STORM WATER SEWER IMPROVEMENTS TO SERVE LOT 21 & 22, COMOTARA INDUSTRIAL PARK FOUTH ADDITION

KANSAS HEART HOSPITAL OFFICE PLAZA

Project Number

946 PPS(607861)

CITY OF WICHITA, KANSAS

Michael E. Lindebak, P. E., City Engineer

GENERAL NOTES

1. Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) hours prior to any excavation, as follows:

   Kansas One-Call 687-2470

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

Cablevision	262-4270
or	263-2061
K.P.L. Gas Service Company	383-8650
Kansas Gas & Electric Company	383-8600
Peoples Natural Gas	942-8811
or	1-800-303-0357
Southwestern Bell Telephone Company	1-571-2611
City of Wichita Water Department	268-4908
City of Wichita Sewer Department	268-4071

2. Exist. utilities and their locations, 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 which do not conflict with proposed construction.

3. The Contractor to verify utility locations prior to construction of this project.

4. Utility service and installation shall be coordinated with the respective utility owners. Contacts are:

KG&E Gas	Steve Orth	261-6867
K.G. & E.	Miles Capps	261-6434
Wichita Water	Paul Bryant	268-4555
	Steve Palmer	268-4908
Southwestern Bell	Jim Tobin	268-2759

5. All areas disturbed by construction shall be seeded with rye Rebel II Fescure grass at a rate of 350 lbs./acre immediately following construction in that area.

6. Traffic affected by the construction of this project shall be handled in accordance with the latest edition of the Manual on Uniform Traffic Control Devices.

7. All lawn/turf areas disturbed by construction of proposed improvements shall be restored with the same grass/ sod as existing. Restoration of disturbed areas shall include, but not be limited to, top soil preparation, seeding, mulch and/or reseeding. All seeding/sodding work shall be in accordance with the City of Wichita standard specifications and the City of Wichita administrative regulation No. AR78 which governs cleanup and replacement following construction. All costs for this work shall be subsidiary to the lump sum price bid for "Site Restoration."

APPROVED AS NOTED BY CITY ENGINEER OF WICHITA

STORM SEWERS VRH 11/30/99

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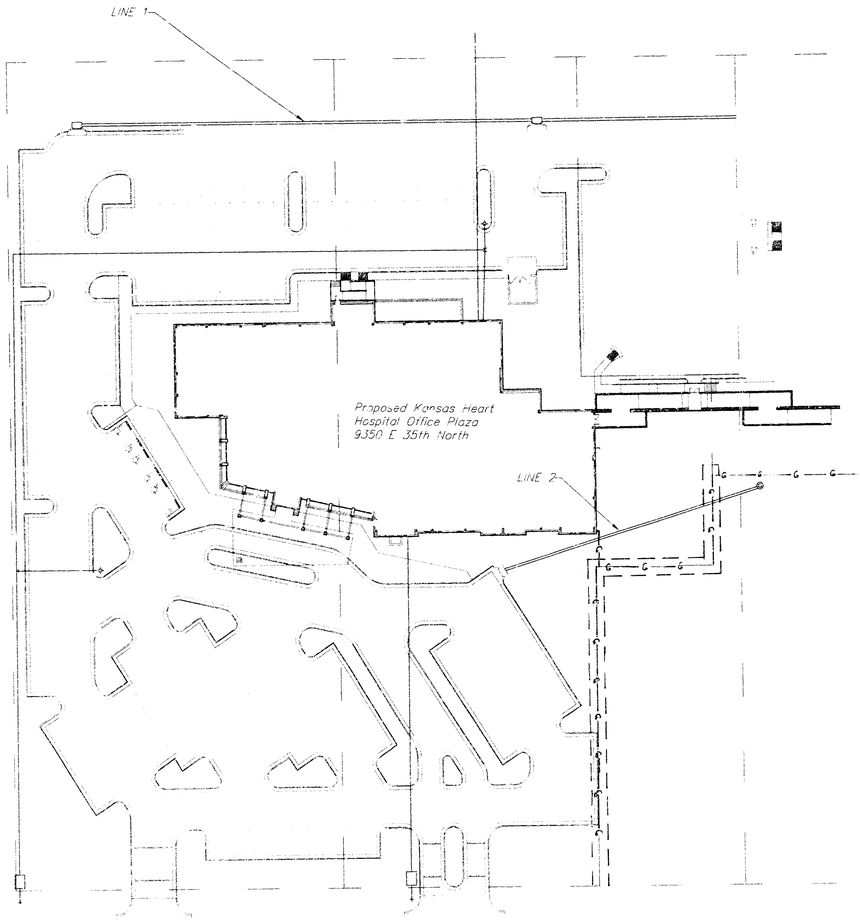


