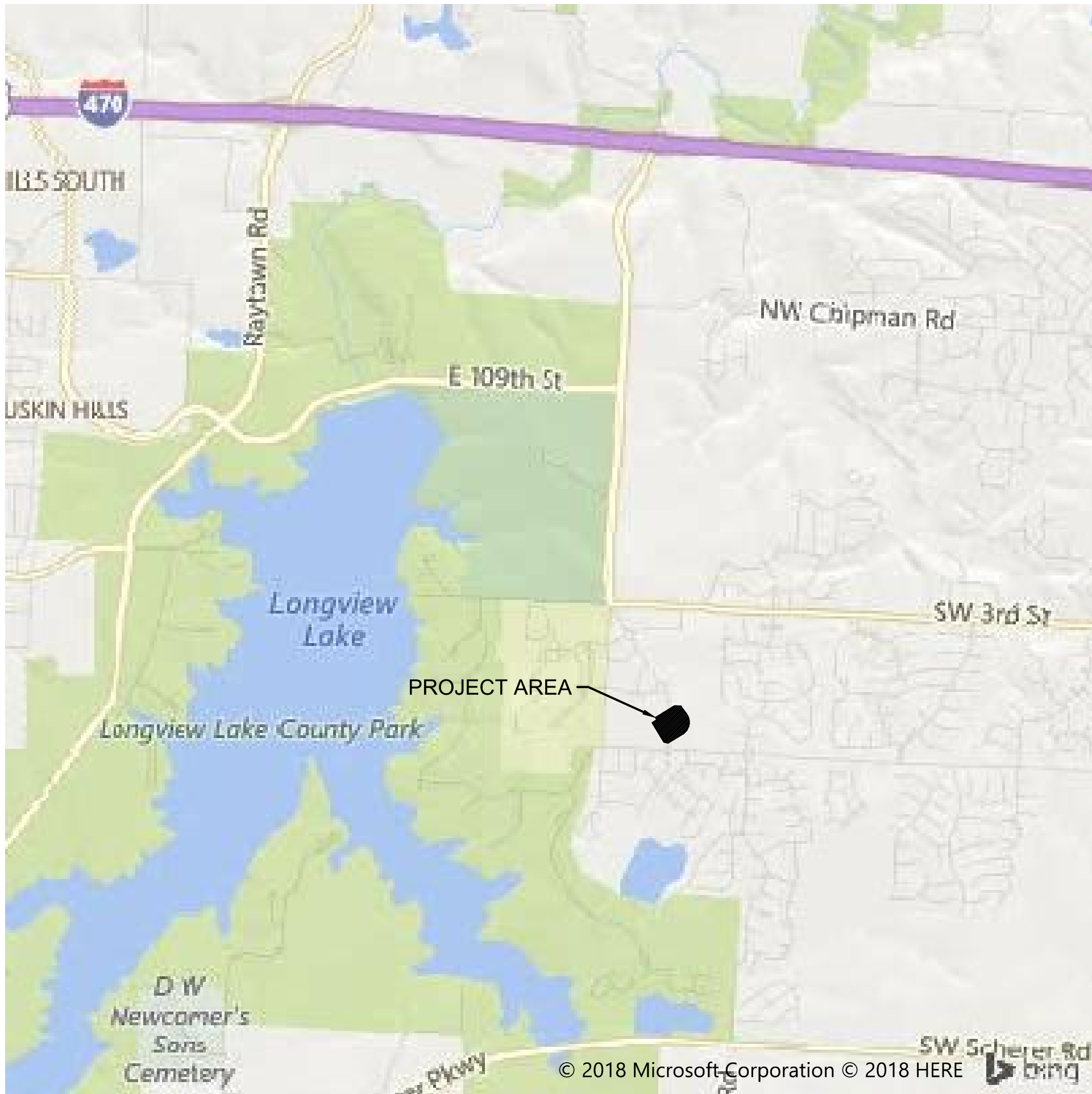


SECTION 10, TOWNSHIP 47 N, RANGE 32 W
IN LEE'S SUMMIT, JACKSON COUNTY, MO

<p>OWNER / DEVELOPER THE YARCO COMPANIES 7920 WARD PKWY KANSAS CITY, MISSOURI 64114 CONTACT: GRUBE, MIKE PHONE: 816.300.0640 FAX: 816.389.5640 EMAIL: MGRUBE@YARCO.COM</p>	<p>UTILITY SERVICE NUMBERS NAME: LEE'S SUMMIT PUBLIC WORKS PHONE: 816-969-1800</p>
<p>ENGINEER OLSSON ASSOCIATES 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: NICHOLAS D. HEISER, P.E. PHONE: 816.587.4320</p>	<p>NAME: LEE'S SUMMIT WATER & SERVICES DEPARTMENT PHONE: 816-969-1940</p> <p>NAME: SPIRE (MGE) PHONE: 314-342-0500</p> <p>NAME: AT&T PHONE: 800-286-8313</p> <p>NAME: KCP&L PHONE: 816-471-5275</p>
<p>SURVEYOR OLSSON ASSOCIATES 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH, P.L.S. PHONE: 816.587.4320</p>	<p>NAME: SPECTRUM (TWC) PHONE: 877-772-2253</p> <p>NAME: GOOGLE FIBER PHONE: 877-454-6959</p>



Sheet List Table	
Sheet Number	Sheet Title
C201	TITLE SHEET
C202	GENERAL NOTES
C203	GENERAL LAYOUT
C204	SANITARY SEWER PLAN & PROFILE
C205	DETAIL SHEET
C206	DETAIL SHEET

Nicki

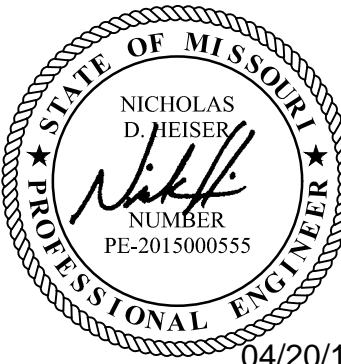
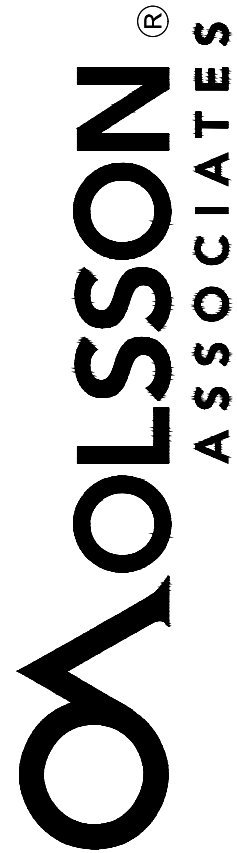
04/20/18
DATE

PROPERTY DESCRIPTION:

LOT 2, MINOR PLAT OF FASCINATION AT NEW LONGVIEW, LOTS 1 & 2, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI. CONTAINING 6.76 ACRES MORE OR LESS.

