

# SANITARY SEWER PLANS (PUBLIC)

TO SERVE



## MARKET STORE #5860-00

HARRY STREET & WEBB ROAD  
WICHITA, SEDGWICK COUNTY, KANSAS  
CITY OF WICHITA PRIVATE PROJECT NO.

2089PPS (607861)

2011

INDEX OF SHEET (PUBLIC)

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OWNERS' ADDRESS

WALMART STORES, INC.  
702 S.W. 8th STREET  
BENTONVILLE, AR 72716  
PH. (479) 273-4000

CITY RESOURCE LIST

<b>CITY MANAGER</b> CITY MANAGER'S OFFICE CITY OF WICHITA 455 N. MAIN - CITY HALL WICHITA, KS 67202 CONTACT: ROBERT LAYTON PH: (316) 268-4351 FAX: (316) 858-7712	<b>CITY ENGINEER</b> PUBLIC WORKS CITY OF WICHITA 455 N. MAIN - CITY HALL WICHITA, KS 67202 CONTACT: JIM ARMOUR PH: (316) 268-4266 FAX: (316) 268-4114	<b>PLANNING / ZONING</b> METROPOLITAN AREA PLANNING DEPARTMENT CITY OF WICHITA 455 N. MAIN - CITY HALL WICHITA, KANSAS 67202 CONTACT: BILL LONGNECKER PH: (316) 268-4494 FAX: (316) 268-4390
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Release Date: 6/3/2011  
: APRos 6/3/2011

APPROVED AS NOTED  
BY CITY ENGINEER OF WICHITA,  
& BY WICHITA WATER & SEWER DEPARTMENT,  
& BY WICHITA FIRE DEPARTMENT

Public Works: J. Kallman 3-11-11  
Water & Sewer: N/A  
Fire: N/A

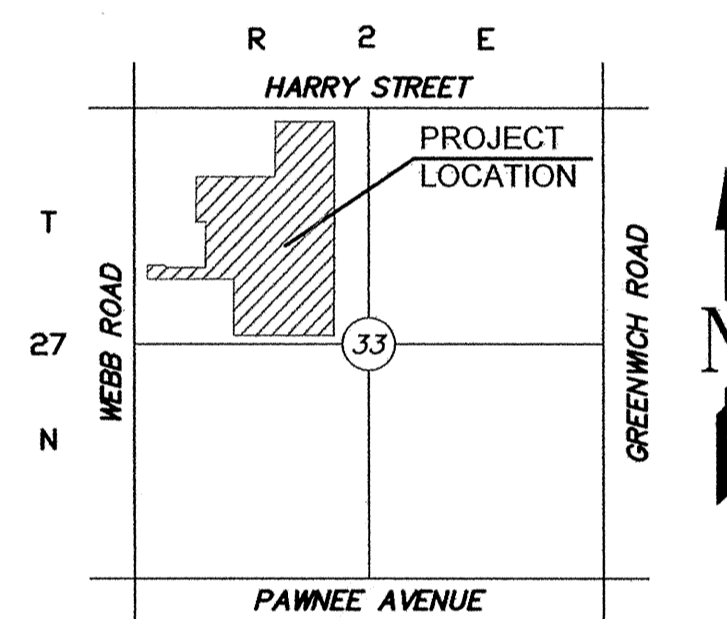
NOTE TO CONTRACTORS

Public Property:

Inspection and testing for the waterline 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 Professional Engineer Licensed in the state of Kansas. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by the City Engineer. All Construction and Materials shall comply with the City or Wichita Specifications and Standards (on file and available in the City Engineer's Office).

Private Property:

Installation and testing for the fire protection line is to be performed by a City of Wichita licensed fire protection contractor in accordance with the fire codes as adopted by the City of Wichita. All material and construction practices for the fire protection line shall comply with the fire codes as adopted by the City of Wichita (available from the City of Wichita Fire Department). The Contractor shall not commence work without notification and approval of the Wichita Fire Department. Inspection of the fire protection line is to be provided by a licensed Engineering Firm under contract with the Owner/Developer and the Fire Department. The contractor shall not start work until the project inspector is assigned to the project and present on the site. Any work done without inspection will be required to be uncovered for inspection.



LOCATION MAP  
NOT TO SCALE

AS BUILTS

Contractor:  
McCullough  
Excavation, Inc.

Project Inspector:  
Larry Gann



5/23/2011

(1) An effort has been made to locate and show approximate location of underground utility lines. 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/her own quantities!

(4) Contractor shall acquire Licensing to work in City of Wichita, shall maintain Insurance Verification per Walmart and City's requirements and shall submit necessary bonds to satisfy City of Wichita's requirements.

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.

ALERT TO CONTRACTOR:

1. THE SITEWORK FOR THE WALMART PORTION OF THIS PROJECT SHALL MEET OR EXCEED THE "SITE SPECIFIC SPECIFICATIONS."
2. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO CONTRACT COMPLETION AND THE FINAL CONNECTION OF SERVICES.

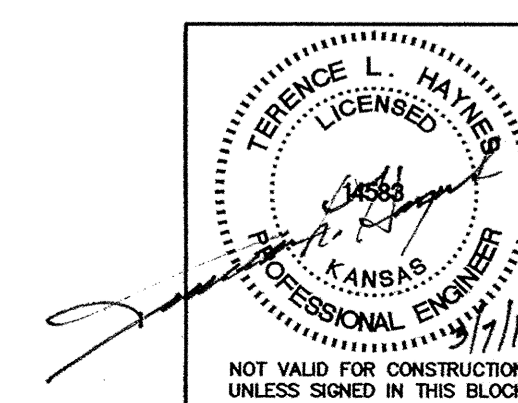
I, Terence L. Haynes, Kansas Professional Engineer, #14583, do hereby state that these Public Sanitary Sewer Line plans & Private Sanitary Sewer Line plans, prepared by me or under my direct, responsible supervision, are in strict conformance with the applicable Codes of the City of Wichita and the sound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

Terence L. Haynes 03/11  
TERENCE L. HAYNES, P.E. #14583

BENCH MARKS:

