

Final Development Plan

Section 6, Township 41 North, Range 31 West

Lee's Summit, Jackson County, Missouri

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 BY SEPARATE DOCUMENT
- 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.

KCP&L ~ 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 DEVELOPMENT ENGINEERING INSPECTION AT 816.969.1200
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:

SITE IS LOCATED ON FIRM PANEL 29095C0417G,
DATED JANUARY 20, .

PROPERTY DESCRIPTION

Lots 1 & 2, Dahmer Development, Lots 1 - 3, a subdivision as recorded in the Office of the Recorder, Jackson County, Missouri

Site Data Table :

Lot 1 Area: 21,376.14 Sq. Ft. (0.49 Acres)

Current Zoning: CBD
Propozed Zoning: CBD

Building 1st Floor 2,625sq. ft. (0.06 Ac.)
Building 2nd Floor 2,625 sq. ft. (0.06 Ac.)
Total: 5,250 sq. ft. (0.12 Ac.)

Impervious Area
Parking/Sidewalk 17,368 sq. ft. (0.40 Ac.)
Building 2,625 sq. ft. (0.41 Ac.)
19,993 sq. ft. (93.5% of Site)

Floor-Area-Ratio: 24.6%

Site Data Table :

Lot 2 Area: 9,576.23 Sq. Ft. (0.22 Acres)

Current Zoning: CBD
Propozed Zoning: CBD

Building 1st Floor 5,848 sq. ft. (0.13 Ac.)
Building 2nd Floor 5,848sq. ft. (0.13 Ac.)
Total: 11,696 sq. ft.(0.26 Ac.)

Impervious Area
Parking/Sidewalk 1,400 sq. ft.
Building 5,848 sq. ft.
7,248 sq. ft. (75.6% of Site)

Floor-Area-Ratio: 61%

Parking:

Provided 50 Standard (2 ADA Accessible 0 ADA Van Accessible)
Entire Site = 52 Spaces

Required 43 Standard / 2 Handicap
Entire Site = 45 Spaces

Current Zoning: CBD
Current Use: Vacant
Proposed Use: Office Building

Sanitary Sewer Service

The site will utilize a sanitary service line from the existing sanitary to the southwest. The existing sanitary will be relocated to the northeast.

Water Service

Water service will be from the existing 12" water main located on Main Street.

Storm Sewer

New Inlets and pipe system will connect to existing public main.

Storm Water Detention

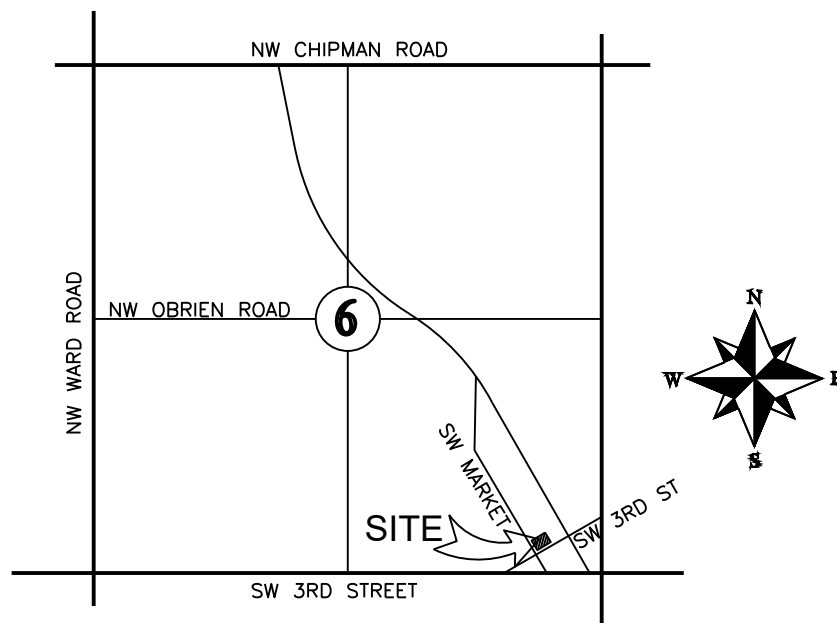
No storm water detention will be provided per APWA Section 5601.3.A.2. The site was previously a fully impervious with an existing building and associated parking area. The entire area of Lot 2 is currently a paveasphalt parking area.

Storm Water Quality Elements

No storm water quality will be provided per APWA Section 5601.3.A.2. The site was previously a fully impervious with an existing building and associated parking area. The entire area of Lot 2 is currently a pave asphalt parking area.

SW Main and SW Market Street

Both streets will be modified to include more on street parking. The developer would like to request all long term parking on SW Main Street be converted to 2 hr parking and 4 loading / unloading zones be provided for use by Amtrack.

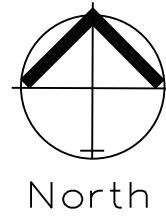


LOCATION MAP
SECTION 6-T41N-R31W

Not to Scale

OWNER:
TUSTIN LLC
Dusty Dahmer
12650 S PFLUMM RD STE 201
OLATHE KS

ALL PAVING ON THE PARKING LOT WILL COMPLY WITH THE UNIFIED DEVELOPMENT ORDINANCE ARTICLE 8 IN TERMS OF PAVING THICKNESS AND BASE

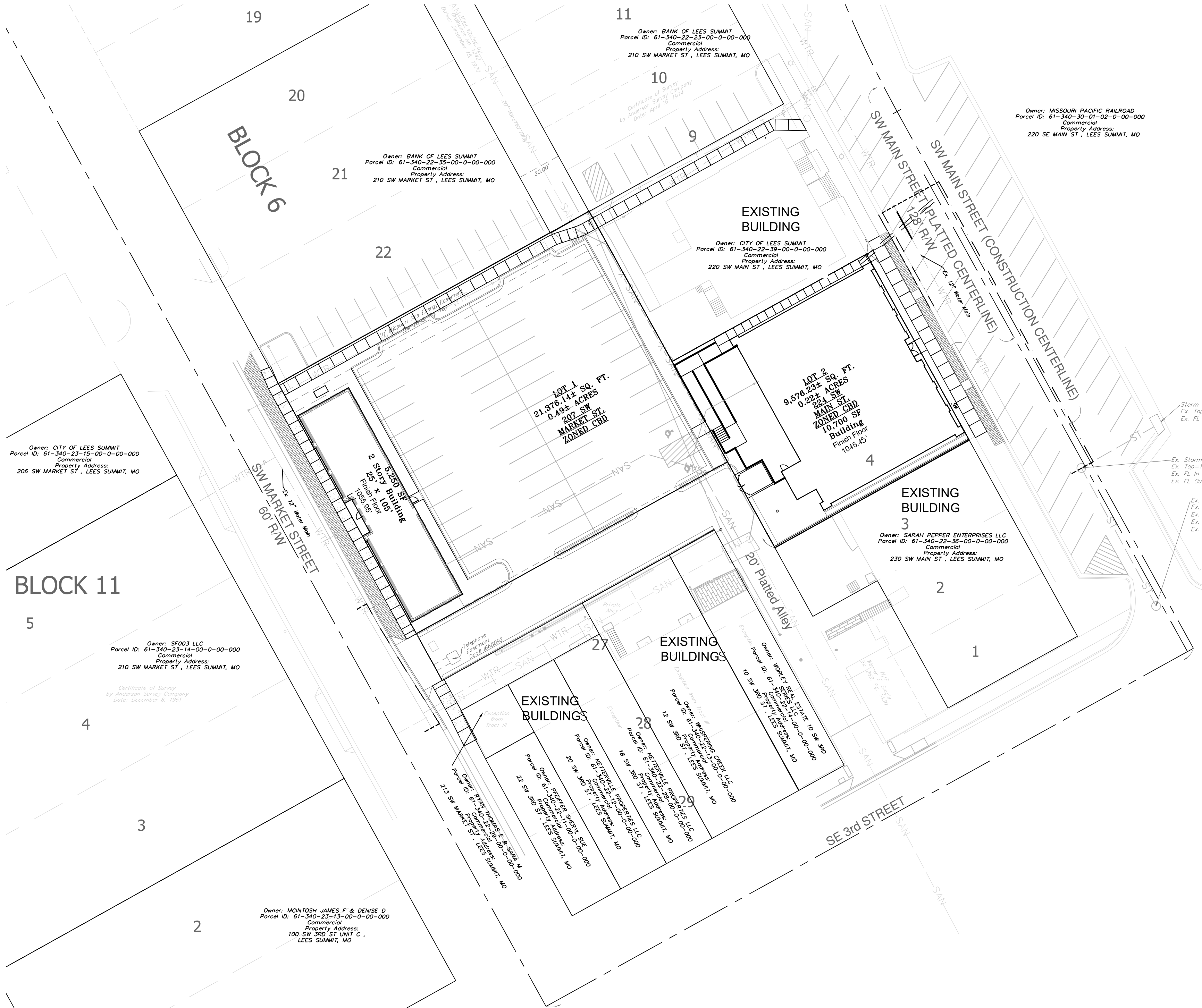


FINAL DEVELOPMENT PLAN

SCALE: 1" = 30'

INDEX OF SHEETS:

- C.001 ~ COVER SHEET
- C.010 ~ DEMOLITION
- C.050 ~ ESC PHASE 1 - Pre Clearing Plan
- C.051 ~ ESC PHASE 2 - Inactive Area Stabilization Plan
- C.052 ~ ESC PHASE 3 - Final Restoration Plan
- C.053 ~ ESC DETAILS
- C.100 ~ SITE PLAN
- C.101 ~ DIMENSION PLAN
- C.200 ~ GRADING PLAN
- C.201 ~ SPOT ELEVATIONS
- C.202 ~ ADA SPOT ELEVATIONS AND DETAILS
- C.203 ~ DRAINAGE MAP
- C.300 ~ STORM SEWER GENERAL LAYOUT
- C.301 ~ STORM SEWER PLAN AND PROFILE
- C.302 ~ ROOF DRAIN PLAN
- C.400 ~ UTILITY PLAN
- C.600 ~ STANDARD DETAILS
- C.601 ~ STANDARD DETAILS
- C.602 ~ STANDARD DETAILS



Professional Registration
Missouri
Engineering 2005002188-D
Surveying 2005008182-D
Kansas
Engineering E-1696
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

Project AND
NICHOLS, LSNM
Issue Date:
January 28, 2019

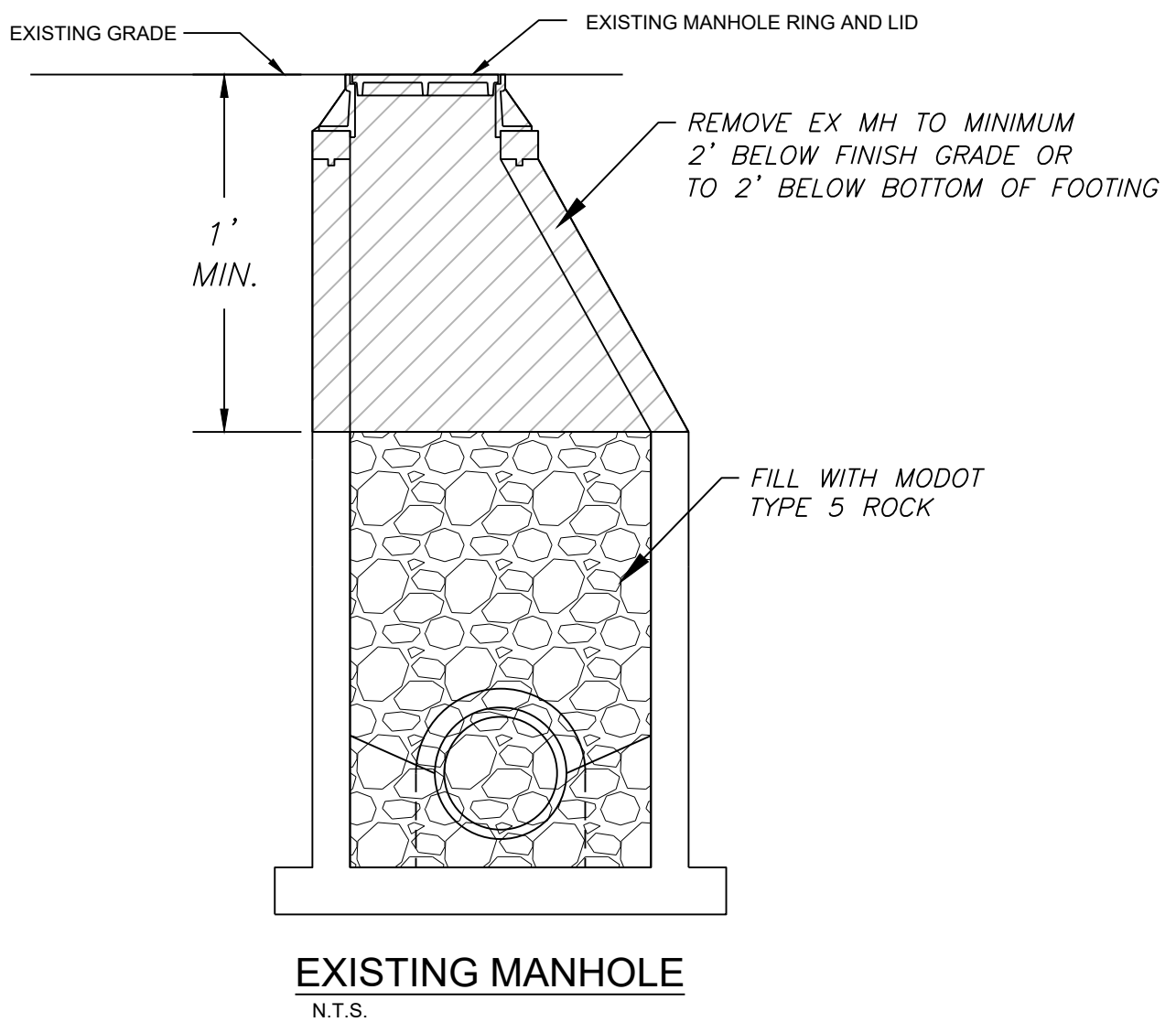
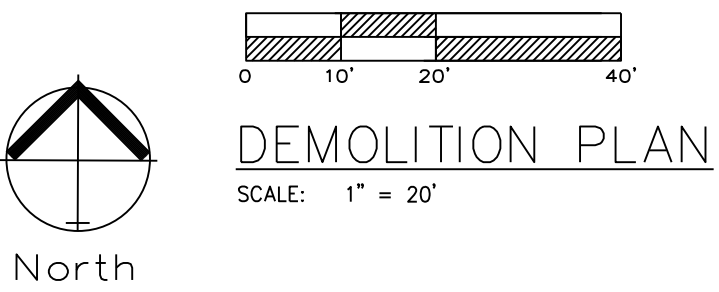
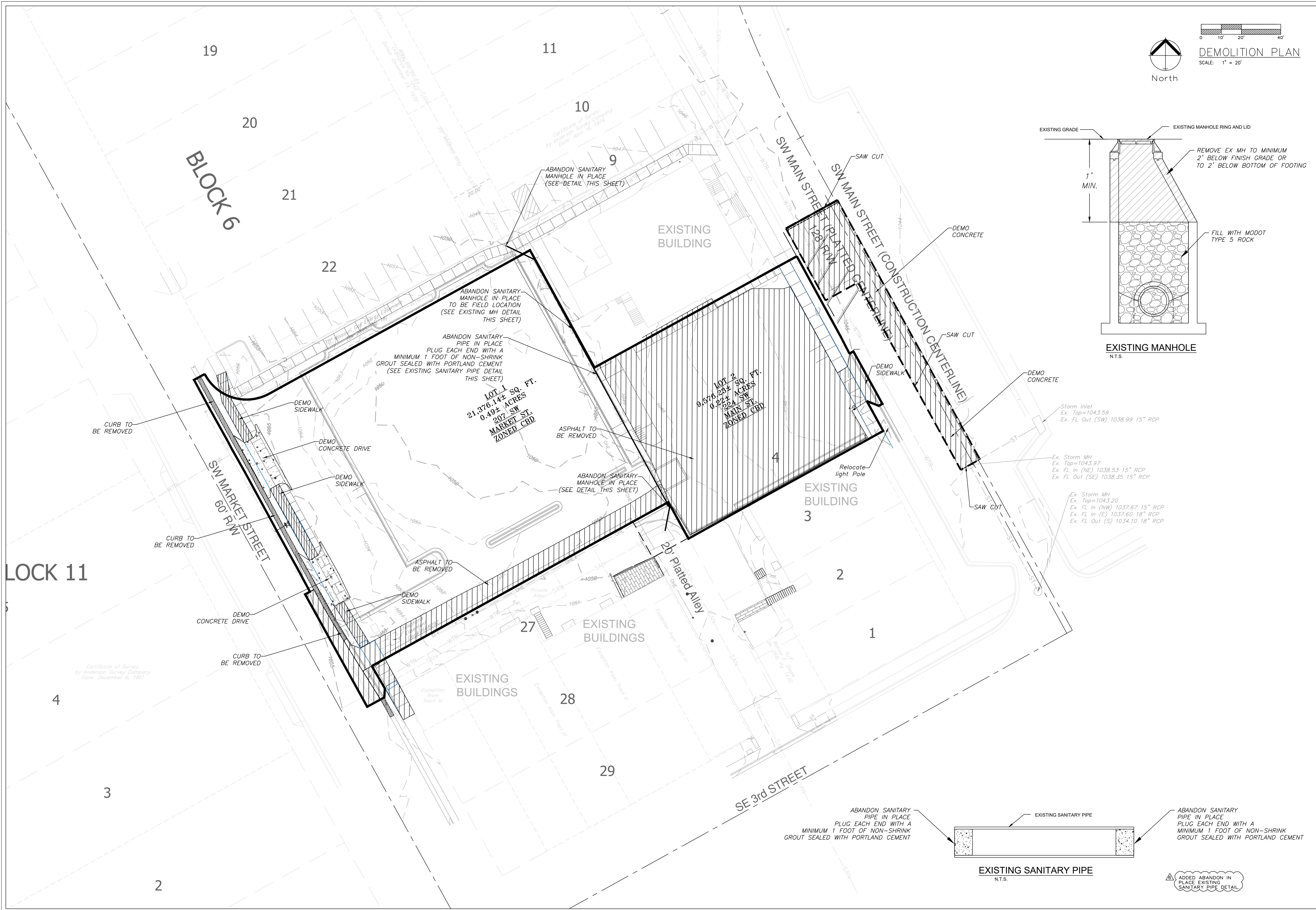
Cover Sheet
Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

- Revised 6/28/19
- Revised 7/2/19

C.001



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

Professional Registration
Missouri
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Surveying 2005003192-D
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Demolition Plan
Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
Revised 6/28/19
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C.010



