2

# CITY OF
# ALBUQUERQUE - NEW MEXICO

# PAVING DISTRICT NO. 166-A



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

1 1 0 1 6 6 1 0 1 7 0 2 0 2 0

08

GORDON HERKENHOFF AND ASSOCIATES CONSULTING ENGINEERS

AS CONSTRUCT




## LEGEND

(PAV. 15) INDICATES PAVING SHEET NUMBER

(S.D. 34) INDICATES STORM DRAIN SHEET NO.

AS CONSTRUCTED

# ALBUQUERQUE, NEW MEXICO

PAVING DISTRICT 166-A

## LOCATION MAP

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

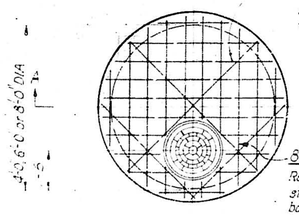
| SCALE | DATE | DRAWN: G.C. | SHEET 2 |
|---|---|---|---|
| 1"=1000' | MARCH 1968 | CHECKED: G.J. | OF 45 |

## 4' or 6' DIA. MANHOLE

Reinforce for residential streets #4@8 each way bottom of slab reinforced for truck traffic #3@8 each way bottom of slab.

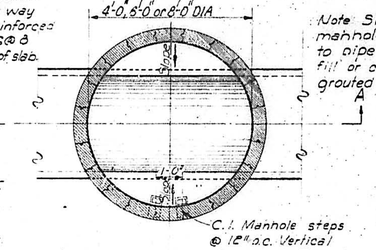
6' DIA. MANHOLE

Reinforce for residential streets #5@6 each way bottom, #8@8 each way bottom for arterial streets



TOP PLAN OF TYPE A

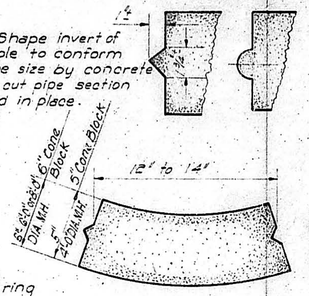
SCALE: 3/8" = 1'-0"




SECTION PLAN OF TYPE A AND TYPE B

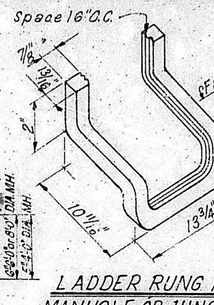
SCALE: 3/8" = 1'-0"

Note: Shape invert of manhole to conform to pipe size by concrete fill or cut pipe section grouted in place.

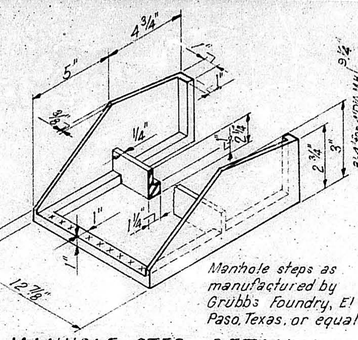



TYPICAL DETAIL OF CONCRETE BLOCK

6" SCALE: 1/8" = 1"

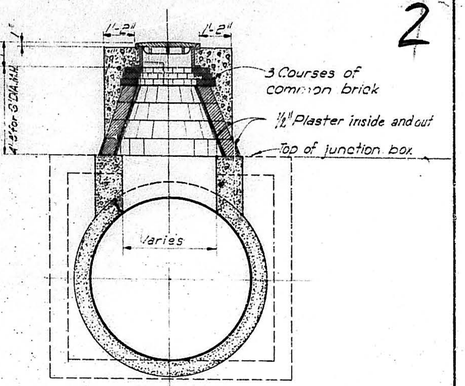



LADDER RUNG FOR MANHOLE OR JUNCTION BOX



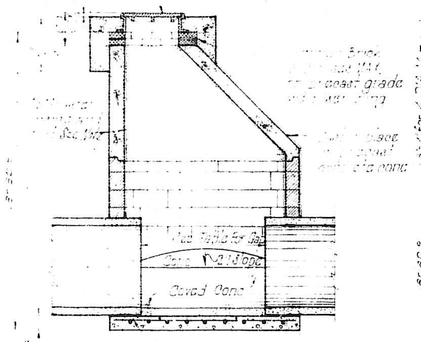

Manhole steps as manufactured by Grubbs Foundry, El Paso, Texas, or equal

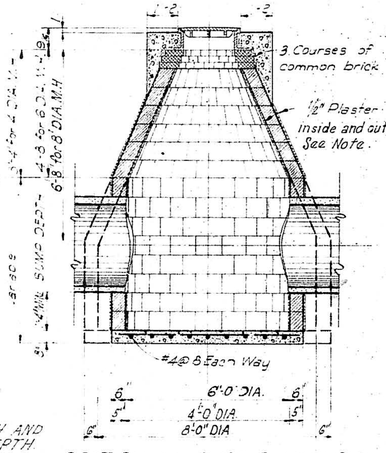
MANHOLE STEP DETAIL

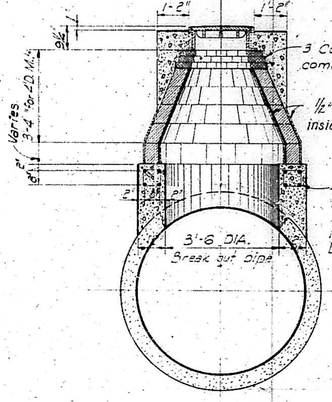



STANDARD MANHOLE CONE

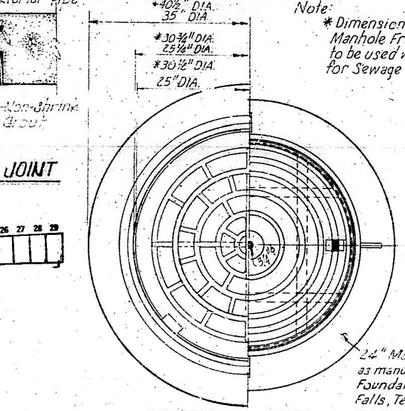
SCALE: 3/8" = 1'-0"



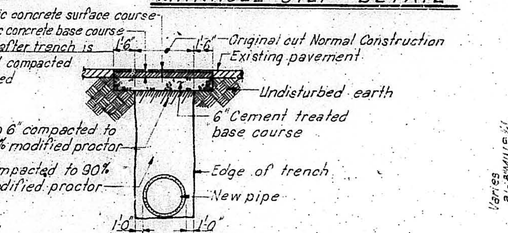

TYPICAL PIPE JOINT



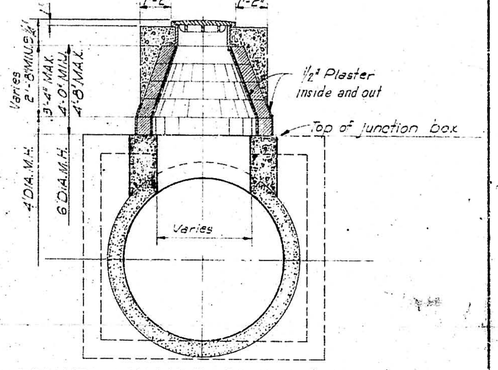

STANDARD HALF PLAN

ALTERNATE HALF PLAN

Note:
* Dimensions for Special Manhole Frame & Cover to be used when specified for Sewage Pumping Stations

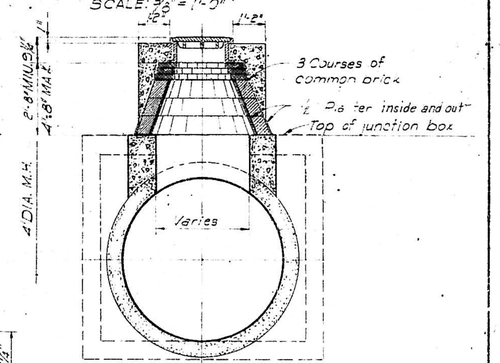



PAVEMENT CUT DETAIL



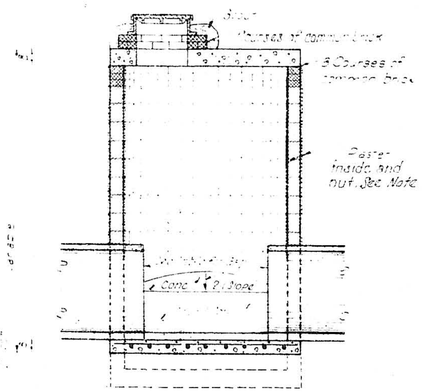

ALTERNATE MANHOLE CONE NO. 1

SCALE: 3/8" = 1'-0"




ALTERNATE MANHOLE CONE NO. 2

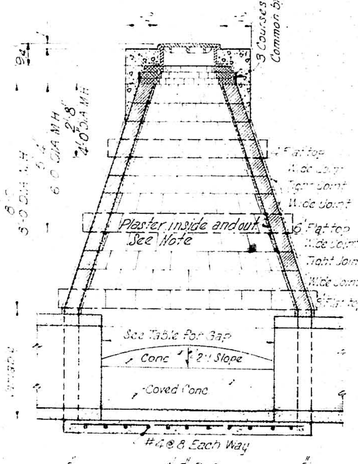
SCALE: 3/8" = 1'-0"




SECTION A-A - TYPE A MANHOLE

(STANDARD AND SUMP INVERT)

SCALE: 3/8" = 1'-0"




SECTION A-A - TYPE B MANHOLE

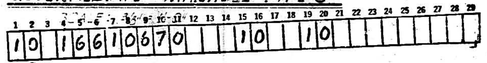
(STANDARD INVERT)

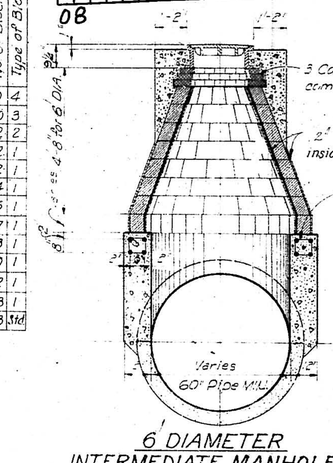
SCALE: 3/8" = 1'-0"

| No. of Blocks Per Row | Type of Block |
|---|---|
| 10 | 4 |
| 10 | 3 |
| 12 | 2 |
| 12 | 1 |
| 12 | 1 |
| 14 | 1 |
| 15 | 1 |
| 17 | 1 |
| 18 | 1 |
| 20 | 1 |
| 22 | 1 |
| 23 | 1 |
| 23 | 1/2 |

4' DIAMETER

INTERMEDIATE MANHOLE-TYPE-C




6' DIAMETER

INTERMEDIATE MANHOLE TYPE C

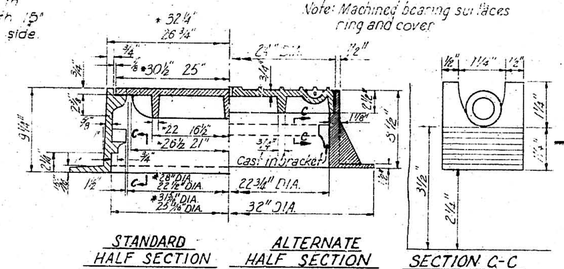
Scale: 3/8" = 1'-0"

MANHOLE GAP FOR REINFORCED CONCRETE PIPE

| Manhole Size: 8 Feet | | Manhole Size: 6 Feet | | Manhole Size: 4 Feet | |
|---|---|---|---|---|---|
| Pipe Size | Gap To Be Left (Max) | Pipe Size | Gap To Be Left (Max) | Pipe Size | Gap To Be Left (Max) |
| 48" | 6.4 Feet | 36" | 4.7 Feet | 18" | 3.5 Feet |
| 54" | 5.9 Feet | 48" | 3.5 Feet | 21" | 3.3 Feet |
| 60" | 5.2 Feet | 54" | 2.6 Feet | 24" | 3.1 Feet |
| 66" | 4.5 Feet | | | 27" | 2.8 Feet |
| 72" | 3.5 Feet | | | 30" | 2.5 Feet |
| | | | | 36" | 1.5 Feet |

TYPICAL DETAILS OF CAST IRON MANHOLE RING AND COVER

SCALE: 1/8" = 1"




STANDARD HALF SECTION

ALTERNATE HALF SECTION

SECTION C-C

Not to scale

Note:
Manholes to be constructed under water to be plastered on the outside (1/2" thick) from 1'-0" above water level on down to bottom of M.H.

AS CONSTRUCTED

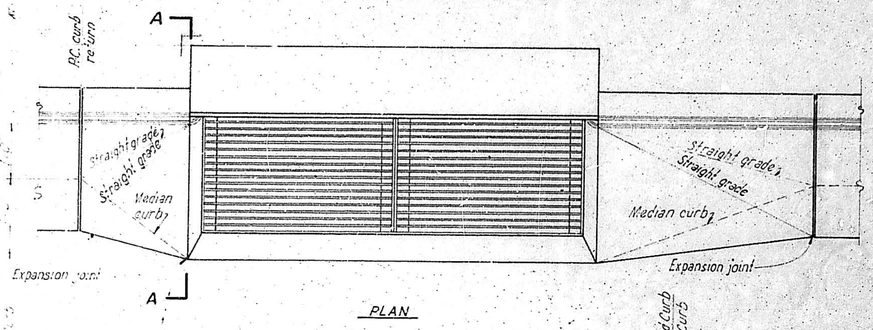
ALBUQUERQUE, NEW MEXICO

STORM DRAIN STANDARDS

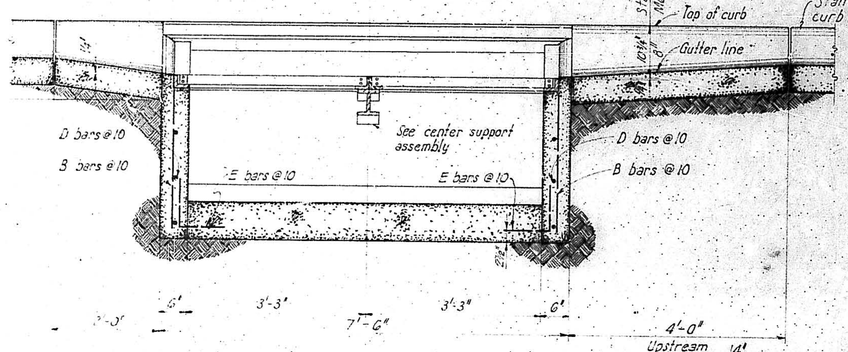
PAVEMENT CUT AND MANHOLE DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

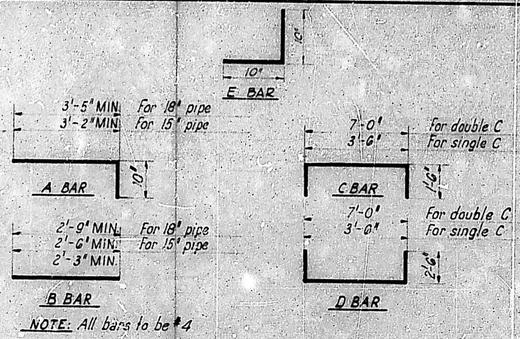
| SCALE | DATE | DRAWN: R.A.G. | SHEET 6 |
|---|---|---|---|
| AS SHOWN | NOV., 1968 | CHECKED: G.A.J. | OF 45 |




PLAN



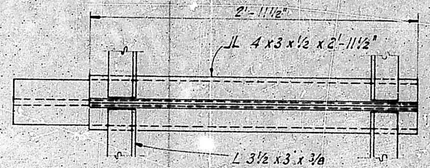

LONGITUDINAL SECTION



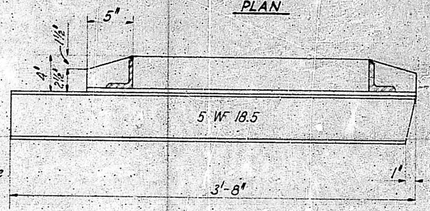

NOTE: All bars to be #4

## BAR BENDING DETAILS

Not to scale



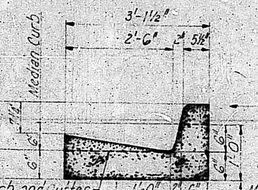

PLAN




ELEVATION

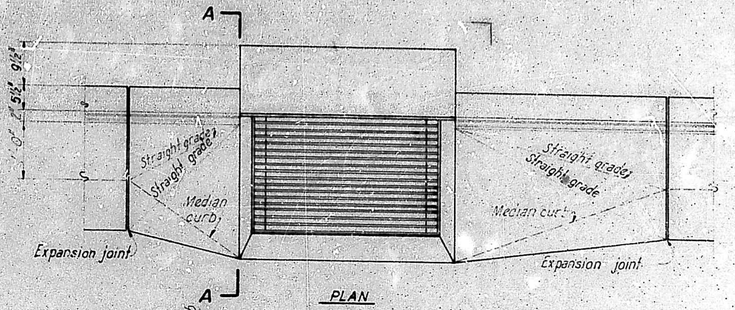
## CENTER SUPPORT ASSEMBLY

Scale: 1½"=1'-0"

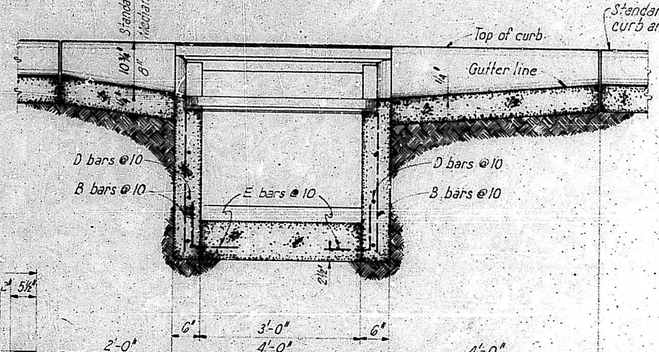



## SECTION A-A

Scale ¾"=1'-0"




PLAN

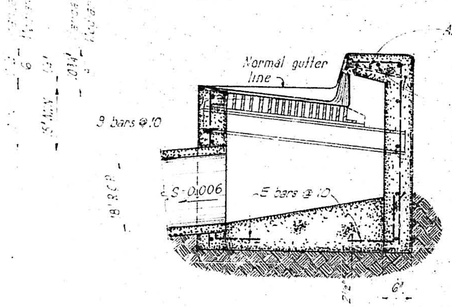



LONGITUDINAL SECTION

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

10 16 1 0 7 7 0 10 10

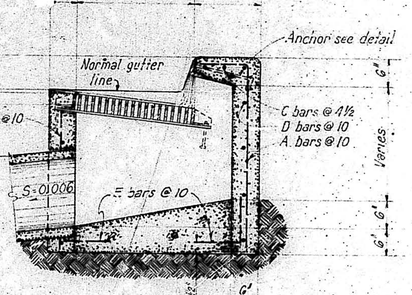
08




TRANSVERSE SECTION

## DOUBLE C INLET

Scale: ¾"=1'-0"

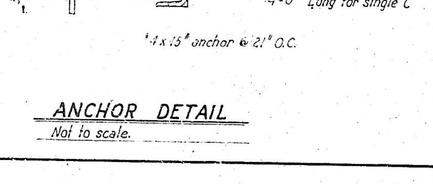



TRANSVERSE SECTION

## SINGLE C INLET

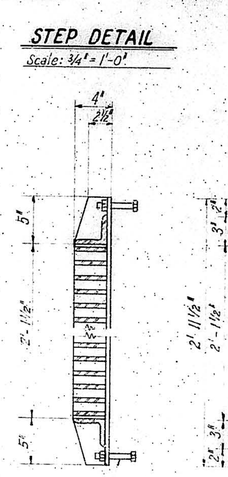
Scale: ¾"=1'-0"

NOTE:
Provide the following slopes for inlet pipes:
15" R.C.P. — S=0.006 Slope: ¾" Per 10' of line
18" R.C.P. — S=0.009 Slope: 1½" Per 10' of line
24" R.C.P. — S=0.008 Slope: 1" Per 10' of line




## ANCHOR DETAIL

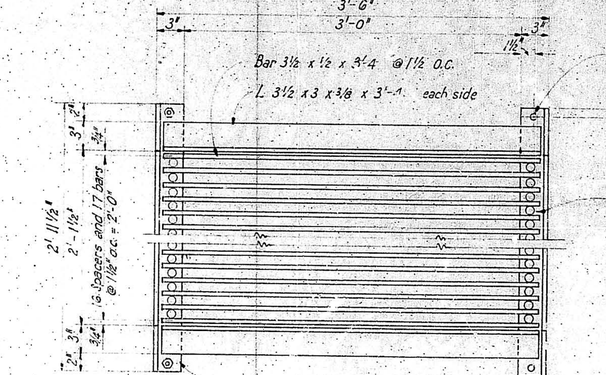
Not to scale.




## STEP DETAIL

Scale: ¾"=1'-0"

NOTE: Step to be located as directed by the project engineer.




1- ¾"x 4' Anchor bolt each outside corner.

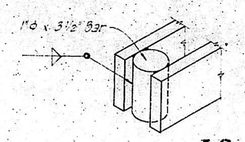
SECTION

PLAN

NOTE: Frame, center support and grating to be welded construction.

## FRAME AND GRATING DETAILS

Scale: 1½"=1'-0"




## SPACER DETAIL

Not to scale.

AS CONSTRUCTED

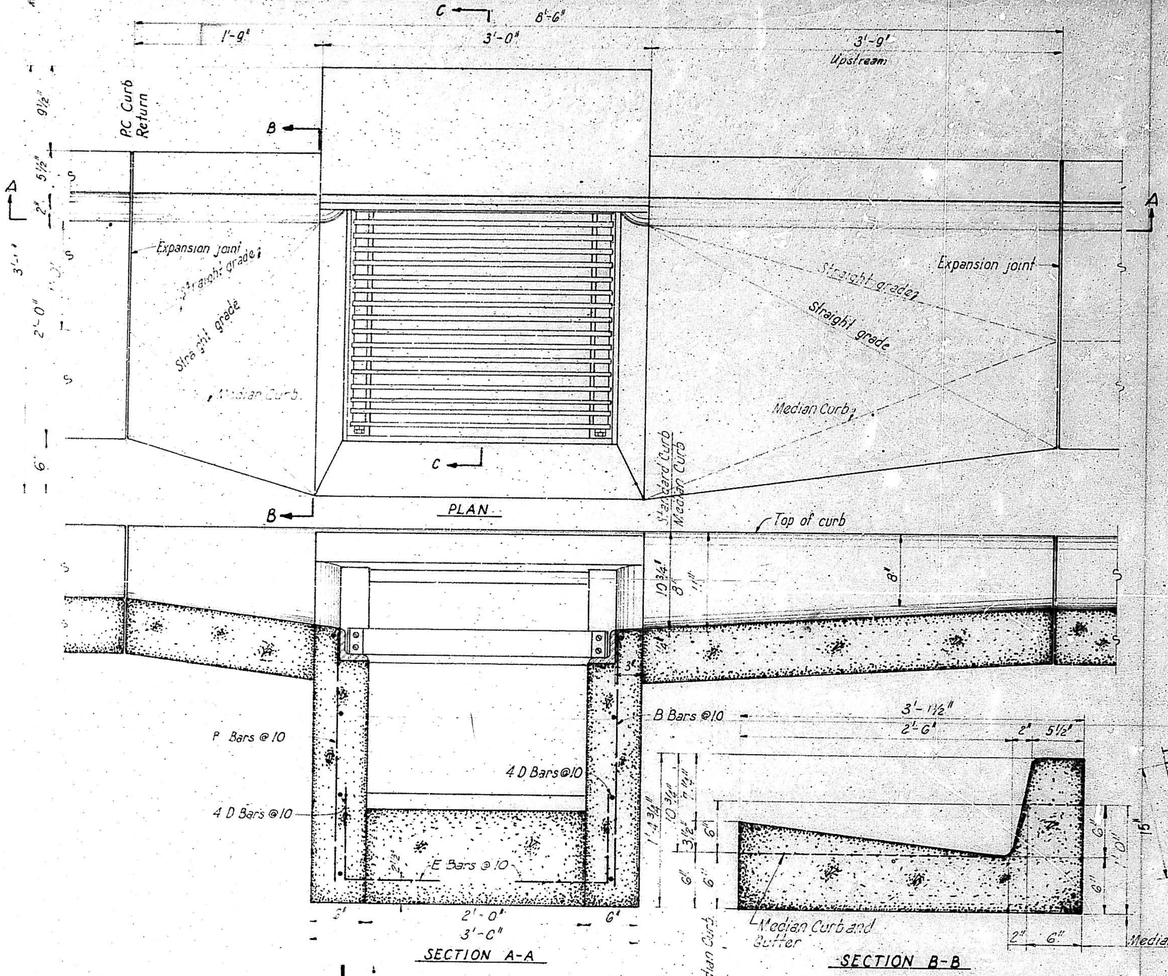
**ALBUQUERQUE, NEW MEXICO**

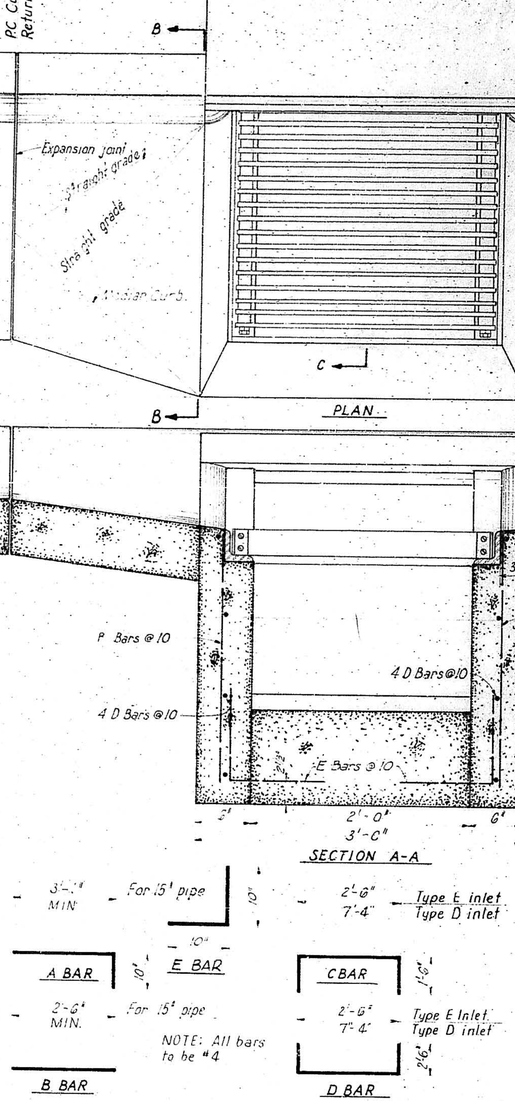
STORM DRAIN STANDARDS

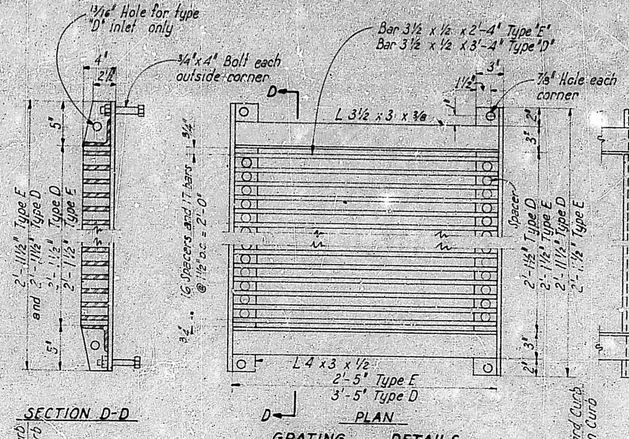
# DOUBLE C AND SINGLE C DROP INLET DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

| SCALE | DATE | DRAWN: A.O.H. | SHEET 7 |
|---|---|---|---|
| AS SHOWN | APRIL 1968 | CHECKED: G.A.J. | OF 45 |

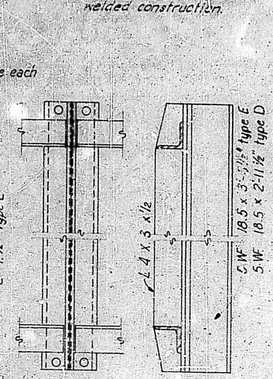


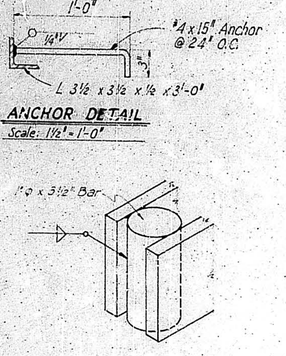




NOTE: Frame for grating, center support and grating to be welded construction.

