STORM WATER SEWER IMPROVEMENTS

TO SERVE
GRANITE CITY FOOD & BREWERY
LOCATED AT 2244 NORTH WEBB ROAD,
PART OF LOT 4, BLOCK 1, TALLGRASS EAST COMMERCIAL ADDITION,
WICHITA, KANSAS

COW PRIV. PROJ. NO. 1498 PPS(607861)

JAMES L. ARMOUR, P.E., ACTING CITY ENGINEER

NOVEMBER 2004

INDEX OF SHEETS

1. Title Sheet
2. Site Plan
3. SWS Plan & Profile
4. Type 1 Curb Inlet Detail
5. Reinforced Concrete MH Detail

GENERAL NOTES

1. ALL ELEVATIONS SHOWN ARE BASED ON CITY OF WICHITA DATUM (MEAN SEA LEVEL ELEV.- 1187.4 = CITY DATUM).

2. 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
KG&E-GAS	263-7511
KG&E-ELECTRIC	264-1141
AQUILA	942-8811
SBC	1-571-2611

THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO PIPELINES.

3. COST OF EXCAVATION, HAULING AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO OTHER ITEMS OF WORK.

4. 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.

5. 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.

6. 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.

7. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES AND BANK LINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE.

8. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA SHALL BE CARRIED THROUGH CONSTRUCTION.

9. 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.

10. 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.

11. 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.

12. ALL PROPOSED STUBS AND PLUGGED PIPES SHALL BE LOCATED WITH GREEN PLASTIC TAPE.

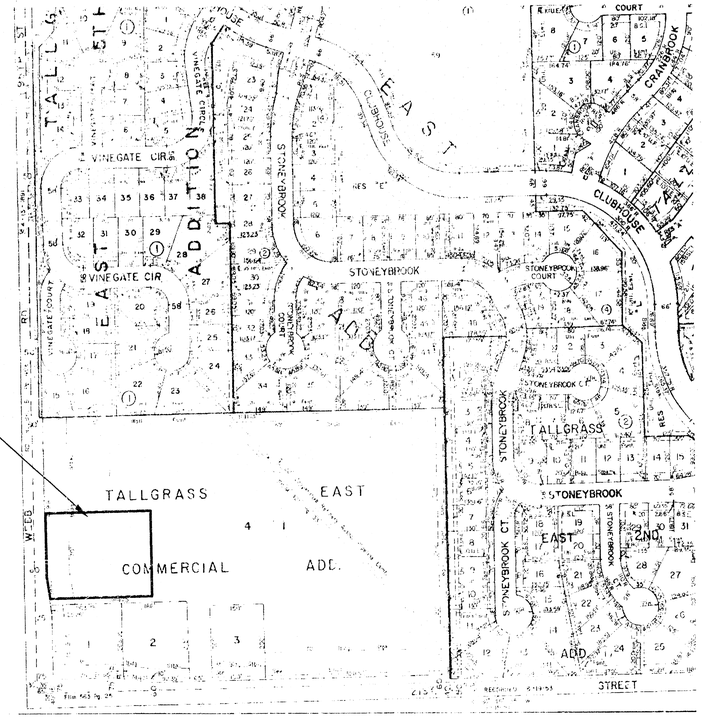
14. THE CONTRACTOR MUST EXAMINE THE CONSTRUCTION SITE PRIOR TO BIDDING AND BE SATISFIED AS TO THE WORK SHOWN FOR COMPLETION. AFTER BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL NOT ASSERT THAT THERE WAS A MISUNDERSTANDING OF THE QUANTITIES OF WORK OR OF THE NATURE FOR THE WORK TO BE COMPLETED.

15. 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.

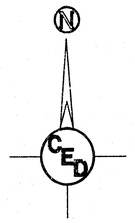
17. THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT EXISTING ROADWAYS AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES TO ENSURE SAFETY AS DIRECTED IN THE GENERAL CONDITIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.

