

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

1501 SW ARBORWALK BLVD.  
LEE'S SUMMIT, MO

PROJECT CONTACTS

DEVELOPER:

SCENIC DEVELOPMENT LLC  
6731 W 121ST STREET STE 100  
OVERLAND PARK, KS 66209  
CONTACT: JORDAN ANDERSON  
PHONE: 913.730.1094  
EMAIL: Jordan.Anderson@Scenic-Dev.com

CIVIL ENGINEER:

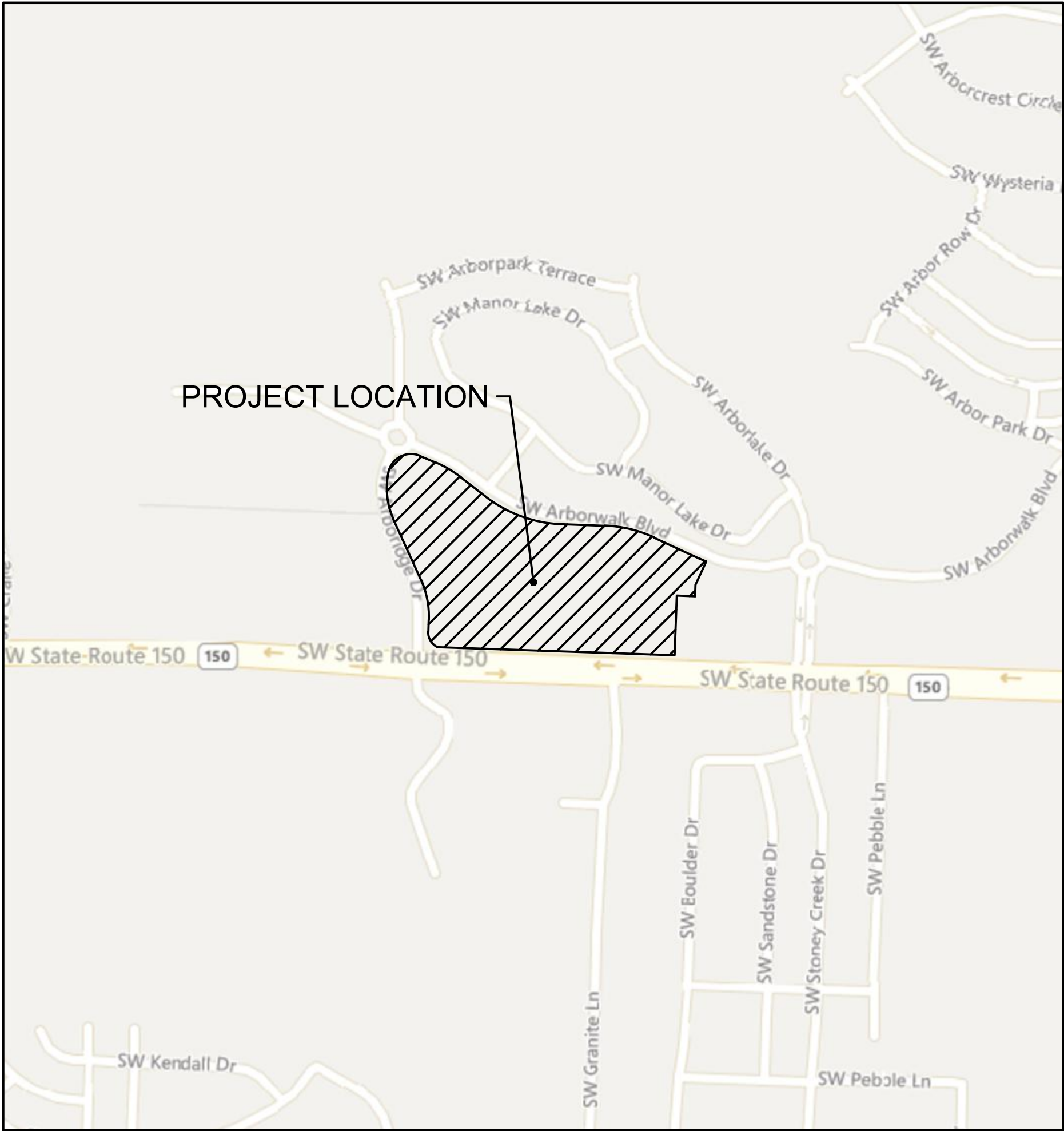
OLSSON  
1301 BURLINGTON, SUITE 100  
NORTH KANSAS CITY, MO 64116  
CONTACT: JULIE E. SELLERS, P.E.  
PHONE: 816.442.6044  
EMAIL: JSSELLERS@OLSSON.COM

SURVEYOR:

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1301 BURLINGTON, SUITE 100  
NORTH KANSAS CITY, MO 64116  
CONTACT: JASON ROUDEBUSH, PLS  
PHONE: 816.442.6059  
EMAIL: JROUDEBUSH@OLSSON.COM

LANDSCAPE ARCHITECT:

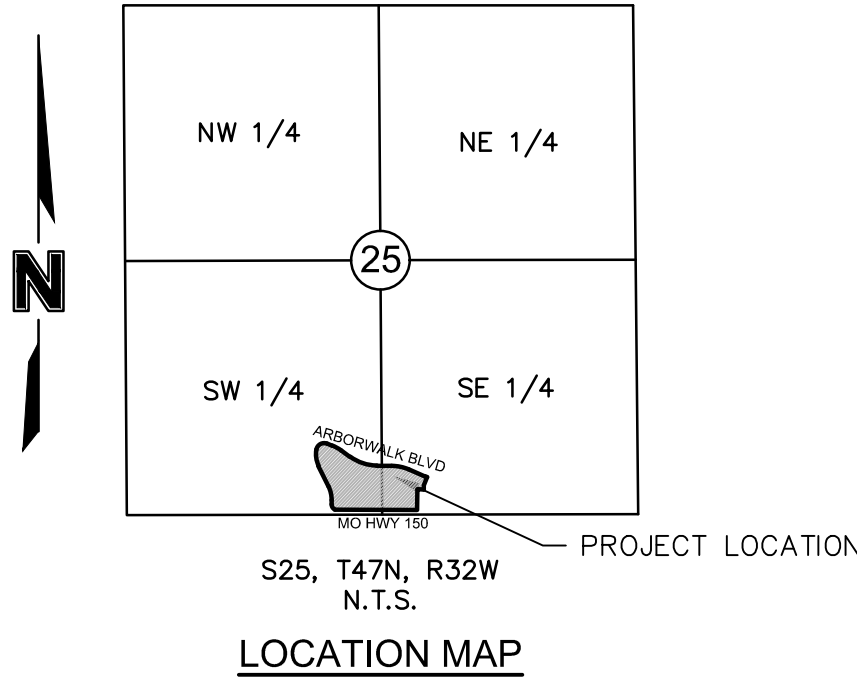
OLSSON  
1301 BURLINGTON, SUITE 100  
NORTH KANSAS CITY, MO 64116  
CONTACT: JACOB HODSON  
PHONE: 816.442.6030  
EMAIL: JHODSON@OLSSON.COM



VICINITY MAP

PROPERTY DESCRIPTION:

A TRACT OF LAND IN THE SOUTHWEST AND SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 47 NORTH, RANGE 32 WEST OF THE 5TH PRINCIPAL MERIDIAN IN LEE'S SUMMIT, JACKSON COUNTY MISSOURI BEING BOUNDED AND DESCRIBED BY OR UNDER THE DIRECT SUPERVISION OF JASON S ROUDEBUSH, P.L.S. 2002014092 AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER, ALSO BEING THE SOUTHWEST CORNER OF SAID SOUTHEAST QUARTER; THENCE SOUTH 87°53'43" EAST, 391.50 FEET TO THE SOUTHWEST CORNER OF AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A, A MINOR SUBDIVISION IN SAID LEE'S SUMMIT RECORDED JANUARY 6, 2006 AS INSTRUMENT NUMBER 2006I0002453 IN BOOK 191 AT PAGE 53 IN JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE NORTH 02°06'17" EAST, ON THE WESTERLY LINE OF SAID AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A, 70.00 FEET; THENCE NORTH 02°05'48" EAST, ON SAID WESTERLY LINE, 7.33 FEET TO A POINT ON THE EXISTING NORTHERLY RIGHT-OF-WAY LINE OF MISSOURI STATE HIGHWAY NO. 150, AS ESTABLISHED BY A MISSOURI STATE HIGHWAY NO. 150 SURVEY RECORDED ON JULY 9, 2009 AS INSTRUMENT NUMBER 2009E0068194 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE AND ALSO BEING THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE NORTH 88°02'15" WEST, ON SAID EXISTING NORTHERLY RIGHT-OF-WAY LINE, 864.32 FEET TO A POINT ON THE EXISTING EASTERLY RIGHT-OF-WAY LINE OF SW. ARBORWALK DRIVE AS ESTABLISHED BY ARBORWALK 4TH PLAT, A-4 THRU K-4, RECORDED MAY 6, 2005 AS INSTRUMENT NUMBER 2005I0036320 IN BOOK 73 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE NORTHWESTERLY ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF NORTH 63°56'56" WEST WITH A RADIUS OF 60.00 FEET, A CENTRAL ANGLE OF 66°03'30" AND AN ARC DISTANCE OF 69.18 FEET; THENCE NORTH 02°06'35" EAST, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, 43.75 FEET; THENCE NORTHERLY, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 325.00 FEET, A CENTRAL ANGLE OF 26°31'46" AND AN ARC DISTANCE OF 150.48 FEET; THENCE NORTH 24°25'11" WEST, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, 240.58 FEET; THENCE NORTHERLY, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 36°32'00" AND AN ARC DISTANCE OF 175.35 FEET; THENCE NORTHEASTERLY, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT HAVING A COMMON TANGENT WITH THE LAST DESCRIBED COURSE WITH A RADIUS OF 84.00 FEET, A CENTRAL ANGLE OF 100°32'29" AND AN ARC DISTANCE OF 147.40 FEET; TO A POINT ON THE EXISTING SOUTHERLY RIGHT-OF-WAY LINE OF SW. ARBORWALK BOULEVARD AS ESTABLISHED BY SAID ARBORWALK 4TH PLAT, A-4 THRU K-4; THENCE SOUTH 67°20'42" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 59.12 FEET; THENCE SOUTHEASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF SOUTH 67°20'44" EAST WITH A RADIUS OF 420.00 FEET, A CENTRAL ANGLE OF 151°1'39" AND AN ARC DISTANCE OF 111.38 FEET; THENCE SOUTH 52°09'04" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 113.01 FEET; THENCE EASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 480.00 FEET, A CENTRAL ANGLE OF 35°42'22" AND AN ARC DISTANCE OF 299.13 FEET; THENCE SOUTH 87°51'25" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 157.54 FEET; THENCE EASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF SOUTH 87°51'23" EAST WITH A RADIUS OF 470.00 FEET, A CENTRAL ANGLE OF 22°40'59" AND AN ARC DISTANCE OF 186.07 FEET; THENCE SOUTH 65°10'24" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 183.16 FEET; THENCE SOUTHEASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 530.03 FEET, A CENTRAL ANGLE OF 02°47'35" AND AN ARC DISTANCE OF 25.84 FEET TO THE NORTHWEST CORNER OF SAID AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A; THENCE ALONG A LINE NON-TANGENT TO SAID CURVE, SOUTH 24°49'36" WEST, ON SAID WESTERLY LINE OF SAID AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A; 92.90 FEET; THENCE SOUTH 02°05'48" WEST, ON SAID WESTERLY LINE, 41.91 FEET; THENCE NORTH 87°54'12" WEST, ON SAID WESTERLY LINE, 66.85 FEET; THENCE SOUTH 02°05'48" WEST, ON SAID WESTERLY LINE, 217.62 FEET TO THE POINT OF BEGINNING. CONTAINING 516,669 SQUARE FEET OR 11.86 ACRES, MORE OR LESS.



Sheet List Table	
Sheet Number	Sheet Title
C0.0	TITLE SHEET
C1.0	GENERAL NOTES
C2.0	EXISTING CONDITIONS & DEMOLITION PLAN
C3.0	SITE PLAN
C3.1	OVERALL DIMENSION PLAN
C3.2	DIMENSION PLAN (A)
C3.3	DIMENSION PLAN (B)
C3.4	DIMENSION PLAN (C)
C3.5	DIMENSION PLAN (D)
C3.6	FIRE LANE PLAN
C4.0	OVERALL GRADING PLAN
C4.1	SPOT ELEVATIONS (A)
C4.2	SPOT ELEVATIONS (B)
C4.3	SPOT ELEVATIONS (C)
C4.4	SPOT ELEVATIONS (D)
C4.5	GRADING DETAILS
C4.6	GRADING DETAILS
C5.0	OVERALL UTILITY PLAN
C6.0	STORMWATER MANAGEMENT PLAN
C7.0	STORM PLAN & PROFILE
C7.1	STORM PLAN & PROFILE
C7.2	STORM PLAN & PROFILE
C7.3	STORM PLAN & PROFILE
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C7.5	STORM PLAN & PROFILE
C7.6	STORM PLAN - DOWNSPOUT CONNECTION A
C7.8	STORM DESIGN TABLES
C8.0	SANITARY SEWER PLAN
C9.0	WATER PLAN & PROFILE
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C10.0	CONSTRUCTION DETAILS
C10.1	CONSTRUCTION DETAILS
L1.0	LANDSCAPE NOTES
L1.1	LANDSCAPE PLAN
L1.2	LANDSCAPE DETAILS
L1.3	TRASH ENCLOSURE
L1.4	GENERATOR SCREEN
A2.01	ARCHITECTURAL ELEVATIONS
A2.02	ARCHITECTURAL ELEVATIONS
A2.03	ARCHITECTURAL ELEVATIONS
A2.04	ARCHITECTURAL ELEVATIONS
E1.1	ELECTRICAL SITE PLAN

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As Noted on Plan Review

Development Services Department  
Lee's Summit, Missouri

09/20/2023

Olsson - Civil Engineering  
Missouri Certificate of Authority #  
1301 Burlington Street  
North Kansas City, MO 64116  
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STATE OF MISSOURI  
JULIE ELAINE SELLERS  
NUMBER PE-2017000367  
9/18/23  
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION				BY				
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1	10.10.2022	CITY COMMENTS				CSM				
2	01.20.2023	CITY COMMENTS								
3	03.03.2023	CITY COMMENTS								
4	08.21.2023	SIDEWALK RELOCATION								
5	08.14.2023	WATER MAIN UPDATES								
						REVISIONS				
						2023				

TITLE SHEET

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: \_\_\_\_\_ CSM

checked by: \_\_\_\_\_ CSM

approved by: \_\_\_\_\_ JS

QA/QC by: \_\_\_\_\_ JS

project no.: A21-04054

drawing no.: C\_TTL01\_A2104054

date: 08.10.2022

SHEET

C0.0

**Note:**  
NO OIL OR GAS WELLS ARE LOCATED ON THE PROPERTY.  
INFORMATION VERIFIED VIA MISSOURI DNR  
<https://dnr.mo.gov/geology/geosrv/oilandgas.htm>

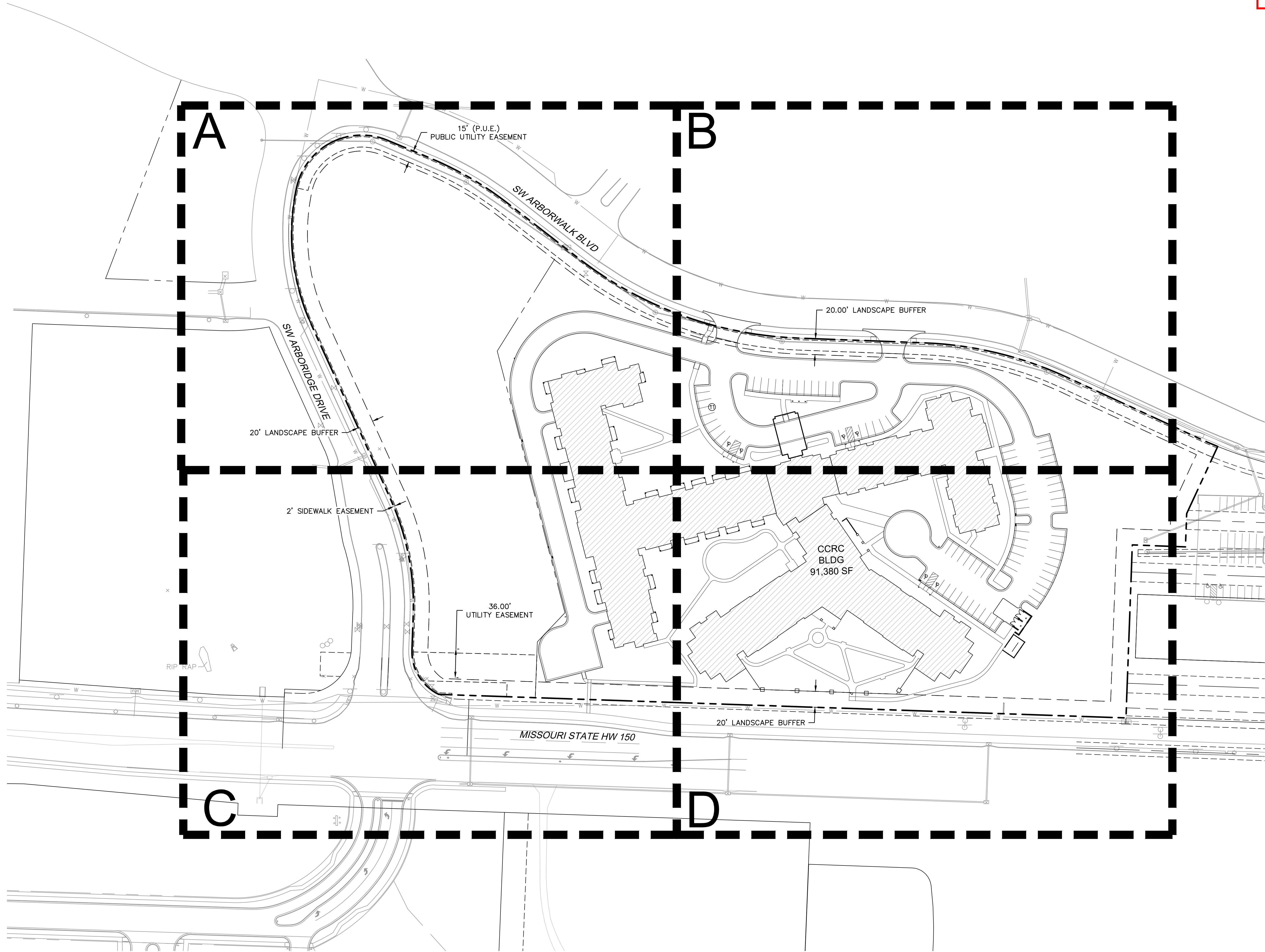
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STATE OF MISSOURI  
JULIE ELAINE SELLERS  
NUMBER  
PE-2017000367  
9/18/23  
PROFESSIONAL ENGINEER

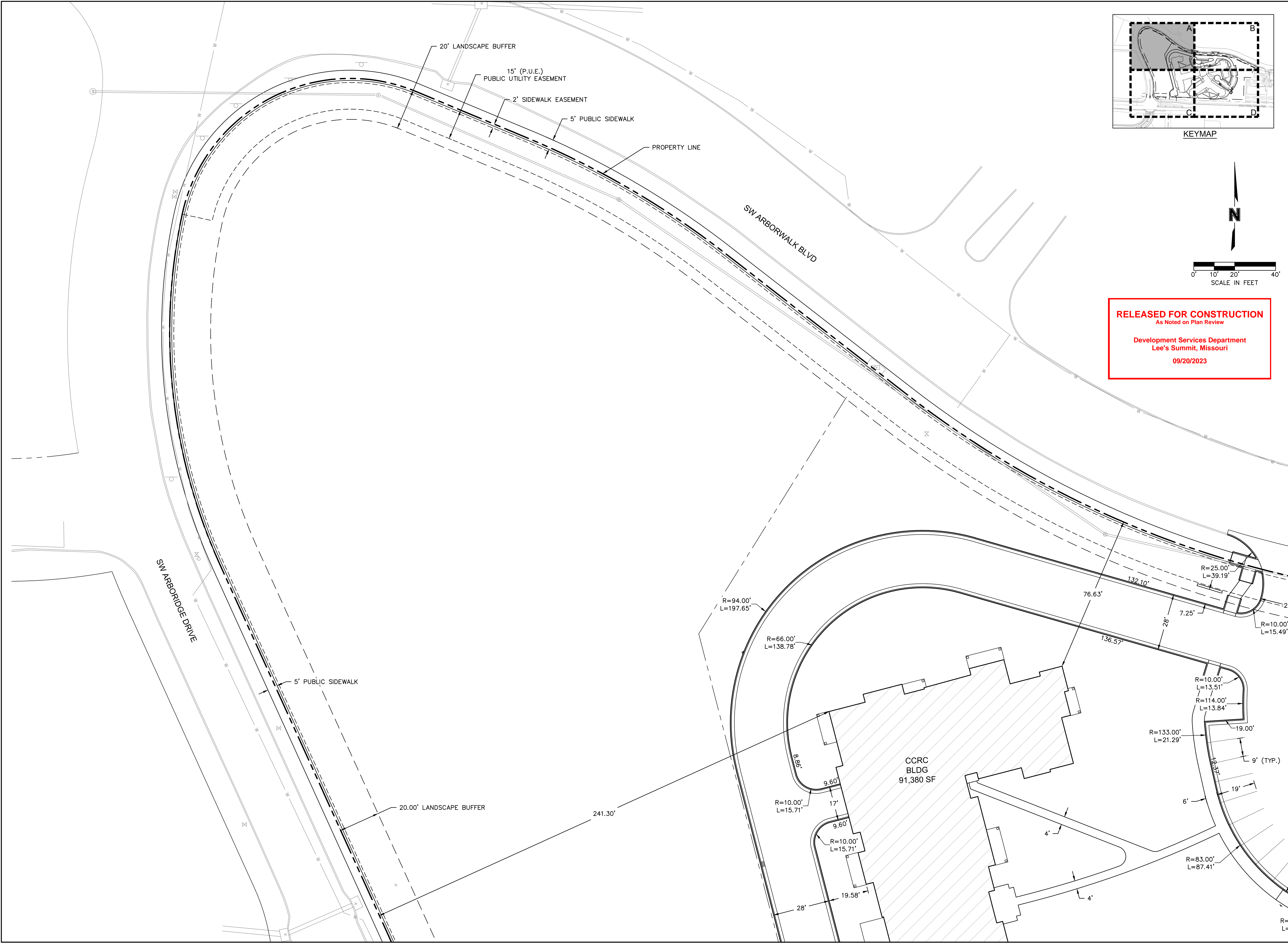
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2	01.20.2023	CITY COMMENTS	
3	03.03.2023	CITY COMMENTS	
4	08.31.2023	SIDEWALK RELOCATION	
5	09.14.2023	WATER MAIN UPDATES	

OVERALL DIMENSION PLAN	2023	REVISIONS
RAINTREE VILLAGE FINAL DEVELOPMENT PLAN		
LEE'S SUMMIT, MO		

drawn by: CSM  
checked by: CSM  
approved by: JS  
QA/QC by: JS  
project no.: A21-04054  
drawing no.: C SIT03\_A2104054  
date: 08.10.2022

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STATE OF MISSOURI  
JULIE ELAINE SELLERS  
NUMBER  
PE-2017000367  
9/18/23  
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10.10.2022	CITY COMMENTS	CSM
2	01.20.2023	CITY COMMENTS	
3	03.03.2023	CITY COMMENTS	
4	08.31.2023	SIDEWALK RELOCATION	
5	09.14.2023	WATER MAIN UPDATES	

REVISIONS	
2023	

DIMENSION PLAN (A)

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: CSM

checked by: CSM

approved by: JS

QA/QC by: JS

project no.: A21-04054

drawing no.: C-ST02\_A2104054

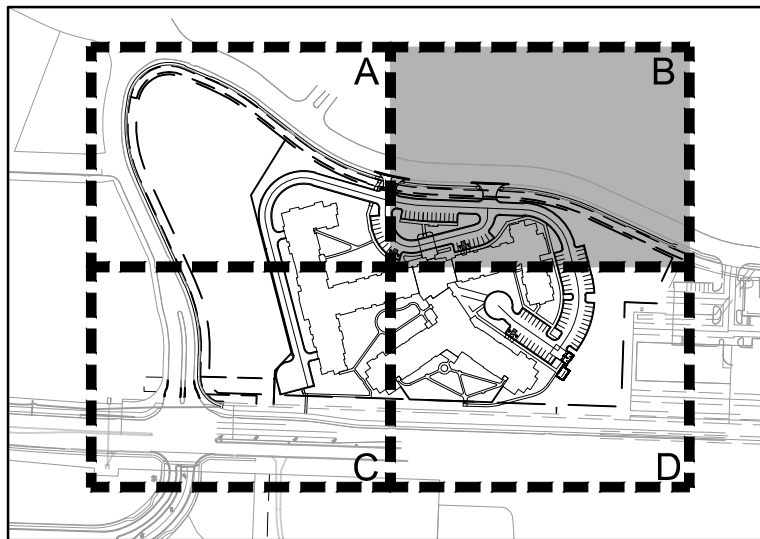
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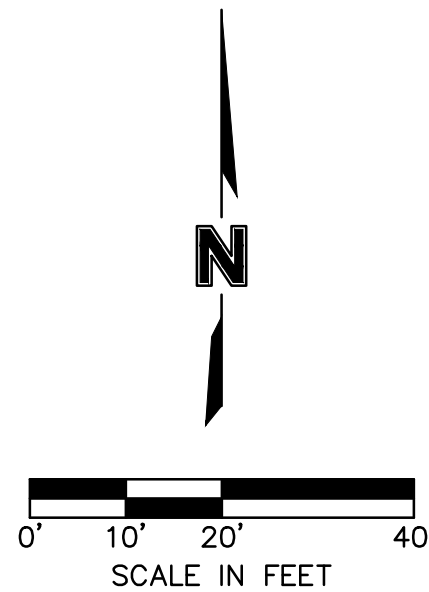
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KEYNOTES X

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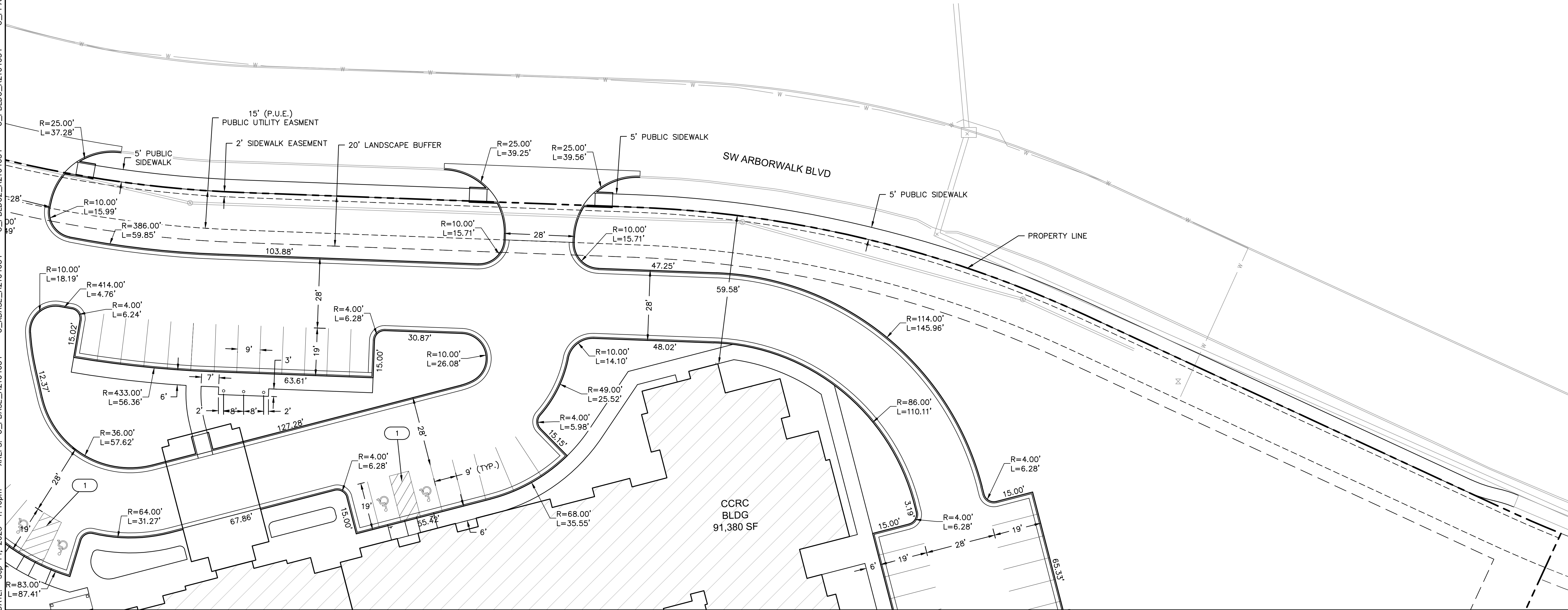
KEYMAP



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Development Services Department  
Lee's Summit, Missouri

09/20/2023



DIMENSION PLAN (B)

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

2023

drawn by: CSM  
checked by: CSM  
approved by: JS  
QA/QC by: JS  
project no.: A21-04054  
drawing no.: C-ST02-A2104054  
date: 08.10.2022

SHEET  
C3.3

BY

CSM

REVISIONS DESCRIPTION

REV. NO.

