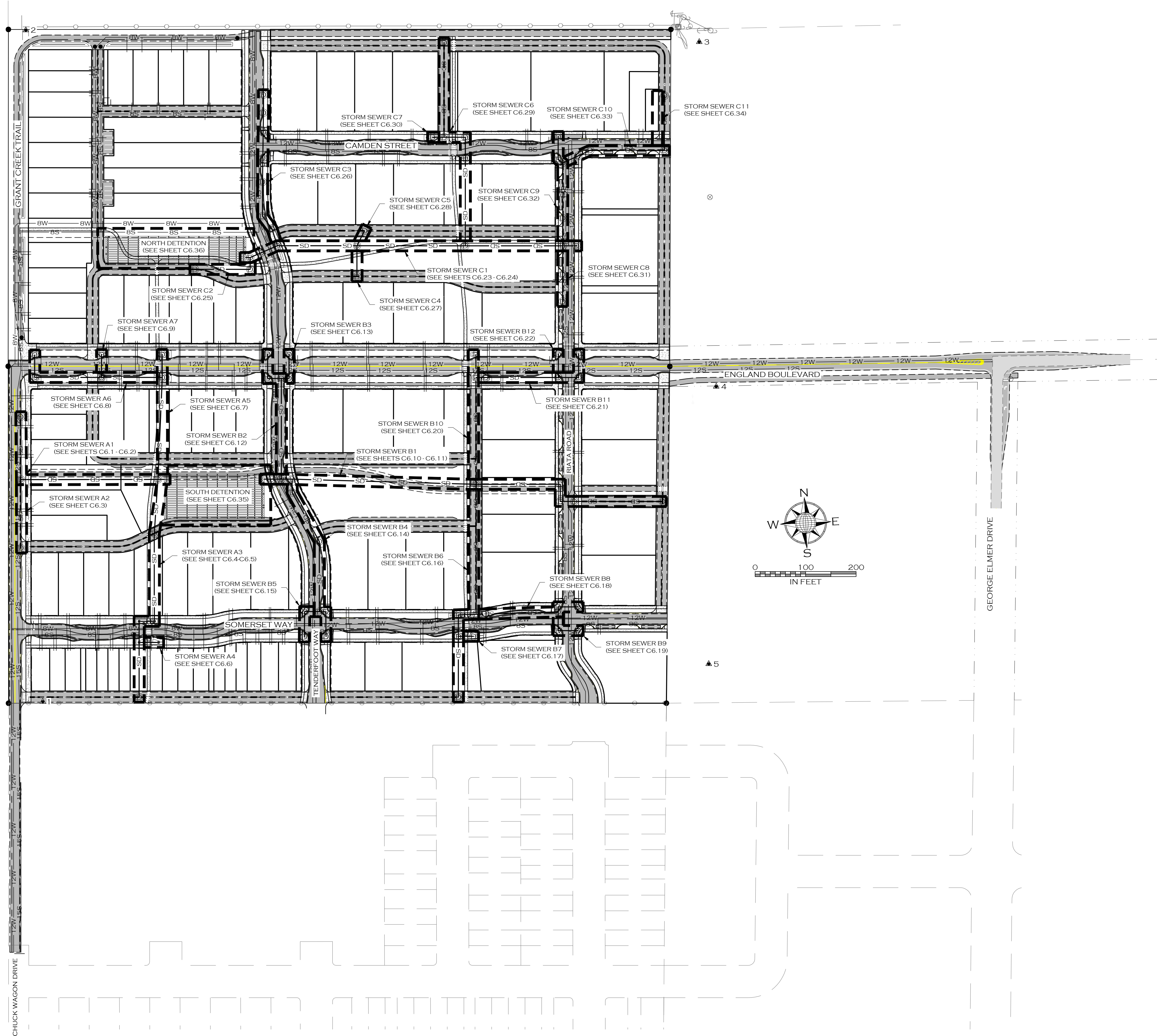




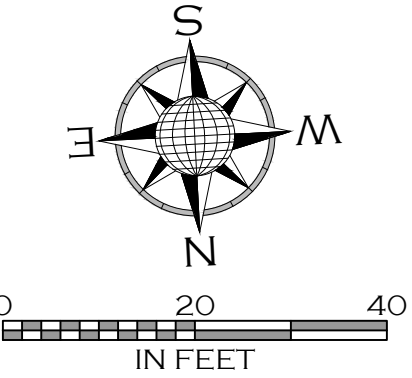
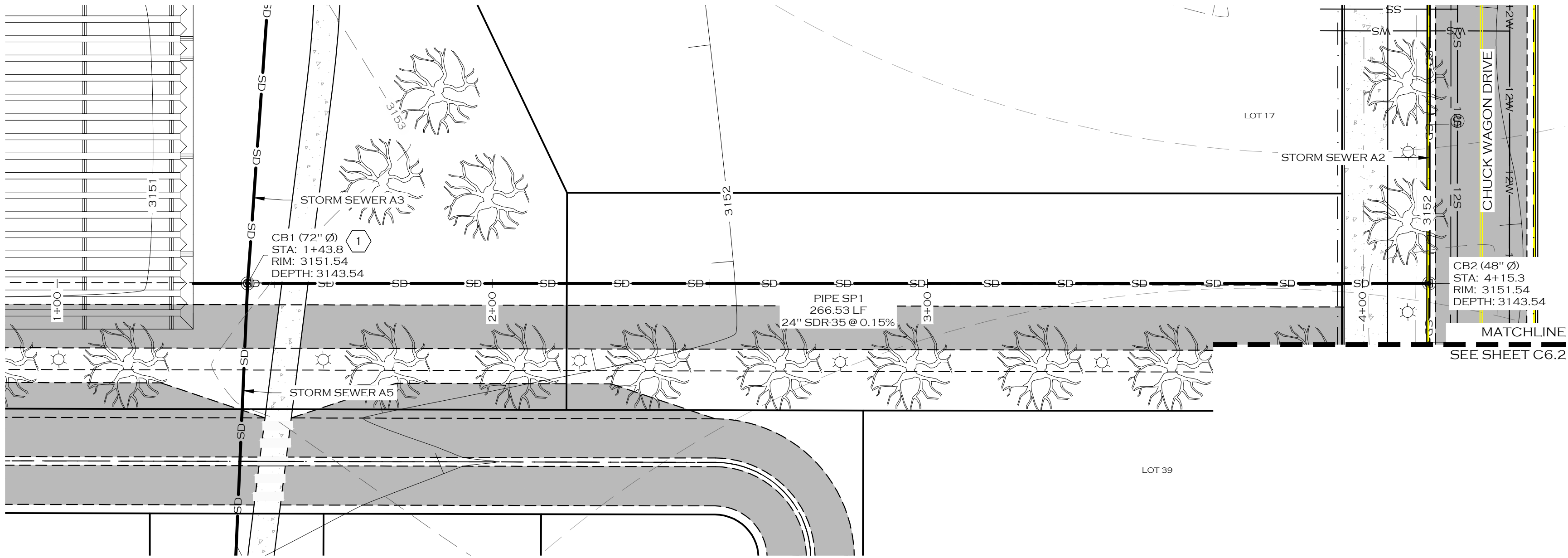
LEGEND

NOTE

PRELIMINARY PLAT - APRIL 2025

C6.0

STRM-OVERALL.DWG PLOTTED BY: MATT HAMMERSTEIN ON JUN/02/2025

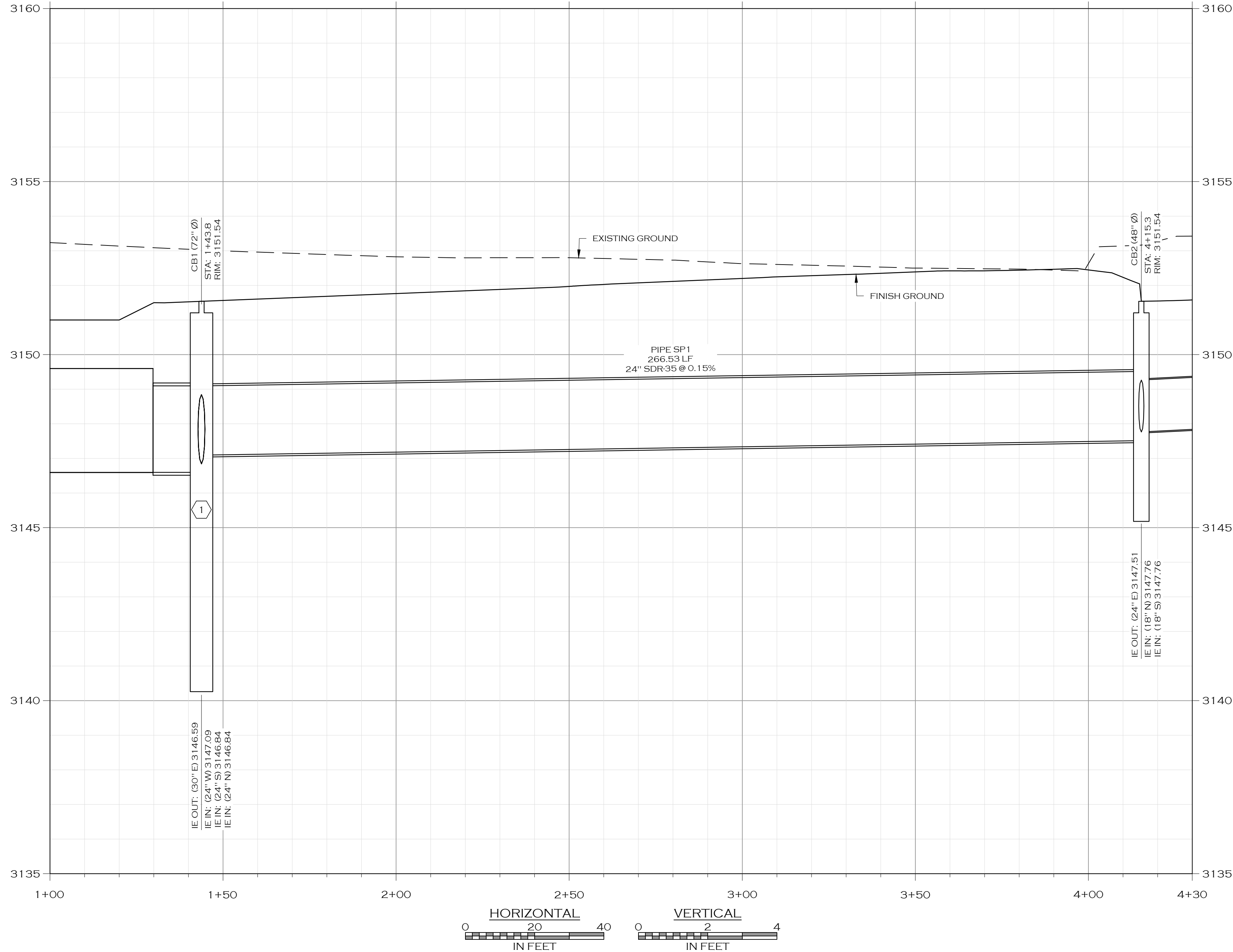


KEY NOTES

- 1 HYDRODYNAMIC SEPARATOR

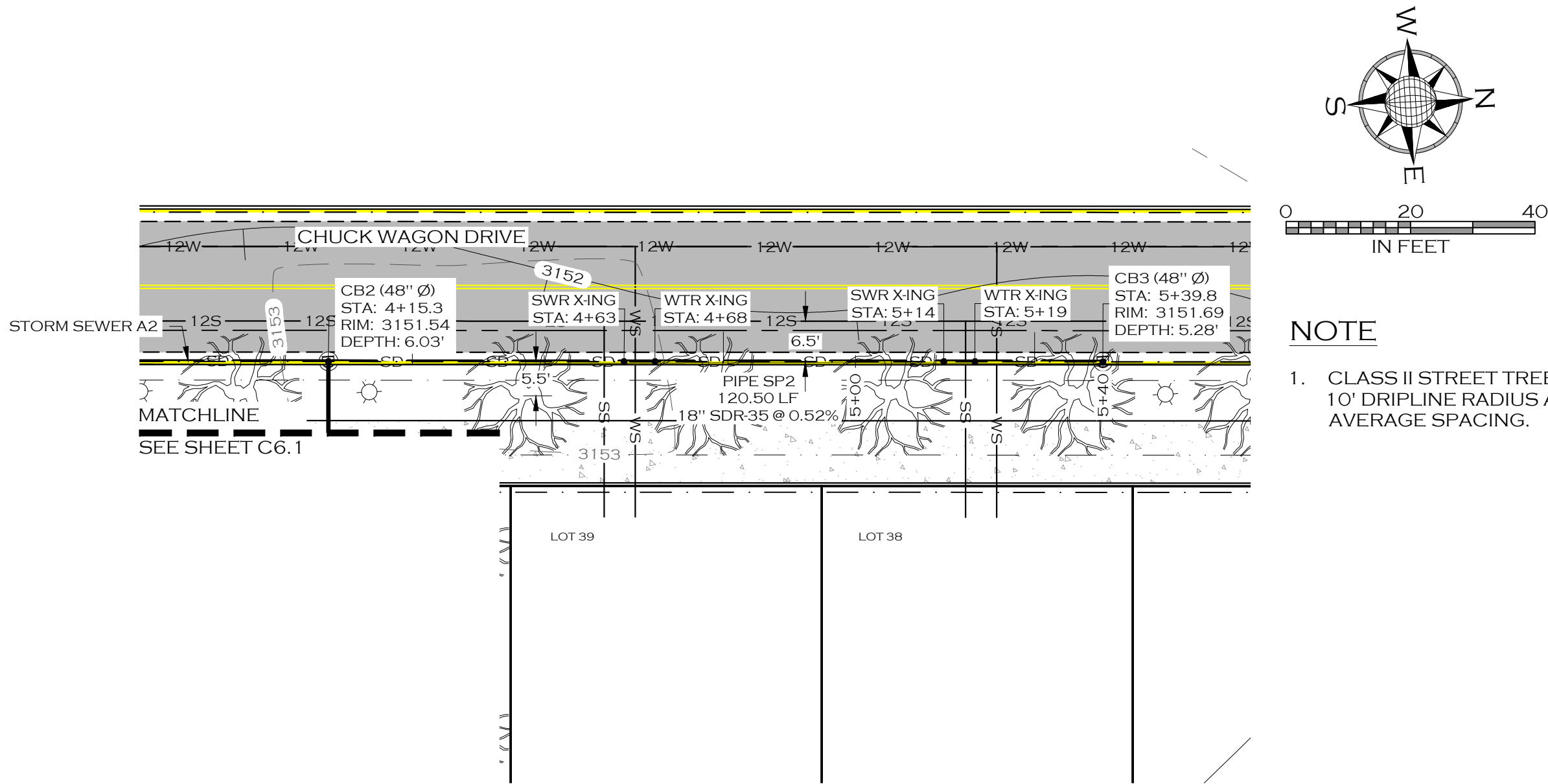
NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.

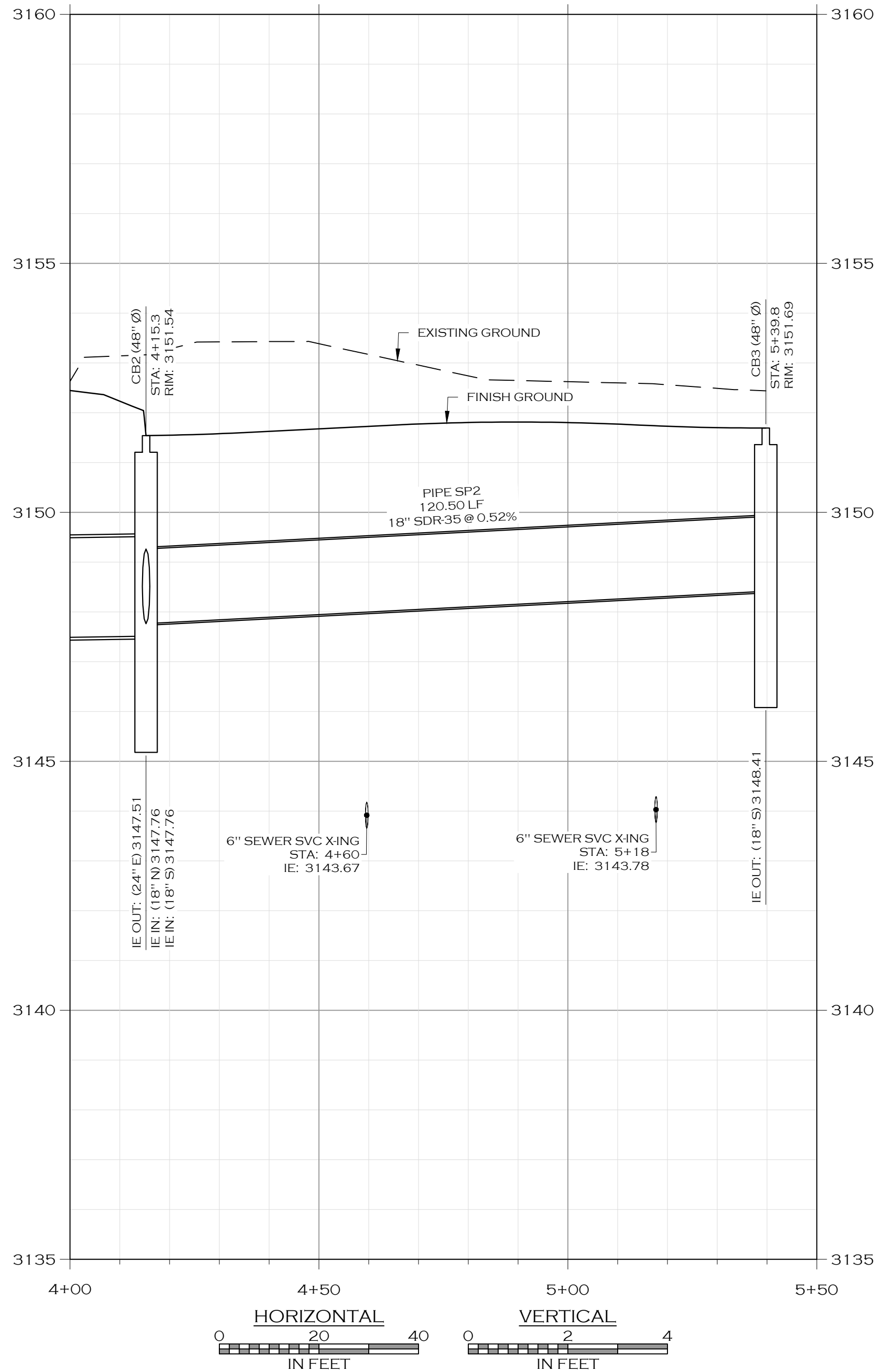


PRELIMINARY PLAT - APRIL 2025

C6.1	STORM SEWER A1 PLAN & PROFILE STA. 1+00 TO 4+14.3	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1995 3000 CLEAR STREET, SUITE 100 • MISSOULA, MT 59801 • 406-230-5505 WWW.WOITHENG.COM	DATE: 4/22/2025	KTS	QA:	DESIGN: MOH/CRH	DRAWN: CRH/MOH	JOB #:	20-077

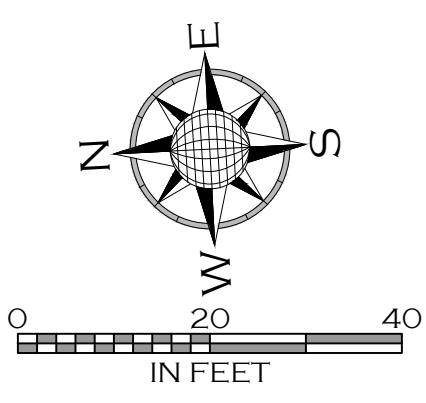
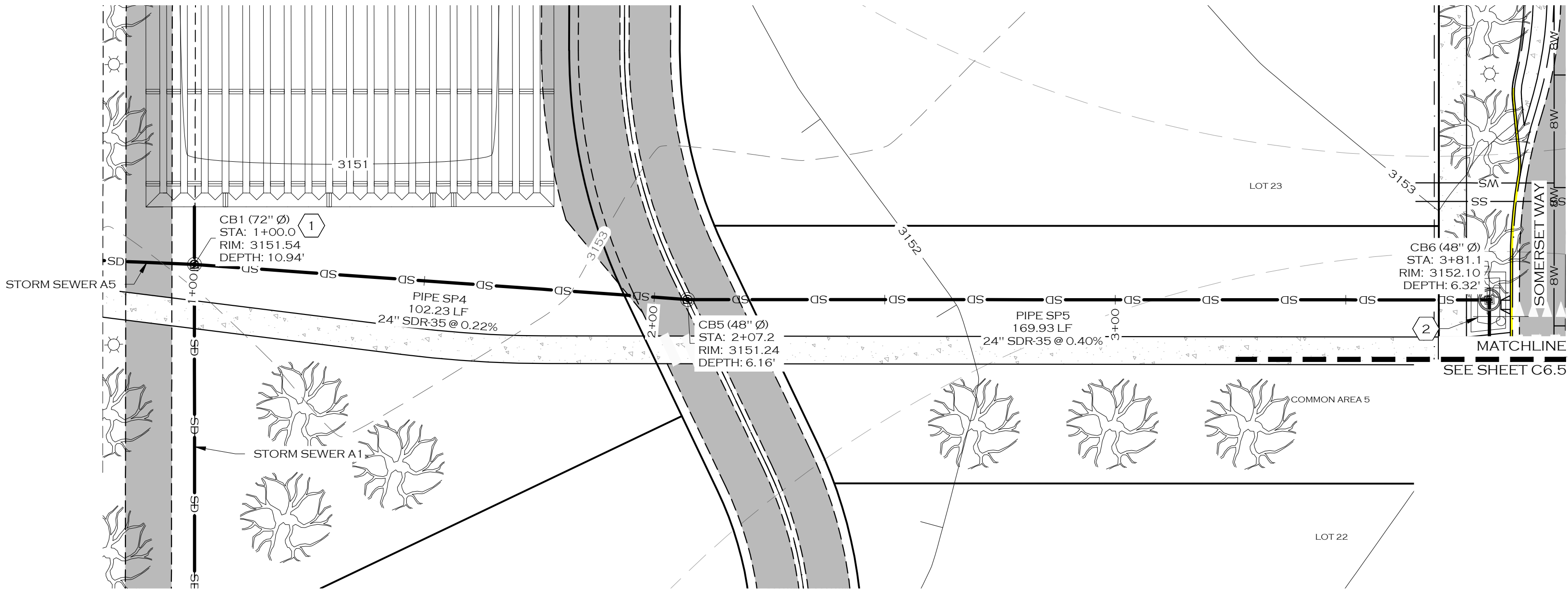


- NOTE
1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



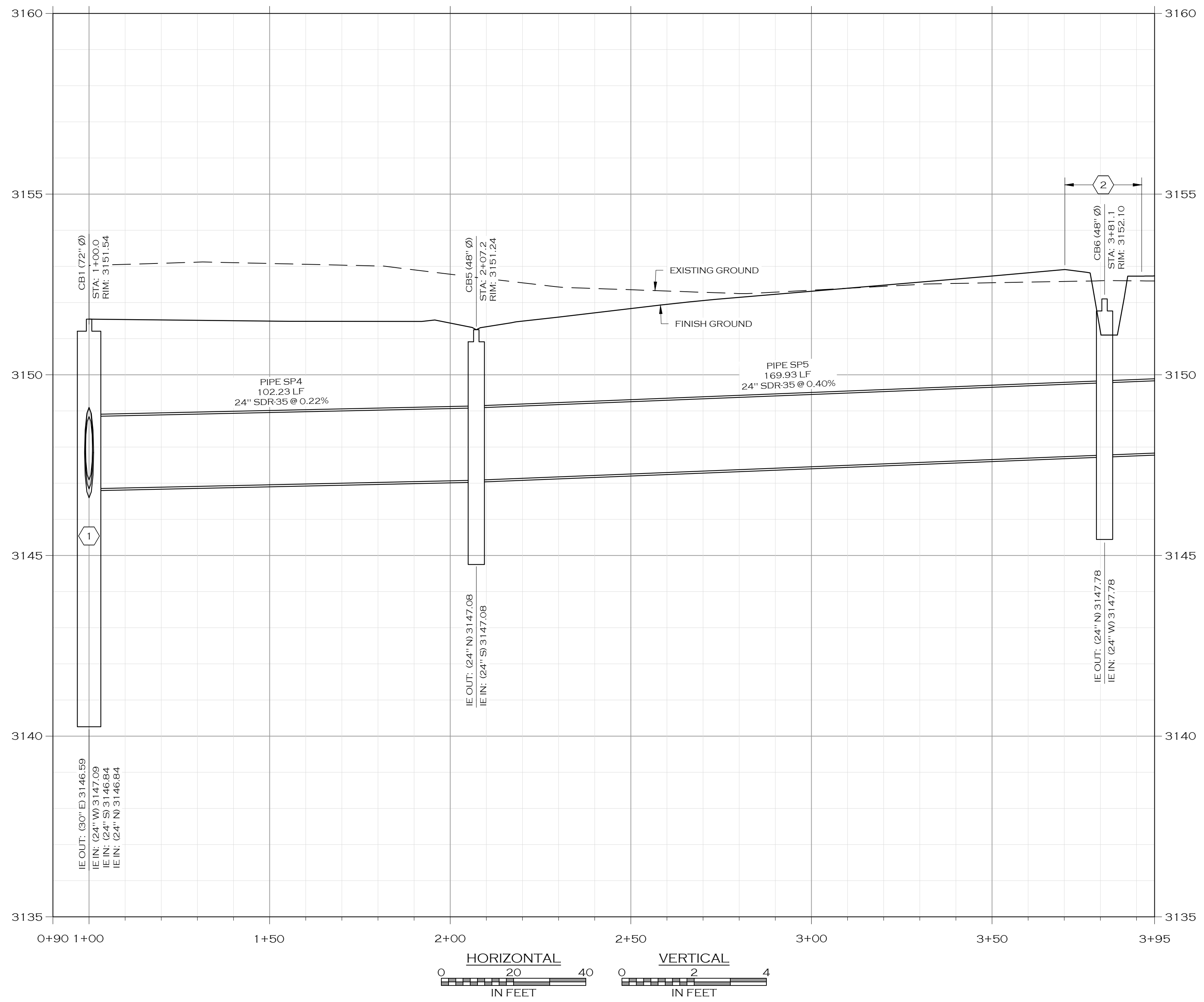
PRELIMINARY PLAT - APRIL 2025

C6.2	PAISLEY PARK SUBDIVISION	MISSOULA	MONTANA	STORM SEWER A1 PLAN & PROFILE STA. 4+14.3 TO 5+38.8	 WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-781-1955 3880 O'LEARY STREET, SUITE A • MISSOULA, MT 59808 • 406-203-9565 • WWW.WOITHENG.COM • COPYRIGHT © WOITH ENGINEERING, INC., 2025	DATE	DESCRIPTION			JOB #:	20077
						DRAWN:	CRH/MOH				
						DESIGN:	MOH/CRH				
						QA:	KTS				
						DATE:	4/22/2025				



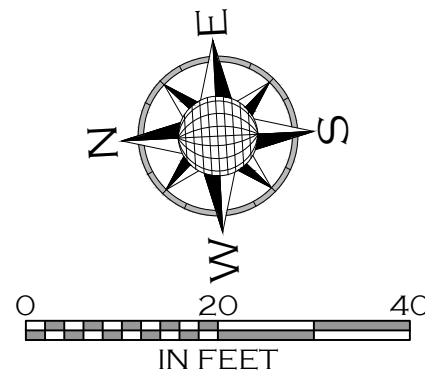
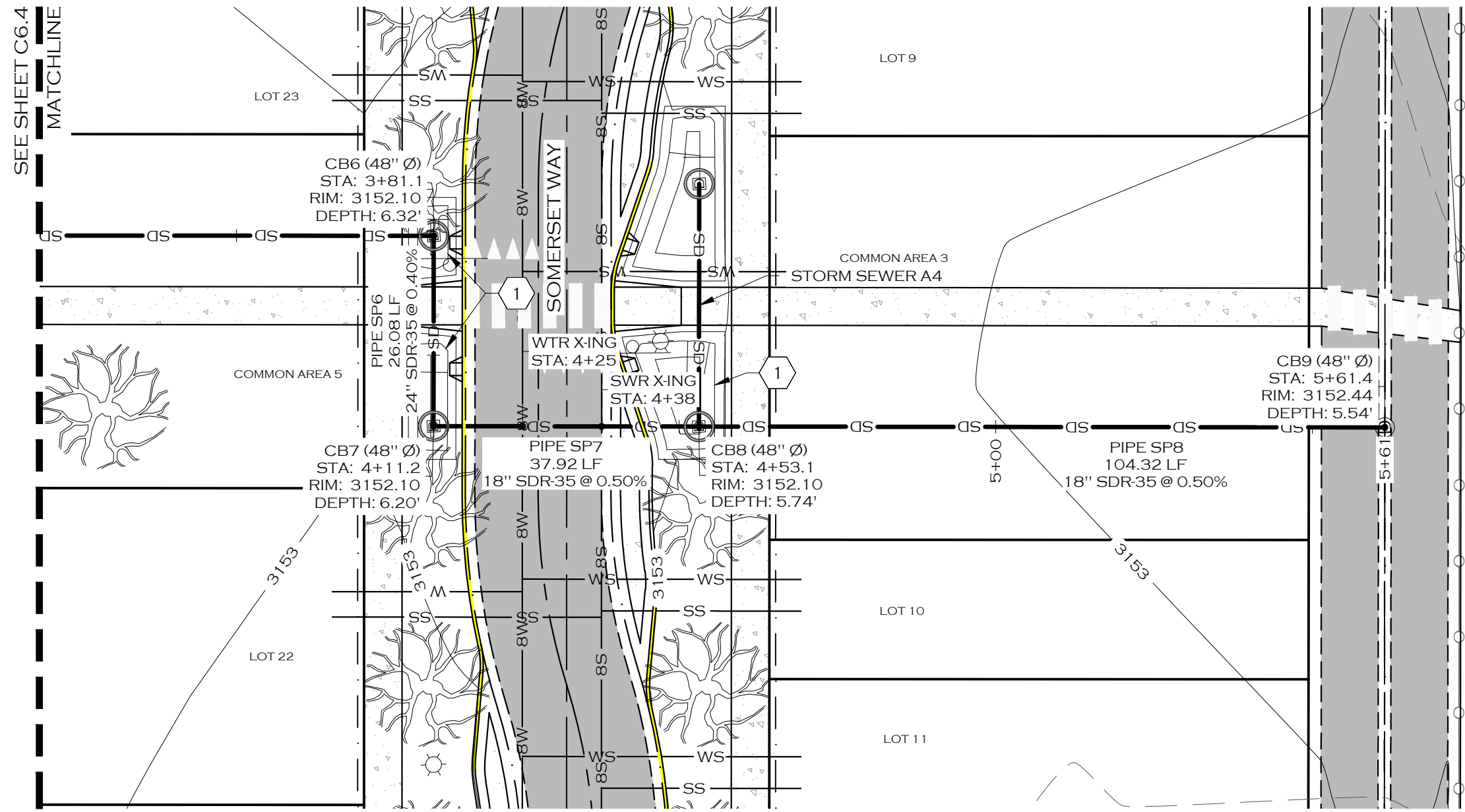
- KEY NOTES**
- 1) HYDRODYNAMIC SEPARATOR
 - 2) BIOSWALE/RETENTION SWALE

- NOTE**
1. CLASS II STREET TREES DEPICTED WITH 10' DRIFLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.4		STORM SEWER A3 PLAN & PROFILE STA. 1+00 TO 3+82.1		MISSOULA		PAISLEY PARK SUBDIVISION		MONTANA	
WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1955 3000 CLARY STREET, SUITE 100 • MISSOULA, MT 59701 • 406-533-5505 WWW.WOITHENG.COM									
JOB #:		20-077		DRAWN:		CRH/MOH		DESIGN:	
QA:		KTS		DATE:		4/22/2025			
DESCRIPTION		DATE							

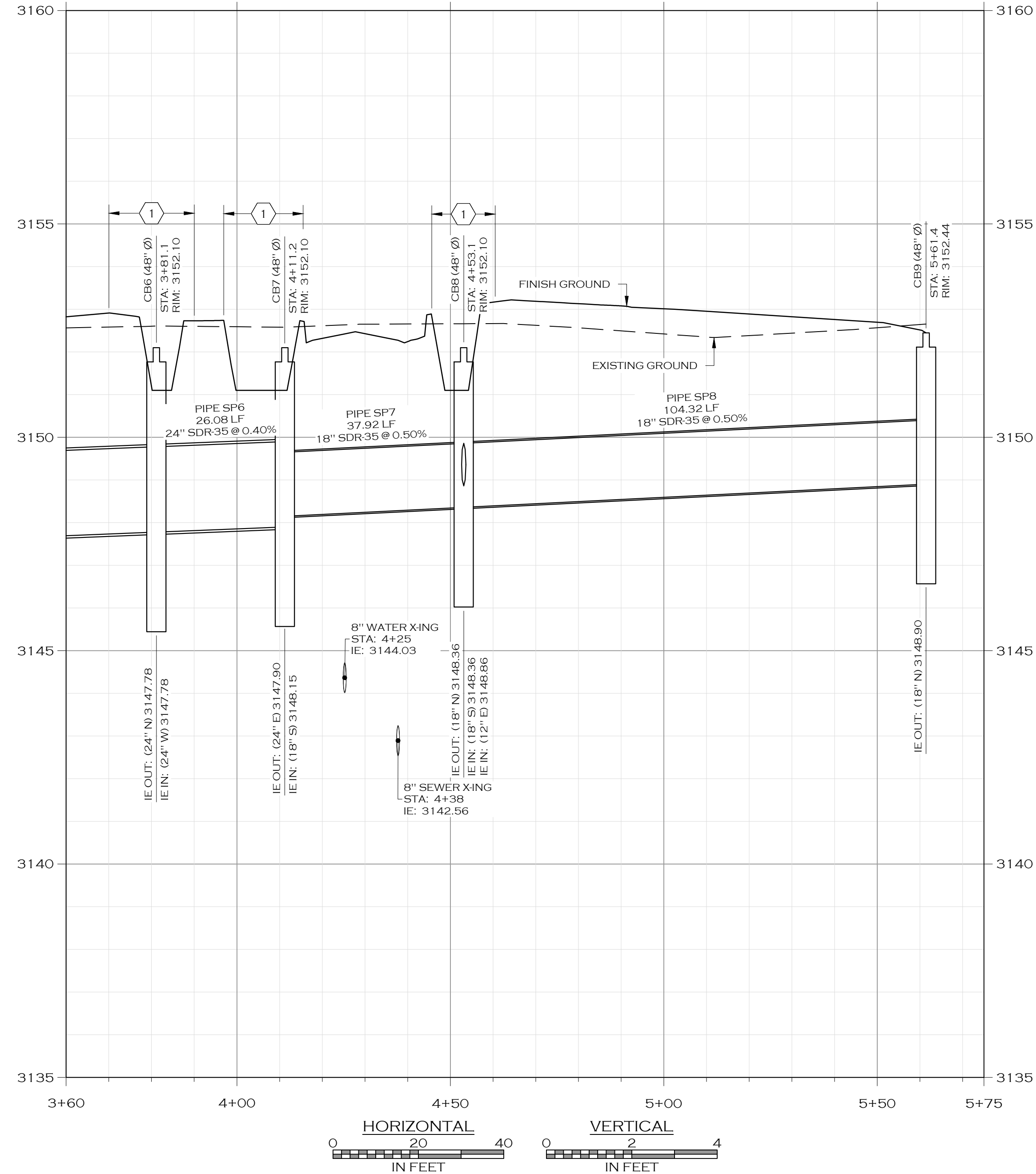


KEY NOTES

① BIOSWALE/RETENTION SWALE

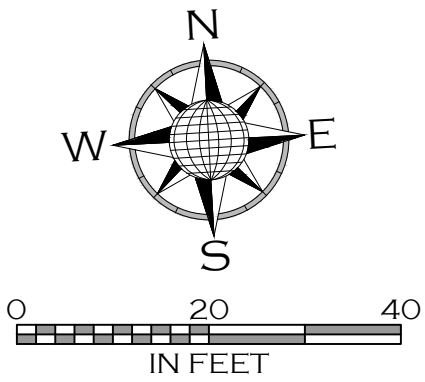
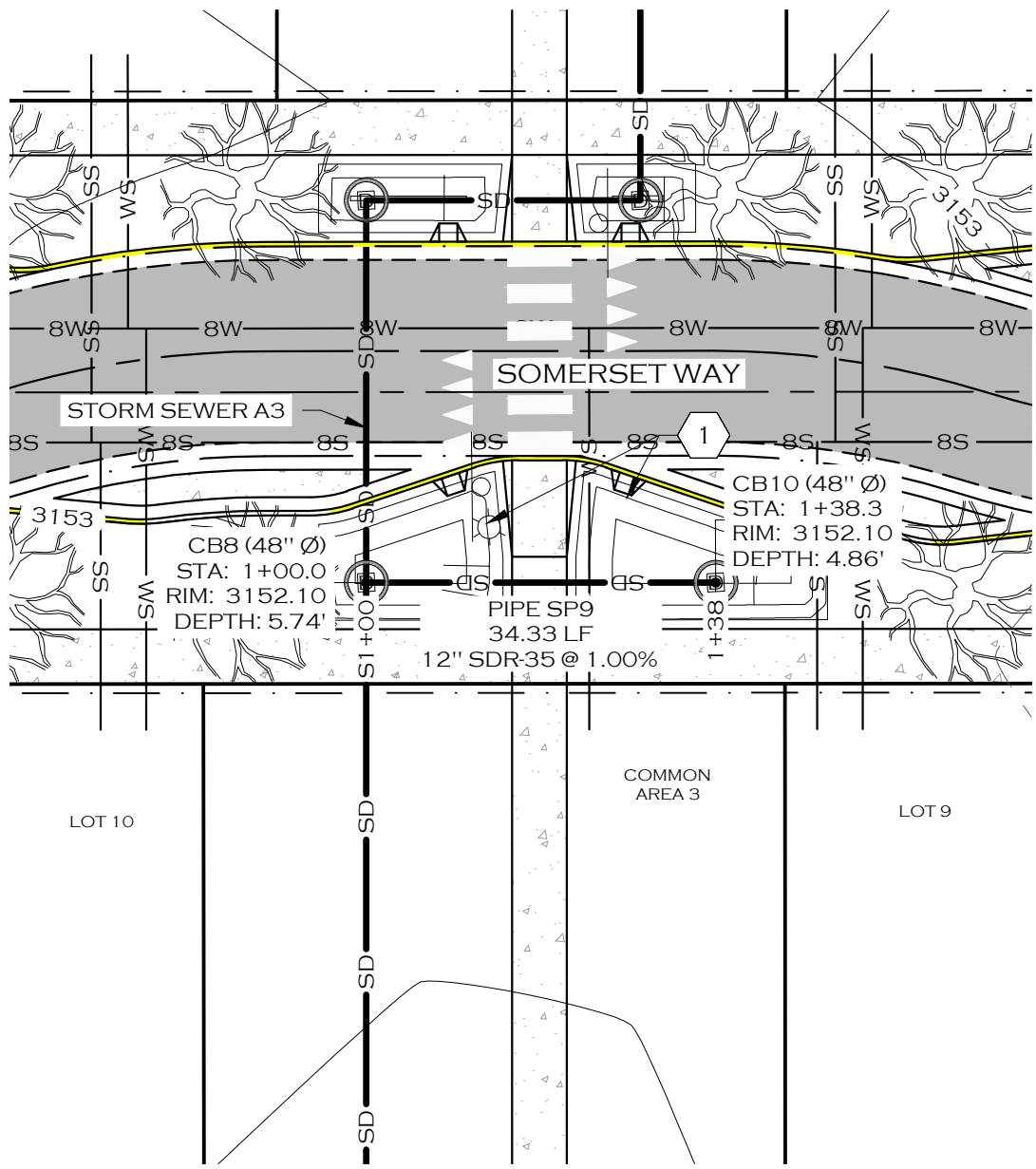
NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.5	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	STORM SEWER A3 PLAN & PROFILE STA. 3+82.1 TO 5+62.4	 WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1955 3000 O'LEARY STREET, SUITE 100 • MISSOULA, MT 59701 • 406-330-5505 • WWW.WOITHENG.COM • COPYRIGHT © WOITH ENGINEERING, INC., 2025	
	DESCRIPTION					
	DATE					
JOB #:						
DRAWN:						
DESIGN:						
QA:						
DATE:						

