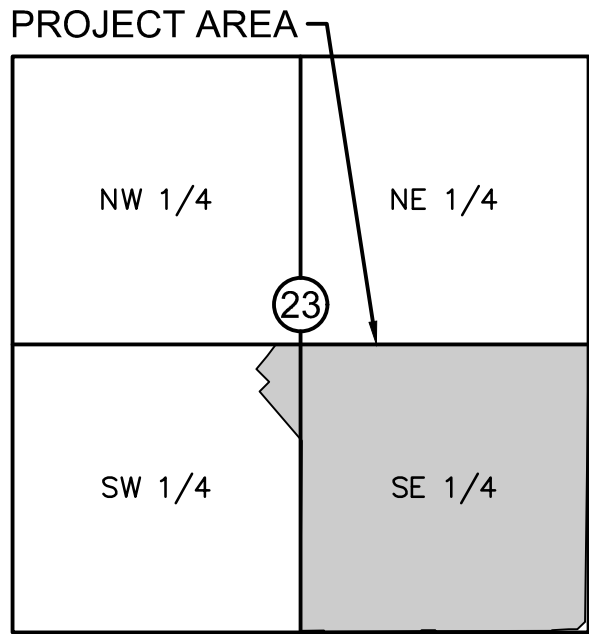


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USER: nhaisier



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

HOOK FARMS FIRST PLAT STREET AND STORM SEWER PLANS

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



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 2005I0087407 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.

Sheet List Table	
Sheet Number	Sheet Title
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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TEL 816.361.1177
FAX 816.361.1888
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TITLE SHEET STREET AND STORM SEWER PLANS	HOOK FARMS FIRST PLAT	2020	LEE'S SUMMIT, MO	REVISIONS	BY										
					REV. NO.	1	2	3	4	5	6				
					REVISIONS DESCRIPTION	DATE	06/15/2020	06/25/2020	09/10/2020	10/01/2020	11/18/2020				
							REVISED PER CITY COMMENTS	REVISED PER CITY COMMENTS	REVISED PER CITY COMMENTS	REVISED PER CITY COMMENTS	REVISED PER CITY COMMENTS				
							REVISED PIPE INSULATION	REVISED PER CITY COMMENTS	REVISED PER CITY COMMENTS	REVISED PER CITY COMMENTS	REVISED PER CITY COMMENTS				
							REVISED LOTS 25-29 GRADING	REVISED LOTS 25-29 GRADING	REVISED LOTS 25-29 GRADING	REVISED LOTS 25-29 GRADING	REVISED LOTS 25-29 GRADING				
							REVISED ADA RAMPS	REVISED ADA RAMPS	REVISED ADA RAMPS	REVISED ADA RAMPS	REVISED ADA RAMPS				
drawn by: CGW						checked by: JES									
approved by: NDH						QA/QC by: JES									
project no.: 019-4061						drawing no.: 019-4061									
date: 04/20/2020															
SHEET C101															

REFERENCES

- ## EXISTING CONDITIONS

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.

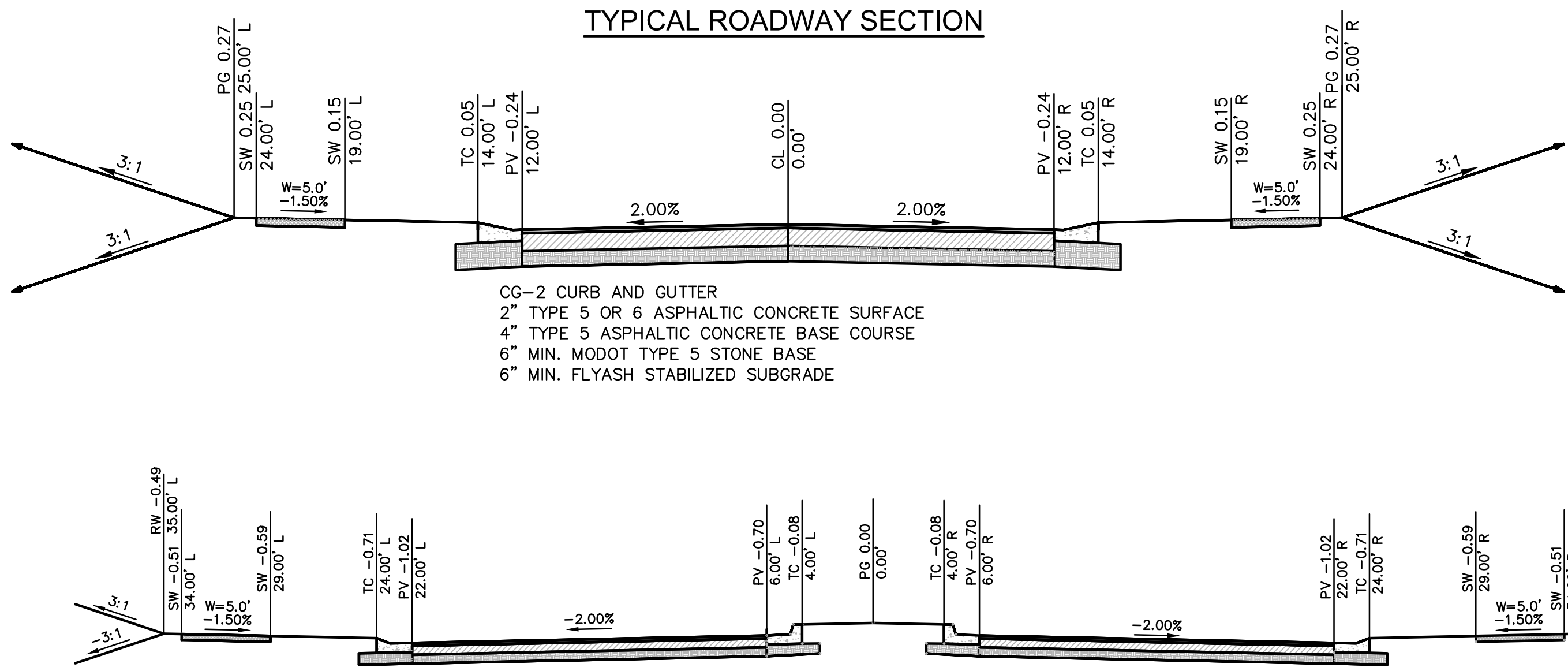
SHOP DRAWINGS

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS A MINIMUM OF 7 DAYS PRIOR TO THE REQUESTED DATE OF APPROVAL. ENGINEER SHALL REVIEW SHOP DRAWINGS OR SAMPLES CONFORMANCE WITH THE DESIGN FOR THIS PROJECT AS DESCRIBED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS. THE ENGINEER'S REVIEW SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS NOTIFIED ENGINEER OF EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND OBTAINED ENGINEER'S WRITTEN APPROVAL OF EACH SUCH VARIATION. PRIOR TO SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE REVIEWED AND VERIFIED:
 - A. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO;
 - B. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK;
 - C. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO;
 - D. CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.
 - E. ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY COMPLETED THE ABOVE TASKS.
2. SHOP DRAWINGS AS DESCRIBED ABOVE ARE REQUIRED FOR, BUT NOT LIMITED TO, THE FOLLOWING:
 - A. ALL STORM SEWER STRUCTURES TO BE INSTALLED WITH THIS PROJECT.
 - B. ALL SANITARY SEWER STRUCTURES TO BE INSTALLED WITH THIS PROJECT.
 - C. ALL SITE FENCING AND RAILING INCLUDING ANY GATES.
 - D. ALL LANDSCAPE AND RETAINING WALLS.
 - E. ANY ITEMS IN THESE PLANS THAT ALLOW FOR AN "APPROVED EQUAL" ALTERNATIVE.

1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH LEE'S SUMMIT, MISSOURI.
2. ALL PIPE LENGTHS AND ELEVATIONS ARE CALCULATED LINEARLY FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
3. COORDINATES ARE PROVIDED AT THE CENTER OF STRUCTURE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING THE BOX DURING INSTALLATION.
4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF STORM SEWER.
5. STORM SEWER TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.
6. STRUCTURE INVERT CHANNELS SHALL BE SMOOTH, CIRCULAR, AND CONFORMING TO 1/2 THE ADJACENT PIPE SECTION (INVERT TO CENTER). CHANGES IN DIRECTION OF FLOW SHALL BE MADE WITH A SMOOTH CURVE AND MAINTAIN SHAPE THROUGHOUT. CHANGES IN GRADE OF ADJACENT PIPES SHALL BE TRANSITIONED SMOOTHLY AND EVENLY THROUGH THE STRUCTURE.
7. PIPE PENETRATIONS SHALL BE GROUTED TO ENSURE WATERTIGHT SEALS.

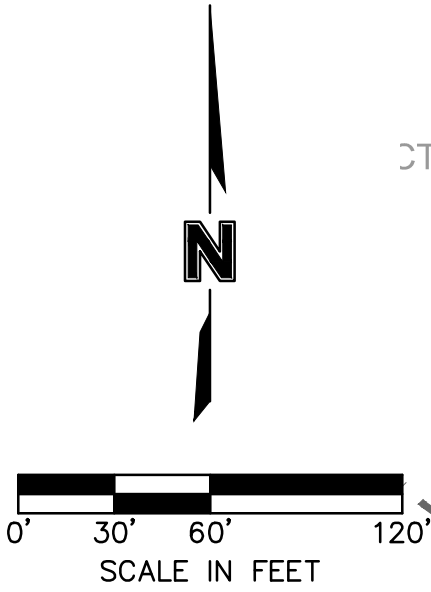
ESTIMATE OF QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
STREET				
1	EXCAVATION	C.Y.	5,854	
2	EMBANKMENT	C.Y.	15,100	
3	SUBGRADE STABILIZATION (6" FLYASH TREATMENT)	S.Y.	11,866	
4	6" ASPHALT PAVEMENT	S.Y.	9,612	
5	CONCRETE CURB & GUTTER (CG-2)	L.F.	6,335	
6	CONCRETE CURB & GUTTER (CG-1 DRY)	L.F.	245	
7	5' CONCRETE SIDEWALK	L.F.	143	
8	ADA RAMP	EA.	11	
9	STOP SIGNS	EA.	5	
10	STREET NAME SIGNS	EA.	10	
11	TYPE IV OBJECT MARKERS	EA.	2	
STORM				
12	STD. CURB INLET (5'x3' INSIDE)	EA.	19	
13	STD. CURB INLET (6'x3' INSIDE)	EA.	3	
14	STD. FIELD INLET (4'x4' INSIDE)	EA.	6	
15	STD. MANHOLE (5' DIA. INSIDE)	EA.	1	
16	WATER QUALITY BASIN OUTLET STRUCTURE	EA.	1	
17	6" PVC	L.F.	175.99	
18	15" HDPE	L.F.	419.42	
19	18" HDPE	L.F.	1552.87	
20	24" HDPE	L.F.	436.49	
21	30" HDPE	L.F.	284.64	
22	36" HDPE	L.F.	94.79	
23	18" FLARED END SECTION	L.F.	2	
24	24" FLARED END SECTION	L.F.	1	
25	30" FLARED END SECTION	EA.	1	
26	36" FLARED END SECTION	EA.	1	
27	15" HDPE PLUG	EA.	1	
28	RIPRAP	S.Y.	55.1	

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USER: nheiser



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

CG-2 CURB & GUTTER
CG-1 DRY CURB & GUTTER AT MEDIAN
2" TYPE 6 ASPHALTIC CONCRETE SURFACE
4" TYPE 5 ASPHALTIC CONCRETE BASE COURSE
6" MIN. MODOT TYPE 5 STONE BASE
6" FLYASH STABILIZED SUBGRADE



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STATE OF MISSOURI
JULIE ELAINE
SELLERS
as *Julie Sellers*
NUMBER
PE-2017000367
12/3/20
PROFESSIONAL ENGINEER

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

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

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USER: rneiser

GENERAL NOTES:

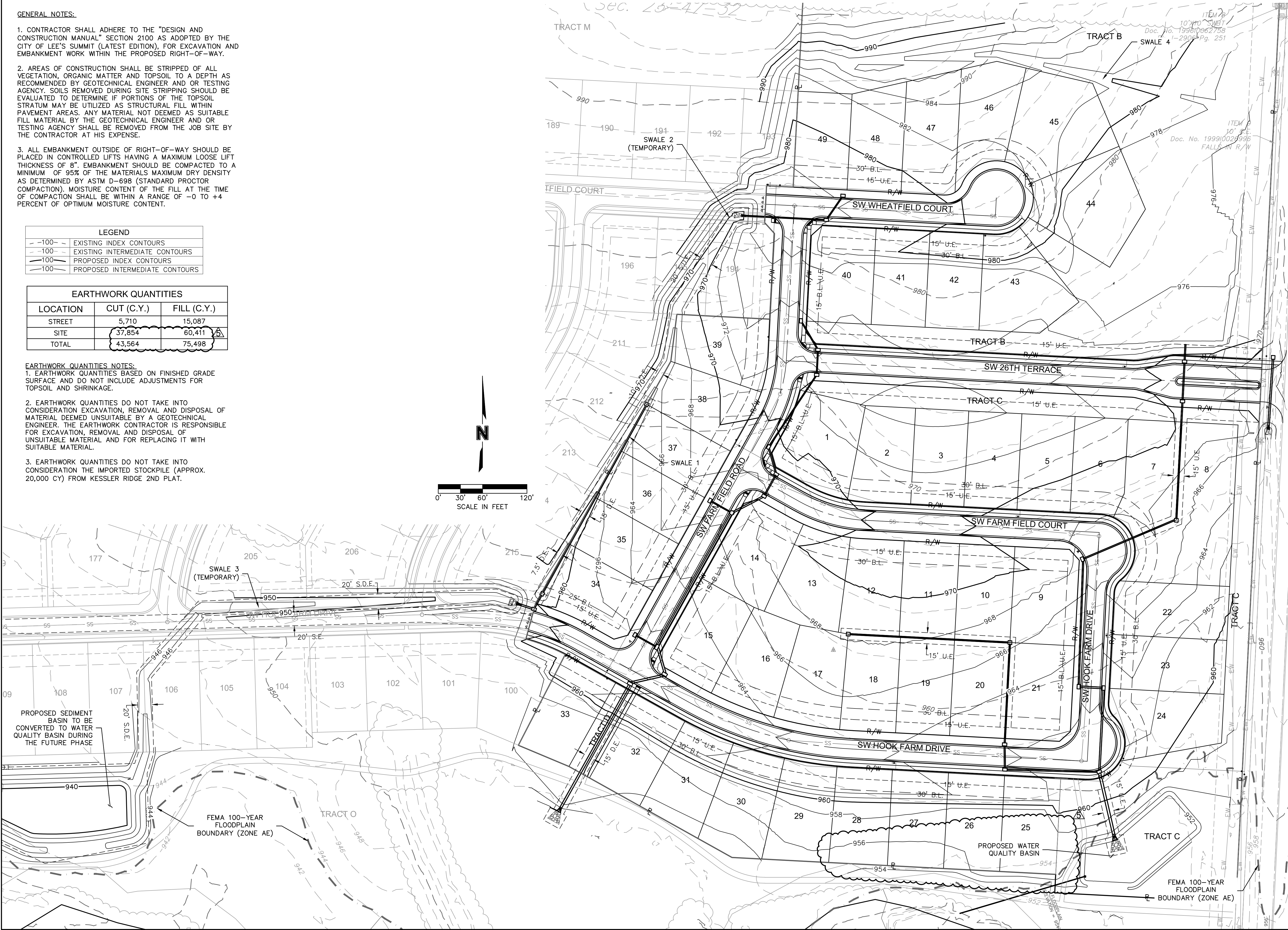
1. CONTRACTOR SHALL ADHERE TO THE "DESIGN AND CONSTRUCTION MANUAL" SECTION 2100 AS ADOPTED BY THE CITY OF LEE'S SUMMIT (LATEST EDITION), FOR EXCAVATION AND EMBANKMENT WORK WITHIN THE PROPOSED RIGHT-OF-WAY.
2. AREAS OF CONSTRUCTION SHALL BE STRIPPED OF ALL VEGETATION, ORGANIC MATTER AND TOPSOIL TO A DEPTH 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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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
12/3/20
PROFESSIONAL ENGINEER

GRADING PLAN
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

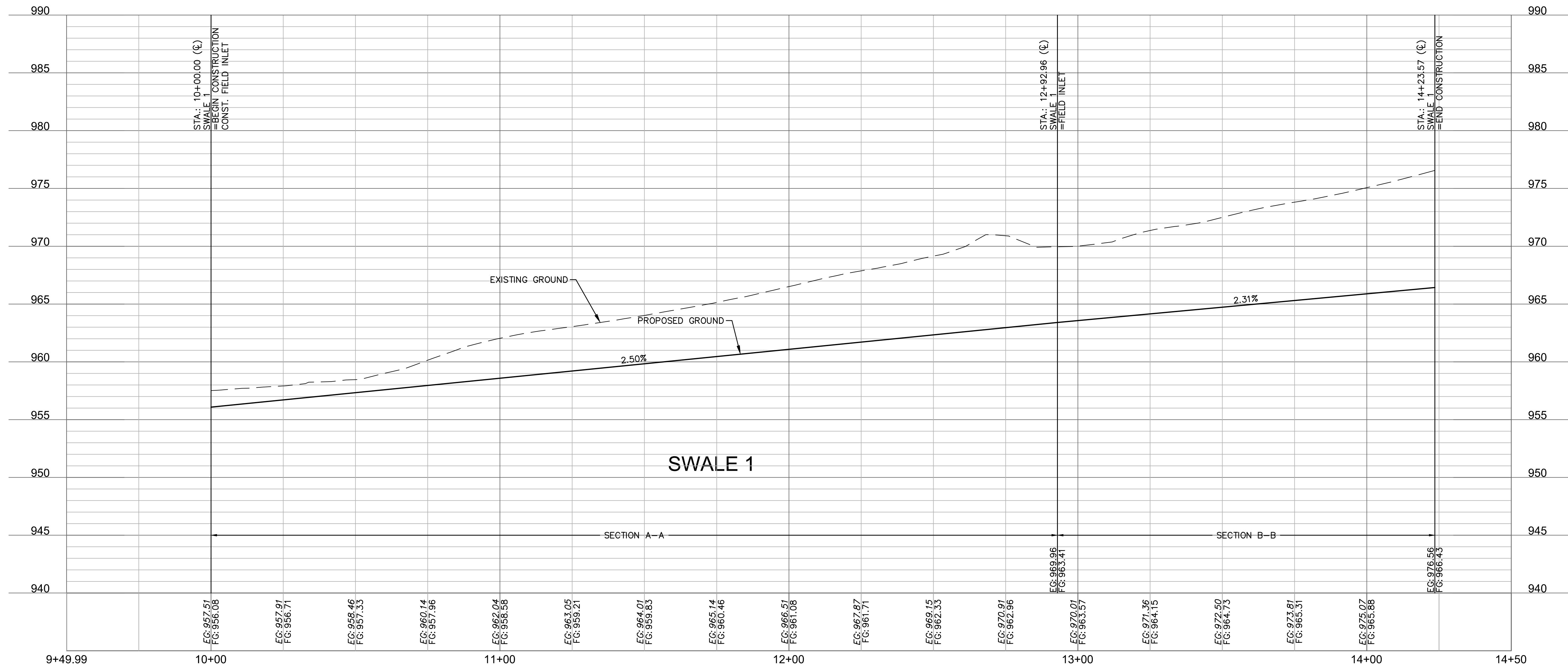
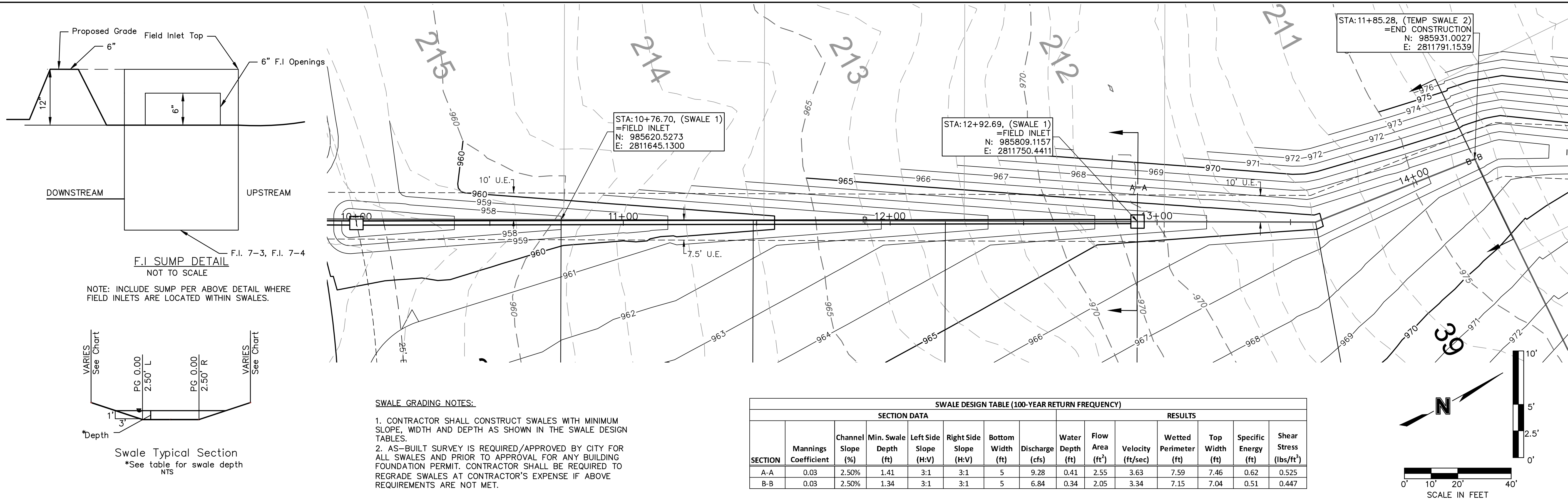
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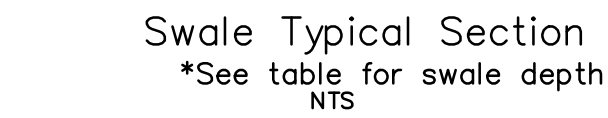
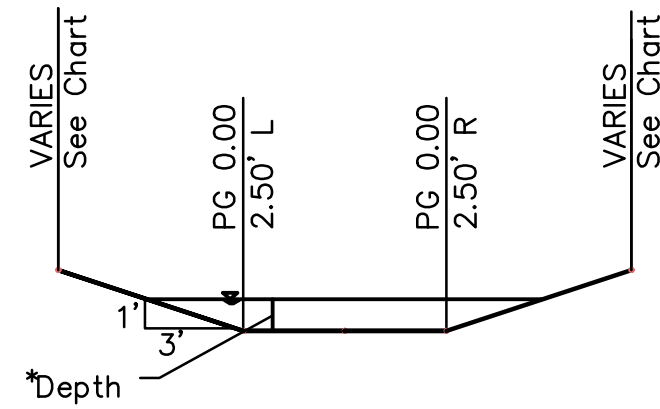
drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C104