GRATING DETAILS
Not to scale

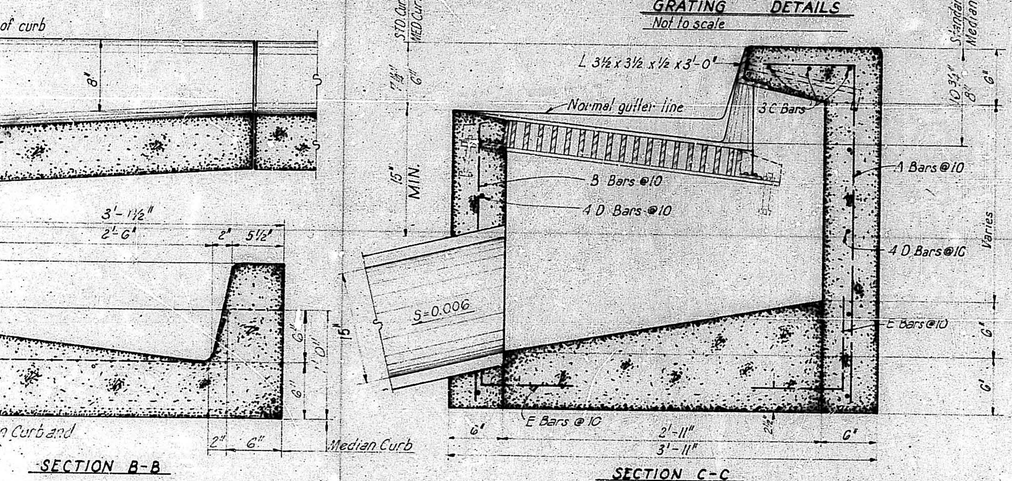



CENTER SUPPORT

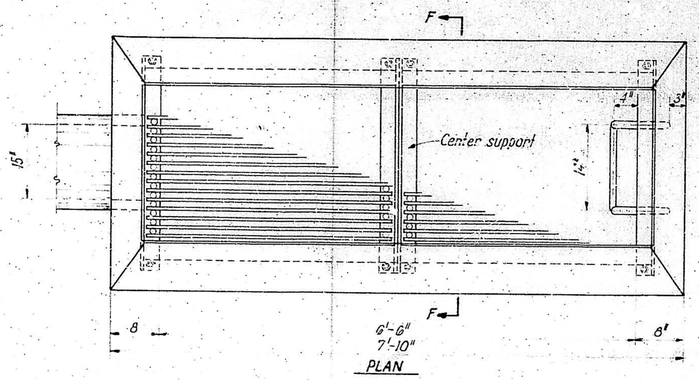


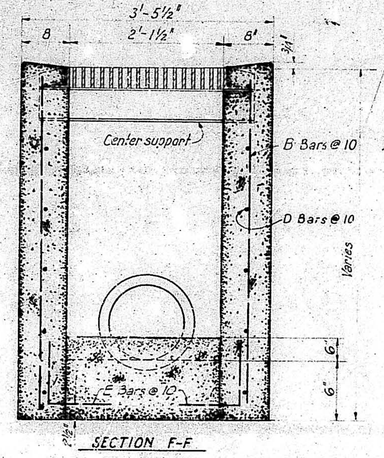

ANCHOR DETAIL
Scale: 1½" = 1'-0"

SPACER DETAIL
Not to scale




TYPE E INLET
Scale: 1½" = 1'-0"




TYPE D INLET
Scale: 1" = 1'-0"

NOTE:
Provide the following slopes for inlet pipes:
15" R.C.P. — S=0.006
18" R.C.P. — S=0.009
24" R.C.P. — S=0.008
Slope Per 10' of line: ¾", 1", 1¼"

AS CONSTRUCTED

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
1 0 | 1 6 6 | 1 0 8 7 0 | | 1 0 | | 1 0
08

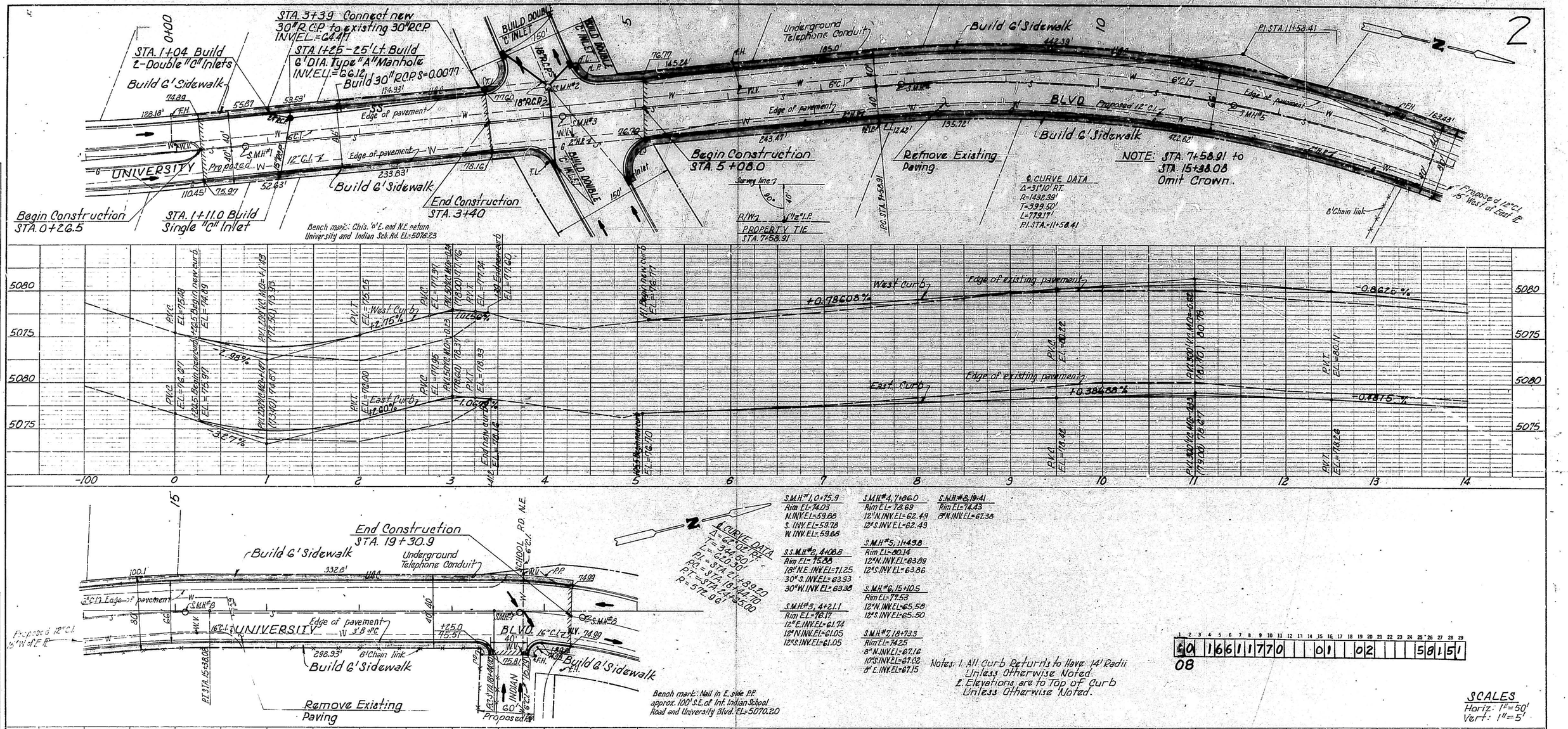
**ALBUQUERQUE, NEW MEXICO**

STORM SEWER STANDARDS

# TYPE D, AND E DROP INLET DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

| SCALE | DATE | DRAWN: A.Q.H. | SHEET 8 |
|---|---|---|---|
| AS SHOWN | APRIL, 1968 | CHECKED: G.A.J. | OF 45 |







| S.M.H.#1, 0+75.9 | S.M.H.#4, 7+86.0 | S.M.H.#8, 19+41 |
|---|---|---|
| Rim EL=74.03 | Rim EL=72.69 | Rim EL=74.43 |
| N. INV. EL=59.66 | 12" N. INV. EL=62.49 | 8" N. INV. EL=67.36 |
| S. INV. EL=59.78 | 12" S. INV. EL=62.49 | |
| W. INV. EL=59.66 | | |

| S.S.M.H.#2, 4+08.8 | S.M.H.#5, 11+49.8 |
|---|---|
| Rim EL=75.85 | Rim EL=80.14 |
| 18" N.E. INV. EL=71.25 | 12" N. INV. EL=63.89 |
| 30" S. INV. EL=63.93 | 12" S. INV. EL=63.86 |
| 30" W. INV. EL=63.36 | |

| S.M.H.#3, 4+21.1 | S.M.H.#6, 15+10.5 |
|---|---|
| Rim EL=76.17 | Rim EL=79.53 |
| 12" E. INV. EL=61.74 | 12" N. INV. EL=65.58 |
| 12" N. INV. EL=61.05 | 12" S. INV. EL=65.50 |
| 12" S. INV. EL=61.05 | |

| S.M.H.#7, 18+73.3 |
|---|
| Rim EL=74.25 |
| 8" N. INV. EL=67.16 |
| 10" S. INV. EL=67.02 |
| 8" E. INV. EL=67.15 |

Notes: 1. All Curb Returns to Have 14' Radii Unless Otherwise Noted.
2. Elevations are to Top of Curb Unless Otherwise Noted.

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
50 | 166 | 11770 | | 01 | | 02 | | | 58 | 151
08

SCALES
Horiz: 1" = 50'
Vert: 1" = 5'

AS CONSTRUCTED

PLAN — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, NOTE BOOK, NO.

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, NOTE BOOK, NO., STRUCTURE NOTATIONS CHKD.

BRUNING NO. 42-152

PLATE 2—PLAN—PROFILE O. P. R. & P. C.
MADE AND PRINTED IN U.S.A.
CHARLES BRUNING COMPANY

GORDON HERKENHOFF & ASSOCIATES INC.
CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A

SHEET 17 OF 45

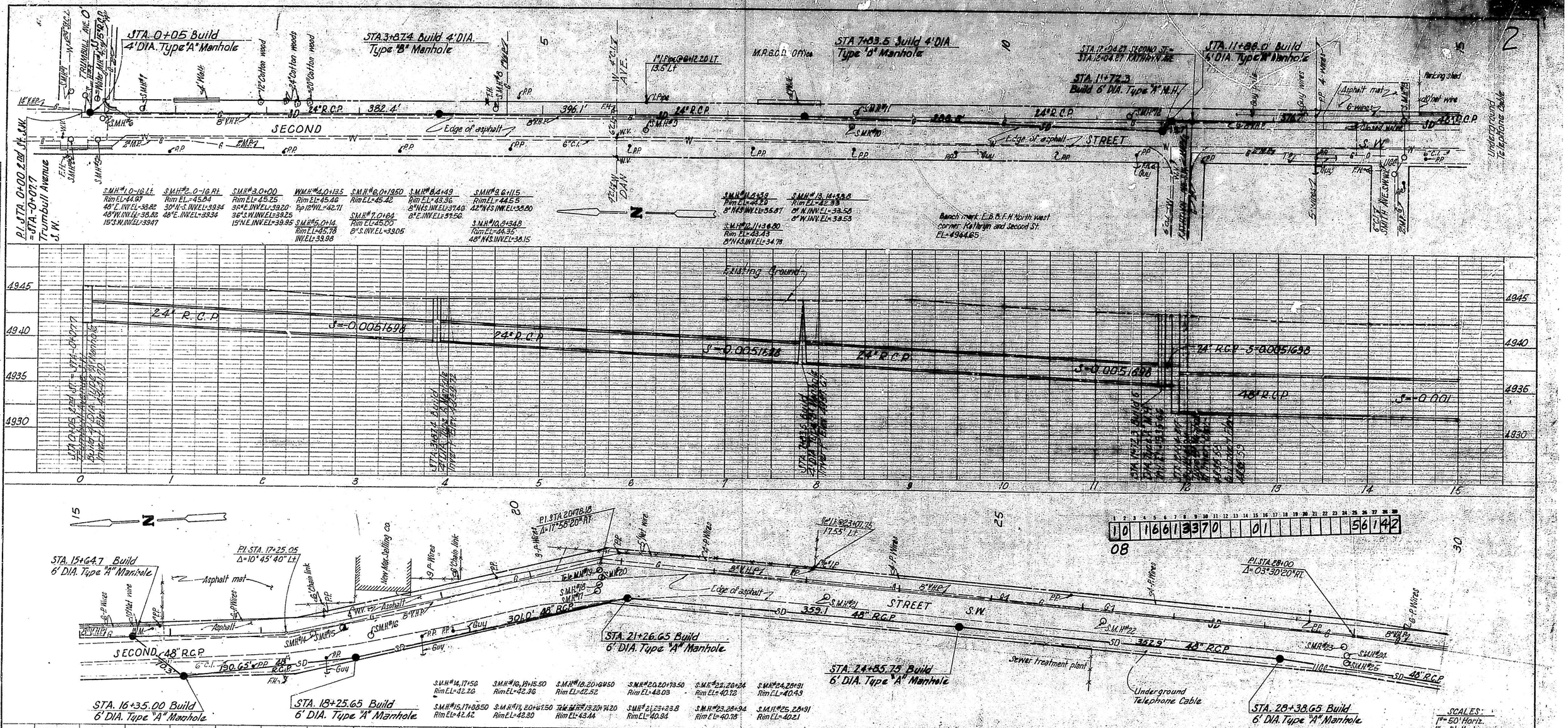
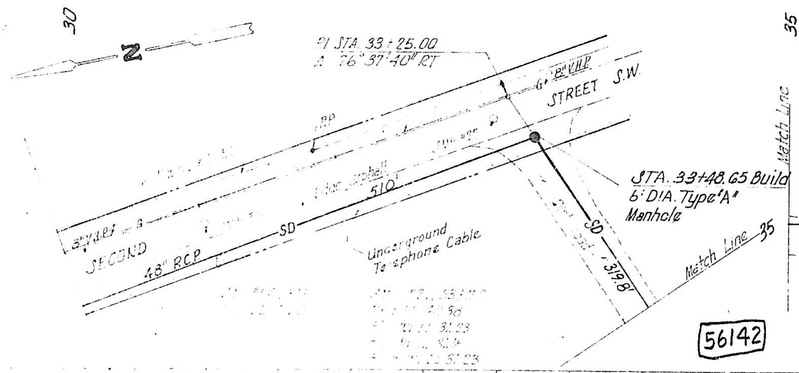
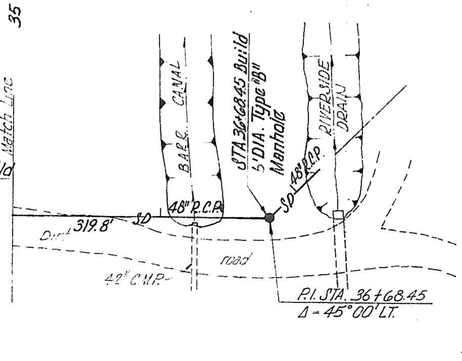



PLATE 2—PLAN—PROFILE O. P. W. & R. E.
MADE AND PRINTED IN U.S.A. CHARLES BRUNING COMPANY

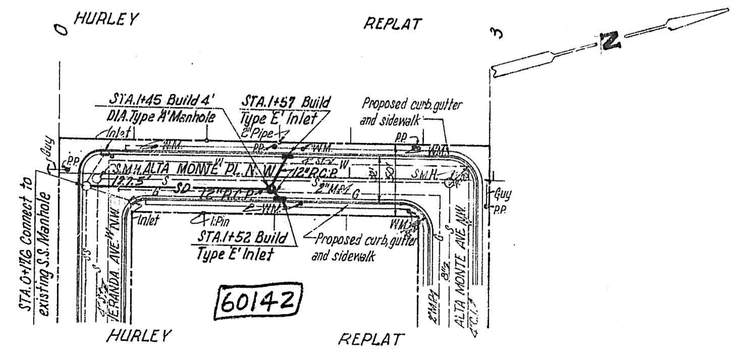
GORDON HERKENHOFF & ASSOCIATES, INC. CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A STORM DRAIN SHEET 33 OF 45

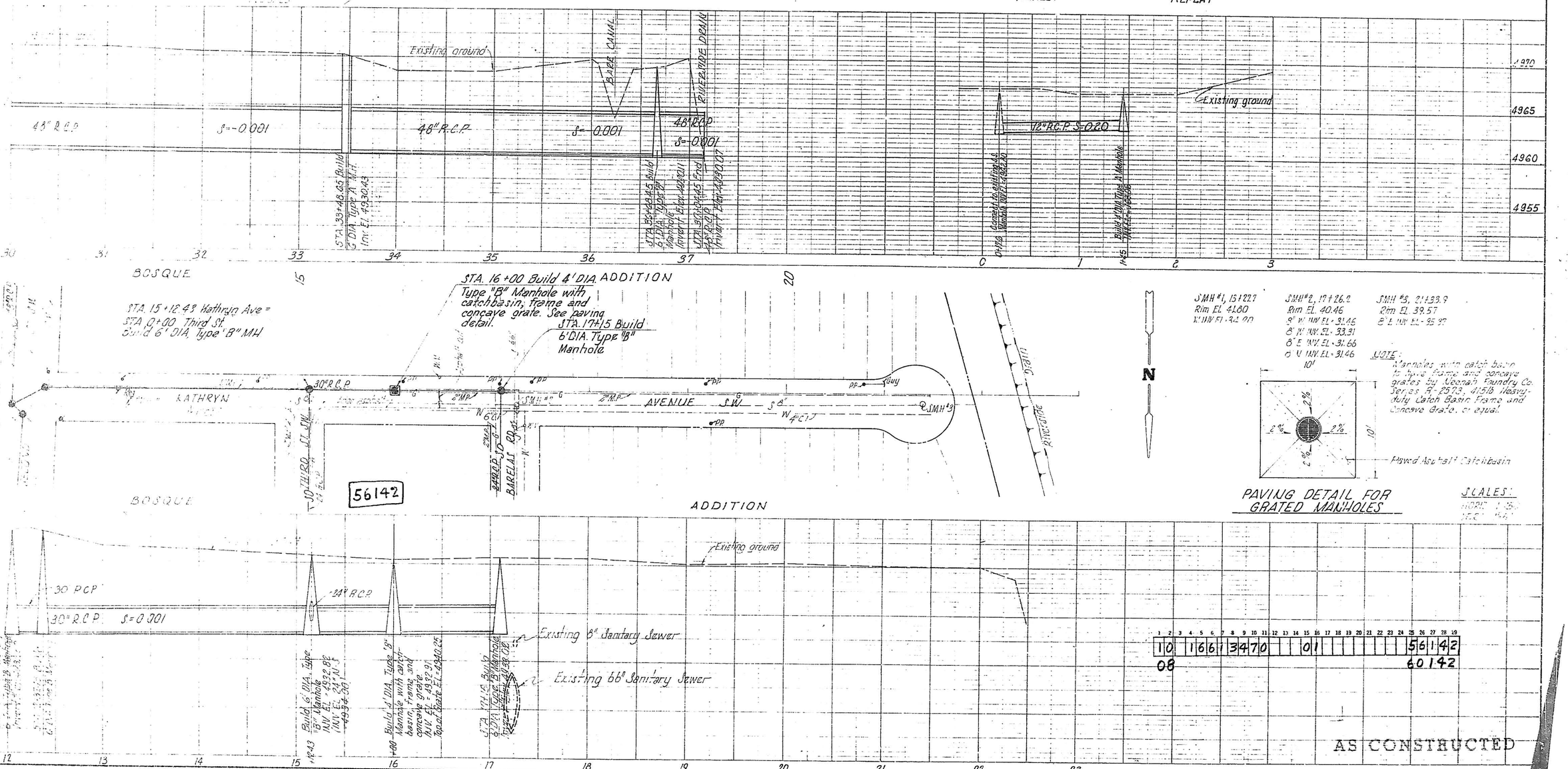



56142




60142










SMH #1, 13+22.7
Rim EL. 41.60
8" NW INV. EL. - 32.00

SMH #2, 17+26.2
Rim EL. 40.46
8" W INV. EL. - 31.46
8" N INV. EL. - 33.31
8" E INV. EL. - 31.66
8" S INV. EL. - 31.46

SMH #3, 21+33.9
Rim EL. 39.57
8" E INV. EL. - 35.27

NOTE:
Manholes with catch basin to have frame and concave grates by Neenah Foundry Co. Series R-2573. 4151B Heavy-Duty Catch Basin Frame and Concave Grate, or equal.