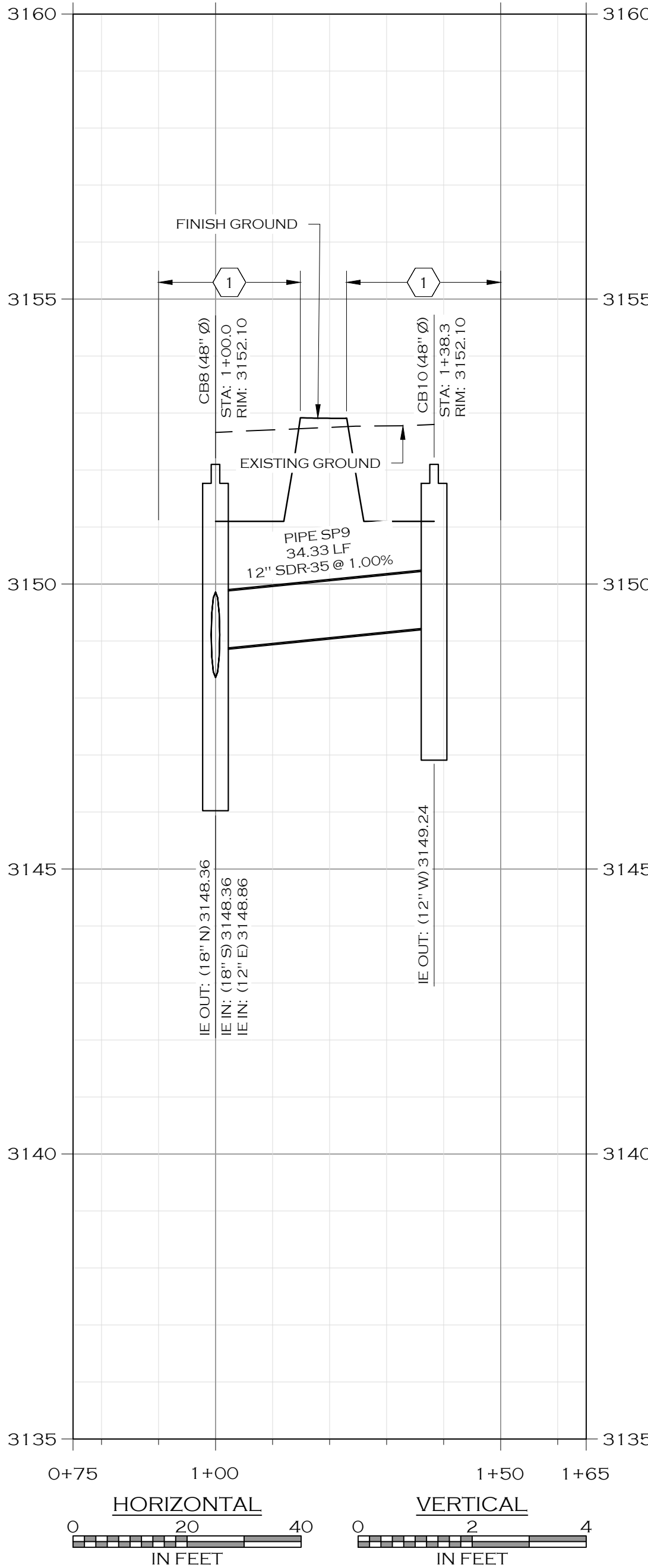


KEY NOTES

- 1 BIOSWALE/RETENTION SWALE

NOTE

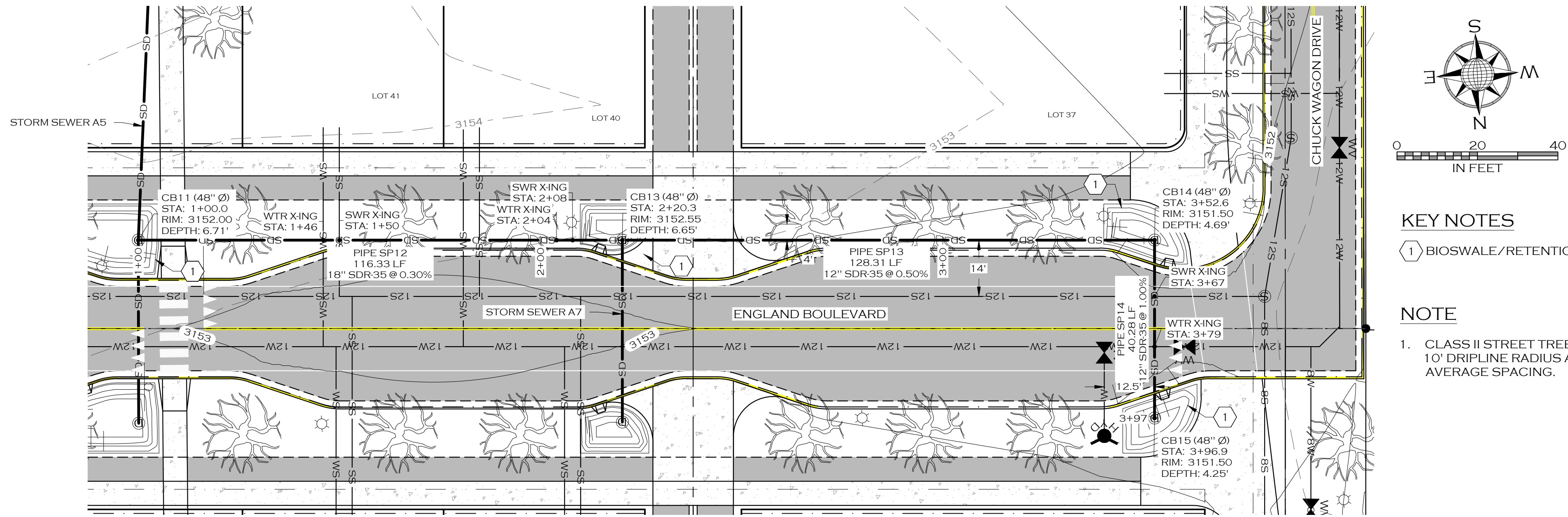
1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.6	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	STORM SEWER A4 PLAN & PROFILE	DATE: 4/22/2025 KTS QA: MOH/CRH DESIGN: CRH/MOH DRAWN: 20-077 JOB #:		DATE	DESCRIPTION	

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3000 CLARY STREET, SUITE 100 • MISSOULA, MT 59801 • 406-233-5505
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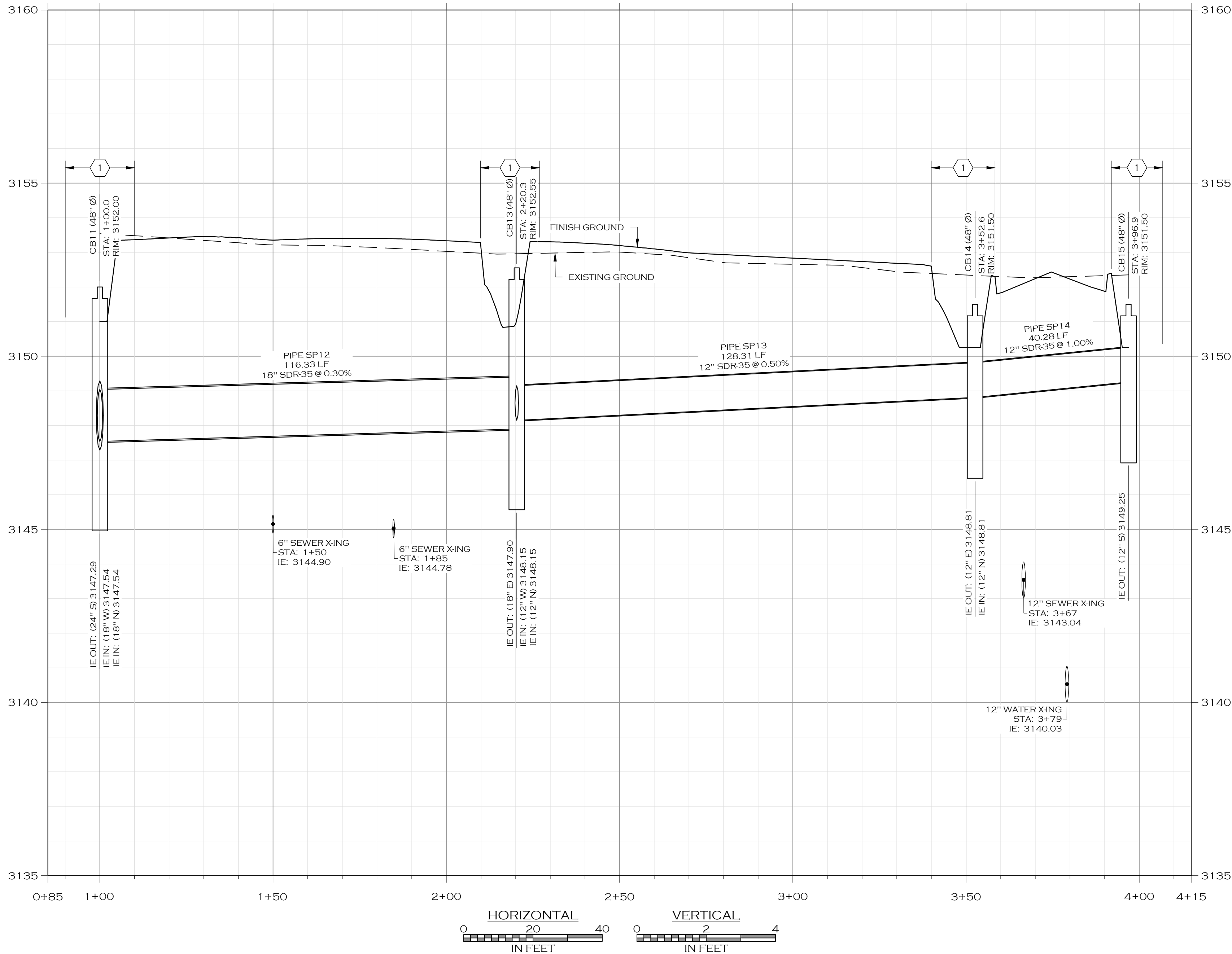


KEY NOTES

1 BIOSWALE/RETENTION SWALE

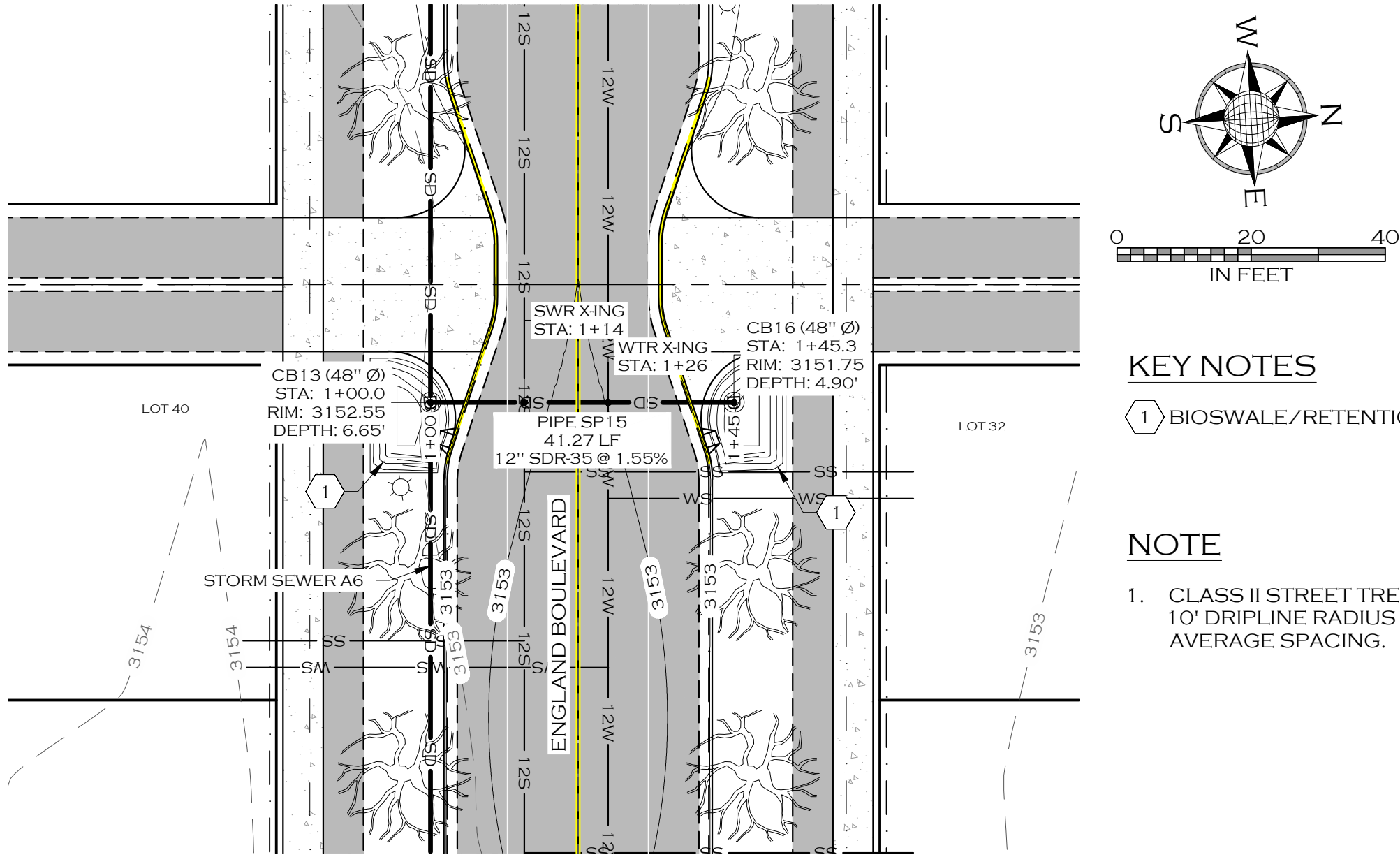
NOTE

- 1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.00	MISSOULA PAISLEY PARK SUBDIVISION MONTANA	 WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1855 3860 O'LEARY STREET, SUITE A • MISSOULA, MT 59808 • 406-203-9565 • WWW.WOITHENG.COM •																																																																																																																																																																																																																																																																																																																																																																																											</
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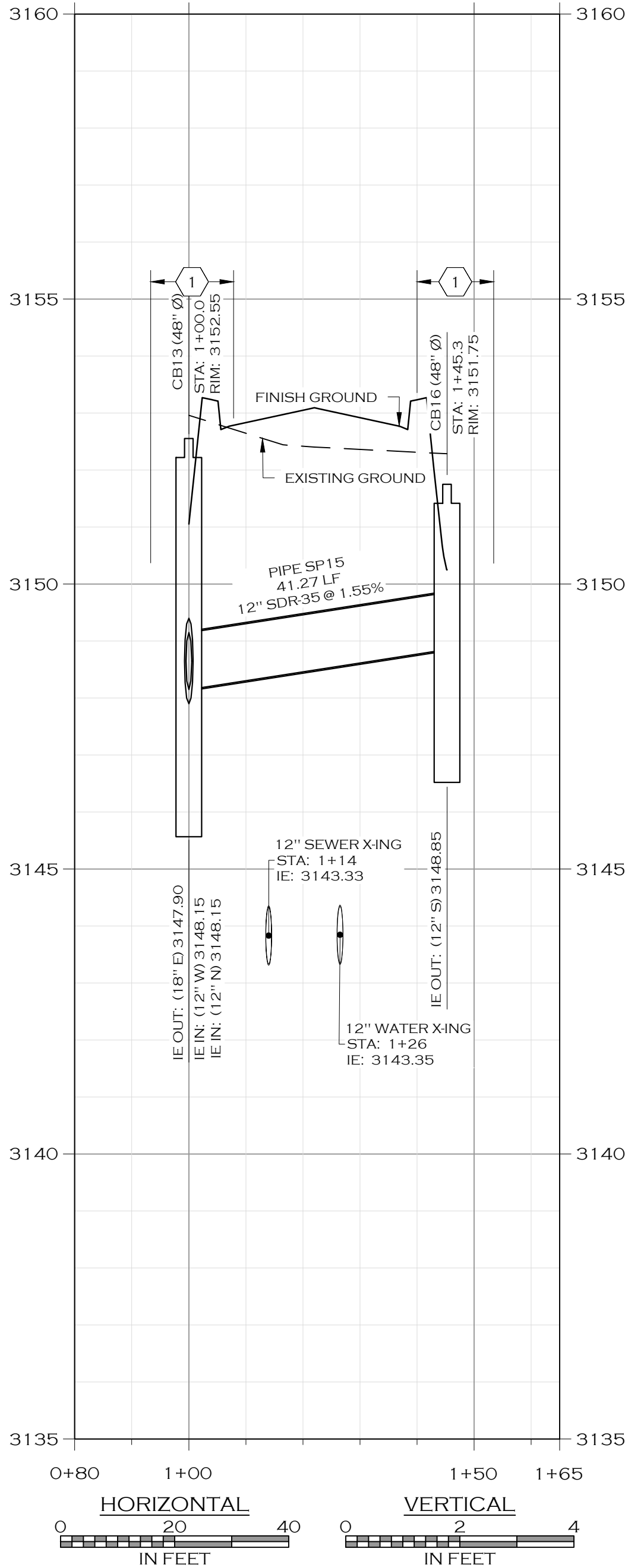


KEY NOTES

- 1 BIOSWALE/RETENTION SWALE

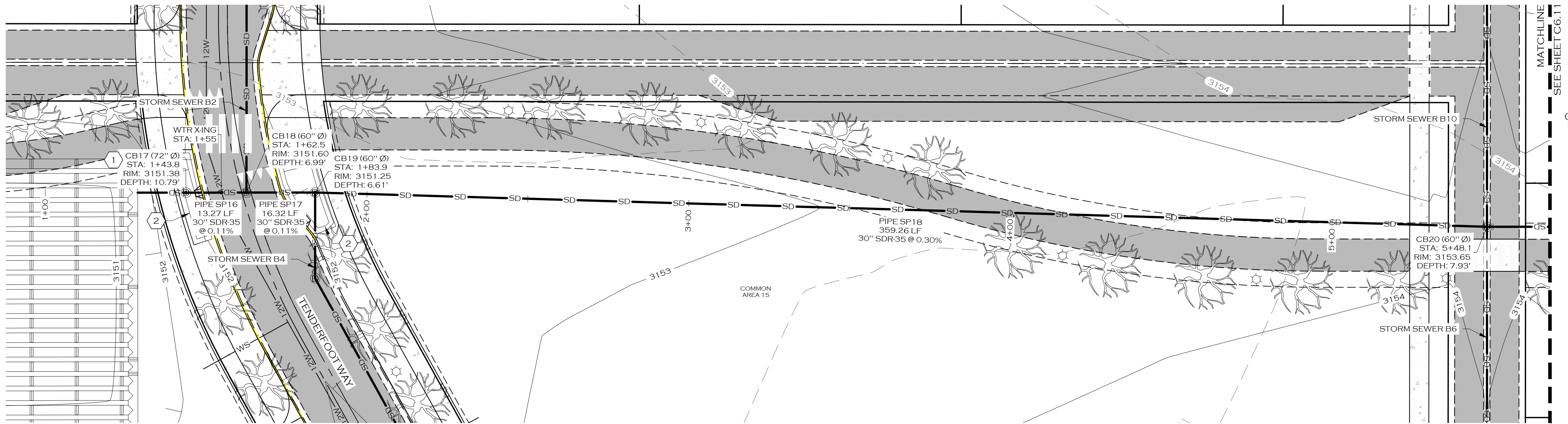
NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.9	STORM SEWER A7 PLAN & PROFILE	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	WOITH ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-791-1955 3000 CLARY STREET, SUITE 100 • MISSOULA, MT 59802 • 406-233-5505 WWW.WOITHENG.COM	DATE	QCA	KTS	DATE	JOB #	20-077

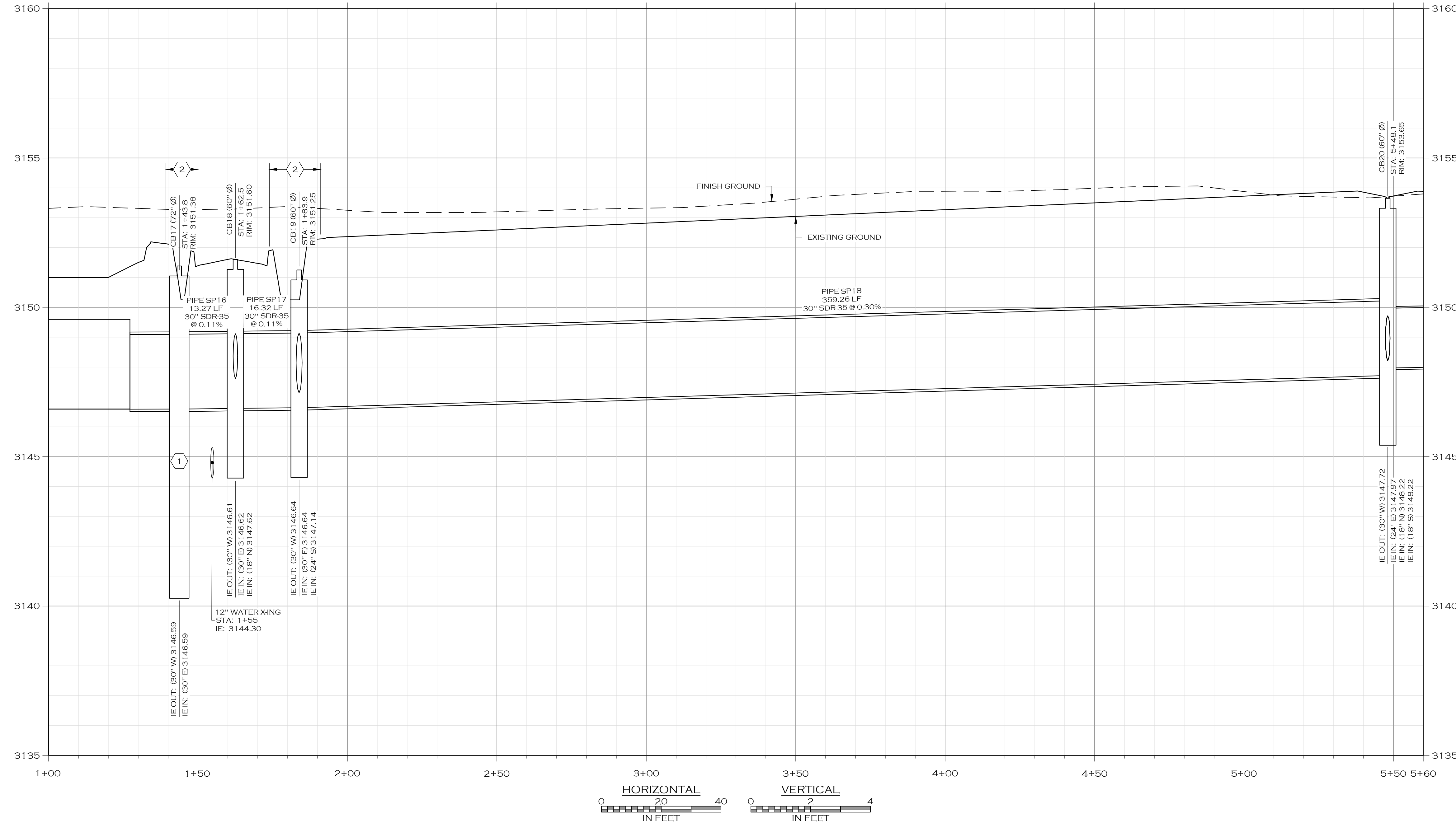


KEY NOTES

- 1 HYDRODYNAMIC SEPARATOR
- 2 BIOSWALE/RETENTION SWALE

NOTE

- CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.

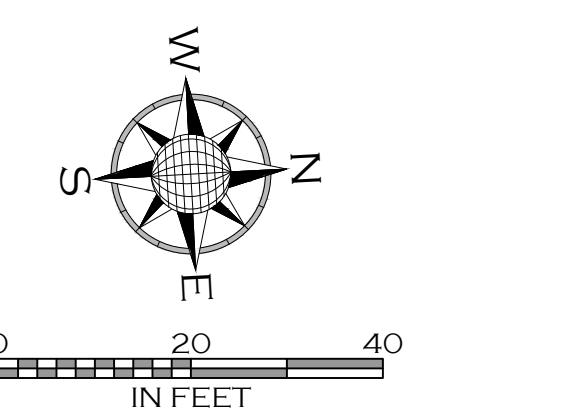
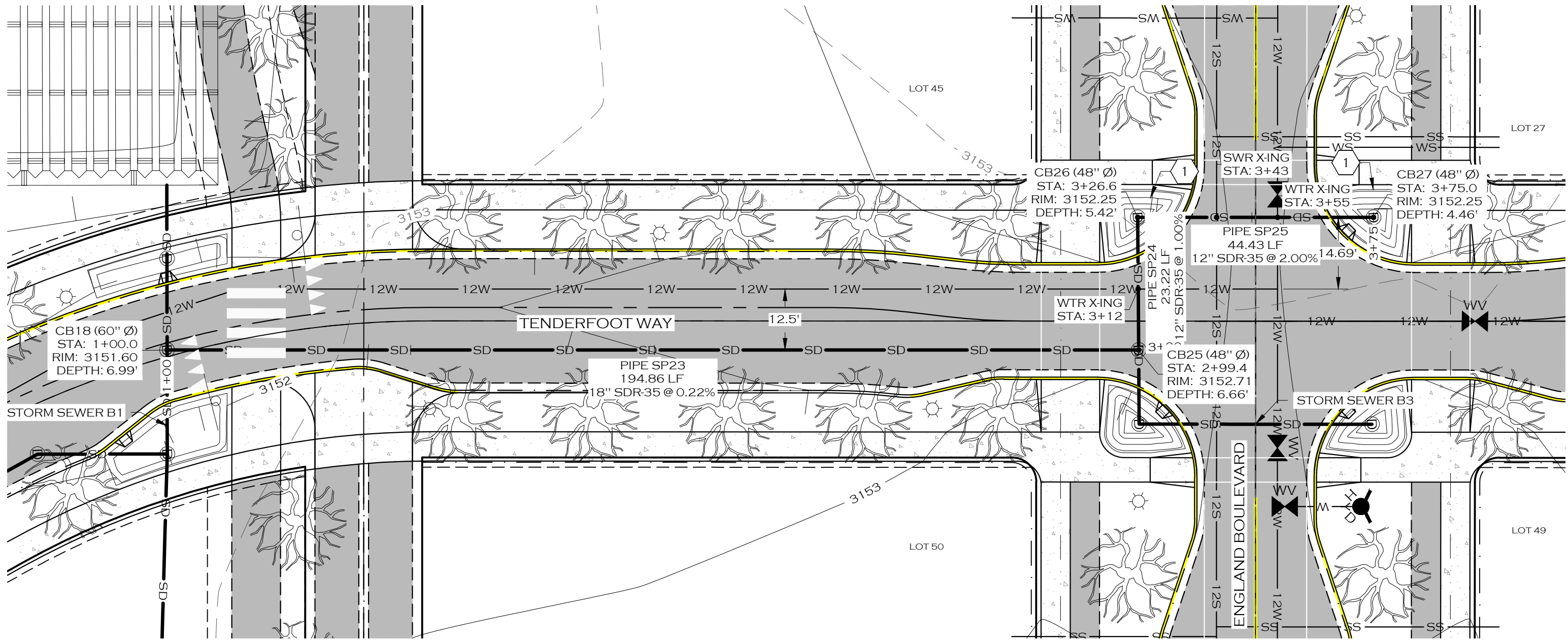


PRELIMINARY PLAT - APRIL 2025

MISSOULA		PAISLEY PARK SUBDIVISION		MONTANA	
STORM SEWER B1 PLAN & PROFILE STA. 1+00 TO 5+43.1					
C6.10					
JOB #:		20-077		DATE: 4/22/2025	
DRAWN:		CRH/MOH		KTS	
DESIGN:		MOH/CRH			
QA:					
DATE:					

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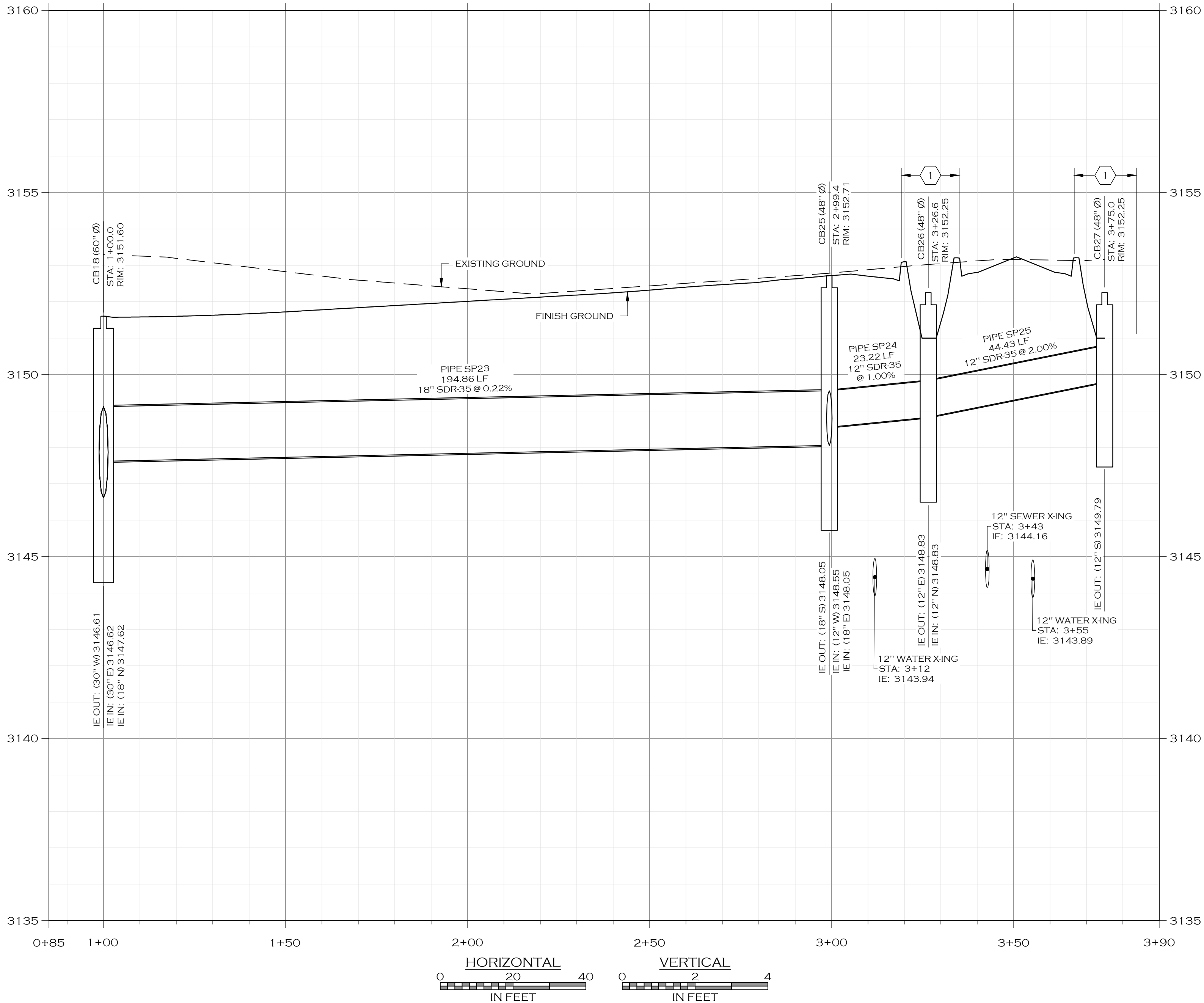


KEY NOTES

1 BIOSWALE/RETENTION SWALE

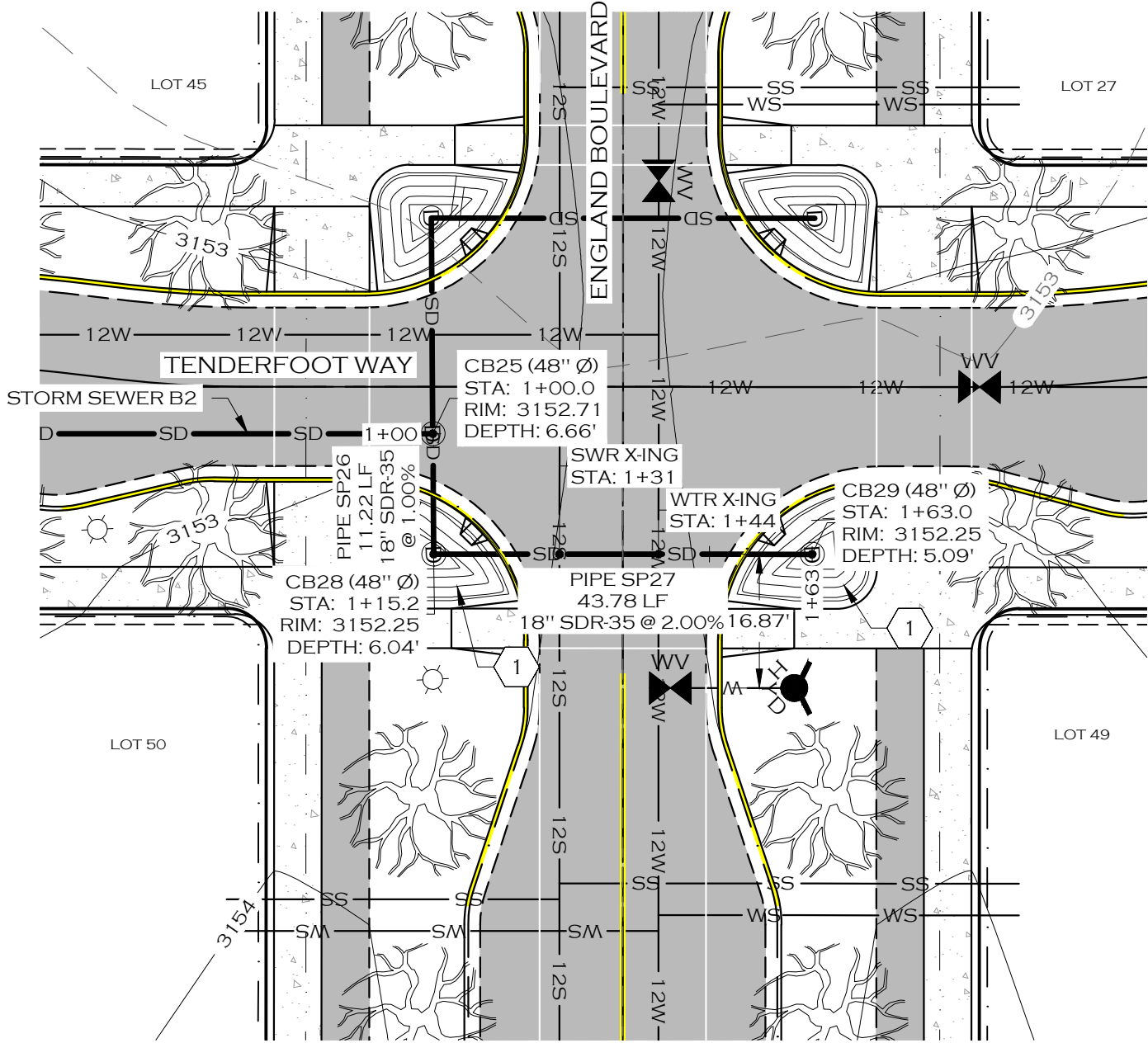
NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.12	
MISSOULA	PAISLEY PARK SUBDIVISION
MONTANA	
STORM SEWER B2 PLAN & PROFILE	
WOITH ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-781-1955 3008 OLNEY STREET, SUITE 100 • MISSOULA, MT 59701 • 406-533-5505 WWW.WOITHENG.COM	
JOB #:	20-077
DRAWN:	CRH/MOH
DESIGN:	MOH/CRH
QA:	KTS
DATE:	4/22/2025

