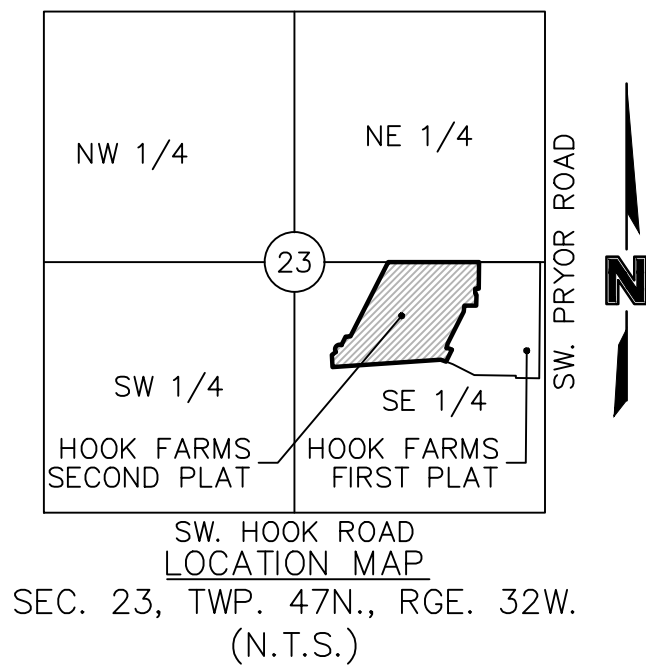


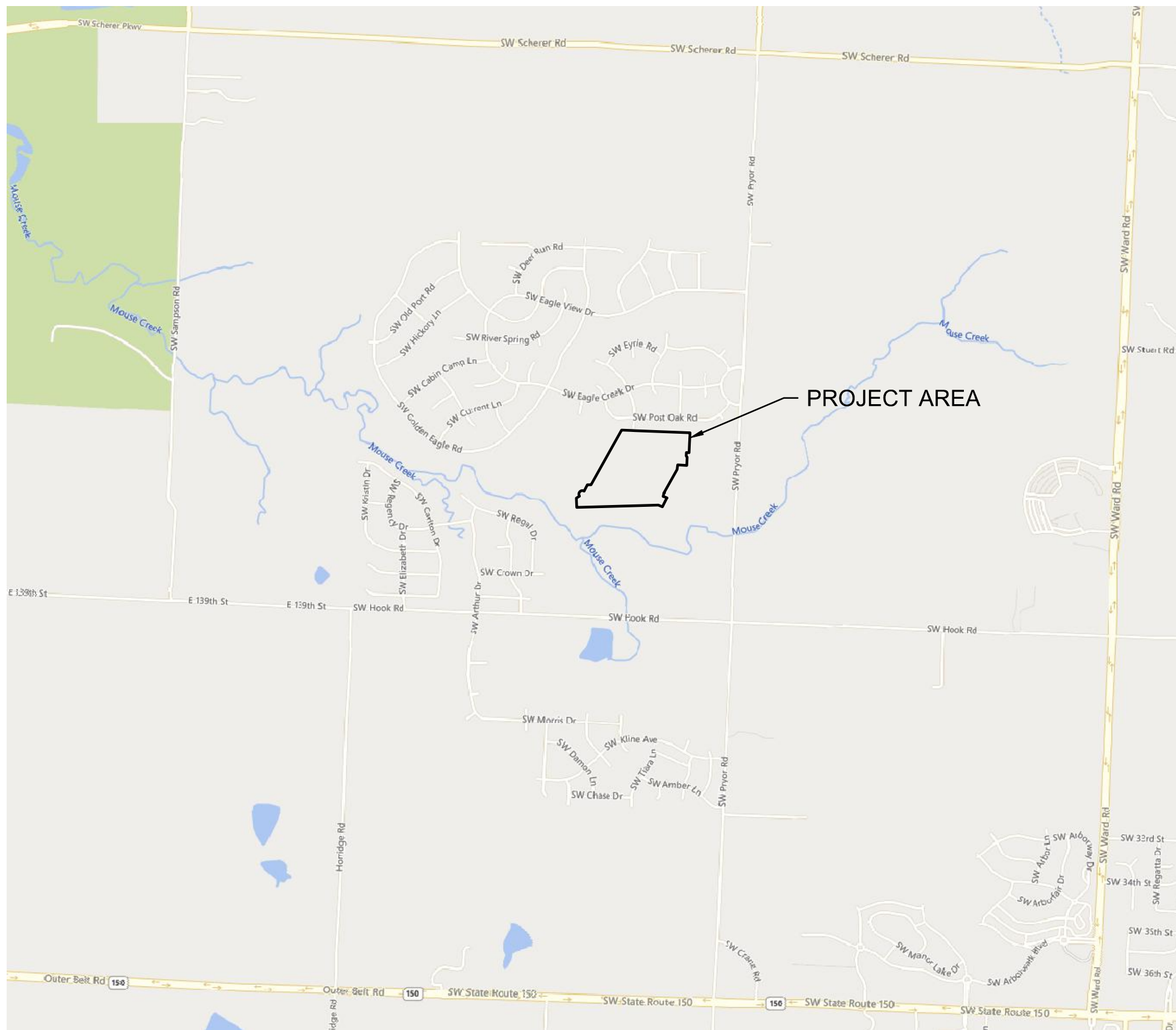
SECTION 23, TOWNSHIP 47 N, RANGE 32 W
IN LEE'S SUMMIT, JACKSON COUNTY, MO



PROJECT TEAM & UTILITY CONTACT LIST	
<u>OWNER / DEVELOPER</u> HUNT MIDWEST REAL ESTATE DEVELOPMENT, INC. 8300 NE UNDERGROUND DRIVE KANSAS CITY, MO 64161 CONTACT: AARON SCHMIDT PHONE: 816.455.2500	<u>UTILITY SERVICE NUMBERS</u> NAME: LEE'S SUMMIT PUBLIC WORKS PHONE: 816-969-1800 NAME: LEE'S SUMMIT WATER & SERVICES DEPARTMENT PHONE: 816-969-1940 NAME: SPIRE (MGE) PHONE: 314-342-0500 NAME: AT&T PHONE: 800-286-8313 NAME: EVERGY PHONE: 816-471-5275
<u>ENGINEER</u> OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JULIE E. SELLERS, P.E. PHONE: 816.361.1177 EMAIL: JSSELLERS@OLSSON.COM	NAME: SPECTRUM (TWC) PHONE: 877-772-2253 NAME: GOOGLE FIBER PHONE: 877-454-6959
<u>SURVEYOR</u> OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH, P.L.S. PHONE: 816.361.1177 EMAIL: JROUDEBOUSH@OLSSON.COM	

☐ NOT FOR CONSTRUCTION

☐ REVIEWED FOR CONSTRUCTION



PROPERTY DESCRIPTION

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 PROPOSED HOOK FARMS FIRST PLAT; THENCE CONTINUING NORTH 87°45'24" WEST ON SAID NORTH LINE, ALSO BEING THE PROPOSED NORTH LINE OF SAID PROPOSED HOOK FARMS FIRST PLAT, ALSO BEING THE SOUTH LINE OF SAID EAGLE CREEK—FIRST PLAT, 64,83.82 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE LEAVING SAID NORTH AND SOUTH LINES, SOUTH 02°59'10" WEST, ALONG THE PROPOSED WESTERLY LINE OF PROPOSED HOOK FARMS FIRST PLAT, 277.38 FEET; THENCE NORTH 87°00'50" WEST, ALONG SAID PROPOSED WESTERLY LINE, 36.00 FEET; THENCE SOUTH 02°59'10" WEST, ALONG SAID PROPOSED WESTERLY LINE, 50.00 FEET; THENCE SOUTH 42°00'50" EAST, ALONG SAID PROPOSED WESTERLY LINE, 19.80 FEET; THENCE SOUTH 02°59'10" WEST, ALONG SAID PROPOSED WESTERLY LINE, 116.00 FEET; THENCE NORTH 87°00'50" WEST, ALONG SAID PROPOSED WESTERLY LINE, 126.12 FEET; THENCE SOUTH 07°19'52" WEST, ALONG SAID PROPOSED WESTERLY LINE, 64.17 FEET; THENCE SOUTH 29°10'47" WEST, ALONG SAID PROPOSED WESTERLY LINE, 375.17 FEET; THENCE SOUTH 15°20'56" WEST, ALONG SAID PROPOSED WESTERLY LINE, 50.00 FEET; THENCE ALONG SAID PROPOSED WESTERLY LINE, EASTERLY ALONG A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF SOUTH 74°39'04" EAST WITH A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 11°57'16" AND AN ARC DISTANCE OF 57.38 FEET; THENCE SOUTH 27°18'12" WEST, ALONG SAID PROPOSED WESTERLY LINE, 138.17 FEET; THENCE LEAVING SAID PROPOSED WESTERLY LINE, NORTH 67°11'53" WEST, 61.05 FEET; THENCE SOUTH 88°21'16" WEST, 1,139.83 FEET; THENCE NORTH 01°38'44" WEST, 128.09 FEET; THENCE NORTH 57°02'58" EAST, 49.90 FEET; THENCE NORTHEASTERLY ALONG A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF NORTH 32°57'02" WEST WITH A RADIUS OF 50.00 FEET, A CENTRAL ANGLE OF 150°22'53" AND AN ARC DISTANCE OF 131.23 FEET; THENCE NORTH 27°25'51" EAST, 98.75 FEET; THENCE NORTH 88°21'16" EAST, 52.12 FEET; THENCE NORTH 29°10'47" EAST, 873.51 FEET TO A POINT ON SAID NORTH LINE OF SAID SOUTHEAST QUARTER, ALSO BEING THE SOUTH LINE OF EAGLE CREEK—SECOND PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT RECORDED AS INSTRUMENT NUMBER 200100058889 IN BOOK 165 AT PAGE 09 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE SOUTH 87°45'24" EAST, ON SAID NORTH LINE AND SAID SOUTH LINE, 682.19 FEET TO THE SOUTHEAST CORNER OF SAID EAGLE CREEK—SECOND PLAT, ALSO BEING THE SOUTHWEST CORNER OF SAID EAGLE CREEK—FIRST PLAT; THENCE SOUTH 87°45'24" EAST ON SAID NORTH LINE, AND SAID SOUTH LINE OF EAGLE CREEK—FIRST PLAT, 273.64 FEET TO THE POINT OF BEGINNING. CONTAINING 1,157.274 SQUARE FEET OR 26.57 ACRES, MORE OR LESS.

BENCHMARK

JA-74
ELEVATION: 1058.10
N: 978461.2779
E: 2809447.9650
DESCRIPTION: KC METRO ALUMINUM GRS DISK SET IN CONCRETE. THE STATION IS STAMPED JA-74, 1988, AND PROJECTS ABOUT 1 INCH

SHEET LIST	
NUMBER	TITLE
C101	TITLE SHEET
C102	GENERAL NOTES
C103	GENERAL LAYOUT
C104	TYPICAL SECTIONS
C105	GRADING PLAN (FOR REFERENCE)
C106	GRADING PLAN (FOR REFERENCE)
C107	SWALE 1 PLAN & PROFILE
C108	SWALE 2 PLAN & PROFILE
C109	SWALE 2 PLAN & PROFILE
C110	ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
C111	ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
C112	ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
C113	ROADWAY PLAN & PROFILE (SW WHEATFIELD COURT)
C114	ROADWAY PLAN & PROFILE (SW WHEATFIELD COURT)
C115	ROADWAY PLAN & PROFILE (SW TRACKER LANE)
C116	ROADWAY PLAN & PROFILE (SW TRACKER LANE)
C117	ROADWAY PLAN & PROFILE (SW TRACKER LANE)
C118	ROADWAY PLAN & PROFILE (SW FARMHOUSE ROAD)
C119	ROADWAY PLAN & PROFILE (SW FIREFLY LANE)
C120	ROADWAY PLAN & PROFILE (SW FIREFLY LANE)
C121	ROADWAY PLAN & PROFILE (SW BARLEY FIELD DRIVE)
C122	ROADWAY PLAN & PROFILE (SW BARLEY FIELD DRIVE)
C123	TRAFFIC CONTROL PLAN
C124	SW TRACKER LANE & SW HOOK FARM DRIVE
C125	SW FIREFLY LANE & SW HOOK FARM DRIVE
C126	SW BARLEY FIELD DRIVE & SW HOOK FARM DRIVE
C127	SW FARMHOUSE ROAD & SW TRACKER LANE
C128	SW WHEATFIELD COURT & SW TRACKER LANE
C129	SW FIREFLY LANE & SW WHEATFIELD COURT
C130	SW BARLEY FIELD DRIVE & SW WHEATFIELD COURT
C131	SW HOOK FARM DRIVE CUL-DE-SAC
C132	STORM SEWER PLAN & PROFILE (LINE 1)
C133	STORM SEWER PLAN & PROFILE (LINE 1)
C134	STORM SEWER PLAN & PROFILE (LINE 2)
C135	STORM SEWER PLAN & PROFILE (LINE 2)
C136	STORM SEWER PLAN & PROFILE (LINES 3 & 4)
C137	STORM SEWER PLAN & PROFILE (LINES 5 & 7)
C138	STORM SEWER PLAN & PROFILE (LINE 6)
C139	STORM SEWER PLAN & PROFILE (LINE 8)
C140	STORM SEWER PLAN & PROFILE (LINE 9)
C141	STORM SEWER PLAN & PROFILE (LINE 10)
C142	STORM SEWER PLAN & PROFILE (LINES 11 & 12)
C143	WATER QUALITY BASIN PLAN
C144	MASTER DRAINAGE PLAN
C145	DRAINAGE PLAN
C146	DRAINAGE TABLES
C147	DRAINAGE TABLES
C148	DETAIL SHEET
C149	DETAIL SHEET
C150	DETAIL SHEET

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

JULIE E. SELLERS, P.E.
CIVIL ENGINEER
MO # PE-2017000367

3/24/21
DATE

[illegible]

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE PLANS IN THEIR POSSESSION ARE THE MOST CURRENT VERSION ISSUED, ARE FULLY COORDINATED WITH ALL SUBCONTRACTORS, AND PRESENT ON SITE AT ALL TIMES. CURRENT PLANS PREPARED BY OLSSON MAY BE OBTAINED AT THE DIRECTION OF OLSSON'S CLIENT. DIRECT REQUESTS TO OLSSON MAY REQUIRE ADDITIONAL AUTHORIZATIONS, AGREEMENTS, AND/OR FEES. PLEASE CONTACT THE ENGINEER FOR INFORMATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS WRITTEN APPROVAL FROM ENGINEER, OWNER, AND DEVELOPER.
3. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
4. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING QUANTITIES AND ITEMS OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THE WORK SHOWN IN THE PLANS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, PAYING ALL FEES, AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
7. THE CONTRACTOR SHALL NOT ENGAGE IN ACTIVITIES THAT MAY ENCROACH ON WATERS OF THE U.S., INCLUDING WETLANDS, UNTIL ANY NECESSARY PERMITS MAY BE OBTAINED. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL CONDITIONS DESCRIBED IN THE PERMIT.
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, THE SAFETY OF ALL PERSONS INCLUDING VISITORS AND THE GENERAL PUBLIC, AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY THROUGHOUT THE PROJECT AND NOT BE LIMITED BY WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
9. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH ALL UTILITY COMPANIES AND OBTAIN ANY RELEVANT INFORMATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BOUNDARY CORNERS AND SECTION CORNERS. ANY BOUNDARY CORNER AND/OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE DURING CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REPAIRING ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES.
12. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER TO PERFORM A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.

REFERENCES

1. UNLESS EXPLICITLY DESCRIBED OTHERWISE WITHIN THESE PLANS THE FOLLOWING SHALL APPLY;
 - A. ALL CONSTRUCTION, INCLUDING THOSE LISTED BELOW, SHALL CONFORM TO THE LATEST CODES AND ORDINANCES OF LEE'S SUMMIT, MISSOURI.
 - B. ALL CONSTRUCTION IN MODOT RIGHT-OF-WAY SHALL CONFORM TO THE LATEST SPECIFICATIONS ADOPTED BY U.S. DEPARTMENT OF TRANSPORTATION AND MODOT.
 - C. ALL TRAFFIC CONTROL SIGNAGE SHALL CONFORM WITH THE CURRENT EDITION OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 - D. ALL UTILITY EXTENSIONS AND CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE UTILITY COMPANIES..
 - E. ALL EXTERIOR PAVEMENT (PCC, ASPHALT, ETC.) SHALL BE IN CONFORMANCE WITH THE SPECIFICATIONS OF LEE'S SUMMIT, MISSOURI AND THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE DELIVERY MANAGER AND COORDINATING ANY MAILBOXES THAT MAY BE DISTURBED. FAILURE TO DO SO MAY SUBJECT THE CONTRACTOR TO PROSECUTION BY THE FEDERAL GOVERNMENT.

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.

CONSTRUCTION

1. THE CONTRACTOR SHALL INSTALL TRAFFIC CONTROL WHILE WORKING IN THE PUBLIC RIGHT-OF-WAY AS SHOWN IN THESE PLANS. IF PLANS ARE NOT PROVIDED, CONTRACTOR SHALL COORDINATE AND PROVIDE CONTROLS TO THE SATISFACTION OF THE RIGHT-OF-WAY OWNER.
2. THE CONTRACTOR SHALL PROTECT ALL TREES OVER 3" CALIPER FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE ON THESE PLANS.
3. THE CONTRACTOR SHALL DISPOSE ALL WASTE MATERIAL RESULTING FROM THE PROJECT OFF-SITE AND IN STRICT CONFORMANCE WITH ALL LOCAL CODES AND ORDINANCES.
4. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS ARE TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED. NOT ALL ADJUSTMENTS ARE INDICATED IN THE PLANS.
5. THE CONTRACTOR SHALL STREET SWEEP OR OTHERWISE CLEAN ALL ACCESS ROUTES TO THE SITE AT CONCLUSION OF THE PROJECT.

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 IN 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. ANY ITEMS IN THESE PLANS THAT ALLOW FOR AN 'APPROVED EQUAL' ALTERNATIVE.

STORM SEWER GENERAL NOTES:

1. STORM STRUCTURES SHALL BE PER CURRENT CITY DETAILS. IF CITY DOES NOT HAVE PUBLISHED DETAILS STRUCTURES SHALL BE PER CURRENT APWA SPECIFICATIONS.
2. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH CITY OF LEE'S SUMMIT, MISSOURI.
3. ALL PIPE LENGTHS AND ELEVATIONS ARE CALCULATED LINEARLY FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
4. ALL STRUCTURE DIMENSIONS ARE TO INSIDE FACE OF STRUCTURE.
5. 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.
6. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF STORM SEWER.
7. 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.
8. STRUCTURE INVERT CHANNELS SHALL BE SMOOTH, CIRCULAR, AND CONFORMING TO ½ 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.
9. PIPE PENETRATIONS SHALL BE GROUTED TO ENSURE WATERTIGHT SEALS.
10. MAINTAIN MINIMUM DEPTH OF COVER PER APWA 5606.06

ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
STREET				
	EXCAVATION	C.Y.	26149	
	EMBANKMENT	C.Y.	25993	
	SUBGRADE STABILIZATION (6" FLYASH TREATMENT)	S.Y.	15049	
	6" ASPHALT PAVEMENT	S.Y.	12232	
	CONCRETE CURB & GUTTER (CG-2)	L.F.	8300	
	CONCRETE CURB & GUTTER (CG-2 DRY)	L.F.	166	
	5' CONCRETE SIDEWALK	L.F.	16.50	
	MILL & OVERLAY	S.Y.	40	
	ADA RAMP	EA.	15	
	STOP SIGNS	EA.	7	
	STREET NAME SIGNS	EA.	14	
	END OF ROAD TREATMENT	EA.	1	
STORM				
	STD. CURB INLET (5'x3' INSIDE)	EA.	21	
	STD. CURB INLET (5'x4' INSIDE)	EA.	2	
	STD. CURB INLET (5'x5' INSIDE)	EA.	2	
	STD. CURB INLET (8'x3' INSIDE)	EA.	2	
	STD. STORM MANHOLE (4' DIA. INSIDE)	EA.	1	
	STD. STORM MANHOLE (5' DIA. INSIDE)	EA.	1	
	STD. FIELD INLET (4'x4' INSIDE)	EA.	7	
	WATER QUALITY BASIN OUTLET STRUCTURE	EA.	1	
	12" PVC	L.F.	168.41	
	15" HDPE	L.F.	1992.05	
	18" HDPE	L.F.	477.24	
	24" HDPE	L.F.	945.56	
	30" HDPE	L.F.	216.94	
	36" HDPE	L.F.	549.76	
	12" HDPE END SECTION	EA.	1	
	15" HDPE END SECTION	EA.	1	
	18" HDPE END SECTION	EA.	1	
	24" HDPE END SECTION	EA.	1	
	36" HDPE END SECTION	EA.	1	
	RIPRAP	S.Y.	85.3	
	CONNECTION TO EXISTING PIPE	EA.	2	

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

olsson

Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City MO 64116
TEL 816.361.1177
FAX 816.361.1888
www.olsson.com

STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

BY

REV. NO. 1

DATE 03-23-2021

REVISIONS DESCRIPTION
REVISED PER CITY COMMENTS

2021

REVISIONS

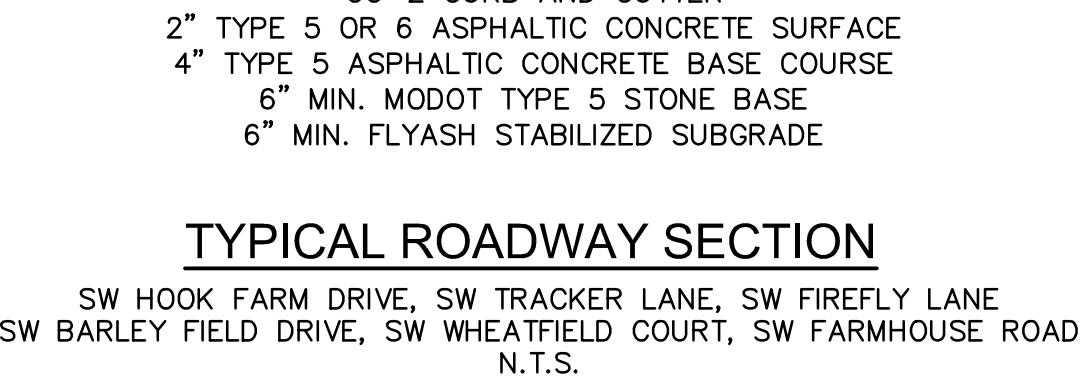
GENERAL NOTES
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
checked by: B.M.W.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

SHEET
C102



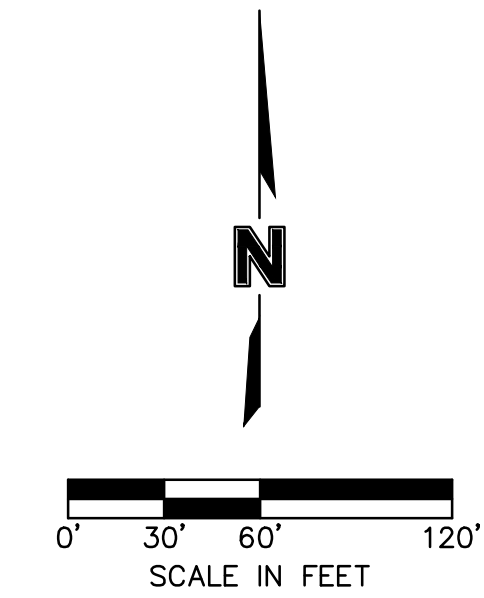
GENERAL NOTES:

1. CONTRACTOR SHALL ADHERE TO THE "DESIGN AND CONSTRUCTION MANUAL" SECTION 2100 AS ADOPTED BY THE CITY OF LEE'S SUMMIT (LATEST EDITION), FOR EXCAVATION AND EMBANKMENT WORK WITHIN THE PROPOSED RIGHT-OF-WAY.
2. AREAS OF CONSTRUCTION SHALL BE STRIPPED OF ALL VEGETATION, ORGANIC MATTER AND TOPSOIL TO A DEPTH AS RECOMMENDED BY GEOTECHNICAL ENGINEER AND OR TESTING AGENCY. SOILS REMOVED DURING SITE STRIPPING SHOULD BE EVALUATED TO DETERMINE IF PORTIONS OF THE TOPSOIL STRATUM MAY BE UTILIZED AS STRUCTURAL FILL WITHIN PAVEMENT AREAS. ANY MATERIAL NOT DEEMED AS SUITABLE FILL MATERIAL BY THE GEOTECHNICAL ENGINEER AND OR TESTING AGENCY SHALL BE REMOVED FROM THE JOB SITE BY THE CONTRACTOR AT HIS EXPENSE.
3. ALL EMBANKMENT OUTSIDE OF RIGHT-OF-WAY SHOULD BE PLACED IN CONTROLLED LIFTS HAVING A MAXIMUM LOOSE LIFT THICKNESS OF 8". EMBANKMENT SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR COMPACTION). MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN A RANGE OF -0 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT.

EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
STREET	26,149	25,993
SITE	118,782	76,745
FUTURE PHASE	0	54,547
TOTAL	144,931	157,285

EARTHWORK QUANTITIES NOTES:

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



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

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STATE OF MISSOURI
JULIE ELAINE SELLERS
Professional Engineer
NUMBER
PE-2017000367
3/24/21

BY

REVISIONS DESCRIPTION

DATE

REV. NO.

1

03-23-2021

REVISED PER CITY COMMENTS

GRADING PLAN (FOR REFERENCE)
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

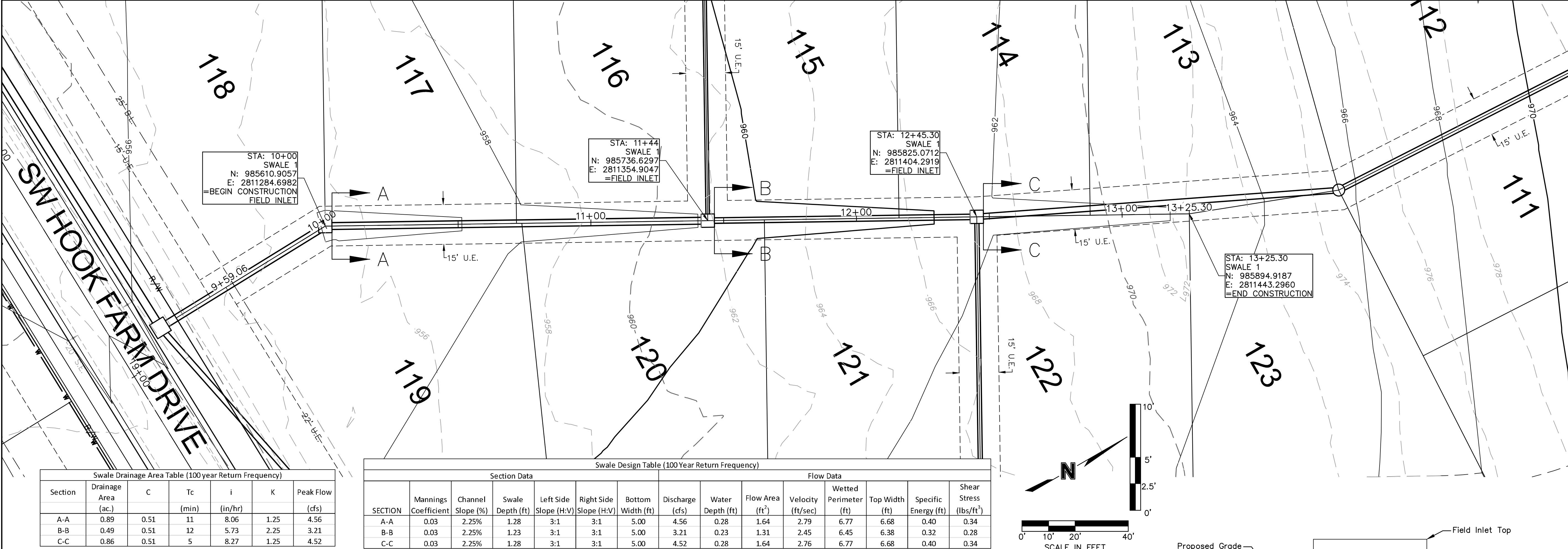
LEE'S SUMMIT, MO

2021

drawn by:
checked by:
designed by:
QA/QC by:
project no.:
date:

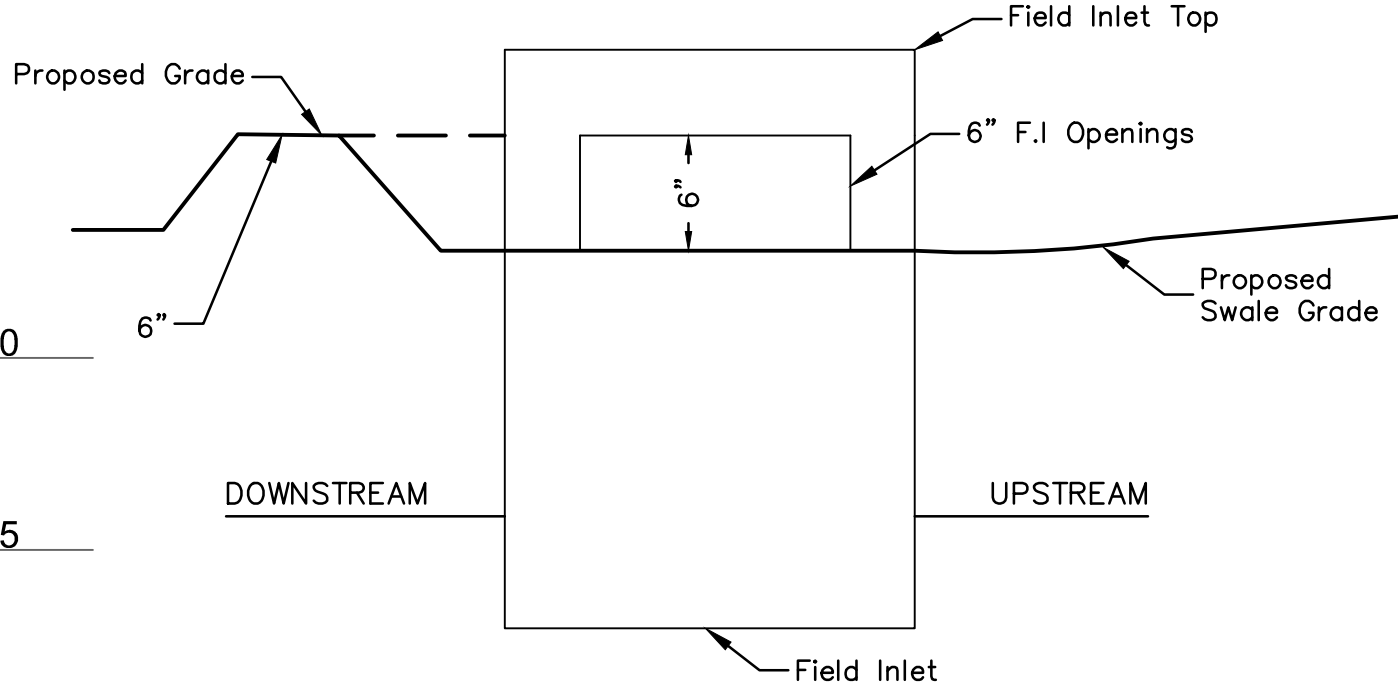
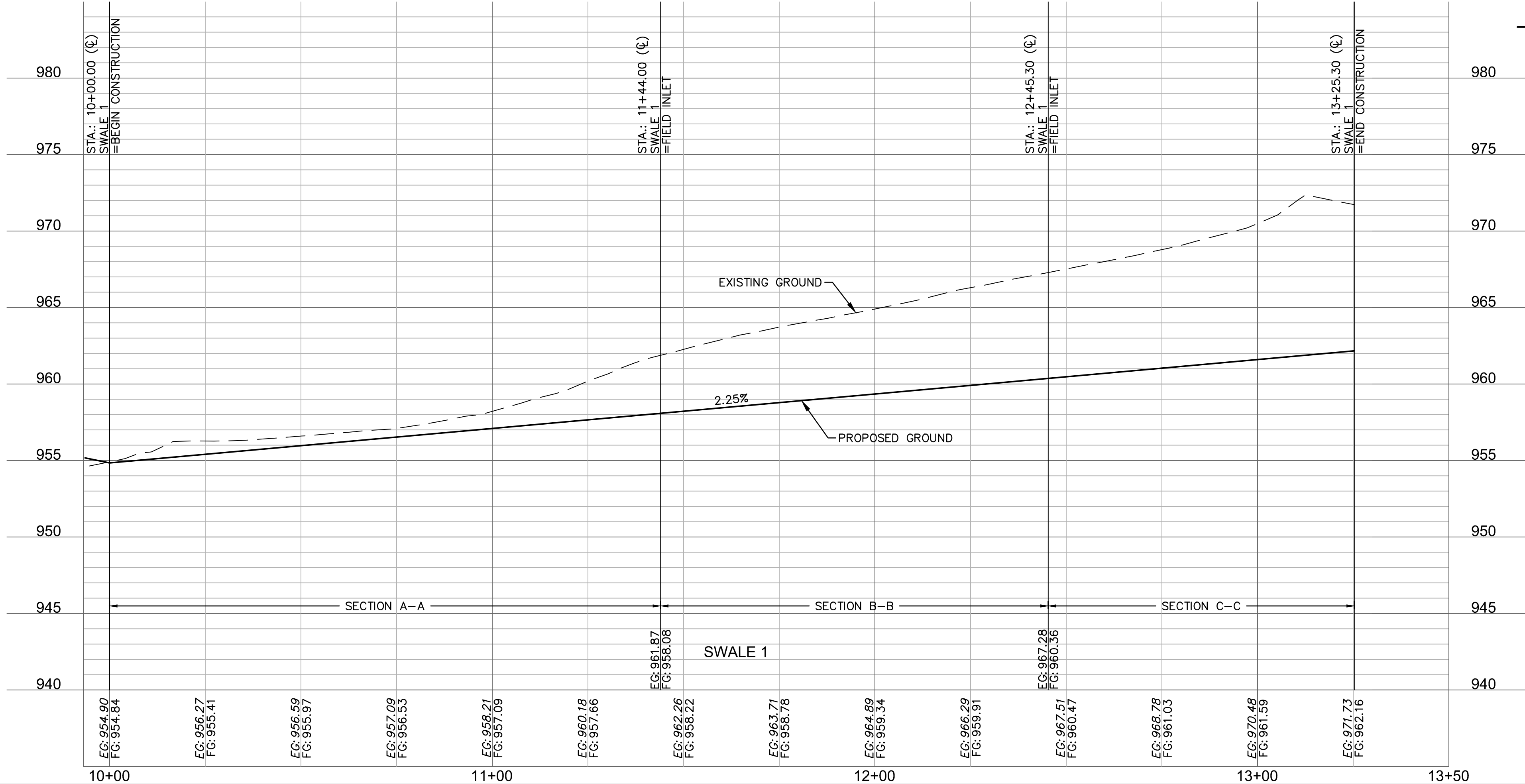
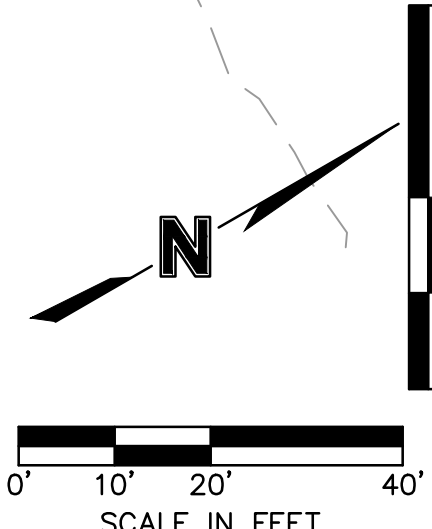
B.M.W./A.A.
B.M.W.
B.M.W./A.A.
J.E.S.
B19-4061
01-08-2021

SHEET
C105



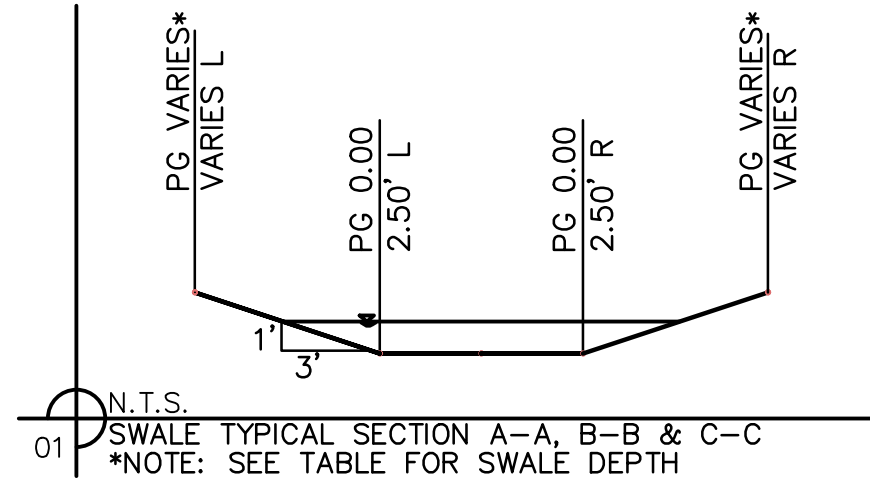
Swale Drainage Area Table (100 year Return Frequency)						
Section	Drainage Area (ac.)	C	Tc (min)	i (in/hr)	K	Peak Flow (cfs)
A-A	0.89	0.51	11	8.06	1.25	4.56
B-B	0.49	0.51	12	5.73	2.25	3.21
C-C	0.86	0.51	5	8.27	1.25	4.52

Swale Design Table (100 Year Return Frequency)													
Section Data							Flow Data						
SECTION	Mannings Coefficient	Channel Slope (%)	Swale Depth (ft)	Left Side Slope (H:V)	Right Side Slope (H:V)	Bottom Width (ft)	Discharge (cfs)	Water Depth (ft)	Flow Area (ft²)	Velocity (ft/sec)	Wetted Perimeter (ft)	Top Width (ft)	Specific Energy (ft)
A-A	0.03	2.25%	1.28	3:1	3:1	5.00	4.56	0.28	1.64	2.79	6.77	6.68	0.40
B-B	0.03	2.25%	1.23	3:1	3:1	5.00	3.21	0.23	1.31	2.45	6.45	6.38	0.32
C-C	0.03	2.25%	1.28	3:1	3:1	5.00	4.52	0.28	1.64	2.76	6.77	6.68	0.40



NOTE: INCLUDE SUMP PER ABOVE DETAIL WHERE FIELD INLETS ARE LOCATED WITHIN SWALES.