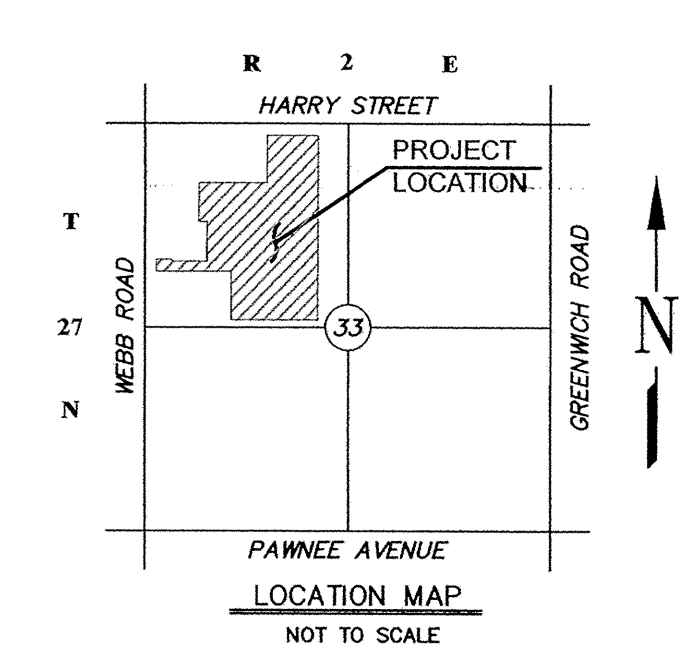
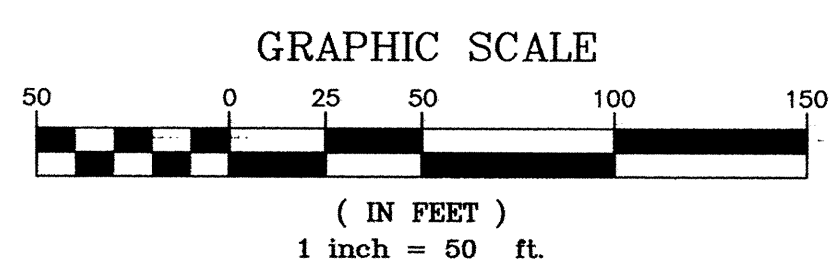
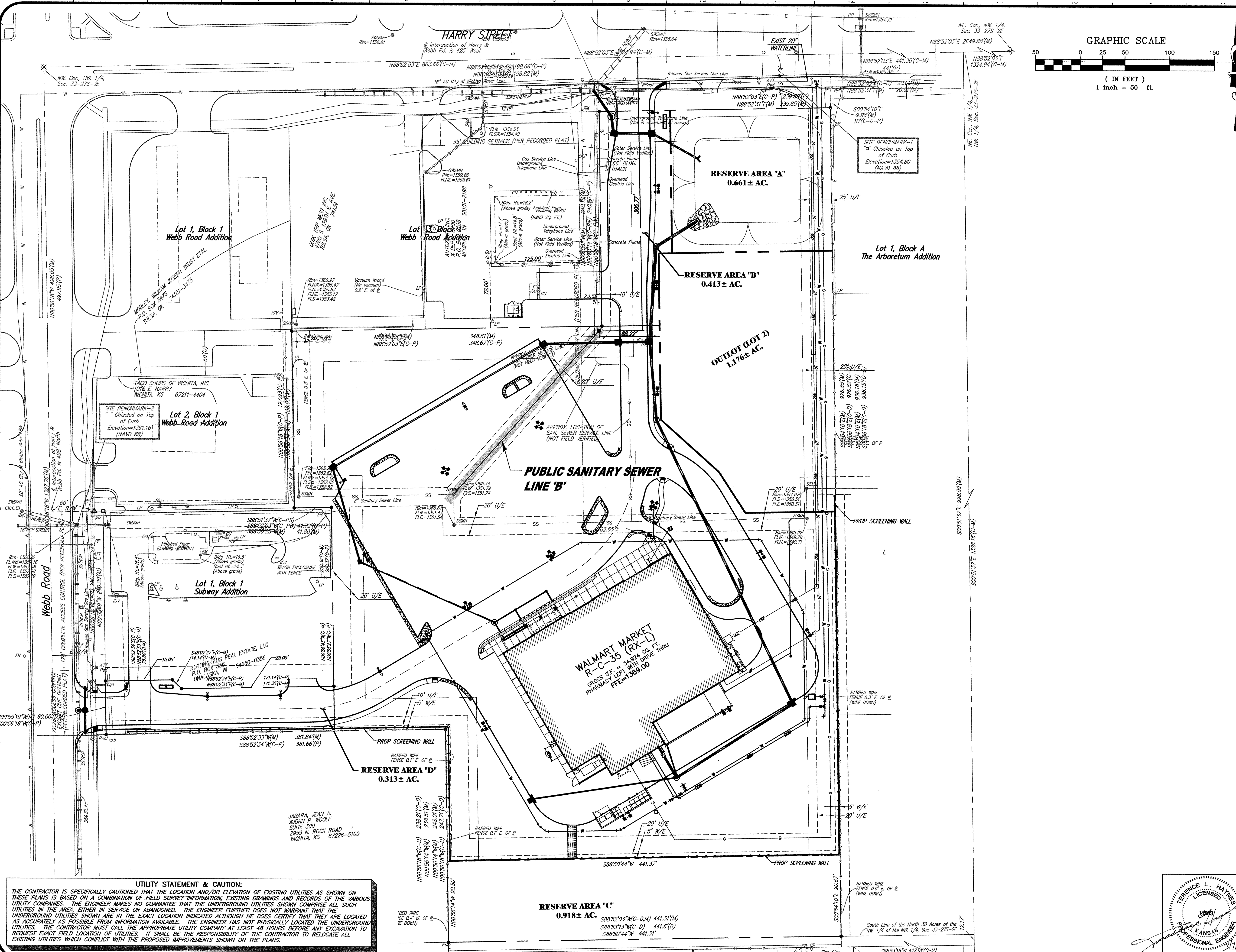
BM #1 "a" CHISELED ON TOP OF CURB ELEV=1354.80	BM #2 "a" CHISELED ON TOP OF CURB ELEV=1361.16
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TITLE SHEET	
PUBLIC SANITARY SEWER PLANS	
MARKET STORE #5860-00	
HARRY STREET & WEBB ROAD WICHITA, KANSAS	
SMC Consulting Engineers, P.C. 815 West Main - Oklahoma City, OK 73106 PH: 405-232-7715 Fax: 405-232-7859	
KANSAS CERTIFICATE OF AUTHORIZATION NO. E-335 EXP. Dec. 31, 2011	
No. / Revision	By / Date
1 / Revised per City's comments	KST / 11/01/10
2 / MM OIB REVIEW	KST / 01/17/11
3 / MM OIB	KST / 01/31/11
4 / Revised per City's comments	TAB / 03/07/11
DATE: 10/04/10	SCALE: NTS
DRAWN BY: KST	PROJECT NO.: 4946.00
ENGINEER: TERENCE L. HAYNES, P.E. #14583	SHEET NO. C-13.1



SMC Consulting Engineers, P.C.