DATE

1

10.10.2022

2

01.20.2023

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03.03.2023

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08.31.2023

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09.14.2023

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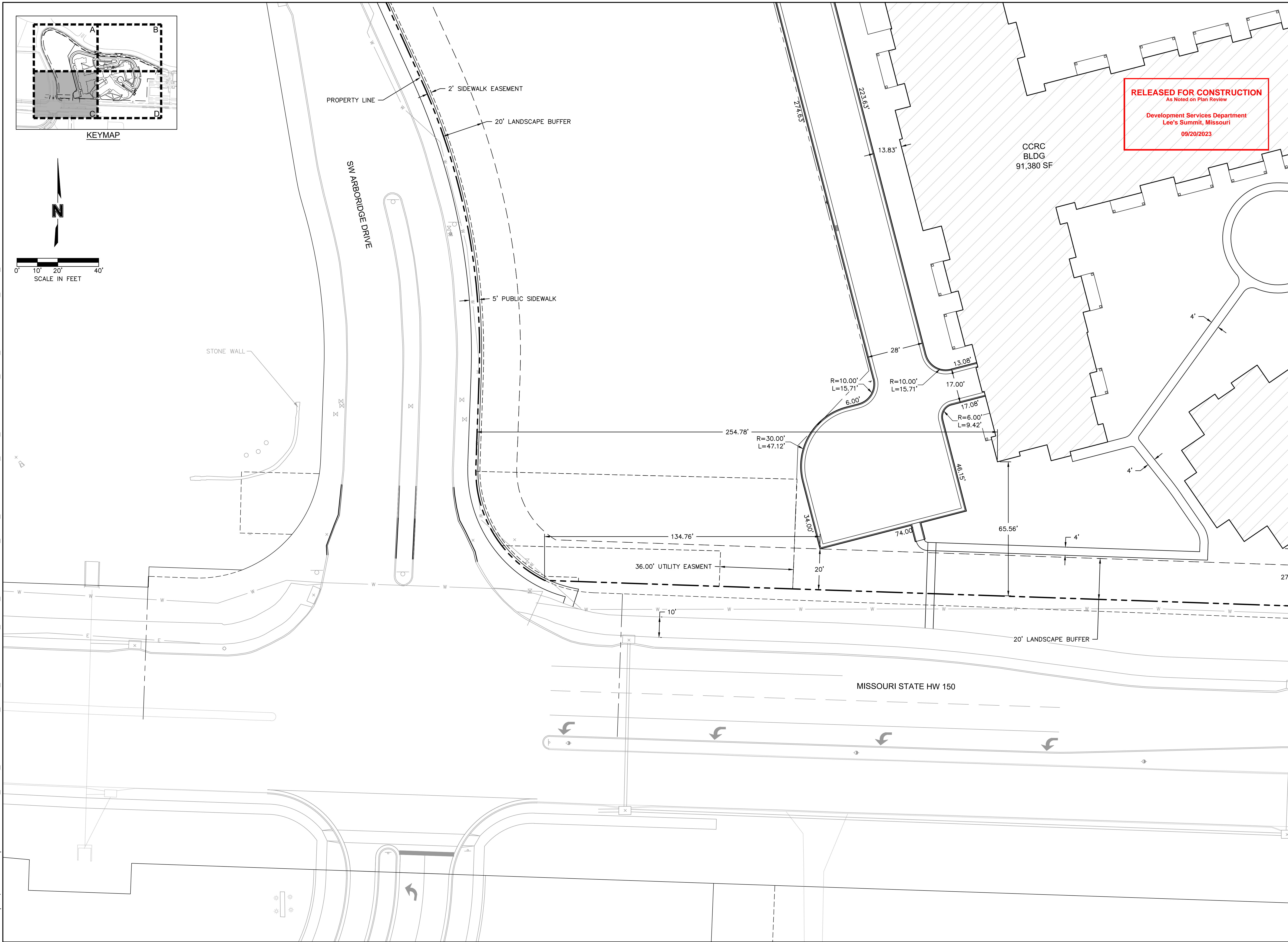
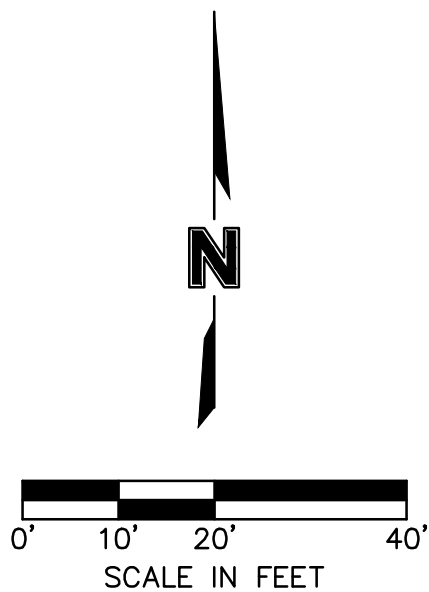
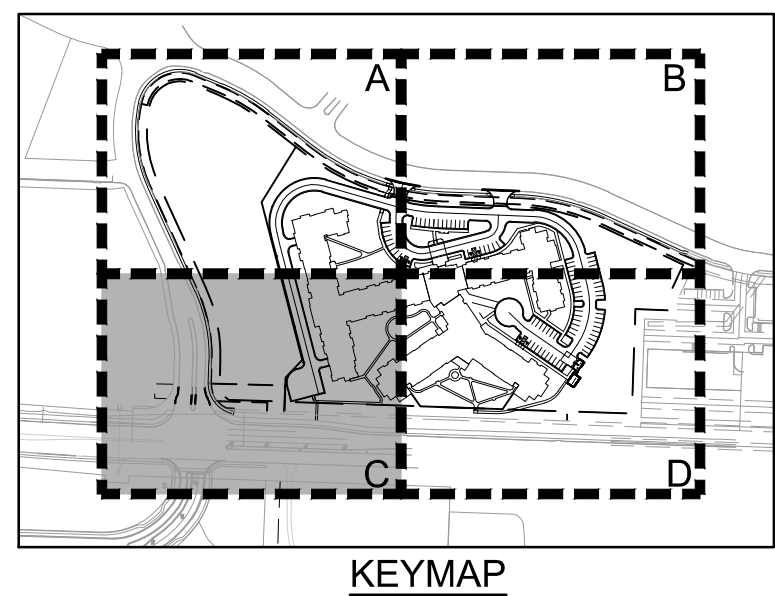
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REVISIONS

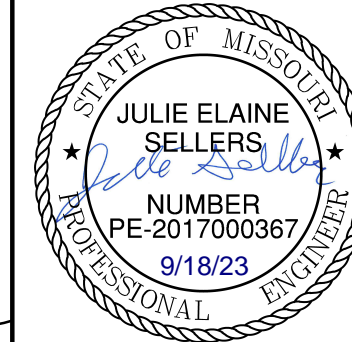


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**Lee's Summit, Missouri**

**09/20/2023**

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1	10.10.2022	CITY COMMENTS	CSM
2	01.20.2023	CITY COMMENTS	
3	03.03.2023	CITY COMMENTS	
4	03.03.2023	SUPPLEMENTAL SPECIFICATION	
5	09.14.2023	WATER MAIN UPDATES	

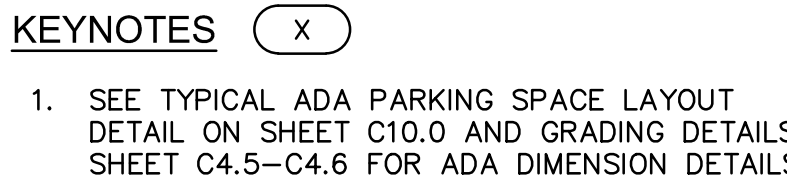
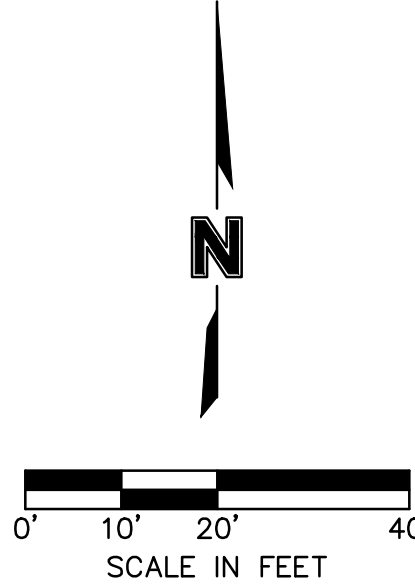
DIMENSION PLAN (C)

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: \_\_\_\_\_ CS  
checked by: \_\_\_\_\_ CS  
approved by: \_\_\_\_\_ J  
QA/QC by: \_\_\_\_\_ J  
project no.: \_\_\_\_\_ A21-0405  
drawing no.: C SIT02 A210405  
date: \_\_\_\_\_ 08.10.2021

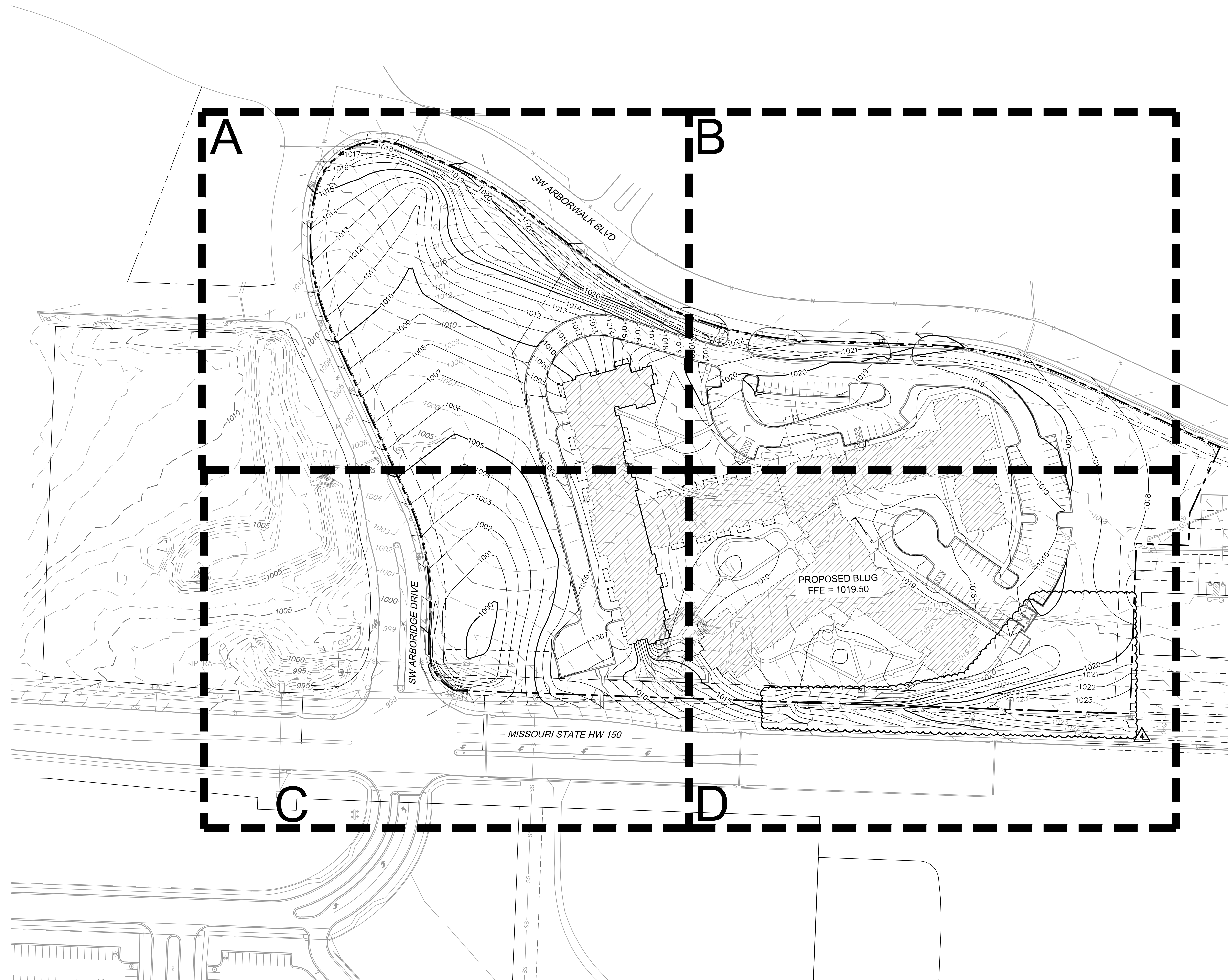
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STATE OF MISSOURI  
JULIE ELAINE  
SELLERS  
NUMBER  
PE-2017000367  
9/18/23  
PROFESSIONAL ENGINEER





### GRADING PLAN LEGEND

———1020———— FINISHED GRADE MAJOR CONTOUR  
 ———1021———— FINISHED GRADE MINOR CONTOUR  
 - - -1020- - - EXISTING GRADE MAJOR CONTOUR  
 - - -1021- - - EXISTING GRADE MINOR CONTOUR  
 ———- - -———— PROPOSED PROPERTY LINE

### GRADING PLAN NOTES

1. THE FINISHED GRADE CONTOUR LINES, SPOT ELEVATIONS AND BUILDING FLOOR ELEVATIONS SHOWN ARE TO SURFACE OF PAVEMENT, FINISHED GRADE EXCLUDING GRADES ADJACENT TO STRUCTURES ETC. REFER TO TYPICAL SECTIONS FOR PAVING, SLAB AND AGGREGATE BASE THICKNESS TO DEDUCT PAVEMENT DEPTH FROM ELEVATIONS SHOWN.
2. THE CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL.
3. THE CONTRACTOR SHALL GRADE LANDSCAPED AREAS TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING AND SIDEWALKS WHEN FINISH LANDSCAPE MATERIALS ARE IN PLACE. THE CONTRACTOR SHALL CONTACT THE ENGINEER REGARDING ANY LOCATIONS WHERE THIS MAY NOT BE FEASIBLE.
4. SPOT ELEVATIONS ARE TO EDGE OF PAVEMENT, LIP OF CURB, OR FINISHED GRADE UNLESS OTHERWISE INDICATED. (SEE LEGEND)

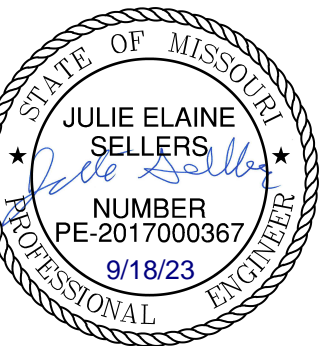
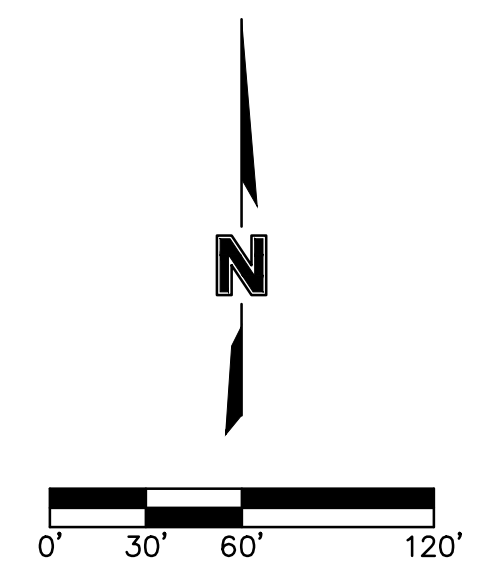
EARTHWORK QUANTITIES		
CUT (C.Y.)	FILL (C.Y.)	NET (C.Y.)
14,832	36,703	21,871 (FILL)

EARTHWORK QUANTITIES NOTES:

1. EARTHWORK QUANTITIES BASED ON FINISHED GRADE SURFACE AND DO NOT INCLUDE ADJUSTMENTS FOR TOPSOIL AND SHRINKAGE.
2. EARTHWORK QUANTITIES DO NOT TAKE INTO CONSIDERATION EXCAVATION, REMOVAL AND DISPOSAL OF MATERIAL DEEMED UNSUITABLE BY A GEOTECHNICAL ENGINEER. THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL AND FOR REPLACING IT WITH SUITABLE MATERIAL.

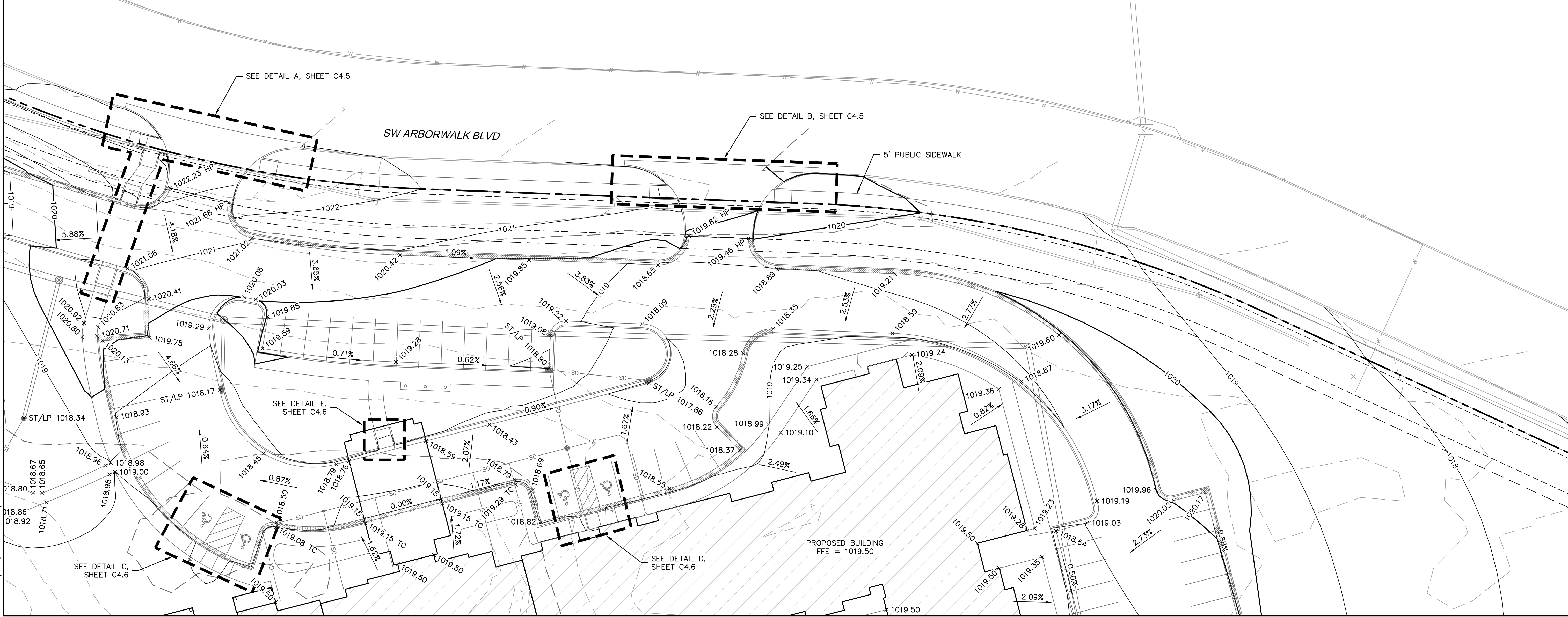
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**Development Services Department**  
**Lee's Summit, Missouri**  
**09/20/2023**





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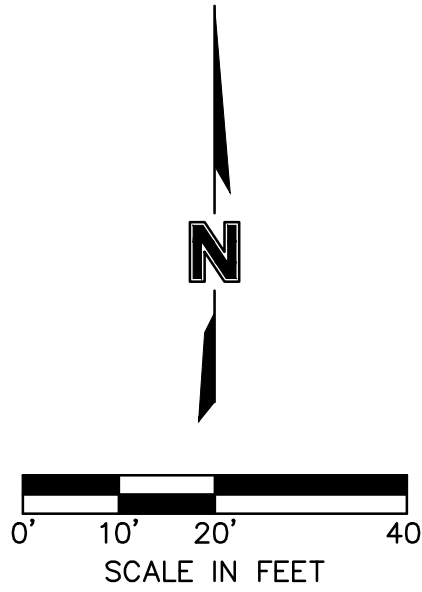
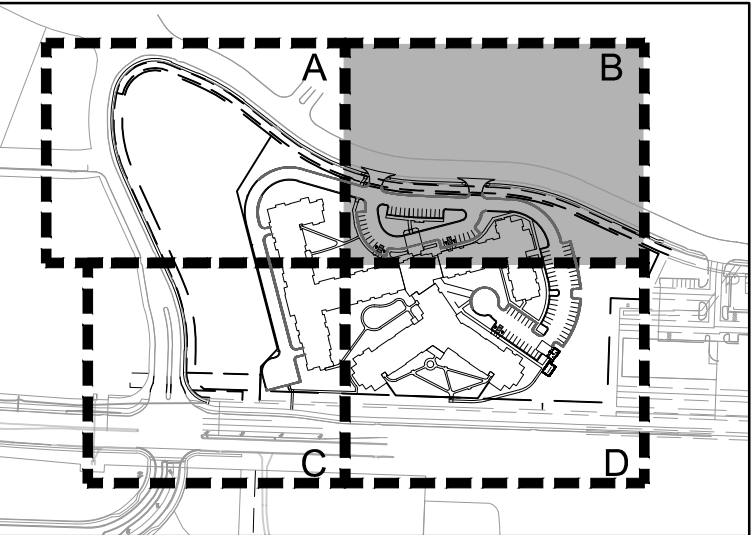
LEGEND

- 1020 FINISHED GRADE MAJOR CONTOUR
- 1021 FINISHED GRADE MINOR CONTOUR
- 1020 EXISTING GRADE MAJOR CONTOUR
- 1021 EXISTING GRADE MINOR CONTOUR
- PROPOSED PROPERTY LINE
- PROPOSED FLOWLINE
- PROPOSED RIDGE LINE
- INSTALL STRAIGHT BACK "WET" CURB & GUTTER
- INSTALL STRAIGHT BACK "DRY" CURB & GUTTER
- TRANSITION BETWEEN "WET" AND "DRY" CURB & GUTTER
- INSTALL RIBBON CURB

SPOT ELEVATION LEGEND:

ALL SPOT ELEVATIONS ARE TO EDGE OF PAVEMENT, LIP OF CURB, AND/OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED AS BELOW. SPOT ELEVATIONS AT FACE OF STRUCTURES INDICATES FEATURES ADJACENT TO STRUCTURE, NOT THE STRUCTURE ITSELF.

- FFE FINISHED FLOOR ELEVATION
- HP HIGH POINT
- LP LOW POINT
- TC TOP OF CURB AT BACK
- TS TOP OF STRUCTURE
- ME MATCH EXISTING
- PV PAVEMENT

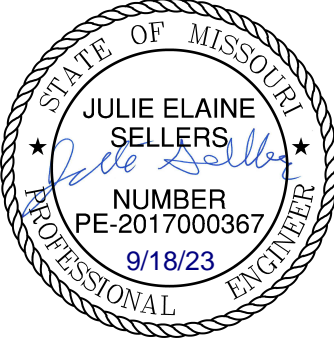


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Lee's Summit, Missouri  
  
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SPOT ELEVATIONS (B)			REVISIONS				
RAINTREE VILLAGE FINAL DEVELOPMENT PLAN			2023				
LEE'S SUMMIT, MO							
REV. NO.	DATE	DESCRIPTION	BY	CSM			
1	10.10.2022	GITY COMMENTS					
2	01.20.2023	GITY COMMENTS					
3	03.03.2023	GITY COMMENTS					
4	08.21.2023	SIDEWALK RELOCATION					
5	08.14.2023	WATER MAIN UPDATES					

drawn by: CSM  
checked by: CSM  
approved by: JS  
QA/QC by: JS  
project no.: A21-04054  
drawing no.: C GRD02\_A2104054  
date: 08.10.2022

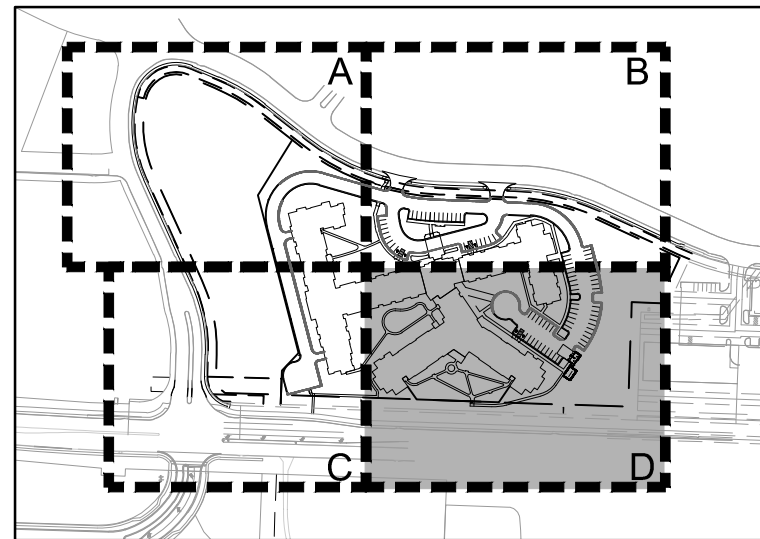
SHEET  
C4.2



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## KEYMAP



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As Noted on Plan Review

Development Services Department  
Lee's Summit, Missouri  
09/20/2023

### LEGEND

	FINISHED GRADE MAJOR CONTOUR
	FINISHED GRADE MINOR CONTOUR
	EXISTING GRADE MAJOR CONTOUR
	EXISTING GRADE MINOR CONTOUR
	PROPOSED PROPERTY LINE
	PROPOSED FLOWLINE
	PROPOSED RIDGE LINE
	INSTALL STRAIGHT BACK "WET" CURB & GUTTER
	INSTALL STRAIGHT BACK "DRY" CURB & GUTTER
	TRANSITION BETWEEN "WET" AND "DRY" CURB & GUTTER
	INSTALL RIBBON CURB

SPOT ELEVATION LEGEND:

ALL SPOT ELEVATIONS ARE TO EDGE OF PAVEMENT, LIP OF CURB, AND/OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED AS BELOW. SPOT ELEVATIONS AT FACE OF STRUCTURES INDICATES FEATURES ADJACENT TO STRUCTURE, NOT THE STRUCTURE ITSELF.

FFE FINISHED FLOOR ELEVATION  
HP HIGH POINT  
LP LOW POINT  
TC TOP OF CURB AT BACK  
TS TOP OF STRUCTURE  
ME MATCH EXISTING  
PV PAVEMENT

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10.10.2022	CITY COMMENTS	CSM
2	01.20.2023	CITY COMMENTS	
3	03.31.2023	CONCRETE	
4	09.14.2023	SIGMA SECTION	
5	09.14.2023	WATER MAIN UPDATES	

○ ○ ○ ○

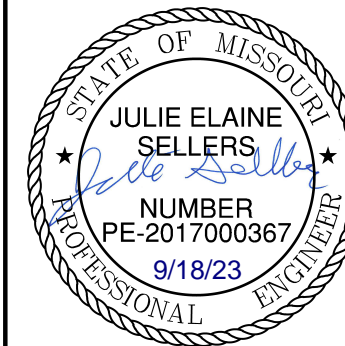
SPOT ELEVATIONS (D)

# RAINTREE VILLAGE FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: \_\_\_\_\_ CS  
checked by: \_\_\_\_\_ CS  
approved by: \_\_\_\_\_ J  
QA/QC by: \_\_\_\_\_ J  
project no.: \_\_\_\_\_ A21-0405  
drawing no.: C GRD02 A210405  
date: \_\_\_\_\_ 08.10.202

SHEET  
C4.4





SPOT ELEVATION LEGEND:

ALL SPOT ELEVATIONS ARE TO EDGE OF PAVEMENT, LIP OF CURB, AND/OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED AS BELOW. SPOT ELEVATIONS AT FACE OF STRUCTURES INDICATES FEATURES ADJACENT TO STRUCTURE, NOT THE STRUCTURE ITSELF.

FFE FINISHED FLOOR ELEVATION  
HP HIGH POINT  
LP LOW POINT  
TC TOP OF CURB AT BACK  
TS TOP OF STRUCTURE  
ME MATCH EXISTING  
PV PAVEMENT

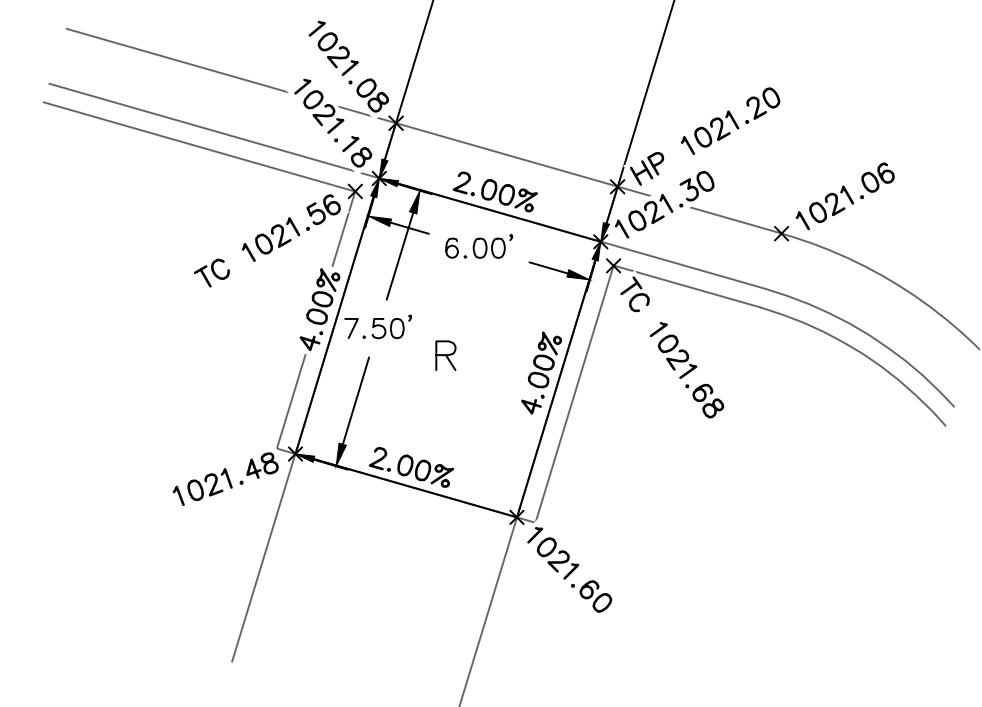
SIDEWALK RAMP LEGEND:

T	TRANSITION
L	LANDING
R	RAMP

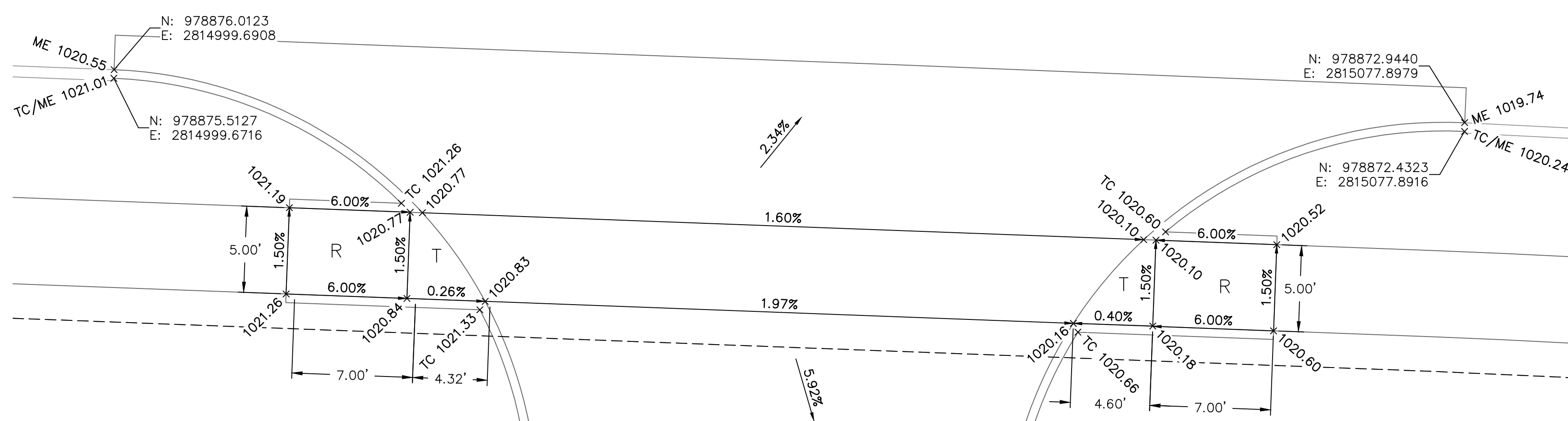
**RELEASED FOR CONSTRUCTION**  
As Noted on Plan Review

**Development Services Department**  
**Lee's Summit, Missouri**

09/20/2023



DETAIL 'A'  
SCALE: 1"=5'



DETAIL 'B'  
SCALE: 1"=5'

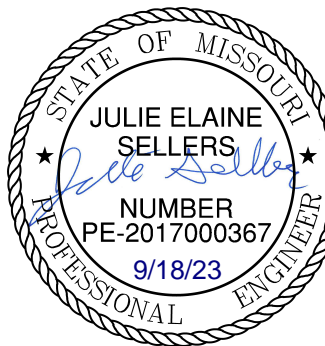
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1	10.10.2022	CITY COMMENTS	CSM
2	01.24.2023	CITY COMMENTS	
3	03.03.2023	CITY COMMENTS	
4	08.31.2023	SIDEWALK RELOCATION	
5	09.14.2023	WATER MAIN UPDATES	

## REVISIONS

2023

## GRADING DETAILS

# RAINTREE VILLAGE FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: \_\_\_\_\_ CS  
checked by: \_\_\_\_\_ CS  
approved by: \_\_\_\_\_ J  
QA/QC by: \_\_\_\_\_ J  
project no.: \_\_\_\_\_ A21-0405  
drawing no.: C GRD02 A210405  
date: \_\_\_\_\_ 08.10.2021

SHEET  
C4.5



REV.	NO.	DATE	REVISIONS DESCRIPTION	BY
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2	01.20.2023	01.20.2023	CITY COMMENTS	
3	03.03.2023	03.03.2023	CITY COMMENTS	
4	08.21.2023	08.21.2023	SIDEWALK RELOCATION	
5	08.14.2023	08.14.2023	WATER MAIN UPDATES	

REVISIONS

OVERALL UTILITY PLAN

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

2023

LEE'S SUMMIT, MO

drawn by: CSM  
checked by: CSM  
approved by: JS  
QA/QC by: JS  
project no.: A21-04054  
drawing no.: C\_UTL01\_A2104054  
date: 08.10.2022

SHEET  
C5.0

LEGEND

- GAS ——— NATURAL GAS SERVICE
- P-UG ——— POWER SERVICE
- SS ——— SANITARY SEWER SERVICE (SHEET C7.0)
- SD ——— STORM SEWER (SHEETS C6.1-C6.3)
- W ——— DOMESTIC WATER LINE (SHEET C8.0)
- FP ——— FIRE PROTECTION LINE (SHEET C8.0)
- P-UG ——— EXISTING POWER SERVICE
- SS ——— EXISTING SANITARY SEWER
- SD ——— EXISTING STORM SEWER
- W ——— EXISTING WATER SERVICE

STORM SEWER (ST)

NOTE: THE STORM SEWER DESIGN IS DETAILED ON SHEETS C7.0 TO C7.3. REFER TO MEP PLANS FOR CONTINUATION THROUGH BUILDING.

SANITARY SEWER (SS)

NOTE: THE SANITARY SEWER DESIGN IS DETAILED ON SHEET C8.0. REFER TO MEP PLANS FOR CONTINUATION INTO BUILDING.

WATER MAIN (W)

NOTE: THE WATER MAIN DESIGN IS DETAILED ON SHEET C9.0 TO C9.5. REFER TO MEP PLANS FOR CONTINUATION INTO BUILDING.

POWER SERVICE (P)

NOTE: CONTRACTOR SHALL COORDINATE ALL POWER INSTALLATIONS WITH MEP PLANS AND SHALL CONFORM WITH ALL LOCAL CODES AND ORDINANCES. CONTRACTOR SHALL CONTACT ENGINEER WITH ANY CONFLICT PRIOR TO INSTALLATION.

NOTE: PRIMARY CONDUIT ROUTING SHOWN IS PROPOSED ONLY. FINAL DESIGN BY SERVICE PROVIDER. CONTRACTOR SHALL CONTACT ENGINEER WITH ANY CONFLICTS.

P1 INSTALL 379 LF OF 2" CONDUIT WITH PULL WIRE FOR PRIMARY POWER SERVICE. COORDINATE INSTALLATION WITH SERVICE PROVIDER.

P2 INSTALL TRANSFORMER PAD AND RISERS PER SERVICE PROVIDER'S STANDARDS AND SPECIFICATIONS. COORDINATE INSTALLATION OF TRANSFORMER WITH UTILITY.

P3 INSTALL GENERATOR, SEE MEP PLANS FOR ADDITIONAL INFORMATION

P4 INSTALL 613 LF OF 2" CONDUIT WITH PULL WIRE FOR PRIMARY POWER SERVICE. COORDINATE INSTALLATION WITH SERVICE PROVIDER.

P5 INSTALL 305 LF OF 2" CONDUIT WITH PULL WIRE FOR PRIMARY POWER SERVICE. COORDINATE INSTALLATION WITH SERVICE PROVIDER.

