

**GENERAL NOTES**

- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS. ALL CONSTRUCTION SHALL BE COMPLETED FOLLOWING CURRENT CITY STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- THE CONTRACTOR WILL BE REQUIRED TO PROVIDE NOTICE TO UTILITY COMPANIES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION, AS FOLLOWS:  
KANSAS ONE-CALL 687-2470  
THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:  

AT&T	1-800-246-8464
BLACK HILLS ENERGY (GAS)	1-800-694-8989
CITY OF WICHITA WATER	1-316-268-4555
CITY OF WICHITA SEWER	1-316-268-4073
CITY OF WICHITA STORMWATER	1-316-268-4090
CITY OF WICHITA TRAFFIC	1-316-268-4034
COX COMMUNICATIONS	1-888-249-3530
KANSAS GAS SERVICE	1-888-482-4950
WESTAR ENERGY	1-800-544-4857
- UTILITY SERVICE LINES, POLES, ETC. ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY ITS OWNER DURING CONSTRUCTION. LOCATIONS OF EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLAN, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS, IN THE OPINION OF THE ENGINEER, THAT WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ABOUTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- THE WATER DISTRIBUTION DIVISION SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY CONTRACTOR AT HIS OWN EXPENSE. VALVE BOXES AND WATER METERS WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO MATCH FIELD GRADES.
- THE CONTRACTOR SHALL NOTIFY THE CONSULTANT ENGINEER AND TOM MASON WITH THE CITY AT 316-268-4574 WITH THE ANTICIPATED CONSTRUCTION START DATE AND NOTIFY THEM OF PROJECT COMPLETION. STAKING FOR THIS PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. MKEC ENGINEERING, INC. WILL PROVIDE INSPECTION AT NO EXPENSE TO THE CONTRACTOR.
- IF TRAFFIC WILL BE IMPACTED BY CONSTRUCTION, A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CITY TRAFFIC ENGINEER, BRIAN COON AT [traffic@wichita.gov](mailto:traffic@wichita.gov) BEFORE CONSTRUCTION CAN BEGIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES TO FACILITATE CONSTRUCTION. ALL CONSTRUCTION ZONE MARKINGS AND SIGNAGE SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS PUBLISHED BY THE US DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION. ALL COSTS ASSOCIATED WITH CONSTRUCTION MARKINGS AND SIGNAGE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- ALL ELEVATIONS SHOWN ARE NAVD 88.
- ALL AREAS DISTURBED DURING CONSTRUCTION THAT WILL NOT BE UNDER PROPOSED PAVEMENT SHALL BE RESTORED TO MATCH EXISTING CONDITIONS.
- CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS COMPANIES AND IS EITHER FROM COMPANY UTILITY DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.
- A PORTION OF EXCESS EXCAVATED MATERIAL SHALL BE MOUNDED AROUND MANHOLES WHICH EXTEND MORE THAN ONE (1) FOOT ABOVE THE EXISTING GROUND. SUCH MOUND SHALL BE CONSTRUCTED WITH NEW DEVELOPMENT A SIX (6) FOOT DIAMETER FLAT TOP WITH 4 TO 1 SIDE SLOPES DOWN TO THE ORIGINAL GROUND. THE ELEVATION OF THE FLAT TOP OF THE MOUND SHALL BE 0.4 FOOT BELOW THE TOP OF THE MANHOLE.
- ALL STUBS AND PLUGGED PIPES SHALL BE LOCATED WITH GREEN PLASTIC TAPE IN THE SAME MANNER AS RISERS.
- CONNECTING TO EXISTING MANHOLES: PRIOR TO LAYING SEWER LINES USING EXISTING STUBS IN EXISTING MANHOLES, THE CONTRACTOR SHALL EXPOSE AND VERIFY THE ELEVATION, GRADE AND ALIGNMENT OF EXISTING STUBS AND NOTIFY THE ENGINEER OF ANY DEVIATION FROM THE PLANS. WHERE CONNECTION TO AN EXISTING MANHOLE THAT DOES NOT HAVE AN EXISTING STUB OR THE STUB IS UNUSABLE DUE TO ELEVATION GRADE OR ALIGNMENT, THE CONTRACTOR SHALL BORE CUT INTO EXISTING MANHOLE WALL TO MAKE CONNECTION USING APPROVED WATER STOP GASKET, AND RESHAPE THE EXISTING MANHOLE INVERT TO PROVIDE SMOOTH FLOW. THE COST TO CONNECTING TO EXISTING MANHOLES IS INCIDENTAL TO THE PROJECT.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
- THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW OF SEWAGE THROUGH CONSTRUCTION. CONTRACTOR'S PROPOSED METHOD FOR MAINTAINING SEWAGE FLOW SHALL BE SUBMITTED AND APPROVED BY THE SEWER MAINTENANCE DIVISION (316-268-4073) PRIOR TO STARTING AND BY-PASSING OF SEWAGE FLOWS.
- CITY MAINTENANCE OF SANITARY SEWER MAINS ENDS AT LAST STRUCTURE WITHIN THE EASEMENT OR RIGHT-OF-WAY LINE.
- ANY SIDEWALK, DRIVE APPROACH, CURB, OR STREET PAVEMENT WITHIN PUBLIC RIGHT-OF-WAY REMOVED TO CONSTRUCT PROJECT MUST HAVE A PAVEMENT CUT PERMIT AND BE REPLACED BY THE CITY CONTRACTOR. PERMITS CAN BE OBTAINED BY CALLING 316-268-4501 OR 316-268-4480.
- ALL FUTURE BUILDINGS AND PAVEMENT ARE FOR INFORMATION ONLY AND ARE SUBJECT TO CHANGE.
- WORK DONE UNDER THIS PROJECT IS SUBJECT TO THE CITY OF WICHITA REQUIREMENTS FOR "CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENTS BY PRIVATE CONTRACT". THE CONTRACTOR SHALL BE FAMILIAR AND COMPLY WITH ALL OF THE REQUIREMENTS, INCLUDING BONDING, INSPECTION, TESTING, NOTIFICATION, PROVIDING AS-BUILT DRAWINGS, PAYING FOR ALL NECESSARY CONNECTIONS, AND/OR STREET REPAIR FEES AND PROVIDING PIPE MATERIAL AND OTHER CERTIFICATIONS.
- DEVELOPER FOR THIS PROJECT IS: WICHITA STATE UNIVERSITY; 1845 FAIRMOUNT ST.; WICHITA, KS 67260  
ERIC KING - DIRECTOR FACILITIES PLANNING; 316-976-8829

PRIVATE SANITARY SEWER  
TO SERVE

# INNOVATION CAMPUS INFRASTRUCTURE PHASE 3

A PORTION OF  
WSU INNOVATION CAMPUS  
PROJECT NO. 2270PPS

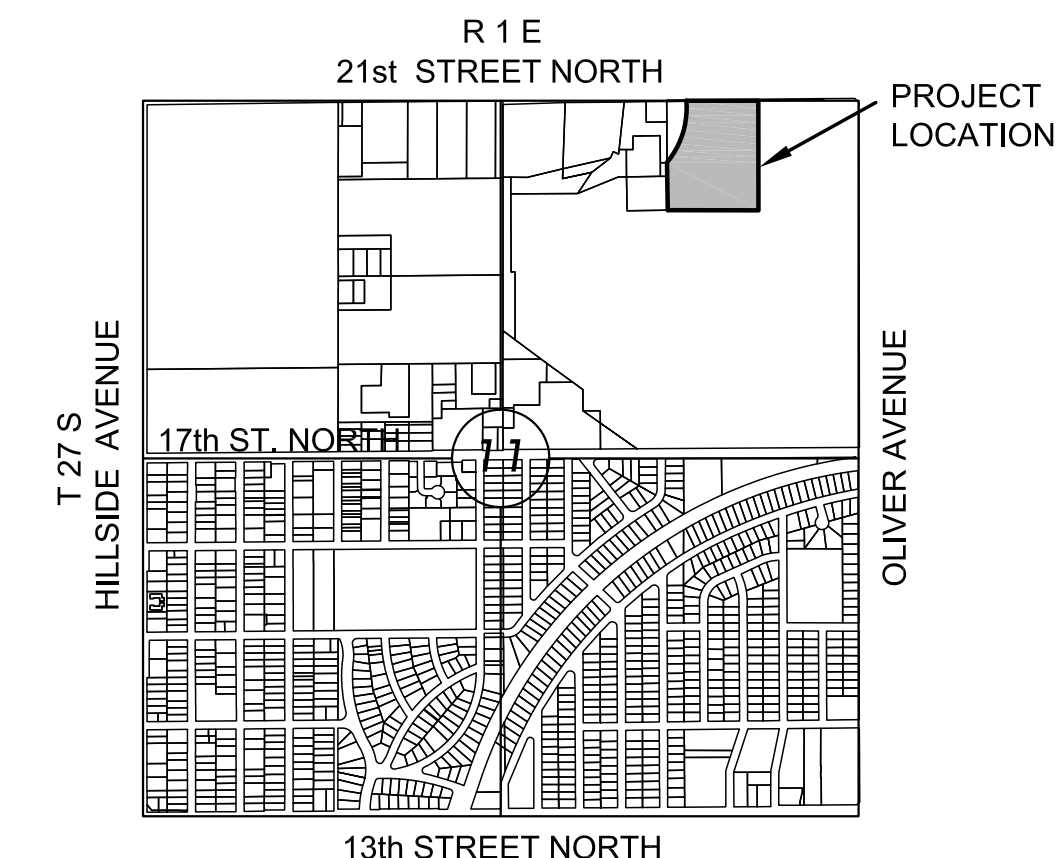
THE CITY OF WICHITA, KANSAS  
GARY JANZEN, P.E. - CITY ENGINEER

OCA 607861

T. Mason - City of Wichita, Inspector  
Release Date: 8/29/2016  
Stub & Risers  
: apr 8/31/2016

**AS-BUILT PLANS - AUGUST 2016**

INSPECTED BY: LARRY SCHALLER, MKEC ENGINEERING, INC  
CONSTRUCTED BY: NOWAK CONSTRUCTION  
CONSTRUCTION DATE: JULY 2016 TO AUGUST 2016