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NICHOLS, LSWO

Issue Date
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ESC PHASE 1
Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

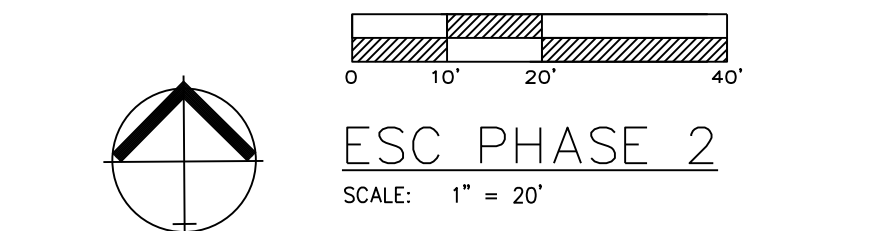
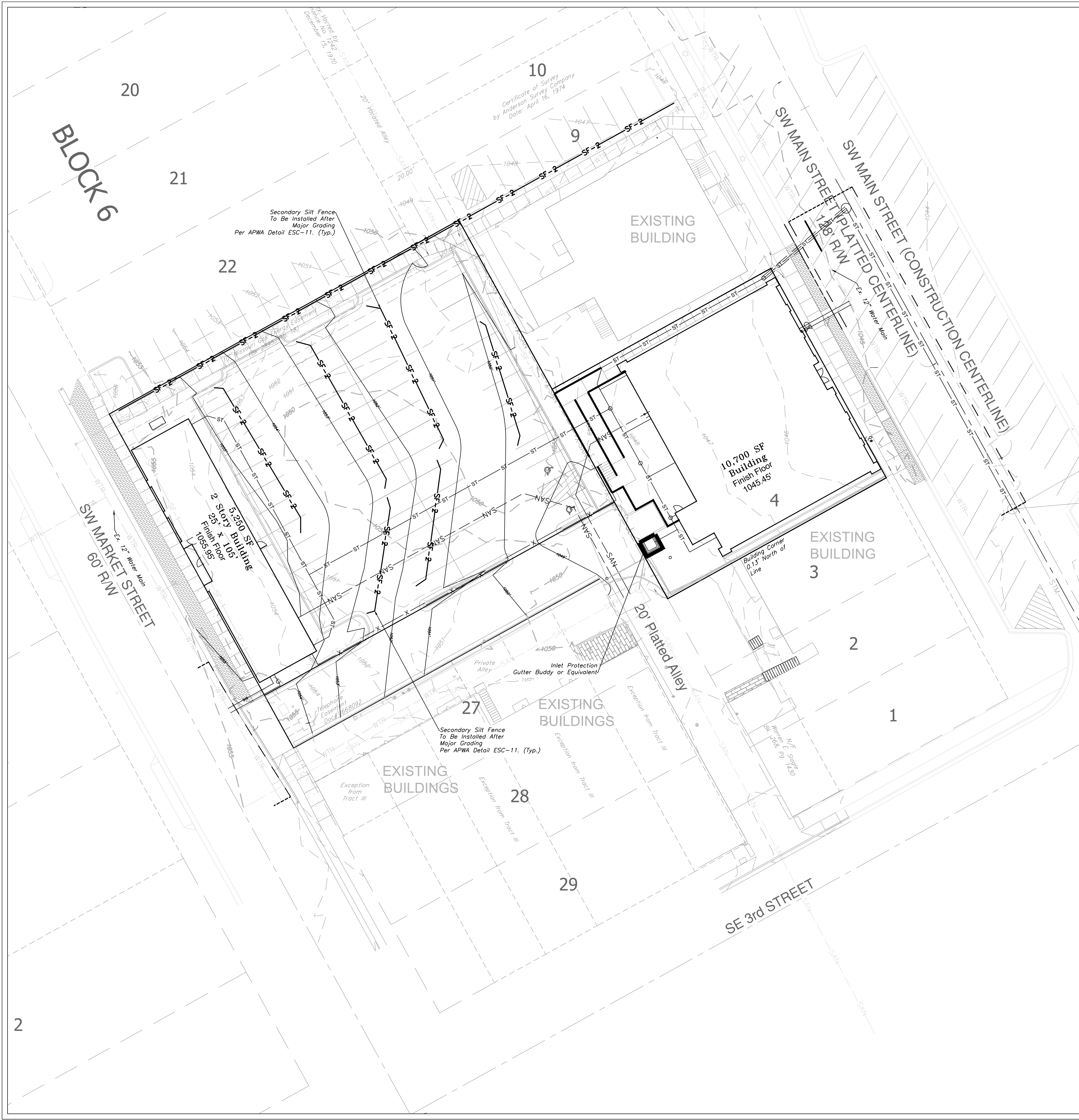
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REVISIONS

Revised 6/28/19

Revised 7/2/19

C.050



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 —

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.

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 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

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 80% 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 RESEEDDED.

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:

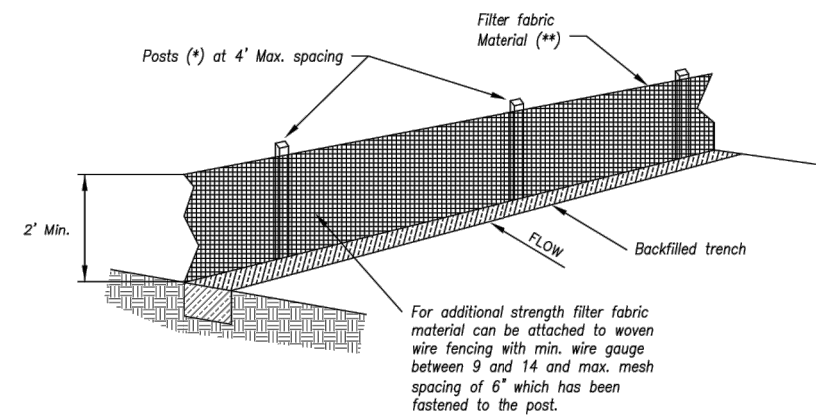
STABILIZATION MEASURES: DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION WILL BE INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM. AFTER A PORTION OF THE SITE IS FINALLY STABILIZED, INSPECTIONS WILL BE CONDUCTED AT LEAST ONCE 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.



- (*) EGGIS
- MAX 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

Not to Scale

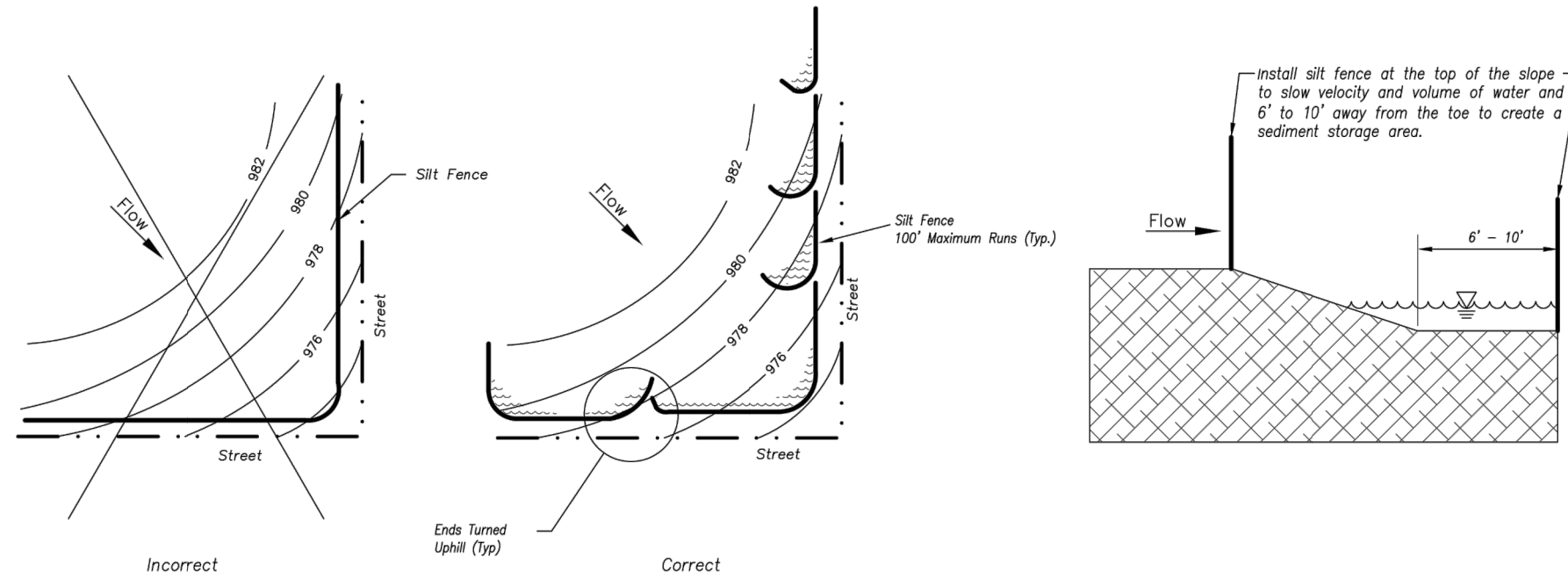


Figure A

SILT FENCE LAYOUT

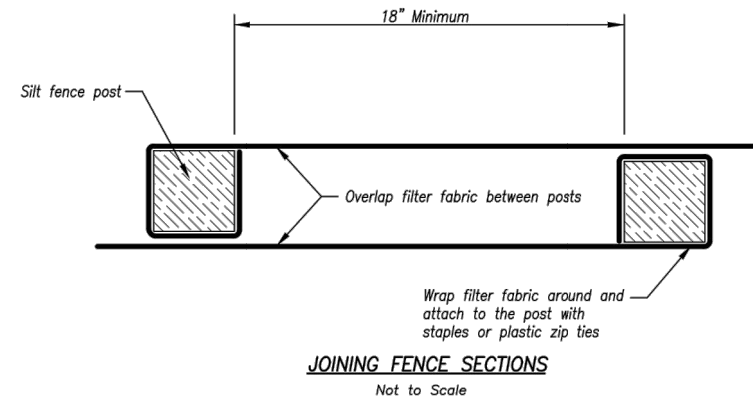
Not to Scale

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. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

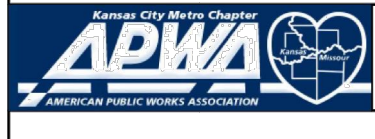
Maintenance:

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.

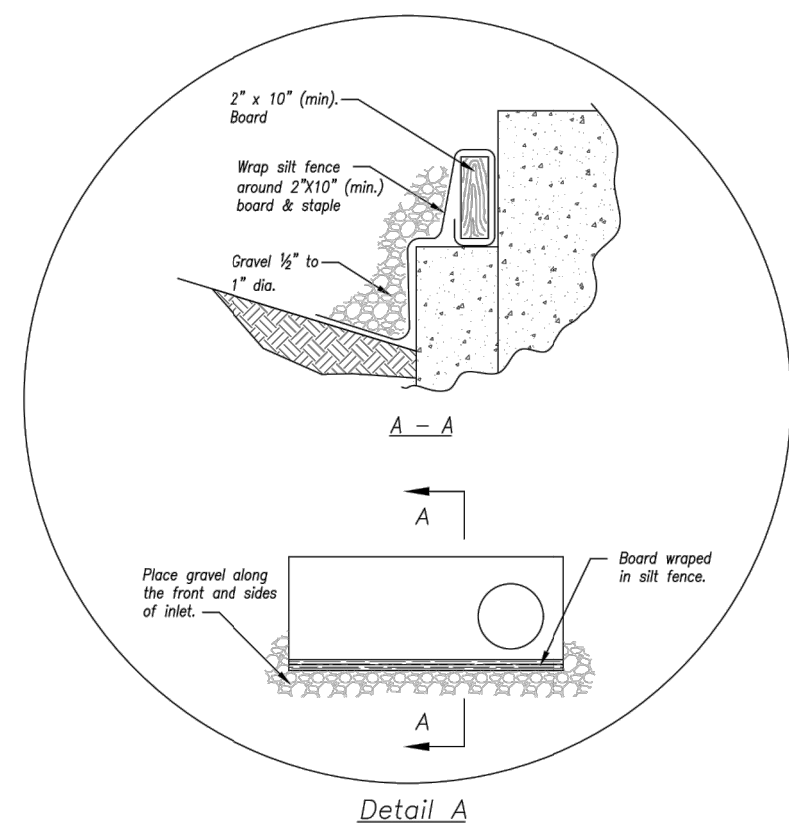
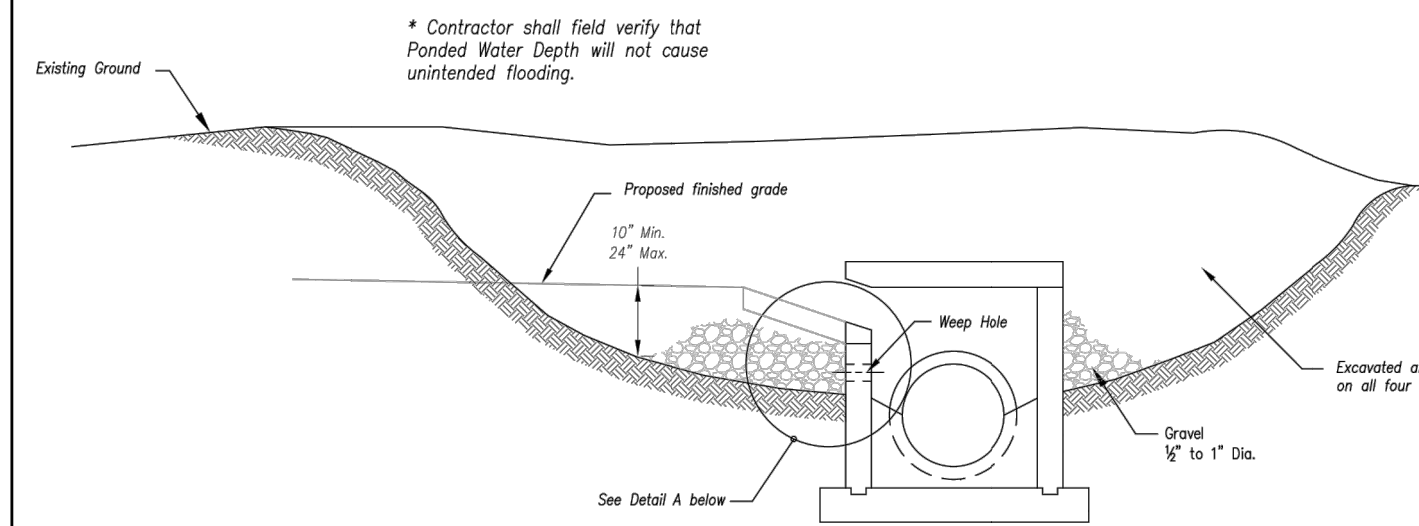


JOINING FENCE SECTIONS

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.



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

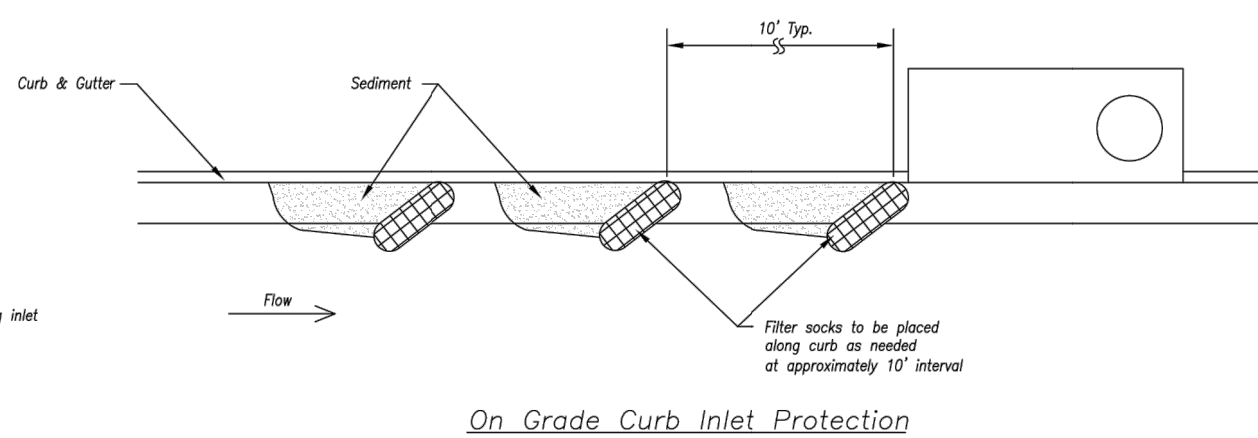
Notes:

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). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

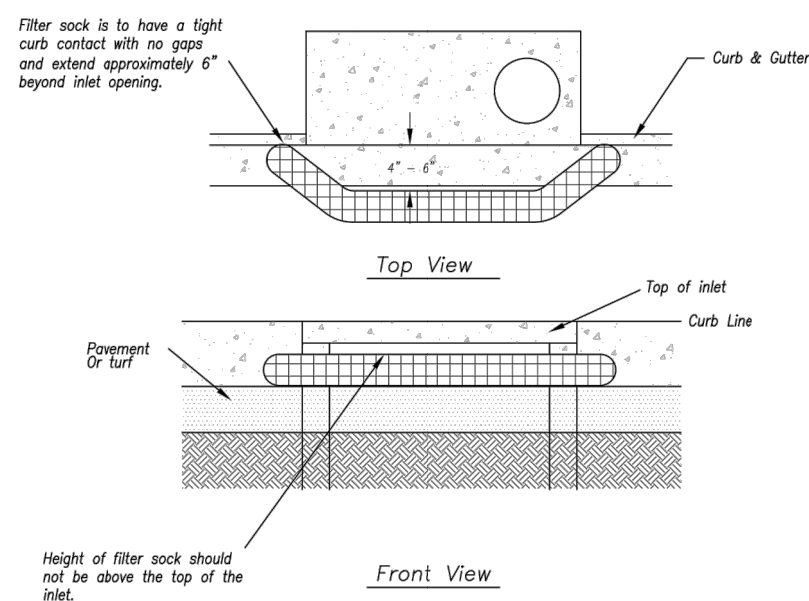
Maintenance:

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.

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

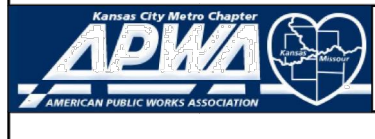


On Grade Curb Inlet Protection



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.

