STORM WATER SEWER IMPROVEMENTS

FOR

GALICHIA HEART HOSPITAL EMERGENCY ROOM ADDITION

LOCATED AT 2610 N. WOODLAWN

WICHITA, KANSAS

COW PRIV. PROJ. NO. 1611 PPS (6078B1)

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

DECEMBER 2005

GENERAL NOTES

1. ALL ELEVATIONS SHOWN ARE BASED ON CITY OF WICHITA DATUM-0.19' (MEAN SEA LEVEL ELEV.-1187.4-0.19=PROJECT 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 857-2470

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

Cox Communications	262-4270 or 263-2061
SBC	1-800-870-8390
Kansas Gas Service	1-888-482-4350
Westar	1-800-383-1183
Aquila	1-800-303-0752
City of Wichita(Water & Sewer)	268-4555

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. INTERNAL 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.

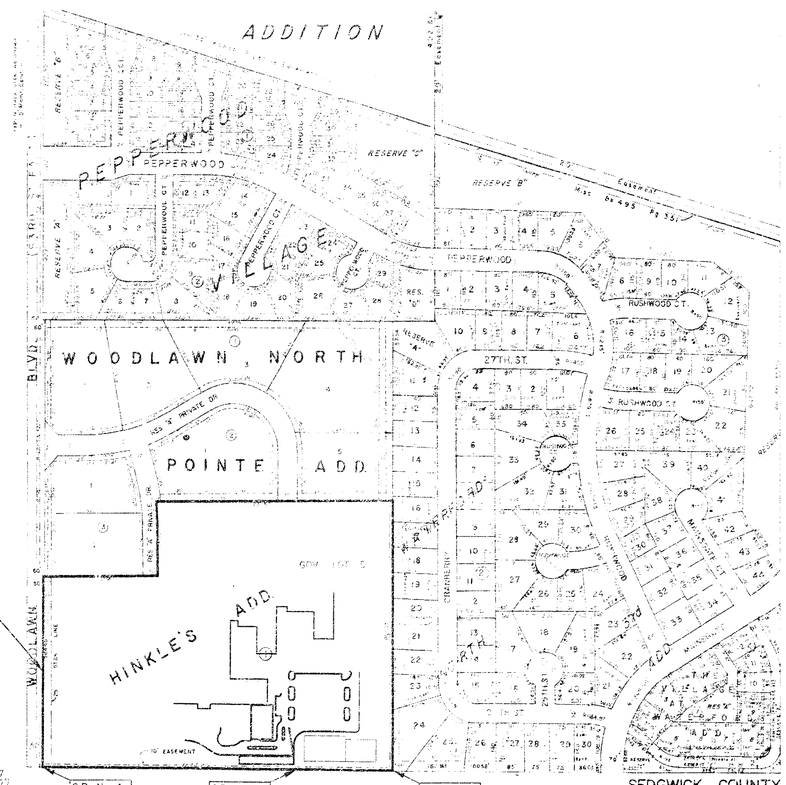
17. THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT EXISTING ROADWAYS AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES TO ENSURE SAFETY AS DIRECTED 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 OF 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.

INDEX OF SHEETS

1. Title Sheet
2. Architectural Survey/Site Plan
3. SWS Plan/Profile
4. 2'X4' Area Inlet Detail
5. Standard Type I Curb Inlet

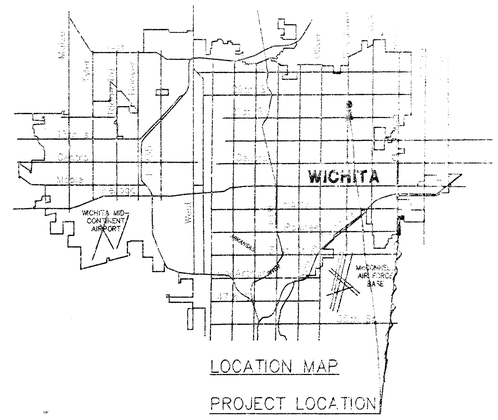


BENEFIT DISTRICT

Project Bench Mark: Square Cut on Top of Curb 69± south of northwest corner of Galichia Building. Elevation = 1192.92. Project Datum(City Datum-0.20')

HORIZONTAL CONTROL POINTS		
C.P. No. 1	N 19199.35 E 19265.99	SW Corner of Hinkle's Addition(Cross)
C.P. No. 2	N 19197.83 E 20360.43	SE Corner of Hinkle's Addition (3/4" Iron Pin w/ MKEC Found)
C.P. No. 3	N 19198.50 E 20050.05	Pin on South Lot Line-Due South of Proposed Curb Inlet. (5/8" Pin Found)

PROJECT LOCATED IN THE
N.W.1/4, SEC. 6, T.27S., R.2E.
WICHITA, SEDGWICK COUNTY, KANSAS



LOCATION MAP

PROJECT LOCATION

APPROVED AS NOTED
By CITY ENGINEER OF WICHITA

Sanitary Sewers ACA 10/5/05
Storm Sewers
Driveway Approaches
Water Mains
Paving

AS-BUILT
11/26/06
DOB K.E. Miller

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 EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER.