**VICINITY MAP**

No Scale

**INDEX TO DRAWINGS**

SHEET NO.	DESCRIPTION
35	SANITARY SEWER TITLE SHEET
36-38	SANITARY SEWER DETAILS
39-40	SANITARY SEWER PLAN & PROFILE

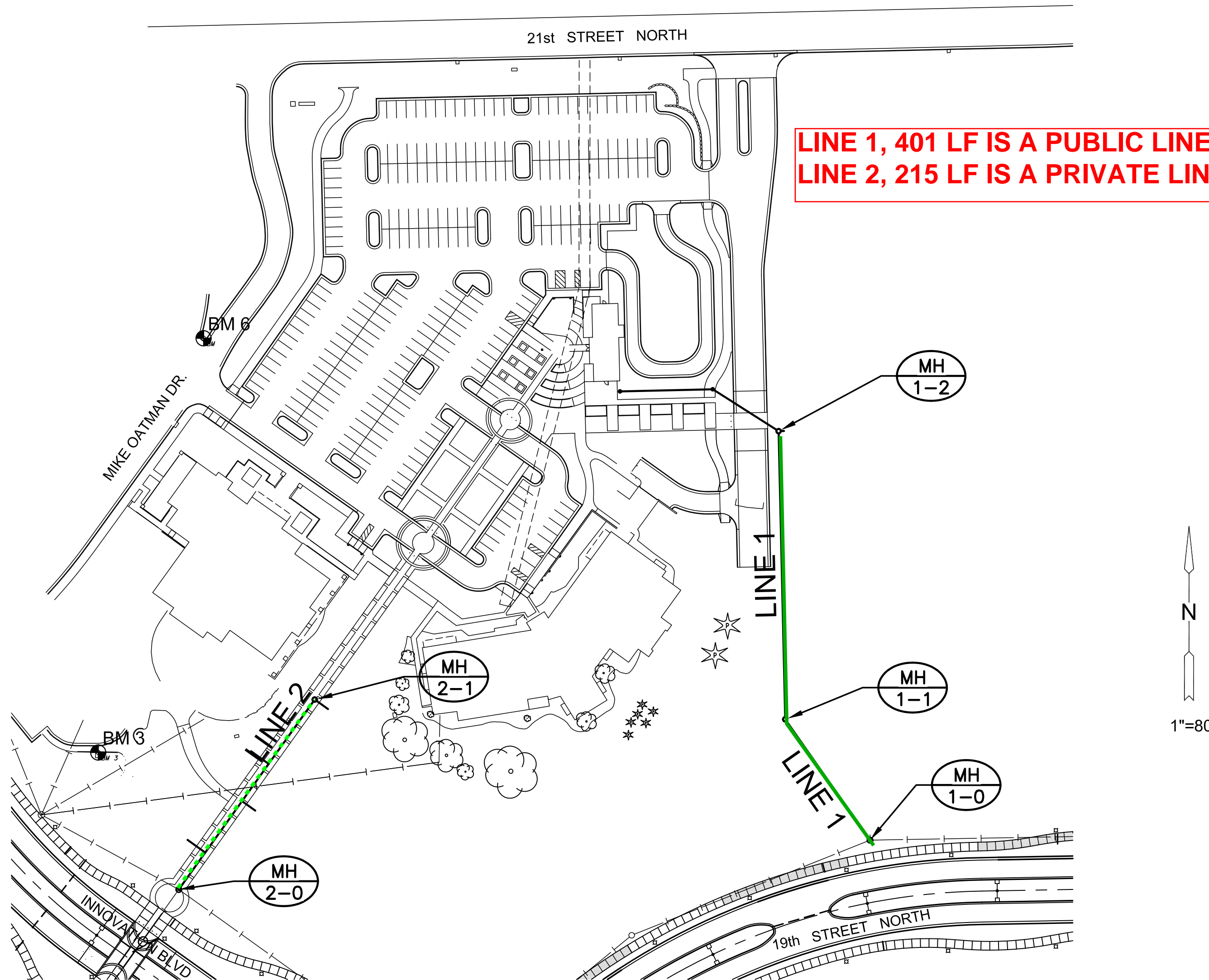
**BENCHMARKS**

BM #3  
Chiseled "\*" on north side of water meter vault, southeast of Mike Oatman Drive, south side of golfer drop off area.  
Elev. = 1416.07 NAVD 88  
N = 1698745.82 E = 1663464.625

BM #6  
Chiseled "I" on top of curb on south nose of median island in Mike Oatman Dr., approx. 280' south of centerline of 21st St.  
Elev. = 1414.16 NAVD 88

**LEGEND**

- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER



**LINE 1, 401 LF IS A PUBLIC LINE  
LINE 2, 215 LF IS A PRIVATE LINE**

APPROVED AS NOTED  
BY WICHITA PUBLIC WORKS  
ENGINEERING DIVISION  
Engineering: *Rebecca Dief* 9/7/16  
Utilities: *[Signature]* 6-7-16

**NOTE TO CONTRACTORS**

Public Property:  
Inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer in the state of Kansas. No work shall be performed by the Contractor without such inspection nor shall any work be commenced without written authorization by City Engineering. All Construction and Materials shall comply with the current City of Wichita Specifications and Standards and Special Provisions. (on file and available at Wichita.gov).

An approved copy of these plans signed by City staff is required on-site.



REVISION	DATE

DIVISION OF ADMINISTRATION & FINANCE  
FACILITIES PLANNING  
1845 FAIRMOUNT ST.  
WICHITA, KANSAS 67260-0047  
Phone 316-978-3030

Department of Administration  
Office of Facilities & Property Management  
Design, Construction & Compliance  
800 SW Jackson, Suite 700  
Topeka, Kansas 66612-1216  
Phone 785-296-9899

WICHITA STATE UNIVERSITY  
INNOVATION CAMPUS INFRASTRUCTURE  
PHASE 3  
1845 FAIRMOUNT ST.  
WICHITA, KANSAS 67260-0023  
DRAWN BY: BKS  
CHECKED BY: ###  
DATE: 04/07/2016

SANITARY SEWER TITLE SHEET  
A-012817(b)

35 OF 89

ORIGINAL CONTRACT DOCUMENTS

REVISION	DATE

DIVISION OF ADMINISTRATION & FINANCE  
FACILITIES PLANNING  
1845 FAIRMOUNT ST.  
WICHITA, KANSAS 67260-0047  
Phone 316-978-3030