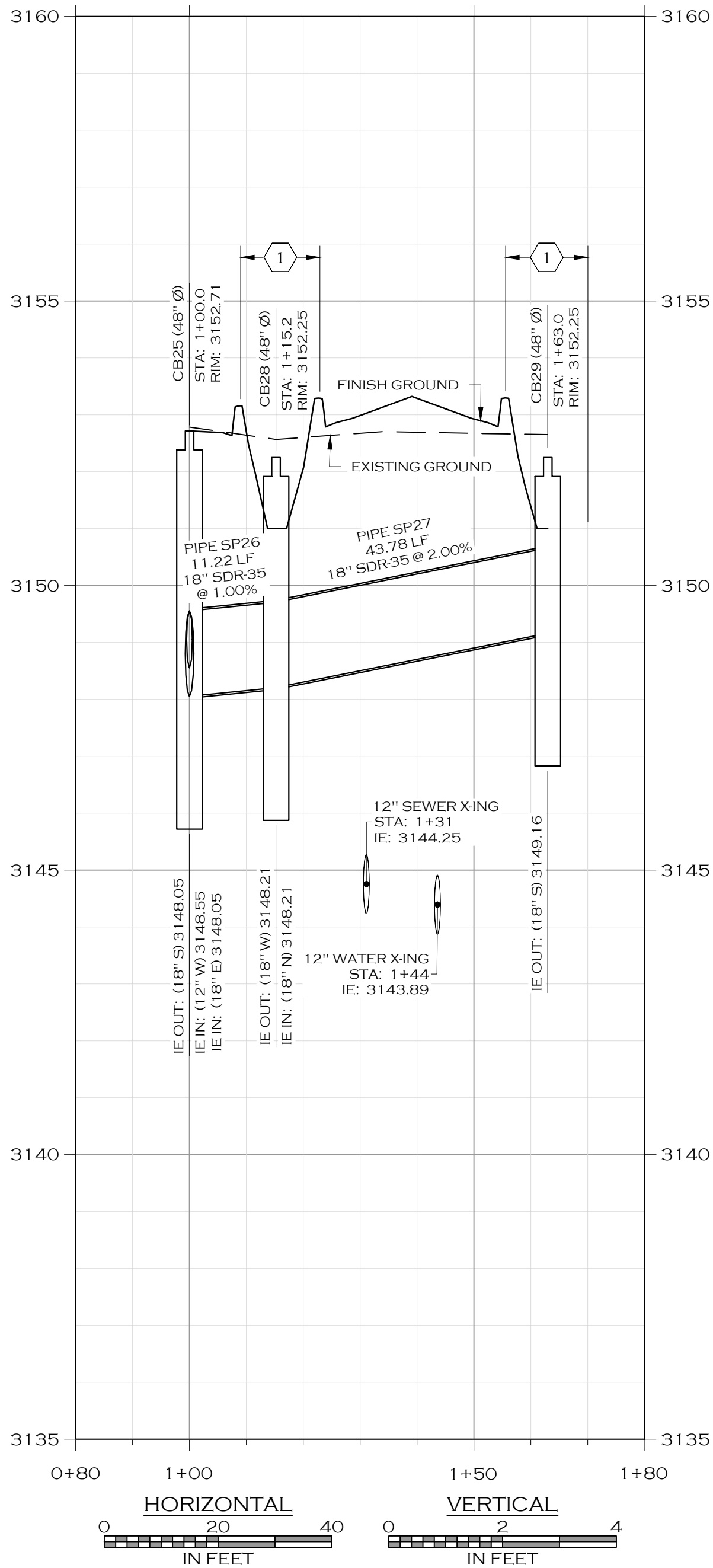


KEY NOTES

1 BIOSWALE/RETENTION SWALE

NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



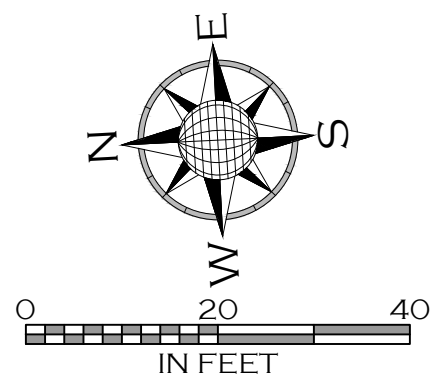
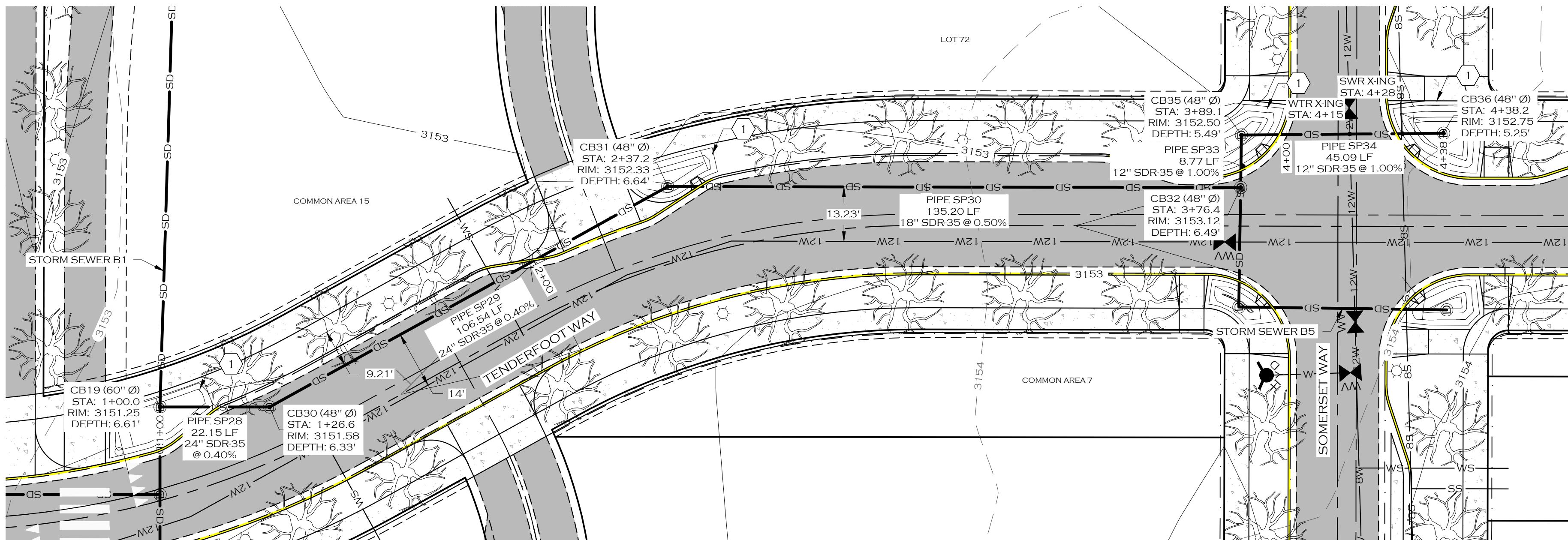
PRELIMINARY PLAT - APRIL 2025

C6.13	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	STORM SEWER B3 PLAN & PROFILE	DATE: 4/22/2025 QA: KTS DESIGN: MOH/CRH DRAWN: CRH/MOH JOB #: 20-077

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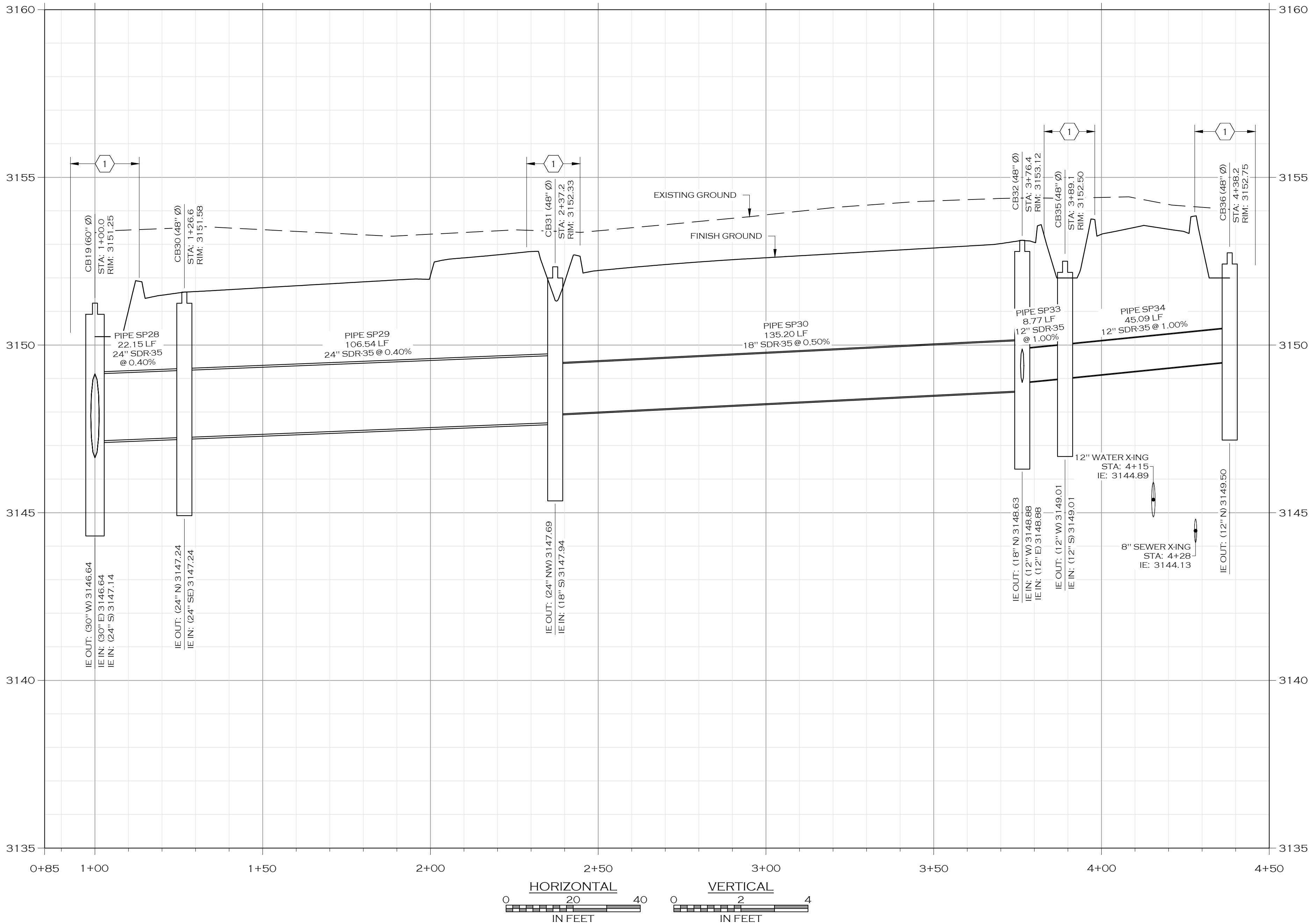
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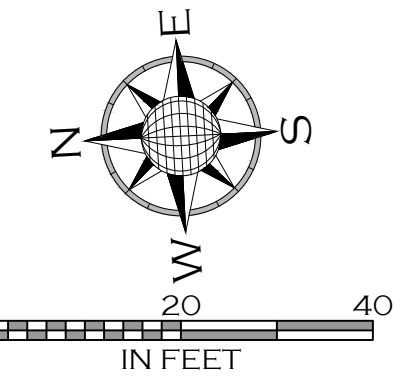
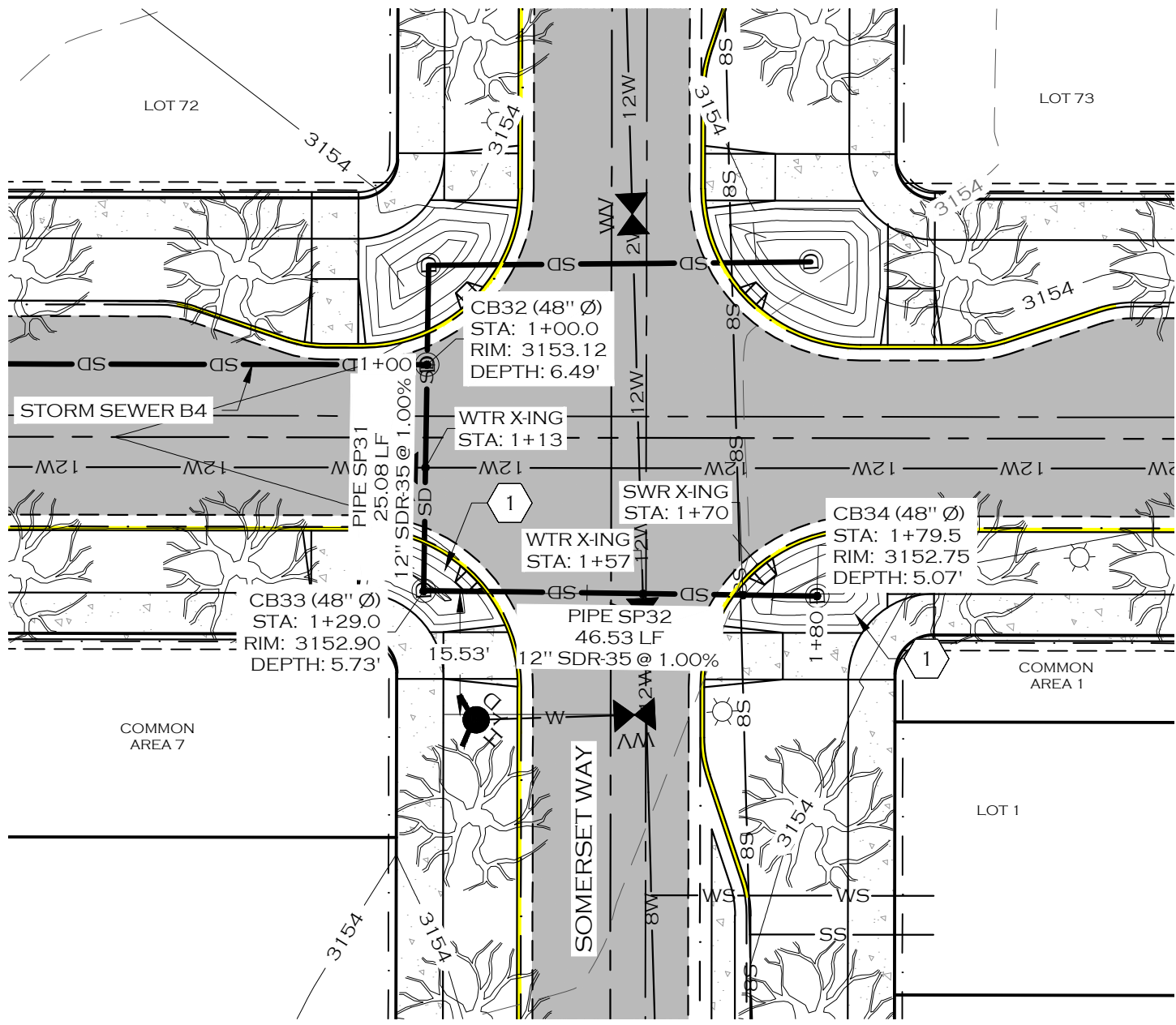
KEY NOTES
1 BIOSWALE/RETENTION SWALE

NOTE
1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.14	
MISSOULA	PAISLEY PARK SUBDIVISION
MONTANA	
STORM SEWER B4 PLAN & PROFILE	
WOITH ENGINEERS & SURVEYORS 405 JRD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1955 3008 CLARY STREET, SUITE 100 • MISSOULA, MT 59701 • 406-233-5505 WWW.WOITHENG.COM	
JOB #:	20-077
DRAWN:	CRH/MOH
DESIGN:	MOH/CRH
QA:	KTS
DATE:	4/22/2025

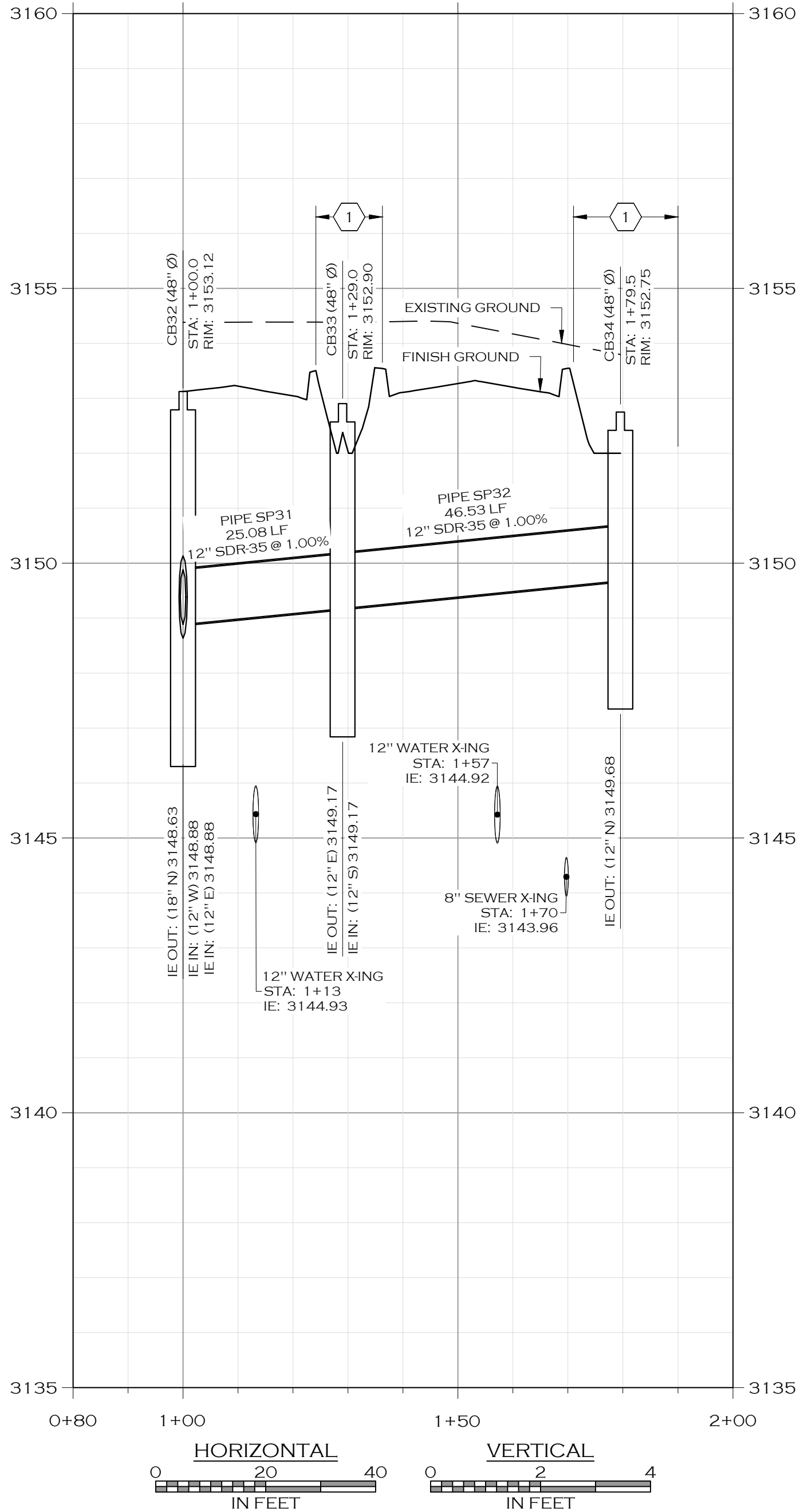


KEY NOTES

1. BIOSWALE/RETENTION SWALE

NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.15

MISSOULA

PAISLEY PARK SUBDIVISION

MONTANA

STORM SEWER B5 PLAN & PROFILE



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DATE:

4/22/2025

QA:

KTS

DESIGN:

MOH/CRH

DRAWN:

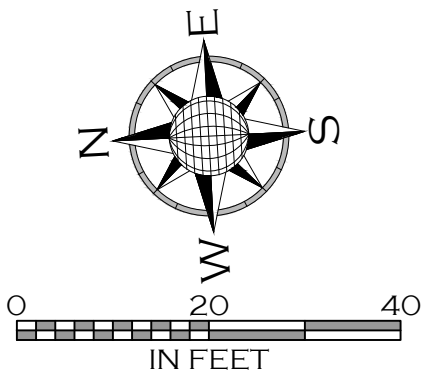
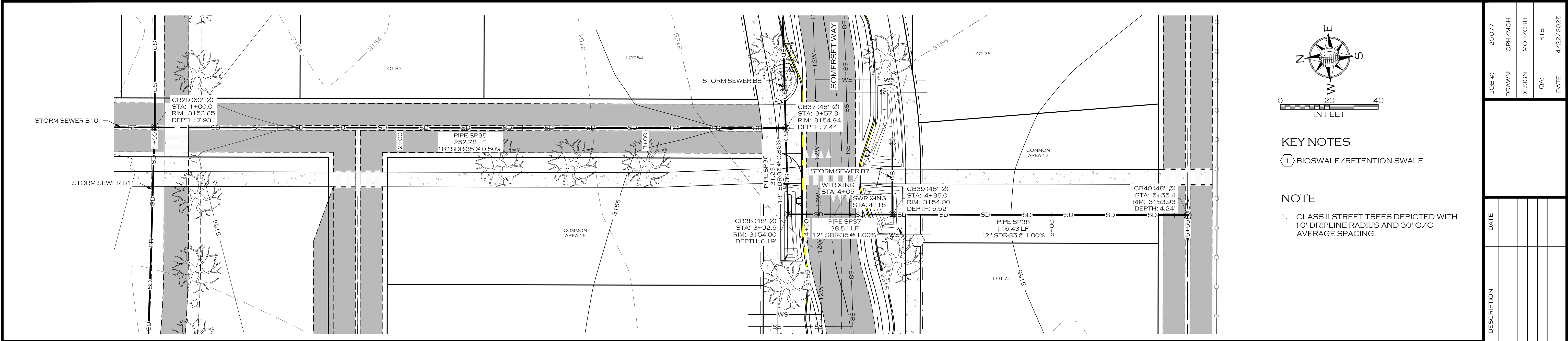
CRH/MOH

JOB #:

20077

DESCRIPTION

DATE

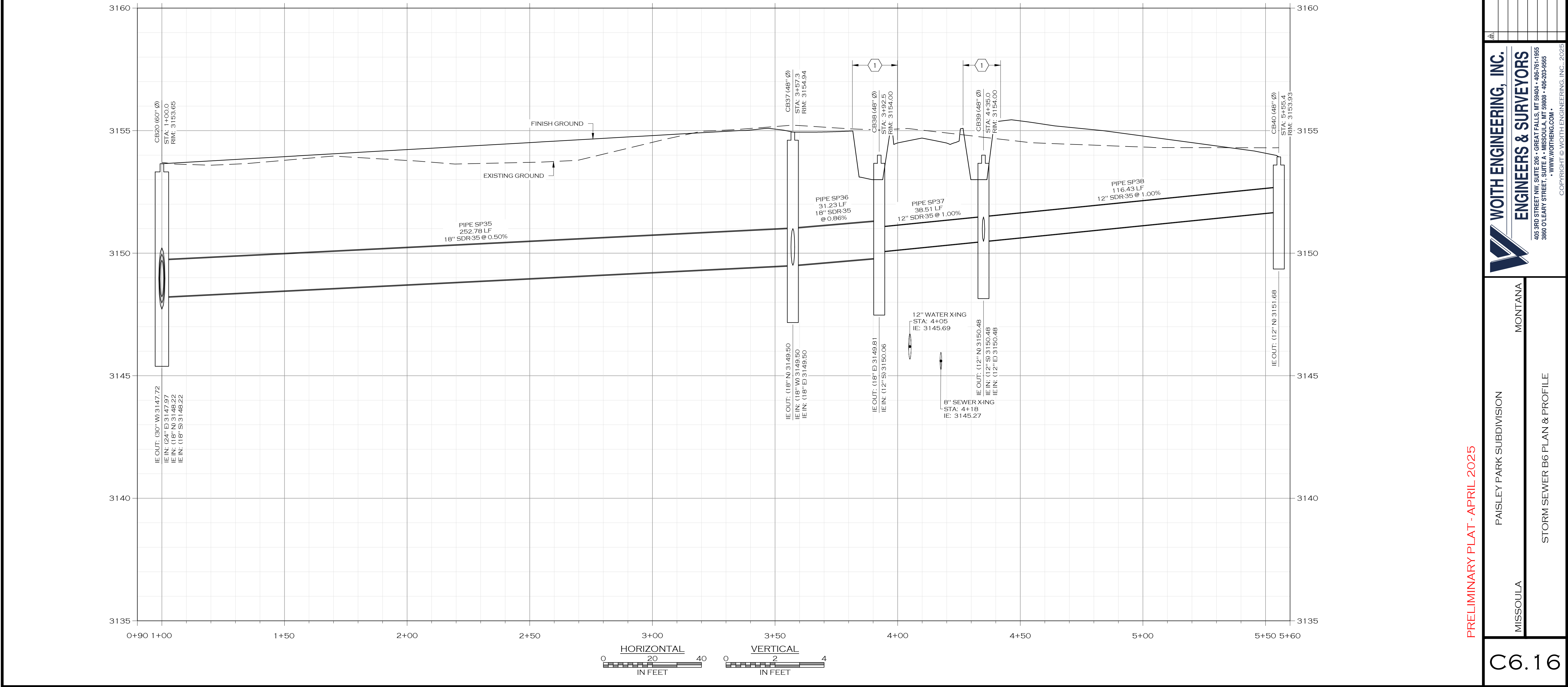


KEY NOTES

- 1 BIOSWALE/RETENTION SWALE

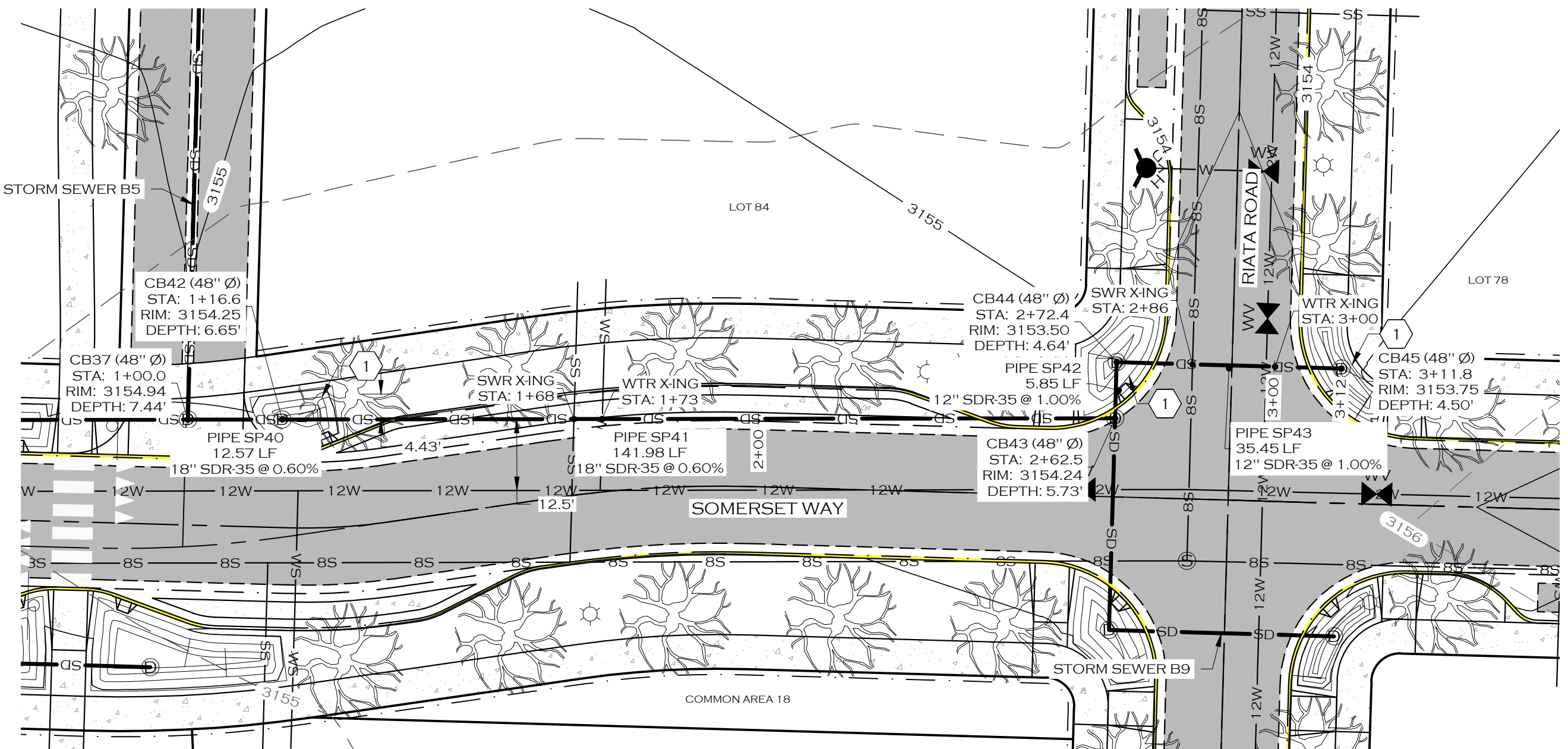
NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.16	
MISSOULA	PAISLEY PARK SUBDIVISION
MONTANA	
STORM SEWER B6 PLAN & PROFILE	
WOITH ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-781-1955 3000 CLARY STREET, SUITE 100 • MISSOULA, MT 59701 • 406-539-5505 WWW.WOITHENG.COM	
DATE	4/22/2025
QA	KTS
DESIGN	MOH/CRH
DRAWN	CRH/MOH
JOB #	20-077

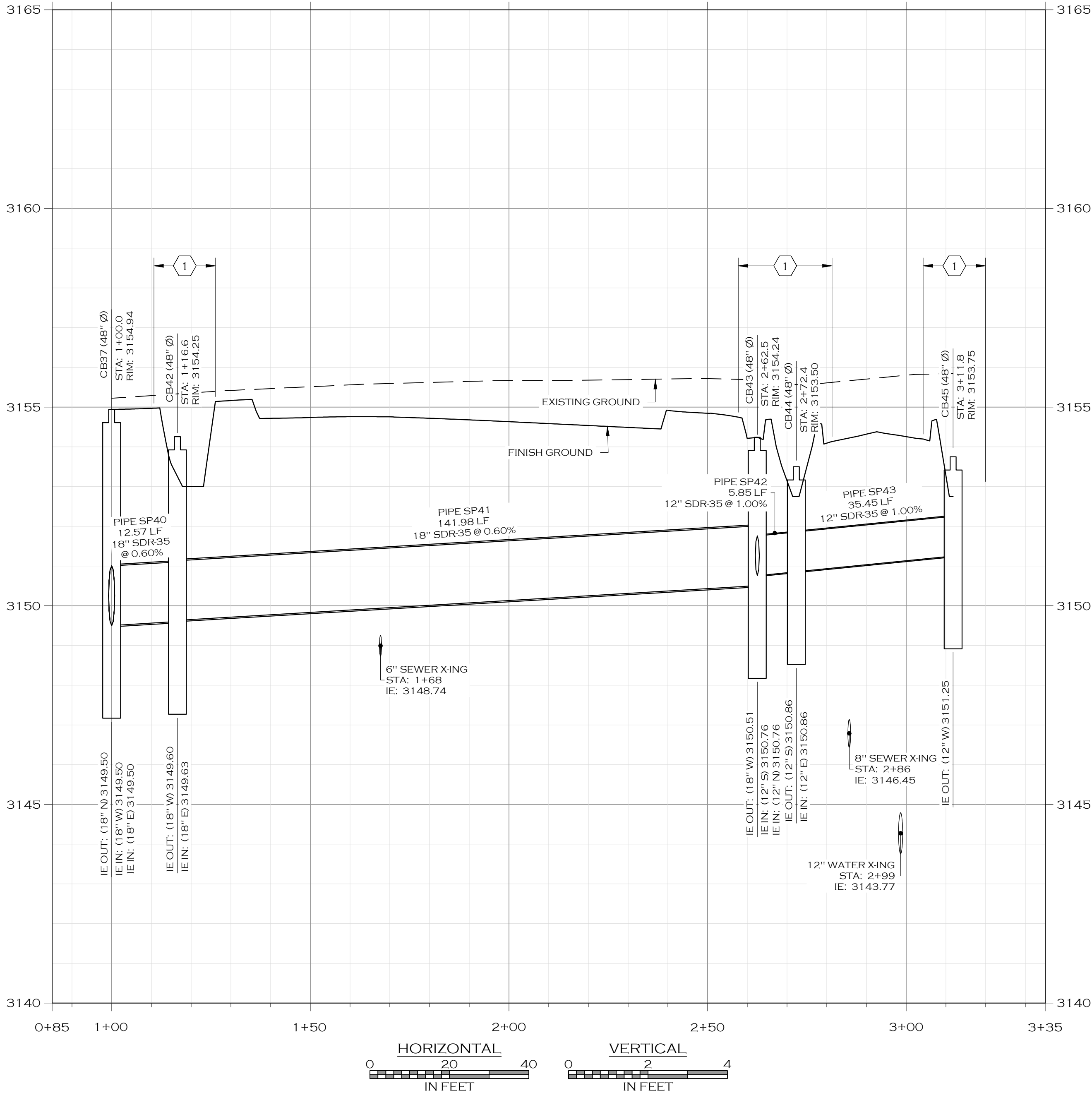


KEY NOTES

1 BIOSWALE/RETENTION SWALE

NOTE

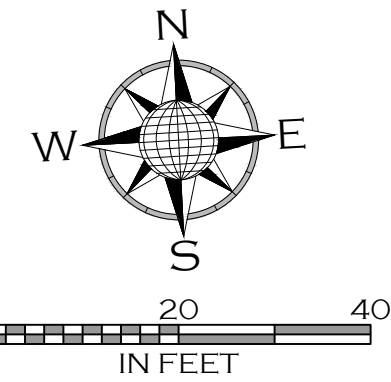
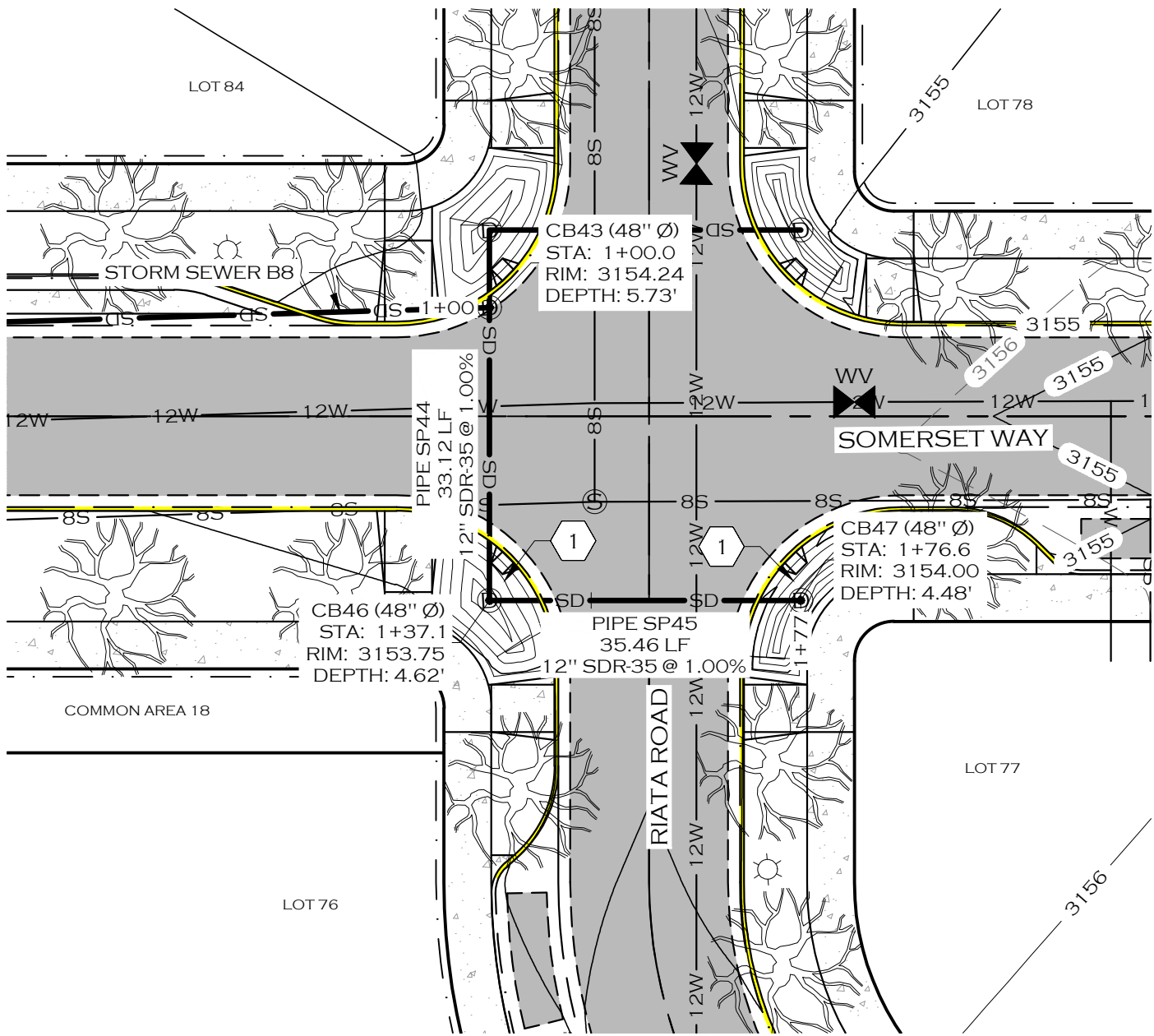
1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.18	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	STORM SEWER B8 PLAN & PROFILE	JOB #: 20-077	DRAWN: CRH/MOH	DESIGN: MOH/CRH	QA: KTS	DATE: 4/22/2025

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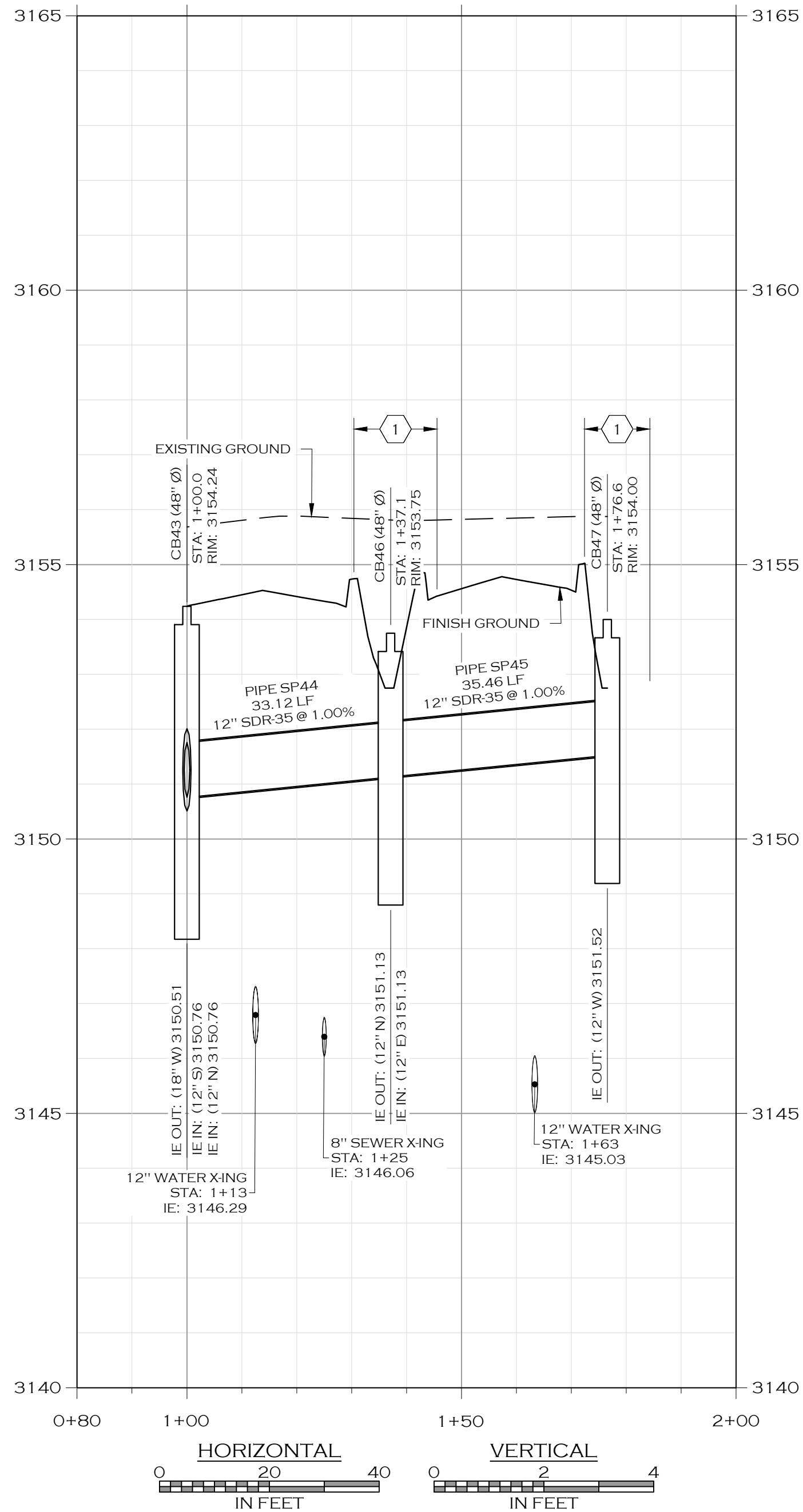


