

SANITARY SEWER PLANS (PUBLIC)

TO SERVE

WAL★MART SUPERCENTER #4321-00

WICHITA, KANSAS

NW 53RD ST. NORTH & N. MERIDIAN

2007

CITY OF WICHITA PRIVATE PROJECT NO. 1738PPS (607861)
JAMES ARMOR, P.E., CITY ENGINEER

Utility Contractors, Inc. - Contractor
 Gann, KE Miller - Inspector
 Released 8/15/07
 As-Built
 Risers
 .pdf by JDL 8/17/07

INDEX OF SHEETS

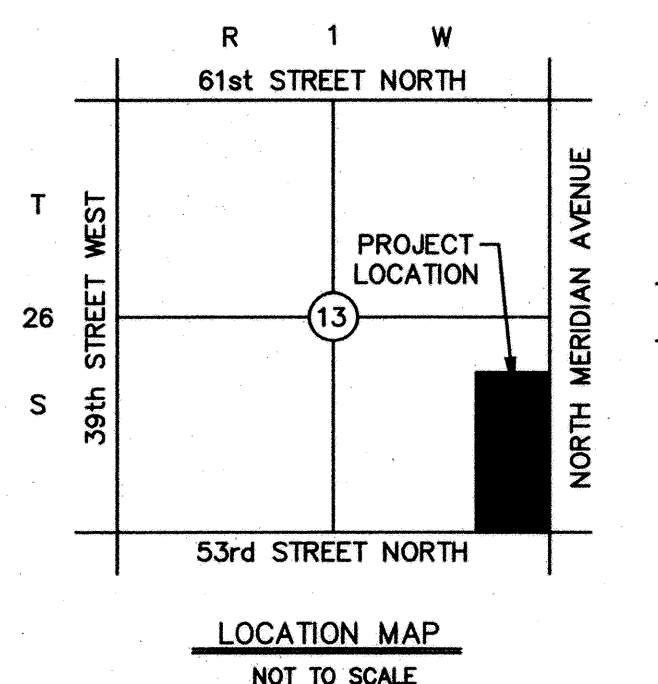
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RESOURCE LIST

<p>GAS COMPANY AQUILA GAS COMPANY 1611 SOUTH HOOVEER WICHITA, KANSAS 67209 PH: (316) 941-1608 CONTACT: CALVIN BRIGGS</p>	<p>ELECTRIC COMPANY WESTAR ENERGY 201 NORTH MARKET WICHITA, KS 67202 PH: (316) 261-6824 CONTACT: SHANE PRICE</p>
<p>KANSAS GAS SERVICE 1021 EAST 26TH STREET NORTH WICHITA, KANSAS 67219 PH: (316) 832-3101 CONTACT: CHARLENE LAWLESS</p>	<p>WATER & SEWER COMPANY CITY OF WICHITA, KS CITY HALL 455 NORTH MAIN WICHITA, KS 67202 PH: (316) 268-4555 FAX: (620) 421-7089 CONTACT: BILL PERKINS</p>
<p>KANSAS DEPT. OF TRANSPORTATION (KDOT) DISTRICT 5 (SOUTH CENTRAL DIVISION) ROBERT COOK - DISTRICT ENGINEER PH: (620) 663-3361</p>	<p>PLANNING / ZONING CITY OF WICHITA METROPOLITAN AREA PLANNING DEPARTMENT CITY HALL - 10TH FLOOR 455 NORTH MAIN WICHITA, KANSAS 67202 PH: (316) 268-4421 CONTACT: DONNA GOLTRY</p>
<p>CIVIL ENGINEERS SMC CONSULTING ENGINEERS, P.C. TERENCE L. HAYNES, P.E. 815 WEST MAIN ST. OKLAHOMA CITY, OK 73106 PH: (405) 232-7715 FAX: (405) 232-7859</p>	<p>TELEPHONE COMPANY SOUTHWESTERN BELL 154 NORTH BROADWAY, ROOM 210 WICHITA, KS 67202 PH: (316) 268-2245 CONTACT: BOB ALLEY</p>

OWNERS' ADDRESS

WAL-MART STORES, INC.
 702 S.W. 8TH STREET
 BENTONVILLE, AR 72716
 PH. (479) 273-4000



NOTE TO CONTRACTOR
CALL KANSAS ONE
1-800-522-6543

This number is to be used for information on the location of all underground utilities. Contact this number prior to any excavation.

APPROVED AS NOTED
 By CITY ENGINEER OF WICHITA

Sanitary Sewers VRH 3/9/07

Storm Sewers _____

Driveway Approaches _____

Water Mains _____

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 EASEMENT OR ANY RIGHT-OF-WAY WITHOUT WRITTEN AGREEMENT BY THE CITY ENGINEER.

BENCH MARKS:

<p>BM #1 R.R. SPIKE IN WEST SIDE OF P.P. AT N.E.N. CORNER OF INTER. 53rd AND MERIDIAN ELEV=1332.86</p>	<p>BM #2 R.R. SPIKE IN NORTH SIDE OF P.P. WEST OF MERIDIAN ON SOUTH SIDE OF 53rd STREET ELEV=1331.15</p>	<p>BM #3 R.R. SPIKE IN NORTH SIDE OF 4th P.P. WEST OF MERIDIAN ON SOUTH SIDE OF NW 53rd ELEV=1332.60</p>
<p>BM #4 R.R. SPIKE IN NORTH SIDE OF 6th P.P. WEST OF MERIDIAN ON SOUTH SIDE OF NW 53rd ELEV=1333.28</p>	<p>BM #5 CUT "X" ON T/C ON E SIDE OF MERIDIAN W OF S PI IN SWLK & APRX 65' S OF DR 5474 MERIDIAN ELEV=1332.91</p>	<p>BM #6 CUT "X" ON SOUTH END OF CONC. HOOD INLET ON EAST SIDE OF MERIDIAN AT 5536 MERIDIAN ELEV=1332.16</p>

1. An effort has been made to locate and show approximate location of underground utilities. Buried utilities are not necessarily shown. It is the Contractors responsibility to locate and preserve all utility services.
2. Proposed utility services have been coordinated with the local utility companies. Contractor is responsible for contacting all utility companies prior to construction.
3. All quantity estimates shown in this set of plans are the Engineer's estimate and are provided for general information only. The Contractor is solely responsible for calculating his own quantities.
4. All construction shall be done in accordance with Wal-Mart Sitework Specifications, and where applicable, as per the City of Wichita's Standard Specifications for Public Improvements and Kansas Department of Transportation's Standard Specifications for Highway Construction, latest edition.

