CONSTRUCTION PLANS
FOR
PIKE AVENUE PATH- COLUMBUS
STPE 48(44), UPN 8048

PREPARED FOR
TOWN OF
COLUMBUS, MONTANA

APPROVED :
June 3, 2015
BY: _____
INTERSTATE ENGINEERING, INC.
PROJECT ENGINEER

QUALITY REVIEW BY:
_____, 2014
BY: _____
INTERSTATE ENGINEERING, INC.
PROJECT MANAGER

MONTANA
6/3/15
CHARLES B. STRUM
28577PE
LICENSED
PROFESSIONAL ENGINEER

INDEX OF DRAWINGS

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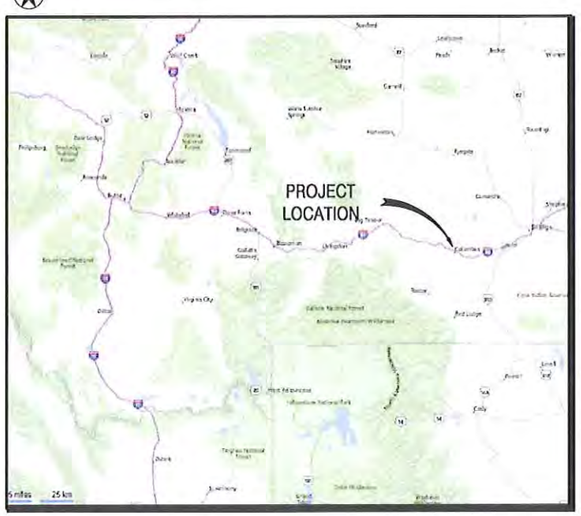
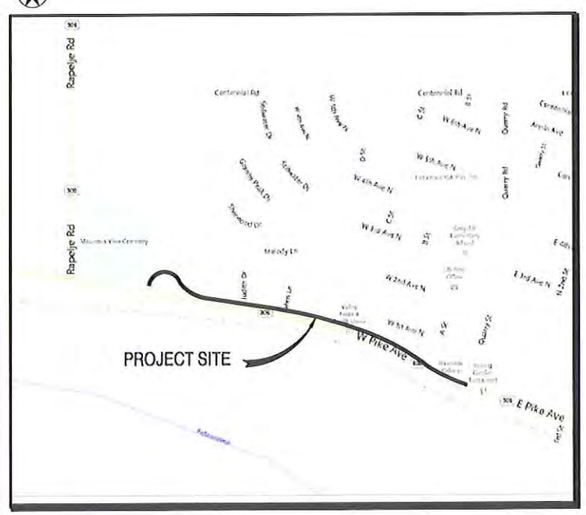


LOCATION MAP
NTS



SITE MAP
NTS

DRAWN BY:	REB
CHECKED BY:	CBS
DATE:	04-15
JOB NO.	Y13-00-131
REVISIONS:	

PIKE AVENUE PATH- COLUMBUS
STPE 48(44), UPN 8048
COVER

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LEGEND

EXST	ABBR	NEW	UTILITY
	MH		SEWER MANHOLE (48")
	FH		FIRE HYDRANT
	W V		WATER VALVE BOX AND RISER
	PP		POWER POLE
E	XFMR		TRANSFORMER
T			TELEPHONE PEDISTAL
			SURVEY
	CP-1		SURVEY CONTROL

EXST	NEW	LINETYPE
W		WATER MAIN & SIZE
S		SEWER MAIN & SIZE
18 SD		STORM DRAIN PIPE & SIZE
G		GAS LINE
E		ELECTRIC LINE
		ROADWAY CENTERLINE
		RIGHT OF WAY
		PROPERTY LINE
		PUBLIC UTILITY EASEMENT
		TEMPORARY CONSTRUCTION EASEMENT
5500	5500	INDEX CONTOUR
		INTERMEDIATE CONTOUR
T		TELCO LINE (UG)
X	X	FENCE
	C C	CUT LIMITS
	F F	FILL LIMITS
		SIGN
		MAIL BOX
		FLAG POLE

GENERAL NOTES:

1. Project control/benchmarks are as shown on these plans.
2. Governing specifications for construction are the Montana Public Works Standard Specifications (MPWSS), Sixth Edition, April 2010, and the Montana Department of Transportation Standard Specifications for Road and Bridge Construction, 2014 Edition.
3. Utility information shown on plans was obtained from a combination of field survey, existing mapping, as-built construction drawings or utility locates. The contractor shall verify the depth of existing utilities where new construction crosses existing utilities.
4. Contractor shall call for utility locates prior to beginning any work. Contractor shall protect all underground utilities. Contractor shall coordinate any required utility relocations with affected utilities.
5. Contractor is responsible for developing the Storm Water Pollution Prevention Plan (SWPPP) and for filing the Notice of Intent with the Montana Department of Environmental Quality (MDEQ) for this project.
6. All embankment fills within the street right-of-way shall be compacted to 95% maximum dry density as determined by ASTM D698, and shall be within 3% of optimum moisture content. Any trench backfill within the street right-of-way shall be compacted to 97% maximum dry density as determined by ASTM D698, and shall be within 3% of optimum moisture.
7. All disturbed areas shall be re-seeded by broadcasting at a rate of 30 pounds per acre. Seed shall consist of the following mix, or approved equal:
   - 40% Fairway Crested Wheatgrass
   - 30% Perennial Ryegrass
   - 20% Smooth Brome
   - 10% Canadian Bluegrass
8. Areas to be reseeded shall have at least 6" of suitable topsoil cover. On-site topsoil disturbed by construction shall be stockpiled and utilized to meet this requirement. Additional imported topsoil may also be required.
9. Disturbed slopes steeper than 4:1 (horizontal: vertical) and constructed drainage ditch sections steeper than 4% shall be covered with North American Green SC150BN Biodegradable Erosion Control Blanket, Western Excelsior EXCEL CS-3, American Excelsior Curlex CL I or approved equal. Erosion control blanket shall be installed in accordance with manufacturer's instructions.
10. Crushed base course shall be Type "A" meeting gradation requirements for Grade 6A of Table 701-8 of the MDT Standard Specifications for Road and Bridge Construction.
11. Surface course asphalt aggregate shall meet gradation for Grade A Aggregate of Table 701-15 of the MDT Standard Specifications for Road and Bridge Construction. Asphalt binder material shall be Grade PG 64-22.
12. Riprap shall be Class I and meet the specifications of the Montana Department of Transportation's Standard Specifications for Road and Bridge Construction, Section 701.06.2.
13. Granular bedding material for use under riprap shall meet the requirements of No. 2 Filter Material of Table 701-20 of the Montana Department of Transportation's Standard Specifications for Road and Bridge Construction
14. Separation fabric shall be Propex 701, Marafi 170N, US Fabrics 180NW or approved equal.
15. Section thickness for the drive approaches shall be 3" bituminous pavement over 9" crushed base course.
16. RCP Culvert Pipe shall be Class III with minimum Wall B.
17. C.S.P. pipe and end sections shall meet the specifications of Section 709.02 of the MDT Standard Specifications for Road and Bridge Construction. All C.S.P.'s shall have flared end sections. Pipe wall thickness shall be 0.064" (16 Gage).
18. Channel shaping for transitions to drainage structures shall result with side slopes no steeper than 2:1 (horizontal:vertical).
19. Path signs shall be installed in accordance with Chapter 9 of the Manual on Uniform Traffic Control Devices, 2009 Edition. Sheet aluminum for signs shall

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PIKE AVENUE PATH- COLUMBUS
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GENERAL NOTES

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Drawn By: REB
Checked By: CBS

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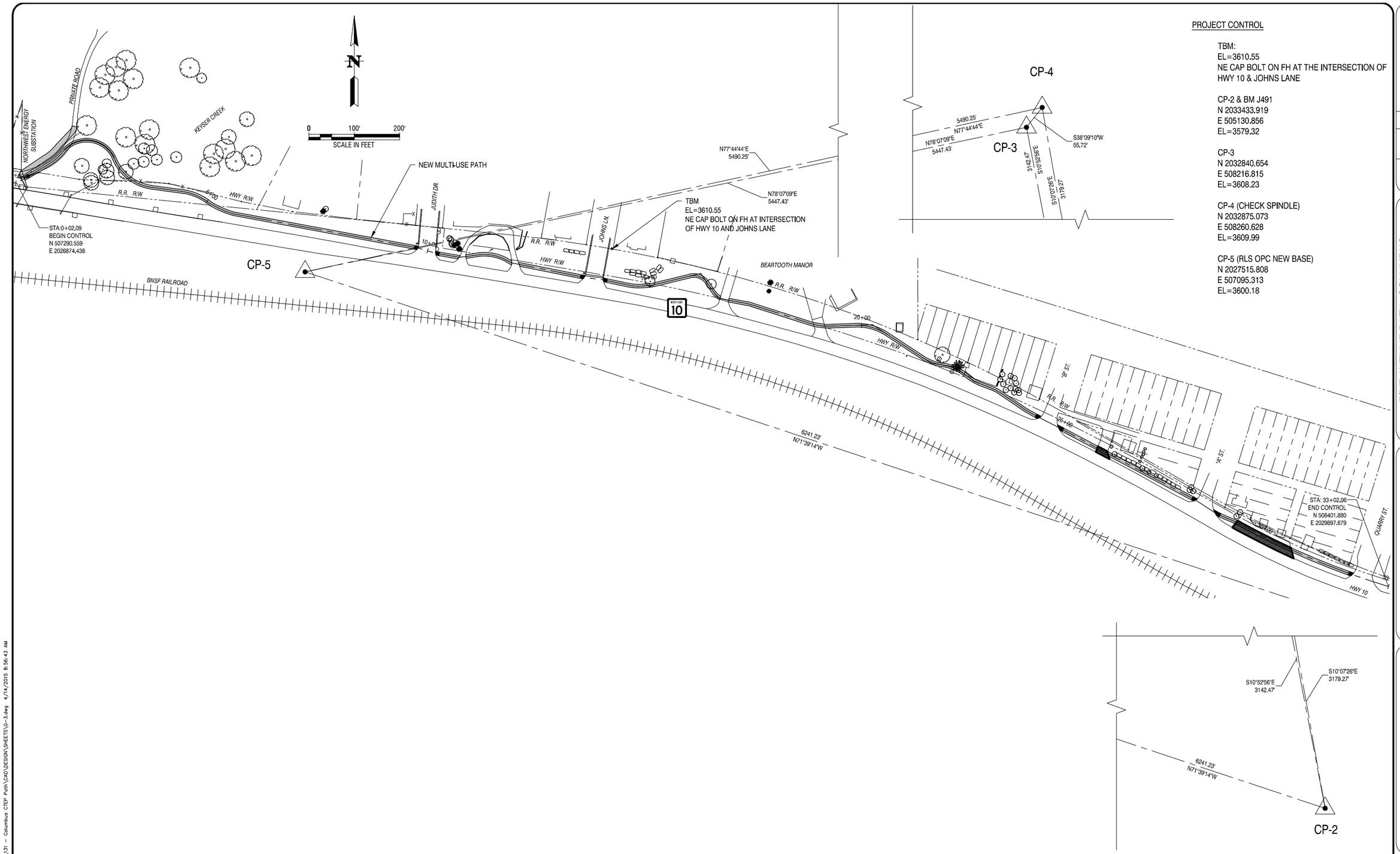

