

Section 8, Township 48 North, Range 31 West
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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LEGEND:

B/L	- BUILDING SET-BACK
C/A	- COMMON AREA
D/E	- DRAINAGE EASEMENT
FND.	- FOUND
L/E	- LANDSCAPE EASEMENT
L.N.A.	- LIMITS OF NO ACCESS
R/W	- RIGHT OF WAY
SAN	- SANITARY SEWER LINE
S/W	- SIDEWALK
U/E	- UTILITY EASEMENT
W	- WATER LINE
ST	- STORM SEWER LINE

STREET & STORM SEWERS:

1 ~ STREET PAVEMENT SHALL CONSIST OF TYPE CG-2 CURBS WITH PAVEMENT PER TABLE LS-2 OF THE LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL

RESIDENTIAL LOCAL STREET SEE BELOW FOR TYPICAL SECTION.

- | | |
|-----------|--|
| OPTION 1) | 4" TYPE II ASPHALT BASE AND 2" TYPE III ASPHALT SURFACE OVER A 6" MoDOT TYPE 5 BASE AND A SUBGRADE MIXTURE OF 6" FLY ASH STABILIZED SUBGRADE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL. |
| OPTION 2) | 4" TYPE II ASPHALT BASE AND 2" TYPE III ASPHALT SURFACE OVER 6" MoDOT TYPE 5 BASE OVERTOP A BIAXIAL GEOGRID MEETING THE REQUIREMENTS OF TABLE 2201.6-1 |

2 ~ STORM SEWER PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) AS APPROVED BY CITY OF LEES SUMMIT DESIGN AND CONSTRUCTION MANUAL.

- 3 - JUNCTION BOXES SHALL BE PER CITY OF LEES SUMMIT STANDARD DRAWING NO. JB-1. FIELD INLETS SHALL BE PER CITY OF LEES SUMMIT STANDARD DRAWING FI-1. TOEWALLS SHALL BE PER CITY OF LEES SUMMIT DRAWING NO. SD-35. STORM MANHOLES SHALL BE PER CITY OF LEES SUMMIT DETAIL SD-27. ROCK LINING AND RIP RAP SHALL BE PER CITY OF LEES SUMMIT.

GENERAL NOTES:

- 1 - ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
- 2 - ALL REQUIRED EASEMENTS WITHIN THE BOUNDARY OF THIS PROJECT SHALL BE PROVIDED FOR ON THE FINAL PLAT.
- 3 - ANY REQUIRED EASEMENT LOCATED OUTSIDE OF THE BOUNDARY OF THIS PROJECT SHALL BE PROVIDED FOR BY SEPARATE INSTRUMENT PRIOR TO ISSUANCE OF THE CONSTRUCTION PERMIT.
- 4 - THE CONTRACTOR SHALL NOTIFY THE CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING INSPECTION AT 816.969.1200 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
- 5 - THE CONTRACTOR SHALL NOTIFY ENGINEERING SOLUTIONS AT 816.623.9888 OF ANY CONFLICT WITH THE IMPROVEMENTS PROPOSED BY THESE PLANS AND SITE CONDITIONS.
- 6 - THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND OBTAIN THE APPROPRIATE BLASTING PERMITS FOR A REQUIRED BLASTING. IF BLASTING IS ALLOWED, ALL BLASTING SHALL CONFORM TO STATE REGULATIONS AND LOCAL ORDINANCES.

UTILITY COMPANIES:

THE FOLLOWING LIST OF UTILITY COMPANIES IS PROVIDED FOR INFORMATION ONLY. WE DO NOT OFFER ANY GUARANTEE OR WARRANTY THAT THIS LIST IS COMPLETE OR ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES THAT MAY BE AFFECTED BY THE PROPOSED CONSTRUCTION AND VERIFYING THE ACTUAL LOCATION OF EACH UTILITY LINE. THE CONTRACTOR SHALL NOTIFY ENGINEERING SOLUTIONS AT 816.623.9888 OF ANY CONFLICT WITH PROPOSED IMPROVEMENTS.

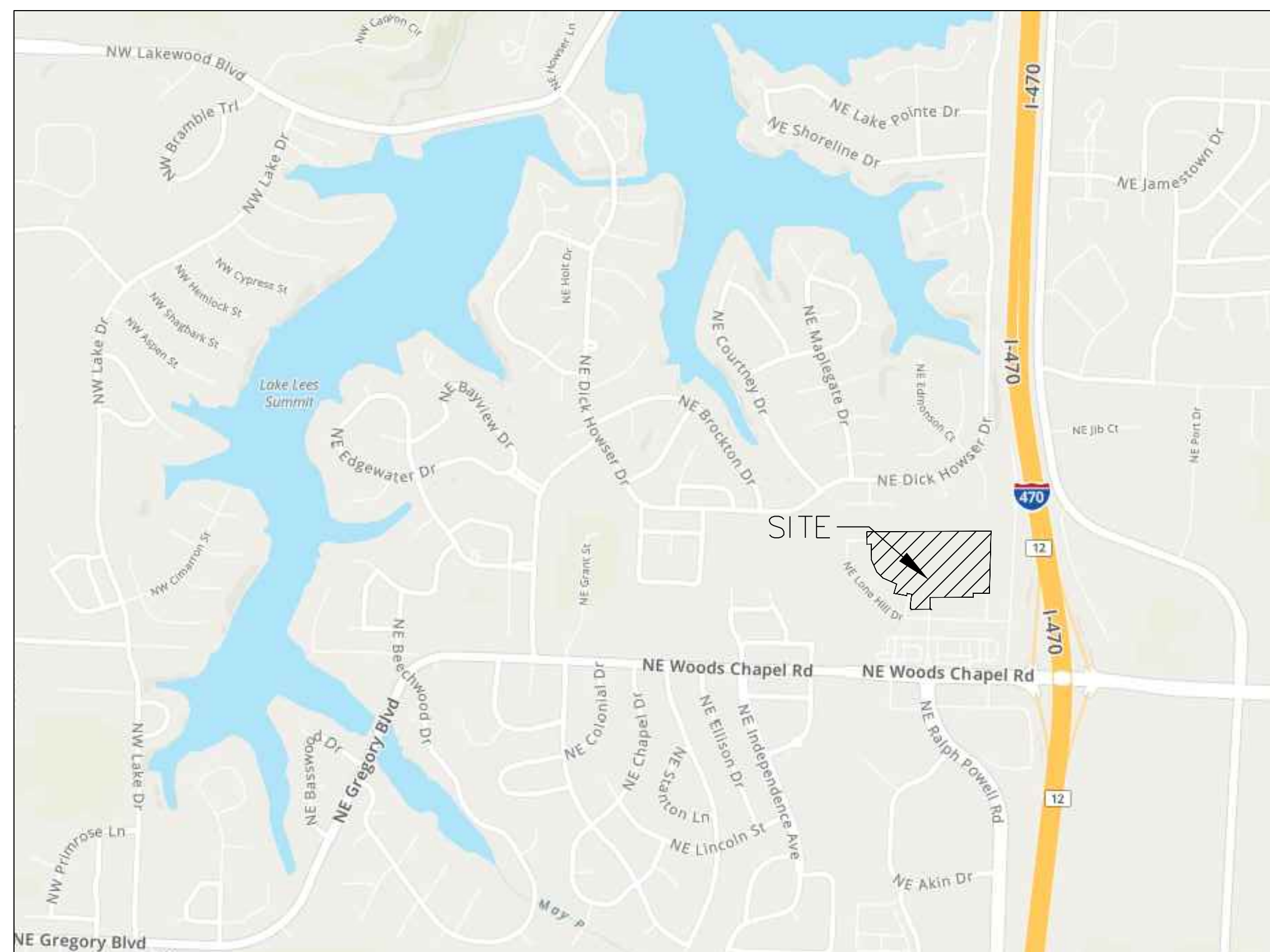
EVERGY ~ 298-1196
MISSOURI GAS ENERGY ~ 756-5261
SOUTHWESTERN BELL TELEPHONE ~ 761-5011
COMCAST CABLE ~ 795-1100
WILLIAMS PIPELINE ~ 422-6300
CITY OF LEE'S SUMMIT PUBLIC WORKS ~ 969-1800
CITY OF LEE'S SUMMIT PUBLIC WORKS INSPECTIONS ~ 969-1800
CITY OF LEE'S SUMMIT WATER UTILITIES ~ 969-1900
MISSOURI ONE CALL (DIG RITE) ~ 1-800-344-7483

OIL - GAS WELLS

ACCORDING TO EDWARD ALTON MAY JR'S ENVIRONMENTAL IMPACT STUDY OF ABANDONED OIL AND GAS WELLS IN LEE'S SUMMIT, MISSOURI IN 1995, THERE ARE NOT OIL AND GAS WELLS WITHIN 185 FEET OF THE PROPERTY AS SURVEYED HEREON.

FLOOD INFORMATION:

The property is located in Zone "X" areas outside the 100 year flood plain per FEMA Map 29095C0430G, dated January 20, 2017



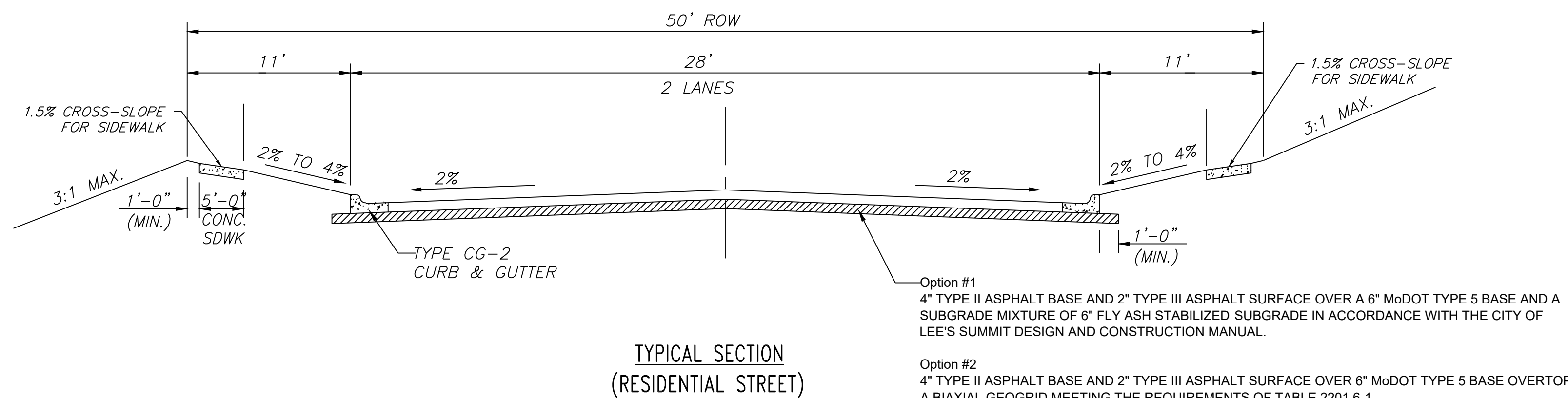
SITE LOCATION MAP

Summary of Quantities:

ITEM AND DESCRIPTION	UNIT	ESTIMATE QUANTITY
ASPHALT PAVING	S.Y.	3,430.9
CURBING	FT	2,343.6
5' SIDEWALK	S.F.	10,278.2
ModOT Type 5 Base	S.Y.	3,702.6
GEOGRID	S.Y.	3,702.6
ADA SIDEWALK RAMP	UNIT	5
CLEARING, GRADING & GRUBBING	LS	1
SILT FENCE	FT	5,724.0
INLET PROTECTION	UNIT	44.0
SEEDING / MULCHING/ FERTILIZING	SAC	18.8
CONST. ENTRANCE	UNIT	2.0
STORM		
30" HDPE	FT	76.4
24" HDPE	FT	54.4
18" HDPE	FT	299.2
15" HDPE	FT	1,129.9
4' x 4' JUNCTION BOX	EA	2.0
18" HDPE END SECTION / TOE WALL	LS	2.0
30" HDPE END SECTION / TOE WALL	LS	2.0
4' x 4' STORM FIELD INLET	EA	6.0
5' x 4' STORM CURB INLET	EA	6.0

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THIS PROJECT HAS BEEN DESIGNED AND THESE PLANS PREPARED IN ACCORDANCE WITH THE CURRENT DESIGN CRITERIA OF THE CITY OF LEE'S SUMMIT, MISSOURI AND THE STATE OF MISSOURI. I FURTHER CERTIFY THAT THESE PLANS WERE DESIGNED IN ACCORDANCE TO AASHTO STANDARDS.



ENGINEERING SOLUTIONS
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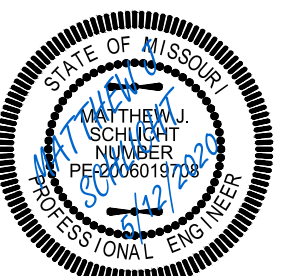
Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

Project: VILLAS OF CHAPEL
RIDGE, LSMO
Issue Date: April 10, 2020

Street & Storm Cover Sheet
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

Street & Storm Cover Sheet

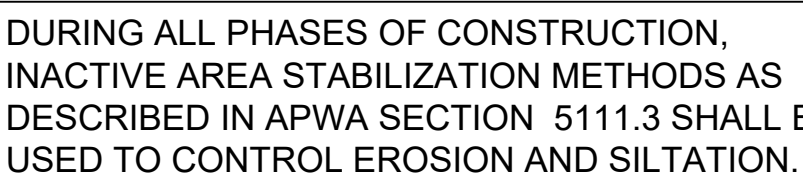


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NE PE E-14335

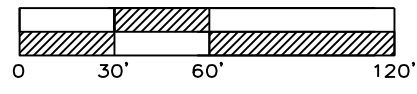
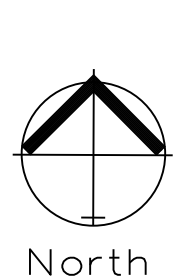
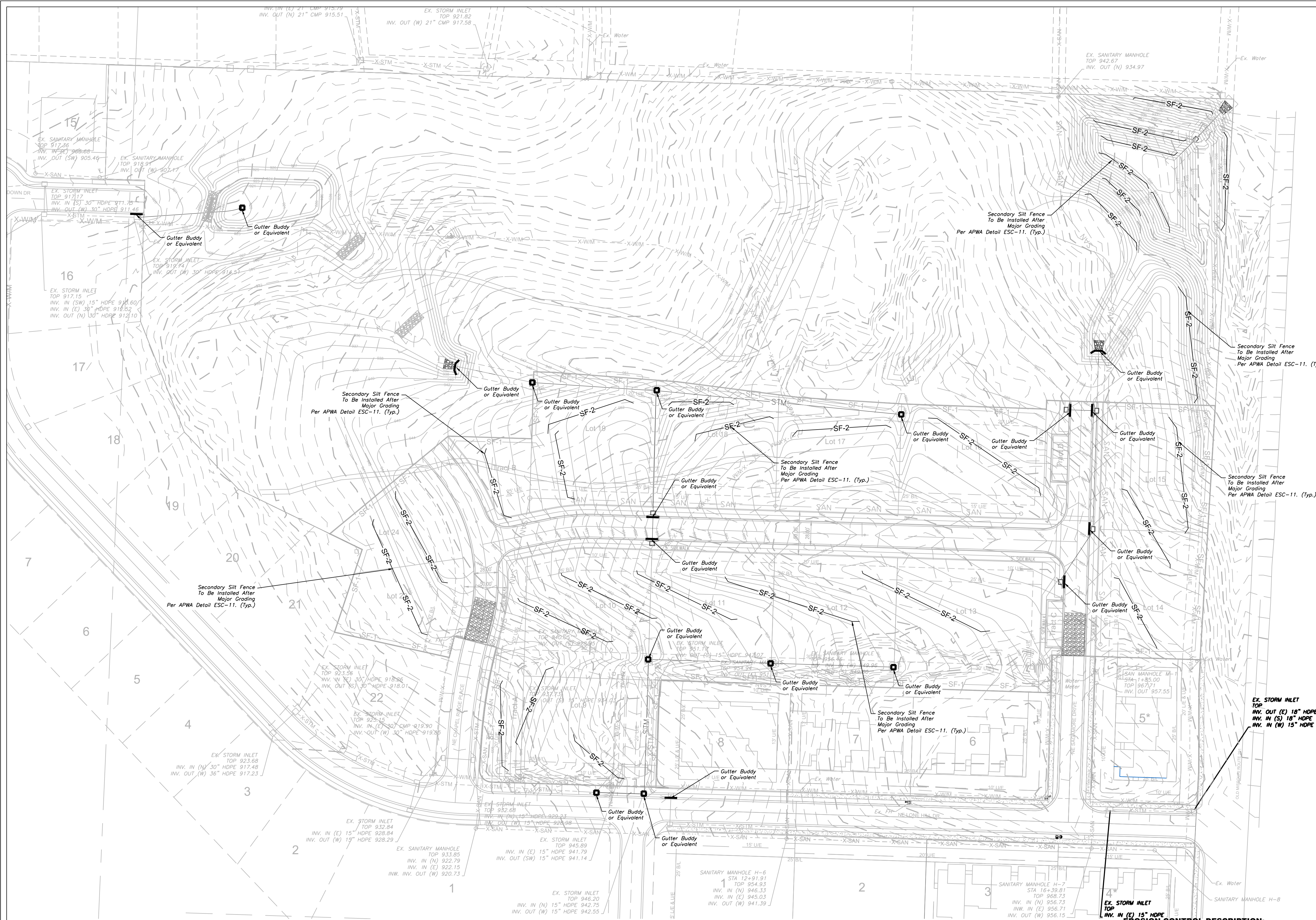
REVISIONS

1	REV. 5/1/2020
2	REV. 5/12/2020

C.001



C.050



INACTIVE AREA STABILIZATION PLAN

SCALE: 1" = 60'

NOTES: The Land Disturbance Plans indicates the Final placement of erosion control devices. The contractor(s) may proceed with construction prior to the final placement of these devices by providing additional devices to control erosion on their items of work. These devices shall be maintained until the final devices are in place.

SILT FENCE PROTECTION TO BE MAINTAINED BY CONTRACTOR

LEGEND

- PHASE 1 SILT FENCE — SF-1 — SF-1 —
- PHASE 2 SILT FENCE — SF-2 — SF-2 —
- INLET PROTECTION
GUTTER BUDDY OR EQUIVALENT —

DURING ALL PHASES OF CONSTRUCTION, INACTIVE AREA STABILIZATION METHODS AS DESCRIBED IN APWA SECTION 511.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.

MAINTENANCE:
TO MAINTAIN THE EROSION AND SEDIMENT CONTROLS, THE FOLLOWING PROCEDURES WILL BE PERFORMED:
SEDIMENT CAPTURE DEVICES: SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UPSLOPE SIDE OF THE FILTER FABRIC FENCES, WHEN THE DEPTH OF ACCUMULATED SEDIMENT REACHES ABOUT ONE-THIRD THE HEIGHT OF THE STRUCTURE.
STORM SEWER INLETS: ANY SEDIMENT IN THE STORM SEWER INLETS WILL BE REMOVED AND DISPOSED OF PROPERLY.
TEMPORARY CONTROLS: ALL TEMPORARY CONTROLS WILL BE REMOVED AFTER THE DISTURBED AREAS HAVE BEEN STABILIZED.

INSPECTION PROCEDURES:
INSPECTIONS WILL BE DONE BY THE RESPONSIBLE PERSON(S) AT LEAST ONCE EVERY WEEK AND WITHIN 24 HOURS EACH STORM EVENT PRODUCING ANY AMOUNT OF RAINFALL. AREAS THAT HAVE BEEN RESEDED WILL BE INSPECTED REGULARLY AFTER SEED GERMINATION TO ENSURE COMPLETE COVERAGE OF EXPOSED AREAS. DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED SHALL HAVE ALL POLLUTION CONTROL MEASURES INSPECTED FOR PROPER INSTALLATION, OPERATION AND MAINTENANCE. LOCATIONS WHERE STORM WATER LEAVES THE SITE SHALL BE INSPECTED FOR EVIDENCE OF EROSION OR SEDIMENT DEPOSITION. ANY DEFICIENCIES SHALL BE NOTED IN A REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN CALENDAR DAYS OF THE INSPECTION. THE PERMITTEE SHALL PROMPTLY NOTIFY THE SITE CONTRACTORS RESPONSIBLE FOR OPERATION AND MAINTENANCE OF POLLUTION CONTROL DEVICES OF DEFICIENCIES.

IF THE EXISTING GROUND COVER IS NATURAL GRASS, DISTURBED AREAS SHALL BE TEMPORARILY SEEDED WITH WHEAT/RYE AT A RATE OF 1.5 POUNDS PER 1000 SQUARE FEET. PERMANENT SEEDED SHALL CONSIST OF 90% IN THREE EQUAL PARTS OF THIN BLADE, TURF-TYPE, TALL FESCUE AND 10% BLUEGRASS SEED AT A RATE OF 10 POUNDS PER 1000 SQUARE FEET. BOTH TEMPORARY AND PERMANENT SEEDED AREAS SHALL BE MULCHED AND WATERED TO MAINTAIN THE PROPER MOISTURE LEVEL OF THE SOIL TO ESTABLISH GRASS. NEW GRASS SHALL BE WATERED AND MAINTAINED UNTIL IT REACHES A HEIGHT OF 3 INCHES. ANY BARE AREAS SHALL BE RESEDED.

ALL EROSION CONTROL DEVICES SHALL BE REMOVED BY GENERAL CONTRACTOR AFTER SITE STABILIZATION IS COMPLETE AND APPROVED BY ENGINEER.

THE DEVELOPER WILL DESIGNATE A QUALIFIED PERSON OR PERSONS TO PERFORM THE FOLLOWING INSPECTIONS:
STABILIZATION MEASURES: DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION WILL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. AFTER A PORTION OF THE SITE IS FINALLY STABILIZED, INSPECTIONS WILL BE CONDUCTED AT LEAST ONCE EVERY MONTH THROUGHOUT THE LIFE OF THE PROJECT. CONTRACTOR CAN CONTACT ENGINEERING SOLUTIONS FOR COPIES OF THE INSPECTION FORM TO BE USED FOR STABILIZATION MEASURES.
STRUCTURAL CONTROLS: FILTER FABRIC FENCES AND ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN WILL BE INSPECTED REGULARLY FOR PROPER POSITIONING, ANCHORING, AND EFFECTIVENESS IN TRAPPING SEDIMENTS. SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UPSLOPE SIDE OF THE FILTER FABRIC. CONTRACTOR CAN CONTACT ENGINEERING SOLUTIONS FOR COPIES OF THE INSPECTION FORM TO BE USED FOR STABILIZATION MEASURES.
DISCHARGE POINTS: DISCHARGE POINTS OR LOCATIONS WILL BE INSPECTED TO DETERMINE WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT AMOUNTS OF POLLUTANTS FROM ENTERING RECEIVING WATERS.
CONSTRUCTION ENTRANCE: LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE WILL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.

A LOG OF EACH INSPECTION SHALL BE KEPT. THE INSPECTION REPORT IS TO INCLUDE THE FOLLOWING MINIMUM INFORMATION: INSPECTOR'S NAME, DATE OF INSPECTION, OBSERVATIONS RELATIVE TO THE EFFECTIVENESS OF THE POLLUTION CONTROL DEVICES, ACTIONS TAKEN OR NECESSARY TO CORRECT DEFICIENCIES, AND LISTING OF AREAS WHERE LAND DISTURBANCE OPERATIONS HAVE PERMANENTLY OR TEMPORARILY STOPPED. THE INSPECTION REPORT SHALL BE SIGNED BY THE PERMITTEE OR BY THE PERSON PERFORMING THE INSPECTION IF DULY AUTHORIZED TO DO SO.

EROSION CONTROL DESCRIPTION:

- 1.) SILT FENCE SHALL BE PLACED AT THE PERIMETER OF THE GRADING AND AT INTERMEDIATE AREAS THROUGHOUT THE SITE AS SHOWN ON THE PLAN. INLET SEDIMENT TRAPS SHALL BE PLACED SURROUNDING ALL STORM INLETS
- 2.) INSTALL TEMPORARY CONSTRUCTION ENTRANCE AS SHOWN ON PLAN

EROSION CONTROL PROCEDURE:

- 1.) SILT FENCE AND TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE PERIMETER OF THE GRADED AREAS PRIOR TO BEGINNING OF CLEARING OR DEMOLITION OPERATIONS. THE CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON PLANS AS GRADING PROGRESSES.

TEMPORARY CONSTRUCTION ENTRANCE NOTES:

- A) INSTALLATION
- 1.) AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC STREETS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED
 - 2.) REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE AND CROWN FOR POSITIVE DRAINAGE
 - 3.) IF SLOPE TOWARDS THE PUBLIC ROAD EXCEED 2% CONSTRUCT A 6 TO 8 INCH HIGH RIDGE WITH 3H : 1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.
 - 4.) INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS
 - 5.) PLACE STONE TO DIMENSIONS AND GRADES AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE
 - 6.) DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE
 - 7.) IF WET CONDITIONS ARE ANTICIPATED PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY
- B) TROUBLESHOOTING
- 1.) CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
 - INADEQUATE RUNOFF CONTROLS TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROADS
 - INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES
 - SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL - INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC
 - PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC - EXTEND PAD BEYOND THE MINIMUM 50 FOOT LENGTH AS NECESSARY
- C) INSPECTION AND MAINTENANCE
- 1.) INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER ANY RAIN EVENT
 - 2.) RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL
 - 3.) TOP DRESS WITH CLEAN 2 AND 3 INCH STONE AS NEEDED
 - 4.) IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADWAY. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY
 - 5.) REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED

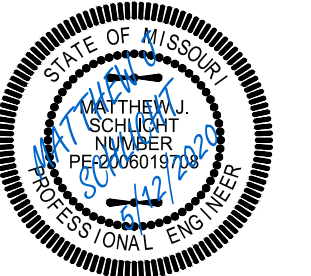
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Professional Registration
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Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6284
Nebraska
Engineering CA2821

THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

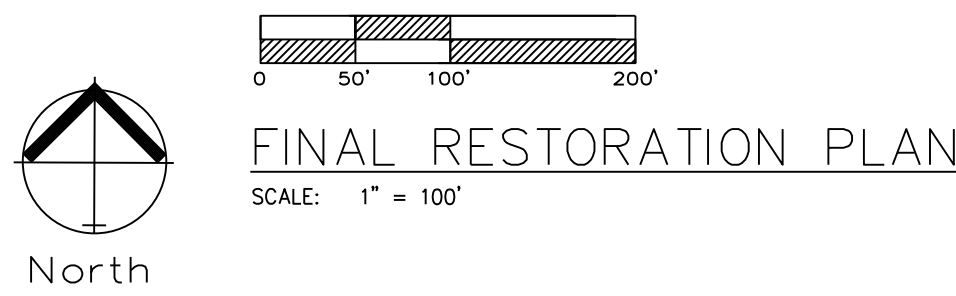
Project: VILLAGES OF CHAPEL RIDGE-LSMO
Issue Date: April 10, 2020

ESC PHASE 2 - Inactive Area Stabilization Plan
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri



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KS PE 19071
OK PE 25226
NE PE E-14335

REVISIONS	
REV. 5/1/2020	
REV. 5/12/2020	



SILT FENCE PROTECTION
TO BE MAINTAINED BY CONTRACTOR

LEGEND

PHASE 1 SILT FENCE — SF-1 — SF-1 —

PHASE 2 SILT FENCE — SF-2 — SF-2 —

INLET PROTECTION
GUTTER BUDDY OR EQUIVALENT —

DURING ALL PHASES OF CONSTRUCTION, INACTIVE AREA STABILIZATION METHODS AS DESCRIBED IN APWA SECTION 5111.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.

NOTES: The Land Disturbance Plans indicates the Final placement of erosion control devices. The contractor(s) may proceed with construction prior to the final placement of these devices by providing additional devices to control erosion on their items of work. These devices shall be maintained until the final devices are in place.

SEED AND MULCH NOTES:

All areas disturbed by construction activities shall be seeded and mulched. Seeding shall be done before the proposed seeded becomes eroded, crusted over, or dried out and shall not be done when the ground is frozen, or covered with snow. The seed shall comply with the requirements of the Missouri Seed Law and the Federal Seed Act. Also, it shall contain no seed of any plant on the Federal Noxious Weed List. Other weed seeds shall not exceed one percent by weight of mix.

Seed and Fertilizer Rate:

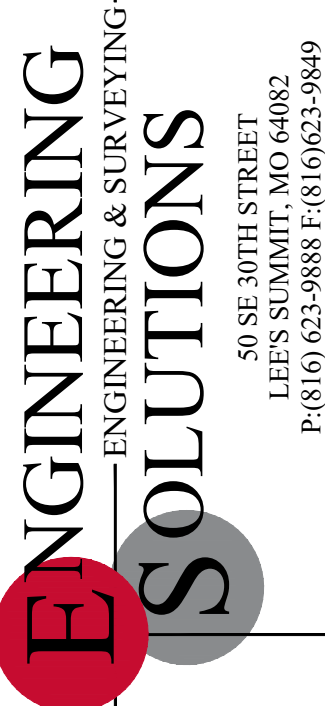
Mix I - Rye Grass / Blue Grass ----- 100 lbs. per Acre
Mix II - Tall Fescue / Blue Grass ----- 195 lbs. per Acre
Lime ----- 2000 lbs per Acre (50 lbs. per 1000 sq. ft.)
Fertilizer ----- 800 to 1200 lbs per Acre (25 lbs per 1000 sq. ft.)

