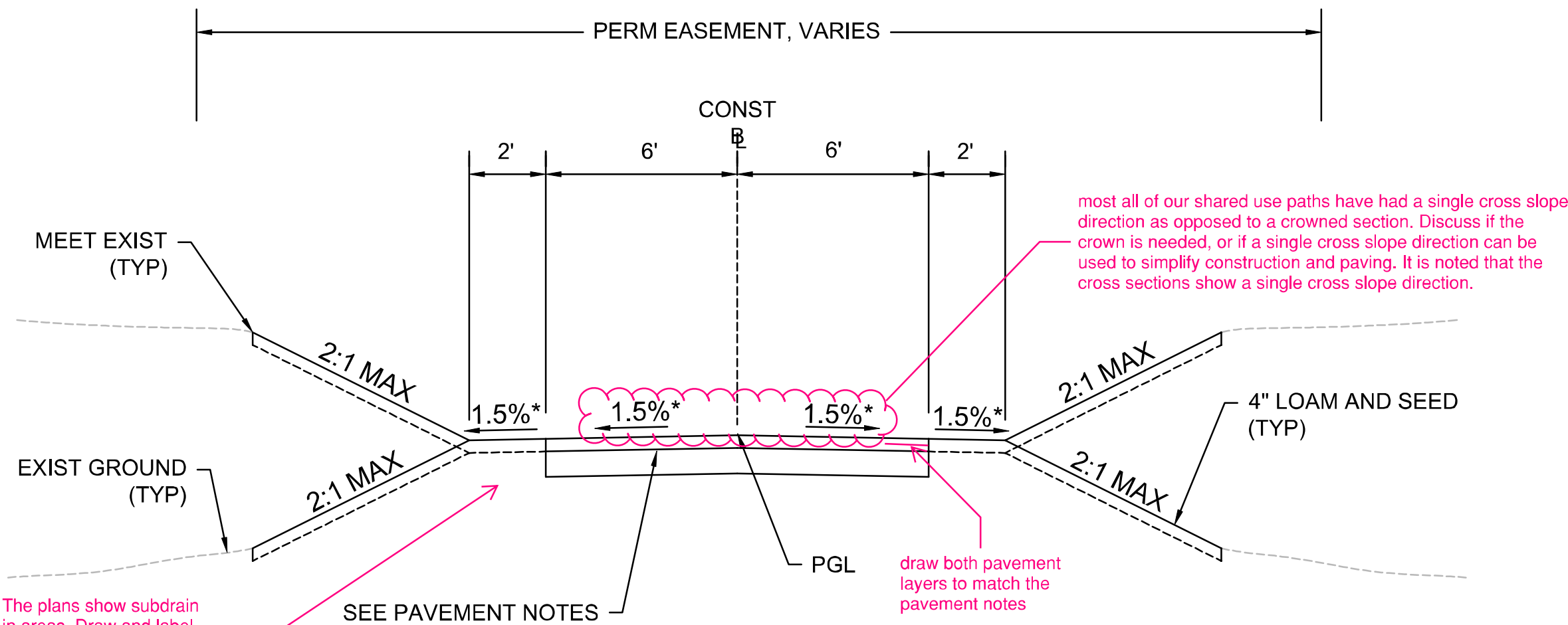
PEDESTRIAN FOOTBRIDGE

STA 33+01 TO STA 47+87
MCKNIGHT COMMUNITY TRAIL
NOT TO SCALE



GLEN ROAD BRIDGE
TYPICAL SECTION

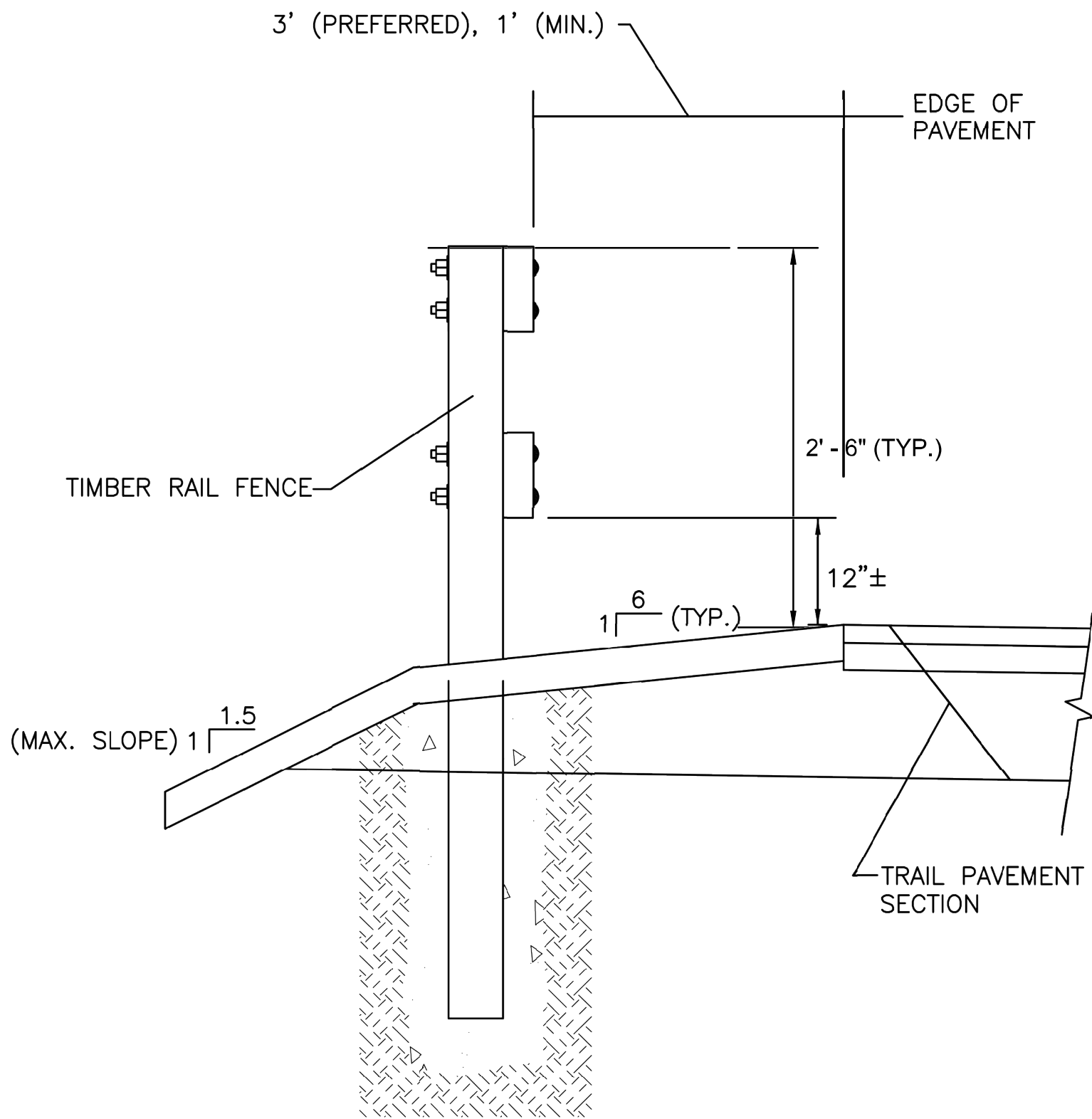
STA 27+59 TO STA 27+77
MCKNIGHT COMMUNITY TRAIL
NOT TO SCALE



SHARED USE PATH (HMA)

STA 400+32 TO STA 415+37
STA 47+87 TO STA 69+97
STA 14+74 TO STA 33+01
MCKNIGHT COMMUNITY TRAIL

STA 0+36 TO STA 7+85
GLEN ROAD CONNECTOR TRAIL
NOT TO SCALE

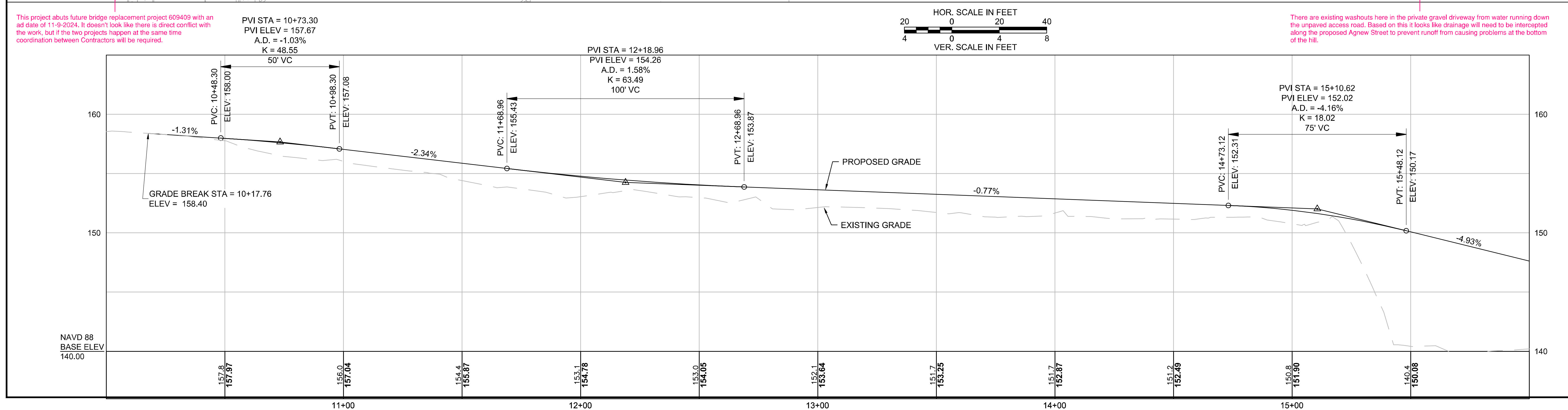
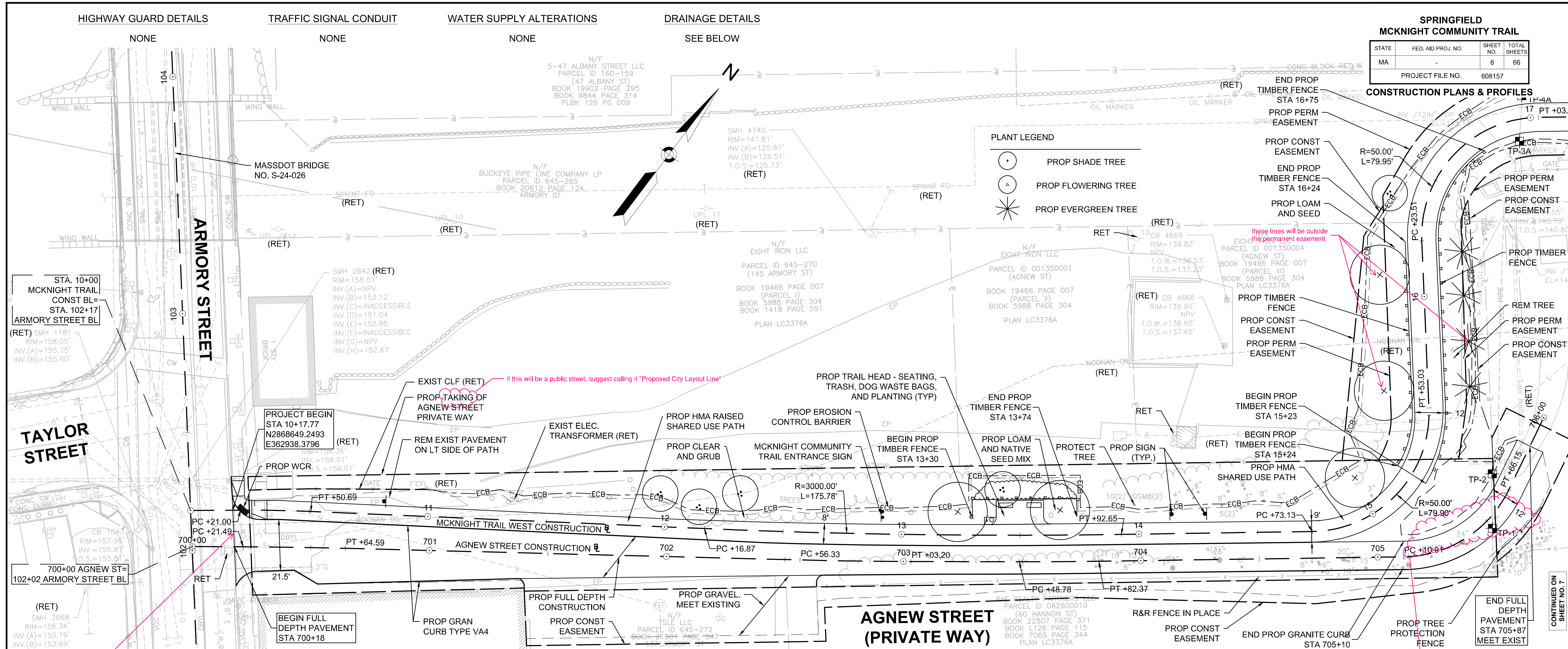


TIMBER FENCE
TYPICAL SECTION

MCKNIGHT COMMUNITY TRAIL
NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5%

SEE CONSTRUCTION PLANS FOR LIMITS



HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

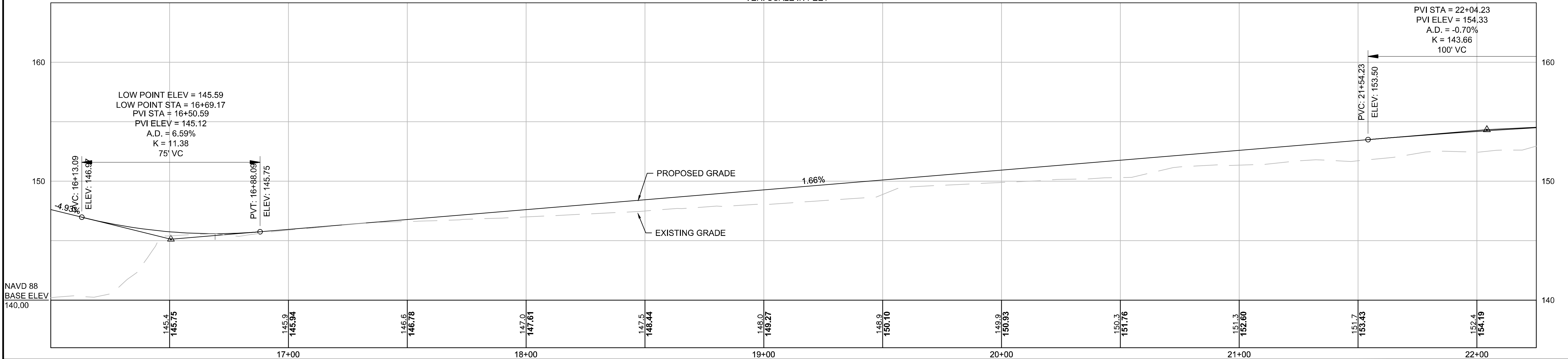
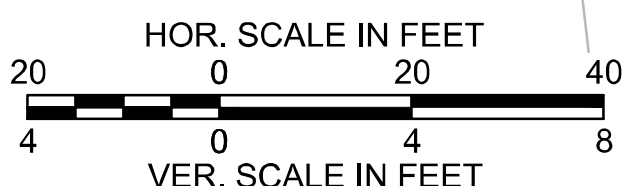
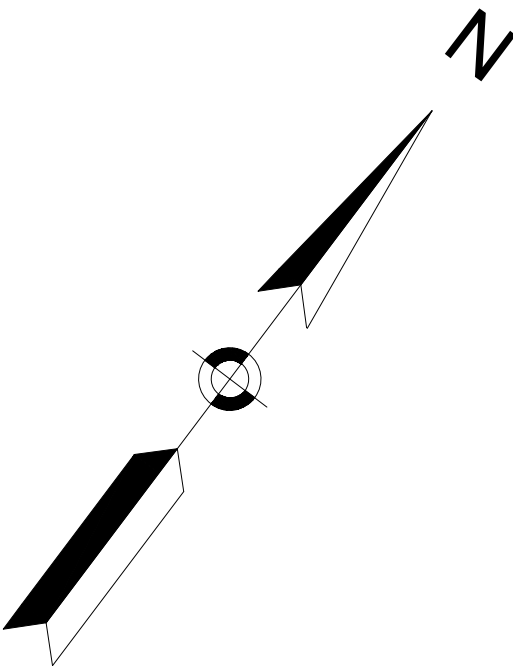
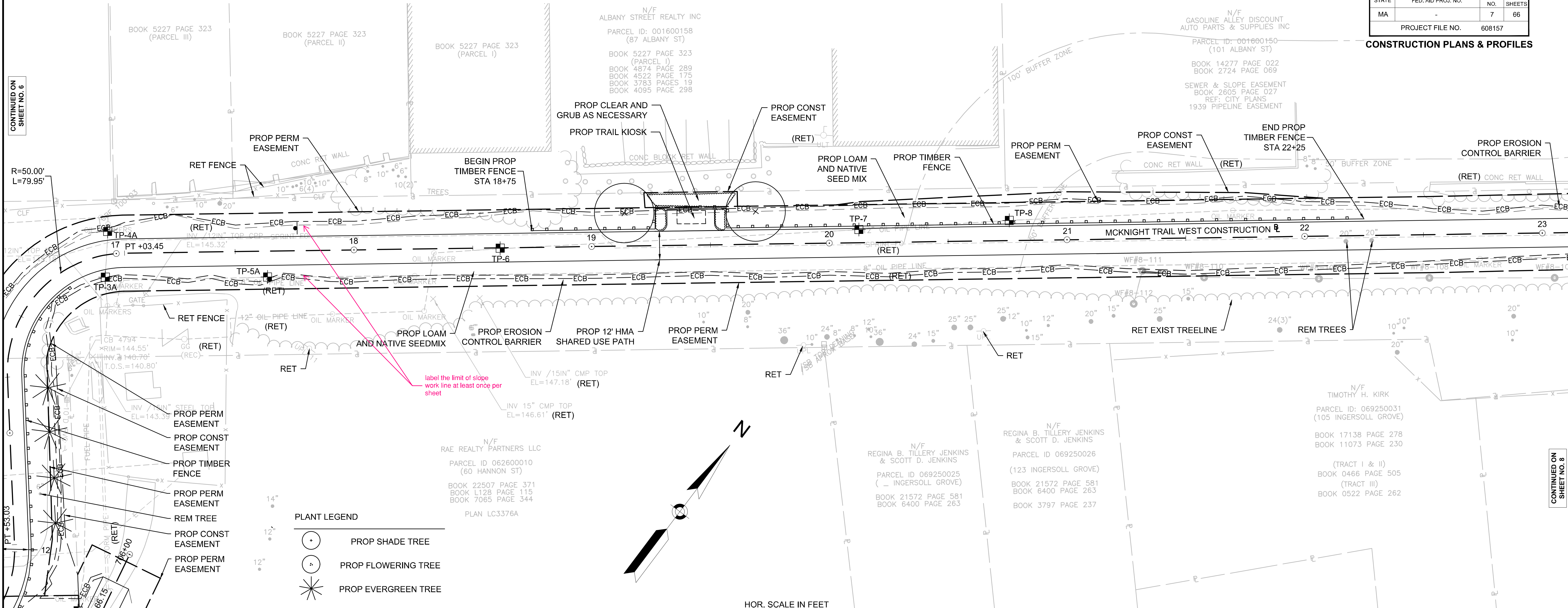
SEE BELOW

SPRINGFIELD MCKNIGHT COMMUNITY TRAIL

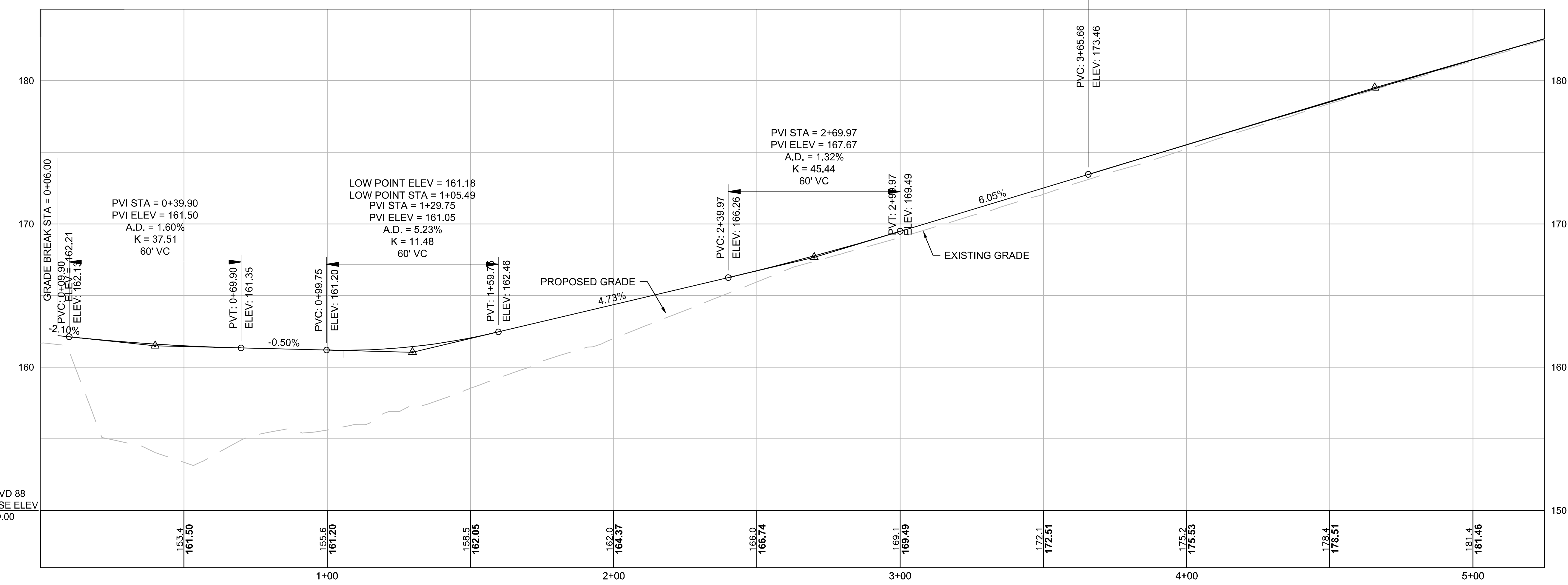
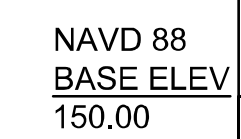
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	66
PROJECT FILE NO. 608157			

CONSTRUCTION PLANS & PROFILES

CONTINUED ON
SHEET NO. 6

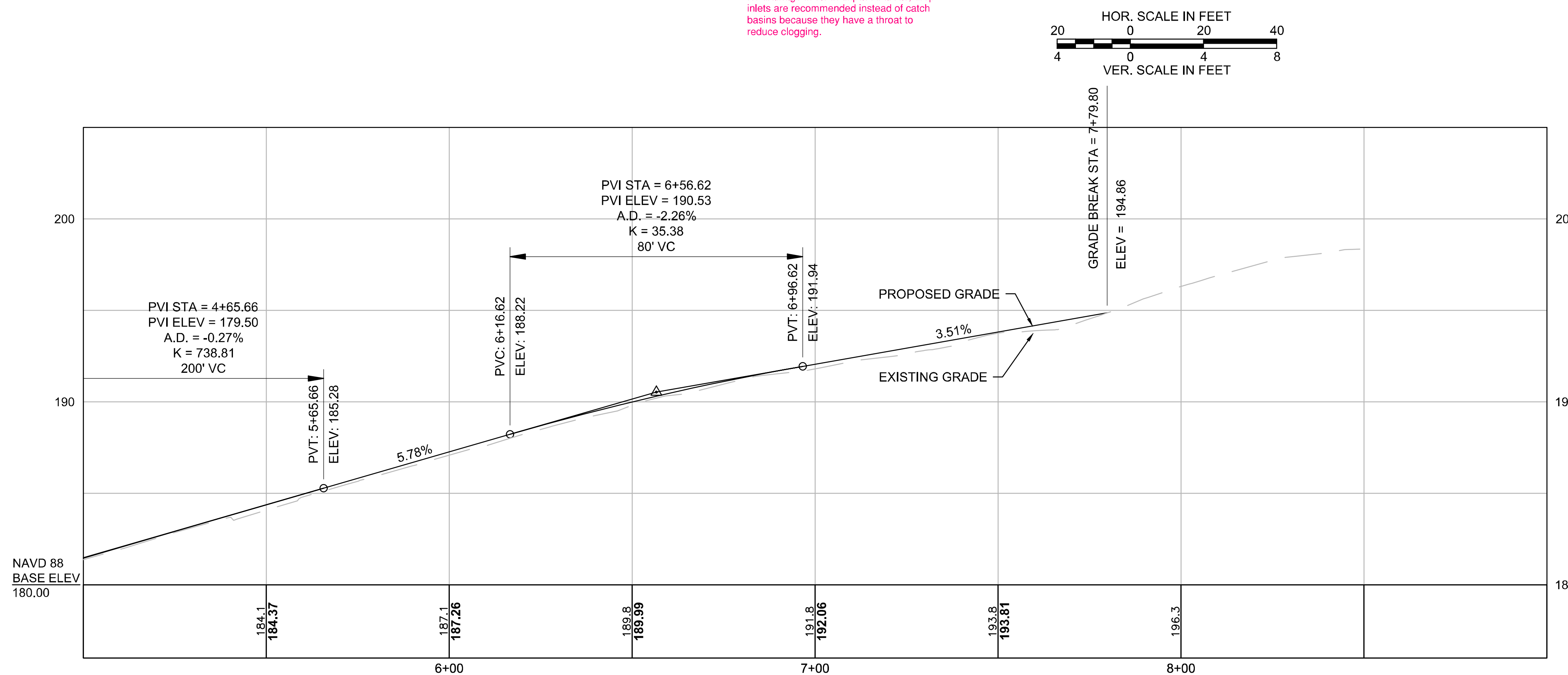
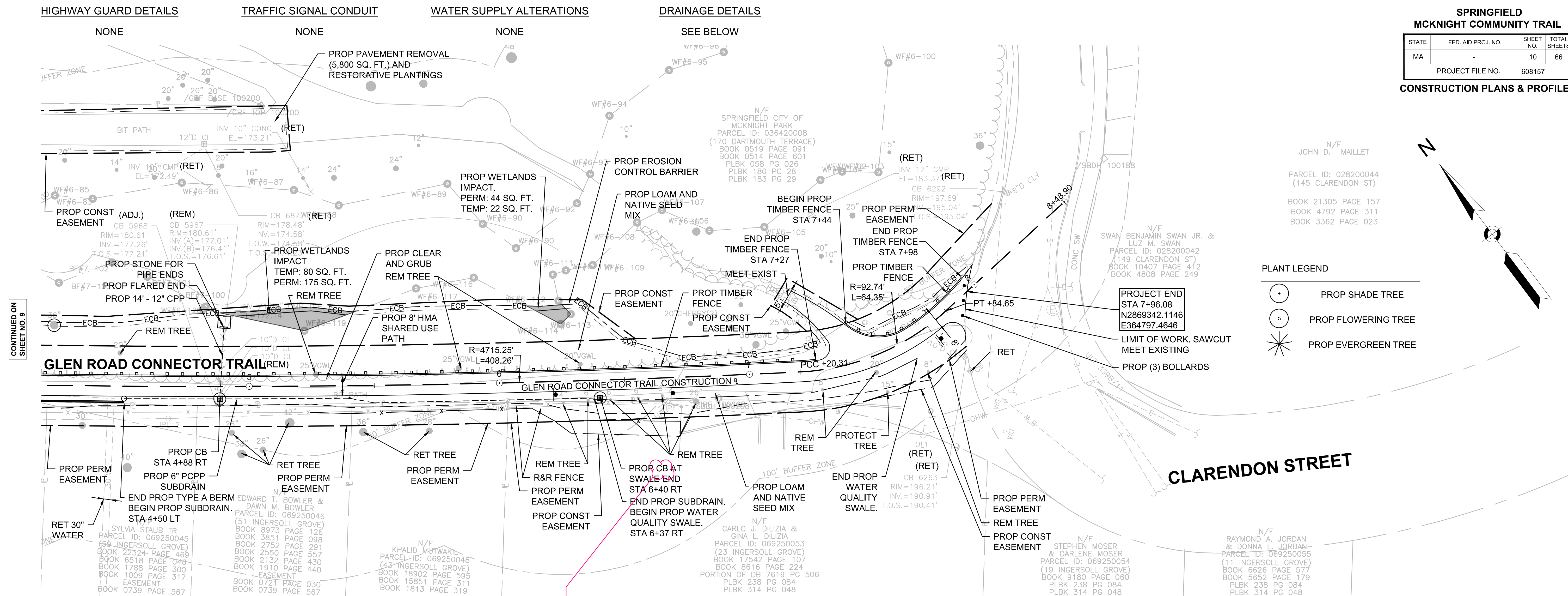


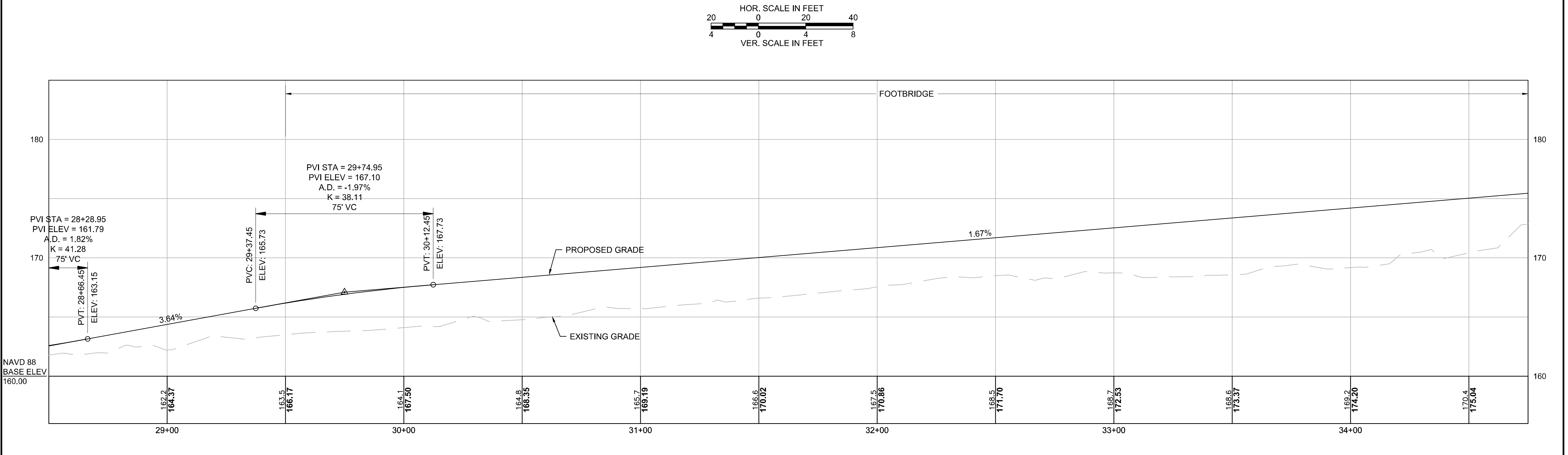
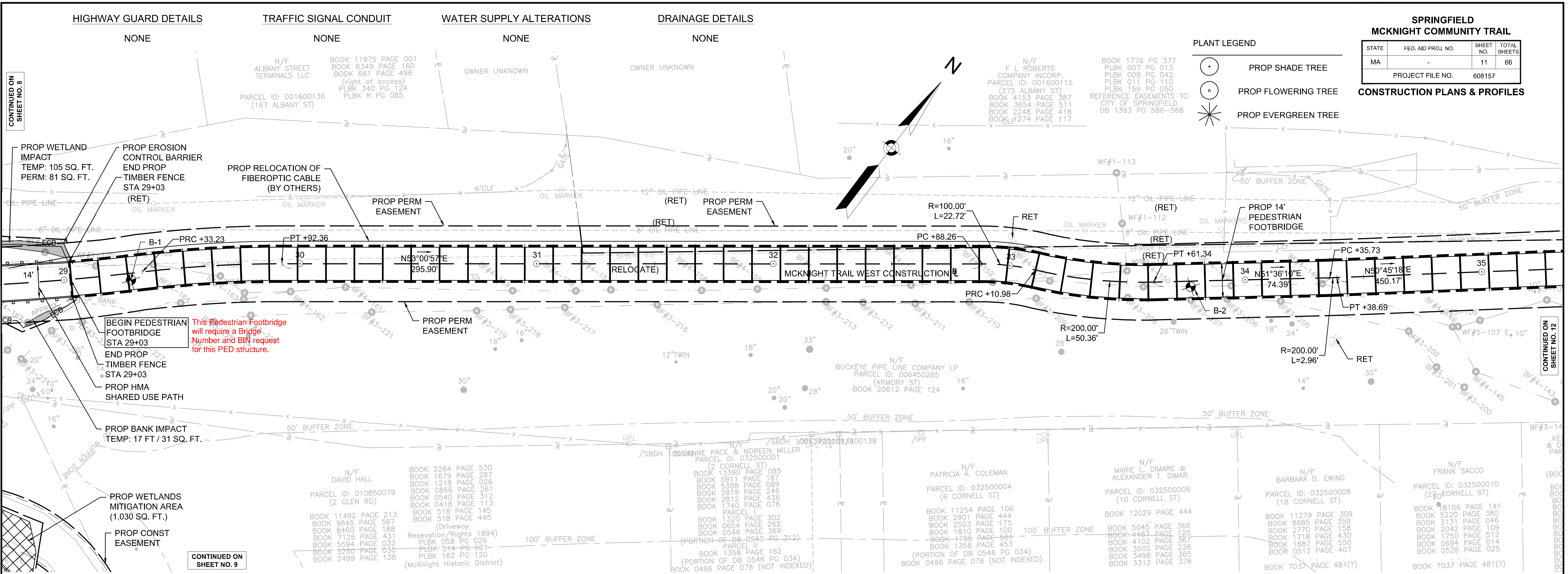
CONTINUED ON
SHEET NO. 8



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	6
PROJECT FILE NO.		608157	

CONSTRUCTION PLANS & PROFILES





HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

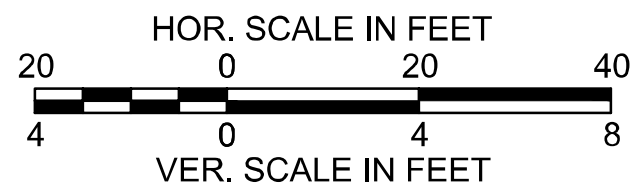
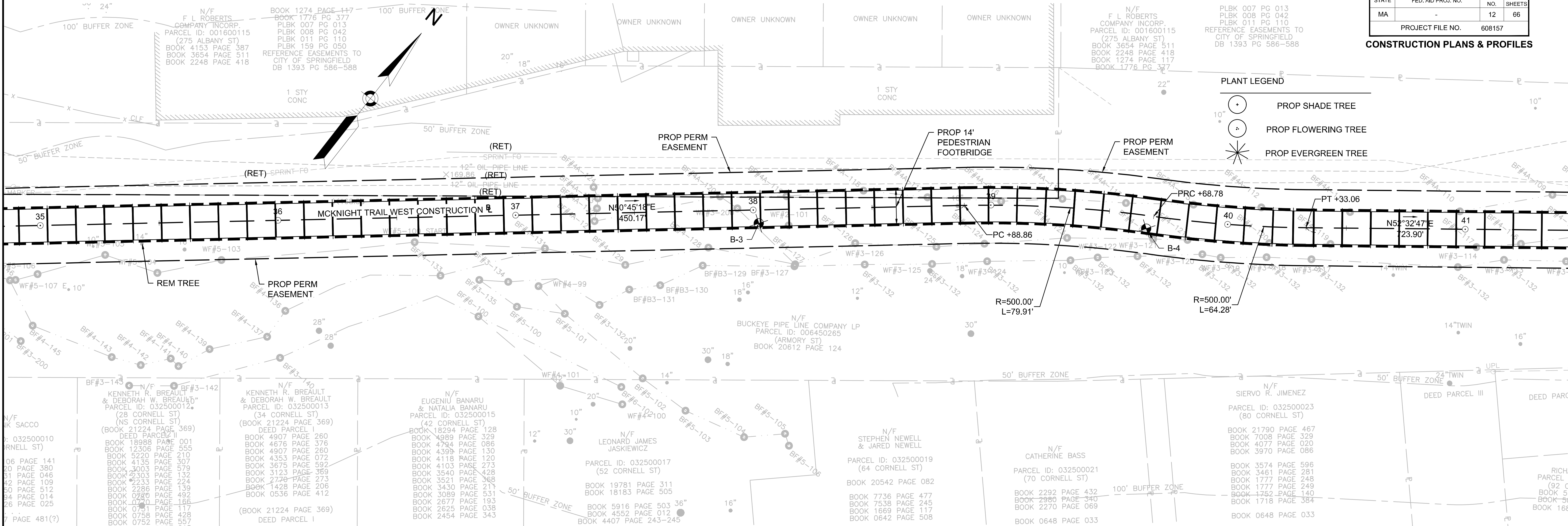
SPRINGFIELD MCKNIGHT COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	66
PROJECT FILE NO.		608157	

