

**GENERAL NOTES:**

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS. ALL CONSTRUCTION SHALL BE COMPLETED FOLLOWING CURRENT CITY STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. 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 1-800-344-7233  
OR 1-316-687-2470

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

AT&T	1-800-246-8464
BLACK HILLS ENERGY	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

3. UTILITY SERVICE LINES, POLES, ETC. ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, 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.

4. 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 WILL 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 WILL REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

5. 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 ENGINEERS APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.

6. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJUTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO START OF CONSTRUCTION.

7. 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 THE CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

8. THE WATER DISTRIBUTION DIVISION SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTORS 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.

9. THE CONTRACTOR SHALL NOTIFY THE CONSULTANT ENGINEER AND TOM MASON WITH THE CITY OF WICHITA AT 316-268-4574 WITH THE ANTICIPATED CONSTRUCTION START DATE AND NOTIFY THEM OF THE PROJECT COMPLETION. STAKING AND INSPECTION FOR THIS PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

10. IF TRAFFIC IS IMPACTED BY CONSTRUCTION, A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CITY TRAFFIC ENGINEER, BRIAN COON AT 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 CONTRACTORS RESPONSIBILITY.

11. ALL ELEVATIONS SHOWN ARE NAVD 88.

12. ALL AREAS DISTURBED DURING CONSTRUCTION THAT WILL NOT BE UNDER PROPOSED PAVEMENT SHALL BE RESTORED TO MATCH EXISTING CONDITIONS.

13. ALL STUBS AND PLUGGED PIPES SHALL BE LOCATED WITH GREEN PLASTIC TAPE IN THE SAME MANNER AS RISERS.

14. 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 THE ELEVATION, GRADE OR ALIGNMENT, THE CONTRACTOR SHALL BORE CUT INTO THE 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.

15. CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.

16. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.

17. THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW OF SEWAGE THROUGH CONSTRUCTION. CONTRACTORS 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.

19. ANY OVER EXCAVATION FROM MANHOLE AND PIPE REMOVAL SHALL BE BACKFILLED WITH AB-3 COMPACTED TO 90%-95% ASTM D898.

20. CITY MAINTENANCE OF SANITARY SEWER MAINS ENDS AT LAST STRUCTURE WITHIN THE EASEMENT OR RIGHT-OF-WAY.

21. ANY SIDEWALKS, DRIVE APPROACHES, CURB, OR STREET PAVEMENT 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.

22. CONTRACTOR IS RESPONSIBLE FOR PROVIDING EROSION CONTROL AS NEEDED REGARDLESS OF WHAT THE CONSTRUCTION PLANS SHOW. EROSION CONTROL BMP DETAILS CAN BE FOUND AT [HTTP://WWW.WICHITA.GOV/GOVERNMENT/DEPARTMENTS/PWU/PAGES/REGULATIONS.ASPX](http://WWW.WICHITA.GOV/GOVERNMENT/DEPARTMENTS/PWU/PAGES/REGULATIONS.ASPX)

