

SW PRYOR RD

MISSOURI STATE HW 150

SW ARBORBRIDGE DRIVE

SW ARBORWALK BLVD

PROJECT LOCATION

SW WARD RD

PROPERTY DESCRIPTION:

THE TRACT OF LAND IN THE SOUTHWEST AND SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 47 NORTH, RANGE 32 WEST OF THE 5TH PRINCIPAL MERIDIAN IN LEE'S SUMMIT, JACKSON COUNTY MISSOURI BEING BOUNDED AND DESCRIBED BY OR UNDER THE DIRECT SUPERVISION OF JASON S. ROUBEUBUSH, P.L.S. 2002014092 AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER, ALSO BEING THE SOUTHWEST CORNER OF SAID SOUTHEAST QUARTER; THENCE SOUTH 87°53'43" EAST, 65.85 FEET TO THE SOUTHWEST CORNER OF SAID ARBORWALK 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A; THENCE ALONG A MINOR SUBDIVISION IN LEE'S SUMMIT RECORDED JANUARY 12, 2006 AS INSTRUMENT NUMBER 2006000245, IN BOOK 191 AT PAGE 53 IN JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE NORTH 02°06'17" EAST, ON THE WESTERLY LINE OF SAID AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A, 70.00 FEET; THENCE NORTH 02°05'48" EAST, ON SAID WESTERLY LINE, 7.33 FEET TO A POINT ON THE EXISTING NORTHERLY RIGHT-OF-WAY LINE OF MISSOURI STATE HIGHWAY NO. 150, AS ESTABLISHED BY A MISSOURI STATE HIGHWAY NO. 150 SURVEY RECORDED ON JULY 9, 2009 AS INSTRUMENT NUMBER 20090068194 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE AND ALSO BEING THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE NORTH 02°05'15" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 86.43 FEET TO A POINT ON THE EXISTING EASTERLY RIGHT-OF-WAY LINE OF SW. ARBORIDGE DRIVE, AS ESTABLISHED BY ARBORWALK 4TH PLAT, A-4 THRU 4-4 C, RECORDED MAY 6, 2005 AS INSTRUMENT NUMBER 20050038320 IN BOOK 186 AT PAGE 73 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE NORTHWESTERLY ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF NORTH 63°56'56" WEST WITH A RADIUS OF 60.00 FEET, A CENTRAL ANGLE OF 66°03'30" AND AN ARC DISTANCE OF 69.18 FEET, THENCE NORTH 02°05'35" EAST, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, 113.01 FEET; THENCE NORTHEASTERLY ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE LEFT BEING ANGLE TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 320.00 FEET, A CENTRAL ANGLE OF 26°31'46" AND AN ARC DISTANCE OF 150.48 FEET; THENCE NORTH 24°25'11" WEST, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, 240.58 FEET; THENCE NORTHERLY, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE ON A CURVE TO THE RIGHT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 36°32'00" AND AN ARC DISTANCE OF 175.35 FEET; THENCE NORTHEASTERLY, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT HAVING A COMMON TANGENT WITH THE LAST DESCRIBED COURSE WITH A RADIUS OF 84.00 FEET, A CENTRAL ANGLE OF 100°32'29" AND AN ARC DISTANCE OF 157.55 FEET; THENCE NORTHEASTERLY, ON THE EXISTING SOUTHEASTLY RIGHT-OF-WAY LINE OF SAID ARBORWALK 4TH PLAT, A-4 THRU 4-4 C, AS ESTABLISHED BY SAID ARBORWALK 4TH PLAT, A-4 THRU 4-4 C, THENCE SOUTH 62°04'42" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 59.12 FEET; THENCE SOUTHEASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE ON A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF SOUTH 67°20'44" EAST WITH A RADIUS OF 420.00 FEET, A CENTRAL ANGLE OF 151°11'39" AND AN ARC DISTANCE OF 111.38 FEET; THENCE SOUTH 52°09'04" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 113.01 FEET; THENCE EASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 480.00 FEET, A CENTRAL ANGLE OF 35°42'22" AND AN ARC DISTANCE OF 299.12 FEET; THENCE NORTH 87°51'43" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 157.55 FEET; THENCE EASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF SOUTH 87°51'23" EAST WITH A RADIUS OF 470.00 FEET, A CENTRAL ANGLE OF 22°40'59" AND AN ARC DISTANCE OF 186.07 FEET; THENCE SOUTH 65°10'24" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 183.16 FEET; THENCE SOUTHEASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 530.03 FEET, A CENTRAL ANGLE OF 02°47'35" AND AN ARC DISTANCE OF 25.84 FEET TO THE NORTHWEST CORNER OF SAID AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A; THENCE ALONG A MINOR SUBDIVISION IN LEE'S SUMMIT RECORDED JANUARY 12, 2006 AS INSTRUMENT NUMBER 2006000245, IN BOOK 191 AT PAGE 53 IN JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE SOUTH 87°51'23" EAST, ON SAID WESTERLY LINE OF SAID AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A, 92.90 FEET; THENCE SOUTH 02°05'48" WEST, ON SAID WESTERLY LINE, 191.91 FEET; THENCE NORTH 87°54'12" WEST, ON SAID WESTERLY LINE, 66.85 FEET; THENCE SOUTH 02°05'48" WEST, ON SAID WESTERLY LINE, 217.62 FEET TO THE POINT OF BEGINNING, CONTAINING 516,669 SQUARE FEET OR 11.86 ACRES, MORE OR LESS.