CONSTRUCTION PLANS & PROFILES

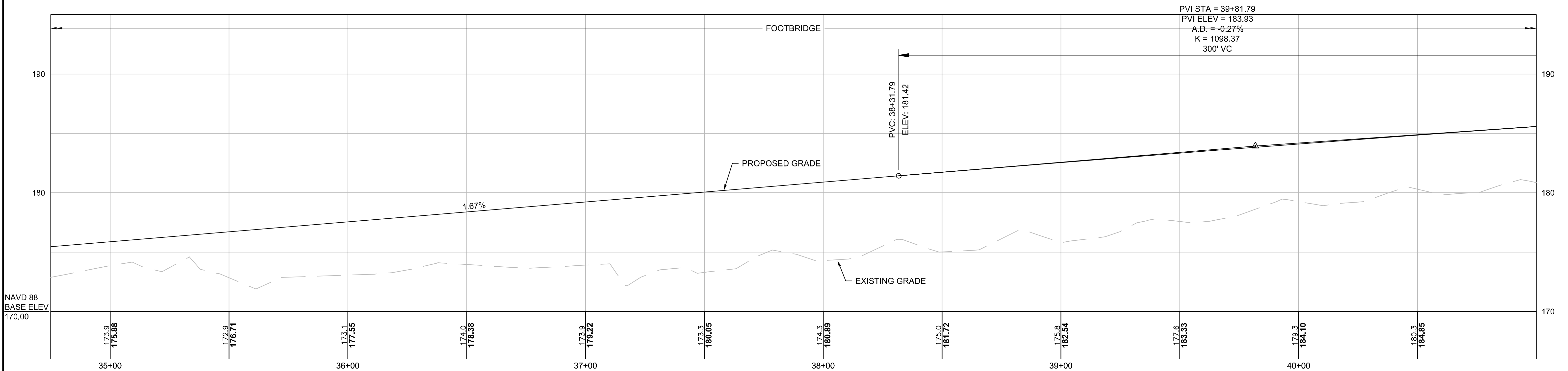
PLANT LEGEND

- PROPOSED SHADE TREE
- PROPOSED FLOWERING TREE
- PROPOSED EVERGREEN TREE



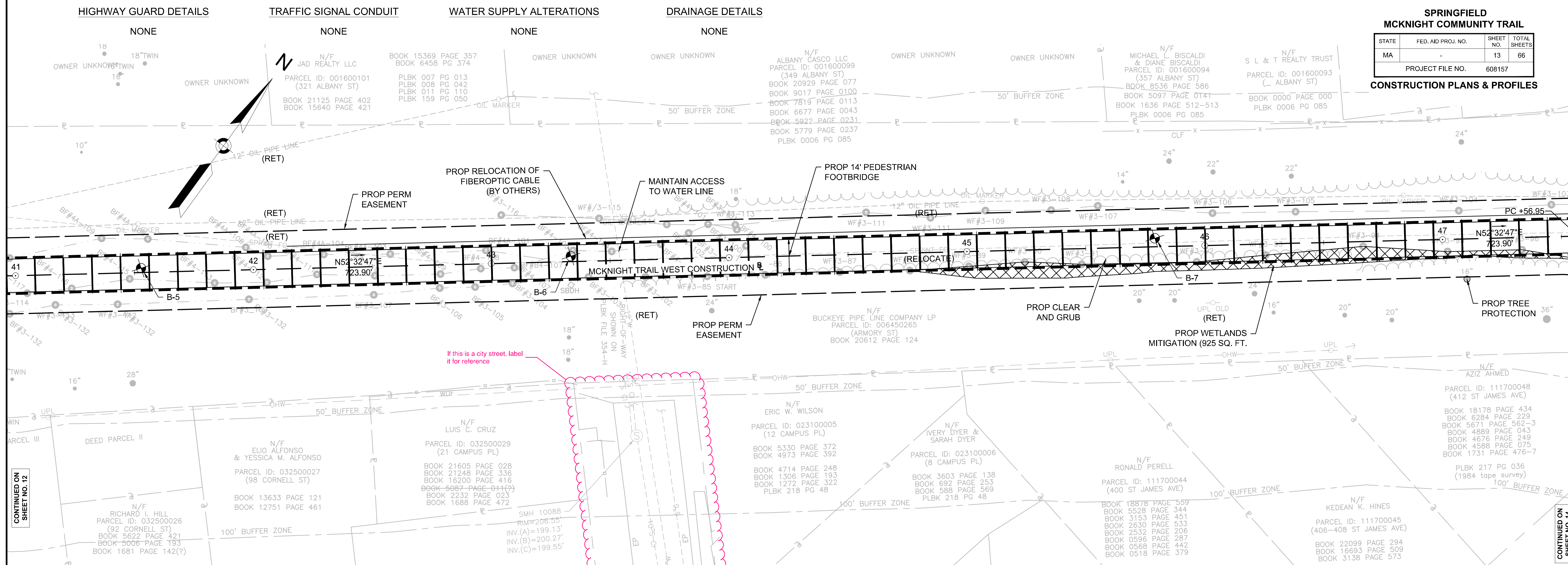
CONTINUED ON
SHEET NO. 11

CONTINUED ON
SHEET NO. 13

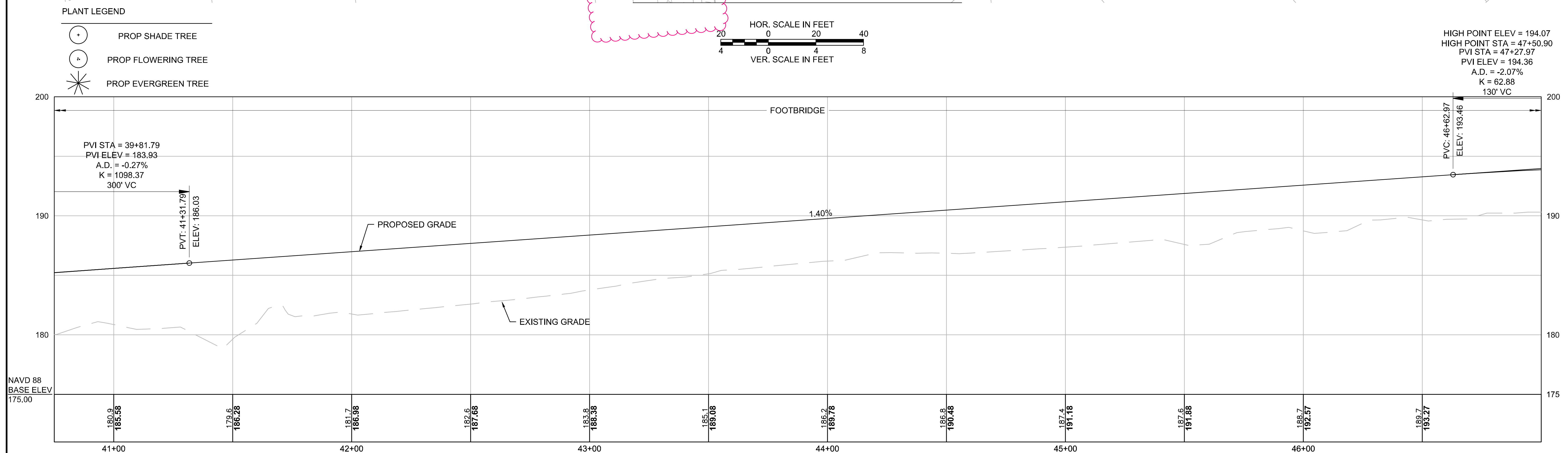


NAVD 88
BASE ELEV
170.00

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	6
PROJECT FILE NO.		608157	



HIGH POINT ELEV = 194.07
HIGH POINT STA = 47+50.90
PVI STA = 47+27.97
PVI ELEV = 194.36
A.D. = -2.07%
K = 62.88
130' VC



HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

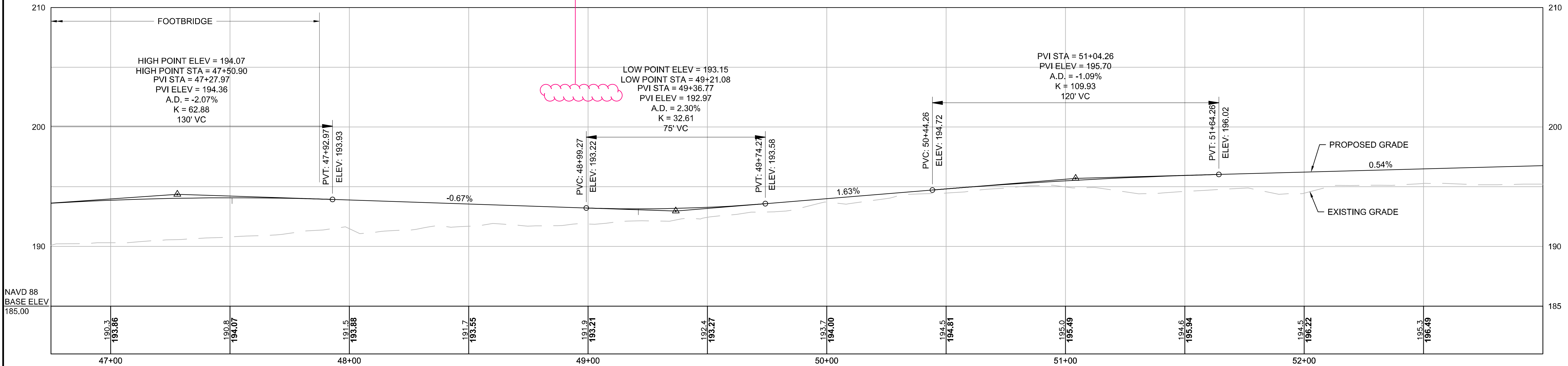
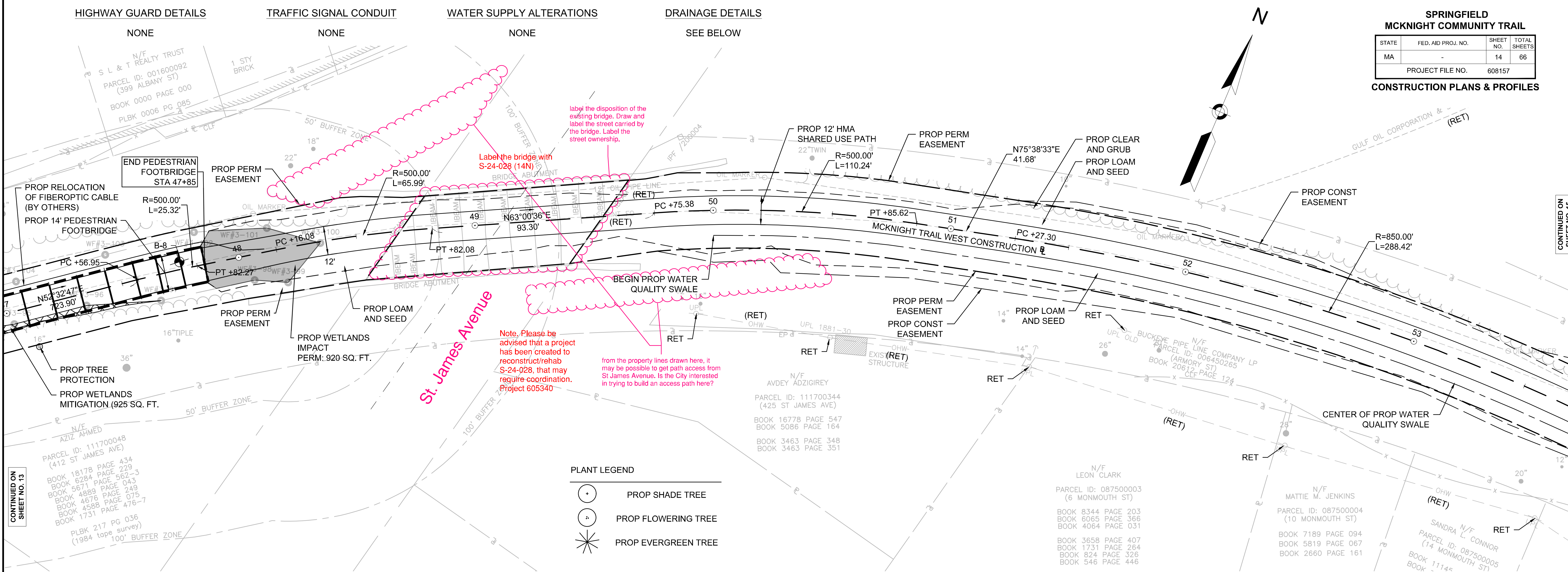
DRAINAGE DETAILS

SEE BELOW

SPRINGFIELD MCKNIGHT COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	66
PROJECT FILE NO. 608157			

CONSTRUCTION PLANS & PROFILES



CONTINUED ON
SHEET NO. 15

CONTINUED ON
SHEET NO. 13

HIGHWAY GUARD DETAILS

NONE

SPRAGUE OPERATING RESOURCES
N/F
LLC

PARCEL ID: 111700320
ST JAMES AV

BOOK 0000 PAGE 000
LC PLAN 29872

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

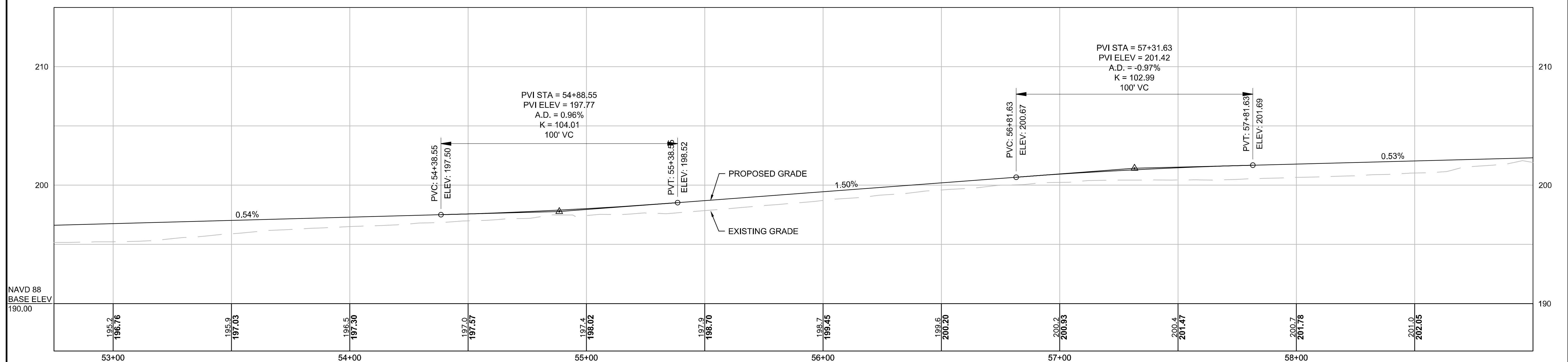
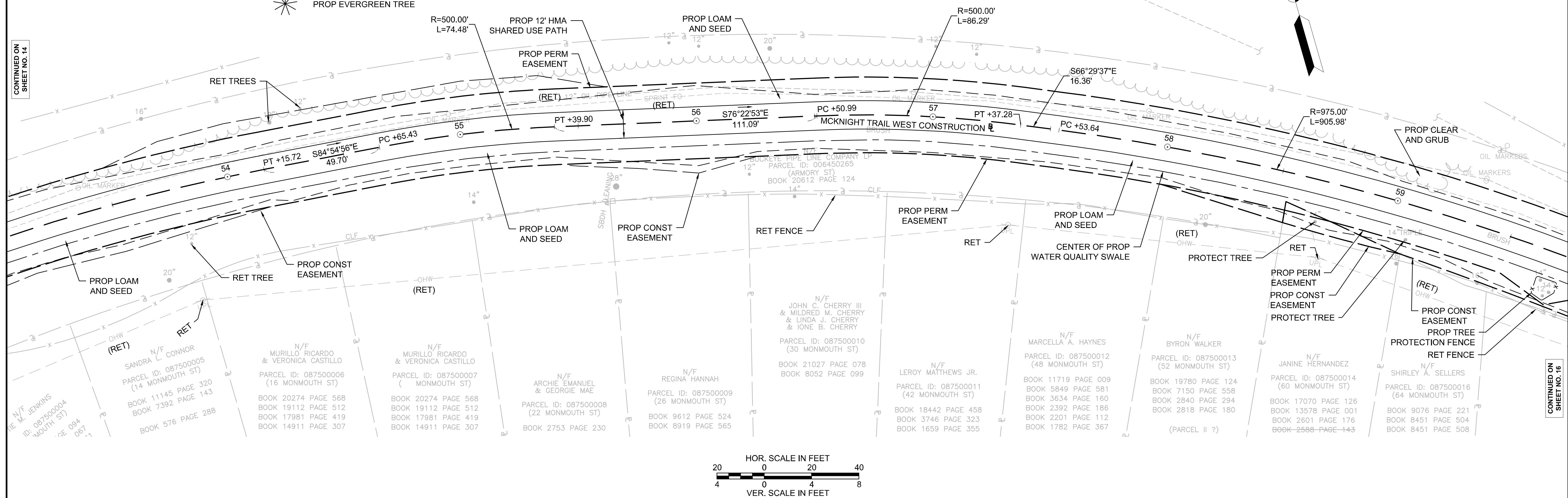
DRAINAGE DETAILS

NONE

**SPRINGFIELD
MCKNIGHT COMMUNITY TRAIL**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	66
PROJECT FILE NO.		608157	

CONSTRUCTION PLANS & PROFILES



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	66
PROJECT FILE NO.		608157	

NAVD 88
BASE ELEV
195.00

PROPOSED GRADE

EXISTING GRADE

0.53%

201.9
202.31

202.2
202.58

202.5
202.84

202.6
203.11

202.9
203.37

203.2
203.64

203.5
203.90

203.7
204.17

204.1
204.43

204.5
204.70

204.8
204.96

204.9
205.23

59+00

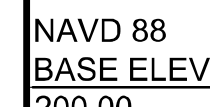
60+00

61+00

62+00

63+00

64+00



HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

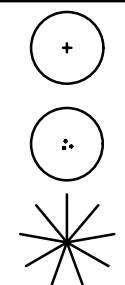
WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW

PLANT LEGEND



PROP SHADE TREE

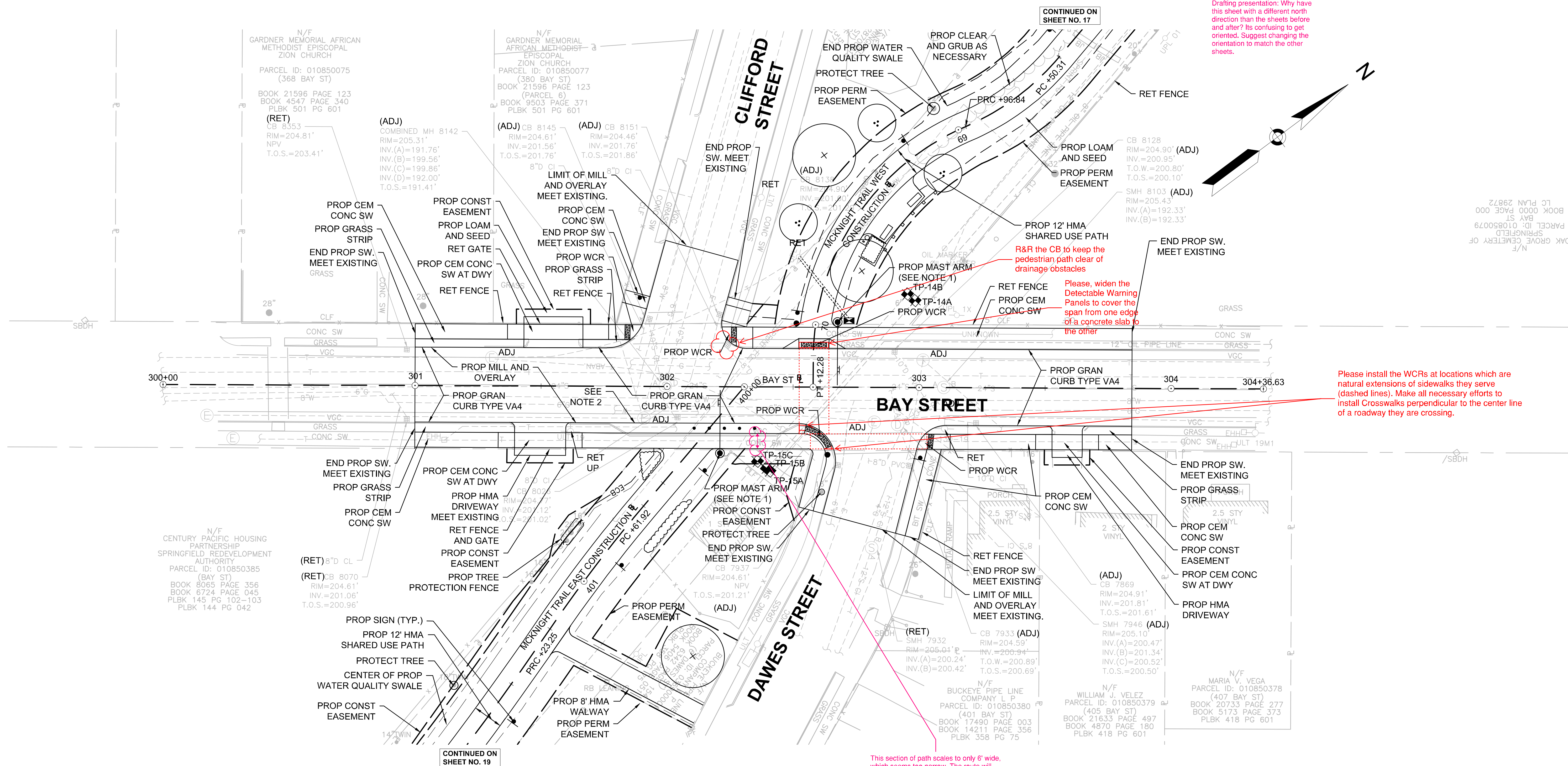
PROP FLOWERING TREE

PROP EVERGREEN TREE

SPRINGFIELD
MCKNIGHT COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	66
PROJECT FILE NO. 608157			

CONSTRUCTION PLANS & PROFILES

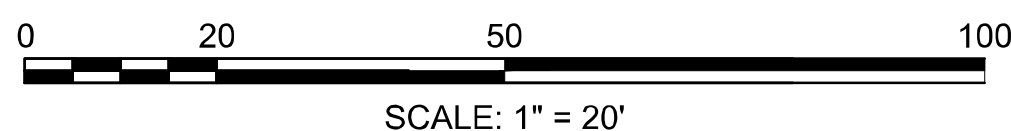


Please install the WCRs at locations which are natural extensions of sidewalks they serve (dashed lines). Make all necessary efforts to install Crosswalks perpendicular to the center line of a roadway they are crossing.

This section of path scales to only 6' wide, which seems too narrow. The route will also require two sharp angle turns for bikes. I think this portion of the design should be reconsidered.

NOTES:

1. TEST PITS SHALL BE REQUIRED FOR ALL PROP. MAST ARMS AND SIGNAL EQUIPMENT FOUNDATIONS AS REQUIRED.
2. THE EXISTING PVTA BUS STOP SHALL BE RELOCATED; LOCATION TBD PENDING COORDINATION WITH PVTA.



HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

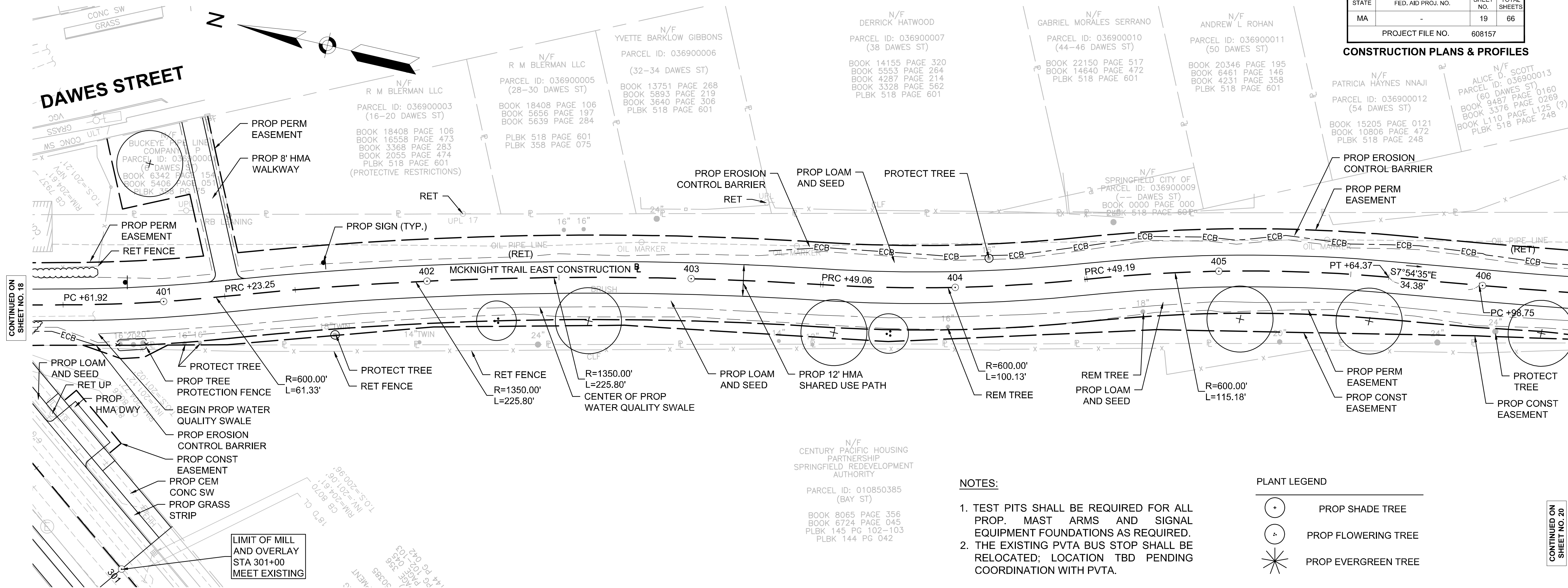
DRAINAGE DETAILS

SEE BELOW

SPRINGFIELD
MCKNIGHT COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	66
PROJECT FILE NO. 608157			

CONSTRUCTION PLANS & PROFILES

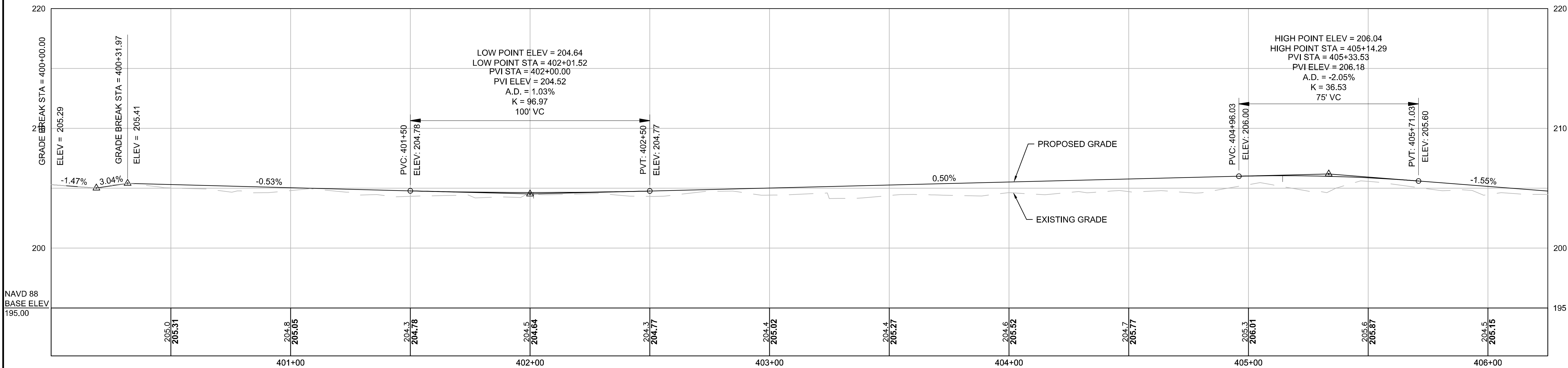
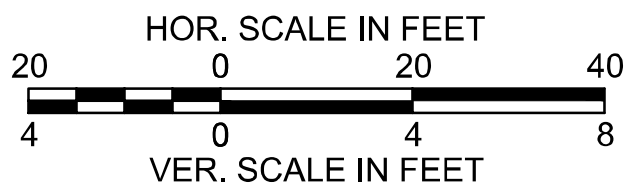


NOTES:

1. TEST PITS SHALL BE REQUIRED FOR ALL PROP. MAST ARMS AND SIGNAL EQUIPMENT FOUNDATIONS AS REQUIRED.
2. THE EXISTING PVTA BUS STOP SHALL BE RELOCATED; LOCATION TBD PENDING COORDINATION WITH PVTA.

PLANT LEGEND

- PROP SHADE TREE
- PROP FLOWERING TREE
- * PROP EVERGREEN TREE



HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

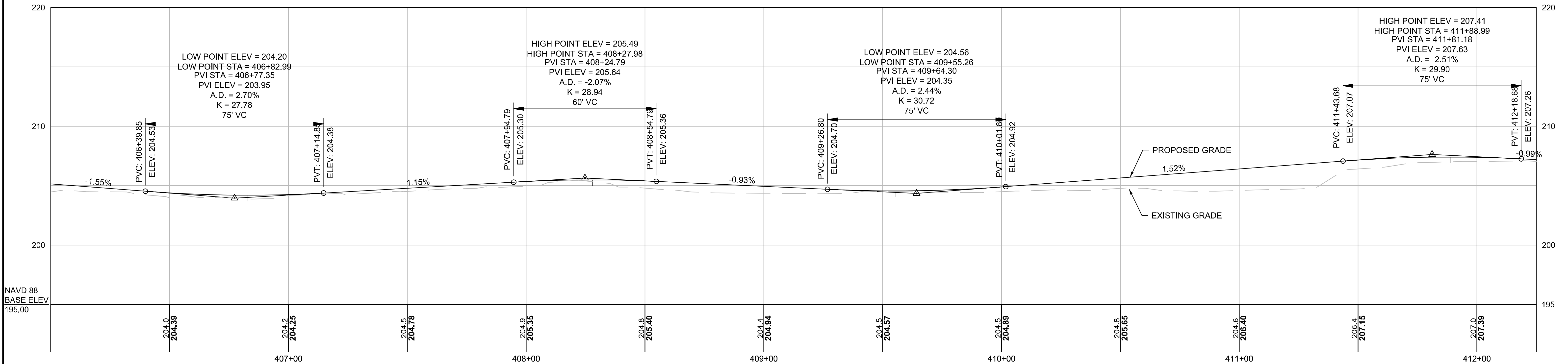
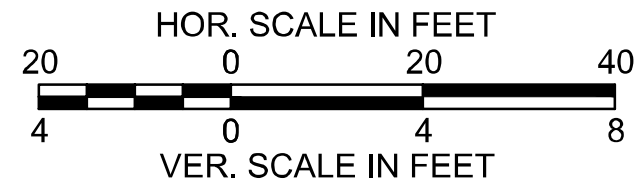
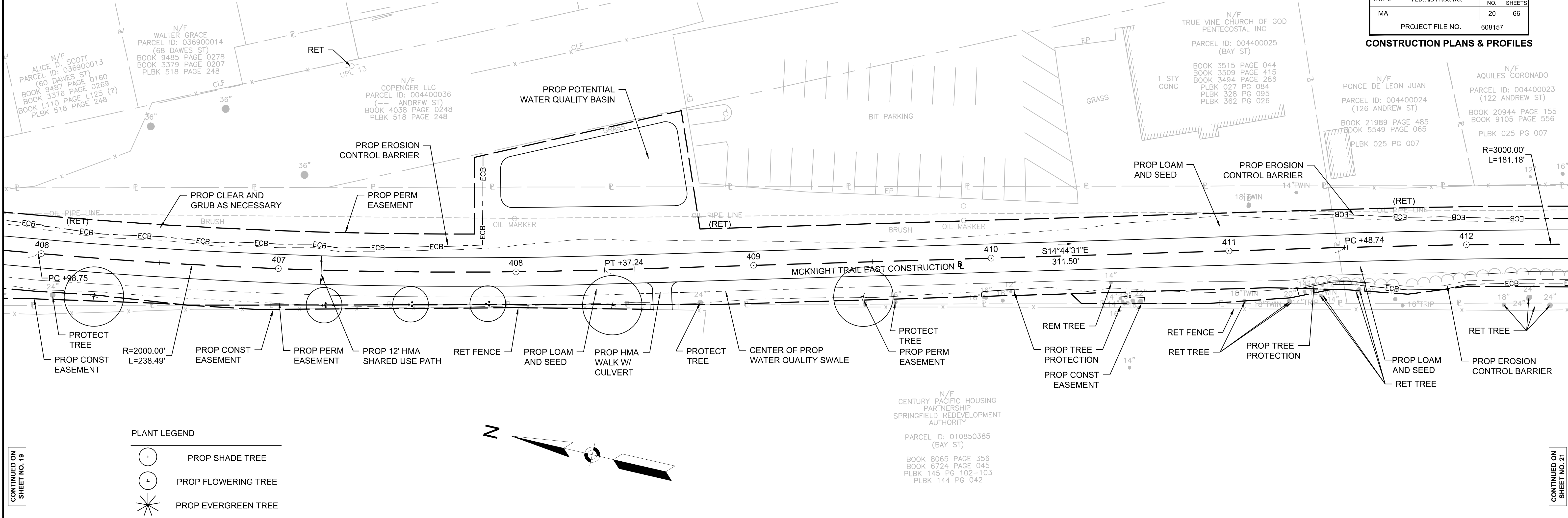
SEE BELOW