BENCHMARK

THE STATION IS A KC METRO DISK SET IN CONCRETE AND FLUSH WITH THE GROUND. THE STATION IS TAMPED JA-147, 2000 STATION JA-148

[illegible]

drawn by: D.A.HO
checked by: N.D.H.
designed by: N.D.H.
QA/QC by: M.G.D.
project no.: 017-3697
date: 2018-04-20

SHEET
C201

GENERAL NOTES:

1. LINEAR FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS (NOT SLOPE MEASUREMENTS) FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
2. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE CURRENT "CITY STANDARDS" AND SPECIFICATIONS OF THE CPD-DS-LDD, LEE'S SUMMIT, EXCEPT AS NOTED.
3. THE DEVELOPER SHALL PERFORM ALIGNMENT AND GRADE, INFILTRATION - EXFILTRATION, DEFLECTION, SOIL DENSITY, AND MANHOLE TESTS AS CALLED OUT IN SECTION 2500 OF THE CURRENT APWA (AMERICAN PUBLIC WORKS ASSOCIATION) STANDARDS AND SPECIFICATIONS. ANY SECTION OF SEWER FAILING ANY OF THE ABOVE MENTIONED TESTS SHALL BE RETESTED BY THE DEVELOPER AFTER REPLACEMENT OR REPAIR.
4. THE DEVELOPER MAY, AS AN ALTERNATE, SUBSTITUTE A.B.S. OR V.C.P. PIPE FOR P.V.C. PIPE. THE FOLLOWING PIPE DEFLECTION TEST SHALL BE IMPLEMENTED ON A.B.S. AND P.V.C. PIPE:

- THE DEVELOPER SHALL PERFORM DIAMETRICAL DEFLECTION TESTS ON FLEXIBLE AND SEMI-FLEXIBLE (I.E. POLY-VINYL-CHLORIDE AND ACRYLONITRILE BUTADIENE STYRENE) PIPE WHEN USED AS A PUBLIC DIAMETER. ALL TESTS SHALL BE CONDUCTED BETWEEN MANHOLES. SEWER TESTS SHALL BE CONDUCTED BETWEEN MANHOLES. SEWER TESTING SHALL BE 100% OF THE TOTAL SEWER INSTALLED. A MANDREL WITH A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE BEING INSTALLED SHALL BE USED.

5. PRIOR TO ORDERING PRE-CAST STRUCTURES, SHOP DRAWINGS ARE TO BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL. THE DESIGN ENGINEER SHALL INDICATE APPROVAL OF THE SHOP DRAWINGS.

6. DEVELOPER SHALL PROVIDE EARTHWORK AND MATERIAL TESTING TO COMPLY WITH THE STANDARD SPECIFICATIONS OF THE CPD-DS-LDD.

7. DURING CONSTRUCTION OF THE PROJECT, THE DEVELOPER SHALL KEEP ONE RECORD COPY OF ALL SPECIFICATIONS, DRAWINGS, ADDENDA, MODIFICATIONS, AND SHOP DRAWINGS AT THE SITE IN GOOD CONDITION. THESE DOCUMENTS SHALL BE ANNOTATED TO SHOW ALL CHANGES MADE DURING CONSTRUCTION. THE EXACT LOCATION OF ALL SEWER WYES, TEES, AND SERVICE LINES SHALL BE RECORD ON THESE DOCUMENTS. AT THE CONCLUSION OF CONSTRUCTION, THESE DOCUMENTS SHALL BE FORWARDED TO THE DESIGN ENGINEER FOR PREPARATION OF AS-BUILT DRAWINGS.

8. THE PROJECT BENCHMARKS AND ALL ELEVATIONS SHOWN ON THE PROFILES ARE N.G.V.D.

9. THE DEVELOPER SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AS-BUILT RECORDS, AND/OR POSITIVE LOCATION DATA. THE DEVELOPER/OWNER/OWNER'S AGENT/ENGINEER/CONSULTANT/ADJOURNER OF THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE DEVELOPER MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT IS THE DEVELOPER'S RESPONSIBILITY TO RELOCATE AND/OR ADJUST ALL EXISTING UTILITIES THAT CONFLICT WITH PROPOSED SITE IMPROVEMENTS.

10. THE DEVELOPER SHALL ALSO UTILIZE THE FOLLOWING TOLL FREE PHONE NUMBER PROVIDED BY "MISSOURI ONE CALL SYSTEM, INC." 1-800-DIG-RITE. THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE OF MISSOURI. THE NAMES AND TELEPHONE NUMBERS OF UTILITY COMPANIES, EVEN IF ONLY REMOTELY INVOLVED WITH THIS PROJECT ARE LISTED UNDER "UTILITY CONTACTS", SHEET C201.

11. THE DEVELOPER SHALL PROVIDE AND MAINTAIN ALL TRAFFIC CONTROL MEASURES NECESSARY TO ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD—LATEST EDITION).

12. THE SITE PLAN IS BASED ON SURVEY BY OLSSON ASSOCIATES, COMPLETED 12-15-17. CONDITIONS ON SITE AT THE TIME OF CONSTRUCTION MAY VARY FROM THE SURVEYED CONDITIONS. DEVELOPER SHALL VERIFY EXISTING SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.

13. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL PERMITS (EXCEPT LAND DISTURBANCE), BONDS, INSURANCE, ETC. AND PAYING ALL FEES. THE COST OF DEVELOPERS BONDS AND INSURANCE AS REQUIRED BY THE CITY OF LEE'S SUMMIT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.

14. DEVELOPER SHALL COMPLY WITH ALL APPLICABLE REGULATIONS REQUIRED BY THE CITY AND THE STATE.

15. THE DEVELOPER MUST REMOVE, AT HIS COST, ANY BAD SUBSURFACE SOIL WHICH WOULD NOT BE ABLE TO SUPPORT ANY PROPOSED PUBLIC IMPROVEMENT. BACKFILL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SECTIONS 2100 AND 2201 ENTITLED "GRADING AND SITE PREPARATION" AND "SUBGRADE PREPARATION".

16. VERTICAL CONTROL IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88). THE DEVELOPER IS ADVISED TO USE BENCHMARK INFORMATION FOR VERTICAL CONTROL.
HORIZONTAL CONTROL (CONTROL POINT INFORMATION) IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83). THE DEVELOPER IS ADVISED TO USE CONTROL POINT INFORMATION FOR HORIZONTAL CONTROL.

Control Point Information				
Point Number	Elevation	North	Easting	Description
CP #102	988.71	999264.487	2804343.208	At intersection of SW. Fascination Dr. and SW Kessler Dr go south along SW. Kessler Dr. to where curb jogs right (west) up against sidewalk.
CP#100	988.67	999658.163	2803977.829	At Intersection of SW Fascination Drive and SW Kessler Drive go west along SW Fascination Drive to west side of parking stalls on south side of street.
CP #26	1010.42	999510.913	2803459.510	In south east quadrant of roundabout located at intersection of S.W. Fascination Dr. and Longview Parkway. West 1' to east edge of sidewalk.
				Southwest to corner of side walk where side walk ends but will be connected to at a later date.
CP#101	1003.96	999030.752	2803749.080	At Intersection of Longview Parkway and SW Fascination Drive go south to second entrance on east side of Longview Parkway.

PLUMBING NOTES:

1. ALL SERVICE LINES SHALL BE LAID AT 2% MINIMUM SLOPE, UNLESS OTHERWISE NOTED.

2. M.S.E. ELEVATION – INDICATES BASEMENT FLOOR ELEVATION OR LOWEST FLOOR ELEVATION SERVICEABLE BY PROPOSED SANITARY SEWER.

EXCAVATING NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO CONTROL DOWNSTREAM EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION.

2. THE DEVELOPER SHALL BE RESPONSIBLE FOR RECORDING ROCK ELEVATIONS AT 25 FOOT (MAXIMUM) INTERVALS WHERE ENCOUNTERED, AND FURNISHING THIS INFORMATION TO THE DESIGN ENGINEER FOR USE ON AS-BUILTS.

3. THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES. EROSION CONTROL PLANS AND PROCEDURES SHALL BE IN PLACE PRIOR TO ANY EXCAVATION.

4. NO SUBSURFACE EXPLORATION FOR THE DETERMINATION OF AND/OR THE LOCATION OF EXISTING ROCK HAS BEEN MADE.

5. WHEN SEWER LINES CROSS A LOW POINT IN A CREEK, THE SEWER LINE MUST BE ENCASED ACCORDING TO LEE'S SUMMIT STANDARDS AND SPECIFICATIONS.

6. DEVELOPER IS RESPONSIBLE FOR KEEPING ALL PUBLIC ROADWAYS ADJACENT TO THE CONSTRUCTION SITE FREE OF DIRT AND DEBRIS RESULTING FROM ACTIVITIES RELATED TO THE CONSTRUCTION OF THIS PROJECT. INSPECTIONS AND CLEANUP TO OCCUR ON A DAILY BASIS.

7. DEVELOPER SHALL KEEP THE ENTIRE PROJECT SITE FREE OF DEBRIS AND TRASH AT ALL TIMES. DEVELOPER SHALL EXECUTE WORK USING METHODS THAT MINIMIZE EXCESSIVE NOISE OR DUST EMISSIONS. DEVELOPER SHALL PROVIDE METHODS, MEANS AND FACILITIES TO PREVENT CONTAMINATION OF SOIL OR WATER FROM DISCHARGE OF REGULATED MATERIALS (I.E. FUEL) USED DURING CONSTRUCTION.

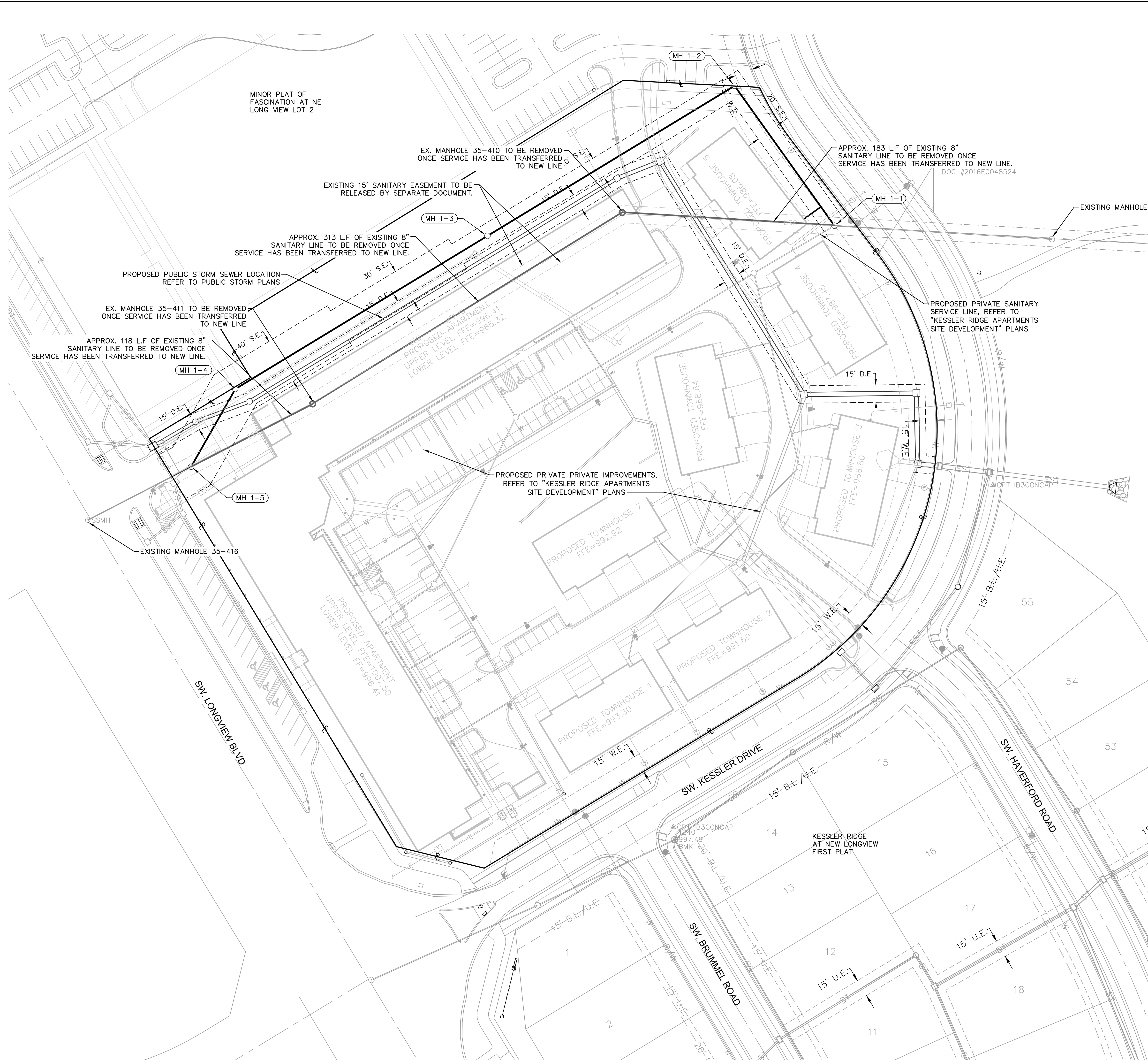
8. THE DEVELOPER SHALL ERECT AND MAINTAIN ORANGE COLORED TEMPORARY CONSTRUCTION FENCE AROUND ALL AREAS INDICATED ON THE PLANS TO BE LEFT UNDISTURBED BOTH TEMPORARY AND PERMANENTLY THE DEVELOPER WILL BE GIVEN NOTICE WHEN HE MAY ENTER THESE AREAS MARKED TEMPORARY BY THE OWNER ONCE PERMITS HAVE BEEN OBTAINED. THE FENCE MATERIAL SHALL BE 48" TALL, HIGH DENSITY POLYETHYLENE (HDPE) WITH NOMINAL MESH OPENING SIZE OF 1.25 INCHES X 1.25 INCHES.

STRUCTURES		
STRUCTURE ID	NORTHING	EASTING
MH 1-1	999264.3182	2804309.9936
MH 1-2	999384.7166	2804224.0407
MH 1-3	999255.5762	2804011.3208
MH 1-4	999123.8318	2803794.3118
MH 1-5	999056.8968	2803756.2197