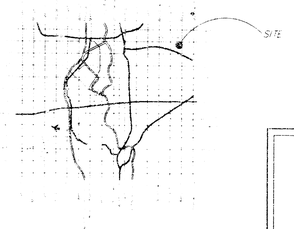
AS-BUILT
Date: 7-1-00
Signed: R. [illegible]

BENCHMARK:

Temporary Bench Mark. Box cut top North Curb 34th St. 100+/- west of Center Webb Rd. Elev. 244.04

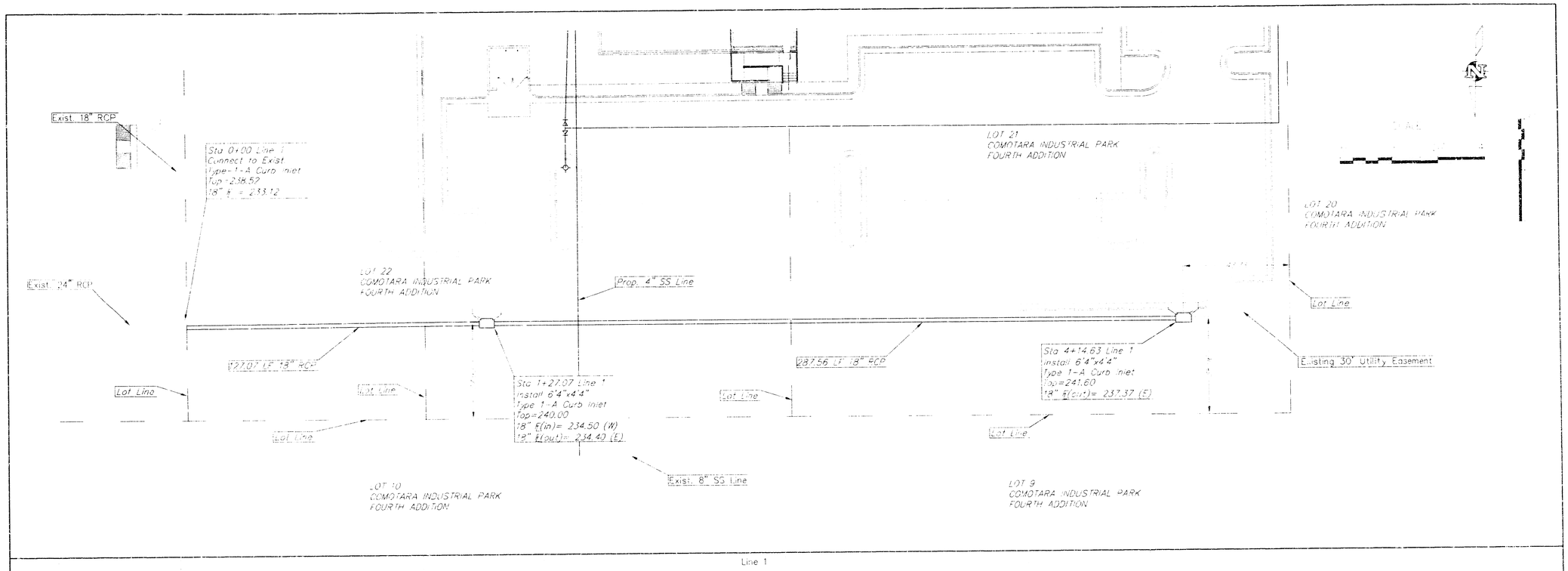
INDEX:

1. Title Sheet
2. Plan and Profile of Line 1
3. Plan and Profile of Line 2
4. Standard/Special Shallow Manhole Type "A"&"B"
5. Standard Type 1-A Curb Inlet.