SPRINGFIELD
MCKNIGHT COMMUNITY TRAIL

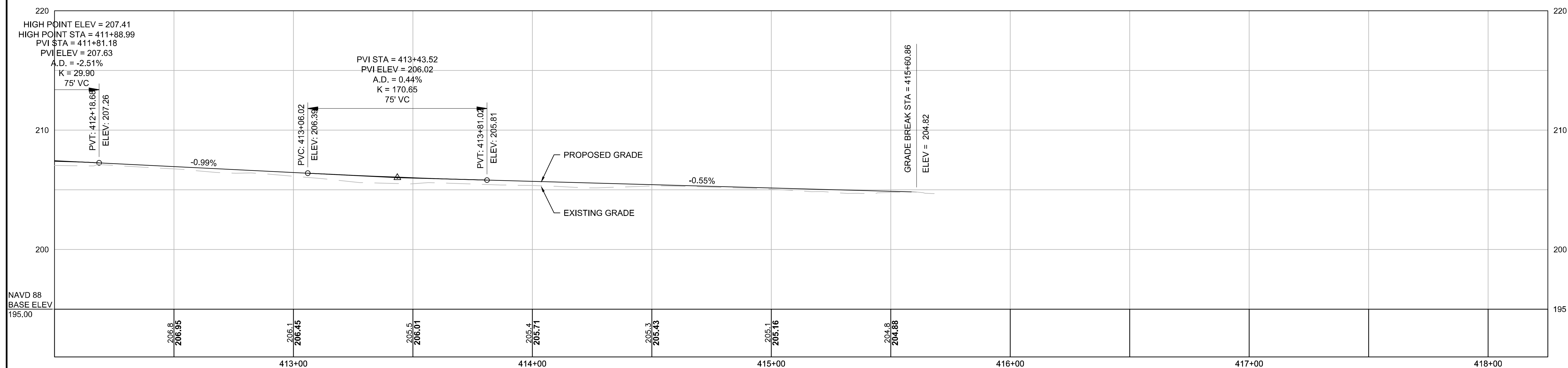
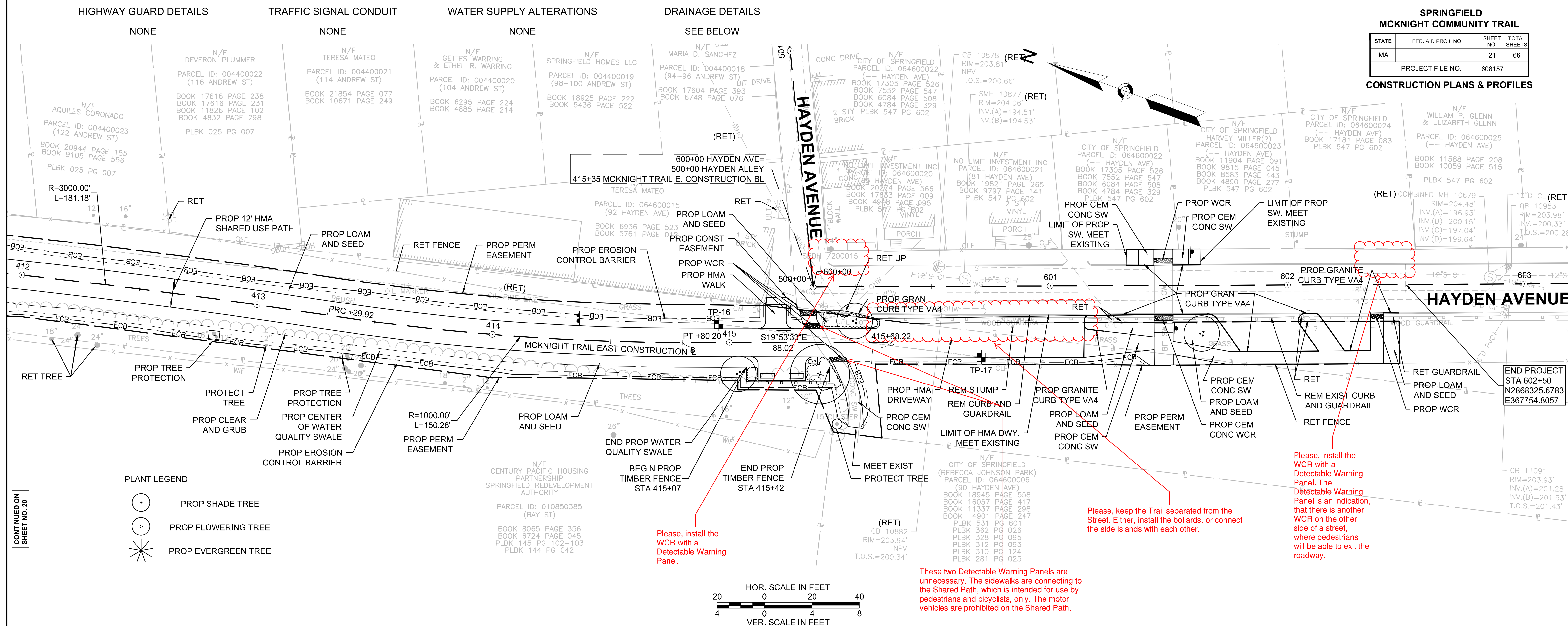
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MA	-	20	66

PROJECT FILE NO. 608157

CONSTRUCTION PLANS & PROFILES

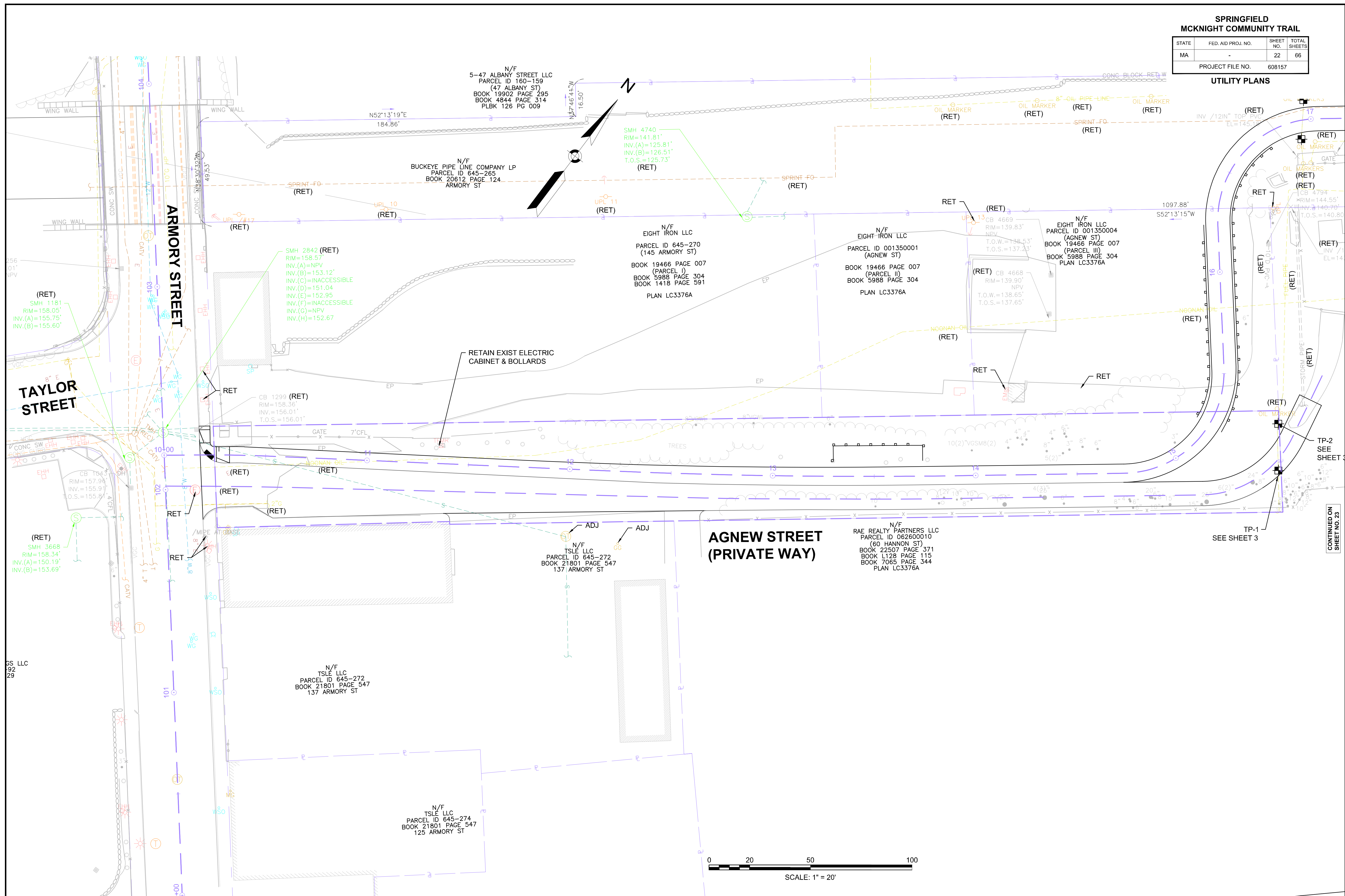


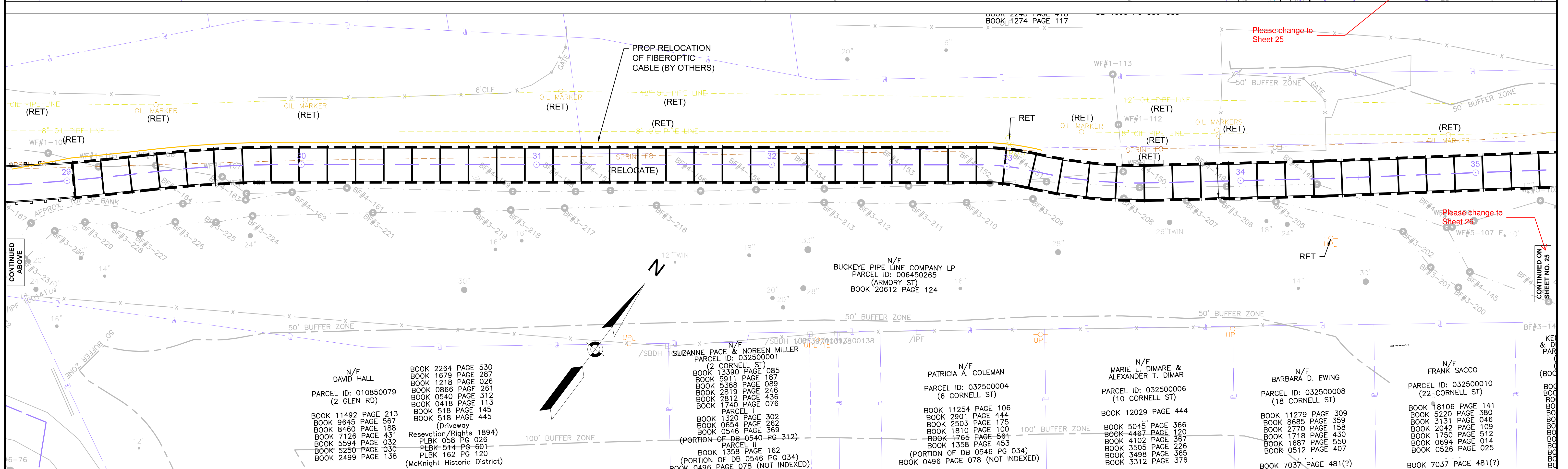
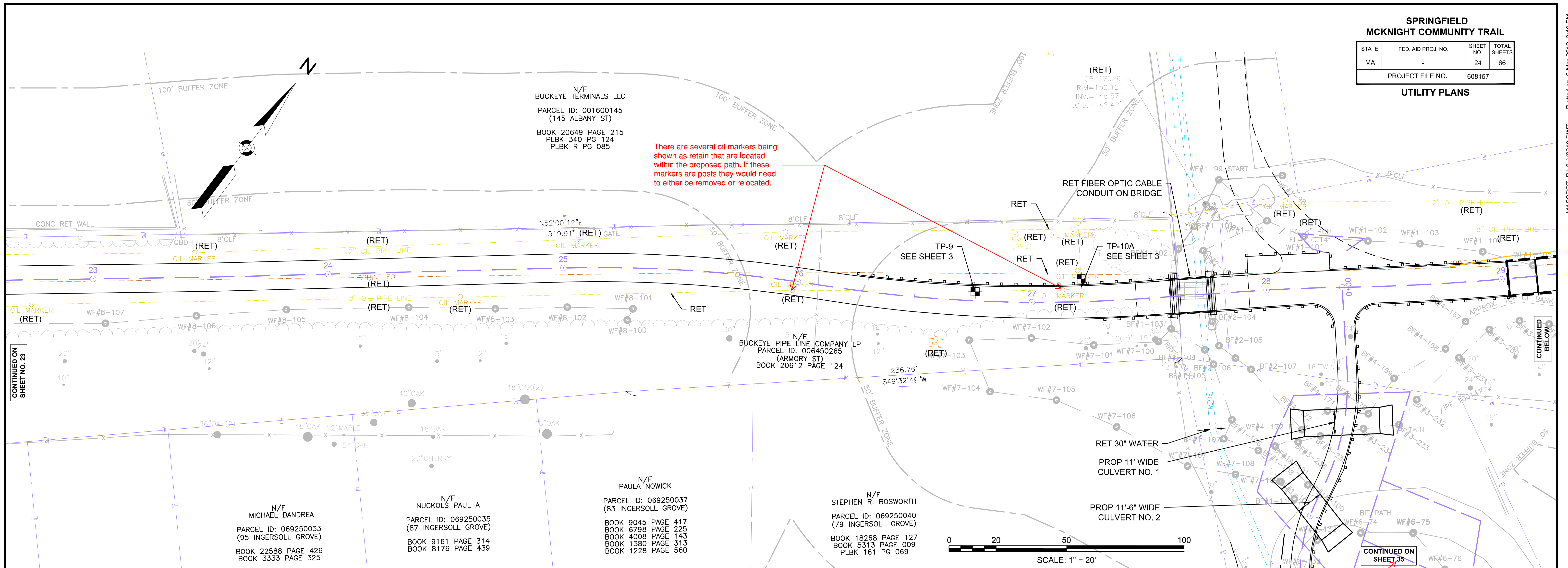
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	6
PROJECT FILE NO.		608157	



SPRINGFIELD MCKNIGHT COMMUNITY TRAIL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	66
PROJECT FILE NO.		608157	

UTILITY PLANS



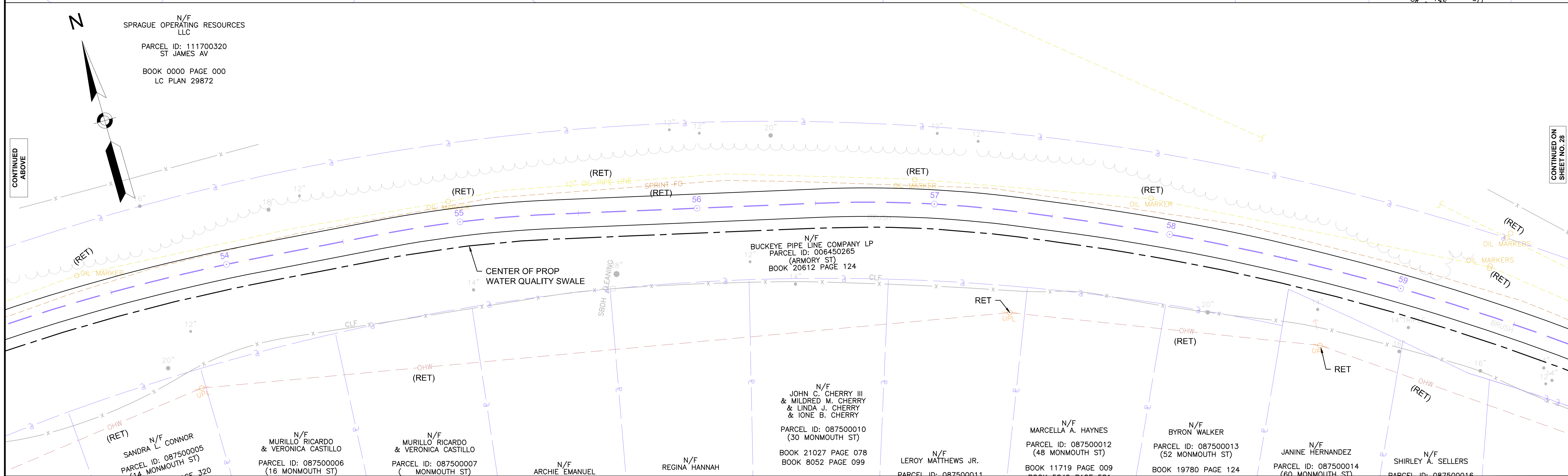
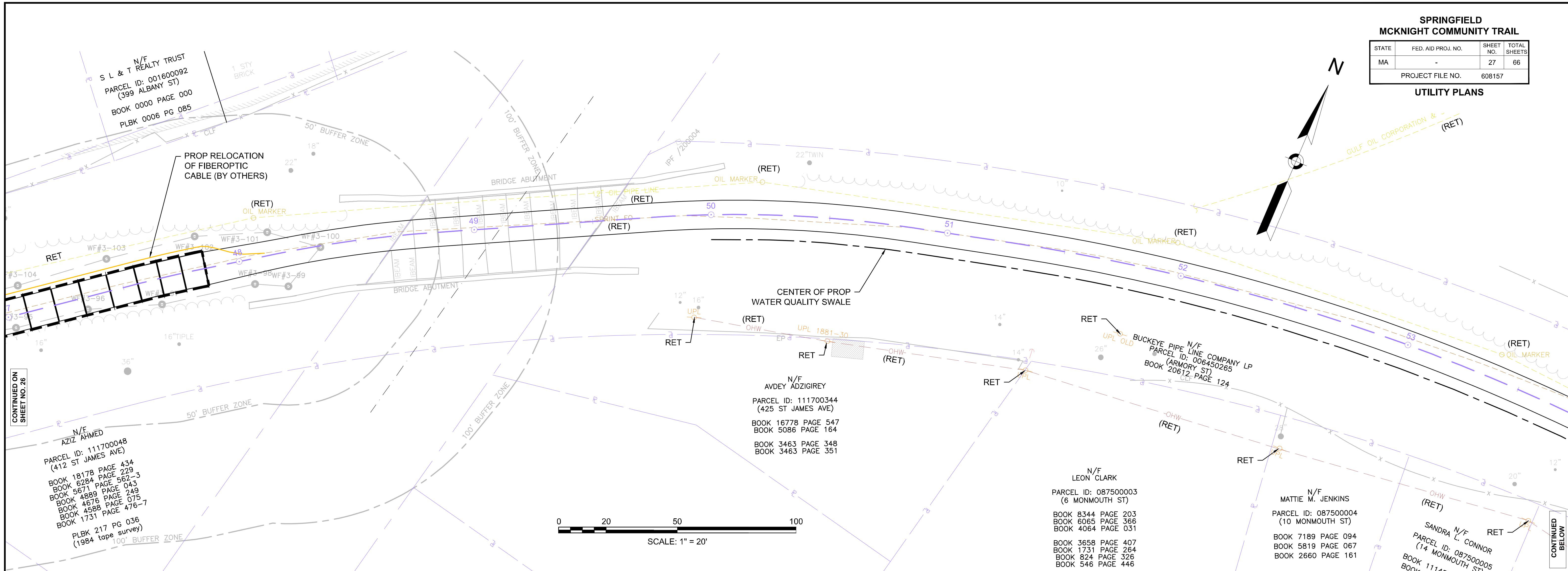


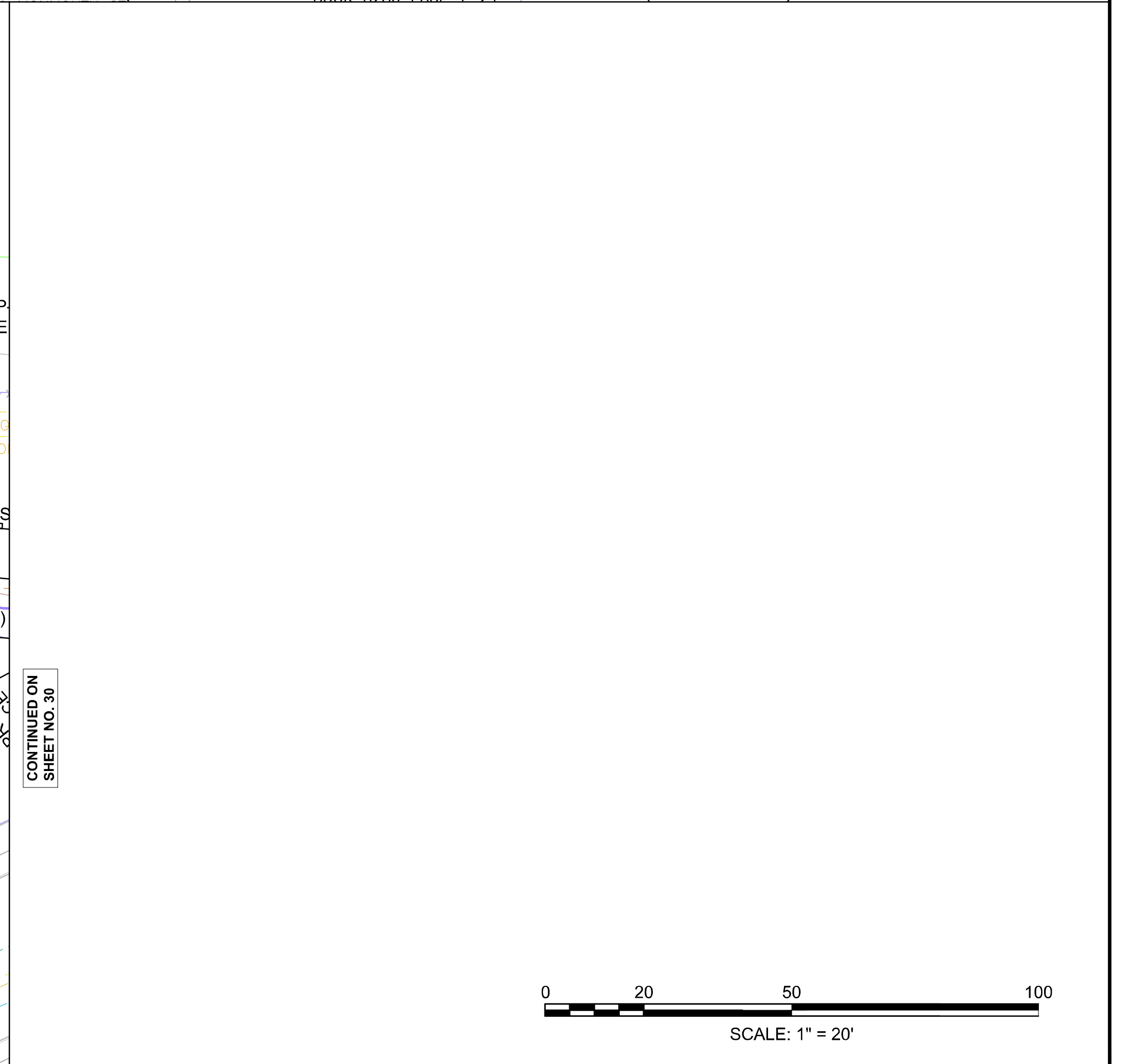
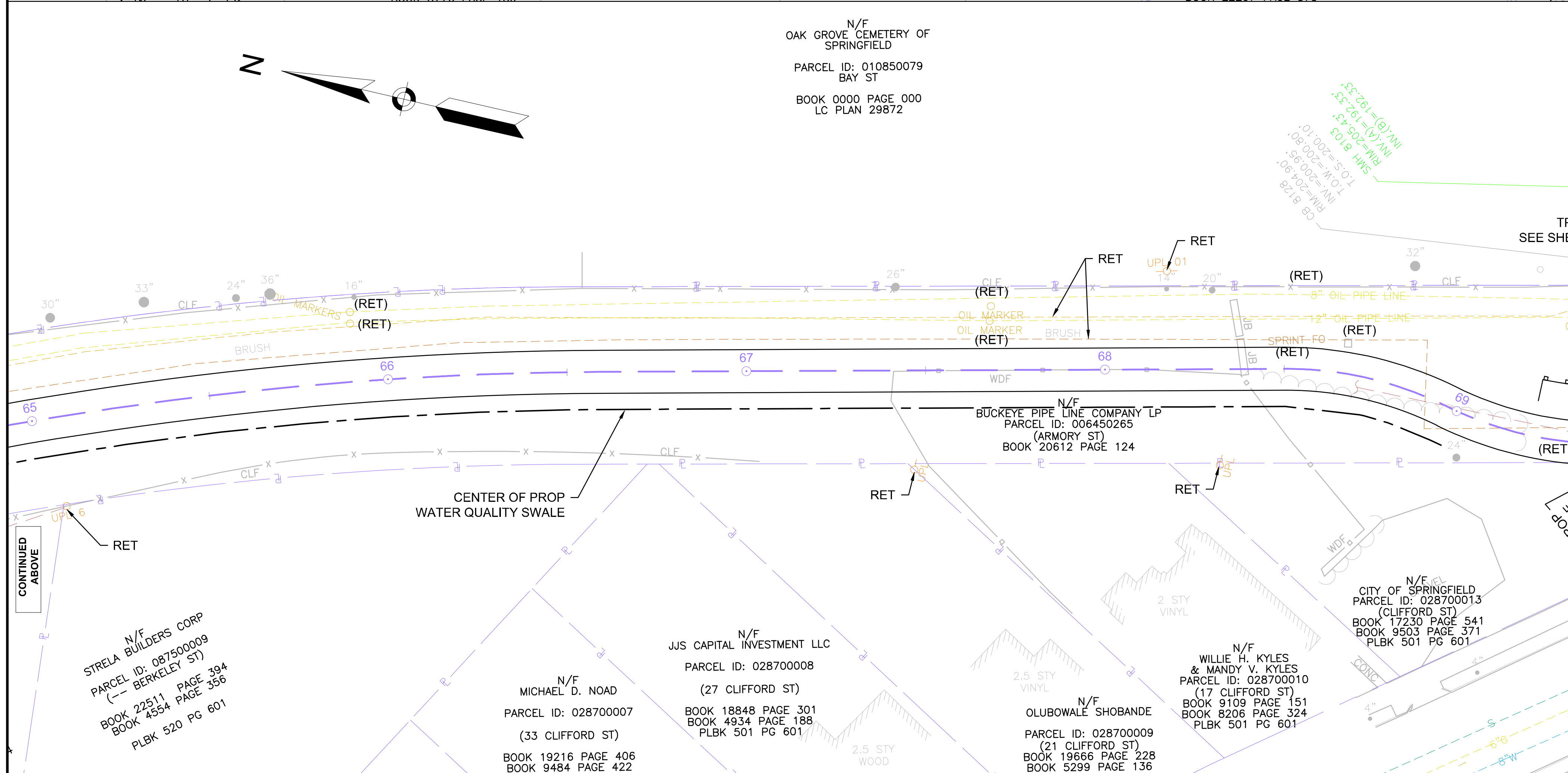
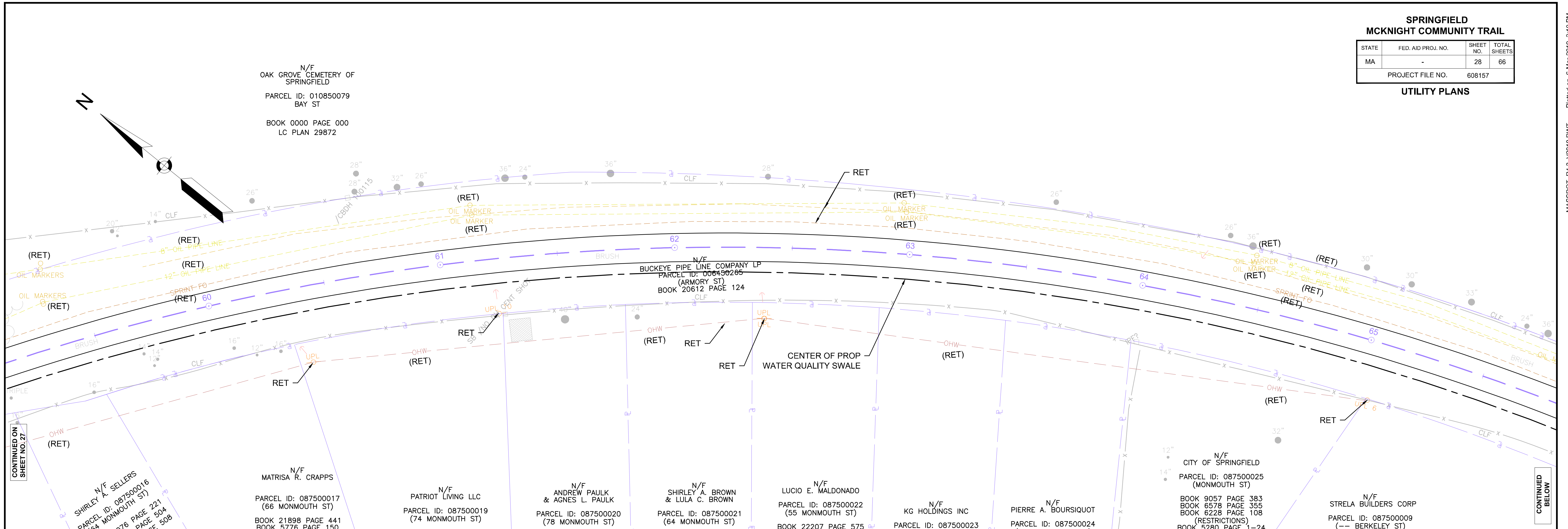
SPRINGFIELD
MCKNIGHT COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	66

PROJECT FILE NO. 608157

UTILITY PLANS





STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	60
PROJECT FILE NO.		608157	



SPRINGFIELD
MCKNIGHT COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	66
PROJECT FILE NO.		608157	

UTILITY PLANS

N/F
PATRICIA HAYNES NNAJI
PARCEL ID: 036900012
(54 DAWES ST)
BOOK 15205 PAGE 0121
BOOK 10806 PAGE 472
PLBK 518 PAGE 248

N/F
ALICE D. SCOTT
PARCEL ID: 036900013
(60 DAWES ST)
BOOK 9487 PAGE 0160
BOOK 3376 PAGE L125 (?)
PLBK 518 PAGE 248



N/F
R M BLERMAN LLC
PARCEL ID: 036900003
(16-20 DAWES ST)
BOOK 18408 PAGE 106
BOOK 16558 PAGE 473
BOOK 3368 PAGE 283
BOOK 2055 PAGE 474
PLBK 518 PAGE 601
(PROTECTIVE RESTRICTIONS)

N/F
R M BLERMAN LLC
PARCEL ID: 036900005
(28-30 DAWES ST)
BOOK 18408 PAGE 106
BOOK 5656 PAGE 197
BOOK 5639 PAGE 284
PLBK 518 PAGE 601
PLBK 358 PAGE 075

N/F
YVETTE BARKLOW GIBBONS
PARCEL ID: 036900006
(32-34 DAWES ST)
BOOK 13751 PAGE 268
BOOK 5893 PAGE 219
BOOK 3640 PAGE 306
PLBK 518 PAGE 601

N/F
DERRICK HATWOOD
PARCEL ID: 036900007
(38 DAWES ST)
BOOK 14155 PAGE 320
BOOK 5553 PAGE 264
BOOK 4287 PAGE 214
BOOK 3328 PAGE 562
PLBK 518 PAGE 601

N/F
GABRIEL MORALES SERRANO
PARCEL ID: 036900010
(44-46 DAWES ST)
BOOK 22150 PAGE 517
BOOK 14640 PAGE 472
PLBK 518 PAGE 601

N/F
ANDREW L ROHAN
PARCEL ID: 036900011
(50 DAWES ST)
BOOK 20346 PAGE 195
BOOK 6461 PAGE 146
BOOK 4231 PAGE 358
PLBK 518 PAGE 601

N/F
SPRINGFIELD CITY OF
PARCEL ID: 036900009
(-- DAWES ST)
BOOK 0000 PAGE 000
PLBK 518 PAGE 601

CONTINUED ON
SHEET NO. 39

CONTINUED
BELOW

CENTER OF PROP
WATER QUALITY SWALE

N/F
CENTURY PACIFIC HOUSING
PARTNERSHIP
SPRINGFIELD REDEVELOPMENT
AUTHORITY
PARCEL ID: 010850385
(BAY ST)
BOOK 8065 PAGE 356
BOOK 6724 PAGE 045
PLBK 145 PG 102-103
PLBK 144 PG 042



N/F
ALICE D. SCOTT
PARCEL ID: 036900013
(60 DAWES ST)
BOOK 9487 PAGE 0160
BOOK 3376 PAGE L125 (?)
PLBK 518 PAGE 248

N/F
WALTER GRACE
PARCEL ID: 036900014
(68 DAWES ST)
BOOK 9485 PAGE 0278
BOOK 3379 PAGE 0207
PLBK 518 PAGE 248

N/F
COPENGER LLC
PARCEL ID: 004400036
(-- ANDREW ST)
BOOK 4038 PAGE 0248
PLBK 518 PAGE 248

PROP. POTENTIAL
WATER QUALITY BASIN

BIT PARKING

N/F
TRUE VINE CHURCH OF GOD
PENTECOSTAL INC
PARCEL ID: 004400025
(BAY ST)
BOOK 3515 PAGE 044
BOOK 3509 PAGE 415
BOOK 3494 PAGE 286
PLBK 027 PG 084
PLBK 328 PG 095
PLBK 362 PG 026

N/F
PONCE DE LEON JUAN
PARCEL ID: 004400024
(126 ANDREW ST)
BOOK 21989 PAGE 485
BOOK 5549 PAGE 065
PLBK 025 PG 007

N/F
AQUILES CORONADO
PARCEL ID: 004400023
(122 ANDREW ST)
BOOK 20944 PAGE 155
BOOK 9105 PAGE 556
PLBK 025 PG 007

CONTINUED
ABOVE

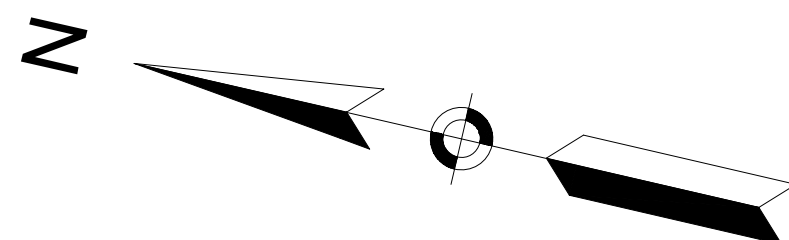
CONTINUED ON
SHEET NO. 31

CENTER OF PROP
WATER QUALITY SWALE

PROP. CULVERT
BENEATH WALK

CENTER OF PROP
WATER QUALITY SWALE

N/F
CENTURY PACIFIC HOUSING
PARTNERSHIP
SPRINGFIELD REDEVELOPMENT
AUTHORITY
PARCEL ID: 010850385
(BAY ST)
BOOK 8065 PAGE 356
BOOK 6724 PAGE 045
PLBK 145 PG 102-103
PLBK 144 PG 042



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	60
PROJECT FILE NO.		608157	

UTILITY PLANS

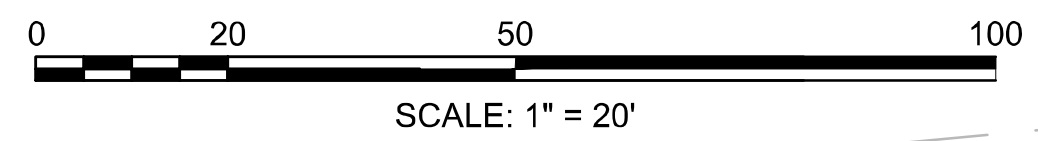




NOT TO SCALE

NOT TO SCALE

1. ALL EXISTING SIGNS AND SIGN POSTS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
2. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY AN APPROVED METHOD.
3. PROPOSED SHARED USE PATH CENTERLINE MARKINGS (SYL/BL) FOLLOW THE CONSTRUCTION BASELINE. SEE STATION LABELING ON PLAN.
4. ALL PROPOSED SIGN POSTS SHALL BE P-5 TYPE (TELESCOPIC POST) UNLESS OTHERWISE NOTED ON PLANS.
5. UNLESS OTHERWISE PROVIDED FOR IN THE MUTCD, ALL SIGNS SHOULD BE 90° TO THE CURB AND FACING THE FLOW OF TRAFFIC.
6. STREET SIGNS SHALL BE MOUNTED PARALLEL WITH THE STREET.
7. ALL R&R SIGNS SHALL BE MOUNTED ON NEW POSTS.
8. SIGNS TO BE MOUNTED NEAR THE CURB LINE SHALL BE SET BACK 6" FROM THE EDGE OF THE SIGN PANEL TO THE CURB LINE. NO SIGN SHALL OVERHANG THE CURB LINE.
9. ALL SIGNS SHALL BE MOUNTED TO PROVIDE A 7' MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND FINISHED GRADE.
10. PRELIMINARY SIGNS ARE SHOWN FOR 25% SUBMISSION; LOCATIONS AND LEGENDS MAY VARY. UPDATED SIGNS AND SIGN SUMMARY WILL BE SHOWN AT 75% SUBMISSION.



SPRINGFIELD
MCKNIGHT COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	66
PROJECT FILE NO.		608157	

SIGN & PAVEMENT MARKING PLANS

Show markings as actual
dashed and solid lines on
the plans, and not just as
notations. - SCT

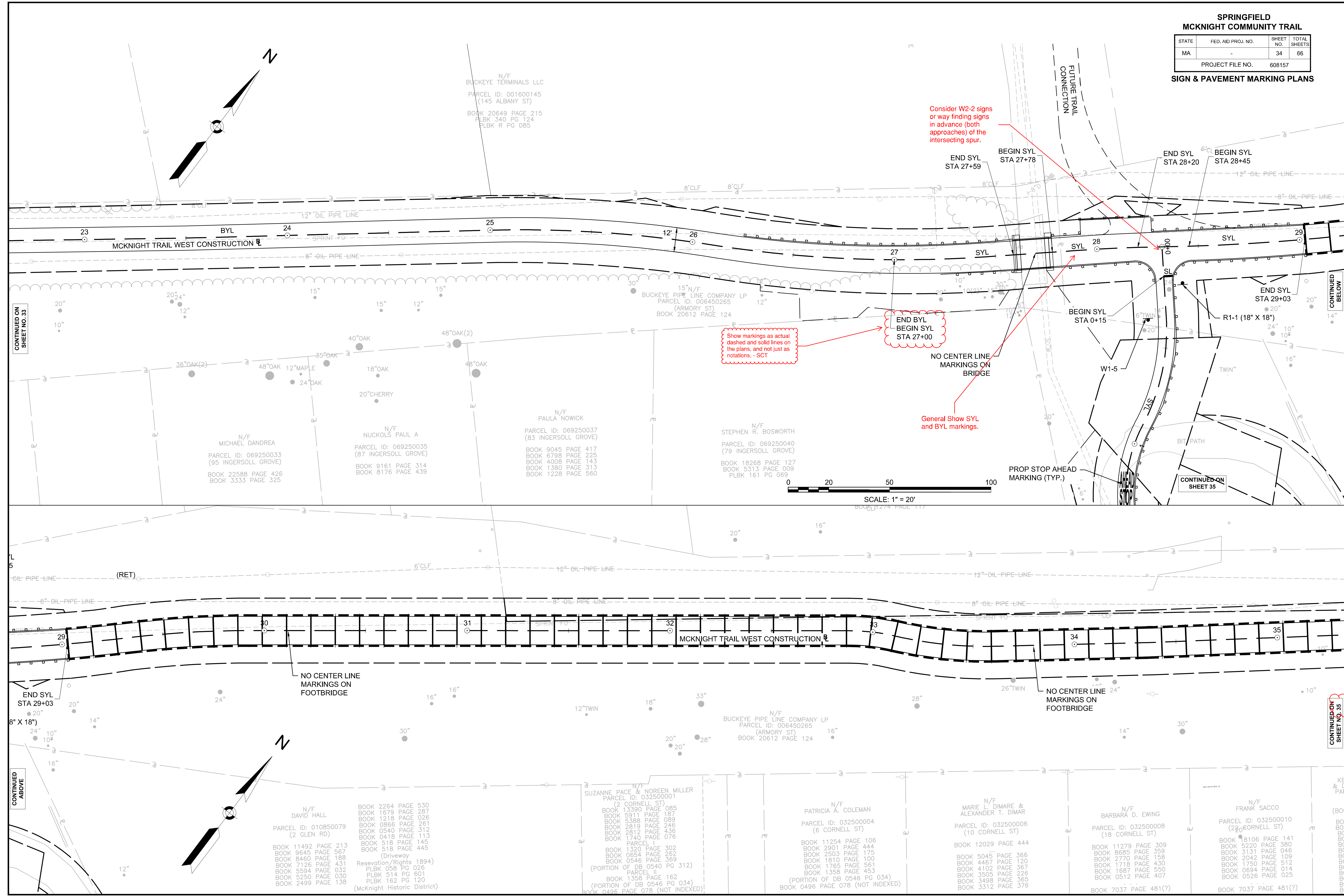
END SYL
BEGIN BYL
STA 17+00

W1-3



CONTINUED ON
SHEET NO. 32

CONTINUED ON
SHEET NO. 34



CONTINUED ON
SHEET NO. 33

CONTINUED
BELOW

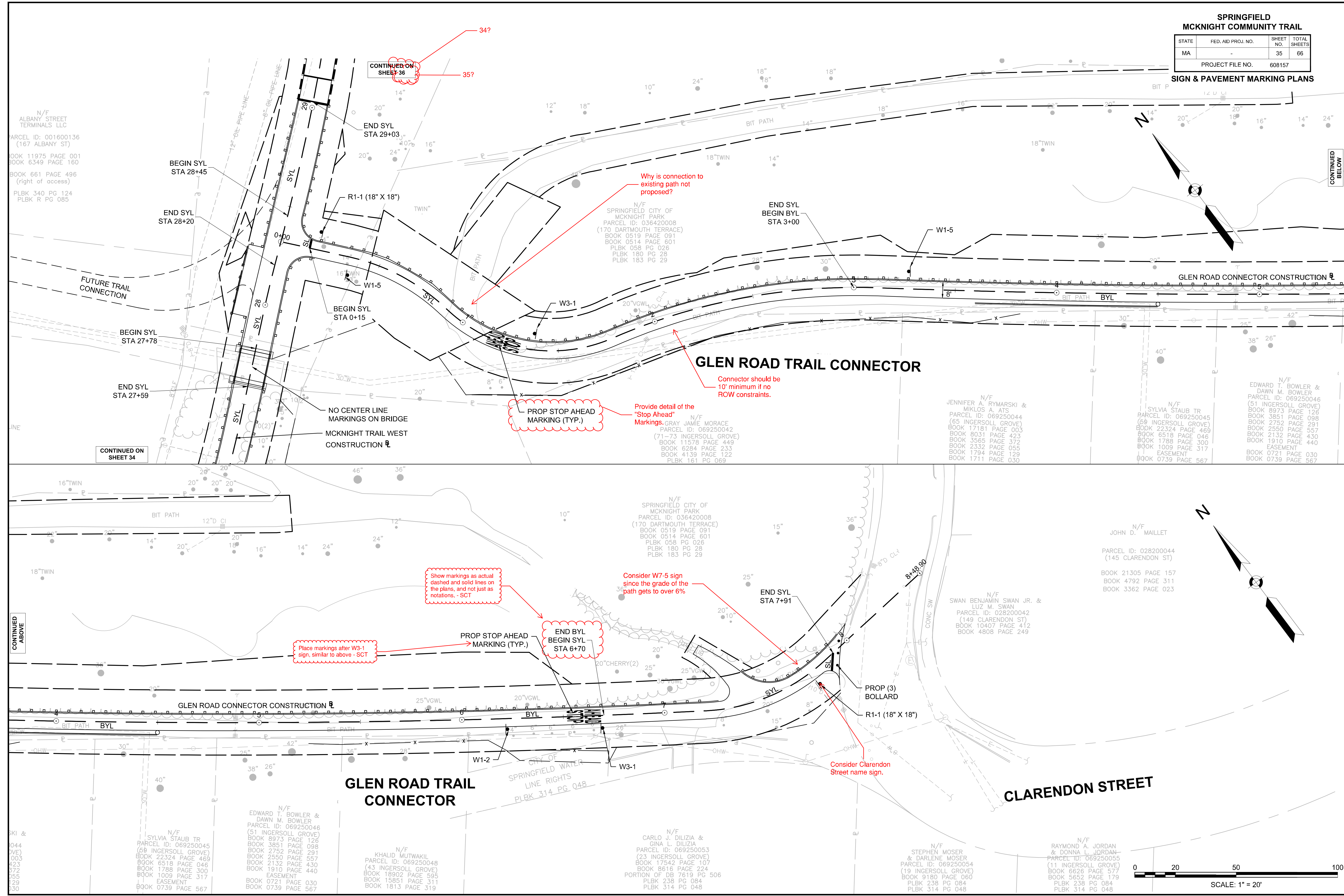
CONTINUED
ABOVE

CONTINUED ON
SHEET NO. 35

36?

SPRINGFIELD MCKNIGHT COMMUNITY TRAIL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	66
PROJECT FILE NO.		608157	

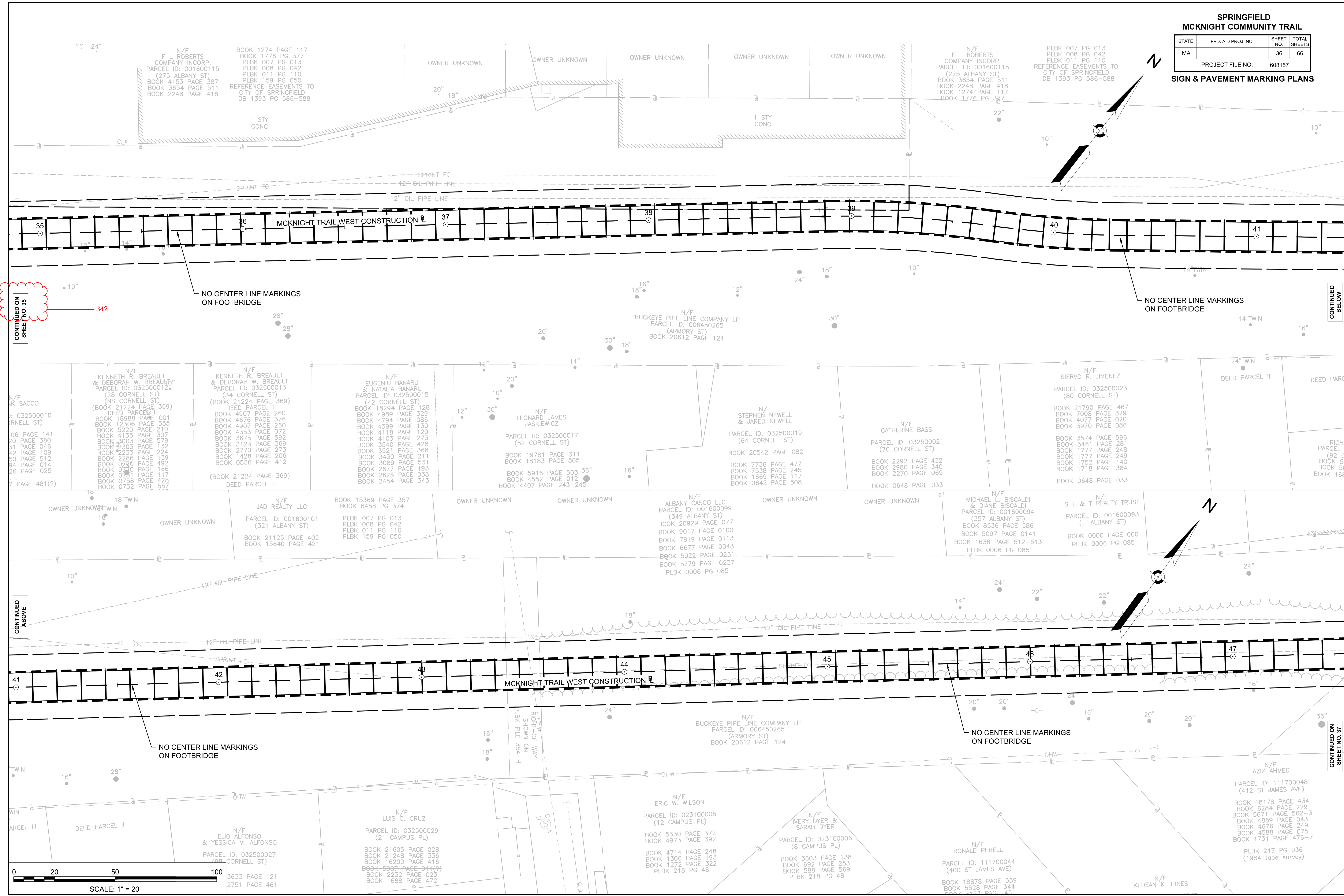
SIGN & PAVEMENT MARKING PLANS



SPRINGFIELD
MCKNIGHT COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	66
PROJECT FILE NO.		608157	

SIGN & PAVEMENT MARKING PLANS

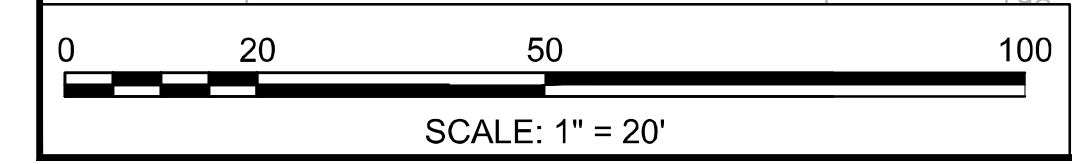


CONTINUED ON
SHEET NO. 35

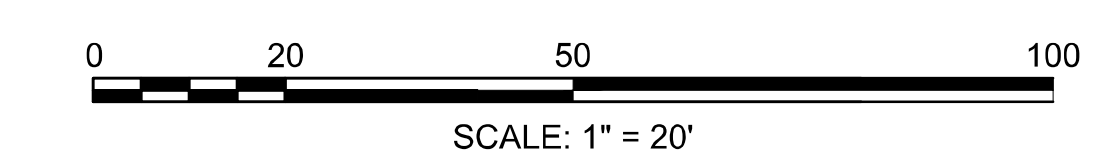
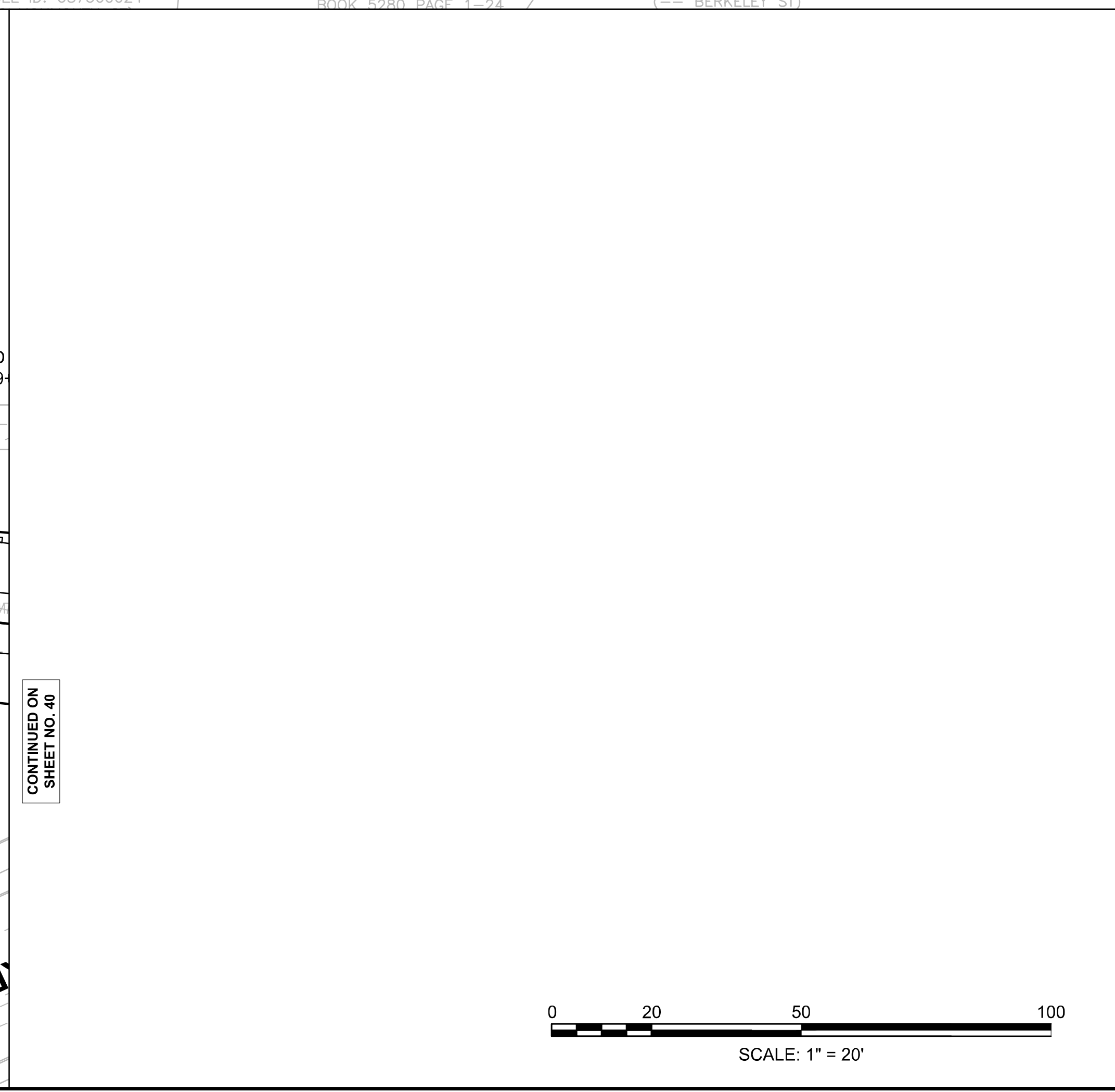
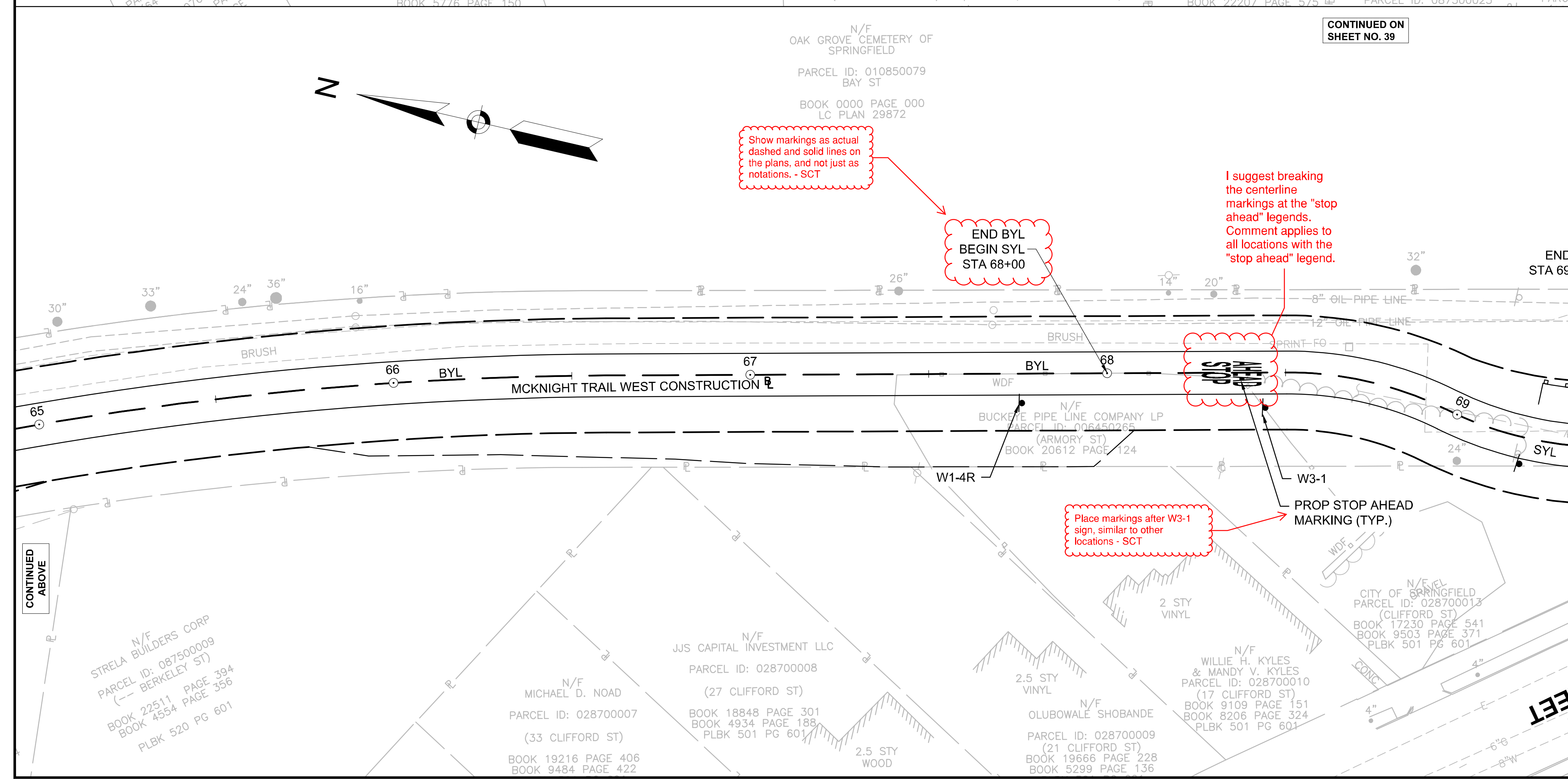
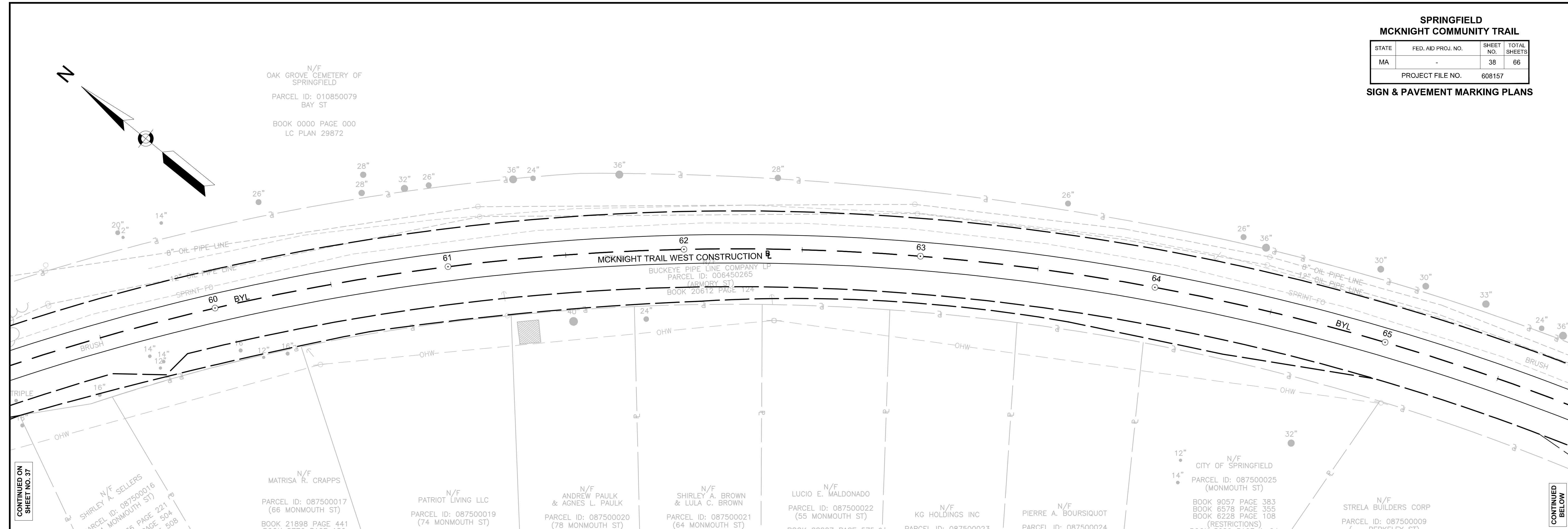
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BELOW

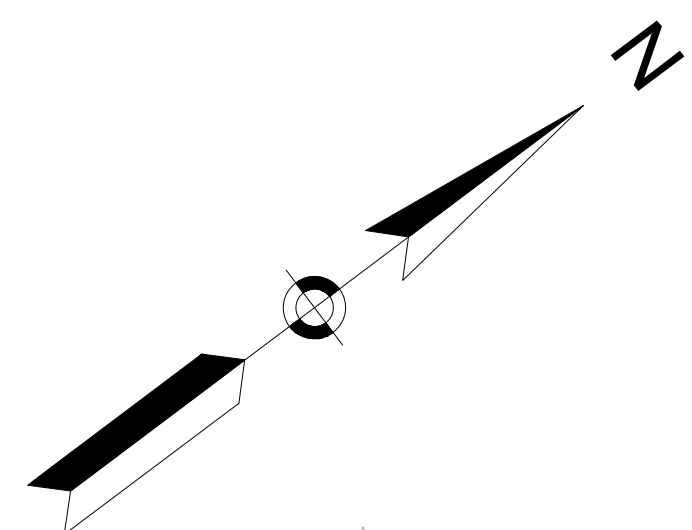
CONTINUED
ABOVE

CONTINUED ON
SHEET NO. 37









SPRINGFIELD MCKNIGHT COMMUNITY TRAIL

SIGN & PAVEMENT MARKING PLANS

OAK GROVE CEMETERY OF
SPRINGFIELD
PARCEL ID: 010850079
BAY ST
BOOK 0000 PAGE 000
LC PLAN 29872

Provide description label for the existing signs on base map. Comment applies to entire S&PM plan set.

Unclear how ramp will tie into existing CW.

Label disposition of existing signs (R&S, R&D, R&R, ect.) and include appropriate items in the estimate

Include R10-6 or R10-6a signs at the stop lines for improved driver compliance.

LIMIT OF PAVEMENT
MARKINGS
MEET EXISTING
STA 302+14

BAY STREET

LIMIT OF PAVEMENT
 MARKINGS
 MEET EXISTING
 STA 301+00

Proposed path offset creates sharp turn and forces cyclists to ride on narrow sidewalk. Consider either angled crossing of Bay St to align with NB approach or placing crossing at Clifford St.

Consider changing the sign ID to be unique for signs that are duplicated on the path vs city streets since they have differing sizes. For example change the ID of the R1-1 on the path to be R1-1a and give the R1-1a its own row on the Sign Summary.

END SYL
BEGIN BYL —
STA 401+73

PROP STOP AHEAD
MARKING (TYP)

W1-4R
END BYL
—BEGIN SYL
STA 68+00

- Please, relocate the CB from the direct pedestrian's path.

LIMIT OF PAVEMENT
MARKINGS
MEET EXISTING
STA 303+84

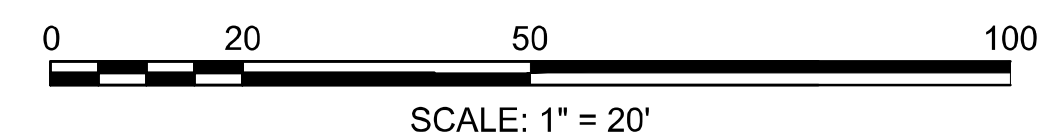
label the proposed lane and shoulder widths

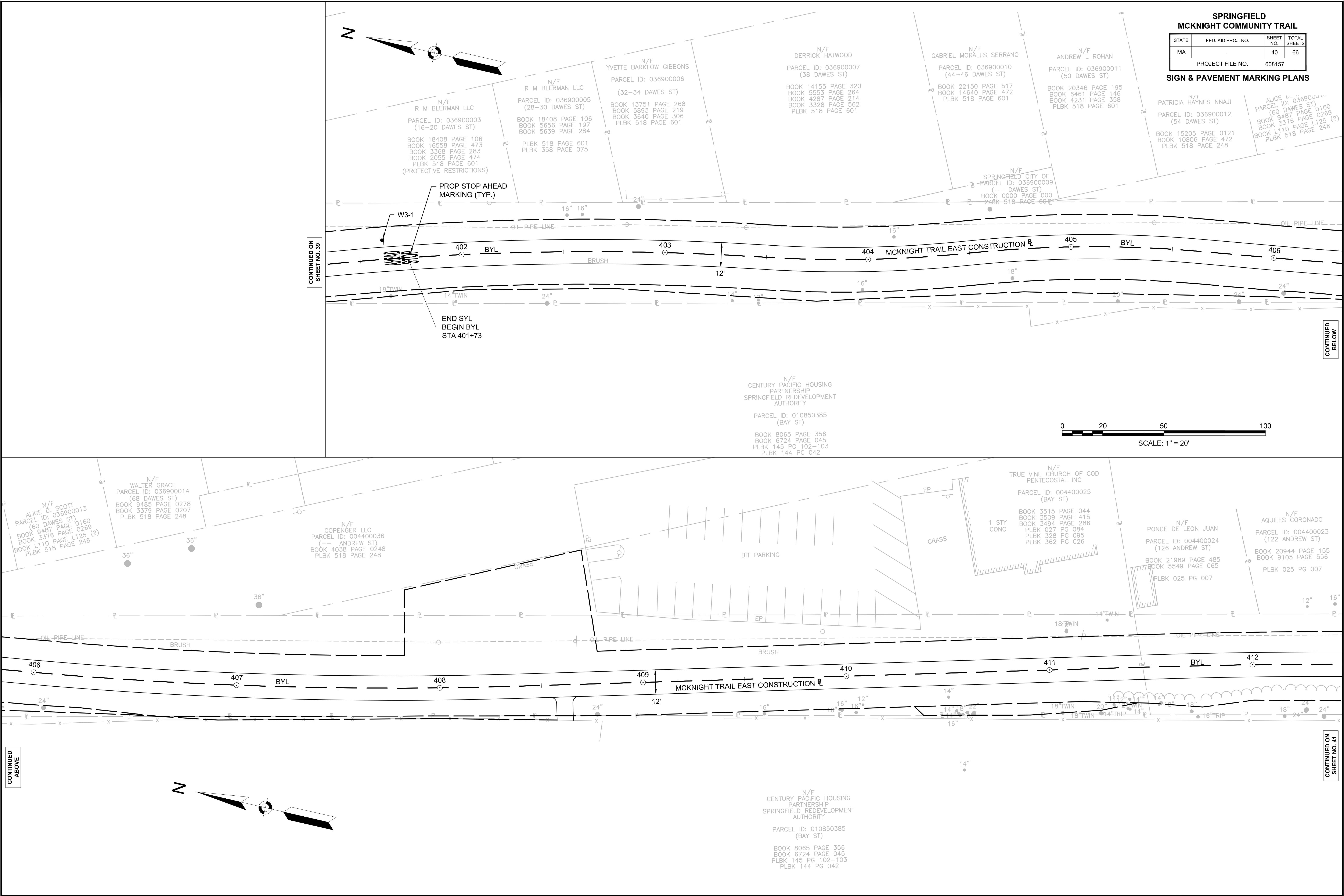
- Relocate R9-5 closer to the crossing/pushbutton.

Per PDDG, SUP crosswalks — and ramps should be at least the same width of path.

Use MA-R10-23a in place of R10-23

CONTINUED ON
SHEET NO. 28

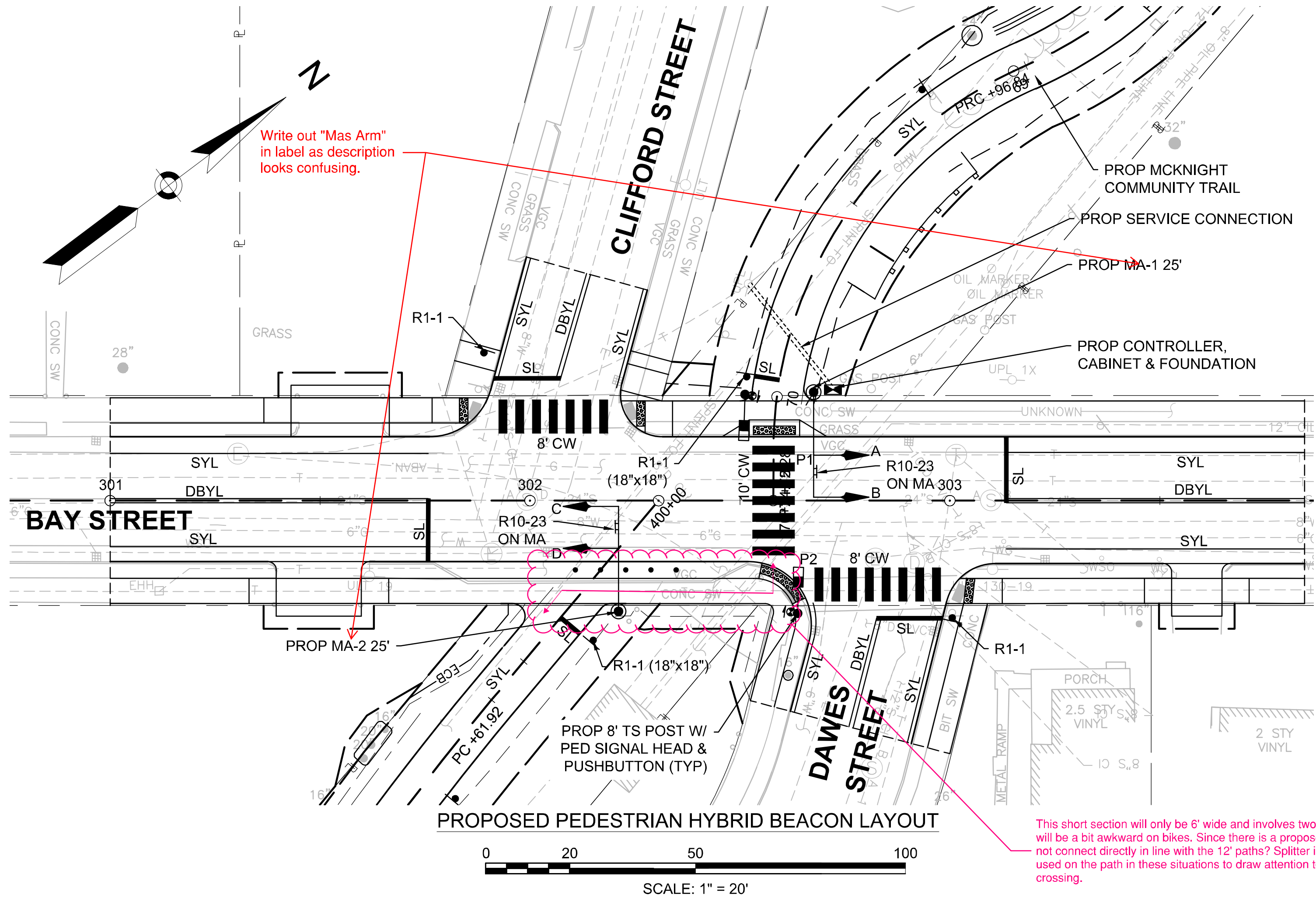




SPRINGFIELD
MCKNIGHT COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	66
PROJECT FILE NO.		608157	

TRAFFIC SIGNAL PLAN



R

R

Y

LOCATION:
A,B,C,D

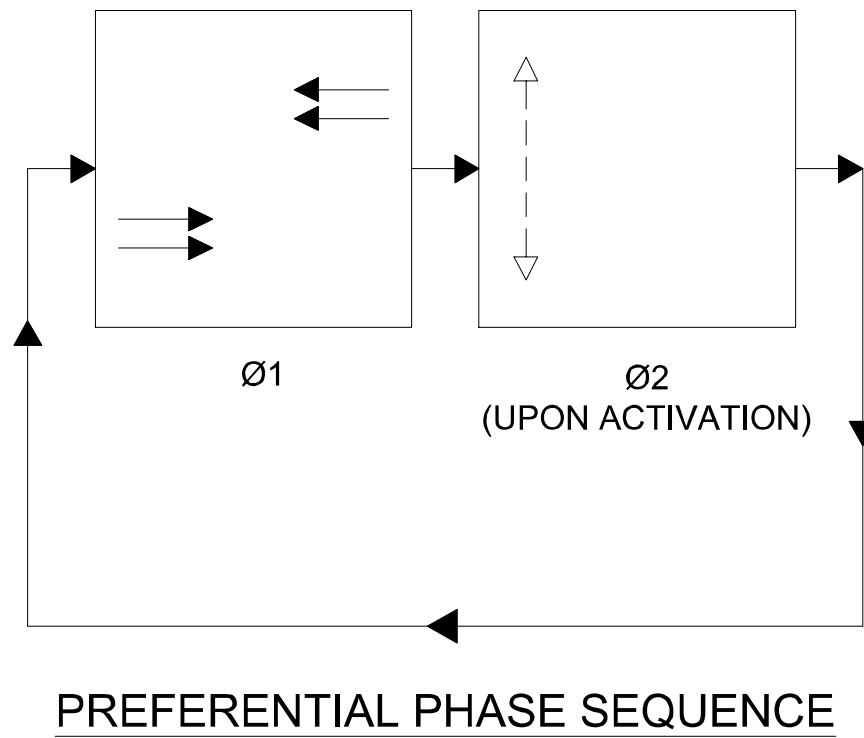
PE

88

LOCATION:
P1-P2

SIGNAL HEAD DESIGNATIONS
NOT TO SCALE

- SIGNAL HEAD NOTES
- ALL SIGNAL HEADS SHALL HAVE BACKPLATES AND TUNNEL VISORS.
 - ALL SIGNAL BACKPLATES SHALL BE 5" LOUVERED WITH 3" YELLOW RETROREFLECTIVE BORDER.
 - ALL SIGNAL LENSES SHALL BE 12" DIA. LED.
 - ALL PEDESTRIAN SIGNAL HEADS SHALL DISPLAY INTERNATIONAL SYMBOLS - (HAND)/(PERSON WALKING) WITH COUNTDOWN DISPLAYS.
 - ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE 16" LED LENSES AND SUN VISORS.
 - ALL SIGNAL HEADS SHALL BE FIXED MOUNTED.



MUTCD Section 4F.02 paragraph 04 states that "the pedestrian hybrid beacon should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs." Both Dawes and Clifford Street are in very close proximity to the crossing without any indications for either approach. Evaluate the pedestrian safety of the proposed HAWK location.

SEQUENCE AND TIMING CHART FOR PEDESTRIAN HYBRID BEACON (HAWK) SIGNAL									
PHASE		Ø1 Ø2							
STREET	DIRECTION	HOUSINGS	1	2	3	4	4	5	6
BAY STREET	NB	A,B	OUT*	FY	SY	SR	SR	FR	FR
BAY STREET	SB	C,D	OUT*	FY	SY	SR	SR	FR	FR
PEDESTRIAN	ALL	P1-P2	DW	DW	DW	DW	W	FDW	DW
TIMING IN SECONDS									
MINIMUM GREEN			45						
PASSAGE TIME			-						
MAXIMUM 1			-						
MAXIMUM 2			-						
CLEARANCE INTERVAL				3	3	1			4
WALK/CLEARANCE/BUFFER INTERVAL								7	5
DETECTOR MEMORY			NON-LOCK				LOCK		
RECALL SWITCH			MAX				OFF		
* DARK UNTIL ACTIVATED									

PEDESTRIAN HYBRID BEACON NOTES:

- IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
- IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATION FOR THAT TRAFFIC MOVEMENT WILL DISPLAY THE APPROPRIATE CLEARANCE INTERVALS.
- PEDESTRIAN PHASE TO BE ACTIVATED BY PEDESTRIAN PUSH-BUTTON ONLY.
- PEDESTRIAN PUSHBUTTONS AND SIGNS SHALL BE LOCATED IN ACCORDANCE WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (FIG. 4E-4) AND POINTED PARALLEL TO THE CROSSWALK.

SEQUENCE FOR PEDESTRIAN HYBRID BEACON (HAWK) SIGNAL			
	1. DARK UNTIL ACTIVATED.		1. DON'T WALK.
	2. FLASHING YELLOW UPON ACTIVATION.		2. DON'T WALK.
	3. STEADY YELLOW FOR VEHICLE CLEARANCE		3. DON'T WALK.
	4. STEADY RED DURING BUFFER INTERVAL.		4. DON'T WALK.
	5. STEADY RED DURING PEDESTRIAN WALK INTERVAL.		5. WALK.
	6. ALTERNATING FLASHING RED DURING PEDESTRIAN CLEARANCE INTERVAL.		6. FLASHING DON'T WALK WITH COUNTDOWN.
	7. ALTERNATING FLASHING RED DURING PEDESTRIAN BUFFER INTERVAL		7. DON'T WALK.
	8. DARK UNTIL ACTIVATED AGAIN .		8. DON'T WALK.

8 Stages VS 7 Stages in the Sequence and Timing Chart.Please resolve.

MAST ARM FOUNDATIONS

MAST ARM	ARM LENGTH	LOCATION		FOUNDATION SIZE			
		STATION	OFFSET	DIAMETER	DEPTH	VERT. BARS	TIE BARS
MA 1	25'	302+67.5	25.8' LT				
MA 2	25'	302+21.1	26.4' RT				

- MAST ARM FOUNDATION DESIGN TO BE VERIFIED PENDING SOIL EXPLORATION.

MAJOR ITEMS		
ITEM NO.	QUANTITY	DESCRIPTION
815.	1	TRAFFIC SIGNAL CONTROLLER (TS2, TYPE 1), LOCATED IN BASE MOUNTED CABINET (SIZE 5) WITH FOUNDATION
	2	25' MAST ARM, TYPE II, STEEL MONOLEVER WITH FOUNDATION
	2	TRAFFIC SIGNAL POST & BASE - 8' STEEL
	4	SIGNAL HEAD, 1-WAY, 3 SECTION, 12" LENSES
	4	5" 3-SECTION BACKPLATES WITH 3" YELLOW RETROREFLECTIVE YELLOW BORDER
	2	PEDESTRIAN SIGNAL HEAD, 1-WAY, 1 SECTION, 16" WITH COUNTDOWN
	2	AUDIBLE & VIBRO-TACTILE PEDESTRIAN PUSHBUTTON INTEGRATED SIGN & SADDLE WITH LED CONFIRMATION LIGHT
	1	SERVICE CONNECTION (UNDERGROUND)
811.31	-	PULL BOX, 12" X 12"
Include item for conduit in PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL. Show the location of conduit on plans.		

NOTES:

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE 2009 EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
- ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD, EXCEPT THAT BACKGROUND COLOR SHALL BE FLUORESCENT ORANGE, IN ACCORDANCE WITH MASSDOT SPECIFICATIONS.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, AND REFLECTORIZED PLASTIC DRUMS WITH LIGHTING DEVICES MOUNTED ON THEM, MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
- THE FIRST TEN PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL NOT COVERED IN THE PLAN SHALL REFER TO MASSDOT "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS".

LEGEND:

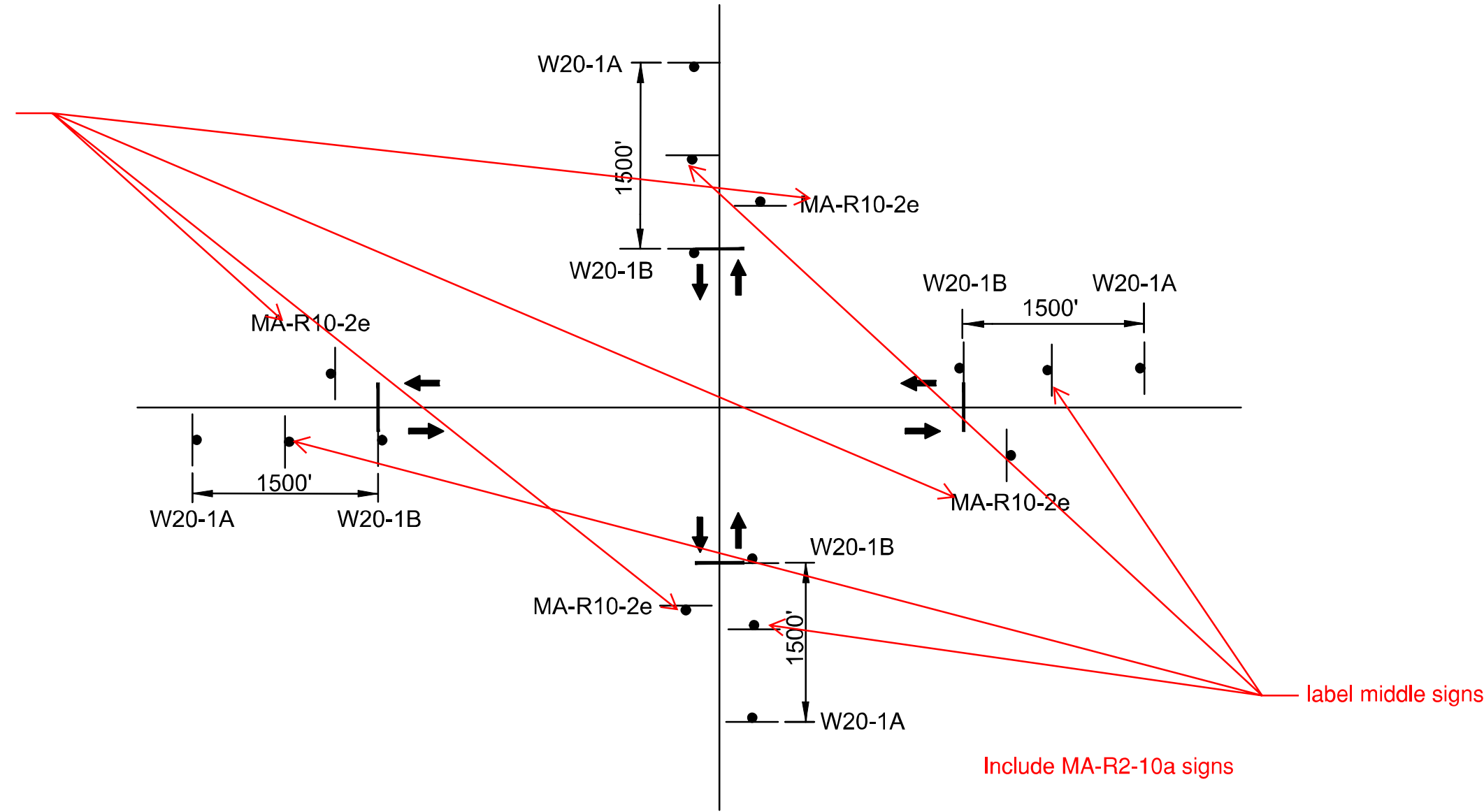
- REFLECTORIZED PLASTIC DRUM
- TYPE III BARRICADE
- FLASHING ARROW PANNEL
- FLASHING ARROW PANNEL
- WORK ZONE
- DIRECTION OF TRAFFIC
- IMPACT ATTENUATOR
- MEDIAN BARRIER
- MEDIAN BARRIER WITH WARNING LIGHTS
- WORK VEHICLE
- TRUCK MOUNTED ATTENUATOR
- TRAFFIC OR PEDESTRIAN SIGNAL
- SIGN
- P POLICE DETAIL
- F FLAGGER

TAPER LENGTH

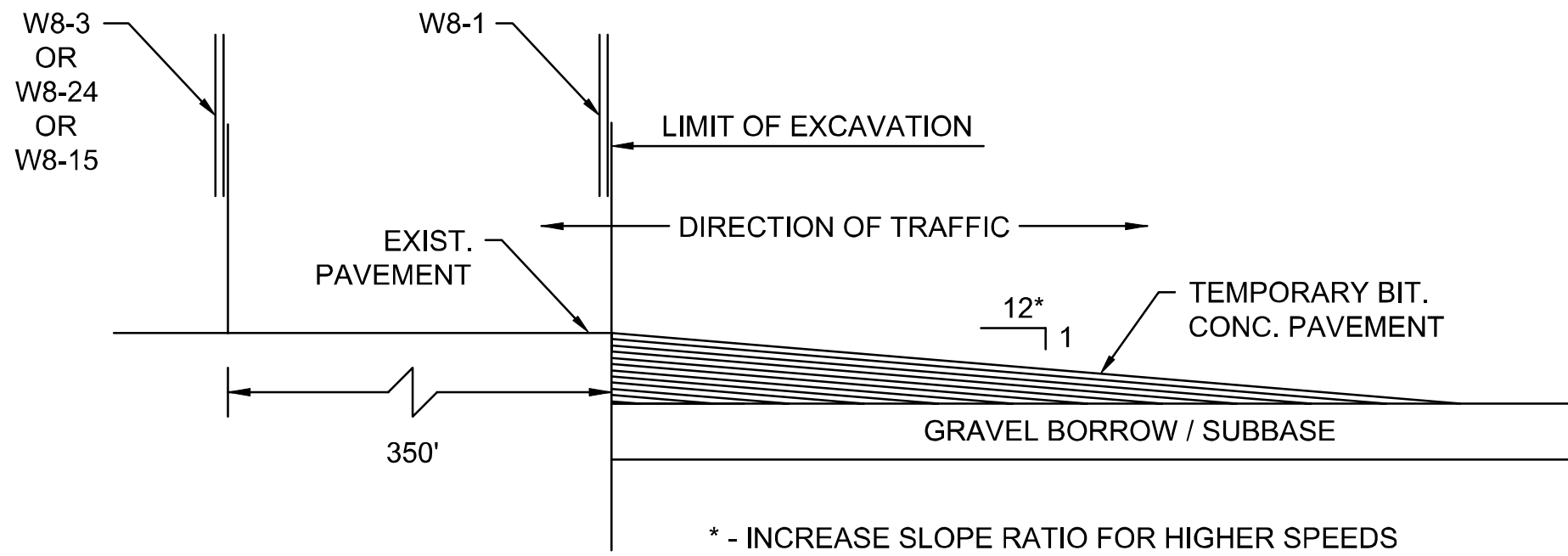
SPEED LIMIT	FORMULA
40 MPH or Less	$L=WS/60$
45 MPH or Greater	$L=W \times S$
L = TAPER LENGTH IN FEET	
W = WIDTH OF OFFSET IN FEET	
S = POSTED SPEED IN MPH	

ID should read
"MA-R2-10e"

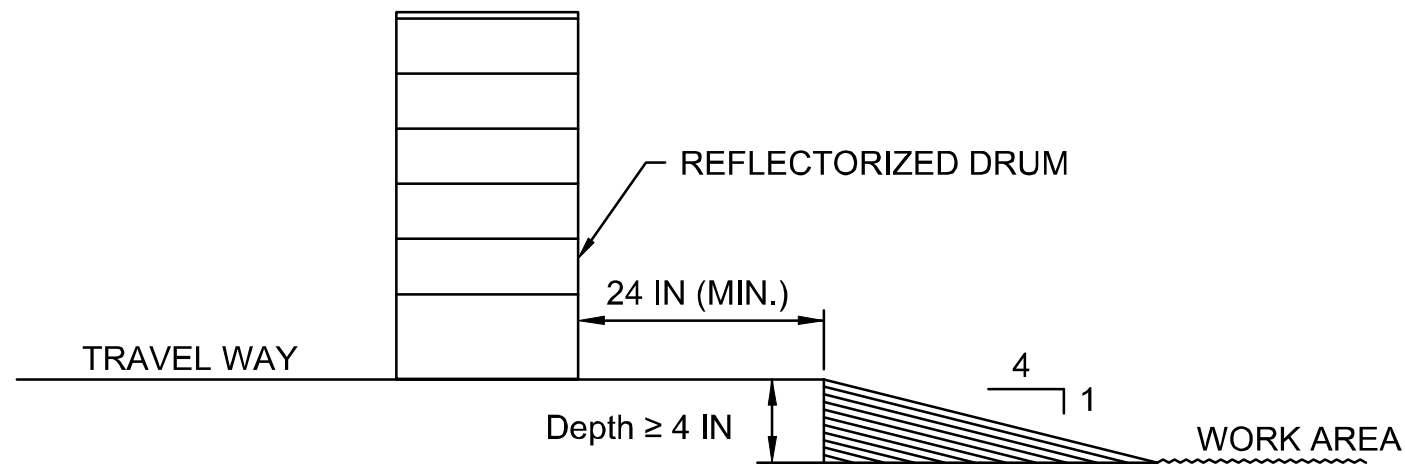
Sequential flashing
lights really only
needed if traffic
set-ups are to remain
overnight. Either
remove note from
plans or include item
859.1
REFLECTORIZED
DRUMS WITH
SEQUENTIAL
FLASHING
WARNING LIGHTS in
estimate.



TYPICAL INTERSECTION
PROJECT LIMIT SIGNING
NOT TO SCALE



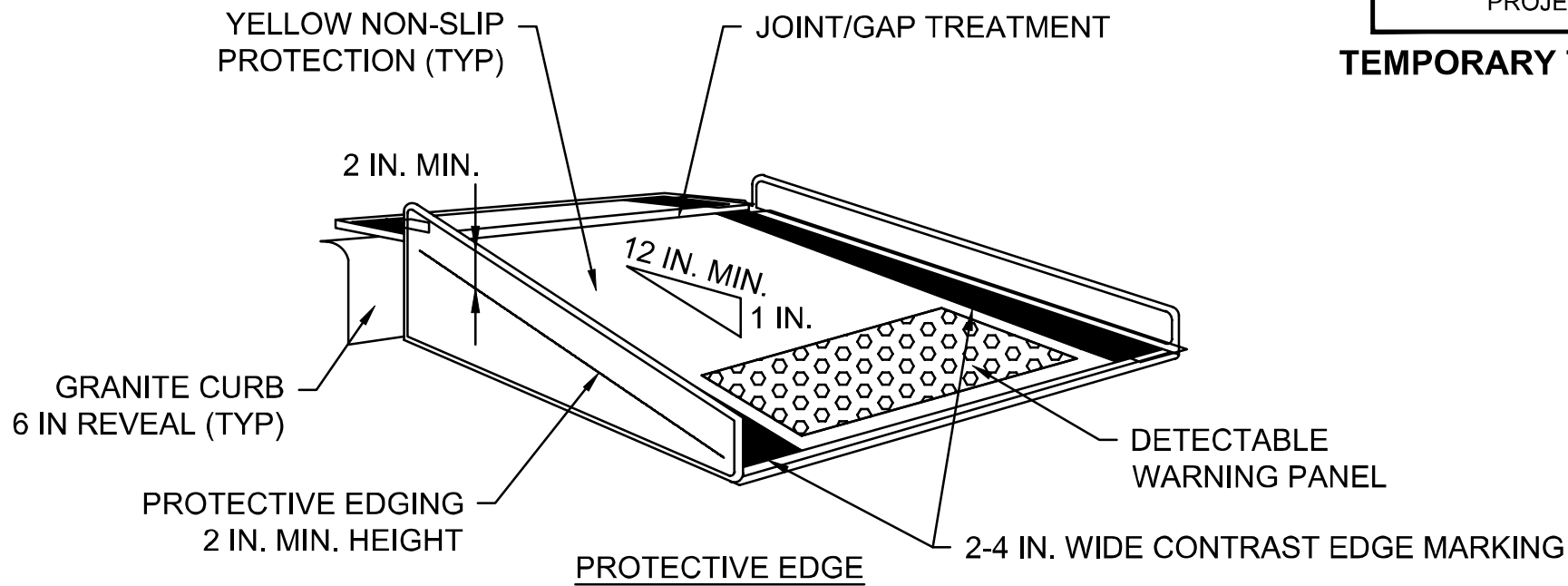
LONGITUDINAL DROP-OFF DETAIL
NOT TO SCALE



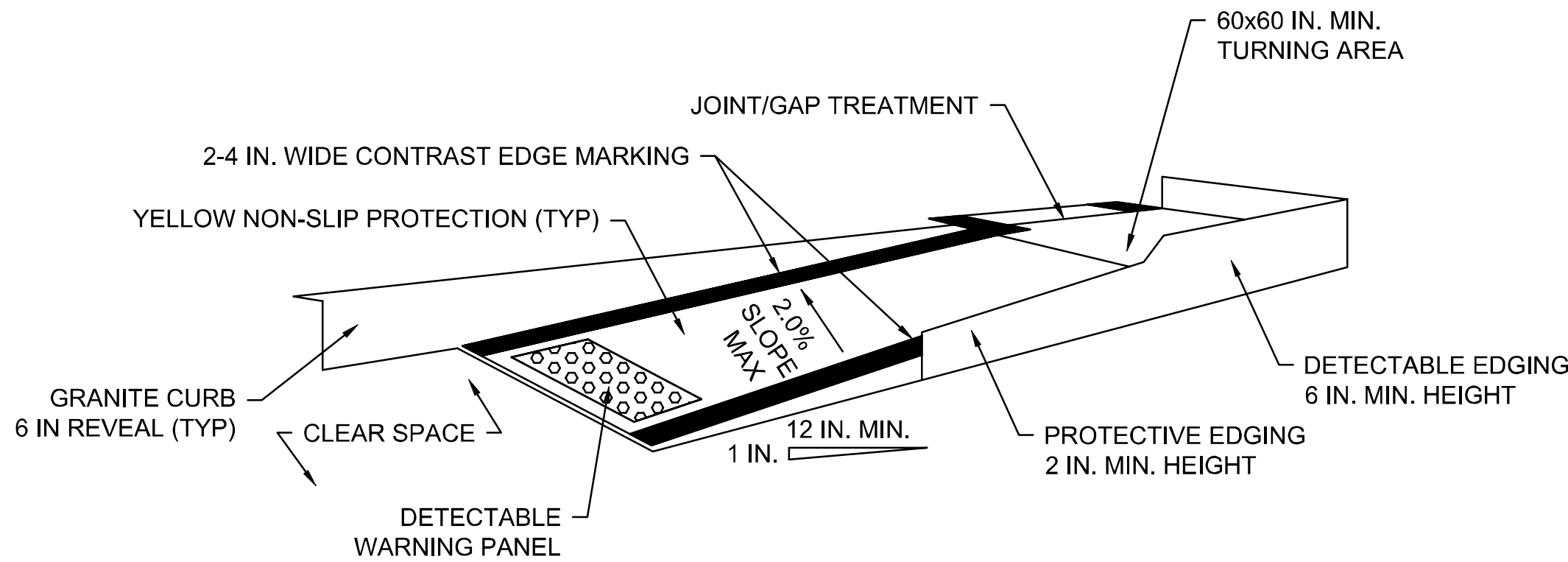
LATERAL DROP-OFF DETAIL
NOT TO SCALE

SPRINGFIELD MCKNIGHT COMMUNITY TRAIL			
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TEMPORARY TRAFFIC CONTROL PLAN



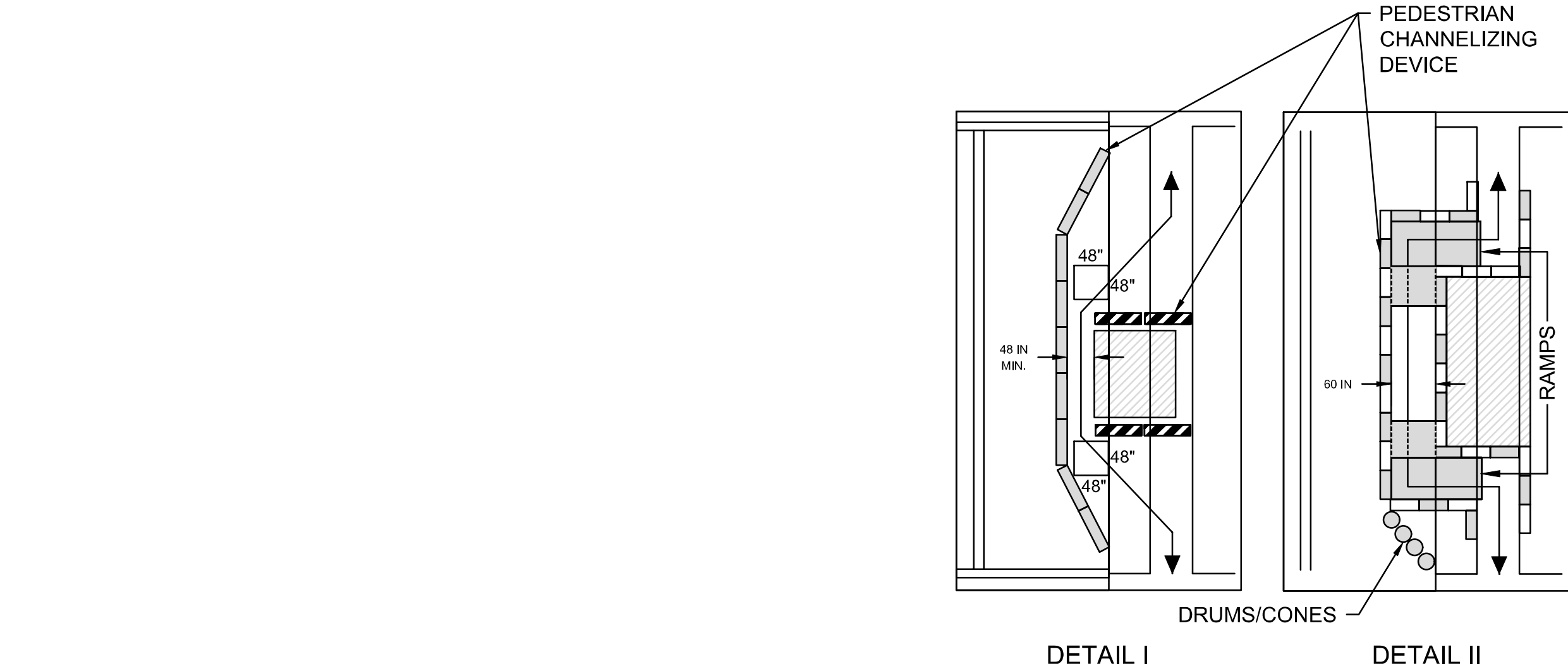
TEMPORARY CURB RAMP-PERPENDICULAR TO CURB
NOT TO SCALE



TEMPORARY CURB RAMP-PARALLEL TO CURB
NOT TO SCALE

NOTES:

- CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
- PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
- DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- THE CURB RAMP WALKWAY AND LANDING AREA SURFACE SHALL BE OF A SOLID CONTINUOUS CONTRASTING COLOR ABUTTING UP TO THE EXISTING SIDEWALK.
- CURB RAMPS AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
- CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.
- IF A TEMPORARY PEDESTRIAN RAMP LEADS TO A CROSSWALK, THEN A DETECTABLE WARNING PAD MUST BE ADHERED TO THE BASE OF THE RAMP. IF IT LEADS TO A PROTECTED PEDESTRIAN BYPASS THAT DOES NOT CONFLICT WITH VEHICULAR TRAFFIC, THEN A PAD SHALL NOT BE INSTALLED ON THE RAMP.

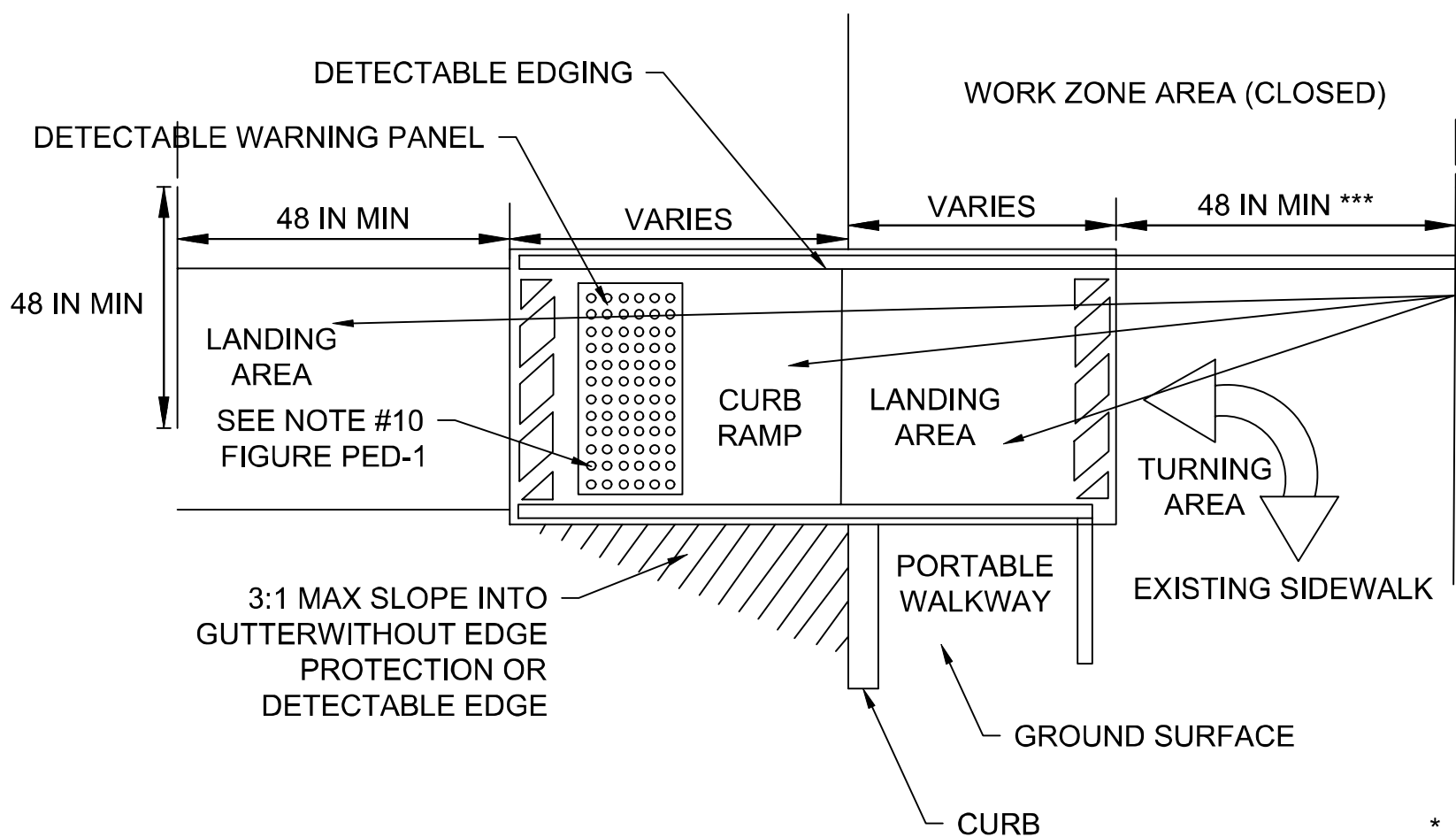


NOTES:

- DETAIL I IS CONSIDERED AN EXAMPLE OF A SHORT TERM CLOSURE AND PEDESTRIAN ASSISTANCE (PERSONEL) TO NAVIGATE AROUND THE CLOSURE/WORK AREA COULD BE CONSIDERED AS AN OPTION IN PLACE OF PROVIDING ADA/AAB DEVICES. DETAIL II IS CONSIDERED AN EXAMPLE OF A LONG TERM CLOSURE THAT WOULD REQUIRE ADDITIONAL ADA/AAB COMPLIANT DEVICES. IF A SIDEWALK CLOSURE OR RESTRICTION LASTS FOR MORE THAN ONE (1) WORK SHIFT THEN ADA/AAB COMPLIANCE SHALL BE FOLLOWED.
- WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, TEMPORARY FACILITIES SHALL BE PROVIDED AND THEY SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
- A PEDESTRIAN CHANNELIZING DEVICE THAT IS DETECTABLE BY A PERSON WITH A VISUAL DISABILITY TRAVELING WITH THE AID OF A LONG CANE SHALL BE PLACED ACROSS THE FULL WIDTH OF THE CLOSED SIDEWALK.
- WHEN USED, TEMPORARY RAMPS SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT (SEE FIGURES).
- THE ALTERNATE PATHWAY SHOULD HAVE A SMOOTH CONTINUOUS HARD SURFACE FOR THE ENTIRE LENGTH OF THE TEMPORARY PEDESTRIAN FACILITY.
- THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THE SIDEWALK EXCEEDS 200 FEET THEN A 5 FOOT BE 5 FOOT PASSING ZONE SHALL BE PROVIDED.
- THE PROTECTIVE REQUIREMENTS OF A TTC WORK ZONE MAY HAVE AN IMPACT IN DETERMINING THE NEED FOR TEMPORARY TRAFFIC BARRIERS AND THEIR USE IN PROVIDING PEDESTRIAN DELINEATION SHOULD BE BASED ON ENGINEERING JUDGMENT .
- CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN; VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE. THESE DETAILS ARE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DETERMINED BY THE ENGINEER.
- AUDIBLE INFORMATION DEVICES SHOULD BE CONSIDERED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.
- EXISTING AUDIBLE DEVICES NO LONGER APPLICABLE DUE TO CONSTRUCTION SHALL BE DISABLED.

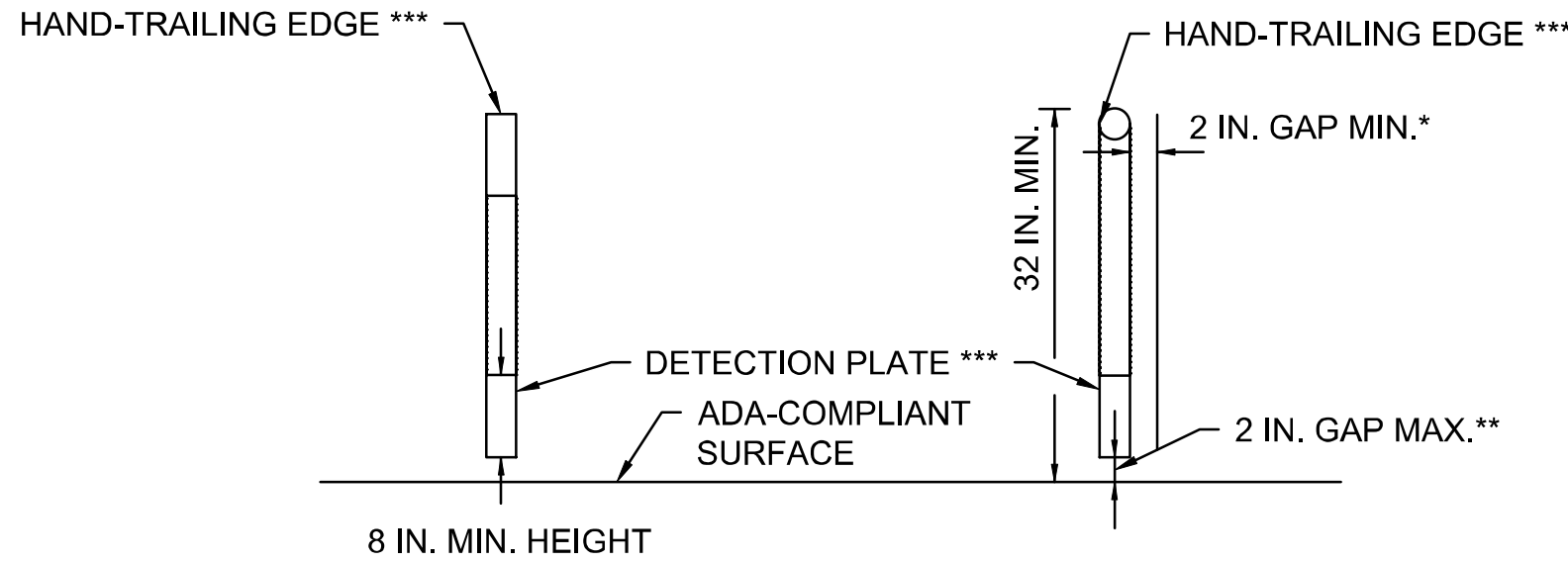
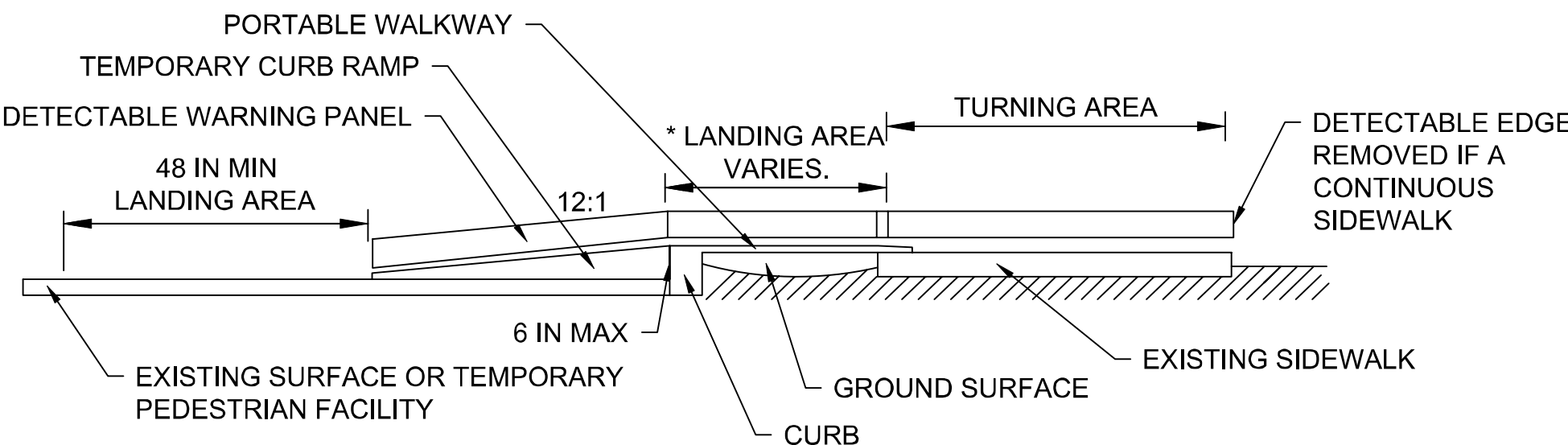
AUDIBLE DEVICES:

- FOR LONG TERM SIDEWALK CLOSURES (AT A MINIMUM OVERNIGHT) A FORM OF SPEECH MESSAGING FOR PEDESTRIANS WITH VISUAL DISABILITIES SHALL BE PROVIDED. AUDIBLE INFORMATION DEVICES SUCH AS DETECTABLE BARRIERS OR BARRICADES AND OTHER PASSIVE PEDESTRIAN ACTIVATION (MOTION ACTIVATED) DEVICES SHOULD BE CONSIDERED FOR THESE CASES. THESE AUDIBLE DEVICES CAN BE MOUNTABLE OR STAND ALONE.



TEMPORARY CURB RAMP
NOT TO SCALE

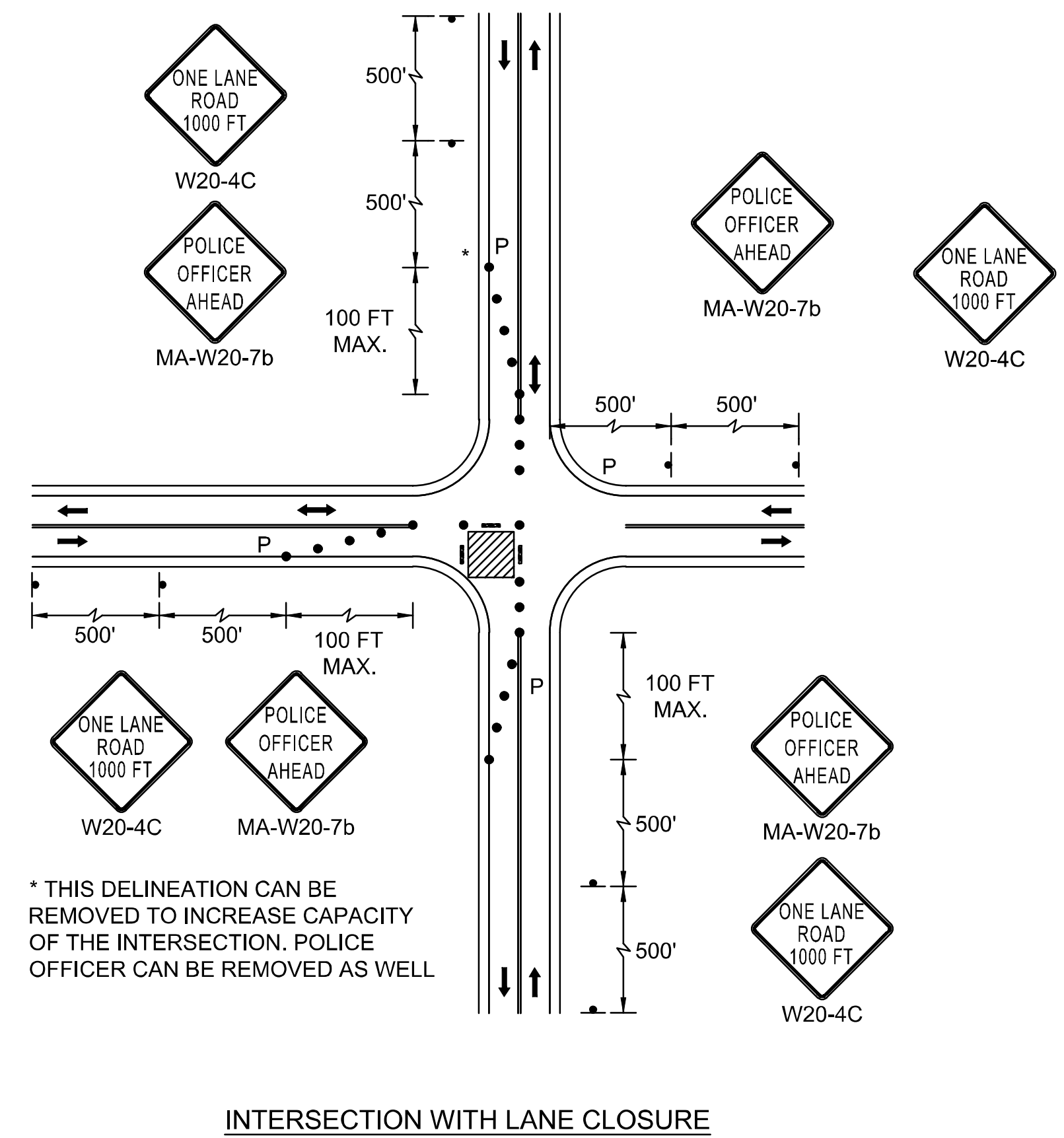
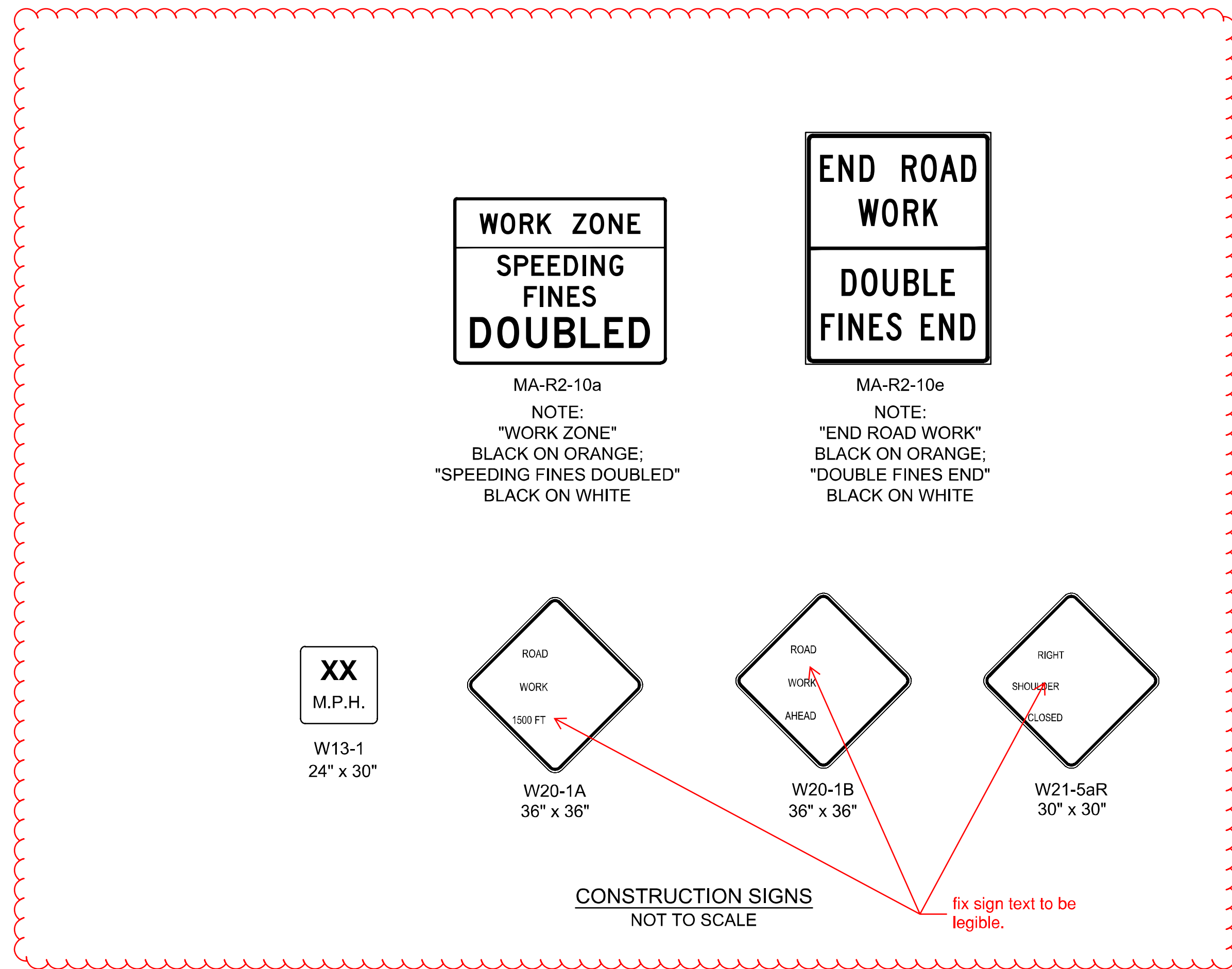
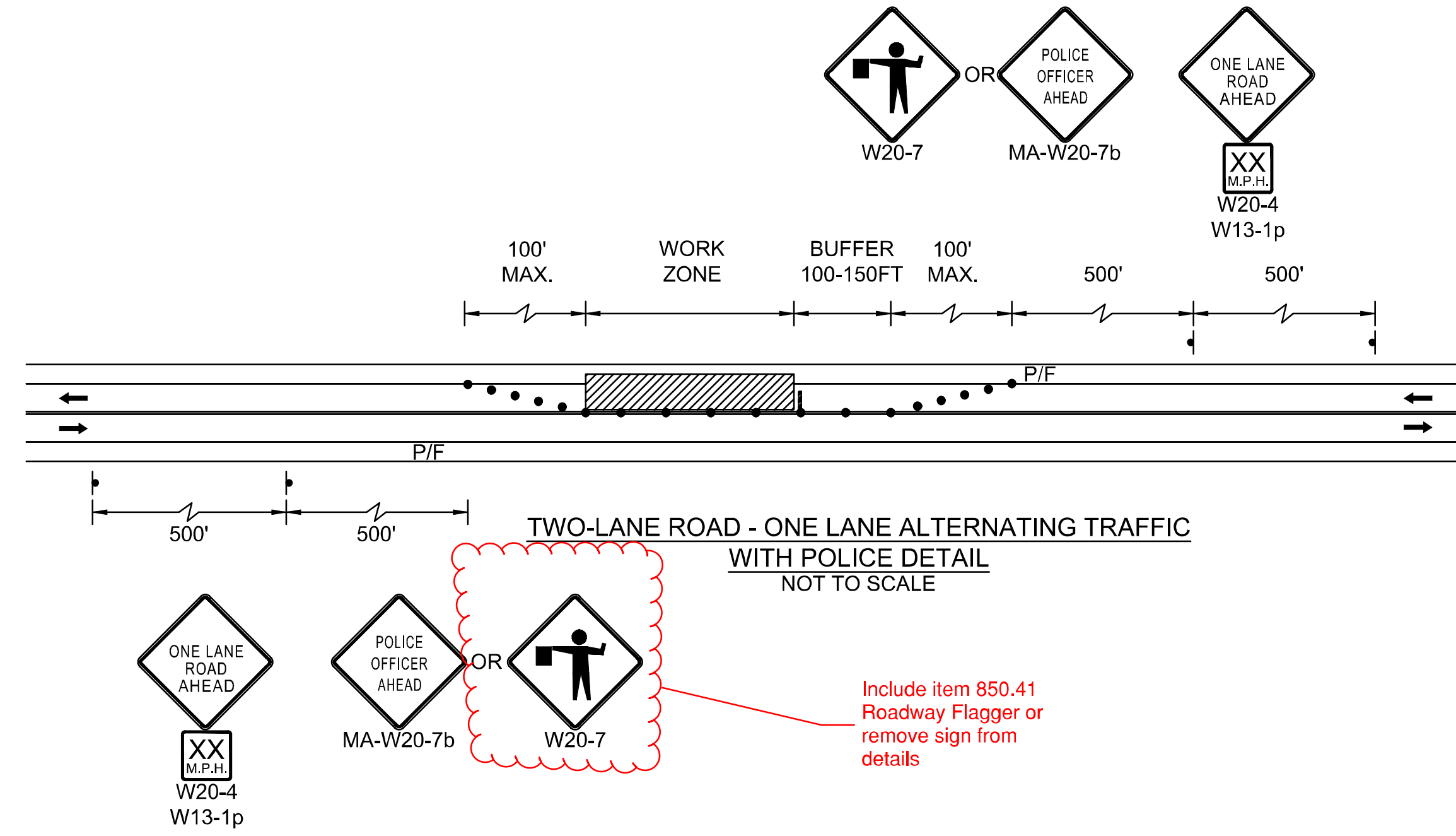
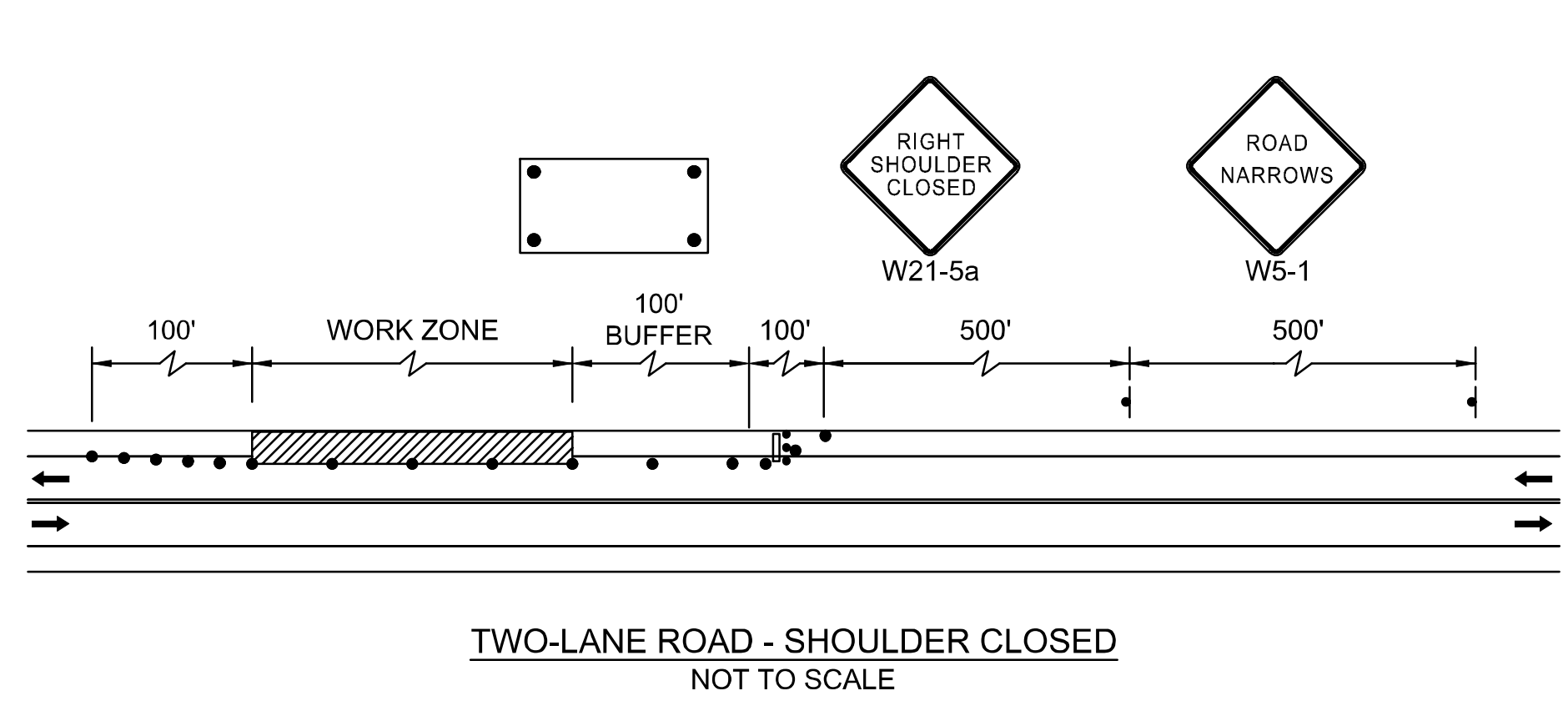
- * LANDING AREA USED TO OVERLAP NON-ADA COMPLIANT SURFACES.
- ** DETECTABLE EDGE REMOVED IF A CONTINUOUS SIDEWALK.
- *** 60 IN. IF AN OBSTRUCTION IS AT BACK OF SIDEWALK



PEDESTRIAN CHANNELIZING DEVICE
NOT TO SCALE

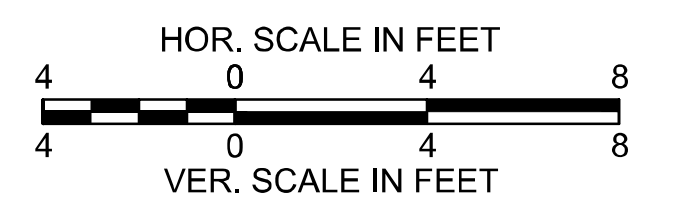
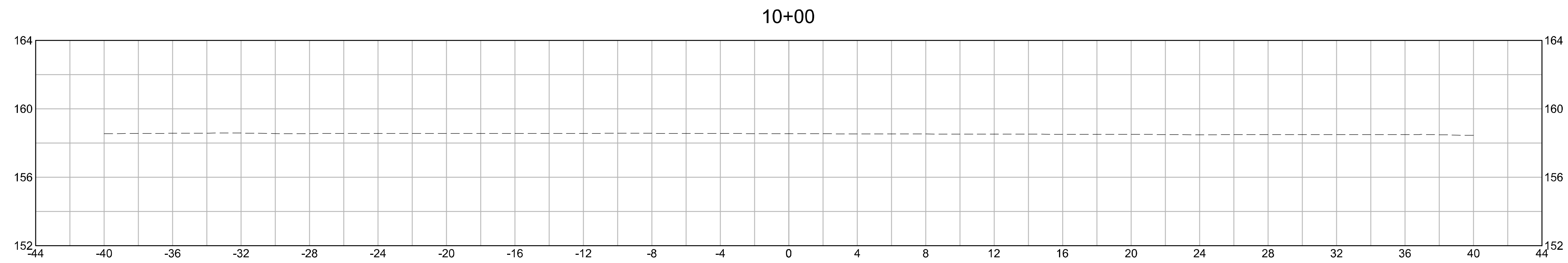
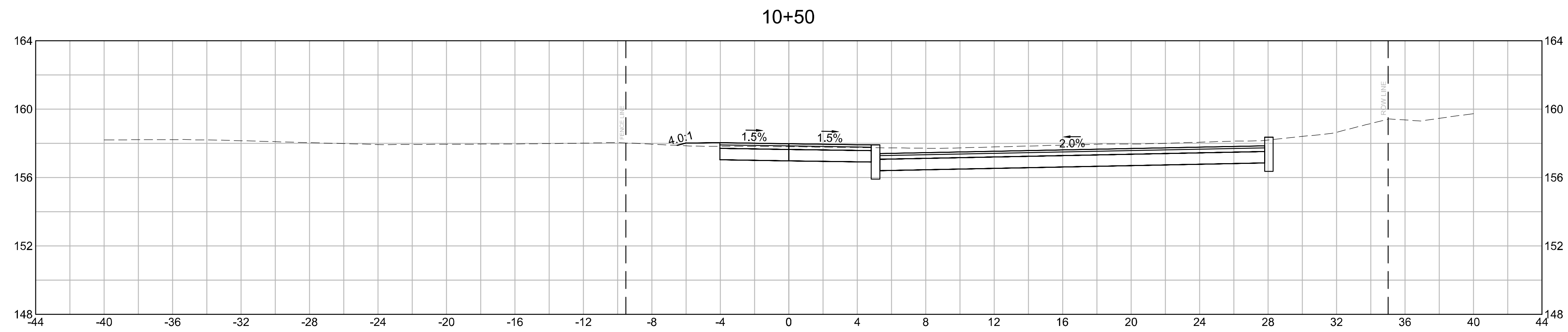
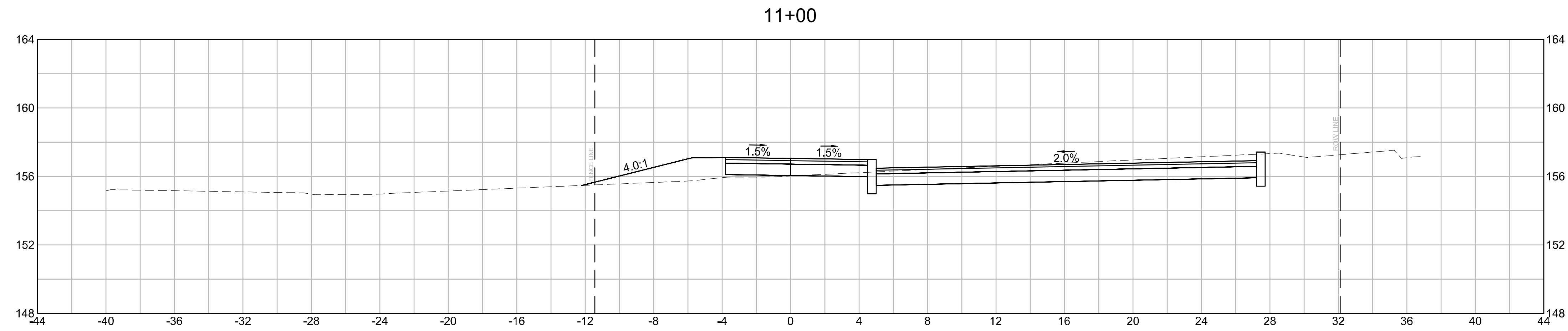
NOTES:

- * THERE SHALL BE A 2 INCH GAP BETWEEN THE HAND-TRAILING EDGE AND ITS SUPPORT.
- ** A MAXIMUM 2 INCH GAP BETWEEN THE BOTTOM OF THE BOTTOM RAIL AND THE SURFACE MAY BE USED TO PROVIDE DRAINAGE.
- *** THE HAND-TRAILING EDGE AND DETECTION PLATE SHALL BE CONTINUOUS THROUGHOUT THE LENGTH OF THE PATH SUCH THAT A PEDESTRIAN USER WITH A LONG CANE CAN FOLLOW IT.

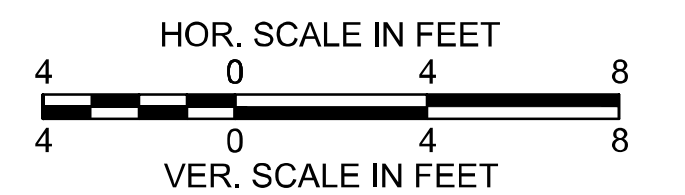
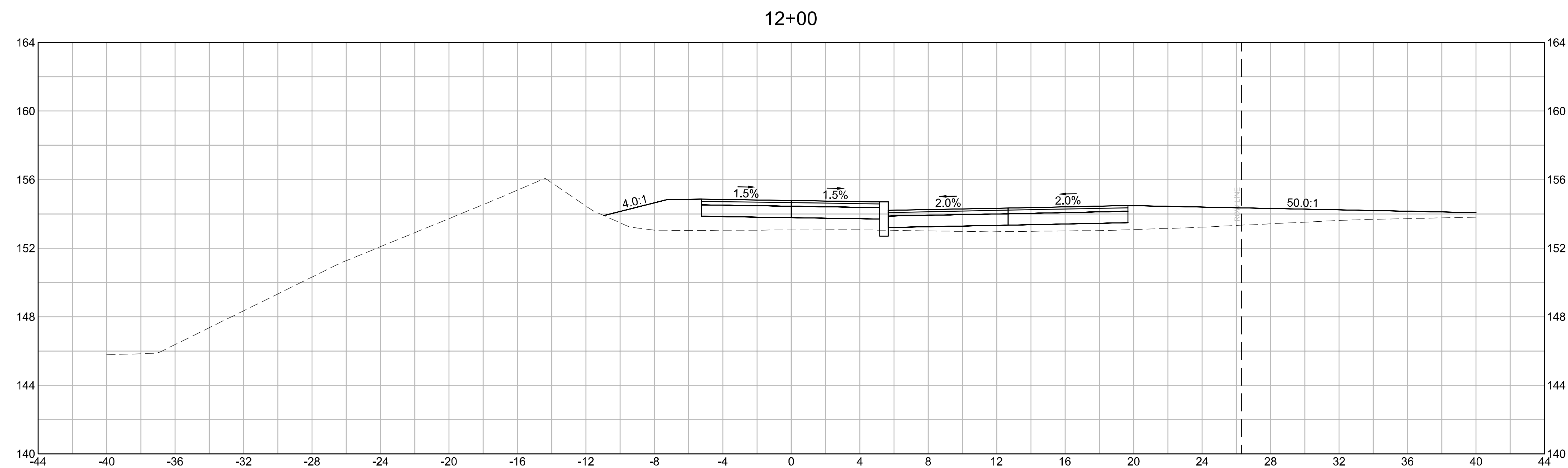
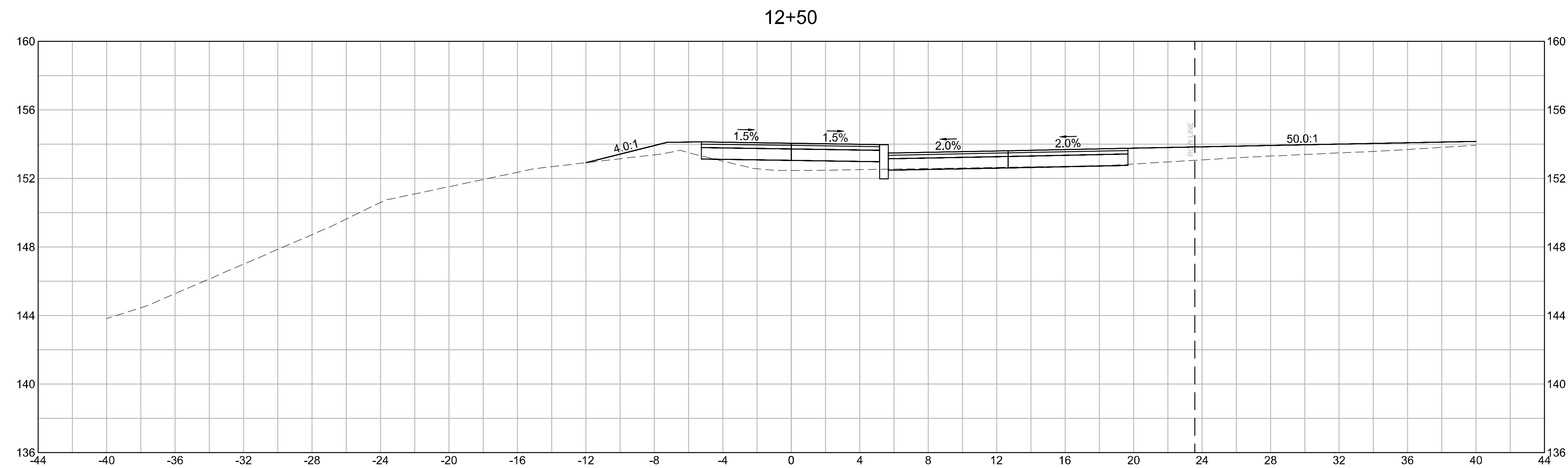


instead include
Temporary Traffic
Sign Summary with
all potential Safety
Signing for Traffic
Management.

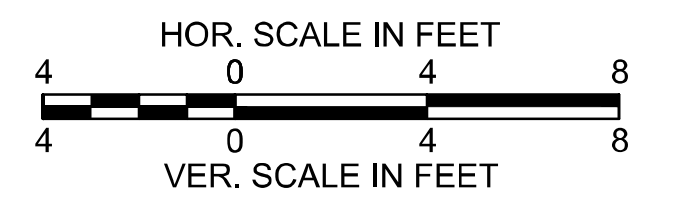
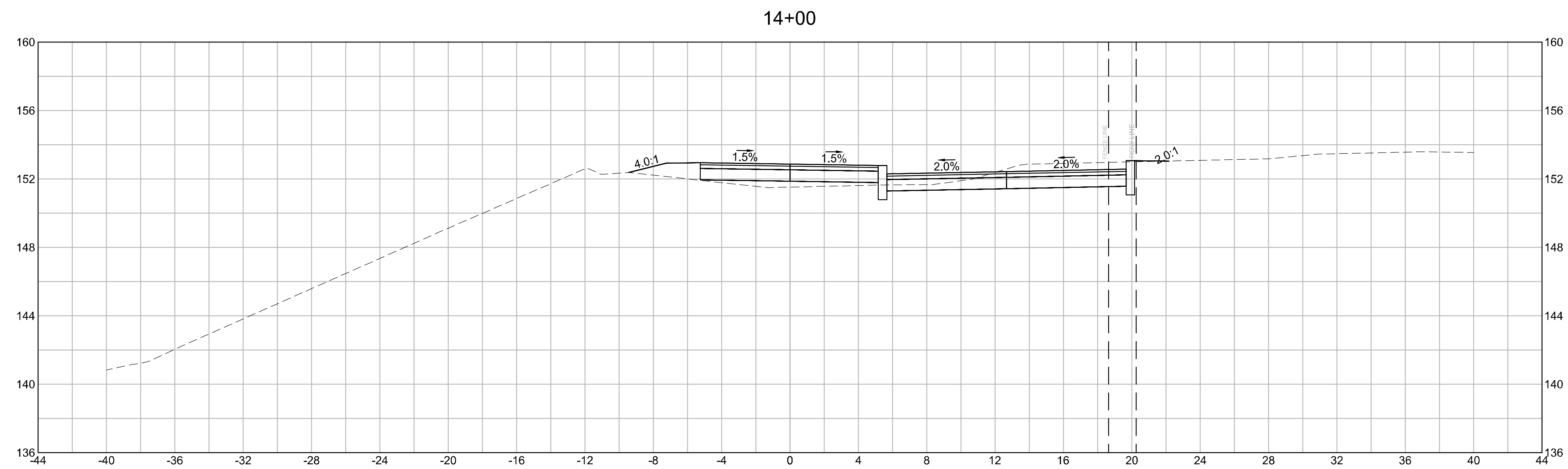
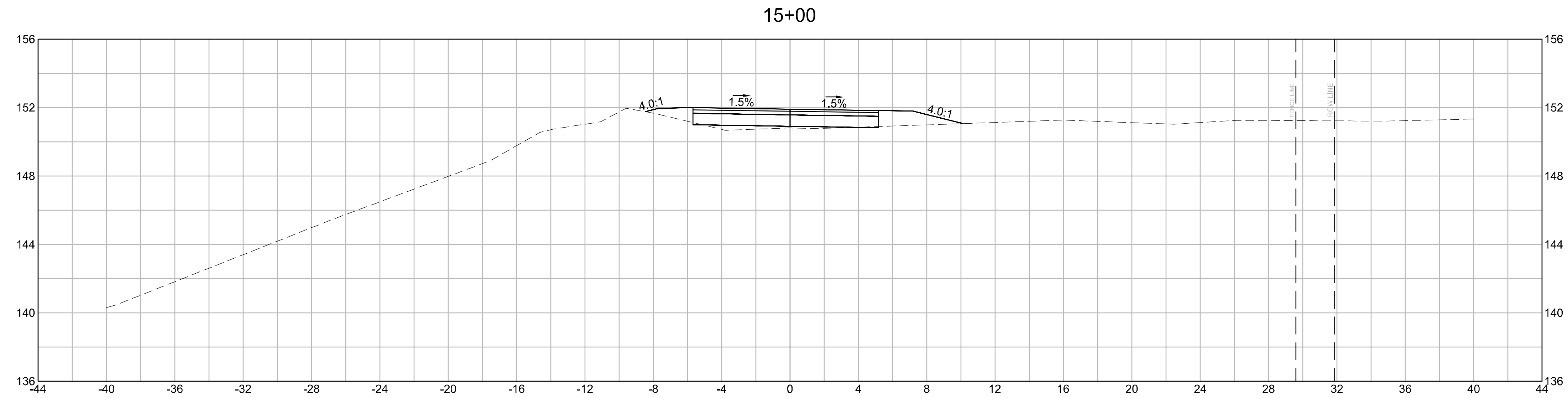
SPRINGFIELD MCKNIGHT COMMUNITY TRAIL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	66	66
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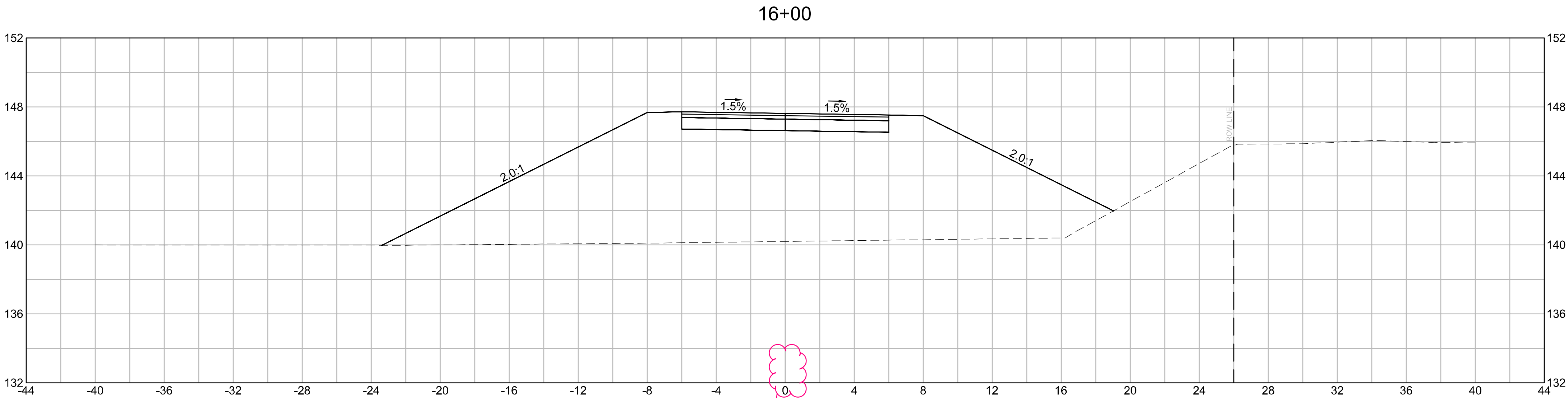
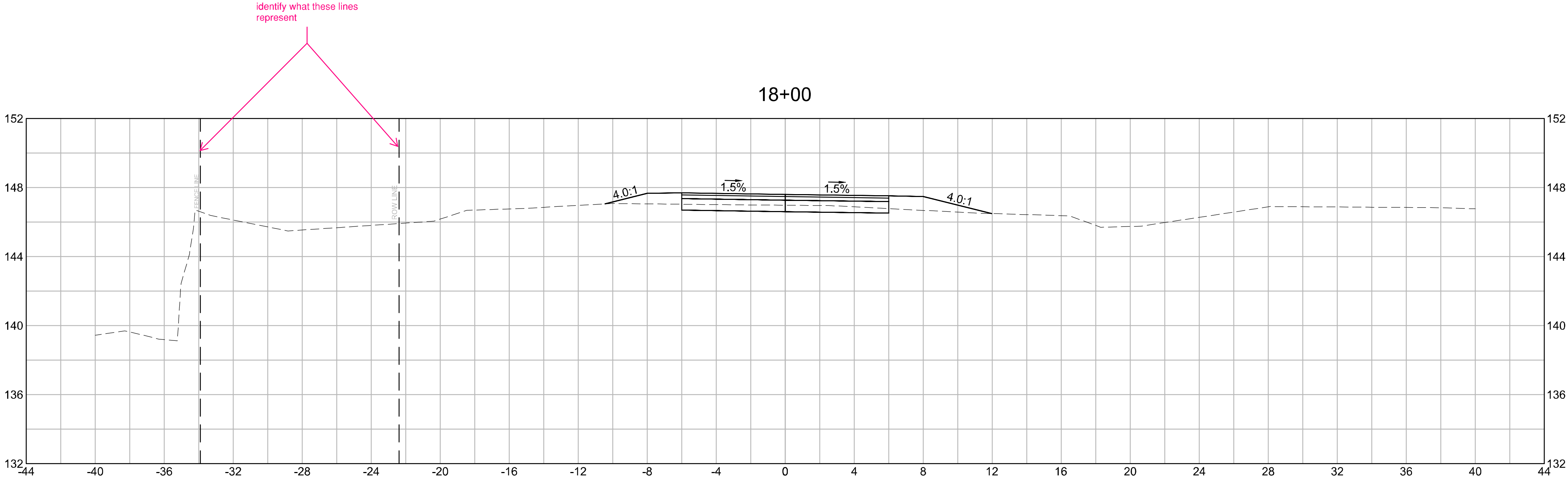


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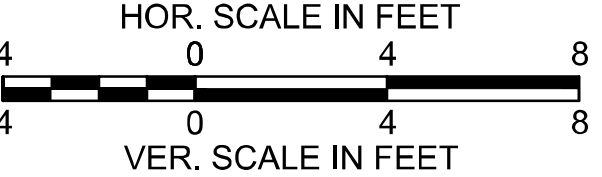


SPRINGFIELD
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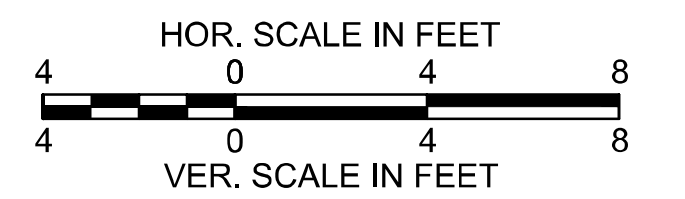
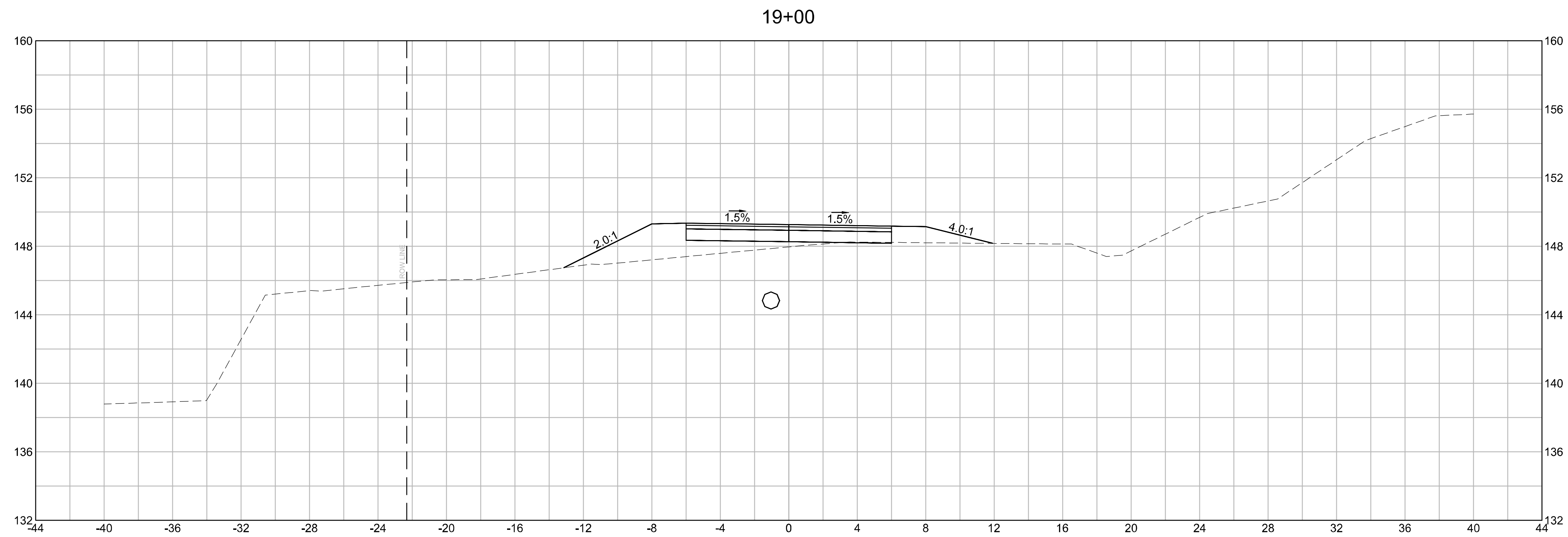
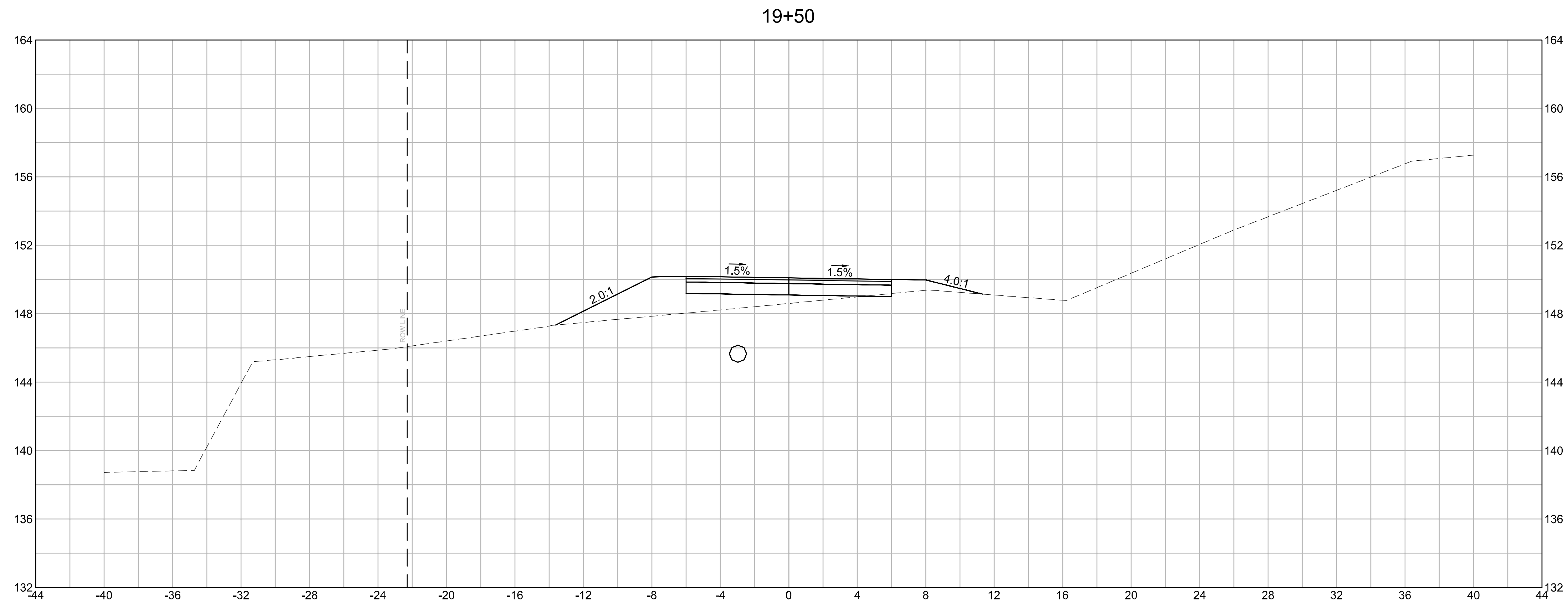
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for the next submission
existing and proposed
profile elevations are
required

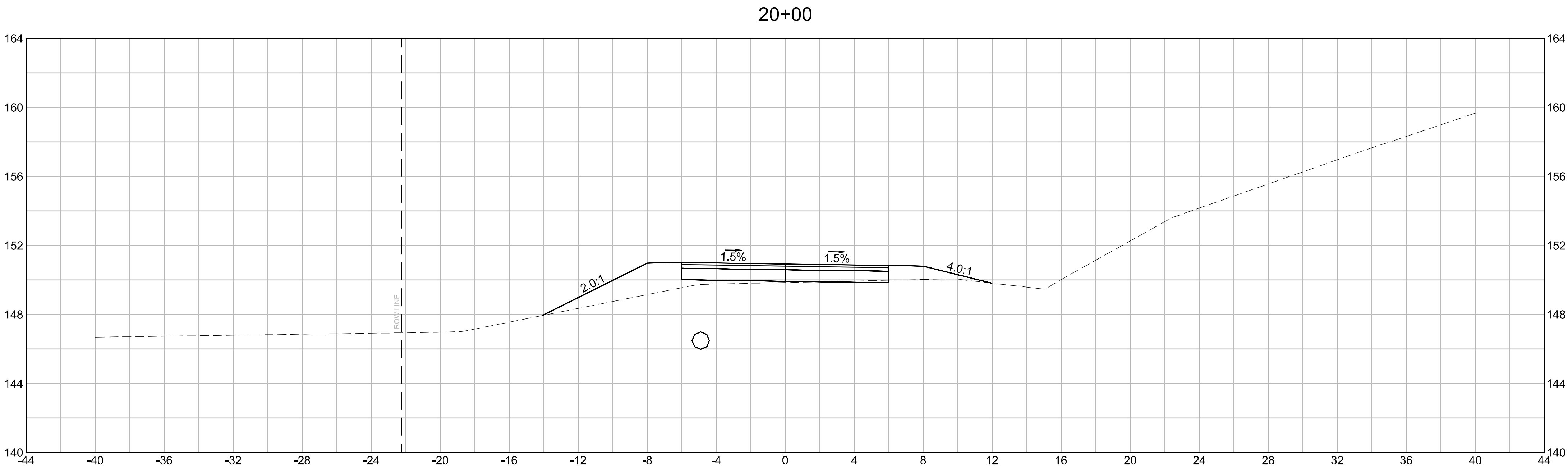
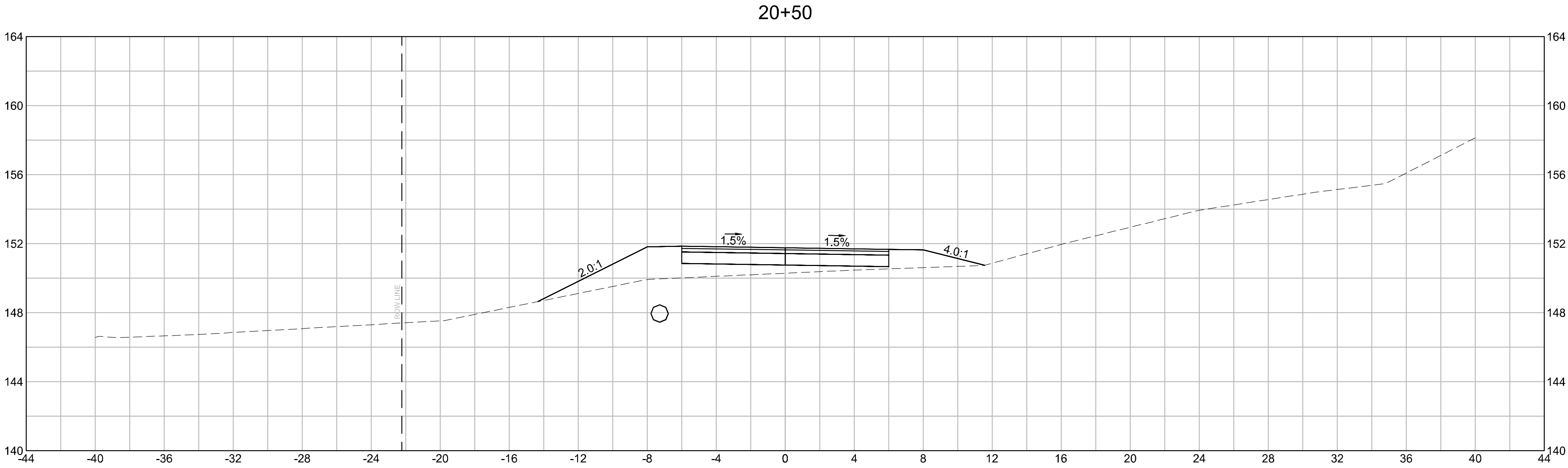


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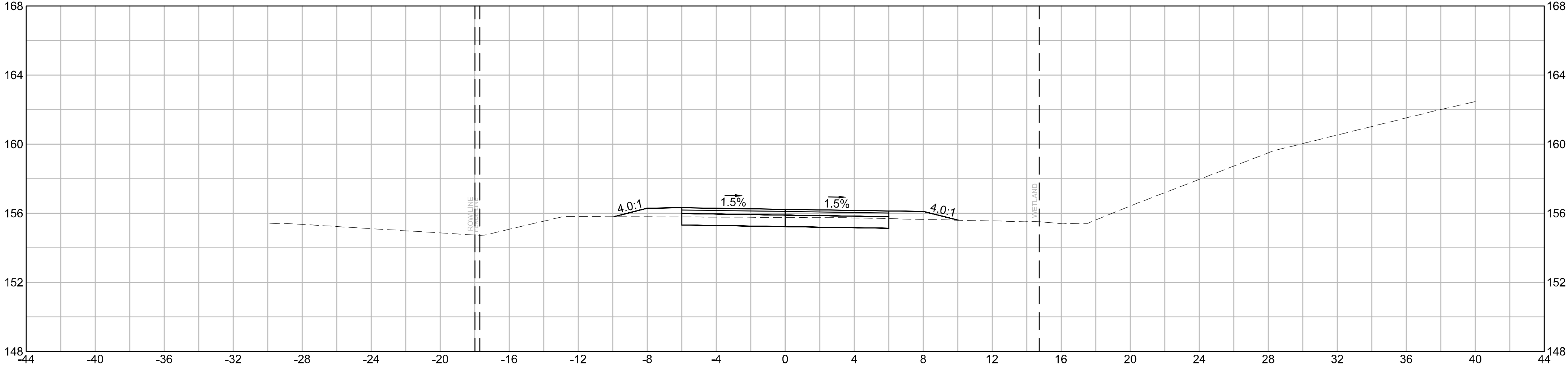
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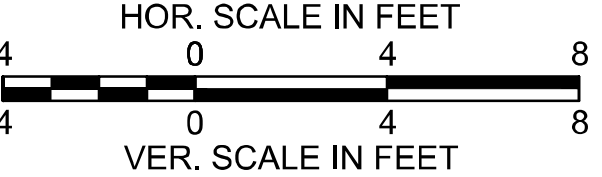
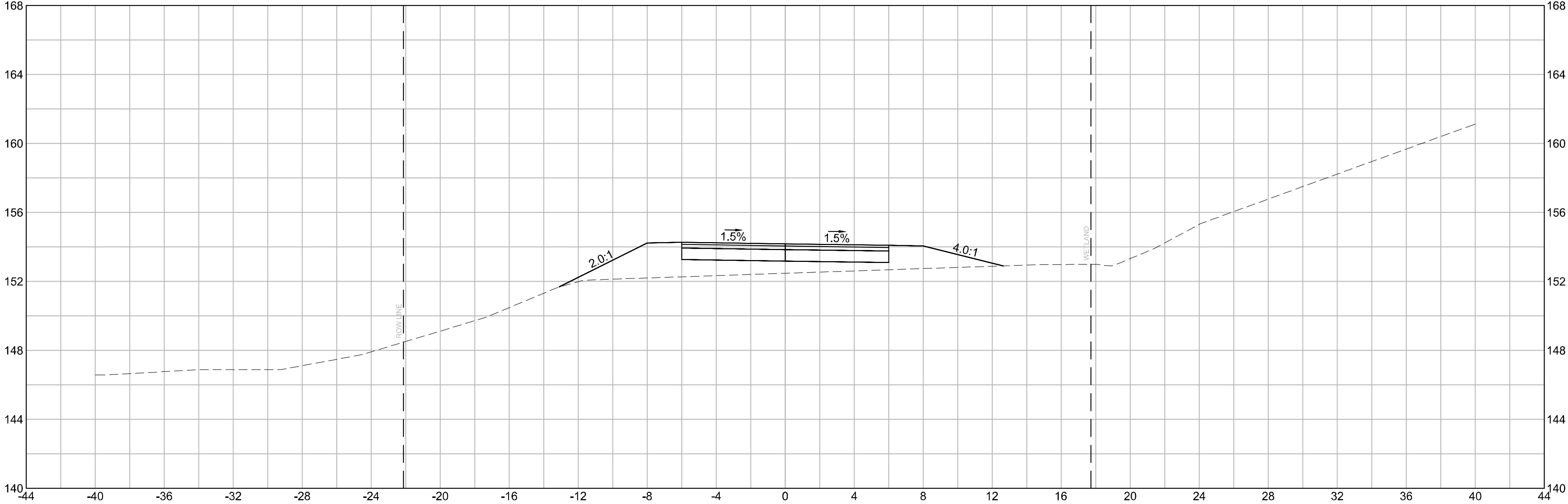
SPRINGFIELD
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24+00

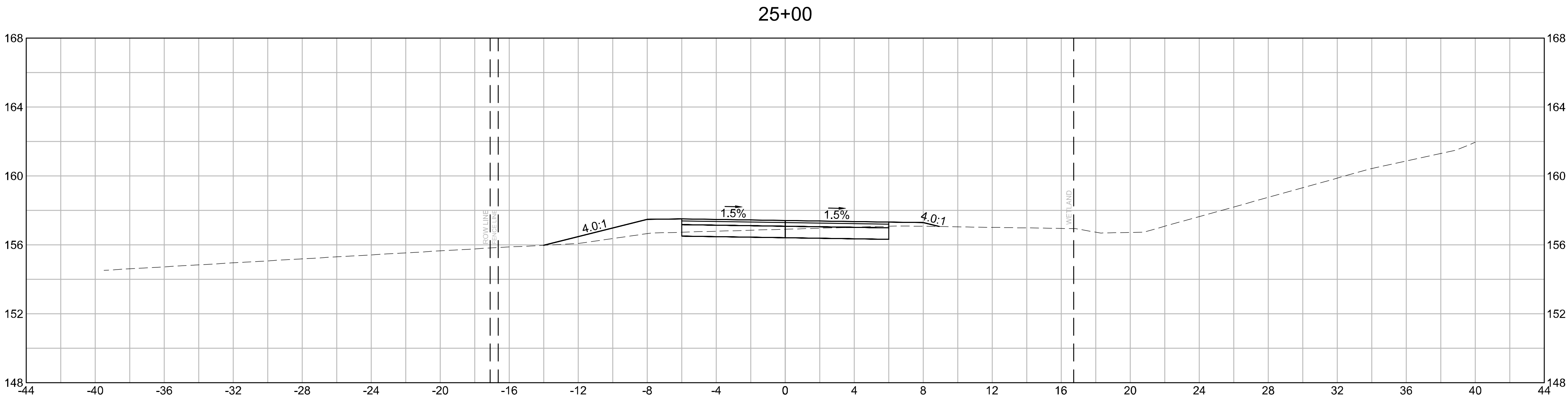
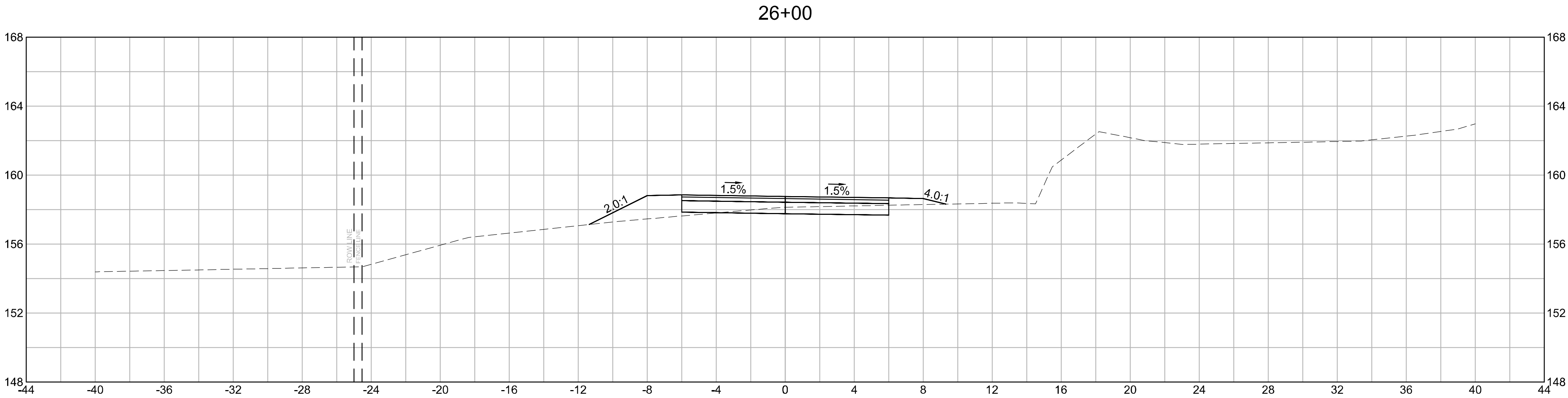


22+00

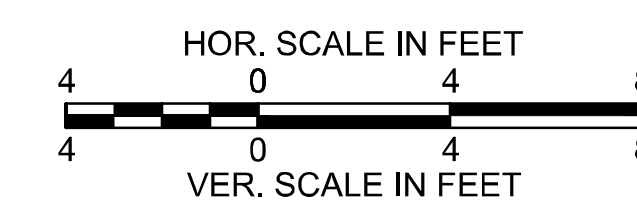
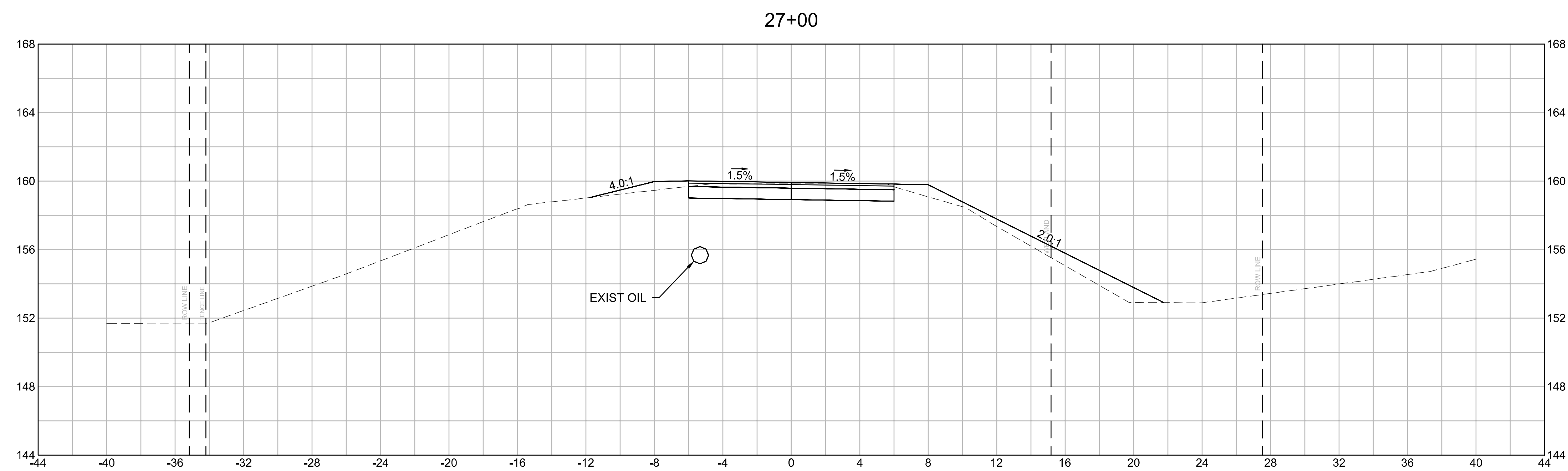
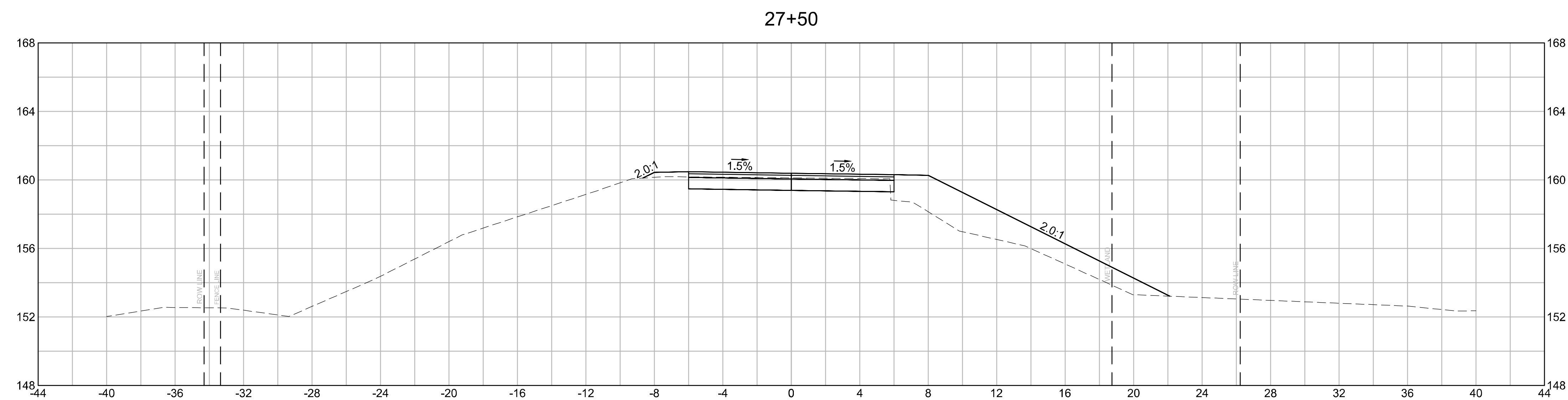


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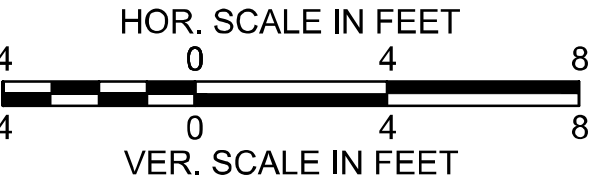
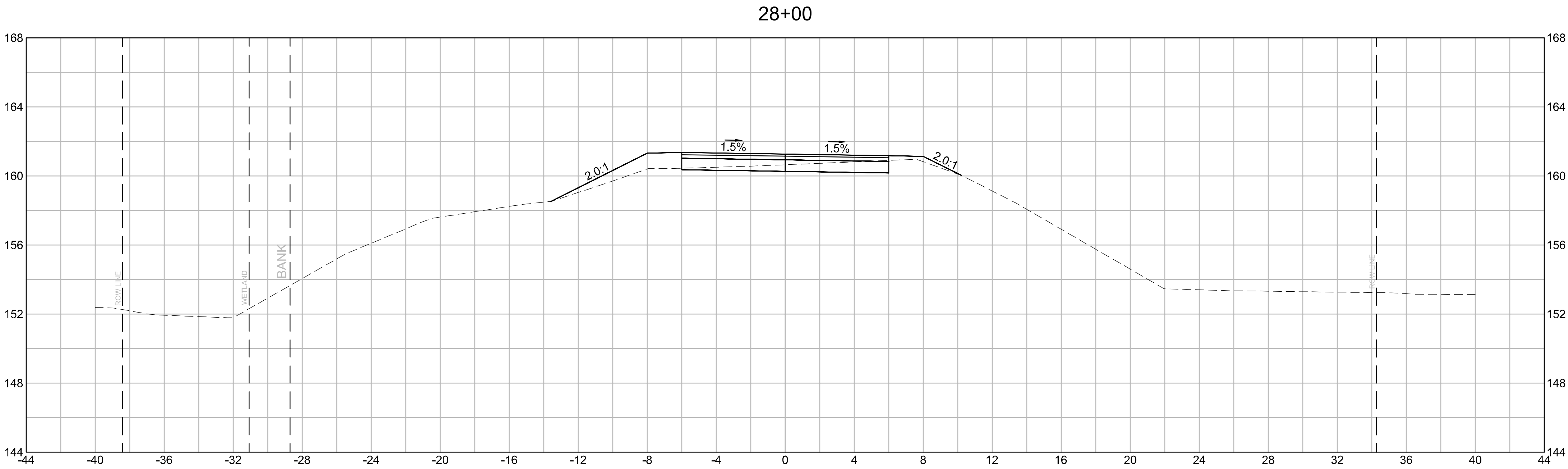
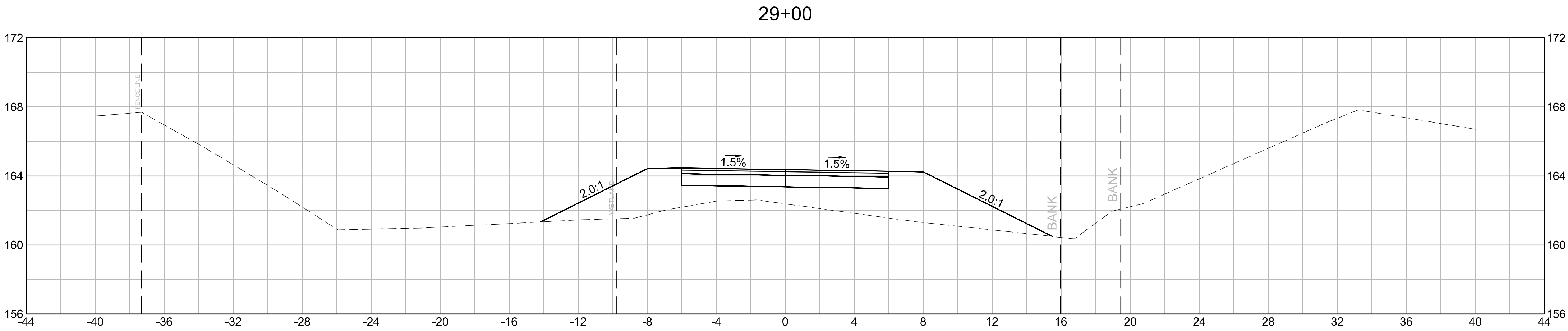


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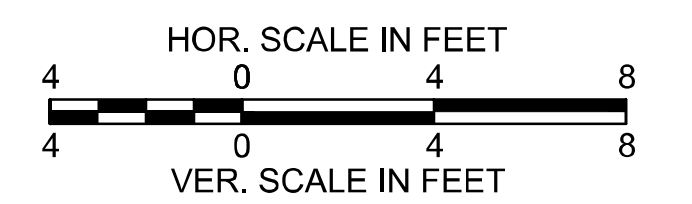
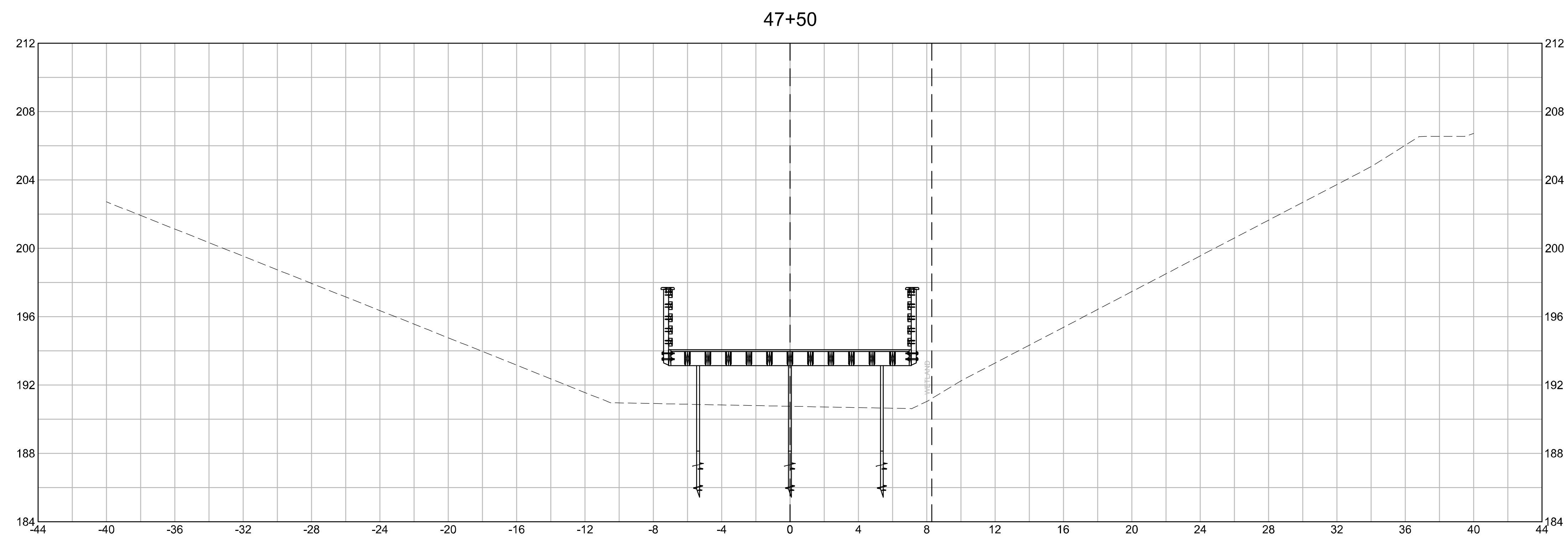
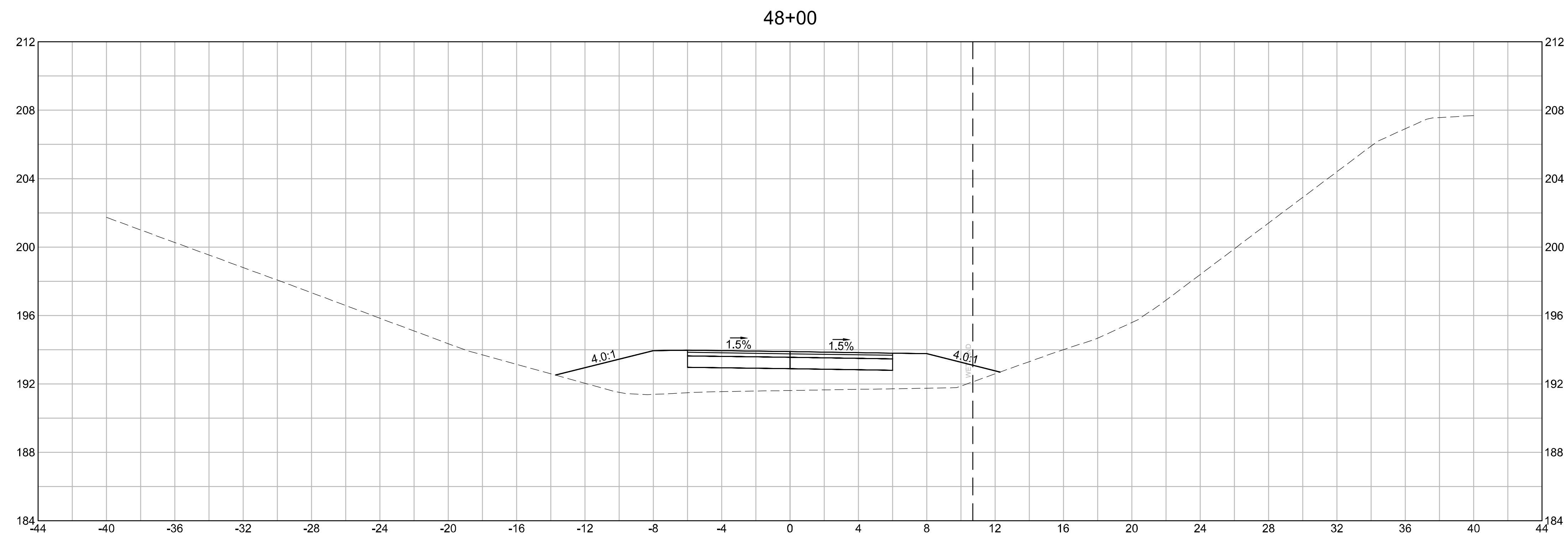


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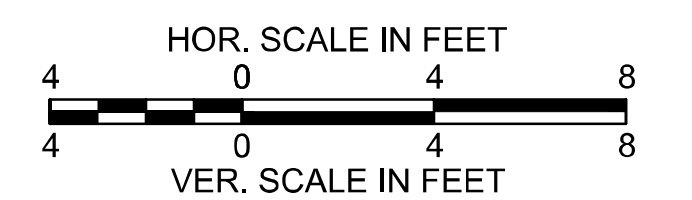
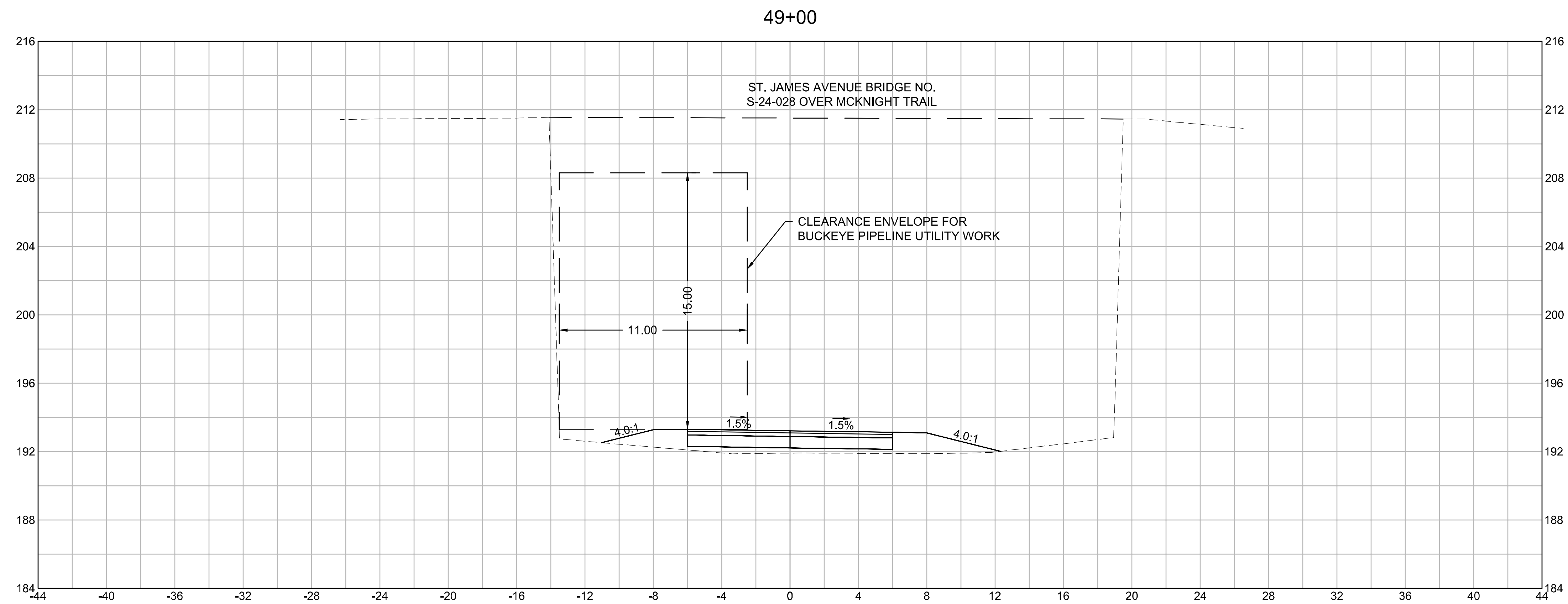
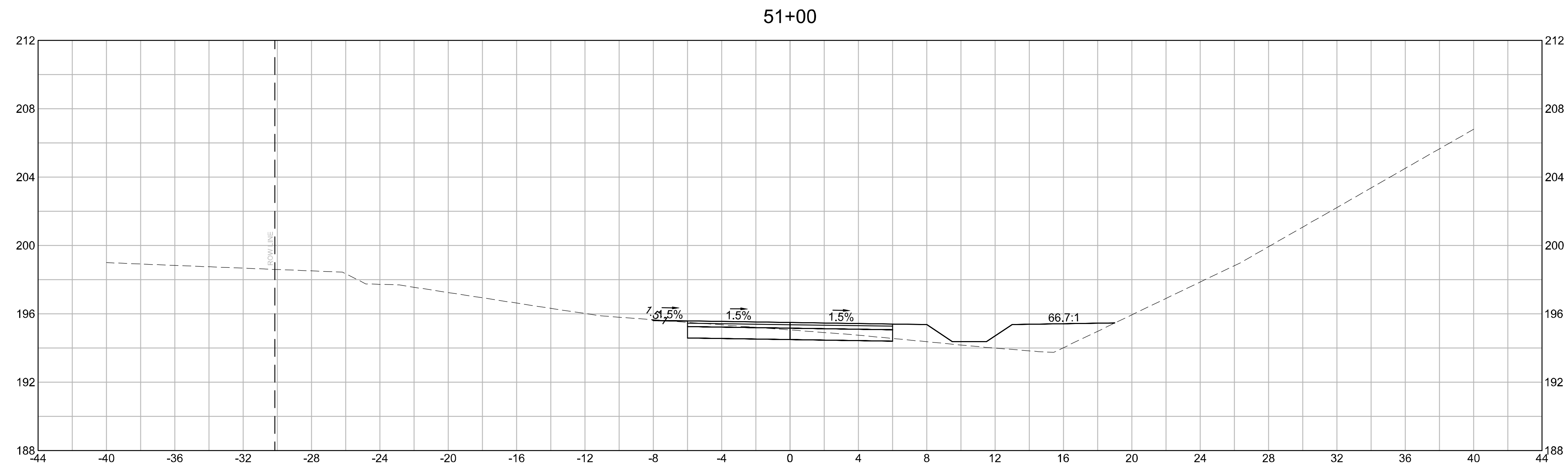
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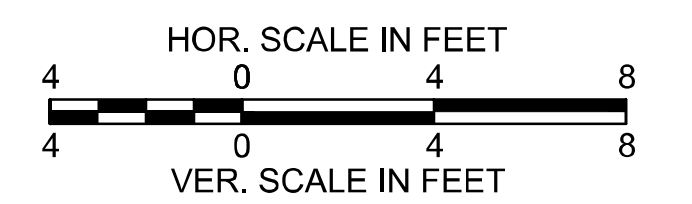
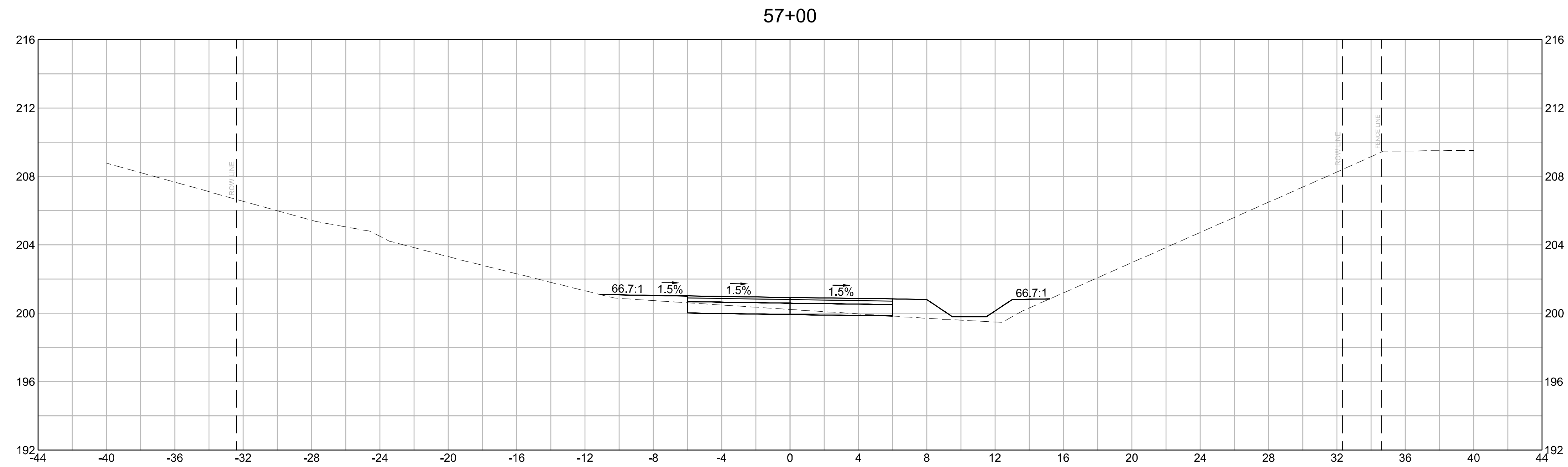
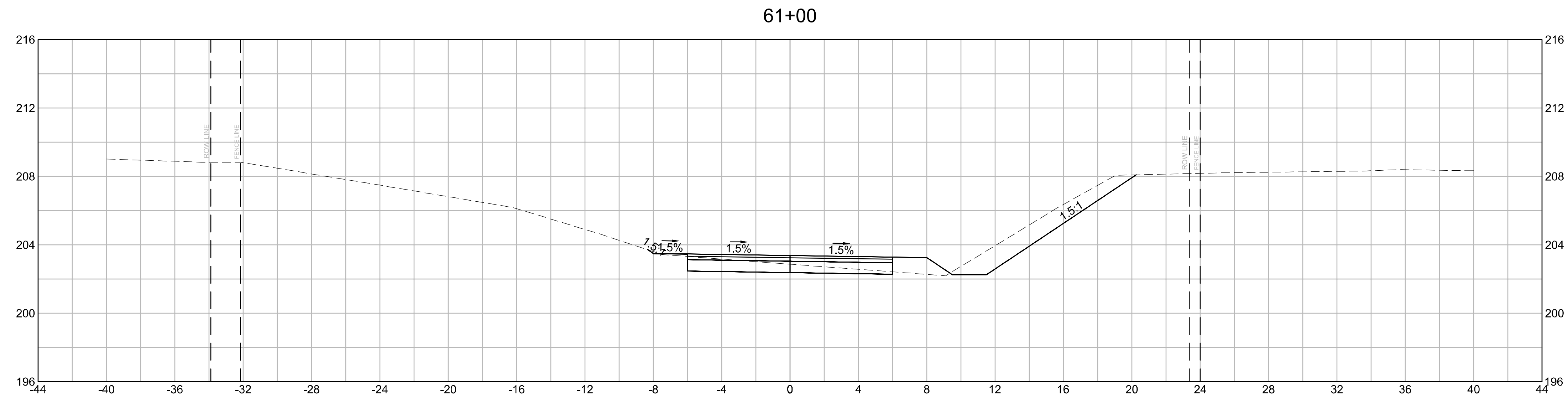
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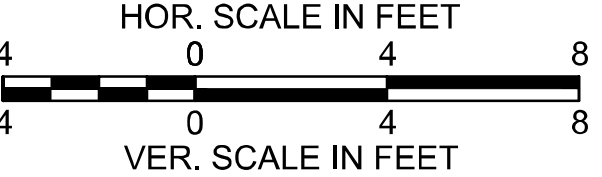
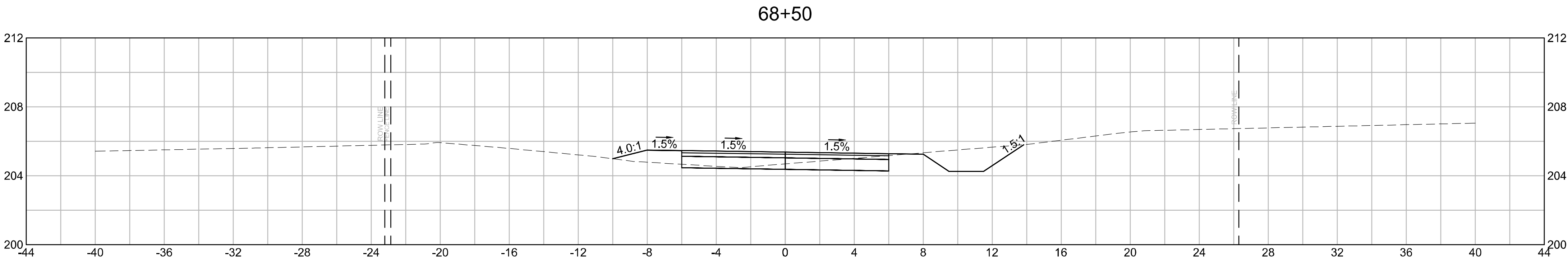
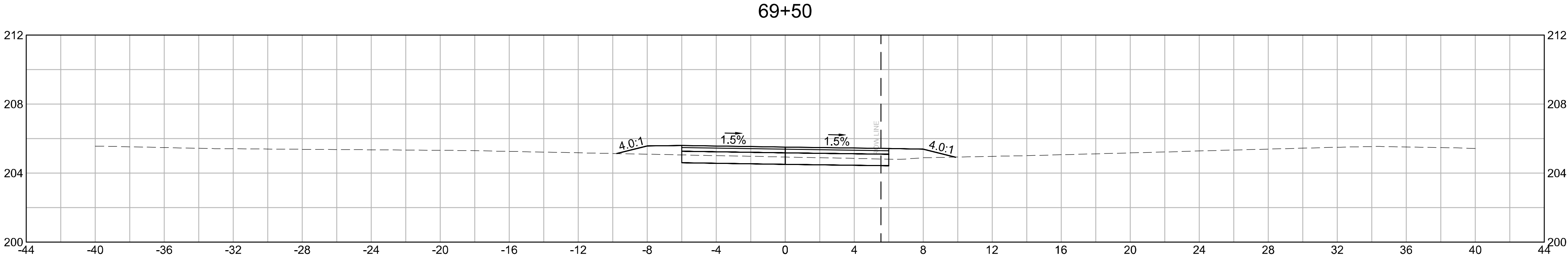


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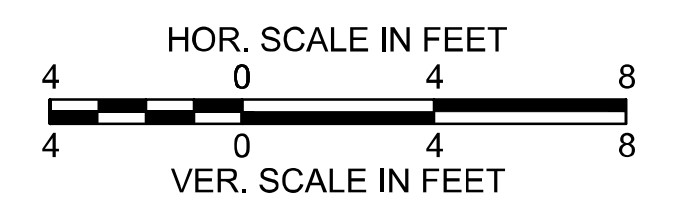
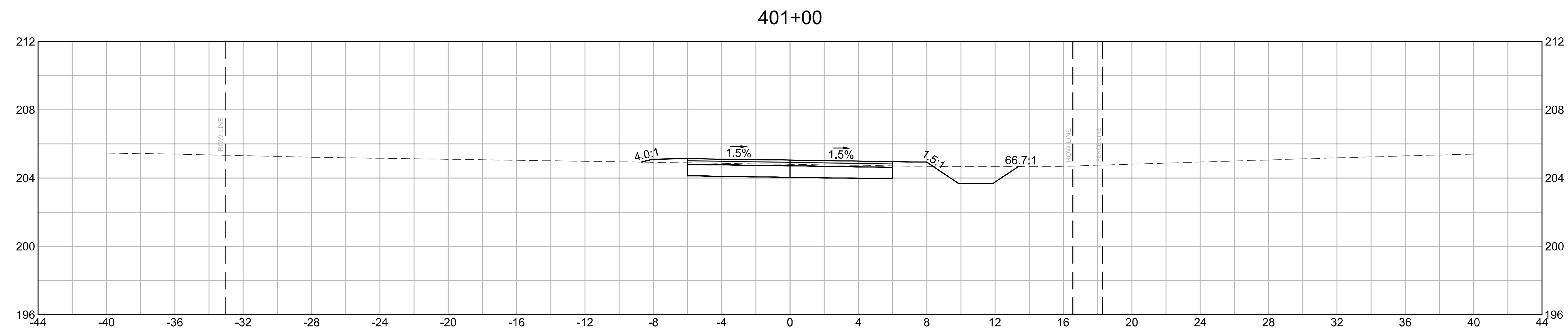
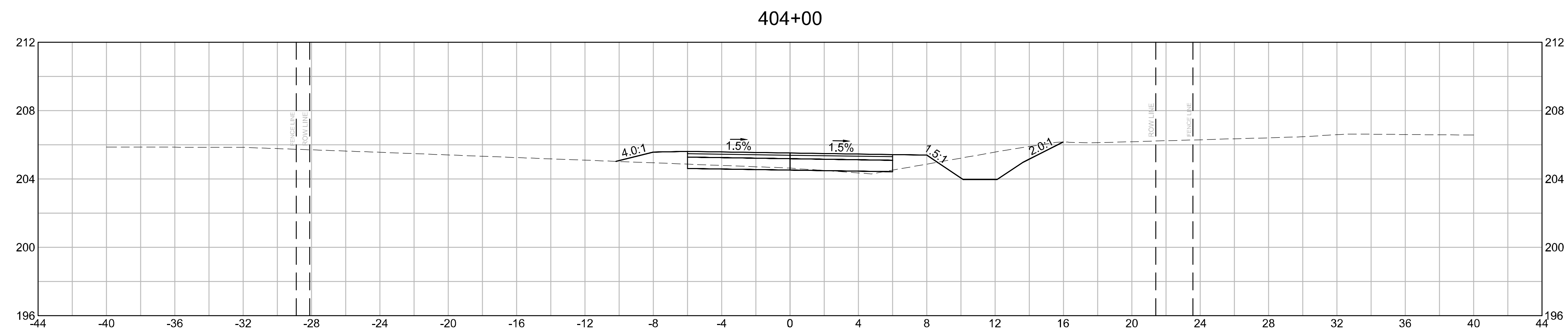
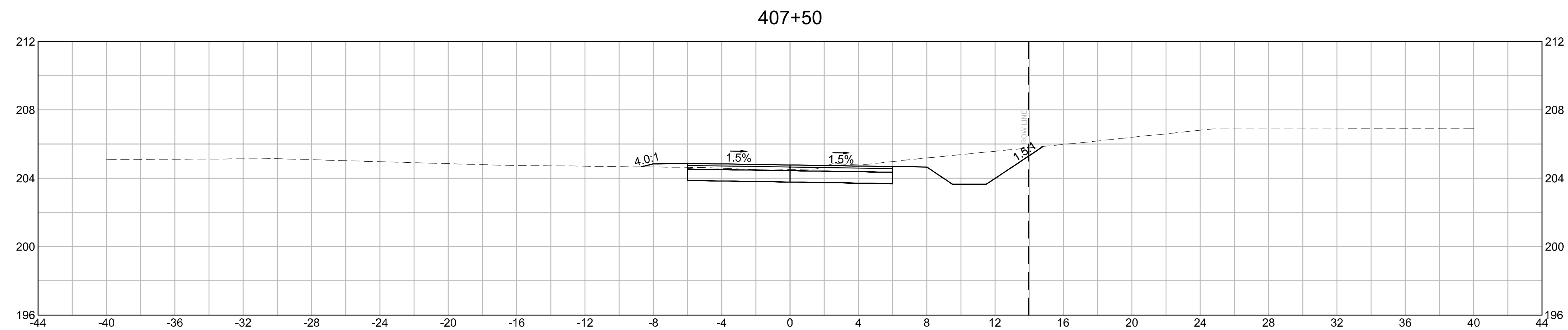


SPRINGFIELD
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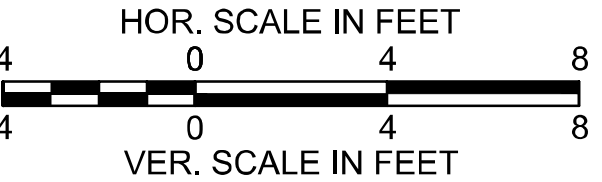
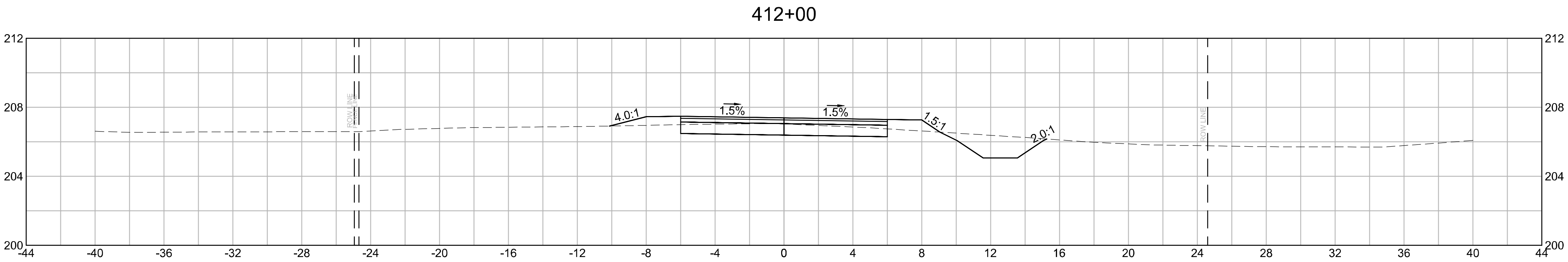
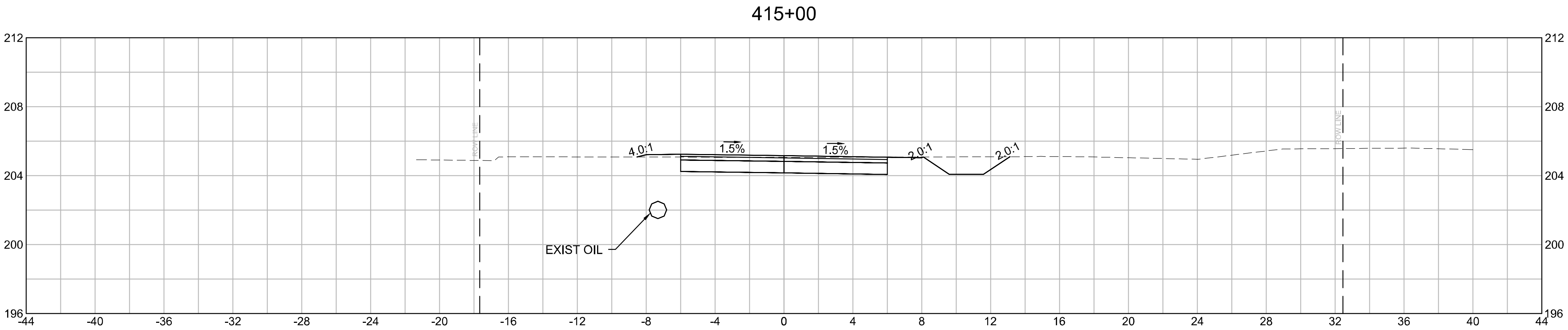
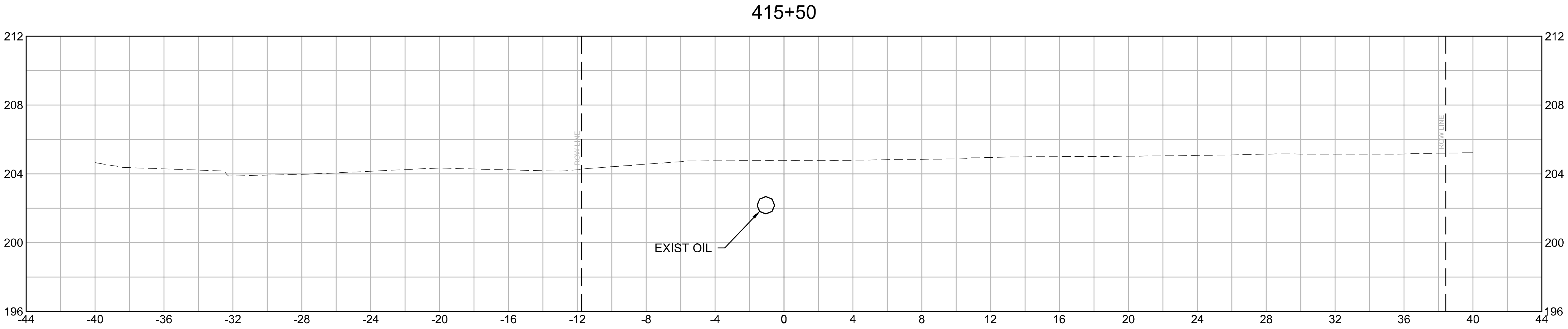


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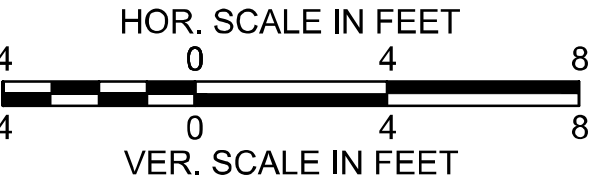
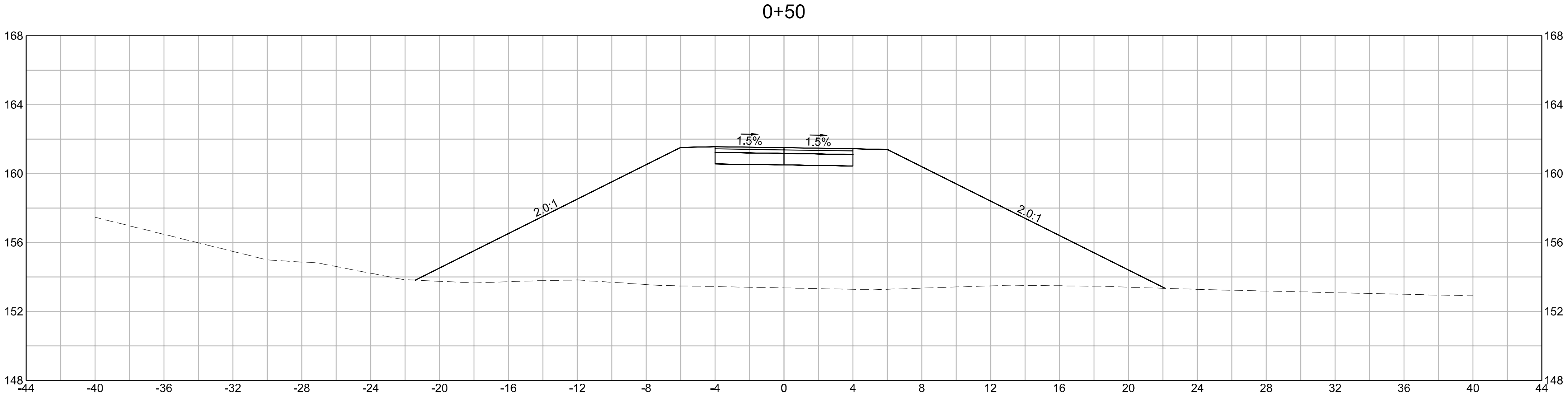
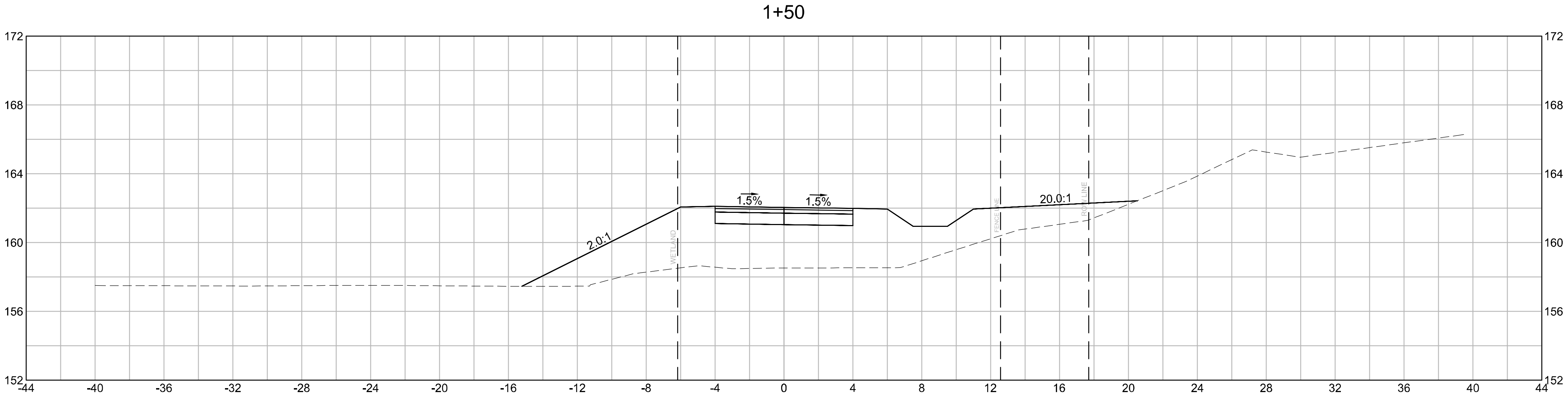
SPRINGFIELD
MCKNIGHT COMMUNITY TRAIL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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PROJECT FILE NO.		608157	



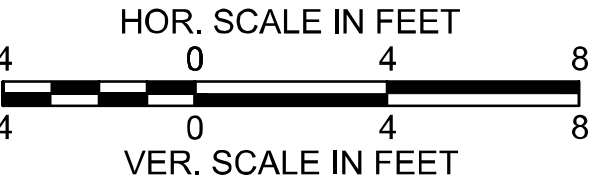
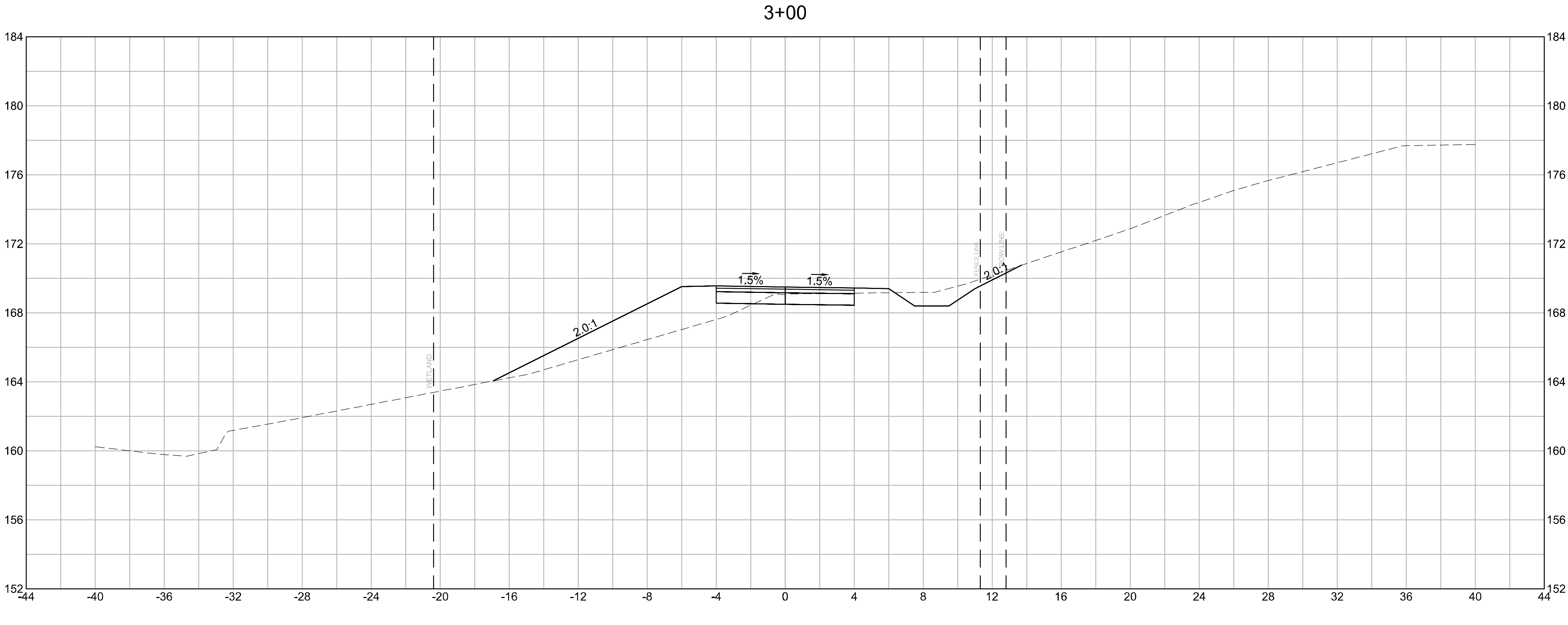
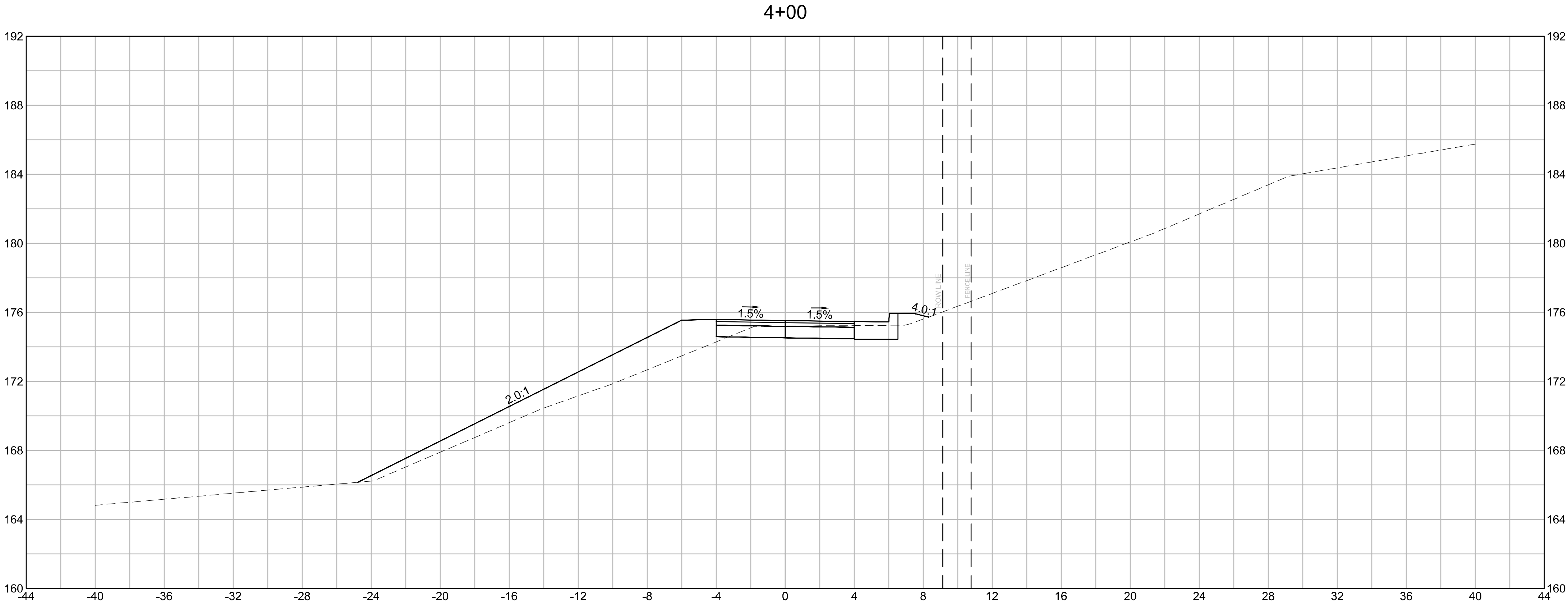
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