I, Terence L. Haynes, Kansas Professional Engineer, #14583, do hereby state that these public sanitary sewer plans, prepared by me or under my direct, responsible supervision, are in strict conformance with the applicable Codes of the City of Wichita and the sound principles and practice of the Civil Engineering profession

TERENCE L. HAYNES, P.E. #14583

REVIEWED BY: _____ DATE: _____
 CITY ENGINEER

TITLE SHEET
PUBLIC SANITARY SEWER LINE PLANS

WAL-MART SUPERCENTER #4321-00

N.W. 53rd ST. NORTH & N. MERIDIAN
WICHITA, KANSAS

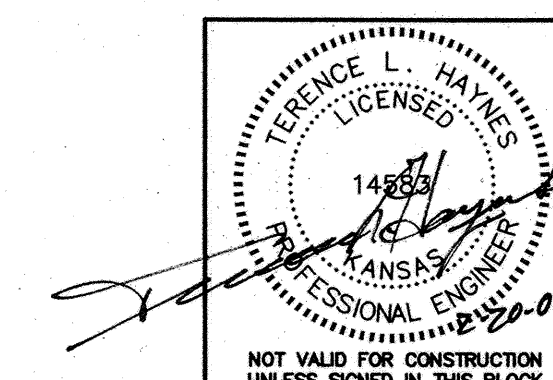
SMC Consulting Engineers, P.C.
 815 West Main - Oklahoma City, OK 73106
 PH: 405-232-7715 Fax: 405-232-7859

SMC

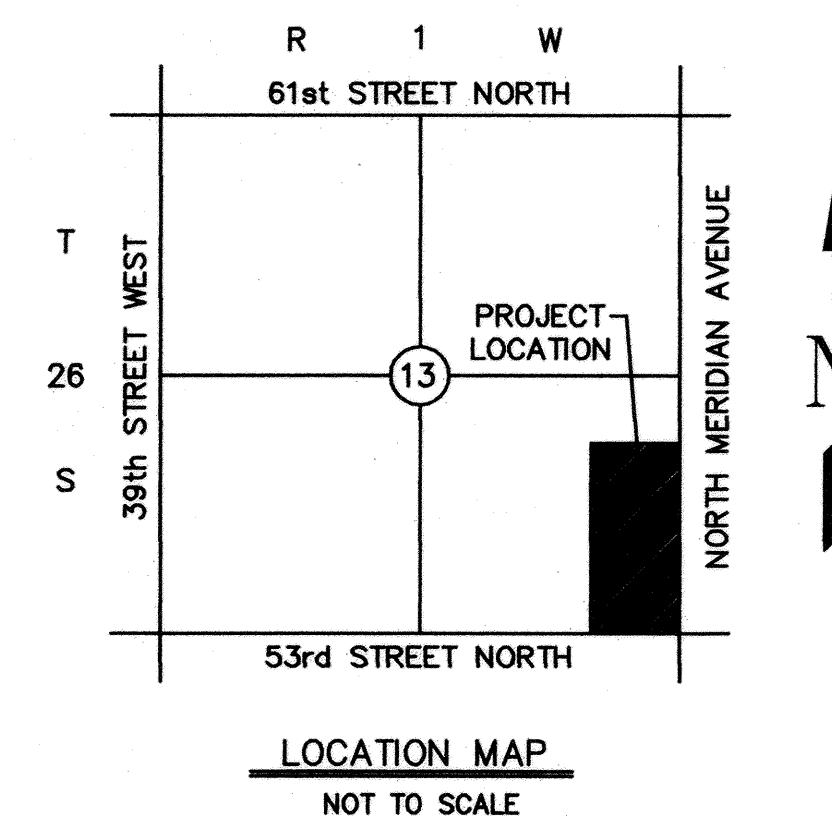
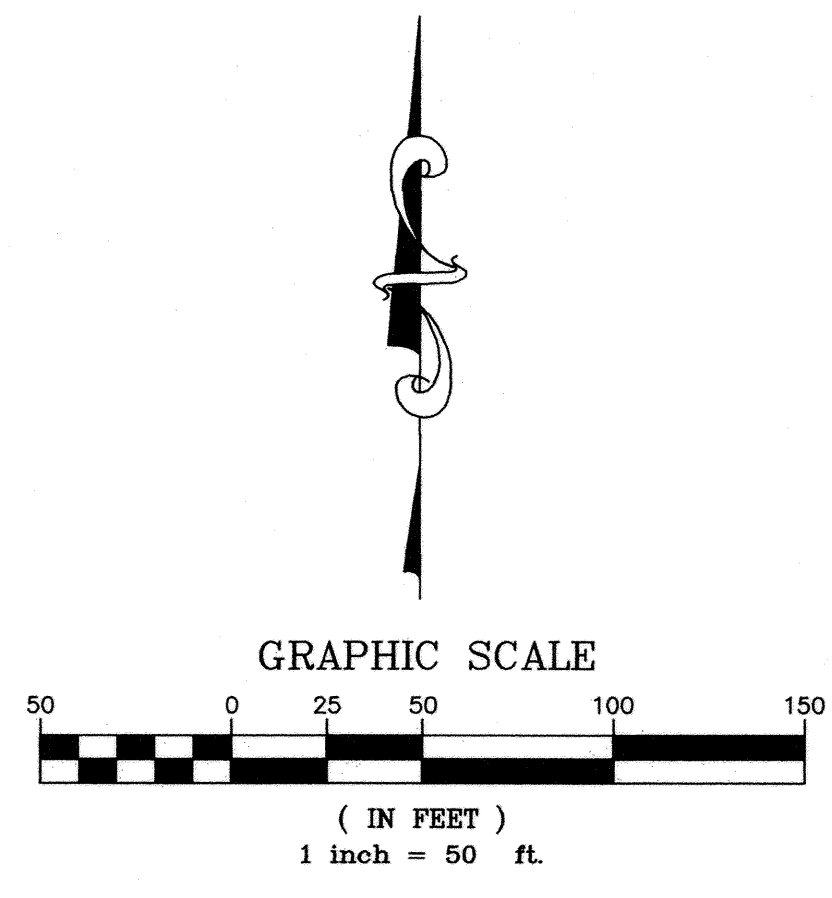
KANSAS CERTIFICATE OF AUTHORIZATION NO. E-335 EXP. DEC. 31, 2008

No.	Revision	By	Date
1	Revision per City comments	MDS	01/23/07
2	Revision per City comments	MDS	02/19/07

DATE: 12/12/06	SCALE: NONE	SHEET NO. C-12.1
DRAWN BY: MDS		
PROJECT NO.: 4344.00		
ENGINEER: TERENCE L. HAYNES, P.E. #14583		



SMC Consulting Engineers, P.C.
 Oklahoma City, Oklahoma



BLOCK 1
RESERVE "C"
0.5702 A.C.

BLOCK 1
LOT 1
20.2203 A.C.

BLOCK 1
LOT 2
1.5406 A.C.

BLOCK 1
LOT 3
1.5205 A.C.

BLOCK 1
RESERVE "A"
1.5774 A.C.

PUBLIC S.S. LINE

PUBLIC S.S. LINE

PUBLIC S.S. LINE

53rd STREET NORTH

CONST. S.S.M.H.
TR=1332.30
FL E=1315.31
FL S=1315.11

CONST. S.S.M.H.
TR=1333.00
FL E=1316.14
FL W=1315.94

PROPOSED SAN. SEWER TRUNK MAIN
RIGHT OF WAY CONDEMNATION CASE NO. B-14456 (VARIABLE WIDTH)

S.S.M.H.
TR=1332.25
FL N=1316.97
FL W=1316.77

15' RIGHT OF WAY CONDEMNATION CASE NO. B-14456 (VARIABLE WIDTH)

FND. BAUGHMAN CP (CLS 58)

SET 5/8" I.P. W/LS 989 CAP

SET 5/8" I.P. W/LS 989 CAP

SET 5/8" I.P. W/LS 989 CAP

SET 5/8" I.P. W/LS 989 CAP

SET 5/8" I.P. W/LS 989 CAP

SET 5/8" I.P. W/LS 989 CAP

SET 5/8" I.P. W/LS 989 CAP

CONST. OUTSIDE DROP TO M.H.
TR=1331.84
FL N=1314.67
FL S=1308.82
FL W=1308.92

FND. 1/2" I.P. W/SINGLEWOOD CAP LS98

PLOWED FIELD

RIGHT OF WAY CONDEMNATION CASE NO. B-14456 (VARIABLE WIDTH)