Professional Registration
Missouri
Engineering 2005002185-D
Surveying 2005000119-D
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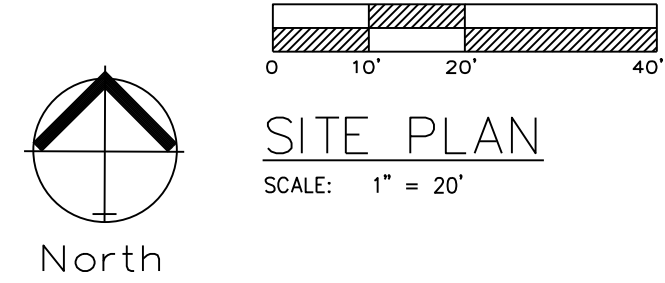
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REVISIONS
Revised 6/28/19
Revised 7/2/19



Slide Gate Notes

Aluminum cantilever slide gates shall conform to ASTM Specification F-1184 "Specification for Industrial and Commercial Horizontal Sliding Gates" and to the following specifications:

ENCLOSED TOP TRACK shall be a single track and rail aluminum extension weighing 5.25 pounds per foot and shall have a minimum 1-1/4" wall thickness at any dimension. The track shall be designed to reduce lateral movement. The top track shall conceal the truck assembly and protect it from the elements. Top track shall be formed to accept the 2"x 2" square vertical members and 1-1/4"x 1-1/4" square diagonal members of the gate.

BOTTOM TRACK shall be a single aluminum extrusion formed to accept the 2" vertical and 1-1/4" diagonal members of the gate. Wall thickness of bottom track shall be minimum 3/16" in cross section. The bottom frame shall also be designed to reduce lateral movement.

SAFETY SEAL: Both top and bottom tracks shall be extended to include a keyway into which the ends of the filler material (such as chain link fabric) shall fit and protect both bystanders and the gate.

GATE FRAMES: Vertical members shall be made of 2" square aluminum tubing, with a 1/8" wall thickness, alloy 6063-T6, weighing 1.09 pounds per lineal foot. Verticals shall be welded top and bottom to form a rigid unit. Diagonal members shall be made of 1-1/4" square aluminum tubing, with 1/8" wall thickness, alloy 6063-T6, weighing .655 pounds per lineal foot. Diagonal bracing shall be solidly welded in each section (or bay) to prevent sagging.

TRUCK ASSEMBLIES shall consist of two (2) heavy duty swivel type trucks having four horizontal wheels with factory sealed and roller bearing inner wheels. The two (2) heavy duty lateral wheels to insure alignment of the truck in the top track.

HARDWARE: All gate hangers, latches, brackets, and associated hardware shall be galvanized after fabrication. Hardware shall meet or exceed ASTM specifications F 626 & A 153.

GATE POSTS: Gates shall be installed on 4" O.D Schedule 40 galvanized posts weighing 9.11 pounds per foot.



ENGINEERING
—ENGINEERING & SURVEYING—
SOLUTIONS

50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
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Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

Project:
REECE AND
NICHOLS, LSMO

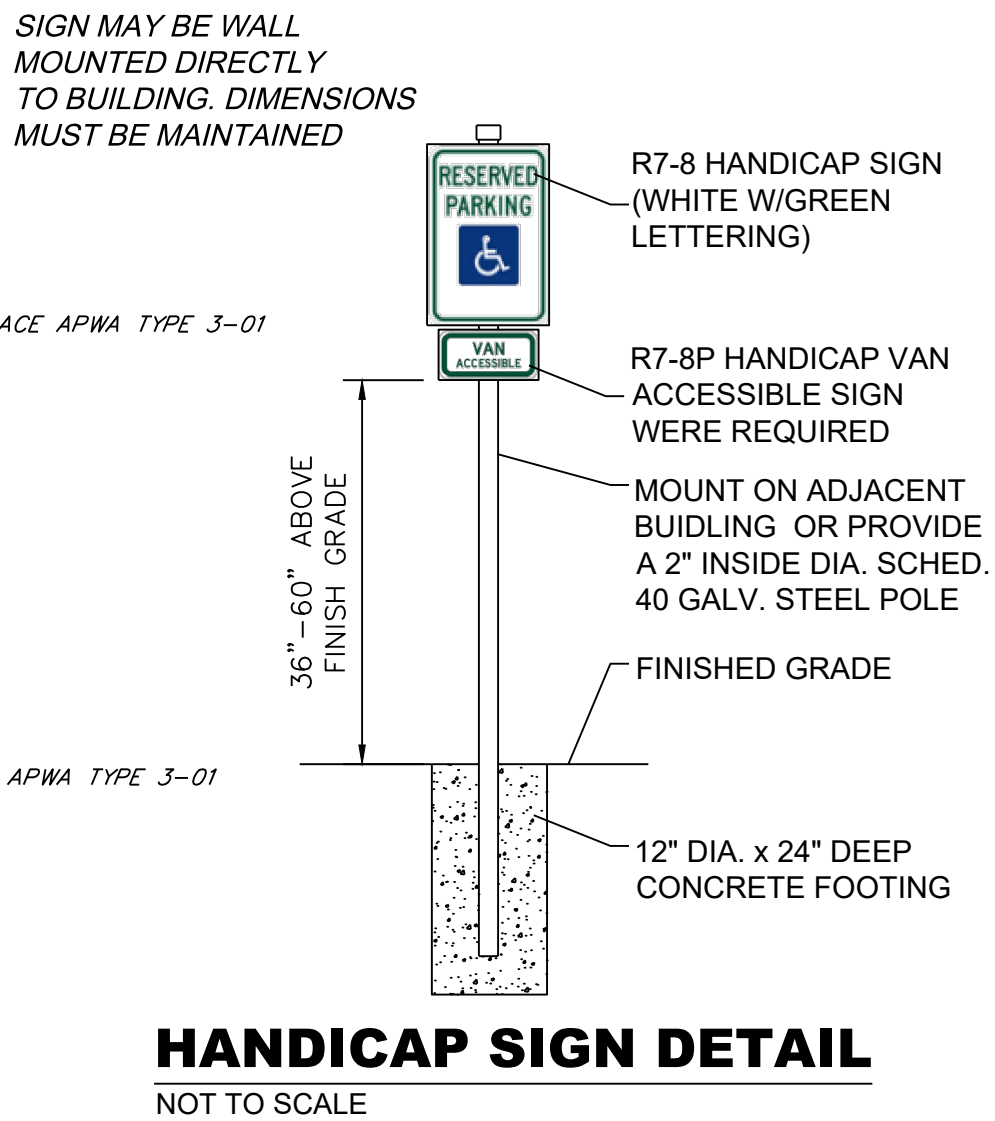
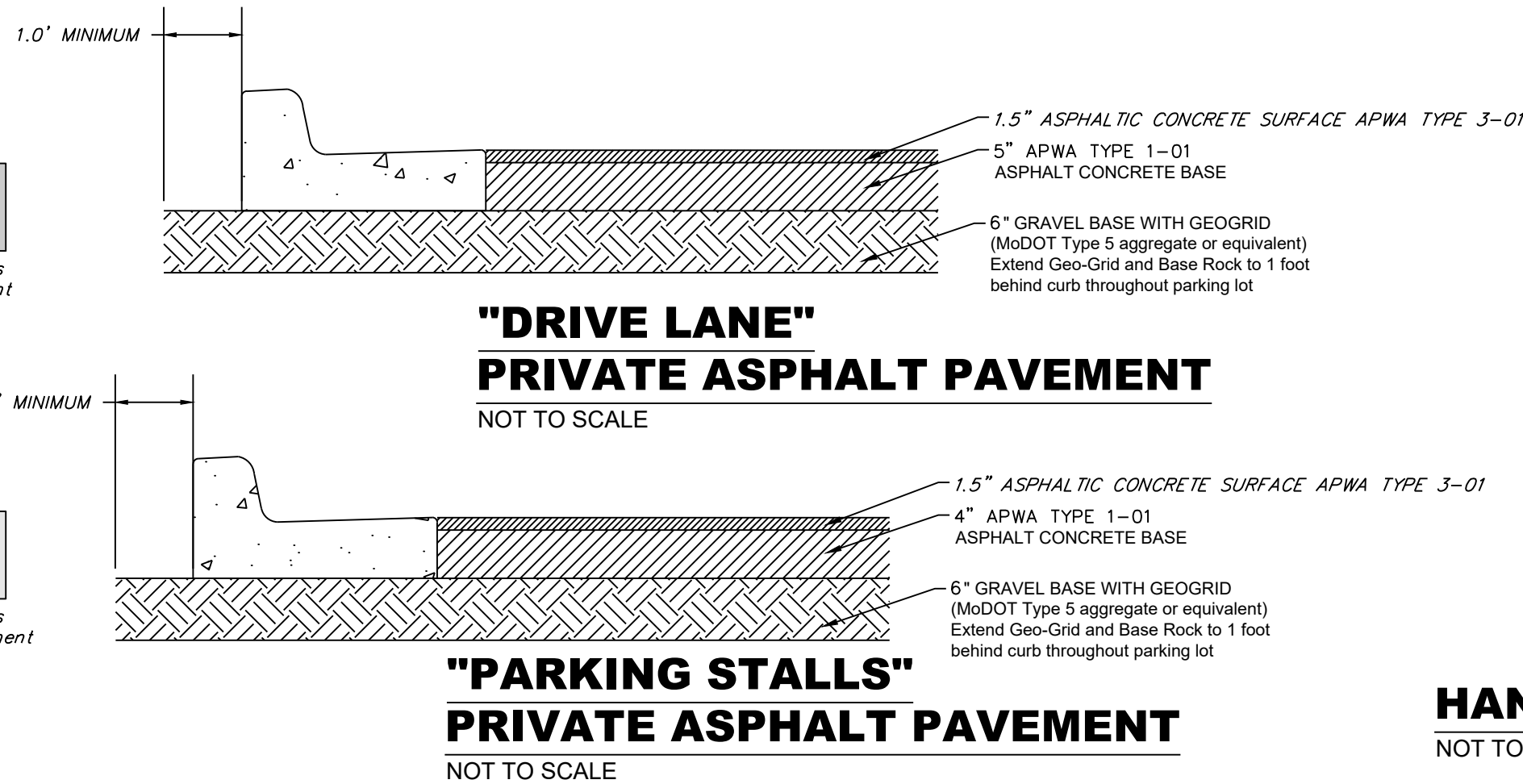
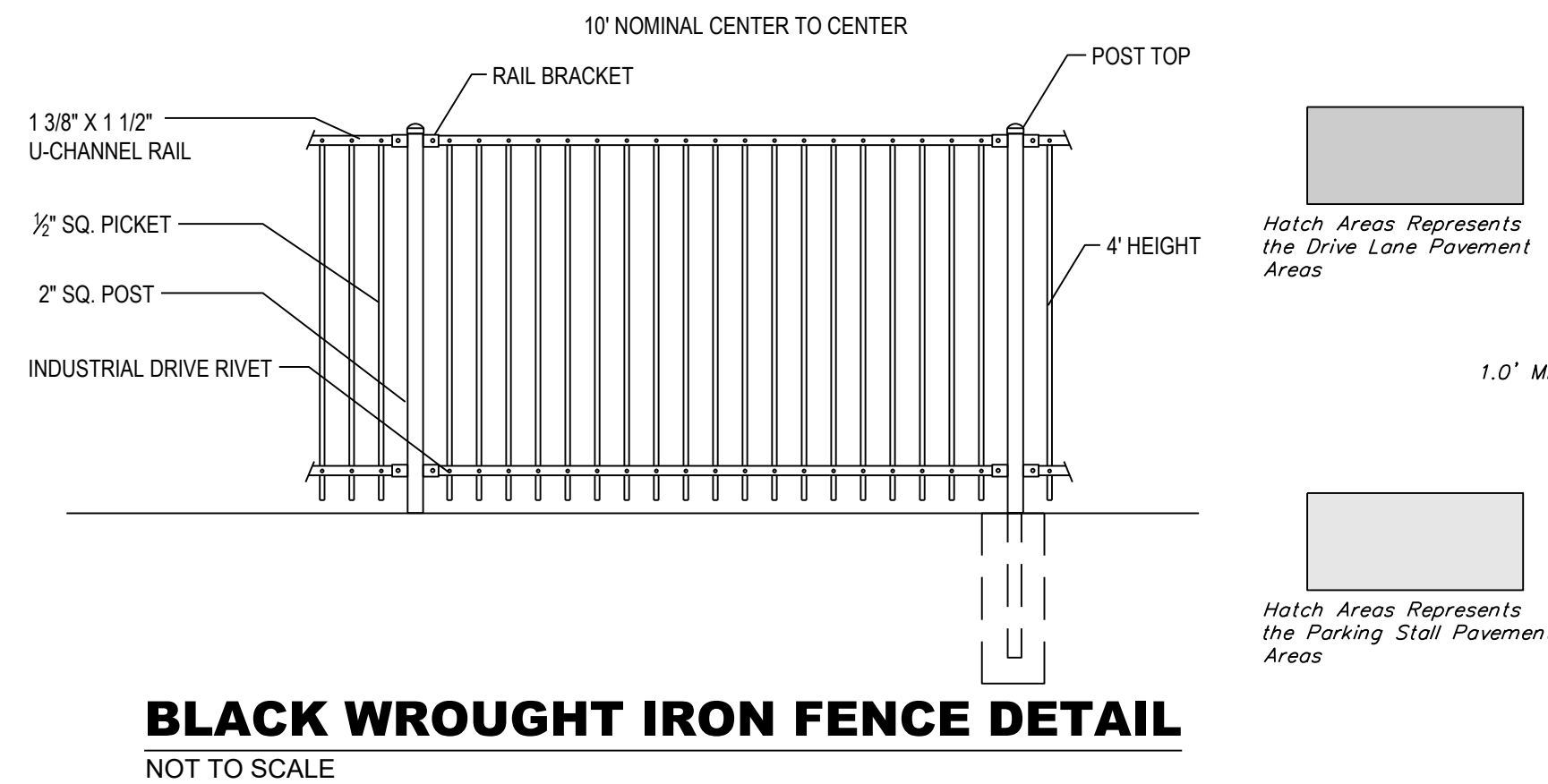
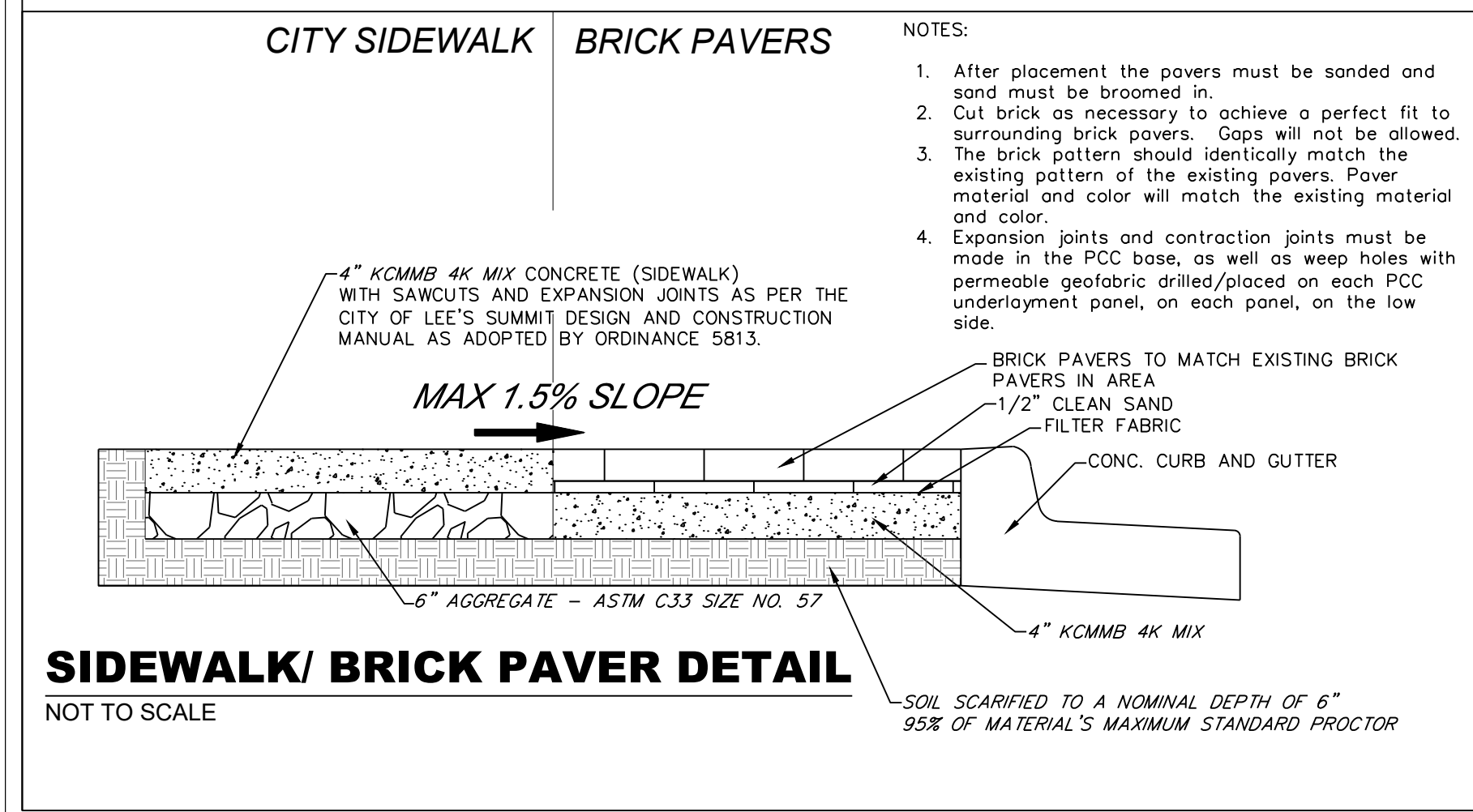
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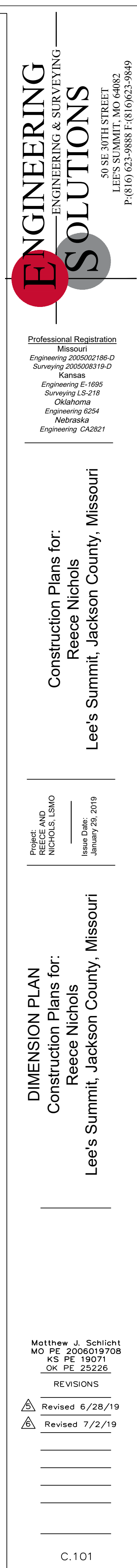
SITE PLAN
Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