Oklahoma City, Oklahoma



**LEGEND**

—X—	SIGN (STOP, YIELD, etc...)	—X—	PROPOSED CONTOUR & CONTOUR ELEVATION
—	ASILE INDICATOR SIGN	■	STORM SEWER INLET
□	LIGHT POLE AND FIXTURE TYPE	⊕	STORM SEWER CURB INLET
→	TRAFFIC FLOW ARROW	⊙	STORM SEWER MANHOLE (SIS - M.H.)
→	STRAIGHT ARROW	•	S.S. MANHOLE
↶	LEFT TURN ARROW	•	S.S. CLEANOUTS
↷	RIGHT TURN ARROW	---	FUTURE CURBS & GUTTER (BY OTHERS)
□	CART CORNERS	---	POWER UNDERGROUND BY CONTRACTOR
TC	TOP OF CURB	---	TELEPHONE UNDERGROUND (PER CITY SIDS)
TP	TOP OF PAVEMENT	---	POWER OVERHEAD
TW	TOP OF WALK	---	POWER UNDERGROUND
TG	TOP OF GUTTER	---	GAS LINE
SW	SIDEWALK	---	FLOW DIRECTION
R	RADIUS	---	FLOW DIRECTION
U/E	UTILITY EASEMENT	---	S.W.S. STORM SEWER
W/E	WALL EASEMENT	---	L.S. LANDSCAPE
U.C.S.	UNDERGROUND COLLECTION SYSTEM	---	S.S. SANITARY SEWER
W	WATER LINE	---	W WATER LINE
DOM	SPOT ELEVATION	---	DOM DOMESTIC WATER LINE

**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 LOCATION PLAN**

**MARKET STORE #5860-00**

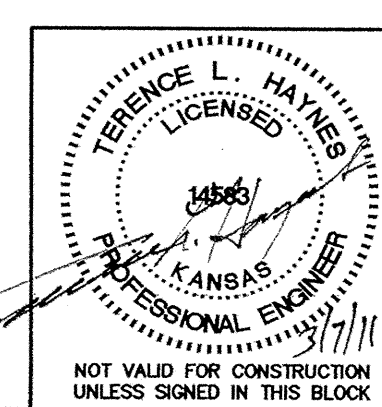
**HARRY STREET & WEBB ROAD WICHITA, KANSAS**

