

THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
STREET AND STORM CONSTRUCTION PLANS

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

CONSTRUCTION AND DESIGN NOTES:

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 LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.

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

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 ~ 298-1198
MISSOURI GAS ENERGY ~ 756-5261
SOUTHWESTERN BELL TELEPHONE ~ 781-5011
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

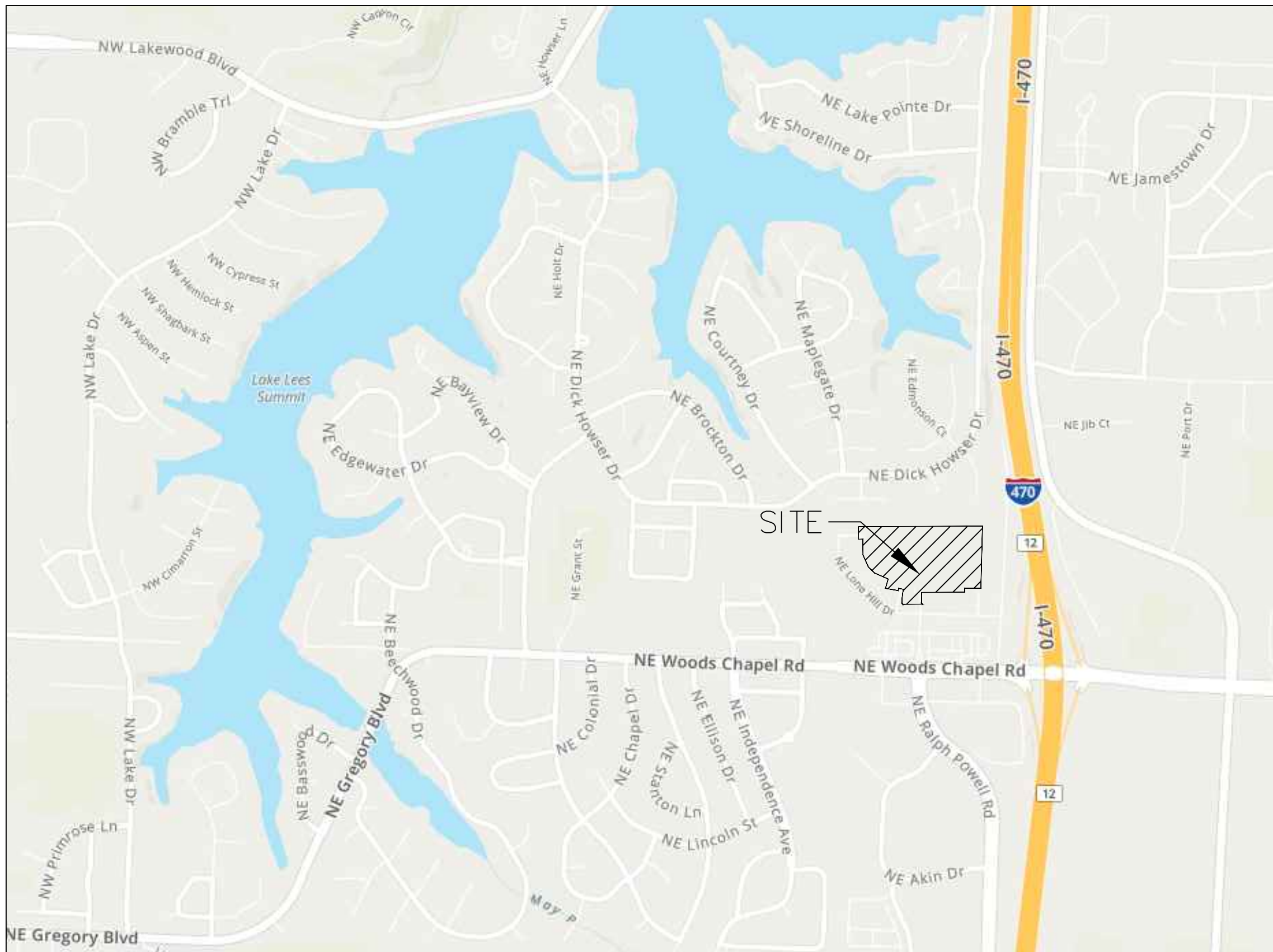
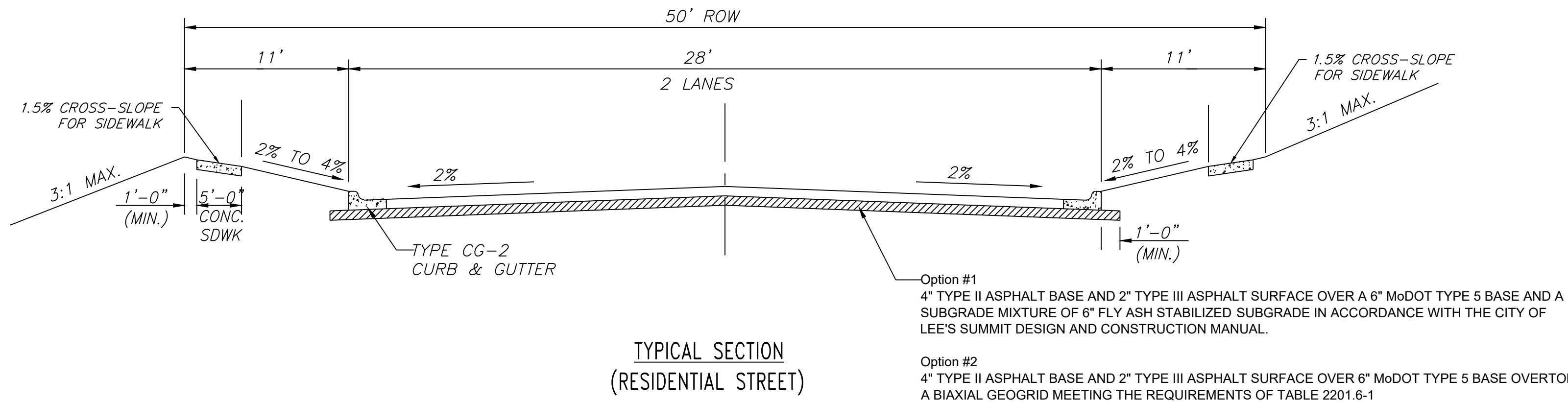
OIL - GAS WELLS

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

ADDED FEMA INFORMATION.



SITE LOCATION MAP

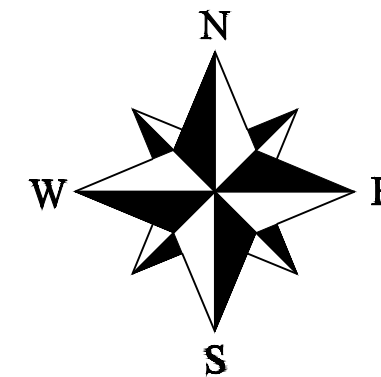
ADDED VICINITY MAP
ADDED SUMMARY OF
QUANTITIES

Summary of Quantities:

ITEM AND DESCRIPTION	UNIT	ESTIMATED QUANTITY
ASPHALT PAVING	S.Y.	3,430.98
CURBING	FT	2,343.62
5' SIDEWALK	S.F.	10,278.23
MoDOT Type 5 Base	S.Y.	3,702.68
GEOGRID	S.Y.	3,702.68
ADA SIDEWALK RAMP	UNIT	5
CLEARING, GRADING & GRUBBING	LS	1
SILT FENCE	FT	5,724.09
INLET PROTECTION	UNIT	44.00
SEEDING / MULCHING/ FERTILIZING	AC	18.83
CONST. ENTRANCE	UNIT	2.00
STORM		
30" HDPE	FT	76.46
24" HDPE	FT	54.41
18" HDPE	FT	299.20
15" HDPE	FT	1,129.96
4' x 4' JUNCTION BOX	EA	2.00
18" HDPE END SECTION / TOE WALL	LS	2.00
30" HDPE END SECTION / TOE WALL	LS	1.00
4' x 4' STORM FIELD INLET	EA	6.00
5' x 4' STORM CURB INLET	EA	6.00

INDEX OF SHEETS:

C.001 ~ COVER SHEET
C.050 ~ ESC PHASE 1 - Pre Clearing Plan
C.051 ~ ESC PHASE 2 - Initial Area Stabilization Plan
C.052 ~ ESC PHASE 3 - Inactive Area Stabilization Plan
C.053 ~ ESC PHASE 4 - Final Restoration Plan
C.100 ~ SITE PLAN
C.200 ~ MASTER DRAINAGE PLAN SHEET 1 OF 3 GRADING PLAN - SWPPP
C.201 ~ MASTER DRAINAGE PLAN SHEET 2 OF 3 SPOT ELEVATIONS
C.202 ~ MASTER DRAINAGE PLAN SHEET 3 OF 3 DRAINAGE AREA MAP
C.203 ~ STREET PLAN & PROFILE
C.204 ~ STREET PLAN & PROFILE
C.205 ~ STREET SIGN PLAN
C.206 ~ SEDIMENT BASIN PLAN
C.207 ~ SIDEWALK RAMP DETAILS
C.208 ~ DETENTION PLAN
C.300 ~ STORM SEWER GENERAL LAYOUT
C.301 ~ STORM SEWER PLAN & PROFILE
C.302 ~ STORM SEWER PLAN & PROFILE
C.303 ~ STORM SEWER PLAN & PROFILE
C.600 ~ CONSTRUCTION DETAILS
C.601 ~ CONSTRUCTION DETAILS
C.602 ~ CONSTRUCTION DETAILS



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

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.

REMOVED APPROVED SIGNATURE BLOCK

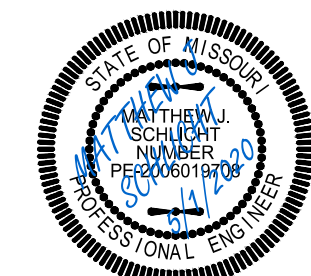


Professional Registration
Missouri
Engineering 2005002186-D
Surveying 200500319-D
Kansas
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Oklahoma
Engineering 6254
Nebraska
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Lee's Summit, Jackson County, Missouri

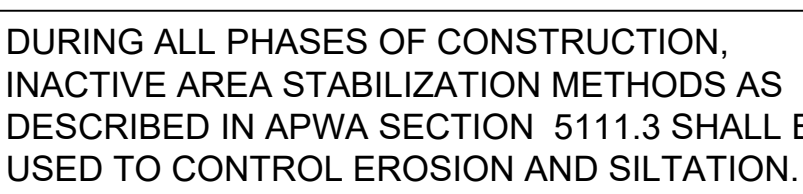
Project:
VILLAS OF CHAPEL
RIDGE, L.S.M.O.
Issue Date:
April 10, 2020

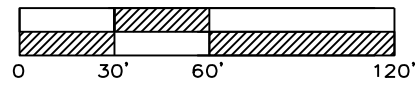
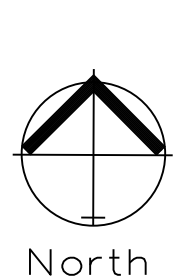
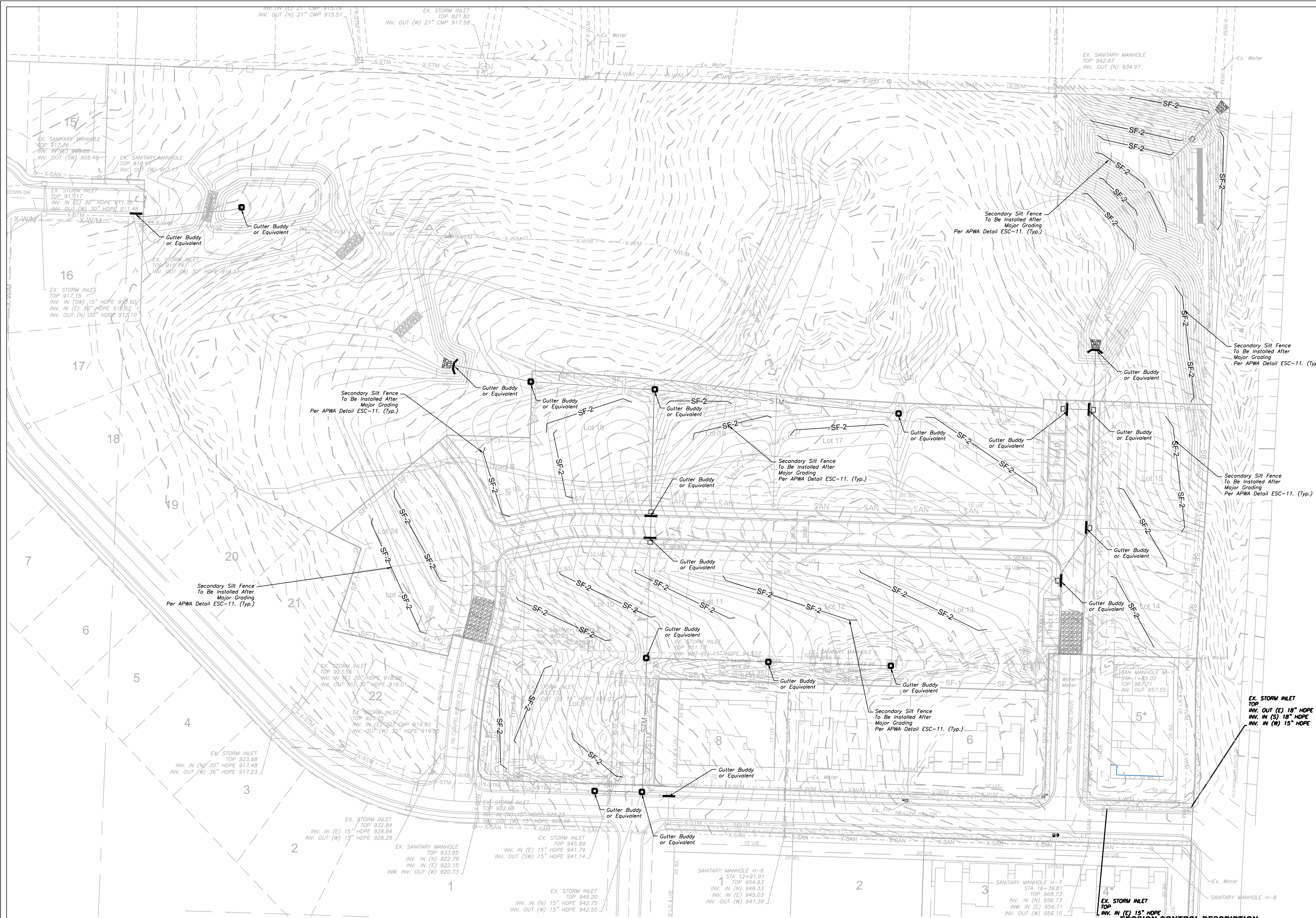
Street & Storm Cover Sheet
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri



Matthew J. Schlacht
MO PE 2006019708
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NE PE E-114335

REVISIONS
REV. 5/1/2020





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 RESEEDED 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 RESEED.

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

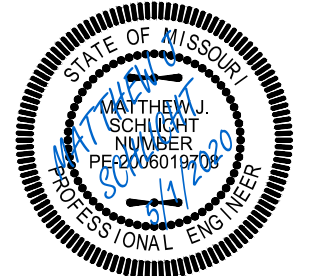
ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P: (816) 623-9888 F: (816) 623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6284
Nebraska
Engineering CA2821

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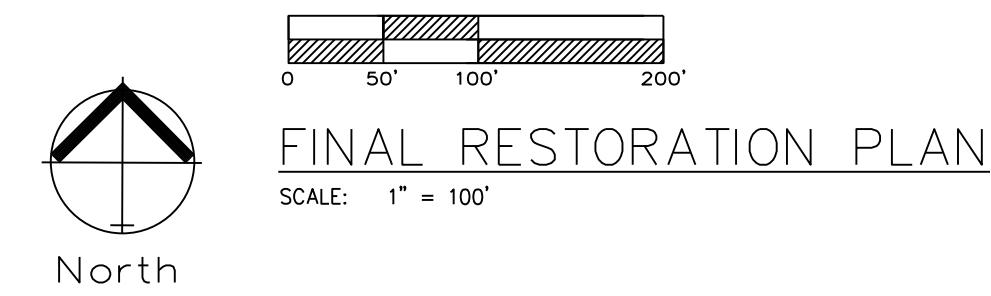
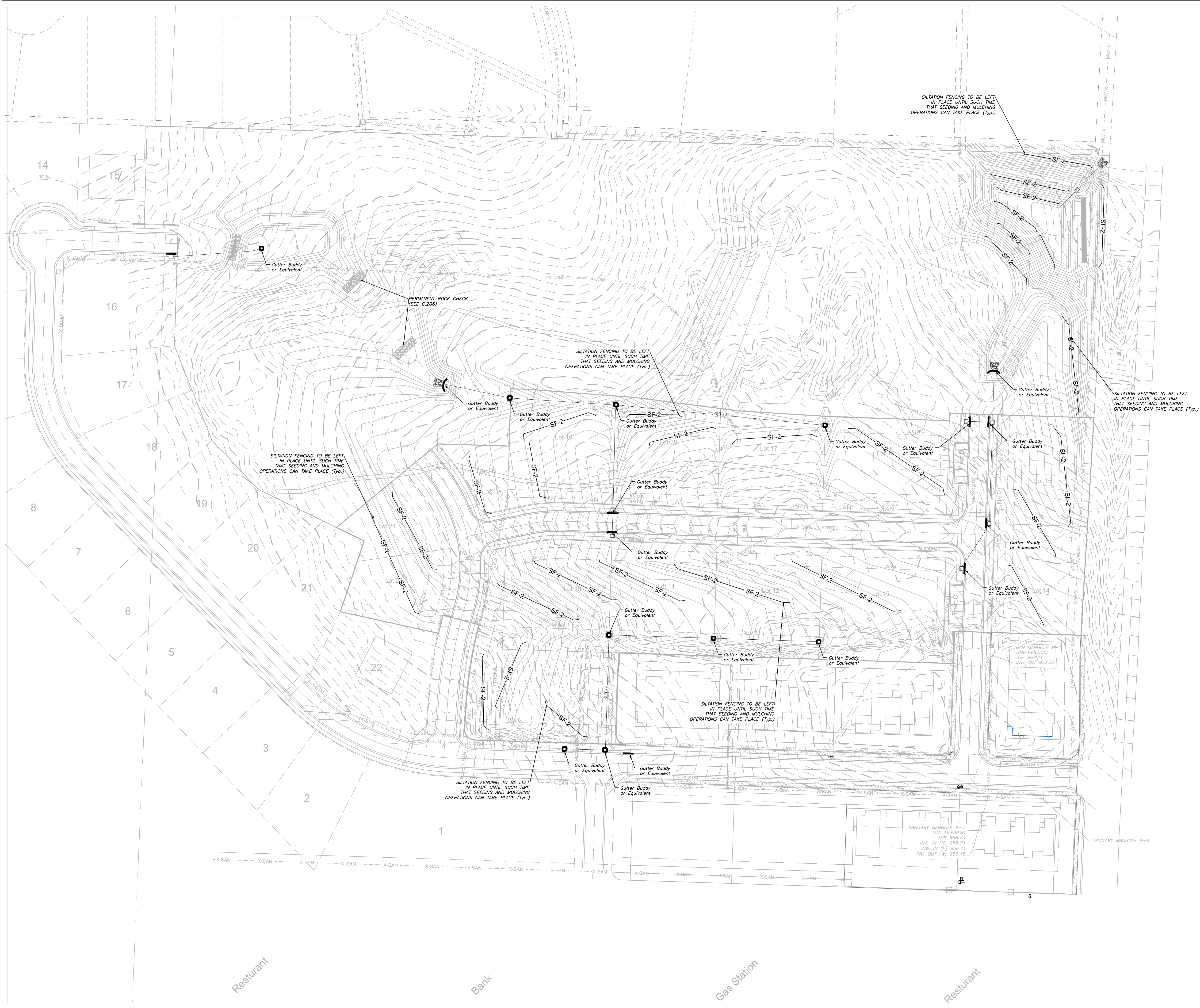
Project: VILLAGES OF CHAPEL RIDGE-LSMO
Issue Date: April 10, 2020

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

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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

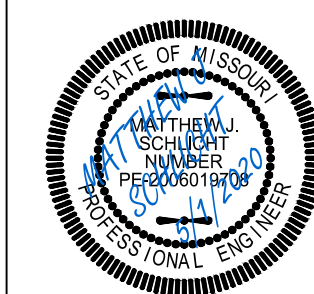


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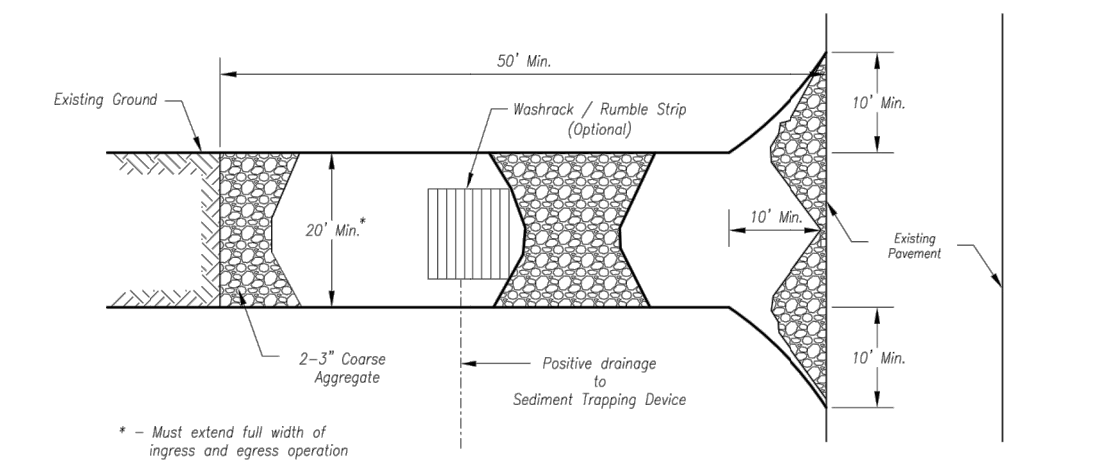
Project:
VILLAS OF CHAPEL
RIDGE-LSMO
Issue Date:
April 10, 2020

ESC PHASE 3 - Final Restoration Plan
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
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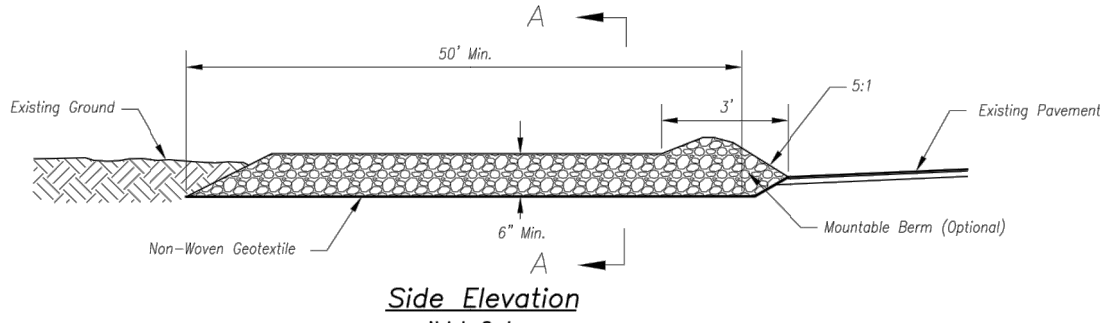


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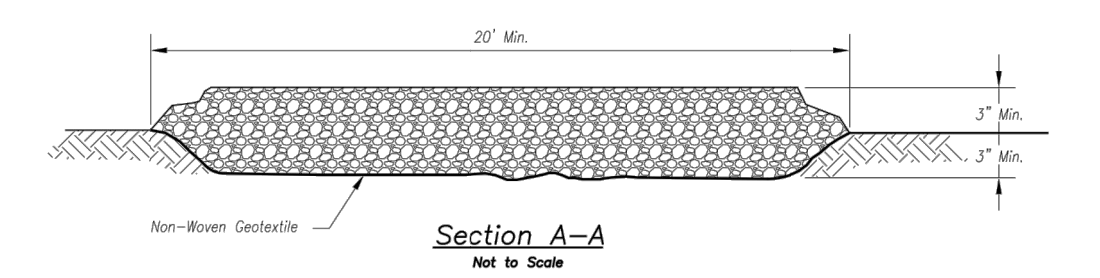
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REV. 5/1/2020



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A-A
Not to Scale

Notes for Construction Entrances:

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 direct 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. Direct 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

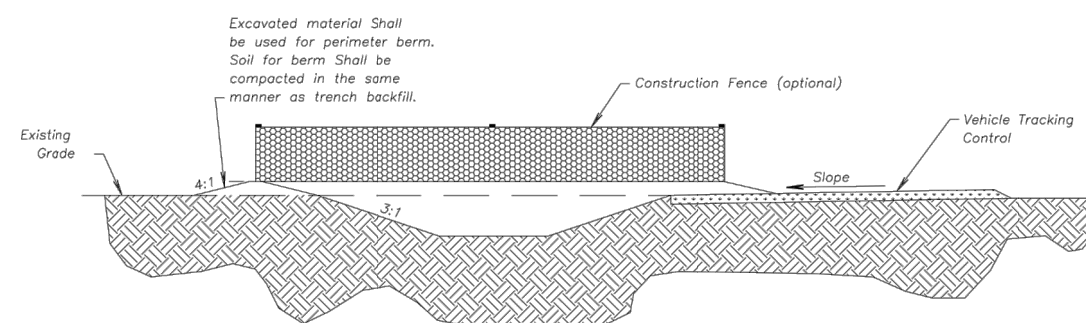
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control. Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

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 1:1 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.