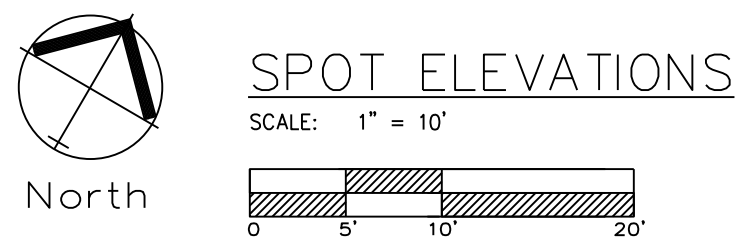
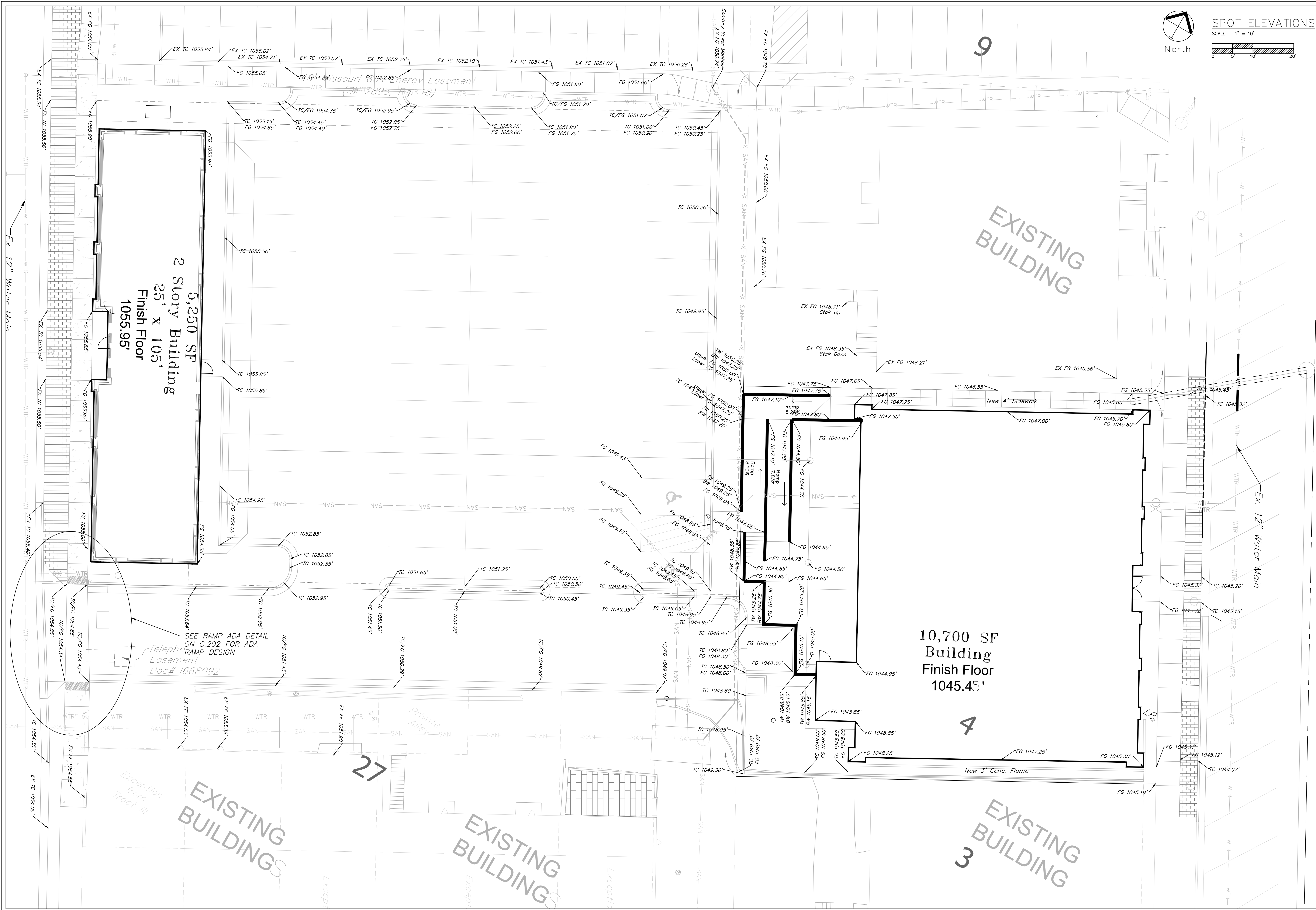
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REVISIONS	
5	Revised 6/28/19
6	Revised 7/2/19

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Construction Plans for:
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Lee's Summit, Jackson County, Missouri

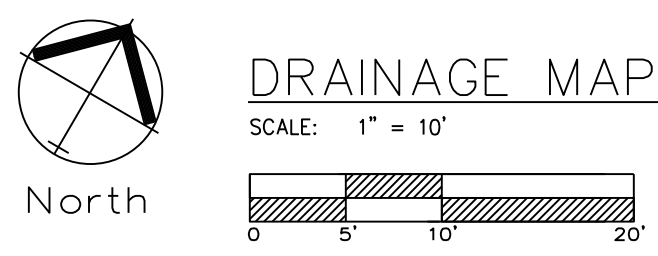
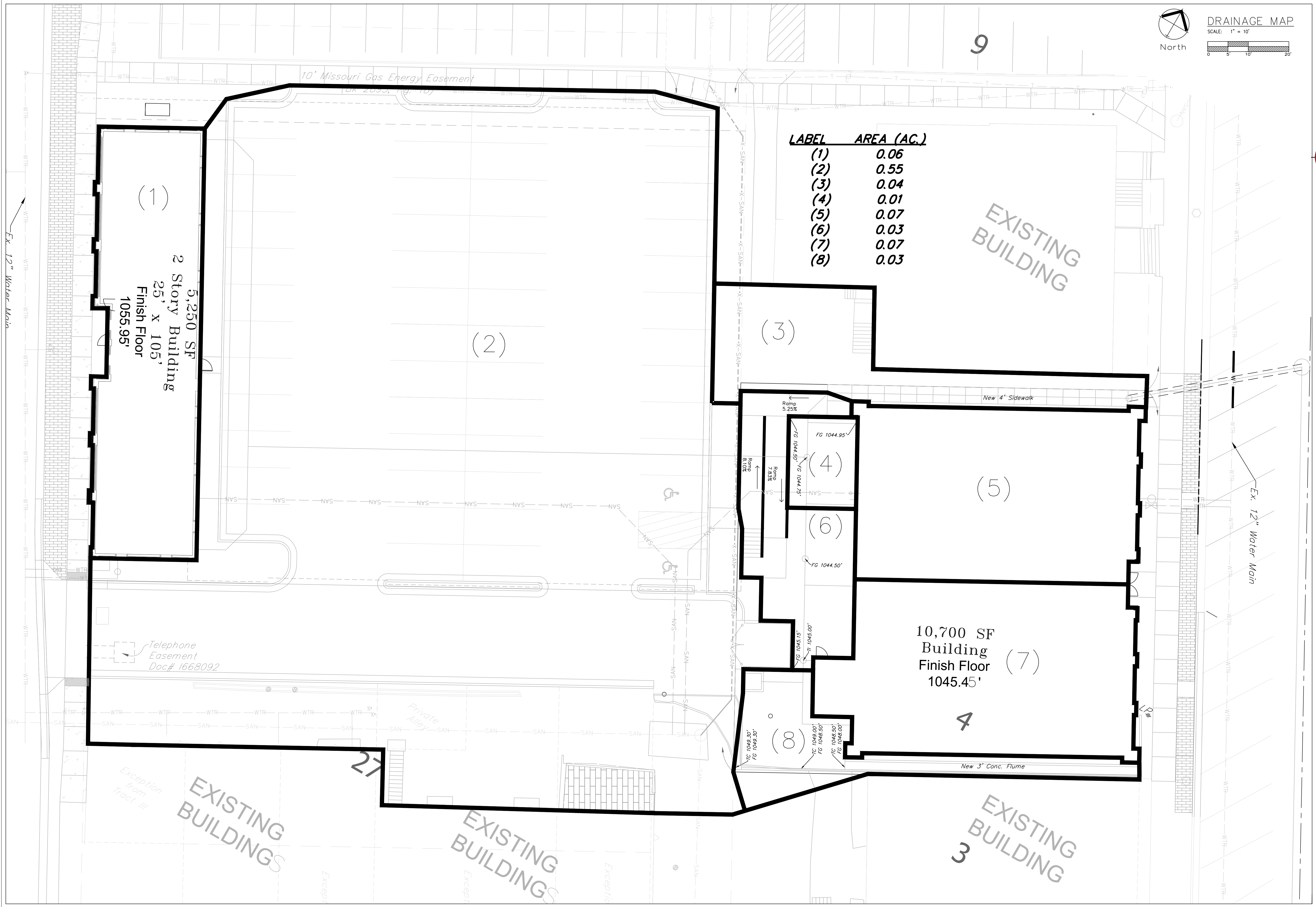
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SPOT ELEVATIONS
Construction Plans for:
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C. 201



<u>LABEL</u>	<u>AREA (AC.)</u>
(1)	0.06
(2)	0.55
(3)	0.04
(4)	0.01
(5)	0.07
(6)	0.03
(7)	0.07
(8)	0.03



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DRAINAGE MAP
Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

Project AND
NICHOLS, LSMO

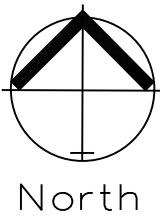
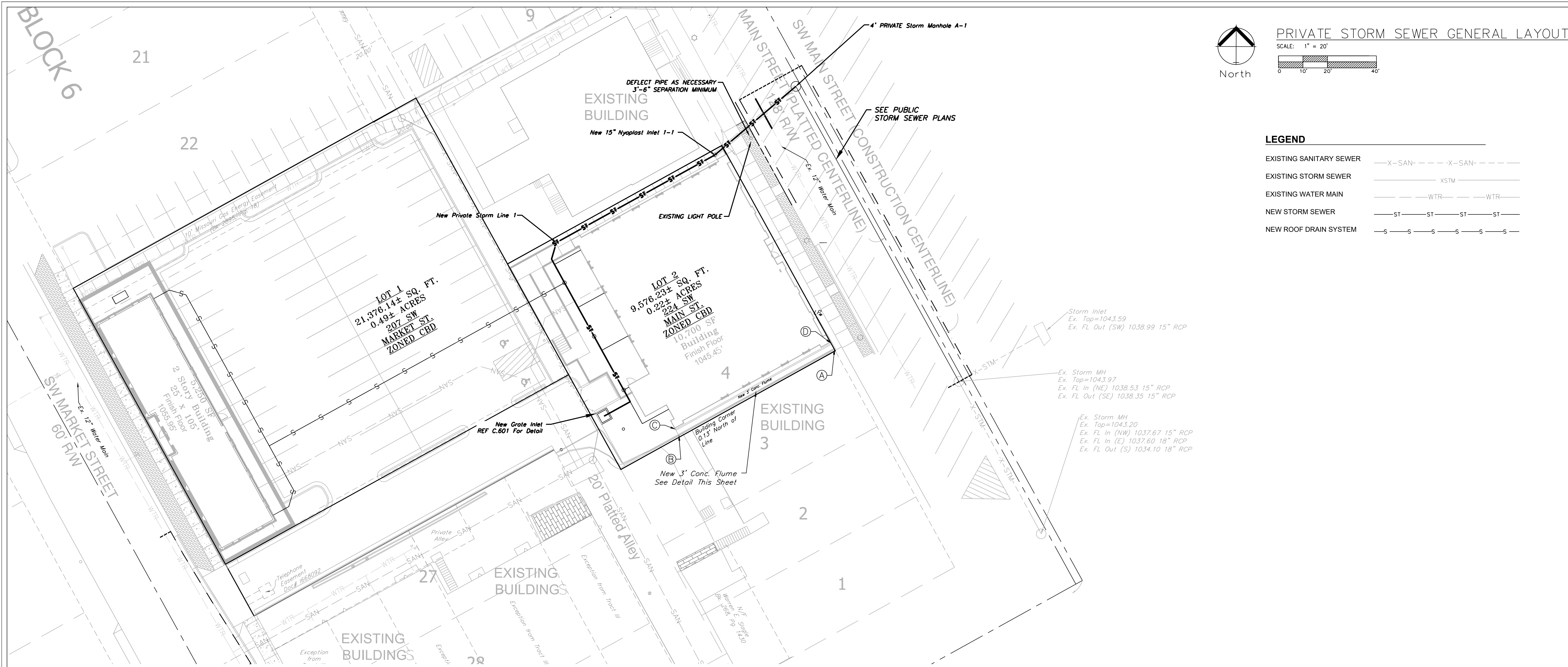
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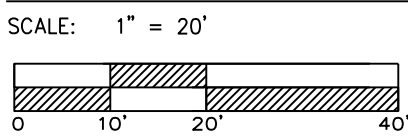
REVISIONS

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C. 203



PRIVATE STORM SEWER GENERAL LAYOUT



LEGEND

EXISTING SANITARY SEWER	X-SAN- - - - X-SAN- - - -
EXISTING STORM SEWER	XSTM
EXISTING WATER MAIN	WTR- - - - WTR- - - -
NEW STORM SEWER	ST- - - - ST- - - - ST- - - - ST- - - -
NEW ROOF DRAIN SYSTEM	S- - - - S- - - - S- - - - S- - - -

APWA STORM DRAINAGE "TC" COMPUTATIONS FOR : REECE NICHOLS																			
AREA ID		TOTAL ACRES		WTRSHD LENGTH		UP ELEV		DN ELEV		SURFACE CODE		"C" VALUE		OVLND LENGTH		UP ELEV		DN ELEV	
2		0.55		244.0		1055.0		1048.0		B		0.87		100.0		1055.0		1050.7	
2		0.55		244.0		1055.0		1048.0		B		0.87		100.0		1055.0		1050.7	

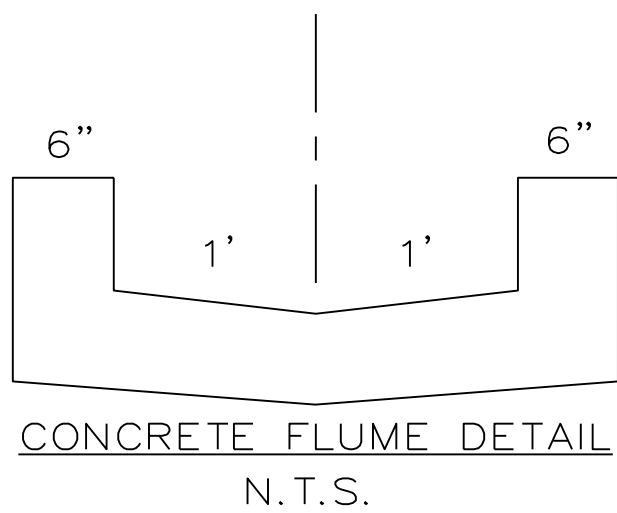
TC FOR ALL OTHER AREAS EQUAL 5 MINUTES.

D.S. Str.		U.S. Str.		LineLength		Incr.Area		TotalArea		RunoffCoeff.		IncrC x A		TotalC x A		InletTime		TimeConc	
A-1		1-1		42.45		0.04		0.83		0.87		0.03		0.72		5		6.4	
1-1		1-2		91.98		0.14		0.79		0.87		0.12		0.69		5		6.1	
1-2		1-3		25		0.1		0.65		0.87		0.09		0.57		5		6	
1-3		1-4		25		0		0.55		0		0		0.48		0		6	
1-4		1-5		17.63		0.55		0.55		0.87		0.48		0.48		5.9		5.9	

D.S. Str.		U.S. Str.		LineLength		Incr.Area		TotalArea		RunoffCoeff.		IncrC x A		TotalC x A		InletTime		TimeConc	
A-1		1-1		42.45		0.04		0.83		0.87		0.03		0.72		5		6.4	
1-1		1-2		91.98		0.14		0.79		0.87		0.12		0.69		5		6.2	
1-2		1-3		25		0.1		0.65		0.87		0.09		0.57		5		6.1	
1-3		1-4		25		0		0.55		0		0		0.48		0		6	
1-4		1-5		17.63		0.55		0.55		0.87		0.48		0.48		5.9		5.9	

100 YEAR AND 10 YEAR OVERFLOW FLUME SECTIONS												
Section	Drainage Area	100 Yr. Runoff (c.f.s.)	10 Yr. Runoff (c.f.s.)	Bed Slope (%)	Base Width (ft)	Side Slope (1:V)	Normal Depth (ft)	Sectional Area	Velocity 100Yr. (f.p.s.)	Velocity 10Yr. (f.p.s.)	Hydraulic Radius (ft)	Shear Stress (p.s.f.)
1	0.58	6.29	3.58	3.59	2	0	0.36	0.72	8.34	7.16	0.26	0.58

NOTE: Flume contains uniform cross section and constant longitudinal (Bed) slope.