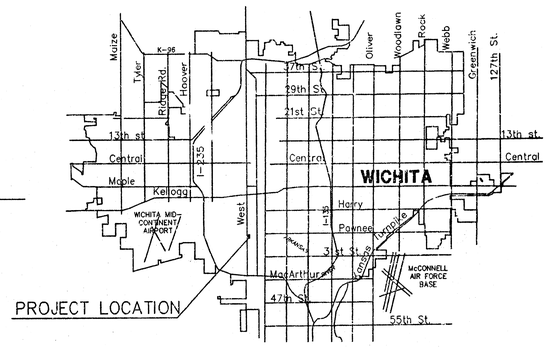
18. ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR78 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR 'SITE RESTORATION'.

19. CUTS MADE TO PAVED SURFACES ON PUBLIC PROPERTY WILL BE REPAIRED BY THE CITY'S CONTRACTOR AND CHARGED AGAINST THE OWNER/APPLICANT. UNIT REPAIR PRICES ARE AVAILABLE FROM THE CITY AT 268-4418. A SURCHARGE MAY BE APPLICABLE: CALL 268-4418 FOR DETAILS. REPAIR COSTS TO BE PAID PRIOR TO RELEASE OF WATER SERVICE IF WATER SERVICE IS AFFECTED.



PROJECT LOCATED IN THE N.W.1/4, SEC. 1, T.28S., R.1W. WICHITA, SEDGWICK COUNTY, KANSAS





PROJECT LOCATION

LOCATION MAP

APPROVED AS NOTED
By CITY ENGINEER OF WICHITA

Sanitary Sewers _____
Storm Sewers VRH 11/22/04
Driveway Approaches _____
Water Mains _____
Paving _____

AS-BUILT
3/9/05
Date
K.E.M.'ller
Signed

NOTE TO CONTRACTOR

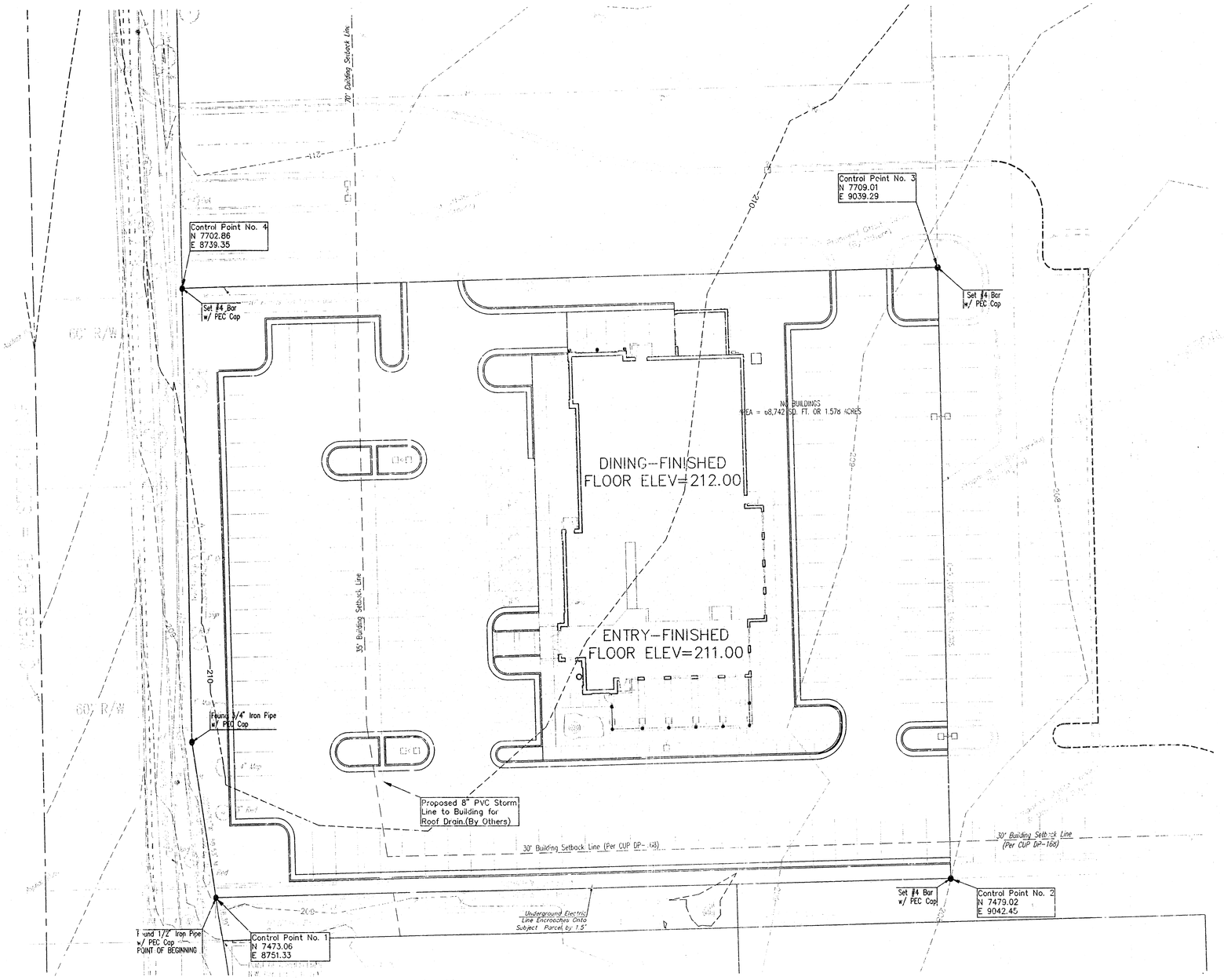
INSPE TION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM UNDER CONTRACT WITH THE OWNER/DEVELOPER. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK 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.

