

GENERAL NOTES:

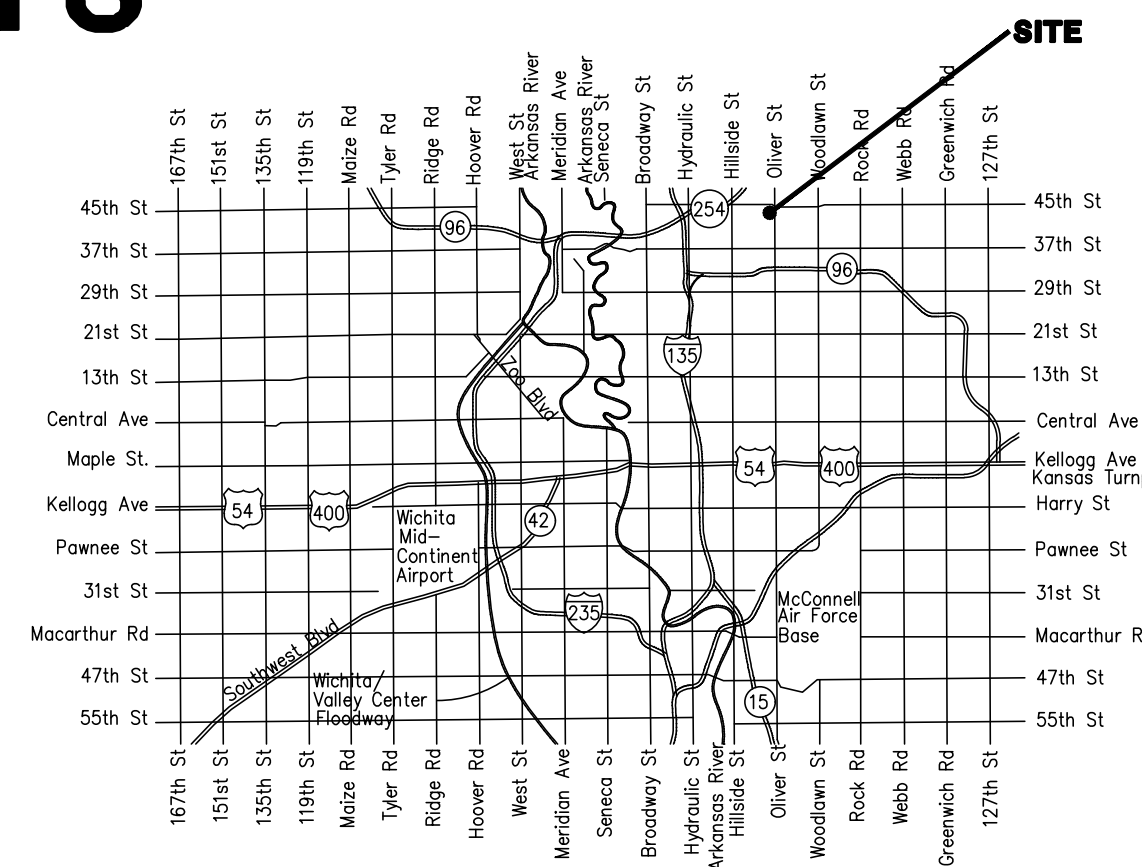
- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
 - Kansas One-Call 687-2470

The Contractor must notify the following in case of an emergency:

 - AT&T 1-800-246-8464
 - Black Hills Energy 1-800-694-8989
 - City of Wichita Water & Sewer 1-316-219-8921
 - 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 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. 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 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.
- 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 City 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 abutting 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 Engineering 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 final grades by the contractor.
- The Contractor shall notify the inspecting engineer and Tom Mason at 316-268-4574 with the City of Wichita with the anticipated construction start date and notify them of project completion. Staking and inspection for this project will be the responsibility of the Contractor.
- If traffic will be impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Mike Armour 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.
- 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.
- Any sidewalk, drive approach, 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.
- All applicable fees (tap, equity, in lieu of & main benefit) must be paid before any connections can be made on this project. Quotes can be obtained on fees by calling 316-268-4555.
- City Maintenance of sanitary sewer mains ends at last structure within the easement or right-of-way.
- All stubs and capped 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 the stub is unusable due to elevation grade or alignment, the Contractor shall remove the stub and plug the hole, and reshape the existing manhole invert to provide smooth flow. Where connecting to an existing manhole that does not have an existing stub, the Contractor shall core 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 limit the extent of trench open overnight and weekends to less than 50 feet.
- 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. 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.
- Any over excavation from manhole and pipe removal shall be backfilled with AB-3 compacted to 90-95% ASTM D698.
- The Contractor shall protect from damage and support existing utilities through construction as approved by the utility owner and the Engineer at the contractors expense.