PROJECT CONTROL

TBM:
EL=3610.55
NE CAP BOLT ON FH AT THE INTERSECTION OF HWY 10 & JOHNS LANE

CP-2 & BM J491
N 2033433.919
E 505130.856
EL=3579.32

CP-3
N 2032840.654
E 508216.815
EL=3608.23

CP-4 (CHECK SPINDLE)
N 2032875.073
E 508260.628
EL=3609.99

CP-5 (RLS OPC NEW BASE)
N 2027515.808
E 507095.313
EL=3600.18

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CONTROL

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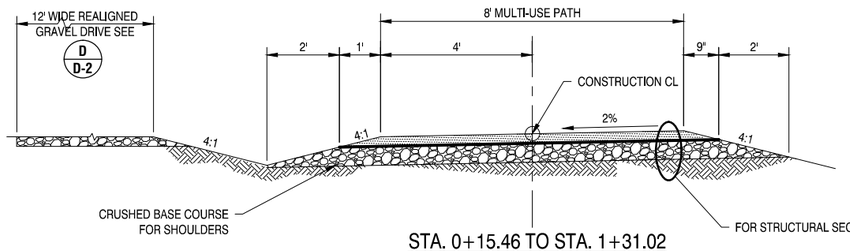
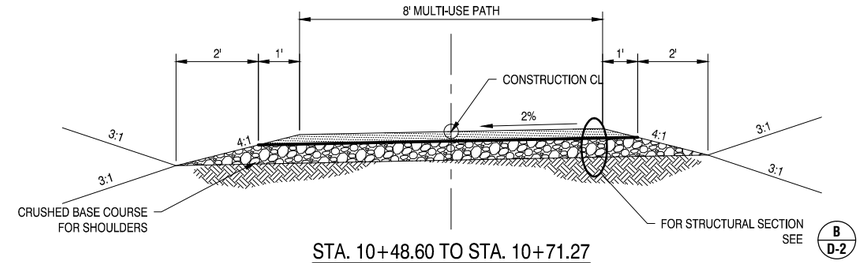


STA. 0+15.46 TO STA. 1+31.02

Scale: NTS



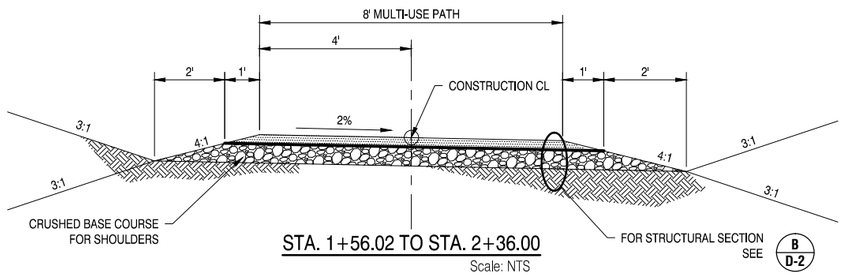
STA. 10+48.60 TO STA. 10+71.27

STA. 13+96.26 TO STA. 16+58.83

STA. 24+67.02 TO STA. 25+64.61

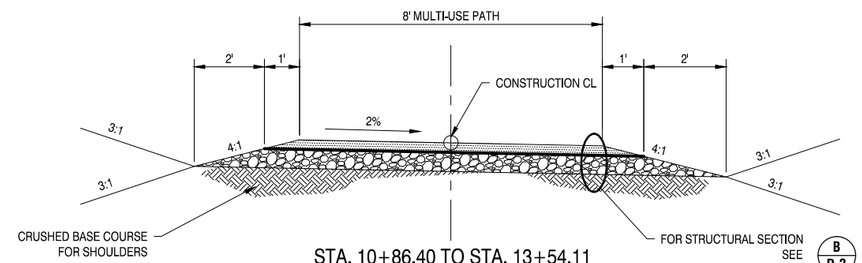
STA. 28+59.75 TO STA. 31+92.41

Scale: NTS



STA. 1+56.02 TO STA. 2+36.00

Scale: NTS



STA. 10+86.40 TO STA. 13+54.11

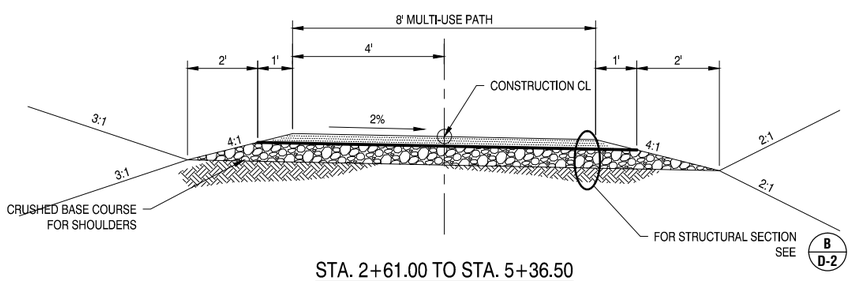
STA. 16+78.24 TO STA. 24+20.15

STA. 25+90.58 TO STA.28+09.61

Scale: NTS

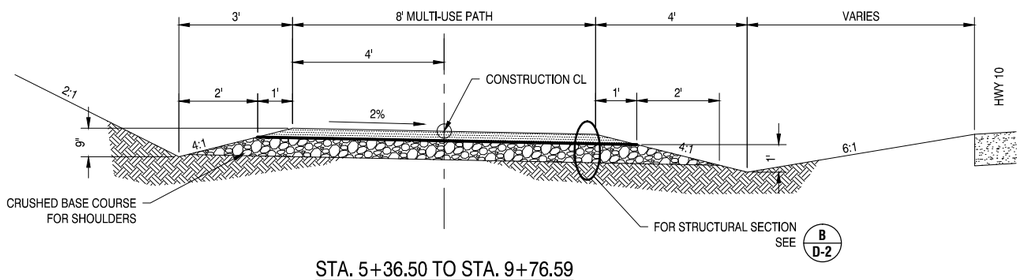
NOTE:

1. TRANSITION MULTI-USE PATH FROM 2% CROSS SLOPE TO LEFT TO 2% CROSS SLOPE RIGHT FROM STA. 1+31.02 TO STA. 1+56.02.
2. TRANSITION MULTI-USE PATH FROM 2% CROSS SLOPE TO RIGHT TO 2% CROSS SLOPE LEFT FROM STA. 2+36.00 TO STA. 2+61.00.



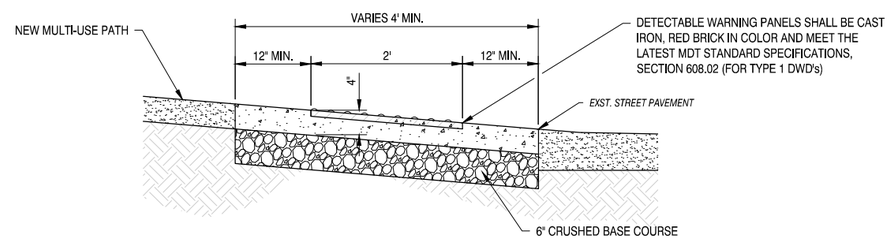
STA. 2+61.00 TO STA. 5+36.50

Scale: NTS



STA. 5+36.50 TO STA. 9+76.59

Scale: NTS



A/D-1 **DETECTABLE WARNING PANELS DETAIL**

Scale: NTS

Revision No.	Date	By	Description

PIKE AVENUE PATH- COLUMBUS

STPE 48(44), UPN 8048

MULTI-USE PATH

DETAILS

Project No.: Y13-00-131

Date: 04-15

Drawn By: REB

Checked By: CBS

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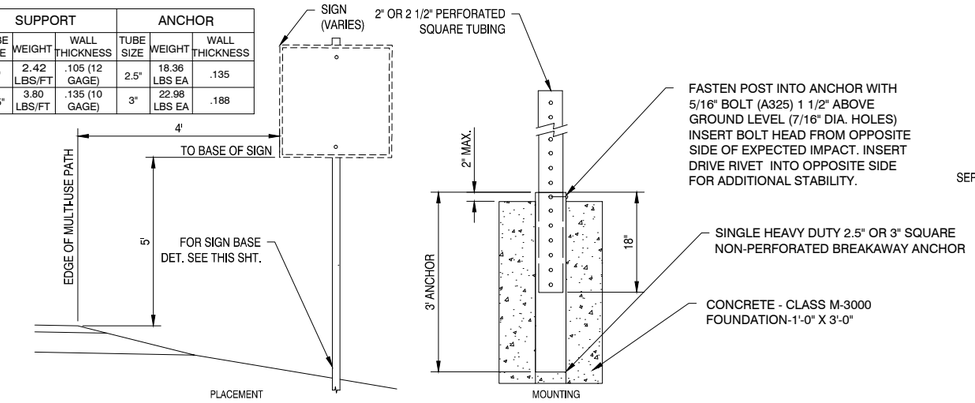
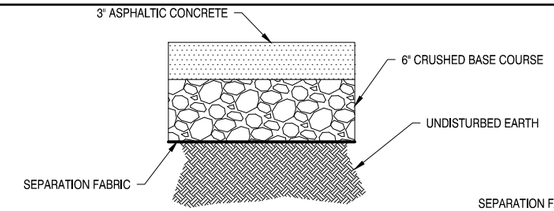
SUPPORT			ANCHOR		
TUBE SIZE	WEIGHT	WALL THICKNESS	TUBE SIZE	WEIGHT	WALL THICKNESS
2"	2.42 LBS/FT	.105 (12 GAGE)	2.5"	18.36 LBS EA	.135
2.5"	3.80 LBS/FT	.135 (10 GAGE)	3"	22.98 LBS EA	.188

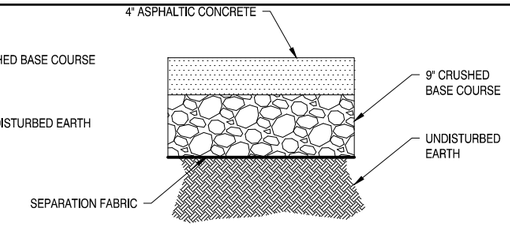


NOTE:
1. ALTERNATE CRASH TESTED AND APPROVED BREAKAWAY DEVICES MAY BE USED AS AN OPTION WITH PRIOR APPROVAL OF THE ENGINEER.
2. USE CONCRETE CLASS "A" OR "D" WITH WOOD FLOAT FINISH ON TOP. FORM TOP 6" OF FOUNDATION.
3. GALVANIZED PIPE PER AASHTO M 111.
4. PAINT PIPE WITH ONE SHOP COAT AND ONE FIELD COAT OF ZINC RICH BASED PAINT AS SPECIFIED IN THE MONTANA DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 710, ON ALL SURFACES NOT IN CONTACT WITH CONCRETE.
5. CONFORM STEEL PIPE TO THE REQUIREMENTS OF ASTM A 53 TYPE "E" OR "S", GRADE "B".
6. SUBMIT SHOP DRAWINGS TO BE APPROVED BY THE ENGINEER BEFORE FABRICATION HAS BEGUN.
7. * SHIMS ARE NOT TO BE USED.