SET MAG NAIL W/LS 989 TAG

SET MAG NAIL W/LS 989 TAG

SET MAG NAIL W/LS 989 TAG

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SET MAG NAIL W/LS 989 TAG

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LEGEND

- SIGN (i.e. STOP, YIELD, etc...)
- LIGHT POLE AND FIXTURE TYPE
- HEAVY DUTY CONCRETE (H.D.C.)
- HEAVY DUTY ASPHALT (H.D.A.)
- STANDARD DUTY ASPHALT (S.D.A.)
- CONCRETE BARRIER
- STRAIGHT ARROW
- ↶ LEFT TURN ARROW
- ↷ RIGHT TURN ARROW
- ⊕ 3 WAY FIRE HYDRANT
- ⊕ TEE
- ⊕ GATE VALVE
- ⊕ CART CORRALS
- L.S. LANDSCAPE
- 1521— PROPOSED CONTOUR & CONTOUR ELEVATION
- STORM SEWER INLET
- STORM SEWER CURB INLET
- STORM SEWER MANHOLE (STS M.H.)
- S.S. MANHOLE
- S.S. CLEANOUTS
- FUTURE CURB & GUTTER BY OTHERS
- UGE— POWER UNDERGROUND
- UTE— TELEPHONE UNDERGROUND
- POWER OVERHEAD
- GAS LINE
- FLOW DIRECTION
- STS STORM SEWER

UTILITY STATEMENT & CAUTION:
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON A COMBINATION OF FIELD SURVEY INFORMATION, EXISTING DRAWINGS AND RECORDS OF THE VARIOUS UTILITY COMPANIES. THE ENGINEER MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

PUBLIC SANITARY SEWER LINE
LOCATION PLAN

WAL-MART SUPERCENTER #4321-00

N.W. 53rd ST. NORTH & N. MERIDIAN
WICHITA, KANSAS

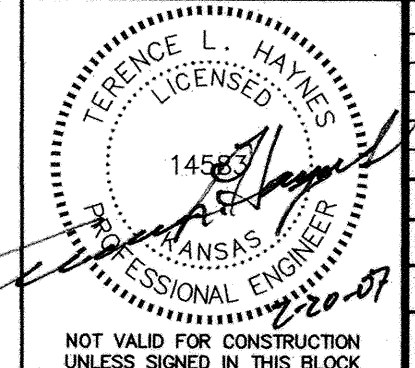
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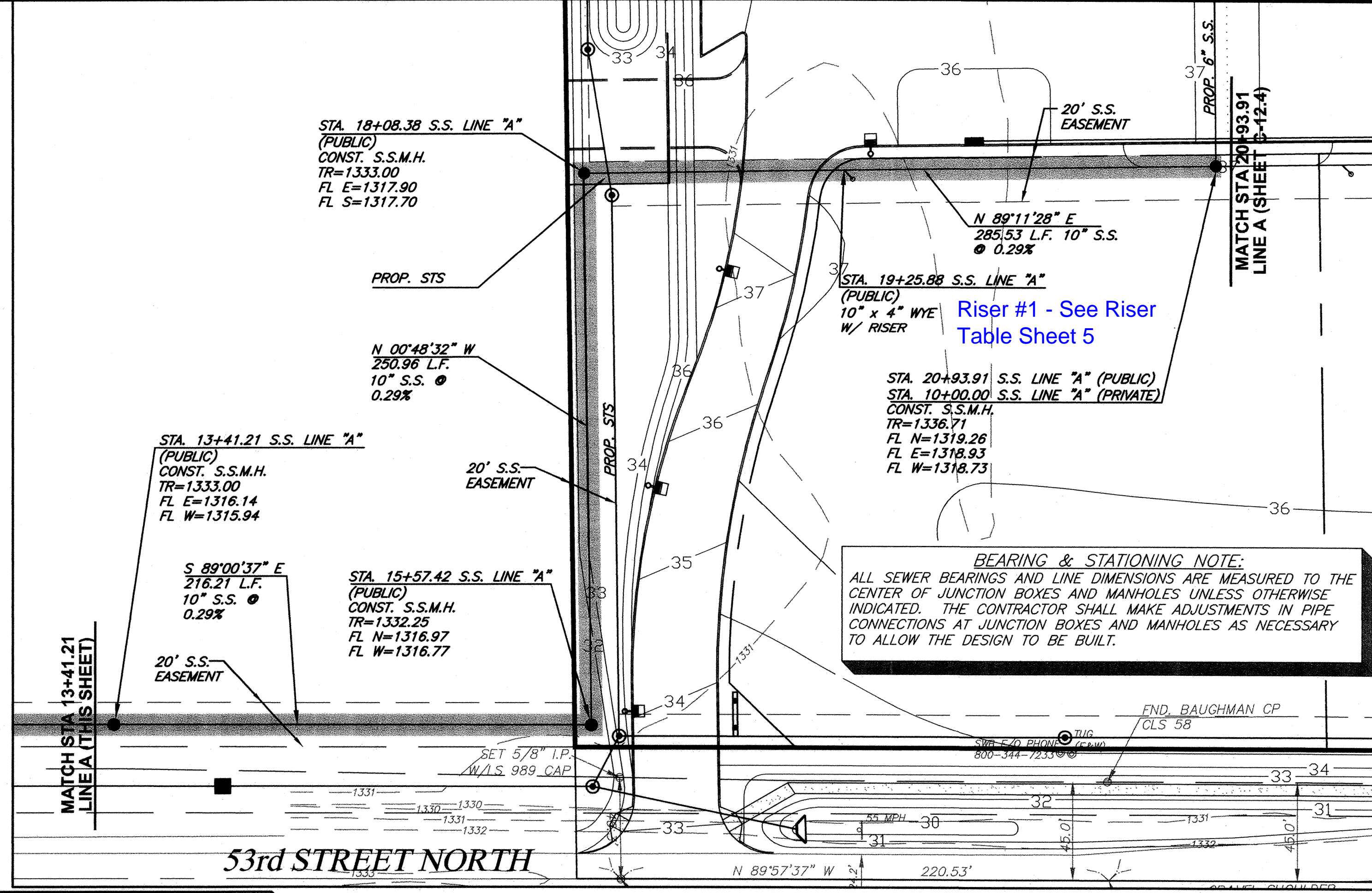
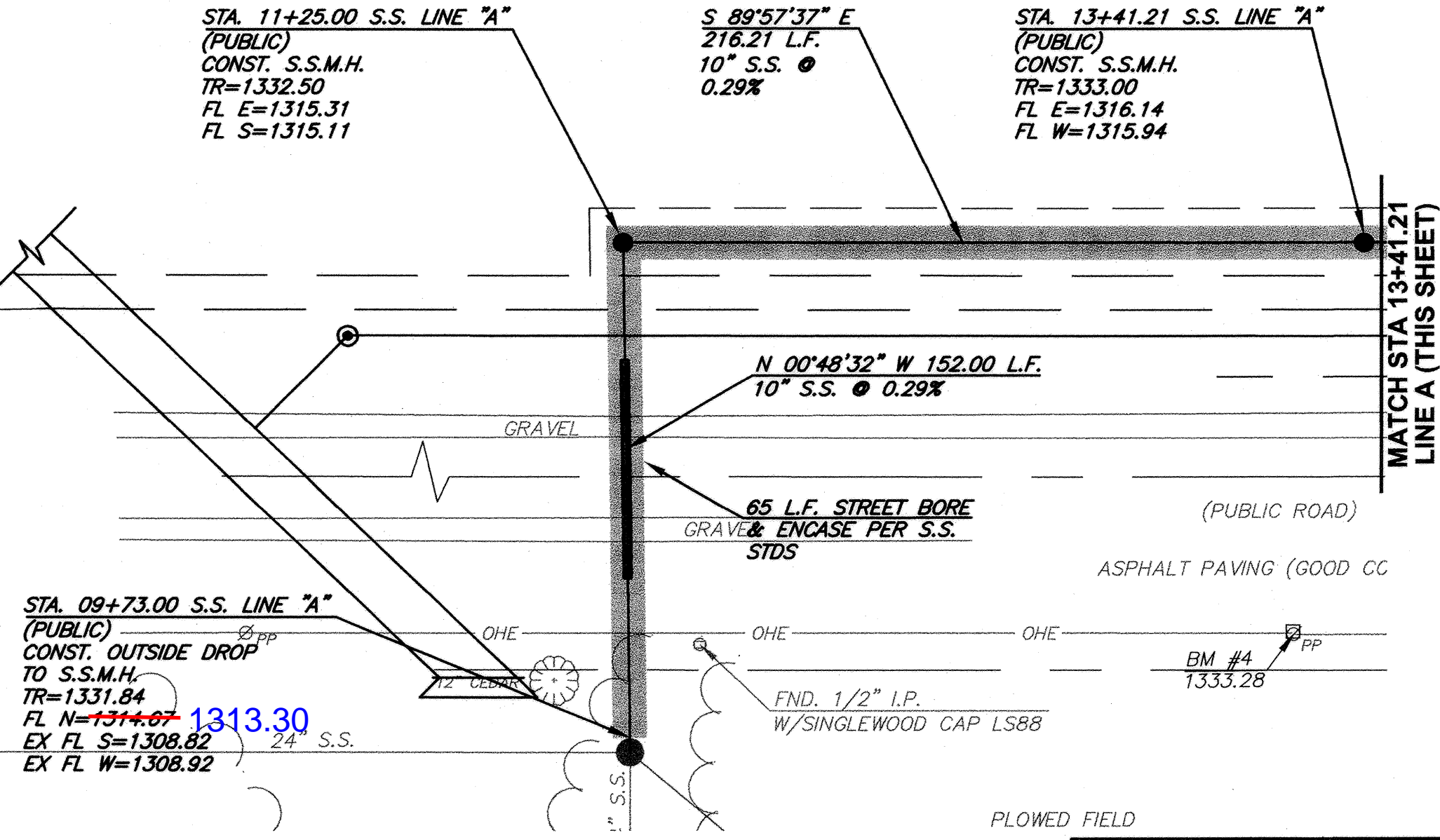
DATE: 12/12/06
DRAWN BY: MDS
PROJECT NO.: 4344.00