SANITARY SEWER IMPROVEMENTS TO SERVE LOT 1 BLOCK D EAGLES LANDING AT NORTH OLIVER 2ND CITY OF WICHITA, KANSAS FEBRUARY 2020 4714 E EAGLES LANDING CT

GARY JANZEN, P.E. CITY ENGINEER
PROJECT NUMBER
2020-005347 PPS (184011)



Vicinity Map

T. Mason - City of Wichita, Inspector
Stub
Release Date: 4/27/2020
: apr 5/1/2020

| SHEET INDEX | |
|--------------|--------------------------|
| Sheet Number | Sheet Title |
| 1 | COVER |
| 2 | LINE NO.1 PLAN & PROFILE |
| 3 | MANHOLE DETAIL |
| 4 | MH FRAME & COVER DETAIL |
| 5 | PLAT |

SANITARY SEWER IMPROVEMENTS

LOT 1 BLOCK D
EAGLES LANDING AT
NORTH OLIVER 2ND

4714 E EAGLES LANDING CT
WICHITA, KS 67220

CERTIFIED ENGINEERING DESIGN, P.A.
CIVIL ENGINEERING SERVICES



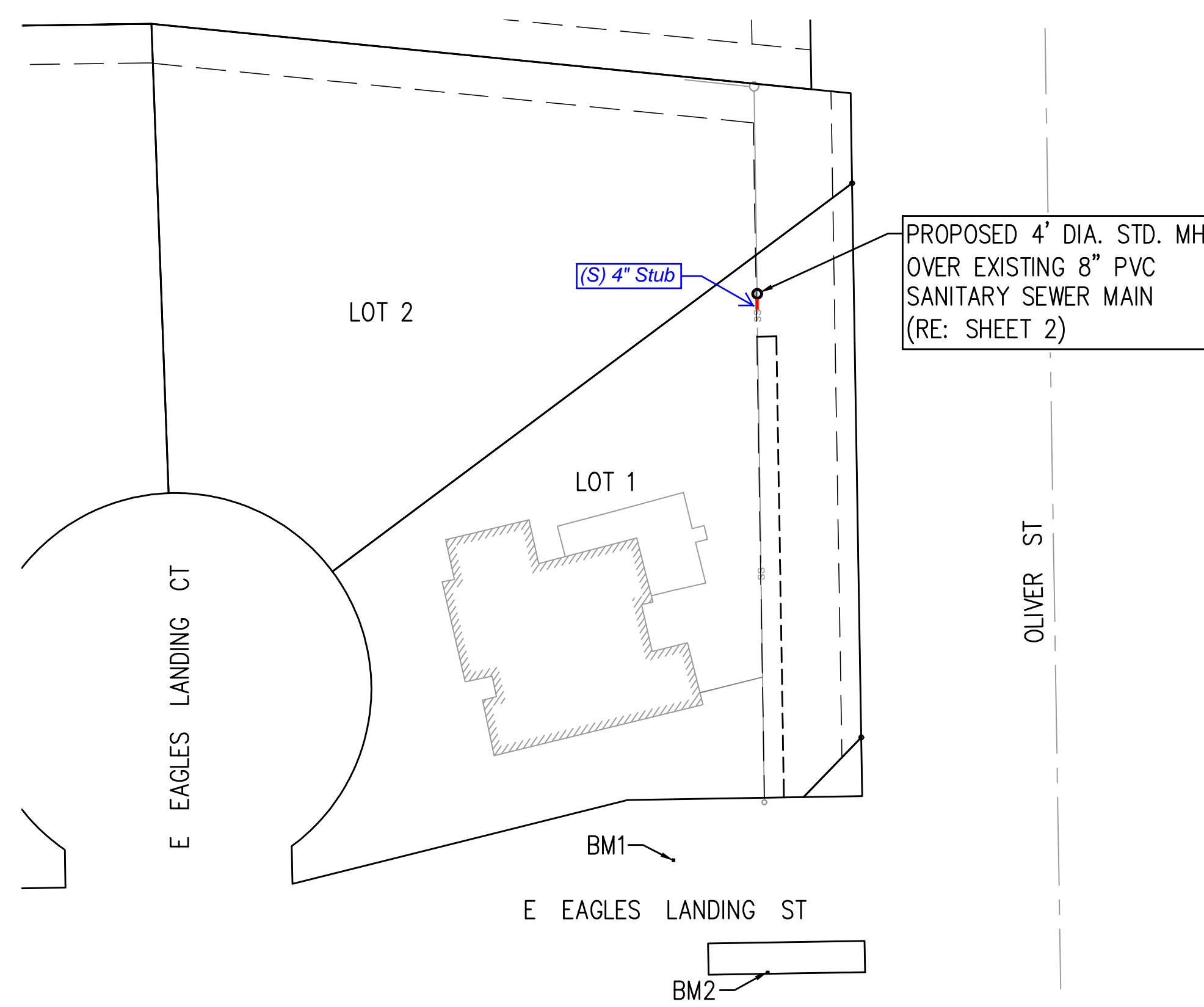
1935 WEST MAPLE STREET
WICHITA, KANSAS 67213
PH.(316)262-8808 FAX.(316)262-1669