COMMUNICATIONS (C)

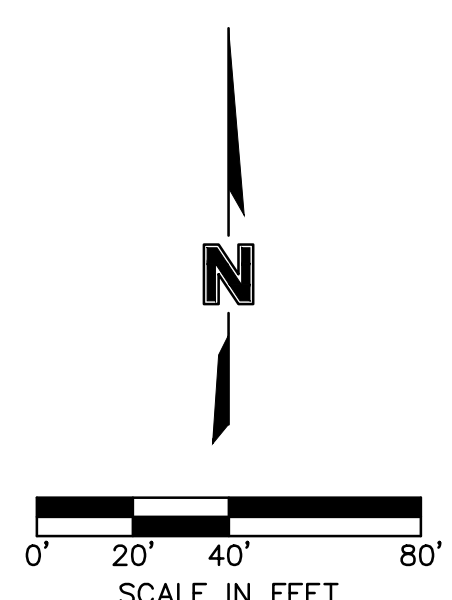
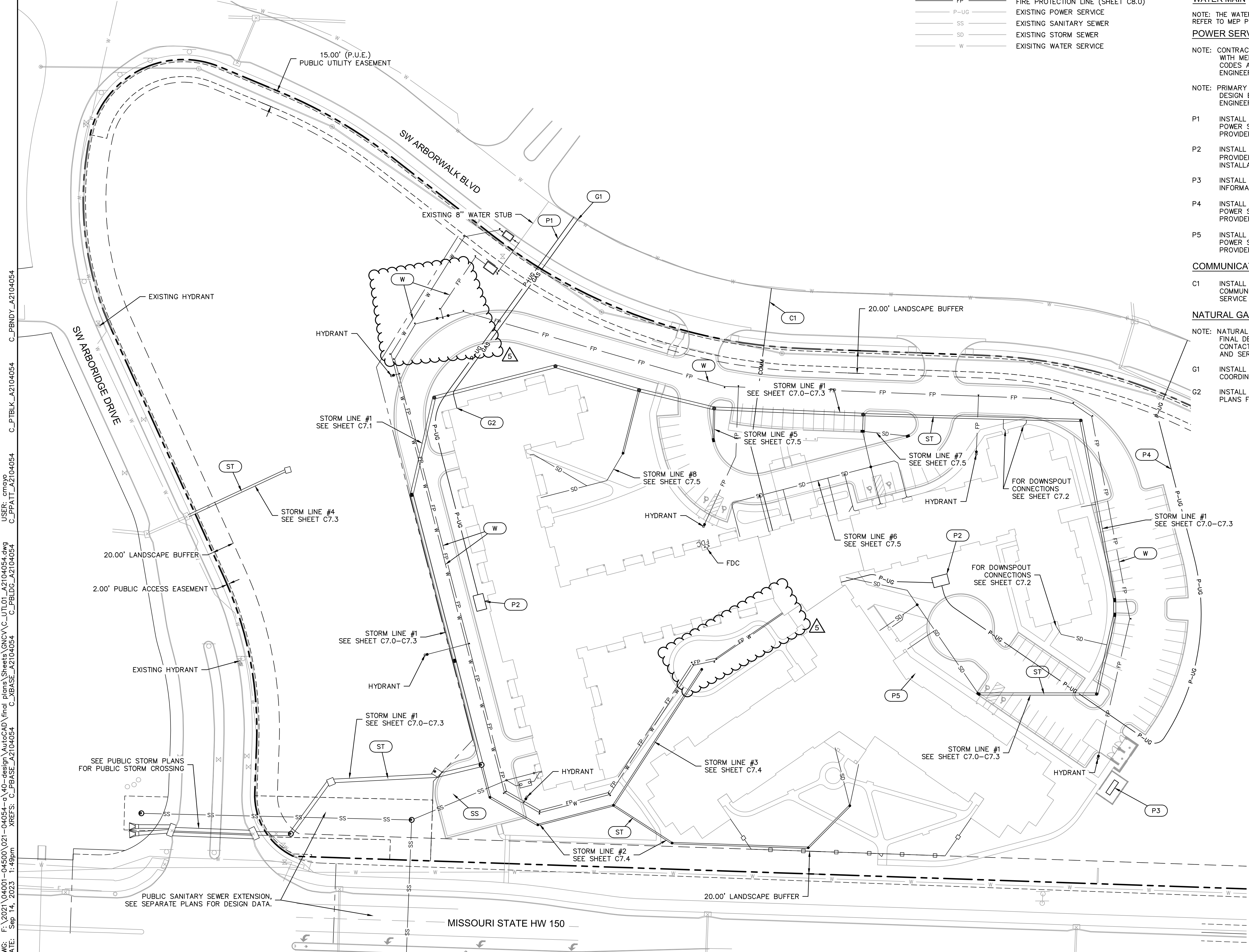
C1 INSTALL 217 LF OF TWO (2) X" CONDUITS WITH PULL WIRE FOR COMMUNICATION SERVICE. COORDINATE INSTALLATION WITH SERVICE PROVIDER

NATURAL GAS SERVICE (G)

NOTE: NATURAL GAS SERVICE ROUTING SHOWN IS PROPOSED ONLY. FINAL DESIGN BY SERVICE PROVIDER. CONTRACTOR SHALL CONTACT ENGINEER WITH ANY CONFLICTS. METER LOCATION AND SERVICE SIZING PER MEP PLAN AND SERVICE PROVIDER.

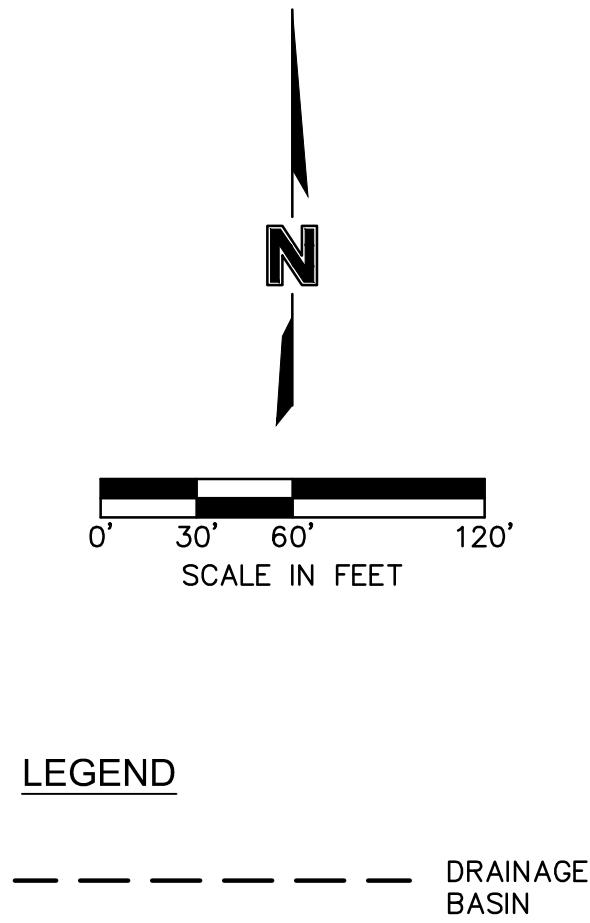
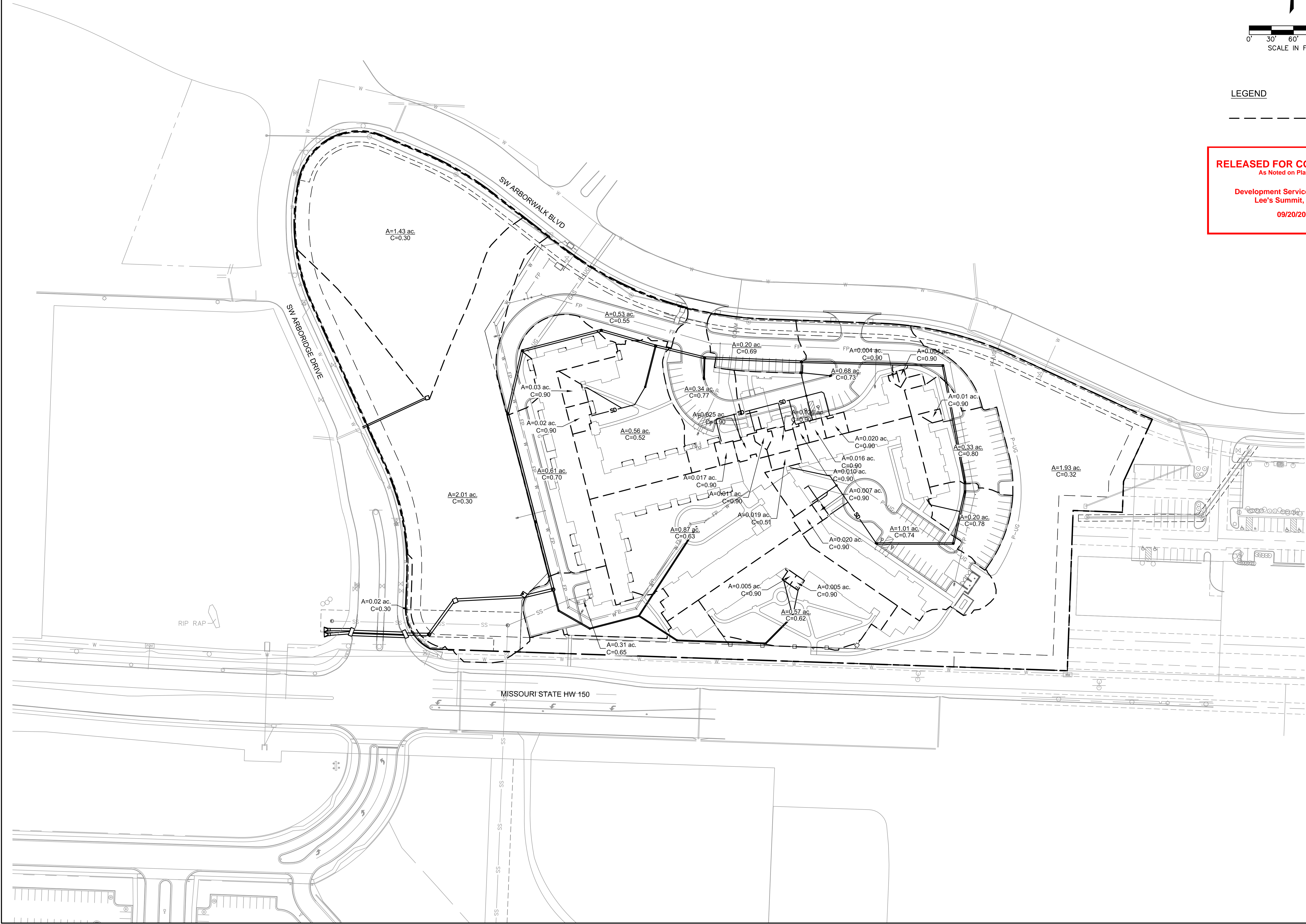
G1 INSTALL 202 LF OF PIPE FOR NATURAL GAS SERVICE. COORDINATE SIZE AND MATERIAL WITH SERVICE PROVIDER.

G2 INSTALL GAS METER AND CONNECT TO BUILDING. SEE MEP PLANS FOR CONTINUATION.



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xroof



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09/20/2023

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JULIE ELAINE  
SELLERS  
NUMBER  
PE-2017000367  
9/18/23  
PROFESSIONAL ENGINEER

REV.	NO.	DATE	REVISIONS DESCRIPTION	BY
1	10.10.2022	CITY COMMENTS	CSM	
2	01.20.2023	CITY COMMENTS		
3	03.03.2023	CITY COMMENTS		
4	08.21.2023	SIDEWALK RELOCATION		
5	08.14.2023	WATER MAIN UPDATES		

REVISIONS

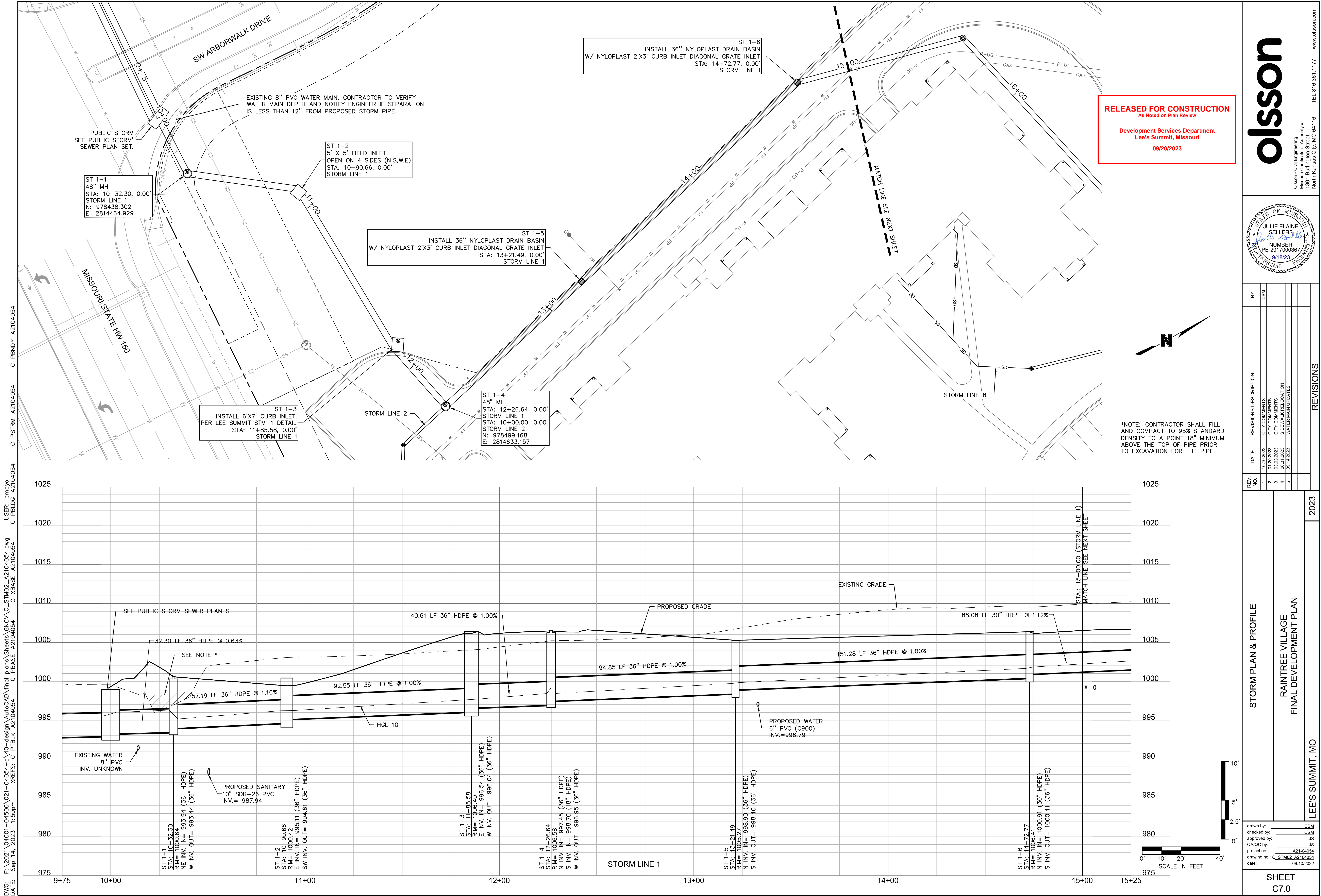
STORMWATER MANAGEMENT PLAN

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: CSM  
checked by: CSM  
approved by: JS  
QA/QC by: JS  
project no.: A21-04054  
drawing no.: C\_STM01\_A2104054  
date: 08.10.2022

SHEET  
C6.0



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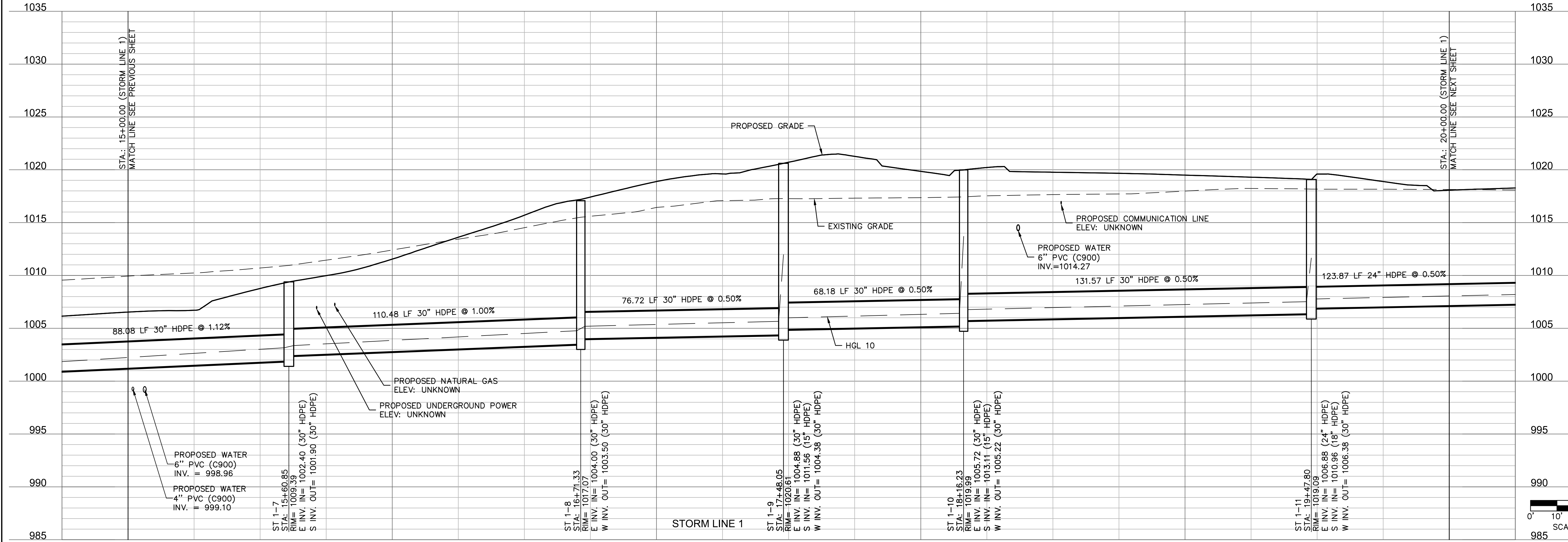
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STORM PLAN & PROFILE  
RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN  
LEE'S SUMMIT, MO

drawn by: CSM  
checked by: CSM  
approved by: JS  
QA/QC by: JS  
project no.: A21-04054  
drawing no.: C\_STM02\_A2104054  
date: 08.10.2022

SHEET  
C7.0

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USER: emn29



ST 1-7  
INSTALL 36" NYLOPLAST DRAIN BASIN  
W/ SOLID LID  
STA: 15+60.85, 0.00'  
STORM LINE 1

ST 1-8  
INSTALL 36" NYLOPLAST DRAIN BASIN  
W/ SOLID LID  
STA: 16+71.33, 0.00'  
STORM LINE 1

ST 1-9  
INSTALL 36" NYLOPLAST DRAIN BASIN  
W/ SOLID LID  
STA: 17+48.05, 0.00'  
STORM LINE 1

ST 1-10  
INSTALL 36" NYLOPLAST DRAIN BASIN  
W/ SOLID LID  
STA: 18+16.23, 0.00'  
STORM LINE 1

ST 1-11  
INSTALL 36" NYLOPLAST DRAIN BASIN  
W/ SOLID TRAFFIC RATED LID  
STA: 19+47.80, 0.00'  
STORM LINE 1

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Development Services Department  
Lee's Summit, Missouri  
09/20/2023

\*NOTE: CONTRACTOR SHALL FILL  
AND COMPACT TO 95% STANDARD  
DENSITY TO A POINT 18" MINIMUM  
ABOVE THE TOP OF PIPE PRIOR  
TO EXCAVATION FOR THE PIPE.



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STATE OF MISSOURI  
JULIE ELAINE  
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9/18/23  
PROFESSIONAL ENGINEER

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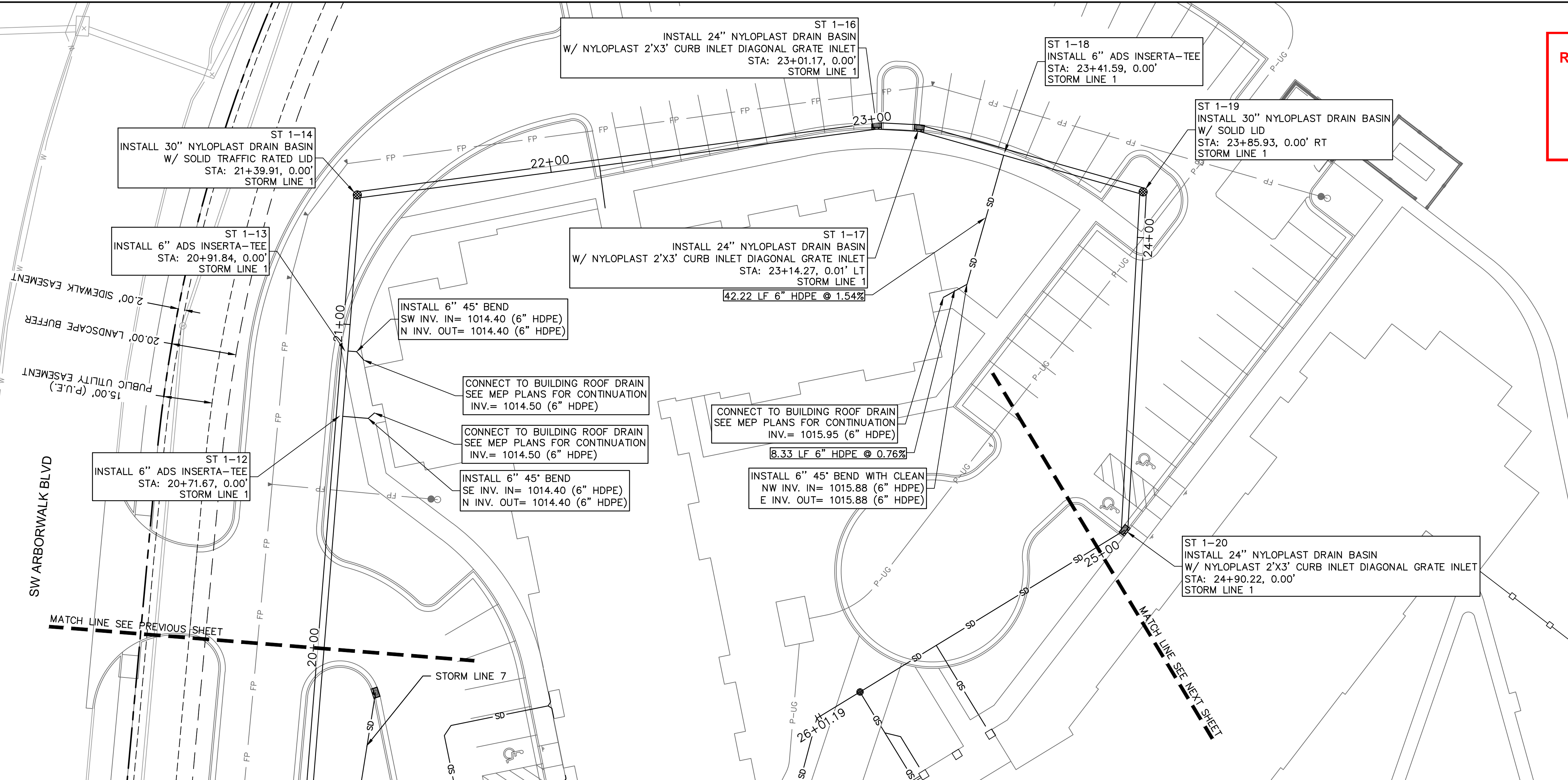
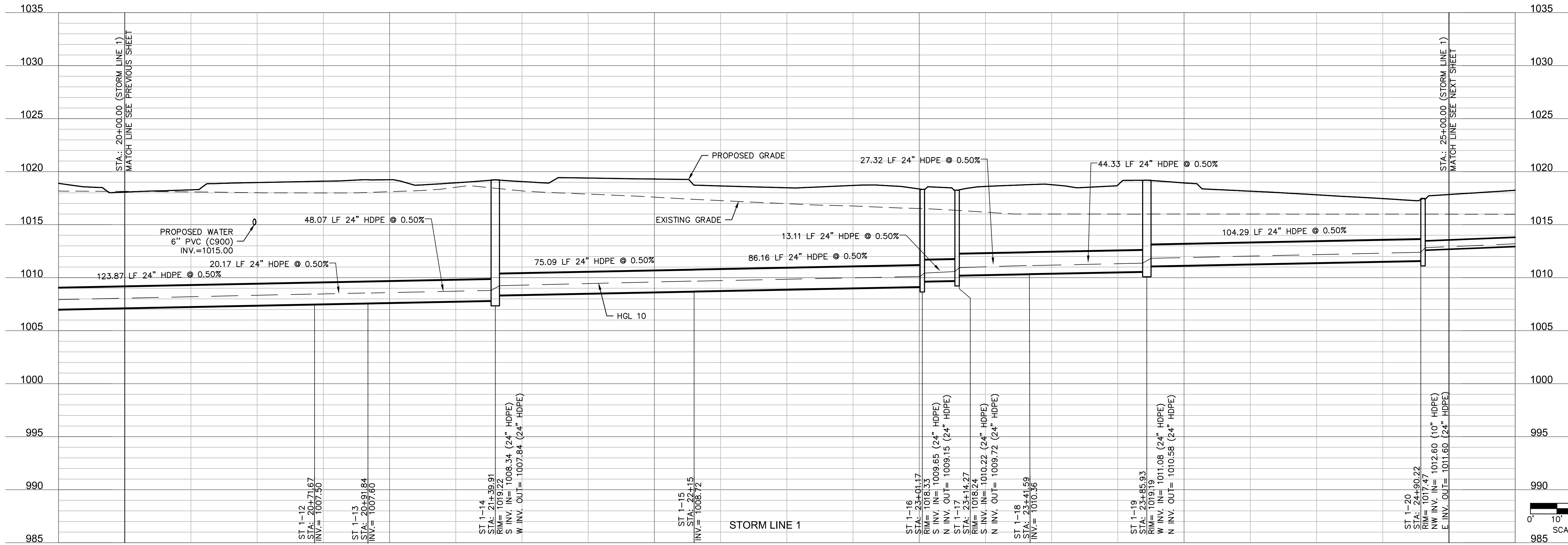
2023

STORM PLAN & PROFILE  
RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN  
LEE'S SUMMIT, MO

drawn by: CSM  
checked by: CSM  
approved by: JS  
QA/QC by: JS  
project no.: A21-04054  
drawing no.: C\_STM02\_A2104054  
date: 08.10.2022

SHEET  
C7.1

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\*NOTE: CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.

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Lee's Summit, Missouri  
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REVISIONS
2023

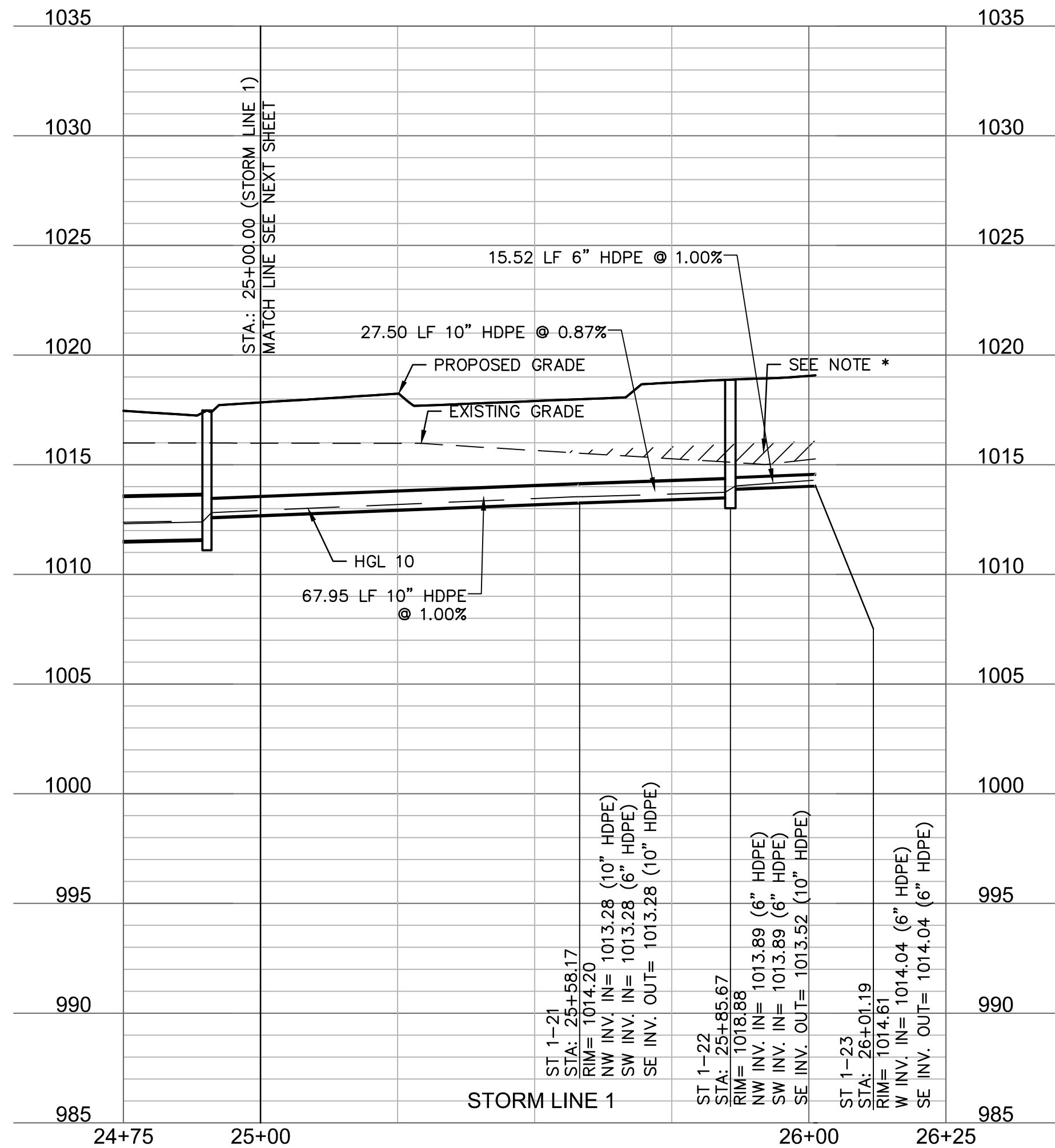
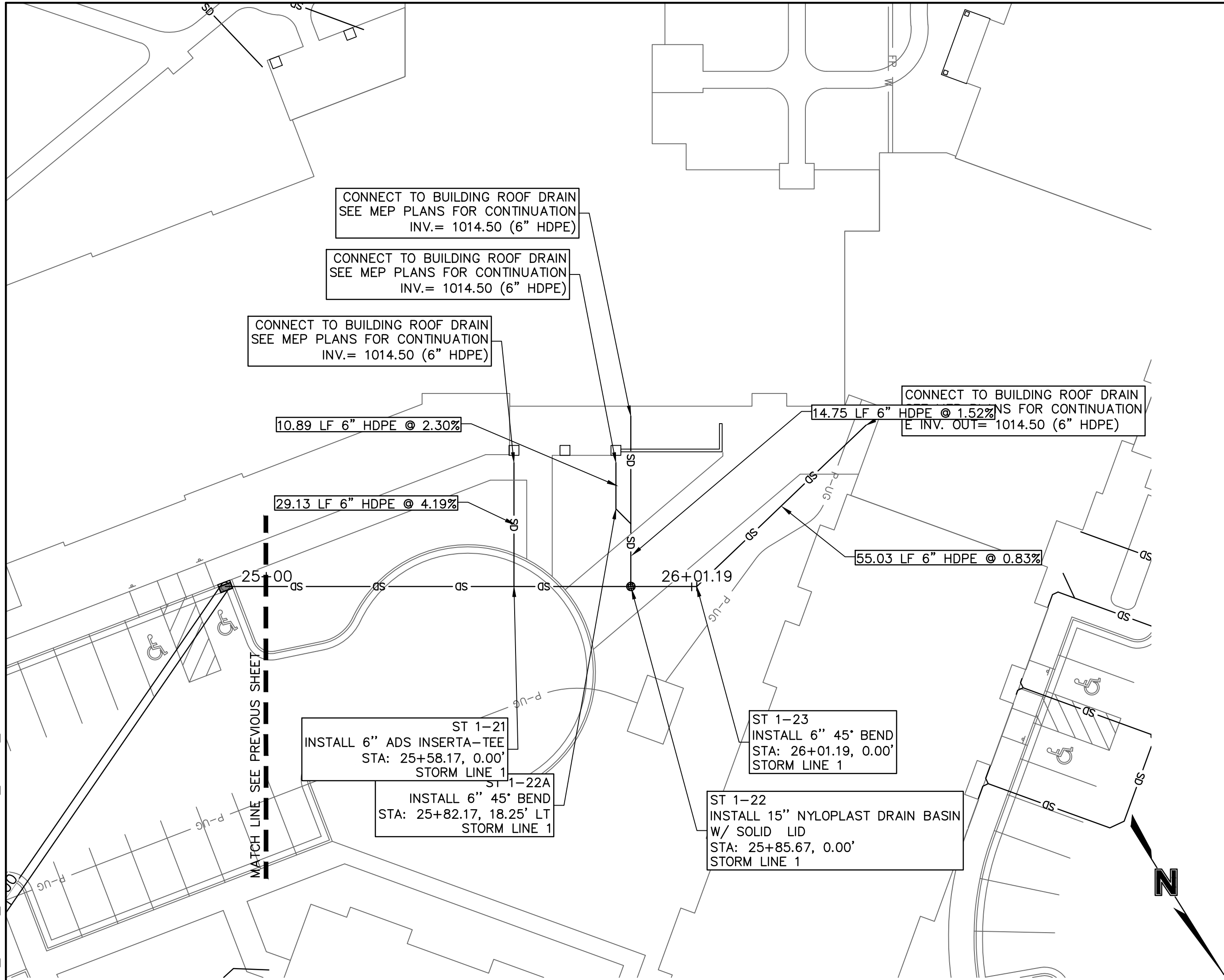
STORM PLAN & PROFILE