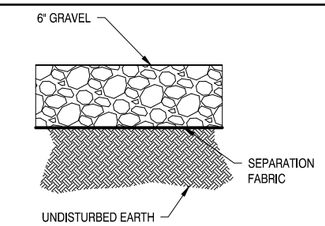
A / D-2 SIGN BASE PLACEMENT & MOUNTING DETAIL
Scale: NTS



B / D-2 MULTI-USE PATH STRUCTURAL SECTION
Scale: NTS



C / D-2 ASPHALT DRIVEWAY STRUCTURAL SECTION
Scale: NTS



D / D-2 PRIVATE DRIVE STRUCTURAL SECTION
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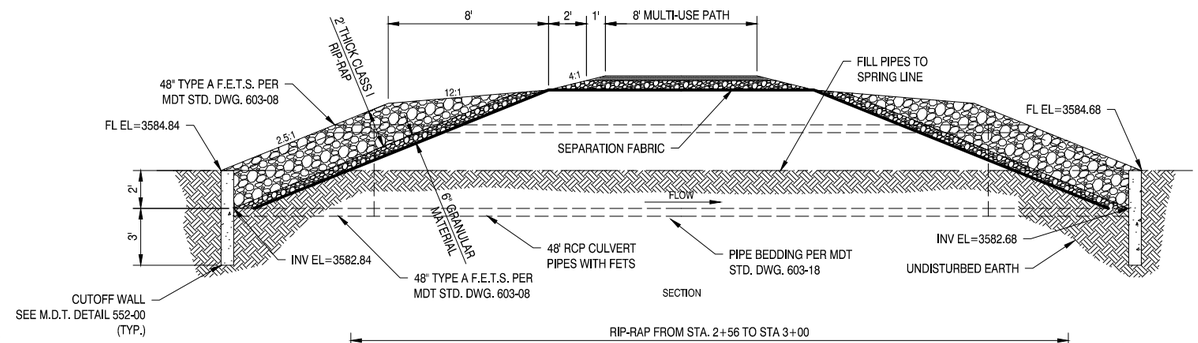

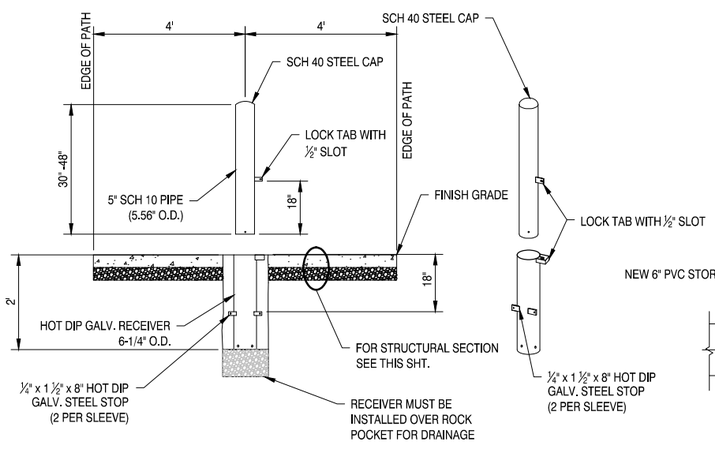

E / D-2 REMOVABLE BOLLARD DETAIL
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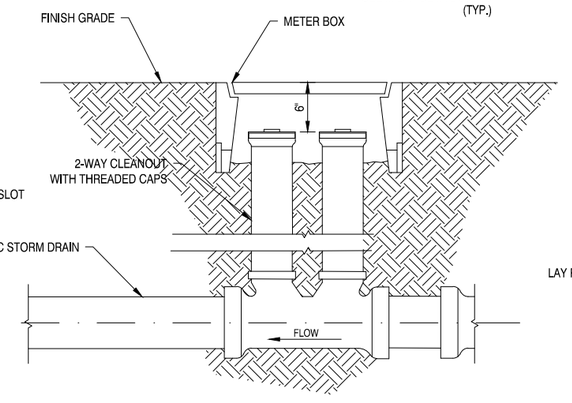

F / D-2 2-WAY CLEANOUT DETAIL
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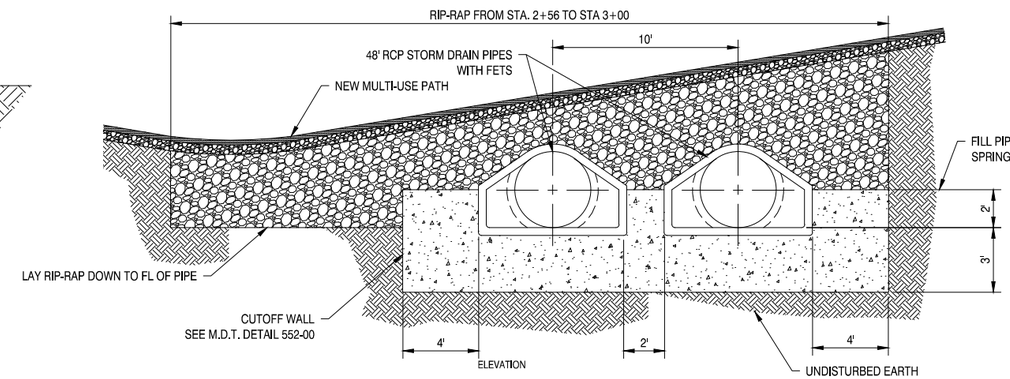

G / D-2 CULVERT RIP-RAP DETAIL
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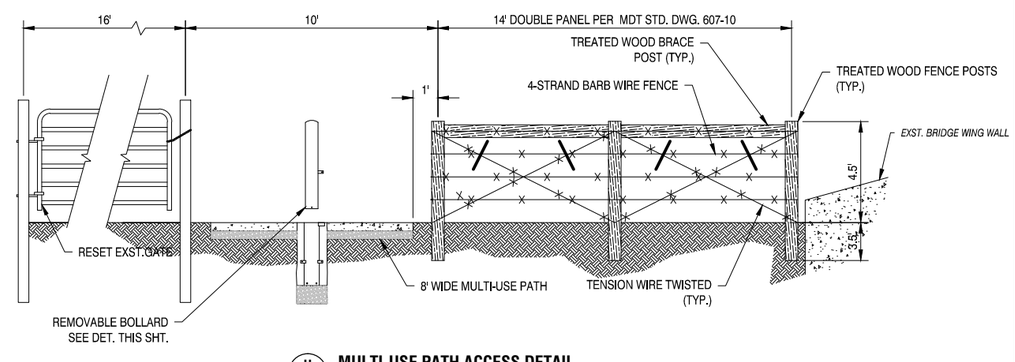

H / D-2 MULTI-USE PATH ACCESS DETAIL
Scale: NTS

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MULTI-USE PATH
DETAILS

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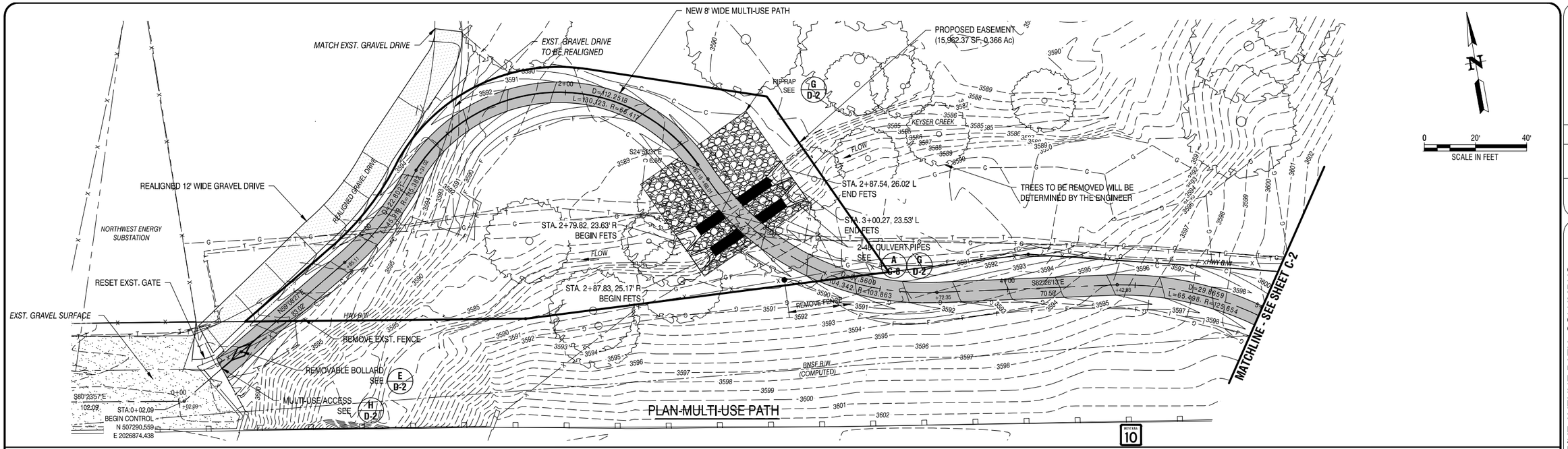