SUMP DETAIL
N.T.S.



SWALE GRADING NOTES:

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

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www.olsson.com

STATE OF MISSOURI
JULIE ELAINE SELLERS
Professional Engineer
NUMBER PE-2017000367
3/24/21

REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS

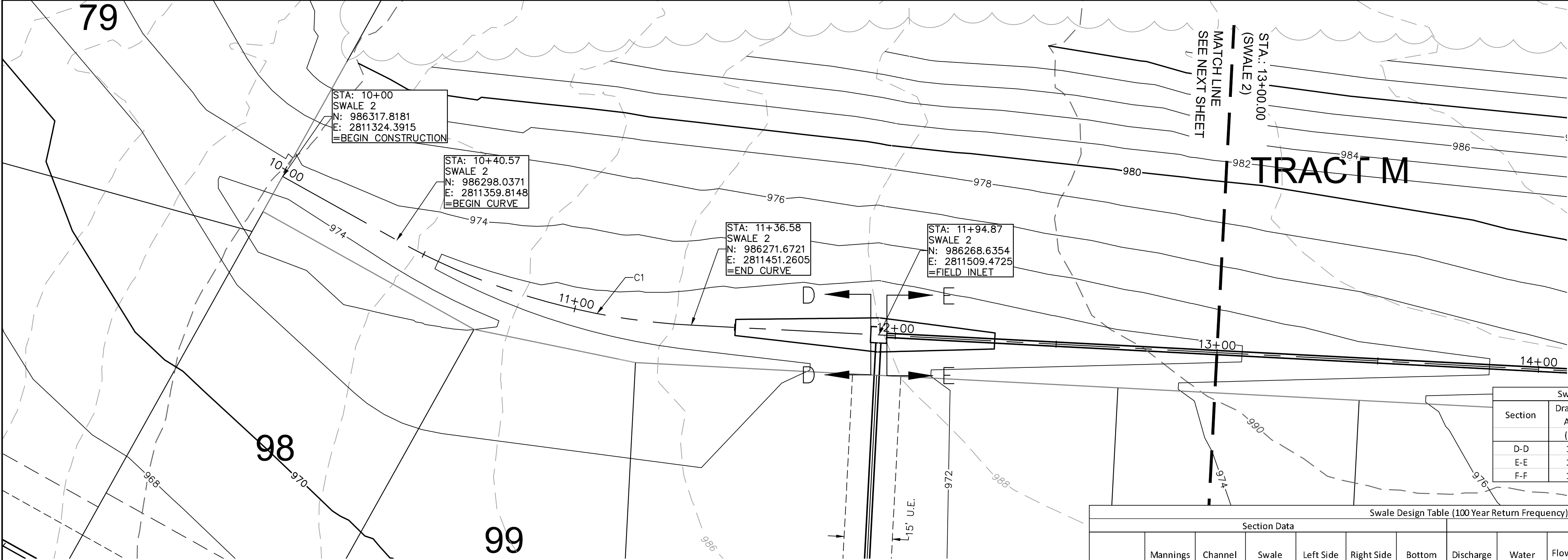
BY	DATE	REVISIONS DESCRIPTION

SWALE 1 PLAN & PROFILE STREET & STORM SEWER PLANS	HOOK FARMS SECOND PLAT	2021
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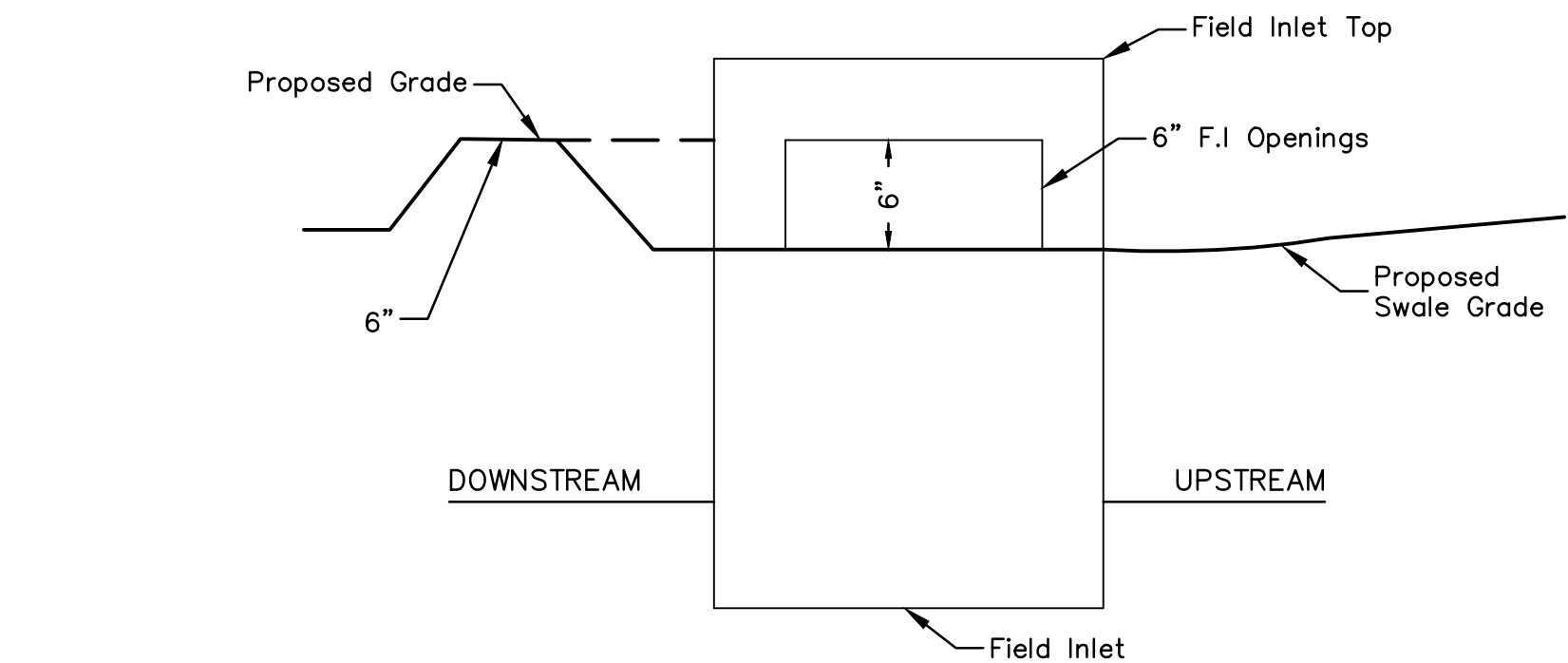
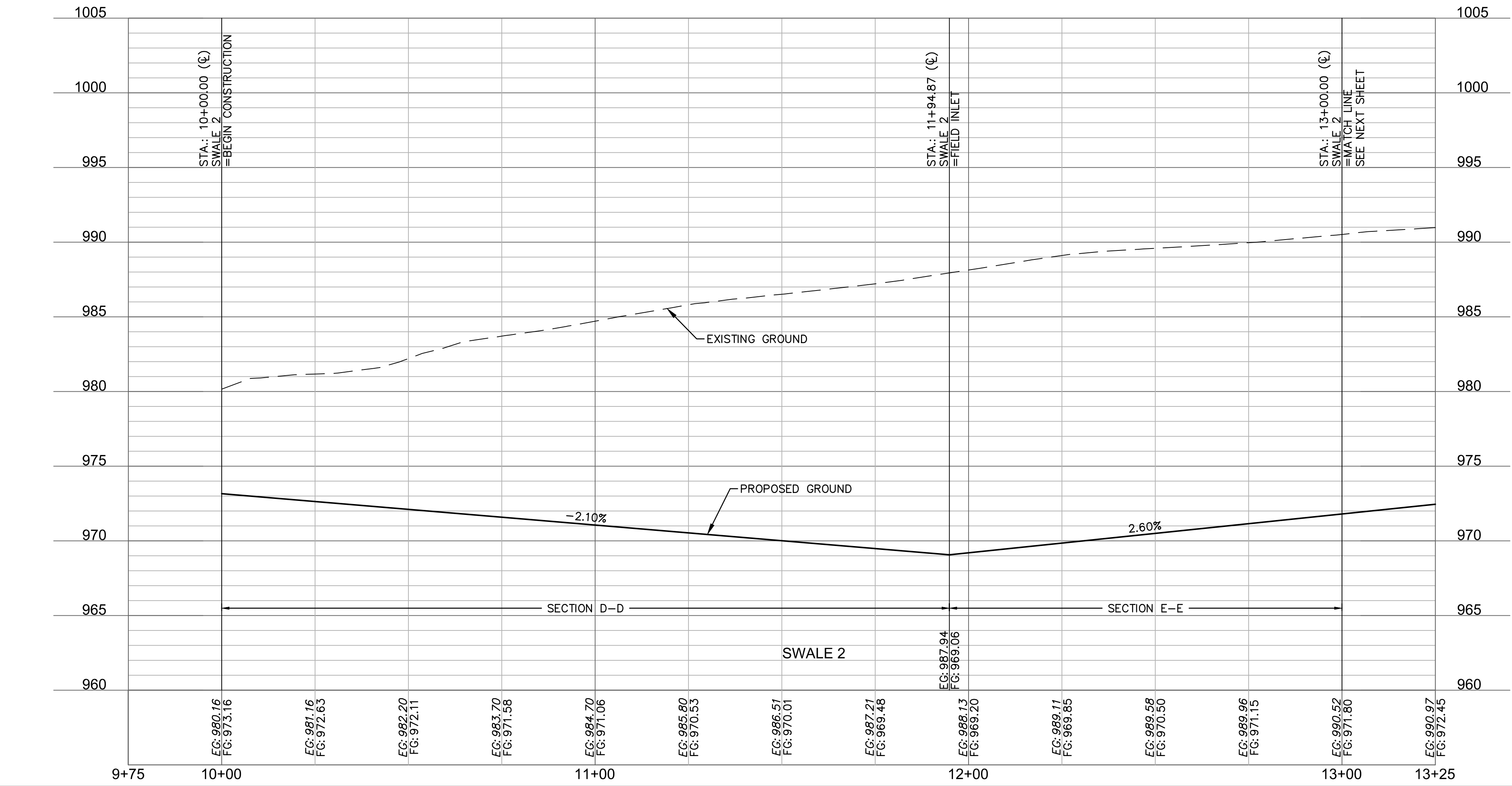
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SHEET
C107

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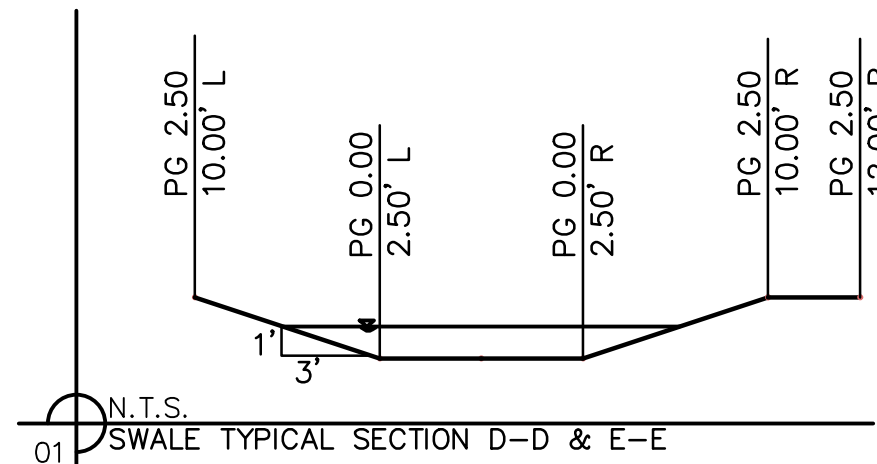


ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	CHORD BEARING	CHORD LENGTH (FT)
C1	10+40.57 11+36.58	N: 986298.04 E: 2811359.81	N: 986271.67 E: 2811451.26	210.00	96.00	026°11'37"	S73°55'01"E	95.17



NOTE: INCLUDE SUMP PER ABOVE DETAIL WHERE FIELD INLETS ARE LOCATED WITHIN SWALES.

SUMP DETAIL
N.T.S.



SWALE GRADING NOTES:

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www.olsson.com

STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER
PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

BY

REVISIONS DESCRIPTION

DATE

REV. NO.

1

03-23-2021

REVISOR COMMENTS

REVISIONS

2021

SWALE 2 PLAN & PROFILE
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

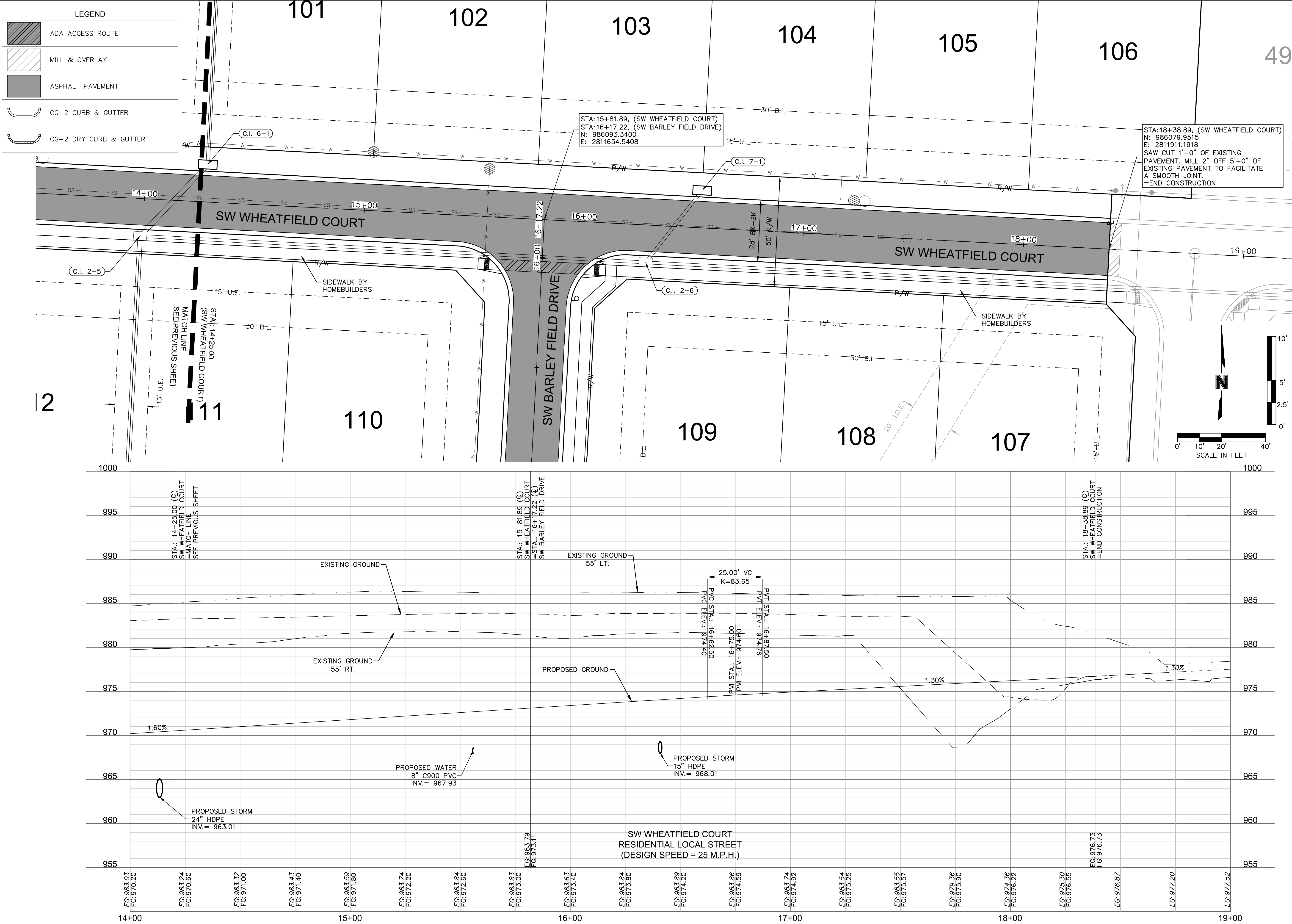
LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
checked by: B.M.W./A.A.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

SHEET
C108

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USER: bworthley



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STATE OF MISSOURI

JULIE ELAINE SELLERS

NUMBER PE-2017000367
3/24/21

PROFESSIONAL ENGINEER

REV.	NO.	DATE	REVISIONS DESCRIPTION	BY
1		03-23-2021	REVISED PER CITY COMMENTS	

ROADWAY PLAN & PROFILE (SW WHEATFIELD COURT)

STREET & STORM SEWER PLANS

HOOK FARMS SECOND PLAT

LEE'S SUMMIT, MO

2021

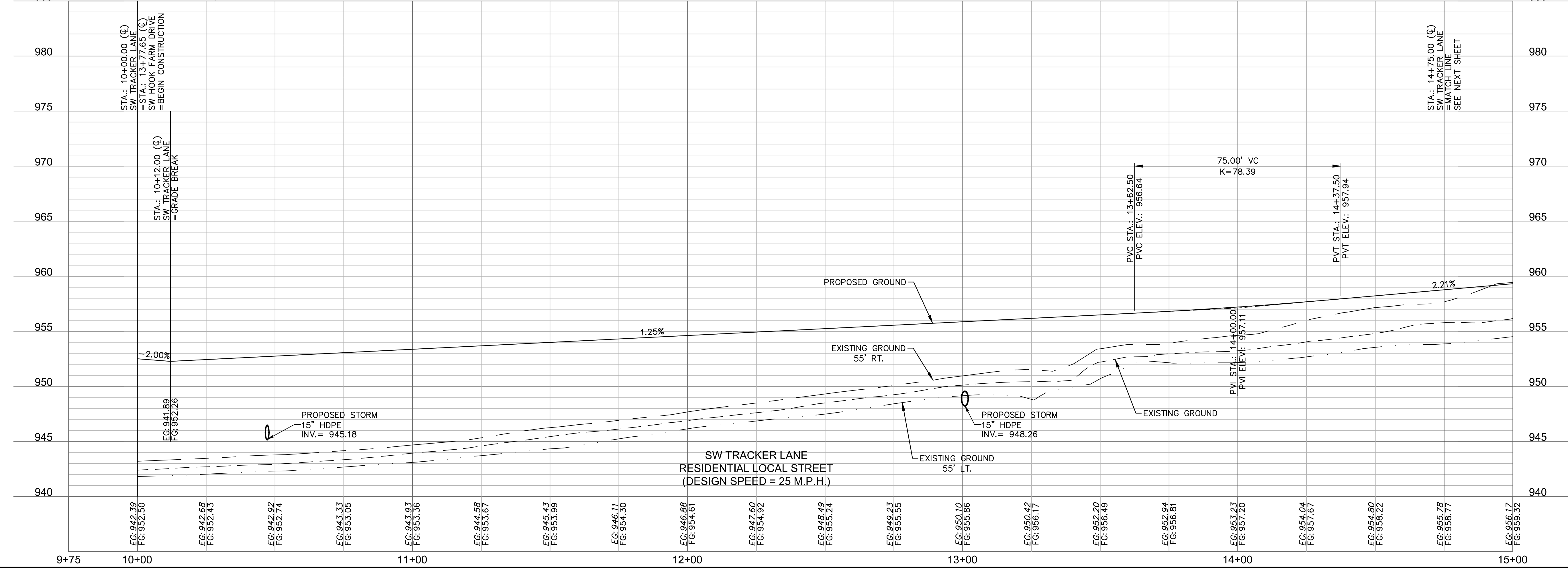
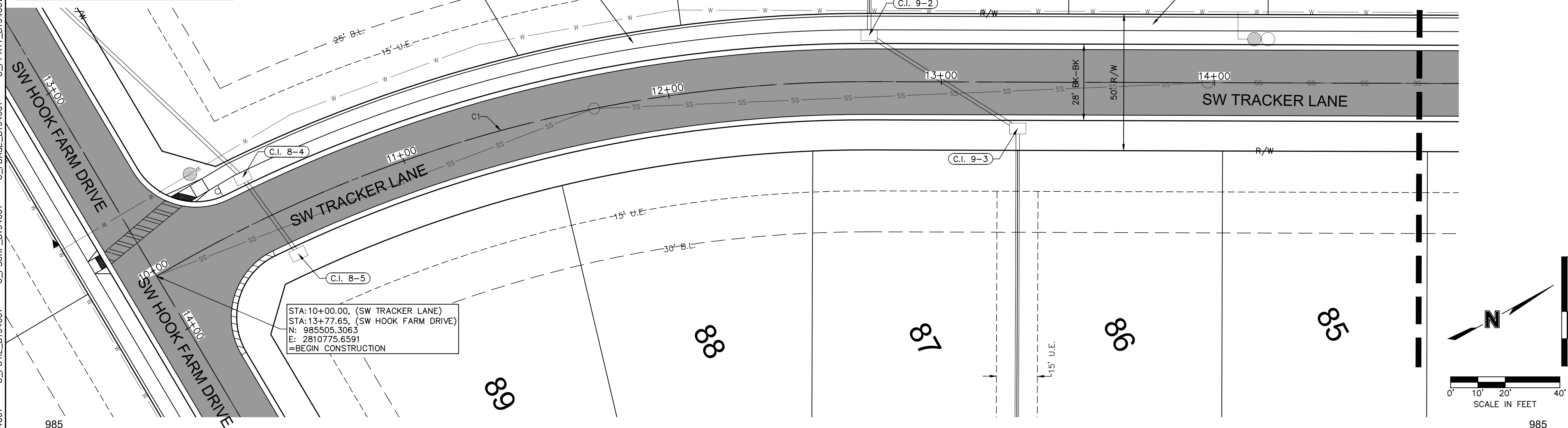
drawn by: B.M.W./A.A.
checked by: B.M.W./A.A.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

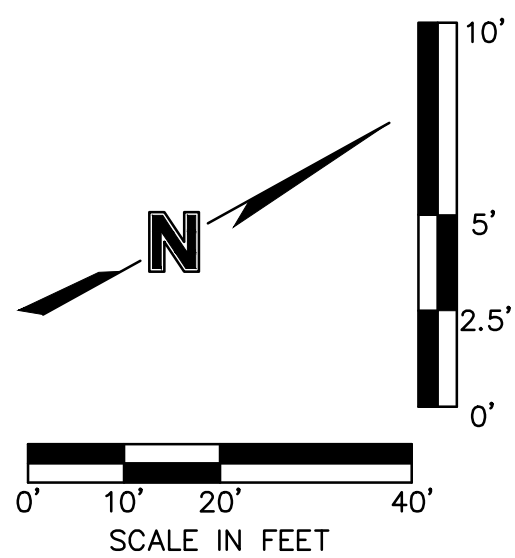
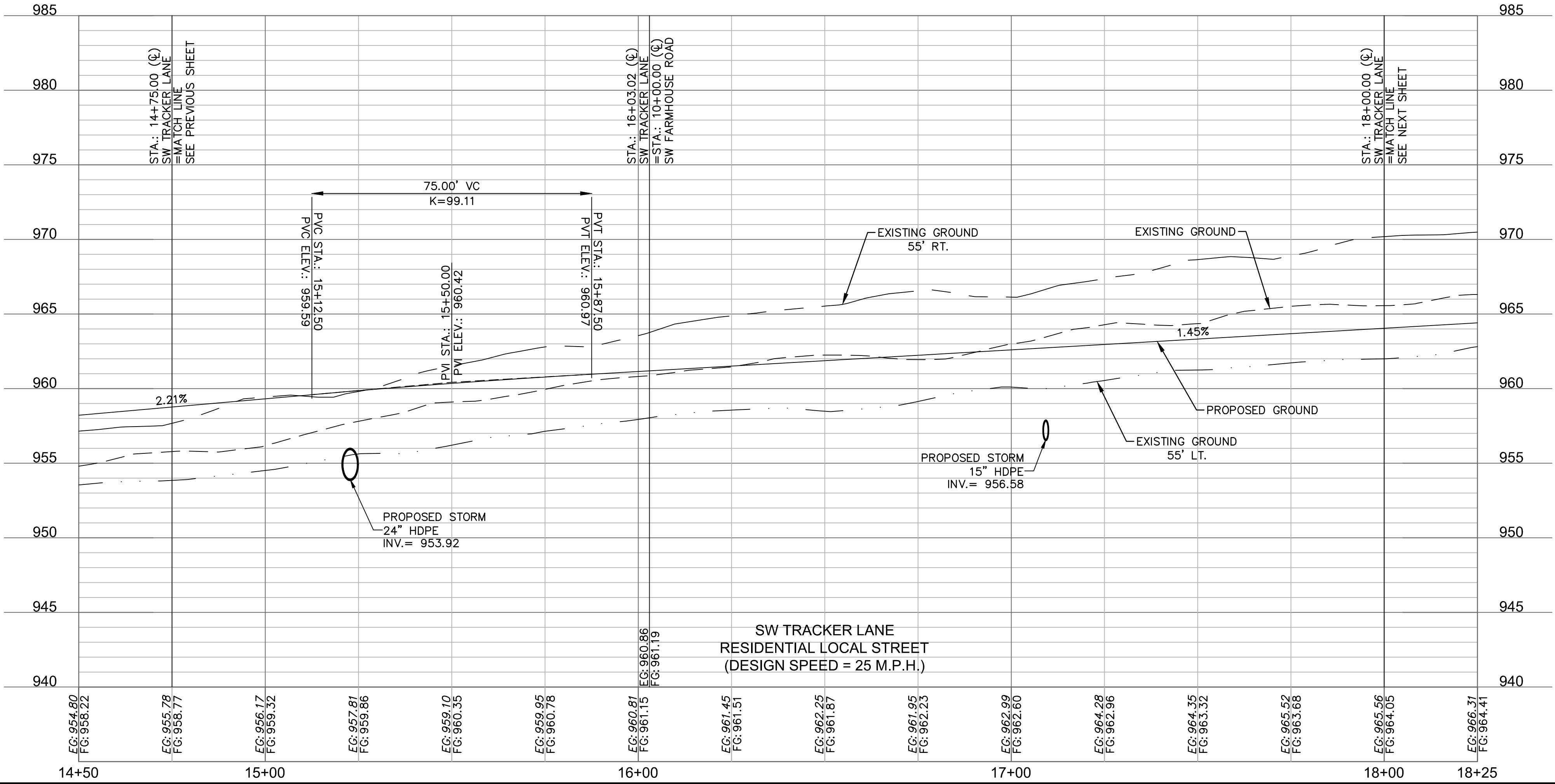
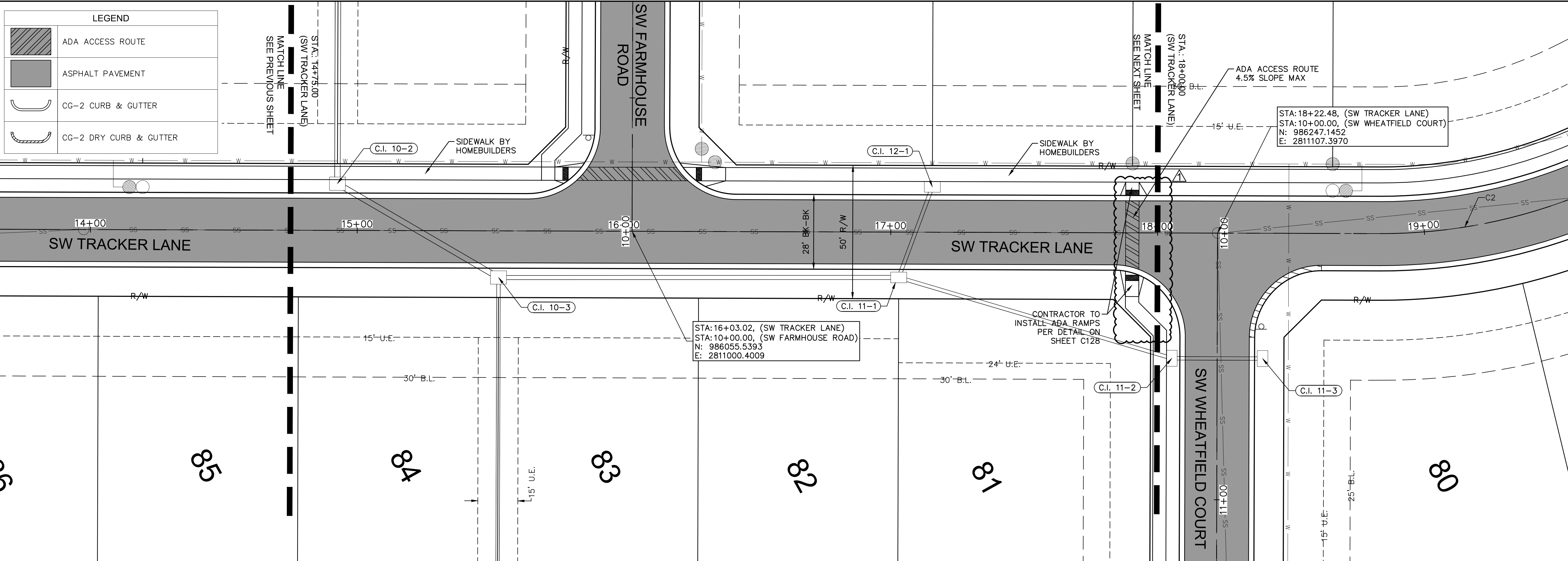
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LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER

ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	CHORD BEARING	CHORD LENGTH (FT)
C1	10+00.18 12+74.38	N: 985505.48 E: 2810775.65	N: 985768.60 E: 2810840.17	510.00	274.20	030°48'19"	N13°46'38"E	270.91





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STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

ROADWAY PLAN & PROFILE (SW TRACKER LANE)
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
checked by: B.M.W./A.A.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

2021

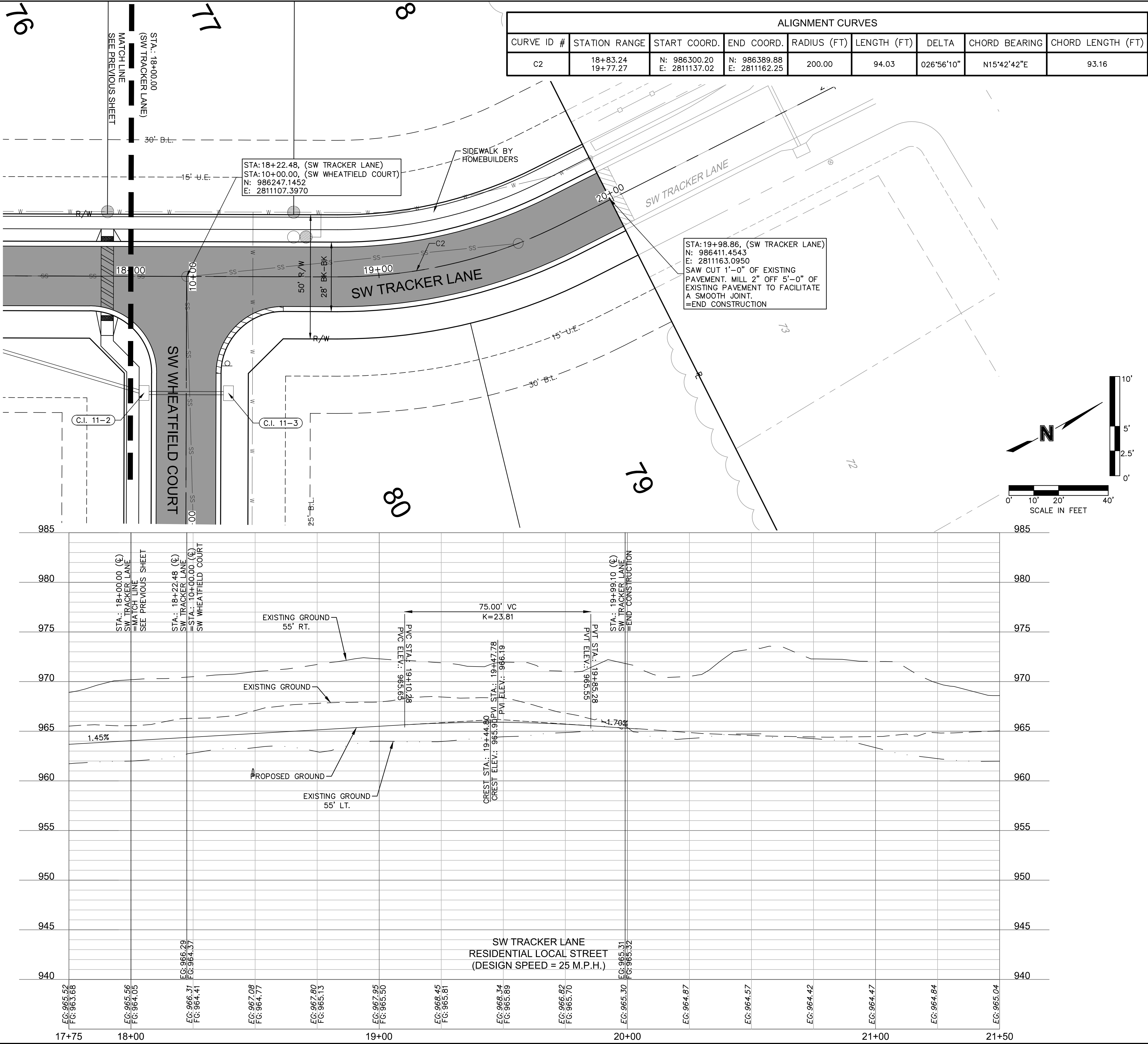
REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS

BY

SHEET
C116

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



ROADWAY PLAN & PROFILE (SW TRACKER LANE)
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
checked by: B.M.W./A.A.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

2021

REV. NO.