REVISIONS

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



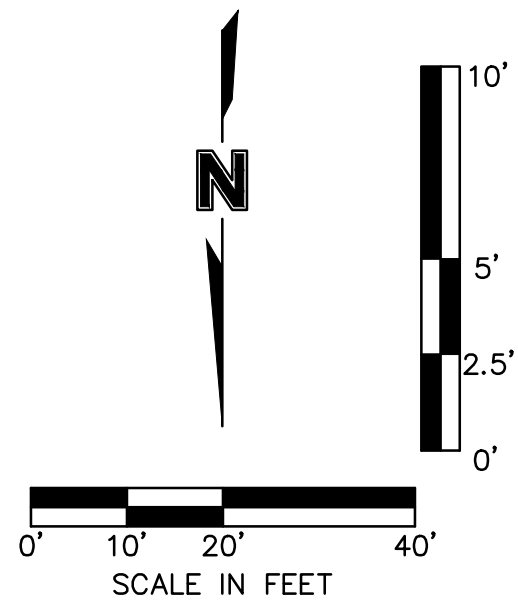
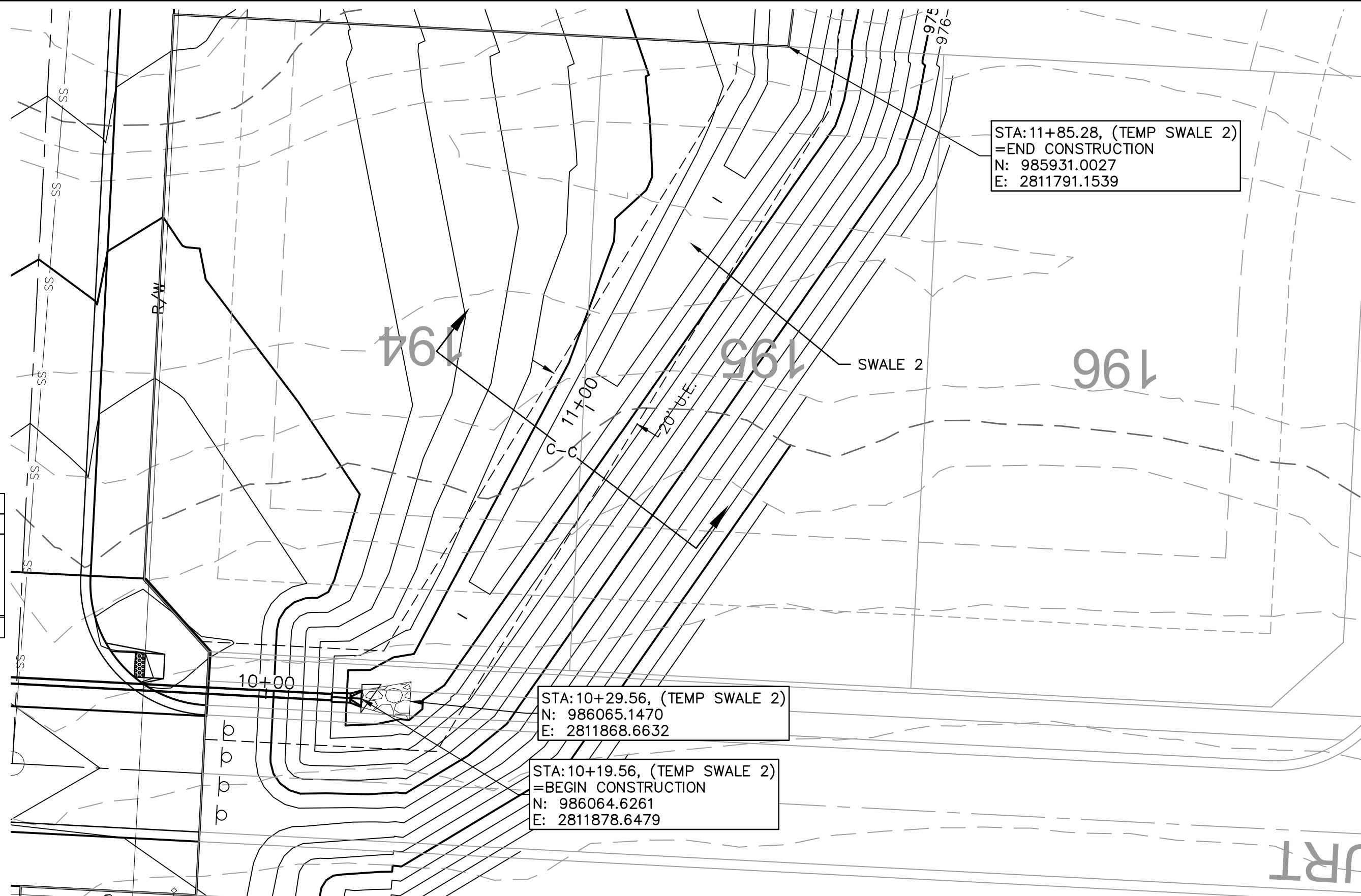
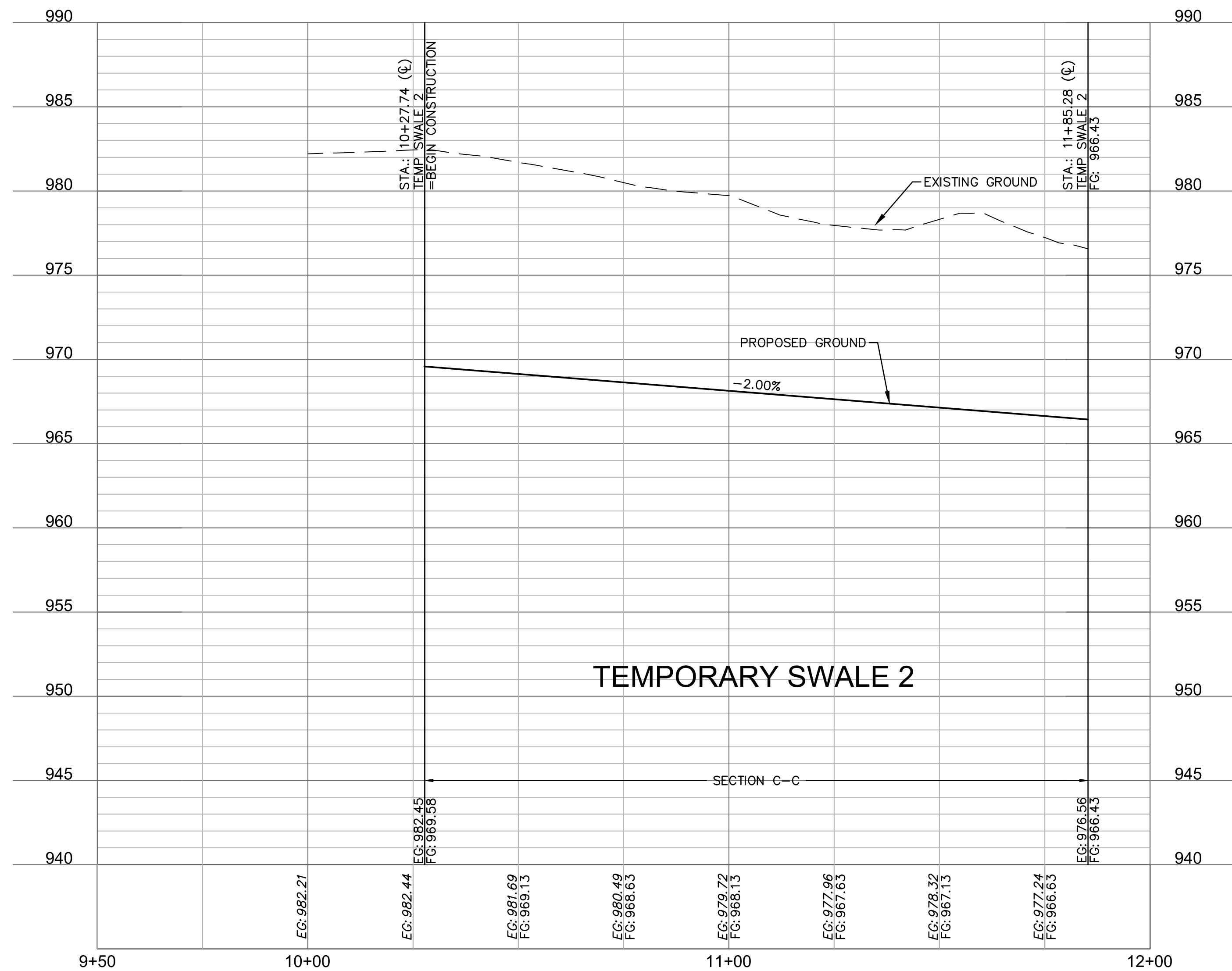


SECTION DATA								RESULTS						
SECTION	Mannings Coefficient	Channel Slope (%)	Min. Swale Depth (ft)	Left Side Slope (H:V)	Right Side Slope (H:V)	Bottom Width (ft)	Discharge (cfs)	Water Depth (ft)	Flow Area (ft²)	Velocity (ft/sec)	Wetted Perimeter (ft)	Top Width (ft)	Specific Energy (ft)	Shear Stress (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.

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 2 PLAN & PROFILE STREET AND STORM SEWER PLANS					
HOOK FARMS FIRST FLAT					
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 C106					

SWALE 2 PLAN & PROFILE STREET AND STORM SEWER PLANS					
HOOK FARMS FIRST FLAT					
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 C106					

SWALE 2 PLAN & PROFILE STREET AND STORM SEWER PLANS					
HOOK FARMS FIRST FLAT					
LEE'S SUMMIT, MO					
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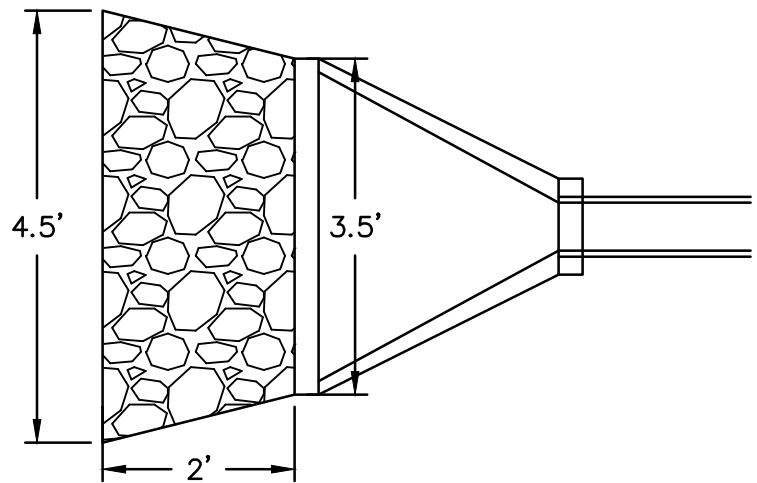
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LEE'S SUMMIT, MO					
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drawn by: _____ CGW					
checked by: _____ JES					
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QA/QC by: _____ JES					
project no.: _____ 019-4061					
drawing no.: _____					
date: _____ 04/20/2020					
SHEET C106					

SWALE 2 PLAN & PROFILE STREET AND STORM SEWER PLANS					
HOOK FARMS FIRST FLAT					
LEE'S SUMMIT, MO					
2020					
drawn by: _____ CGW					
checked by: _____ JES					
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drawing no.: _____					
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SHEET C106					

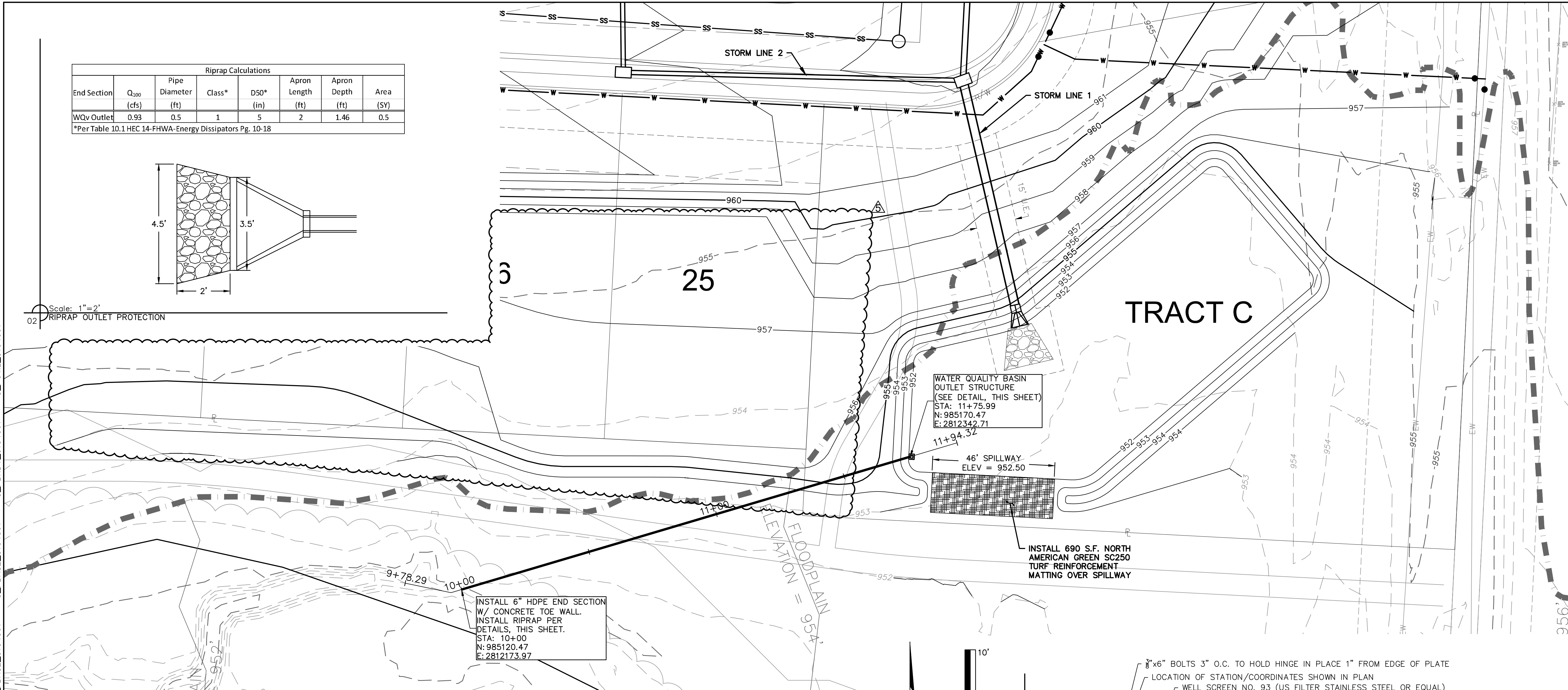
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checked by: _____ JES					
approved by: _____ NDH					
QA/QC by: _____ JES					
project no.: _____ 019-4061					
drawing no.: _____					
date: _____ 04/20/2020					
SHEET C106					

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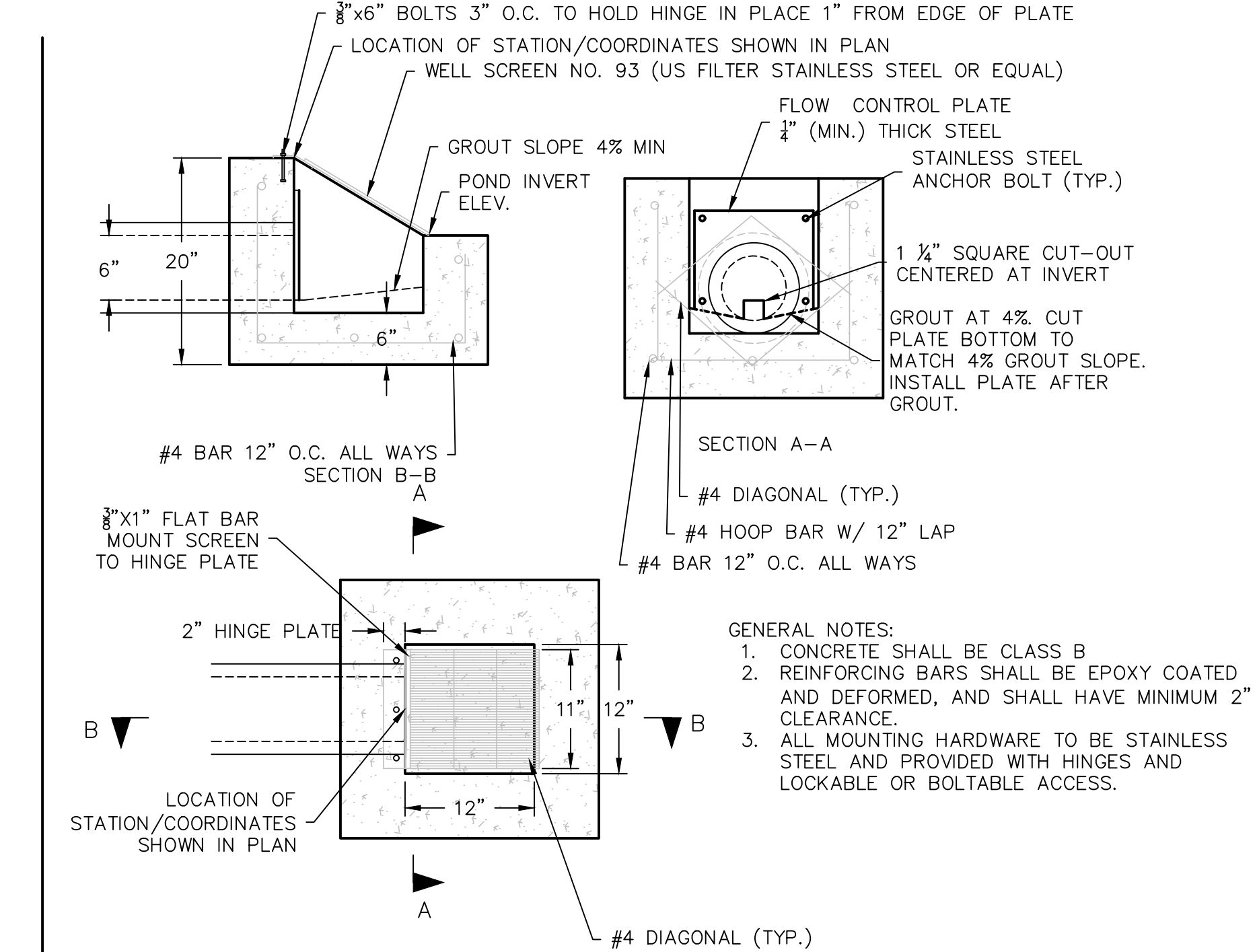
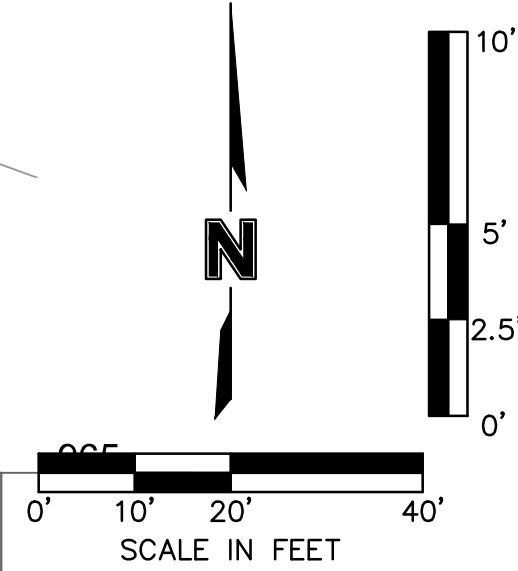
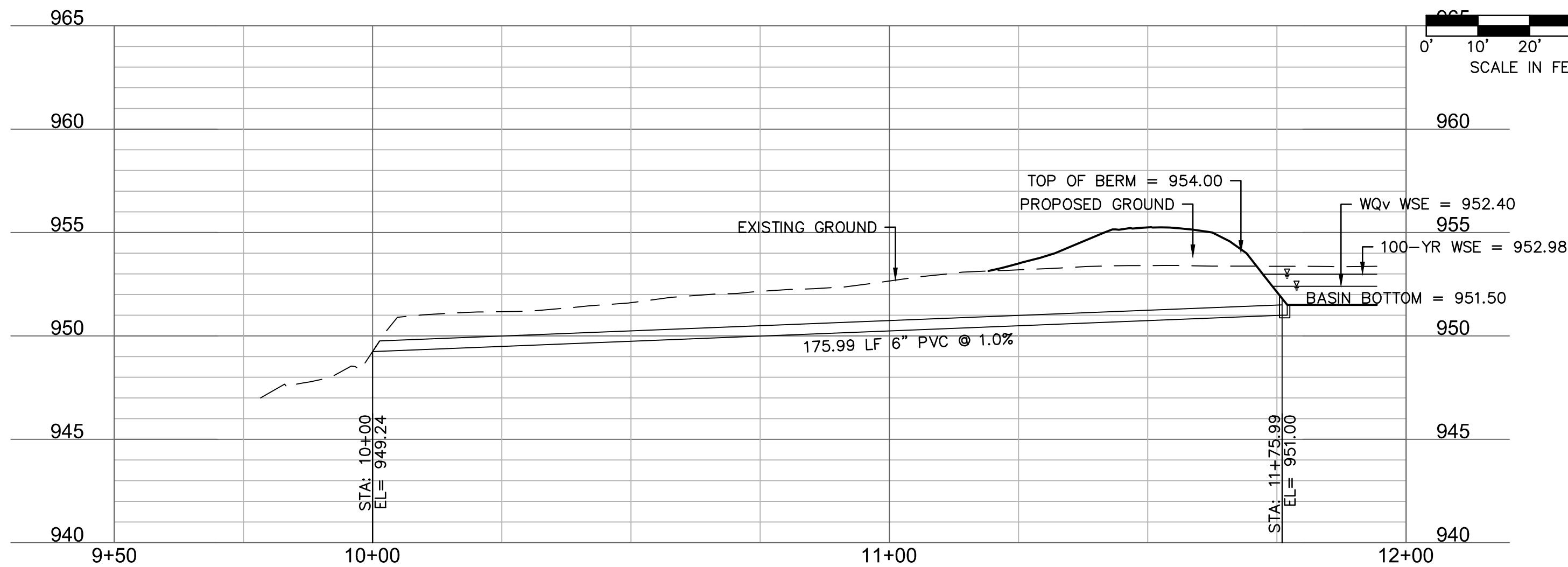
Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
WQv Outlet	0.93	0.5	1	5	2	1.46
Area (SY)						
0.5						
*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18						



Scale: 1"=2'
02 RIPRAP OUTLET PROTECTION



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



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SELLERS
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12/3/20
PROFESSIONAL ENGINEER

BY

DATE

REV. NO.