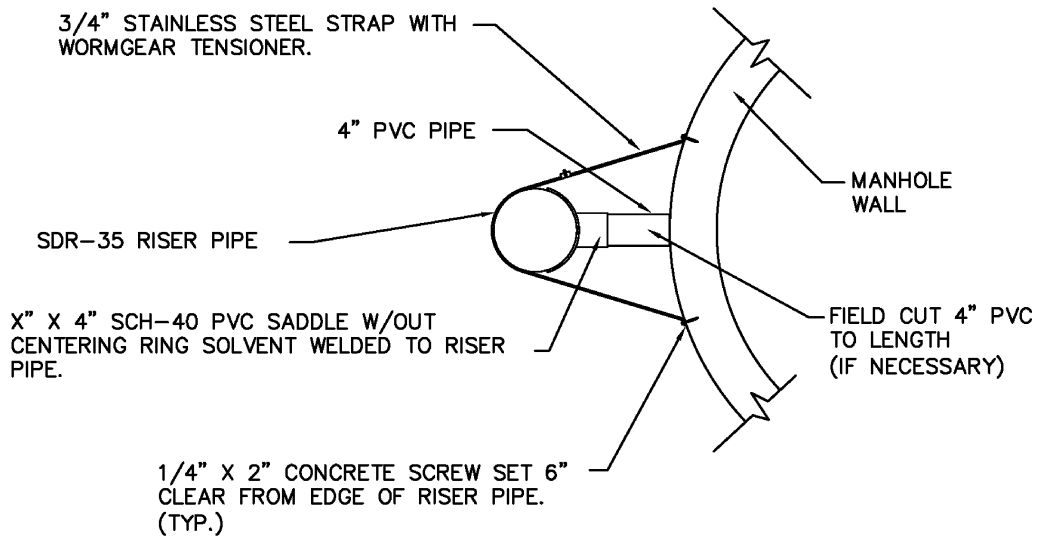
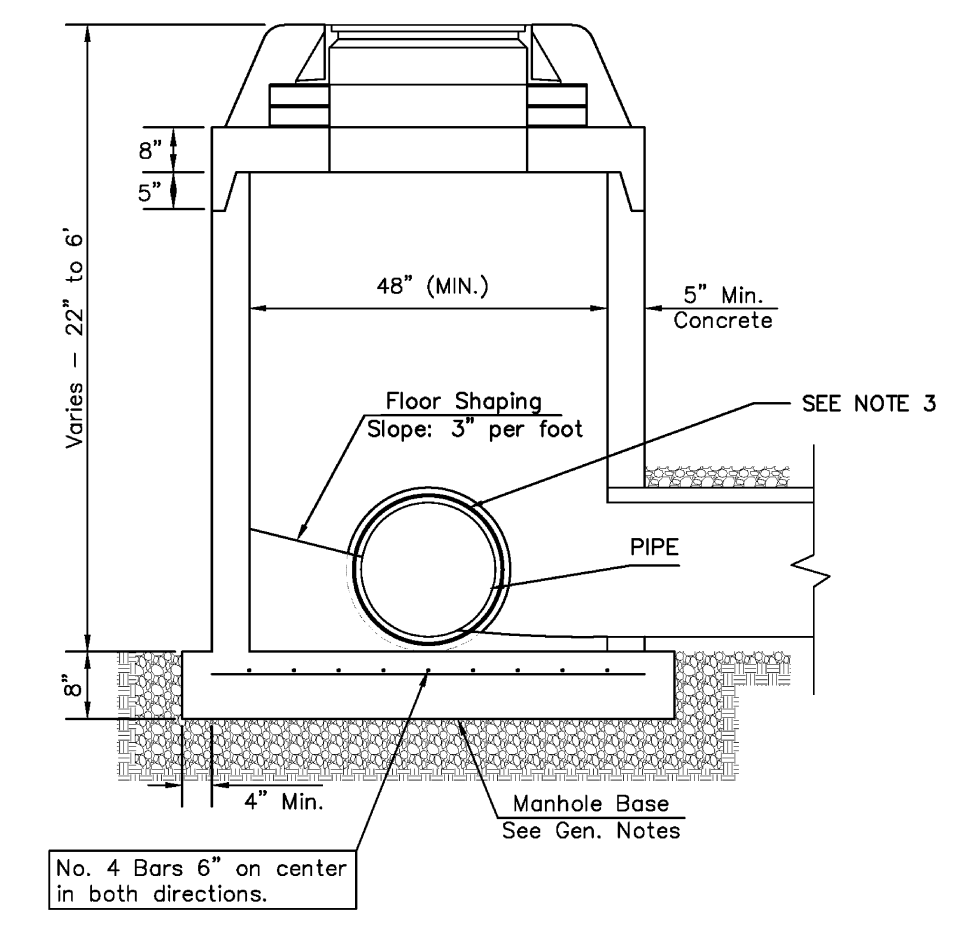
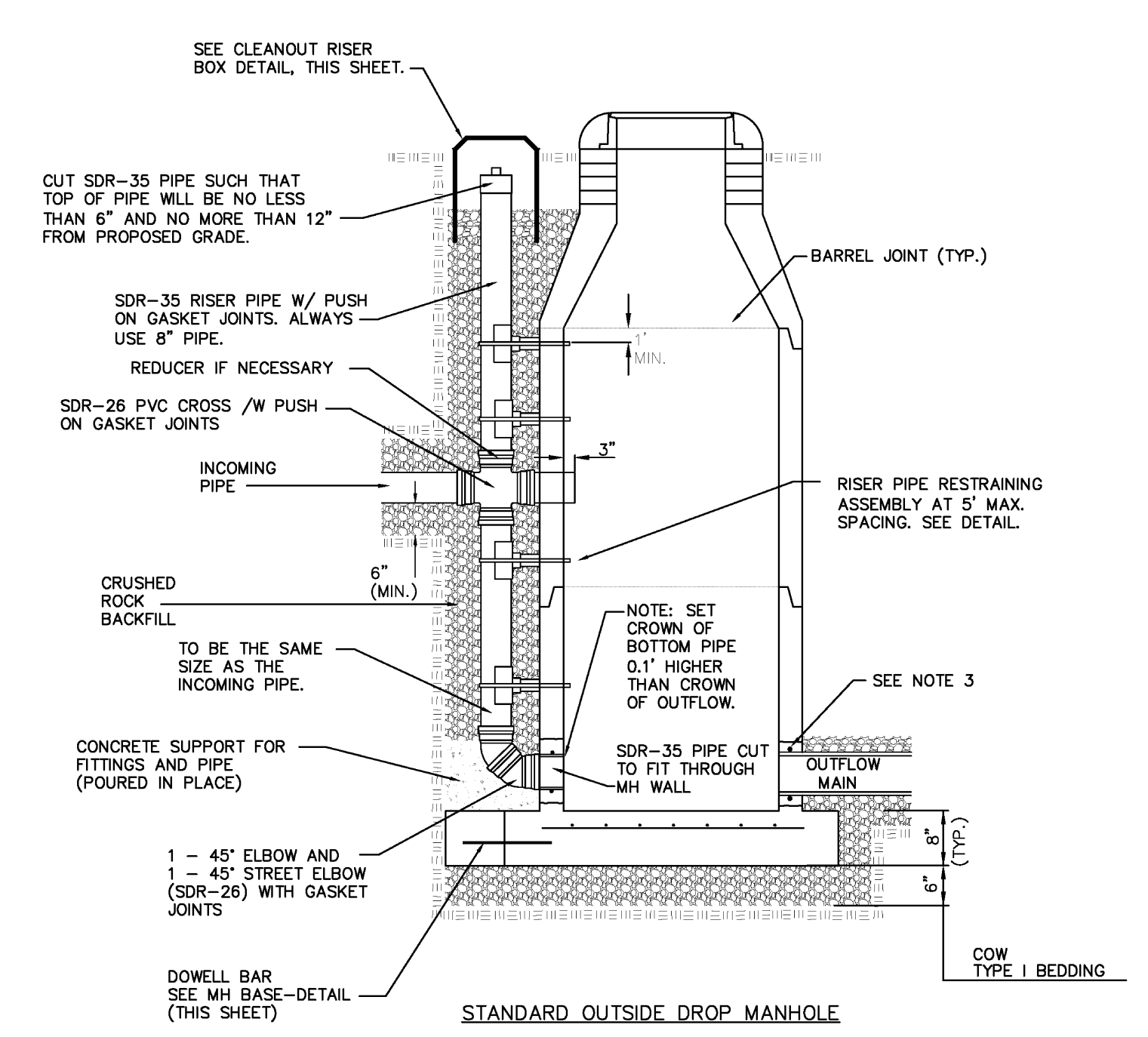
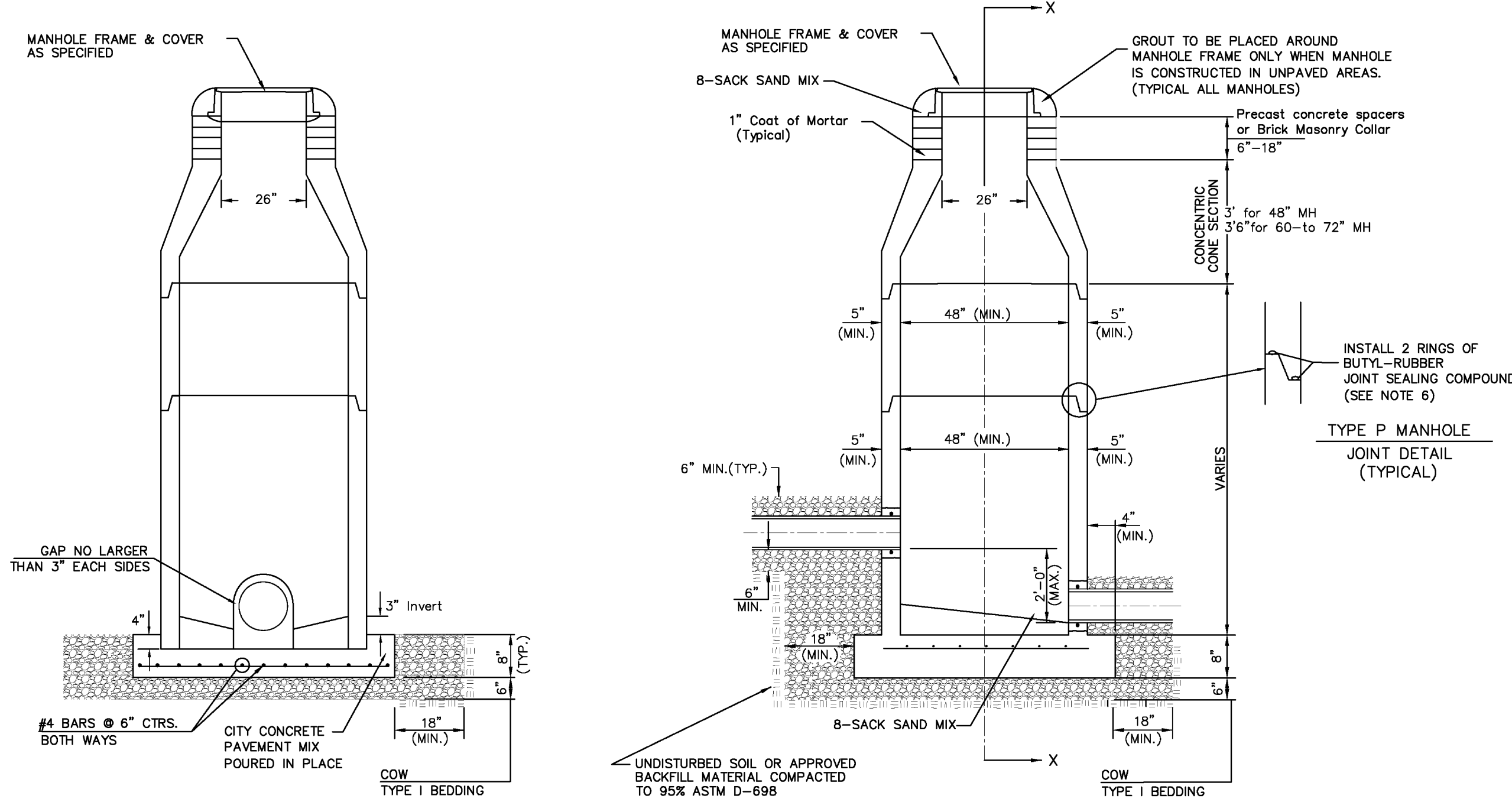
Department of Administration  
Office of Facilities & Property Management  
Design, Construction & Compliance  
800 SW Jackson, Suite 700  
Topeka, Kansas 66612-1216  
Phone 785-296-8899

WICHITA STATE UNIVERSITY  
INNOVATION CAMPUS INFRASTRUCTURE  
PHASE 3

1845 FAIRMOUNT ST.  
WICHITA, KANSAS 67260-0023  
DRAWN BY: BKS  
CHECKED BY: ###

SANITARY SEWER MANHOLE DETAIL  
A-012817(b)

