CONSTRUCTION PLANS FOR

SANITARY SEWER IMPROVEMENTS

FOR

FAIRFIELD CLUB APARTMENTS

THE CITY OF WICHITA,

SEDGWICK COUNTY, KANSAS

MICHAEL D. LINDEBAK, P.E.-CITY ENGINEER

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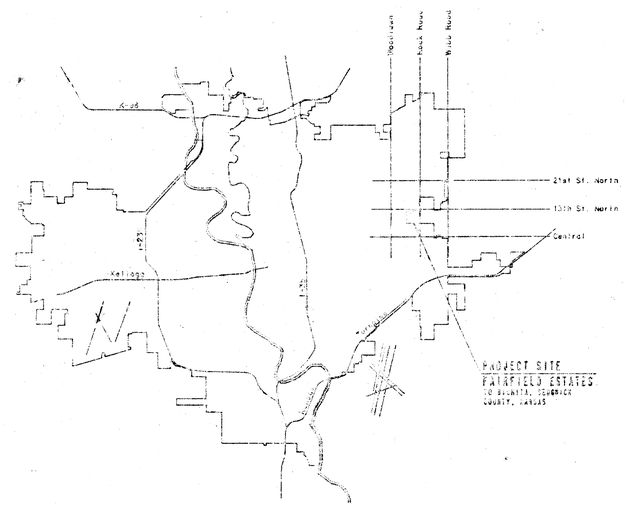


LOCATION MAP

APPROVED AS NOTED
By CITY ENGINEER OF WICHITA

Sanitary Sewers .....

Storm Sewers .....

Driveway Approaches .....

Water Mains .....

Paving .....

NOTE TO CONTRACTOR

This project will be constructed under the supervision of the CITY ENGINEER and conforming to the SPECIFICATIONS of the CITY OF WICHITA. The CONTRACTOR will pay the City of Wichita for all costs of plan review, inspection and testing per contract.

CITY OF WICHITA PROJECT NO. 468-76-245-80001-000-000-052

JANUARY, 1986

PLANS PREPARED BY

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

BRUCE D. SCHULTE
LICENSED
KANSAS
PROFESSIONAL ENGINEER

BOUNDARY		
POINT NO.	NORTH	EAST
1	3658.375822 N	4950.000000 E
2	3659.135406 N	4850.032385 E
3	3671.894644 N	4750.056920 E
4	3875.161549 N	4320.018175 E
5	3015.161549 N	4320.018175 E
6	3010.376168 N	4950.000000 E

BUILDINGS			
POINT NO.		NORTH	EAST
1	1	3400.759369 N	4736.934717 E
	2	3400.759779 N	4533.434717 E
	3	3318.533479 N	4538.634858 E
	4	3318.333633 N	4735.934858 E
2	5	3359.022401 N	4800.334431 E
	6	3359.210601 N	4765.435242 E
	7	3288.378234 N	4744.317111 E
	8	3288.190599 N	4780.133300 E
3	9	3290.834423 N	4923.000000 E
	10	3290.834423 N	4876.583300 E
	11	3192.434423 N	4876.583300 E
	12	3192.434423 N	4923.000000 E
4	13	3172.434423 N	4923.000000 E
	14	3172.434423 N	4876.583300 E
	15	3030.934423 N	4876.583300 E
	16	3030.934423 N	4923.000000 E
5	17	3067.303853 N	4836.862968 E
	18	3088.012880 N	4704.033301 E
	19	3034.287180 N	4705.770178 E
	20	3013.233103 N	4836.599546 E
6	21	3133.328291 N	4671.321852 E
	22	3133.893583 N	4622.773238 E
	23	3032.868133 N	4422.307344 E
	24	3032.437033 N	4670.755338 E
7	25	3133.880389 N	4598.773931 E
	26	3134.933463 N	4552.358590 E
	27	3035.738354 N	4531.010399 E
	28	3033.383730 N	4598.825760 E
8	29	3068.387843 N	4512.483830 E
	30	3069.376326 N	4379.654362 E
	31	3034.711126 N	4379.391939 E
	32	3033.702145 N	4512.220507 E
9	33	3267.021987 N	4497.518175 E
	34	3267.021987 N	4340.018175 E
	35	3218.605387 N	4340.018175 E
	36	3218.605387 N	4497.518175 E
10	37	3339.438887 N	4497.518175 E
	38	3339.438887 N	4340.018175 E
	39	3291.021987 N	4340.018175 E
	40	3291.021987 N	4497.518175 E
11	41	3237.321105 N	4725.538898 E
	42	3239.092151 N	4571.376446 E
	43	3191.928792 N	4571.018175 E
	44	3190.755766 N	4725.180427 E
12	45	3400.522570 N	4616.434714 E
	46	3400.622518 N	4570.018017 E
	47	3259.122518 N	4570.018175 E
	48	3259.122570 N	4616.434875 E
13	49	3456.338469 N	4561.184875 E
	50	3456.338469 N	4407.018175 E
	51	3409.171769 N	4407.018175 E
	52	3409.171769 N	4561.184875 E
14	53	3527.505169 N	4561.184875 E
	54	3527.505169 N	4407.018175 E
	55	3480.338469 N	4407.018175 E
	56	3480.338469 N	4561.184875 E
15	57	3648.809710 N	4497.881397 E
	58	3649.006055 N	4340.385941 E
	59	3598.590752 N	4340.018175 E
	60	3598.394407 N	4497.513651 E
16	61	3580.822760 N	4732.881397 E
	62	3581.219105 N	4575.385941 E
	63	3532.803802 N	4575.018175 E
	64	3531.687457 N	4732.513651 E
17	65	3574.588184 N	4801.583300 E
	66	3574.844244 N	4759.417295 E
	67	3420.679816 N	4753.530348 E
	68	3420.423755 N	4800.716333 E
18	69	3633.580194 N	4923.000000 E
	70	3633.580194 N	4876.583300 E
	71	3482.080194 N	4876.583300 E
	72	3482.080194 N	4923.000000 E
19	73	3472.080194 N	4923.000000 E
	74	3472.080194 N	4876.583300 E
	75	3373.580194 N	4876.583300 E
	76	3373.580194 N	4923.000000 E