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

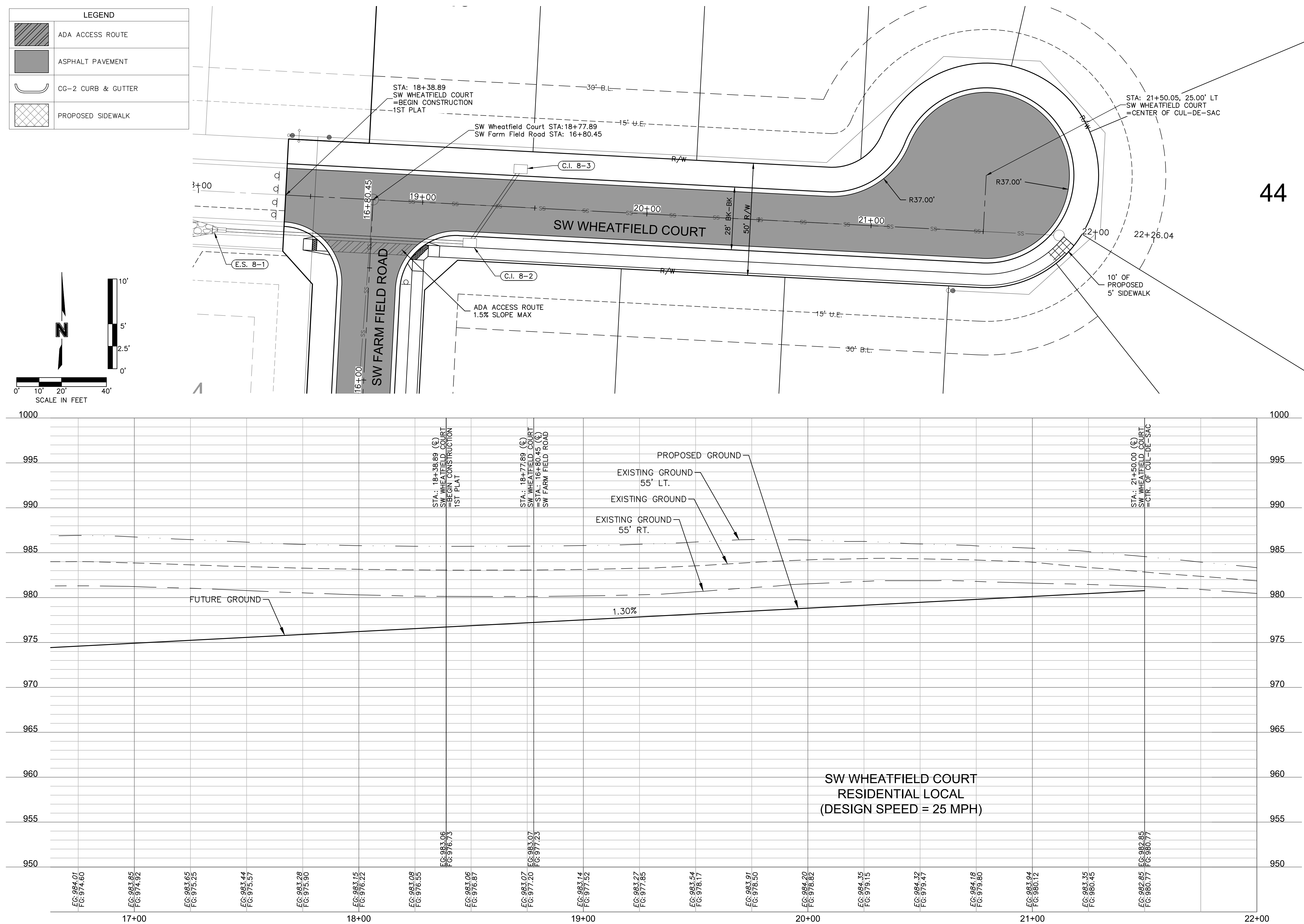
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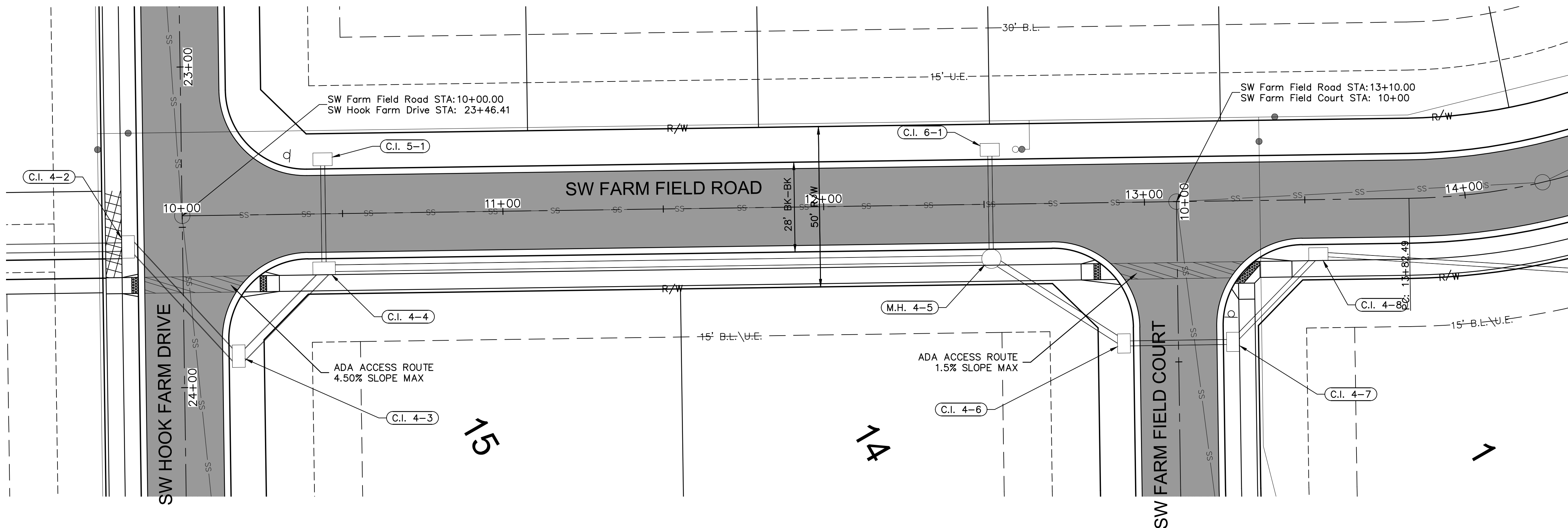
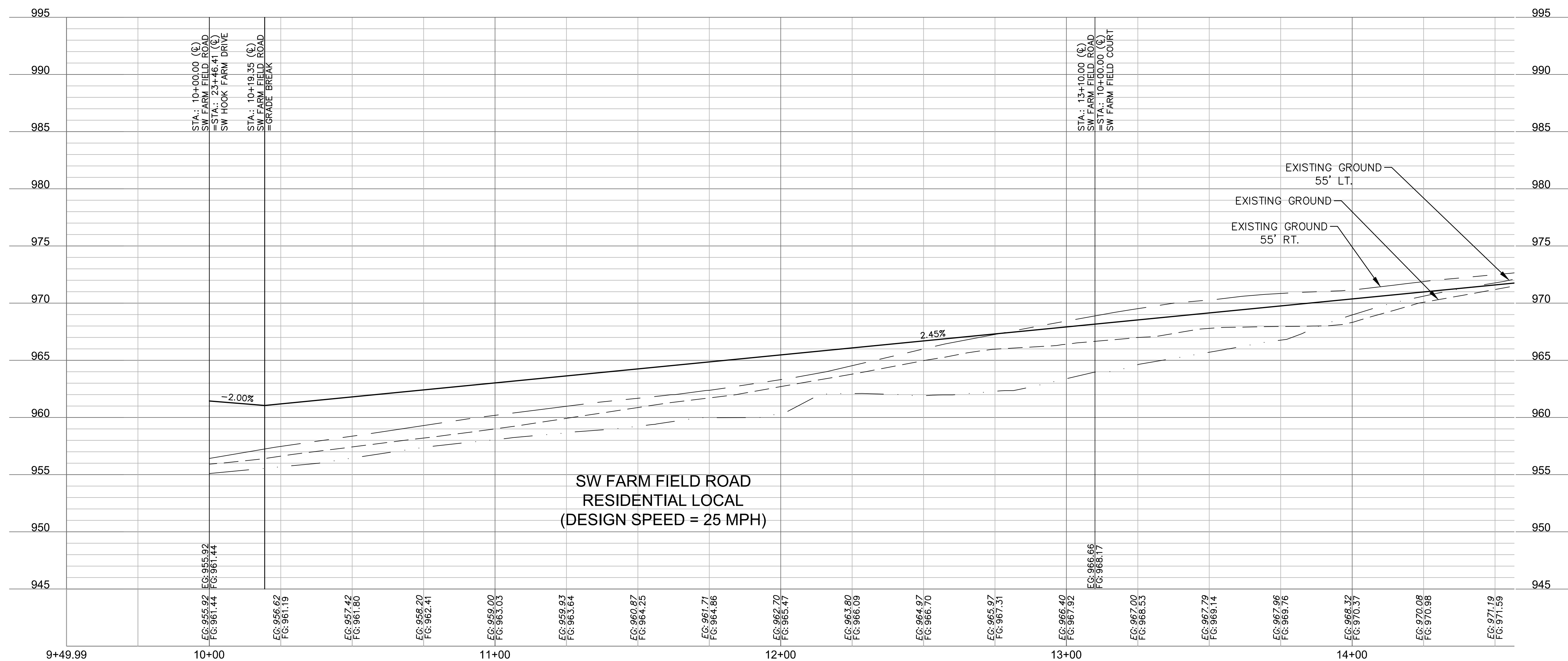
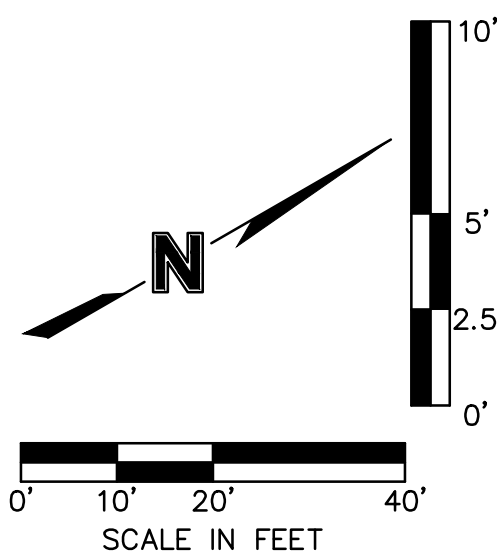
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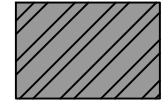
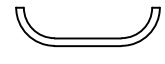
WATER QUALITY BASIN PLAN
STREET AND STORM SEWER PLANS
HOOK FARMS
FIRST FLAT
LEE'S SUMMIT, MO

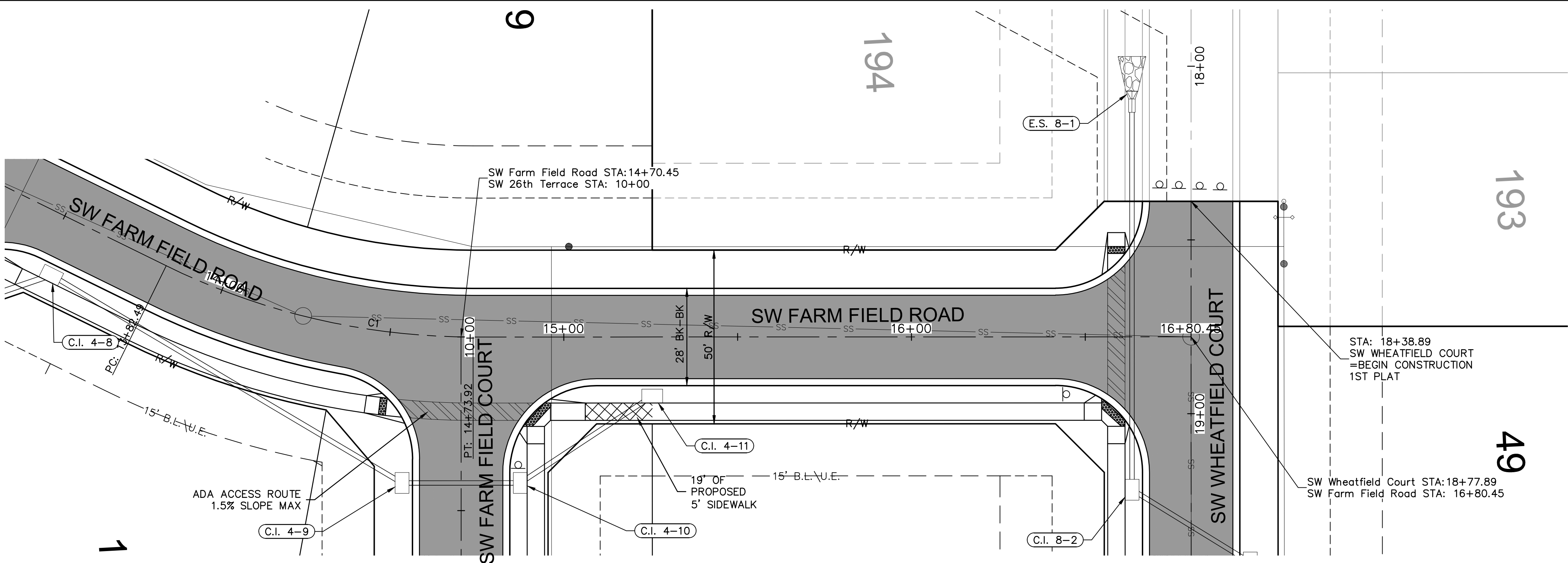
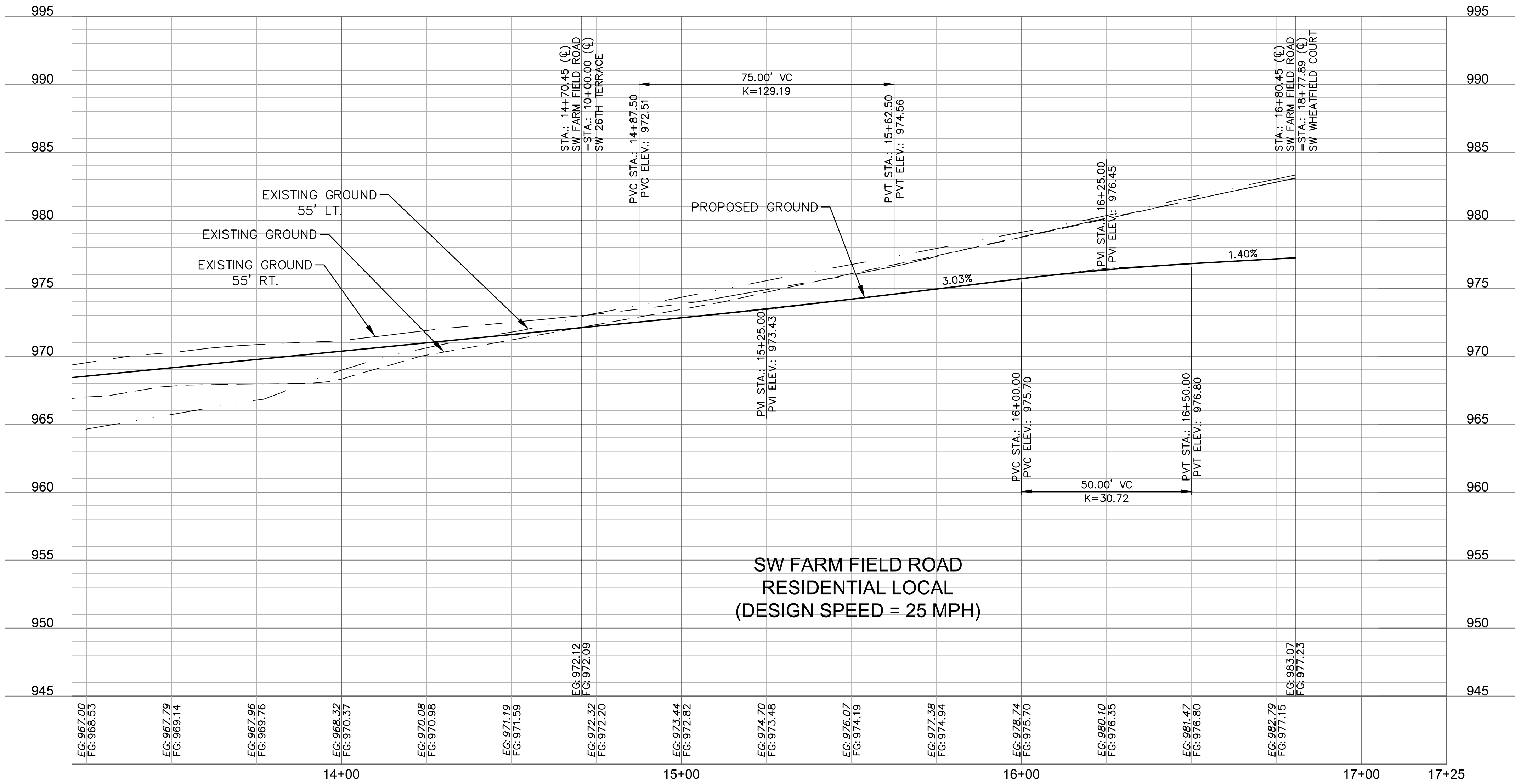
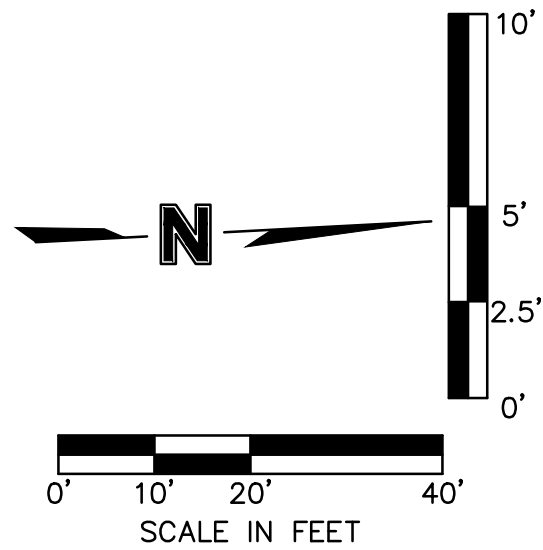
drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C110





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

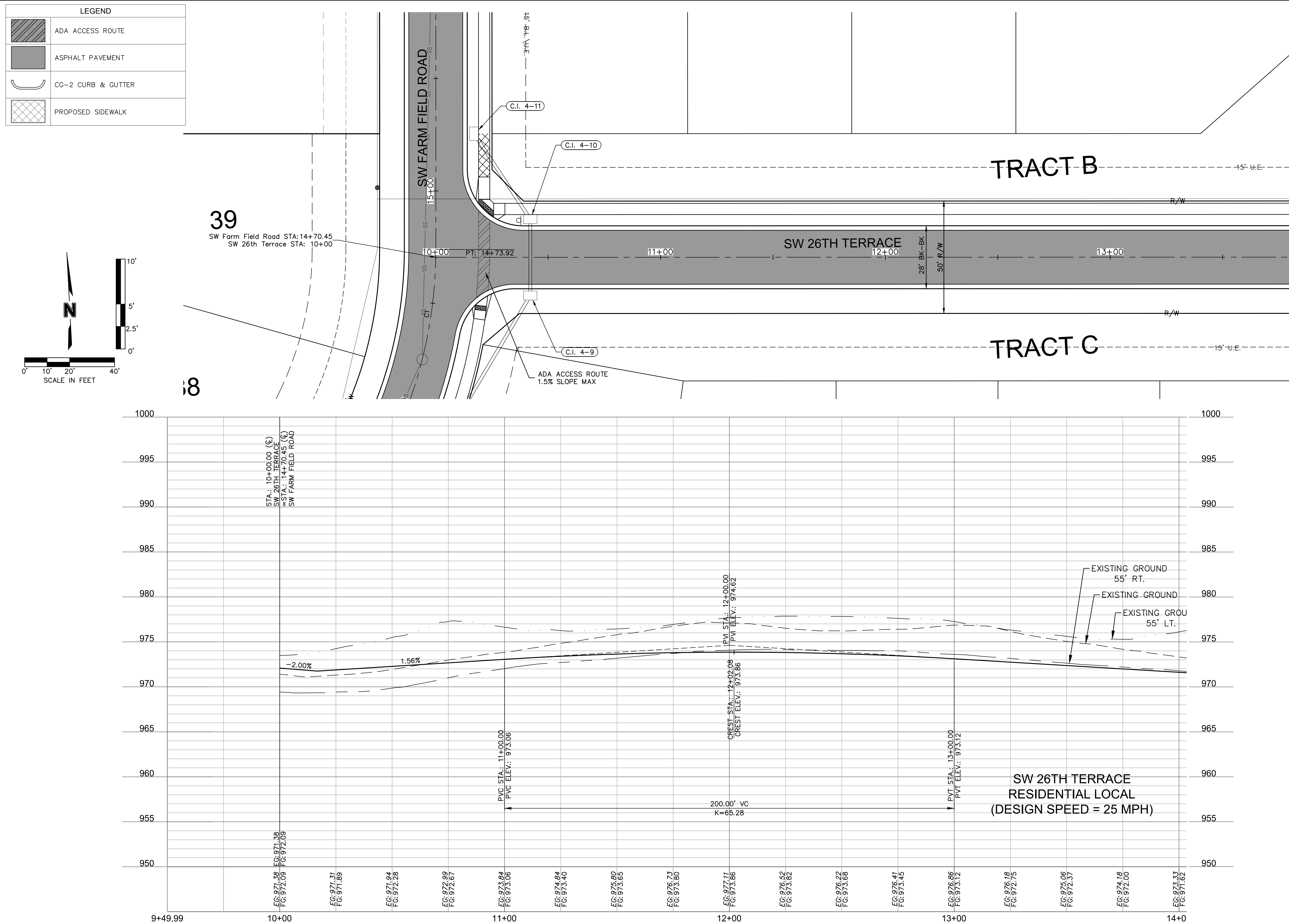
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approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C113

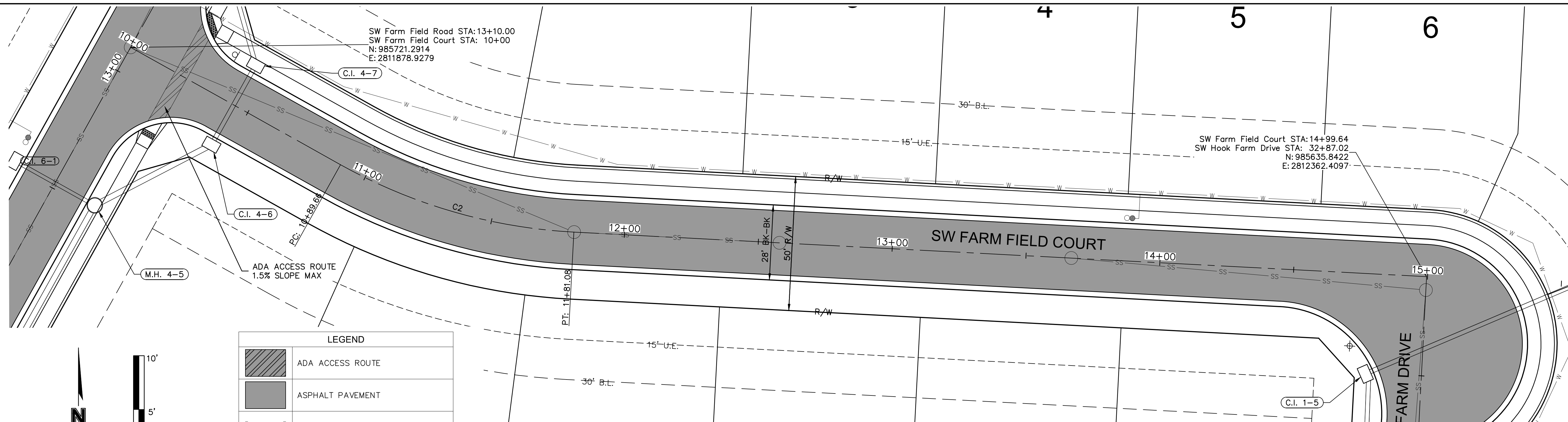
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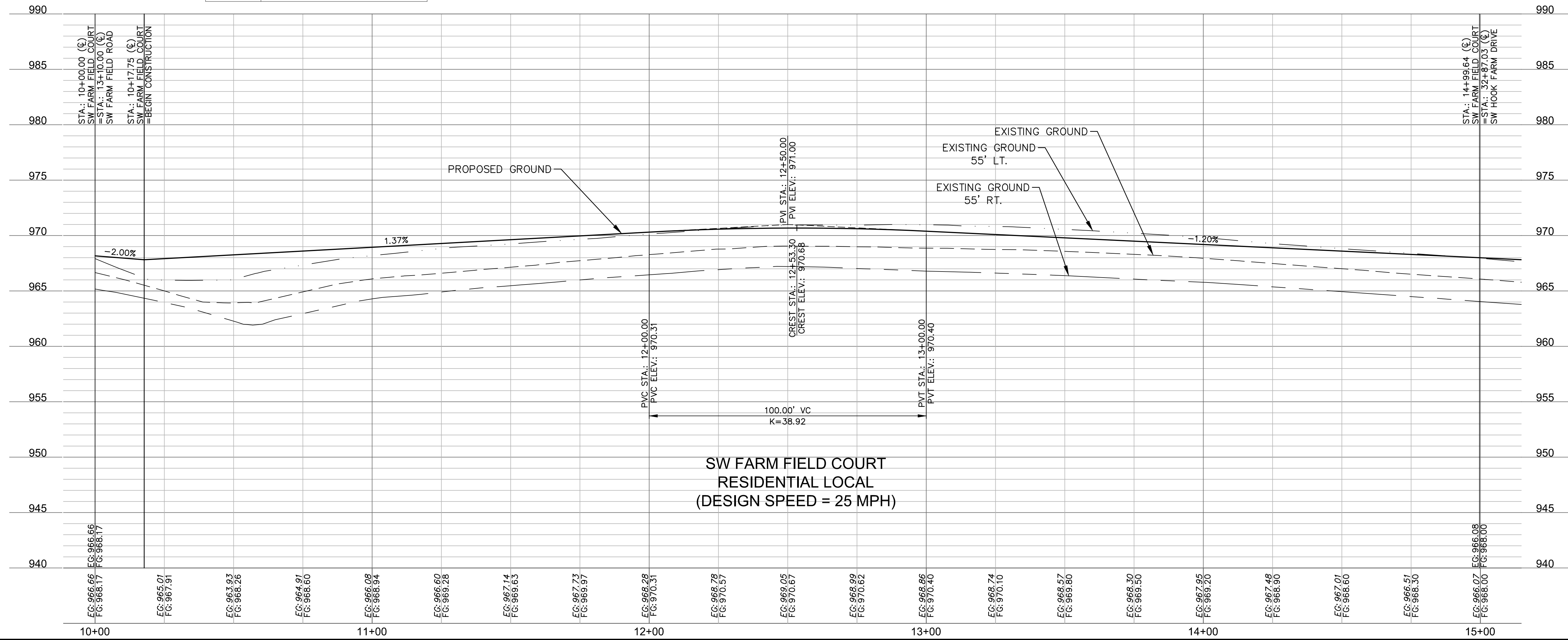
STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
12/3/20
PROFESSIONAL ENGINEER