# SANITARY SEWER PRIVATE PROJECT PLANS FOR QUIKTRIP STORE #0329R

1620 S. OLIVER  
WICHITA, SEDGWICK COUNTY, KANSAS

2271 PPS (O.C.A. NO. 607861)

GARY JANZEN, P.E., CITY ENGINEER

APRIL 2016

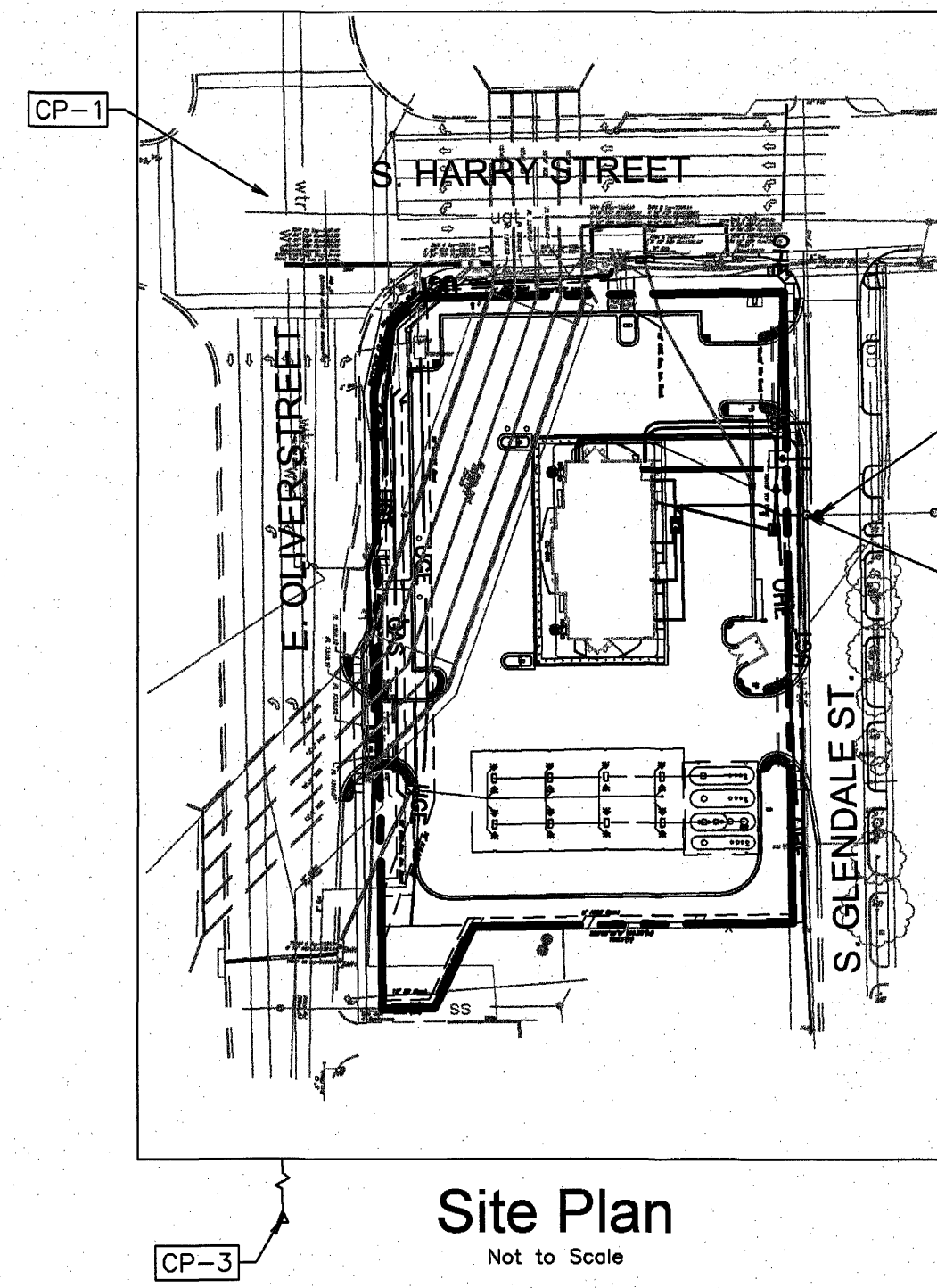
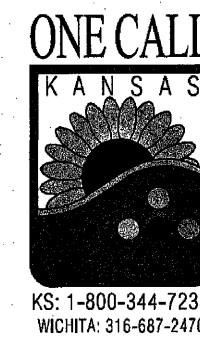
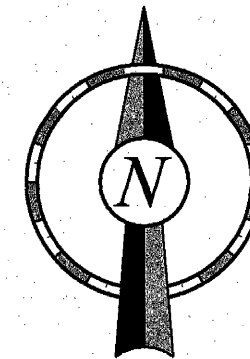
T. Mason - City of Wichita, Inspector  
Stub  
Release Date: 03/09/2017  
: apr 03/10/2017

**AS-BUILTS**  
**CONTRACTOR: CK CONTRACTING**  
**SUPERINTENDENT: TERRY HENRY**  
**FOREMAN: BLAKE HENRY**  
**INSPECTED BY: JACOB MORRIS**  
**(SCHWAB EATON)**  
**PDF BY: JM (02.23.17)**

**Sheet List Table**

Sheet Number	Sheet Title
1	COVER
2	PLAN & PROFILE
3	MANHOLE DETAIL
4	MANHOLE FRAME AND COVER DETAIL
5	PLAT
6	EROSION CONTROL DETAILS 1
7	EROSION CONTROL DETAILS 2
8	EROSION CONTROL DETAILS 3
9	EROSION CONTROL DETAILS 4
10	EROSION CONTROL DETAILS 5

SEE GENERAL NOTE 22



Site Plan  
Not to Scale

**CONTROL POINTS:**

CP-1  
NW COR., NW 1/4, SEC. 36, T27S, R1E  
5/8" REBAR FOUND  
N. 1678172.979  
E. 1665616.577

CP-2  
NE COR., NW 1/4, SEC 36, T27S, R1E  
1/2" REBAR FOUND  
N. 1678176.152  
E. 1665831.648

CP-3  
SE COR., NW 1/4, SEC 36, T27S, R1E  
5/8" REBAR FOUND  
N. 1677808.293  
E. 1665837.033

**BENCHMARKS:**

BM-1 CITY OF WICHITA BENCHMARK DISC ON WEST END OF NORTH HEADWALL OF RCBC, 130' +/- EAST OF CENTERLINE OF OLIVER STREET.  
ELEV.=1330.37 N.A.V.D. 88'

BM 2 - 8" REBAR WITH ALUMINUM DISC CAP STAMPED MKEC LOCATED 6.2 FEET NORTH AND 4.2 FEET EAST OF THE NORTHEAST CORNER OF A TYPE 1 STREET INLET ON EAST SIDE OF OLIVER AVENUE, SAID INLET LYING 46 FEET NORTH NORTHWESTERLY FROM THE SOUTHWEST CORNER OF QUIKTRIP 21ST ADDITION.  
ELEV.=1327.21 N.A.V.D. 88

APPROVED AS NOTED  
BY WICHITA PUBLIC WORKS  
ENGINEERING DIVISION

Engineering: *[Signature]* 4/2/16  
Utilities: *[Signature]* 4-12-16

NOTE TO CONTRACTORS

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 are required on-site.

**MUNICIPAL CONTACT LIST:**

**CITY OF WICHITA**

OFFICE OF CENTRAL INSPECTION  
DEPARTMENT-PLANNING DIVISION  
CITY HALL, 7TH FLOOR  
455 N. MAIN  
WICHITA, KS, 67202  
TEL: (316) 268-4477  
FAX: (316) 268-4663  
CONTACT: PAUL HAYS

PRIVATE PROJECTS/  
ENGINEERING DEPARTMENT  
CITY HALL, 7TH FLOOR  
455 N. MAIN  
WICHITA, KS, 67202  
TEL: (316) 268-4501  
CONTACT: REBECCA GREIF

CITY OF WICHITA STORM WATER  
MANAGEMENT DEPARTMENT  
CITY HALL, 8TH FLOOR  
455 N. MAIN  
WICHITA, KS, 67202  
TEL: (316) 268-4498  
CONTACT: JOE HICKLE, P.E.

CITY FIRE DEPARTMENT  
CITY HALL, 11TH FLOOR  
455 N. MAIN  
WICHITA, KS, 67202  
TEL: (316) 268-4245  
FAX: (316) 858-7706  
CONTACT: CHIEF STUART BEVIS

OFFICE OF CENTRAL INSPECTION  
DEPARTMENT-INSPECTIONS DIVISION  
CITY HALL, 7TH FLOOR  
455 N. MAIN  
WICHITA, KS, 67202  
TEL: (316) 268-4460  
FAX: (316) 268-4663  
CONTACT: TOM STOLTZ(DIRECTOR)

CITY TRAFFIC ENGINEER  
CITY HALL, 7TH FLOOR  
455 N. MAIN  
WICHITA, KS, 67202  
TEL: (316) 268-4393  
FAX: (316) 268-4114  
CONTACT: BRIAN COON, P.E.

CITY OF WICHITA WATER & SEWER  
UTILITIES  
CITY HALL, 7TH FLOOR  
455 N. MAIN  
WICHITA, KS, 67202  
TEL: (316) 268-4555  
A. CONTACT: REBECCA GREIF  
B. CONTACT: GREG LOLLEY  
TEL: (316) 268-4501

OFFICE OF CENTRAL INSPECTION  
DEPARTMENT-INSPECTIONS DIVISION  
CITY HALL, 7TH FLOOR  
455 N. MAIN  
WICHITA, KS, 67202  
TEL: (316) 268-4460  
FAX: (316) 268-4663  
CONTACT: TOM STOLTZ(DIRECTOR)

ELECTRIC COMPANY (WESTAR ENERGY)  
TEL: (316) 261-6315

GAS COMPANY (KANSAS GAS SERVICE)  
TEL: (316) 831-5664

TELEPHONE COMPANY (AT&T)  
TEL: (316) 268-2762

CABLE COMPANY (COX COMMUNICATIONS)  
TEL: (316) 260-7475

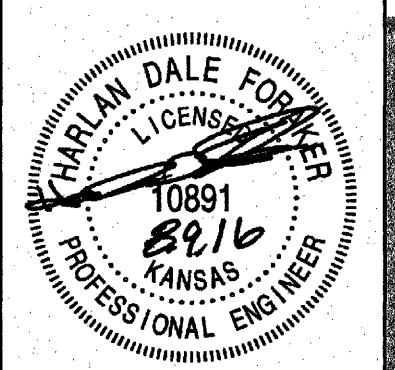
SURVEYOR OF RECORD  
MID-KANSAS ENGINEERING CONSULTANTS  
BRIAN LINDEBAK  
411 NORTH WEBB ROAD  
WICHITA, KS, 67206  
TEL: (316) 684-9600  
FAX: (316) 684-5100

ENGINEER OF RECORD  
CERTIFIED ENGINEERING DESIGN, P.A.  
HARLAN D. FORAKER, P.E.  
1935 WEST MAPLE STREET  
WICHITA, KS, 67213  
TEL: (316) 262-8808  
FAX: (316) 262-1669

QT REAL ESTATE PROJECT MANAGER  
QUIKTRIP CORPORATION  
JESSICA GLAVAS  
4705 S. 129TH EAST AVE.  
TULSA, OK 74134  
TEL: (918) 615-7804

QT PROJECT MANAGER  
QUIKTRIP CORPORATION  
ASHLEY GOODRICH  
4705 S. 129TH EAST AVE.  
TULSA, OK 74134  
TEL: (918) 615-7432

**PRIVATE UTILITIES LIST: PROJECT CONTACT LIST:**



PROJECT NO.: 20152242

CERTIFIED ENGINEERING DESIGN, P.A.  
1935 W. MAPLE STREET  
WICHITA, KANSAS 67213  
PH: (316) 262-8808  
FAX: (316) 262-1669

QuikTrip No. 0329R

HARRY & OLIVER  
WICHITA, KS



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DIVISION:
VERSION: 001
DESIGNED BY:
DRAWN BY:
REVIEWED BY:

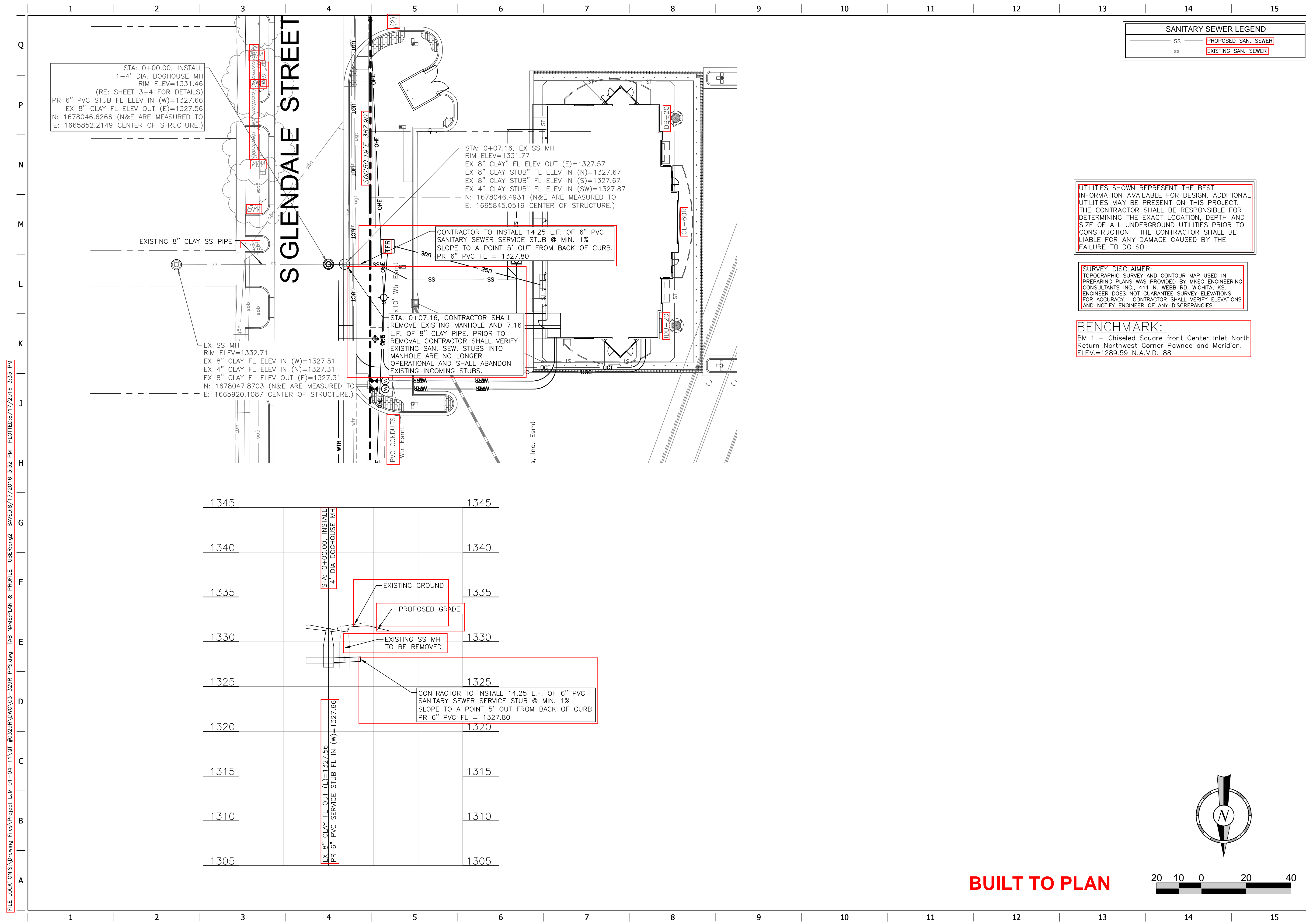
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COVER

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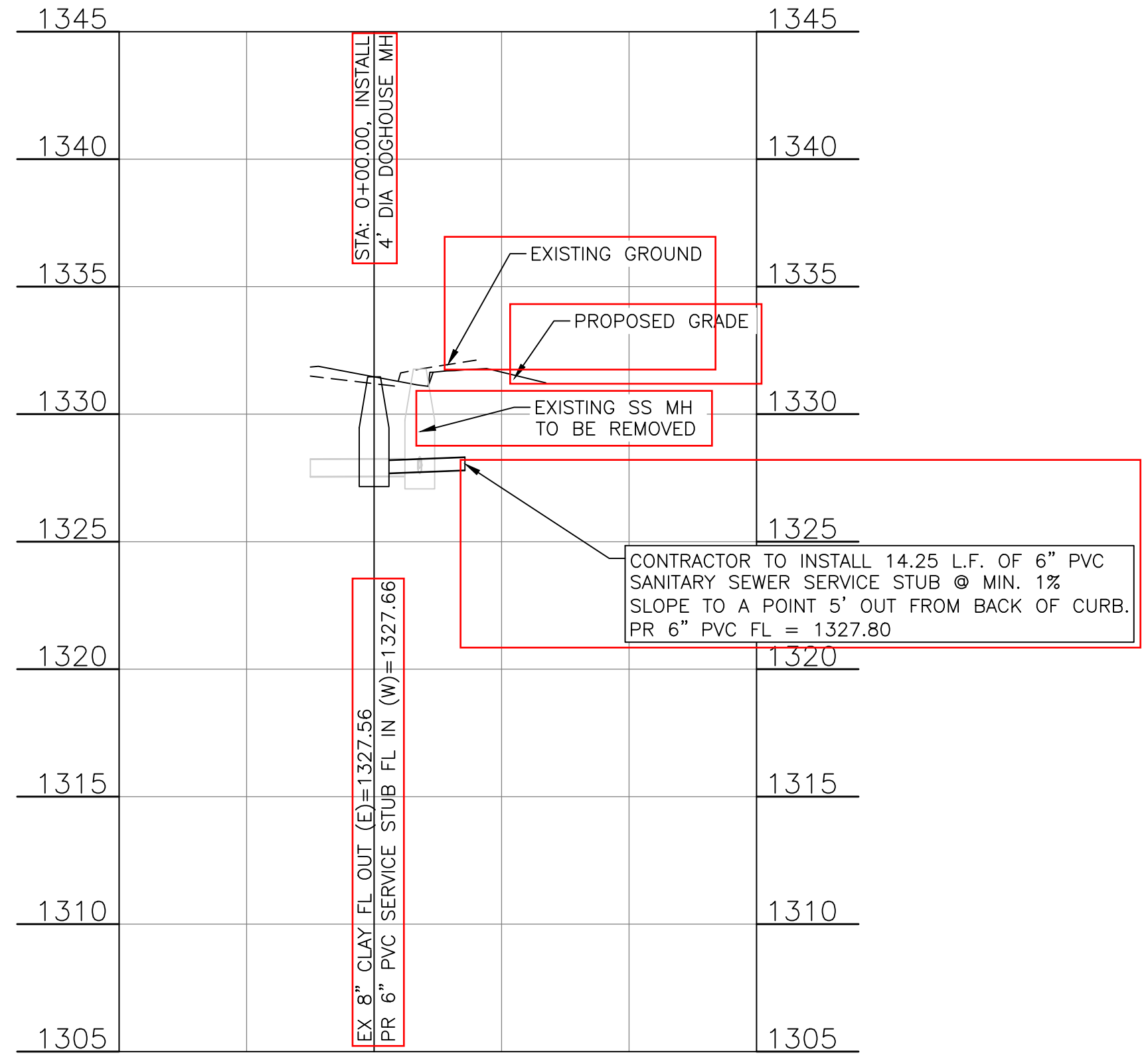
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RIM ELEV=1331.46  
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PR 6" PVC STUB FL ELEV IN (W)=1327.66  
EX 8" CLAY FL ELEV OUT (E)=1327.56  
N: 1678046.6266 (N&E ARE MEASURED TO  
E: 1665852.2149 CENTER OF STRUCTURE.)

STA: 0+07.16, EX SS MH  
RIM ELEV=1331.77  
EX 8" CLAY" FL ELEV OUT (E)=1327.57  
EX 8" CLAY STUB" FL ELEV IN (N)=1327.67  
EX 8" CLAY STUB" FL ELEV IN (S)=1327.67  
EX 4" CLAY STUB" FL ELEV IN (SW)=1327.87  
N: 1678046.4931 (N&E ARE MEASURED TO  
E: 1665845.0519 CENTER OF STRUCTURE.)

CONTRACTOR TO INSTALL 14.25 L.F. OF 6" PVC  
SANITARY SEWER SERVICE STUB @ MIN. 1%  
SLOPE TO A POINT 5' OUT FROM BACK OF CURB.  
PR 6" PVC FL = 1327.80

STA: 0+07.16, CONTRACTOR SHALL  
REMOVE EXISTING MANHOLE AND 7.16  
L.F. OF 8" CLAY PIPE. PRIOR TO  
REMOVAL CONTRACTOR SHALL VERIFY  
EXISTING SAN. SEW. STUBS INTO  
MANHOLE ARE NO LONGER  
OPERATIONAL AND SHALL ABANDON  
EXISTING INCOMING STUBS.

EX SS MH  
RIM ELEV=1332.71  
EX 8" CLAY FL ELEV IN (W)=1327.51  
EX 4" CLAY FL ELEV IN (N)=1327.31  
EX 8" CLAY FL ELEV OUT (E)=1327.31  
N: 1678047.8703 (N&E ARE MEASURED TO  
E: 1665920.1087 CENTER OF STRUCTURE.)



**SANITARY SEWER LEGEND**

SS	PROPOSED SAN. SEWER
SS	EXISTING SAN. SEWER

UTILITIES SHOWN REPRESENT THE BEST  
INFORMATION AVAILABLE FOR DESIGN. ADDITIONAL  
UTILITIES MAY BE PRESENT ON THIS PROJECT.  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR  
DETERMINING THE EXACT LOCATION, DEPTH AND  
SIZE OF ALL UNDERGROUND UTILITIES PRIOR TO  
CONSTRUCTION. THE CONTRACTOR SHALL BE  
LIABLE FOR ANY DAMAGE CAUSED BY THE  
FAILURE TO DO SO.

**SURVEY DISCLAIMER:**  
TOPOGRAPHIC SURVEY AND CONTOUR MAP USED IN  
PREPARING PLANS WAS PROVIDED BY MKEC ENGINEERING  
CONSULTANTS INC., 411 N. WEBB RD, WICHITA, KS.  
ENGINEER DOES NOT GUARANTEE SURVEY ELEVATIONS  
FOR ACCURACY. CONTRACTOR SHALL VERIFY ELEVATIONS  
AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

**BENCHMARK:**  
BM 1 - Chiseled Square front Center Inlet North  
Return Northwest Corner Pawnee and Meridian.  
ELEV.=1289.59 N.A.V.D. 88

PROJECT NO.: 20152242

CERTIFIED ENGINEERING DESIGN, P.A.  
1935 W. MAPLE STREET  
WICHITA, KANSAS 67213  
PH: (316)262-8808  
FAX: (316)262-1669

QuikTrip No. 0329R  
HARRY & OLIVER  
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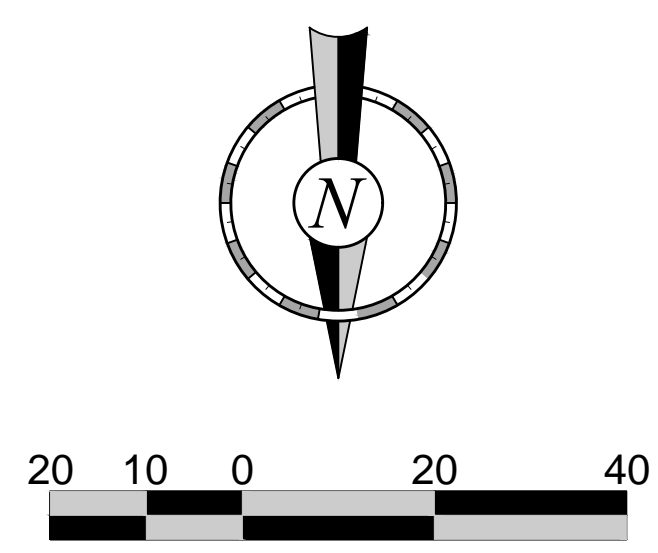
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REV	DATE	DESCRIPTION	ORIGINAL ISSUE DATE:

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PLAN & PROFILE

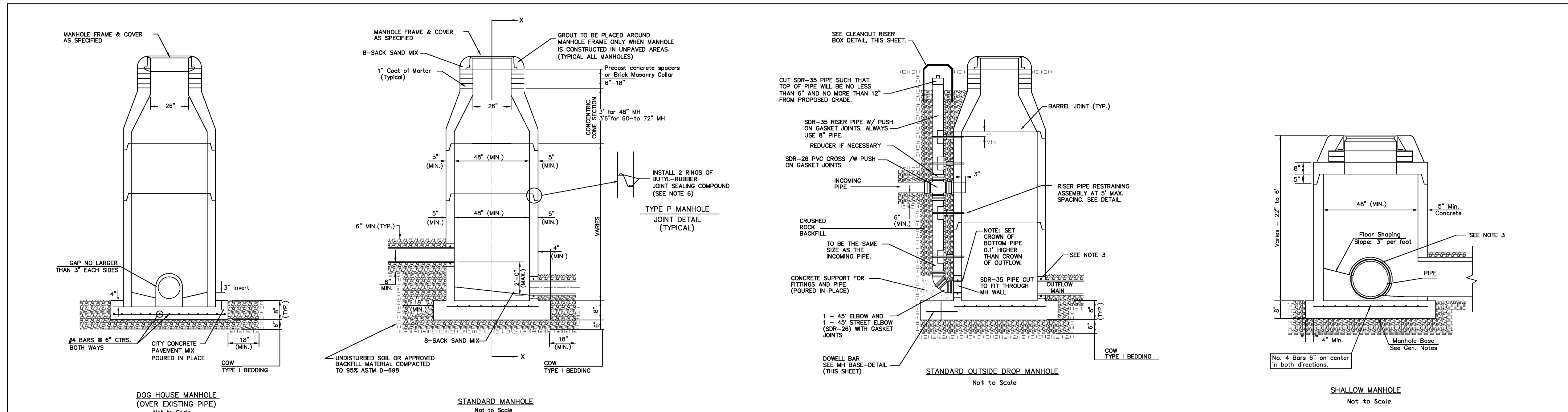
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**BUILT TO PLAN**



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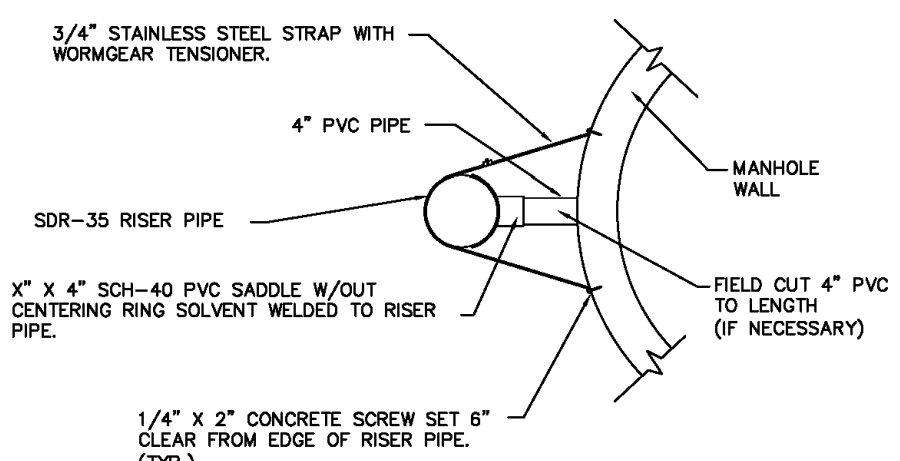
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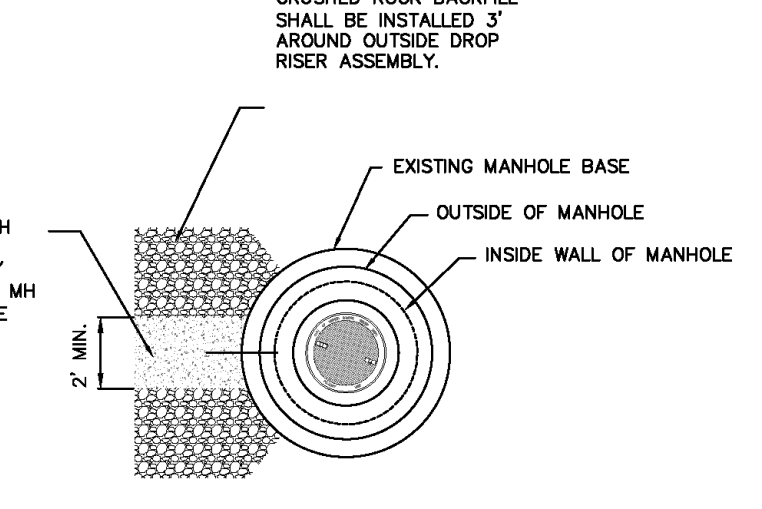
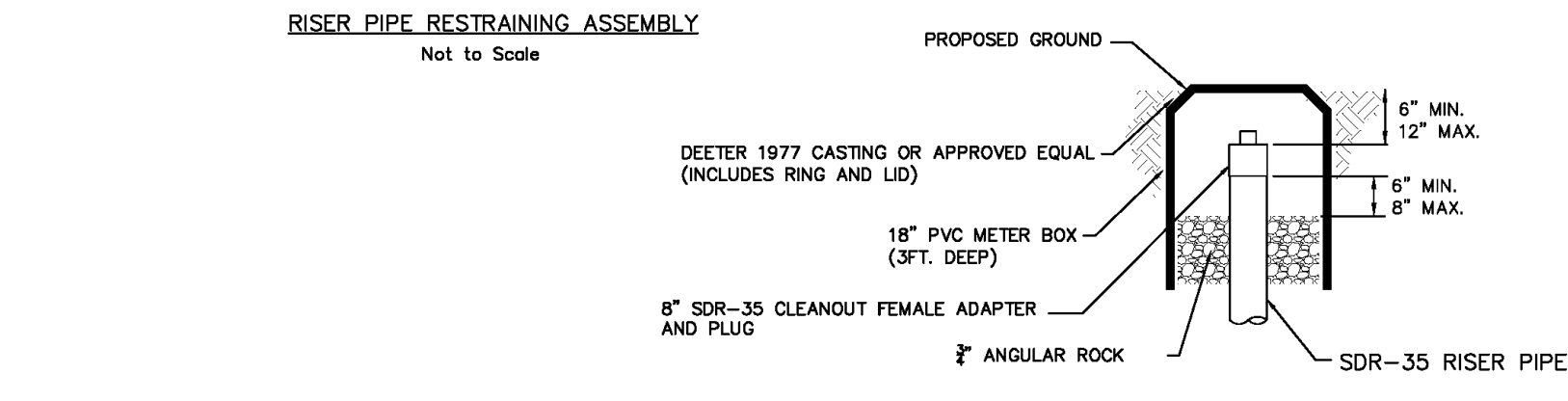
**PRECAST MANHOLE GENERAL NOTES**

- 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. 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.