Sheet Number	Sheet Title
S0.0	TITLE SHEET
S1.0	GENERAL NOTES
S2.0	SANITARY SEWER PLAN & PROFILE
S2.1	SANITARY SEWER PLAN & PROFILE
S3.0	DETAILS SHEET
S3.1	DETAILS SHEET

STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER
PE-2017000367
2/28/23
PROFESSIONAL ENGINEER

[illegible]

<p>TITLE SHEET</p> <p>PUBLIC SANITARY SEWER PLANS</p> <p>RAINTREE VILLAGE</p> <p>PUBLIC SANITARY SEWER PLANS</p>	<p>LEE'S SUMMIT, MO</p> <p>2023</p>
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drawn by: _____ CSM
checked by: _____ CSM
approved by: _____ JS
QA/QC by: _____ JS
project no.: _____ A21-04054
drawing no.: C TTL01 A2104054
date: _____ 08.10.2022

SHEET
S0.0

olsson

Olsson • Civil Engineering
Missouri Certificate of Authority #
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177 www.olsson.com

PROJECT CONTACTS

DEVELOPER:

SCENIC DEVELOPMENT LLC
6731 W 121ST STREET STE 100
OVERLAND PARK, KS 66209
CONTACT: JORDAN ANDERSON
PHONE: 913.730.1094
EMAIL: Jordan.Anderson@Scenic-Dev.com

CIVIL ENGINEER

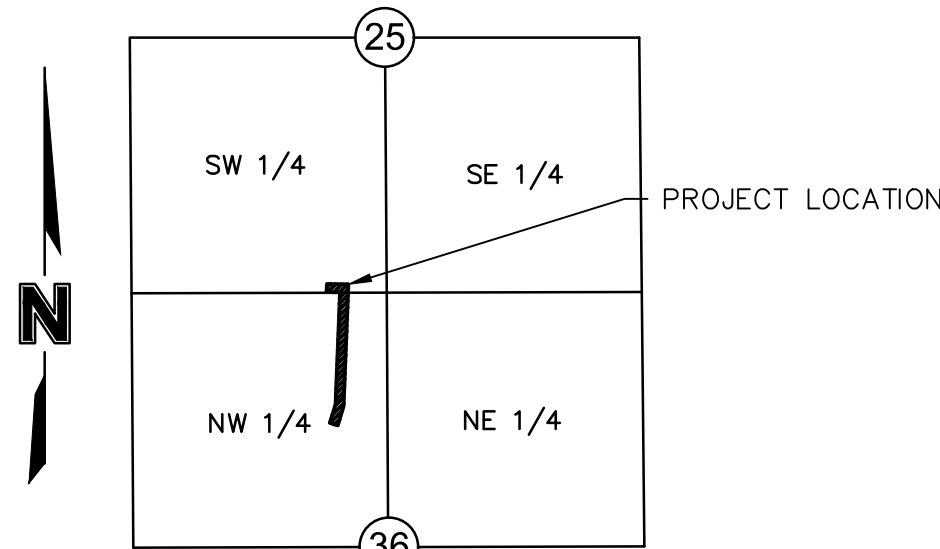
OLSSON
1301 BURLINGTON, SUITE 100
NORTH KANSAS CITY, MO 64116
CONTACT: JULIE SELLERS
PHONE: 816.442.6044
EMAIL: JSSELLERS@OLSSON.COM

SURVEYOR:

OLSSON
1301 BURLINGTON, SUITE 100
NORTH KANSAS CITY, MO 64116
CONTACT: JASON ROUDEBUSH
PHONE: 816.442.6059
EMAIL: JROUDEBUSH@OLSSON.COM

LANDSCAPE ARCHITECT:

OLSSON
1301 BURLINGTON, SUITE 100
NORTH KANSAS CITY, MO 64116
CONTACT: JACOB HODSON
PHONE: 816.442.6030
EMAIL: JHODSON@OLSSON.COM



LOCATION MAP

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE PLANS IN THEIR POSSESSION ARE THE MOST CURRENT VERSION ISSUED, ARE FULLY COORDINATED WITH ALL SUBCONTRACTORS, AND PRESENT ON SITE AT ALL TIMES. CURRENT PLANS PREPARED BY OLSSON MAY BE OBTAINED AT THE DIRECTION OF OLSSON'S CLIENT. DIRECT REQUESTS TO OLSSON MAY REQUIRE ADDITIONAL AUTHORIZATIONS, AGREEMENTS, AND/OR FEES. PLEASE CONTACT THE ENGINEER FOR INFORMATION.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS WRITTEN APPROVAL FROM ENGINEER, OWNER, AND DEVELOPER.

3. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.

4. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING QUANTITIES AND ITEMS OF WORK.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THE WORK SHOWN IN THE PLANS.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, PAYING ALL FEES, AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.

7. THE CONTRACTOR SHALL NOT ENGAGE IN ACTIVITIES THAT MAY ENCROACH ON WATERS OF THE U.S., INCLUDING WETLANDS, UNTIL ANY NECESSARY PERMITS MAY BE OBTAINED. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL CONDITIONS DESCRIBED IN THE PERMIT.

8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, THE SAFETY OF ALL PERSONS INCLUDING VISITORS AND THE GENERAL PUBLIC, AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY THROUGHOUT THE PROJECT AND NOT BE LIMITED BY WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.

9. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH ALL UTILITY COMPANIES AND OBTAIN ANY RELEVANT INFORMATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.

10. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BOUNDARY CORNERS AND SECTION CORNERS. ANY BOUNDARY CORNER AND/OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE.

11. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE DURING CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REPAIRING ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES.

12. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER TO PERFORM A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.

REFERENCES

1. UNLESS EXPLICITLY DESCRIBED OTHERWISE WITHIN THESE PLANS THE FOLLOWING SHALL APPLY:

A. ALL CONSTRUCTION, INCLUDING THOSE LISTED BELOW, SHALL CONFORM TO THE LATEST CODES AND ORDINANCES OF LEE'S SUMMIT, MISSOURI.

B. ALL CONSTRUCTION IN MODOT RIGHT-OF-WAY SHALL CONFORM TO THE LATEST SPECIFICATIONS ADOPTED BY U.S. DEPARTMENT OF TRANSPORTATION AND MODOT.