DATE

REVISIONS DESCRIPTION

REVISED PER CITY COMMENTS

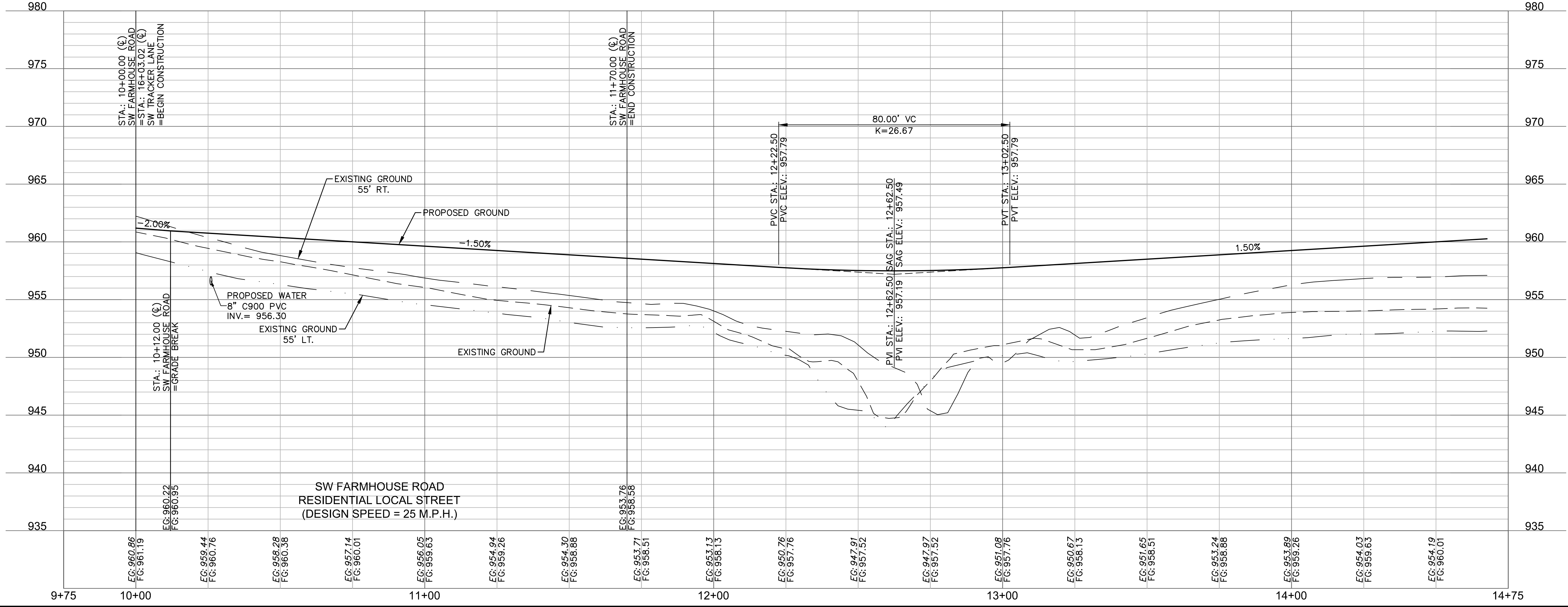
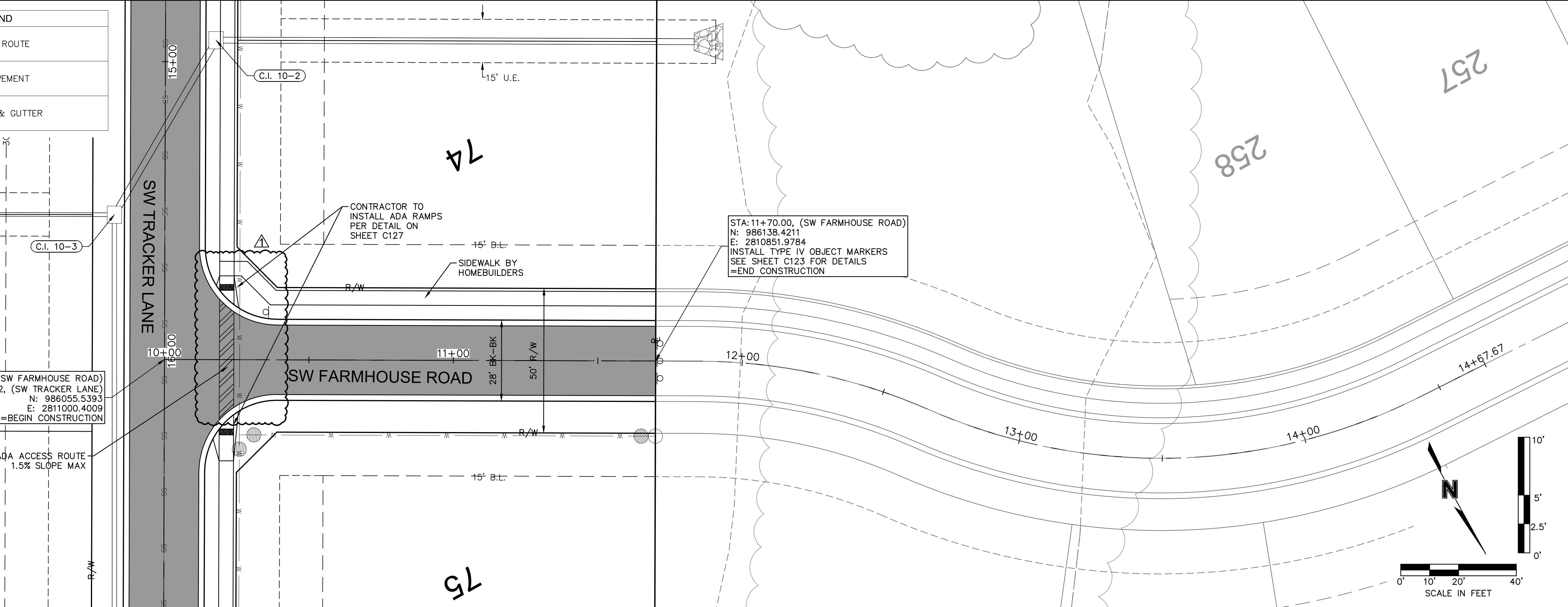
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REVISIONS

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



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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

ROADWAY PLAN & PROFILE (SW FARMHOUSE ROAD)
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

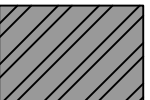
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date: 01-08-2021

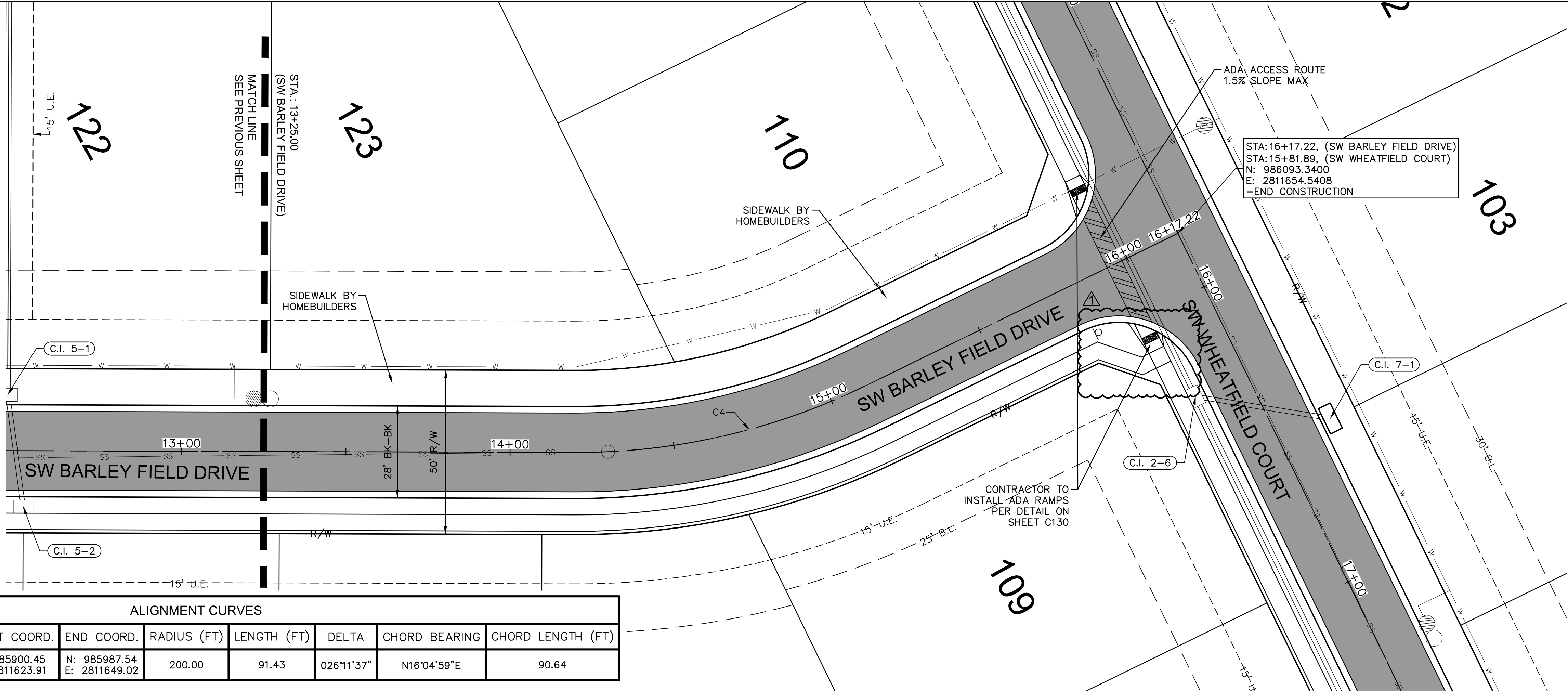
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REVISIONS

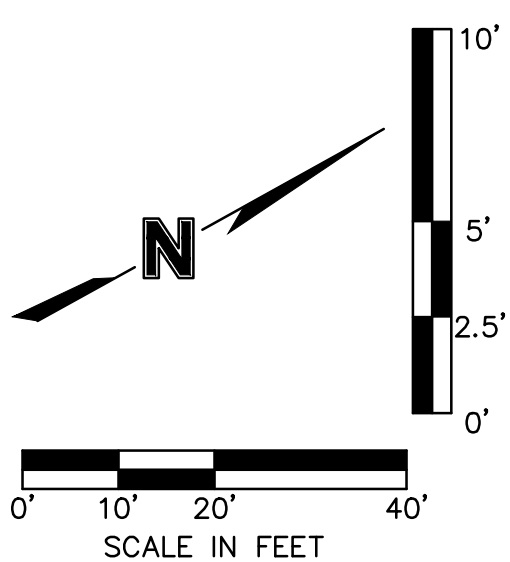
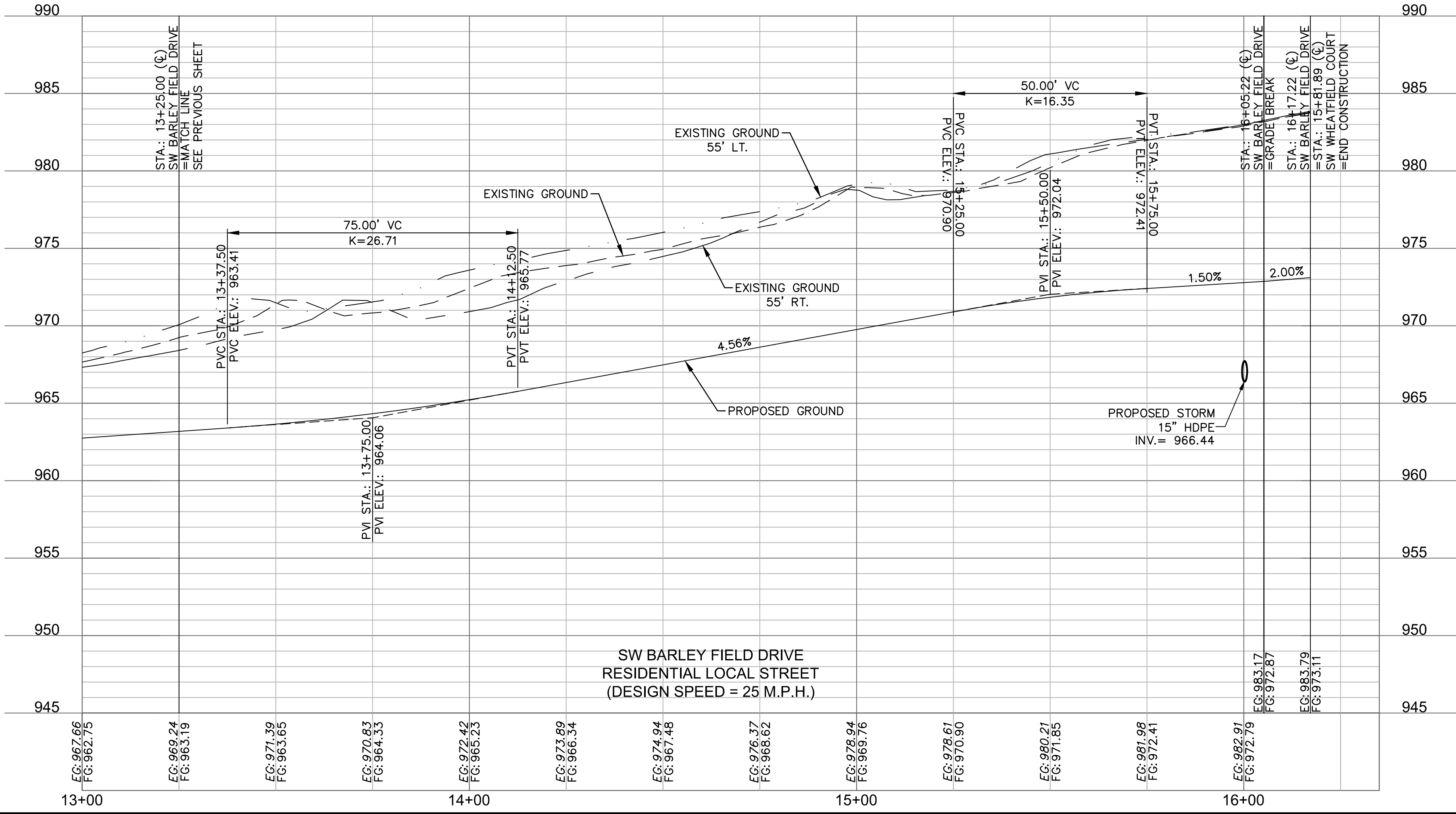
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	

SHEET
C118

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	CHORD BEARING	CHORD LENGTH (FT)
C4	14+19.84 15+11.28	N: 985900.45 E: 2811623.91	N: 985987.54 E: 2811649.02	200.00	91.43	026°11'37"	N16°04'59"E	90.64



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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER
PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

ROADWAY PLAN & PROFILE (SW BARLEY FIELD DRIVE)
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

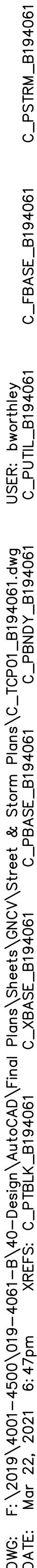
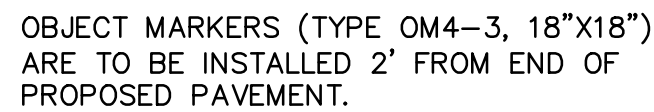
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QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

2021

REV. NO. 1
DATE 03-23-2021
REVISIONS DESCRIPTION
REVISED PER CITY COMMENTS

REVISIONS

SHEET
C122



TRACT M

HOOK FARMS
1ST PLAT

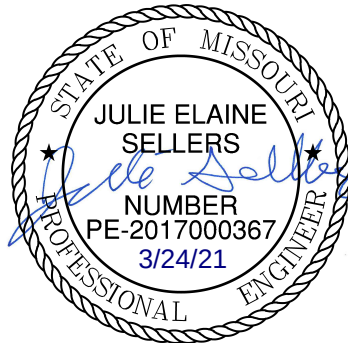
TRAFFIC CONTROL PLAN STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

drawn by: B.M.W./J.A.
checked by: B.M.W.
designed by: B.M.W./J.A.
QA/QC by: J.E.S.
project no.: B19-406
date: 01-08-202

SHEET
C123

[illegible]

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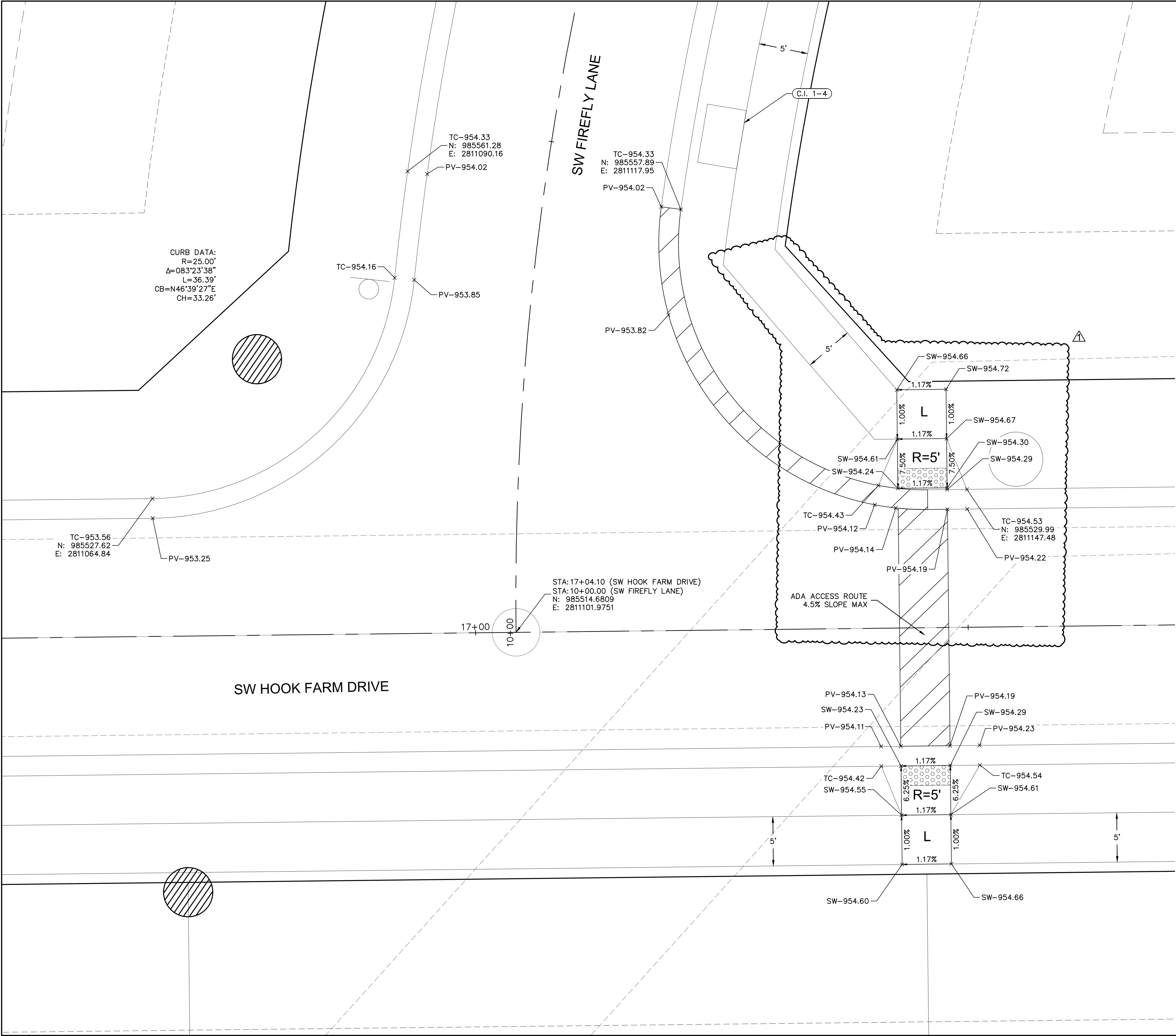
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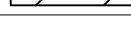
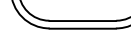
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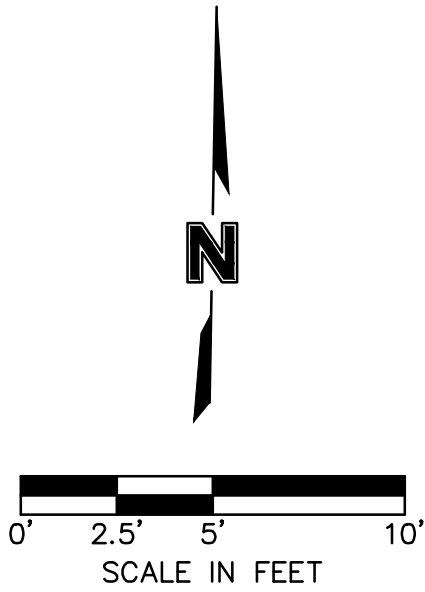
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DATE: Mar 22,



INTERSECTION AND ADA DETAIL NOTES:

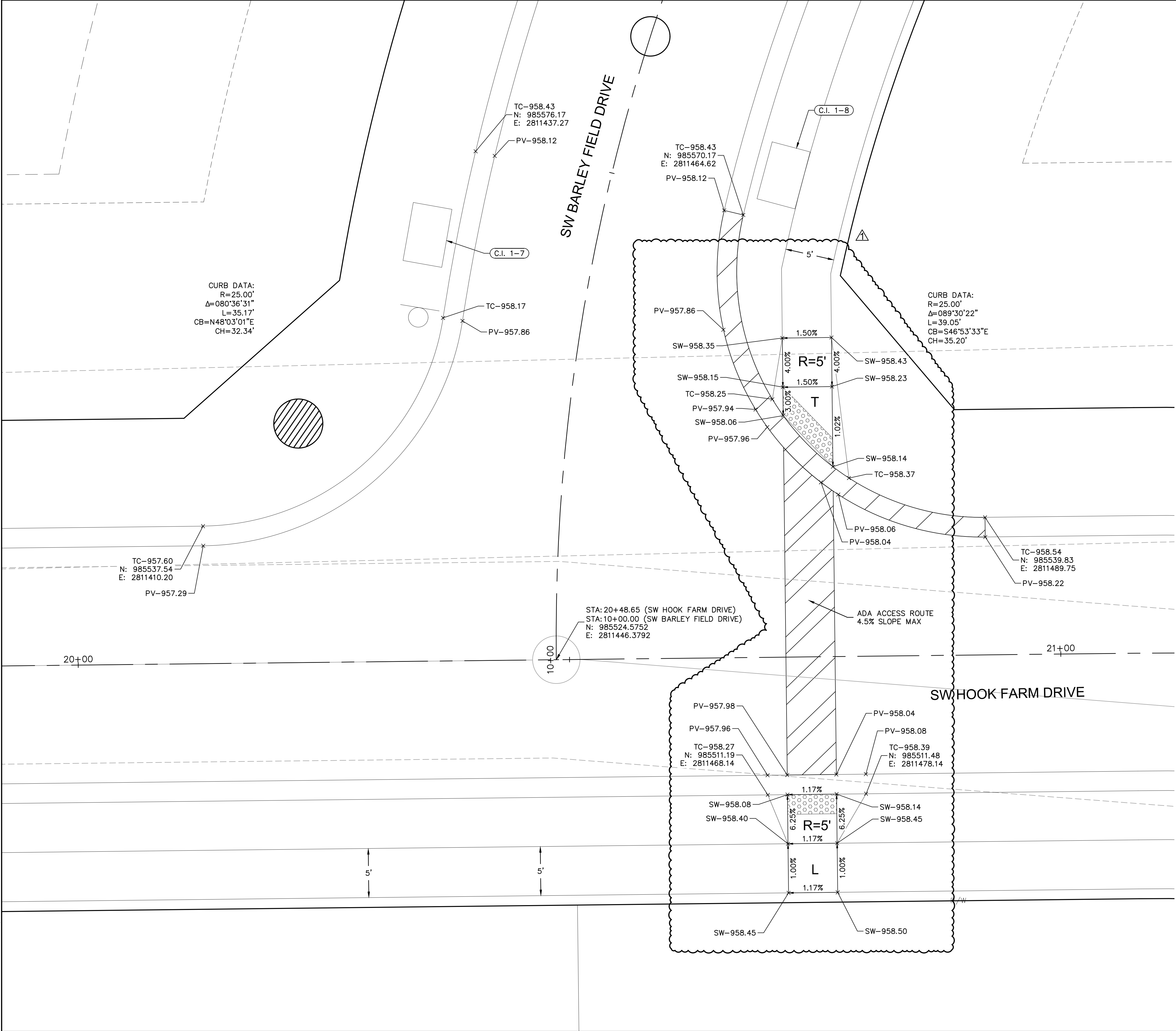
1. ALL ADA CURB RAMPS SHALL BE BUILT PER CURRENT MUNICIPALITY ADOPTED ADA STANDARDS.
2. CURB RAMP FLARES SHALL NOT BE STEEPER THAN 1:10 MAX SLOPES.
3. LANDING SHALL BE PROVIDED WHERE INDICATED ON PLAN SHEET OR BY PROWAG STANDARDS. LANDING SHALL BE 4'X4' MINIMUM.
4. RAMP RUNS SHALL HAVE A MAXIMUM RUNNING SLOPE OF 1:12 UNLESS THE RAMP LENGTH IS OVER 15 FEET, THEN THE SLOPE CAN BE GREATER AS INDICATED IN DETAILS TO REACH STREET GRADES.
5. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
6. CROSS SLOPE FOR RAMPS AND SIDEWALK SHALL NOT EXCEED 2%.
7. AFTER CURBS HAVE BEEN CONSTRUCTED, AND BEFORE ASPHALT OR CURB AND PAVEMENT IS POURED, CURBS SHOULD BE MEASURED WITH A LEVEL TO ENSURE CURB ALONG ADA RAMPS AND LANDINGS WILL MEET ADA REQUIREMENTS.
8. ADA RAMP CONSTRUCTION WILL BE INSPECTED THOROUGHLY BY THE CITY INSPECTOR. CONTRACTOR SHALL BE REQUIRED TO RECONSTRUCT RAMPS, CURBS AND/OR PAVEMENT AT CONTRACTOR'S EXPENSE IF ADA RAMPS AND LANDINGS CANNOT MEET THE ADA REQUIREMENTS, PER APPROVED PLAN OR APPROVED ALTERNATIVE.
9. CURVE DATA IS FOR BACK OF CURB.

LEGEND	
TC-	TOP OF CURB
PV-	TOP OF PAVEMENT
SW-	SIDEWALK
L	LANDING AREA
R	RAMP AREA
T	TRANSITION AREA
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



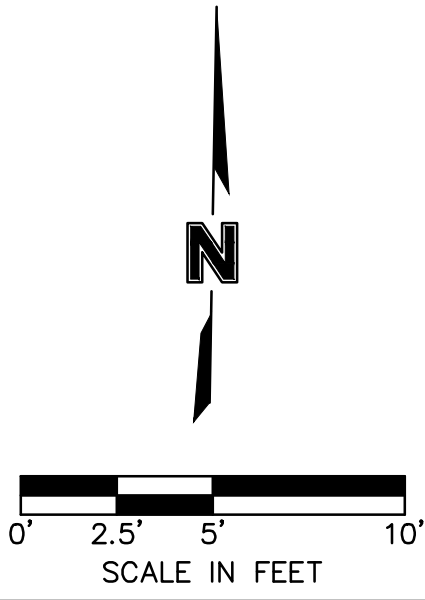
SW FIREFLY LANE & SW HOOK FARM DRIVE STREET & STORM SEWER PLANS					
HOOK FARMS SECOND PLAT					
LEE'S SUMMIT, MO					
2021					
drawn by: _____ B.M.W./A.A. checked by: _____ B.M.W./ designed by: _____ B.M.W./A.A./ QA/QC by: _____ J.E.S. project no.: _____ B19-4061 date: _____ 01-08-2021					
SHEET C125					

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USER: bworthley



- INTERSECTION AND ADA DETAIL NOTES:
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 7. AFTER CURBS HAVE BEEN CONSTRUCTED, AND BEFORE ASPHALT OR CONCRETE PAVEMENT IS POURED, CURBS SHOULD BE MEASURED WITH A LEVEL TO ENSURE CURB ALONG ADA RAMPS AND LANDINGS WILL MEET ADA REQUIREMENTS.
 8. ADA RAMP CONSTRUCTION WILL BE INSPECTED THOROUGHLY BY THE CITY INSPECTOR. CONTRACTOR SHALL BE REQUIRED TO RECONSTRUCT RAMPS, CURBS AND/OR PAVEMENT AT CONTRACTOR'S EXPENSE IF ADA RAMPS AND LANDINGS CANNOT MEET THE ADA REQUIREMENTS, PER APPROVED PLAN OR APPROVED ALTERNATIVE.
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LEGEND	
TC--	TOP OF CURB
PV--	TOP OF PAVEMENT
SW--	SIDEWALK
L	LANDING AREA
R	RAMP AREA
T	TRANSITION AREA
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



SW BARLEY FIELD DRIVE & SW HOOK FARM DRIVE
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

2021

REVISIONS

BY

DATE

REV. NO.

REVISIONS DESCRIPTION

		1	03-23-2021	REVISED PER CITY COMMENTS

drawn by: B.M.W./A.A.

checked by: B.M.W.

designed by: B.M.W./A.A.

QA/QC by: J.E.S.

project no.: B19-4061

date: 01-08-2021

SHEET

C126

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STATE OF MISSOURI

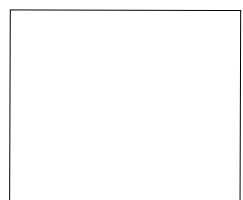
JULIE ELAINE SELLERS

NUMBER PE-2017000367

3/24/21

PROFESSIONAL ENGINEER

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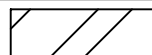
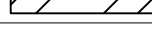
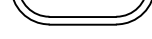


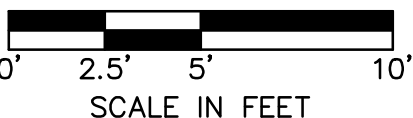
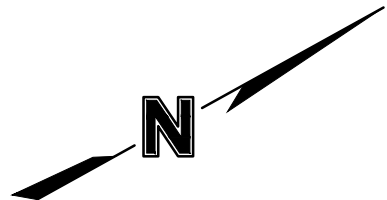
SW TRACKER LANE

SW FARMHOUSE ROAD

STA: 16+03.02 (SW TRACKER LANE)
STA: 10+00.00 (SW FARMHOUSE ROAD)
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E: 2811000.4009

- INTERSECTION AND ADA DETAIL NOTES:
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PV--	TOP OF PAVEMENT
SW--	SIDEWALK
L	LANDING AREA
R	RAMP AREA
T	TRANSITION AREA
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



SW FARMHOUSE ROAD & SW TRACKER LANE STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT. MO.

2021

DEVIATIONS

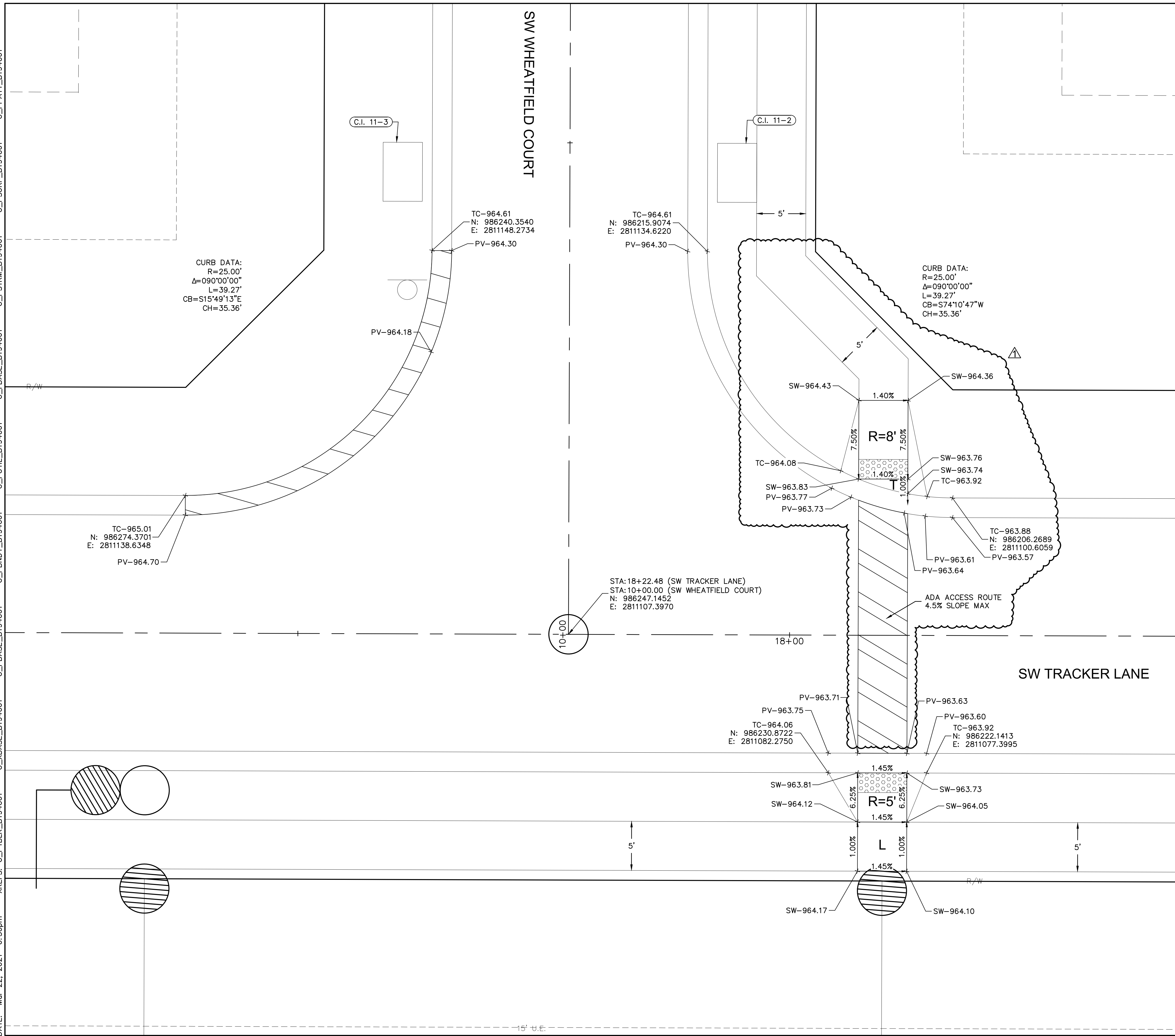
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	



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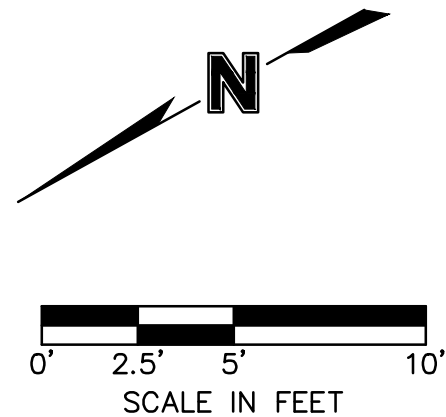
olson

SHEET
C127



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SW WHEATFIELD COURT & SW TRACKER LANE
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

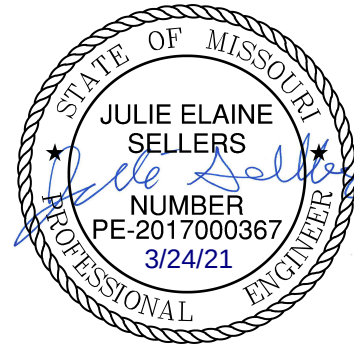
LEE'S SUMMIT, MO

2021

DEVISIONS

BY

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1	03-23-2021	REVISED PER CITY COMMENTS	



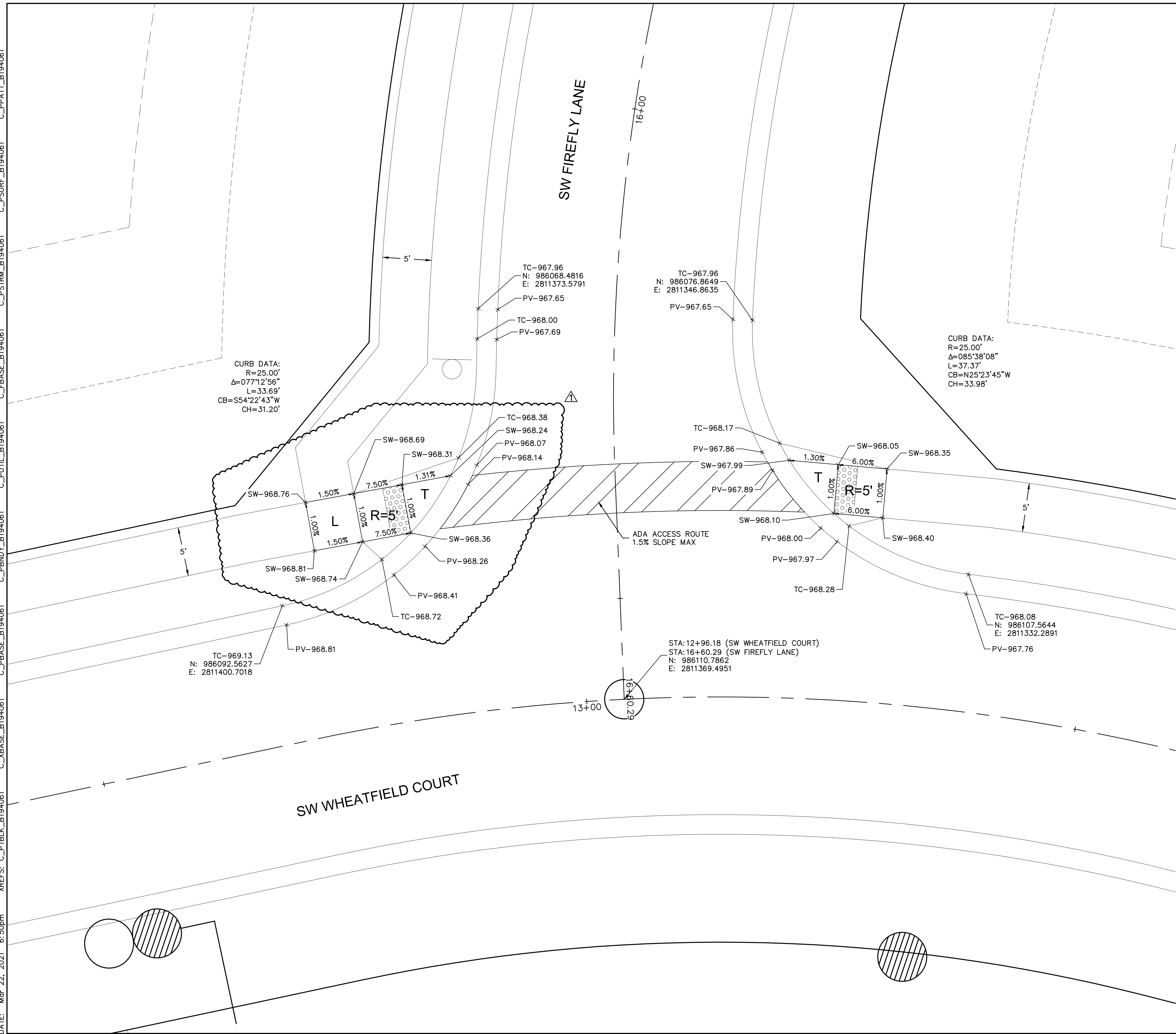
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drawn by: B.M.W./J.A.
checked by: B.M.W.
designed by: B.M.W./J.A.
QA/QC by: J.E.S.
project no.: B19-406
date: 01-08-202

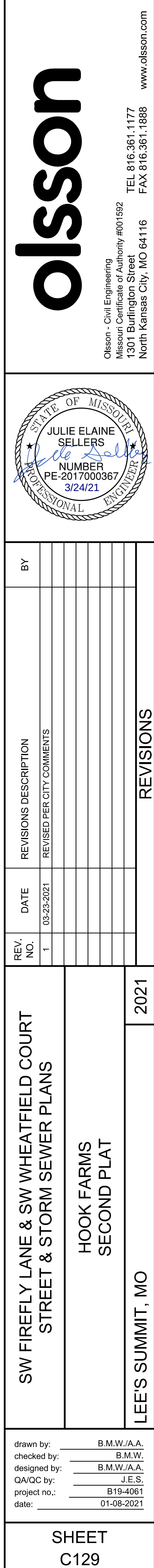
SHEET
C128

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			C_PPAT1_B194061



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	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