CARPORTS			
POINT NO.		NORTH	SOUTH
A	01	3283.640421 N	4871.583213 E
	02	3283.640421 N	4853.583213 E
	03	3211.640421 N	4853.583213 E
	04	3211.640421 N	4871.583213 E
B	05	3166.640421 N	4871.583213 E
	06	3166.640421 N	4853.583213 E
	07	3094.640421 N	4853.583213 E
	08	3094.640421 N	4871.583213 E
C	09	3095.118440 N	4808.721756 E
	10	3095.528816 N	4754.723314 E
	11	3077.529135 N	4754.385589 E
	12	3077.118958 N	4803.585031 E
D	13	3201.132208 N	4811.251471 E
	14	3201.512332 N	4757.250059 E
	15	3183.512601 N	4757.126333 E
	16	3183.102728 N	4811.124748 E
E	17	3160.142033 N	4574.211735 E
	18	3160.547551 N	4820.313325 E
	19	3142.548170 N	4820.378030 E
	20	3142.142552 N	4874.273359 E
F	21	3160.882857 N	4603.013839 E
	22	3161.088496 N	4549.612497 E
	23	3143.089018 N	4549.475772 E
	24	3142.883376 N	4602.877114 E
G	25	3398.560314 N	4495.151038 E
	26	3397.183940 N	4405.155602 E
	27	3079.184459 N	4405.018677 E
	28	3078.560833 N	4495.014780 E
H	29	3205.481256 N	4464.623507 E
	30	3211.139342 N	4382.852172 E
	31	3193.195098 N	4391.437546 E
	32	3187.538032 N	4483.216981 E
I	33	3249.438687 N	4520.518175 E
	34	3249.438687 N	4502.518175 E
	35	3195.438687 N	4502.518175 E
	36	3195.438687 N	4520.518175 E
J	37	3348.438687 N	4520.518175 E
	38	3348.438687 N	4502.518175 E
	39	3294.438687 N	4502.518175 E
	40	3294.438687 N	4520.518175 E
K	41	3251.438687 N	4566.018175 E
	42	3251.438687 N	4548.018175 E
	43	3197.438687 N	4548.018175 E
	44	3197.438687 N	4566.018175 E
L	45	3350.438687 N	4566.018175 E
	46	3350.438687 N	4548.018175 E
	47	3314.438687 N	4548.018175 E
	48	3314.438687 N	4566.018175 E
M	49	3402.438687 N	4548.018175 E
	50	3402.438687 N	4503.018175 E
	51	3384.438687 N	4503.018175 E
	52	3384.438687 N	4548.018175 E
N	53	3360.438687 N	4441.018175 E
	54	3360.438687 N	4396.018175 E
	55	3342.438687 N	4396.018175 E
	56	3342.438687 N	4441.018175 E
O	57	3450.346687 N	4402.018175 E
	58	3450.346687 N	4384.018175 E
	59	3396.346687 N	4384.018175 E
	60	3396.346687 N	4402.018175 E
P	61	3540.346687 N	4402.018175 E
	62	3540.346687 N	4384.018175 E
	63	3486.346687 N	4384.018175 E
	64	3486.346687 N	4402.018175 E
Q	65	3552.255169 N	4479.018175 E
	66	3552.255169 N	4407.018175 E
	67	3534.255169 N	4407.018175 E
	68	3534.255169 N	4479.018175 E
R	69	3585.878257 N	4460.152071 E
	70	3594.088608 N	4408.153831 E
	71	3576.089129 N	4406.018647 E
	72	3575.878778 N	4458.015233 E
S	73	3603.793628 N	4631.466171 E
	74	3604.321311 N	4562.018175 E
	75	3586.321831 N	4561.801450 E
	76	3585.794147 N	4631.349443 E
T	77	3602.938143 N	4744.371613 E
	78	3603.595749 N	4837.538419 E
	79	3585.595268 N	4837.393894 E
	80	3584.938662 N	4744.918890 E
U	81	3584.810373 N	4809.087615 E
	82	3601.651487 N	4753.442533 E
	83	3583.796510 N	4753.162378 E
	84	3578.955598 N	4806.727313 E
V	85	3613.695788 N	4868.583300 E
	86	3613.695770 N	4850.583300 E
	87	3523.695770 N	4850.583387 E
	88	3523.695788 N	4868.583387 E
W	89	3457.257212 N	4868.583451 E
	90	3457.257194 N	4850.583451 E
	91	3385.257194 N	4850.583521 E
	92	3385.257212 N	4868.583521 E