C. ALL TRAFFIC CONTROL SIGNAGE SHALL CONFORM WITH THE CURRENT EDITION OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

D. ALL UTILITY EXTENSIONS AND CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE UTILITY COMPANIES.

E. ALL EXTERIOR PAVEMENT (PCC, ASPHALT, ETC.) SHALL BE IN CONFORMANCE WITH THE SPECIFICATIONS OF LEE'S SUMMIT, MISSOURI

4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE DELIVERY MANAGER AND COORDINATING ANY MAILBOXES THAT MAY BE DISTURBED. FAILURE TO DO SO MAY SUBJECT THE CONTRACTOR TO PROSECUTION BY THE FEDERAL GOVERNMENT.

EXISTING CONDITIONS

1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS OF THE PROJECT AREA.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THEIR OWN INVESTIGATIONS AND MAKING THEIR OWN ASSUMPTIONS REGARDING SITE SURFACE AND SUBSURFACE CONDITIONS. THIS INCLUDES THE LOCATION AND CONSISTENCY OF ANY EXISTING ROCK LAYERS UNDERLYING THE PROJECT SITE. CONTACT THE ENGINEER REGARDING ANY DISCREPANCIES THAT MAY AFFECT THE ABILITY TO CONSTRUCT FROM THESE PLANS AS DESIGNED.

3. EXISTING CONDITIONS WERE DETERMINED THROUGH A VARIETY OF METHODS THAT MAY INCLUDE SURVEY, AERIAL IMAGERY, AVAILABLE RECORDS, GIS DATA, ETC. SUBSURFACE CONDITIONS ARE APPROXIMATE AND MAY NOT INCLUDE ALL UTILITIES AND OTHER SITE IMPROVEMENTS PRESENT ON SITE. THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS WHEN CONFLICTS AND DISCREPANCIES ARE FOUND.

CONSTRUCTION

1. THE CONTRACTOR SHALL INSTALL TRAFFIC CONTROL WHILE WORKING IN THE PUBLIC RIGHT-OF-WAY AS SHOWN IN THESE PLANS. IF PLANS ARE NOT PROVIDED, CONTRACTOR SHALL COORDINATE AND PROVIDE CONTROLS TO THE SATISFACTION OF THE RIGHT-OF-WAY OWNER.

2. THE CONTRACTOR SHALL PROTECT ALL TREES OVER 3" CALIPER FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE ON THESE PLANS.

3. THE CONTRACTOR SHALL DISPOSE ALL WASTE MATERIAL RESULTING FROM THE PROJECT OFF-SITE AND IN STRICT CONFORMANCE WITH ALL LOCAL CODES AND ORDINANCES.

4. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS ARE TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED. NOT ALL ADJUSTMENTS ARE INDICATED IN THE PLANS.

5. THE CONTRACTOR SHALL STREET SWEEP OR OTHERWISE CLEAN ALL ACCESS ROUTES TO THE SITE AT CONCLUSION OF THE PROJECT.

SHOP DRAWINGS

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING A MINIMUM OF 7 DAYS PRIOR TO THE REQUESTED DATE OF APPROVAL. ENGINEER SHALL REVIEW SHOP DRAWINGS OR SAMPLES CONFORMANCE WITH THE DESIGN FOR THIS PROJECT AS DESCRIBED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS. THE ENGINEER'S REVIEW SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS NOTIFIED ENGINEER OF EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND OBTAINED ENGINEER'S WRITTEN APPROVAL OF EACH SUCH VARIATION. PRIOR TO SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE REVIEWED AND VERIFIED:

A. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO;

B. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK;

C. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO;

D. CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.

E. ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY COMPLETED THE ABOVE TASKS.

2. SHOP DRAWINGS AS DESCRIBED ABOVE ARE REQUIRED FOR, BUT NOT LIMITED TO, THE FOLLOWING:

A. ALL SANITARY SEWER STRUCTURES TO BE INSTALLED WITH THIS PROJECT.

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

SANITARY SEWER GENERAL NOTES

1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH CITY OF LEE'S SUMMIT, MISSOURI.

2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

4. ALL STRUCTURE DIMENSIONS ARE TO INSIDE FACE OF STRUCTURE.

5. COORDINATES ARE PROVIDED AT THE CENTER OF STRUCTURE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING THE LID DURING INSTALLATION.

6. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF SANITARY SEWER.

7. SANITARY SEWER TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.

8. MANHOLE INVERT CHANNELS SHALL BE SMOOTH, CIRCULAR, AND CONFORMING TO ½ THE ADJACENT PIPE SECTION (INVERT TO CENTER). CHANGES IN DIRECTION OF FLOW SHALL BE MADE WITH A SMOOTH CURVE AND MAINTAIN SHAPE THROUGHOUT. CHANGES IN GRADE OF ADJACENT PIPES SHALL BE TRANSITIONED SMOOTHLY AND EVENLY THROUGH THE MANHOLE.

9. PIPE PENETRATIONS SHALL USE GASKETS TO ENSURE WATERTIGHT SEALS.

10. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.

11. SEWER LINE INSPECTIONS AND TESTING MUST BE SCHEDULED A MINIMUM OF TWO FULL BUSINESS DAYS IN ADVANCE. CONTRACTOR SHALL FURNISH ALL TESTING EQUIPMENT. TESTING SHALL INCLUDE

A. MANDREL TEST OF ALL GRAVITY SEWERS. IF THE MANDREL TEST FAILS ON ANY SECTION OF PIPE, THAT SECTION SHALL BE UNCOVERED AND REPLACED.

B. AIR PRESSURE TEST OF ALL GRAVITY SEWERS.

C. VACUUM TEST OF ALL MANHOLES.

12. REFER TO CURRENT CITY SPECIFICATIONS FOR MINIMUM PIPE SLOPES.

13. CONTRACTOR MAY BE REQUIRED TO RECONSTRUCT PIPE AND STRUCTURE IF MINIMUM INVERT DROP OR PIPE SLOPE REQUIREMENTS ARE NOT MET.

