CITY OF

ALBUQUERQUE - NEW MEXICO

STORM SEWER PROJECT

OCTOBER - 1950

CITY MANAGER

CHAS. E. WELLS

CITY ENGINEER

E.O. BETTS

CHAIRMAN

ERNEST W. EVERLY

COMMISSIONERS

J.A. GILBERT

DON WILSON

PAUL BATSEL

CLYDE TINGLEY

CONSULTING ENGINEERS

HERKENHOFF AND TURNEY

SANTA FE

EDMUND ROSS

ALBUQUERQUE

HASIE AND GREEN

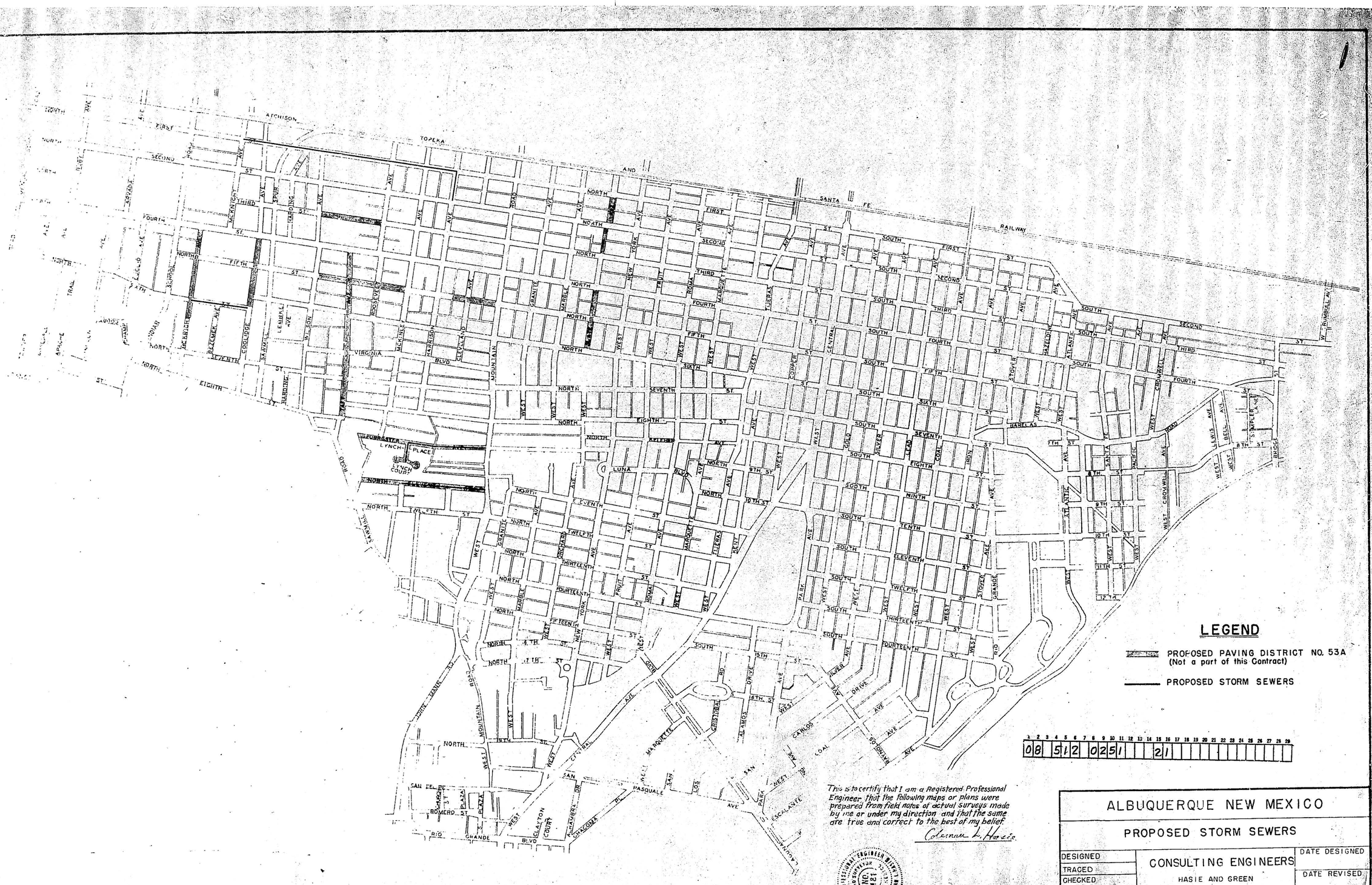
ALBUQUERQUE

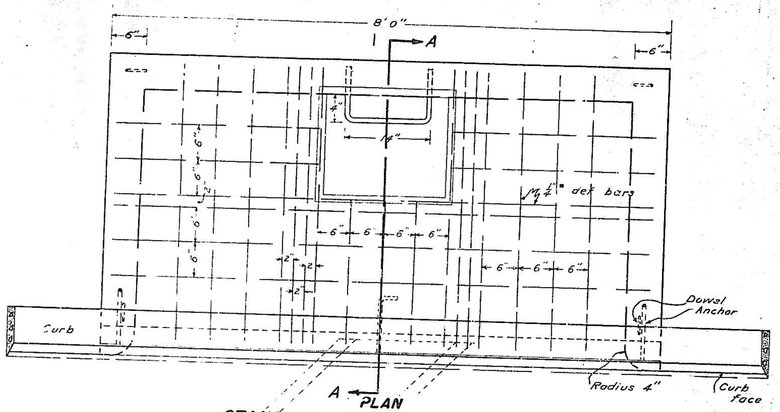
INDEX SHEET

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2. PROPOSED STORM SEWERS
3. STANDARD CATCH BASINS, TYPES B&C, C-I AND APPURTENANCES
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5. TYPE A CURB INLET-STANDARD MANHOLE FRAME AND COVER
6. STANDARD METHOD OF REPAIRING CUTS IN PAVEMENT-ALSO-STANDARD LOCAL DEPRESSIONS FOR CATCH BASINS

7&8. STORM SEWER LINE-PLAN PROFILE

SHT 1


ATCHISON
TOPEKA
AND
SANTA FE
RAILWAY
FIRST AVE
SECOND AVE
THIRD AVE
FOURTH ST
FIFTH ST
SEVENTH ST
EIGHTH ST
NINTH ST
TENTH ST
ELEVENTH ST
TWELFTH ST
THIRTEENTH ST
FOURTEENTH ST
FIFTEENTH ST
16TH ST
17TH ST
VIRGINIA
MOUNTAIN
LUNA BLVD
ROMERO ST
RIO GRANDE BLVD
LEGEND
PROPOSED PAVING DISTRICT NO. 53A
(Not a part of this Contract)
PROPOSED STORM SEWERS
This is to certify that I am a Registered Professional Engineer, that the following maps or plans were prepared from field notes of actual surveys made by me or under my direction and that the same are true and correct to the best of my belief.
Coleman L. Hasie
REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NEW MEXICO NO. 121
ALBUQUERQUE NEW MEXICO
PROPOSED STORM SEWERS
DESIGNED
TRACED
CHECKED
SCALE
1" = 500'
CONSULTING ENGINEERS
HASIE AND GREEN
HERKENHOFF AND TURNEY
EDMUND ROSS
DATE DESIGNED
DATE REVISED
SHEET 2 OF 8