GARAGES			
POINT NO.		NORTH	SOUTH
1	01	3159.118964 N	4808.895859 E
	02	3159.683864 N	4736.897976 E
	03	3139.683441 N	4736.746059 E
	04	3139.119541 N	4808.743982 E
2	05	3139.119541 N	4808.743982 E
	06	3139.666441 N	4736.746059 E
	07	3119.667018 N	4736.594142 E
	08	3119.120118 N	4808.592065 E
3	09	3160.568038 N	4486.478404 E
	10	3181.185304 N	4405.480398 E
	11	3140.588615 N	4488.326487 E
	12	3141.183831 N	4405.328591 E
4	13	3121.184458 N	4405.176565 E
	14	3120.589122 N	4486.174570 E
5	15	3187.528272 N	4360.018175 E
	16	3187.528272 N	4340.018175 E
	17	3097.528272 N	4340.018175 E
	18	3097.528272 N	4360.018175 E
6	19	3450.438687 N	4360.018175 E
	20	3450.438687 N	4340.018175 E
	21	3360.438687 N	4340.018175 E
	22	3360.438687 N	4360.018175 E
7	23	3576.438687 N	4360.018175 E
	24	3576.438687 N	4340.018175 E
	25	3486.438687 N	4340.018175 E
	26	3486.438687 N	4360.018175 E
8	27	3647.753830 N	4636.892579 E
	28	3648.360093 N	4555.894915 E
	29	3628.368870 N	4555.742999 E
	30	3627.754137 N	4636.740662 E
9	31	3646.833479 N	4744.889463 E
	32	3647.517105 N	4654.892059 E
	33	3627.517682 N	4654.740143 E
	34	3626.834056 N	4744.737548 E
10	35	3635.068306 N	4833.273108 E
	36	3646.329877 N	4752.330711 E
	37	3626.490813 N	4750.397039 E
	38	3616.229442 N	4830.744436 E

GARAGE	NO. OF STALLS	WIDTH OF STALLS	GARAGE LENGTH
1	8	9.0'	72.0'
2	8	9.0'	72.0'
3	9	9.0'	81.0'
4	9	9.0'	81.0'
5	10	9.0'	90.0'
6	10	9.0'	90.0'
7	10	9.0'	90.0'
8	9	9.0'	81.0'
9	10	9.0'	90.0'
10	9	9.0'	81.0'

CARPORT	NO. OF STALLS	WIDTH OF STALLS	CARPORT LENGTH
A	8	9.0'	72.0'
B	8	9.0'	72.0'
C	6	9.0'	54.0'
D	6	9.0'	54.0'
E	6	8.9'	53.4'
F	6	8.9'	53.4'
G	10	9.0'	90.0'
H	8	9.0'	72.0'
I	6	9.0'	54.0'
J	6	9.0'	54.0'
K	6	9.0'	54.0'
L	4	9.0'	36.0'
M	5	9.0'	45.0'
N	5	9.0'	45.0'
O	6	9.0'	54.0'
P	6	9.0'	54.0'
Q	8	9.0'	72.0'
R	6	9.0'	54.0'
S	8	8.7'	69.6'
T	10	8.7'	87.0'
U	6	9.0'	54.0'
V	10	9.0'	90.0'
W	8	9.0'	72.0'

STREET CENTERLINE P.I.'s		
POINT NO.	NORTH	SOUTH
01	3332.257423 N	4950.500000 E
02	3331.257423 N	4838.583300 E
03	3170.893802 N	4838.583300 E
04	3173.192106 N	4536.018175 E
05	3372.438687 N	4536.018175 E
06	3372.438687 N	4372.018175 E
07	3564.255169 N	4372.018175 E
08	3564.255169 N	4531.255288 E
09	3616.552317 N	4531.652541 E
10	3614.922173 N	4745.258278 E
11	3603.130854 N	4838.583300 E
12	3358.814883 N	4838.583300 E
13	3106.891956 N	4838.583300 E
14	3107.915557 N	4703.815935 E
15	3171.913811 N	4704.302069 E
16	3173.315792 N	4519.735193 E
17	3171.045627 N	4519.717949 E
18	3108.317585 N	4519.241463 E
19	3109.435498 N	4372.018175 E
20	3182.688592 N	4372.018175 E
21	3673.056887 N	4532.081706 E
22	3359.255596 N	4757.421186 E

SANITARY SEWER MANHOLES		
POINT NO.	NORTH	SOUTH
~~01~~	~~3023.452774 N~~	~~4545.011540 E~~
~~02~~	~~3177.434423 N~~	~~4745.078815 E~~
~~03~~	~~3247.788900 N~~	~~4745.014080 E~~
~~04~~	~~3245.674192 N~~	~~4678.634887 E~~
~~05~~	~~3252.122578 N~~	~~4570.018183 E~~
~~06~~	~~3279.321987 N~~	~~4497.518175 E~~
~~07~~	~~3420.723247 N~~	~~4745.560466 E~~
~~08~~	~~3418.322581 N~~	~~4623.434703 E~~
~~09~~	~~3410.622515 N~~	~~4567.184875 E~~
~~10~~	~~3381.231481 N~~	~~4567.184875 E~~
~~11~~	~~3581.311035 N~~	~~4407.437530 E~~
~~12~~	~~3020.414437 N~~	~~4945.000000 E~~
~~13~~	~~3177.434423 N~~	~~4945.000000 E~~
01	3177.434423 N	4535.000000 E
02	3482.080194 N	4945.000000 E
03	3482.080194 N	4871.583300 E
04	3410.769960 N	4800.693943 E
05	3410.622515 N	4567.184875 E
06	3565.622515 N	4567.184875 E
07	3177.434423 N	4945.000000 E