14. SANITARY STRUCTURES SHALL BE PER CURRENT CITY DETAILS. IF CITY DOES NOT HAVE PUBLISHED DETAILS STRUCTURES SHALL BE PER CURRENT APWA SPECIFICATIONS.

15. GRAVITY SANITARY SEWER AND WATER LINES SHALL BE SEPARATED BY A MINIMUM OF 10' HORIZONTALLY WHEN PARALLEL AND 2' VERTICALLY WHEN CROSSING. WATER LINES SHALL CROSS ABOVE SANITARY SEWERS.

Sanitary Sewer Design Information											
Upstream Manhole	Downstream Pipe Slope	Downstream Pipe Diameter	Proposed Cumulative Area	Future Cumulative Area	Peak Base Flow	Peak Infiltration Flow	Peak Inflow	Total Peak Flow	Downstream Pipe Mannings N	Downstream Pipe Capacity	Downstream Pipe Full Flow Velocity
	(%)	(in)	(Ac.)	(Ac.)	(gpd)	(gpd)	(cfs)	(cfs)		(cfs)	(fps)
EX MH 7517	0.54%	18	19.31	21.14	60675.00	20225.000	0.969	1.094	0.013	7.70	4.36
SS 1-1	0.50%	10	19.31	21.14	60675.00	20225.000	0.969	1.094	0.013	1.55	2.84
SS 1-2	0.50%	10	19.31	21.14	60675.00	20225.000	0.969	1.094	0.013	1.55	2.84
SS 1-3	0.50%	10	19.31	21.14	60675.00	20225.000	0.969	1.094	0.013	1.55	2.84
SS 1-4	0.50%	10	19.31	21.14	24229.55	10112.500	0.969	1.022	0.013	1.55	2.84
SS 1-5	0.50%	10	3.95	21.14	37635.00	12545.000	0.647	0.725	0.013	1.55	2.84



OVERALL DRAINAGE COVERAGE MAP

ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
STREET				
1	REMOVE CONCRETE CURB & GUTTER	L.F.	63	
2	REMOVE CONCRETE PAVEMENT	S.Y.	81	
3	10" SANITARY PVC (SDR-26)	L.F.	1898.57	
4	MANHOLES, STD. 4' DIA.	EA.	6	
5	CONNECTION TO EXISTING M.H.	EA.	1	
6	20" STEEL CASING PIPE	L.F.	165.42	
7	CONCRETE CURB & GUTTER (TYPE CG-1)	L.F.	63	
8	CONCRETE PAVEMENT (MATCH EXISTING)	S.Y.	81	

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

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

GENERAL NOTES

PUBLIC SANITARY SEWER PLANS

RAINTREE VILLAGE

PUBLIC SANITARY SEWER PLANS

LEE'S SUMMIT, MO

REV. NO.

DATE

REVISIONS DESCRIPTION

BY

CSM

1

09/29/2022

CITY COMMENTS

2

01/20/2023

CITY COMMENTS

3

02/28/2023

CITY COMMENTS

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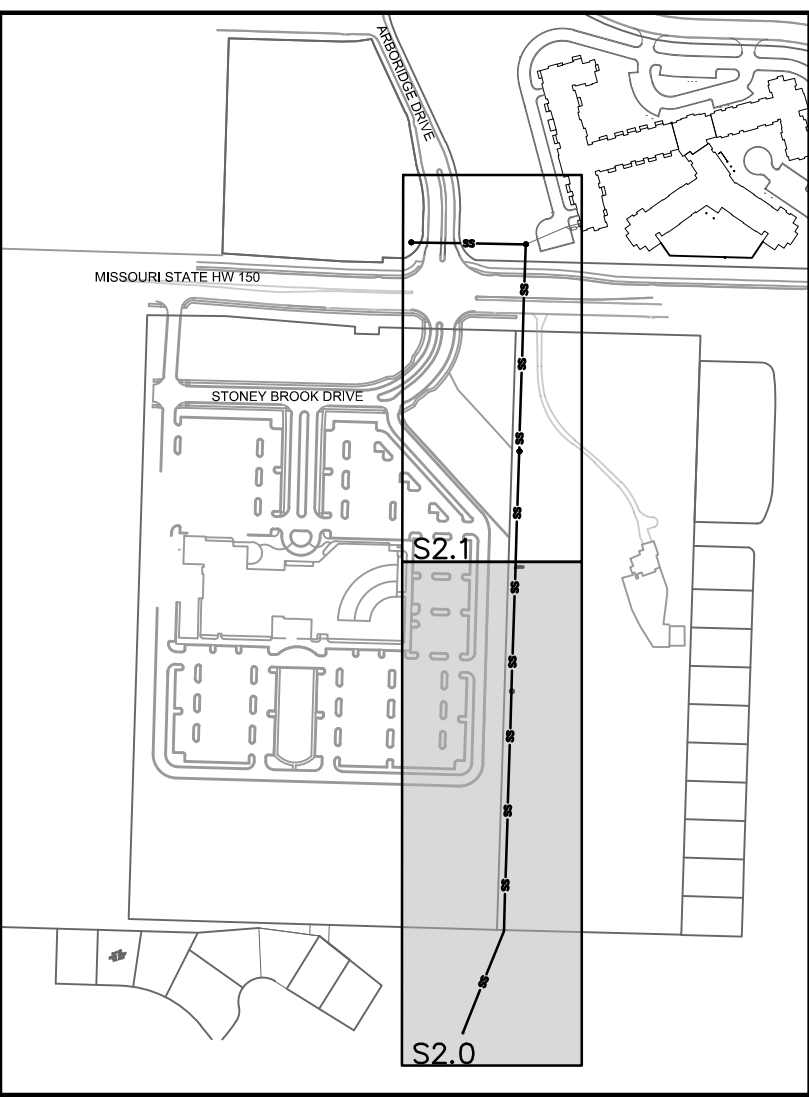
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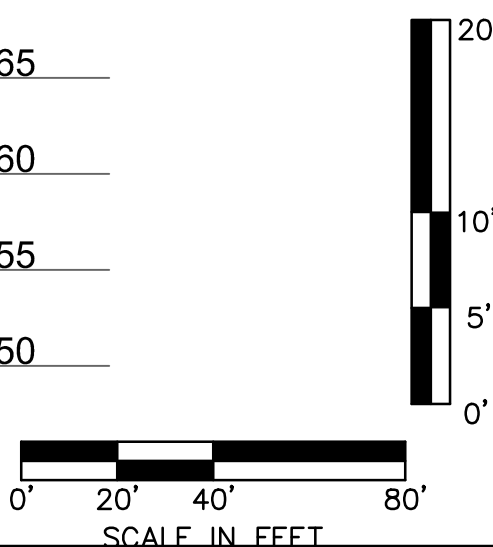
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KEYMAP
SCALE 1"=400'