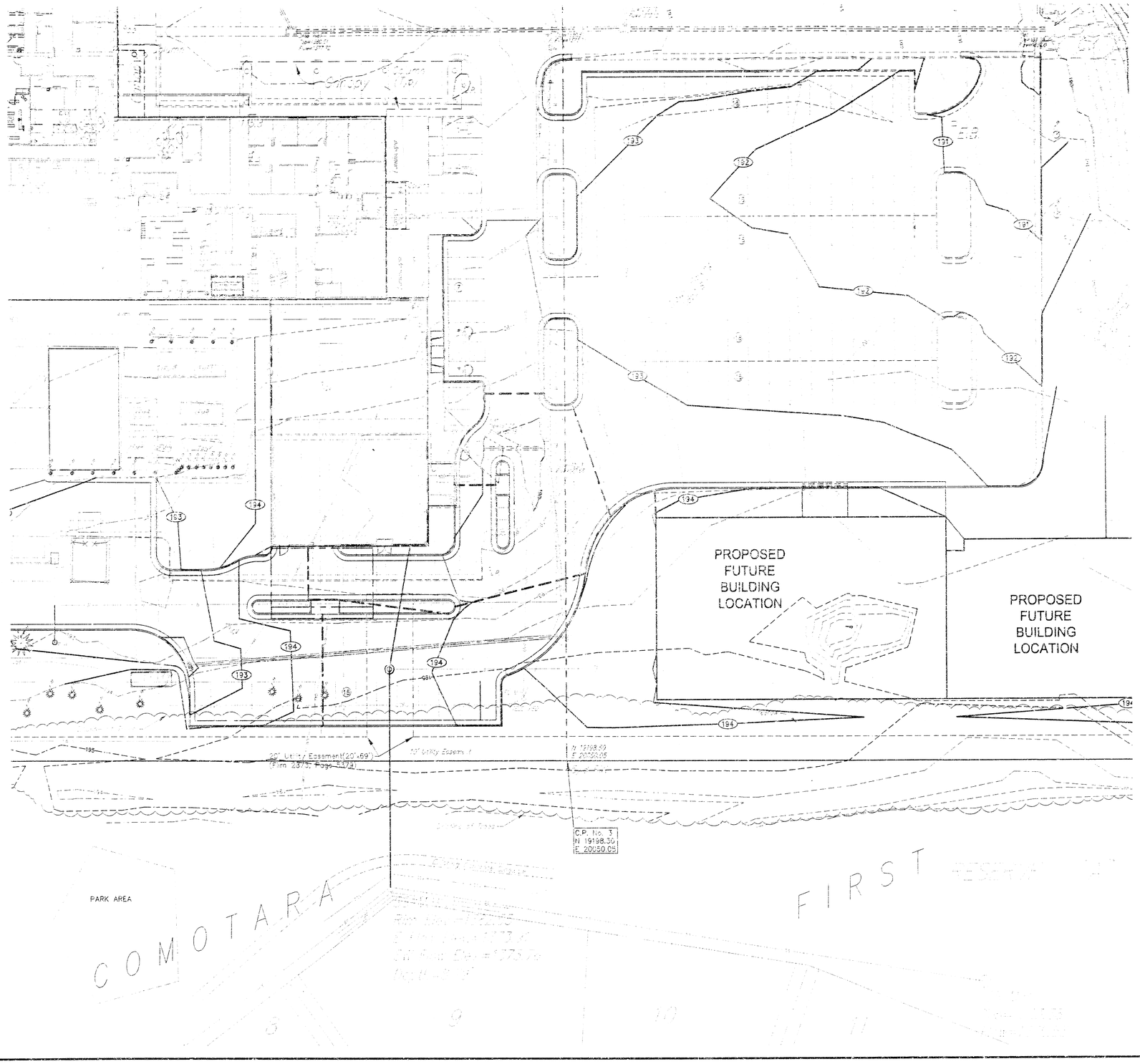
HARLAN DALE FORMAN LICENSED 10891 KANSAS PROFESSIONAL ENGINEER 12.5.05

C.O.W. PROJ. NO. 1611 PPS (6078B1)