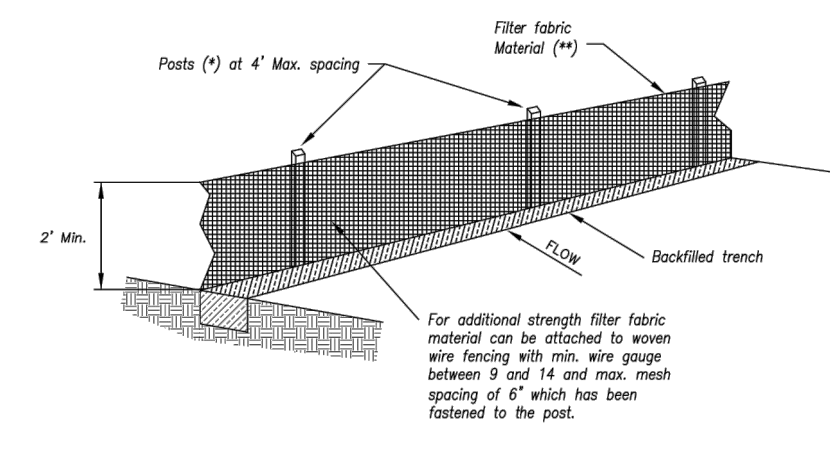
Maintenance for Concrete Washout:

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 backfill 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



(*) EGGSIS	
MIN. LENGTH 4'	
HARDWOOD 1 3/4\" x 1 3/4\"	
NO.2 SOUTHERN PINE 2 3/4\" x 2 3/4\"	
STEEL 1.33 LB/FT	

(**) - Geotextile Fabric shall meet the requirements of AASHTO M288

SILT FENCE DETAILS

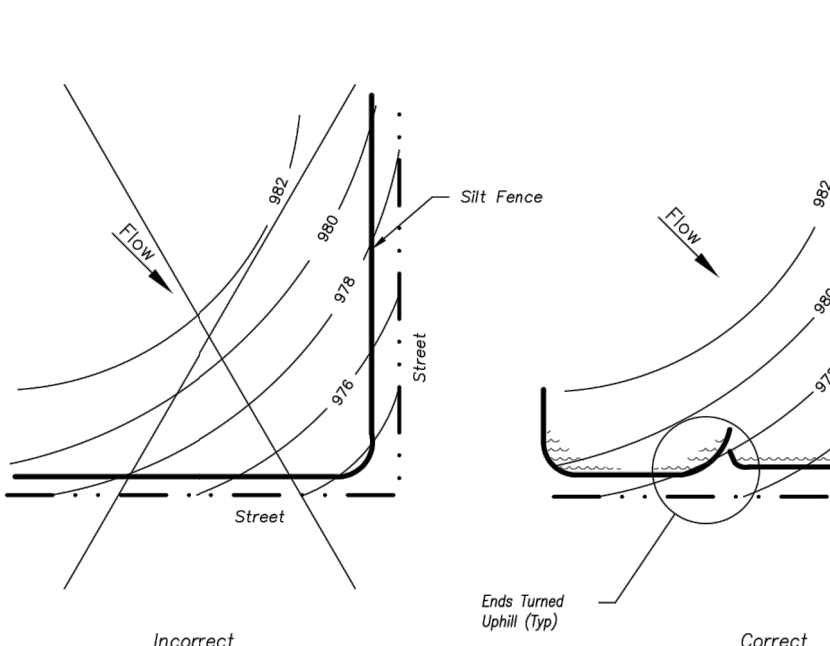
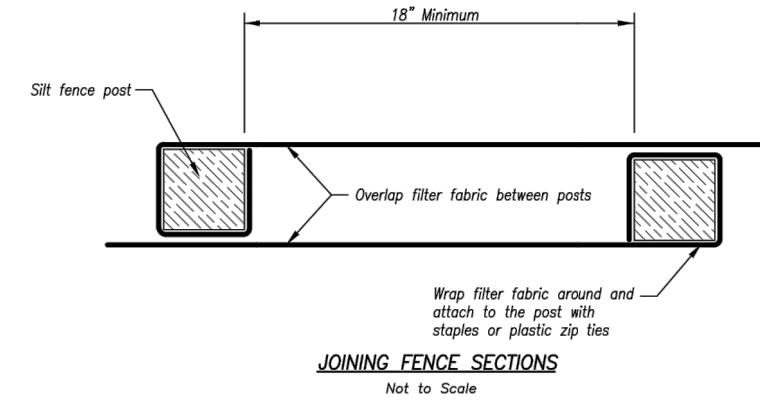
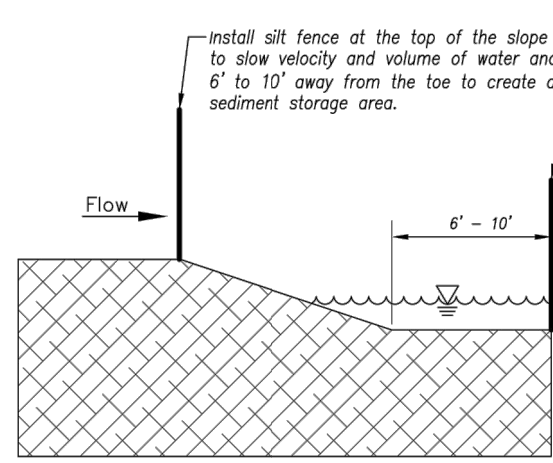


Figure A

SILT FENCE LAYOUT



JOINING FENCE SECTIONS

Not to Scale

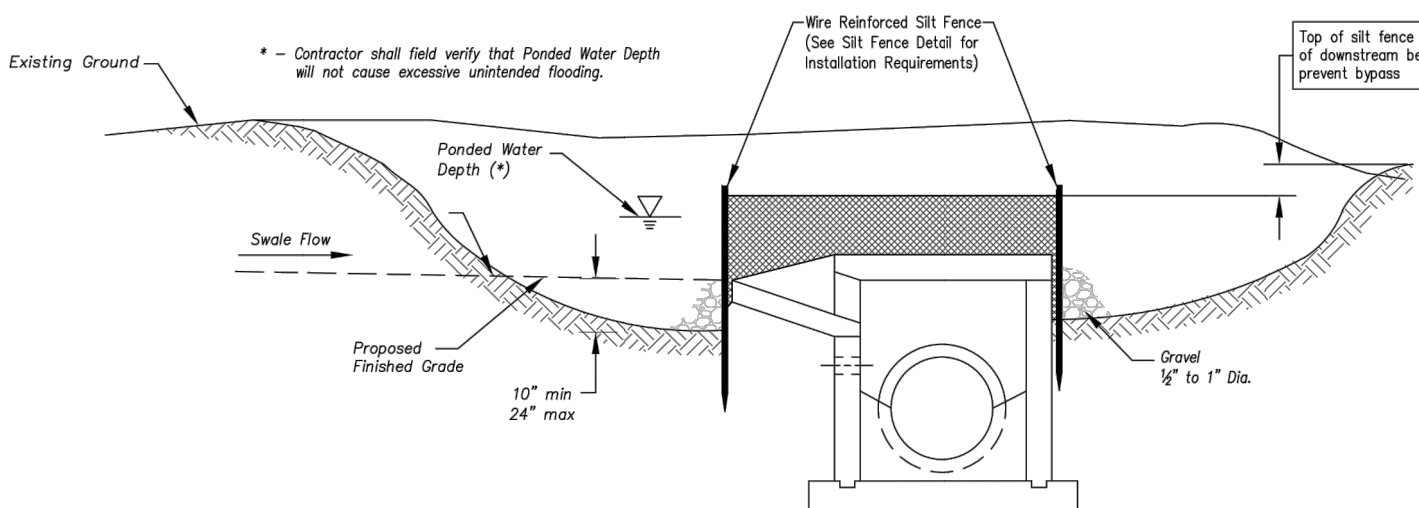
Overlap filter fabric between posts

Wrap filter fabric around and attach to the post with staples or plastic zip ties

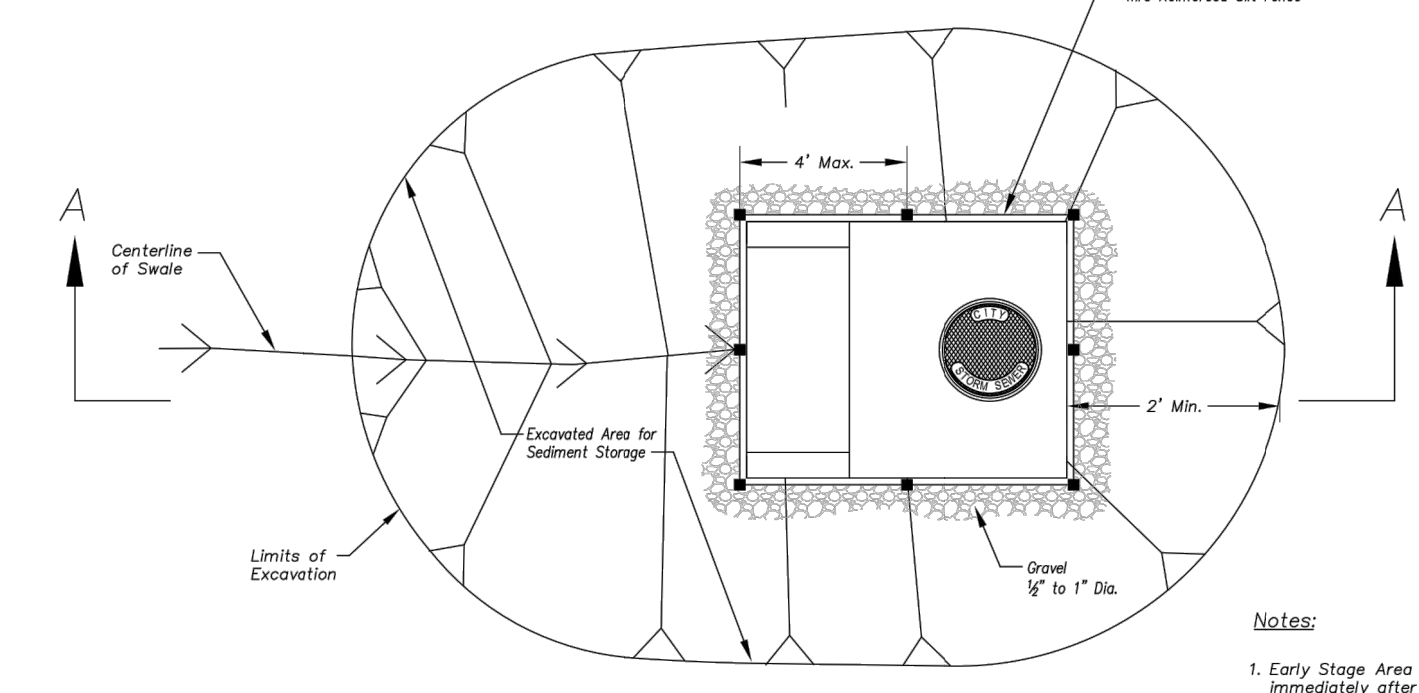
Not to Scale

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

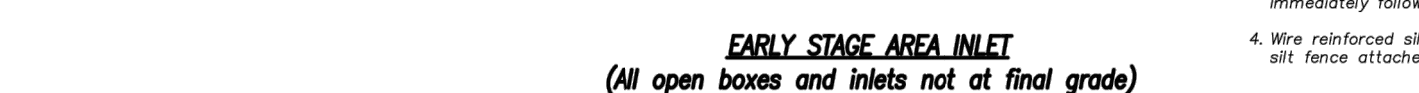
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



Section A-A
Not to Scale



Section A-A
Not to Scale



EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Notes:

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.

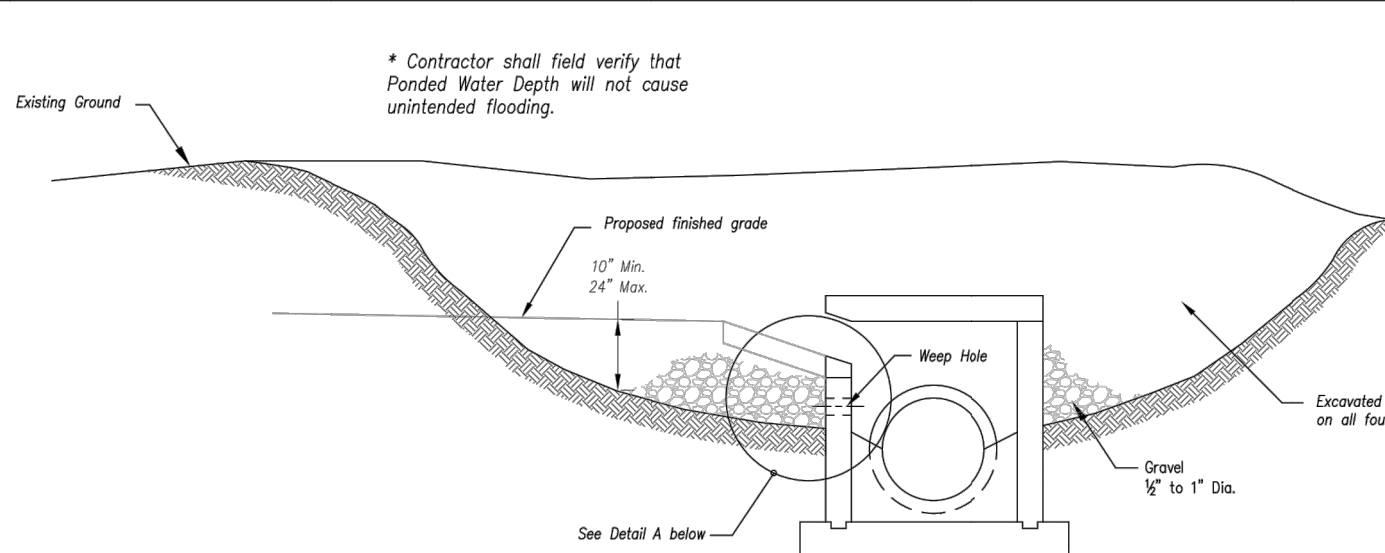
LATE STAGE AREA INLET (Area inlets at final grade and existing inlets)

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.

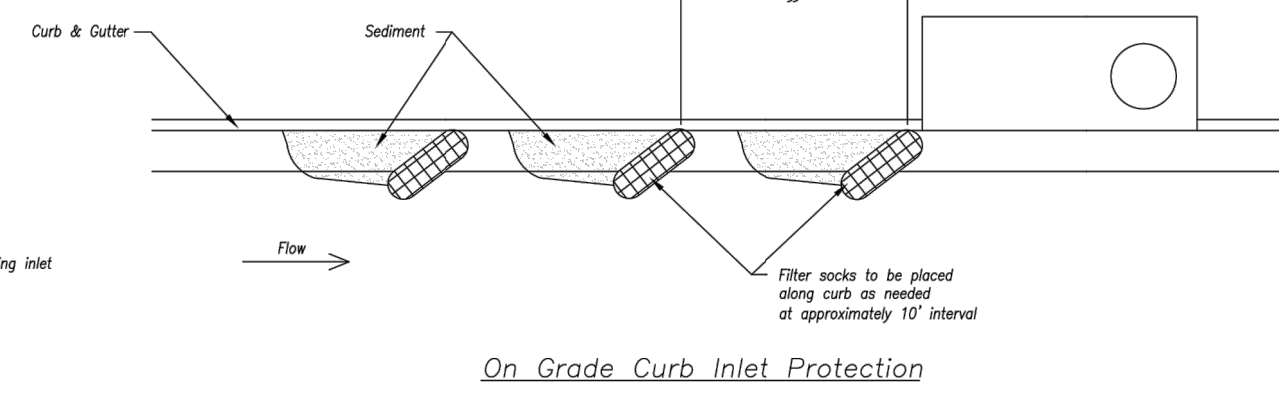
AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07 ADOPTED 10/24/2016

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

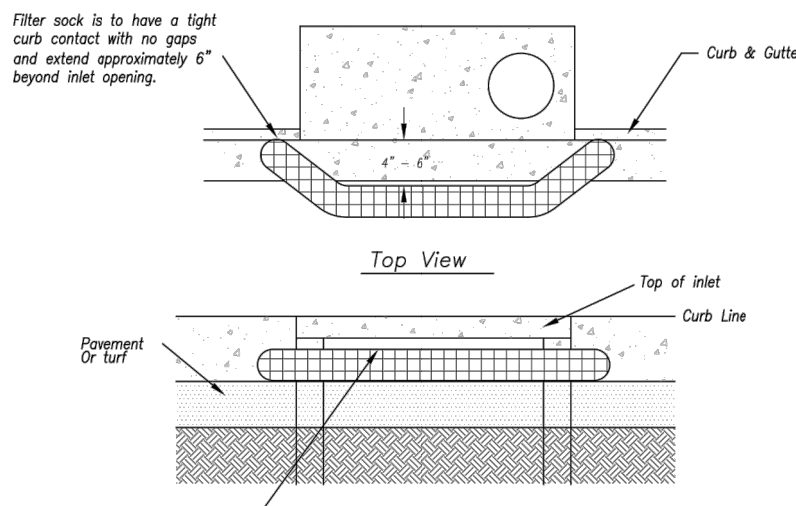


Detail A

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



On Grade Curb Inlet Protection

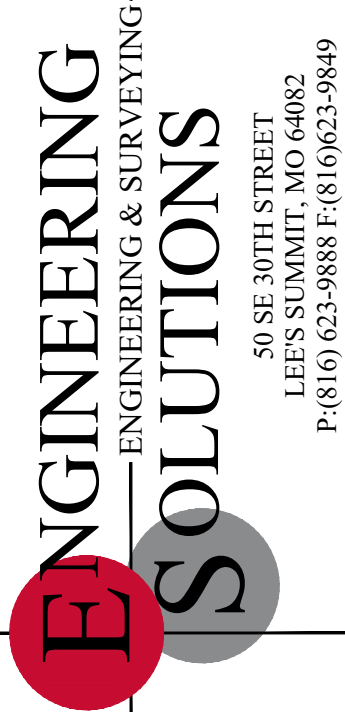
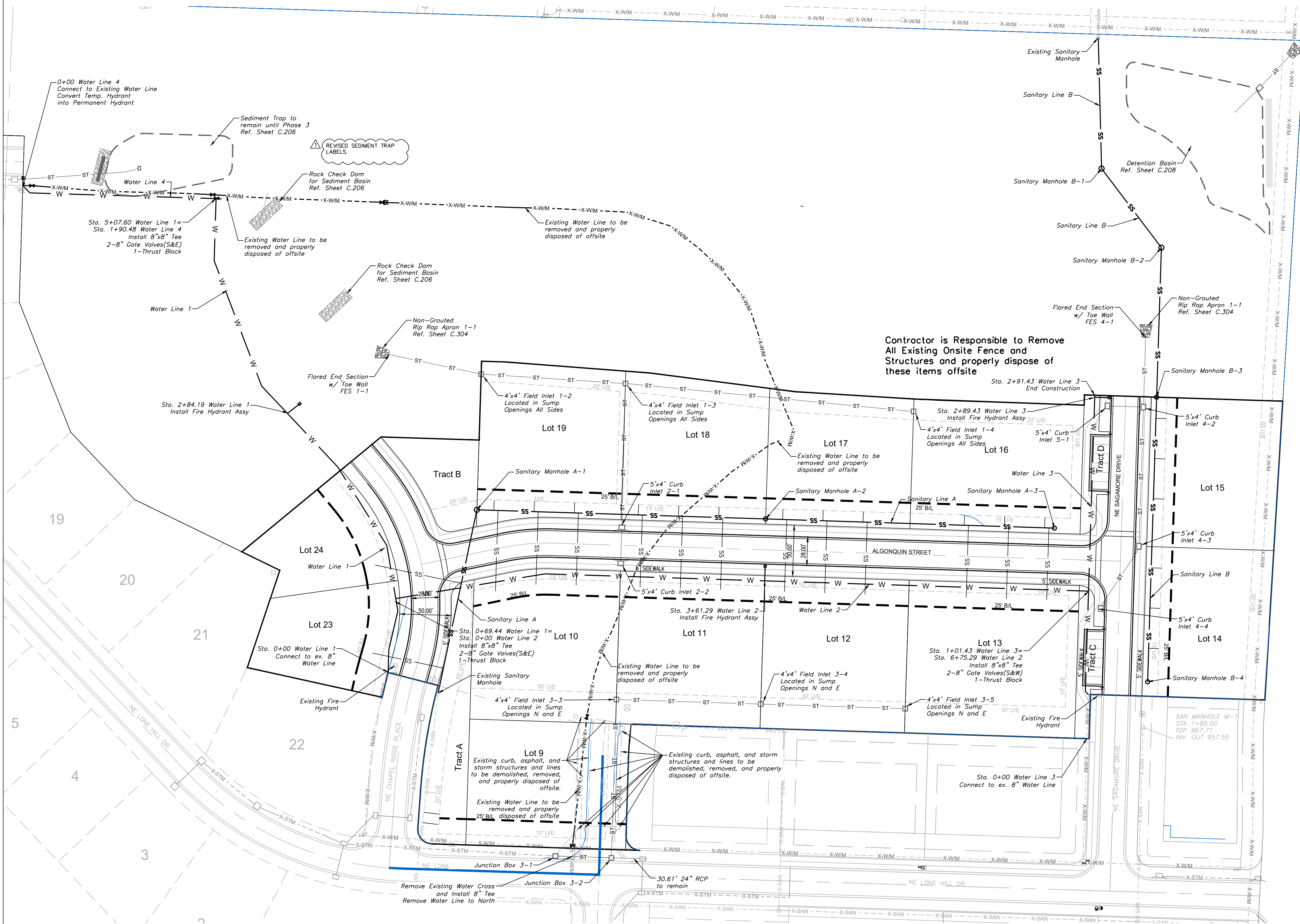
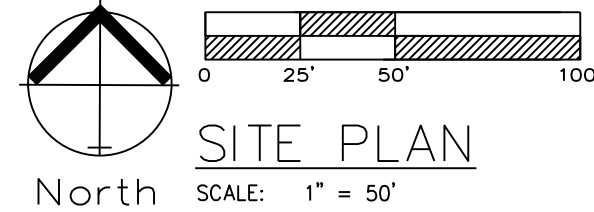


Sump Inlet Sediment Filter

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.