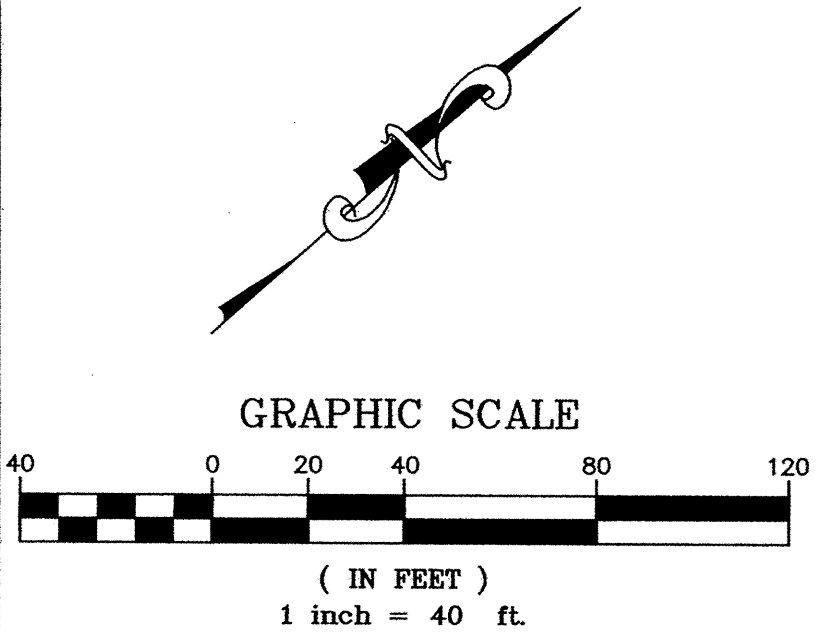
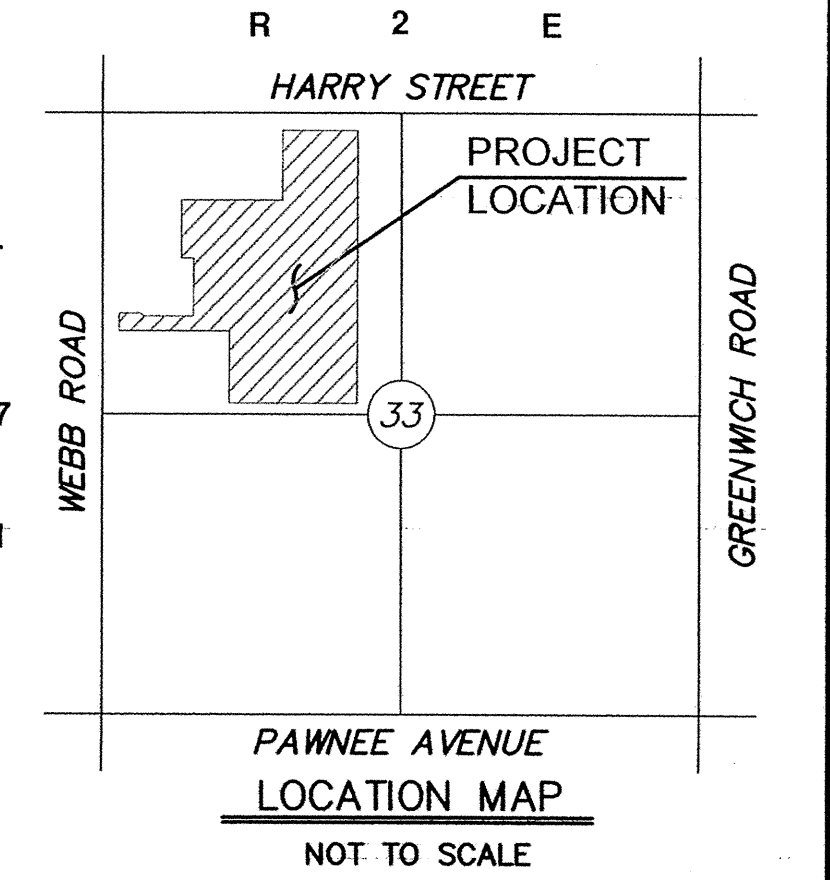
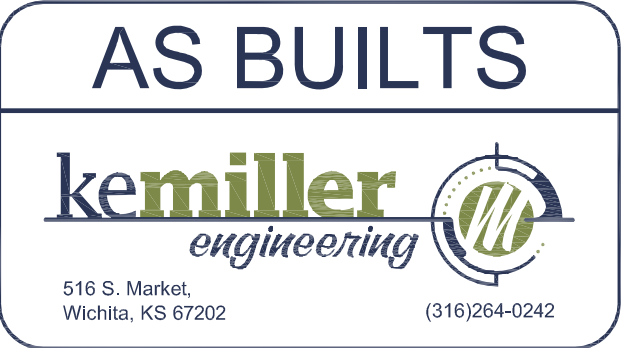
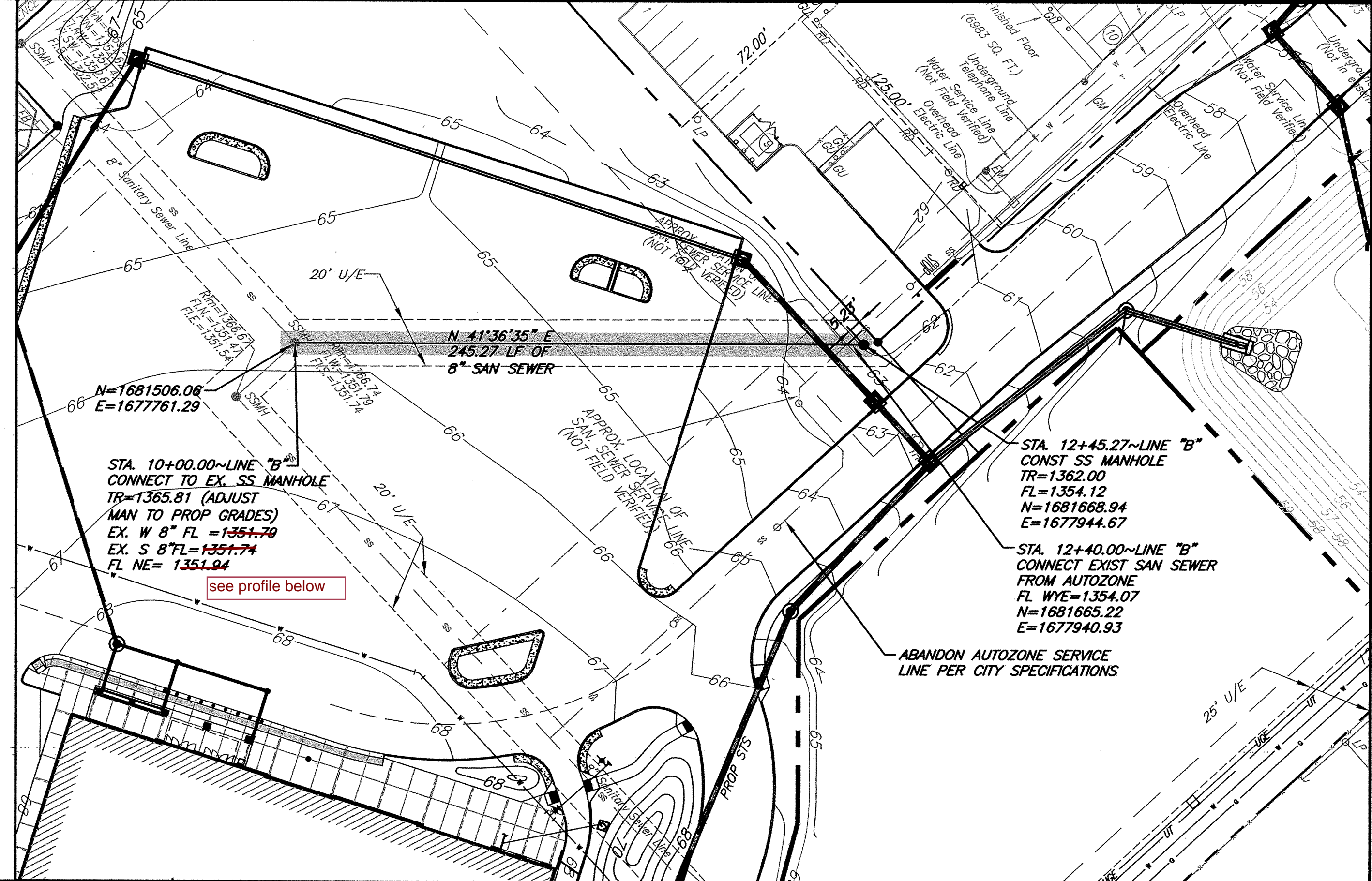
**SMC Consulting Engineers, P.C.**  
 815 West Main - Oklahoma City, OK 73106  
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**SMC**

No.	Revision	By	Date
1	Revised per city's comments	KST	11/01/10
2	MM OIB REVIEW	KST	01/17/11
3	MM OIB	KST	01/31/11

DATE: 10/04/10 SCALE: 1"=50'  
 DRAWN BY: KST SHEET NO. C-13.2  
 PROJECT NO.: 4946.00 ENGINEER: TERENCE L. HAYNES, P.E. #14583