During the dates December 15th through May 31 ALL lime fertilizer, seed and mulch shall be applied to finished slopes of disturbed areas. During the months of June, July, October and November 1st through December 15th, lime fertilizer, seed and mulch shall be applied at the following rates:

Lime - 100% of specified quantity
Fertilizer - 75% of the specified quantity
Seed - 50% of the specified quantity
Mulch - 100% of the specified quantity

Mulch shall be Vegetative type, cereal straw from stalks of oats, rye, or barley, or approved equal. The straw shall be free of prohibited weed seed and relatively free of all other noxious and undesirable seed. Mulch shall be applied at the rate of 2 tons per acre, (70 to 90 lbs per 1000 sq. ft.). Mulch shall be embedded by a mulch anchoring tool or disk type roller having flat serrated disks spaced not more than 10 inches apart and cleaning scrapers shall be provided

ONCE SITE IS 90% VEGETATED ALL ESC DEVICES SHALL BE REMOVED AND ANY DISTURBED AREAS SHALL BE RESTORED

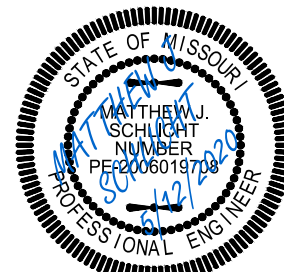


Professional Registration
Missouri
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Nebraska
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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

Project: VILLAS OF CHAPEL RIDGE LSMO
Issue Date: April 10, 2020

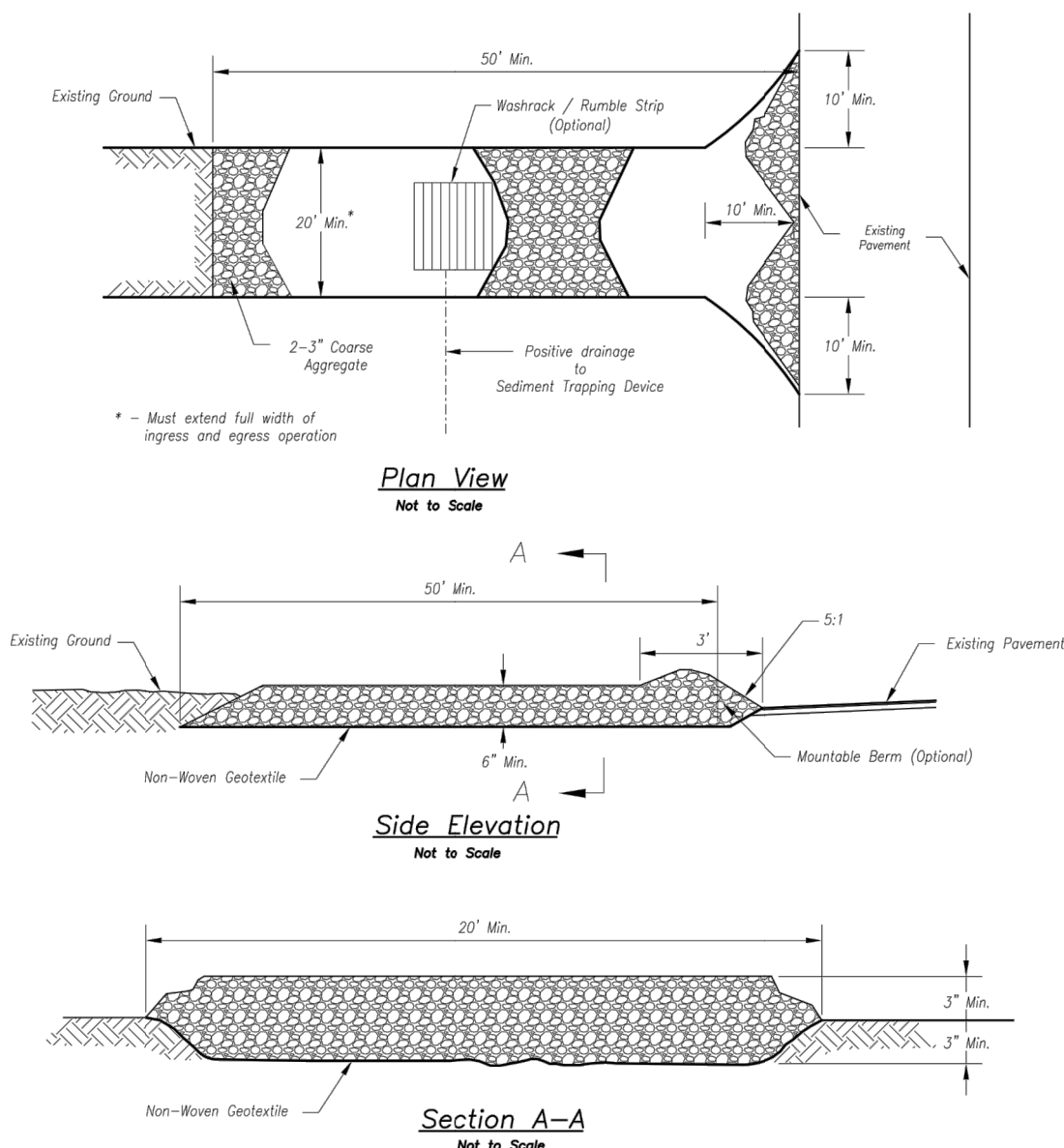
ESC PHASE 3 - Final Restoration Plan
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri



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KS PE 19071
OK PE 25226
NE PE E-14335

REVISIONS

REV. 5/1/2020
REV. 5/12/2020



Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or adjacent to industrial areas.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3:1 V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface shaped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrances:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

CONSTRUCTION ENTRANCE

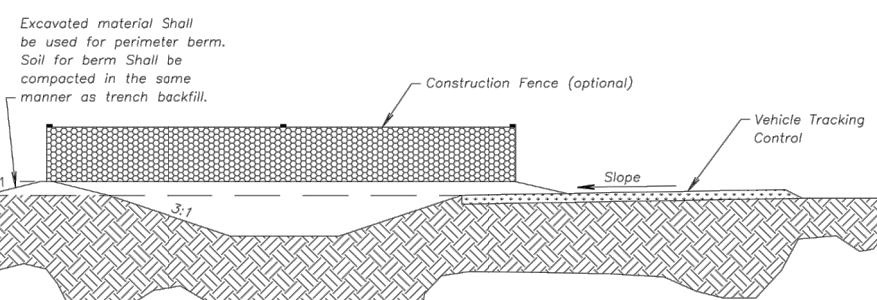
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control. Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout areas shall include a 1-ft subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and survey rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

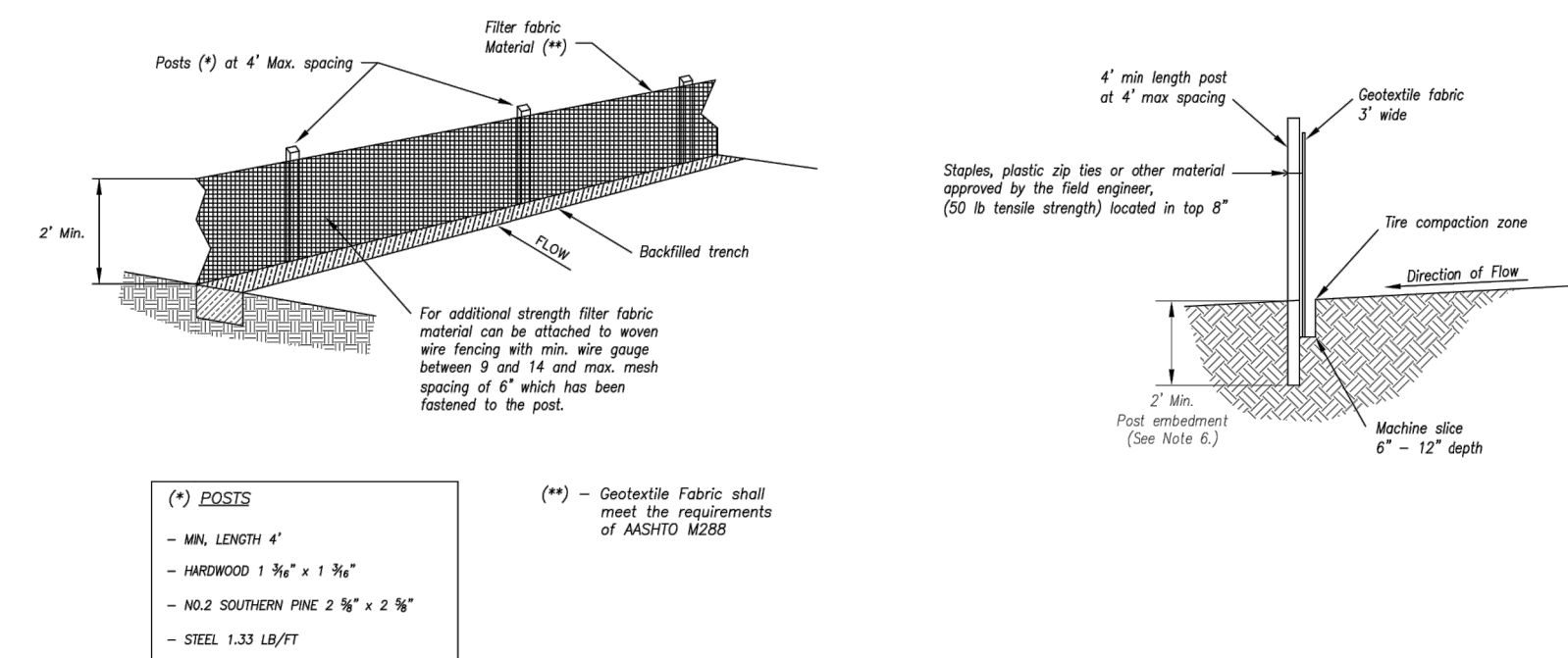
Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted basalt and topped, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

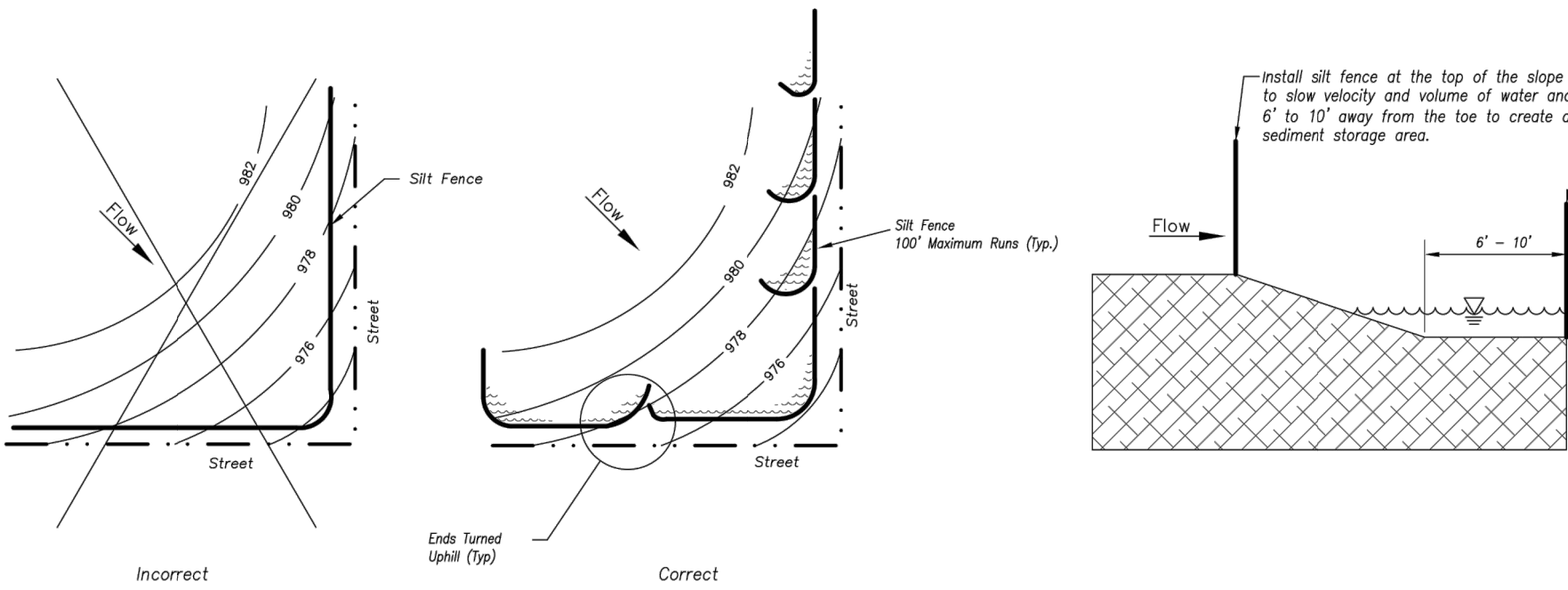


CONCRETE WASHOUT

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01 ADOPTED 10/24/2016



SILT FENCE DETAILS



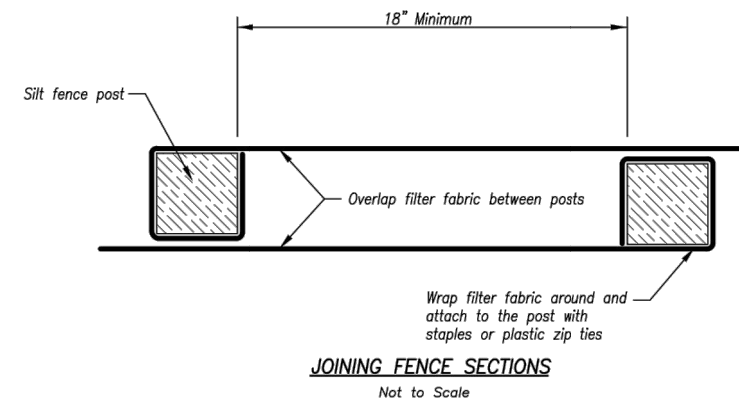
SILT FENCE LAYOUT

Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

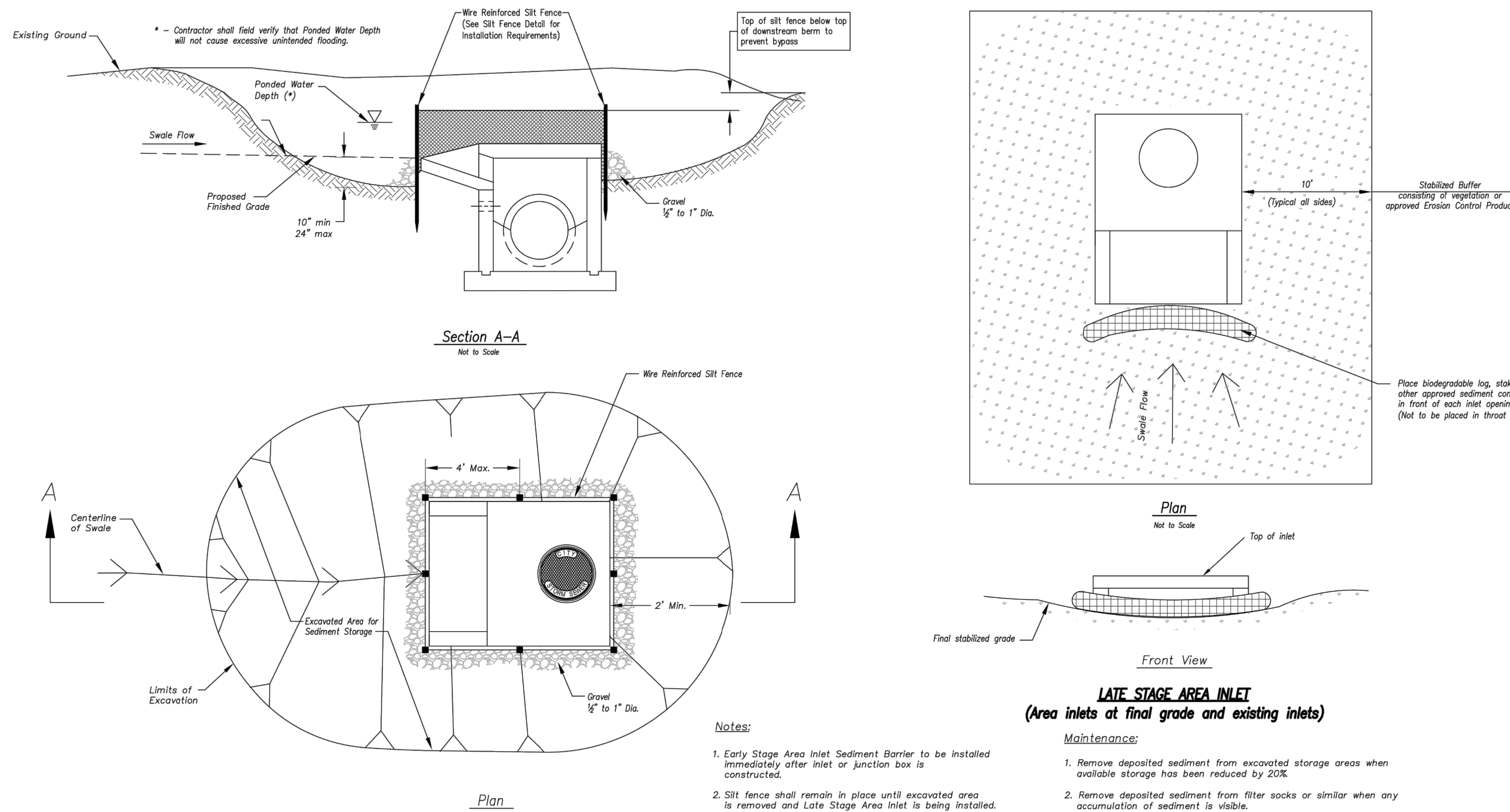
Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of silt fence.
2. Repair as necessary to maintain function and structure.



AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
SILT FENCE	STANDARD DRAWING NUMBER ESC-03 ADOPTED 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



LATE STAGE AREA INLET (Area inlets at final grade and existing inlets)

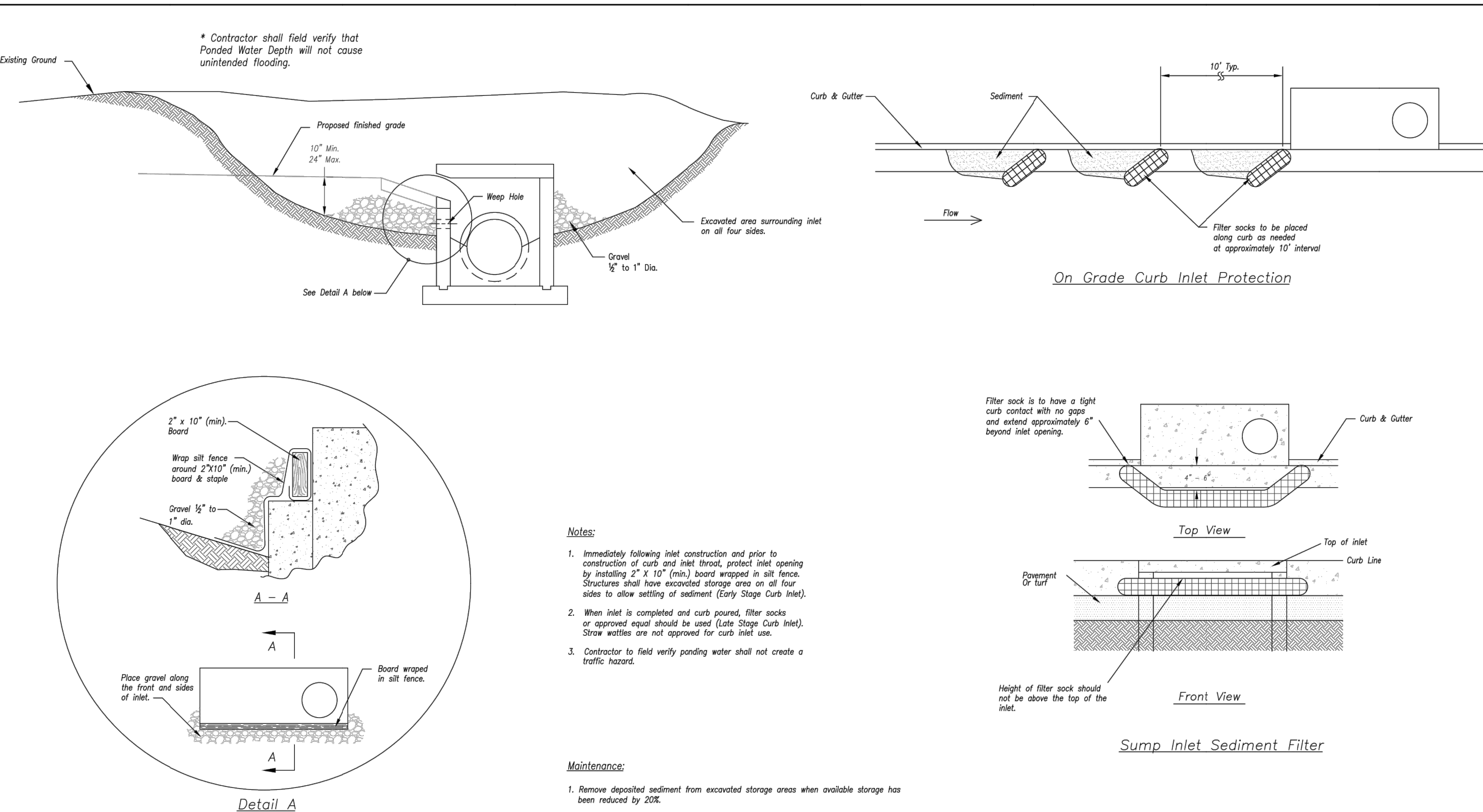
Maintenance:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07 ADOPTED 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



EARLY STAGE CURB INLET (Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2' x 10' (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Draw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

LATE STAGE CURB INLET (After Pouring Curb and Inlet Throat)

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06 ADOPTED 10/24/2016

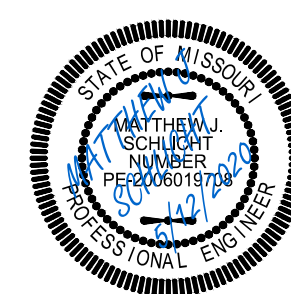
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

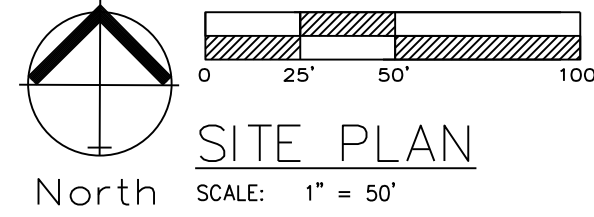
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Issue Date: April 10, 2020

ESC - Standard Details
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

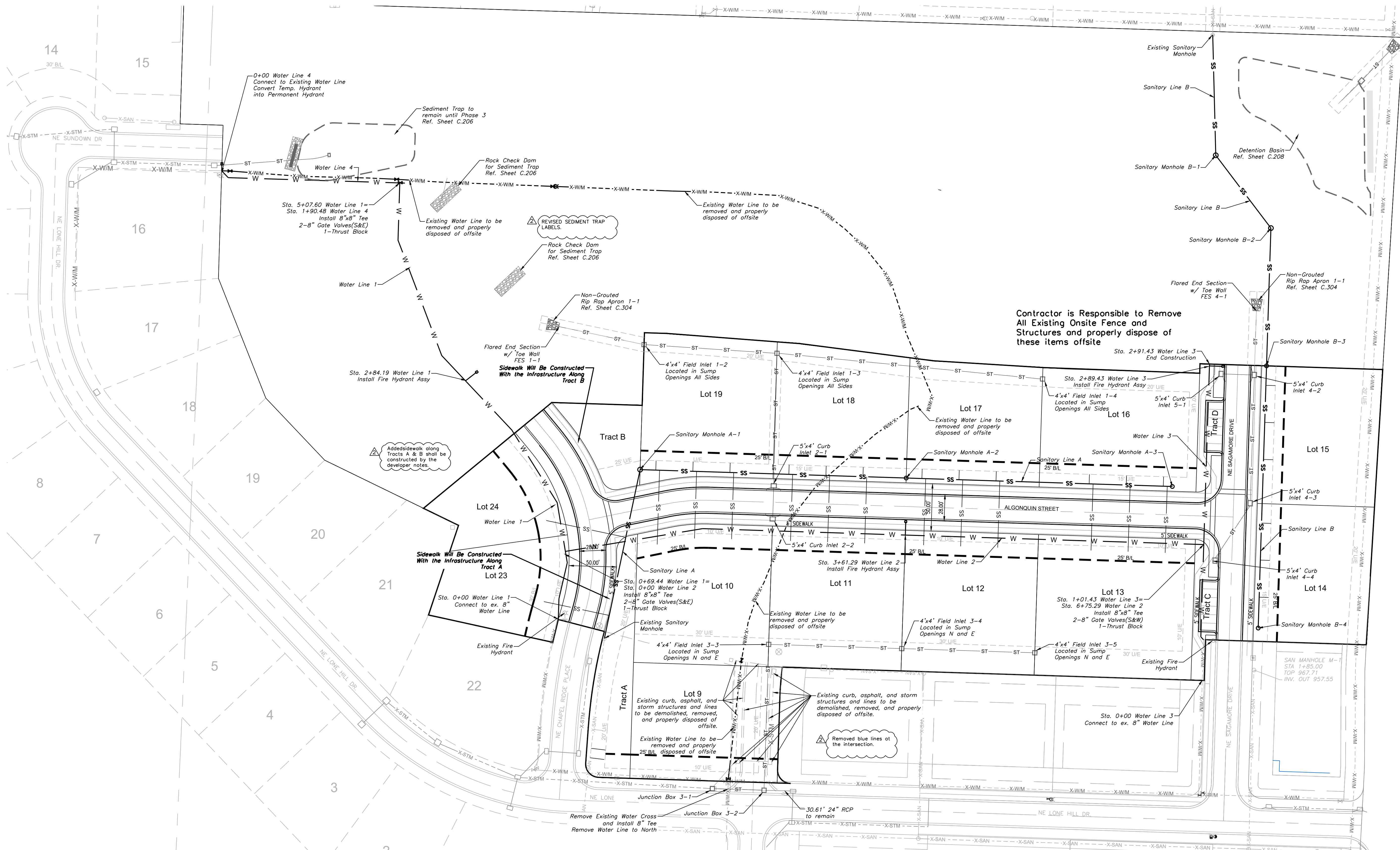


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SITE PLAN

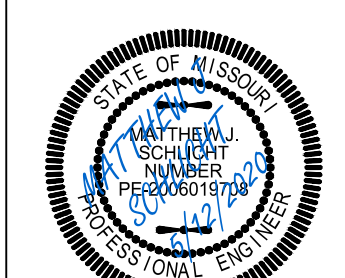


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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

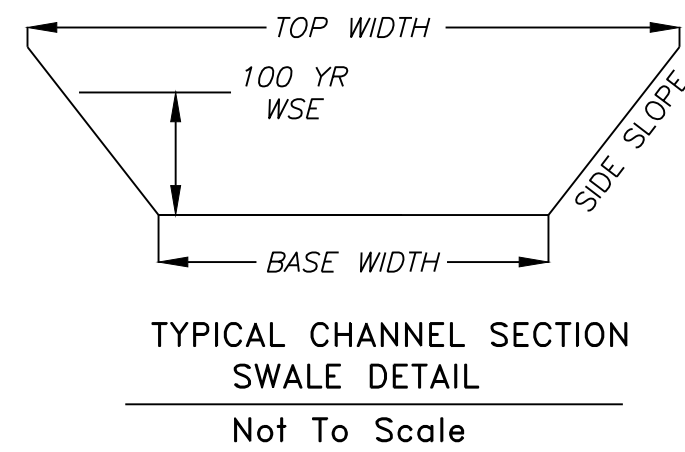
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Issue Date:
April 10, 2020

Site Plan
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri



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100 YEAR OVERFLOW SWALE SECTIONS									
Section	100 Yr. Runoff (c.f.s.)	Bed Slope (%)	Base Width (ft)	Side Slope (1:V)	100 Yr WSE (ft)	Sectional Area	Velocity 100Yr. (f.p.s.)	Hydraulic Radius (ft)	Shear Stress (p.s.f.)
A-A	1.35	6.67	4	5	0.11	0.50	2.70	0.10	0.42
B-B	2.37	6.67	6	5	0.13	0.86	2.74	0.12	0.49
C-C	3.60	6.67	4	5	0.20	1.00	3.60	0.17	0.69
D-D	2.50	6.67	6	5	0.13	0.86	2.89	0.12	0.49
E-E	3.60	2.72	6	5	0.21	1.48	2.43	0.18	0.31
F-F	1.03	6.67	6	5	0.08	0.51	2.01	0.08	0.31
G-G	3.00	5.00	5	3	0.18	1.00	3.01	0.16	0.51
H-H	3.73	4.16	5	5	0.21	1.27	2.94	0.18	0.46
I-I	3.37	4.00	5	3	0.20	1.12	3.01	0.18	0.45