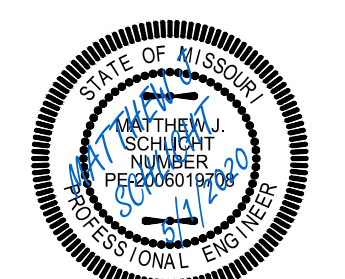


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Oklahoma
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Nebraska
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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit,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

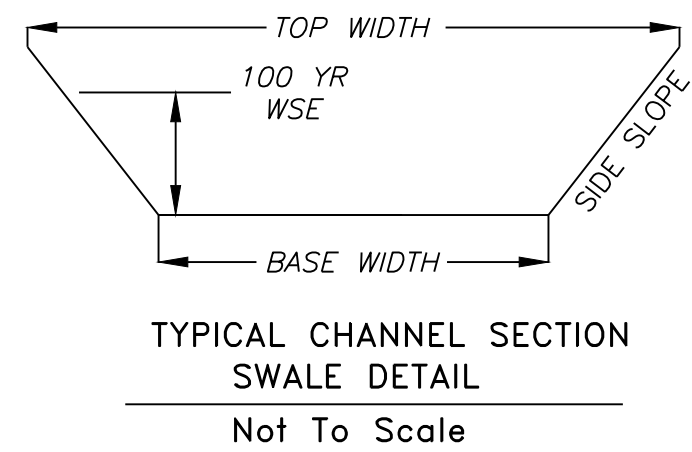
Project:
VILLAS OF CHAPEL
RIDGE, L/SJO
Issue Date:
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Site Plan
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri



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

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 (f.p.s.)	100Yr. 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

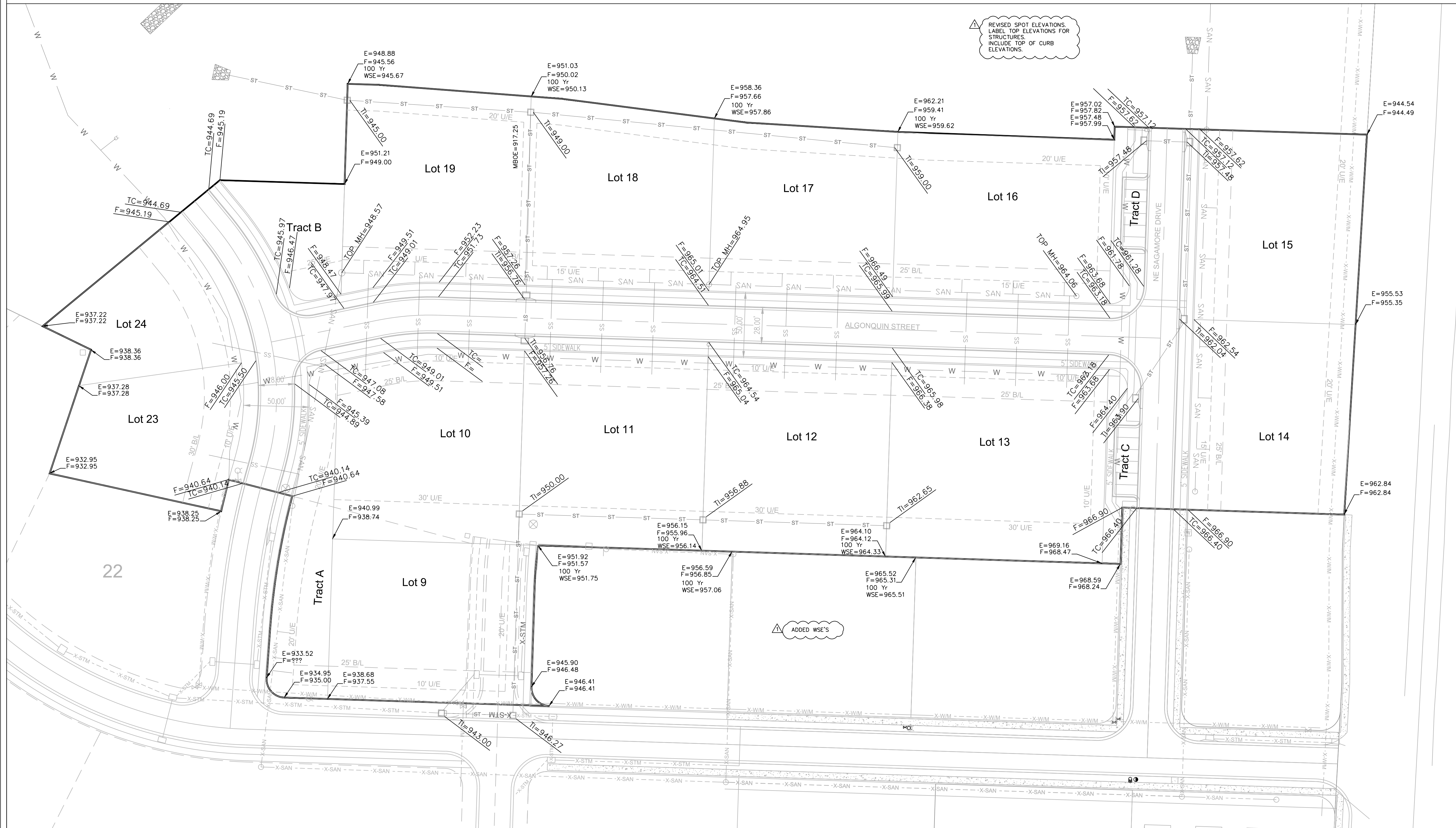
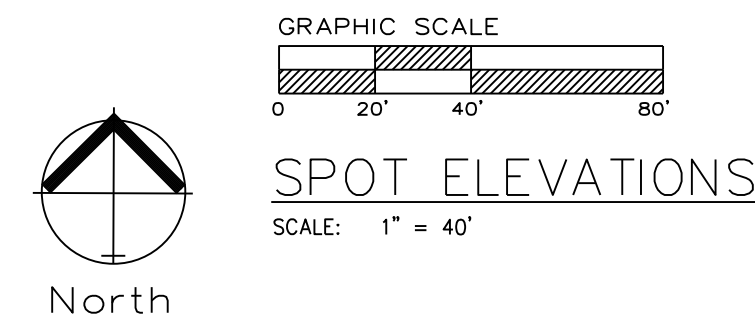
NOTE: Swale should be lined with "Straw with Net" turf reinforcement (Curlex Blanket or Eqv.) . Per Table 5607-1 in APWA Manual

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

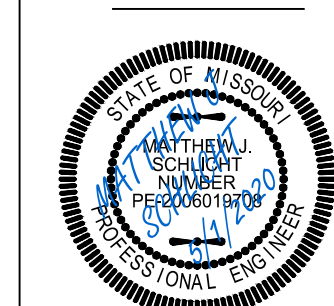
Note:

AS GRADED PLOT PLAN REQUIRED FOR EACH LOT.

ADDED NOTE.



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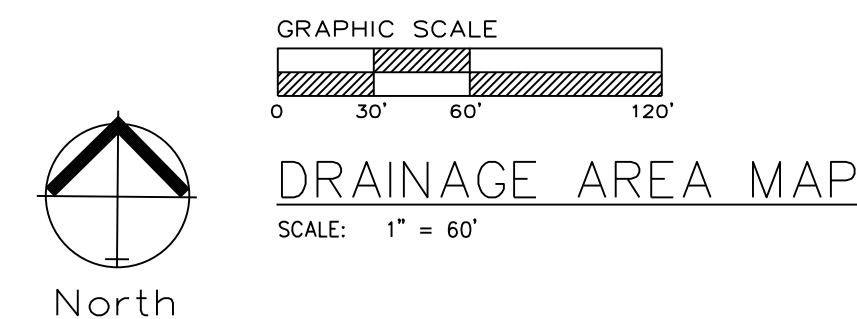
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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

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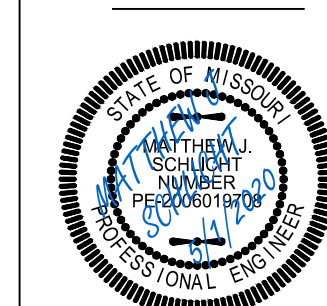


APWA STORM DRAINAGE "TC" COMPUTATIONS FOR : VILLAS OF CHAPEL RIDGE 2ND PLAT																																		
		yellow areas are self computing overwrite if necessary		Surface types: SURFACE CODES		Asph/ConcBus/Com		Dirt	Grass/Park	Lake	MultFam	SnglFam	Undev	Other	TC COMPUTATION																			
				"C" Values		0.90		0.87	0.60	0.30	0.90	0.66	0.51	0.3																				
		TOTAL WATERSHED				OVERWRITE		Length - DN		Elev or Slope if necessary		SURFACE		P=Paved		Unwrite Slope or Elevations U=Unpaved if necessary																		
				SURFACE		"C"		OVRLND FLOW - 100' MAX				P		FLOW - FIRST REACH																				
				CODE		VALUE		LENGTH		UP		ELEV		DN		ELEV		SLOPE																
						</																												

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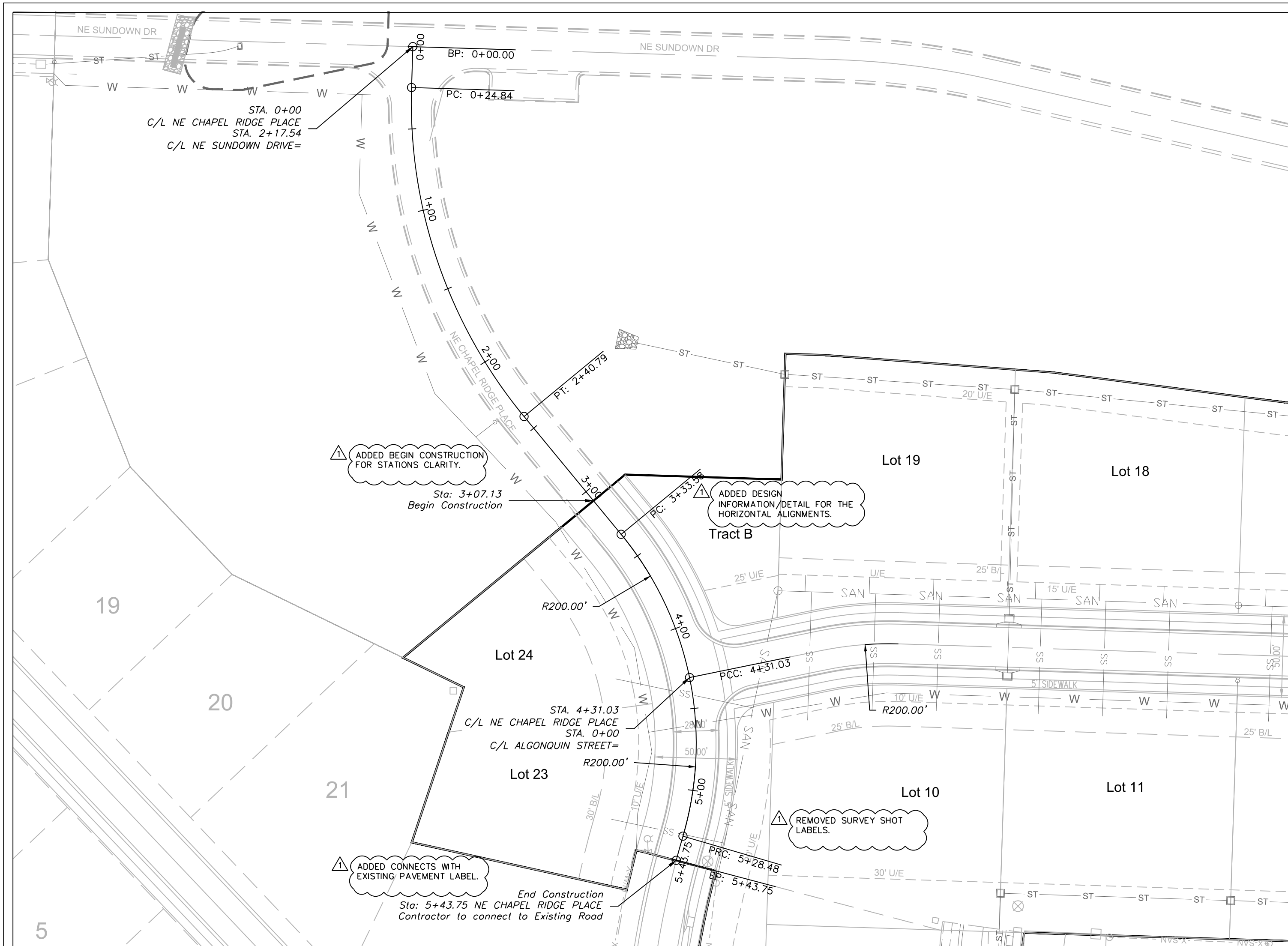
Project: VILLAS OF CHAPEL
RIDGE, LSMO
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Master Drainage Map 3 of 3:
Drainage Area Map
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County,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

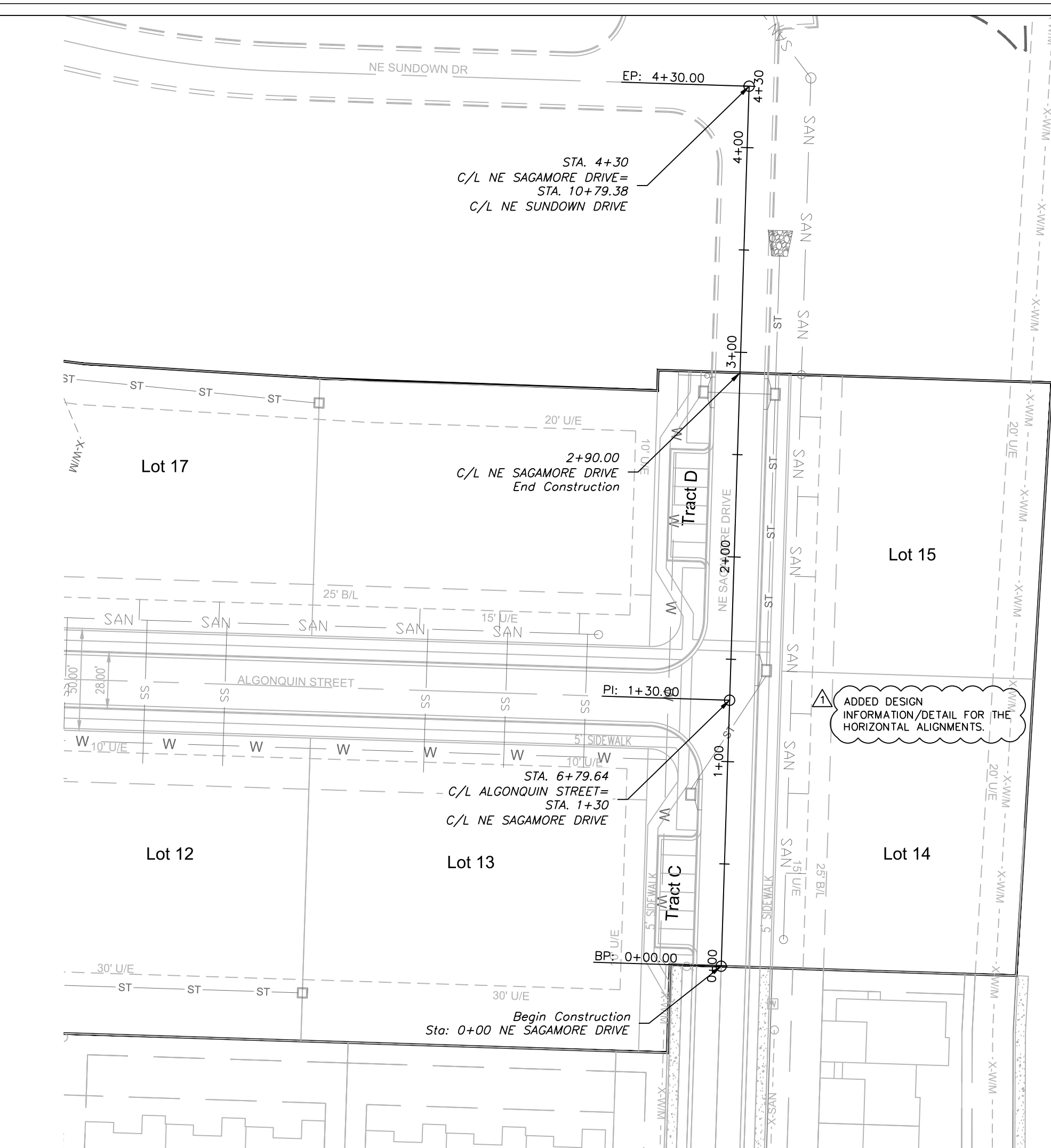
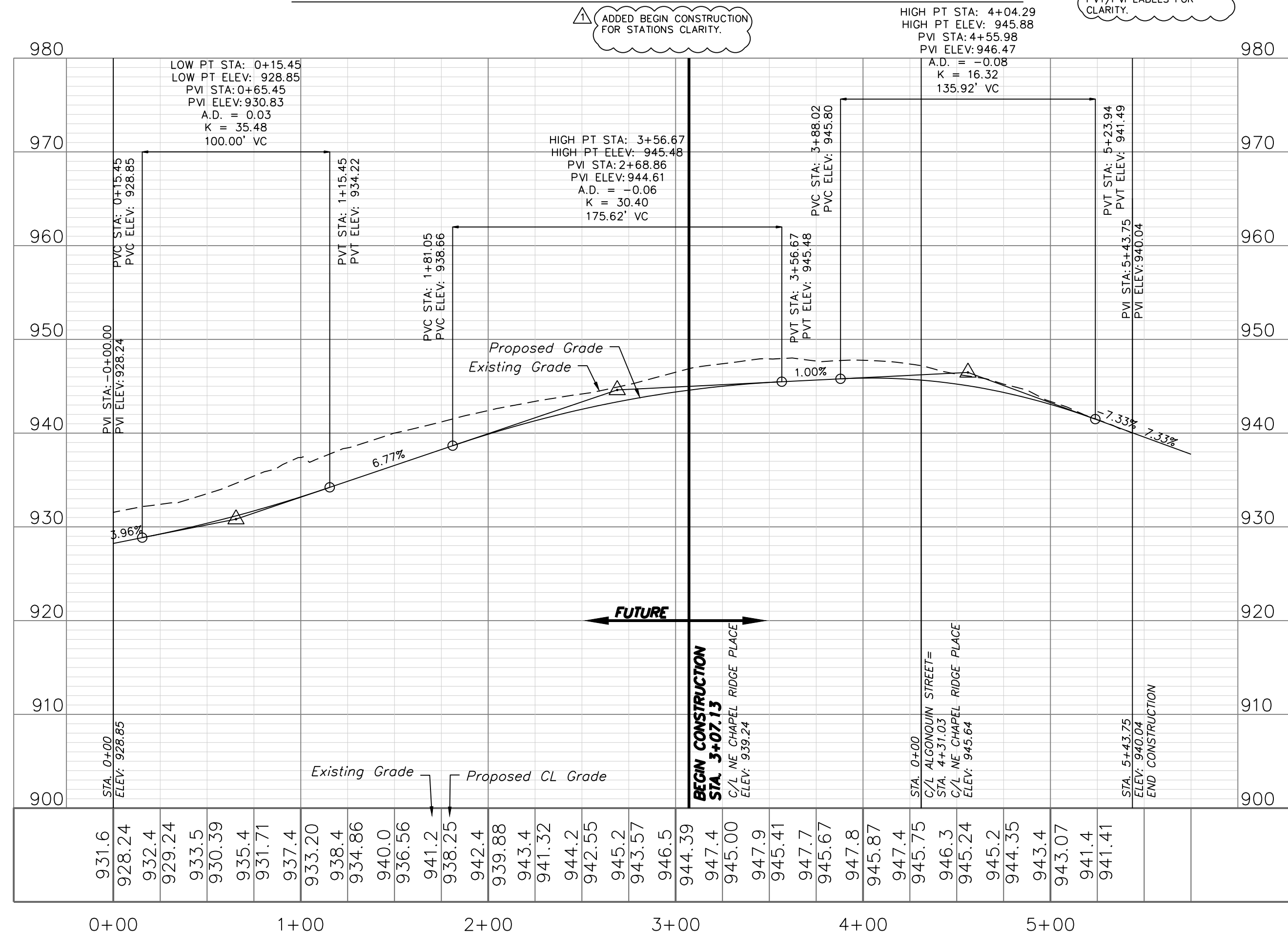


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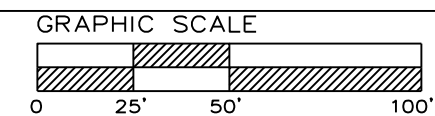
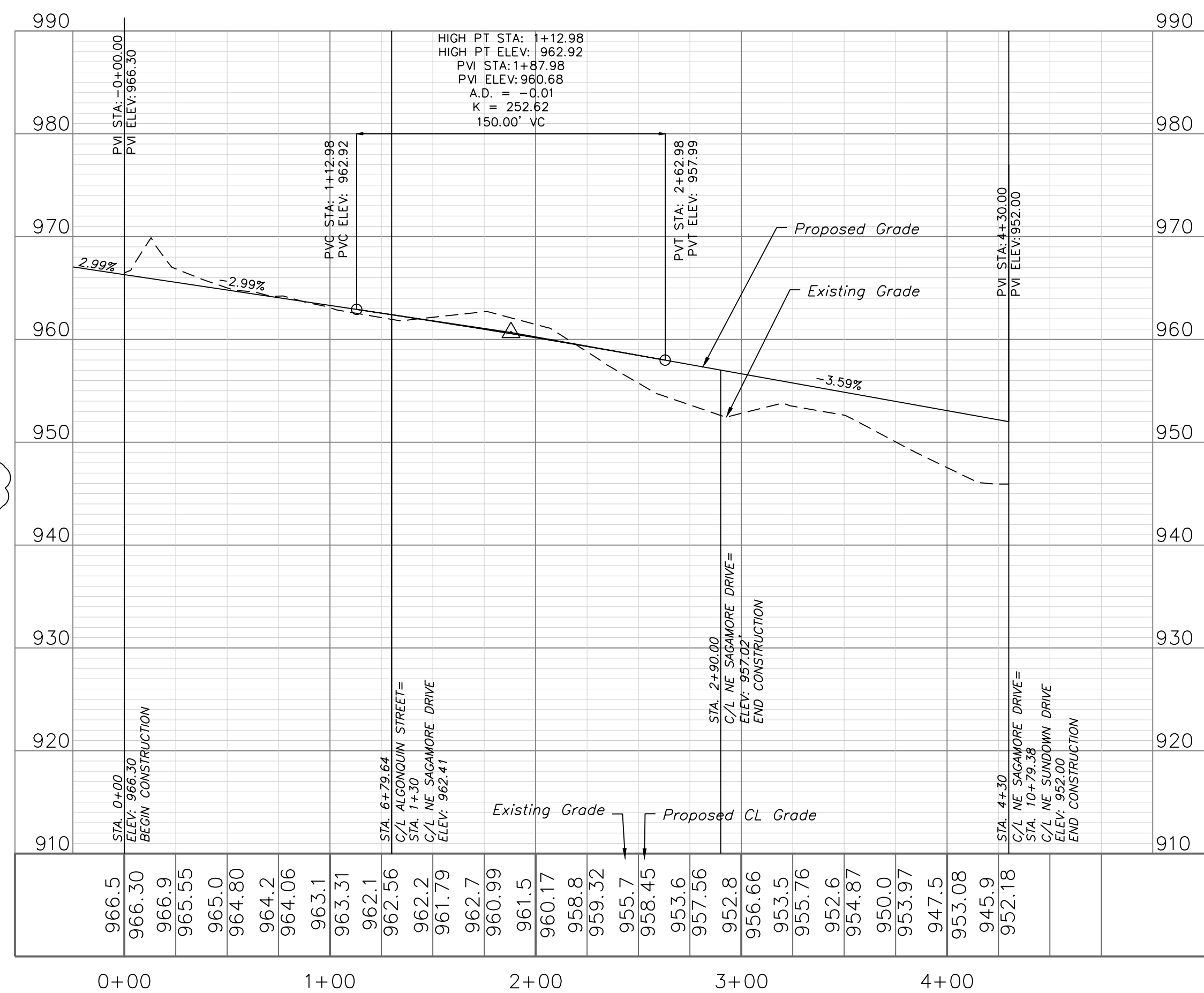
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NE CHAPEL RIDGE PLACE

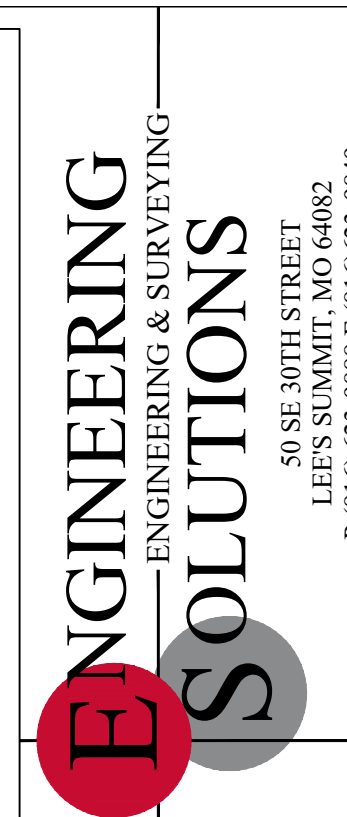
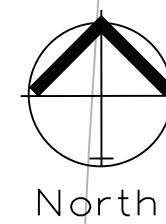


NE SAGAMORE DRIVE



STREET PLAN & PROFILE

SCALE: 1" = 50'



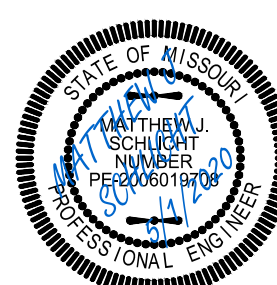
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THE ESTATES OF CHAPEL RIDGE-2ND PLAT
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Lee's Summit, Jackson County, Missouri

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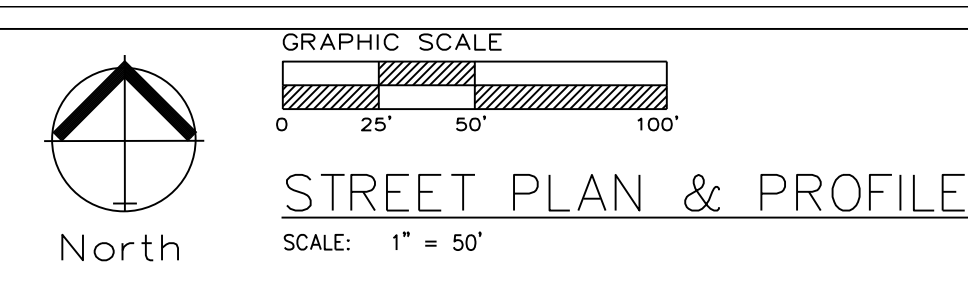
Street Plan and Profile

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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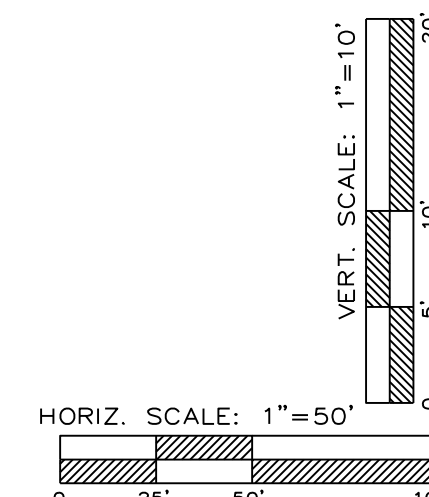


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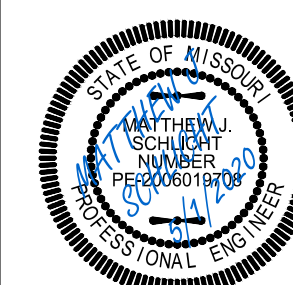
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1 Show the locations of the ADA-accessible routes for the stop controlled intersections in Profile view.