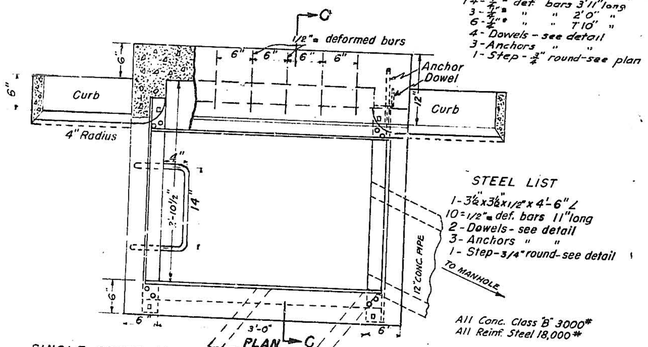


STANDARD CATCH BASIN – TYPE B.

SCALE: 1 INCH = 1 FOOT

STEEL LIST

1 - 3½"x3½"x½" x 8'-0" L
14 - ½" ø def. bars 3'11" long
3 - ½" ø " " 2'0" "
6 - ½" ø " " 1'10" "
4 - Dowels - see detail
3 - Anchors " "
1 - Step - ¾" round - see plan



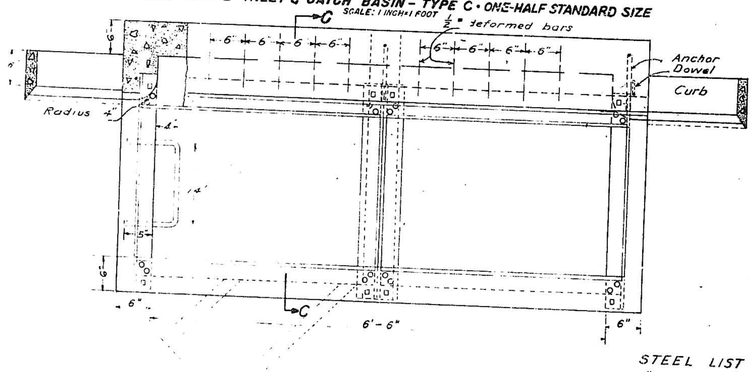
STEEL LIST

1 - 3½"x3½"x½" x 4'-6" L
10 - ½" ø def. bars 11" long
2 - Dowels - see detail
3 - Anchors " "
1 - Step - ¾" round - see detail

All Conc. Class 'B' 3000#
All Reinf. Steel 18,000#

SINGLE GRATE INLET & CATCH BASIN – TYPE 'C' ONE-HALF STANDARD SIZE

SCALE: 1 INCH = 1 FOOT

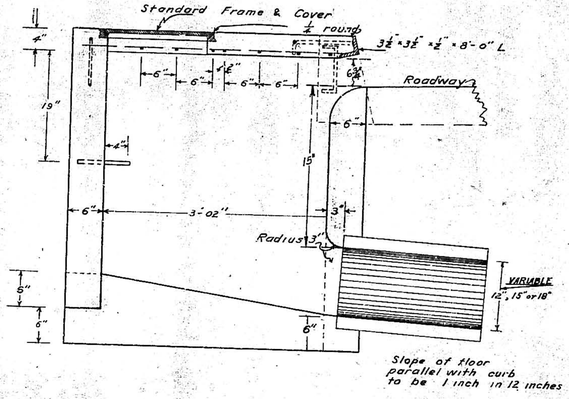


STEEL LIST

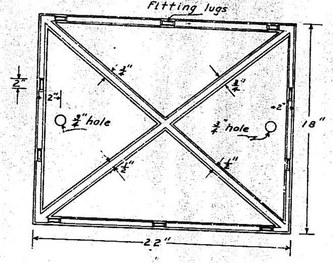
1 - 3½"x3½"x½" x 7'6" L
10 - ½" ø def. bars 11" long
2 - Dowels - see detail
3 - Anchors " "
1 - Step - ¾" round - see plan

DOUBLE GRATE STANDARD CATCH BASIN – TYPE C

Scale 1" = 1'2"

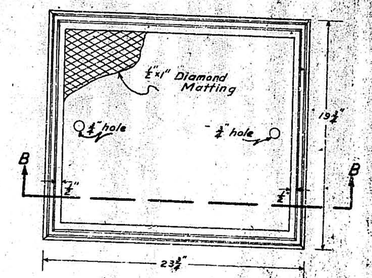


SECTION A–A



BOTTOM PLAN OF COVER

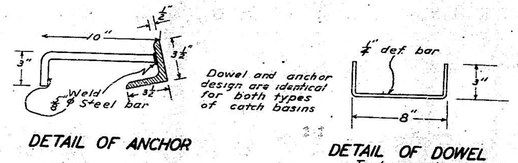
Scale 1" = 6"



PLAN OF FRAME AND COVER



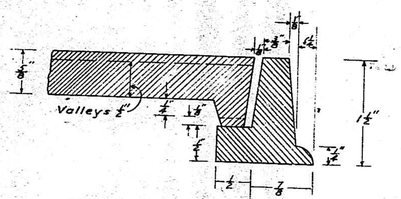
SECTION B–B



DETAIL OF ANCHOR

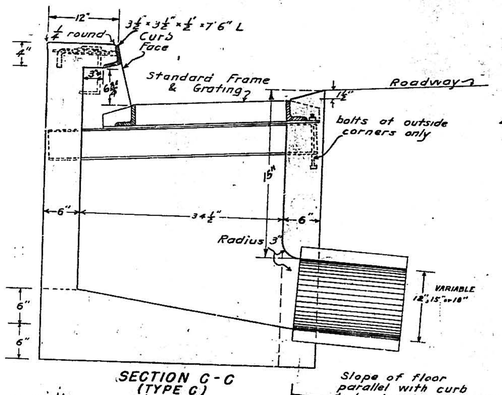
DETAIL OF DOWEL

To be used when top is poured separate

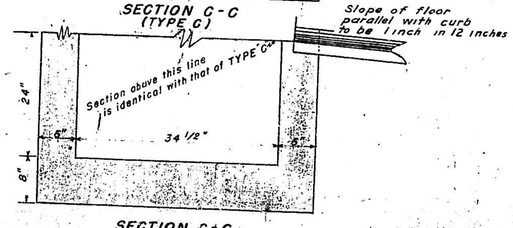


FRAME AND COVER CONNECTION

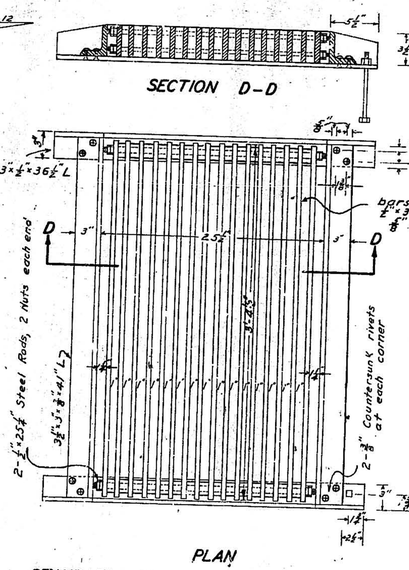
Scale 1" = 1"