PAVING DETAIL FOR GRATED MANHOLES

SCALES:
HORIZ. 1"=10'
VERT. 1"=4'

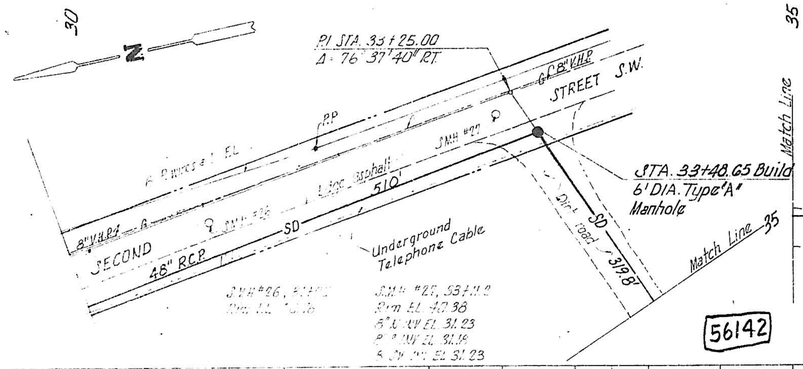


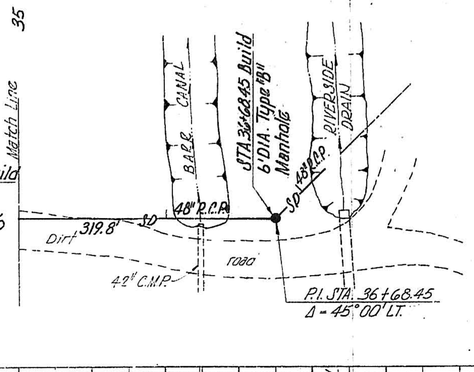

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

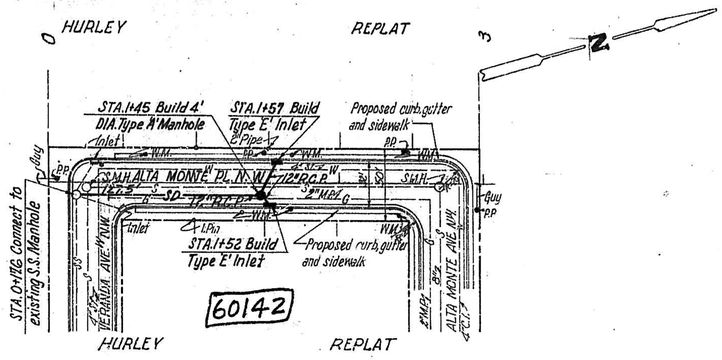
10 | 16 | 67 | 34 | 70 | | 01 | | | | | | | | | | | | | | | | | 56142

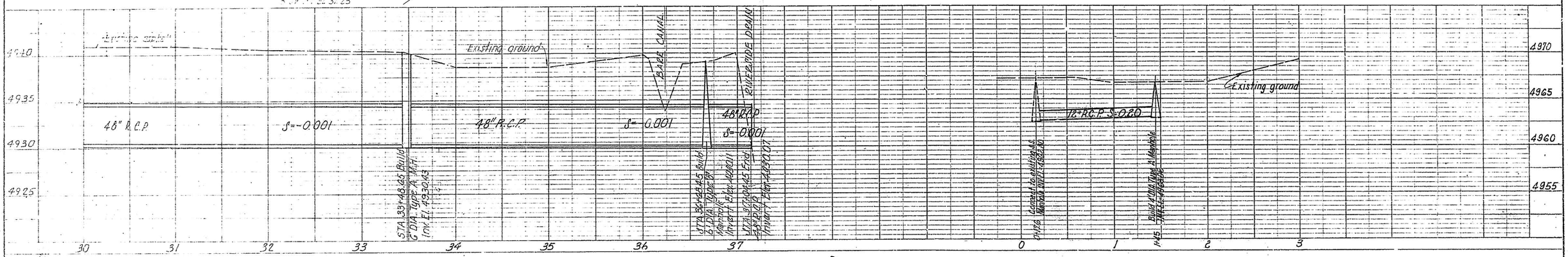
08 60142

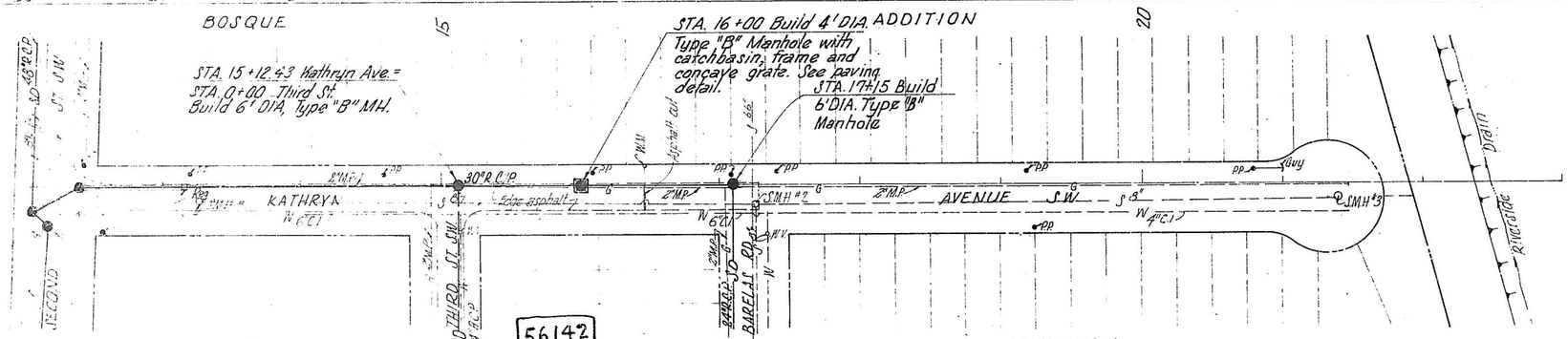
AS CONSTRUCTED

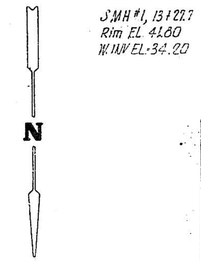


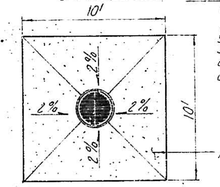




SMH #1, 13+22.7
Rim EL. 41.60
W. INV. EL. 34.20

SMH #2, 17+26.9
Rim EL. 40.46
8" W. INV. EL. = 31.46
8" N. INV. EL. = 33.31
8" E. INV. EL. = 31.66
8" N. INV. EL. = 31.46

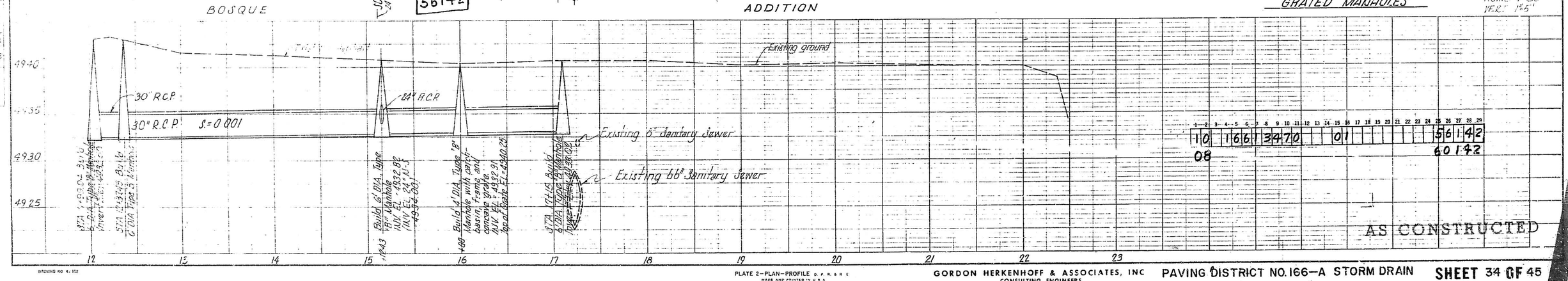
SMH #3, 21+33.9
Rim EL. 39.57
8" E. INV. EL. = 35.37

NOTE: Manholes with catch basin to have frame and concave grates by Neenah Foundry Co. Series R-2573, 41 lb. Heavy-duty Catch Basin Frame and Concave Grate, or equal.




PAVING DETAIL FOR GRATED MANHOLES

SCALES: HORIZ. 1"=50' VERT. 1"=5'




AS CONSTRUCTED

L14751-L14752-D
AS-BUILT INVERT: 18"

L14653-L14751-D
AS-BUILT INVERT: 18"

L14651-L14652-D
REMAME WITH NEW CONECTION.
AS-BUILT INVERT: 18"

L14752-L14745-D
AS-BUILT INVERT: 24"

4

U. SANCHEZ

STA. 2+60 Build double "C" Inlet

ADDITION

P.I. 1+42 Build two double "C" Inlets

STA. 5+51.05 Anderson (Back) EQUATION STA. 0+00 John St. (Ahead)

Match Line STA. 0+50

Underground Telephone Cable

Existing curb & gutter

STA. 2+00.5 Build Single "C" Inlet

Proposed curb, gutter & Sidewalk

JOHN ST. S.E.

ANDERSON

Existing Inlet

STA. 0+00 Connect to Existing Manhole

STA. 2+50 Build 4' DIA. Type "B" Manhole

STA. 2+95 Build double "C" Inlet

STA. 5+21 Build 4' DIA. Type "A" Manhole

P.I. STA. 5+91.00 Δ=96°23'20"Rt.

EAST SAN JOSE SCHOOL

56142

STA. 0+99 Build 4' DIA. Type "A" Manhole

STA. 1+90 Build 4' DIA. Type "A" Manhole

STA. 2+07.5 Build Single "C" Inlet

STA. 1+50.50 Build 4' DIA. Type "A" Manhole

S.M.H.#1 0-4
Rim El.= 44.78
8" N. INV. EL.= 36.26
10" E. INV. EL.= 37.08
10" W. INV. EL.= 37.38
8" S. INV. EL.= 36.58

S.M.H.#3 2+94.5
Rim El.= 48.59
8" N. INV. El.= 39.89
8" S. INV. El.= 39.94
10" W. INV. El.= 39.78
8" E. INV. El.= 42.69

S.M.H.#6 3+19.8
Rim El.= 49.65
Cleanout

S.M.H.#7 3+04
Rim El.= 49.49
Trunk Line W & N.E
INV. El.= 36.84

S.M.H.#8 3+24
Rim El.= 49.75
Trunk: S.W & N. El.= 36.90
8" E. INV. El.= 43.35

S.M.H.#9 0-2.58
Rim El.= 54.92
8" N. INV. El.= 47.17
10" E. INV. El.= 46.87
12" W. INV. El.= 46.91

S.M.H.#10 1+29.6
Rim El.= 53.73
8" N. INV. El.= 46.03
8" S. INV. El.= 47.84

S.S.M.H.#2 0+00
Rim El.= 44.78
15" S. INV. El.= 39.48
15" W. INV. El.= 39.48
15" NE. INV. El.= 41.38
15" SE. INV. El.= 39.68

S.M.H.#4 2+67.5
Rim El.= 49.09
E. & S.W. El.= 39.49

S.M.H.#5 2+69
Rim El.= 49.24 Cleanout

L14745-D
UPDATED FROM HINKLE STORM DRAIN PLANS (2012) = 4941.66.

L14751-D
DATUM: 4949.00 + 2.67 = 4951.67

L14752-D
DATUM: 4943.00 + 2.67 = 4945.67

L14651
MODEL INVERT: 4952.165
DATUM: 4949.50 + 2.67 = 4952.17

L14653-D
DATUM: 4949.23 + 2.67 = 4951.90

4955
4950
4945
4940

Proposed Finish Grade

Existing ground

Existing Top of pavement

18" R.C.P. J-600218

S=+0.04214

S=+0.010

24" R.C.P.

18" R.C.P.

Existing 12" Sanitary Sewer

STA. 5+40.5 Build 4' DIA. Type "A" Manhole Invert El.= 4940.00

STA. 6+42 Build 4' DIA. Type "A" Manhole Invert El.= 4940.25

STA. 0+50 Build 4' DIA. Type "A" Manhole Invert El.= 4940.50

STA. 1+90 Build 4' DIA. Type "A" Manhole Invert El.= 4940.90

STA. 2+50 Build 4' DIA. Type "A" Manhole Invert El.= 4941.30

STA. 5+40.5 Build EQUATION STA. 5+40.5 AHD

BOSQUE ADDITION BARELAS

ADDITION M. R. G. C. D.

MAP 41

STA. 1+50 Build 4' DIA. Type "B" M.H. with catch basin, frame and concave grate. (See paving detail, Sheet 34)

STA. 0+00 Build 6' Manhole

STA. 0+10 Build 6' Type "B" Manhole

P.I. STA. 3+18.18 Δ=06°02'10" LT

BARELAS

SOUTH HEAN

STA. 3+18.18 Build 4' DIA. Type "B" Manhole with catch basin, frame & concave grate.

STA. 6+00 Build 4' DIA. Type "B" Manhole

P.I. STA. 8+82.95 Δ=19°41' Rt.

RIVERVIEW ELEMENTARY SCHOOL

4' Chain Link

Gate

STA. 8+82.95 Build 4' DIA. Type "B" Manhole

STA. 10+50 Build 4' DIA. Type "B" Manhole with catchbasin, frame and concave grate.

56141

BOSQUE ADDITION BARELAS

ADDITION M. R. G. C. D.

MAP 41

SCALES
1" = 50' Horiz.
1" = 5' Vert.

PROFILE

4930
4935
4940
4925

Existing ground

24" R.C.P. S= 0.003

24" R.C.P. S= 0.003

24" R.C.P. S=0.003

24" R.C.P. S=0.003

STA. 0+00 Build 6' Manhole Invert El.= 4929.75

Build 4' DIA. Type "B" Manhole with catch basin, frame and concave grate. INV. El.= 4933.17 Top of Grate El.= 4939.75

STA. 3+18.18 Build 4' DIA. Type "B" Manhole with catch basin, frame and concave grate. INV. El.= 4933.97 Top of Grate El.= 4940.00

STA. 6+00 Build 4' DIA. Type "B" Manhole Invert El.= 4934.82

STA. 8+82.95 Build 4' DIA. Type "B" Manhole Invert El.= 4935.67

Build 4' DIA. Type "B" Manhole with catch basin, frame and concave grate. (See paving detail, Sheet 34) INV. El.= 4934.50 Top of Grate El.= 4940.25

10 16613570 01 56142
08 56141

AS CONSTRUCTED

PLATE 2 - PLAN - PROFILE
MADE AND PRINTED BY THE CHARLES BRUNING COMPANY

GORDON HERKENHOFF & ASSOCIATES, INC
CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A STORM DRAIN SHEET 35 OF 45

M. R. G. C. D. MAP 35

STA. 0+25 Tie to existing 36" R.C.P. S=0.0

2 M.H.

Hog wire Fence

257.2'

AMADO ROAD N.W.

36" R.C.P.

SD

Hog wire Fence

2 M.H.

4' Net wire Fence

P.I. STA. 5+00.90 Δ=0°24' RT.

Cor. Fence

P.I. STA. 8+89.38 Δ=104°47' LT.

Picket Fence

Cor.

6' Chain link Fence

Chain Link

6' C.I.

W.V.

S.M.H. #5

P.P.

36" R.C.P.

221.8'

36" R.C.P.

3.2.1

S.M.H. #4

S.M.H. #3

Picket Fence

2 Board Fence

2 Board Fence

5' Chain link Fence

STA. 2+75 Build 6' DIA. Type 'B' Manhole

STA. 5+00 Build 6' DIA. Type 'B' Manhole Pass 8" Sanitary Sewer Thru Manhole with 8"x8'-0" C.I. Pipe

SERENA RD.

18" Elm

24" Elm

24" Elm

4' Net Fence

4' Board Fence

STA. 8+83.33 Build 6' DIA. Type 'B' Manhole

DURANES RD.

MATCH LINE 10+00

M.R.G.C.D. MAP 35

STA. 12+05 Build 6' DIA. Type 'B' Manhole

DURANES 36" R.C.P.

RD. N.W.

318.0'

2 M.P.

6" C.I.

Dir.

Proposed curb, gutter and sidewalk this contract

12+10.44 DURANES (Back)= 0-33.80 ZICKERT PL. (AHD) Δ=108°02'20" RT

STA. 0-22.5 Build 6' DIA. Type "B" Manhole Pass 8" Janitary Sewer Line Thru Manhole with 8"x8'-0" C.I. Pipe

2 block walk

ledge

F.H.

Proposed curb, gutter and sidewalk this contract

ZICKERT PL. (AHD)

MATCH LINE 10+00

MATCH LINE 0+50

ADDITION

S.S.M.H. #6 0+00 Rim EL=57.08 42" W. INV. EL=50.18 30" E. INV. EL=50.18 36" N. INV. EL=50.28

S.M.H. #2, 0+08.2 Rim EL=57.09 24" E. INV. EL=46.38 24" W. INV. EL=46.32 8" N. INV. EL=47.27

S.M.H. #3, 5+00.90 Rim EL=59.43 E. INV. EL=50.63 N. INV. EL=50.73 S. INV. EL=50.73

S.M.H. #4, 8+83.80 Rim EL=60.41 8" N. INV. EL=52.20

S.M.H. #5, P.I. +08' Rim EL=60.15 8" E. INV. EL=52.45 8" W. INV. EL=52.45 8" NE. INV. EL=52.45

S.M.H. #6, 12+05 Rim EL=59.58 8" E. INV. EL=51.88 8" W. INV. EL=51.88 8" N. INV. EL=52.12

Bench Mark - Chiseled "X" North Bonnet Bolt Fire Hydrant Northwest Corner Zickert Pl. and Durenes. Elev. = 4961.54

Bench Mark - Chiseled "+" South Curb Durenes in line with Amado Rd. Elev. = 4957.51

M. R. G. C. D. MAP 35 ADDITION

4960 4955 4950

Existing ground

36" R.C.P. S=0.002

36" R.C.P. S=0.002

36" R.C.P. S=0.002

36" R.C.P. S=0.002

36" R.C.P. S=0.002

125' Tie to existing 36" R.C.P. S=0.0 INV. EL. 4942.83

4+75 Build 6' DIA. Type 'B' Manhole INV. EL. 4950.88

4+00 Build 6' DIA. Type 'B' Manhole S. INV. EL. 4950.68 W. INV. EL. 4951.18

4+89.38 Build 6' DIA. Type 'B' Manhole INV. EL. 4953.06

12+05 Build 6' DIA. Type 'B' Manhole INV. EL. 4962.27

0 1 2 3 4 5 6 7 8 9 10 11 12 C +50

ZICKERT ADDITION

M. R. G. C. D. MAP 35

STA. 3+00 Build Double 'C' Inlet

STA. 6+00 Build 6' DIA. Type 'B' Manhole

Proposed curb, gutter and sidewalk this contract

319.0'

18" R.C.P.

36" R.C.P.

SD

ZICKERT PLACE

302.3'

305.6'

6" C.I.

S.M.H.

36" R.C.P. N.W.

2 M.P.

I.P.

R.P.

STA. 3+00 Build Double 'C' Inlet

STA. 3+00 Build 6' DIA. Type 'B' Manhole

Proposed curb, gutter and sidewalk this contract.

ROAD N.W.

ZICKERT

STA. 12+05 Build 6' DIA. Type "B" Manhole

P.I. STA. 12+10.44 Δ=6°39'20" RT.

P.I. STA. 13+90.13 Δ=21°03'40" RT.

STA. 13+90.13 Build 6' DIA. Type "B" Manhole

STA. 16+89.06 Build 4' DIA. Type "A" Manhole.

STA. 16+97.06 Build 2-Single "C" Inlets

35°20' RT.

190.9'

SD

36" R.C.P.

DURANES

W

6" C.I.

S.M.H.

195.1'

36" R.C.P.

ROAD

N.W.

F.H.

STA. 15+88.51 Build 6' DIA. Type "A" Manhole

P.I. STA. 15+88.51 Δ=94°16'40" LT.

SCALES 1"=50' Horiz. 1"=5' Vert.

Bench Mark - Nail in Power Pole North Side Intersection Zickert Rd. and Zickert Pl. Elev. 4962.27

Bench Mark - Chiseled "+" North Bonnet Bolt Fire Hydrant Northwest Corner Zickert Pl. & Durenes Rd. Elev. 4961.54

ZICKERT ADDITION

AS CONSTRUCTED

10 166136701 59122 08

Existing Ground

Proposed Top of Curb

4960 4955 4950

36" R.C.P. S=0.002

36" R.C.P. S=0.002

36" R.C.P. S=0.002

18" R.C.P. S=0.002

36" R.C.P. S=0.002

36" R.C.P. S=0.002

4+00 Build 6' DIA. Type 'B' Manhole INV. EL=4943.36

4+00 Build 6' DIA. Type 'B' Manhole INV. EL=4953.96

4+89.38 Build 6' DIA. Type 'B' Manhole INV. EL=4953.56

12+05 Build 6' DIA. Type 'B' Manhole INV. EL=4962.27

12+90.13 Build 6' DIA. Type 'B' Manhole INV. EL=4955.06

15+51 Build 6' DIA. Type 'A' Manhole INV. EL=4955.90 SOUTH INV. EL=4956.38 EAST

16+00 Build 4' DIA. Type 'A' Manhole INV. EL=4955.5

1 2 3 4 5 6 7 8 9 12 13 14 15 15

PLAN

PROFILE

BRUNING NO. 42 182

PLATE 2 — PLAN — PROFILE C. P. B. & I. MADE AND PRINTED IN U.S.A. CHARLES BRUNING COMPANY

GORDON HERKENHOFF & ASSOCIATES INC. CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A STORM DRAIN. SHEET 36 OF 45

4

U. SANCHEZ ADDITION

STA. 0+00 Connect to Existing Manhole

STA. 2+50 Build 4'DIA. Type "B" Manhole

STA. 2+60 Build double "C" Inlet

STA. 2+95 Build double "C" Inlet

STA. 5+21 Build 4'DIA. Type "A" Manhole

EAST SAN JOSE SCHOOL

P.I. 1+42 Build two double "C" Inlets

STA. 5+51.05 Anderson (Back) EQUATION STA 0+00 John St. (Ahead)

Match Line STA 0+50

P.I. STA 5+81.05 Δ=96°23'20"Rt.

STA. 0+99 Build 4'DIA. Type "A" Manhole

STA. 1+50.50 Build 4'DIA. Type "A" Manhole

STA 2+00.5 Build Single "C" Inlet

STA. 2+07.5 Build Single "C" Inlet

JOHN ST. S.E.

Proposed curb, gutter & Sidewalk

Underground Telephone Cable

Match Line STA 0+50

S.M.H.#1 0-A
Rim El.= 44.78
8" N. INV. EL.=38.28
10" E. INV. EL.=37.88
10" W. INV. EL.=37.98
8" S. INV. EL.=36.58

S.M.H.#2 0+99
Rim El.= 44.76
15" S. INV. EL.=39.48
15" W. INV. EL.=39.48
15" NE. INV. EL.=41.38
15" SE. INV. EL.=39.68

S.M.H.#3 2+64.5
Rim El.= 48.59
8" N. INV. EL.=39.89
8" S. INV. EL.=39.94
10" W. INV. EL.=39.79
8" E. INV. EL.=42.69

S.M.H.#4 2+67.5
Rim El.= 48.09
E. & S.W. El.=39.49

S.M.H.#5 2+88
Rim El.= 48.24 Cleanout

S.M.H.#6 3+18.8
Rim El.=49.65
Cleanout

S.M.H.#7 3+04
Rim El.= 48.24
Trunk Line W & N.E. INV. EL.= 36.84

S.M.H.#8 3+24
Rim El.= 48.76
Trunk S.W. & N. EL.= 36.90
6" E. INV. EL.= 43.35

S.M.H.#9 0-2.5.8
Rim El.= 54.95
8" N. INV. EL.= 47.17
12" E. INV. EL.= 46.87
12" W. INV. EL.= 46.91

S.M.H.#10 1+80.6
Rim El.= 53.73
8" N. INV. EL.= 48.03
8" S. INV. EL.= 47.84

56142

PLAN

4355
4350
4345
4340

Existing top of pavement

Proposed Finish Grade

Existing ground

STA. 5+41.05 Back EQUATION STA 0+00 AHD

18" R.C.P. S=.00238

S=+0.02214

S=+0.010

24" R.C.P.

18" R.C.P.

Existing 12" Sanitary Sewer

STA. 2+50 Build 4'DIA. Type "B" Manhole Invert Elev. 4340.30

Existing Manhole Invert Elev. 4340.00

STA. 2+60 Build 4'DIA. Type "A" Manhole Invert Elev. 4340.00

STA. 2+95 Build 4'DIA. Type "A" Manhole Invert Elev. 4339.80

STA. 5+21 Build 4'DIA. Type "A" Manhole Invert Elev. 4339.26

STA. 0+99 Build 4'DIA. Type "A" Manhole Invert Elev. 4339.50

STA. 1+90 Build 4'DIA. Type "A" Manhole Invert Elev. 4339.30

0 1 2 3 4 5 0 1 2

BOSQUE ADDITION BARELAS ADDITION M.R.G.C.D. MAP 41

STA. 1+50 Build 4' DIA. Type "B" M.H. with catch basin, frame and concave grate. (See paving detail, Sheet 34)

STA. 3+18.18 Δ=06°02'10" LT

STA. 0+00 Build 6' DIA. Type "B" Manhole

BARELAS

SOUTHERN AVE.

PARKWAY N.W.

ROAD

RIVERVIEW ELEMENTARY SCHOOL

4' Chain Link

Gate

P.I. STA 8+82.95 Δ=19°41' RT.

STA. 3+18.18 Build 4'DIA. Type "B" Manhole with catch basin, frame & concave grate.

STA. 6+00 Build 4'DIA. Type "B" Manhole

STA. 8+82.95 Build 4'DIA. Type "B" Manhole

STA. 10+50 Build 4'DIA. Type "B" Manhole with catchbasin, frame and concave grate

56141

BOSQUE ADDITION BARELAS ADDITION M.R.G.C.D. MAP 41

PROFILE

4940
4935
4930
4925

Existing ground

24" R.C.P. S= 0.003 | 24" R.C.P. S= 0.003 | 24" R.C.P. S=0.003 | 24" R.C.P. S=0.003

Build 4'DIA. Type "B" Manhole with catch basin, frame and concave grate INV. EL. = 4933.47 Top of Grate EL. = 45.89.75

Build 4'DIA. Type "B" Manhole with catch basin, frame and concave grate INV. EL. = 4933.57 Top of Grate EL. = 4940.00

STA. 6+00 Build 4'DIA. Type "B" Manhole Invert El. = 4938.82

STA. 8+82.95 Build 4'DIA. Type "B" Manhole Invert Elev. 4936.67

Build 4'DIA. Type "B" Manhole with catch basin, frame and concave grate. Sub Dr. to North and connect 24" R.C.P. also in manhole INV. EL. = 4933.17 Top of Grate EL. = 4941.30

0 1 2 3 4 5 6 7 8 9 10 11 12

SCALES
1"=50' Hor.
1"=5' Vert.