CERTIFIED ENGINEERING DESIGN, P.A.
CED
810 WEST DOUGLAS, SUITE C
WICHITA, KANSAS 67203
PH: (316) 262-8808
FAX: (316) 262-1659

SHEET 1 TOTAL 5

1/2 14 02 18



GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

HORIZONTAL CONTROL POINTS		
C.P. NO. 1	N 19199.35 E 19265.99	SW Corner of Hinkle's Addition Cross
C.P. NO. 2	N 19197.83 E 20360.40	SE Corner of Hinkle's Addition (3/4" Iron Pin w/ MB Pound)
C.P. NO. 3	N 19198.30 E 20050.05	Pin on South Lot Line-Due South of Proposed Curb Inlet (5/8" Pin Found)

GALICHIA EMERGENCY ROOM ADDITION & RENOVATION

SITE PLAN

2610 N. WOODLAWN, WICHITA, KANSAS

CED PROJ. NO.: 20051285

CERTIFIED ENGINEERING DESIGN, P.A.

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

DESIGNED: HDF	SCALE: 1"=20'	SHEET 2
DRAWN: CKW	DATE: 11/05	
CHECKED: HDF	CED FILE: Galichia-ph3-Base	TOTAL 5

Sta. 0+81.97 & Sta. 0+92.79, CAUTION!!!
Existing Fiber Optic Line
Approx. Depth=36"
Contractor Shall Coordinate with Utility Owner.

Sta. 1+50.38, CAUTION!!!
Proposed 8" PVC SS Line
4" SS FL Elev.=186.63
Top of 8" PVC SS Line=187.60
Clearance=11.25"

Sta. 2+16.83, CAUTION!!!
Existing Telephone Line
Depth Unknown, Contractor Shall
Coordinate with Utility Owner.

Sta. 1+31.09, CAUTION!!!
Existing Gas Line
Depth Unknown, Contractor Shall
Coordinate with Utility Owner.

Sta. 2+27.00, End SWS,
Construct 2'x4' Area Inlet
Top Elev.=191.91
Ft. Out 15"(E)=189.00
N 19238.59
E 19886.59

Sta. 0+62.40, CAUTION!!!
Existing Fiber Optic Line
Approx. Depth=36"
Contractor Shall Coordinate
with Utility Owner.

Sta. 0+80.61, CAUTION!!!
Existing 8" Waterline
Top of Pipe Elev.=187.40
(Per Plan)
Clearance=4.8"

Sta. 0+00.00, Exist. Curb Inlet.
Contractor shall Reconstruct Curb Inlet
into a 2'x4' Area Inlet. Raise Top of
Inlet from 190.15 to 192.05. Core inlet
Wall and Seal new 15" RCP to Inlet Wall
w/ Quick-Set Hydraulic Cement.
Exist. FL In 15"(W)=187.66
Prop. FL In 15"(S)=187.66
Exist. FL Out 18"(E)=187.66
Contractor Shall Verify FL Elev. of 18"
RCP and Notify Engineer of any
Discrepancies from FL Elevations Shown.
N 19324.59
E 20042.73