SECTION C-C (TYPE G)



SECTION C-C (TYPE G-1)



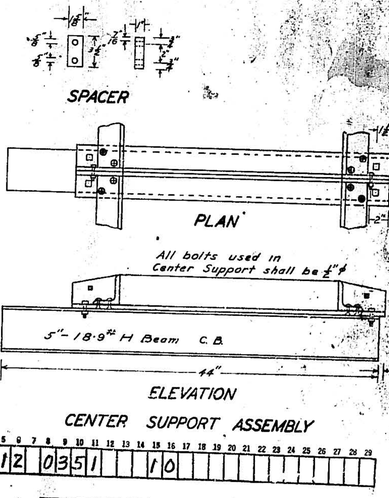
SECTION D–D

PLAN

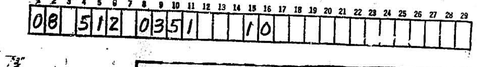
STANDARD FRAME AND GRATING

Scale ⅜" = 1"

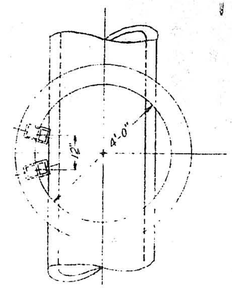
NOTE: APPROVED EQUAL CAST IRON GRATE AND FRAME PERMISSIBLE

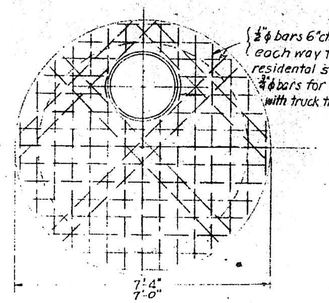


CENTER SUPPORT ASSEMBLY

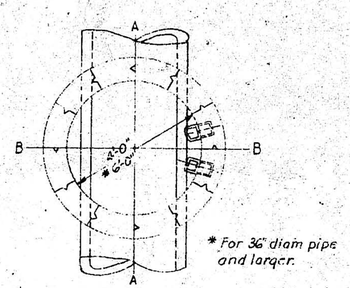


CITY OF ALBUQUERQUE		
STANDARD CATCH BASINS, TYPES B&C, C-1 AND APPURTENANCES		
DESIGNED	CONSULTING ENGINEERS	DATE DESIGNED
TRACED	HASIE AND GREEN HERKENHOFF AND TURNEY EDMUND ROSS	DATE REVISED
CHECKED		
SCALE		SHEET 3 OF 8

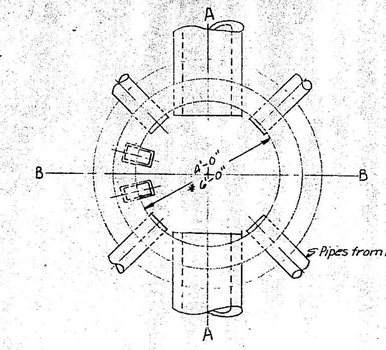


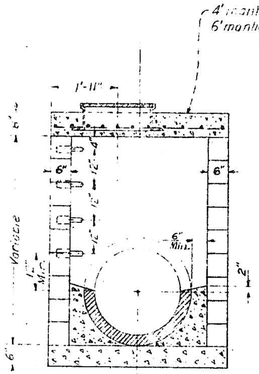


PRECAST CONC COVER

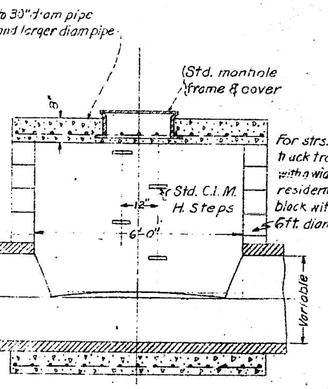


SECTION PLAN



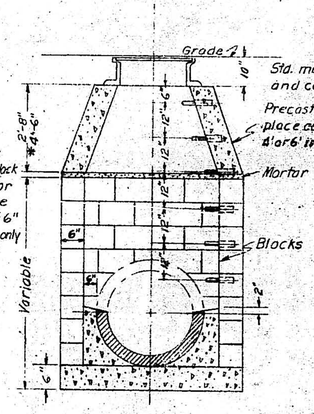


SECT. 4 FOOT M.H.

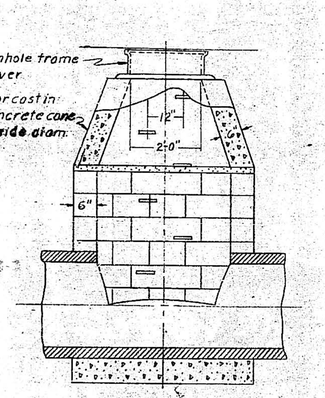


SECT. 6 FOOT M.H.

STANDARD STORM SEWER MANHOLE TYPE "A"



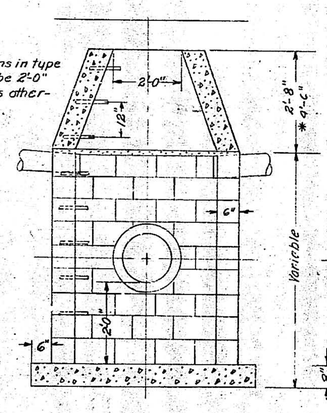
SECTION B-B



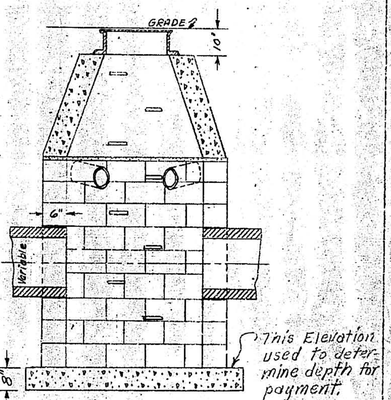
SECTION A-A

STANDARD STORM SEWER MANHOLE TYPE "B"

NOTE:
All catch basins in type "C" manholes to be 2'-0" in depth unless otherwise noted.