KEY NOTES

- 1 BIOSWALE/RETENTION SWALE

NOTE

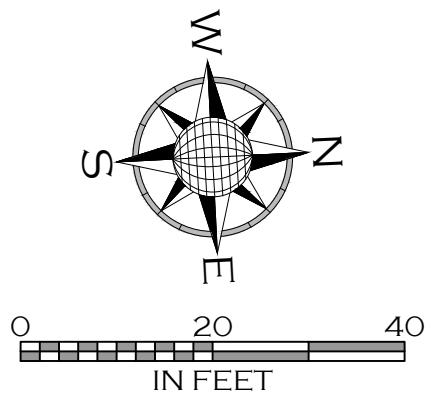
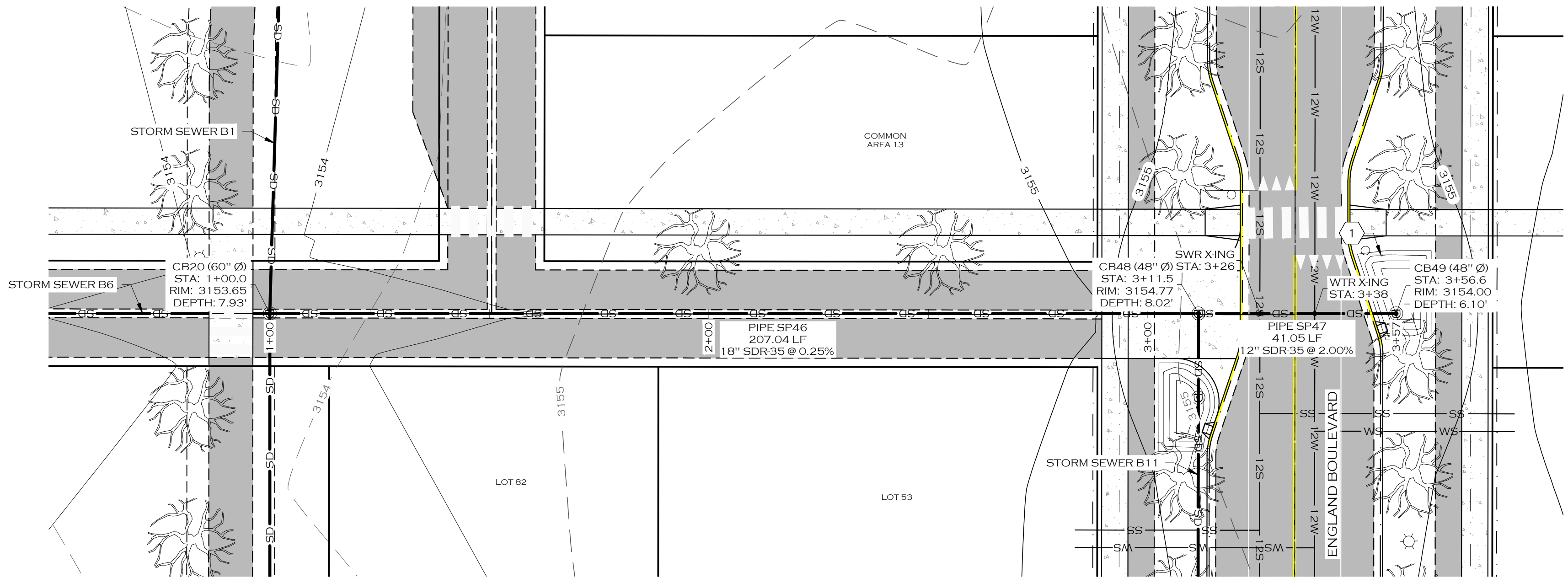
- 1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.19	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	STORM SEWER B9 PLAN & PROFILE	DATE: 4/22/2025 QA: KTS DESIGN: MOH/CRH DRAWN: CRH/MOH JOB #: 20-077

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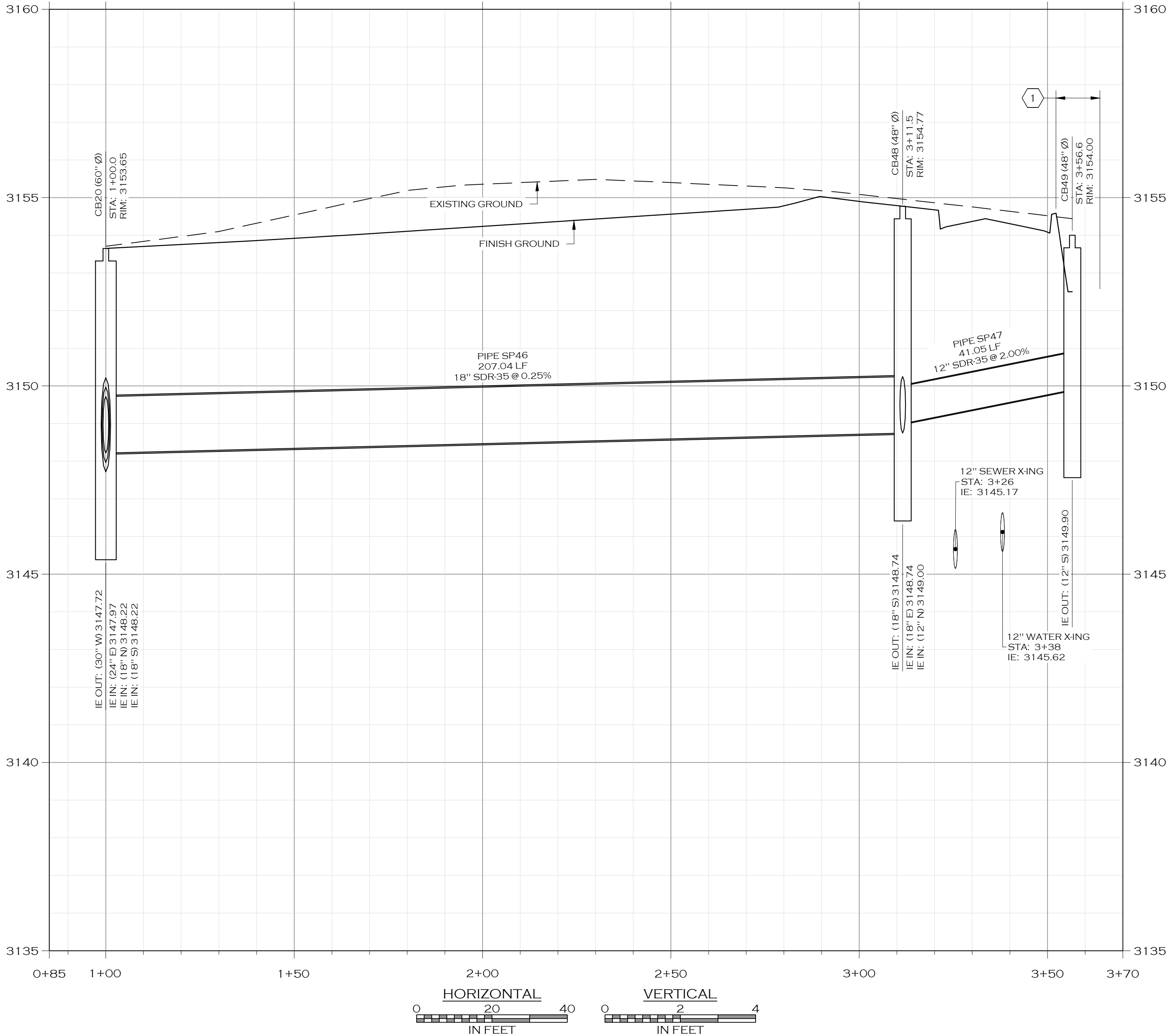


KEY NOTES

1 BIOSWALE/RETENTION SWALE

NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

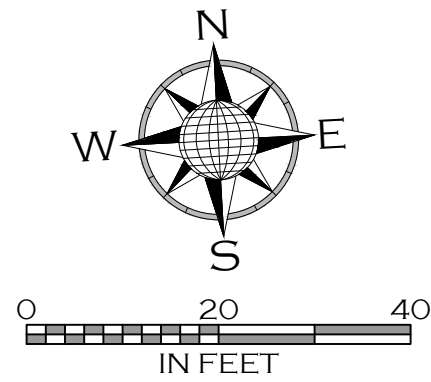
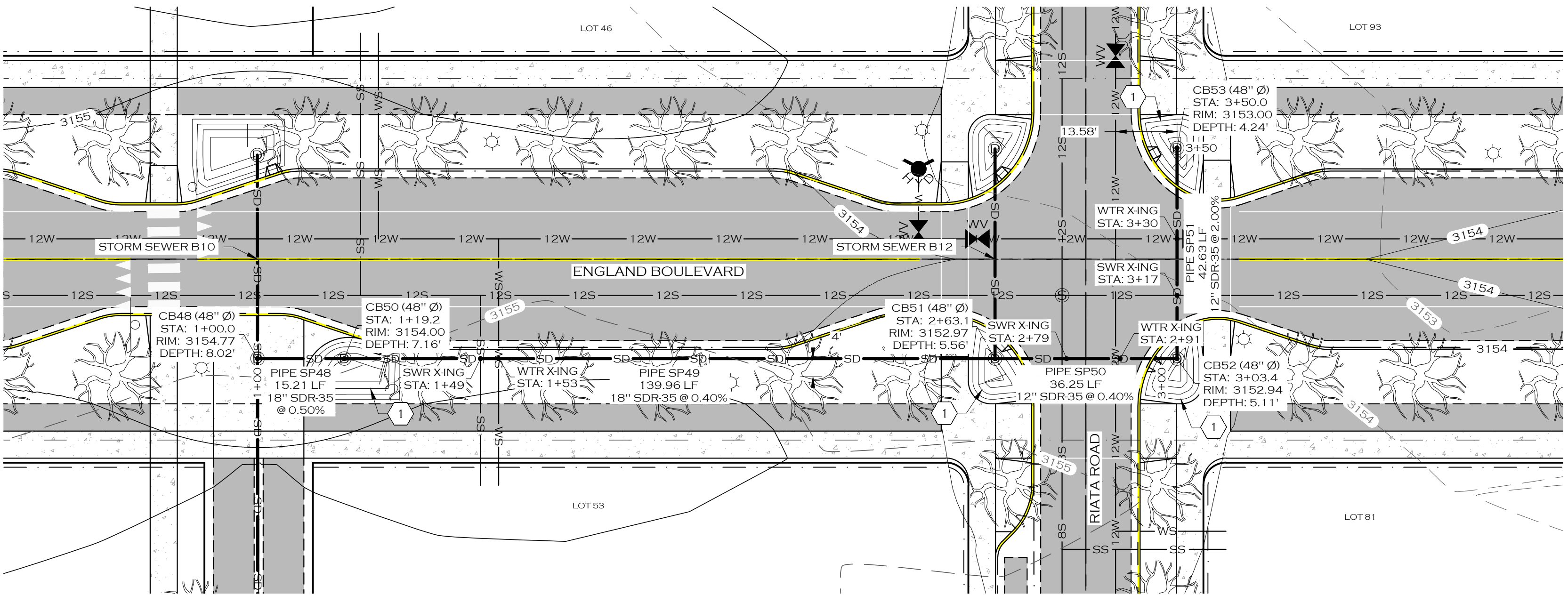
C6.20	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	STORM SEWER B10 PLAN & PROFILE	DATE: 4/22/2025 KTS QA: KTS DESIGN: MOH/CRH DRAWN: CRH/MOH JOB #: 20-077



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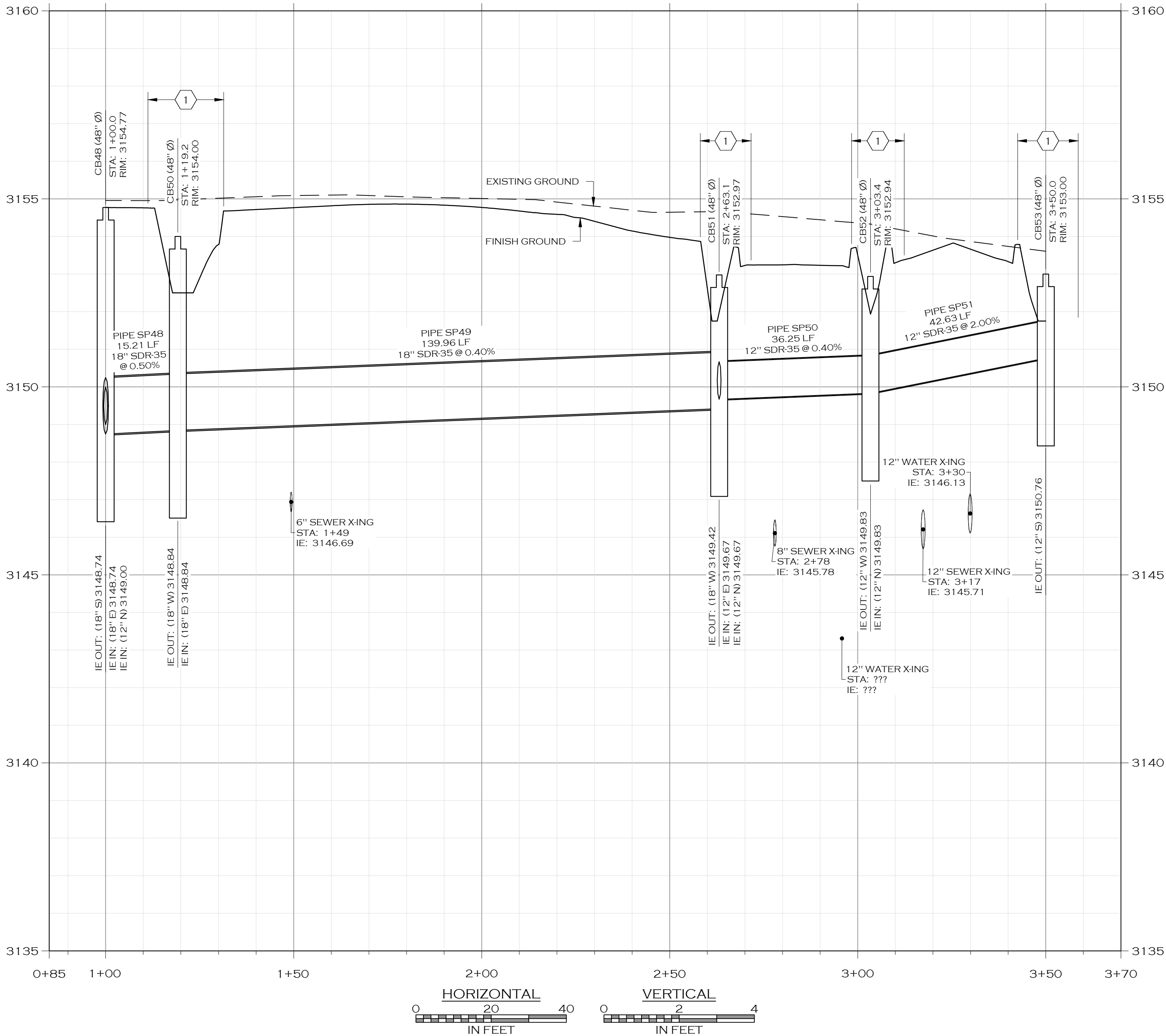


KEY NOTES

1 BIOSWALE/RETENTION SWALE

NOTE

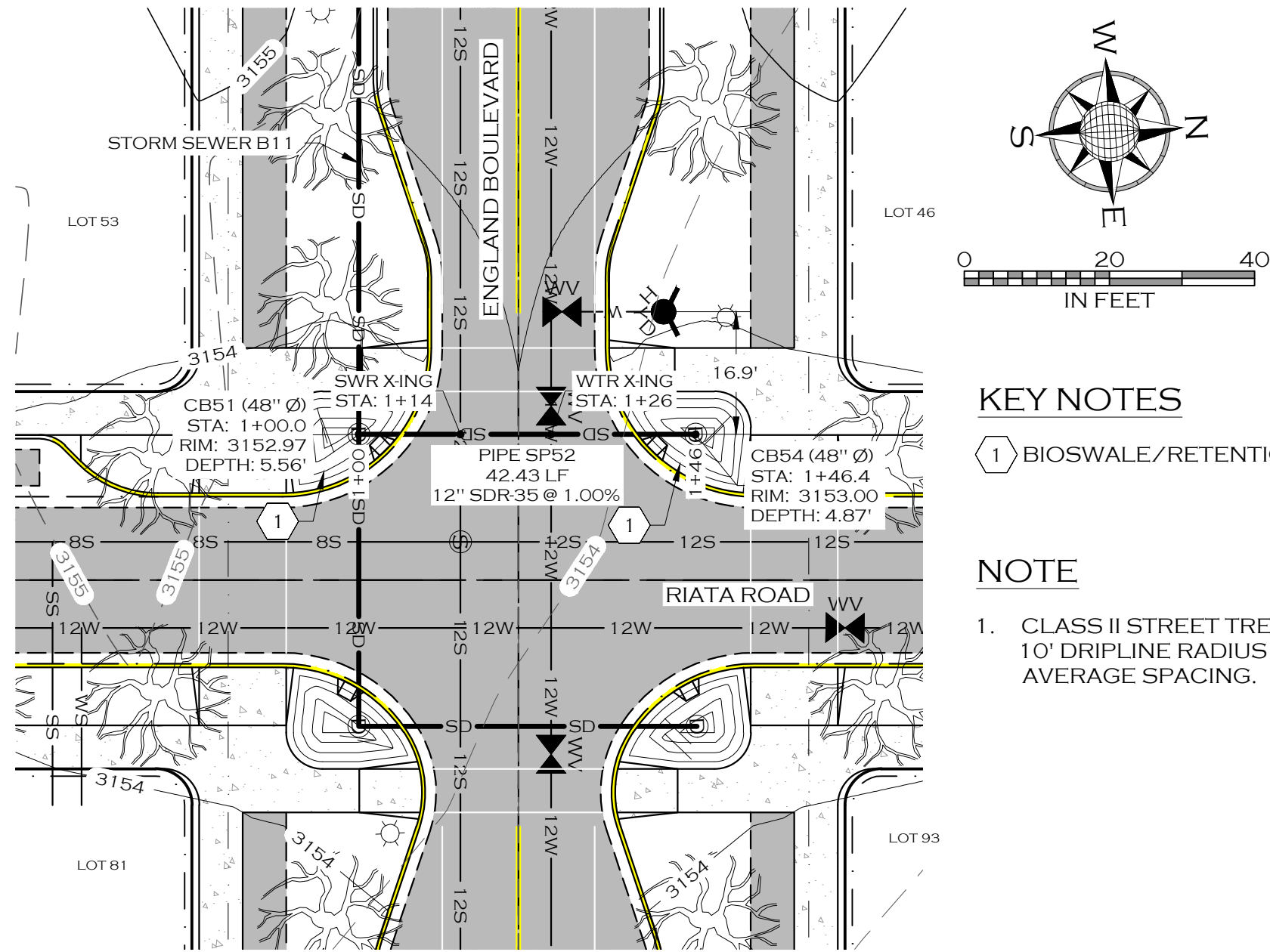
1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.21	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	STORM SEWER B11 PLAN & PROFILE	DATE: 4/22/2025 QA: KTS DESIGN: MOH/CRH DRAWN: CRH/MOH JOB #: 20-077

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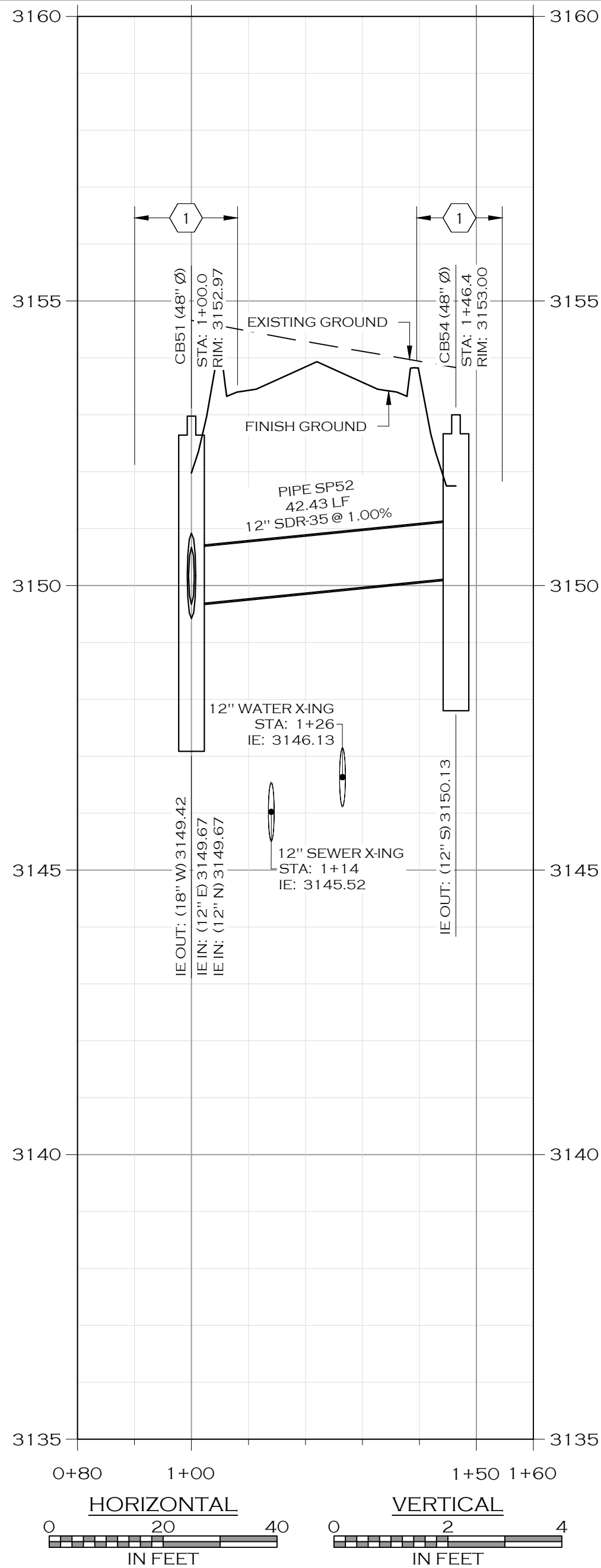


KEY NOTES

- 1 BIOSWALE/RETENTION SWALE

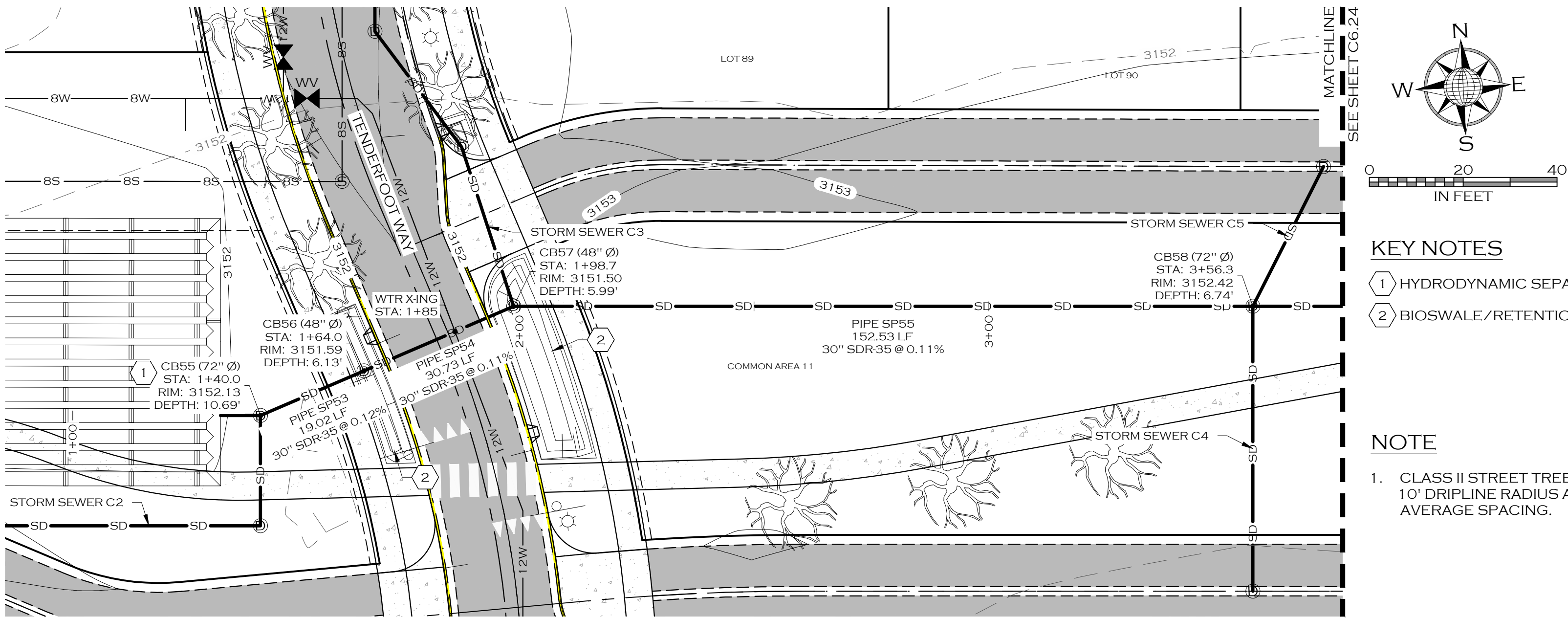
NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

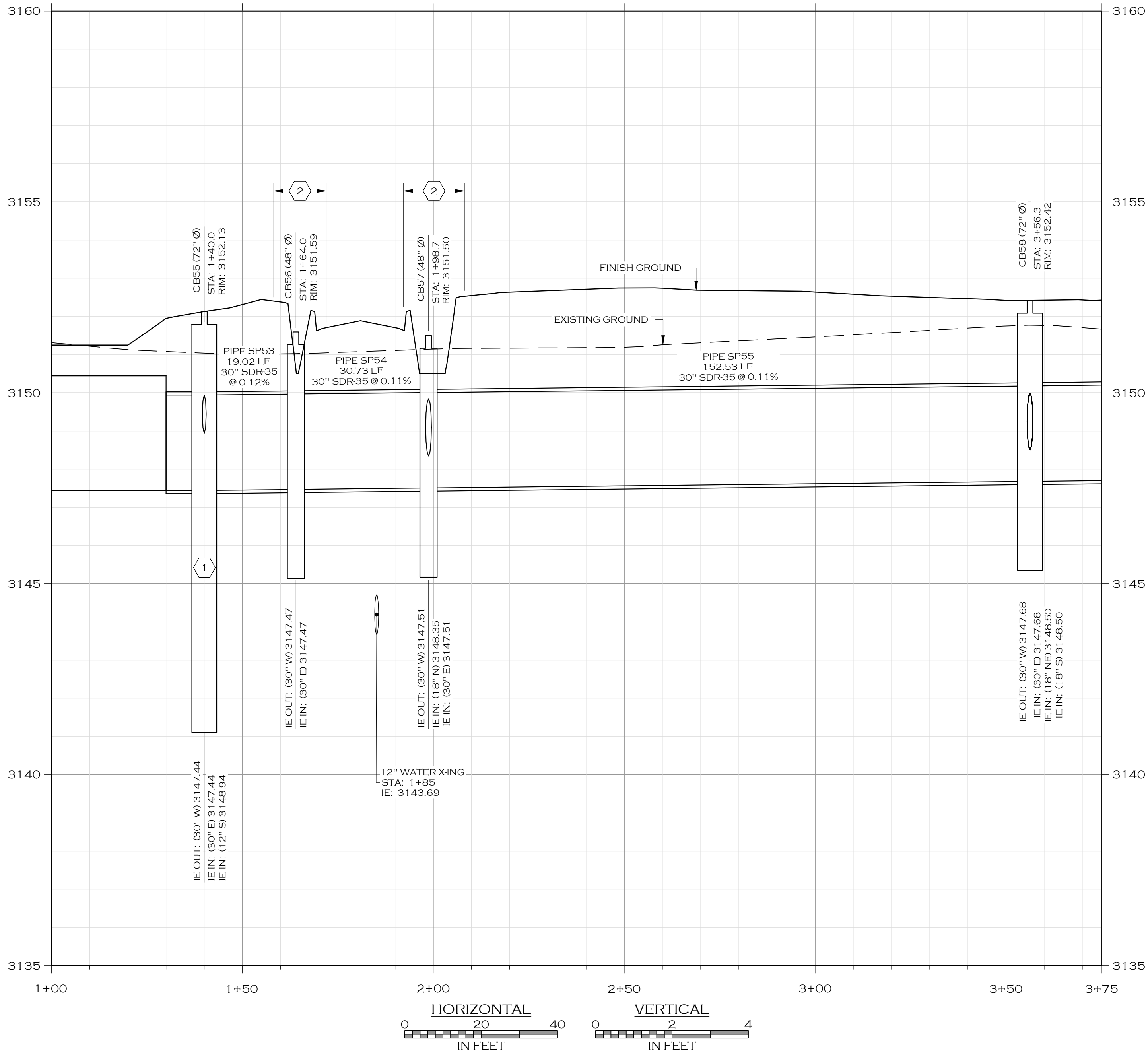
C6.22	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	STORM SEWER B12 PLAN & PROFILE	 WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1955 3880 O'LEARY STREET, SUITE A • MISSOULA, MT 59808 • 406-203-9565 • WWW.WOITHENG.COM • COPYRIGHT © WOITH ENGINEERING, INC., 2025		DESCRIPTION	DATE	JOB #:	200777
									DRAWN:	CRH/MOH
									DESIGN:	MOH/CRH
									QA:	KTS
									DATE:	4/22/2025



- KEY NOTES
- 1 HYDRODYNAMIC SEPARATOR
 - 2 BIOSWALE/RETENTION SWALE

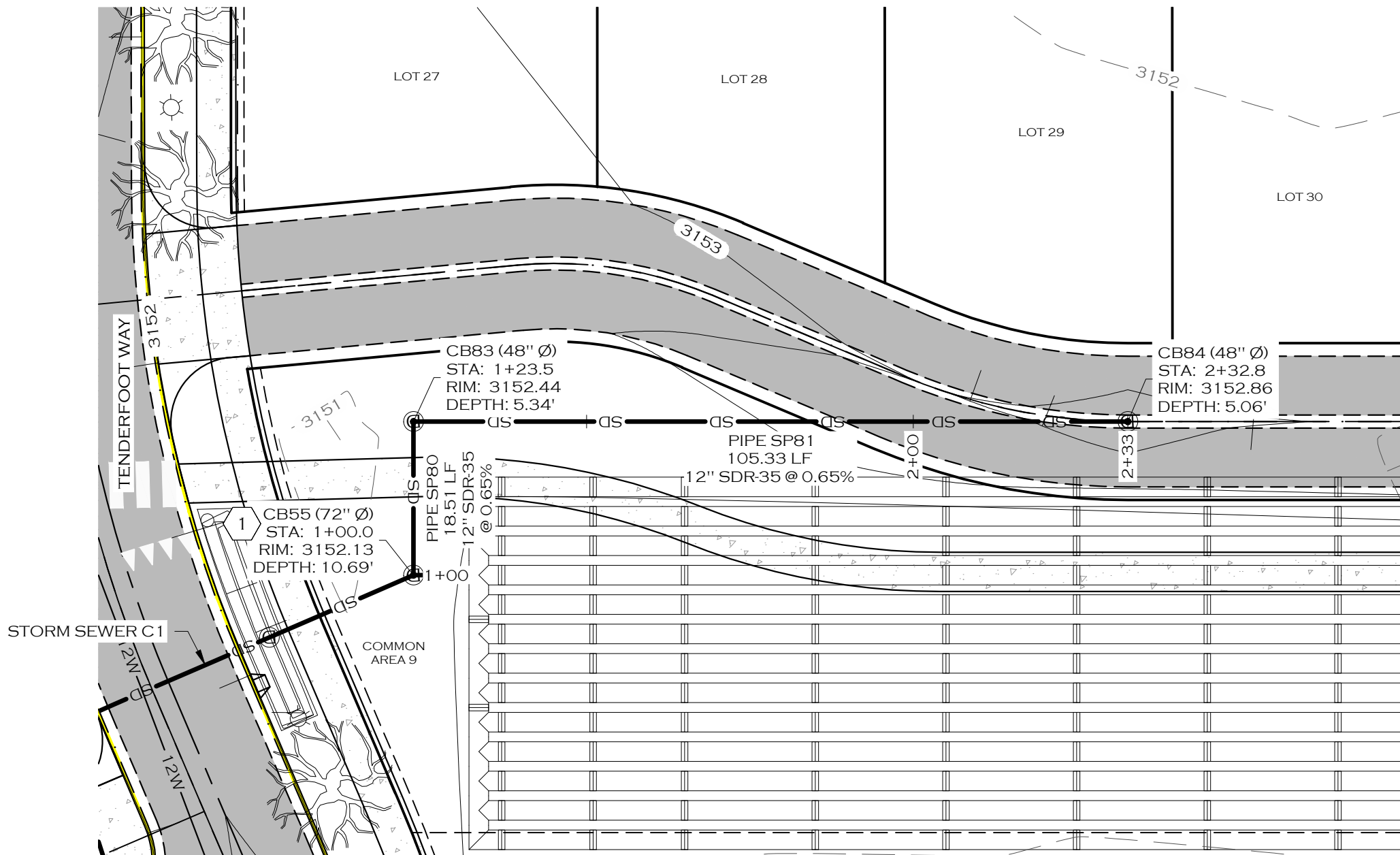
NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.23	STORM SEWER C1 PLAN & PROFILE STA. 1+00 TO 3+56.3	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1955 3000 CLARY STREET, SUITE 100 • MISSOULA, MT 59703 • 406-233-5505 WWW.WOITHENG.COM	DATE:	4/22/2025
						QA:	KTS
					DESIGN:	MOH/CRH	
					DRAWN:	CRH/MOH	
					JOB #:	20-077	

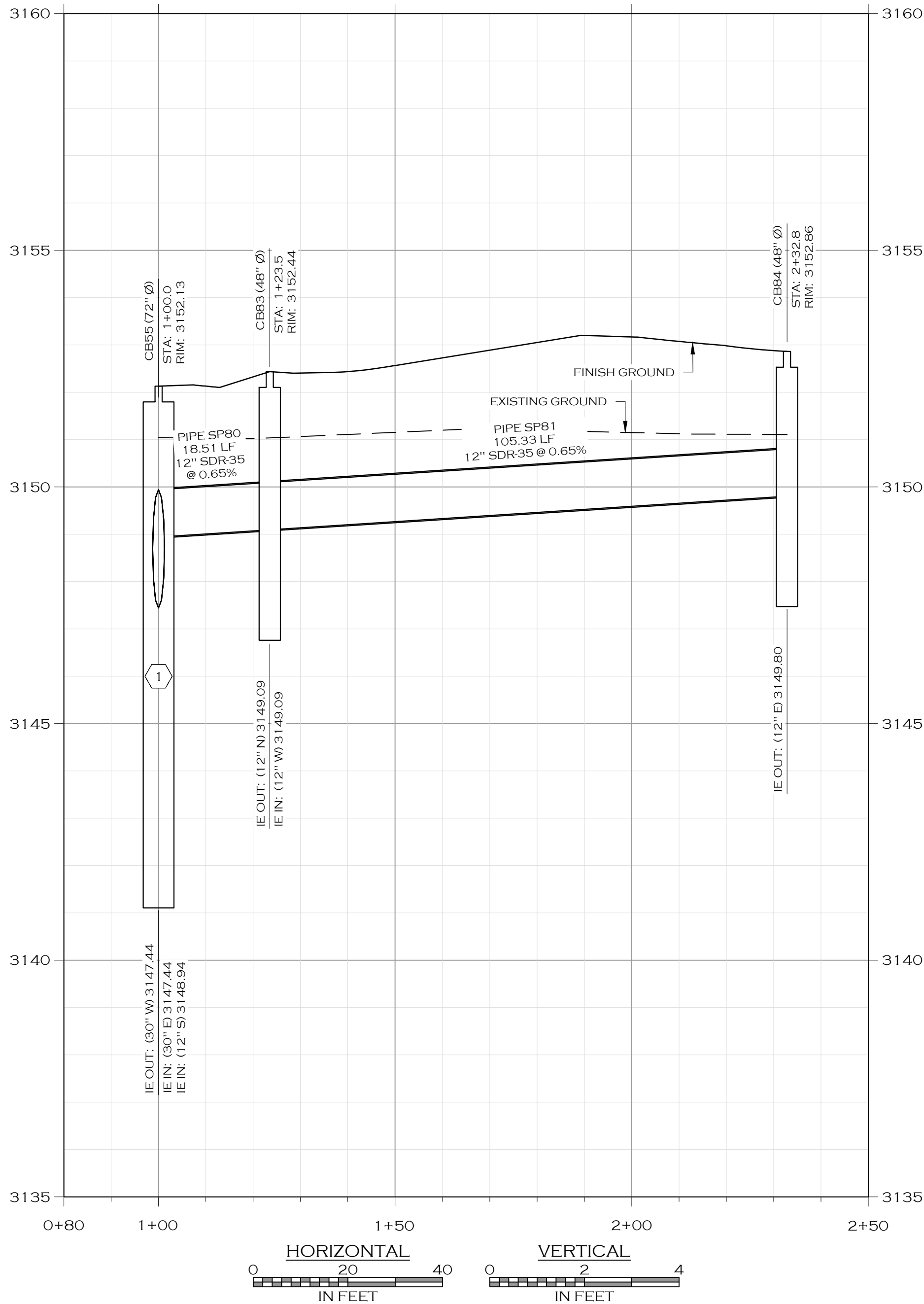


KEY NOTES

1 HYDRODYNAMIC SEPARATOR

NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIFLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.25

