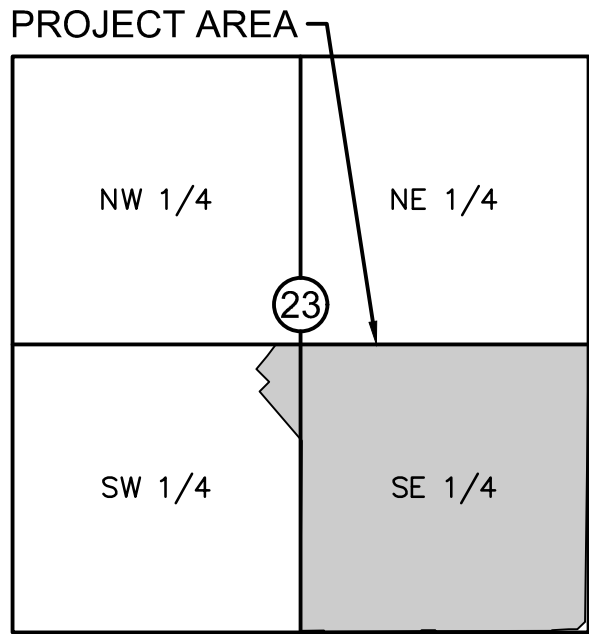


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VICINITY MAP
S23, T47N, R32W
SCALE 1"=2000'

PROJECT TEAM & UTILITY CONTACT LIST	
OWNER / DEVELOPER	HUNT MIDWEST REAL ESTATE DEVELOPMENT, INC. 8300 NE UNDERGROUND DRIVE KANSAS CITY, MO 64161 CONTACT: AARON SCHMIDT PHONE: 816.459.4285 EMAIL: ASCHMIDT@HUNTMIDWEST.COM
ENGINEER	OLSSON 1301 BURLINGTON STREET, SUITE 100 NORTH KANSAS CITY, MISSOURI 64116 CONTACT: JULIE E. SELLERS, P.E. PHONE: 816.361.1177
SURVEYOR	OLSSON 1301 BURLINGTON STREET, SUITE 100 NORTH KANSAS CITY, MISSOURI 64116 CONTACT: JASON ROUDEBUSH, P.L.S. PHONE: 816.361.1177

- ☐ NOT FOR CONSTRUCTION
- ☒ REVIEWED FOR CONSTRUCTION



PROPERTY DESCRIPTION:

A tract of land in the Southeast 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. 2002014092 as follows: Commencing at the Southeast corner of said Southeast Quarter; thence North 02°45'34" East, on the East line of said Southeast Quarter, 2,635.08 feet to the Northeast corner of said Southeast Quarter; thence North 87°45'24" West, on the North line of said Southeast Quarter, 50.00 feet to the Southeast corner of Lot 3, EAGLE CREEK—FIRST PLAT, a subdivision in said Lee's Summit recorded as Instrument Number 110409 in Book 165 at Page 01 in Jackson County Recorder of Deeds Office, also being the Northwest corner of SW Pryor Road as described in the Right of Way Deed recorded as Instrument Number 20050087407 in said Jackson County Recorder of Deeds Office, also being Point of Beginning of the tract of land to be herein described; thence South 02°45'34" West, on the existing Westerly right-of-way line of said SW Pryor Road of said Right of Way Deed, 1,220.74 feet; thence leaving said existing Westerly right-of-way line, North 87°00'50" West, 245.56 feet; thence North 02°59'10" East, 25.00 feet; thence North 87°00'50" West, 438.50 feet; thence North 60°49'13" West, 252.48 feet; thence North 67°11'53" West, 74.21 feet; thence North 27°18'12" East, 138.17 feet; thence Westerly, on a curve to the left, having an initial tangent bearing of North 62°41'48" West with a radius of 275.00 feet, a central angle of 11°57'16" and an arc distance of 57.38 feet; thence North 15°20'56" East, 50.00 feet; thence North 29°10'47" East, 375.17 feet; thence North 07°19'52" East, 64.17 feet; thence South 87°00'50" East, 126.12 feet; thence North 02°59'10" East, 116.00 feet; thence North 42°00'50" West, 19.80 feet; thence North 02°59'10" East, 50.00 feet; thence South 87°00'50" East, 36.00 feet; thence North 02°59'10" East, 277.38 feet to a point on the South line of said EAGLE CREEK—FIRST PLAT and said North line of said Southeast Quarter; thence South 87°45'24" East, on said South and said North line, 643.83 feet to the Point of Beginning. Containing 953,270 square feet or 21.88 acres, more or less.

HOOK FARMS FIRST PLAT STREET AND STORM SEWER PLANS

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

Sheet List Table	
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C101	TITLE SHEET
C102	GENERAL NOTES
C103	GENERAL LAYOUT
C104	GRADING PLAN
C105	SWALE 1 PLAN & PROFILE
C106	SWALE 2 PLAN & PROFILE
C107	SWALE 3 PLAN & PROFILE
C108	SWALE 3 PLAN & PROFILE CONT'D
C109	SWALE 4 PLAN & PROFILE
C110	WATER QUALITY BASIN PLAN
C111	ROADWAY PLAN & PROFILE (SW WHEATFIELD COURT)
C112	ROADWAY PLAN & PROFILE (SW FARM FIELD ROAD)
C113	ROADWAY PLAN & PROFILE (SW FARM FIELD ROAD)
C114	ROADWAY PLAN & PROFILE (SW 26TH TERRACE)
C115	ROADWAY PLAN & PROFILE (SW 26TH TERRACE)
C116	ROADWAY PLAN & PROFILE (SW FARM FIELD COURT)
C117	ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
C118	ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
C119	ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
C120	TRAFFIC CONTROL PLAN
C121	SW WHEATFIELD COURT & SW FARM FIELD ROAD
C122	SW FARM FIELD ROAD & SW 26TH TERRACE
C123	SW 26TH TERRACE
C124	SW FARM FIELD ROAD & SW FARM FIELD COURT
C125	SW FARM FIELD ROAD & SW HOOK FARM DRIVE
C126	SW HOOK FARM DRIVE & SW HOOK FARM DRIVE
C127	SW FARM FIELD COURT & SW HOOK FARM DRIVE
C128	SW WHEAT FIELD COURT CUL-DE-SAC
C129	STORM SEWER PLAN & PROFILE (LINE 1)
C130	STORM SEWER PLAN & PROFILE (LINE 1 CONT'D)
C131	STORM SEWER PLAN & PROFILE (LINE 2)
C132	STORM SEWER PLAN & PROFILE (LINE 3 & 9)
C133	STORM SEWER PLAN & PROFILE (LINE 4)
C134	STORM SEWER PLAN & PROFILE (LINE 4 CONT'D)
C135	STORM SEWER PLAN & PROFILE (LINES 5, 6, & 8)
C136	STORM SEWER PLAN & PROFILE (LINE 7)
C137	MASTER DRAINAGE PLAN
C138	DRAINAGE PLAN
C139	DRAINAGE TABLES
C140	STORM DETAILS

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TITLE SHEET
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

2020

REVISIONS

REFERENCES

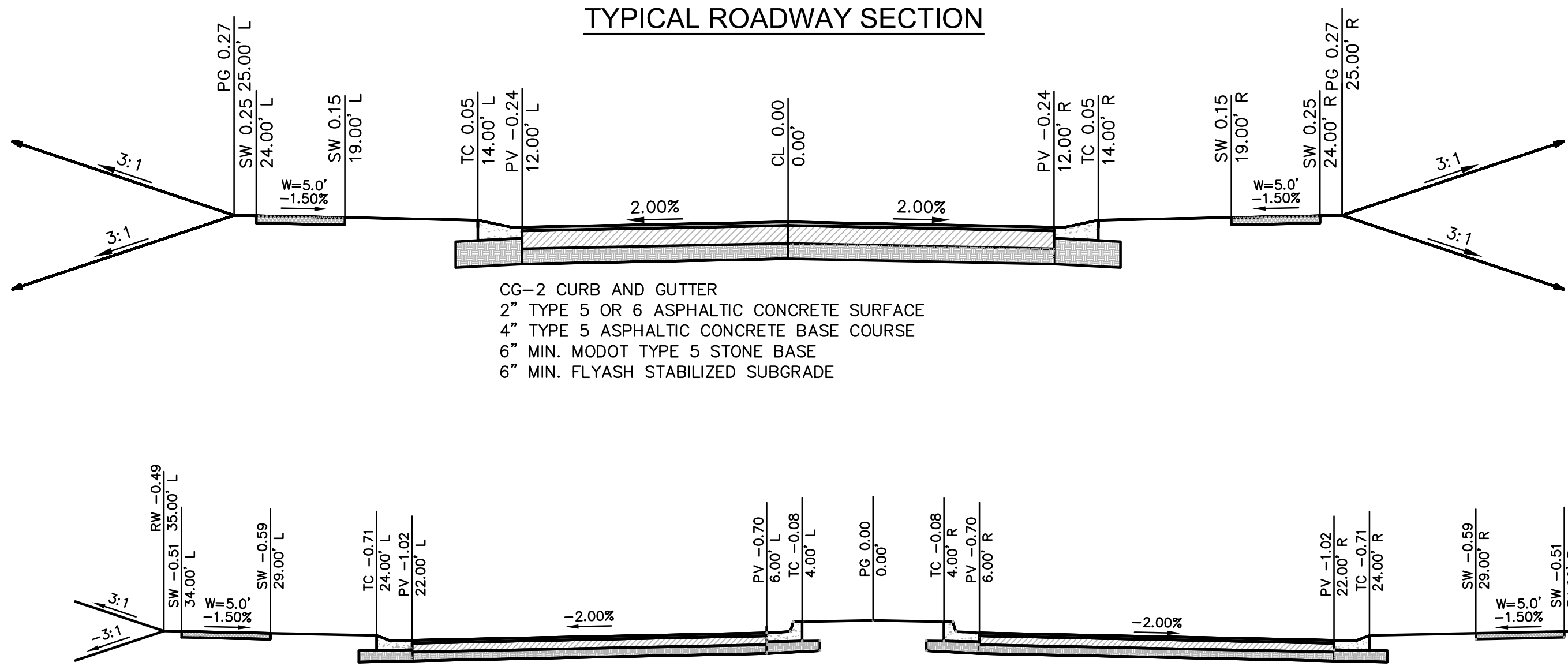
- ## EXISTING CONDITIONS

- ## SHOP DRAWINGS

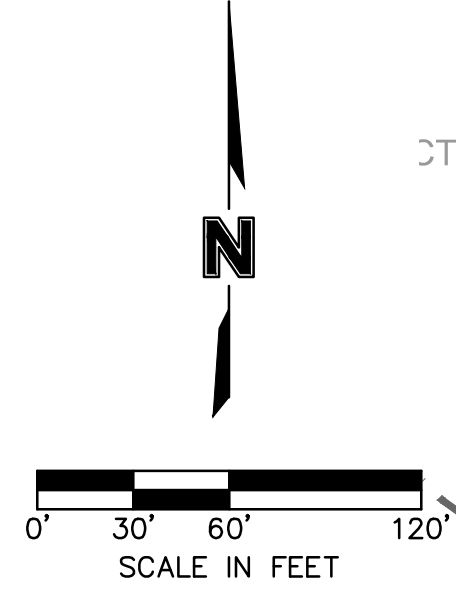
- www.olsson.com

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TYPICAL ROADWAY SECTION



RESIDENTIAL LOCAL STREET - ENTRANCE (48' BK-BK)
SW 26TH TERRACE



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STATE OF MISSOURI
JULIE ELAINE SELLERS
Professional Engineer
NUMBER PE-2017000367
3/12/21

REV. NO.	DATE	REVISIONS DESCRIPTION
1	06/15/2020	REVISED PER CITY COMMENTS
2	06/25/2020	REVISED PER CITY COMMENTS
3	09/10/2020	REVISED PIPE INSULATION
4	10/01/2020	REVISED PER CITY COMMENTS
5	11/18/2020	REVISED LOTS 25-29 GRADINGS
6	02/17/2021	REVISED ADA RAMPS
7	03/12/2021	REVISED ADA RAMPS

BY

REVISIONS

GENERAL LAYOUT
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C103

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Storm Plans\VC GRD01_0194061.dwg
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GENERAL NOTES:

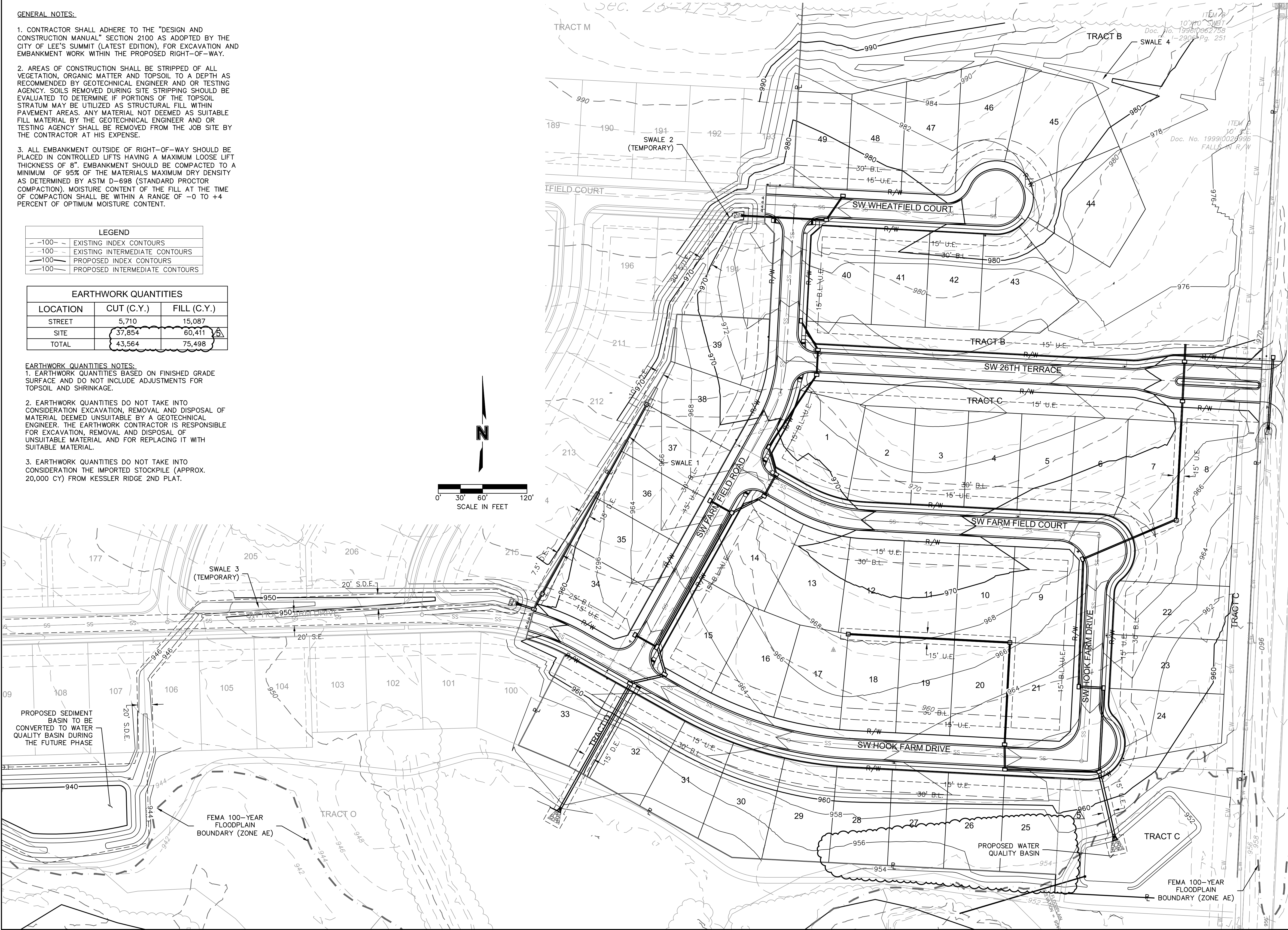
1. CONTRACTOR SHALL ADHERE TO THE "DESIGN AND CONSTRUCTION MANUAL" SECTION 2100 AS ADOPTED BY THE CITY OF LEE'S SUMMIT (LATEST EDITION), FOR EXCAVATION AND EMBANKMENT WORK WITHIN THE PROPOSED RIGHT-OF-WAY.
2. AREAS OF CONSTRUCTION SHALL BE STRIPPED OF ALL VEGETATION, ORGANIC MATTER AND TOPSOIL TO A DEPTH 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.

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

EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
STREET	5,710	15,087
SITE	37,854	60,411
TOTAL	43,564	75,498

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.
3. EARTHWORK QUANTITIES DO NOT TAKE INTO CONSIDERATION THE IMPORTED STOCKPILE (APPROX. 20,000 CY) FROM KESSLER RIDGE 2ND PLAT.



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JULIE ELAINE SELLERS
Professional Engineer
NUMBER PE-2017000367
3/12/21

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	
2	06/25/2020	REVISED PER CITY COMMENTS	
3	09/10/2020	REVISED PIPE INSULATION	
4	10/01/2020	REVISED PER CITY COMMENTS	
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6	02/17/2021	REVISED ADA RAMPS	
7	03/12/2021	REVISED ADA RAMPS	

GRADING PLAN
STREET AND STORM SEWER PLANS

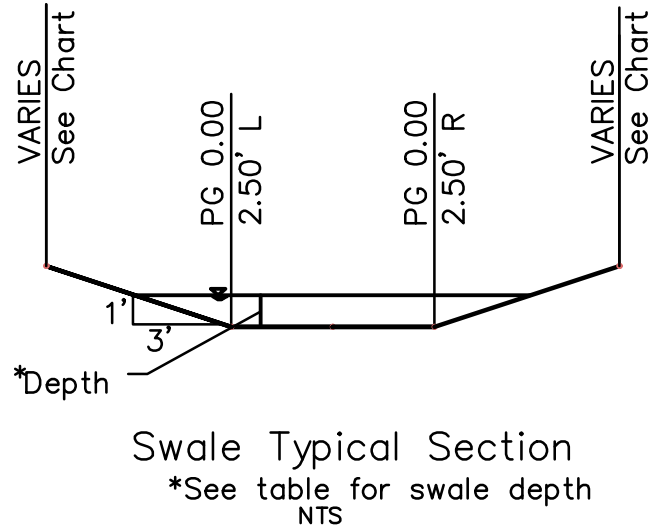
HOOK FARMS
FIRST PLAT

2020

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C104

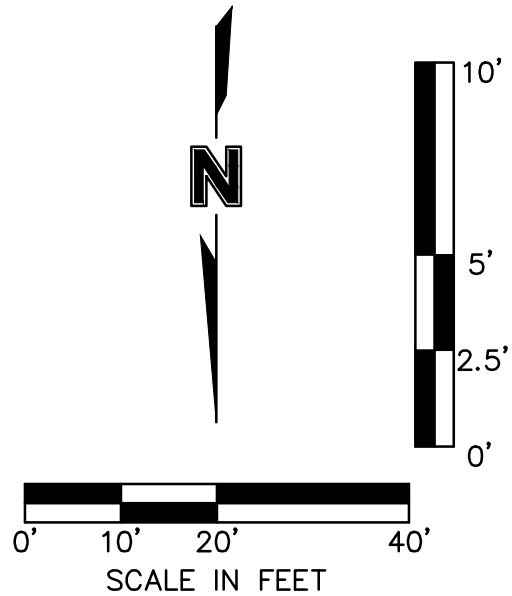
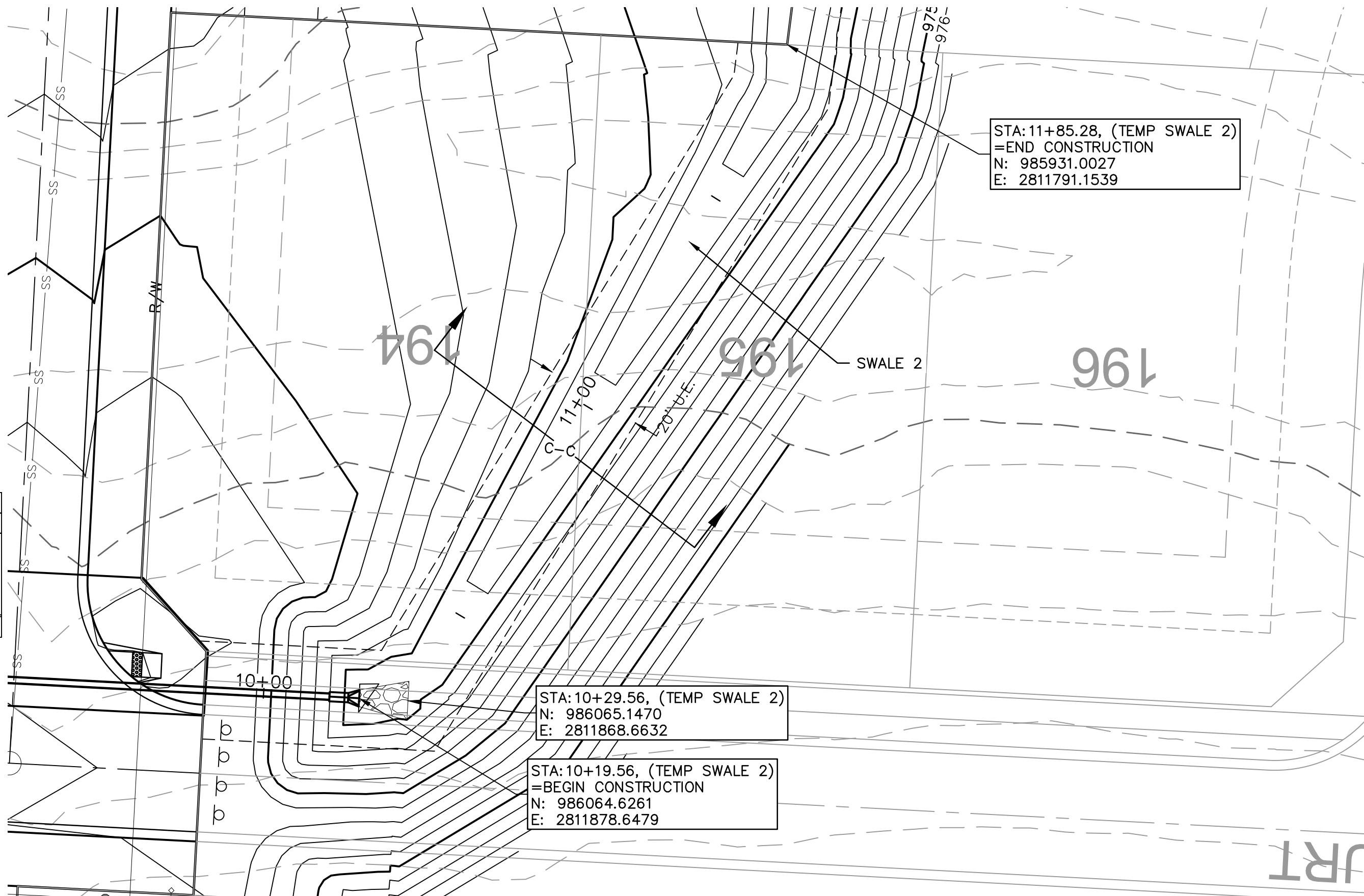
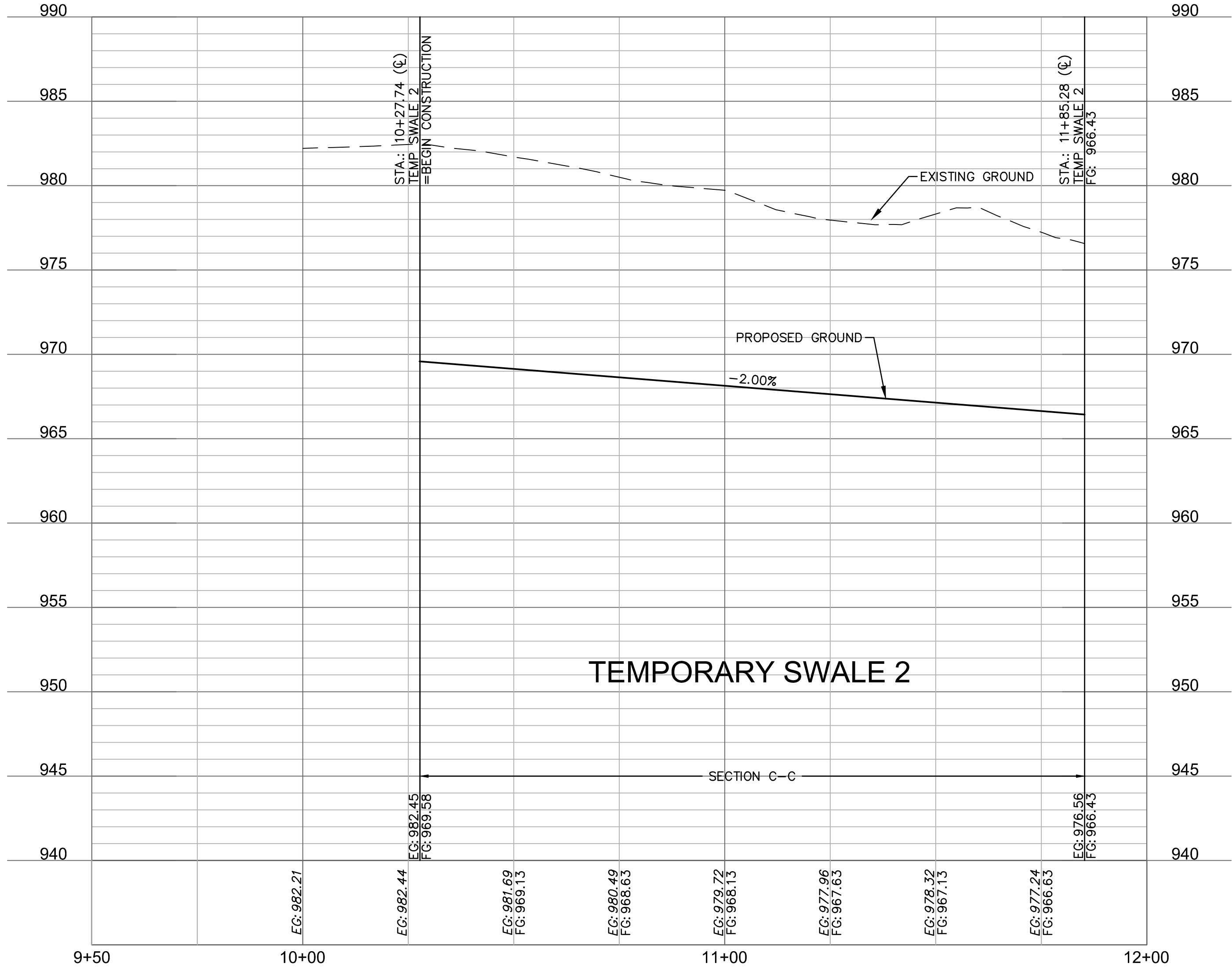
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USER: rneiser



