

GENERAL NOTES

- ALL ELEVATIONS SHOWN ARE BASED ON MEAN SEA LEVEL.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT(48)HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:
KANSAS ONE CALL 687-2470
THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:
Cox Communications 262-4270 or 263-2061
SBC 1-800-870-8390
Kansas Gas Service 1-888-482-4950
Westar 1-800-383-1183
Aquila 1-800-303-0752
City of Wichita(Water & Sewer) 268-4555
- THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO PIPELINES.
- COST OF EXCAVATION, HAULING AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO OTHER ITEMS OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE INSPECTOR FOR THIS PROJECT 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT ON SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO REESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS SUCH IRONS SHALL BE REESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES AND BANK LINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE.
- INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA SHALL BE CARRIED THROUGH CONSTRUCTION. LOCAL RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA SHALL BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS.
- UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR 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. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. 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, THAT IN THE OPINION OF THE ENGINEER, 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 FLOODPLAIN 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.
- PROPERTIES WITHIN THE PROJECT LIMITS MAY HAVE UNDERGROUND SPRINKLER SYSTEMS IN THE PUBLIC RIGHT-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SALVAGE ALL SPRINKLER HEADS AND/OR VALVES AND GIVE SUCH MATERIAL TO THEIR OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED AS SUBSIDIARY TO THE CONTRACT PAY ITEMS OF WORK.
- ALL PROPOSED STUBS AND PLUGGED PIPES SHALL BE LOCATED WITH GREEN PLASTIC TAPE.
- PRIOR TO LAYING THE NEW SEWER LINES THE CONTRACTOR SHALL EXPOSE AND VERIFY THE ELEVATION, GRADE AND ALIGNMENT OF THE EXISTING SANITARY SEWER AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES FROM THE PLAN.
- THE CONTRACTOR MUST EXAMINE THE CONSTRUCTION SITE PRIOR TO BIDDING AND BE SATISFIED AS TO THE WORK SHOWN FOR COMPLETION. AFTER BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL NOT ASSERT THAT THERE WAS A MISUNDERSTANDING OF THE QUANTITIES OF WORK OR OF THE NATURE FOR THE WORK TO BE COMPLETED.
- EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION AVAILABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WHICH ARE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES. ANY LINES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL PIPE JOINTS SHALL BE LAID AND PUSHED 'FULL HOME', WITH THE BEVELED END OF THE SPOGOT MAKING FULL CONTACT WITH THE CHAMFERED AREA AT THE THROAT OF THE BELL OR SOCKET, WITH NO SEPARATION BETWEEN THEM. IF SEPARATION IS DETERMINED, THE PIPE SHALL BE EXCAVATED AND RE-LAID ACCORDING TO SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.
- AT LEAST 24 HOURS BEFORE CONNECTING NEW SEWER PIPE TO THE EXISTING SEWAGE SYSTEM, THE CONTRACTOR SHALL CONTACT THE CITY OF WICHITA SEWER DEPARTMENT (268-4024). THE CONTRACTOR SHALL KEEP ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION. TO PREVENT WATER OR DEBRIS FROM ENTERING THE EXISTING SEWER, A MECHANICAL PLUG SHALL BE INSTALLED AND MAINTAINED TO ISOLATE THE EXISTING SEWER FROM THE NEW CONSTRUCTION UNTIL THE NEW CONSTRUCTION IS CLEANED, TELEVISED AND HAS BEEN ACCEPTED. THE WATER USED FOR CLEANING SHALL NOT BE ADDED TO THE FLOW OF THE EXISTING SEWER. THE CLEANING OR OTHERWISE ACCUMULATED WATER SHALL BE PUMPED OR OTHERWISE REMOVED PRIOR TO TELEVISING.
- THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT EXISTING ROADWAYS AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES TO ENSURE SAFETY AS DIRECTED IN THE GENERAL CONDITIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- ALL SODDING, SEEDING, AND EROSION CONTROL OF THE AREAS DISTURBED BY CONSTRUCTION OF THE SANITARY SEWER AS SHOWN ON THE PLANS (SEE SHEET NO.3), SHALL BE "SUBSIDIARY" TO "SITE CLEARING & RESTORATION".
- THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.

SANITARY & STORM SEWER IMPROVEMENTS

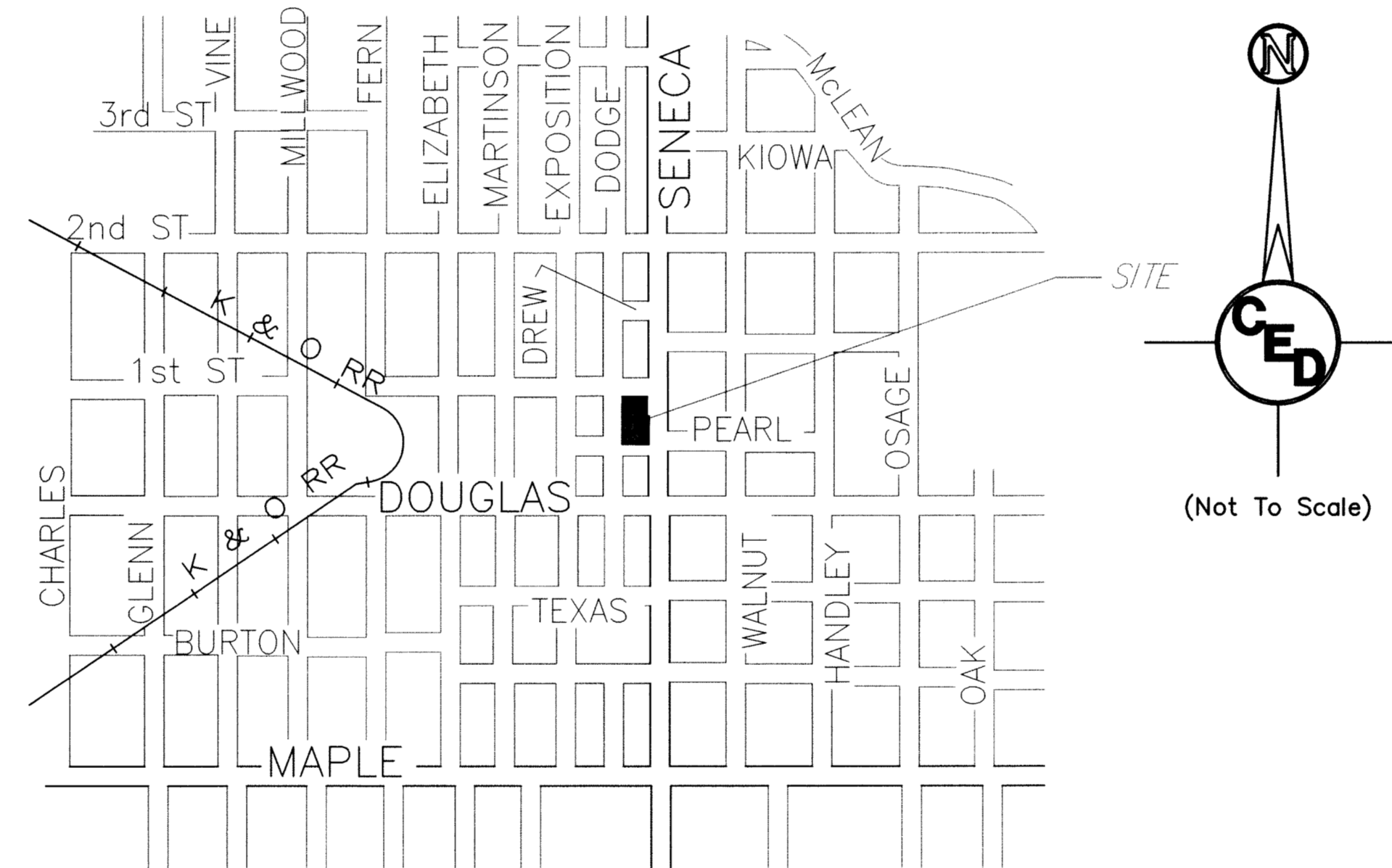
TO SERVE

BRAUM 1ST ADDITION

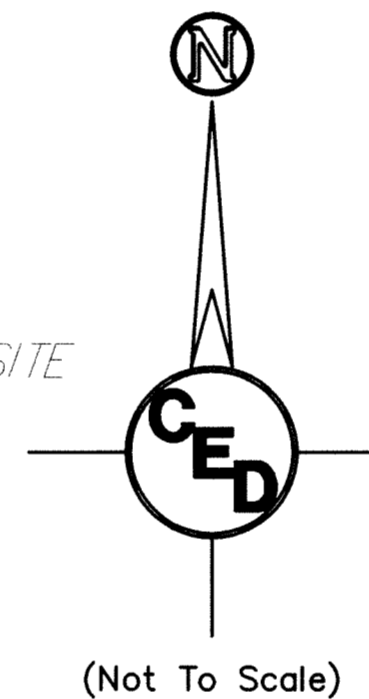
WICHITA, SEDGWICK COUNTY, KANSAS

CITY OF WICHITA PRIVATE PROJECT NO.:
2027 PPS (O.C.A. NO. 607861),
JAMES L. ARMOUR, P.E., CITY ENGINEER
JANUARY 2010

Sheet List Table	
Sheet Number	Sheet Title
01	Title Sheet
02	Survey Plan
03	Site-Staking Plan
04	Sanitary Sewer P&P
05	SWS P&P
06	SS MH Dtl
07	Area Inlet Detail