STORM SEWER STRUCTURES		
POINT NO.	NORTH	SOUTH
1	2928.487743 N	4935.000000 E
2	3025.490542 N	4935.000000 E
3	3026.086484 N	4856.545898 E
4	3027.372713 N	4687.217483 E
5	3028.550373 N	4532.181951 E
6	3106.317585 N	4519.241463 E
7	3170.893802 N	4838.583300 E
8	3171.880356 N	4735.035318 E
9	3253.844685 N	4735.659943 E
10	3254.598674 N	4636.662799 E
11	3360.622587 N	4631.434762 E
12	3673.258043 N	4900.000000 E
13	3603.130854 N	4838.583300 E
14	3579.903888 N	4743.444601 E
15	3468.338469 N	4742.838921 E
16	3468.338469 N	4576.184875 E
17	3468.338469 N	4484.184875 E
18	3468.338469 N	4330.018175 E
19	3279.021987 N	4330.018175 E
20	2914.852262 N	4962.000000 E
21	3468.338469 N	4372.018175 E

BENCH MARKS:

Railroad Spike in Northwest face 20" dia. Elm Tree 30' East of the Northwest corner Lot 18, Block 10, Fairfield Estates.
Elev. 187.65 (City Datum)

Chiseled "□" in center on East side of Storm Drain Inlet on the West side of Rock Road 90' South of the Southeast corner of Lot 18, Block 10, Fairfield Estates.
Elev. 181.06 (City Datum)

No.	Revision	By	Date
2	Revised San. Sewer & Water	BR	1-28-86
1	Per Revised Grading Plan	BR	11-27-85

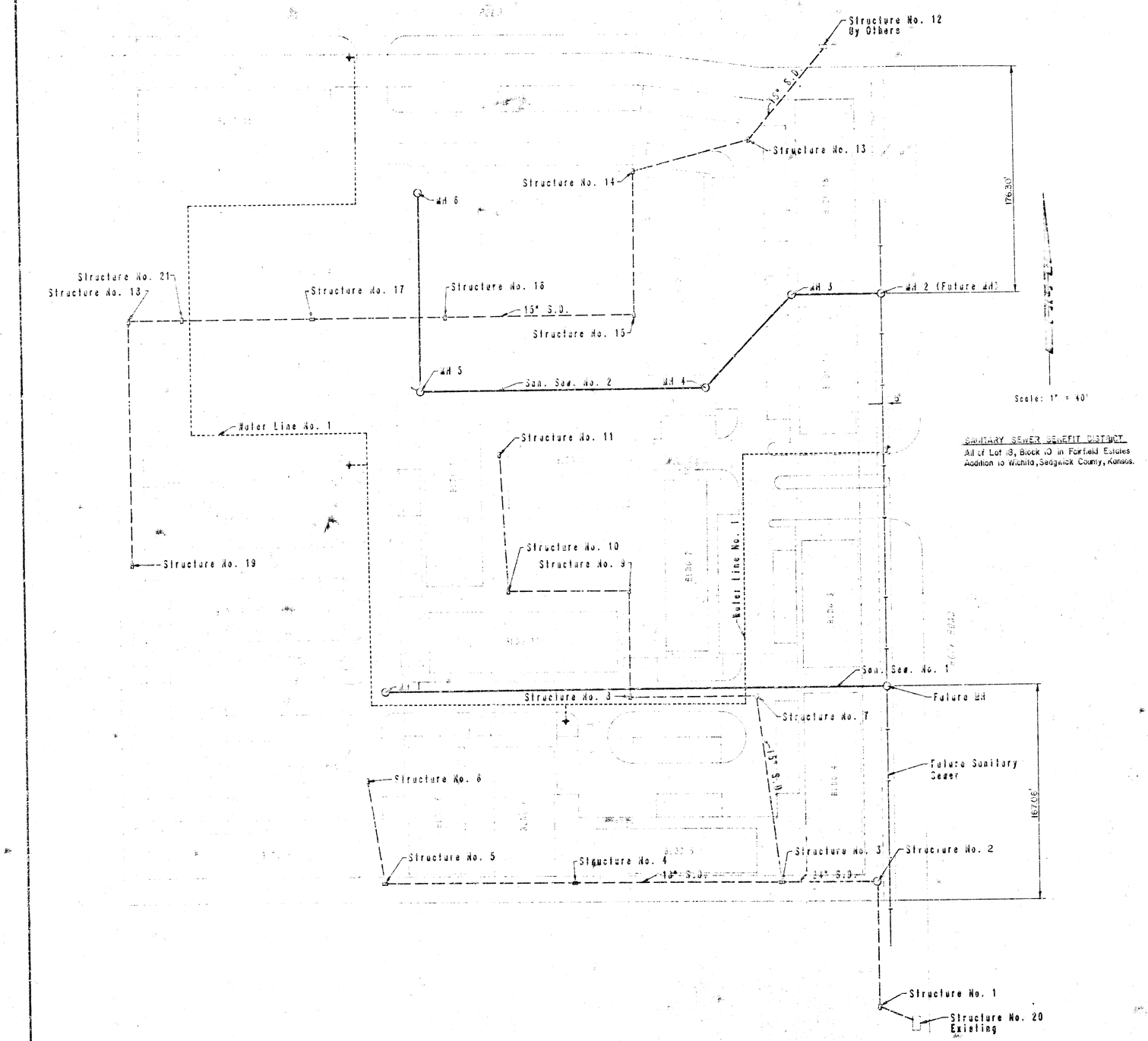
BRUCE D. RENSING LICENSED 7992 PROFESSIONAL ENGINEER KANSAS

FAIRFIELD CLUB APARTMENTS

SITE COORDINATES

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by BDR | Job No. 34-85492 | Sht. C1 of 16
Drawn by CAL | Date November, 1985



SANITARY SEWER BENEFIT DISTRICT
All of Lot 18, Block 10 in Fairfield Estates
Addition to Wichita, Sedgwick County, Kansas.