SWALE DESIGN TABLE (100-YEAR RETURN FREQUENCY)														
SECTION DATA								RESULTS						
SECTION	Mannings Coefficient	Channel Slope (%)	Min. 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)
C-C	0.03	2.00%	1.23	3:1	3:1	5	19.60	0.23	1.31	2.28	6.45	6.38	0.31	0.253

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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STATE OF MISSOURI
JULIE ELAINE SELLERS
Professional Engineer
NUMBER PE-2017000367
3/12/21

SWALE 2 PLAN & PROFILE
STREET AND STORM SEWER PLANS
HOOK FARMS
FIRST PLAT
LEE'S SUMMIT, MO
2020

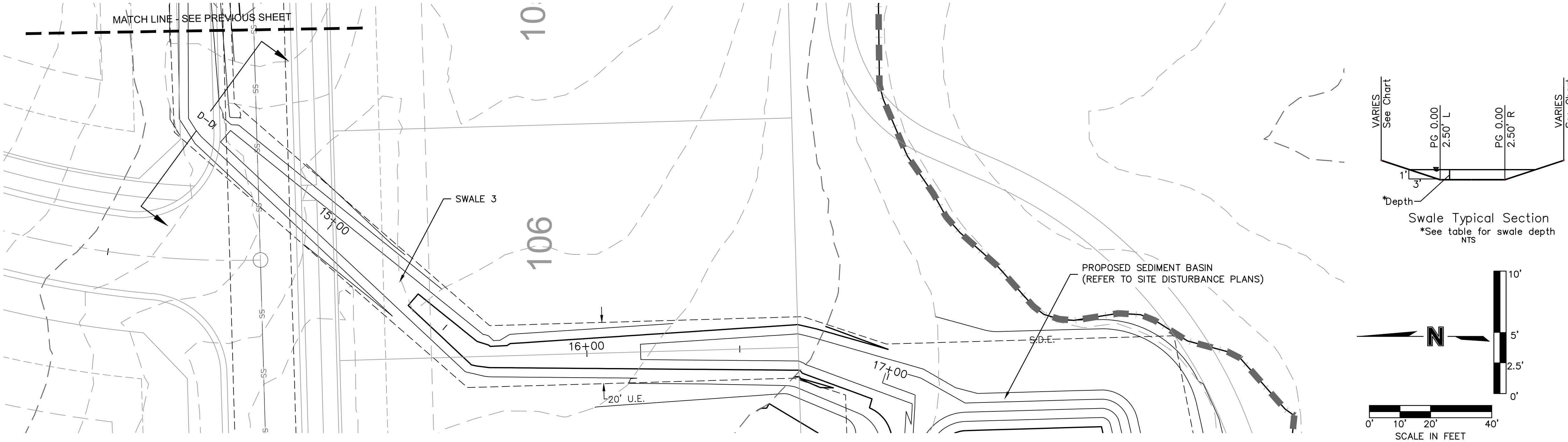
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checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C106

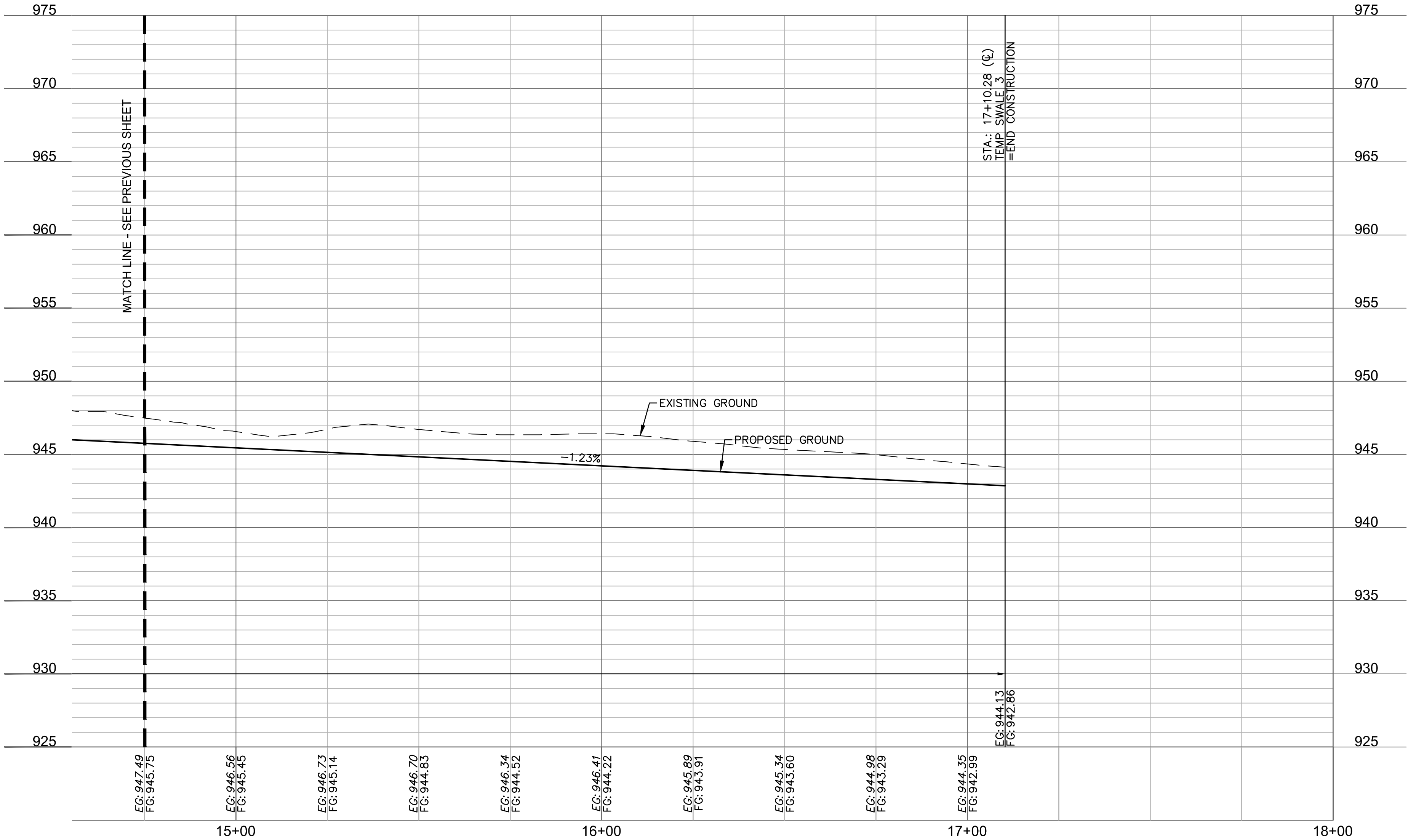
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REVISIONS

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SWALE DESIGN TABLE (100-YEAR RETURN FREQUENCY)														
SECTION DATA								RESULTS						
SECTION	Mannings Coefficient	Channel Slope (%)	Min. 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	1.23%	2.03	3:1	3:1	5	36.35	1.03	8.33	4.36	11.51	11.18	1.33	0.556



- SWALE GRADING NOTES:**
- CONTRACTOR SHALL CONSTRUCT SWALES WITH MINIMUM SLOPE, WIDTH AND DEPTH AS SHOWN IN THE SWALE DESIGN TABLES.
 - 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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3/12/21

STATE OF MISSOURI
PROFESSIONAL ENGINEER

SWALE 3 PLAN & PROFILE CONT'D
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
date: 04/20/2020

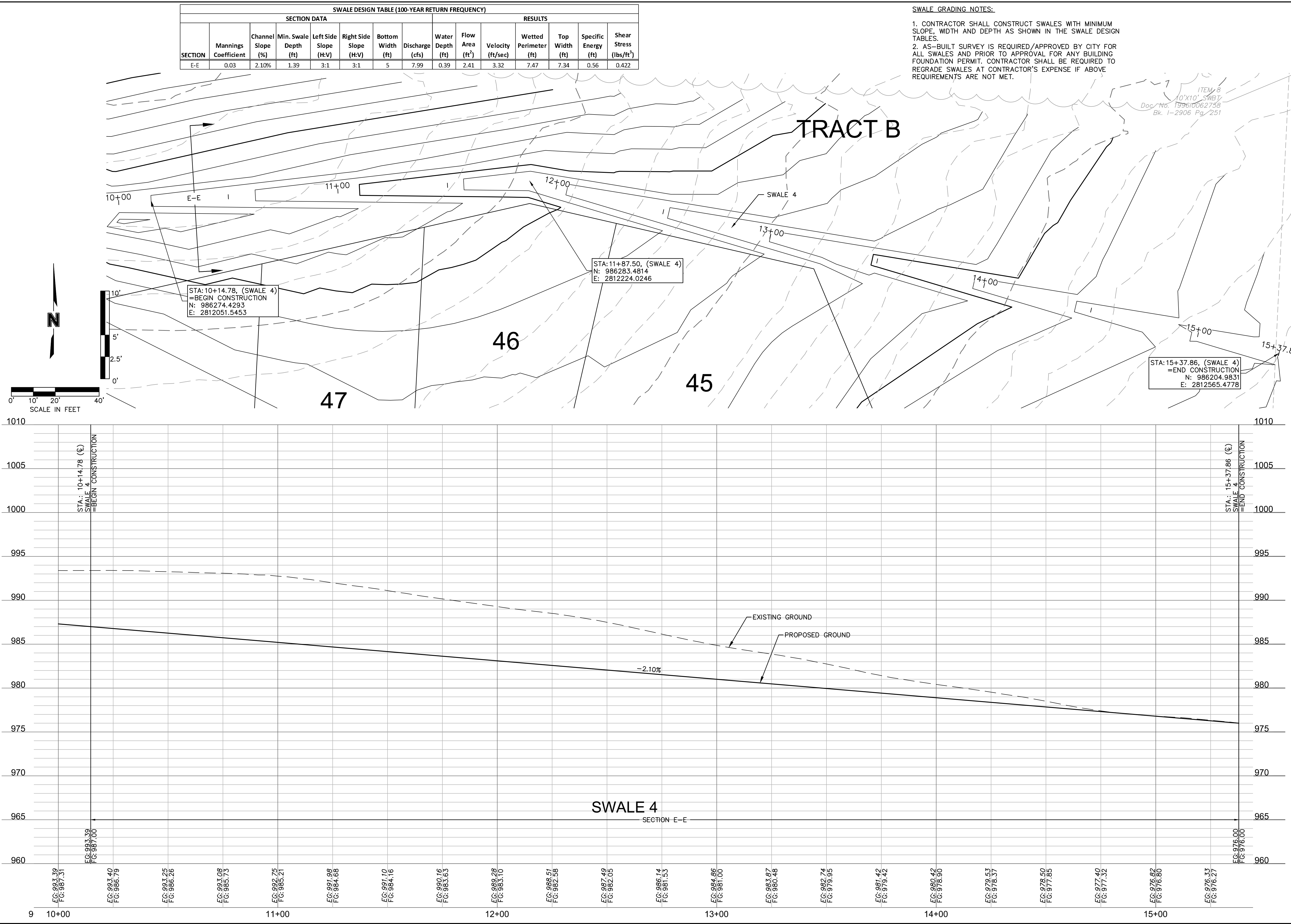
SHEET
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2020

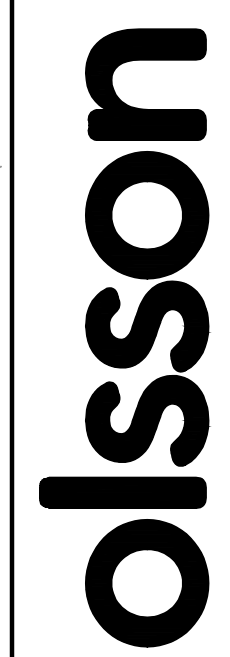
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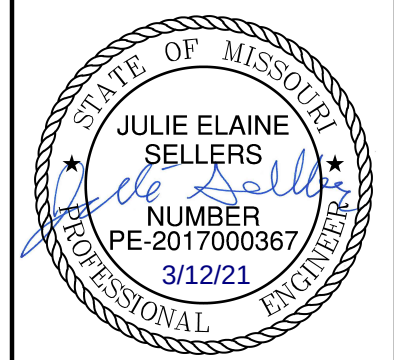
SWALE GRADING NOTES:

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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NUMBER PE-2017000367
3/12/21

SWALE 4 PLAN & PROFILE
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST FLAT

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.: 04/20/2020

DATE

REV. NO.

DATE

REVISIONS DESCRIPTION

1

06/15/2020

REVISED PER CITY COMMENTS

2

06/25/2020

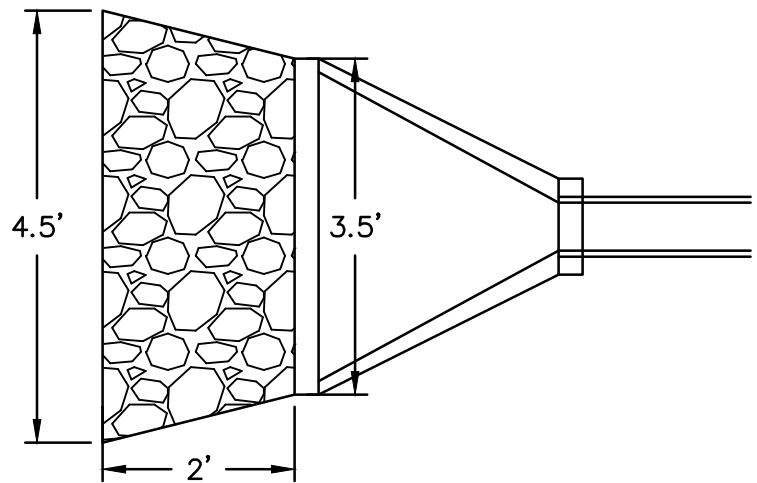
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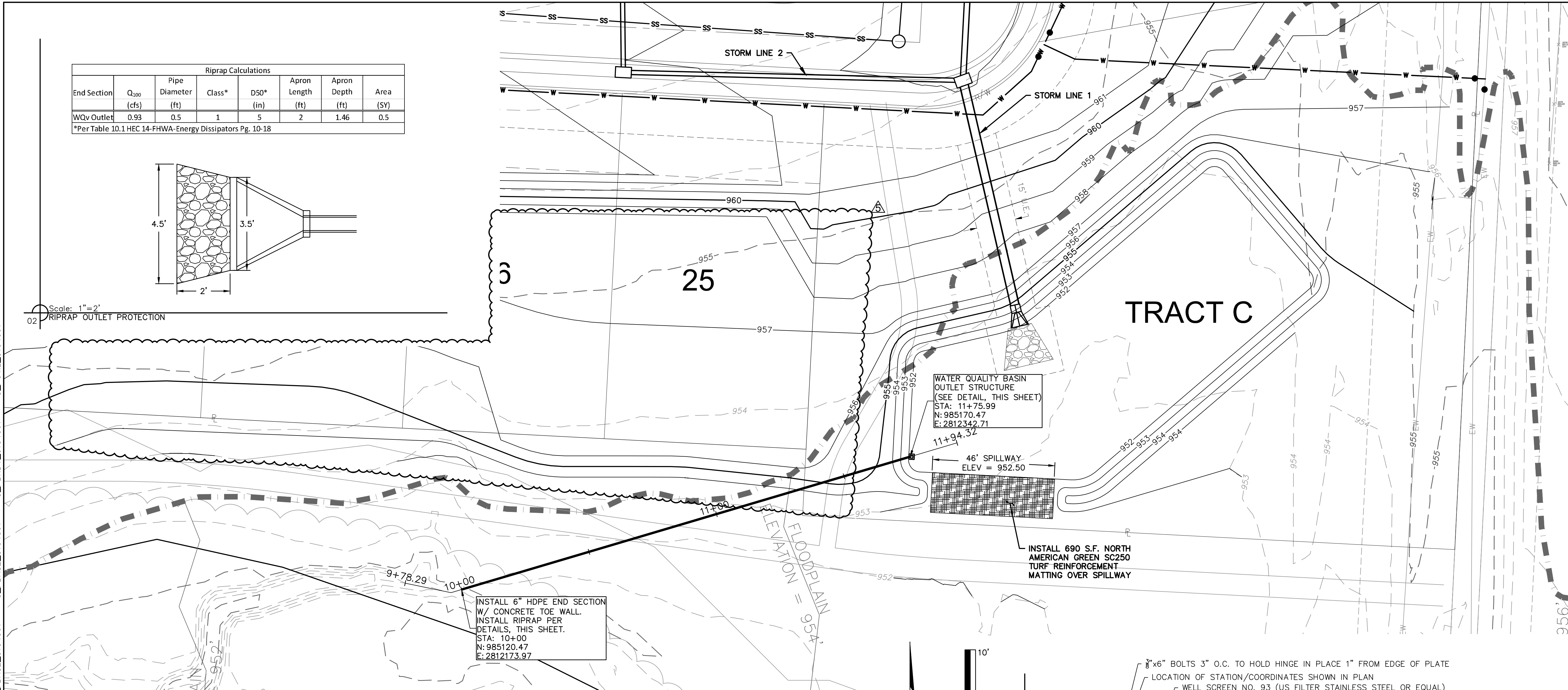
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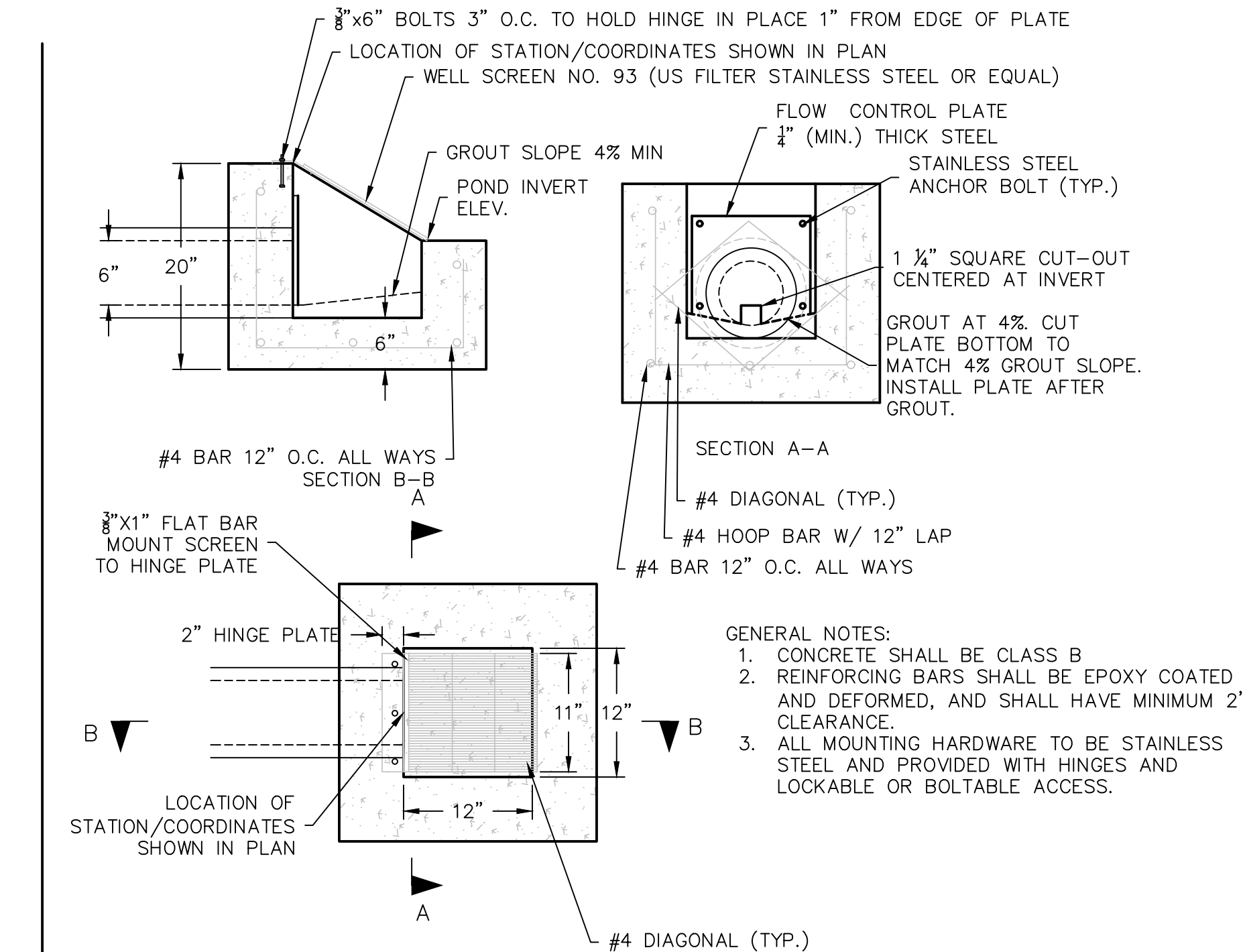
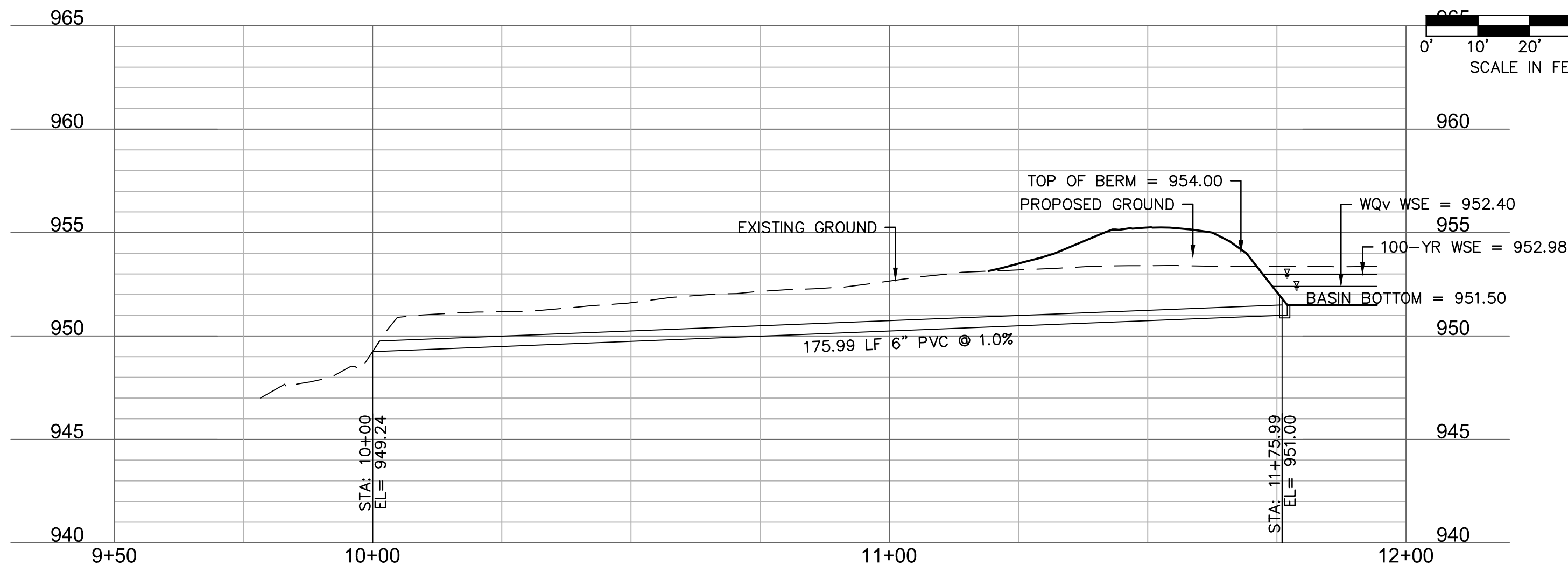
Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
WQv Outlet	0.93	0.5	1	5	2	1.46
Area (SY)						
0.5						
*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18						



Scale: 1"=2'
02 RIPRAP OUTLET PROTECTION



WATER QUALITY OUTLET (9+50 - 12+00)



Scale: 1"=1'
01 WATER QUALITY BASIN OULET STRUCTURE

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1		06/15/2020	REVISED PER CITY COMMENTS	
2		06/25/2020	REVISED PER CITY COMMENTS	
3		09/10/2020	REVISED PIPE INSULATION	
4		10/01/2020	REVISED PER CITY COMMENTS	
5		11/18/2020	REVISED LOTS 25-29 GRADING	