36 OF 89  
ORIGINAL CONTRACT DOCUMENTS



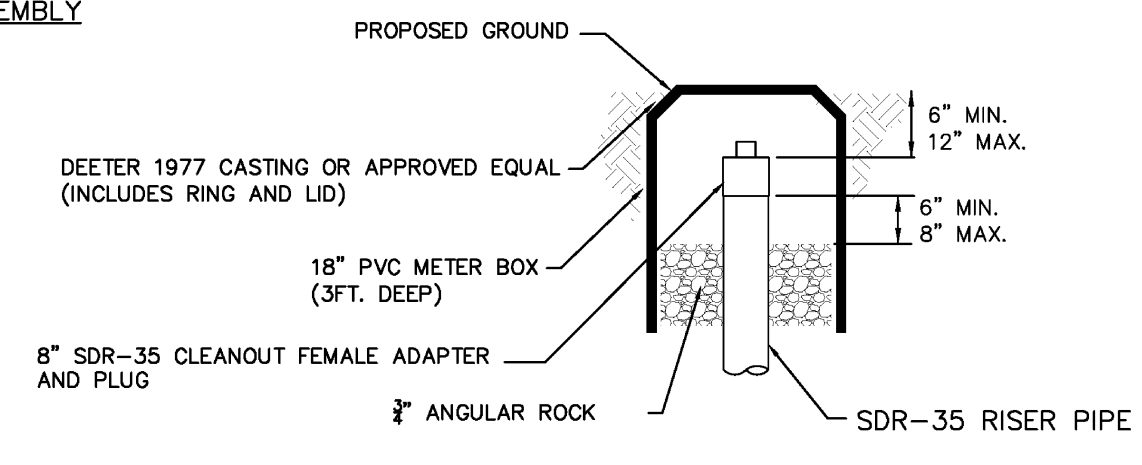
SANITARY SEWER MANHOLE DIAMETERS

DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"

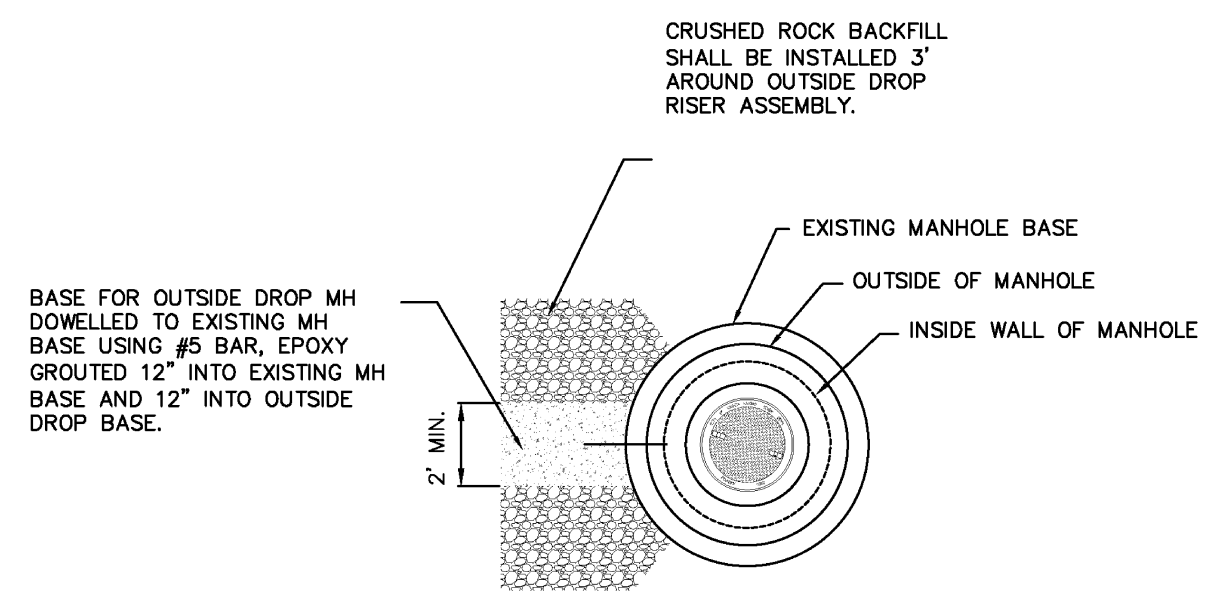
PRECAST MANHOLE GENERAL NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
- EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
- JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
- ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12" DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS, AS INDICATED BY THE PLANS.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
- TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
- OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
- THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
- PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
- THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
- REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.

RISER PIPE RESTRAINING ASSEMBLY  
Not to Scale



CLEANOUT RISER BOX DETAIL  
Not to Scale



MH BASE DETAIL  
Not to Scale

AS-BUILT PLANS - AUGUST 2016

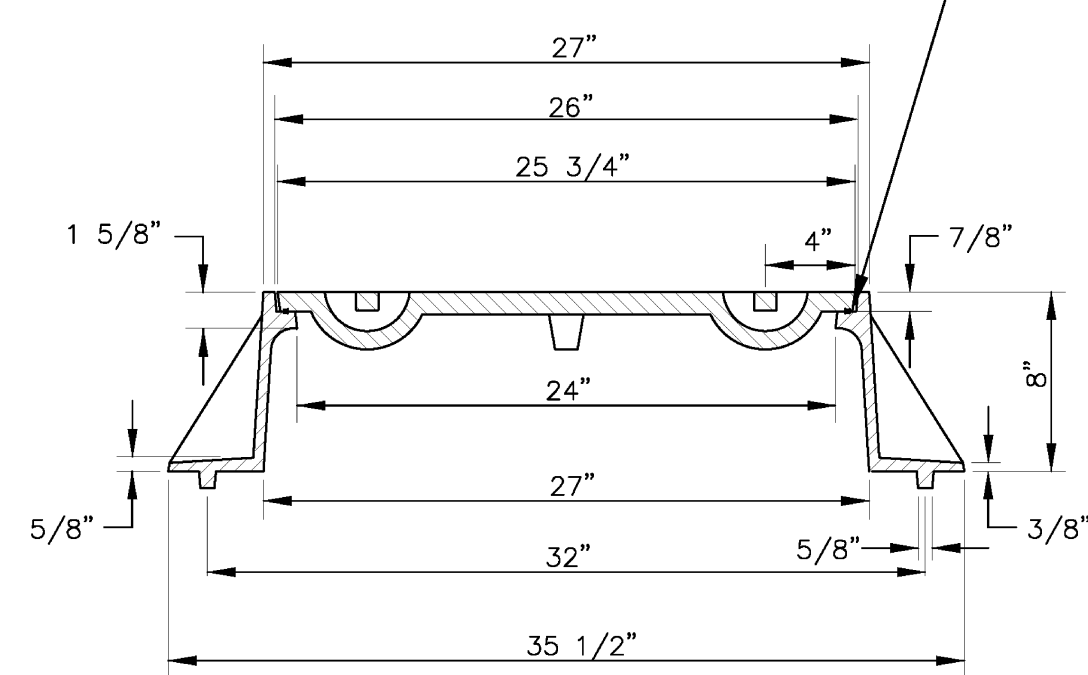
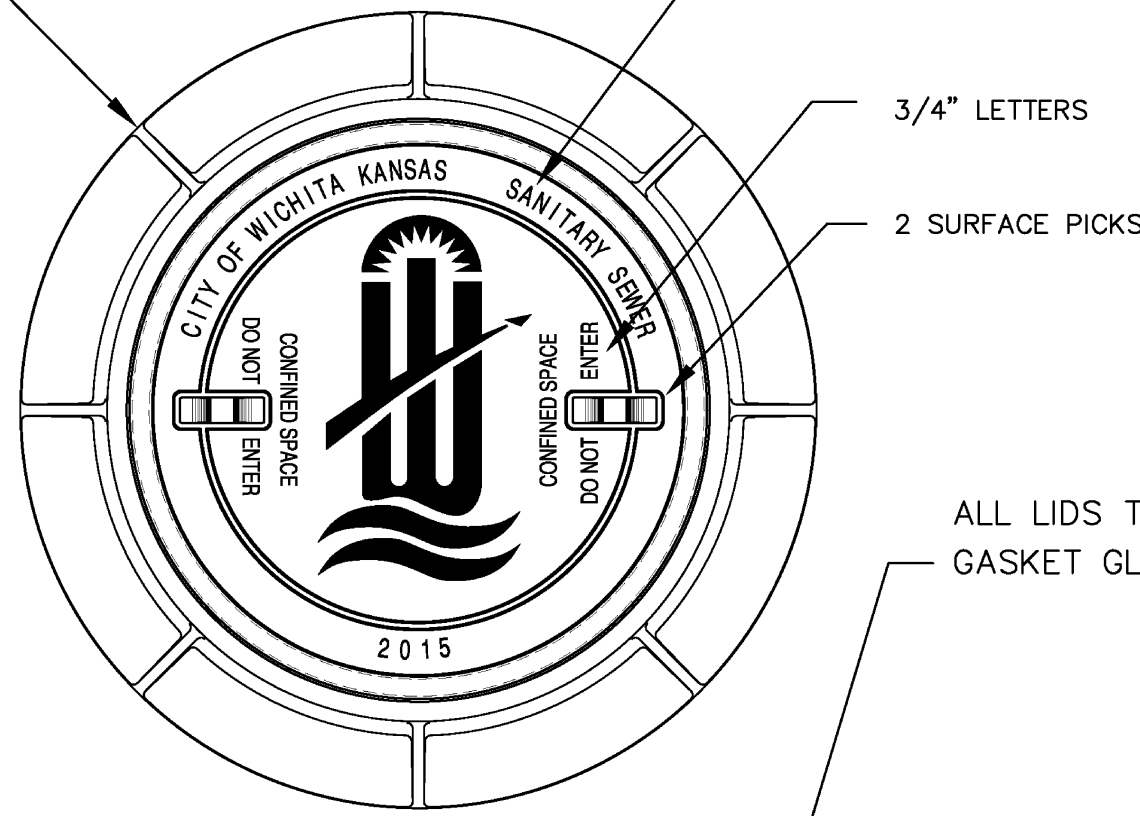
**CITY OF WICHITA**  
PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION

REVISED JANUARY 2015

**PRECAST SANITARY SEWER MANHOLE**  
CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER ####PPS	OCA NUMBER 607861	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET

8 - GUSSETS  
5/8" TAPERED  
TO 1/2"



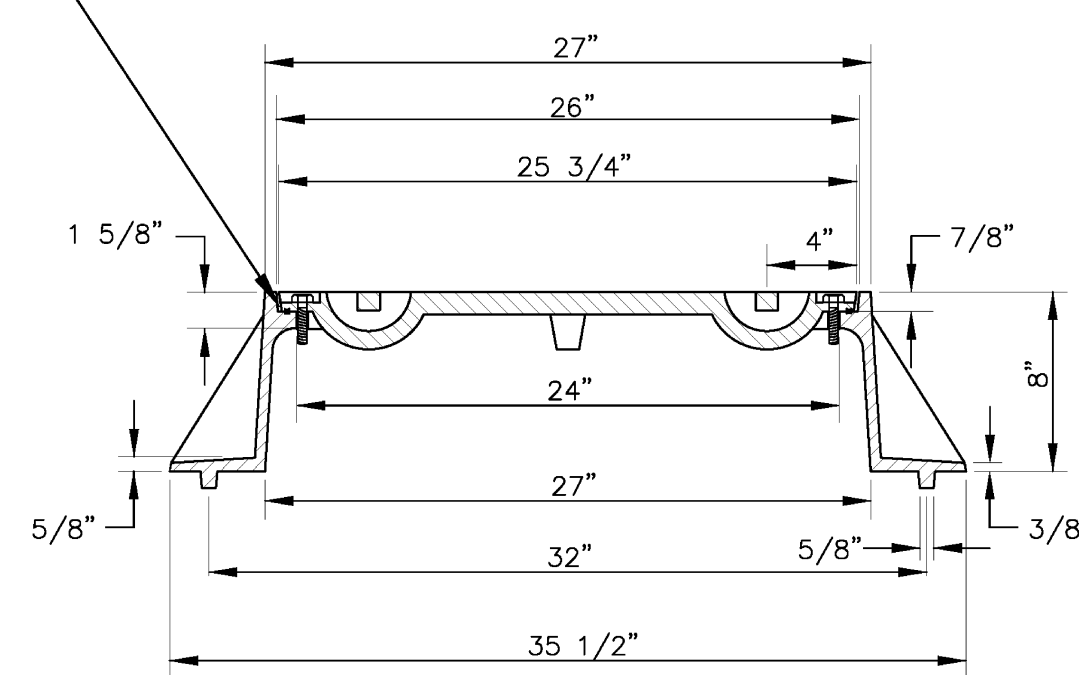
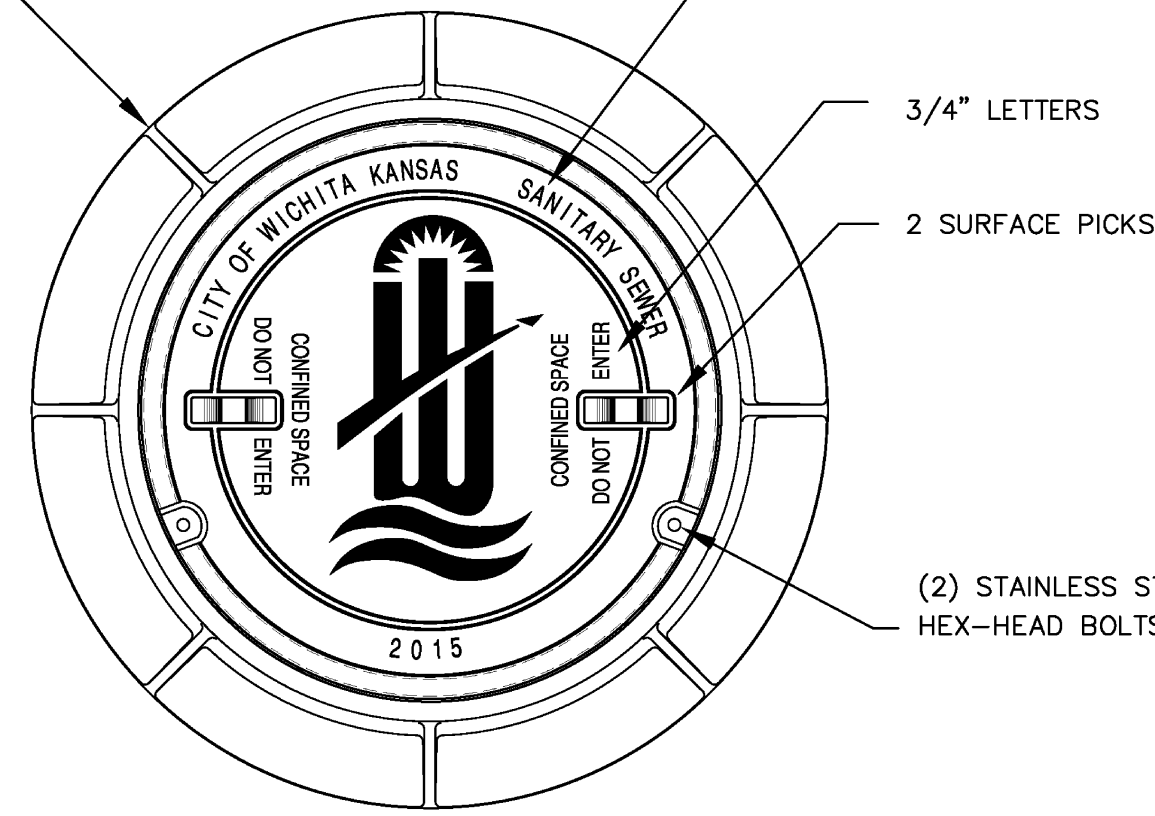
STANDARD MANHOLE FRAME & COVER

DEETER #1261 OR EJIW #1936-Z1

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

8 - GUSSETS  
5/8" TAPERED  
TO 1/2"

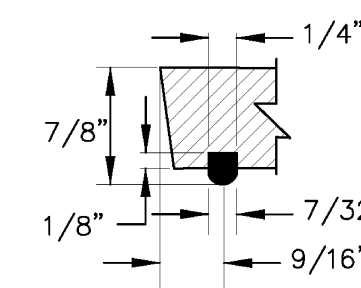


BOLT DOWN MANHOLE FRAME & COVER

DEETER #1261 OR EJIW #1936-Z1

NOTE:

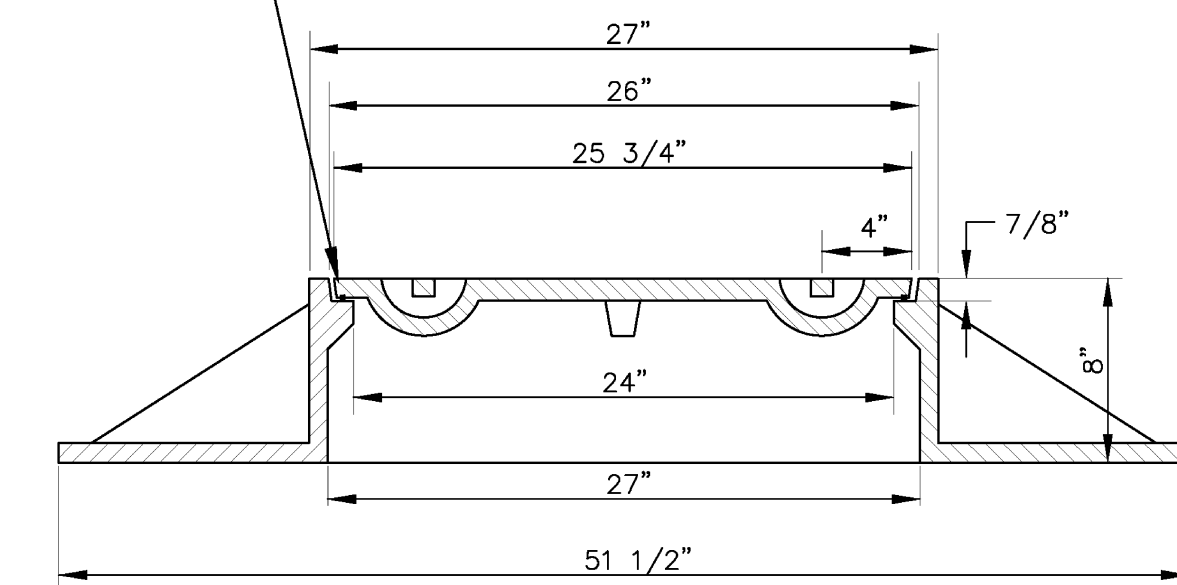
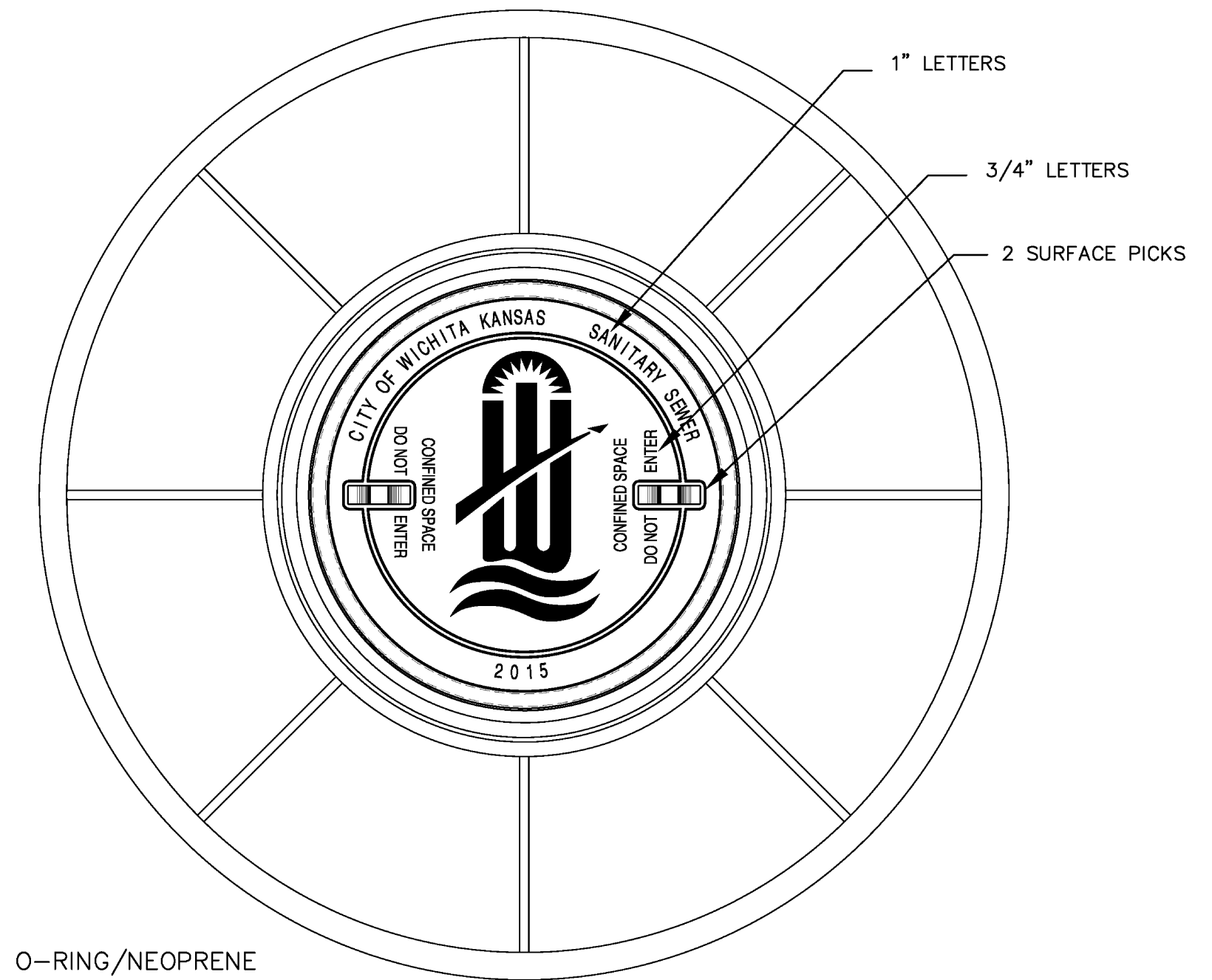
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.



O-RING DETAIL

ALL LIDS TO BE FURNISHED WITH O-RING/NEOPRENE GASKET GLUED IN THE COVER BEARING SURFACE.

ALL LIDS TO BE FURNISHED WITH O-RING/NEOPRENE GASKET GLUED IN THE COVER BEARING SURFACE.



WIDE FLANGED FRAME & COVER

DEETER #1261A

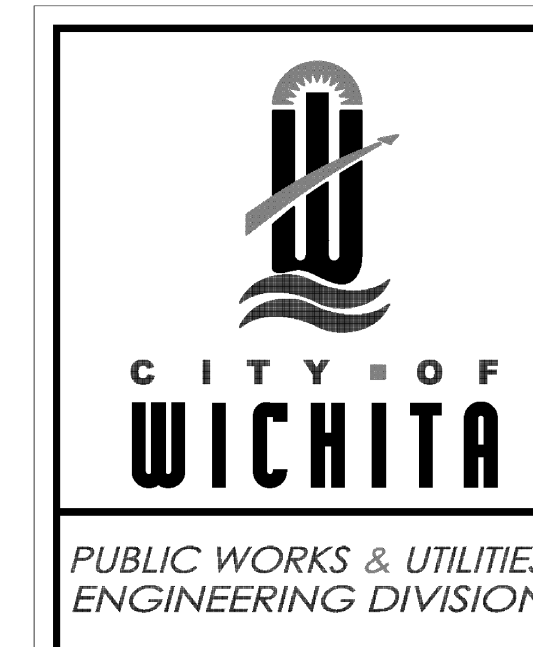
NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
3. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
4. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER". THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN WITH CITY OF WICHITA DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

AS-BUILT PLANS - AUGUST 2016



MANHOLE  
FRAME AND COVER  
(SANITARY SEWER)

CITY ENGINEER  
GARY JANZEN, P.E.

PROJECT NUMBER  
###PPS

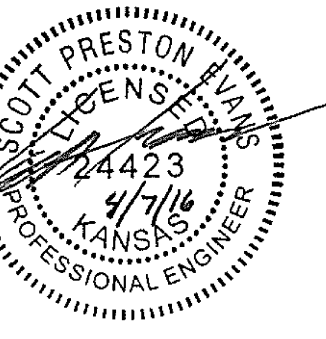
OCA NUMBER  
607861

DATE

CITY ENGINEER'S OFFICE  
CITY HALL - SEVENTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(316) 268-4501

SHEET

REVISED: MARCH 2016



REVISION	DATE

DIVISION OF ADMINISTRATION & FINANCE  
FACILITIES PLANNING  
1845 FAIRMOUNT ST.  
WICHITA, KANSAS 67260-0047  
Phone 316-978-3030

Department of Administration  
Office of Facilities & Property Management  
Design, Construction & Compliance  
800 SW Jackson, Suite 700  
Topeka, Kansas 66612-1216  
Phone 785-296-8899

WICHITA STATE UNIVERSITY  
INNOVATION CAMPUS INFRASTRUCTURE  
PHASE 3  
1845 FAIRMOUNT ST.  
WICHITA, KANSAS 67260-0023  
DRAWN BY: BKS  
CHECKED BY: ###  
DATE: 04/07/2016

MANHOLE FRAME & COVER DETAIL

A-012817(b)

SS-102

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ORIGINAL CONTRACT DOCUMENTS

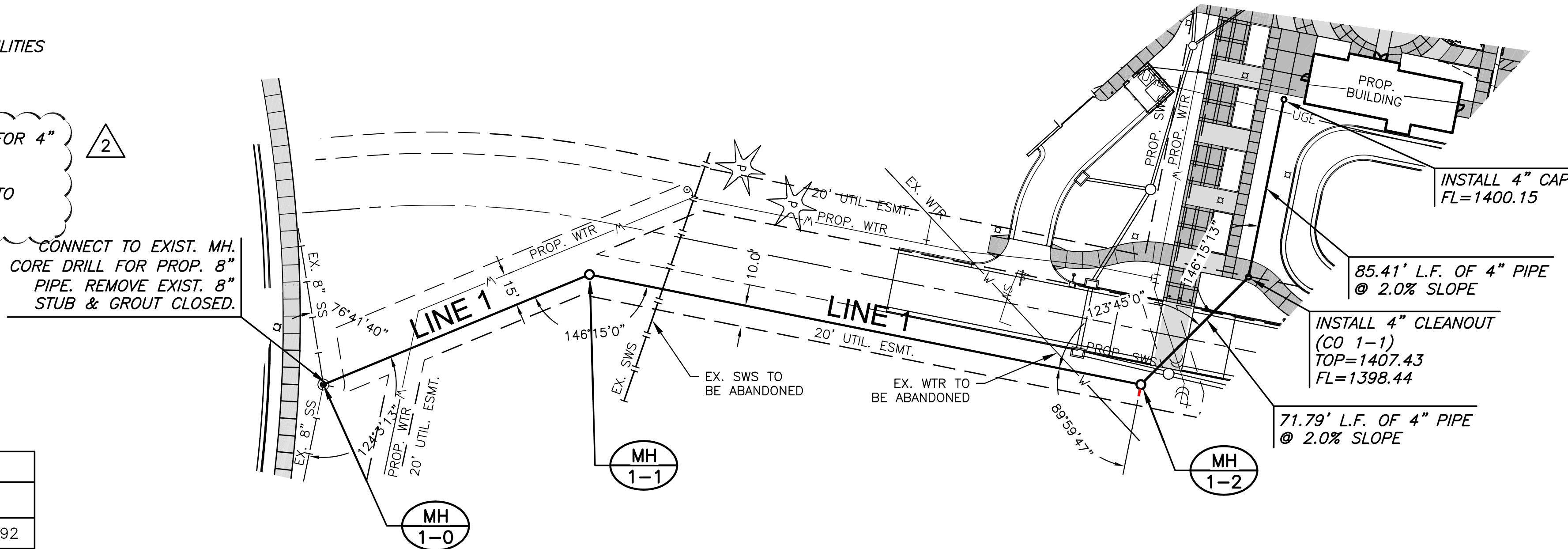


**NOTE:**

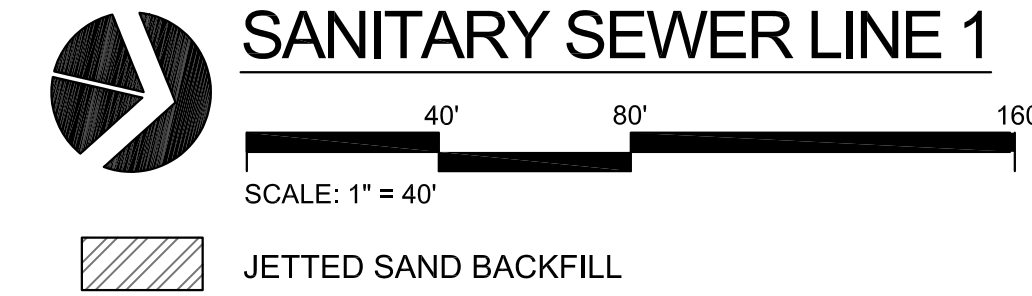
- 1) CONTRACTOR TO VERIFY THE DEPTH AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- 2) ALL MANHOLES OVER 12' IN DEPTH SHALL BE JOINT WRAPPED.
- 3) CONTRACTOR IS REQUIRED TO OBTAIN A PERMIT THROUGH MABCD FOR 4" SEWER SERVICE LINE CONNECTION.
- 4) MABCD SHALL INSPECT THE 4" SEWER SERVICE LINE CONNECTION TO MANHOLE 1-2.

