

STORM WATER DRAIN #72

To Serve

CEDAR MEADOWS ADDITION WESTWIND THIRD ADDITION

AND LOT 38

WESTWIND FOURTH ADDITION

INDEX CODE 750182

Project No.

468-76-245-81701-000-000-001

CITY OF WICHITA, KANSAS

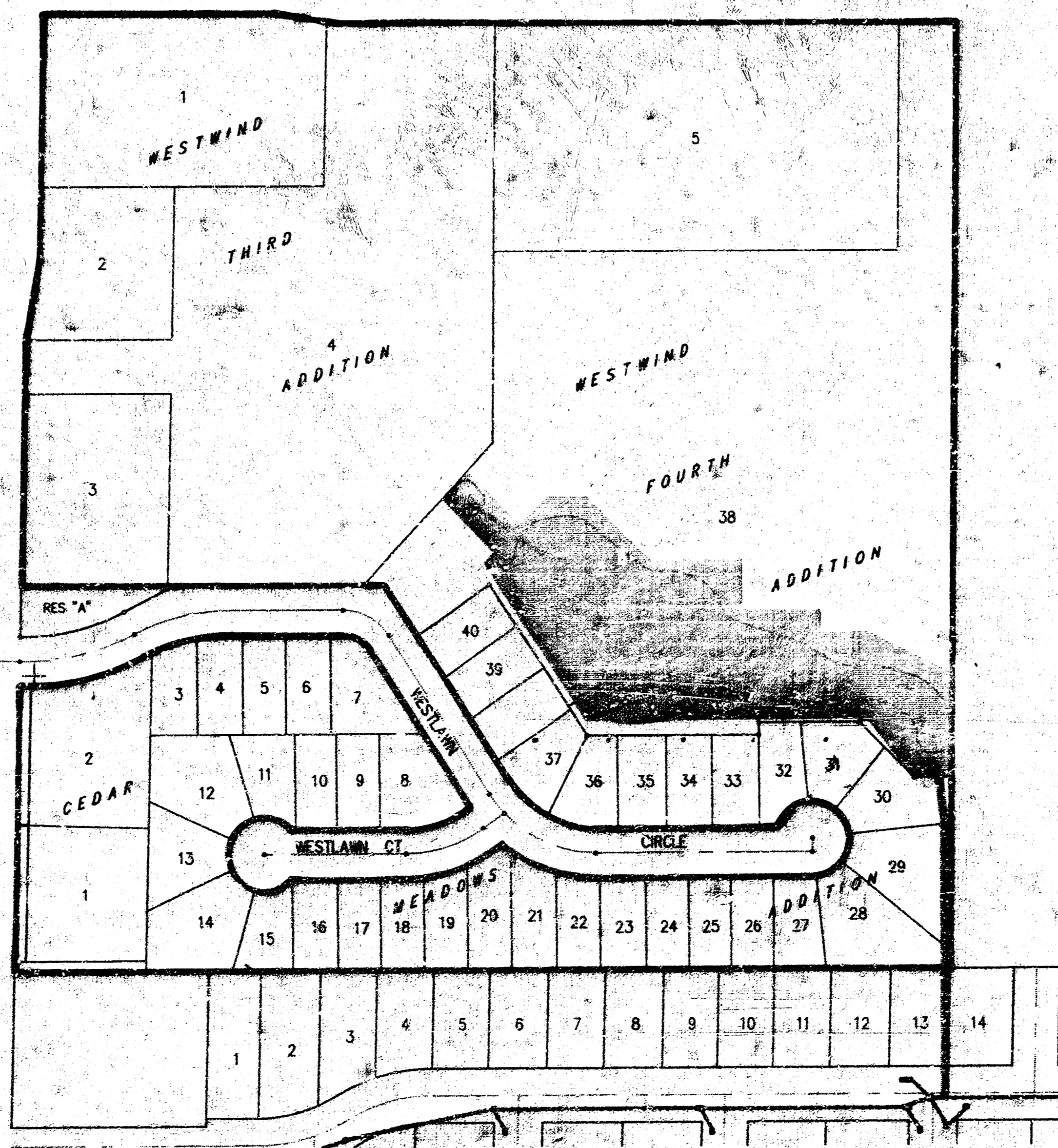
Michael E. Lindebak City Engineer

GENERAL NOTES

- 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.
- A saw cut of at least one-half the depth of existing surface courses or one-fourth the depth of the existing total pavement thickness shall be provided at locations where proposed construction abuts an existing surface course or pavement for which partial removal of that surface or pavement is required, except when such saw cuts are within three (3) feet of an existing joint. The removal shall be extended to the existing joint. Such saw cuts will not be paid for directly and this cost shall be considered as subsidiary to the removal of the surface or pavement.
- 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 flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in water 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.
- Properties within the project limits may have underground sprinkler systems in 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.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
- 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.
- The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state law.
- Pavement removal and/or replacement will be measured and paid for on the lineal foot basis as measured along the centerline of the sewer regardless of width, pavement type and/or pavement thickness. Minimum limits of such pavement removal and replacement shall be one foot beyond the limits of the excavation made for the sewer or the structure, except when such lines of removal are within three (3) feet of an existing joint the limits of removal shall be extended to the existing joint. Removal and replacement of existing pavement shall conform to the applicable sections of the City of Wichita Standard Specifications.
- Construction of this project must be coordinated with Incidental Drainage for Westwind Circle, project no. 472-76-245-81718-000-001.

SHEET INDEX

- IMPROVEMENT DISTRICT
- DETENTION POND PLAN & QUANTITIES
- POND INFLOW PIPE
- POND COORDINATES & EARTHWORK QUANTITIES
- REINFORCED CONC. MH DETAIL
- SHALLOW MH DETAIL



Improvement District



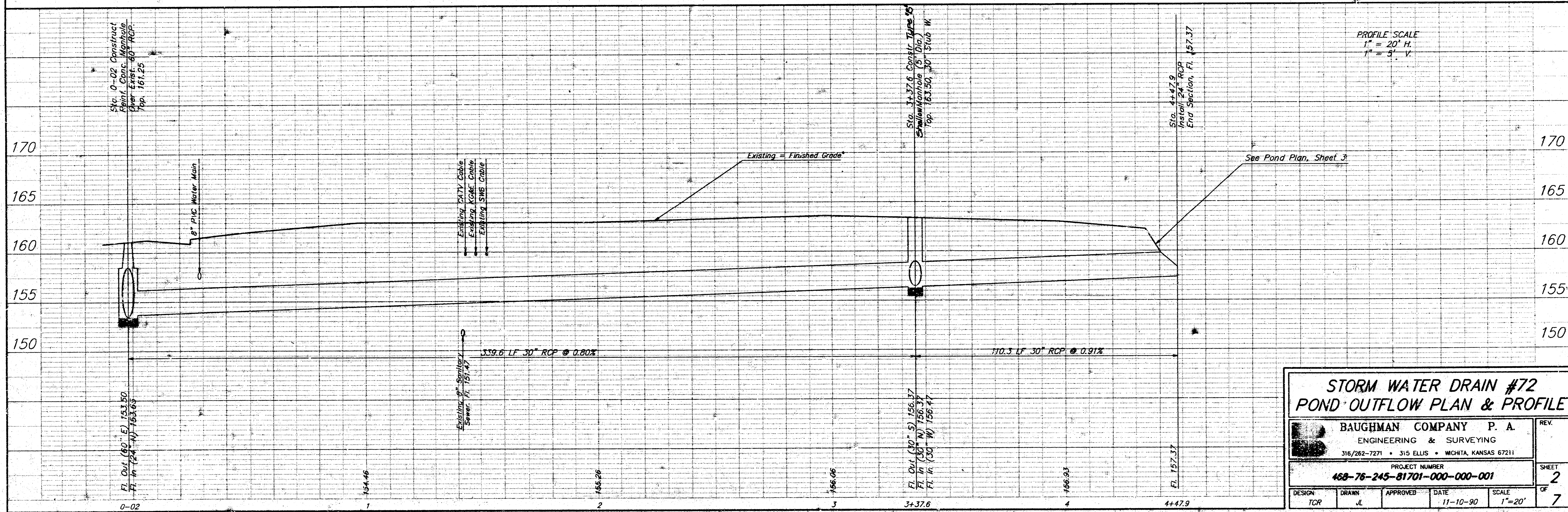
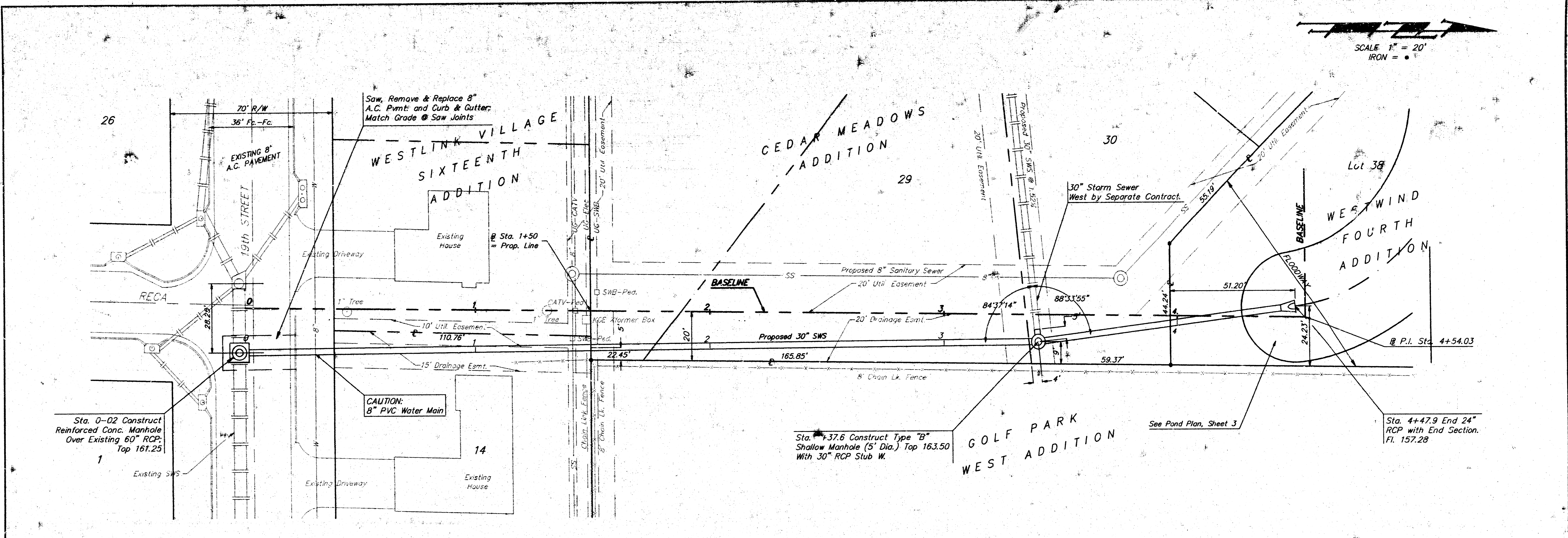
*Booked
4-91
MCG*