Vicinity Map
PROJECT LOCATED IN THE NE 1/4,
SE 1/4, SEC 19, T27S, R1E,
WICHITA, SEDGWICK COUNTY, KANSAS



(Not To Scale)

AS-BUILT PLANS - SANITARY SEWER
BUILT AS DESIGNED
Contractor: Utilities Plus
Inspector: Randy Voth, Certified Engineering Design
.pdf by: CC, June 7, 2010

RELEASED DATE: JUNE 10, 2010 (SANITARY SEWER)
.APRosas 7/10/2010

AS-BUILT PLANS - STORM SEWER
BUILT AS DESIGNED
Contractor: Utilities Plus
Inspector: Randy Voth, Certified Engineering Design
.pdf by: CC, 10 November 2010

APPROVED AS NOTED
By CITY ENGINEER OF WICHITA

Sanitary Sewers Julian Kallman 2-10

Storm Sewers Julian Kallman 2-10

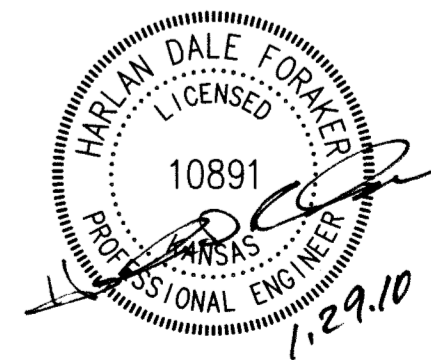
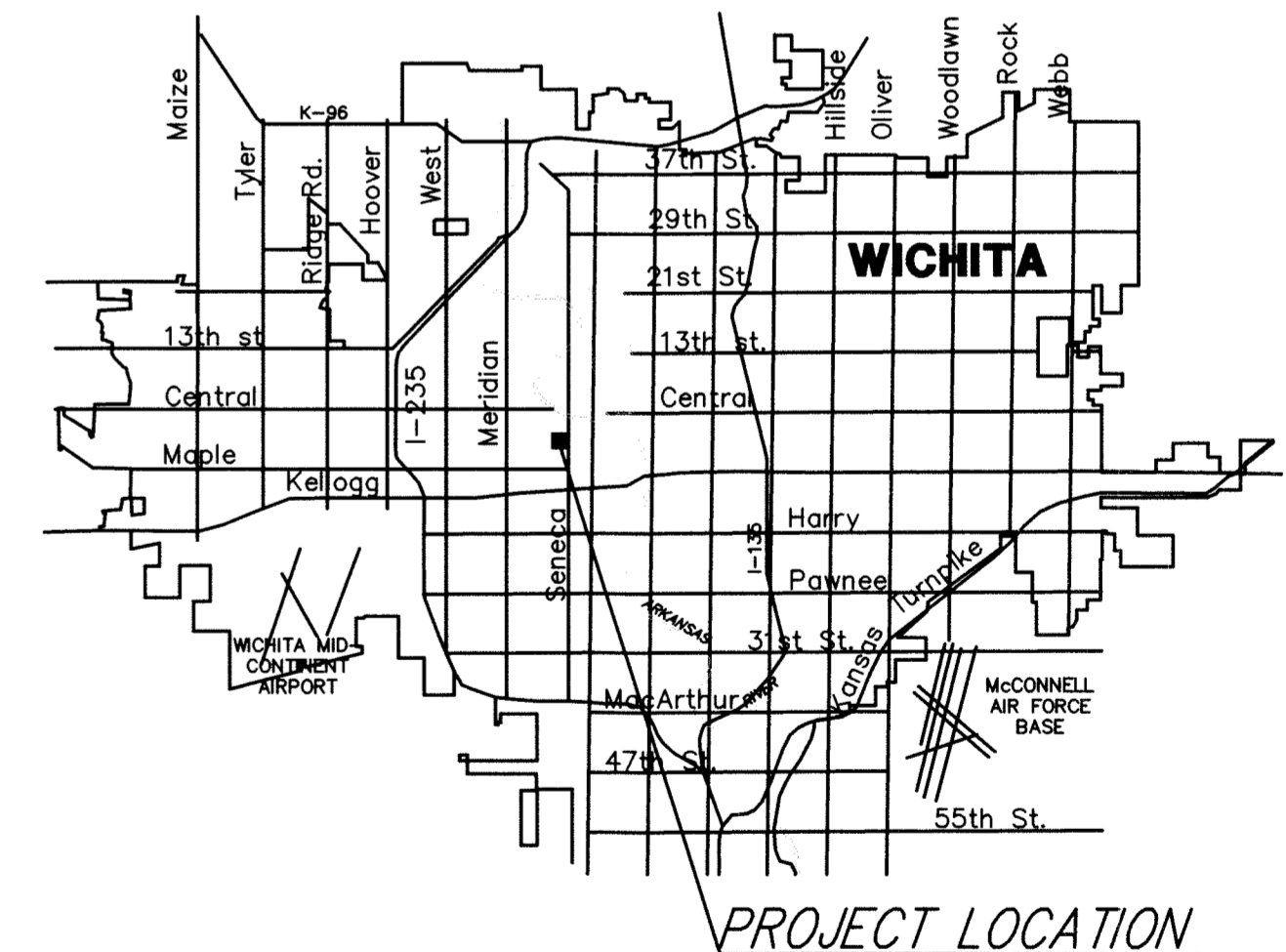
Driveway Approaches _____

Water Mains _____

Paving _____

NOTE TO CONTRACTOR

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. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR THE PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR WITHOUT SUCH INSPECTION NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER.



HORIZONTAL CONTROL POINTS				
C.P. 1	N 1685643.27	E 1644105.02	1/2"	ReBar w/Savoy Cap @ Prop. NW Cor.
C.P. 2	N 1685639.33	E 1644360.01	1/2"	ReBar w/Savoy Cap @ Prop. NE Cor.
C.P. 3	N 1685394.31	E 1644110.28	5/8"	ReBar @ Prop. SW Cor.
C.P. 4	N 1685399.60	E 1644375.26	1/2"	ReBar w/B-man Cap @ Prop. SE Cor.

Bench Mark:
Square Cut on top of curb 14.9' North of the NW
Corner of Lot 1, Block A, Braum 1st Addition:
Elevation = 1301.83 NAVD88

CED PROJ. NO. 20091878		CERTIFIED ENGINEERING DESIGN, P.A.	
CED	1935 WEST MAPLE	SHEET	1
	WICHITA, KANSAS 67213	TOTAL	7
	PH: (316) 262-8808 FAX: (316) 262-1669		

Preliminary Plat Braum 1st Addition

Wichita, Sedgwick County, Kansas

LEGAL DESCRIPTION:

Parcel 1: Lot 1, Joe's Addition, Wichita, Sedgwick County, Kansas

Parcel 2: Lots 21, 23, 25, 27 and 29 on Seneca Street, in Martinson's 2nd Addition to West Wichita, Sedgwick County, Kansas together with the East Half of Vacated Alley adjoining said Lots 21, 23, 25, 27 and 29 on the west and together with Vacated Pearl Street as platted in said Martinson's 2nd Addition, adjoining said Lot 21 and said East Half of vacated alley on the South.

Parcel 3: Lots 22, 24, 26, 28 and 30, Dodge Avenue, Martinson's 2nd Addition to West Wichita, Sedgwick County, Kansas, together with the West Half of vacated alley adjoining said Lots 22, 24, 26, 28 and 30 on the East and together with Vacated Pearl Street as platted in said Martinson's 2nd Addition, adjoining said Lot 22 and said West Half of vacated alley on the South.

Parcel 4: Lots 32, 34, 36 and 38 on Dodge Avenue, Martinson's Sixth Addition to Wichita, Sedgwick County, Kansas, together with the West Half of Vacated North-South Alley lying East of Lots 32, 34, 36 and 38.