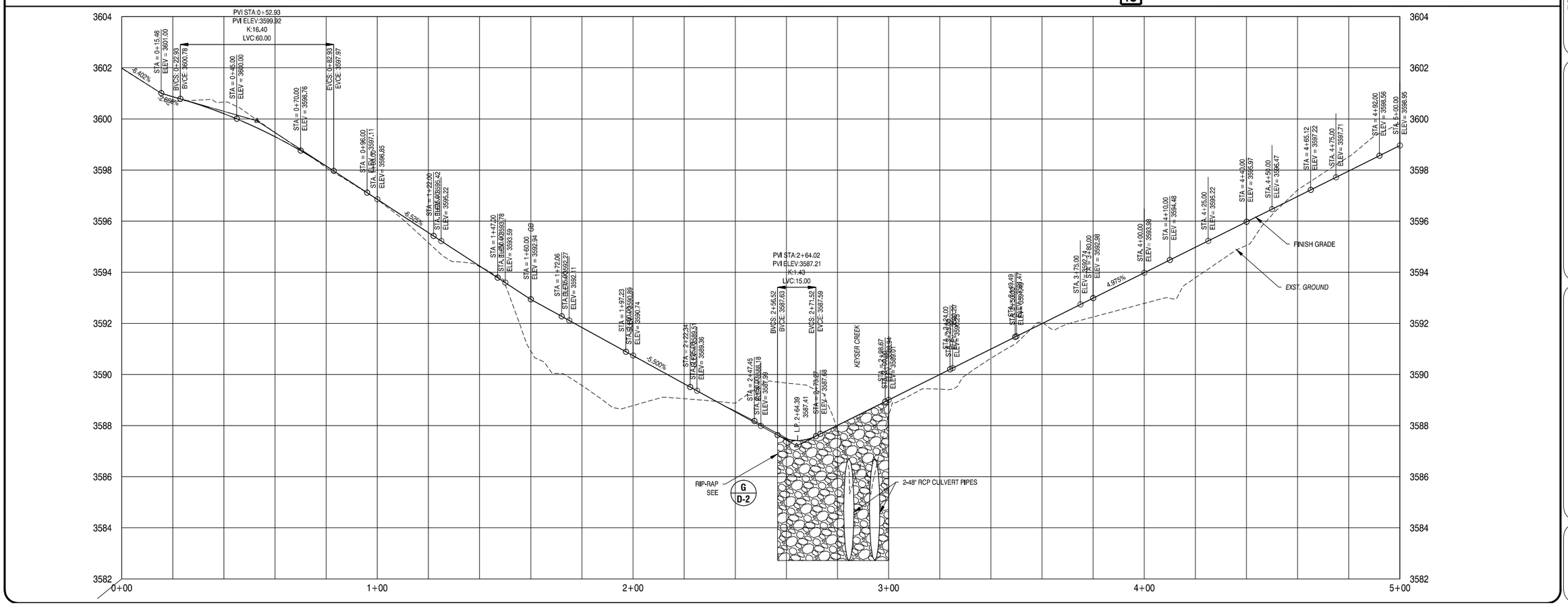

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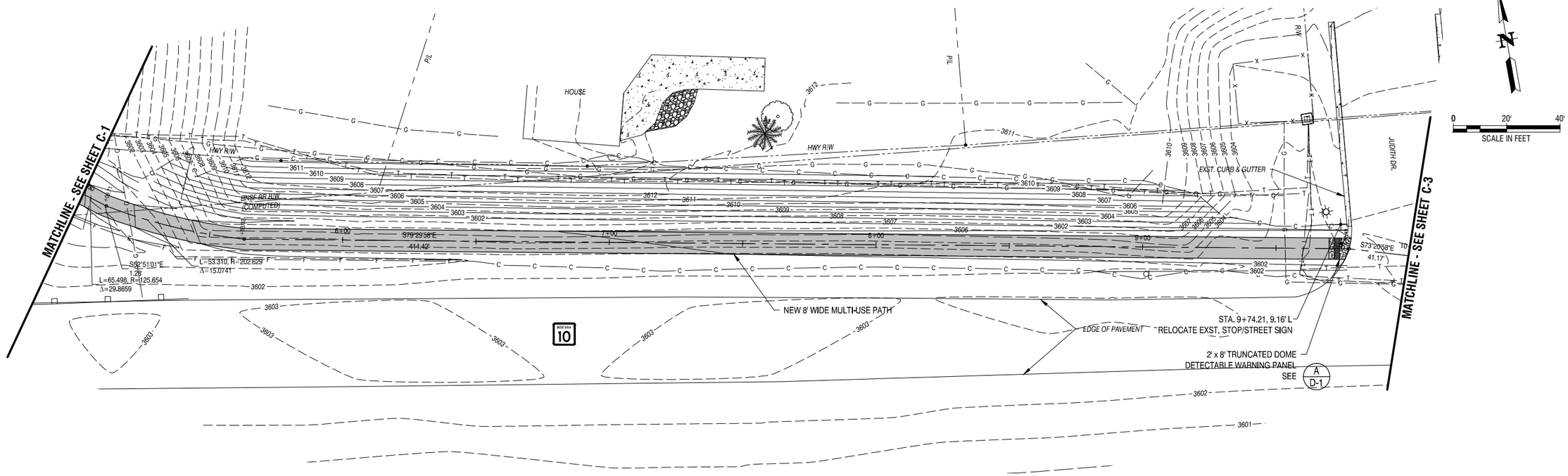
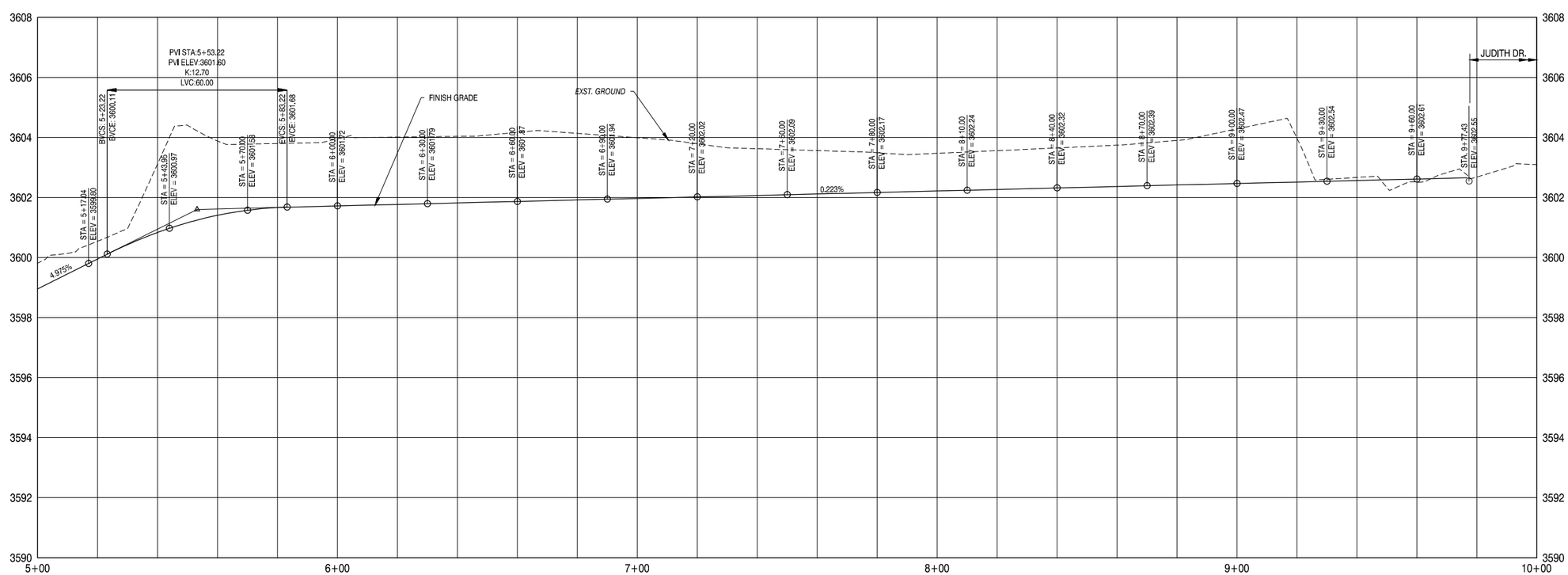


PLAN-MULTI-USE PATH



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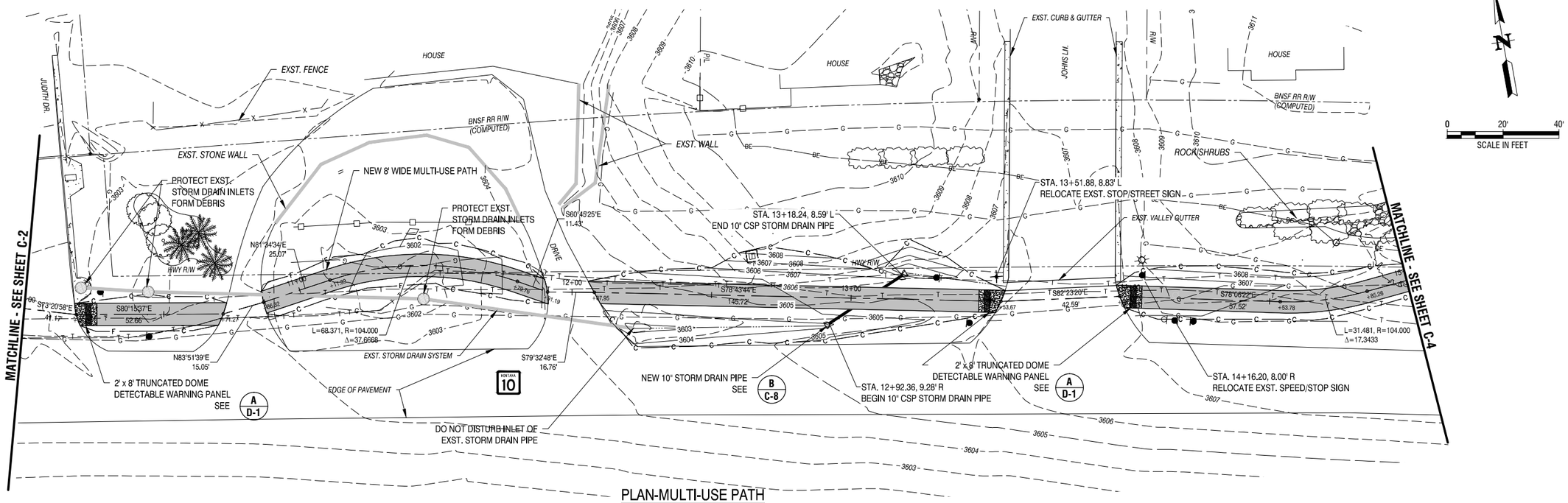
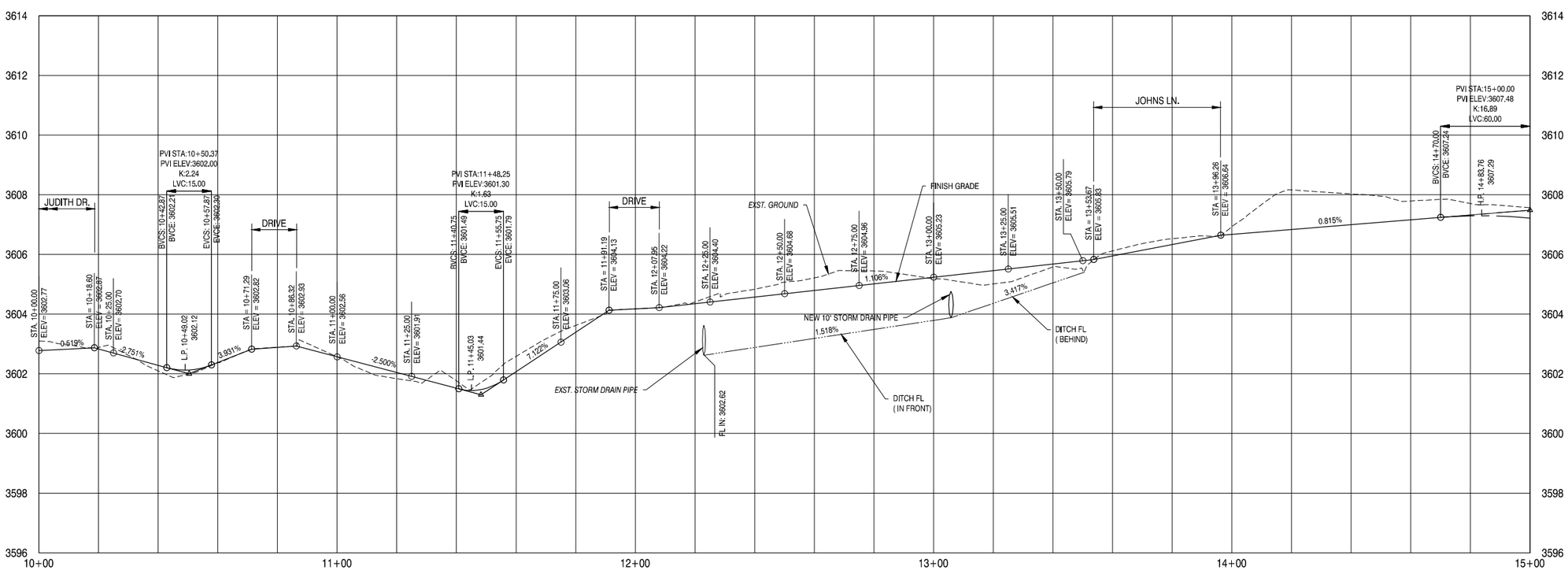


