

☐ NOT FOR CONSTRUCTION

☒ REVIEWED FOR CONSTRUCTION



SECTION 23, TOWNSHIP 47 N, RANGE 32 W.
IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



TRACT OF LAND IN THE NORTHEAST QUARTER OF SECTION 23 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. 202014092 AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH 02°46'08" EAST, ON THE EAST LINE OF SAID NORTHEAST QUARTER 1,323.83 FEET TO THE SOUTHEAST CORNER OF THE NORTH HALF OF SAID NORTHEAST QUARTER, ALSO BEING THE NORTHEAST CORNER OF EAGLE CREEK - FIFTH PLAT, A SUBDIVISION OF LAND IN SAID LEE'S SUMMIT RECORDED OCTOBER 9, 2001 AS INSTRUMENT NUMBER 200100082127 IN BOOK 70 AT PAGE 14; SAID OFFICE OF RECORDER OF DEEDS, JACKSON COUNTY, MISSOURI; THENCE LEAVING SAID EAST LINE, NORTH 88°13'31" WEST, 1,025.00 FEET TO THE SOUTHWEST CORNER OF SAID EAGLE CREEK - FIFTH PLAT, ALSO BEING THE NORTH LINE OF SAID SOUTHWEST CORNER OF EAGLE CREEK - SIXTH PLAT, TO THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED, THENCE NORTH 87°41'31" WEST ON SAID SOUTH LINE AND SAID NORTH LINE, 675.87 FEET TO THE NORTHWEST CORNER OF SAID EAGLE CREEK - FIFTH PLAT, ALSO BEING THE NORTHEAST CORNER OF EAGLE CREEK - SIXTH PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT RECORDED OCTOBER 9, 2001 AS INSTRUMENT NUMBER 200100082129 IN BOOK 70 AT PAGE 15 IN SAID OFFICE OF RECORDER OF DEEDS, JACKSON COUNTY, MISSOURI; THENCE NORTH 87°41'31" WEST ON SAID SOUTH LINE, ALSO BEING THE NORTH LINE OF SAID EAGLE CREEK - SIXTH PLAT, 704.45 FEET TO THE NORTHWEST CORNER OF SAID EAGLE CREEK - SIXTH PLAT, ALSO BEING THE EASTERLY LINE OF TRACT C OF EAGLE CREEK - SEVENTH PLAT, LOTS 230 THRU 282, INCLUSIVE, AND TRACT C, A SUBDIVISION OF LAND IN SAID LEE'S SUMMIT RECORDED APRIL 25, 2003 AS INSTRUMENT NUMBER 200300030129 IN BOOK 76 AT PAGE 12 IN SAID OFFICE OF RECORDER OF DEEDS, JACKSON COUNTY, MISSOURI; THENCE LEAVING SAID EAST LINE, NORTH 02°46'08" EAST, ON THE EAST LINE OF SAID SOUTHWEST CORNER OF EAGLE CREEK - FIFTH PLAT, 197.92 FEET TO THE NORTHWEST CORNER OF SAID EAGLE CREEK - SIXTH PLAT, ALSO BEING A POINT ON THE EXISTING SOUTHERLY RIGHT-OF-WAY LINE SW EAGLE VIEW DRIVE, AS ESTABLISHED BY SAID EAGLE CREEK - SEVENTH PLAT, LOT 230 THRU 282, INCLUSIVE, AND TRACT C; THENCE EASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE LEFT HAVING AN INITIAL TANGENT BEARING OF SOUTH 86°54'35" EAST WITH A RADIUS OF 830.00 FEET, A CENTRAL ANGLE OF 29°39'14" AND AN ARC DISTANCE OF 429.57 FEET; THENCE NORTH 63°26'11" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 285.62 FEET; THENCE EASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 1,270.00 FEET, A CENTRAL ANGLE OF 31°03'25" AND AN ARC DISTANCE OF 888.40 FEET; THENCE SOUTH 85°30'24" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 109.10 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED, THENCE SOUTHERLY, 109.10 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED, THENCE SOUTH 02°46'08" WEST, 559.61 FEET; THENCE SOUTH 02°31'56" WEST, 1,025.00 FEET; THENCE WESTERLY ON A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF NORTH 87°41'31" WEST WITH A RADIUS OF 1,025.00 FEET, A CENTRAL ANGLE OF 04°39'21" AND AN ARC DISTANCE OF 83.29 FEET; THENCE SOUTH 02°18'29" WEST, 123.38 FEET TO THE POINT OF BEGINNING, CONTAINING 669.406 SQUARE FEET OR 15.37 ACRES, MORE OR LESS.

BENCHMARK

BENCHMARK NO. 1
CHISELED SQUARE ON THE NORTHWEST CORNER OF 6' X 4' CURB INLET THAT IS ON THE SOUTH SIDE OF SW EAGLEVIEW DRIVE AND WEST OF SW BURNINGWOOD LANE, STRAIGHT SOUTH OF A 6' X 4' CURB INLET.
ELEVATION = 1002.10

OLSSON HAS BEEN RETAINED TO PROVIDE AS-BUILT DRAWINGS FOR THIS PROJECT.


STEPHEN SAYLOR, P.E.
CIVIL ENGINEER
MO#2018021248

5/7/2024
DATE

osion



5/7/2024

REVISIONS

2023

TITLE SHEET
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

LEE'S SUMMIT, MISSOURI

drawn by: _____ CW
checked by: _____ SS
approved by: _____ JS
QA/QC by: _____ JS
project no.: _____ A20-2467
drawing no.: C TTL01 A202467
date: _____ 02/23/2024

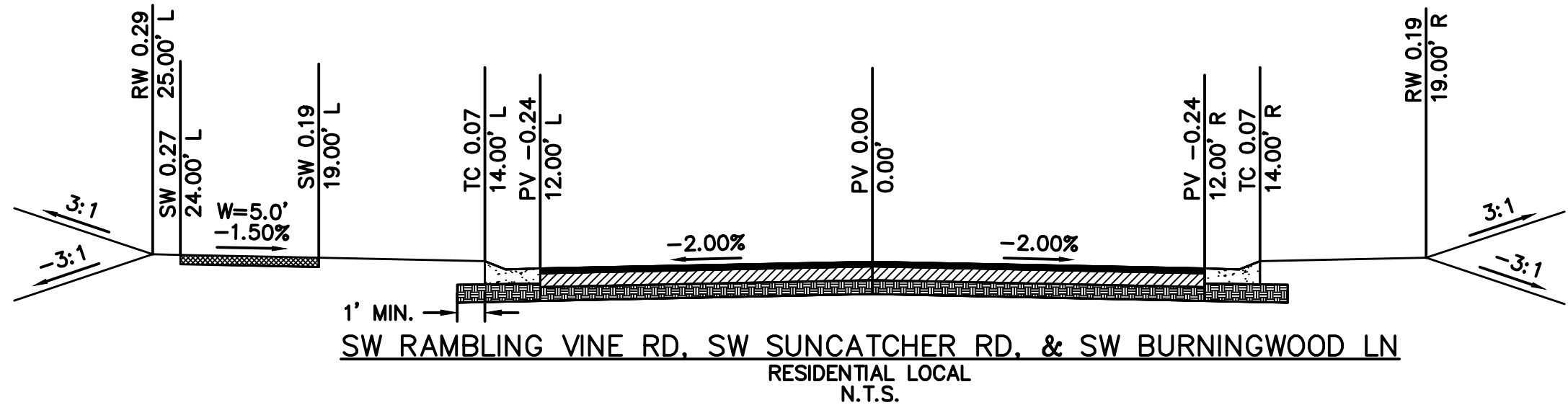
SHEET
C101

1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS OF THE PROJECT AREA.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THEIR OWN INVESTIGATIONS AND MAKING THEIR OWN ASSUMPTIONS REGARDING SITE SURFACE AND SUBSURFACE CONDITIONS. THIS INCLUDES THE LOCATION AND CONSISTENCY OF ANY EXISTING ROCK LAYERS UNDERLYING THE PROJECT SITE. CONTACT THE ENGINEER REGARDING ANY DISCREPANCIES THAT MAY AFFECT THE ABILITY TO CONSTRUCT FROM THESE PLANS AS DESIGNED.
3. EXISTING CONDITIONS WERE DETERMINED THROUGH A VARIETY OF METHODS THAT MAY INCLUDE SURVEY, AERIAL IMAGERY, AVAILABLE RECORDS, GIS DATA, ETC. SUBSURFACE CONDITIONS ARE APPROXIMATE AND MAY NOT INCLUDE ALL UTILITIES AND OTHER SITE IMPROVEMENTS PRESENT ON SITE. THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS WHEN CONFLICTS AND DISCREPANCIES ARE FOUND.

POINT NUMBER	NORTHING	EASTING	POINT ELEVATION	DESCRIPTION
3	988896.2697	2811669.1312	975.106	3" IB RED CONTROL CAP SET ON THE NORTH SIDE OF THE INTERSECTION OF SW SUNCATCHER ROAD AND SW TIMBERTREE LANE. IT IS 2.30 FT NORTH OF THE BACK OF CURB, 4.40 FT EAST OF A NO PARKING SIGN, AND 2.10 FT SOUTH OF THE SIDEWALK.
1	988266.771	28811631.025	998.394	3" IB RED CONTROL CAP SET ON THE SOUTH SIDE OF EAGLE VIEW DRIVE, WEST OF SW SUNCATCHER ROAD AND EAST OF SW GOOSEBERRY LANE. IT IS 5.20 FT SOUTH OF THE BACK OF CURB, 32.00 FT NORTHEAST OF THE NORTHWEST CORNER OF A 6" X 6" VAULT, AND 77.00 FT WEST OF A NO PARKING SIGN
2	988263.9838	2812623.0498	1023.391	3" IB RED CONTROL CAP SET ON THE WEST SIDE OF PRYOR ROAD AND SOUTH OF SW EAGLEVIEW DRIVE. IT IS 9.00 FT SOUTH OF THE BACK OF CURB, 19.00 FT NORTHEAST TO THE NORTHEAST CORNER OF A 6" X 6" VAULT, AND 18.00 FT NORTHWEST TO A 4" TREE
4	988904.8351	2812800.168	1015.344	3" IB RED CONTROL CAP SET ON THE EAST SIDE OF PRYOR ROAD AND SOUTH OF DRIVEWAY #2041. IT IS 2.50 FT EAST OF THE EDGE OF ASPHALT, 55.00 FT SOUTH OF THE DRIVEWAY, AND 4.00 FT WEST OF THE TOP OF BANK

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
STREET				
	EXCAVATION	C.Y.	10606	
	EMBANKMENT	C.Y.	1038	
	6" ASPHALT PAVEMENT	S.Y.	6314.19	
	6" MODOT TYPE 5 STONE BASE	S.Y.	6314.19	
	8" CHEMICAL SUBGRADE STABILIZATION	S.Y.	6314.19	
	CONCRETE CURB & GUTTER (CG-2)	L.F.	4475.46	
	5' CONCRETE SIDEWALK	L.F.	3601.65	
	MILL & OVERLAY	S.Y.	13.33	
	ADA RAMP	EA.	12	
	STOP SIGNS	EA.	6	
	STREET NAME SIGNS	EA.	12	
	TYPE III OBJECT MARKER	EA.	4	
	TYPE IV OBJECT MARKER	EA.	2	
STORM				
	STD. CURB INLET (5'x3' INSIDE)	EA.	10	
	STD. CURB INLET (5'x4' INSIDE)	EA.	3	
	STD. CURB INLET (5'x5' INSIDE)	EA.	4	
	STD. CURB INLET (6'x3' INSIDE)	EA.	2	
	STD. CURB INLET (6'x5' INSIDE)	EA.	1	
	STD. CURB INLET (7'x5' INSIDE)	EA.	1	
	STD. STORM MANHOLE (4' DIA. INSIDE)	EA.	1	
	STD. FIELD INLET (4'x4' INSIDE)	EA.	7	
	15" HDPE	L.F.	1610.30	
	18" HDPE	L.F.	191.73	
	24" HDPE	L.F.	325.64	
	30" HDPE	L.F.	913.72	
	15" HDPE END SECTION	EA.	2	
	30" HDPE END SECTION	EA.	1	
	SWALE EXCAVATION	C.Y.	1743	
	SWALE EMBANKMENT	C.Y.	393	
	RIPRAP	S.Y.	26.74	
	TURF REINFORCEMENT MATTING	S.Y.	1572.61	

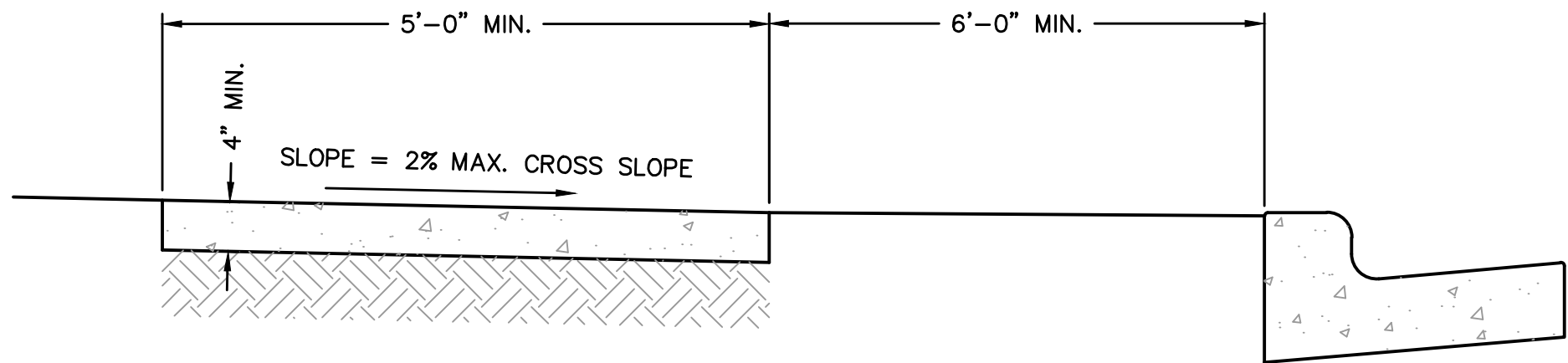
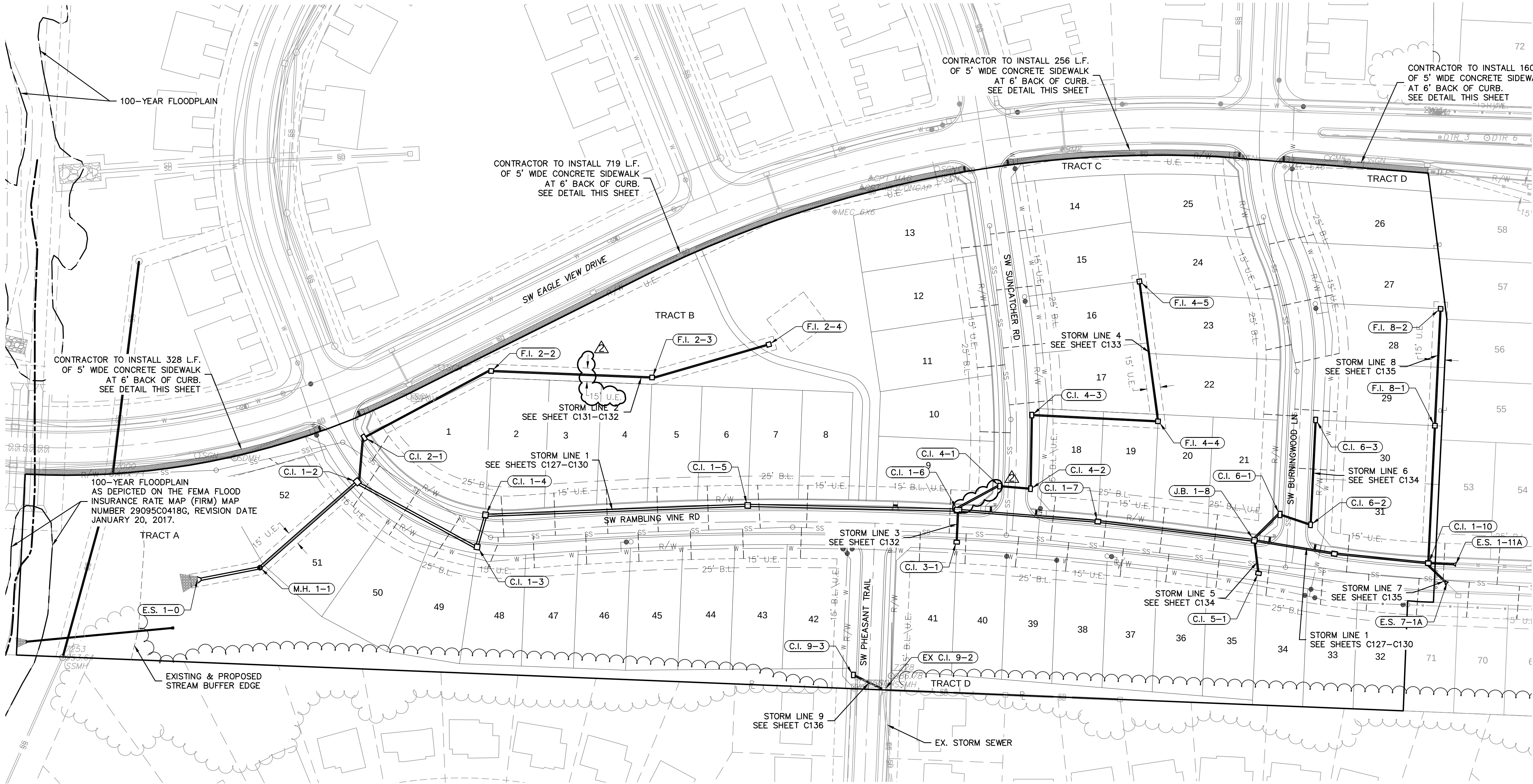
SUMMARY OF QUANTITIES AS INDICATED ABOVE AND ANY QUANTITIES AS SHOWN WITHIN THE PLANS SHALL HAVE BEEN PROVIDED FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR USE IN PREPARATION OF CONTRACT DOCUMENTS. QUANTITIES INTENDED FOR, BUT NOT LIMITED TO, THE PREPARATION OF PROPOSALS AND BID DOCUMENTS SHALL BE INDEPENDENTLY EVALUATED BY THE ESTIMATING PARTY BASED UPON THE CONTENTS OF THESE PLANS.



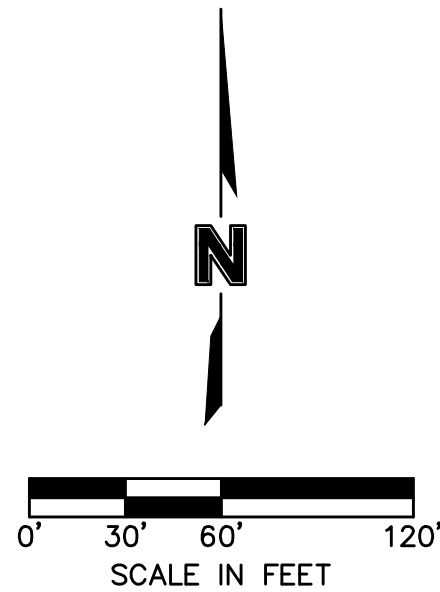
NOTE:
ALL ASPHALT MATERIALS SHALL CONFORM
TO THE KCMMB ASPHALT MATERIAL
SPECIFICATION, CURRENT EDITION.

2" TYPE 5 ASPHALTIC CONCRETE SURFACE
4" TYPE 5 ASPHALTIC CONCRETE BASE COURSE
6" MIN. MODOT TYPE 5 STONE BASE
8" CHEMICAL STABILIZED SUBGRADE
CG-2 CURB & GUTTER

DWG: F:\2020\2001-2500\020-2467-A\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Street & Storm\C_GEN01_A202467.dwg
DATE: May 07, 2024 10:34am
USER: sso\or C_PBASE_A202467 C_PENDY_A202467 C_PTBLK_A202467 C_PSTRM_A202467



DETAIL 1: STANDARD CONCRETE WALK DETAIL
NOT TO SCALE



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1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
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STATE OF MISSOURI
STEPHEN M. SAYLOR
NUMBER
PE-2018021248
5/7/2024

REVISIONS		
REV. NO.	DATE	REVISIONS DESCRIPTION
1	02/23/2024	REVISED PER CITY COMMENTS
2	04/02/2024	REVISED PER CITY COMMENTS

GENERAL LAYOUT
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

LEE'S SUMMIT, MISSOURI

drawn by: C.W.
checked by: J.S.
approved by: J.S.
QA/QC by: J.S.
project no.: A20-2467
drawing no.: C_GEN01_A202467
date: 02/23/2024

SHEET
C103

LOT FILL INFORMATION			
LOT NUMBER	MAX DEPTH OF FILL (OVER 2' PLACED)	FILL PLACED ON EXISTING SLOPES > 5:1	PROPOSED SLOPES > 3:1
1			
2			
3			
4			
5		X	
6			
7			
8			
9			
10			
11			
12			
13	4.0	X	
14			
15			
16		X	
17	3.0	X	
18	3.0	X	
19	3.0	X	
20	3.0	X	
21	3.0	X	
22			
23		X	
24			
25			
26			
27			
28			
29			
30			
31			
32			
33		X	
34		X	
35	3.0	X	
36	3.0	X	
37	3.0	X	
38	7.0		
39	6.0		
40	6.0	X	
41	4.0	X	
42	3.0		
43	3.0		
44			
45			
46			
47			
48			
49			
50		X	
51	3.0	X	
52	3.0	X	
X Indicates condition applies to lot			

GENERAL NOTES:

1. CONTRACTOR SHALL ADHERE TO THE "DESIGN AND CONSTRUCTION MANUAL" SECTION 2100 AS ADOPTED BY THE CITY OF LEE'S SUMMIT (LATEST EDITION), FOR EXCAVATION AND EMBANKMENT WORK WITHIN THE PROPOSED RIGHT-OF-WAY.

2. AREAS OF CONSTRUCTION SHALL BE STRIPPED OF ALL VEGETATION, ORGANIC MATTER AND TOPSOIL TO A DEPTH AS RECOMMENDED BY GEOTECHNICAL ENGINEER AND OR TESTING AGENCY. SOILS REMOVED DURING SITE STRIPPING SHOULD BE EVALUATED TO DETERMINE IF PORTIONS OF THE TOPSOIL STRATUM MAY BE UTILIZED AS STRUCTURAL FILL WITHIN PAVEMENT AREAS. ANY MATERIAL NOT DEEMED AS SUITABLE FILL MATERIAL BY THE GEOTECHNICAL ENGINEER AND OR TESTING AGENCY SHALL BE REMOVED FROM THE JOB SITE BY THE CONTRACTOR AT HIS EXPENSE.

3. ALL EMBANKMENT OUTSIDE OF RIGHT-OF-WAY SHOULD BE PLACED IN CONTROLLED LIFTS HAVING A MAXIMUM LOOSE LIFT THICKNESS OF 8". EMBANKMENT SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR COMPACTION). MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN A RANGE OF -0 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT.

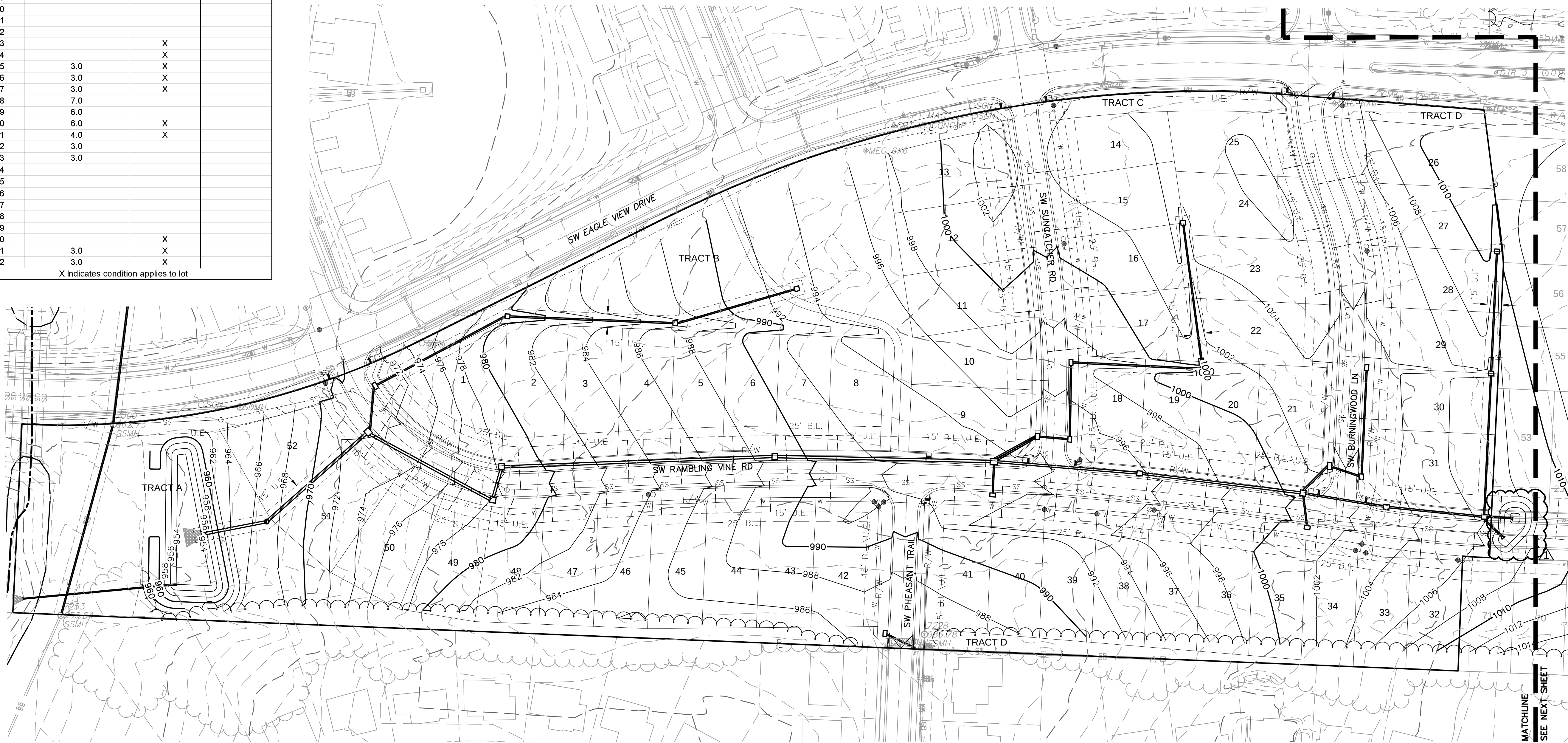
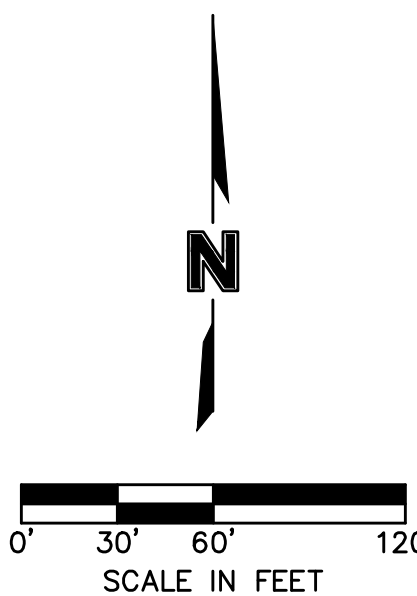
EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
STREET	10,606	1,038
SWALE	1,743	393
SITE	67,079	40,131
TOTAL	79,428	41,562

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.

LEGEND	
	EXISTING INDEX CONTOURS
	EXISTING INTERMEDIATE CONTOURS
	PROPOSED INDEX CONTOURS
	PROPOSED INTERMEDIATE CONTOURS



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USER: sso\or

LOT FILL INFORMATION			
LOT NUMBER	MAX DEPTH OF FILL (OVER 2' PLACED)	FILL PLACED ON EXISTING SLOPES > 5:1	PROPOSED SLOPES > 3:1
53			
54			
55			
56			
57		X	
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73	8.0	X	
74	11.0		
75	12.0		
76	12.0		
77	11.0		
78	11.0		
79	11.0		
80	4.0	X	
81		X	
82	4.0		
83	5.0	X	
84		X	
85		X	
86	4.0		
87	5.0		
88	3.0	X	
89	4.0	X	
90	7.0	X	
91	8.0	X	
92	8.0	X	
93	7.0		
94	7.0		
95	7.0		
96	6.0	X	
X Indicates condition applies to lot			

GENERAL NOTES:

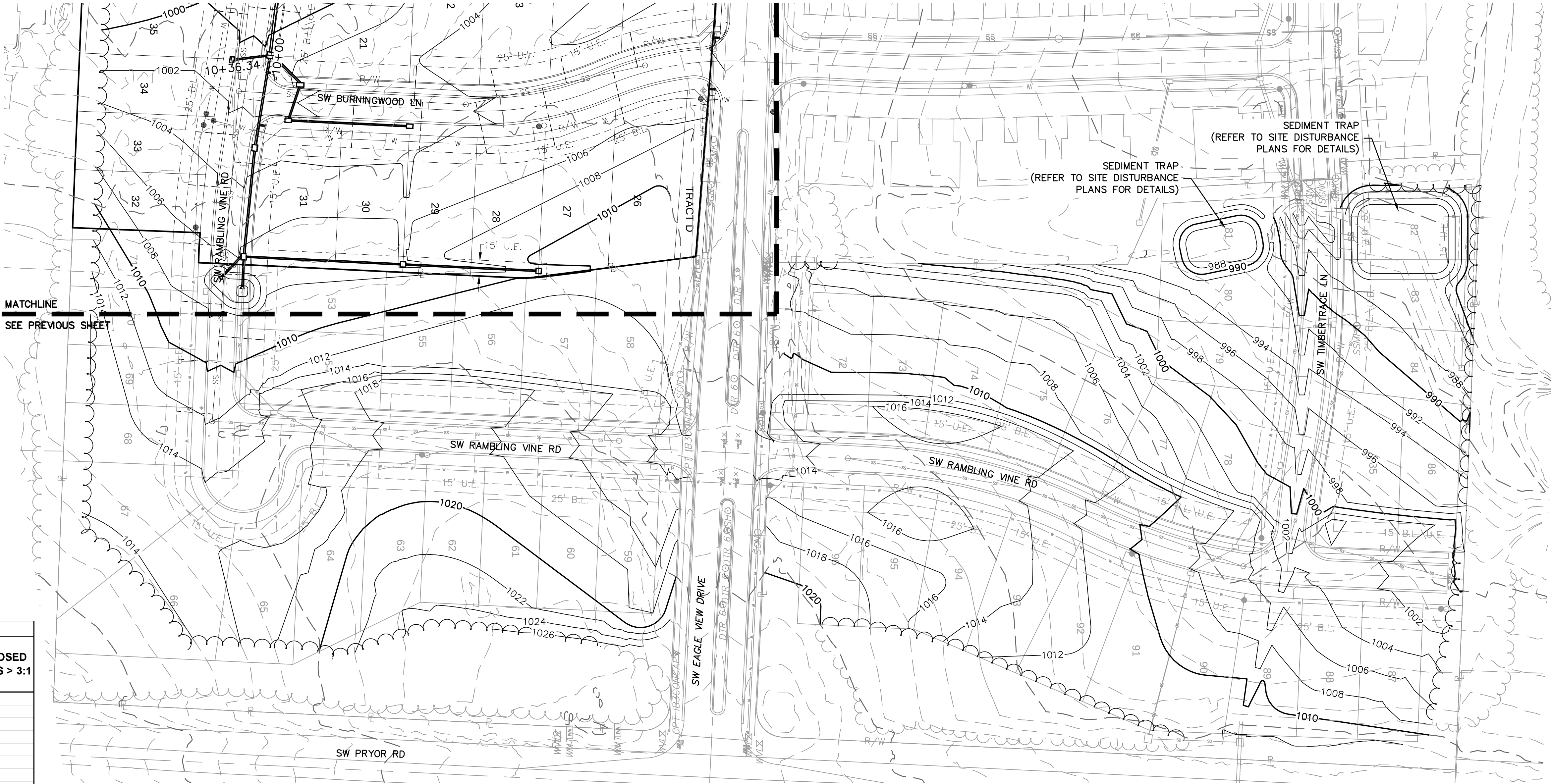
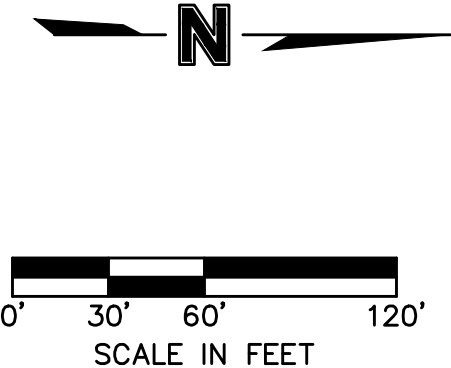
- CONTRACTOR SHALL ADHERE TO THE "DESIGN AND CONSTRUCTION MANUAL" SECTION 2100 AS ADOPTED BY THE CITY OF LEE'S SUMMIT (LATEST EDITION), FOR EXCAVATION AND EMBANKMENT WORK WITHIN THE PROPOSED RIGHT-OF-WAY.
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- ALL EMBANKMENT OUTSIDE OF RIGHT-OF-WAY SHOULD BE PLACED IN CONTROLLED LIFTS HAVING A MAXIMUM LOOSE LIFT THICKNESS OF 8". EMBANKMENT SHOULD BE COMPACTED TO A MINIMUM OF 98% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR COMPACTION). MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN A RANGE OF -0 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT.

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TOTAL	79,428	41,562

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LEGEND	
-100-	EXISTING INDEX CONTOURS
-100-	EXISTING INTERMEDIATE CONTOURS
100	PROPOSED INDEX CONTOURS
100	PROPOSED INTERMEDIATE CONTOURS



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STATE OF MISSOURI

STEPHEN M. SAYLOR

NUMBER

PE-2018021248

5/7/2024

GRADING PLAN (FOR REFERENCE ONLY)

STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS

FIRST PLAT

LEE'S SUMMIT, MISSOURI

2023

drawn by: CJK

checked by: SS

approved by: JS

QA/QC by: JS

project no.: A20-2467

drawing no.: C_GRD01_A202467

date: 02/23/2024

SHEET

C105

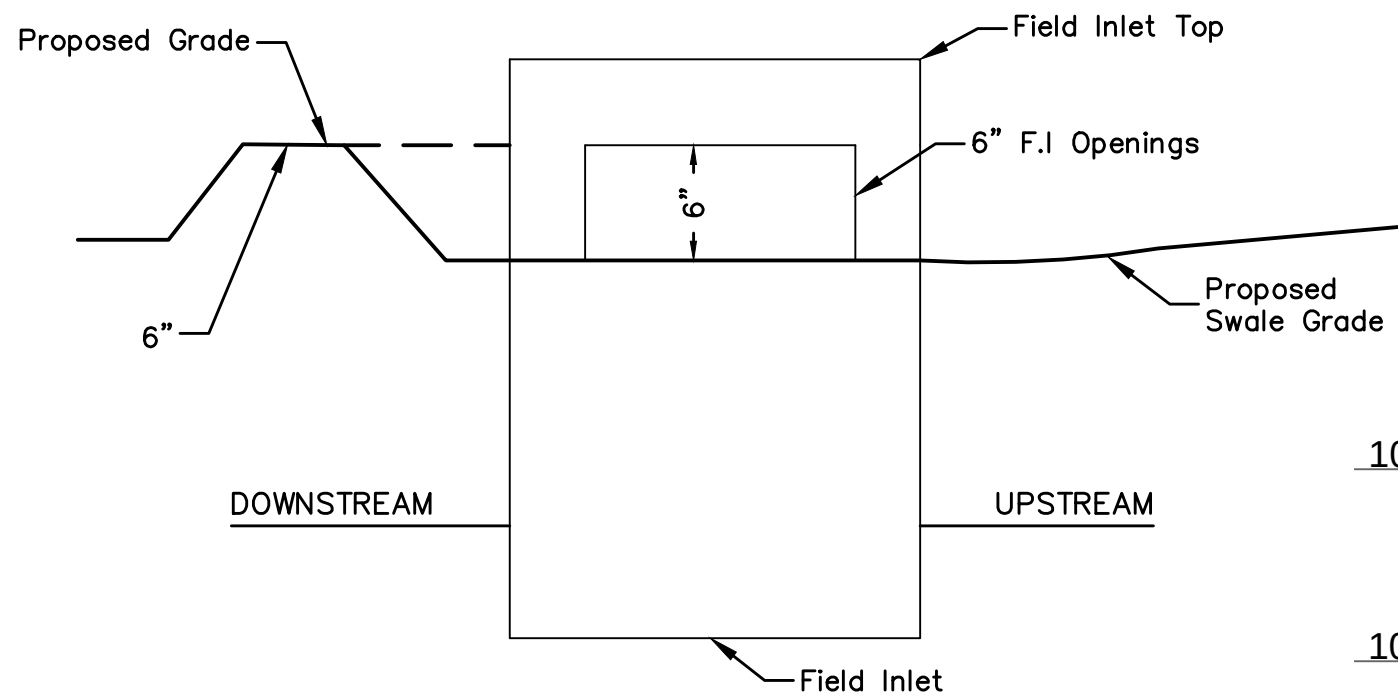
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REVISIONS DESCRIPTION

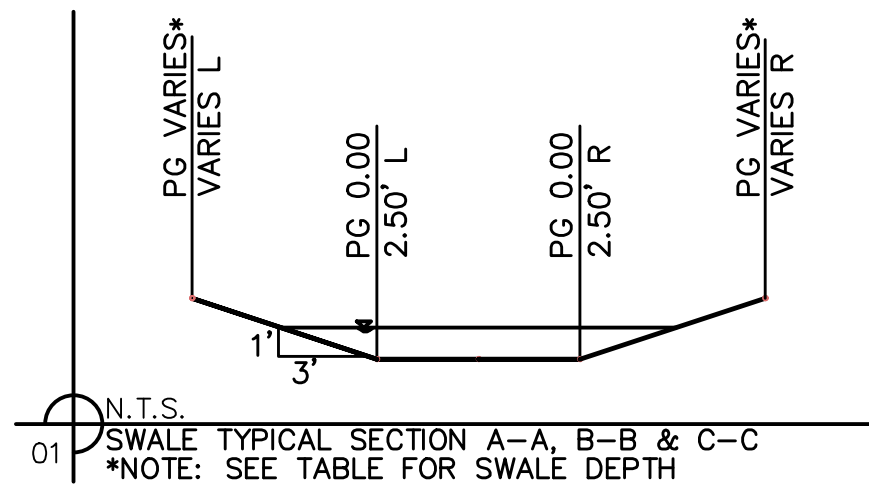
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REV. NO.