HARLAN DALE FORMAN LICENSED 10891 KANSAS PROFESSIONAL ENGINEER 11-24-04

CED PROJ. NO.: 20041215

CERTIFIED ENGINEERING DESIGN, P.A.
810 WEST DOUGLAS, SUITE C
WICHITA, KANSAS 67203
PH: (316) 262-8808
FAX: (316) 262-1669

SHEET 1
TOTAL 5



GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20 ft.

LEGAL DESCRIPTION

Part of Lot 4, Block 1, Tallgrass East Commercial an addition to Wichita, Sedgwick County, Kansas described as: Commencing at the Northwest corner of Lot 1, Block 1, Tallgrass East Commercial; thence bearing N09°19'07"W along the West line of said Lot 4, a distance of 16.39 feet to the Point of Beginning; thence continuing bearing N09°19'07"W, a distance of 59.46 feet; thence bearing N00°47'16"W, along the West line of said Lot 4, a distance of 171.14 feet; thence bearing N88°49'35"E, parallel with the North line of said Lot 4, a distance of 300.01 feet; thence bearing S00°47'16"E, parallel with the West line of said Lot 4, a distance of 230.01 feet; thence bearing S88°49'35"W, parallel with and 16.23 North of the North line of Lot 1, Block 1, Tallgrass East Commercial a distance of 291.19 feet to the Point of Beginning..

HORIZONTAL CONTROL POINTS

C.P. NO. 1	N 7473.06 E 8751.33	SW Corner of Subject Property, A portion of Lot 4, Block 1, Tallgrass East Commerical Addition. (See Legal)
C.P. NO. 2	N 7479.02 E 9042.45	SE Corner of Subject Property, A portion of Lot 4, Block 1, Tallgrass East Commerical Addition. (See Legal)
C.P. NO. 3	N 7709.01 E 9039.29	NE Corner of Subject Property, A portion of Lot 4, Block 1, Tallgrass East Commerical Addition. (See Legal)
C.P. No. 4	N 7702.86 E 8739.35	NW Corner of Subject Property, A portion of Lot 4, Block 1, Tallgrass East Commerical Addition. (See Legal)