SCALE: 1"=50'
SHEET NO. C-12.2
ENGINEER: TERENCE L. HAYNES, P.E. #14583



UTILITY STATEMENT:
 THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON A COMBINATION OF FIELD SURVEY INFORMATION, EXISTING DRAWINGS AND RECORDS OF THE VARIOUS UTILITY COMPANIES. THE ENGINEER MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

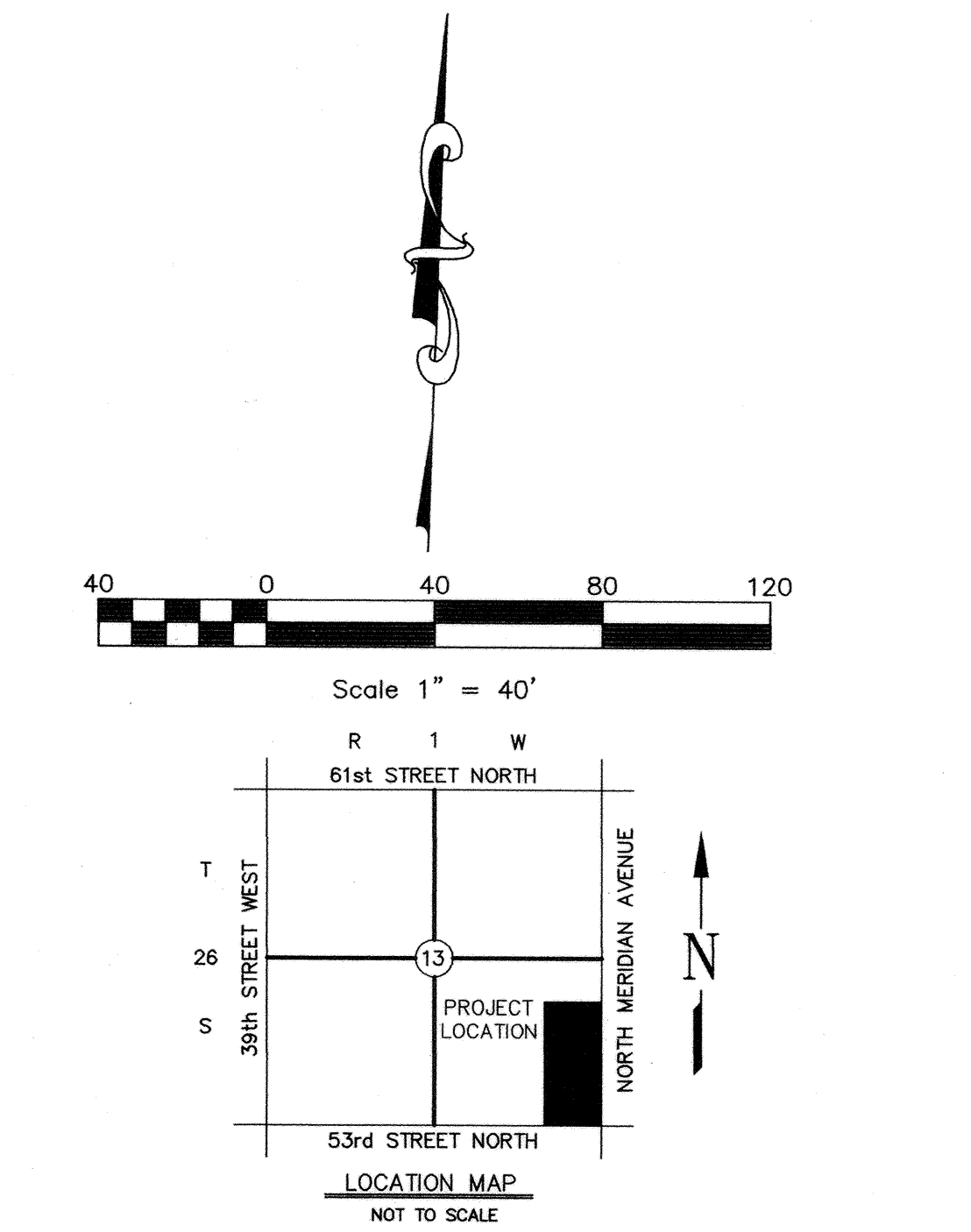
NOTE:
 1. THE PROPOSED 6" BUILDING SANITARY SERVICE LINE SHALL BE INSTALLED BY A LICENSED DRAIN LAYER WITH PERMIT AND INSPECTION FROM THE OFFICE OF CENTRAL INSPECTION (OCI) PER CURRENT CODES. (AN 8" LINE REQUIRES AN ENGINEERED PROJECT). ALL 4" AND 6" SANITARY SEWER PIPE SHALL BE SCH 40 PVC AND ALL 8" SANITARY SEWER PIPE SHALL BE SDR 35 (REFER TO TITLE 16.04.020 PERMITS REQUIRED; TITLE 16.04.080 SEWER PIPES AND TITLE 16.04.100 USE OF JUNCTION MANHOLE).