REVISIONS

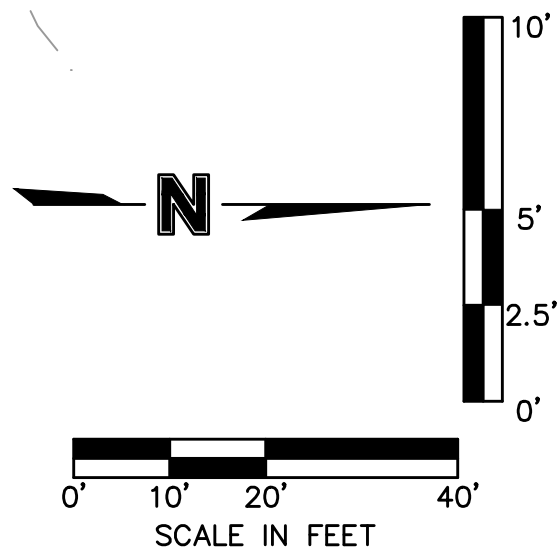
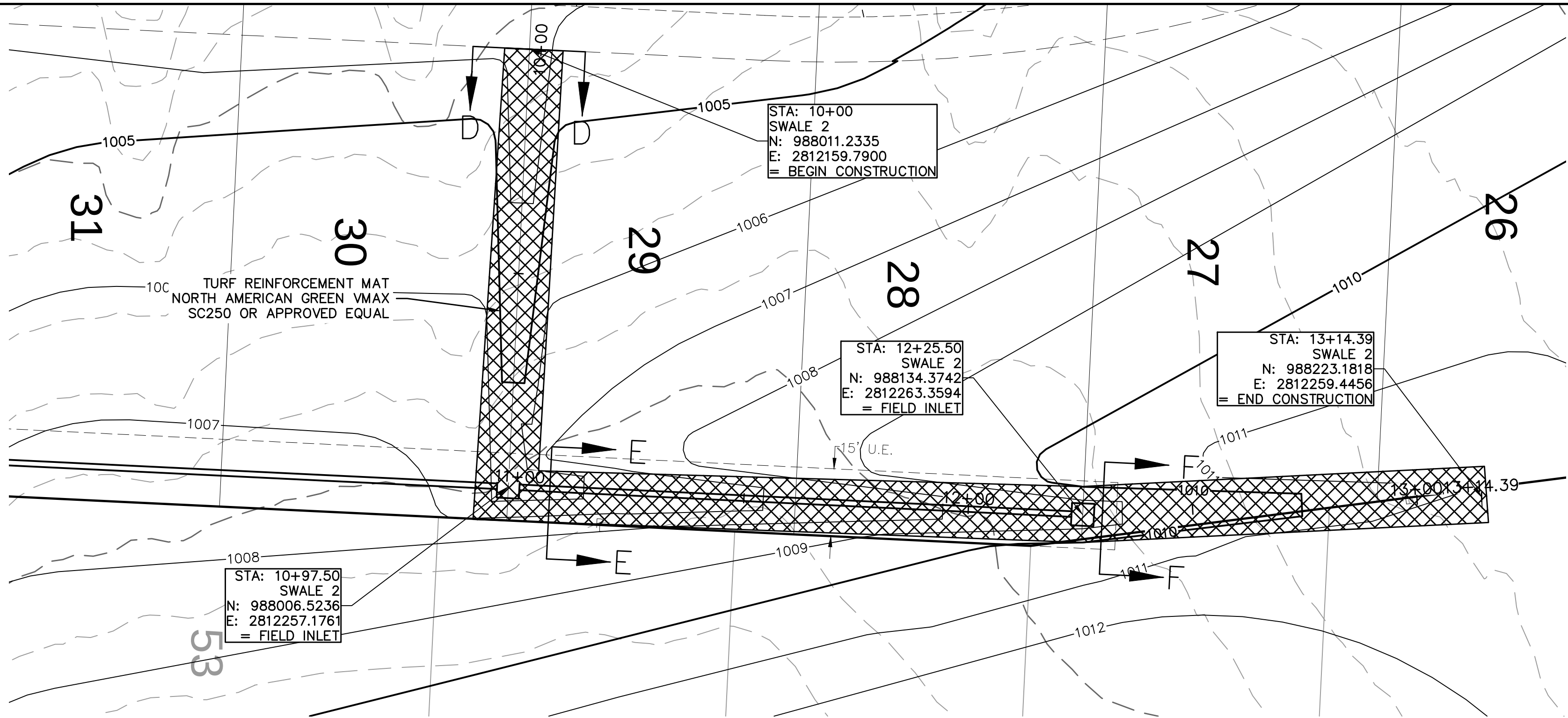
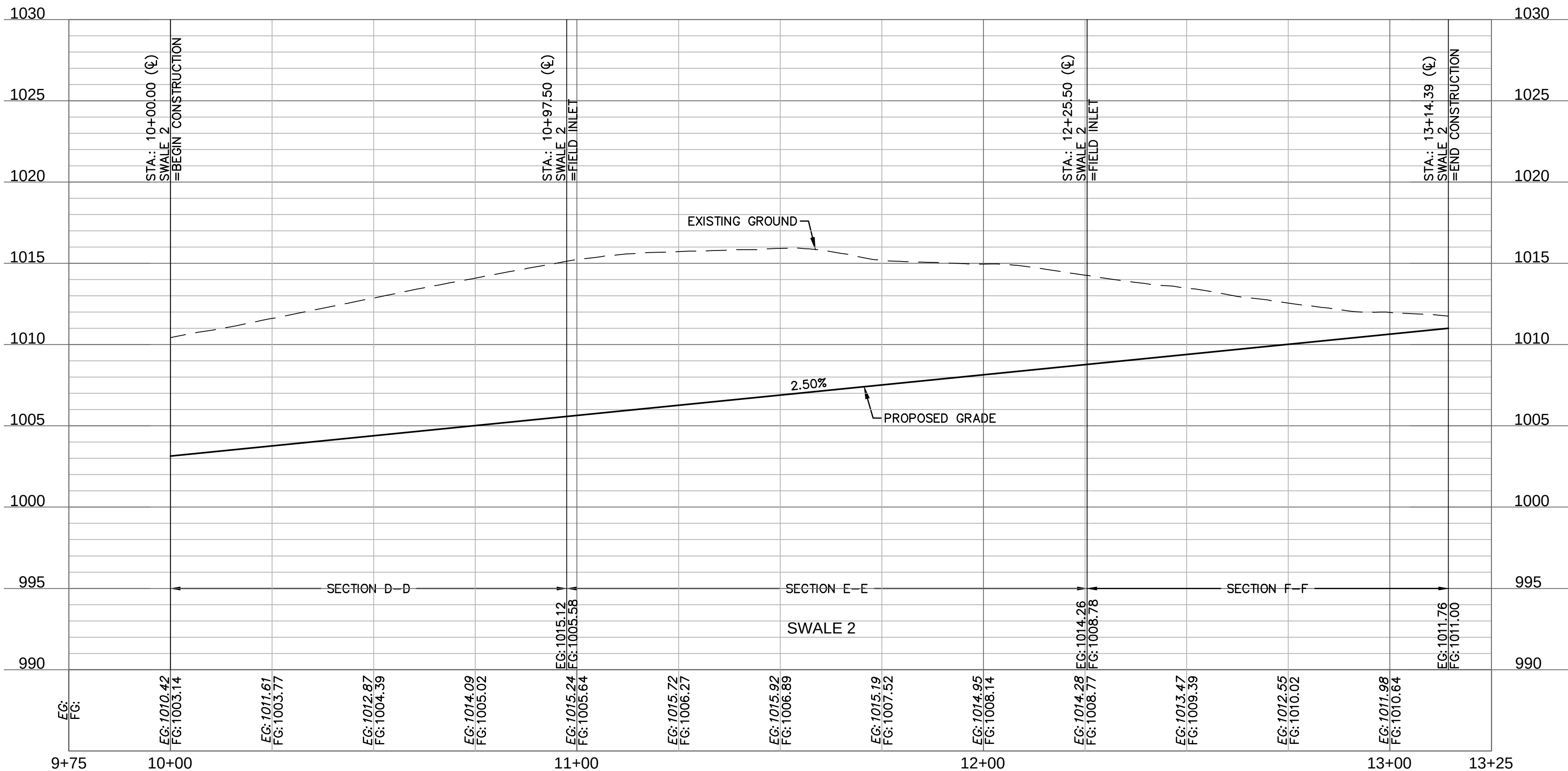


SUMP DETAIL
N.T.S.



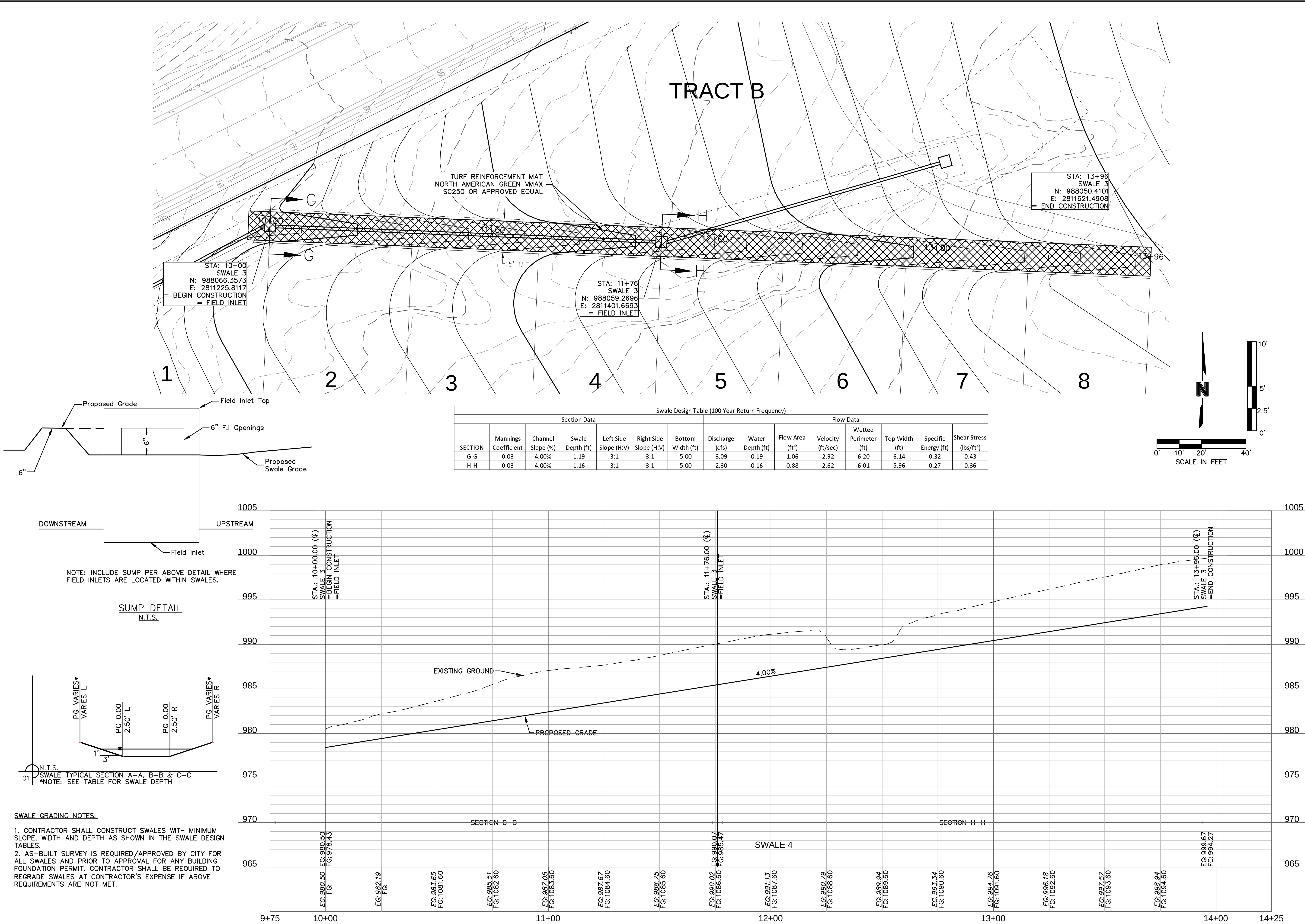
SWALE GRADING NOTES:

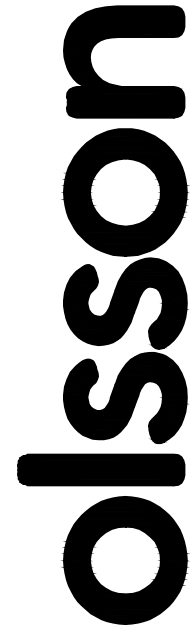
1. CONTRACTOR SHALL CONSTRUCT SWALES WITH MINIMUM SLOPE, WIDTH AND DEPTH AS SHOWN IN THE SWALE DESIGN TABLES.
2. AS-BUILT SURVEY IS REQUIRED/APPROVED BY CITY FOR ALL SWALES AND PRIOR TO APPROVAL FOR ANY BUILDING FOUNDATION PERMIT. CONTRACTOR SHALL BE REQUIRED TO REGRADE SWALES AT CONTRACTOR'S EXPENSE IF ABOVE REQUIREMENTS ARE NOT MET.



Swale Design Table (100 Year Return Frequency)															
Section Data							Flow Data								
SECTION	Mannings Coefficient	Channel Slope (%)	Swale Depth (ft)	Left Side Slope (H:V)	Right Side Slope (H:V)	Bottom Width (ft)	Discharge (cfs)	Water Depth (ft)	Flow Area (ft²)	Velocity (ft/sec)	Wetted Perimeter (ft)	Top Width (ft)	Specific Energy (ft)	Shear Stress (lbs/ft²)	
D-D	0.03	2.50%	1.10	3:1	3:1	5.00	0.72	0.10	0.53	1.36	5.63	5.60	0.13	0.15	
E-E	0.03	2.50%	1.19	3:1	3:1	5.00	2.50	0.19	1.09	2.36	6.20	6.14	0.28	0.27	
F-F	0.03	2.50%	1.13	3:1	3:1	5.00	1.18	0.13	0.70	1.68	5.82	5.78	0.17	0.19	

DWG: F:\2020\2001-2500\020-2467-A\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Street & Storm\C_SWL01_A202467.dwg
DATE: May 07, 2024 10:38am
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USER: ssaylor





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TEL 816.361.1177
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STATE OF MISSOURI
STEPHEN M. SAYLOR
NUMBER
PE-2018021248
5/7/2024

BY

REVISIONS DESCRIPTION

DATE

REV. NO.

2023

SWALE 3 PLAN & PROFILE
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

LEE'S SUMMIT, MISSOURI

drawn by: CQ

checked by: SS

approved by: JS

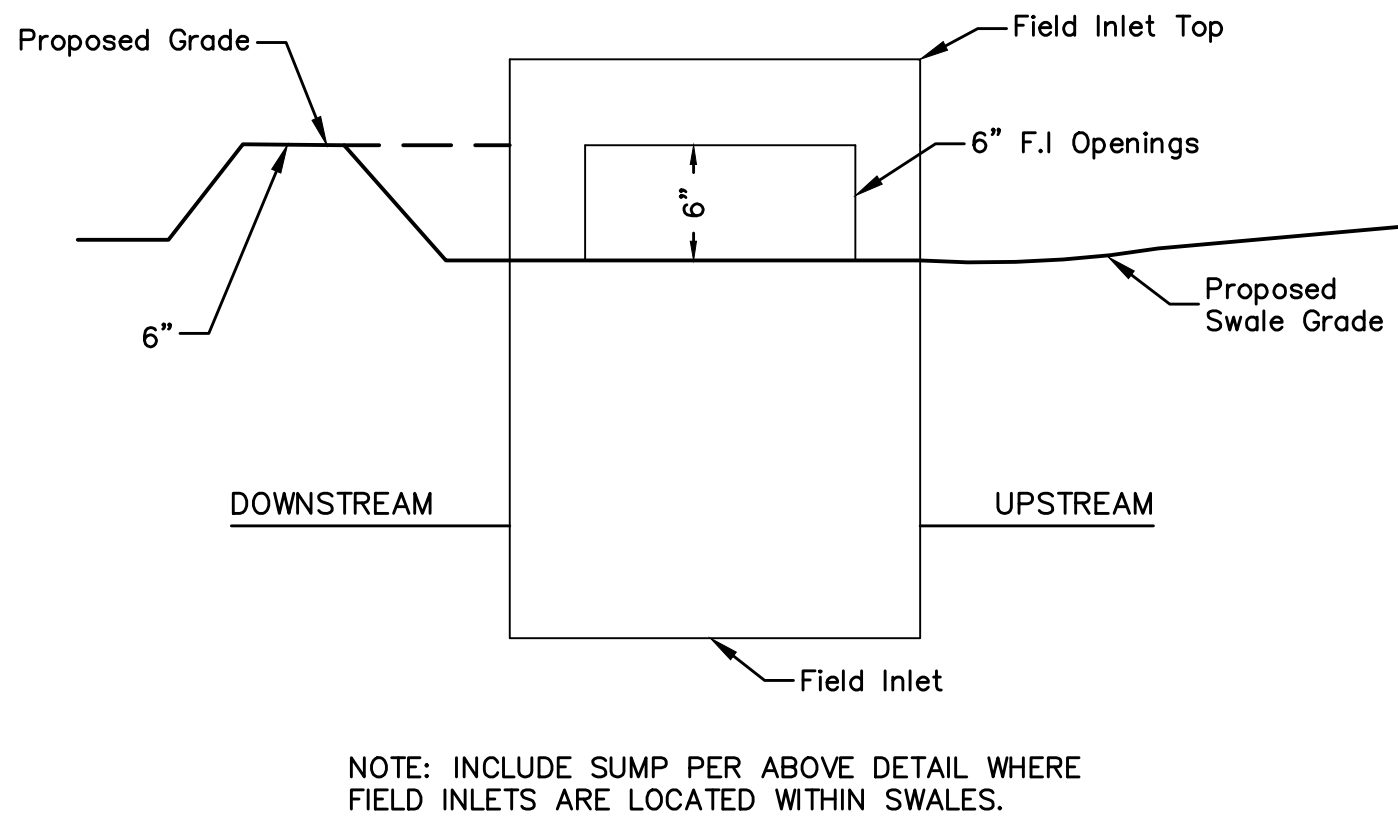
QA/QC by: JS

project no.: A20-2467

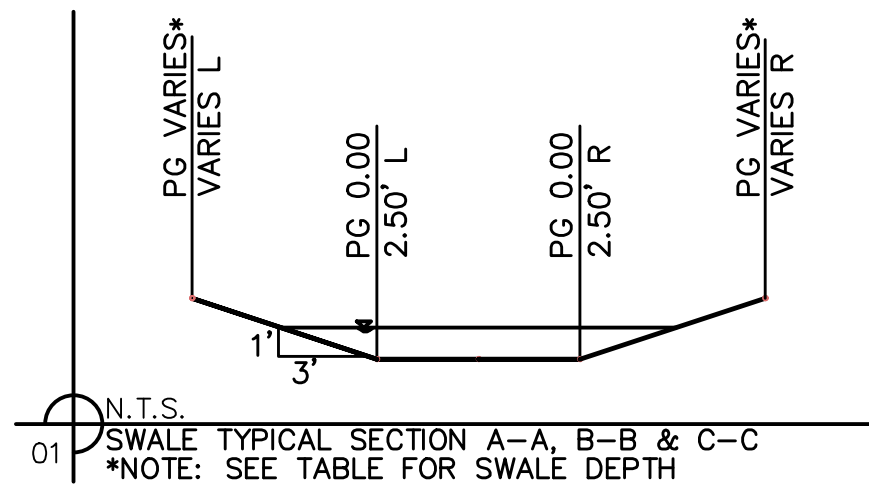
drawing no.: C_SWL01_A202467

date: 02/23/2024

SHEET
C108

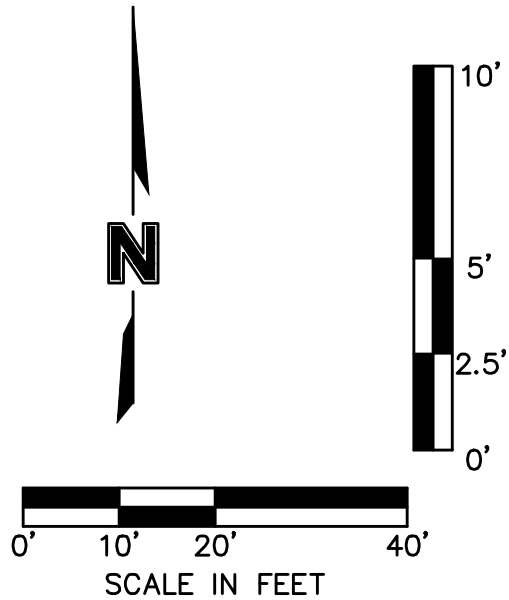
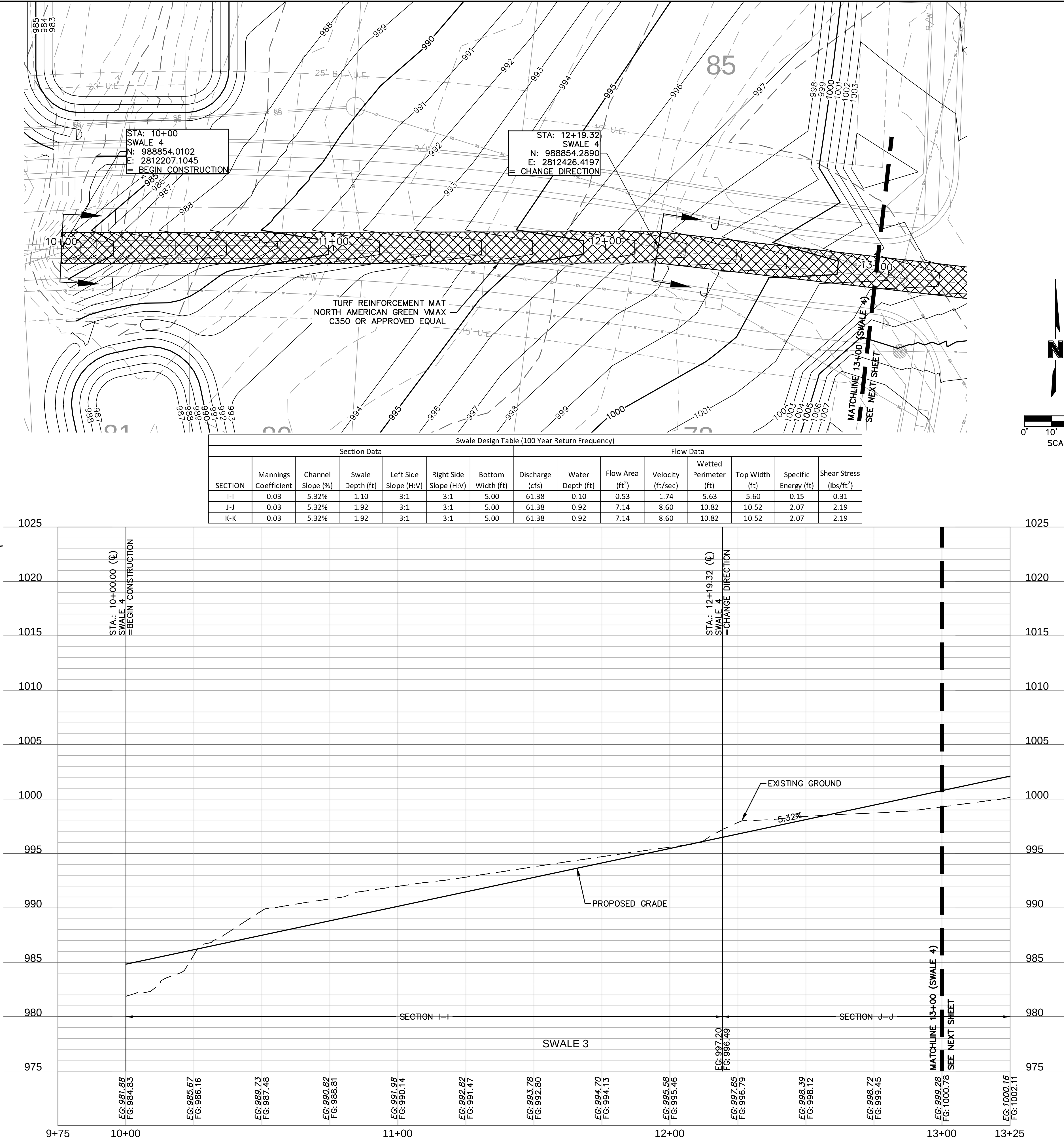


SUMP DETAIL
N.T.S.



SWALE GRADING NOTES:

1. CONTRACTOR SHALL CONSTRUCT SWALES WITH MINIMUM SLOPE, WIDTH AND DEPTH AS SHOWN IN THE SWALE DESIGN TABLES.
2. AS-BUILT SURVEY IS REQUIRED/APPROVED BY CITY FOR ALL SWALES AND PRIOR TO APPROVAL FOR ANY BUILDING FOUNDATION PERMIT. CONTRACTOR SHALL BE REQUIRED TO REGRADE SWALES AT CONTRACTOR'S EXPENSE IF ABOVE REQUIREMENTS ARE NOT MET.



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North Kansas City MO 64116
TEL 816.361.1177
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REVISIONS			
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SWALE 4 PLAN & PROFILE
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

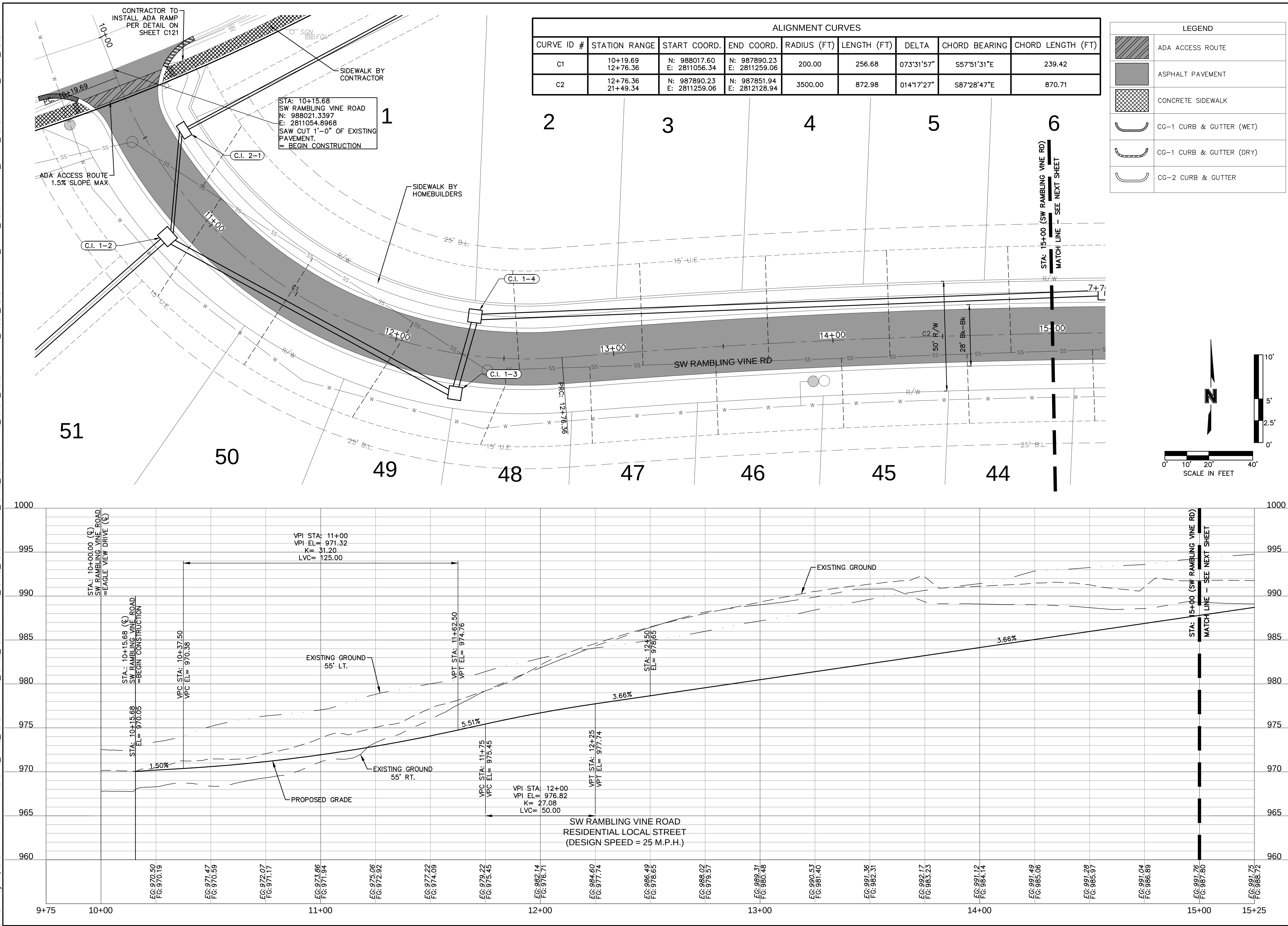
LEE'S SUMMIT, MISSOURI

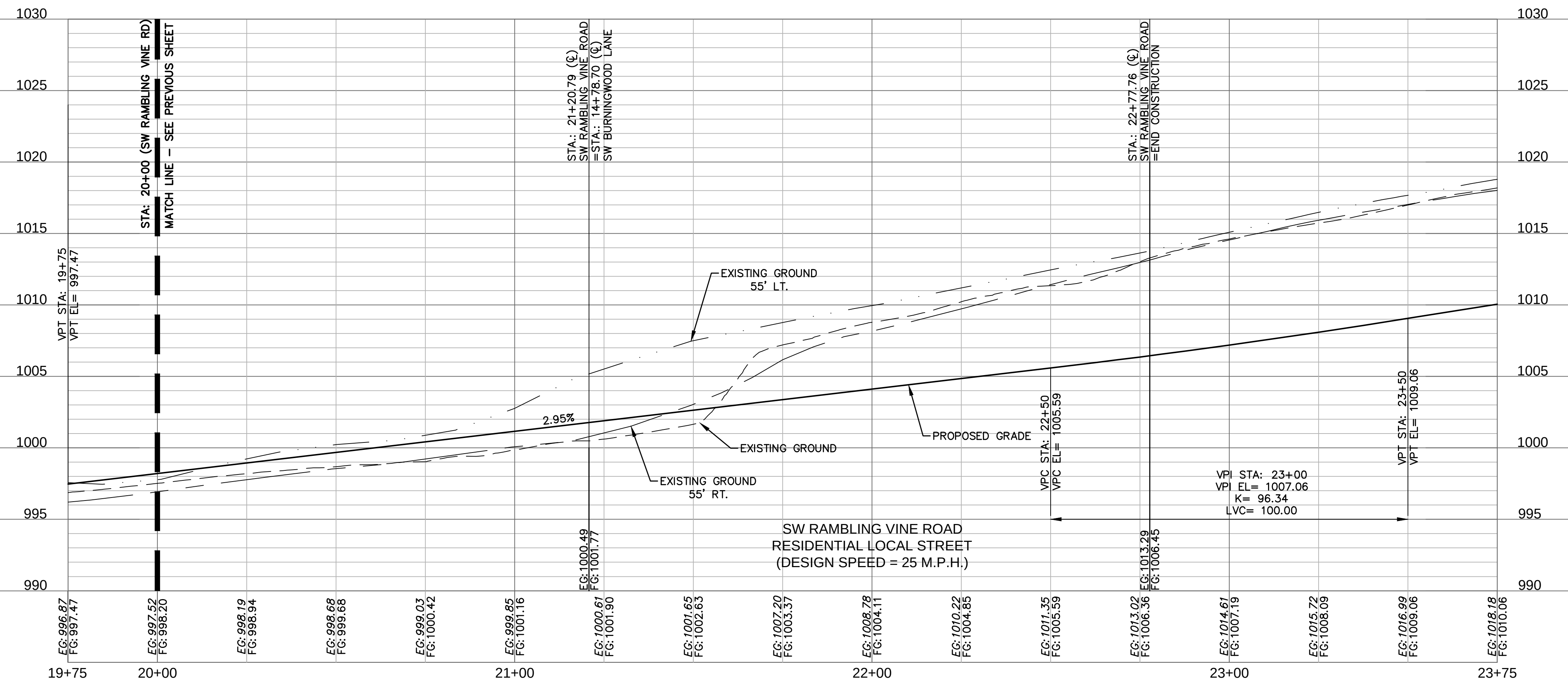
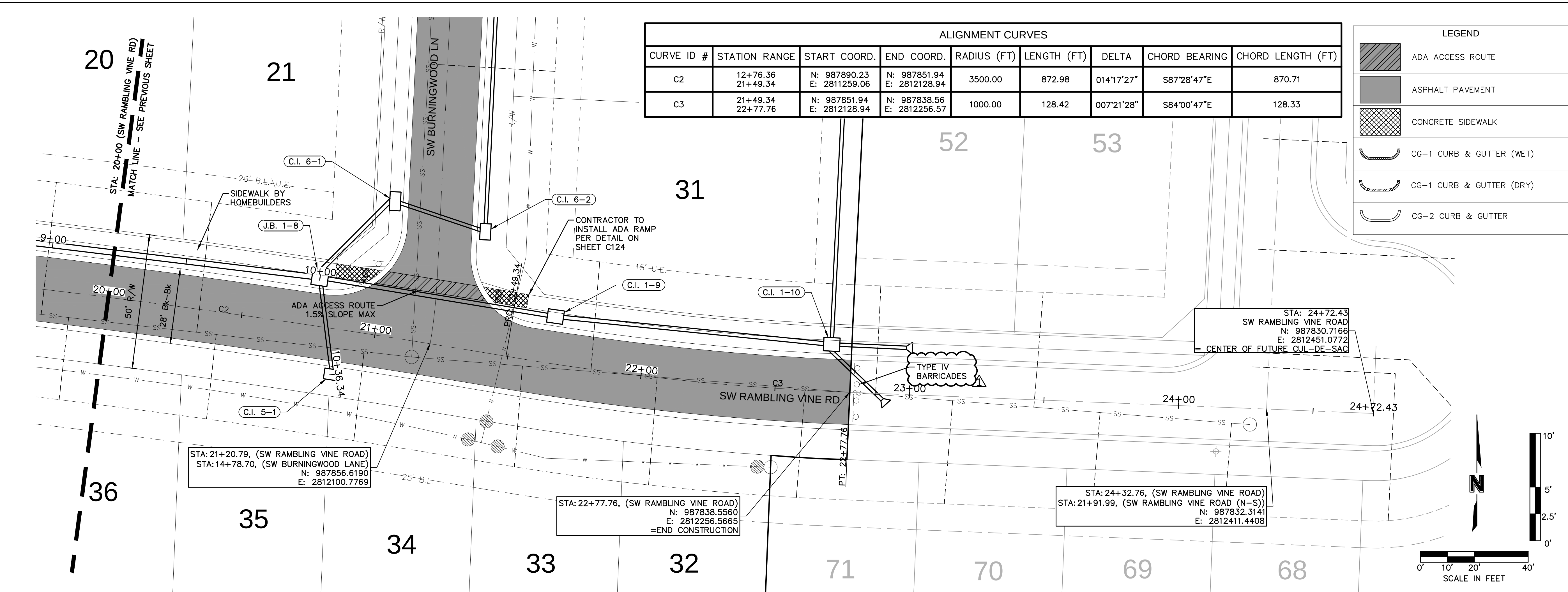
drawn by: _____
checked by: _____
approved by: _____
QA/QC by: _____
project no.: A20-2467
drawing no.: C_SWL01_A202467
date: 02/23/2024