PLAN-MULTI-USE PATH



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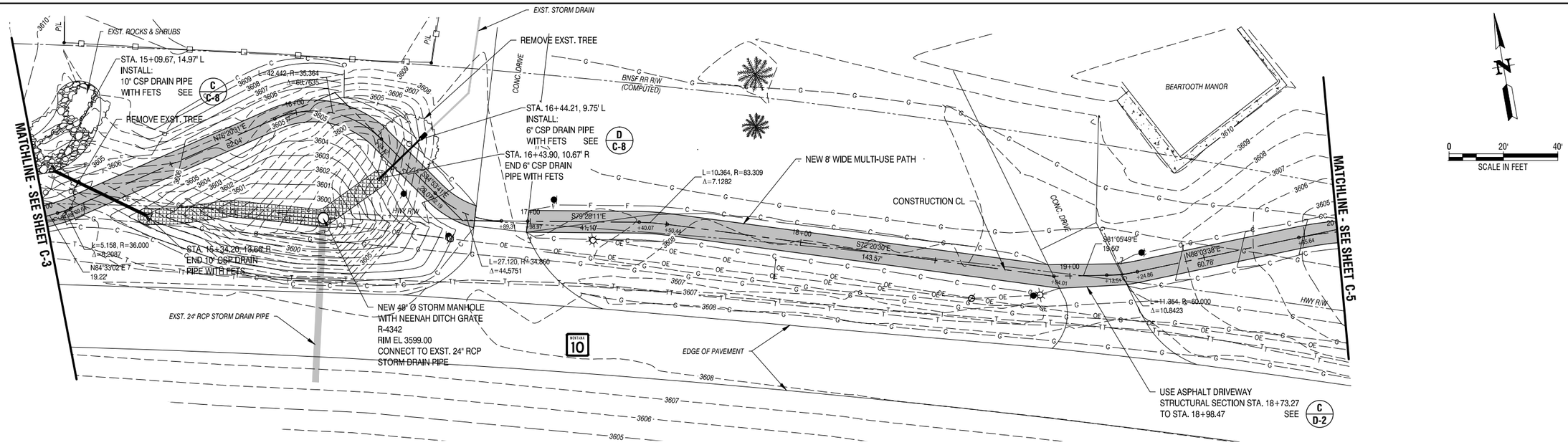
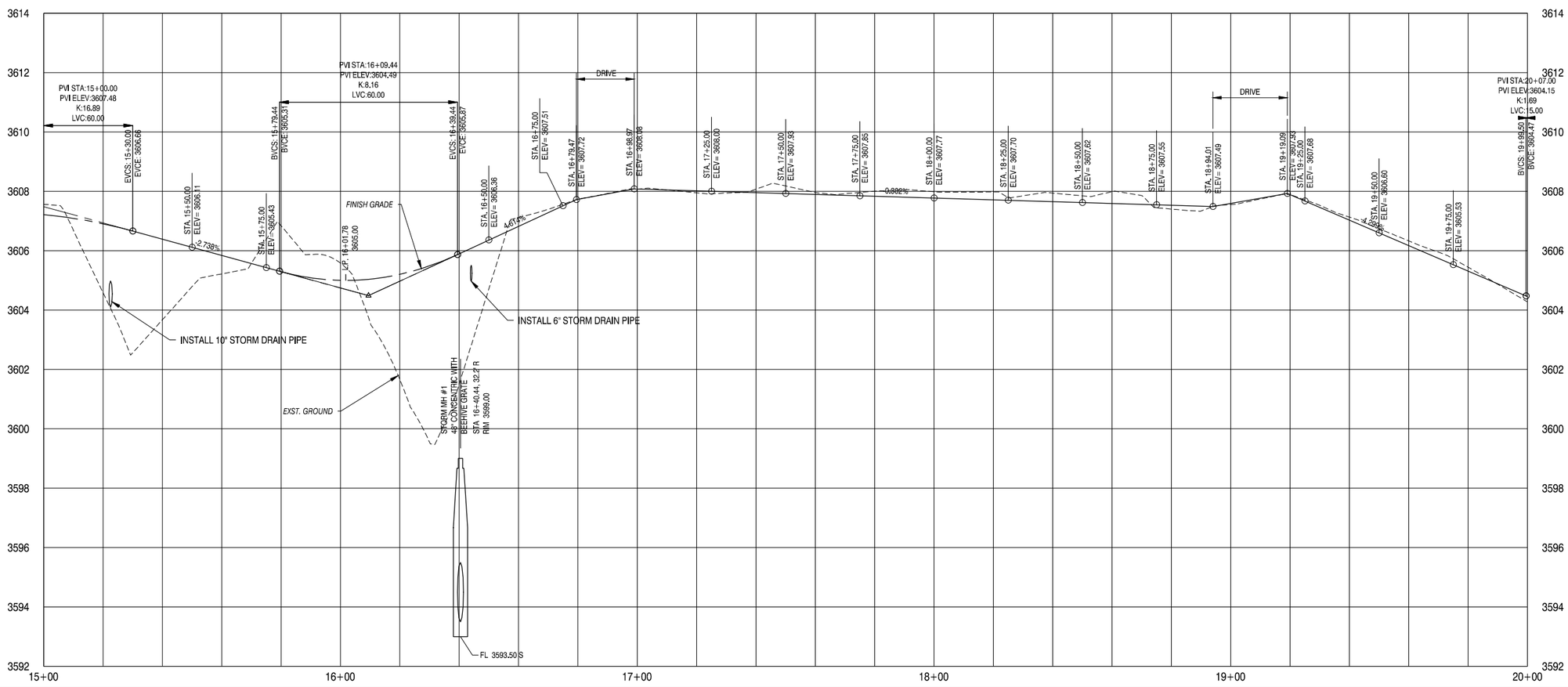


PLAN-MULTI-USE PATH



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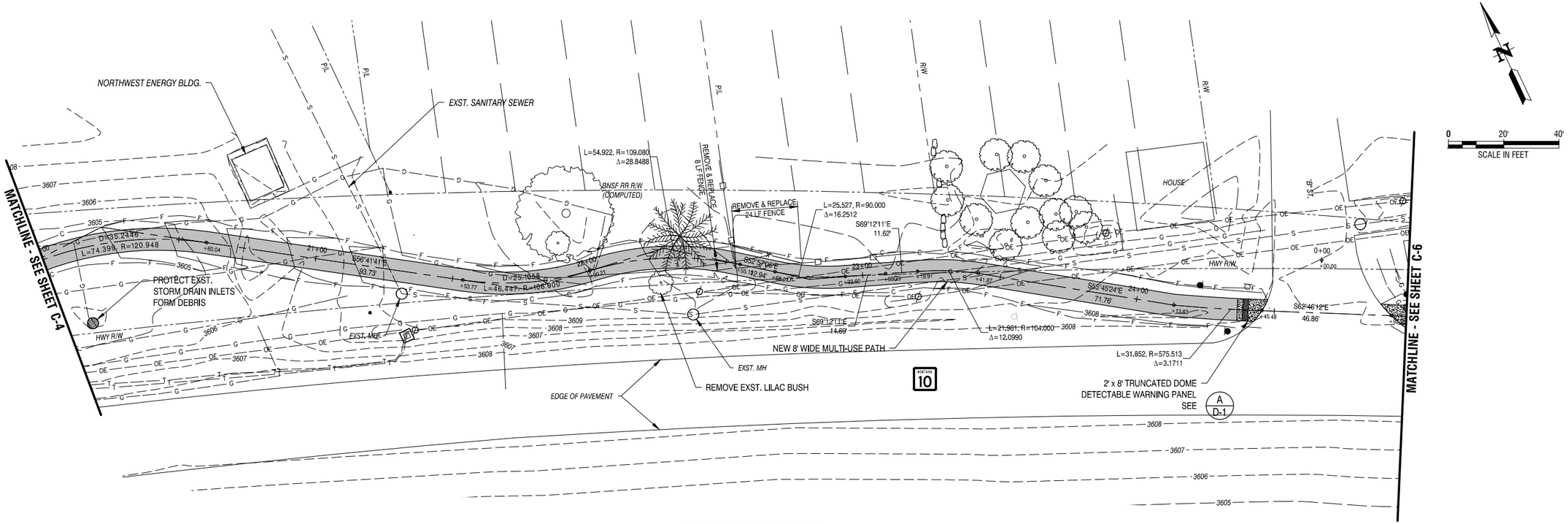
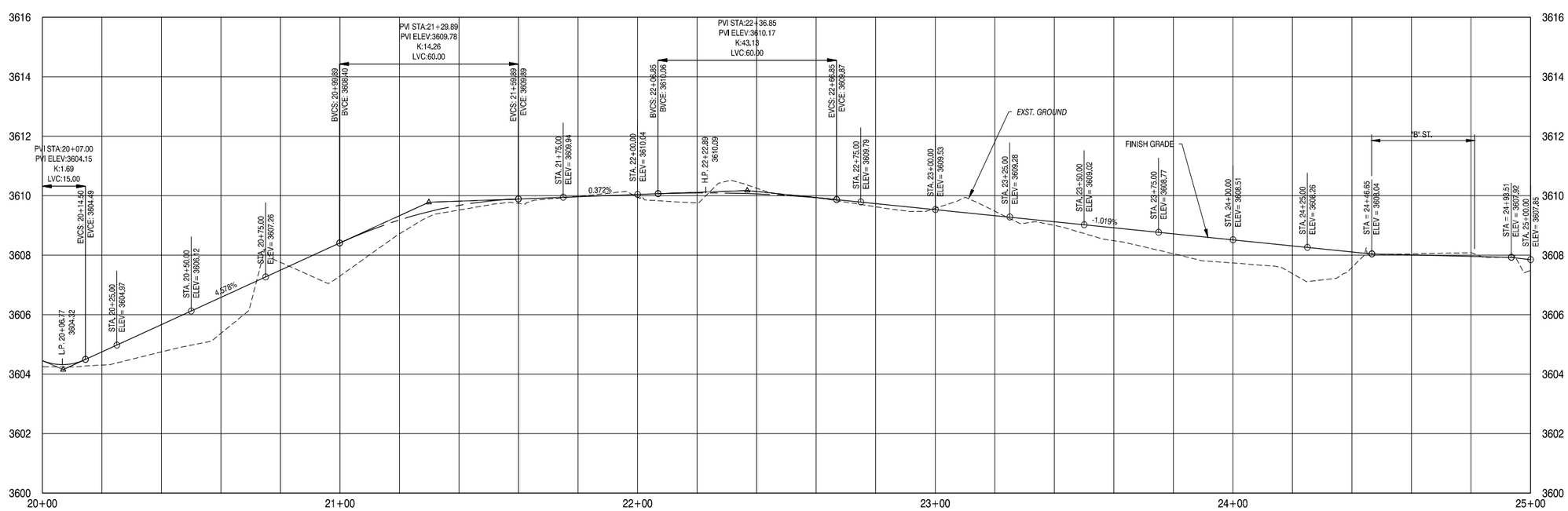


PLAN-MULTI-USE PATH



Revision No.	Date	By	Description

PIKE AVENUE PATH- COLUMBUS
STPE 48(44), UPN 8048
MULTI-USE PATH

Project No.: Y13-00-131
Date: 04-15
Drawn By: REB
Checked By: CBS

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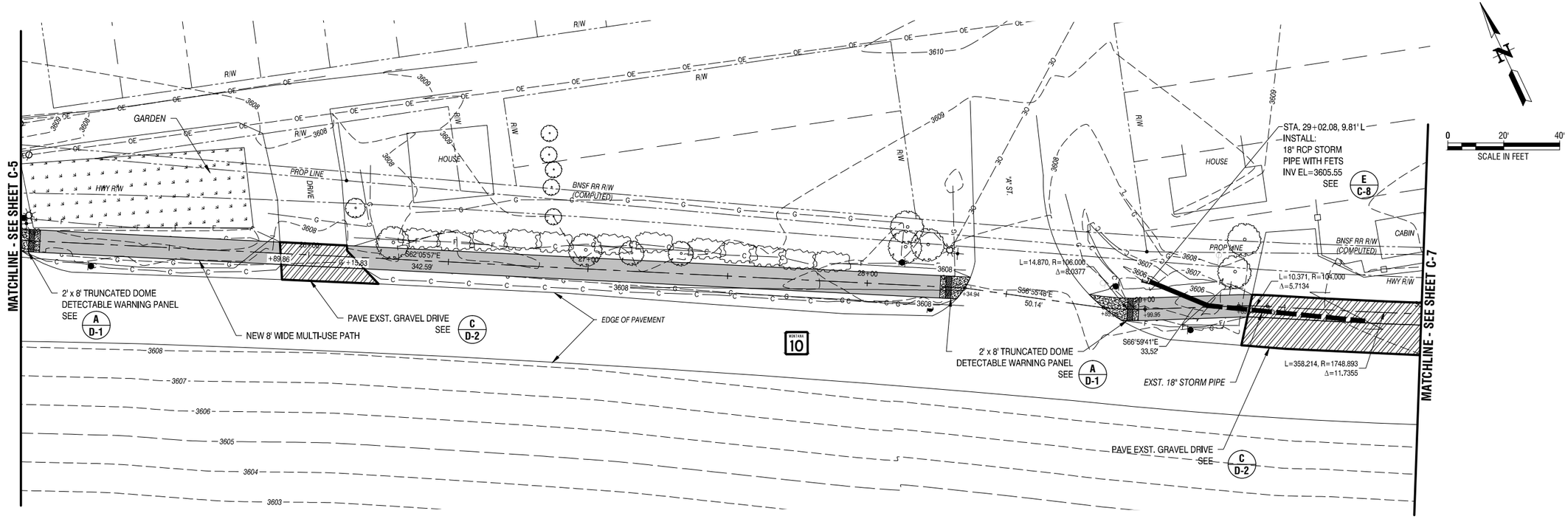
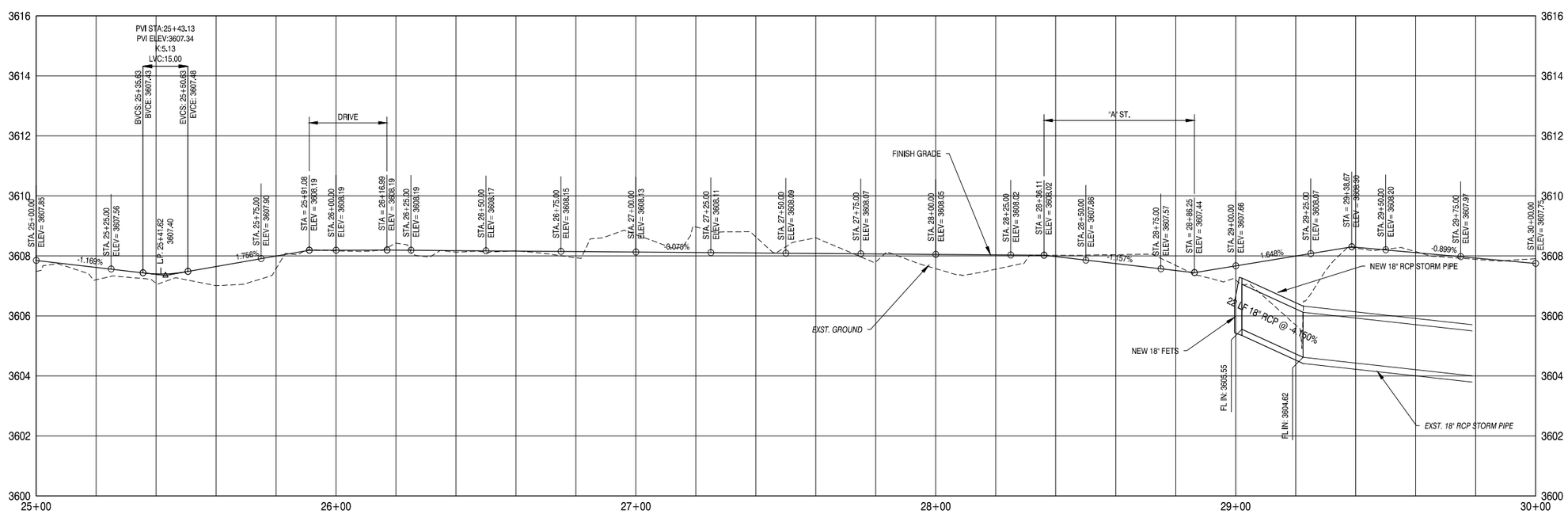