GENERAL		LEGEND		SURVEY MARKERS	
	ACU	AIR CONDITIONING UNIT		BMK	BENCHMARK
	AST	ARROW STRAIGHT		CPT	CONTROL POINT
	ATL	ARROW TURN LEFT		FND	FOUND MONUMENT
	ATR	ARROW TURN RIGHT		ROW	ROW MARKER
	BLB	BILLBOARD		SCR	SECTION CORNER
	BOV	BLOW OFF VALVE		SET	SET MONUMENT
	BSH	BUSH	BOUNDARIES		
	COL	COLUMN	— — — SECTION LINE		
	CTR	CONIFEROUS TREE	— EP — EXISTING PROPERTY BOUNDARY		
	DRN	DRAIN GRATE	— P — PROPOSED PROPERTY BOUNDARY		
	DTR	DECIDUOUS TREE	— — — EXISTING LOT LINE		
	FLP	FLAG POLE	— — — PROPOSED LOT LINE		
	GDP	GUARD POST	— ER/W — EXISTING RIGHT-OF-WAY		
	GPL	GUY POLE	— R/W — PROPOSED RIGHT-OF-WAY		
	GTP	GREASE TRAP	UTILITIES		
	GUY	GUY WIRE		CAB	CABLE BOX
	HCP	ACCESSABLE PARKING MARKER		CAV	CABLE VAULT
	LST	LIFT STATION		TVP	TELEVISION PEDESTAL
	MLB	MAILBOX		TVR	TELEVISION RISER
	MP	MILE POST MARKER	— ECTVOH — EXISTING CABLE TV, OVERHEAD		
	MWL	MONITORING WELL	— ECTV — EXISTING CABLE TV, UNDERGROUND		
	PIV	POST INDICATOR VALVE	— CTVOH — PROPOSED CABLE TV, OVERHEAD		
	PPT	PROPANE TANK	— CTV — PROPOSED CABLE TV, UNDERGROUND		
	RAT	RADIO TOWER		FOB	FIBER OPTIC BOX
	SAD	SATELLITE		FOM	FIBER OPTIC MANHOLE
	SCV	SPRINKLER CONTROL VALVE		FOP	FIBER OPTIC PEDESTAL
	SGN	SIGN		FOV	FIBER OPTIC VAULT
	SLB	STREET LIGHT BOX	— EFOOH — EXISTING FIBER OPTIC, OVERHEAD		
	SLC	STREET LIGHT CABINET	— EFO — EXISTING FIBER OPTIC, UNDERGROUND		
	SPB	SPRINKLER BOX	— FOOH — PROPOSED FIBER OPTIC, OVERHEAD		
	SPH	SPRINKLER HEAD	— FO — PROPOSED FIBER OPTIC, UNDERGROUND		
	STP	STUMP	— FDC — FIBER DEPT. CONNECTION		
	SVL	SEWER VALVE	— EFP — EXISTING FIRE PROTECTION SYSTEM LINE		
	TCB	TRAFFIC CONTROL BOX	— FP — PROPOSED FIRE PROTECTION SYSTEM LINE		
	TSA	TRAFFIC SIGNAL WITH MAST ARM	— EFL — EXISTING FUEL LINE		
	TSC	TRAFFIC SIGNAL CABINET	— FPL — PROPOSED FUEL LINE		
	TSMH	TRAFFIC SIGNAL MANHOLE		GAR	GAS RISER
	TSP	TRAFFIC SIGNAL POLE		GMH	GAS MANHOLE
	TRE	EXISTING TREELINE		GMK	GAS MARKER
	PTRE	PROPOSED TREELINE		GMT	GAS METER
	SIDEWALK	EXISTING SIDEWALK		GRG	GAS REGULATOR
	SIDEWALK	PROPOSED SIDEWALK		GVL	GAS VALVE
	BUILDINGS	EXISTING BUILDINGS	— EG — EXISTING NATURAL GAS LINE		
	BUILDINGS	PROPOSED BUILDINGS	— G — PROPOSED NATURAL GAS LINE		
	EDGE	EXISTING EDGE OF PAVEMENT		TEC	TELEPHONE CABINET
	EDGE	PROPOSED EDGE OF PAVEMENT		TEP	TELEPHONE PEDESTAL
	RDWY	EXISTING ROADWAY CENTER LINE		TER	TELEPHONE RISER
	RDWY	PROPOSED ROADWAY CENTER LINE		TEV	TELEPHONE VAULT
	CURB	EXISTING CURB & GUTTER		TMH	TELEPHONE MANHOLE
	CURB	PROPOSED CURB & GUTTER	— ETELOH — EXISTING TELEPHONE LINE, OVERHEAD		
	R	RADIUS	— ETEL — EXISTING TELEPHONE LINE, UNDERGROUND		
	L	ARC DISTANCE	— TELOH — PROPOSED TELEPHONE LINE, OVERHEAD		
	D	DELTA / CENTRAL ANGLE	— TEL — PROPOSED TELEPHONE LINE, UNDERGROUND		
EASEMENTS & SETBACKS			GLT	GROUND LIGHT	
A.E.	ACCESS EASEMENT		LTP	LIGHT POLE	
B.M.P.	BEST MANAGEMENT PRACTICE EASEMENT		PWP	POWER POLE	
B.L.	BUILDING SETBACK		TRF	ELECTRIC TRANSFORMER	
C.T.V.E.	CABLE TV EASEMENT		EBX	ELECTRIC BOX	
C.E.	CONSERVATION EASEMENT		ELC	ELECTRIC CABINET	
C.G.E.	CONSTRUCTION GRADING EASEMENT		ELR	ELECTRIC RISER	
F.P.E.	FLOOD PLAIN EASEMENT		EMH	ELECTRIC MANHOLE	
F.O.E.	FIBER OPTIC EASEMENT		EMT	ELECTRIC METER	
F.P.S.E.	FIRE PROTECTION SYSTEM EASEMENT		ESC	ELECTRIC SECTIONALIZER	
F.L.E.	FUEL LINE EASEMENT		EVT	ELECTRIC VAULT	
L.S.E.	LANDSCAPE EASEMENT		YDL	YARD LIGHT	
G.E.	NATURAL GAS EASEMENT	— EEOH — EXISTING POWER/ELECTRIC LINE, OVERHEAD			
T.E.	TELEPHONE EASEMENT	— EE — EXISTING POWER/ELECTRIC LINE, UNDERGROUND			
E.E.	POWER/ELECTRIC EASEMENT		SCO	SEWER CLEANOUT	
P.S.	PARKING SETBACK		SSMH	SANITARY MANHOLE	
S.B.	STREAM BUFFER	— ESS — EXISTING SANITARY SEWER			
S.D.E.	SURFACE DRAINAGE EASEMENT	— SS — PROPOSED SANITARY SEWER			
SIGHT DIST. ESMT.	SIGHT DISTANCE EASEMENT	— ESL — EXISTING STEAM LINE			
S.E.	SANITARY SEWER EASEMENT	— SL — PROPOSED STEAM LINE			
S.L.E.	STEAM LINE EASEMENT		SDMH	STORM SEWER MANHOLE	
D.E.	STORM DRAINAGE EASEMENT		FES	FLARED END SECTION	
S.W.M.E.	STORM WATER MANAGEMENT EASEMENT		RDN	ROOF DRAIN	
T.C.D.S.E.	TEMPORARY CUL-DE-SAC EASEMENT	— EST — EXISTING STORM SEWER			
TEMP. ESMT.	TEMPORARY EASEMENT	— ST — PROPOSED STORM SEWER			
TRAIL ESMT.	TRAIL PATH EASEMENT		FH	FIRE HYDRANT	
U.E.	UTILITY EASEMENT		WMH	WATER MANHOLE	
W.E.	WATER EASEMENT		WKW	WATER MARKER	
F.Y.S	FRONT YARD SETBACK		WMT	WATER METER	
R.Y.S.	REAR YARD SETBACK		WVL	WATER VALVE	
S.Y.S.	SIDE YARD SETBACK	— EW — EXISTING WATER LINE			
		— W — PROPOSED WATER LINE			
		CONTOURS			
		— -100 — EXISTING INDEX CONTOURS			
		— -100 — EXISTING INTERMEDIATE CONTOURS			
		— 100 — PROPOSED INDEX CONTOURS			
		— 100 — PROPOSED INTERMEDIATE CONTOUR			

ALL NOTES REFERENCED ON THIS PLAN SHEET MAY HAVE APPLICATIONS TO EVERY FACET OF THE CONSTRUCTION PLANS. THE NOTE HEADINGS OR TITLES ARE TO BE USED AS A GENERAL GUIDE TO APPLICABLE SITUATIONS.