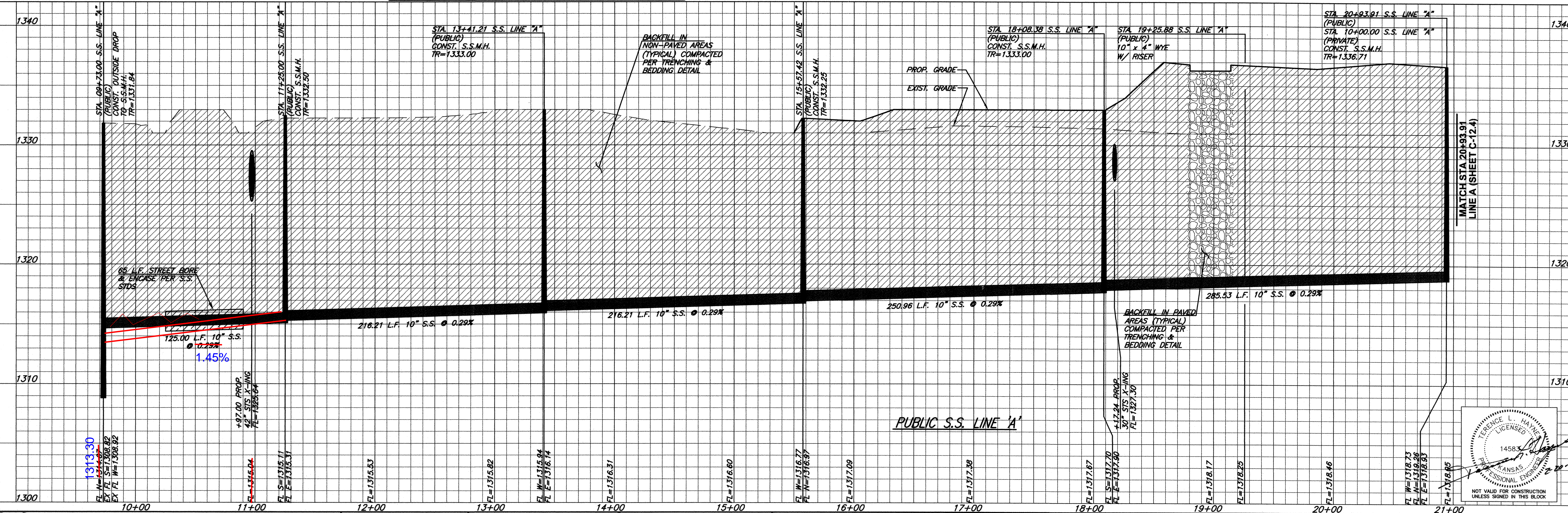
BEARING & STATIONING NOTE:
 ALL SEWER BEARINGS AND LINE DIMENSIONS ARE MEASURED TO THE CENTER OF JUNCTION BOXES AND MANHOLES UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN PIPE CONNECTIONS AT JUNCTION BOXES AND MANHOLES AS NECESSARY TO ALLOW THE DESIGN TO BE BUILT.