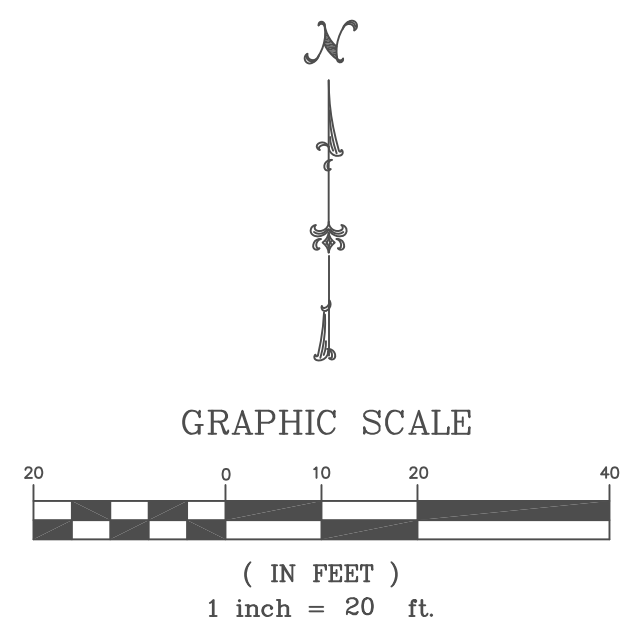
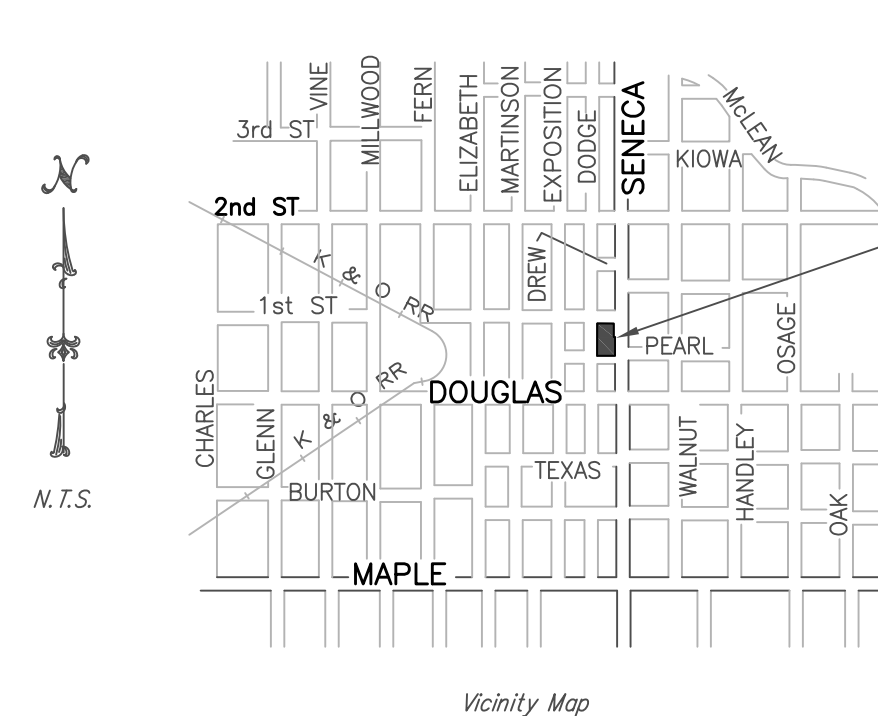
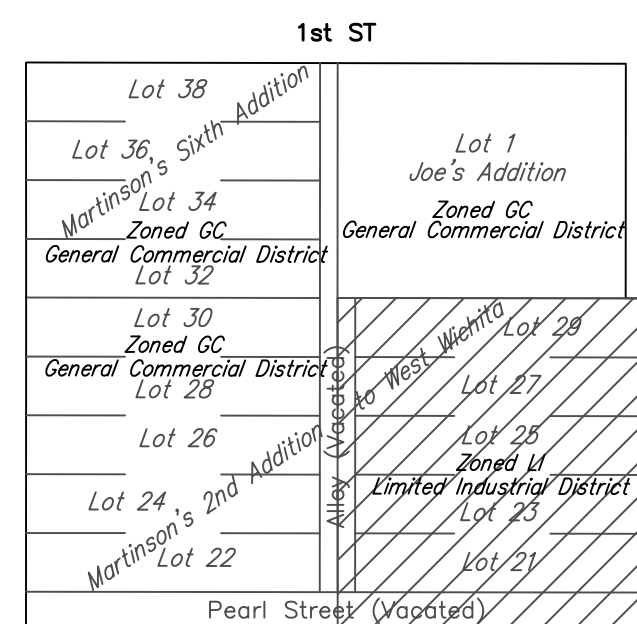
OWNER:
Retail Buildings, Inc.
Elaine Braum, President
3000 NE 63rd St
Oklahoma City, OK 73121

GROSS AREA: 62,593.04 sq.ft.±
1.44 Acres±

NET AREA: 60,694.57 sq.ft.±
1.39 Acres±

EXISTING ZONING: GC & LI

CONTROL NO'S: 199783, 199784, 199789, 199790, 199791,
200111, 200112, 23092

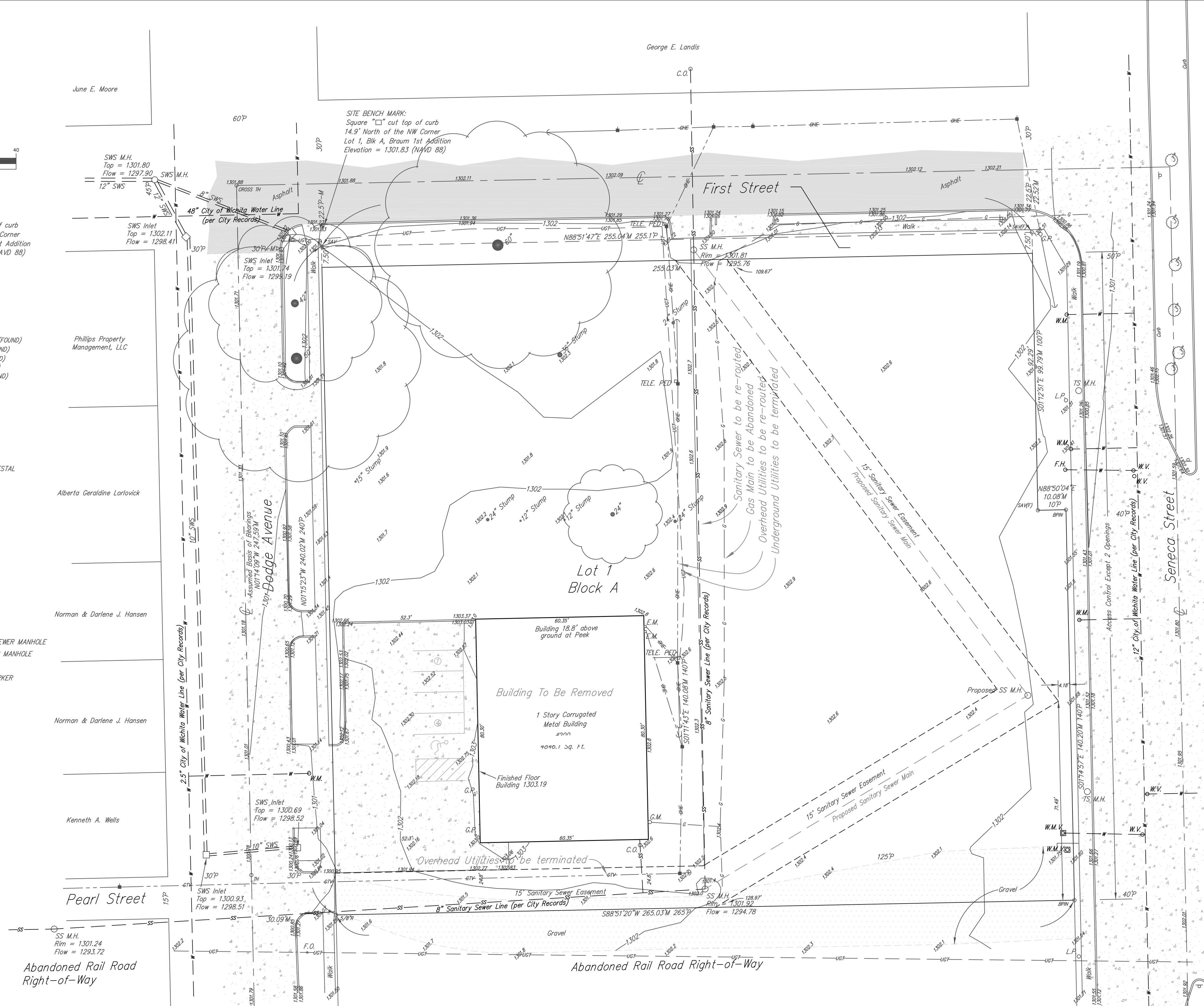


SITE BENCH MARK: Square "□" cut top of curb 14.9' North of the NW Corner Lot 1, Blk A, Braum 1st Addition Elevation = 1301.83 (NAVD 88)

- LEGEND:
- P = Platted
 - M = Measured
 - C = Calculated
 - D = Described
- 5/8" R 5/8" REBAR (FOUND)
 - BPIN 1/2" REBAR W/BALIGHMAN CAP (FOUND)
 - MACON 1/2" REBAR W/MACON CAP (FOUND)
 - TH CITY OF WICHITA CONTROL (FOUND)
 - SAV 1/2" REBAR W/SAVDY CAP (SET)
 - SAV(T) 1/2" REBAR W/SAVDY CAP (FOUND)

- LEGEND:
- G = GAS MAIN
 - W = WATER MAIN
 - SS = SANITARY SEWER
 - SWS = STORM WATER SEWER
 - UGE = UNDER GROUND ELECTRIC
 - UGT = UNDER GROUND TELEPHONE