REVISED IMPROVEMENT DISTRICT 1-10-91 TCR
BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/267-7271 • 315 ELLIS • WICHITA, KANSAS 67201

December 12, 1990

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SCALE 1" = 20'
IRON = •



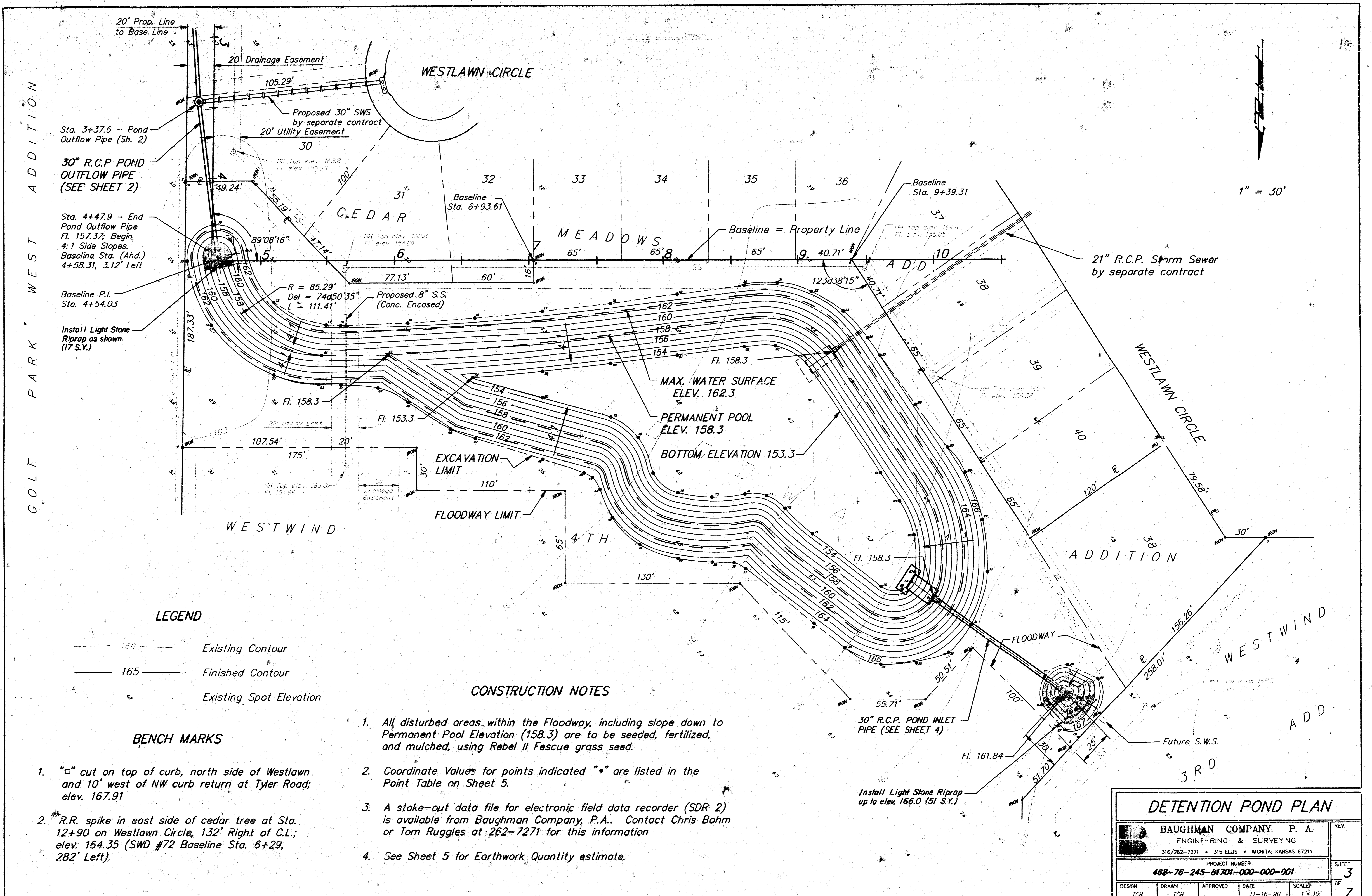
**STORM WATER DRAIN #72
POND OUTFLOW PLAN & PROFILE**

BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
468-76-245-81701-000-001

DESIGN	TCR	DRAWN	JL	APPROVED	DATE	11-10-90	SCALE	1"=20'	REV.	OF
									2	7

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GOLF PARK WEST ADDITION

1" = 30'

LEGEND

- Existing Contour
- Finished Contour
- Existing Spot Elevation

BENCH MARKS

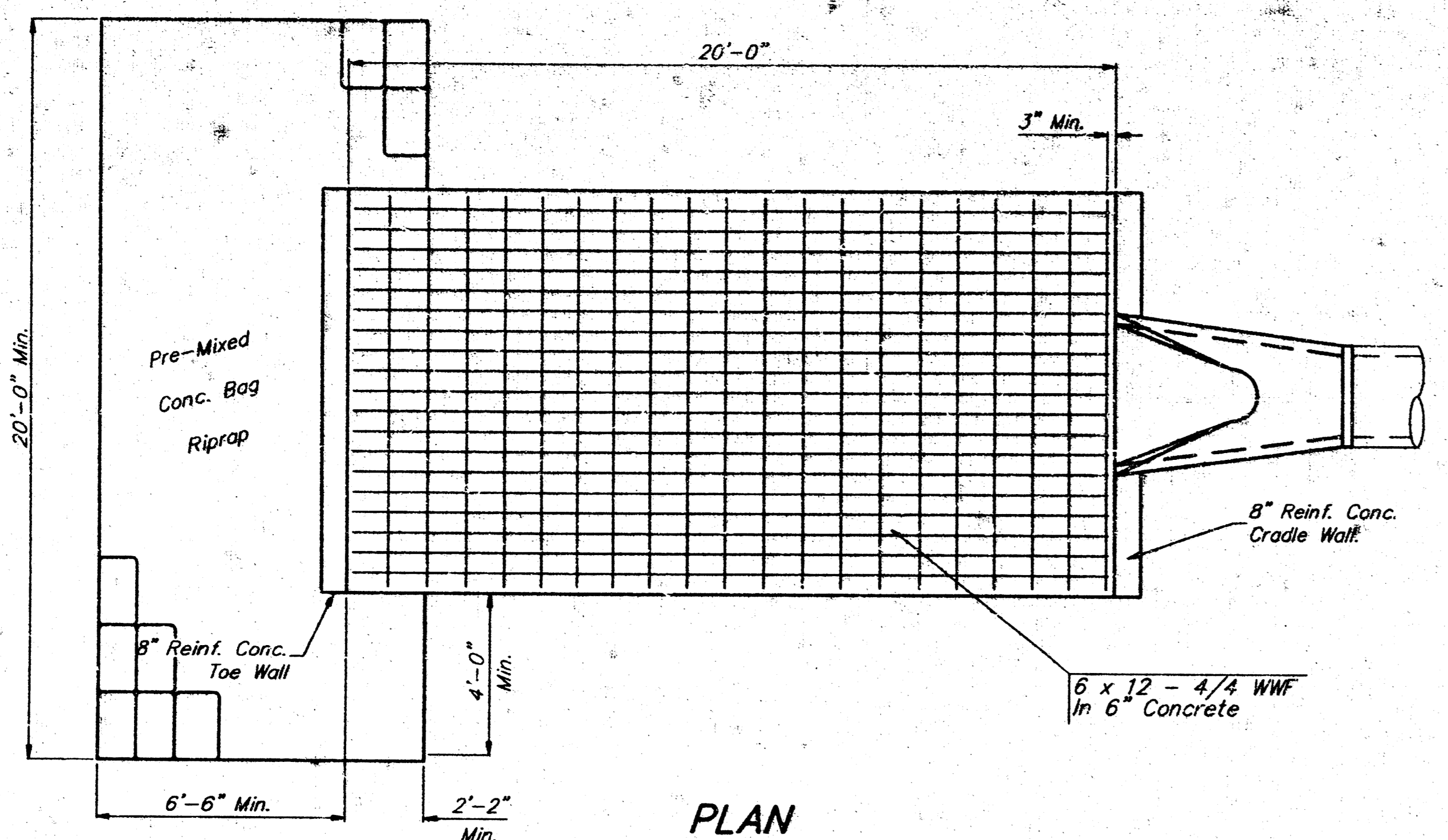
1. "□" cut on top of curb, north side of Westlawn and 10' west of NW curb return at Tyler Road; elev. 167.91
2. "R.R." spike in east side of cedar tree at Sta. 12+90 on Westlawn Circle, 132' Right of C.L.; elev. 164.35 (SWD #72 Baseline Sta. 6+29, 282' Left)