No	Revision	By	Date
2	Revised San. Sewer - Water	BR	1-27-86
1	Per Revised Grading Plan	BR	11-27-85

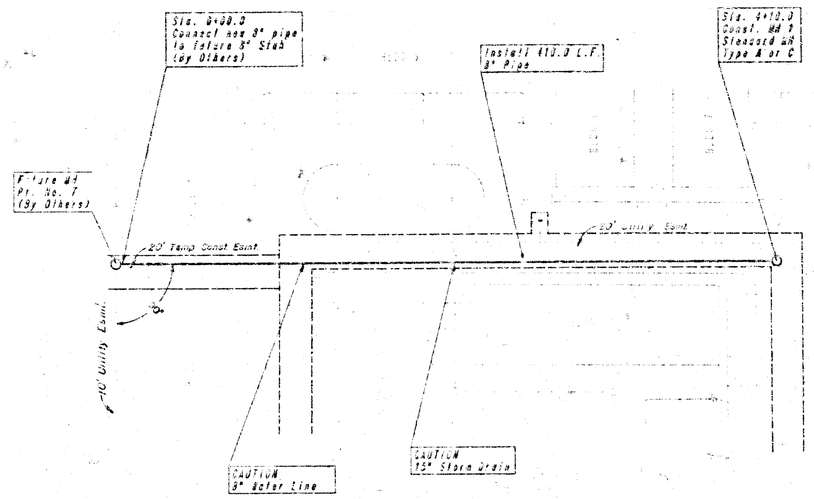
FAIRFIELD CLUB APARTMENTS

UTILITY LAYOUT PLAN

MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-70-[illegible]

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by BOR | Job No. 34-85492 | Sht. C6 of 16
Drawn by CAL | Date November, 1985



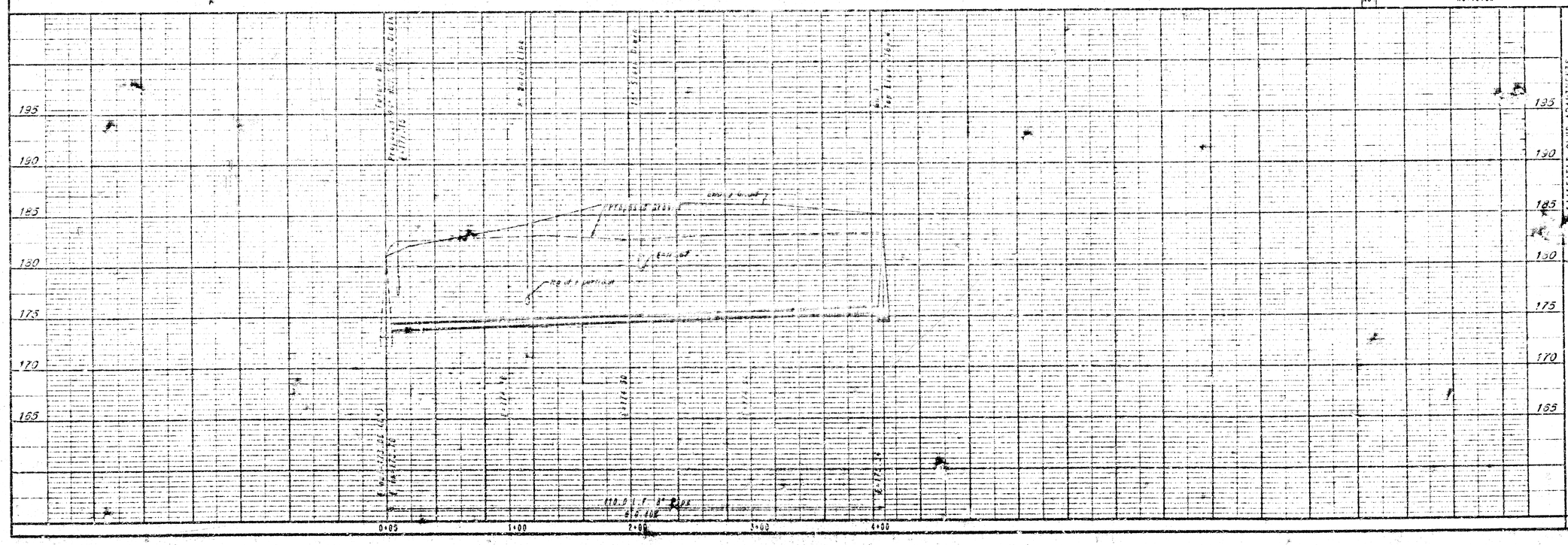
GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS.
2. ALL ELEVATIONS SHOWN ARE CITY OF WICHITA DATUM (USGS-1187.4 = CITY DATUM).
3. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
4. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION, IF REQUIRED, (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ANY EXISTING LINES WITHIN THE PROJECT AREA: GAS SERVICE COMPANY, K.G.&E., THE WICHITA WATER DEPARTMENT, AND AIR CAPITAL CABLEVISION.
5. THE CONTRACTOR MUST ALSO NOTIFY THE TELEPHONE COMPANY AT (913) 571-2115 48 HOURS PRIOR TO BEGINNING EXCAVATION AND REQUEST THAT ANY LINES WITHIN THE PROJECT AREA BE FLAGGED.
6. THE BURIED UTILITIES AS LOCATED ON THE PLANS ARE APPROXIMATE LOCATIONS ONLY. IT SHOULD BE NOTED THAT OTHER BURIED LINES AND CABLES MAY EXIST WHICH ARE NOT SHOWN ON THESE PLANS. 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.
7. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES, AND BANK LINES TO THEIR ORIGINAL SLOPES EXCEPT AS SHOWN OTHERWISE ON THE EASEMENT GRADING PLAN.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY CORNERS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY CORNERS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH CORNERS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE OTHER ITEMS OF WORK.
9. ALL EXCESS EXCAVATED MATERIAL FROM THIS PROJECT SHALL BE WASTED ON SITE. NO EXCESS MATERIAL SHALL BE PLACED WITHIN STREET RIGHTS-OF-WAY. THE CONTRACTOR SHALL CONTACT THE DEVELOPER FOR INFORMATION PERTAINING TO ACCEPTABLE LOCATIONS FOR THE DISPOSITION OF WASTE MATERIAL. WASTE MATERIAL SHALL BE GRADED SMOOTH AND SLOPED TO DRAIN. THIS WORK SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
10. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.