NOTE:
CONNECT TO EXISTING STRUCTURE WITH CORE
DRILLING, PER CITY OF LEE'S SUMMIT'S DESIGN
CRITERIA SECTION 6500.



SANITARY SEWER PLAN & PROFILE PUBLIC SANITARY SEWER PLANS

RAINTREE VILLAGE PUBLIC SANITARY SEWER PLANS

LEE'S SUMMIT, MO

drawn by: _____ CSM
checked by: _____ CSM
approved by: _____ JS
QA/QC by: _____ JS
project no.: _____ A21-04054
drawing no.: C SAN01 A2104054
date: _____ 08.10.2022

SHEET
S2.0

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REVISIONS

2023

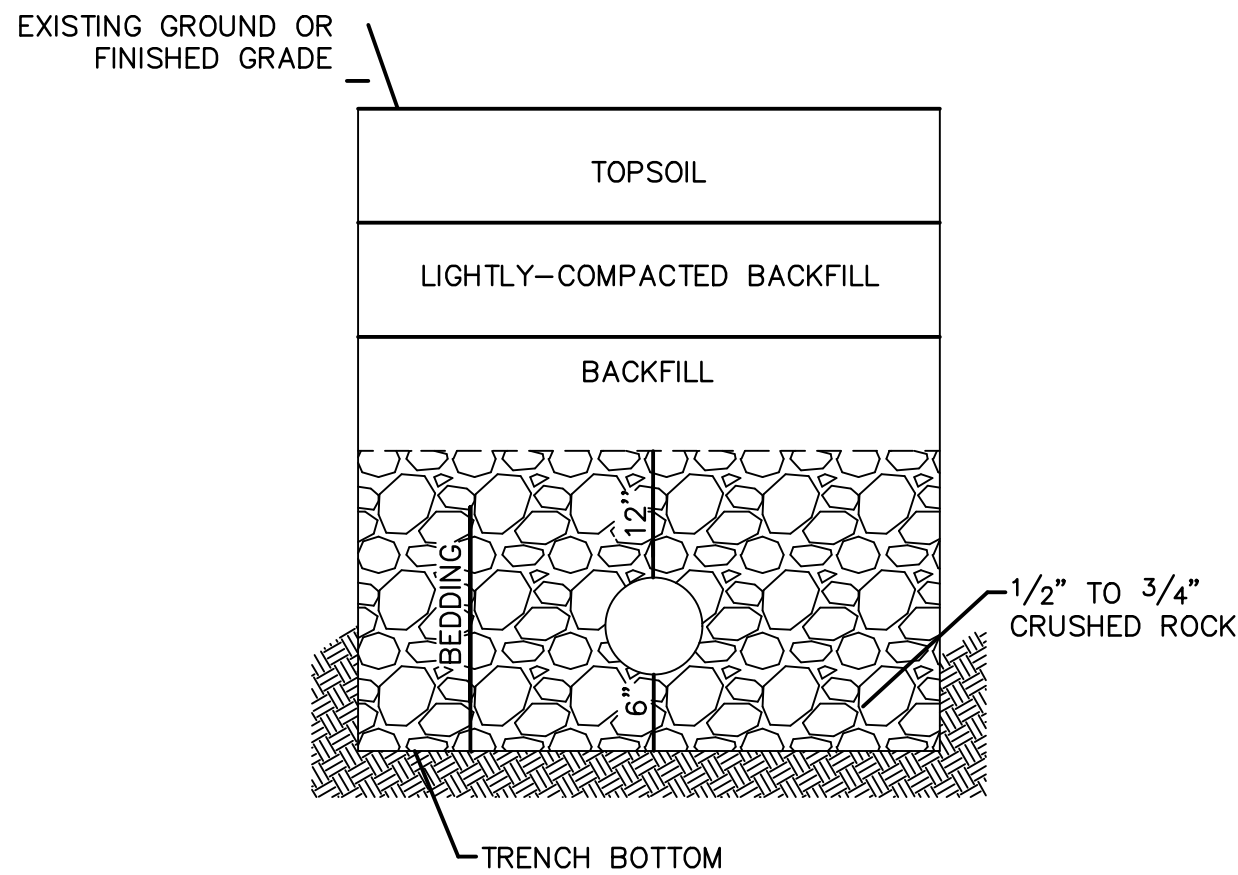
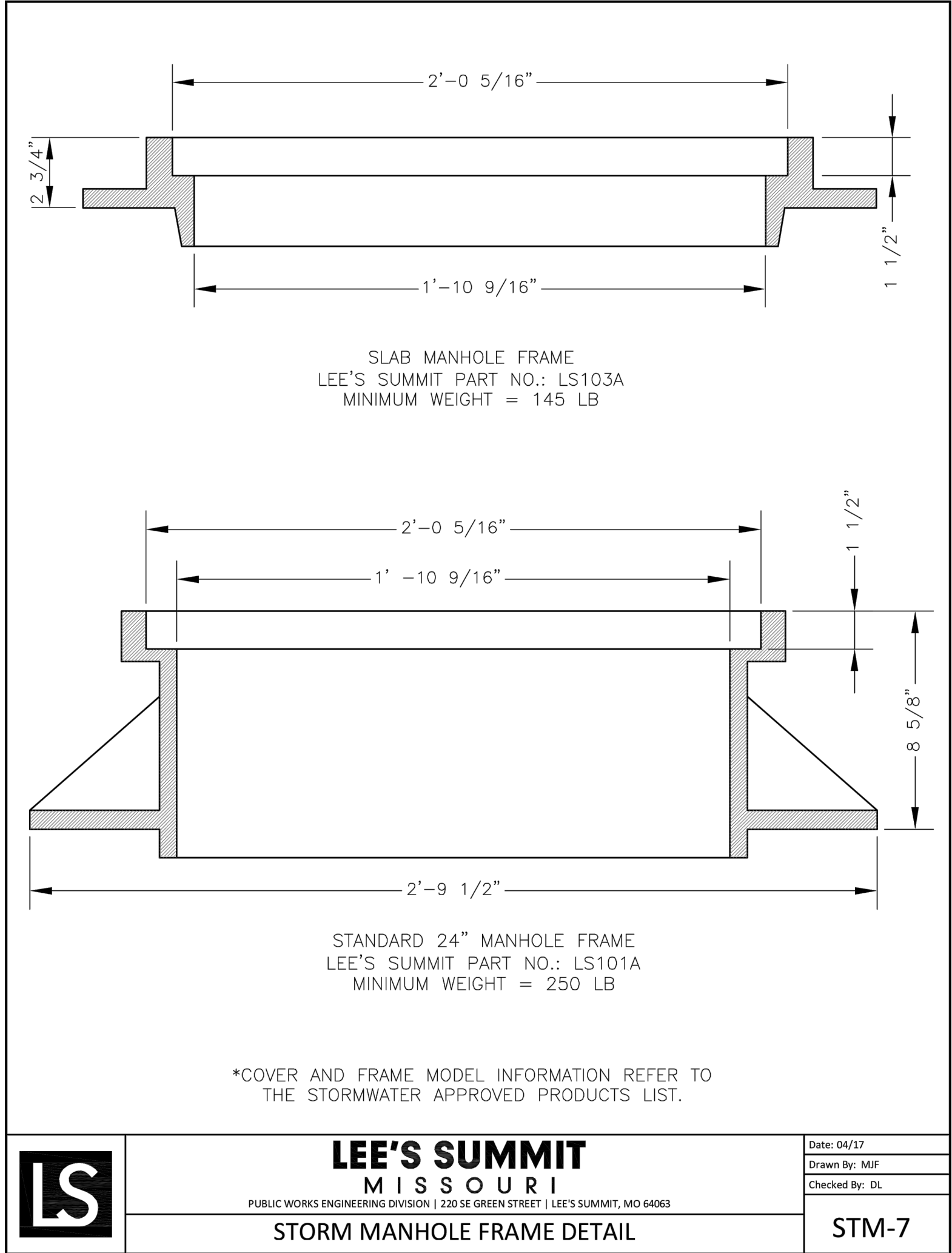
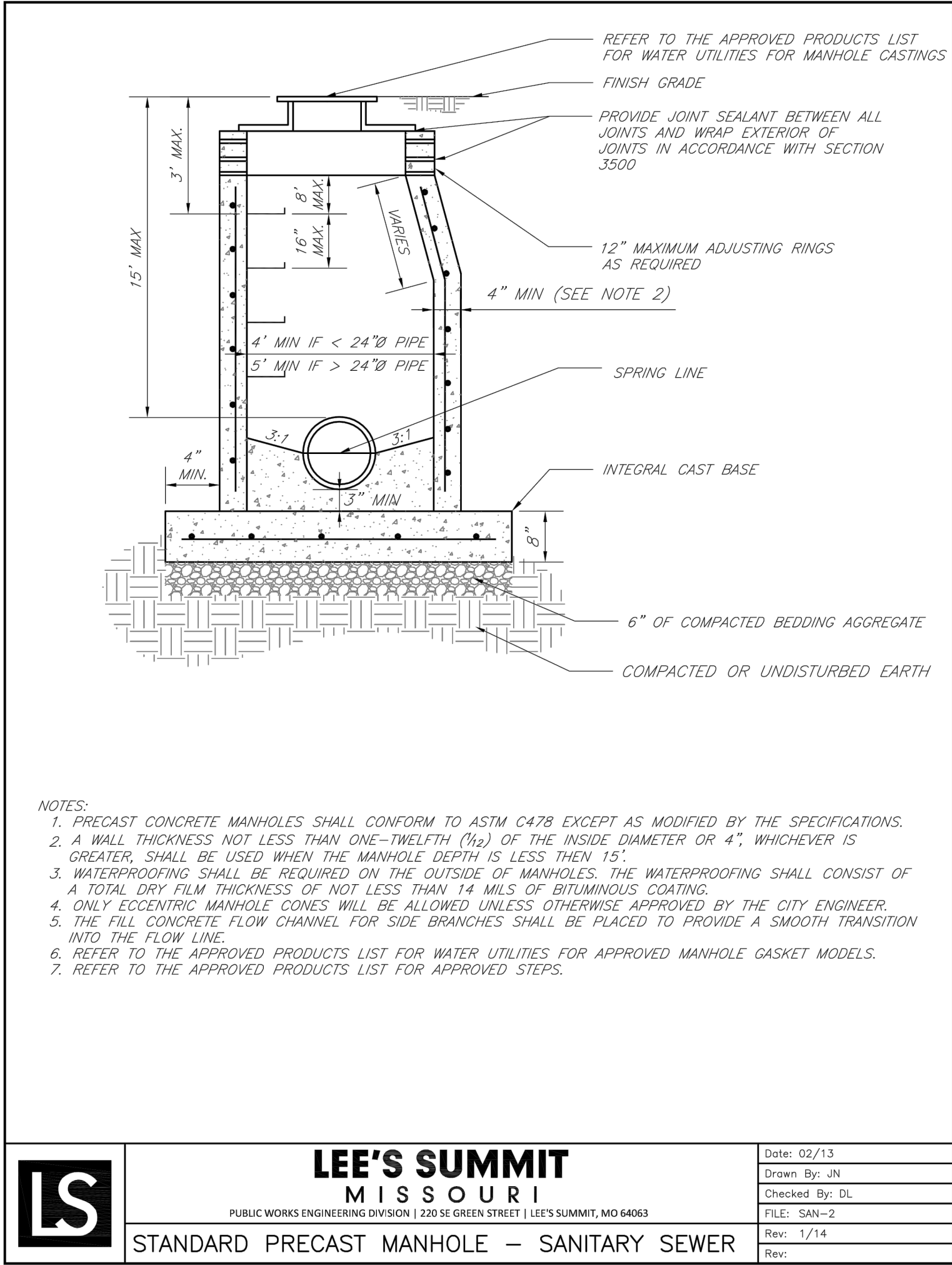
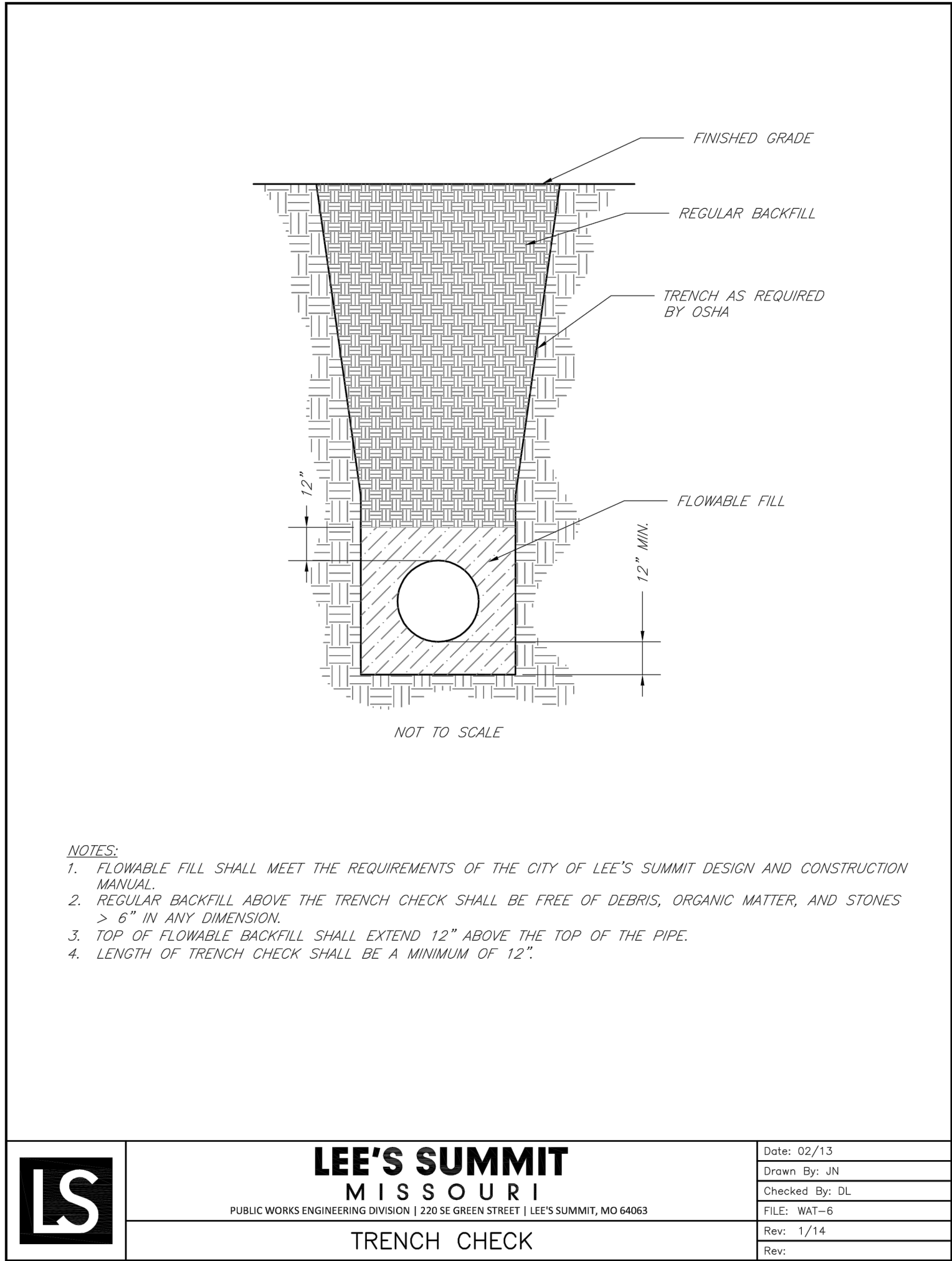
Olsson