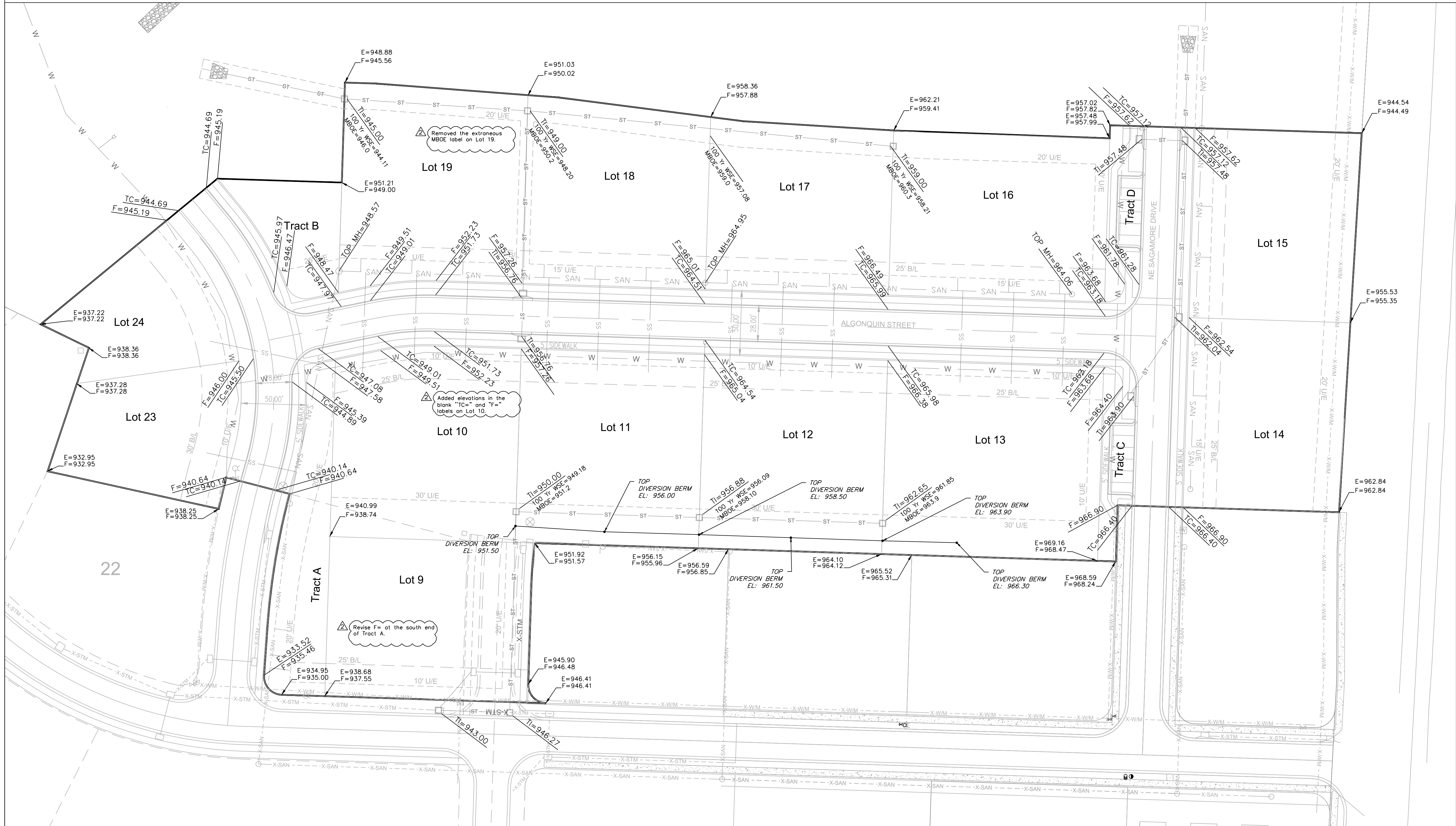
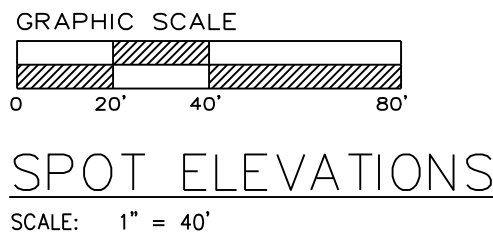
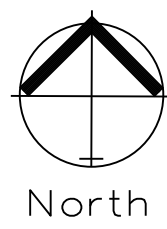
NOTE: Swale sections extend the entire length between upstream and downstream structures with the exception of a transition at each structure.

NOTE: Swale should be lined with "Straw with Net" turf reinforcement (Curlex Blanket or Eqv.) . Per Table 5607-1 in APWA Manual

Townhomes	Basement Type	MBOE Lt.	MBOE Rt.
Lot Number			
9	Full	940.8	951.0
10	Daylight	951.0	940.8
11	Daylight	957.9	951.0
12	Daylight	963.7	957.9
13	Full	966.0	963.7
14	Daylight	957.4	964.9
15	Walkout	946.5	957.4
16	Walkout	960.0	960.0
17	Walkout	958.0	960.0
18	Walkout	950.0	958.0
19	Daylight	946.0	950.0

Estates	Basement Type	MBOE Lt.	MBOE Rt.
Lot Number			
23	Walkout	935.0	939.3
24	Walkout	939.3	939.2

Note:
AS GRADED PLOT PLAN REQUIRED FOR EACH LOT.



Master Drainage Plan 2 of 3:
Spot Elevations
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri



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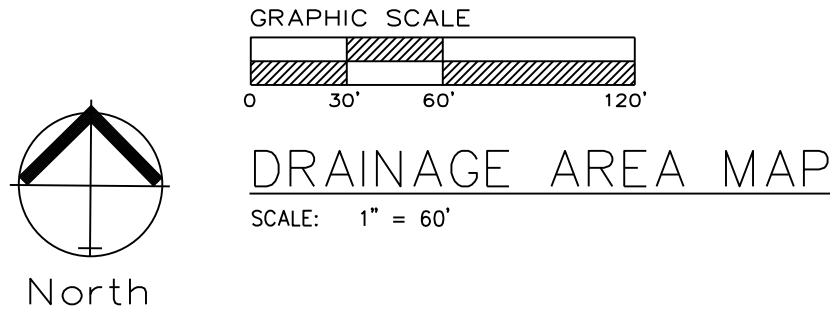
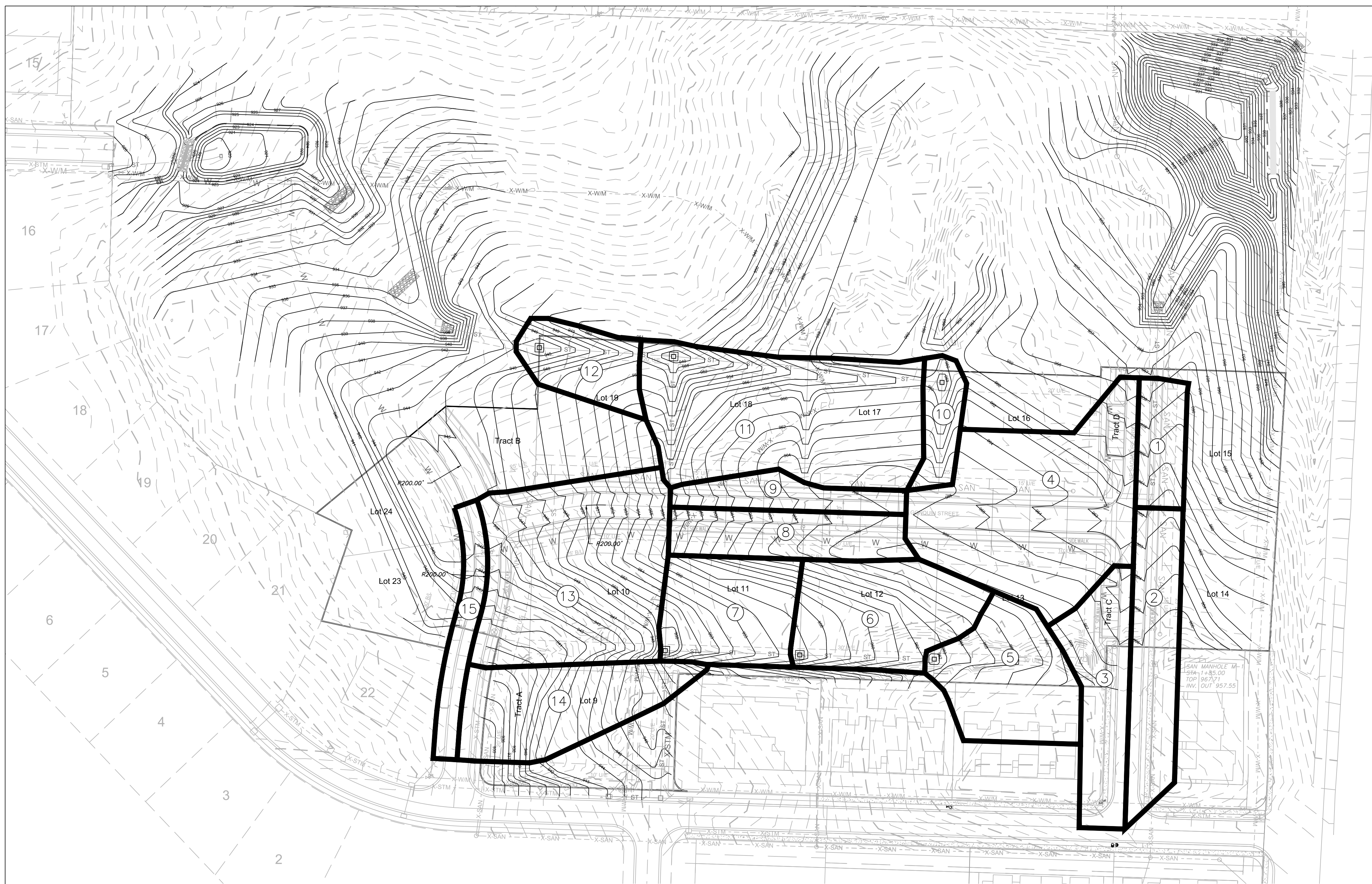
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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

Project:
VILLAS OF CHAPEL
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Issue Date:
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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
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LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

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Master Drainage Map 3 of 3:
Drainage Area Map
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
REGISTERED PROFESSIONAL ENGINEER

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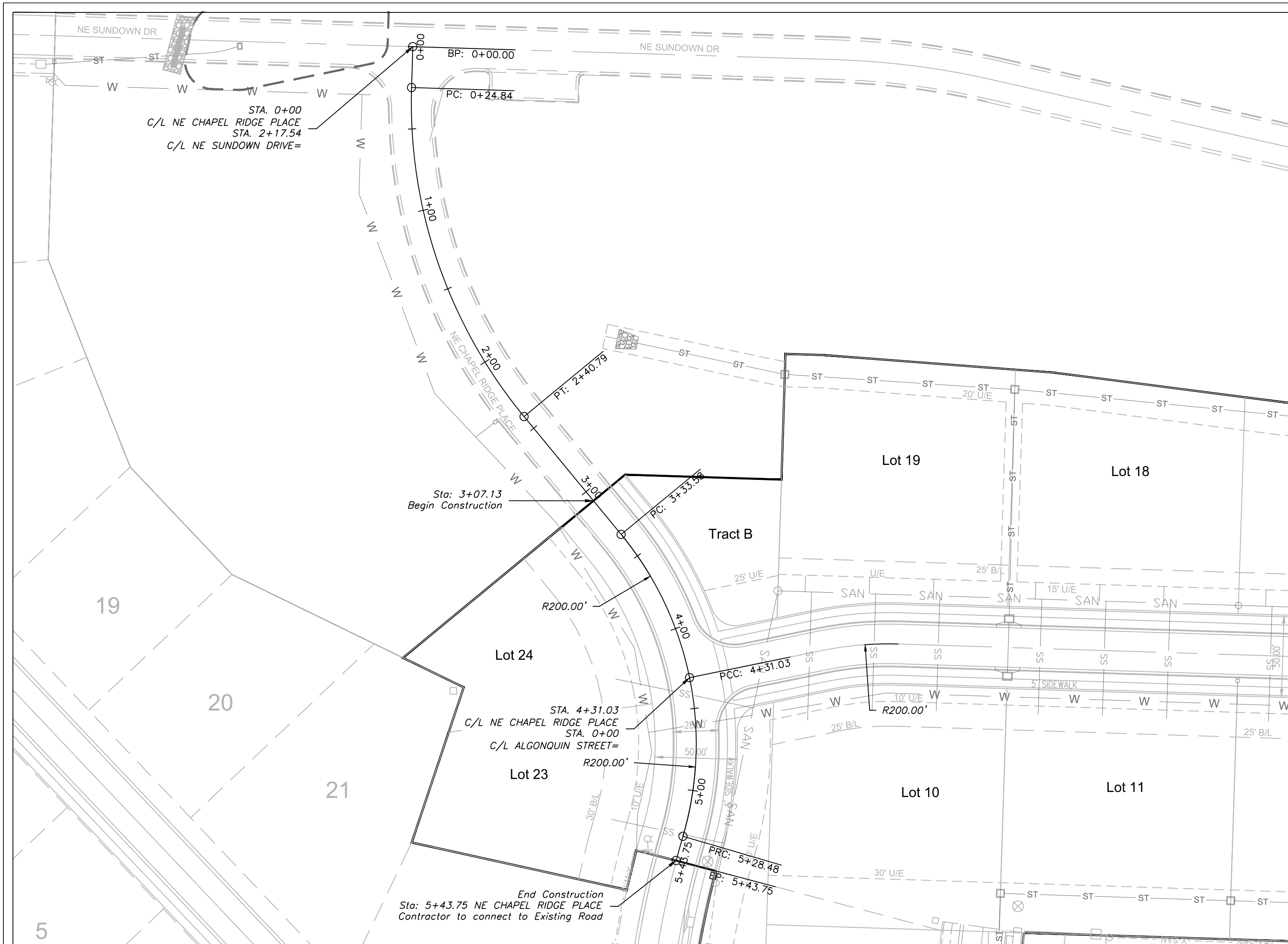
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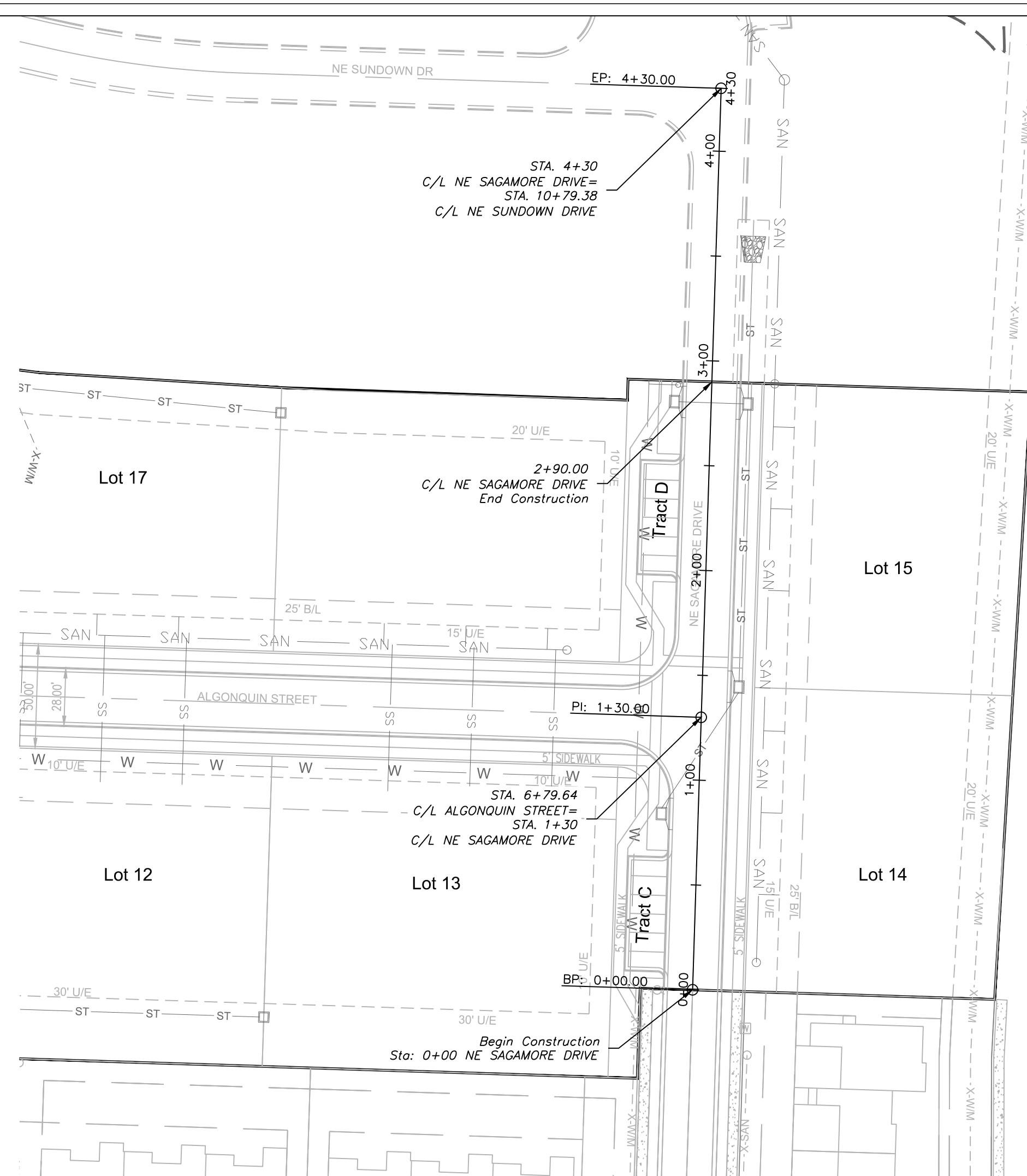
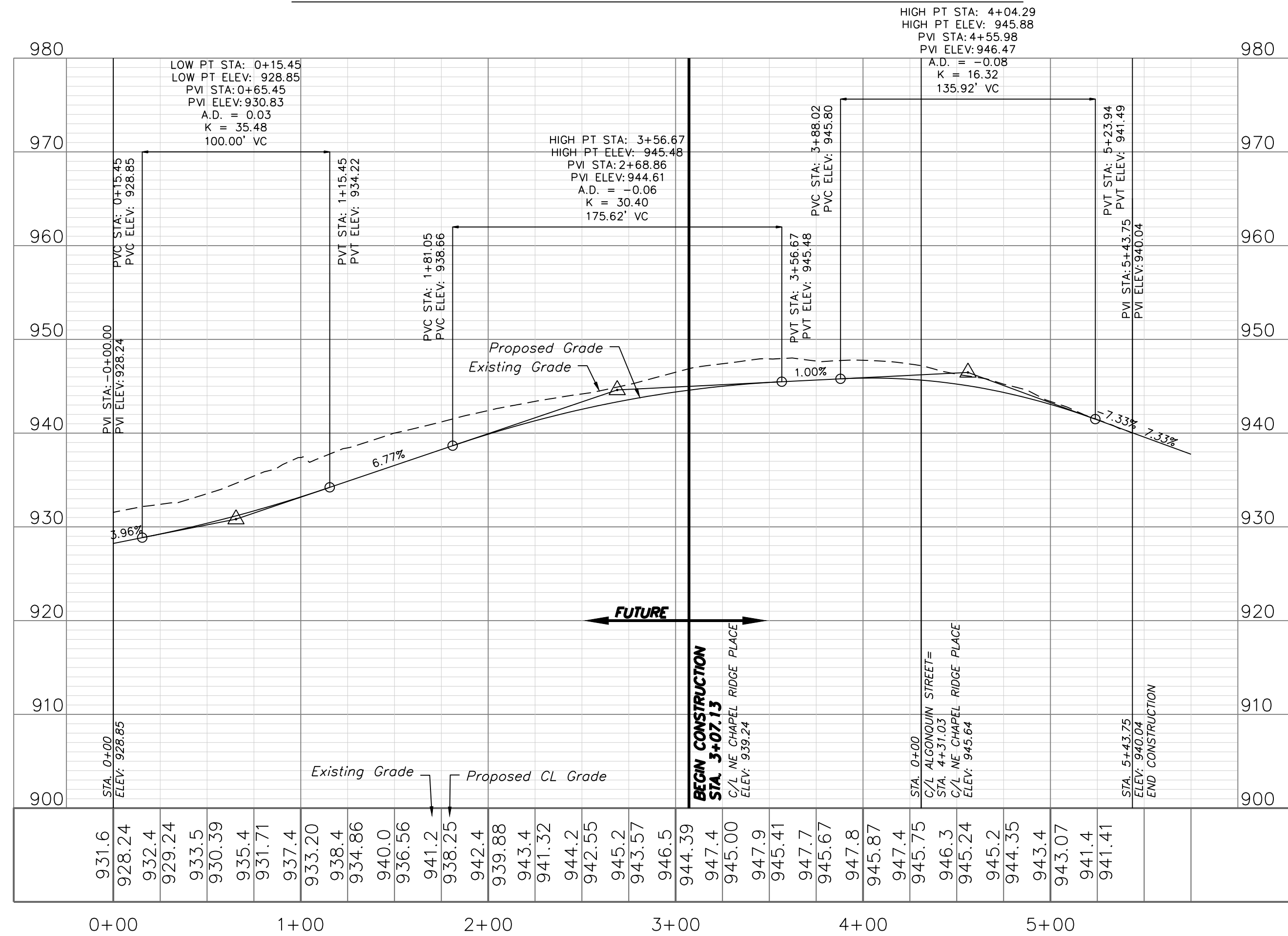
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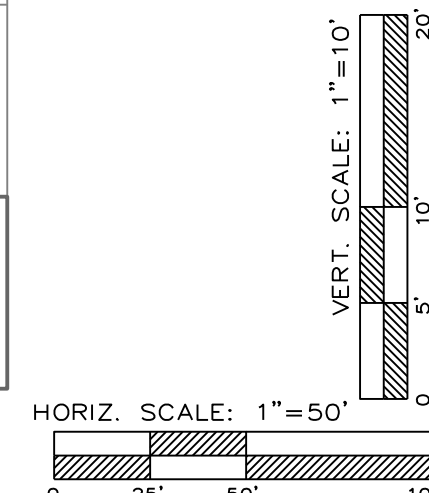
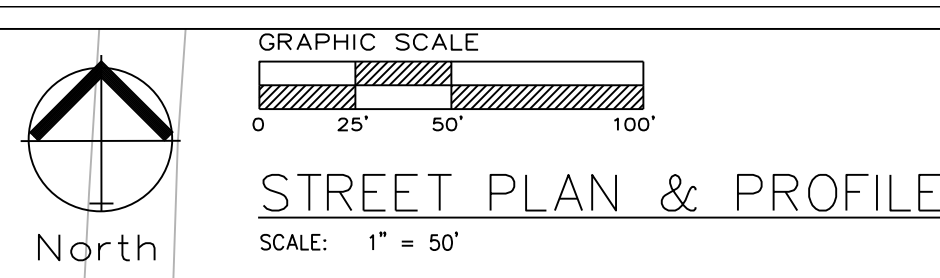
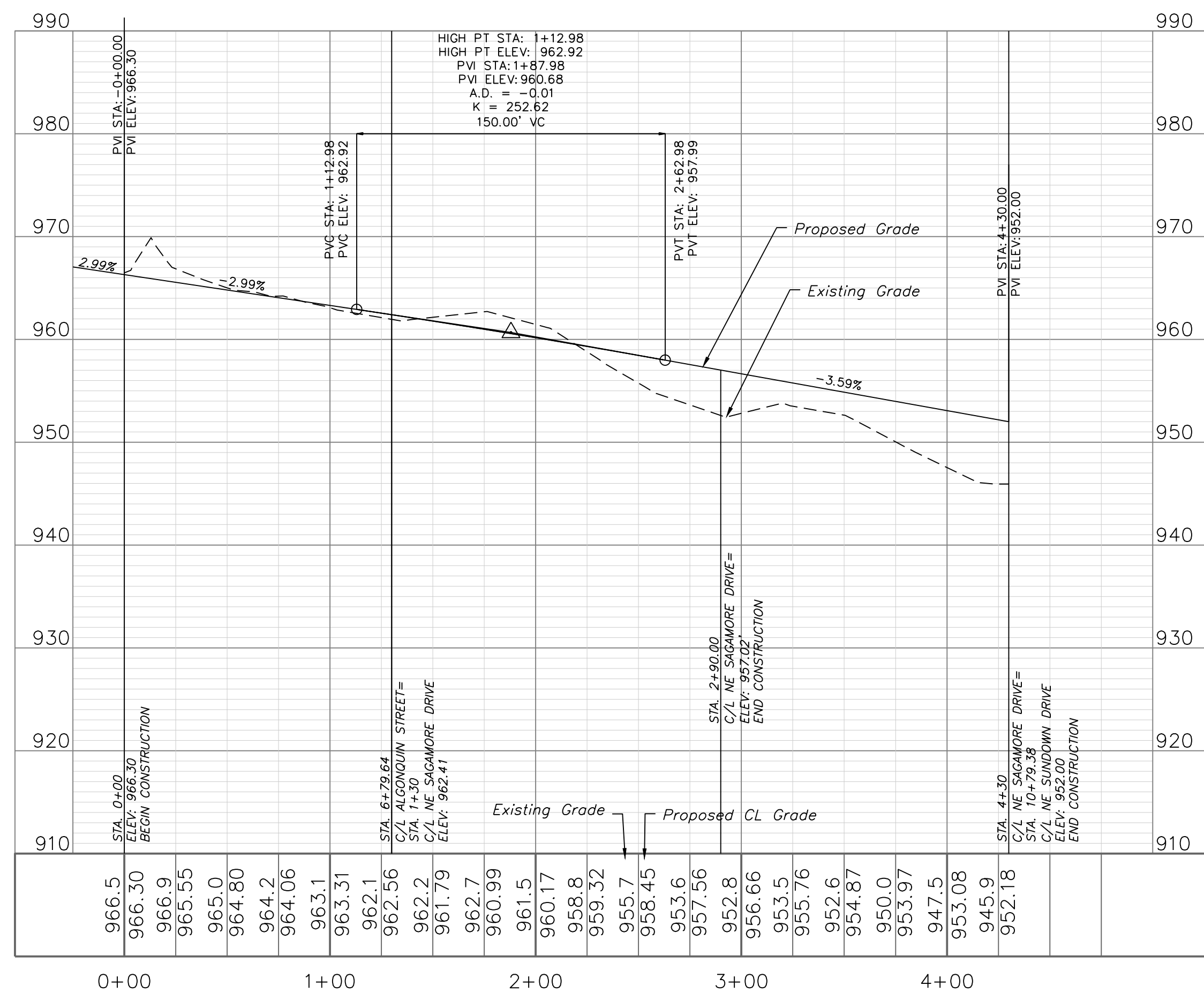
APWA STORM DRAINAGE "TC" COMPUTATIONS FOR : VILLAS OF CHAPEL RIDGE 2ND PLAT																																																																																																																							
yellow areas are self computing overwrite if necessary					Surface types: SURFACE CODES					Asph/ConcBus/Com					Dirt					Grass/Park					Lake					MultFam					SnglFam					Undev					Other																																																																										
					"C" Values					0.90					0.87					0.60					0.30					0.90					0.66					0.51					0.3																																																																										
					TOTAL WATERSHED					OVERLAND FLOW - 100' MAX					SURFACE CODE					P=Paved U=Unpaved					Slope or Elevations if necessary					TC COMPUTATION																																																																																									
					SURFACE CODE					"C" VALUE					OVR LND LENGTH					UP ELEV					DN ELEV					SLOPE %					VELOCITY F/S					Cal Overland Flow T(I)					Used Min 5 Max 15 T(I)					Cal Channel One T(T)					Cal Channel Two T(T)					Total T@ 10					AREA ID																																																						
AREA ID					TOTAL SQ.FT.					TOTAL ACRES					WTRSHD LENGTH					UP ELEV					DN ELEV					SLOPE %					VELOCITY F/S					Cal Overland Flow T(I)					Used Min 5 Max 15 T(I)					Cal Channel One T(T)					Cal Channel Two T(T)					Total T@ 10					AREA ID																																																						
POST																																																																	POST																																																						
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NE CHAPEL RIDGE PLACE



NE SAGAMORE DRIVE



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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
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LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

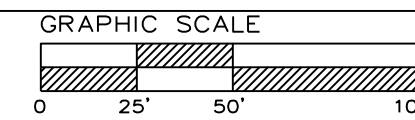
Project:
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Issue Date:
April 10, 2020