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

10 16 61 35 70 01 56142
08 56141

AS CONSTRUCTED

PLATE 2—PLAN—PROFILE OF DRAIN
MADE AND PRINTED BY THE CHARLES BRUNING COMPANY

GORDON HERKENHOFF & ASSOCIATES, INC
CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A STORM DRAIN SHEET 35 OF 45

ALVARADO GARDENS ADDITION UNIT Nº 2

Bench mark: Chis'd top conc headwall of siphon S. side Int. Glenwood and Cambell Road EL 4970.04

NOTE: The Removal of Existing Underground Irrigation Structures Shall be Included in the Unit Price Bid For Grading.

STA. 4+30 Build 3'x3' Division Box
Inlet Invert (East) = EL. 4960.0
Outlet Invert (West) = EL. 4965.0
Outlet Invert (North) = EL. 4965.0
Install 18" Gate to North and West Outlets. Top of Box = EL. 4968.0

Stubout One Section 18" R.C.P.

POMERENK ADDITION

End 18" R.C.P. STA. 6+05
Invert EL. 4964.0

Remove Existing 12" R.C.P.

Remove Existing 15" R.C.P.

Remove Existing CONC. Box

STA. 3+86 Build 3'x3' Division Box. Inlet Invert = 4966.0. Outlet Inv. EL. 4960.0 Top of Box = EL. 4968.0

60122

ALVARADO GARDENS ADDITION UNIT Nº 3

STA. 8+60.00 - 34' Lt.
Build Type "E" Inlet

STA. 9+25
Build Single "C" Inlets

STA. 9+35 Build 4' Dia. Type "A" M.H.

STA. 10+00 Build 4' Dia. Type "B" M.H. Invert Elev. 4958.34

STA. 12+61.2 Build 4' Dia. Type "B" Manhole

STA. 13+84 Build Single "C" Inlet

STA. 14+00 Build 4' Diameter Type "A" Manhole

STA. 13+82 Build Single "C" Inlet

PROPERTY TIE STA. 4+34.73

ALVARADO GARDENS ADD. UNIT Nº 2

ALVARADO GARDENS ADDITION UNIT Nº 3

Existing Ground

Proposed Finish Grade

ALVARADO GARDENS ADDITION Nº 3

STA. 15+65 Build 2-3'x3' Division Box-East INV In = EL. 4966.20 West INV Out = EL. 4961.5 Top Box. 4968.00

STA. 16+48.1 Connect To Existing Pipe

STA. 18+12 Build Type "C" Inlets

STA. 18+65 Build 3'x3' Division Box
East Inv. In = 60.6
West Inv. Out 68.6
Top Box EL. = 67.25

STA. 15+65 Build 3'x3' Division Box-East INV In = EL. 4961.5 South Inv Out = 65.0 Top Box EL 4968.00

STA. 18+00 Build 4' Dia Type "B" Manhole

STA. 18+75 Build 3'x3' Division Box
East Inv. In = 66.6
West Inv. Out 60.6
Top Box EL. = 67.25

60121

Survey line

PROPERTY TIE STA. 15+69.86

Bench mark in nail in L.P. S.W. Corner Veranda and Glenwood EL. = 4967.77

Note: For Division Box Details See Detail Sheet 9

JESUS APODACA ADDITION

STA. 17+95 Build 2-Single "C" Inlets

STA. 17+90 Build 4' DIA. Type "A" Manhole INV. EL. = 4942.00 NO. 2

STA. 0+27 Build 4' DIA. Type "A" Manhole INV. EL. = 4941.70

U.S.C.&G.S. Bench Mark N-224-1951 N.E. Corner Trumbull & Commercial by fence corner. Elev. = 4945.23

59141

SCALES HORIZ. 1"=50 VERT 1"=5'

10 166138701 08 60122 60121 59141

Proposed Finish Grade

Existing Ground

AS CONSTRUCTED

PLATE 2—PLAN—PROFILE

GORDON HERKENHOFF & ASSOCIATES INC. CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A STORM DRAIN SHEET 38 OF 45

LIVINGSTON PLACE SUBDIVISION NO. 1

NOTE: FOR STRUCTURE DETAILS SEE SHEET 11

Existing Curb & Gutter

AVENUE N.W.

STA. 0-1+76.90 Build Type "A" Manhole

STA. 0+00 Los Arboles

STA. 0-9.45 4'DIA. Type "A" Manhole (STA. 0+00.35 Lot A-5 obs. STA. 0+00 Bm. Incline 0°. (E. Survey)

SAN ISIDRO ST. J. 32

169.2' 151.4' 103.0' 125.4' 149.1' 30°18'00" 3 M.H.P. 3 M.H.P. 3 M.H.P.

ALVARADO GARDENS ADDITION UNIT Nº 2

Bench mark: Chis. a top cone headwall of siphon 3 side inf. Glenwood and Cambell Road EL 4970.04

NOTE: The Removal of Existing Underground Irrigation Structures Shall be Included in the Unit Price Bid For Grading.

STA. 4+30 Build 3'x3' Division Box
Inlet Invert (East) = EL. 4960.0
Outlet Invert (West) = EL. 4965.0
Outlet Invert (North) = EL. 4965.0
Install 18" Gate to North and West Outlets. Top of Box = EL. 4968.0

Stubout One Section 18" R.C.P.

POMERENK ADDITION

End 18" R.C.P. STA. 6+05
Invert EL. 4964.0

ALVARADO GARDENS ADDITION UNIT Nº 3

GLENWOOD ROAD NW

Remove Existing 12" R.C.P.

Remove Existing 15" R.C.P.

Remove Existing CONC. Box

STA. 3+86 Build 3'x3' Division Box. Inlet Invert = 4966.0. Outlet Inv. EL. 4960.0
Top of Box = EL. 4968.0

STA. 8+60.00 - 34' Lt. Build Type "E" Inlet

STA. 9+25 Build Single "C" Inlets

STA. 9+35 Build 4' Dia. Type "A" M.H.

STA. 10+00 Build 4' Dia. Type "A" M.H. Invert Elev. 4958.34

STA. 12+61.2 Build 4' Dia. Type "B" Manhole

STA. 13+84 Build Single "C" Inlet

STA. 14+00 Build 4' Diameter Type "A" Manhole

STA. 13+88 Build Single "C" Inlet

PROPERTY TIE STA. 4+34.73

ORO VISTA

JESUS APODACA

STA. 17+95 Build 2-Single "C" Inlets

STA. 17+90 Build 4' DIA. Type "A" Manhole INV. EL. = 4942.00 NO. 2

TRUMBULL AVE.

Note: For Division Box Details See Detail Sheet 9

STA. 0+07 Build 4' DIA. Type "A" Manhole Inv. EL. 4941.70

U.S.C. & G.S. Bench Mark N-224-1951
N.E. Corner Trumbull & Commercial by Fence corner. Elev. = 4945.23

Bench mark in nail in L.P. S.W. Corner Veranda and Glenwood EL. = 4967.77

ALVARADO GARDENS ADDITION Nº 3

STA. 15+65 Build 2-3'x3' Division Box-East Inv In = EL 4966.20 West Inv Out = EL 4961.5 Top Box. 4968.00

STA. 16+48.1 Connect To Existing Pipe

STA. 18+12 Build Type "C" Inlets

STA. 18+65 Build 3'x3' Division Box East Inv. In=60.6 West Inv. Out 68.6 Top Box EL.=67.25

STA. 15+65 Build 3'x3' Division Box-East Inv. In = EL 4961.5 South Inv. Out = 65.0 Top Box EL=4968.00

STA. 18+00 Build 4' DIA Type "B" Manhole

STA. 18+75 Build 3'x3' Division Box East Inv. In=68.6 West Inv. Out 80.6 Top Box EL.=67.25

Survey line
3/4" I.P.
R/W
PROPERTY TIE STA. 15+69.86

60122 60121 59141

SCALES
HORIZ 1"=50
VERT 1"=5'

AS CONSTRUCTED

PLATE 2—PLAN—PROFILE

GORDON HERKENHOFF & ASSOCIATES INC.
CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A STORM DRAIN SHEET 38 OF 45

ALVARADO GARDENS ADDITION UNIT Nº 2

Benchmark: Chiseled top cone headwall of siphon 3 side ditch Glenwood and Cambell Road EL 4970.04

NOTE: The Removal of Existing Underground Irrigation Structures shall be included in the Unit Price Bid for Grading.

STA. 4+30 Build 3'x3' Division Box Inlet Invert (East) = EL. 4960.0 Outlet Invert (West) = EL. 4965.0 Outlet Invert (North) = EL. 4965.0 Install 18" Gate to North and West Outlets. Top of Box = EL. 4968.0

Stub out One Section 18" R.C.P.

Remove Existing 12" R.C.P.

POMERENK ADDITION

End 18" R.C.P. STA. 6+05 Invert EL. 4964.0

Remove Existing 15" R.C.P.

STA. 3+86 Build 3'x3' Division Box. Inlet Invert = 4966.0. Outlet Inv. EL. 4960.0 Top of Box = EL. 4968.0

Remove Existing CONC. Box & Chicken wire Fence

GLENWOOD

ROAD

60122

STA. 8+60.00 - 34' Lt. Build Type "E" Inlet

STA. 9+25 Build Single "C" Inlets

STA. 9+35 Build 4' Dia. Type "A" M.H.

STA. 10+00 Build 4' Dia. Type "B" M.H. Invert Elev. 4958.34

ALVARADO GARDENS ADDITION UNIT Nº 3

STA. 12+61.2 Build 4' Dia. Type "B" Manhole

STA. 13+84 Build Single "C" Inlet

STA. 14+00 Build 4' Diameter Type "A" Manhole

STA. 13+82 Build Single "C" Inlet

PROPERTY TIE STA. 4+34.73.

ALVARADO GARDENS ADD. UNIT Nº 2

POMERENK ADDITION

ALVARADO GARDENS ADDITION UNIT Nº 3

Existing Ground

Proposed Finish Grade

18" R.C.P. S=0.005873

18" R.C.P. S=0.0025

18" R.C.P. S=0.00625

ALVARADO GARDENS ADDITION Nº 3 2 0

STA. 15+65 Build 2-3'x3' Division Box-East INV In = EL. 4966.20 West INV Out = EL. 4961.5 Top Box. 4968.00

STA. 16+48.1 Connect To Existing Pipe

STA. 18+12 Build Type "C" Inlets

STA. 18+65 Build 3'x3' Division Box East Inv. In = 60.6 West Inv. Out 66.6 Top Box EL. = 67.25

GLENWOOD ROAD NW

18" R.C.P.

STA. 18+00 Build 4' DIA Type "B" Manhole

STA. 15+65 Build 3'x3' Division Box-East INV In = EL. 4961.5 South Inv. Out = 65.0 Top Box EL. 4968.00

STA. 18+75 Build 3'x3' Division Box East Inv. In = 66.6 West Inv. Out 60.6 Top Box EL. = 67.25

Survey line

R/W

¾" I.P.

PROPERTY TIE STA. 15+69.86

Bench mark in nail in L.P. S.W. Corner Veranda and Glenwood EL. = 4967.77

60121

Existing Ground

Proposed Finish Grade

Build 4' DIA. Type "A" Manhole INV EL. 4957.35

24" R.C.P. S=0.0045

18" R.C.P. S=0.0025

STA. 0+27 Build 4' DIA. Type "A" Manhole INV. EL. = 4941.70

Note: For Division Box Details See Detail Sheet 9

JESUS APODACA

FRUMBULL AVE.

STA. 1+05 Build 2-Single "C" Inlets

STA. 1+90 Build 4' DIA. Type "A" Manhole INV. EL. = 4942.00 NO. 2

U.S.C.&G.S. Bench Mark N-224-1951 N.E. Corner Frumbull & Commercial by Pencil corner. Elev. = 4945.23

59141

10 166 1387 0 01 08

60122 60121 59141

Proposed Finish Grade

Existing Ground

18" R.C.P. S=0.0015

AS CONSTRUCTED

SCALES HORIZ 1"=50 VERT 1"=5

PLATE 2—PLAN—PROFILE

GORDON HERKENHOFF & ASSOCIATES INC. CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A STORM DRAIN SHEET 38 OF 45

GRANDE GARDEN ADDITION

STA 3+00 Build Type "C" Inlet

STA 5+75 Build 6' DIA. Type "A" Manhole
STA 5+44 Build 3'x3' Division Box North INV. EL In = 4960.80 South INV. EL Out = 4955.70 Top Box = EL. 4963.00

Stubout One Section 18" R.C.P.

Proposed curb, gutter and sidewalk this contract

Remove Existing 15" R.C.P.

STA. 9+50 Build Type "C" Inlet

STA. 9+50 Build 4' DIA. Type "A" Manhole

Stubout One Section 18" R.C.P.

Proposed curb, gutter and sidewalk this contract

STA. 3+96.19 Zickert Rd. = STA. 9+02.80 Zickert Pl. Build 6' DIA. Type "B" Manhole

STA. 5+44 Build 3'x3' Division Box North INV. EL. In = 4955.70 South INV. EL. Out 4960.70

STA 3+00 Build 4' DIA Type A" Manhole STA 3+00 Build Type "C" Inlet

STA. 3+76 Build 6' Dia Type "A" Manhole

M.R.G.C.D. MAP 35

STA. 5+58.89 Build 6' DIA. Type "B" Manhole

59121

NOTE: The Removal of Existing Underground Irrigation Structures Shall be Included in the Unit Bid Price for Grading.

10

Stubout One Section 18" R.C.P.

M.R.G.C.D. MAP 35

STA. 0+03 Build 3'x3' Division Box West INV. EL. = 4959.50 East INV. EL. = 4955.50 Top Box EL. = 4962.00

STA. 2+05 Build 4' DIA. Type "A" Manhole

STA. 1+98 Build Single "C" Inlet

Remove Existing 15" R.C.P.

Note: For Division Box Details See Detail Sheet 9

STA. 0+12 Build 3'x3' Division Box West INV. EL. = 4955.57 TR. 208 Ø East INV. EL. = 4959.40 Top Box EL. = 4962.00

STA. 1+98 Build Single "C" Inlet

PROPERTY TIE STA. 7+17.50

Stubout One Section 18" R.C.P.

M.R.G.C.D. MAP 35

59122

NOTE: For Division Box Details see Detail Sheet

STA. 3+06.55 Durranes = STA. 15+88.51 Rice Build 6' DIA. Type "A" Manhole East INV. EL. = 4953.46 South INV. EL. = 4955.00 Stub one joint of 36" R.C.P. to West and Plug in Manhole.

Top of Proposed Grade

Existing ground

Proposed Grade

Existing Ground

36" R.C.P. S = 0.002

24" R.C.P. S = 0.002

18" R.C.P. S = 0.002

RICE & DURANES ADDITION NO. 2

STA 4+04.0 Build 2 Single "C" Inlets

STA 4+10 Build 4' DIA. Type "A" Manhole

STA 4+73.6 Build 4' DIA Type "B" Manhole

STA 6+66.50 Build 4' DIA. Type "B" Manhole

59131

Bench Mark: Chiseled X on West Curb. Rio Grande in line with Rice Ave. EL. 4961.24

S.M.H. #2 L-931 Rim EL = 59.22 8"C INV. EL = 53.67 8"W INV. EL = 53.61

S.M.H. #3 61532 Rim EL = 59.93 8"W INV. EL 54.43

STA. 7+10 End 18" R.C.P. Invert EL. 4954.00 Build Slope Paving See Detail Sheet 3

STA 3+08.80 1" Pin Survey Line

STA 3+44.13 PROPERTY TIES

STA. 0+100 ELENTH ST. = STA 0+50 CHEROKEE RD

STA. 0+08 Build 4' DIA Type "A" Manhole

WINONA

STA. 1+83 Build 4' DIA. Type "A" Manhole BLOCK 11

Match Line

ELEVENTH ST. SD 4 W.

STA. 1+08.34 Cherokee Survey Build 2-Single "C" Inlets

P.I. STA. 1+83.00 Δ = 89°36'40" Lt.

ADDITION 60142

MONK BRIDGE GARDENS ADD.

WINONA ADDITION

P.I. STA. 1+83.00 Δ = 89°36'40" Lt.

McELHENEY ADDITION

LA LUZ DR.

LA LUZ SUBDIVISION McELHENEY ADD.

60141

S.M.H. #1 STA 0+00 Rim EL = 65.37 8"C INV. EL. = 59.87 8"W INV. EL = 59.87 8"W INV. EL = 59.87

S.M.H. #2 STA 1+83.6 S. Rim EL = 65.75 8"S INV. EL = 59.40 8"W INV. EL = 59.40 12" INV. EL = 59.59 12" S.W. INV. EL = 61.59

S.M.H. #3 STA 3+21 S. Rim EL = 64.39 8"W INV. EL = 58.89 8"W INV. EL = 58.89 12" INV. EL = 59.09 12" S.W. INV. EL = 61.09

S.M.H. #4 STA 3+28.65 S. Rim EL = 64.94 8"W INV. EL = 59.44 8"W INV. EL = 59.44 12" INV. EL = 60.51 12" S.W. INV. EL = 60.51

S.M.H. #5 STA 3+28.65 S. Rim EL = 64.94 8"W INV. EL = 59.44 8"W INV. EL = 59.44 12" INV. EL = 60.51 12" S.W. INV. EL = 60.51

Bench Mark: Nail in Power Pole Northwest corner Cherokee EL. 4966.59

Proposed Finish Grade

S = 0.00333 18" R.C.P. S = 0.00333

Existing Ground

S = 0.00131 18" R.C.P. S = 0.00131

STA. 0+08 Build 4' DIA Type "A" Manhole Invert EL. 4959.39

STA. 1+45 Build 4' DIA Type "A" Manhole Invert EL. 4960.17

STA. 1+58.2 Connect to Existing Storm Sewer Manhole Existing Invert EL. 4960.09

SCALES Vert. 1" = 5' Horiz. 1" = 50'

10 16 61 39 70 01 59 12 1

08

59122
59131
60141
60142

AS CONSTRUCTED

PLATE 2 - PLAN - PROFILE

GORDON HERKENHOFF & ASSOCIATES INC. CONSULTING ENGINEERS

PAVING DISTRICT NO. 166 - A STORM DRAIN SHEET 39 OF 45

PLAN

CANDELARIA FARM AREA

STA. 5+55.6 Connect to existing Manhole

STA. 8+00 Build 4' DIA. Type 'D' M.H.

STA. 8+35 Build 2-3'x3' Division Boxes
East Box East INV. EL. 4964.80
West INV. EL. 4960.00
Top Box EL. 4967.50
West Box East INV. EL. 4960.00
West INV. EL. 4964.80
Top Box EL. 4967.50

Stubout One Section 18" R.C.P.

STA. 10+85 Trellis = Remove Existing 0-37 Veranda Build 4' DIA. Type 'B' Manhole

TRELLIS DRIVE VERANDA

30" R.C.P. SD 247.4'

30" R.C.P. SD 286.2' N.W.

Iron Pin

Fire Hydrant

Stubout One Section 18" R.C.P.

Note: For Division Box Details See Sheet 9

NOTE: The Removal of Existing Underground Irrigation Structures Shall be Included in the Unit Bid Price for Grading.

R/W Line ℄ Iron Pin ℄ Survey — PROPERTY TIE STA. 2+90.02

℄ Survey 10.00' Iron Pin R/W South Candelaria — PROPERTY TIE STA. 5+35.37

ALVARADO GARDENS ADDITION UNIT NO. 3

Bench Mark – Chiseled "D" East End of Southeast Return Trellis and Candelaria Elev. = 4964.18

PROFILE

4965 4960 4955 4950

30" R.C.P S=0.0039 — Proposed top of curb — Existing ground — 30" R.C.P S=0.0039

+55.6 Connect to existing M.H. INVEL. 4955.10

Stub Out 4' DIA Type 'B' manhole INVEL. 4956.66

Sta. 8+00 Build 4' DIA Type 'D' MH INVEL. 4956.05

Sta. 10+85 Build 4' DIA Type 'B' M.H. INVEL. 4957.16

0 1 2 3 4 5 6 7 8 9 10 11

CANDELARIA FARM AREA

STA. 0+40 Build 4' DIA Type 'B' Manhole

STA. 0+50 Build sgl. 'C' Inlet

STA. 3+75 Build 4' DIA. Type 'B' Manhole

STA. 6+80 Build 4' DIA. Type 'B' Manhole

STA. 7+00 Build Sgl. 'C' Inlet

R/W Line ℄

24" R.C.P. SD 81.6' — 15" R.C.P. — VERANDA — 24" R.C.P. SD 334.3' — 24" R.C.P. S — SD 305.3' — 15" R.C.P. — ROAD — N.W.

STA. 0+50 Build Sgl. 'C' Inlet

STA. 7+00 Build Sgl. 'C' Inlet

STA. 0-47.84 Veranda Rd. STA. 10+97.63 Trellis Dr.

℄ Survey ℄ Trellis Dr. — PROPERTY TIE

℄ Survey 25.00' R/W Line ℄ — PROPERTY TIE STA. 9+10.00

ALVARADO GARDENS ADDITION UNIT NO. 3

Bench Mark – Nail in Light Pole Southwest Corner Veranda and Glenwood Elev. = 4967.77

PROFILE

4965 4960 4955

24" R.C.P. S=0.0039 — 24" R.C.P S=0.0039 — Proposed Top of curb — Existing Ground — 24" R.C.P S=0.0039

30" INVEL. 4957.16

+40 Build 4' DIA Type 'B' manhole INVEL. 4955.46

15" Build 4' DIA Type 'B' manhole INVEL. 4955.77

+50 Build 4' DIA Type 'B' manhole INVEL. 4956.66

0 1 2 3 4 5 6 7 8 9 10 11 12

AS CONSTRUCTED

DRAWING NO. 67152

PLATE 2—PLAN—PROFILE

MADE AND PRINTED IN U.S.A. CHARLES BRUNING COMPANY

GORDON HERKENHOFF & ASSOCIATES INC. CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A STORM DRAIN SHEET 40 OF 45

RICHARDS ADDITION

STA. 0-106 Begin 18" Storm Drain Line. Inv. EL. = 4961.00 Slope. Paving See Detail sheet 9

STA. 0-31 Build 4' DIA. Type "B" Manhole Pass 8" Sanitary Sewer thru Manhole with 8'x8' C.I. Pipe. Construct Manhole with 18" Sump.

STA. 2+13 Build Single "C" Inlets

STA. 2+13 Build 4' DIA. Type "A" M.H. Invert Elev. 4962.00

ALEXANDER ROAD N.W.

CHEROKEE

GRIEGOS DRAIN

Bench Mark - Chiseled Mark on West Curb of Cherokee & E. Alexander PROPERTY TIE STA. 2+77.35 Elev. = 4966.69

60132

RICHARDS ADDITION

Proposed Finish Grade

Existing Ground

S=0.00313 18" R.C.P. S=+0.00313

4965

4960

STA. 0-31.0 Re-Build 4' DIA. Type "B" Manhole Pipe Invert Elev. 4963.23

STA. 1+46.87 Build Single "C" Inlets

STA. 2+13 Build 4' DIA. Type "A" Manhole Invert Elev. 4962.00

0 1 2 3 4

STA. 16+73.1 Build 6' DIA. Type "A" M.H.

Underground Tel. Cable

PLEASANT ACRES

STA. 19+20.77 BK. Build Single "C" Inlets.

STA. 20+75.77 Build 6' DIA. Type "A" M.H.

STA. 20+87.69 Build 6' DIA. Type "A" M.H. Pass 8" Sanitary Sewer thru Manhole with 8"x 10' C.I. Pipe. Invert Elev. 4964.14

STA. 23+00 Build Single "C" Inlets

STA. 18+27.17 Build 6' DIA. Type "A" M.H.

Traffic control

STA. 21+05.70 Build 6' DIA. Type "A" M.H.

GRIEGOS ROAD

STA. 17+46.87 Build 6' DIA. Type "A" Manhole. P.I. Δ = 13°54'50" Rt. Invert Elev. 4963.48

STA. 16+61.00 Build 6' DIA. Type "A" Manhole Pass 15" Sanity Sewer thru Manhole with 15"x 10' C.I. Pipe. Invert Elev. 4963.30

STA. 19+20.77 BK.

STA. 19+30.33 A.H. Build 6' DIA. Type "A" Manhole. P.I. Δ = 2°56' Rt. Invert Elev. 4963.83

Build 6' DIA. Type "A" Manhole STA. 20+93.30

STA. 23+00 Build 6' DIA. Type "A" Manhole. Invert Elev. 4964.57

Stub 70'36" R.C.P. S=+0.002 to North. Plug N.E. Pipe with brick and mortar

Build 6' DIA. Type "A" Manhole 20' North of Street E

Build 6' DIA. Type "A" Manhole over 12" Sanitary Sewer, Pass 12" Sanitary thru M

Stubout One Section 15" R.C.P.