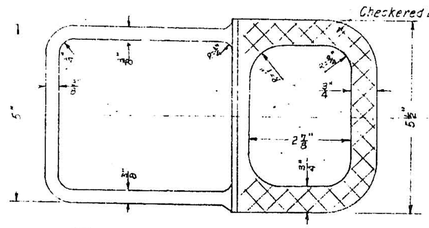


SECTION B-B

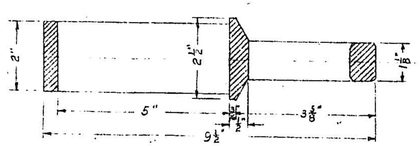


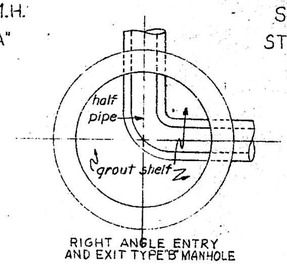
SECTION A-A

STANDARD STORM SEWER MANHOLE TYPE "C"

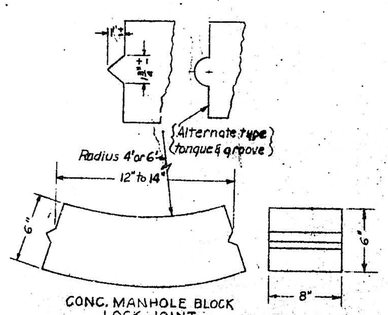


STANDARD MANHOLE STEP



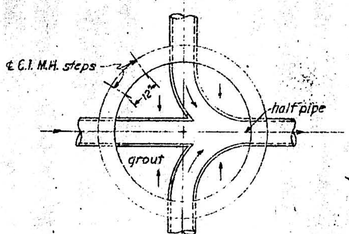


RIGHT ANGLE ENTRY AND EXIT TYPE "B" MANHOLE



CONC. MANHOLE BLOCK LOCK JOINT

All conc. for manholes & blocks - class "B" 3000 #/in² min.
All reinf. steel structure grade - 18000 #/in²



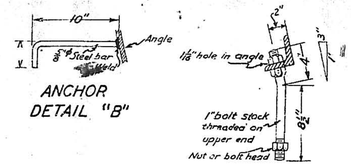
TWO RIGHT ANGLE ENTRANCES INTO MAIN FLOW LINE TYPE "B" M.H.

MANHOLE SPECIFICATIONS

The contractor has the option of building the masonry walls of all manholes of solid concrete or block. If solid concrete is used, the walls must have a thickness of not less than six inches. Block for six inch walls must have a thickness of not less than eight(8) inches, and a width of not less than six(6) inches, a length of twelve(12) to fourteen (14) inches and shall be lock joint type. The concrete from which such blocks are constructed shall meet the specifications for class "A" as set forth in govetning concrete specifications for this project. . Type of block must be approved by the Engineer and each block shall be molded with a curvature equal to and matching exactly that of the manhole being built. All concrete blocks shall conform in all respects to the standard specifications for "Conc. Masonry Units for construction of Catch Basin & Manholes" A.S.T.M. Designation C 139-39 or any subsequent revisions thereof. Cones may be poured in place, or precast and then grouted to manhole barrel. All manhole frames, covers and steps to be standard cast iron as shown. In wet sewer construction manhole barrels shall be constructed of poured conc. to a pre-determined elevation as shown on plan & profile sheets. Remainder of barrel may be constructed of curved conc. block set in water proof mortar.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
0 8 5 1 2 0 4 5 1 1 0

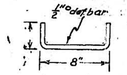
CITY OF ALBUQUERQUE		
STANDARD MANHOLE DESIGNS.		
DESIGNED	CONSULTING ENGINEERS	DATE DESIGNED
TRACED	HASIE AND GREEN	DATE REVISED
CHECKED	HERKENHOFF AND TURNEY	
SCALE	EDMUND ROSS	SHEET 4 OF 8



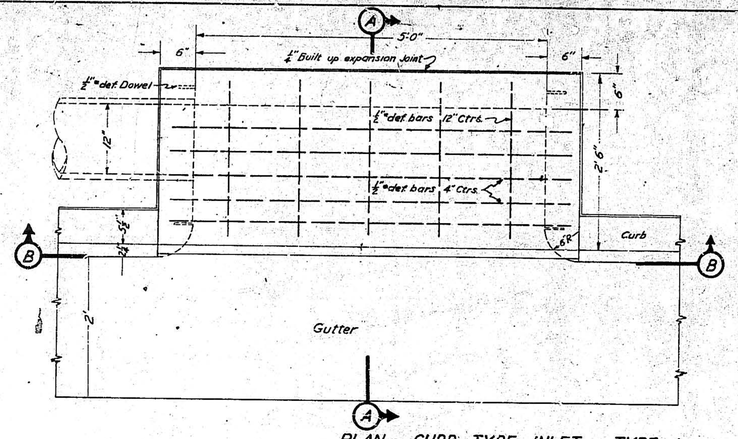
ANCHOR DETAIL "B"

GRATE BOLT DETAIL "A"

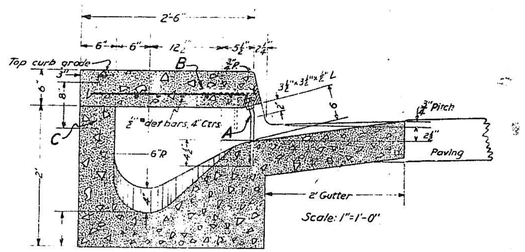
Scale 1½"=1'-0"



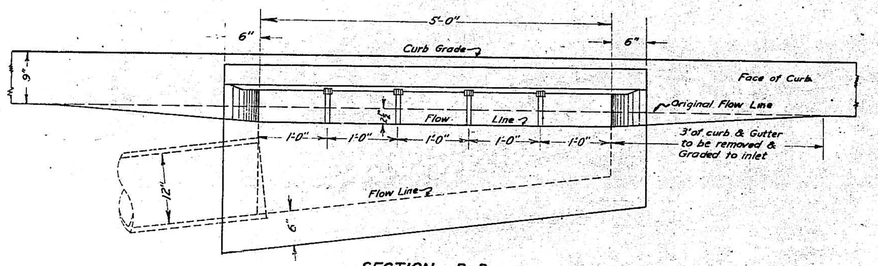
DOWEL DETAIL "C"