CONNECT TO EXIST. MH. CORE DRILL FOR PROP. 8" PIPE. REMOVE EXIST. 8" STUB & GROUT CLOSED.

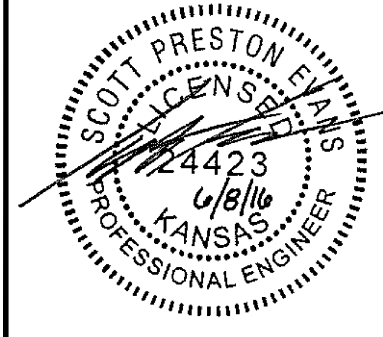
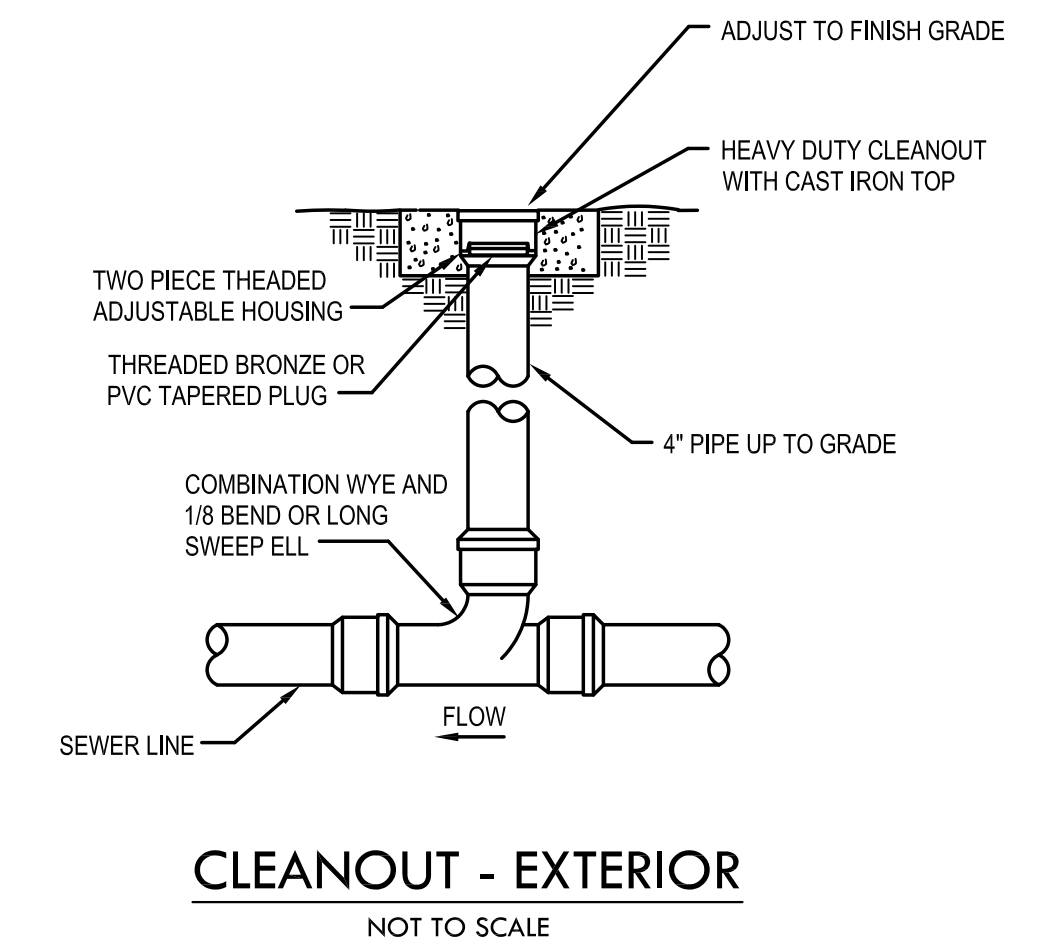
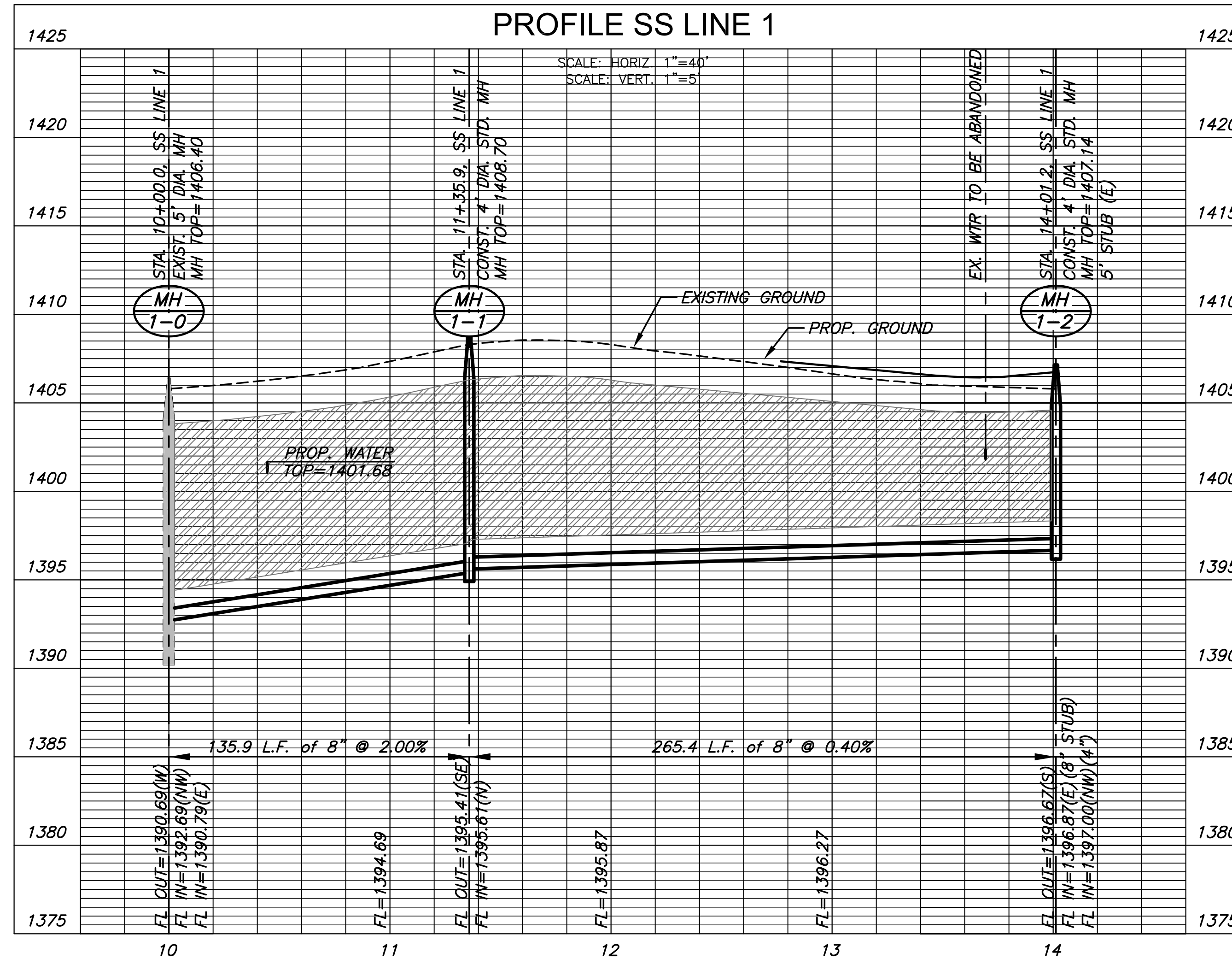
SANITARY POINTS		
Desc.	Northing	Easting
MH 1-0	1698665.16	1664174.92
MH 1-1	1698776.38	1664096.86
MH 1-2	1699041.68	1664090.77
CO 1-1	1699080.19	1664030.17
CO 1-2	1699078.23	1663944.79