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

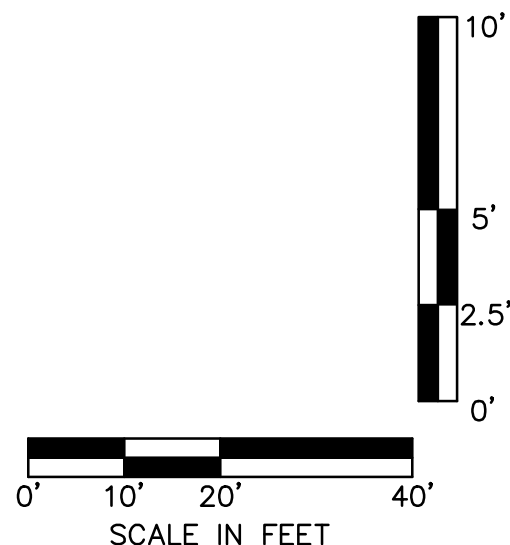
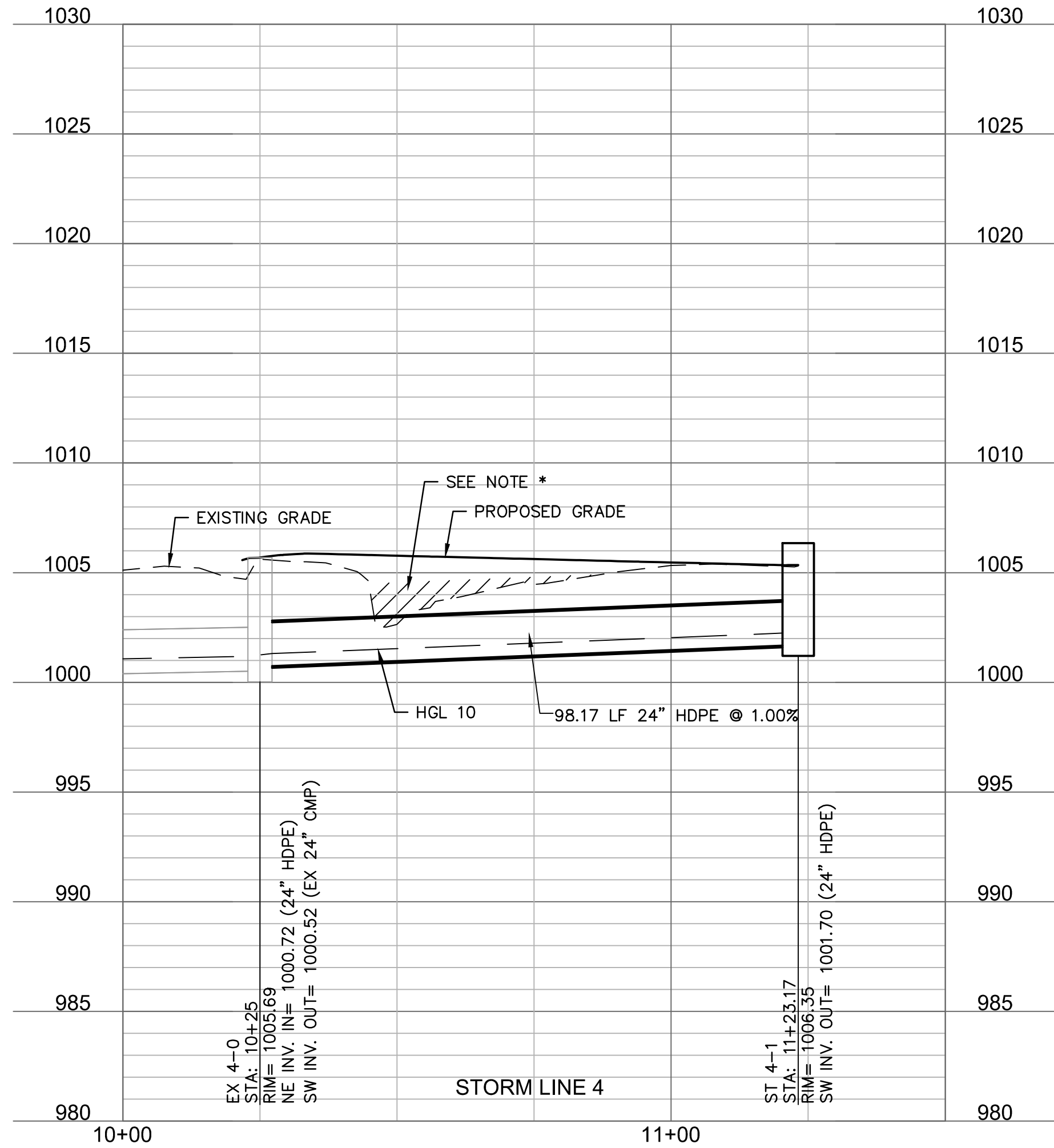
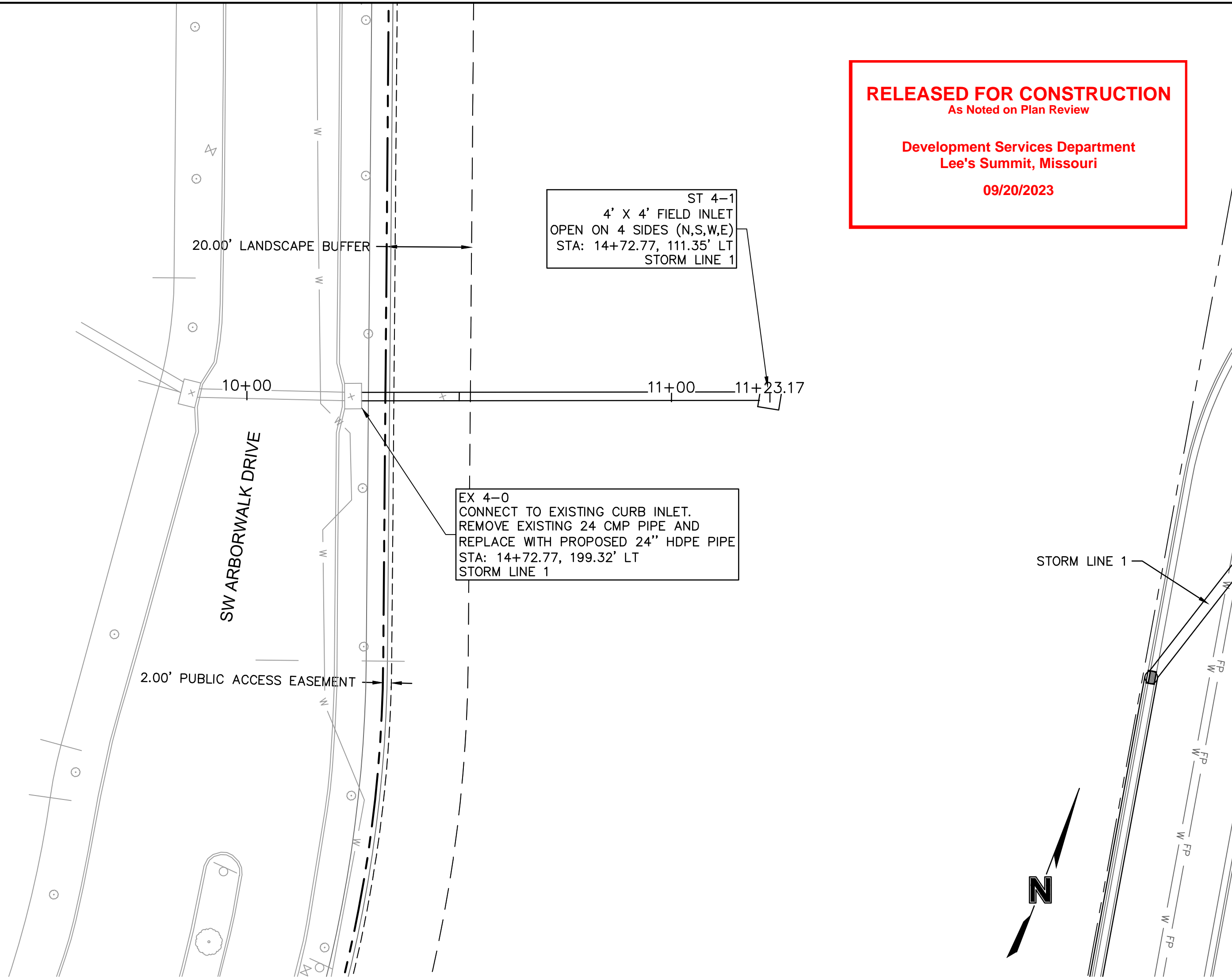
LEE'S SUMMIT, MO

drawn by: CSM  
checked by: CSM  
approved by: JS  
QA/QC by: JS  
project no.: A21-04054  
drawing no.: C\_STM02\_A2104054  
date: 08/10/2022

SHEET  
C7.2



\*NOTE: CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.



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Lee's Summit, Missouri

09/20/2023

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STATE OF MISSOURI  
JULIE ELAINE  
SELLERS  
Professional Engineer  
NUMBER  
PE-2017000367  
9/18/23

BY  
CSM

REVISIONS DESCRIPTION  
1 10.10.2022 CITY COMMENTS  
2 01.20.2023 CITY COMMENTS  
3 03.03.2023 CITY COMMENTS  
4 08.21.2023 SIDEWALK RELOCATION  
5 08.14.2023 WATER MAIN UPDATES

REV. NO.  
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2  
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4  
5

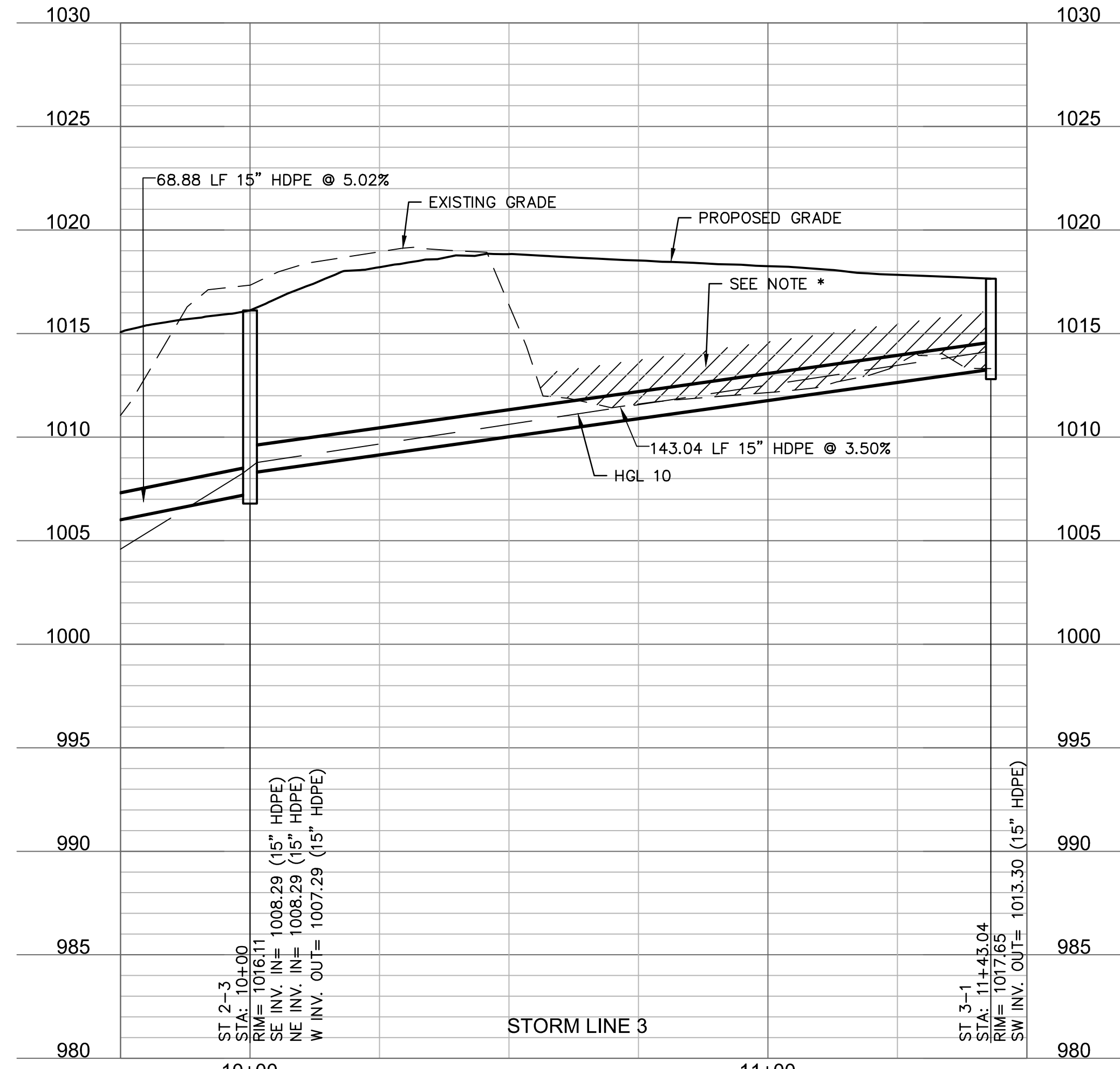
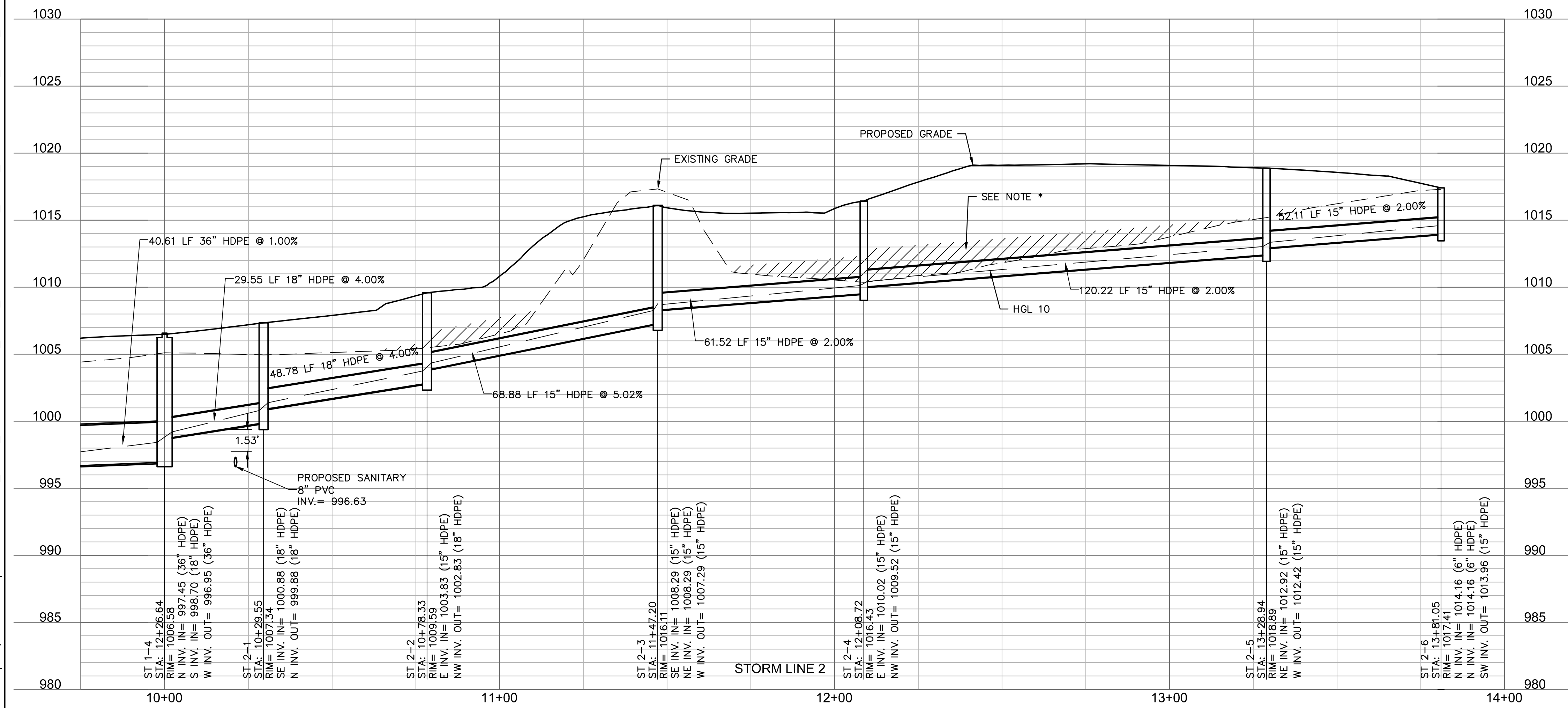
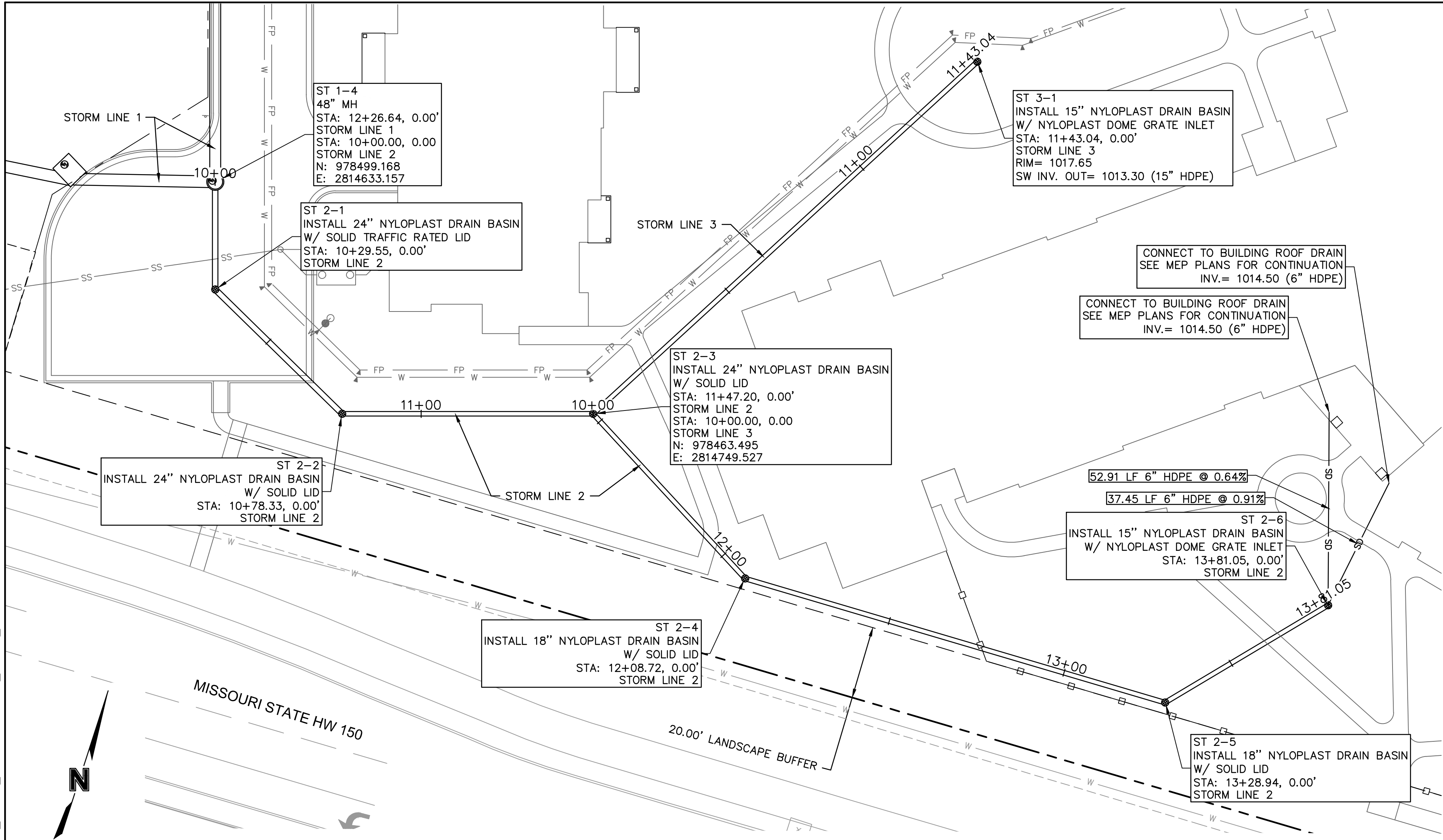
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REVISIONS  
2023

STORM PLAN & PROFILE  
RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN  
LEE'S SUMMIT, MO

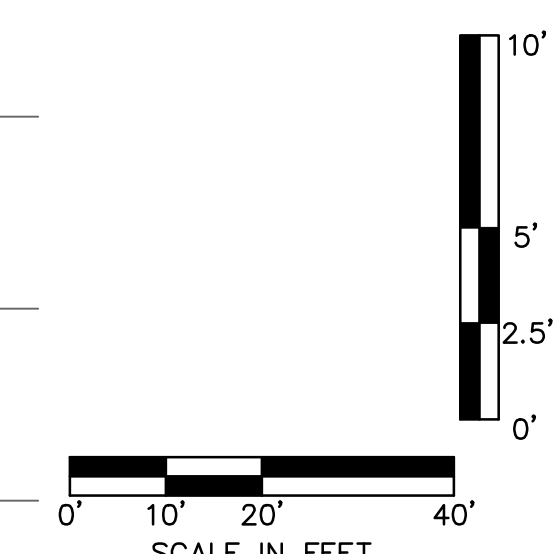
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drawing no.: C\_STM02\_A2104054  
date: 08.10.2022

SHEET  
C7.3



\*NOTE: CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.

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BY  
CSM

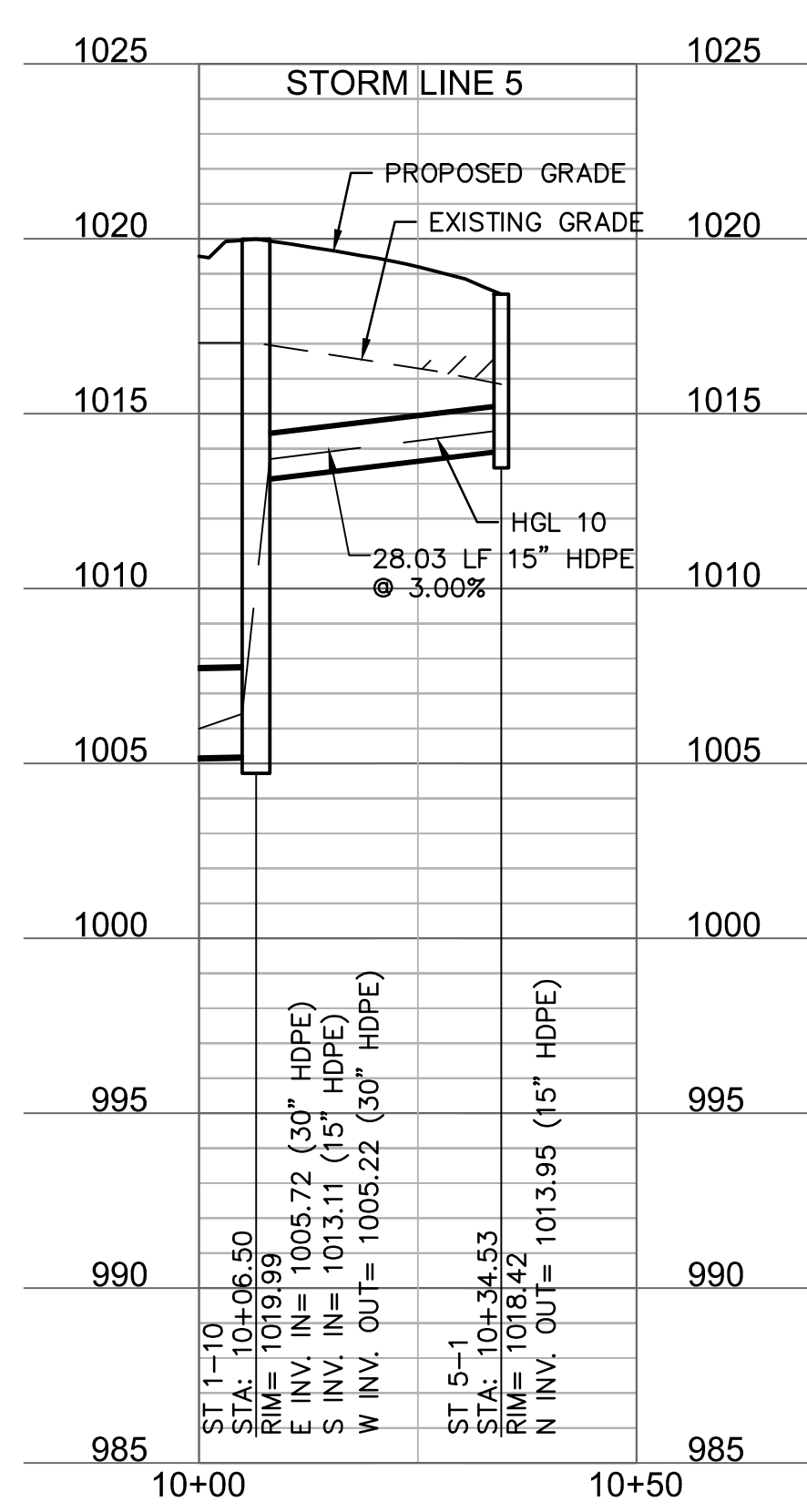
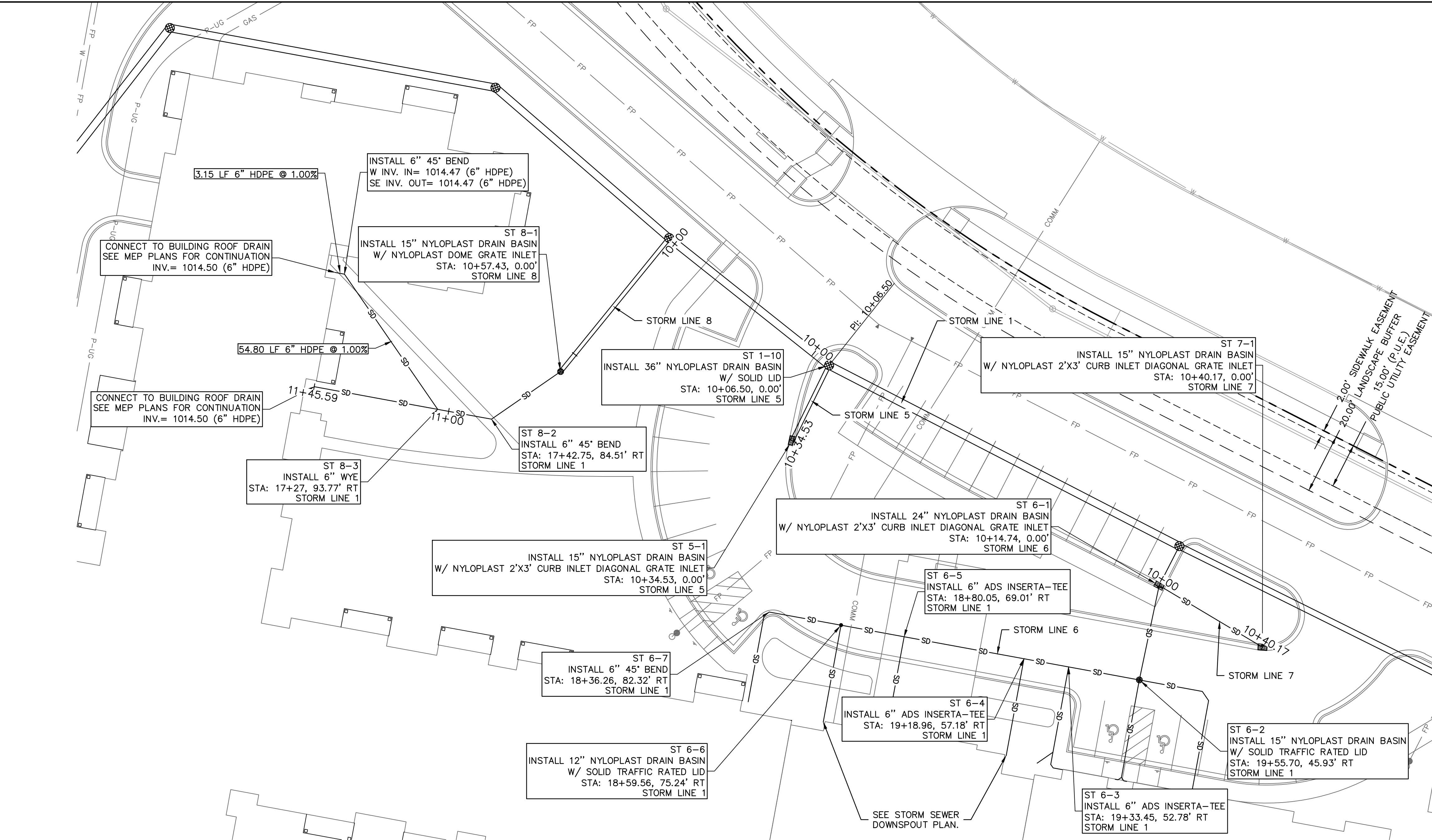
REV. NO. DATE REVISIONS DESCRIPTION  
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4 08/21/2023 SIDEWALK RELOCATION  
5 08/14/2023 WATER MAIN UPDATES

2023

STORM PLAN & PROFILE  
RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN  
LEE'S SUMMIT, MO