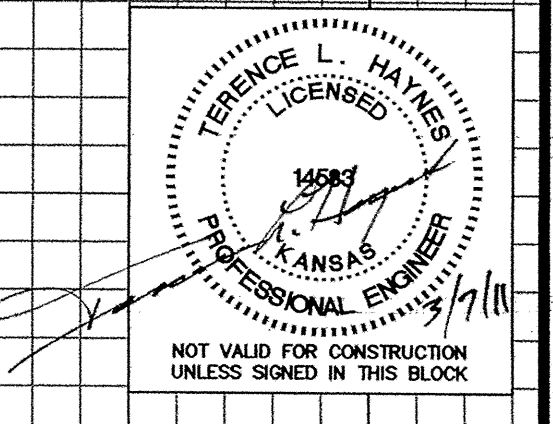
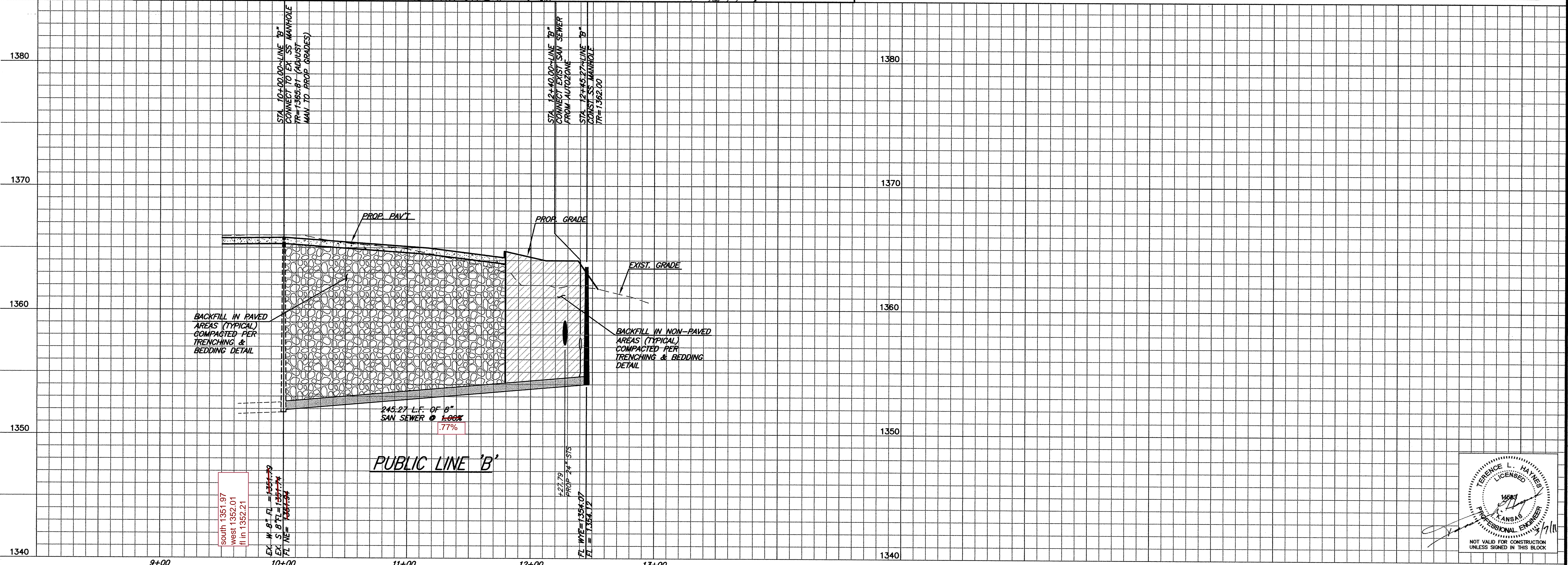




**THE CONTRACTOR SHALL CONNECT THE EXISTING SANITARY SEWER SERVICE FROM AUTOZONE DURING NON-BUSINESS HOURS TO MINIMIZE DISRUPTION TO AUTOZONE'S BUSINESS OPERATION.**

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

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 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.

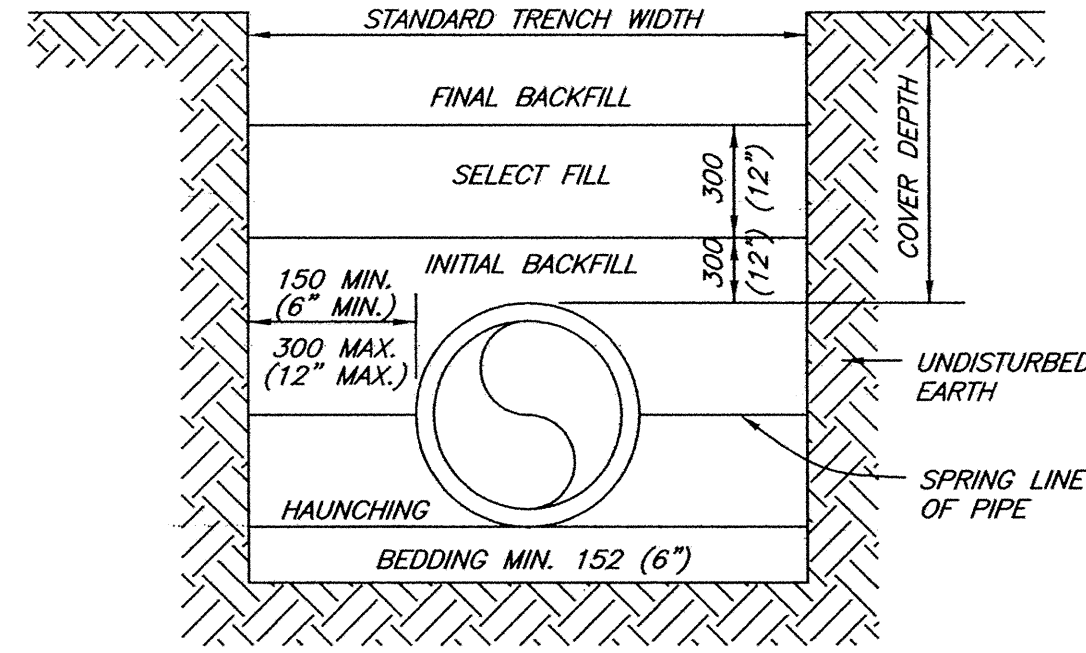


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GENERAL CONSTRUCTION NOTES: SEWER