MISSOULA

PAISLEY PARK SUBDIVISION

MONTANA

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DRAWN:

CRH/MOH

JOB #:

20077

DESCRIPTION

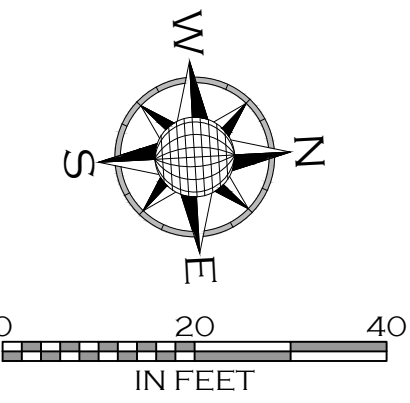
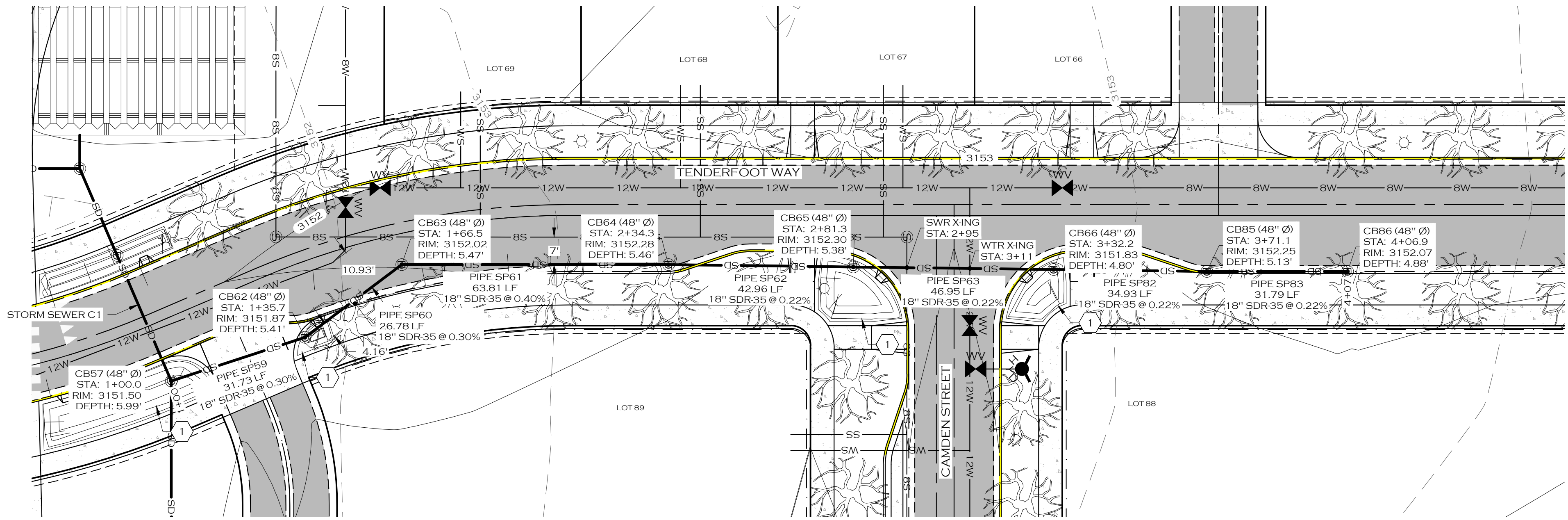
DATE



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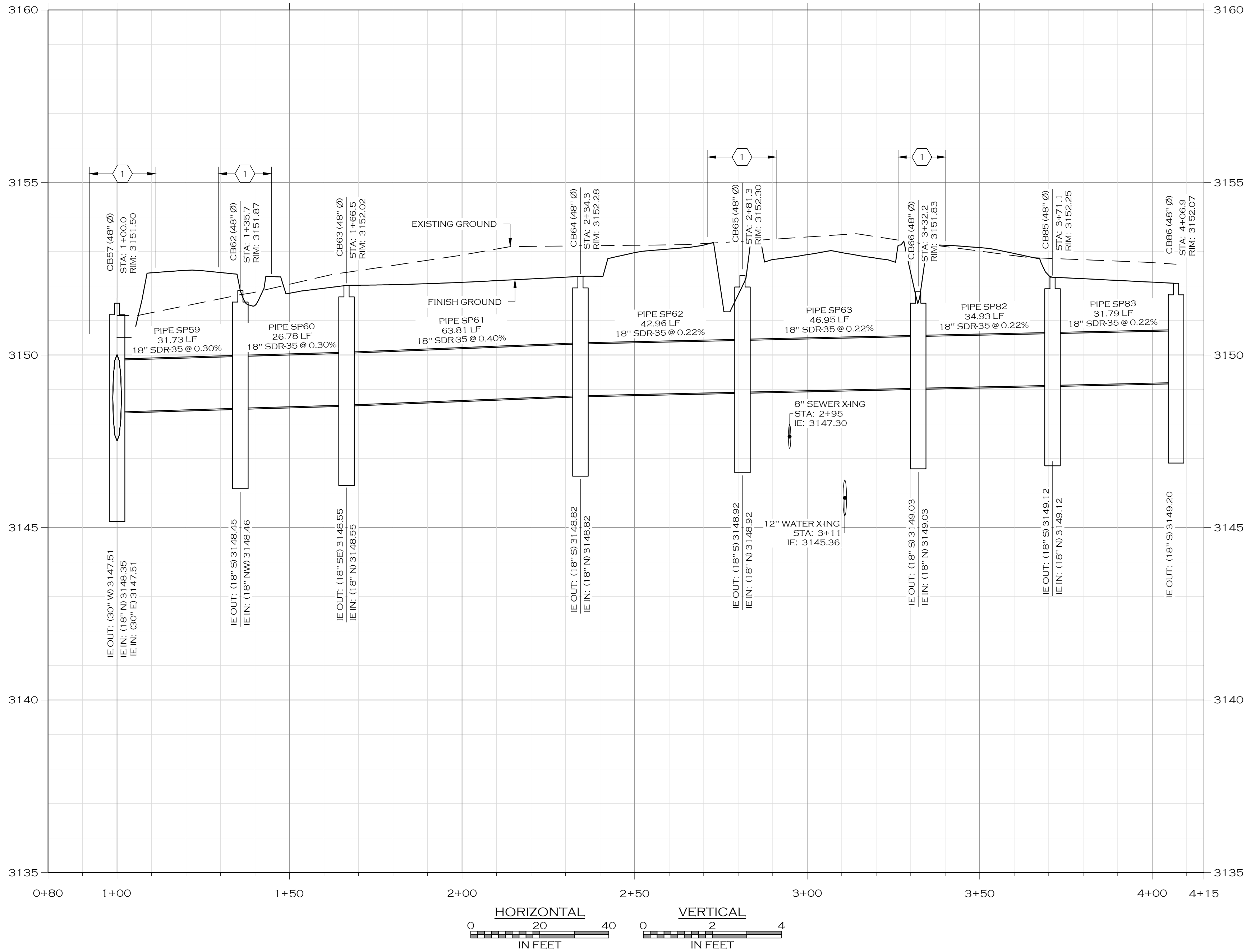


KEY NOTES

1 BIOSWALE/RETENTION SWALE

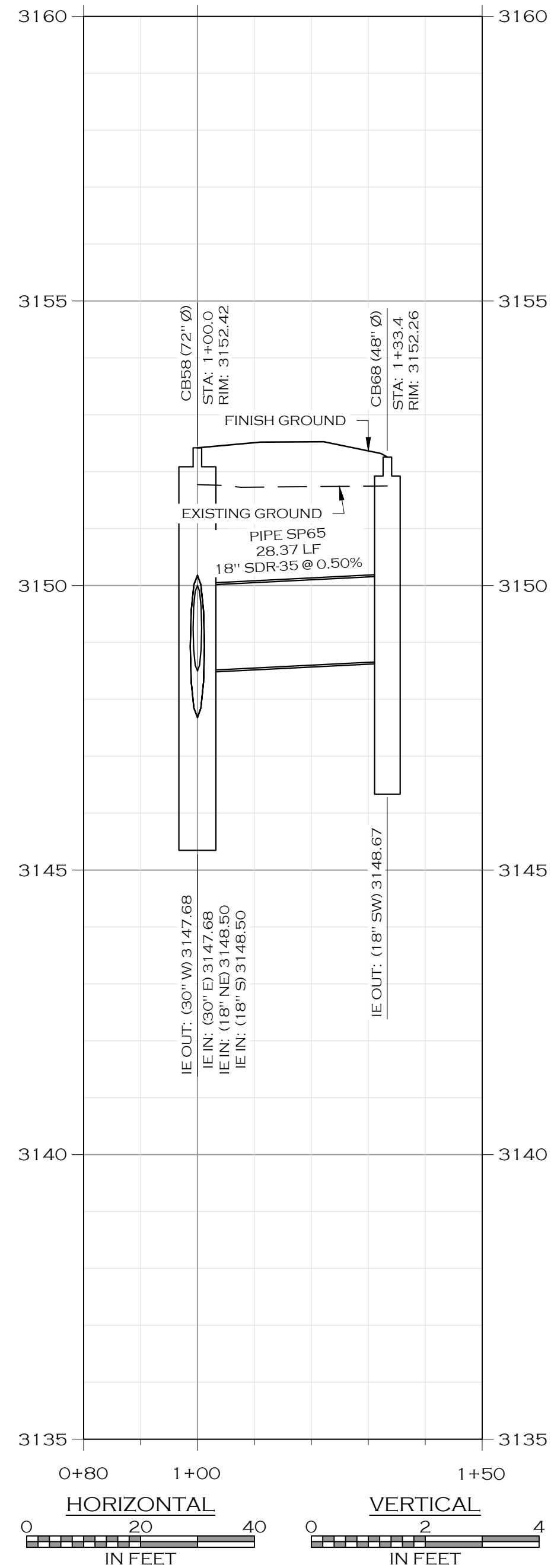
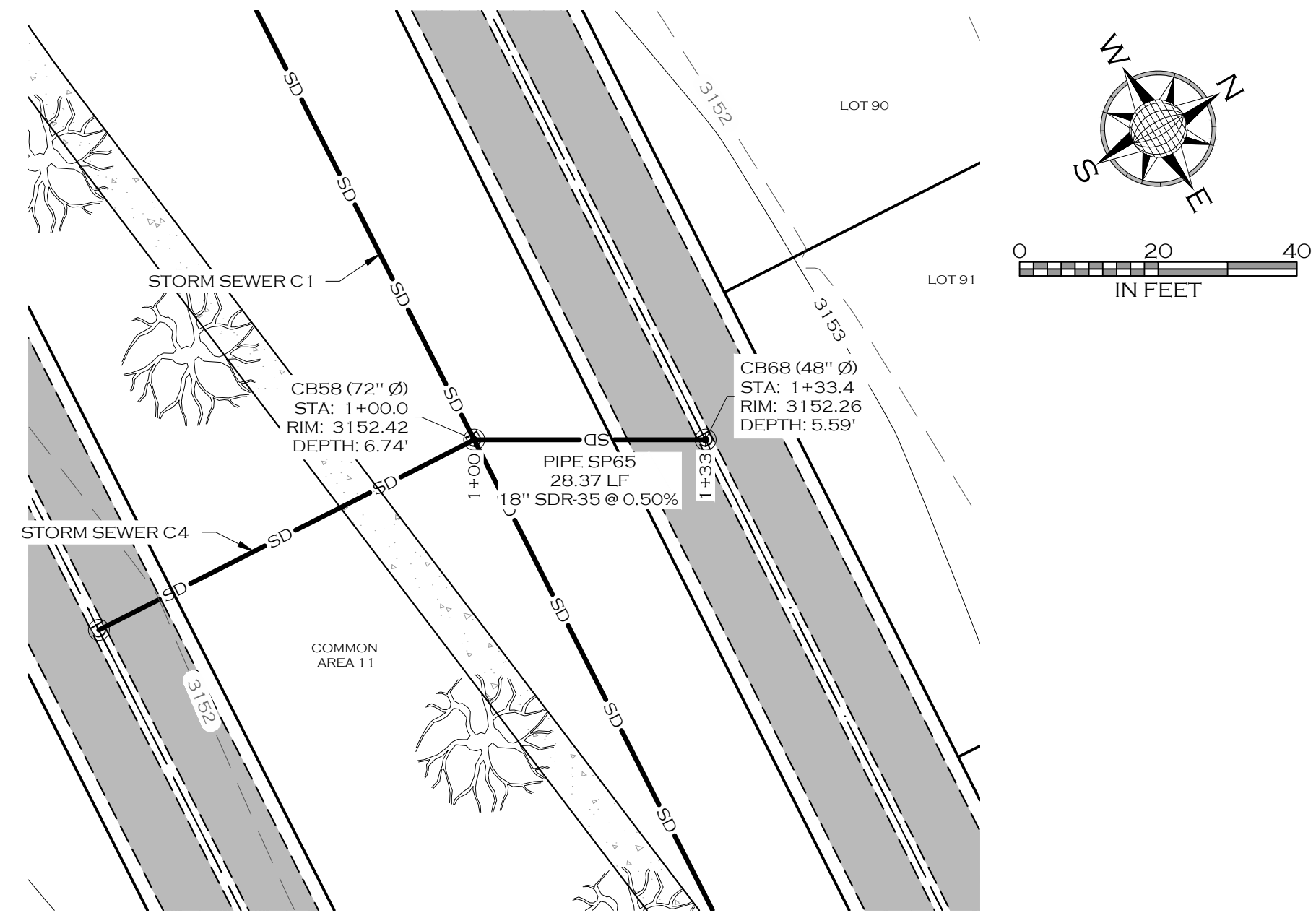
NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.26 MISSOULA PAISLEY PARK SUBDIVISION MONTANA STORM SEWER C3 PLAN & PROFILE	 WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 9th STREET NW, SUITE 405, GREAT FALLS, MT 59404 • 406-751-4955 3890 01 EART STREET, SUITE A • MISSOULA, MT 59808 • 406-203-9545 • WWW.WOITHENG.COM • COPYRIGHT © WOITH ENGINEERING, INC., 2025	DATE:	4/22/2025
		QA:	KTS
		DESIGN:	MOH/CRH
		DRAWN:	CRH/MOH
		JOB #:	20077
		DESCRIPTION	
		DATE	



PRELIMINARY PLAT - APRIL 2025

C6.28

PAISLEY PARK SUBDIVISION

STORM SEWER C5 PLAN & PROFILE

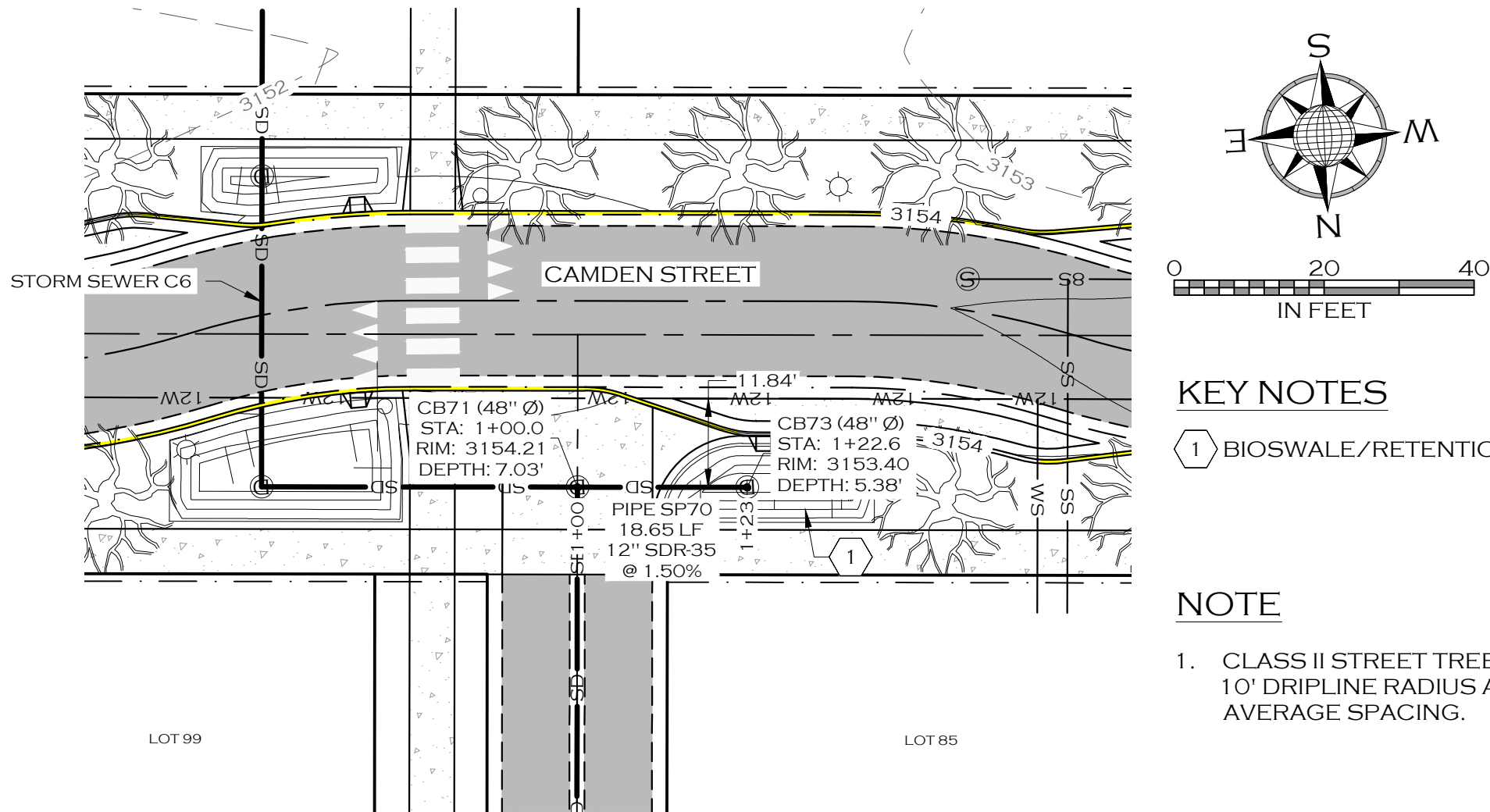
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STRM-C5.DWG PLOTTED BY: MATT HAMMERSTEIN ON JUN/02/2025

[illegible]

JOB #:	20077
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QA:	KTS
DATE:	4/22/2025

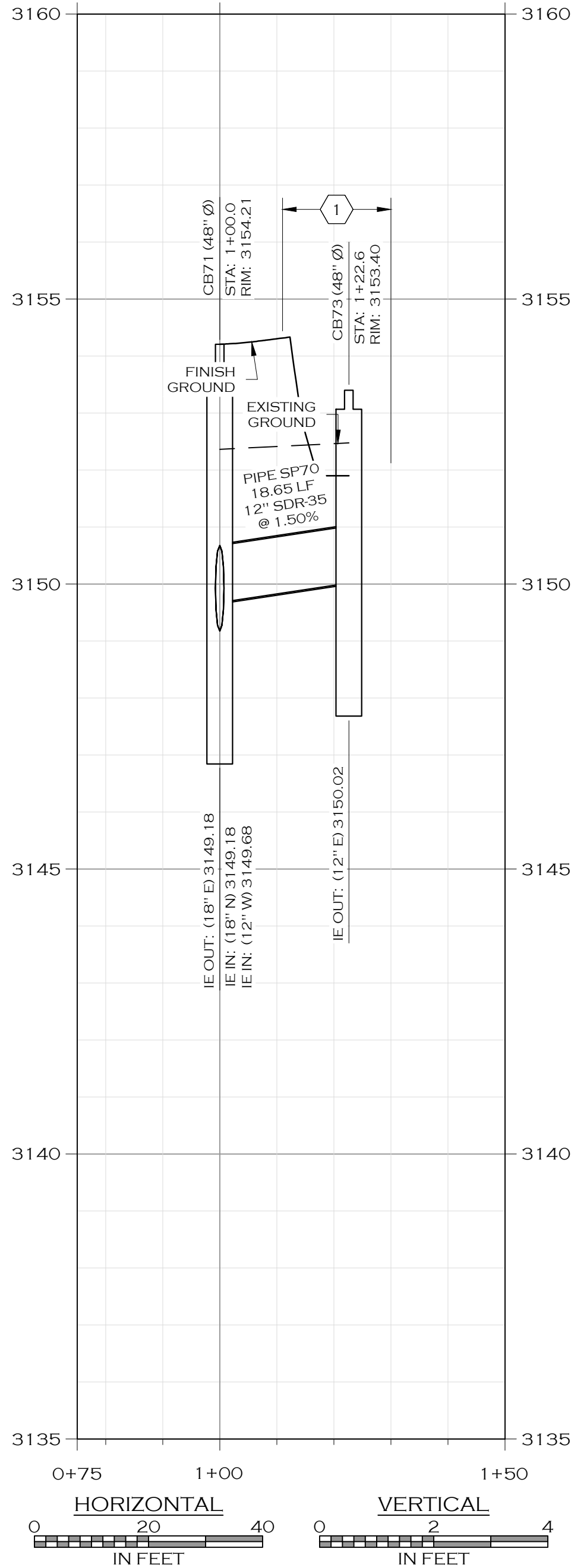


KEY NOTES

- 1 BIOSWALE/RETENTION SWALE

NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.30

MISSOULA

PAISLEY PARK SUBDIVISION

MONTANA

WOITH ENGINEERING, INC.

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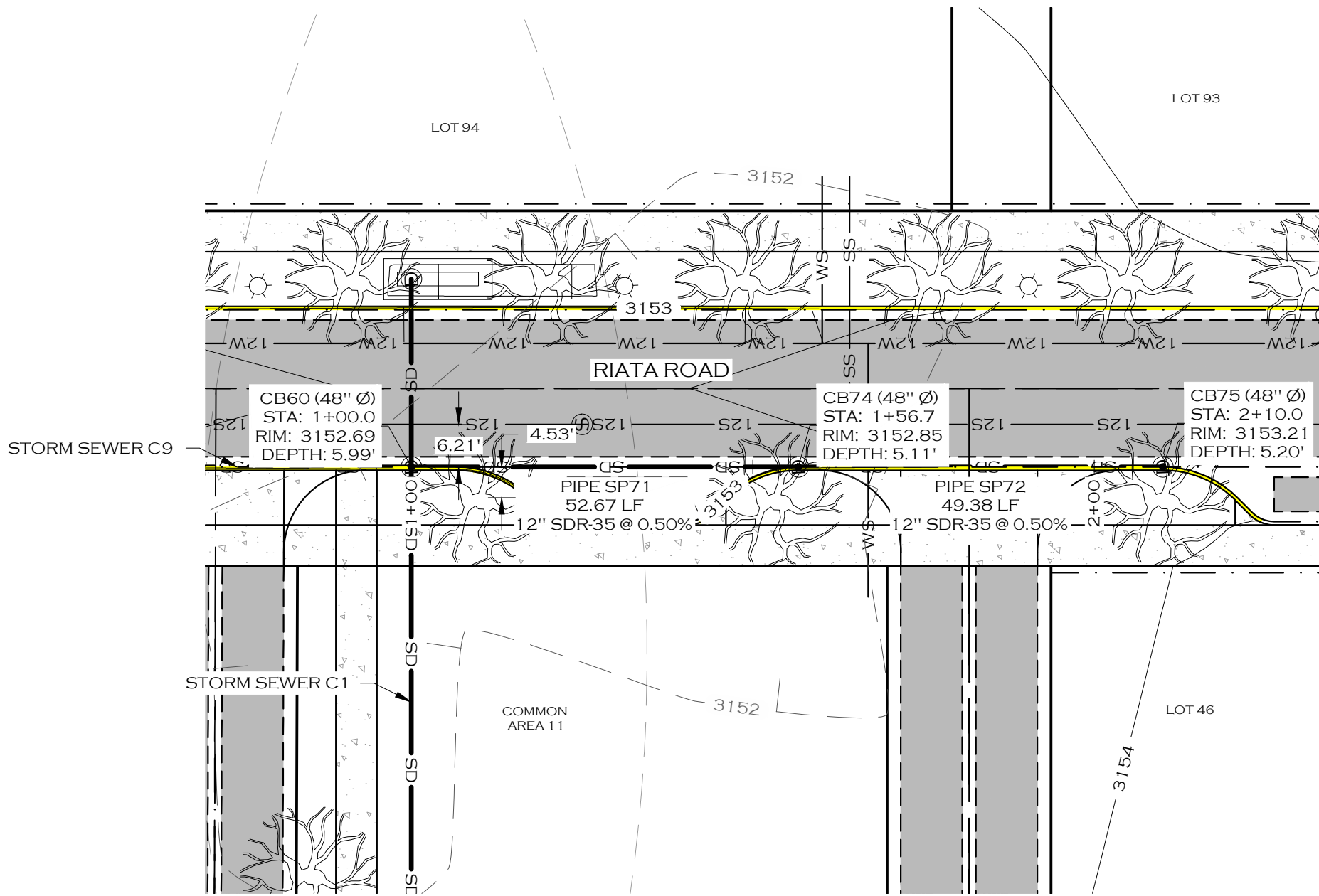
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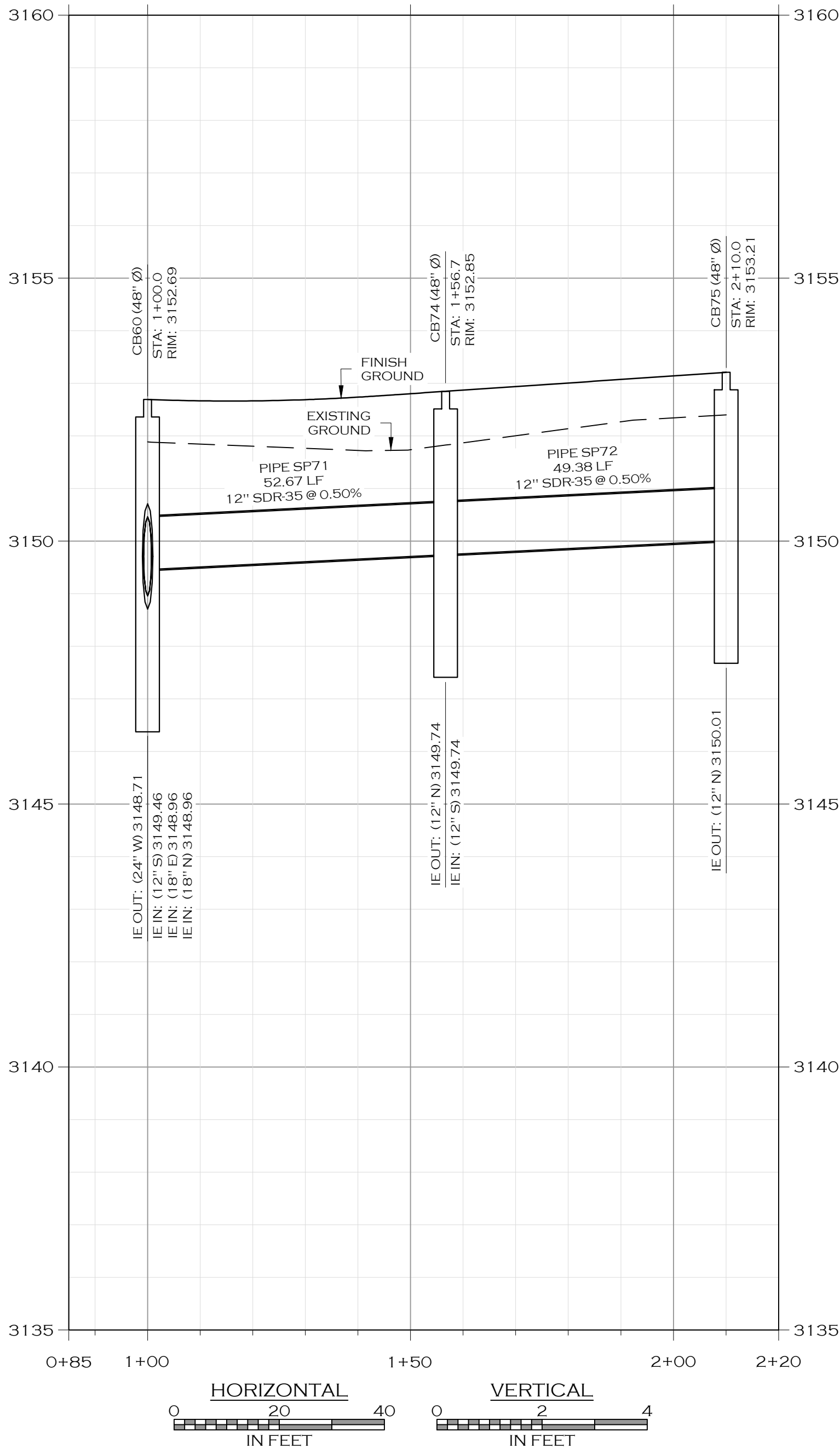
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JOB #:	20077
DRAWN:	CRH/MOH
DESIGN:	MOH/CRH
QA:	KTS
DATE:	4/22/2025
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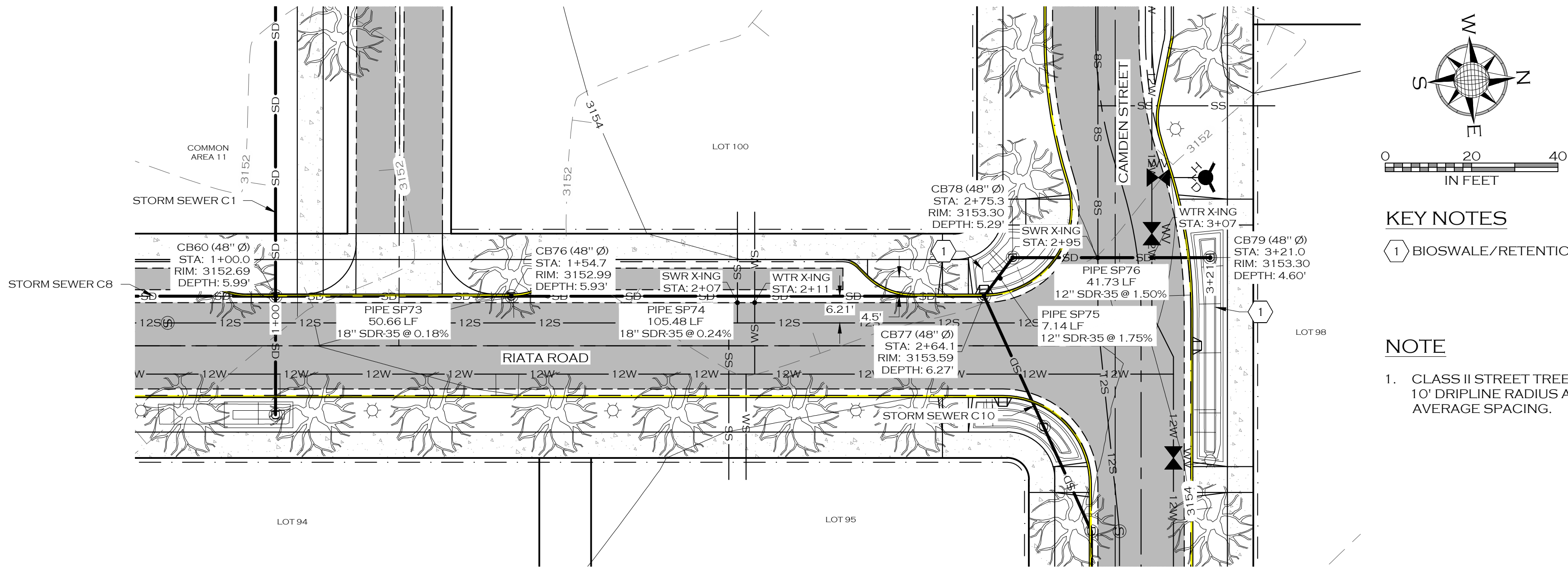
NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.31	STORM SEWER C8 PLAN & PROFILE	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	WOITH ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-781-1955 3000 CLARY STREET, SUITE 100 • MISSOULA, MT 59701 • 406-233-5505 WWW.WOITHENG.COM •	#	DESCRIPTION	DATE	JOB #:	20-077
									DRAWN:	CRH/MOH
									DESIGN:	MOH/CRH
									QA:	KTS
									DATE:	4/22/2025

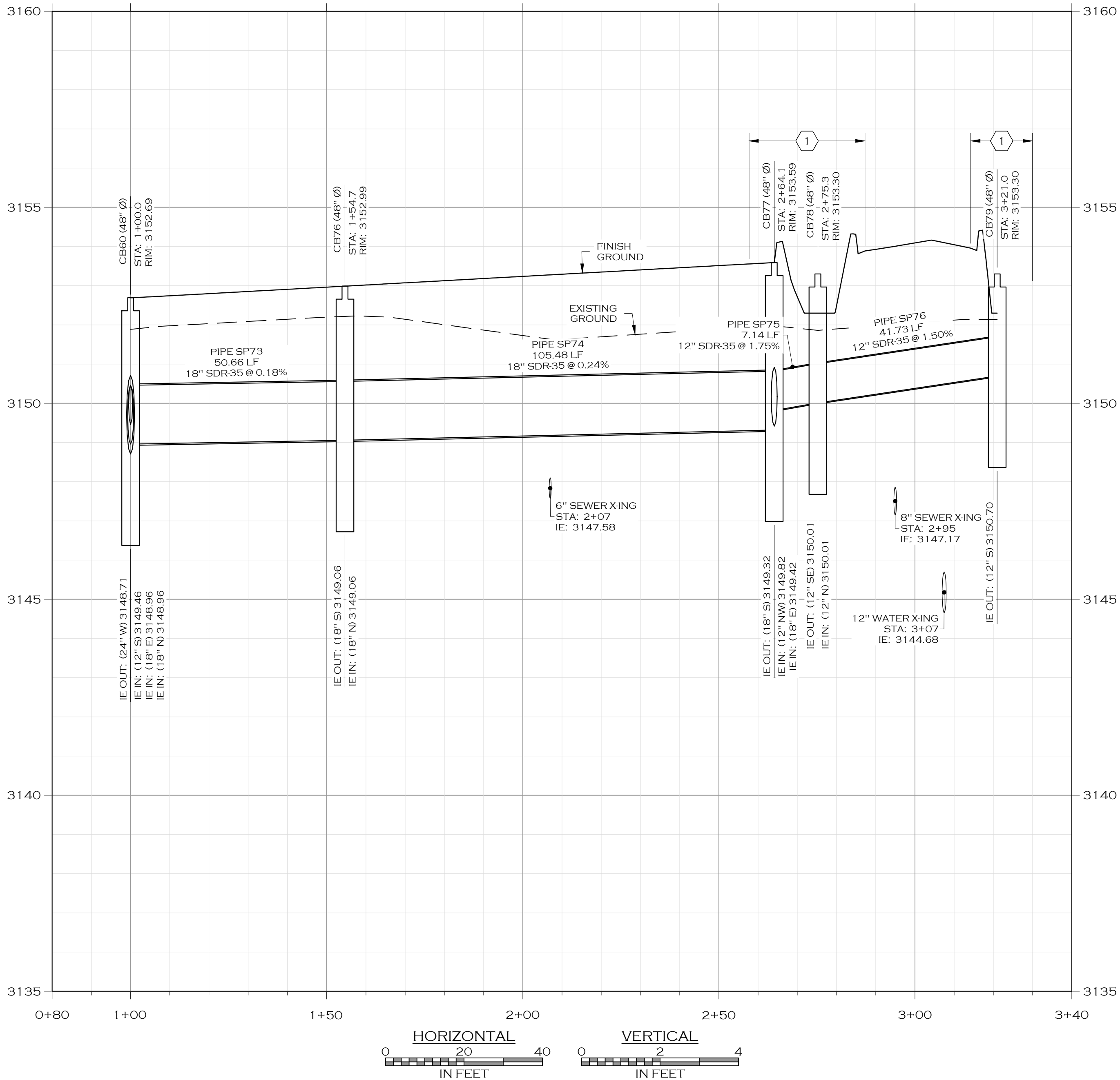


KEY NOTES

1 BIOSWALE/RETENTION SWALE

NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



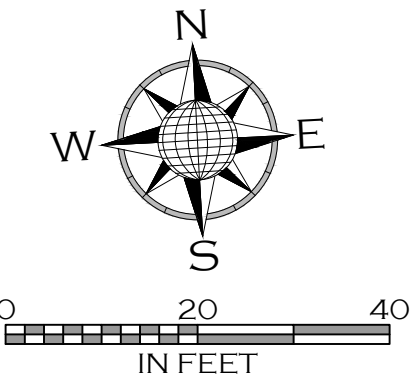
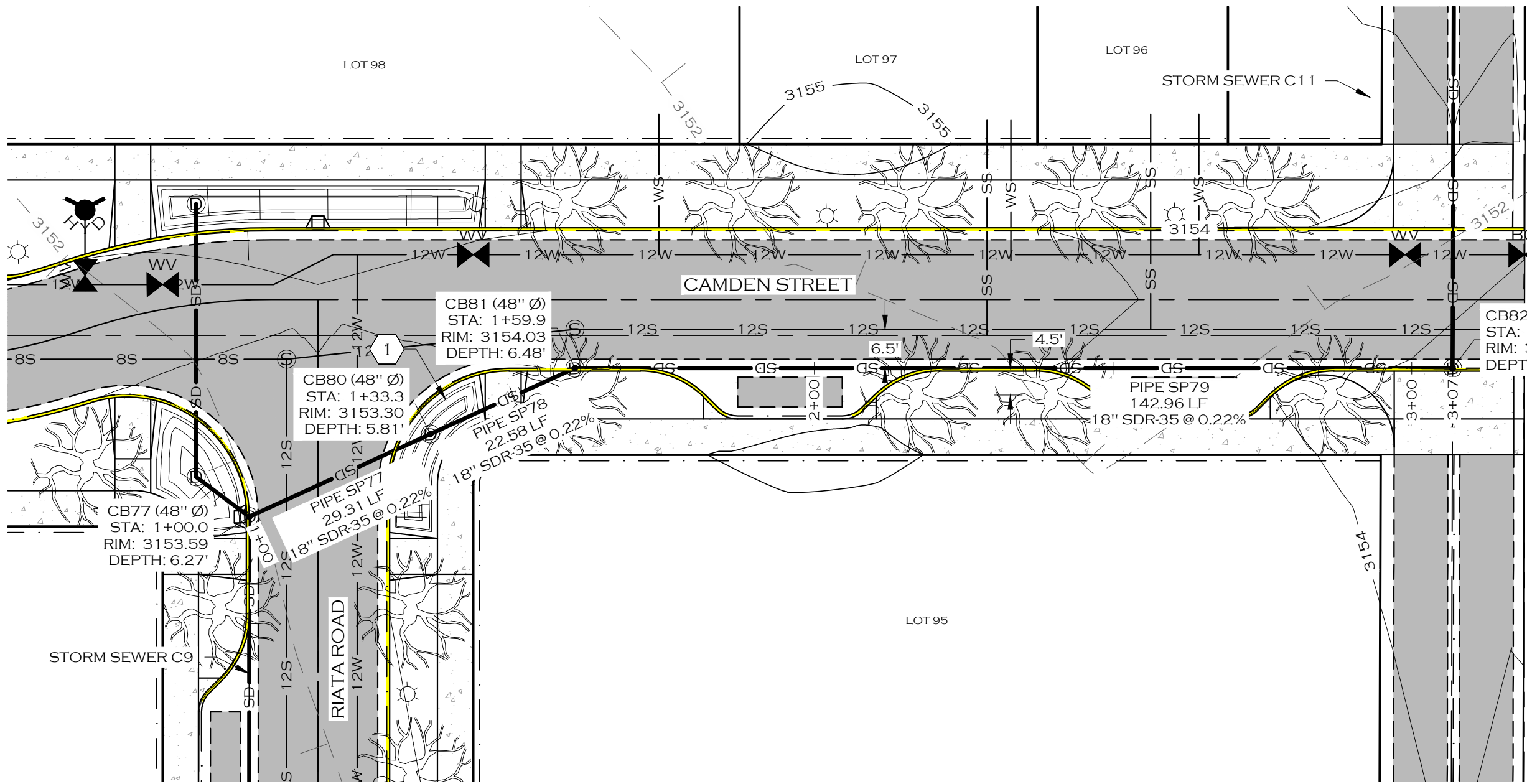
PRELIMINARY PLAT - APRIL 2025