SITE PLAN FOR

GRANITE CITY FOOD & BREWERY

2244 N. WEBB ROAD, WICHITA, KANSAS

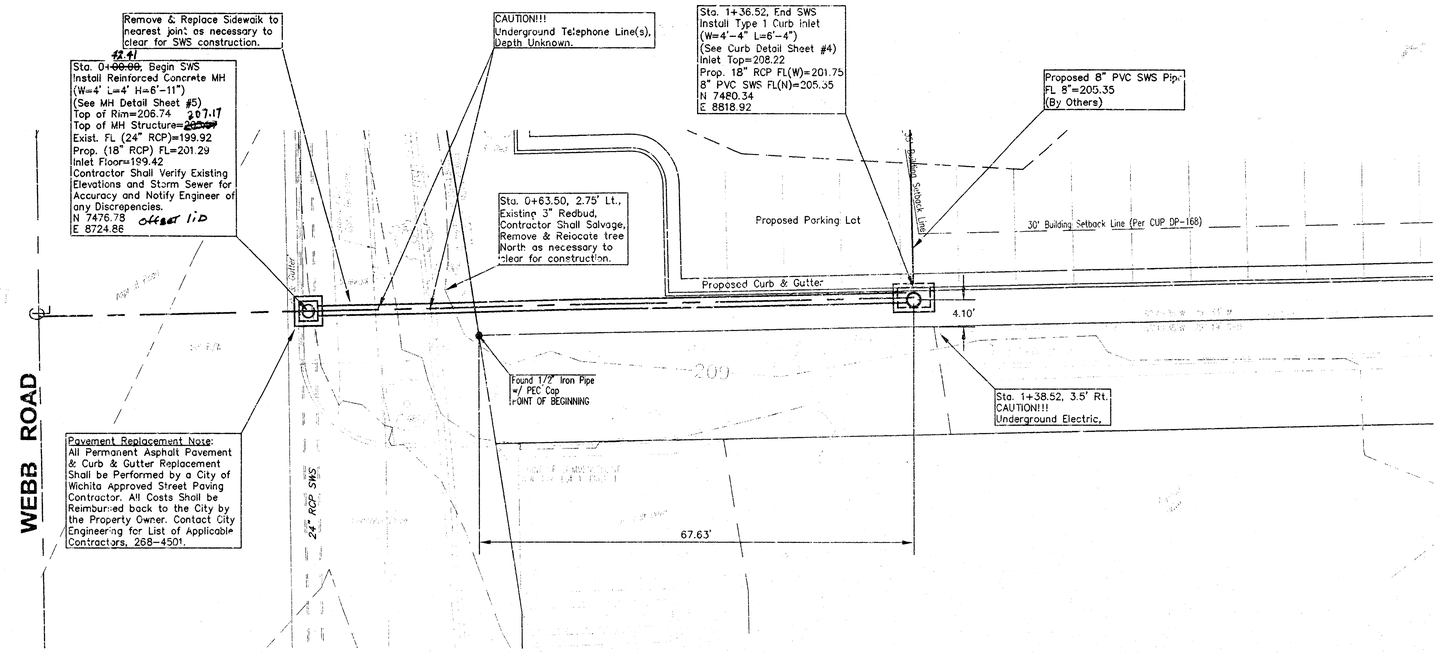
CED PROJ. NO.: 20041215

CERTIFIED ENGINEERING DESIGN, P.A.