- ALL SEWERS CONSTRUCTED OF RIGID OR SEMI-RIGID PIPE EXTENDING FROM ALL MANHOLES SHALL BE ENCASED WITH CONCRETE FOR A DISTANCE OF 3 FEET (0.9 M) FROM THE OUTSIDE WALL OF THE MANHOLE. THIS SUPPORT MAY BE DELETED IF A FLEXIBLE, WATER-TIGHT GASKET IS USED TO CONNECT THE SEWER TO THE MANHOLE. NO SUPPORT IS REQUIRED FOR SEWERS CONSTRUCTED OF FLEXIBLE PIPE.
- THE MANHOLE RING AND LID SHALL BE CLAY & BAILEY 2008 BV, DETER FOUNDRY (OR EQUAL), AND SHALL COMPLY WITH ASTM A-48.
- ALL SANITARY SEWER PIPE SHALL BE IN ACCORDANCE WITH ASTM D3034. THE JOINTS SHALL BE RUBBER GASKET TYPE IN ACCORDANCE WITH ASTM D3212 AND ASTM F477. THE MINIMUM WALL THICKNESS SHALL COMPLY WITH SDG-35.
- ALL PVC WATER LINE AND SANITARY SEWER PIPE IS TO BE MARKED WITH WARNING TAPE.
- THE USE OF POURED IN PLACE MANHOLES IS NOT ACCEPTABLE. ALL SANITARY SEWER SEWER MANHOLES SHALL CONFORM TO ASTM C76. THE JOINTS SHALL BE RUBBER RING GASKET IN ACCORDANCE WITH ASTM C443. THE PIPE BLOCKOUTS SHALL BE FACTORY FABRICATED.
- MANHOLE STEPS SHALL BE M.A. PS2-PF, CLAY & BAILEY 2102, OR EQUAL (REFER CITY FOR REQUIREMENTS)
- ALL WATER AND SEWER PIPE AND MANHOLES SHALL BE TESTED PRIOR TO ACCEPTANCE IN ACCORDANCE WITH CURRENT CITY STANDARDS AND SPECIFICATIONS, AS APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT.
- ALL SANITARY SEWER PIPE SHALL BE PRESSURE TESTED. IN ADDITION, A SEVEN SPINE MANDREL OF CORRESPONDING DIAMETER SHALL BE PULLED THROUGH ALL PVC SANITARY SEWER PIPE TO CHECK FOR PIPE DEFLECTION.

PIPE INSIDE DIAMETER		STANDARD TRENCH WIDTH	
MM	IN.	MM	IN.
150	6	450	18
200	8	600	24
250	10	750	30
300	12	750	30
375	15	900	36
450	18	900	36
525	21	1,050	42
600	24	1,050	42
675	27	1,200	48
750	30	1,200	48
900	36	1,350	54
1,050	42	1,500	60
1,200	48	1,650	66



BACKFILL DESCRIPTION	NON-PAVED AREAS			PAVED AREAS (See Note 7)		
	PVC	DUCTILE IRON	H D P E	PVC	DUCTILE IRON	H D P E
FINAL BACKFILL	EXCAVATED MATERIAL	EXCAVATED MATERIAL	EXCAVATED MATERIAL	SBM	SBM	SBM
SELECT BACKFILL	SELECT FILL	SELECT FILL	SELECT FILL	SBM	SBM	SBM
INITIAL BACKFILL	COVER ≤ 10'-SAND OR SBM > 10'-SBM	SELECT FILL	COVER ≤ 10'-SAND OR SBM > 10'-SBM	SBM	SBM	SBM
HAUNCHING	COVER ≤ 10'-SAND OR SBM > 10'-SBM	SELECT FILL	COVER ≤ 10'-SAND OR SBM > 10'-SBM	SBM	SBM	SBM
BEDDING	See Note 3	See Note 3	See Note 3	See Note 3	See Note 3	See Note 3

NOTES:

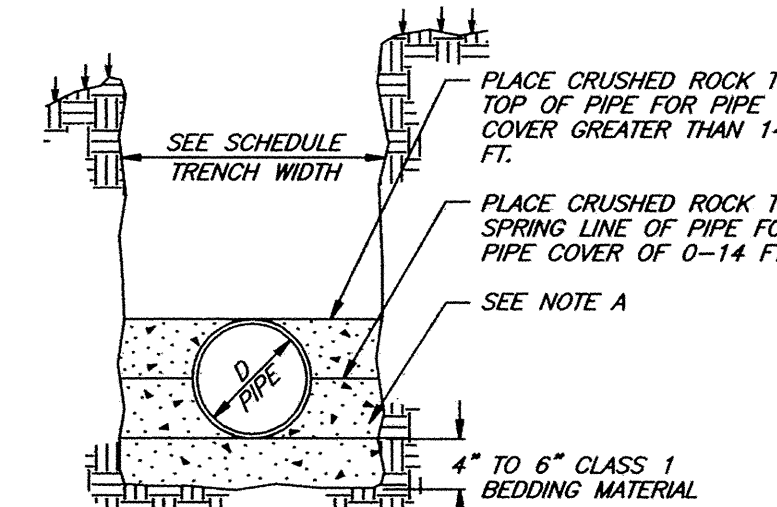
- INSTALLATION AND BACK FILLING SHALL MEET MANUFACTURERS RECOMMENDATIONS.
  - SELECT FILL CONSISTS OF EXCAVATED MATERIALS CONTAINING NO ROCKS LARGER THAN 50 MM (2").
  - STANDARD BEDDING MATERIAL (SBM) SHALL CONFORM TO KDOT A9-3 AGGREGATE BASE OR FLOWABLE FILL OR APPROVED EQUAL.
  - COMPACTION REQUIREMENTS:
    - NON-PAVED AREAS: 90% MINIMUM STANDARD PROCTOR DENSITY FOR COHESIONLESS SOILS AND 85% FOR COHESIVE SOILS.
    - PAVED AREAS: 95% MINIMUM STANDARD PROCTOR DENSITY FOR COHESIONLESS SOILS.
  - IN SANDY SOIL, CONTRACTOR MAY BACKFILL WITH NATIVE MATERIAL AND USE WARNING TAPE 18" ABOVE PIPE.
  - NO WATER JETTING ALLOWED.
  - THE BACKFILL MATERIAL SHALL EXTEND A MINIMUM OF 2-Feet BEHIND THE BACK OF CURB, OR THE EDGE OF PAVEMENT WHERE NO CURB EXISTS.
- METRIC UNITS ARE IN MM WITH ENGLISH UNITS IN PARENTHESIS, UNLESS INDICATED OTHERWISE.