WATER QUALITY BASIN PLAN
STREET AND STORM SEWER PLANS

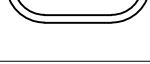
HOOK FARMS
FIRST FLAT

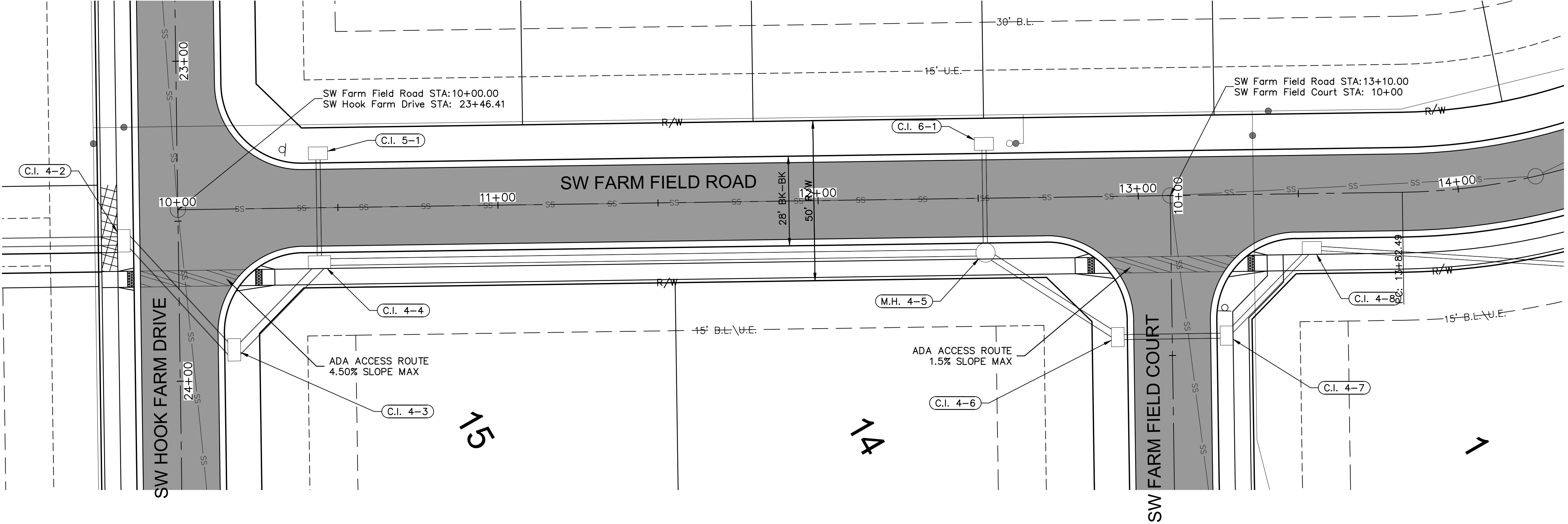
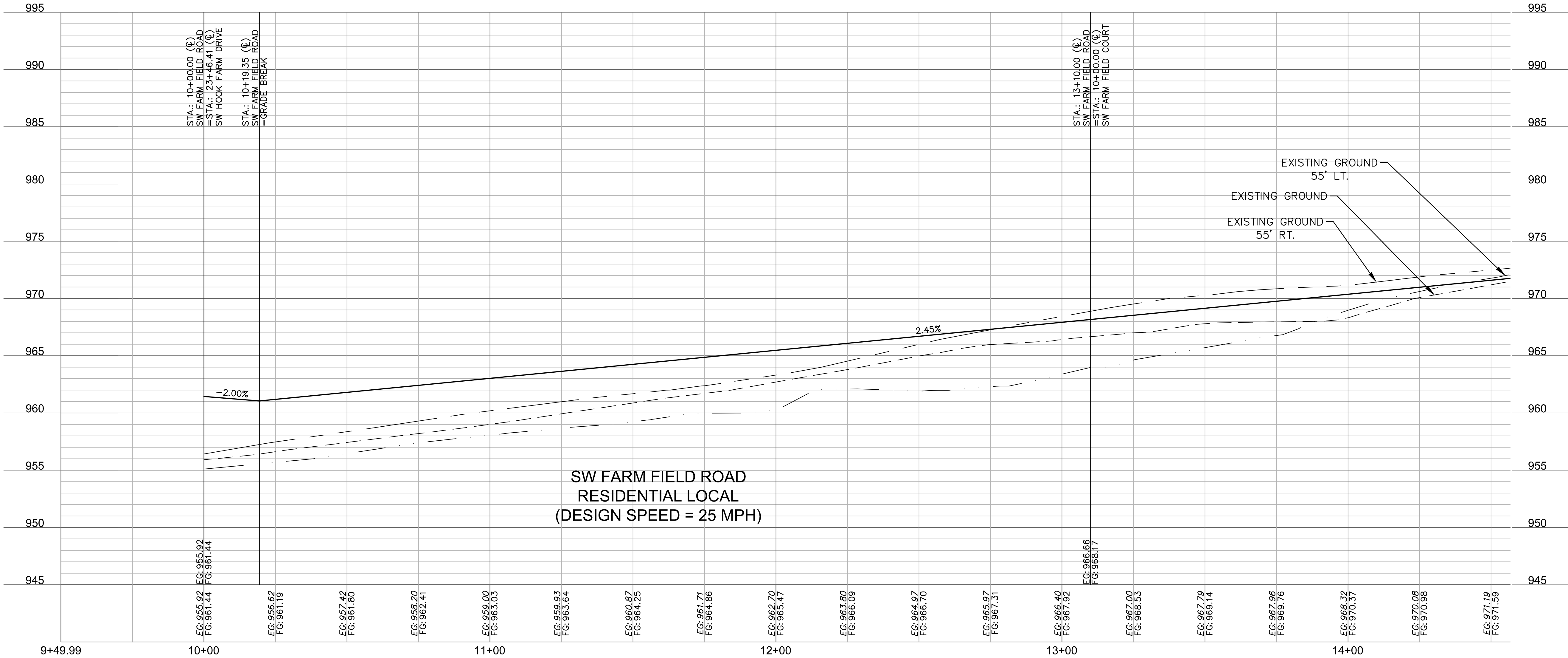
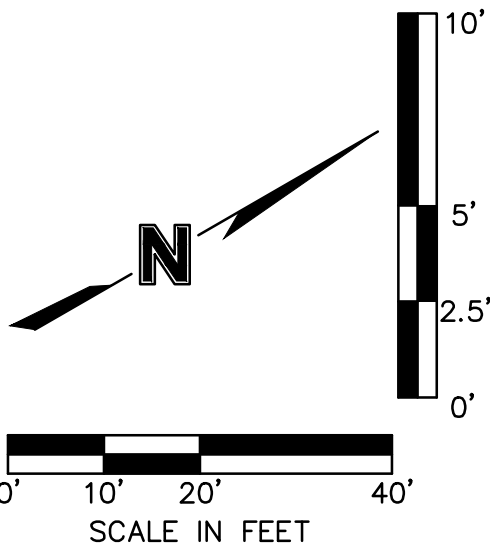
2020

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C110

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Storm Plans\VC_RPP01_0194061.dwg
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LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CG-2 CURB & GUTTER



ROADWAY PLAN & PROFILE (SW FARM FIELD ROAD)
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

drawn by: _____ CGW
checked by: _____ JES
approved by: _____ NDH
QA/QC by: _____ JES
project no.: 019-4061
drawing no.: _____
date: 04/20/2020

SHEET
C112

DATE

REV. NO.

REVISIONS DESCRIPTION

BY

1	06/15/2020	REVISED PER CITY COMMENTS	
2	06/25/2020	REVISED PER CITY COMMENTS	
3	09/10/2020	REVISED PIPE INSULATION	
4	10/01/2020	REVISED PER CITY COMMENTS	
5	11/18/2020	REVISED LOTS 25-29 GRADINGS	
6	02/17/2021	REVISED ADA RAMPS	
7	03/12/2021	REVISED ADA RAMPS	

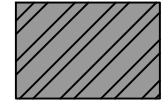
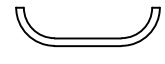
REVISIONS

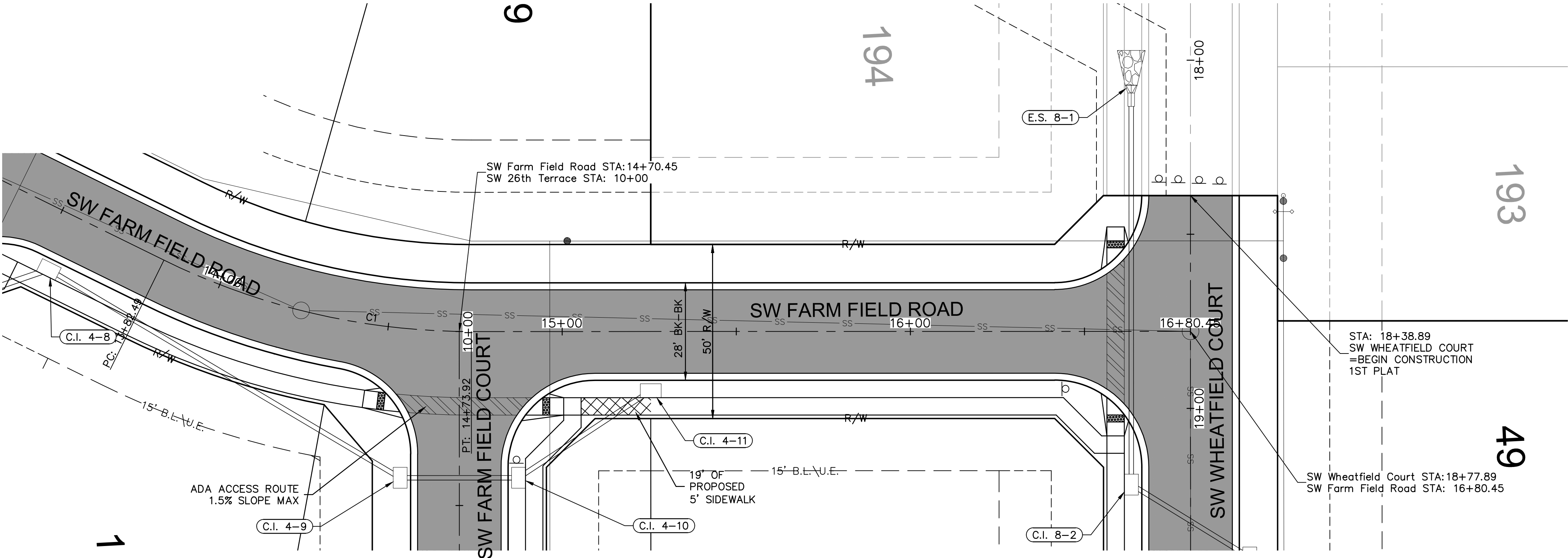
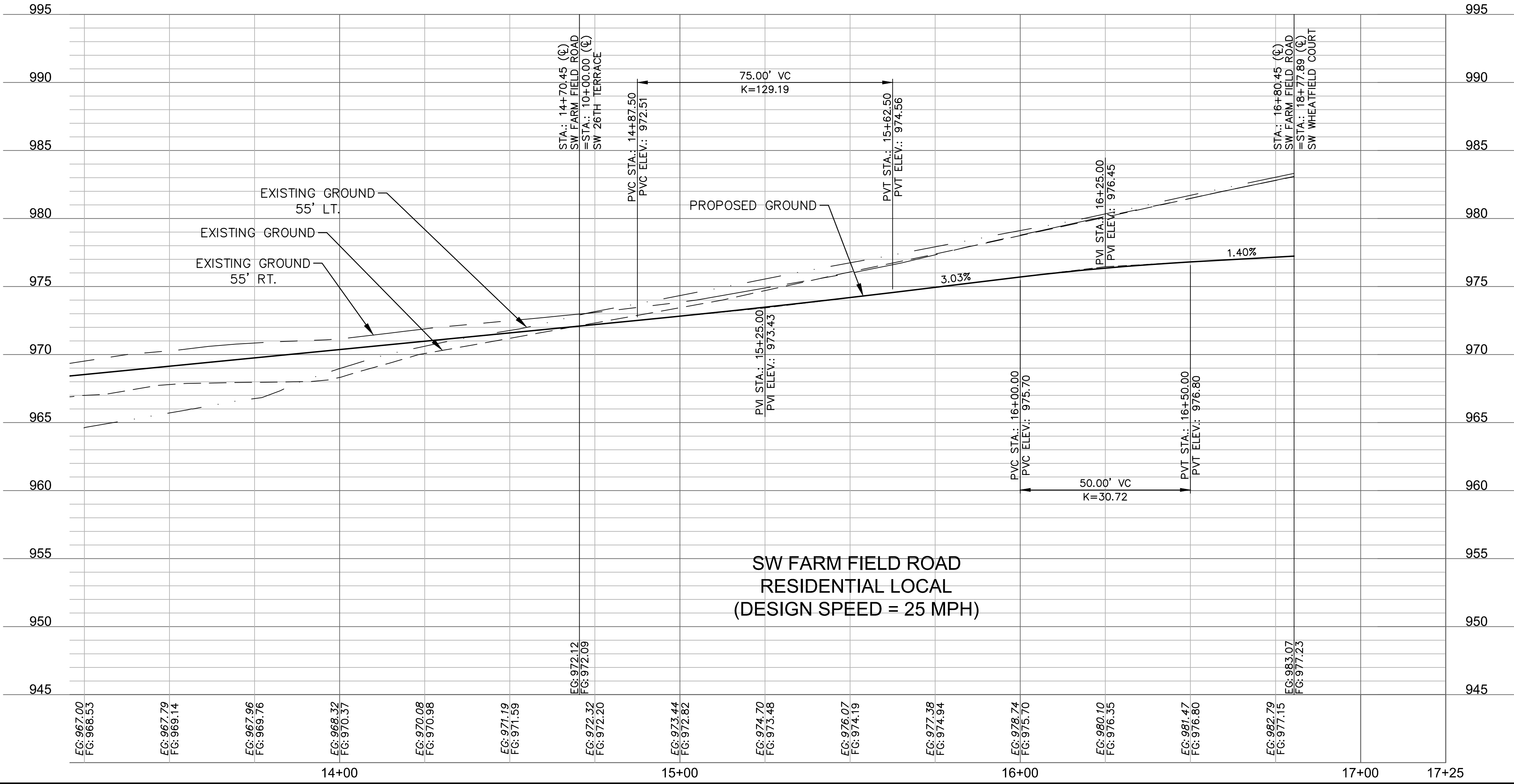
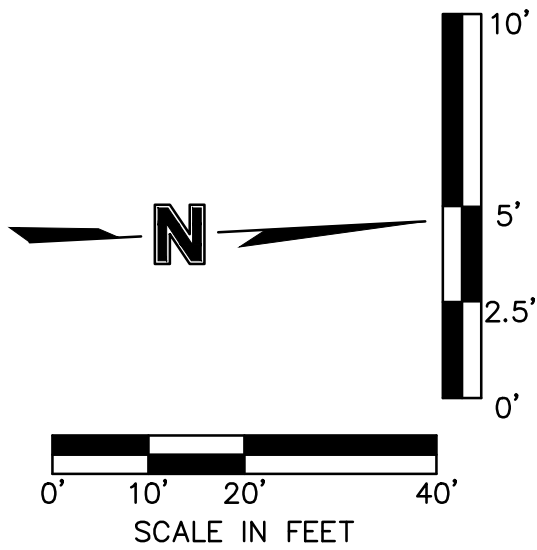
2020

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STATE OF MISSOURI
JULIE ELAINE
SELLERS
Professional Engineer
NUMBER
PE-2017000367
3/12/21

LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CG-2 CURB & GUTTER



ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT	P.I. STATION (BACK)
C1	13+82.49 14+73.92	N: 985784.58 E: 2811914.27	N: 985871.67 E: 2811939.38	200.00	91.43	026°11'37"	46.53	14+27.39

ROADWAY PLAN & PROFILE (SW FARM FIELD ROAD)
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

2020

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
1	06/15/2020	REVISED PER CITY COMMENTS
2	06/25/2020	REVISED PER CITY COMMENTS
3	09/10/2020	REVISED PIPE INSULATION
4	10/01/2020	REVISED PER CITY COMMENTS
5	11/18/2020	REVISED LOTS 25-29 GRADING
6	02/17/2021	REVISED ADA RAMPS
7	03/12/2021	REVISED ADA RAMPS

SHEET
C113

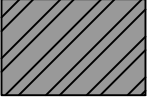
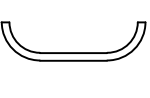
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checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

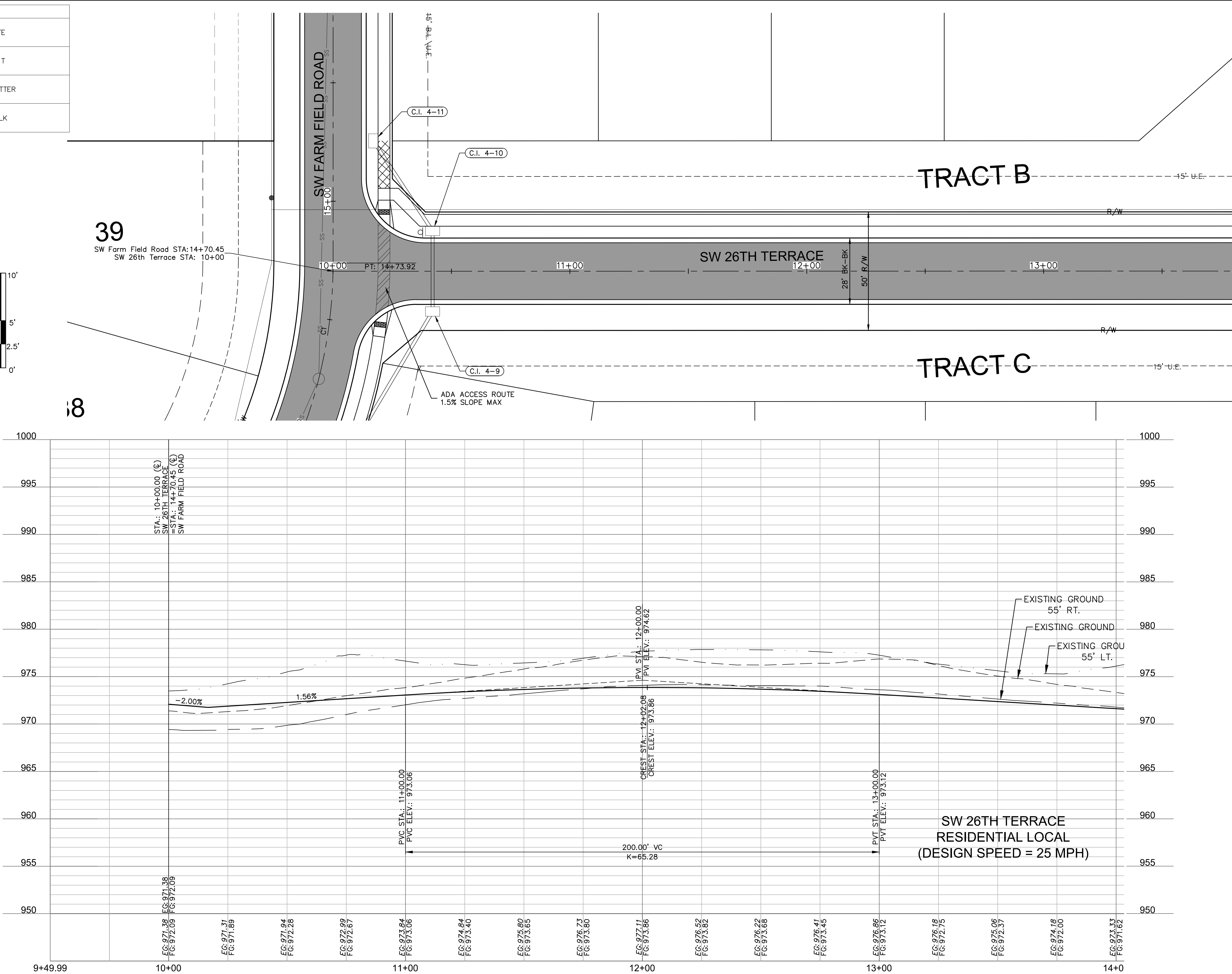
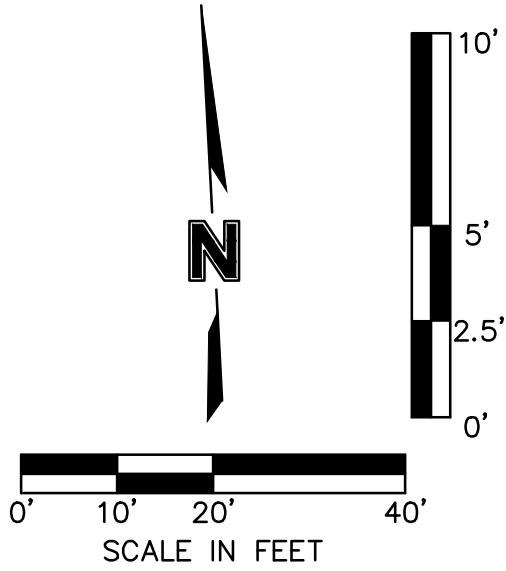
olsson

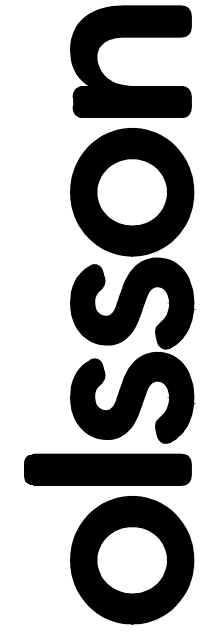
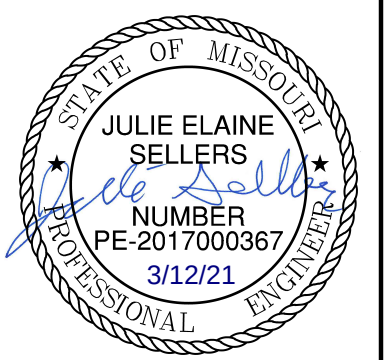
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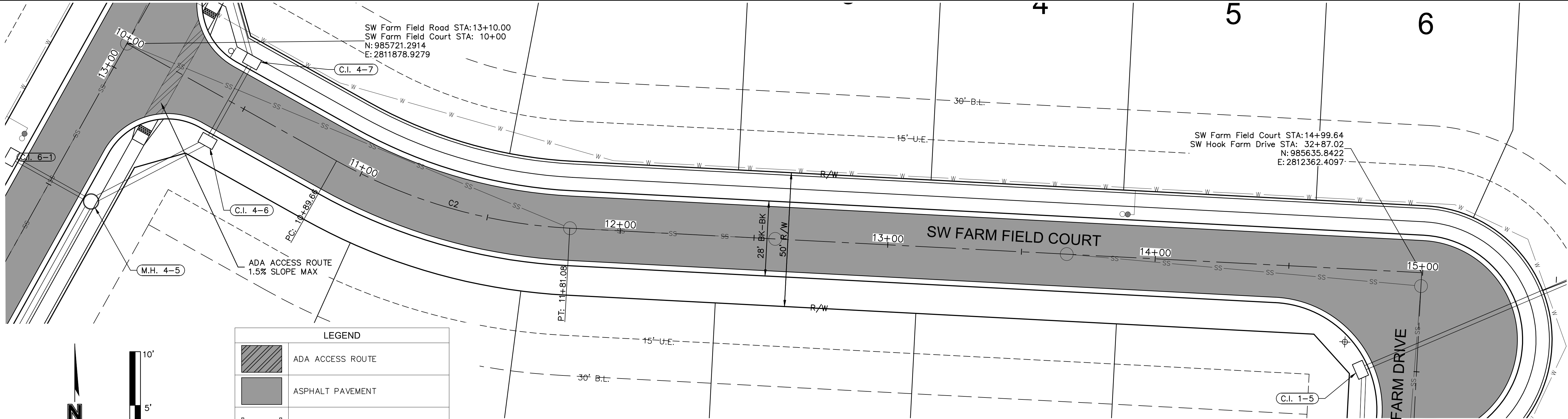
STATE OF MISSOURI
JULIE ELAINE
SELLERS
Professional Engineer
NUMBER
PE-2017000367
3/12/21

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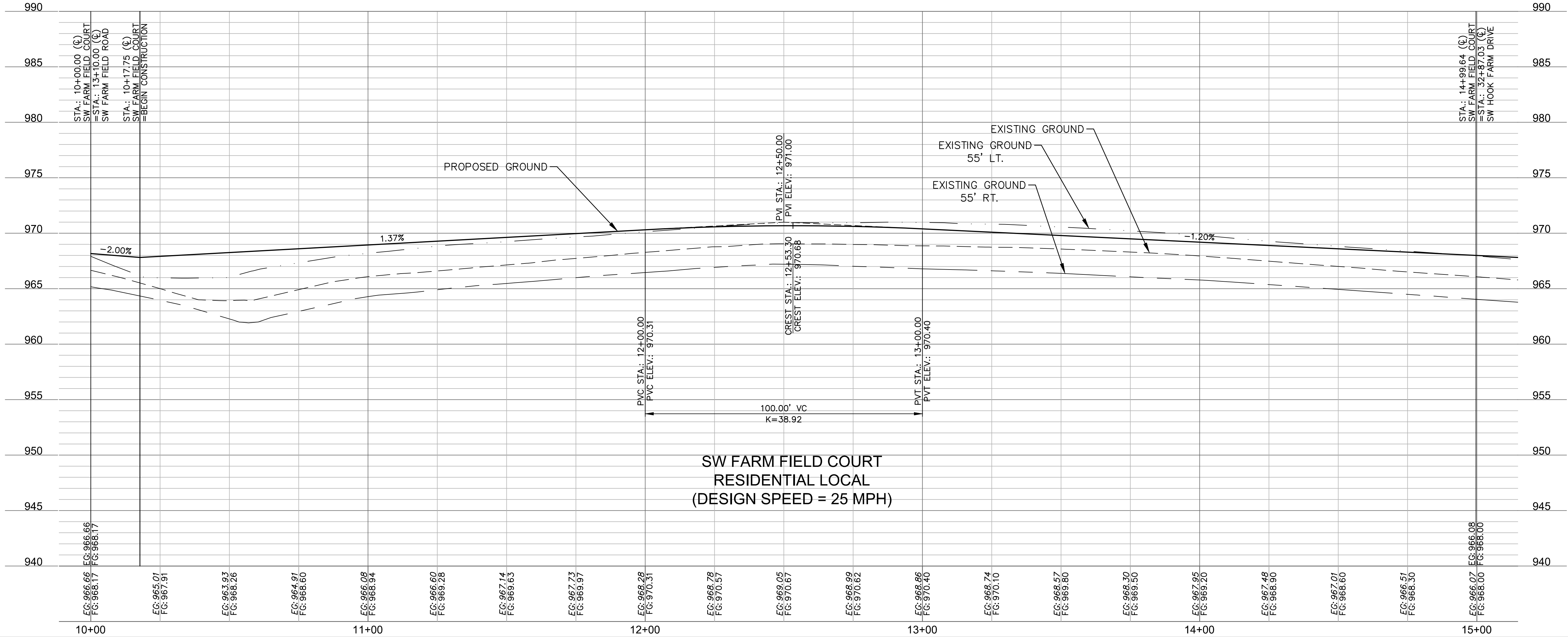
LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CG-2 CURB & GUTTER
	PROPOSED SIDEWALK



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		JULIE ELAINE SELLERS NUMBER PE-2017000367 3/12/21	
ROADWAY PLAN & PROFILE (SW 26TH TERRACE) STREET AND STORM SEWER PLANS		BY	
HOOK FARMS FIRST PLAT		REV. NO.	DATE
		1	06/15/2020
		2	06/25/2020
		3	09/10/2020
		4	10/01/2020
		5	11/18/2020
		6	02/17/2021
2020		REVISIONS	
LEE'S SUMMIT, MO		REVISED ADA RAMP	
SHEET C114		REVISED ADA RAMP	



ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT	P.I. STATION (BACK)
C2	10+89.66 11+81.08	N: 985677.58 E: 2811957.21	N: 985652.47 E: 2812044.29	200.00	91.42	026°11'22"	46.52	11+34.56



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JULIE ELAINE SELLERS
Professional Engineer
NUMBER PE-2017000367
3/12/21

ROADWAY PLAN & PROFILE (SW WHEATFIELD COURT)
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