**AS-BUILT PLANS - AUGUST 2016**



**PLAN SS LINE 1  
PROFILE SS LINE 1**



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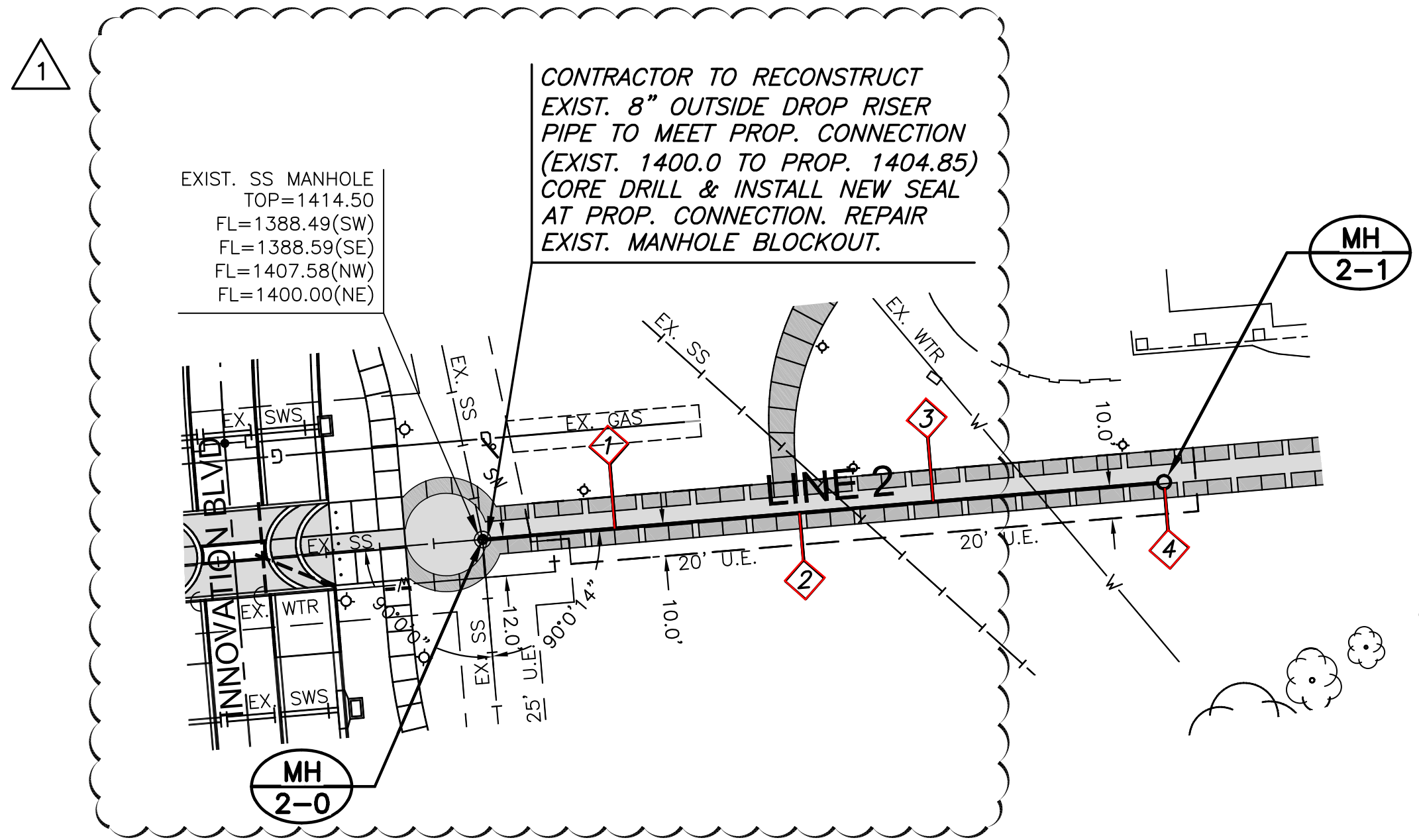
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SANITARY SEWER LINE 1  
A-012817(b)  
39 OF 89  
ORIGINAL CONTRACT DOCUMENTS

**NOTE:**

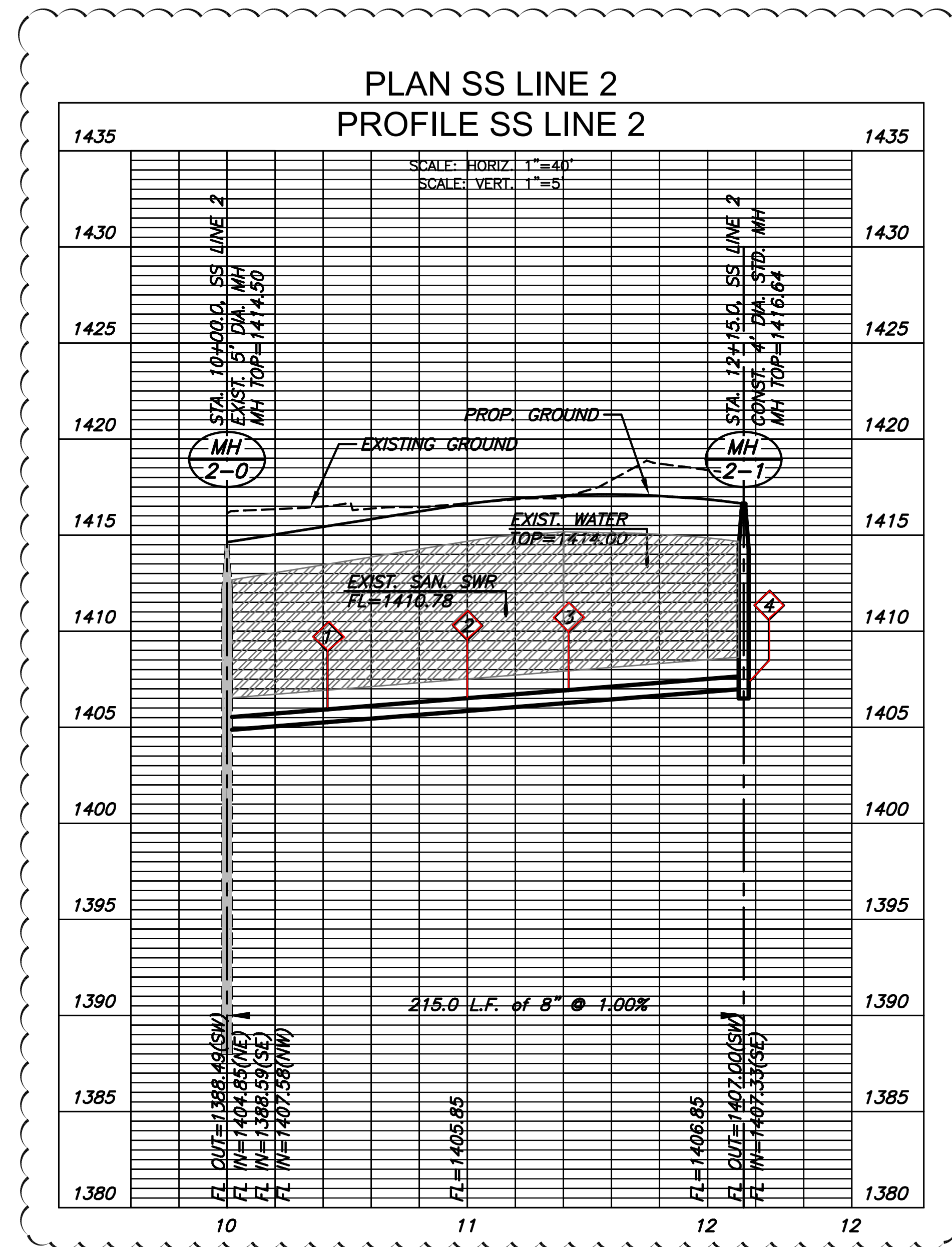
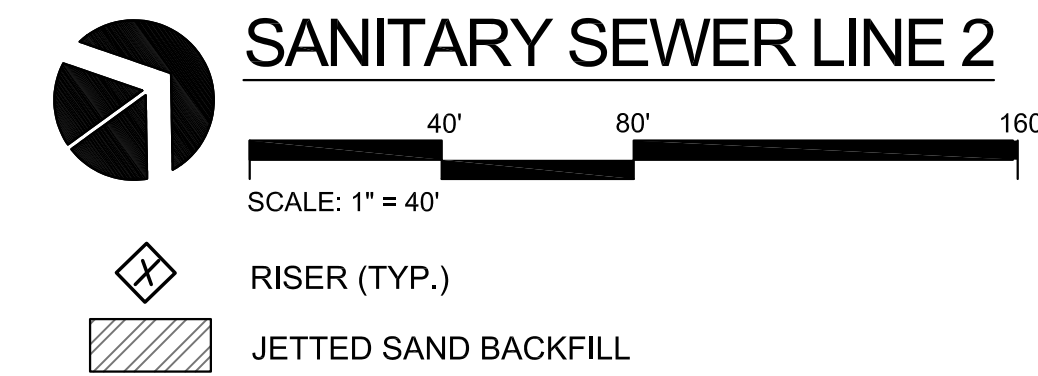
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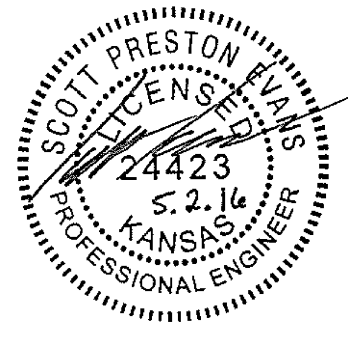
SEWER SERVICE RISER TABLE				FOR INFORMATION ONLY	
NO.	TYPE	LOCATION		APPROXIMATE LENGTH	
		LINE NO.	STA./DIRECTION	VERTICAL (FT)	HORIZONTAL (FT)
1	6" TEE	2	10+42/LT.	9.5'	20.0'
2	6" TEE	2	11+00/RT.	10.0'	15.0'
3	6" TEE	2	11+42/LT.	10.0'	20.0'
4	6" MH	2	12+15/RT.	9.5'	15.0'

SANITARY POINTS		
Desc.	Northing	Easting
MH 2-0	1698619.75	1663538.64
MH 2-1	1698794.60	1663663.76

**AS-BUILT PLANS - AUGUST 2016**



J:\PROJECTS\2016\1601010062\_WSU\_LINE\_MIXED\_USE\_AREA\_PHASE\_3 - STARBUCKS - 16099 CAD\SHOTS\05 CIVIL\SANI\16099 SANI LINE 2.DWG



DATE	REVISION	DATE

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SANITARY SEWER LINE 2  
 A-012817(b)  
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 ORIGINAL CONTRACT DOCUMENTS