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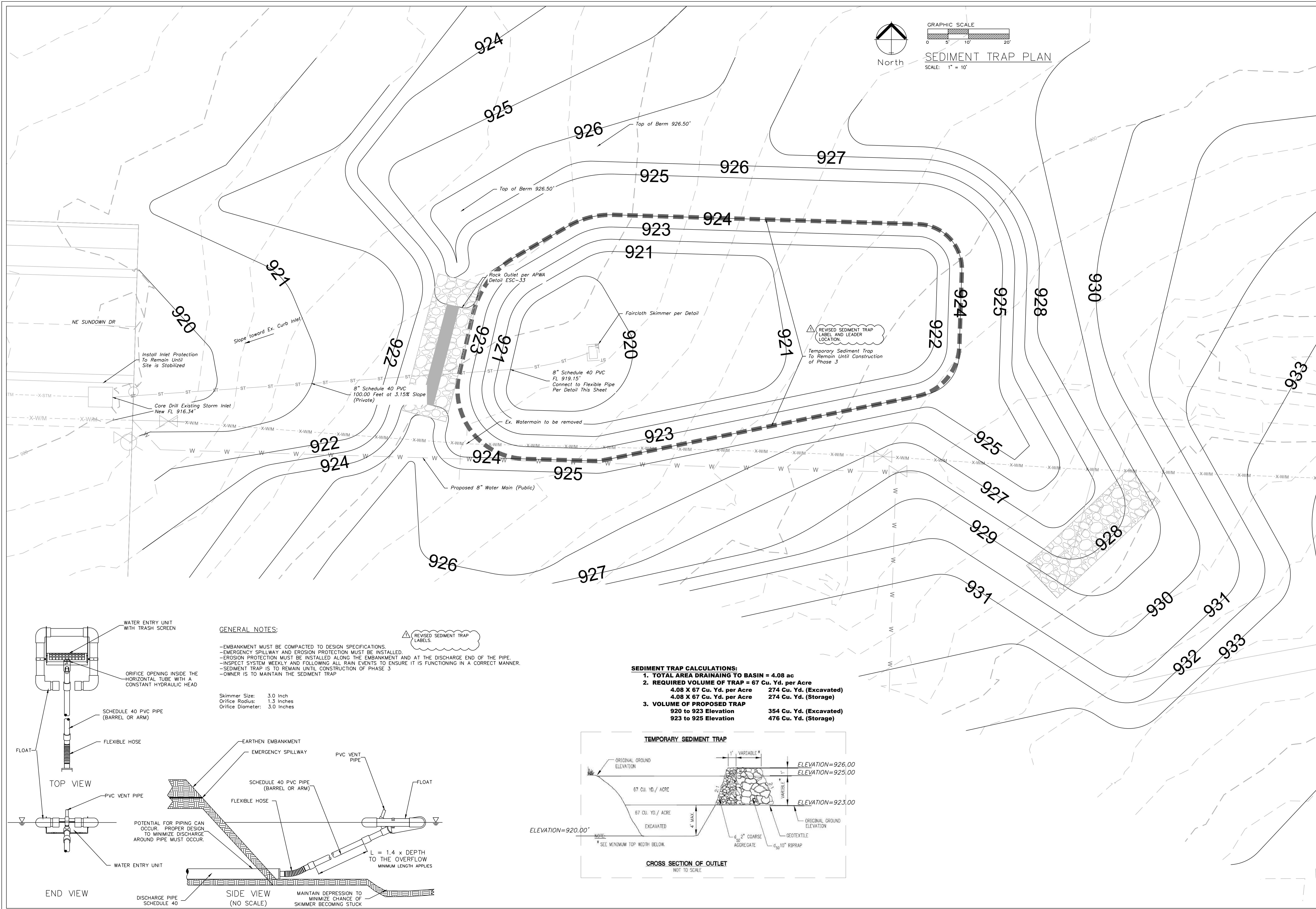
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LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

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LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

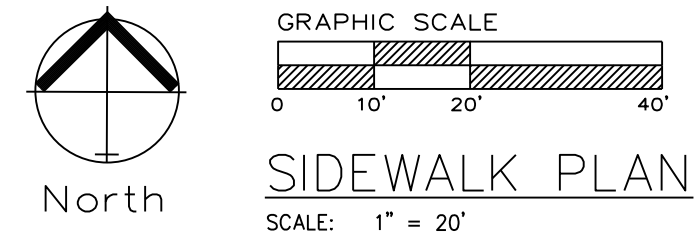
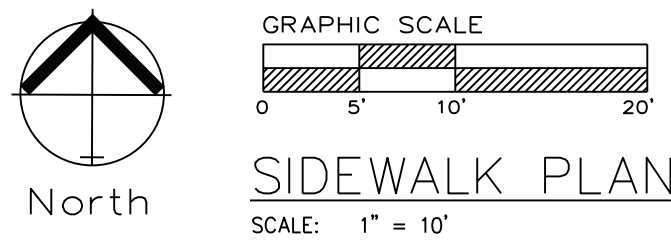
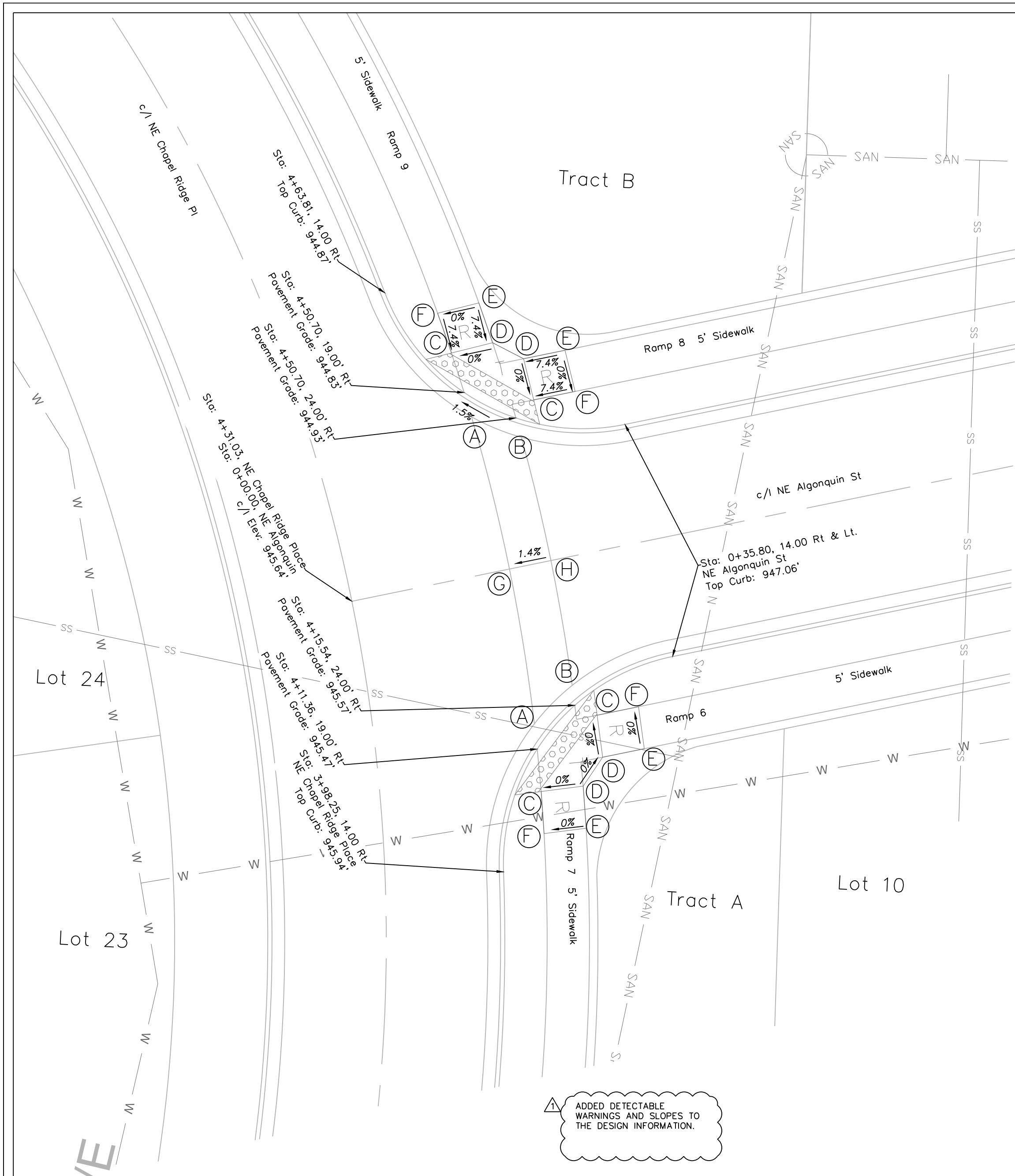
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Sediment Basin
Grading Plan
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri

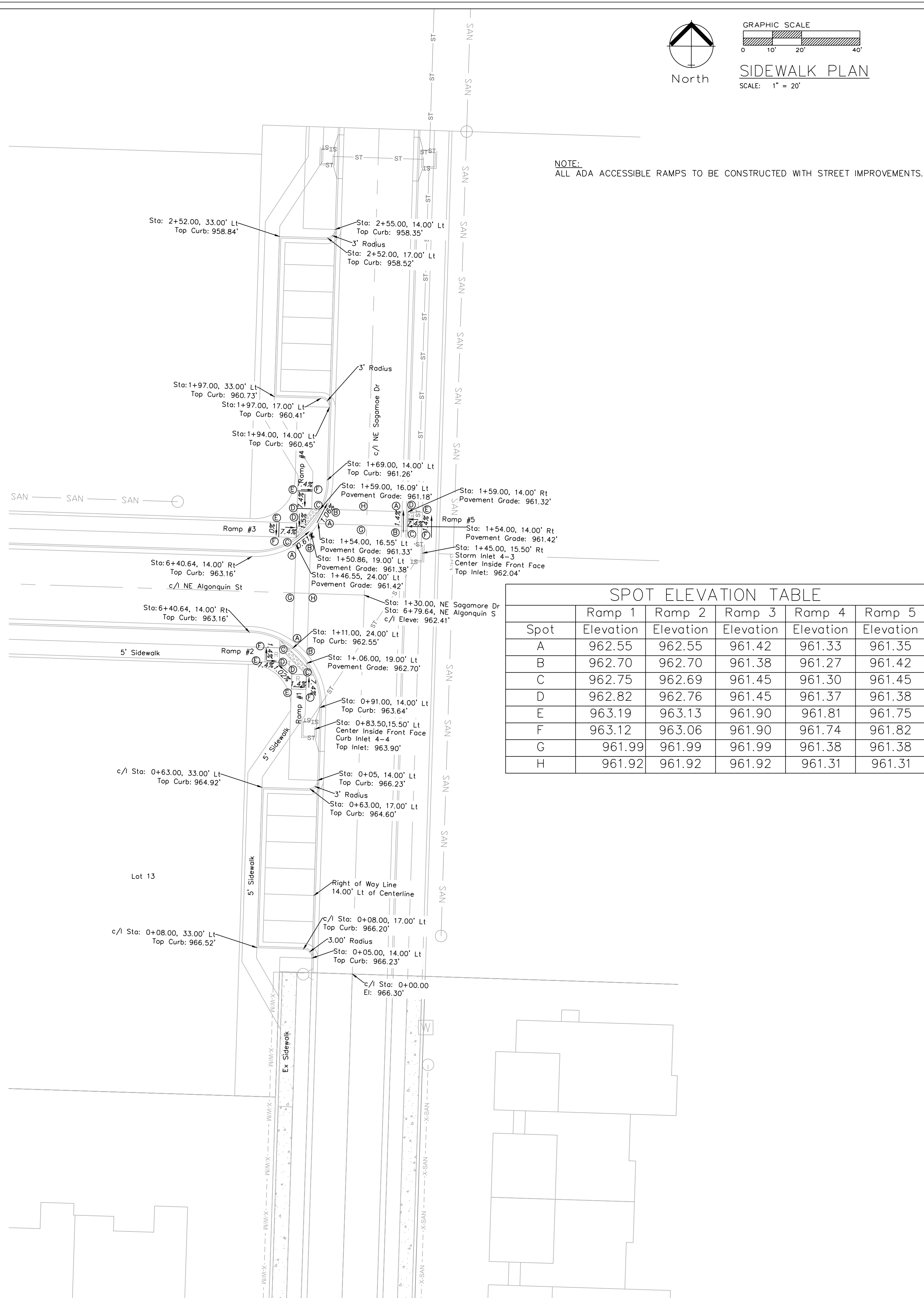
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C. 206



SPOT ELEVATION TABLE				
Spot	Ramp 6	Ramp 7	Ramp 8	Ramp 9
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	Ramp 2	Ramp 3	Ramp 4	Ramp 5
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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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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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

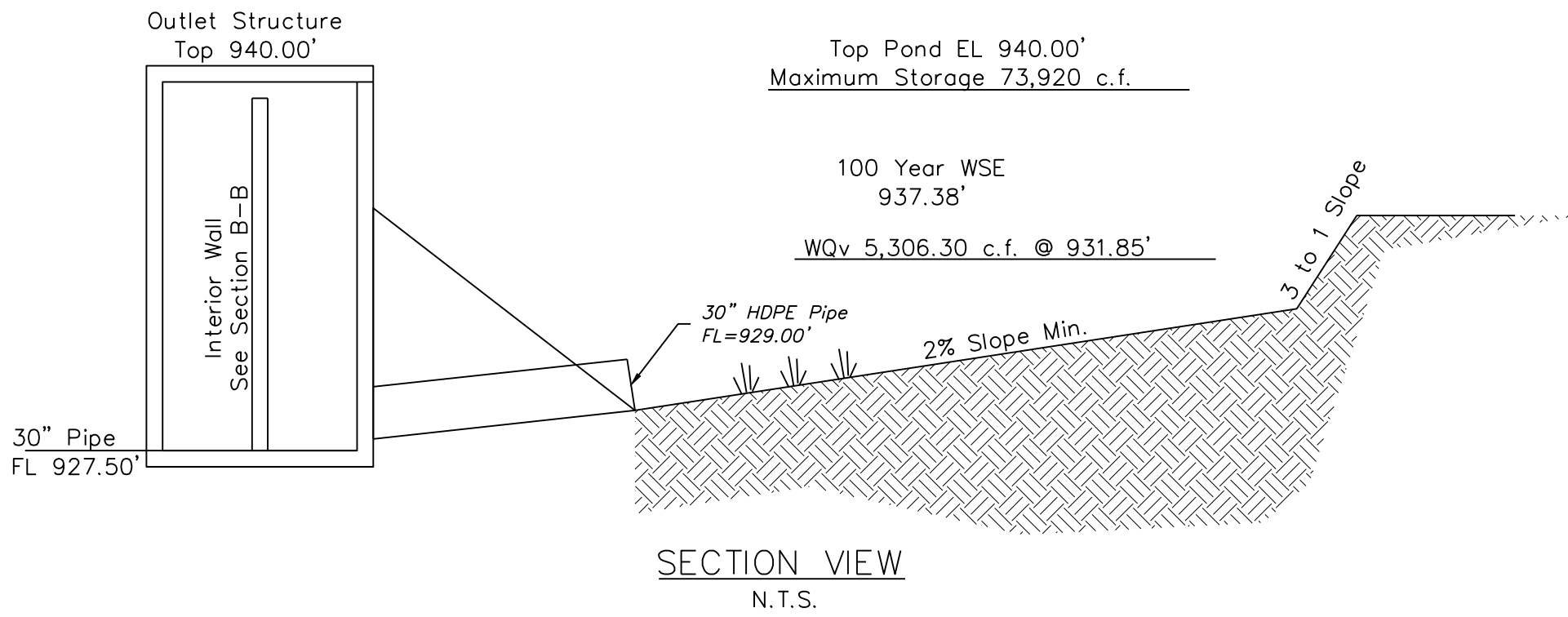
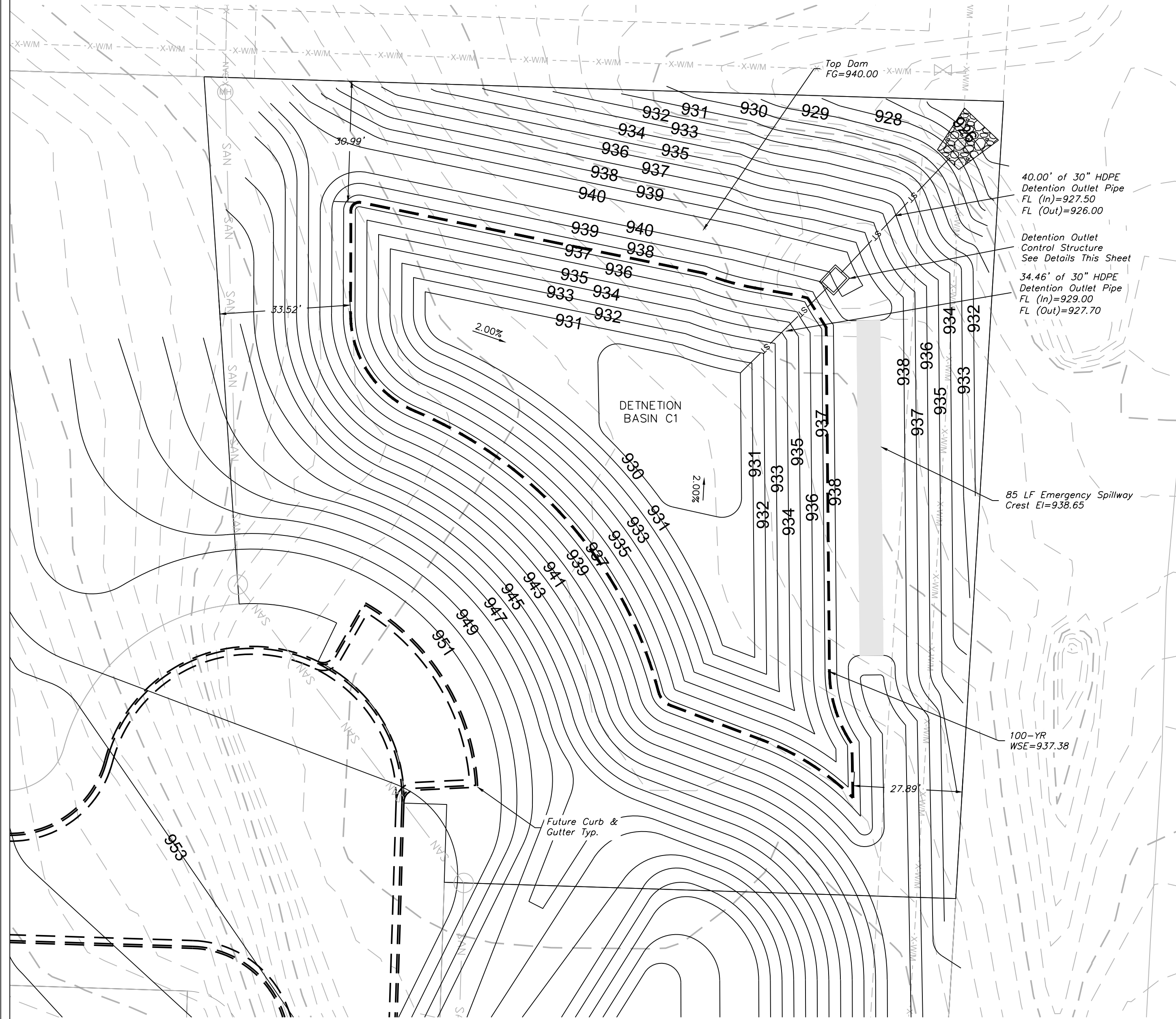
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DETENTION BASIN PLAN

SCALE: 1" = 20'



REINFORCING

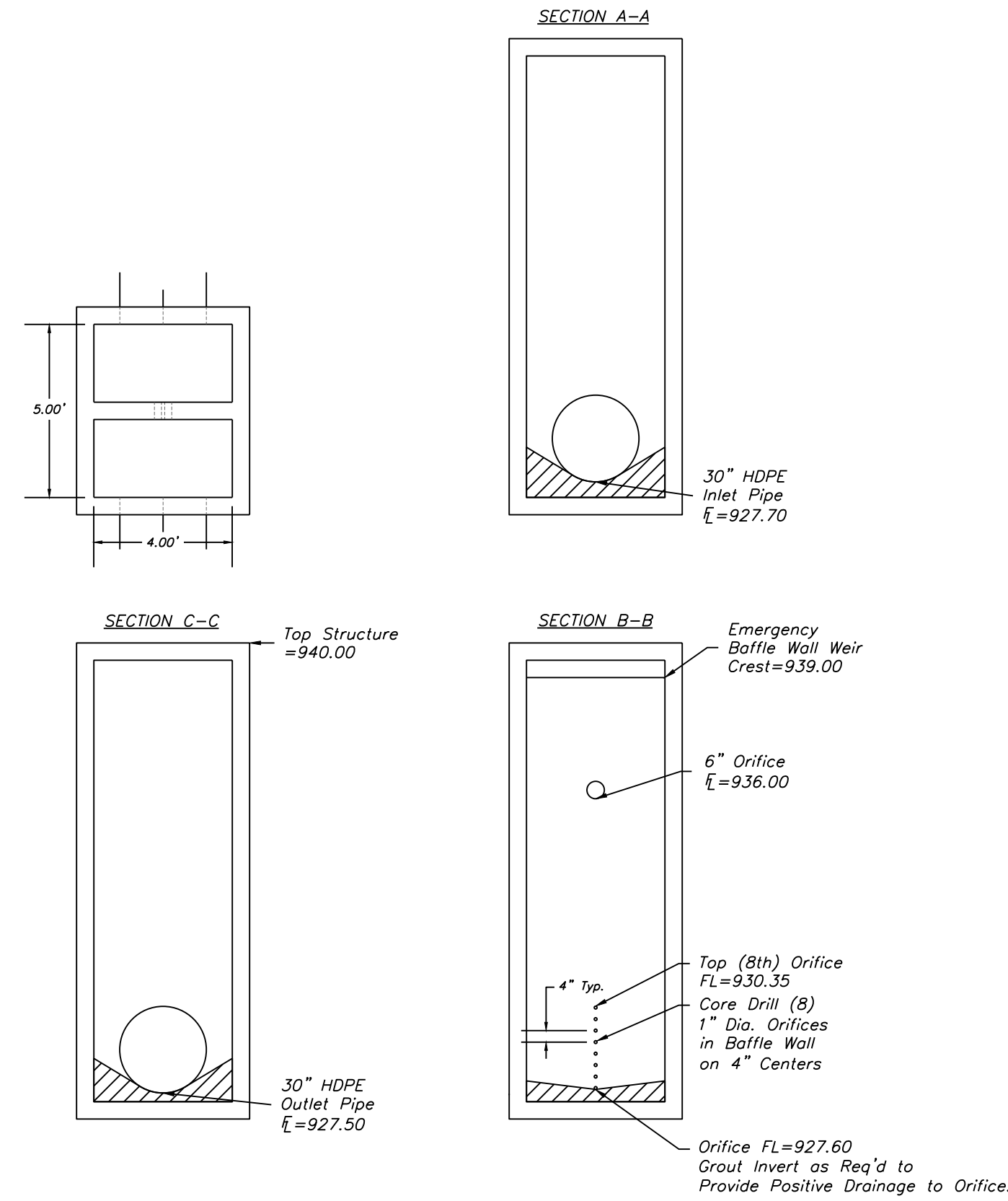
BARS	SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6