REV. NO. DATE REVISIONS DESCRIPTION

1 06/15/2020 REVISED PER CITY COMMENTS

2 06/25/2020 REVISED PER CITY COMMENTS

3 09/10/2020 REVISED PIPE INSULATION

4 10/01/2020 REVISED PER CITY COMMENTS

5 11/18/2020 REVISED LOTS 25-29 GRADING

6 02/17/2021 REVISED ADA RAMPS

7 03/12/2021 REVISED ADA RAMPS

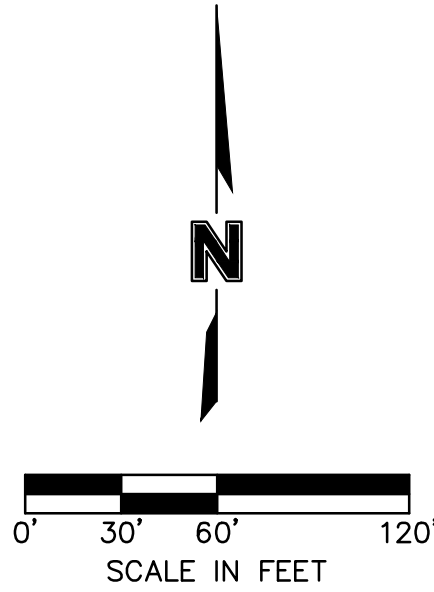
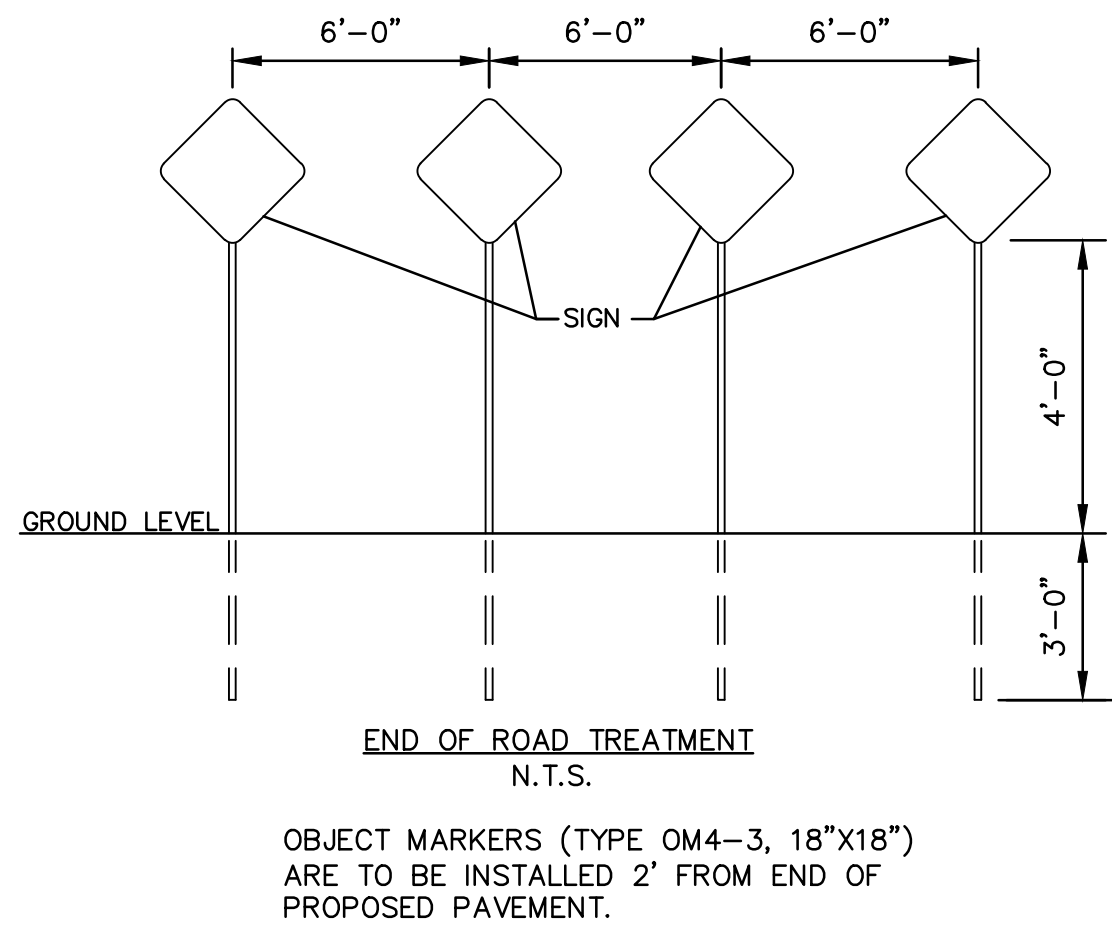
BY

REVISIONS

2020

SHEET C116

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Professional Engineer
NUMBER PE-2017000367
3/12/21

TRAFFIC CONTROL PLAN
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

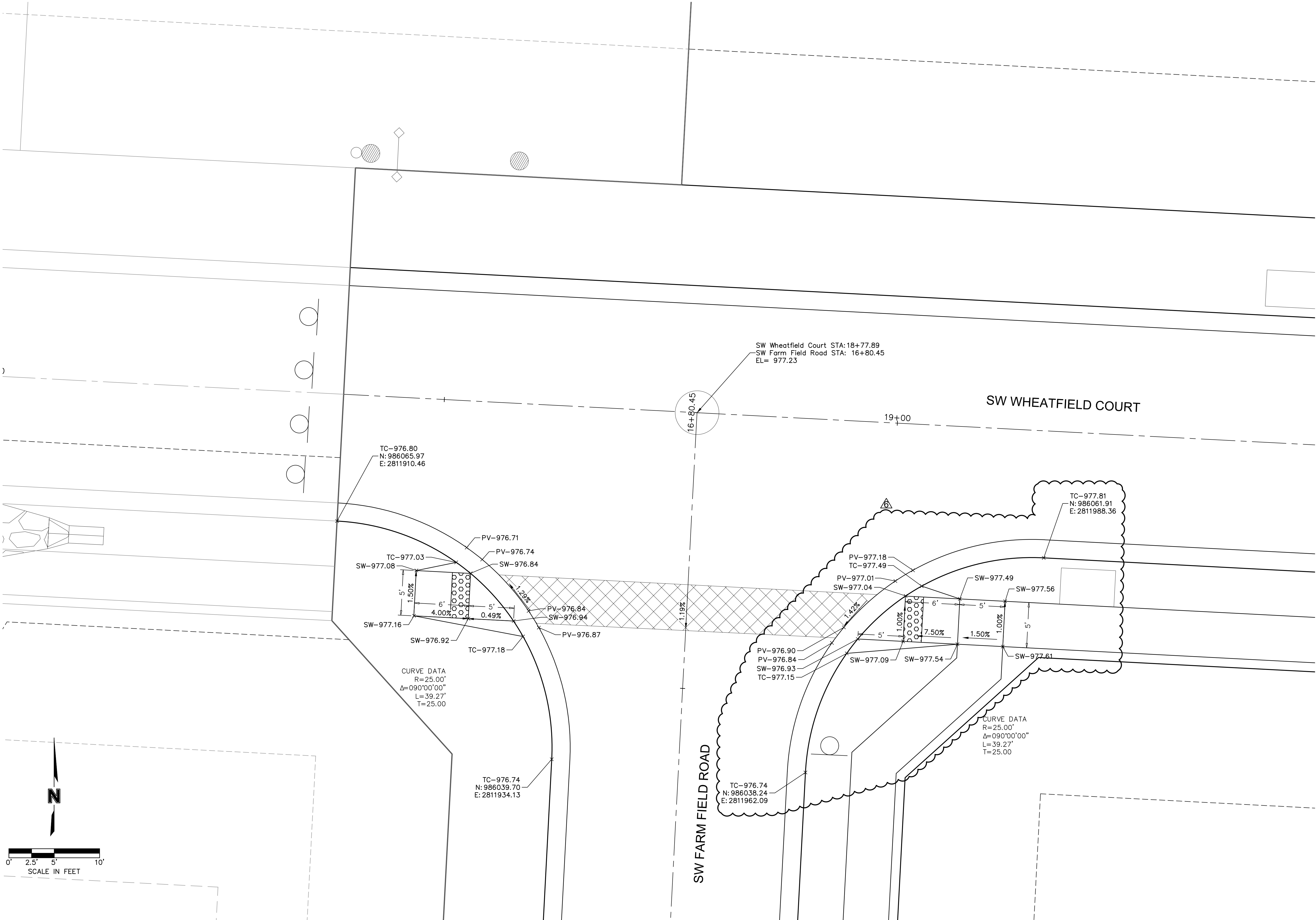
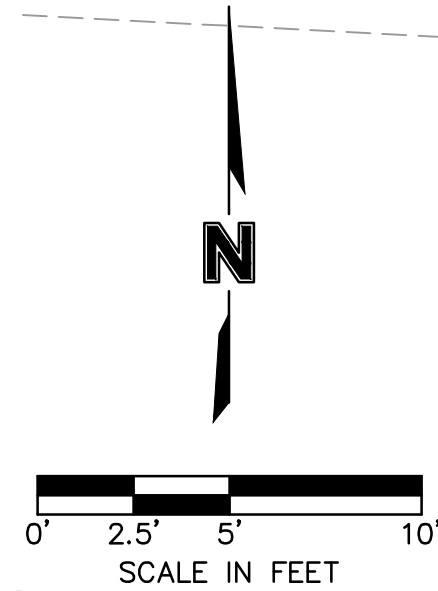
drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

DATE: 04/20/2020

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
1	06/15/2020	REVISED PER CITY COMMENTS
2	06/25/2020	REVISED PER CITY COMMENTS
3	09/10/2020	REVISED PER CITY COMMENTS
4	10/01/2020	REVISED PER CITY COMMENTS
5	11/18/2020	REVISED PER CITY COMMENTS
6	02/17/2021	REVISED ADA RAMP
7	03/12/2021	REVISED ADA RAMP

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JULIE ELAINE SELLERS
NUMBER PE-2017000367
3/12/21
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	
2	06/25/2020	REVISED PER CITY COMMENTS	
3	09/10/2020	REVISED PIPE INSULATION	
4	10/01/2020	REVISED PER CITY COMMENTS	
5	11/18/2020	REVISED LOTS 25-29 GRADING	
6	02/17/2021	REVISED ADA RAMP	
7	03/12/2021	REVISED ADA RAMP	

SW WHEATFIELD COURT & SW FARM FIELD ROAD
STREET AND STORM SEWER PLANS

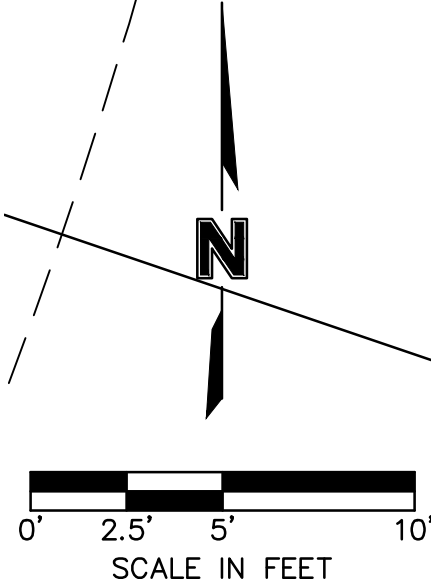
HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

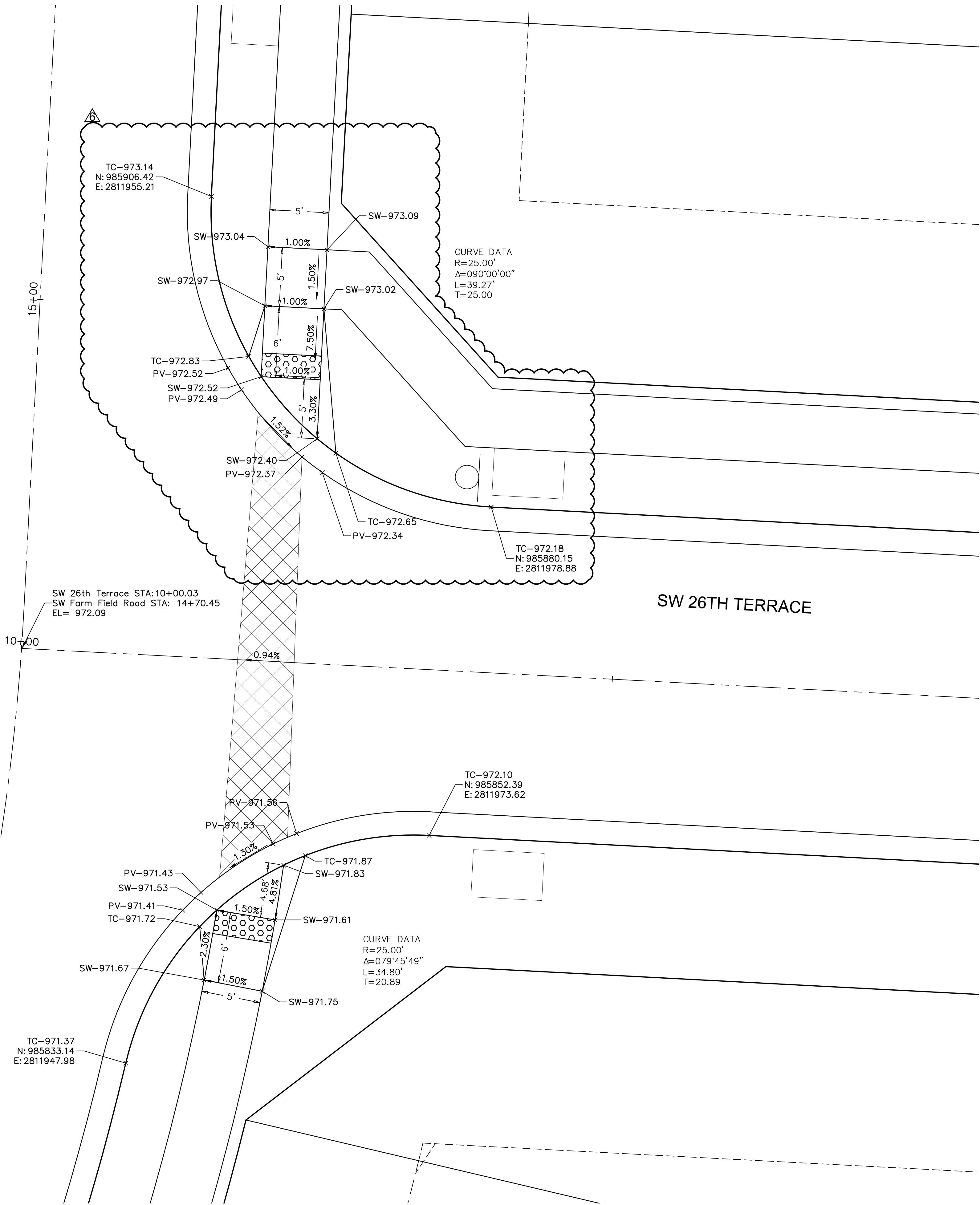
drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C121

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SW FARM FIELD ROAD



SW 26TH TERRACE

SW FARM FIELD ROAD & SW 26TH TERRACE
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

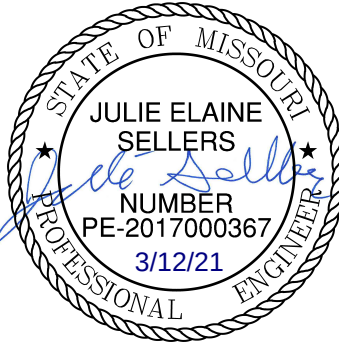
2020

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C122

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	
2	06/25/2020	REVISED PER CITY COMMENTS	
3	09/10/2020	REVISED PIPE INSULATION	
4	10/01/2020	REVISED PER CITY COMMENTS	
5	11/18/2020	REVISED LOTS 25-29 GRADING	
6	02/17/2021	REVISED ADA RAMPS	
7	03/12/2021	REVISED ADA RAMPS	

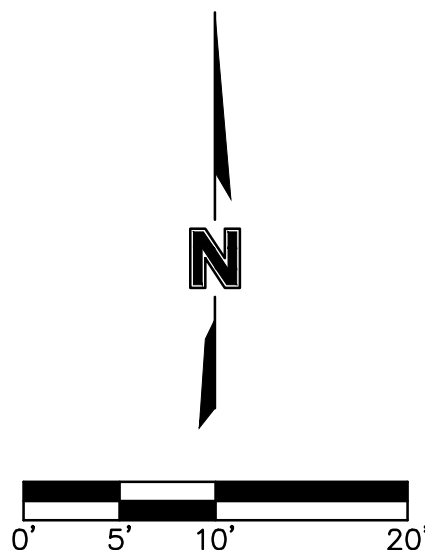
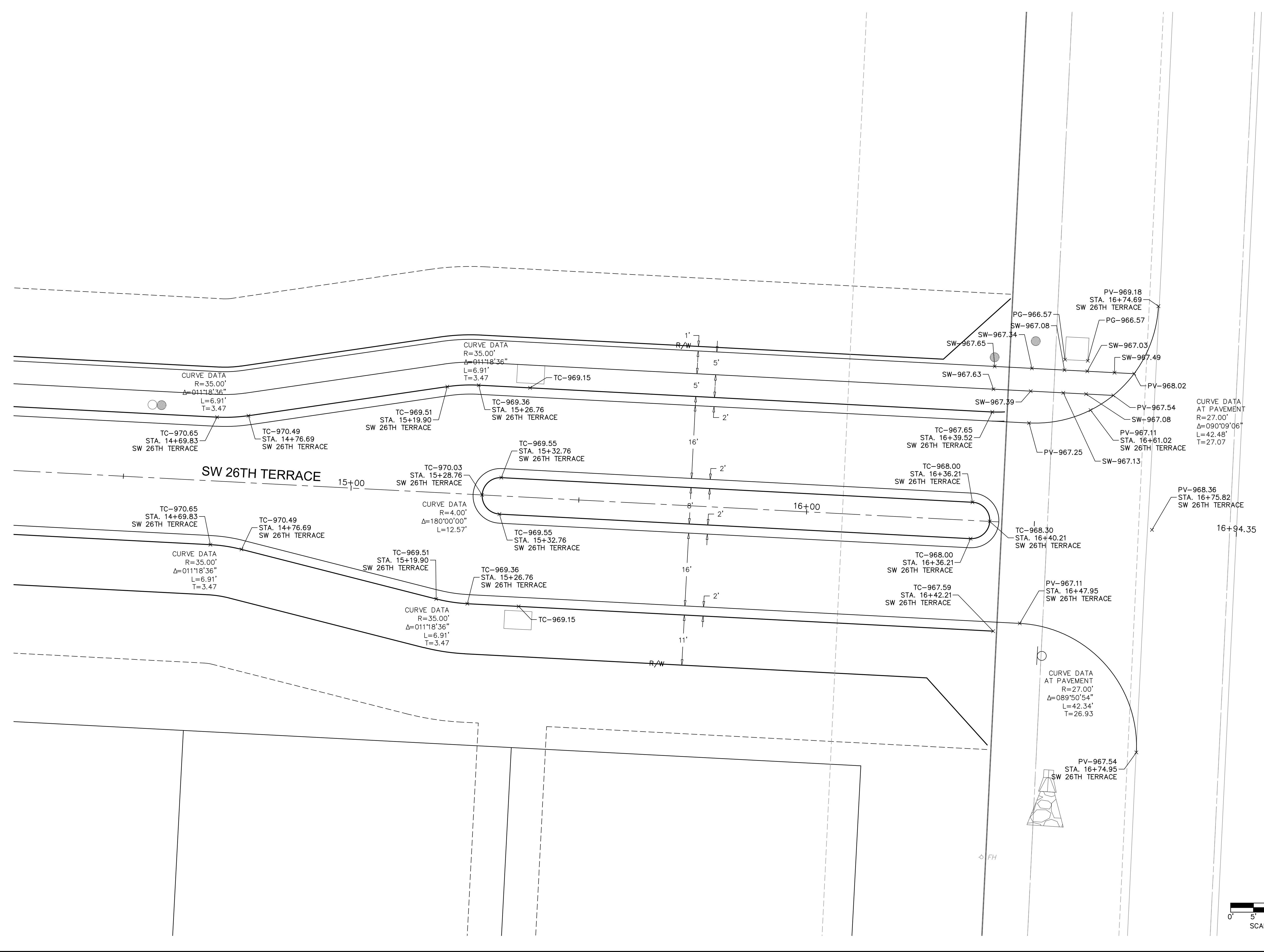
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DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Street and Storm Plans\0194061.dwg
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USER: nheiser



SW PRYOR ROAD

SW 26TH TERRACE
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

2020

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	
2	06/25/2020	REVISED PER CITY COMMENTS	

drawn by: CGW

checked by: JES

approved by: NDH

QA/QC by: JES

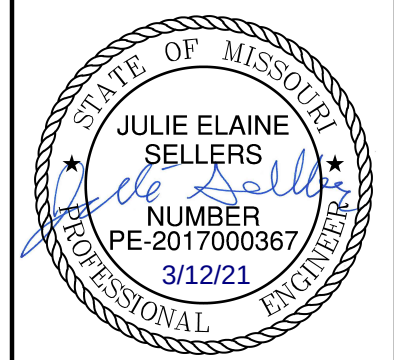
project no.: 019-4061

drawing no.: 04/20/2020

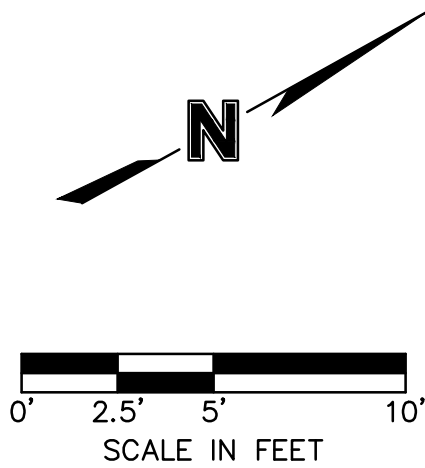
SHEET C123

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DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Storm Plans\VC_INT01_0194061.dwg USER: nheiser
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Δ=090°00'00"
L=39.27'
T=25.00

TC-967.28
N: 985680.41
E: 2811872.14

PV-967.34
TC-967.66
PV-967.37

SW-967.59
SW-967.67
SW-967.55
SW-967.57

6'
1.50%
2.00%
0.49%
5'

PV-967.47
PV-967.50
TC-967.81

TC-968.18
N: 985690.05
E: 2811906.15

SW Farm Field Court STA:10+00.00
SW Farm Field Road STA: 13+10
EL= 968.17

SW FARM FIELD ROAD

TC-969.19
N: 985748.52
E: 2811910.17

TC-968.75
PV-968.44
PV-968.39
SW-968.42

SW-968.87
SW-968.95

1.00%
7.50%
1.50%
1.00%
5'

PV-968.29
PV-968.25
SW-968.32
TC-968.56

SW-968.47
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L=39.27'
T=25.00

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N: 985714.50
E: 2811919.80

SW FARM FIELD COURT

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JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
3/12/21
PROFESSIONAL ENGINEER

REV.	NO.	DATE	DESCRIPTION	BY
1		06/15/2020	REVISED PER CITY COMMENTS	
2		06/25/2020	REVISED PER CITY COMMENTS	
3		09/10/2020	REVISED PIPE INSULATION	
4		10/01/2020	REVISED PER CITY COMMENTS	
5		11/18/2020	REVISED LOTS 25-29 GRADINGS	
6		02/17/2021	REVISED ADA RAMPS	
7		03/12/2021	REVISED ADA RAMPS	

SW FARM FIELD ROAD & SW FARM FIELD COURT
STREET AND STORM SEWER PLANS

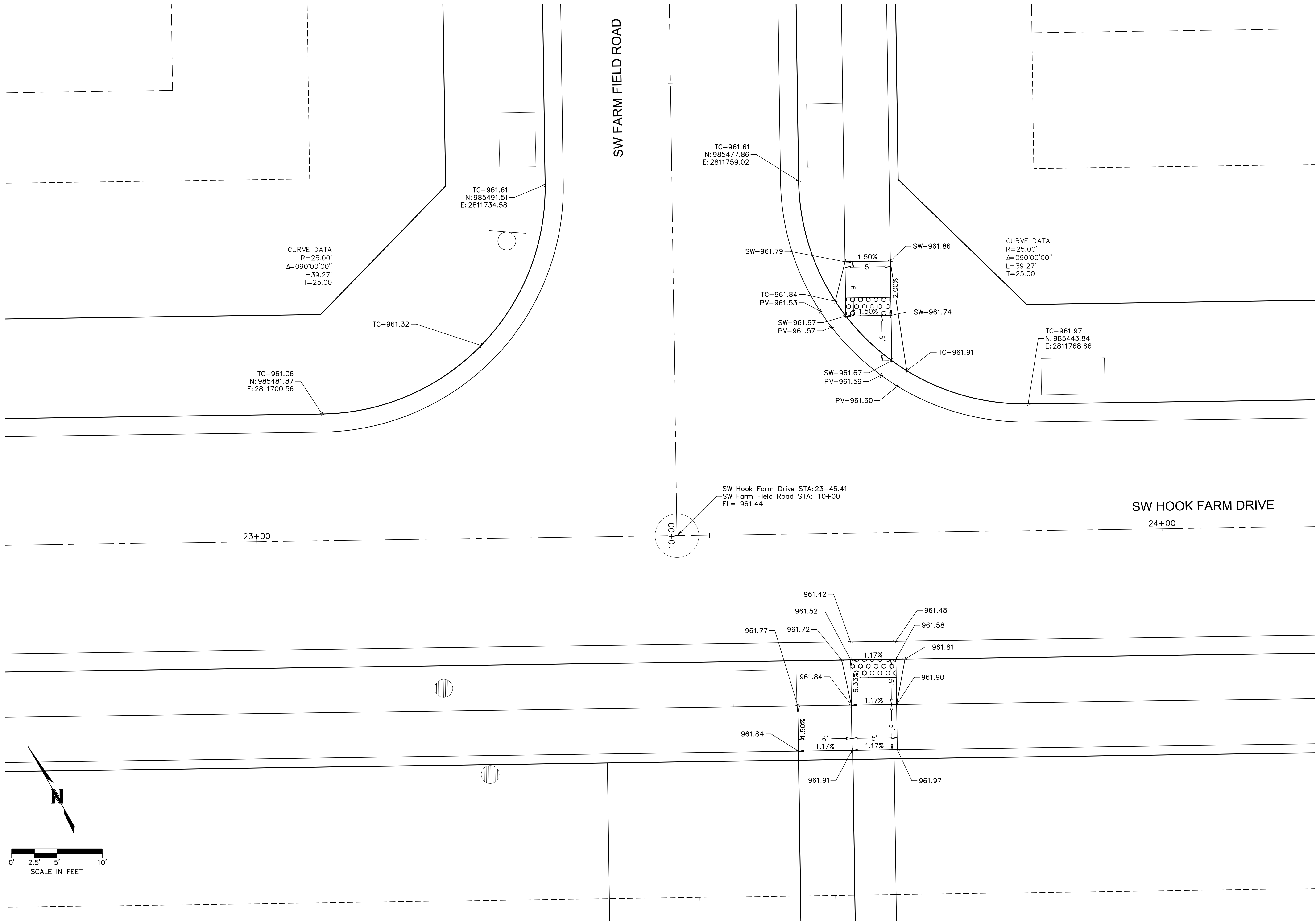
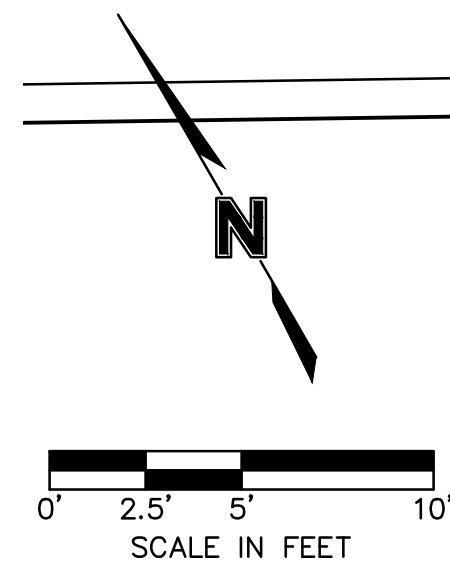
HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C124