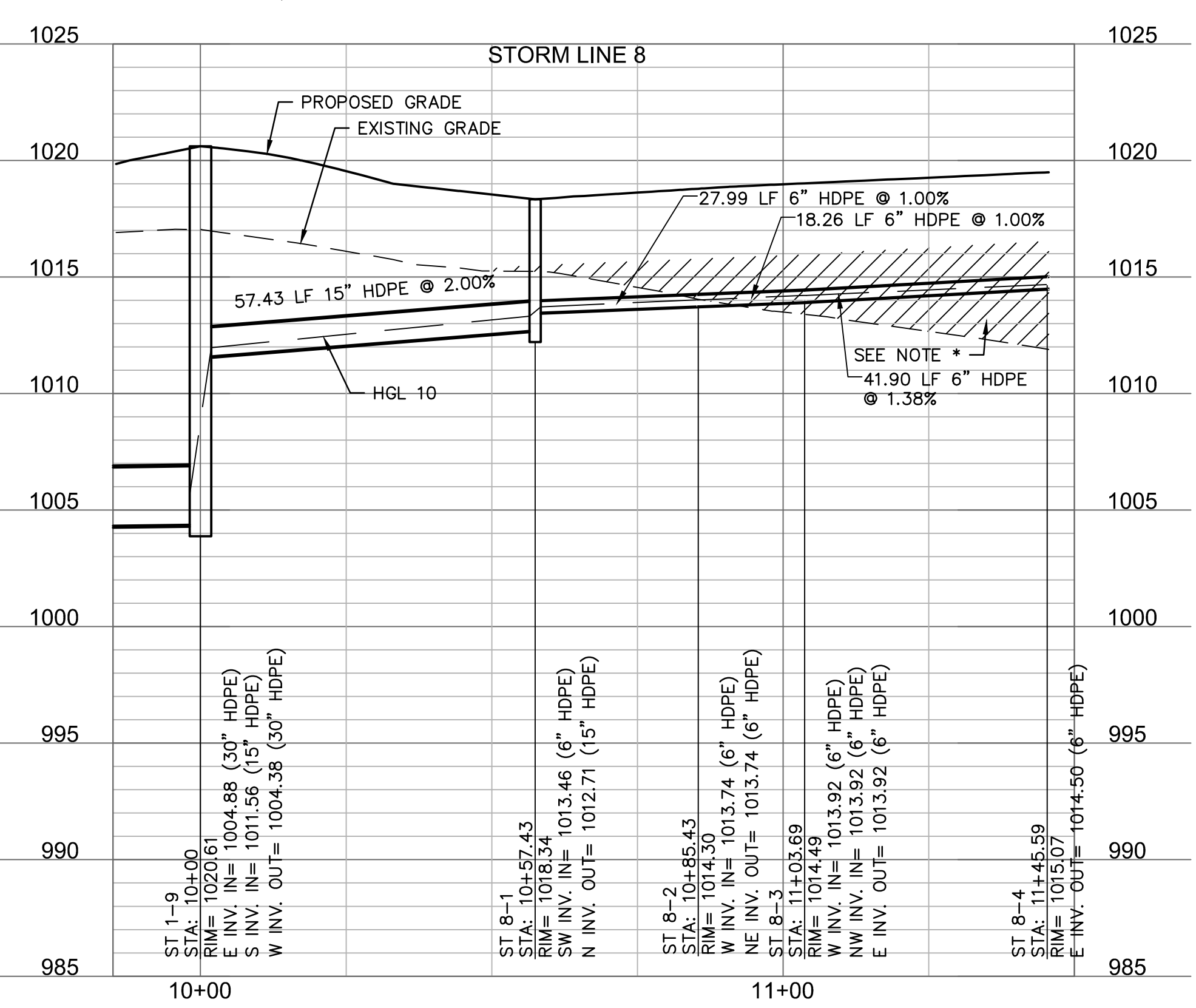
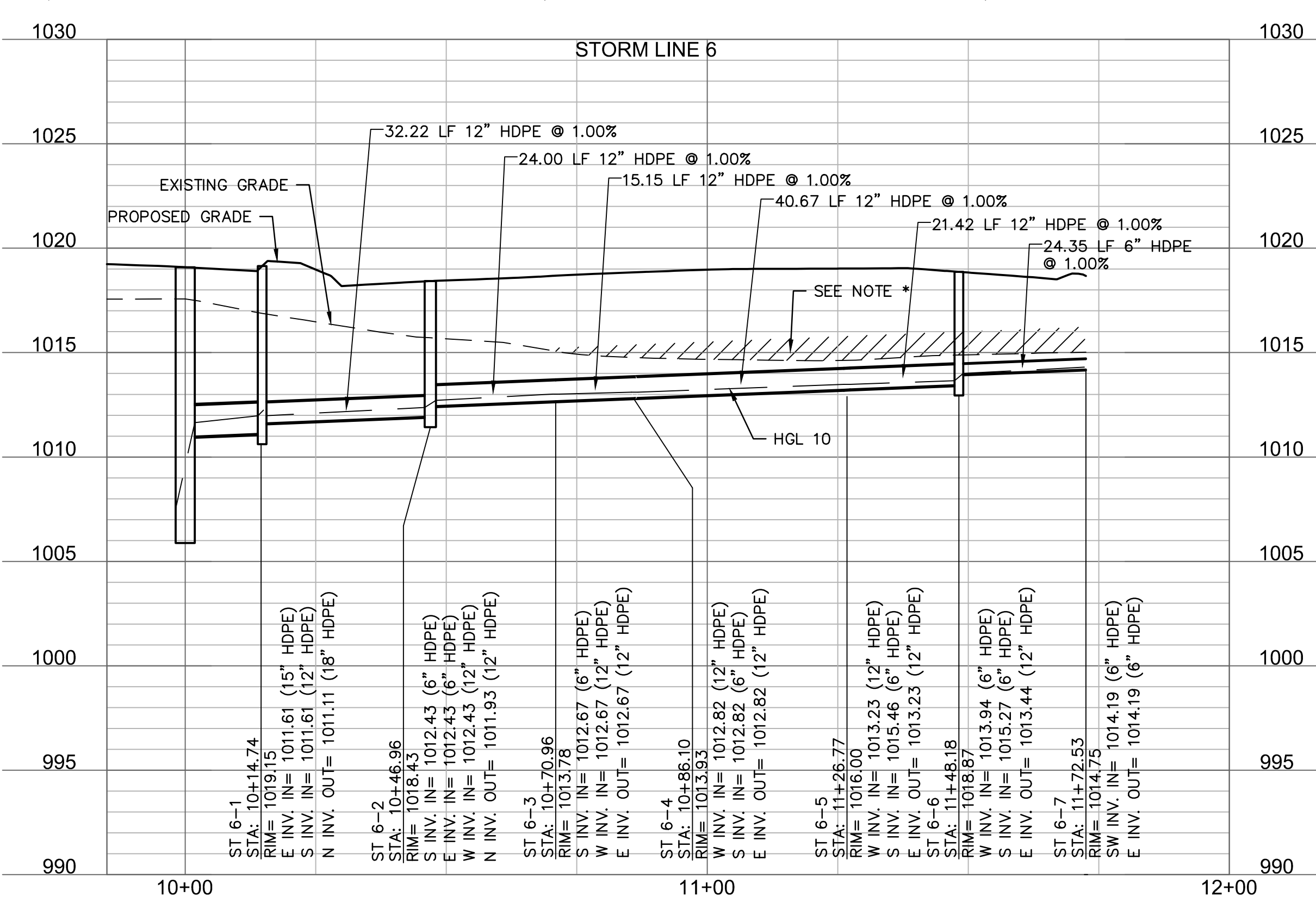
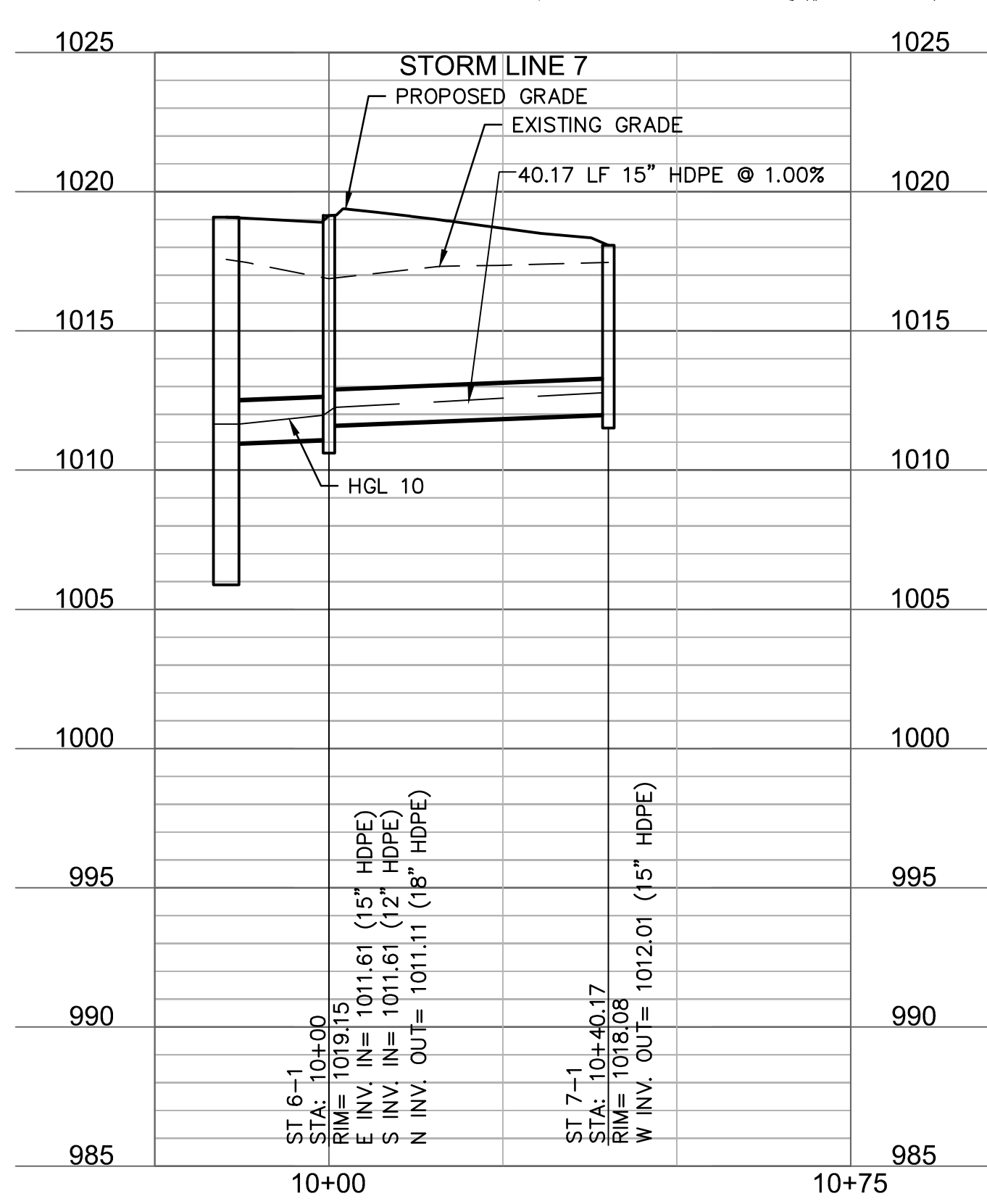
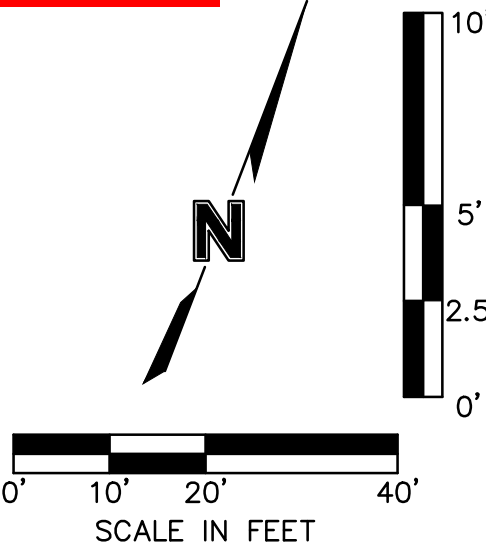
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checked by: CSM  
approved by: JS  
QA/QC by: JS  
project no.: A21-04054  
drawing no.: C-STW02\_A2104054  
date: 08/10/2022

SHEET  
C7.4



**RELEASED FOR CONSTRUCTION**  
As Noted on Plan Review  
  
Development Services Department  
Lee's Summit, Missouri  
09/20/2023

\*NOTE: CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.



STORM PLAN & PROFILE

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: CSM  
checked by: CSM  
approved by: JLS  
QA/QC by: JLS  
project no.: A21-04054  
drawing no.: C\_STM02\_A2104054  
date: 08.10.2022

SHEET  
C7.5



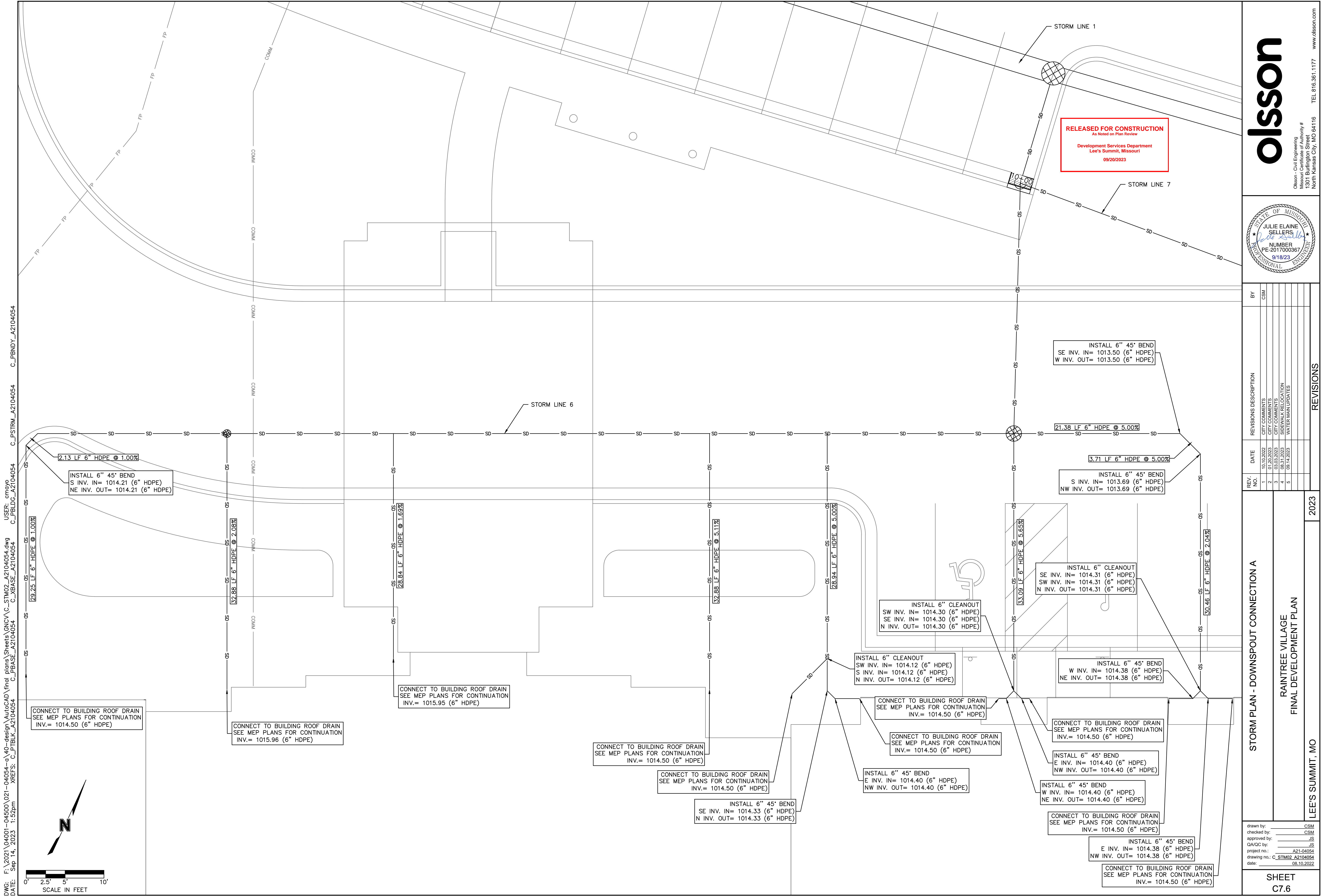
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3	03.03.2023			CITY COMMENTS	
4	08.21.2023			SIDEWALK RELOCATION	
5	08.14.2023			WATER MAIN UPDATES	

REVISIONS

2023

**olsson**

Olsson - Civil Engineering  
Missouri Certificate of Authority #  
1301 Burlington Street  
North Kansas City, MO 64116  
TEL 816.361.1177  
www.olson.com



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STATE OF MISSOURI  
JULIE ELAINE SELLERS  
NUMBER  
PE-2017000367  
9/18/23  
PROFESSIONAL ENGINEER

REV.	NO.	DATE	REVISIONS DESCRIPTION	BY
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3	03.03.2023	CITY COMMENTS		
4	08.31.2023	SEWALK RELOCATION		
5	09.14.2023	WATER MAIN UPDATES		

REV.	NO.	DATE	REVISIONS DESCRIPTION	BY
1	10.10.2022	CITY COMMENTS	CSM	
2	01.20.2023	CITY COMMENTS		
3	03.03.2023	CITY COMMENTS		
4	08.31.2023	SEWALK RELOCATION		
5	09.14.2023	WATER MAIN UPDATES		

2023

REVISIONS

STORM PLAN - DOWNSPOUT CONNECTION A

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

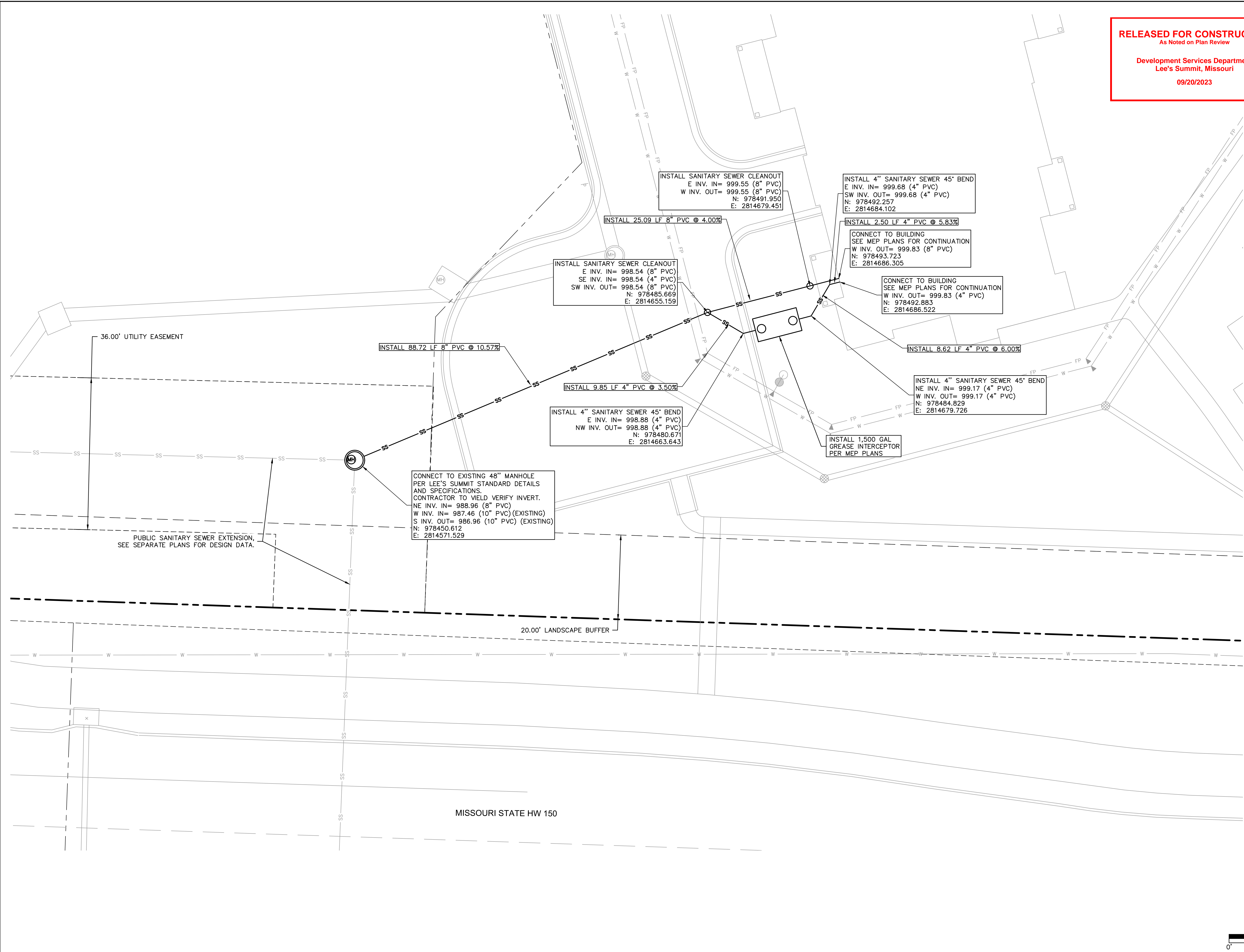
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drawing no.: C\_STM02\_A2104054  
date: 08.10.2022

SHEET  
C7.6

Storm Sewer Design Calculation Table												
10 Year Return Frequency												
Upstream Structure	Downstream Structure	Length (ft)	Upstream Invert (ft)	Downstream Invert (ft)	Slope (%)	Diameter (in)	Manning's n	Total Flow (cfs)	Velocity (ft/s)	Capacity (cfs)	Flow Depth (ft)	Upstream Struct. HGL (ft)
ST 1-1	ST P1-3	19.372	993.44	993.24	1.03	36	0.012	24.74	7.5	73.42	1.28	995.04
ST 1-2	ST 1-1	66.087	994.61	993.94	1.01	36	0.012	24.91	7.89	72.75	1.21	996.22
ST 1-3	ST 1-2	92.547	996.08	995.11	1.05	36	0.012	22.22	7.68	73.97	1.13	997.6
ST 1-4	ST 1-3	40.614	996.95	996.58	0.91	36	0.012	21.34	7.36	68.96	1.15	998.43
ST 1-5	ST 1-4	94.846	998.4	997.45	1	36	0.012	17.06	7.03	72.31	0.99	999.72
ST 1-6	ST 1-5	151.279	1000.41	998.9	1	36	0.012	15.33	6.81	72.18	0.94	1001.66
ST 1-7	ST 1-6	88.08	1001.9	1000.91	1.12	30	0.012	14	7.01	47.1	0.93	1003.16
ST 1-8	ST 1-7	110.483	1003.5	1002.4	1	30	0.012	14.21	6.86	44.33	0.97	1004.77
ST 1-9	ST 1-8	76.719	1004.38	1004	0.5	30	0.012	14.36	5.97	31.27	1.19	1005.66
ST 1-10	ST 1-9	68.177	1005.22	1004.88	0.5	30	0.012	12.7	5.76	31.37	1.11	1006.42
ST 1-11	ST 1-10	131.568	1006.38	1005.72	0.5	30	0.012	11.55	5.61	31.47	1.05	1007.52
ST 1-12	ST 1-11	123.87	1007.5	1006.88	0.5	24	0.012	7.22	5.07	17.33	0.9	1008.45
ST 1-13	ST 1-12	20.174	1007.6	1007.5	0.5	24	0.012	7.14	4.85	17.25	0.95	1008.55
ST 1-14	ST 1-13	48.072	1007.84	1007.6	0.5	24	0.012	7.1	4.85	17.31	0.95	1008.79
ST 1-15	ST 1-14	75.093	1008.72	1008.34	0.51	24	0.012	7.21	5.08	17.43	0.9	1009.67
ST 1-16	ST 1-15	86.161	1009.15	1008.72	0.5	24	0.012	7.28	4.92	17.31	0.95	1010.11
ST 1-17	ST 1-16	13.107	1009.72	1009.65	0.53	24	0.012	5.74	4.81	17.9	0.78	1010.57
ST 1-18	ST 1-17	27.321	1010.36	1010.22	0.51	24	0.012	4.85	4.54	17.54	0.72	1011.14
ST 1-19	ST 1-18	44.334	1010.58	1010.36	0.5	24	0.012	4.86	4.32	17.26	0.77	1011.36
ST 1-20	ST 1-19	104.293	1011.6	1011.08	0.5	24	0.012	5.02	4.56	17.3	0.74	1012.39
ST 1-21	ST 1-20	67.95	1013.28	1012.6	1	10	0.012	0.36	2.8	2.37	0.22	1013.54
ST 1-22	ST 1-21	27.501	1013.52	1013.28	0.87	10	0.012	0.25	1.96	2.22	0.26	1013.74
ST 1-23	ST 1-22	15.517	1014.04	1013.89	0.97	6	0.012	0.13	2.22	0.6	0.16	1014.22
ST 2-1	ST 1-4	29.549	999.88	998.7	3.99	18	0.012	5.65	7.83	22.73	0.51	1000.8
ST 2-2	ST 2-1	48.776	1002.83	1000.88	4	18	0.012	5.69	7.85	22.75	0.51	1003.75
ST 2-3	ST 2-2	68.879	1007.29	1003.83	5.02	15	0.012	5.73	8.7	15.68	0.52	1008.26
ST 2-4	ST 2-3	61.517	1009.52	1008.29	2	15	0.012	2.35	5.27	9.89	0.42	1010.13
ST 2-5	ST 2-4	120.22	1012.42	1010.02	2	15	0.012	2.43	5.32	9.88	0.42	1013.04
ST 2-6	ST 2-5	52.11	1013.96	1012.92	2	15	0.012	2.47	5.34	9.88	0.43	1014.59
ST 3-1	ST 2-3	143.036	1013.3	1008.29	3.5	15	0.012	4.03	7.08	13.09	0.48	1014.11
ST 4-1	EX 4-0	98	1001.7	1000.72	1	24	0.012	3.15	4.58	24.5	0.48	1002.32
ST 5-1	ST 1-10	28.026	1013.95	1013.11	3	15	0.012	1.92	5.45	12.11	0.34	1014.5
ST 6-1	ST 1-11	14.736	1011.11	1010.96	1.02	18	0.012	4.99	5.52	11.48	0.69	1011.97
ST 6-2	ST 6-1	32.221	1011.93	1011.61	0.99	12	0.012	1.12	3.77	3.84	0.37	1012.37
ST 6-3	ST 6-2	24	1012.67	1012.43	1	12	0.012	0.68	3.27	3.86	0.28	1013.01
ST 6-4	ST 6-3	15.147	1012.82	1012.67	0.99	12	0.012	0.46	2.23	3.84	0.34	1013.1
ST 6-5	ST 6-4	40.665	1013.23	1012.82	1.01	12	0.012	0.36	2.19	3.87	0.28	1013.48
ST 6-6	ST 6-5	21.415	1013.44	1013.23	0.98	12	0.012	0.25	1.9	3.82	0.25	1013.65
ST 6-7	ST 6-6	24.351	1014.19	1013.94	1.03	6	0.012	0.13	2.26	0.62	0.15	1014.37
ST 7-1	ST 6-1	40.175	1012.01	1011.61	1	15	0.012	3.65	5.17	6.98	0.64	1012.78
ST 8-1	ST 1-9	57.435	1012.71	1011.56	2	15	0.012	2.33	5.25	9.9	0.41	1013.32
ST 8-2	ST 8-1	27.994	1013.74	1013.46	1	6	0.012	0.31	2.93	0.61	0.26	1014.02
ST 8-3	ST 8-2	18.263	1013.92	1013.74	0.99	6	0.012	0.32	2.75	0.6	0.28	1014.21
ST 8-4	ST 8-3	41.897	1014.5	1013.92	1.38	6	0.012	0.13	1.61	0.71	0.28	1014.68

Storm Sewer Design Calculation Table												
100 Year Return Frequency												
Upstream Structure	Downstream Structure	Length (ft)	Upstream Invert (ft)	Downstream Invert (ft)	Slope (%)	Diameter (in)	Manning's n	Total Flow (cfs)	Velocity (ft/s)	Capacity (cfs)	Flow Depth (ft)	Upstream Struct. HGL (ft)
ST 1-1	ST P1-3	19.372	993.44	993.24	1.03	36	0.012	51.85	10.01	73.42	1.86	995.78
ST 1-2	ST 1-1	66.087	994.61	993.94	1.01	36	0.012	52.07	9.99	72.75	1.88	996.95
ST 1-3	ST 1-2	92.547	996.08	995.11	1.05	36	0.012	46.27	9.21	73.97	1.84	998.29
ST 1-4	ST 1-3	40.614	996.95	996.58	0.91	36	0.012	44.35	9.23	68.96	1.75	999.12
ST 1-5	ST 1-4	94.846	998.4	997.45	1	36	0.012	35.24	8.04	72.31	1.67	1000.33
ST 1-6	ST 1-5	151.279	1000.41	998.9	1	36	0.012	31.34	8.23	72.18	1.43	1002.22
ST 1-7	ST 1-6	88.08	1001.9	1000.91	1.12	30	0.012	28.49	8.75	47.1	1.4	1003.72
ST 1-8	ST 1-7	110.483	1003.5	1002.4	1	30	0.012	28.76	8.54	44.33	1.47	1005.33
ST 1-9	ST 1-8	76.719	1004.38	1004	0.5	30	0.012	28.94	7.23	31.27	1.9	1006.28
ST 1-10	ST 1-9	68.177	1005.22	1004.88	0.5	30	0.012	25.49	7.07	31.37	1.72	1006.94
ST 1-11	ST 1-10	131.568	1006.38	1005.72	0.5	30	0.012	22.97	6.89	31.47	1.59	1008.01
ST 1-12	ST 1-11	123.87	1007.5	1006.88	0.5	24	0.012	14.21	6.16	17.33	1.38	1008.88
ST 1-13	ST 1-12	20.174	1007.6	1007.5	0.5	24	0.012	14.04	5.27	17.25	1.61	1009.15
ST 1-14	ST 1-13	48.072	1007.84	1007.6	0.5	24	0.012	13.92	5.01	17.31	1.73	1009.43
ST 1-15	ST 1-14	75.093	1008.72	1008.34	0.51	24	0.012	14.04	6.18	17.43	1.36	1010.08
ST 1-16	ST 1-15	86.161	1009.15	1008.72	0.5	24	0.012	14.07	5.68	17.31	1.6	1010.52
ST 1-17	ST 1-16	13.107	1009.72	1009.65	0.53	24	0.012	11.08	5.83	17.9	1.14	1010.91
ST 1-18	ST 1-17	27.321	1010.36	1010.22	0.51	24	0.012	9.33	5.5	17.54	1.04	1011.45
ST 1-19	ST 1-18	44.334	1010.58	1010.36	0.5	24	0.012	9.3	5.32	17.26	1.09	1011.67
ST 1-20	ST 1-19	104.293	1011.6	1011.08	0.5	24	0.012	9.47	5.49	17.3	1.06	1012.7
ST 1-21	ST 1-20	67.95	1013.28	1012.6	1	10	0.012	0.66	3.34	2.37	0.3	1013.64
ST 1-22	ST 1-21	27.501	1013.52	1013.28	0.87	10	0.012	0.45	2.32	2.22	0.36	1013.81
ST 1-23	ST 1-22	15.517	1014.04	1013.89	0.97	6	0.012	0.23	2.64	0.6	0.21	1014.28
ST 2-1	ST 1-4	29.549	999.88	998.7	3.99	18	0.012	10.75	9.74	22.73	0.73	1001.14
ST 2-2	ST 2-1	48.776	1002.83	1000.88	4	18	0.012	10.8	9.76	22.75	0.73	1004.09
ST 2-3	ST 2-2	68.879	1007.29	1003.83	5.02	15	0.012	10.84	11.37	15.68	0.76	1008.49
ST 2-4	ST 2-3	61.517	1009.52	1008.29	2	15	0.012	4.42	6.4	9.89	0.59	1010.37
ST 2-5	ST 2-4	120.22	1012.42	1010.02	2	15	0.012	4.5	6.44	9.88	0.59	1013.28
ST 2-6	ST 2-5	52.11	1013.96	1012.92	2	15	0.012	4.54	6.45	9.88	0.59	1014.82
ST 3-1	ST 2-3	143.036	1013.3	1008.29	3.5	15	0.012	7.07	8.61	13.09	0.65	1014.36
ST 4-1	EX 4-0	98	1001.7	1000.72	1	24	0.012	5.53	5.39	24.5	0.65	1002.53
ST 5-1	ST 1-10	28.026	1013.95	1013.11	3	15	0.012	3.38	6.46	12.11	0.45	1014.69
ST 6-1	ST 1-11	14.736	1011.11	1010.96	1.02	18	0.012	9.51	6.79	11.48	1.04	1012.3
ST 6-2	ST 6-1	32.221	1011.93	1011.61	0.99	12	0.012	2.11	3.89	3.84	0.69	1012.55
ST 6-3	ST 6-2	24	1012.67	1012.43	1	12	0.012	1.28	3.93	3.86	0.4	1013.15
ST 6-4	ST 6-3	15.147	1012.82	1012.67	0.99	12	0.012	0.86	2.69	3.84	0.48	1013.21
ST 6-5	ST 6-4	40.665	1013.23	1012.82	1.01	12	0.012	0.66	2.59	3.87	0.39	1013.57
ST 6-6	ST 6-5	21.415	1013.44	1013.23	0.98	12	0.012	0.45	2.23	3.82	0.34	1013.72
ST 6-7	ST 6-6	24.351	1014.19	1013.94	1.03	6	0.012	0.23	2.68	0.62	0.21	1014.43
ST 7-1	ST 6-1	40.175	1012.01	1011.61	1	15	0.012	6.4	6.21	6.98	0.94	1013.03
ST 8-1	ST 1-9	57.435	1012.71	1011.56	2	15	0.012	4.2	6.3	9.9	0.57	1013.54
ST 8-2	ST 8-1	27.994	1013.74	1013.46	1	6	0.012	0.57	3.51	0.61	0.38	1014.12
ST 8-3	ST 8-2	18.263	1013.92	1013.74	0.99	6	0.012	0.57	3.49	0.6	0.39	1014.31
ST 8-4	ST 8-3	41.897	1014.5	1013.92	1.38	6	0.012	0.23	1.85	0.71	0.46	1014.74

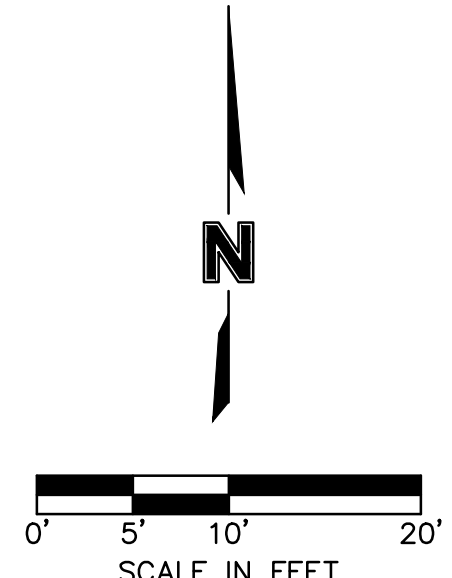
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As Noted on Plan Review

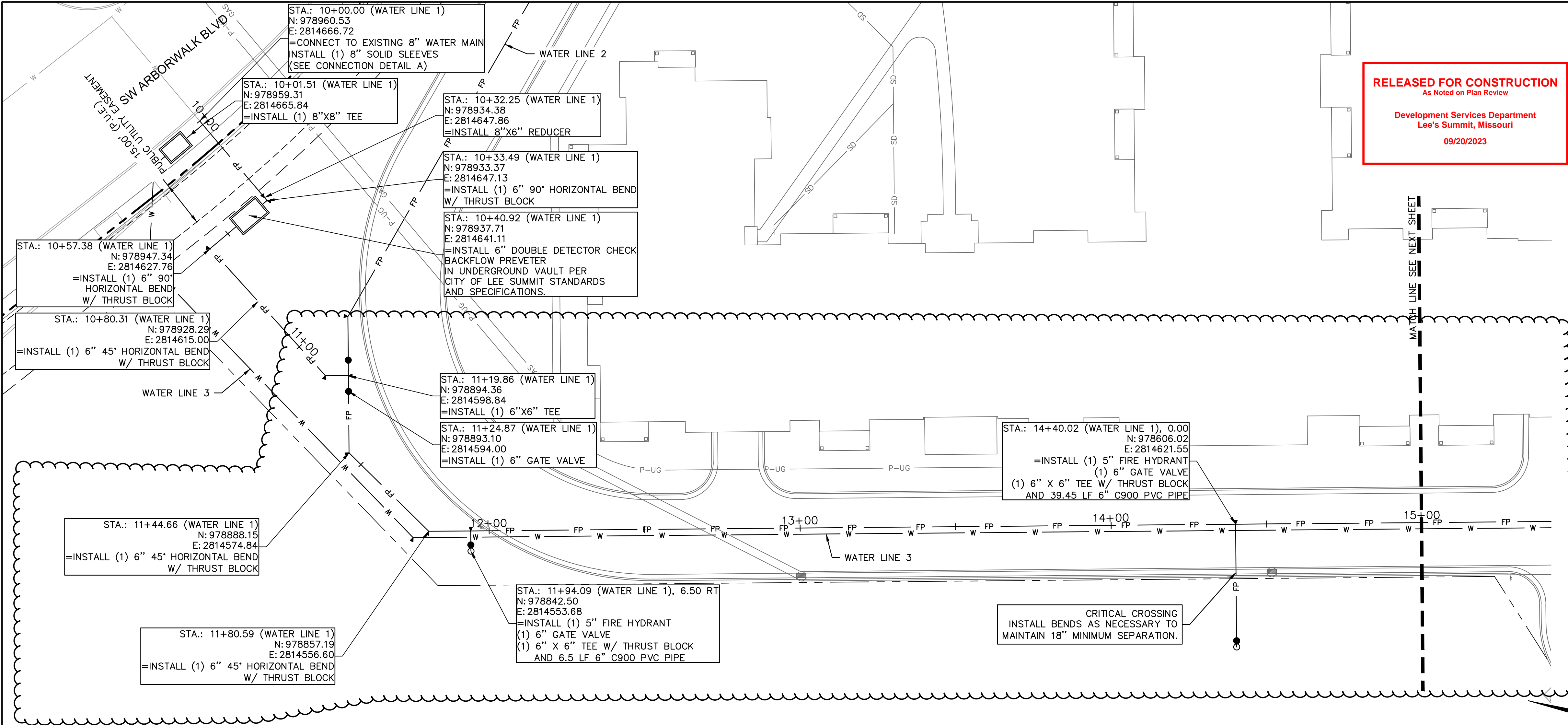
**Development Services Department**  
**Lee's Summit, Missouri**