- TELE. PED TELEPHONE PEDESTAL
- E.B. ELECTRIC BOX
- G.M. GAS METER
- W.M. WATER METER
- W.V. WATER VALVE
- F.H. FIRE HYDRANT
- M.W. MONITOR WELL
- C.O. CLEAN OUT
- L.P. LIGHT POLE
- POWER POLE
- HIGH LINE POLE
- DUY ANCHOR
- 4 SIGN
- G.P. GUARD POST
- SWS M.H. STORM WATER SEWER MANHOLE
- SS M.H. SANITARY SEWER MANHOLE
- G.P. DUY POLE
- F.O. FIBER OPTIC MARKER



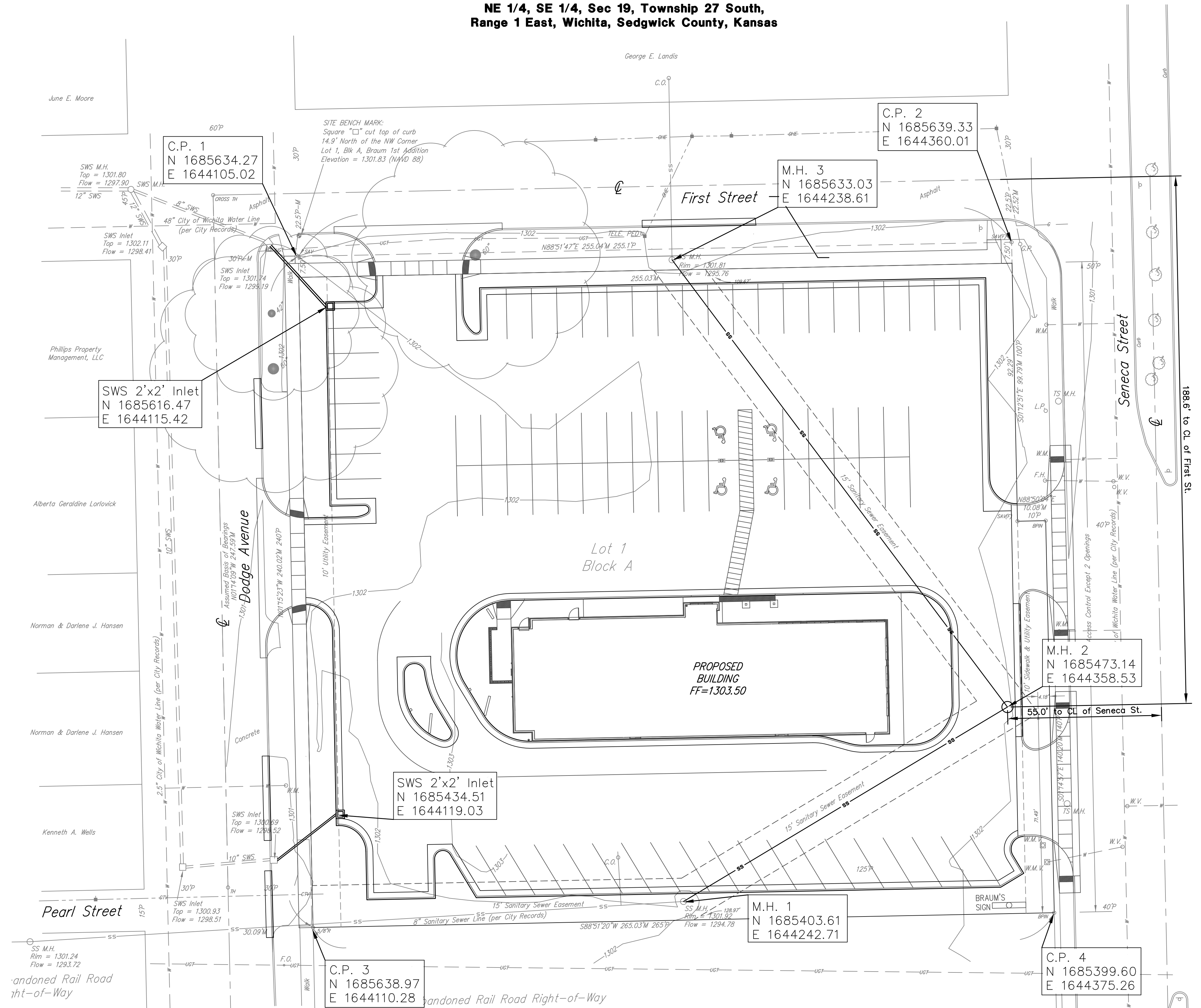
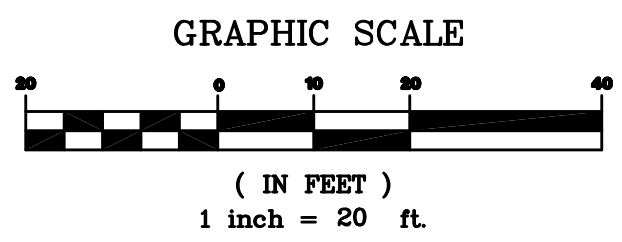
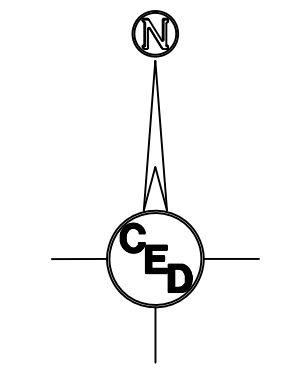
NOTE:
Location of all utilities shown on this drawing, reflect the best information available, consisting of both field observation and information from the records of the various utility companies. Before completing any final design or beginning any excavation on this site, contact the appropriate utility companies for verification of the utility locations.

Savoy Company, P.A.
Land Surveyors
433 S. Hydraulic, Wichita, KS 67211-1911
www.savoyco.com

15 May 2009
PROJECT NO. 09EE10673 P

SITE STAKING & CONTROL PLAN

**BRAUM 1ST ADDITION
SANITARY SEWER IMPROVEMENTS**
NE 1/4, SE 1/4, Sec 19, Township 27 South,
Range 1 East, Wichita, Sedgwick County, Kansas



Bench Mark:
Square Cut on top of curb 14.9' North of the NW
Corner of Lot 1, Block A, Braum 1st Addition:
Elevation = 1301.83 NAVD88

HORIZONTAL CONTROL POINTS			
C.P. 1	N 1685643.27	E 1644105.02	1/2" ReBar w/Savoy Cap @ Prop. NW Cor.
C.P. 2	N 1685639.33	E 1644360.01	1/2" ReBar w/Savoy Cap @ Prop. NE Cor.
C.P. 3	N 1685394.31	E 1644110.28	5/8" ReBar @ Prop. SW Cor.
C.P. 4	N 1685399.60	E 1644375.26	1/2" ReBar w/Bman Cap @ Prop. SE Cor.

SURVEY DISCLAIMER:
TOPOGRAPHIC SURVEY AND CONTOUR MAP USED IN PREPARING PLANS WAS PROVIDED BY SAVOY COMPANY, P.A., 535 S. EMPORIA, SUITE 104, WICHITA, KS. ENGINEER DOES NOT GUARANTEE SURVEY ELEVATIONS FOR ACCURACY. CONTRACTOR SHALL VERIFY ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

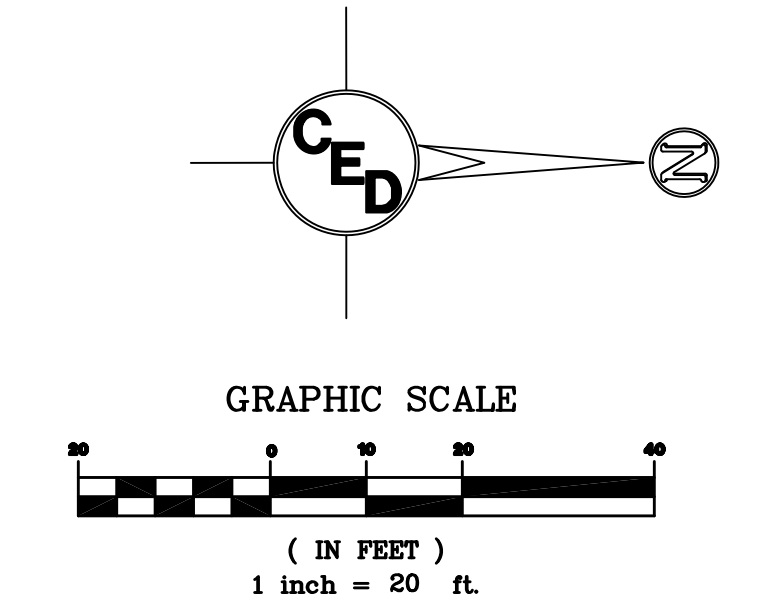
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**BRAUM'S
SITE STAKING PLAN**

1st ST. N. & SENECA
CED PROJ. NO.: 20091828
CERTIFIED ENGINEERING DESIGN, P.A.