C6.32	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	STORM SEWER C9 PLAN & PROFILE	DATE: 4/22/2025 QA: KTS DESIGN: MOH/CRH DRAWN: CRH/MOH JOB #: 20-077

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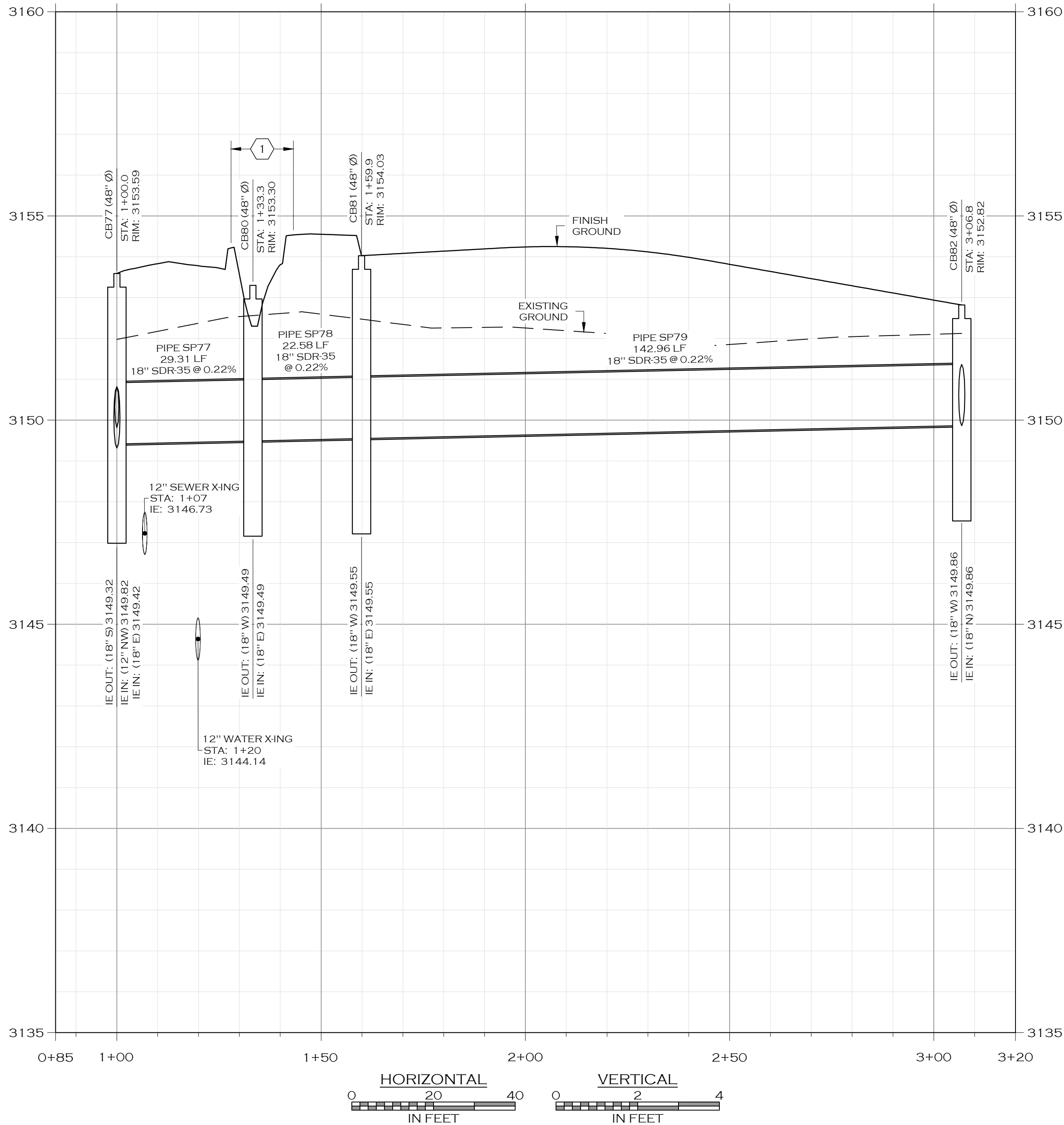


KEY NOTES

1 BIOSWALE/RETENTION SWALE

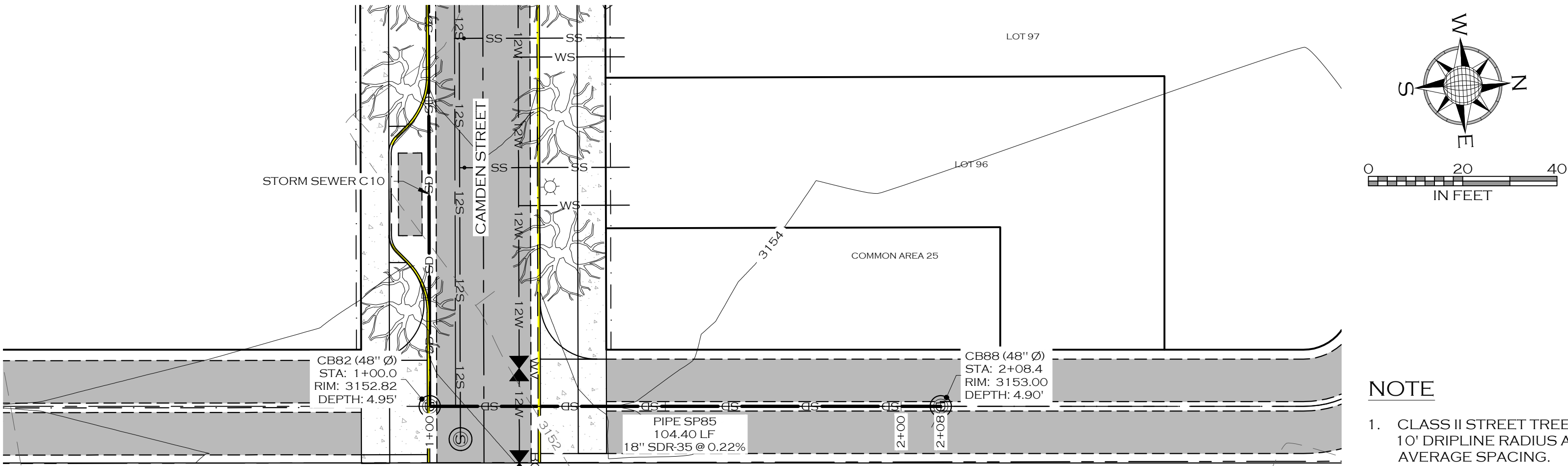
NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



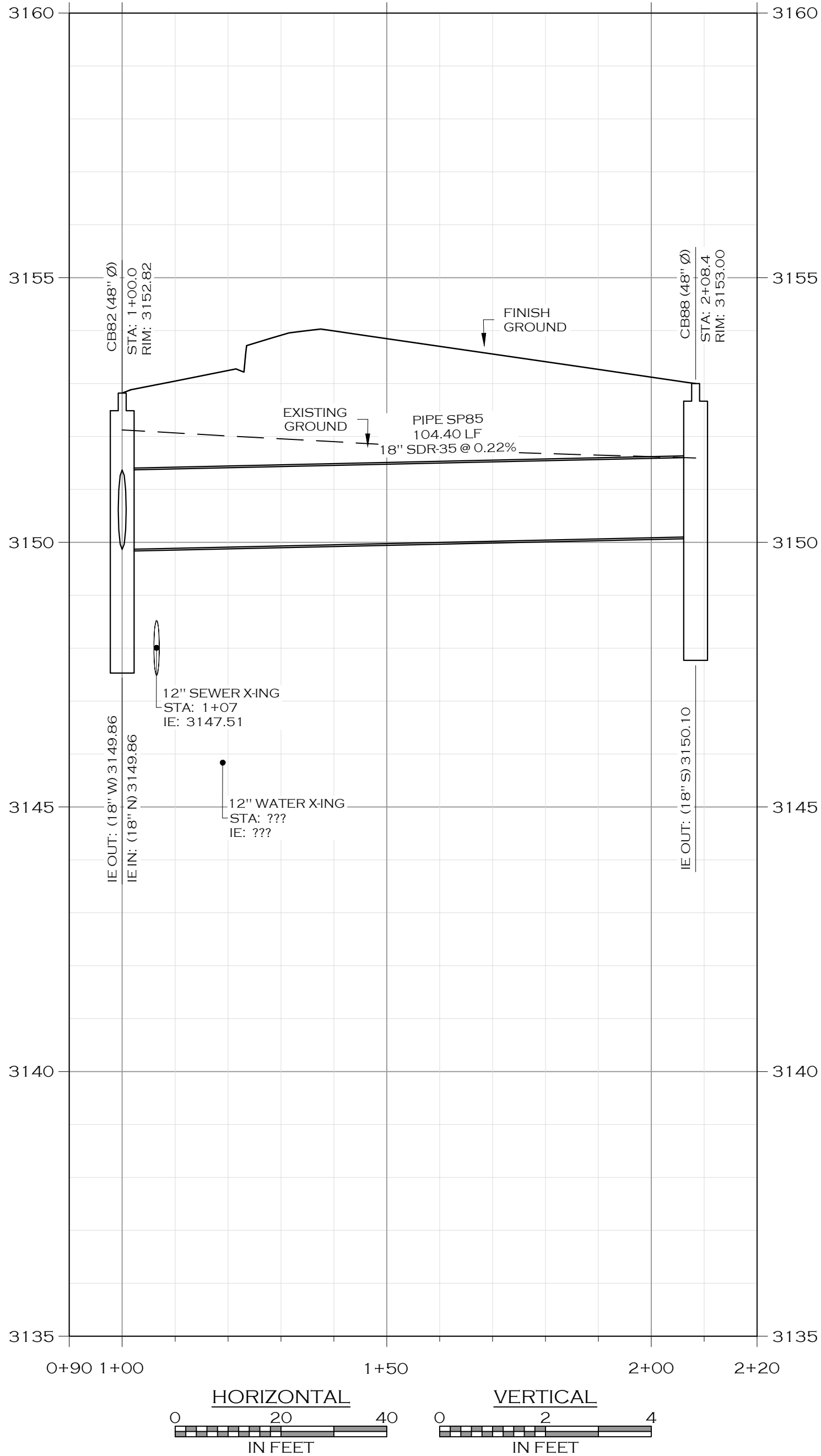
PRELIMINARY PLAT - APRIL 2025

C6.33	STORM SEWER C10 PLAN & PROFILE	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	WOITH ENGINEERS & SURVEYORS 405 JRD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1955 3088 CLARY STREET, SUITE 100 • MISSOULA, MT 59703 • 406-230-5505 WWW.WOITHENG.COM •	DATE	QCA	DESIGN	DRAWN	JOB #	20-077



NOTE

1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.34

MISSOULA

PAISLEY PARK SUBDIVISION

MONTANA



WOITH ENGINEERING, INC.

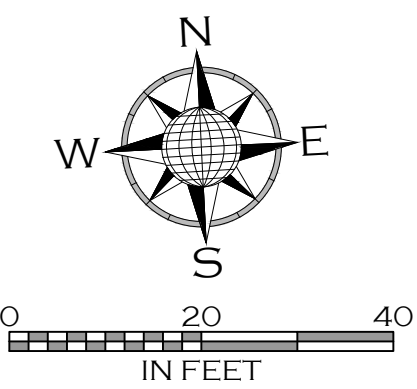
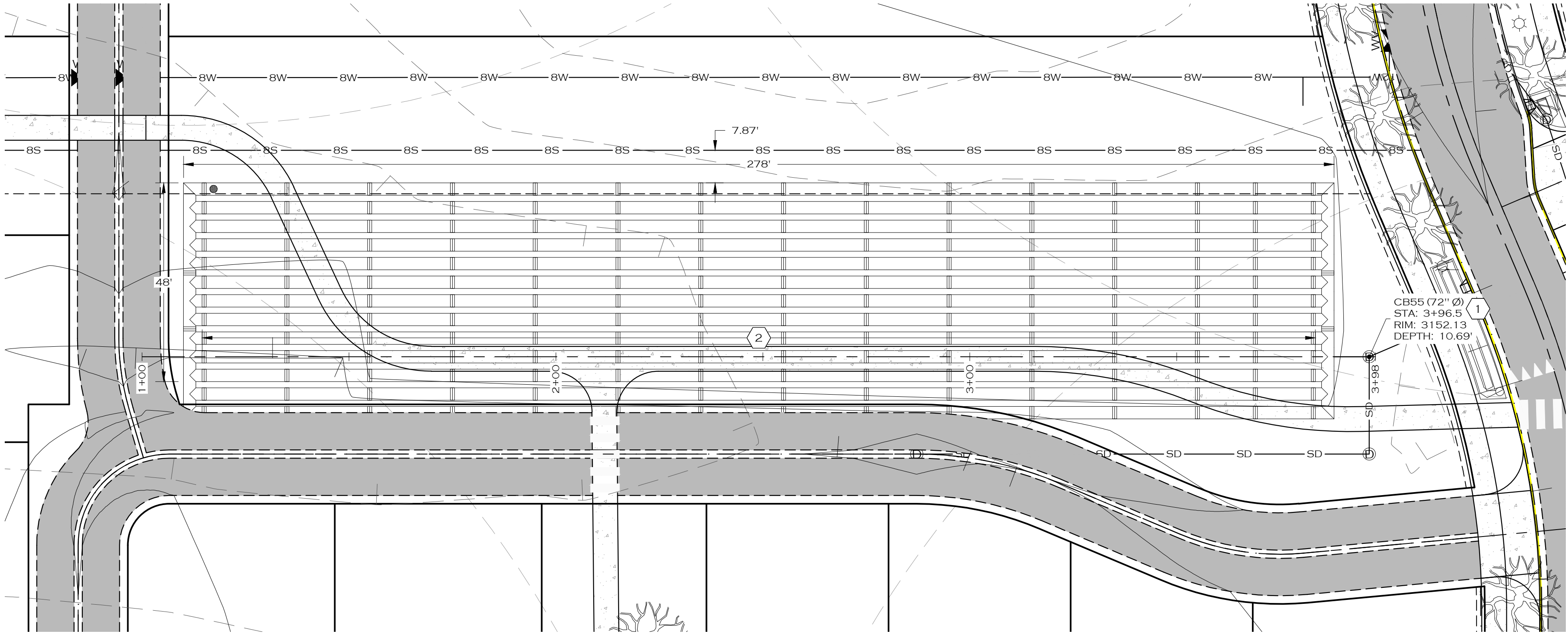
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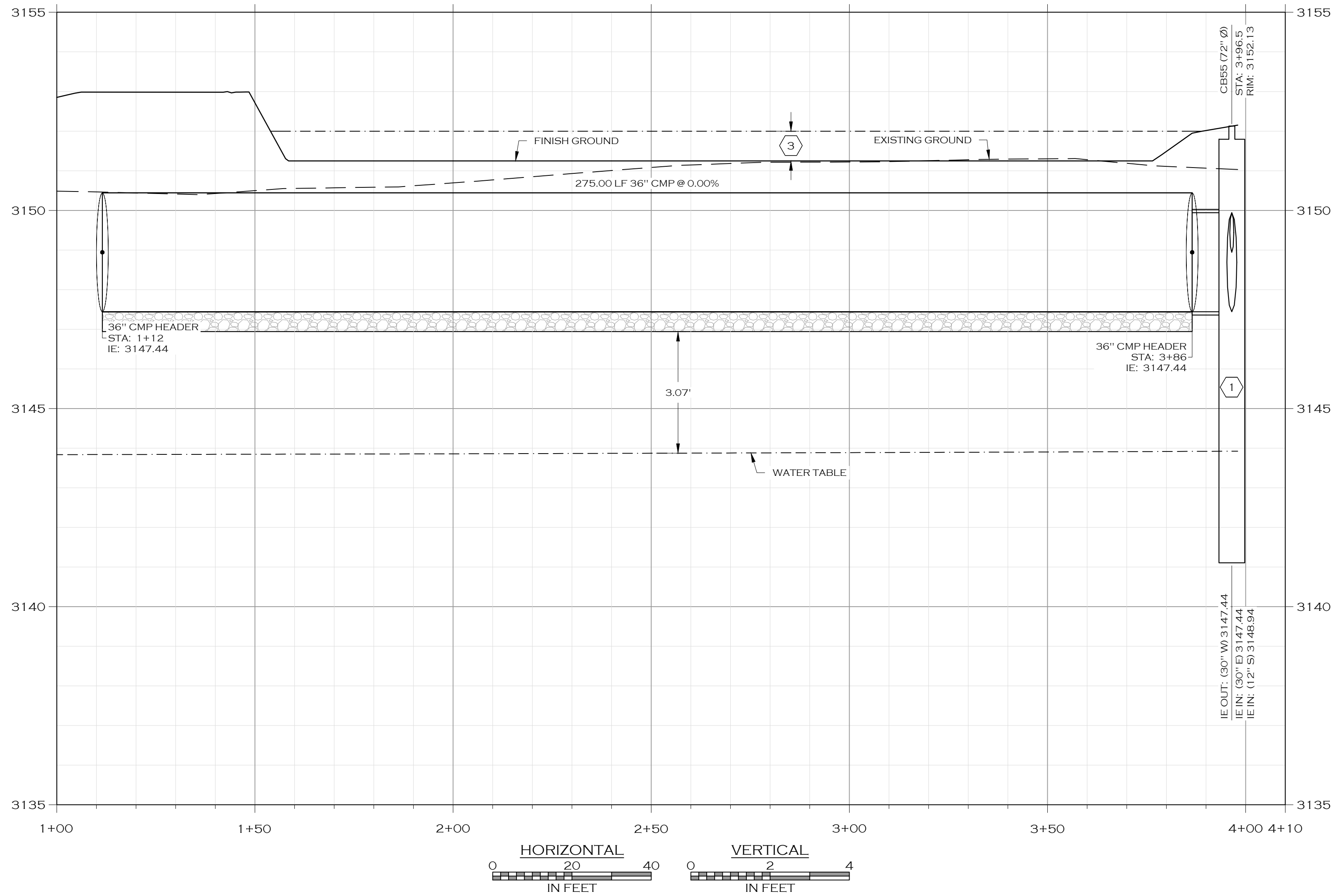


KEY NOTES

- 1 HYDRODYNAMIC SEPARATOR
- 2 ISOLATOR ROW (42" CMP; IE 3146.94')
- 3 SURFACE DETENTION STORAGE

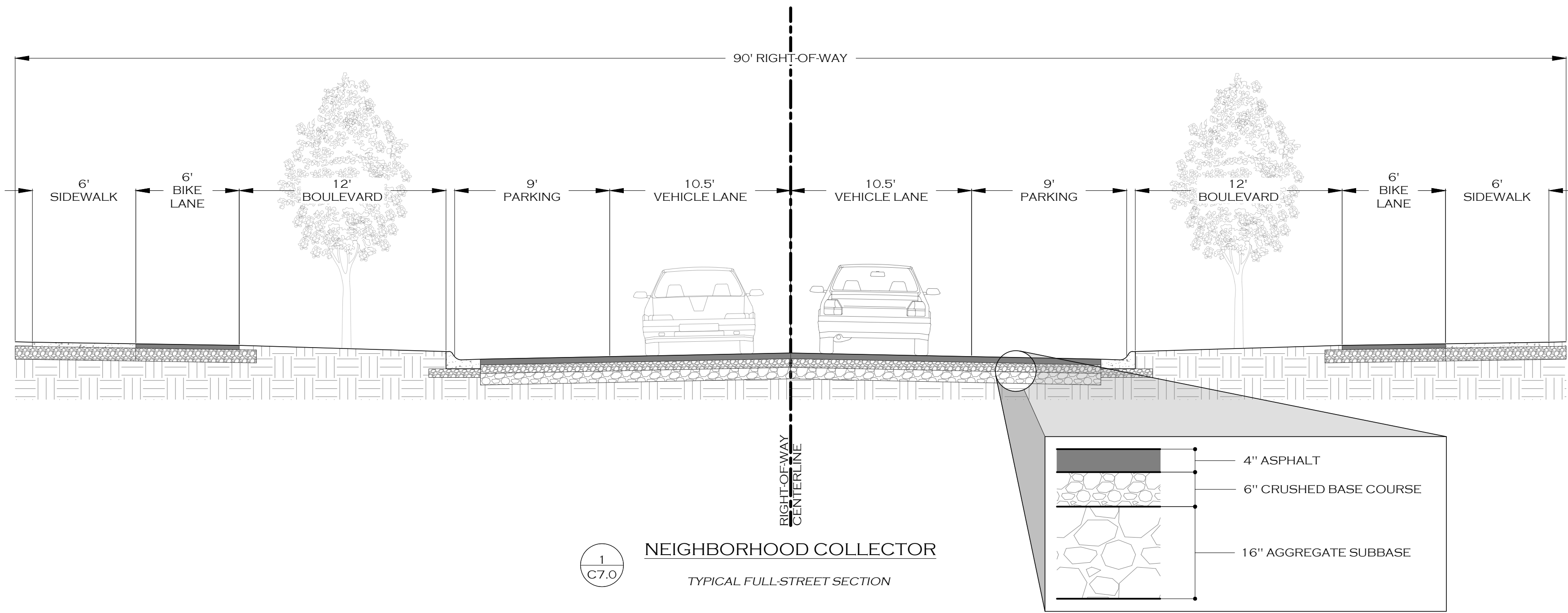
NOTE

- 1. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.



PRELIMINARY PLAT - APRIL 2025

C6.36		MISSOULA		PAISLEY PARK SUBDIVISION		MONTANA		 WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1955 3880 O'LEARY STREET, SUITE A • MISSOULA, MT 59808 • 406-203-9585 • WWW.WOITHENG.COM •		COPYRIGHT © WOITH ENGINEERING, INC., 2025	



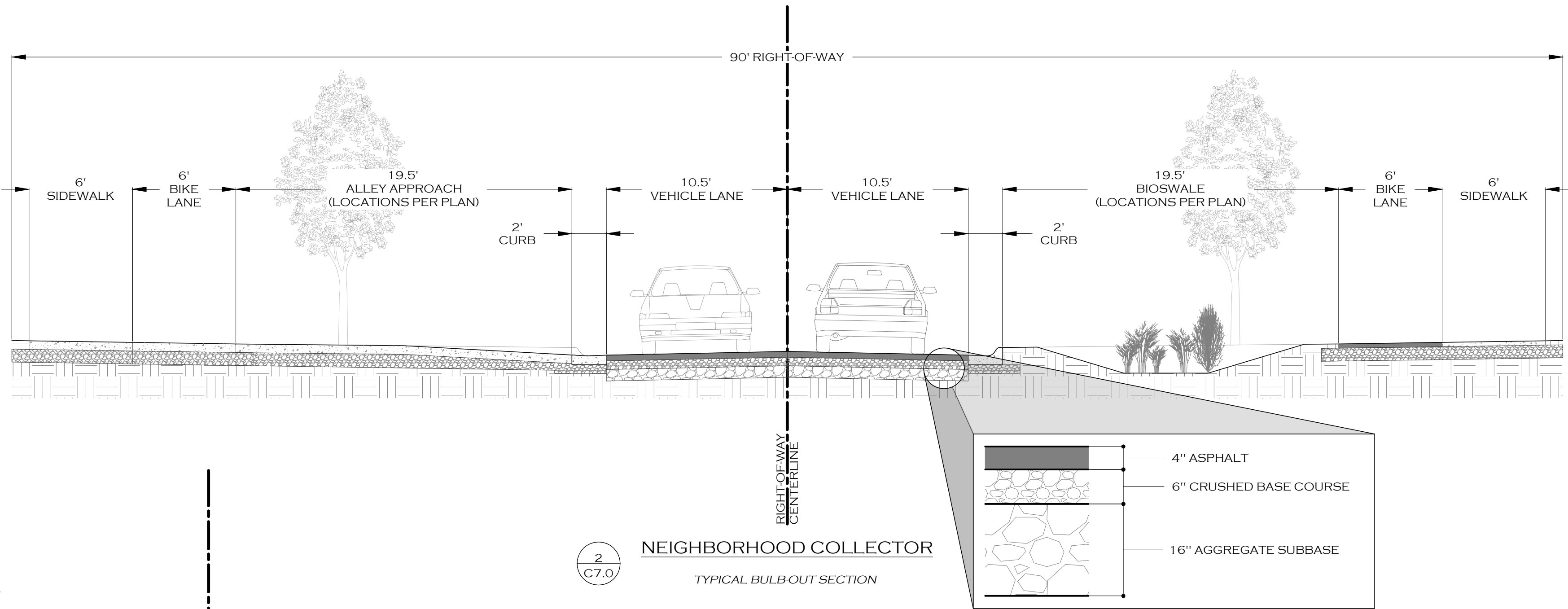
NOTE

1. REFERENCE PROJECT GEOTECHNICAL REPORT (ALLWEST, 2024) FOR SECTION DESIGN CALCULATIONS.

1
C7.0

NEIGHBORHOOD COLLECTOR

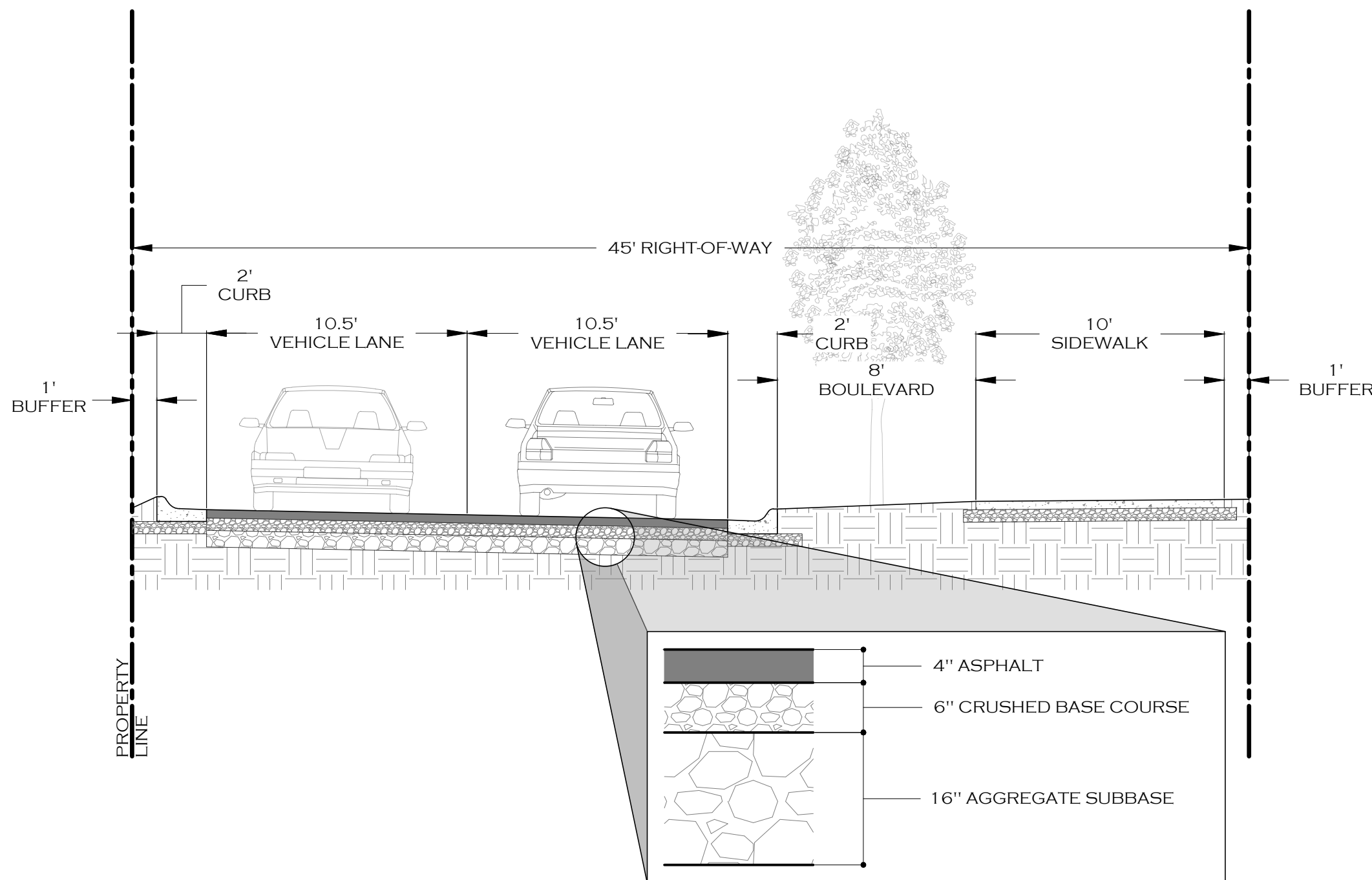
TYPICAL FULL-STREET SECTION



2
C7.0

NEIGHBORHOOD COLLECTOR

TYPICAL BULB-OUT SECTION



3
C7.0

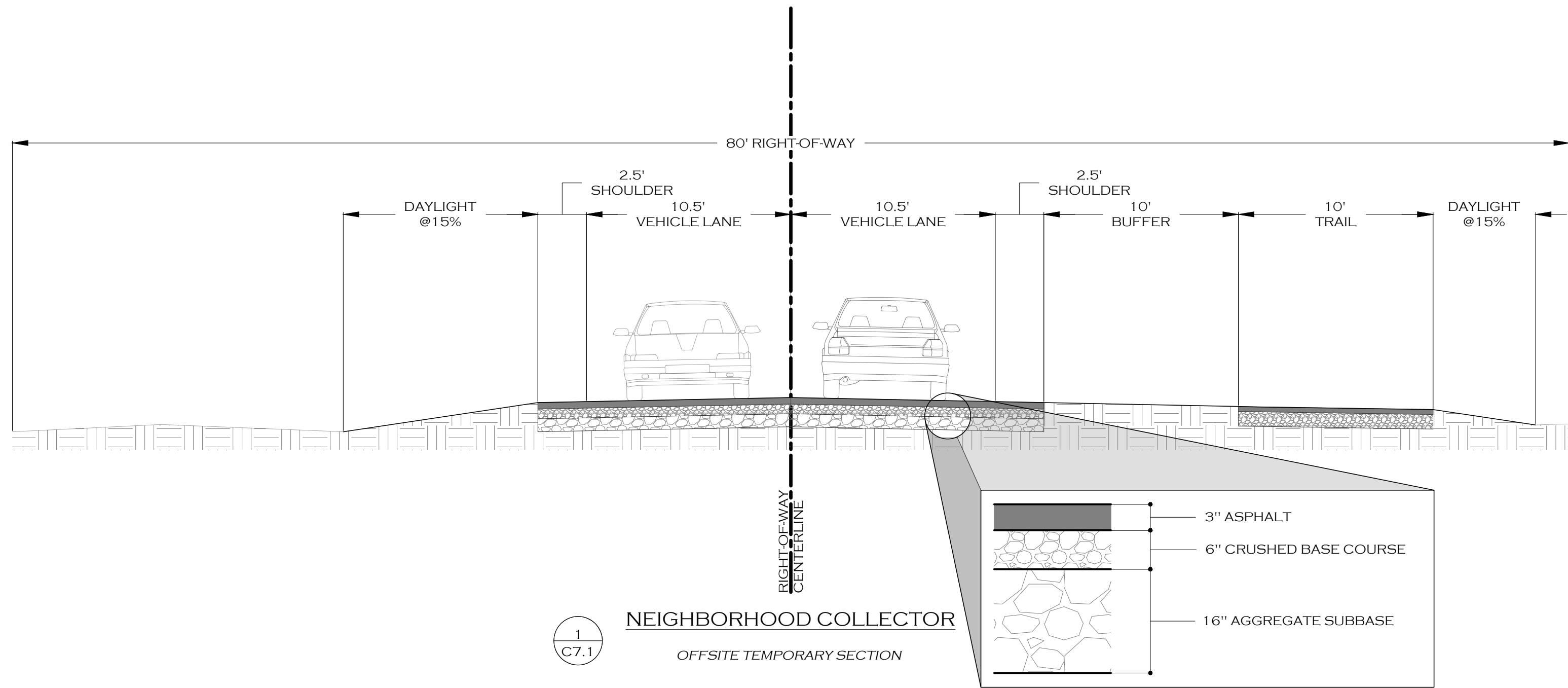
NEIGHBORHOOD COLLECTOR (HALF STREET)

CHUCK WAGON DRIVE

PRELIMINARY PLAT - APRIL 2025

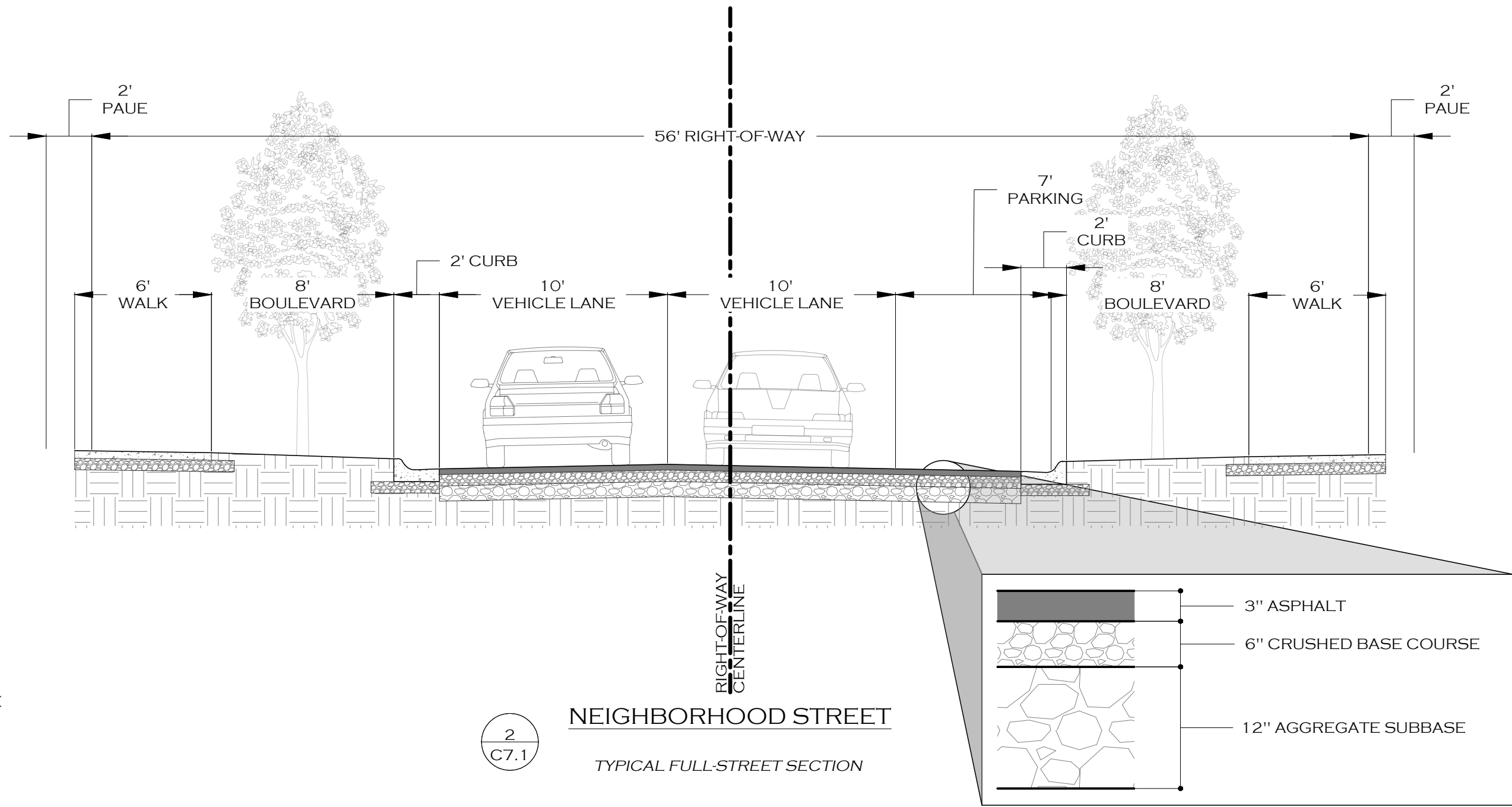
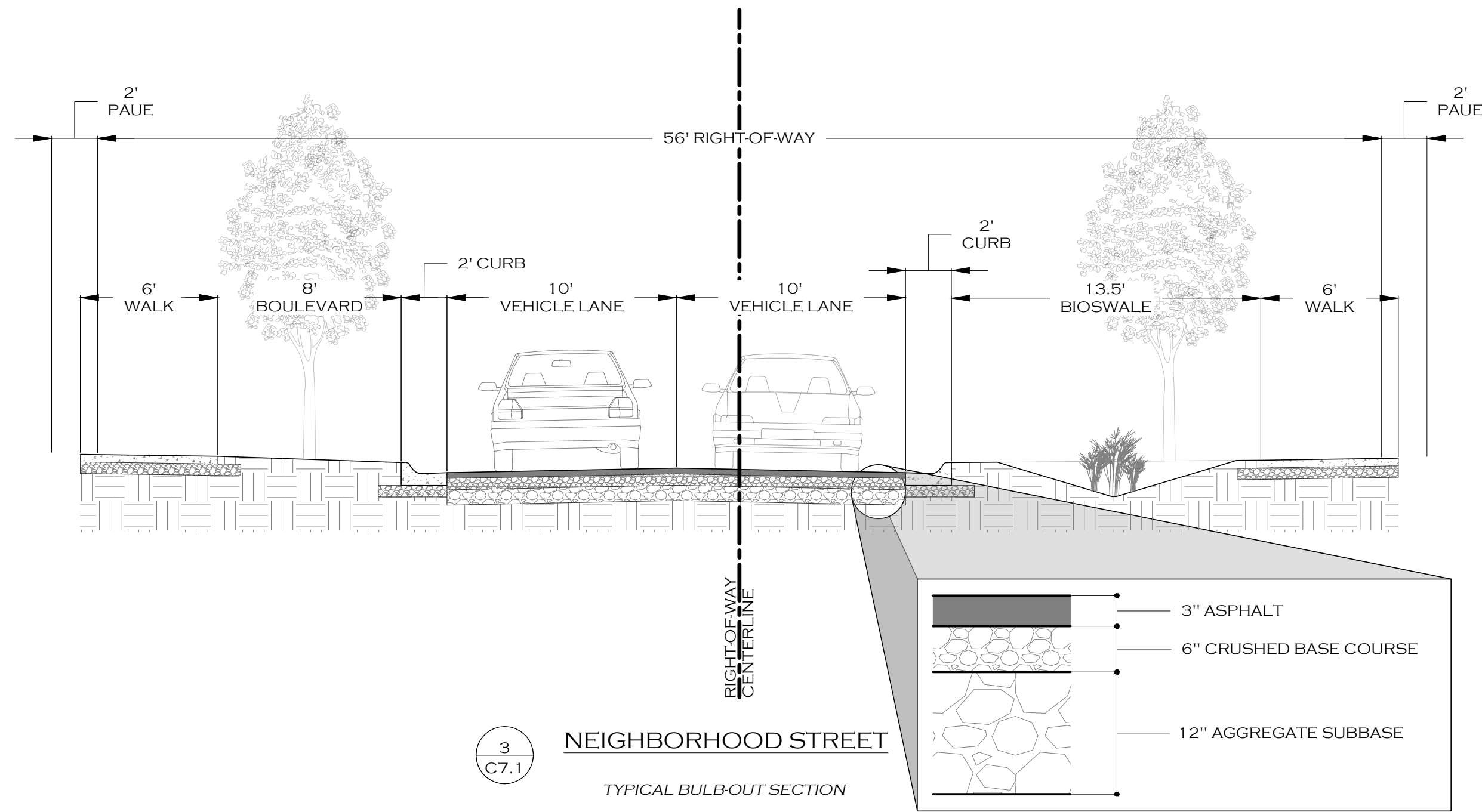
JOB #:		20-077
DRAWN:	CRH/MOH	
DESIGN:	MOH/CRH	
QA:	KTS	
DATE:	4/22/2025	
DESCRIPTION		
DATE		
4		
PAISLEY PARK SUBDIVISION		MONTANA
MISSOULA		RIGHT-OF-WAY SECTIONS
C7.0		