C.P. No. 3
N 19198.50
E 20050.05

Install 178.62 L.F. of 15"
RCP SWS @ 0.40% Slope

Install 163.94 L.F. of 15"
RCP SWS @ 0.40% Slope

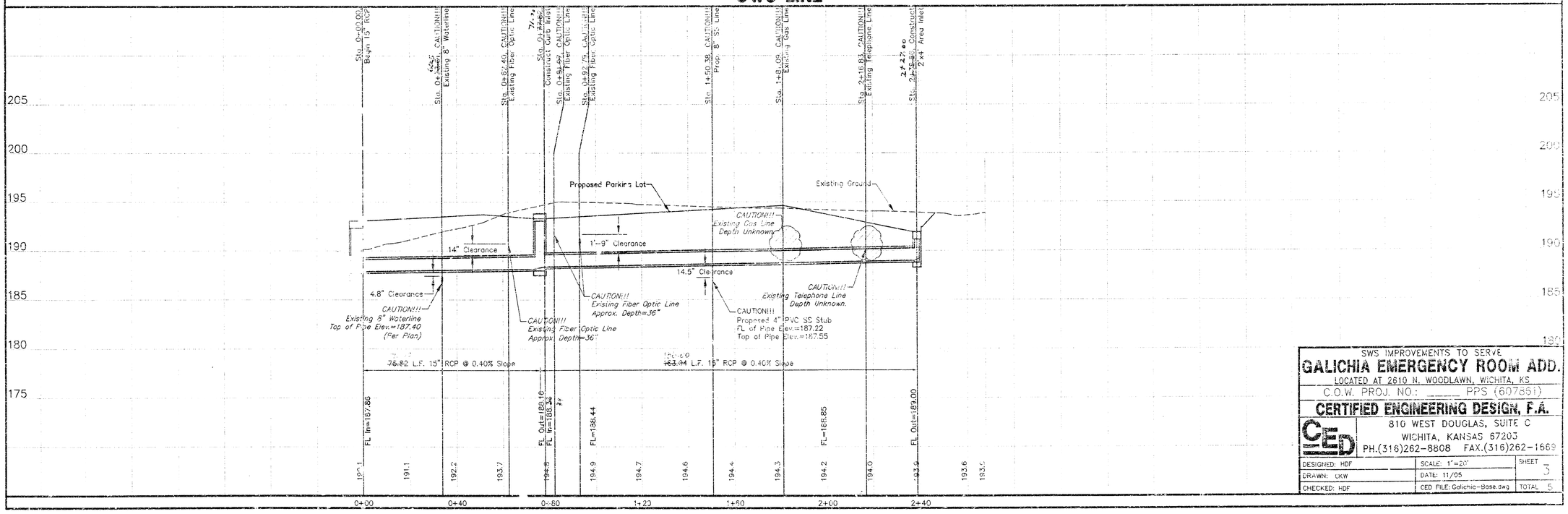
GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

HORIZONTAL CONTROL POINTS		
C.P. NO. 1	N 19199.35 E 19285.89	SW Corner of Hinkle's Addition(Cross)
C.P. NO. 2	N 19197.83 E 20389.43	SE Corner of Hinkle's Addition (1/4" Iron Pin w/ MKEC Found)
C.P. NO. 3	N 19198.50 E 20050.05	Pin on south Lot Line Due South of Proposed Curb Inlet. (8" Iron Found)

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.

SURVEY DISCLAIMER:
TOPOGRAPHIC SURVEY AND CONTOUR MAP USED IN PREPARING PLANS WAS PROVIDED BY PROFESSIONAL ENGINEERING CONSULTANTS, P.A., 303 S. TOPEKA, WICHITA, KS. ENGINEER DOES NOT GUARANTEE SURVEY ELEVATIONS FOR ACCURACY. CONTRACTOR SHALL VERIFY ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

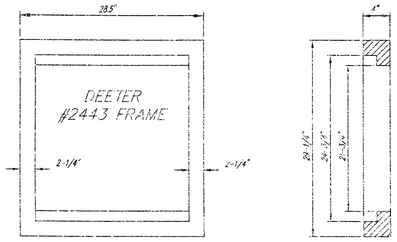
SWS LINE

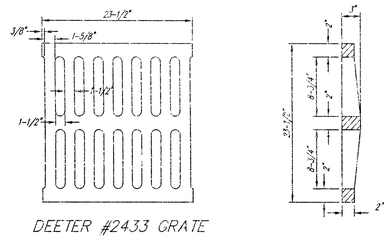


SWS IMPROVEMENTS TO SERVE
GALICHIA EMERGENCY ROOM ADD.
LOCATED AT 2810 N. WOODLAWN, WICHITA, KS
C.O.W. PROJ. NO.: _____ PPS (607881)