**SANITARY SEWER PIPE TRENCHING AND BEDDING**

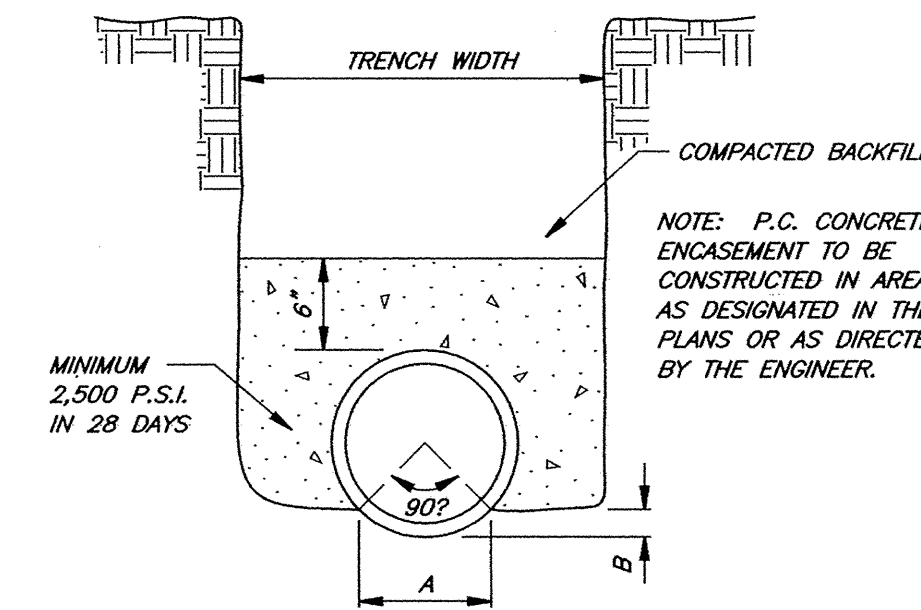
NOT TO SCALE

TRENCH WIDTH	D	C.Y. CRUSHED ROCK PER L.F. 0-14 FT.	C.Y. CRUSHED ROCK DEPTHS GREATER THAN 14 FT.
2.2'	8"	.062	.082
2.2'	10"	.065	.088
2.2'	12"	.070	.093
2.6'	15"	.086	.123
2.9'	18"	.102	.149
3.3'	21"	.124	.186
3.8'	24"	.153	.236
4.2'	27"	.180	.281
4.5'	30"	.242	.318
4.9'	33"	.230	.370
5.2'	36"	.254	.412

NOTE: STONE SHALL BE HAND OR MECHANICALLY TAMPED.



**TYPICAL SECTION CRUSHED ROCK CRADLE FLEXIBLE PIPE**

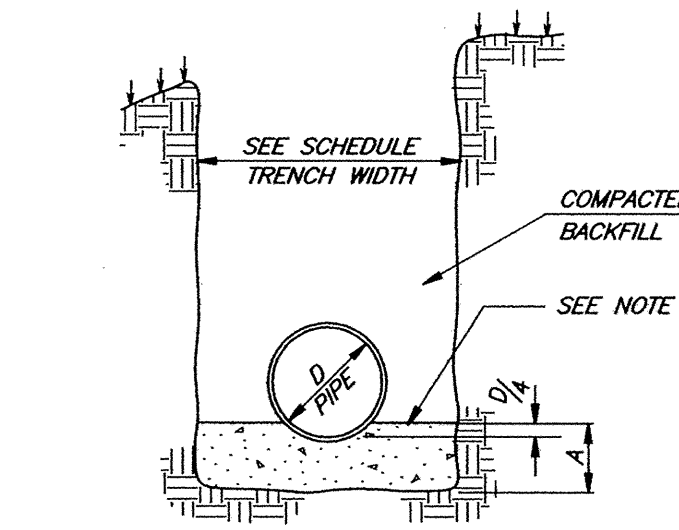


**CONCRETE ENCASEMENT DETAIL**

NOT TO SCALE

TRENCH WIDTH	D	A	C.Y. CRUSHED ROCK PER L.F.
2.2'	8"	8"	.052
2.2'	10"	9"	.058
2.2'	12"	10"	.063
2.6'	15"	11"	.082
2.9'	18"	12"	.089
3.3'	21"	13"	.121
3.8'	24"	14"	.149
4.2'	27"	15"	.175
4.5'	30"	16"	.199
4.9'	33"	17"	.229
5.2'	36"	18"	.256

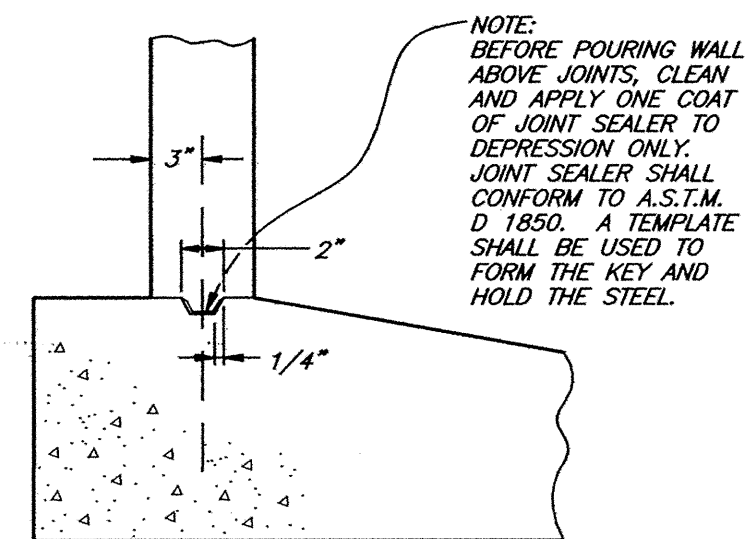
NOTE: STONE SHALL BE HAND OR MECHANICALLY TAMPED.



**TYPICAL SECTION CRUSHED ROCK CRADLE RIGID PIPE**

NOTE A: BEDDING MATERIAL SHALL BE WELL GRADED, CLEAN GRAVEL OR CRUSHED STONE WITH 95% PASSING THE 1/2" SIEVE, AND 5% PASSING THE NO. 4 SIEVE WITH A MAXIMUM SIZE OF 3/4".