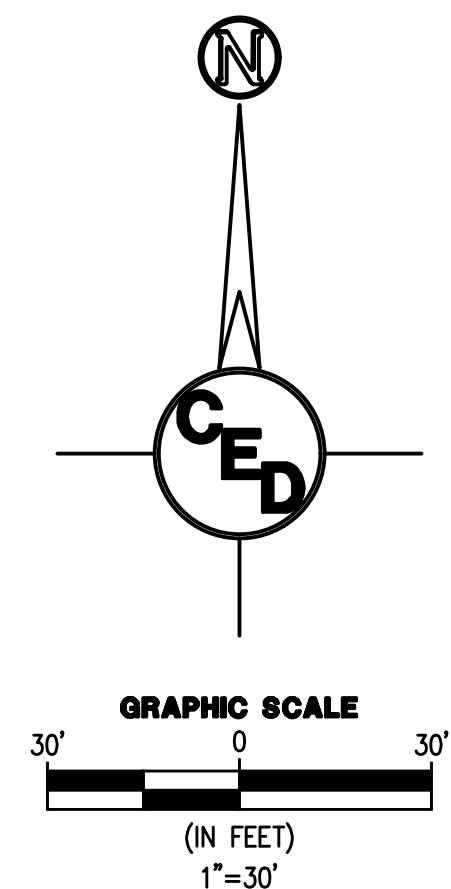
PROJECT NO.: 20202775
ISSUE DATE: 02/19/20
CONTACT: H. FORAKER
CHECKED BY: H. FORAKER



COVER



PROPOSED 4' DIA. STD. MH
OVER EXISTING 8" PVC
SANITARY SEWER MAIN
(RE: SHEET 2)



AS-BUILTS:
Contractor: Apex Excavating
Superintendent: Chris Oard 316-765-1018
Inspector: Logan Mills / CED
Date of Completion: 4-23-20

Summary Table:
SS MH = 1 Each
Abandoned SS MH - 1 Each

BENCHMARK LIST

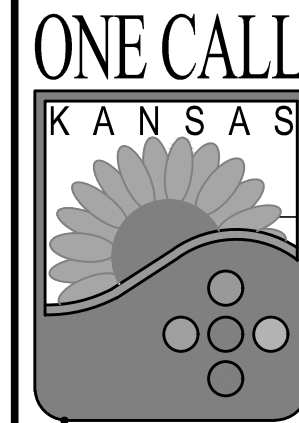
- BM #1 - "X" CUT TOP OF CURB
ELEV. = 1398.32 (NAVD88)
- BM #2 - SQUARE CUT TOP OF CURB
ELEV. = 1399.83 (NAVD88)

SURVEY DISCLAIMER:
TOPOGRAPHIC SURVEY USED IN PREPARING PLANS ARE FOR ENGINEERING DESIGN PURPOSES ONLY. ENGINEER DOES NOT GUARANTEE SURVEY ELEVATIONS FOR ACCURACY. CONTRACTOR SHALL VERIFY ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

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.

FILE LOCATION: C:\Users\kvasawyer2\OneDrive - Certified Engineering Design, P.A.\Projects\2020\20202775\DWG\Eagles Landing - PPS.dwg TAB NAME: COVER USER: kvasawyer2 PLOTTED: 2/27/2020 1:59 PM

FILE LOCATION: C:\Users\kasawyer2\OneDrive - Certified Engineering Design, P.A\Projects\2020\20202775\DWG\Locales\Landing - PPS.dwg TAB NAME: LINE 1 PP USER: kasawyer2 SAVER: 2/27/2020 1:58 PM PLOTTED: 2/27/2020 2:00 PM



SURVEY DISCLAIMER:
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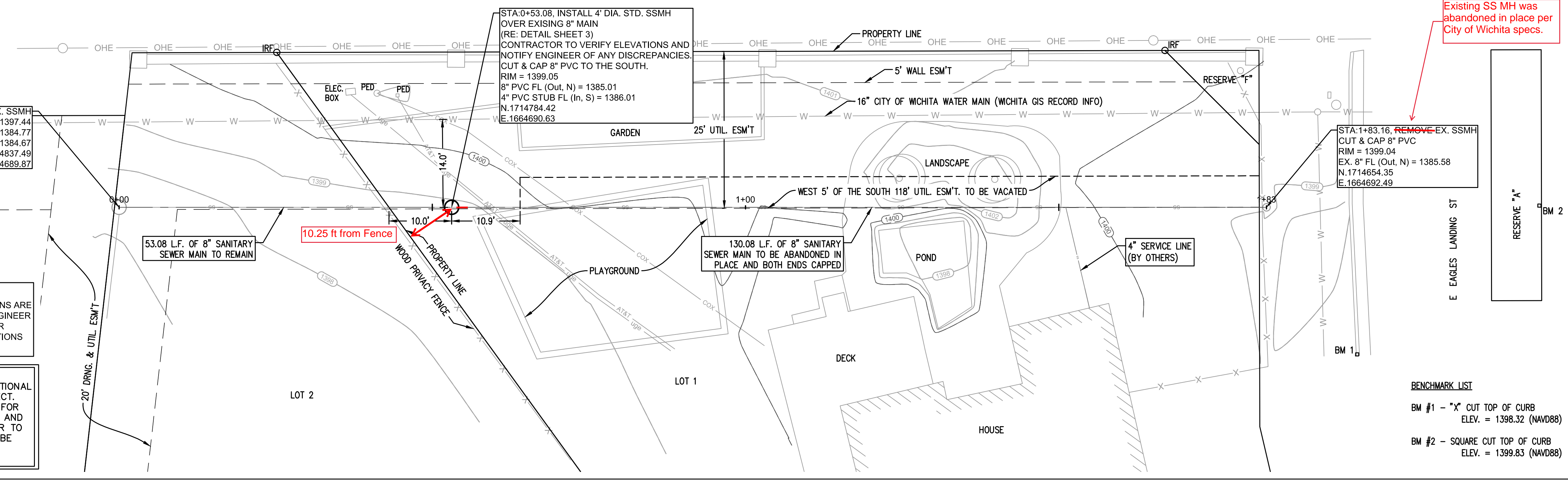
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STA:0+00.00, EX. SSMH
 RIM = 1397.44
 EX. 8" FL (In, S) = 1384.77
 EX. 8" FL (Out, W) = 1384.67
 N.1714837.49
 E.1664689.87