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osorio

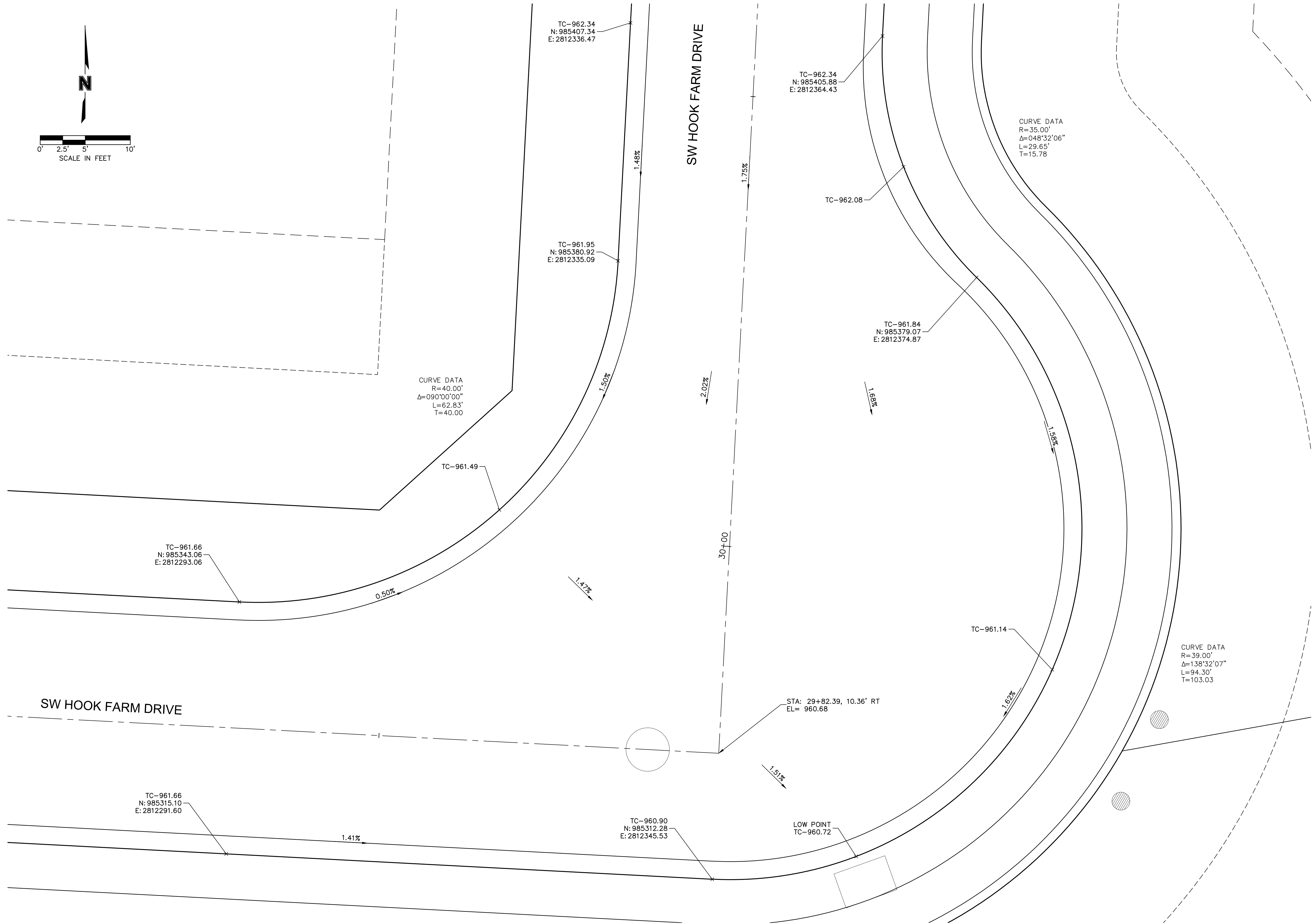
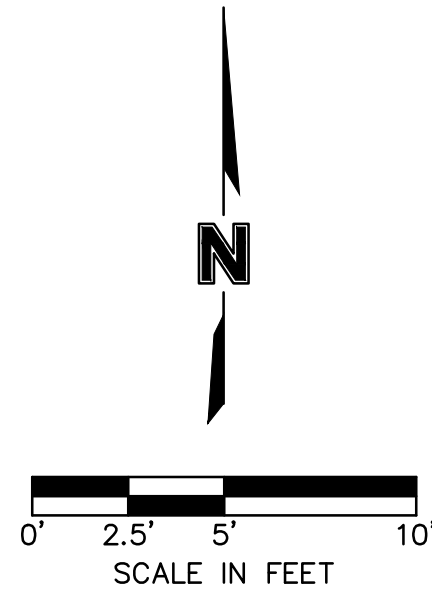
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SW FARM FIELD ROAD & SW HOOK FARM DRIVE STREET AND STORM SEWER PLANS	HOOK FARMS FIRST PLAT	2020
LEE'S SUMMIT, MO		

drawn by: _____ CGW
checked by: _____ JES
approved by: _____ NDH
QA/QC by: _____ JES
project no.: _____ 019-4061
drawing no.: _____
date: _____ 04/20/2020

SHEET
C125

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Streets\GNCA\Street and Storm Plans\C_INT02_0194061.dwg
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 DATE: Jun 29, 2020 6:46pm



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[illegible]

SW HOOK FARM DRIVE & SW HOOK FARM DRIVE STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

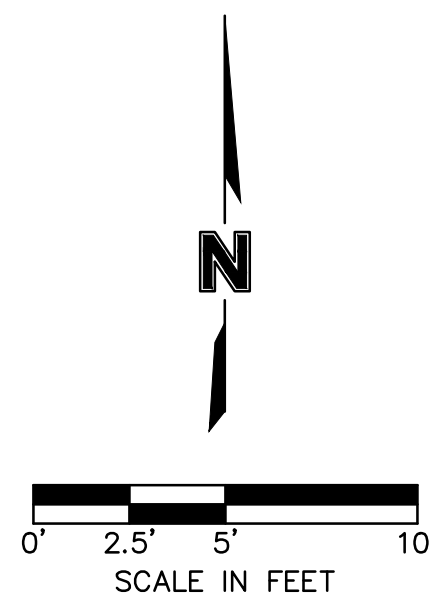
LEE'S SUMMIT, MO

2020

drawn by: _____ CGW
checked by: _____ JES
approved by: _____ NDH
QA/QC by: _____ JES
project no.: _____ 019-4061
drawing no.: _____
date: _____ 04/20/2020

SHEET
C126

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 DATE: Jun 29, 2020 6:46pm



TC-968.72
N: 985652.64
E: 2812309.21

TC-968.72
N: 985624.67
E: 2812307.75

CURVE DATA
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 $\Delta=090^{\circ}00'00''$
L=62.83'
T=40.00'

TC-966.05
N: 985556.23
E: 2812344.24

TC-966.81
N: 985582.64
E: 2812345.62

SW Hook Farm Drive STA: 32+87.03
SW Farm Field Court STA: 14+99.64
EL= 967.41

TC-967.90
N: 985649.82
E: 2812363.14

TC-966.05
N: 985554.77
E: 2812372.20

TC-966.53
N: 985580.35
E: 2812385.37

CURVE DATA
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L=29.65'
T=15.78

CURVE DATA
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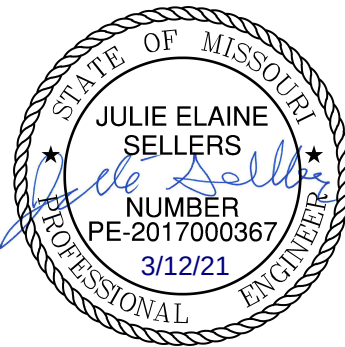
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TC-966.29

- TC-967.77

- TC-967.36

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[illegible]

SW FARM FIELD COURT & SW HOOK FARM DRIVE
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

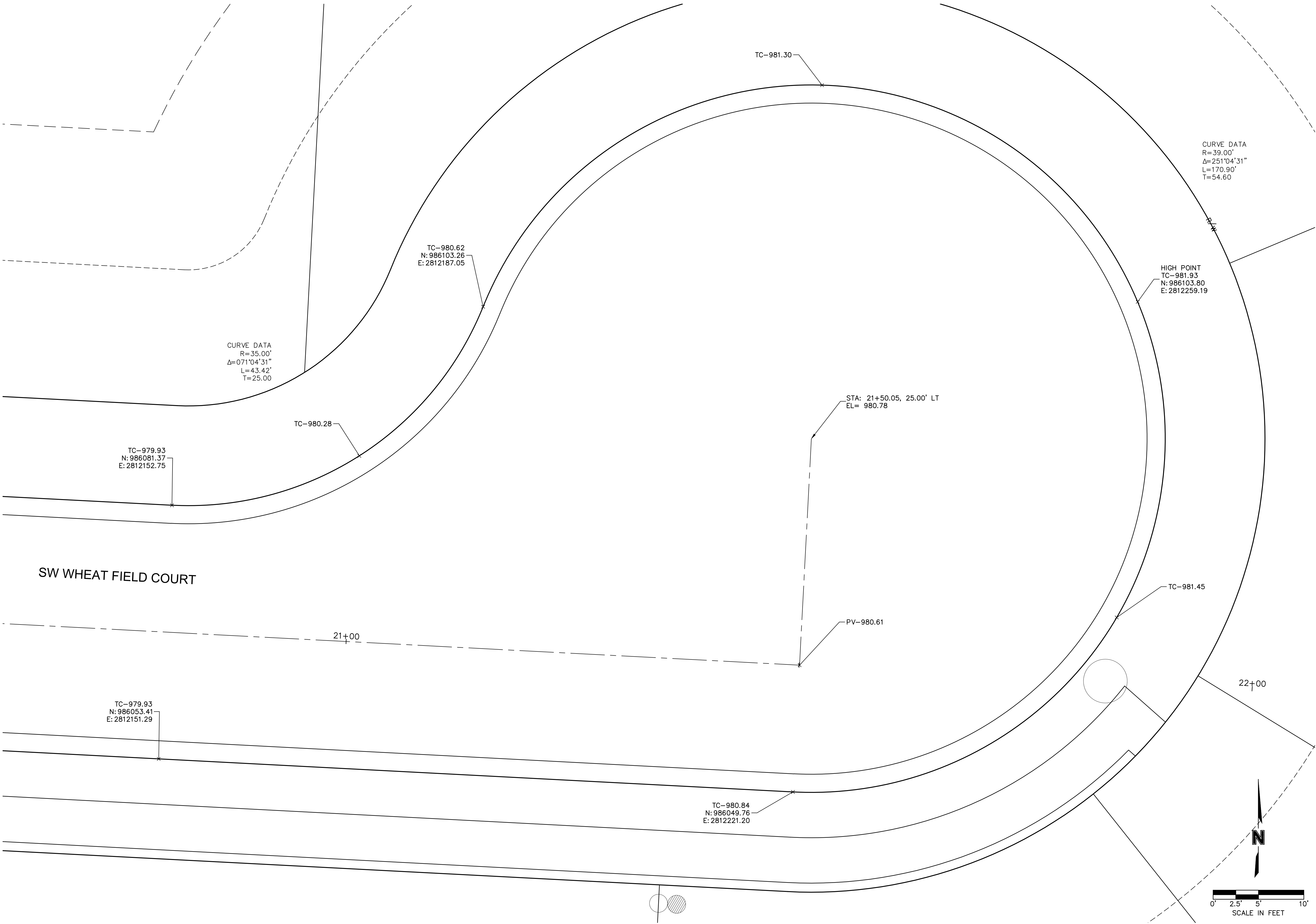
2020

drawn by: _____ CGW
checked by: _____ JES
approved by: _____ NDH
QA/QC by: _____ JES
project no.: _____ 019-4061
drawing no.: _____
date: _____ 04/20/2020

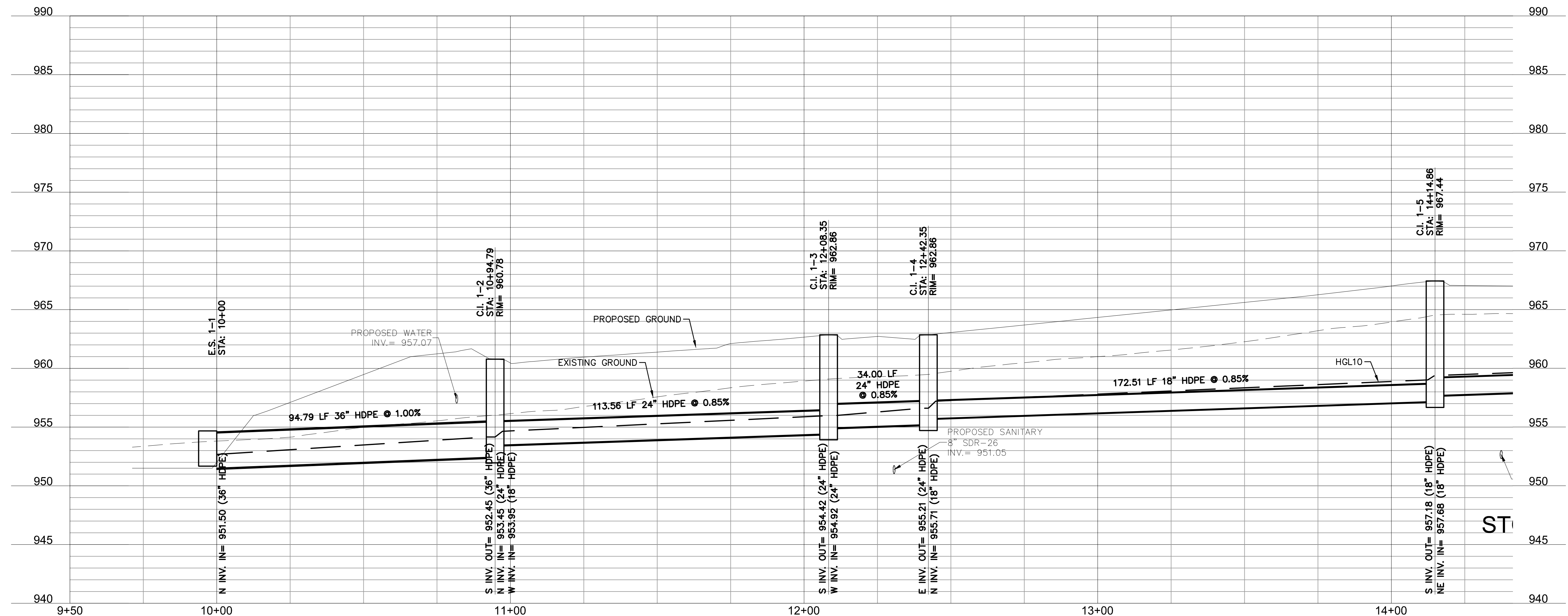
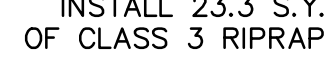
SHEET
C127

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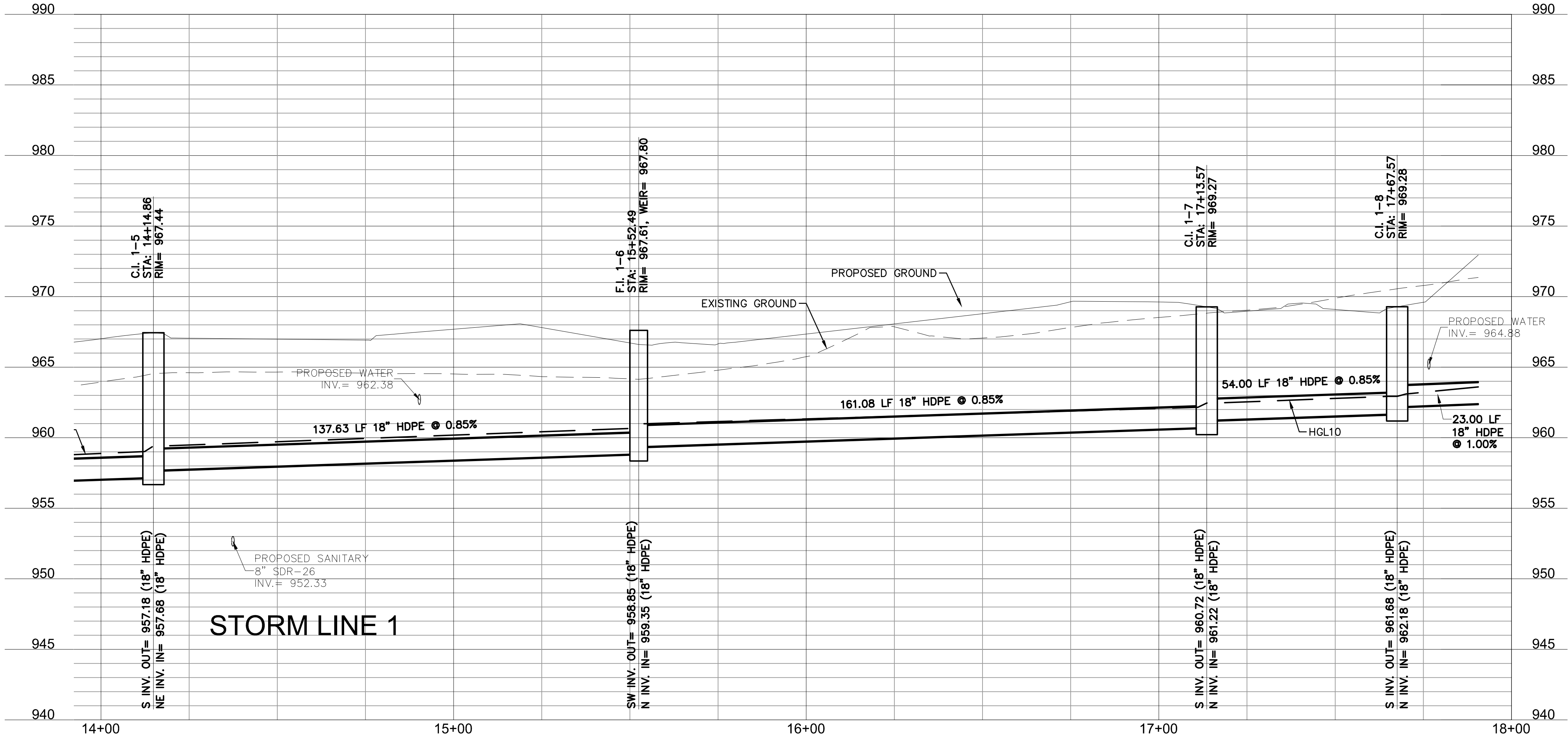
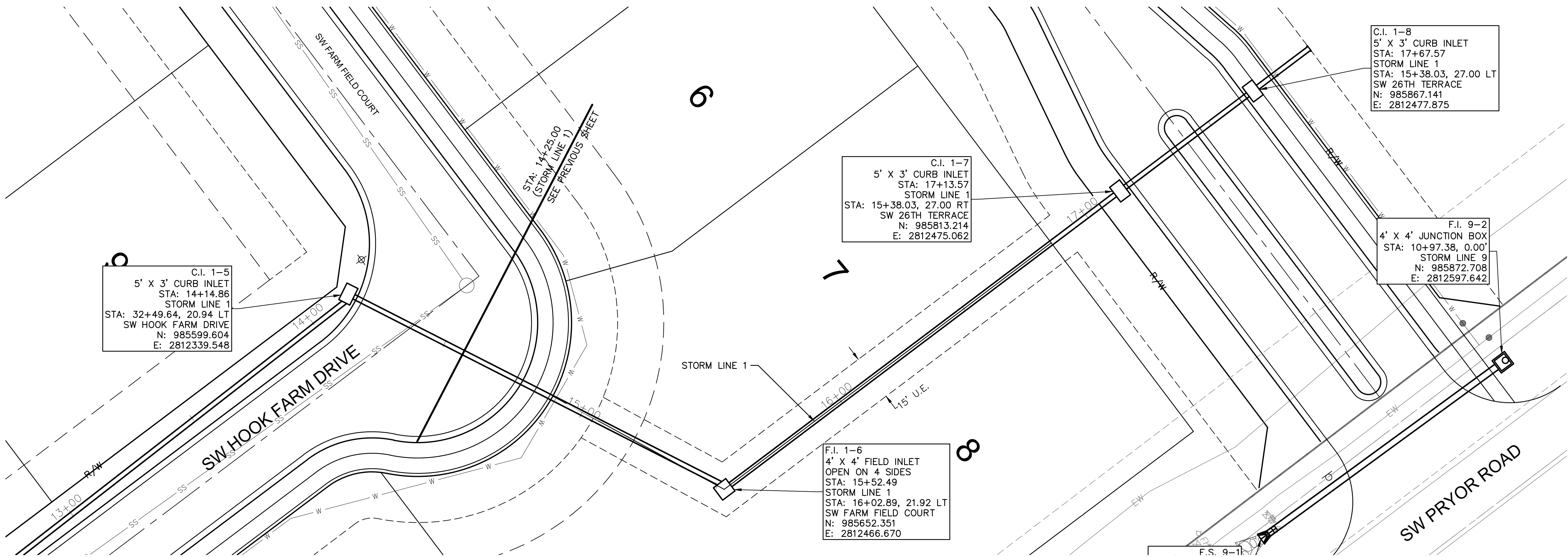
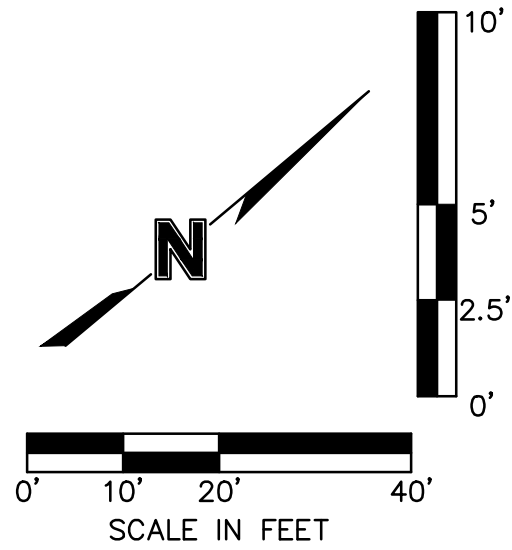
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*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18



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JULIE ELAINE SELLERS
Professional Engineer
NUMBER PE-2017000367
3/12/21