CED

810 WEST DOUGLAS, SUITE C
WICHITA, KANSAS 67203
PH.(316)262-8808 FAX.(316)262-1669

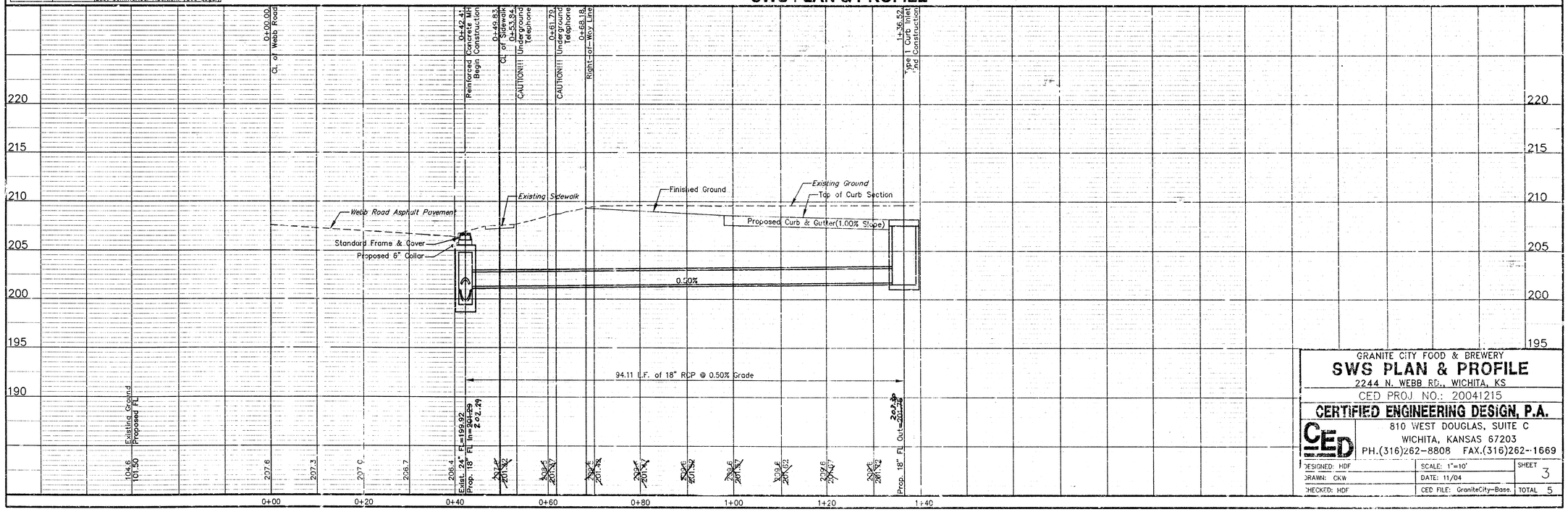
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CHECKED: HDF	CED FILE: GraniteCity-Base.	TOTAL 5



HORIZONTAL CONTROL POINTS

C.P. NO. 1	N 7473.06 E 8751.33	SW Corner of Subject Property, A portion of Lot 4, Block 1, Tallgrass East Commerical Addition. (See Legal)
C.P. NO. 2	N 7479.02 E 9042.45	SE Corner of Subject Property, A portion of Lot 4, Block 1, Tallgrass East Commerical Addition. (See Legal)
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SWS PLAN & PROFILE



GRANITE CITY FOOD & BREWERY

SWS PLAN & PROFILE

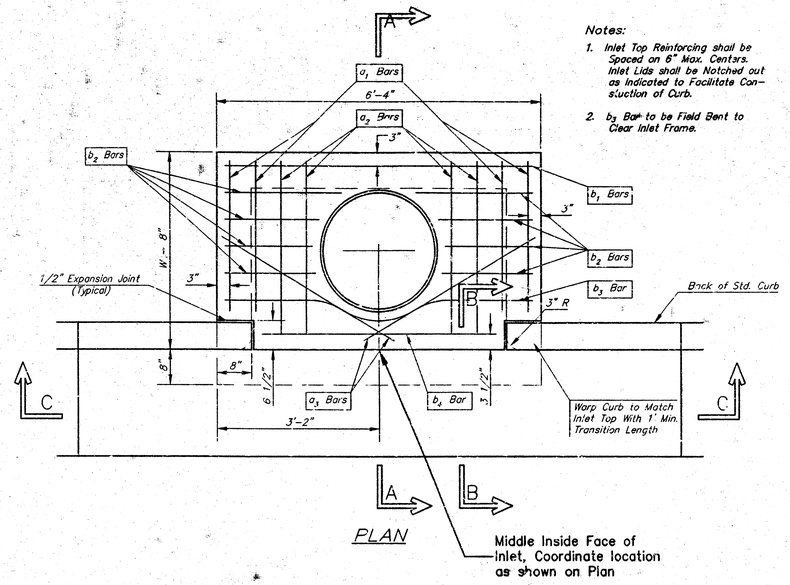
2244 N. WEBB RD., WICHITA, KS

CED PROJ NO.: 20041215

CERTIFIED ENGINEERING DESIGN, P.A.