GENERAL NOTES:

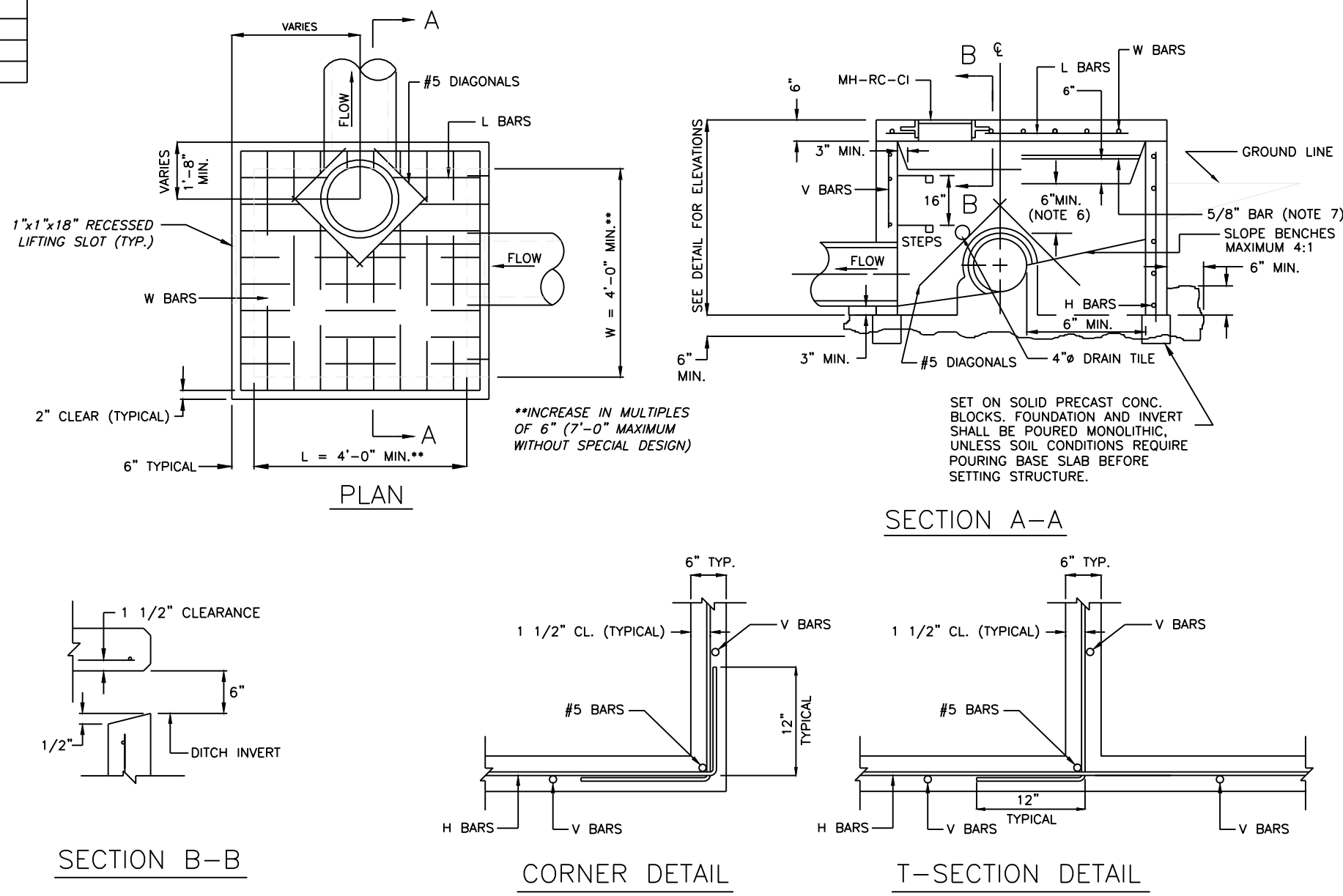
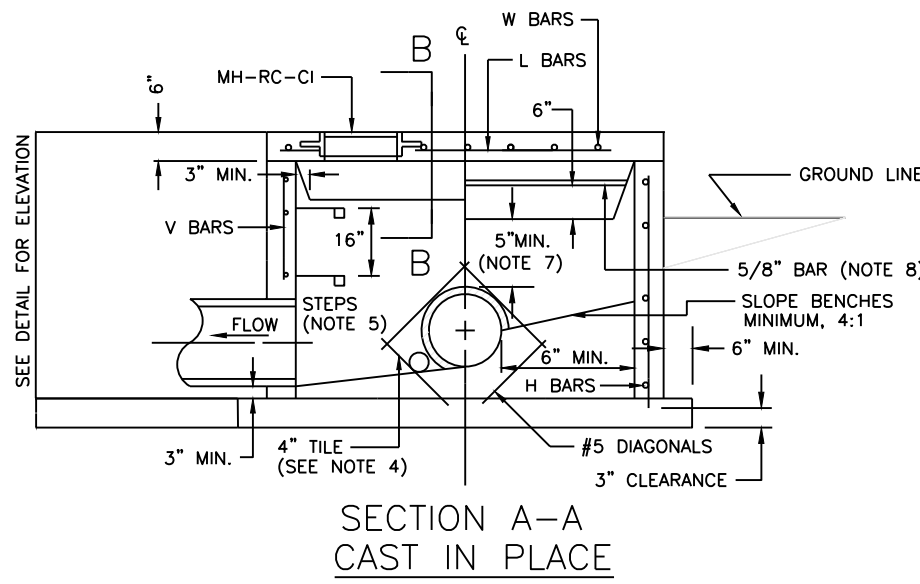
1. Locate ring and cover over outlet.
2. All work and materials shall conform to APWA Sect. 2600.
3. Use 3/4" chamfer strip on all exposed concrete corners.
4. Steps required @ 16" O.C. when depth from top of casting to invert exceeds 4 feet.
5. Boxouts will not be allowed to project through the corners 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.

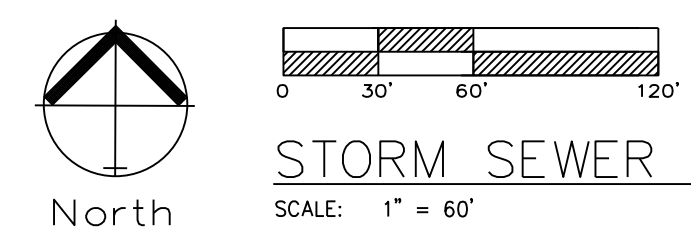
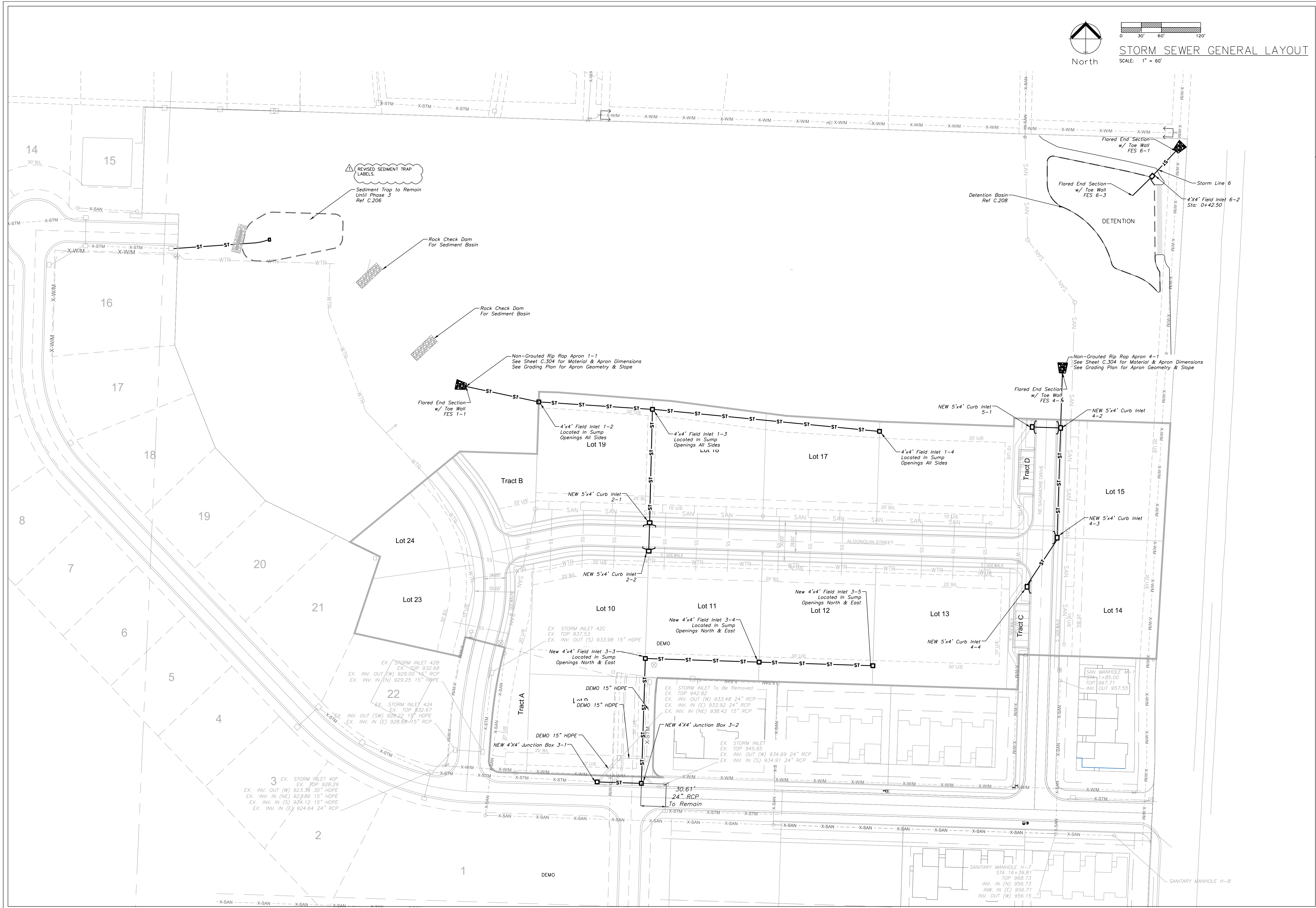
DETENTION OUTLET STRUCTURE

SCALE: 1" = 4'

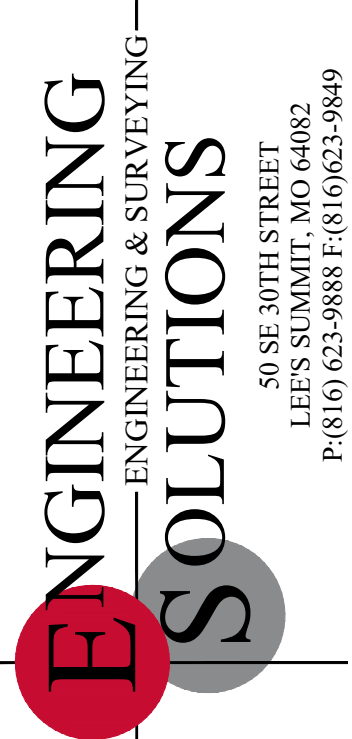


Detention Outlet Structure





STORM SEWER GENERAL LAYOUT



Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005003119-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

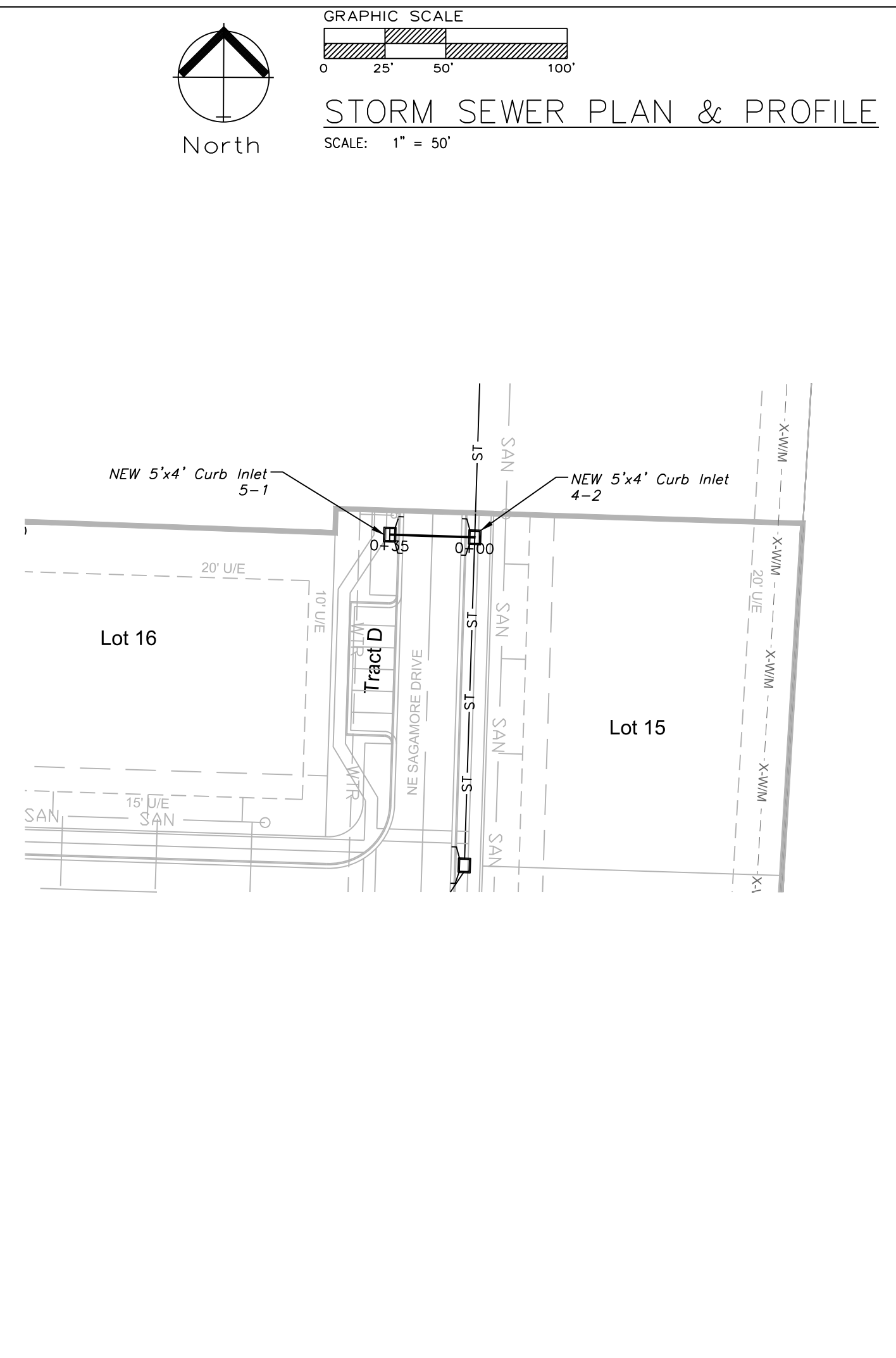
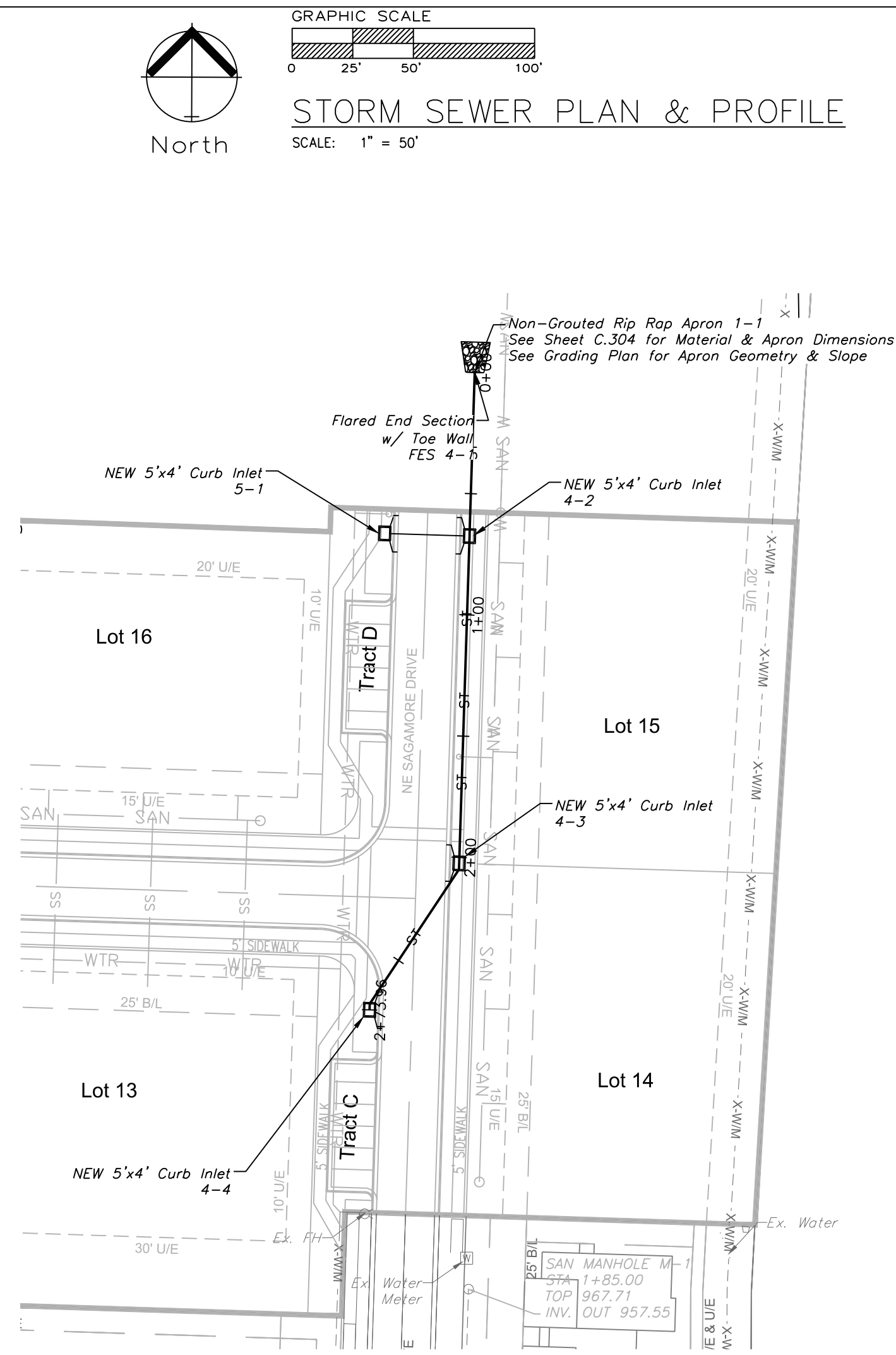
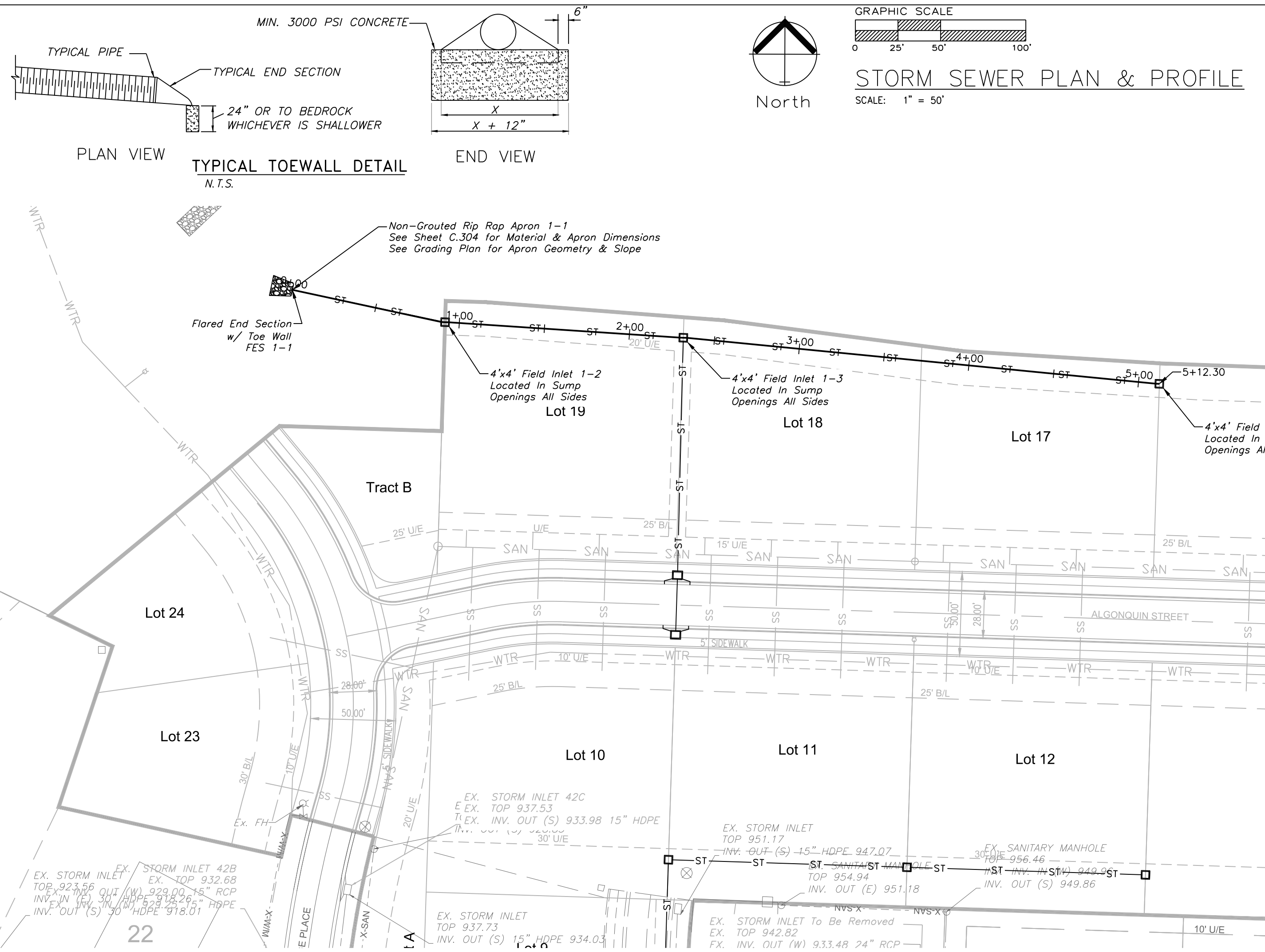
Project:
VILLAS OF CHAPEL
RIDGE, LS MO
Issue Date:
April 10, 2020

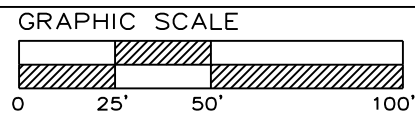
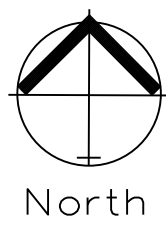
Storm Sewer General Layout
Construction Plans for:
THE ESTATES OF CHAPEL RIDGE-2ND PLAT
LOTS 23 & 24 AND
THE TOWNHOMES OF CHAPEL RIDGE-2ND PLAT
LOTS 9-19 & TRACTS A-D
Lee's Summit, Jackson County, Missouri



Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25228
NE PE E-114335

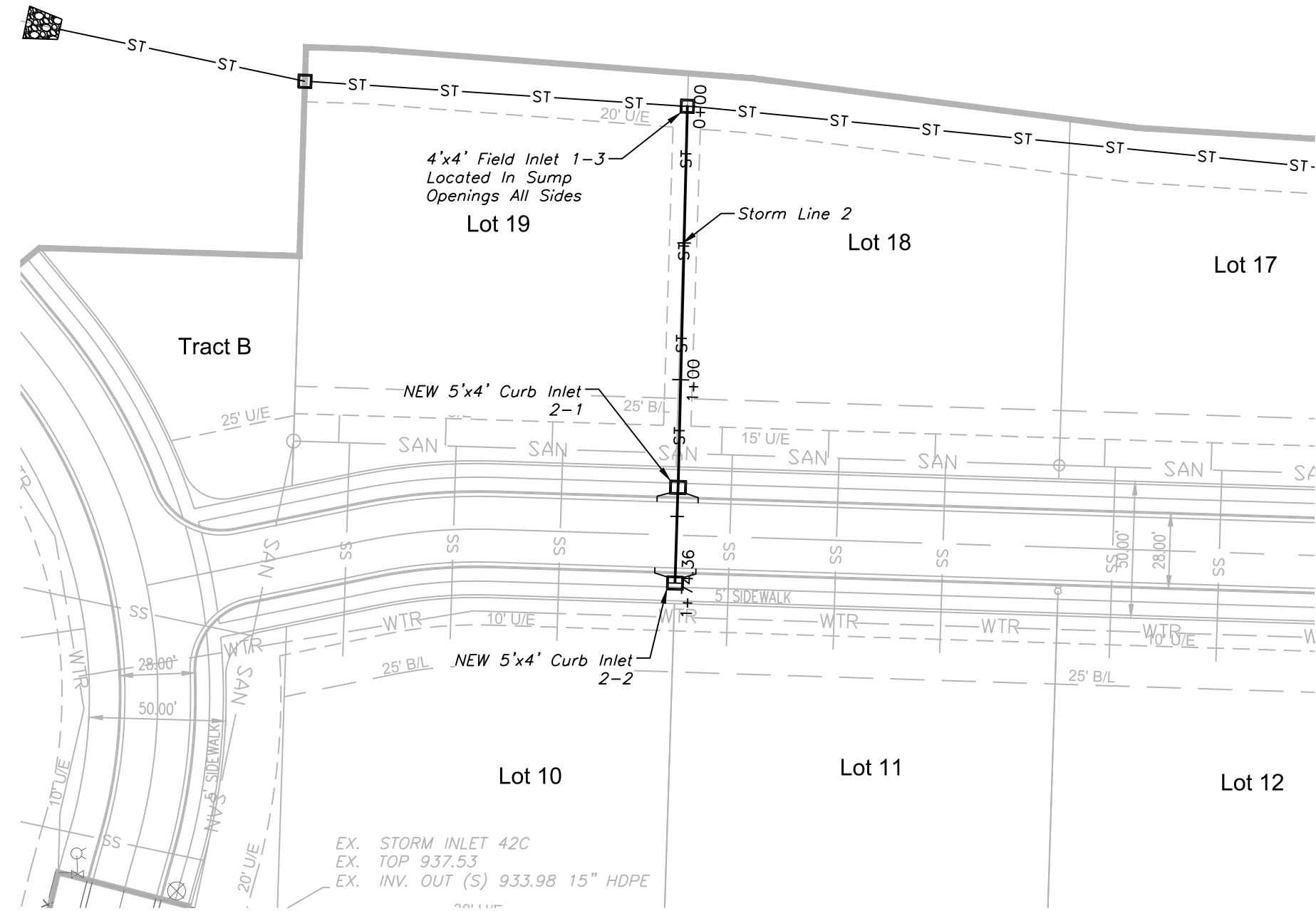
REVISIONS	
REV. 5/1/2020	



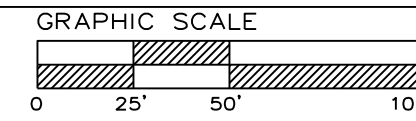
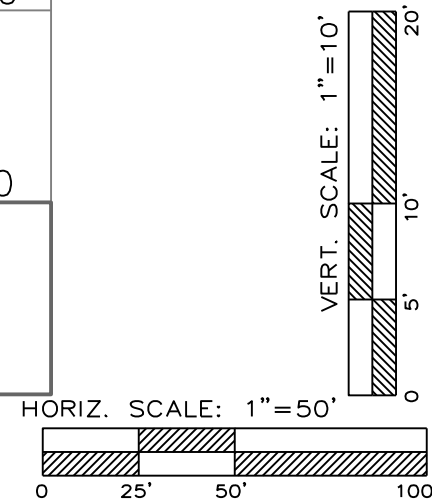
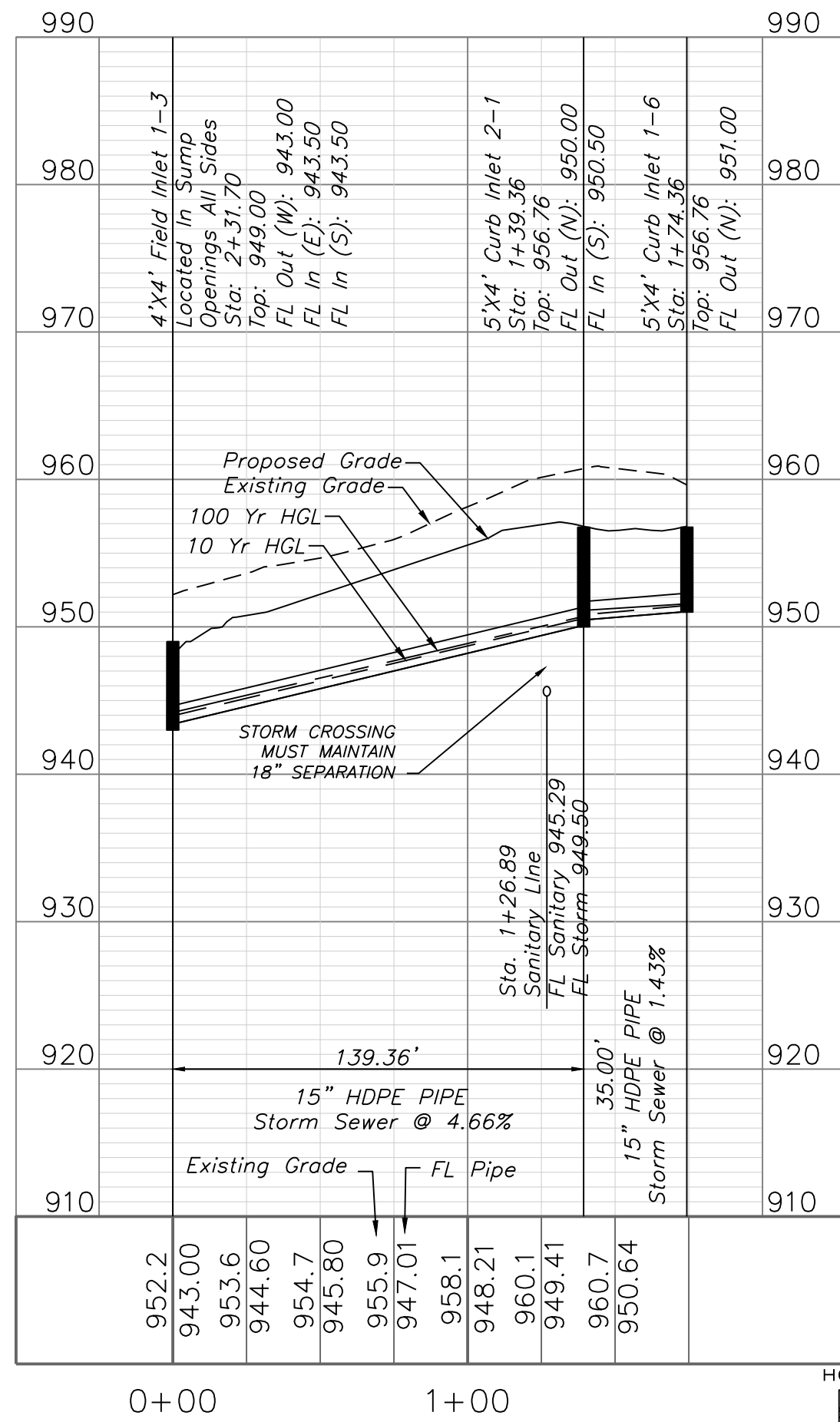


STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'

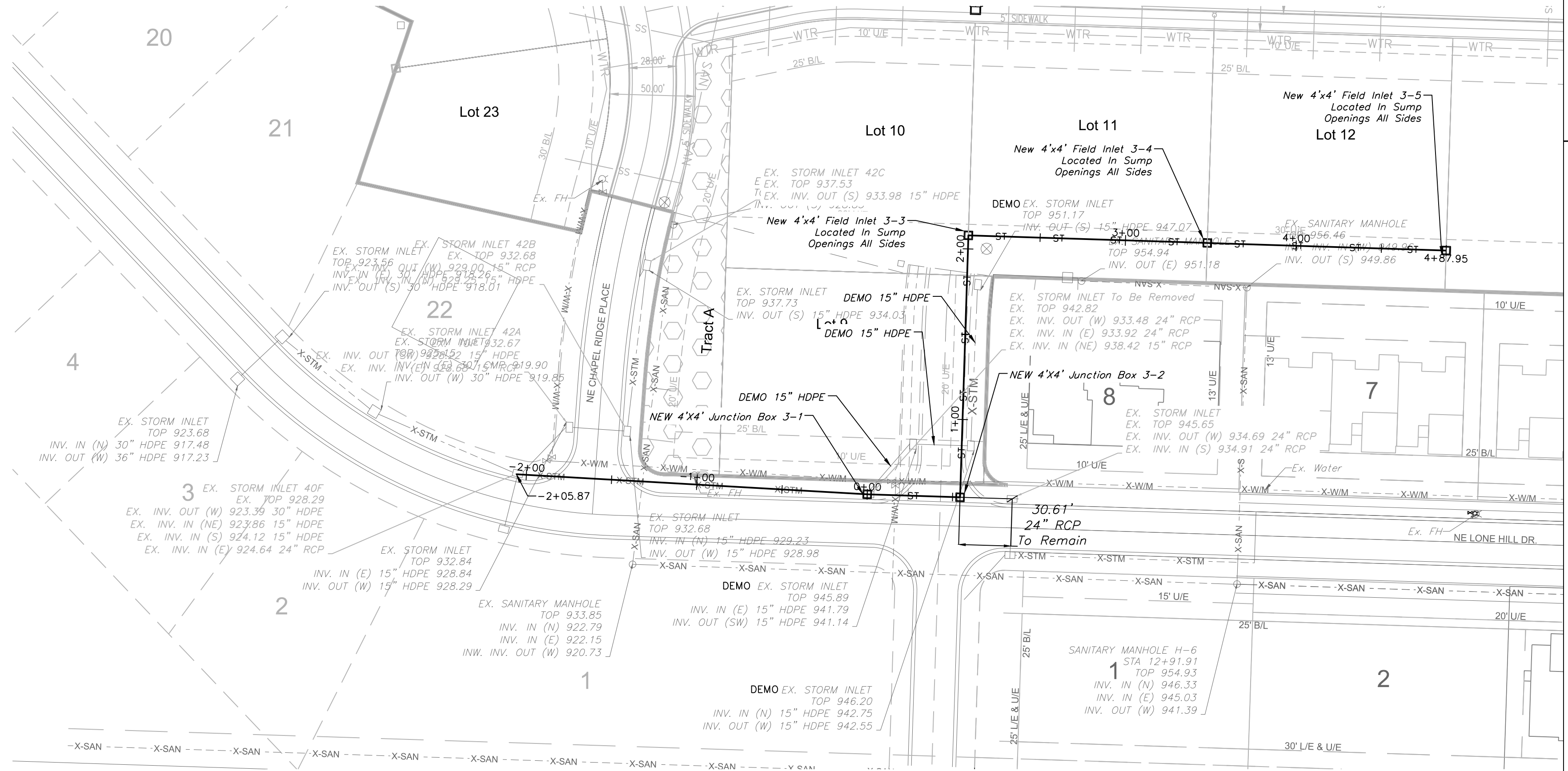


STORM LINE 2

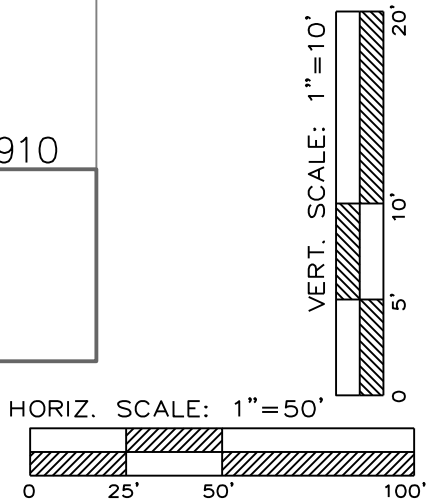
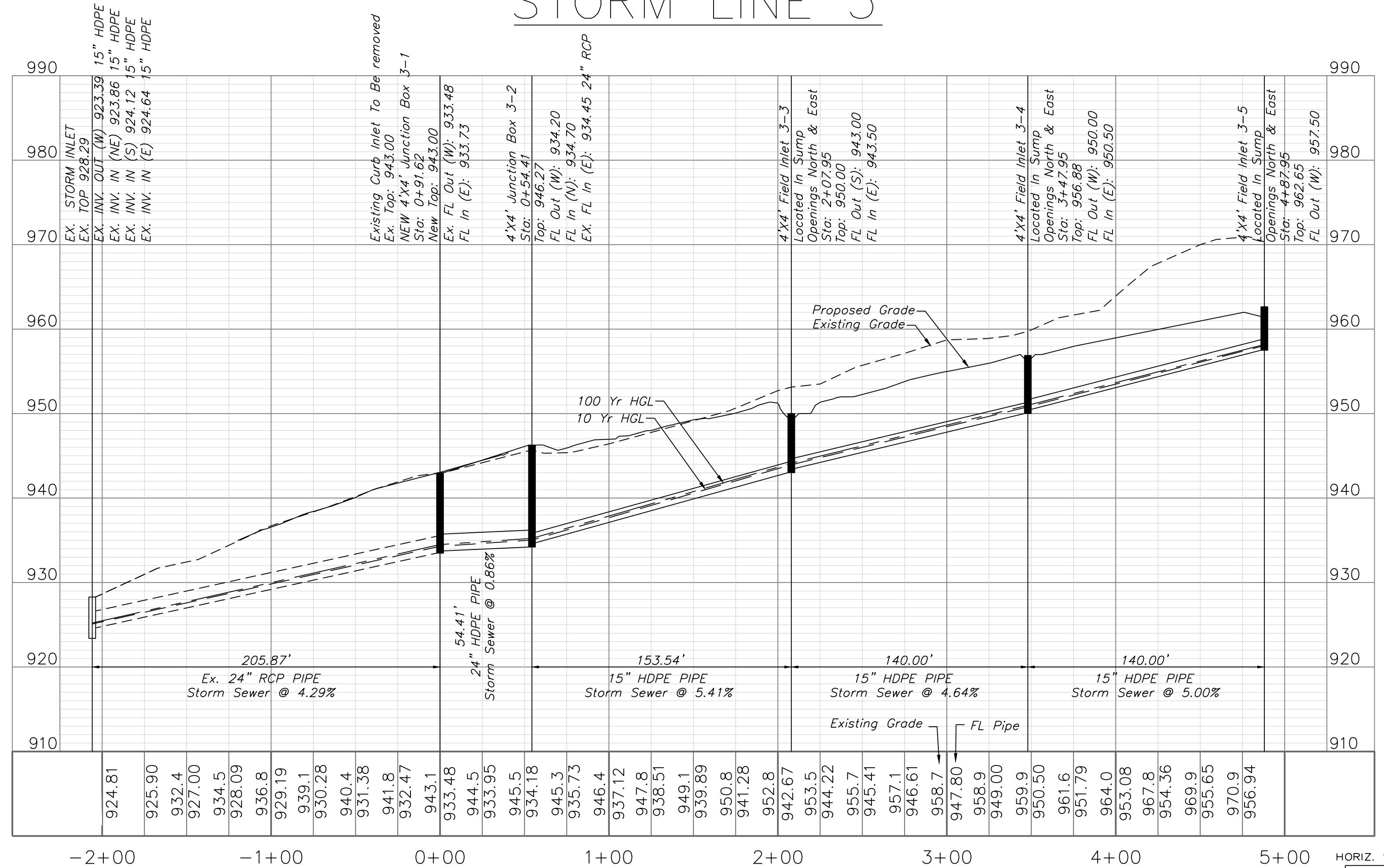


STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'



STORM LINE 3

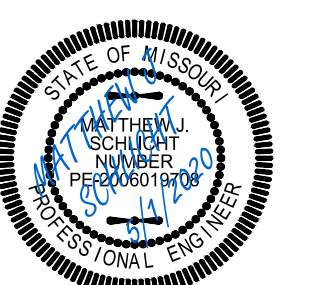


Professional Registration
Missouri
Engineering 2005002186-D
Surveying 200500319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

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

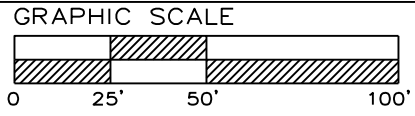
Project:
VILLAS OF CHAPEL
RIDGE, LS MO
Issue Date:
April 10, 2020

Storm Sewer 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
Lee's Summit, Jackson County, Missouri



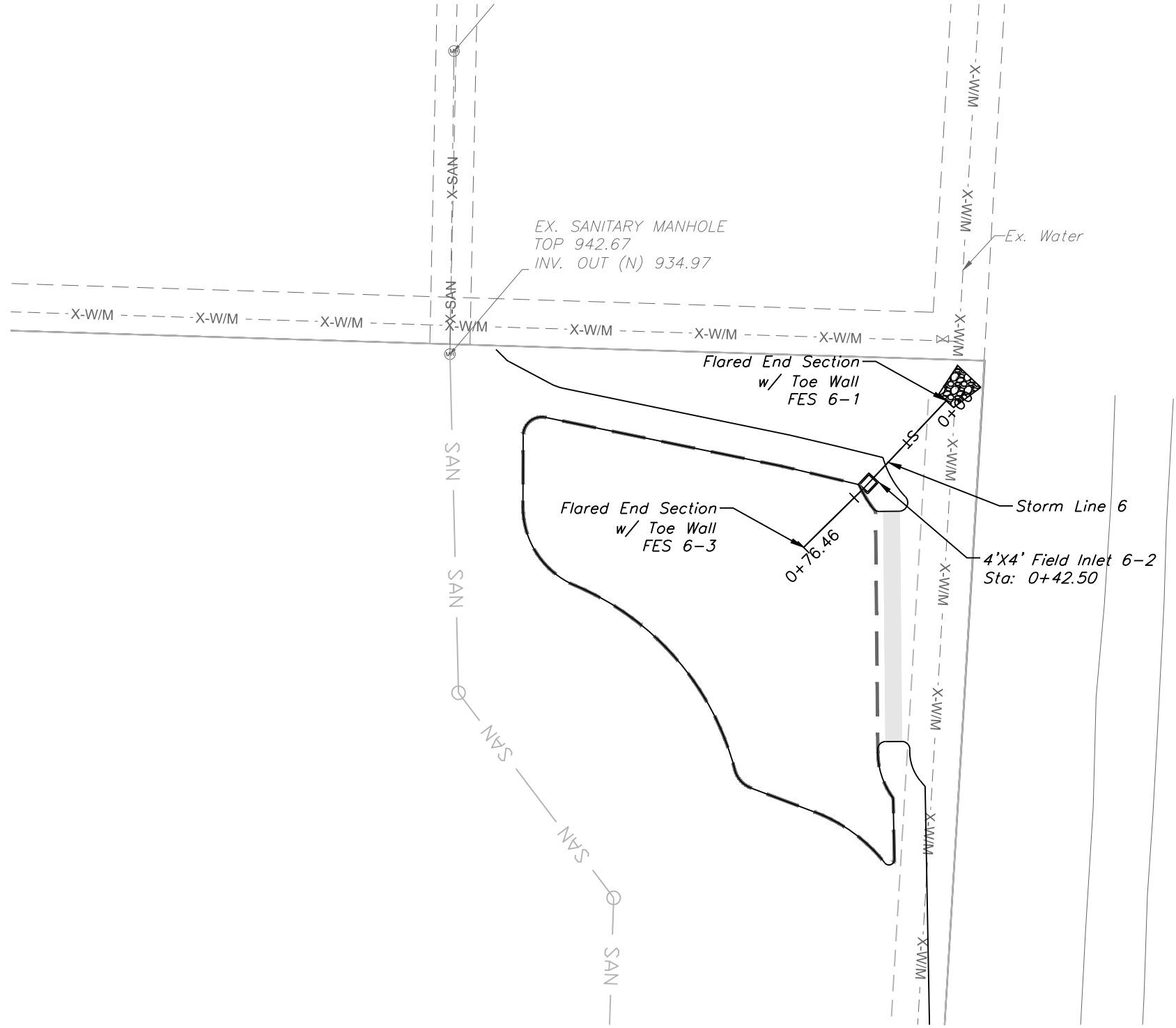
Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25228
NE PE E-1114335

REVISIONS
REV. 5/1/2020

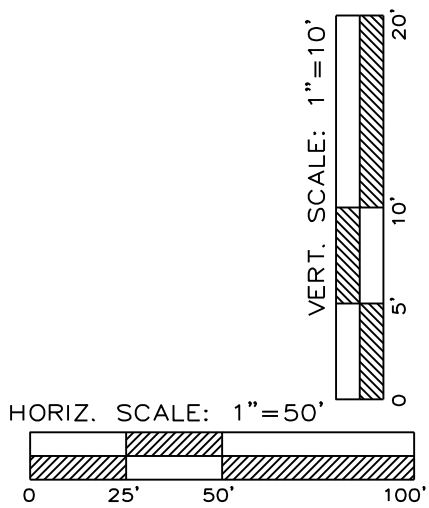
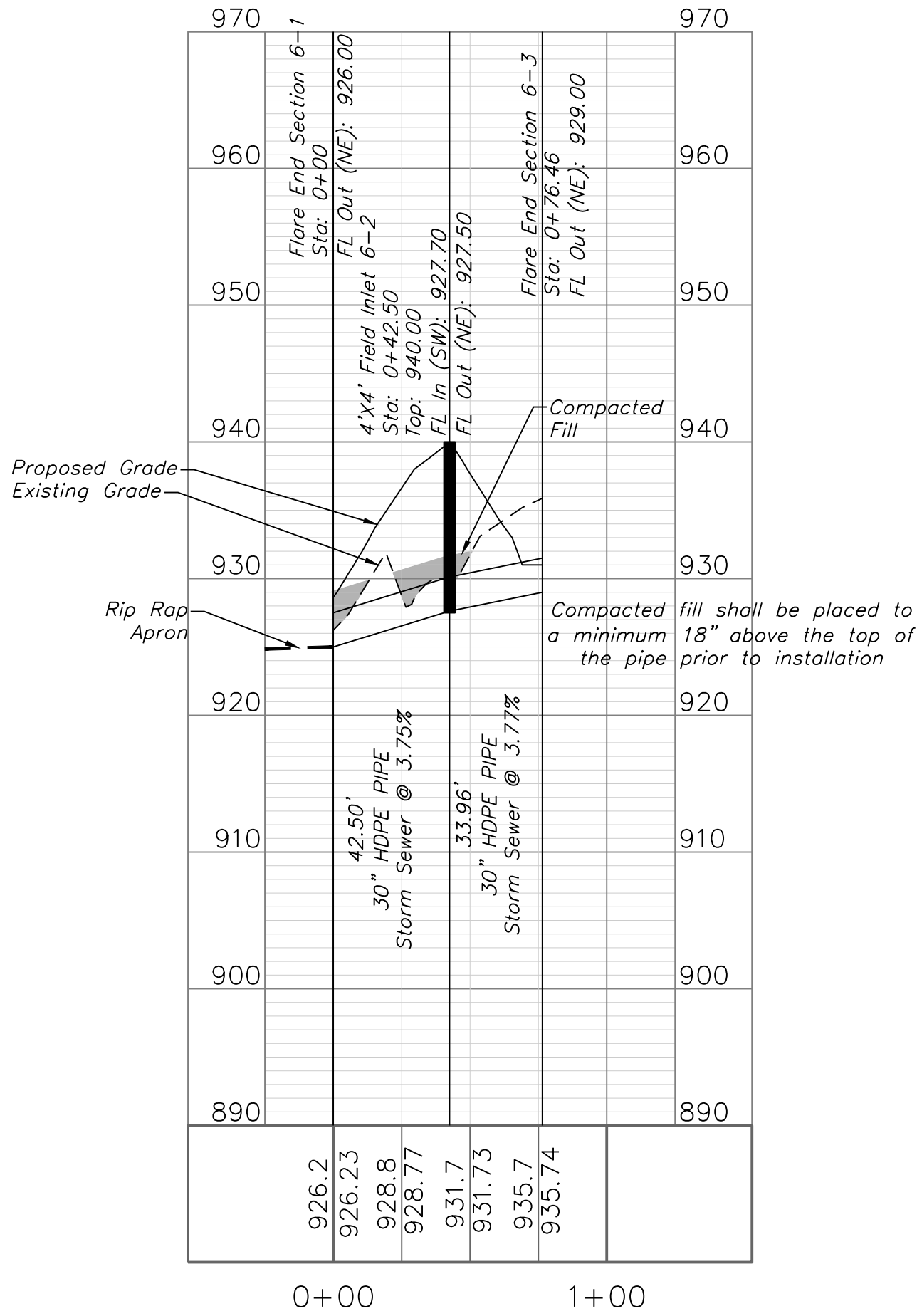