BY
DATE
REV. NO.
1 06/15/2020
2 06/25/2020
REVISED PER CITY COMMENTS
REVISED PER CITY COMMENTS

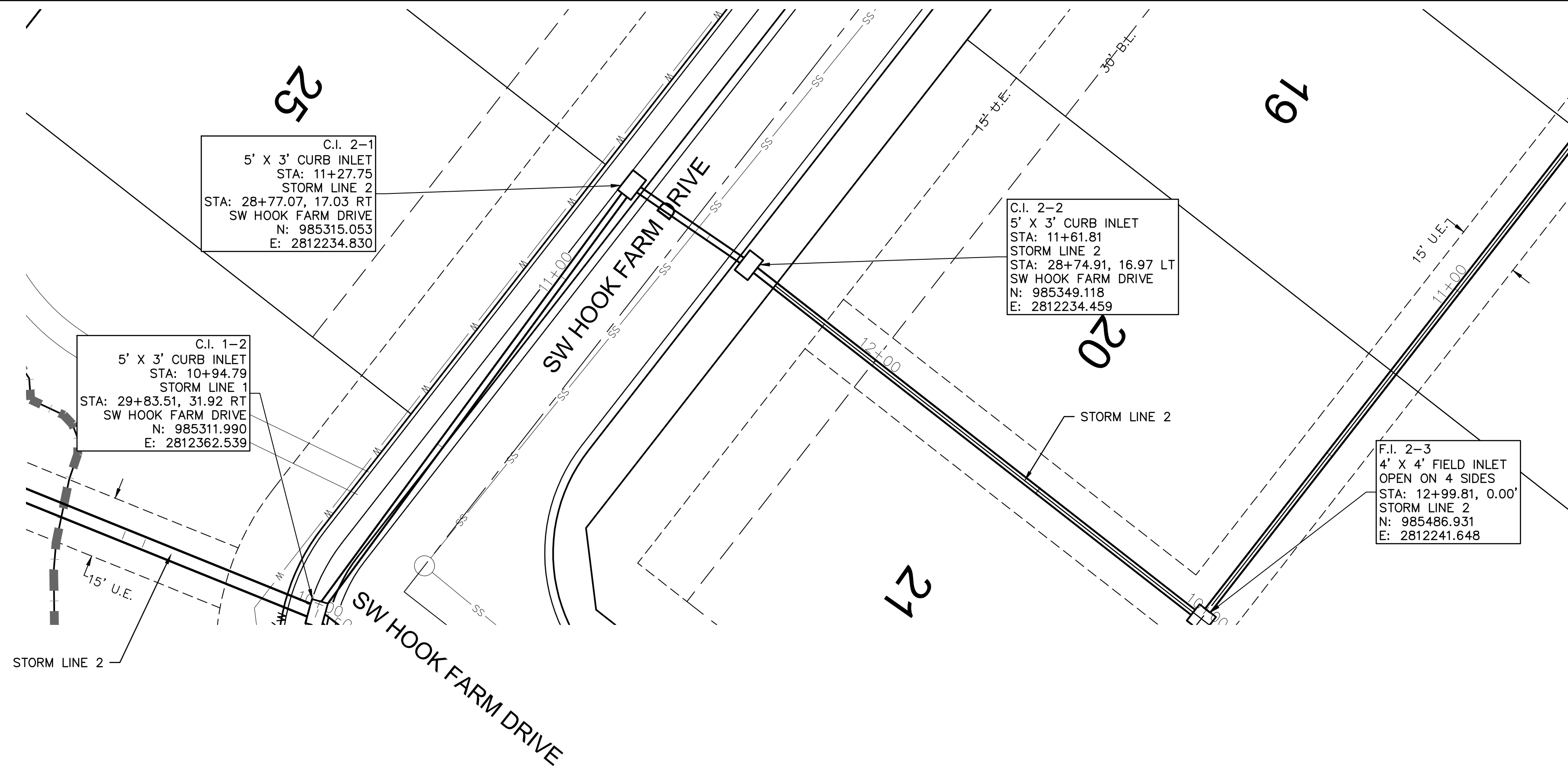
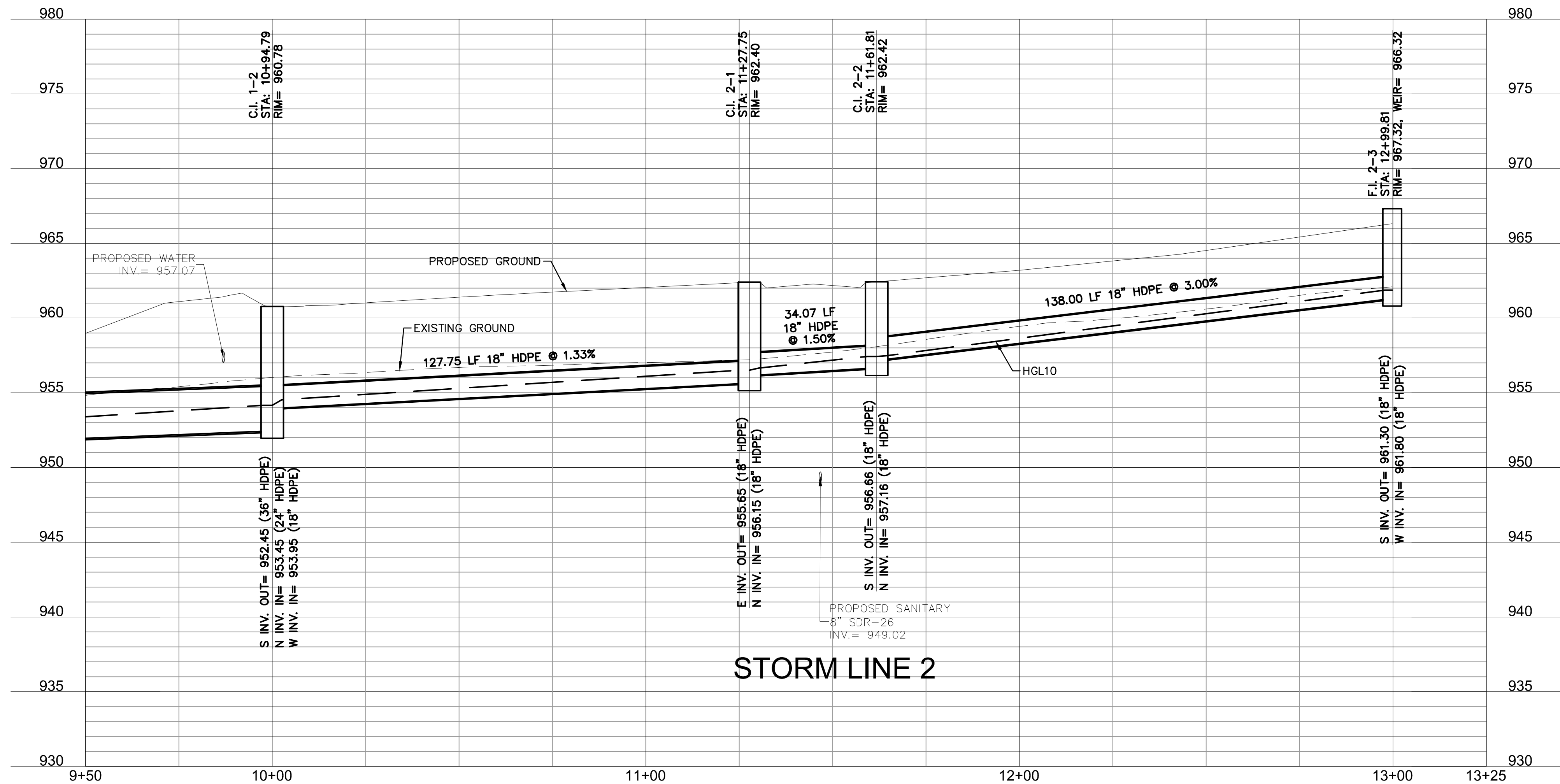
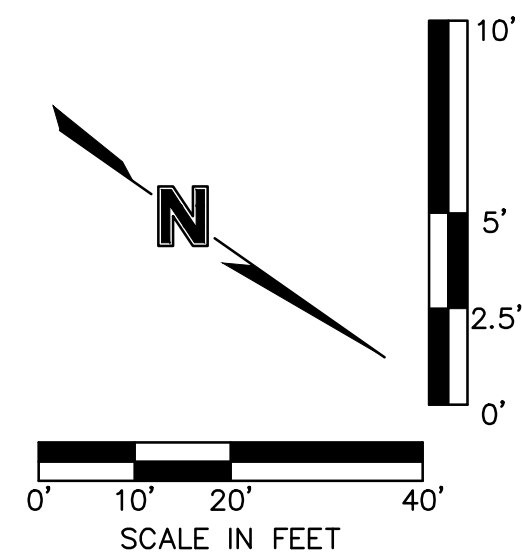
STORM SEWER PLAN & PROFILE (LINE 1 CONT'D)
STREET AND STORM SEWER PLANS
HOOK FARMS
FIRST PLAT
LEE'S SUMMIT, MO
2020

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C130

REVISIONS

61\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Street and Storm Plans\C_STM01_0194061.dwg
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USER: rheser



drawn by: _____ CGW
checked by: _____ JES
approved by: _____ NDH
QA/QC by: _____ JES
project no.: _____ 019-4061
drawing no.: _____
date: _____ 04/20/2020

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

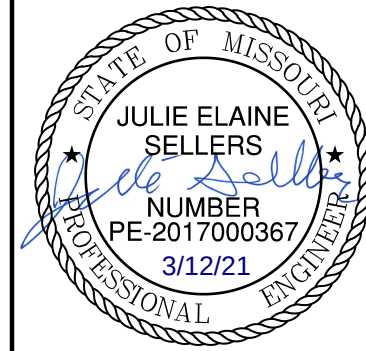
HOOK FARMS
FIRST PLAT

LEE'S SUMMIT. MO.

2020

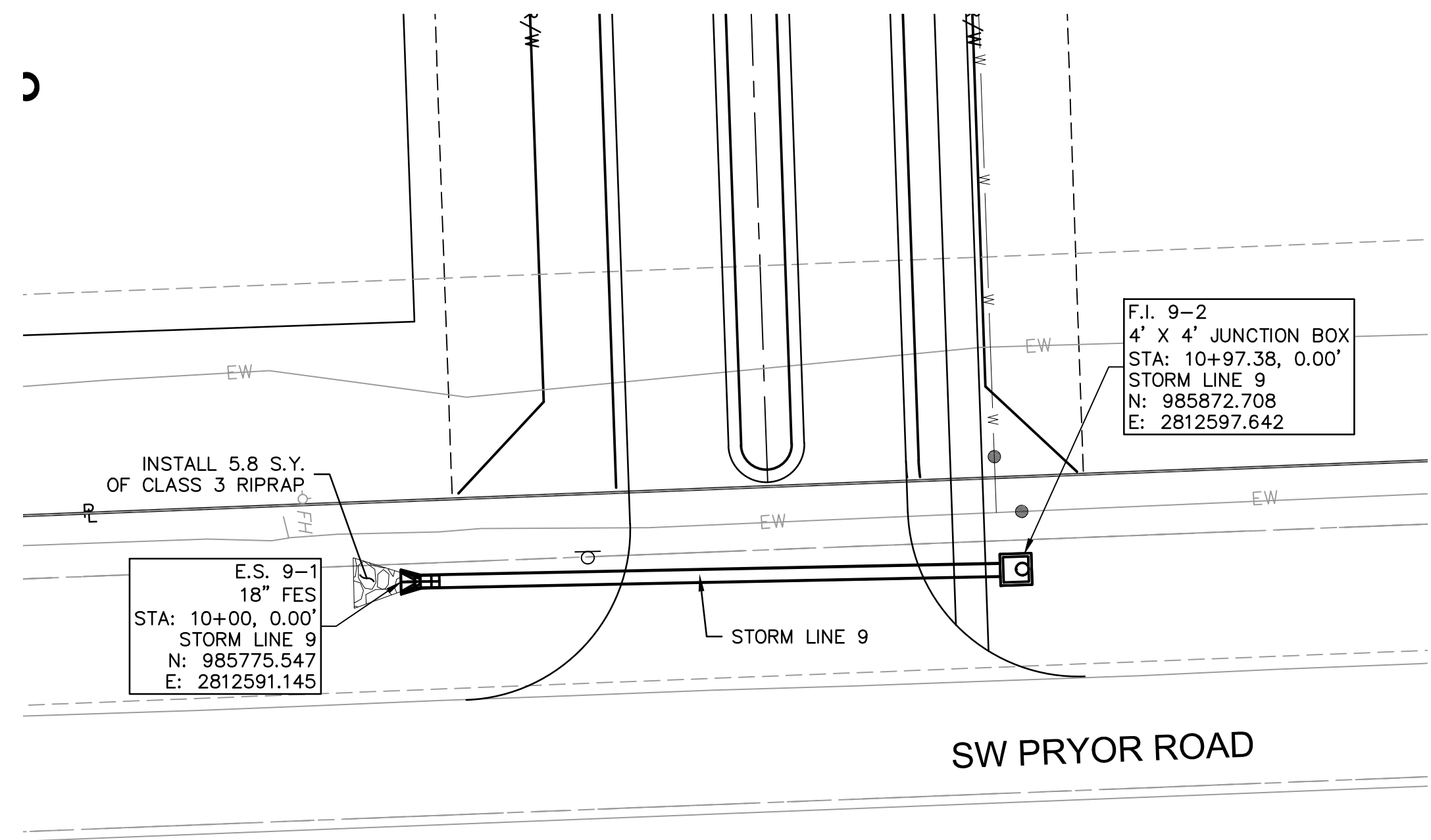
REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	
2	06/25/2020	REVISED PER CITY COMMENTS	



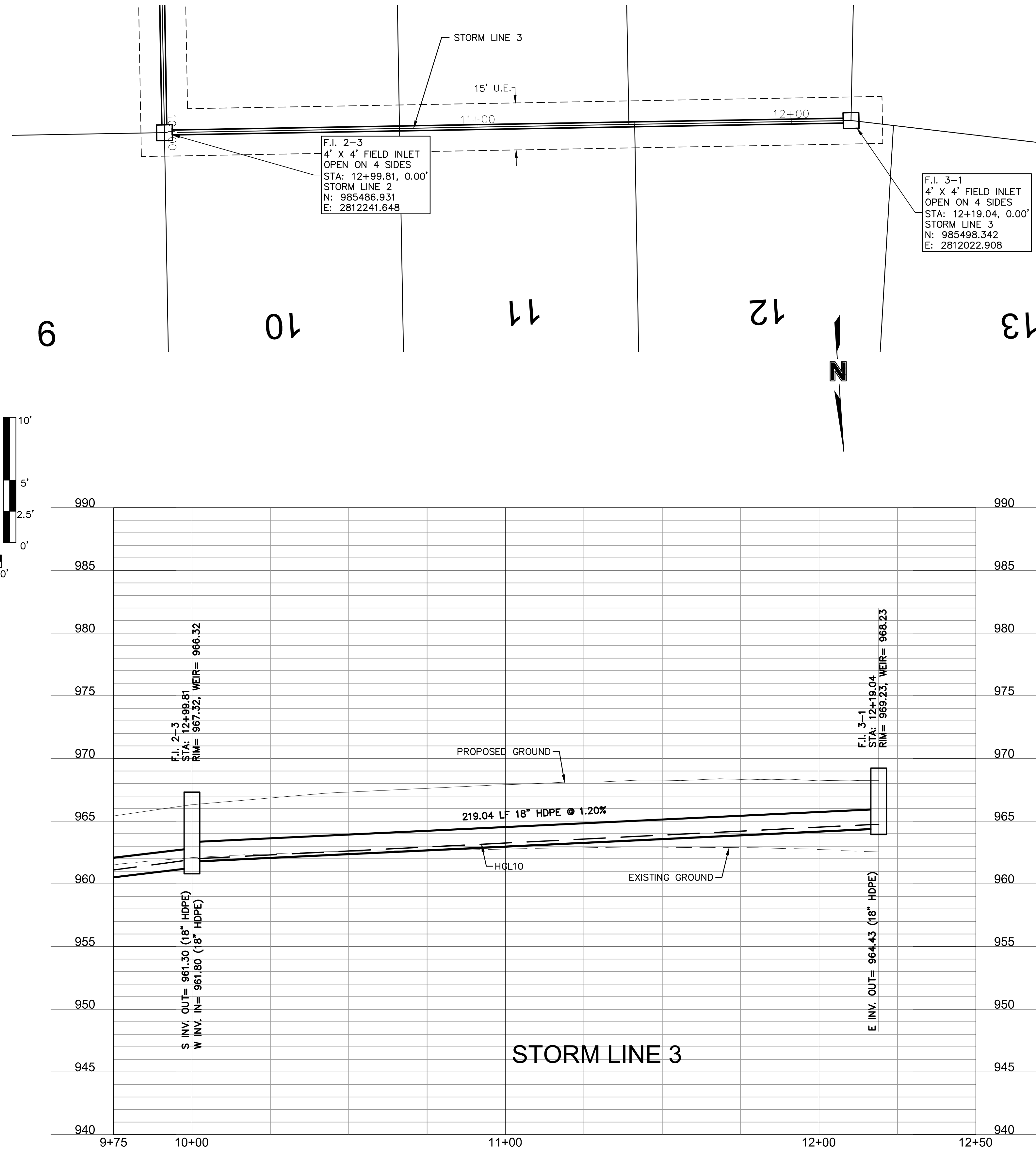
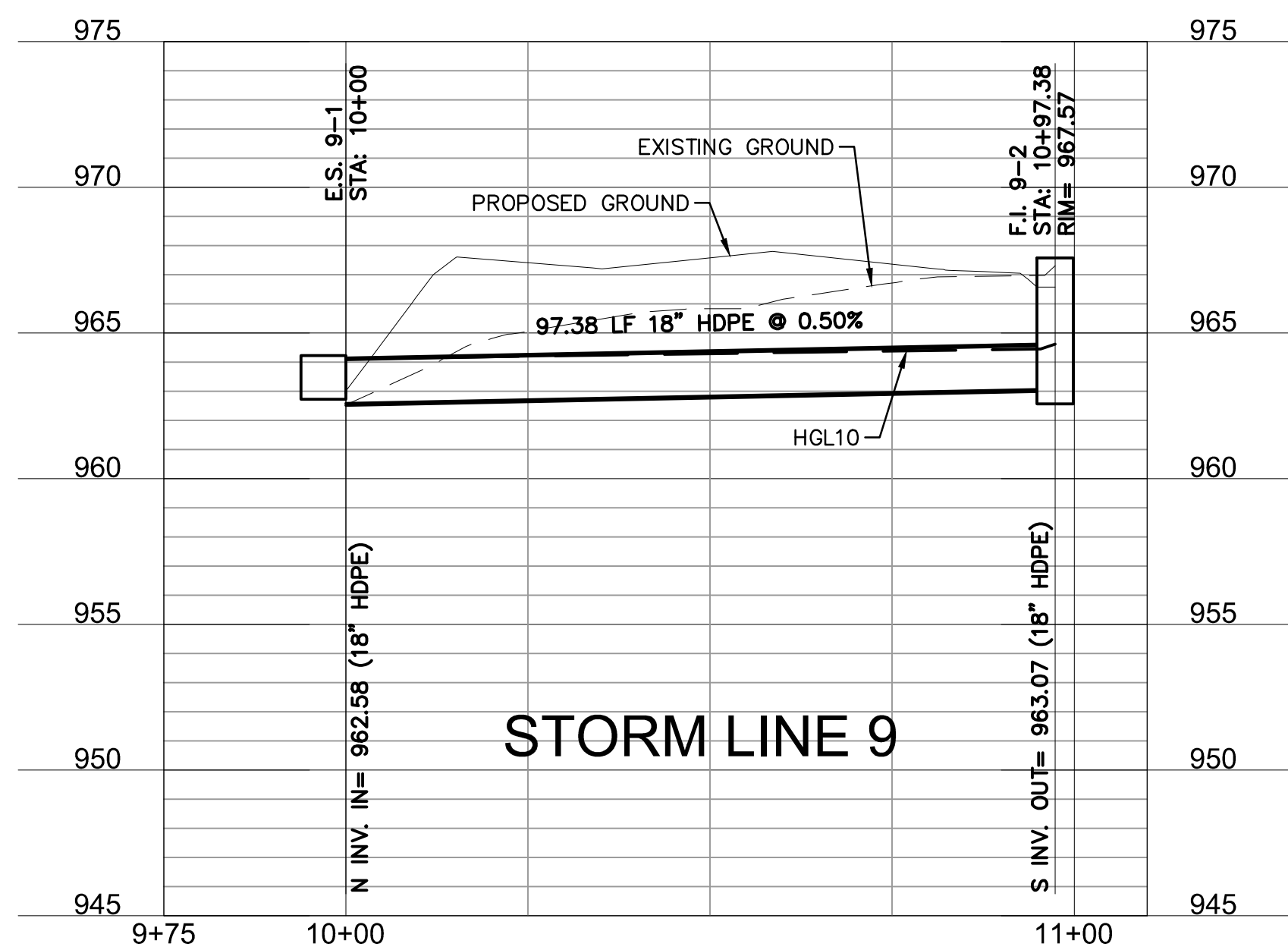
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Riprap Calculations							
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)	Area (SY)
E.S. 9-1	14.93	1.5	3	10	7.5	2.00	5.8

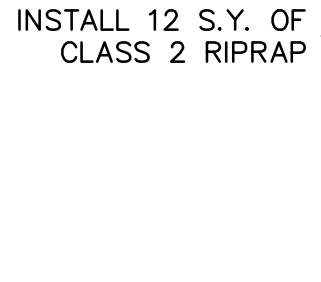
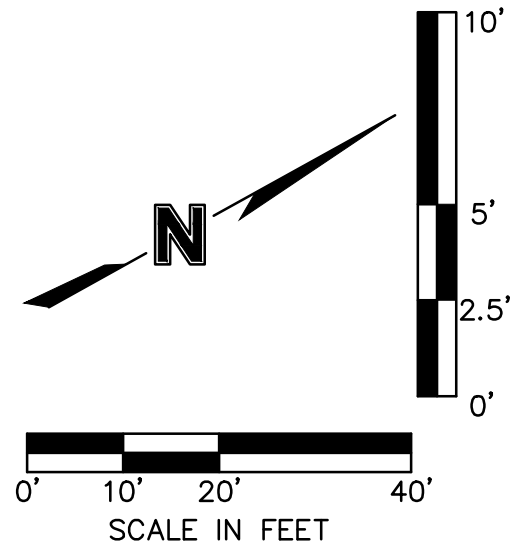
*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18



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USER: nheiser

Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Area (sq ft)
E.S. 4-1	27.38	2.5	2	6	10	12.0

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



E.S. 4-1
30" FES
STA: 10+00
STORM LINE 4
N: 985258.303
E: 2811631.226

33

32

C.I. 4-2
6' X 3' CURB INLET
STA: 11+98
STORM LINE 4
STA: 23+55.88, 17.00 RT
SW HOOK FARM DRIVE
N: 985431.176
E: 2811727.761

C.I. 4-3
6' X 3' CURB INLET
STA: 12+46.46
STORM LINE 4
STA: 23+90.41, 17.00 LT
SW HOOK FARM DRIVE
N: 985444.022
E: 2811774.492

SW HOOK FARM DRIVE

C.I. 5-1
5' X 3' CURB INLET
STA: 10+34
STORM LINE 5
STA: 10+44.00, 17.00 LT
SW FARM FIELD ROAD
N: 985497.337
E: 2811734.397

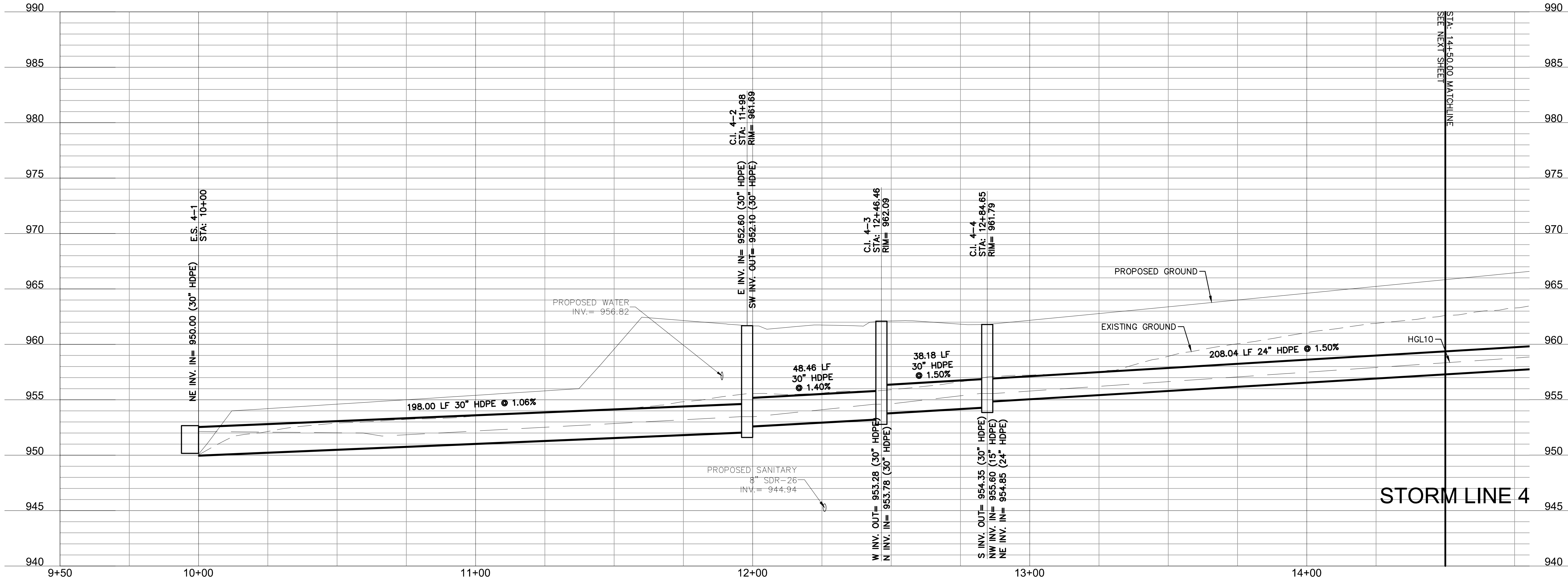
C.I. 4-4
6' X 3' CURB INLET
STA: 12+84.65
STORM LINE 4
STA: 10+44.00, 17.00 RT
SW FARM FIELD ROAD
N: 985480.760
E: 2811764.082

M.H. 4-5
60" MH
STA: 14+92.88
STORM LINE 4
STA: 12+52.04, 17.00 RT
SW FARM FIELD ROAD
N: 985662.394
E: 2811865.510

SW FARM FIELD ROAD

14

15



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JULIE ELAINE SELLERS
Professional Engineer
NUMBER PE-2017000367
3/12/21