PLAN - GURB TYPE INLET - TYPE A

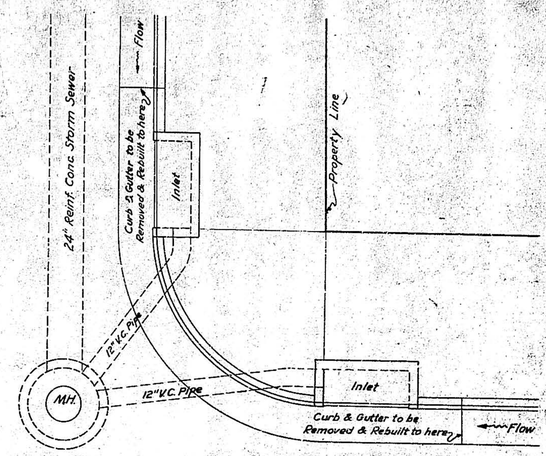


SECTION- A-A



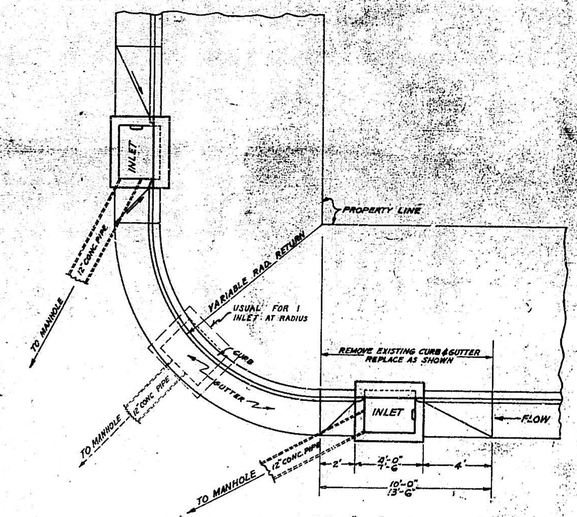
SECTION B-B

Scale: 1"=1'-0"

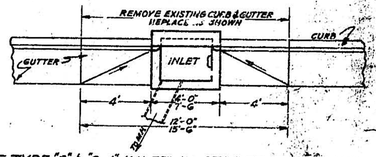


LOCATION OF INLETS IN STREET-TYPE "A"

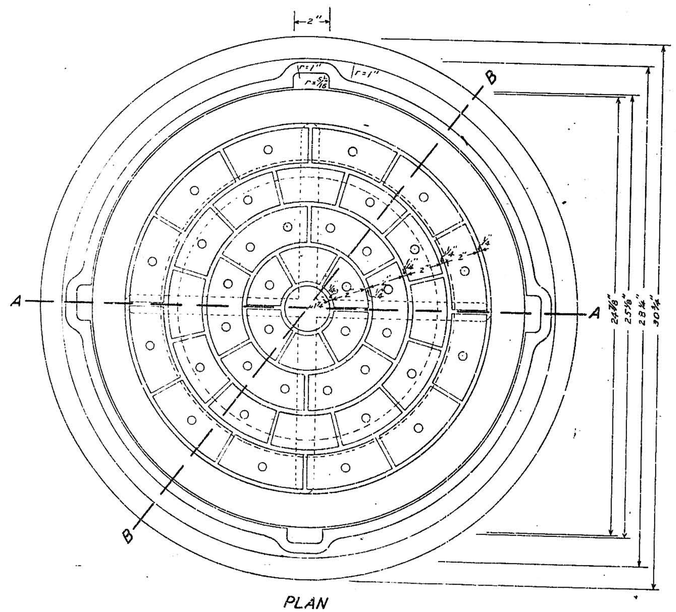
Scale 1"=1'-0"



LOCATION OF TYPE "C" & "C-1" INLETS IN STREET



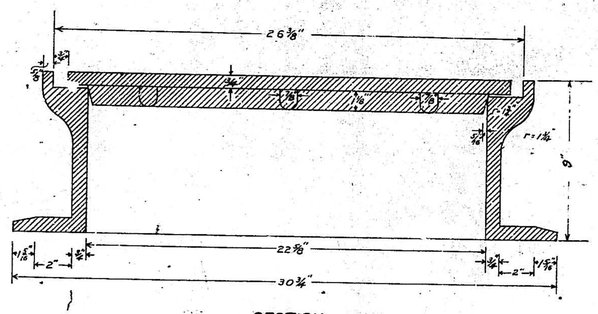
LOCATION OF TYPE "C" & "C-1" INLET IN STREET TANGENT



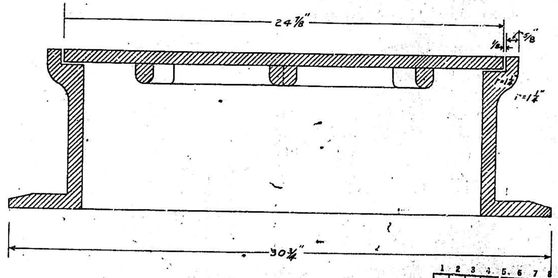
PLAN

STANDARD MANHOLE FRAME AND COVER

Scale ½"=1"



SECTION A-A

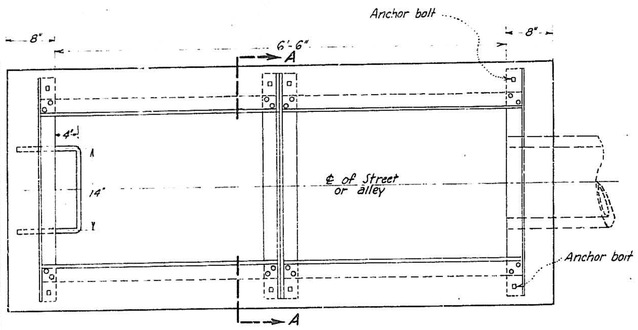


SECTION B-B

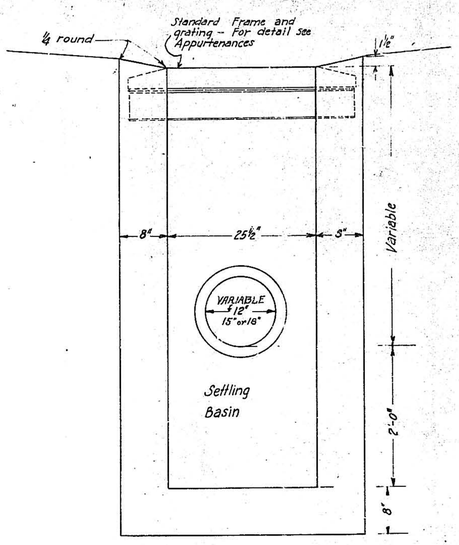
Scale ½"=1"

CITY OF ALBUQUERQUE		
TYPE A CURB INLET STANDARD MANHOLE FRAME AND COVER		
DESIGNED	CONSULTING ENGINEERS	DATE DESIGNED
TRACED	HASIE AND GREEN HERKENHOFF AND TURNEY EDMUND ROSS	DATE REVISED
CHECKED		
SCALE		SHEET 5 OF 8