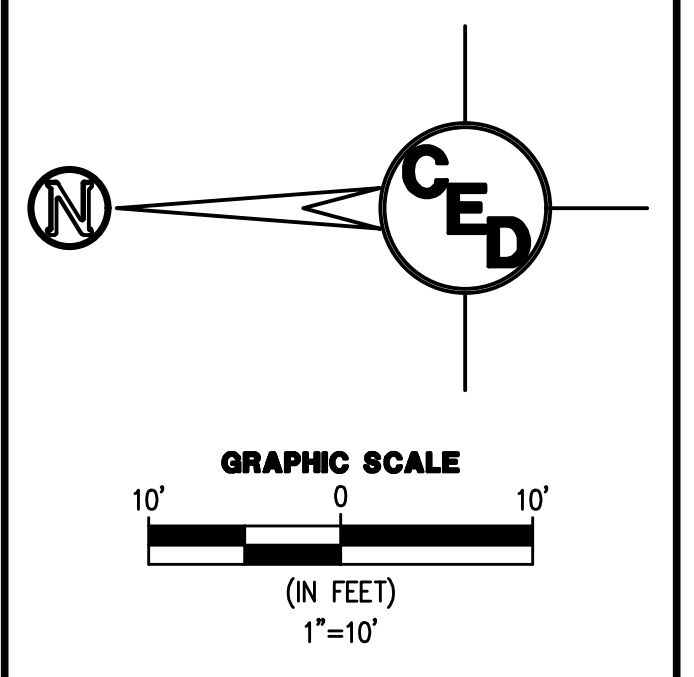
STA:0+53.08, INSTALL 4" DIA. STD. SSMH OVER EXISTING 8" MAIN (RE: DETAIL SHEET 3)
 CONTRACTOR TO VERIFY ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CUT & CAP 8" PVC TO THE SOUTH.
 RIM = 1399.05
 8" PVC FL (Out, N) = 1385.01
 4" PVC STUB FL (In, S) = 1386.01
 N.1714784.42
 E.1664690.63

STA:1+83.16, REMOVE EX. SSMH CUT & CAP 8" PVC
 RIM = 1399.04
 EX. 8" FL (Out, N) = 1385.58
 N.1714654.35
 E.1664692.49

Existing SS MH was abandoned in place per City of Wichita specs.