SECTIONS.DWG PLOTTED BY MATT HAMMERSTEIN ON JUN/02/2025



NOTE

1. REFERENCE PROJECT GEOTECHNICAL REPORT (ALLWEST, 2024) FOR SECTION DESIGN CALCULATIONS.



PRELIMINARY PLAT - APRIL 2025

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DRAWN:	CRH/MOH	
DESIGN:	MOH/CRH	
QA:	KTS	
DATE:	4/22/2025	
DESCRIPTION		
#	DATE	
1		
2		
3		
4		
PAISLEY PARK SUBDIVISION		MONTANA
MISSOULA		RIGHT-OF-WAY SECTIONS
C7.1		



64' RIGHT-OF-WAY

6' WALK

12' BOULEVARD

8' PARKING

3' COVE GUTTER

2' CURB

10' VEHICLE LANE

10' VEHICLE LANE

2' CURB

9.5' BOULEVARD

6' WALK

RIGHT-OF-WAY CENTERLINE

WOONERF STREET

2
C7.2

3" ASPHALT

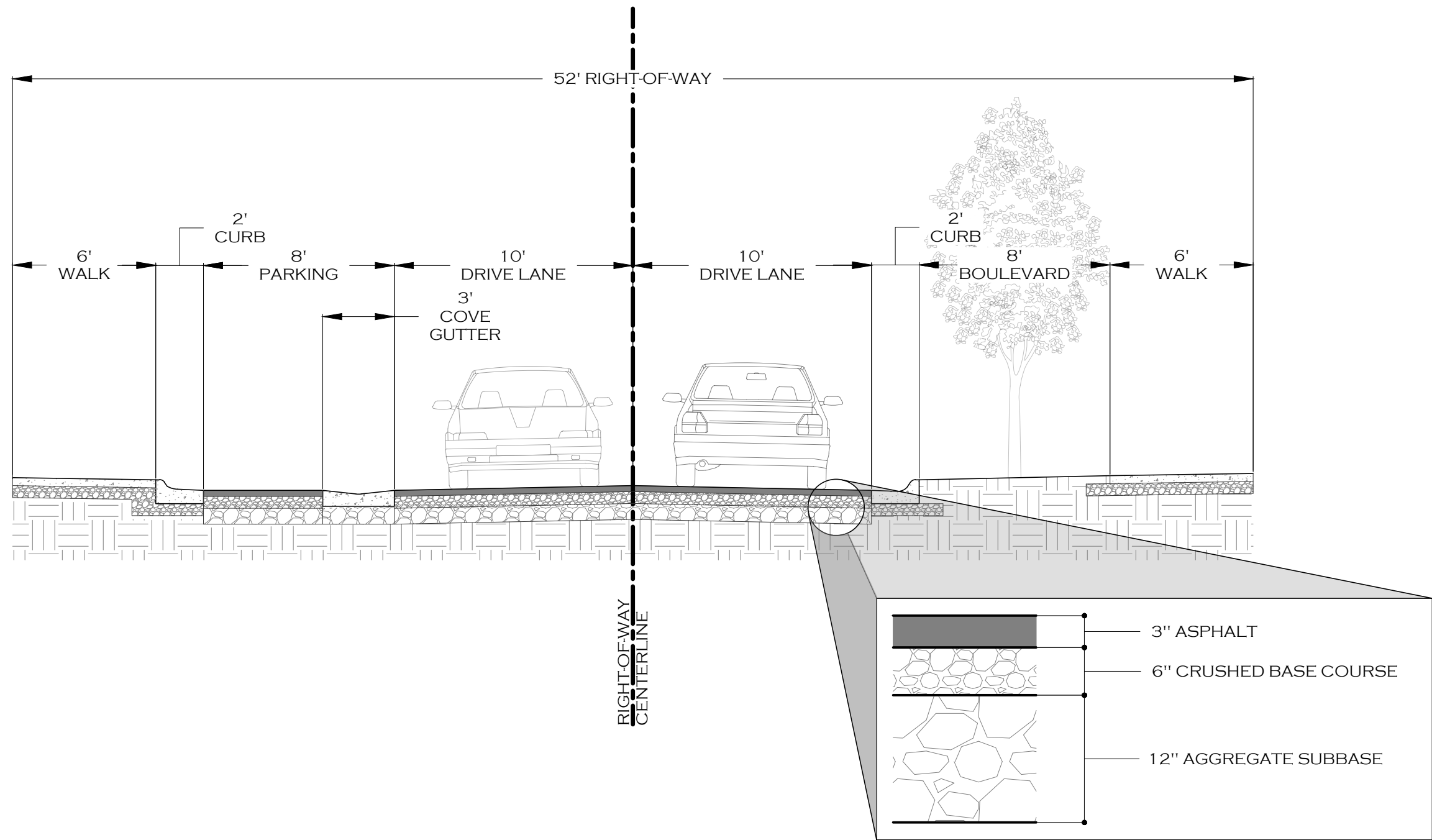
6" CRUSHED BASE COURSE

12" AGGREGATE SUBBASE

TYPICAL FULL-STREET SECTION, PARKING LEFT



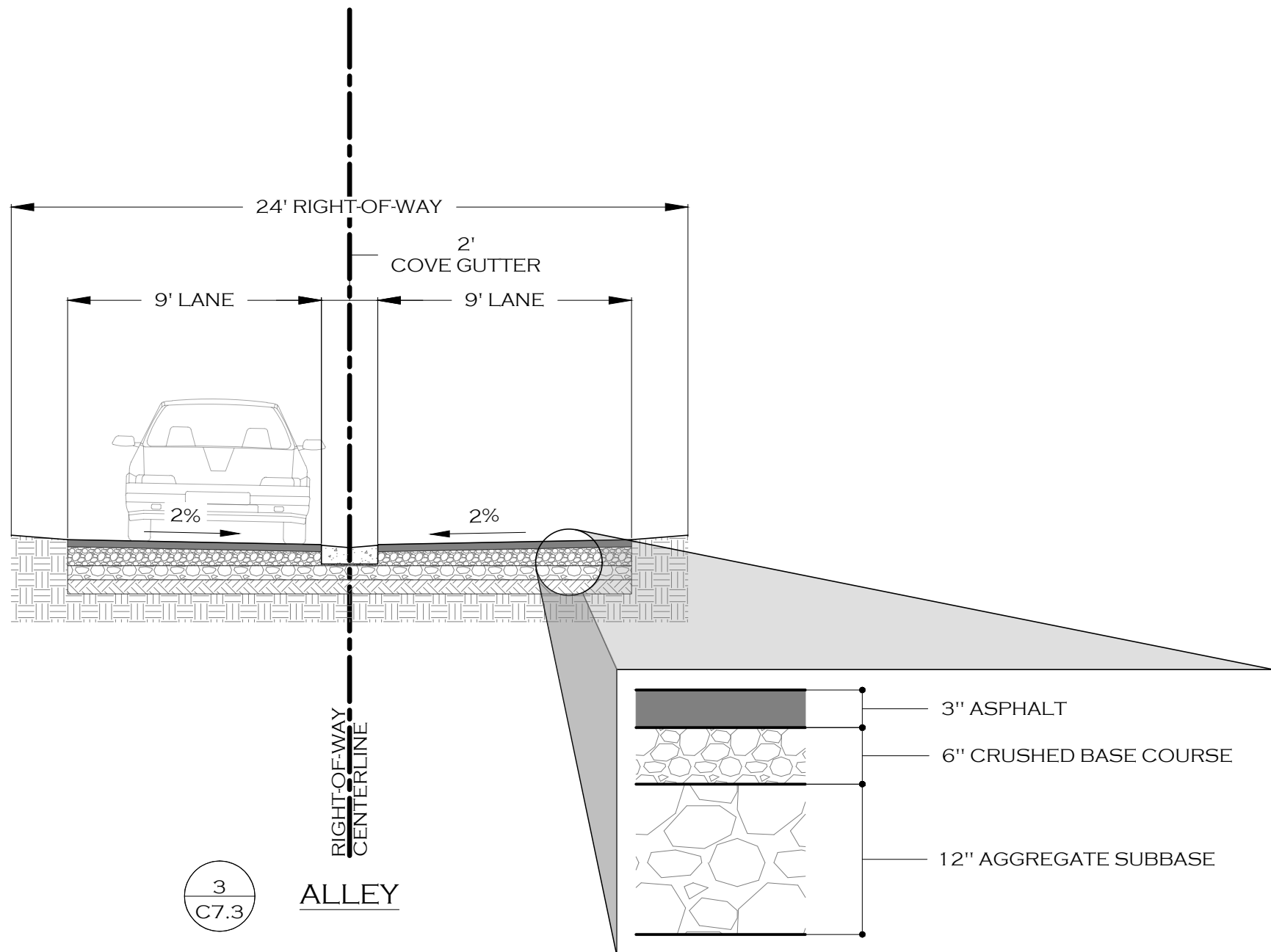
SECTIONS.DWG PLOTTED BY: MATT HAMMERSTEIN ON JUN/02/2025



1
C7.3

URBAN SECONDARY STREET (PARKING)

TYPICAL STREET SECTION WITH PARKING BAY

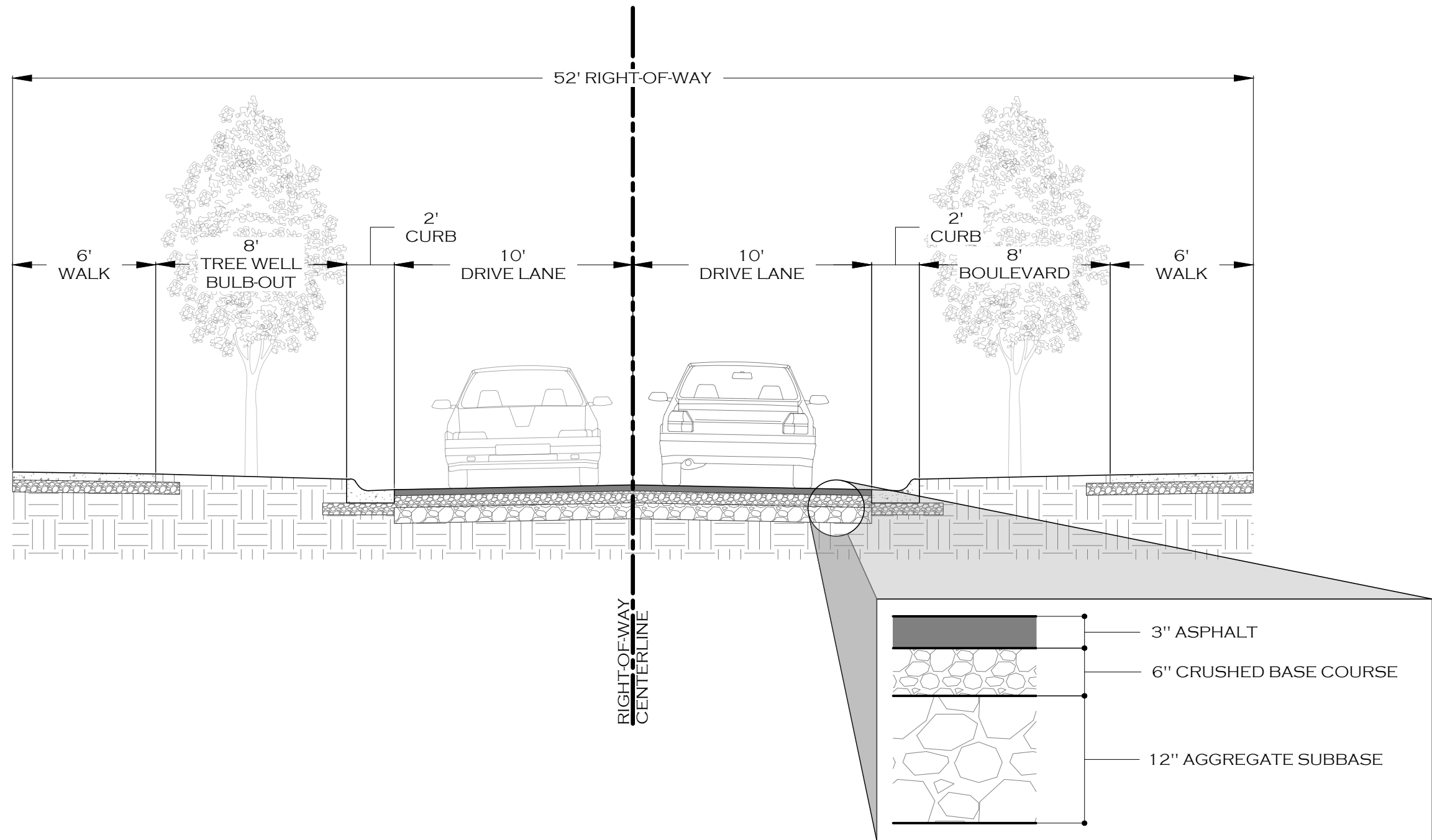


3
C7.3

ALLEY

NOTE

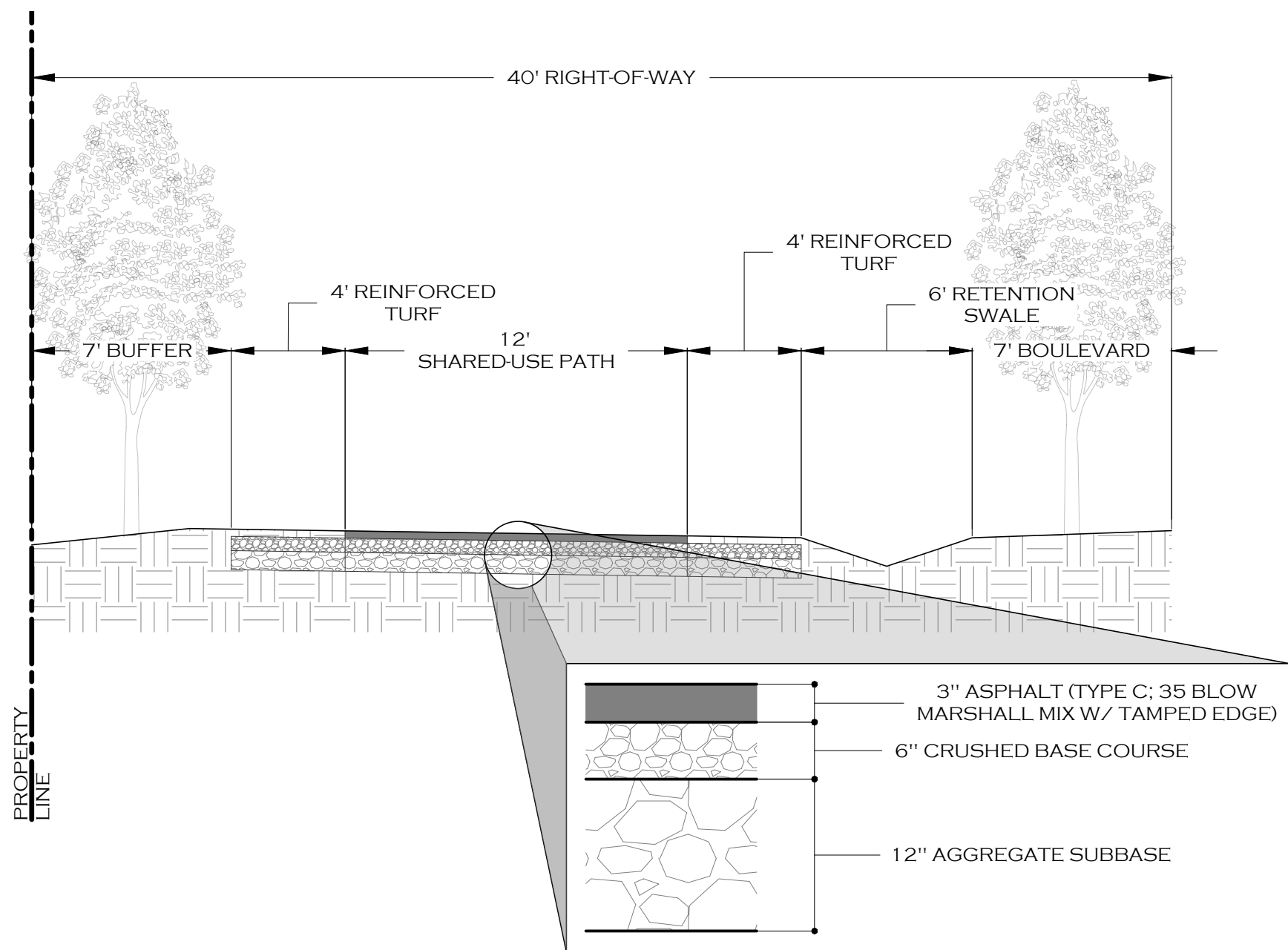
1. REFERENCE PROJECT GEOTECHNICAL REPORT (ALLWEST, 2024) FOR SECTION DESIGN CALCULATIONS.



2
C7.3

URBAN SECONDARY STREET (TREE WELL)

TYPICAL STREET SECTION WITH TREE WELL BULB-OUT



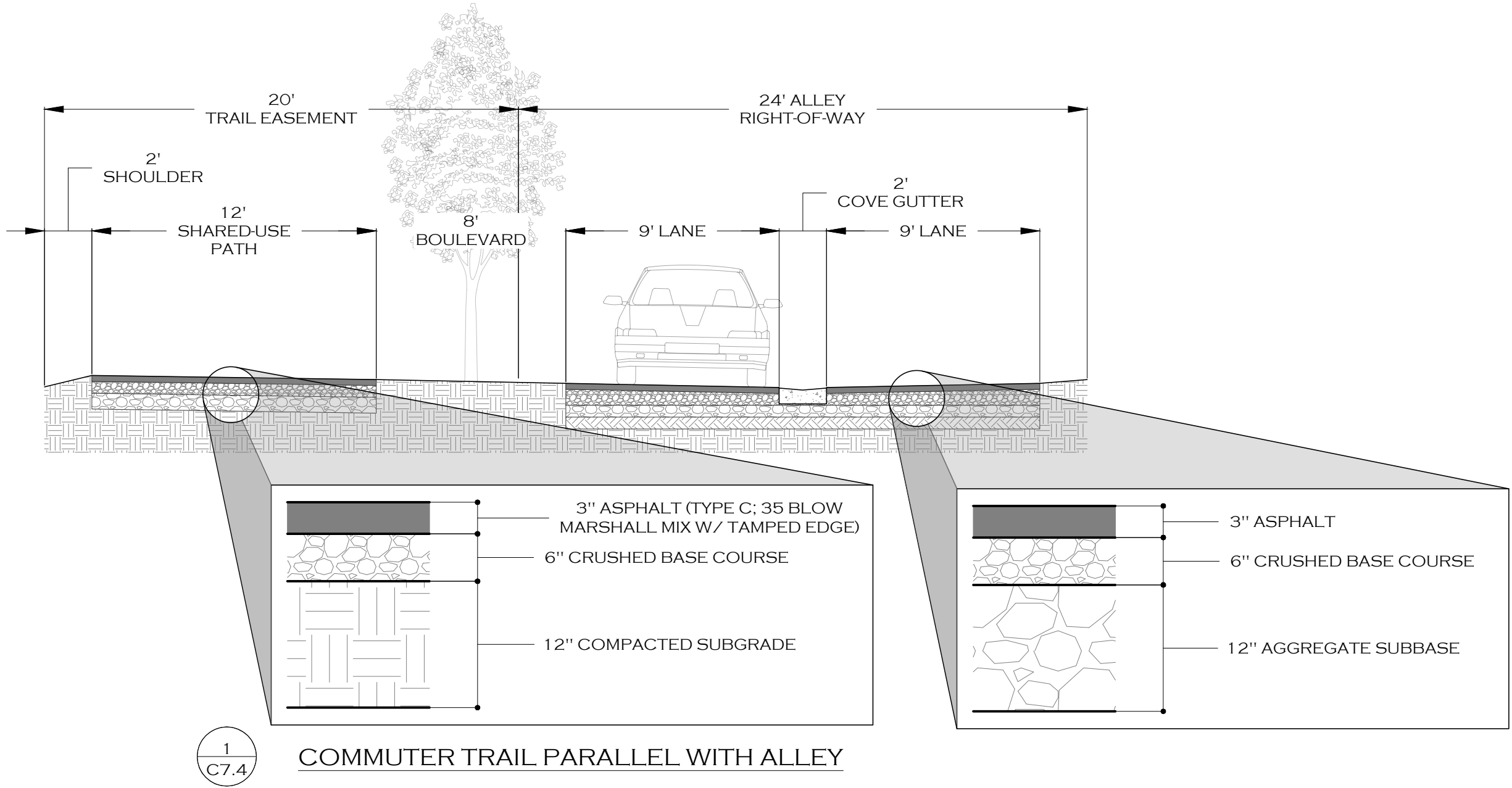
4
C7.3

TRAIL STREET

PRELIMINARY PLAT - APRIL 2025

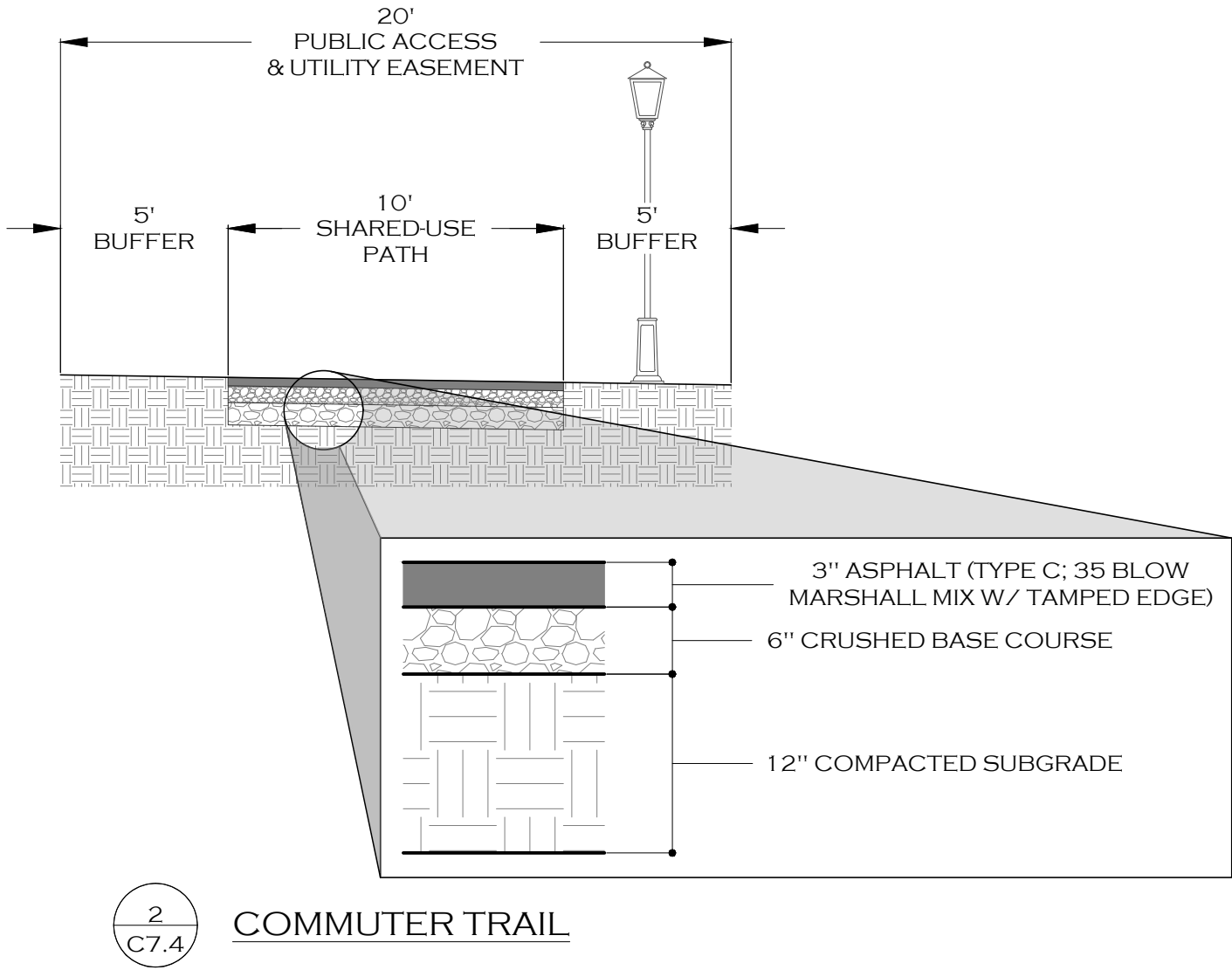
C7.3	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	RIGHT-OF-WAY SECTIONS	 WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1855 3880 O'LEARY STREET, SUITE A • MISSOULA, MT 59808 • 406-203-9565 • WWW.WOITHENG.COM • COPYRIGHT © WOITH ENGINEERING, INC., 2025		DESCRIPTION	DATE	JOB #:	20077
						DRAWN:	CRH/MOH			
						DESIGN:	MOH/CRH			
						QA:	KTS			
						DATE:	4/22/2025			

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NOTE

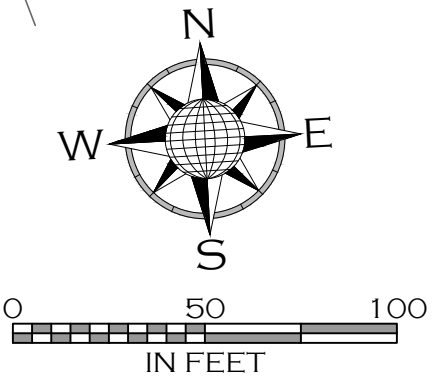
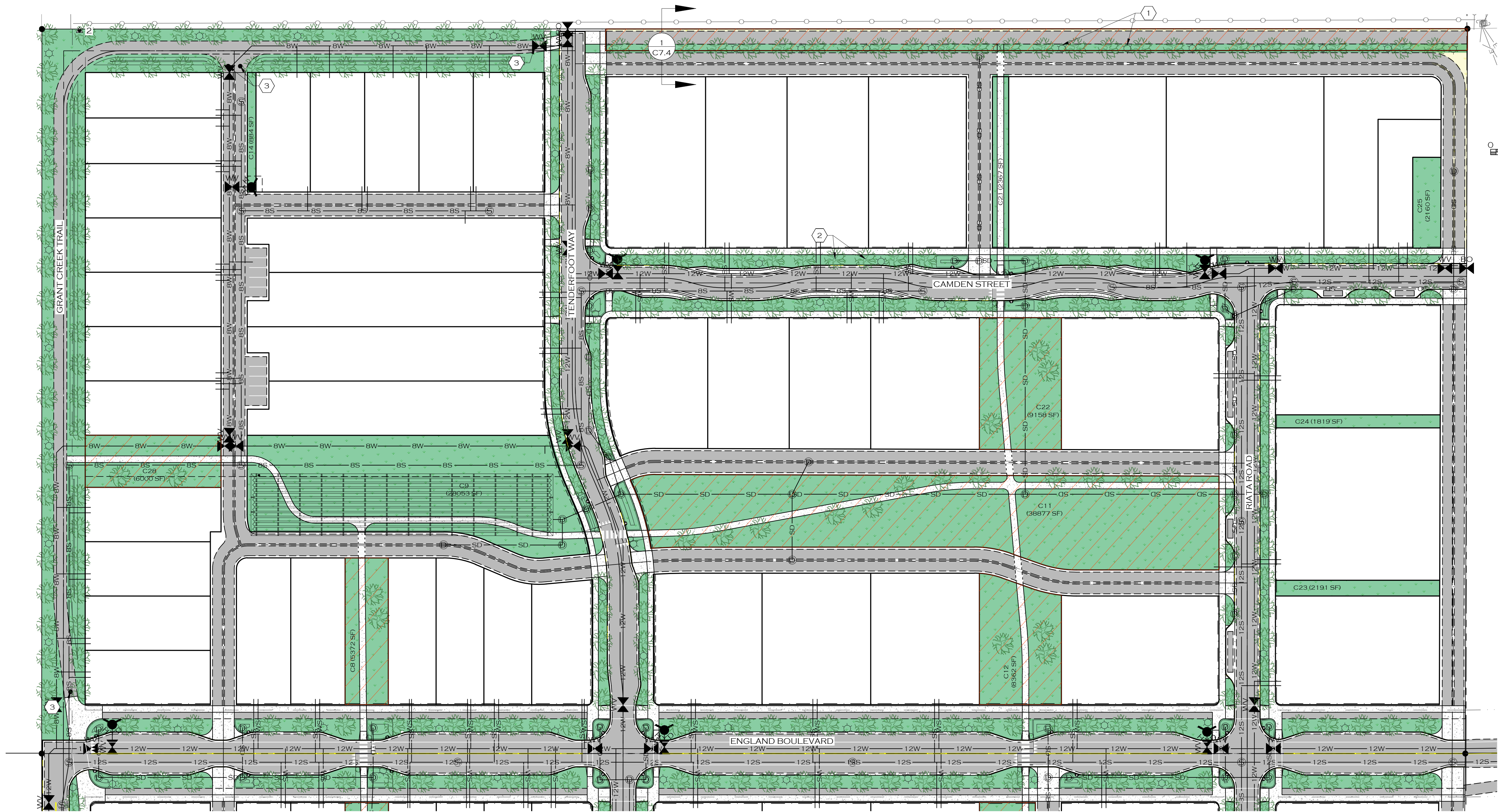
1. REFERENCE PROJECT GEOTECHNICAL REPORT (ALLWEST, 2024) FOR SECTION DESIGN CALCULATIONS.



PRELIMINARY PLAT - APRIL 2025

C7.4	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	COMMUTER TRAIL SECTIONS	JOB #: 20-077	DRAWN: CRH/MOH	DESIGN: MOH/CRH	QA: KTS	DATE: 4/22/2025

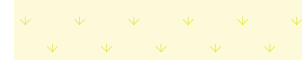
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PARKLAND TREE QUANTITY CALCULATION					
COMMON AREA	AREA COUNTED TO PARKLAND DEDICATION		30% REQUIRED CANOPY COVERAGE AREA	MINIMUM CLASS II TREES REQUIRED	CLASS II TREES PROVIDED
C5	8,046.37	0.18	2,413.9	3	3
C6 & C27	38,907.64	0.89	11,672.3	12	18
C8	5,371.9	0.12	1,611.6	2	2
C10	5,028.82	0.12	1,508.6	2	2
C11	38,877.08	0.89	11,663.1	12	12
C12	8,362.17	0.19	2,508.7	3	3
C13	6,479.81	0.15	1,943.9	2	2
C15	33,756.28	0.77	10,126.9	11	12
C16	7,951.5	0.18	2,385.5	3	3
C19	2,965.27	0.07	889.6	1	5
C20	10,548.75	0.24	3,164.6	4	5
C22	9,158.35	0.21	2,747.5	3	3
C26	15,861	0.36	4,758.3	5	26
C28	6,000	0.14	1,800.0	2	2
TOTAL	197,314.94	4.53	59,194.5	65	98

STREET TREE QUANTITY CALCULATION						
STREET	LENGTH (EXCLUDING INTERSECTIONS)	BOULEVARD ON:	MINIMUM (35' O/C)	AVERAGE (30' O/C)	MAXIMUM (25' O/C)	PROVIDED
CHUCK WAGON DRIVE	553.03'	ONE SIDE	16	18	23	18
SOMERSET WAY	1,138.43'	BOTH SIDES	66	76	92	71
ENGLAND BOULEVARD	1,132.14'	BOTH SIDES	65	75	91	70
CAMDEN STREET	730.8'	BOTH SIDES	42	49	59	44
GRANT CREEK TRAIL	1,022.4'	BOTH SIDES	59	68	82	68
TENDERFOOT WAY	1,105.79'	BOTH SIDES	64	74	89	69
RIATA ROAD	899.29'	BOTH SIDES	52	60	72	51
TOTAL			364	420	508	391

LANDSCAPING LEGEND

-  PROPOSED IRRIGATED SOD LANDSCAPING
-  PROPOSED NATIVE GRASS LANDSCAPING

KEY NOTES

-  PEDESTRIAN-SCALE STREET LIGHT FIXTURE (TYPICAL)
-  CLASS II STREET TREE (TYPICAL)
-  REMOVABLE BOLLARD

NOTES

1. AREAS WITHIN RED BOUNDARY AND HATCHED WITH DIAGONAL RED LINES PROPOSED TO BE USED TO SATISFY THE PARKLAND LAND DEDICATION REQUIRED.
2. CLASS II STREET TREES DEPICTED WITH 10' DRIPLINE RADIUS AND 30' O/C AVERAGE SPACING.
3. PEDESTRIAN-SCALE STREET LIGHTING DEPICTED AT 80' ON CENTER AVERAGE SPACING IN T3 TRANSECT ZONE AND 60' ON CENTER AVERAGE SPACING IN T4-R, T4-O, AND T5 TRANSECT ZONES.

20-077

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PAISLEY PARK SUBDIVISION

WOITH ENGINEERING, INC.