SCALE:
PLAN: LAT. & LONG. 40 0 40 80
PROFILE: HORIZ. SAME AS ABOVE
VERT.

No	Revision	By	Date
2	Revised San. Sewer	BR	1-27-88
1	Per Revised Grading Plan	BR	11-27-85

LINE NO. 1



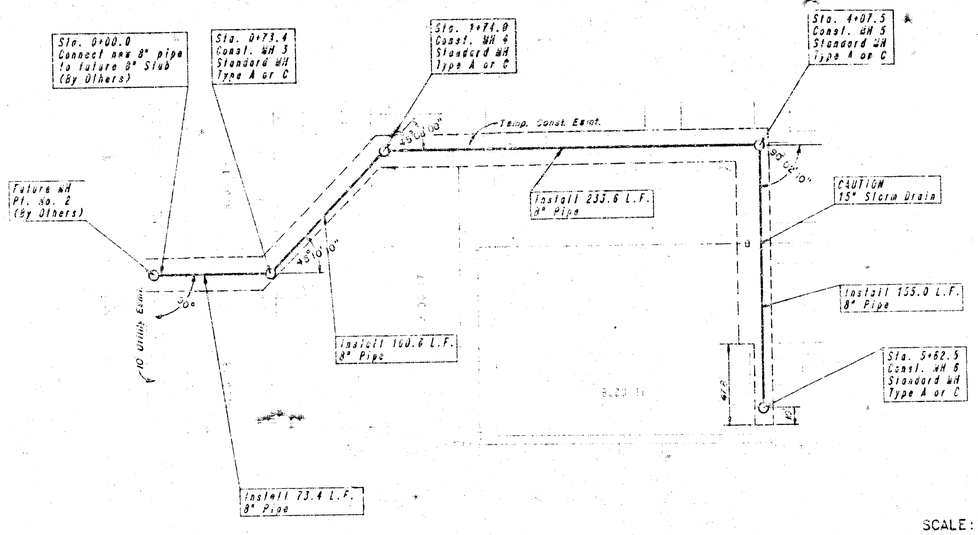
FAIRFIELD CLUB APARTMENTS

LINE NO. 1

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
WICHITA, KANSAS

Job No. 34-6142
Date: November 1985
Designed By: BDR
Drawn By: CAL

Sheet C8 of 12



SCALE:

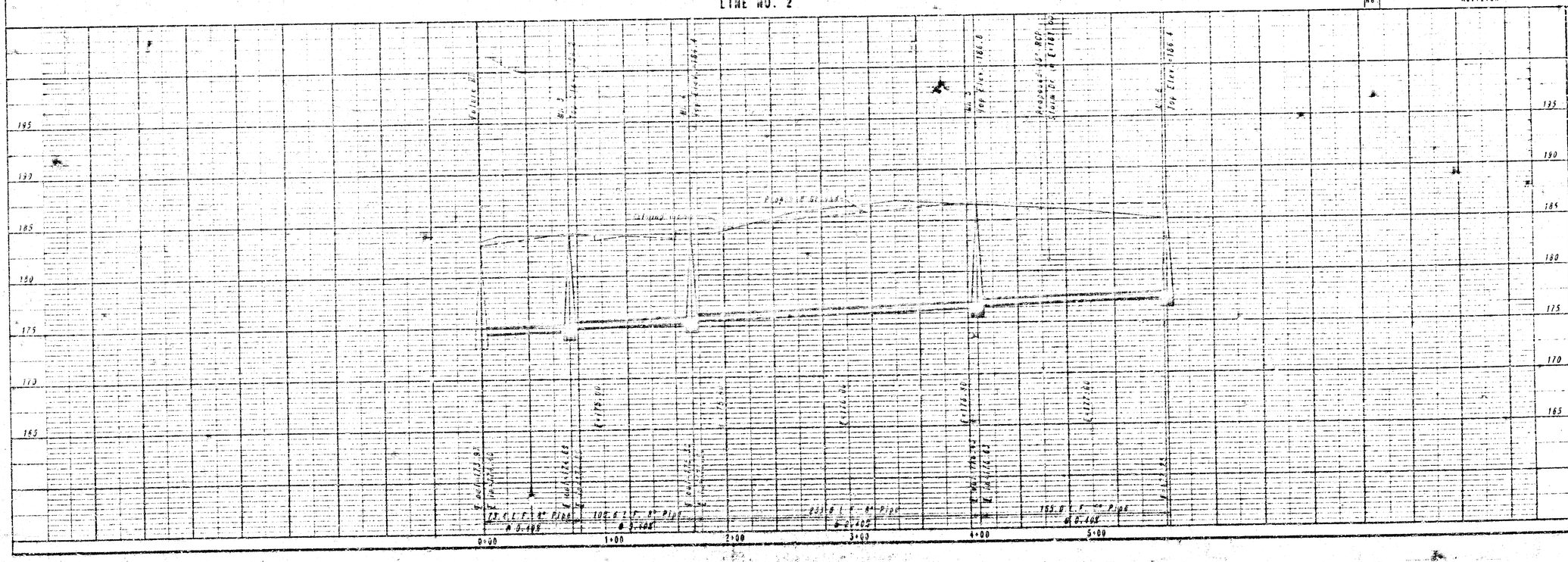
PLAN: LAT. & LONG. 40 0 40 80

PROFILE: HORIZ. SAME AS ABOVE

VERT.