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

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

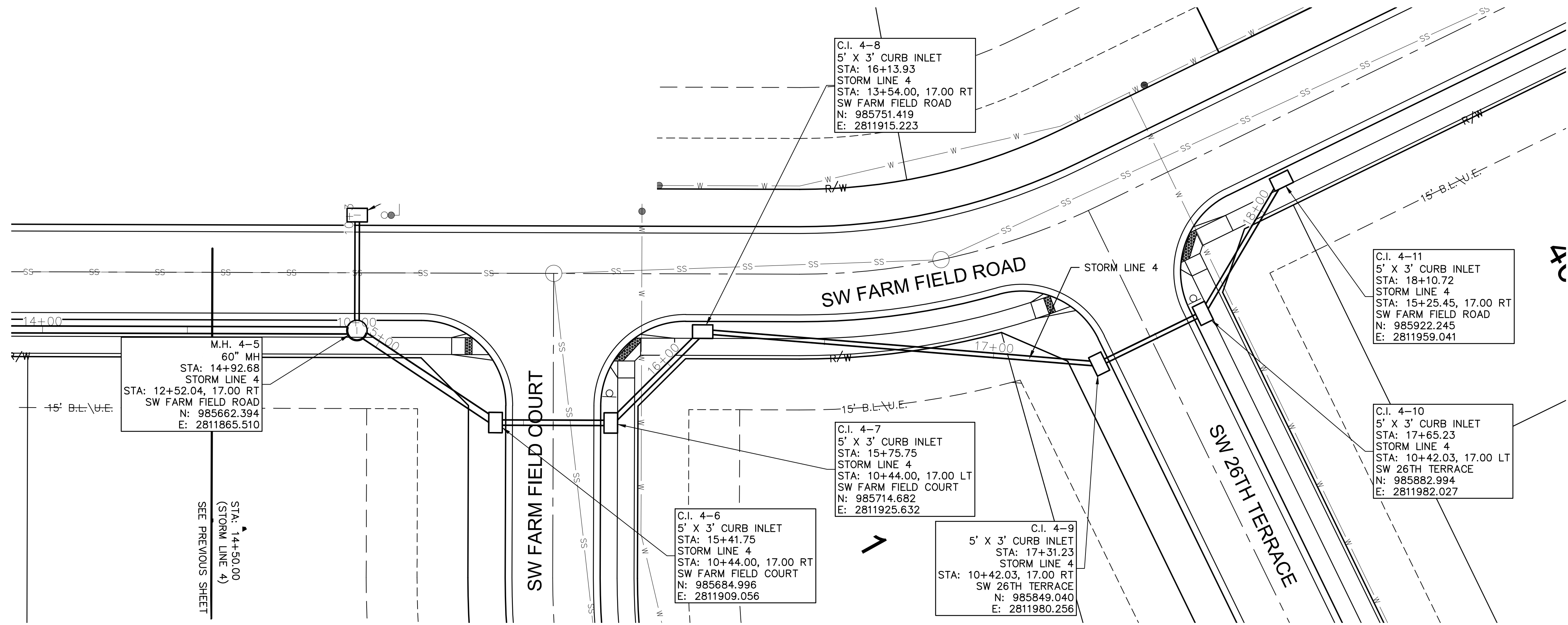
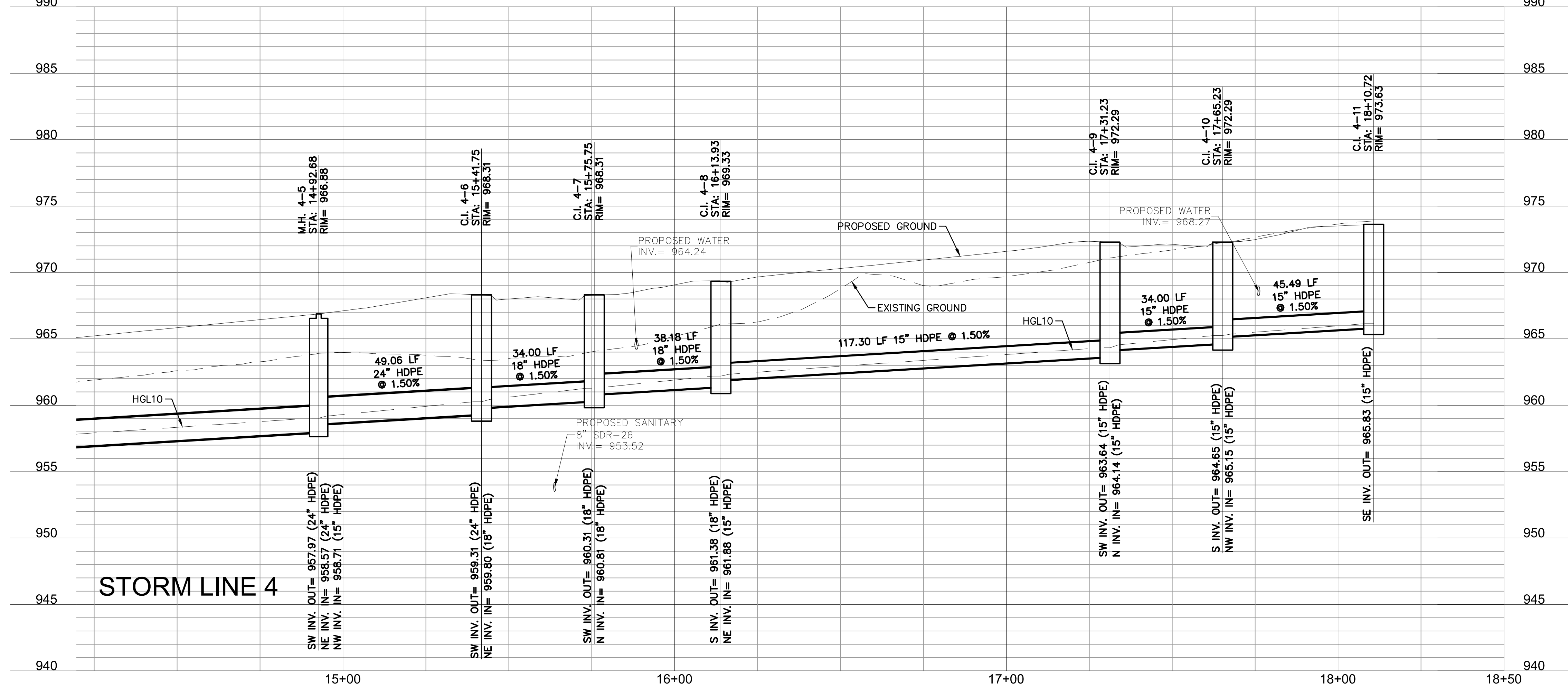
drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

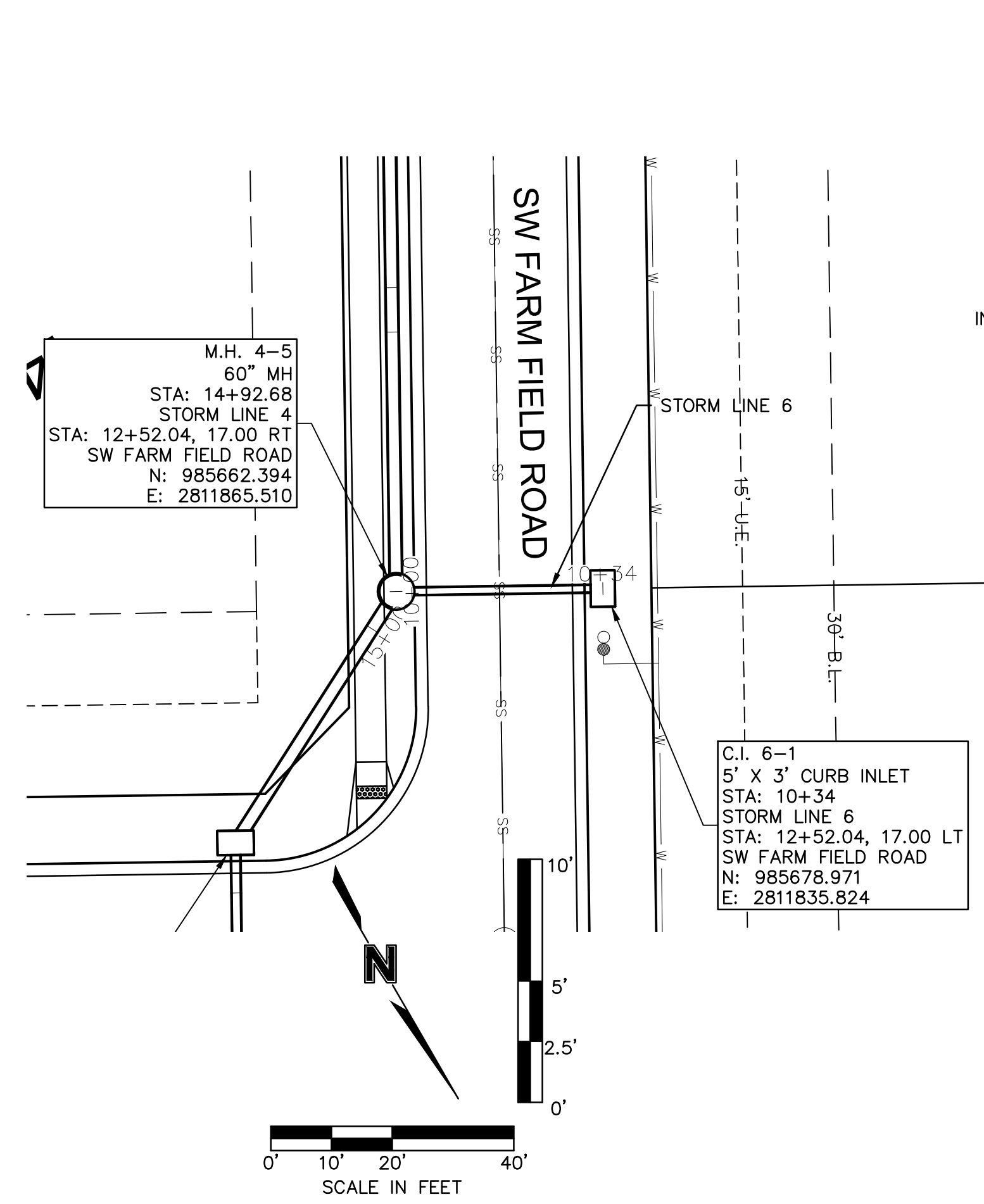
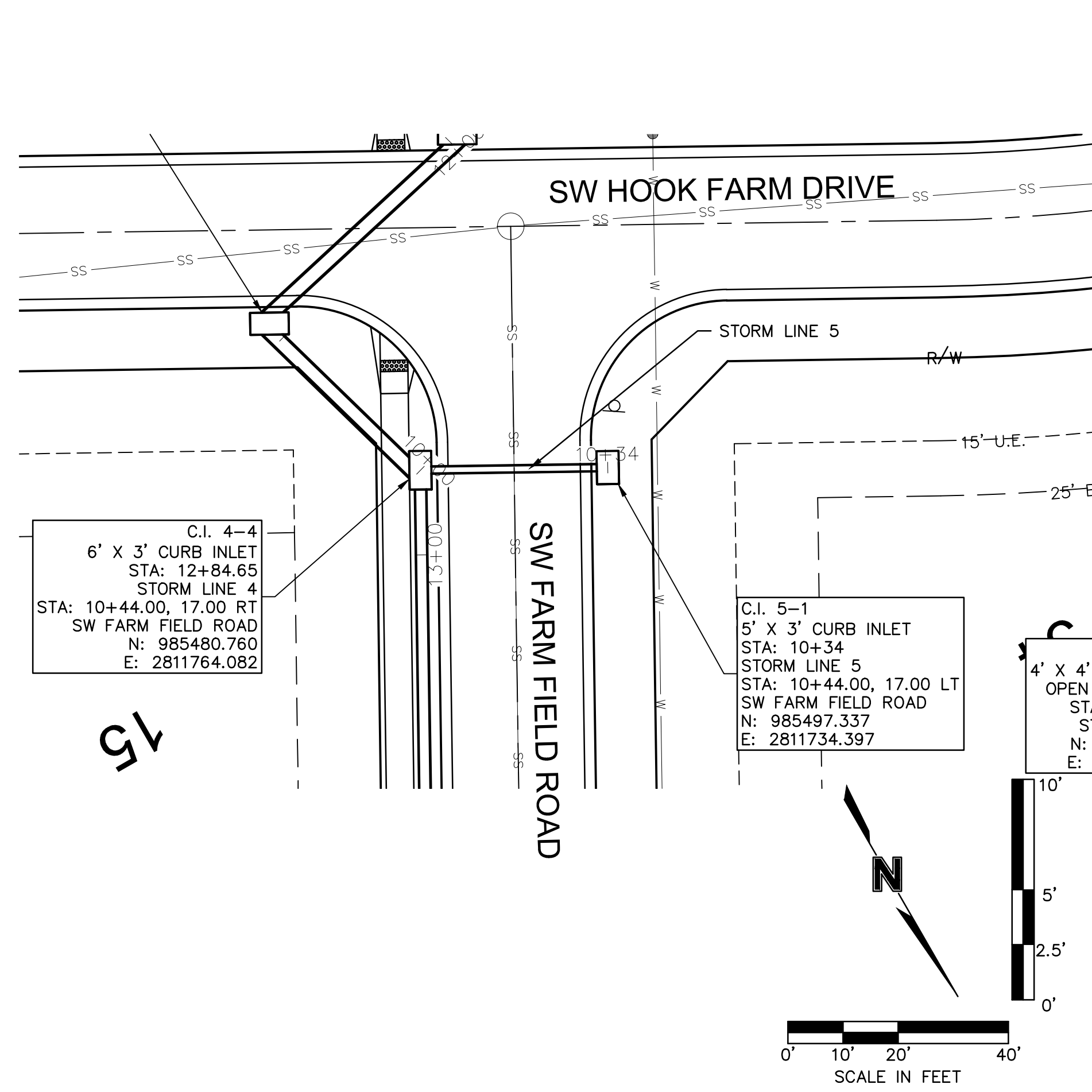
SHEET
C133

BY

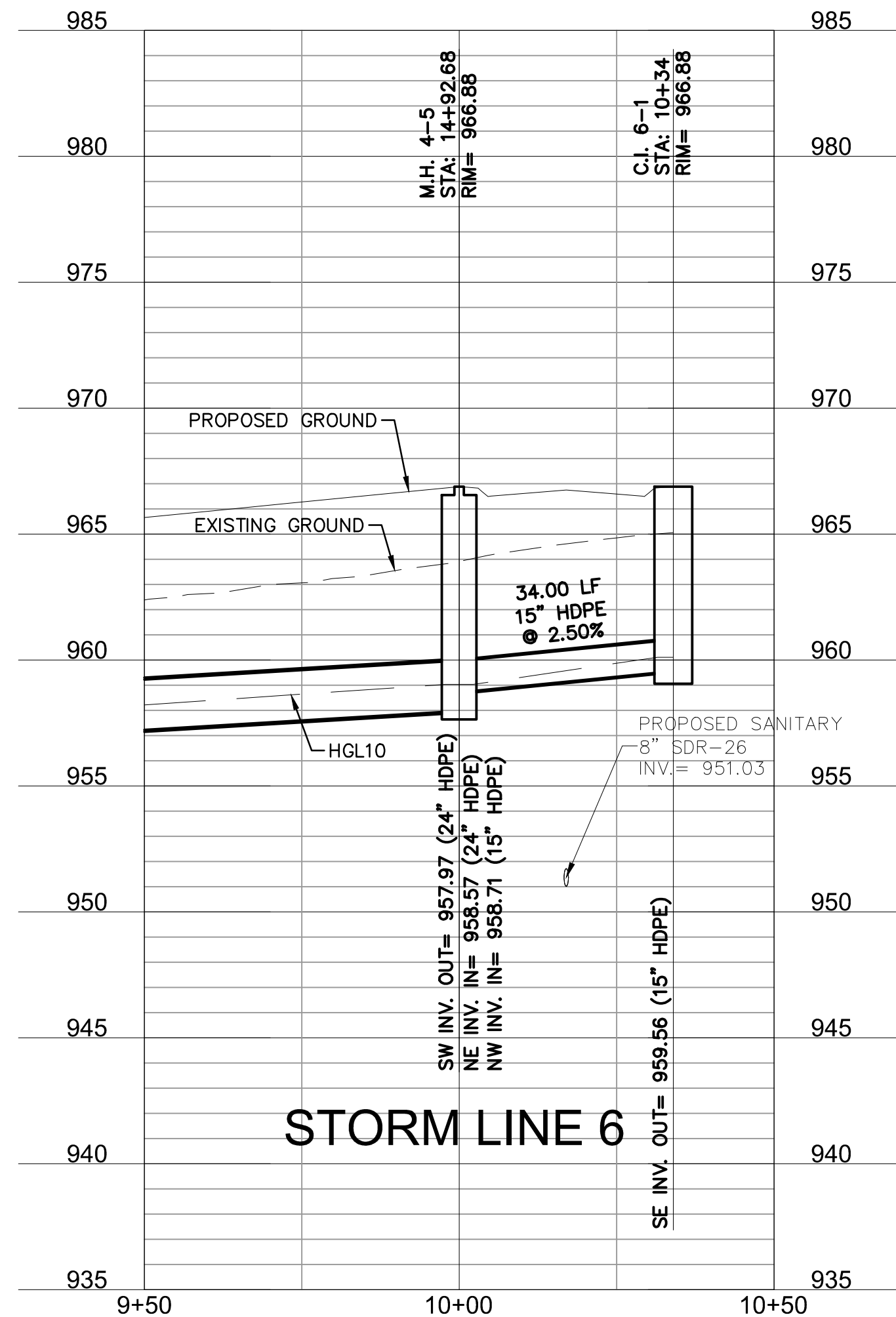
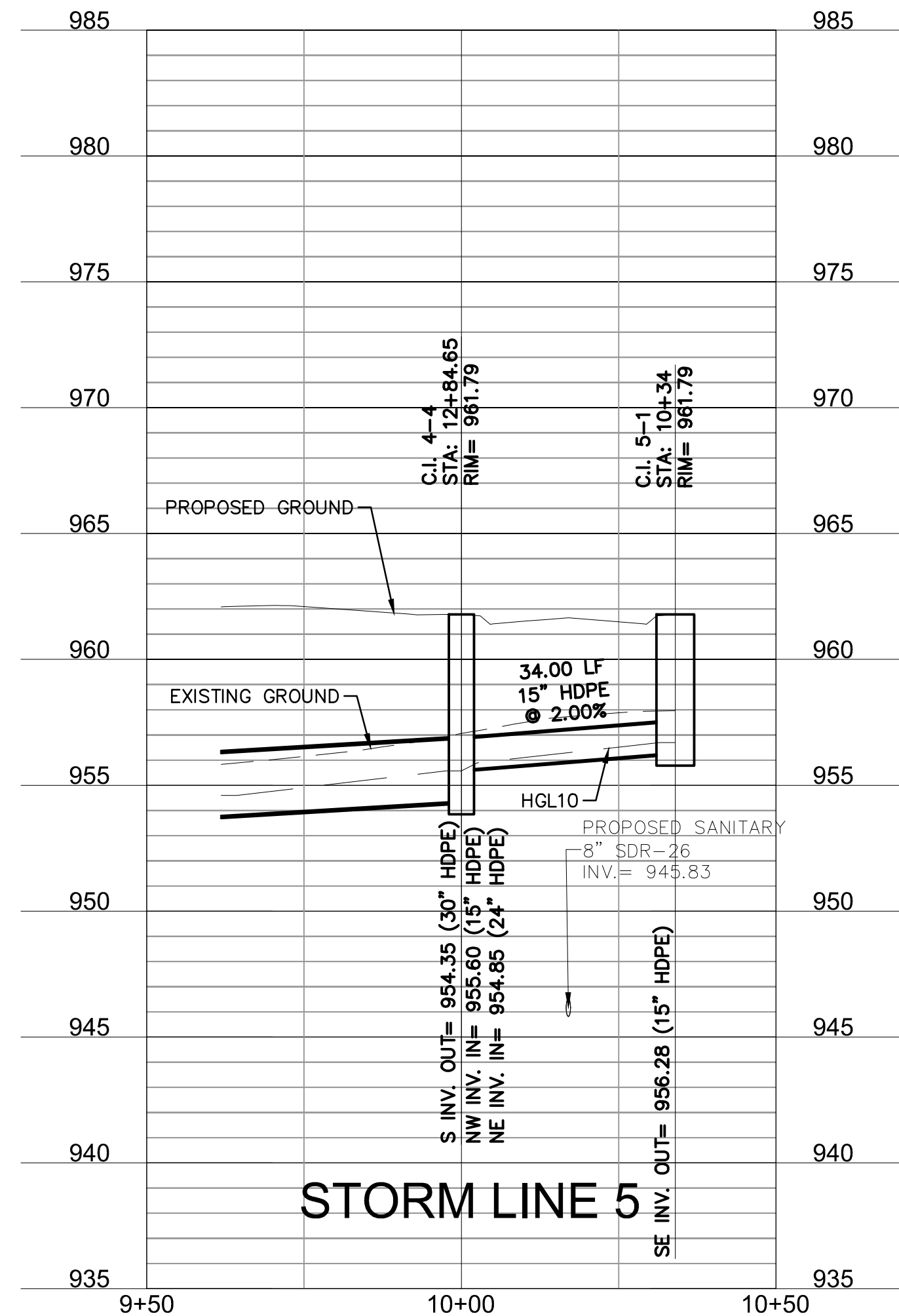
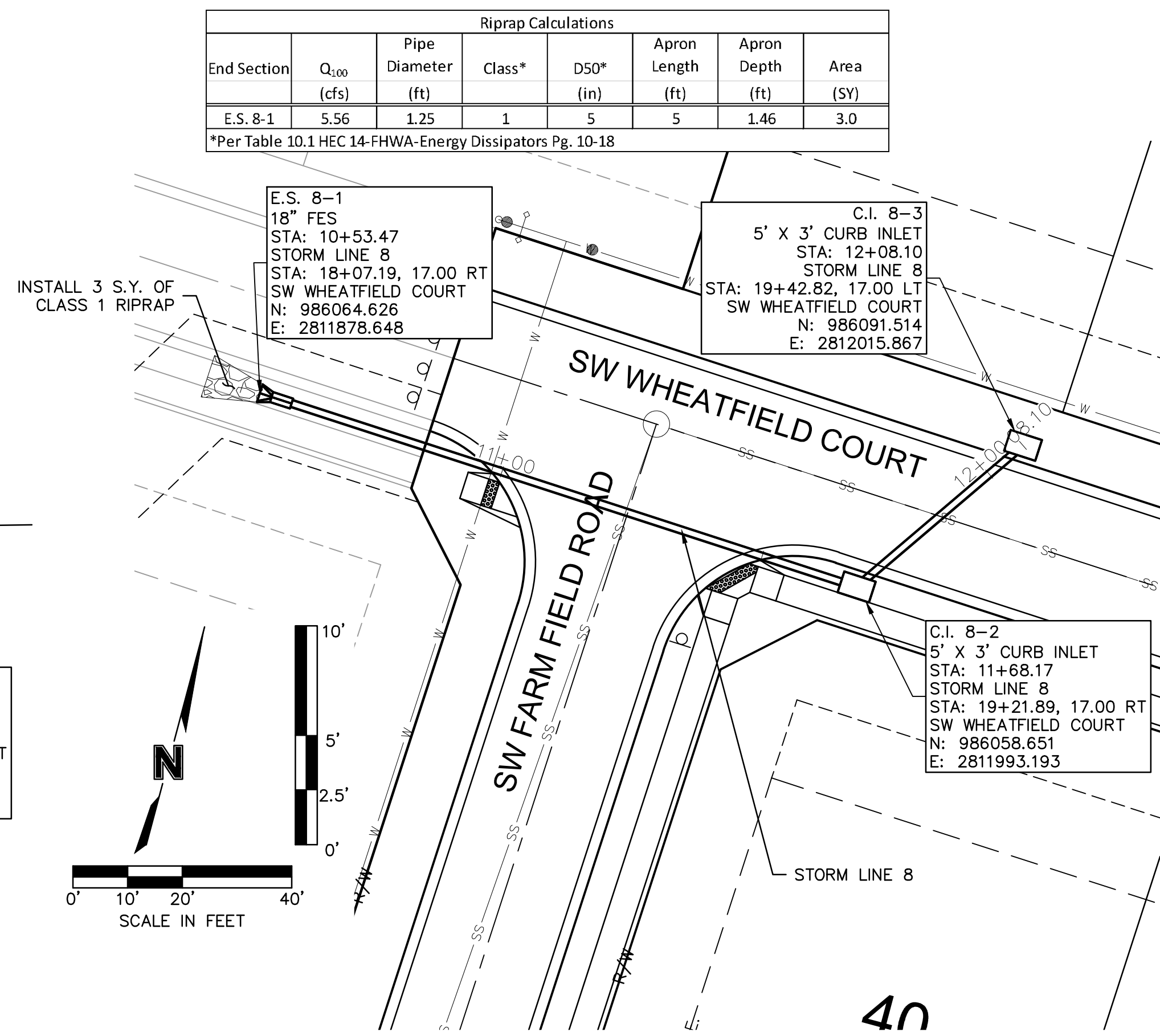
REVISIONS

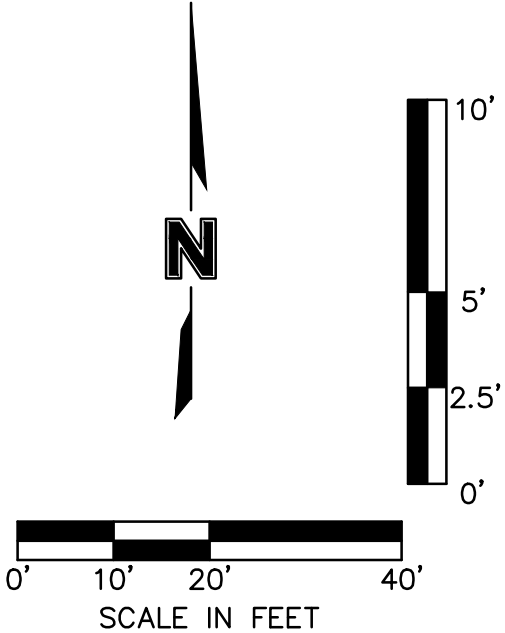
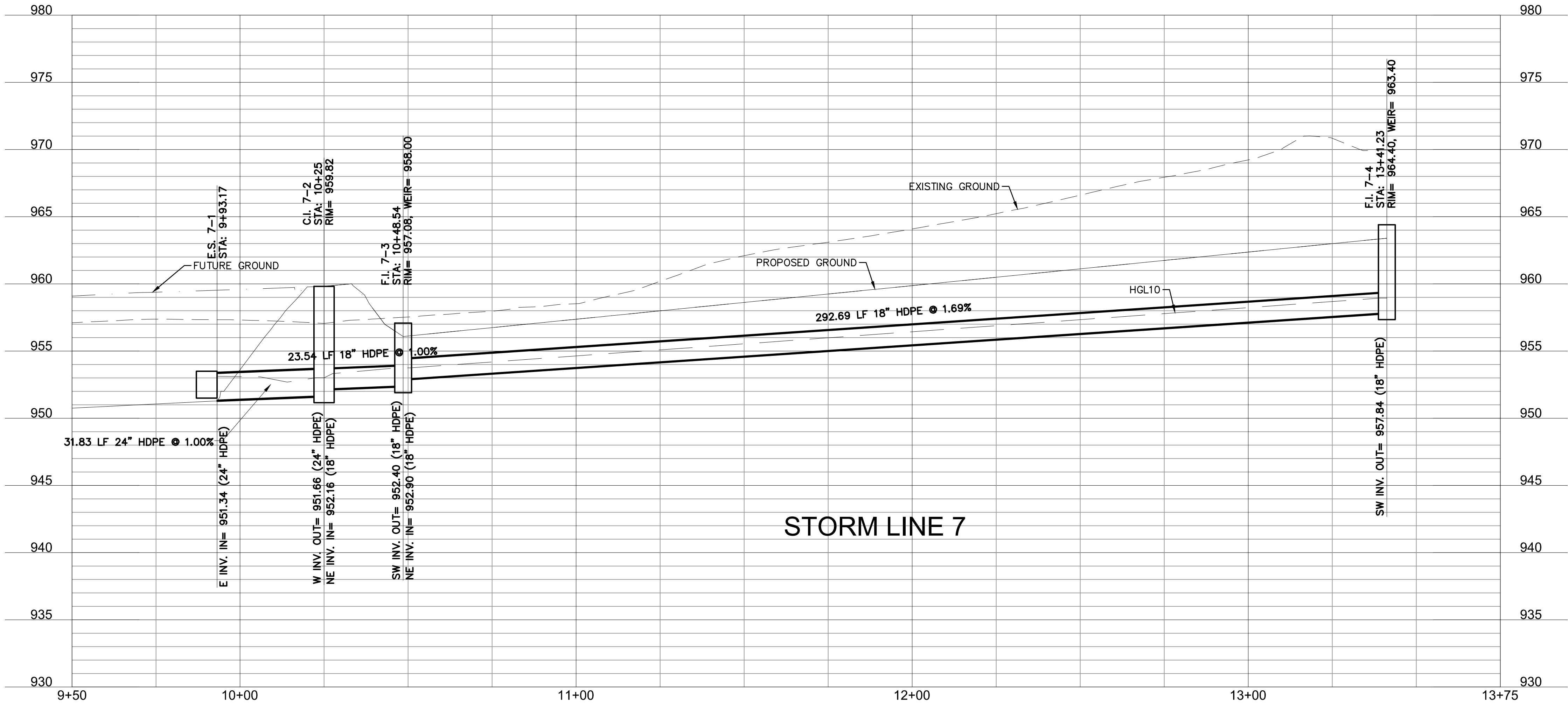
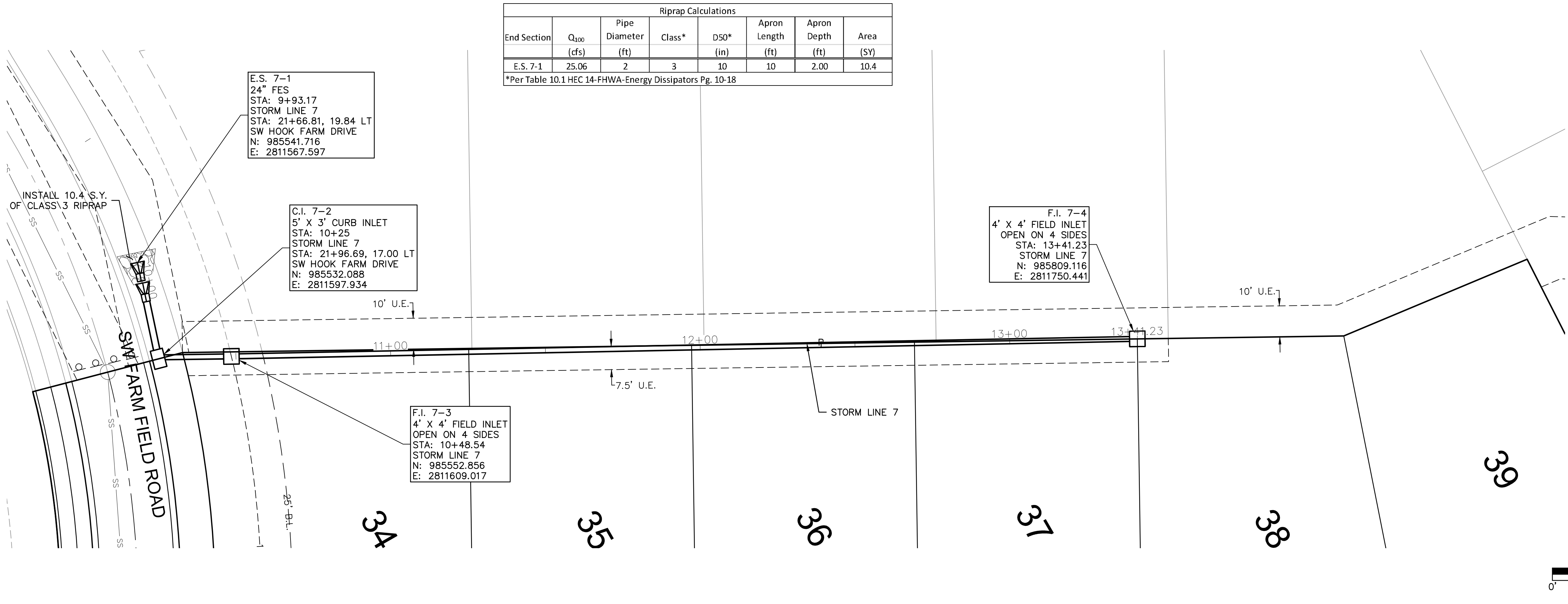
2020





Riprap Calculations							
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)	Area (SY)
E.S. 8-1	5.56	1.25	1	5	5	1.46	3.0
*Per Table 10.1 HEC 14 FHWA-Energy Dissipators Pg. 10-18							





Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
E.S. 7-1	25.06	2	3	10	10	2.00

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

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Professional Engineer
NUMBER PE-2017000367
3/12/21

BY
REVISIONS

STORM SEWER PLAN & PROFILE (LINE 7)
STREET AND STORM SEWER PLANS
HOOK FARMS
FIRST PLAT
LEE'S SUMMIT, MO
2020

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C136

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

NOTES:

MBOE - MINIMUM BUILDING OPENING ELEVATION

NOTES:
1. 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.