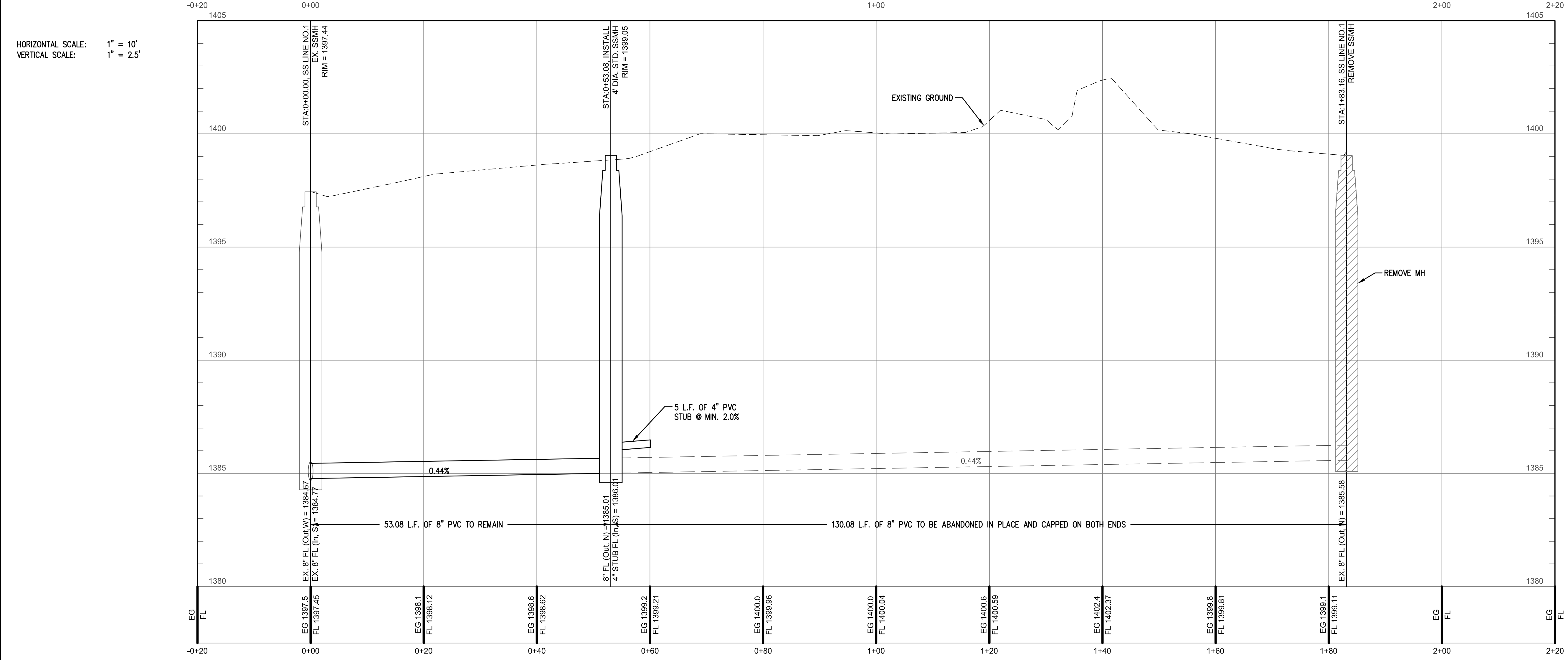


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BENCHMARK LIST
 BM #1 - "X" CUT TOP OF CURB
 ELEV. = 1398.32 (NAVD88)
 BM #2 - SQUARE CUT TOP OF CURB
 ELEV. = 1399.83 (NAVD88)

SS Line No. 1



SANITARY SEWER IMPROVEMENTS

LOT 1 BLOCK D
 EAGLES LANDING AT
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4714 E EAGLES LANDING CT
 WICHITA, KS 67220