1935 WEST MAPLE
WICHITA, KANSAS 67213
PH.(316)262-8808 FAX.(316)262-1669

DESIGNED: HDF	SCALE: 1" = 20'	SHEET 3
DRAWN: PDC	DATE: 9.23.09	
CHECKED: HDF	CED FILE: BRAUM SPLN 10	TOTAL 7



Sta. 10+00, SS Line 1
The Contractor shall plug existing line(N) in accordance with City Specifications. Core existing MH as required to install 8" PVC pipe. All imperfections shall be filled with hydraulic cement.
Contractor shall raise manhole rim 12" in accordance with City Standards & Specifications.
Existing FL Out (N) = 1294.78
Proposed FL Out (NE) = 1294.78
N 1685403.61
E 1644242.71

Install 135.09 L.F. of 8" PVC Pipe at 0.3% Slope

STA. 10+85.89, CAUTION!!! PROP. NEW 6" FIRE PROTECTION LINE, APPROX. CLEARANCE=19" 6" CONCRETE ENCASEMENT OF 8" SEWER LINE 10 L.F. EITHER SIDE(20 L.F. TOTAL) OF FIRE LINE IN ACCORDANCE W/ CITY SPECIFICATIONS. (REF. 1517 PPW PRIVATE PROJECT PLANS.)

Install 199.86 L.F. of 8" PVC Pipe at 0.3% Slope

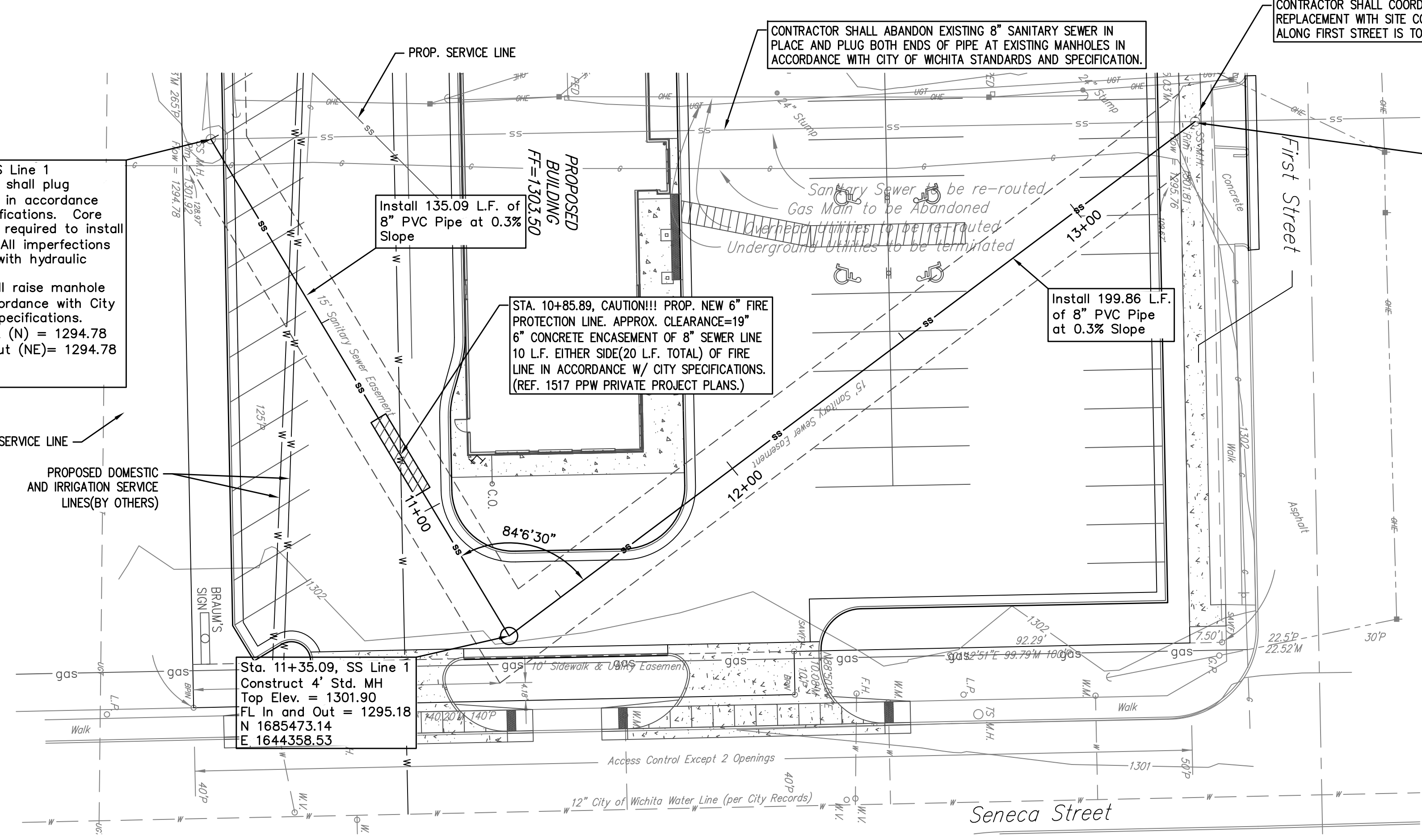
Sta. 13+34.95, SS Line 1
The Contractor shall plug existing line(N) in accordance with City Specifications. Core existing MH as required to install 8" PVC pipe. All imperfections shall be filled with hydraulic cement.
Existing FL In (S) = 1295.78
Proposed FL In (SE) = 1295.78
N 1685633.03
E 1644238.61

BACKFILL & COMPACTION NOTE:
CONTRACTOR SHALL BACKFILL AND COMPACT FILL MATERIAL OVER THE NEW 8" SS LINE WITHIN THE PROPOSED PARKING LOT PAVEMENT AREA IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATION, "801.6 BACKFILLING AND COMPACTION".

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.

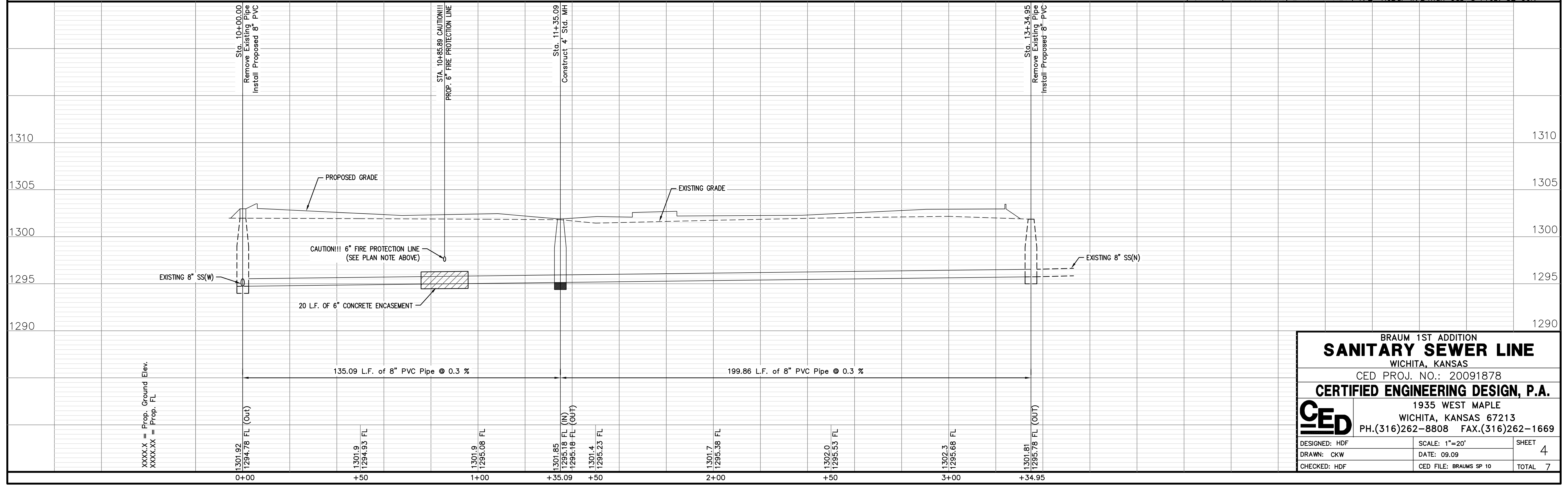
Bench Mark:
Square Cut on top of curb 14.9' North of the NW Corner of Lot 1, Block A, Braum 1st Addition:
Elevation = 1301.83 NAVD88