Remove exist. 12" Concrete Pipe

STA. 26+65 Build 3'x3' Division Box INV. EL. E = 4967.50 INV. EL. W = 4967.10

STA. 27+34 Build 3'x3' Division Box INV. EL. E = 4970.10 INV. EL. N = 4961.50

ADDITION

S.S.M.H. #1 STA. 16+48.10 E. Lug EL. = 4969.72 8" W.S.W. INV. EL. = 4965.82 12" S. INV. EL. = 4963.92 12" E. INV. EL. = 4963.92 12" N. INV. EL. = 4964.02

S.S.M.H. #2 STA. 16+87.60 E. Lug EL. = 4970.17 10" E. INV. EL. = 4966.27 10" N.W. INV. EL. = 4966527

S.S.M.H. #3 STA. 17+42.80 W. Lug. EL. = 4970.73 10" E. INV. EL. = 4966.93 10" W. INV. EL. = 4966.93

S.S.M.H. #4 STA. 18+83.20 N.W. Lug EL. = 4969.82 10" N. INV. EL. = 4966.42 10" W. INV. EL. = 4966.42

S.S.M.H. #5 STA. 20+82.30 S. Lug. EL. = 4969.87 12" E. INV. EL. = 4964.67 12" W. INV. EL. = 4964.65 8" S. INV. EL. = 4965.27

PROPERTY TIE STA. 19+58.20

PROPERTY TIES STA. 23+80.5 and 23+90.2

STA. 27+38.00 Build Single "C" Inlets

PROPERTY TIE STA. 26+70.49

STA. 26+95 Build 6' DIA. Type "A" Manhole Pass 8" Sanitary Sewer thru Manhole with 8"x 10' C.I. Pipe Invert Elev. 4965.36

STA. 26+70 Build 6' DIA. Type "A" Manhole E. & W. Invert Elev. 4965.31 N. Invert Elev. 4965.31

NOTE: The removal of existing underground irrigation structures shall be included in the unit bid price for grading.

Existing Ground

Proposed finish Grade

4970

4965

S=+0.002 36" R.C.P. S=+0.002 36" R.C.P. S=+0.002 36" R.C.P. S=+0.002 36" R.C.P. S=+0.002 36" R.C.P. S=+0.002 36" R.C.P. S=+0.002 36" R.C.P. S=+0.002 36" R.C.P. S=+0.002

15 16 17 18 19 20 21 22 23 24 25 26 27

Right Storm Stanislaus 36" Invert Elev 4963.00 Slope. Paving see detail sheet NOTE: Storm Drain Stationing is backed from STA 9+00.77 to Alameda Drain

Build 6' DIA. Type "A" Manhole P.I. Δ = 60°47'10" Invert EL 4963.18

60151

LUKE SUBDIVISION

STA. 0-36.40 Build 4' DIA. Type "B" Manhole Pass 8" Sanitary Sewer thru Manhole with 8'x 8' C.I. Pipe. Constrict Manhole with 18" Sump

LEON COURT N.W.

18" R.C.P. 15" R.C.P. SD 124.4'

STA. 1+13 Build Single "C" Inlets

STA. 1+13 Build 4' DIA. Type "A" Manhole Invert Elev. 4961.50

Iron Pin R.W. Line ℄ Survey

PROPERTY TIE STA. 2+76.80 "T" Iron R.W. Line ℄ Survey

½" Iron Pin R/W Line

PROPERTY TIE STA. 1+99.95

½" Iron Pin R/W Line ℄ Survey

STA. 0-100 Begin 18" Storm Drain Line. Inv. El. = 4961.00 Slope Paving see detail sheet 9

GRIEGOS DRAIN

60131

LUKE SUBDIVISION

Existing Ground

Proposed Finish Grade

S=0.00234 18" R.C.P. S=+0.00234

4965

4960

STA. 0-36.40 Build 4' DIA. Type "B" Manhole Pass 8" Sanitary Sewer thru Manhole with 8'x 8' C.I. Pipe. Constrict Manhole with 18" Sump

STA. 1+13 Build 4' DIA. Type "A" Manhole Invert Elev. 4961.50

0 1 2 3

ADDITION

Bench Mark - Chiseled Mark on West Curb of Cherokee & and ℄ Alexander. Elev. = 4966.69

PROPERTY TIE STA. 0+00

60131

Survey Line Y

Old R/W

New R/W

Iron Pipe

PROPERTY TIE STA. 19+58.20

Survey Line Z

R/W Z

R=30'

PROPERTY TIES STA. 23+80.5 and 23+90.2

STA. 27+38.00 Build Single "C" Inlets

PROPERTY TIE STA. 26+70.49

P.P. Underground Tel. Conduit & Cable

Existing 12" R.C.P.

AS CONSTRUCTED

T 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

10 16 6 14 17 0 01

60132 60131 60151 08

PLATE 2 — PLAN — PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC CONSULTING ENGINEERS

PAVING DISTRICT NO. 166 - A STORM DRAIN SHEET 41 OF 45

RICHARDS ADDITION

STA. 0-106
Begin 18" Storm Drain
Line. Inv. El. = 4961.00
Slope Paving See
Detail sheet 9

STA. 0-31 Build 4' DIA. Type 'B' Manhole Pass 8" Sanitary Sewer thru Manhole with 8'x8' C.I. Pipe. Construct Manhole with 18" Sump.

STA. 2+13 Build Single 'C' Inlets

STA. 2+13 Build 4' DIA. Type 'A' M.H. Invert Elev. 4962.00

ALEXANDER ROAD

GRIEGOS DRAIN

CHEROKEE ROAD

Bench Mark ~ Chiseled Mark on West Curb of Cherokee & E. Alexander Elev. = 4966.69

PROPERTY TIE STA. 2+77.35

60132

RICHARDS ADDITION

Proposed Finish Grade

Existing Ground

S=-0.00313 18" R.C.P. S=+0.00313

STA. 0-31.0 Begin 8" Storm Drain Line Invert Elev. 4961.33

STA. 1+46.87 Build Single 'C' Inlets

STA. 2+13 Build 4' DIA. Type 'A' Manhole Invert Elev. 4962.00

STA. 16+73.1 Build 6' DIA. Type 'A' M.H.

Underground Tel. Cable

STA. 19+20.77 Bk. Build Single 'C' Inlets.

STA. 20+75.77 Build 6' DIA. Type 'A' M.H.

STA. 18+27.17 Build 6' DIA. Type 'A' M.H.

STA. 17+16.87 Build 6' DIA. Type 'A' Manhole. P.I. Δ = 13°54'50" Rt. Invert Elev. 4963.48

STA. 16+61.00 Build 6' DIA. Type 'A' Manhole Pass 15" Sanity Sewer thru Manhole with 15"x10' C.I. Pipe. Invert Elev. 4963.30

STA. 19+30.33 Ah. Build 6' DIA. Type 'A' Manhole. P.I. Δ = 2°56' Rt. Invert Elev. 4963.83

S.M.H. #6 STA. 20+63.50
S.W. Lug El. = 4971.03
12" W. Inv. El. = 4965.83
12" N. Inv. El. = 4965.75
6" N. Inv. El. = 4966.13

Flow Line STA. 19+30.33 Elev. = 4963.33

Top of Curb Elev. = 4967.33

Flow Line STA. 19+20.77 Elev. = 4963.83

Alameda Drain

36" Inv. Elev. 4963.00
Slope paving see detail sheet
NOTE: Storm Drain Stationing is backed from STA 9+00.77 to Alameda Drain

Build 6' DIA. Type 'A' Manhole P.I. Δ = 60°47'40" Invert El. 4963.13

PLEASANT ACRES ADDITION

60151

STA. 20+87.69 Build 6' DIA. Type 'A' M.H. Pass 8" Sanitary Sewer thru Manhole with 8"x10' C.I. Pipe. Invert Elev. 4964.14

STA. 23+00 Build Single 'C' Inlets

STA. 21+04.70 Build 6' DIA. Type 'A' M.H.

STA. 23+00 Build 6' DIA. Type 'A' M.H.

Build 6' DIA. Type 'A' Manhole 20' North of Street E

Build Single 'C' Inlets

Build 6' DIA. Type 'A' Manhole over 12" Sanitary Sewer. Pass 12" Sanitary thru M with 12"x10' C.I. Pipe.

GRIEGOS ROAD

Build 6' DIA. Type 'A' Manhole

STA. 23+00 Build 6' DIA. Type 'A' Manhole. Invert Elev. 4964.57

Stub 70' 36" R.C.P. S=+0.002 to North

Plug N.E. Pipe with brick and mortar

Stubout One Section 15" R.C.P.

Remove exist 12" Concrete Pipe

STA 26+65 Build 3'x3' Division Box. INV. El. E = 4967.50 INV. El. W = 4970.70

STA 27+34 Build 3'x3' Division Box. INV. El. E = 4970.70 INV. El. W = 4967.50

NOTE: The removal of existing underground irrigation structures shall be included in the unit bid price for grading.

Existing Ground

Proposed Finish Grade

36" R.C.P. S=+0.002

S=+0.002

PROFILE

4970
4965

0 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

PLATE 2 - PLAN - PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC
CONSULTING ENGINEERS

PAVING DISTRICT NO. 166 - A STORM DRAIN SHEET 41 OF 45

AS CONSTRUCTED

LUKE SUBDIVISION

6

STA. 0-36.90 Build 4' DIA. Type '5' Manhole Pass 8" Sanitary Sewer thru Manhole with 8'x8' C.I. Pipe. Construct Manhole with 18" Sump

LEON COURT

STA. 1+13 Build Single 'C' Inlets

STA. 1+13 Build 4' DIA. Type 'A' Manhole Invert Elev. 4961.50

Bench Mark ~ Chiseled Mark on West Curb of Cherokee & and E. Alexander. Elev. = 4966.6

PROPERTY TIE STA. 0+00

60131

Iron Pin R/W Line ℄ Survey

PROPERTY TIE STA 2+76.80

"T" Iron R/W Line ℄ Survey

½" Iron Pin R/W Line

PROPERTY TIE STA. 1+89.98

½" Iron Pin R/W Line ℄ Survey

STA. 0-100 Begin 18" Storm Drain Line. Inv. El. = 4961.00 Slope Paving see detail sheet 9

GRIEGOS DRAIN

S.S.M.H. #1 STA. 16+48.70
N.E. Lug El. = 4969.78
8" W.S.W. Inv. El. = 4965.82
8" S. Inv. El. = 4963.92
12" E. Inv. El. = 4963.92
12" N. Inv. El. = 4964.02

S.S.M.H. #2 STA. 16+87.60
E. Lug El. = 4970.17
10" E. Inv. El. = 4965.27
10" N.W. Inv. El. = 4965.27

S.S.M.H. #3 STA. 17+92.80
W. Lug El. = 4970.73
10" E. Inv. El. = 4966.93
10" W. Inv. El. = 4966.93

S.S.M.H. #4 STA. 18+83.20
W. Lug El. = 4969.82
10" W. Inv. El. = 4966.42
10" N. Inv. El. = 4966.42

S.S.M.H. #5 STA. 20+83.30
S. Lug El. = 4969.87
12" E. Inv. El. = 4964.67
12" W. Inv. El. = 4964.65
8" S. Inv. El. = 4965.27

PROPERTY TIE STA 19+58.40

PROPERTY TIES STA 23+90.5 and 23+90.32

STA. 27+38.00 Build Single 'C' Inlets

PROPERTY TIE STA. 26+70.49

STA. 26+95 Build 6' DIA. Type 'A' Manhole Pass 8" Sanitary Sewer thru Manhole with 8"x10' C.I. Pipe Invert Elev. 4965.36

STA. 26+70 Build 6' DIA. Type 'A' Manhole E. & W. Invert Elev. 4965.31 N. Invert Elev. 4965.31

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

1 0 1 6 6 1 4 1 7 0 0 1 6 0 1 3 2

0 8

6 0 1 3 1

6 0 1 5 1

TRACT 25b MAP 33 M.R.G.C.D.

LOS HERMANOS ADDITION

4

STA. 0+22.0 Begin 24" Storm Drain Line Invert Elev 4962.0

STA. 0+82.20 Build 4' DIA. Type "A" M.H.

STA. 1+01.60 Build 4' DIA. Type "A" M.H.

STA. 2+08 Build Type "E" Inlet

STA. 2+00 Build 4' DIA. Type "A" Manhole

STA. 2+28

Bench Mark ~ Chiseled "X" North end Median Nose on 2nd St. Between The Banes Co. and The Tempte Co. Elev. = 4968.17

P.I. STA. 5+38.44 Line "A" = STA. 0+00 Line "B"

STA. 5+56 Build Type "E" Inlet

STA. 5+33.44 Build 6' DIA. Type "A" Manhole

STA. 5+33 Build Type "E" Inlet

BANES CO.

STA. 7+50 Build 4' DIA. Type "A" Manhole

STA. 7+50 Build 2-Type "E" Inlets

TEMPTE CO.

LINE "A"

60151

P.I. STA. 9+48.14 Δ = 86°58'30" Lt.

STA. 9+43.14 Build 6' DIA. Type "A" Manhole

STA. 9+43.14 Build Type "E" Inlet

STA. 10+25.94 Build 4' DIA. Type "A" M.H.

STA. 12+54.84 Build 4' DIA. Type "A" M.H.

STA. 13+19.70 Build 4' DIA. Type "A" Manhole.

STA. 13+19.70 Build Single Inlets

STA. 13+59.70 Build 4' DIA. Type "A" Manhole

STA. 12+09.70 Line "A" = STA. 0+00 Carlton Street Survey

STA. 13+60 Build Single "C" Inlets.

CARLTON AVENUE

STREET

Edge of Asphalt

Line "A" Survey Line

Existing Curb & Gutter

Asphalt Pavement

Concrete Foundation

Chain Link Fence

Rock Slab

Guy

Telephone Cable

Existing Walk

Existing Curb & Gutter

Existing Median

Match Line

Railroad Spur

Small Inlet

Section 4 Line

Existing Ground

Proposed Finish Grade

4970

4965

4960

4955

TRACT 25b MAP 33 M.R.G.C.D. LOS HERMANOS ADDITION

Manhole to be Built on "A" Line

STA. 2+60.40 Line "B" = STA. 0+00 Las Hermanas Survey

STA. 1+07 Build Single "C" Inlets.

STA. 3+15.00 Build 4' DIA. Type "A" M.H.

STA. 0+95 LAS HERMANAS Survey Build 4' DIA. Type "A" Manhole

STA. 1+40 LAS HERMANAS Survey Build 4' DIA. Type "A" Manhole

STA. 1+45 Build Single "C" Inlets.

LINE "B"

60151

Turn Bench Mark ~ ℄ Nail STA. 5+00 Line "A" Elev. = 4968.71

TRACT 25b MAP 33 M.R.G.C.D. LOS HERMANOS ADDITION

S.M.H. #1 STA. 7+11.00
N. Lug EL. = 4944.94
48" R. INV. EL. = 39.34
48" W. INV. EL. = 39.34

S.S.M.H. #2 STA. 7+46.2
N. Lug EL. 4944.60
12" N.W. INV. EL. 40.80
12" N.E. INV. EL. 41.25
12" N. INV. EL. 40.25
12" S. INV. EL. 40.50
12" S.E. INV. EL. 41.15

S.M.H. #3 STA. 10+66.30
N. Lug EL. = 4945.55
36" R. INV. EL. 41.30
36" W. INV. EL. 41.25

Plug existing Inlet lines in Manhole No. 2

Remove & Reconstruct Single "C" Inlets

Build Single "C" Inlet

COMMERCIAL

TRUMBULL AVENUE S.E.

WILLIAM S.E.

STA. 7+45 (5' Lt of ℄) Build 6' DIA. Type "A" Manhole

56141

NOTE: For continued stations and property ties, see Paving, Sheet 15.

S.M.H. #4 STA. 10+79.00
N. Lug EL. 4945.54
(dead, full of dirt)

S.M.H. #5 STA. 10+83.30
N.E. Lug EL. 4945.77

Water Valve MH # 6 STA. 10+83.5
N. Lug EL. 4945.84

S.S.M.H. #7 STA. 11+03.50
N. Lug EL. 4946.19

Gas M.H. # 8 STA. 11+10.70
N.W. Lug EL. 4946.56

STA. 11+03.5 (Trumbull Ave.) = STA. 35+17.4 (William St.) Build 6' DIA. Type "B" Manhole on existing 36" R.C.P. Line

SCALES
Horiz. 1"=50'
Vert. 1"=5'

Existing Ground

Existing Ground Profile

Proposed finish Grade

24" R.C.P. S=0.002

24" R.C.P. S=0.0064

Exist. 36" San. Sewer

Exist. 18" Storm Sewer

4945

4940

4935

10 16 16 14 27 0 01 60151

08 56141

AS CONSTRUCTED

PLATE 2—PLAN—PROFILE

GORDON HENKENHOFF & ASSOCIATES INC.
CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A STORM DRAIN SHEET 42 OF 45

RICHARDS ADDITION

STA. 0-106
Begin 18" Storm Drain Line. Inv. EL = 4961.00
Slope Paving See Detail sheet 9

STA. 0-31 Build 4' DIA. Type 'B' Manhole Pass 8" Sanitary Sewer thru Manhole with 8'x8' C.I. Pipe. Constract Manhole with 18" Sump.

STA. 2+13 Build Single "C" Inlets

STA. 2+13 Build 4' DIA. Type "A" M.H. Invert Elev. 4962.00

ALEXANDER ROAD N.W.

GRIEGOS DRAIN

CHEROKEE ST.

Bench Mark ~ Chiseled Mark on West Curb of Cherokee & E. Alexander

PROPERTY TIE STA. 2+77.33 Elev. = 4966.69

60132

RICHARDS ADDITION

LUKE SUBDIVISION

STA. 0-36.40 Build 4' DIA. Type "B" Manhole Pass 8" Sanitary Sewer thru Manhole with 8'x8' C.I. Pipe. Constract Manhole with 18" Sump

STA. 1+13 Build Single "C" Inlets

STA. 1+13 Build 4' DIA. Type "A" Manhole Invert Elev. 4961.50

LEON COURT N.W.

CHEROKEE RD. N.W.

GRIEGOS DRAIN

PROPERTY TIE STA. 2+76.80 "T" Iron

STA. 0-100 Begin 18" Strom Drain Line. Inv. EL = 4961.00 Slope Paving see detail sheet 9

PROPERTY TIE STA. 1+39.98

PROPERTY TIE STA. 0+00

Bench Mark ~ Chiseled Mark on West Curb of Cherokee & and E. Alexander. Elev. = 4966.63

60131

LUKE SUBDIVISION

6

Proposed Finish Grade — Existing Ground

4965 — 4960

β=0.00313 18" R.C.P. S=+0.00313

S=0.002347 18" R.C.P. S=+0.002347

STA. 0-31.0 Begin 4' DIA. Type 'B' Manhole Pass 8" Sanitary Sewer thru Manhole with 8'x8' C.I. Pipe. Constract Manhole with 18" Sump. Invert Elev. = 4963.29

STA. 1+13 Build Single "C" Inlets

STA. 2+13 Build 4' DIA. Type "A" Manhole Invert Elev. 4962.00

STA. 0-100 Begin 18" Strom Drain Line. Invert Elev. 4961.00

STA. 1+39.98 Build 4' DIA. Type "A" Manhole Invert Elev. 4961.50

0 1 2 3 4

STA. 16+73.1 Build 6' DIA. Type "A" M.H.

Underground Tel. Cable

STA. 19+20.77 B.K. Build Single "C" Inlets.

STA. 19+20.77 B.K.

STA. 18+27.17 Build 6' DIA. Type "A" M.H.

STA. 20+75.77 Build 6' DIA. Type "A" M.H.

STA. 20+87.69 Build 6' DIA. Type "A" M.H. Pass 8" Sanitary Sewer thru Manhole with 8'x 10' C.I. Pipe. Invert Elev. 4964.14

STA. 23+00 Build Single "C" Inlets

STA. 21+76.70 Build 6' DIA. Type "A" M.H.

STA. 23+00 Build 6' DIA. Type "A" M.H.

STA. 23+63.50 Build 6' DIA. Type "A" M.H.

Build Single "C" Inlets

Build 6' DIA. Type "A" Manhole 20' North of Street ℄

Build 6' DIA. Type "A" Manhole over 12" Sanitary Sewer. Pass 12" Sanitary thru M. with 12"x10" C.I. Pipe.

PLEASANT ACRES ADDITION

GRIEGOS ROAD N.W.

DRAIN

SECOND STREET

ALAMEDA

Begin Storm Drain 36" Invert Elev 4963.00 Slope paving see detail sheet

NOTE: Storm Drain Stationing is backed from STA 9+50.77 to Alameda Drain

PI STA 9+20.77 Tangent Elev. 4963.83

Underground Telephone Cable

STA. 17+46.87 Build 6' DIA. Type "A" Manhole. PI Δ = 13°54'50" Rt. Invert Elev. 4963.48

STA. 16+61.00 Build 6' DIA. Type "A" Manhole Pass 15" Sanitary Sewer thru Manhole with 15"x10' C.I. Pipe Invert Elev. 4963.30

STA. 19+30.33 A.h. Build 6' DIA. Type "A" Manhole. PI Δ = 2°36' Rt. Invert Elev. 4963.83

S.M.H. "6" STA. 26+63.50
S.W. Lug EL = 4971.03
12"E. INV. EL = 4965.83
12"W. INV. EL = 4965.75
8"N. INV. EL = 4966.13

STA. 19+20.77 B.K.

STA. 20+00 Build 6' DIA. Type "A" Manhole. Invert Elev. 4964.57

STA. 23+00 Build 6' DIA. Type "A" Manhole

STA. 20+93.30

S.M.H. "7" STA. 24+94.70
S.W. Lug EL = 4971.19
12"W. INV. EL = 4966.09
12"E. INV. EL = 4966.49
8"S. INV. EL = 4966.39

Stub 70'36" R.C.P. S=+0.002 to North. Plug N.E. Pipe with brick and mortar

ADDITION

S.M.H. "1" STA. 16+48.70
N.E. Lug EL = 4969.72
8"W.S.W. INV. EL = 4965.82
12"S. INV. EL = 4963.92
12"E. INV. EL = 4963.92
12"N. INV. EL = 4964.02

S.M.H. "5" STA. 20+83.30
S. Lug EL = 4969.87
12"E. INV. EL = 4964.67
12"W. INV. EL = 4964.65
8"S. INV. EL = 4965.27

S.S.M.H. "2" STA. 16+87.60
E. Lug EL = 4970.17
10"E. INV. EL = 4965.27
10"N.W. INV. EL = 4965.27

S.S.M.H. "3" STA. 17+42.80
W. Lug EL = 4970.73
10"E. INV. EL = 4966.93
10"W. INV. EL = 4966.93

S.S.M.H. "4" STA. 18+03.20
N.W. Lug EL = 4969.82
10"N. INV. EL = 4966.42
10"W. INV. EL = 4966.42

Division Box INV. EL. E = 4967.50 INV. EL. W = 4970.10

STA. 26+65 Build 3'x3'

Division Box INV. EL. E = 4970.10 INV. EL. W = 4967.50

STA. 27+94 Build 3'x3'

Stubout One Section 15" R.C.P.

Build Single "C" Inlets

STA. 26+95 Build 6' DIA. Type "A" Manhole Pass 8" Sanitary Sewer thru Manhole with 8'x 10' C.I. Pipe Invert Elev. 4965.36

STA. 26+10 Build 6' DIA. Type 'A' Manhole E. & W. Invert Elev. 4965.31 N. Invert Elev. 4965.31

PROPERTY TIES STA 23+80.5 and 23+90.32 STA. 27+38.00

PROPERTY TIE STA. 26+70.45

PROPERTY TIE STA 19+58.40

PROPERTY TIE STA. 2+76.80

NOTE: The removal of existing underground irrigation structures shall be included in the unit bid price for grading.

Existing Ground — Proposed Finish Grade

4970 — 4965

5'+0.002 — 36" R.C.P. — S=+0.002 — 35" R.C.P. — 36" R.C.P. — 36" R.C.P. — 36" R.C.P. — 36" R.C.P. — S=+0.002 — 36" R.C.P. — S=+0.002

15 16 17 18 19 20 21 22 23 24 25 26 27

PROFILE

PLAN

T 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

10 08 16 6 11 14 17 0 01 60132 60131 60151

AS CONSTRUCTED

PLATE 2 — PLAN — PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC CONSULTING ENGINEERS

PAVING DISTRICT NO. 166 - A STORM DRAIN SHEET 41 OF 45

TRACT 25b MAP 33 M.R.G.C.D. LOS HERMANOS ADDITION

4

STA 0-22.0 Begin 24" Storm Drain Line Invert Elev 4962.0

STA. 0+82.20 Build 4' Dia. Type "A" M.H.

STA. 1+01.80 Build 4' Dia. Type "A" M.H.

STA. 2+08 Build Type "E" Inlet

STA. 2+00 Build 4' DIA. Type "A" Manhole

STA. 5+33.44 Build 6' DIA. Type "A" Manhole

STA. 5+56 Build Type "E" Inlet

STA. 5+33 Build Type "E" Inlet

STA. 7+50 Build 4' DIA. Type "A" Manhole

STA. 7+50 Build 2-Type "E" Inlets

STA. 9+43.14 Build 6' DIA. Type "A" Manhole

STA. 9+43.14 Build Type "E" Inlet

STA. 10+25.34 Build 4' DIA. Type "A" M.H.

STA. 12+64.86 Build 4' DIA. Type "A" M.H.

STA. 13+19.70 Build 4' DIA. Type "A" Manhole.

STA. 13+19.70 Build Single Inlets

STA. 13+59.70 Build 4' DIA. Type "A" Manhole

STA. 12+09.70 Line "A" = STA. 0+00 Carlton Street Survey

STA. 13+60 Build Single "C" Inlets.

P.I. STA. 5+38.44 Line "A" = STA. 0+00 Line "B"

P.I. STA. 9+48.14 Δ = 86°58'30" Lt.

Bench Mark ~ Chiseled "X" North end Median Nose on 2nd St. Between The Banes Co. and The Tempte Co. Elev. = 4968.17

LINE "A"

BANES CO.

TEMPTE CO.

CARLTON STREET N.W.

60151

Existing Ground

Proposed Finish Grade

24" R.C.P. S=0.002

24" R.C.P. S=0.0064

TRACT 25b MAP 33 M.R.G.C.D. LOS HERMANOS ADDITION

Manhole to be Built on "A" Line

STA. 2+60.40 Line "B" = STA 0+00 Las Hermanas Survey

STA. 1+07 Build Single "C" Inlets.