2. 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"

3. PLAT IS LOCATED OUTSIDE OF ANY REQUIRED BUFFER ZONES FOR NATURAL STREAMS.

4. 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.

5. REFER TO SHEET C105-C109 FOR SWALE GRADING DETAILS.

6. DRAINAGE PATHS TO BE CONSTRUCTED BETWEEN EACH OF THE LOTS LABELED AS STANDARD LOTS TO DRAIN WEST.

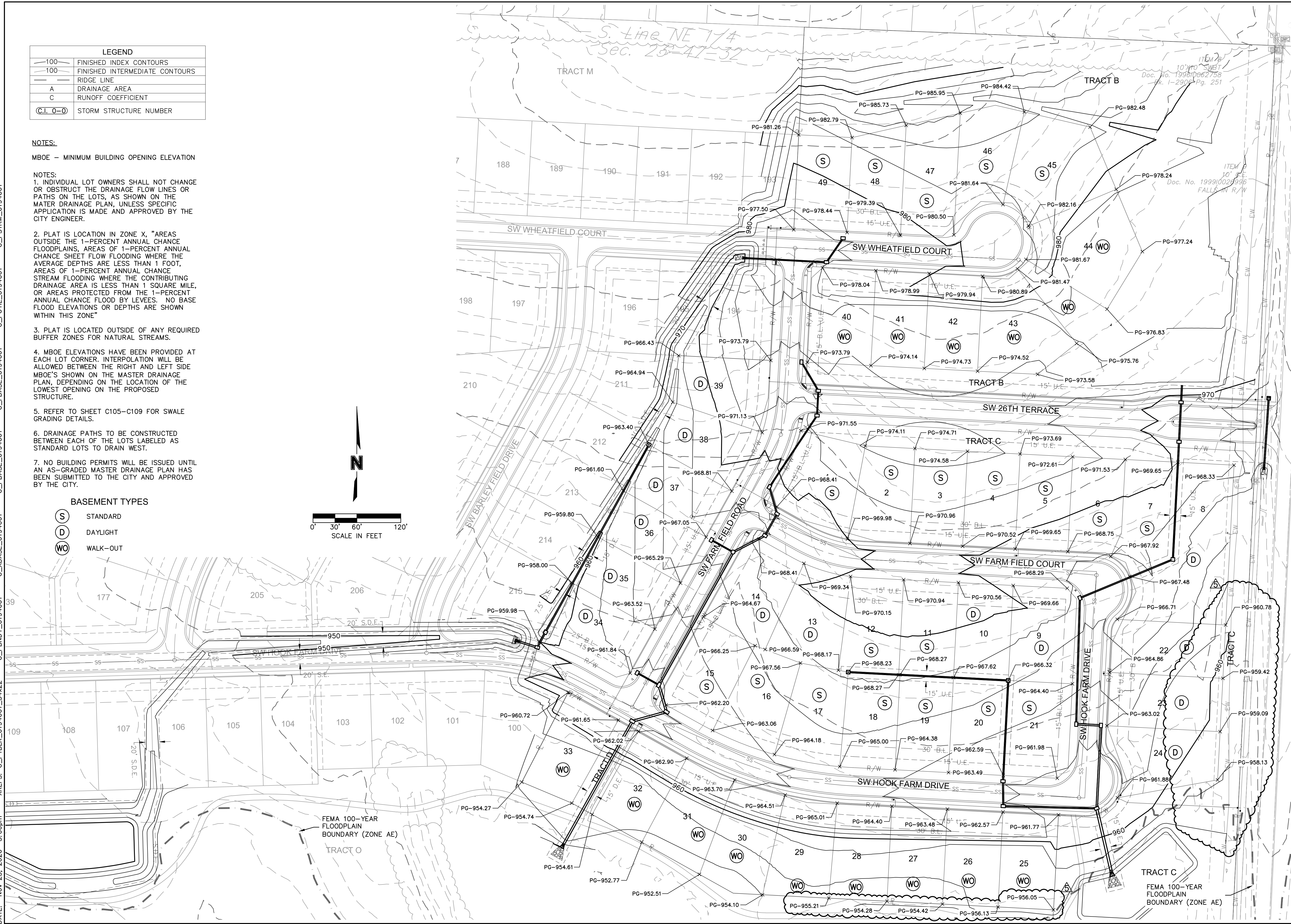
7. NO BUILDING PERMITS WILL BE ISSUED UNTIL AN AS-GRADED MASTER DRAINAGE PLAN HAS BEEN SUBMITTED TO THE CITY AND APPROVED BY THE CITY.

BASEMENT TYPES

- (S) STANDARD
(D) DAYLIGHT
(WO) WALK-OUT



N



MASTER DRAINAGE PLAN
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

2020

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C137



REV. NO.	DATE	REVISIONS DESCRIPTION
1	06/15/2020	REVISED PER CITY COMMENTS
2	06/25/2020	REVISED PER CITY COMMENTS
3	09/10/2020	REVISED PIPE INSULATION
4	10/01/2020	REVISED PER CITY COMMENTS
5	11/18/2020	REVISED LOTS 25-29 GRADING

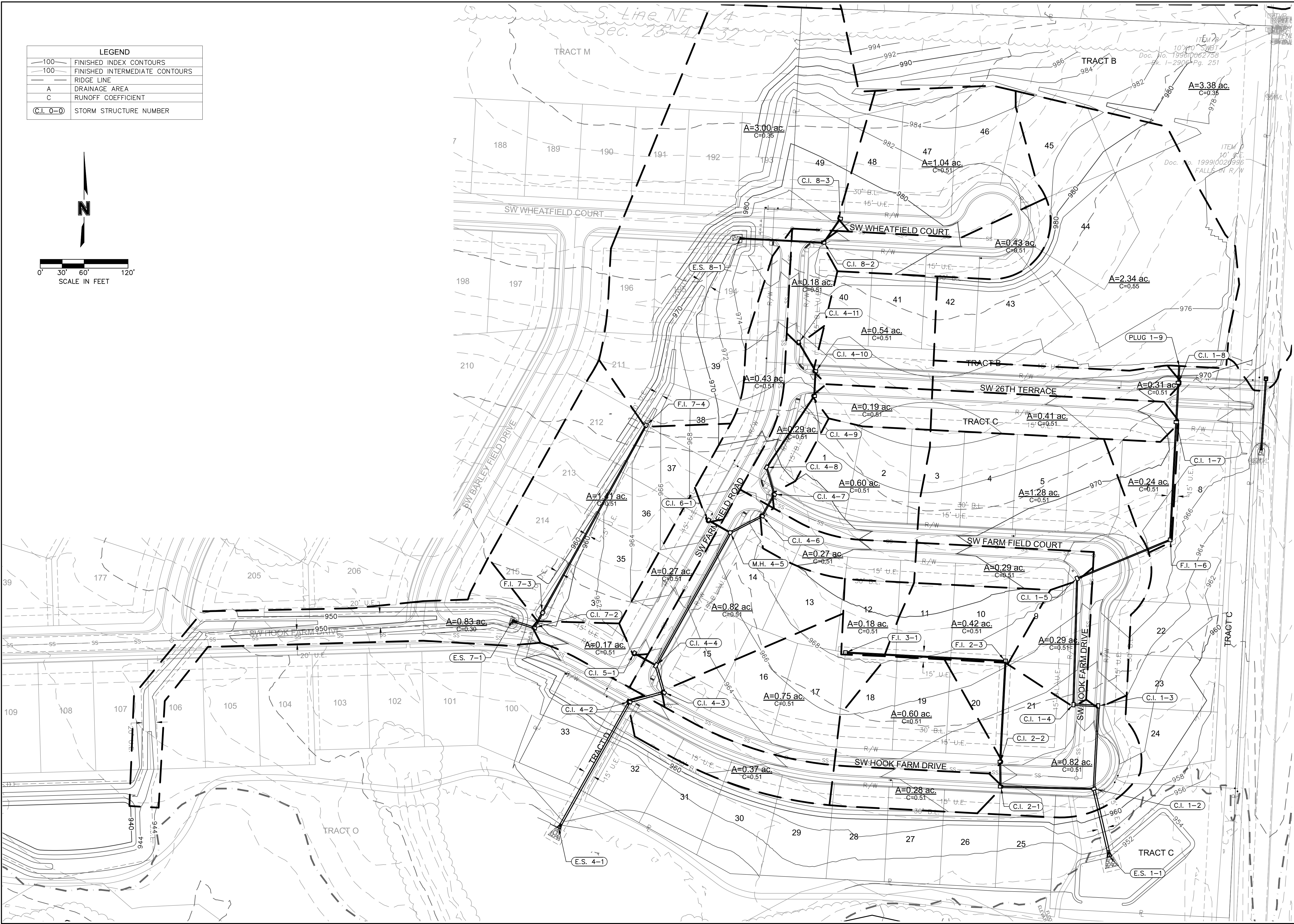
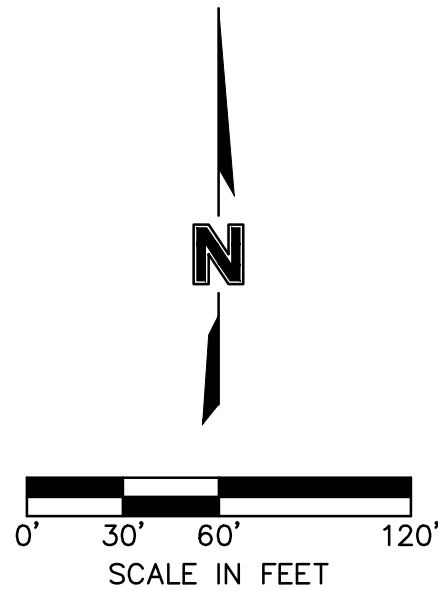
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LEGEND	
	100 FINISHED INDEX CONTOURS
	100 FINISHED INTERMEDIATE CONTOURS
	RIDGE LINE
	DRAINAGE AREA
	RUNOFF COEFFICIENT
	STORM STRUCTURE NUMBER



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JULIE ELAINE SELLERS
Professional Engineer
NUMBER PE-2017000367
3/12/21

BY

DATE

REV. NO.

REVISIONS DESCRIPTION

06/15/2020

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06/25/2020

2

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DRAINAGE PLAN
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C138

2020

REVISIONS

Inlet Design Table													
10 Year Return Frequency													
Inlet ID	Inlet Location	Peak Flow	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(L)	SAG	0.60	...	...	...	...	...	...	...	...	0.16	8.12	...
C.I. 1-2(R)	SAG	1.43	...	...	...	...	...	...	...	...	0.14	6.86	...
C.I. 1-2	SAG	3.08	1.89	4.97	0.80	19.40	15.52	4.97	0.00	100.00%	...	...	...
C.I. 1-3	GRADE	4.80	0.00	4.80	1.00	3.01	3.01	3.01	1.79	62.65%	0.21	10.54	...
C.I. 1-4	GRADE	1.09	0.11	1.19	1.00	1.06	1.06	1.06	0.13	89.12%	0.13	6.26	...
C.I. 1-5	GRADE	1.09	0.00	1.09	1.00	0.98	0.98	0.98	0.11	90.13%	0.12	6.04	...
F.I. 1-6	SAG	0.90	0.00	0.90	0.80	18.67	14.93	0.90	0.00	100.00%	...	...	0.07
C.I. 1-7	GRADE	1.54	0.00	1.54	1.00	1.49	1.49	1.49	0.04	97.14%	0.14	6.54	...
C.I. 1-8	GRADE	1.16	0.00	1.16	1.00	1.15	1.15	1.15	0.01	98.84%	0.13	5.89	...
PLUG 1-9	SAG	9.46	...	...	...	...	...	...	...	...	...	...	...
C.I. 2-1	GRADE	1.05	0.00	1.05	1.00	0.95	0.95	0.95	0.10	90.49%	0.12	5.96	...
C.I. 2-2	GRADE	2.25	0.00	2.25	1.00	1.80	1.80	1.80	0.45	79.97%	0.16	7.94	...
F.I. 2-3	SAG	1.58	0.00	1.58	0.80	18.67	14.93	1.58	0.00	100.00%	...	...	0.10
F.I. 3-1	SAG	0.68	0.00	0.68	0.80	18.67	14.93	0.68	0.00	100.00%	...	...	0.05
C.I. 4-2	GRADE	1.39	0.00	1.39	1.00	1.24	1.24	1.24	0.15	89.36%	0.13	6.62	...
C.I. 4-3	GRADE	2.81	0.00	2.81	1.00	2.20	2.20	2.20	0.61	78.28%	0.17	8.63	...
C.I. 4-4(L)	SAG	2.51	...	...	...	...	...	...	...	...	0.17	8.27	...
C.I. 4-4(R)	SAG	0.00	...	...	...	...	...	...	...	...	0.00	0.00	...
C.I. 4-4	SAG	3.08	0.09	3.17	0.80	23.28	18.63	3.17	0.00	100.00%	...	...	...
C.I. 4-6	GRADE	1.01	0.00	1.01	1.00	0.92	0.92	0.92	0.09	90.84%	0.12	5.88	...
C.I. 4-7	GRADE	2.25	0.00	2.25	1.00	1.80	1.80	1.80	0.45	79.97%	0.16	7.94	...
C.I. 4-8(L)	SAG	0.64	...	...	...	...	...	...	...	...	0.12	6.05	...
C.I. 4-8(R)	SAG	0.00	...	...	...	...	...	...	...	...	0.00	0.00	...
C.I. 4-8	SAG	1.09	0.45	1.54	0.80	19.40	15.52	1.54	0.00	100.00%	...	...	...
C.I. 4-9	GRADE	0.71	0.00	0.71	1.00	0.67	0.67	0.67	0.04	93.77%	0.10	5.16	...
C.I. 4-10	GRADE	2.03	0.00	2.03	1.00	1.66	1.66	1.66	0.37	81.81%	0.15	7.63	...
C.I. 4-11	GRADE	0.68	0.00	0.68	1.00	0.64	0.64	0.64	0.04	94.15%	0.10	5.05	...
C.I. 5-1	GRADE	1.01	0.34	1.35	1.00	1.18	1.18	1.18	0.17	87.71%	0.13	6.55	...
C.I. 6-1	GRADE	1.76	0.17	1.93	1.00	1.59	1.59	1.59	0.34	82.61%	0.15	7.49	...
C.I. 7-2	GRADE	0.64	0.61	1.25	1.00	1.11	1.11	1.11	0.14	88.63%	0.13	6.36	...
F.I. 7-3	SAG	5.29	0.00	5.29	0.80	18.67	14.93	5.29	0.00	100.00%	...	...	0.22
F.I. 7-4	SAG	7.72	0.00	7.72	0.80	18.67	14.93	7.72	0.00	100.00%	...	...	0.28
C.I. 8-2	GRADE	1.35	0.00	1.35	1.00	1.18	1.18	1.18	0.17	87.69%	0.13	6.55	...
C.I. 8-3	GRADE	4.16	0.00	4.16	1.00	2.77	2.77	2.77	1.40	66.43%	0.20	9.99	...
F.I. 9-1	SAG	8.70	0.00	8.70	0.80	18.67	14.93	8.70	0.00	100.00%	...	...	0.30

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						
10 Year Return Frequency						
Inlet ID	Drainage Area	C	Tc	i	K	Peak Flow
	(ac)		(min)	(in/hr)		(cfs)
C.I. 1-2(L)	0.16	0.51	5.00	7.35	1.00	0.60
C.I. 1-2(R)	0.38	0.51	5.00	7.35	1.00	1.43
C.I. 1-2(B)	0.28	0.51	5.00	7.35	1.00	1.05
C.I. 1-2	0.82	0.51	5.00	7.35	1.00	3.08
C.I. 1-3	1.28	0.51	5.00	7.35	1.00	4.80
C.I. 1-4	0.29	0.51	5.00	7.35	1.00	1.09
C.I. 1-5	0.29	0.51	5.00	7.35	1.00	1.09
F.I. 1-6	0.24	0.51	5.00	7.35	1.00	0.90
C.I. 1-7	0.41	0.51	5.00	7.35	1.00	1.54
C.I. 1-8	0.31	0.51	5.00	7.35	1.00	1.16
PLUG 1-9	2.34	0.55	5.00	7.35	1.00	9.46
C.I. 2-1	0.28	0.51	5.00	7.35	1.00	1.05
C.I. 2-2	0.60	0.51	5.00	7.35	1.00	2.25
F.I. 2-3	0.42	0.51	5.00	7.35	1.00	1.58
F.I. 3-1	0.18	0.51	5.00	7.35	1.00	0.68
C.I. 4-2	0.37	0.51	5.00	7.35	1.00	1.39
C.I. 4-3	0.75	0.51	5.00	7.35	1.00	2.81
C.I. 4-4(L)	0.67	0.51	5.00	7.35	1.00	2.51
C.I. 4-4(R)	0.00	0.51	5.00	7.35	1.00	0.00
C.I. 4-4(B)	0.15	0.51	5.00	7.35	1.00	0.56
C.I. 4-4	0.82	0.51	5.00	7.35	1.00	3.08
C.I. 4-6	0.27	0.51	5.00	7.35	1.00	1.01
C.I. 4-7	0.60	0.51	5.00	7.35	1.00	2.25
C.I. 4-8(L)	0.17	0.51	5.00	7.35	1.00	0.64
C.I. 4-8(R)	0.00	0.51	5.00	7.35	1.00	0.00
C.I. 4-8(B)	0.12	0.51	5.00	7.35	1.00	0.45
C.I. 4-8	0.29	0.51	5.00	7.35	1.00	1.09
C.I. 4-9	0.19	0.51	5.00	7.35	1.00	0.71
C.I. 4-10	0.54	0.51	5.00	7.35	1.00	2.03
C.I. 4-11	0.18	0.51	5.00	7.35	1.00	0.68
C.I. 5-1	0.27	0.51	5.00	7.35	1.00	1.01
C.I. 6-1	0.47	0.51	5.00	7.35	1.00	1.76
C.I. 7-2	0.17	0.51	5.00	7.35	1.00	0.64
F.I. 7-3	1.41	0.51	5.00	7.35	1.00	5.29
F.I. 7-4	3.00	0.35	5.00	7.35	1.00	7.72
C.I. 8-2	0.36	0.51	5.00	7.35	1.00	1.35
C.I. 8-3	1.11	0.51	5.00	7.35	1.00	4.16
F.I. 9-1	3.38	0.35	5.00	7.35	1.00	8.70

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)	Upstream Top Elev. (ft)
C.I. 8-2	E.S. 8-1	114.701	969.58	970.73	1.00	15	0.01	3.95	5.74	8.41	0.60	971.53	977.94
C.I. 8-3	C.I. 8-2	39.926	971.33	972.13	2.00	15	0.01	2.77	6.02	11.88	0.41	972.80	978.21
C.I. 4-2	E.S. 4-1	198.000	952.10	950.00	1.06	30	0.01	16.51	4.84	54.91	2.14	953.47 j	961.69
C.I. 4-3	C.I. 4-2	48.464	953.28	952.60	1.40	30	0.01	15.30	7.93	63.16	0.87	954.60	962.09
C.I. 4-4	C.I. 4-3	38.184	954.35	953.78	1.49	30	0.01	13.17	7.48	65.14	0.82	955.57	961.79
M.H. 4-5	C.I. 4-4	208.035	957.97	954.79	1.53	24	0.01	8.82	6.51	36.35	0.78	959.03	966.88
C.I. 4-6	M.H. 4-5	49.062	959.31	958.57	1.51	24	0.01	7.23	6.93	36.11	0.61	960.26	966.81
C.I. 4-7	C.I. 4-6	34.000	960.31	959.80	1.50	18	0.01	6.31	7.01	16.72	0.64	961.28	968.31
C.I. 4-8	C.I. 4-7	38.184	961.38	960.81	1.49	18	0.01	4.51	6.31	16.68	0.53	962.19	969.18
C.I. 4-9	C.I. 4-8	117.300	963.64	961.88	1.50	15	0.01	2.97	5.75	10.28	0.46	964.33	972.29
C.I. 4-10	C.I. 4-9	34.000	964.65	964.14	1.50	15	0.01	2.30	5.32	10.28	0.40	965.26	972.29
C.I. 4-11	C.I. 4-10	45.486	965.83	965.15	1.49	15	0.01	0.64	3.66	10.26	0.21	966.14	973.57
C.I. 1-2	E.S. 1-1	94.790	952.45	951.50	1.00	36	0.01	28.03	8.84	86.80	1.17	954.16	960.78
C.I. 1-3	C.I. 1-2	113.558	954.42	953.45	0.85	24	0.01	18.05	8.13	27.17	1.19	955.95	962.86
C.I. 1-4	C.I. 1-3	34.000	955.21	954.92	0.85	24	0.01	15.04	7.64	27.16	1.06	956.61	962.86
C.I. 1-5	C.I. 1-4	172.513	957.18	955.71	0.85	18	0.01	13.98	7.91	12.60	1.50	959.02	967.44
F.I. 1-6	C.I. 1-5	137.631	958.85	957.68	0.85	18	0.01	13.00	7.36	12.59	1.50	960.66	968.80
C.I. 1-7	F.I. 1-6	161.082	960.72	959.35	0.85	18	0.01	12.10	6.90	12.59	1.50	962.16	968.91
C.I. 1-8	C.I. 1-7	54.000	961.68	961.22	0.85	18	0.01	10.61	6.78	12.60	1.24	962.93	968.91
PLUG 1-9	C.I. 1-8	23.000	962.41	962.18	1.00	18	0.01	9.46	7.32	13.65	0.92	963.60	967.43
C.I. 2-1	C.I. 1-8	127.746	955.65	953.95	1.33	18	0.01	5.01	6.34	15.75	0.58	956.51	962.40
C.I. 2-2	C.I. 2-1	34.068	956.66	956.15	1.50	18	0.01	4.06	6.11	16.70	0.50	957.43	962.42
F.I. 2-3	C.I. 2-2	138.000	961.30	957.16	3.00	18	0.01	2.26	6.06	23.65	0.31	961.87	967.32
F.I. 3-1	F.I. 2-3	219.038	964.43	961.80	1.20	18	0.01	0.68	3.46	14.96	0.22	964.74	969.23
C.I. 6-1	M.H. 4-5	34.000	959.61	958.71	2.65	15	0.01	1.59	4.96	13.66	0.32	960.11	966.88
C.I. 7-2	E.S. 7-1	31.830	951.66	951.34	1.01	24	0.01	14.17	5.53	29.48	1.78	953.01 j	959.82
F.I. 7-3	C.I. 7-2	23.540	952.40	952.16	1.02	18	0.01	13.01	8.32	13.79	1.16	953.75	956.08
F.I. 7-4	F.I. 7-3	292.690	957.84	952.90	1.69	15	0.01	7.72	7.71	10.91	0.85	958.94	963.40
C.I. 5-1	C.I. 4-4	34.000	956.27	955.62	1.91	15	0.01	1.18	4.62	11.61	0.27	956.70	961.79
F.I. 9-1	E.S. 9-1	97.38	963.07	962.58	0.50	18	0.010	8.70	5.02	9.68	1.50	964.45	967.57