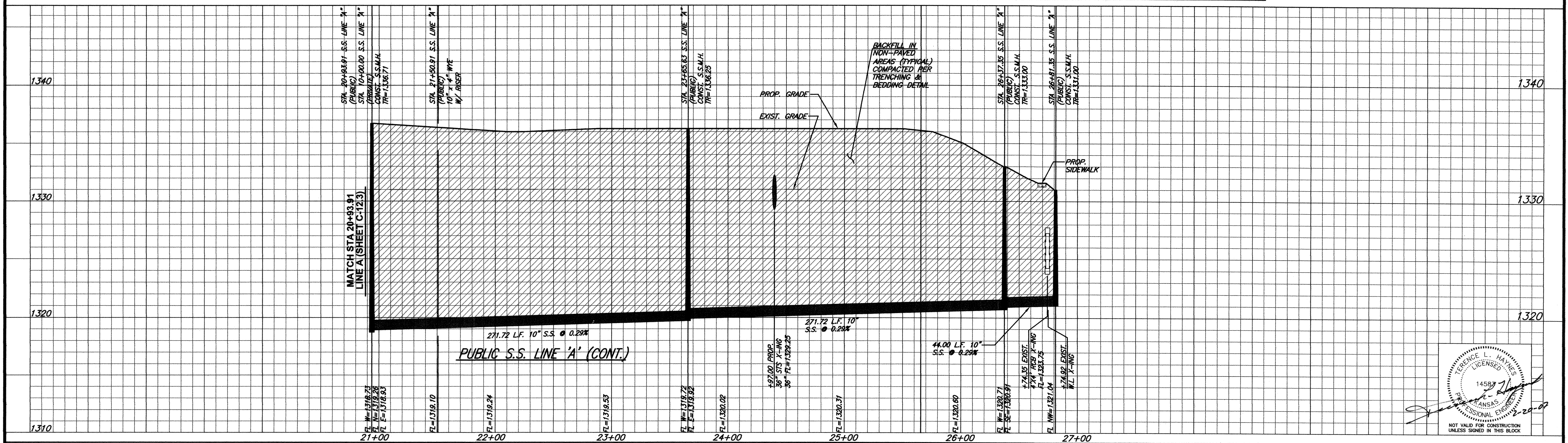
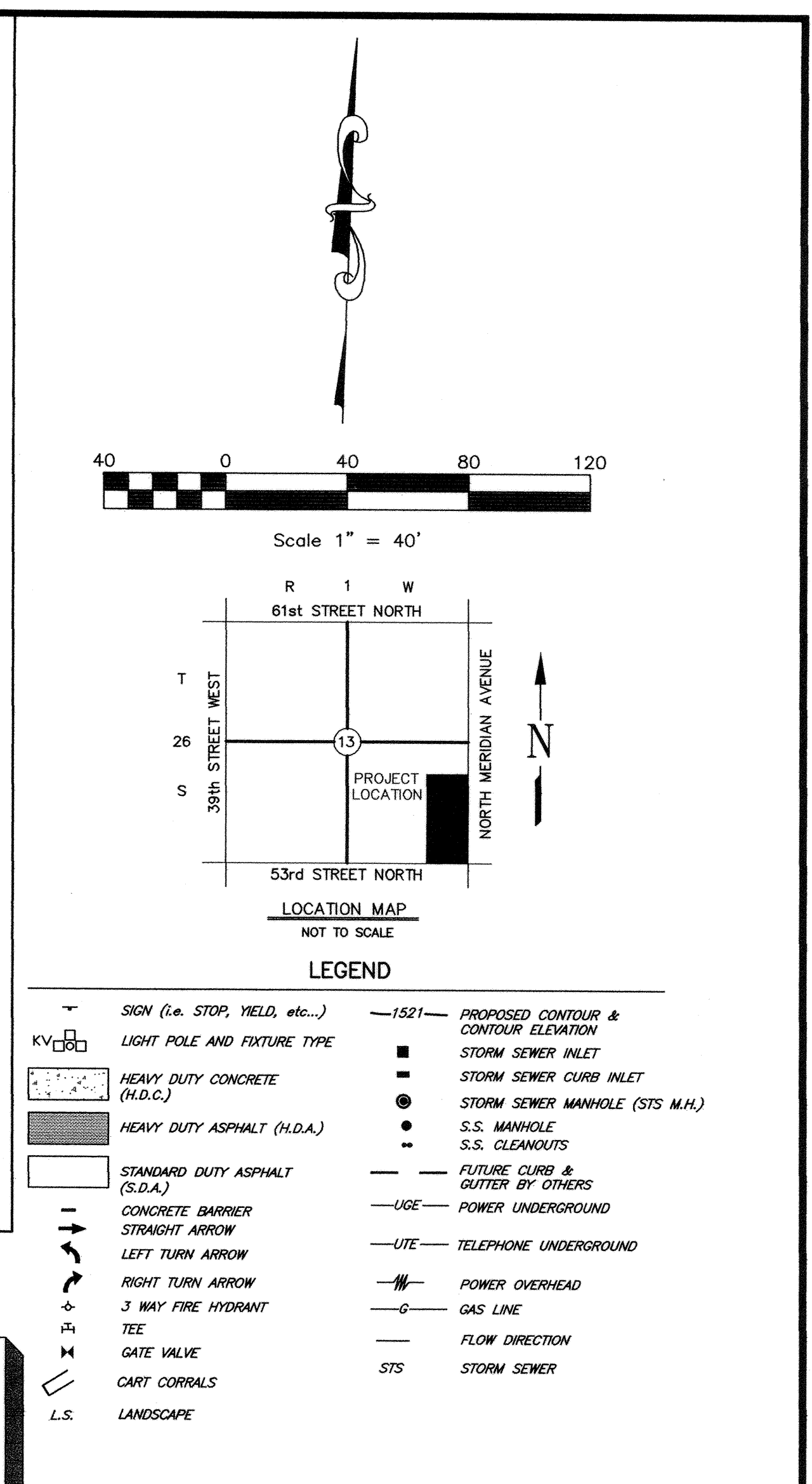
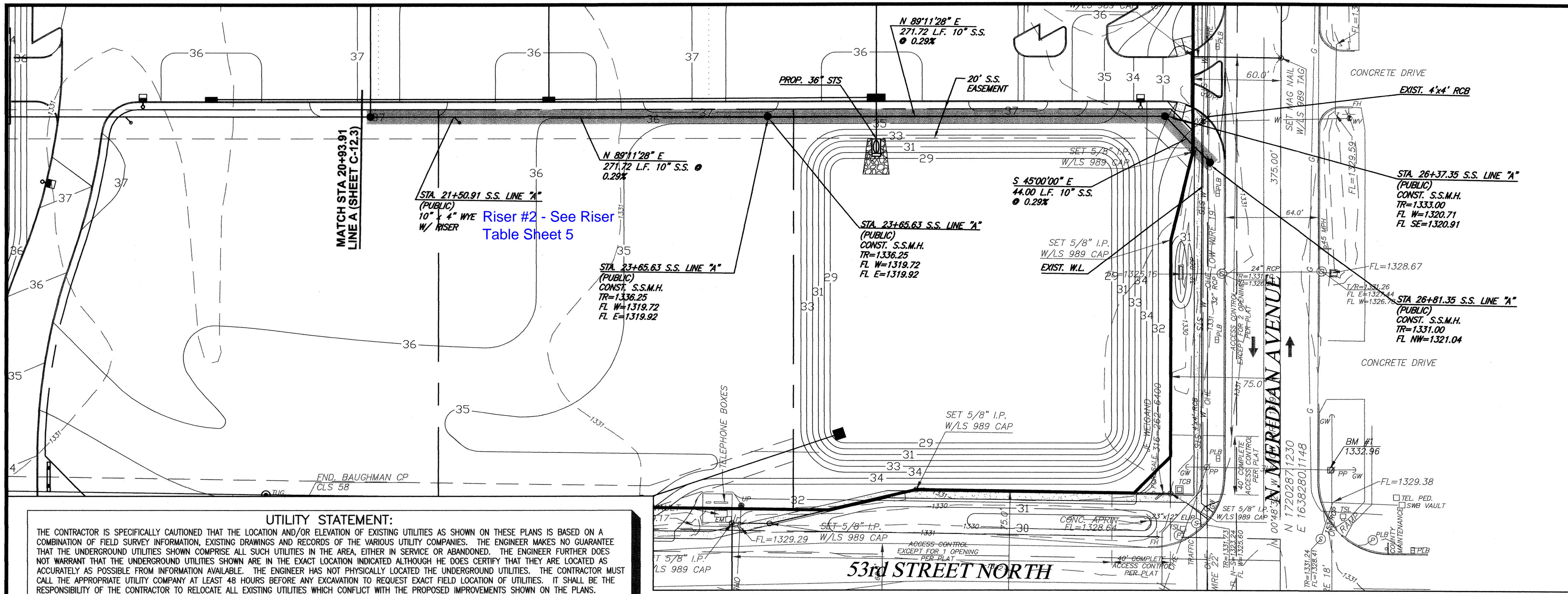
NOTE: THE GENERAL CONTRACTOR IS RESPONSIBLE FOR MAKING ALL ADJUSTMENTS OF EXISTING UTILITIES TO ALLOW THE DESIGN TO BE BUILT.

NOTE: ALL PROPOSED SAN. SEWER LINE SHALL BE PVC SDR35 UNLESS OTHERWISE NOTED.



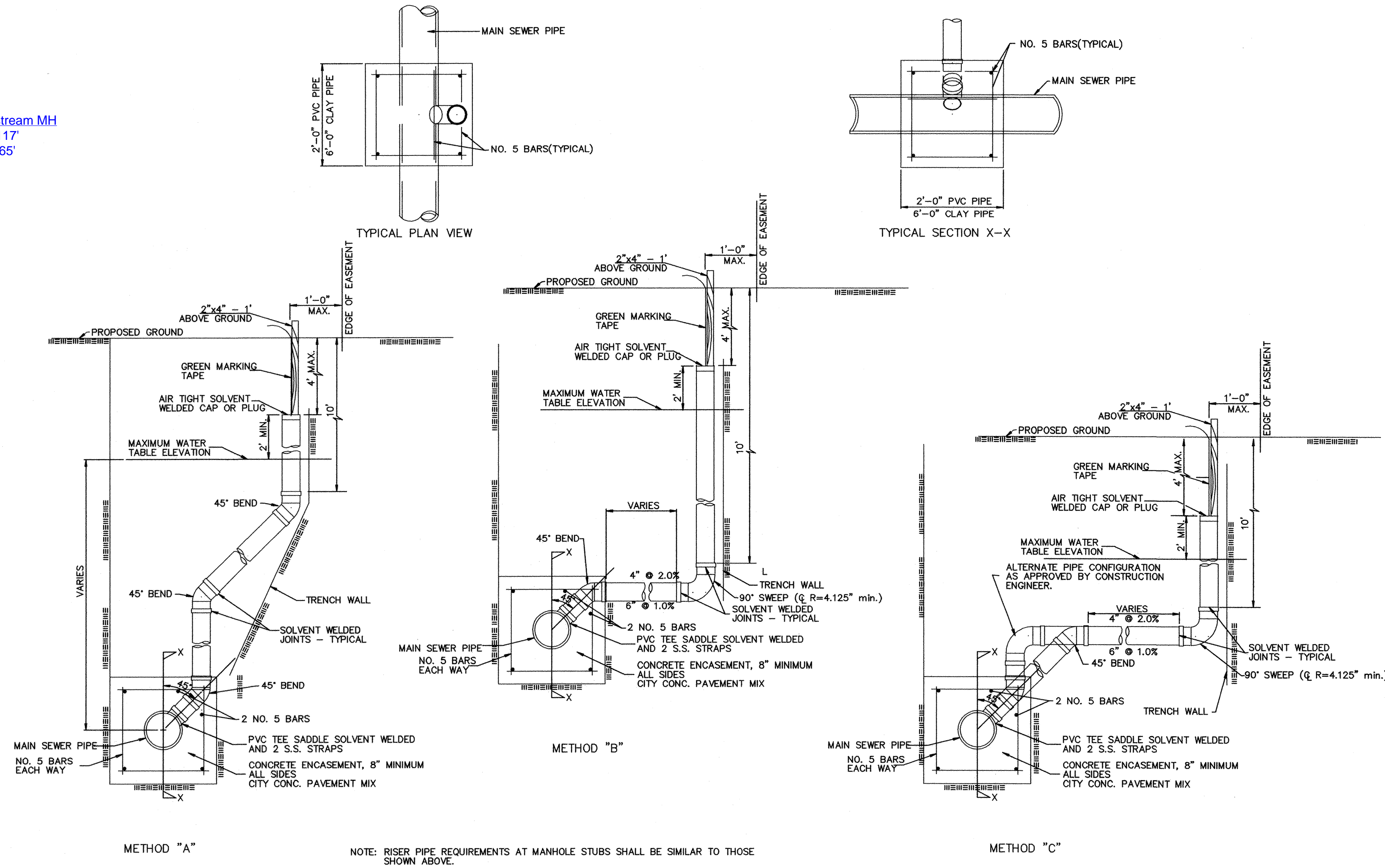
- LEGEND**
- SIGN (i.e. STOP, YIELD, etc.)
 - LIGHT POLE AND FIXTURE TYPE
 - HEAVY DUTY CONCRETE (H.D.C.)
 - HEAVY DUTY ASPHALT (H.D.A.)
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 - GAS LINE
 - FLOW DIRECTION
 - STS
 - STORM SEWER