**09/20/2023**



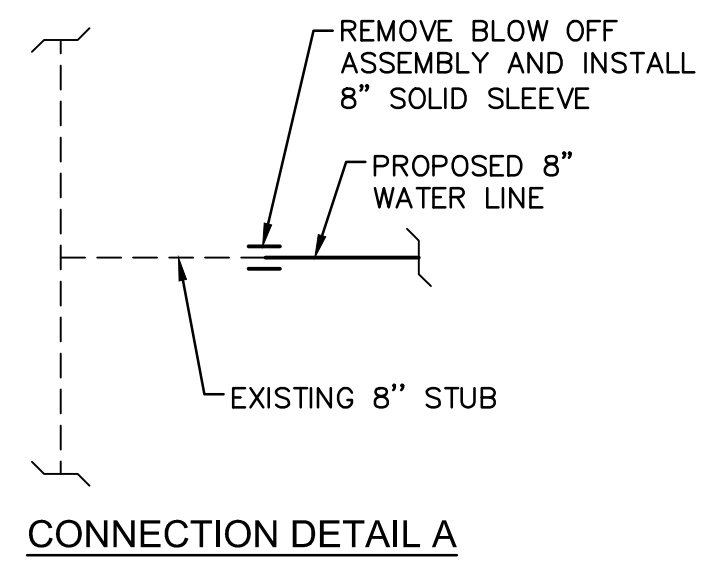
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		<p>LEE'S SUMMIT, MO</p>			
<p>SANITARY SEWER PLAN</p>		<p>RAINTREE VILLAGE FINAL DEVELOPMENT PLAN</p>			
		REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		1	10.10.2022	CITY COMMENTS	CSM
		2	01.20.2023	CITY COMMENTS	
		3	03.03.2023	CITY COMMENTS	
		4	09.31.2023	SIDEWALK RELOCATION	
		5	09.14.2023	WATER MAIN UPDATES	
		REVISIONS			

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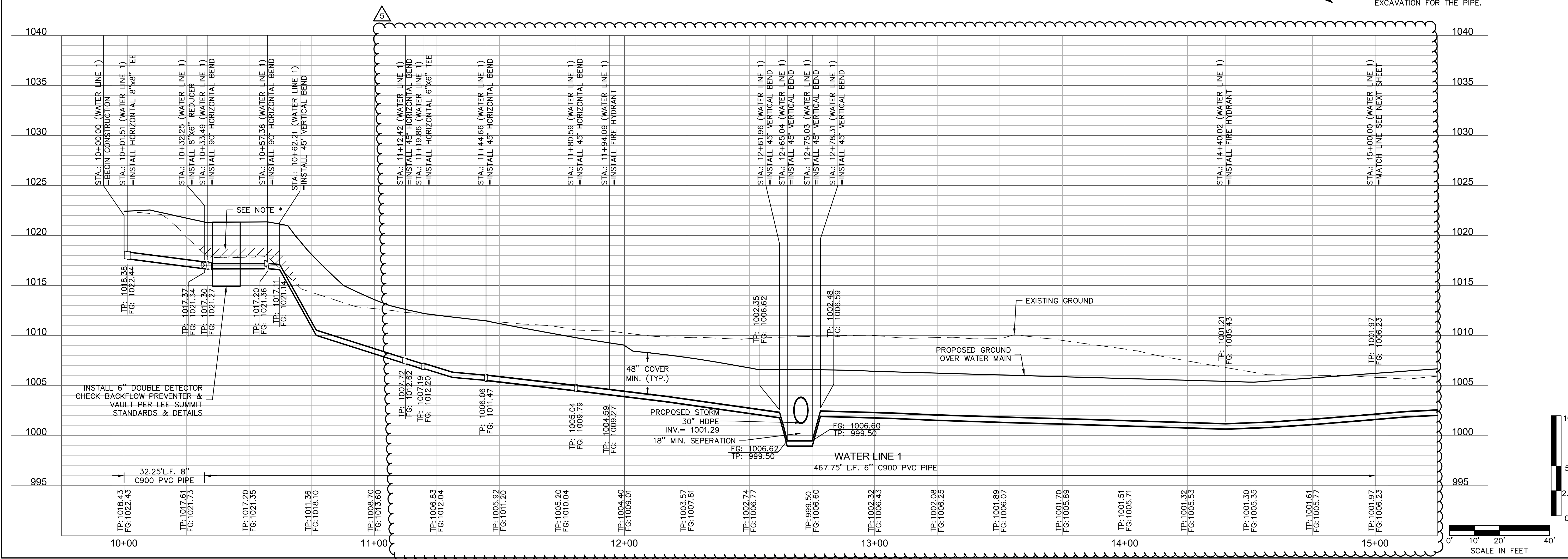


**RELEASED FOR CONSTRUCTION**  
As Noted on Plan Review  
Development Services Department  
Lee's Summit, Missouri  
09/20/2023

- ### WATER PLAN NOTES
1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH UTILITY OWNER.
  2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF FITTING OR WALL OF VAULT.
  3. COORDINATES ARE PROVIDED ALONG PIPE CENTERLINE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING INSTALLATIONS.
  4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF WATER.
  5. WATER PIPE TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.
  6. ALL PRIVATE WATER LINES SHALL BE A MINIMUM OF 48 INCHES AND MAXIMUM OF 60 INCHES BELOW THE FINISHED GRADE ELEVATIONS SHOWN HEREIN UNLESS OTHERWISE NOTED.
  7. IF AN AS-BUILT OF A WATER LINE IS REQUIRED OR EXPECTED THE CONTRACTOR SHALL NOT BACKFILL THE TRENCH UNTIL AN AS-BUILT SURVEY IS CONDUCTED.
  8. DISINFECTION AND PRESSURE TESTING OF WATER LINES SHALL BE PERFORMED AND PAID FOR BY THE CONTRACTOR AND AS REQUIRED BY THE UTILITY OWNER.
  9. ALL EXISTING FIRE HYDRANTS ON SITE OR IN THE RIGHT-OF-WAY BETWEEN PROPERTY AND ROADWAY SHALL BE REPAIRED PER LOCAL CODES AND ORDINANCES.
  10. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.
  11. ALL WATER SERVICE INSTALLATIONS INCLUDING BACKFLOW DEVICES ARE SUBJECT TO FIELD VERIFICATION AND APPROVAL BY THE WATER DEPARTMENT INSPECTOR.



\*NOTE: CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.



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Missouri Certificate of Authority #  
1301 Burlington Street  
North Kansas City, MO 64116  
TEL 816.361.1177  
www.olsson.com

STATE OF MISSOURI  
JULIE ELAINE  
SELLERS  
NUMBER  
PE-2017000367  
9/18/23  
PROFESSIONAL ENGINEER

BY CSM

REV. NO. DATE REVISIONS DESCRIPTION

1 10/10/2022 CITY COMMENTS

2 01/20/2023 CITY COMMENTS

3 03/03/2023 CITY COMMENTS

4 08/21/2023 SIDEWALK RELOCATION

5 08/14/2023 WATER MAIN UPDATES

2023

WATER PLAN & PROFILE

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: CSM

checked by: CSM

approved by: JS

QA/QC by: JS

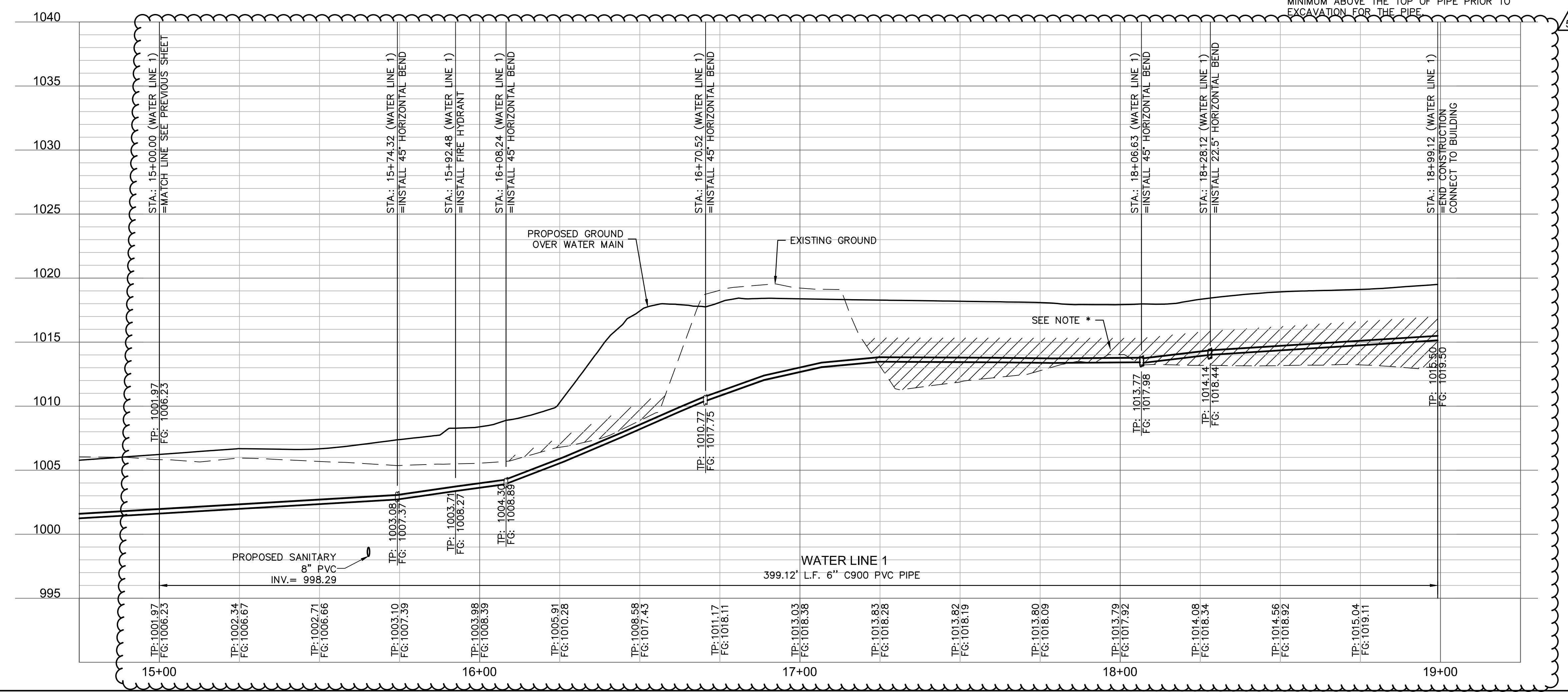
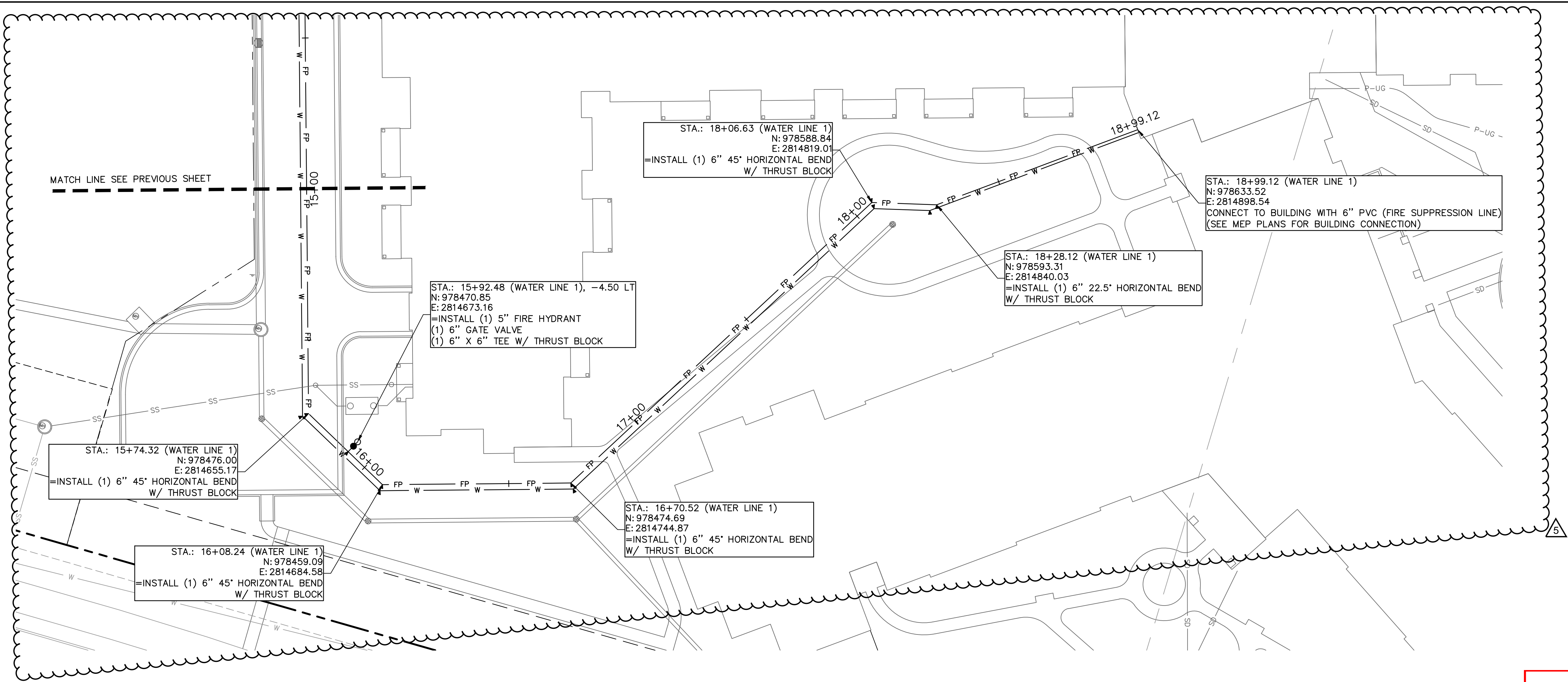
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drawing no.: C\_WAT01\_A2104054

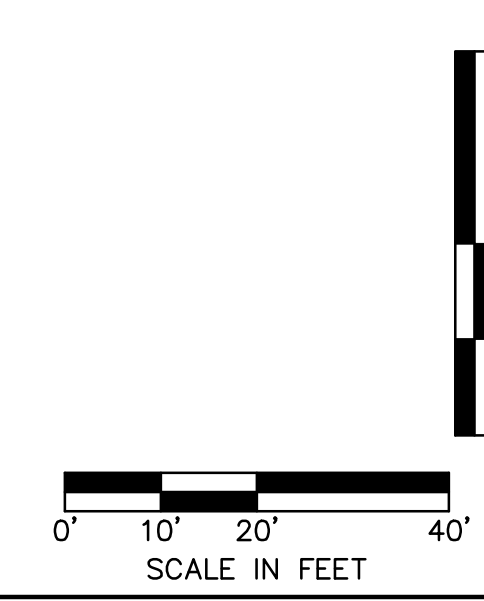
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Development Services Department  
Lee's Summit, Missouri  
09/20/2023



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JULIE ELAINE  
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PROFESSIONAL ENGINEER

REV.	NO.	DATE	REVISIONS DESCRIPTION	BY
1	10.10.2022	GTY COMMENTS	CSM	
2	01.20.2023	GTY COMMENTS		
3	03.03.2023	GTY COMMENTS		
4	08.31.2023	SIDEWALK RELOCATION		
5	08.14.2023	WATER MAIN UPDATES		

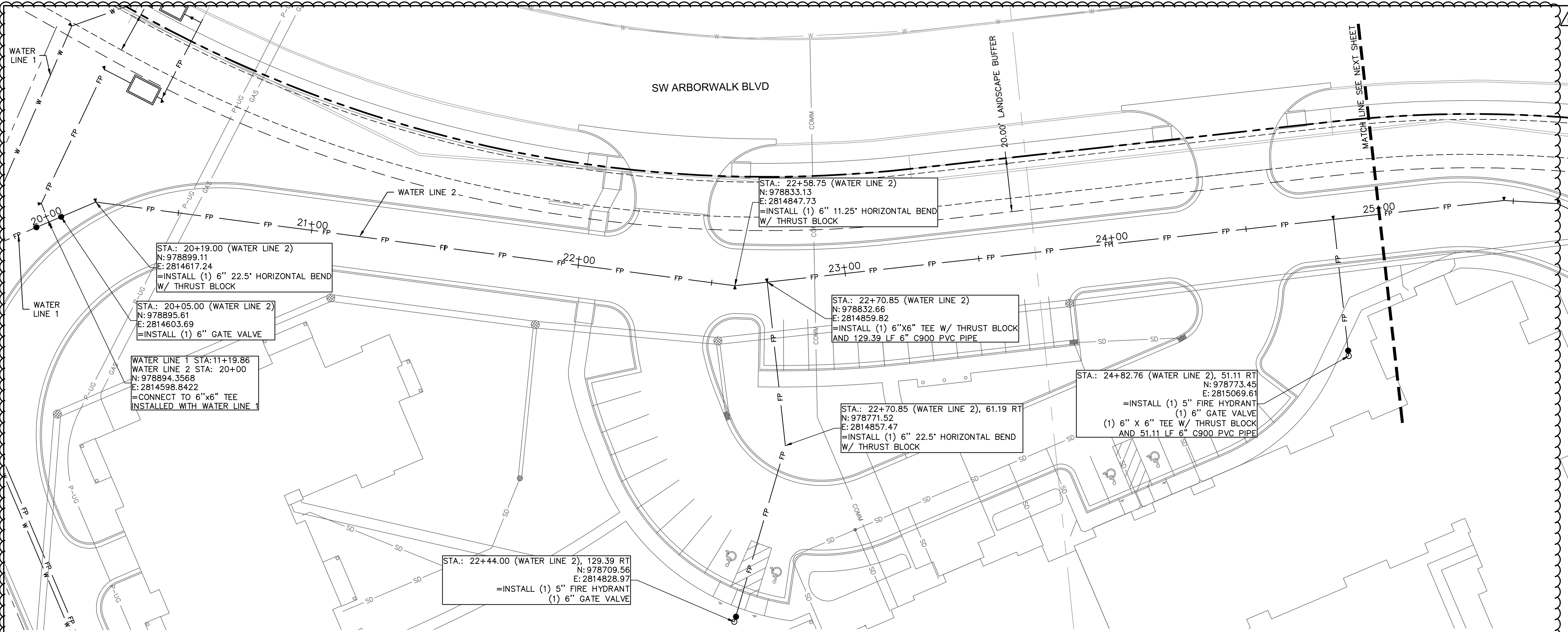
REVISIONS

WATER PLAN & PROFILE  
RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN  
LEE'S SUMMIT, MO

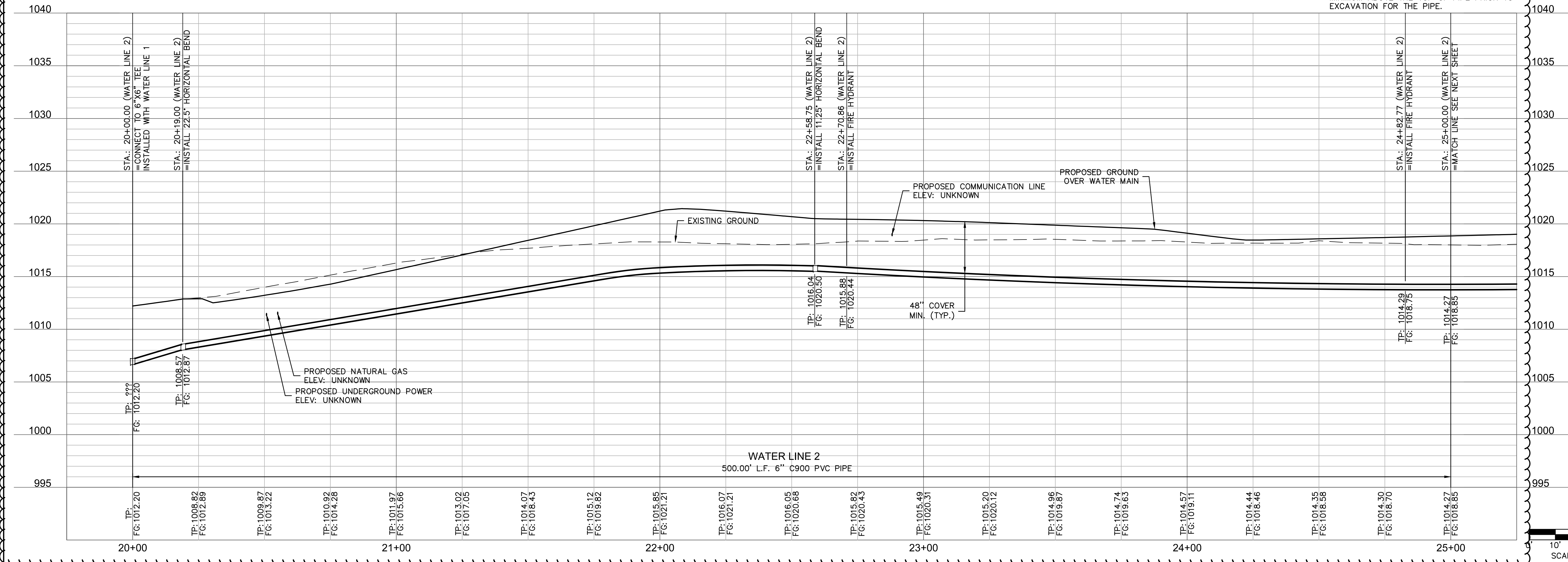
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checked by: CSM  
approved by: JS  
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drawing no.: C\_WAT01\_A2104054  
date: 08.10.2022

SHEET  
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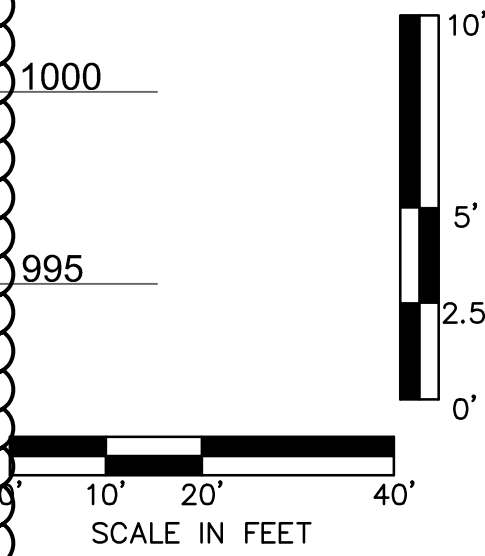
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9/18/23  
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REV.	NO.	DATE	REVISIONS DESCRIPTION	BY
1	10.10.2022	10.10.2022	QTY COMMENTS	CSM
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3	03.03.2023	03.03.2023	QTY COMMENTS	
4	08.21.2023	08.21.2023	SIDEWALK RELOCATION	
5	09.14.2023	09.14.2023	WATER MAIN UPDATES	

WATER PLAN & PROFILE

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: CSM

checked by: CSM

approved by: JS

QA/QC by: JS

project no.: A21-04054

drawing no.: C\_WAT01\_A2104054

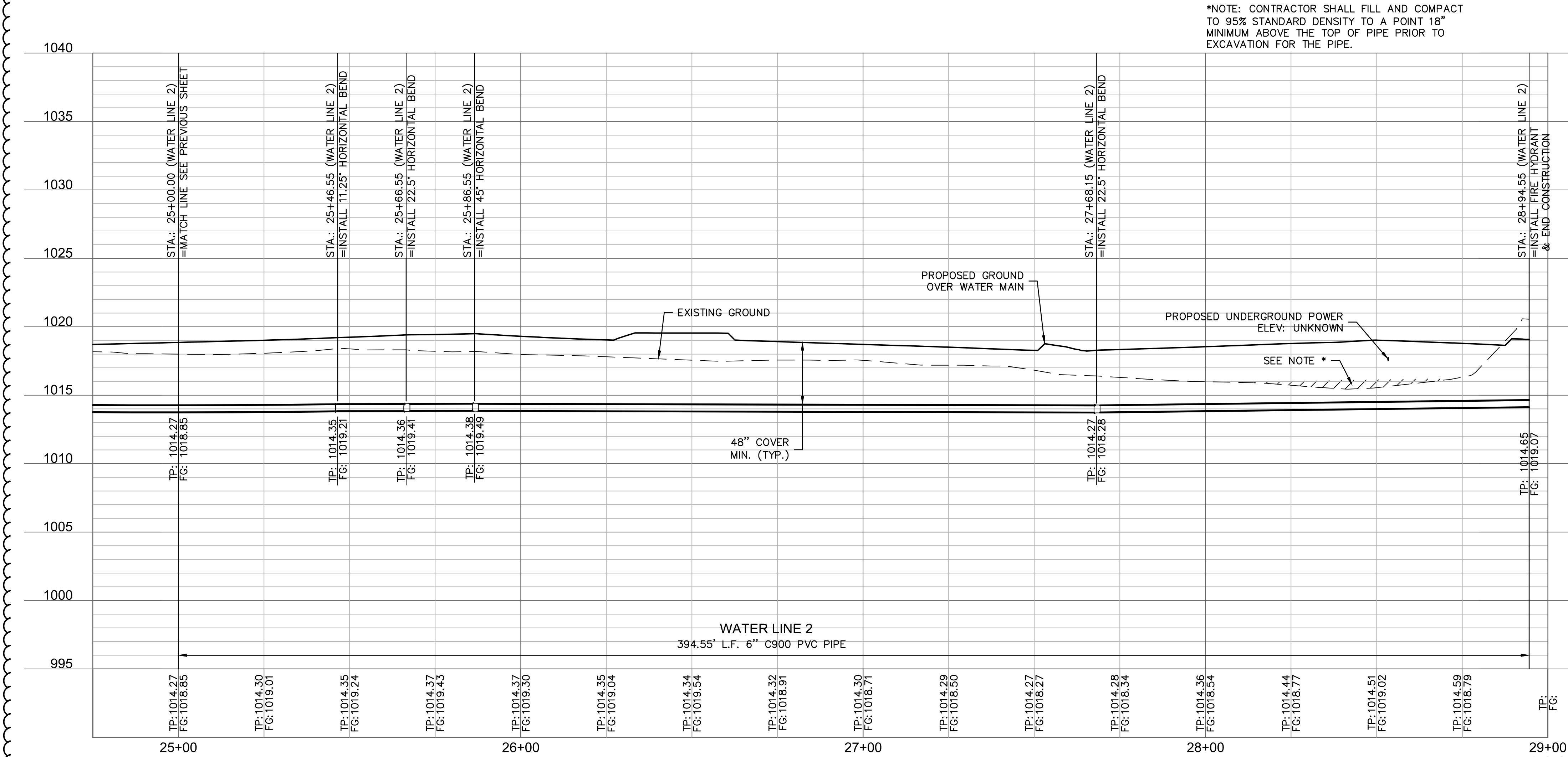
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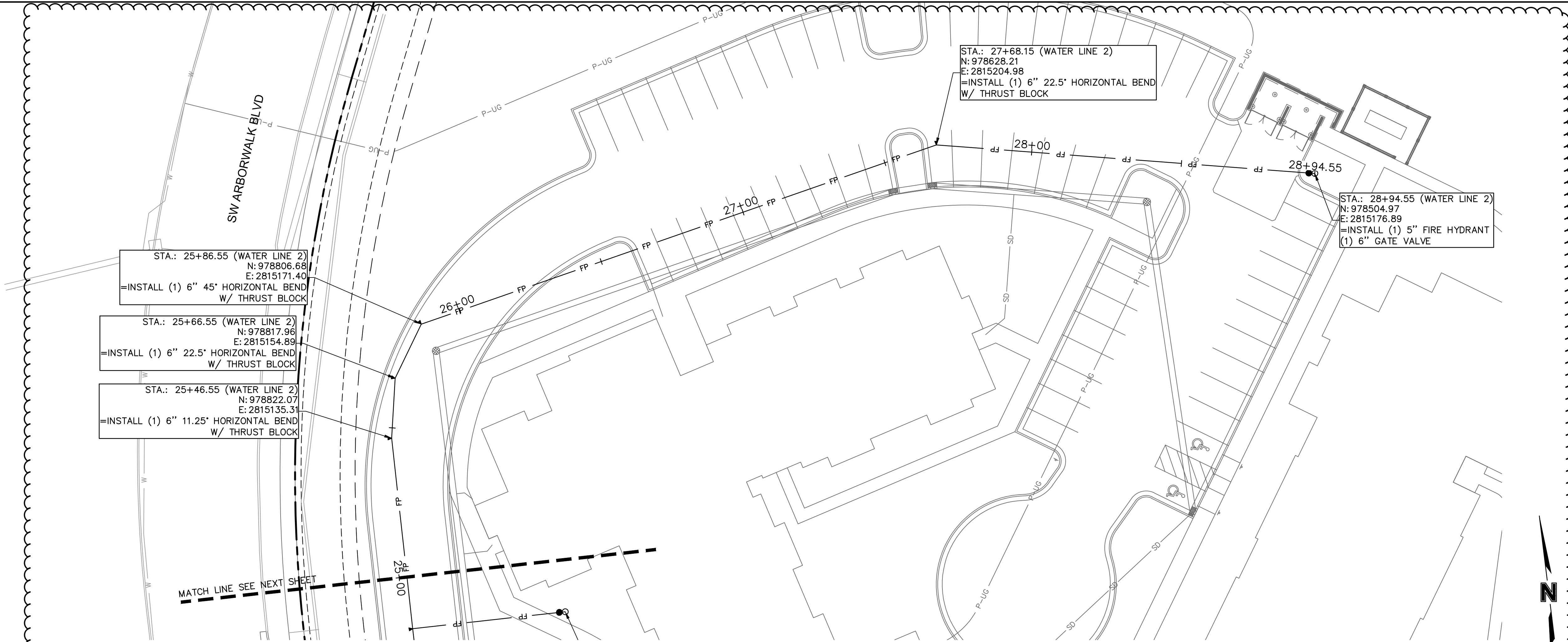
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2023

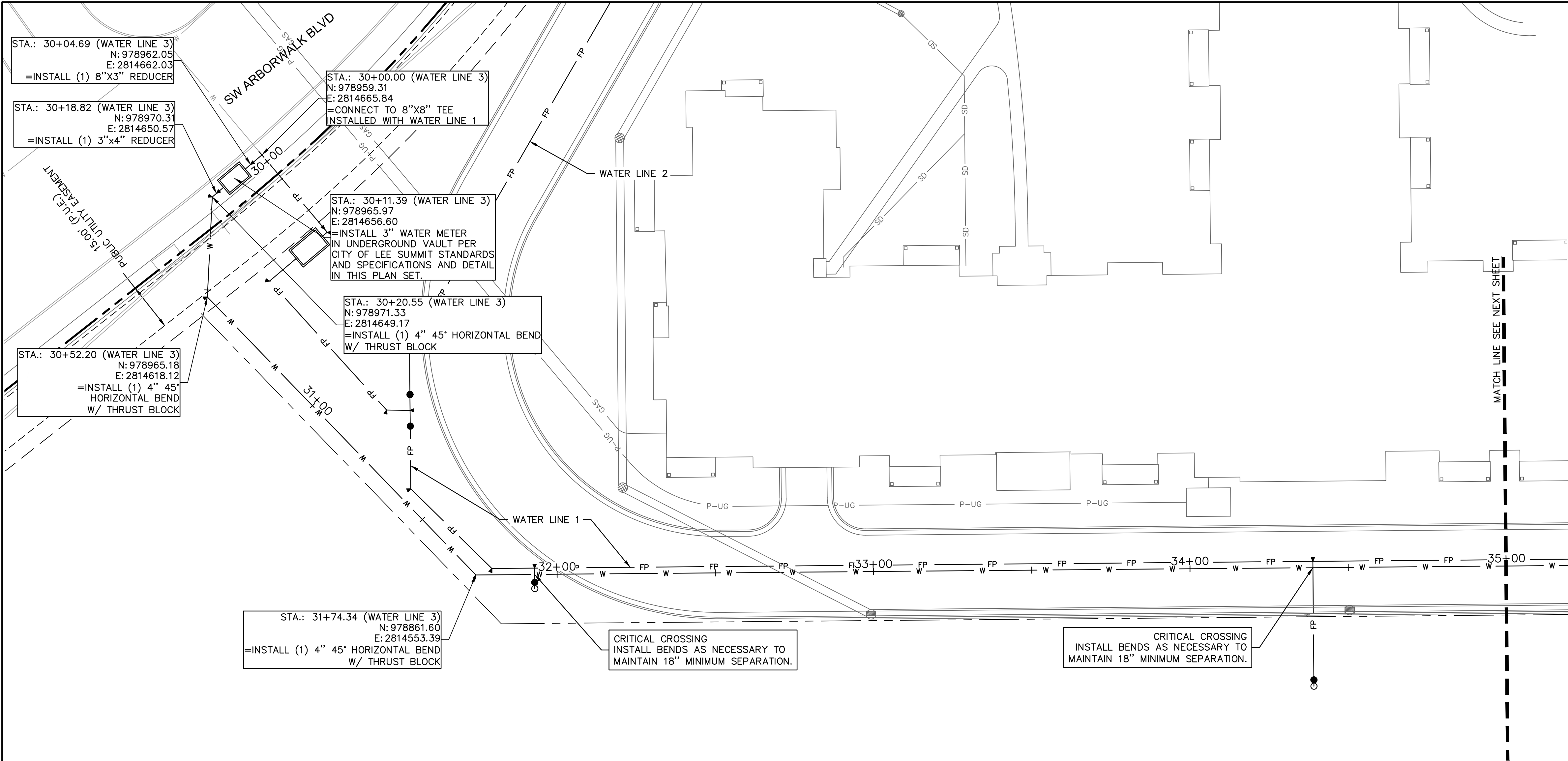
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USER: ericvrs