LAS HERMANAS STREET N.W.

STA. 3+15.00 Build 4' DIA. Type "A" M.H.

STA. 0+95 LAS HERMANAS Survey Build 4' DIA. Type "A" Manhole

STA. 1+40 LAS HERMANAS Survey Build 4' DIA. Type "A" Manhole

LINE "B"

60151

Turn Bench Mark ~ ℄ Nail STA. 5+00 Line "A" Elev. = 4968.71

S.M.H. #1 STA. 7+11.00
N. Lug EL. = 4944.94
48" N. INV. EL. = 39.34
48" W. INV EL = 39.34

S.S.M.H. #2 STA. 7+46.2
N. Lug EL. 4942.60
12" NW. INV. EL. 40.80
12" N.E. INV. EL. 40.25
12" N. INV. EL. 40.25
12" S INV. EL. 40.50
12" S.E INV. EL. 41.15

S.M.H. #3 STA. 10+66.20
N. Lug EL. = 4945.55
36" N. INV. EL. 41.30
36" W. INV. EL. 41.25

STA. 7+45 (5' Lt of ℄) Build 6' DIA. Type "A" Manhole

Plug existing Inlet lines in Manhole No. 2

Remove & Reconstruct Single "C" Inlets

COMMERCIAL

TRUMBULL AVENUE S.E. 24" R.C.P.

WILLIAM ST. S.E.

56141

NOTE: For continued stations and property ties, see Paving, Sheet 15.

S.M.H. #4 STA. 10+79.00
N. Lug EL. 4945.52
(dead, full of dirt)

S.M.H. #5 STA. 10+83.30
N.E. Lug EL. 4945.77

Water Valve MH #6 STA. 10+89.5
N. Lug EL. 4945.84

S.S.M.H. #7 STA. 11+03.50
N. Lug EL. 4946.19

Gas M.H. #8 STA. 11+10.70
N.W. Lug EL. 4946.56

SCALES
Horiz. 1"=50'
Vert. 1"=5'

AS CONSTRUCTED

PLATE 2—PLAN—PROFILE

GORDON HERKENHOFF & ASSOCIATES INC.
CONSULTING ENGINEERS

PAVING DISTRICT NO. 166-A STORM DRAIN SHEET 42 OF 45

PLAN

PROFILE

P.I. STA 2+08.05 Δ=05°15'20" Lt.

P.I. STA 3+09.93 Δ=05°45'20" Rt.

P.I. STA 4+68.84 Δ=03°29'30" Rt.

P.I. STA 5+84.40 Δ=04°09'10" Lt.

BANES CO.

STA. 9+00 Build 4' DIA. Type "A" Manhole

STA. 11+94 End 18" R.C.P. INV. EL. = 4967.75

4

S.M.H. STA 11+13.5
S.W. Lug EL. = 67.65
12"E. INV. EL. = 63.10
15 S. INV. EL. = 62.43
15 N. INV. EL. = 61.47

INLET GRATE STA 2+08.05
TAR. EL. = 69.34
24"E INV. EL. = 65.81
24"W INV. EL. = 65.84

S.S.M.H. STA 3+09.93
W. RIM EL. = 70.04
24"E INV. EL. = 66.16
24"W INV. EL. = 66.16

M.H. Box STA 4+03
Box EL. = 70.20
24"E INV. EL. = 66.55
24"W INV. EL. = 66.20

S.S.M.H. STA 4+68.96
S.T. A. INV. = 66.85

A.T. & S.F. RAILROAD

BIG 3 WELDING BUILDING

BANES COMPANY BUILDING

Asphalt Lot

Building

Asphalt Pad

Metal Building

Concrete Pad

Asphalt Driveway

Waste Ditch

Wood Box

Chain Link Fence

Dirt

R.R. Spur

Remove Existing 24" C.M.P.

Remove Existing 12" C.M.P.

315.3'

293.7'

60151

STA. 5+84.40
Remove Existing Concrete Headwall. Build 4' DIA. Type "A"

LINE "C"

Begin 18" R.C.P. INV. EL. = 4967.33

NOTE: The Cost of Removing 24" and 12" C.M.P. shall be included in the Unit Price Bid for 18" R.C.P. The 24" and 12" C.M.P. is to be removed without damaging and is the property of the Banes Co. The pipe shall be stored at the location designated by the Engineer.

Bench Mark - Chiseled "a" East end of concrete "W" Box EL. = 70.07

Chiseled "a" West end of concrete fence foundation. EL. = 4970.13

Existing Ground

Top of Fill Elevation 1 Foot Minimum over Pipe

18" R.C.P. S=0.00069

Top of Rail Road

4970
4965
4960

Build 4' DIA. Type "A" Manhole INV. EL. = 4966.33

Existing 24" C.M.P. Type

Build 4' DIA. Type "A" Manhole INV. EL. = 4967.55

Existing 24" C.M.P. Type

Existing 24" C.M.P. Type

Existing 24" C.M.P. Type

Existing 12" C.M.P. Type

Existing 24" C.M.P. Type

Existing 24" C.M.P. Type

Existing 24

4

P.I. STA 2+08.05 Δ=05°15'20" Lt

P.I. STA 3+09.93 Δ=05°43'20" Rt

P.I. STA 4+68.84 Δ=03°23'30" Rt

P.I. STA. 5+84.40 Δ=04°09'10" Lt

BANES CO.

STA. 9+00 Build 4' DIA. Type "A" Manhole

STA. 11+94 End 18" R.C.P. INV. EL. = 4967.75

S.M.H. STA 1+13.5
S.W. Lug EL. = 67.65
12" E. INV. EL. = 65.10
15" S. INV. EL. = 62.43
15" W. INV. EL. = 61.17

INLET GRATE STA 2+08.05
TOP EL. = 69.34
24" E. INV. EL. = 65.81
24" W. INV. EL. = 65.84

S.S.M.H. STA 3+09.93
W. RIM EL. = 70.04
24" W. INV. EL. = 66.16
24" W. INV. EL. = 66.16

M.H. Box STA 9+03
Box EL. = 70.70
24" S. W. EL. = 66.50
24" W. INV. EL. = 66.50

S.S.M.H. STA 4+68.84
24" W. INV. EL. = 70.17
24" E. W. INV. EL. = 66.86

60151

STA. 5+84.40 Remove Existing Concrete Headwall. Build 4' DIA. Type "A" Manhole. Begin 18" R.C.P. INV. EL. = 4967.33

LINE "C"

NOTE: The Cost of Removing 24" and 12" C.M.P. shall be included in the Unit Price Bid for 18" R.C.P. The 24" and 12" C.M.P. is to be removed without damaging and is the property of the Banes Co. The pipe shall be stored at the location designated by the Engineer.

Beach Mark - Chisled 'a' East end of concrete fence Foundation. EL. = 4970.13

Remove Existing 24" C.M.P.

Remove Existing 12" C.M.P.

Remove Existing 24" C.M.P.

315.3'

293.7'

Asphalt Lot

Building

Asphalt Pad

Metal Building

Waste Ditch

Metal Bldg.

Concrete Bed

Asphalt Driveway

Concrete Curb

Dirt

R.R. Spur

SECOND STREET

A.T. & S.F. RAILROAD

Existing Ground

Top of Fill Elevation 1 Foot Minimum over Pipe

18" R.C.P. S=0.00069

50'0" Railroad

4970
4965
4960

PLAN

STA. 0+00 Third St. = STA. 15+12.43 Kathryn Ave. 6' DIA. Type "B" Manhole (See Sheet 32)

STA. 3+50 Build 4' DIA. Type "B" Manhole with catchbasin, frame and concave grate. See sheet 34 for paving detail.

STA. 3+75 Build 4' DIA. Type "B" Manhole with catchbasin, frame and concave grate. See Sheet 34 for paving detail.

STA. 6+50 Build 4' DIA. Type "B" Manhole

SOUTHERN AVE.

KATHRYN AVENUE S.W.

THIRD STREET S.W.

DAN AVENUE

24" R.C.P.

56142

08 56142

SCALES:

Existing Profile - Oil

Top of Grate EL. = 4941.90

Top of Grate EL. = 4943.78

24" R.C.P. S.=0.003%

24" R.C.P. S.=0.0031

24" R.C.P. S.=0.0031

9" San Sewer

8" San Sewer

Build 4' DIA. Type "B" Manhole with catchbasin, frame and concave grate. INV. EL. = 4937.59

Build 4' DIA. Type "B" Manhole INV. EL. = 4936.02

Build 4' DIA. Type "B" Manhole with catchbasin, frame and concave grate. INV. EL. = 4937.02 (Terminal)

4945
4940
4935

PROFILE

AS CONSTRUCTED

PLATE 2 PLAN PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC
CONSULTING ENGINEERS

PAVING DISTRICT 166-A STORM DRAIN

SHEET 43 OF 45

GLENDALE ADDITION

4

DRAIN

ALAMEDA

SLOPE PAVING

STREET N.W.

SANDIA ROAD N.W.

Note: For Grade Paving Detail See Sheet 9

STA. 3+00 Build Type 'E' Inlet

STA. 3+00 Build 4' DIA. Type 'B' Manhole

Proposed curb, gutter and sidewalk this contract

STA. 9+01.39 Build Type 'E' Inlet

STA. 9+01.39 Build 4' DIA. Type 'A' Manhole

STA. 0-20 Build 4' DIA. Type 'B' Manhole 12" Sewer to be installed through Manhole in 12" C.I.P. x 8'

STA. 3+00 Build Type 'E' Inlet

Proposed curb, gutter and sidewalk this contract

STA. 9+01.39 Build Type 'E' Inlet

Bench mark '4' S.B.B. F.H. on N. side of Cul De Sac Sandia Rd. and A.T. and S.F. R.R. El. = 4977.30

61151

GLENDALE ADDITION

proposed finish grade

Existing ground

18" R.C.P. S=0.003

12" R.C.P. S=0.003

18" R.C.P. S=0.003

STA. 0+20 Build 4' DIA. Type 'B' Manhole Inv. El. = 4966.38

Build 4' DIA. Type 'B' Manhole Inv. El. = 4967.32

STA. 9+01.39 Build 4' DIA. Type 'A' Manhole Inv. El. = 4963.02

4980 4975 4970 4965

0 1 2 3 4 5 6 7 8 9 10

LOS HERMANOS ADDITION

STA. 1+93 Build Single "C" Inlet

STA. 2+00 Build 4' DIA. Type "A" Manhole

Underground TEL. Conduit and Cable

STA. 20+89 Griegos Rd. 6' DIA. Type 'A' Manhole

STA. 20+94 Griegos Rd. = STA. 4+49.5 Las Hermanos St. Build 6' DIA. Type "A" Manhole

LAS HERMANOS STREET N.W.

BELL ROSE RD

442.04

185.37

166.12

STA. 1+98 Build Single "C" Inlet

60151

Bench Mark - Nail in South Side of Power Pole Intersection of Las Hermanos and Griegos Rd.

Elev 4972.3

LOS HERMANOS ADDITION

AS CONSTRUCTED

Existing Ground

Proposed finish grade

24" R.C.P. S=-0.002

STA. 1+98 Build 6' DIA. Type 'A' Manhole Inv. El. = 4964.96

STA. 4+49.5 Build 6' DIA. Type 'A' Manhole Inv. El. = 4964.20

4970 4965 4960

0 1 2 3 4 5 6 0 1 2 3 4 5

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

1 0 1 6 6 1 4 4 7 0 0 1 6 1 1 5 1

0 8 60151

PLATE 2 PLAN-PROFILE

GORDON HERKENHOFF & ASSOCIATES INC.
CONSULTING ENGINEERS

PAVING DISTRICT NO. 166 - A STORM DRAIN SHEET 44 OF 45

STA. 0+23.7 BEGIN 36" R.C.P. INV. EL = 5086.00

BEGIN CONSTRUCTION STA. 0+00

CURVE DATA FOR ASPHALT CURB REVERSE CURVE
Δ = 31°17'06" L = 131.45'
D = 23.802.8° T = 67.40'
R = 240.71'

ASPHALT CURB STA. 0+06 to 2+50

BUILD DOUBLE C' INLETS

BEGIN NEW CURB AND GUTTER 2+50

STA 3+00 BUILD 6' DIA. TYPE 'B' MANHOLE INV. EL = 86.15

STA. 3+50 BUILD 6' DIA. TYPE 'B' MANHOLE INV. EL = 86.88

BEGIN NEW CONC. CURB & GUTTER STA. 2+00

ASPHALT CURB STA. -0+06 to 2+00

STA. 4+00 BUILD 6' DIA. TYPE 'B' MANHOLE INV. EL = 87.02

Remove East 100' of existing guard rails and relocate

CURVE DATA REVERSE CURVE SOUTH CURB STA 0+06 to 5+00
Δ = 2°58'43" T = 125.09
D = 1.19095° R = 4810.54'
L = 250.01'

Bench Mark: Chiseled 'I' Northeast Corner Concrete Channel Lining on North Diversion Channel. EL 5085.70

Company Easement

BUILD DOUBLE C' INLETS

24" Steel Band
30" R.C.P. ±2
3/4" Anchor Bolts (2 ea. Side)
12"
Existing Slope Paving

STORM SEWER ANCHOR DETAIL AT STA. 0+23.7

INTERSTATE | INDUSTRIAL | TRACT

OSUNA ROAD N.E.

℄ Survey and R/W

150' Public Service R/W Line

2316.02'

Existing Ground
North Top Curb
South Top Curb
+0.15 %
+1.75 %
+1.01 %
+1.07 %

PVI EL = 5096.08
PVI EL = 5095.16
PVI EL = 5094.55
PVI EL = 5095.00
PVI EL = 5107.46
PVI EL = 5107.32
PVI EL = 5103.17
PVI EL = 5103.08
PVI EL = 5107.15
PVI EL = 5110.75

ACADEMY INDUSTRIAL PARK UNIT NO. 1

STA. 25+99.65 Iron Pin
7' Easement
139.87'
STA. 27+00 ℄ 36' Driveway
STA. 26+25'
STA. 25+55
STA. 23+20
STA. 21+80
STA. 11+70
R = 38'
R = 15'

TYPICAL STREET SECTION STAGE CONSTRUCTION

22' Asphalt Paving | 76' Asphalt Curb | 22' Asphalt Paving
21' | 74' | 21'

Notes:
1. All curb returns to have 14' radii unless otherwise noted.
2. Elevations are to top of curb unless otherwise indicated.

SCALES
Horiz: 1" = 50'
Vert: 1" = 10'

PLAN — HOR. SCALE 1" = 50' — DRAWN — TRACED — CHECKED — NOTE BOOK — SUBMITTED — NO. OF SHEETS

PROFILE — HOR. SCALE 1" = 50' — VERT. SCALE 1" = 5' — DRAWN — TRACED — CHECKED — NOTE BOOK — SUBMITTED — NO. OF SHEETS

BRUNING NO. 42 192

PLATE 2—PLAN—PROFILE

PAVING DISTRICT NO. 166—C SHEET 9 OF 14

STA. 0+23.7 BEGIN 36" R.C.P. INV. EL = 5086.00

BEGIN CONSTRUCTION STA. 0+00

ASPHALT CURB STA. 0+06 to 2+50

Concrete Channel Liner

New location of guard rail

30' Laydown Driveway

36" R.C.P.

S = 0.0027

36' E to E North Diversion Channel Bridge

Guard Rail

Sidewalk

1°19'

New location of guard rail

Remove East 100' of existing guard rails and relocate

Eq. Joint

CURVE DATA RELERSE CURVE
SOUTH CURB STA 0+00 to 5+00
Δ = 2°58'43" T = 125.09
D = 1.19095° R = 4810.94'
L = 250.01'

CURVE DATA FOR ASPHALT CURB REVERSE CURVE.
Δ = 31°17'06" L = 131.43'
D = 23.8028° T = 67.40'
R = 240.71'

BEGIN NEW CURB AND GUTTER 2+50

STA. 3+00 BUILD 6' DIA. TYPE 'B' MANHOLE INV. EL. = 86.75

STA. 3+50 BUILD 6' DIA. TYPE 'B' MANHOLE INV. EL. = 86.88

BEGIN NEW CONC. CURB & GUTTER STA. 2+00

Laydown Driveway R=5

ASPHALT CURB STA. 0+06 to 2+00

Bench Mark: Chiseled □ Northeast Corner Concrete Channel Lining on North Diversion Channel. EL. 5085.70

Company Easement

BUILD DOUBLE 'C' INLETS

INTERSTATE

CURVE DATA STA. 2+50 to 5+00
Δ = 5°02'18" L = 250.30' T = 125.23'
D = 2.01291° R = 2846.41'

BUILD DOUBLE 'C' INLETS

3+20 3+70 4+20

18" R.C.P. 36" R.C.P. 18" R.C.P.

S = 0.0028

STA. 4+00 BUILD 6' DIA. TYPE 'B' MANHOLE INV. EL. = 87.02

INDUSTRIAL TRACT

150' Public Service R/W Line

MH. 18" 15" S 22' 150' 75' 16'

2263.19'

OSUNA

℄ Survey and R/W

R=38'

STA. 10+20

STA. 11+70

ROAD N.E.

2316.02'

R/W Line

14" Steel Band

36" R.C.P. 2-2

3/4" Anchor Bolts (2 ea. Side)

12" Existing Slope Paving

STORM SEWER ANCHOR DETAIL AT STA. 0+23.7

N

INTERSTATE INDUSTRIAL TRACT

5100 5090 5085

+1.00% +0.45% +1.10%

Existing Ground

North Top Curb

PVC EL = 5092.70 PVI 100' VC MID = 5093.13 (5093.70) PVT EL = 5093.70

PVC EL = 5092.28 PVI 200' VC MID = 5093.18 (5093.80) PVT EL = 5093.70

PVC EL = 5093.70 PVI 200' VC MID = 5095.16 (5095.00) PVT EL = 5096.08

-0.30% -0.45% +0.45%

Existing Ground

South Top Curb

PVC EL = 5092.28 PVI 200' VC MID = 5093.18 (5093.00) PVT EL = 5093.18

PVC EL = 5093.18 PVI 200' VC MID = 5095.16 (5095.00) PVT EL = 5096.08

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

INTERSTATE INDUSTRIAL TRACT

ACADEMY INDUSTRIAL PARK UNIT NO. 1

STA. 25+94.65 Iron Pin

11' Easement

R/W Line

139.87'

OSUNA

℄ Survey and R/W

STA. 21+80 R=38'

STA. 23+20 R=38'

ROAD N.E.

STA. 26+25' R=15

STA. 25+55

℄ Guardrail STA. 27+00

TYPICAL STREET SECTION
STAGE CONSTRUCTION V

22' Asphalt Curb 26' 22'
21' Asphalt Paving 74' 21' Asphalt Paving

Notes:
1. All curb returns to have 14' radii unless otherwise noted
2. Elevations are to top of curb unless otherwise indicated.

N

INTERSTATE INDUSTRIAL TRACT

SCALES
Horiz: 1" = 50'
Vert: 1" = 10'

5110 5100 5090 5120 5110 5100

+1.077% +1.15% +1.75%

Existing Ground

North Top Curb

South Top Curb

PVC EL = 5107.32 PVI 200' VC MID = 5109.17 (5109.00) PVT EL = 5110.75

PVC EL = 5107.32 PVI 200' VC MID = 5109.17 (5109.00) PVT EL = 5110.75

15 16 17 18 19 20 21 22 23 24 25 26 27

PLAN — SURVEYED, PLOTTED, NOTE BOOK, NO. ___, DATE, BY, ALIGNMENT CHECKED, RT. OF WAY CHECKED

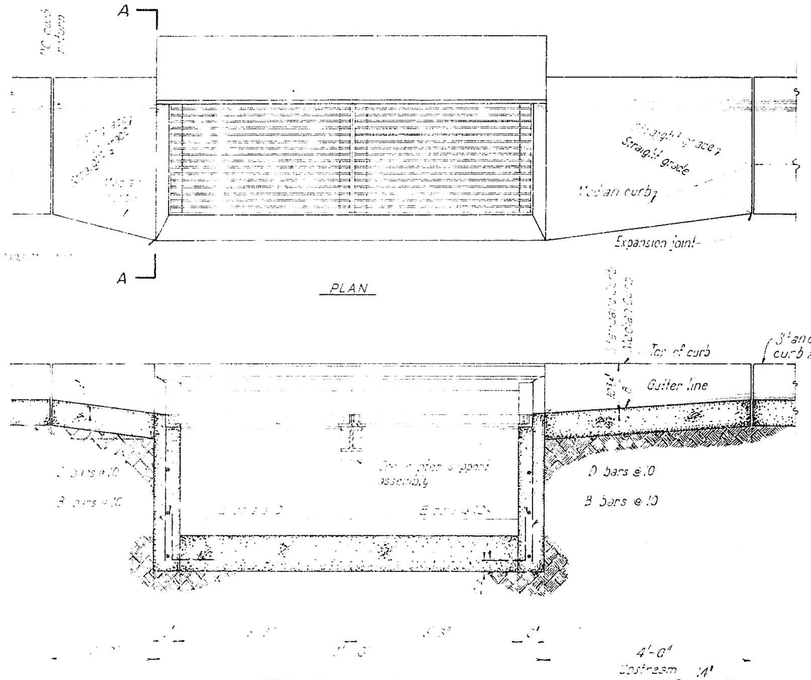
PROFILE — SURVEYED, PLOTTED, NOTE BOOK, GRADES CHECKED, RT. OF WAY CHECKED, NO. ___, STRUCTURE NOTATIONS CHKD., DATE, BY

PLATE 2—PLAN—PROFILE O. P. R. R. R. E.
MADE AND PRINTED IN U.S.A.
SULLIVAN PRINTING COMPANY

AS CONSTRUCTED

PAVING DISTRICT NO. 166-C

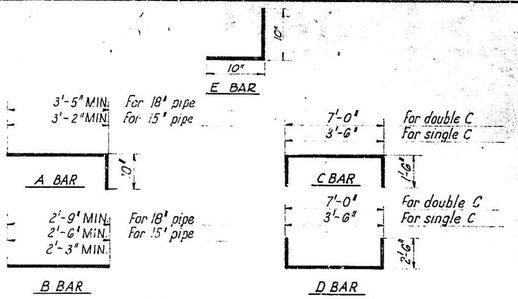
SHEET 9 OF 14




NOTE: Step to be located as directed by the project engineer.

## STEP DETAIL

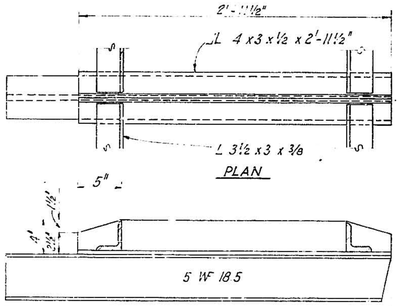
Scale: 3/4" = 1'-0"




NOTE: All bars to be #4

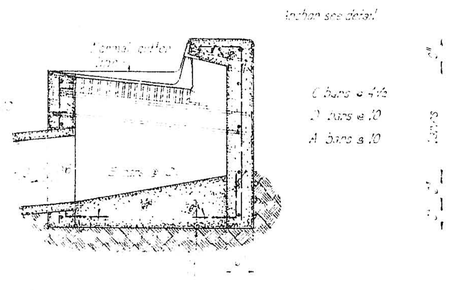
## BAR BENDING DETAILS

Not to scale

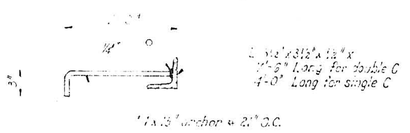



## CENTER SUPPORT ASSEMBLY

Scale: 1½" = 1'-0"

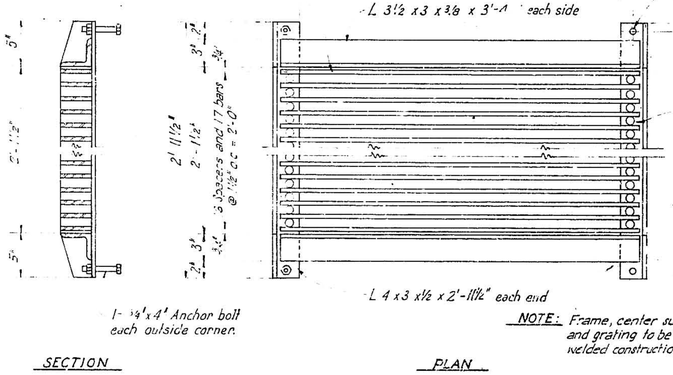



## DOUBLE C INLET




## ANCHOR DETAIL

Not to scale.



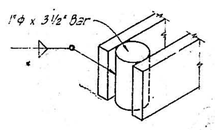

1- ¾"x 4' Anchor bolt each outside corner.

NOTE: Frame, center support and grating to be welded construction.