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

DESIGNED: HDF	SCALE: 1"=20'	SHEET 3
DRAWN: CKW	DATE: 11/05	
CHECKED: HDF	CED FILE: Galichia-Base.dwg	TOTAL 5

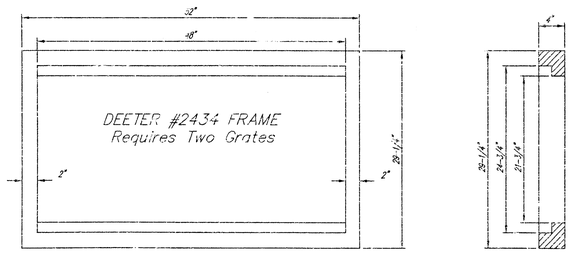




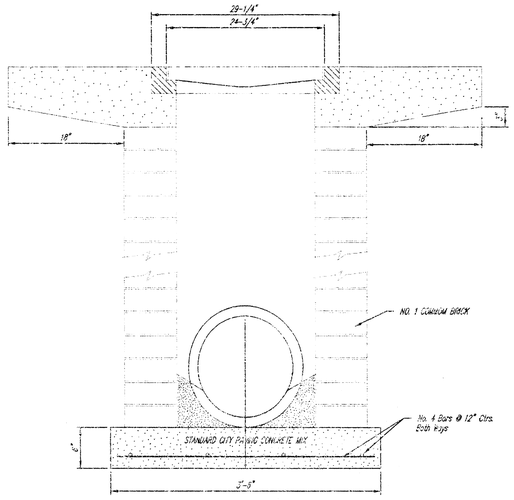
DEETER #2433 GRATE

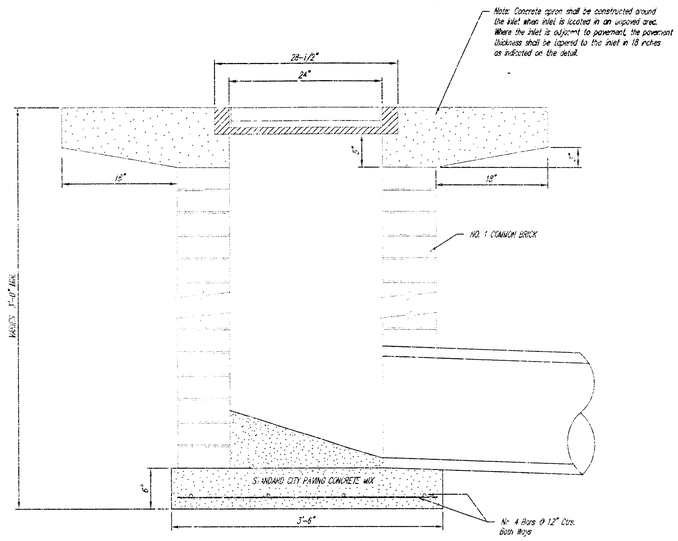
NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be approved by the engineer.

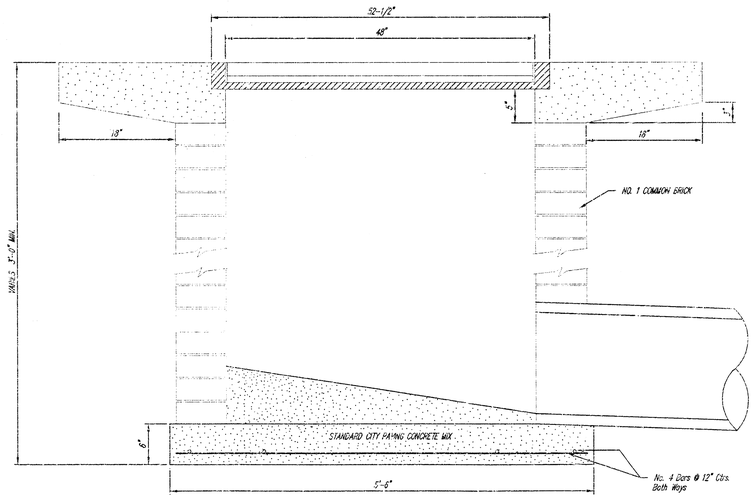
24" x 24" Frame and Grate Detail



Double 24" x 24" Frame Detail







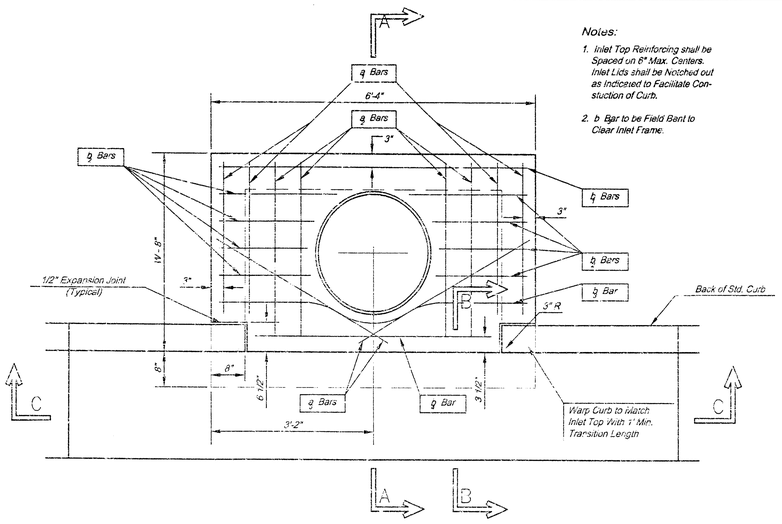
THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4601
(316) 268-4114 FAX