CONCRETE FLUME DETAIL
N.T.S.
Q100 = 6.29 CFS
ASSUMING INLET 5-1
100% PLUGGED
100 YR WSE = 1048.36
AT POINT B
SLOPE = 3.59%

Finish Grade Elevations of Channel	
Pt.	Elevation
A	1045.79
B	1048.50
C	1048.50
D	1045.79

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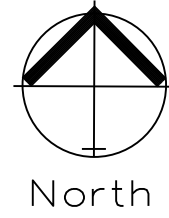
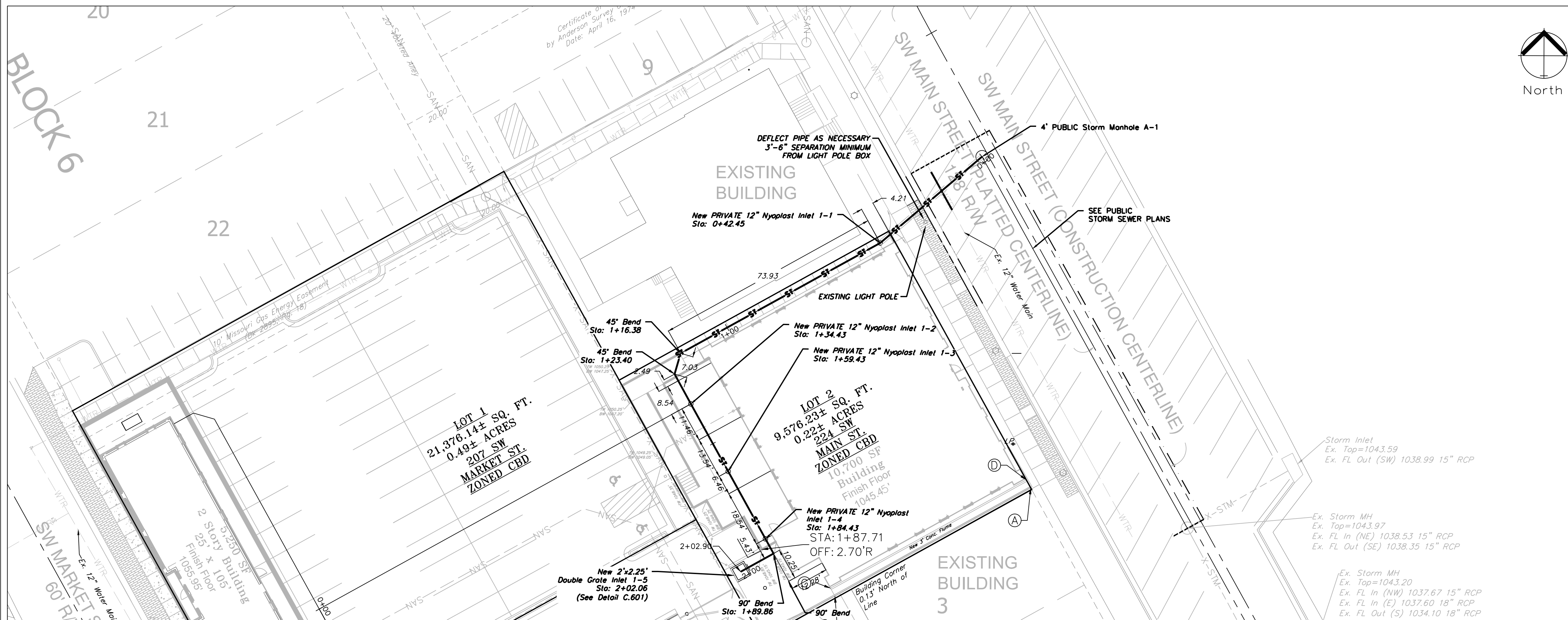
Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

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NICHOLS, LSNM
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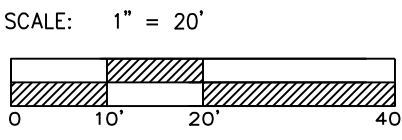
Private Storm Sewer General Layout
Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

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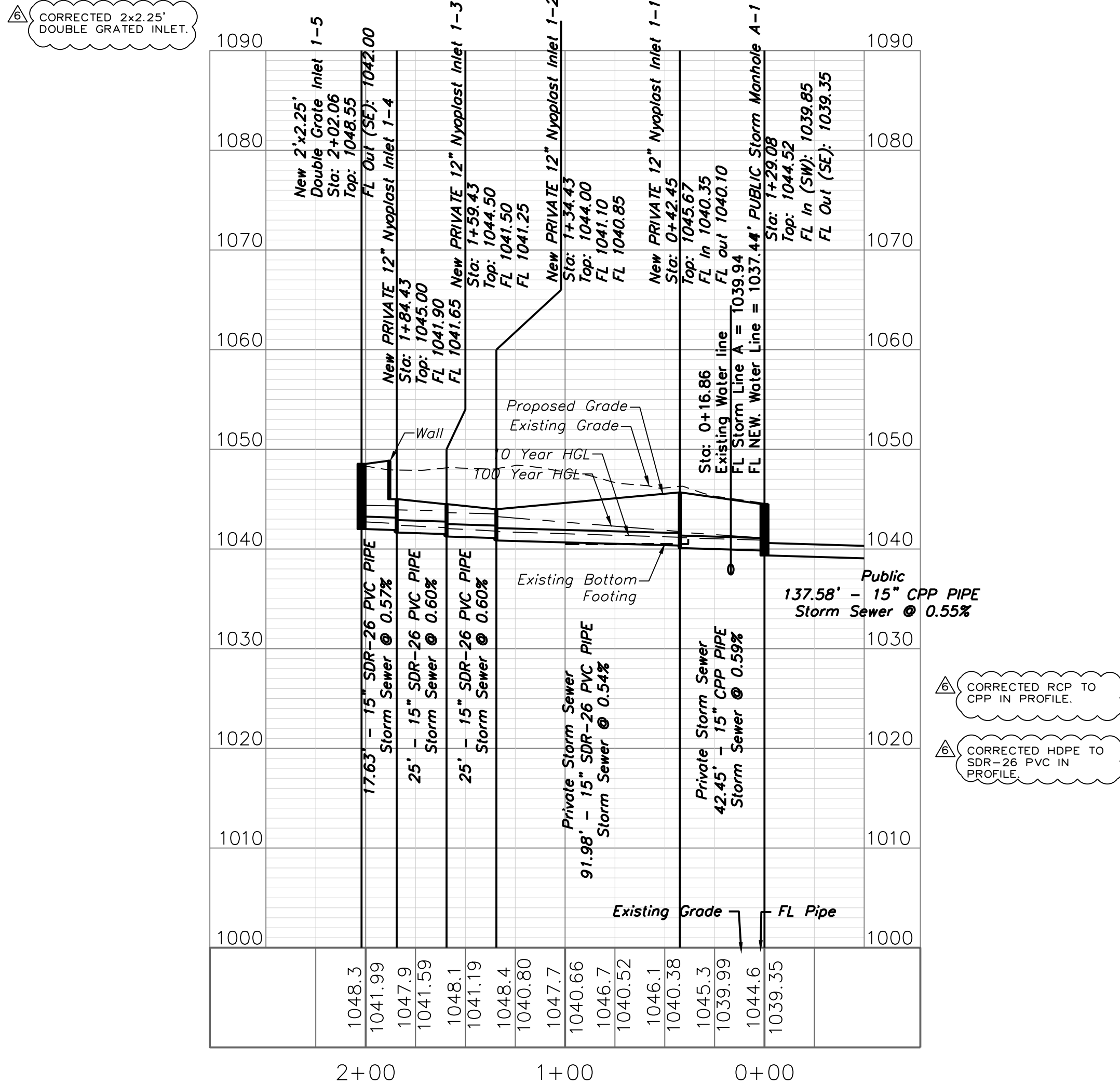
PRIVATE STORM SEWER PLAN AND PROFILE



LEGEND

- EXISTING SANITARY SEWER: -X-SAN- -X-SAN- -X-SAN-
- EXISTING STORM SEWER: -XSTM- -XSTM- -XSTM-
- EXISTING WATER MAIN: -WTR- -WTR- -WTR-
- NEW STORM SEWER: -ST- -ST- -ST- -ST-
- NEW ROOF DRAIN SYSTEM: -S- -S- -S- -S- -S-

PRIVATE STORM LINE 1



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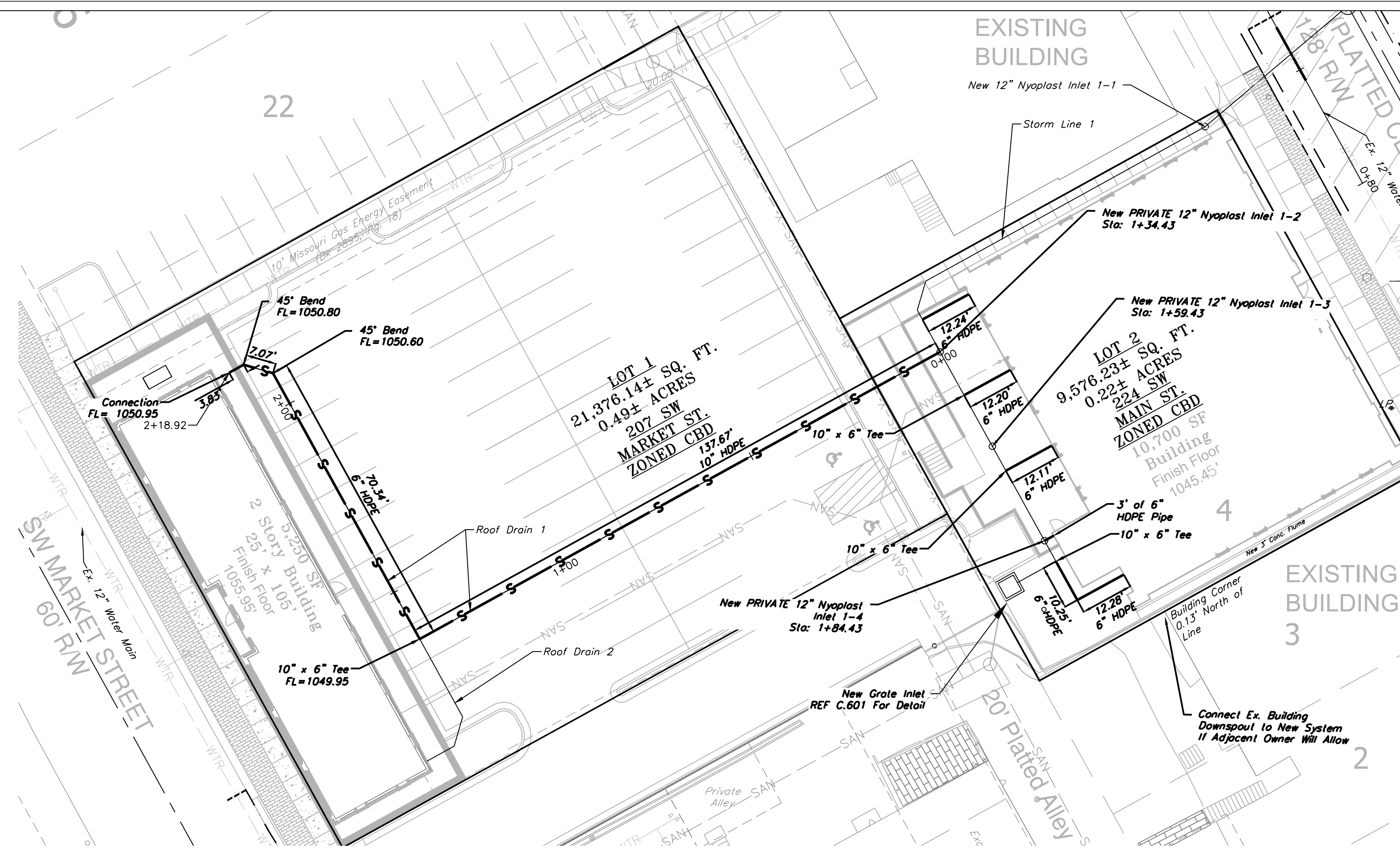
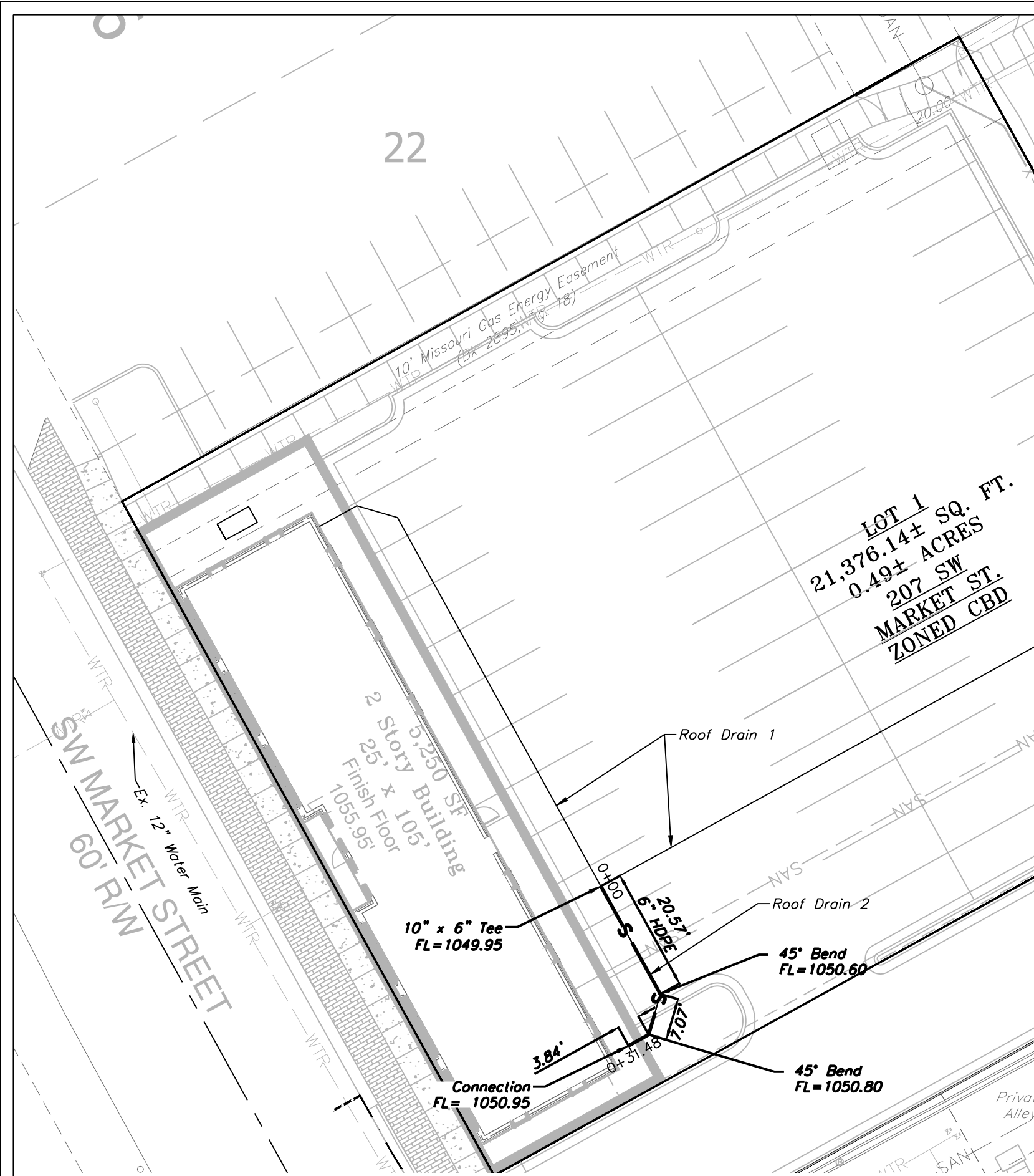
Construction Plans for:
Reece Nichols
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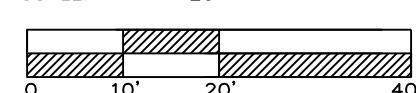
Private Storm Sewer Plan and Profile
Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

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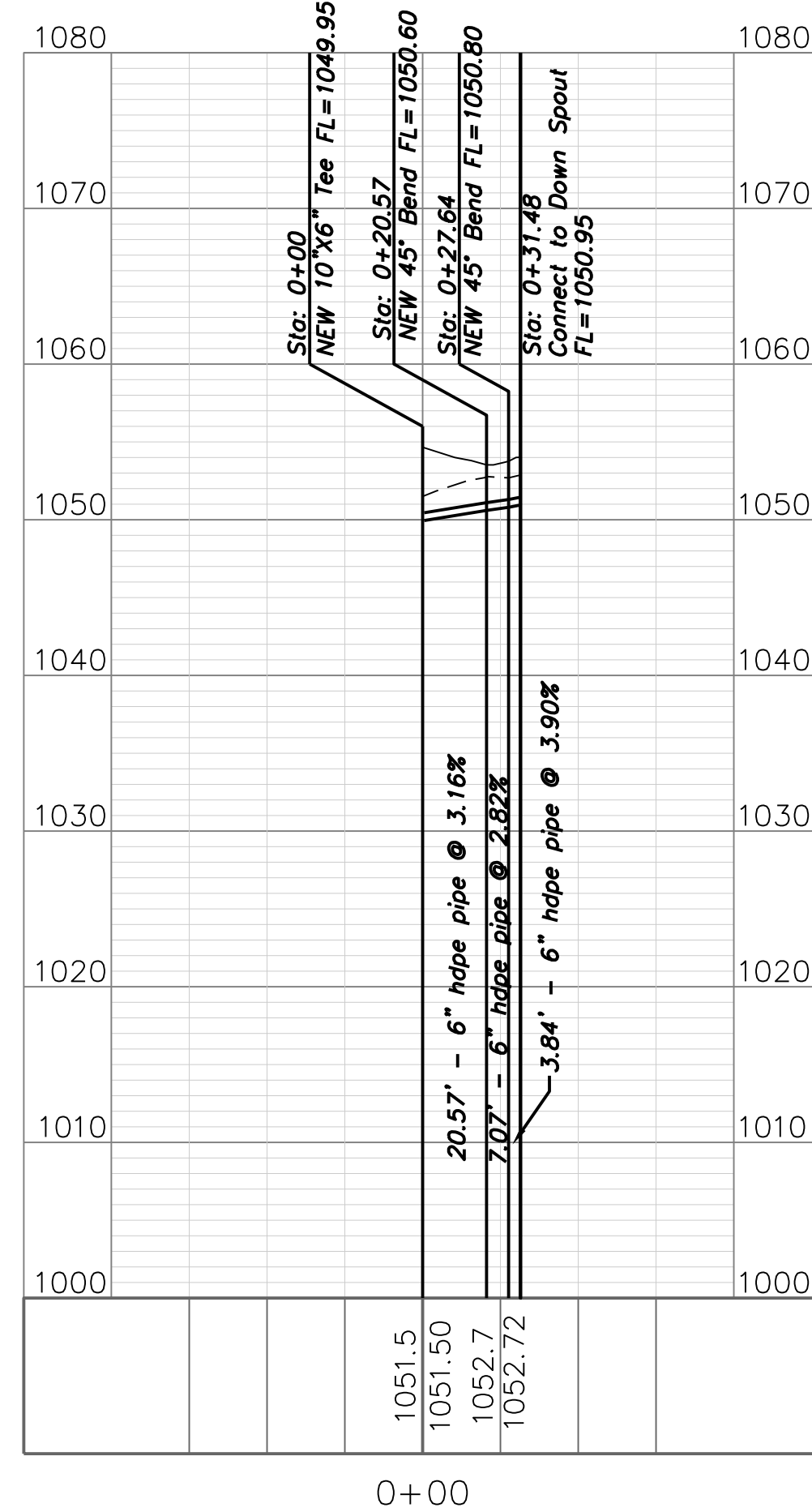
PRIVATE ROOF DRAIN PLAN
SCALE: 1" = 20'