SECTION PLAN

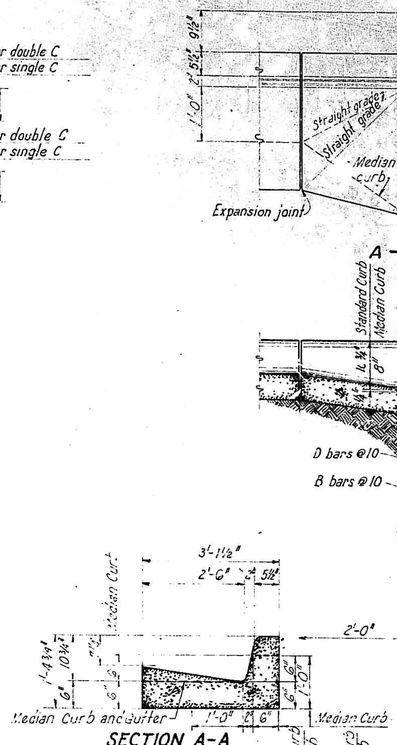
## FRAME AND GRATING DETAILS

Scale: 1½" = 1'-0"



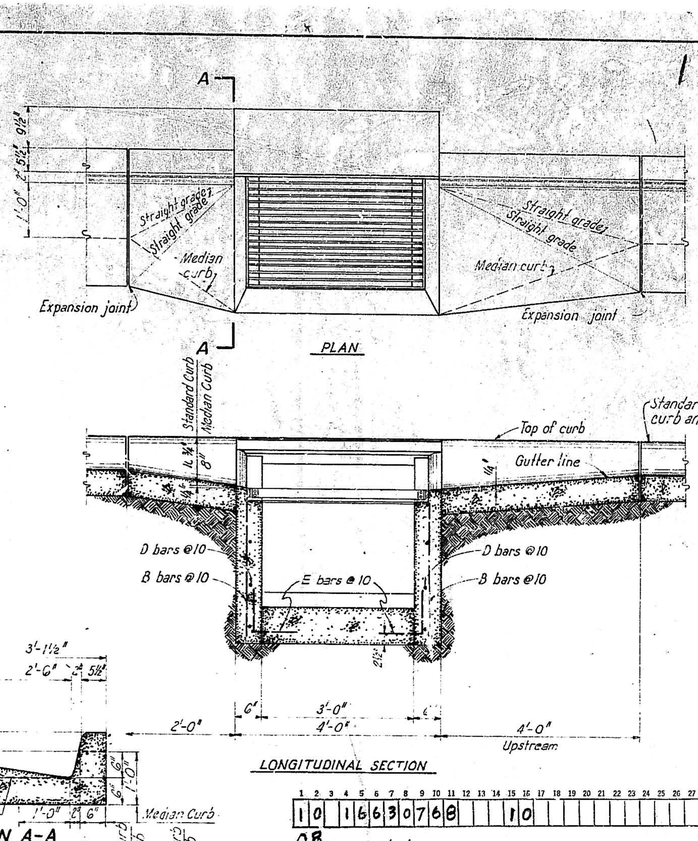

## SPACER DETAIL

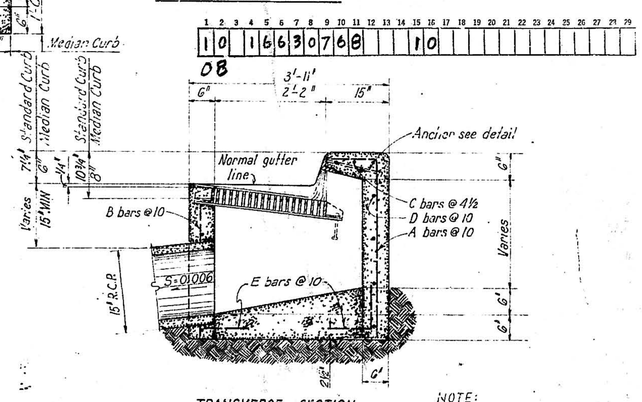
Not to scale.




## SECTION A-A

Scale: ¾" = 1'-0"




## SINGLE C INLET

Scale: 3/4" = 1'-0"

NOTE:
Provide the following slopes for inlet pipes:
15" R.C.P. — S=0.006 Slope 3/4"
18" R.C.P. — S=0.009 Per 18" 1 1/8"
24" R.C.P. — S=0.008 of line 1"

**ALBUQUERQUE, NEW MEXICO**

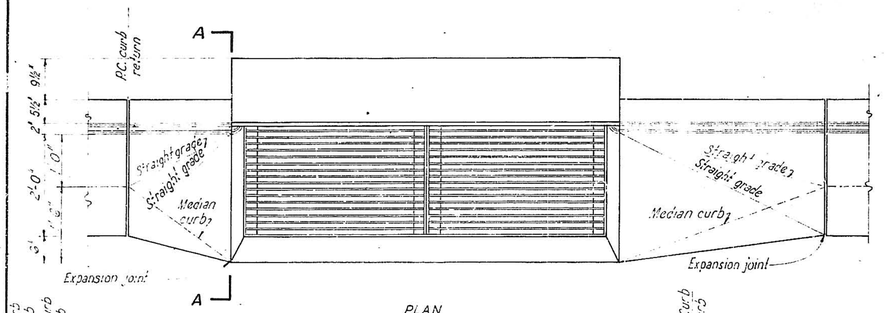
STORM DRAIN STANDARDS

# DOUBLE C AND SINGLE C DROP INLET DETAILS

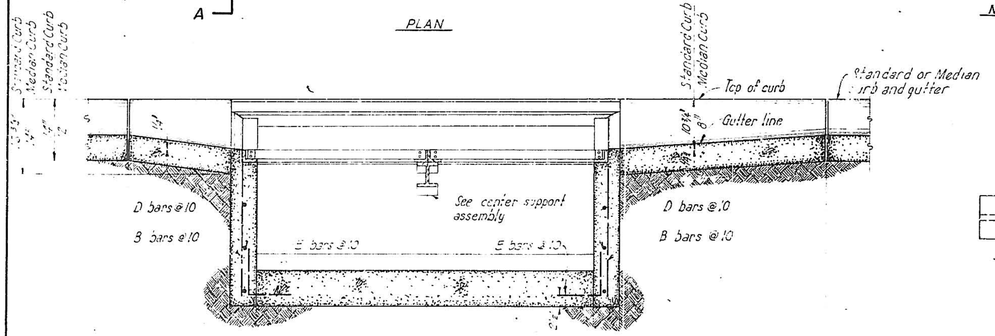
GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

| SCALE | DATE | DRAWN: A.O.H. | SHEET 7 |
|---|---|---|---|
| AS SHOWN | NOV., 1964 | CHECKED: G.H.J. | OF 14 |

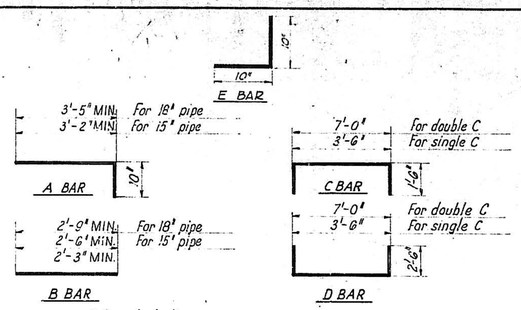
AS CONSTRUCTED




PLAN



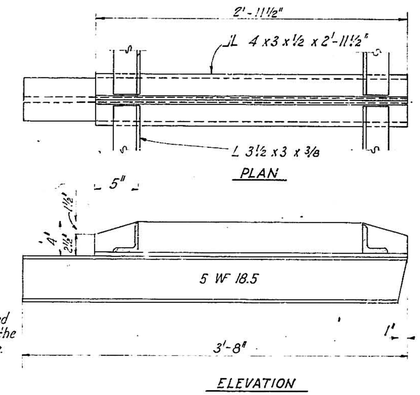

LONGITUDINAL SECTION




NOTE: All bars to be #4

## BAR BENDING DETAILS

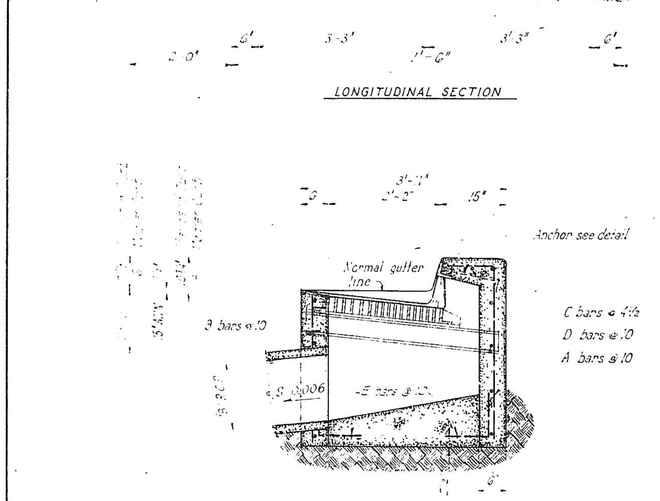
Not to scale




ELEVATION

## CENTER SUPPORT ASSEMBLY

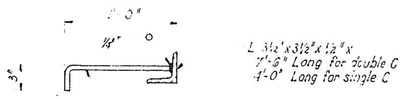
Scale: 1½" = 1'-0"




TRANSVERSE SECTION

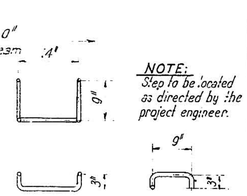
## DOUBLE C INLET

Scale: 3/4" = 1'-0"




## ANCHOR DETAIL

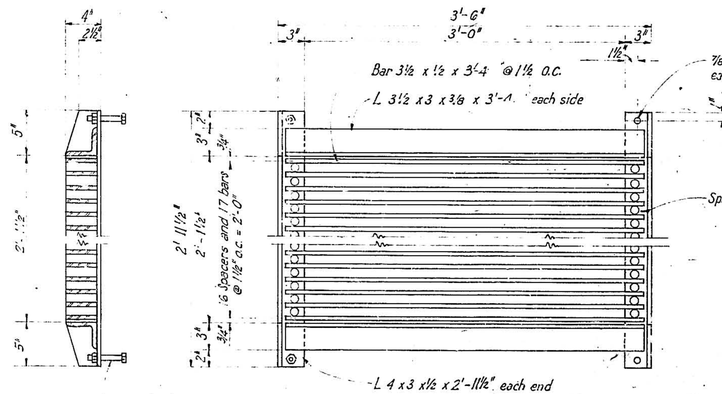
Not to scale.




NOTE: Step to be located as directed by the project engineer.

## STEP DETAIL

Scale: 3/4" = 1'-0"

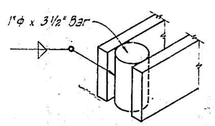



SECTION PLAN

NOTE: Frame, center support and grating to be welded construction.

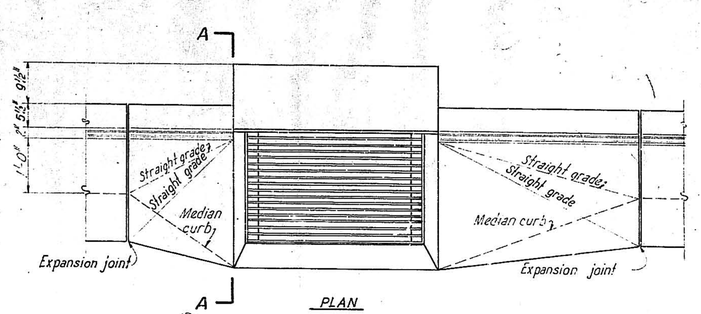
## FRAME AND GRATING DETAILS

Scale: 1½" = 1'-0"

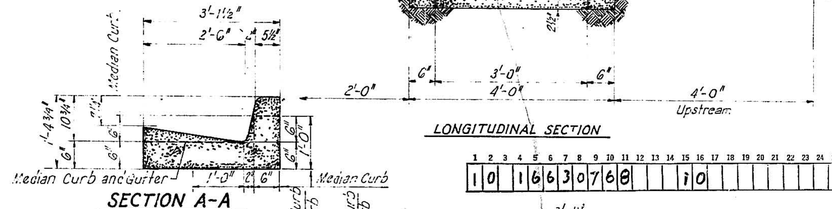



## SPACER DETAIL

Not to scale.



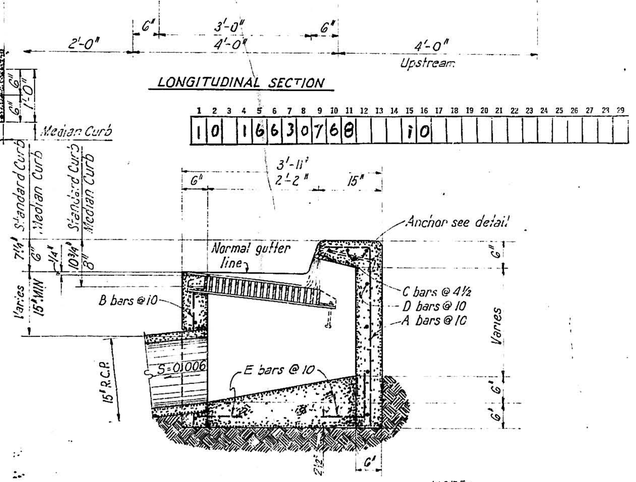

PLAN




LONGITUDINAL SECTION

## SECTION A-A

Scale: 3/4" = 1'-0"




TRANSVERSE SECTION

## SINGLE C INLET

Scale: 3/4" = 1'-0"

NOTE:
Provide the following slopes for inlet pipes:
15" R.C.P. — S=0.006 Slope
18" R.C.P. — S=0.009 Per 10'
24" R.C.P. — S=0.008 of line

# ALBUQUERQUE, NEW MEXICO

STORM DRAIN STANDARDS

## DOUBLE C AND SINGLE C DROP INLET DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

| SCALE | DATE | DRAWN: A.O.H. | SHEET 7 |
|---|---|---|---|
| AS SHOWN | NOV., 1964 | CHECKED: G.A.J. | OF 14 |

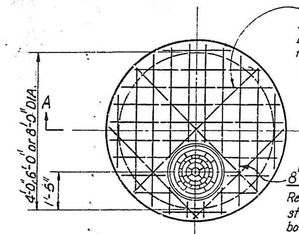
AS CONSTRUCTED

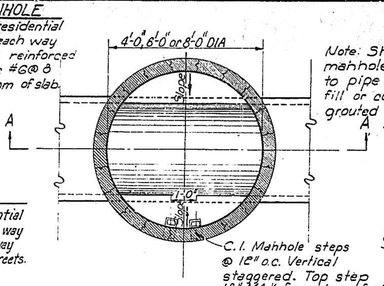
## 4'or6' DIA.MANHOLE

Reinforce for residential streets #4@8 each way bottom of slab reinforced for truck traffic #6@8 each way bottom of slab.

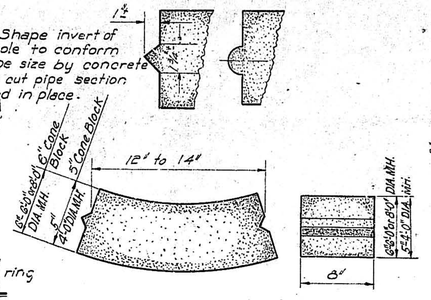
## 8' DIA. MANHOLE

Reinforce for residential streets #5@6 each way bottom, #8@6 each way bottom for arterial streets.




Note: Shape invert of manhole to conform to pipe size by concrete fill or cut pipe section grouted in place.




## TOP PLAN OF TYPE A

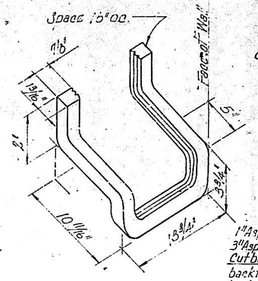
SCALE: 3/8" = 1'-0"

## SECTION PLAN OF TYPE A AND TYPE B

SCALE: 3/8" = 1'-0"

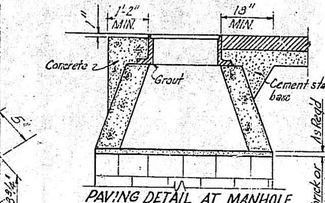
## TYPICAL DETAIL OF CONCRETE BLOCK

1/8" SCALE: 1/8" = 1"



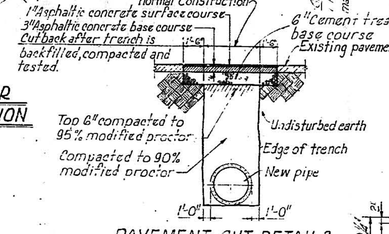

## LADDER RUNG FOR MANHOLE OR JUNCTION BOX

Not to Scale



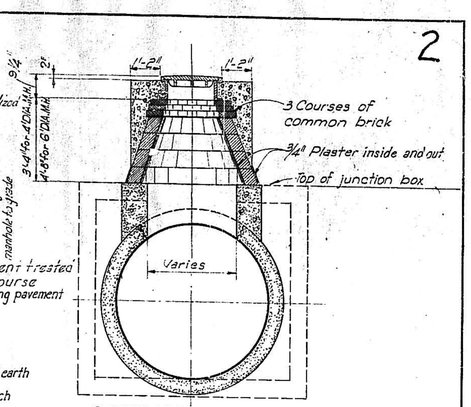

## PAVING DETAIL AT MANHOLE

Original cut



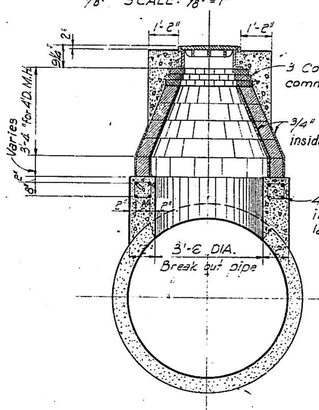

## PAVEMENT CUT DETAILS

No Scale



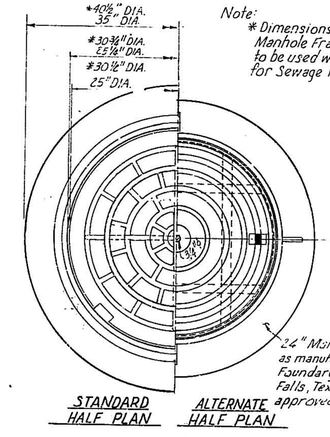

## STANDARD MANHOLE CONE

SCALE: 3/8" = 1'-0"




## 4' DIAMETER INTERMEDIATE MANHOLE-TYPE C

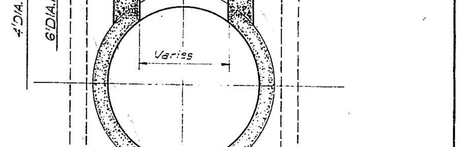
SCALE: 3/8" = 1'-0"




Note:
* Dimensions for Special Manhole Frame & Cover to be used when specified for Sewage Pumping Stations

STANDARD HALF PLAN

ALTERNATE HALF PLAN

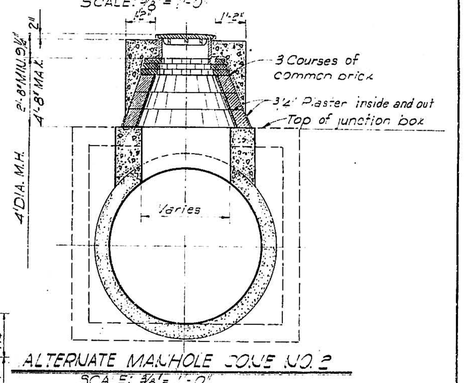






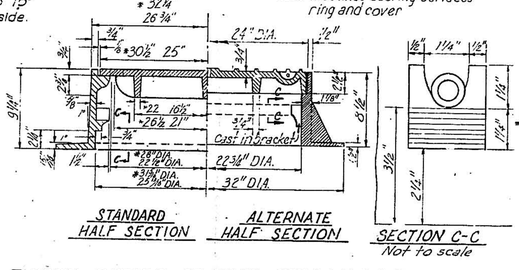
## ALTERNATE MANHOLE COVE NO. 1

SCALE: 3/8" = 1'-0"




## ALTERNATE MANHOLE COVE NO. 2

SCALE: 3/8" = 1'-0"



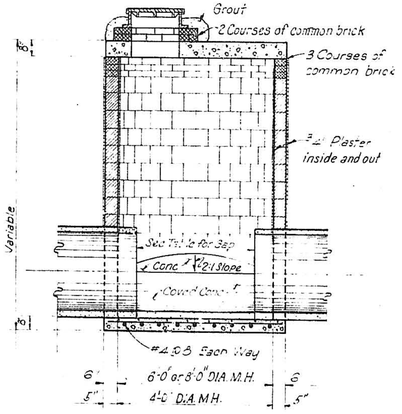

STANDARD HALF SECTION

ALTERNATE HALF SECTION

SECTION C-C
Not to scale

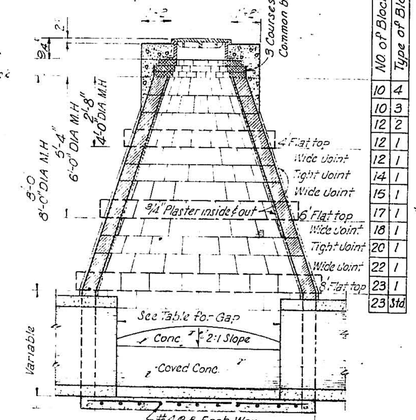
## SECTION A-A - TYPE A MANHOLE

(WITH SUMPED INVERT)
SCALE: 3/8" = 1'-0"




## SECTION A-A - TYPE B MANHOLE

(WITH SUMPED INVERT)
SCALE: 3/8" = 1'-0"




| No. of Blocks Per Row | Type of Block |
|---|---|
| 10 | 4 |
| 10 | 3 |
| 12 | 2 |
| 12 | 1 |
| 12 | 1 |
| 14 | 1 |
| 15 | 1 |
| 17 | 1 |
| 18 | 1 |
| 20 | 1 |
| 22 | 1 |
| 23 | 1 |
| 23 | Std |

## SECTION A-A - TYPE A MANHOLE

( STANDARD INVERT )
SCALE: 3/8" = 1'-0"



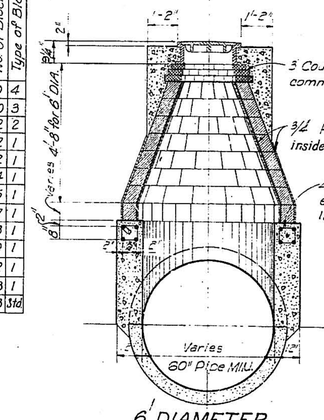

## SECTION A-A - TYPE B MANHOLE

(STANDARD INVERT)
SCALE: 3/8" = 1'-0"




## 6' DIAMETER INTERMEDIATE MANHOLE TYPE C

Scale: 3/8" = 1'-0"




## MANHOLE GAP FOR REINFORCED CONCRETE PIPE

| Manhole Size: 6 Feet | | Manhole Size: 6 Feet | | Manhole Size: 4 Feet | |
|---|---|---|---|---|---|
| Pipe Size | Gap To Be Left (Max) | Pipe Size | Gap To Be Left (Max) | Pipe Size | Gap To Be Left (Max) |
| 48" | 6.4 Feet | 36" | 4.7 Feet | 18" | 3.5 Feet |
| 54" | 5.9 Feet | 48" | 3.9 Feet | 21" | 3.3 Feet |
| 60" | 5.2 Feet | 54" | 2.6 Feet | 24" | 3.1 Feet |
| 66" | 4.5 Feet | | | 27" | 2.8 Feet |
| 72" | 3.5 Feet | | | 30" | 2.5 Feet |
| | | | | 36" | 1.5 Feet |

## TYPICAL DETAILS OF CAST IRON MANHOLE RING AND COVER

SCALE: 1/8" = 1"

AS CONSTRUCTED

**ALBUQUERQUE, NEW MEXICO**

STORM DRAIN STANDARDS

PAVEMENT CUT AND MANHOLE DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

| SCALE: | DATE | DRAWN: R.A.G. | SHEET 6 |
|---|---|---|---|
| AS SHOWN | NOV., 196 | CHECKED: G.A.J. | OF 14 |

4'or6 DIA.MANHOLE
Reinforce for residential streets #4@8 each way bottom of slab reinforce for truck traffic #4@8 each way bottom of slab.

6 DIA. MANHOLE
Reinforce for residential streets #5@6 each way bottom, #6@8 each way bottom for arterial streets.

4'-0, 6'-0 or 8'-0 DIA.

TOP PLAN OF TYPE A
SCALE: 3/8" = 1'-0"

4'-0, 6'-0 or 8'-0 DIA

C.I. Manhole steps @ 12" o.c. Vertical staggered. Top step 10" MAX. from top of ring

SECTION PLAN OF TYPE A AND TYPE B
SCALE: 3/8" = 1'-0"

Note Shape invert of manhole to conform to pipe size by concrete fill or cut pipe section grouted in place.

12" to 14"

6"x30"x8"x12" Cone Block
3 Cone Block
4'-0" DIA. MH.
6"x30"x8"x12" DIA. MH.
8"

TYPICAL DETAIL OF CONCRETE BLOCK
1/8" SCALE: 1/8" = 1"

Space 16" O.C.
1/16
1 1/16
2"
10 11/16"
18 3/4"
3 3/4"
5"
Face of Curb

LADDER RUNG FOR MANHOLE OR JUNCTION BOX
Not to Scale

1'-2" MIN.
18" MIN.
Concrete
Grout
Cement stabilized base
As Reqd.
Grout brick or block to adjust manhole to grade

PAVING DETAIL AT MANHOLE

Original cut normal construction
1" Asphaltic concrete surface course
3" Asphaltic concrete base course
Cut back after trench is backfilled, compacted and tested.
6" Cement treated base course
Existing pavement
1'-0"
Top 6" compacted to 95% modified proctor
Compacted to 90% modified proctor
Undisturbed earth
Edge of trench
New pipe
1'-0"
1'-0"

PAVEMENT CUT DETAILS
No Scale

2'
3-4"to-4'DIA.M.H.
4'DIA.M.H.
1'-2"
1'-2"
3 Courses of common brick
3/4" Plaster inside and out
Top of junction box
Varies

STANDARD MANHOLE CONE
SCALE: 3/8" = 1'-0"

Grout
2 Courses of common brick
3 Courses of common brick
3/4" Plaster inside and out
Varies
#4@8 Each Way
6'-0 or 8'-0 DIA M.H
4'-0" DIA M.H.