Street Plan and Profile
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
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MO PE 2006019708
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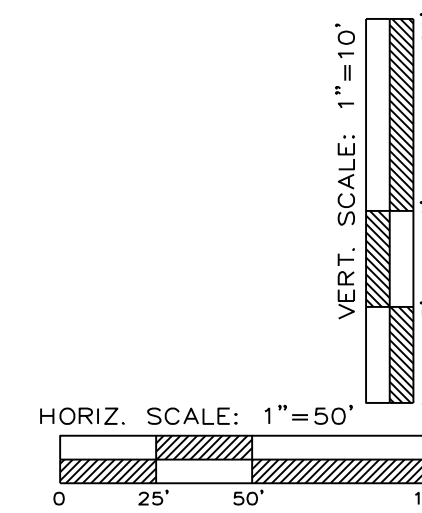
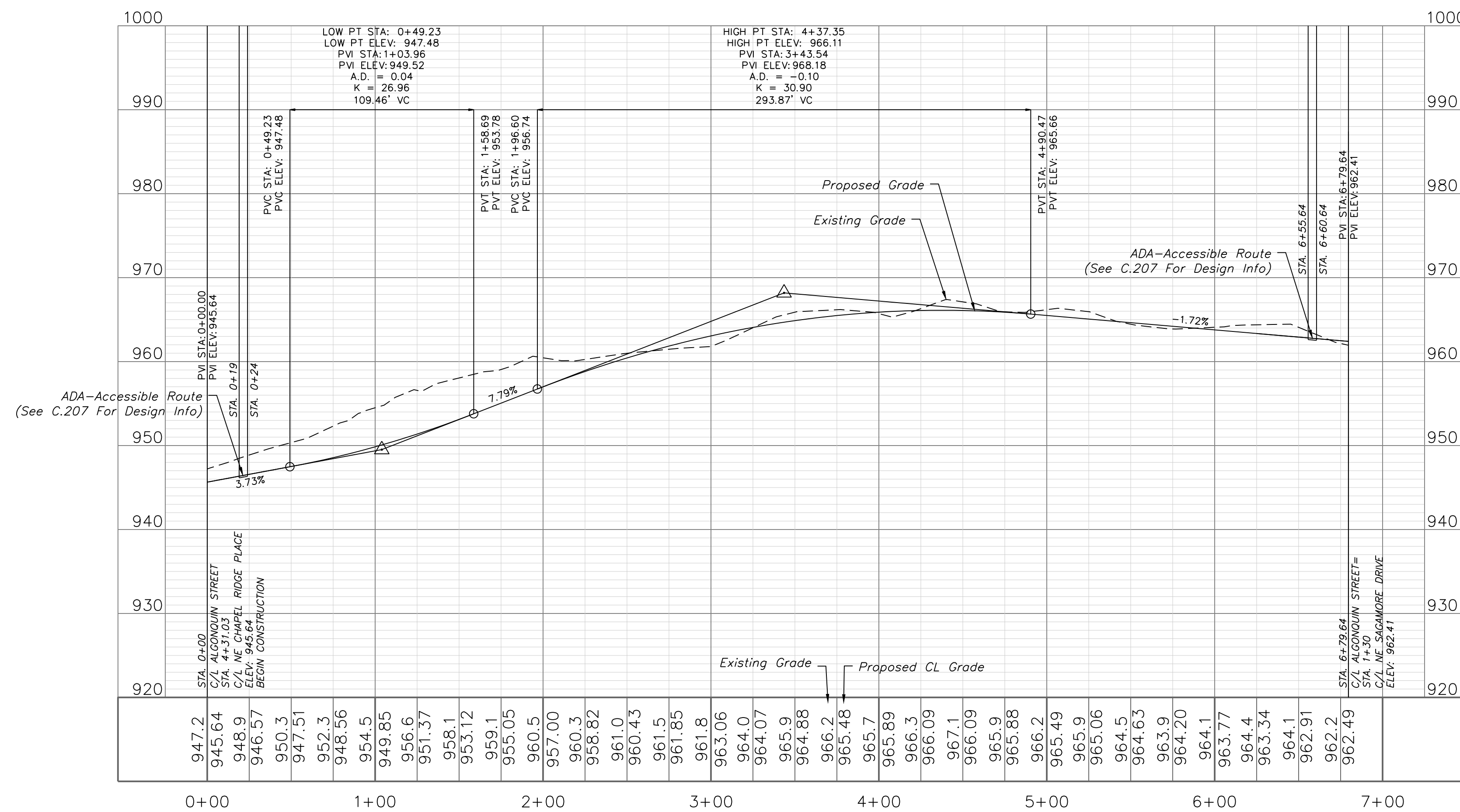
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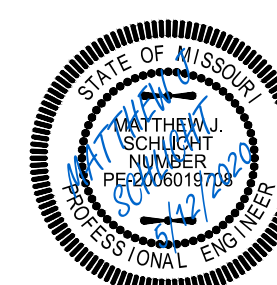
STREET PLAN & PROFILE
SCALE: 1" = 50'

ALGONQUIN STREET



Street Plan and Profile

Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
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LOTS 9-19 & TRACTS A-D
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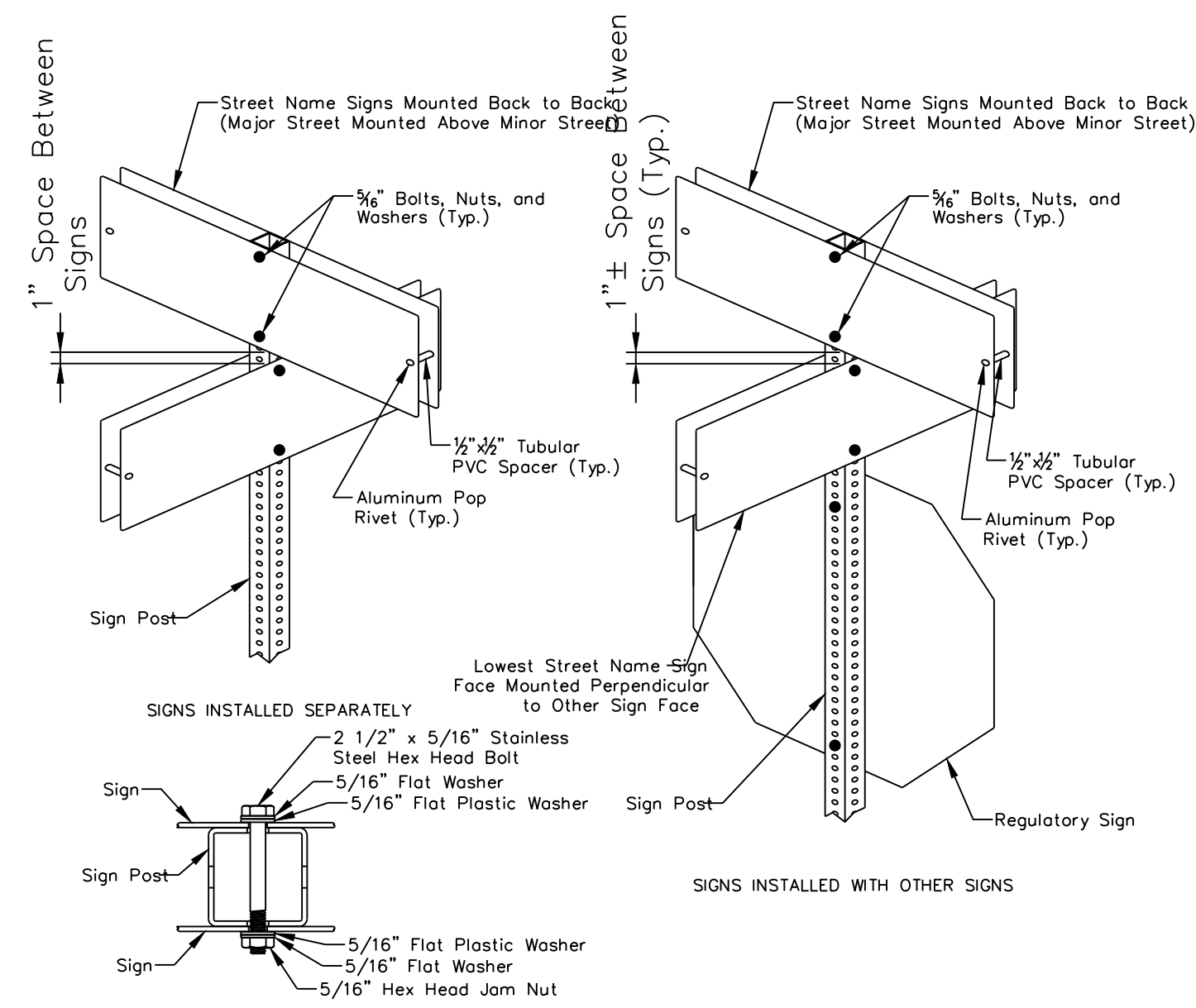
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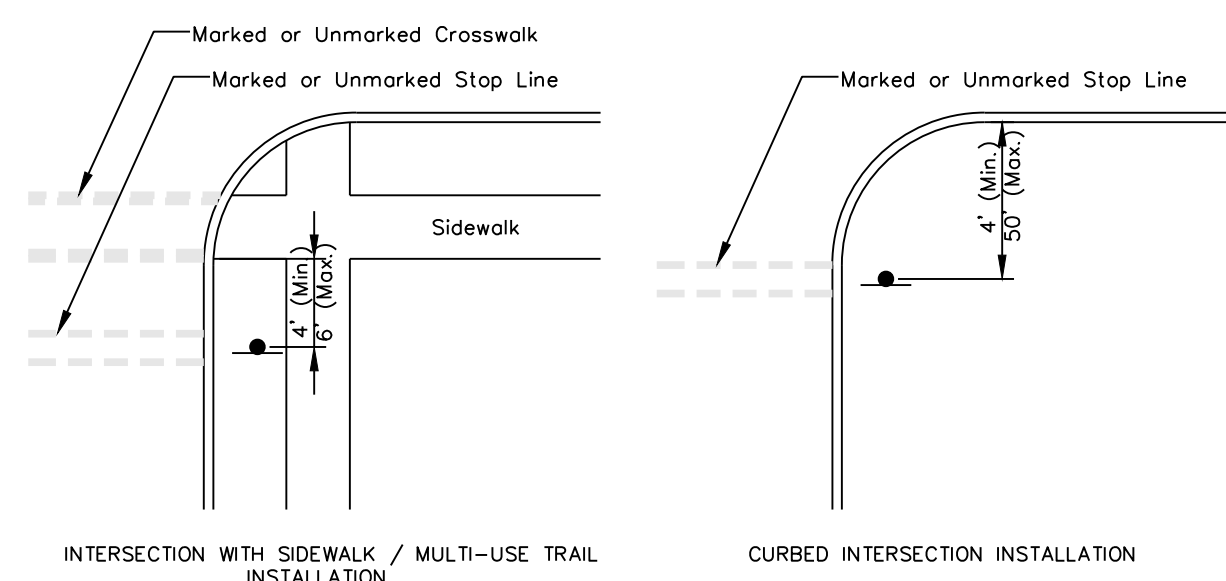
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Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

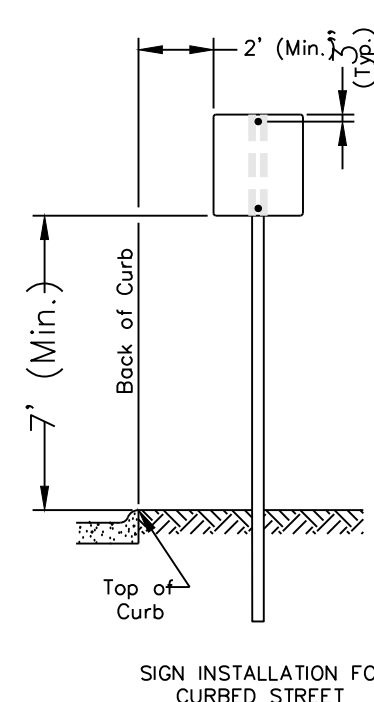
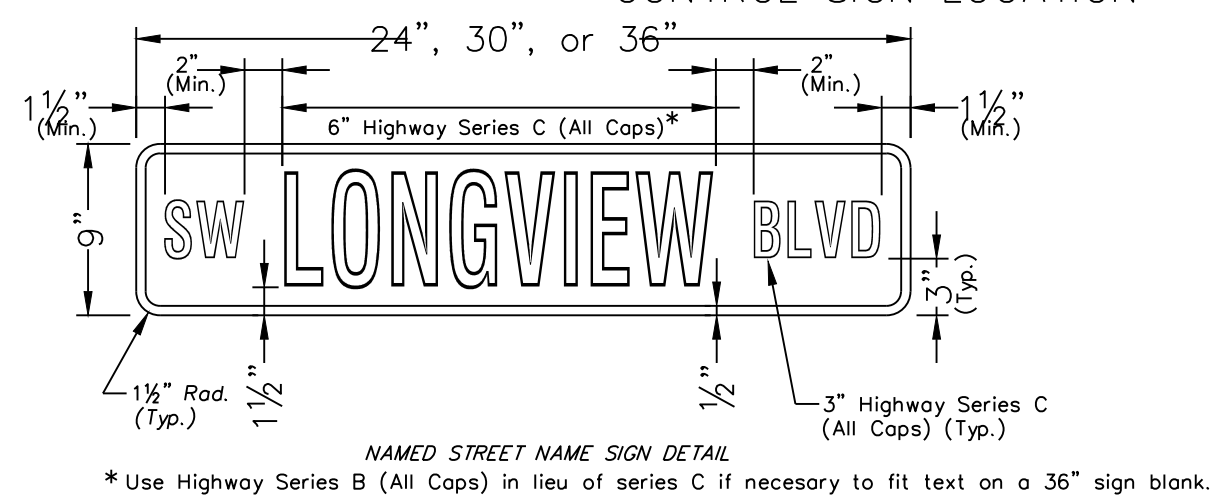
Project:
VILLAS OF CHAPEL
RIDGE, LS MO
Issue Date:
April 10, 2020



SQUARE STEEL POST MOUNTING DETAILS

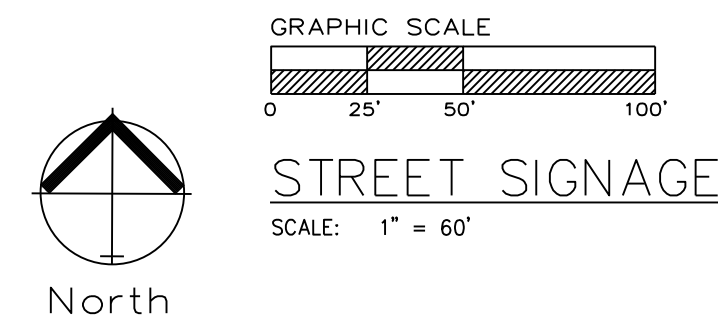
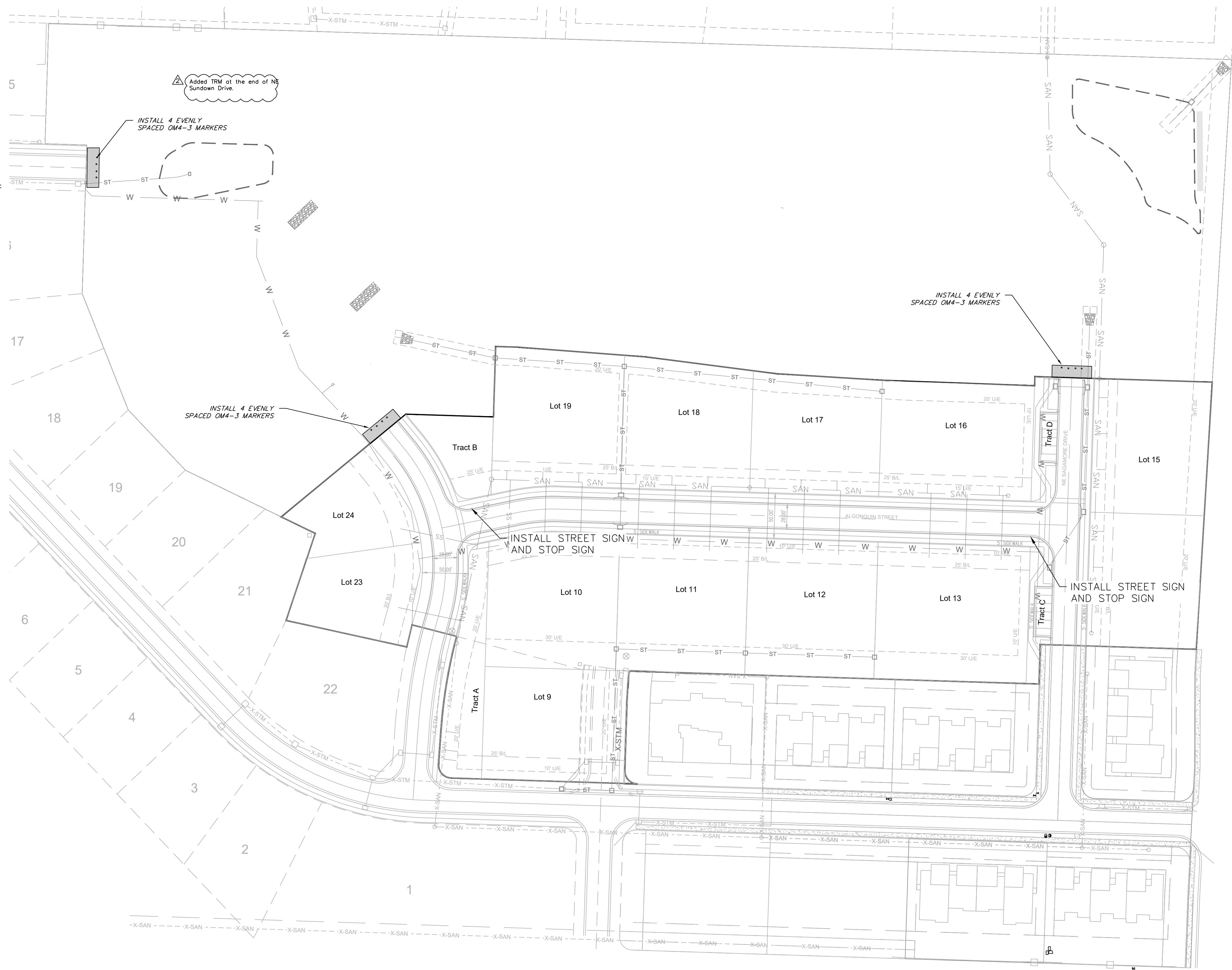


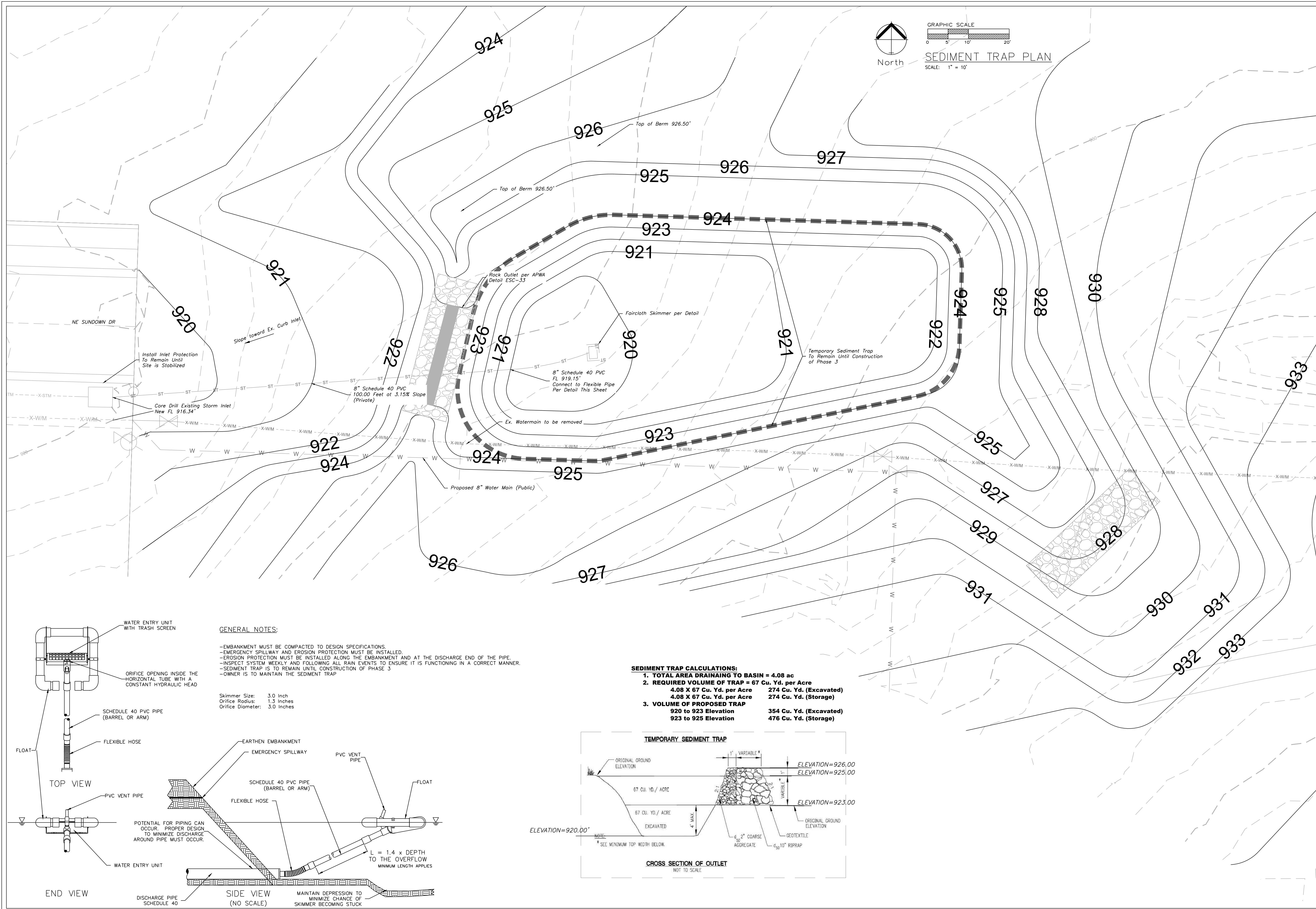
CONTROL SIGN LOCATION



SIGN MOUNTING DETAILS

* The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.





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Project: VILLAS OF CHAPEL RIDGE LS100
Issue Date: April 10, 2020

THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
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LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

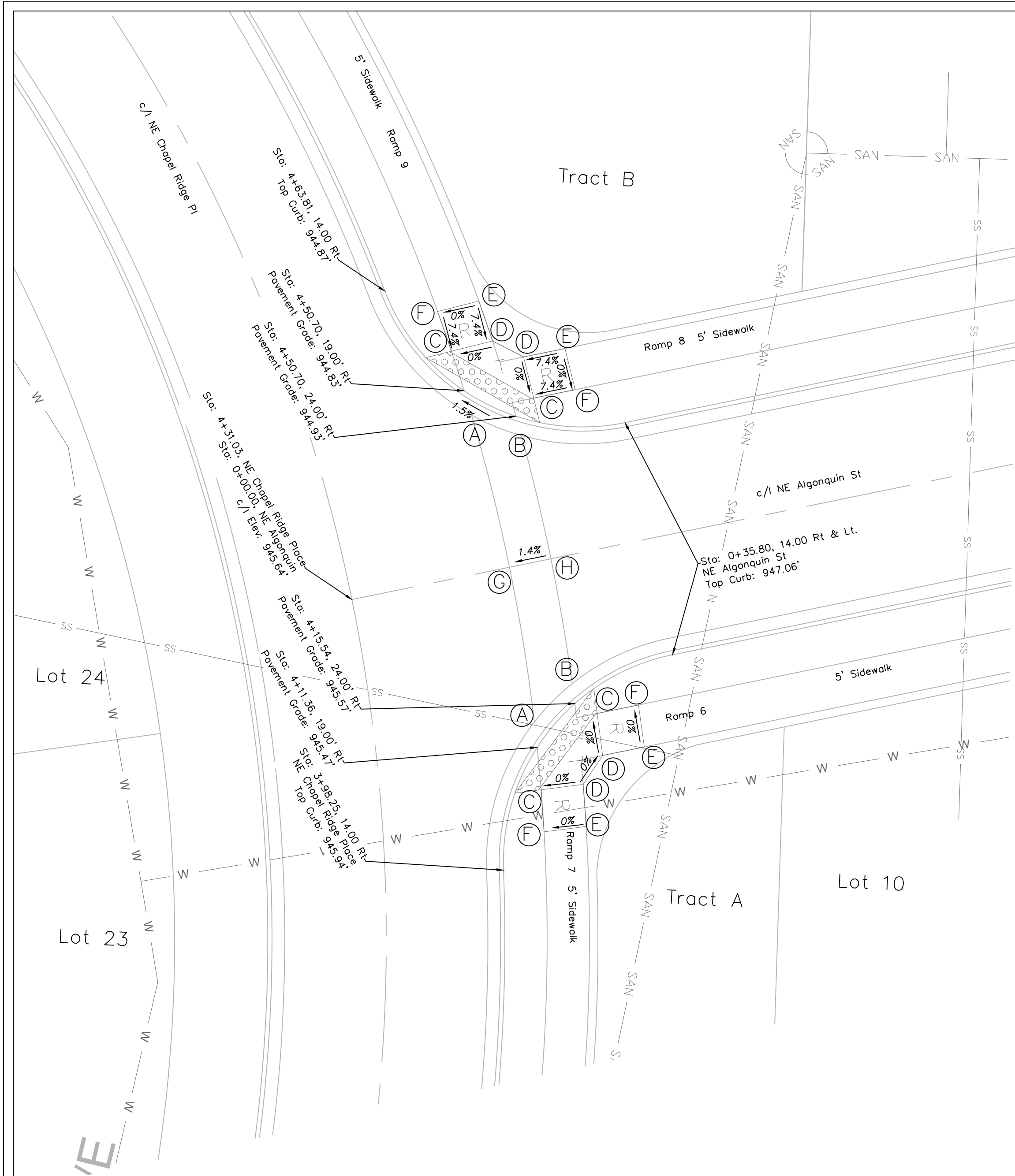
Sediment Basin
Grading Plan
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

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KS PE 19071
OK PE 25226
NE PE E-14335

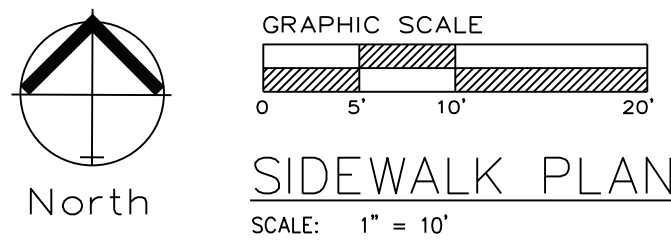
REVISIONS

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REV. 5/12/2020	

C. 206



SPOT ELEVATION TABLE				
Spot	Ramp 6 Elevation	Ramp 7 Elevation	Ramp 8 Elevation	Ramp 9 Elevation
A	945.47	945.47	944.83	944.83
B	945.57	945.57	944.93	944.93
C	945.62	945.52	944.98	944.88
D	945.62	945.62	944.98	944.98
E	945.99	945.99	945.35	945.35
F	945.99	945.99	945.35	945.35
G	945.18	945.18	945.18	945.18
H	945.25	945.25	945.25	945.25



SPOT ELEVATION TABLE					
Spot	Ramp 1 Elevation	Ramp 2 Elevation	Ramp 3 Elevation	Ramp 4 Elevation	Ramp 5 Elevation
A	962.55	962.55	961.42	961.33	961.35
B	962.70	962.70	961.38	961.27	961.42
C	962.75	962.69	961.45	961.30	961.45
D	962.82	962.76	961.45	961.37	961.38
E	963.19	963.13	961.90	961.81	961.75
F	963.12	963.06	961.90	961.74	961.82
G	961.99	961.99	961.99	961.38	961.38
H	961.92	961.92	961.92	961.31	961.31

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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
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LOTS 9-19 & TRACTS A-D
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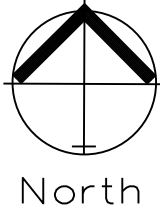
Project:
VILLAS OF CHAPEL
RIDGE-LSMO
Issue Date:
April 10, 2020

Sidewalk and
Intersection Plan
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

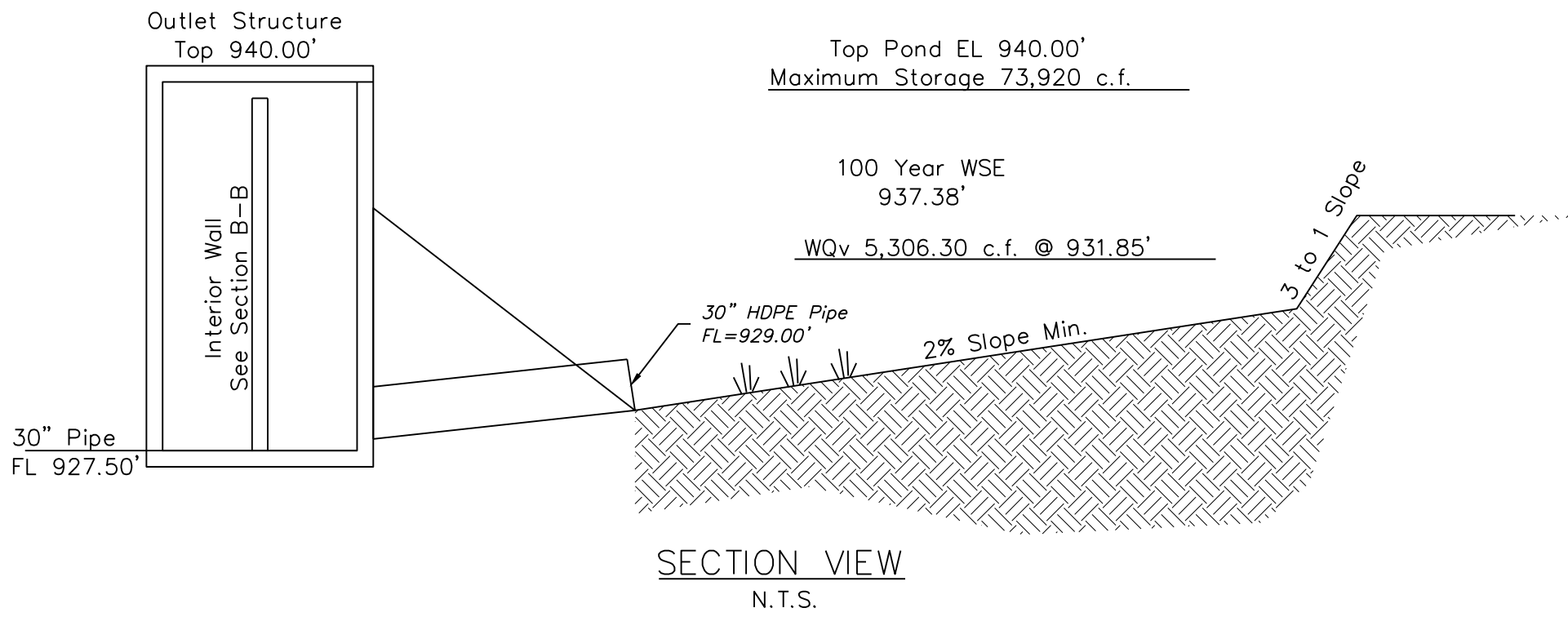
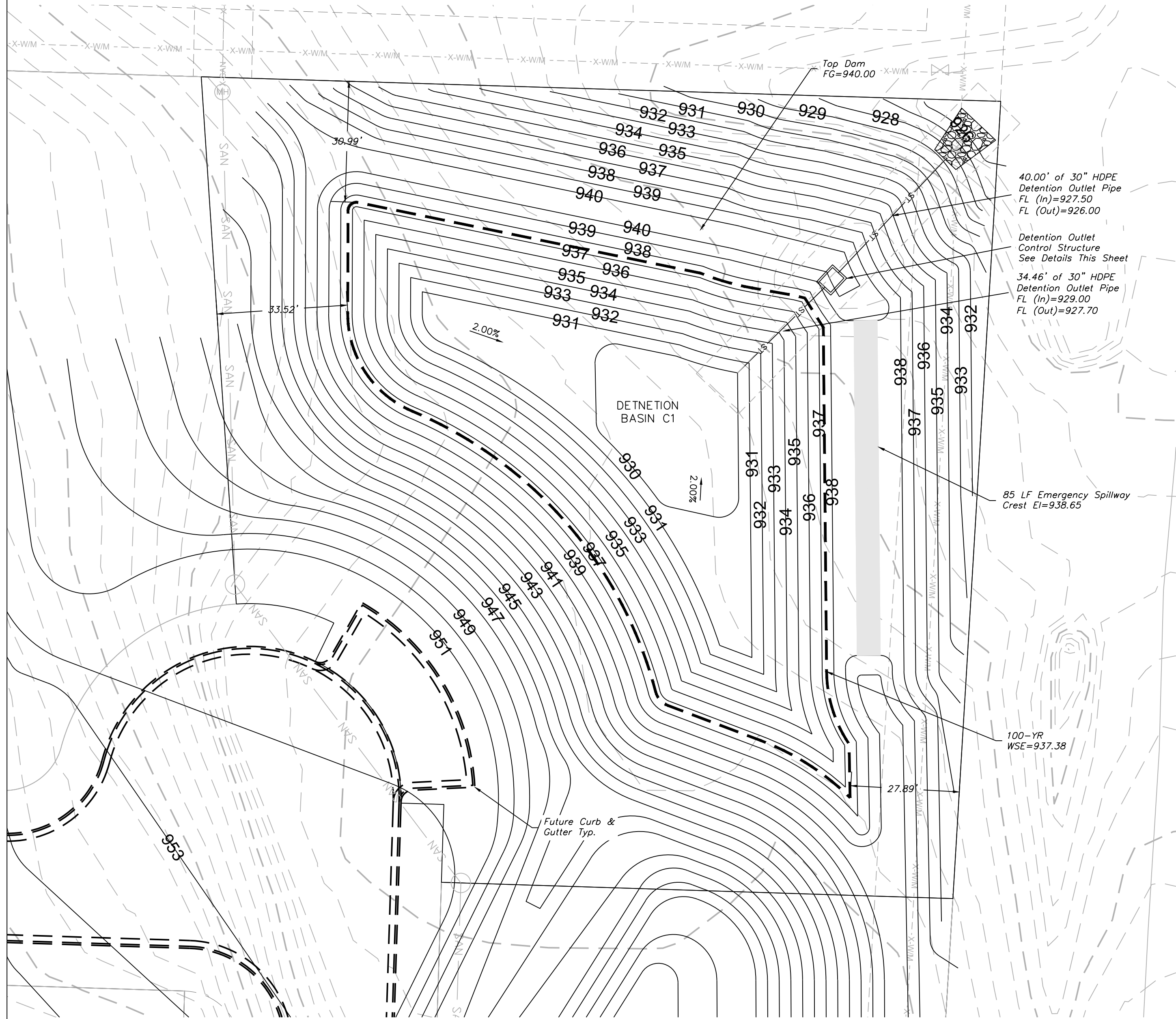
STATE OF MISSOURI
MATTHEW J. SCHLICHT
REGISTERED PROFESSIONAL ENGINEER
NO. 0000019708
EXPIRATION DATE 12/31/2025

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226
NE PE E-14335

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REV. 5/12/2020	



DETENTION BASIN PLAN
SCALE: 1" = 20'

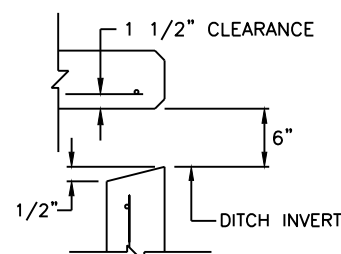
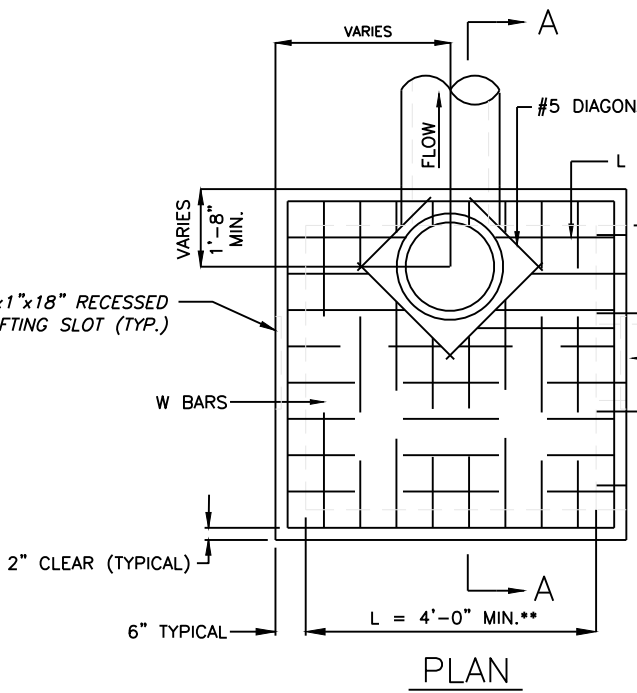
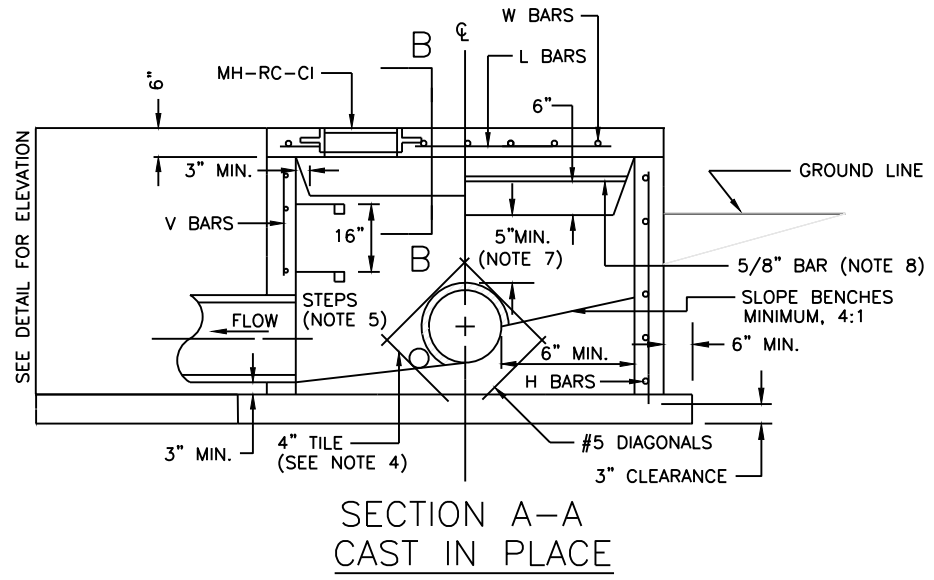


GENERAL NOTES:

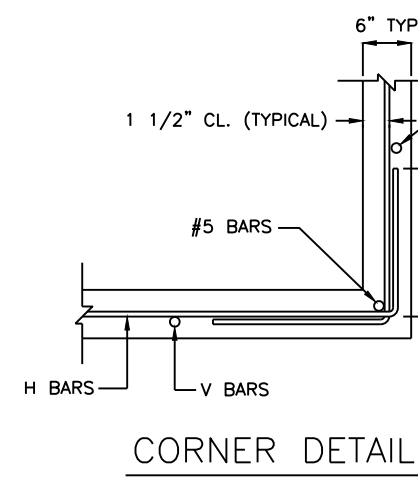
1. Locate ring and cover over outlet.
2. All work and materials shall conform to APWA Sect. 2600.
3. Use 3/4" chamfer strip on all exposed concrete corners.
4. Steps required @ 16" O.C. when depth from top of casting to invert exceeds 4 feet.
5. Boxouts will not be allowed to project through the corners of the structure.
6. The minimum reinforcing shall be 1 H-bar over a cast-in place pipe and 2 H-bars over a precast boxout.
7. Limit opening height to 6" with No. 5 galvanized bars extending to corner rebars.
9. Show field inlet orientation on plans plus number and size of opening.
10. O.R. = one half outside pipe diameter (O.D.).
11. 4" Ø field tile or precast hole shall be located at entering pipe and in the front face sump points. These tiles or openings shall be capped with 1/4" galvanized wire mesh on the outside of the inlet and clear the invert and base concrete.
12. Location of the Manhole shall be located along the Northeast side of the structure.

BARS	SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6

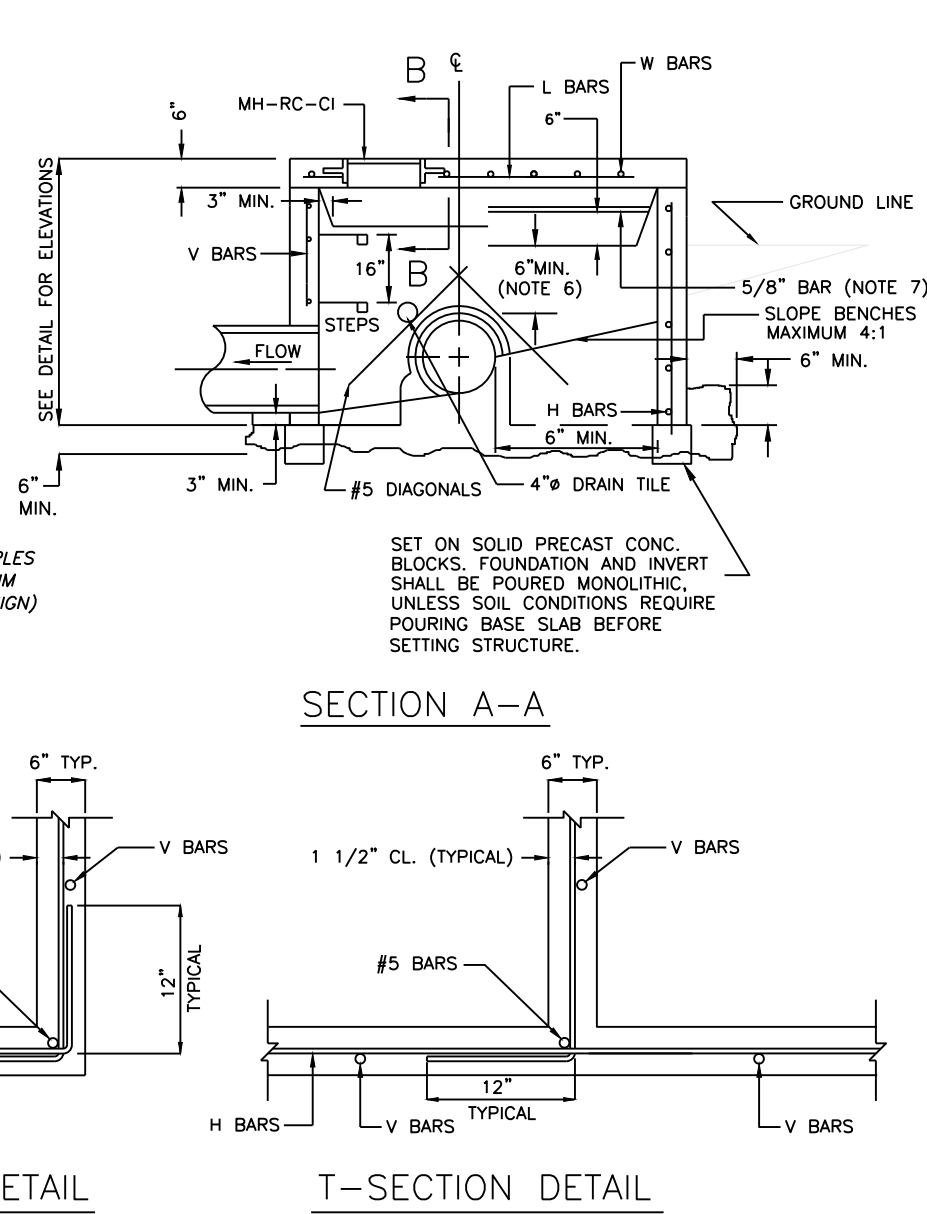
Detention Outlet Structure



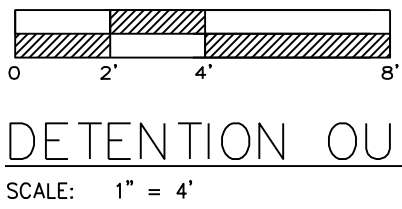
SECTION B-B



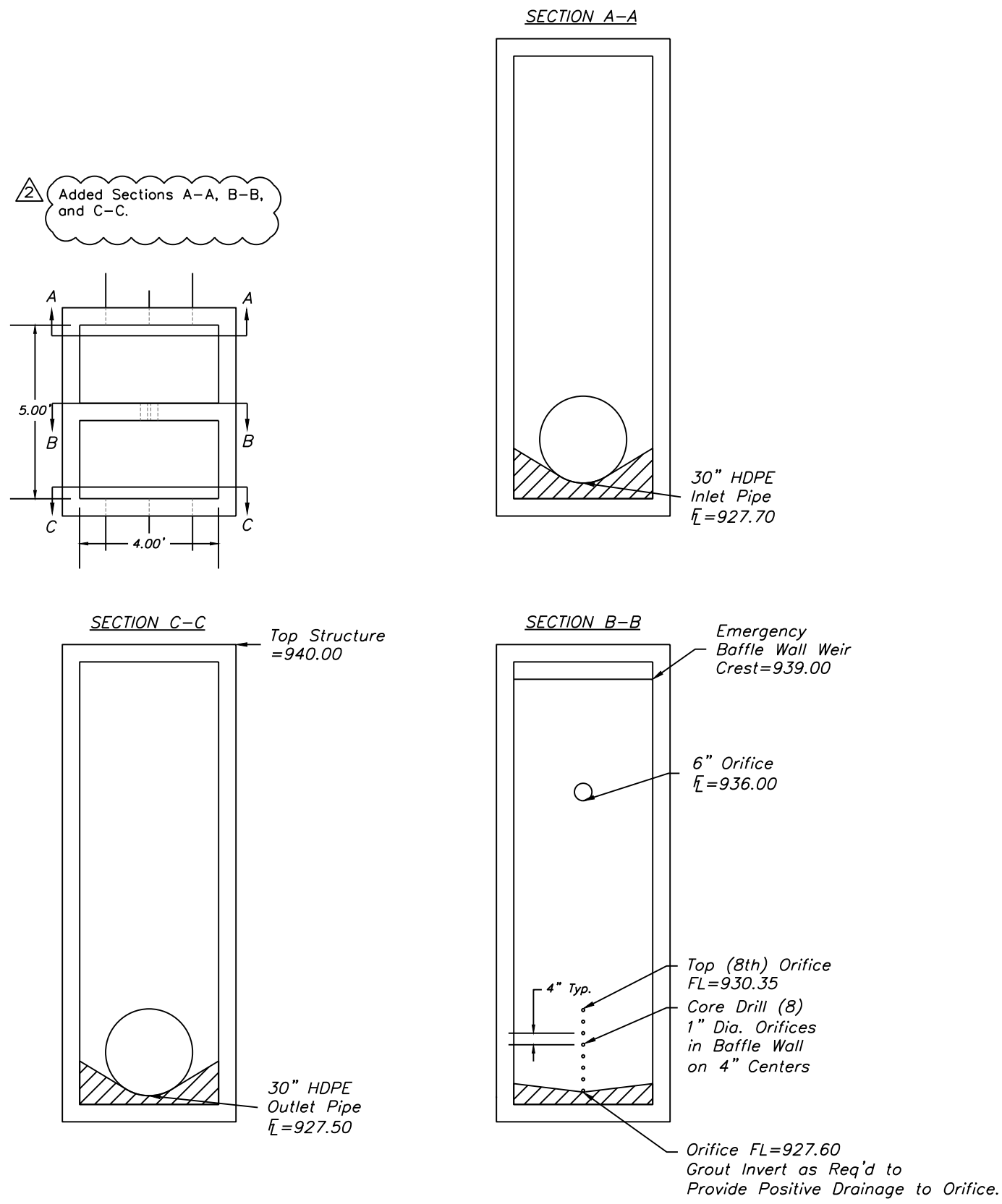
CORNER DETAIL



T-SECTION DETAIL

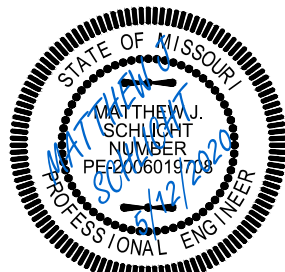


DETENTION OUTLET STRUCTURE



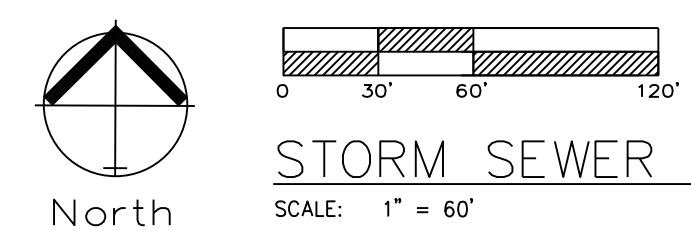
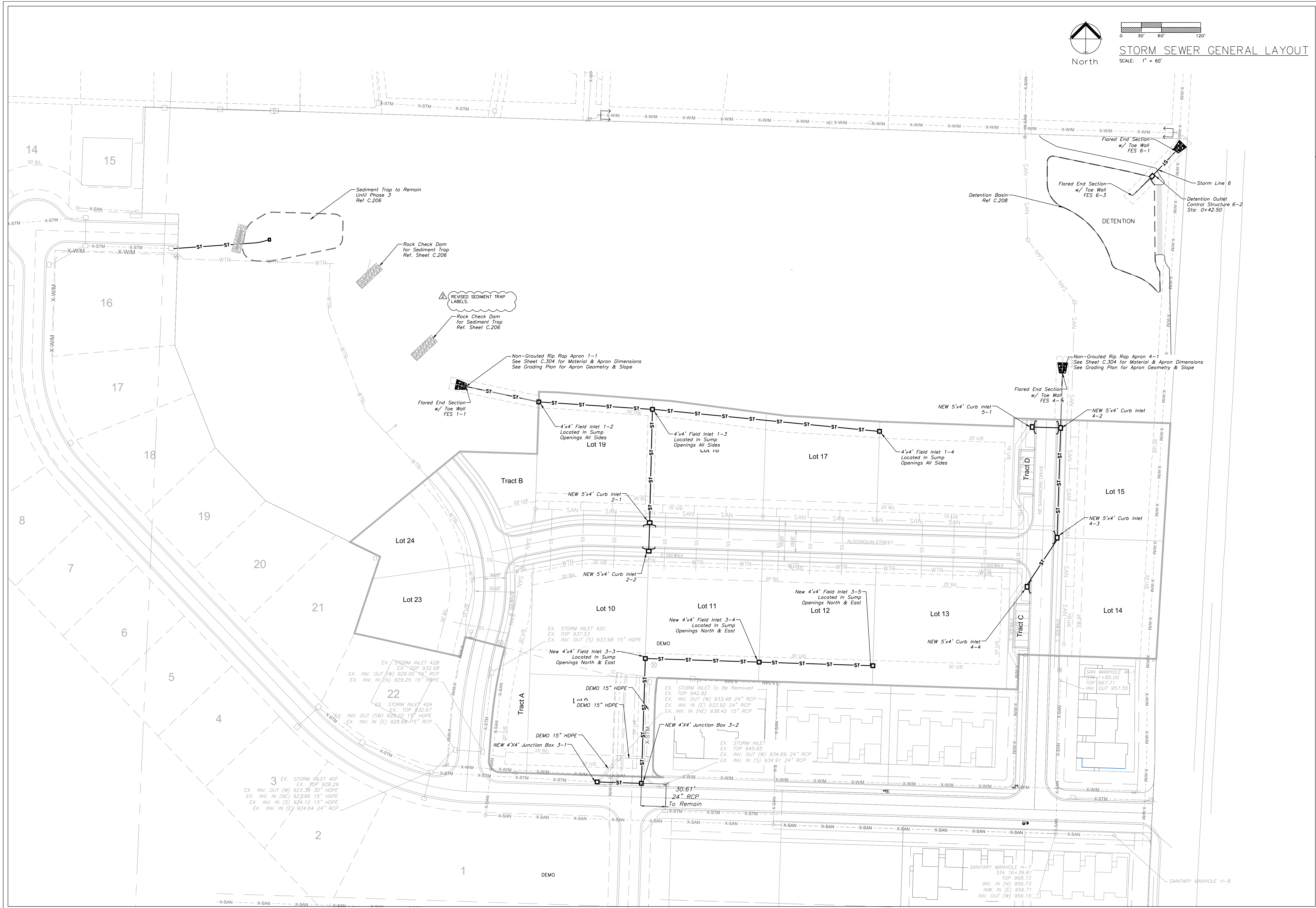
Detention Basin Plan

Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

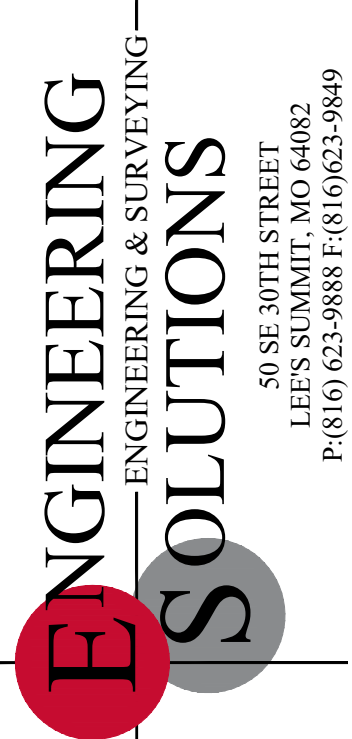


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STORM SEWER GENERAL LAYOUT

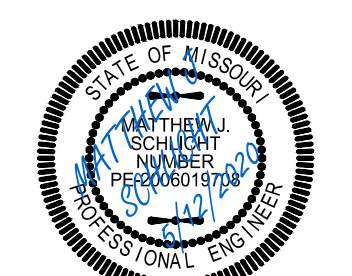


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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
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LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

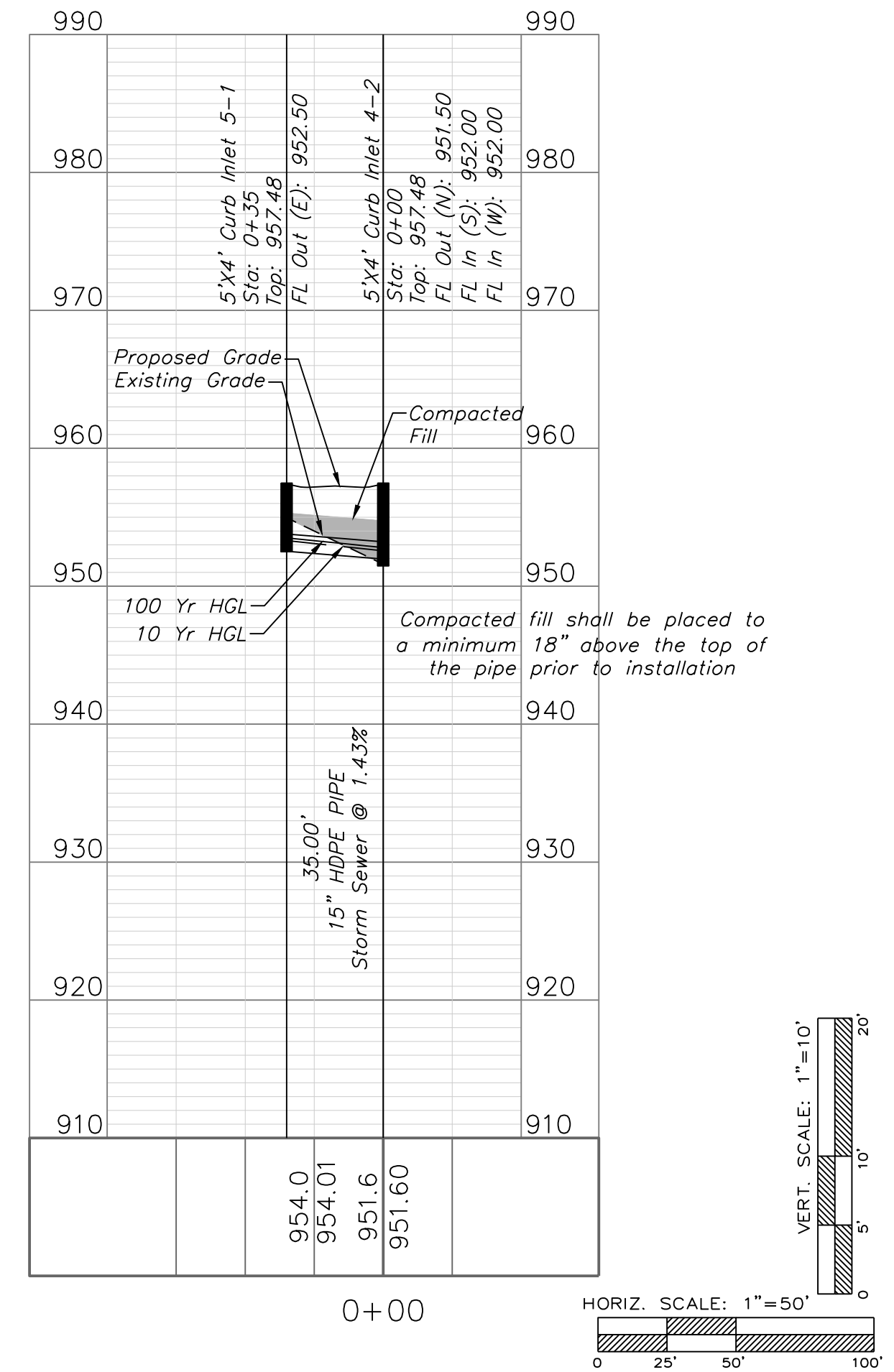
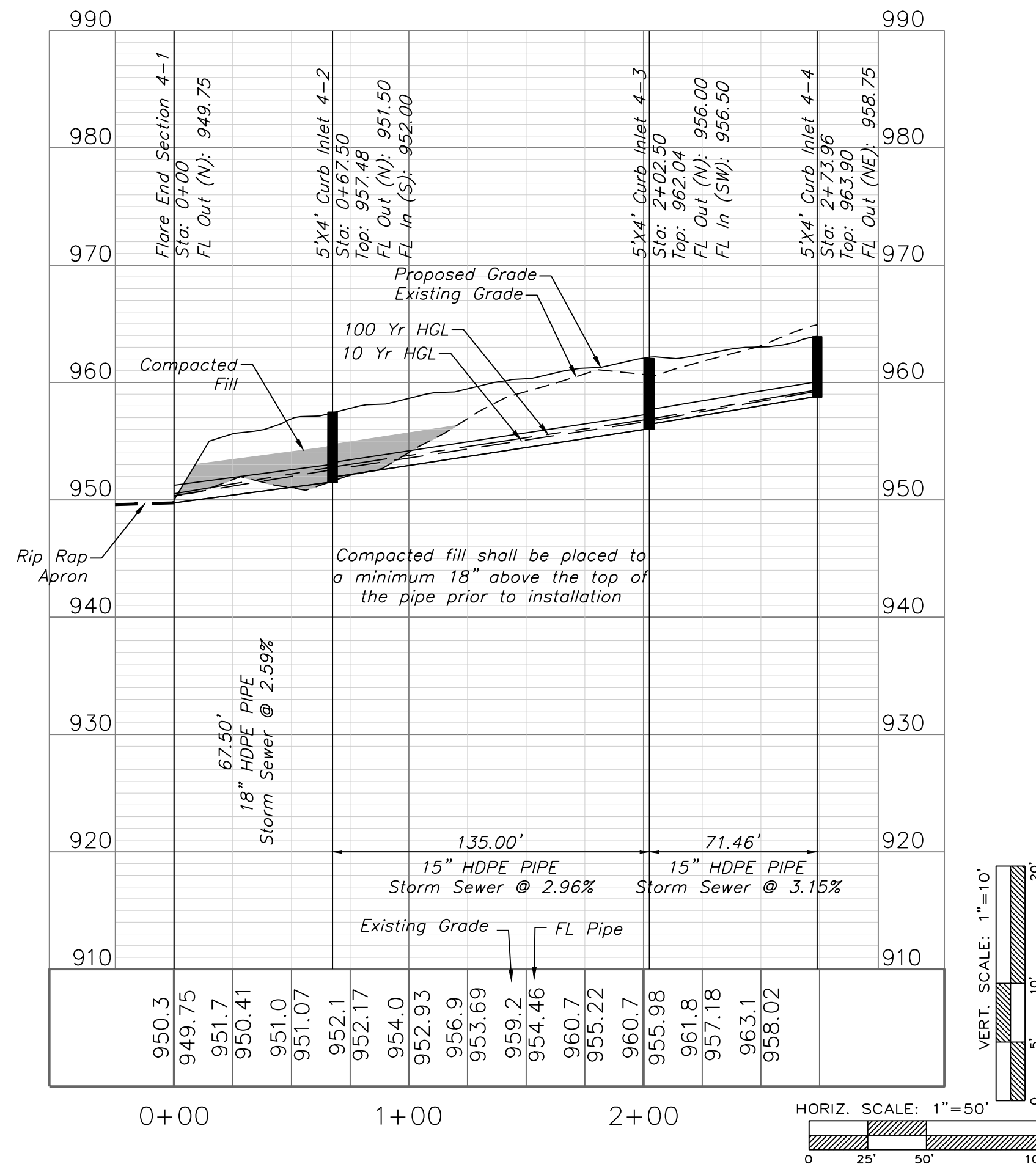
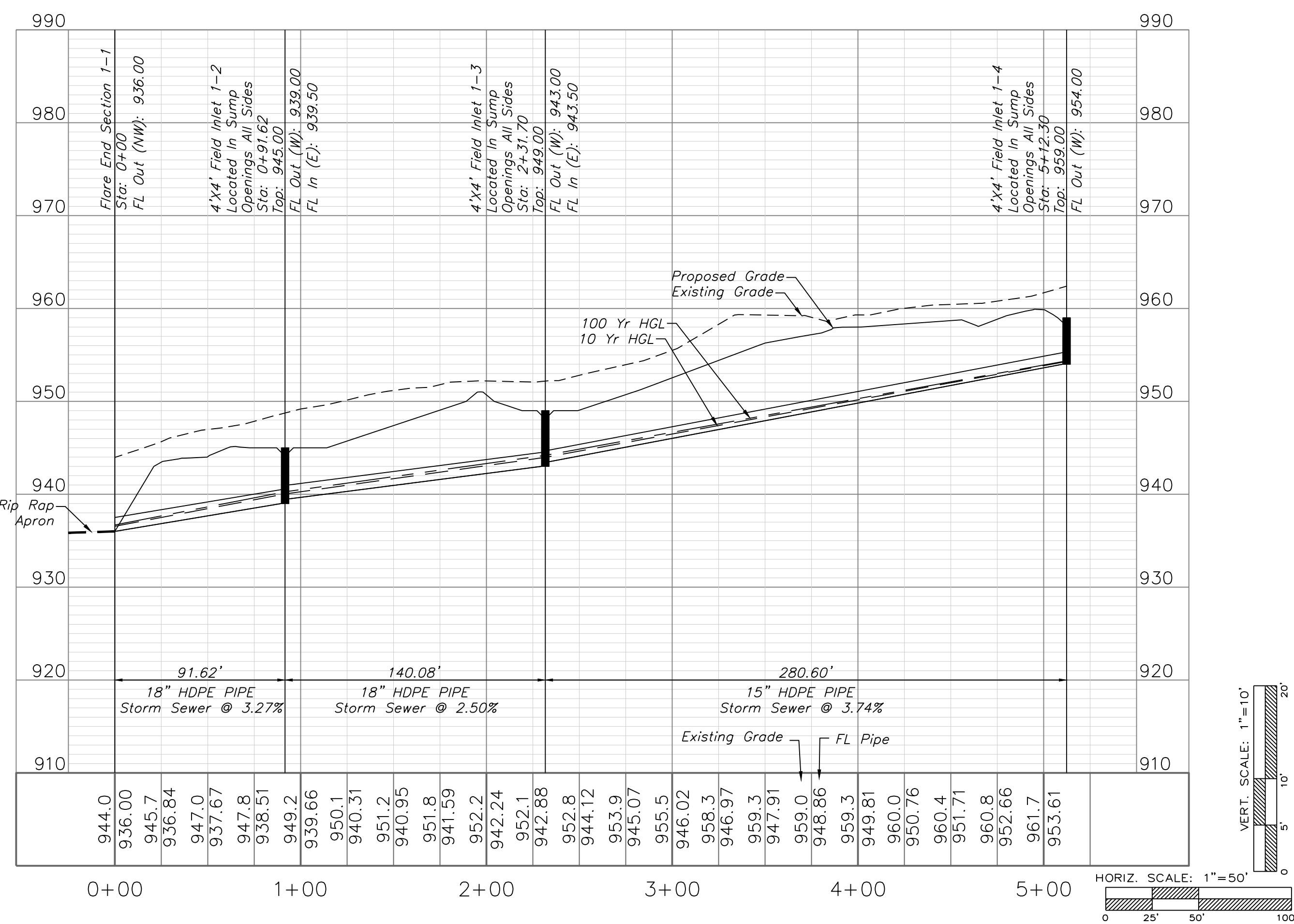
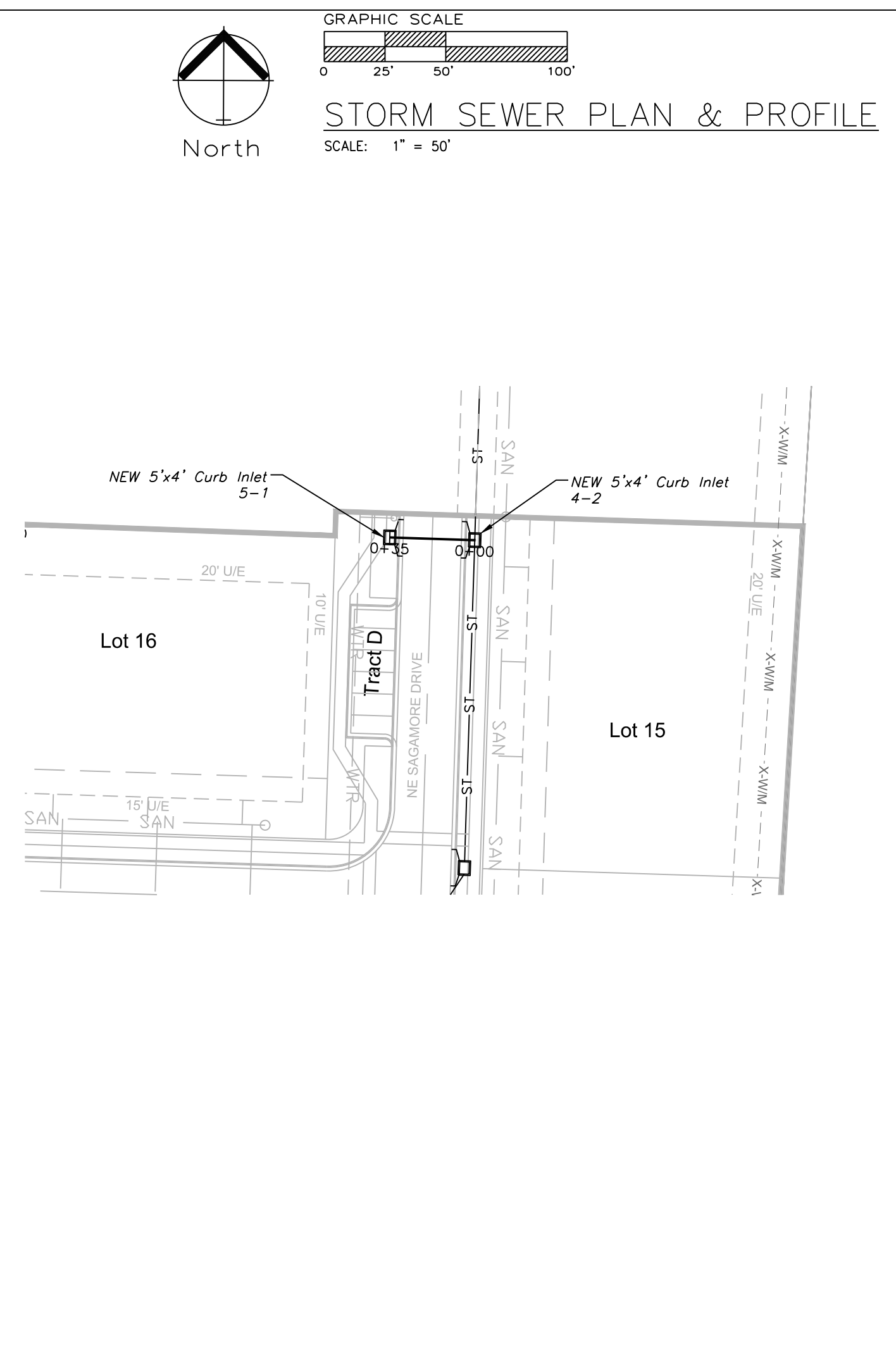
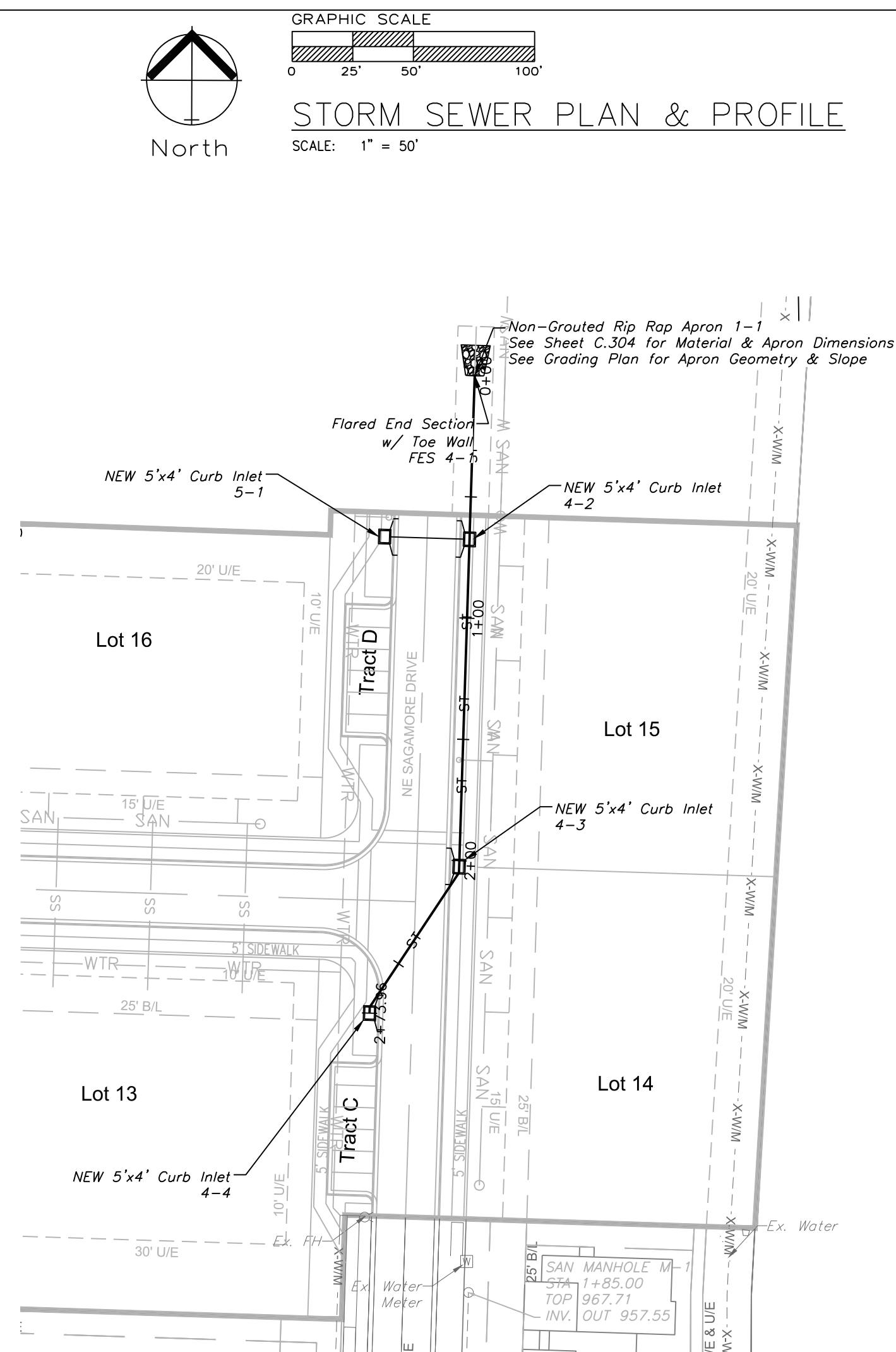
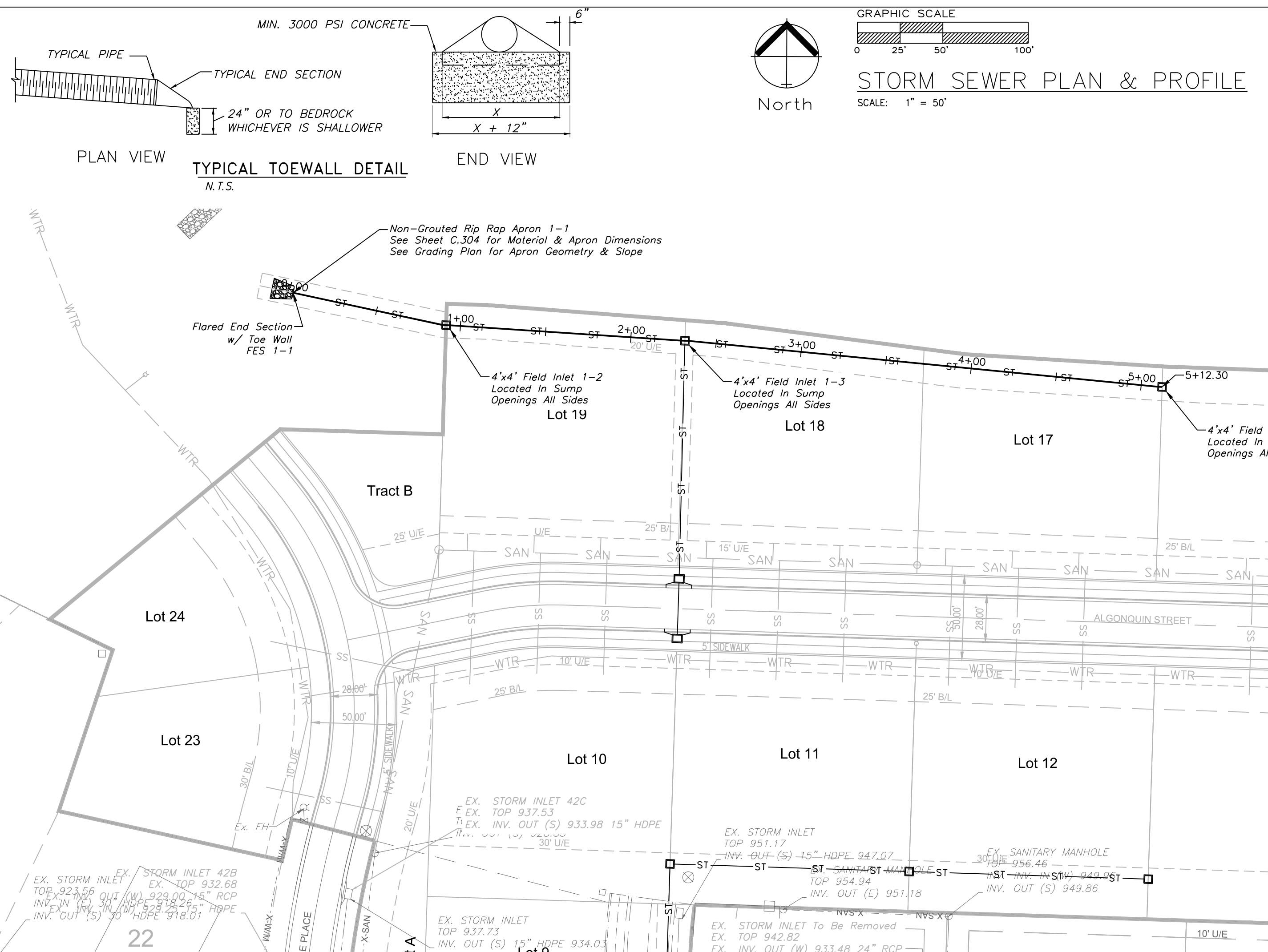
Project:
VILLAS OF CHAPEL
RIDGE, LS MO
Issue Date:
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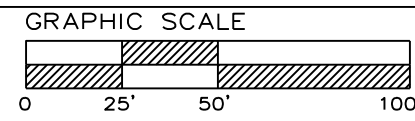
Storm Sewer General Layout
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri



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KS PE 19071
OK PE 25228
NE PE E-114335

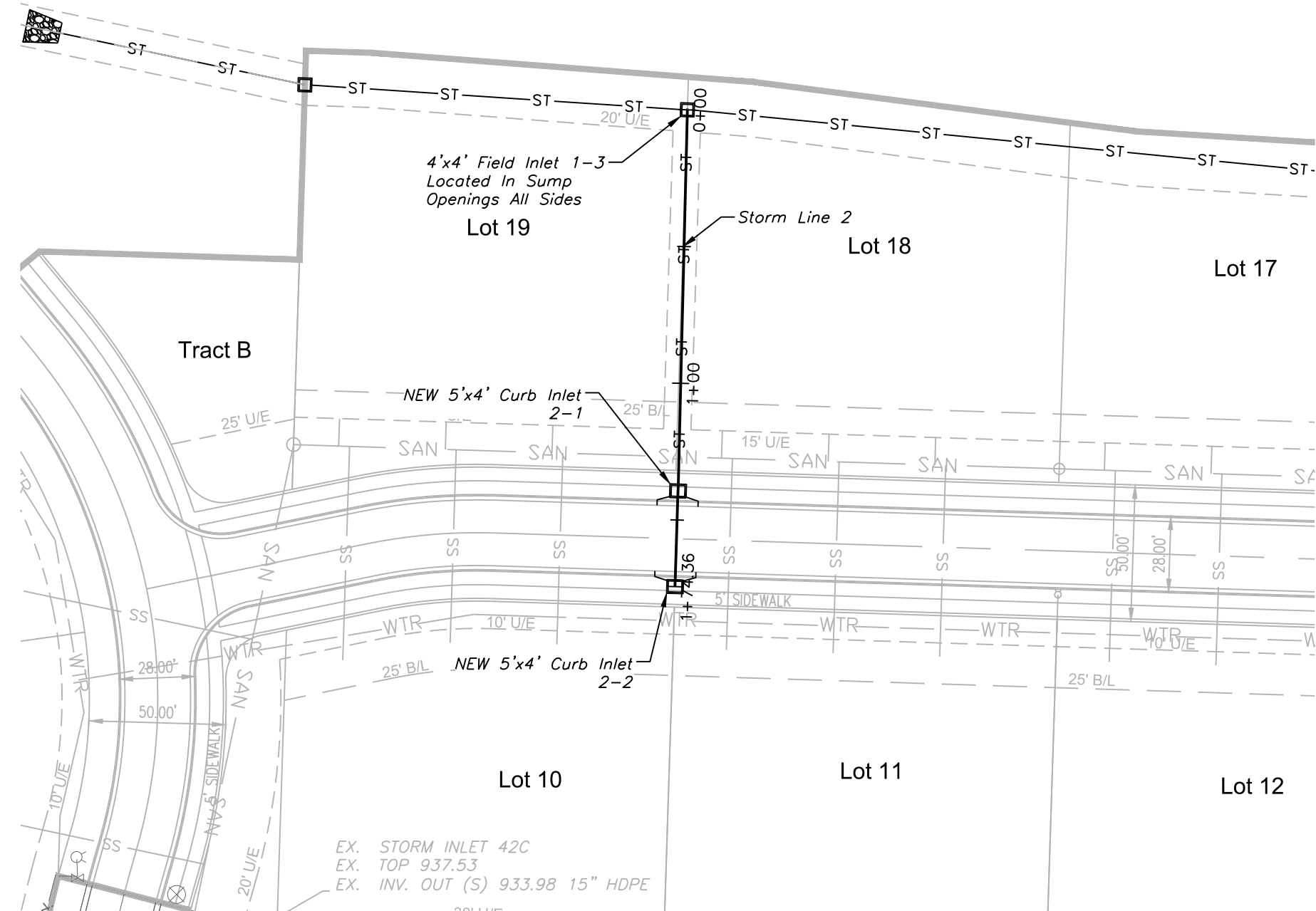
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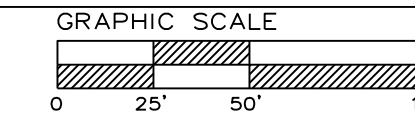
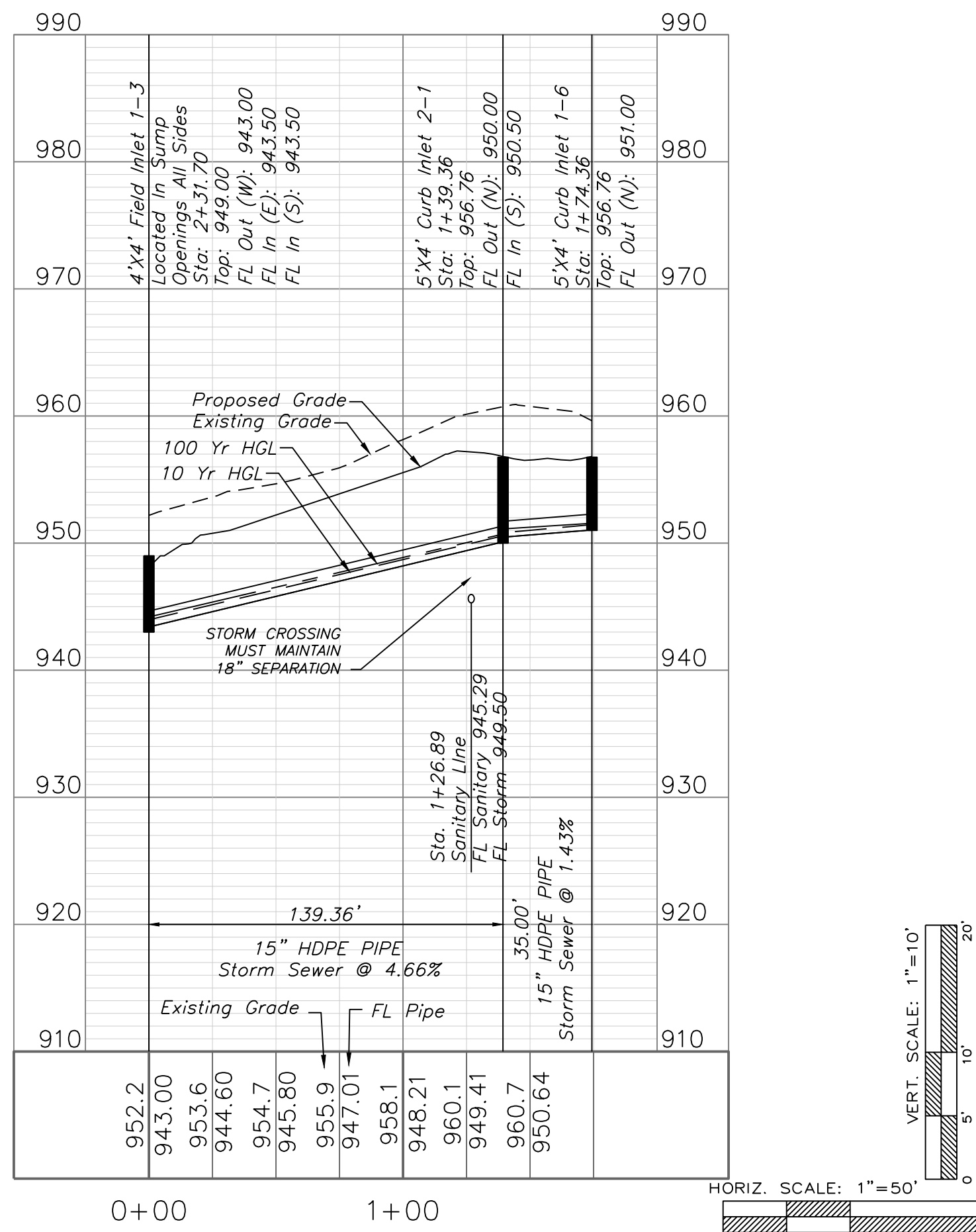


STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'

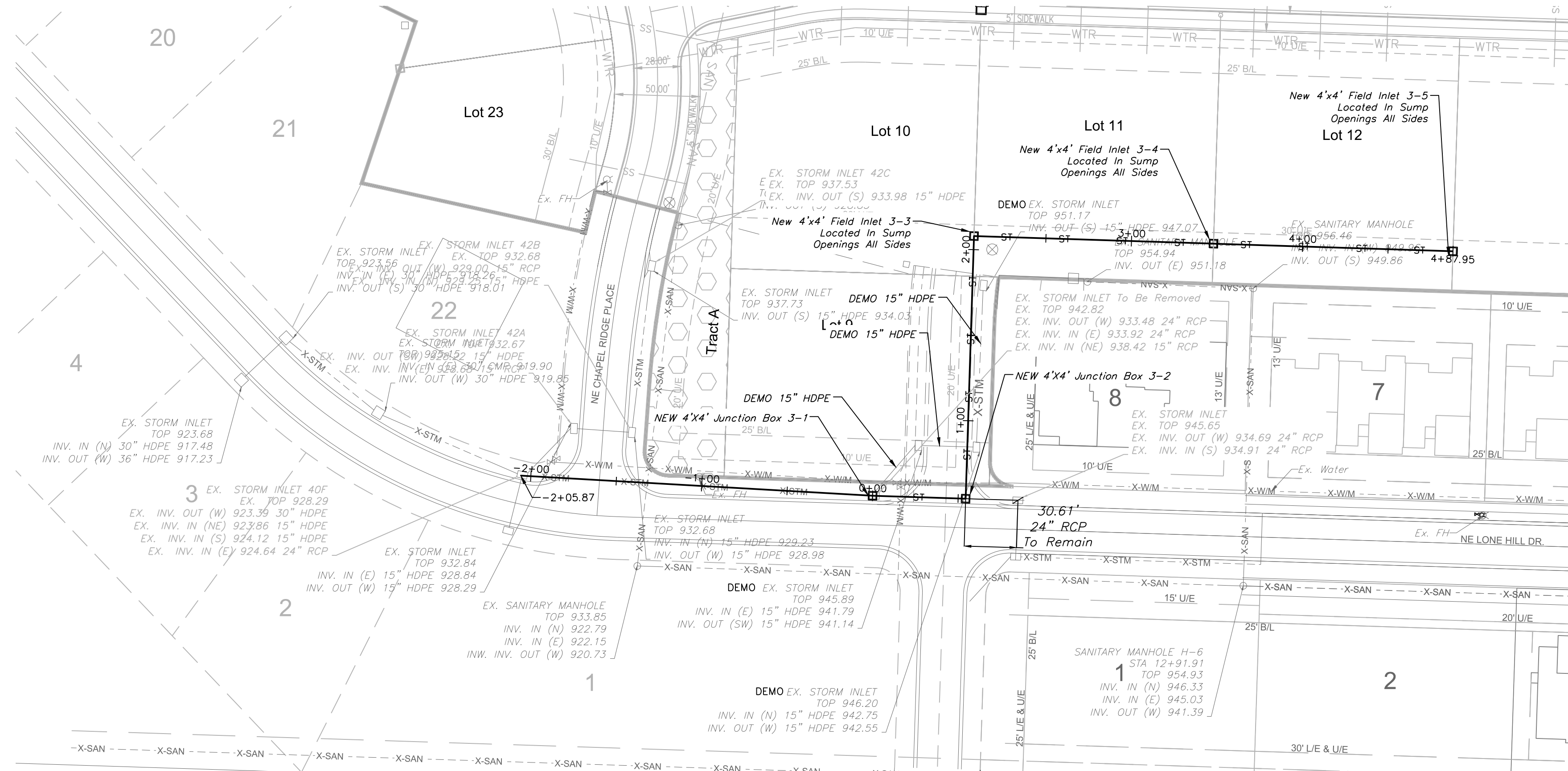


STORM LINE 2

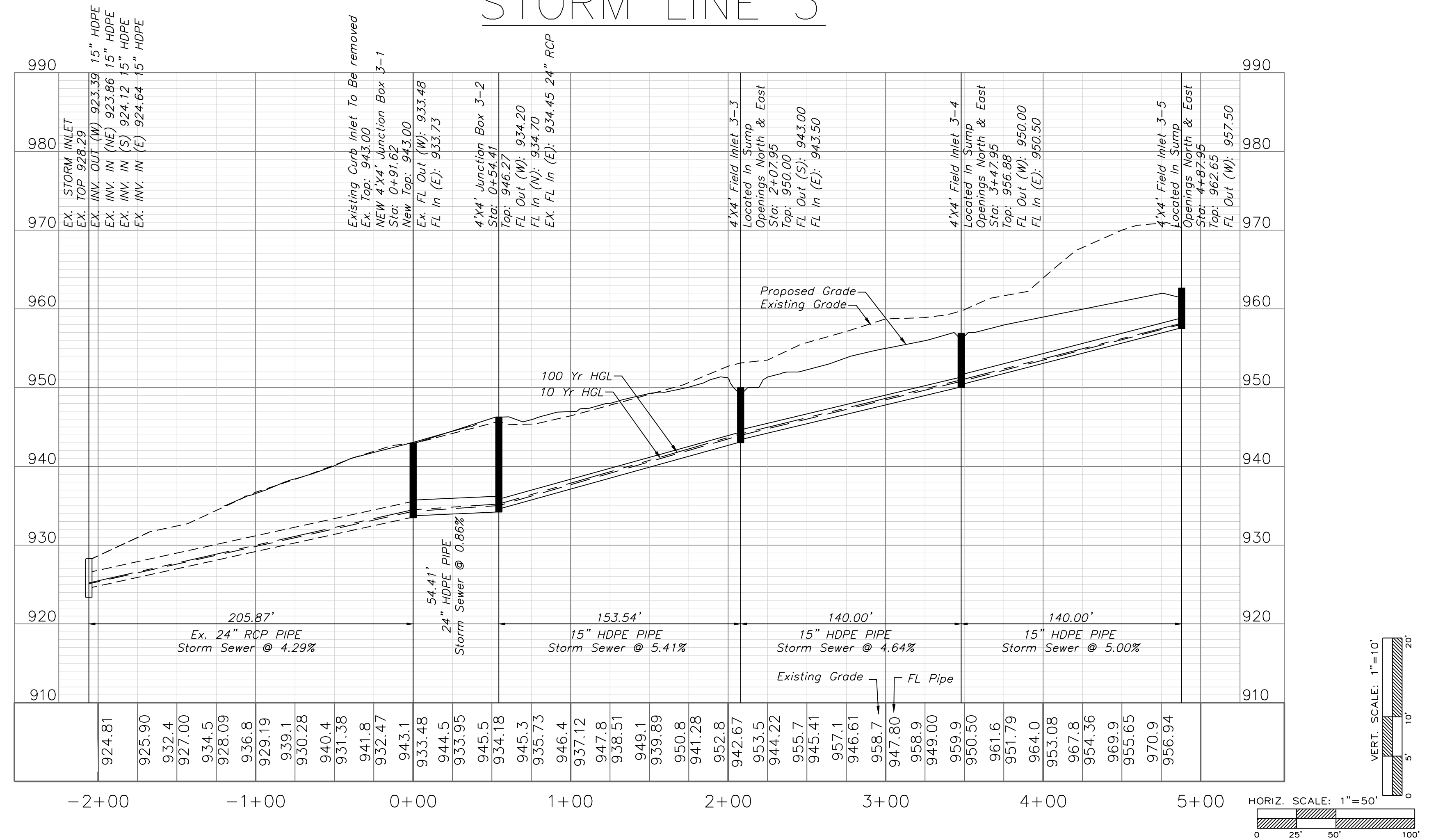


STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'



STORM LINE 3

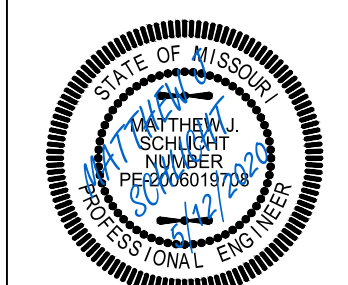


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Surveying LS-218
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Engineering CA2821

THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
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LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

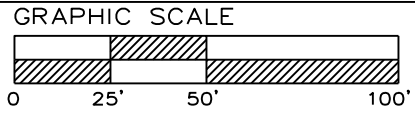
Project:
VILLAS OF CHAPEL
RIDGE, LSUMO
Issue Date:
April 10, 2020

Storm Sewer Plan and Profile
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
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LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri



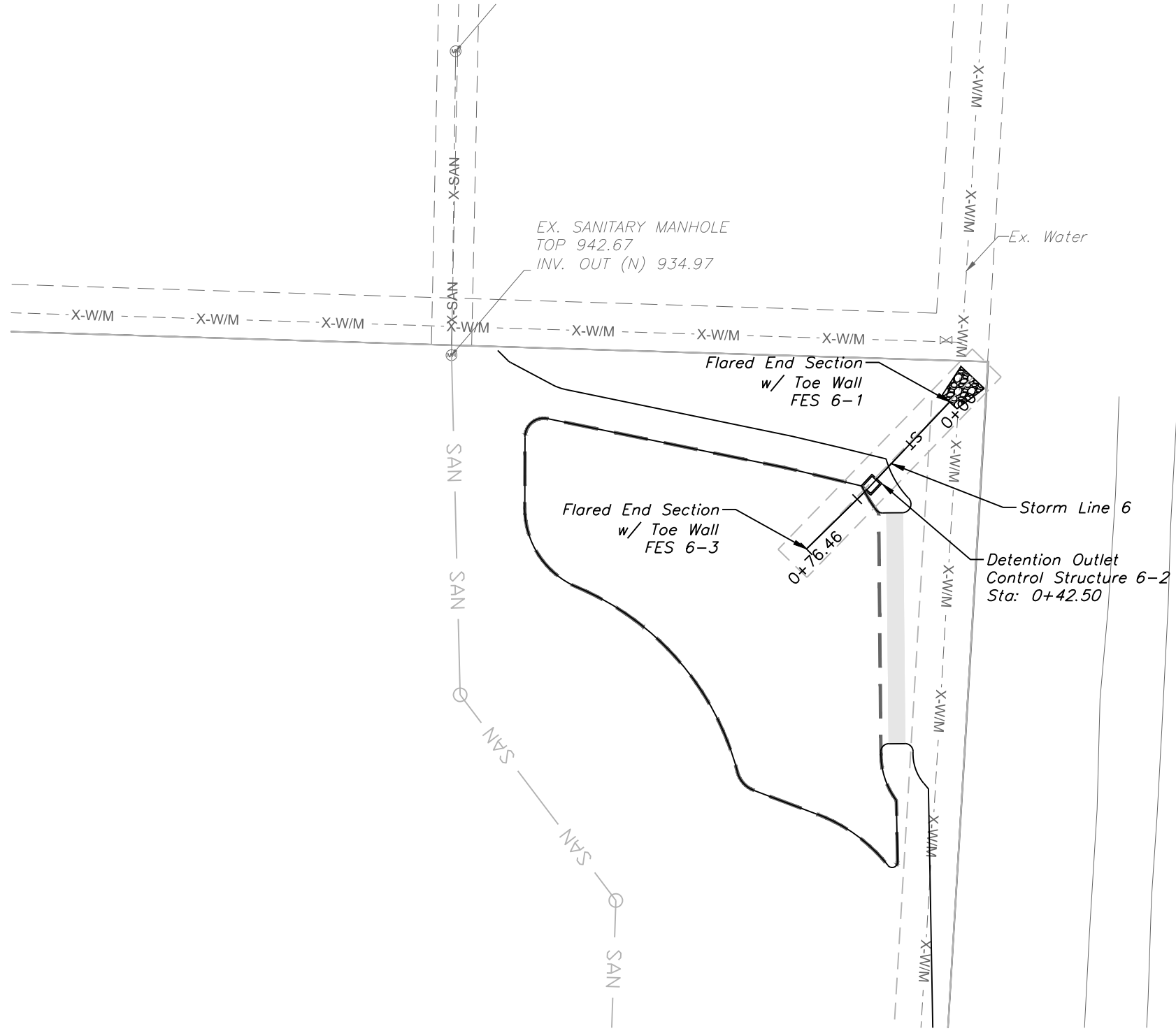
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KS PE 19071
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NE PE E-11-114335

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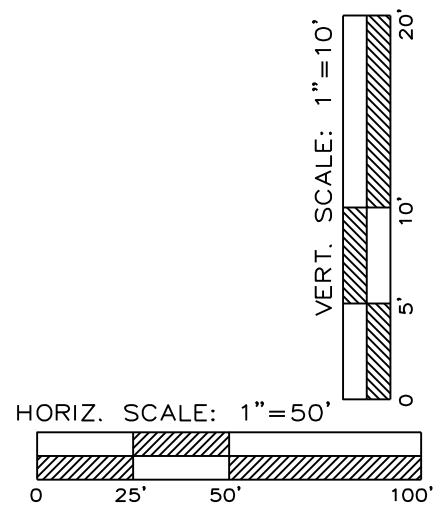
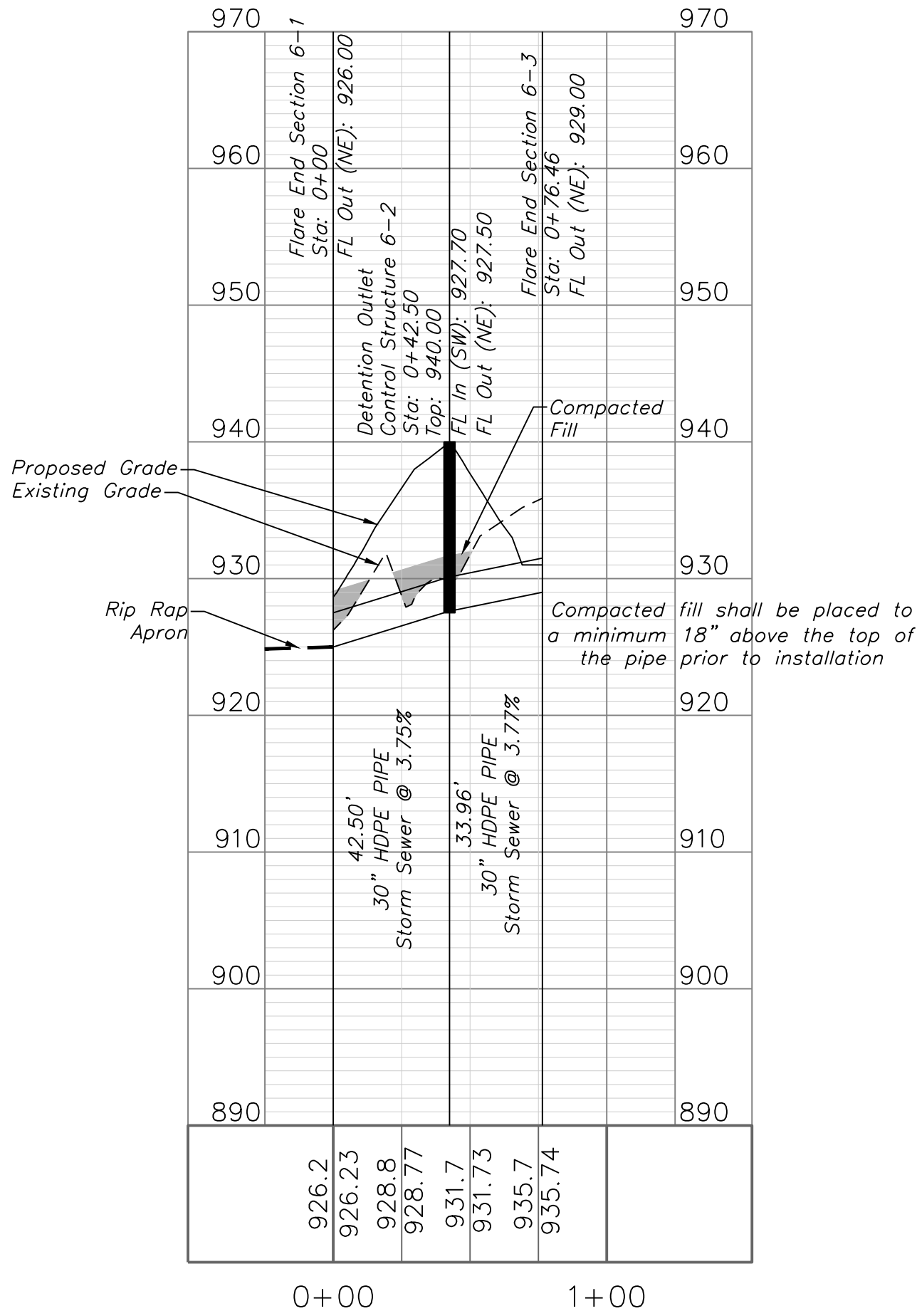


STORM SEWER PLAN & PROFILE

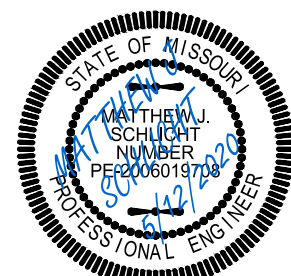
SCALE: 1" = 50'



STORM LINE 6



Storm Sewer Plan and Profile
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
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△	REV. 5/12/2020

Project:
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RIDGE, L.S.M.O.
Issue Date:
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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
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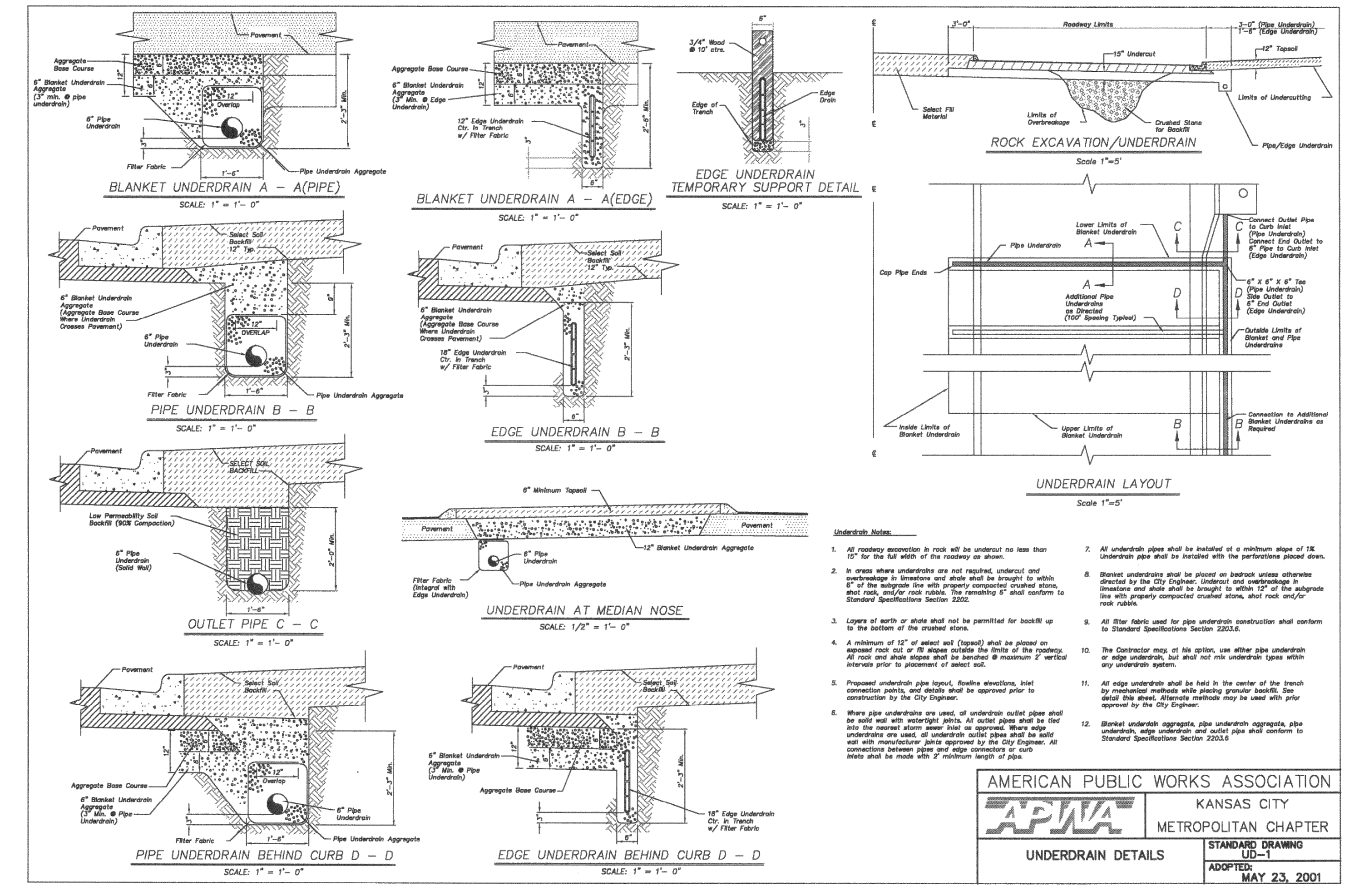
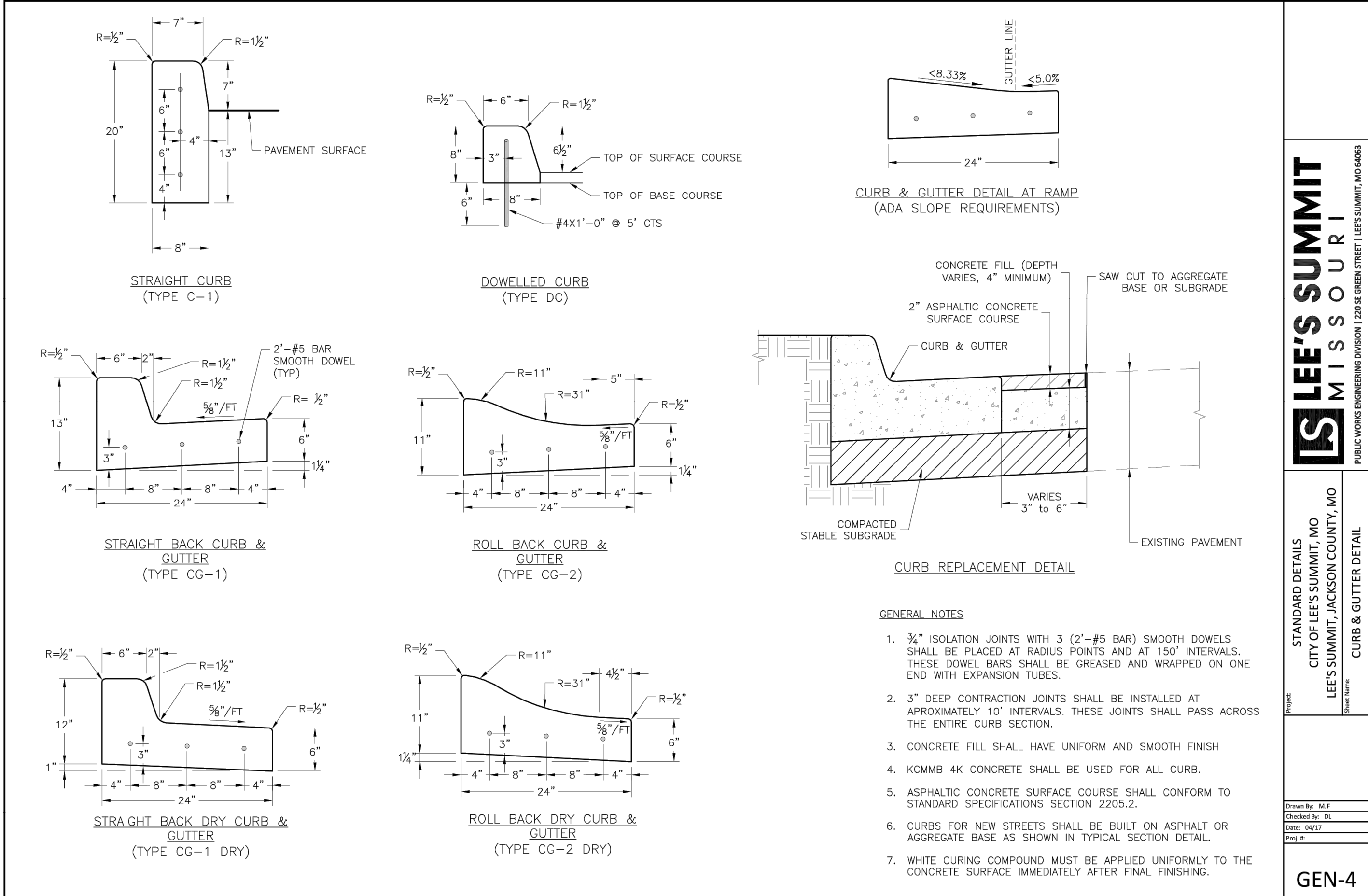
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10 YEAR INLET																						
D.S. Str.	Str.	Area (ac)	InletTime (min)	Int. (in/hr)	RunoffCoeff. (C)	Q=CIA (cfs)	Q Carry-over (cfs)	QCaptured (cfs)	QBypassed (cfs)	JunctType	CurbHeight (in)	CurbLength (ft)	GutterSlope (ft/ft)	GutterWidth (ft)	CrossSlope, Sw (ft/ft)	CrossSlope, Sx (ft/ft)	InletDepth (ft)	BypassDepth (ft)	BypassSpread (ft)	GutterDepth (ft)	GutterSpread (ft)	Bypass Str.
1-1	1-2	0.21	5.20	7.21	0.66	1.00	0	1	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.08	n/a	n/a	0.08	3.78	Sag
1-2	1-3	0.87	6.20	6.94	0.66	3.99	0	3.99	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.19	n/a	n/a	0.19	9.51	Sag
1-3	1-4	0.12	5.30	7.18	0.66	0.57	0	0.57	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.05	n/a	n/a	0.05	2.6	Sag
1-3	2-1	0.17	6.00	7.00	0.66	0.78	0	0.3	0.49	Curb	10	5	0.078	2	0.05	0.02	0.11	0.1	1.9	0.11	2.66	EX 42A
2-1	2-2	0.28	6.00	7.00	0.66	1.29	0	0.39	0.9	Curb	10	5	0.078	2	0.05	0.02	0.13	0.12	2.94	0.13	3.74	EX 42C
EX 40F	3-1	0	0.00	0.00	0.00	0.00	....	....	....	JB	....	....	....	....	....	....	....	....	....	....	....	....
3-1	3-2	0	0.00	0.00	0.00	0.00	....	....	....	JB	....	....	....	....	....	....	....	....	....	....	....	....
3-2	3-3	0.36	5.30	7.18	0.66	1.71	0	1.71	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.11	n/a	n/a	0.11	5.4	Sag
3-3	3-4	0.45	5.50	7.13	0.66	2.12	0	2.12	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.12	n/a	n/a	0.12	6.24	Sag
3-4	3-5	0.4	5.50	7.13	0.66	1.88	0	1.88	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.12	n/a	n/a	0.12	5.76	Sag
EX 40F	EX 42A	0.15	6.00	7.00	0.66	0.69	5.79	1.15	5.33	Curb	10	5	0.03	2	0.05	0.02	0.26	0.25	9.35	0.26	10.13	EX 40F
EX 42A	EX 42B	0.43	5.80	7.05	0.66	2.00	0	0.63	1.37	Curb	10	5	0.03	2	0.05	0.02	0.18	0.16	5.04	0.18	6.07	EX 40F
EX 42B	EX 42C	0.84	6.10	6.97	0.66	3.86	0.9	0.84	3.93	Curb	10	5	0.059	2	0.05	0.02	0.21	0.2	7.08	0.21	7.71	EX 40F
4-1	4-2	0.15	5.50	7.13	0.66	0.71	1.07	0.57	1.21	Curb	10	5	0.036	2	0.05	0.02	0.17	0.15	4.5	0.17	5.49	Offsite
4-2	4-3	0.36	6.40	6.89	0.66	1.64	0	0.56	1.07	Curb	10	5	0.03	2	0.05	0.02	0.17	0.15	4.43	0.17	5.51	4-2
4-3	4-4	0.33	5.20	7.21	0.66	1.57	0	0.55	1.02	Curb	10	5	0.03	2	0.05	0.02	0.17	0.15	4.3	0.17	5.4	5-1
4-2	5-1	0.87	5.80	7.05	0.66	4.05	1.02	0.97	4.09	Curb	10	5	0.036	2	0.05	0.02	0.24	0.22	8.04	0.24	8.81	Offsite

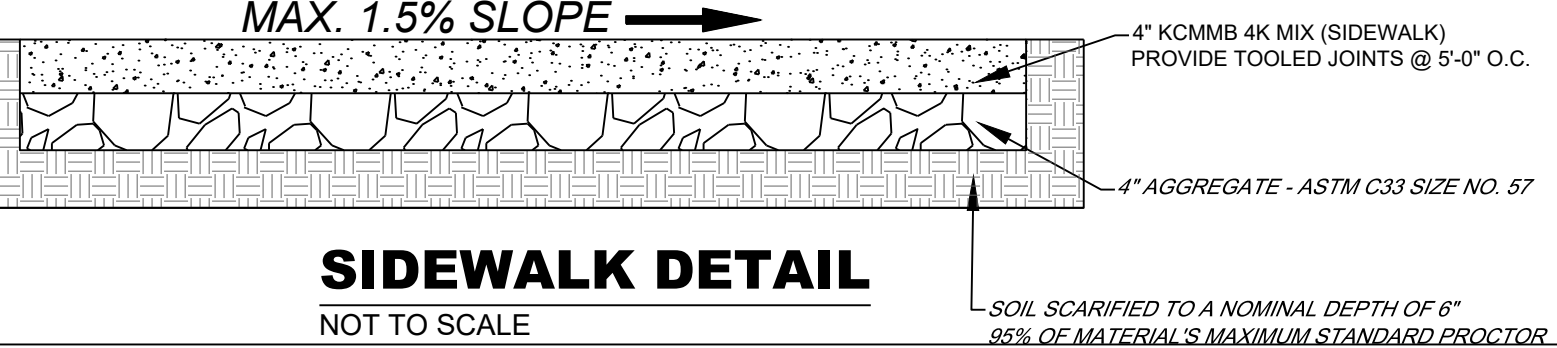
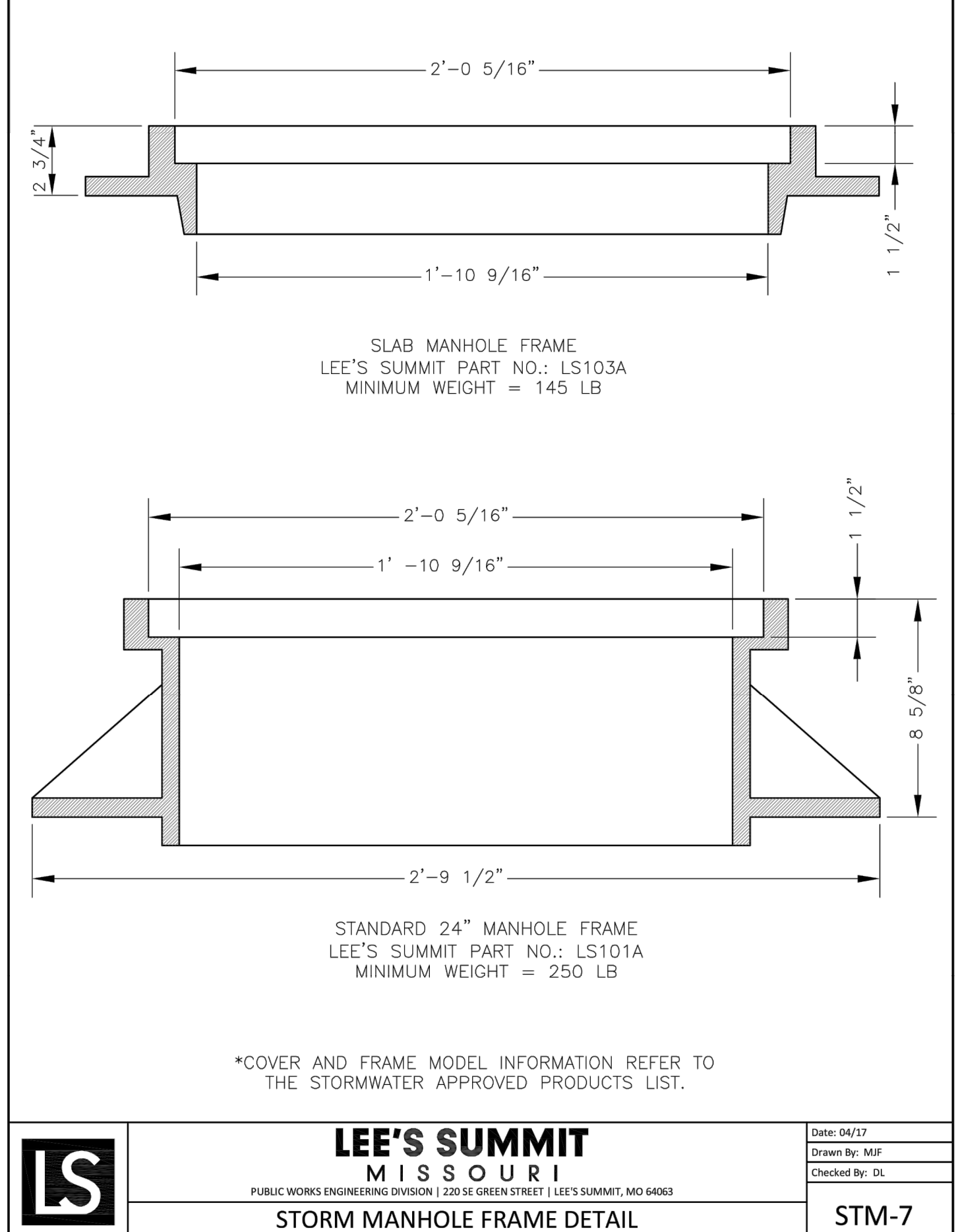
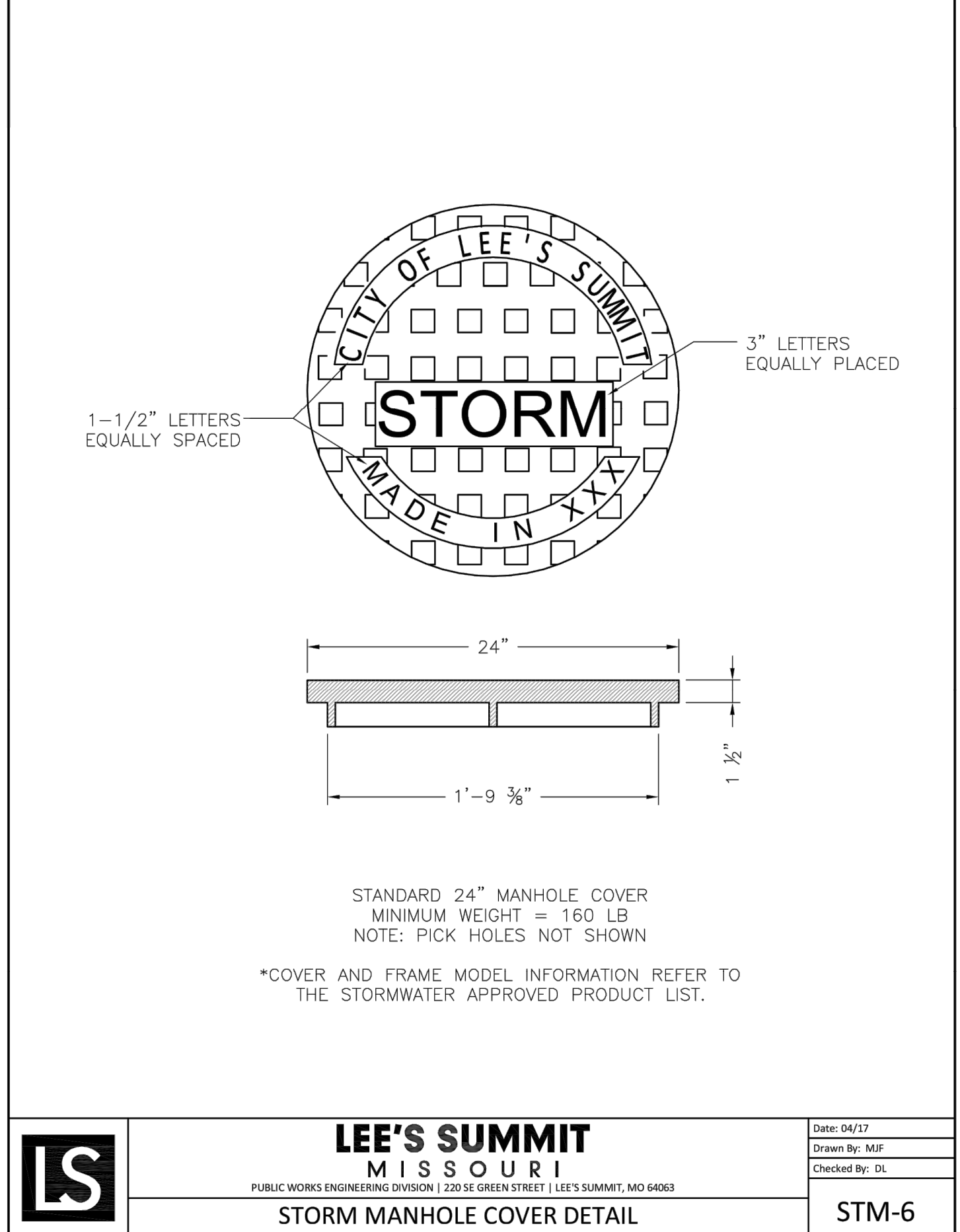
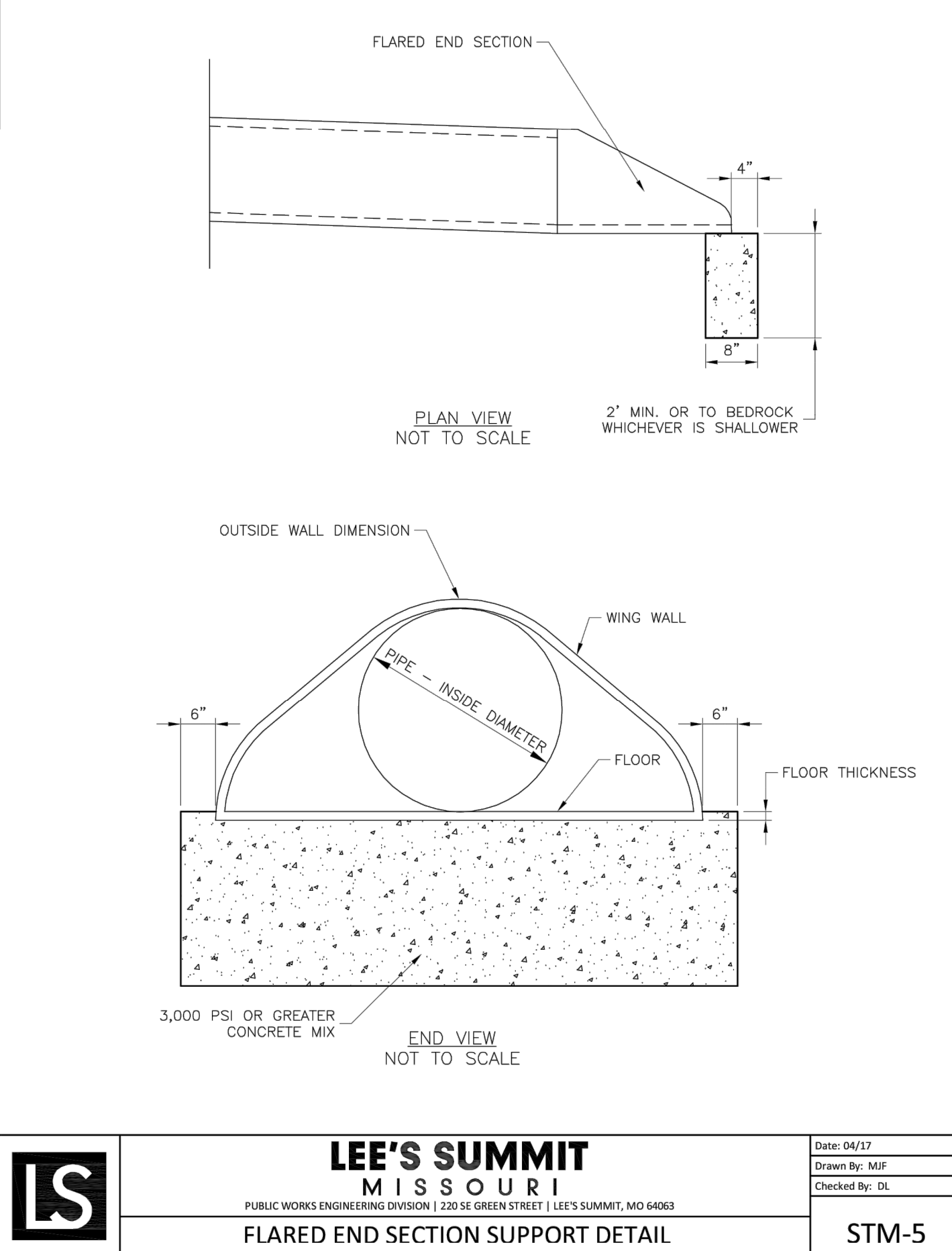
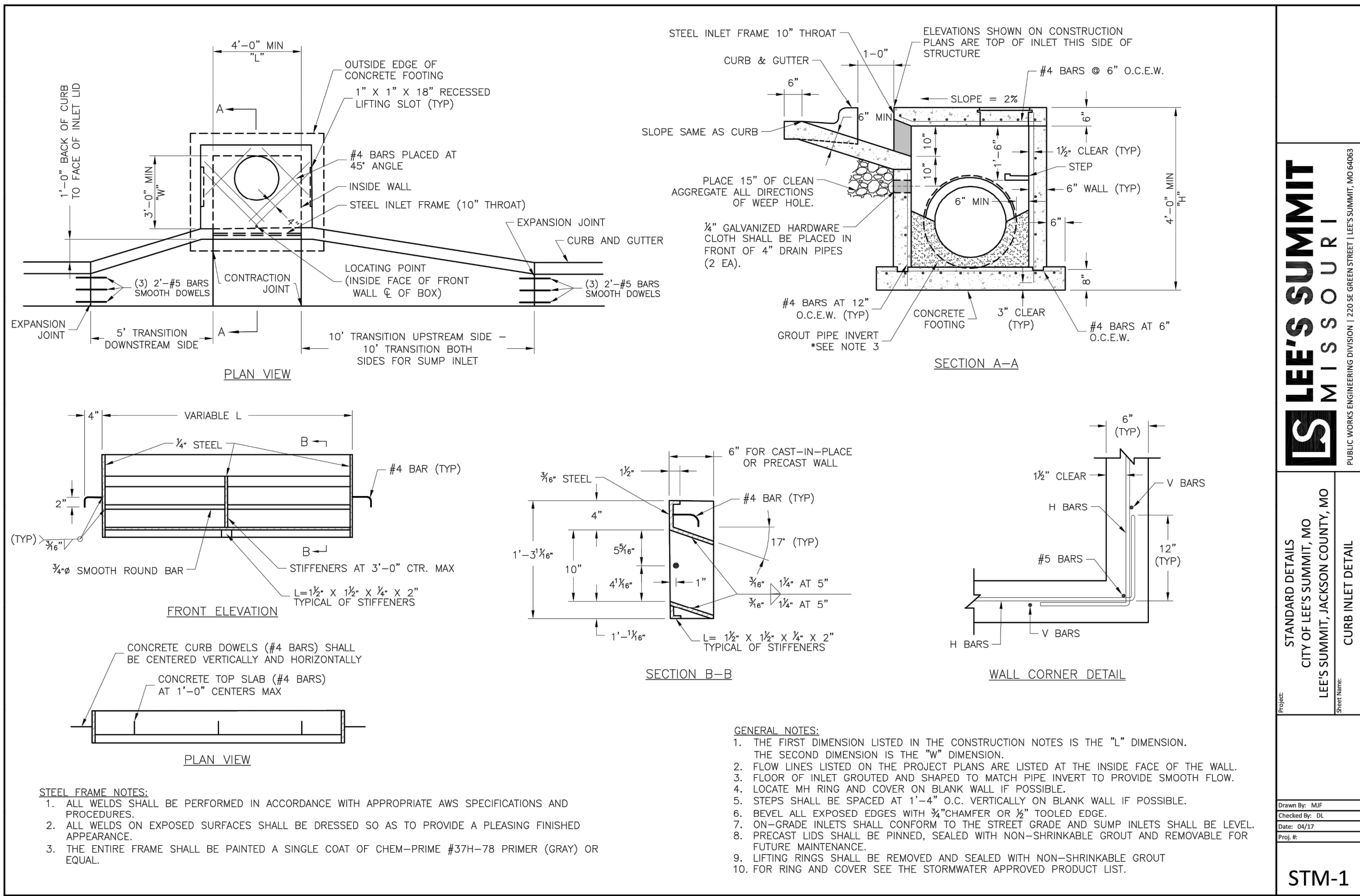
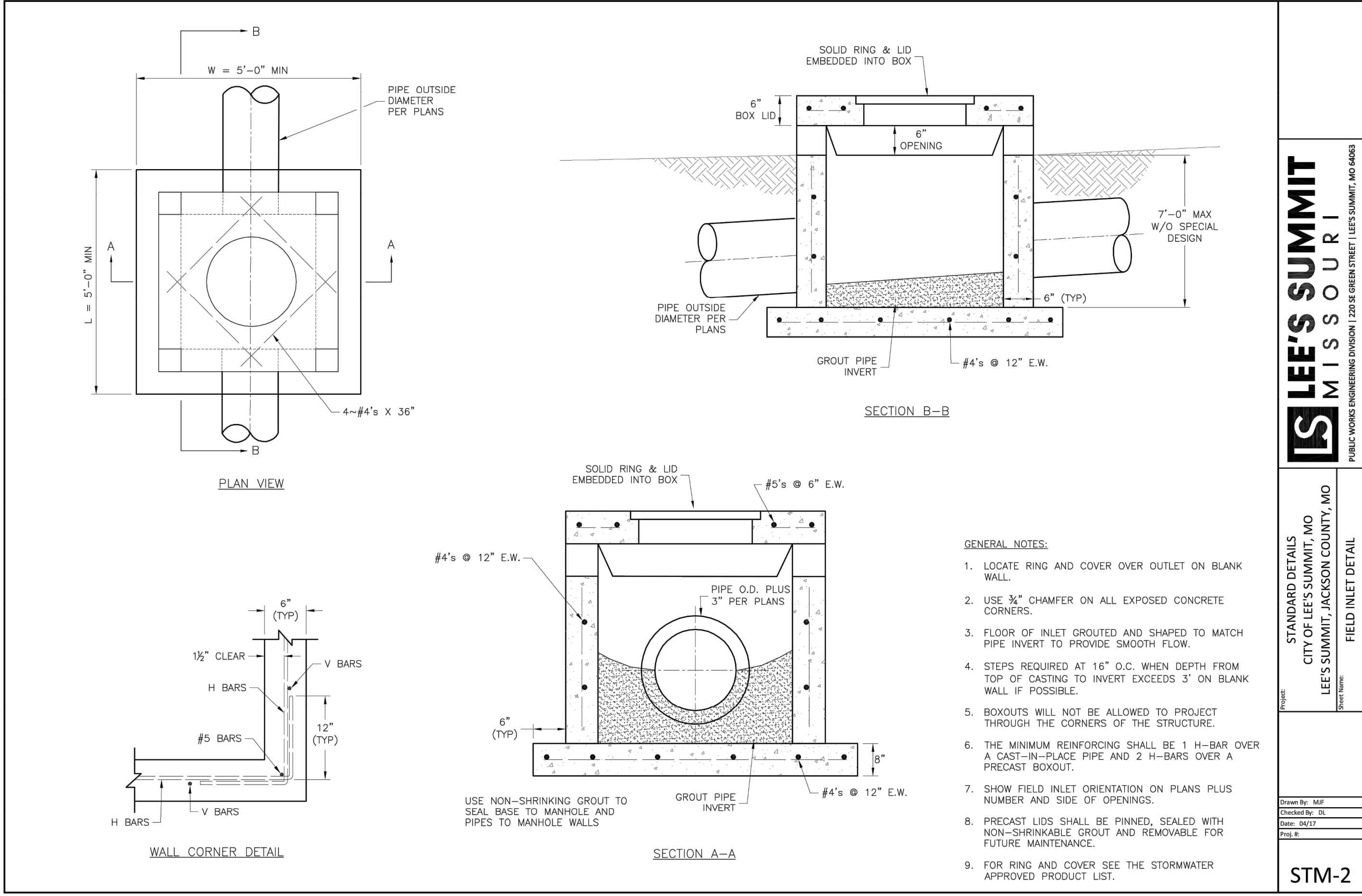
10 YEAR PIPE																						
D.S. Str.	U.S. Str.	LineLength (ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	IncrC x A	TotalC x A	InletTime (min)	TimeConc (min)	RnfalInt (in/hr)	TotalRunoff (cfs)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	HGLDn (ft)	HGLUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
1-1	1-2	91.62	0.21	1.65	0.66	0.14	1.09	5.2	8	6.5	7.10	7.10	24.70	8.78	18	3.27	936.00	939.00	936.55	940.03	937.50	945.00
1-2	1-3	140.08	0.87	1.44	0.66	0.57	0.95	6.2	7.7	6.6	6.26	6.26	21.58	7.89	18	2.50	939.50	943.00	940.05	943.97	945.00	949.00
1-3	1-4	280.60	0.12	0.12	0.66	0.08	0.08	5.3	5.3	7.2	0.57	0.57	16.24	1.97	15	3.74	943.50	954.00	943.97	954.29	949.00	959.00
1-3	2-1	139.36	0.17	0.45	0.66	0.11	0.3	6	6.1	7	2.07	2.07	18.13	4.36	15	4.66	943.50	950.00	943.97	950.57	949.00	956.76
2-1	2-2	35.00	0.28	0.28	0.66	0.18	0.18	6	6	7	1.29	1.29	10.03	4.44	15	1.43	950.50	951.00	950.80	951.45	956.76	956.76
EX 40F	3-1	205.87	0.00	1.21	0	0	0.8	0	6.6	6.8	5.46	5.46	46.87	7.22	24	4.29	924.64	933.48	925.10	934.30	928.29	943.00
3-1	3-2	54.41	0.00	1.21	0	0	0.8	0	6.5	6.9	5.49	5.49	27.33	5.64	24	0.86	933.73	934.20	934.34	935.03	943.00	946.27
3-2	3-3	153.54	0.36	1.21	0.66	0.24	0.8	5.3	6.2	6.9	5.54	5.54	19.52	9.60	15	5.41	934.70	943.00	935.16	943.95	946.27	950.00
3-3	3-4	140.00	0.45	0.85	0.66	0.3	0.56	5.5	5.9	7	3.94	3.94	18.09	7.28	15	4.64	943.50	950.00	943.95	950.80	950.00	956.88
3-4	3-5	140.00	0.40	0.4	0.66	0.26	0.26	5.5	5.5	7.1	1.88	1.88	18.77	5.94	15	5.00	950.50	957.50	950.80	958.05	956.88	962.65
EX 40F	EX 42A	43.25	0.15	1.42	0.66	0.1	0.94	6	6.5	6.9	6.43	6.43	26.65	11.93	15	10.08	923.86	928.22	924.28	929.24	928.29	932.67
EX 42A	EX 42B	33.90	0.43	1.27	0.66	0.28	0.84	5.8	6.4	6.9	5.77	5.77	6.27	5.72	15	0.94	928.68	929.00	929.62	929.97	932.67	932.68
EX 42B	EX 42C	97.97	0.84	0.84	0.66	0.55	0.55	6.1	6.1	7	3.86	3.86	18.45	4.98	15	4.83	929.25	933.98	929.97	934.77	932.68	937.53
4-1	4-2	67.50	0.15	1.71	0.66	0.1	1.13	5.5	6.8	6.8	7.65	7.65	21.98	8.49	18	2.59	949.75	951.50	950.36	952.57	951.25	957.48
4-2	4-3	135.00	0.36	0.69	0.66	0.24	0.46	6.4	6.4	6.9	3.14	3.14	14.45	5.05	15	2.96	952.00	956.00	952.57	956.71	957.48	962.04
4-3	4-4	71.46	0.33	0.33	0.66	0.22	0.22	5.2	5.2	7.2	1.57	1.57	14.90	5.67	15	3.15	956.50	958.75	956.77	959.25	962.04	963.90
4-2	5-1	35.00	0.87	0.87	0.66	0.57	0.57	5.8	5.8	7	4.05	4.05	10.03	6.10	15	1.43	952.00	952.50	952.57	953.31	957.48	957.48

100 YEAR INLET																						
D.S. Str.	Str.	Area (ac)	InletTime (min)	Int. (in/hr)	RunoffCoeff. (C)	Q=CIA (cfs)	Q Carry-over (cfs)	QCaptured (cfs)	QBypassed (cfs)	JunctType	CurbHeight (in)	CurbLength (ft)	GutterSlope (ft/ft)	GutterWidth (ft)	CrossSlope, Sw (ft/ft)	CrossSlope, Sx (ft/ft)	InletDepth (ft)	BypassDepth (ft)	BypassSpread (ft)	GutterDepth (ft)	GutterSpread (ft)	Bypass Str.
1-1	1-2	0.21	5.20	10.91	0.66	1.51	0	1.51	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.1	n/a	n/a	0.1	4.98	Sag
1-2	1-3	0.87	6.20	10.50	0.66	6.03	0	6.03	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.25	n/a	n/a	0.25	12.54	Sag
1-3	1-4	0.12	5.30	10.87	0.66	0.86	0	0.86	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.07	n/a	n/a	0.07	3.42	Sag
1-3	2-1	0.17	6.00	10.58	0.66	1.19	0	0.38	0.81	Curb	10	5	0.078	2	0.05	0.02	0.13	0.11	2.73	0.13	3.55	EX 42A
2-1	2-2	0.28	6.00	10.58	0.66	1.96	0	0.49	1.46	Curb	10	5	0.078	2	0.05	0.02	0.15	0.14	4.02	0.15	4.73	EX 42C
EX 40F	3-1	0.00	0.00	0.00	0.00	0.00	....	....	....	MH	....	....	....	....	....	....	....	....	....	....	....	....
3-1	3-2	0.00	0.00	0.00	0.00	0.00	....	....	....	MH	....	....	....	....	....	....	....	....	....	....	....	....
3-2	3-3	0.36	5.30	10.87	0.66	2.58	0	2.58	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.14	n/a	n/a	0.14	7.12	Sag
3-3	3-4	0.45	5.50	10.79	0.66	3.20	0	3.2	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.16	n/a	n/a	0.16	8.22	Sag
3-4	3-5	0.40	5.50	10.79	0.66	2.85	0	2.85	0	Dp-Curb	6	16	Sag	....	0.02	0.02	0.15	n/a	n/a	0.15	7.6	Sag
EX 40F	EX 42A	0.15	6.00	10.58	0.66	1.05	9.33	1.46	8.91	Curb	10	5	0.03	2	0.05	0.02	0.31	0.29	11.53	0.31	12.26	EX 40F
EX 42A	EX 42B	0.43	5.80	10.66	0.66	3.03	0	0.78	2.25	Curb	10	5	0.03	2	0.05	0.02	0.21	0.19	6.41	0.21	7.33	EX 40F
EX 42B	EX 42C	0.84	6.10	10.54	0.66	5.85	1.46	1.04	6.27	Curb	10	5	0.059	2	0.05	0.02	0.25	0.23	8.68	0.25	9.26	EX 40F
4-1	4-2	0.15	5.50	10.79	0.66	1.07	1.78	0.72	2.12	Curb	10	5	0.036	2	0.05	0.02	0.2	0.18	5.97	0.2	6.84	Offsite
4-2	4-3	0.36	6.40	10.43	0.66	2.48	0	0.7	1.78	Curb	10	5	0.03	2	0.05	0.02	0.19	0.17	5.73	0.19	6.7	4-2
4-3	4-4	0.33	5.20	10.91	0.66	2.38	0	0.69	1.69	Curb	10	5	0.03	2	0.05	0.02	0.19	0.17	5.59	0.19	6.57	5-1
4-2	5-1	0.87	5.80	10.66	0.66	6.12	1.69	1.21	6.6	Curb	10	5	0.036	2	0.05	0.02	0.27	0.26	9.83	0.27	10.54	Offsite

100 YEAR PIPE																						
D.S. Str.	U.S. Str.	LineLength (ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	IncrC x A	TotalC x A	InletTime (min)	TimeConc (min)	RnfalInt (in/hr)	TotalRunoff (cfs)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	HGLDn (ft)	HGLUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
1-1	1-2	91.62	0.21	1.65	0.66	0.14	1.09	5.2	7.8	9.9	10.79	10.79	24.70	10.16	18	3.27	936.00	939.00	936.69	940.26	937.50	945.00
1-2	1-3	140.08	0.87	1.44	0.66	0.57	0.95	6.2	7.6	10	9.51	9.51	21.58	8.46	18	2.50	939.50	943.00	940.26	944.19	945.00	949.00
1-3	1-4	280.60	0.12	0.12	0.66	0.08	0.08	5.3	5.3	10.9	0.86	0.86	16.24	2.07	15	3.74	943.50	954.00	944.19	954.36	949.00	959.00
1-3	2-1	139.36	0.17	0.45	0.66	0.11	0.3	6	6.1	10.5	3.13	3.13	18.13	4.42	15	4.66	943.50	950.00	944.19	950.71	949.00	956.76
2-1	2-2	35.00	0.28	0.28	0.66	0.18	0.18	6	6	10.6	1.96	1.96	10.03	5.02	15	1.43	950.50	951.00	950.87	951.56	956.76	956.76
EX 40F	2-3	205.87	0.00	1.21	0	0	0.8	0	6.6	10.3	8.26	8.26	46.87	8.17	24	4.29	924.64	938.25	924.21	934.50	928.29	943.00
3-1	3-2	54.41	0.00	1.21	0	0	0.8	0	6.5	10.4	8.31	8.31	27.33	6.26	24	0.86	933.73	934.20	934.50	935.23	943.00	946.27
3-2	3-3	153.54	0.36	1.21	0.66	0.24	0.8	5.3	6.2	10.5	8.38	8.38	19.52	11.23	15	5.41	934.70	943.00	935.27	944.13	946.27	950.00
3-3	3-4	140.00	0.45	0.85	0.66	0.3	0.56	5.5	5.9	10.6	5.95	5.95	18.09	7.66	15	4.64	943.50	950.00	944.13	950.99	950.00	956.88
3-4	3-5	140.00	0.40	0.4	0.66	0.26	0.26	5.5	5.5	10.8	2.85	2.85	18.77	5.32	15	5.00	950.50	957.50	950.99	958.18	956.88	962.85
EX 40F	EX 42A	43.25	0.15	1.42	0.66	0.1	0.94	6	6.5	10.4	8.74	8.74	26.65	14.07	15	10.08	923.86	928.22	924.38	929.40	928.29	932.67
EX 42A	EX 42B	33.90	0.43	1.27	0.66	0.28	0.84	5.8	6.4	10.4	8.74	8.74	6.27	7.12	15	0.94	928.68	929.00	929.93	930.55	932.67	932.68
EX 42B	EX 42C	97.97	0.84	0.84	0.66	0.55	0.55	6.1	6.1	10.5	5.85	5.85	18.45	5.22	15	4.83	929.25	933.98	931.73	934.96	932.68	937.53
4-1	4-2	67.50	0.15	1.71	0.66	0.1	1.13	5.5	6.8	10.3	11.59	11.59	21.98	9.87	18	2.59	949.75	951.50	950.52	952.80	951.25	957.48
4-2	4-3	135.00	0.36	0.69	0.66	0.24	0.46	6.4	6.4	10.4	4.75	4.75	14.45	5.44	15	2.96	952.00	956.00	952.80	956.88	957.48	962.04
4-3	4-4	71.46	0.33	0.33	0.66	0.22	0.22	5.2	5.2	10.9	2.38	2.38	14.90	5.70	15	3.15	956.50	958.75	956.88	959.37	962.04	963.90
4-2	5-1	35.00	0.87	0.87	0.66	0.57	0.57	5.8	5.8	10.7	6.12	6.12	10.03	6.62	15	1.43	952.00	952.50	952.80	953.50	957.48	957.48



GENERAL NOTE:
1 - ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.



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