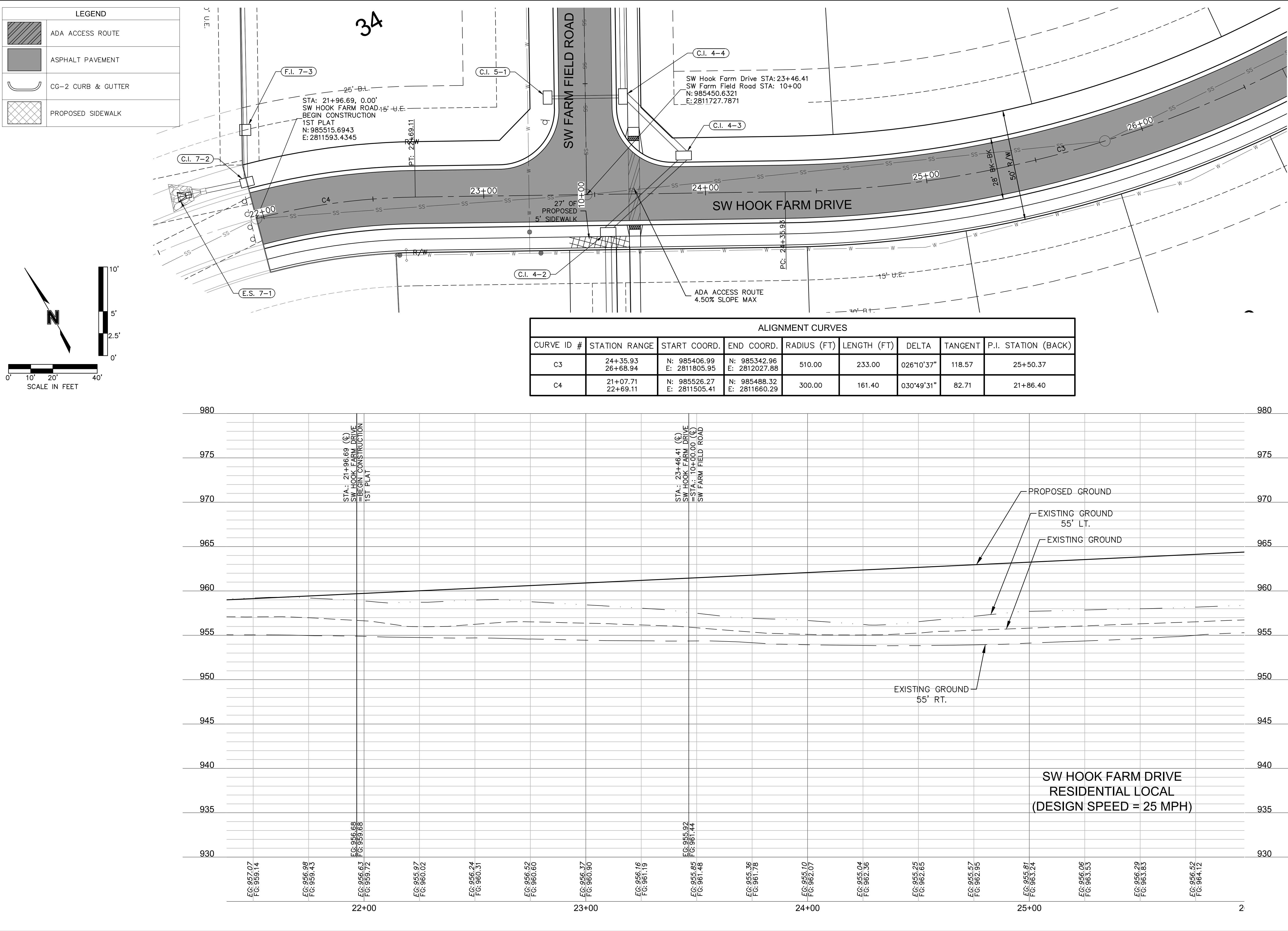


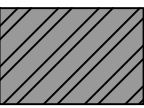
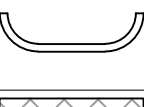
ROADWAY PLAN & PROFILE (SW 26TH TERRACE) STREET AND STORM SEWER PLANS		REV. NO.	DATE	REVISONS DESCRIPTION	BY
HOOK FARMS FIRST PLAT		1	06/15/2020	REVISED PER CITY COMMENTS	
		2	06/25/2020	REVISED PER CITY COMMENTS	
LEE'S SUMMIT, MO					
2020				REVISIONS	
drawn by: _____ CGW					
checked by: _____ JES					
approved by: _____ NDH					
QA/QC by: _____ JES					
project no.: _____ 019-4061					
drawing no.: _____					
date: _____ 04/20/2020					
SHEET C114					

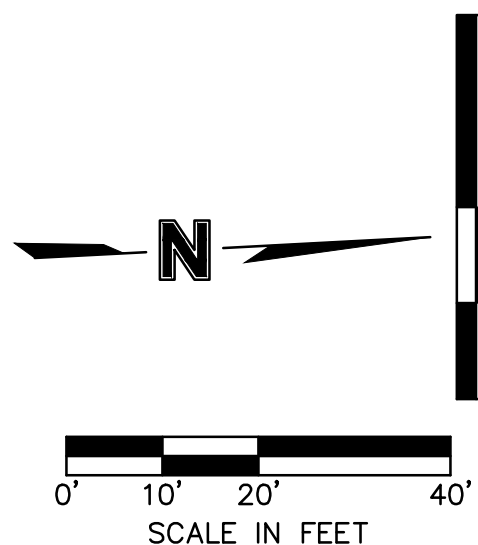
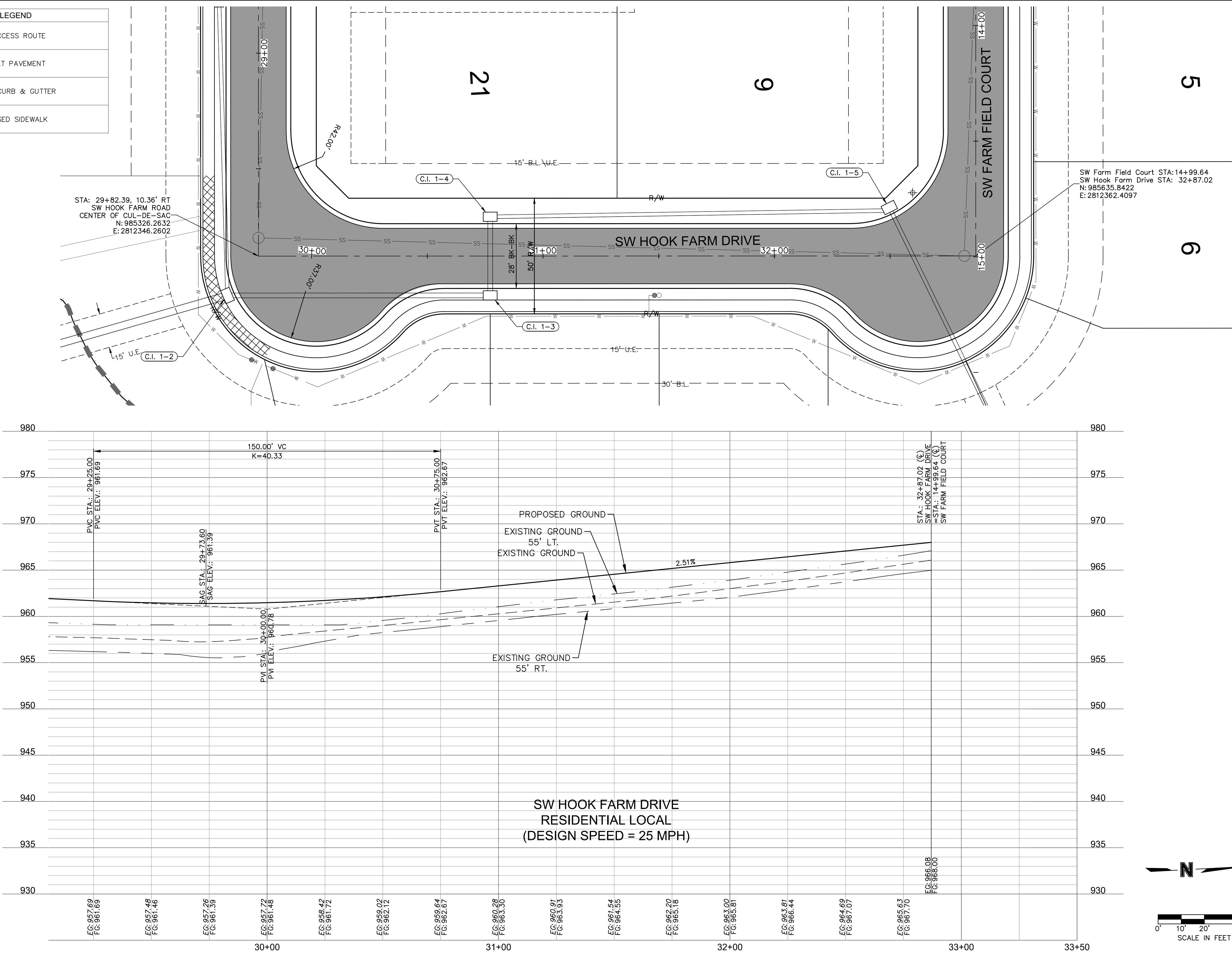


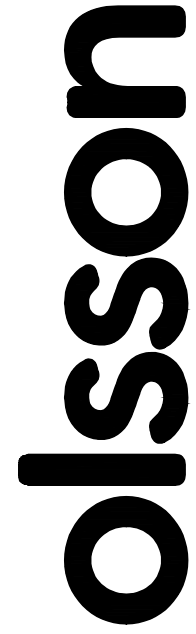
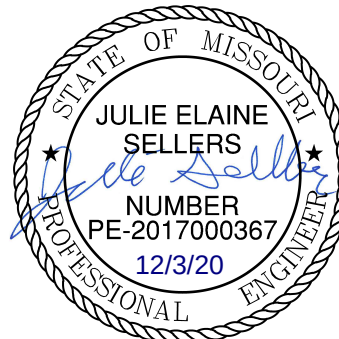
ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT	P.I. STATION (BACK)
C2	10+89.66 11+81.08	N: 985677.58 E: 2811957.21	N: 985652.47 E: 2812044.29	200.00	91.42	026°11'22"	46.52	11+34.56



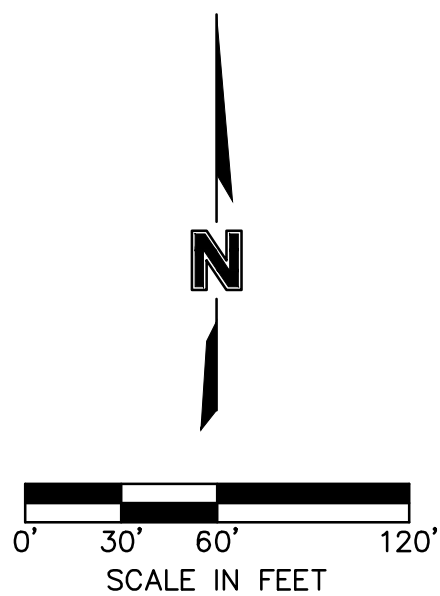
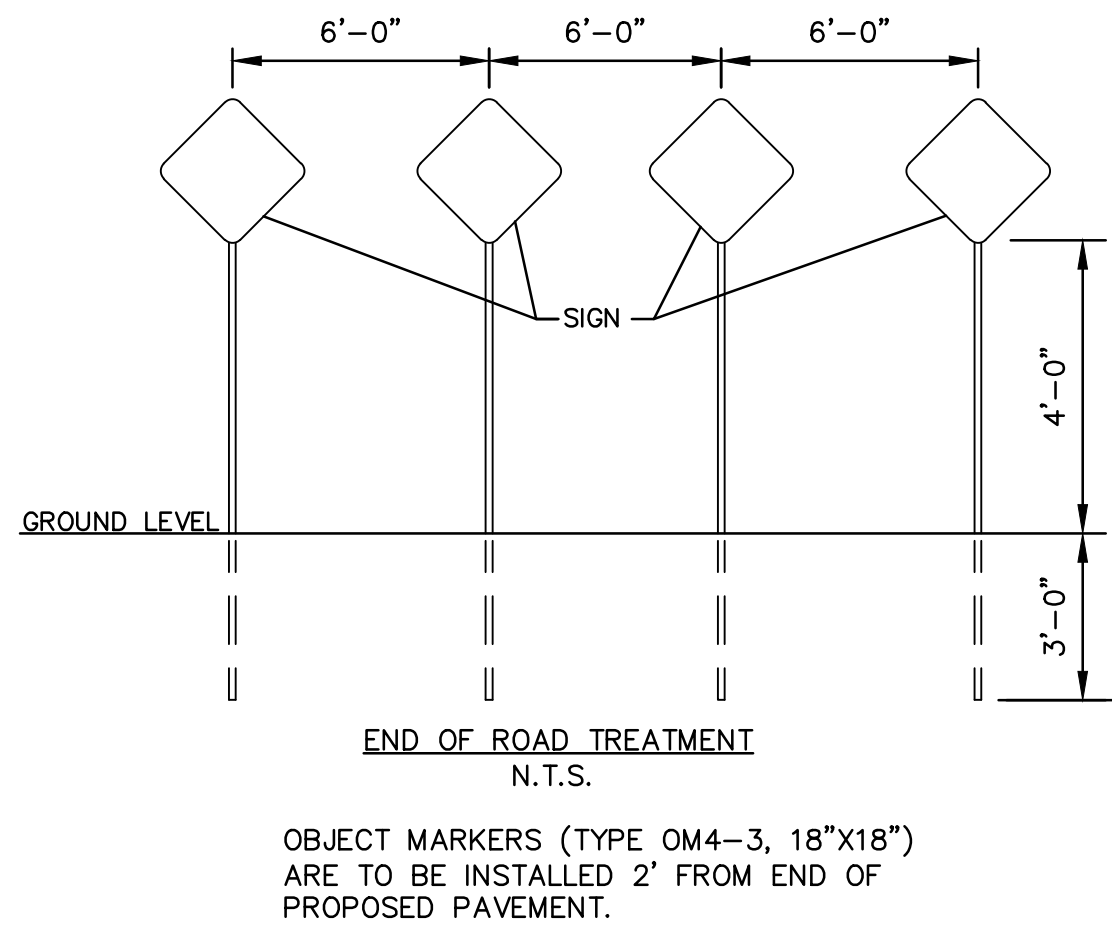


LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CG-2 CURB & GUTTER
	PROPOSED SIDEWALK



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ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE) STREET AND STORM SEWER PLANS		BY	
HOOK FARMS FIRST PLAT		REVISIONS	
LEE'S SUMMIT, MO		2020	
drawn by: CGW		DATE	
checked by: JES		REV. NO.	
approved by: NDH		1 06/15/2020	
QA/QC by: JES		2 06/25/2020	
project no.: 019-4061		REVISED PER CITY COMMENTS	
drawing no.:		REVISED PER CITY COMMENTS	
date: 04/20/2020			
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JULIE ELAINE SELLERS
PE-2017000367
12/3/20
PROFESSIONAL ENGINEER

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

SHEET
C120

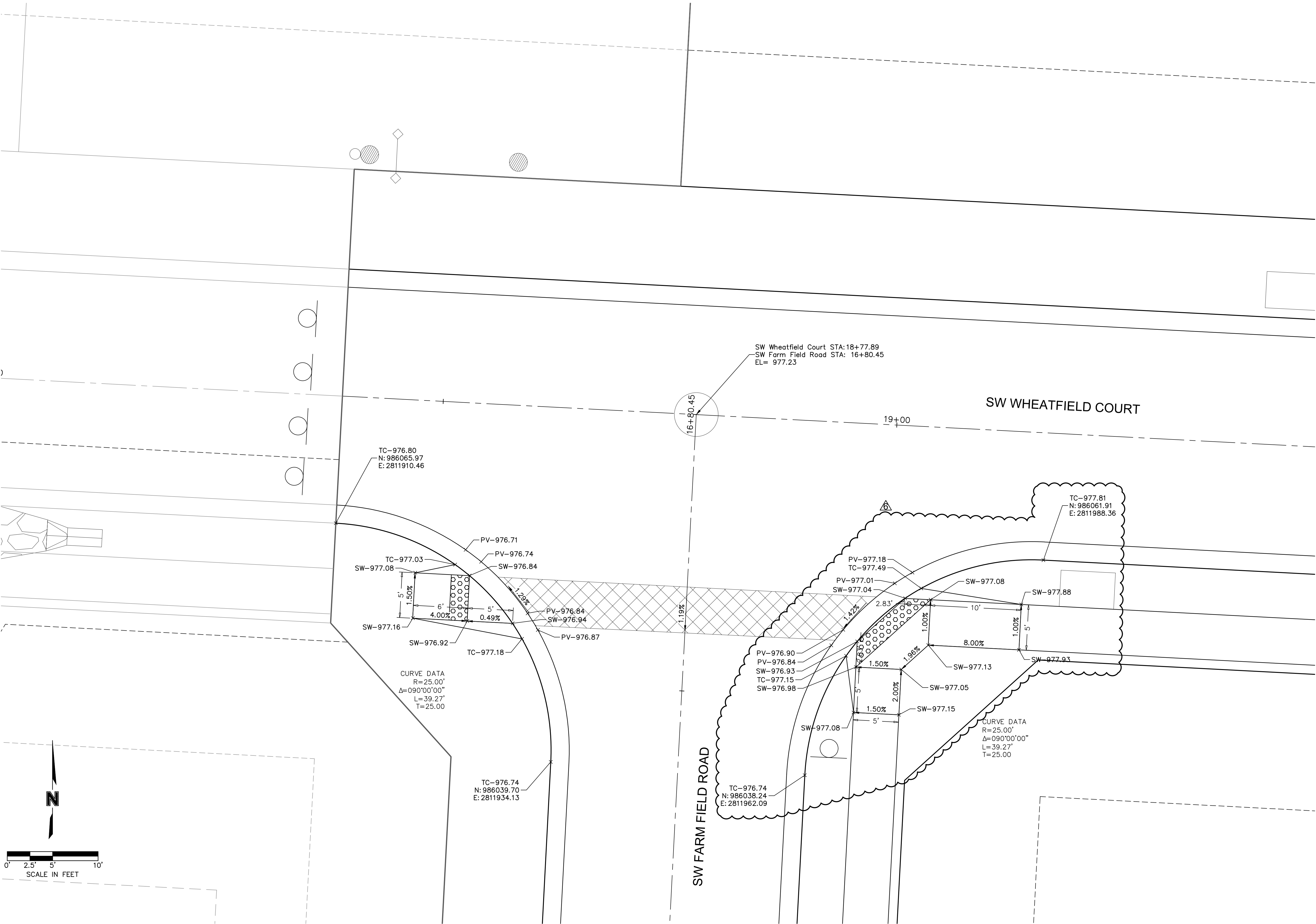
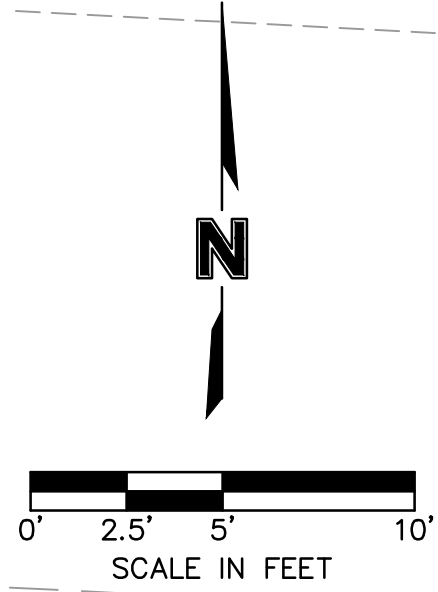
REV.	NO.	DATE	REVISIONS DESCRIPTION
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2		06/25/2020	REVISED PER CITY COMMENTS

BY

REVISIONS

2020

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DATE: Feb 17, 2021 9:13am XREFS: C:\PTBLK_0194061_34x22 C:\PBASE_0194061 C:\PBASE_0194061



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

STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
2/19/21
PROFESSIONAL ENGINEER

BY

REVISIONS

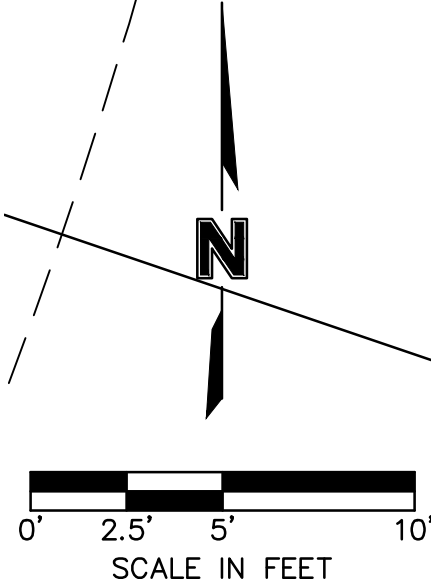
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2	06/25/2020	REVISED PER CITY COMMENTS
3	09/10/2020	REVISED PIPE INSULATION
4	10/01/2020	REVISED PER CITY COMMENTS
5	11/18/2020	REVISED LOTS 25-29 GRADING
6	02/17/2021	REVISED ADA RAMP

2020

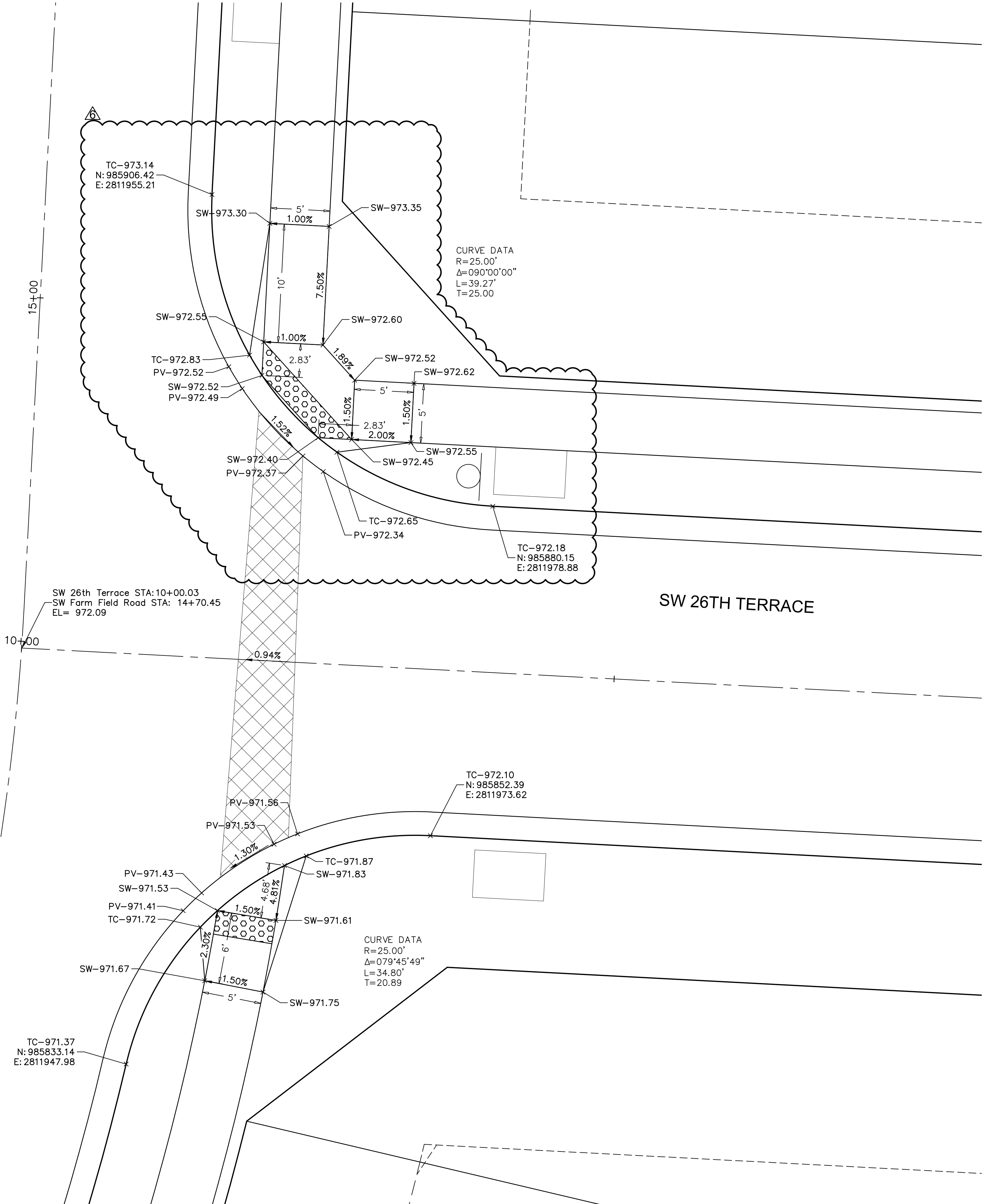
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SW FARM FIELD ROAD



SW FARM FIELD ROAD & SW 26TH TERRACE
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
C122

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

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

REV. NO.