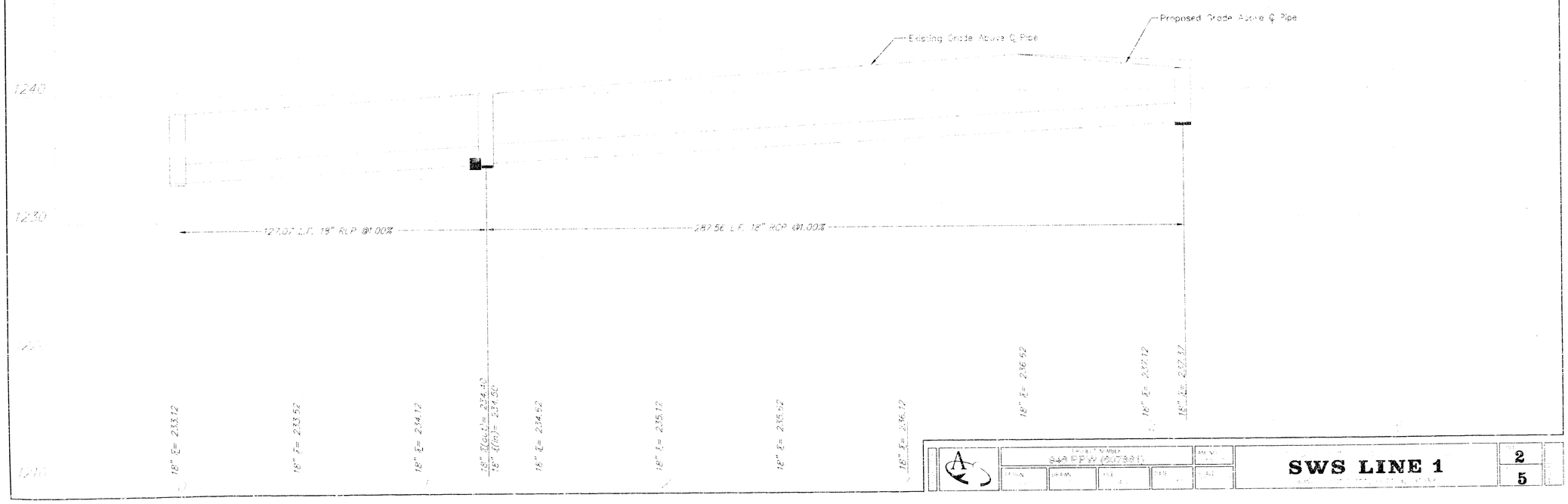


LOCATION MAP

AUSTIN P.A.
ENGINEERING SERVICES

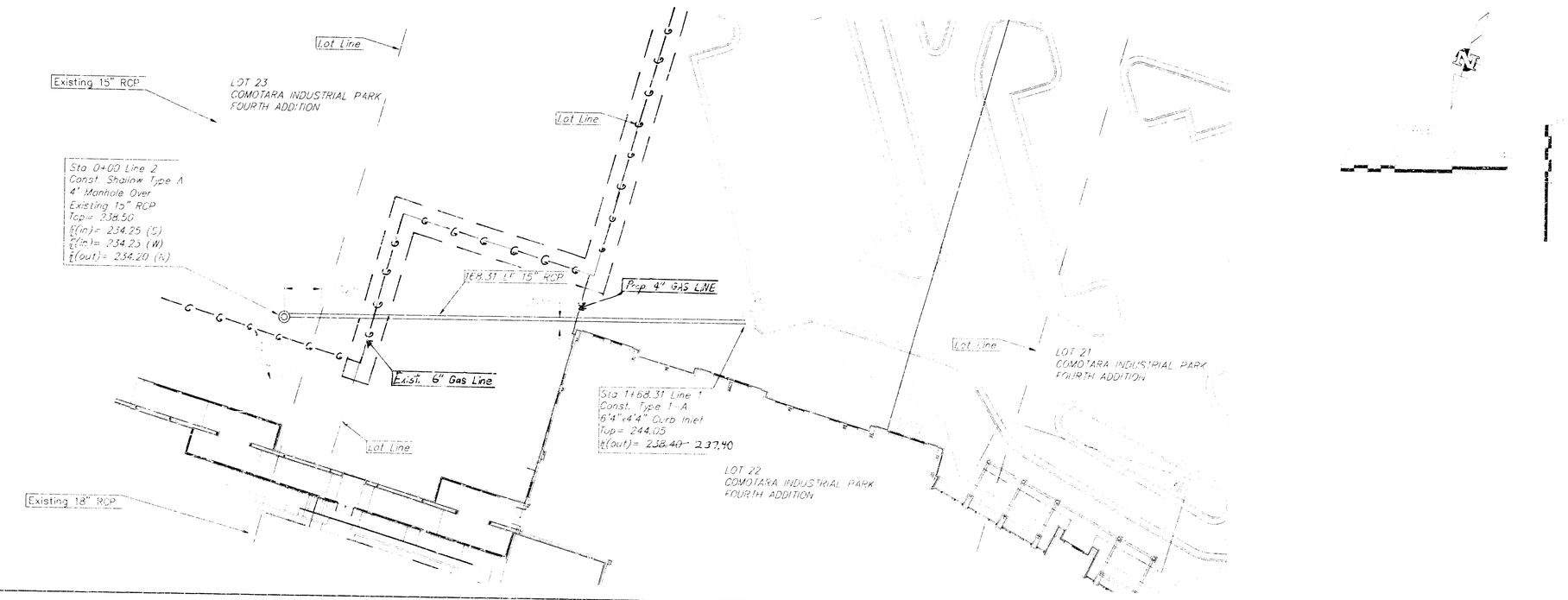


Line 1

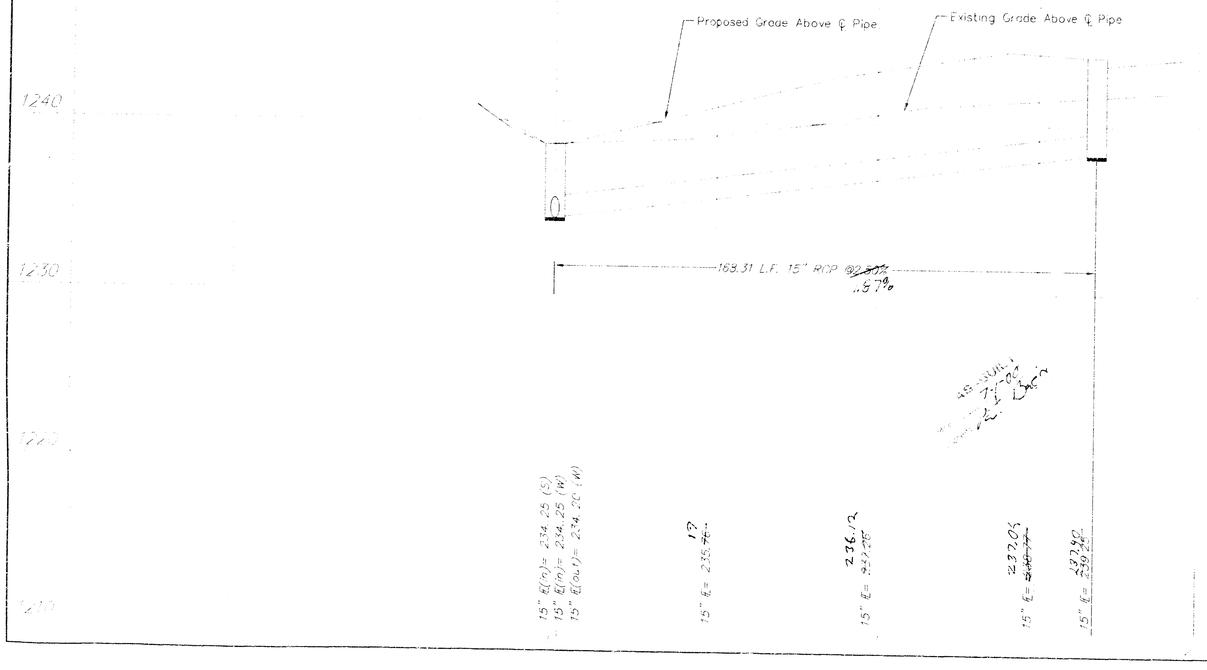


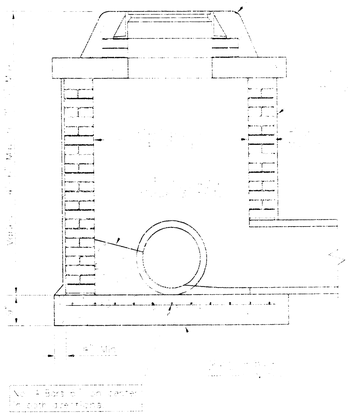
SWS LINE 1

2
5

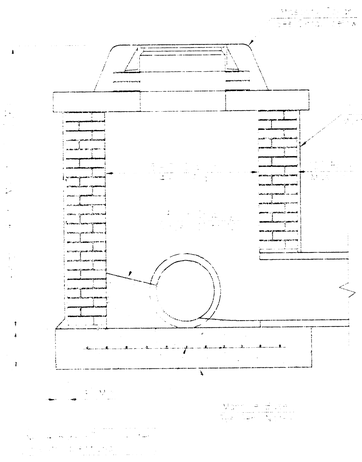

Lot Line
Existing 15" RCP
LOT 23
COMOTARA INDUSTRIAL PARK
FOURTH ADDITION
Lot Line
Sta 0+00 Line 2
Const. Shallow Type A
4' Manhole Over
Existing 15" RCP
Top= 238.50
t(in)= 234.25 (S)
t(in)= 234.23 (W)
t(out)= 234.20 (N)
168.31 LF 15" RCP
Prop 4" GAS LINE
Exist. 6" Gas Line
Lot Line
Sta 1+68.31 Line 1
Const. Type 1-A
6'4"x4'4" Curb Inlet
Top= 244.05
t(out)= 238.40 - 237.90
LOT 22
COMOTARA INDUSTRIAL PARK
FOURTH ADDITION
Lot Line
LOT 21
COMOTARA INDUSTRIAL PARK
FOURTH ADDITION
Existing 18" RCP