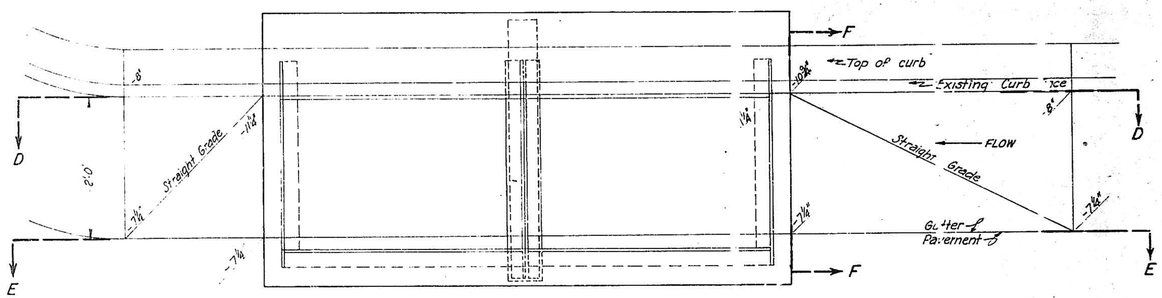
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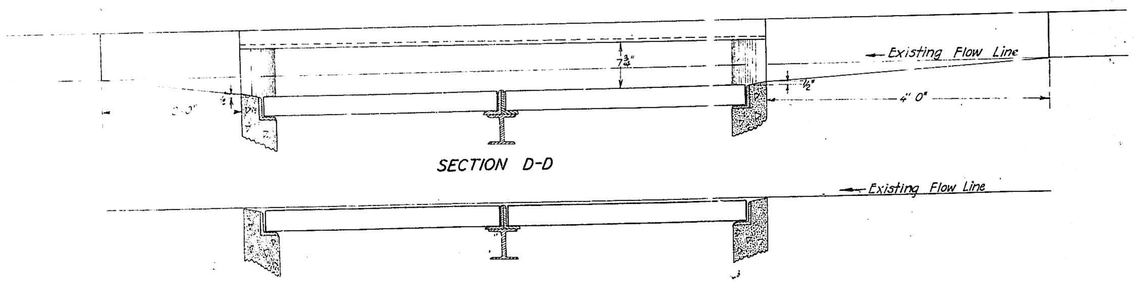
PLAN
STANDARD CATCH BASIN TYPE - D
Scale 1"=1'



SECTION A-A

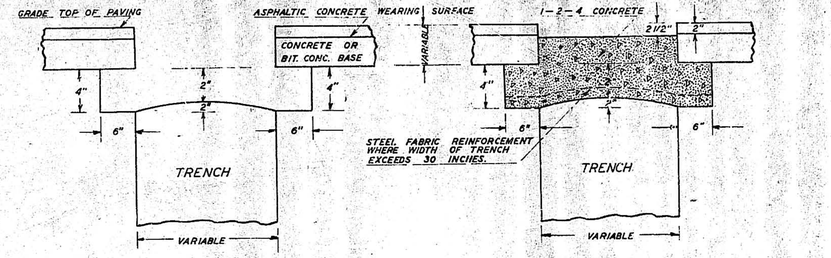


PLAN
STANDARD LOCAL DEPRESSIONS FOR CATCH BASINS
TYPES A, B AND C & C-1



SECTION D-D

SECTION E-E

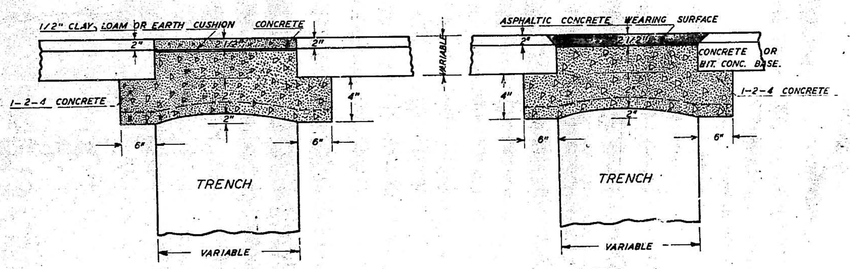


STEP 1.

STEP 2.

(A). BACKFILL AND HAND-TAMP THE OPEN TRENCH IN SUCCESSIVE LAYERS OF NOT MORE THAN SIX INCHES IN THICKNESS.
(B). SQUARE UP EXPOSED EDGES OF PAVING IN A NEAT MANNER.
(C). EXCAVATE DIRECTLY UNDER EDGE OF PAVING A TRENCH 6 WIDE AND 4 DEEP AS SHOWN ABOVE.
(D). ARCH BACKFILL IN CENTER OF TRENCH MAKING THE CROWN AT CENTER 2 BELOW BOTTOM EDGE OF PAVING
(E). DEPTH OF PATCH WILL VARY ACCORDING TO TYPE OF PAVING TO BE REPAIRED.

(A). WASH OFF THE EXPOSED PAVING EDGES AND WET THE SUBGRADE LIGHTLY.
(B). FILL WITH A 1-2-4 MIX CONCRETE TO WITHIN 2 1/2 OF GRADE OR TOP OF PAVING TAMP THE CONCRETE THOROUGHLY ESPECIAL CARE BEING TAKEN TO COMPLETELY FILL AND TAMP THE CONCRETE INTO THE TRENCH UNDER EDGE OF PAVING.
(C). WHERE THE WIDTH OF TRENCH EXCEEDS 30 INCHES PLACE ONE LAYER OF STEEL FABRIC REINFORCEMENT WEIGHING NOT LESS THAN 35 POUNDS PER 100 SQ. FT., 2" ABOVE THE BOTTOM OF THE CONCRETE.
(D). STRIKE THE SURFACE OF THE CONCRETE OFF ROUGHLY WITH A SHOVEL BUT DO NOT FINISH SMOOTH.



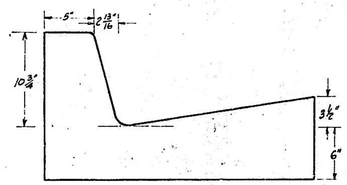
STEP 3.

STEP 4.

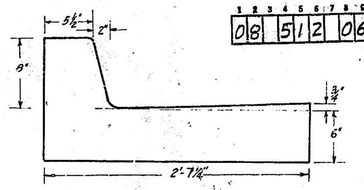
(A). AFTER THE CONCRETE PLACED IN STEP 2. HAS TAKEN ITS INITIAL SET PLACE A 1/2" LAYER OF CLAY, LOAM OR ORDINARY EARTH (NOT SAND) OVER THE SURFACE OF THE CONCRETE.
(B). FILL REMAINDER OF CUT WITH 1-2-4 MIX CONCRETE TO TOP OF PAVING AND FINISH WITH WOODEN FLOAT.
(C). BARRICADE AGAINST TRAFFIC FOR AT LEAST 24 HOURS AFTER PLACING TOP COURSE. AT NIGHT PLACE LANTERNS OR TORCHES BY THE BARRICADES.

NOTE: TO REPAIR CUTS IN PLAIN CONCRETE, ALLEY PAVING. PREPARE THE OPENING AS IN STEP 1. FILL WITH 1-2-4 MIX CONCRETE AND FINISH FLUSH WITH TOP OF PAVING.