DROP INLET
2' X 2'/2' X 4'

JAMES L. ARMOUR P.E. - CITY ENGINEER

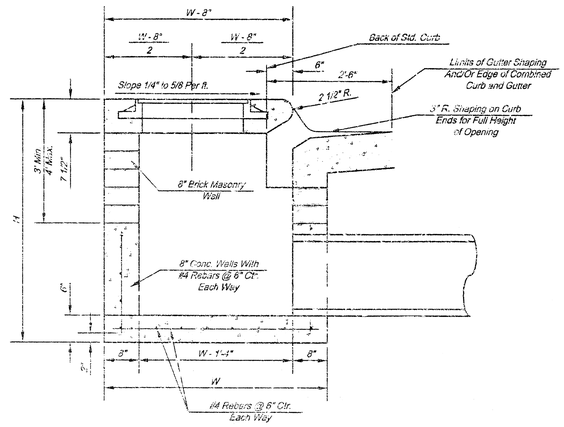
PROJECT NUMBER	INDEX CODE
1611	807861
DATE: NOV 05	SHEET 4 OF 5



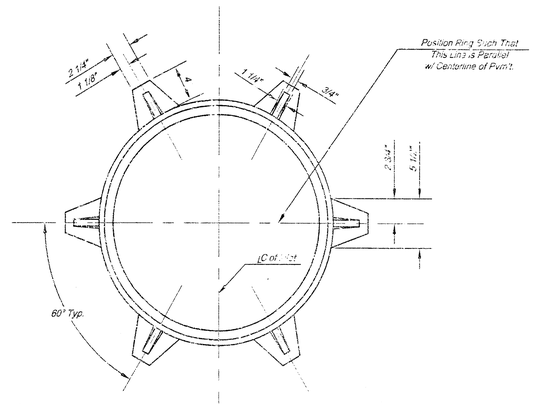
Notes:

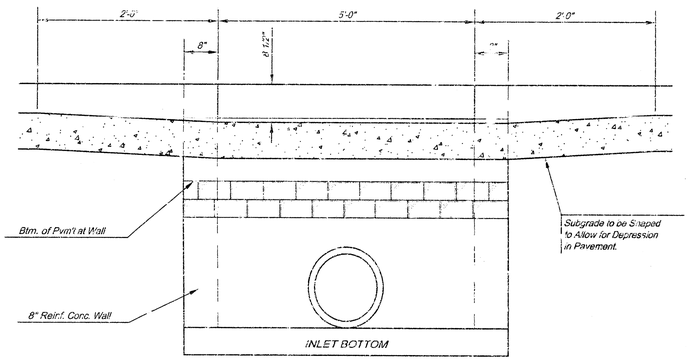
1. Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids shall be Notched out as Indicated to Facilitate Construction of Curb.
2. b Bar to be Field Bent to Clear Inlet Frame.

PLAN

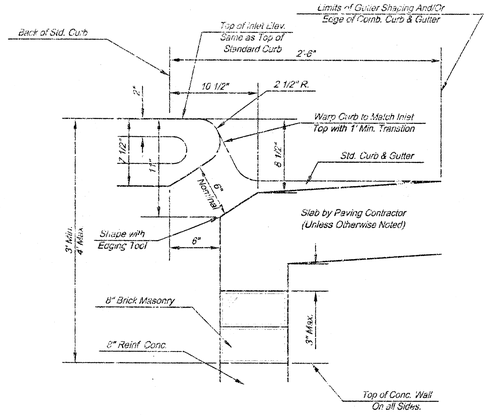


SECTION A–A

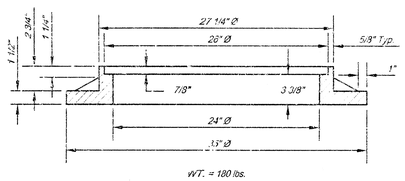




SECTION C–C



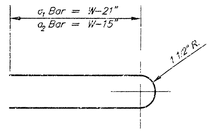
SECTION B–B



WT. = 180 lbs.

MANHOLE RING AND COVER

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



BENDING DIAGRAM

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 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±

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

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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
1611 PPS	(607661)
DATE	SHEET 5 OF 5
NOV 05	

18 14 05 18