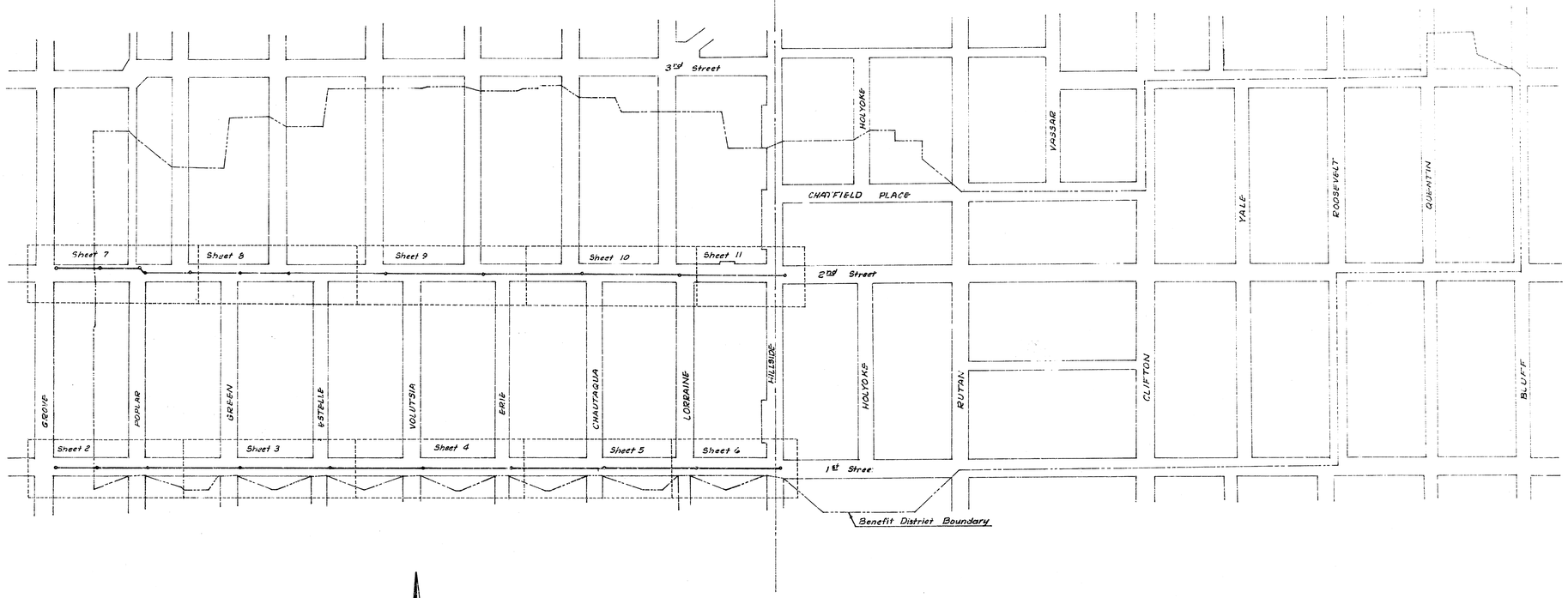
STORM WATER SEWER NO. 105



SCALE: 1"=200'

R. W. LINN, CITY ENGINEER
CITY OF WICHITA, KANSAS

DATE May 1, 1925

STORM WATER SEWER NO. 105
Project No. D8KA 573027

Sheet 1 of 11

ACCESS

This project is to be co-ordinated with the drainage and paving of 2ND ST from 125' West of W.L. poplar to W.L. HILLSIDE in such a manner that vehicular access will be provided at all times to the portions of streets from 1ST to 2ND ST bet GROVE and HILLSIDE.

Remove pavement with saw joint and replace pavement from Sta. 0+05 to Sta. 1+41. Width of removal approx. 7'5".

B.M 1149 'D' cut at intersection back of walks on S.E. corner of FIRST ST and GROVE ST.

NOTE: All existing and future utility lines on plans shown or below grade as indicated are for information and identification purposes only. Contractor's shall have full responsibility in contacting each respective utility company shown or not shown.

1"=20'

STORM SEWER BY OTHERS

START PROJECT Sta. 0+05

FIRST ST

SECOND ST

GROVE AVE

POPLAR

48" R.C.P

48" RCP @ +0.3%

48" RCP Stub @ +0.3% by Others
Connect to 48" R.C.P. Stub
Work incidental to project

Install 98'x 18' R.C.P.