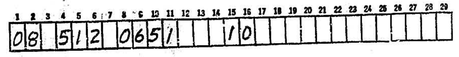
(A). BREAK AND CHIP OUT THE 2" TOP COURSE OF CONCRETE AND 1/2" LAVER OF DIRT.
(B). CUT BACK THE EDGE OF PRESENT ASPHALTIC CONCRETE SURFACE ON AN ANGLE OF 45° WITH VERTICAL OR 1 TO 1 SLOPE.
(C). CLEAN OUT, CUT AND SWEEP CLEAN WITH HEAVY BROOM.
(D). HAUL AWAY AND DISPOSE OF ALL WASTE MATERIALS.
(E). REPAIR CUT WITH ASPHALTIC CONCRETE WEARING SURFACE IN ACCORDANCE WITH CITY PAVING SPECIFICATIONS. THE SURFACE FINISH TO BE THE SAME TYPE AS THAT OF PAVING SURROUNDING THE PATCH.
(F). THE STREET IN VICINITY OF PATCH SHALL BE THOROUGHLY CLEANED UP BEFORE BEING OPENED TO TRAFFIC.



SECTION F-F



STANDARD SECTION
CURB AND GUTTER



CITY OF ALBUQUERQUE

STANDARD METHOD OF REPAIRING CUTS IN PAVEMENTS - ALSO - STANDARD LOCAL DEPRESSIONS FOR CATCH BASINS

DESIGNED	CONSULTING ENGINEERS	DATE DESIGNED
TRACED	HASIE AND GREEN	DATE REVISED
CHECKED	HERKENHOFF AND TURNEY	
SCALE	EDMUND ROSS	SHEET 6 OF 8

2

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59142

NOTE: All gas lines approx. 2½' Underground.
All water lines approx. 3' underground.
T.C. - - - Top of Curb.
T.G. - - - Top of grate.

PLATE 2-PLAN-PROFILE - D.P.W. & W.E.
CHARLES SPUNING COMPANY, INC.

Sheet 7 of 8

2

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SUMMER

HARRISON AVE

3 Proposed Single Grate Type C-1 Catch Basin
T.C. 104.2, T.G. 103.2 (North 2 inlets)
T.C. 104.1 T.G. 103.1 (South 1 inlet)
Elevations to be verified in field.

Proposed Single Grate Type C-1 Catch Basin
T.C. 104.7 (East Side)
T.G. 103.7 (South Side)
These elevations to be verified in field.

Existing Storm Sewer Mh 4' West & 8' North of Intersection of N 2nd and Harrison R.C. Make connection to Storm Sewer, Lateral overflow from Sanitary Sewer located on the North side of Harrison Ave.

B.M. Top Fireplug S.W. Cor. Harrison & 1st Street. Elev. 111.45

NOTE: All gas lines approx. 2½' Underground.
All water lines approx. 3' underground.
T.C. - - Top of Curb.
T.G. - - Top of grate.

2" Gas Line

Existing 8" Elbow Type Storm Drain Catch Basin

T.C. EL. 72.19 (Both Sides)
T.G. EL. 71.19 (Both Sides)

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Existing Storm Sewer M.H. & Filled with Sand. Clean Out.

HARVEY

NORTH 6th STREET

PROPOSED TYPE C-1 Single Grate Catch Basin
T.C. EL. 72.80
T.G. EL. 71.80

2" Gas Line, 323' S. of Midnight

PROPOSED TYPE C-1 Single Grate Catch Basin
T.C. EL. 71.47
T.G. EL. 70.97

Grades

8" Asb. 16" Water Line

2" Gas

18" San. Sewer

24" Concrete Storm Sewer

16" Conc. Pipe S=.30% V=2.4 Ft/sec
568' - 0'to 6'

2" Gas Line

10" CONC. PIPE S=.44% V=2.5 FT./SEC.
720' 0'to 6'

San. Sewer

6" Water Line

8" Sanitary Sewer

16" Water Line 5'W of ℄

2 Proposed Single Grate Type C-1 Catch Basin, T.C. 109.0, T.G. 108.0 (Elevations to be verified in field.)

8" Water Line 10'W of ℄ From Harrison to Roosevelt

2 Proposed Single Grate Type C-1 Catch Basin T.C. 109.10, T.G. 108.1 (Elevations to be verified in field.)

6" Water Line 10'W of ℄ From Roosevelt to Midnight

2" Gas Line 20' W of ℄

Existing Storm Drain Catch Basin
Cleggue Clean Out.
Connect to Storm Sewer M.H.

8" Sanitary Sewer

3 Proposed Single Grate Type C-1 Catch Basin
North side - T.C. 109.4, T.G. 108.4
South side - T.C. 109.4, T.G. 108.4
Elevations to be verified in field.

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SUMMER

KINLEY

CONSTITUTION

ROOSEVELT

Existing Drop Inlets-8" Elbow Type

Existing Storm Sewer M.H.

WILSON AVE

MARVIN

MERRY

SCHOOL

8" Sanitary Sewer

2" Water Line 10'W of ℄

4" H.P.Gas Line

6" Water Line

2" Gas Line

2" H.P.Gas Line

3 Proposed Single Grate Type C-1 Catch Basin
North Side - T.C. 112.50 T.G. 111.50
South Side - T.C. 112.10 T.G. 111.10
Elevations to be verified in field

12" Water Line

4" H.P.Gas

8" San. Sewer

3 Proposed Single Grate Type C-1 Catch Basin. North side- T.C. 112.5 T.G. 112.0. South Side- T.C. 112.6 T.G. 112.0 Elevations to be verified in field. Use 8" from inlets to manhole at this point

Note: Clean Out Storm Sewer M.H. at Station 15+91
Payment by Force account

Contractor to arrange with R.R. Co. for Crossing

B.M.-RR Spike in base of switch stand marked WSSB. Elev. 113.24

B.M. Top Fireplug N.W. Cor. Coolidge & West. Elev. 114.70

COOLIDGE AVE

10" Conc. Pipe S=.40% V=2.4 FT/SEC.
759' - 0'to 6'

10" Conc. Pipe S=.44% V=2.5 ft/sec.
957' - 0'to 6'

10" CONC. PIPE S=.44% V=2.5

Water

Gas

PLATE 2-PLAN-PROFILE O.P.R.&R.E.
CHARLES BRUNENG, COMPANY, INC.

Sheet 7 of 8

Mountain Rd

T.C. EL. 69.49
T.G. EL. 68.49

Sanitary sewer M.H.

8" Water Line

Forrester Ave.

Existing Elevation, M.H.

8" Elbow Type Drop Inlet EX STING

4" Gas Line

8" Sanitary Sewer

T.C. EL. 69.49
T.G. EL. 68.49

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SCALE 1"=100'

Proposed "TYPE" C Single Grate Catch Basin
T.C. EL. 71.40
T.G. EL. 70.40

Proposed "TYPE C" Single Grate Catch Basin
T.C. EL. 71.40
T.G. EL. 70.40

EXISTING
8" Elbow Type Drop Inlets Completely Filled. Clean Out. Connect to New M.H.
T.C. EL. 73.81
T.G. EL. 69.81

Proposed "Type C" Single Grate Catch Basin
T.C. EL. 71.79
T.G. EL. 69.81

Note: T.C.---Top of Curb.
T.G.---Top of Grade.

Proposed Type C Single grate Catch Basin
T.C. EL. 171.6
T.G. EL. 170.6

8" Water line
8" San. Sewer
2" Gas line

Lynch Court

Lynch Place

Storm Drop Inlets Filled With Dirt.

Data for Inlets shown on Sta. 9+48 Forrester St.

58141

Note: All Waters Lines Approx 3' Under Ground.
All Gas Lines Approx 2.5 Under ground.

Sta. Identical to Sta. 9+48 Forrester Street.

10" Conc. Pipe S=4.69% V=25

Mountain Rd

Cleveland

Existing 8" Elbow Type Drop Inlet Completely Filled. Clean Out. Connect to New M.H.

Proposed "Type C" Single Grate Catch Basin
T.C. EL. 69.89
T.G. EL. 68.89

Proposed "Type C" Single Grate
T.C. EL. 70.04
T.G. EL. 69.04

Proposed "Type C" Single Grate Catch Basin
T.C. EL. 70.07
T.G. EL. 69.07

North 11th Street

2" Gas Line

8" San. Sewer

T.C. EL. 69.44
T.G. EL. 68.64
Proposed "Type C" Single Grate Catch Basin

Proposed "Type C" Single Grate Catch Basin
T.C. EL. 70.12
T.G. EL. 69.12

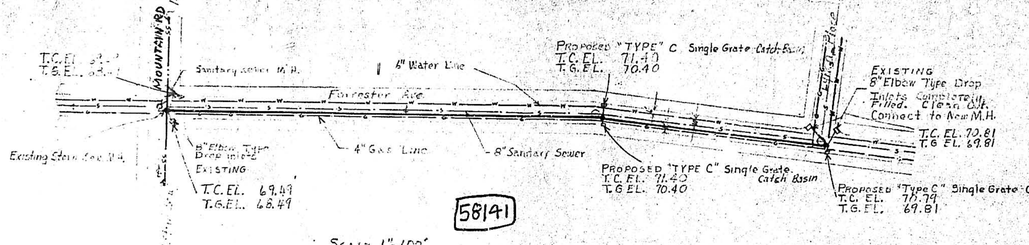
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SCALE 1"=100'

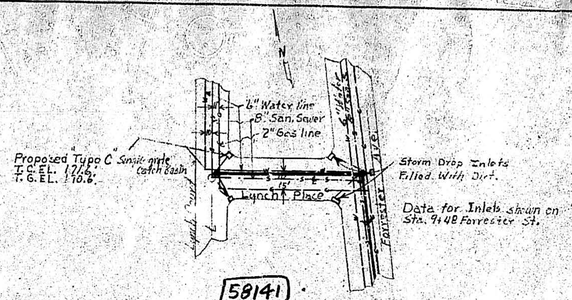
10" Conc. Pipe S=0.28% V=2.0 FT/SEC

0 8 5 1 2 0 8 5 1 0 1 5 8 1 4 1
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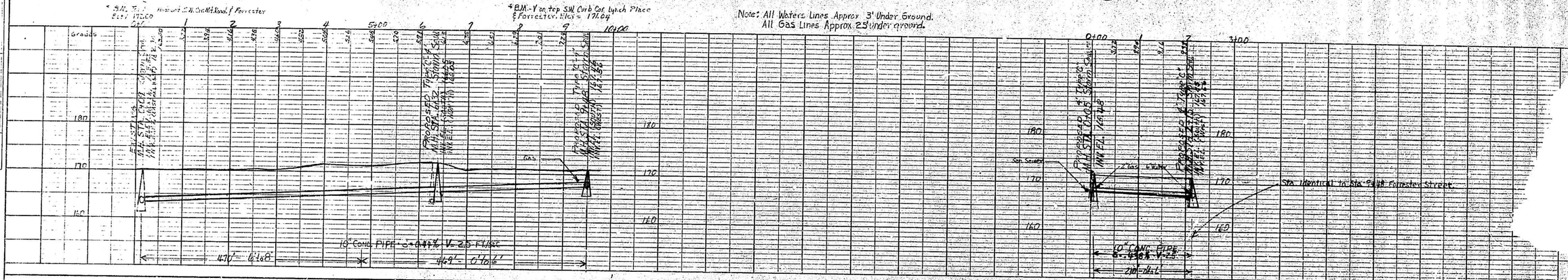
PLATE 2—PLAN—PROFILE O.P.R.&D.E.
CHARLES BRUNING COMPANY, INC.

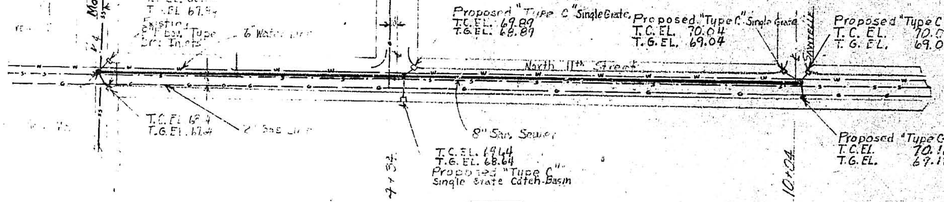


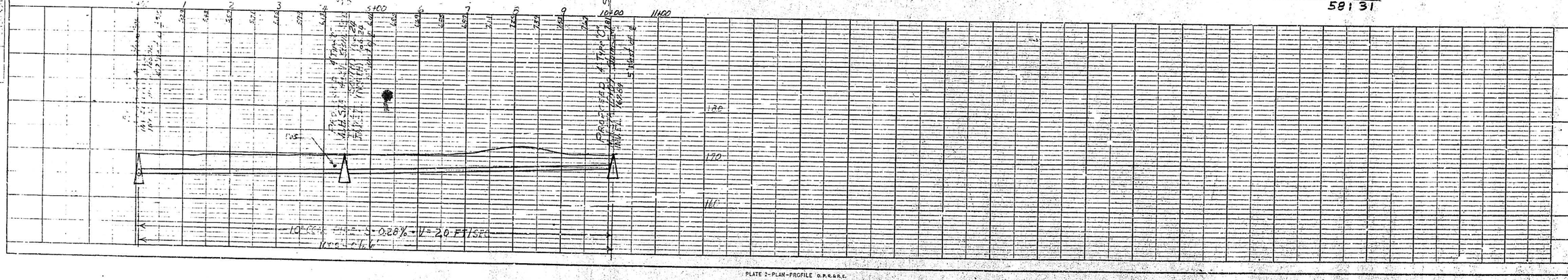
Note: T.C. --- Top of Curb.
T.G. --- Top of Grate.



Note: All Waters Lines Approx 3' Under Ground.
All Gas Lines Approx 2½ under ground.







1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
08 512 0851 01 58141
58131

PLATE 2-PLAN-PROFILE O.P.G.&R.E.
CHARLES BRUNING COMPANY, INC.