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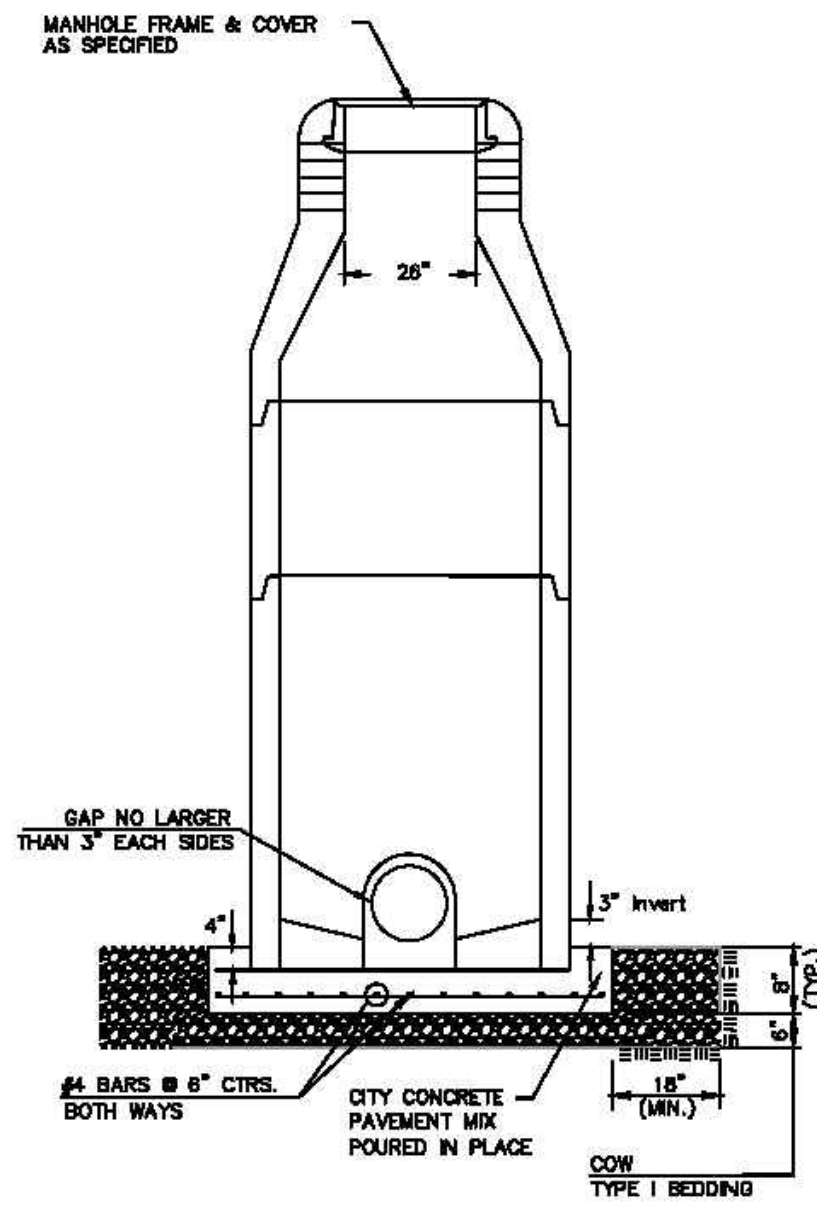
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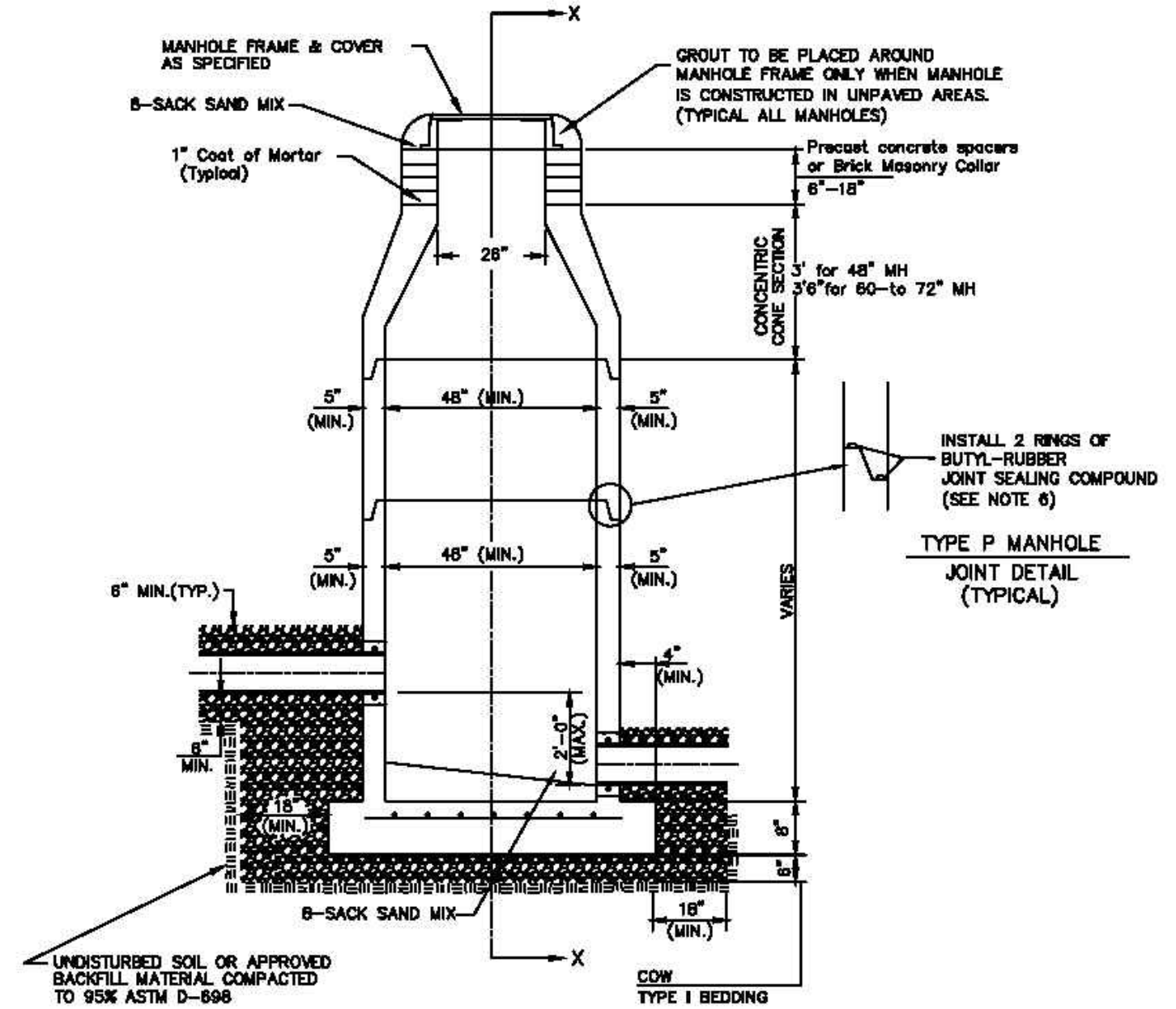
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 ISSUE DATE: 02/19/20
 CONTACT: H. FORAKER
 CHECKED BY: H. FORAKER