CONSTRUCTION NOTES

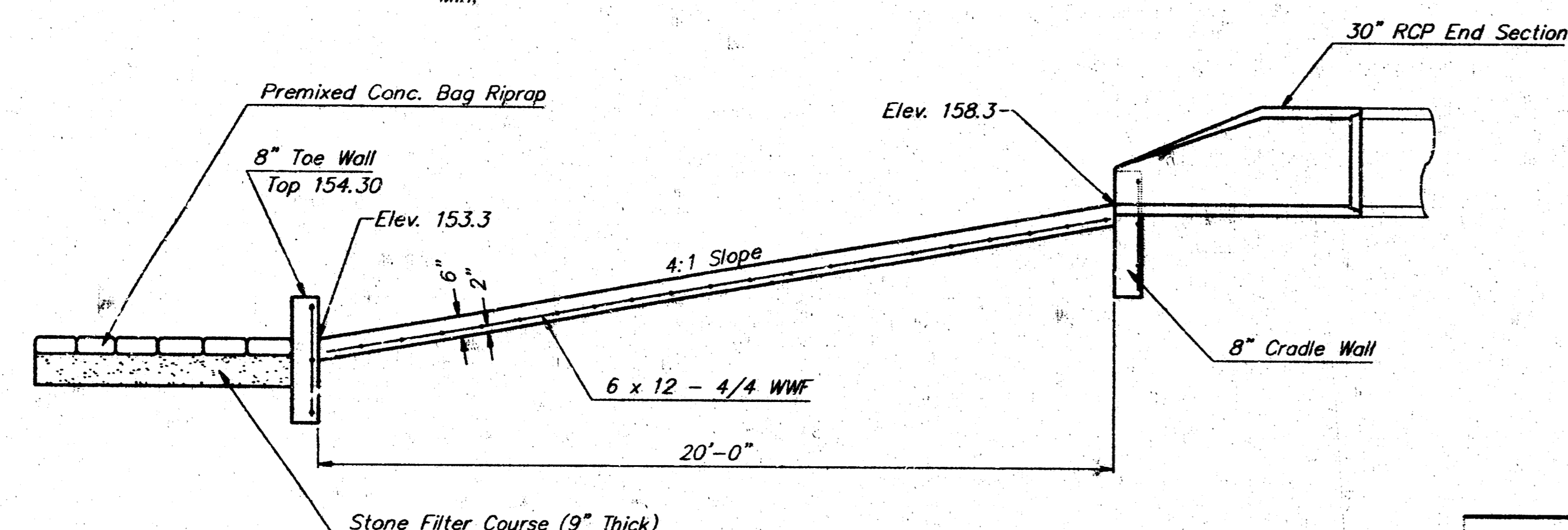
1. All disturbed areas within the Floodway, including slope down to Permanent Pool Elevation (158.3) are to be seeded, fertilized, and mulched, using Rebel II Fescue grass seed.
2. Coordinate Values for points indicated "*" are listed in the Point Table on Sheet 5.
3. A stake-out data file for electronic field data recorder (SDR 2) is available from Baughman Company, P.A.. Contact Chris Bohm or Tom Ruggles at 262-7271 for this information
4. See Sheet 5 for Earthwork Quantity estimate.

DETENTION POND PLAN				
BAUGHMAN COMPANY P. A. ENGINEERING & SURVEYING 316/282-7271 • 315 ELUS • WICHITA, KANSAS 67211				REV.
PROJECT NUMBER 468-76-245-81701-000-001				SHEET
				3
DESIGN	DRAWN	APPROVED	DATE	SCALE
TCR	TCR		11-16-90	1" = 30'
				OF
				7

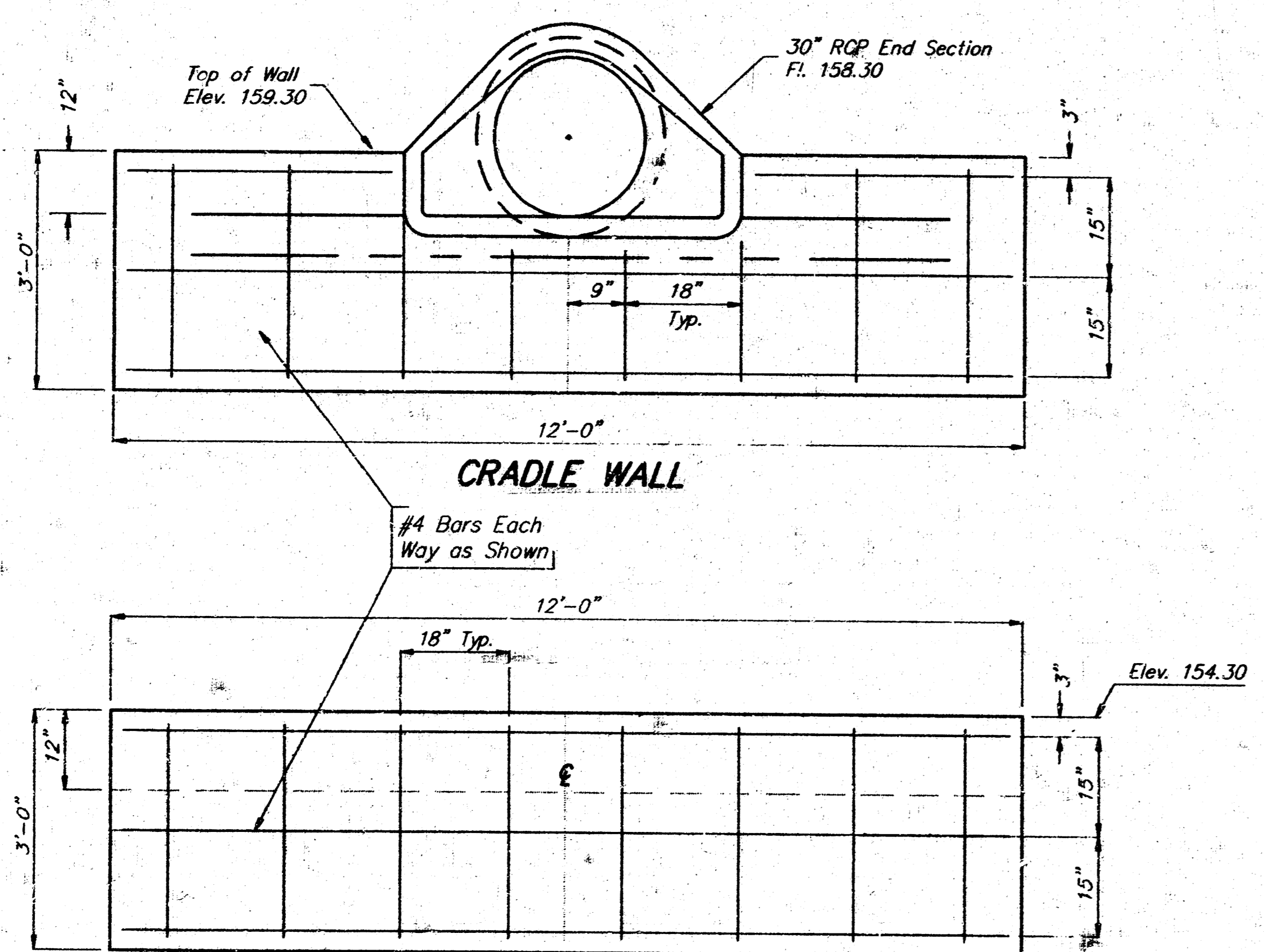
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PLAN

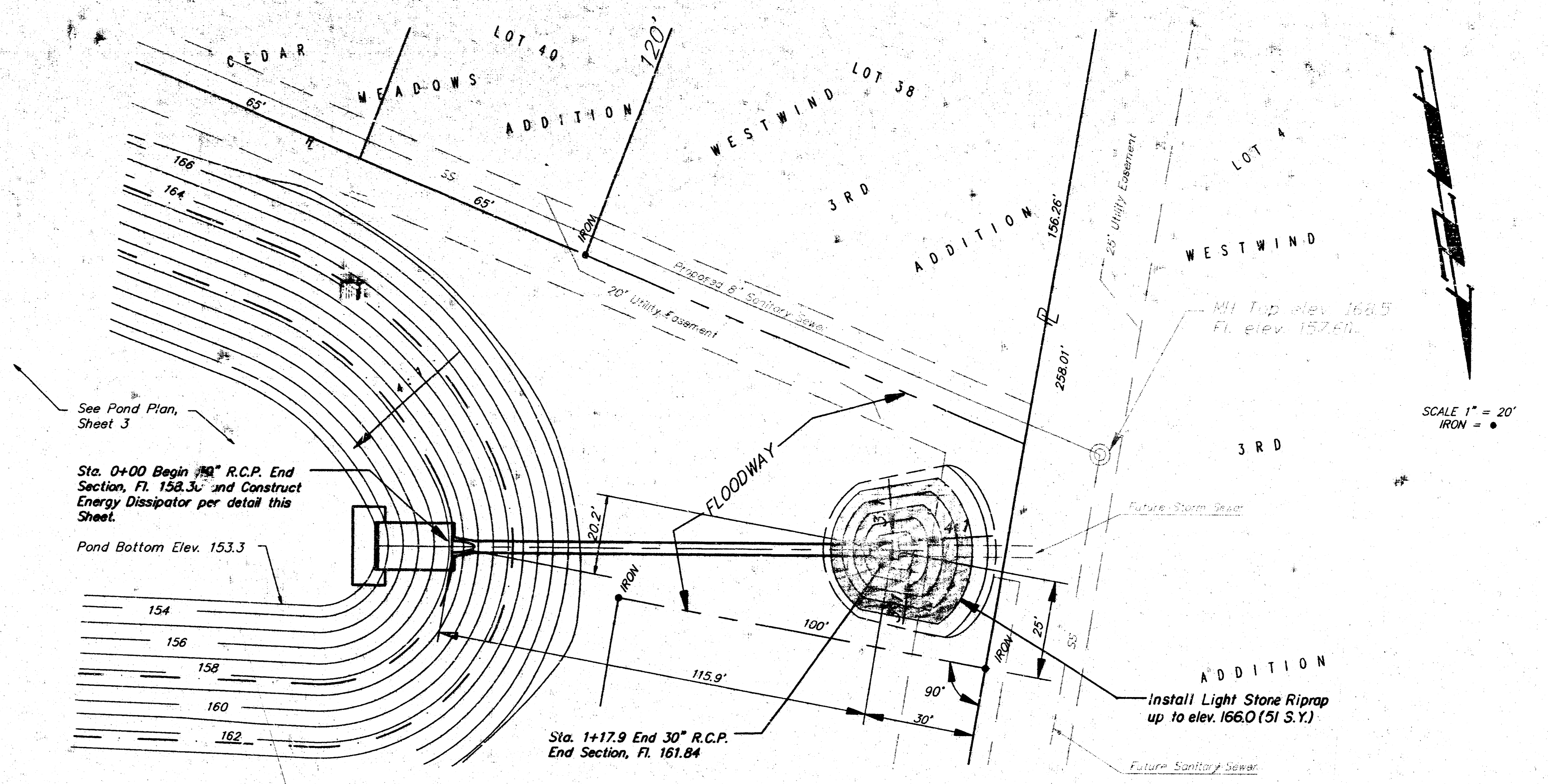


SECTION



TOE WALL
DETAIL ENERGY DISSIPATOR

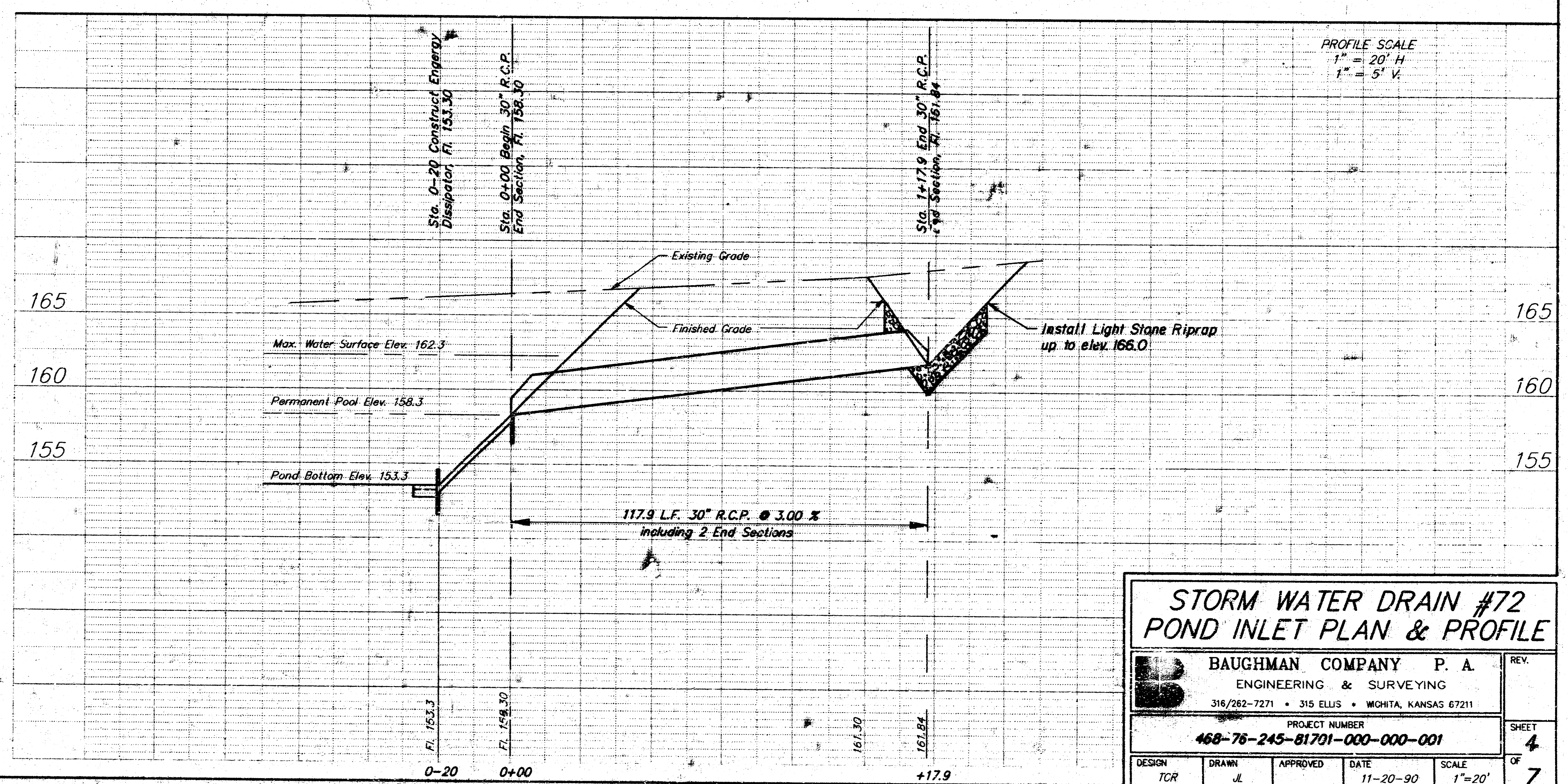
NO SCALE



See Pond Plan, Sheet 3
Sta. 0+00 Begin 30" R.C.P. End Section, Fl. 158.30 and Construct Energy Dissipator per detail this Sheet.
Pond Bottom Elev. 153.3

Sta. 1+17.9 End 30" R.C.P. End Section, Fl. 161.84

Install Light Stone Riprap up to elev. 166.0 (51 S.Y.)



STORM WATER DRAIN #72 POND INLET PLAN & PROFILE				
BAUGHMAN COMPANY P. A. ENGINEERING & SURVEYING 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211				REV.
PROJECT NUMBER 468-76-245-81701-000-000-001				SHEET 4
DESIGN TCR	DRAWN JL	APPROVED	DATE 11-20-90	SCALE 1"=20'
				OF 7

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**COORDINATE POINT VALUES
FOR POND STAKING**

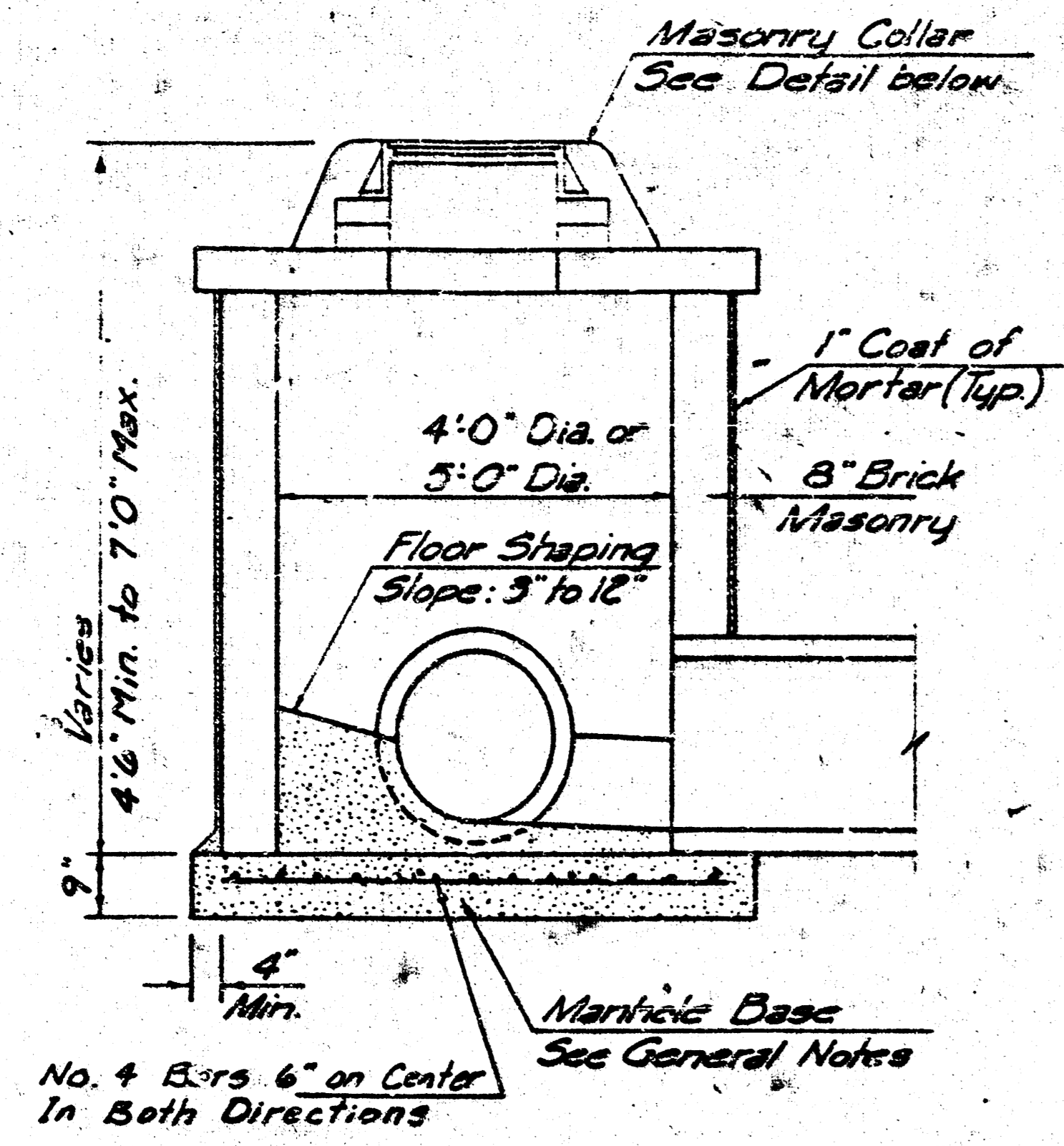
POINT NO.	NORTH	EAST
PT. 1 N	20194.760	E 21327.770
PT. 2 N	20251.018	E 21337.478
PT. 3 N	20307.320	E 21313.180
PT. 4 N	20304.311	E 21313.463
PT. 5 N	20306.720	E 21078.607
PT. 6 N	20306.126	E 20842.903
PT. 7 N	20501.460	E 20537.850
PT. 8 N	20649.170	E 20681.810
PT. 9 N	20439.230	E 21339.840
PT. 10 N	20282.102	E 21316.320
PT. 11 N	20500.150	E 21291.772
PT. 12 N	20352.577	E 21271.999
PT. 13 N	20352.989	E 21232.704
PT. 14 N	20353.103	E 21222.122
PT. 15 N	20351.316	E 21171.795
PT. 16 N	20347.738	E 21122.381
PT. 17 N	20342.748	E 21072.020
PT. 18 N	20337.248	E 21022.322
PT. 19 N	20330.879	E 20972.275
PT. 20 N	20324.298	E 20922.014
PT. 21 N	20322.272	E 20897.648
PT. 22 N	20328.482	E 20872.437
PT. 23 N	20342.197	E 20849.382
PT. 24 N	20361.048	E 20831.280
PT. 25 N	20373.349	E 20822.041
PT. 26 N	20407.691	E 20796.412
PT. 27 N	20437.700	E 20772.346
PT. 28 N	20453.335	E 20759.407
PT. 29 N	20468.731	E 20746.401
PT. 30 N	20525.289	E 20742.368
PT. 31 N	20562.546	E 20735.121
PT. 32 N	20581.768	E 20771.686
PT. 33 N	20589.184	E 20795.628
PT. 34 N	20590.142	E 20821.301
PT. 35 N	20578.914	E 20848.330
PT. 36 N	20561.750	E 20871.153
PT. 37 N	20523.446	E 20921.926
PT. 38 N	20519.109	E 20950.231
PT. 39 N	20518.939	E 20946.174
PT. 40 N	20516.298	E 20971.517
PT. 41 N	20506.732	E 21000.211
PT. 42 N	20487.663	E 21021.012
PT. 43 N	20468.050	E 21030.191
PT. 44 N	20459.464	E 21035.394
PT. 45 N	20456.367	E 21041.642
PT. 46 N	20446.751	E 21071.626
PT. 47 N	20432.418	E 21122.094
PT. 48 N	20425.886	E 21140.625
PT. 49 N	20407.078	E 21171.442
PT. 50 N	20396.985	E 21194.228
PT. 51 N	20394.902	E 21221.843
PT. 52 N	20394.673	E 21237.996
PT. 53 N	20388.026	E 21271.791
PT. 54 N	20352.862	E 21318.043
PT. 55 N	20307.524	E 21334.450
PT. 56 N	20374.162	E 21236.125
PT. 57 N	20374.000	E 21186.594
PT. 58 N	20389.644	E 21124.169
PT. 59 N	20385.024	E 21071.767
PT. 60 N	20379.378	E 21022.220
PT. 61 N	20373.458	E 20972.136
PT. 62 N	20367.329	E 20922.204
PT. 63 N	20366.903	E 20899.194
PT. 64 N	20435.691	E 20821.762
PT. 65 N	20475.625	E 20807.904
PT. 66 N	20499.394	E 20797.615
PT. 67 N	20825.636	E 20796.623
PT. 68 N	20532.130	E 20799.297
PT. 69 N	20537.639	E 20806.145
PT. 70 N	20538.696	E 20821.413
PT. 71 N	20496.769	E 20871.994
PT. 72 N	20480.863	E 20892.006
PT. 73 N	20472.043	E 20905.992
PT. 74 N	20471.128	E 20921.691
PT. 75 N	20473.215	E 20944.403
PT. 76 N	20470.121	E 20971.562
PT. 77 N	20456.308	E 20990.072
PT. 78 N	20431.407	E 21001.242
PT. 79 N	20417.104	E 21022.154
PT. 80 N	20413.237	E 20783.294
PT. 81 N	20609.718	E 20685.788
PT. 82 N	20599.115	E 20701.157
PT. 83 N	20590.405	E 20683.937
PT. 84 N	20599.784	E 20661.717
PT. 85 N	20625.356	E 20643.129
PT. 86 N	20633.970	E 20686.145
PT. 87 N	20618.577	E 20702.917

**EXCAVATION VOLUME
ESTIMATE**

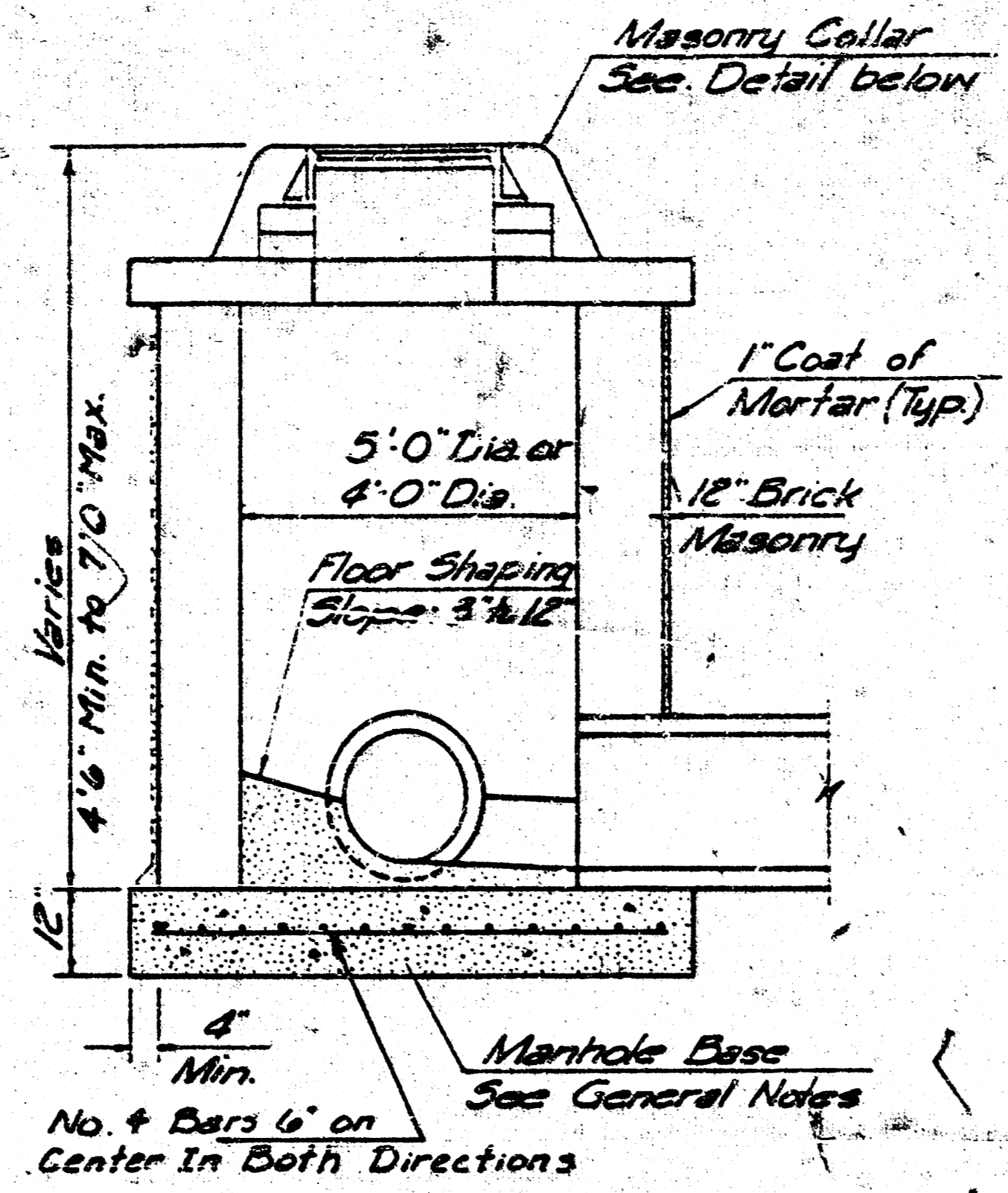
ELEVATION	AREA	INCREMENTAL VOLUME
166.9	0	3446.0
166.0	7659	14783.0
165.0	21907	31796.0
164.0	41685	54709.0
163.0	67733	45986.5
162.3	63657	18837.5
162.0	61926	57362.5
161.0	52799	51704.0
160.0	50609	47855.0
159.0	45101	42793.5
158.3	40486	39881.5
158.0	39277	37314.0
157.0	35351	33471.5
156.0	31592	29525.0
155.0	27458	26009.5
154.0	24561	23406.0
153.3	22251	23406.0
OUTLET DITCH		206.0
INLET AREA		1183.0
TOTAL VOLUME		560,270.2 Cu. Ft. = 20,750 Cu. Yd.

COORDINATES AND EARTHWORK			
BAUERMAN COMPANY P. A. ENGINEERING & SURVEYING 316/282-7271 • 315 ELLIS • WICHITA, KANSAS 67211			REV.
PROJECT NUMBER 480-78-245-81701-000-000-001			SHEET 5
DESIGN TCR	DRAWN TCR	APPROVED DATE 12-12-90	SCALE 1"=30' 7

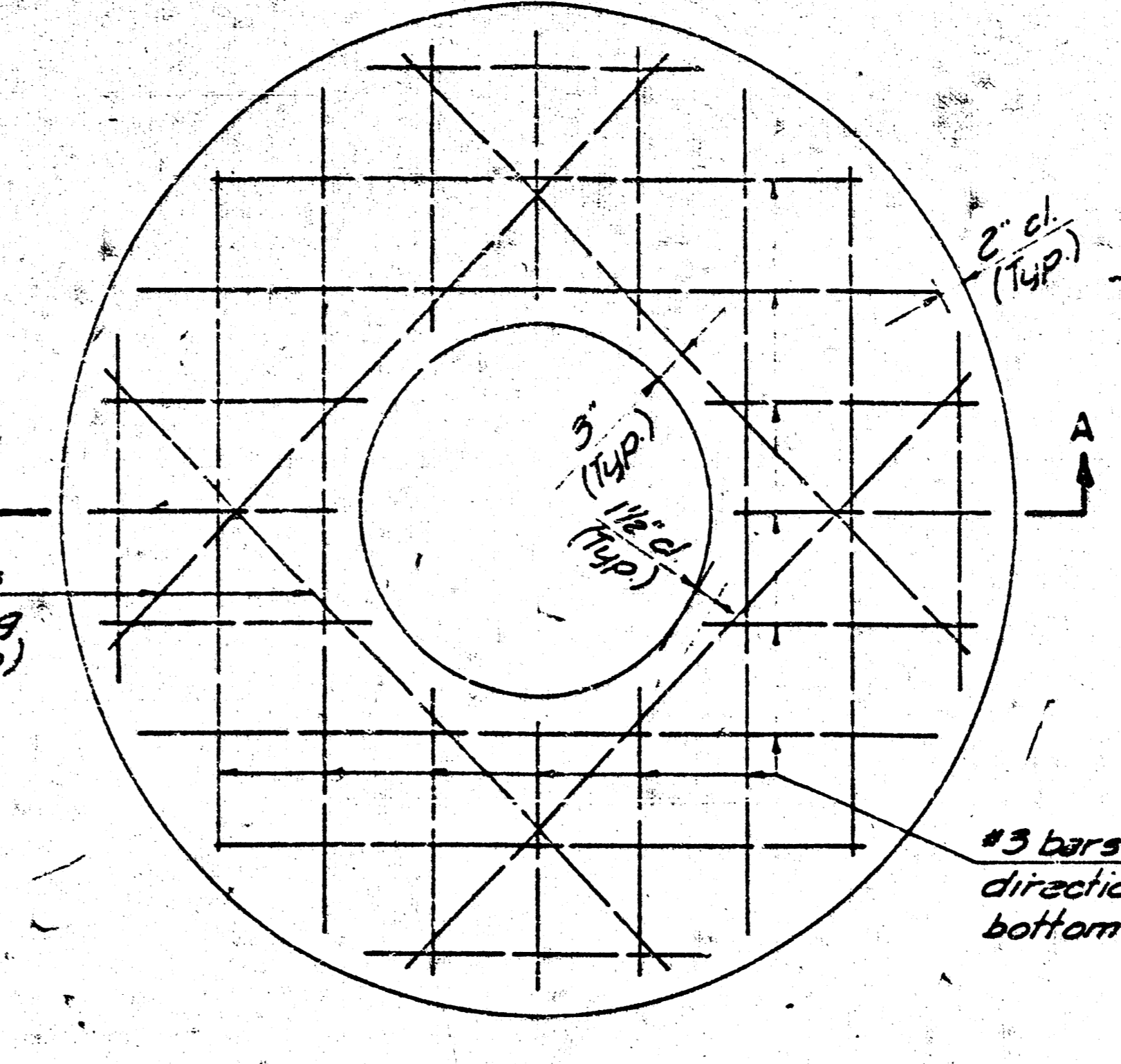
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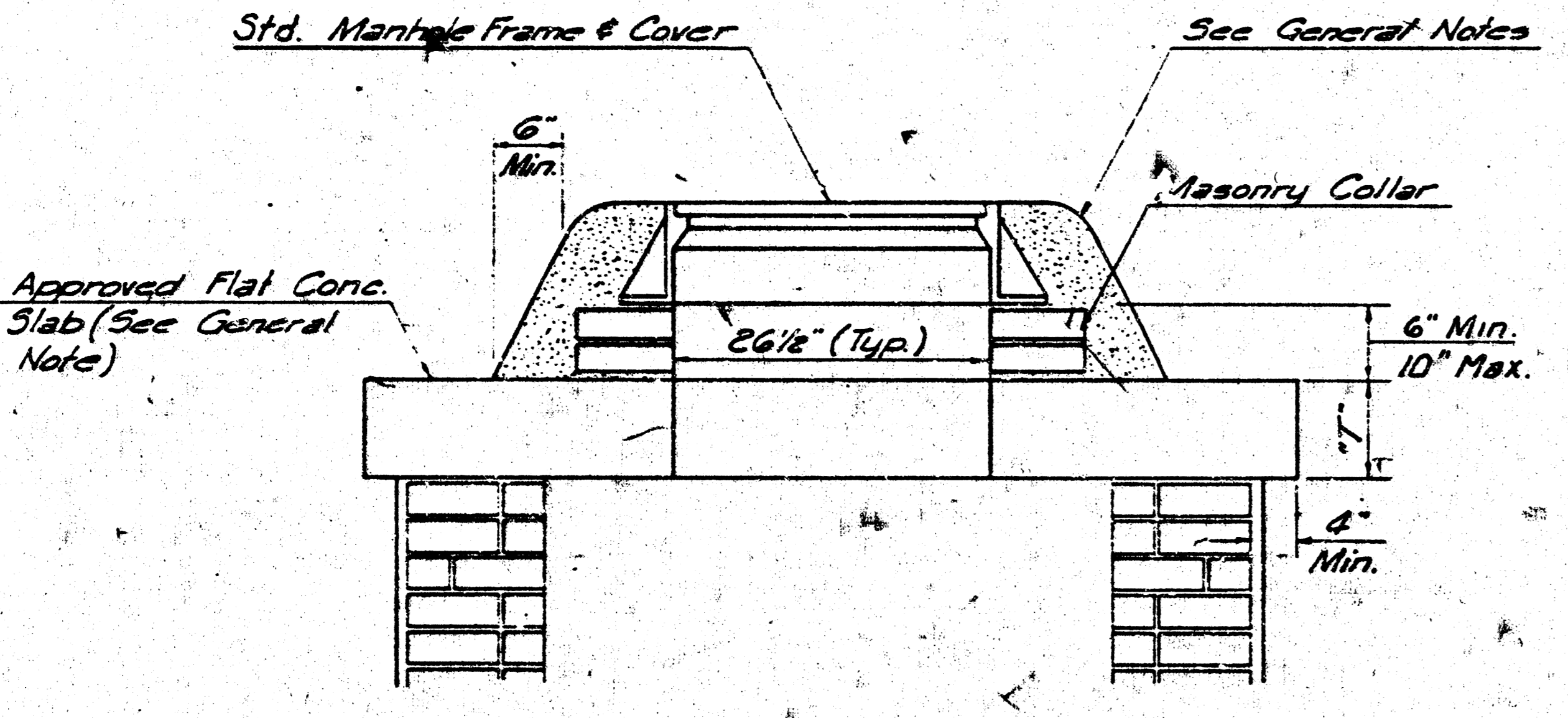
SHALLOW TYPE "A" MANHOLE