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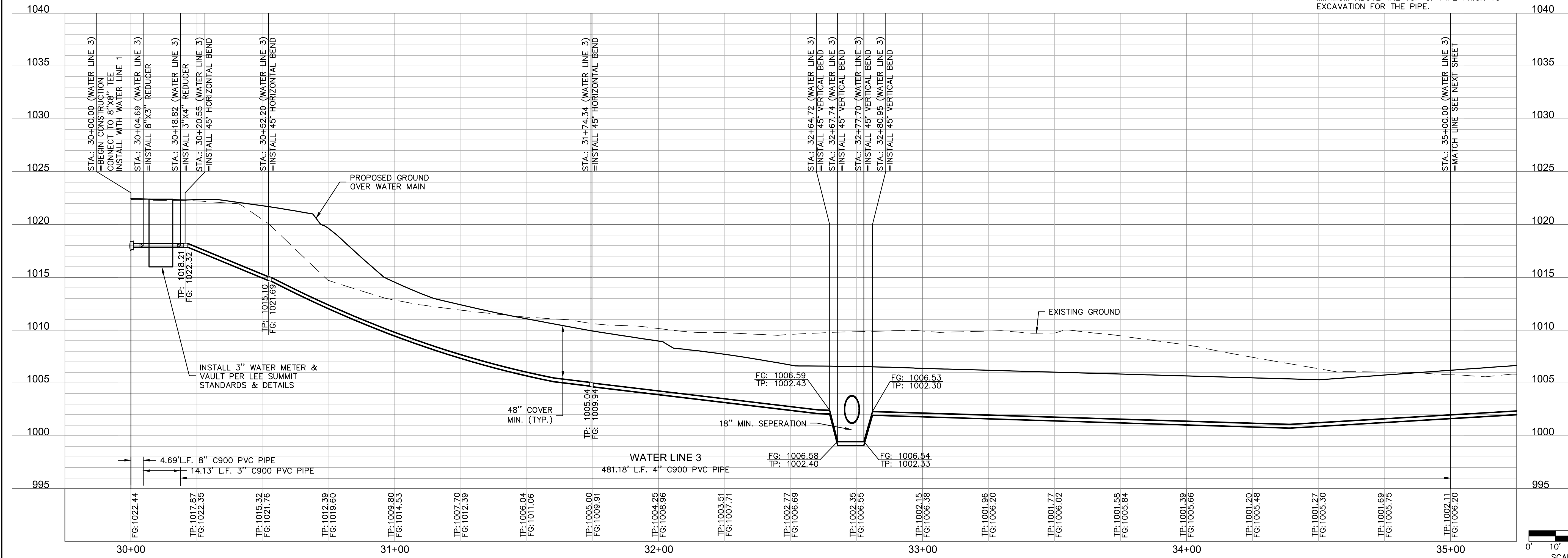


#### WATER PLAN NOTES

1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH UTILITY OWNER.
2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF FITTING OR WALL OF VAULT.
3. COORDINATES ARE PROVIDED ALONG PIPE CENTERLINE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING INSTALLATIONS.
4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF WATER.
5. WATER PIPE TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.
6. ALL PRIVATE WATER LINES SHALL BE A MINIMUM OF 48 INCHES AND MAXIMUM OF 60 INCHES BELOW THE FINISHED GRADE ELEVATIONS SHOWN HEREIN UNLESS OTHERWISE NOTED.
7. IF AN AS-BUILT OF A WATER LINE IS REQUIRED OR EXPECTED THE CONTRACTOR SHALL NOT BACKFILL THE TRENCH UNTIL AN AS-BUILT SURVEY IS CONDUCTED.
8. DISINFECTION AND PRESSURE TESTING OF WATER LINES SHALL BE PERFORMED AND PAID FOR BY THE CONTRACTOR AND AS REQUIRED BY THE UTILITY OWNER.
9. ALL EXISTING FIRE HYDRANTS ON SITE OR IN THE RIGHT-OF-WAY BETWEEN PROPERTY AND ROADWAY SHALL BE REPAINTED PER LOCAL CODES AND ORDINANCES.
10. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.
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STATE OF MISSOURI

JULIE ELAINE SELLERS

NUMBER

PE-2017000367

9/18/23

PROFESSIONAL ENGINEER

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WATER PLAN & PROFILE

RAINTREE VILLAGE

FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: CSM

checked by: CSM

approved by: JS

QA/QC by: JS

project no.: A21-04054

drawing no.: C\_WAT02\_A2104054

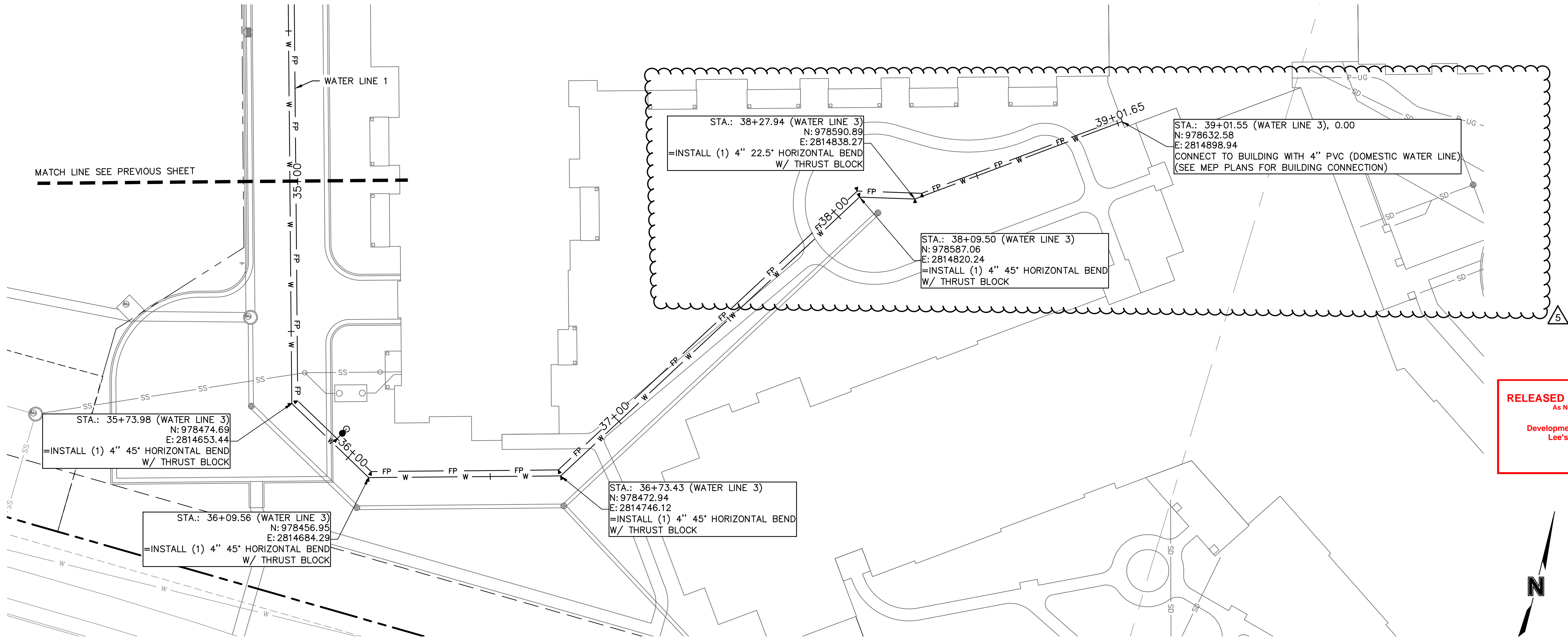
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C9.4

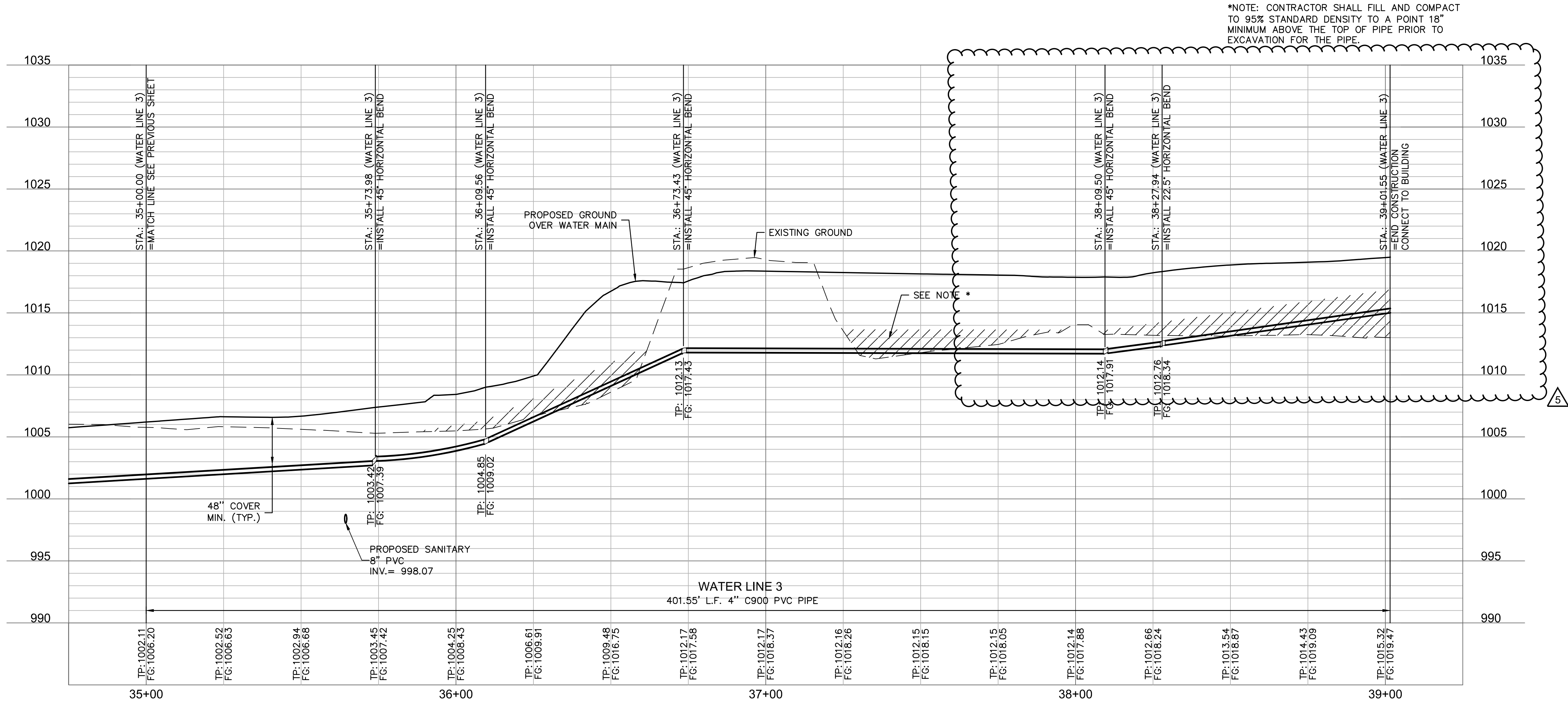
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USER: cm999



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Lee's Summit, Missouri  
09/20/2023



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STATE OF MISSOURI  
JULIE ELAINE  
SELLERS  
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PE-2017000367  
9/18/23  
PROFESSIONAL ENGINEER

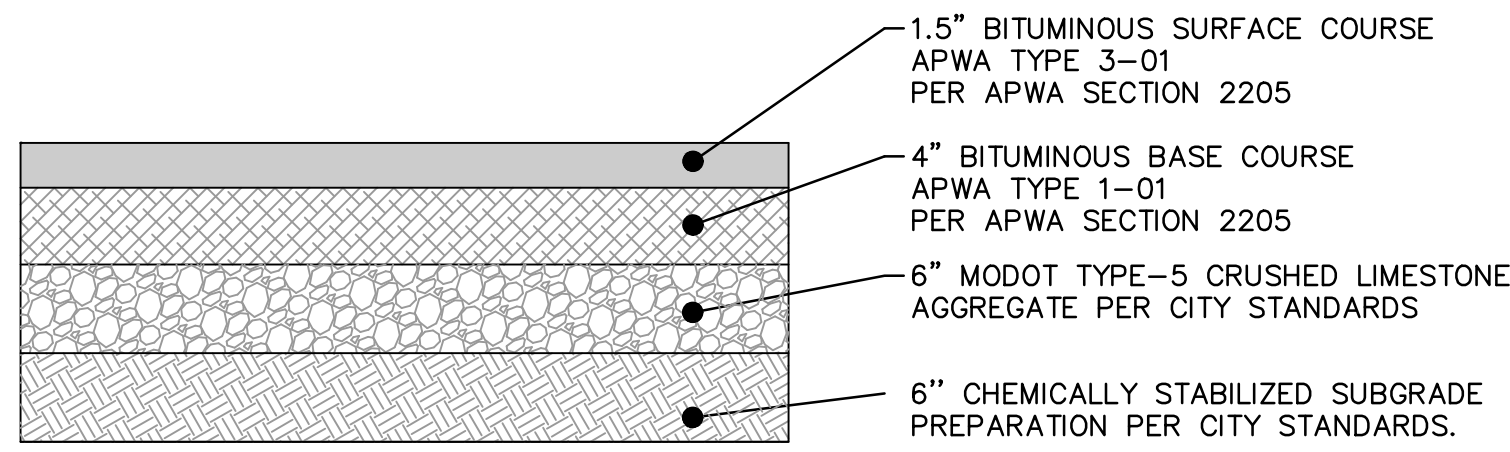
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2023

WATER PLAN & PROFILE  
RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN  
LEE'S SUMMIT, MO

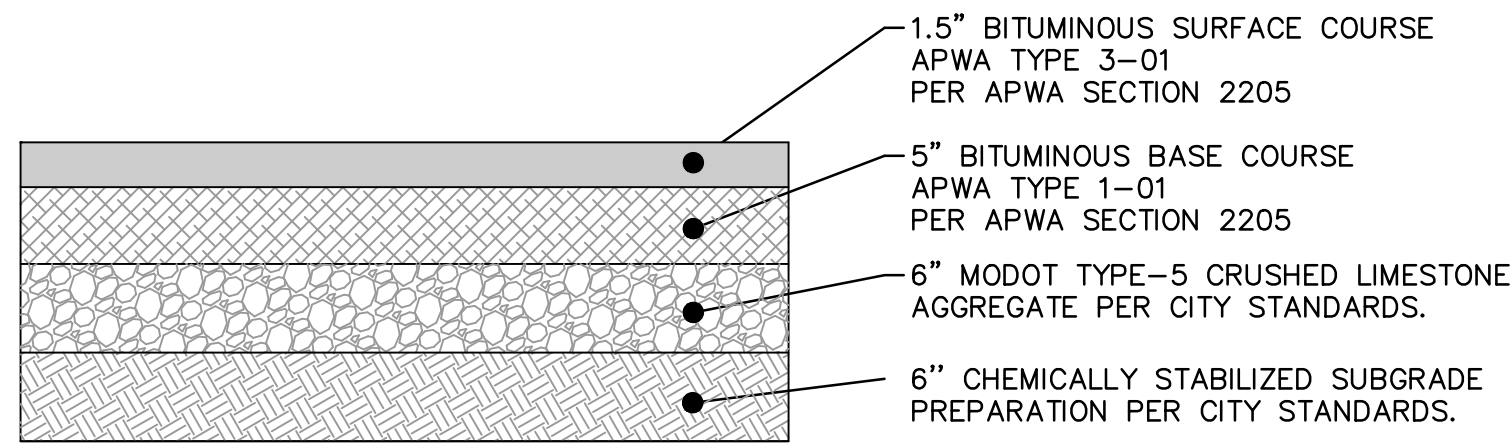
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checked by: CSM  
approved by: JS  
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project no.: A21-04054  
drawing no.: C\_WAT02\_A2104054  
date: 08.10.2022

SHEET  
C9.5



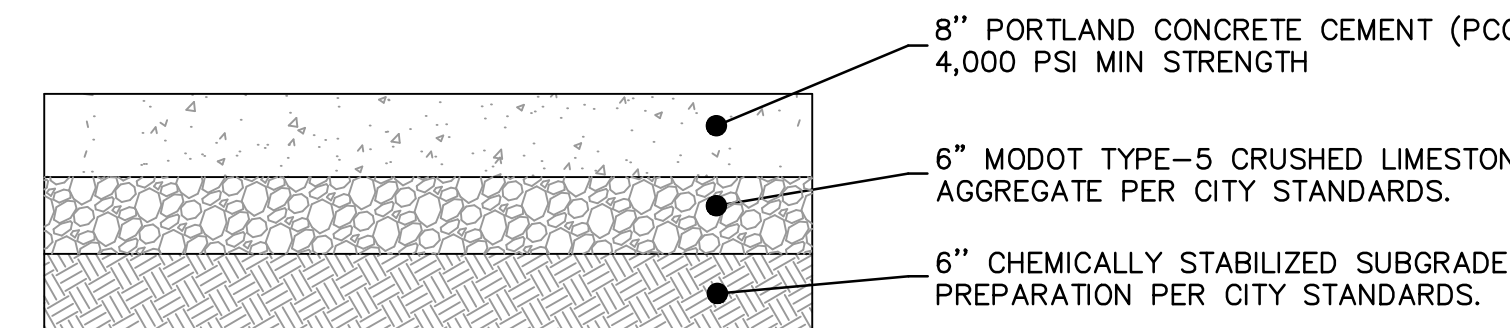
NOTE: ALL CONSTRUCTION, SITE PREPARATION, GRADING, AND EXCAVATION PROCEDURES SHALL CONFORM TO RECOMMENDATIONS AS OUTLINED IN THE GEOTECHNICAL REPORT INCLUDING ADDENDUMS. CONTRACTOR SHALL CONTACT ENGINEER WITH ANY DISCREPANCIES OR CONCERNS BASED ON ACTUAL SITE CONDITIONS.

PARKING AREA ASPHALT SECTION  
NOT TO SCALE

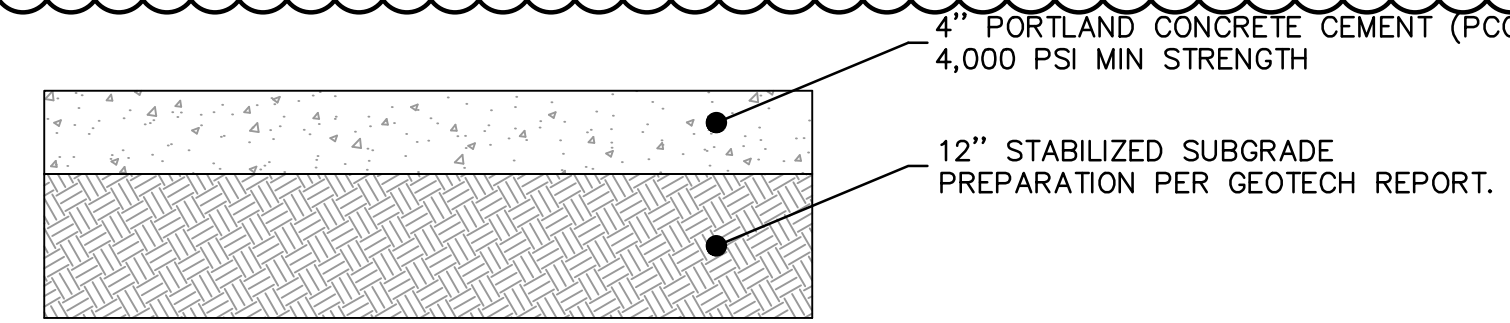


NOTE: ALL CONSTRUCTION, SITE PREPARATION, GRADING, AND EXCAVATION PROCEDURES SHALL CONFORM TO RECOMMENDATIONS AS OUTLINED IN THE GEOTECHNICAL REPORT INCLUDING ADDENDUMS. CONTRACTOR SHALL CONTACT ENGINEER WITH ANY DISCREPANCIES OR CONCERNS BASED ON ACTUAL SITE CONDITIONS.

DRIVE AREA ASPHALT SECTION  
NOT TO SCALE



HEAVY PCC SECTION  
NOT TO SCALE



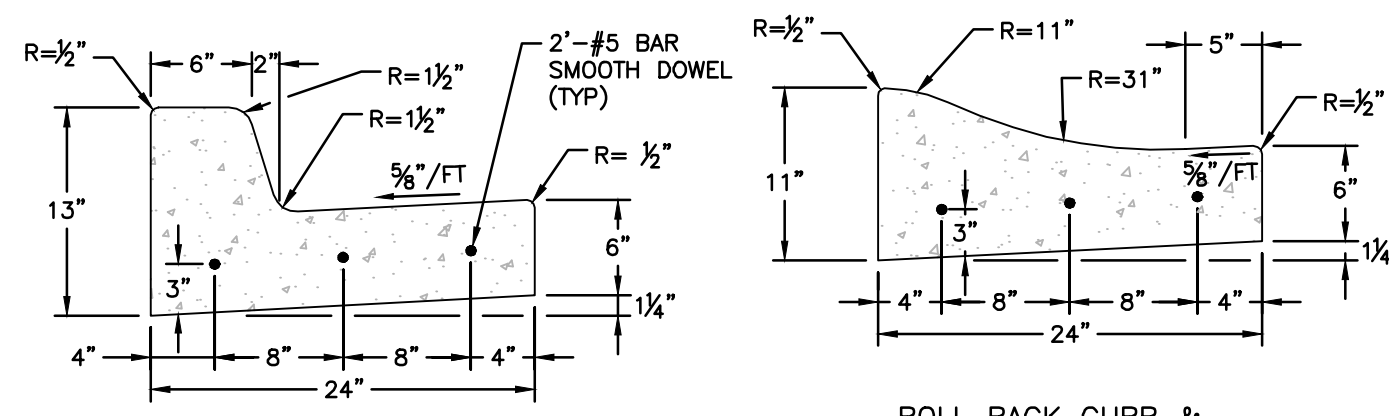
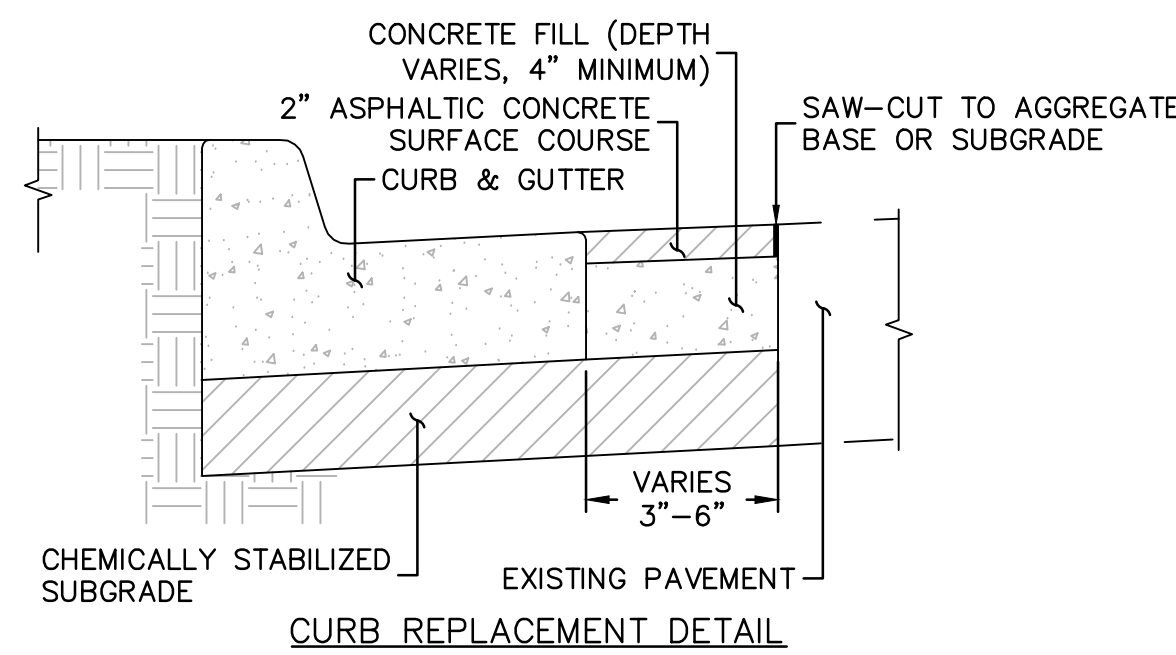
PCC SIDEWALK SECTION  
NOT TO SCALE

#### NOTES

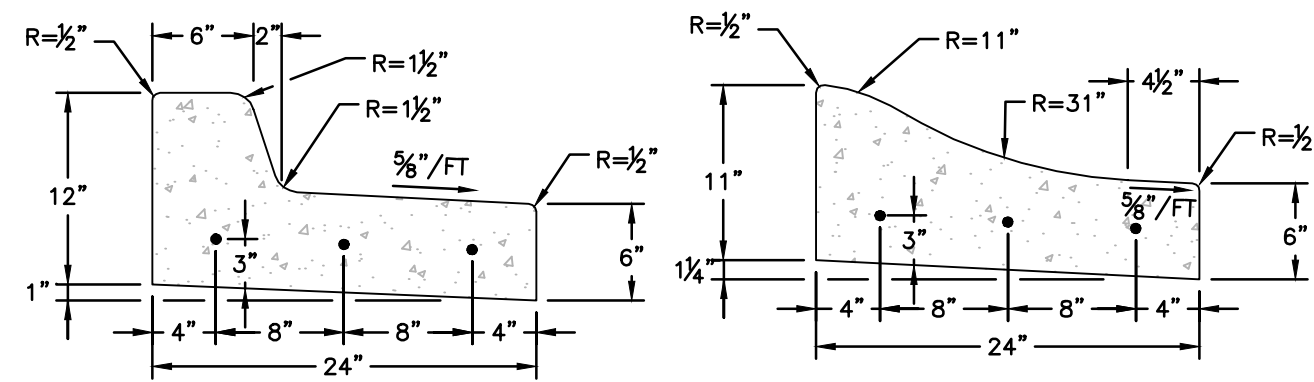
- 5,000 PSI KCMBB CONCRETE SHALL BE USED FOR STRUCTURES WITH ORIFICE PLATE
- STRUCTURES MAY BE PRE-CAST OR CAST IN PLACE AT THE CONTRACTOR'S OPTION. FOR PRE-CAST CONSTRUCTION CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE DESIGN ENGINEER, AND PROVIDE A COPY OF THE APPROVED SHOP DRAWINGS TO THE CITY.

#### GENERAL NOTES:

- 3/4" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
- 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH.
- KCMBB 4K CONCRETE SHALL BE USED FOR ALL CURBS.
- ASPHALTIC CONCRETE SURFACE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
- CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
- WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
- AGGREGATE BASE AND SUBGRADE PREPARATION SHALL EXTEND A MINIMUM ONE FOOT BEYOND THE BACK OF CURB



STRAIGHT BACK CURB & GUTTER  
(TYPE CG-1)



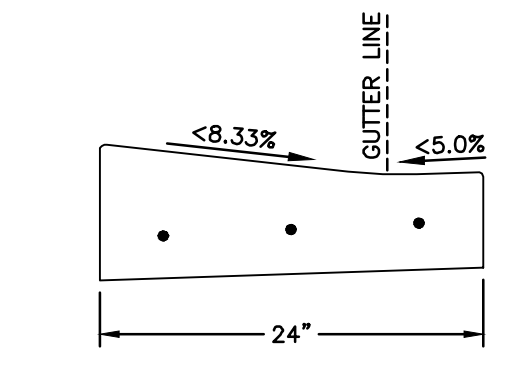
ROLL BACK CURB & GUTTER  
(TYPE CG-2)



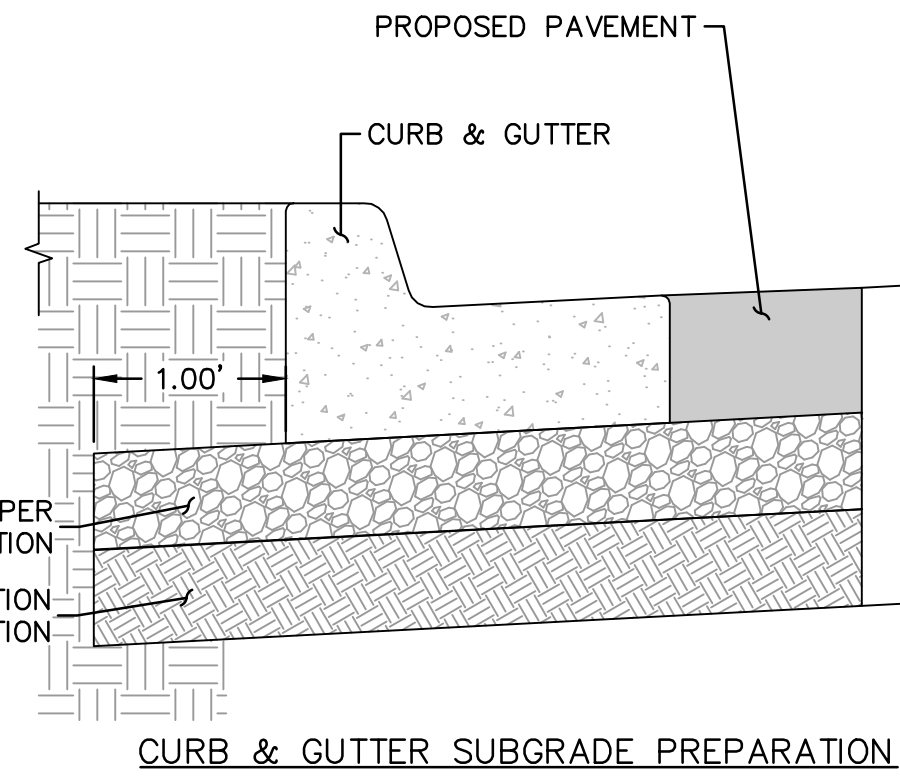
STRAIGHT BACK DRY CURB & GUTTER  
(TYPE CG-1 DRY)



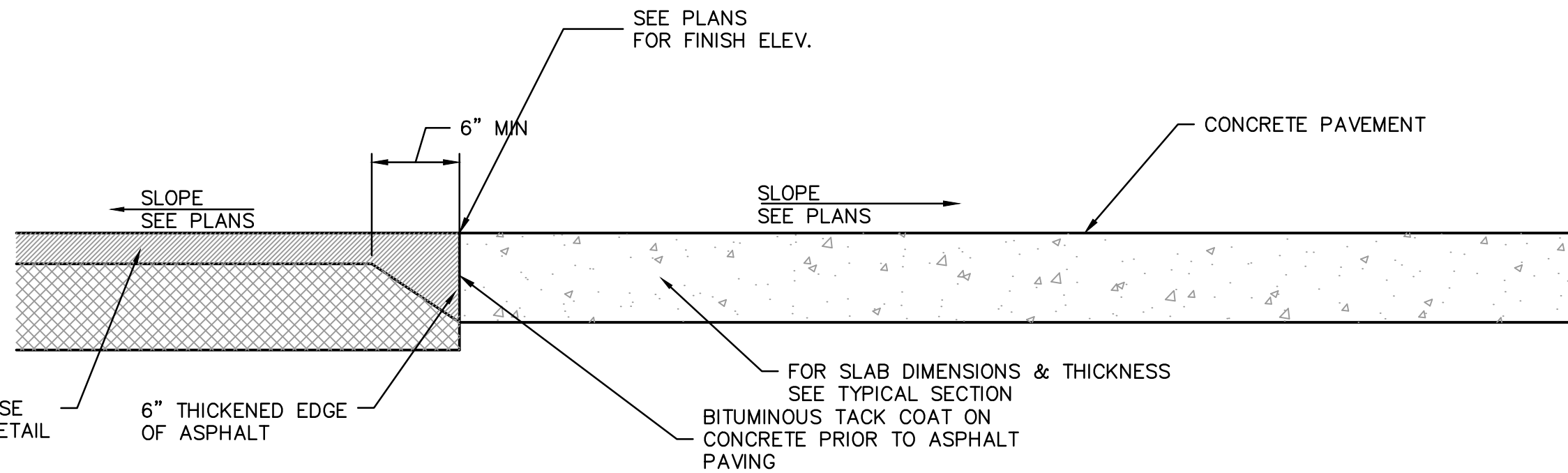
ROLL BACK DRY CURB & GUTTER  
(TYPE CG-2 DRY)