STORM SEWER PLAN & PROFILE

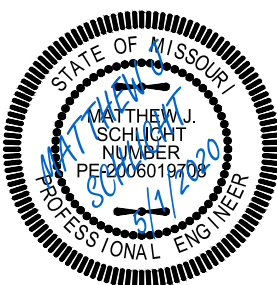
SCALE: 1" = 50'



STORM LINE 6



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



Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226
NE PE E-1-14335

REVISIONS	
REV. 5/1/2020	

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, L.S.M.O.
Issue Date: April 10, 2020

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 200500319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

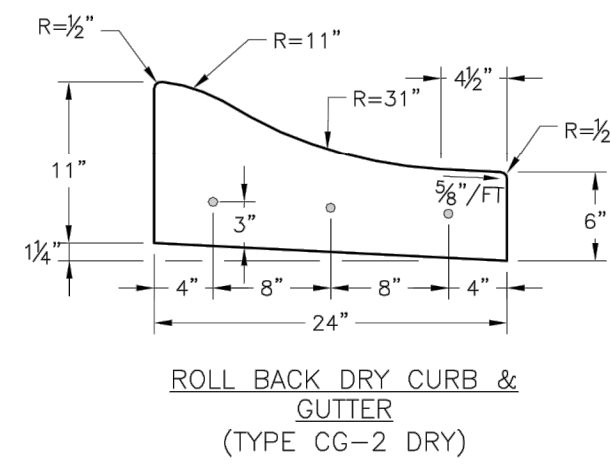
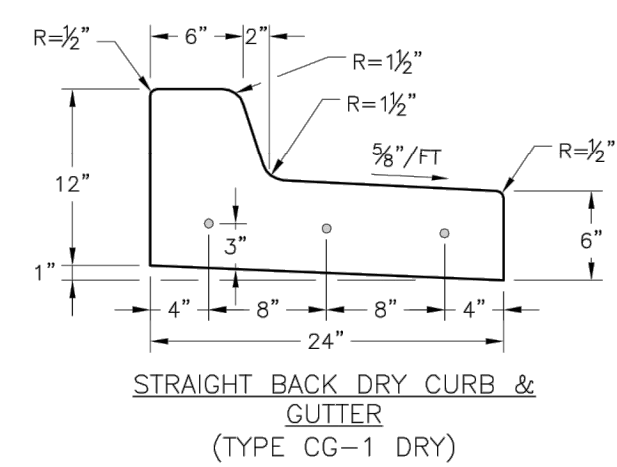
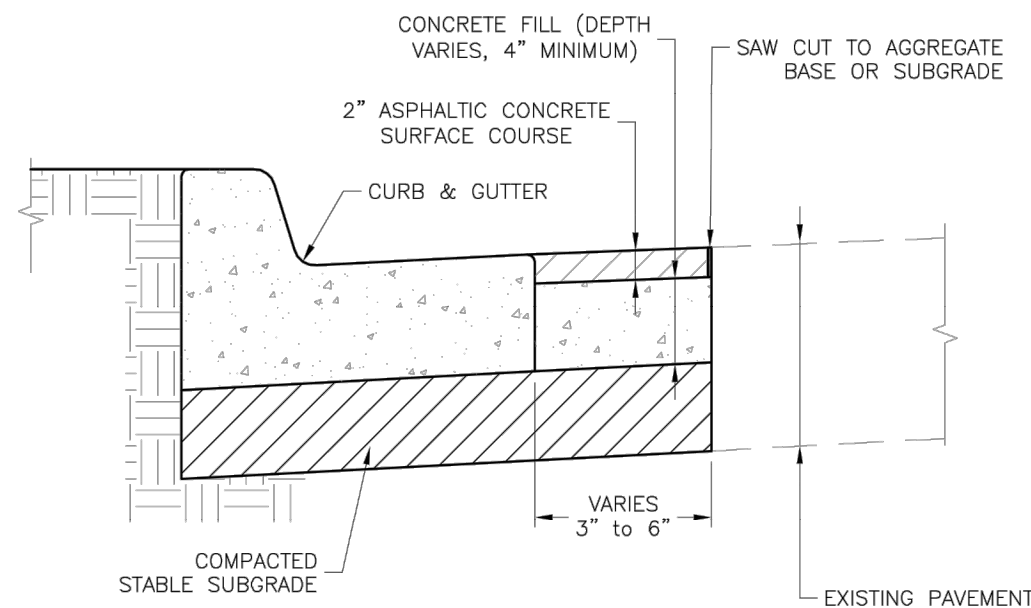
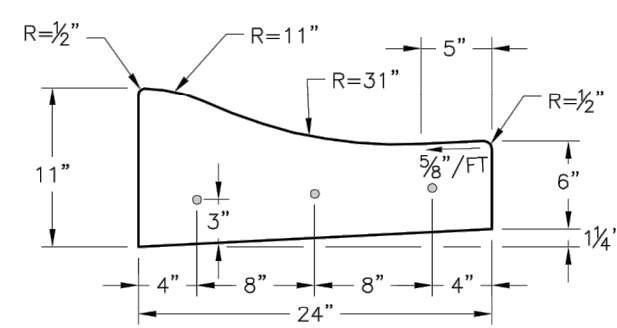
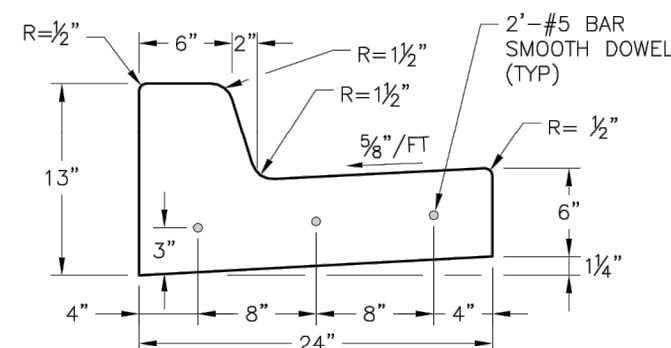
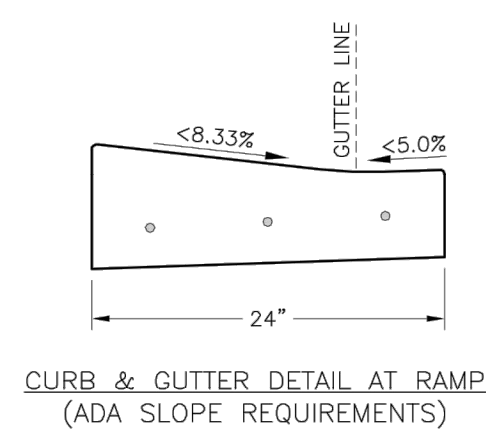
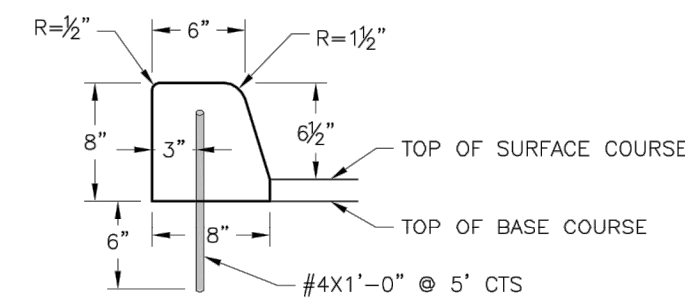
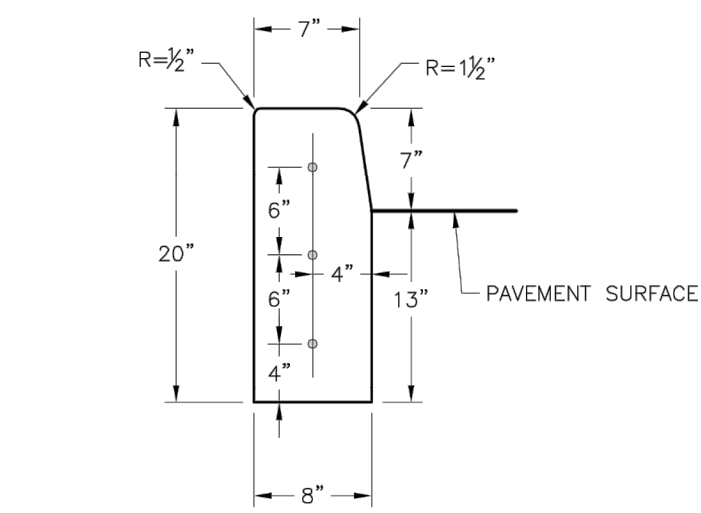
ENGINEERING SOLUTIONS
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P: (816) 623-9888 F: (816) 623-9849

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	
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- GENERAL NOTES

1. 3/4" ISOLATION JOINTS PLACED AT 3' (2'-85 BAR) SMOOTH DOWELS SHALL BE JOINED AT RADIUS POINTS AND AT 150" INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END TO PREVENT CORROSION DURING CURING.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH.
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATION SECTION 202.02.
6. CURES FOR NEW STREETS SHALL BE DONE ON ASPHALT OR AGGREGATE BASE AS SHOWN IN THE SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CURING SURFACE IMMEDIATELY AFTER FINAL FINISHING.



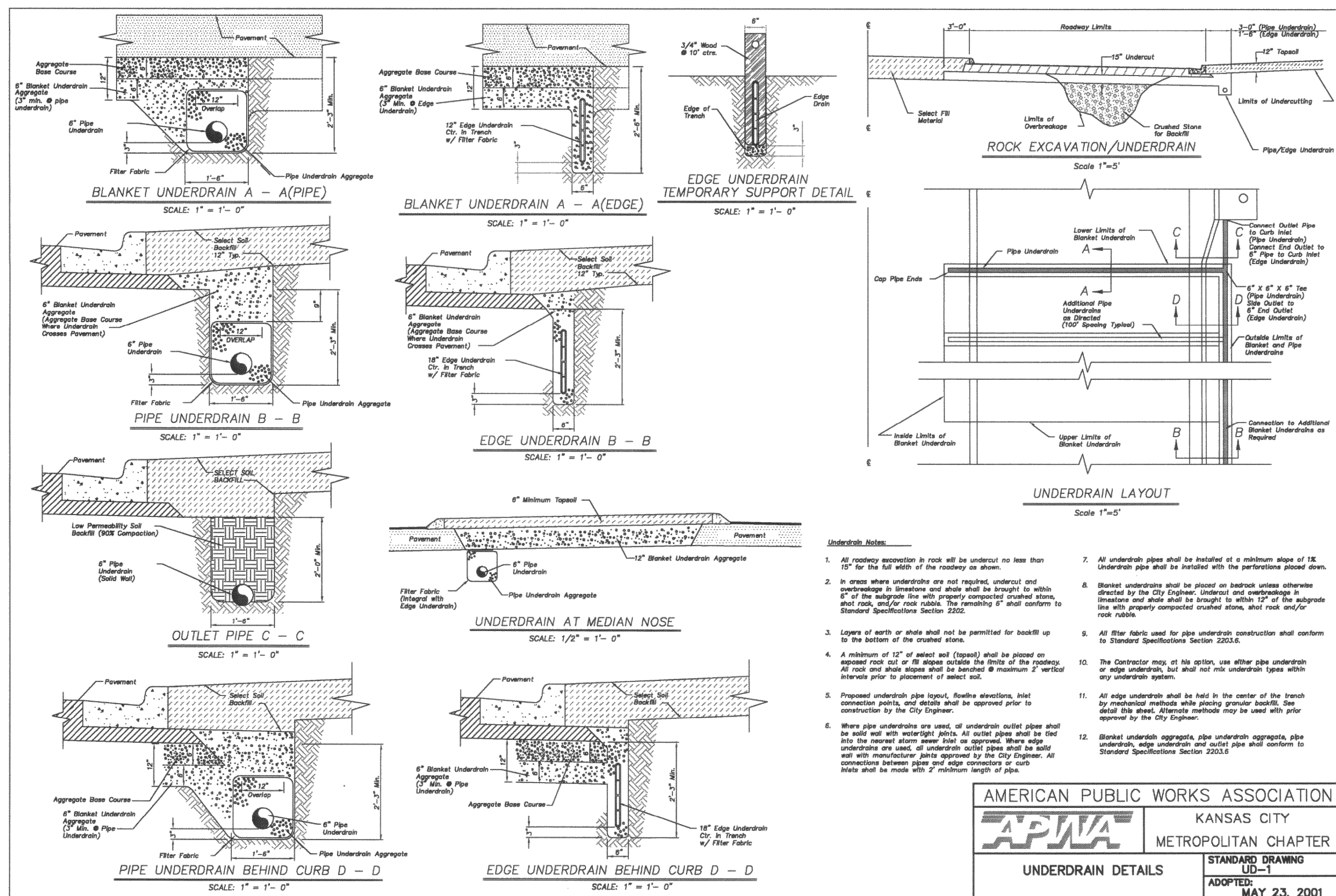
LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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

CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #: GEN-4



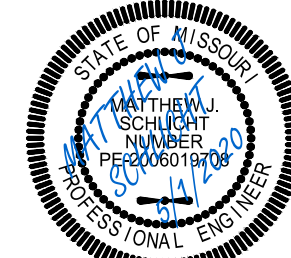
GENERAL NOTE:

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

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

Project: VILLAS OF CHAPEL
RIDGE, LSMO

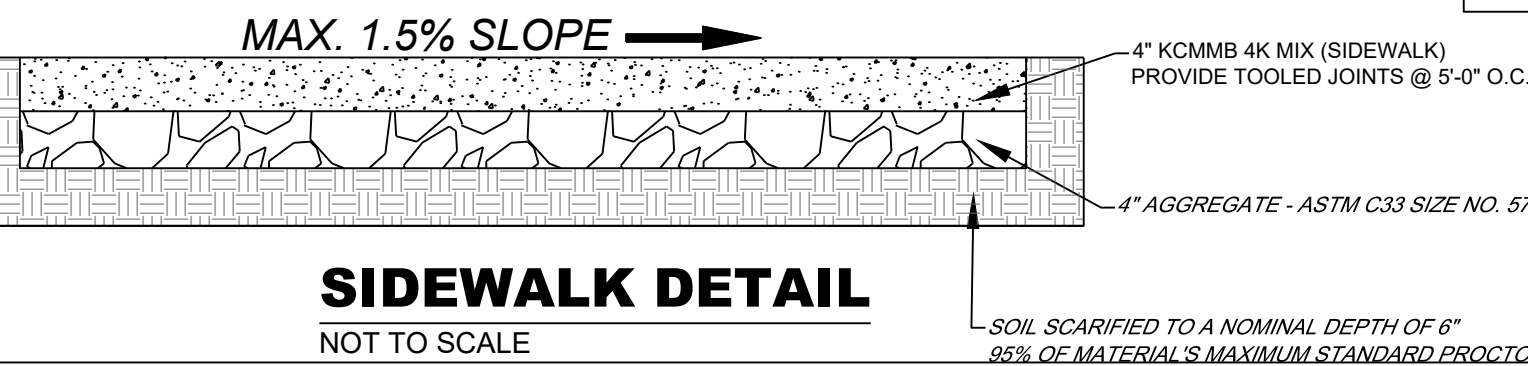
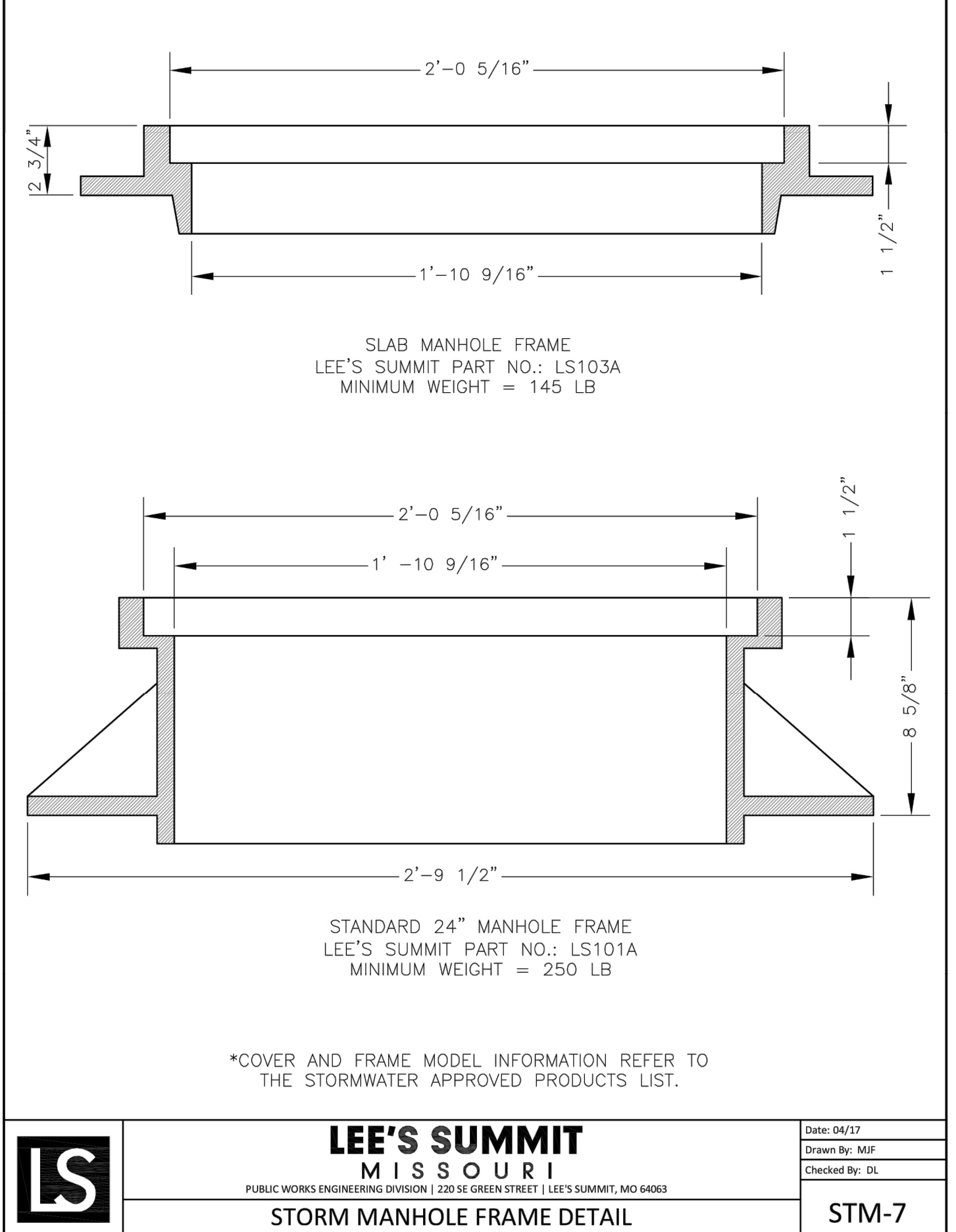
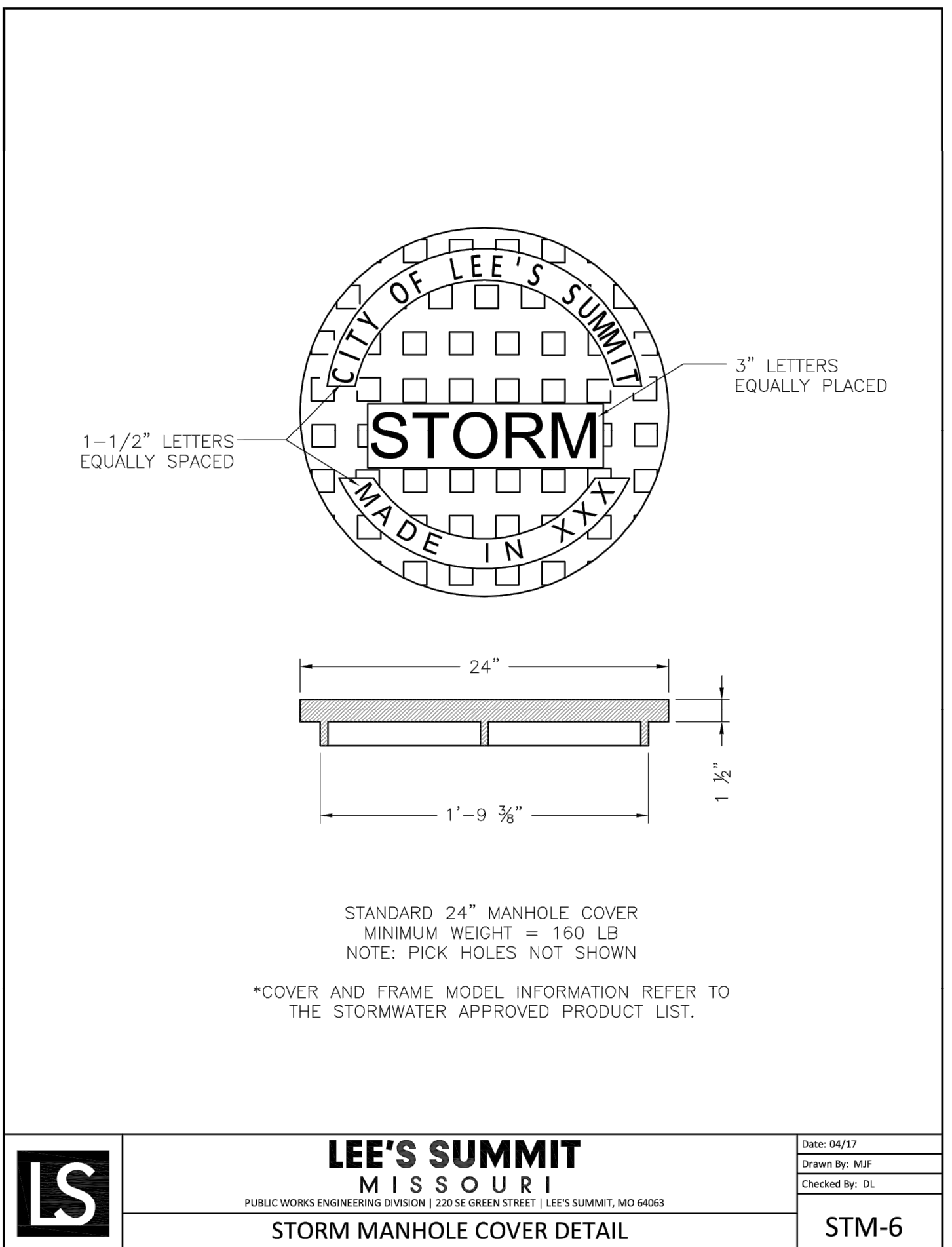
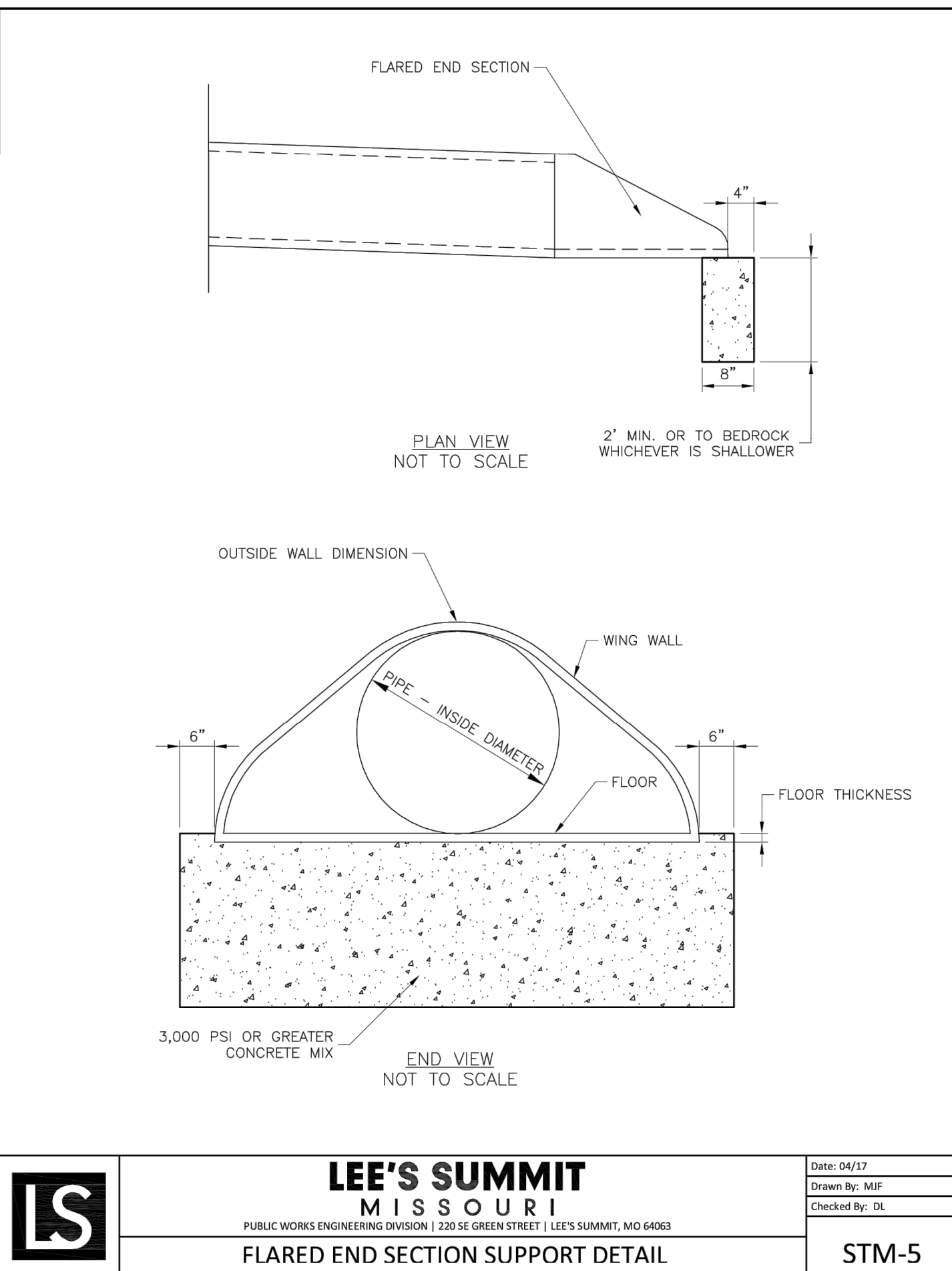
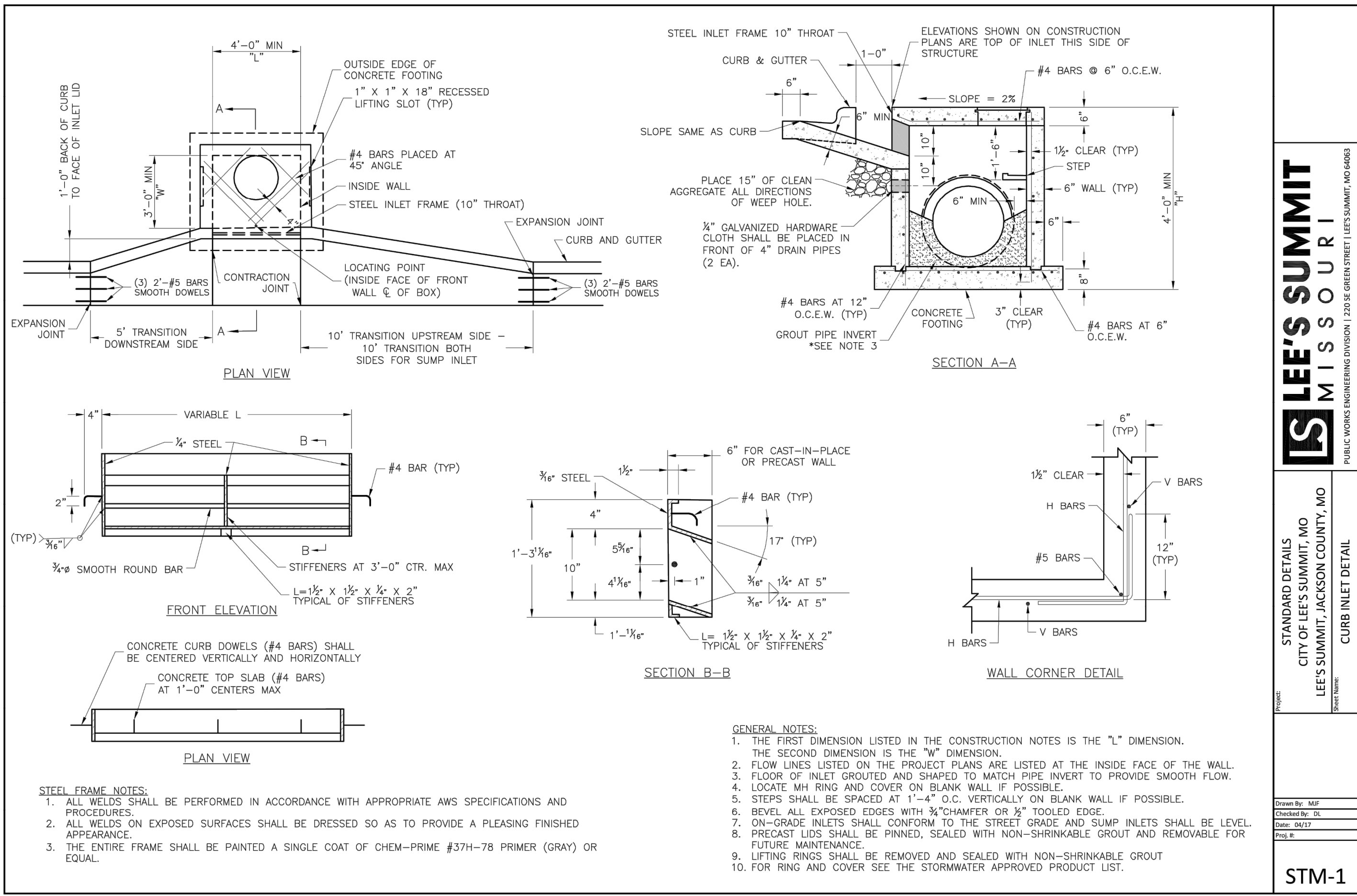
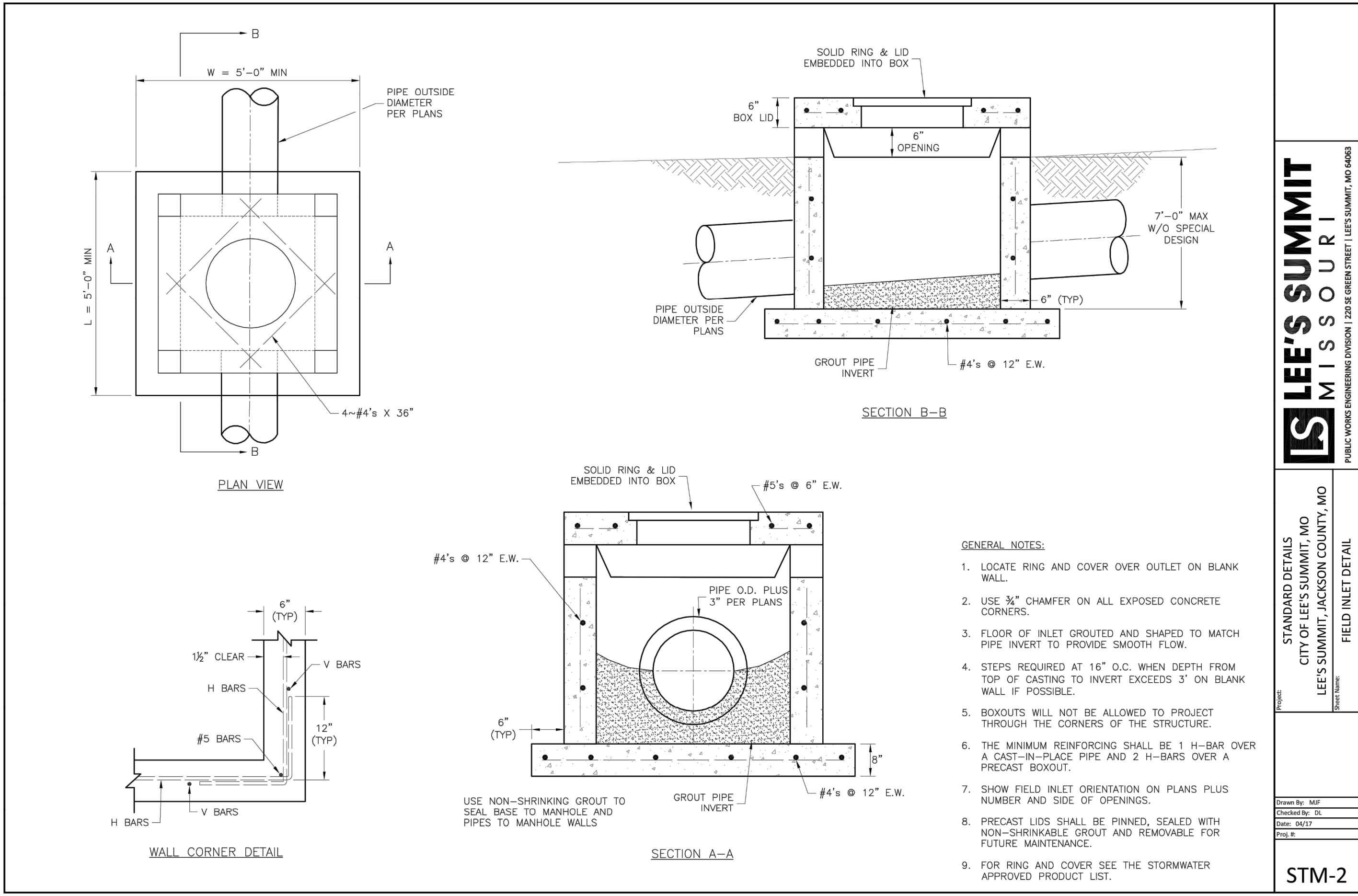
Issue Date: April 10, 2020