LINE NO.1 PLAN & PROFILE

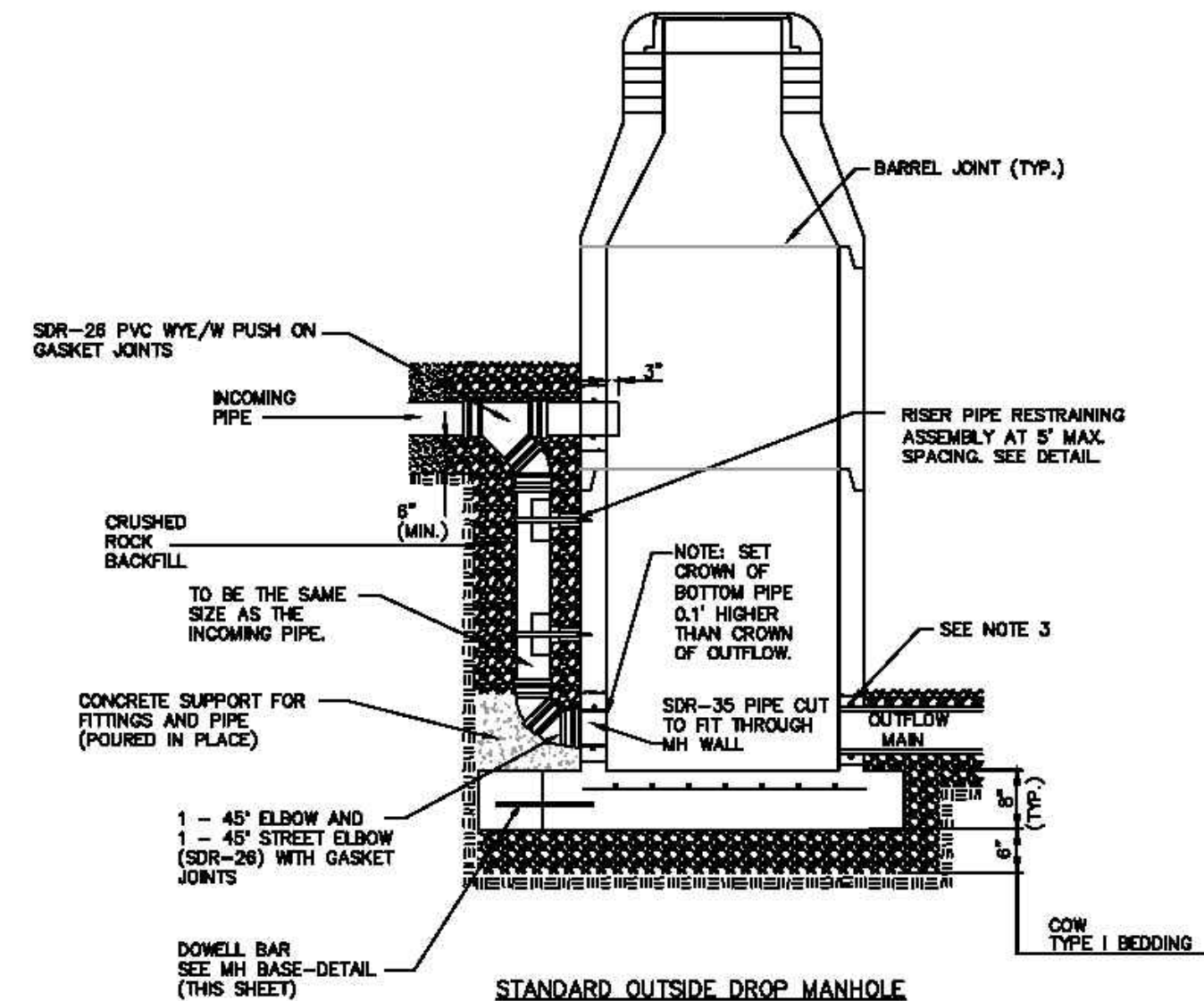
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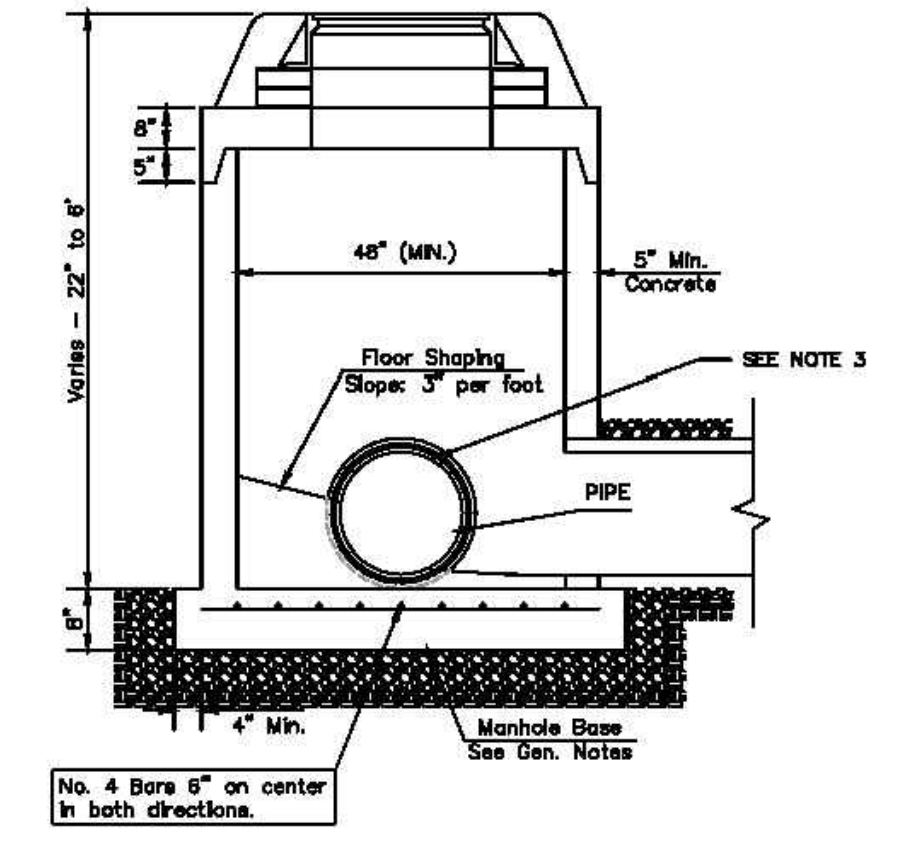
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale



STANDARD OUTSIDE DROP MANHOLE
Not to Scale

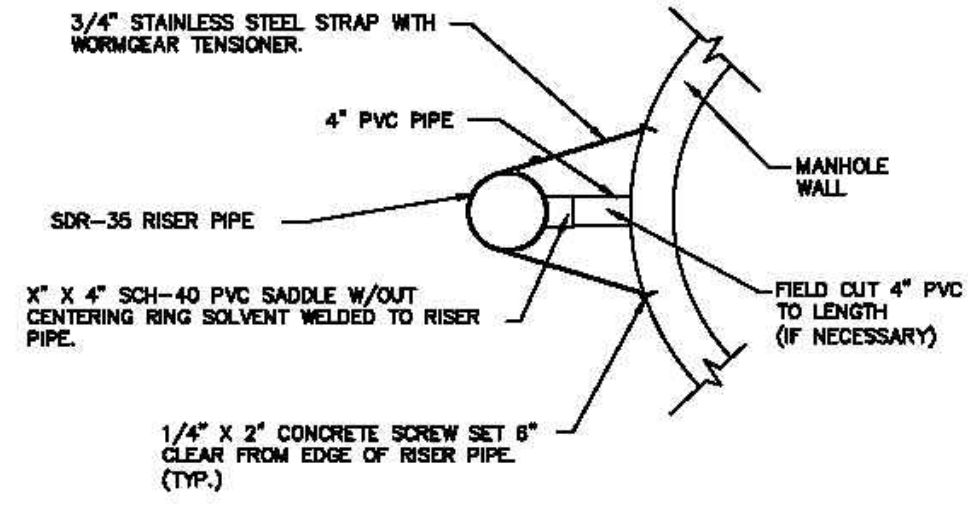


SHALLOW MANHOLE
Not to Scale

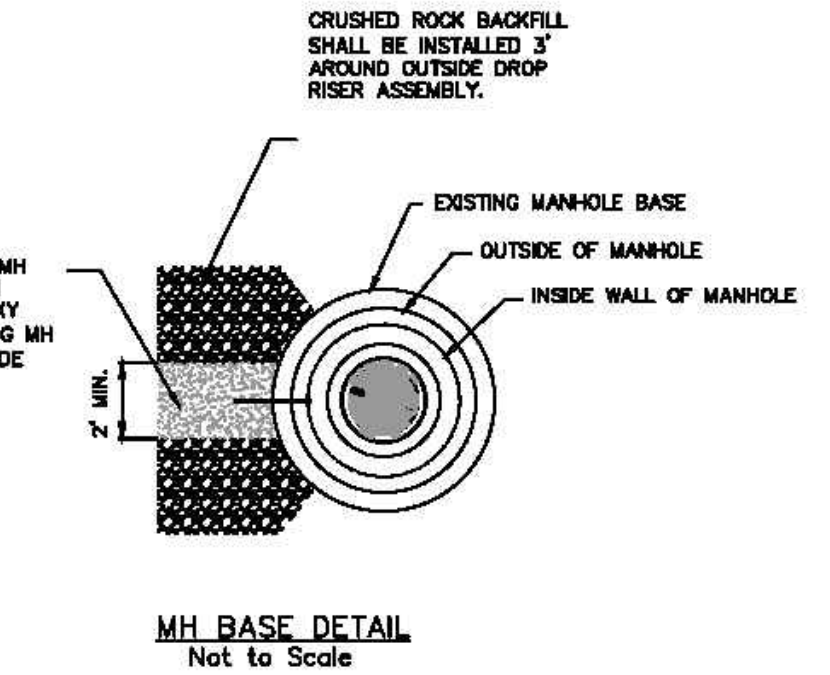
= COW TYPE I BEDDING
 = UNDISTURBED SOIL

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 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.



RISER PIPE RESTRAINING ASSEMBLY
Not to Scale



MH BASE DETAIL
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

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

| | | | |
|--|------------|--|--|
| REVISION NOVEMBER 2010 | | RISER PIPE RETAINING ASSEMBLY REVISED ON MANHOLE DRAWING | |
| | | | |
| 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 (314) 268-4501 | | | |

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SANITARY SEWER IMPROVEMENTS

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MANHOLE DETAIL