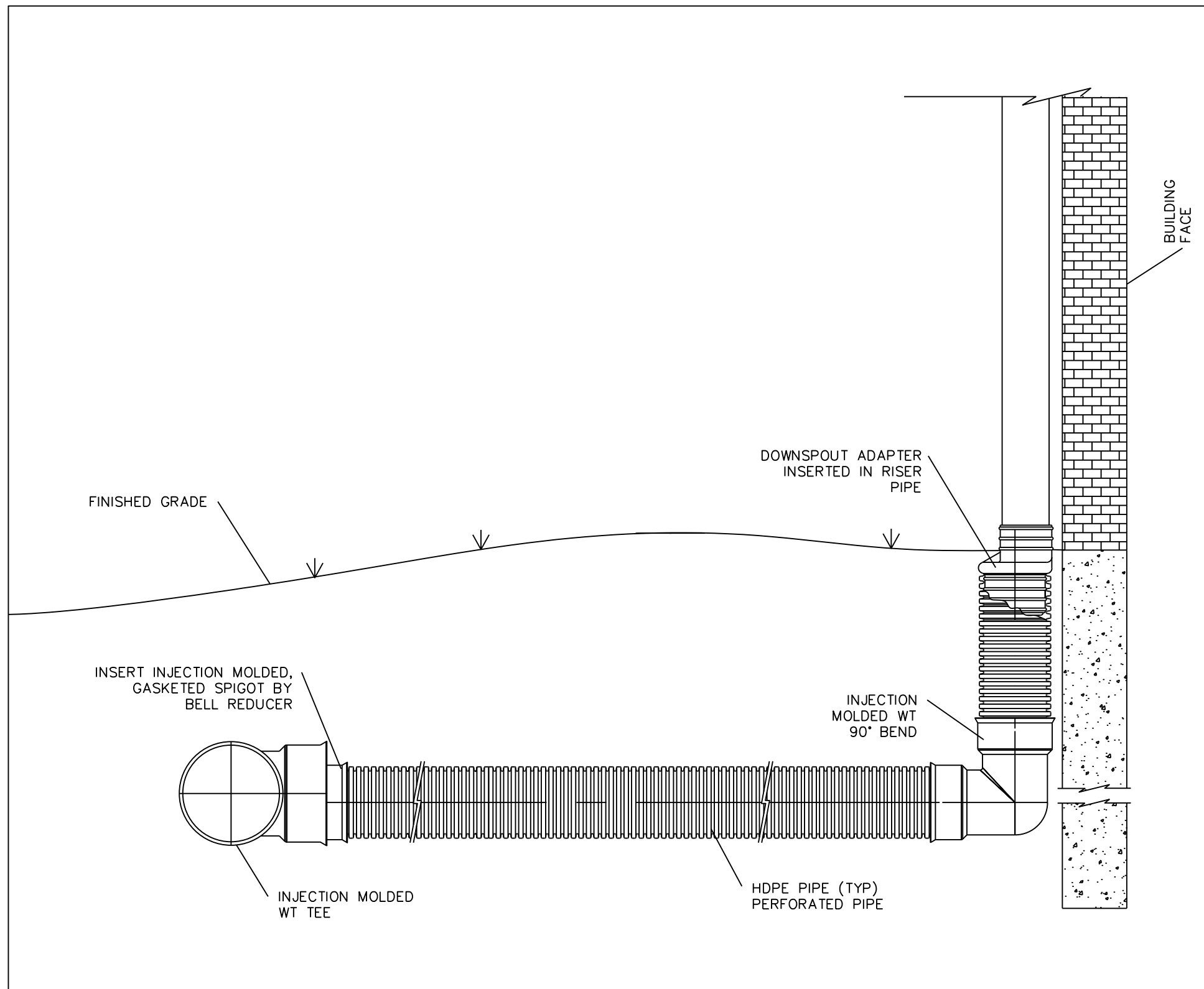
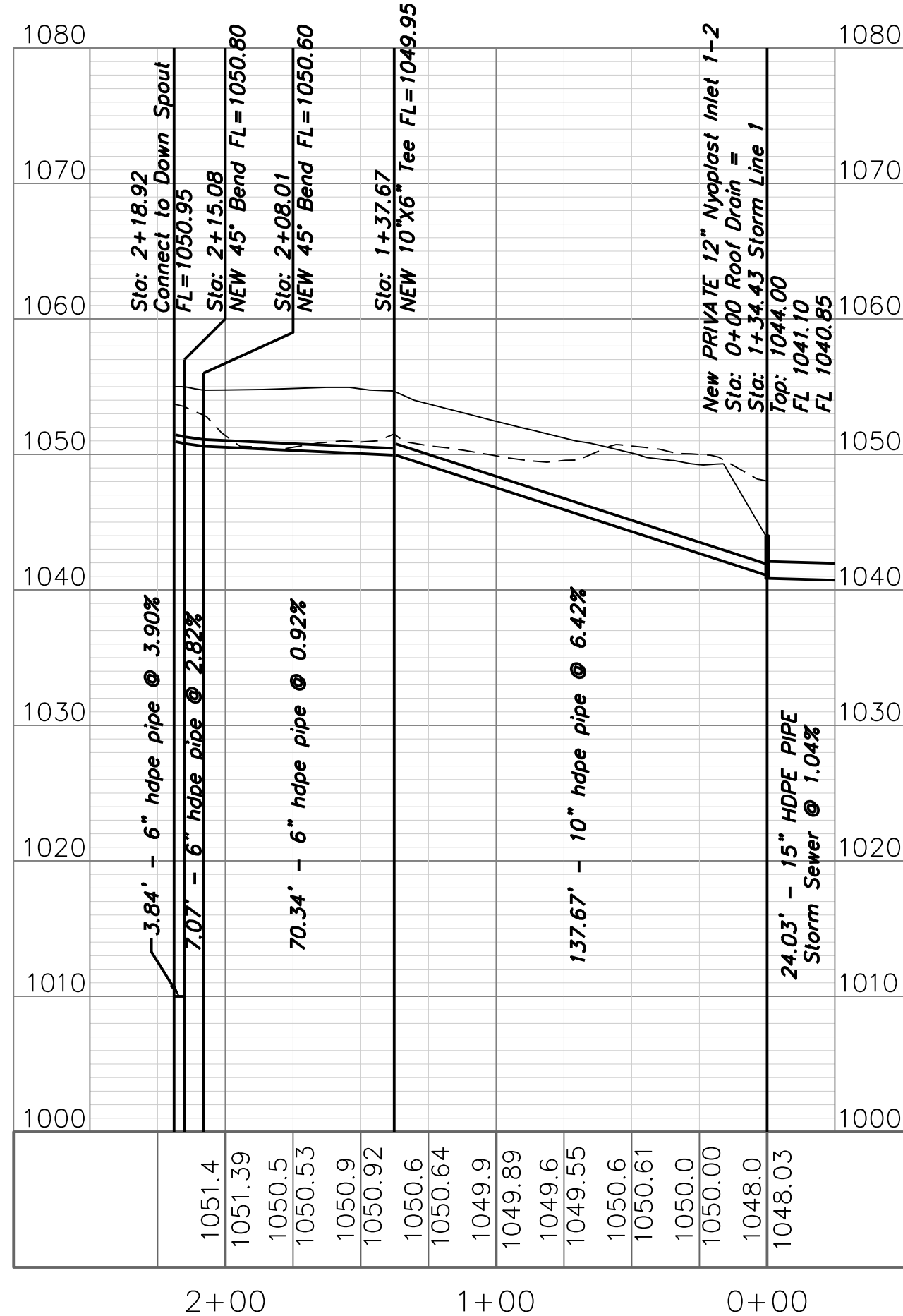
LEGEND

- EXISTING SANITARY SEWER: X-SAN
- EXISTING STORM SEWER: XSTM
- EXISTING WATER MAIN: WTR
- NEW STORM SEWER: ST
- NEW ROOF DRAIN SYSTEM: S