BUILT PER PLAN



LINE NO. 1 SANITARY SEWER PROFILE

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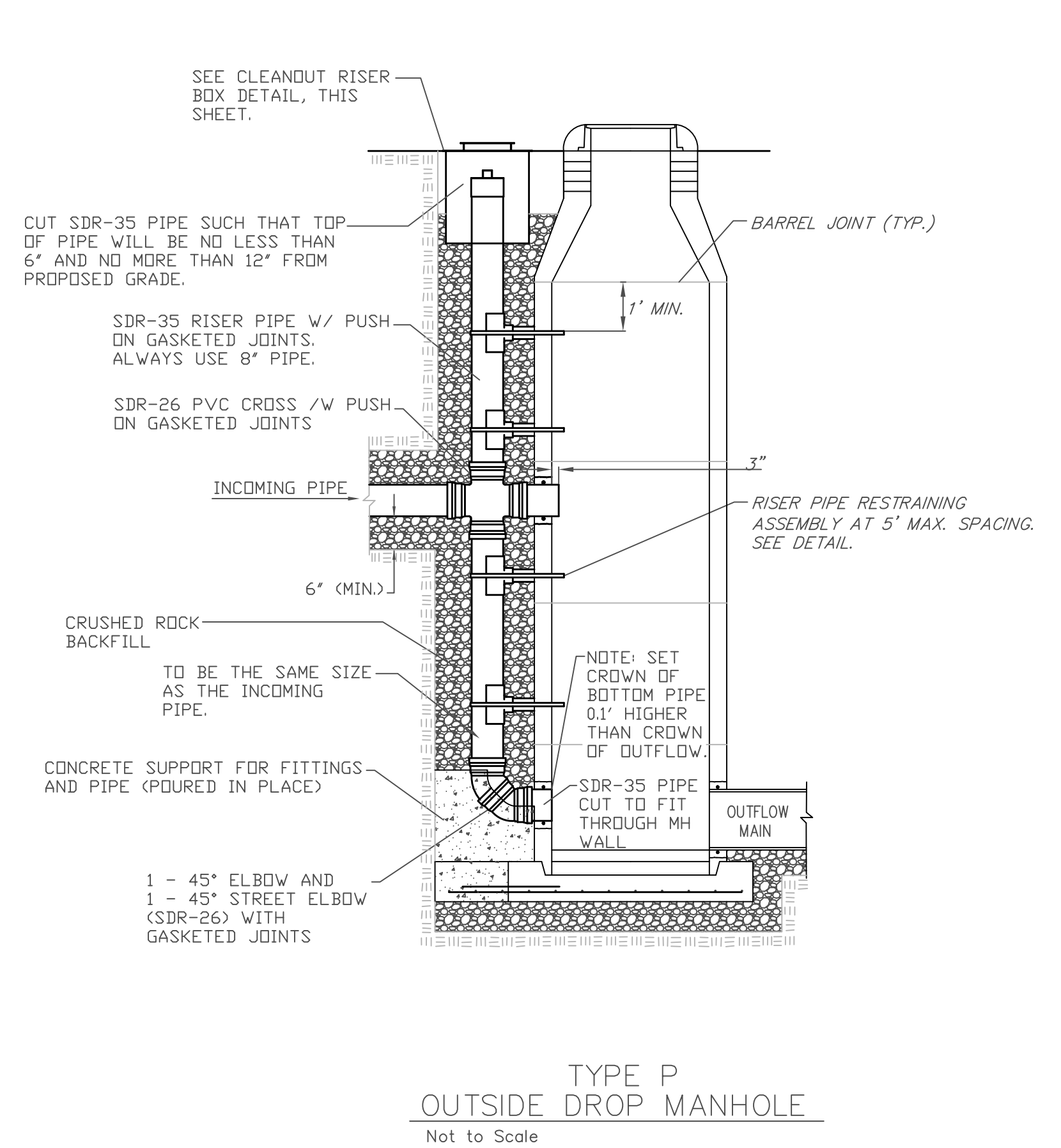
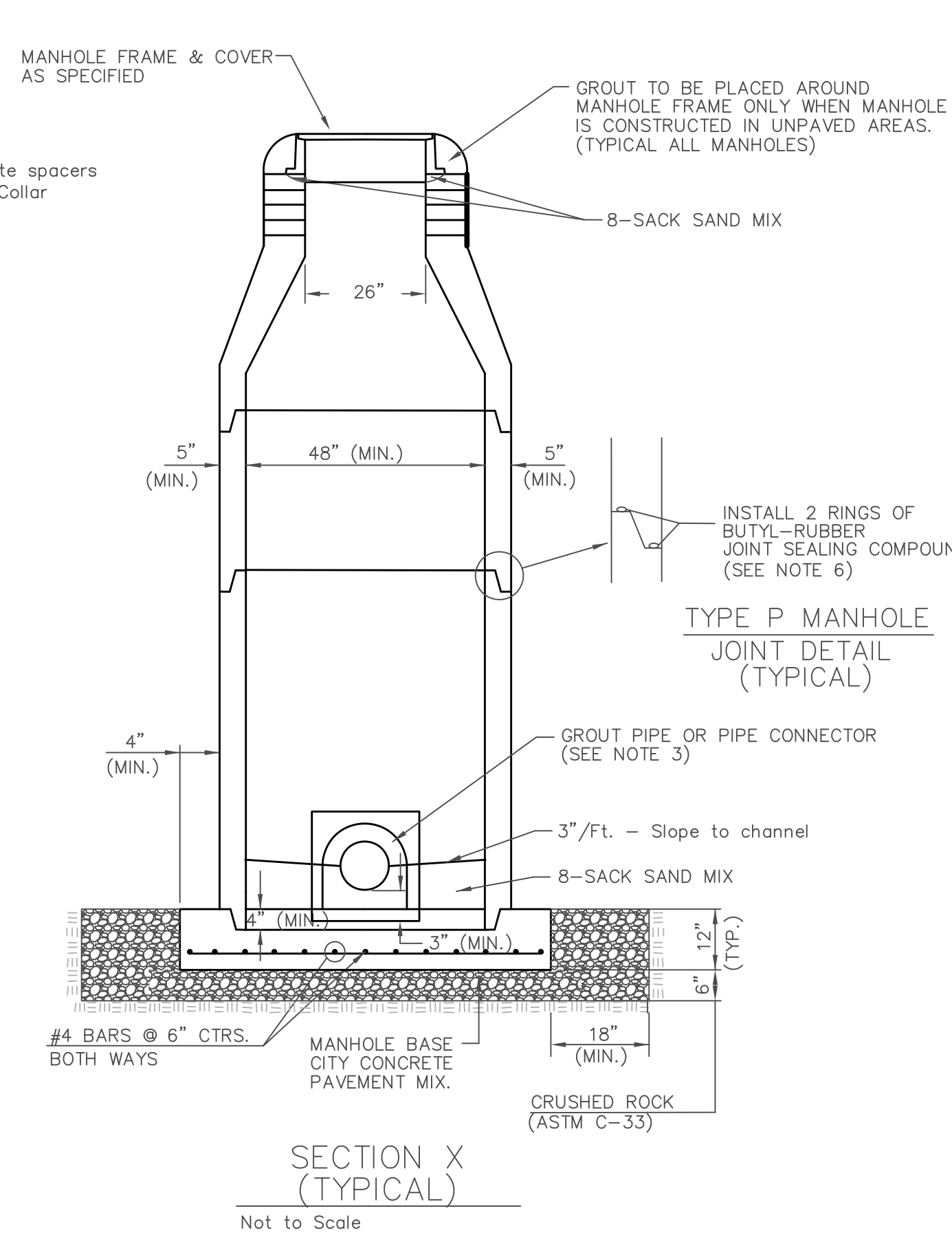
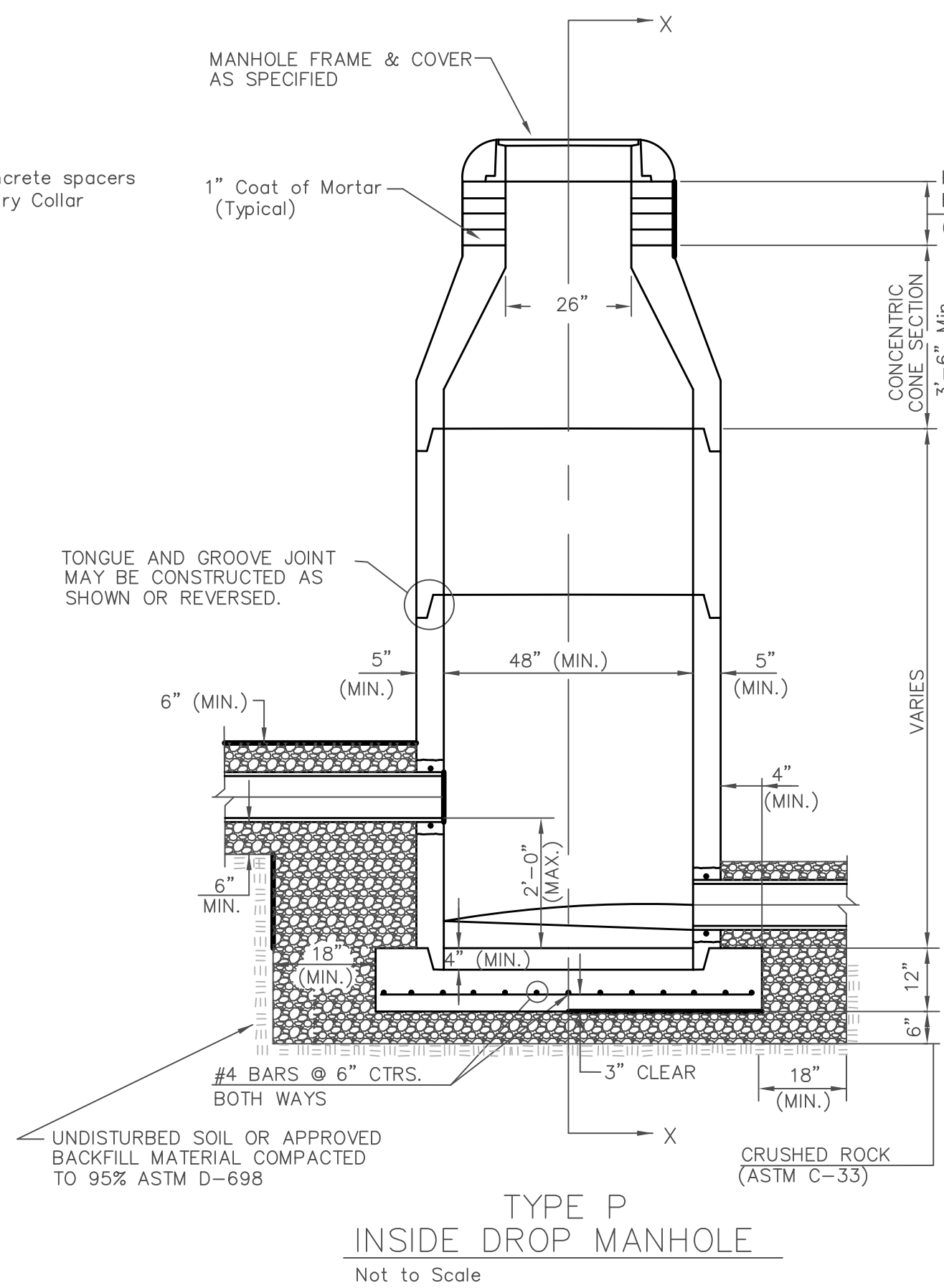