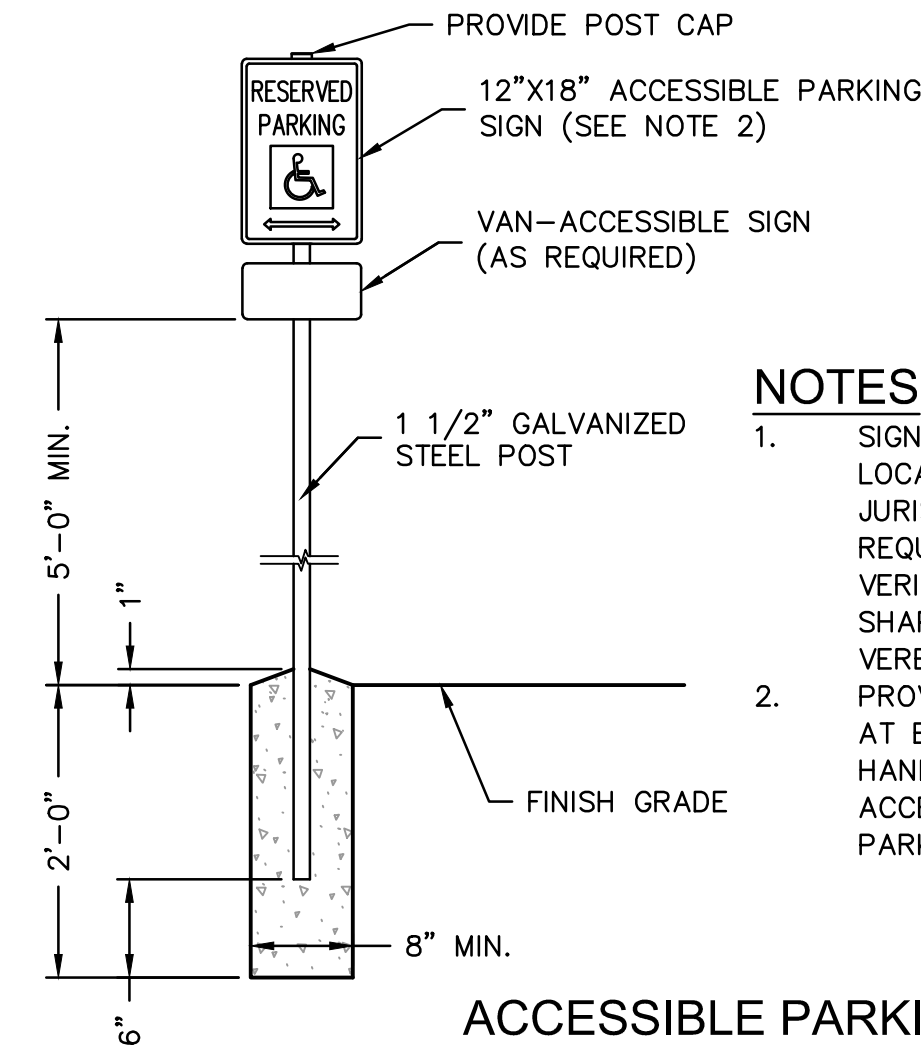
CURB & GUTTER DETAIL AT RAMP  
(ADA SLOPE REQUIREMENTS)



CURB & GUTTER SUBGRADE PREPARATION



TYPICAL JOINT SECTION AT CONCRETE AND ASPHALT PAVEMENT  
NOT TO SCALE

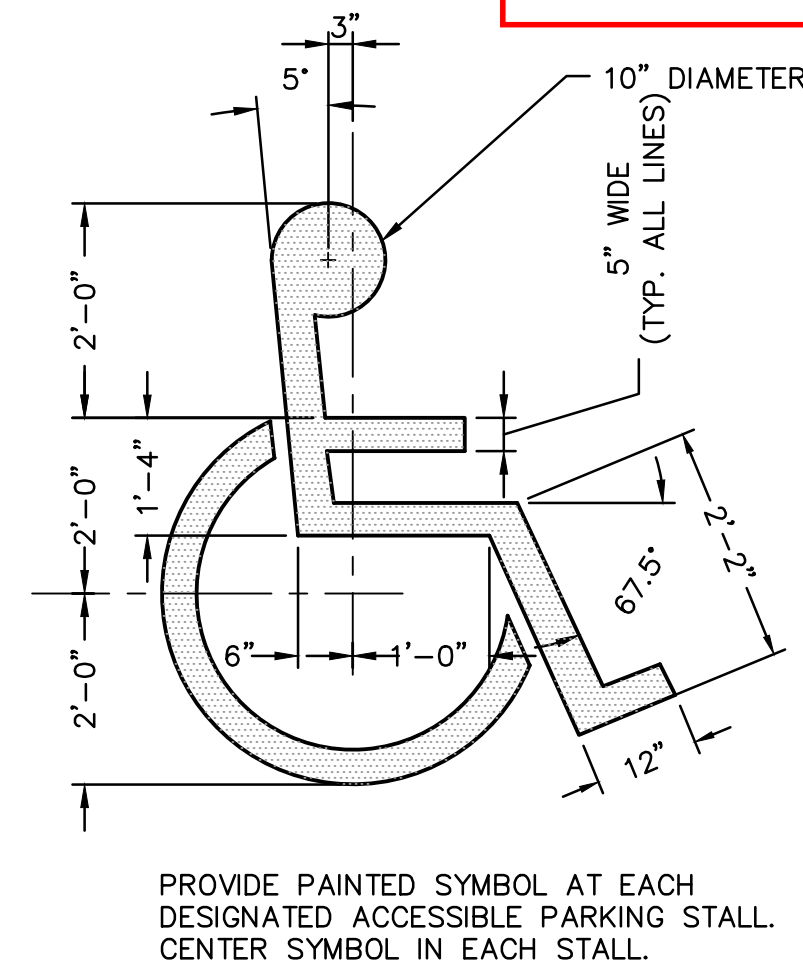


#### NOTES

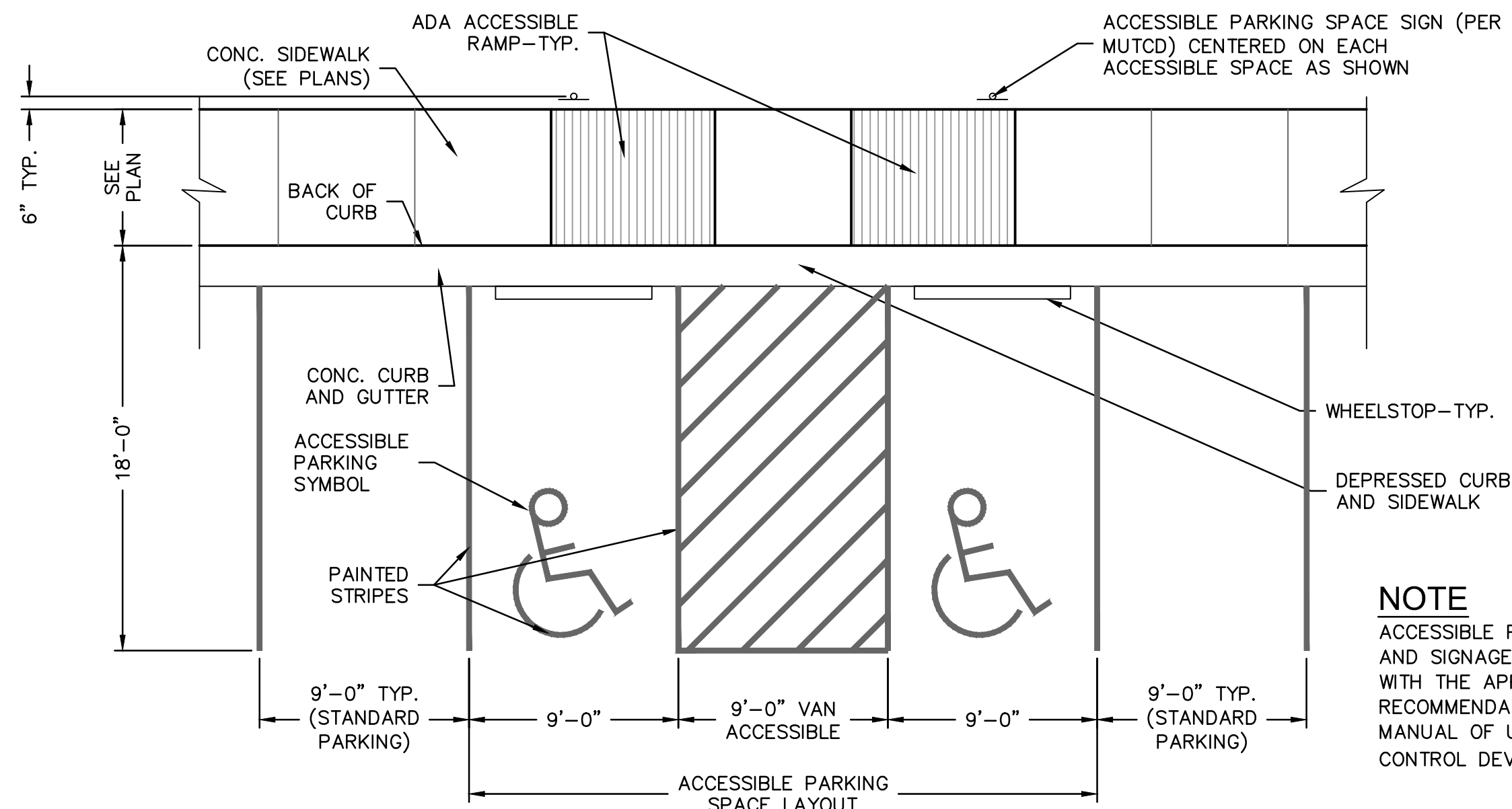
- SIGN TO BE PER LOCAL JURISDICTION REQUIREMENTS. VERIFY SIZE, SHAPE & VERBIAGE
- PROVIDE SIGN AT EACH HANDICAPPED ACCESSIBLE PARKING STALL.

ACCESSIBLE PARKING SPACE SIGNAGE  
NOT TO SCALE

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Lee's Summit, Missouri  
09/20/2023



ACCESSIBLE PARKING SYMBOL  
NOT TO SCALE



TYPICAL ADA PARKING SPACE LAYOUT DETAIL  
NOT TO SCALE

#### NOTE

ACCESSIBLE PARKING SYMBOL AND SIGNAGE SHALL COMPLY WITH THE APPLICABLE RECOMMENDATIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

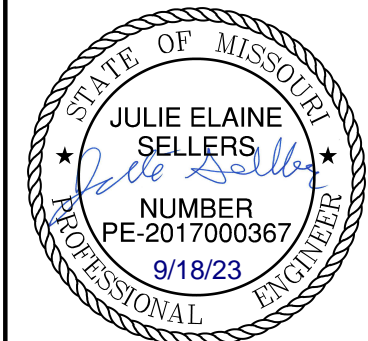
CONSTRUCTION DETAILS

RAINTREE VILLAGE  
FINAL DEVELOPMENT PLAN

LEE'S SUMMIT, MO

drawn by: CSM  
checked by: CSM  
approved by: JS  
QA/QC by: JS  
project no.: A21-04054  
drawing no.: C-DTL01\_A2104054  
date: 08/10/2022

SHEET  
C10.0



REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10/10/2022	CITY COMMENTS	CSM
2	01/20/2023	CITY COMMENTS	
3	03/03/2023	CITY COMMENTS	
4	08/27/2023	SWANSON REVISION	
5	08/14/2023	WATER MAIN UPDATES	

REVISIONS

2023

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Missouri Certificate of Authority #  
1301 Burlington Street  
North Kansas City, MO 64116  
www.olsson.com  
TEL 816.361.1177





USER: cmayo  
C\_PBLDG\_A2

**Development Services Department  
Lee's Summit, Missouri**

0' 150' 300'  
SCALE IN FEET

STATE OF MISSOURI  
JACOB  
HODSON  
NUMBER  
PLA-2023000549  
02/16/23  
PROFESSIONAL LANDSCAPE ARCHITECT

Olsson - Civil Engineering  
Missouri Certificate of Authority #  
1301 Burlington Street  
North Kansas City, MO 64111

## REVISIONS

2023

LEE'S SUMMIT. MO

LANDSCAPE PLAN

# RAINTREE VILLAGE FINAL DEVELOPMENT PLAN

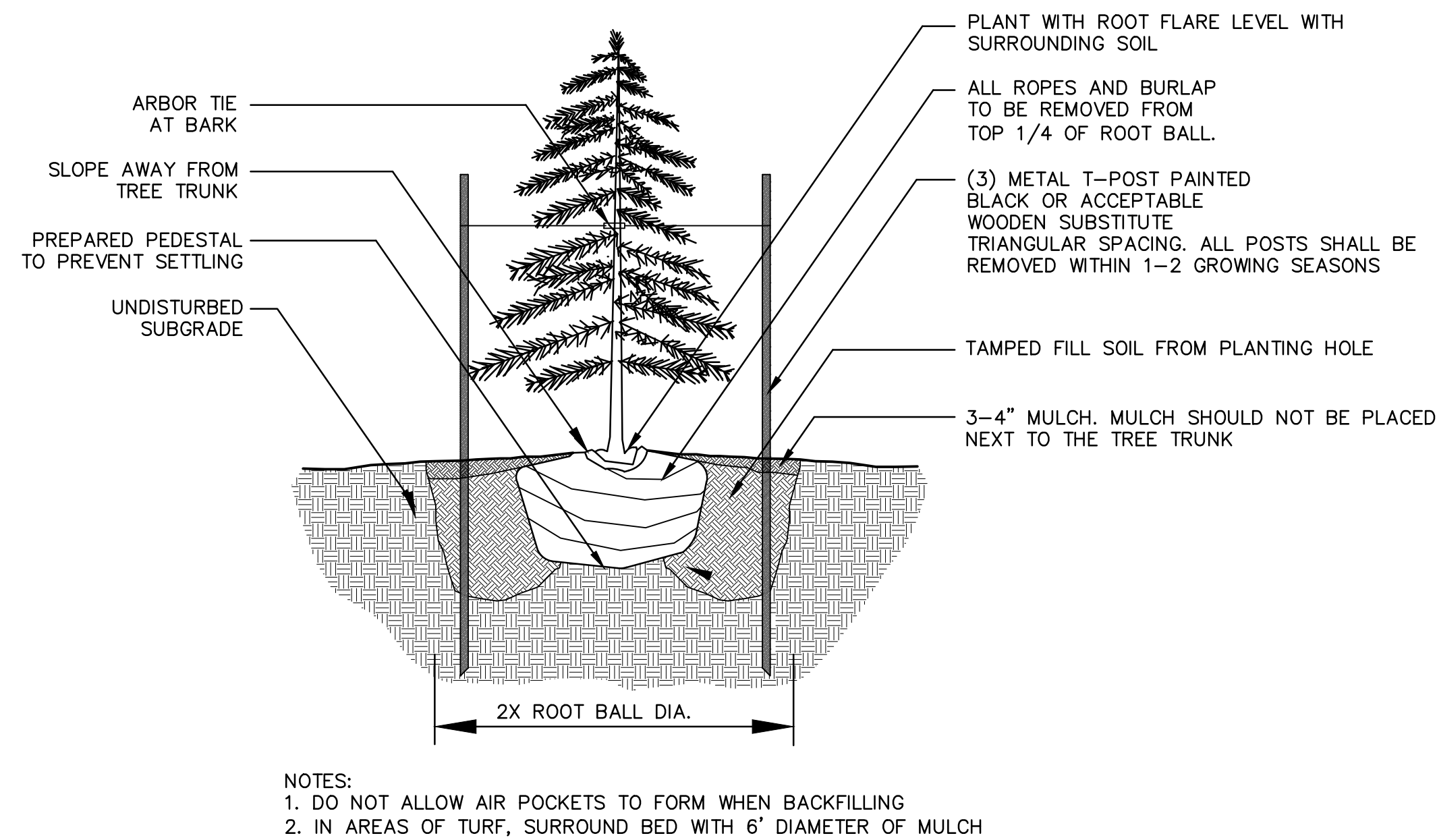
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date: \_\_\_\_\_ 08.10.2022

SHEET  
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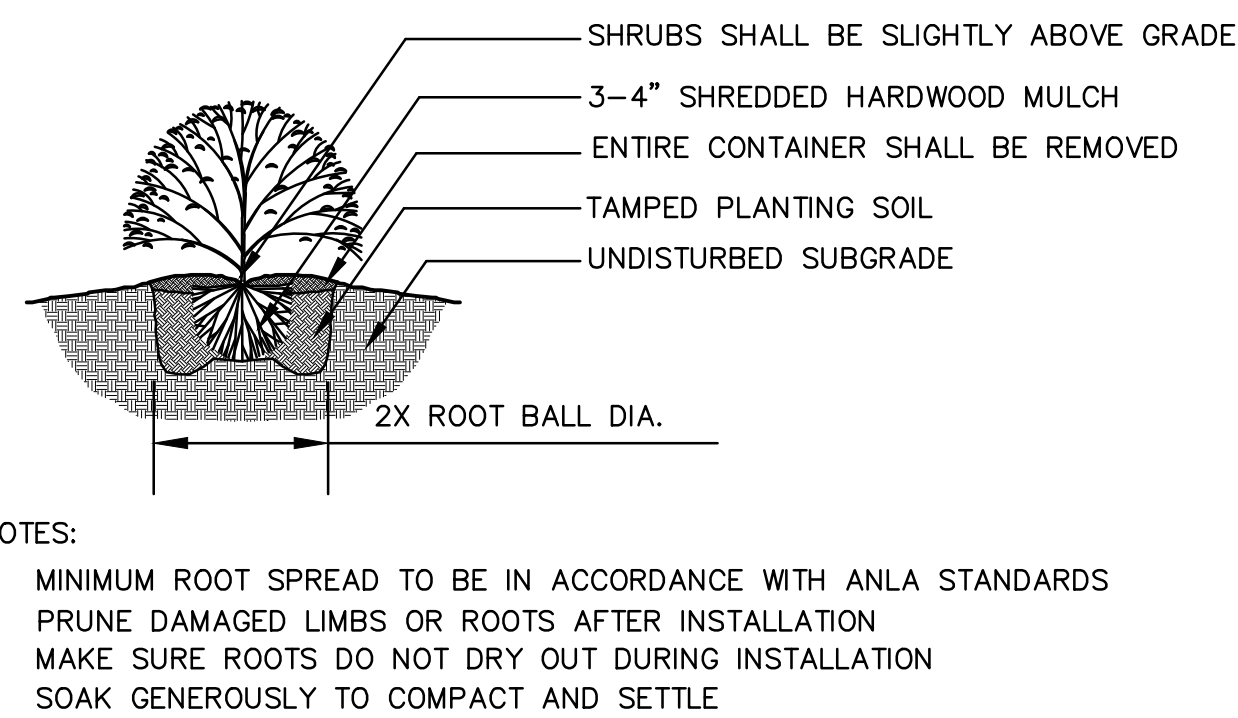
**RELEASED FOR CONSTRUCTION**  
As Noted on Plan Review

**Development Services Department**  
**Lee's Summit, Missouri**

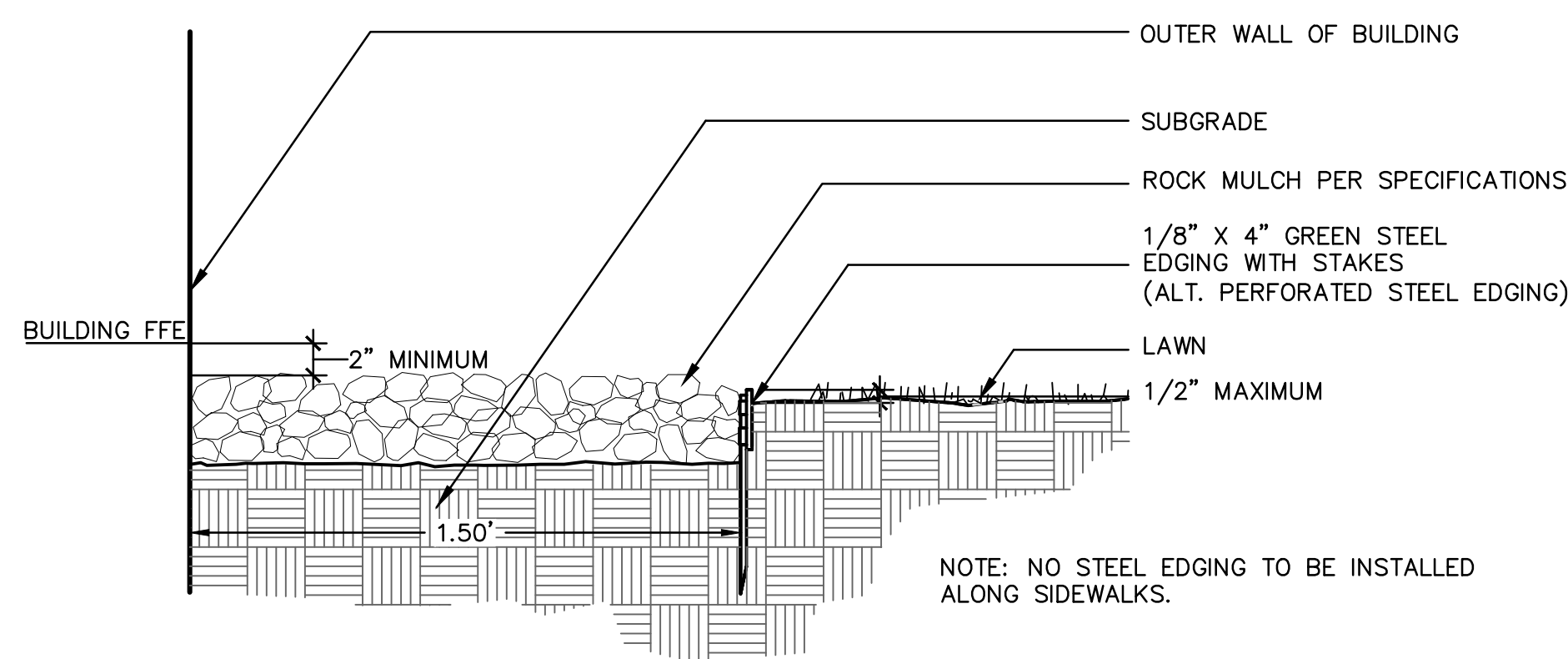
**09/20/2023**



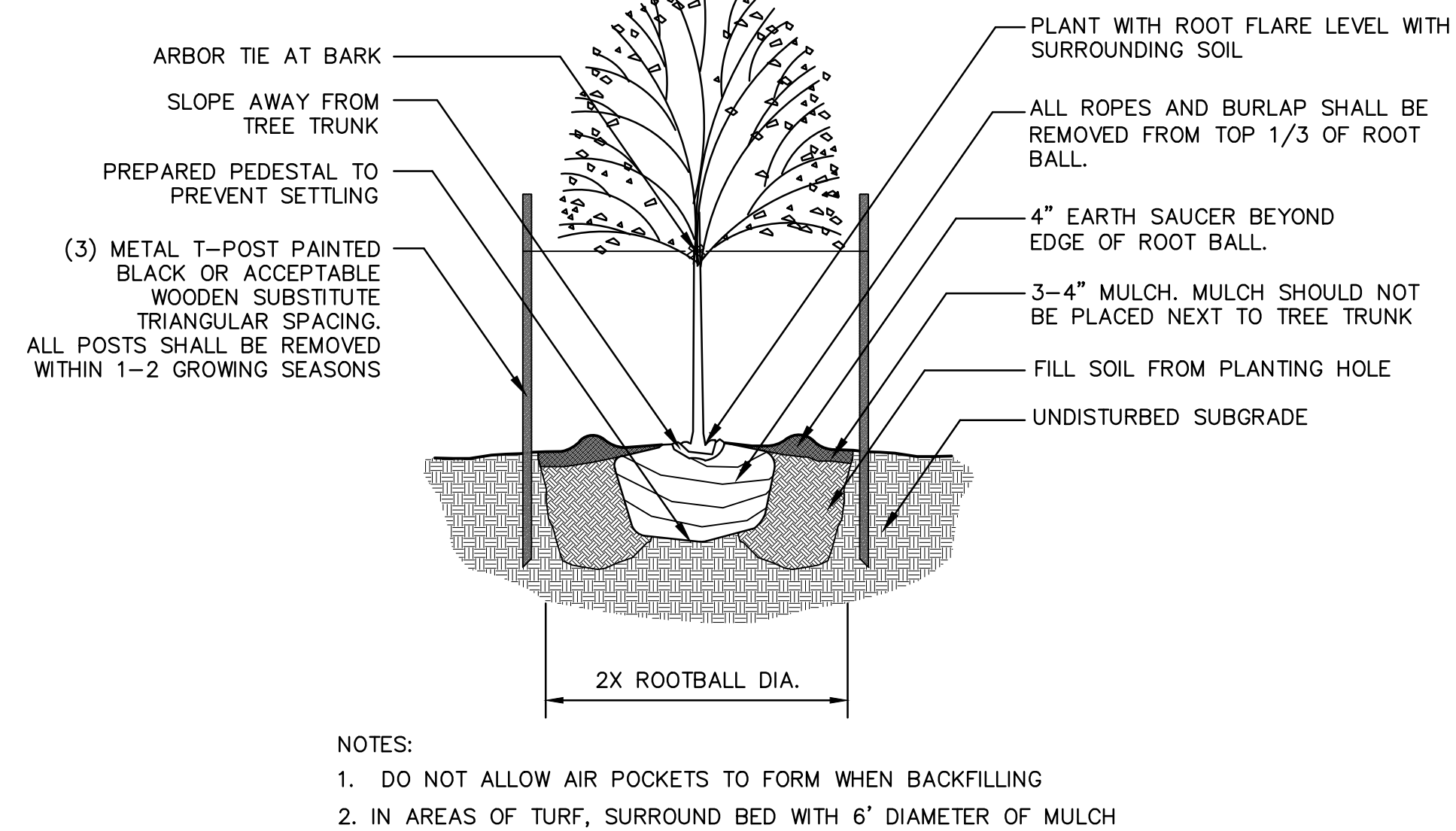
## 1 Evergreen Tree Planting Detail



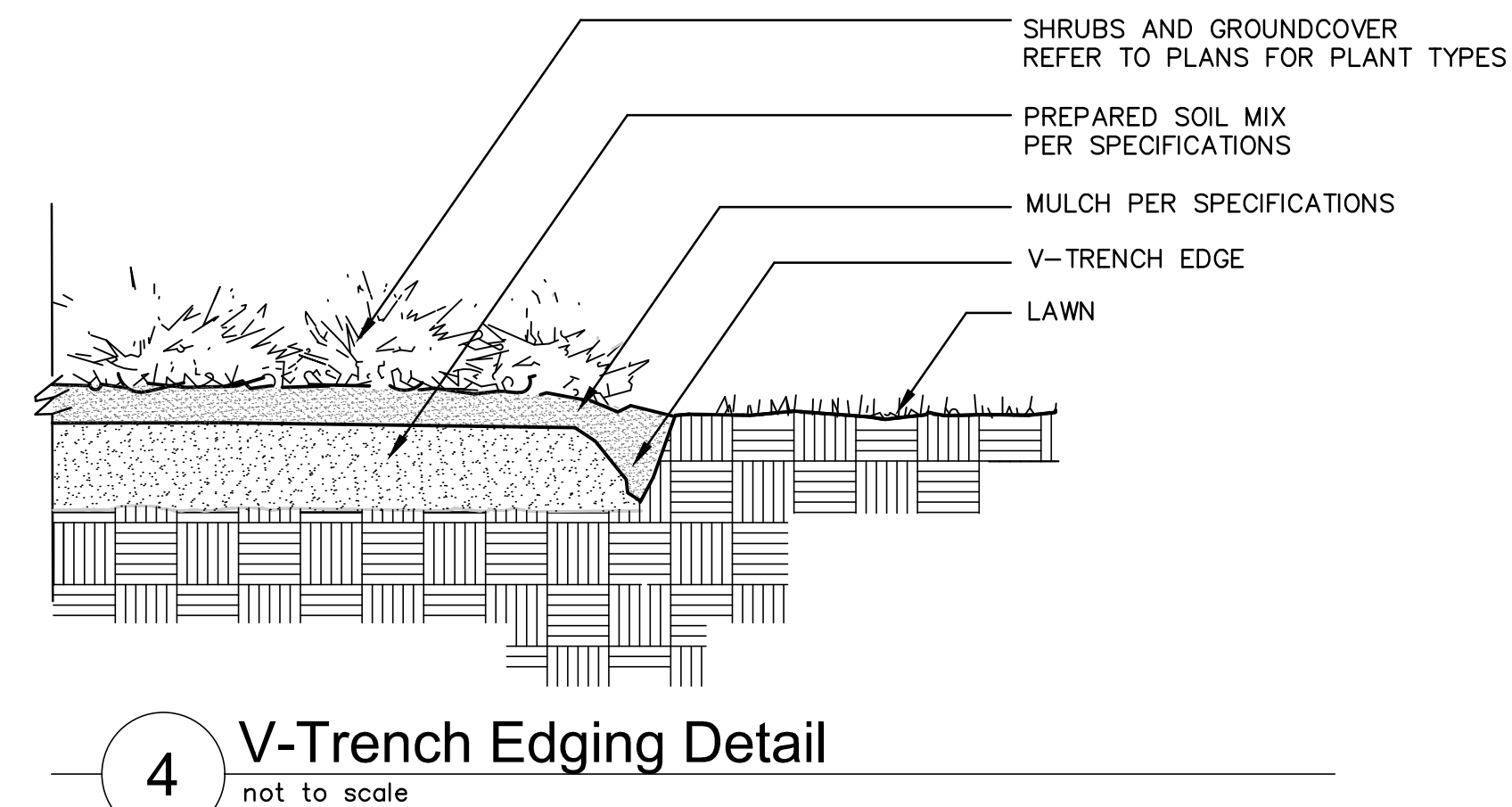
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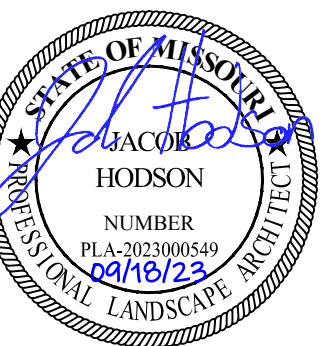
## 5 Rock Mulch Border Detail



## 2 Deciduous Tree Planting Detail

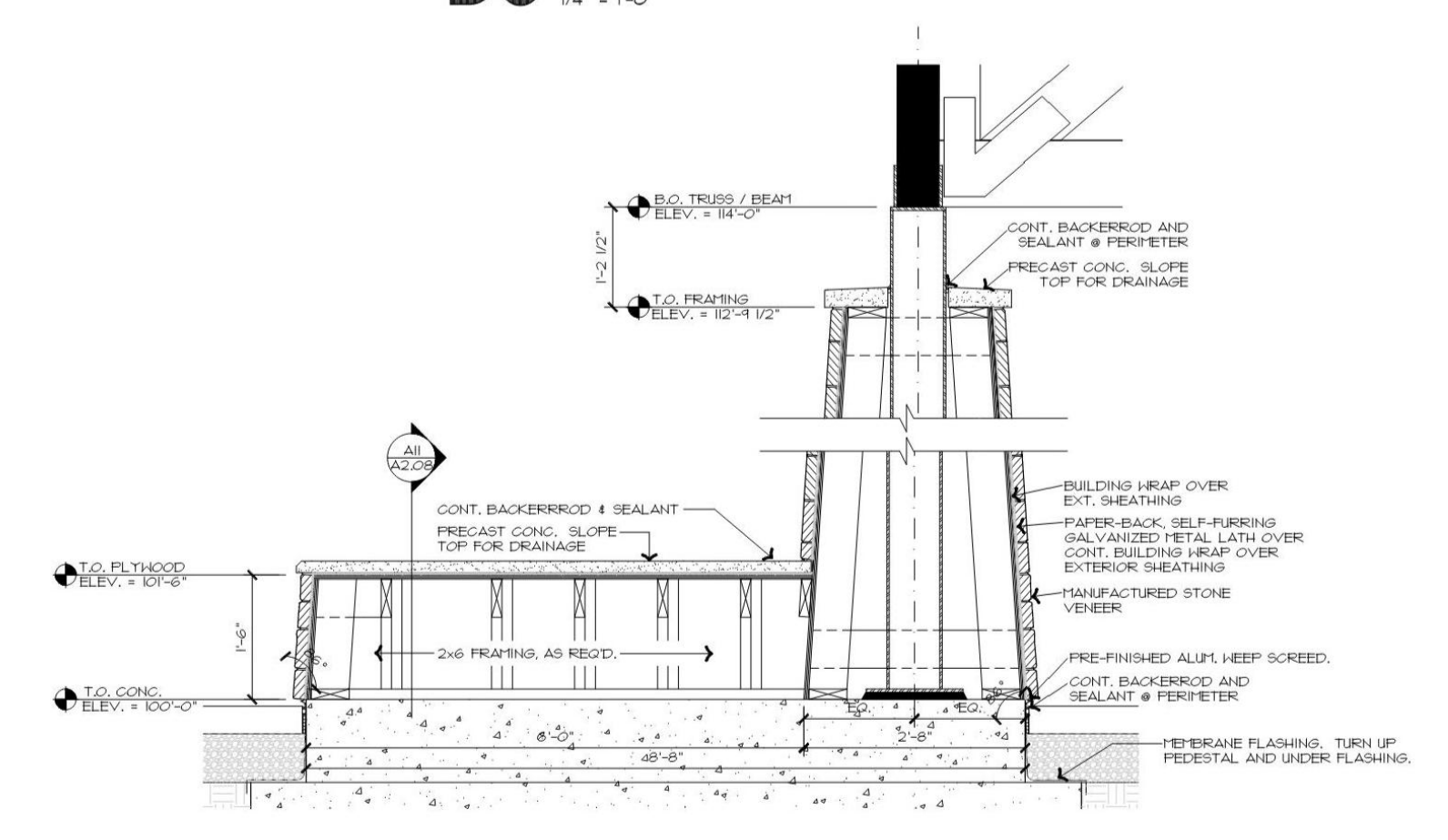


#### 4 V-Trench Edging Detail



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<b>REVISIONS</b>				





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