PLAN-MULTI-USE PATH



Revision No.	Date	By	Description

PIKE AVENUE PATH- COLUMBUS
STPE 48(44), UPN 8048
MULTI-USE PATH

Project No.: Y13-00-131
Date: 04-15
Drawn By: REB
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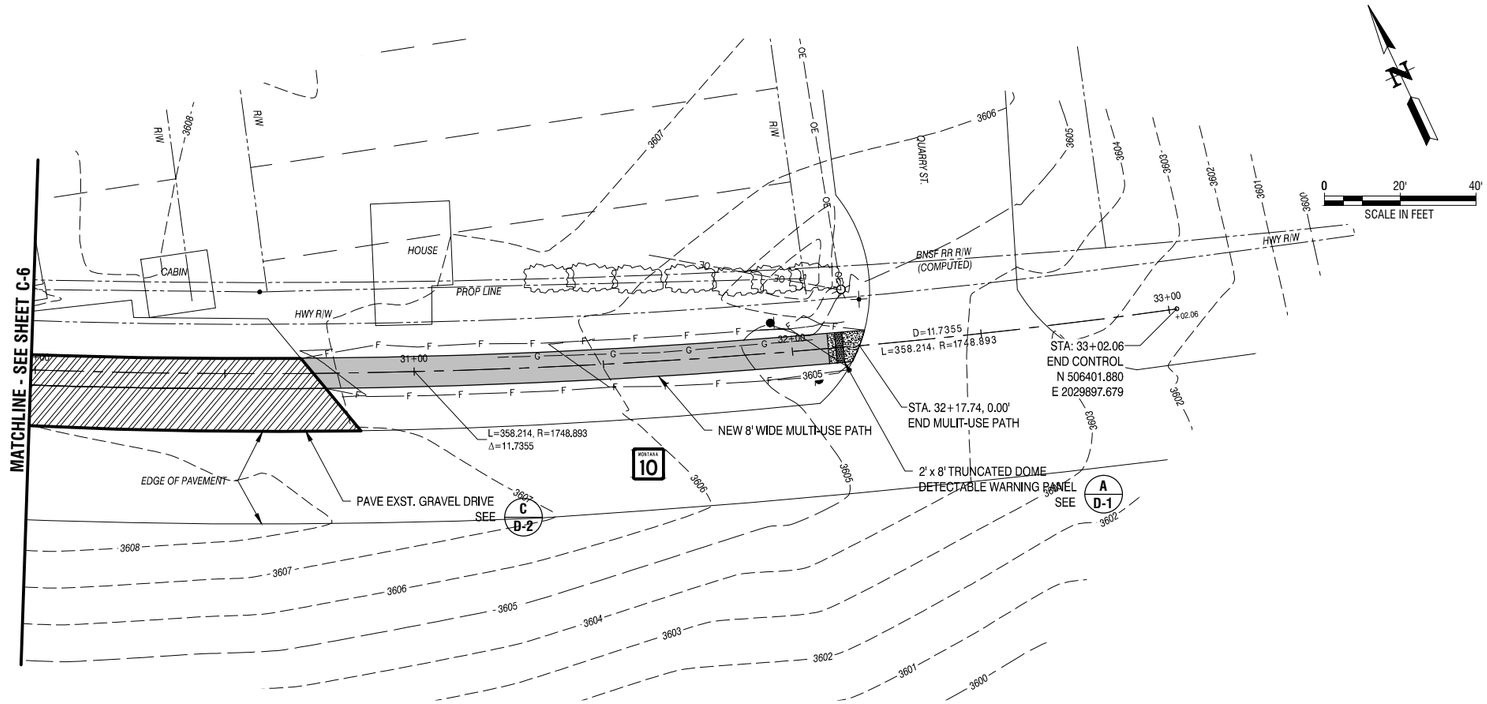
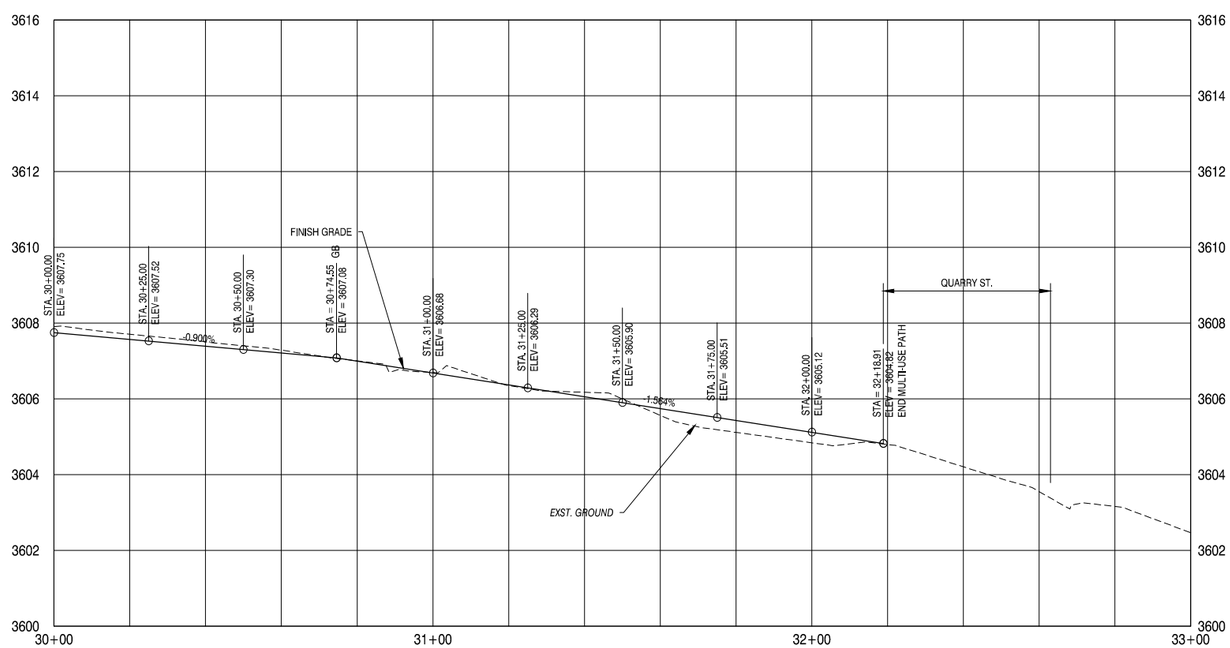


PLAN-MULTI-USE PATH



Revision No.	Date	By	Description

PIKE AVENUE PATH- COLUMBUS
STPE 48(44), UPN 8048
MULTI-USE PATH

Project No.: Y13-00-131
Date: 04-15
Drawn By: REB
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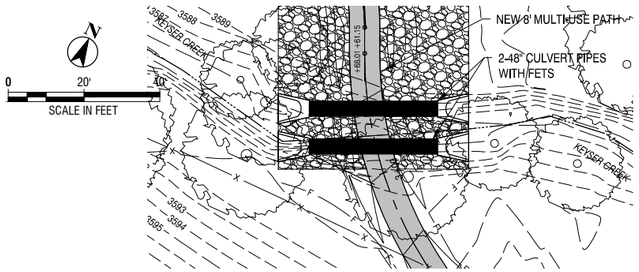
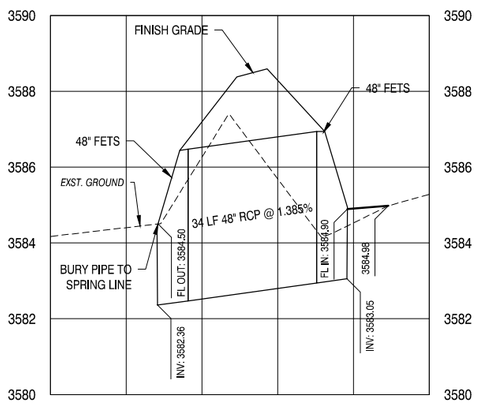
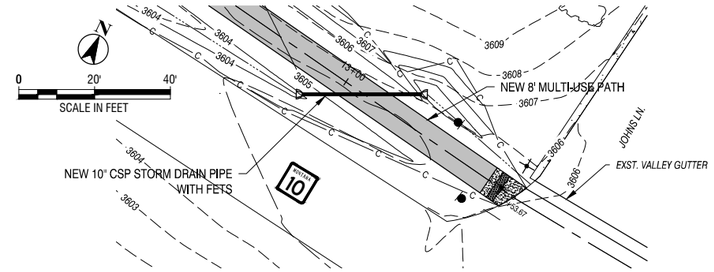
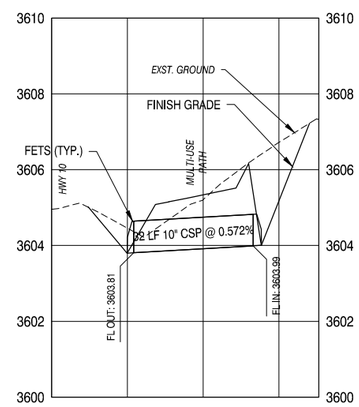




A / C-1 KEYSER CREEK STORM PIPE

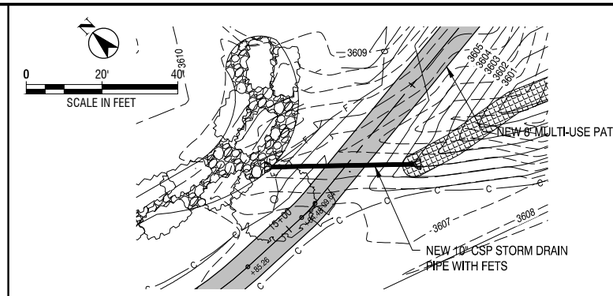
Scale: Horiz. 1"=20' Vert. 1"=2'