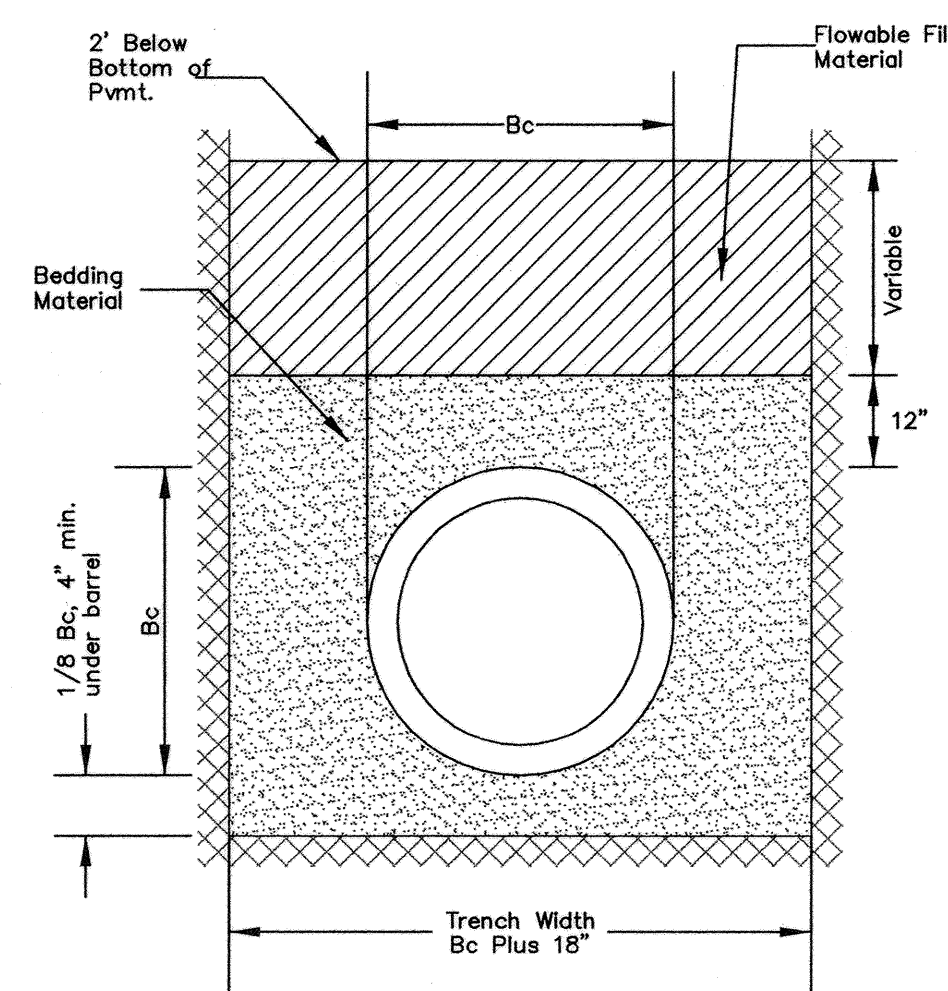
Riser Service Table

Riser No.	Line No.	Station	Distance from Main to Riser (L/R)	Distance from Upstream MH to Downstream MH
1	A	19+25.88	5' Rt.	171' 117'
2	A	21+50.91	5' Rt.	208' 65'

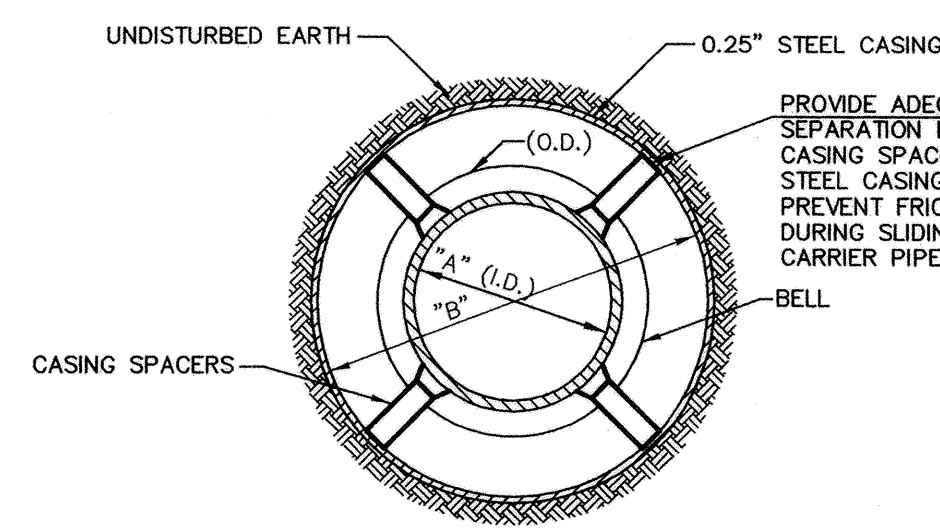


VERTICAL RISER DETAILS

N.T.S.