**SANITARY SEWER MANHOLE DIAMETERS**

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



REVISED JANUARY 2015

**PRECAST  
SANITARY SEWER  
MANHOLE**

CITY ENGINEER  
**GARY JANZEN, P.E.**

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

**BUILT TO PLAN**

SS-101

PROJECT NO.: 20152242

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HARRY & OLIVER  
WICHITA, KS

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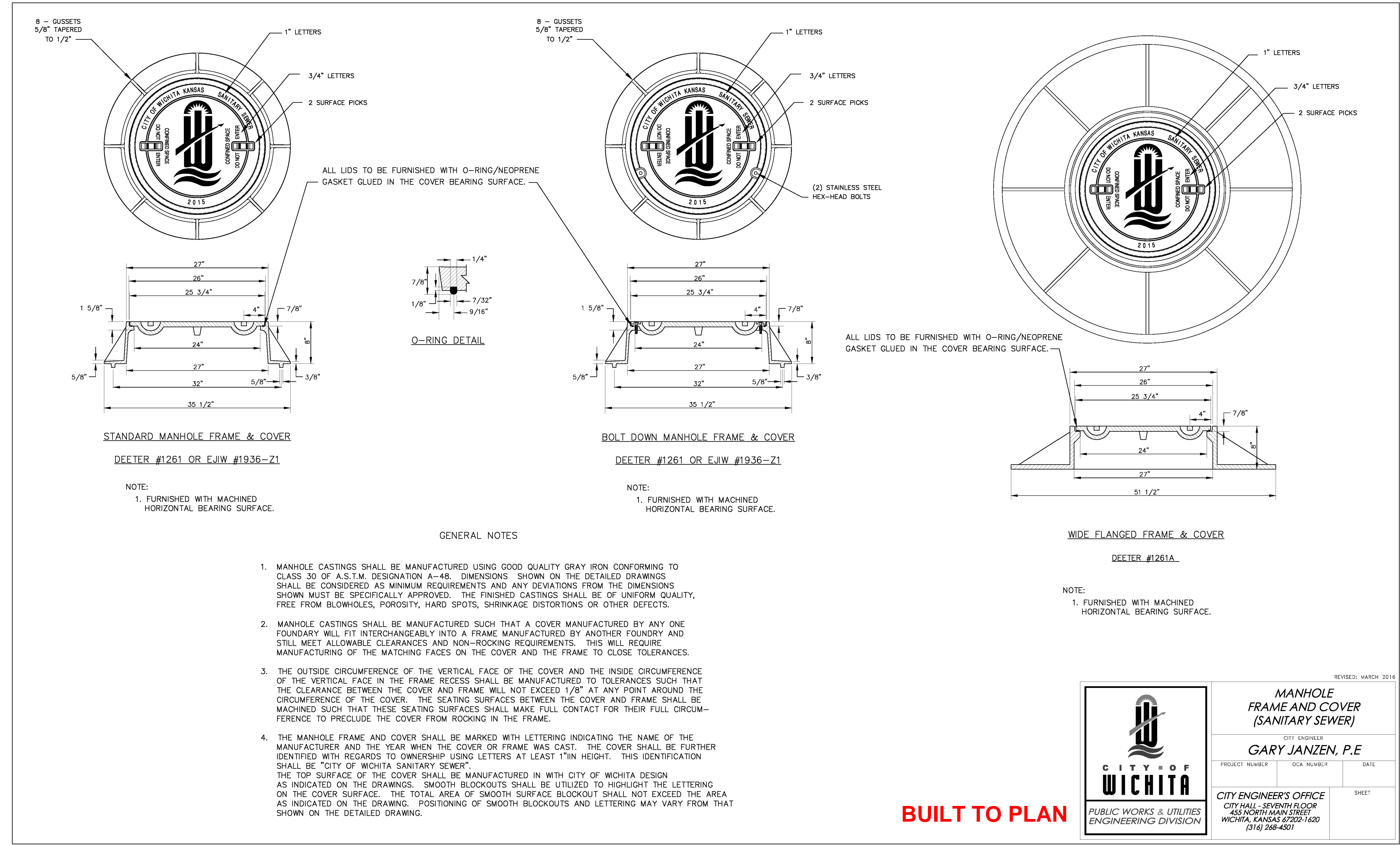
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SHEET TITLE:  
**MANHOLE DETAIL**

SHEET NUMBER:  
**3**

FILE LOCATION: \\S:\Drawing Files\Project LHM 01-04-11-11\01\_#0329R\DWG\03-29R\_TPS.dwg TAB NAME: MANHOLE DETAIL USER: eng2 SAVED: 08/17/2016 3:33 PM PLOTTED: 08/17/2016 3:33 PM

FILE LOCATION: \\Drawing Files\Project LHM 01-04-11\1101\_0329R\DWG\03-329R\_IPS.dwg TAB MANHOLE FRAME AND COVER DETAIL USER:engj SAVES:8/17/2016 3:32 PM PLOTTED:8/17/2016 3:33 PM



**BUILT TO PLAN**

REVISED: MARCH 2016

**MANHOLE FRAME AND COVER (SANITARY SEWER)**

CITY ENGINEER  
**GARY JANZEN, P.E.**

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REV	DATE	DESCRIPTION	ORIGINAL	ISSUE DATE:

SHEET TITLE:  
MANHOLE FRAME AND COVER DETAIL

SHEET NUMBER:  
**4**

SS-102