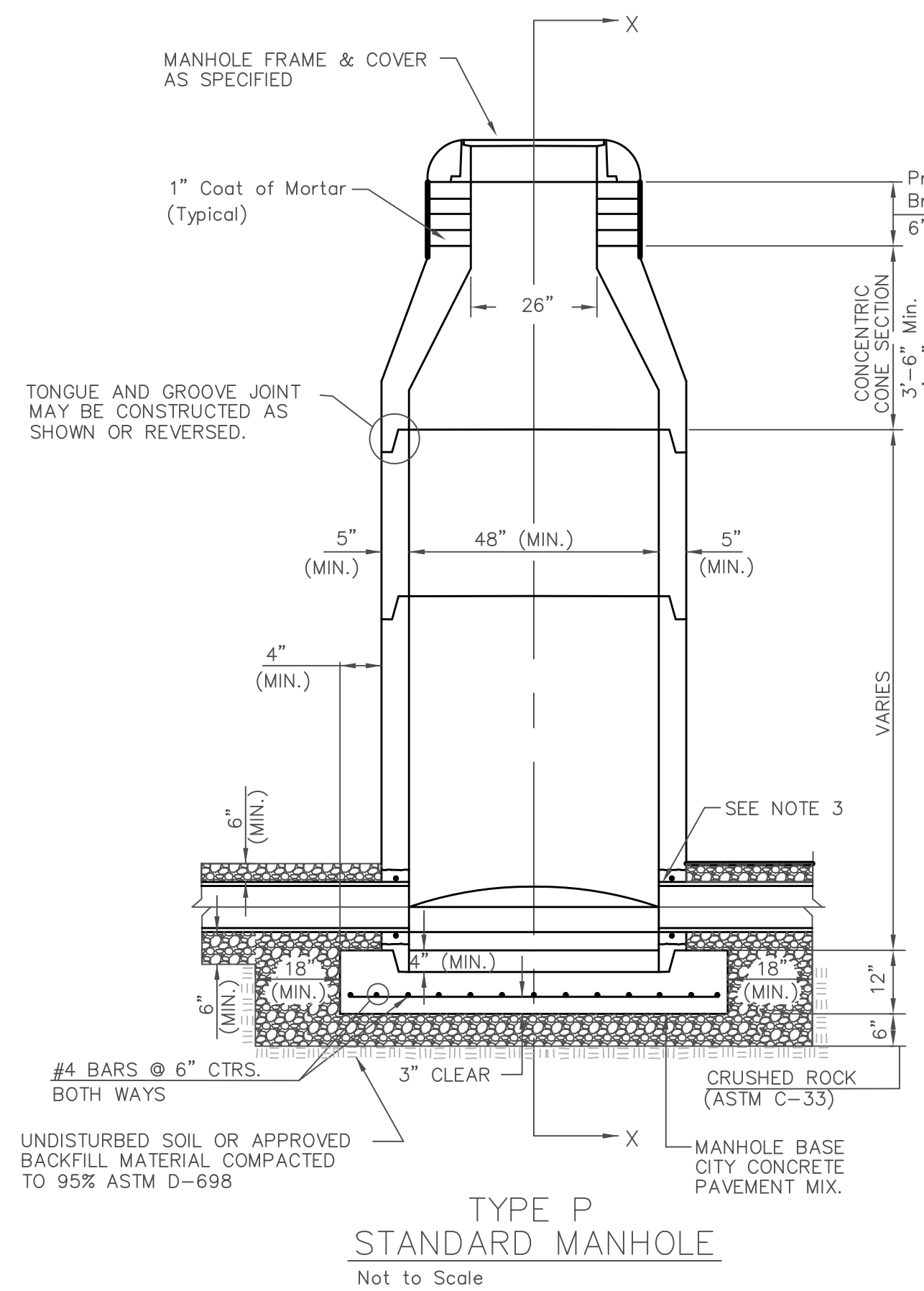
BRAUM 1ST ADDITION
SANITARY SEWER LINE
WICHITA, KANSAS
CED PROJ. NO.: 20091878
CERTIFIED ENGINEERING DESIGN, P.A.
1935 WEST MAPLE
WICHITA, KANSAS 67213
PH.(316)262-8808 FAX.(316)262-1669