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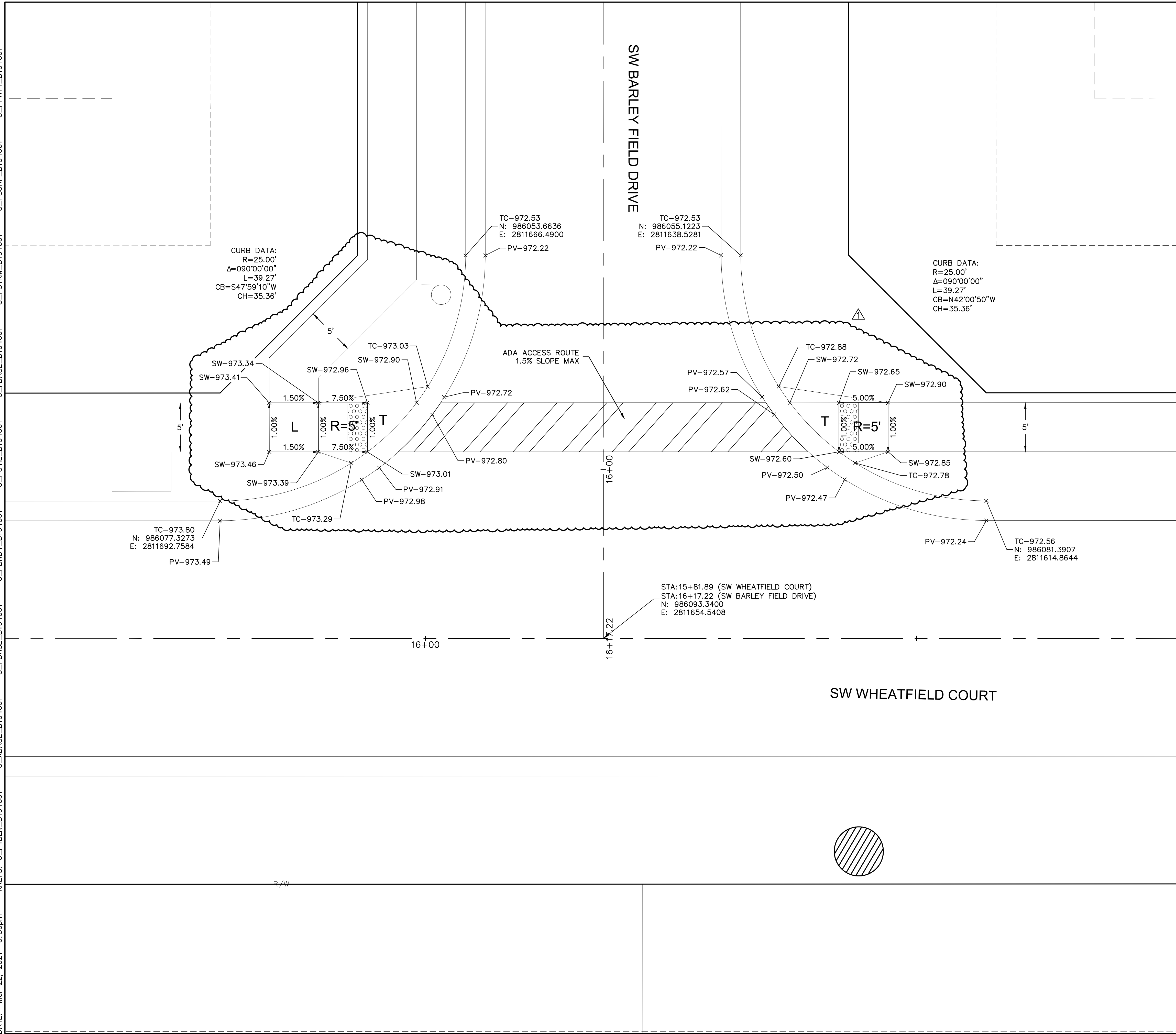
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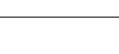
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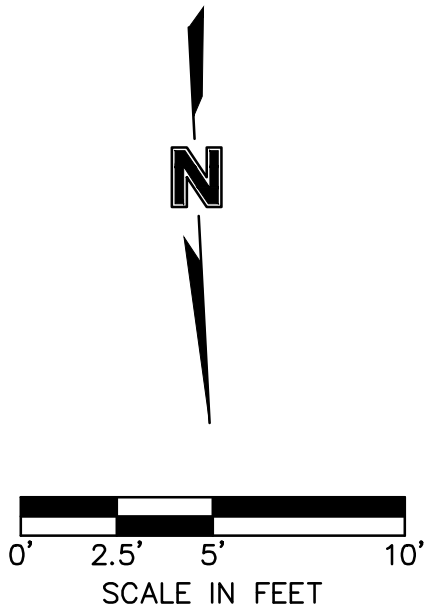
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DATE: Mar 22,



- INTERSECTION AND ADA DETAIL NOTES:
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	CG-2 DRY CURB & GUTTER

SW BARLEY FIELD DRIVE & SW WHEATFIELD COURT
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

2021

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STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

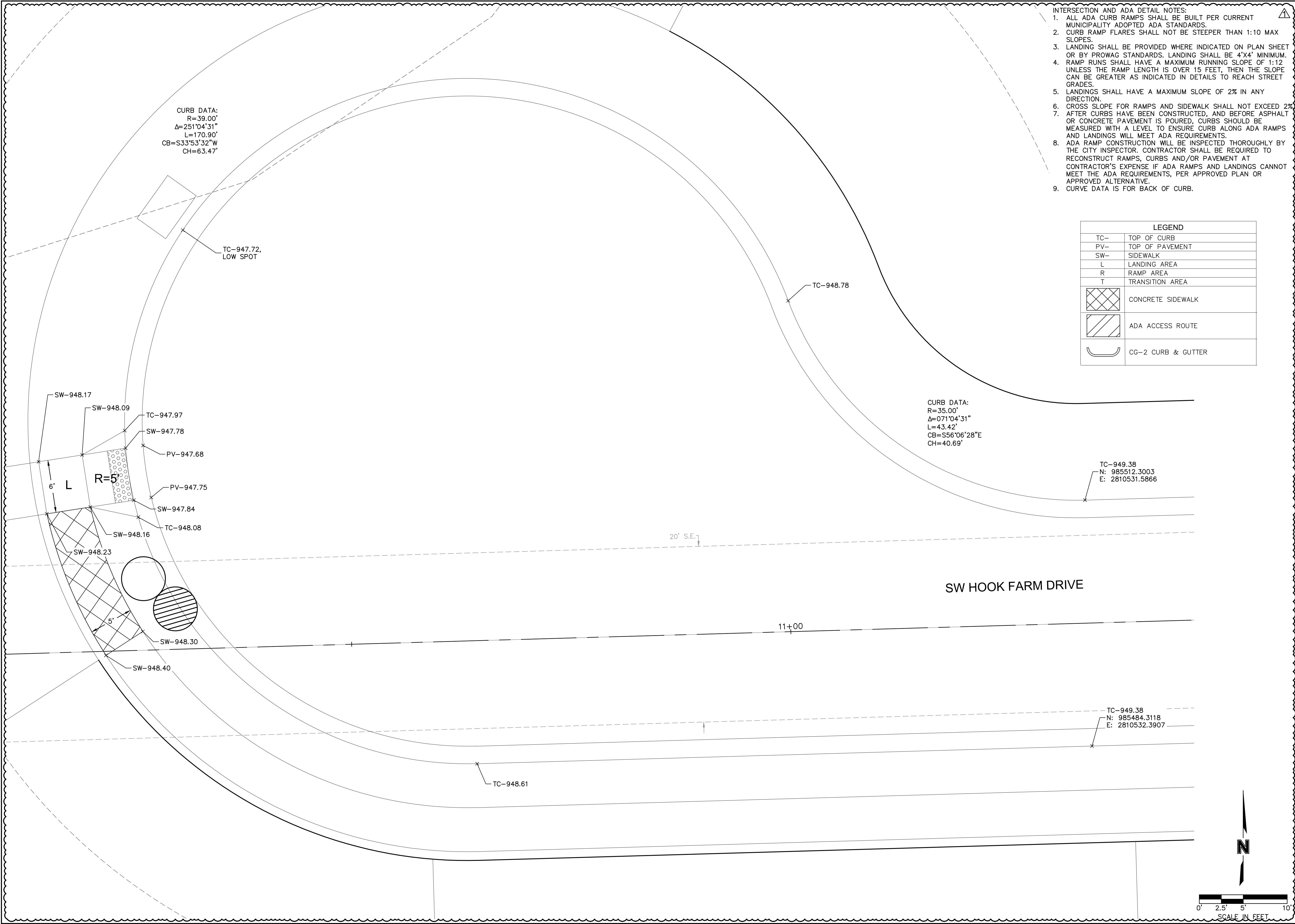
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SHEET
C130

drawn by: B.M.W./A.A.
checked by: B.M.W.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

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USER: bworthley



CURB DATA:
R=39.00'
Δ=251°04'31"
L=170.90'
CB=S33°53'32"W
CH=63.47'

TC-947.72,
LOW SPOT

TC-948.78

CURB DATA:
R=35.00'
Δ=071°04'31"
L=43.42'
CB=S56°06'28"E
CH=40.69'

LEGEND	
TC--	TOP OF CURB
PV--	TOP OF PAVEMENT
SW--	SIDEWALK
L	LANDING AREA
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	CONCRETE SIDEWALK
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER

- INTERSECTION AND ADA DETAIL NOTES:
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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	

SW HOOK FARM DRIVE CUL-DE-SAC
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

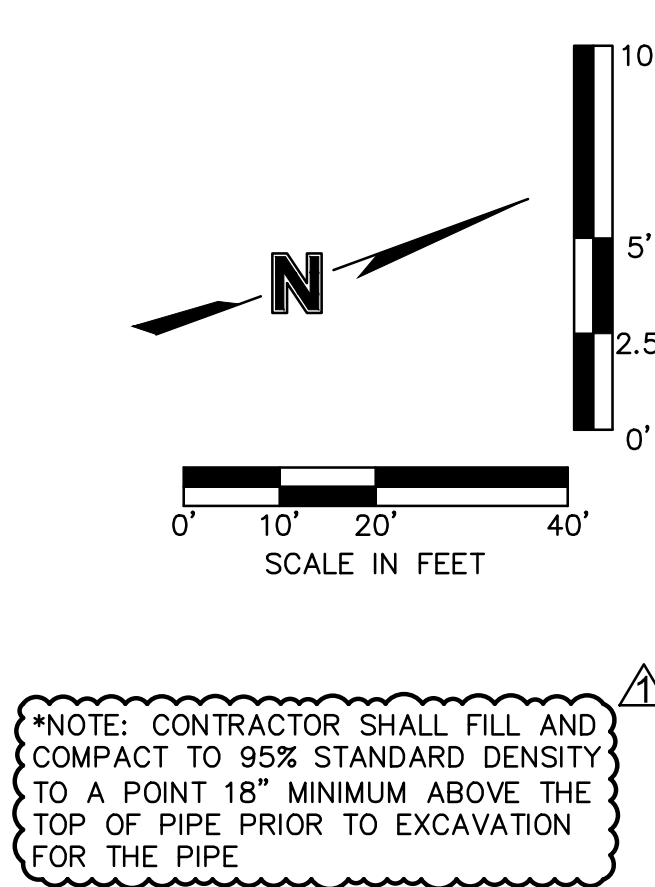
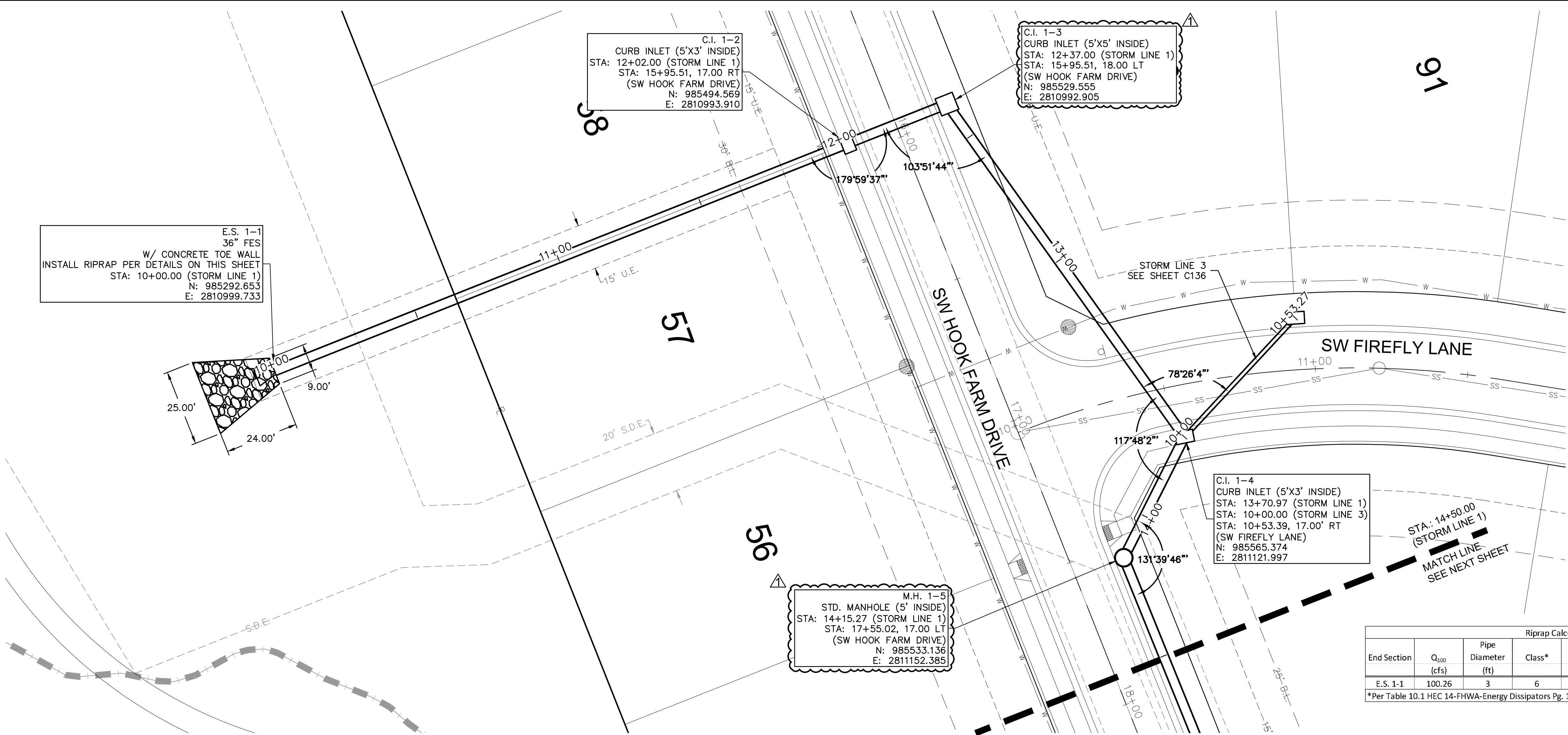
2021

REVISIONS

drawn by: B.M.W./J.A.A.
checked by: B.M.W.
designed by: J.E.S.
QA/QC by: B19-4061
project no.: 01-08-2021
date:

SHEET
C131

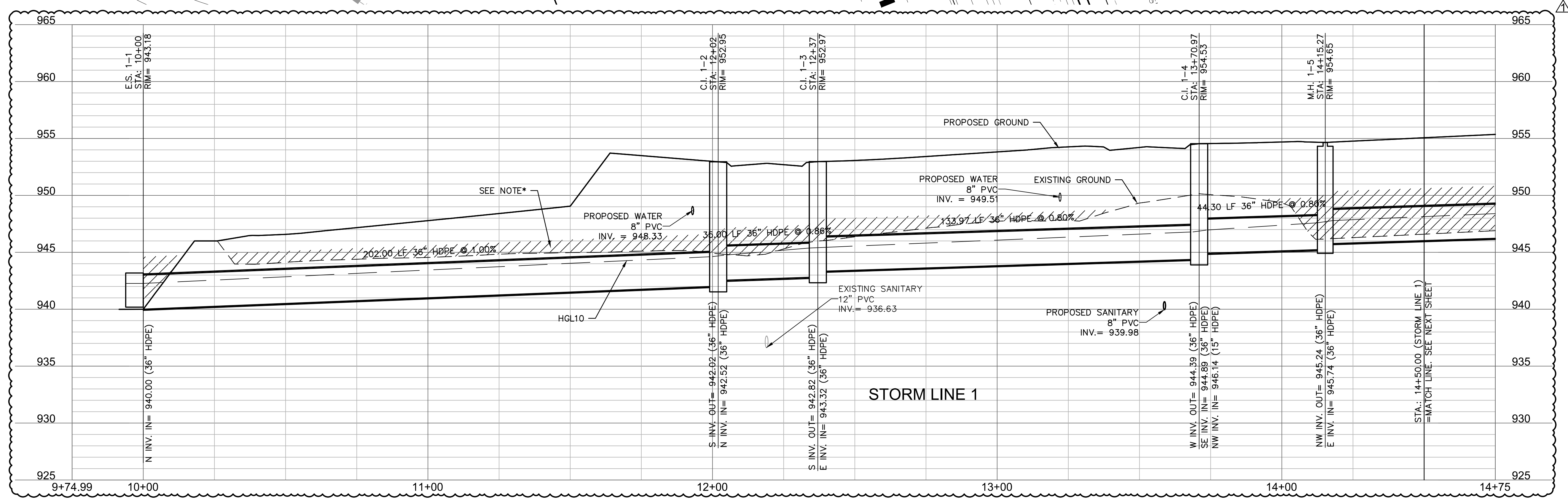
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USER: bworthley C_PUTIL_B194061



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

Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
E.S. 1-1	100.26	3	6	22	24	3.67
Area (SY)						
E.S. 1-1						45.3

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



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JULIE ELAINE SELLERS
NUMBER PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

BY

REV. NO. 1

DATE 03-23-2021

REVISIONS DESCRIPTION

REVISED PER CITY COMMENTS

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

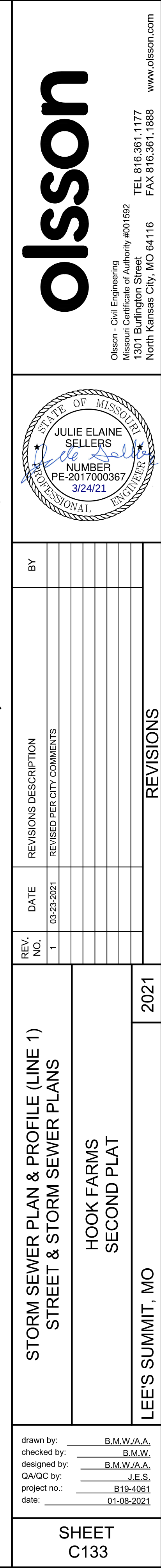
HOOK FARMS
SECOND PLAT

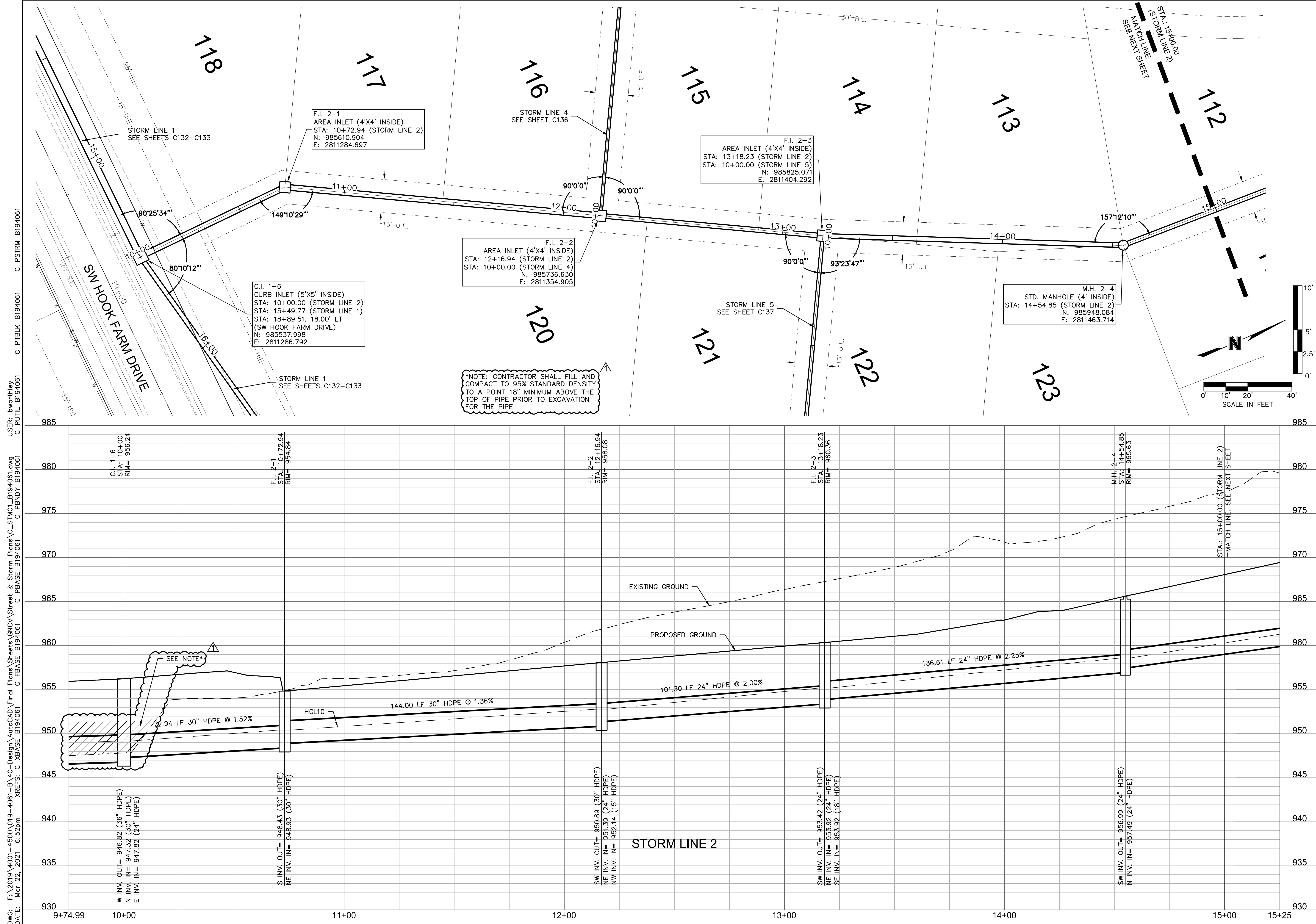
2021

LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
checked by: B.M.W./
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

SHEET C132



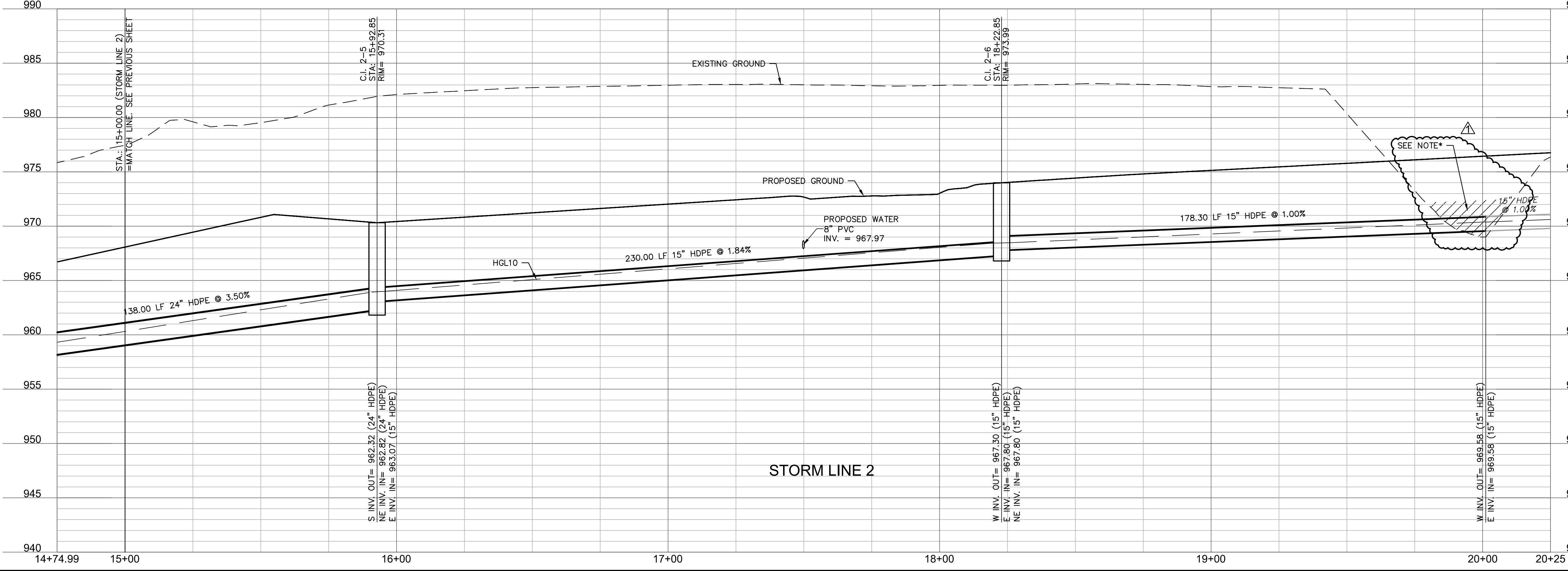
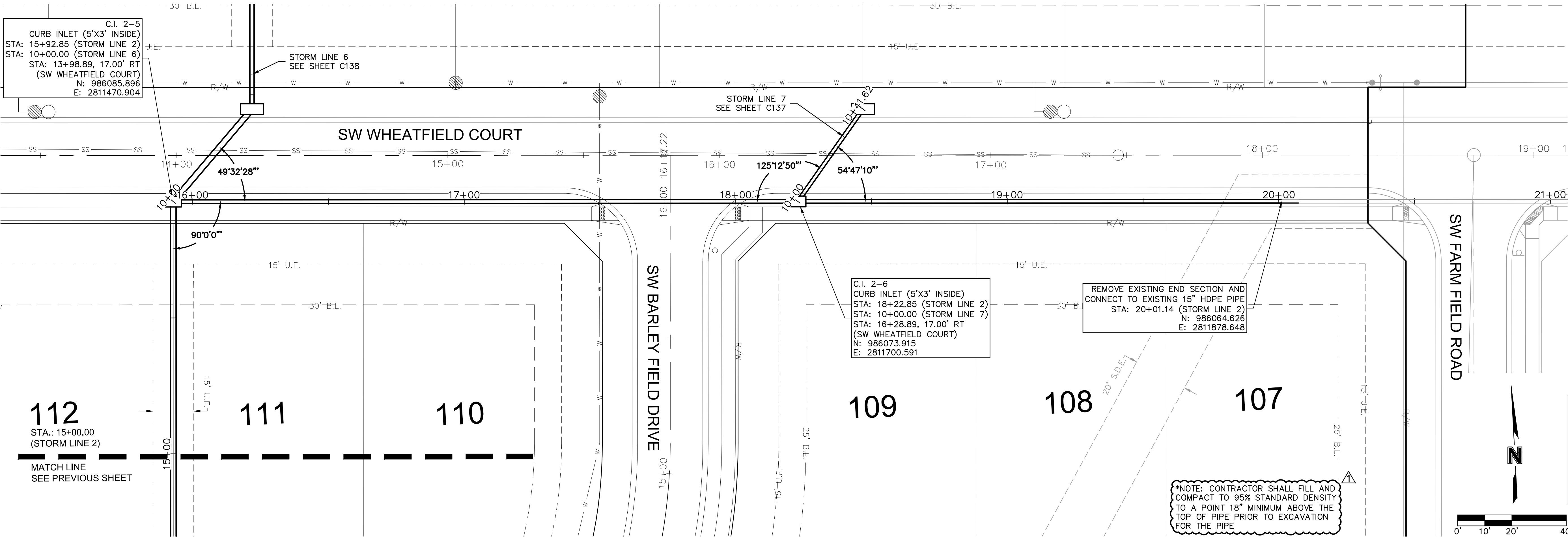


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USER: bworthley
C_PUTL_B194061

C_PTBLK_B194061

C_PSTRM_B194061



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

HOOK FARMS
SECOND PLAT

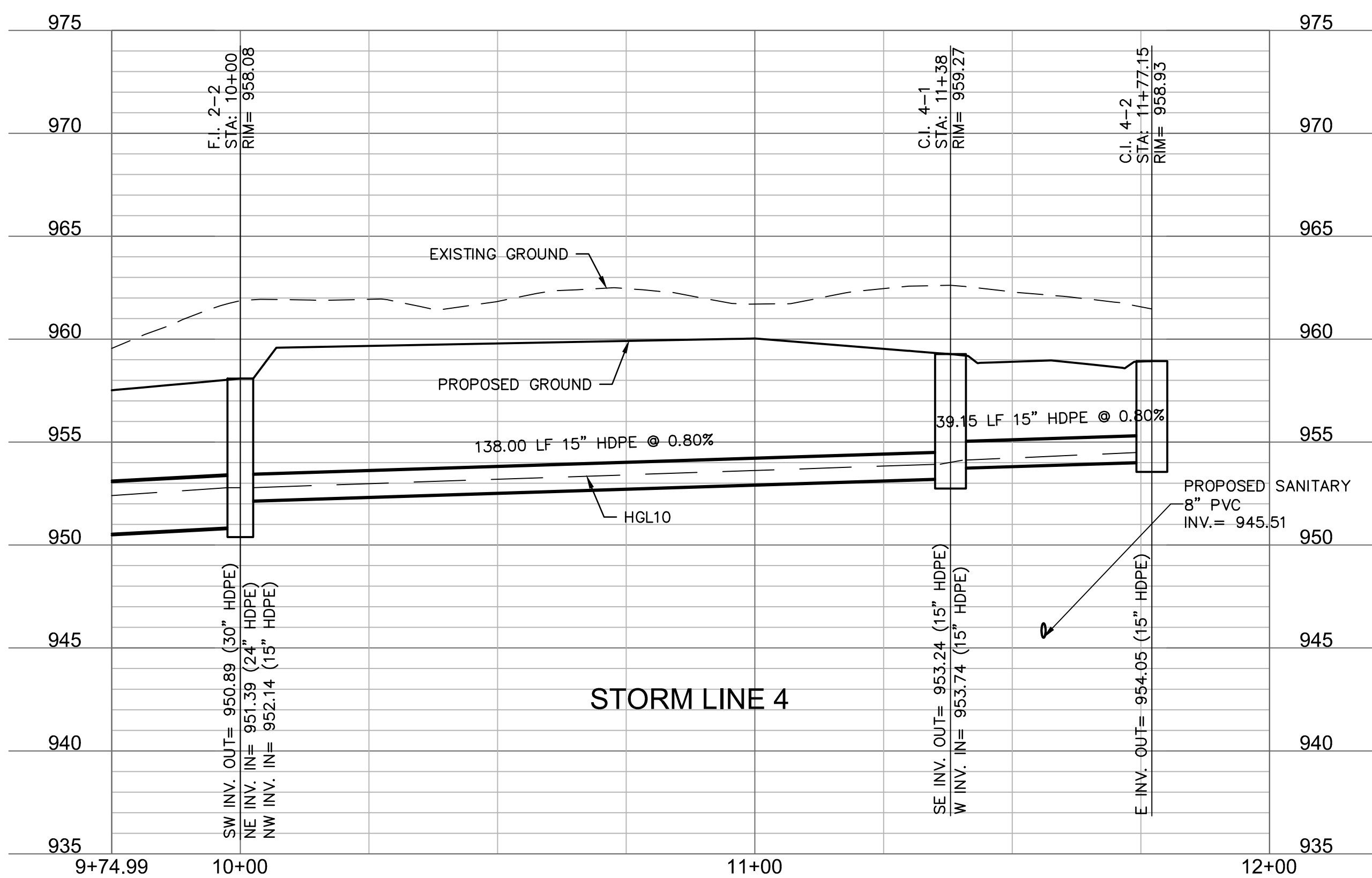
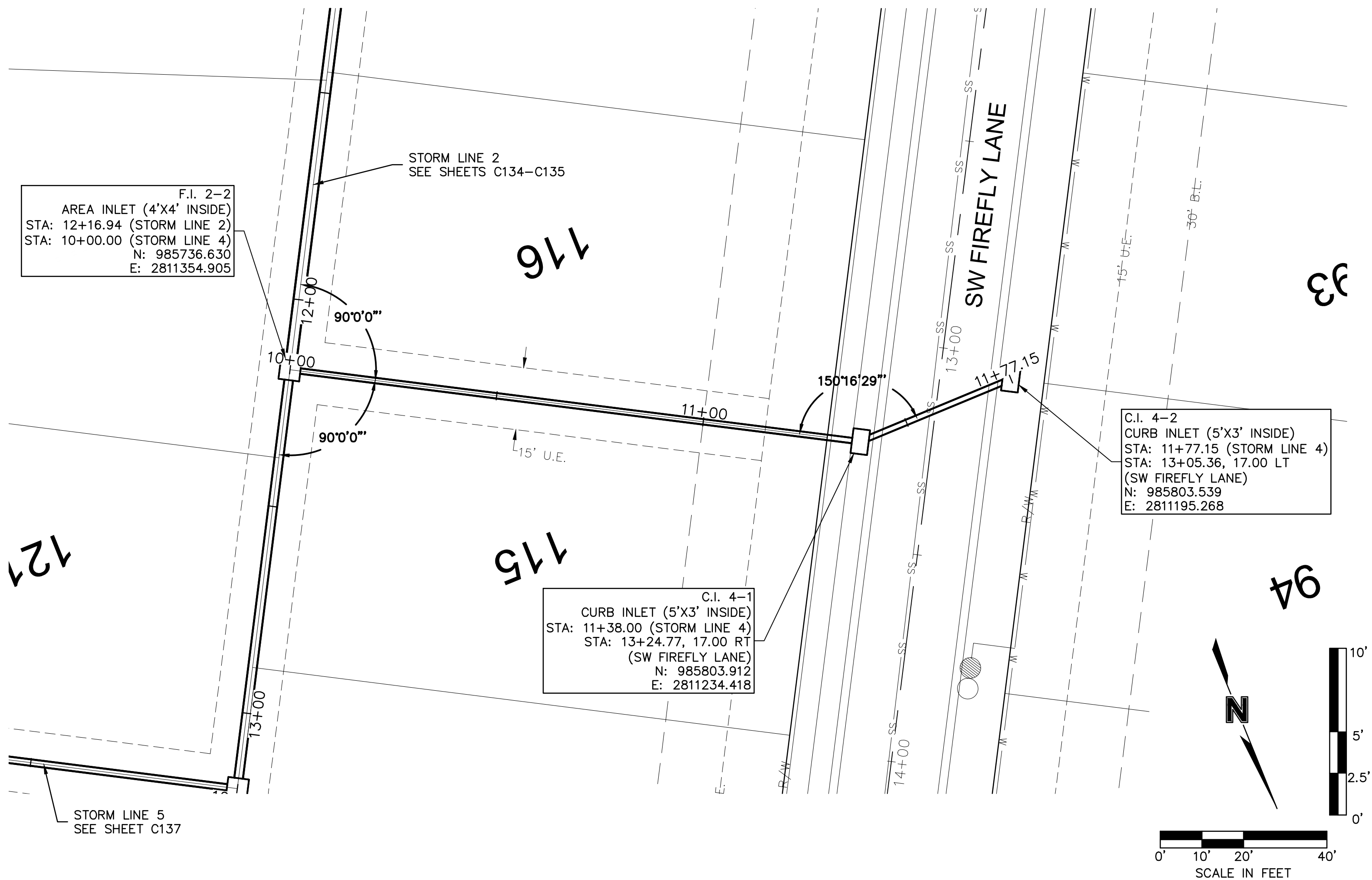
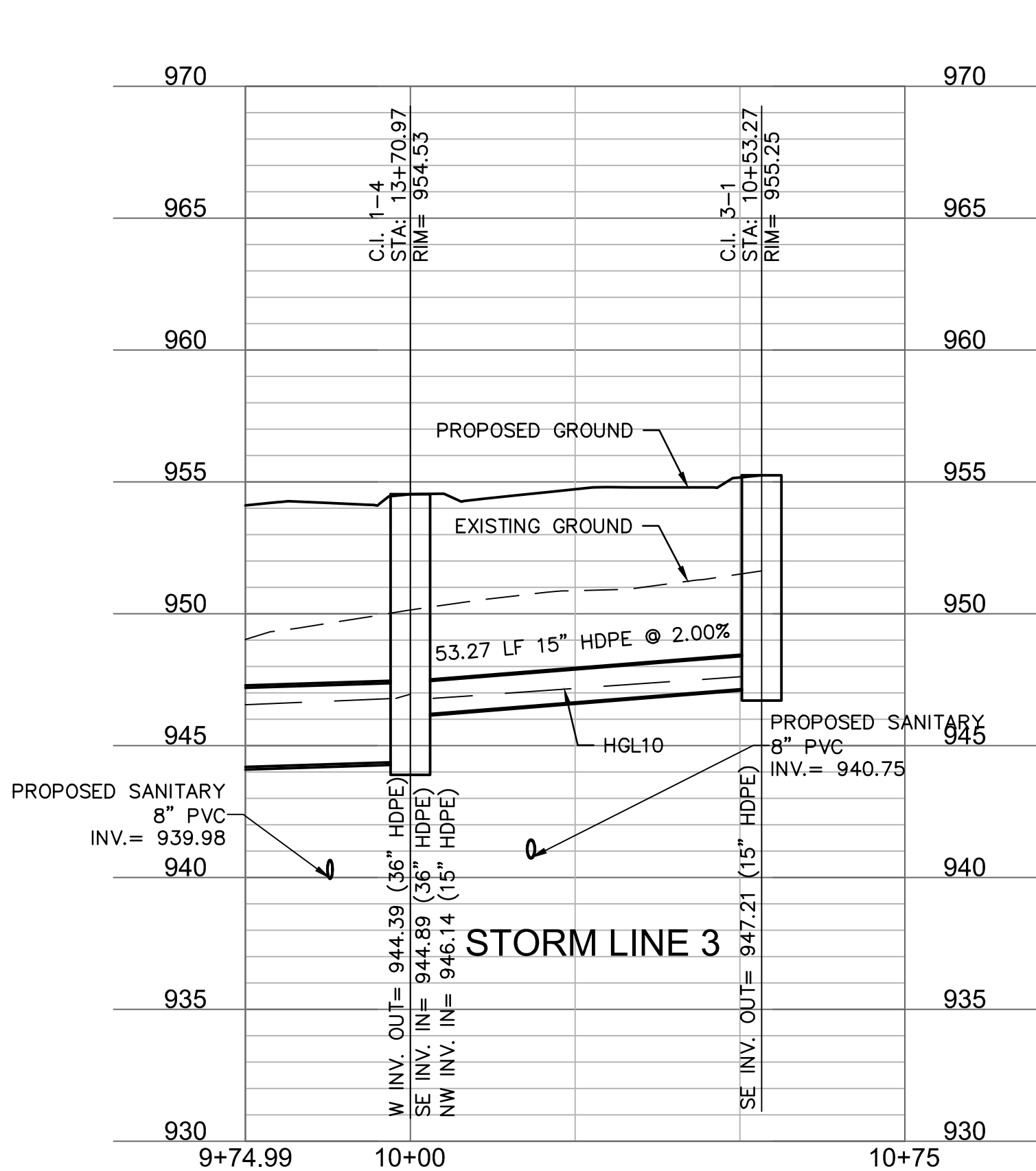
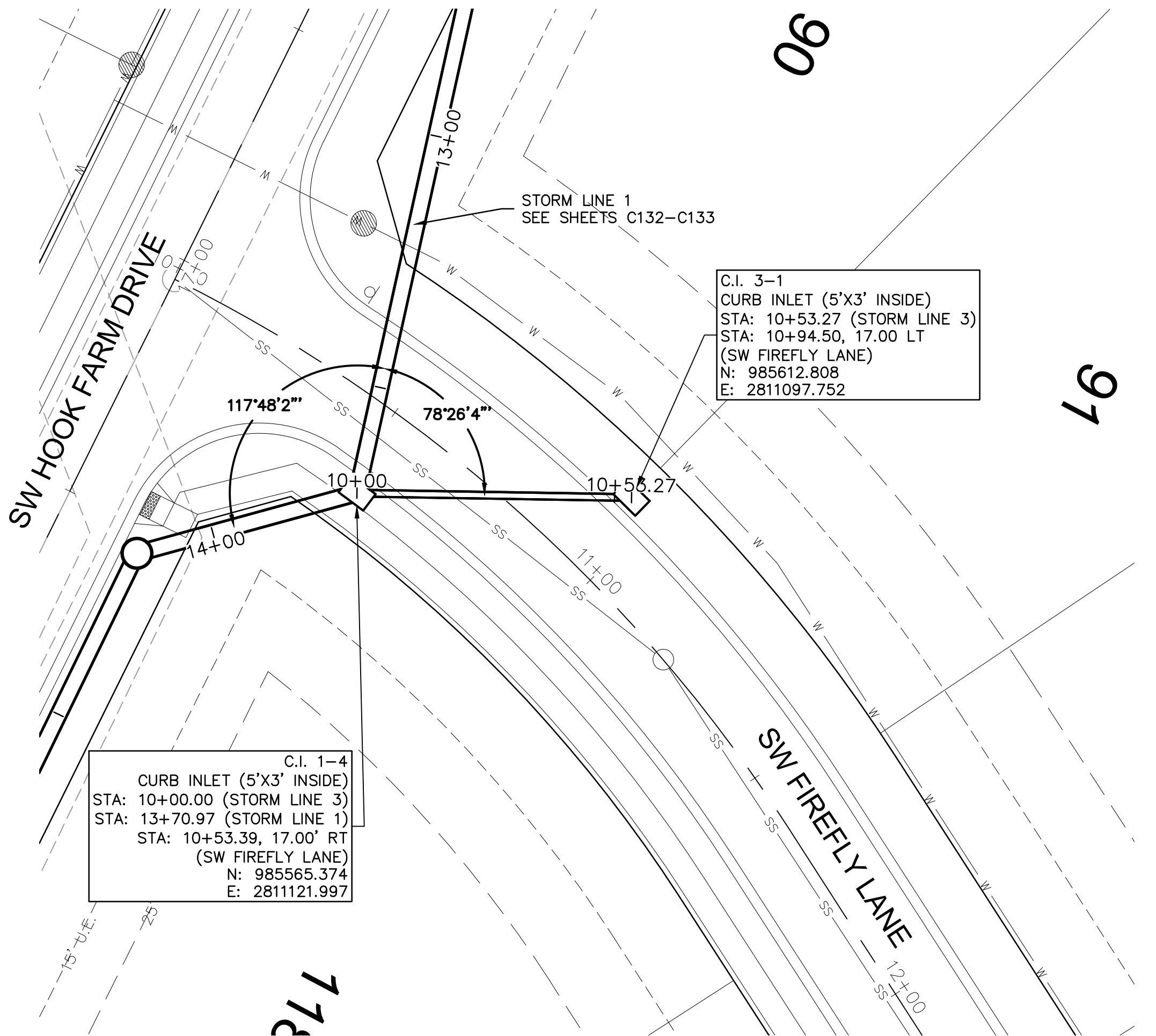
LEE'S SUMMIT, MO