No.	Revision	By	Date
2	Revised San. Sewer	SM	1-27-86
1	Per Revised Grading Plan	BM	11-27-85

LINE NO. 2



FAIRFIELD CLUB APARTMENTS

LINE NO. 2

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

WICHITA, KANSAS

Designed By: BCR

Drawn By: CAL

Job No. 34-81492

Date: November, 1985

Sheet C9 of 16

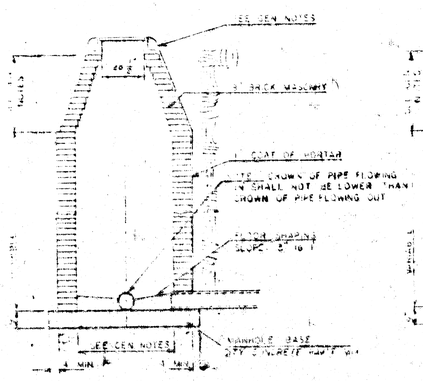
REVISED SEPTEMBER 1980
REVISED DECEMBER 1981

SEWER APPURTENANCES DETAILS

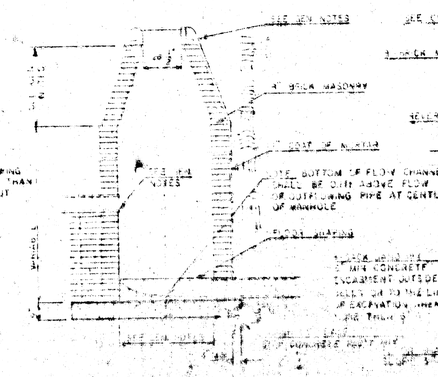
ADOPTED AS STANDARD DESIGN
BY

CITY of WICHITA, KANSAS

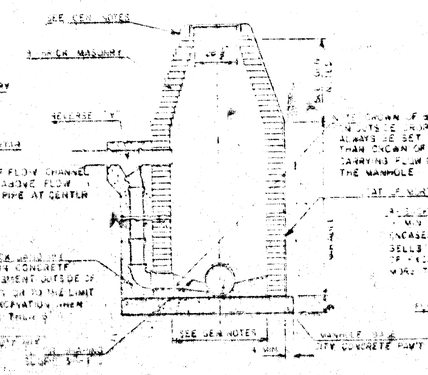
TYPE "A" MANHOLE



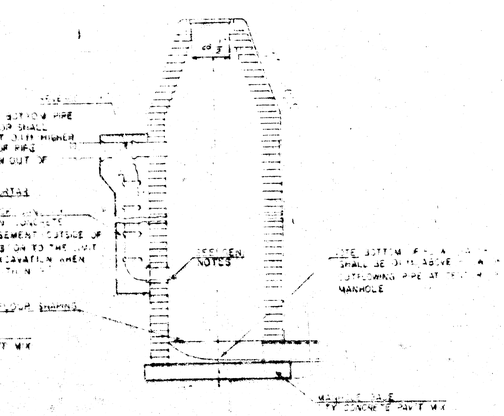
TYPE "A" INSIDE DROP MANHOLE



TYPE "A" OUTSIDE DROP MANHOLE



DETAIL OF OUTSIDE DROP CONSTRUCTED ON EXISTING MANHOLE



MANHOLE FRAME AND COVER DETAIL

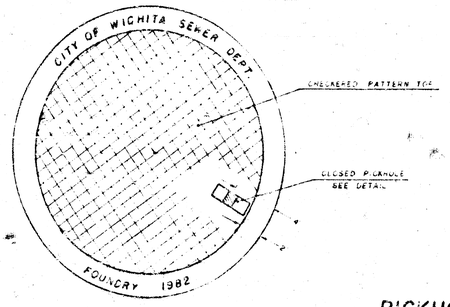
ADOPTED AS STANDARD DESIGN

BY

City of Wichita, Kansas

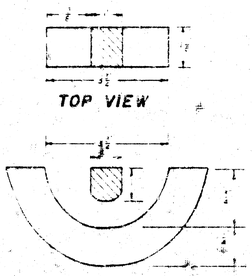
MANHOLE COVER

Weight: 180 Lbs.