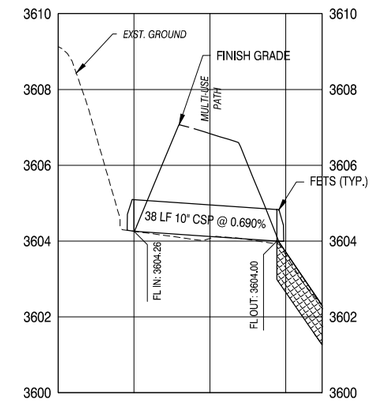




B / C-3 JOHNS LANE STORM PIPE

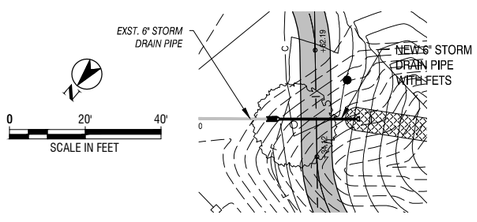
Scale: Horiz. 1"=20' Vert. 1"=2'

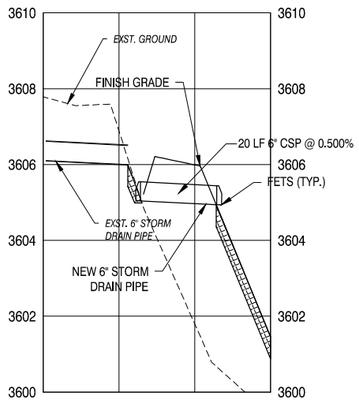




C / C-8 STA. 15+22 STORM PIPE

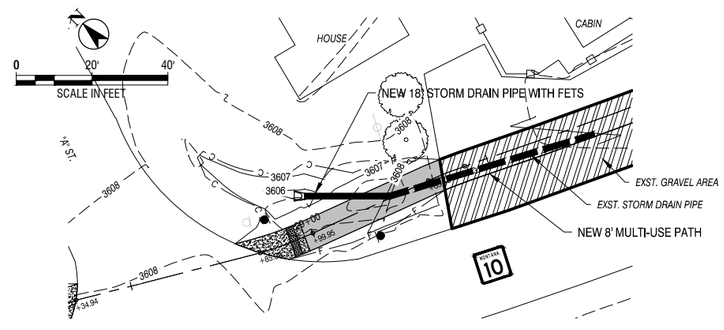
Scale: Horiz. 1"=20' Vert 1"-2'

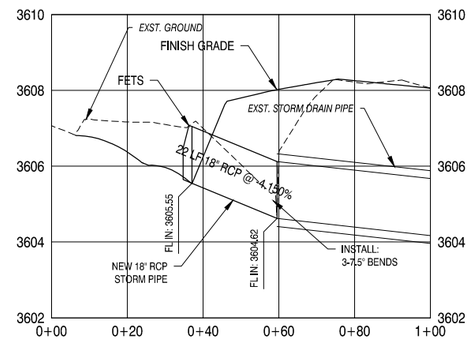




D / C-8 STA. 16+46 STORM PIPE

Horiz. 1"=20' Vert. 1"=2'





E / C-8 A STREET STORM PIPE

Scale: Horiz. 1"=20' Vert. 1"=2'

Revision No.	Date	By	Description

PIKE AVENUE PATH- COLUMBUS
STPE 48(44), UPN 8048
STORM PIPE PLAN & PROFILE

Project No.: Y13-00-131
Date: 04-15
Drawn By: REB
Checked By: CBS

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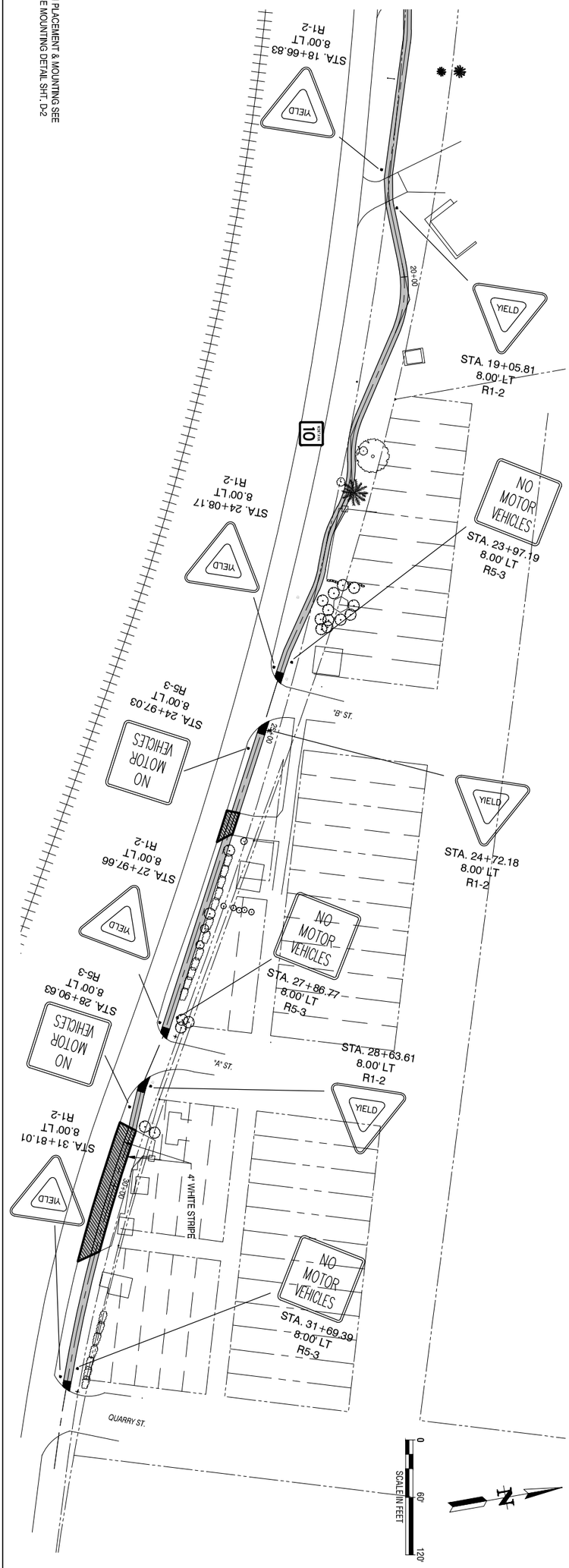
NOTES:
1. FOR SIGN PLACEMENT & MOUNTING SEE SIGN BASE MOUNTING DETAIL SHT. D-2



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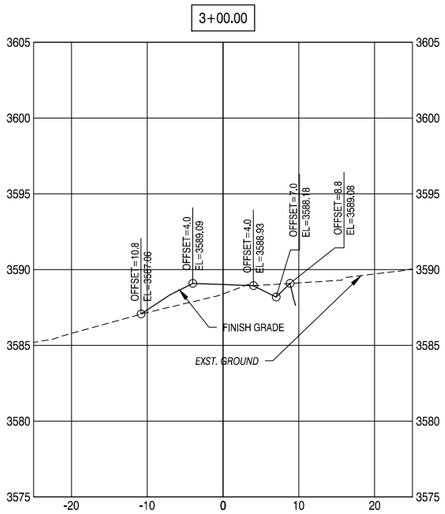
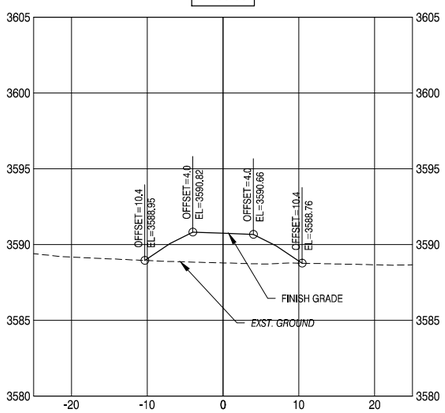
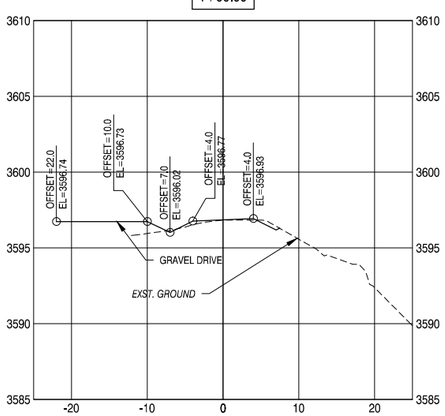
PIKE AVENUE PATH- COLUMBUS
STPE 48(44), UPN 8048
SIGNING AND STRIPING

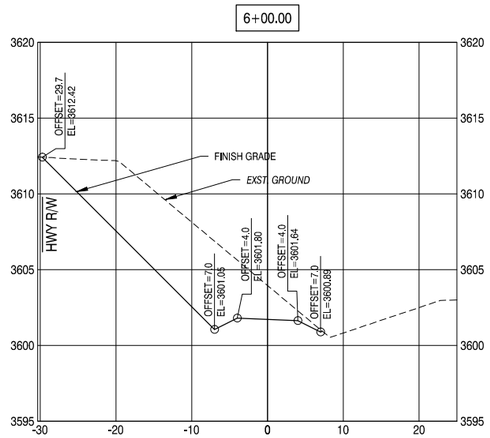
Drawn By:	REB	Project No.:	Y13-00-131
Checked By:	CBS	Date:	04-15