Install Manhole Sta 1138 Flo In 110.60 Flo Out 110.40 See Sheet G

Install 15"x 10' R.C.P.

Install Std 2'x5' Inlet Top 114.78

Install Std 2'x5' Inlet, Top 115.40

Install Std 2'x5' Inlet, Top 114.70

Install 15"x 22' R.C.P.

Install 15"x 31' RCP

Install Std 2'x5' Inlet, Top 115.20

Install 15"x 28' RCP

Install Std 2'x5' Inlet, Top 115.20

Install 18"x 22' RCP

Install Manhole Sta. 3+55 See Sheet G

Install 15"x 10' RCP

Install Std. 2'x5' Inlet Top 115.30

Install 42"x 141' RCP

42" RCP

Match Line

NOTE: TEMPORARY PAVEMENT REPAIRS SHALL BE CONSTRUCTED AS DIRECTED BY THE FIELD ENGINEER TO EXPEDITE CONSTRUCTION OF THE STORM SEWER. THIS WORK SHALL BE PAID FOR AT THE PRICE BID PER TON OF ASPHALT.

Flo In 110.60
Flo Out 110.40
Flo 111.90
Flo 111.60
Flo 111.50
Flo 111.20
Flo 111.10
Flo 108.63
Flo 108.93
Flo 111.10
Flo 111.80

Existing Utilities: 4" Gas, Street light pole, 6" water, Hall-section line, Traffic light pole, 2" water, 3" Gas, 8" Sanitary Sewer, 15" alley-vacated, 36" Sanitary Sewer, Clean out on Trap, Street light pole, Traffic light pole, Traffic light pole, 8" Sanitary Sewer, 15' alley, 2" Water Line, 3" Gas Line, Install Manhole Type A Sta. 3+32 Flo 113.02, Match Line

Install Manhole Type A Sta 1+32 Flo 111.42

Start Project Sta 0+05

Flow 107.41

Manhole by Others 107.43±

48" RCP

Flo 107.81

42" RCP

107.71 | 108.01 | 108.31 | 48" RCP 108.43 / 42" RCP 108.93 | 109.21 | 107.68

334' of 48" R.C.P. @ +0.3%

161' of 42" R.C.P. @ +0.47%

AS Built Per Plan IH-81

CAUTION
UNDERGROUND UTILITIES
Please check with K G & E or Southwestern Bell Telephone Co. for Location

STORM WATER SEWER NO. 105
Project No. DBKA 573027

Sheet 2 of 11

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B.M.: 117.4' "O" cut in N.E. corner walk to WICHITA BIBLE COLLEGE on S.W. Cor FIRST and GREEN.

B.M.: 120.68 N.W. corner cono porch on west side of House at 150 N. ESTELLE.

Install Std. 2'×5' Inlet, Top 116.60

Install ... ×31' RCP

Install Std. 2'×5' Inlet, Top 116.30

Install 15"×23' RCP

Install Std. 2'×5' Inlet, Top 116.60

Install 18"×22' RCP

Install 42"×174' RCP

Install Manhole Sta. 4+74 See Sheet 6

Install 15"×10' RCP

Install Std. 2'×5' Inlet, Top 116.75

Install Std. 2'×5' Inlet, Top 117.75

Install 36"×325' RCP

Install 10 L.F. Reinf. Conc. Encasement on exist. 8" sanitary sewer.

Install 15"×24' RCP

Install Std. 2'×5' Inlet, Top 117.50

Install 15"×86' RCP

Install Std. 2'×5' Inlet, Top 117.90

Install 18"×22' RCP

Install Manhole Sta. 9+88 See Sheet 6

Install 36"×101' RCP

Install 15"×16' RCP

Install Std. 2'×5' Inlet, Top 117.90

FIRST ST

GREEN ST

ESTELLE AVE

Match Line

15' alley

20' alley

8" Sanitary Sewer

2" Water

4" Gas

Thimble

Type II Manhole

Install Manhole Sta. 4+74 Top 116.36

8" San. Sewer Fl. 110.02±

Install Manhole Sta. 9+88 Top 117.35

42" RCP

36" RCP

Install 10 L.F. Reinf. Conc. Encasement.

109.68 — 110.15 — 42" RCP 110.52 / 36" RCP 111.00 — 111.11 — 111.53 — 111.95 — 36" RCP 112.37 / 36" RCP 112.39 — 112.81

174' of 42" RCP @ +0.47%

325' of 36" RCP @ +0.42%

101' of 36" RCP @ 0.42%

STORM WATER SEWER NO. 105
Project No. DBKA 513027

Sheet 3 of 11

3/11

B.M. = 119.22 "J" in Johnson on ℄ of walk west of S.W. corner VOLUTSIA and FIRST ST.

B.M. 121.75 "O" cut on corner of walk at N.L. FIRST ST and E.L. ERIE

Install Std. 2'x5' Inlet, Top 119.35

Install 15"x31' RCP

Install Std. 2'x5' Inlet, Top 119.40

Install 15"x28' RCP

Install Std. 2'x5' Inlet, Top 119.40

Install 18"x28' RCP

Install 36"x236' RCP

Install Manhole Sta. 13+38
See Sheet 6

Install 15"x12' RCP

Install Std. 2'x5' Inlet, Top 119.52

Install 30"x325' RCP

Install Std. 2'x5' Inlet, Top 121.35

Install 15"x24' RCP

Install Std. 2'x5' Inlet, Top 121.35

Install 15"x28' RCP

Install Std. 2'x5' Inlet, Top 121.40

Install 18"x28' RCP

Install 24"x61' RCP

Install Manhole Sta. 16+28
See Sheet 6

Install 15"x16' RCP

Install Std. 2'x5' Inlet, Top 121.45

FIRST ST.

VOLUTSIA AVE.

ERIE ST.

Match Line

15' alley

8" Sanitary Sewer

3" Gas

6" Water

2" Water

Install Manhole Type 2
Sta. 14+13
Top 119.15

Install Manhole Type 2
Sta. 16+13
Top 121.22

8" San. Sewer
Rt. 110.362

3" San. Line

8" Water Line

8" San. Sewer
Rt. 118.19

3" San. Line

8" San. Line

6" Water Line

36" RCP

30" RCP

24" RCP

112.81

119.23

113.45

30" out 119.29
30" in 114.29

114.69

115.29

115.89

36" out 116.04
36" in 116.04

117.11

236' of 36" RCP @ +0.42%

325' of 30" RCP @ +0.6%

41' of 24" RCP @ +0.9%

11 12 13 14 15 16 17

STORM WATER SEWER NO. 105
Project No. DBKA 573027

B.M. = 124.19 "W" in Weller on ℄ of walk N. of N.W. corner CHAUTAUQUA and FIRST.

B.M. = 125.43 S.E. corner of first conc step to house No. 3102 E. FIRST ST.

Install Std. 2'x5' Inlet, Top 124.35

Install 15"x 31' RCP

Install Std. 2'x5' Inlet, Top 124.95

Install 15"x28' RCP

Install Std. 2'x5' Inlet, Top 124.65

Install 18"x22' RCP

Install 24"x 306' RCP

Remove and Replace Bricks of existing Manhole as required for storm sewer construction. Work incidental to project.

Install 24"x 296' RCP

Install Manhole Sta. 19+32.5 See Sheet 6

Install 15"x 10' RCP

Install Std. 2'x5' Inlet, Top 124.55

For inlets on Lorraine Ave. See Sheet 6

Remove pavt. area 80' Lt. of ℄

FIRST ST

CHAUTAUQUA AVE

LORRAINE AVE

Match Line

15' Alley

4" Gas

8" Water

8" Storm Sewer

2" Gas

Temp. Manhole Type II Sta. 19+32.5 Top 124.21

6" Storm Sewer El. 118.62

24" RCP

296' of 24" RCP @ +0.9%

306' of 24" RCP @ +0.7%

17 18 19 20 21 22 23

STORM WATER SEWER NO 105
Project No. DBKA 573027

Sheet 5 of 7

FILMED FROM THE BEST

B.M. = 133.36 N.E. corner conc base for SKELLY sign on S.W. corner FIRST and HILLSIDE.

Removal limits for paving project 21' ± E.

Install Std. 2'×5' Inlet, Top 126.75

Install 15"×31' R.C.P.

Install Std. 2'×5' Inlet, Top 126.91

Install 15"×28' R.C.P.

Install Std. 2'×5' Inlet, Top 126.96

Install 18"×22' R.C.P.

Install 18"×308' R.C.P.

Removal limits of paving project

Install Spec. Manhole, See Sheet 6, 4.0' Rt. S. of ℄, Sta. 23+24

Install 15"×10' R.C.P.

Install Std. 2'×5' Inlet, Top 124.90

Install 21"×24' RCP

Remove Existing Manhole
Plug existing 21" RCP
Construct Type B 4' dia. Std. Manhole

ALTERNATE DESIGN NOTE: Contractor to excavate storm sewer crossings with water lines and Bell Cables of and near Hillside prior to work ahead of Sta. 23+24. Any conflict of elevation with existing facilities shall be corrected by Engineer by lowering storm sewer the minimum required amount to clear facilities. (The elevations at Sta. 23+24 to remain the same. The min. flowline of 18" RCP @ Sta. 24+32 is 124.1. The pipe slope between above stations to be constant.) Costs for this work and additional work required by an alternate shall be included in price bid for pipe.

1"=20'

MANHOLE DIMENSIONS				
Location	L	D_1	D_2	Type
1+52	5'0"	4'5"	1.85'	I
3+39	5'0"	4'5"	2.37'	I
4+74	5'0"	3'06"	1.75'	I
9+98	4'0"	3'4"	1.44'	I
13+34	4'0"	3'4"	1.88'	I
16+59	4'0"	3'4"	1.84	I
19+98	4'0"	3'5"	1.89'	II
23+24	6'0"	3'5"	2.03'	II

For Top Elevation & Pipe Flowlines See Plan-Profile of each manhole.

PLAN TOP

SECTION A-A

SECTION B-B

MANHOLE DETAIL
Scale: ½"=1'

24" RCP
18" RCP
24' of 24" RCP @+0.7%
308' of 18" RCP @+0.46%

STORM WATER SEWER NO. 105
Project No. DBKA 573027

Sheet 6 of 11

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B.M.= 119.09 N.E. cor 1st Conc. top House S.W. cor 2ND and GROVE.
B.M. = 120.18 N.E. " " " House # 2159 60.3' 2ND STREET.

NOTE: Remove Curb & Gutter Sta. 14+75 to Sta. 17+04. Replace Curb & Gutter in kind Sta. 14+75 to Sta. 15+30

Start Project Sta. 13+95±

Connect to 30" R.C.P. By Others Work incidental to project.

Drainage by Others

30" RCP by Others

4" Arkla Gas

Install 30"×163'± RCP

Sta. 15+58

Install Spec. Inlet Junction Box Top: 119.77 See Sheet 11

Ins. ±11 30"x 142' RCP @ 17.17 north street ℄

30" RCP

6" cl. Water

Drainage by Others

2ND

Begin New Pavement

6" Arkla Gas

End of 15" RCP @ 35° bevel and installed flush with interior wall.

Install 15"×40' RCP @ 1% min. slope Max. Flow @ Inlet 112.1 Min. flow @ Junction Box 112.8 (locate pipe at max. elevations to clear Bell Cable & Water Line

Sta. 15+34.57

Install Std. 2'×5' Inlet Top 118.70

Use Std. Type B, 5' dia. manhole with modified top. See Sheet 11.

MANHOLE @ STA. 17+14

Scale: 3/8"=1'0"

SPEC. INLET JUNCTION BOX @ 17+00.7

Scale: 3/8"=1'0"

Sta. 17+00.7

Install Spec. Inlet Junction Box Top 119.25 see Sheet 11

Install 30"×22' R.C.P.

Install Manhole center of street. Sta. 17+14; Top 119.13

Install 30"×146.56' RCP @ center of street.

16.78

Limits of Pavement Removal

Sta. 18+82.38

Install Std. 2'×5' Inlet Top 119.70

Install 15"×26' R.C.P.

Save this tree

Install Std. 2'×5' Inlet Top 119.60

Install 15"×85' RCP @ 1% min. slope. Max. Flow @ Inlet = 116.15; Min. Flow @ manhole = 112.7 (locate pipe at max. elevations to clear water line.)

Install 30"×262' RCP @ center of street.

E.L. Arkla Gas

8" Water

Elev. 114.8

Elev. 114.8

STREET

30" RCP

Bell cable

3" Gas

Install 15"×24' RCP @ 1% min. slope Max. Flow @ Inlet 115.90 Min. Flow @ manhole 112.20 (locate pipe at max. elevations to clear cable)

11.77

Sta. 17+32

Install Std. 2'×5' Inlet Top 118.35

Use Std. Type B, 5' dia. manhole with modified top. See Sheet 11

MANHOLE @ STA. 18+82.58

Scale: 3/8"=1'0"

Install Manhole @ center of street Sta. 18+82.38' Top 119.43

2" Arkla Gas

6" Water

POPLAR

30

30

30

B.M. = 121.99 N.J. car first cone step House # 856 North E.S. ISLE STREET

SCALE: Hor. 1"=20'
Ver. 1"=5'

NOTE: Engineer to take "ties" on iron for replacement by Engineer on Street Paving Project

Install Manhole @ center of street Sta. 20+63; Top 119.72

NOTE: Engineer to take "ties" on iron for replacement by Engineer on Street Paving Project.

Install Std. 2'x5' Inlet Top 120.30

Install 15"x 27' RCP

Install Std. 2'x5' Inlet Top 120.15

12ND STREET

ESTELLE AVE

GREEN ST.

6" Arkla

2" Arkla

30" RCP

Install 15"x16' RCP @ 1% min slope
Max. flow @ inlet 116.8
Min. flow @ manhole 115.2
(locate pipe at max. elevation to clear cable)

Install Std. 2'x5' inlet Top 119.90

Install 15"x16' RCP @ 1% min. slope
Max. flow @ inlet 116.7
Min. flow @ manhole 113.7
(locate pipe at max. elevations to clear 8" water line)

Install Manhole @ center of street Sta. 22+29.14; Top 120.04

Use Std. Type 'B' 5' dia manhole with modified top. See Sheet 11

MANHOLE @ 20+63
Scale: 3/8" = 1'0"

Use Typ. "B" 5' dia. manhole with modified top. See Sheet 11

MANHOLE @ 22+29.14
Scale: 3/8" = 1'0"

Match Line

2" Arkla

2" Water

Manhole Sta. 20+63 Top 119.72

3" Gas

Manhole Sta. 22+29.14 Top 120.04

6" Water

MATCH LINE

30" RCP

112.52

112.82

113.01

113.12

113.42

113.51

113.72

114.02

114.32

163' of 30" RCP @ +0.3%

166.16' of 30" RCP @ +0.3%

270.84' of 30" RCP @ +0.30%

19 20 21 22 23 24 25

STORM WATER SEWER NO. 105
Project No. DBKA 573027

Sheet 8 of 11

B.M. (P.S.) N.W. cor. 19' Brick Step House # 2901 E. 2nd STREET.

Install Std. 2'x5' Inlet Top 122.00

Install 15"x27" RCP

Install Std. 2'x5' Inlet Top 121.85

Install 15"x16' RCP

Sta 25+84.10

NOTE: Engineer to take "ties" on irons for replacement by Engineer on Street Pavt Project.

Install Std. 2'x5' Inlet, Top 124.40

Install 15"x27" RCP

Install Std. 2'x5' Inlet, Top 124.40

Install 15"x16' RCP

Sta 20+39.3

SCALE: Hor. 1"=20'
Ver. 1"=5'

E 8" Arkla

4" Gas

Limits of Pavmt Removal

E 2" Water

E 4" Gas

E 6" Arkla

Sta 118.7

Sta 118.8

Sta 118.4

Tie 118.1

Sta 121.0

Sta 120.7

Sta 120.6

Sta 120.2

30" RCP

2ND STREET

Install 24"x 355.2' RCP

24" RCP

24" RCP

2" Water

8" Water

4" Gas

6" Water

Install manhole @ center of street, Sta. 25+84.10 Top 121.70

Install 30"x 84.10' RCP @ center of street

Install manhole @ center of street, Sta 20+39.3 Top 124.25

NOTE: Engineer to take "ties" on irons for replacement by Engineer on Str. et Pavt Project

Install 24"x 160.7' RCP @ center of street

VOLUNTEER

Use Std. Type "L" manholes with modified tops. See Sheet 11

15" RCP

30" RCP

24" RCP

5' Dia.

4' Dia.

MANHOLE @ 25+84.10

MANHOLE @ 20+39.3

Scale: 3/8"=1'0"

4" Gas

Manhole Sta. 25+84.10 Top 121.70

2" Arkla

4" Gas

Manhole Sta. 20+39.30 Top 124.25

2" Arkla

Match Line

30" RCP

24" RCP

24" RCP

114.32

30" in 114.67

24" in 115.07

119.26

116.43

117.40

118.77

24" out 119.25

24" in 119.62

119.85

120.85

84.10' of 30" RCP @ +0.3%

355.2' of 24" RCP @ +1.17%

160.7' of 24" RCP @ +1.00%

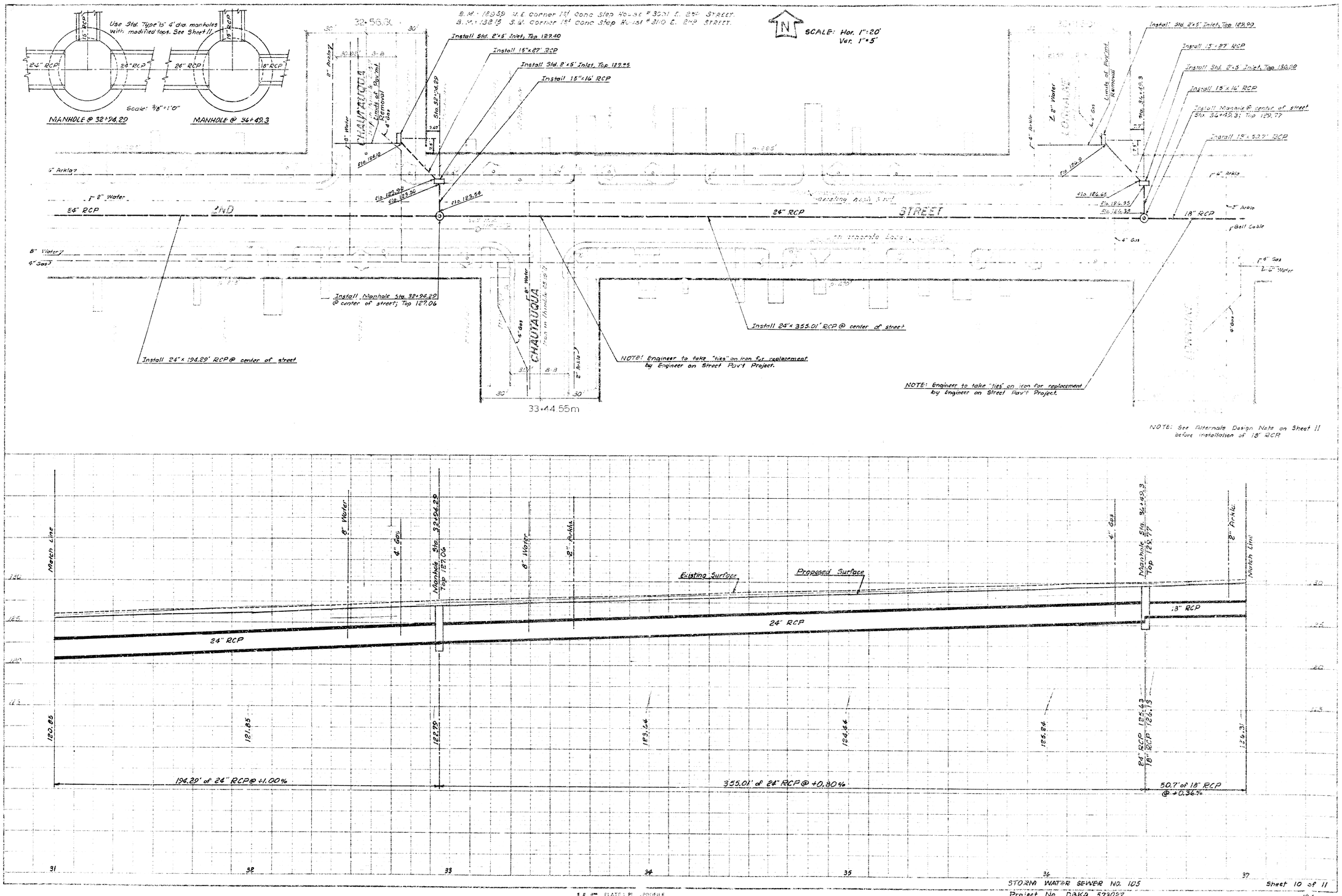
25 26 27 28 29 30 31

PLATE 1 PLAN-PROFILE
FRANK S. ESSER CO.
48 7570 MADE IN U.S.A.

STORM WATER SEWER NO. 105
Project No. DBKA 573027

Sheet 9 of 11

9/11

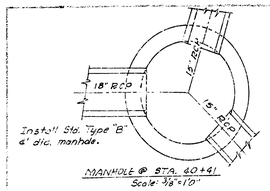


STORM WATER SEWER NO. 105
Project No. DBKA 573027

Sheet 10 of 11

10/11

K&E PLATE 1 PI PROFILE
SEARS & LESER CO.
48 1920 MADE IN U.S.A.



MANHOLE @ STA. 40+41
Scale: 3/8"=1'0"

B.M.: 1332 S.W. cor. conc. retaining curb N.E. end of HILLSIDE.
B.M.: 1338 N.E. cor. conc. b... to SKELLY Sign S.W. of 2nd HILLSIDE

NOTE: All required pavement removal ahead of Sta. 39+80 shall be with saw joint and replaced within this project. Walk east of Hillside shall be replaced within this project.

Remove 8" V.C.P. and two inlets, plug 8" pipe as shown.

Limits of Pavmt Removal

2ND STREET

18" RCP

6" Arkla

6" Gas

6" Water

8" Arkla

4" Gas

6" Water

Install 18"x 36" RCP @ center of street

ALTERNATE DESIGN NOTE: Contractor to excavate storm sewer crossings with water lines and Bell cables at and near Hillside prior to work ahead of Sta. 34+49. Any conflict of elevation with existing facilities shall be corrected by Engineer by lowering storm sewer the minimum required amount to clear facilities. (The elevations at Sta. 34+93.3 to remain the same. The min. flowline of 18" RCP @ Sta. 40+41 is 126.76. The pipe slope between the above stations shall be constant. The min. slope of inlet lead pipes to be 1%) Costs for this work and additional work required by an alternate plan shall be included in price bid for pipe.
If the above does not correct the conflict, it will be necessary for owner of existing facilities to alter their facilities.

NOTE: Engineer to take "ties" on iron and, iron & thimble shall be replaced in this project. Work incidental to project.

SCALE: Hor. 1"=20'
Ver. 1"=5'

40+00 20+00

HILLSIDE AVENUE

Brick retaining wall

Install 15" RCP to existing inlet, shape bottom, plug existing outlet pipe.

Install 15"x 20' RCP

Install Std. 2'x5' Inlet, Top 134.30±

Install 15"x 10' RCP

Bell Cable

Sta. 40+47

Sta. 40+40

Walk

Install Std. 2'x5' Inlet, Top 134.70±

Remove & replace pavement as directed by Engineer

Flo. 131.2

Flo. 131.0

Flo. 130.90

Flo. 131.6

Flo. 131.0

Flo. 129.0

4" Gas (Arkla)

Bell Cable Abandoned & Retired

Install 18"x 15' RCP

Flo. 131.0

Flo. 131.2

Flo. 131.5

Remove & replace pavement as directed by Engineer

4" Gas

Bell Cable

Walk

Bell Cable

Install Std. 2'x5' Inlet, Top 136.07±

Sta. 40+58

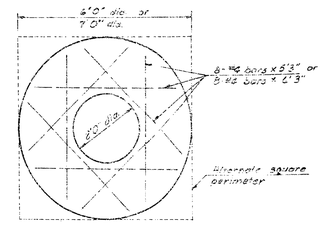
Sta. 40+71

Install 15"x 10' RCP

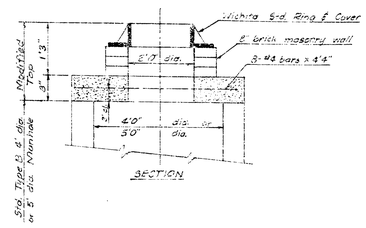
Install Std. 2'x5' Inlet, Top 136.79

Install 15"x 23' RCP

Install Manhole, Sta. 40+41; Top 134.43



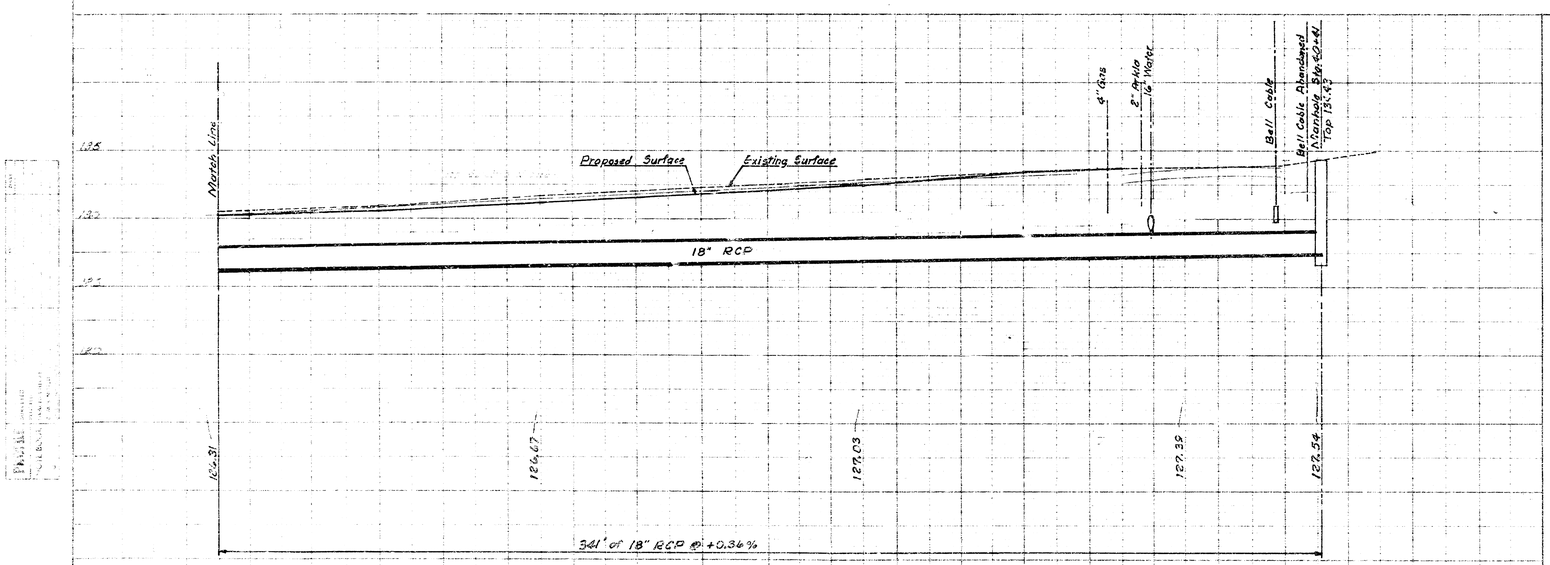
REINFORCEMENT PLAN

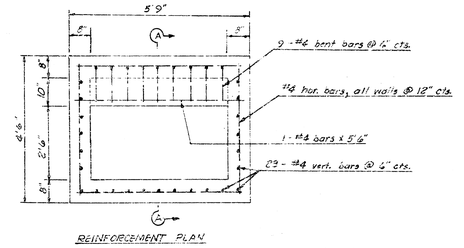


SECTION

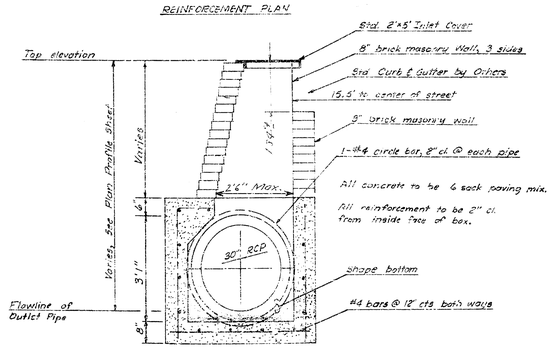
Std. Type "B" MANHOLE MODIFIED
Scale: 1/2"=1'0"

NOTE: CONTRACTOR SHALL HAVE OPTION BETWEEN CONSTRUCTION STANDARD (TYPE B) MANHOLE MODIFIED AS SHOWN IN PLANS OR STANDARD BRICK MANHOLE (TYPE B). WIDE FLANGE MANHOLE RINGS (NO. 300 AS MANUFACTURED BY WESTERN IRON AND FOUNDRY CO., OR AN APPROVED EQUAL, SHALL BE SUBSTITUTED FOR THE STANDARD MANHOLE RING IF THE CONTRACTOR DESIRES THE STANDARD BRICK MANHOLE (TYPE B) OPTION. STANDARD (TYPE B) MANHOLES MODIFIED (5' DIAMETER) OR ALTERNATE STANDARD BRICK MANHOLE (TYPE B)(5' DIAMETER) WITH WIDE FLANGE RING SHALL BE PAID FOR AS MANHOLE TYPE III. STANDARD (TYPE B) MANHOLE MODIFIED (4' DIAMETER) OR ALTERNATE STANDARD BRICK MANHOLE (TYPE B)(4' DIAMETER) WITH WIDE FLANGE RING SHALL BE PAID FOR AS MANHOLE TYPE IV.





REINFORCEMENT PLAN



SECTION A-A

SPEC. INLET JUNCTION BOX
Scale: 1/2"=1'0"

STORM WATER SEWER NO. 105
Project No. DAKA 573027

Sheet 11 of 11

K&E PLAN PROFILE KEUFFEL & ESSER CO.