ROOF DRAIN 2



ROOF DRAIN



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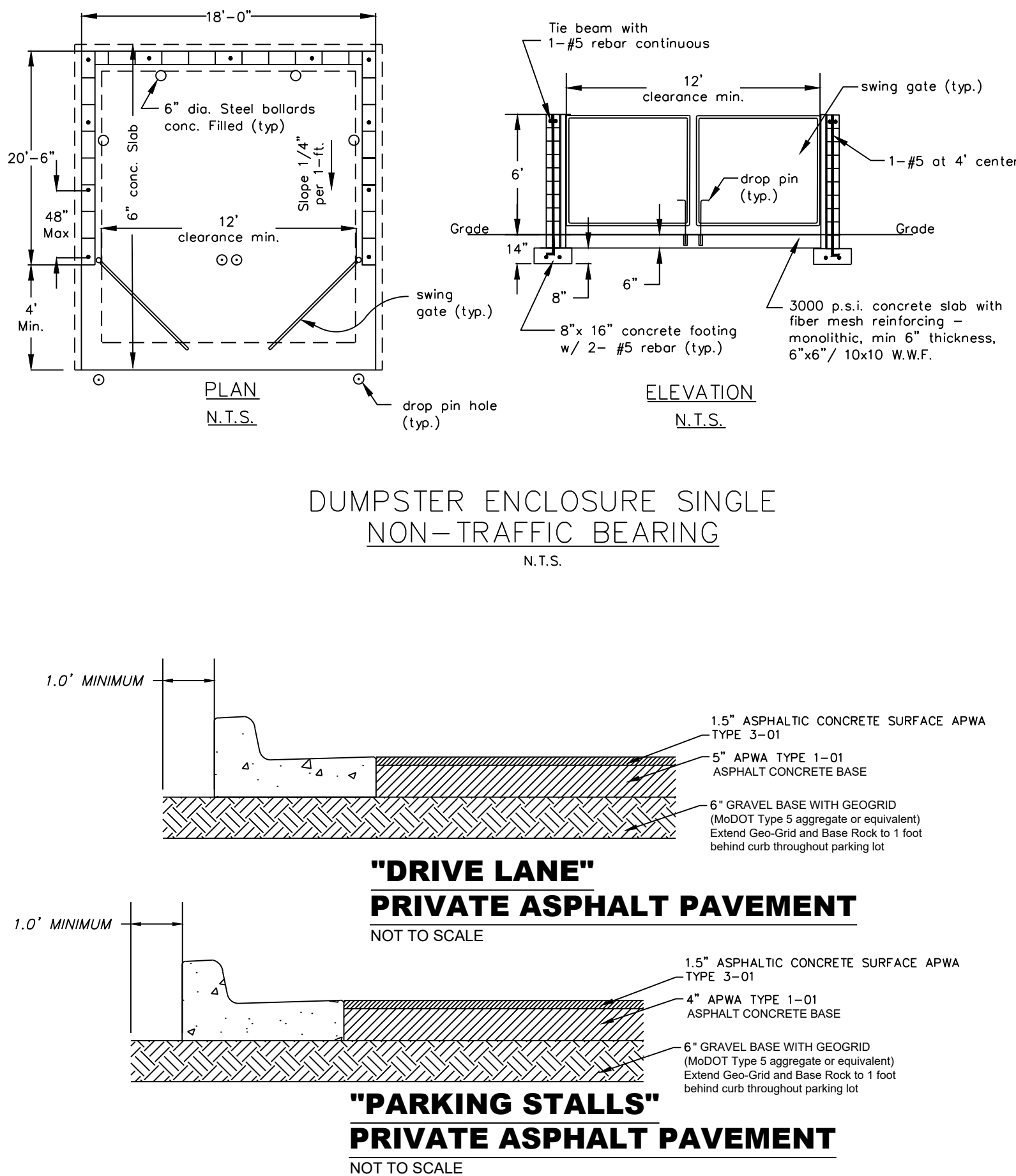
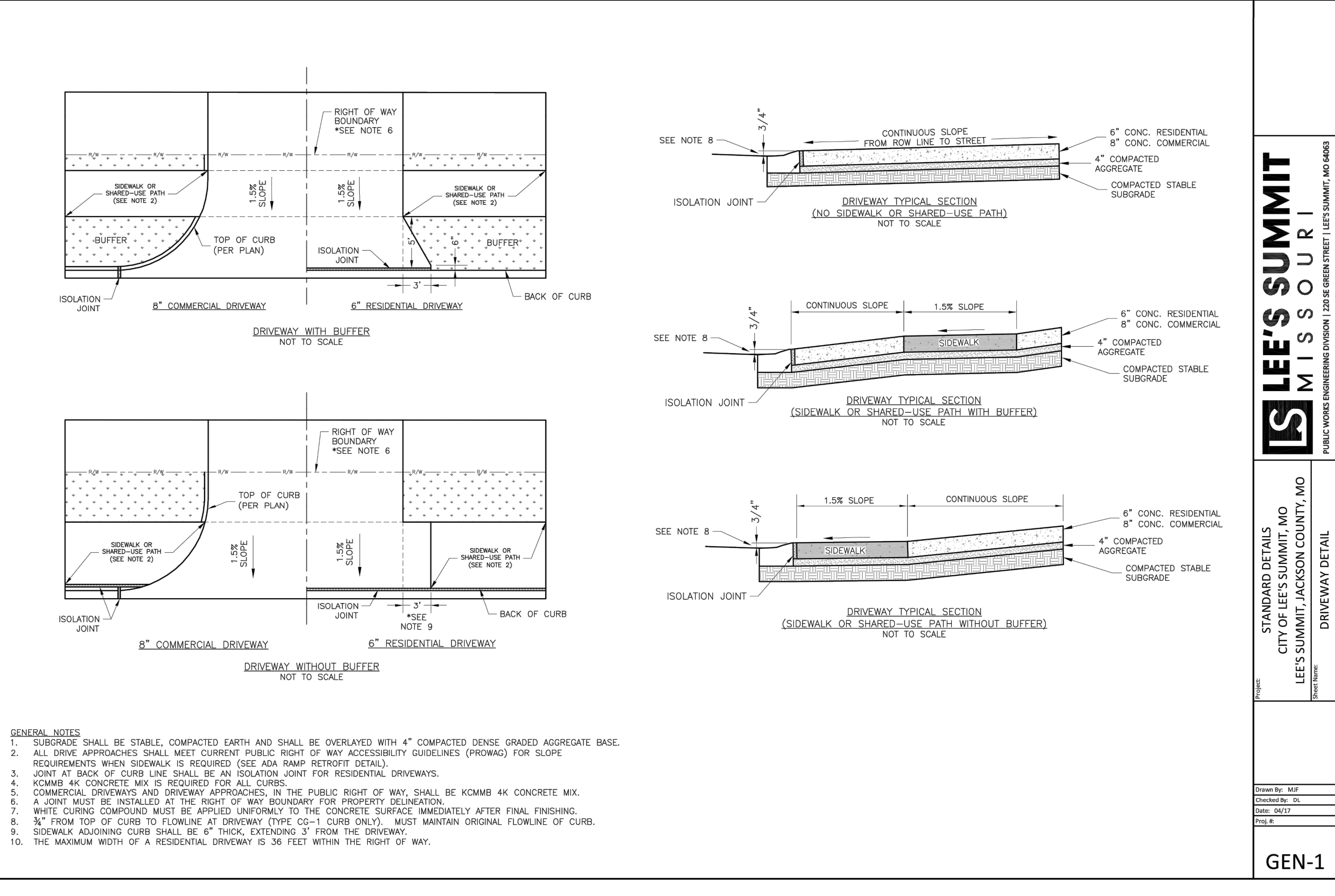
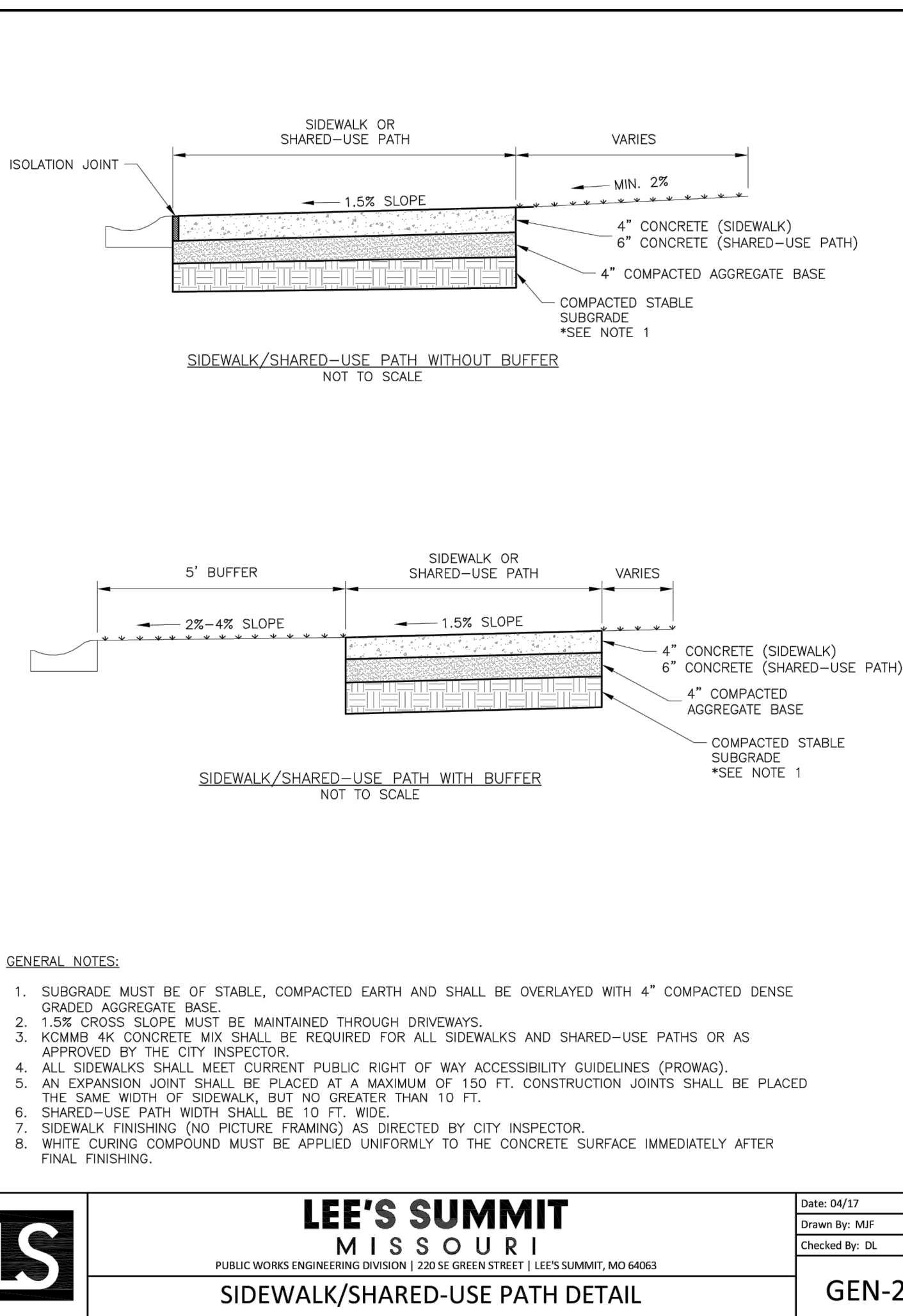
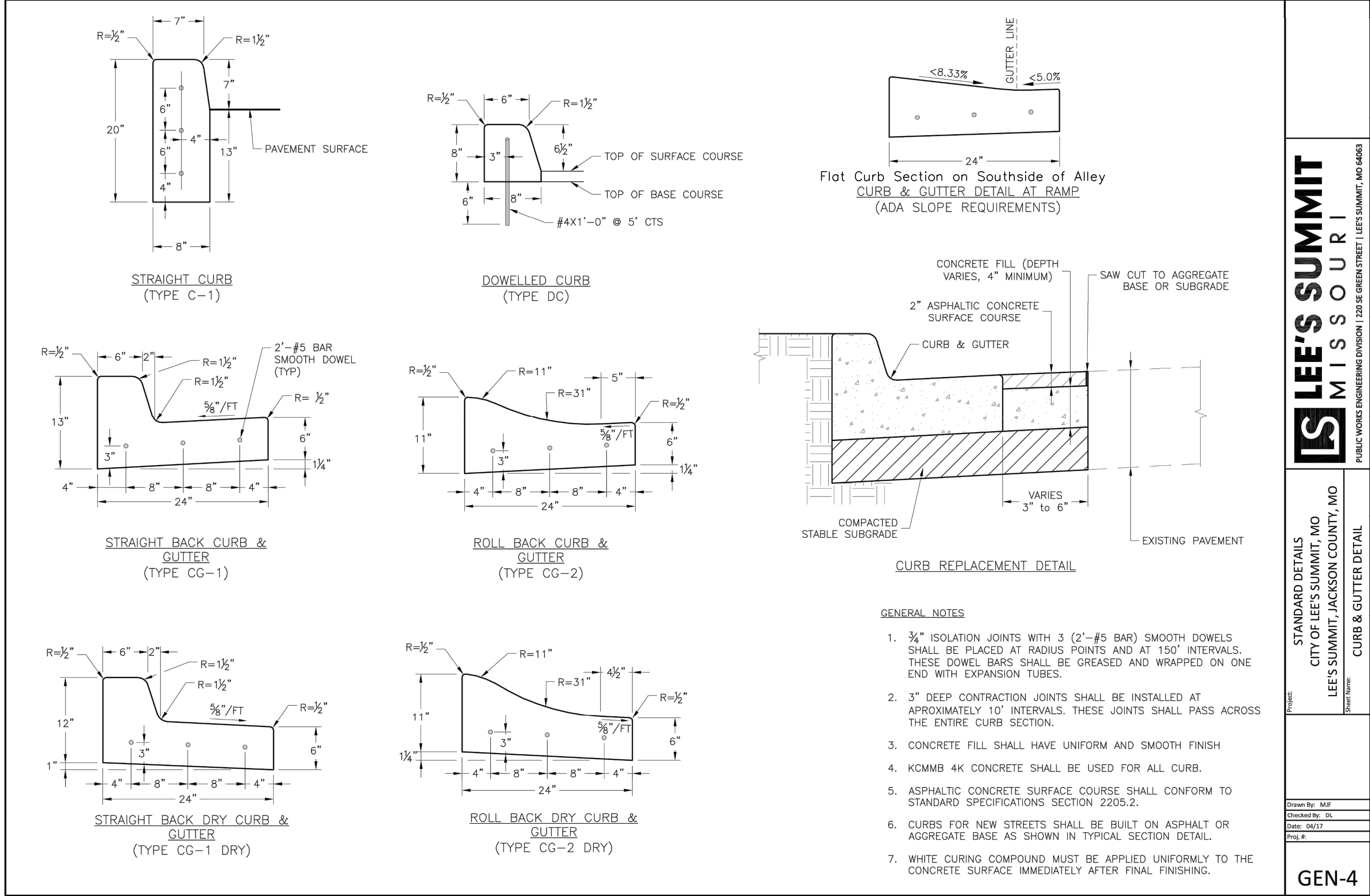
Construction Plans for:
Reece Nichols
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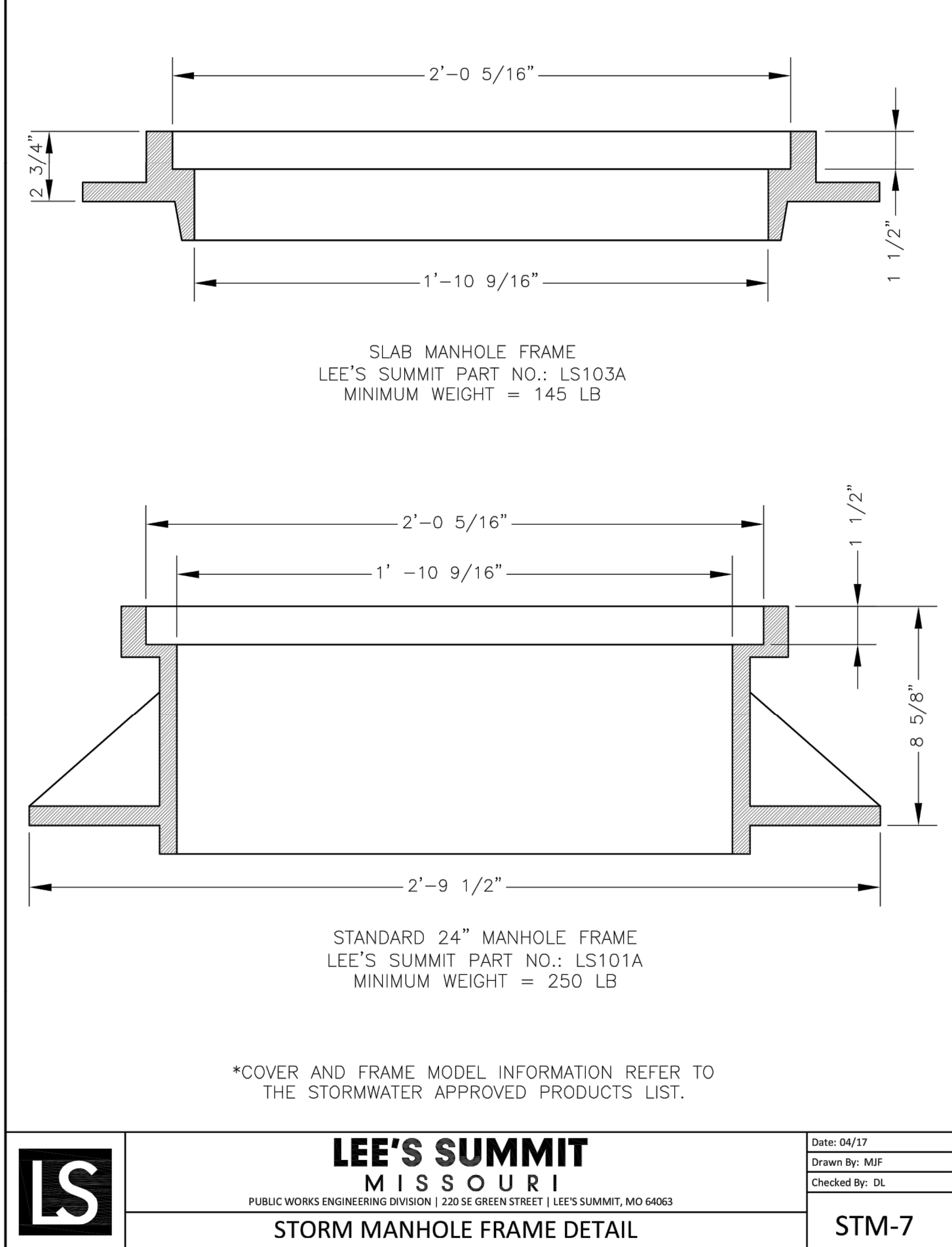
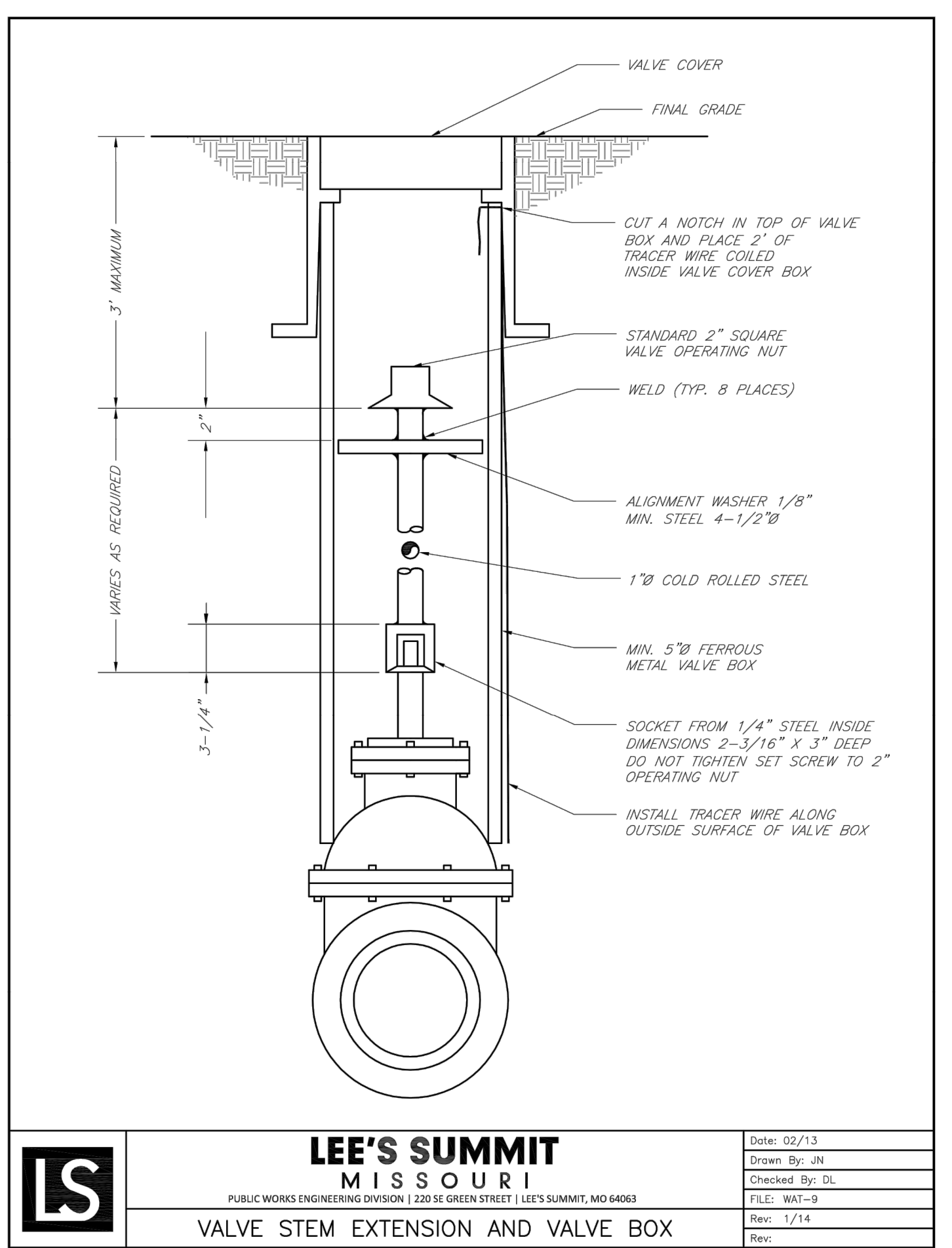
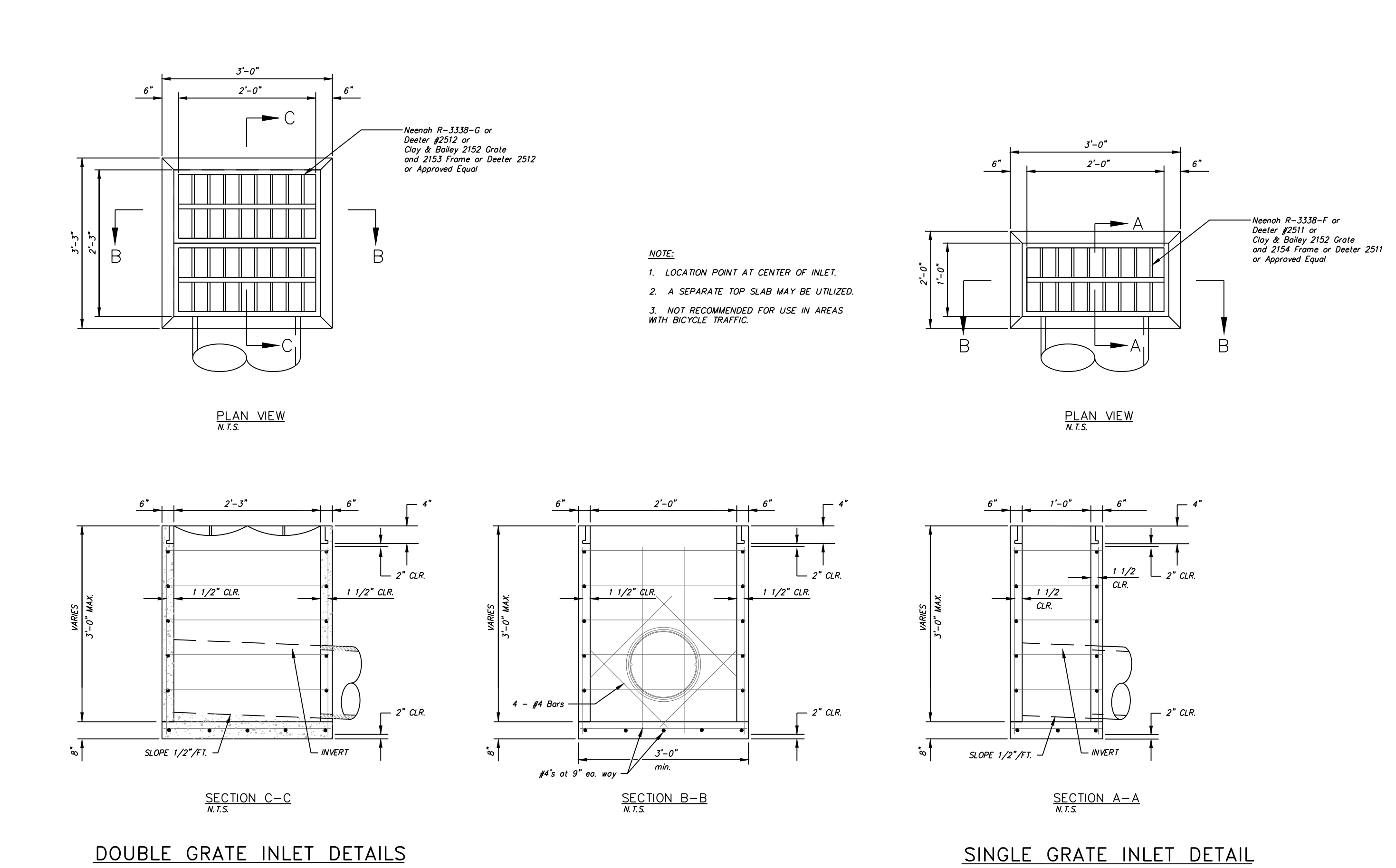