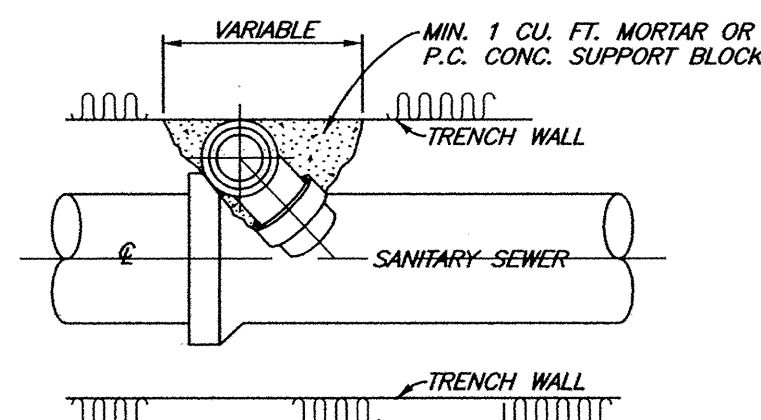
PIPE SIZE	TRENCH WIDTH	A (FT.)	B (FT.)	C.Y. CONC. PER L.F. ENCASEMENT
8"	2.2'	0.574	0.119	0.079
10"	2.2'	0.707	0.146	0.083
12"	2.2'	0.843	0.174	0.086
15"	2.6'	1.049	0.217	0.111
18"	2.9'	1.263	0.261	0.133
21"	3.3'	1.473	0.305	0.163
24"	3.8'	1.679	0.347	0.206
27"	4.2'	1.892	0.392	0.243
30"	4.5'	2.099	0.434	0.272
33"	4.9'	2.294	0.475	0.314
36"	5.2'	2.489	0.515	0.347



**DETAIL KEY CONSTRUCTION JOINT FOR BOTTOM & WALLS**

NOT TO SCALE

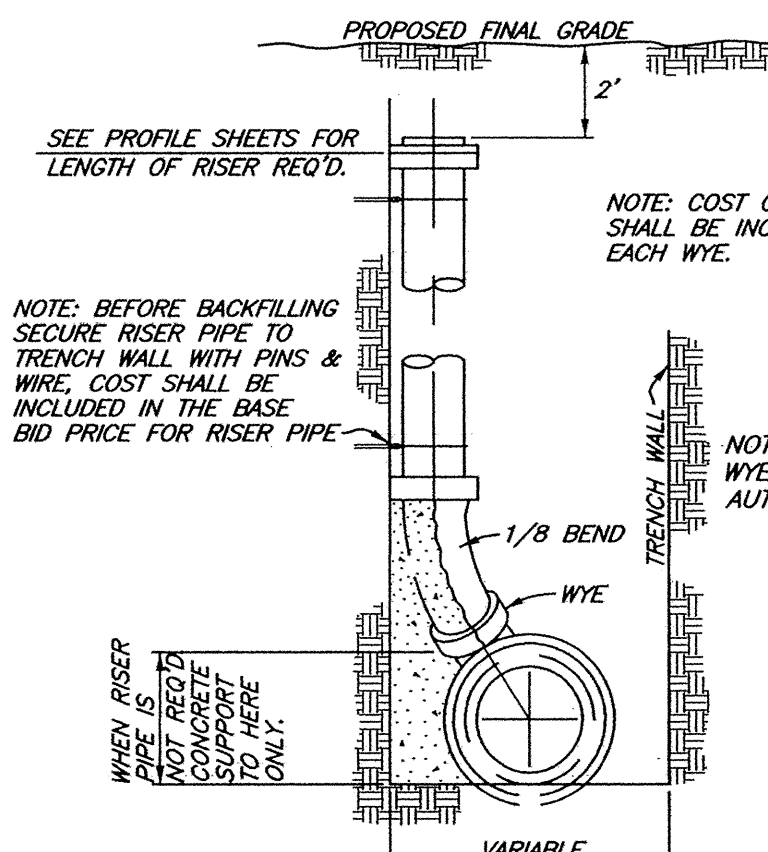
WHERE TRENCH WALLS ARE SLOPED, THE RISER SHALL BE SECURED TO THE SLOPING TRENCH WALL AFTER IT HAS SHAPED TO ASSURE THAT THE RISER IS SUPPORTED THROUGHOUT ITS LENGTH. THE RISER SHALL NOT BE EXTENDED TO A POINT OUTSIDE OF THE EASEMENT SHOWN ON THE PLANS. WHEN THIS METHOD IS USED, THE CONTRACTOR SHALL ALSO KEEP A LIST OF THE HORIZONTAL DISTANCES FROM THE CENTERLINE OF THE PIPE OVER TO THE TOP OF THE RISER, ALONG WITH HIS RECORD OF WYE LOCATIONS.



**PLAN**

**WYE AND RISER DETAIL**

NOT TO SCALE



**ELEVATION**

NOTE: COST OF P.C. CONC. SUPPORTS & STOPPERS SHALL BE INCLUDED IN THE BASE BID PRICE FOR EACH WYE.

NOTE: A TEE MAY BE USED IN PLACE OF A WYE IF REQUIRED BY THE REGULATORY AUTHORITY.

PUBLIC SANITARY SEWER LINE DETAILS

WALMART MARKET #5860-00

HARRY STREET & WEBB ROAD  
WICHITA, KANSAS

SMC Consulting Engineers, P.C.

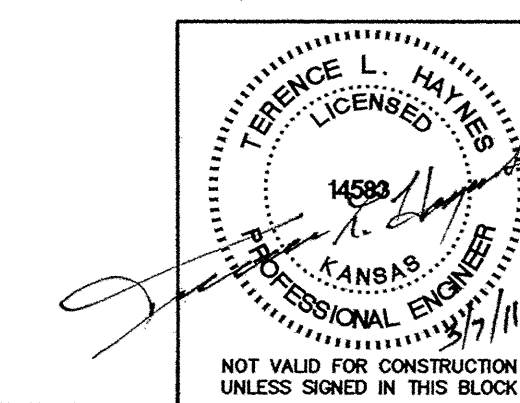
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DATE: 01/04/11	SCALE:	SHEET NO.
DRAWN BY: KST	N.T.S.	C-13.4
PROJECT NO.: 4946.00		
ENGINEER: TERENCE L. HAYNES, P.E. #14583		



NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK