B.M. 103.59 City B.M. Disc, Top of S. rail @ E. end Box Culvert, Sheridan & 31st.

B.M. 102.15 N. rim M.H. @ S.W. cor. of Sheridan & Cassado.

NOTE: All areas within earthwork limits shall be seeded in accordance with Kansas State Highway 1966 Standard Specifications using mixed native grass seed and prairie hay mulch. Seed shall be applied at 80 lbs per acre and fertilizer at 300 lbs per acre. Fertilizer shall contain 18% Nitrogen, 18% Phosphate and 18% Potassium. Costs for seeding, mulching and other appurtenant work shall be paid for as bid for "Seeding." Excavation from channel to be placed in wind-row west of new channel and northeast of existing channel as directed by Engineer.

Sec. 1, T28S, R1W

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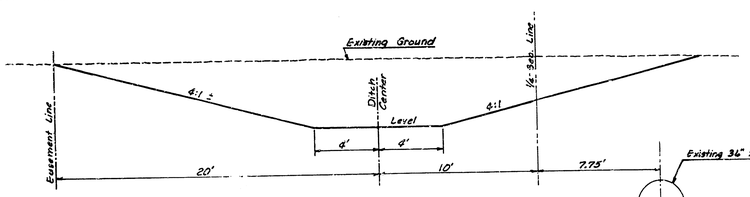
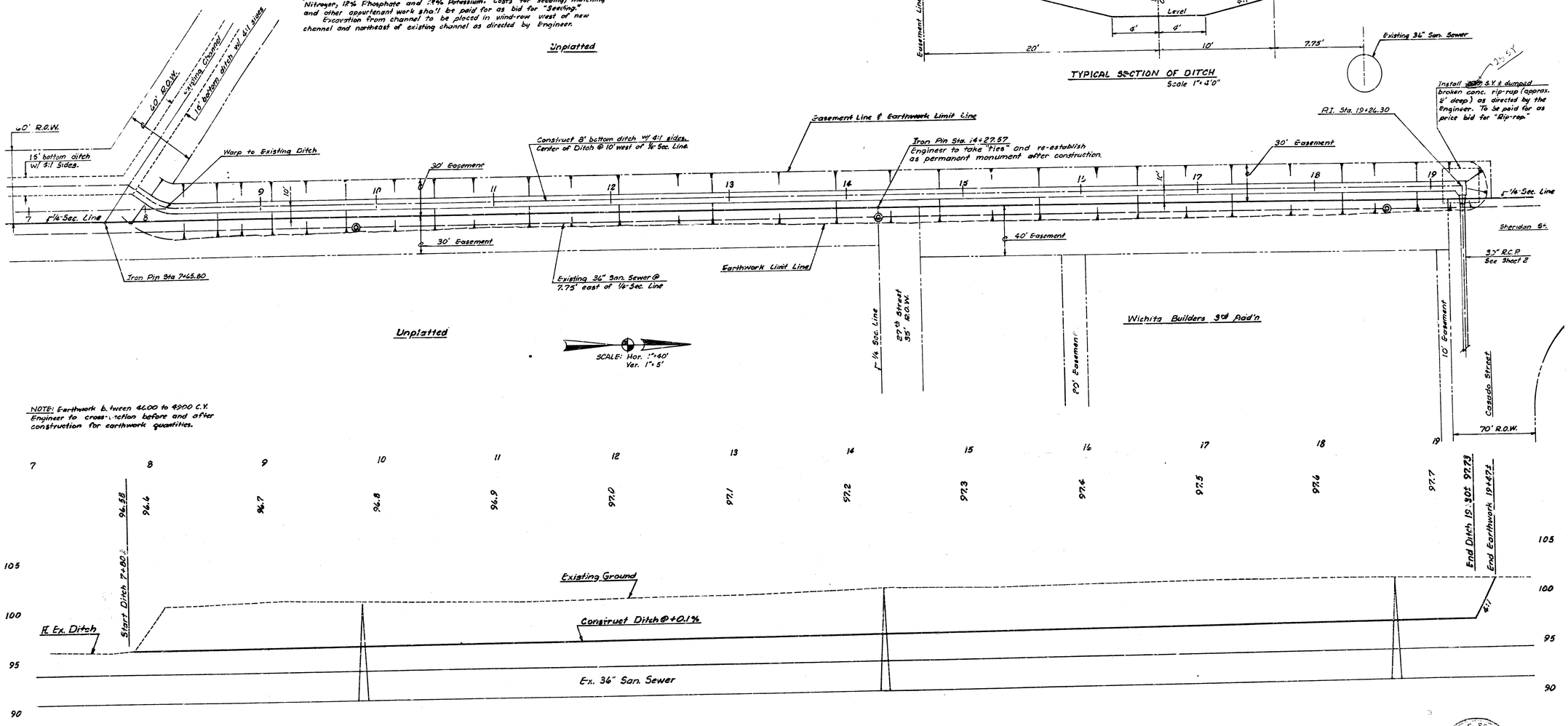


TYPICAL SECTION OF DITCH
Scale 1"=4'0"



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SCALE: Hor. 1"=40'
Ver. 1"=5'

NOTE: Earthwork between 4200 to 4900 C.Y. Engineer to cross-section before and after construction for earthwork quantities.

DONALD E. SCHNEIDER — LICENSED LAND SURVEYOR — 5311 — STATE OF KANSAS

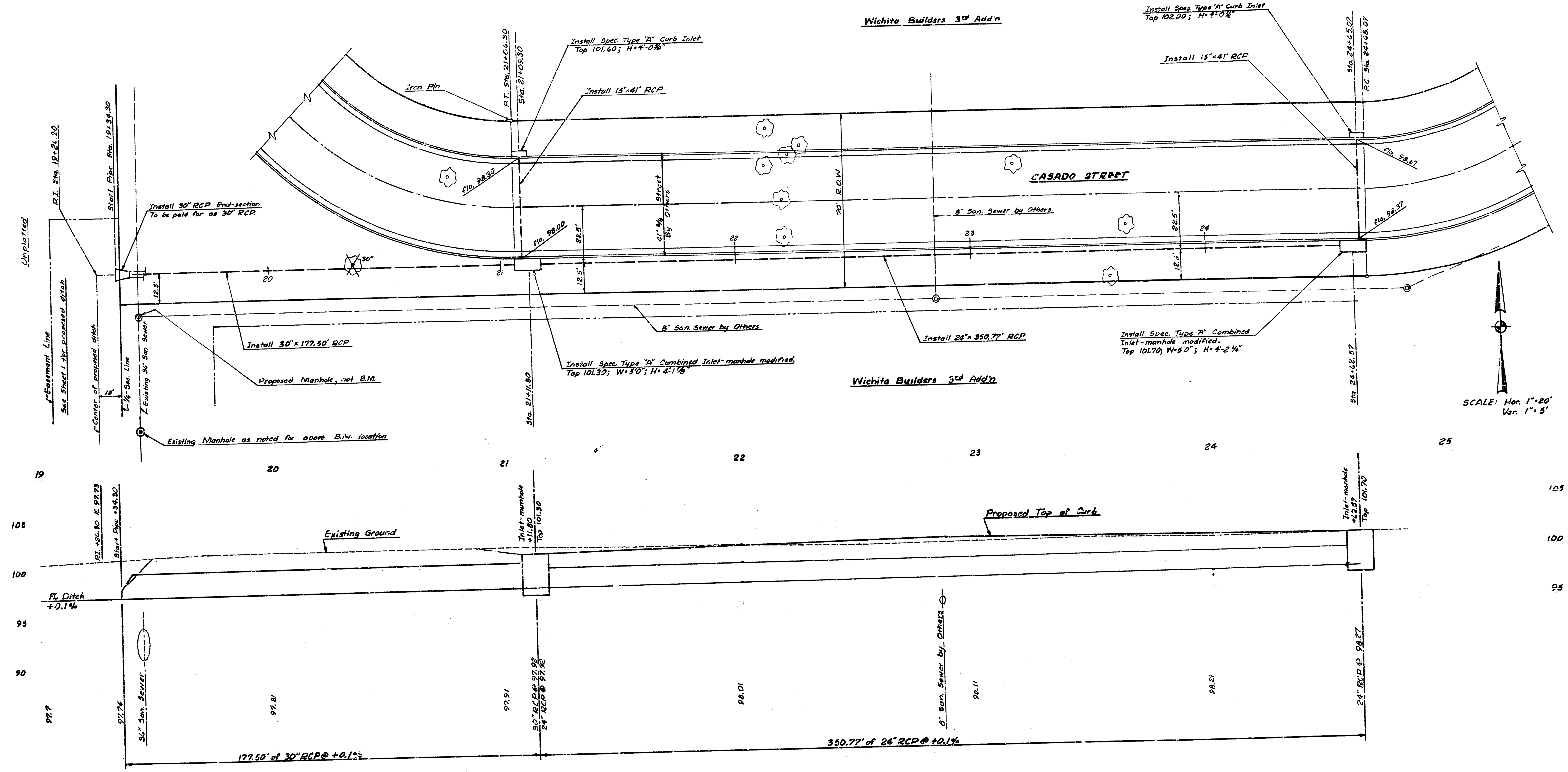
DEAN S. SELLERS — LICENSED ENGINEER — 3503 — STATE OF KANSAS

STORM WATER SEWER NO. 103
R. W. LINN, CITY ENGINEER
CITY OF WICHITA, KANSAS
PROJECT NO. DBKA 573007
DATE APRIL 1973 SHEET 1 OF 5 1/7

B.M. 102.07 Iron in thimble at 1/4-Sec. cor. Sheridan St. & Pawnee, E. thimble.
B.M. 102.15 N. Rim M.H. S.W. cor. Sheridan & Casado.

NOTE: Excess excavation from storm sewer to be stockpiled in Wichita Builders 3rd Add'n as directed by Engineer.

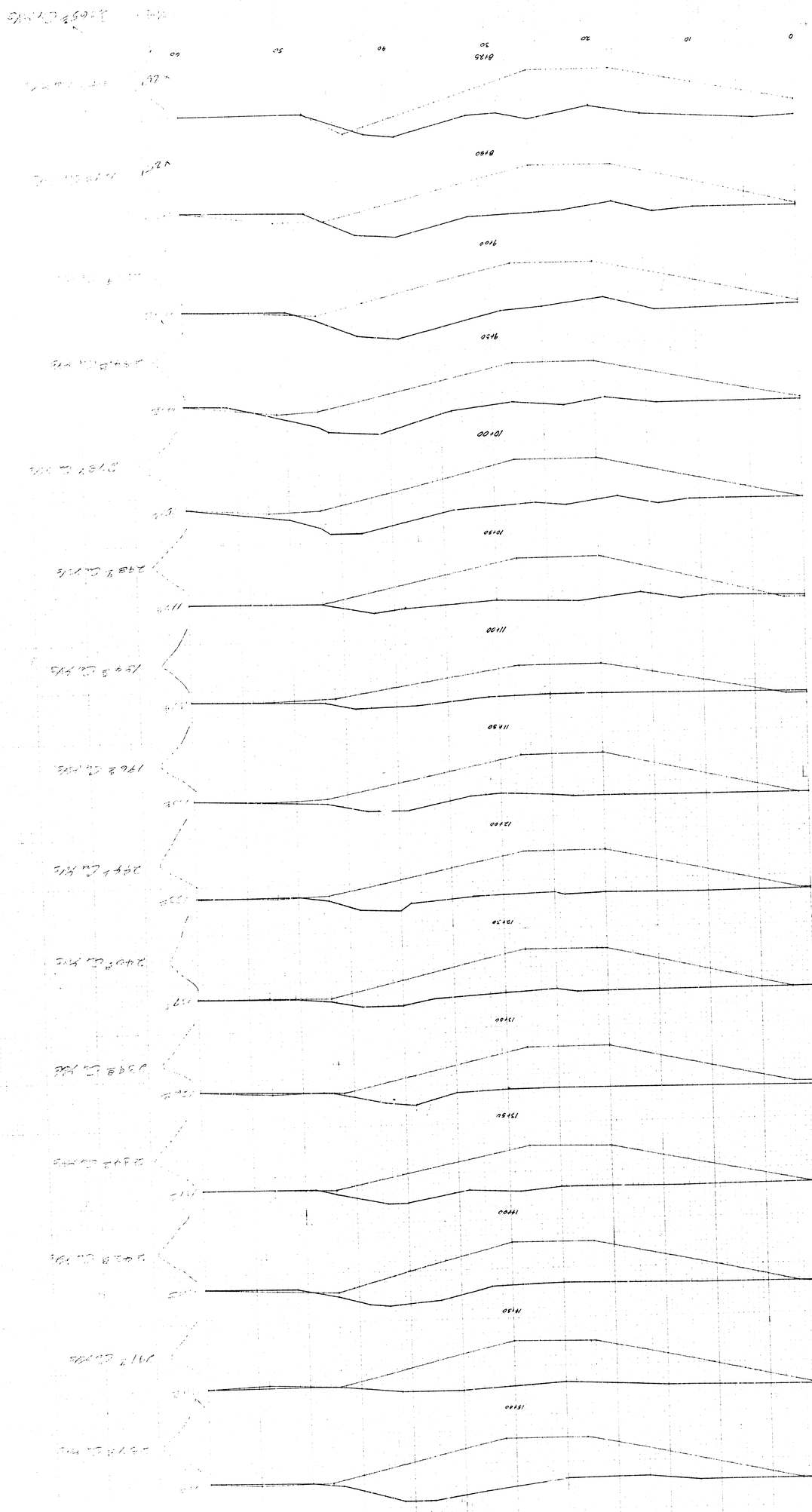
Sec. 1, T28S, R1W



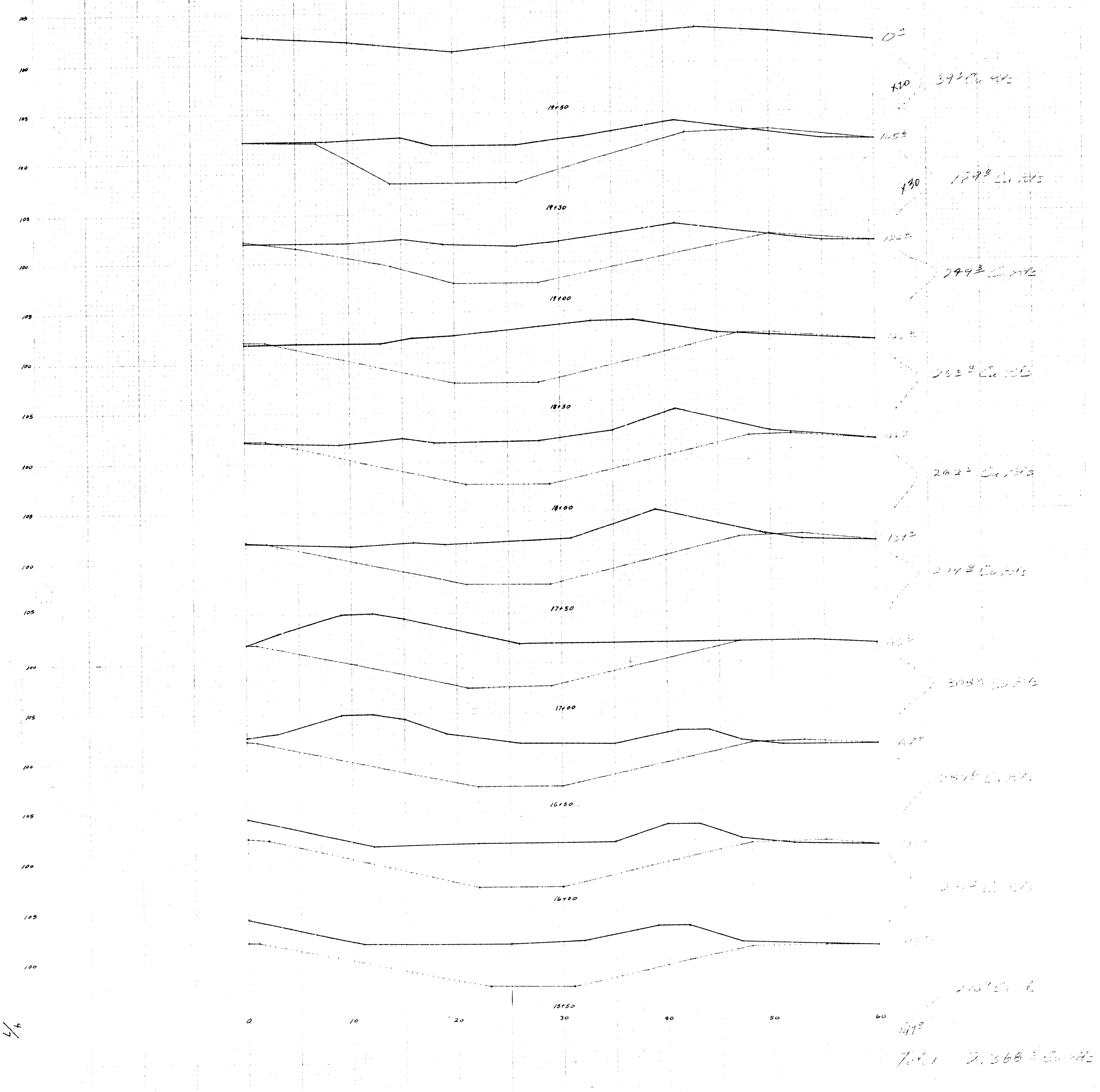
Wichita Builders 3rd Add'n
Install Spec. Type "A" Curb Inlet Top 102.00; H=4'-0⅞"
Install 15"×41' RCP
Install Spec. Type "A" Curb Inlet Top 101.60; H=4'-0⅜"
Iron Pin
P.T. Sta. 21+06.30
Sta. 21+09.30
Install 15"×41' RCP
Sta. 24+45.07
P.C. Sta. 24+68.07
CASADO STREET
Unplatted
Easement Line
See Sheet 1 for proposed ditch
Center of proposed ditch
1/4 Sec. Line
Existing 36" San. Sewer
P.T. Sta. 19+26.30
Start Pipe Sta. 19+34.30
Install 30" RCP End-section. To be paid for as 30" RCP.
fl. 98.30
fl. 98.00
fl. 98.67
fl. 98.37
Street By Others
8" San. Sewer by Others
Install 30"×177.50' RCP
Proposed Manhole, not B.M.
Install Spec. Type "A" Combined Inlet-manhole modified. Top 101.30; W=5'0"; H=4'-1⅛"
Install 24"×350.77' RCP
Install Spec. Type "A" Combined Inlet-manhole modified. Top 101.70; W=5'0"; H=4'-2¼"
Wichita Builders 3rd Add'n
Sta. 21+11.80
Sta. 24+62.57
Existing Manhole as noted for above B.M. location
SCALE: Hor. 1"=20' Ver. 1"=5'
19
20
21
22
23
24
25
105
100
95
90
P.T. +26.30 fl. 97.73
Start Pipe +34.30
Existing Ground
Inlet-manhole +11.80 Top 101.30
Proposed Top of Curb
Inlet-manhole +62.57 Top 101.70
FL Ditch +0.1%
36" San. Sewer
30" RCP @ 97.92
24" RCP @ 97.92
8" San. Sewer by Others
24" RCP @ 98.27
97.9
97.76
97.81
97.91
98.01
98.11
98.21
177.50' of 30" RCP @ +0.1%
350.77' of 24" RCP @ +0.1%

STORM WATER SEWER NO. 103
Project No. DBKA 573007

Sheet 2 of 5 2/7


0
10
20
30
40
50
60
8+85
8+50
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50
14+00
14+50
15+00
15+50

Dirt Work
Excavation
5,733⅙ Cu Yds



Fed. Road Dist. No.	State	Proj. No.	Fiscal Year	Sheet No.	Total Sheets
5	Kansas				

Section

***STRUCTURAL STEEL COVER PLATE**
Weight 98 Lbs. Each

* Non-skid steel floor plate (Commercial grade), welded to steel (ASTM A-7, A-36, A-242 or A-441) bars

PLAN

* Hot or cold poured joint sealing compound, or Premoulded Exp. Jt. Filler (Non-extruding, Type B).

SECTION G-G

SECTION Y-Y

FRONT ELEVATION

NOTE: ~~See this sheet for shaping of depression of inlet. This work shall be paid for as "Concrete Pavement".~~
Floor of Inlet shall be shaped as shown in various "EXAMPLES" on Reinforced Concrete Manhole Standard No. 633.
Concrete used for shaping shall be sand mix concrete. ~~Class "A" concrete.~~
~~No addition in concrete quantities shall be made for shaping floor of Inlets.~~

SECTION X-X

TYPES A5-1, A7.5-1 & A10-1

TYPES A5-1, A7.5-1 & A10-1
Weight = 129 Lbs. per 2'-6" section

TYPES A5-2, A7.5-2 & A10-2

TYPE A5-2 SHOWN
Weight - See Tables below

NOTE: All bolts and nuts shall be galvanized and meet the requirements of sub-section U15-2 of the 1966 Specifications.

Note: All castings shall be gray iron and shall comply with ASTM A-48 Class 25 S.

DETAILS OF CURB CASTING (IRON)

FOR TYPE A5-2 CASTINGS			
Radius	20'	25'	30'
"A"	1⅜"	1½"	1¼"
Weight-Lbs.	285	278	274

FOR TYPE A7.5-2 CASTINGS			
Radius	20'	25'	30'
"A"	4¾"	3⅝"	2⅞"
Weight-Lbs.	474	455	445

FOR TYPE A10-2 CASTINGS			
Radius	20'	25'	30'
"A"	7½"	6"	5"
Weight-Lbs.	721	680	653

NOTE: Weights given in tables above are total weights for Curb Castings only.
All weights of castings are calculated weights with no allowance for fillets, overruns, anchor bars and bolts.

Note: Use Paving Concrete throughout.
Bevel all exposed edges with a ¾" triangular moulding.
Reinforcing bars shall be bent around pipe.
~~No deductions in concrete quantities shall be made for pipe openings.~~
~~At the contractors option Class A Concrete (AE) may be used throughout but payment shall be made as Cu. Yds of Class A Concrete Miscellaneous.~~
A small opening may be required in the back of the inlet to drain a low area, if ordered by the Engineer. Reinforcing bars will extend through the opening. ~~No deduction in concrete quantities will be made for this opening.~~
When so ordered by the Engineer the top of the inlet shall be sloped slightly to approximately fit the ground line or other conditions.
Structural steel cover plate and all exposed cast iron surfaces shall be painted either in the shop or in the field with one coat of a zinc dust paint, followed by two field coats of aluminum paint.
No substitutions of design will be permitted on casting.

No.	DATE	REVISIONS	BY	APP'D
21	3-26-70	Class "A" miscellaneous.	W.L.H.	K.G.L.
20	5-9-69	Added Note on shaping of Floor	W.L.H.	K.G.L.
19	5-67	Add joint castings & Optional opening etc.	ALE	KGL
18	8-66	To conform to 1966 Specs	ALE	CAE

STATE HIGHWAY COMMISSION OF KANSAS

SPECIAL
TYPE "A" CURB INLET

SCALE 1 Inch = 1 Foot (Or as shown)
DESIGNED BY E.A.L. DATE 9-43 DETAILED BY W.A.B. TRACED BY W.A.B.
CHECKED BY A.L.B. APPROVED BY [illegible] DATE 4-3-46

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Project No OBKA 573007
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5	KANSAS				

Note: Use Paving Concrete throughout. Bevel all exposed edges with a ¾" triangular moulding. Reinforcing bars shall be bent around pipe. No deductions in concrete quantities shall be made for pipe openings.

At the contractors option Class A Concrete (AE) may be used throughout, but payment shall be made as Cu. Yds. of Class A Concrete miscellaneous. A small opening may be required in the back of the inlet to drain a low area, if ordered by the Engineer. Reinforcing bars will extend through the opening. No deduction in concrete quantities will be made for this opening. When so ordered by the Engineer the top of the inlet shall be sloped slightly to approximately fit the ground line or other conditions. All exposed cast iron surfaces shall be painted either in the shop or in the field with one coat of a zinc dust paint, followed by two field coats of aluminum paint. No substitutions of design will be permitted on castings.

* Motor cold poured joint sealing compound, or Premoulded Exp. Jt. Filler (Nonextruding, Type B).

NOTE: All bolts and nuts shall be galvanized and meet the requirements of sub-section U15-2 of the 1966 Specifications.

FOR TYPE A5-2 CASTINGS			
Radius	20'	25'	30'
"A"	1⅝"	1½"	1⅜"
Weight-Lbs	283	278	274

Note: All castings shall be gray iron and shall comply with ASTM A-48 Class 25 B.

NOTE: Weights given in tables above are total weights for Curb Castings only. All weights of castings are calculated weights with no allowance for fillets, overruns, anchor bars and bolts.

NOTE: See standard sheet for Concrete Pavement Auxiliary Details for shaping gutter approaching and leaving inlets. This shaping will be required at all Type "A" inlets, unless otherwise noted on the plans. This work will be paid for as follows; where combined curb & gutter is used the entire length of the shaped gutter and the curb, together with the concrete under the gutter casting, shall be paid for as "Combined Curb & Gutter, Type ___"; where concrete pavement and edge curb is used the shaped approaches and the edge curb, together with the concrete under the gutter casting, shall be paid for as "Concrete Pavement" and "6" Edge Curb".

See Standard Sheet No. 633 for Details of Manhole Cover and Ring and Cast Iron Step.

Floor of Inlet-Manhole shall be shaped as shown in various "EXAMPLES" on Reinforced Concrete Manhole Standard No. 633. Concrete used for shaping shall be: Sand Mix Concrete. No addition in concrete quantities shall be made for shaping floor of Inlet-Manhole.

No.	Date	Revisions	By	App'd
13	3-26-70	Class "A" miscellaneous	W.L.H.	K.G.L.
12	3-3-69	Added Note on Shaping of Floor	W.L.H.	K.G.L.
11	5-31-67	Added curb castings & optional quantities	ALE	KGL
10	3-6-66	To conform to 1966 Specs	ALE	CAR

STATE HIGHWAY COMMISSION OF KANSAS

SPECIAL TYPE "A"
COMBINED INLET-MANHOLE
MODIFIED

SCALE None
DESIGNED BY ___ DATE ___ DETAILED BY C.R.E. TRACED BY ___
CHECKED BY A.L.E. APPROVED BY E.A.R. DATE 6-27-56

STORM WATER SEWER NO. 103
Project No. D884 57205 Sheet 6 of 7

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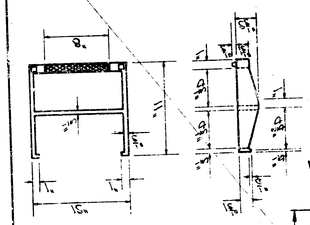

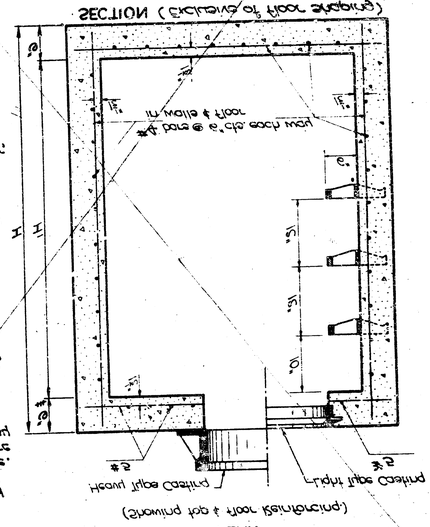

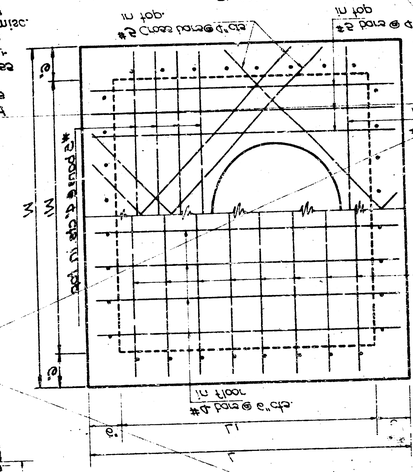

Fed. Road Div. No.	State	Proj. No.	Fiscal Year	Sheet No.	Total Sheets
5	Kansas				

Section

Where dimension "L" or "W" is greater than 6', use 8" slab thickness.

PLAN (Showing top & floor Reinforcing.)

SECTION (Exclusive of floor shaping)

Note: Contractor has the option of using pre-cast manholes, as approved by the engineer (See Special Provision). Payment of quantities shall be on a con. in place basis.

CAST IRON MANHOLE RING TYPE B
Weight = 138 Lbs.

CAST IRON MANHOLE RING TYPE A
Weight = 192 Lbs.

CAST IRON MANHOLE COVER
Weight = 134 Lbs.

HEAVY TYPE MANHOLE COVER & RING

NOTE: Weight of castings includes no allowance for fillets and overruns.

CAST IRON MANHOLE COVER
Weight = 64 Lbs.

CAST IRON MANHOLE RING
Weight = 53 Lbs.

LIGHT TYPE MANHOLE COVER & RING

SECTIONAL VIEW (EXAMPLE V)
Showing Floor Shaping

NOTE: Class "A" concrete to be used thruout. Bevel all exposed edges with a ¾" triangular moulding.

At the contractor's option Class "A" concrete (AE) may be used thruout, but payment shall be made as Cu. Yds of Class "A" concrete misc.

In general, pipes will enter and leave the manhole at various positions. Where possible bend bars around pipes.

Floor of manhole to be shaped as shown in various "EXAMPLES" with unreinforced Class "A" concrete.

Manhole opening and steps, where used, shall be placed to afford easy access to top of shaped invert. Top reinforcing bars to be adjusted accordingly.

All castings shall be gray iron and shall comply with ASTM A-48, Class 25 S.

All exposed cast iron surfaces (rings & covers) not subjected to traffic, shall be painted either in the shop or in the field with one coat of a zinc dust paint, followed by two field coats of aluminum paint.

No deductions in concrete quantities shall be made for pipe openings.

No additions in concrete quantities shall be made for shaping floor of Manholes.

When so ordered by the Engineer, the top of the manhole shall be sloped slightly to approximately fit the ground line or other conditions.

TYPICAL EXAMPLES OF VARIOUS PIPE COMBINATIONS

Showing method of shaping floor of manholes to provide increased hydraulic efficiency.
For reinforcing & other features see "PLAN" and "SECTION".

FLOOR PLAN (EXAMPLE I)

FLOOR PLAN (EXAMPLE II)

FLOOR PLAN (EXAMPLE IV)

SECTION A-A (EXAMPLE I)

FLOOR PLAN (EXAMPLE III)

SECTION A-A (EXAMPLE IV)

CAST IRON STEP
Weight = 14 Lbs.
Scale: 1½" = 1'

NOTE: Steps not to be used where "H" is less than 6 feet.

SECTION B-B (EXAMPLE I)

NO.	DATE	REVISIONS	
13	4-12-71	Added Pre-Cast Manhole option.	K.G.L.
12	3-26-70	Class "A" miscellaneous	K.G.L.

STATE HIGHWAY COMMISSION OF KANSAS

REINFORCED CONCRETE MANHOLE

STD. NO. 633 SCALE (1 inch = 1 foot (for 22" x 36" sheet) / Except as noted)
DESIGNED BY E.A.S. DATE 2-45 DETAILED BY W.A.B. TRACED BY E.A.S.
CHECKED BY A.L.G. APPROVED BY [illegible] DATE 4-5-45

STORM WATER SEWER NO. 103
Project No. DBKA 32009
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FILMED FROM THE BEST