DWG: F:\2017\3697-4000\017-3697\40-Design\AutoCAD\Final Plans\Sheets\GENV\01_Sanitary_36-24\C_GEN02_73697.dwg
DATE: Apr 19, 2018 3:54pm
USER: rtheiser



drawn by: D.A.H.
checked by: N.D.H.
designed by: N.D.H.
QA/QC by: M.G.D.
project no.: 017-3697
date: 2018-04-20

GENERAL LAYOUT
SANITARY SEWER PLANS

KESSLER RIDGE APARTMENTS

LEE'S SUMMIT, MO

NO. REV.

DATE

REVISIONS DESCRIPTION

BY

04/20/18

REVISIONS

OLSSON[®]

ASSOCIATES

NICHOLAS D. HEISER

PROFESSIONAL ENGINEER

PE-2015000555

NOT A SEAL OF ANY STATE

303 E. BURLING ST. SUITE 100

NORTH KANSAS CITY, MO 64116

TEL 816.597.4320

FAX 816.597.1393

www.olssonassociates.com

Sanitary Sewer Design Information										
Upstream Manhole	Downstream Pipe Slope (%)	Downstream Pipe Diameter (in)	Proposed Cumulative Area (Ac.)	Future Cumulative Area (Ac.)	Minimum Hourly Peak Design Flow (cfs/ac)	Proposed Cumulative Peak Flows (cfs)	Future Cumulative Peak Flows (cfs)	Downstream Pipe Mannings N	Downstream Pipe Capacity (cfs)	Downstream Pipe Full Flow Velocity (fps)
EX MH 1-0	3.34%	8	23.04	0	0.029	0.668	0.668	0.014	2.051	5.875
MH 1-1	1.02%	8	21.55	0	0.029	0.625	0.625	0.014	1.133	3.247
MH 1-2	0.65%	8	14.18	0	0.029	0.411	0.411	0.014	0.905	2.592
MH 1-3	0.65%	8	14.18	0	0.029	0.411	0.411	0.014	0.905	2.592
MH 1-4	0.71%	8	14.18	0	0.029	0.411	0.411	0.014	0.945	2.709
MH 1-5	0.70%	8	14.18	0	0.029	0.411	0.411	0.014	0.939	2.690
EX MH 1-6	0.84%	8	14.18	0	0.029	0.411	0.411	0.014	1.028	2.946

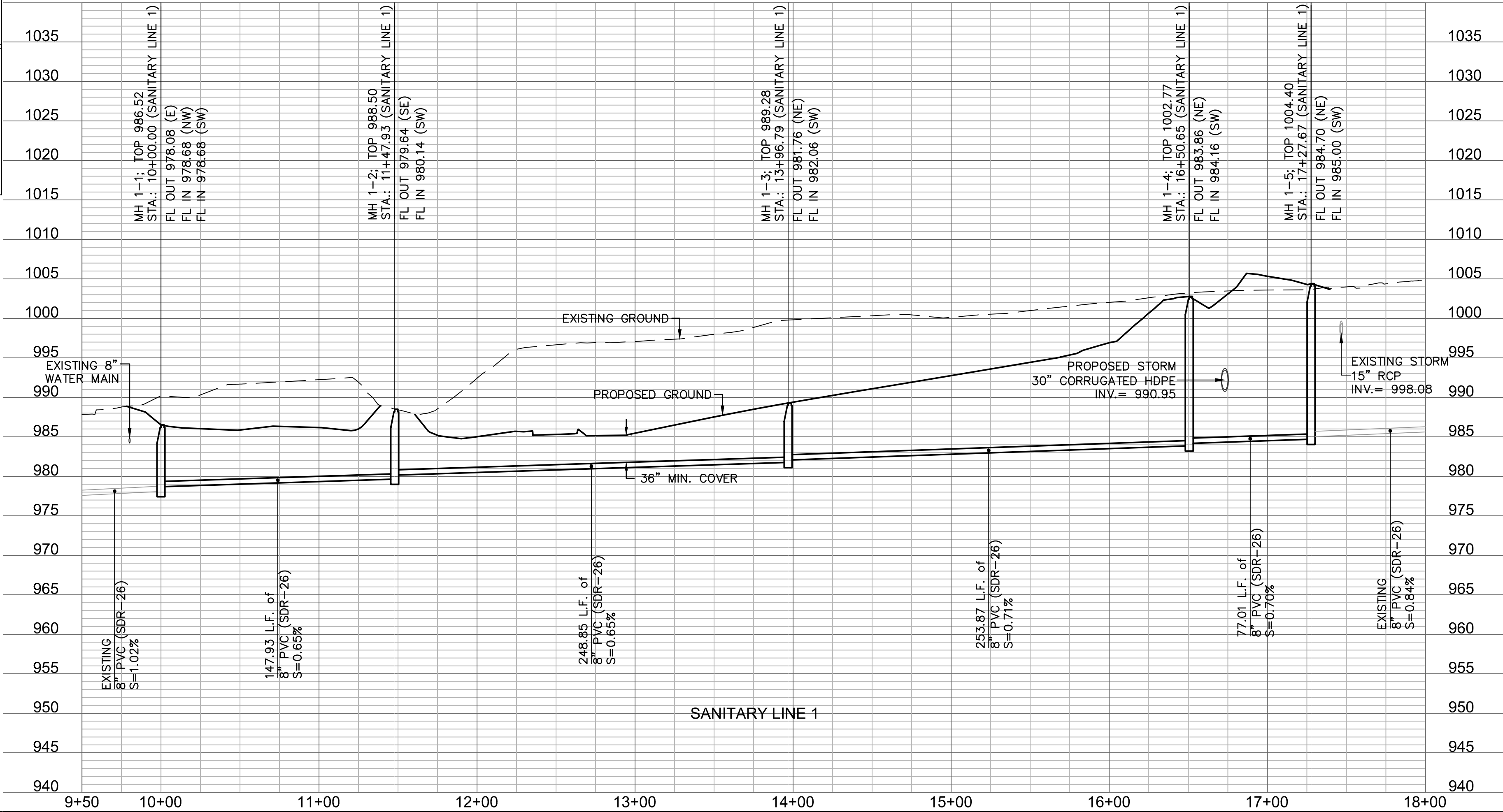
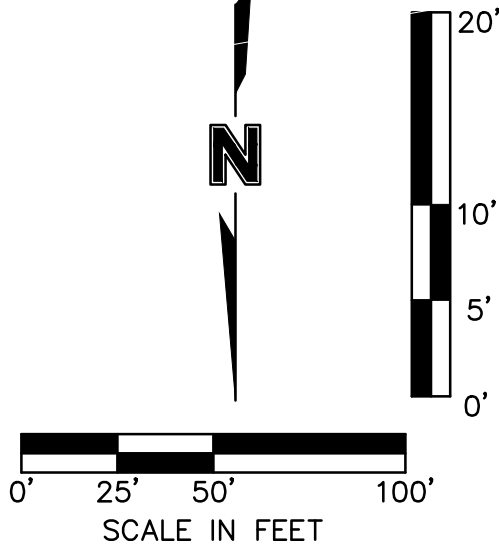
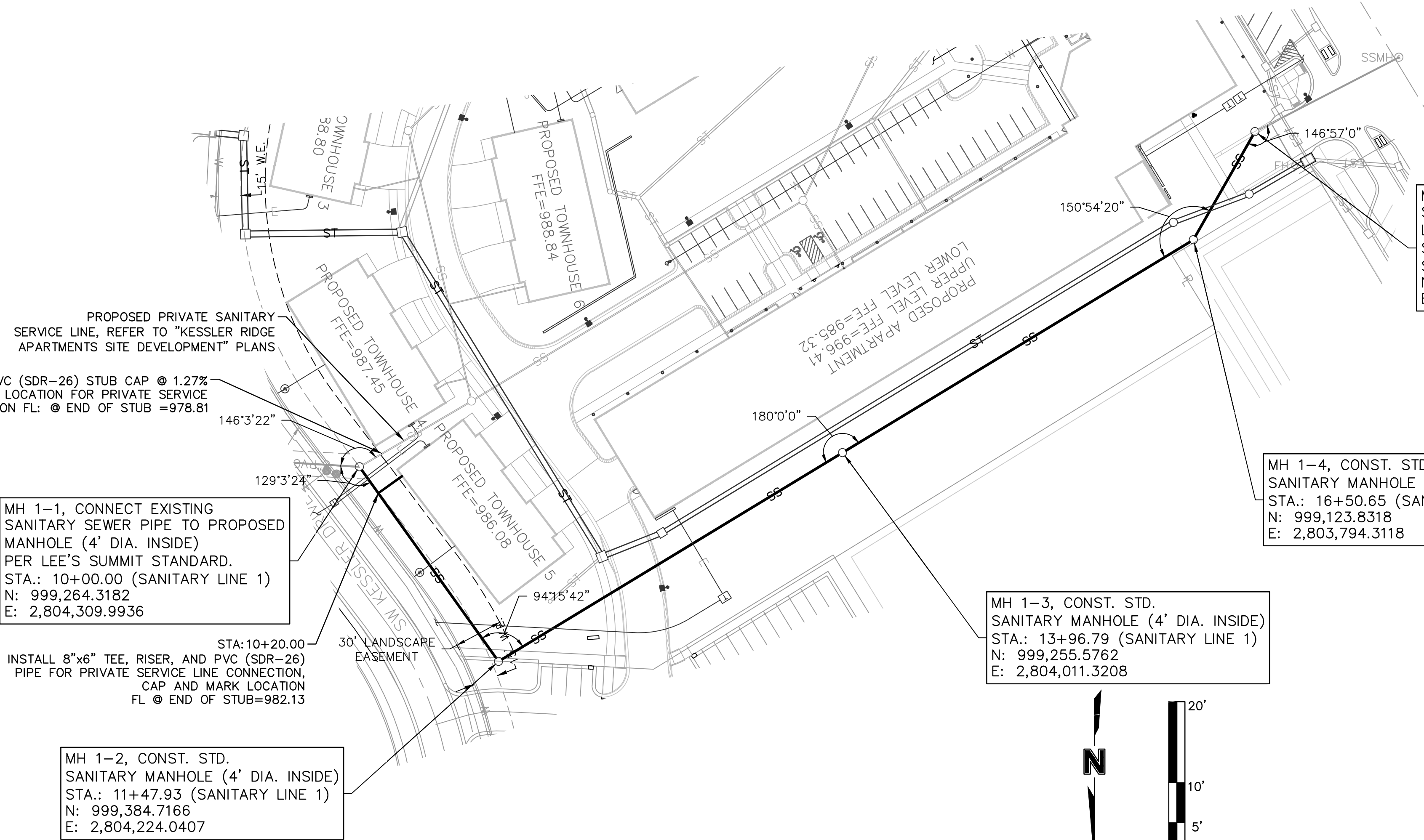
Sanitary Sewer Laterals							
Lateral	Upstream Manhole	Lateral Station	Lateral Length (ft)	Riser (ft)	Flowline at Main or Manhole (ft)	Flowline at End of Lateral (ft)	Minimum Servicable Floor Elevation (ft)
Townhome 5	MH 1-2	10+20.00	18.19	2.0	979.81	982.13	985.23