SECTION A-A - TYPE A MANHOLE
(WITH SLOPED INVERT)
SCALE: 3/8" = 1'-0"

3 Courses of common brick
3/4" Plaster inside and out
4-#6 for 6'DIA.M.H.
6-#6 for 8'DIA.M.H.
Varies
#4@8 Each Way
6'-0 DIA.
4'-0 DIA.
6'-0 or 8'-0 DIA.

SECTION A-A - TYPE B MANHOLE
(WITH SLOPED INVERT)
SCALE: 3/8" = 1'-0"

1'-2"
1'-2"
3 Courses of common brick
3/4" Plaster inside and out
4 #6 Hoops - Febricated in each in 2 peices with 15" lap 3#3 ties each side.
3'-6" DIA.
Break out pipe

4' DIAMETER
INTERMEDIATE MANHOLE-TYPE C
SCALE: 3/8" = 1'-0"

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
1 0 1 6 6 3 0 6 6 8 1 0
#8

Note:
* Dimensions for Special Manhole Frame & Cover to be used when specified for Sewage Pumping Stations

*40½" DIA.
35" DIA.
*30 3/4" DIA.
25 1/4" DIA.
*30 1/2" DIA.
25" DIA.
24" Manhole frame and cover as manufactured by Taylor Foundary Company, Wichita Falls, Texas, 400 # set or approved equal

STANDARD HALF PLAN
ALTERNATE HALF PLAN

Varies
2'-6" MIN.
3'-4" MAX.
4'-0" MIN.
4'-8" MAX.
4'DIA.M.H.
6'DIA.M.H.
3/4" Plaster inside and out
Top of junction box
Varies

ALTERNATE MANHOLE COVE NO. 1
SCALE: 3/8" = 1'-0"

Grout
2 Courses of common brick
3 Courses of common brick
3/4" Plaster inside and out
Conc. 1" 2:1 Slope
Invert of Sewer
#4@8 Each Way
6'-0 or 8'-0 DIA M.H.
4'-0" DIA M.H.

SECTION A-A - TYPE A MANHOLE
(STANDARD INVERT)
SCALE: 3/8" = 1'-0"

3 Courses of Common brick
3 Courses of common brick
3/4" Plaster inside and out
Flat top
Side Joint
Tight Joint
Side Joint
Flat top
Side Joint
Tight Joint
Side Joint
Flat top
Not To Scale Portion
Conc. 1" 2:1 Slope
Coved Cone
#4@8 Each Way
4'-0" DIA.
6'-0 or 8'-0" DIA.

SECTION A-A - TYPE B MANHOLE
(STANDARD INVERT)
SCALE: 3/8" = 1'-0"

| No. of Blocks Per Row | Type of Block |
|---|---|
| 10 | 4 |
| 10 | 3 |
| 12 | 2 |
| 12 | 1 |
| 12 | 1 |
| 14 | 1 |
| 15 | 1 |
| 17 | 1 |
| 18 | 1 |
| 20 | 1 |
| 22 | 1 |
| 23 | 1 |
| 23 | Std |

1'-2"
1'-2"
3 Courses of common brick
3/4" Plaster inside and out
4 #6 Hoops - Febricated in each in 2 pieces with 15" lap 3#3 ties each side.
Varies
60" Pipe Mill.

6' DIAMETER
INTERMEDIATE MANHOLE TYPE C
Scale: 3/8" = 1'-0"

Note: Machined bearing surfaces ring and cover

* 32¼"
26 ¼"
1/2"
8 *30½" 25"
24" DIA.
1/2"
3/4"
2 1/2"
1 1/8"
6 1/2"
22 16½"
26½" 21"
3/4"
Cast in Bracket
1/8"
1/4"
22 3/4" DIA.
32" DIA.
1/2"
1 1/4"
1/2"
1 1/8"
1 1/2"
3 1/16"
2 1/2"

STANDARD HALF SECTION
ALTERNATE HALF SECTION
SECTION C-C.
Not to scale

ALTERNATE MANHOLE COVE NO. 2
SCALE: 3/8" = 1'-0"

MANHOLE GAP FOR REINFORCED CONCRETE PIPE

| Manhole Size: 4 Feet | | Manhole Size: 6 Feet | | Manhole Size: 8 Feet | |
|---|---|---|---|---|---|
| Pipe Size | Gap To Be Left (Max) | Pipe Size | Gap To Be Left (Max) | Pipe Size | Gap To Be Left (Max) |
| 48" | 6.4 Feet | 36" | 4.7 Feet | 18" | 3.5 Feet |
| 54" | 5.9 Feet | 48" | 3.9 Feet | 21" | 3.3 Feet |
| 60" | 5.2 Feet | 54" | 2.6 Feet | 24" | 3.1 Feet |
| 66" | 4.5 Feet | | | 27" | 2.8 Feet |
| 72" | 3.5 Feet | | | 30" | 2.5 Feet |
| | | | | 36" | 1.5 Feet |

TYPICAL DETAILS OF CAST IRON MANHOLE RING AND COVER
SCALE: 1/8" = 1"

AS CONSTRUCTED

ALBUQUERQUE, NEW MEXICO
STORM DRAIN STANDARDS

PAVEMENT CUT AND MANHOLE DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

| SCALE | DATE | DRAWN: R.A.G. | SHEET 6 |
|---|---|---|---|
| AS SHOWN | NOV., 196 | CHECKED: G.A.J. | OF 14 |

ACADEMY INDUSTRIAL PARK UNIT NO. 1

STA. -(0-01.7)
Connect to Existing Stub

S.M.H. #1 STA. 0-01.7
RIM EL. = 5141.74
18" N. INV. EL. = 5128.35
18" E. INV. EL. = 5127.68
18 W. INV. EL. = 5127.48

STA. 9+00.0
Build 4' DIA. M.H.

Ve" Iron Pipe R/W Line

E"V.C.P.

JEFFERSON STREET N.E.

STA. C+50
Build 4' DIA. Type "B" M.H.

Bench Mark: Spindle in South Side of Fire Hydrant Northeast Corner Covina and Jefferson
EL. = 5142.75

STA. 3+58.49 BK. =
STA. 3+50.71 AHD
EQUATION
P.I. Δ = 13°27'20" Lt.
Build 4' DIA. Manhole

Ex. 8" Water Line

Fire Hydrant

P.I. STA 3+54.60
Δ = 13°27'20" Lt.

STA. 6+00.0
Build 4' DIA M.H.

℄ Survey

8" V.C.P.

R/W Line

62171

1' Easement | 200' Public Service Easement | Channel | Company | Section Line

Ve" Iron Pipe | P.P. | P.P. | P.P.

STA. 11+88.46
Build 4' DIA. Terminal M.H.
Stub 1 Joint of 8" Pipe and Plug in M.H.

Floodway | Fire Hydrant | 3-P.W.

West R/W | Ve" I.P. | West R/W | Ve" I.P. | ℄ Survey

STA 3+49.59 | P.I. STA. 3+54.60

PROPERTY TIE STA. 3+49.59

PROPERTY TIE STA. 11+88.46

Bench Mark: Nail in South Pc ver Pole of 2 Poles 47.8' Lt. of STA. 12+08
EL. 5146.77

SCALES:
Horiz: 1"=50'
Vert: 1"=10'

ACADEMY INDUSTRIAL PARK UNIT NO. 1

5150 / 5140 / 5130 / 5120

Existing Ground Profile
Fill to right of way line
Top of Curb

S=0.004 | S=0.004 | S=0.004 | S=0.004

8" V.C.P. Sewer Line | 8" V.C.P. Sewer Line | 8" V.C.P. Sewer Line | 8" V.C.P. Sewer Line

Build 4' DIA. M.H. INV. EL. = 5130.28
Build 4' DIA. M.H. INV. EL. = 5131.38
Build 4' DIA. M.H. INV. EL. = 5132.74

STA. 15+45.57
END WATERLINE
1-16" Gate Valve
1-18"x16" Reducer
1-16" Blind Flange
1-Valve Box

STA. 15+00.0
1-18"x18"x8" Cross
2-8" Gate Valves
2-8" Blind Flanges
2-Valve Boxes

0 1 2 3 4 5 6 7 8 9 10 11 12 13

OVERMYER WAREHOUSE COMPANY LOOP INDUSTRIAL DISTRICT

STA. - (0+05.C)
1-16"x16"x8"x8" Cross (Ft.)
1-16" Blind Flange
1-16" Gate Valve
1-18"x16" Reducer
2-8" Solid Sleeves
1-Valve Box

Overmyer Warehouse

5' Easement

Zinc Cap R.P.E. N.E. 1966

Future R.R. Crossing

TRACT "C-2"

365.00' R/W Line 365.00'

WASHINGTON STREET NE.

℄ Survey
Rebar
STA. 5+00 Install New Fire Hydrant

8" C.I.

715.00'

10' Easement

TRACT "D-1"

STA. 1+80.0
1-18"x18"x8" Tee
1-8" Gate Valve
1-8" Blind Flange
1-Valve Box

STA. 5+50.0
1-18"x18"x8"x8" Cross
2-8" Gate Valves
2-8" Blind Flanges
2-Valve Boxes

Notes:
All curb returns to have 14' radii unless otherwise noted
℄ Elevations are to top of curb unless otherwise indicated

OPP. STA. 8+35.2
(53.8' Lt. of ℄ Survey)
Build Storm Drain Outlet
INV. EL. = 5103.00
(See Details Sheet )

Excavate to Primary Channel

For Drain Canal Crossing see Detail Sheet 8.

STA. 9+25.0
Build 4' DIA. M.H.

TRACT "A"

STA. 11+30.0
Build 4' DIA. M.H.

STA. 13+25.0
Build 4' DIA. M.H.

Canal | Drainage

1/2" Iron Pipe | 18" C. CYL. Water Line | 1/2" Iron Pipe

24" R.C.P. | SD | 24" R.C.P. | 18" R.C.P. | 24" R.C.P. | 18" R.C.P.

STA. 10+00 Install New Fire Hydrant

STA. 11+00.0
1-18"x18"x8"x8" Cross
2-8" Gate Valves
2-8" Blind Flanges
2-Valve Boxes

OPP. STA. 11+40.81
Build Single 'C' Inlets

OPP. STA. 13+35.0
Build 2 Single 'C' Inlets

STA. 13+60.0
Build 4' DIA. MH.
End Construction

OPP. STA. 13+70.0
Build Single 'C' Inlets

STA. 15+50 Install New Fire Hydrant

18" C.CYL. W.L.

MATCH LINE 13+50 | MATCH LINE 14+50

Future R.R. Crossing

C&G | C&G

Future Curb Cut

Bench Mark: 1" Iron Pipe ℄ Corner at East End of Washington and Los Angeles

64172

SCALES:
Horiz: 1"=50'
Vert: 1"=10'

PROFILE

5110 / 5100 / 5090

Top of Proposed East Curb

Existing Water Line
Approx. INV EL. 05.5
Relocate and Set to new Grade if Required

18" Concrete Cylinder Water Line

Remove & Relocate existing 24" Pipe

S=0.005 | S=0.005

24" R.C.P. Storm Drain

80-10.5' 8" C.I. Water Service

670' 8" C.I. Water Service

153.8' ℄ Survey Build Storm Drain Outlet INV. EL. = 5104.08

OPP. STA. 8+37 INSTALL POWER COLLAR TINV. EL. = 5101.47

Begin Bench at 1 ST Joint South of Manhole (Storm Drain) 4' DIA. MH. INV. EL. 5103.35

4' DIA. MH. INV. EL. 5103.5

670' 8" C.I. Water Service

4' DIA. MH. INV. EL. 5103.5

4' DIA. MH. INV. EL. 5103.69

Top of Proposed East Curb

18" C.CYL. Water Line

100' 8" C.I. Water Service

0-100 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

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

10 16631468 03 62171

CB 0102 64172

C2

C7

PLATE 2—PLAN—PROFILE

PAVING DISTRICT NO. 166-C SHEET 14 OF 14

5

STA. -(0-01.7)
Connect to Existing Stub

ACADEMY INDUSTRIAL PARK UNIT NO. 1

Existing Sewer Line

Asphalt Drive

STA. 4+41 STA. 0-01.7
R/M EL. = 5141.74
18" N. INV. EL. = 5128.35
18" E. INV. EL. = 5127.68
18 W. INV. EL = 512.748

STA. 9+00.0
Build 4' DIA. M.H.

10' Easement

200' Public Service Easement

Channel

Company

Section Line

STA. 11+88.46
Build 4' DIA. Terminal M.H.
Stub 1 Joint of 8" Pipe and Plug in M.H.

¾" Iron Pipe

R/W Line

℄ OSUNA ROAD N.E.

8" V.C.P.

JEFFERSON STREET N.E.

℄ Survey

Fire Hydrant

Existing Water Line

Floodway

P.P.

3-P.W.

West R/W

½" I.P.

STA. 0+50
Build 4' DIA. Type "B" M.H.

Bench Mark. Chiseled "+" South Bonnet Bolt Fire Hydrant Northeast Corner Osuna and Jefferson
EL = 5142.75

STA. 3+58.49 BK =
STA. 3+50.71 AHD
EQUATION
P.I. Δ = 13°27'20" Lt.
Build 4' DIA. Manhole

P.I. STA. 3+54.60
Δ = 13°27'20" Lt.

STA. 6+00.0
Build 4' DIA. M.H.

62171

Bench Mark: Nail in South Power Pole of 2 Poles 47.8' Lt. of STA. 12+08
EL. 5146.77

SCALES:
Horiz: 1"=50'
Vert: 1"=10'

PROPERTY TIE
STA 3+49.57

PROPERTY TIE
STA. 11+88.46

ACADEMY INDUSTRIAL PARK UNIT NO. 1

5150
5140
5130
5120

Existing Ground Profile
Fill to right of way line
Top of Curb

S=0.004
S=0.004
S=0.004
S=0.004

8" V.C.P. Sewer Line
8" V.C.P. Sewer Line
8" V.C.P. Sewer Line
8" V.C.P. Sewer Line

Build Drop Manhole
Existing Manhole
INV EL. 5128.35

Build 4' DIA. MH
INV EL. 5126.55

Build 4' DIA. MH
INV EL. 5123.79

Build 4' DIA. MH
INV EL. 5120.28

Build 4' DIA. MH
INV EL. 5131.98

Build 4' DIA. MH
INV EL. 5132.74

0 1 2 3 4 5 6 7 8 9 10 11 12 13

STA. 10+00.0
1-18"x18"x8"x8" Cross
2-8" Gate Valves
2-8" Blind Flanges
2-Valve Boxes

STA. 16+45.57
END WATERLINE
1-16" Gate Valve
1-18"x16" Reducer
1-16" Blind Flange
1-Valve Box

STA. -(0+05.0)
1-16"+16"x8"x8" Cross (Fl)
1-16" Blind Flange
1-16" Gate Valve
1-18"x16" Reducer
2-8" Solid Sleeves
1-Valve Box

OVERMYER WAREHOUSE COMPANY LOOP

Overmyer Warehouse

Spur Track

5' Easement

Zinc Cap
K.P.E. N.E. 1966
Future R.R. Crossing

TRACT "C-2"

OPP. STA. 8+35.2
(53.8' Lt. of ℄ Survey)
Build Storm Drain Outlet
INV. EL. = 5103.00
(See Details Sheet )

Excavate to Primary Channel

For Drain Canal Crossing See Detail Sheet 8

STA. 9+25.0
Build 4' DIA. M.H.

TRACT "A"

STA. 11+30.0
Build 4' DIA. M.H.

STA. 13+25.0
Build 4' DIA. M.H.

350.00' R/W Line

365.00'

WASHINGTON STREET N.E.

Curb and Gutter

℄ Survey

Radar STA. 5+00 Install New Fire Hydrant

½" Iron Pipe

18" C. CYL. Water Line

Canal

Drainage

24" R.C.P.

18" R.C.P.

15" R.C.P.

STA. 10+00 Install New Fire Hydrant

STA. 15+50 Install New Fire Hydrant

STA. 1+80.0
1-18"x18"x8" Tee
1-8" Gate Valve
1-8" Blind Flange
1-Valve Box

TRACT "D-1"

415.00' R/W Line

10' Easement

STA. 5+50.0
1-18"x18"x8"x8" Cross
2-8" Gate Valves
2-8" Blind Flanges
2-Valve Boxes

Notes:
1. All curb returns to have 14' radii unless otherwise noted
2. Elevations are to top of curb unless otherwise indicated

Bench Mark: 1" Iron Pipe ¼ Corner at Intersection of Washington and Los Angeles

LOOP INDUSTRIAL DISTRICT

64172

STA. 11+00.0
1-18"x18"x8"x8" Cross
2-8" Gate Valves
2-8" Blind Flanges
2-Valve Boxes

TRACT "C-1"

OPP. STA. 11+40.81
Build Single 'C' Inlets

OPP. STA. 13+35.0
Build 2 Single 'C' Inlets

OPP. STA. 13+70.0
Build Single 'C' Inlets

STA. 13+60.0
Build 4' DIA. MH.
End Construction

SCALES:
Horiz 1"=50'
Vert 1"=10'

10 16 31 46 80 3 62171
0102 64172

PROFILE

5110
5100
5090

Existing Water Line
Approx. INV. EL. 05.0
Relocate and Set to new Grade if Required.

Top of Proposed East Curb

18" Concrete Cylinder Water Line

Remove & Relocate existing 24" Pipe

S=0.005

24" R.C.P. Storm Drain
S=0.005

S=0.005

+30 10.2' 8" C.I. Water Service

+50 67.0' 8" C.I. Water Service

(53.8' Lt. of ℄ Survey) Build Storm Drain Outlet INV. EL. = 5103.00

OPP. STA. 8+97 INSTALL POURED COLLAR (INV. EL. 5101.41

Begin Grade at 1st Joint South of Manhole (Storm Drain) INV. EL. 5100.35

4' DIA. MH. INV EL. 5100.5

+00 67.0' 8" C.I. Water Service

4' DIA. MH. INV EL. 5100.5

+20 4' DIA. MH. INV EL. 5100.68

+00 67.0' 8" C.I. Water Service

+00 67.0' 8" C.I. Water Service

0-100 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Top of Proposed East Curb

18" C.CYL. Water Line

MATCH LINE 14+50

PLATE 2—PLAN—PROFILE
MADE AND PRINTED IN U.S.A.
CHARLES BRUNING COMPANY

PAVING DISTRICT NO. 166-C SHEET 14 OF 14

GLENDALE ADDITION

4

Note For Slope Paving Detail See Sheet 9

ALAMEDA DRAIN — Top of Slope — SLOPE PAVING — SECOND STREET N.W.

STA.3+00 Build Type E' Inlet

STA.3+00 Build 4' DIA. Type B' Manhole

Proposed curb, gutter and sidewalk this contract

STA.9+01.39 Build Type E' Inlet

STA.9+01.39 Build 4' DIA. Type 'A' Manhole

STA.0-20 Build 4' DIA. Type B' Manhole 12" Sewer to be installed through Manhole in 12" Cl.D x 8'

SANDIA ROAD N.W.

18" R.C.P. — 12" R.C.P. — 24" M.P. — 8" C.I.

Bench mark 4' S.A.B. F.H. on N. side of Cul De Sac Sandia Rd. and A.T. and S.F. R.R. E.L. = 4977.30

61151

GLENDALE ADDITION

PLAN

18" RCP S=0.003 — 18" R.C.P. S=0.003 — 18" R.C.P. S=0.005

proposed finish grade — Existing ground

4980 4975 4970 4965

0 1 2 3 4 5 6 7 8 9 10

LOS HERMANOS 2 ADDITION

STA. 1+93 Build Single "C" inlet

STA. 2+00 Build 4' DIA. Type "A" Manhole

Underground Tel. Conduit and Cable

STA. 20+83 Grieggs Rd. 6' DIA. Type "A" Manhole

STA. 20+94 Grieggs Rd. = STA. 4+49.5 Las Hermanas St. Build 6' DIA. Type "A" Manhole

Bench Mark — Nail in South Side of Power Pole Intersection of Las Hermanas and Grieggs Rd.

Elev 4972.50

LAS HERMANAS STREET N.W. — 15" R.C.P. — 24" R.C.P. — 442.04' — 185.37' — 166.12'

BELL ROSE RD — GRIEGGS

STA. 1+98 Build Single "C" Inlet

60151

LOS HERMANOS ADDITION

AS CONSTRUCTED

Existing Ground — Proposed finish grade

24" R.C.P. S=-0.002

4970 4965 4960

0 1 2 3 4 5 6 0 1 2 3 4 5

PROFILE

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

1 0 1 6 6 1 4 4 7 0 0 1 6 1 1 5 1

60151

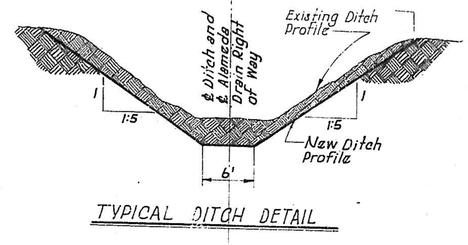
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PLATE 2 — PLAN — PROFILE

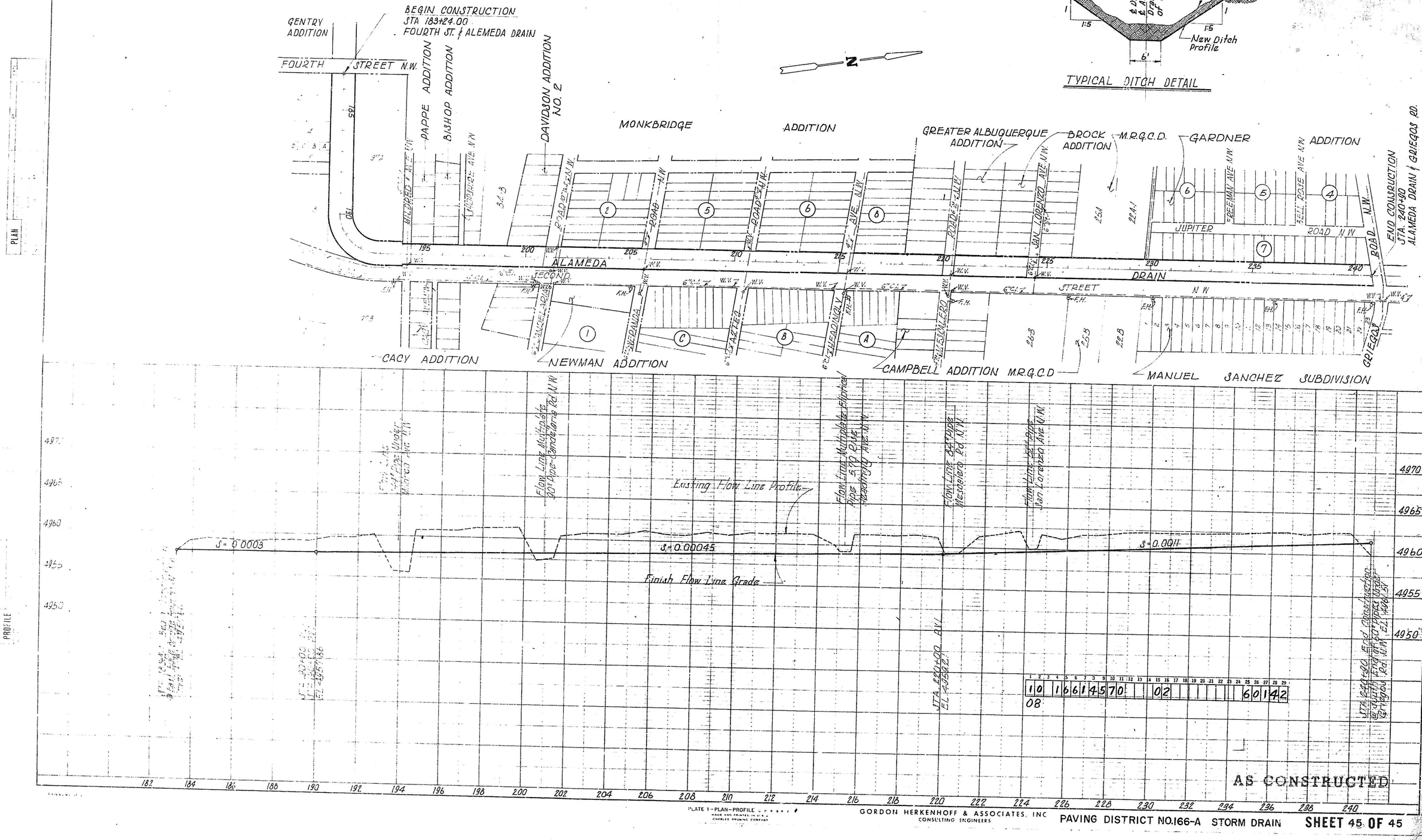
GORDON HERKENHOFF & ASSOCIATES INC.
CONSULTING ENGINEERS

PAVING DISTRICT NO. 166 — A STORM DRAIN SHEET 44 OF 45

2




TYPICAL DITCH DETAIL




10 16 61 45 70 02 60 14 2
08

AS CONSTRUCTED

PLATE 1—PLAN—PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC
CONSULTING ENGINEERS

PAVING DISTRICT NO.166-A STORM DRAIN

SHEET 45 OF 45