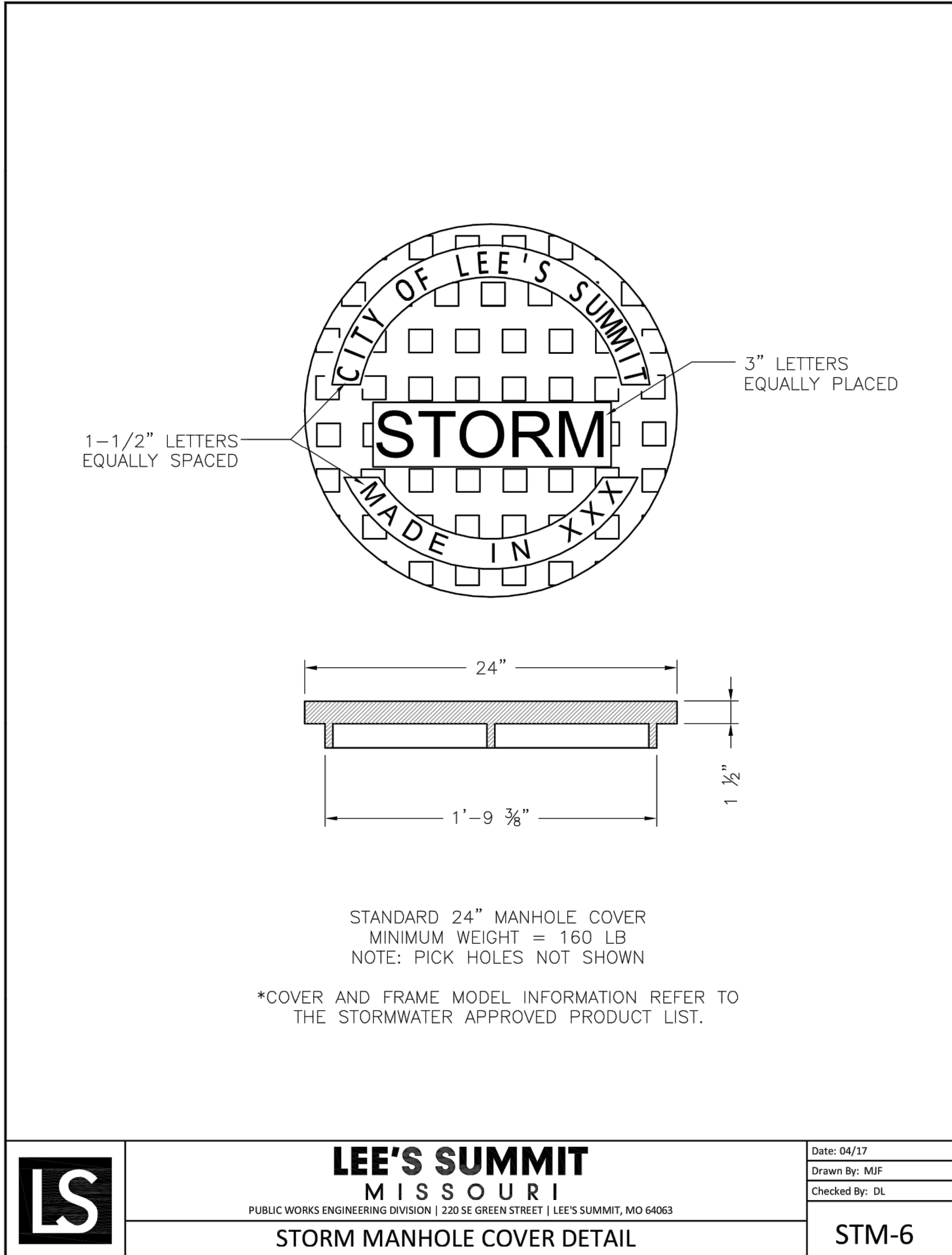
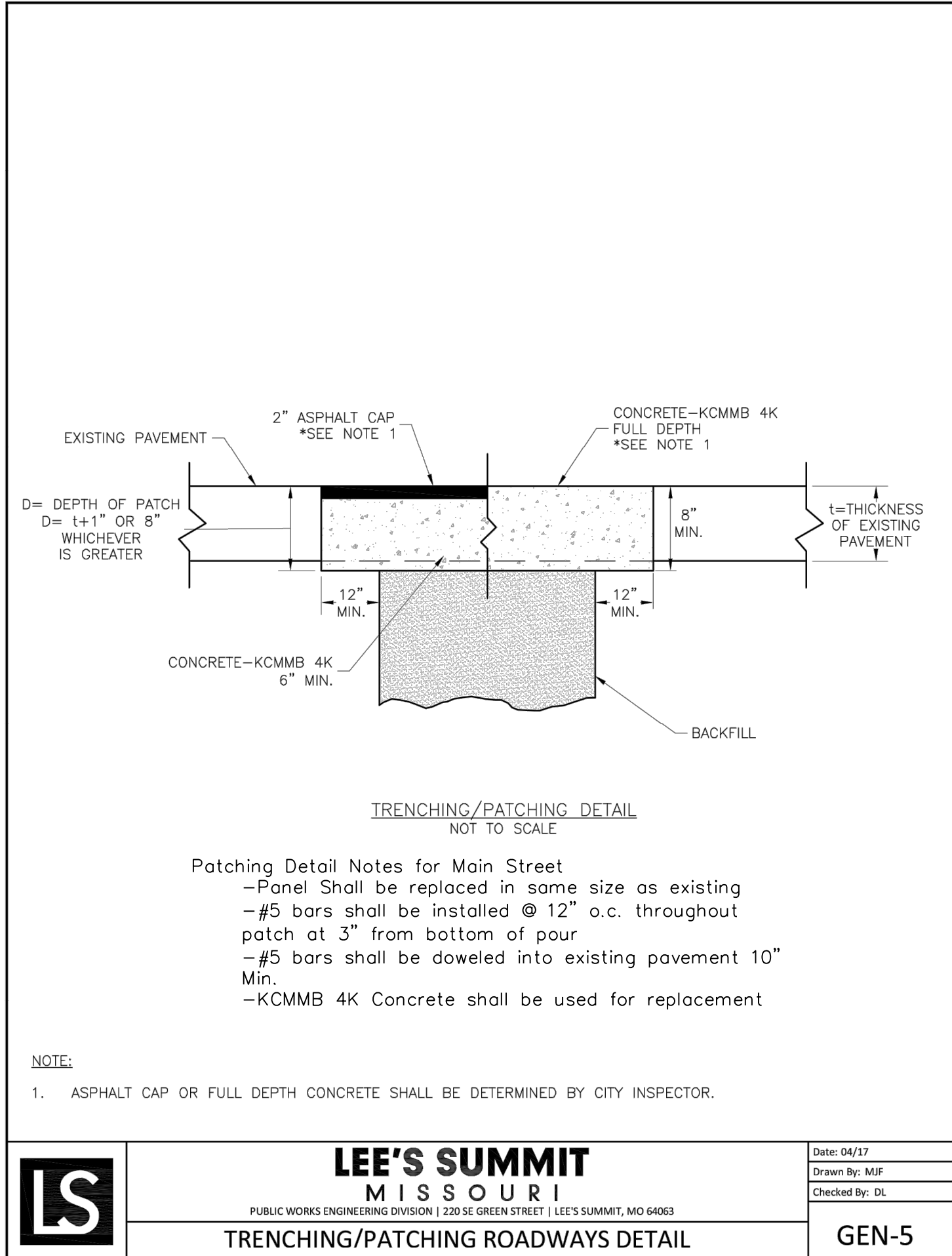
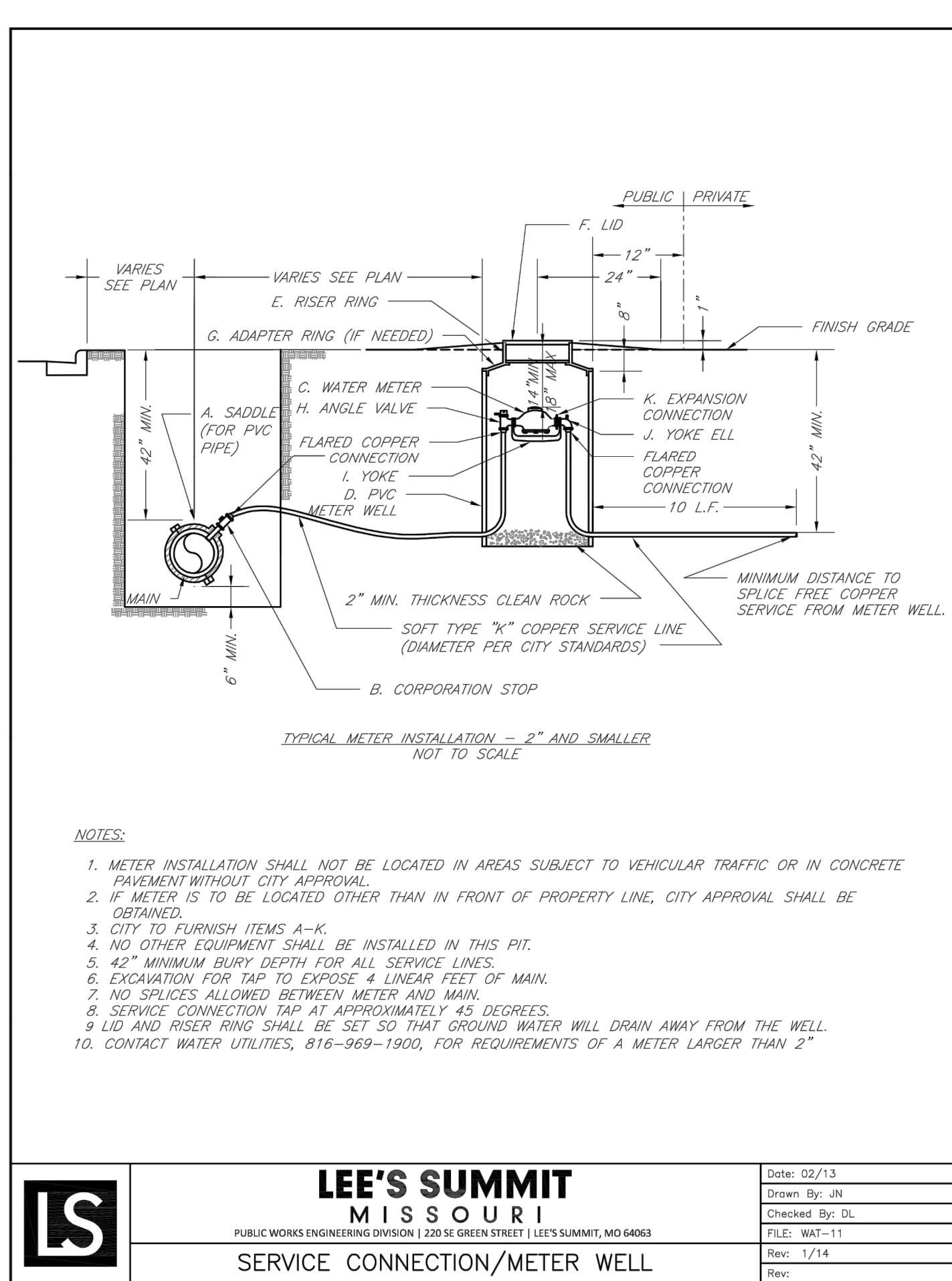
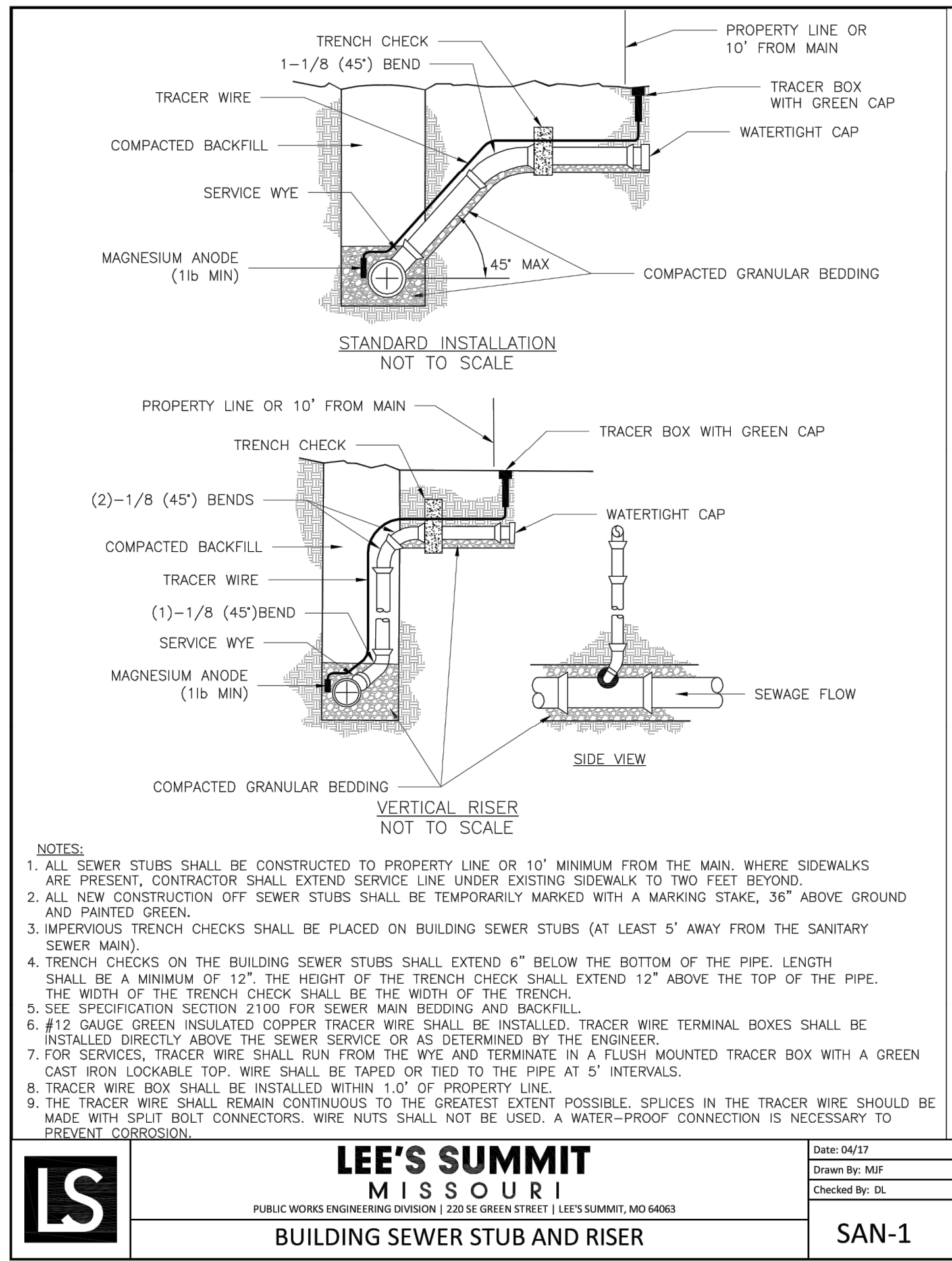
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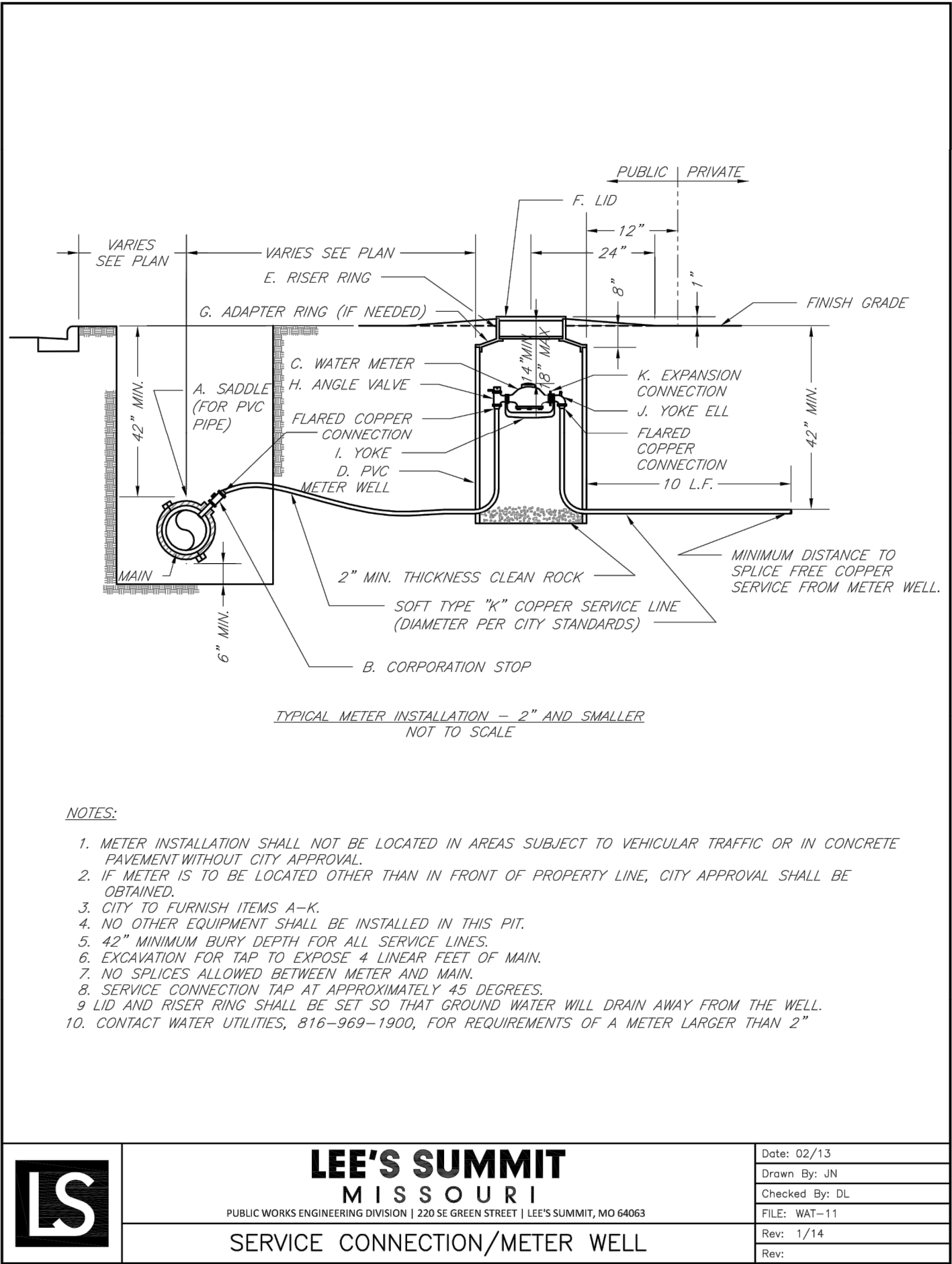
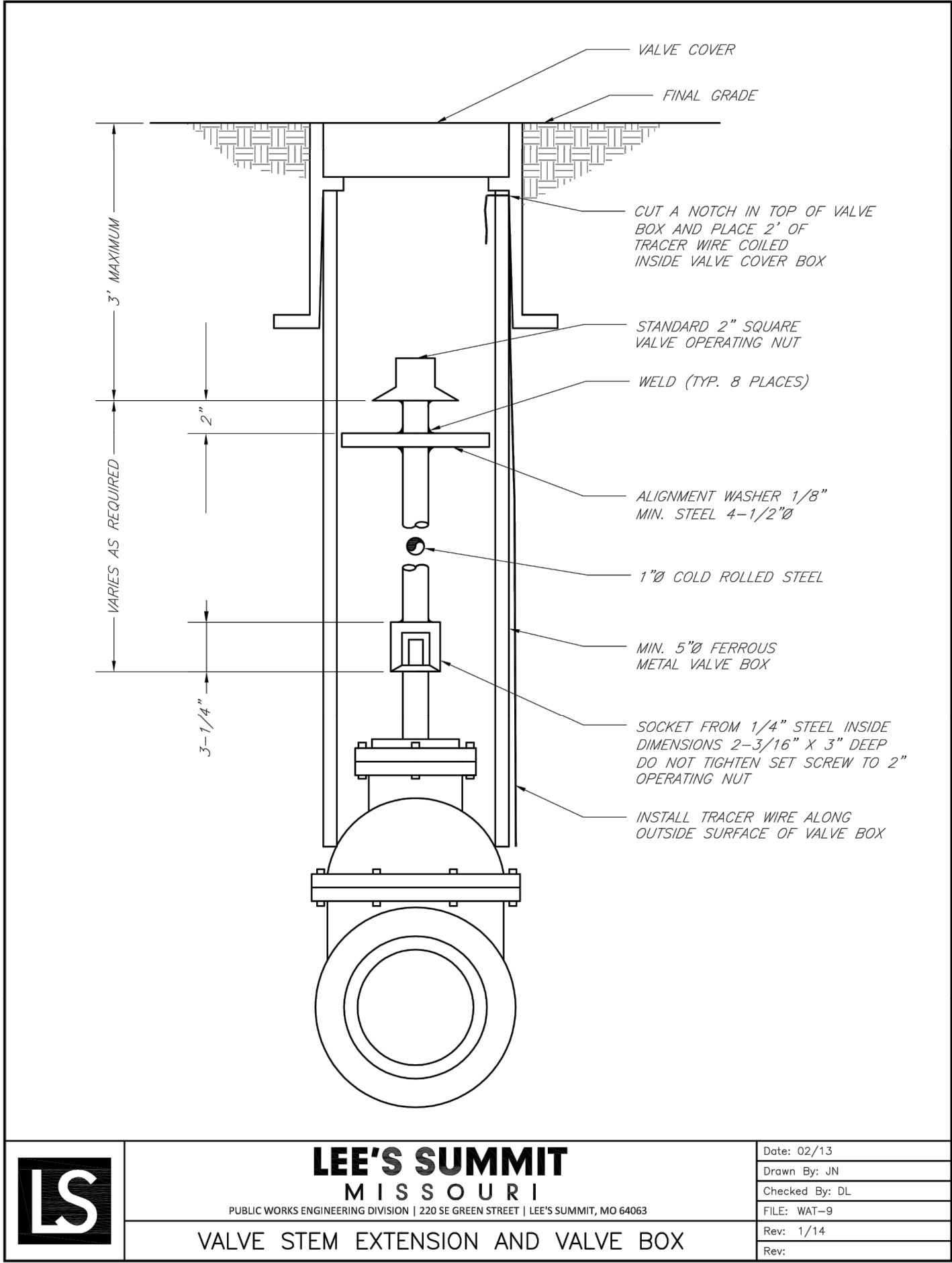
Private Roof Drain Plan
Construction Plans for:
Reece Nichols
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Standard Details
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