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MISSOULA

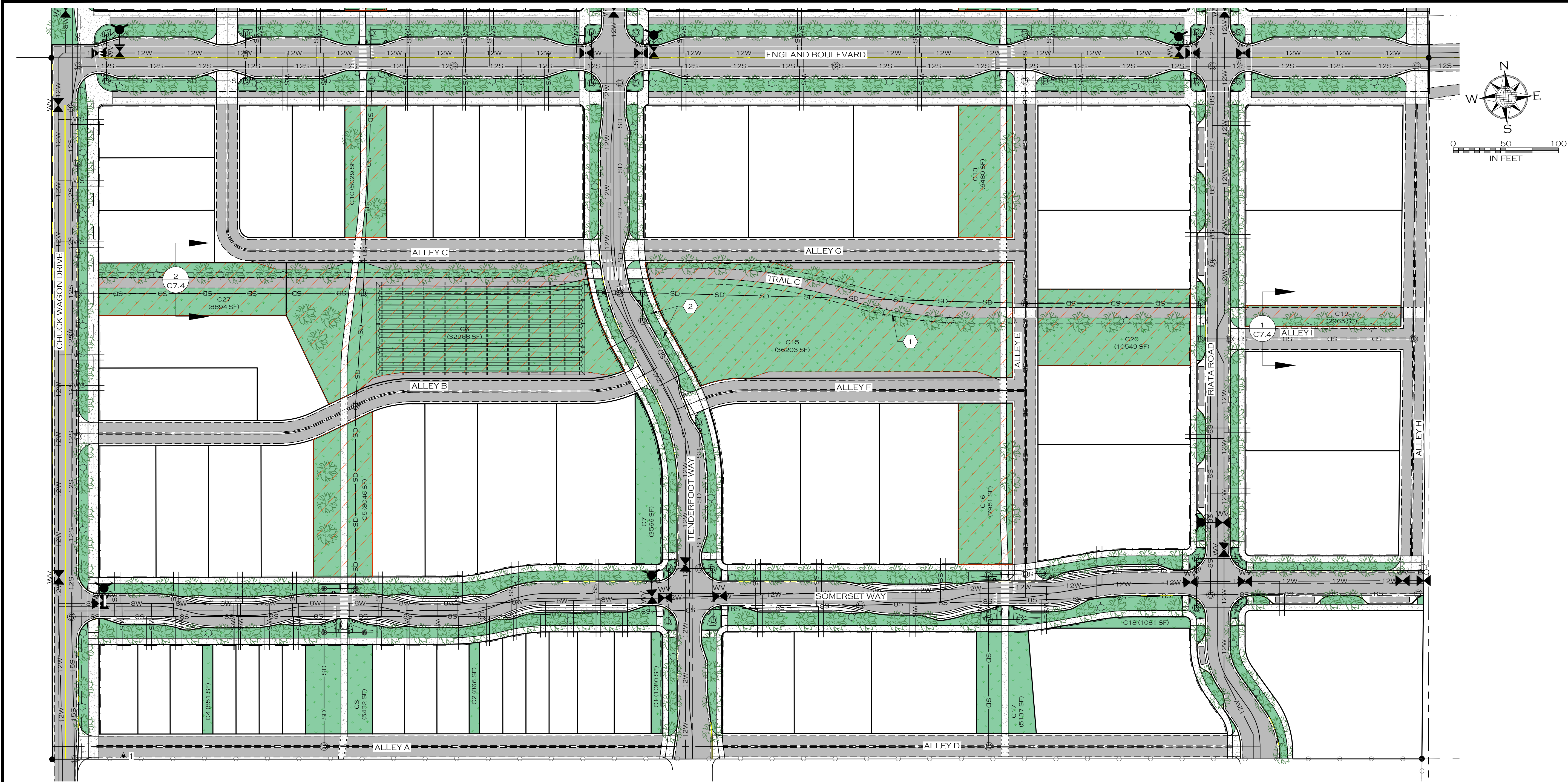
MONTANA

PARK & LANDSCAPING PLAN - NORTH

C8.0

PRELIMINARY PLAT - APRIL 2025

LANDSCAPE PLANDWG PLOTTED BY:MATT HAMMERSTEIN ON JUN/02/2025



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PRELIMINARY PLAT - APRIL 2025

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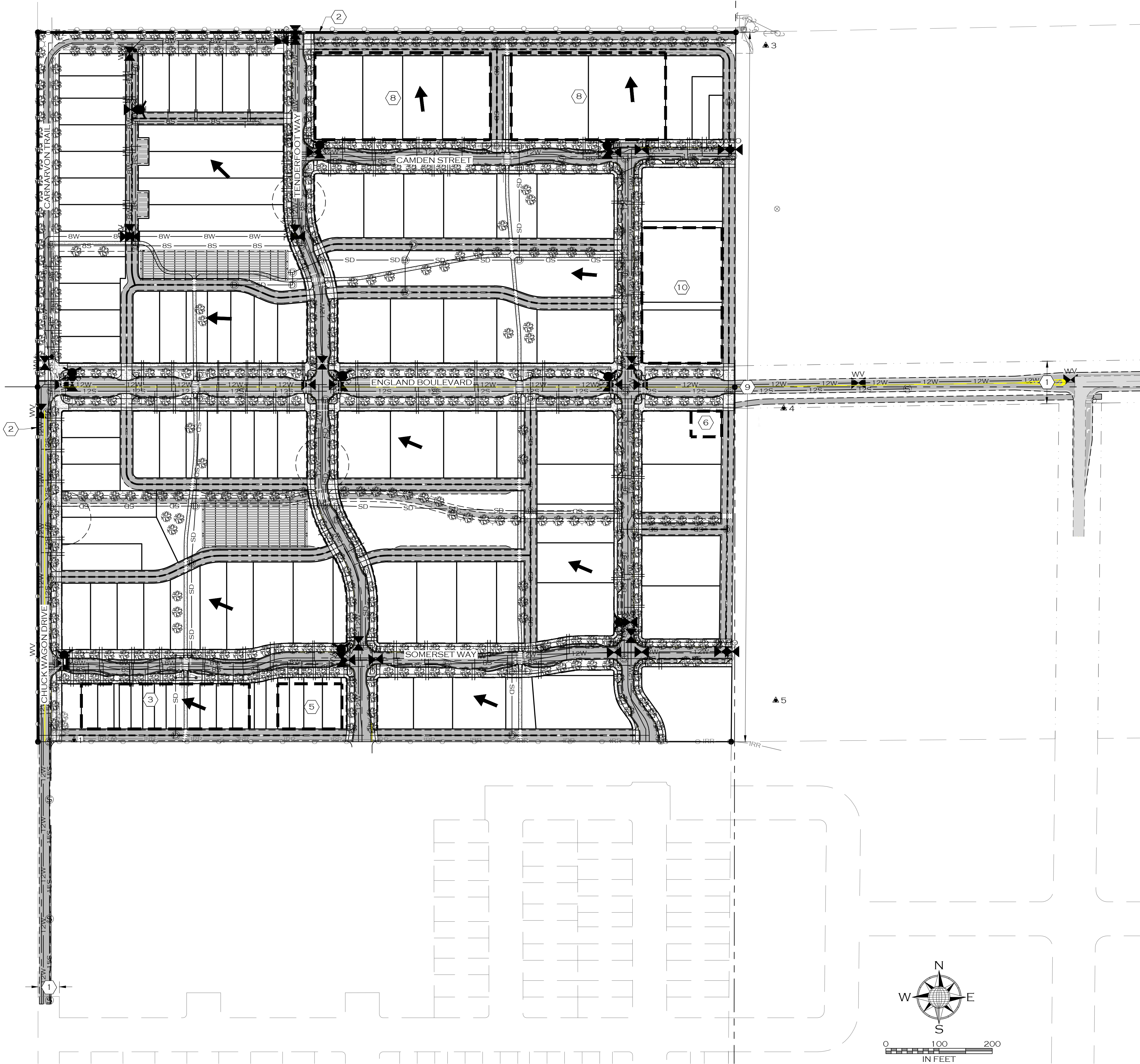
MISSOULA

MONTANA

PARK & LANDSCAPING PLAN - SOUTH

C8.1

LANDSCAPE PLANDWG PLOTTED BY:MATT HAMMERSTEIN ON JUN/02/2025



EROSION CONTROL KEY NOTES

- PHASE 1
- 1 CONSTRUCTION OF TEMPORARY GRAVEL CONSTRUCTION ENTRANCE PER CITY OF MISSOULA GUIDELINES OR TRACK OUT DEVICE AS APPROVED BY THE ENGINEER. SEE CITY OF MISSOULA STANDARD DETAIL STD-607 ON SHEET C#.# FOR DETAILS AND SPECIFICATIONS. ONLY REQUIRED FOR DESIGNATED ENTRANCES INTO LOT.
 - 2 PROVIDE AND INSTALL SILT FENCE AS SHOWN. SEE CITY OF MISSOULA STANDARD DETAIL STD-604 ON SHEET C#.# FOR DETAILS AND SPECIFICATIONS. KEEP IN GOOD CONDITION.
 - 3 STAGING AREA AND MATERIALS STORAGE AREA ARE DESIGNATED AS SHOWN.
 - 4 PROTECT EXISTING STORM DRAIN INLETS. SEE CITY OF MISSOULA STANDARD DETAIL STD-651 ON SHEET C#.# FOR DETAILS AND SPECIFICATIONS.
 - 5 PORTABLE TOILET, JOBSITE TRAILER AND PARKING AREA.
- PHASE 2
- 6 PROVIDE CONCRETE TRUCK WASHOUT AREA PER BEST PRACTICES ENSURING THAT ALL WASHOUT IS CONTAINED.
 - 7 PROTECT STORM DRAIN INLETS AS INSTALLED. SEE CITY OF MISSOULA STANDARD DETAIL STD-651 ON SHEET C#.# FOR DETAILS AND SPECIFICATIONS.
 - 8 EXAMPLE SOIL STOCKPILE LOCATIONS (ACTUAL LOCATIONS DETERMINED BY CONTRACTOR.) TEMPORARILY STABILIZE ALL SOIL STOCKPILES WITH THE USE OF EROSION CONTROL BLANKET OR PLASTIC LAID OVER THE STOCKPILE OR INSTALL A V-DITCH AND BERM AROUND THE PERIMETER OF THE STOCKPILE SET A MINIMUM OF 5 FEET FROM THE TOE OF THE PILE.
 - 9 LIMIT EARTH DISTURBING ACTIVITIES NEAR THE BOUNDARY OF THE SITE TO PRESERVE EXISTING VEGETATION AND PROVIDE VEGETATIVE BUFFER. IF SLOPES STEEPER THAN 3:1 ARE DISTURBED, SURFACE ROUGHEN AND TEMPORARILY SEED.
 - 10 REFUSE PILES/ DEBRIS BOX LOCATION.

NOTES

- 1. IF THE SHOWN LOCATIONS FOR POLLUTION AND EROSION CONTROL PROTECTION MEASURES ARE NOT SUITABLE THIS PLAN MUST BE UPDATED WITH THE NEW LOCATIONS.
- 2. SWPPP ADMINISTRATOR TO EVALUATE SITE AND IDENTIFY ALL INLETS AFFECTED BY THE CURRENT PROJECT PHASING AND ENSURE INLET PROTECTION IS INSTALLED. UPDATED PLANS WITH ANY ADDITIONAL INLETS THAT HAVE INLET PROTECTION.
- 3. STORMWATER BMP'S ARE CATEGORIZED UNDER THREE PHASES:

PHASE 1: PRE CONSTRUCTION
PHASE 2: PROGRESSIVE CONSTRUCTION
PHASE 3: POST CONSTRUCTION
- 4. PHASE 3 POST CONSTRUCTION BMP'S SHALL INCLUDE RESEEDING ACTIVITIES IN ORDER TO STABILIZE SITE WITH VEGETATION IN ACCORDANCE TO THE PROJECT WEED MANAGEMENT AND REVEGETATION PLAN, AND TO REMOVE BMP'S THAT ARE NO LONGER NEEDED.

PRELIMINARY PLAT - APRIL 2025

C9.0	
STORMWATER POLLUTION PREVENTION PLAN	
MISSOULA	MONTANA
PAISLEY PARK SUBDIVISION	
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QA:	KTS
DATE:	4/22/2025
DATE:	
DESCRIPTION	

INFORMATION PROVIDED TAKEN FROM THE EPA STORMWATER MENU OF BMP'S

3. SWPPP TO BE FILED WITH MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY BY GENERAL CONTRACTOR.
2. NOTICE OF INTENT (NOI), SWPPP PACKET, AND NOI CONFIRMATION LETTER MUST BE SUBMITTED TO THE CITY OF MISSOULA IN ORDER TO OBTAIN A CITY STORM WATER PERMIT.
3. PUBLIC SIGNAGE FOR SWPPP IS REQUIRED PER SECTION 1.2.3. OF THE MDEQ GENERAL PERMIT.
4. NOTICE OF TERMINATION (NOT) AND NOT CONFIRMATION LETTER MUST BE SUBMITTED TO CITY OF MISSOULA UPON FINAL STABILIZATION TO CLOSE OUT CITY PERMIT.
5. THE GENERAL CONTRACTOR MUST STRICTLY ADHERE TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) DURING CONSTRUCTION OPERATIONS.
6. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED FROM CITY OF MISSOULA.
7. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL PERIMETER EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
8. ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 14 DAYS OF FINAL GRADING.
9. SHOULD CONSTRUCTION STOP FOR LONGER THAN 14 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED.
10. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF A RAINFALL EXCEEDING 0.5 INCHES DURING A 24-HOUR PERIOD OR MORE FREQUENTLY IF REQUIRED BY GOVERNING NPDES GENERAL PERMIT. ALL MAINTENANCE REQUIRED BY INSPECTION SHALL COMMENCE WITHIN 24 HOURS AND BE COMPLETED WITHIN 48 HOURS OF REPORT.
11. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
12. GENERAL CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
13. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
14. GENERAL CONTRACTOR SHALL ESTABLISH PERMANENT SOIL STABILIZATION.
15. ON SITE DUST CONTROL SHALL BE ACCOMPLISHED BY USING WATER. APPLICATION OF WATER MAY BE REQUIRED MULTIPLE TIMES PER DAY DURING CONSTRUCTION ACTIVITY.
16. AN UP-TO-DATE SWPPP PACKET WITH SWPPP INSPECTION RECORDS SHALL BE PROVIDED TO THE ENGINEER TO PROVIDE TO THE CITY AT TIME OF AS-BUILTS. SWPPP PERMITTEE RESPONSIBLE FOR PROVIDED NOT AND NOT CONFIRMATION FROM DEQ TO CITY TO CLOSE OUT CITY STORM WATER PERMIT.
17. CONTRACTOR TO PERFORM CLEARING AND EARTH-MOVING ACTIVITIES ONLY DURING DRY WEATHER. MEASURES TO ENSURE ADEQUATE EROSION PREVENTION AND SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO EARTH-MOVING ACTIVITIES AND CONSTRUCTION.
18. MEASURES TO ENSURE ADEQUATE EROSION PREVENTION AND SEDIMENT CONTROL ARE REQUIRED YEAR-ROUND. STABILIZE DENUDEED AREAS AND MAINTAIN EROSION PREVENTION MEASURES CONTINUOUSLY BETWEEN FROM MARCH 1 THROUGH NOVEMBER 1.
19. USE SEDIMENT CONTROLS OR FILTRATION TO REMOVE SEDIMENT WHEN DEWATERING SITE AND OBTAIN FEDERAL AND STATE PERMITS, AS NECESSARY.
20. LIMIT CONSTRUCTION ACCESS ROUTES TO STABILIZED, DESIGNATED ACCESS POINTS.
21. AVOID TRACKING DIRT OR OTHER MATERIALS OFF SITE; CLEAN OFF-SITE PAVED AREAS AND SIDEWALKS USING DRY SWEEPING METHODS.
22. TRAIN AND PROVIDE INSTRUCTION TO ALL EMPLOYEES AND SUBCONTRACTORS REGARDING THE CURRENT VERSION OF THE MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY FIELD GUIDE FOR BEST MANAGEMENT PRACTICES.
23. PLACEMENT OF EROSION PREVENTION MATERIALS AT ALL LOCATIONS SPECIFIED ON THE SWPPP IS REQUIRED ON WEEKENDS AND DURING RAIN EVENTS.
24. THE AREAS DELINEATED ON THE PLANS FOR PARKING, GRUBBING, STORAGE, ETC., SHALL NOT BE ENLARGED OR "RUN OVER".
25. CONSTRUCTION SITES ARE REQUIRED TO HAVE EROSION PREVENTION AND SEDIMENT CONTROL MATERIALS ON SITE DURING THE "OFF-SEASON".
26. EROSION PREVENTION AND SEDIMENT CONTROL MATERIALS SHALL BE STORED ON SITE.
27. TREE PROTECTION SHALL BE IN PLACE BEFORE ANY DEMOLITION, GRADING, EXCAVATING, OR GRUBBING IF NECESSARY.

1. ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR DURING SITE CONSTRUCTION SHALL BE STORED, HANDLED, AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER. NO MATERIALS SHALL BE STORED ON THE STREET
2. COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM SHALL BE PROVIDED FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS AND NON-INERT WASTES PRESENT ON THE SITE.
3. MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAINAGE, SOLVENT AND DE-GREASING CLEANING ACTIVITIES, AND OTHER ACTIVITIES WHICH MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF MUST BE CONDUCTED USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS. CONTAMINATED SURFACES SHALL BE CLEANED IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT. EMERGENCY REPAIRS MAY BE PERFORMED ON SITE USING TEMPORARY PLASTIC PLACED BENEATH, AND IF RAINING, OVER THE VEHICLE.
4. CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING PAVEMENT CUTTING WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASH WATER, OR SEDIMENTS, AND NON-Storm WATER DISCHARGES TO STORM DRAINS AND WATERCOURSES.
5. AVOID CLEANING, FUELING, OR MAINTAINING VEHICLES ON SITE, EXCEPT IN A DESIGNATED AREA WHERE WASH WATER IS CONTAINED AND TREATED. LIMIT AND TIME APPLICATIONS OF PESTICIDES AND FERTILIZERS TO PREVENT POLLUTED RUNOFF.

PURPOSE AND DESCRIPTION

THE PURPOSE OF A SILT FENCE IS TO RETAIN THE SOIL ON DISTURBED LAND, SUCH AS A CONSTRUCTION SITE, UNTIL THE ACTIVITIES DISTURBING THE LAND ARE SUFFICIENTLY COMPLETED TO ALLOW REVEGETATION AND PERMANENT SOIL STABILIZATION TO BEGIN, KEEPING THE SOIL ON A CONSTRUCTION SITE, RATHER THAN LETTING IT BE WASHED OFF INTO NATURAL WATER BODIES (E.G., STREAMS, RIVERS, PONDS, LAKES, ESTUARIES) PREVENTS THE DEGRADATION OF AQUATIC HABITATS AND SILTATION OF HARBOR CHANNELS, AND NOT LETTING SOIL WASH OFF ONTO ROADS, WHICH READILY TRANSPORT IT TO STORM SEWERS, AVOIDS HAVING SEWERS CLOGGED WITH SEDIMENT. THE COST OF INSTALLING SILT FENCES ON A WATERSHED'S CONSTRUCTION SITES IS CONSIDERABLY LESS THAN THE COSTS ASSOCIATED WITH LOSING AQUATIC SPECIES, DREDGING NAVIGATION CHANNELS, AND CLEANING SEDIMENT OUT OF MUNICIPAL STORM SEWERS.

A SILT FENCE IS A TEMPORARY SEDIMENT BARRIER MADE OF POROUS FABRIC. IT'S HELD UP BY WOODEN OR METAL PORTS DRIVEN INTO THE GROUND, SO IT'S INEXPENSIVE AND RELATIVELY EASY TO REMOVE. THE FABRIC PONDS SEDIMENT-LADEN STORMWATER RUNOFF, CAUSING SEDIMENT TO BE RETAINED BY THE SETTLING PROCESSES. A SINGLE 100 FOOT (FT) RUN OF SILT FENCE MAY HOLD 50 TONS OF SEDIMENT IN PLACE. MOST CONSTRUCTION SITES TODAY DO HAVE SILT FENCES, BUT MANY DO NOT WORK EFFECTIVELY BECAUSE THEY ARE NOT WELL DESIGNED, INSTALLED, OR MAINTAINED. THE FOCUS OF THIS FACT SHEET IS HOW TO MAKE SILT FENCES WORK.

DESIGN

THE THREE PRINCIPAL ASPECTS OF SILT FENCE DESIGN ARE: PROPER PLACEMENT OF FENCING, ADEQUATE AMOUNT OF FENCING, AND APPROPRIATE MATERIALS.

PROPER PLACEMENT OF FENCING

PLACEMENT IS IMPORTANT BECAUSE WHERE A FENCE STARTS, RUNS, AND ENDS IS CRITICAL TO ITS EFFECTIVENESS. IMPROPER PLACEMENT CAN MAKE THE FENCE A COMPLETE WASTE OF MONEY. ANALYZE THE CONSTRUCTION SITE'S CONTOURS TO DETERMINE THE PROPER PLACEMENT. SEGMENT THE SITE INTO MANAGEABLE SEDIMENT STORAGE AREAS FOR USING MULTIPLE SILT FENCE RUNS. THE DRAINAGE AREA ABOVE ANY FENCE SHOULD USUALLY NOT EXCEED A QUARTER OF AN ACRE. WATER FLOWING OVER THE TOP OF A FENCE DURING A NORMAL RAINFALL INDICATES THE DRAINAGE AREA IS TOO LARGE. AVOID LONG RUNS OF SILT FENCE BECAUSE THEY CONCENTRATE THE WATER IN A SMALL AREA WHERE IT WILL EASILY OVERFLOW THE FENCE.

DESCRIPTION

STORM DRAIN INLET PROTECTION MEASURES PREVENT COIL AND DEBRIS FROM ENTERING STORM DRAIN DROP INLETS. THESE MEASURES ARE USUALLY TEMPORARY AND ARE IMPLEMENTED BEFORE A SITE IS DISTURBED.

THERE ARE SEVERAL TYPES OF INLET PROTECTION:

EXCAVATION AROUND THE PERIMETER OF THE DROP INLET: EXCAVATING A SMALL AREA AROUND AN INLET CREATES A SETTling POOL THAT REMOVES SEDIMENTS AS WATER IN RELEASED SLOWLY INTO THE INLET THROUGH SMALL HOLES PROTECTED BY GRAVEL AND FILTER FABRIC.

FABRIC BARRIERS AROUND INLET ENTRANCES: ERECTING A BARRIER MADE OF POROUS FABRIC AROUND AN INLET CREATES A SHIELD AGAINST SEDIMENT WHILE ALLOWING WATER TO FLOW INTO THE DRAIN. THIS BARRIER SLOWS RUNOFF WHILE CATCHING SOIL AND OTHER DEBRIS AT THE DRAIN INLET.

BLOCK AND GRAVEL PROTECTION: STANDARD CONCRETE BLOCKS AND GRAVEL CAN BE USED TO FORM A BARRIER TO SEDIMENTS THAT PERMITS WATER RUNOFF TO FLOW THROUGH SELECT BLOCKS LAID SIDEWAYS.

SANDBAGS CAN ALSO BE USED TO CREATE TEMPORARY SEDIMENT BARRIERS AT INLETS. FOR PERMANENT INLET PROTECTION AFTER THE SURROUNDING AREA HAS BEEN STABILIZED, DOD CAN BE INSTALLED. THIS PERMANENT MEASURE IS AN AESTHETICALLY PLEASING WAY TO FLOW STORMWATER NEAR DROP INLET ENTRANCES AND TO REMOVE SEDIMENTS AND OTHER POLLUTANTS FROM RUNOFF.

APPLICABILITY

ALL TEMPORARY INLET PROTECTION SHOULD HAVE A DRAINAGE AREA NO GREATER THAN 1 ACRE PER INLET. TEMPORARY CONTROLS SHOULD BE CONSTRUCTED BEFORE THE SURROUNDING LANDSCAPE IS DISTURBED. EXCAVATED DROP INLET PROTECTION AND BLOCK AND GRAVEL INLET PROTECTION ARE APPLICABLE TO AREAS OF HIGH FLOW, WHERE DRAIN OVERFLOW IS EXPECTED. FABRIC BARRIERS ARE RECOMMENDED FOR SMALLER, FLATTER DRAINAGE AREAS (SLOPES LESS THAN 5 PERCENT LEADING TO THE DRAIN). TEMPORARY DROP INLET CONTROL MEASURES ARE OFTEN USED IN SEQUENCE OR WITH OTHER EROSION CONTROL TECHNIQUES.

SITING AND DESIGN CONSIDERATIONS

WITH THE EXCEPTION OF SOD DROP INLET PROTECTION, INSTALL THESE CONTROLS BEFORE ANY SOIL DISTURBANCE IN THE DRAINAGE AREA. EXCAVATE AROUND DROP INLETS AT LEAST 1 FOOT DEEP (2 FEET MAXIMUM), EXCAVATING A VOLUME OF AT LEAST 35 YD³ PER ACRE DISTURBED. SIDE SLOPES LEADING TO THE INLET SHOULD BE NO STEEPER THAN 2:1. DESIGN THE SHAPE OF THE EXCAVATED AREA SUCH THAT THE DIMENSIONS FIT THE AREA FROM WHICH STORMWATER IS EXPECTED TO DRAIN. FOR EXAMPLE, THE LONGEST SIDE OF AN EXCAVATED AREA SHOULD BE ALONG THE SIDE OF THE INLET EXPECTED TO DRAIN THE LARGEST AREA.

STAKE FABRIC INLET PROTECTION CLOSE TO THE INLET TO PREVENT OVERFLOW ONTO UNPROTECTED SOILS. STAKES SHOULD BE AT LEAST 3 FEET LONG AND SPACED NO MORE THAN 3 FEET APART. CONSTRUCT A FRAME FOR FABRIC SUPPORT DURING OVERFLOW PERIODS, AND BURY IT AT LEAST 1 FOOT BELOW THE SOIL SURFACE. IT SHOULD RISE TO A HEIGHT NO GREATER THAN 1.5 FEET ABOVE THE GROUND. THE TOP OF THE FRAME AND FABRIC SHOULD BE BELOW THE DOWNSLOPE GROUND ELEVATION TO KEEP RUNOFF FROM BYPASSING THE INLET.

BLOCK AND GRAVEL INLET BARRIERS SHOULD BE AT LEAST 1 FOOT HIGH (2 FEET MAXIMUM). DO NOT USE MORTAR. LAY THE BOTTOM ROW OF BLOCKS AT LEAST 2 INCHES BELOW THE SOIL SURFACE. FLUSH AGAINST THE DRAIN FOR STABILITY. PLACE ONE BLOCK IN THE BOTTOM ROW ON EACH SIDE OF THE INLET ON ITS SIDE TO ALLOW DRAINAGE. PLACE 1/2-INCH WIRE MESH OVER ALL BLOCK OPENINGS TO PREVENT GRAVEL FROM ENTERING THE INLET. PLACE GRAVEL (3/4 TO 1 1/2 INCH IN DIAMETER) OUTSIDE THE BLOCK STRUCTURE AT A SLOPE NO GREATER THAN 2:1.

DO NOT CONSIDER SOD INLET PROTECTION UNTIL THE ENTIRE SURROUNDING DRAINAGE AREA IS STABILIZED. LAY THE SOD SO THAT IT EXTENDS AT LEAST 4 FEET FROM THE INLET IN EACH DIRECTION TO FORM A CONTINUOUS MAT AROUND THE INLET. LAY THE SOD STRIPS PERPENDICULAR TO THE DIRECTION OF FLOWS. STAGGER THEM SO THAT THE STRIP ENDS ARE NOT ALIGNED. THE SLOPE OF THE SODDED AREA SHOULD NOT BE STEEPER THAN 4:1 APPROACHING THE DROP INLET.

LIMITATIONS

TO INCREASE THE EFFECTIVENESS OF THESE PRACTICES, USE THEM WITH OTHER MEASURES, SUCH AS SMALL IMPOUNDMENTS OR SEDIMENT TRAPS (USEPA, 1992). IN GENERAL, STORMWATER INLET PROTECTION MEASURES ARE PRACTICAL FOR AREAS RECEIVING RELATIVELY CLEAN RUNOFF THAT IS NOT HEAVILY LADEN WITH SEDIMENT. THEY ARE DESIGNED TO HANDLE DRAINAGE FROM AREAS LESS THAN 1 ACRE (CASQA, 2003). TO PREVENT CLOGGING , STORM DRAIN CONTROL STRUCTURES MUST BE MAINTAINED FREQUENTLY. IF SEDIMENT AND OTHER DEBRIS CLOG THE WATER INTAKE, DROP INLET CONTROL MEASURES CAN ACTUALLY CAUSE EROSION IN UNPROTECTED AREAS.

MAINTENANCE CONSIDERATIONS

CHECK ALL TEMPORARY CONTROL MEASURES AFTER EACH STORM EVENT. TO MAINTAIN THE CAPACITY OF THE SETTLING POOLS, REMOVE ACCUMULATED SEDIMENT FROM THE AREA AROUND THE DROP INLET (EXCAVATED AREA, AREA AROUND FABRIC BARRIER OR BLOCK STRUCTURE) WHEN THE CAPACITY IS REDUCED BY HALF. REMOVE ADDITIONAL DEBRIS FROM THE SHALLOW POOLS PERIODICALLY. THE WEEP HOLES IN EXCAVATED AREAS AROUND INLETS CAN BECOME CLOGGED, PREVENTING WATER FROM DRAINING OUT OF THE POOLS. IF THAT HAPPENS, IT MIGHT BE DIFFICULT AND COSTLY TO UNCLOG THE INTAKE.

DESCRIPTION

THE PURPOSE OF STABILIZING ENTRANCES TO A CONSTRUCTION SITE IS TO MINIMIZE THE AMOUNT OF SEDIMENT LEAVING THE AREA AS MUD AND SEDIMENT ATTACHED TO VEHICLES. INSTALLING A PAD OF GRAVEL OVER FILTER CLOTH WHERE CONSTRUCTION TRAFFIC LEAVES A SITE CAN HELP STABILIZE A CONSTRUCTION ENTRANCE. AS A VEHICLE DRIVES OVER THE PAD, THE PAD REMOVES MUD AND SEDIMENT FROM THE WHEELS AND REDUCES SOIL TRANSPORT OFF THE SITE. THE FILTER CLOTH SEPARATES THE GRAVEL FROM THE SOIL BELOW, KEEPING THE GRAVEL FROM BEING GROUND INTO THE COIL. THE FABRIC ALSO REDUCES THE AMOUNT OF RUTTING CAUSED BY VEHICLE TIRES. IT SPREADS THE VEHICLE'S WEIGHT OVER A SOIL AREA LARGER THAN THE TIRE WIDTH.

IN ADDITION TO USING A GRAVEL PAD, A VEHICLE WASHING STATION CAN BE ESTABLISHED AT THE SITE ENTRANCE. USING WASH STATIONS ROUTINELY CAN REMOVE A LOT OF SEDIMENT FROM VEHICLES BEFORE THEY LEAVE THE SITE. DIVERTING RUNOFF FROM VEHICLE WASHING STATIONS INTO A SEDIMENT TRAP HELPS TO MAKE SURE THE SEDIMENT FROM VEHICLES STAYS ONSITE AND IS HANDLED PROPERLY.

APPLICABILITY

TYPICALLY, STABILIZED CONSTRUCTION ENTRANCES ARE INSTALLED WHERE CONSTRUCTION TRAFFIC LEAVES OR ENTERS AN EXISTING PAVED ROAD. BUT SITE ENTRANCE STABILIZATION SHOULD BE EXTENDED TO ANY ROADWAY OR ENTRANCE WHERE VEHICLES ENTER OR LEAVE THE SITE. FROM A PUBLIC RELATIONS POINT OF VIEW, STABILIZING CONSTRUCTION SITE ENTRANCES CAN BE WORTH THE EFFORT. IF THE SITE ENTRANCE IS THE MOST NOTICEABLE PART OF A CONSTRUCTION SITE, STABILIZING THE ENTRANCE CAN IMPROVE BOTH THE APPEARANCE AND THE PUBLIC PERCEPTION OF THE CONSTRUCTION PROJECT.

SITING AND DESIGN CONSIDERATIONS

STABILIZE ALL ENTRANCES TO A SITE BEFORE CONSTRUCTION AND FURTHER SITE DISTURBANCE BEGIN. MAKE SURE THE STABILIZED SITE ENTRANCES ARE LONG AND WIDE ENOUGH TO ALLOW THE LARGEST CONSTRUCTION VEHICLE THAT WILL ENTER THE SITE TO FIT THROUGH WITH ROOM TO SPARE. IF MANY VEHICLES ARE EXPECTED TO USE AN ENTRANCE IN ANY ONE DAY, MAKE THE SITE ENTRANCE WIDE ENOUGH FOR TWO VEHICLES TO PASS AT THE SAME TIME WITH ROOM ON EITHER SIDE OF EACH VEHICLE. IF A SITE ENTRANCE LEADS TO A PAVED ROAD, MAKE THE END OF THE ENTRANCE FLARED SO THAT LONG TRUCKS AND TRAILERS CAN EASILY TURN ONTO OR OFF THE PAVED ROADWAY. IF CONSTRUCTION SITE ENTRANCES CROSS A STREAM, SWAMP, OR OTHER DEPRESSION, PROVIDE A BRIDGE OR CULVERT TO PREVENT EROSION FROM UNPROTECTED BANKS. MAKE SURE STONE AND GRAVEL USED TO STABILIZE THE CONSTRUCTION SITE ENTRANCE ARE LARGE ENOUGH SO THAT THEY ARE NOT CARRIED OFFSITE BY VEHICLES. AVOID SHARP-EDGED STONE TO REDUCE THE POSSIBILITY OF PUNCTURING TIRES. INSTALL STONE OR GRAVEL AT A DEPTH OF AT LEAST 6 INCHES FOR THE ENTIRE LENGTH AND WIDTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

LIMITATIONS

ALTHOUGH STABILIZING A CONSTRUCTION ENTRANCE REDUCES THE AMOUNT OF SEDIMENT LEAVING A SITE SOME SOIL MIGHT STILL BE DEPOSITED FROM VEHICLE TIRES ONTO PAVED SURFACES. TO FURTHER REDUCE THE CHANCE OF THESE SEDIMENTS POLLUTING STORMWATER RUNOFF, SWEEP THE PAVED AREA ADJACENT TO THE STABILIZED SITE ENTRANCE. FOR SITES THAT USE WASH STATIONS, A RELIABLE WATER SOURCE TO WASH VEHICLES BEFORE LEAVING, THE SITE MIGHT NOT BE INITIALLY AVAILABLE. WATER MIGHT HAVE TO BE TRUCKED TO THE SITE AT ADDITIONAL COST.

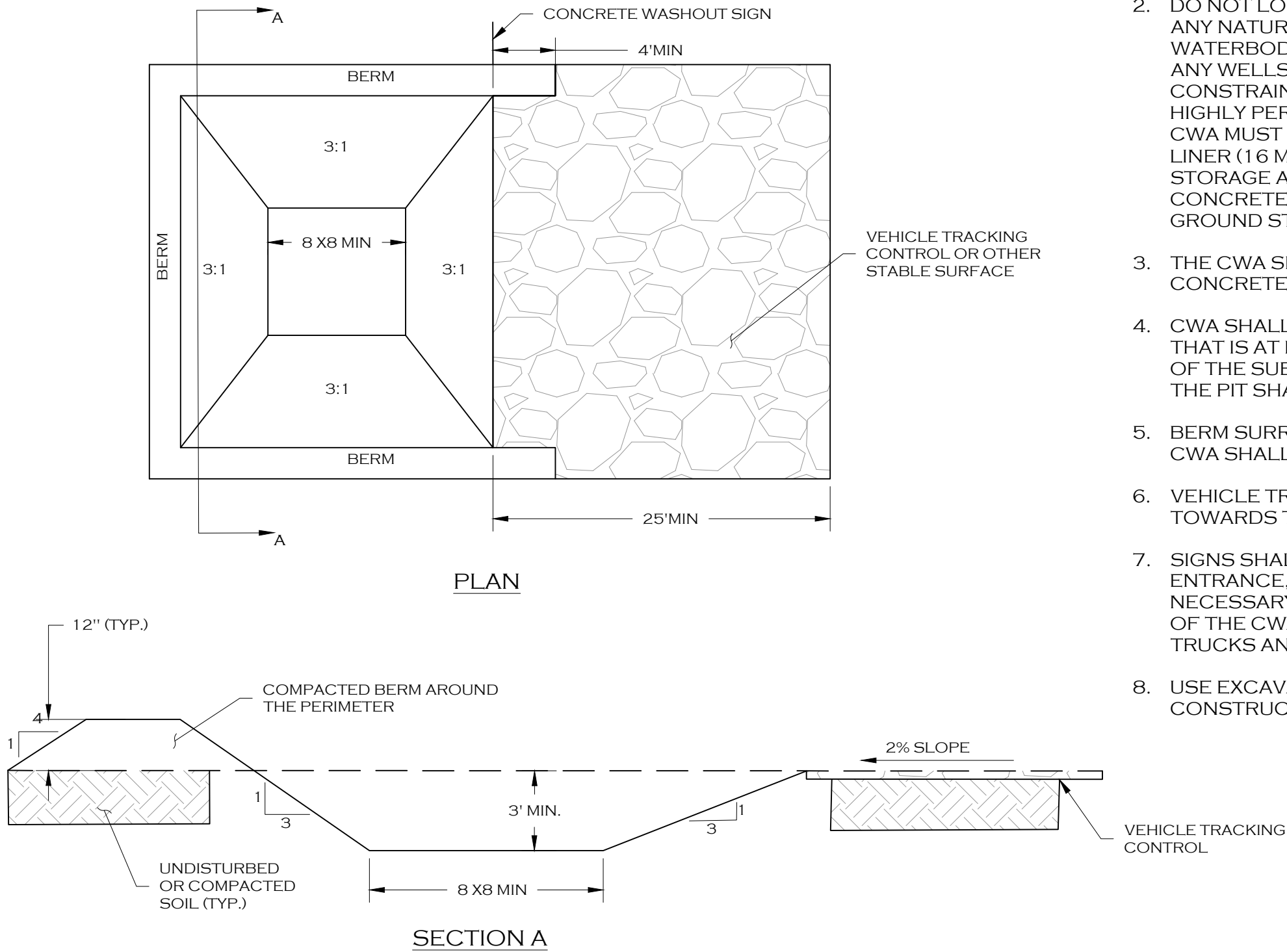
MAINTENANCE CONSIDERATIONS

MAINTAIN STABILIZATION OF THE SITE ENTRANCES UNTIL THE REST OF THE CONSTRUCTION SITE HAS BEEN FULLY STABILIZED. YOU MIGHT NEED TO ADD STONE AND GRAVEL PERIODICALLY TO EACH STABILIZED CONSTRUCTION SITE ENTRANCE TO KEEP THE ENTRANCE EFFECTIVE. SWEEP UP SOIL TRACKED OFFSITE IMMEDIATELY FOR PROPER DISPOSAL. FOR SITES WITH WASH RACKS AT EACH SITE ENTRANCE, CONSTRUCT SEDIMENT TRAPS AND MAINTAIN THEM FOR THE LIFE OF THE PROJECT. PERIODICALLY REMOVE SEDIMENT FROM THE TRAPS TO MAKE SURE THEY KEEP WORKING.

EFFECTIVENESS

STABILIZING CONSTRUCTION ENTRANCES TO PREVENT SEDIMENT TRANSPORT OFFSITE IS EFFECTIVE ONLY IF ALL THE ENTRANCES TO THE SITE ARE STABILIZED AND MAINTAINED. STABILIZING THE SITE ENTRANCES MIGHT NOT BE VERY EFFECTIVE UNLESS A WASH RACK IS INSTALLED AND ROUTINELY USED (CORISH, 1995). THIS CAN BE PROBLEMATIC FOR SITES WITH MULTIPLE ENTRANCES AND HIGH VEHICLE TRAFFIC.

C9.1	PAISLEY PARK SUBDIVISION		 WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1955 3880 O'LEARY STREET, SUITE A • MISSOULA, MT 59808 • 406-203-9585 • WWW.WOITHENG.COM •	MISSOULA		MONTANA		STORMWATER POLLUTION PREVENTION PLAN NOTES	
	JOB #:	20077		DRAWN:	CRH/MOH	DESIGN:	MOH/CRH	QA:	KTS
		DESCRIPTION	DATE						



CONCRETE WASHOUT AREA (CWA)
SCALE: N.T.S.

NOTES

1. SEE PLAN VIEW FOR LOCATION OF CWA
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

PRELIMINARY PLAT - APRIL 2025

C9.2	MISSOULA	PAISLEY PARK SUBDIVISION	MONTANA	 WOITH ENGINEERING, INC. ENGINEERS & SURVEYORS 405 3RD STREET NW, SUITE 206 • GREAT FALLS, MT 59404 • 406-761-1955 3000 O'LEARY STREET, SUITE A • MISSOULA, MT 59808 • 406-230-9565 • WWW.WOITHENG.COM • COPYRIGHT © WOITH ENGINEERING, INC., 2025	STORMWATER POLLUTION PREVENTION PLAN DETAILS			
					DATE	4/22/2025	QA:	KTS
					DESIGN:	MOH/CRH	DRAWN:	CRH/MOH
					JOB #:	20077		