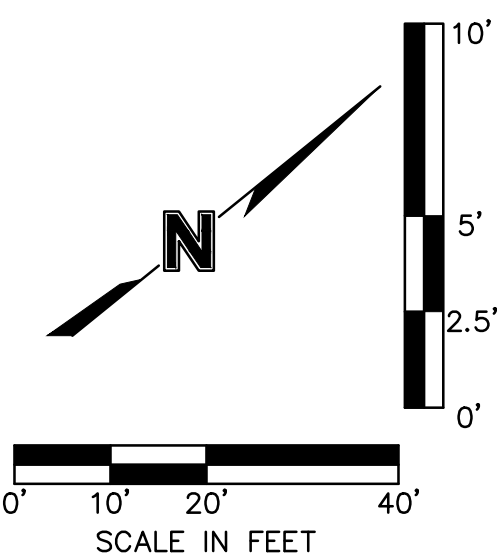
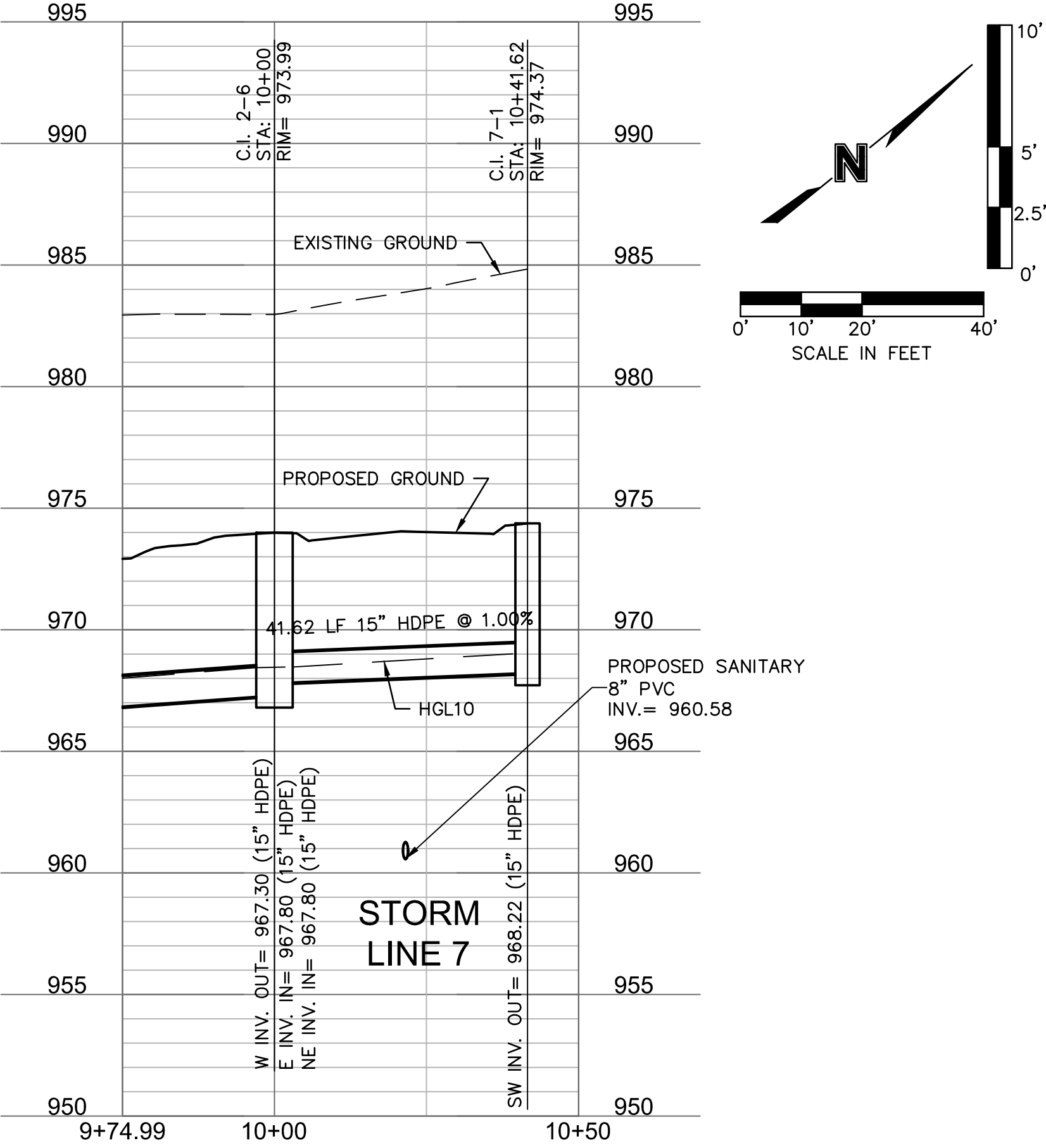
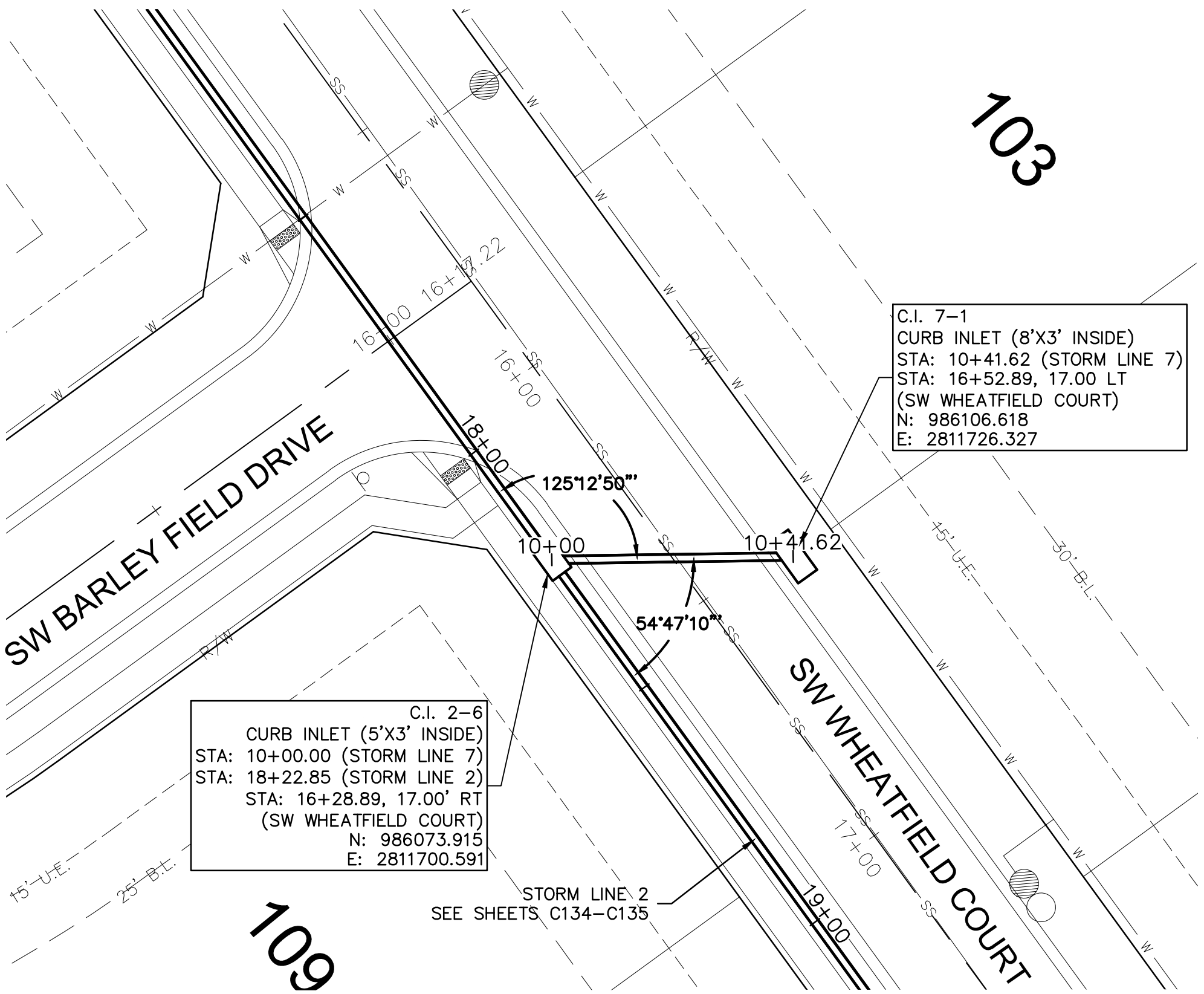
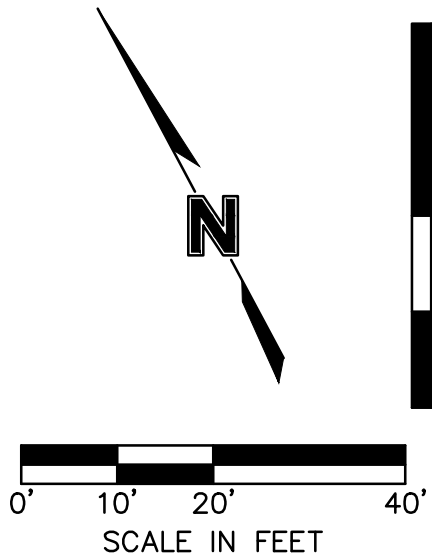
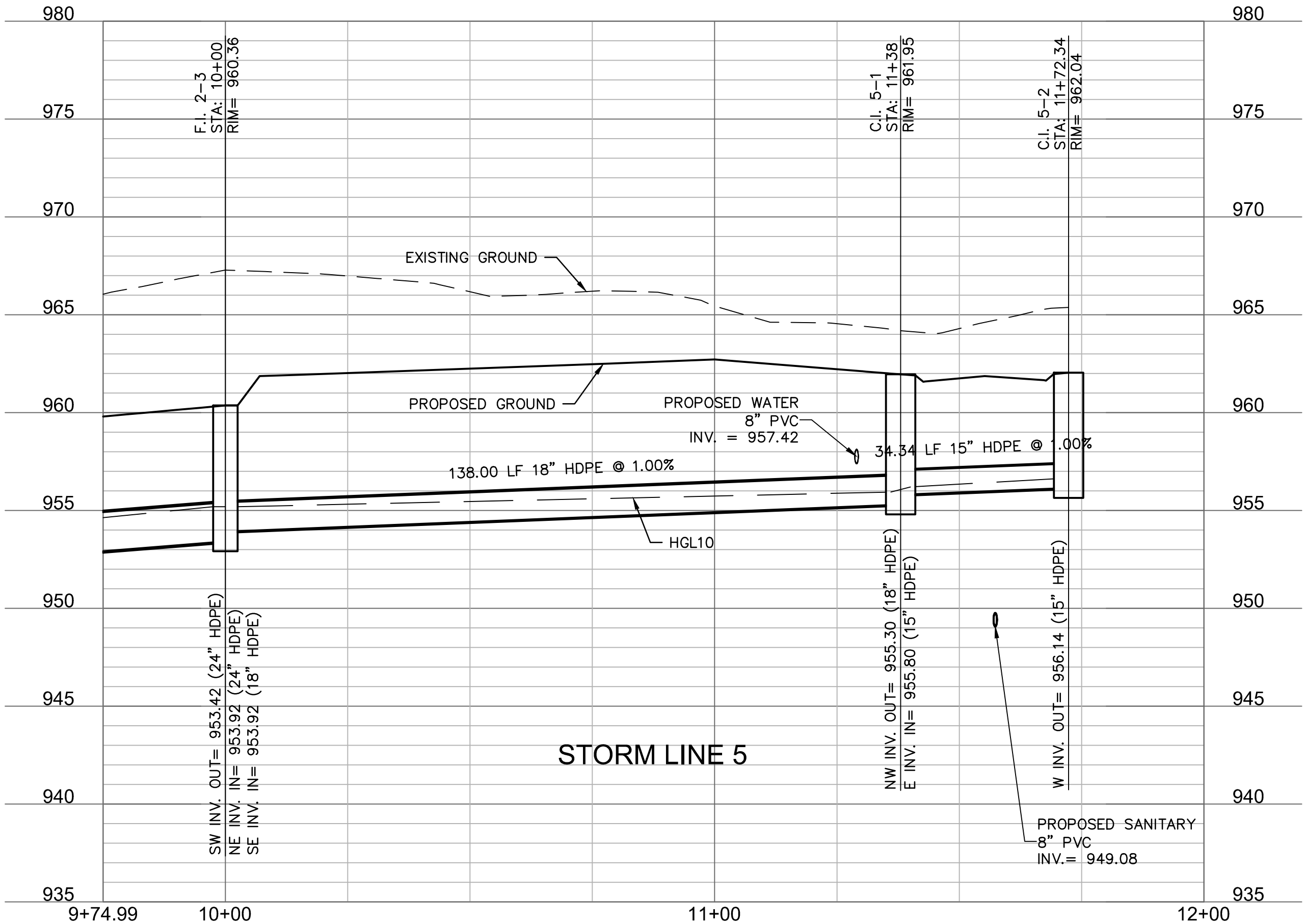
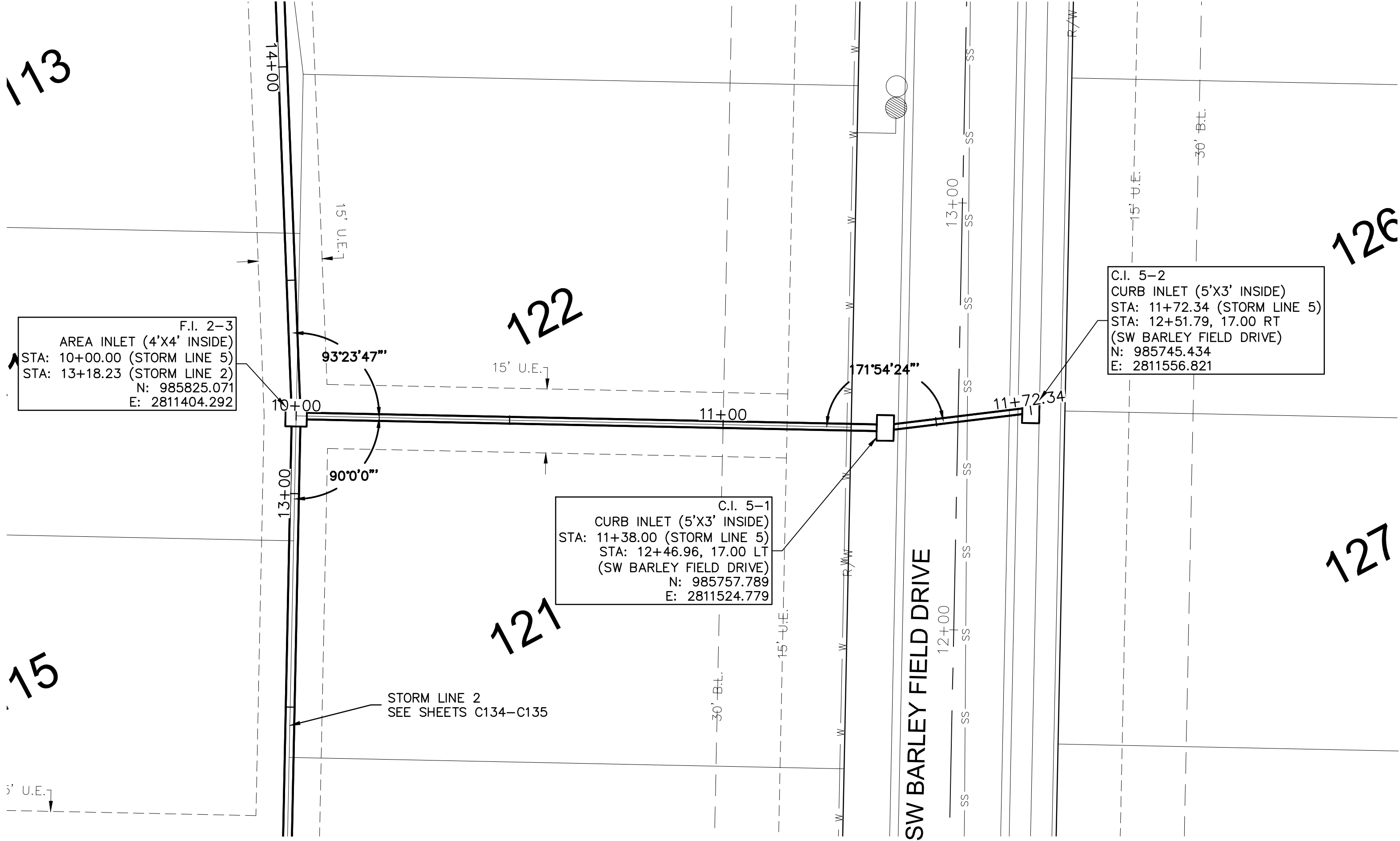
drawn by: B.M.W./A.A.
checked by: B.M.W./
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

2021

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS





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STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

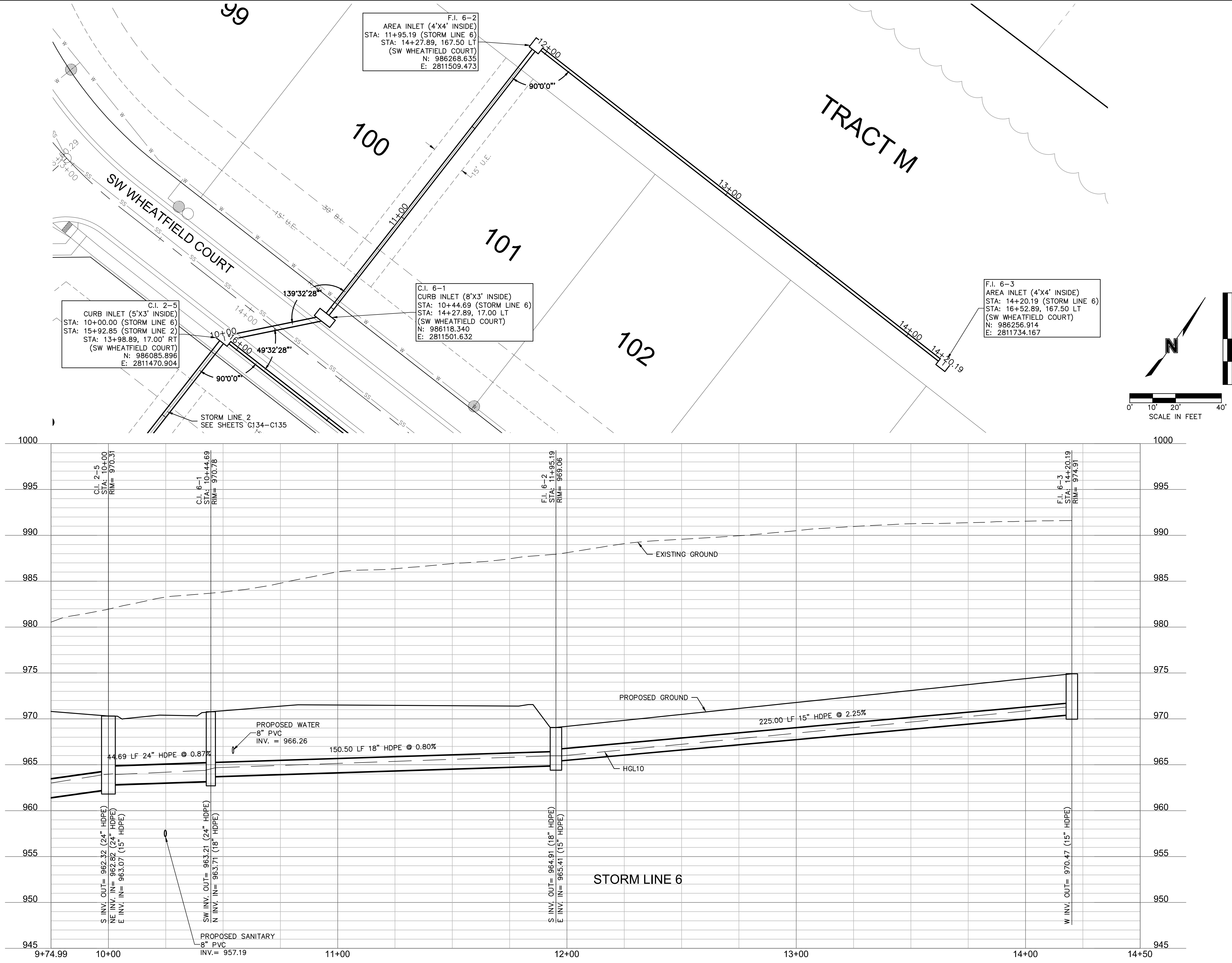
BY
REV. NO. 1
DATE 03-23-2021
REVISIONS DESCRIPTION
REVISED PER CITY COMMENTS

STORM SEWER PLAN & PROFILE (LINES 5 & 7)
STREET & STORM SEWER PLANS
HOOK FARMS
SECOND PLAT
LEE'S SUMMIT, MO
2021

drawn by: B.M.W./A.A.
checked by: B.M.W./
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

SHEET
C137

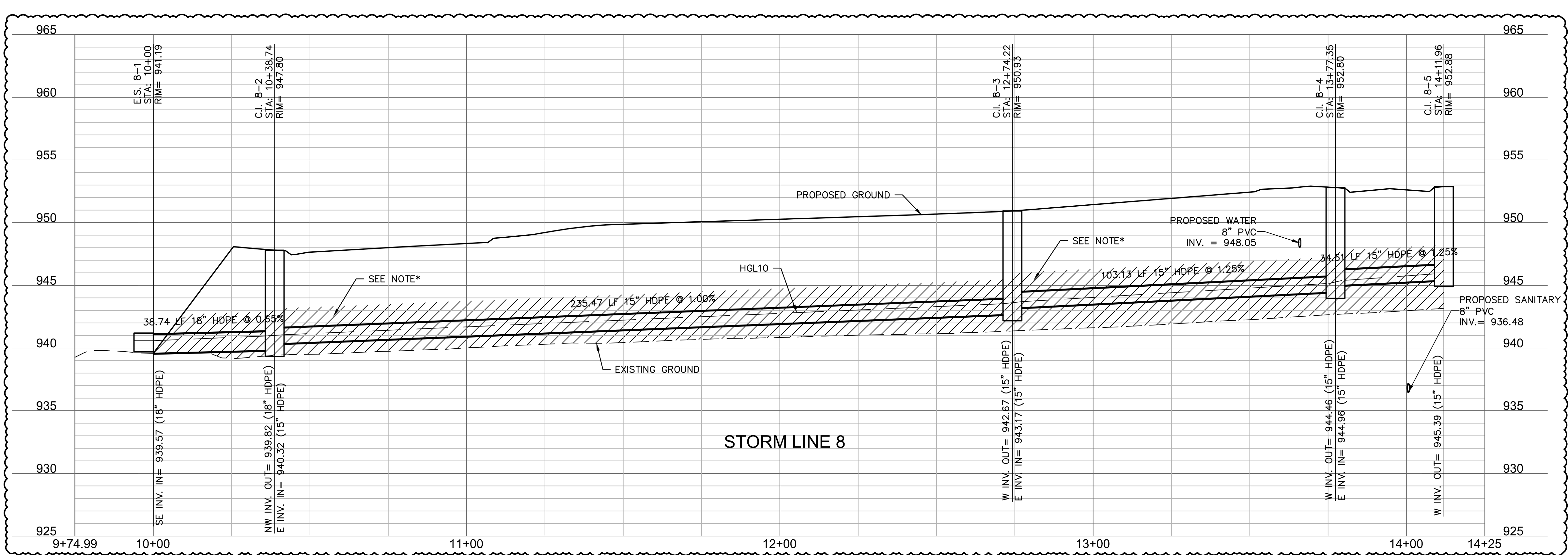
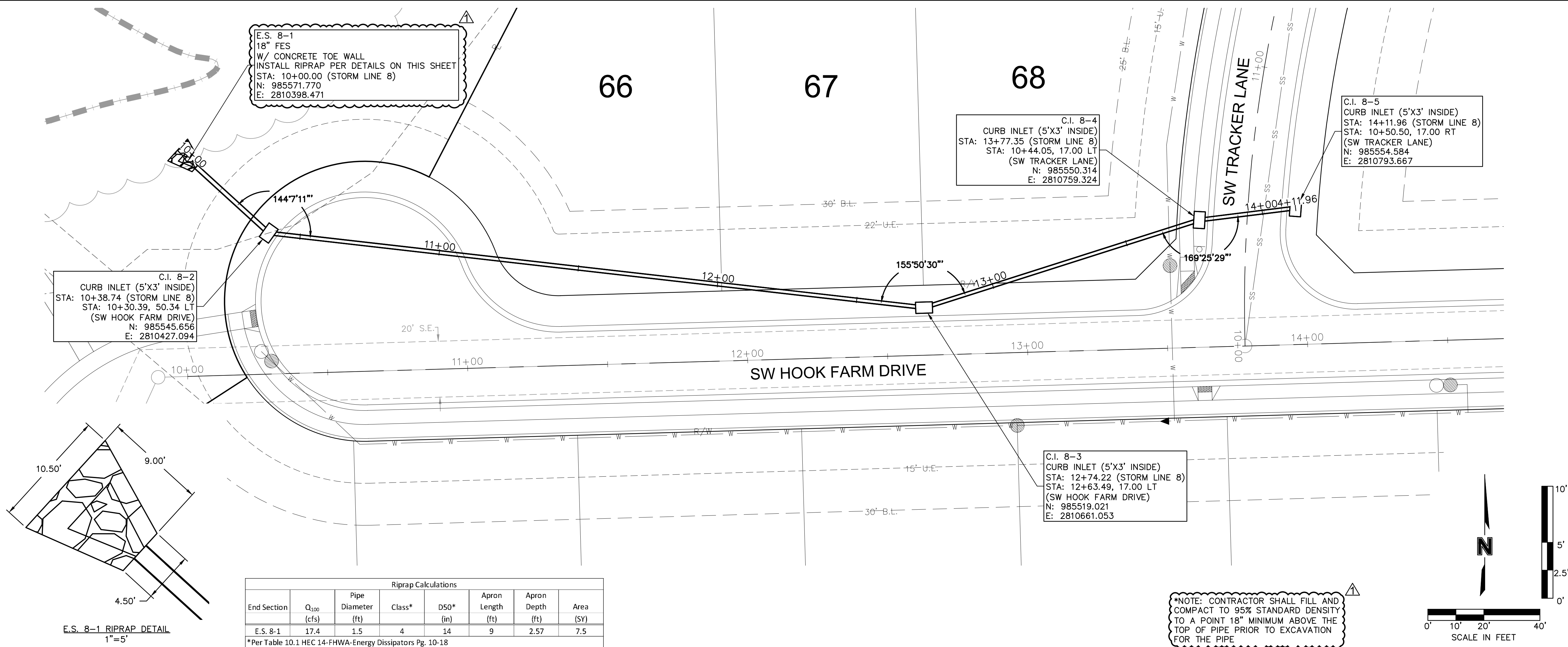
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USER: bworthley



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STORM SEWER PLAN & PROFILE (LINE 6) STREET & STORM SEWER PLANS		2021	
HOOK FARMS SECOND PLAT		LEE'S SUMMIT, MO	
drawn by: B.M.W./A.A. checked by: B.M.W./ designed by: B.M.W./A.A. QA/QC by: J.E.S. project no.: B19-4061 date: 01-08-2021		REVISIONS	

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USER: bworthley C_PUTL_B194061



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JULIE ELAINE SELLERS
NUMBER PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

BY

REVISIONS DESCRIPTION

REV. NO.

DATE

REVISIONS

STORM SEWER PLAN & PROFILE (LINE 8)
STREET & STORM SEWER PLANS

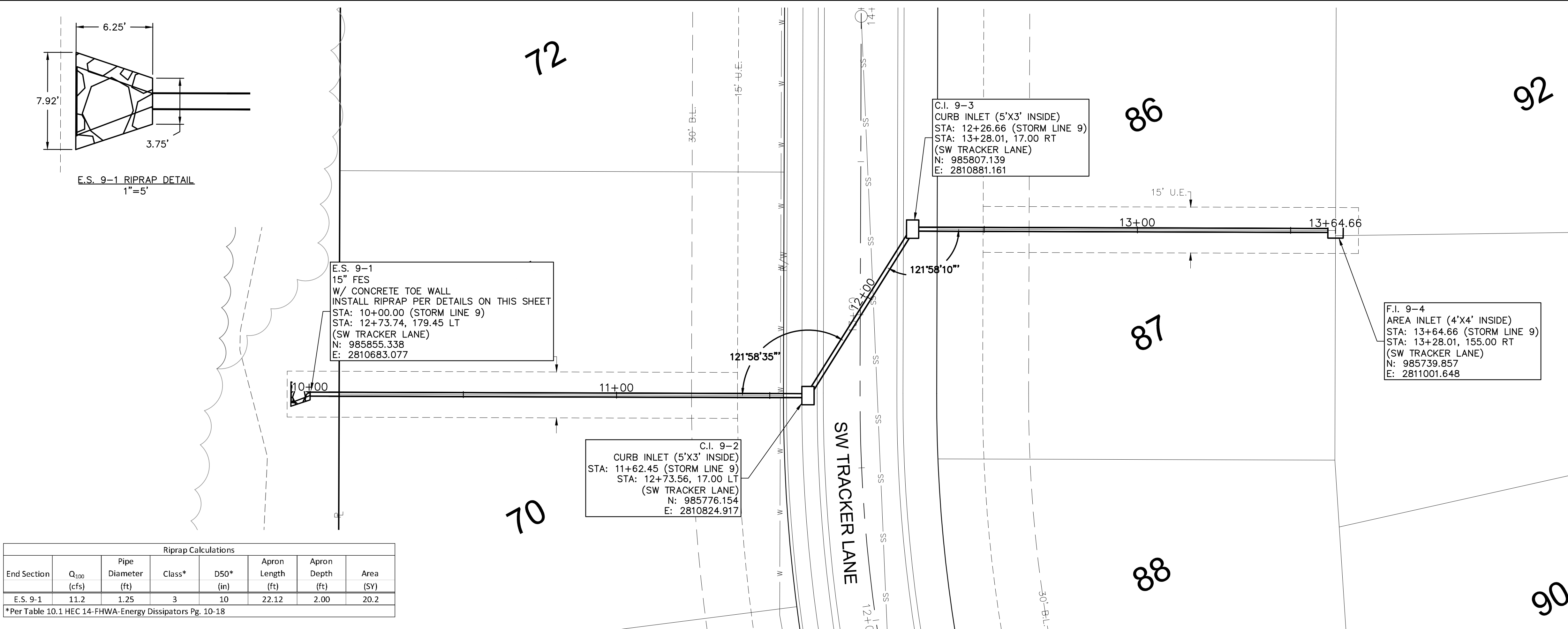
HOOK FARMS
SECOND PLAT

2021

drawn by: B.M.W./A.A.
checked by: B.M.W.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

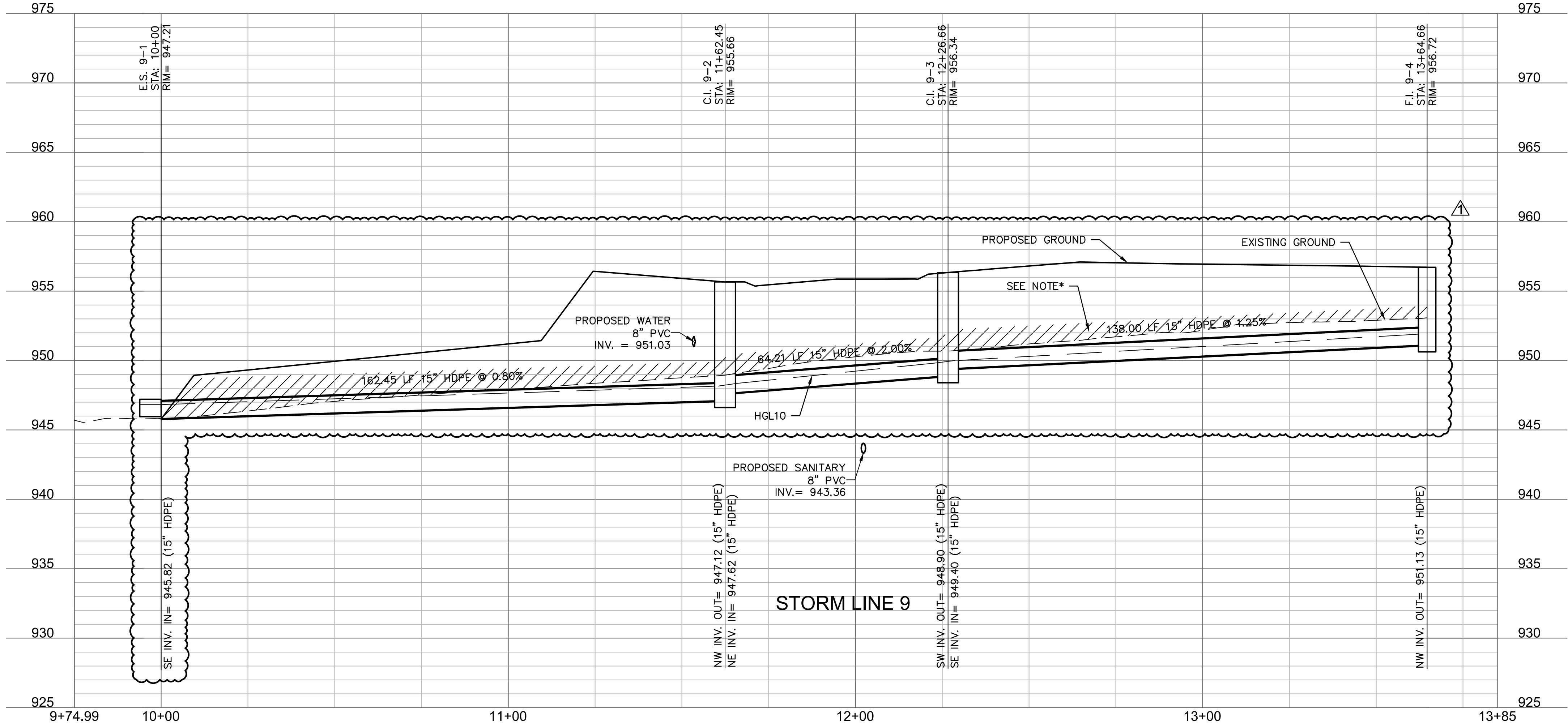
SHEET
C139

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USER: bworthley

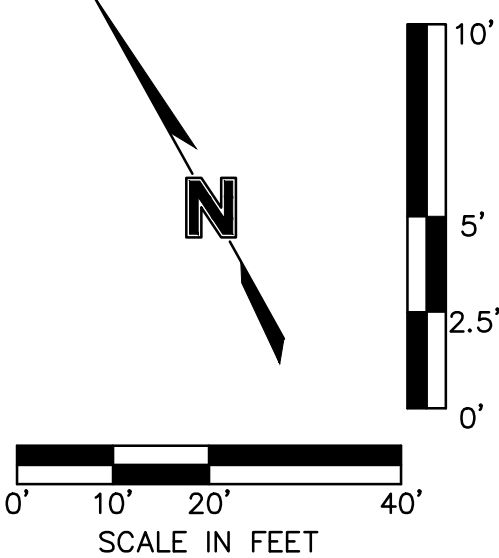


Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
E.S. 9-1	11.2	1.25	3	10	22.12	2.00
Area (SV)						
20.2						

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



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



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JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

BY

REVISIONS DESCRIPTION

DATE

REV. NO.

1

03-23-2021

REVISED PER CITY COMMENTS

STORM SEWER PLAN & PROFILE (LINE 9)
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

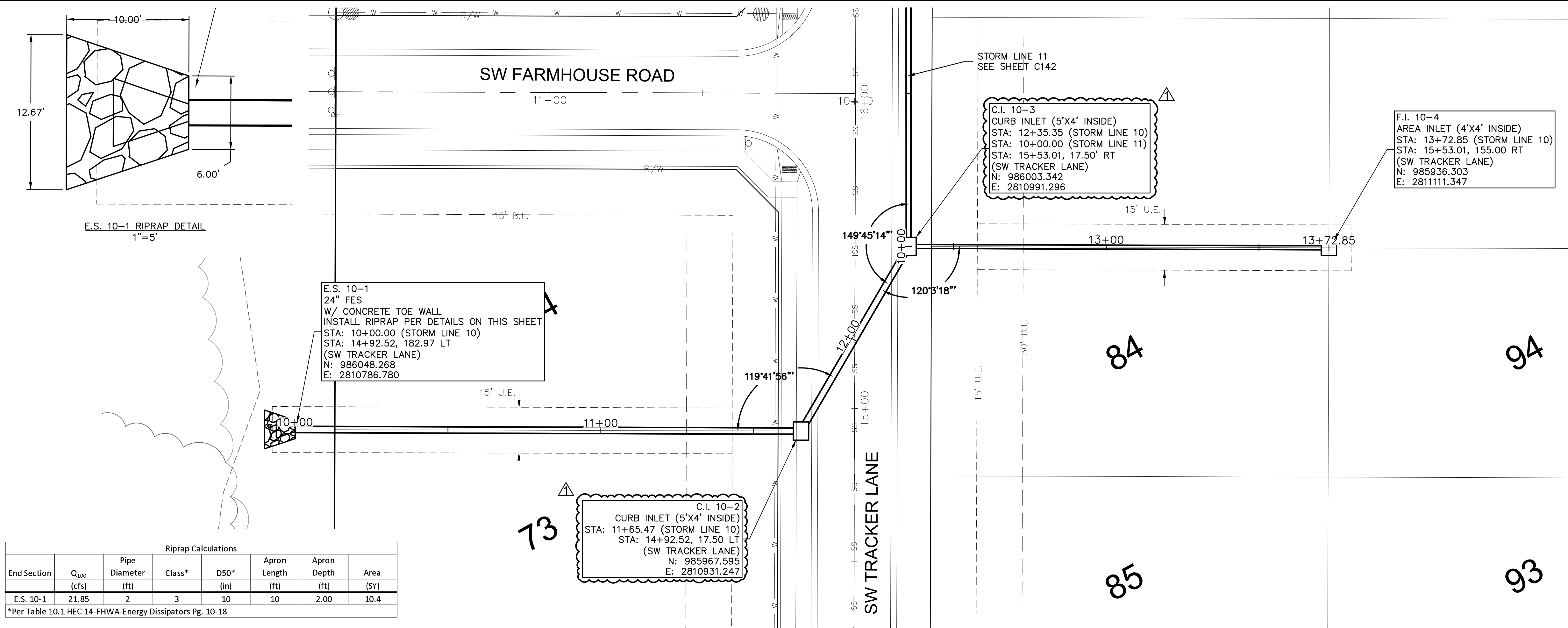
2021

LEE'S SUMMIT, MO

2021

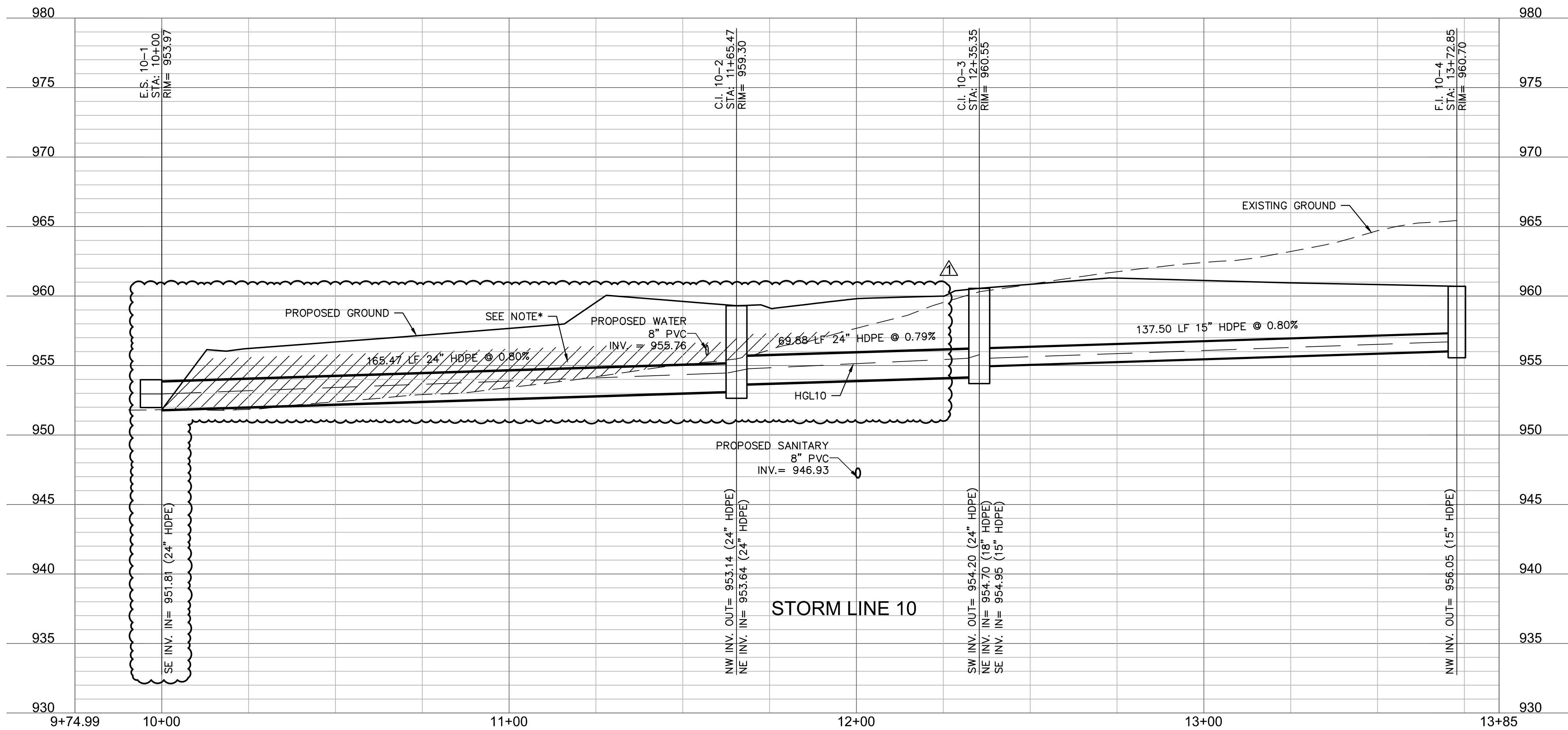
drawn by: B.M.W./A.A.
checked by: B.M.W.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

SHEET
C140



Riprap Calculations							
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)	Area (SY)
E.S. 10-1	21.85	2	3	10	10	2.00	10.4

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



SCALE IN FEET

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

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REV.	NO.	DATE	REVISIONS DESCRIPTION	BY
1		03-23-2021	REVISED PER CITY COMMENTS	

STORM SEWER PLAN & PROFILE (LINE 10)
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

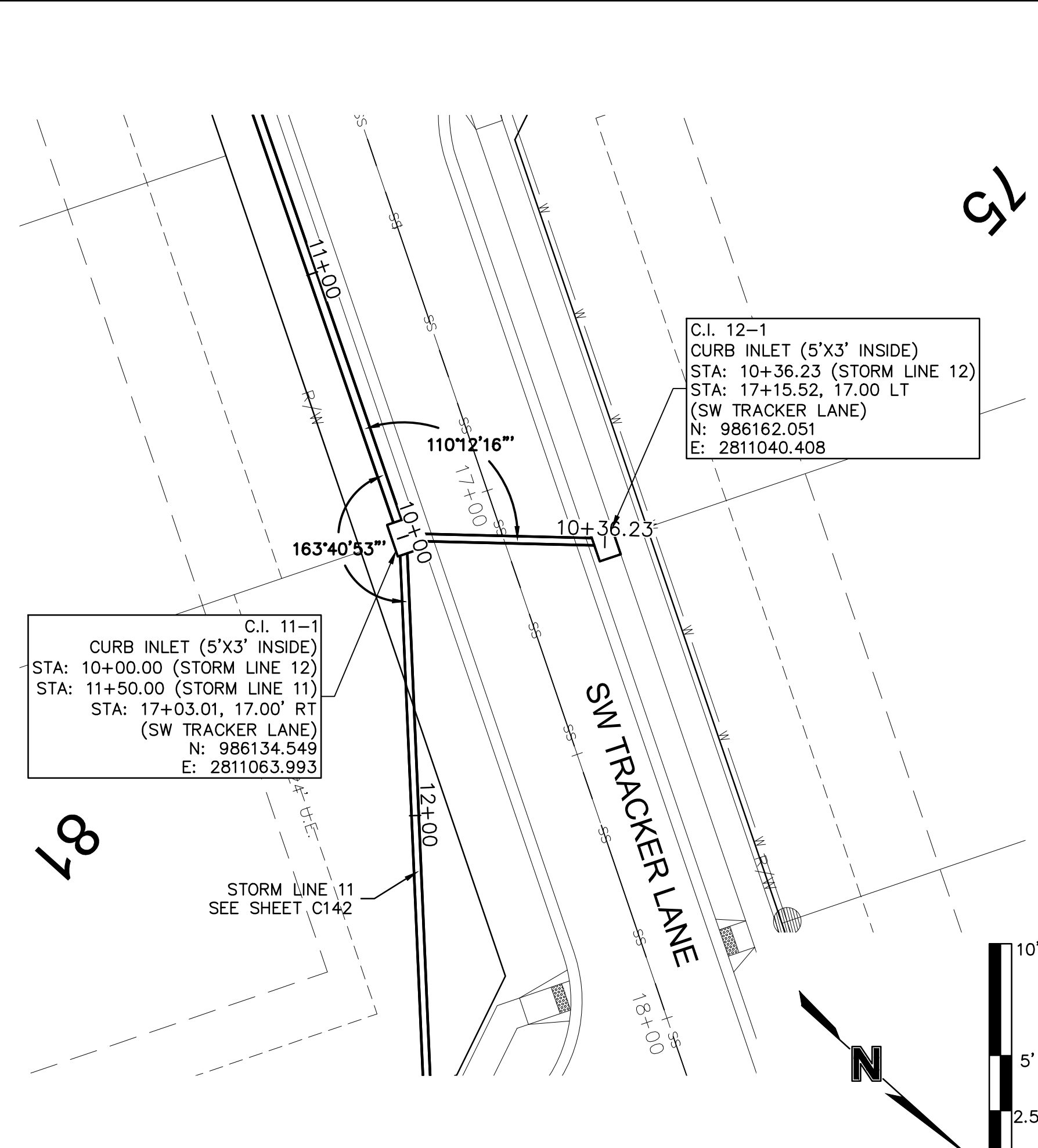
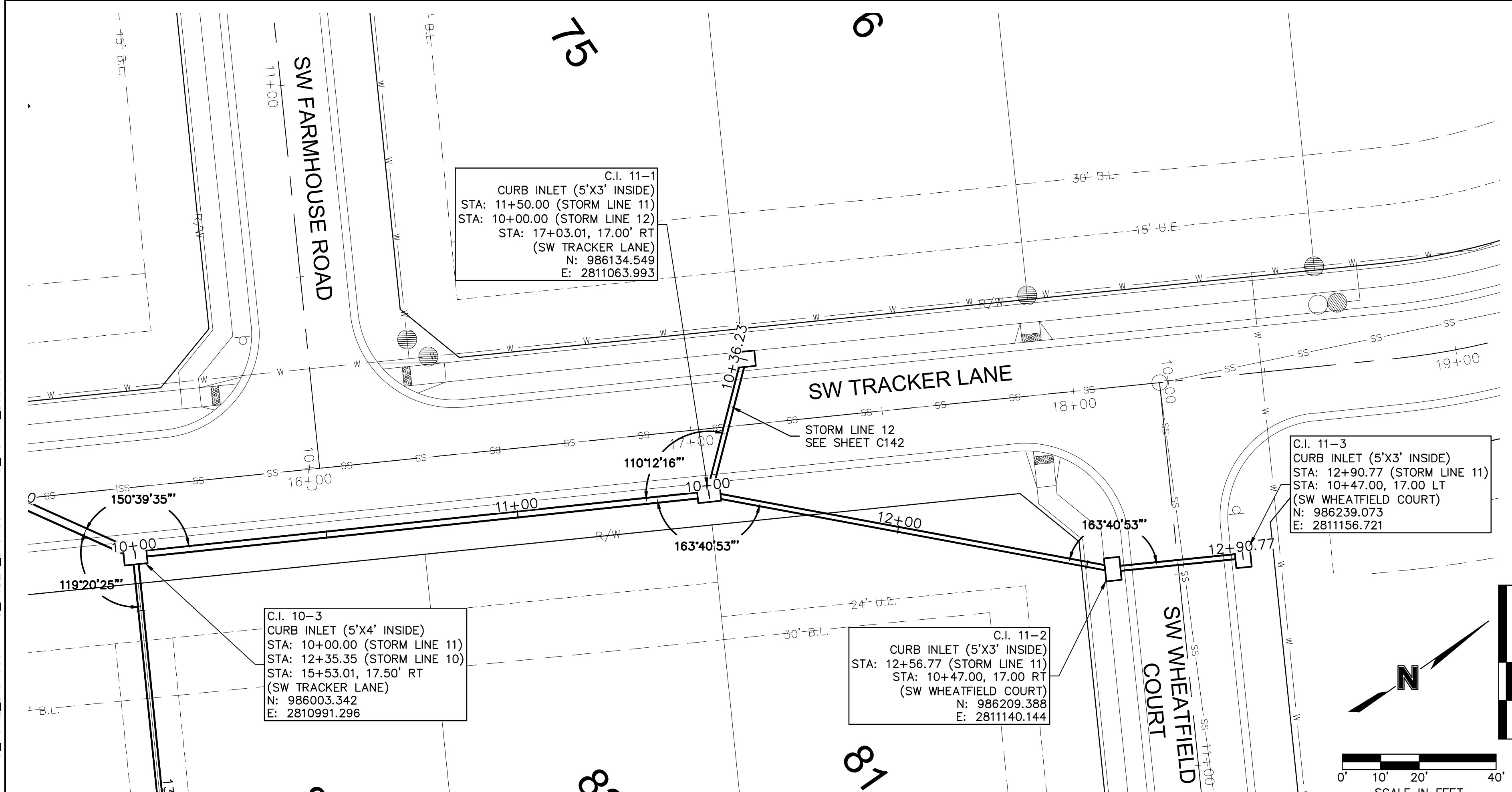
2021

REVISIONS

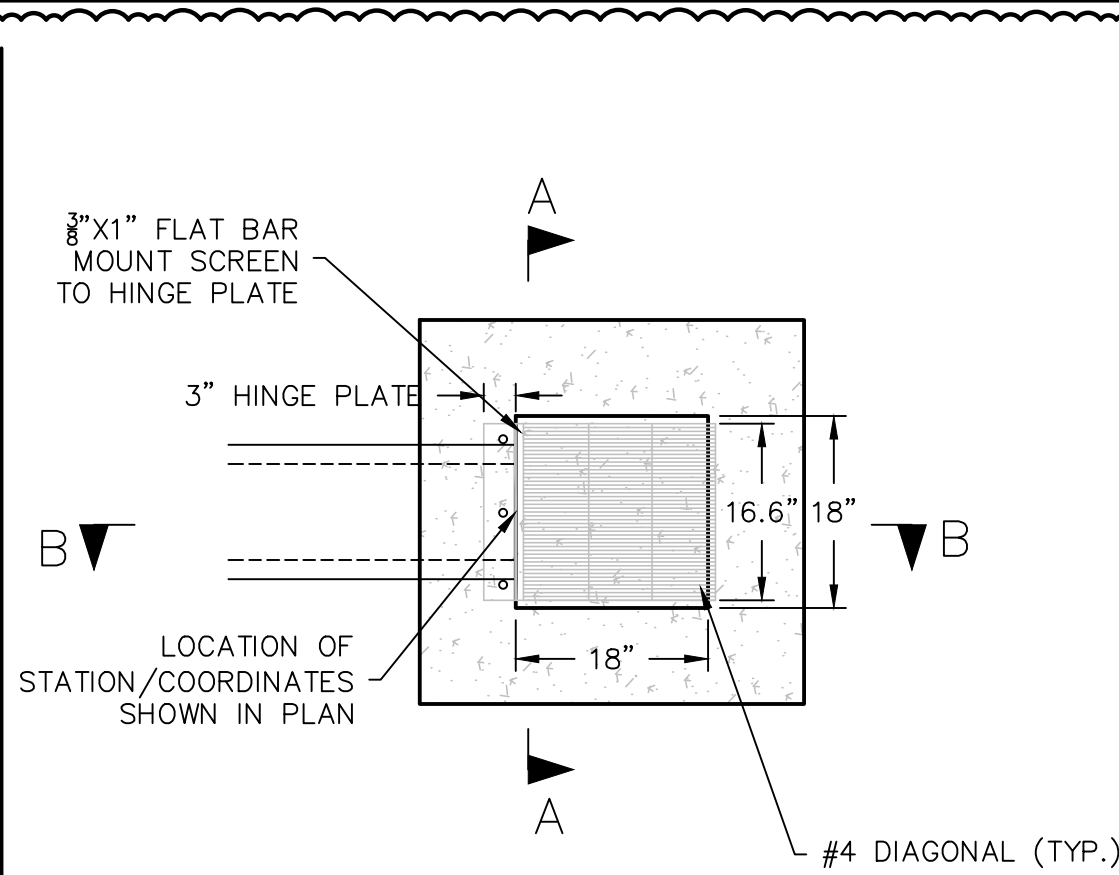
drawn by: B.M.W./A.A.
checked by: B.M.W.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

SHEET
C141

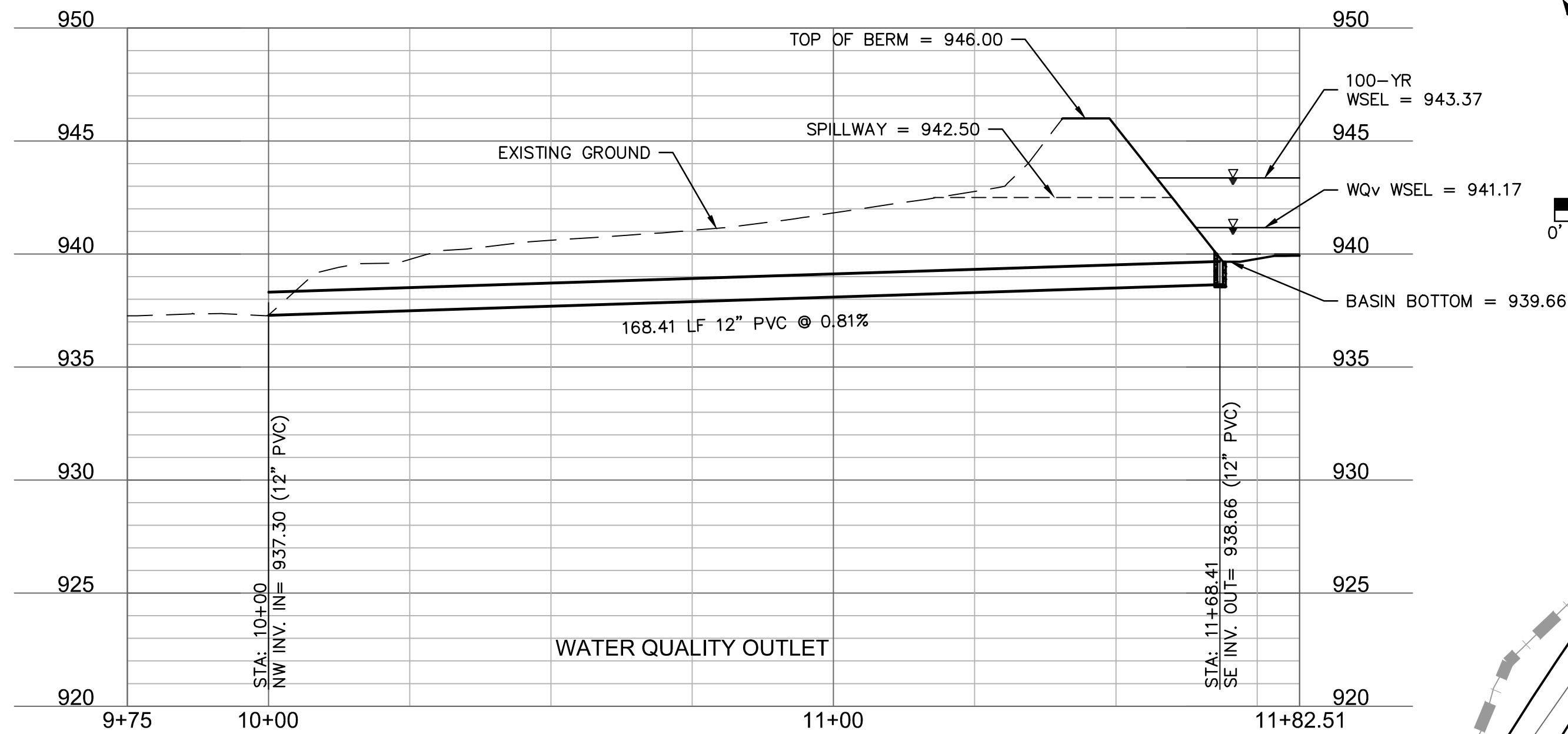
USER: bworthley
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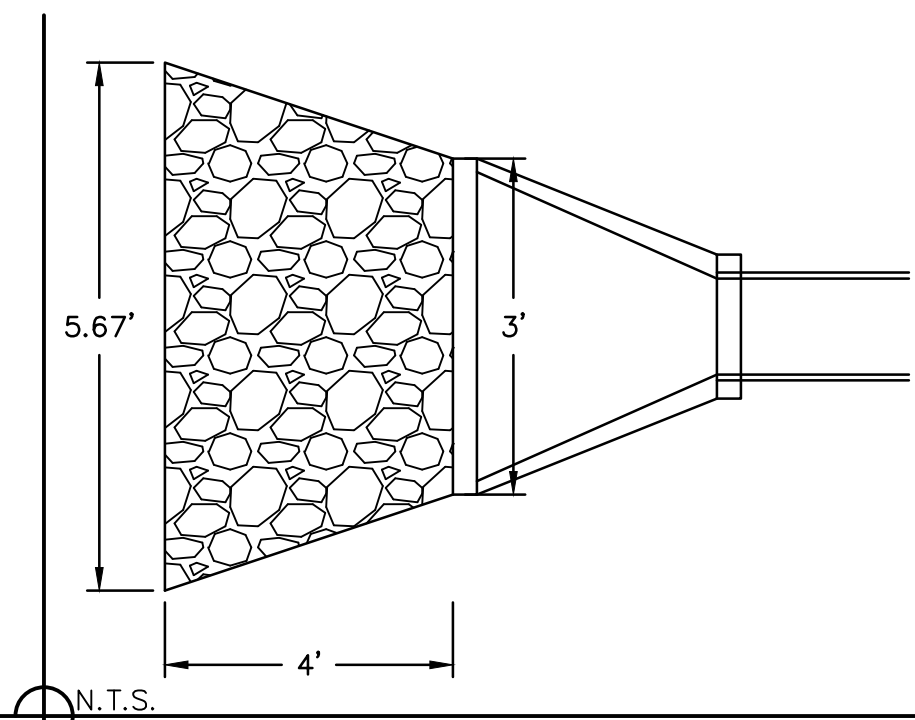
N.T.S.
01 WATER QUALITY BASIN OULET STRUCTURE



BASIN DETAILS	
SPILLWAY TYPE	BROAD CRESTED WEIR
SPILLWAY LENGTH	58 FT
SPILLWAY ELEVATION	942.50 FT
SPILLWAY DEPTH	3.50 FT
DAM ELEVATION	946.00 FT
WATER QUALITY STORM WATER SURFACE ELEVATION	941.17 FT
100-YR DESIGN WATER SURFACE ELEVATION	943.37 FT
DESIGN STORAGE	109,035 CF

Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
WQv Outlet	4.154	1	1	5	4	1.46

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



STA.: 10+00.00
INSTALL 12" HDPE END SECTION
W/ CONCRETE TOE WALL.
INSTALL RIPRAP PER
DETAILS ON THIS SHEET.
N: 985095.415
E: 2811129.828

STA.: 11+68.41
WATER QUALITY BASIN
OUTLET STRUCTURE,
SEE DETAIL ON THIS SHEET
N: 985238.848
E: 2811041.573

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REV.	NO.	DATE	REVISIONS DESCRIPTION	BY
1		03-23-2021	REVISED PER CITY COMMENTS	

WATER QUALITY BASIN PLAN STREET & STORM SEWER PLANS		2021
HOOK FARMS SECOND PLAT		
LEE'S SUMMIT, MO		

drawn by: B.M.W./A.A.
checked by: B.M.W./A.A.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

SHEET
C143

DWG: F:\2019\4001-4500\019-4061-BV40-Design\AutoCAD\Final Plans\Sheets\GNCV\Street & Storm Plans\C_DRN01_B194061.dwg
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USER: bworthley

- 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 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 C107-C109 FOR SWALE GRADING DETAILS.
 6. DRAINAGE PATHS TO BE CONSTRUCTED BETWEEN LOTS LABELED AS STANDARD AND/OR UPHILL LOTS.
 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.

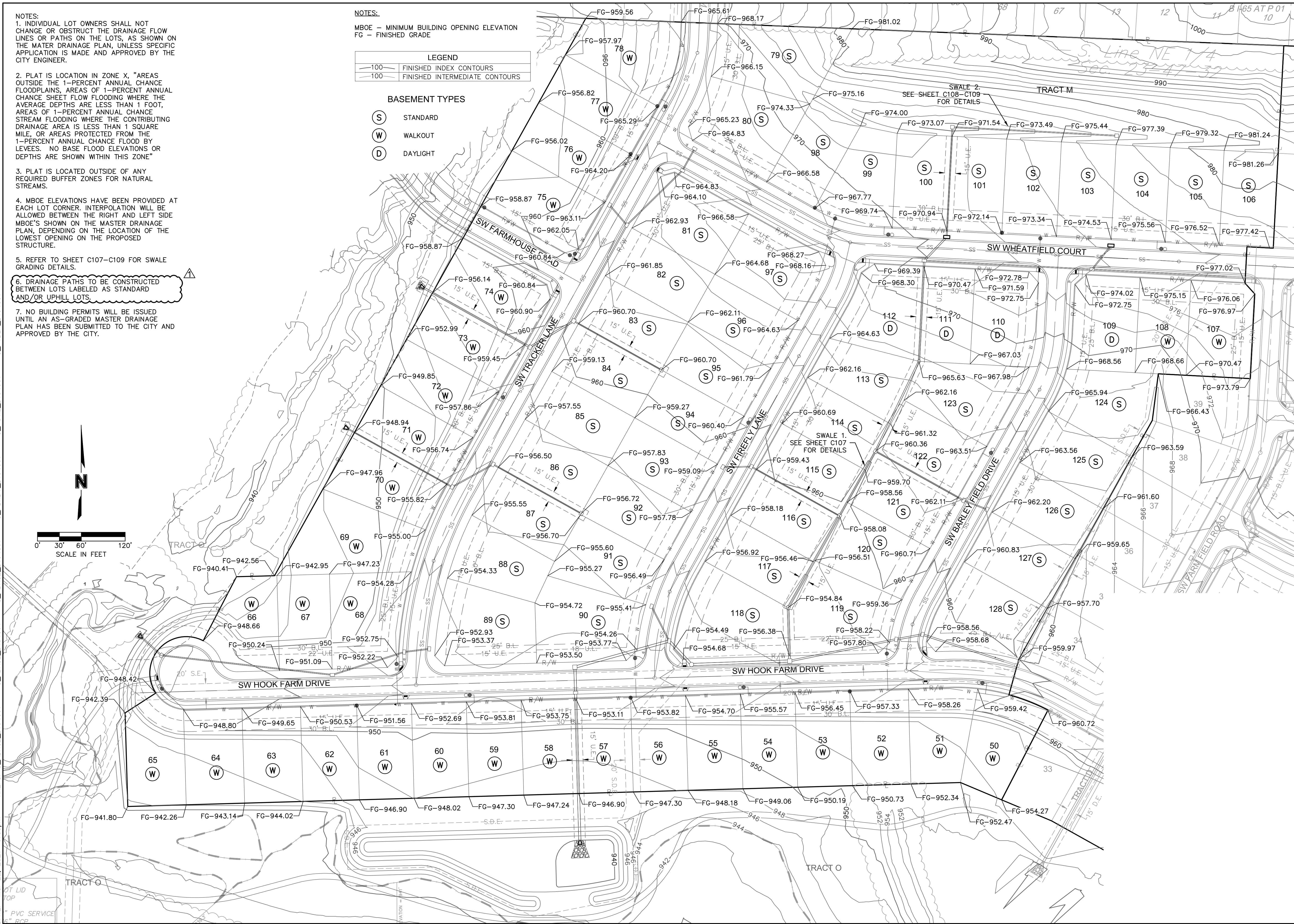
NOTES:

MBOE - MINIMUM BUILDING OPENING ELEVATION
FG - FINISHED GRADE

LEGEND	
	FINISHED INDEX CONTOURS
	FINISHED INTERMEDIATE CONTOURS

BASEMENT TYPES

- (S) STANDARD
(W) WALKOUT
(D) DAYLIGHT



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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER
PE-2017000367
3/24/21
PROFESSIONAL ENGINEER

MASTER DRAINAGE PLAN
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
checked by: B.M.W./
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

SHEET
C144

REV. NO. 1
DATE 03-23-2021
REVISIONS DESCRIPTION
REVISED PER CITY COMMENTS

BY

REVISIONS

2021

Inlet Design Table						
10 Year Return Frequency						
Inlet ID	Captured Flow	Bypass Flow	Inlet Efficiency (Note 2)	Gutter Depth	Gutter Spread	Ponding Depth
	(cfs)	(cfs)	(%)	(ft)	(ft)	(ft)
C.I. 1-2(L)	3.36	0.00	100.00%	0.20	10.20	...
C.I. 1-2(R)	0.23	0.00	100.00%	0.07	3.74	...
C.I. 1-2	4.19	0.00	100.00%	...	...	...
C.I. 1-3(L)	0.34	0.00	100.00%	0.09	4.36	...
C.I. 1-3(R)	2.74	0.00	100.00%	0.19	9.44	...
C.I. 1-3	7.20	0.00	100.00%	...	...	...
C.I. 1-4	1.43	0.24	85.63%	0.14	7.21	...
C.I. 1-6	1.94	0.32	85.85%	0.18	8.79	...
C.I. 1-7	1.08	0.13	89.48%	0.13	6.36	...
C.I. 1-8	1.05	0.12	89.77%	0.13	6.28	...
F.I. 2-1	3.04	0.00	100.00%	...	...	0.15
F.I. 2-2	2.59	0.00	100.00%	...	...	0.13
F.I. 2-3	2.48	0.00	100.00%	...	...	0.13
C.I. 2-5	0.64	0.03	95.13%	0.11	5.27	...
C.I. 2-6	0.97	0.08	91.95%	0.12	6.22	...
C.I. 3-1	1.08	0.11	90.54%	0.13	6.47	...
C.I. 4-1	1.66	0.32	83.66%	0.16	7.76	...
C.I. 4-2	1.28	0.18	87.85%	0.14	6.92	...
C.I. 5-1	1.34	0.20	87.27%	0.14	7.05	...
C.I. 5-2	1.54	0.27	85.02%	0.15	7.50	...
C.I. 6-1	3.22	0.90	78.18%	0.21	10.38	...
F.I. 6-2	3.41	0.00	100.00%	...	...	0.16
F.I. 6-3	4.16	0.00	100.00%	...	...	0.18
C.I. 7-1	3.80	1.42	72.80%	0.23	11.35	...
C.I. 8-2(L)	2.06	0.00	100.00%	0.15	7.65	...
C.I. 8-2(R)	0.99	0.00	100.00%	0.13	6.25	...
C.I. 8-2	3.99	0.00	100.00%	...	...	...
C.I. 8-3	1.51	0.17	89.96%	0.16	7.96	...
C.I. 8-4	1.10	0.14	88.79%	0.13	6.37	...
C.I. 8-5	1.86	0.38	83.08%	0.17	8.31	...
C.I. 9-2	0.98	0.08	92.39%	0.13	6.34	...
C.I. 9-3	1.59	0.25	86.30%	0.16	7.76	...
F.I. 9-4	3.68	0.00	100.00%	...	...	0.17
C.I. 10-2	0.33	0.01	97.51%	0.08	3.88	...
C.I. 10-3	1.85	0.41	81.75%	0.16	8.20	...
F.I. 10-4	2.63	0.00	100.00%	...	...	0.14
C.I. 11-1	3.20	1.41	69.52%	0.22	11.03	...
C.I. 11-2	0.91	0.07	92.93%	0.12	6.12	...
C.I. 11-3	3.67	2.18	62.75%	0.24	11.98	...
C.I. 12-1	0.94	0.07	92.82%	0.12	6.25	...

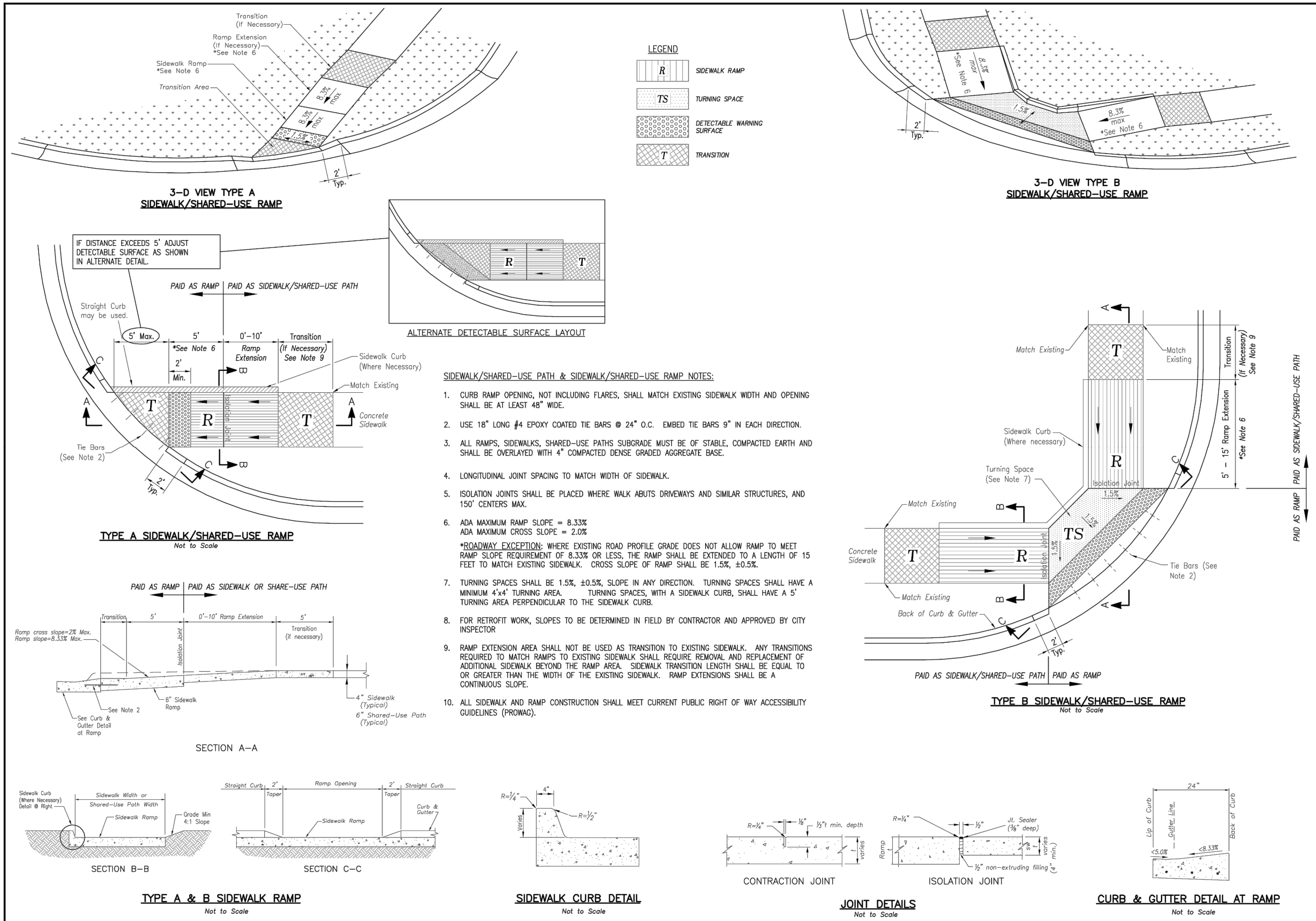
Drainage Area Design Table						
10 Year Return Frequency						
Inlet ID	Drainage Area	C	Tc	i	K	Peak Flow
	(ac)		(min)	(in/hr)		(cfs)
C.I. 1-2(L)	0.87	0.51	5.00	7.35	1.00	3.26
C.I. 1-2(R)	0.06	0.51	5.00	7.35	1.00	0.23
C.I. 1-2(B)	0.16	0.51	5.00	7.35	1.00	0.60
C.I. 1-2	1.09	0.51	5.00	7.35	1.00	4.09
C.I. 1-3(L)	0.09	0.51	5.00	7.35	1.00	0.34
C.I. 1-3(R)	0.55	0.51	5.00	7.35	1.00	2.06
C.I. 1-3(B)	1.10	0.51	5.00	7.35	1.00	4.13
C.I. 1-3	1.74	0.51	5.00	7.35	1.00	6.53
C.I. 1-4	0.36	0.51	5.00	7.35	1.00	1.35
C.I. 1-6	0.50	0.51	5.00	7.35	1.00	1.88
C.I. 1-7	0.27	0.51	5.00	7.35	1.00	1.01
C.I. 1-8	0.24	0.51	5.00	7.35	1.00	0.90
F.I. 2-1	0.81	0.51	5.00	7.35	1.00	3.04
F.I. 2-2	0.69	0.51	5.00	7.35	1.00	2.59
F.I. 2-3	0.66	0.51	5.00	7.35	1.00	2.48
C.I. 2-5	0.18	0.51	5.00	7.35	1.00	0.68
C.I. 2-6	0.28	0.51	5.00	7.35	1.00	1.05
C.I. 3-1	0.27	0.51	5.00	7.35	1.00	1.01
C.I. 4-1	0.52	0.51	5.00	7.35	1.00	1.95
C.I. 4-2	0.39	0.51	5.00	7.35	1.00	1.46
C.I. 5-1	0.40	0.51	5.00	7.35	1.00	1.50
C.I. 5-2	0.46	0.51	5.00	7.35	1.00	1.73
C.I. 6-1	0.72	0.51	5.00	7.35	1.00	2.70
F.I. 6-2	0.91	0.51	5.00	7.35	1.00	3.41
F.I. 6-3	1.11	0.51	5.00	7.35	1.00	4.16
C.I. 7-1	1.02	0.51	5.00	7.35	1.00	3.83
C.I. 8-2(L)	0.55	0.51	5.00	7.35	1.00	2.06
C.I. 8-2(R)	0.22	0.51	5.00	7.35	1.00	0.83
C.I. 8-2(B)	0.25	0.51	5.00	7.35	1.00	0.94
C.I. 8-2	1.02	0.51	5.00	7.35	1.00	3.83
C.I. 8-3	0.31	0.51	5.00	7.35	1.00	1.16
C.I. 8-4	0.31	0.51	5.00	7.35	1.00	1.16
C.I. 8-5	0.53	0.51	5.00	7.35	1.00	1.99
C.I. 9-2	0.28	0.51	5.00	7.35	1.00	1.05
C.I. 9-3	0.38	0.51	5.00	7.35	1.00	1.43
F.I. 9-4	0.98	0.51	5.00	7.35	1.00	3.68
C.I. 10-2	0.09	0.51	5.00	7.35	1.00	0.34
C.I. 10-3	0.23	0.51	5.00	7.35	1.00	0.86
F.I. 10-4	0.70	0.51	5.00	7.35	1.00	2.63
C.I. 11-1	0.63	0.51	5.00	7.35	1.00	2.36
C.I. 11-2	0.26	0.51	5.00	7.35	1.00	0.98
C.I. 11-3	1.32	0.51	5.00	7.35	1.00	4.95
C.I. 12-1	0.27	0.51	5.00	7.35	1.00	1.01

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. 1-2	E.S. 1-1	202.00	942.02	940.00	1.00	36	0.012	65.27	10.82	72.25	2.23	944.61	952.95
C.I. 1-3	C.I. 1-2	35.00	942.83	942.52	0.86	36	0.012	61.08	10.33	68.99	2.19	945.35	952.95
C.I. 1-4	C.I. 1-3	133.97	944.39	943.32	0.80	36	0.012	53.88	9.58	64.51	2.10	946.77	954.53
M.H. 1-5	C.I. 1-4	44.30	945.24	944.89	0.79	36	0.012	51.37	9.41	64.22	2.03	947.57	954.65
C.I. 1-6	M.H. 1-5	134.49	946.82	945.74	0.80	36	0.012	51.37	9.44	64.75	2.02	949.15	956.22
C.I. 1-7	C.I. 1-6	148.70	949.01	947.82	0.80	24	0.012	16.30	7.01	21.91	1.33	950.46	958.22
C.I. 1-8	C.I. 1-7	36.74	949.80	949.51	0.79	24	0.012	15.22	6.97	21.77	1.23	951.21	958.58
NULL ON LINE 1	C.I. 1-8	104.17	951.34	950.30	1.00	24	0.012	14.17	7.17	24.48	1.09	952.69	953.52
	C.I. 1-6	72.94	948.43	947.32	1.52	30	0.012	34.08	8.46	54.44	1.85	950.41	954.84
	F.I. 2-2	144.00	950.89	948.93	1.36	30	0.012	30.54	8.99	51.83	1.46	952.77	958.08
F.I. 2-3	F.I. 2-2	101.30	953.42	951.39	2.00	24	0.012	25.01	9.67	34.69	1.38	955.18	960.36
M.H. 2-4	F.I. 2-3	136.61	956.99	953.92	2.25	24	0.012	19.65	8.37	36.73	1.26	958.58	965.63
C.I. 2-5	M.H. 2-4	138.00	962.32	957.49	3.50	24	0.012	19.65	9.27	45.84	1.09	963.91	970.31
C.I. 2-6	C.I. 2-5	230.00	967.30	963.07	1.84	15	0.012	8.72	8.09	9.49	0.94	968.44	973.99
NULL ON LINE 2	C.I. 2-6	178.30	969.58	967.80	1.00	15	0.012	3.95	5.30	6.99	0.67	970.38	970.95
	C.I. 1-4	53.27	947.21	946.14	2.01	15	0.012	1.08	2.42	9.91	0.63	947.62	955.25
	F.I. 2-2	138.00	953.24	952.14	0.80	15	0.012	2.94	4.48	6.25	0.63	953.93	959.27
C.I. 4-2	C.I. 4-1	39.15	954.05	953.74	0.79	15	0.012	1.28	3.62	6.22	0.38	954.50	958.93
C.I. 5-1	F.I. 2-3	138.00	955.30	953.92	1.00	18	0.012	2.88	2.89	11.38	1.26	955.94	961.95
C.I. 5-2	C.I. 5-1	34.34	956.14	955.80	0.99	15	0.012	1.54	4.00	6.96	0.40	956.63	962.04
C.I. 6-1	C.I. 2-5	44.69	963.21	962.82	0.87	24	0.012	10.29	5.69	22.89	1.09	964.36	970.78
F.I. 6-2	C.I. 6-1	150.50	964.91	963.71	0.80	18	0.012	7.57	5.97	10.16	0.96	965.97	969.06
F.I. 6-3	F.I. 6-2	225.00	970.47	965.41	2.25	15	0.012	4.16	6.45	10.49	0.55	971.29	974.91
C.I. 7-1	C.I. 2-6	41.62	968.22	967.80	1.01	15	0.012	3.80	5.25	7.03	0.66	969.01	974.37
C.I. 8-2	E.S. 8-1	38.74	939.82	939.57	0.65	18	0.012	8.46	5.88	9.14	1.13	940.97	946.73
C.I. 8-3	C.I. 8-2	235.47	942.67	940.32	1.00	15	0.012	4.47	4.98	6.99	0.86	943.53	950.92
C.I. 8-4	C.I. 8-3	103.13	944.46	943.17	1.25	15	0.012	2.96	5.09	7.82	0.53	945.15	952.80
C.I. 8-5	C.I. 8-4	34.61	945.39	944.96	1.24	15	0.012	1.86	4.43	7.80	0.42	945.93	952.88
C.I. 9-2	E.S. 9-1	162.45	947.12	945.82	0.80	15	0.012	5.73	5.70	6.26	0.94	948.09	955.66
C.I. 9-3	C.I. 9-2	64.21	948.90	947.62	1.99	15	0.012	4.75	6.55	9.88	0.61	949.78	956.35
F.I. 9-4	C.I. 9-3	138.00	951.13	949.40	1.25	15	0.012	3.68	5.44	7.83	0.60	951.90	956.72
C.I. 10-2	E.S. 10-1	165.47	953.14	951.81	0.80	24	0.012	13.10	6.67	21.93	1.11	954.44	959.29
C.I. 10-3	C.I. 10-2	69.88	954.20	953.64	0.79	24	0.012	12.77	6.63	22.01	1.09	955.48	960.55
F.I. 10-4	C.I. 10-3	137.50	956.05	954.95	0.80	15	0.012	2.63	4.48	6.25	0.57	956.70	960.70
C.I. 11-1	C.I. 10-3	150.00	955.90	954.70	0.80	18	0.012	8.72	6.26	10.18	1.07	957.04	962.77
C.I. 11-2	C.I. 11-1	106.77	958.00	956.40	1.50	15	0.012	4.58	6.07	8.56	0.65	958.87	964.79
C.I. 11-3	C.I. 11-2	34.00	958.84	958.50	1.00	15	0.012	3.67	5.19	7.00	0.64	959.61	964.79
C.I. 12-1	C.I. 11-1	36.23	956.76	956.40	0.99	15	0.012	0.94	2.23	6.97	0.64	957.14	962.95

Inlet Design Table						
100 Year Return Frequency						
Inlet ID	Captured Flow	Bypass Flow	Inlet Efficiency (Note 2)	Gutter Depth	Gutter Spread	Ponding Depth
	(cfs)	(cfs)	(%)	(ft)	(ft)	(ft)
C.I. 1-2(L)	6.19	0.00	100.00%	0.26	12.82	...
C.I. 1-2(R)	0.39	0.00	100.00%	0.09	4.62	...
C.I. 1-2	7.63	0.00	100.00%	...	...	...
C.I. 1-3(L)	0.59	0.00	100.00%	0.11	5.38	...
C.I. 1-3(R)	6.36	0.00	100.00%	0.26	12.96	...
C.I. 1-3	14.19	0.00	100.00%	...	...	...
C.I. 1-4	2.44	0.89	73.20%	0.19	9.34	...
C.I. 1-6	3.55	1.43	71.29%	0.24	11.81	...
C.I. 1-7	1.90	0.48	79.74%	0.16	8.20	...
C.I. 1-8	1.92	0.50	79.31%	0.17	8.25	...
F.I. 2-1	5.33	0.00	100.00%	...	...	0.22
F.I. 2-2	4.54	0.00	100.00%	...	...	0.19
F.I. 2-3	4.34	0.00	100.00%	...	...	0.19
C.I. 2-5	1.08	0.11	90.84%	0.13	6.50	...
C.I. 2-6	1.58	0.26	85.66%	0.15	7.68	...
C.I. 3-1	1.89	0.42	81.80%	0.17	8.30	...
C.I. 4-1	2.57	0.96	72.69%	0.19	9.63	...
C.I. 4-2	2.03	0.53	79.27%	0.17	8.55	...
C.I. 5-1	2.14	0.60	78.02%	0.18	8.76	...
C.I. 5-2	2.44	0.85	74.25%	0.19	9.38	...
C.I. 6-1	5.35	4.17	56.23%	0.28	14.21	...
C.I. 6-2	5.99	0.00	100.00%	...	...	0.23
F.I. 6-3	7.30	0.00	100.00%	...	...	0.27
C.I. 7-1	5.55	4.78	53.73%	0.29	14.65	...
C.I. 8-2(L)	3.62	0.00	100.00%	0.19	9.45	...
C.I. 8-2(R)	2.87	0.00	100.00%	0.19	9.30	...
C.I. 8-2	8.13	0.00	100.00%	...	...	...
C.I. 8-3	3.64	1.42	71.92%	0.24	12.02	...
C.I. 8-4	1.83	0.46	79.78%	0.16	8.02	...
C.I. 8-5	3.80	2.55	59.83%	0.25	12.28	...
C.I. 9-2	1.62	0.26	86.25%	0.16	7.85	...
C.I. 9-3	4.00	2.86	58.28%	0.25	12.72	...
F.I. 9-4	6.45	0.00	100.00%	...	...	0.25
C.I. 10-2	0.56	0.03	94.87%	0.10	4.79	...
C.I. 10-3	4.19	4.36	49.04%	0.27	13.48	...
F.I. 10-4	4.61	0.00	100.00%	...	...	0.20
C.I. 11-1	5.09	7.04	41.98%	0.32	15.85	...
C.I. 11-2	1.49	0.22	87.24%	0.15	7.56	...
C.I. 10-3	4.19	4.36	49.04%	0.27	13.48	...
F.I. 10-4	4.61	0.00	100.00%	...	...	0.20
C.I. 11-1	5.09	7.04	41.98%	0.32	15.85	...
C.I. 11-2	1.49	0.22	87.24%	0.15	7.56	...
C.I. 11-3	5.08	7.77	39.56%	0.32	16.10	...
C.I. 12-1	1.55	0.23	87.07%	0.15	7.71	...

Drainage Area Design Table						
100 Year Return Frequency						
Inlet ID	Drainage Area	C	Tc	i	K	Peak Flow
	(ac)		(min)	(in/hr)		(cfs)
C.I. 1-2(L)	0.87	0.51	5.00	10.32	1.25	5.73
C.I. 1-2(R)	0.06	0.51	5.00	10.32	1.25	0.39
C.I. 1-2(B)	0.16	0.51	5.00	10.32	1.25	1.05
C.I. 1-2	1.09	0.51	5.00	10.32	1.25	7.17
C.I. 1-3(L)	0.09	0.51	5.00	10.32	1.25	0.59
C.I. 1-3(R)	0.55	0.51	5.00	10.32	1.25	3.62
C.I. 1-3(B)	1.10	0.51	5.00	10.32	1.25	7.24
C.I. 1-3	1.74	0.51	5.00	10.32	1.25	11.45
C.I. 1-4	0.36	0.51	5.00	10.32	1.25	2.37
C.I. 1-6	0.50	0.51	5.00	10.32	1.25	3.29
C.I. 1-7	0.27	0.51	5.00	10.32	1.25	1.78
C.I. 1-8	0.24	0.51	5.00	10.32	1.25	1.58
F.I. 2-1	0.81	0.51	5.00	10.32	1.25	5.33
F.I. 2-2	0.69	0.51	5.00	10.32	1.25	4.54
F.I. 2-3	0.66	0.51	5.00	10.32	1.25	4.34
C.I. 2-5	0.18	0.51	5.00	10.32	1.25	1.18
C.I. 2-6	0.28	0.51	5.00	10.32	1.25	1.84
C.I. 3-1	0.27	0.51	5.00	10.32	1.25	1.78
C.I. 4-1	0.52	0.51	5.00	10.32	1.25	3.42
C.I. 4-2	0.39	0.51	5.00	10.32	1.25	2.57
C.I. 5-1	0.40	0.51	5.00	10.32	1.25	2.63
C.I. 5-2	0.46	0.51	5.00	10.32	1.25	3.03
C.I. 6-1	0.72	0.51	5.00	10.32	1.25	4.74
F.I. 6-2	0.91	0.51	5.00	10.32	1.25	5.99
F.I. 6-3	1.11	0.51	5.00	10.32	1.25	7.30
C.I. 7-1	1.02	0.51	5.00	10.32	1.25	6.71
C.I. 8-2(L)	0.55	0.51	5.00	10.32	1.25	3.62
C.I. 8-2(R)	0.22	0.51	5.00	10.32	1.25	1.45
C.I. 8-2(B)	0.25	0.51	5.00	10.32	1.25	1.65
C.I. 8-2	1.02	0.51	5.00	10.32	1.25	6.71
C.I. 8-3	0.31	0.51	5.00	10.32	1.25	2.04
C.I. 8-4	0.31	0.51	5.00	10.32	1.25	2.04
C.I. 8-5	0.53	0.51	5.00	10.32	1.25	3.49
C.I. 9-2	0.28	0.51	5.00	10.32	1.25	1.84
C.I. 9-3	0.38	0.51	5.00	10.32	1.25	2.50
F.I. 9-4	0.98	0.51	5.00	10.32	1.25	6.45
C.I. 10-2	0.09	0.51	5.00	10.32	1.25	0.59
C.I. 10-3	0.23	0.51	5.00	10.32	1.25	1.51
F.I. 10-4	0.70	0.51	5.00	10.32	1.25	4.61
C.I. 11-1	0.63	0.51	5.00	10.32	1.25	4.15
C.I. 11-2	0.26	0.51	5.00	10.32	1.25	1.71
C.I. 11-3	1.32	0.51	5.00	10.32	1.25	8.69
C.I. 12-1	0.27	0.51	5.00	10.32	1.25	1.78

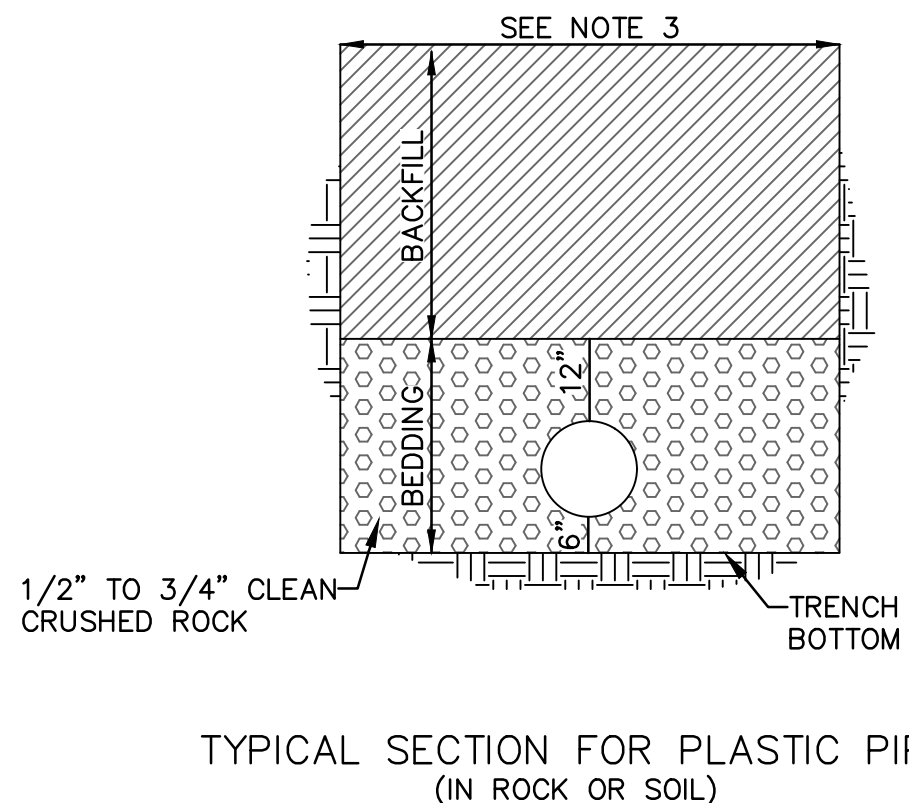
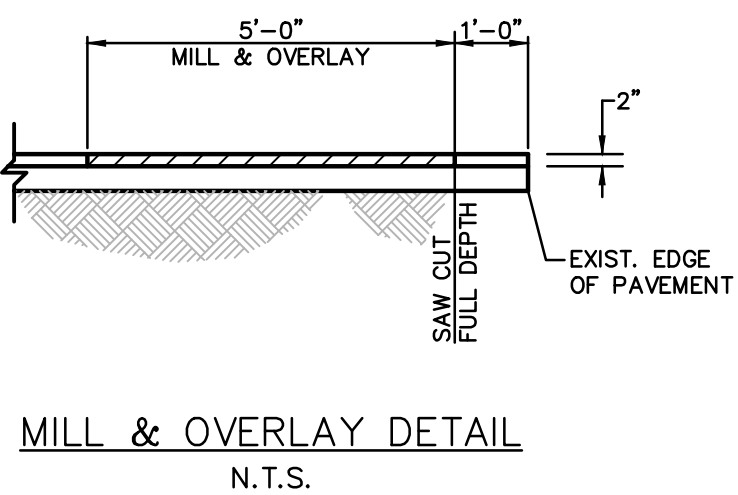
Storm Sewer Design Calculation Table													
100 Year Return Frequency													
Upstream Structure	Downstream Structure	Length (ft)	Upstream Invert (ft)	Downstream Invert (ft)	Slope (%)	Diameter (in)	Manning's n	Total Flow (cfs)	Velocity (ft/s)	Capacity (cfs)	Flow Depth (ft)	Upstream Struct. HGL (ft)	Upstream Top Elev. (ft)
C.I. 1-2	E.S. 1-1	202.00	942.02	940.00	1.00	36	0.012	100.26	14.26	72.25	2.90	946.61	952.95
C.I. 1-3	C.I. 1-2	35.00	942.83	942.52	0.86	36	0.012	92.63	13.11	68.99	3.00	948.11	952.95
C.I. 1-4	C.I. 1-3	133.97	944.39	943.32	0.80	36	0.012	78.44	11.10	64.51	3.00	950.76	954.53
M.H. 1-5	C.I. 1-4	44.30	945.24	944.89	0.79	36	0.012	74.11	10.49	64.22	3.00	951.99	954.65
C.I. 1-6	M.H. 1-5	134.49	946.82	945.74	0.80	36	0.012	74.11	10.49	64.75	3.00	954.09	956.22
C.I. 1-7	C.I. 1-6	148.70	949.01	947.82	0.80	24	0.012	17.99	5.73	21.91	2.00	955.58	958.22
C.I. 1-8	C.I. 1-7	36.74	949.80	949.51	0.79	24	0.012	16.09	5.12	21.77	2.00	955.89	958.58
NULL ON LINE 1	C.I. 1-8	104.17	951.34	950.30	1.00	24	0.012	14.17	4.51	24.48	2.00	956.36	953.52
F.I. 2-1	C.I. 1-6	72.94	948.43	947.32	1.52	30	0.012	54.19	11.04	54.44	2.50	956.33	954.84
F.I. 2-2	F.I. 2-1	144.00	950.89	948.93	1.36	30	0.012	48.00	9.78	51.83	2.50	958.21	958.08
F.I. 2-3	F.I. 2-2	101.30	953.42	951.39	2.00	24	0.012	38.86	12.37	34.69	2.00	961.35	960.36
M.H. 2-4	F.I. 2-3	136.61	956.99	953.92	2.25	24	0.012	29.94	9.53	36.73	2.00	964.35	965.63
C.I. 2-5	M.H. 2-4	138.00	962.32	957.49	3.50	24	0.012	29.94	9.53	45.84	2.00	966.83	970.31
C.I. 2-6	C.I. 2-5	230.00	967.30	963.07	1.84	15	0.012	11.08	9.03	9.49	1.25	973.17	973.99
NULL ON LINE 2	C.I. 2-6	178.30	969.58	967.80	1.00	15	0.012	3.95	3.22	6.99	1.25	974.24	970.95
C.I. 3-1	C.I. 1-4	53.27	947.21	946.14	2.01	15	0.012	1.89	1.54	9.91	1.25	951.57	955.25
C.I. 4-1	F.I. 2-2	138.00	953.24	952.14	0.80	15	0.012	4.60	3.75	6.25	1.25	959.40	959.27
C.I. 4-2	C.I. 4-1	39.15	954.05	953.74	0.79	15	0.012	2.03	1.65	6.22	1.25	959.50	958.93
C.I. 5-1	F.I. 2-3	138.00	955.30	953.92	1.00	18	0.012	4.58	2.59	11.38	1.50	962.53	961.95
C.I. 5-2	C.I. 5-1	34.34	956.14	955.80	0.99	15	0.012	2.44	1.99	6.96	1.25	962.60	962.04
C.I. 6-1	C.I. 2-5	44.69	963.21	962.82	0.87	24	0.012	17.78	5.66	22.89	2.00	967.63	970.78
F.I. 6-2	C.I. 6-1	150.50	964.91	963.71	0.80	18	0.012	13.29	7.52	10.16	1.50	971.03	969.06
F.I. 6-3	F.I. 6-2	225.00	970.47	965.41	2.25	15	0.012	7.30	5.95	10.49	1.25	972.39	974.91
C.I. 7-1	C.I. 2-6	41.62	968.22	967.80	1.01	15	0.012	5.55	4.52	7.03	1.25	973.94	974.37
C.I. 8-2	E.S. 8-1	38.74	939.82	939.57	0.65	18	0.012	17.40	9.91	9.14	1.44	941.90	946.73
C.I. 8-3	C.I. 8-2	235.47	942.67	940.32	1.00	15	0.012	9.27	7.55	6.99	1.25	946.64	950.92
C.I. 8-4	C.I. 8-3	103.13	944.46	943.17	1.25	15	0.012	5.63	4.59	7.82	1.25	947.57	952.80
C.I. 8-5	C.I. 8-4	34.61	945.39	944.96	1.24	15	0.012	3.80	3.10	7.80	1.25	947.77	952.88
C.I. 9-2	E.S. 9-1	162.45	947.12	945.82	0.80	15	0.012	11.20	9.13	6.26	1.25	952.40	955.66
C.I. 9-3	C.I. 9-2	64.21	948.90	947.62	1.99	15	0.012	9.58	7.81	9.88	1.25	954.12	956.35
F.I. 9-4	C.I. 9-3	138.00	951.13	949.40	1.25	15	0.012	6.45	5.26	7.83	1.25	956.73	956.72
C.I. 10-2	E.S. 10-1	165.47	953.14	951.81	0.80	24	0.012	21.85	7.88	21.93	1.63	954.81	959.29
C.I. 10-3	C.I. 10-2	69.88	954.20	953.64	0.79	24	0.012	21.29	7.83	22.01	1.58	955.85	960.55
F.I. 10-4	C.I. 10-3	137.50	956.05	954.95	0.80	15	0.012	4.61	4.90	6.25	0.92	956.92	960.70
C.I. 11-1	C.I. 10-3	150.00	955.90	954.70	0.80	18	0.012	13.21	7.48	10.18	1.50	958.22	962.77
C.I. 11-2	C.I. 11-1	106.77	958.00	956.40	1.50	15	0.012	6.57	5.35	8.56	1.25	959.51	964.79
C.I. 11-3	C.I. 11-2	34.00	958.84	958.50	1.00	15	0.012	5.08	4.80	7.00	1.15	959.75	964.79
C.I. 12-1	C.I. 11-1	36.23	956.76	956.40	0.99	15	0.012	1.55	1.26	6.97	1.25	958.59	962.95



LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 1205 SE GREEN STREET | LEE'S SUMMIT, MO 64083

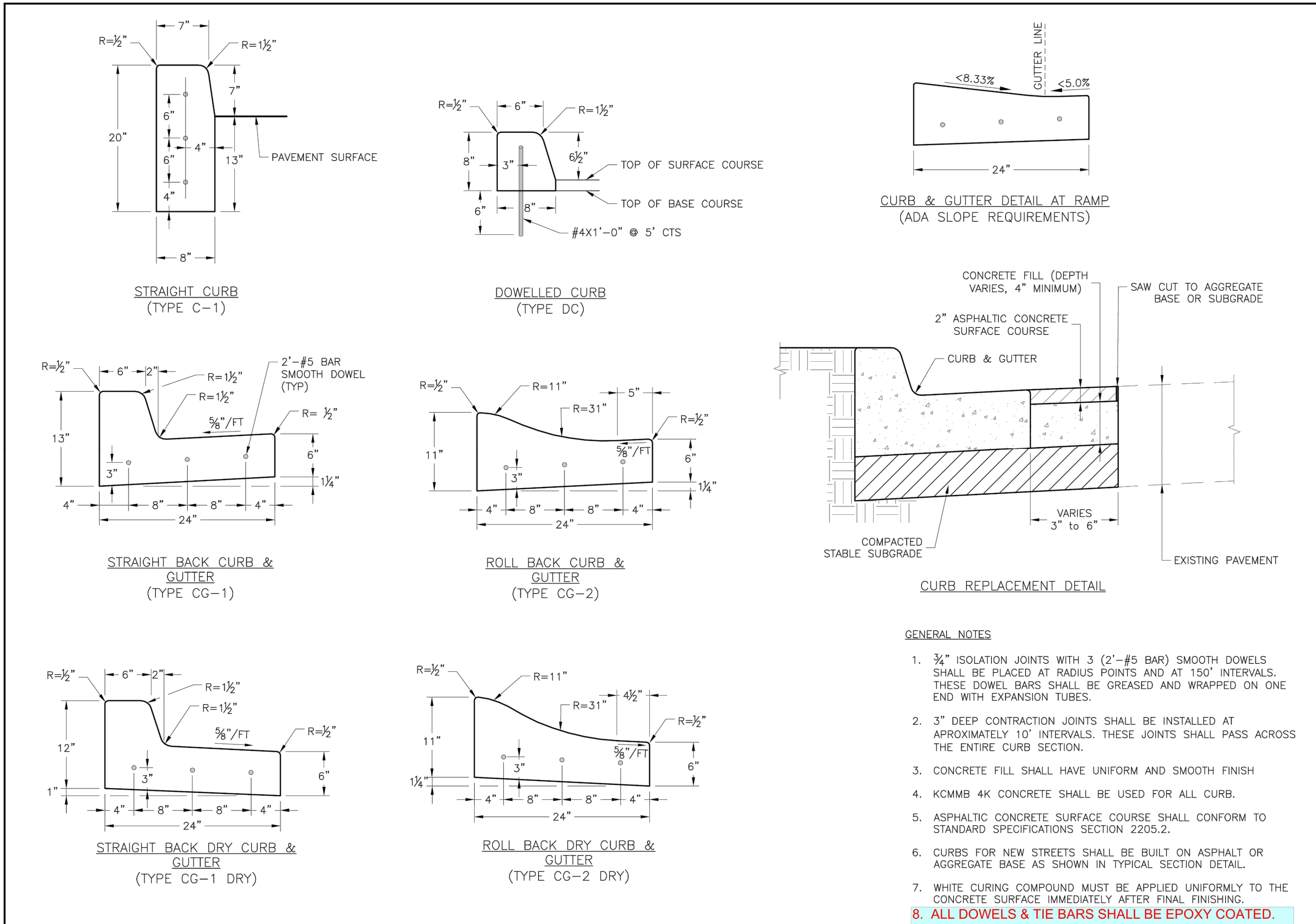
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
ADA RAMP RETROFIT DETAIL

GEN-3A



UNDERGROUND PIPE INSTALLATION FOR STORM SEWER LINES
N.T.S.

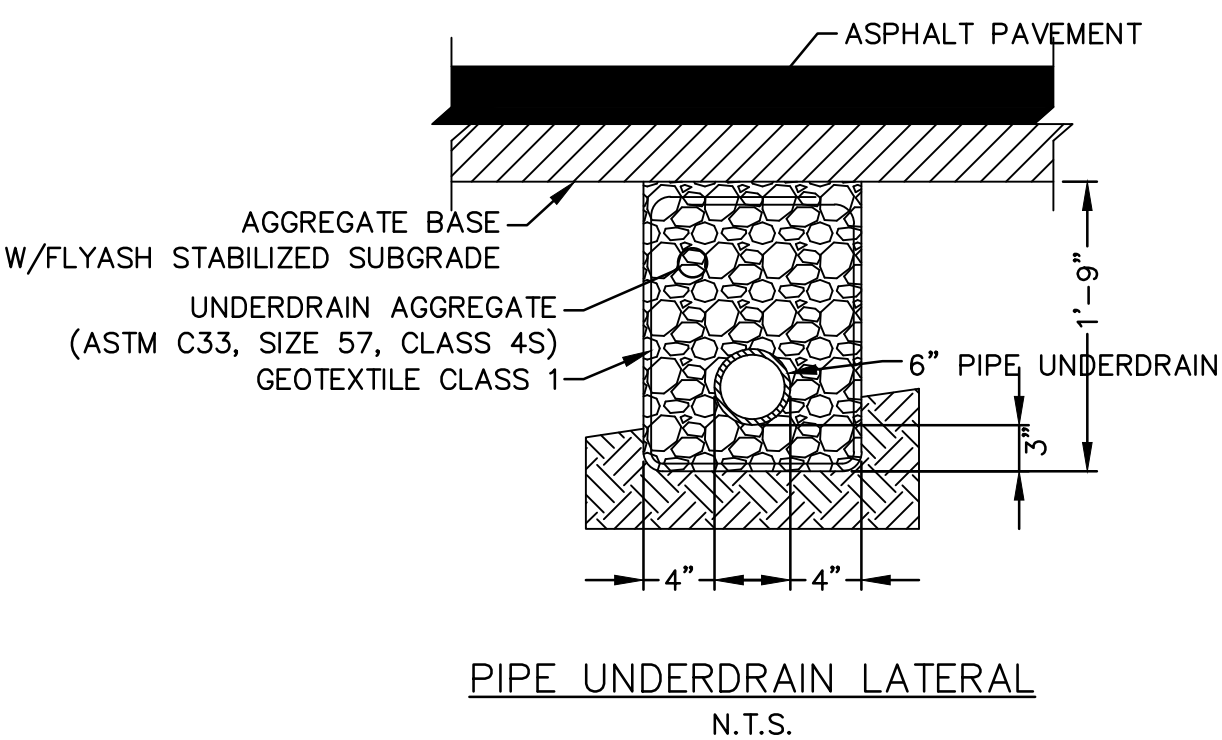
- BACKFILL SHALL BE JOB EXECAVATED MATERIAL FREE FROM DEBRIS AND STONES COMPACTED TO 90% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698. BACKFILL UNDER PAVEMENT (EXISTING OR PROPOSED), SHALL BE FLOWABLE FILL.
- TRENCH BANKS MAY BE CUT BACK ON SLOPES IN ACCORDANCE WITH CURRENT OSHA REGULATIONS, BUT ONLY IN AREAS WHERE THE INCREASED TRENCH WIDTH WILL NOT INTERFERE WITH SURFACE FEATURES. SLOPES MUST NOT EXTEND BELOW TOP OF BEDDING.
- MINIMUM AND MAXIMUM WIDTHS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATION AS APPROVED ON ENGINEERING PLANS.



LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 1205 SE GREEN STREET | LEE'S SUMMIT, MO 64083

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB & GUTTER DETAIL

GEN-4



- NOTES:**
- Where Pipe Underdrains are used, all Underdrain Outlet Pipes shall be solid wall with watertight joints. All Outlets Pipes shall be tied into the nearest storm sewer inlets at roadway sag locations as indicated in the street profile.
 - All Underdrain Pipes shall be installed at a minimum slope of 1%.
 - Underdrain Pipe shall be installed with the perforations placed down.
 - Blanket Underdrain Aggregate, Pipe Underdrain Aggregate, Pipe Underdrain, Edge Underdrain and Outlet Pipe shall conform to City of Lee's Summit Specifications.
 - Overlap geotextile at top of trench a minimum of 12".

DETAIL SHEET
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

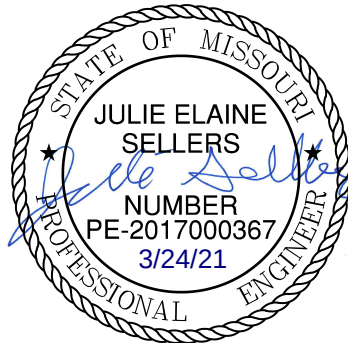
2021

drawn by: B.M.W./A.A.
checked by: B.M.W.
designed by: B.M.W./A.A.
QA/QC by: J.E.S.
project no.: B19-4061
date: 01-08-2021

SHEET
C148

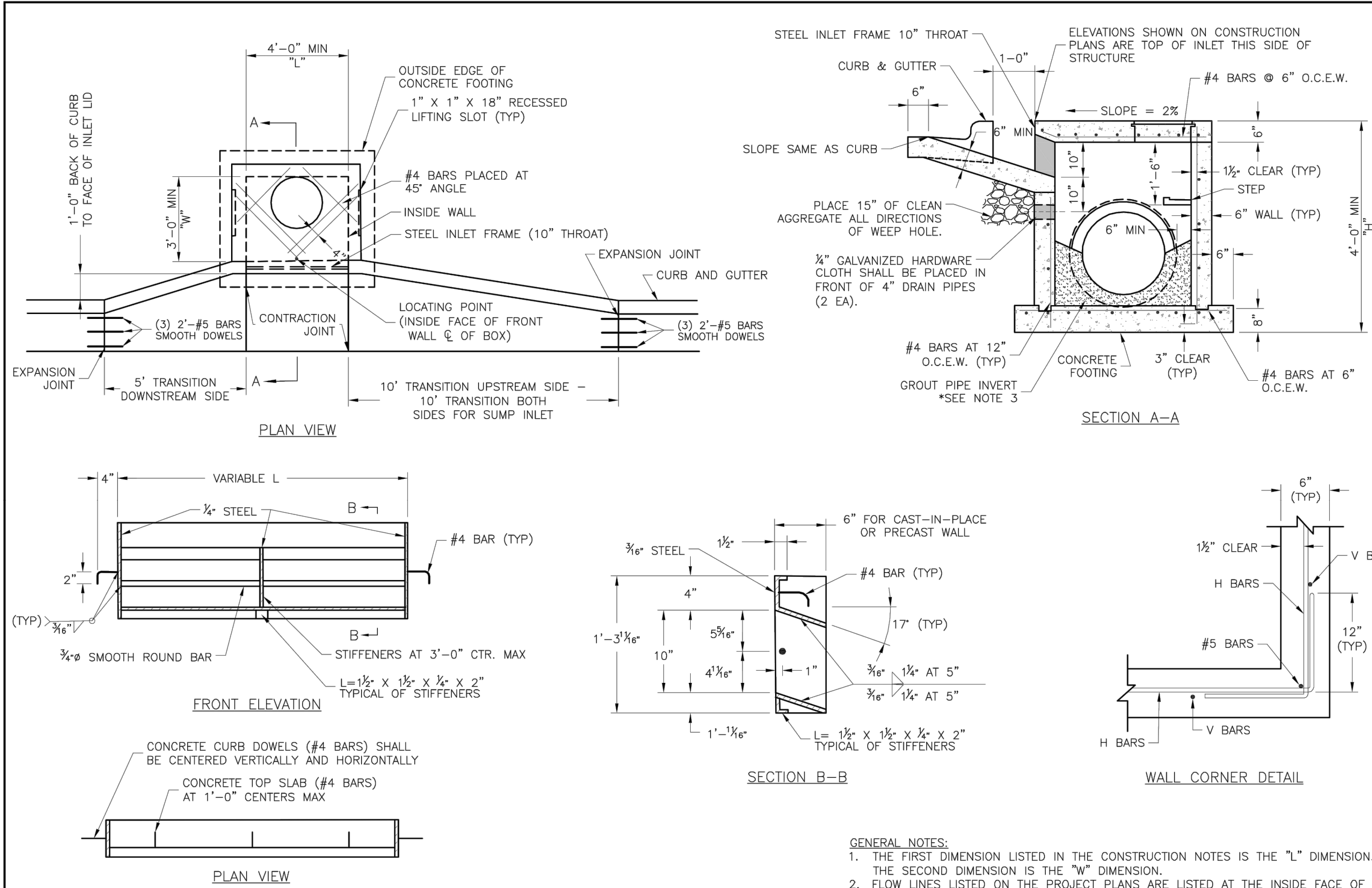
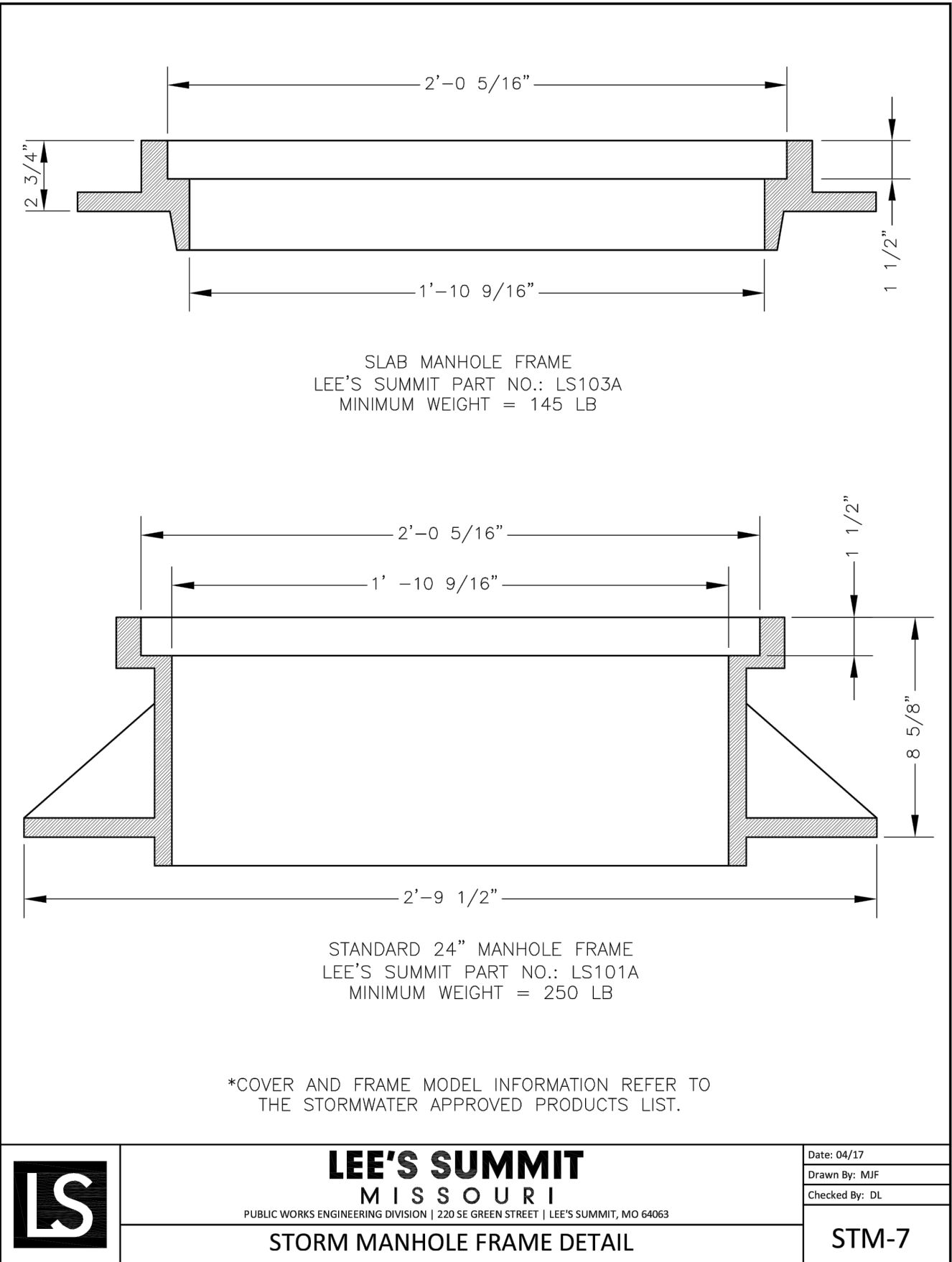
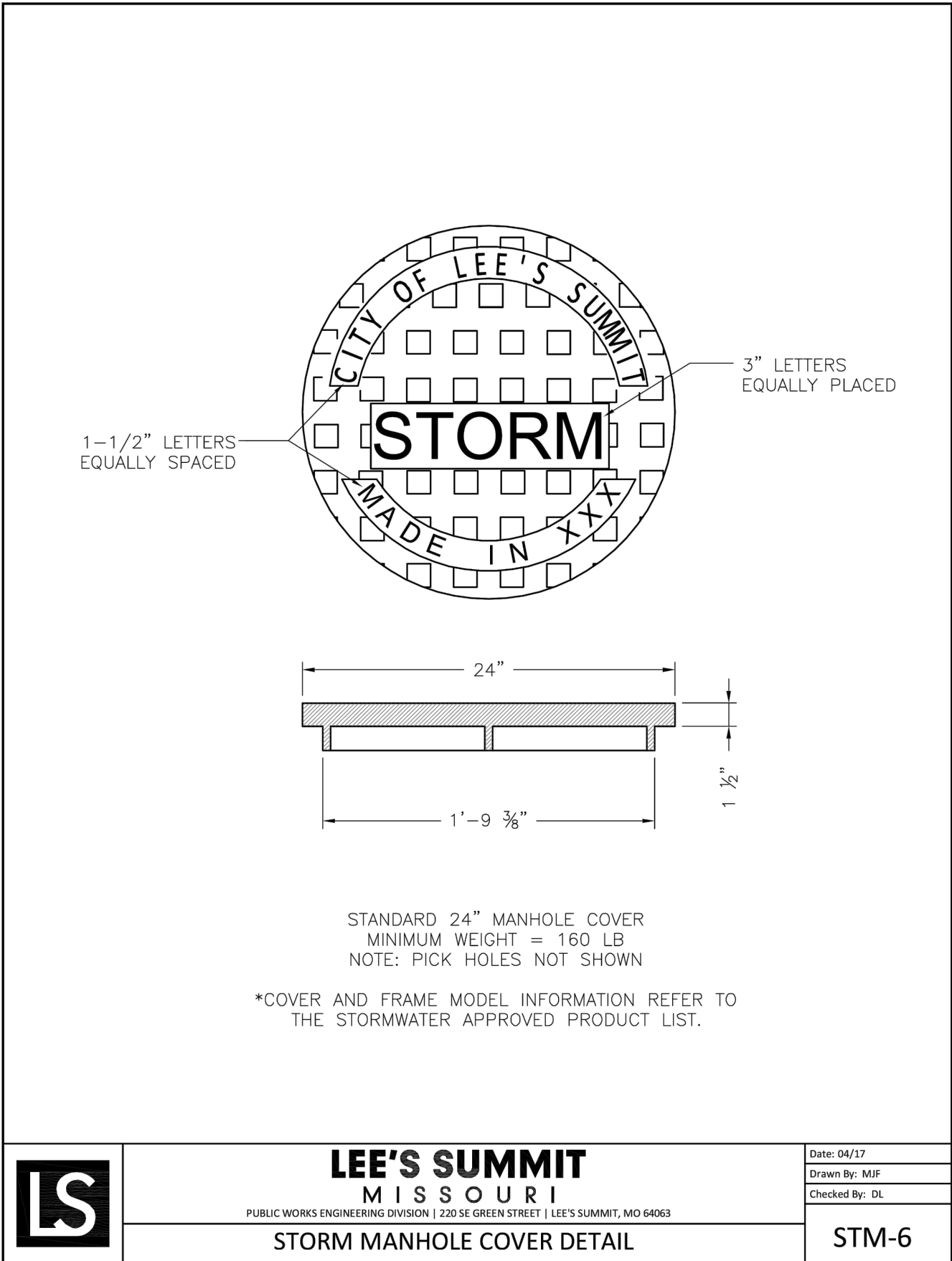
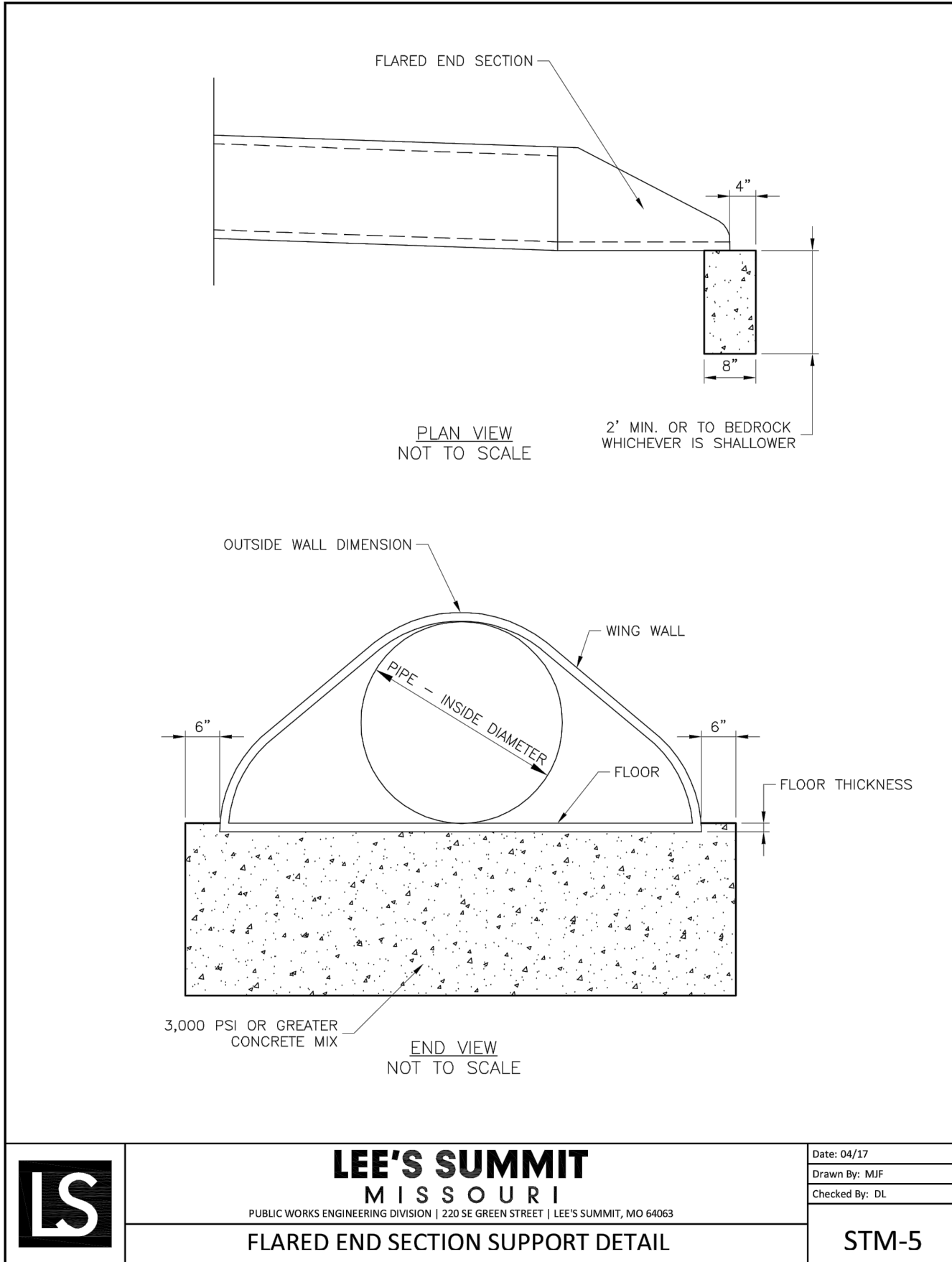
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	

REVISIONS



olsson

Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City MO 64116
TEL 816.361.1177
FAX 816.361.1888
www.olson.com

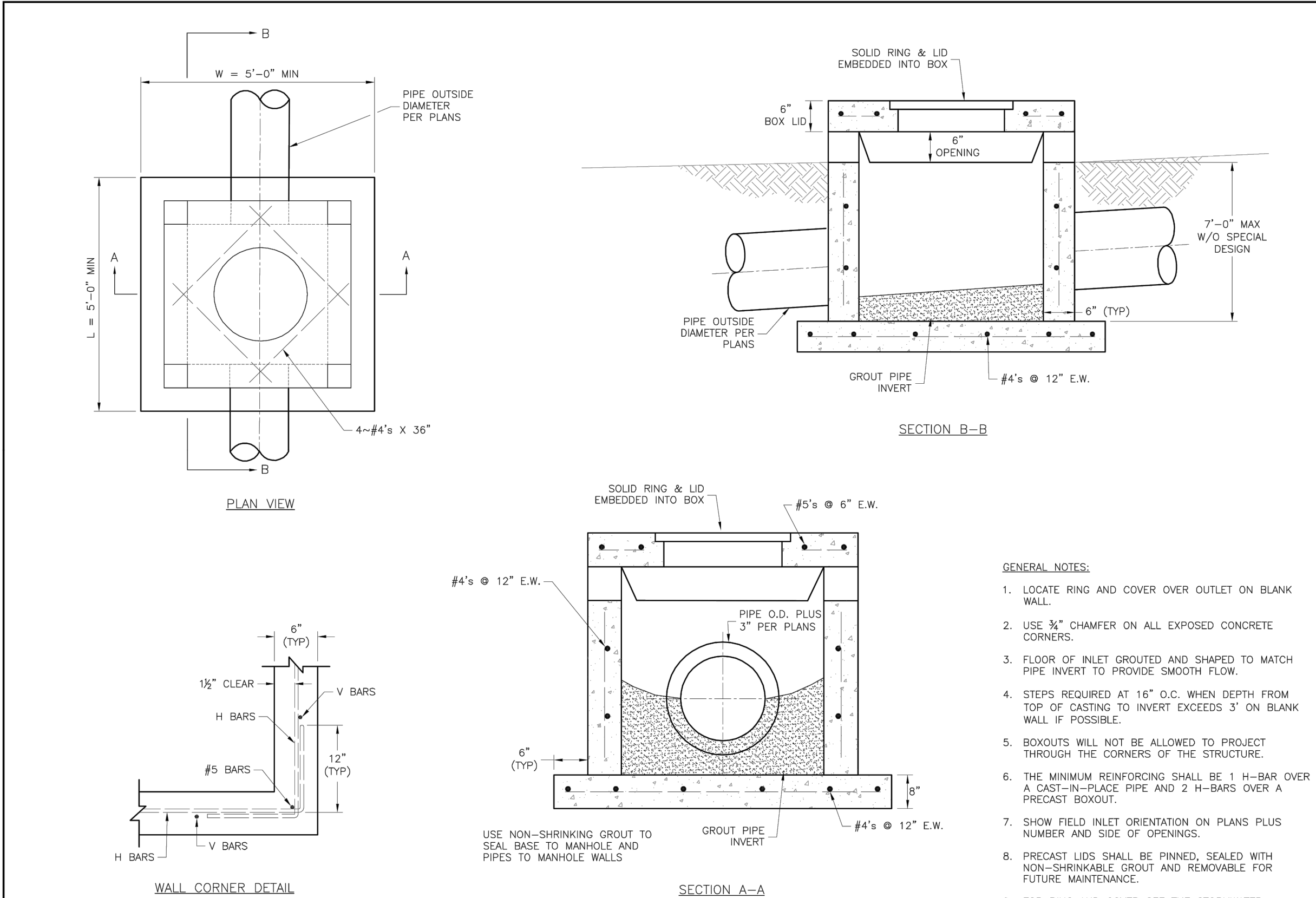


LEE'S SUMMIT MISSOURI

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Drawn By: MJF
Checked By: DL
Date: 04/17
Title: S

STM-1



LEE'S SUMMIT MISSOURI

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Drawn By: MJF
Checked By: DL
Date: 04/17
Title: S

STM-2

DETAIL SHEET
STREET & STORM SEWER PLANS

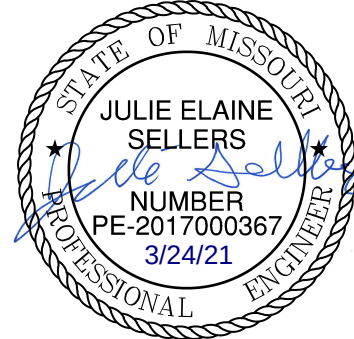
HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

2021

REVISIONS DESCRIPTION

BY

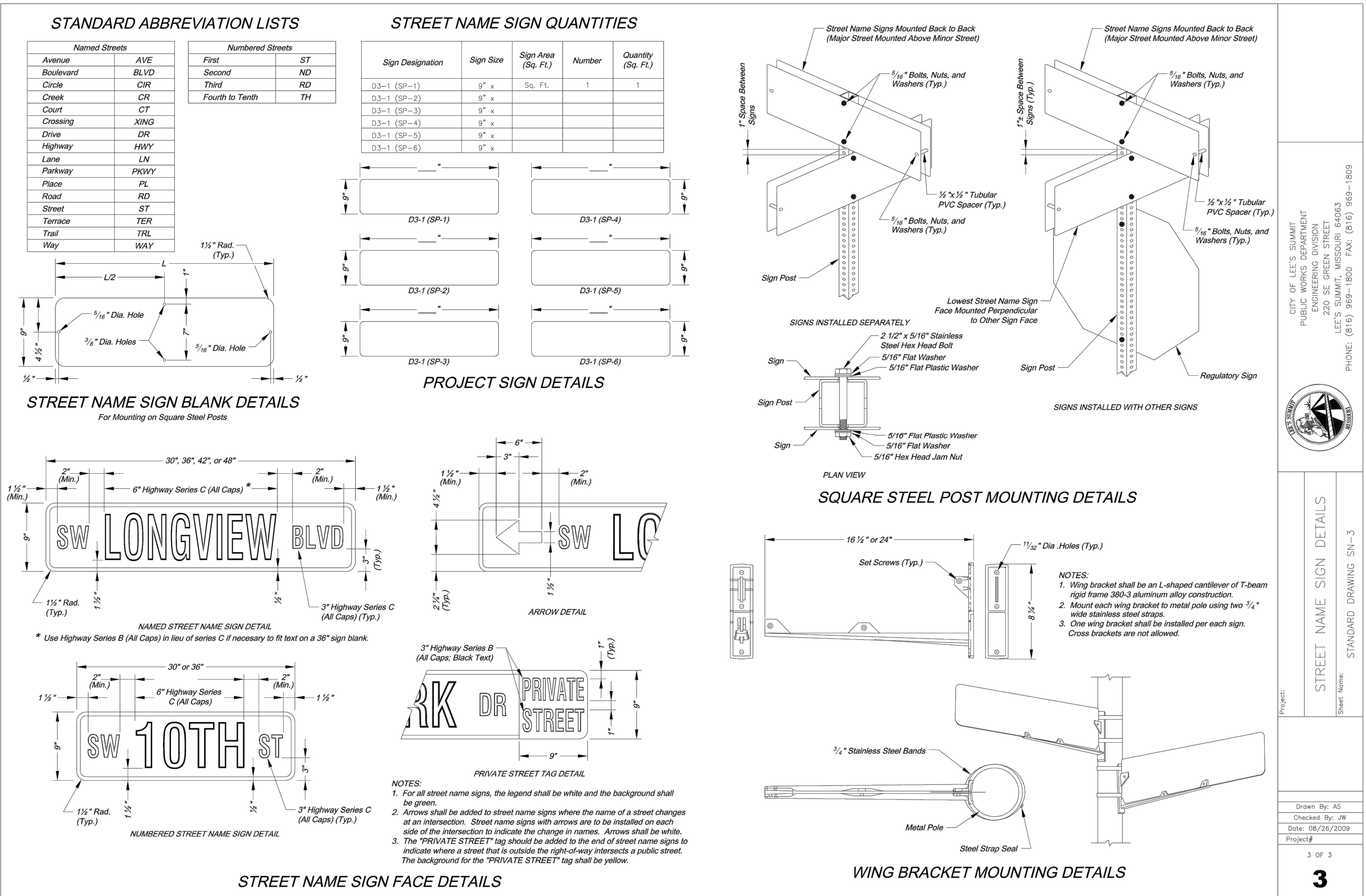


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SHEET
C149

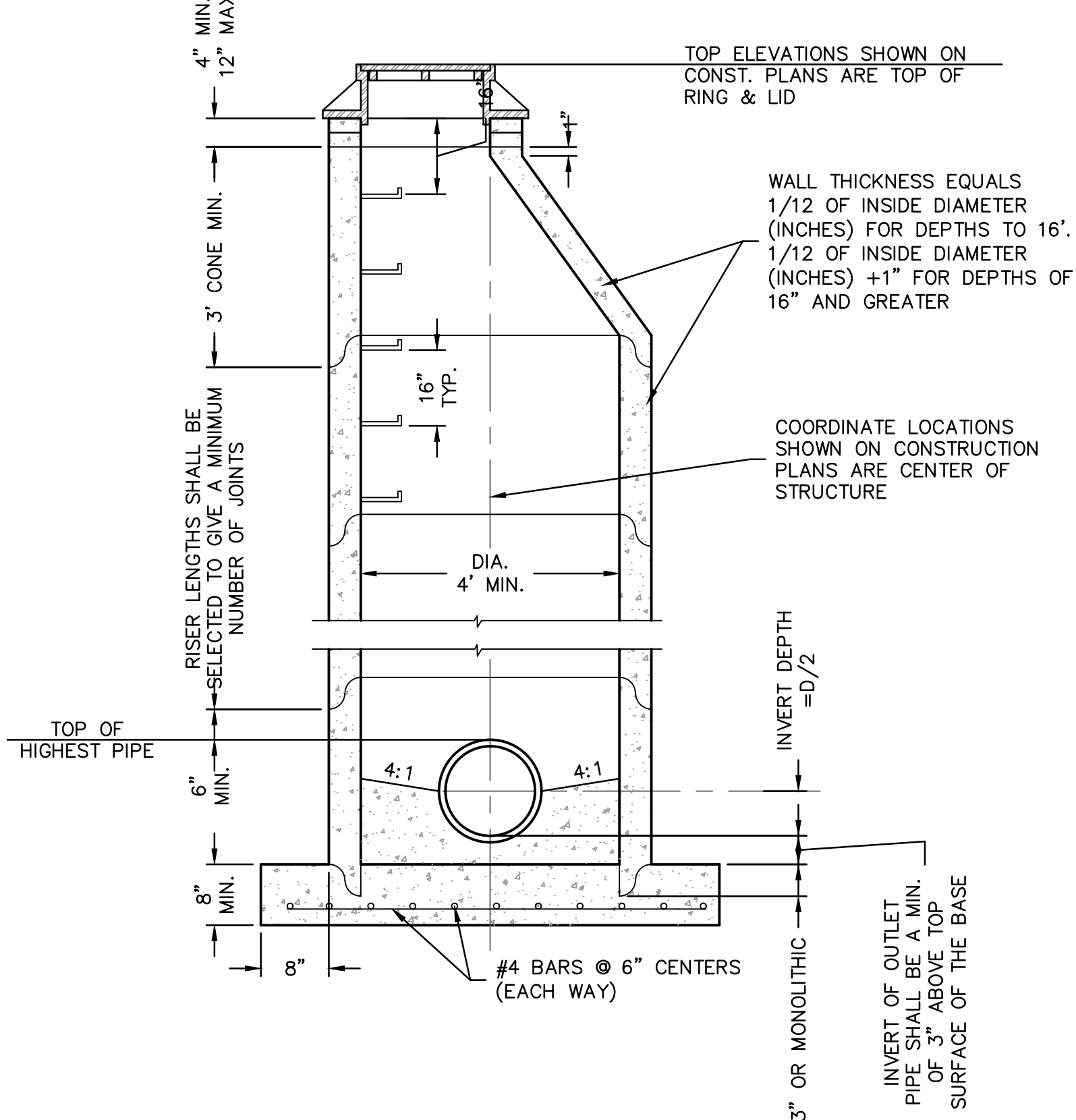
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QA/QC by: J.E.S.
project no.: B19-4061
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CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 889-1800 FAX: (816) 889-1809

PROJECT: STREET NAME SIGN DETAILS
SHEET NAME: STANDARD DRAWING SN-3
1 OF 3

Drawn By: AS
Checked By: JW
Date: 03/23/2021
Project: 19-4061



DETAIL SHEET
STREET & STORM SEWER PLANS

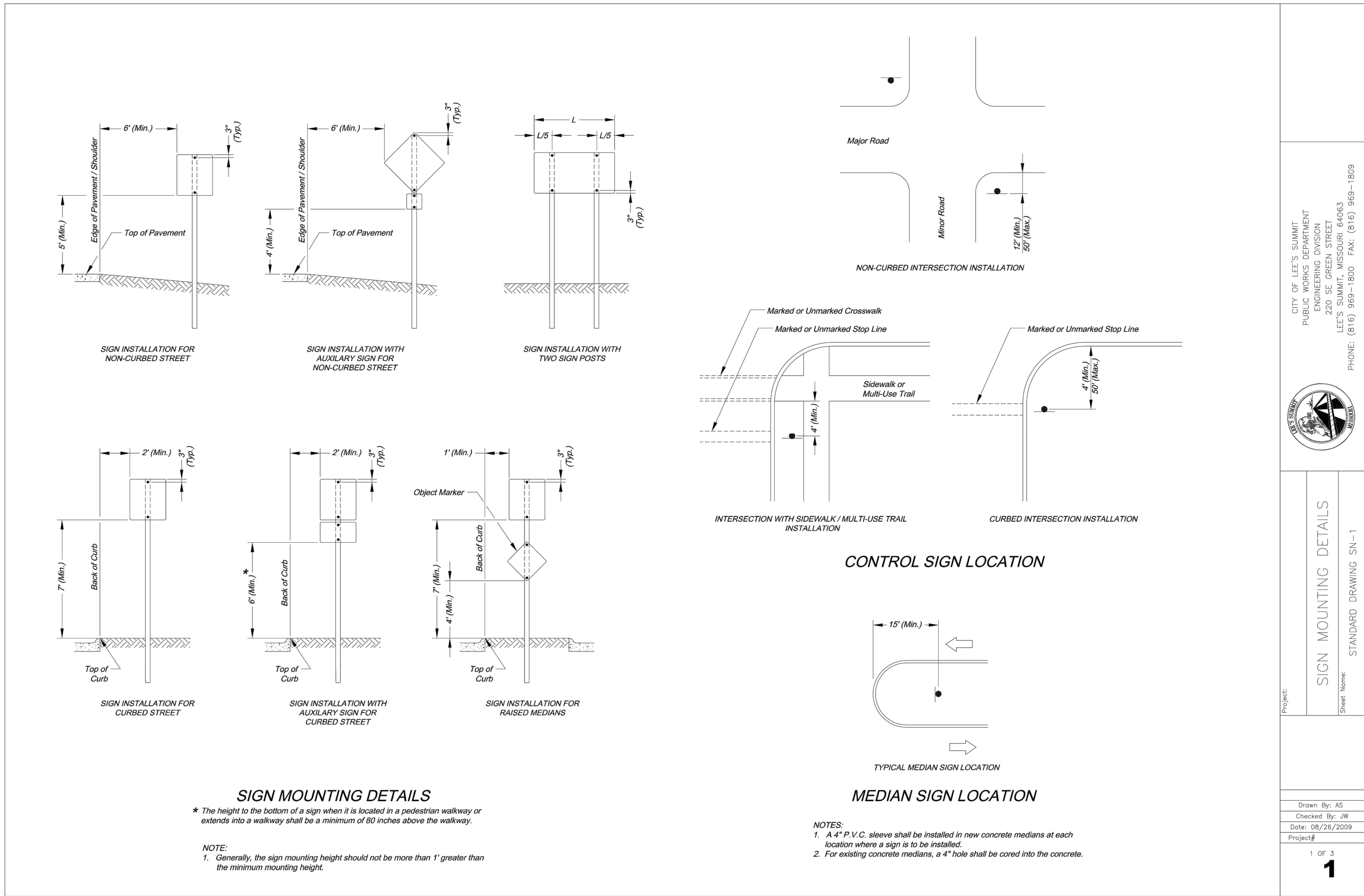
HOOK FARMS
SECOND PLAT

REVISIONS

REV.	NO.	DATE	REVISIONS DESCRIPTION
1		03-23-2021	

drawn by: B.M.W./A.A.
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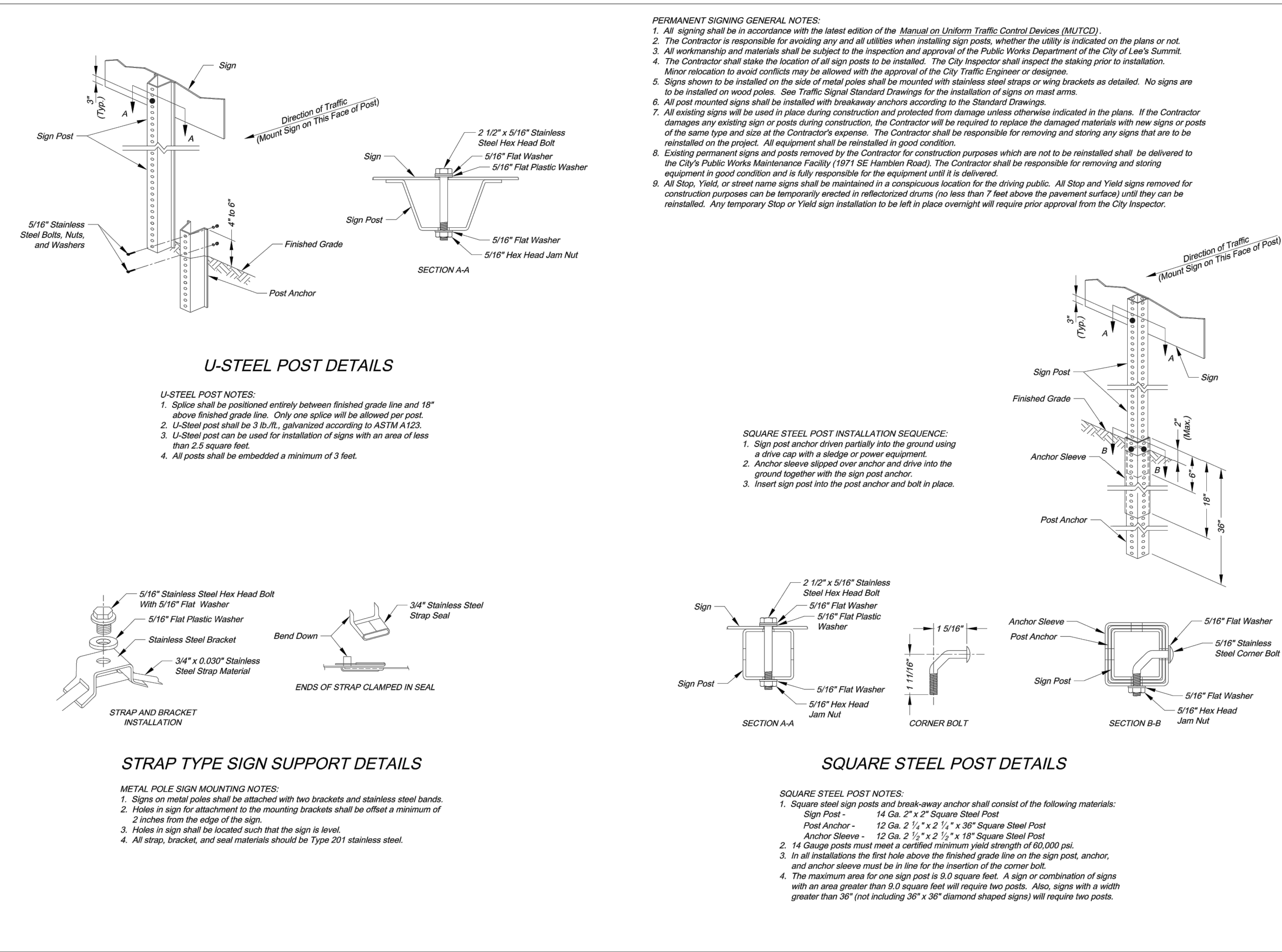
SHEET
C150



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220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
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PROJECT: SIGN MOUNTING DETAILS
SHEET NAME: STANDARD DRAWING SN-1
1 OF 3

Drawn By: AS
Checked By: JW
Date: 03/23/2021
Project: 19-4061



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PROJECT: SIGN POST DETAILS
SHEET NAME: STANDARD DRAWING SN-2
2 OF 3

Drawn By: AS
Checked By: JW
Date: 03/23/2021
Project: 19-4061

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Professional Engineer
NUMBER PE-2017000367
3/24/21