DATE

REVISIONS DESCRIPTION

BY

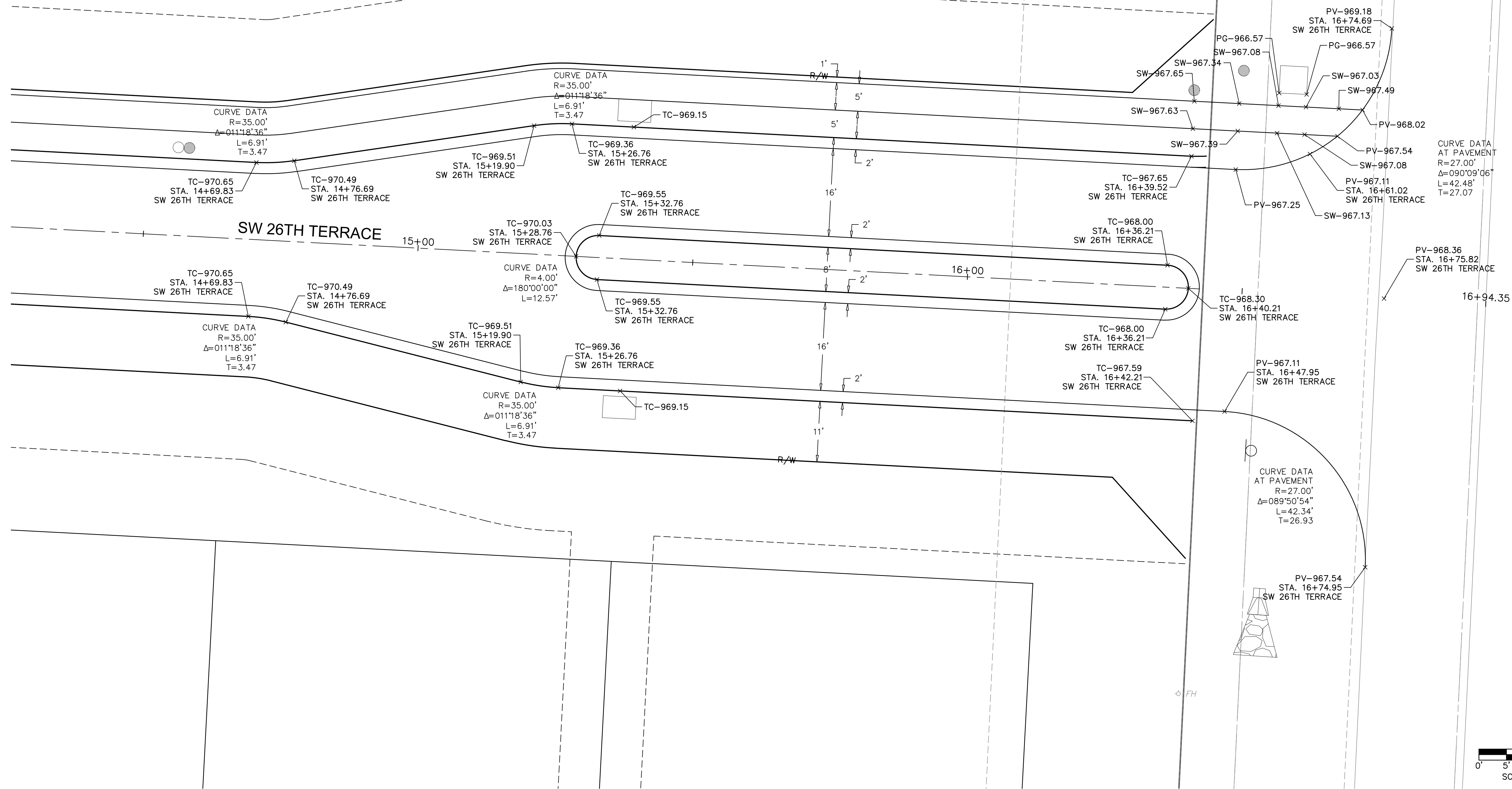
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4	10/01/2020	REVISED PER CITY COMMENTS	
5	11/18/2020	REVISED PER CITY COMMENTS	
6	02/17/2021	REVISED ADA RAMP	

REVISIONS

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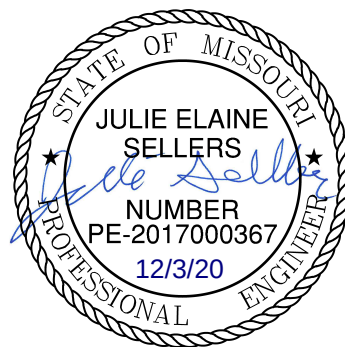
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USER: nheiser



0' 5' 10' 20'

SCALE IN FEET

SW PRYOR ROAD



SW 26TH TERRACE
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

REVISIONS

2020

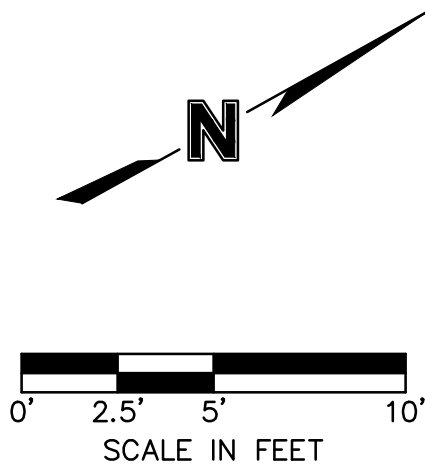
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checked by: _____ JES
approved by: _____ NDH
QA/QC by: _____ JES
project no.: _____ 019-4061
drawing no.: _____
date: _____ 04/20/2020

SHEET
C123

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E: 2811872.14

PV-967.34
TC-967.66
PV-967.37
SW-967.47
PV-967.47
PV-967.50
TC-967.81
SW-967.56
SW-967.64
SW-967.55
SW-967.57

CURVE DATA
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Δ=090°00'00"
L=39.27'
T=25.00

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

SW FARM FIELD COURT

TC-968.18
N: 985714.50
E: 2811919.80

PV-968.29
PV-968.25
SW-968.32
TC-968.56
SW-968.37

SW-968.47

SW-968.42
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SW-969.20
SW-969.25

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

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

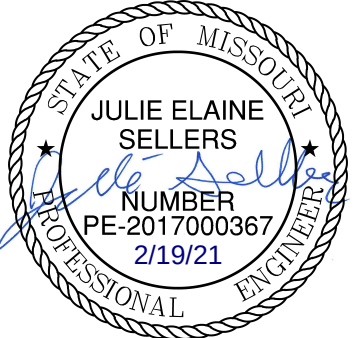
2020

REVISIONS

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

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

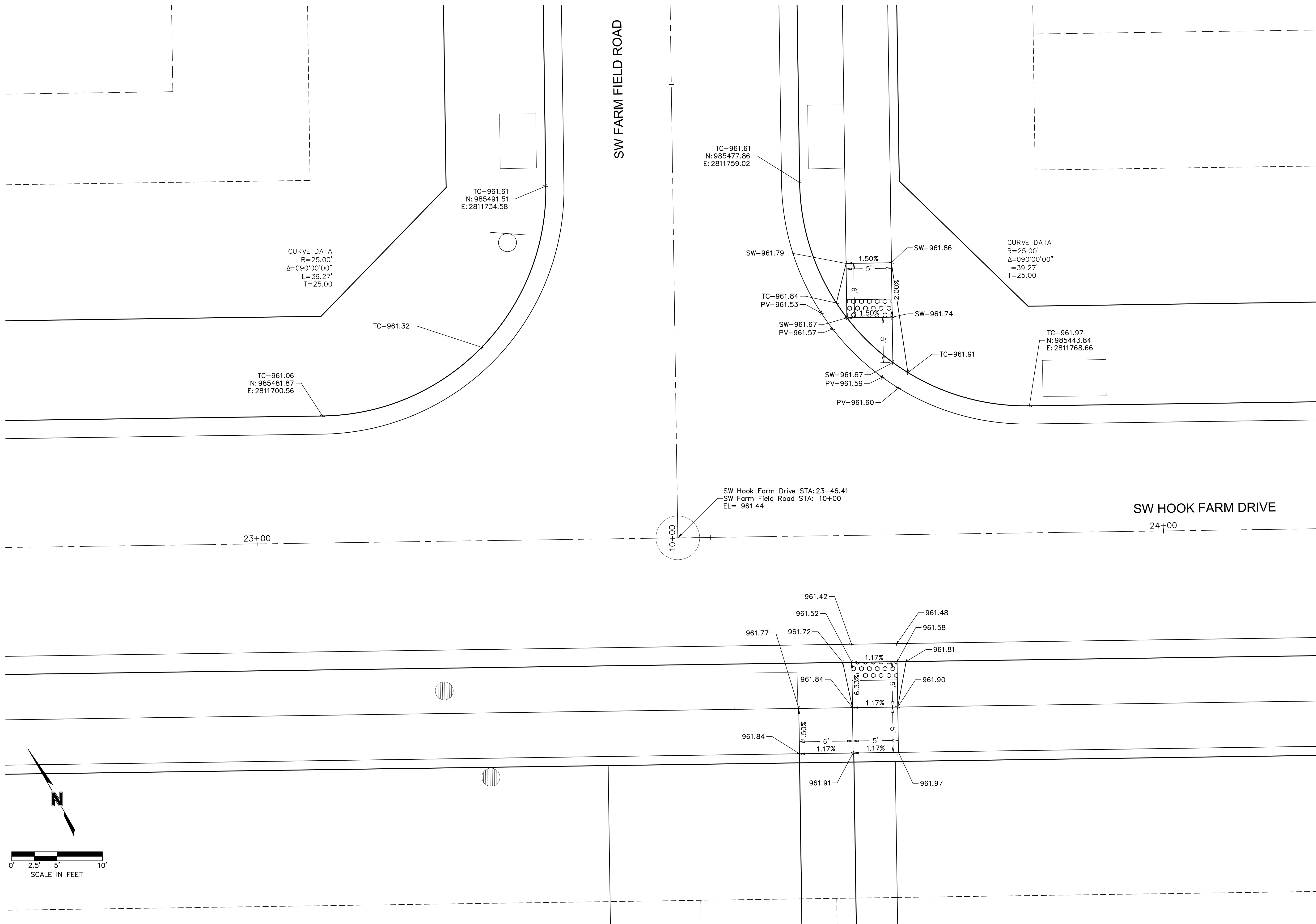
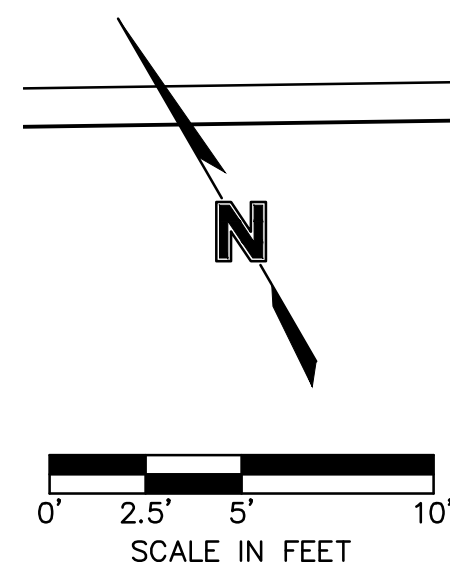
SHEET
C124



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

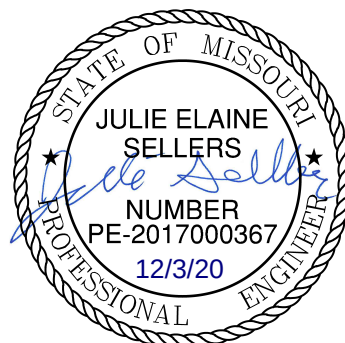
HOOK FARMS
FIRST PLAT

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

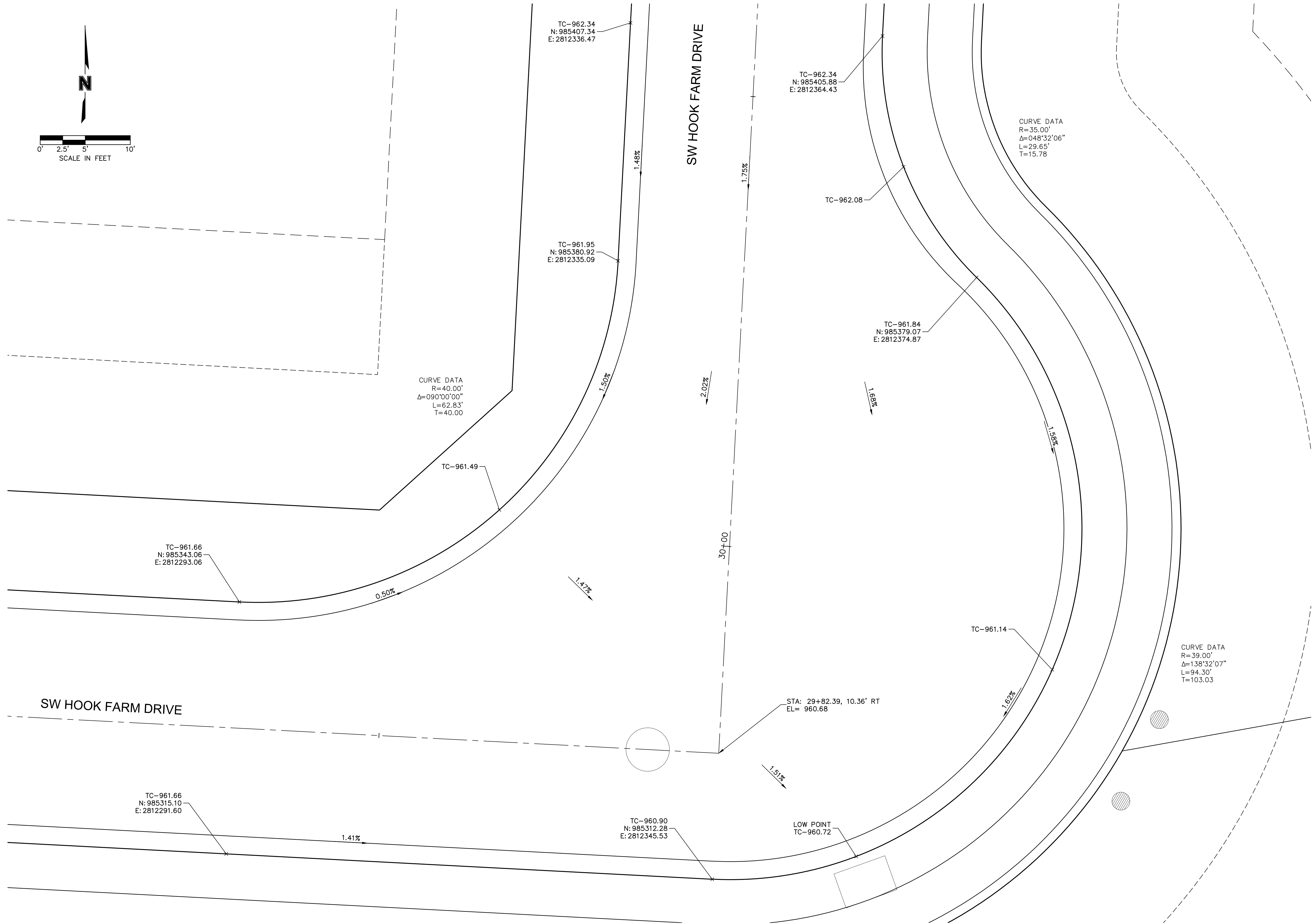
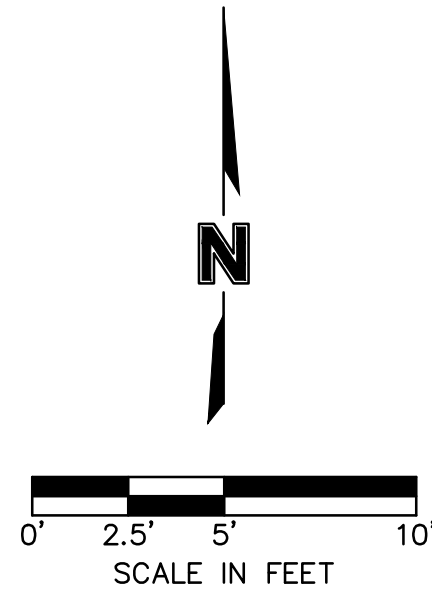
SHEET
C125

[illegible]

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DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Street and Storm Plans\C_INT02_0194061.dwg
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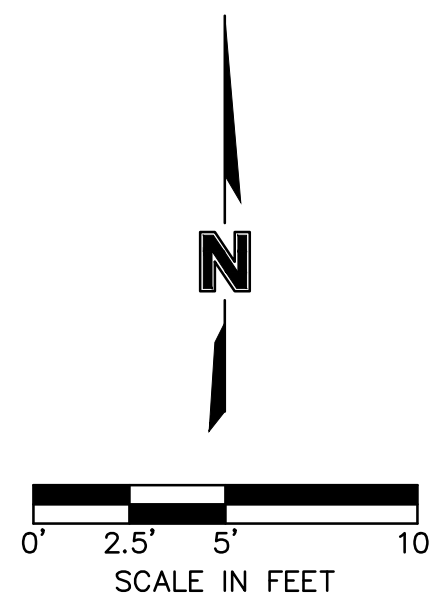
SW HOOK FARM DRIVE & SW HOOK FARM DRIVE STREET AND STORM SEWER PLANS	HOOK FARMS FIRST PLAT
LEE'S SUMMIT, MO	
drawn by: _____ CGW checked by: _____ JES approved by: _____ NDH QA/QC by: _____ JES project no.: _____ 019-4061 drawing no.: _____ date: _____ 04/20/2020	

[illegible]

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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



TC-968.72
N: 985624.67
E: 2812307.75

TC-968.72
N: 985652.64
E: 2812309.21

SW FARM FIELD COURT

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

TC-966.81
N: 985582.64
E: 2812345.62

TC-966.05
N: 985556.23
E: 2812344.24

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

32+87:03
+00

TC-966.53
N: 985580.35
E: 2812385.37

TC-966.05
N: 985554.77
E: 2812372.20

TC-966.29-

TC-967.21-

CURVE DATA
R=35.00'
 $\Delta=048^{\circ}32'06''$
L=29.65'
T=15.78

CURVE DATA
R=39.00'
 $\Delta=138^{\circ}32'06''$
L=94.30'
T=103.03

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

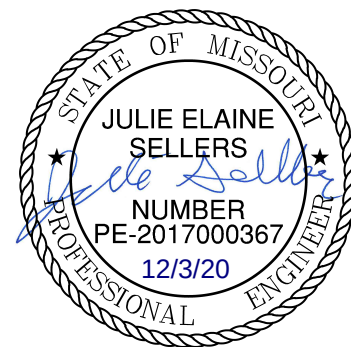
HOOK FARMS
FIRST PLAT

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

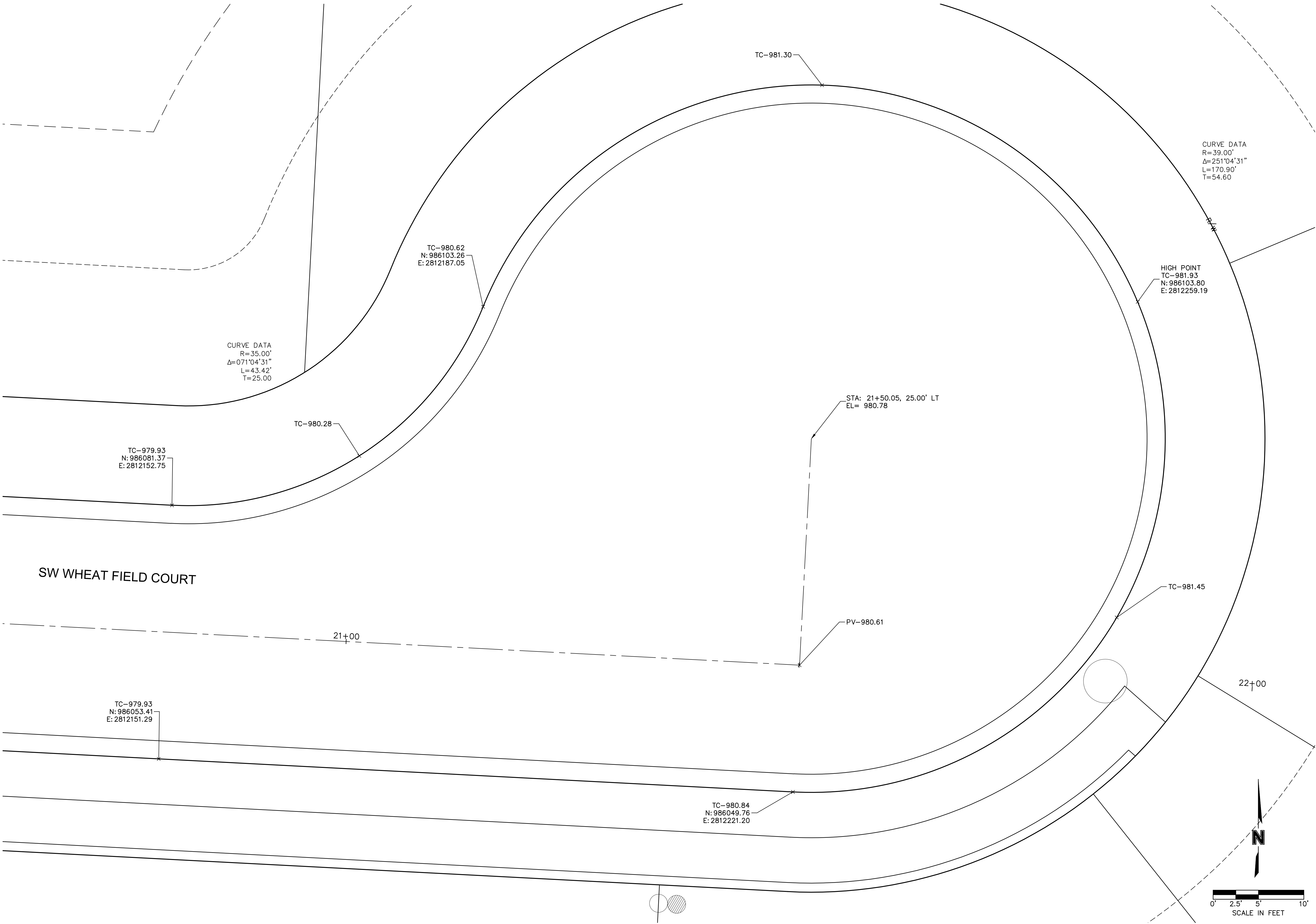
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DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Street and Storm Plans\VC_INT02_0194061.dwg USER: nhaiser
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SW WHEAT FIELD COURT CUL-DE-SAC
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