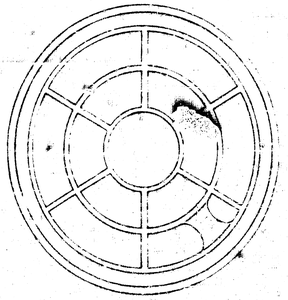
TOP VIEW

PICKHOLE DETAIL



TOP VIEW

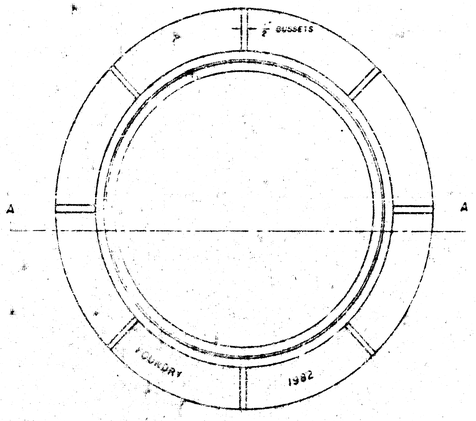
SECTION VIEW



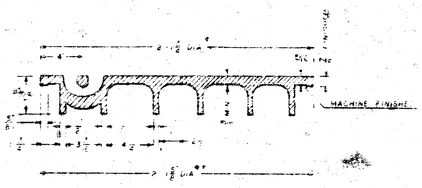
BOTTOM VIEW

MANHOLE FRAME

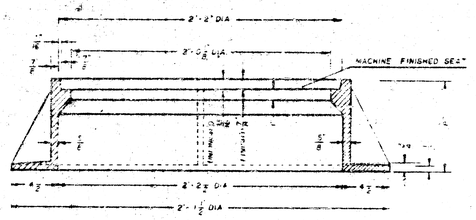
Weight: 240 Lbs.



TOP VIEW



SECTION VIEW



SECTION A-A

* OUTSIDE DIA. TOP OF COVER

** OUTSIDE DIA. BOTTOM OF COVER

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL [illegible] MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN [illegible] OFFICIALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY WITH A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

5. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

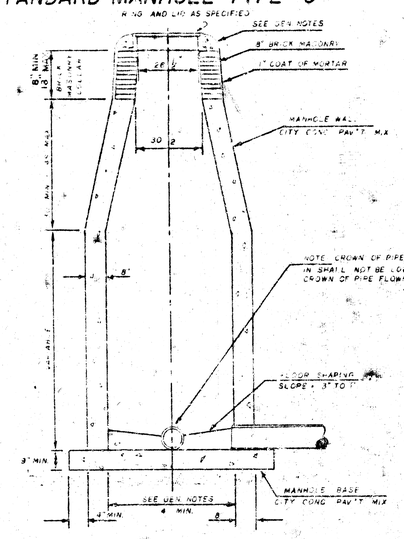
DEC. 1981

SEWER APPURTENANCES DETAILS

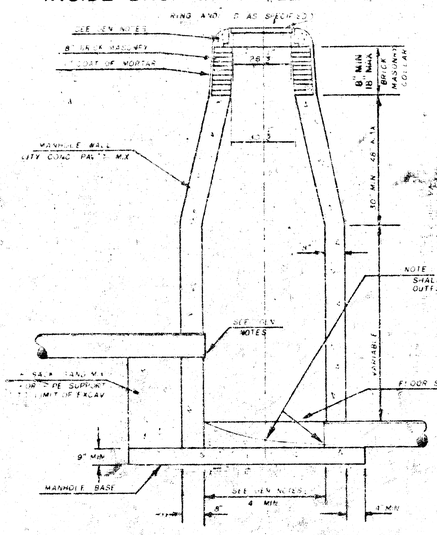
ADOPTED AS STANDARD DESIGN
BY

City of Wichita, Kansas

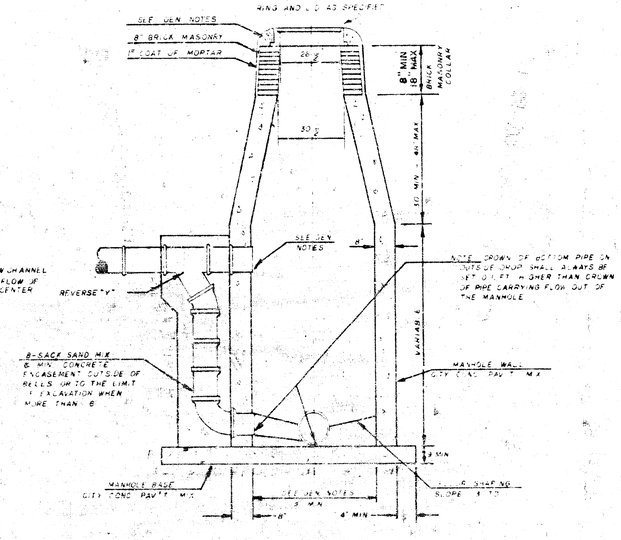
STANDARD MANHOLE TYPE "C"



INSIDE DROP MANHOLE TYPE "C"



OUTSIDE DROP MANHOLE TYPE "C"



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 OF CONCRETE 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. TYPE "C" MANHOLES CAN BE CONSTRUCTED ONLY WHERE PIPE SIZES ARE 8" OR SMALLER. THE INSIDE DIAMETER OF TYPE "C" MANHOLES SHALL BE 4'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASE. REINFORCING STEEL SHALL CONSIST OF WC. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. REINFORCING STEEL SHALL BE PLACED 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. COST OF FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

3. AN OPENING SHALL BE CUT IN THE MANHOLE WALL FOR THE UPPER INLET PIPE FOR INSIDE AND OUTSIDE DROP MANHOLES. THE UPPER INLET PIPE SHALL BE GROUTED INTO THIS OPENING WITH NON-SHRINK GROUT. THE EXTERIOR OF THIS CONCRETE CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.

4. 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 EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPE OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLE SHALL HAVE THE TOP HALF REMOVED TO WEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.

5. 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.

6. 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.

7. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.

8. STANDARD MANHOLES TYPE "C" AND STANDARD INSIDE DROP MANHOLES TYPE "C" SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES TYPE "C" SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

JNL JAN. 1982

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