DESIGNED: HDF	SCALE: 1"=20'	SHEET
DRAWN: CKW	DATE: 09.09	4
CHECKED: HDF	CED FILE: BRAUMS SP 10	TOTAL 7

XXXX X = Prop. Ground Elev.
XXXXXX = Prop. FL

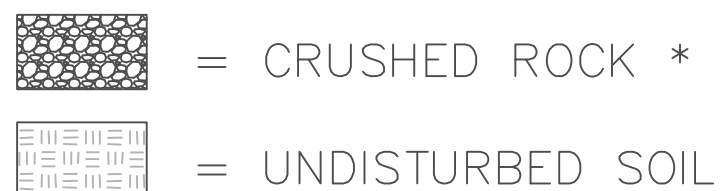
SEWER APPURTENANCES DETAILS

ADOPTED AS STANDARD DESIGN BY CITY OF WICHITA, KS AUGUST 2007



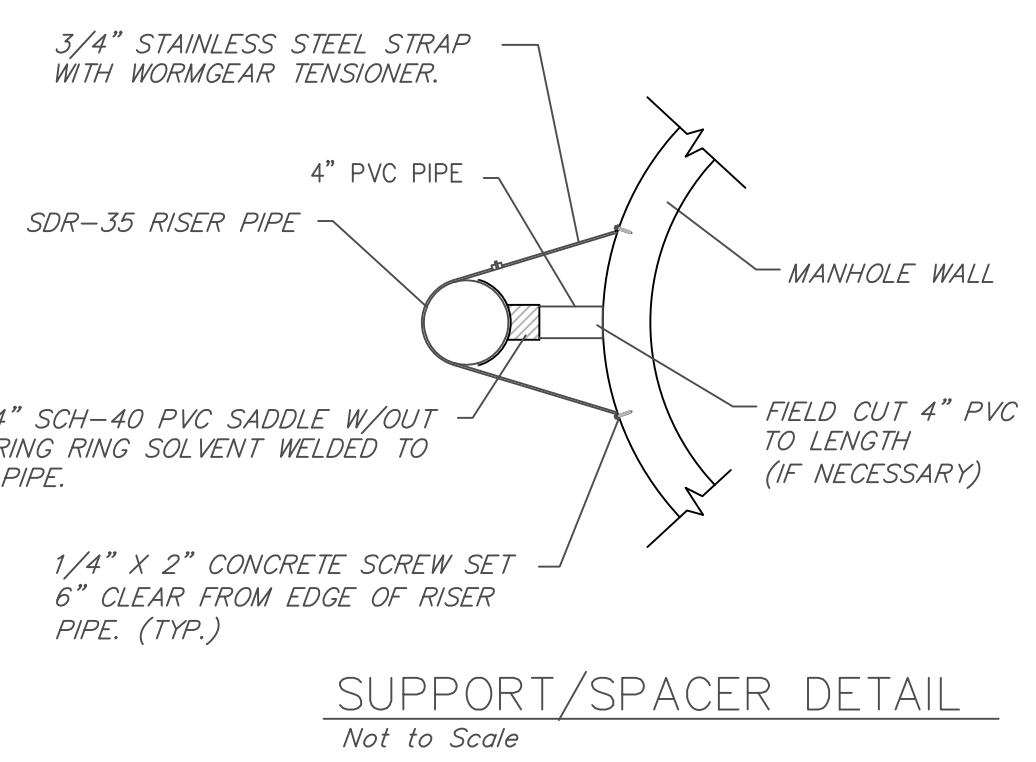
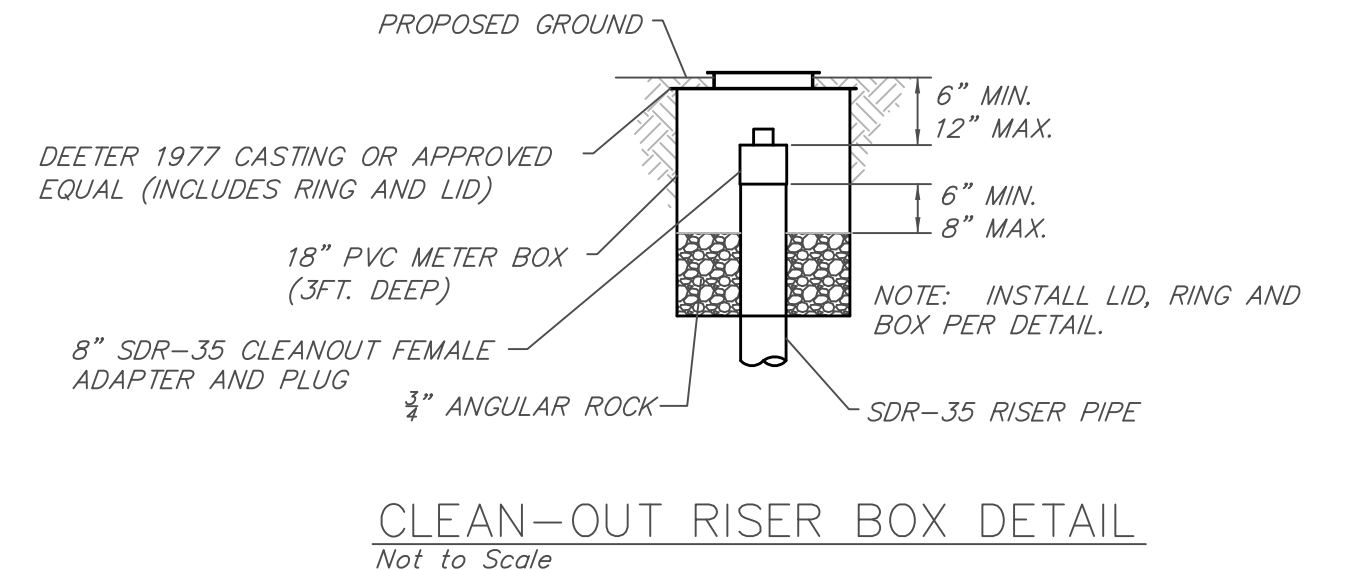
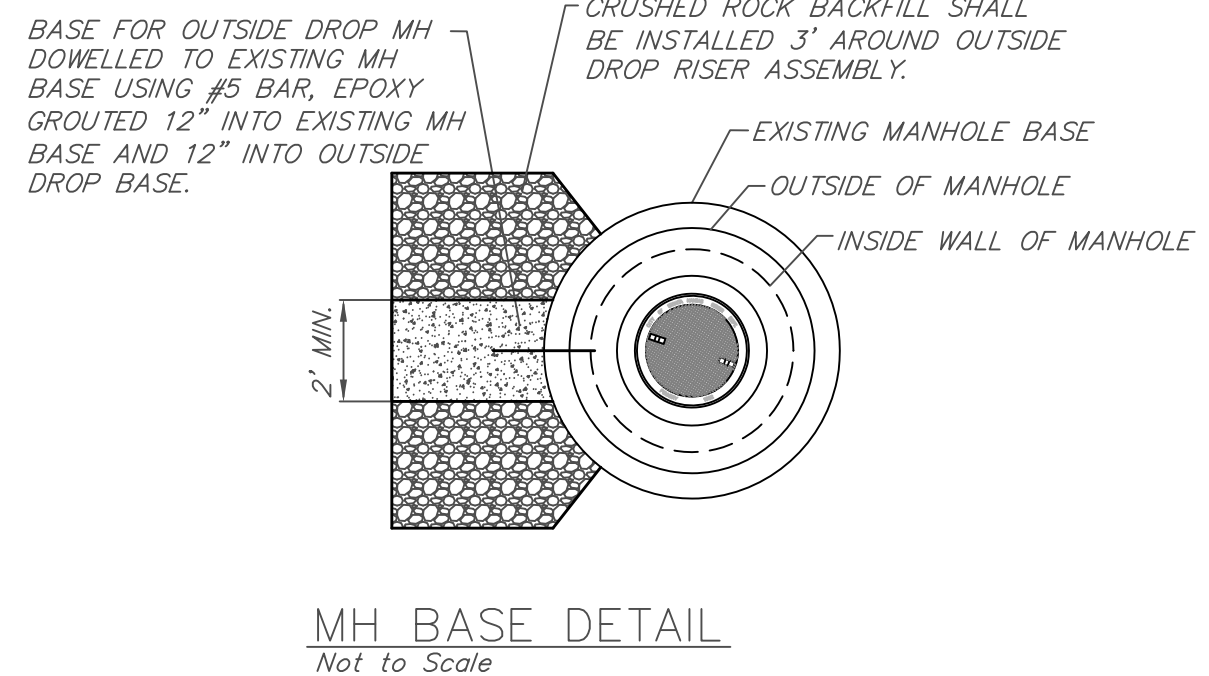
PRECAST MANHOLE GENERAL NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUDED IN PLACE WITH NON-SHRINK GROUT. 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.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. 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.
9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
10. 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.
11. 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.
12. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.



* CRUSHED ROCK USED FOR ENCASEMENT AND BEDDING SHALL CONFORM TO ASTM C-33, GRADATION NO. 67, AND SHALL MEET ALL REQUIREMENTS FOR PORTLAND CEMENT CONCRETE PAVEMENT COARSE AGGREGATE, SECTION 406.2, CITY OF WICHITA STANDARD SPECIFICATIONS. ALL CRUSHED ROCK FOR BEDDING AND ENCASEMENT SHALL EXTEND TO THE LIMITS OF THE MANHOLE EXCAVATION.

13. 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 GROUDED THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUDED 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.
14. THE FLOORS OF ALL MANHOLES SHALL 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 EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. 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.
15. 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.
16. THE VERTICAL DROP IN INSIDE DROP 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.
17. STANDARD MANHOLES AND STANDARD INSIDE DROP 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.
18. A 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.
19. 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.
20. REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.
21. FRAMES AND CHIMNEYS OF ALL MANHOLES CONSTRUCTED IN A FLOODWAY OR UNDER A PAVED SURFACE SHALL BE SEALED WITH AN EXTERNAL CHIMNEY SEAL AS MANUFACTURED BY CRETEX SPECIALTY PRODUCTS, OR PRE-APPROVED EQUAL. THE CHIMNEY SEAL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM C-877 TYPE II, AND HAVE PASSED THE ASTM C-1244 TEST. EXTERNAL JOINT SEAL SHALL CONSIST OF A COLLAR 9" TO 18" WIDE WITH AN OUTER LAYER OF POLYETHYLENE WITH A MINIMUM TENSILE STRENGTH OF 4,000 PSI AND A MINIMUM TEAR RESISTANCE OF 1500 PSI, AND AN UNDER LAYER OF RUBBERIZED MASTIC REINFORCED WITH WOVEN POLYPROPYLENE FABRIC, WITH TWO 5/8" STEEL STRAPS LOCATED WITHIN THE COLLAR 3/4" FROM EACH EDGE AND CONFINED IN TUBES THAT ISOLATE THEM FROM THE MASTIC AND ALLOW THEM TO SLIP FREELY WHEN MECHANICALLY TIGHTENED AND LOCKED AROUND THE MANHOLE JOINT, AND FURNISHED WITH A MINIMUM OF 6" OVERLAP AND A CLOSING FLAP TO COVER ANY REMAINING EXPOSED STRAP.
22. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL, CRETEXWRAP EXTERNAL JOINT SEAL, OR PRE-APPROVED EQUAL. EXTERNAL JOINT SEAL SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, AND SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM C-877 TYPE II, AND HAVE PASSED THE ASTM C-1244 TEST. EXTERNAL JOINT SEAL SHALL CONSIST OF A COLLAR 9" TO 18" WIDE WITH AN OUTER LAYER OF POLYETHYLENE WITH A MINIMUM TENSILE STRENGTH OF 4,000 PSI AND A MINIMUM TEAR RESISTANCE OF 1500 PSI, AND AN UNDER LAYER OF RUBBERIZED MASTIC REINFORCED WITH WOVEN POLYPROPYLENE FABRIC, WITH TWO 5/8" STEEL STRAPS LOCATED WITHIN THE COLLAR 3/4" FROM EACH EDGE AND CONFINED IN TUBES THAT ISOLATE THEM FROM THE MASTIC AND ALLOW THEM TO SLIP FREELY WHEN MECHANICALLY TIGHTENED AND LOCKED AROUND THE MANHOLE JOINT, AND FURNISHED WITH A MINIMUM OF 6" OVERLAP AND A CLOSING FLAP TO COVER ANY REMAINING EXPOSED STRAP.



STANDARD TYPE 'P' MANHOLES		
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