810 WEST DOUGLAS, SUITE C
WICHITA, KANSAS 67203
PH.(316)262-8808 FAX.(316)262-1669

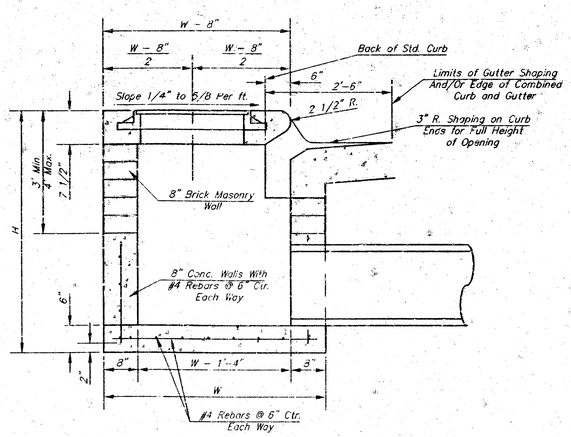
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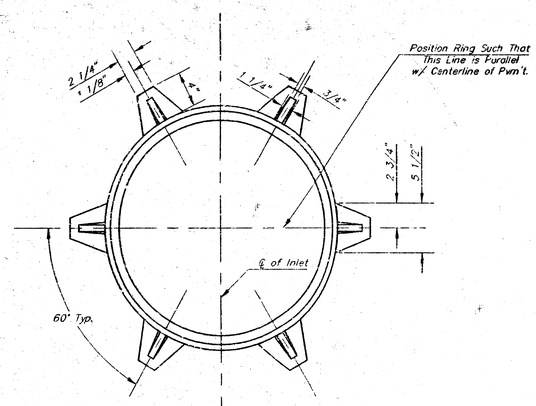
PLAN

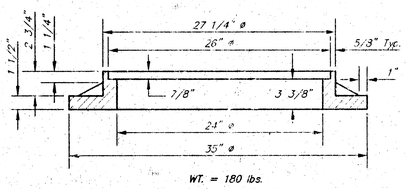
Notes:

1. Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids shall be Notched out as Indicated to Facilitate Construction of Curb.
2. b_2 Bar to be Field Bent to Clear Inlet Frame.



SECTION A-A

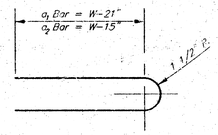




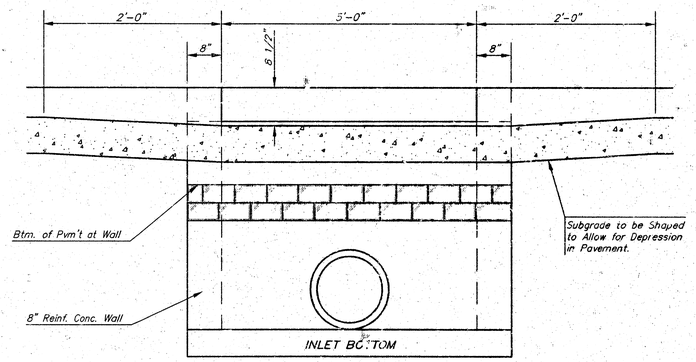
WT. = 180 lbs.