2020

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
C128

STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
12/3/20
PROFESSIONAL ENGINEER

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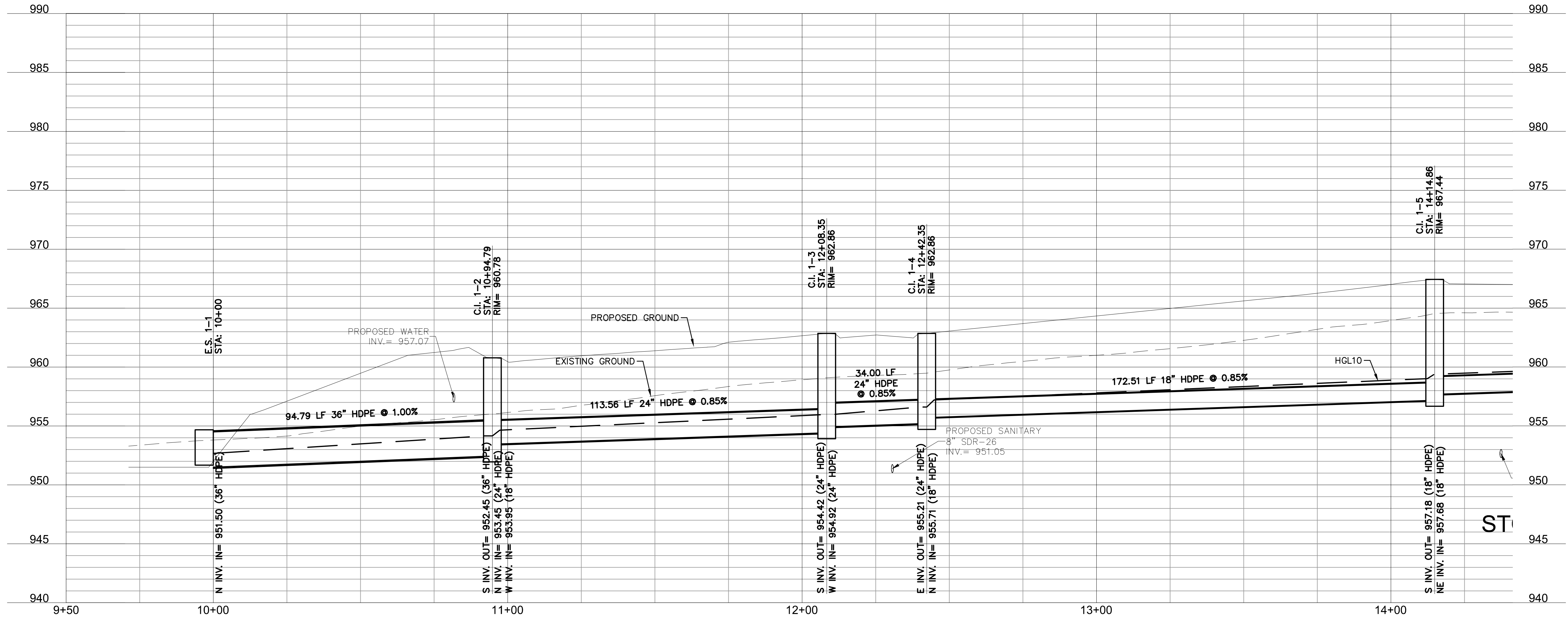
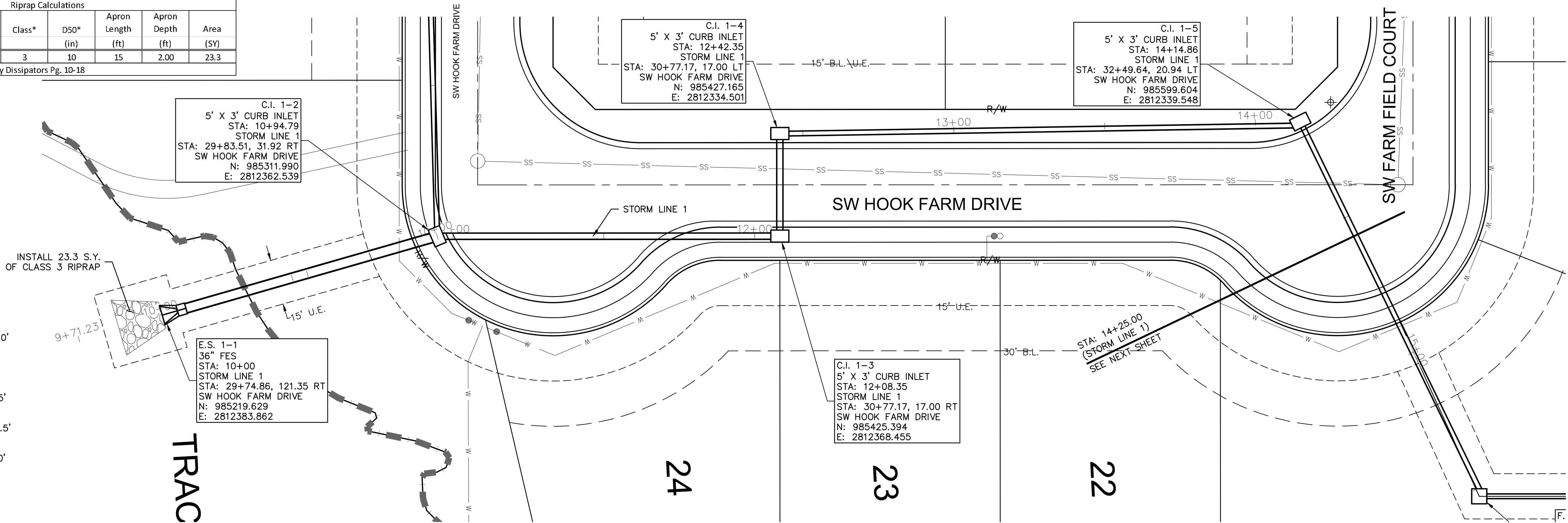
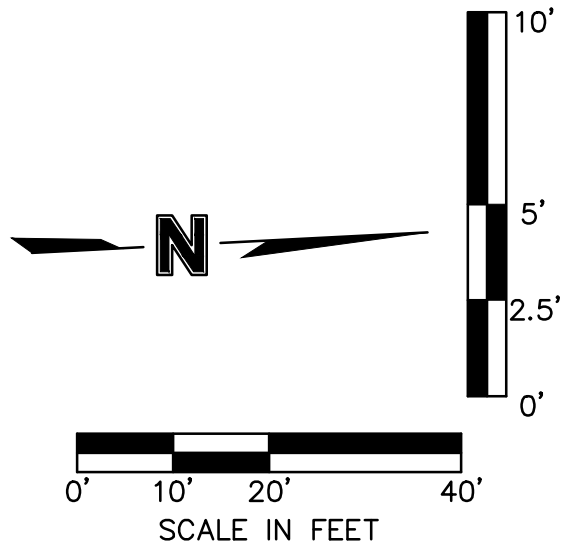
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USER: rneiser

Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
E.S. 1-1	48.24	3	3	10	15	2.00
Area (SY)						
23.3						

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



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NUMBER PE-2017000367
12/3/20

BY

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

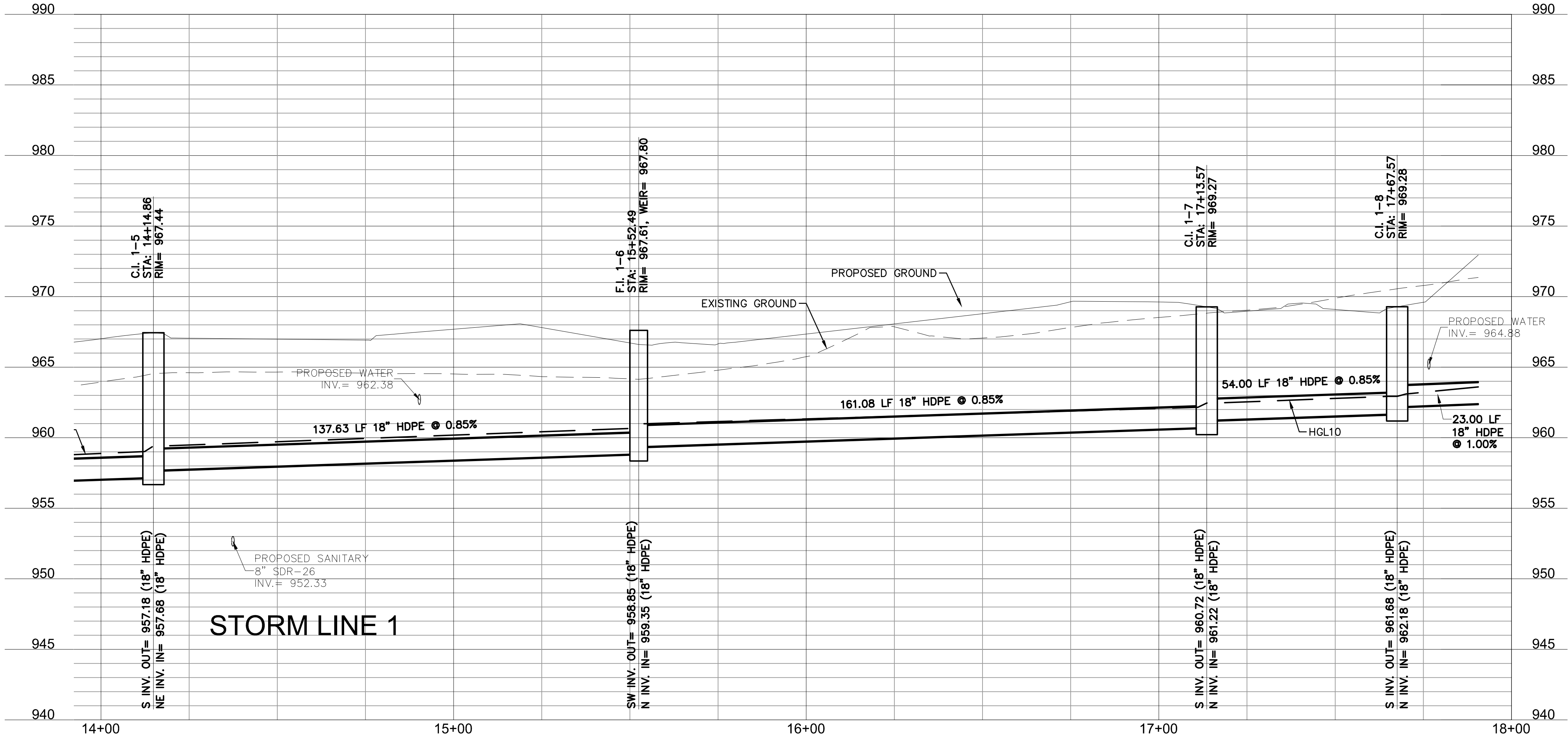
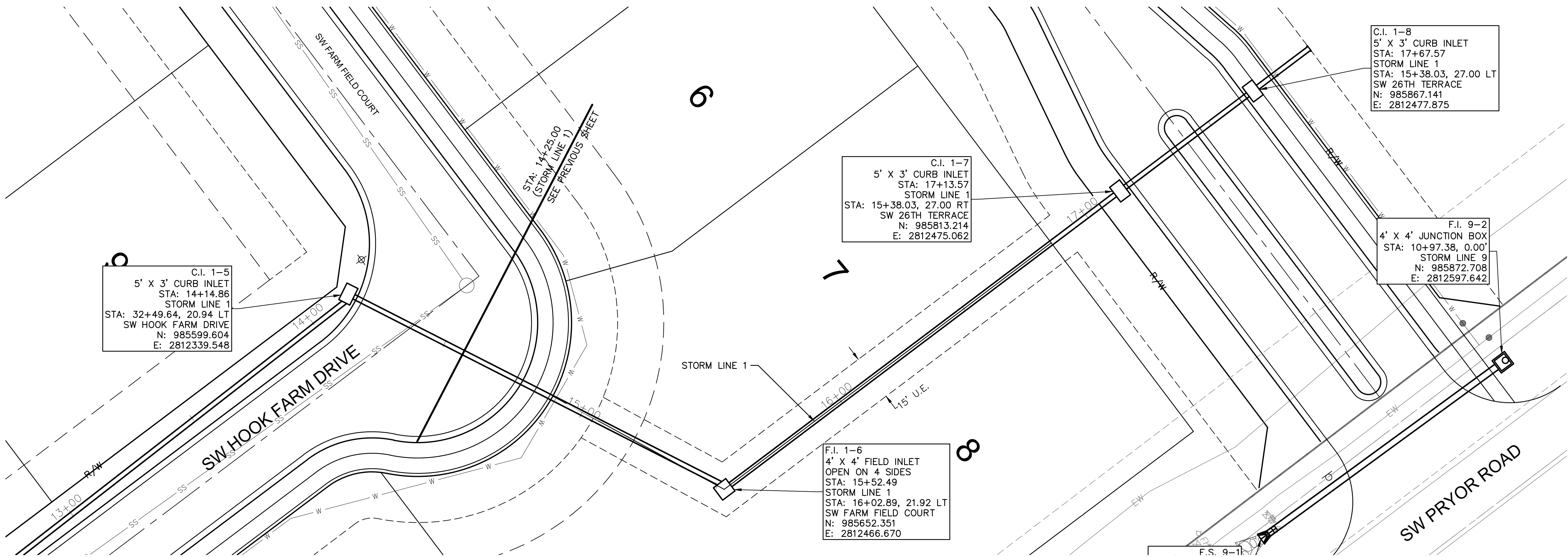
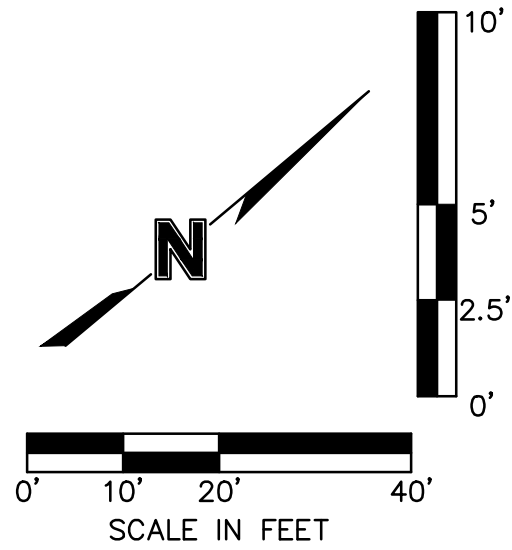
2020

STORM SEWER PLAN & PROFILE (LINE 1)
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
C129

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sheet\GNCV\Street and Storm Plans\C_STM01_0194061.dwg
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USER: nheiser



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PROFESSIONAL ENGINEER

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2 06/25/2020 REVISED PER CITY COMMENTS

2020

STORM SEWER PLAN & PROFILE (LINE 1 CONT'D)
STREET AND STORM SEWER PLANS

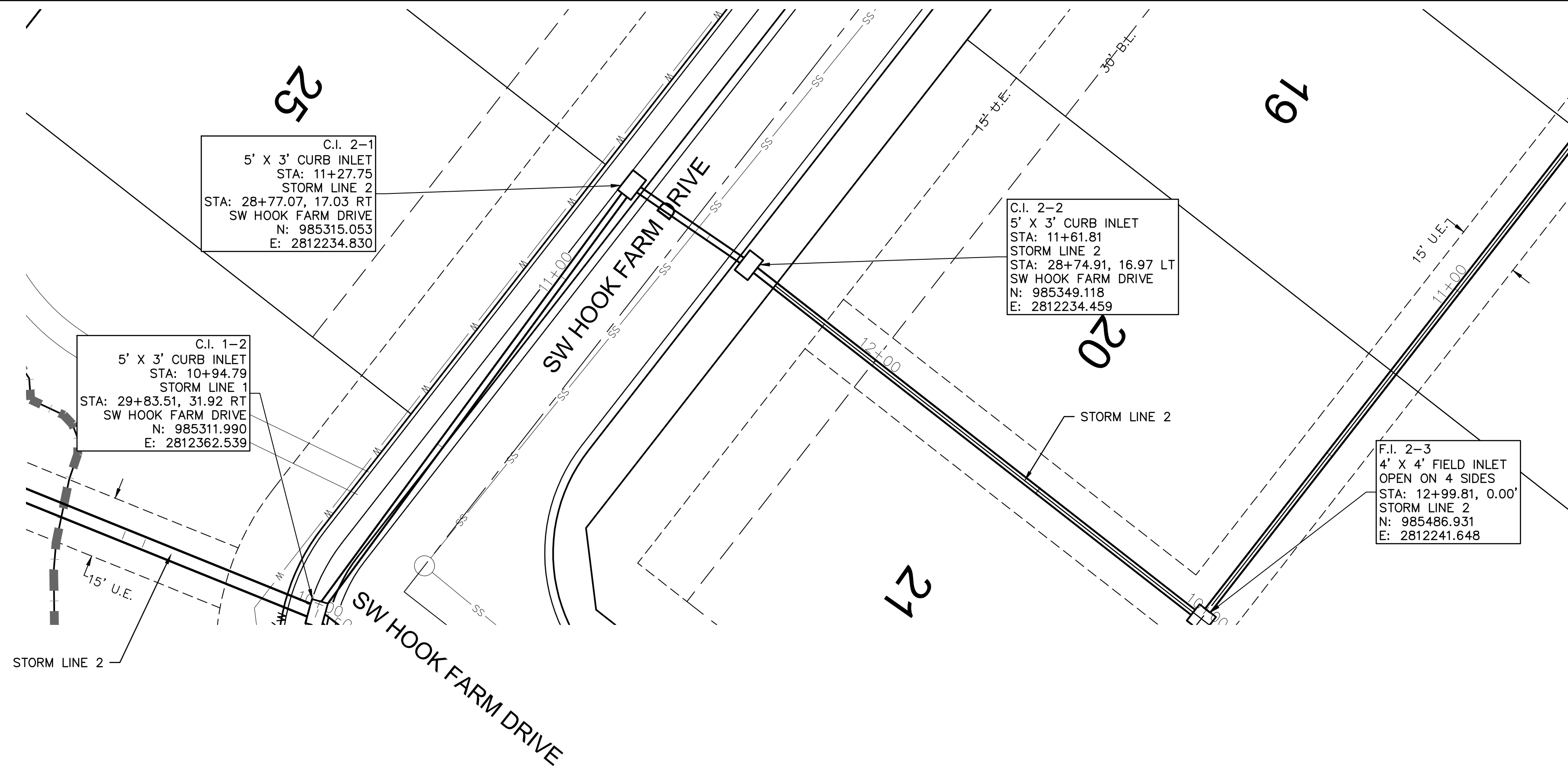
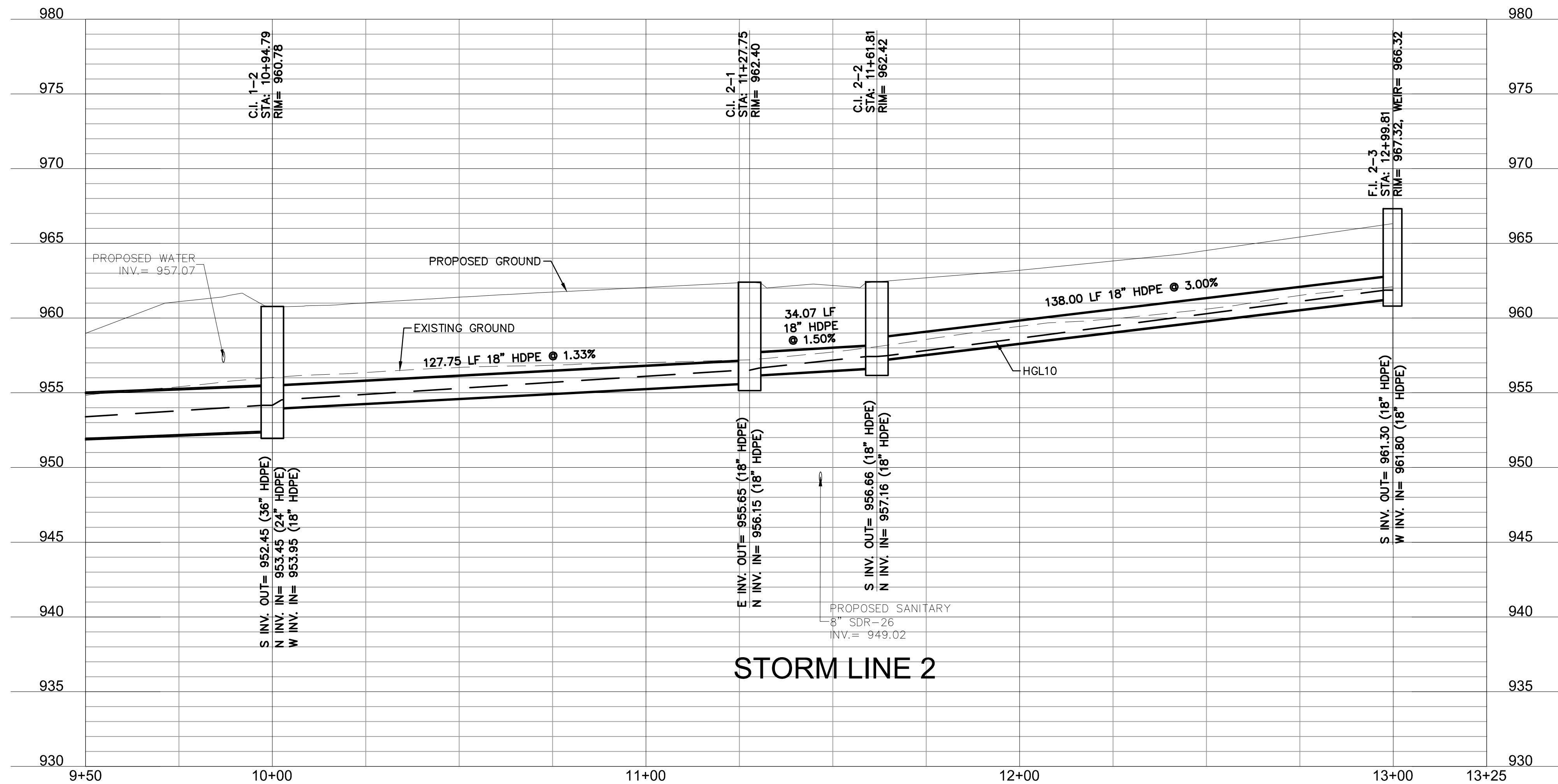
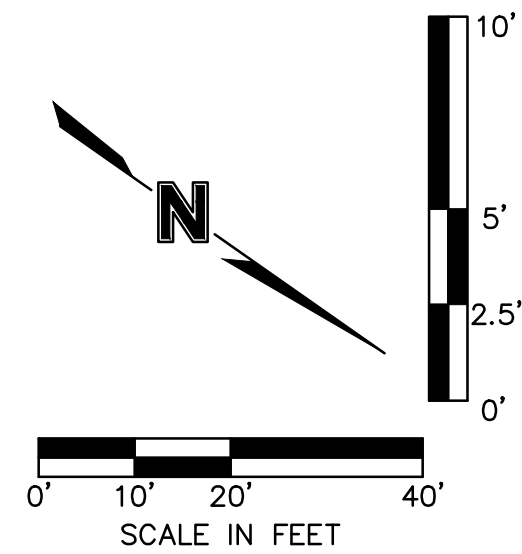
HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