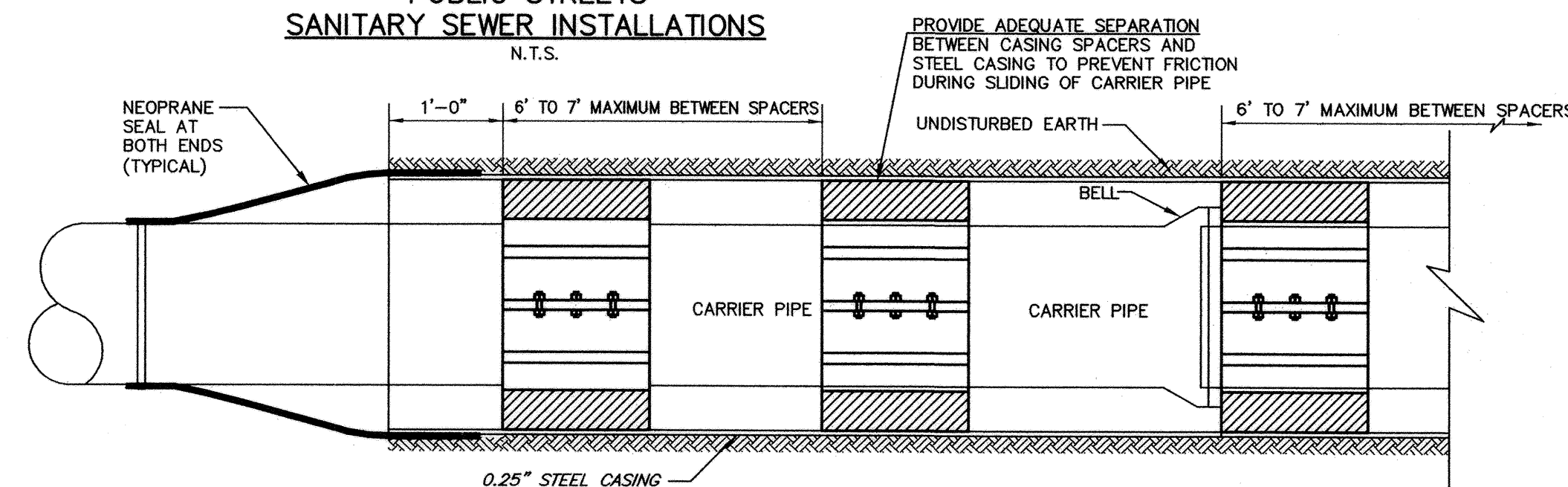


DETAIL OF FLOWABLE FILL FOR SANITARY SEWER PIPE
N.T.S.



TYPICAL SECTION FOR BORING PUBLIC STREETS
SANITARY SEWER INSTALLATIONS
N.T.S.

PIPE & STEEL CASING SCHEDULE	
PIPE DIAMETER "A"	CASING DIAMETER "B"
4	10"
6	12"
8	14" or 16"
10	18"
12	20"
16	24"
18	26"
20	30"
24	33"



CASING SPACER DETAIL (CARRIER PIPE IN CENTER)
N.T.S.

GENERAL NOTES

- RISERS.** Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table. Risers shall also be installed to serve all lots and tracts where the sanitary sewer main depth is greater than 12 feet below the proposed ground elevation. Installation of risers because of field conditions shall be approved by the Construction Engineer. The location of the risers to serve developed property shall be approved by the property owner and the Construction Engineer.
- PIPE STUBS.** Pipe stubs shall be installed in manholes where locations of manholes will provide satisfactory service connection as determined by the Construction Engineer. The vertical distance between the flowing of the manhole pipe stub and the flowing of the sanitary sewer main out of the manhole shall not exceed 2 feet. Risers shall be utilized at manhole pipe stubs as indicated in Note 1. Manhole pipe stubs shall be set such that the top of the stub is not lower than the top of the sanitary sewer main.
- SIZING.** Pipe stubs and risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers or pipe stubs are required because of field conditions, the risers and stubs shall be six-inch diameter for commercial or industrial properties and 4" or 6" diameter for residential properties, based on lot size and sanitary sewer main depth. Sizing of risers and stubs shall be approved by the Construction Engineer prior to installation.
- RISER OR STUB MATERIAL.** Risers and stubs shall be constructed of Schedule 40 PVC pipe meeting the requirements of the latest revision of A.S.T.M. All pipe joints shall be solvent welded.
- REINFORCED CONCRETE ENCASEMENT.** Riser connections to clay pipe sanitary sewers shall be reinforced concrete encased both ways from the riser centerline. The reinforced concrete encasement shall extend three feet from the riser centerline or stop at the first sanitary sewer pipe joint within three feet of the riser centerline. Riser connections to PVC Sanitary Sewer mains shall be reinforced concrete encased one foot each way from the riser centerline. The concrete encasement shall be reinforced using reinforcing steel as shown in the appropriate drawing. The concrete shall conform to the City Standard Specifications for concrete pavement.
- BEDDING.** Bedding around the sanitary sewer riser shall be compacted Pipe Bedding Type 1 or 2. The bedding shall be placed and compacted from the depth of the sanitary sewer main to the top of the sanitary sewer riser pipe. Compacted Pipe Bedding Type 1 or 2 shall be required for all risers whether constructed in vertical wall or sloped wall trenches. Bedding material and construction practices shall be approved by the Construction Engineer prior to installation.
- SUPPORT OF RISERS.** Sanitary sewer riser pipe shall be supported during trench backfill. The riser pipe shall be held in a vertical position at all times until trench backfill and compaction has been completed. Contractor's methods for supporting and backfilling the riser pipe shall be approved by the Construction Engineer.
- PLUGGING.** The ends of the riser pipes and manhole stubs shall be plugged using an airtight solvent welded cap or plug. Cap or plug fittings shall be approved by the Construction Engineer prior to installation. Caps or plugs which do not provide an airtight seal will not be accepted.
- TOP OF THE RISER PIPE.** The top elevation of the sanitary sewer riser pipe shall be built per plan elevations, unless otherwise directed by the Construction Engineer. Where riser elevations are not shown on the plans, the top of the risers shall be set at an elevation four feet below the proposed ground surface. If ground water is encountered, the top of the riser pipe shall be set at an elevation two feet (min.) above the maximum water table elevation, regardless of the riser elevation shown on the plans.
- MARKING.** Locations of the ends of the sanitary sewer riser pipe shall be marked by fastening green colored plastic tape to the end of the riser. The tape shall be supported by a length of wooden 2" x 4", extending from the top of the riser pipe to the proposed ground surface. The green tape shall be visible and extend one foot above the proposed ground surface. The green tape shall be 4 mil Polyethylene film with a minimum width of three inches, specifically manufactured for the purpose of identification of underground sewers.
- LOCATION MEASURES.** The project inspector shall record and document the location of all risers constructed as measured from the nearest manhole, indicating the direction from the manhole, the direction and distance from the main, riser size, and elevation of the top of the riser.
- RISER LOCATION.** The riser shall be located per plan if shown. If not shown on the plan, the riser shall be located at the center of the lot, within one foot of the property side of the easement for the lot being served. All riser locations shall be approved by the Construction Engineer prior to installation.
- PAYMENT.** "Sanitary sewer risers" shall be paid for at the contract unit price per each, which price shall be full compensation for all pipe, fittings, marking tape, length of wooden 2 x 4, reinforced concrete encasement, support during backfill, backfill, labor, site restoration, and any other items necessary to complete the work.

"Manhole stubs" shall be paid for at the contract unit price per each, which shall be full compensation for all labor, material, and incidentals necessary to complete the work including all pipe, fittings, reinforced concrete encasement, and all other items as required and listed for "Sanitary Sewer Risers".

PUBLIC SANITARY SEWER DETAILS

WAL-MART SUPERCENTER #4321-00
N.W. 53rd ST. NORTH & N. MERIDIAN
WICHITA, KANSAS

SMC Consulting Engineers, P.C.
 815 West Main - Oklahoma City, OK 73106
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No.	Revision	By	Date

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PROJECT NO.: 4344.00	ENGINEER: TERENCE L. HAYNES, P.E. #14583	