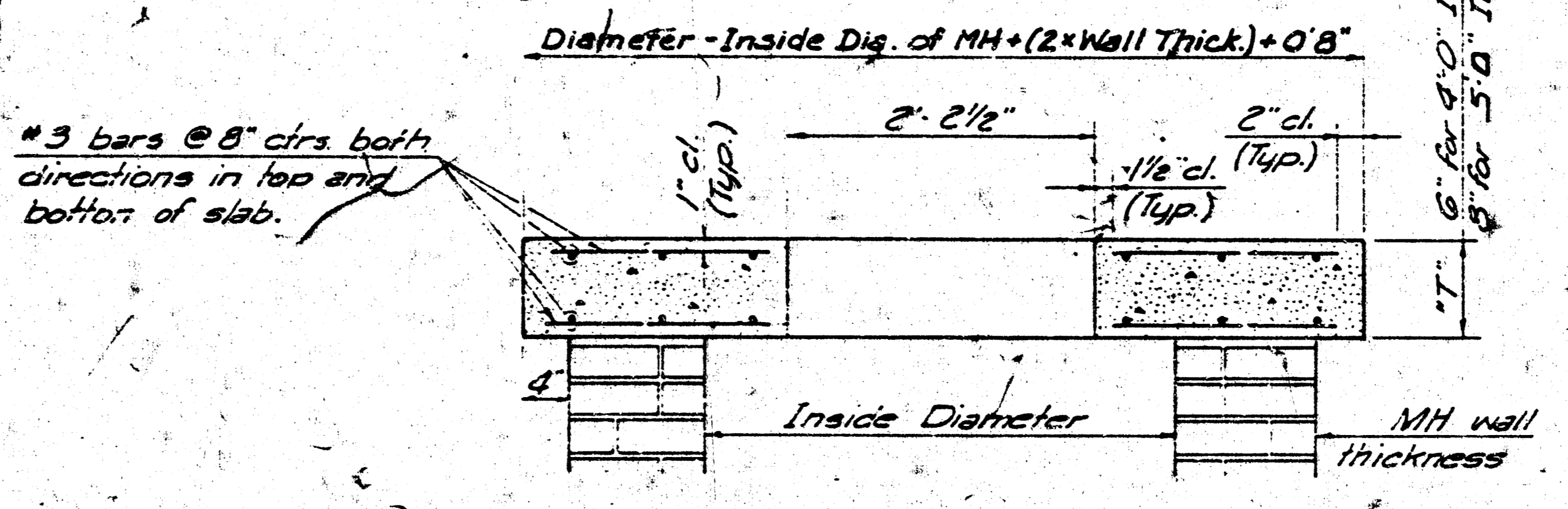
SHALLOW TYPE "B" MANHOLE



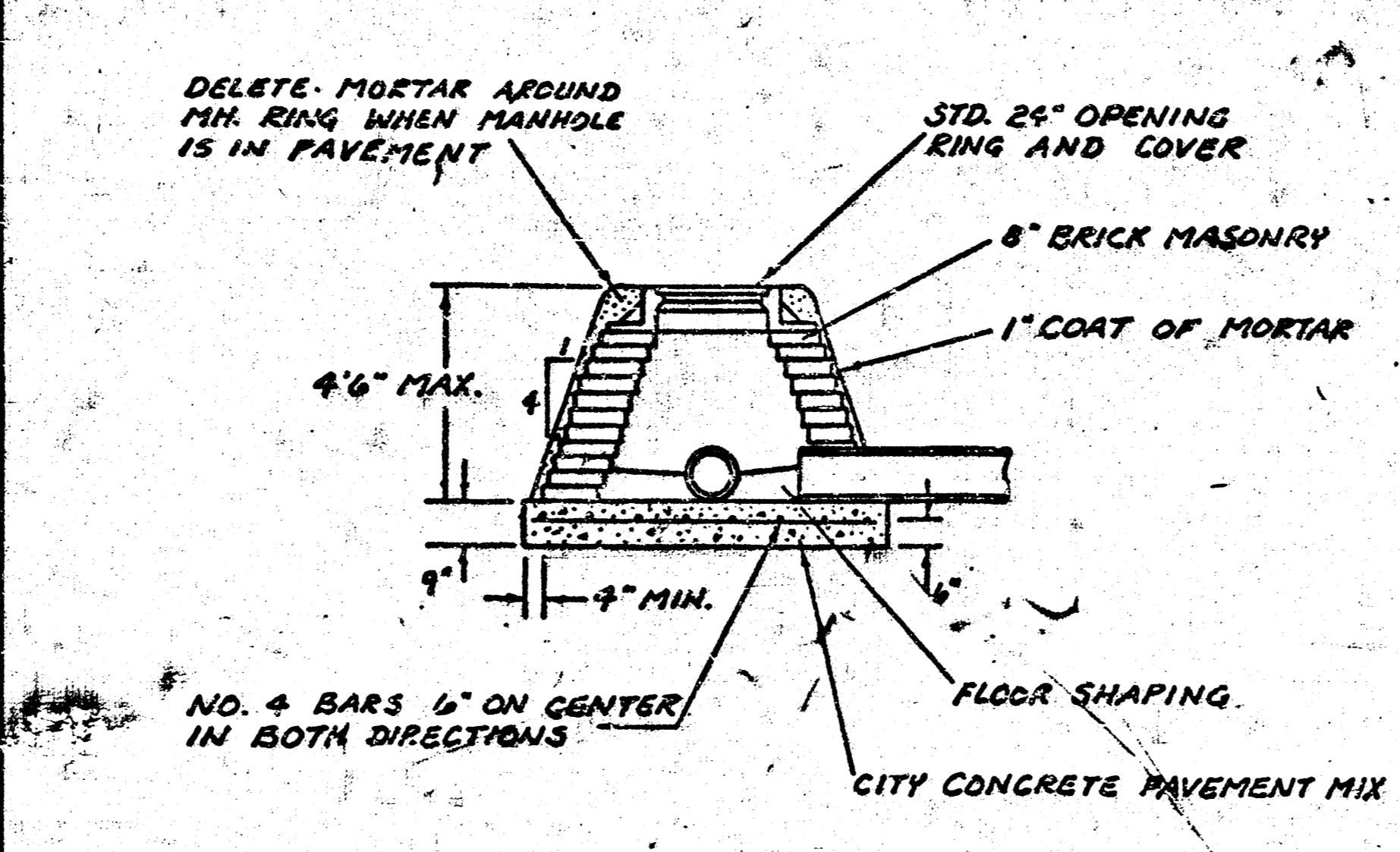
PLAN



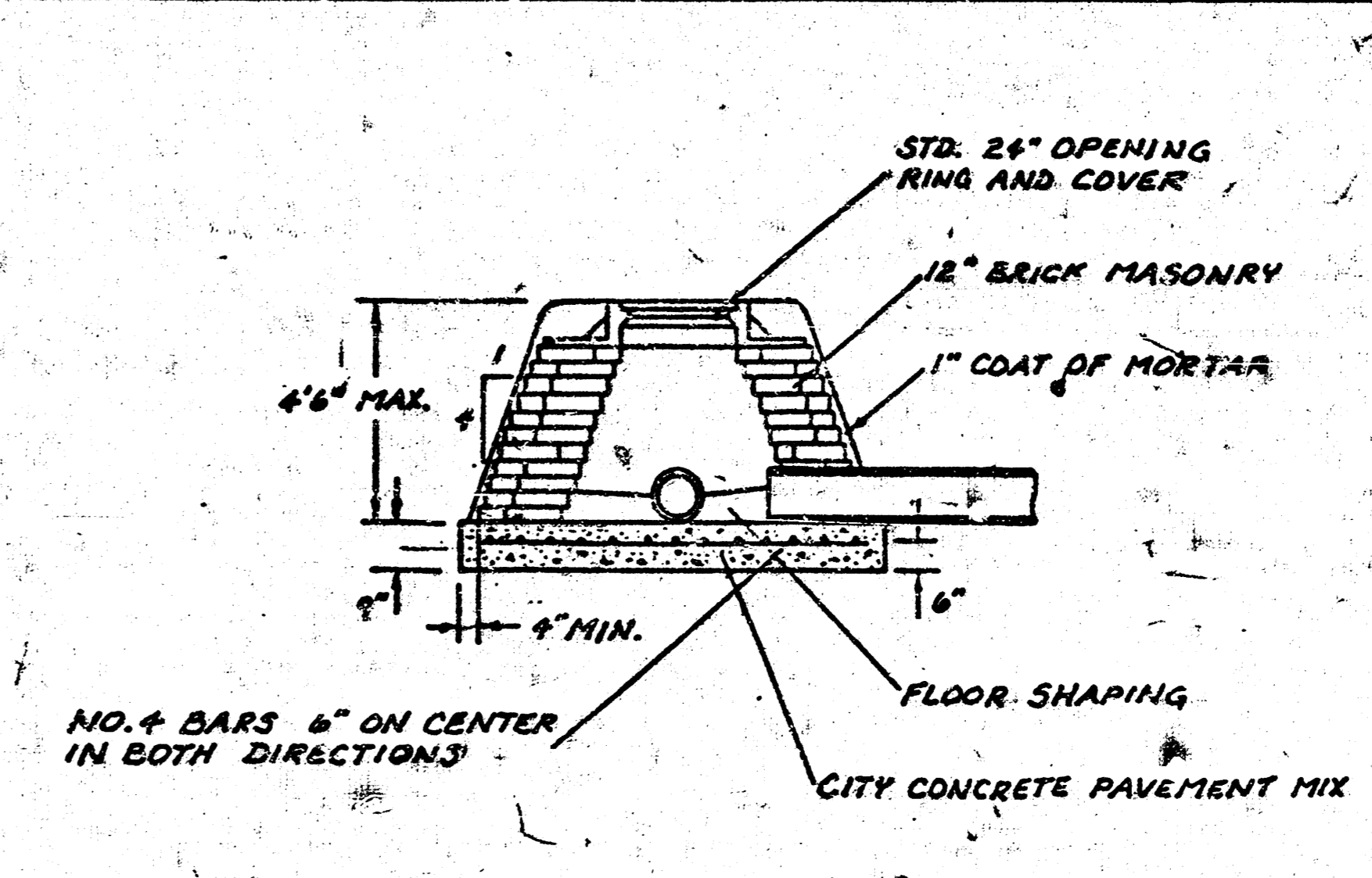
MASONRY COLLAR DETAIL



**SECTION A-A
FLAT CONCRETE SLAB DETAILS**



SPECIAL SHALLOW TYPE 'A' MANHOLE



SPECIAL SHALLOW TYPE 'B' MANHOLE

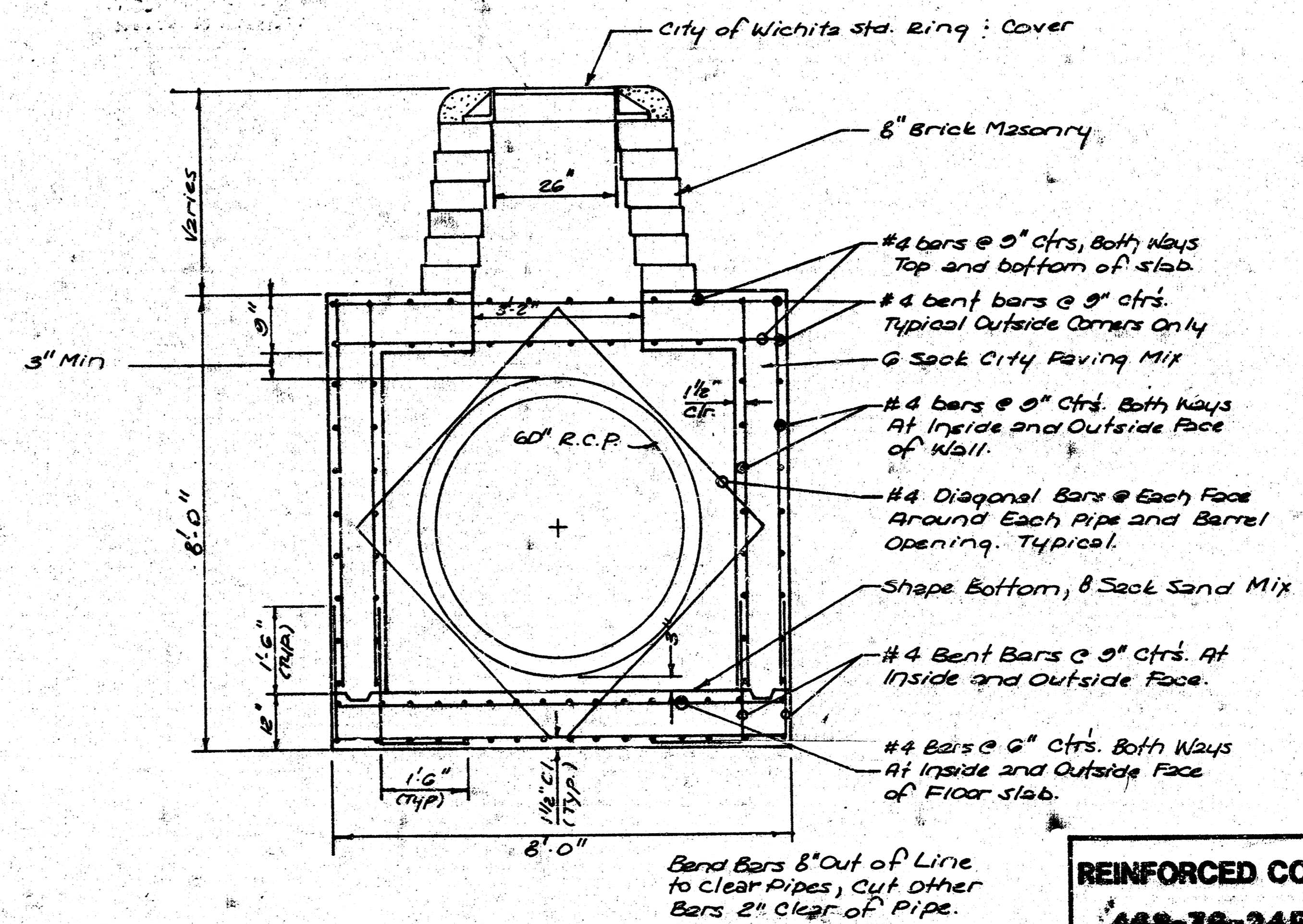
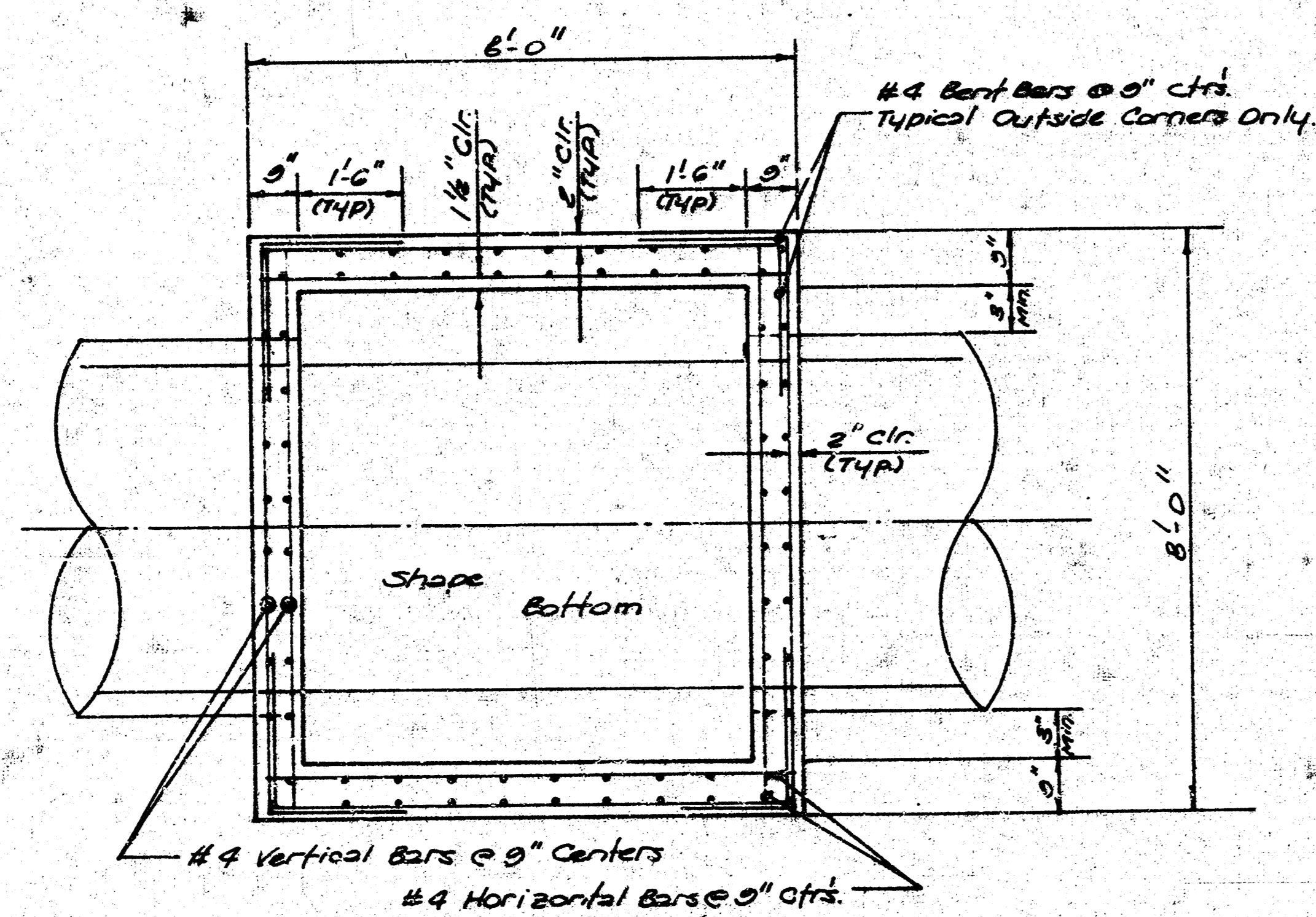
GENERAL NOTES

- 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 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.
 - 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.
 - 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 NEAR 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.
 - 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.
 - 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.
 - THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- 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 SHALL BE 4' UNLESS INDICATED OTHERWISE.

**CITY OF WICHITA, KANSAS
STANDARD SHALLOW MANHOLES
TYPE 'A' AND TYPE 'B'**

Designed by	Checked by
Drawn by	Date
	Job No.

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REINFORCED CONCRETE MANHOLE DETAIL

469-79-245-81701-000-000-001

BAUGHMAN COMPANY, P.A.
SURVEYING & ENGINEERING

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