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

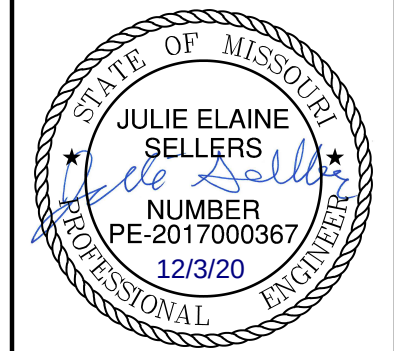
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USER: nheiser
061 C_FBA



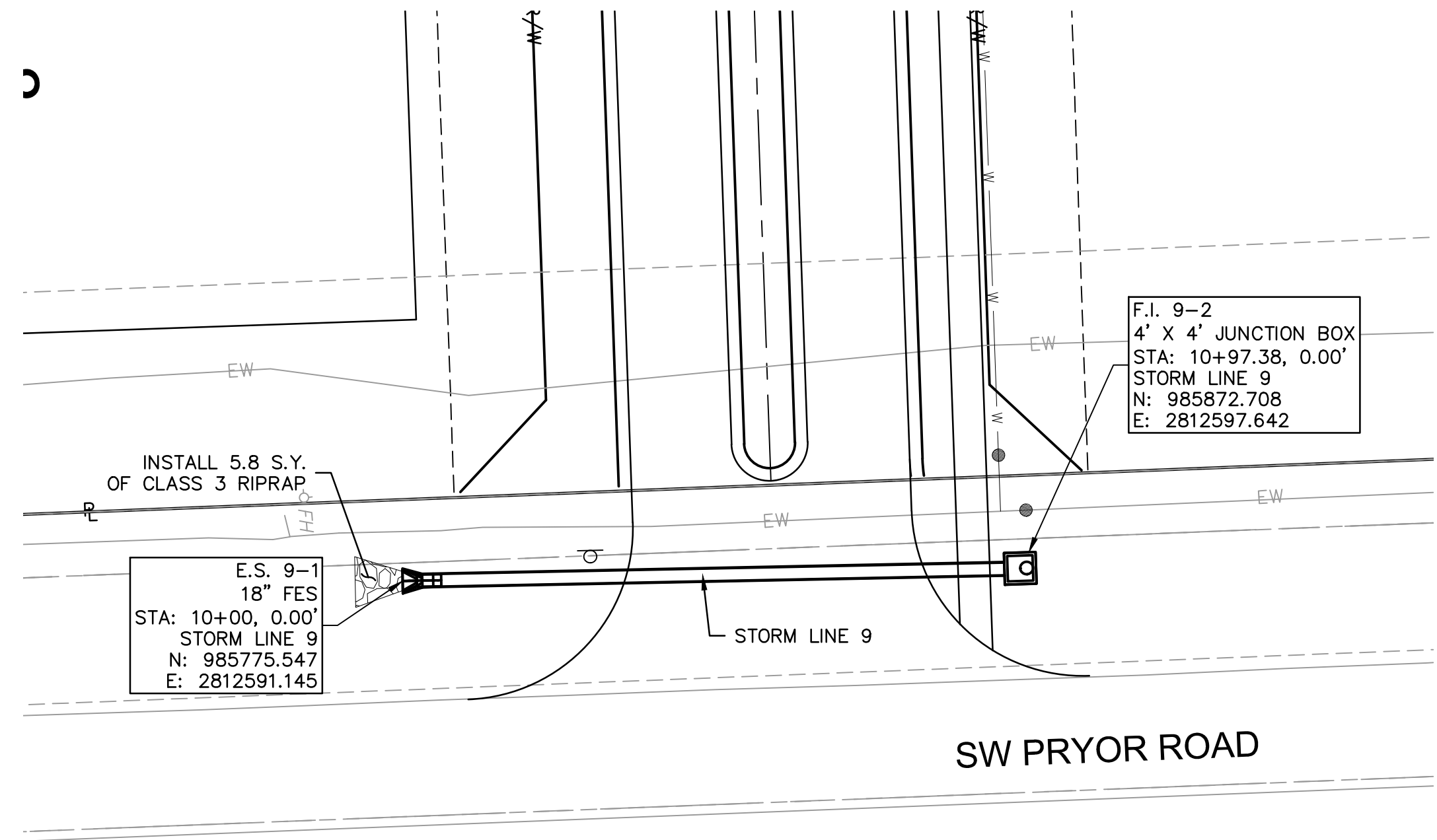
SHEET
C131

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

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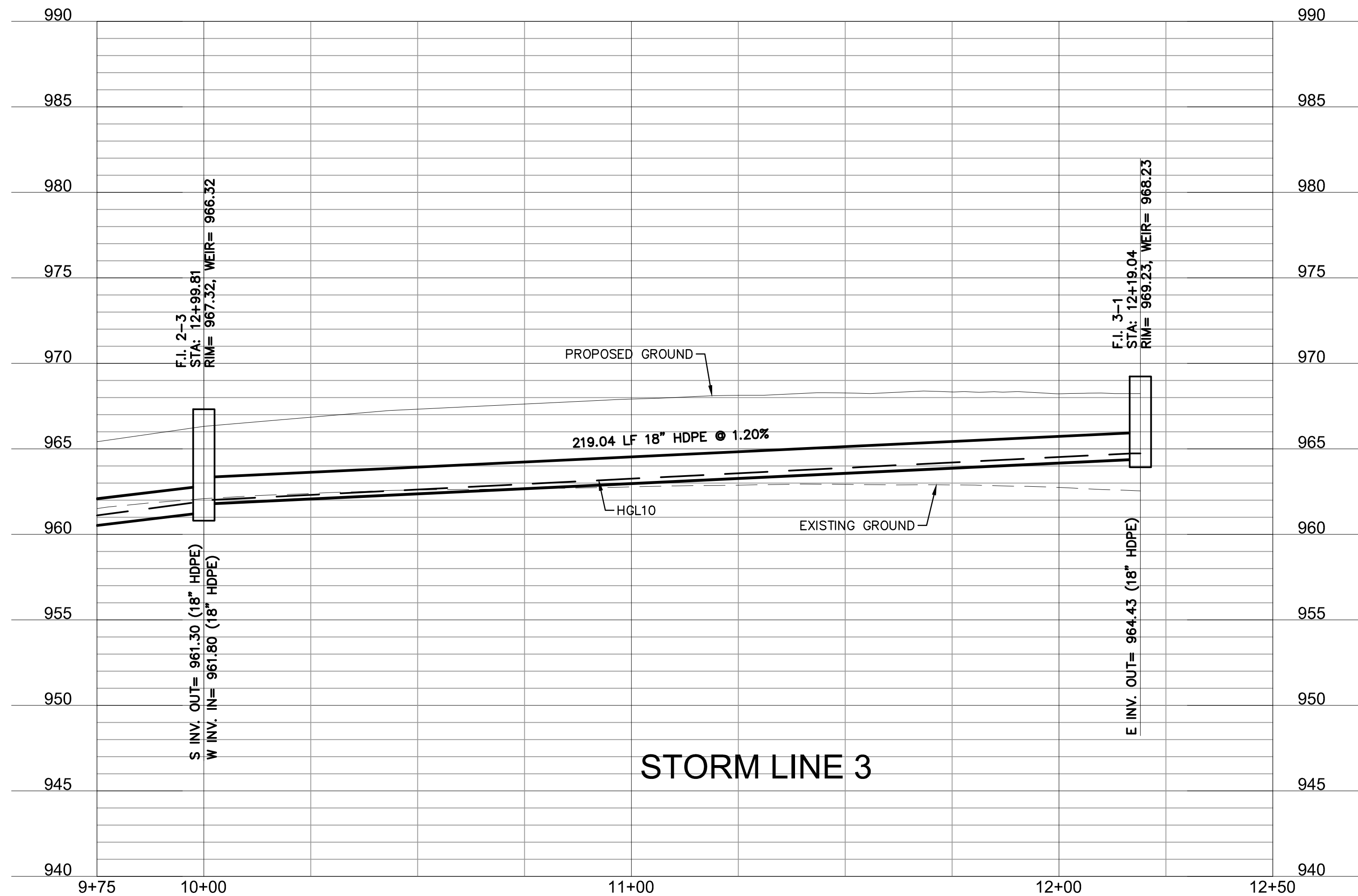
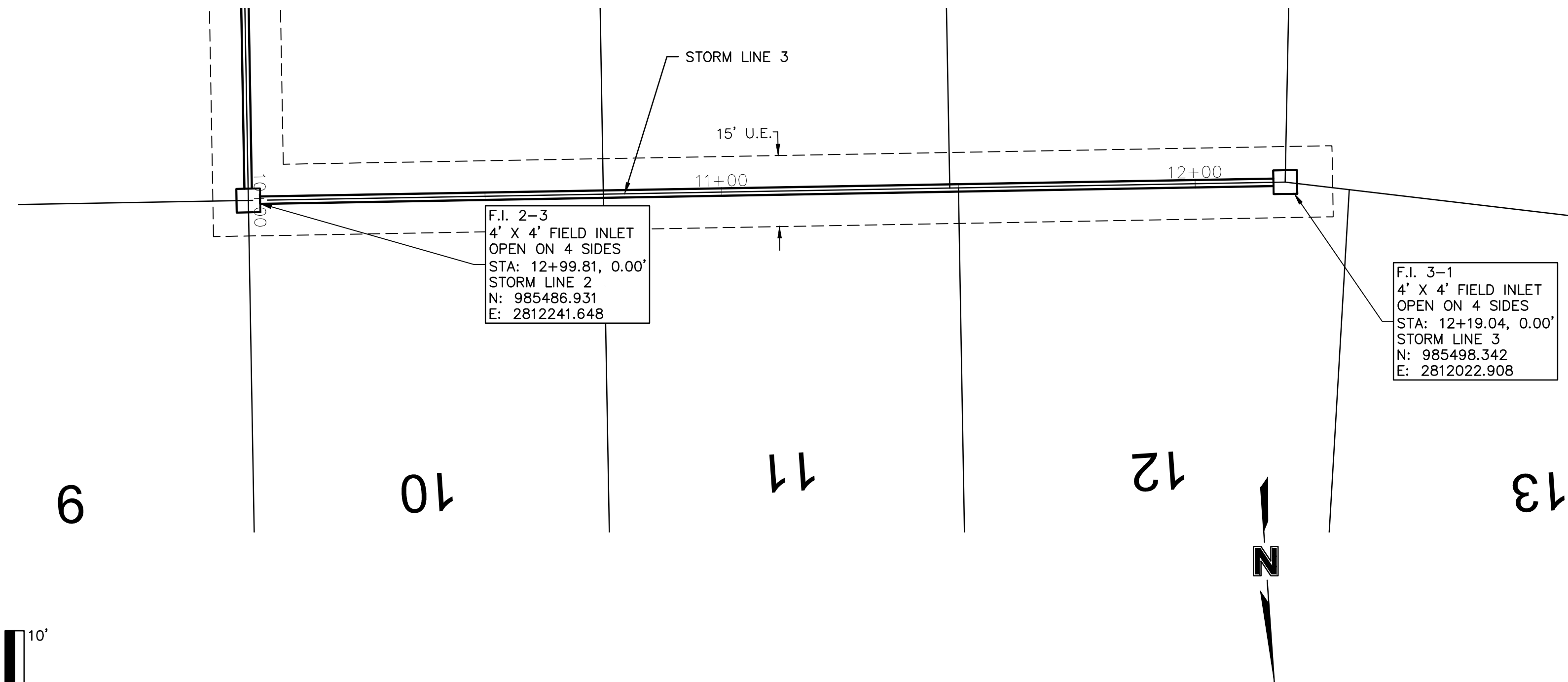
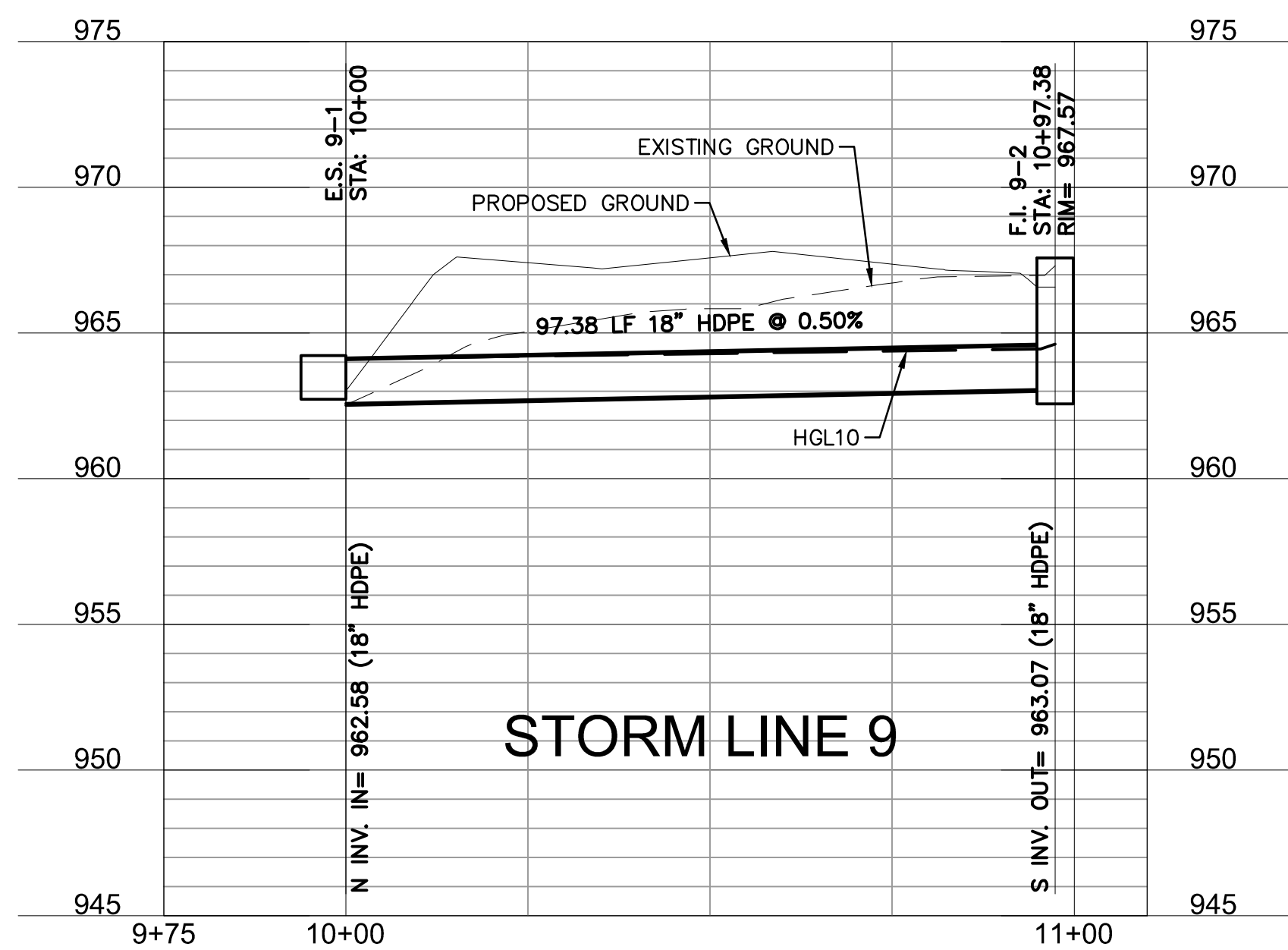
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Riprap Calculations							
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)	Area (SY)
E.S. 9-1	14.93	1.5	3	10	7.5	2.00	5.8

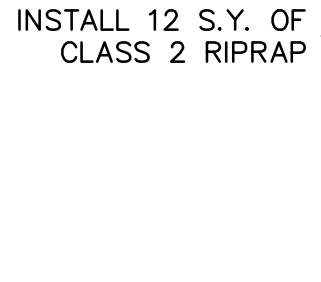
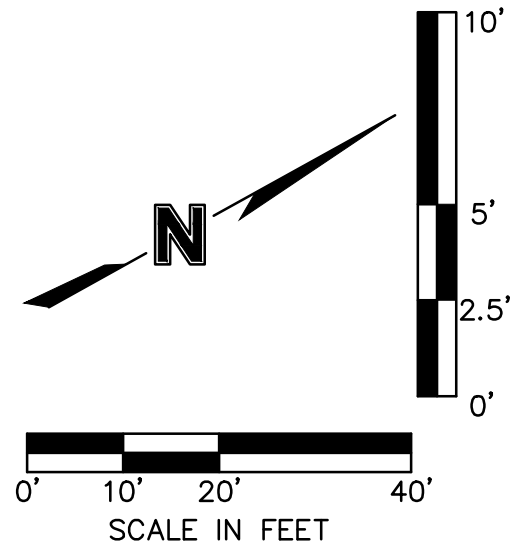
*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18



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USER: nheiser

Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Area (SY)
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

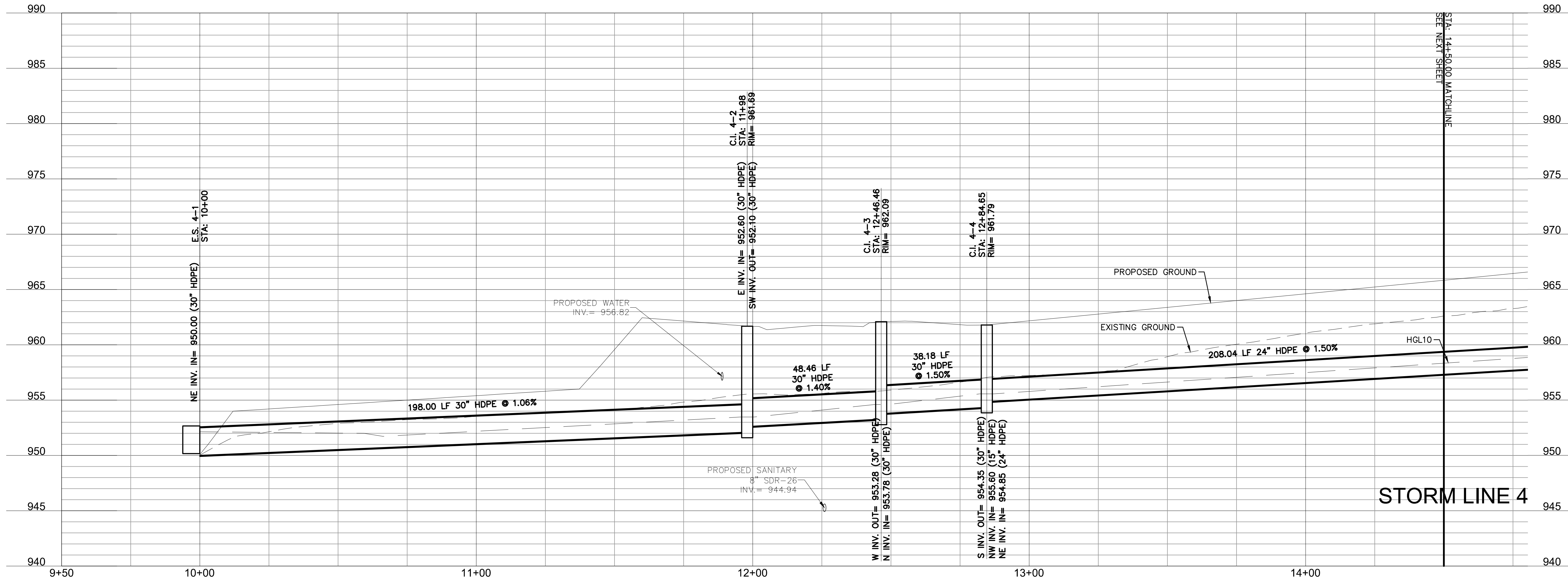
C.I. 4-4
6' X 3' CURB INLET
STA: 12+84.65
STORM LINE 4
STA: 10+44.00, 17.00 RT
SW FARM FIELD ROAD
N: 985480.760
E: 2811764.082

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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12/3/20