Olsson - Civil Engineering
Missouri Certificate of Authority #
1301 Burlington Street
North Kansas City, MO 64111

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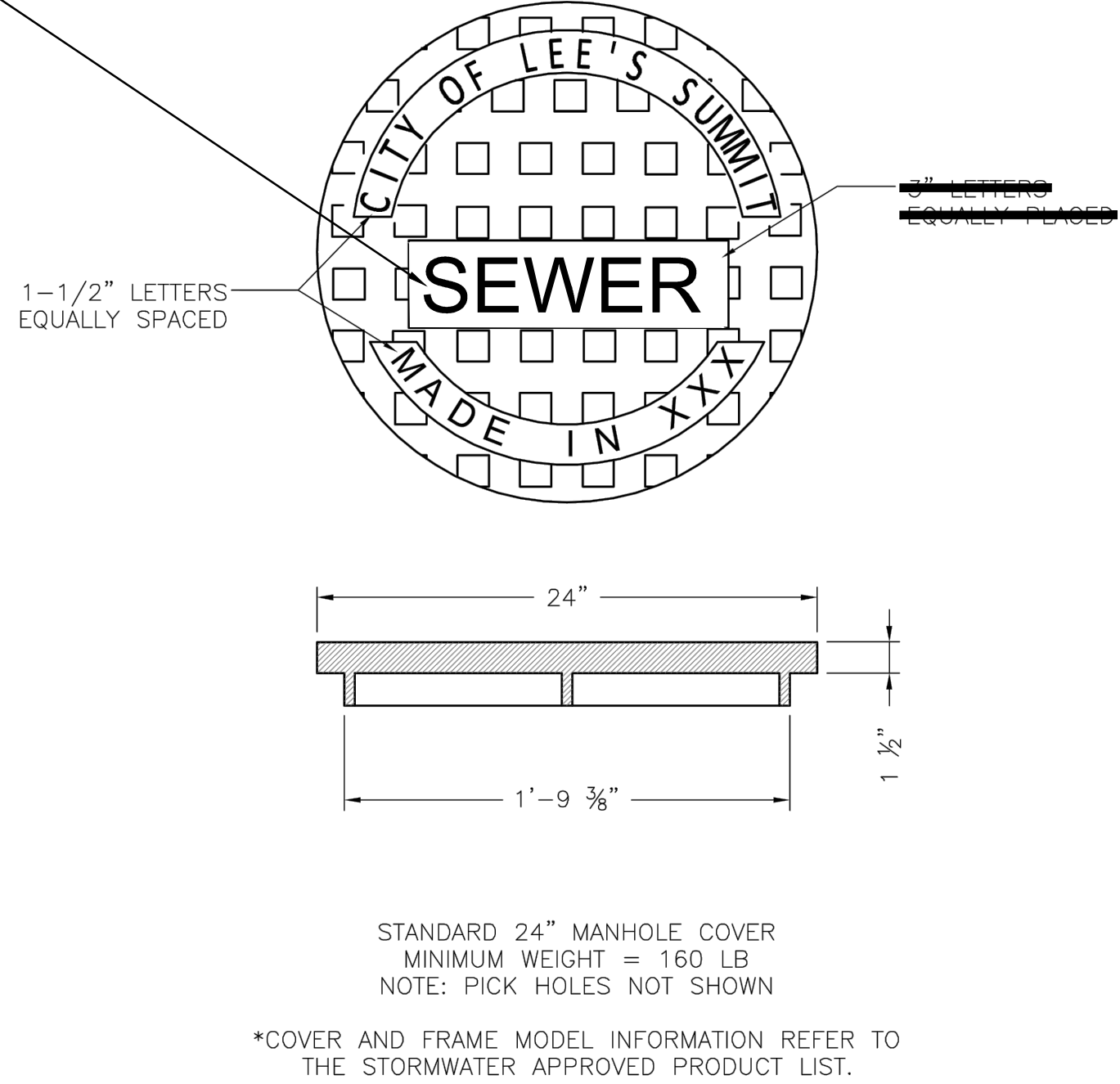
TEL 816.361.1177

www.olsson.com



- NOTES:**
1. A MINIMUM OF 36 INCHES OF COVER SHALL BE OVER THE TOP OF THE PIPE. THIS MINIMUM OF COVER SHALL BE FROM THE TOP OF PIPE TO THE FINISHED GRADE.
2. BEDDING AGGREGATE SHALL BE PLACED FROM A LEVEL 6 INCHES BELOW THE BOTTOM OF THE PIPE TO A LEVEL 6 INCHES ABOVE THE TOP OF THE PIPE.
3. TRENCH BACKFILL IN PAVED AREAS WITHIN STREET OR ALLEY RIGHT OF WAYS
a. NARROW TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES 24 INCHES OR LESS IN WIDTH AND SHALL BE TYPE A FLOWABLE FILL.
b. STANDARD TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES BETWEEN 24 TO 48 INCHES WIDE SHALL BE EITHER TYPE A FLOWABLE FILL OR DENSE, WELL GRADED AGGREGATE BASE MATERIAL. AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENTS FOR KDOT AB-3; MODOT TYPES 1 OR 5; OR APWA 2202.2.
c. WIDE TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES GREATER THAN 48 INCHES WIDE SHALL BE SUITABLE MATERIAL AS SPECIFIED FOR EARTH EMBANKMENT IN APWA STANDARD SPECIFICATIONS, SECTION 2102.2.C.
4. SUITABLE BACKFILL MATERIAL OUTSIDE OF PAVED AREAS WITHIN RIGHT OF WAY, AND ALL AREAS OUTSIDE RIGHT OF WAY, MAY BE SUITABLE MATERIAL AS SPECIFIED FOR EARTH EMBANKMENT IN APWA STANDARD SPECIFICATIONS, SECTION 2102.2.C. SUITABLE BACKFILL MATERIAL MAY ALSO BE OTHER TRENCH BACKFILL MATERIAL (FLOWABLE FILL OR AGGREGATE BASE) DEPENDING ON SITE CONDITIONS, TRENCH WIDTHS OR AT THE DIRECTION OF THE CITY'S ON SITE INSPECTOR.

THE WORD "STORM" TO BE REPLACED WITH THE "SEWER"



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DETAILS SHEET

PUBLIC SANITARY SEWER PLANS

RAINTREE VILLAGE

PUBLIC SANITARY SEWER PLANS

LEE'S SUMMIT, MO

2023

SHEET
S3.0

REV. NO.

DATE

REVISIONS DESCRIPTION

BY

1

09.29.2022

CITY COMMENTS

CSM

2

01.20.2023

CITY COMMENTS

CSM

3

02.28.2023

CITY COMMENTS

CSM

REVISIONS

drawn by: _____

checked by: _____

approved by: _____

QA/QC by: _____

project no.: _____

drawing no.: _____

date: _____

CSM

CSM

JS

JS

A21-04054

C_DTL01_A2104054

08.10.2022