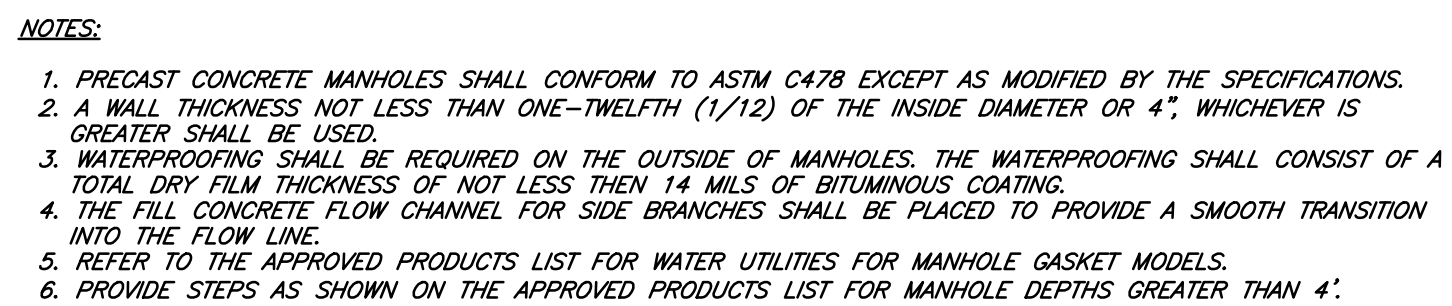
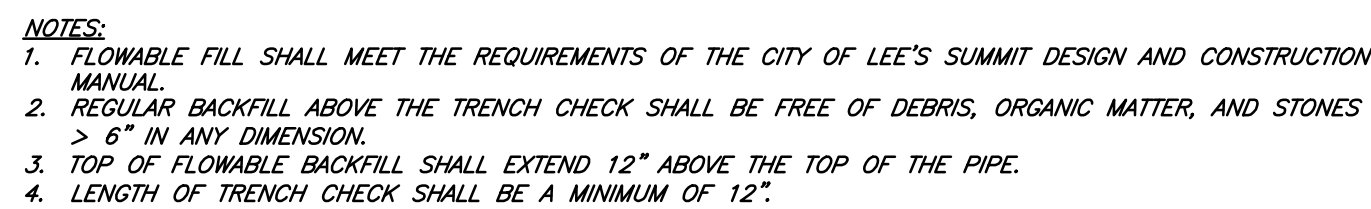
NOTES:
ALL SERVICE LINE CONNECTIONS SHALL BE MADE WITH AN 8"x6" PVC WYE, 6" PVC 45° BEND, OR AN 8"x6" TEE, AND THE APPROPRIATE LENGTH OF 6" PVC LATERAL (UNLESS OTHERWISE SHOWN) AND CAP.

MAXIMUM DEVIATION FROM LATERAL STATION LOCATIONS AS CALLED OUT SHALL BE 2.0' TO AVOID PIPE JOINT.

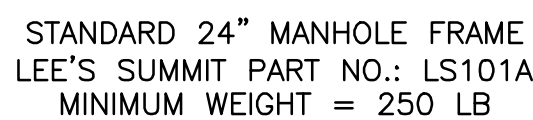
SANITARY LATERALS ARE DESIGNED @ 2.00% SLOPE. IF RISER IS INDICATED, IT IS TO BE AT THE SANITARY MAIN, UNLESS OTHERWISE NOTED.

TRENCH CHECKS SHALL BE PROVIDED IN ACCORDANCE WITH THE STANDARD LEE'S SUMMIT TRENCH CHECK DETAIL (SHEET C205) ON ALL PRIVATE SANITARY SEWER SERVICE LATERALS.





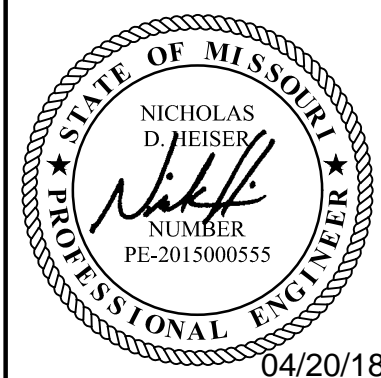
1 N.T.S.
TRENCH CHECK



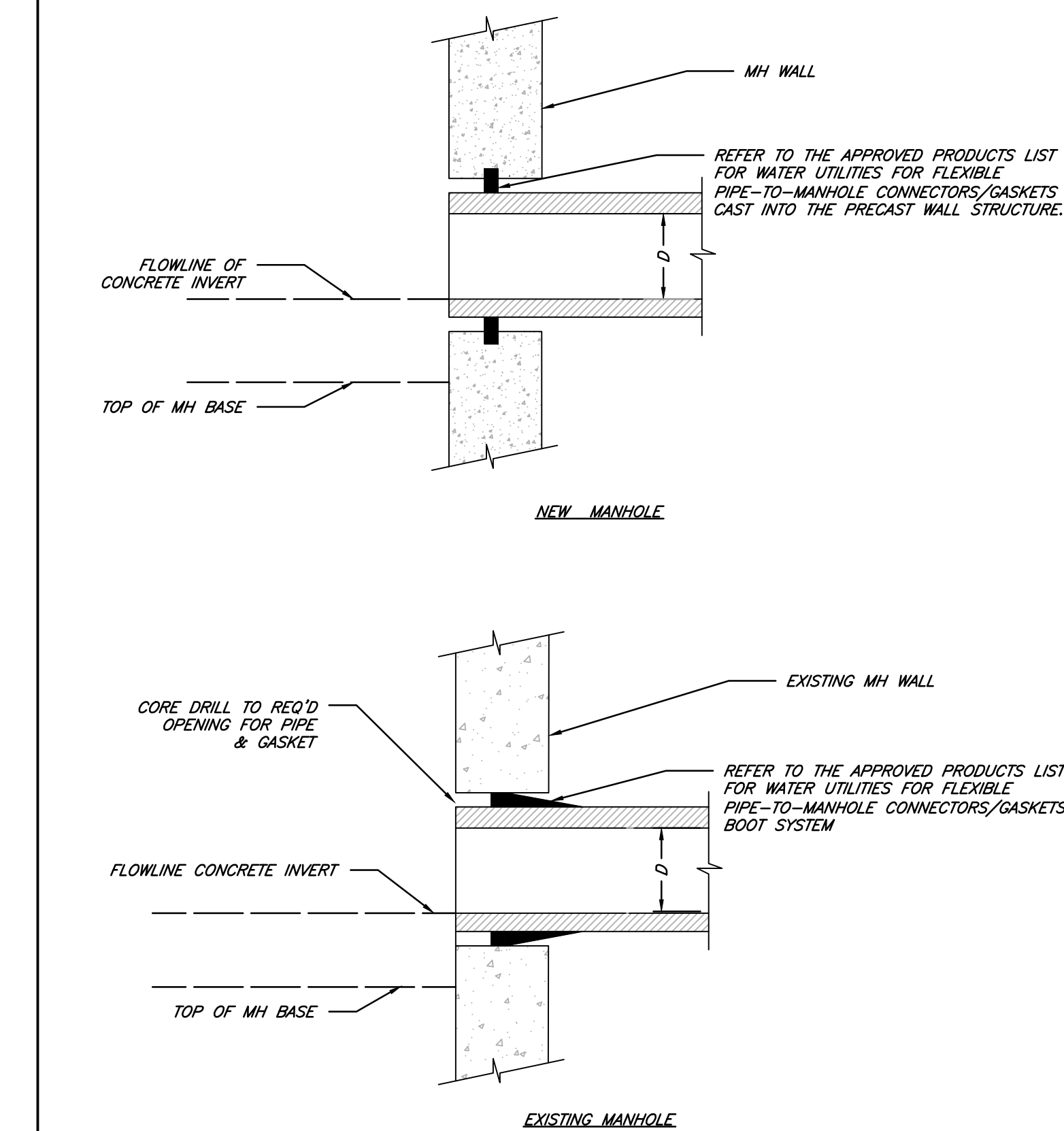
*COVER AND FRAME MODEL INFORMATION REFER TO THE SANITARY APPROVED PRODUCTS LIST.



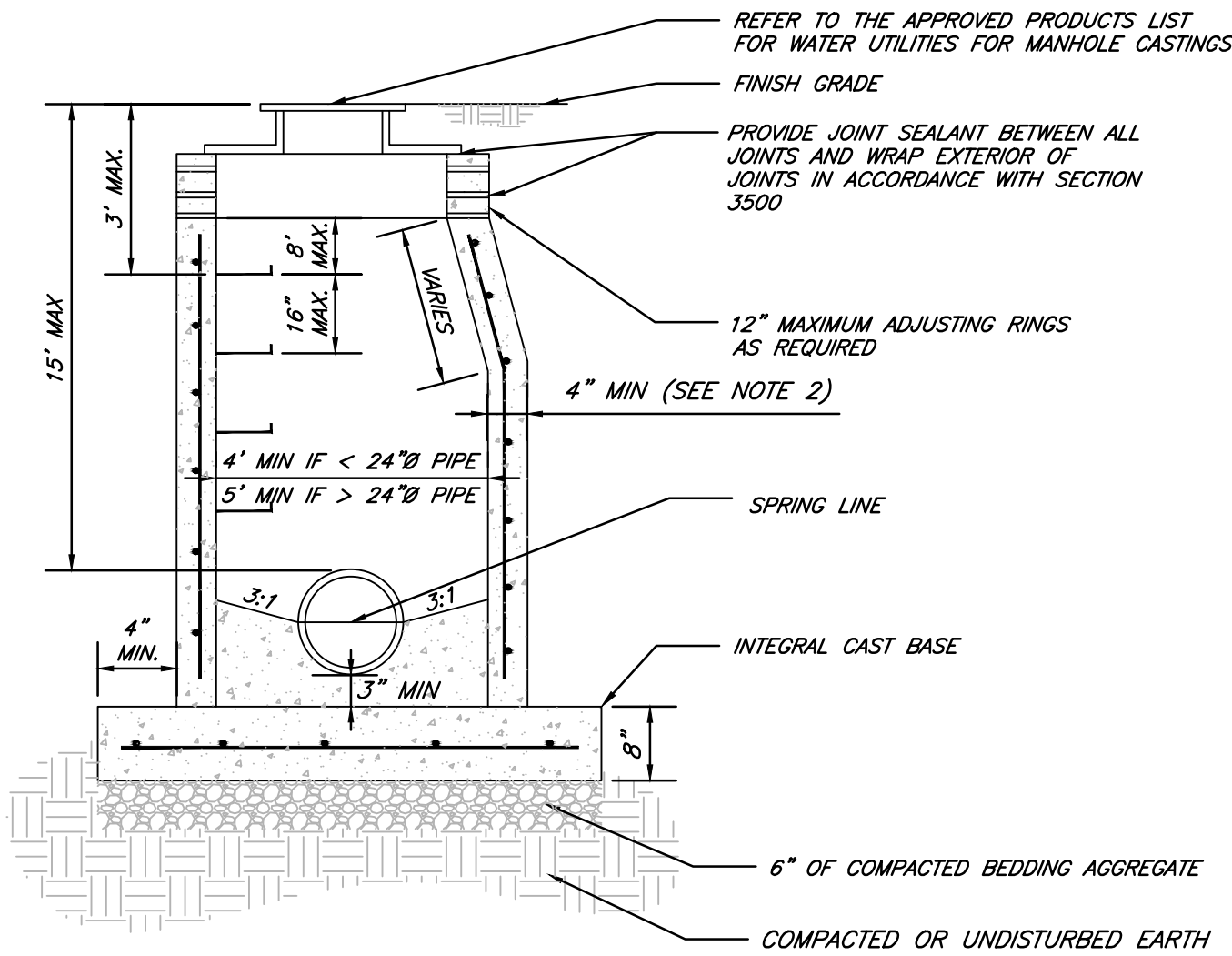
- NOTES:
1. A MINIMUM OF 36 INCHES OF COVER SHALL BE OVER THE TOP OF THE PIPE. THIS MINIMUM OF COVER SHALL BE FROM THE TOP OF PIPE TO THE FINISHED GRADE.
 2. BEDDING AGGREGATE SHALL BE PLACED FROM A LEVEL 6 INCHES BELOW THE BOTTOM OF THE PIPE TO A LEVEL 6 INCHES ABOVE THE TOP OF THE PIPE.
 3. TRENCH 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, OTHERWISE, WELL GRADED AGGREGATE BASE MATERIAL. AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENT FOR KDOT AASHTO 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.

[illegible]

<p>DETAIL SHEET</p> <p>SANITARY SEWER PLANS</p>	
<p>KESSLER RIDGE APARMENTS</p>	
<p>LEE'S SUMMIT, MO</p>	<p>2018</p>

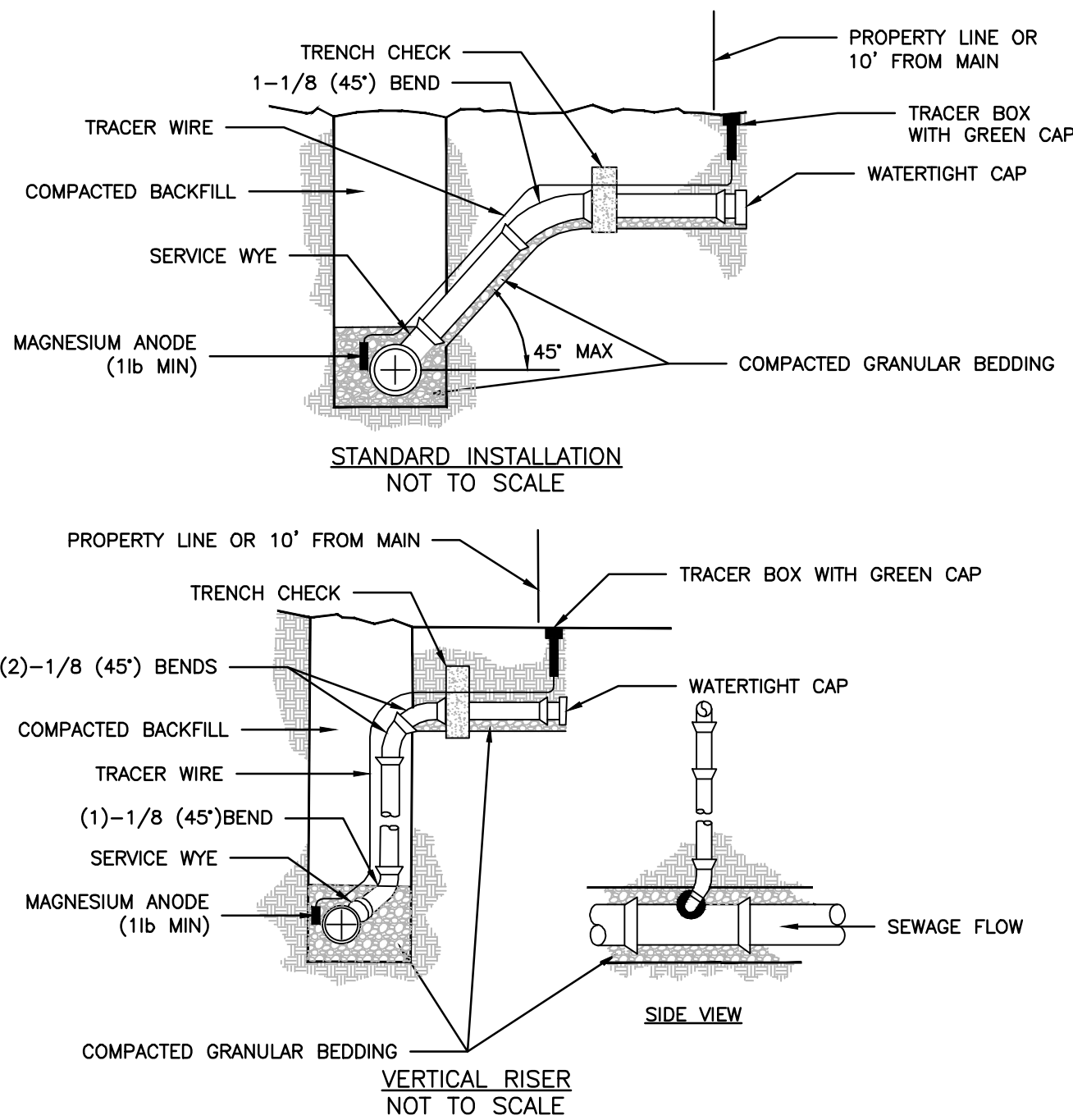


7 N.T.S.
MANHOLE WALL CONNECTIONS



- NOTES:
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
 2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH ($\frac{1}{12}$) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THAN 15'.
 3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
 4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
 6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
 7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

8 N.T.S.
STANDARD PRECAST MANHOLE - SANITARY SEWER



- NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
 2. ALL NEW CONSTRUCTION OFF SEWER STUBS SHALL BE TEMPORARILY MARKED WITH A MARKING STAKE, 36" ABOVE GROUND AND PAINTED GREEN.
 3. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
 4. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
 5. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
 6. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
 7. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
 8. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
 9. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

9 N.T.S.
BUILDING SEWER STUB AND RISER

OLSSON[®]
ASSOCIATES

NICHOLAS D. HEISER
PE-2015000555

PROFESSIONAL ENGINEER

04/20/18

BY

REVISIONS DESCRIPTION

NO. REV.

DATE

2018

LEE'S SUMMIT, MO

DETAIL SHEET
SANITARY SEWER PLANS

KESSLER RIDGE APARMENTS

drawn by: D.A.H.Q.
checked by: N.D.H.
designed by: N.D.H.
QA/QC by: M.G.D.
project no.: 017-3697
date: 2018-04-20

SHEET
C206