MANHOLE RING AND COVER

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



BENDING DIAGRAM



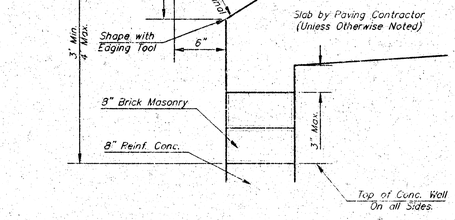
SECTION C-C

STEEL SCHEDULE

BAR		a_1	a_2	a_3	b_1 W=4'-4"	b_1 W=5'-4"	b_1 W=6'-4"	b_1 W=7'-4"	b_1 W=8'-4"	b_2	b_3	b_4	Wt. Lbs.
NUMBER		4	4	2	1	3	5	7	9	6	1	1	
SIZE		#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH	W=4'-4"	5'-7"	6'-7"	4'-0"	6'-1"	–	–	–	–	1'-9"	6'-2"	4'-8"	60±
	W=5'-4"	7'-7"	8'-7"	5'-0"	–	6'-1"	–	–	–	1'-9"	6'-2"	4'-8"	81±
	W=6'-4"	9'-7"	10'-7"	6'-0"	–	–	6'-1"	–	–	1'-9"	6'-2"	4'-8"	101±
	W=7'-4"	11'-7"	12'-7"	7'-0"	–	–	–	6'-1'	–	1'-9"	6'-2"	4'-8"	121±
	W=8'-4"	13'-7"	14'-7"	8'-0"	–	–	–	–	6'-1"	1'-9"	6'-2"	4'-8"	141±

Note: a_3 Bars to be Placed Approx. 2" Below Top of Inlet Cover.

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4'-4"	3'-8" 6'-4" 7 1/2"	21" & SMALLER	0.38±
5'-4"	4'-8" 6'-4" 7 1/2"	24" & 30"	0.51±
6'-4"	5'-8" 6'-4" 7 1/2"	36" & 42"	0.64±
7'-4"	6'-8" 6'-4" 7 1/2"	48" & 54"	0.77±
8'-4"	7'-8" 6'-4" 7 1/2"	60" & 66"	0.90±



SECTION B-B

GENERAL NOTES

1. 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.
2. Contractor shall have the option of constructing 8" brick masonry walls between the concrete inlet base and top on this inlet when W=6'-4" and H=7'-0" or less.
3. Inlet invert shall be shaped with 8 sack sand 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.
4. The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.

THE CITY OF WICHITA

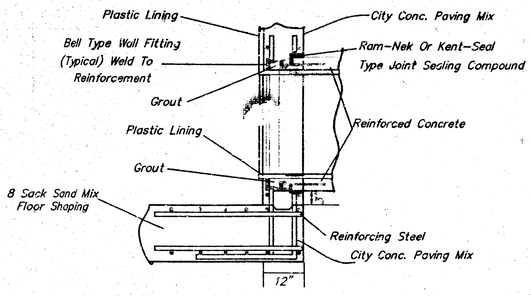
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

STANDARD TYPE 1 CURB INLET

OPENING = 6" x 5'-0"

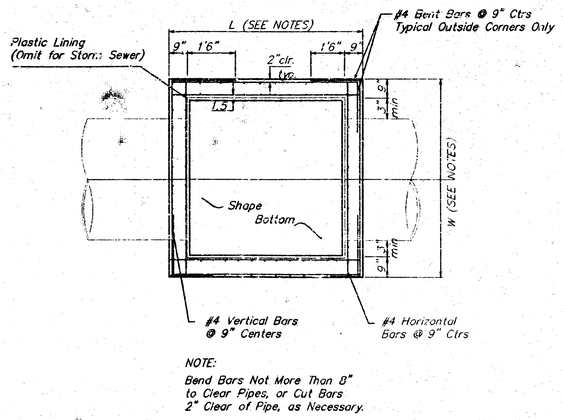
JAMES L. ARMOUR P.E. - CITY ENGINEER

PROJECT NUMBER	INDEX CODE
———	PPS(607861)
DATE: NOV 04	SHEET 4 OF 5



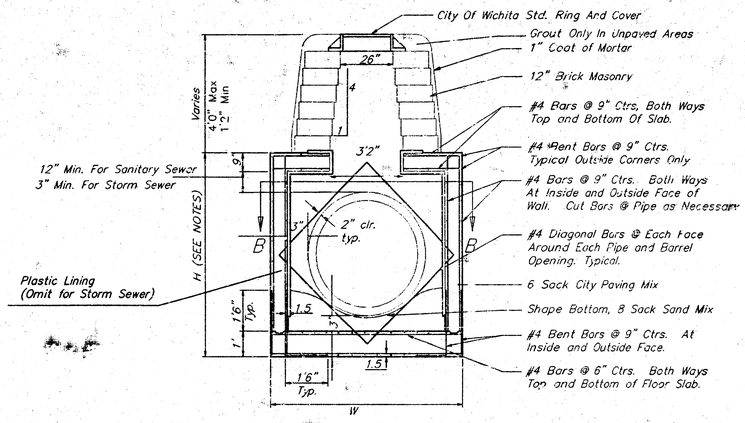
R.C.P. CONNECTION DETAIL

SANITARY SEWER ONLY



NOTE:
Bend Bars Not More Than 8" to Clear Pipes, or Cut Bars 2" Clear of Pipe, as Necessary.

TOP VIEW



REINFORCED CONCRETE MANHOLE

MANHOLE STACK 2.33' TO 4'0"

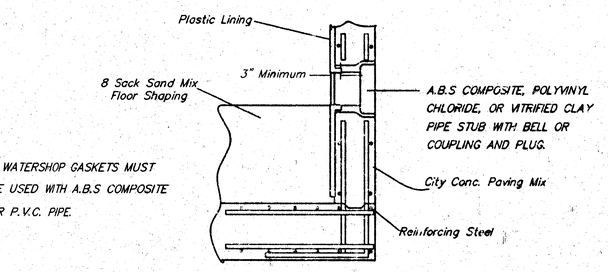
GENERAL NOTES:

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE WALLS AND BASES SHALL CONFORM TO THE REQUIREMENTS 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.

2. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING. USING 8-SACK SAND MIX CONCRETE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS.

3. 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.

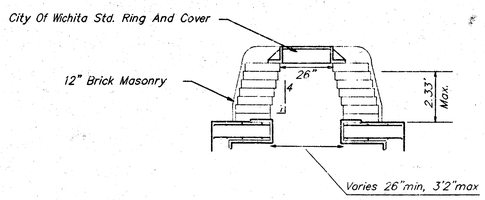
4. THE ENDS OF ALL PIPES IN MANHOLES SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF MANHOLE WALL.



NOTE: WATERSHOP GASKETS MUST BE USED WITH A.B.S COMPOSITE OR P.V.C. PIPE.

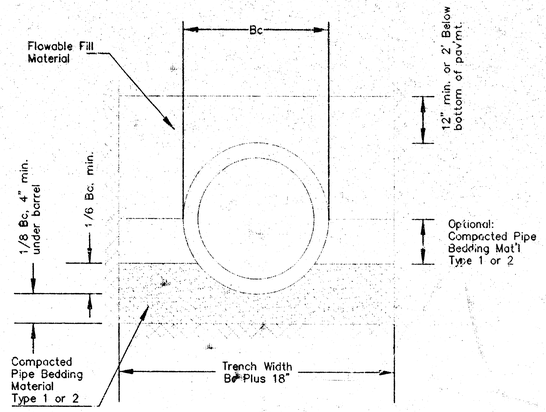
PIPE STUB DETAIL

SANITARY SEWER ONLY

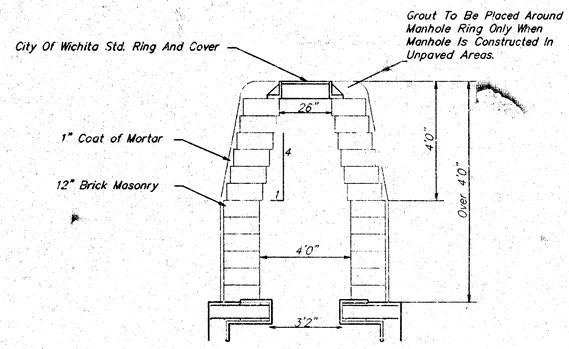


REINFORCED CONCRETE MANHOLE

MANHOLE STACK LESS THAN 2.33'



Detail Of Flowable Fill
For Storm Sewer Pipe Except
Corrugated Metal Pipe.



REINFORCED CONCRETE MANHOLE

MANHOLE STACK OVER 4'0"

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
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REINFORCED CONCRETE MANHOLE

JAMES L. ARMOUR P.E. - CITY ENGINEER

PROJECT NUMBER —

INDEX CODE PPS(607861)

DATE NOV 04

SHEET 5 OF 5

SSDTAIL.DWG