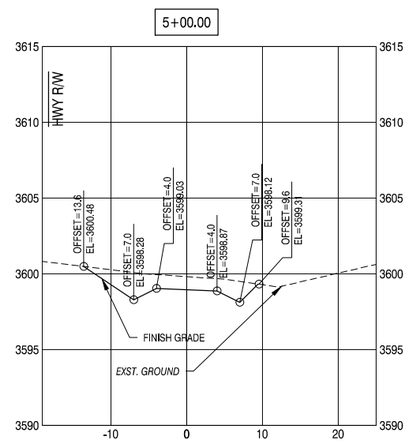
Revision No.	Date	By	Description

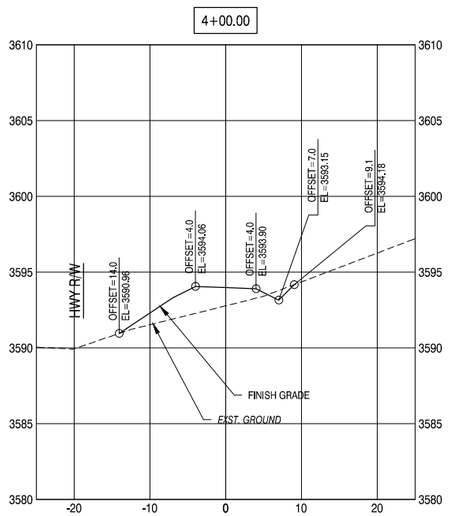


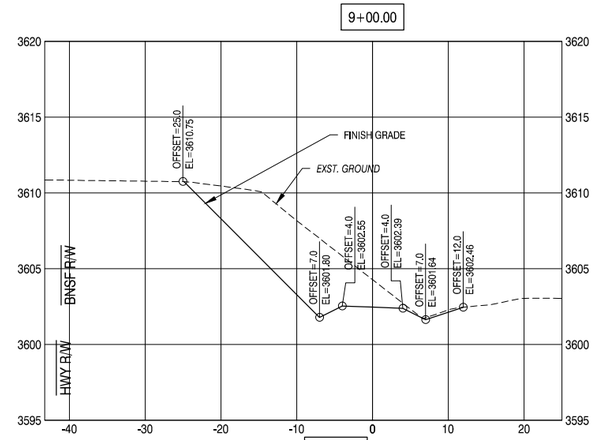


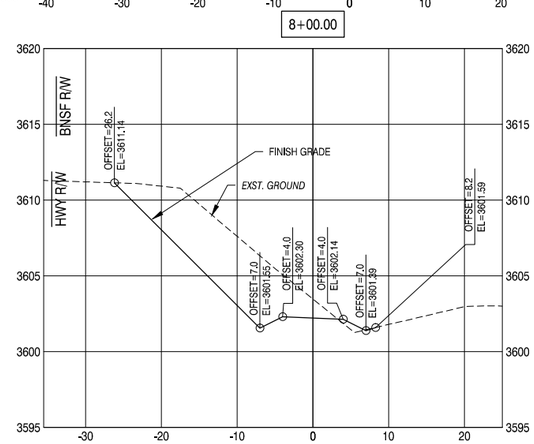


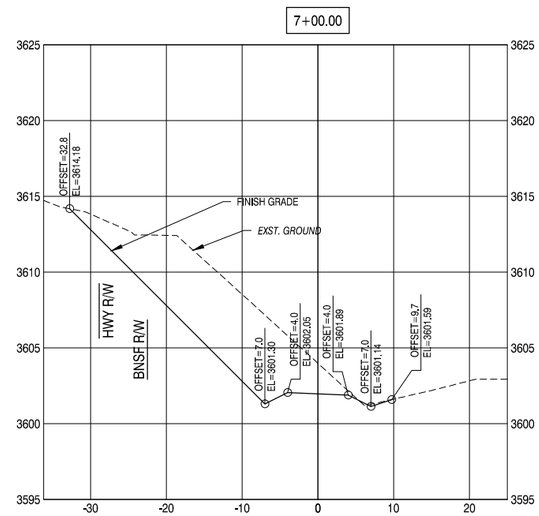


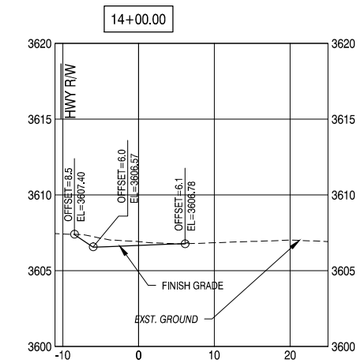


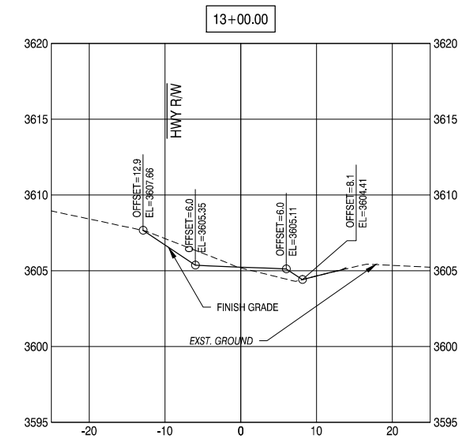


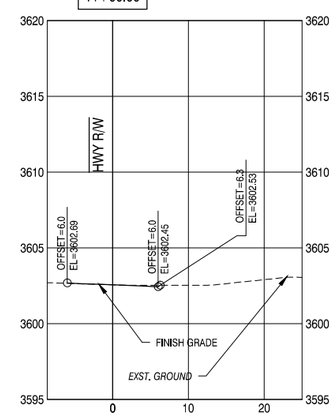












Revision No.	Date	By	Description

PIKE AVENUE PATH- COLUMBUS
STPE 48(44), UPN 8048
MULTI-USE PATH

Drawn By: ####
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SECTIONS

Project No.: Y13-00-131
Date: ####

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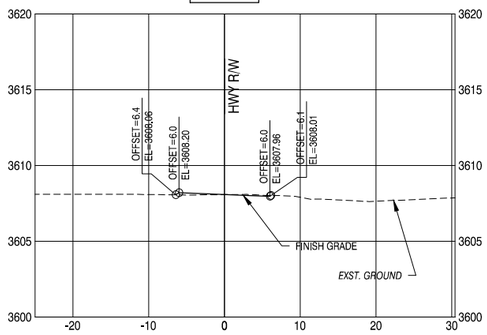

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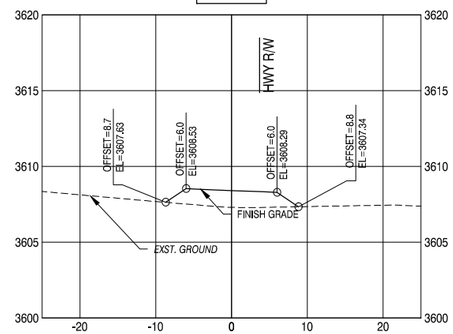

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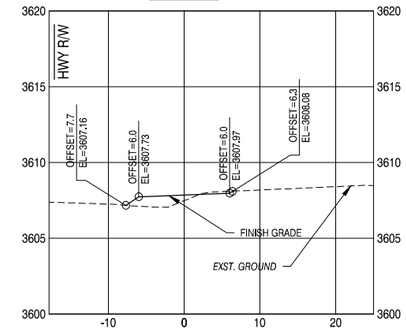

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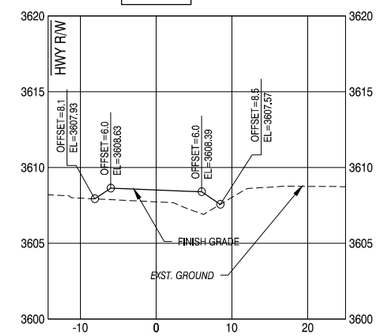

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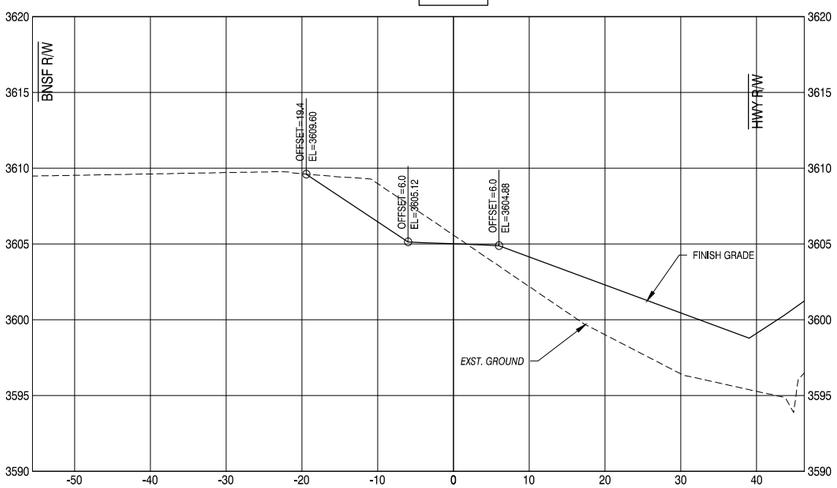

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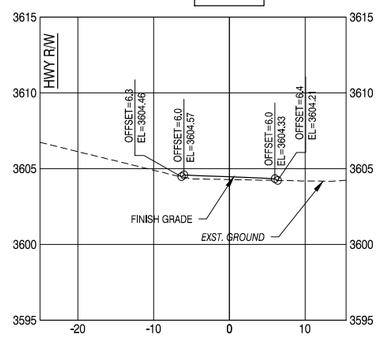

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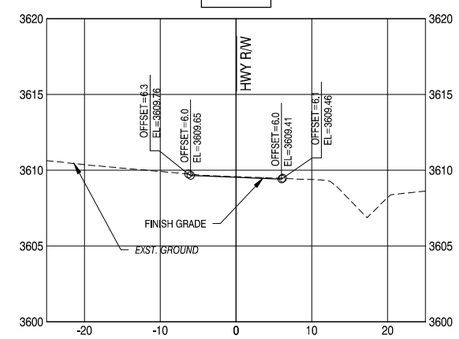

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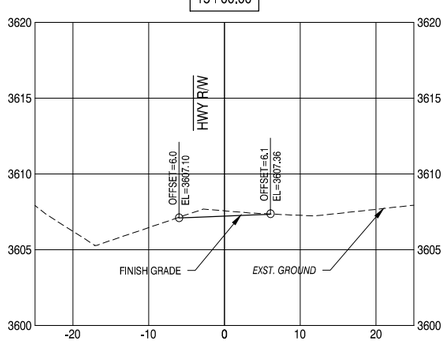

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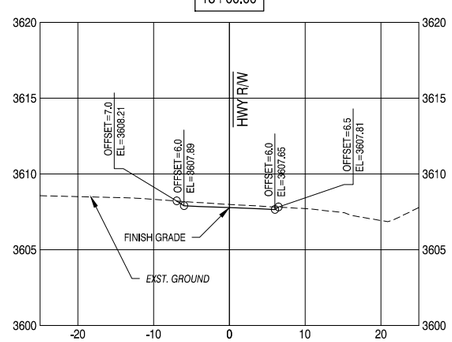

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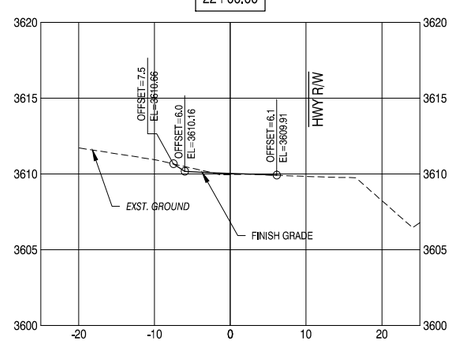

Revision No.	Date	By	Description

PIKE AVENUE PATH- COLUMBUS
STPE 48(44), UPN 8048
MULTI-USE PATH

SECTIONS

Project No.: Y13-00-131
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Checked By: CBS

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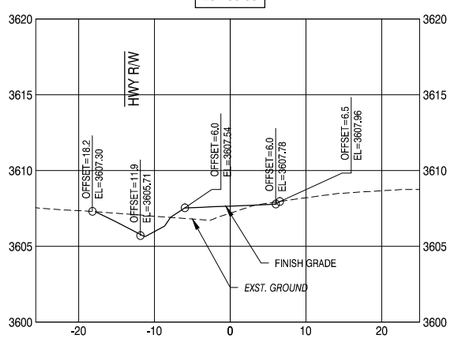

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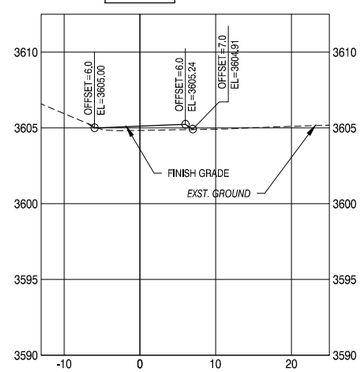

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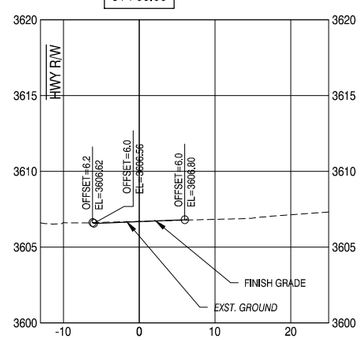

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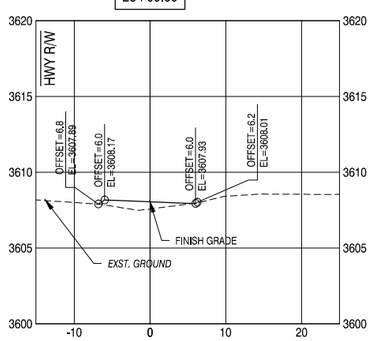

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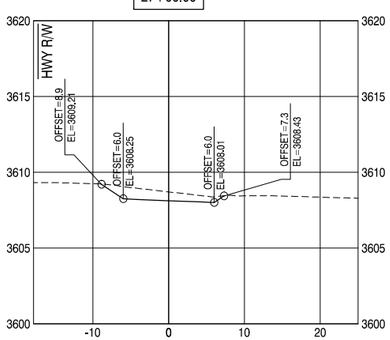

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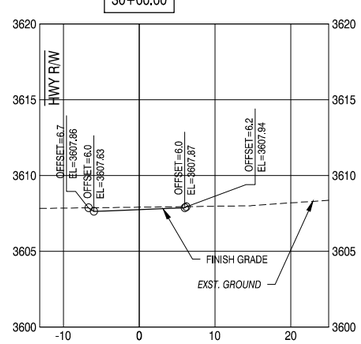

Revision No.	Date	By	Description

PIKE AVENUE PATH- COLUMBUS
STPE 48(44), UPN 8048
MULTI-USE PATH

Drawn By: ####
Checked By: CBS

SECTIONS

Project No.: Y13-00-131
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