Line 2

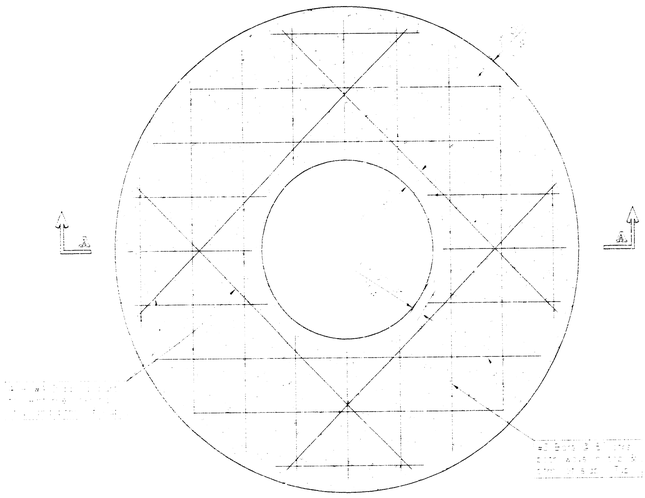

Proposed Grade Above ℄ Pipe
Existing Grade Above ℄ Pipe
1240
1230
1220
1210
168.31 L.F. 15" RCP @ .57%
15" E(in)= 234.25 (S)
15" E(in)= 234.25 (W)
15" E(out)= 234.20 (N)
17
15" E= 235.46
236.12
15" E= 235.28
237.05
15" E= 236.90
237.82
15" E= 236.74



SHALLOW TYPE "A" MANHOLE



SHALLOW TYPE "B" MANHOLE



PLAN

GENERAL NOTES

1. 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 cement 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. Type "A" shallow manholes can be used on sewers when the manhole is not located within public street pavement. Manholes constructed where pipe sizes are smaller than 24" shall have an inside diameter of 4'. Manholes constructed where pipe sizes are 24" or larger shall have an inside diameter of 5'. Completed manhole shall be without leaks and water tight.

2. 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 6" 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.

3. 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.

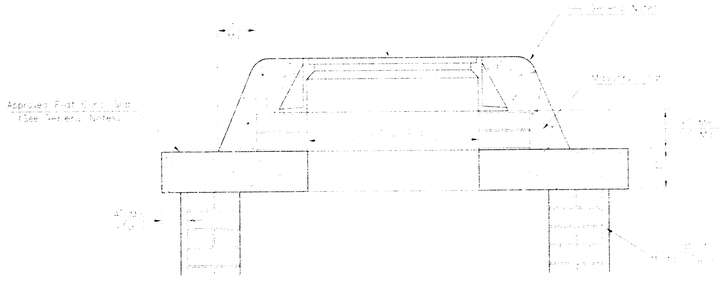
4. Pipes installed within the excavation made for the manhole shall be cradled with concrete to the limits of the manhole excavation. When clay pipe is used, the cradle shall extend to the first joint outside the manhole. The cradle shall be terminated at the clay pipe joint in a manner which will maintain the flexibility of the joint. Cost of cradle within manhole excavation or to clay pipe joints adjacent to manhole shall be included in the unit price bid for the manhole.