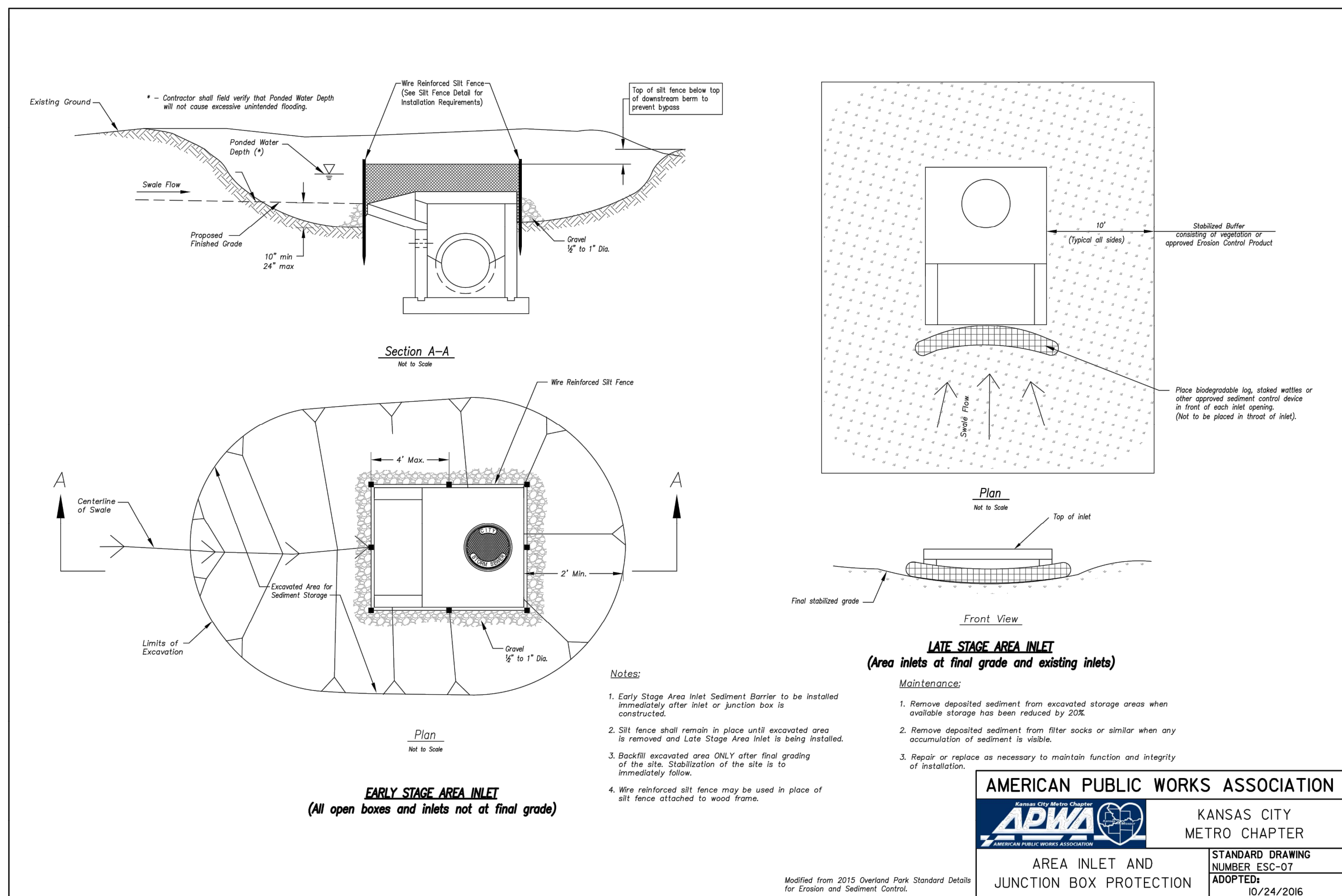
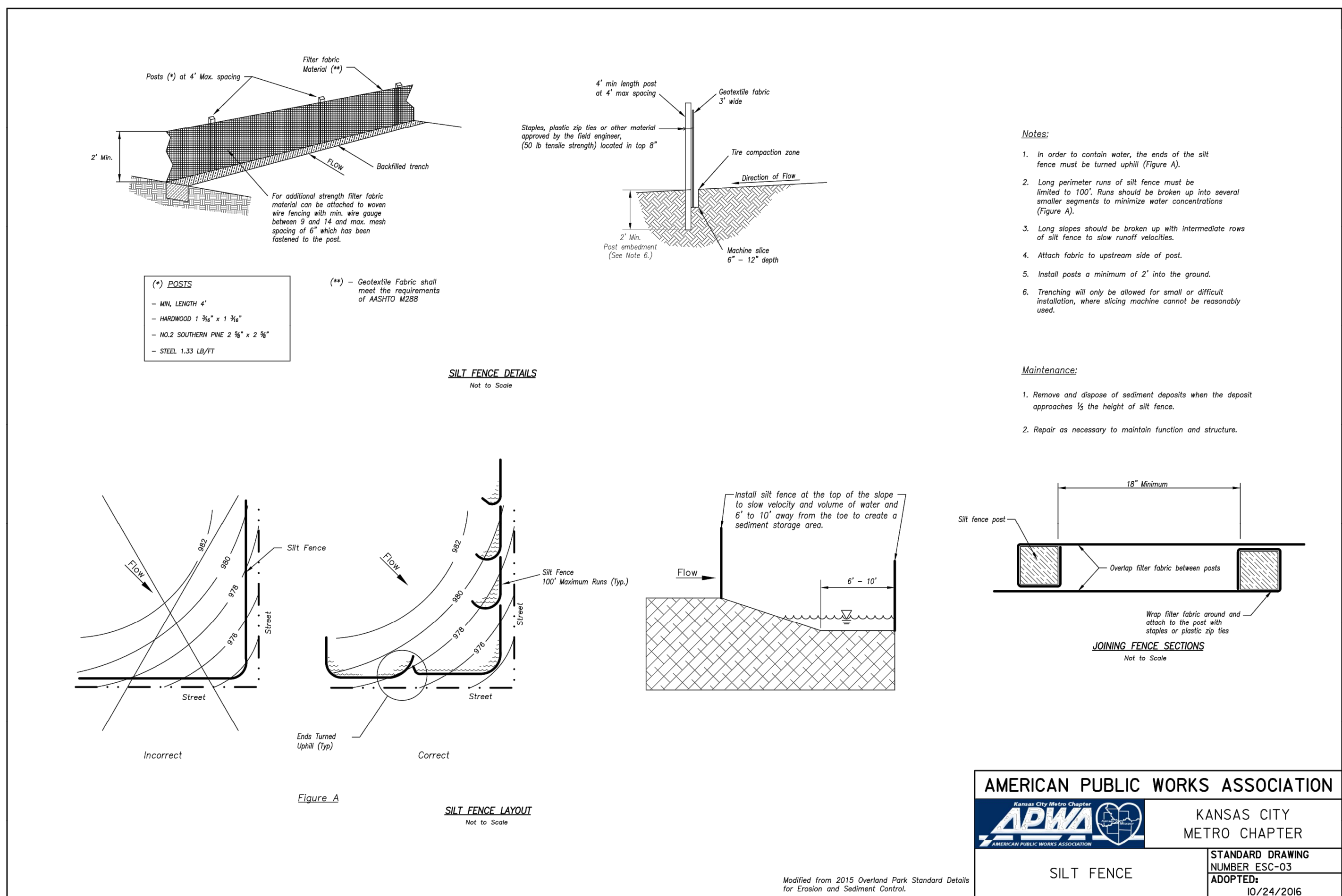
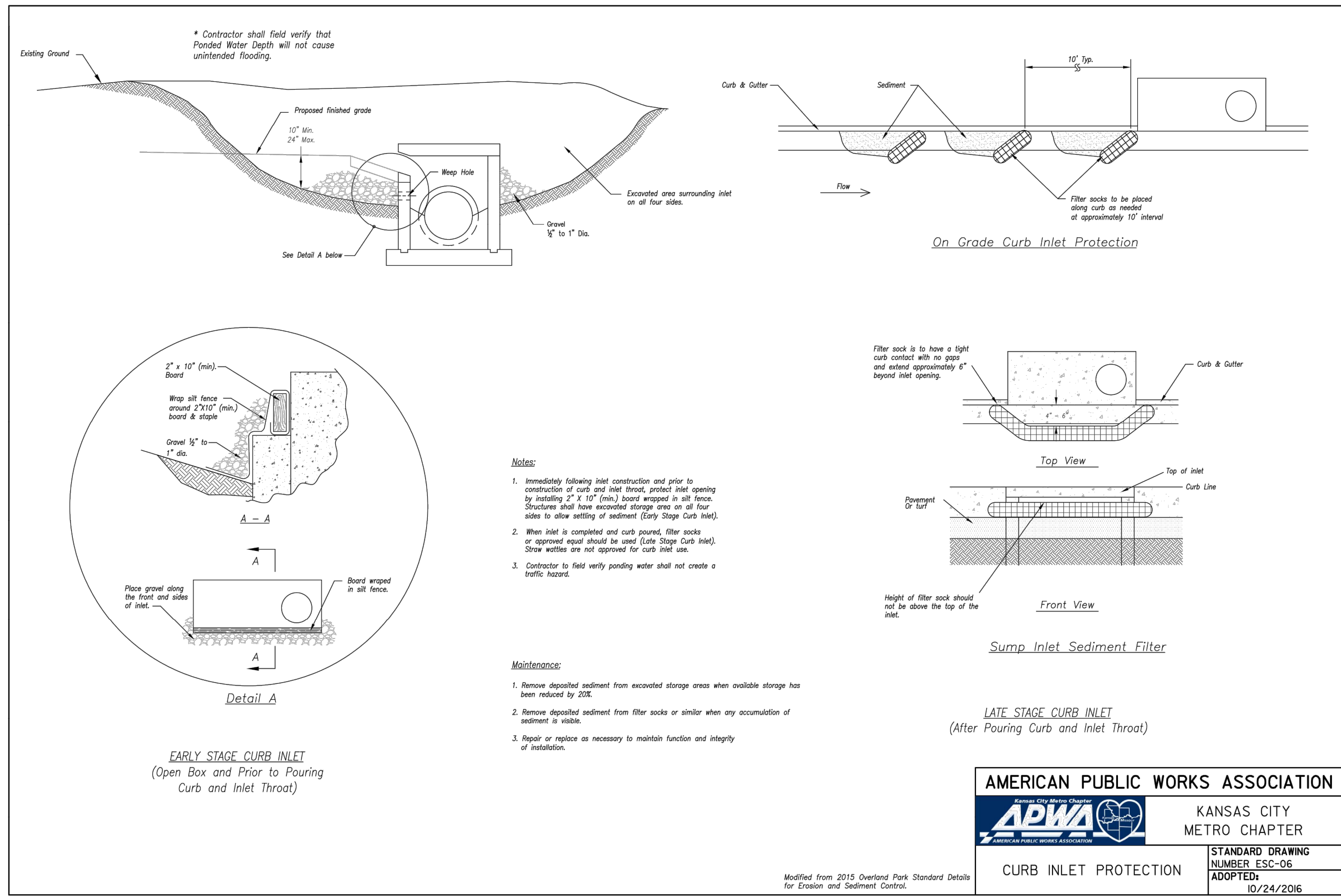
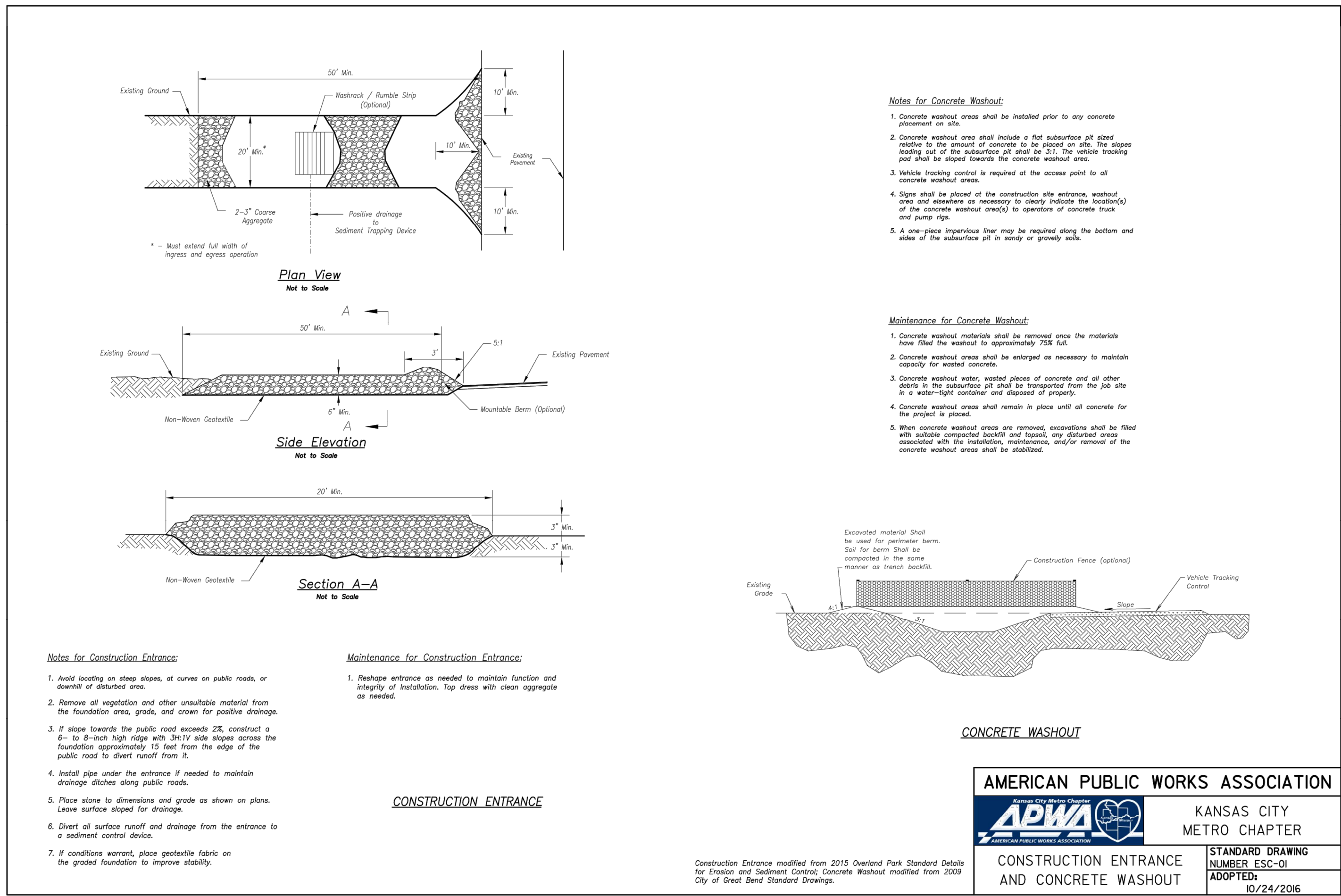
Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226
NE PE E-14335

REVISIONS

1 REV. 5/1/2020



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