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

HOOK FARMS
FIRST FLAT

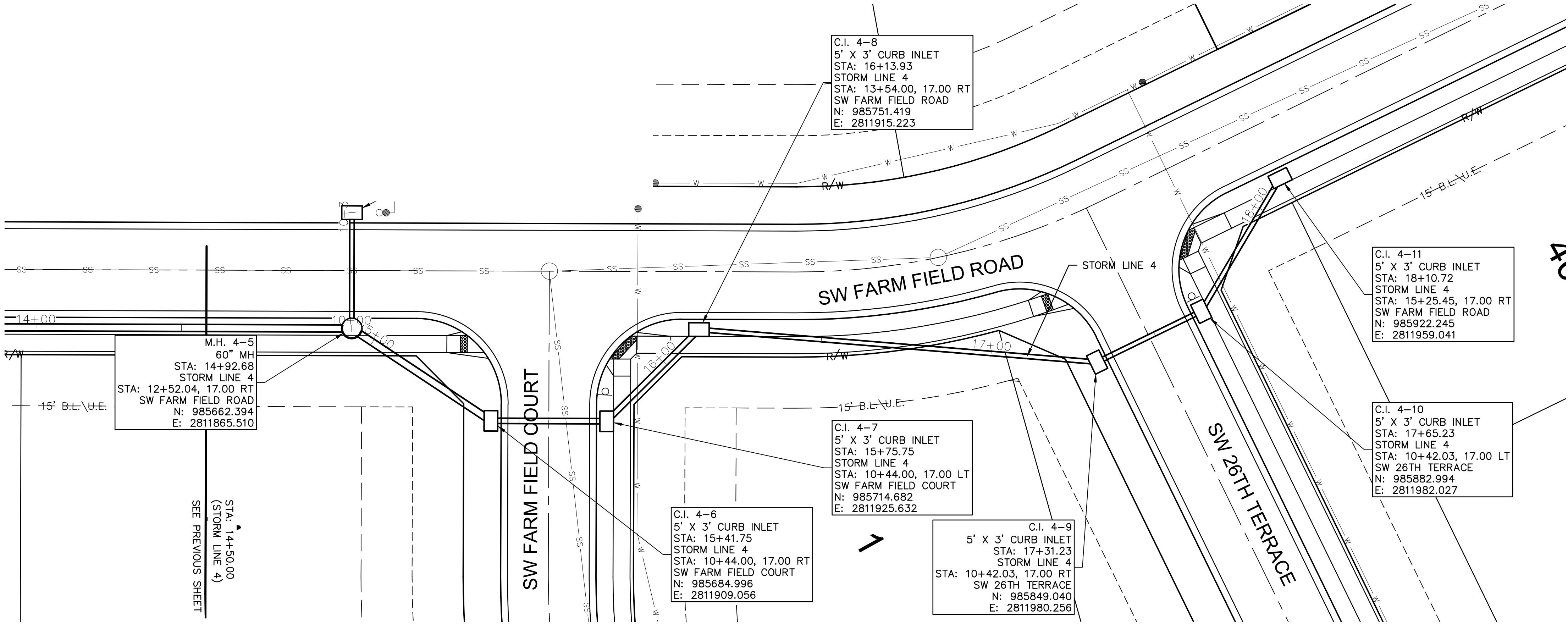
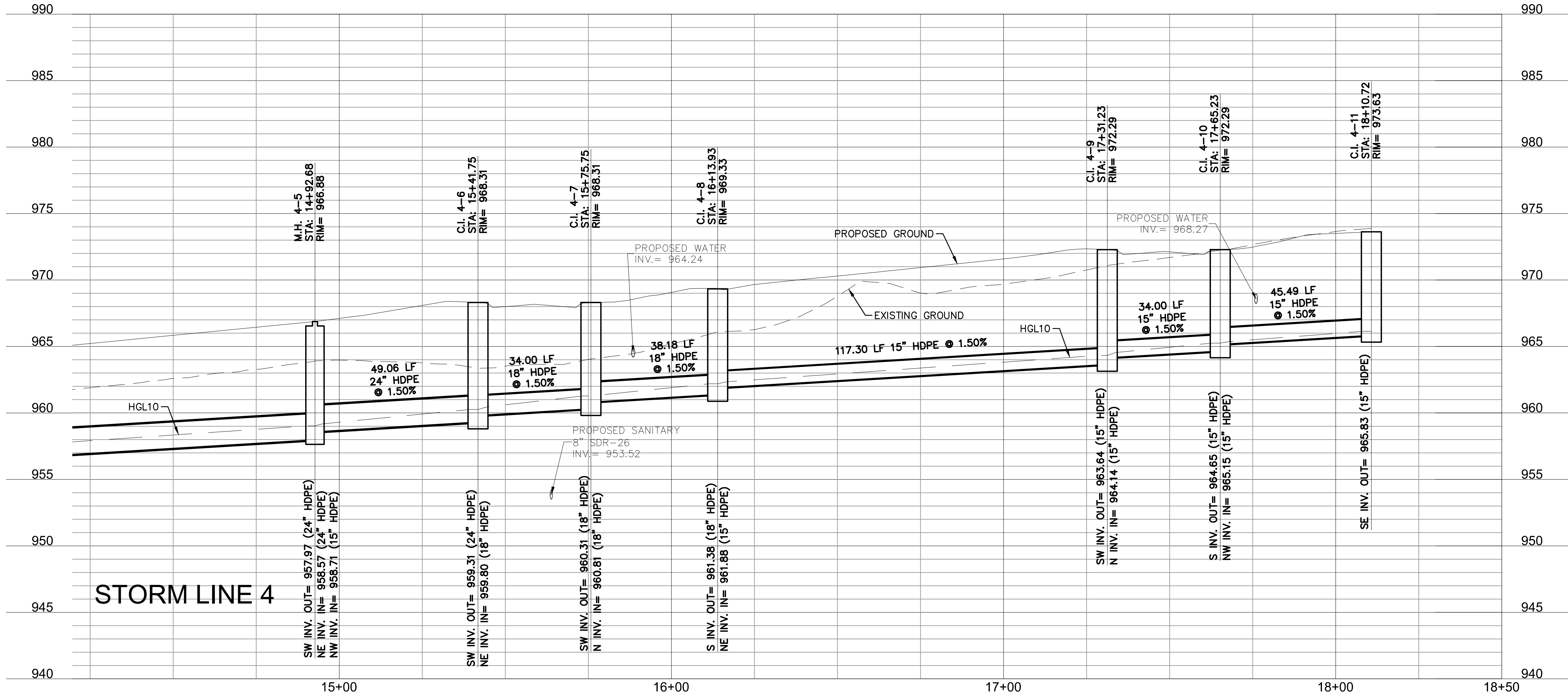
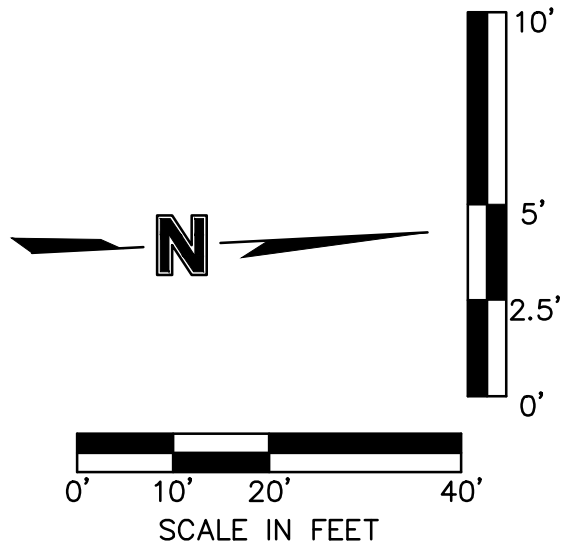
LEE'S SUMMIT, MO

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

2020

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JULIE ELAINE SELLERS
NUMBER PE-2017000367
12/3/20
PROFESSIONAL ENGINEER

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

BY

DATE

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

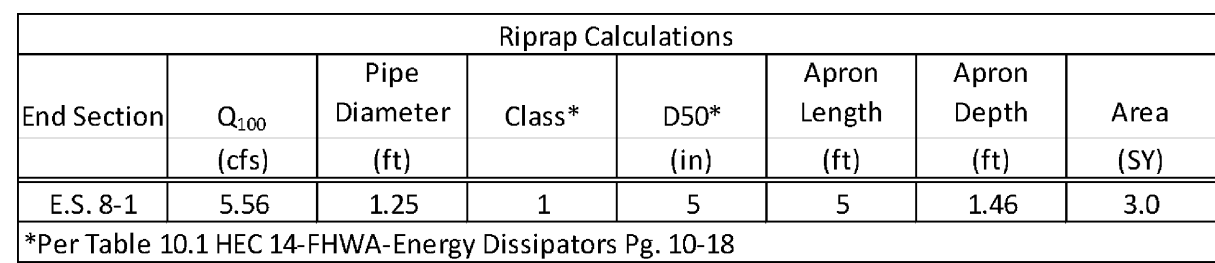
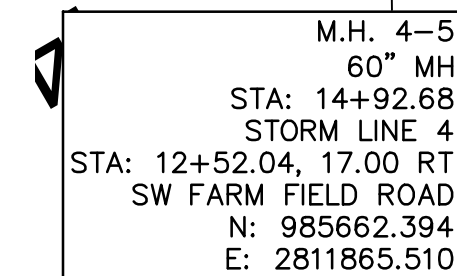
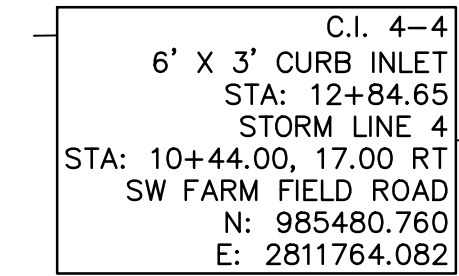
HOOK FARMS
FIRST FLAT

2020

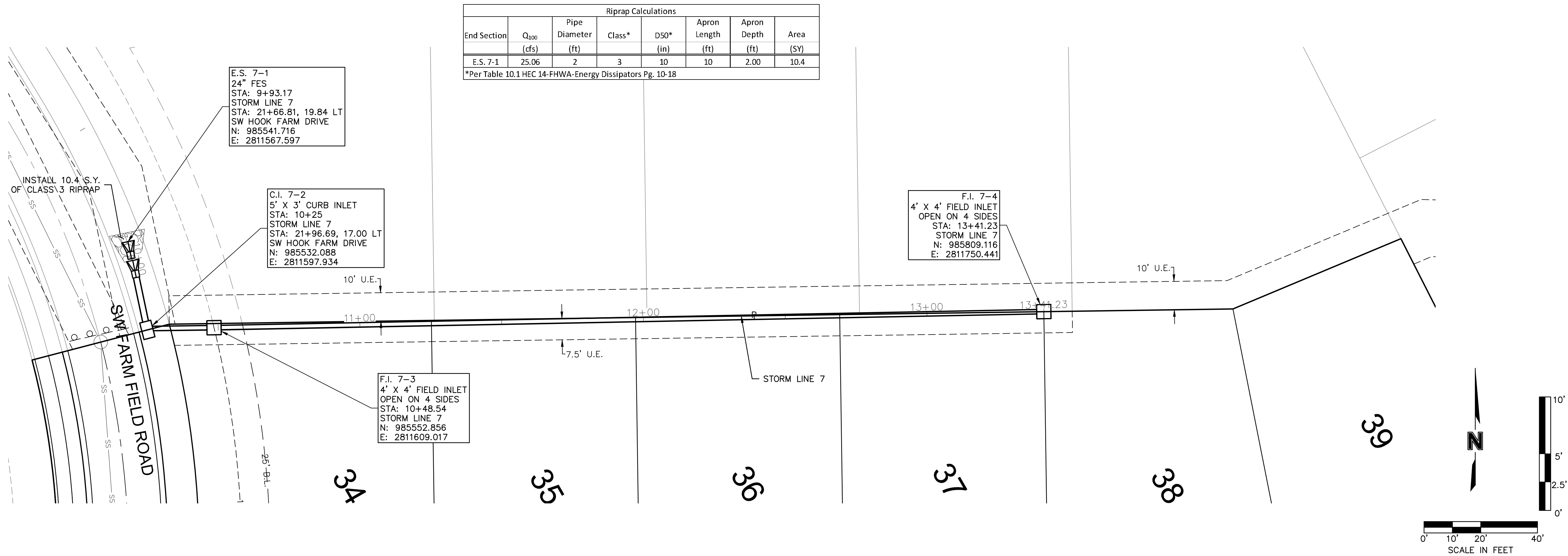
LEE'S SUMMIT, MO

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

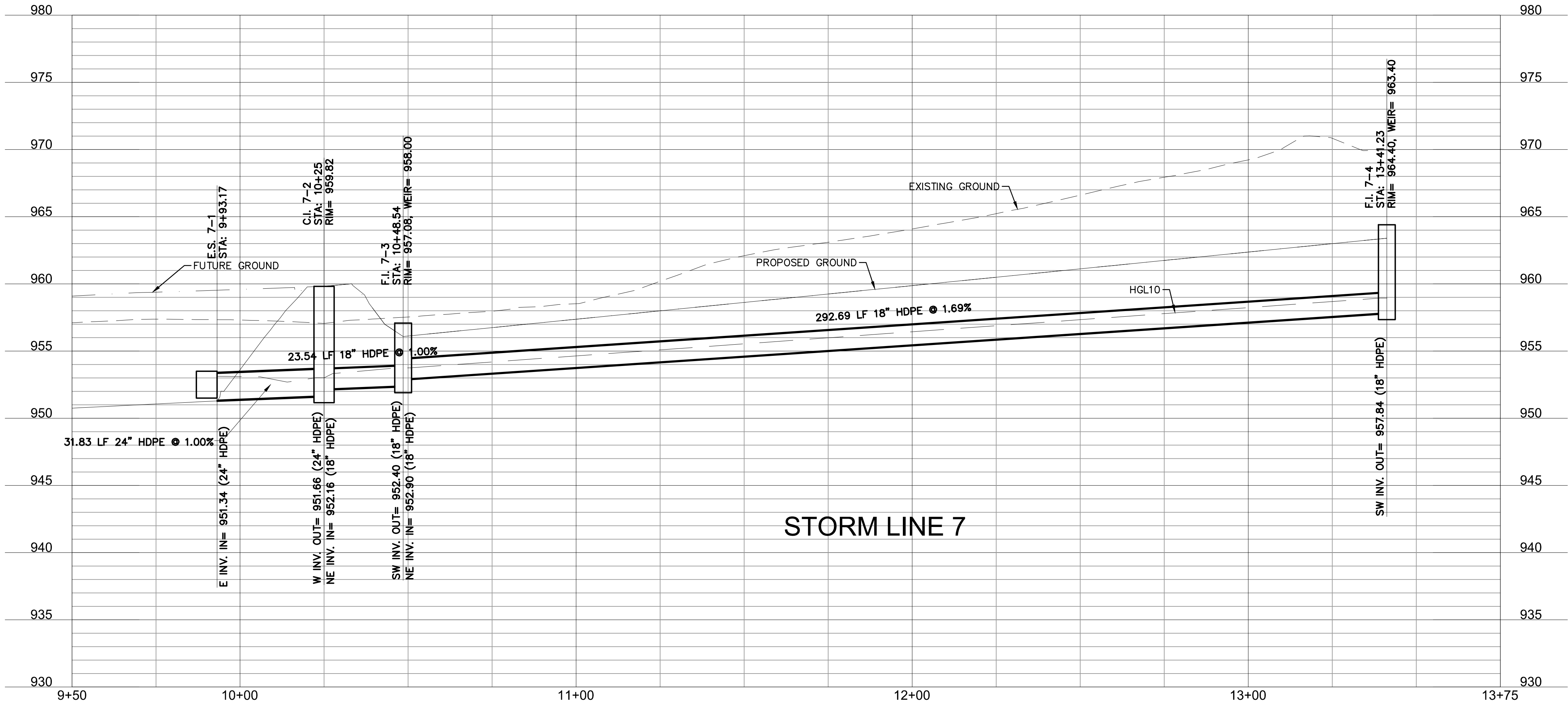
SHEET
C134



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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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NUMBER PE-2017000367
12/3/20
PROFESSIONAL ENGINEER

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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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USER: nheiser C_PSTRM_0194061 C_PUTIL_0194061 C_FBASE_0194061

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.

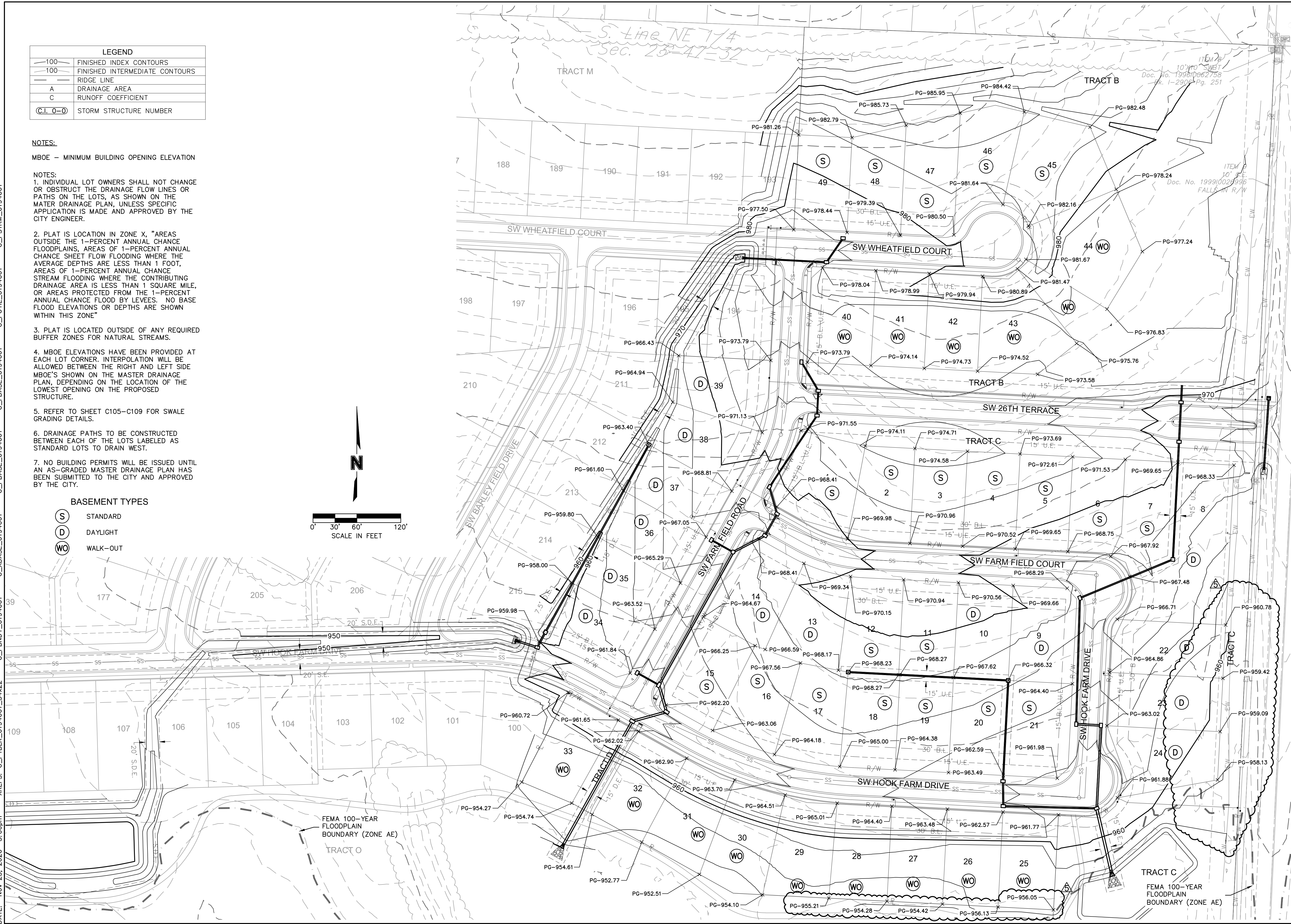
7. NO BUILDING PERMITS WILL BE ISSUED UNTIL AN AS-GRADED MASTER DRAINAGE PLAN HAS BEEN SUBMITTED TO THE CITY AND APPROVED BY THE CITY.

BASEMENT TYPES

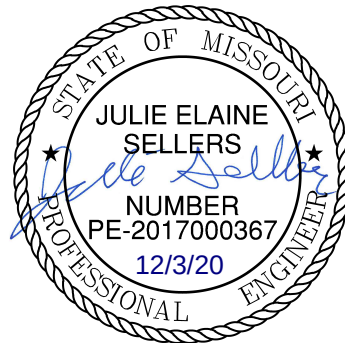
- STANDARD
- DAYLIGHT
- WALK-OUT



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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 PER CITY COMMENTS	
4	10/01/2020	REVISED PER CITY COMMENTS	
5	11/18/2020	REVISED LOTS 25-29 GRADING	

MASTER DRAINAGE PLAN
STREET AND STORM SEWER PLANS

HOOK FARMS
FIRST PLAT

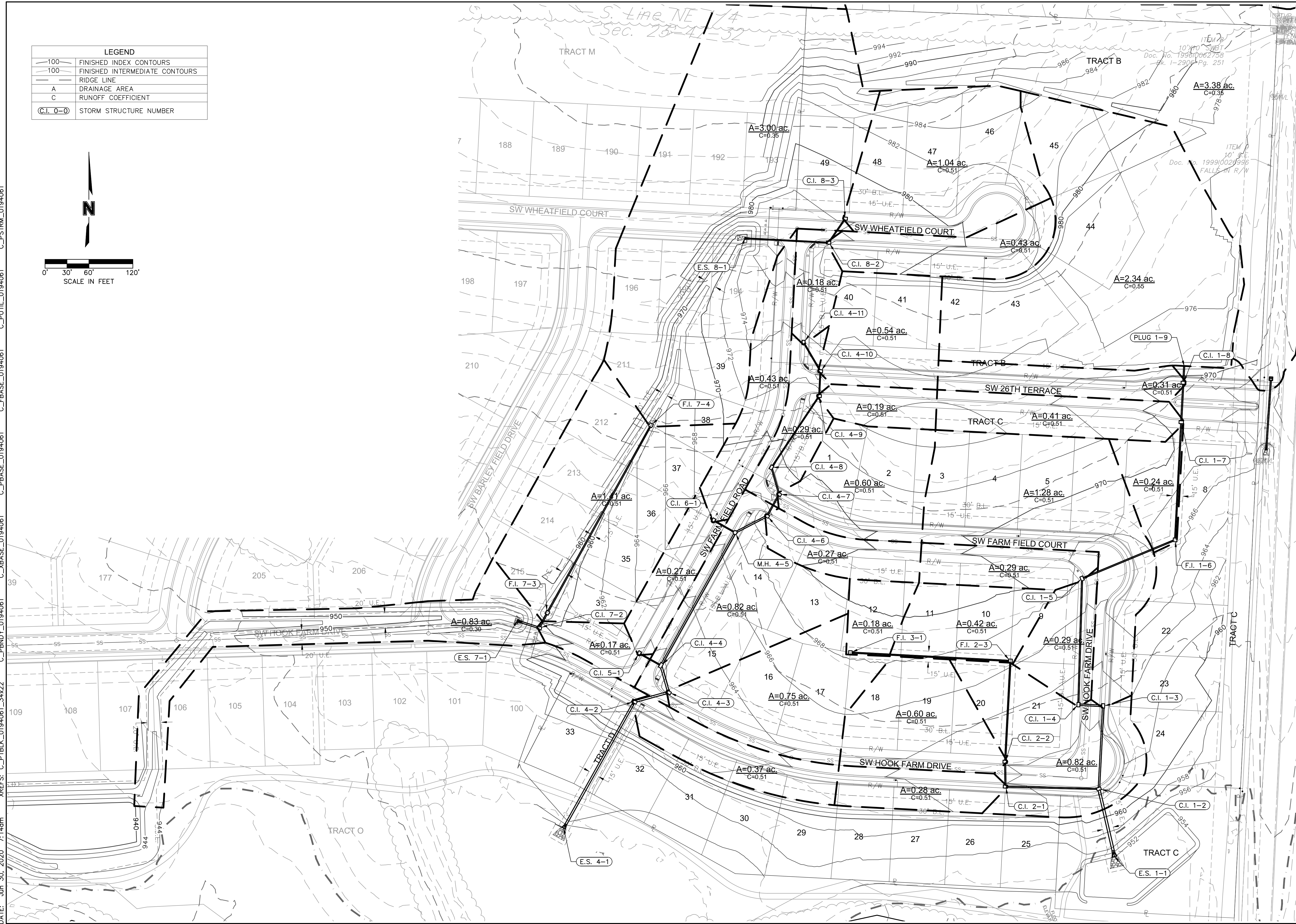
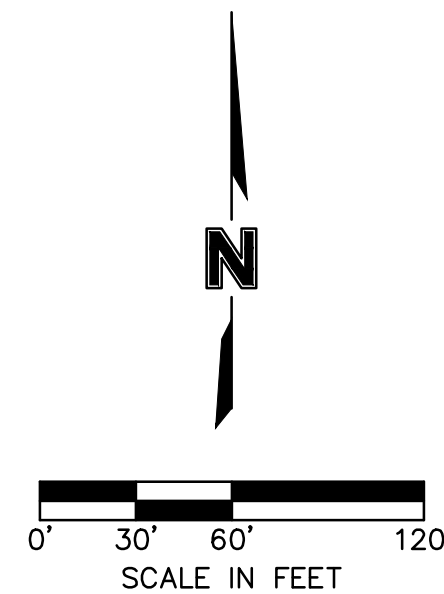
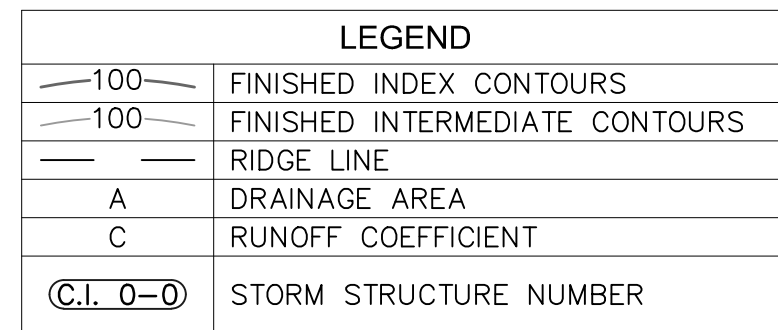
LEE'S SUMMIT, MO

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

SHEET
C137

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DRAINAGE PLAN
STREET AND STORM SEWER PLANS

**HOOK FARMS
FIRST PLAT**

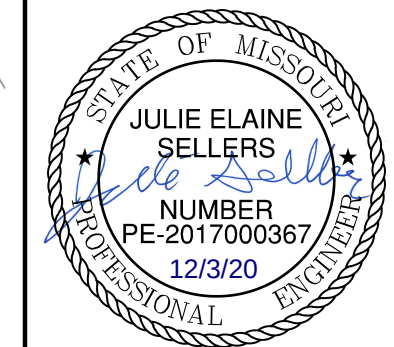
LEE'S SUMMIT, MO

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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
C138

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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.
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	966.31
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. 1-9	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