5. 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 drawings.

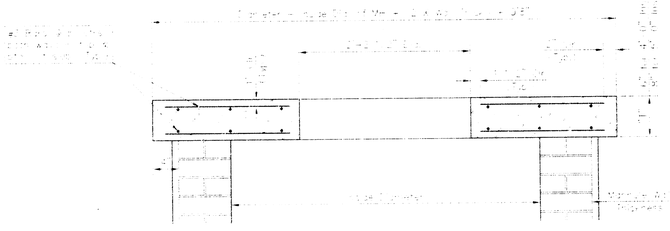
6. The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.

7. Standard shallow manholes type "A" and "B" shall be paid for at the unit price bid per each for the type and diameter indicated. Standard special shallow manholes type "A" and "B" shall be paid for at the unit price bid per each for the type indicated. All standard shallow manhole diameters will be 4' unless indicated otherwise.

8. All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62-87.

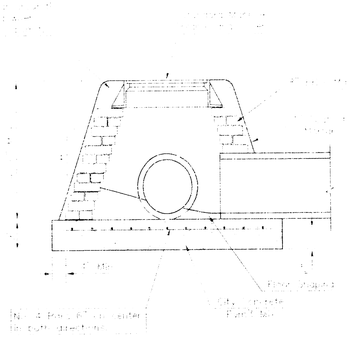


MASONRY COLLAR DETAIL

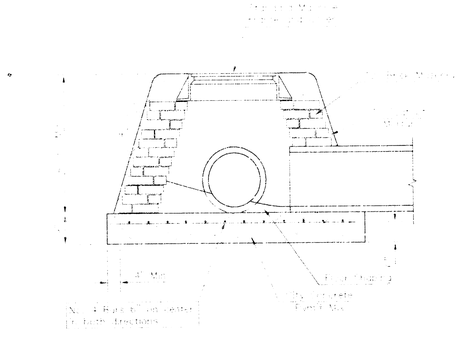


SECTION A–A

FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE "A" MANHOLE



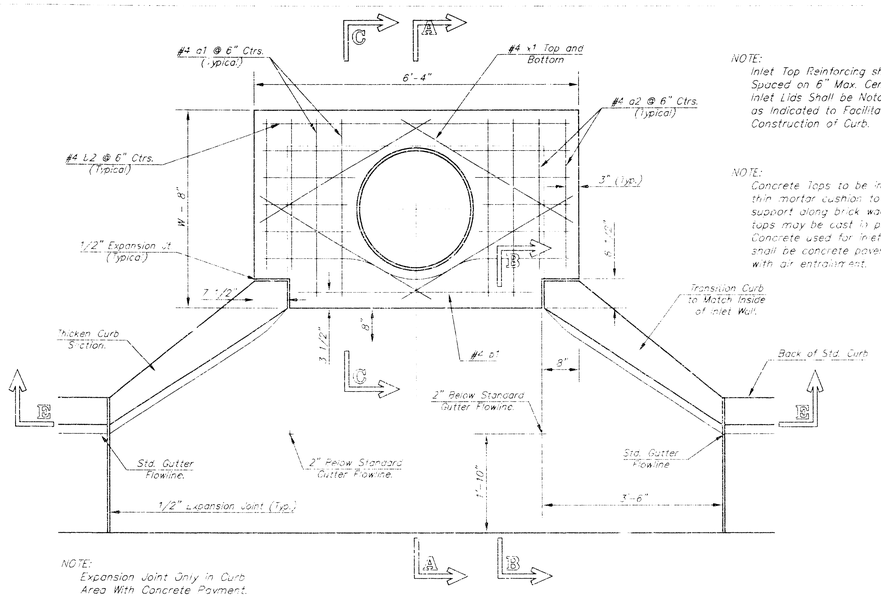
SPECIAL SHALLOW TYPE "B" MANHOLE

CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

STANDARD SPECIAL SHALLOW MANHOLES TYPE 'A' & 'B'

M. E. LINDEBAK P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
XXX–XXXXX	XXXXXX
DATE: MAR 96	SHEET 4 OF 5

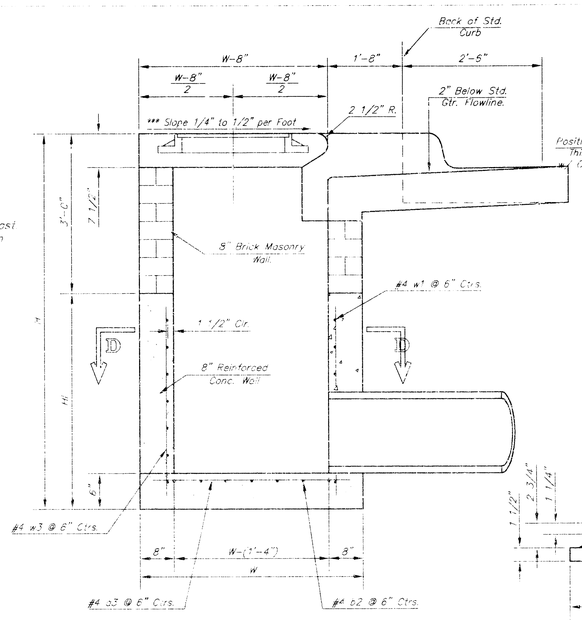


PLAN

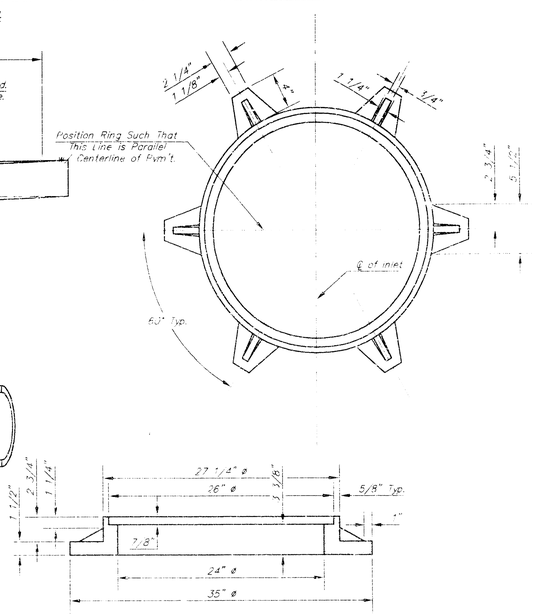
NOTE:
Expansion Joint Only In Curb Area With Concrete Pavment.

NOTE:
Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids Shall be Notched Out as Indicated to Facilitate Construction of Curb.

NOTE:
Concrete Tops to be installed on thin mortar cushion to insure full support along brick walls. Concrete tops may be cast in place or precast. Concrete used for inlet construction shall be concrete pavement mix with air entrainment.



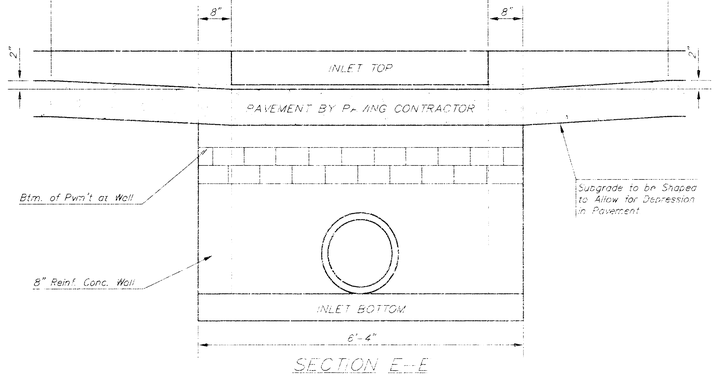
SECTION A-A



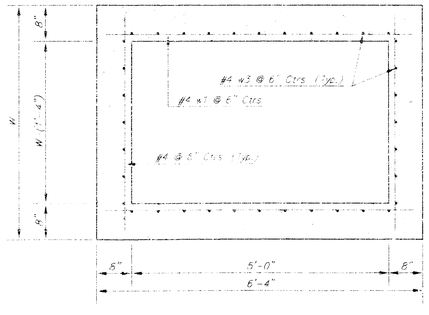
MANHOLE RING AND COVER

Weight = 180 Lbs.

*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.



SECTION E-E



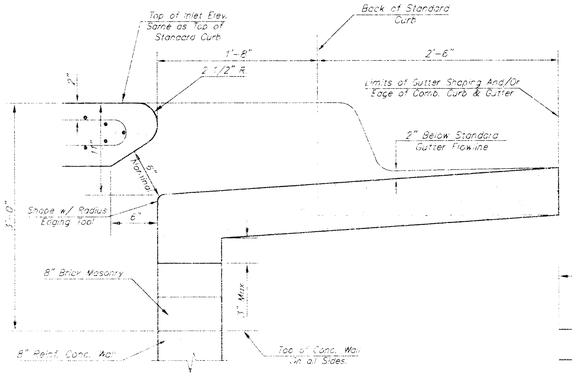
SECTION D-D

NOTE: Contractor shall have the option of constructing 8" brick masonry walls between the concrete inlet base and top of the inlet when W=E'-4" and H=7'-0" or less.

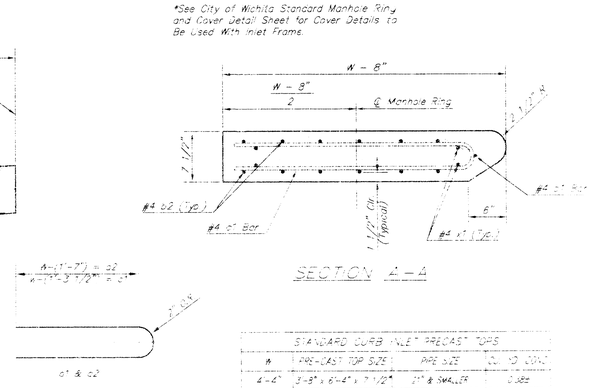
Additional curb and gutter construction necessary to connect set back inlet to pavement will be paid for at the unit price bid for each inlet made up.

Inlet invert shall be shaped with 8 each sack mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self cleaning between all inlet and/or outlet pipes.

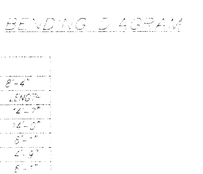
The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.



SECTION B-B



SECTION A-A



BENDING DIAGRAM

PRECAST SLAB AND FLOOR REINFORCING

	W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
a1	#4	8	6'-7"	8	6'-7"	8	6'-7"	8	6'-7"	8	6'-7"
a2	#4	4	6'-0"	4	6'-0"	4	6'-0"	4	6'-0"	4	6'-0"
b3	#4	44	4'-7"	52	4'-7"	60	4'-7"	68	4'-7"	76	4'-7"
b2	#4	23	4'-0"	29	4'-0"	35	4'-0"	41	4'-0"	47	4'-0"
L2	#4	8	8'-0"	8	8'-0"	8	8'-0"	8	8'-0"	8	8'-0"

WALL REINFORCING

	W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
w1	#4	①	6'-7"	①	6'-7"	①	6'-7"	①	6'-7"	①	6'-7"
w2	#4	①	4'-7"	①	5'-7"	①	6'-7"	①	7'-7"	①	8'-7"
w3	#4	32	②	36	②	40	②	44	②	48	②

* Field Bend or Cut Reinforcing as Required for Clearance.

① 4 (H - 12") (H - 21") Rounded down to nearest 0.5'

② H - 3"

STANDARD CURB INLET PRECAST OPT.

W	PRE-CAST TOP SIZE	PIPE SIZE	VOL. OF CONC.
4'-4"	5'-8" x 6'-4" x 7 1/2"	27" & SMALLER	0.4Cy
5'-4"	6'-8" x 6'-4" x 7 1/2"	24" & 30"	0.5Cy
6'-4"	5'-8" x 6'-4" x 7 1/2"	36" & 42"	0.6Cy
7'-4"	6'-8" x 6'-4" x 7 1/2"	42" & 54"	0.7Cy
8'-4"	7'-8" x 6'-4" x 7 1/2"	60" & 66"	0.8Cy

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4401 FAX

STANDARD INLET FOR CURB INLET OPENING W x 5'-0"

M. E. LINDEBAK P.E. - CITY ENGINEER

PROJECT NUMBER 797 IRS 607561

INDEX CODE

DATE MAR 98

SHEET