C/S
SS
LS
JS

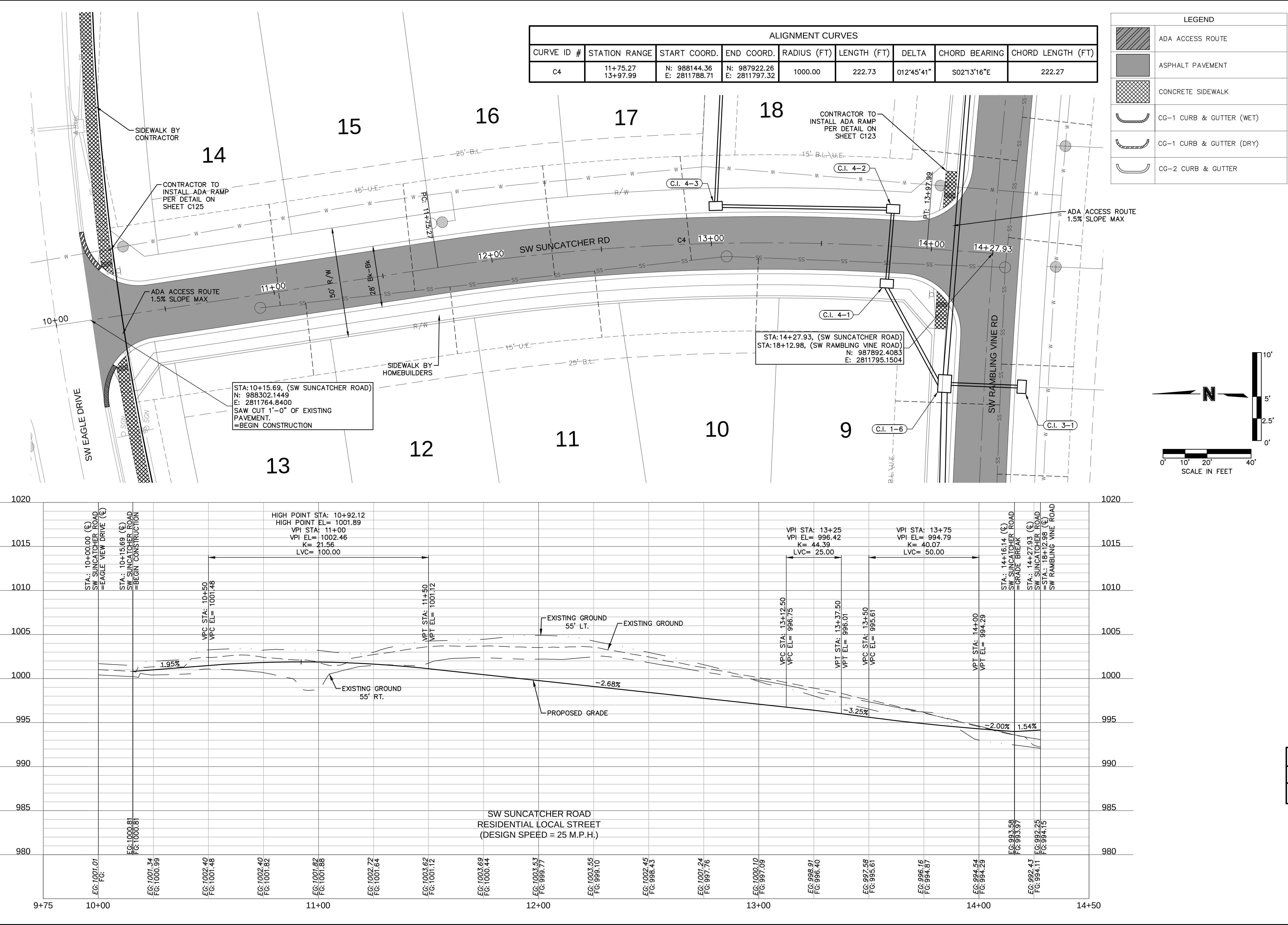
SHEET
C109

2023





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ROAD PLAN & PROFILE (SW SUNCATCHER ROAD)
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2023

REVISIONS

drawn by: CJK

checked by: SS

approved by: JS

QA/QC by: JS

project no.: A20-2467

drawing no.: C_RPP02_A202467

date: 02/23/2024

SHEET
C115

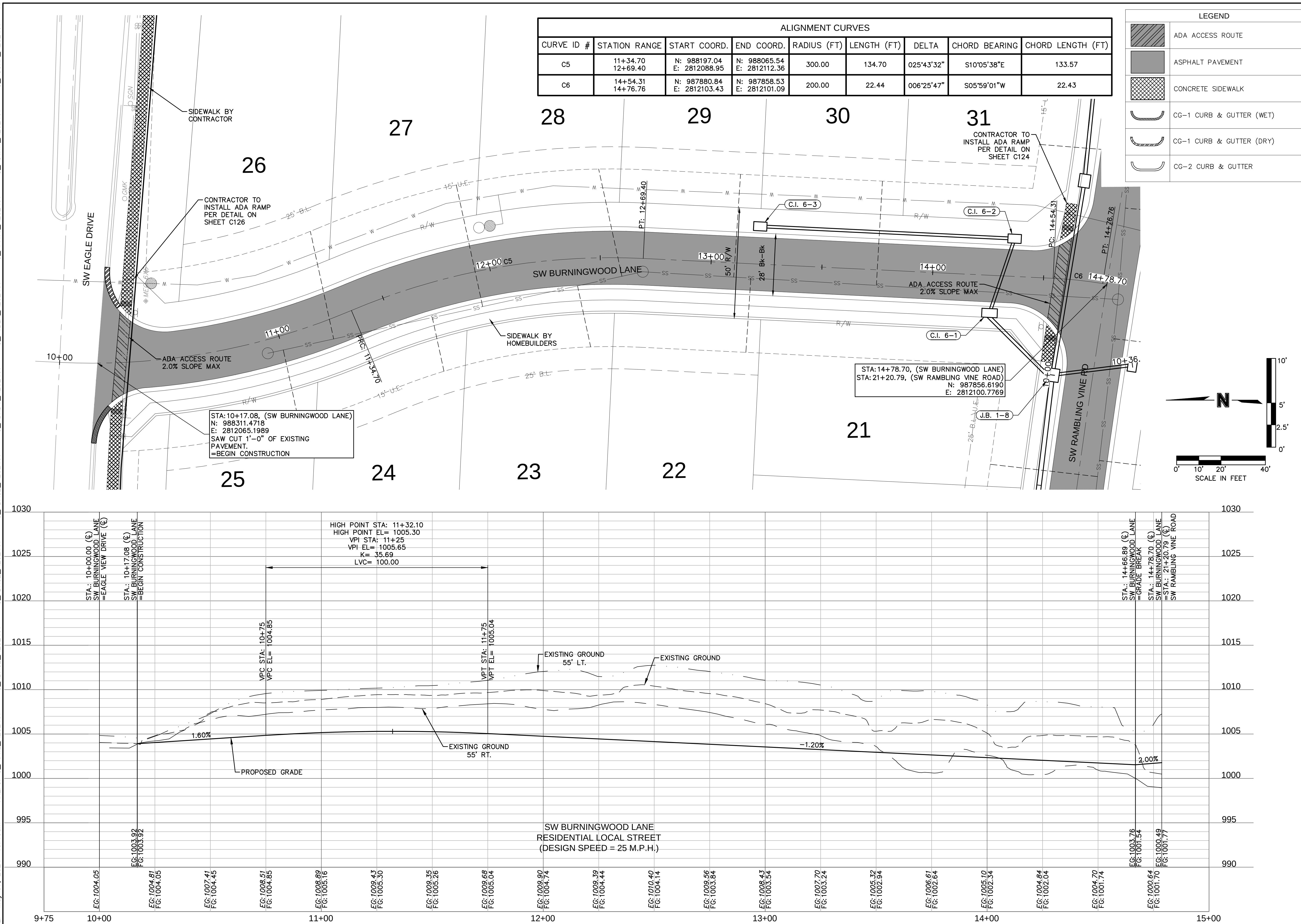
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North Kansas City MO 64116
TEL 816.361.1177
www.olson.com

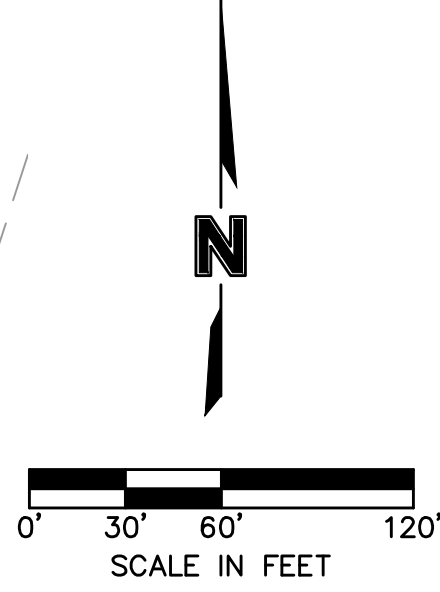
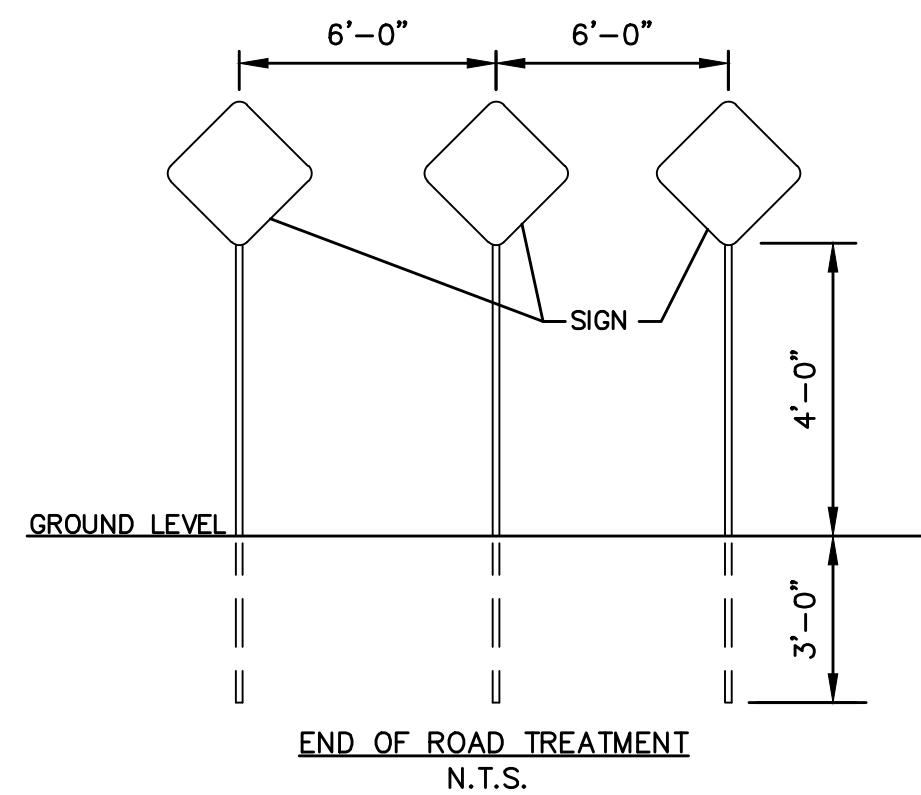
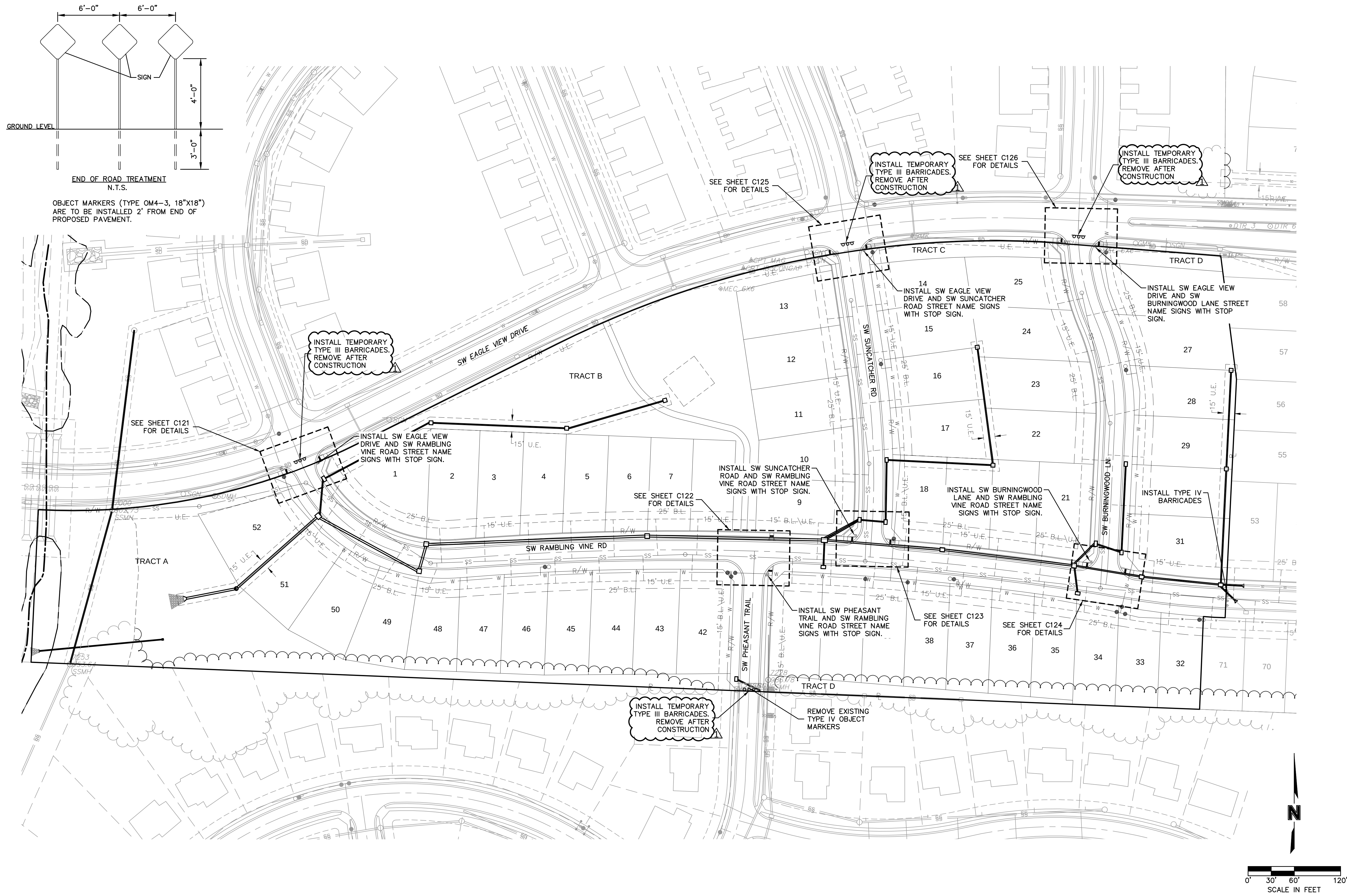
STATE OF MISSOURI

STEPHEN M. SAYLOR
NUMBER
PE-2018021248
PROFESSIONAL ENGINEER

5/7/2024



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USER: ssaylor



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STATE OF MISSOURI

STEPHEN M. SAYLOR
NUMBER
PE-2018021248
5/7/2024

PROFESSIONAL ENGINEER

TRAFFIC CONTROL PLAN
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
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drawn by: CW

checked by: SS

approved by: JS

QA/QC by: JS

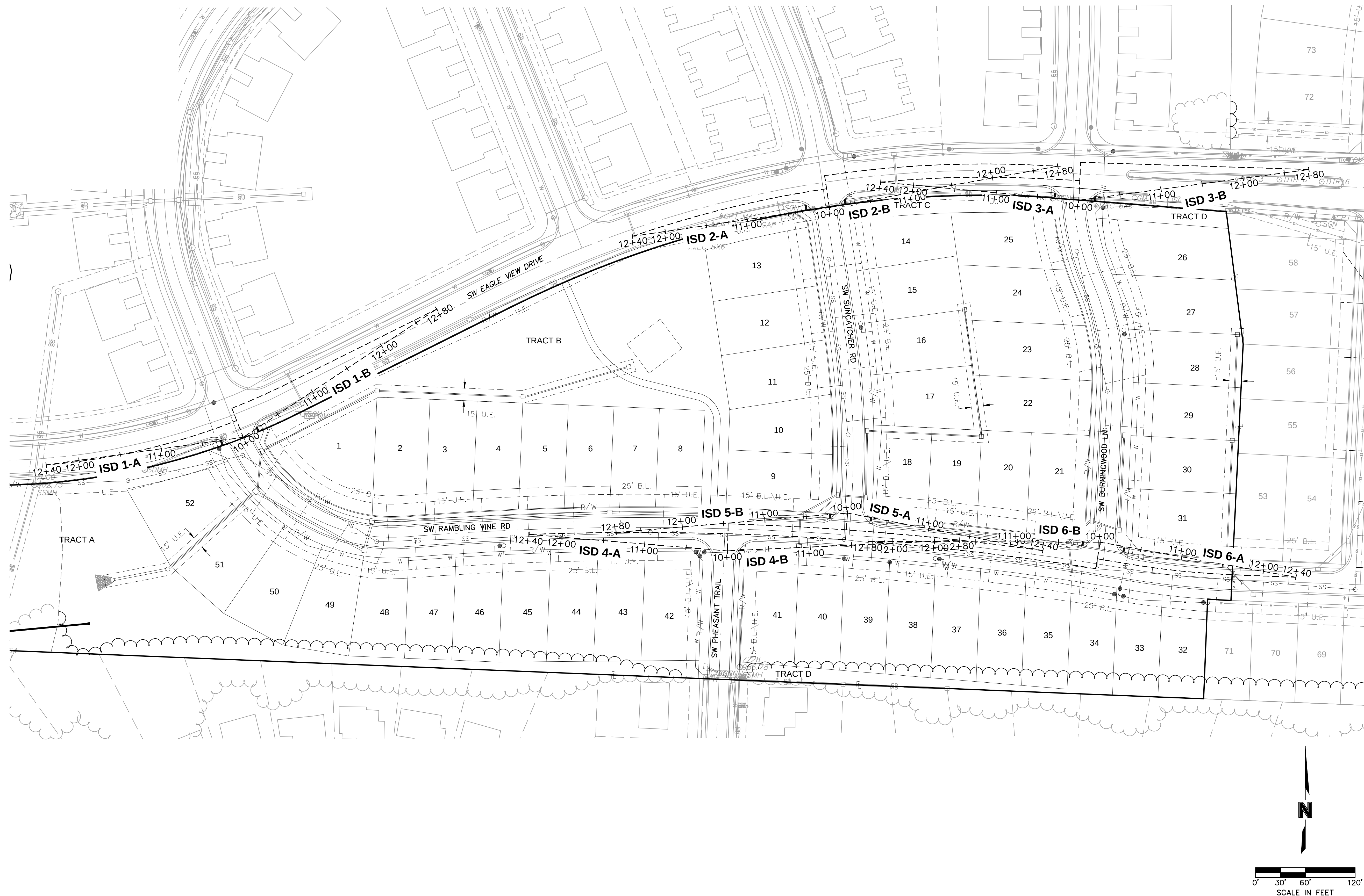
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drawing no.: C TCP01 A202467

date: 02/23/2024

SHEET
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INTERSECTION SITE DISTANCE PLAN STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS FIRST FLOOR

LEE'S SUMMIT, MISSOURI

2023

REVISIONS DESCRIPTION

BY _____

STATE OF MISSOURI
STEPHEN M. SAYLOR
NUMBER
PE-2018021248
PROFESSIONAL ENGINEER

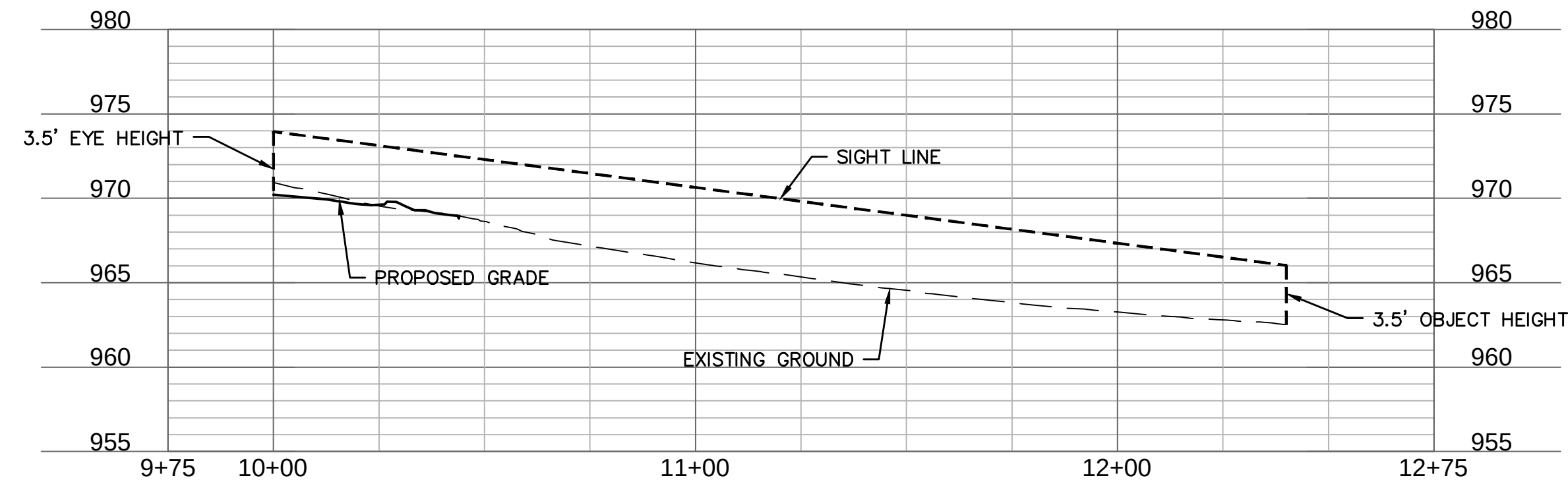
olsson

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North Kansas City, MO 64116

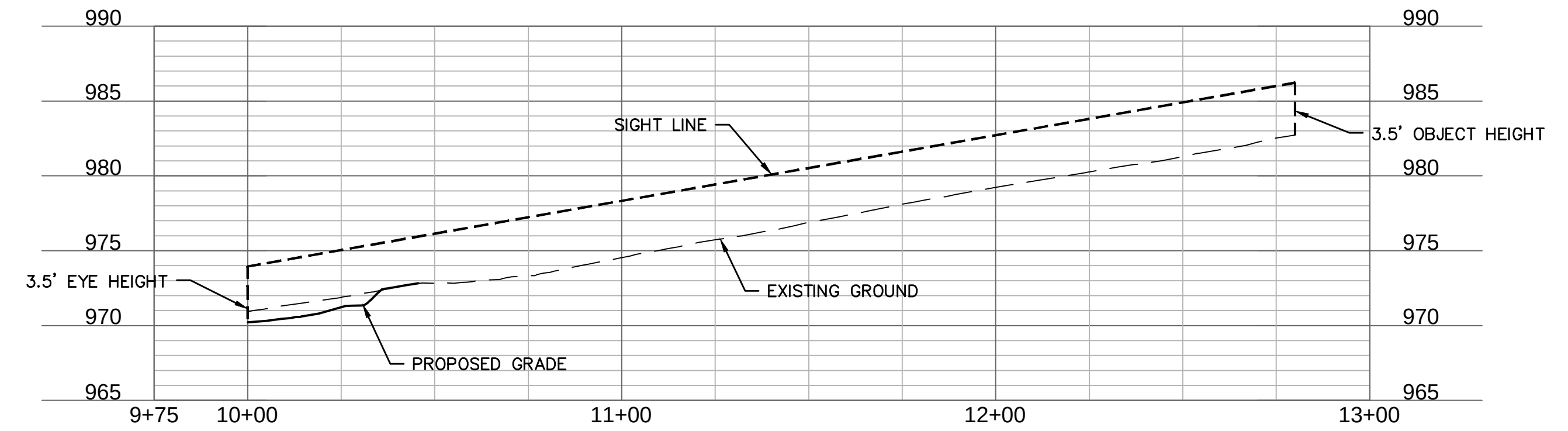
TEL 816.361.1177 www.olsson.com

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USER: ssaylor

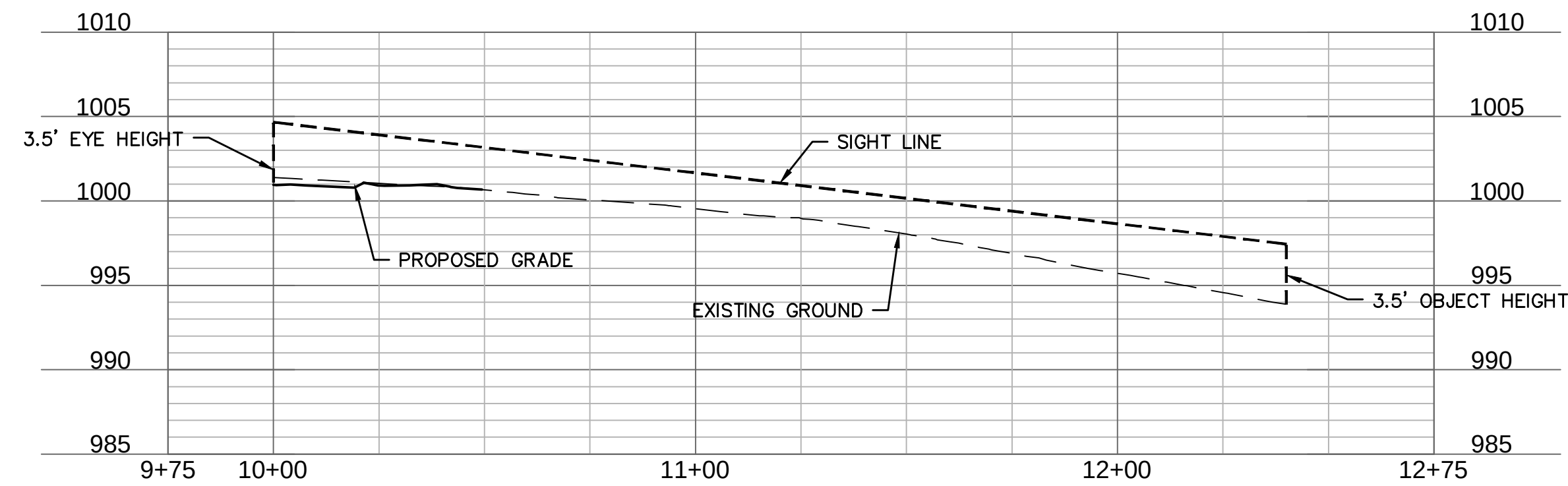
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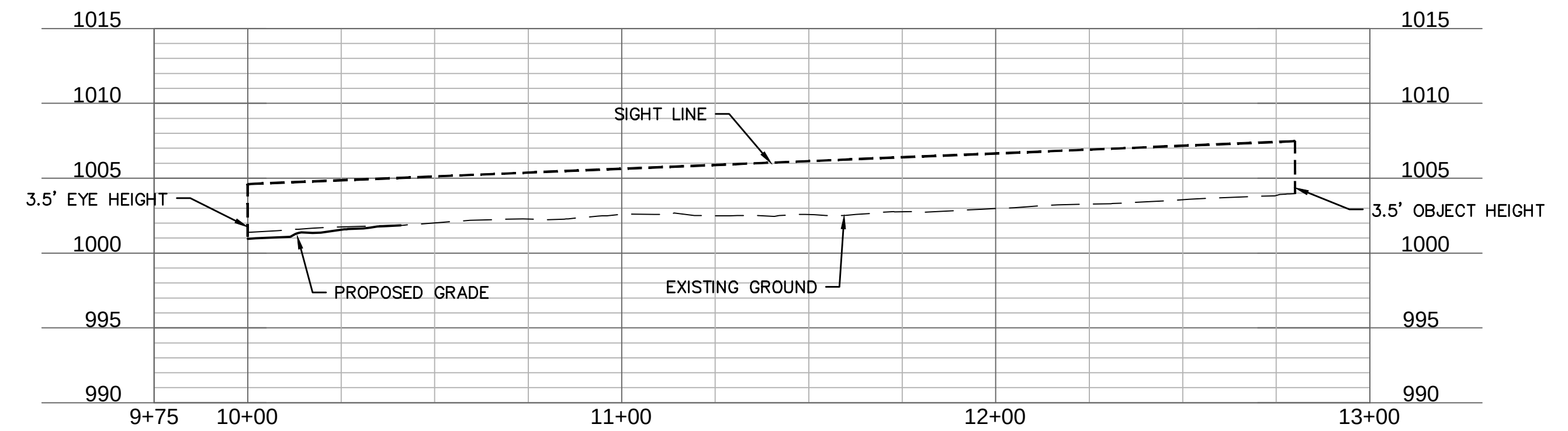
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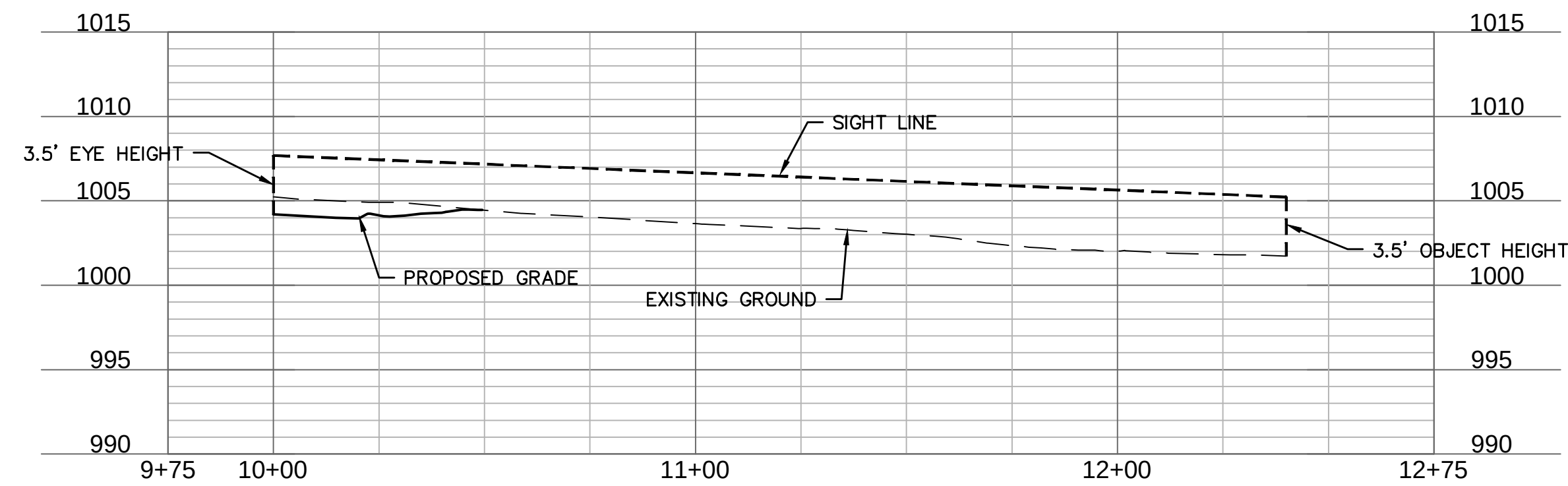
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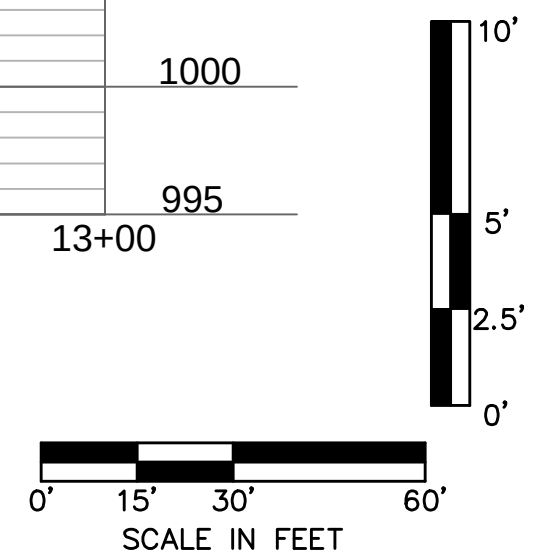
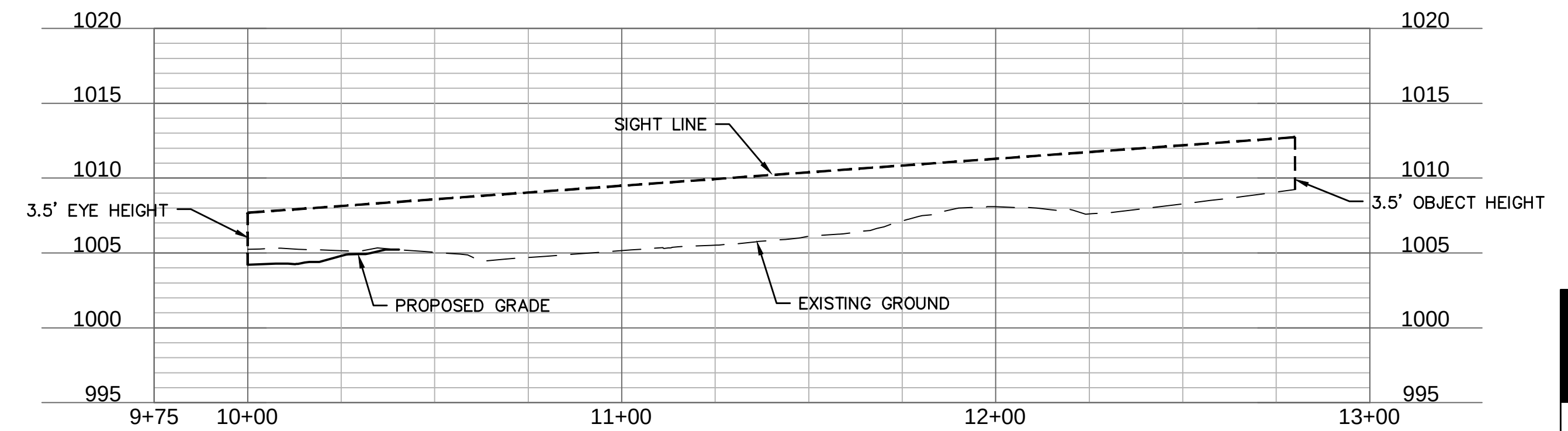
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ISD 3-B (9+75 - 13+00)



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7/2024

[illegible]

INTERSECTION SITE DISTANCE PROFILES

STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

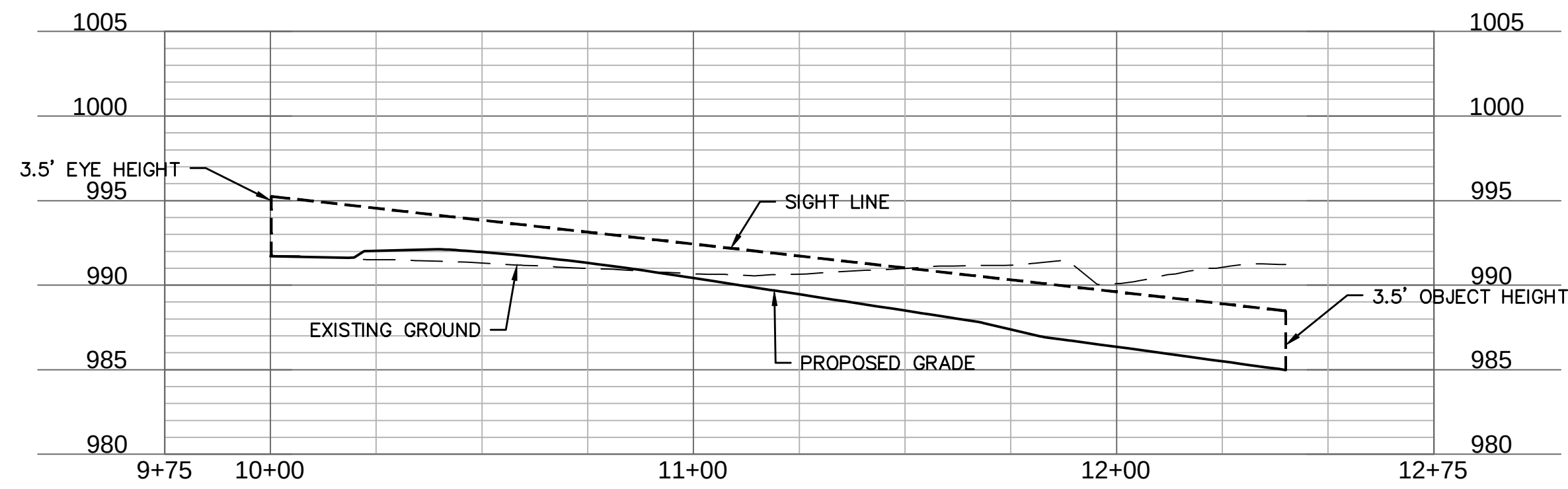
LEE'S SUMMIT, MISSOURI	2023
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Drawn by: _____ CW
 Checked by: _____ SS
 Approved by: _____ JS
 A/QC by: _____ JS
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 Drawing no.: C TCP02 A202467
 Date: _____ 02/23/2024

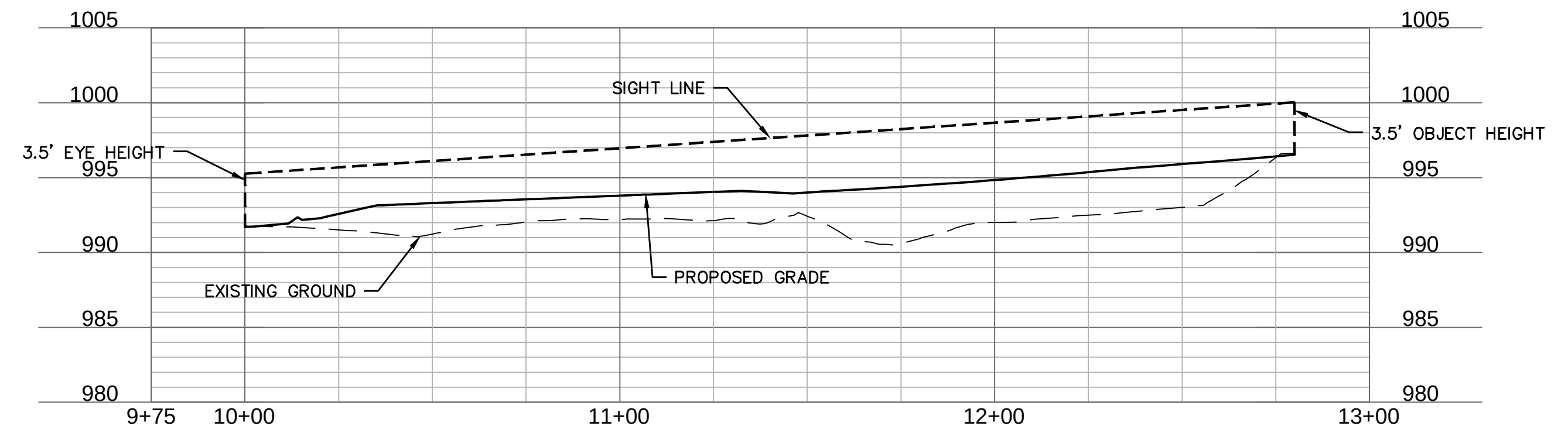
SHEET
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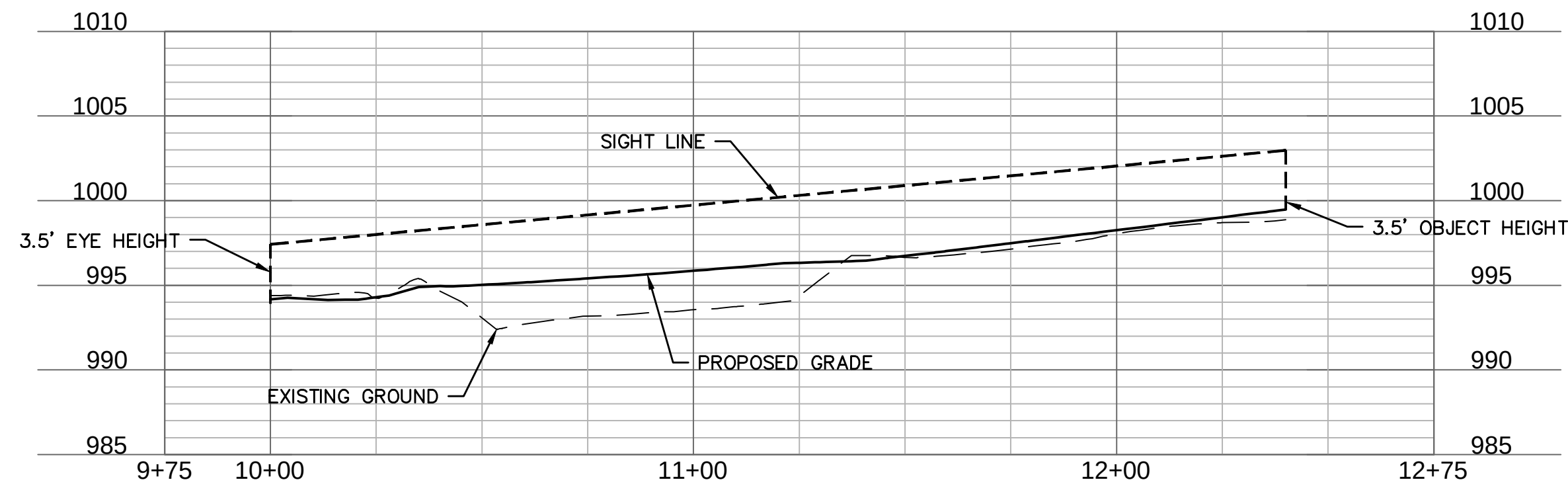
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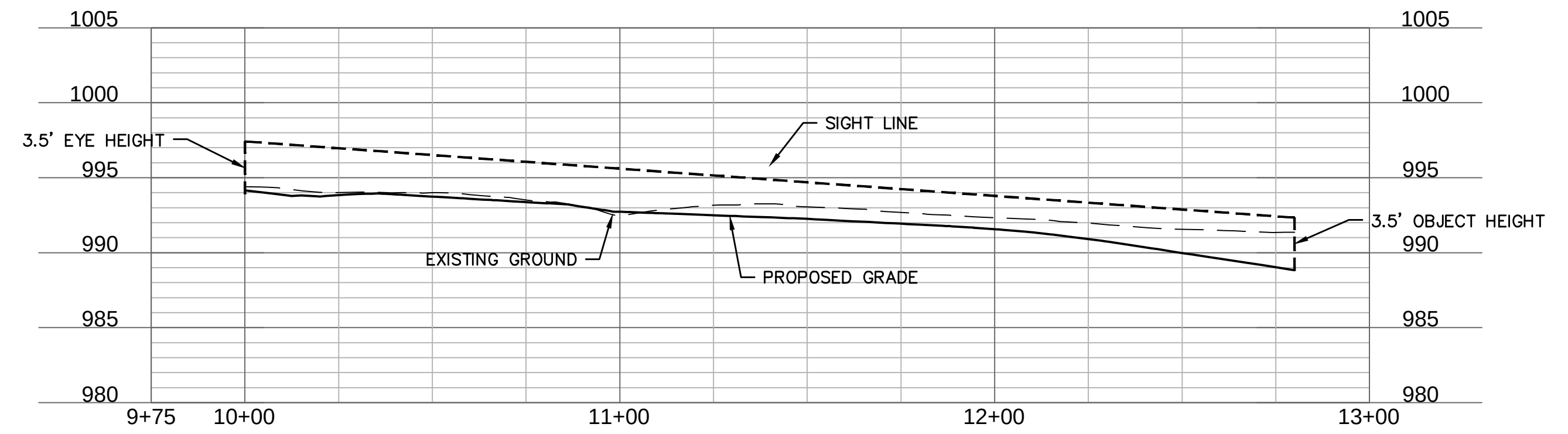
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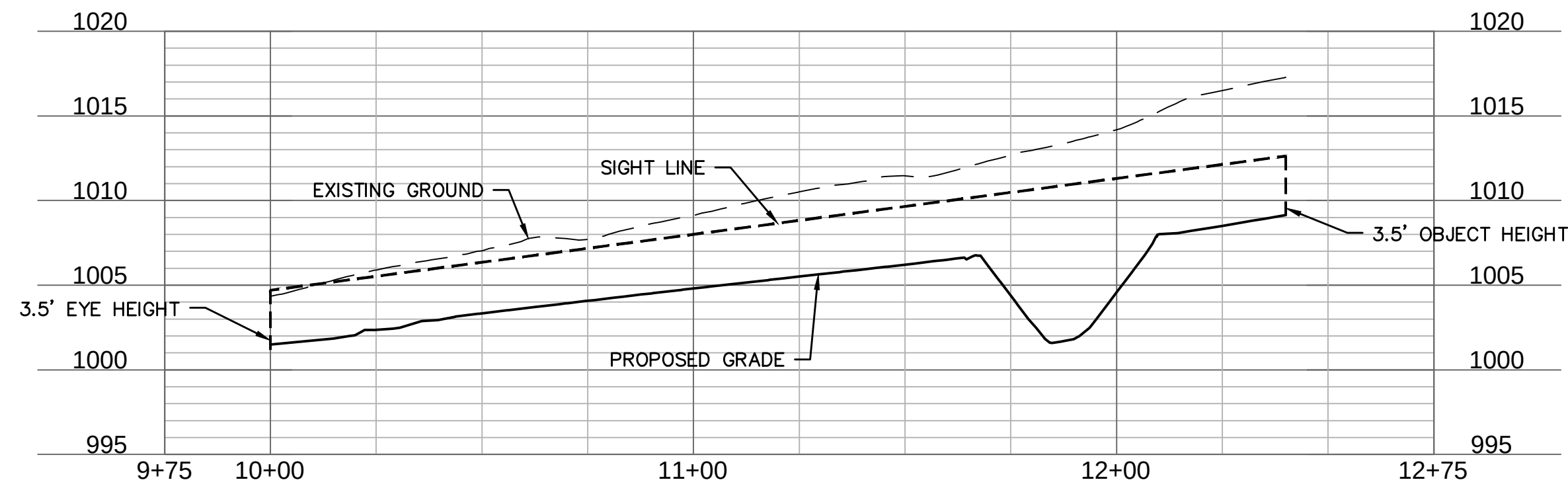
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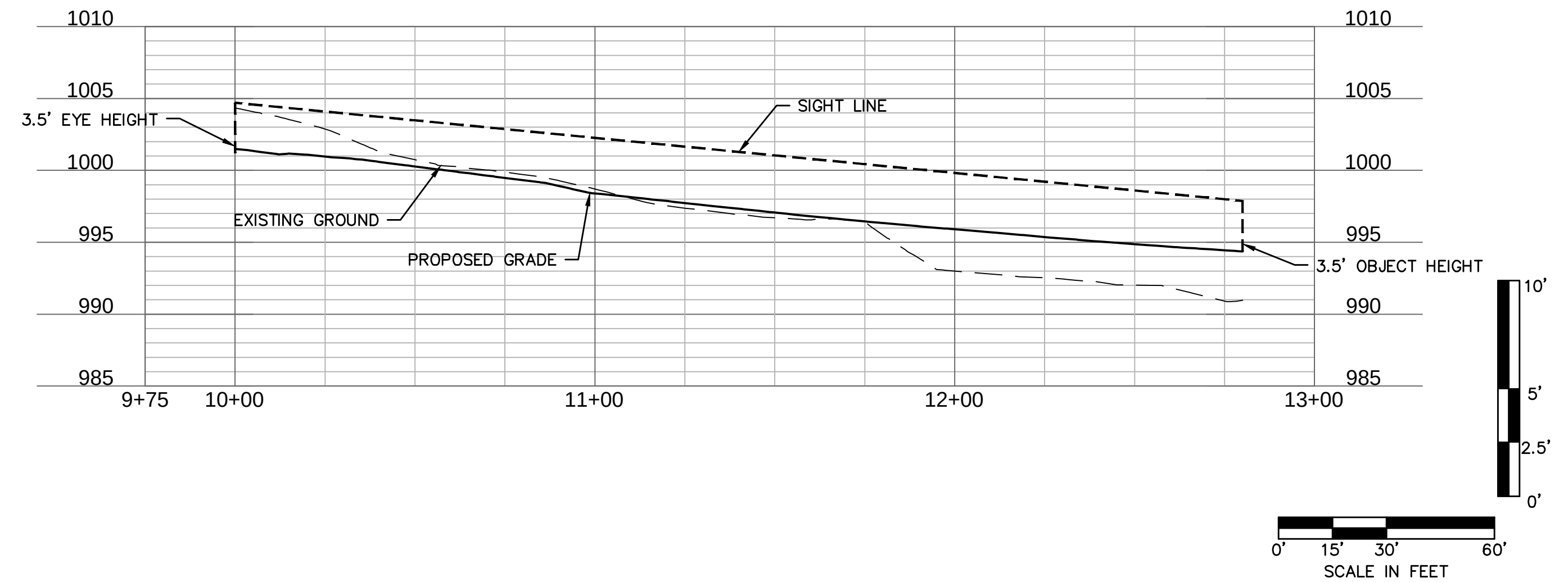
ISD 5-B (9+75 - 13+00)



ISD 6-A (9+75 - 12+75)



ISD 6-B (9+75 - 13+00)



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1301 Burlington Street
North Kansas City, MO 64116

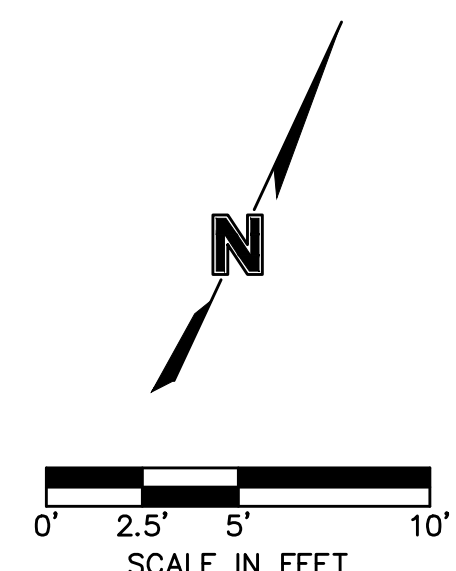
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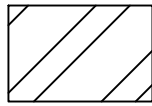
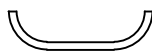
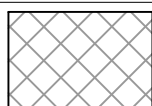
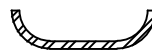
EAGLE CREEK VILLAS FIRST PLAT	
LEE'S SUMMIT, MISSOURI	2023

Drawn by: _____ CW
 Checked by: _____ SS
 Approved by: _____ JS
 A/QC by: _____ JS
 Project no.: _____ A20-2467
 Drawing no.: C TCP02 A202467
 Date: _____ 02/23/2024

SHEET
C120

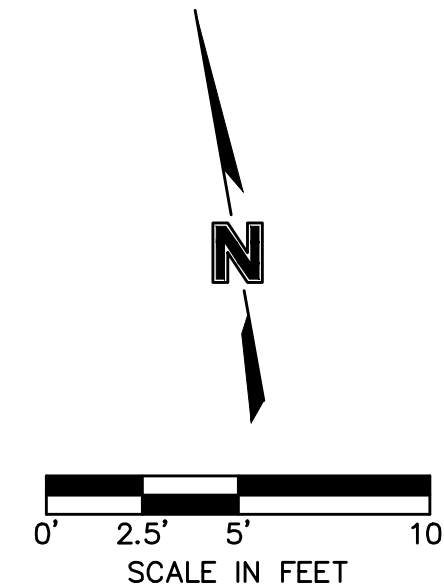
USER: ssaylor
467 C_PB



- | LEGEND | |
|---|--|
| TC-- | TOP OF CURB |
| PV-- | TOP OF PAVEMENT |
| SW-- | SIDEWALK |
| L | LANDING AREA |
| R | RAMP AREA |
| T | TRANSITION AREA |
|  | ADA ACCESS ROUTE |
|  | CG-2 CURB & GUTTER |
|  | CONCRETE SIDEWALK
(CONSTRUCTED BY CONTRACTOR) |
|  | CG-1 CURB & GUTTER (WET) |
|  | CG-1 CURB & GUTTER (DRY) |

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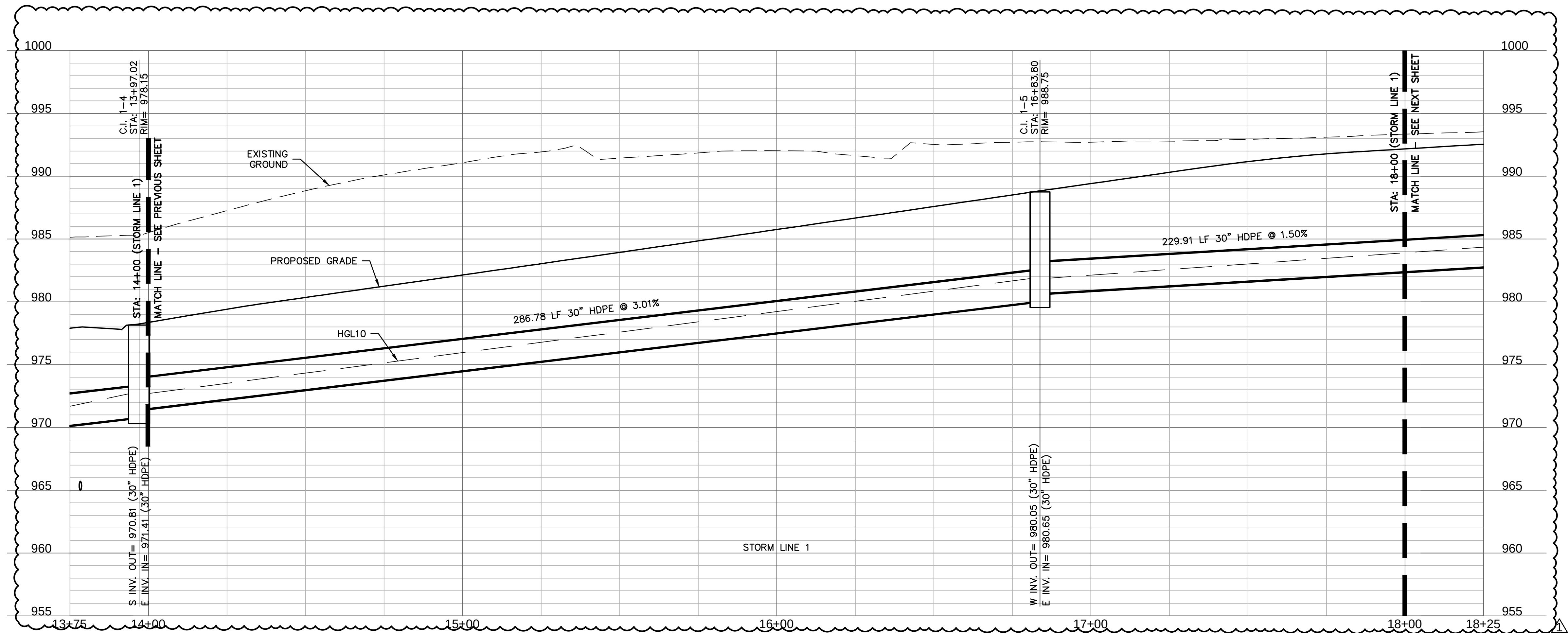
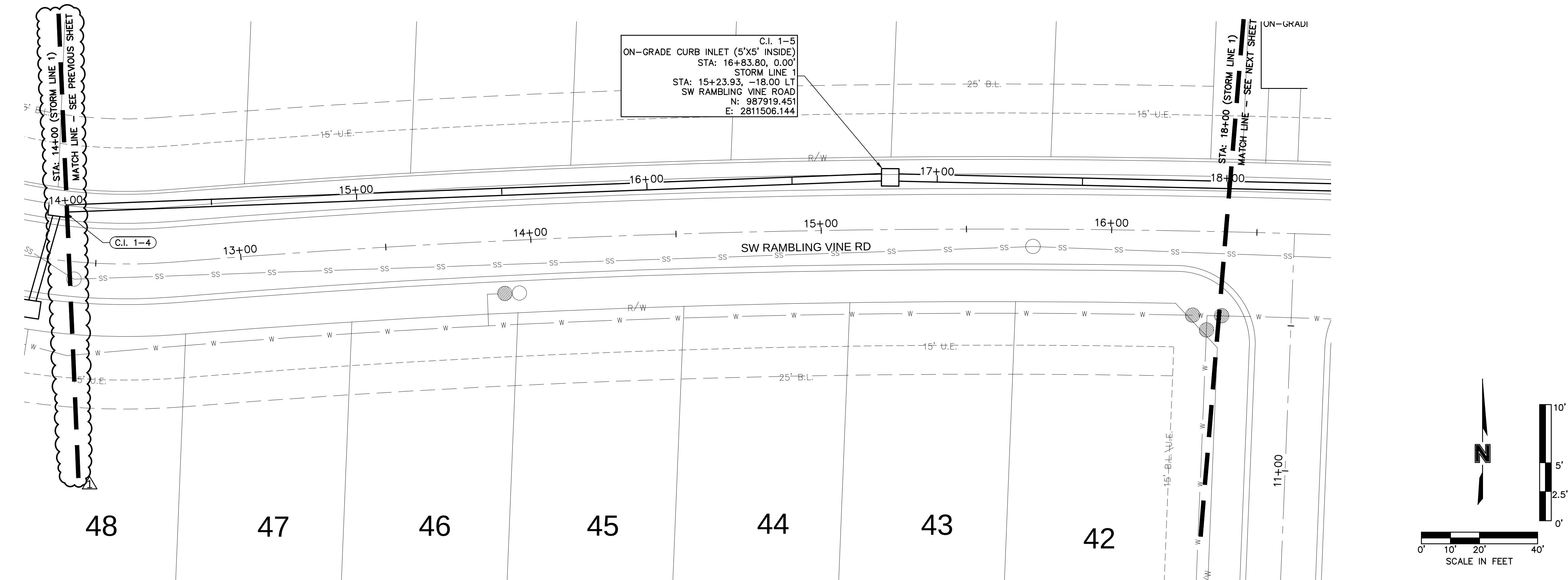
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1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177 www.olsson.com

USER: ssaylor
467 C_PB

- | LEGEND | |
|---|--|
| TC— | TOP OF CURB |
| PV— | TOP OF PAVEMENT |
| SW— | SIDEWALK |
| L | LANDING AREA |
| R | RAMP AREA |
| T | TRANSITION AREA |
|  | ADA ACCESS ROUTE |
|  | CG-2 CURB & GUTTER |
|  | CONCRETE SIDEWALK
(CONSTRUCTED BY CONTRACTOR) |

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SW RAMBLING VINE RD & SW BURNINGWOOD LN STREET & STORM SEWER PLANS		REV. NO. DATE REVISIONS DESCRIPTION BY	
EAGLE CREEK VILLAS FIRST PLAT		REV. NO. DATE REVISIONS DESCRIPTION BY	
LEE'S SUMMIT, MISSOURI 2023		REV. NO. DATE REVISIONS DESCRIPTION BY	
drawn by: _____ checked by: _____ approved by: _____ QA/QC by: _____ project no.: _____ drawing no.: _____ date: _____		CW SS JS JS A20-2467 C_INT01 A202467 02/23/2024	
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USER: ssyfor



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North Kansas City, MO 64116



5/7/2024

[illegible]

STORM SEWER PLAN & PROFILE (LINE 1)
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

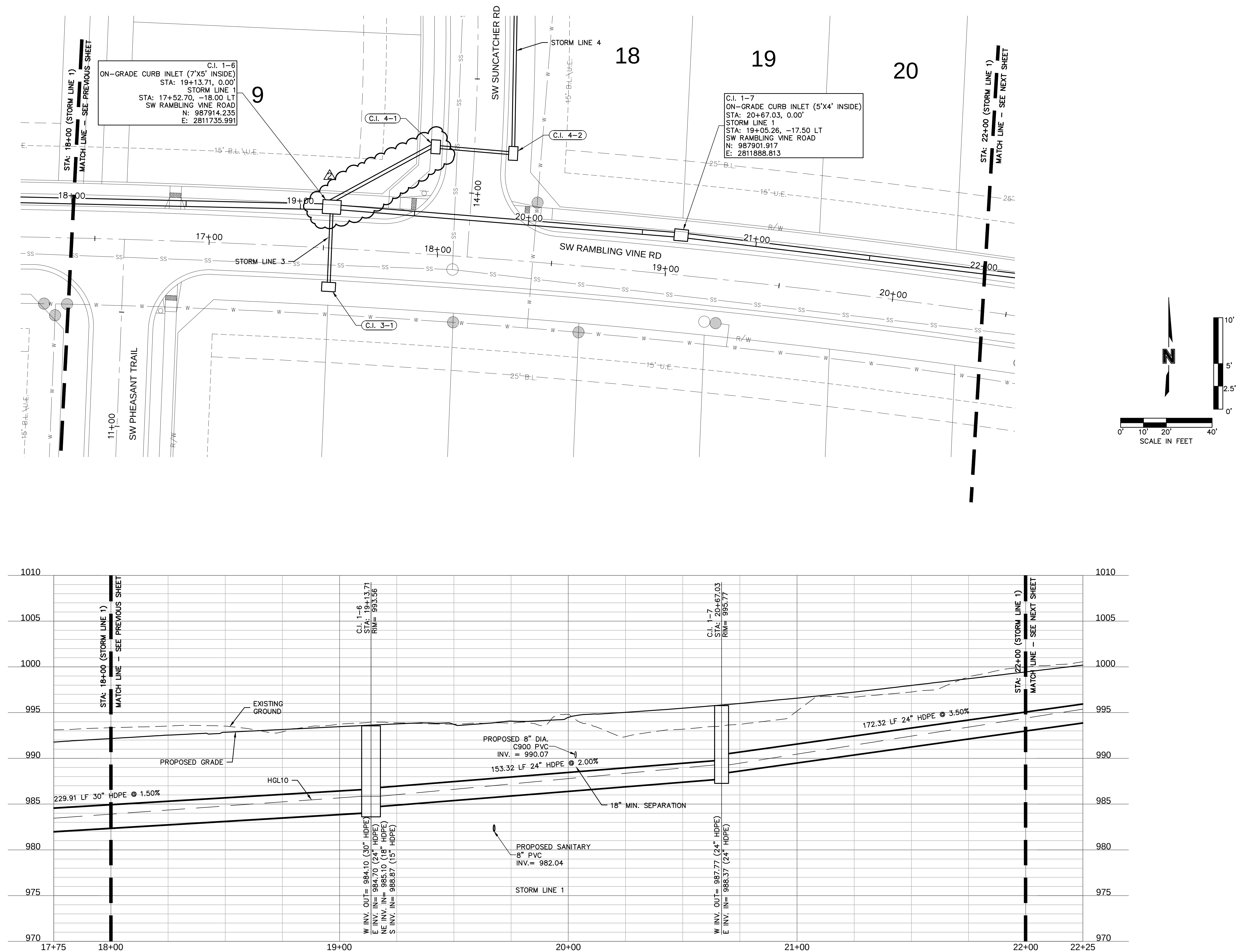
LEE'S SUMMIT, MISSOURI

2023

drawn by: _____ CW
checked by: _____ SS
approved by: _____ JS
QA/QC by: _____ JS
project no.: _____ A20-2467
drawing no.: C STM01 A202467
date: _____ 02/23/2024

SHEET
C128

DWG: F:\2020\2001-2500\020-2467-A\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Street & Storm\C_STM01_A202467.dwg USER: ssaylor
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DATE: May 07, 2024 10:55am



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5/7/202.

[illegible]

STORM SEWER PLAN & PROFILE (LINE 1)
STREET & STORM SEWER PLANS

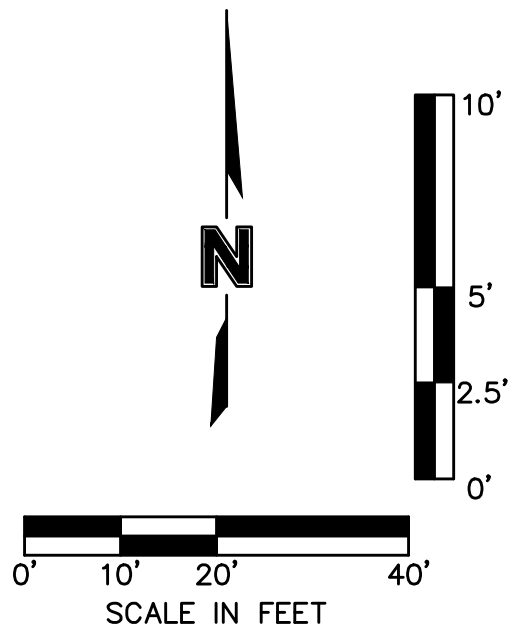
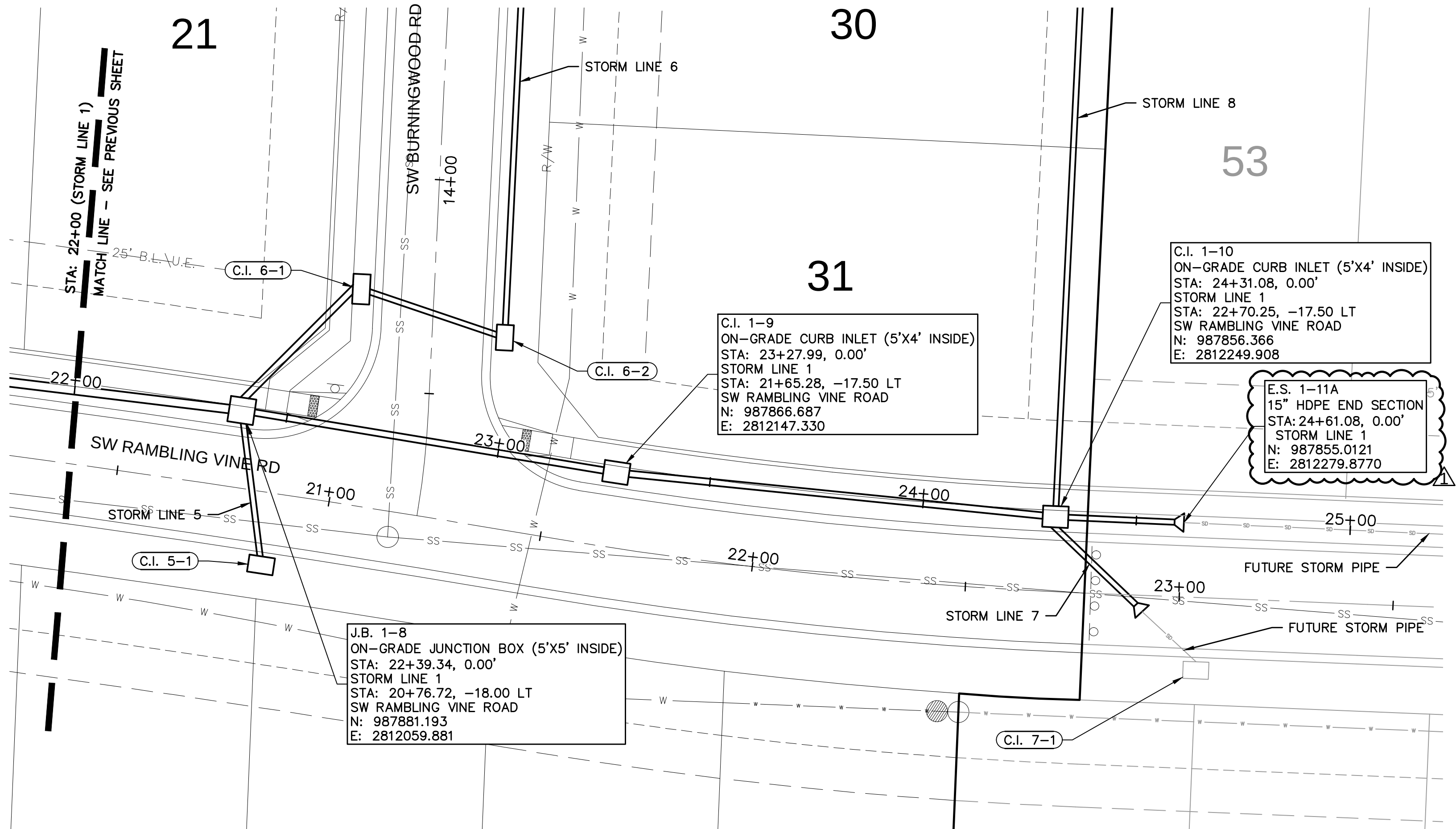
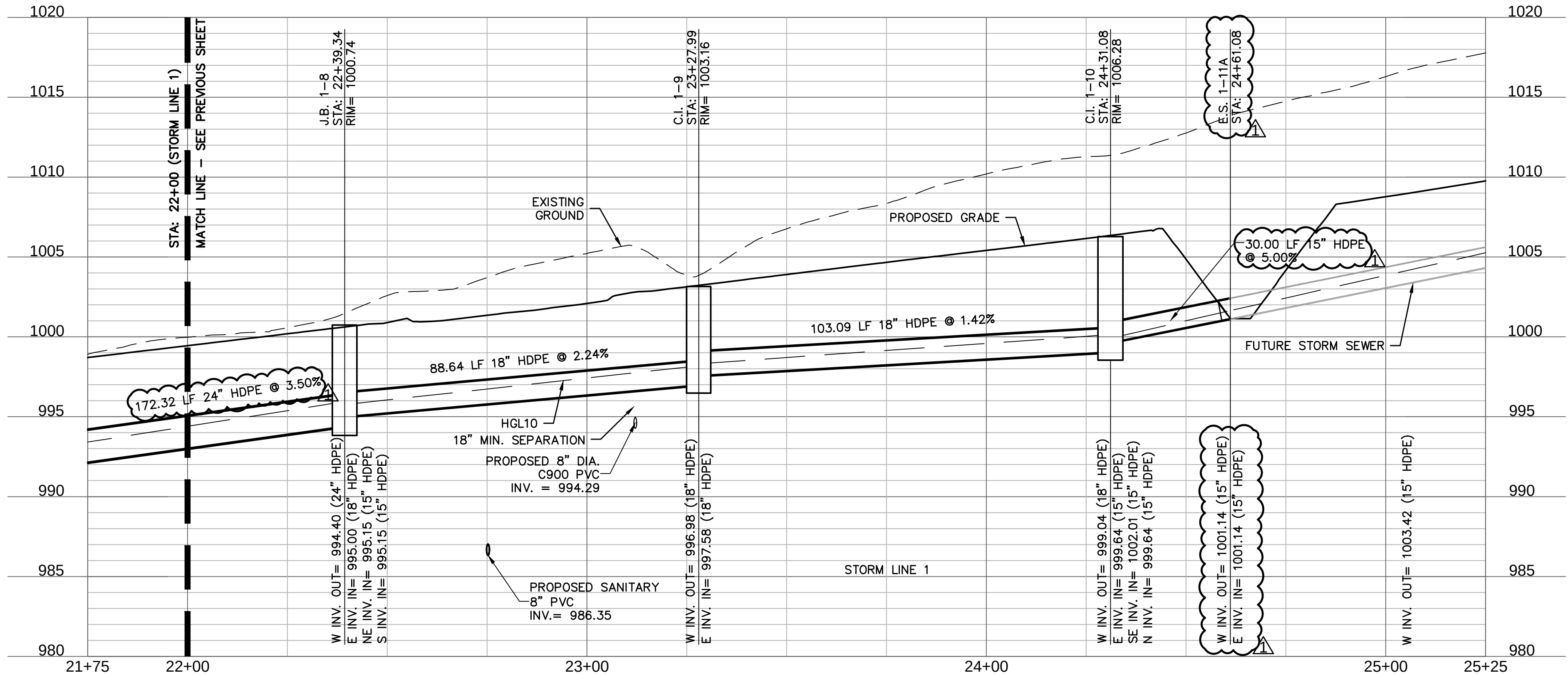
EAGLE CREEK VILLAS
FIRST PLAT

LEE'S SUMMIT, MISSOURI

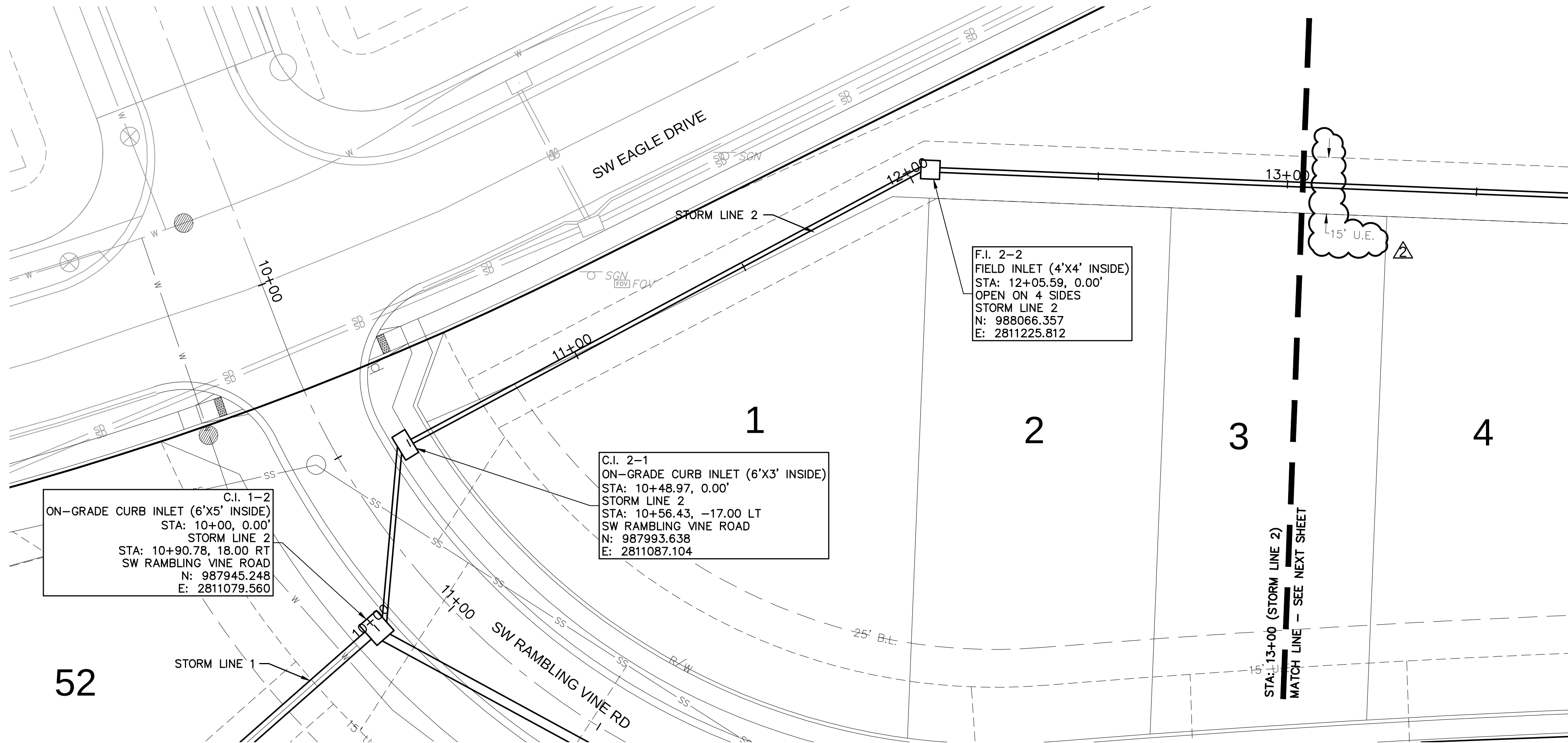
2023

drawn by: _____ CW
checked by: _____ SS
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date: _____ 02/23/2024

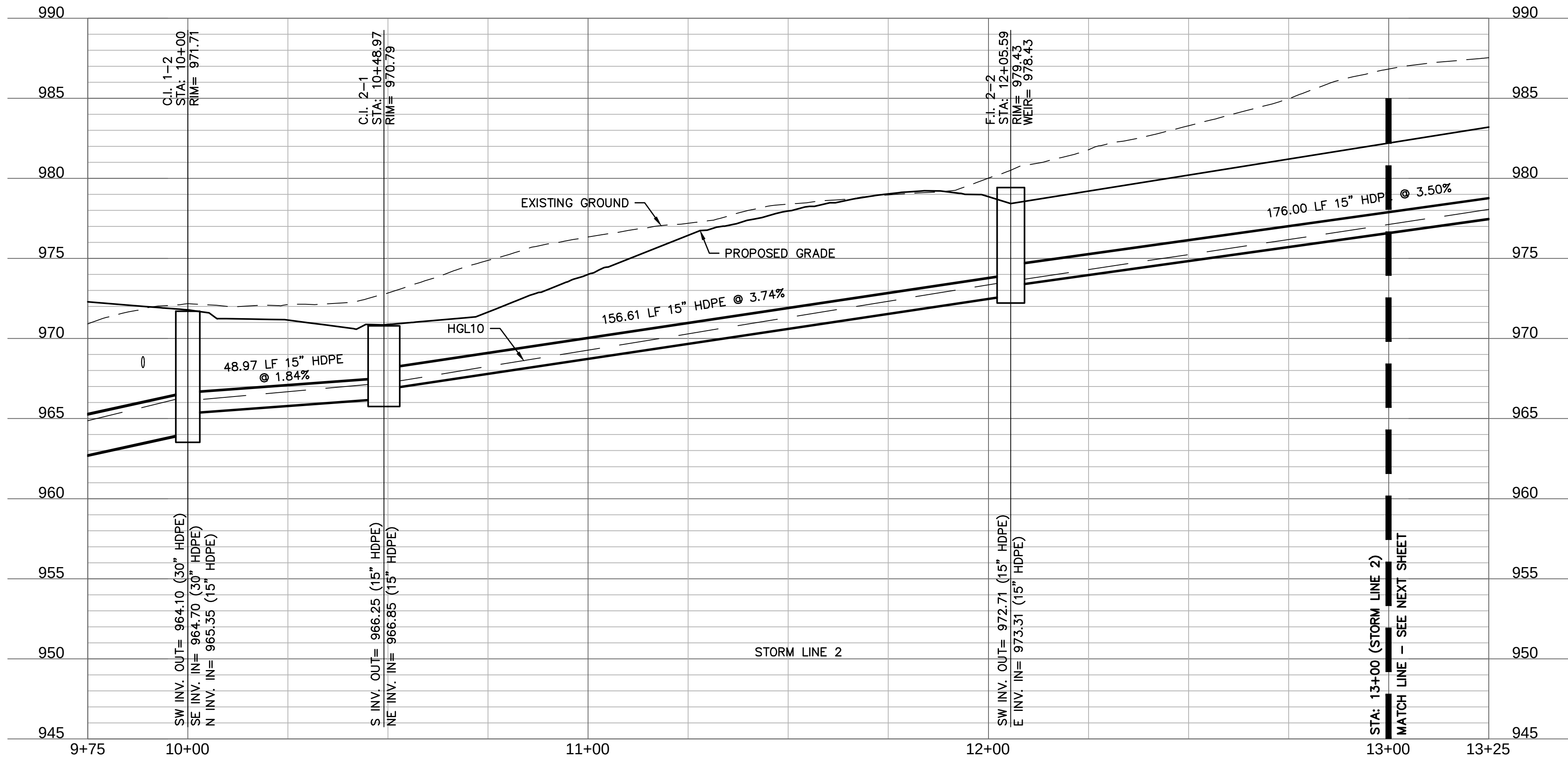
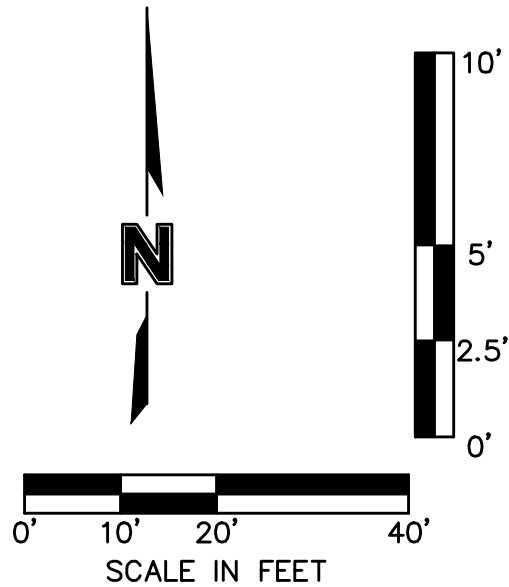
SHEET
C129



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		5/7/2024	
STORM SEWER PLAN & PROFILE (LINE 1) STREET & STORM SEWER PLANS		REVISIONS	
EAGLE CREEK VILLAS FIRST PLAT		2023	
LEE'S SUMMIT, MISSOURI			
drawn by: _____ checked by: _____ approved by: _____ QA/QC by: _____ project no.: A20-2467 drawing no.: C_STM01_A202467 date: 02/23/2024			
SHEET C130			



52



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North Kansas City, MO 64116
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5/7/2024

REVISIONS	
REV. NO.	DATE
2	04/02/2024

BY	REVISIONS DESCRIPTION
	REVISED PER CITY COMMENTS

STORM SEWER PLAN & PROFILE (LINE 2)
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

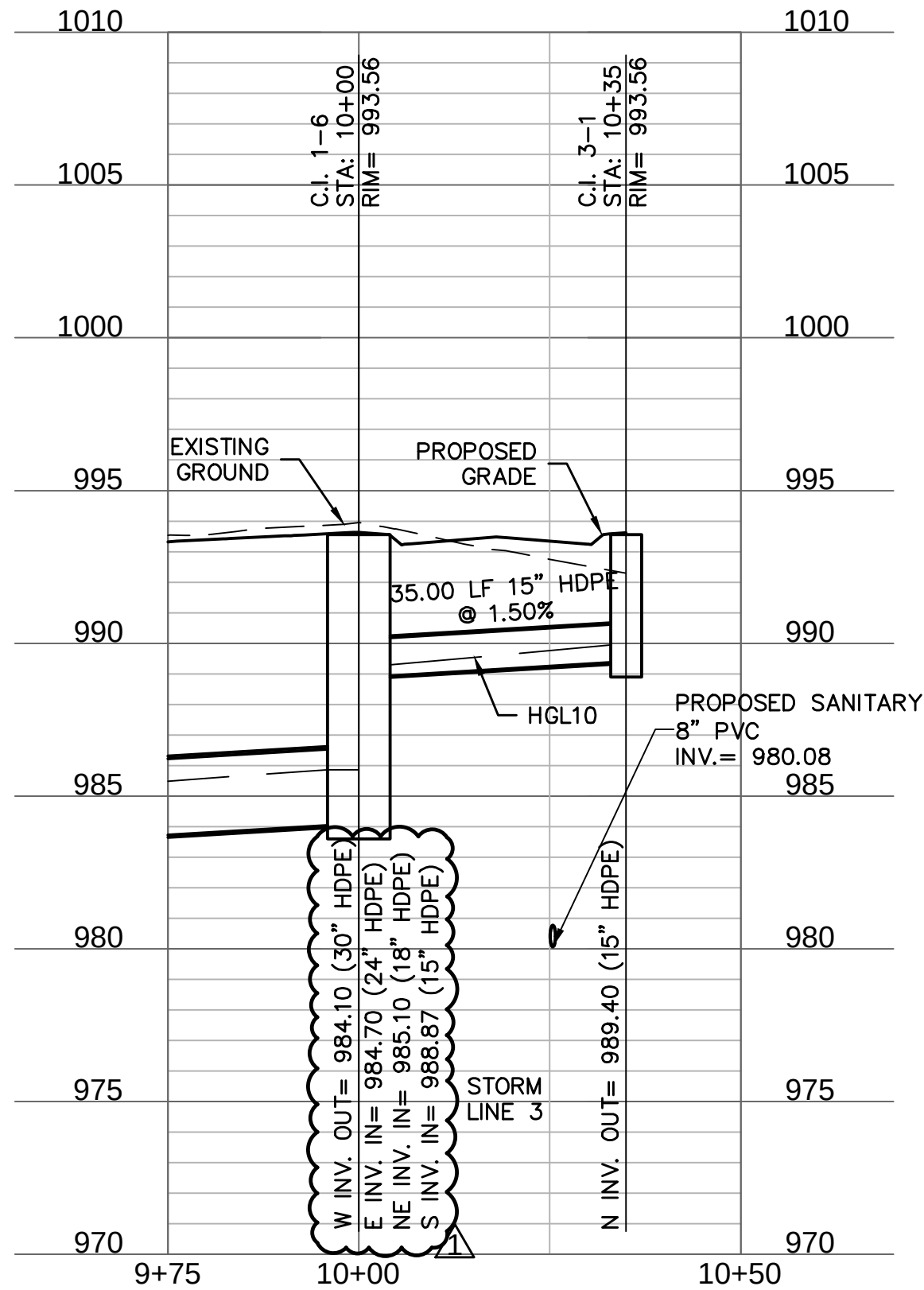
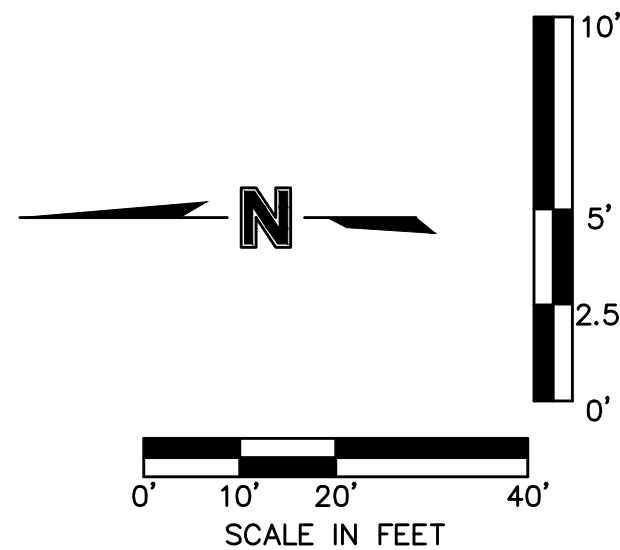
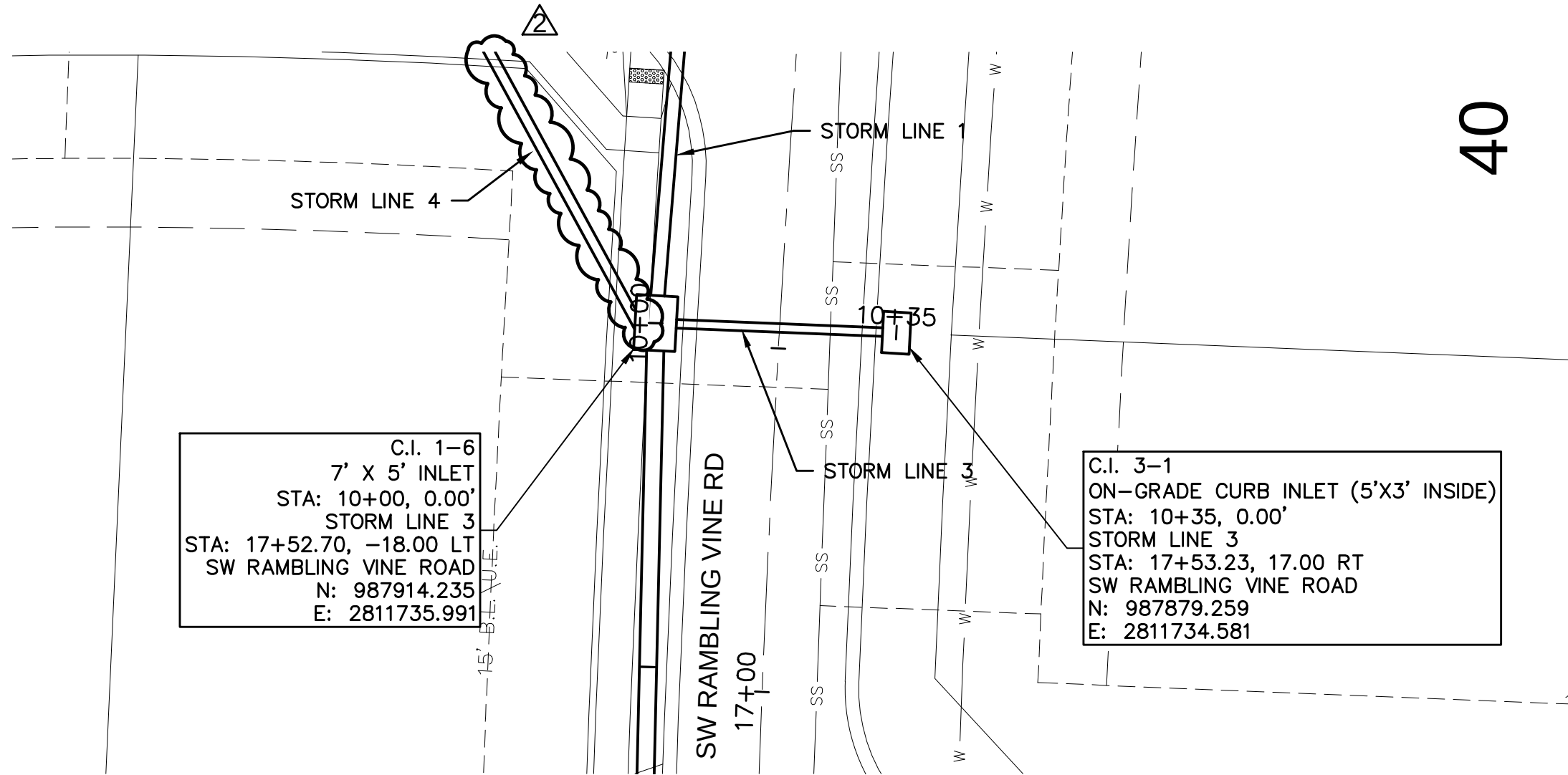
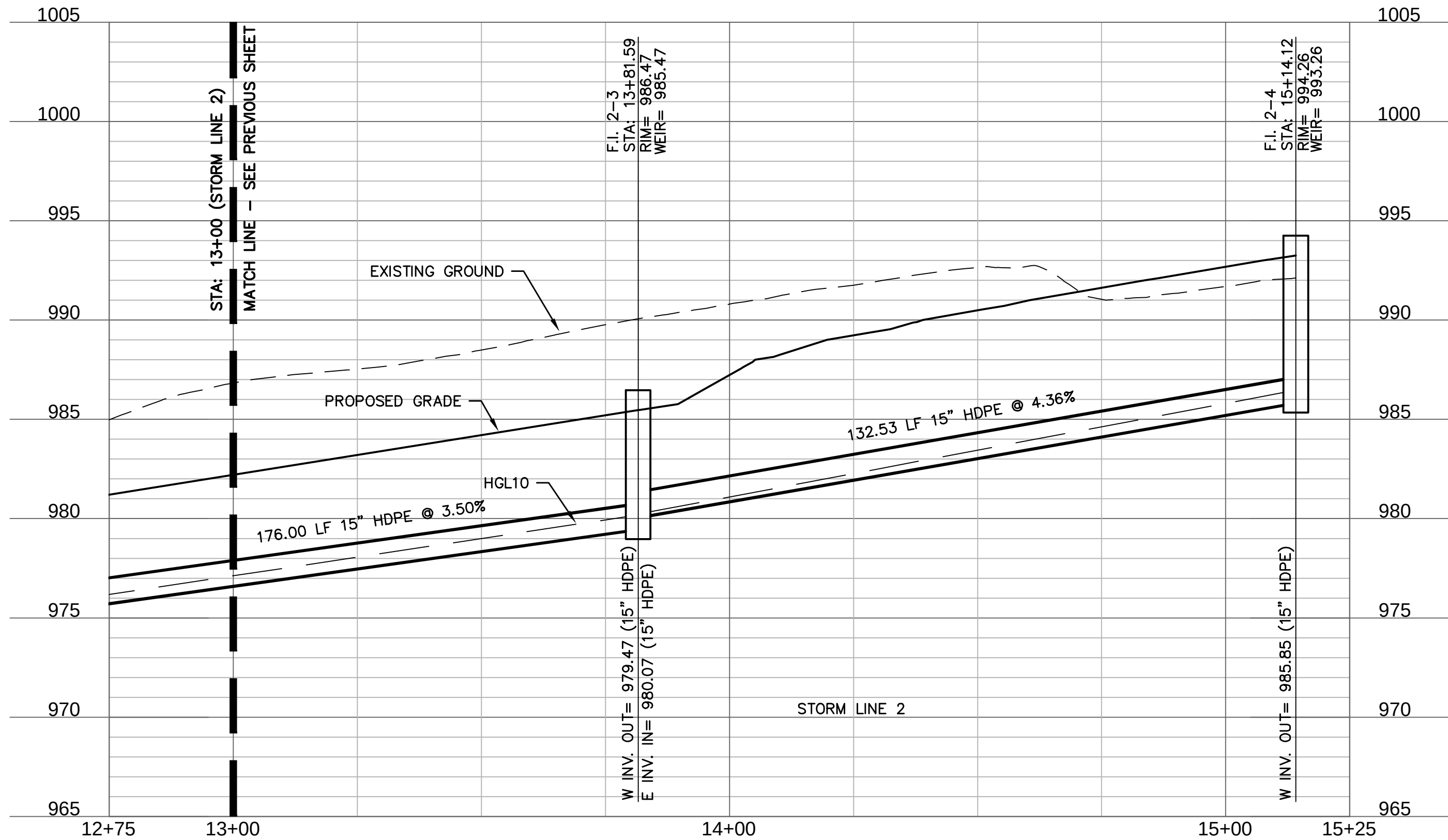
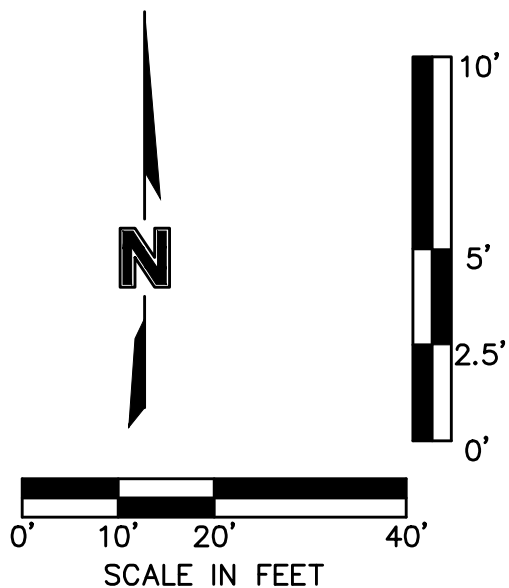
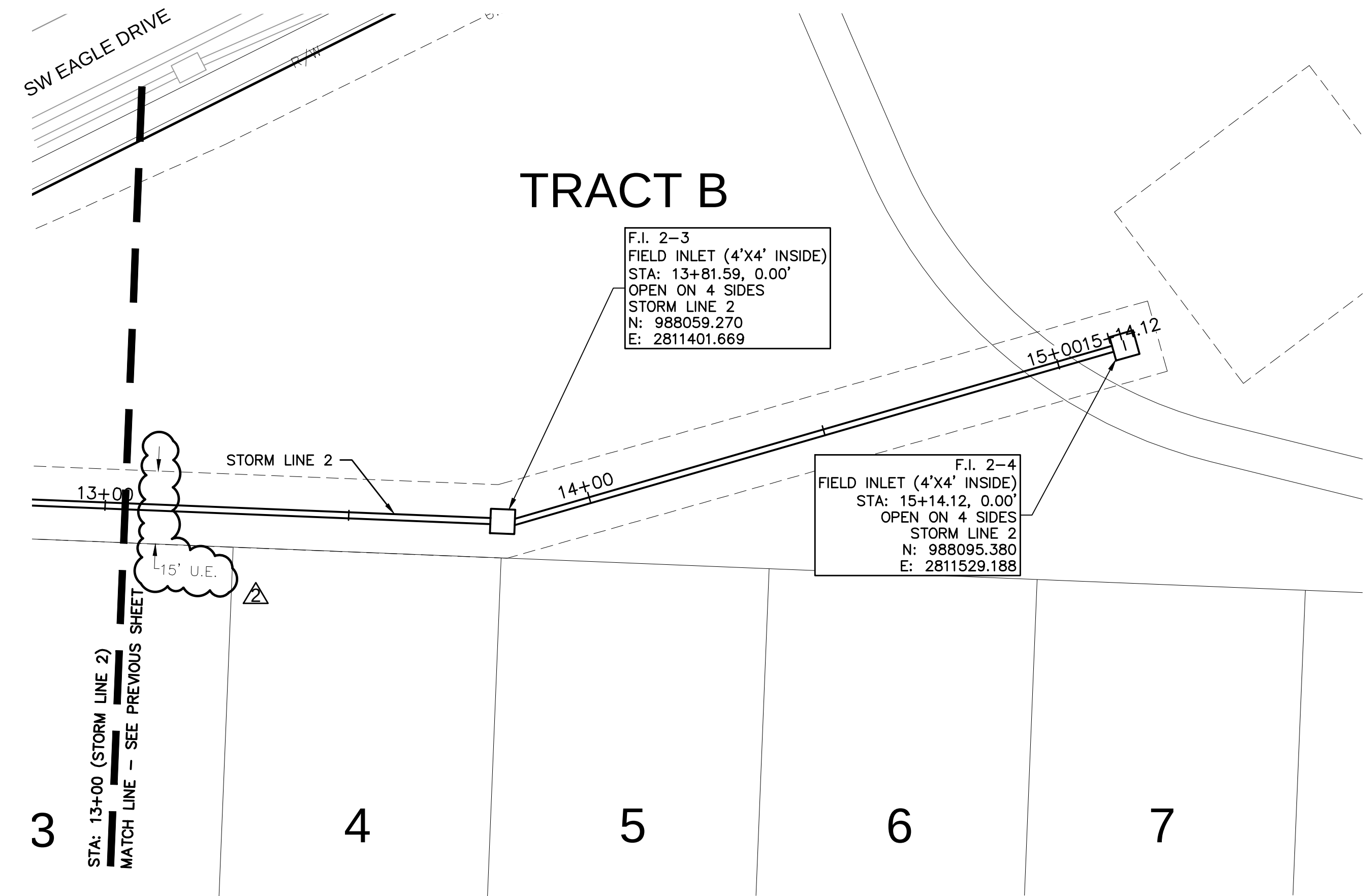
LEE'S SUMMIT, MISSOURI

drawn by: _____
checked by: _____
approved by: _____
QA/QC by: _____
project no.: A20-2467
drawing no.: C_STM02_A202467
date: 02/23/2024

CJ
SS
LS
JS

SHEET
C131

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STATE OF MISSOURI
STEPHEN M. SAYLOR
NUMBER
PE-2018021248
5/7/2024

BY

REVISIONS

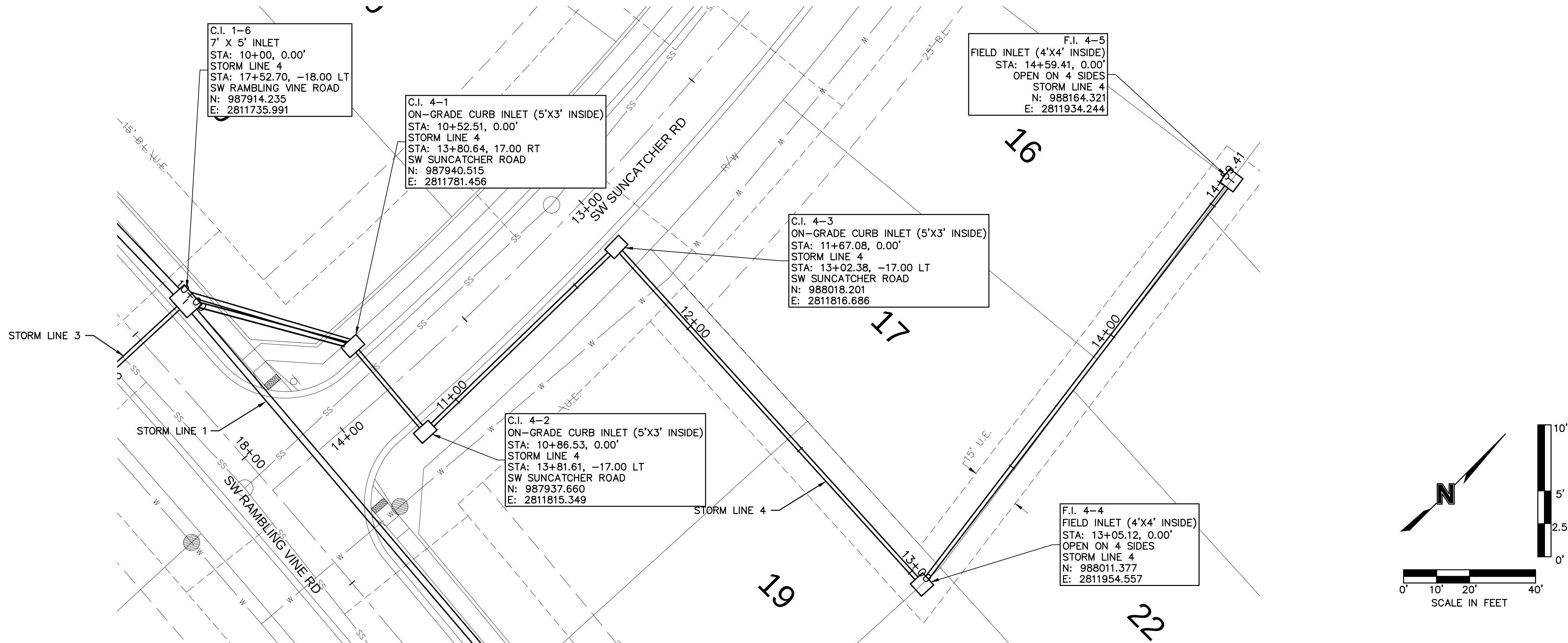
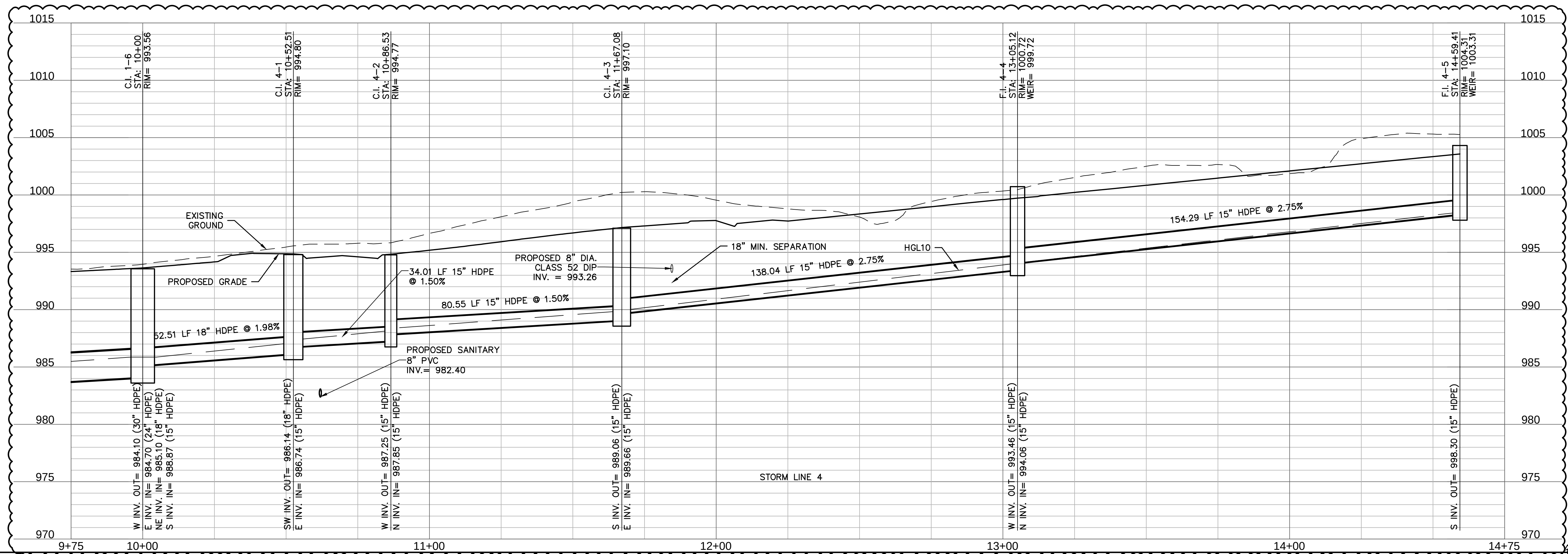
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STREET & STORM SEWER PLANS
EAGLE CREEK VILLAS
FIRST PLAT
LEE'S SUMMIT, MISSOURI

2023

drawn by: CJK
checked by: SS
approved by: JS
QA/QC by: JS
project no.: A20-2467
drawing no.: C_STM02_A202467
date: 02/23/2024

SHEET
C132

DWG: F:\2020
DATE: May 07



STORM SEWER PLAN & PROFILE (LINE 4)
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2023

drawn by: _____ CW
checked by: _____ SS
approved by: _____ JS
QA/QC by: _____ JS
project no.: _____ A20-2467
drawing no.: C STM02 A202467
date: _____ 02/23/2024

SHEET
C133

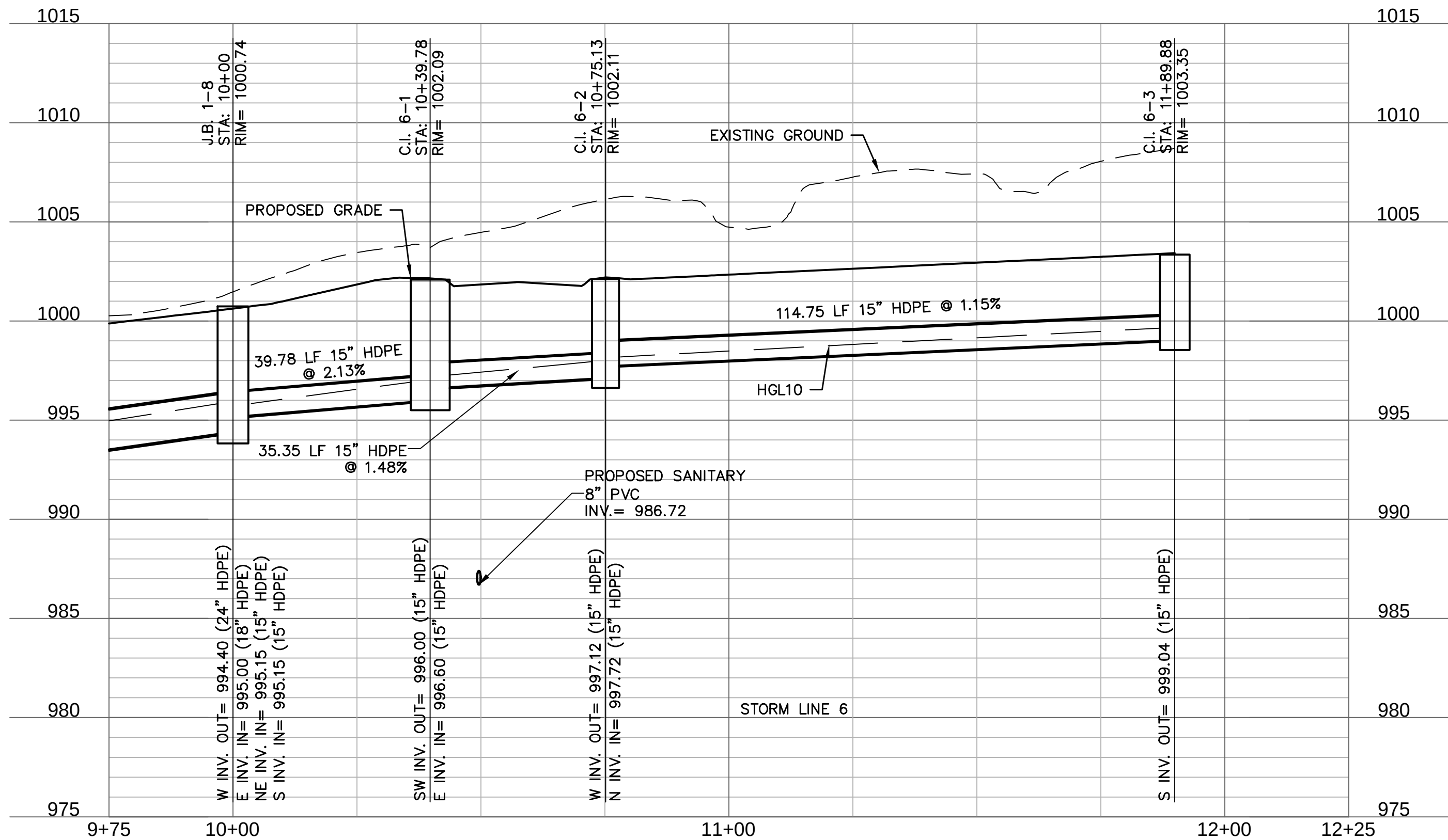
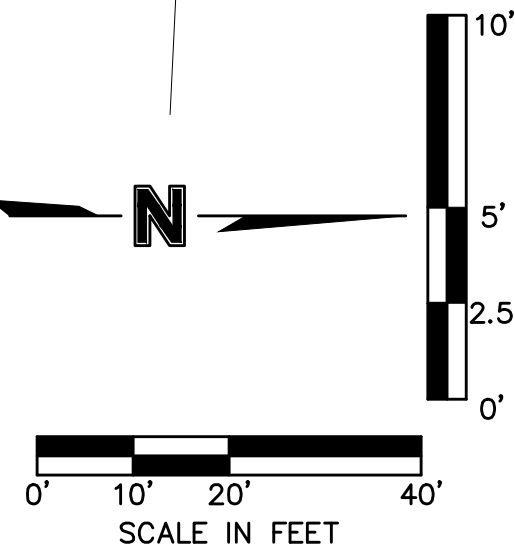
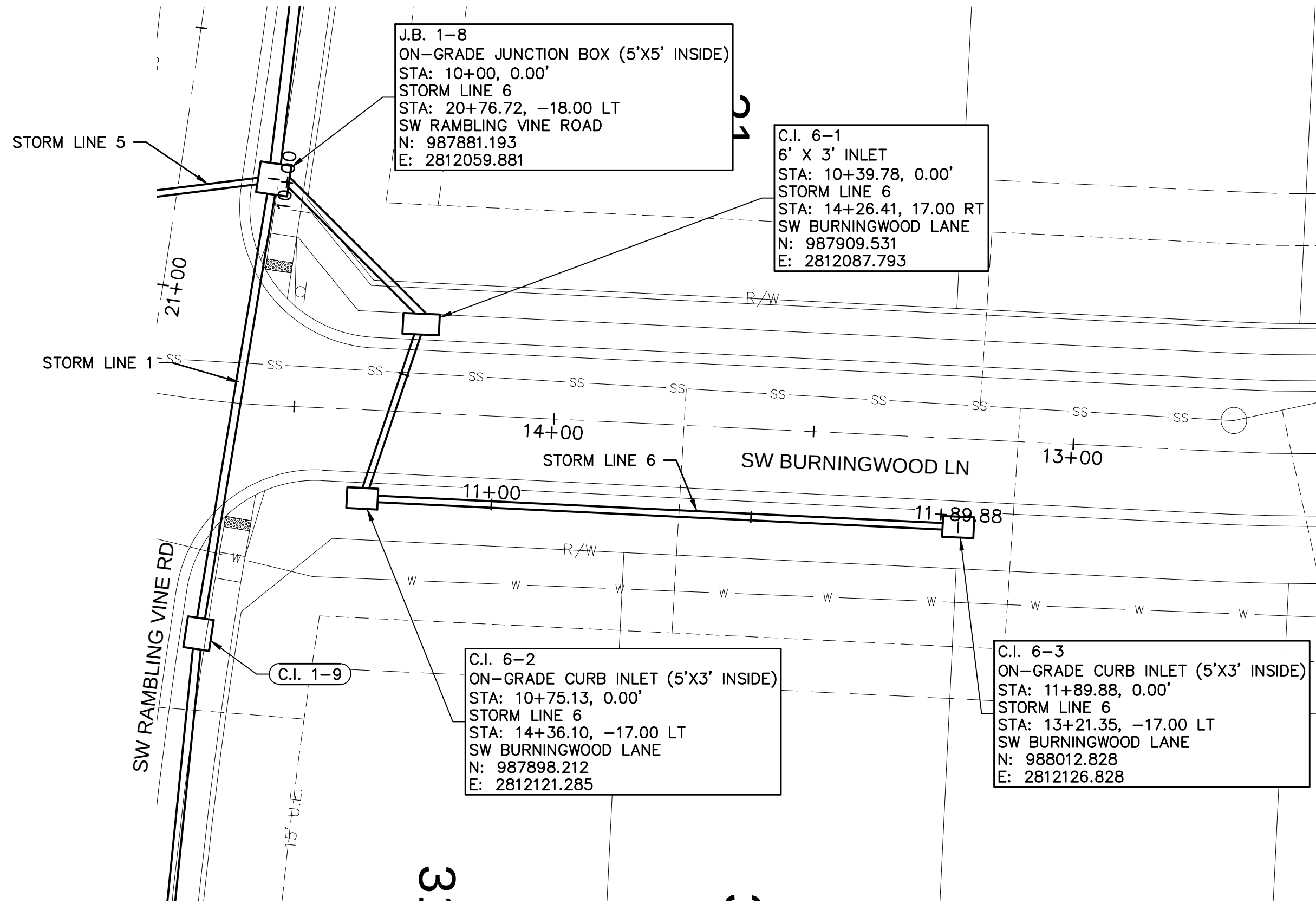
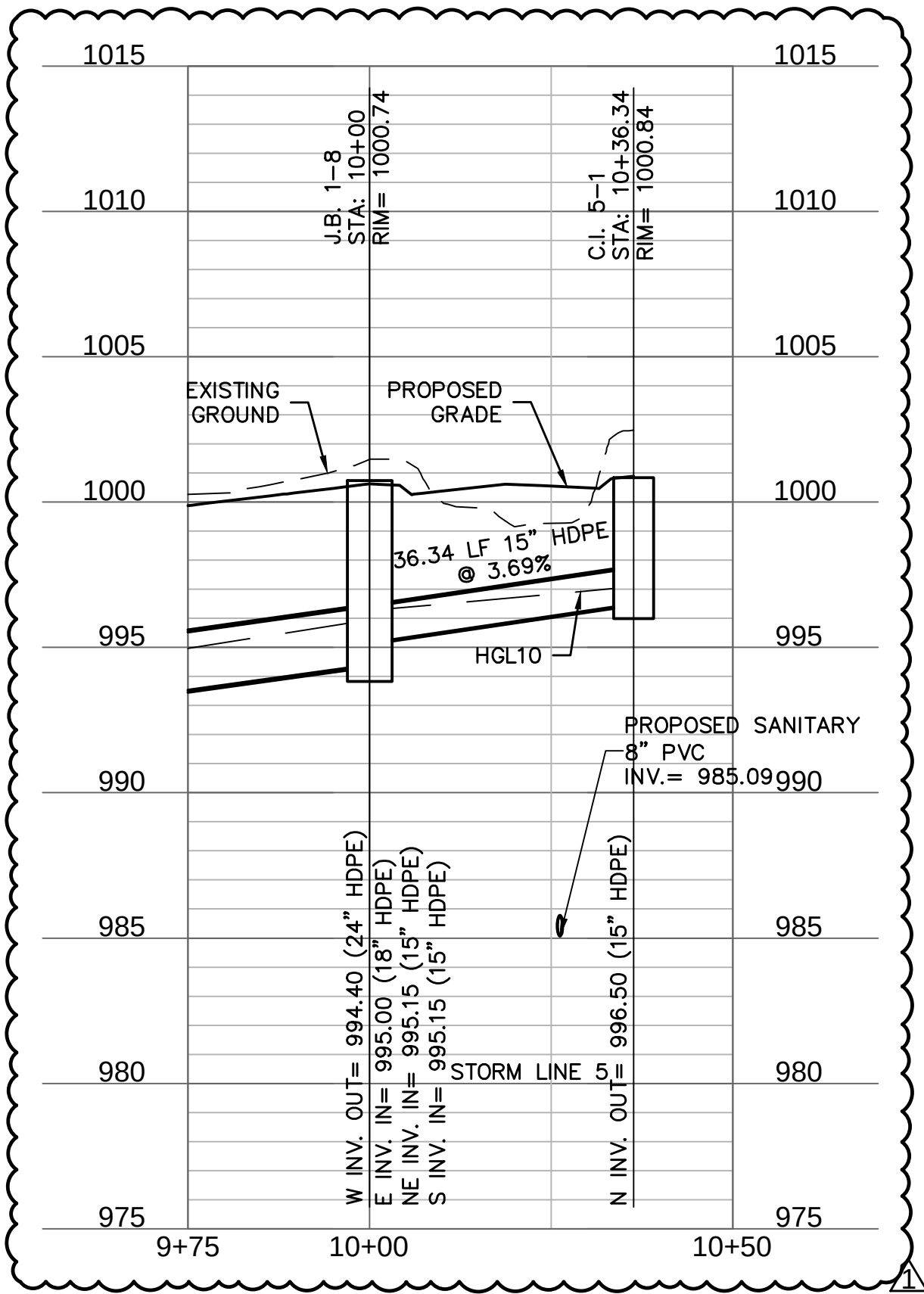
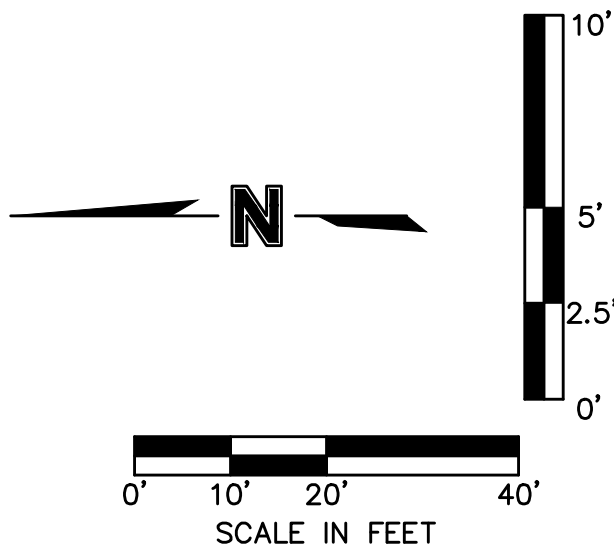
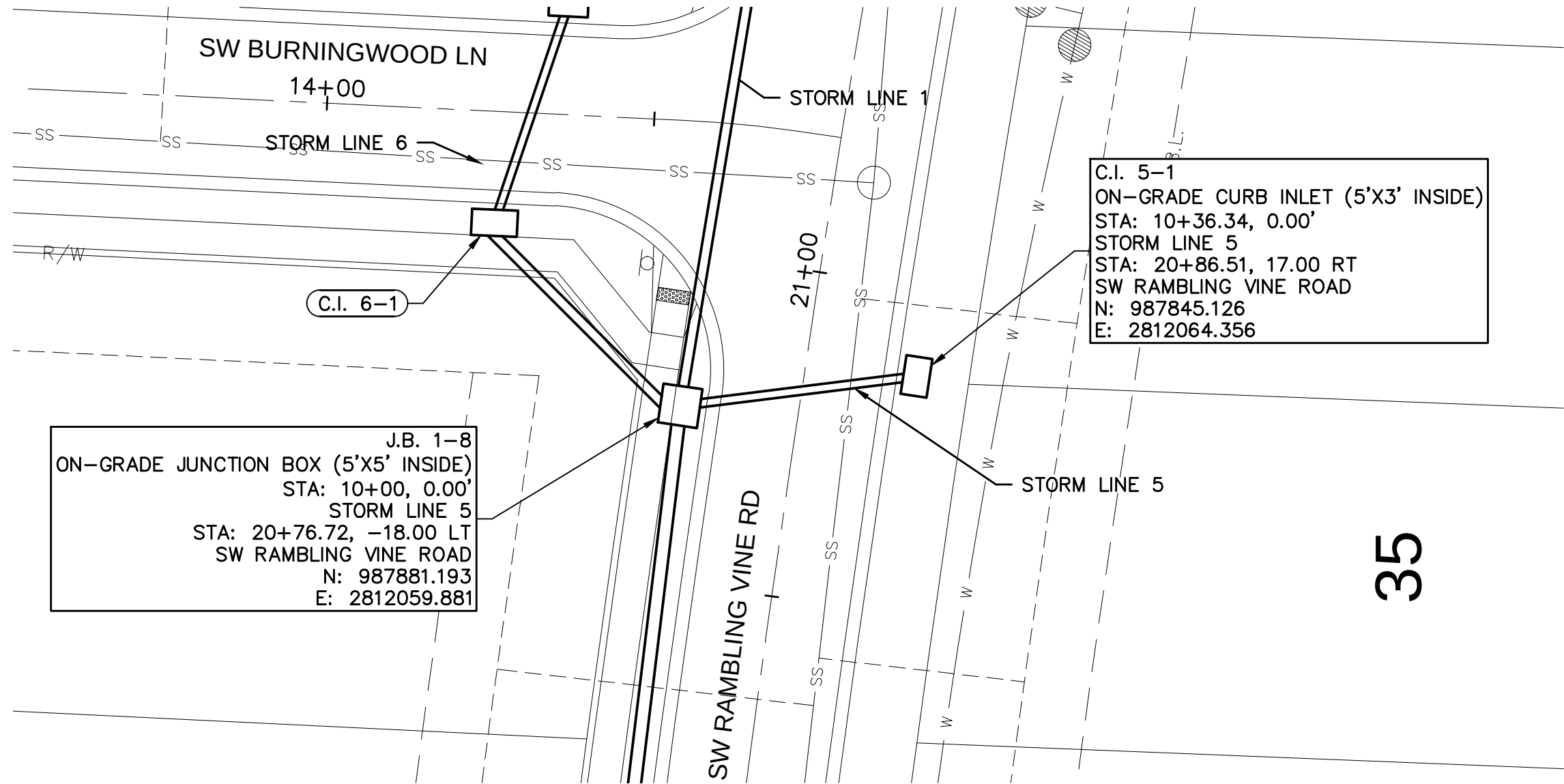
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1	02/23/2024	REVISED PER CITY COMMENTS	
DEVIATIONS			

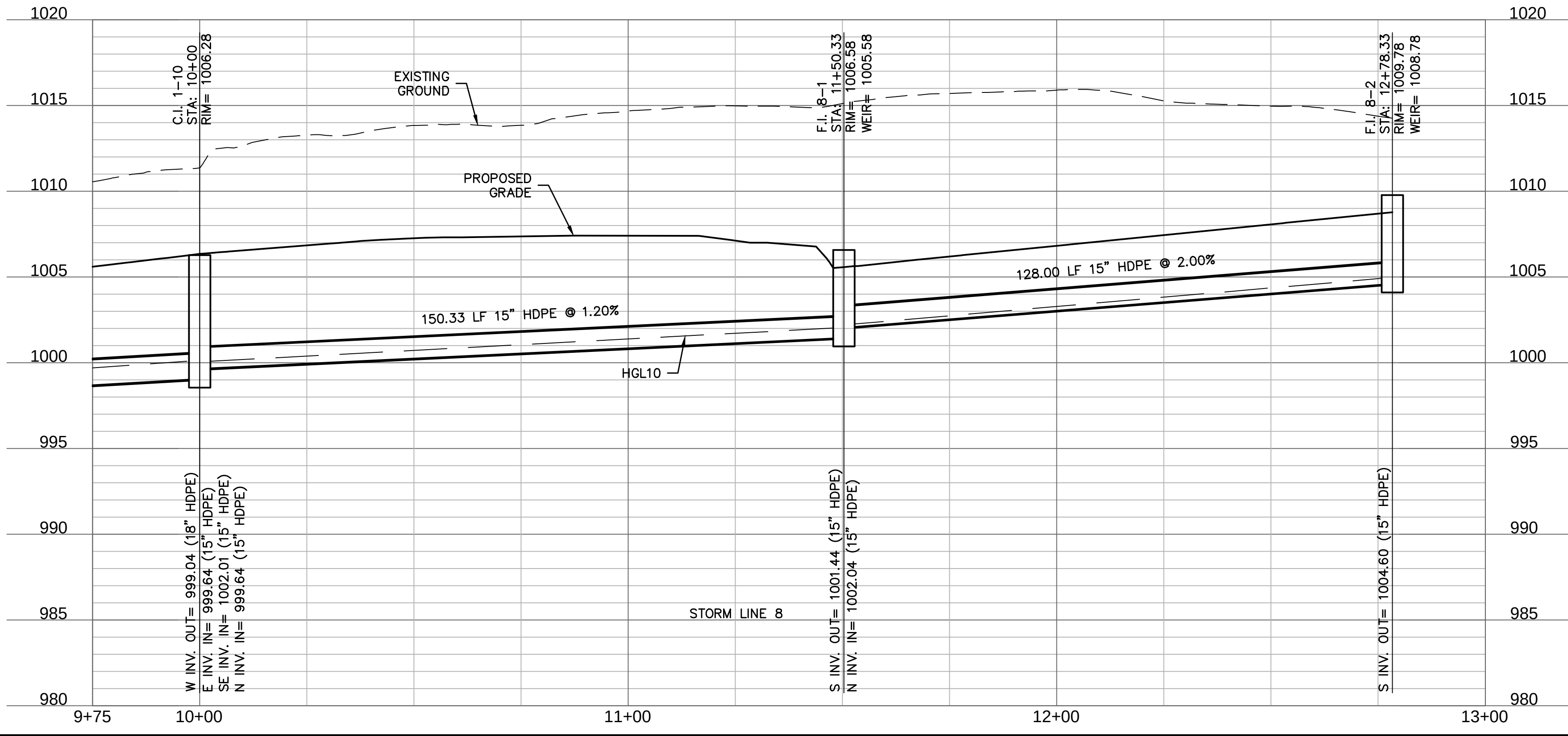
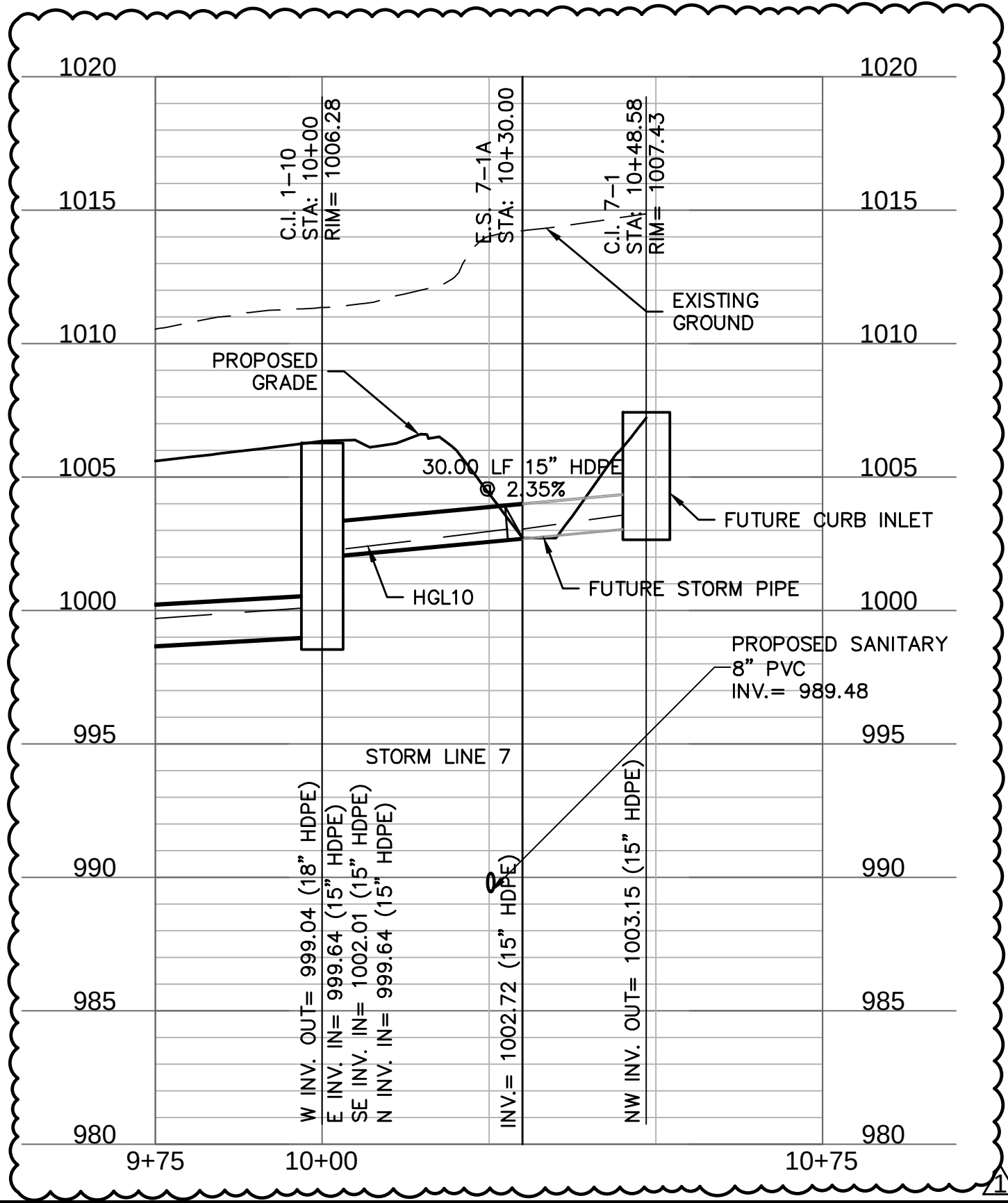
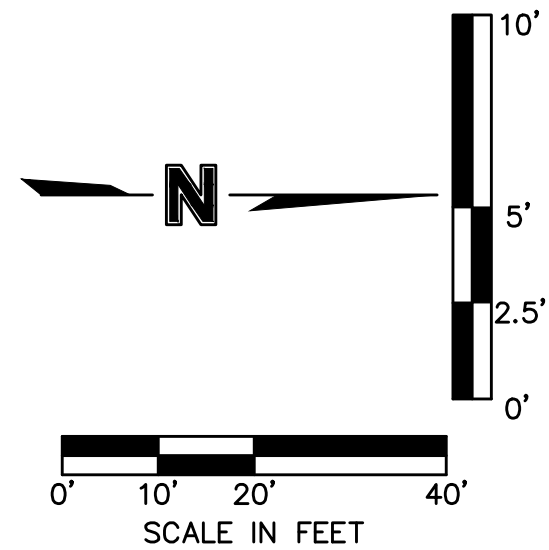
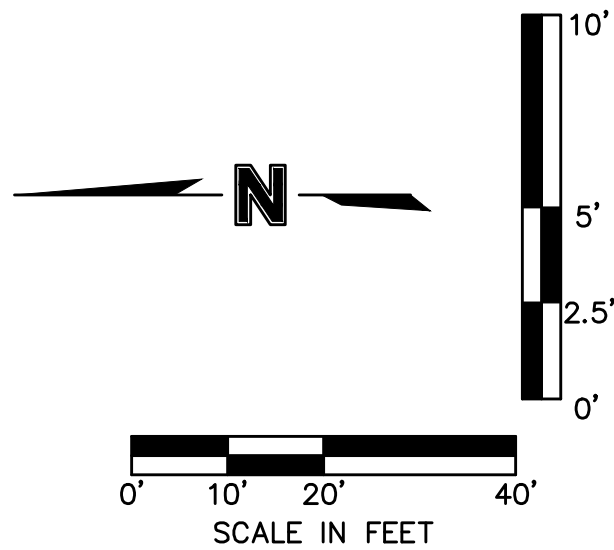
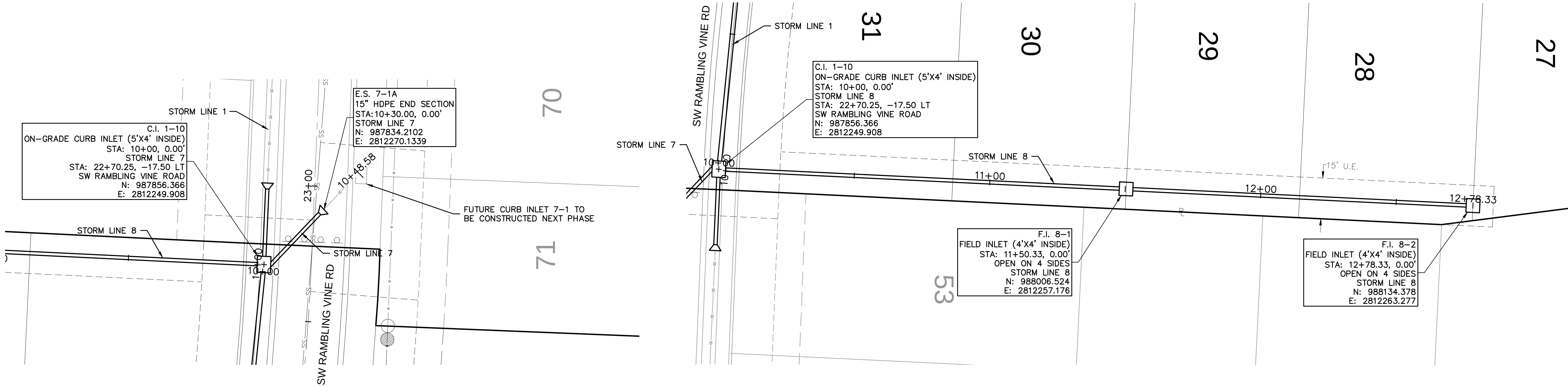
STATE OF MISSOURI
STEPHEN M. SAYLOR
NUMBER
PE-2018021248
PROFESSIONAL ENGINEER

olson

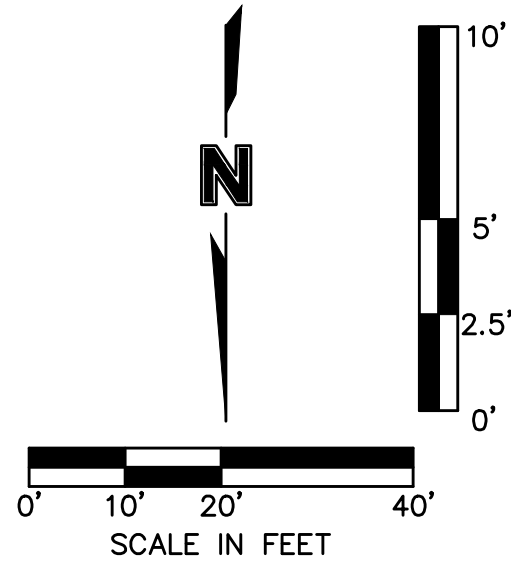
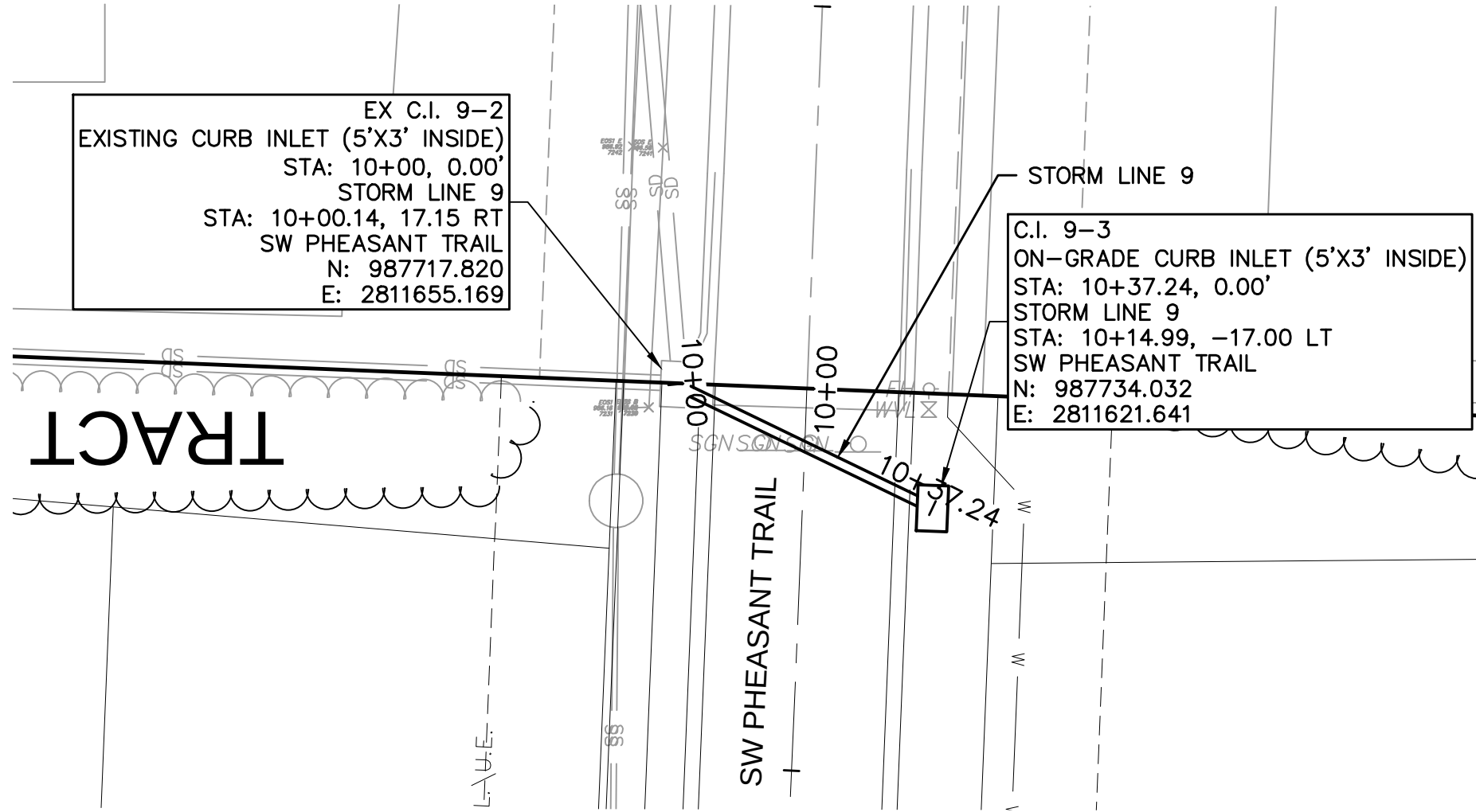
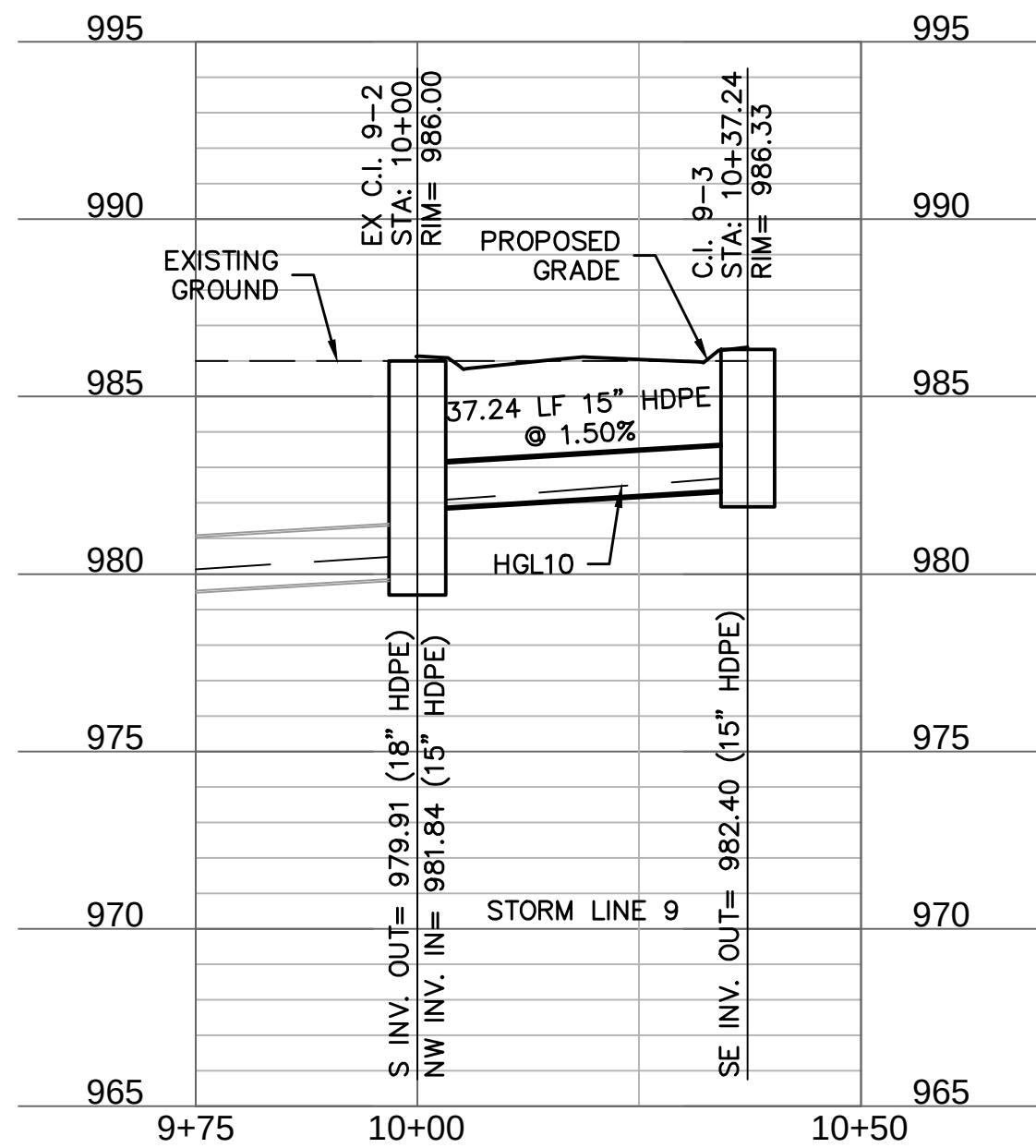
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DATE: May 07, 2024 10:58am USER: ssaylor



drawn by: _____ CW
checked by: _____ SS
approved by: _____ JS
QA/QC by: _____ JS
project no.: _____ A20-2467
drawing no.: C STM02 A202467
date: _____ 02/23/2024

SHEET
C136

STATE OF MISSOURI
 ★ ★
 STEPHEN M.
 SAYLOR
 NUMBER
 PE-2018021248
 PROFESSIONAL ENGINEER

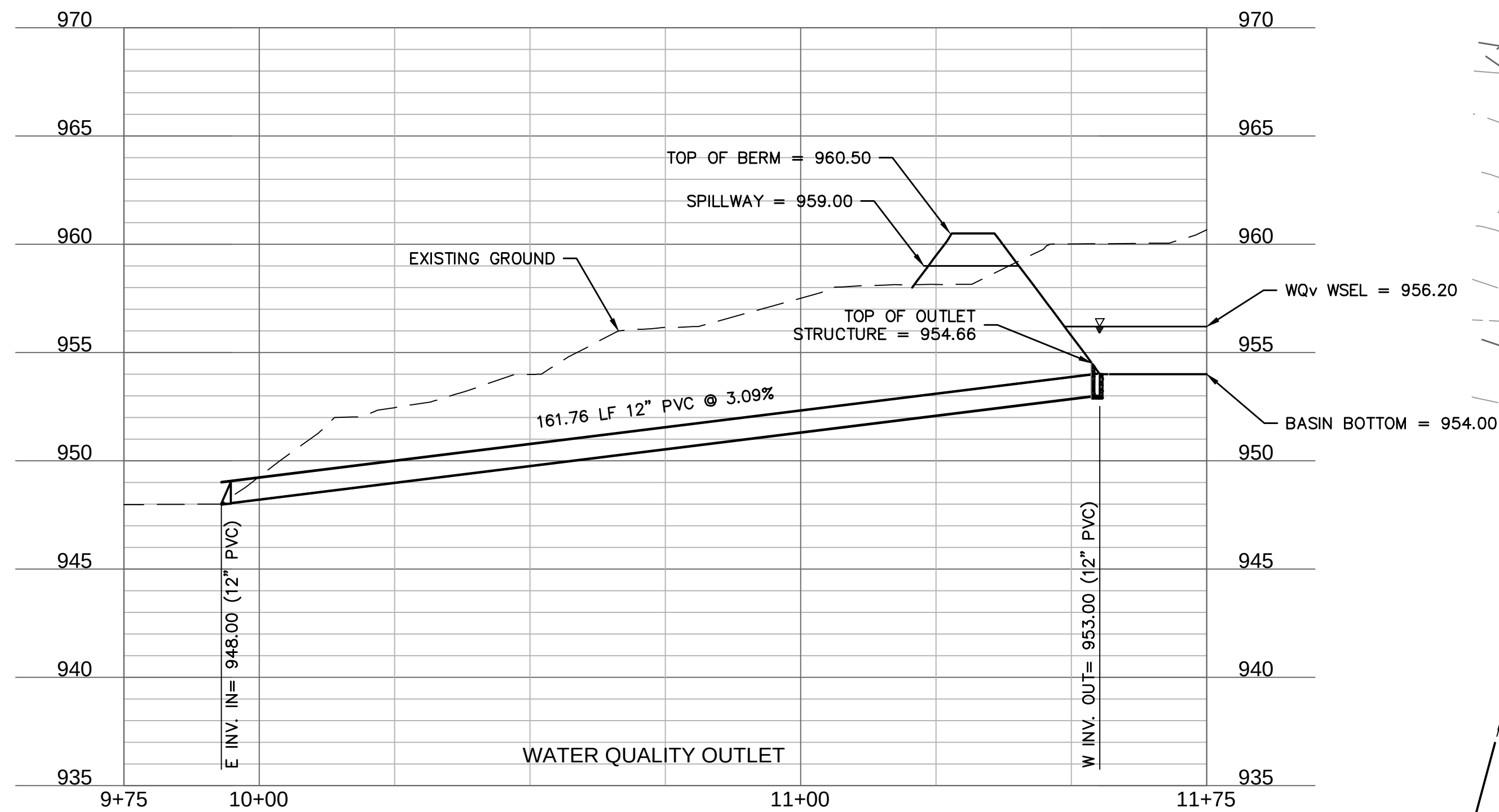
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STORM SEWER PLAN & PROFILE (LINE 9) STREET & STORM SEWER PLANS	2023
EAGLE CREEK VILLAS FIRST PLAT	

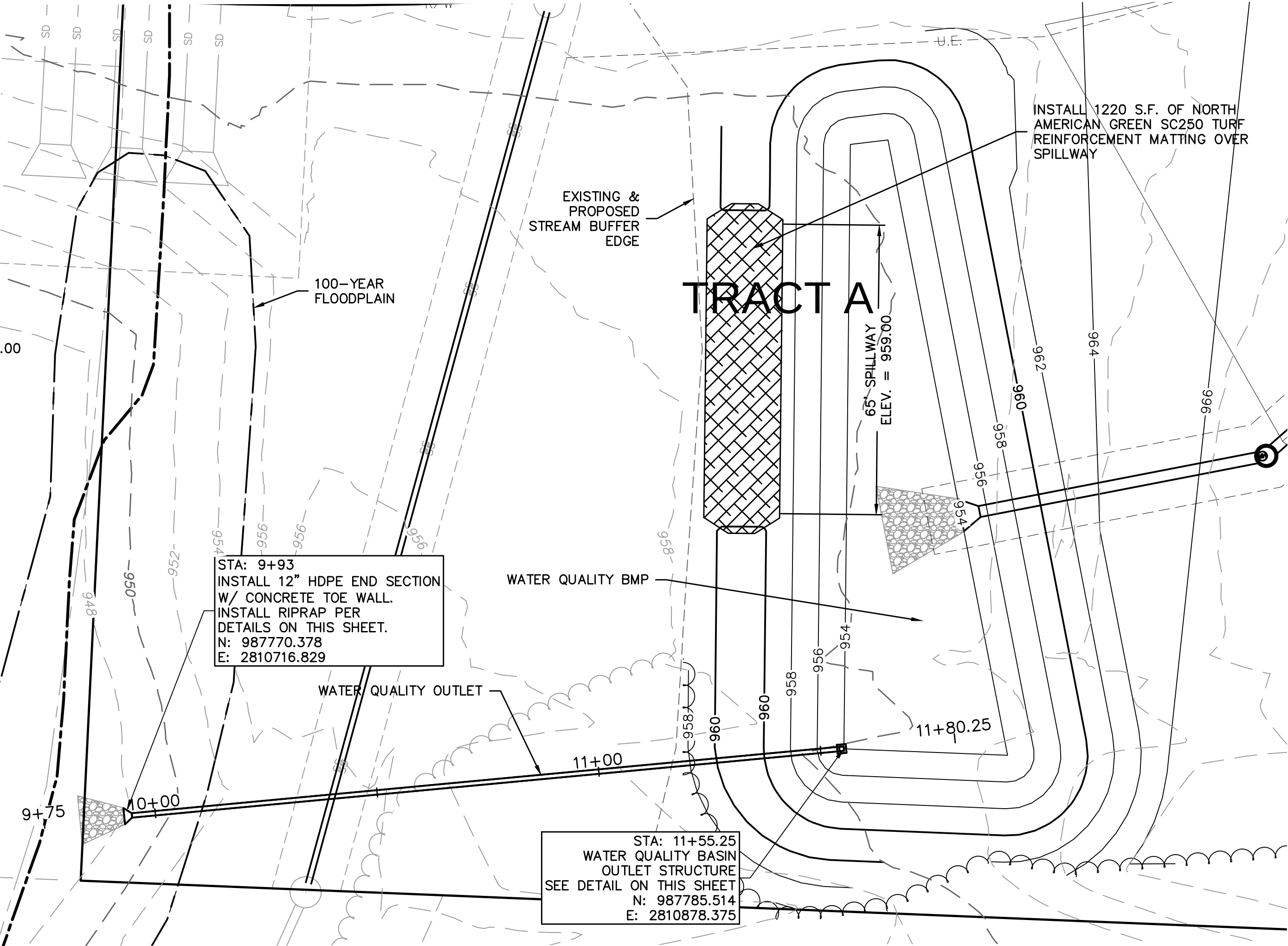
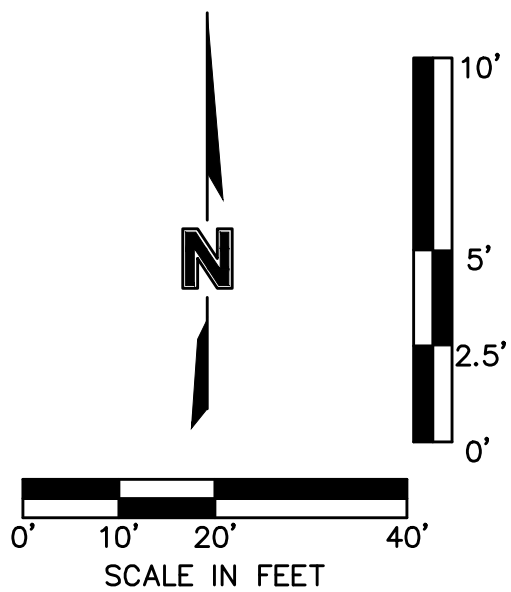
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USER: ssoyfor



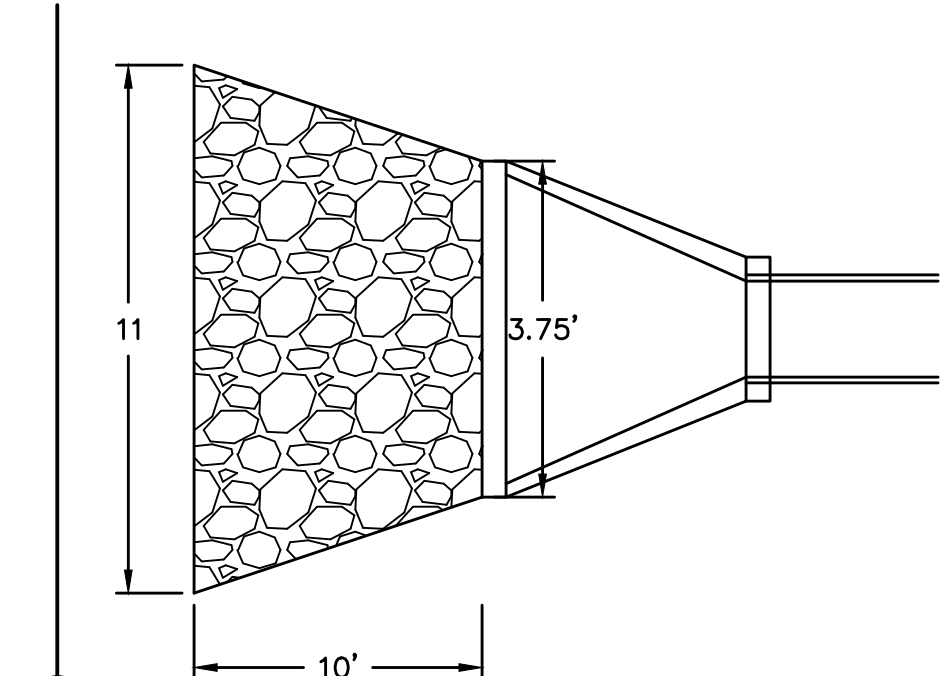
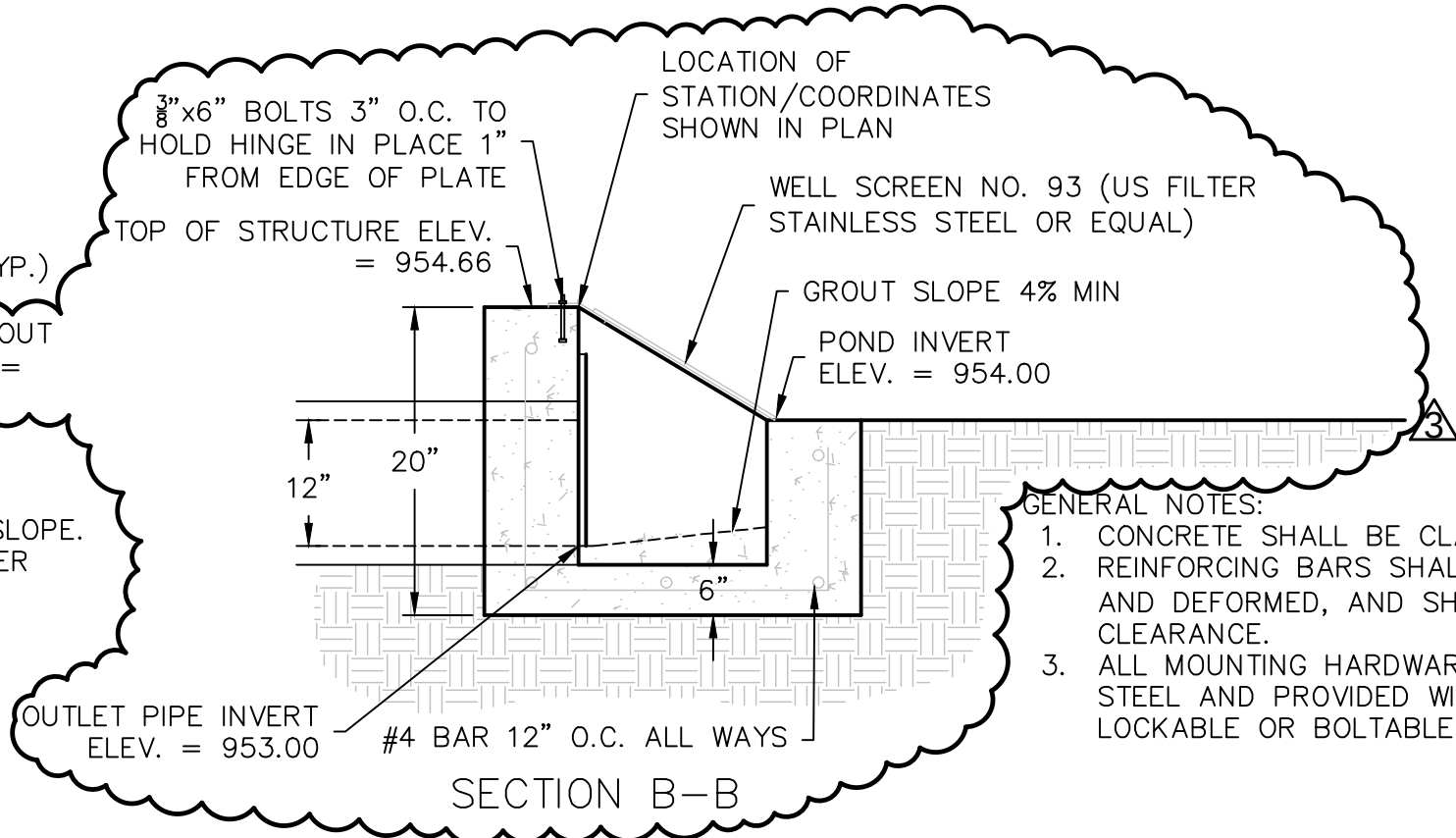
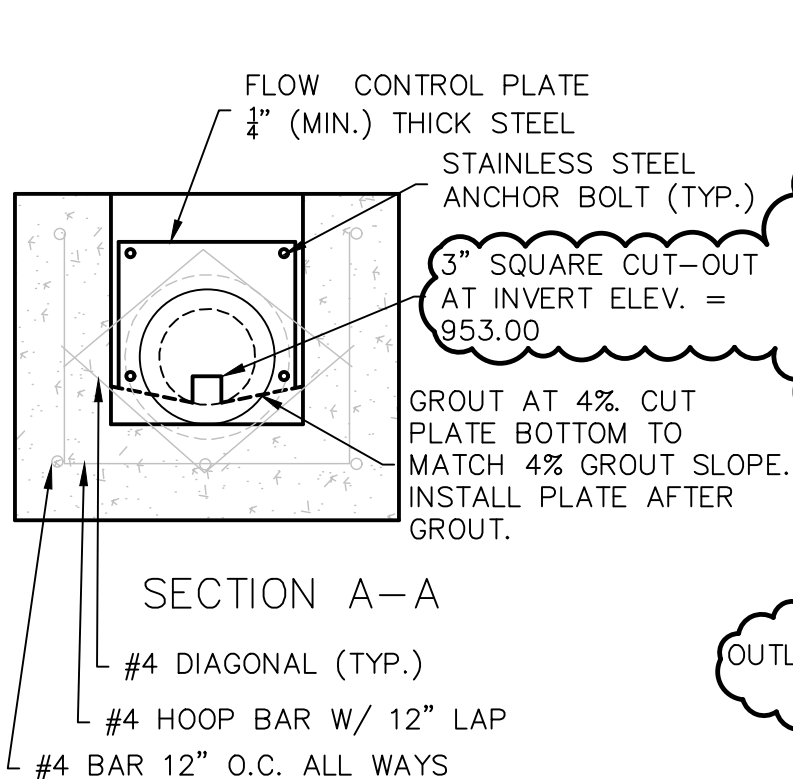
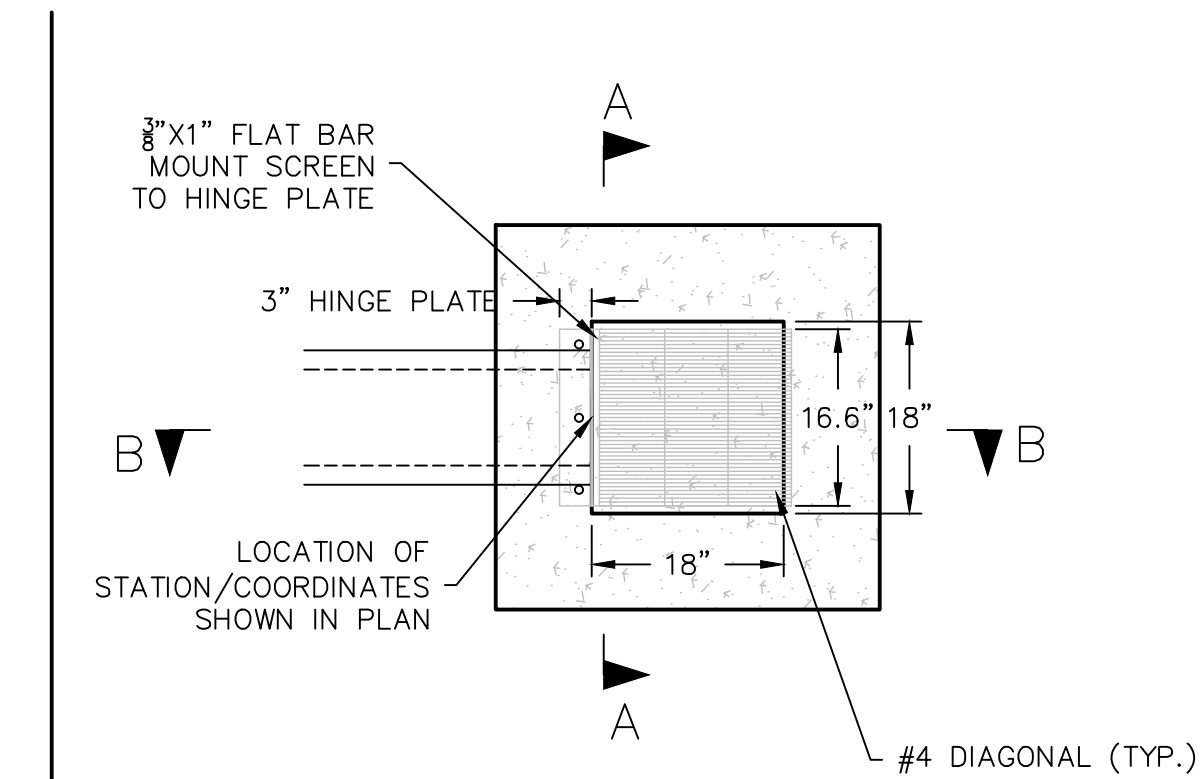
BASIN DETAILS	
SPILLWAY TYPE	BROAD CRESTED WEIR
SPILLWAY LENGTH	65 FT
SPILLWAY ELEVATION	959.00 FT
SPILLWAY DEPTH	1.50 FT
DAM ELEVATION	960.50 FT
BASIN BOTTOM ELEVATION	954.00 FT
WATER QUALITY STORM WATER SURFACE ELEVATION	956.20 FT
DESIGN STORAGE	28,703 CF



NOTE:
SPILLWAY SIZED TO HANDLE 100-YEAR FLOW

Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class* (in)	D50* (ft)	Apron Length (ft)	Apron Depth (ft)
WQy Outlet	12.97	1	5	20	7	3.33
Area (SY)						
						4.1

*Per Table 10.1 HEC-14 FHWA-Energy Dissipators Pg. 10-18



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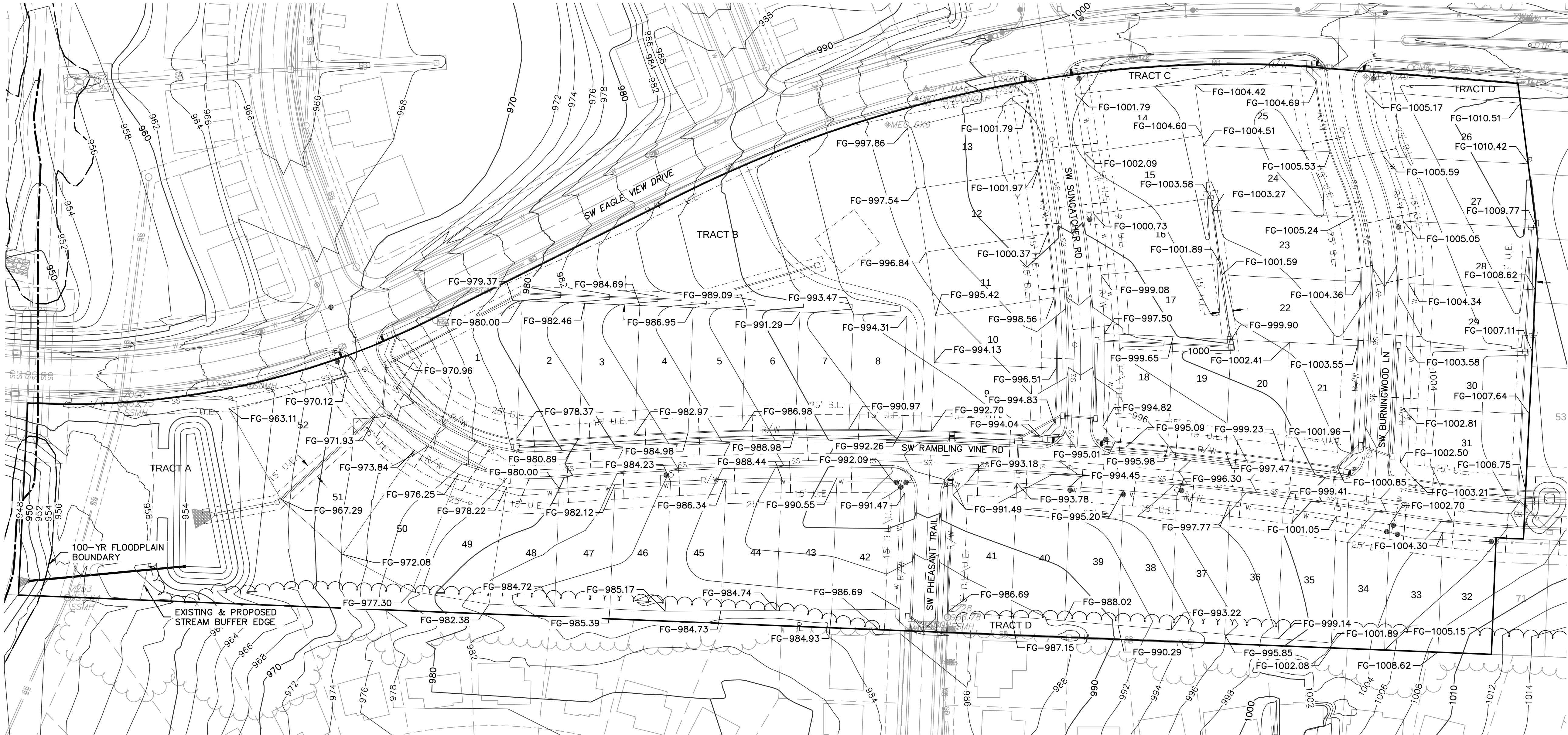
REVISIONS	
REV. NO.	DATE
1	02/23/2024
2	04/02/2024
3	05/07/2024

WATER QUALITY BASIN PLAN STREET & STORM SEWER PLANS	
EAGLE CREEK VILLAS FIRST PLAT	
LEE'S SUMMIT, MISSOURI	
2023	

drawn by: _____
checked by: _____
approved by: _____
QA/QC by: _____
project no.: A20-2467
drawing no.: C_DBP01_A202467
date: 02/23/2024

SHEET
C137

DWG: F:\2020\2001-2500\020-2467-A\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Street & Storm\C_DRN01_A202467.dwg
DATE: May 07, 2024 11:01am
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C_PTBLK_A202467
C_PBDY_A202467
C_PBASE_A202467
C_PUTIL_A202467
C_XBASE_A202467



NOTES:

- INDIVIDUAL LOT OWNERS SHALL NOT CHANGE OR OBSTRUCT THE DRAINAGE FLOW LINES OR PATHS ON THE LOTS, AS SHOWN ON THE MASTER DRAINAGE PLAN, UNLESS SPECIFIC APPLICATION IS MADE AND APPROVED BY THE CITY ENGINEER.
- PLAT IS LOCATION IN ZONE X, "AREAS OUTSIDE THE 1-PERCENT ANNUAL CHANCE FLOODPLAINS, AREAS OF 1-PERCENT ANNUAL CHANCE SHEET FLOW FLOODING WHERE THE AVERAGE DEPTHS ARE LESS THAN 1 FOOT, AREAS OF 1-PERCENT ANNUAL CHANCE STREAM FLOODING WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1 SQUARE MILE, OR AREAS PROTECTED FROM THE 1-PERCENT ANNUAL CHANCE FLOOD BY LEVEES. NO BASE FLOOD ELEVATIONS OR DEPTHS ARE SHOWN WITHIN THIS ZONE" AS DEPICTED ON THE FEMA FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 29095C0418G, REVISION DATE JANUARY 20, 2017.
- THE STREAM BUFFER EDGE HAS BEEN IDENTIFIED ON THE PLAT WHICH IS LOCATED WITHIN THE BOUNDS OF EAGLE CREEK VILLAS AND OUTSIDE OF PROPOSED SITE IMPROVEMENTS AND PROPOSED LOTS.
- MBOE ELEVATIONS HAVE BEEN PROVIDED AT EACH LOT CORNER. INTERPOLATION WILL BE ALLOWED BETWEEN THE RIGHT AND LEFT SIDE MBOE'S SHOWN ON THE MASTER DRAINAGE PLAN, DEPENDING ON THE LOCATION OF THE LOWEST OPENING ON THE PROPOSED STRUCTURE.
- REFER TO SHEET C106-C110 FOR SWALE GRADING DETAILS.
- DRAINAGE PATHS TO BE CONSTRUCTED BETWEEN LOTS LABELED AS STANDARD AND/OR UPHILL LOTS.
- NO BUILDING PERMITS WILL BE ISSUED UNTIL AN AS-GRADED MASTER DRAINAGE PLAN HAS BEEN SUBMITTED TO THE CITY AND APPROVED BY THE CITY.

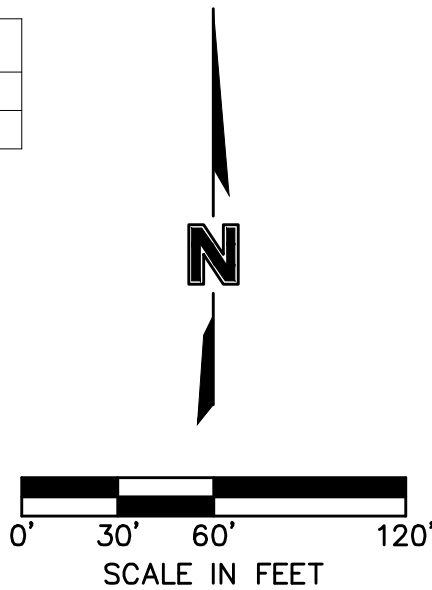
Eagle Creek Villas 1st Plat			
Minimum Building Opening Elevation			
Lot	Rear Left MBOE	Rear Right MBOE	As Built Plot Plan Required
22	1000.50	1002.19	Y
23	1002.19	1003.87	Y
24	1003.87	1005.11	Y
51	972.68	967.89	Y
52	967.89	963.71	Y

MBOE elevations have been provided per lot lines, facing the lot from the street. Interpolation will be allowed between the right and left side MBOE's provided, depending on the location of the lowest opening on the proposed structure.

NOTES:

FG - FINISHED GRADE

LEGEND	
—100—	FINISHED INDEX CONTOURS
—100—	FINISHED INTERMEDIATE CONTOURS



MASTER DRAINAGE PLAN
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2023

drawn by: CWR
checked by: SS
approved by: JS
QA/QC by: JS
project no.: A20-2467
drawing no.: C_DRN01_A202467
date: 02/23/2024

SHEET
C138

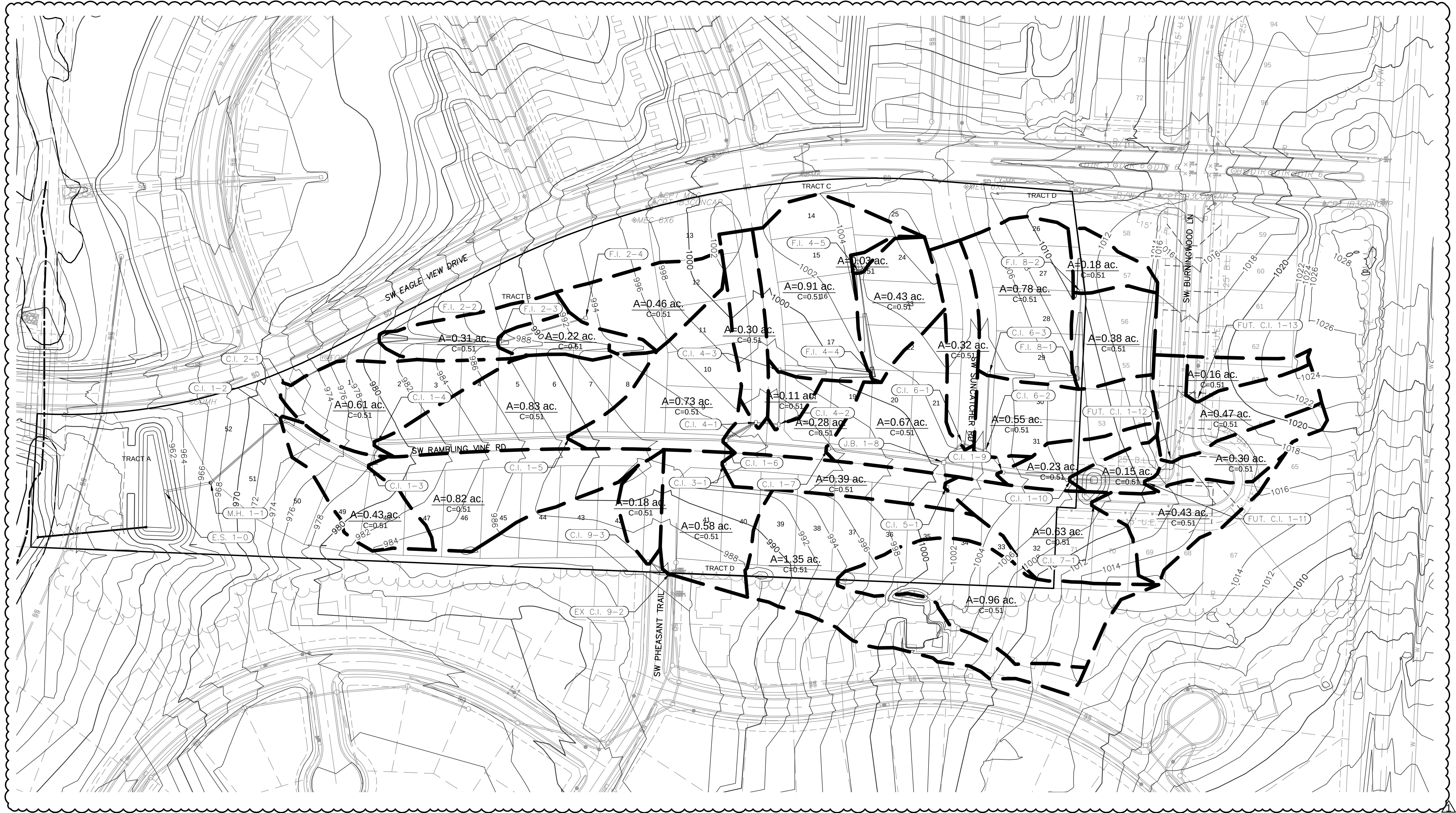


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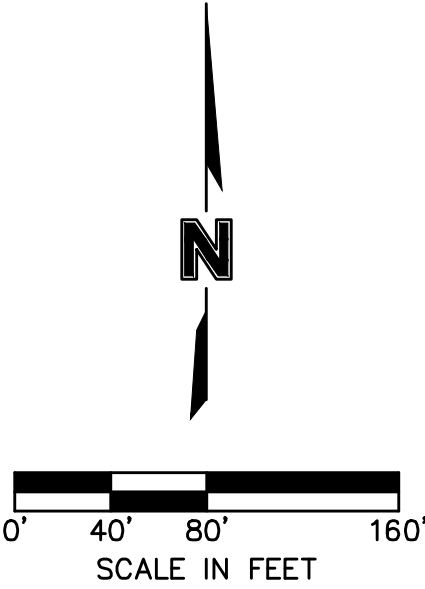
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1301 Burlington Street
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DWG: F:\2020\2001-2500\020-2467-A\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Street & Storm\VC_DRN02_A202467.dwg USER: sso\or C_PSTRM_A202467
DATE: May 07, 2024 11:03am XREFS: C_PU1L_A202467 C_XBASE_A202467 C_FBASE_A202467 C_PTBLK_A202467 C_PBDY_A202467



LEGEND	
	FINISHED INDEX CONTOURS
	FINISHED INTERMEDIATE CONTOURS
	RIDGE LINE
	DRAINAGE AREA
	RUNOFF COEFFICIENT
	STORM STRUCTURE NUMBER



DRAINAGE PLAN
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	02/23/2024	REVISED PER CITY COMMENTS	

drawn by: _____

checked by: _____

approved by: _____

QA/QC by: _____

project no.: _____

drawing no.: _____

date: _____

CW

SS

JS

JS

A20-2467

C_DRN02_A202467

02/23/2024

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C139

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STATE OF MISSOURI

STEPHEN M. SAYLOR
NUMBER
PE-2018021248
5/7/2024

10 Year Return Frequency													
Inlet ID	Inlet Location	Peak Flow	Upstream Bypass	Total Flow	Clogging Factor	Inlet Capacity	Sag Inlet Capacity (Note 1)	Captured Flow	Bypass Flow	Inlet Efficiency (Note 2)	Gutter Depth	Gutter Spread	Ponding Depth
		(cfs)	(cfs)	(cfs)		(cfs)	(cfs)	(cfs)	(cfs)	(%)	(ft)	(ft)	(ft)
C.I. 1-2	GRADE	1.51	0.94	2.45	1.00	1.69	1.69	1.69	0.76	69.13%	0.15	7.31	...
C.I. 1-3	GRADE	2.77	0.00	2.77	1.00	1.83	1.83	1.83	0.94	65.99%	0.15	7.66	...
C.I. 1-4	GRADE	2.66	0.87	3.53	1.00	2.10	2.10	2.10	1.43	59.42%	0.17	8.39	...
C.I. 1-5	GRADE	2.43	0.22	2.64	1.00	1.78	1.78	1.78	0.87	67.23%	0.15	7.53	...
C.I. 1-6	GRADE	1.05	0.79	1.84	1.00	1.62	1.62	1.62	0.22	88.27%	0.16	8.10	...
C.I. 1-7	GRADE	2.15	0.23	2.38	1.00	1.88	1.88	1.88	0.50	78.95%	0.16	8.10	...
C.I. 1-9	GRADE	0.83	0.56	1.39	1.00	1.16	1.16	1.16	0.23	83.50%	0.12	6.16	...
C.I. 1-10	GRADE	0.56	0.26	0.82	1.00	0.74	0.74	0.74	0.08	90.19%	0.10	5.06	...
C.I. 2-1	GRADE	2.02	0.00	2.02	1.00	1.49	1.49	1.49	0.53	73.64%	0.14	6.80	...
F.I. 2-2	GRADE	1.09	0.00	1.09	1.80	35.34	63.61	1.09	0.00	100.00%	...	...	0.09
F.I. 2-3	GRADE	0.83	0.00	0.83	2.80	45.64	127.80	0.83	0.00	100.00%	...	...	0.08
F.I. 2-4	GRADE	1.57	0.00	1.57	3.80	54.02	205.27	1.57	0.00	100.00%	...	...	0.12
C.I. 3-1	GRADE	1.46	0.71	2.17	1.00	1.87	1.87	1.87	0.30	86.17%	0.17	8.62	...
C.I. 4-1	GRADE	1.13	0.00	1.13	1.00	0.98	0.98	0.98	0.14	87.41%	0.12	5.79	...
C.I. 4-2	GRADE	0.41	0.74	1.15	1.00	1.00	1.00	1.00	0.15	87.15%	0.12	5.84	...
C.I. 4-3	GRADE	2.66	0.00	2.66	1.00	1.92	1.92	1.92	0.74	72.34%	0.16	8.00	...
F.I. 4-4	GRADE	1.61	0.00	1.61	4.80	61.26	294.04	1.61	0.00	100.00%	...	...	0.12
F.I. 4-5	GRADE	0.11	0.00	0.11	5.80	67.73	392.83	0.11	0.00	100.00%	...	...	0.02
C.I. 5-1	GRADE	2.22	0.31	2.53	1.00	1.82	1.82	1.82	0.71	71.98%	0.15	7.71	...
C.I. 6-1	GRADE	1.20	0.00	1.20	1.00	1.11	1.11	1.11	0.09	92.52%	0.14	6.90	...
C.I. 6-2	GRADE	2.01	0.47	2.48	1.00	2.09	2.09	2.09	0.39	84.30%	0.18	9.05	...
C.I. 6-3	GRADE	2.72	0.00	2.72	1.00	2.25	2.25	2.25	0.47	82.85%	0.19	9.37	...
C.I. 7-1	GRADE	1.61	0.00	1.61	1.00	1.31	1.31	1.31	0.31	81.05%	0.13	6.51	...
F.I. 8-1	GRADE	1.43	0.00	1.43	6.80	73.63	500.70	1.43	0.00	100.00%	...	...	0.11
F.I. 8-2	GRADE	0.68	0.00	0.68	7.80	79.10	616.96	0.68	0.00	100.00%	...	...	0.07
EX C.I. 9-2	GRADE	2.18	0.00	2.18	1.00	1.72	1.72	1.72	0.45	79.31%	0.15	7.69	...
C.I. 9-3	GRADE	0.68	0.00	0.68	1.00	0.63	0.63	0.63	0.04	93.66%	0.10	4.96	...
EX. F.I. 10-1	GRADE	5.06	0.00	5.06	8.80	84.21	741.03	5.06	0.00	100.00%	...	...	0.25
EX. F.I. 10-2	GRADE	3.60	0.00	3.60	9.80	89.03	872.46	3.60	0.00	100.00%	...	...	0.20

Notes:

1. Inlet capacity at sag location has been reduced by a clogging factor of 0.80, reducing theoretical capacity to 80% capacity, as required per APWA Section 5600. Both theoretical capacity and reduced capacity are shown.
2. Inlet efficiency shown in the tables is Captured Flow/Total Flow, denoting the actual percentage of flow captured after the capacity has been reduced to 80% of theoretical capacity.

10 Year Return Frequency						
Inlet ID	Drainage Area	C	Tc	i	K	Peak Flow
	(ac)		(min)	(in/hr)		(cfs)
C.I. 1-2	0.43	0.51	6.68	6.87	1.00	1.51
C.I. 1-3	0.82	0.51	7.58	6.63	1.00	2.77
C.I. 1-4	0.83	0.51	9.01	6.29	1.00	2.66
C.I. 1-5	0.73	0.51	8.04	6.52	1.00	2.43
C.I. 1-6	0.28	0.51	5.00	7.35	1.00	1.05
C.I. 1-7	0.67	0.51	9.04	6.29	1.00	2.15
C.I. 1-9	0.23	0.51	5.92	7.08	1.00	0.83
C.I. 1-10	0.15	0.51	5.00	7.35	1.00	0.56
C.I. 2-1	0.61	0.51	8.16	6.49	1.00	2.02
F.I. 2-2	0.31	0.51	6.68	6.87	1.00	1.09
F.I. 2-3	0.22	0.51	5.00	7.35	1.00	0.83
F.I. 2-4	0.46	0.51	7.38	6.69	1.00	1.57
C.I. 3-1	0.39	0.51	5.00	7.35	1.00	1.46
C.I. 4-1	0.30	0.51	5.00	7.35	1.00	1.13
C.I. 4-2	0.11	0.51	5.00	7.35	1.00	0.41
C.I. 4-3	0.91	0.51	11.73	5.73	1.00	2.66
F.I. 4-4	0.43	0.51	5.00	7.35	1.00	1.61
F.I. 4-5	0.03	0.51	5.00	7.35	1.00	0.11
C.I. 5-1	0.63	0.51	6.51	6.91	1.00	2.22
C.I. 6-1	0.32	0.51	5.00	7.35	1.00	1.20
C.I. 6-2	0.55	0.51	5.63	7.16	1.00	2.01
C.I. 6-3	0.78	0.51	6.81	6.83	1.00	2.72
C.I. 7-1	0.43	0.51	5.00	7.35	1.00	1.61
F.I. 8-1	0.38	0.51	5.00	7.35	1.00	1.43
F.I. 8-2	0.18	0.51	5.00	7.35	1.00	0.68
EX C.I. 9-2	0.58	0.51	5.00	7.35	1.00	2.18
C.I. 9-3	0.18	0.51	5.00	7.35	1.00	0.68
EX. F.I. 10-1	1.35	0.51	5.00	7.35	1.00	5.06
EX. F.I. 10-2	0.96	0.51	5.00	7.35	1.00	3.60

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)
M.H. 1-1	E.S. 1-0	69.78	955.74	954.00	2.49	30	0.012	39.18	11.74	70.16	1.34	957.85
C.I. 1-2	M.H. 1-1	142.00	964.10	956.34	5.46	30	0.012	39.18	10.76	103.86	1.51	966.21
C.I. 1-3	C.I. 1-2	149.01	969.15	964.70	2.99	30	0.012	32.51	9.22	76.78	1.51	971.09
C.I. 1-4	C.I. 1-3	36.24	970.81	969.75	2.93	30	0.012	30.68	9.59	75.99	1.34	972.7
C.I. 1-5	C.I. 1-4	286.78	980.04	971.41	3.01	30	0.012	28.58	9.35	77.07	1.29	981.86
C.I. 1-6	C.I. 1-5	229.91	984.10	980.65	1.50	30	0.012	26.8	9.14	54.43	1.24	985.86
C.I. 1-7	C.I. 1-6	153.32	987.77	984.70	2.00	24	0.012	17.69	8.13	34.67	1.16	989.28
J.B. 1-8	C.I. 1-7	172.32	994.40	988.37	3.50	24	0.012	15.81	8.93	45.84	0.91	995.83
C.I. 1-9	J.B. 1-8	88.64	996.98	995.00	2.23	18	0.012	8.54	7.23	17	0.83	998.11
C.I. 1-10	C.I. 1-9	103.10	999.04	997.58	1.42	18	0.012	7.38	6.7	13.54	0.79	1000.09
FUT. C.I. 1-11	C.I. 1-10	75.57	1003.42	999.64	5.00	15	0.012	3.22	6.22	15.65	0.45	1004.14
FUT. 1-12	FUT. C.I. 1-11	49.45	1007.65	1005.77	3.80	12	0.012	2.14	6.2	7.52	0.37	1008.28
FUT. C.I. 1-13	FUT. 1-12	97.39	1009.71	1008.25	1.50	12	0.012	0.58	3.4	4.72	0.24	1010.03
C.I. 2-1	C.I. 1-2	48.98	966.25	965.35	1.84	15	0.012	4.98	5.39	9.48	0.86	967.15
F.I. 2-2	C.I. 2-1	156.61	972.71	966.85	3.74	15	0.012	3.49	6.88	13.53	0.43	973.46
F.I. 2-3	F.I. 2-2	176.00	979.47	973.31	3.50	15	0.012	2.4	6.04	13.09	0.36	980.09
F.I. 2-4	F.I. 2-3	132.53	985.85	980.07	4.36	15	0.012	1.57	5.62	14.61	0.28	986.35
C.I. 3-1	C.I. 1-6	35.00	989.40	988.87	1.51	15	0.012	1.87	4.63	8.61	0.4	989.94
C.I. 4-1	C.I. 1-6	52.51	986.14	985.10	1.98	18	0.012	5.62	5.6	16.01	0.76	987.05
C.I. 4-2	C.I. 4-1	34.01	987.25	986.74	1.50	15	0.012	4.64	6.09	8.57	0.66	988.12
C.I. 4-3	C.I. 4-2	80.55	989.06	987.85	1.50	15	0.012	3.64	5.64	8.57	0.57	989.83
F.I. 4-4	C.I. 4-3	138.04	993.46	989.66	2.75	15	0.012	1.72	5.16	11.61	0.33	993.98
F.I. 4-5	F.I. 4-4	154.29	998.30	994.06	2.75	15	0.012	0.11	2.32	11.6	0.09	998.43
C.I. 5-1	J.B. 1-8	36.34	996.49	995.15	3.69	15	0.012	1.82	3.14	13.43	0.68	997.03 j
C.I. 6-1	J.B. 1-8	39.78	996.00	995.15	2.14	15	0.012	5.45	6.71	10.23	0.68	996.95
C.I. 6-2	C.I. 6-1	35.35	997.12	996.60	1.47	15	0.012	4.34	5.94	8.48	0.63	997.96
C.I. 6-3	C.I. 6-2	114.75	999.04	997.72	1.15	15	0.012	2.25	4.61	7.5	0.47	999.64
C.I. 7-1	C.I. 1-10	48.58	1003.15	1002.01	2.35	15	0.012	1.31	4.6	10.72	0.3	1003.6
F.I. 8-1	C.I. 1-10	150.33	1001.44	999.64	1.20	15	0.012	2.11	4.54	7.65	0.45	1002.02
F.I. 8-2	F.I. 8-1	128.00	1004.60	1002.04	2.00	15	0.012	0.68	3.67	9.89	0.22	1004.92
EX C.I. 9-2	EX C.I. 9-1	162.08	979.91	977.48	1.50	18	0.012	2.35	4.77	13.93	0.42	980.49
C.I. 9-3	C.I. 9-2	37.24	982.40	981.84	1.50	15	0.012	0.63	3.37	8.58	0.23	982.71

drawn by: _____ CW checked by: _____ SS approved by: _____ JS QA/QC by: _____ JS project no.: _____ A20-2467 drawing no.: <u>C DRN02</u> A202467 date: <u>02/23/2024</u>		2023	
DRAINAGE TABLES (10-YEAR) STREET & STORM SEWER PLANS		EAGLE CREEK VILLAS FIRST PLAT	
LEE'S SUMMIT, MISSOURI		2023	

Inlet Design Table													
100 Year Return Frequency													
Inlet ID	Inlet Location	Peak Flow	Upstream Bypass	Total Flow	Clogging Factor	Inlet Capacity	Sag Inlet Capacity (Note 1)	Captured Flow	Bypass Flow	Inlet Efficiency (Note 2)	Gutter Depth	Gutter Spread	Ponding Depth
		(cfs)	(cfs)	(cfs)		(cfs)	(cfs)	(cfs)	(cfs)	(%)	(ft)	(ft)	(ft)
C.I. 1-2	GRADE	2.65	2.45	5.10	1.00	2.48	2.48	2.48	2.62	48.56%	0.19	9.63	...
C.I. 1-3	GRADE	4.89	0.00	4.89	1.00	2.44	2.44	2.44	2.45	49.85%	0.19	9.48	...
C.I. 1-4	GRADE	4.70	3.17	7.87	1.00	2.81	2.81	2.81	5.06	35.67%	0.23	11.33	...
C.I. 1-5	GRADE	4.28	1.47	5.75	1.00	2.58	2.58	2.58	3.17	44.92%	0.20	10.08	...
C.I. 1-6	GRADE	1.84	3.18	5.02	1.00	3.55	3.55	3.55	1.47	70.64%	0.24	11.80	...
C.I. 1-7	GRADE	3.79	1.30	5.09	1.00	3.11	3.11	3.11	1.99	61.01%	0.22	10.78	...
C.I. 1-9	GRADE	1.46	2.10	3.56	1.00	2.25	2.25	2.25	1.30	63.40%	0.18	8.76	...
C.I. 1-10	GRADE	0.99	0.91	1.89	1.00	1.48	1.48	1.48	0.41	78.10%	0.14	6.92	...
C.I. 2-1	GRADE	3.56	0.00	3.56	1.00	2.11	2.11	2.11	1.45	59.18%	0.17	8.42	...
F.I. 2-2	GRADE	1.91	0.00	1.91	1.80	35.34	63.61	1.91	0.00	100.00%	...	...	0.13
F.I. 2-3	GRADE	1.45	0.00	1.45	2.80	45.64	127.80	1.45	0.00	100.00%	...	...	0.11
F.I. 2-4	GRADE	2.76	0.00	2.76	3.80	54.02	205.27	2.76	0.00	100.00%	...	...	0.17
C.I. 3-1	GRADE	2.57	2.15	4.71	1.00	3.40	3.40	3.40	1.31	72.12%	0.23	11.52	...
C.I. 4-1	GRADE	1.97	0.00	1.97	1.00	1.55	1.55	1.55	0.42	78.59%	0.14	7.15	...
C.I. 4-2	GRADE	0.72	2.01	2.73	1.00	1.96	1.96	1.96	0.77	71.75%	0.16	8.08	...
C.I. 4-3	GRADE	4.71	0.00	4.71	1.00	2.70	2.70	2.70	2.01	57.41%	0.20	9.91	...
F.I. 4-4	GRADE	2.83	0.00	2.83	4.80	61.26	294.04	2.83	0.00	100.00%	...	...	0.17
F.I. 4-5	GRADE	0.20	0.00	0.20	5.80	67.73	392.83	0.20	0.00	100.00%	...	...	0.03
C.I. 5-1	GRADE	3.91	0.87	4.78	1.00	2.63	2.63	2.63	2.15	55.04%	0.20	9.78	...
C.I. 6-1	GRADE	2.11	0.00	2.11	1.00	1.82	1.82	1.82	0.28	86.58%	0.17	8.52	...
C.I. 6-2	GRADE	3.53	1.35	4.88	1.00	3.48	3.48	3.48	1.40	71.32%	0.23	11.67	...
C.I. 6-3	GRADE	4.78	0.00	4.78	1.00	3.43	3.43	3.43	1.35	71.78%	0.23	11.59	...
C.I. 7-1	GRADE	2.83	0.00	2.83	1.00	1.96	1.96	1.96	0.87	69.29%	0.16	8.04	...
F.I. 8-1	GRADE	2.50	0.00	2.50	6.80	73.63	500.70	2.50	0.00	100.00%	...	...	0.16
F.I. 8-2	GRADE	1.18	0.00	1.18	7.80	79.10	616.96	1.18	0.00	100.00%	...	...	0.10
EX C.I. 9-2	GRADE	3.82	0.00	3.82	1.00	2.55	2.55	2.55	1.26	66.87%	0.19	9.49	...
C.I. 9-3	GRADE	1.18	0.00	1.18	1.00	1.05	1.05	1.05	0.14	88.42%	0.12	6.12	...
EX. F.I. 10-1	GRADE	8.88	0.00	8.88	8.80	84.21	741.03	8.88	0.00	100.00%	...	...	0.37
EX. F.I. 10-2	GRADE	6.32	0.00	6.32	9.80	89.03	872.46	6.32	0.00	100.00%	...	...	0.29

Notes:
1. Inlet capacity at sag location has been reduced by a clogging factor of 0.80, reducing theoretical capacity to 80% capacity, as required per APWA Section 5600.
Both theoretical capacity and reduced capacity are shown.
2. Inlet efficiency shown in the tables is Captured Flow/Total Flow, denoting the actual percentage of flow captured after the capacity has been reduced to 80% of theoretical capacity.

Drainage Area Design Table						
100 Year Return Frequency						
Inlet ID	Drainage Area	C	Tc	i	K	Peak Flow
	(ac)		(min)	(in/hr)		(cfs)
C.I. 1-2	0.43	0.51	6.68	9.67	1.25	2.65
C.I. 1-3	0.82	0.51	7.58	9.35	1.25	4.89
C.I. 1-4	0.83	0.51	9.01	8.89	1.25	4.70
C.I. 1-5	0.73	0.51	8.04	9.20	1.25	4.28
C.I. 1-6	0.28	0.51	5.00	10.32	1.25	1.84
C.I. 1-7	0.67	0.51	9.04	8.88	1.25	3.79
C.I. 1-9	0.23	0.51	5.92	9.95	1.25	1.46
C.I. 1-10	0.15	0.51	5.00	10.32	1.25	0.99
C.I. 2-1	0.61	0.51	8.16	9.16	1.25	3.56
F.I. 2-2	0.31	0.51	6.68	9.67	1.25	1.91
F.I. 2-3	0.22	0.51	5.00	10.32	1.25	1.45
F.I. 2-4	0.46	0.51	7.38	9.42	1.25	2.76
C.I. 3-1	0.39	0.51	5.00	10.32	1.25	2.57
C.I. 4-1	0.30	0.51	5.00	10.32	1.25	1.97
C.I. 4-2	0.11	0.51	5.00	10.32	1.25	0.72
C.I. 4-3	0.91	0.51	11.73	8.12	1.25	4.71
F.I. 4-4	0.43	0.51	5.00	10.32	1.25	2.83
F.I. 4-5	0.03	0.51	5.00	10.32	1.25	0.20
C.I. 5-1	0.63	0.51	6.51	9.73	1.25	3.91
C.I. 6-1	0.32	0.51	5.00	10.32	1.25	2.11
C.I. 6-2	0.55	0.51	5.63	10.07	1.25	3.53
C.I. 6-3	0.78	0.51	6.81	9.62	1.25	4.78
C.I. 7-1	0.43	0.51	5.00	10.32	1.25	2.83
F.I. 8-1	0.38	0.51	5.00	10.32	1.25	2.50
F.I. 8-2	0.18	0.51	5.00	10.32	1.25	1.18
EX C.I. 9-2	0.58	0.51	5.00	10.32	1.25	3.82
C.I. 9-3	0.18	0.51	5.00	10.32	1.25	1.18
EX. F.I. 10-1	1.35	0.51	5.00	10.32	1.25	8.88
EX. F.I. 10-2	0.96	0.51	5.00	10.32	1.25	6.32

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)
M.H. 1-1	E.S. 1-0	69.78	955.74	954.00	2.49	30	0.012	63.78	14.66	70.16	1.87	958.15
C.I. 1-2	M.H. 1-1	142.00	964.10	956.34	5.46	30	0.012	63.78	14.92	103.86	1.81	966.51
C.I. 1-3	C.I. 1-2	149.01	969.15	964.70	2.99	30	0.012	53.07	12.52	76.78	1.81	971.48
C.I. 1-4	C.I. 1-3	36.24	970.81	969.75	2.93	30	0.012	50.63	12.31	75.99	1.73	973.12
C.I. 1-5	C.I. 1-4	286.78	980.04	971.41	3.01	30	0.012	47.82	11.81	77.07	1.71	982.31
C.I. 1-6	C.I. 1-5	229.91	984.10	980.65	1.50	30	0.012	45.24	11.1	54.43	1.74	986.33
C.I. 1-7	C.I. 1-6	153.32	987.77	984.70	2.00	24	0.012	29.05	10.1	34.67	1.63	989.62
J.B. 1-8	C.I. 1-7	172.32	994.40	988.37	3.50	24	0.012	25.94	10.68	45.84	1.25	996.18
C.I. 1-9	J.B. 1-8	88.64	996.98	995.00	2.23	18	0.012	14.58	9.13	17	1.18	998.38
C.I. 1-10	C.I. 1-9	103.10	999.04	997.58	1.42	18	0.012	12.33	8.07	13.54	1.12	1000.37
FUT. C.I. 1-11	C.I. 1-10	75.57	1003.42	999.64	5.00	15	0.012	5.21	6.2	15.65	0.73	1004.35
FUT. 1-12	FUT. C.I. 1-11	49.45	1007.65	1005.77	3.80	12	0.012	3.48	7.29	7.52	0.48	1008.45
FUT. C.I. 1-13	FUT. 1-12	97.39	1009.71	1008.25	1.50	12	0.012	0.98	3.96	4.72	0.31	1010.13
C.I. 2-1	C.I. 1-2	48.98	966.25	965.35	1.84	15	0.012	8.23	6.99	9.48	1.16	967.37 j
F.I. 2-2	C.I. 2-1	156.61	972.71	966.85	3.74	15	0.012	6.12	8.28	13.53	0.59	973.71
F.I. 2-3	F.I. 2-2	176.00	979.47	973.31	3.50	15	0.012	4.21	7.18	13.09	0.49	980.3
F.I. 2-4	F.I. 2-3	132.53	985.85	980.07	4.36	15	0.012	2.76	6.64	14.61	0.37	986.52
C.I. 3-1	C.I. 1-6	35.00	989.40	988.87	1.51	15	0.012	3.4	5.54	8.61	0.55	990.14
C.I. 4-1	C.I. 1-6	52.51	986.14	985.10	1.98	18	0.012	9.24	6.1	16.01	1.23	987.31 j
C.I. 4-2	C.I. 4-1	34.01	987.25	986.74	1.50	15	0.012	7.69	7.31	8.57	0.93	988.35
C.I. 4-3	C.I. 4-2	80.55	989.06	987.85	1.50	15	0.012	5.73	6.55	8.57	0.75	990.03
F.I. 4-4	C.I. 4-3	138.04	993.46	989.66	2.75	15	0.012	3.03	6.12	11.61	0.44	994.16
F.I. 4-5	F.I. 4-4	154.29	998.30	994.06	2.75	15	0.012	0.2	2.76	11.6	0.11	998.47
C.I. 5-1	J.B. 1-8	36.34	996.49	995.15	3.69	15	0.012	2.63	3.25	13.43	1.03	997.14 j
C.I. 6-1	J.B. 1-8	39.78	996.00	995.15	2.14	15	0.012	8.73	7.73	10.23	1.03	997.15
C.I. 6-2	C.I. 6-1	35.35	997.12	996.60	1.47	15	0.012	6.91	6.98	8.48	0.86	998.17
C.I. 6-3	C.I. 6-2	114.75	999.04	997.72	1.15	15	0.012	3.43	5.23	7.5	0.59	999.79
C.I. 7-1	C.I. 1-10	48.58	1003.15	1002.01	2.35	15	0.012	1.96	5.17	10.72	0.36	1003.71
F.I. 8-1	C.I. 1-10	150.33	1001.44	999.64	1.20	15	0.012	3.68	4.79	7.65	0.73	1002.21
F.I. 8-2	F.I. 8-1	128.00	1004.60	1002.04	2.00	15	0.012	1.18	4.3	9.89	0.29	1005.03
EX C.I. 9-2	EX C.I. 9-1	162.08	979.91	977.48	1.50	18	0.012	3.6	5.44	13.93	0.52	980.63
C.I. 9-3	EX C.I. 9-2	37.24	982.40	981.84	1.50	15	0.012	1.05	3.9	8.58	0.3	982.8

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5/7/2024

BY

REV. NO. 1

DATE 02/23/2024

REVISIONS DESCRIPTION
REVISED PER CITY COMMENTS

REVISIONS

DRAINAGE TABLES (100-YEAR)
STREET & STORM SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

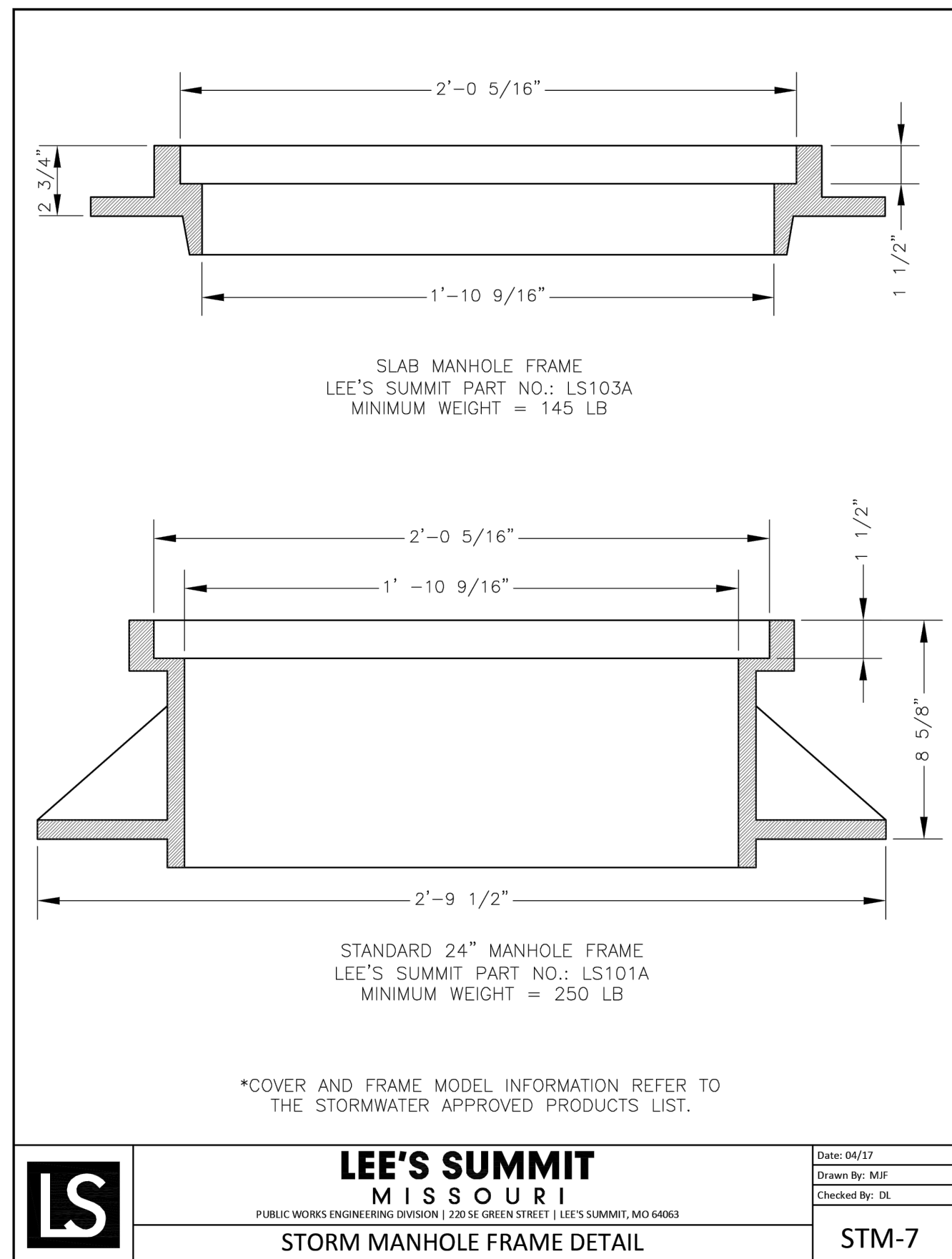
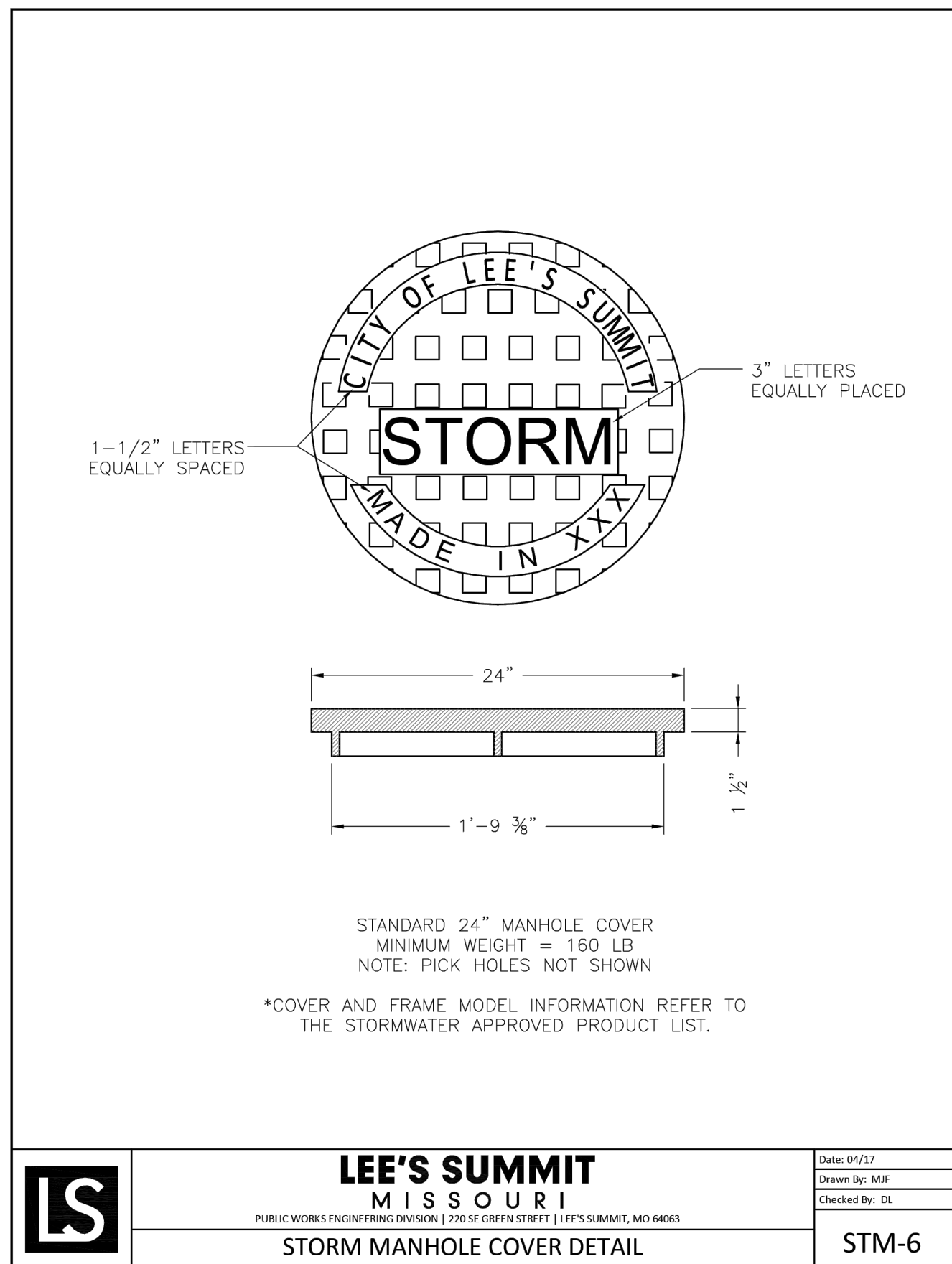
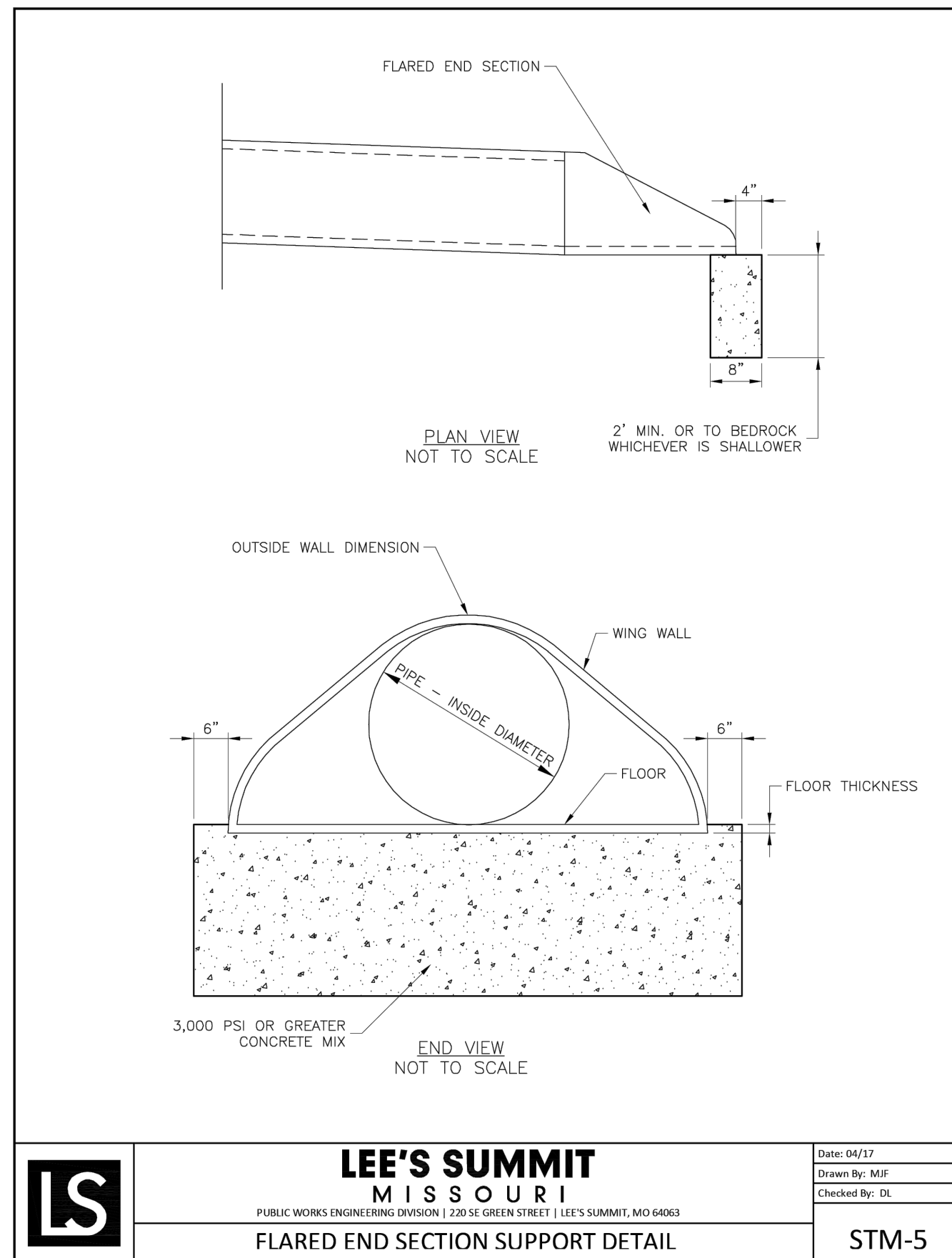
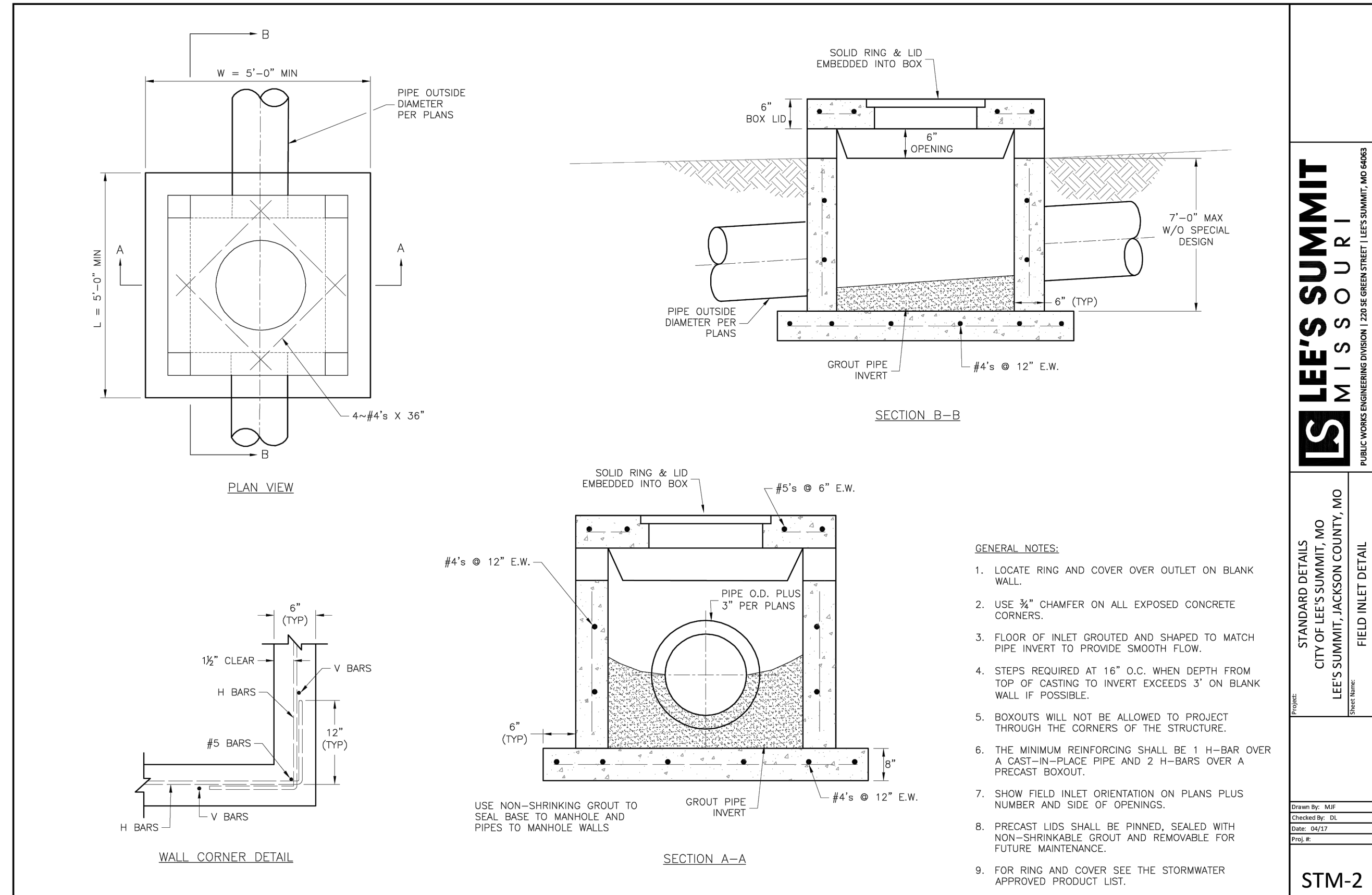
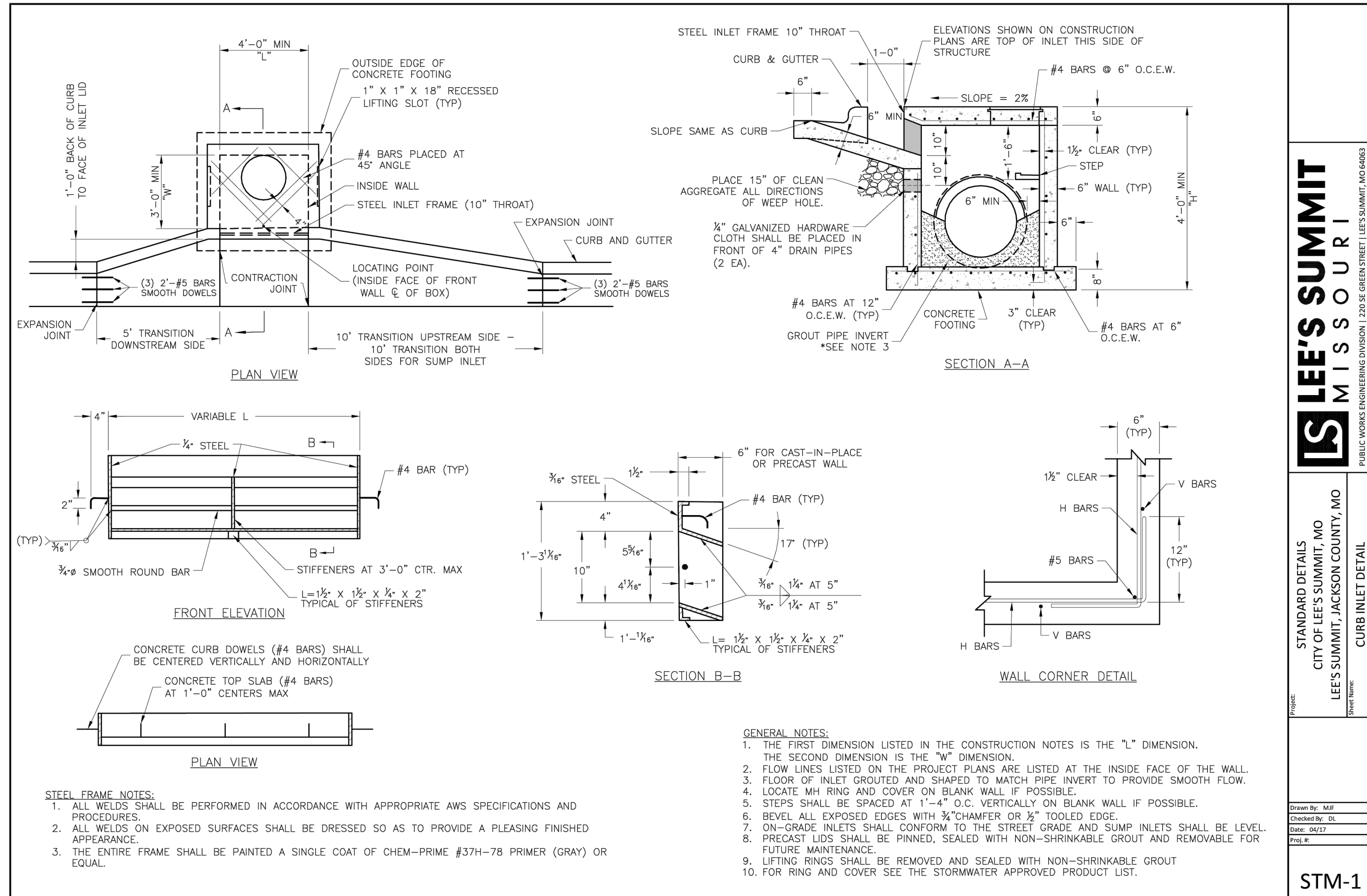
LEE'S SUMMIT, MISSOURI

2023

drawn by: _____
checked by: _____
approved by: _____
QA/QC by: _____
project no.: A20-2467
drawing no.: C_DRN02_A202467
date: 02/23/2024

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