

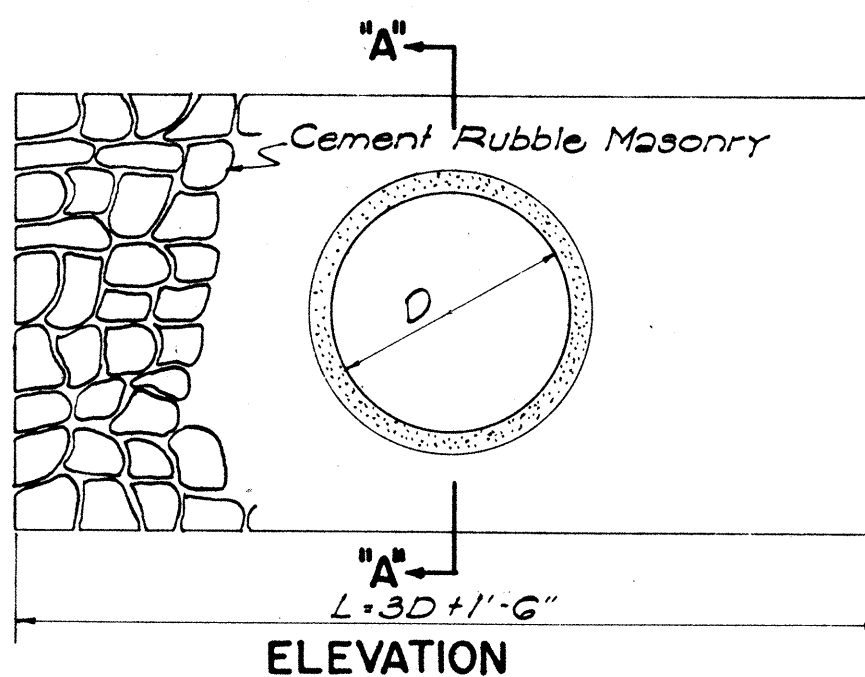
| D   | W   | H     | T=H+H |
|-----|-----|-------|-------|
| 18" | 24" | 2'-0" | 4'-0" |
| 24" | 30" | 2'-0" | 4'-0" |
| 30" | 30" | 2'-0" | 4'-0" |
| 36" | 36" | 3'-0" | 6'-0" |

**DETAIL OF OUTLET DITCH**  
Scale: 1/2" = 1'-0"

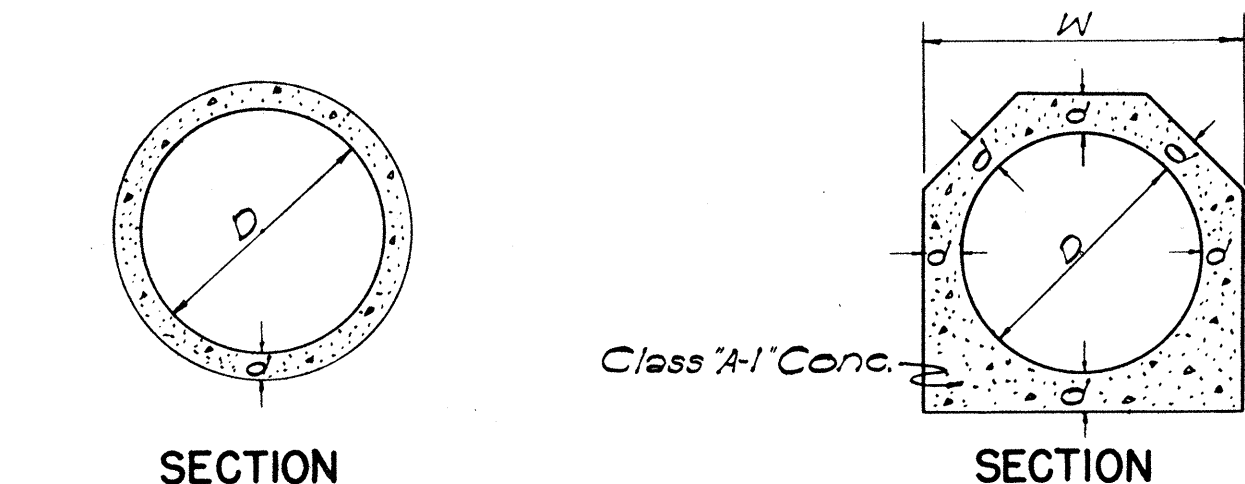
| D   | D   | L=D+G | Cu Yds. | Where Variables Equal |
|-----|-----|-------|---------|-----------------------|
| 23" | 18" | 2'-5" | 3.02    | 4'-6"                 |
| 30" | 24" | 3'-0" | 3.61    | 5'-0"                 |
| 37" | 30" | 3'-7" | 4.21    | 5'-6"                 |
| 44" | 36" | 4'-2" | 4.85    | 6'-0"                 |

NOTE:  
Dimension "X" is assumed as 2'-4" in figuring the above quantities.

| D   | H     | B     | L      | Cast-in-Place Conc. Culvert Cu. Yds. | Conc. Pipe Culvert Cu. Yds. | Corrugated Pipe Culvert Cu. Yds. |
|-----|-------|-------|--------|--------------------------------------|-----------------------------|----------------------------------|
| 18" | 3'-6" | 1'-0" | 6'-0"  | 0.85                                 | 0.95                        | 0.93                             |
| 24" | 4'-0" | 2'-0" | 7'-6"  | 1.28                                 | 1.41                        | 1.41                             |
| 30" | 4'-6" | 2'-3" | 9'-0"  | 1.83                                 | 2.00                        | 2.00                             |
| 36" | 5'-0" | 2'-6" | 10'-6" | 2.42                                 | 2.84                        | 2.72                             |



**DETAIL OF MASONRY HEADWALL**  
Scale: 1/2" = 1'-0"

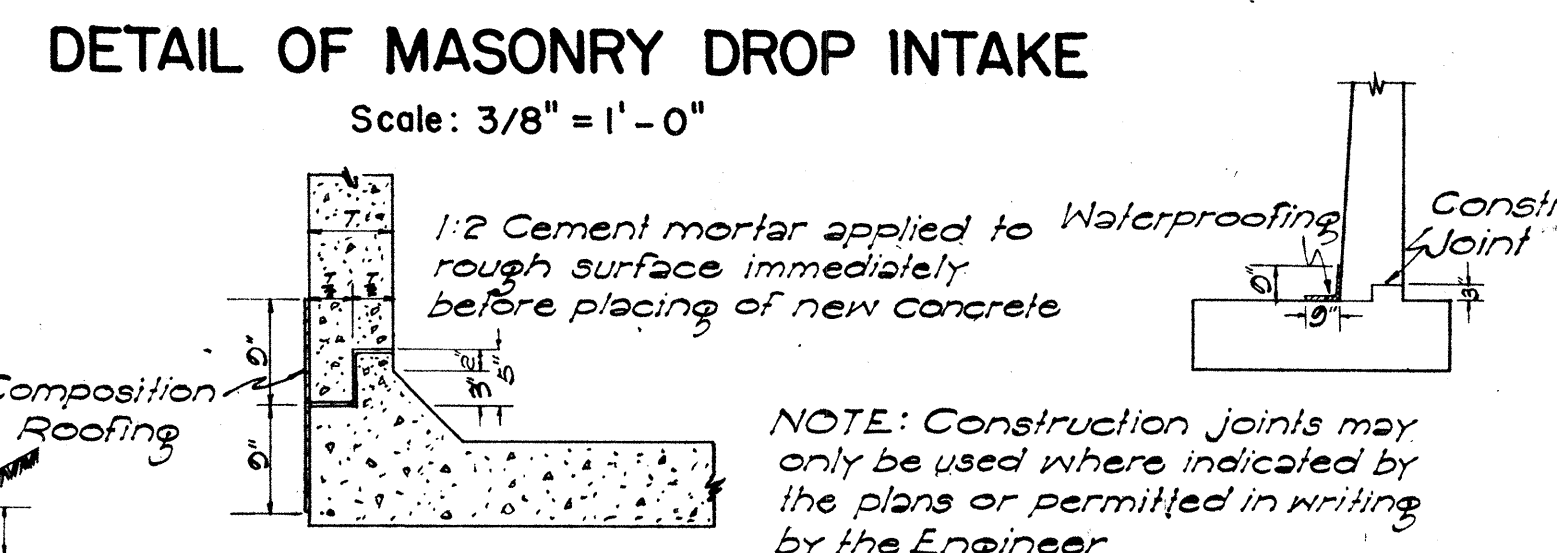


**SECTION CONC. PIPE CULVERT**

NOTE:  
Thickness of reinforcing and concrete used are to conform with the approved design as provided by the Specifications.

**CAST-IN-PLACE CONC. CULVERT**

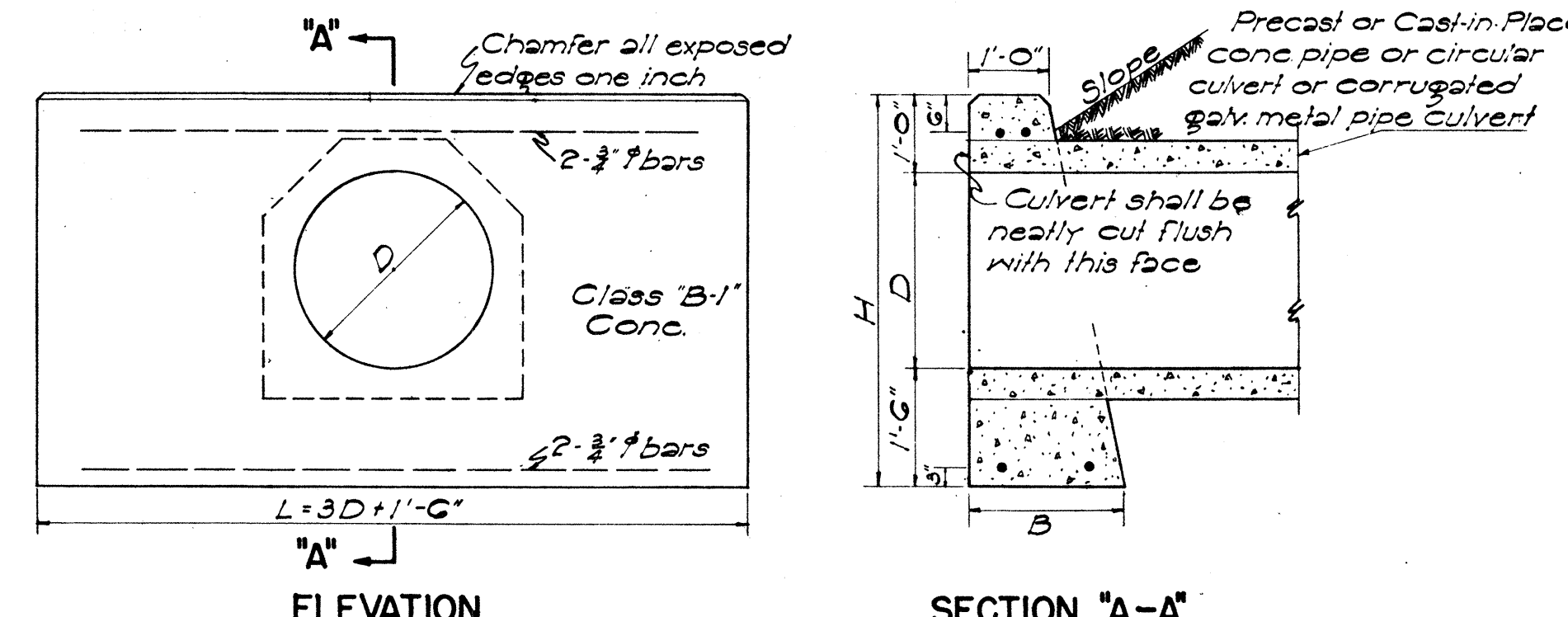
| D   | d      | W      | Cu Yds. per ft. |
|-----|--------|--------|-----------------|
| 18" | 4"     | 2'-2"  | 0.11            |
| 24" | 4 1/2" | 2'-9"  | 0.14            |
| 30" | 5"     | 3'-4"  | 0.19            |
| 36" | 5 1/2" | 3'-11" | 0.26            |



**CONSTR. JOINT DETAILS**  
Scale: 3/8" = 1'-0"

NOTE: Construction joints may only be used where indicated by the plans or permitted in writing by the Engineer.

METHOD OF APPLYING CONSTR. JOINT WATERPROOFING  
(1) Map surface either side of joint as required with asphalt 50-100 penetration (A.S.T.M. Desig. D 5-25) applied at 200°F.  
(2) Apply one layer of 55-lb composition roofing to hot asphalt.  
(3) Map surface of composition roofing and 3" beyond all around with thick coat of asphalt as specified under (1).  
The above work is incidental to concrete and will not be paid for separately.

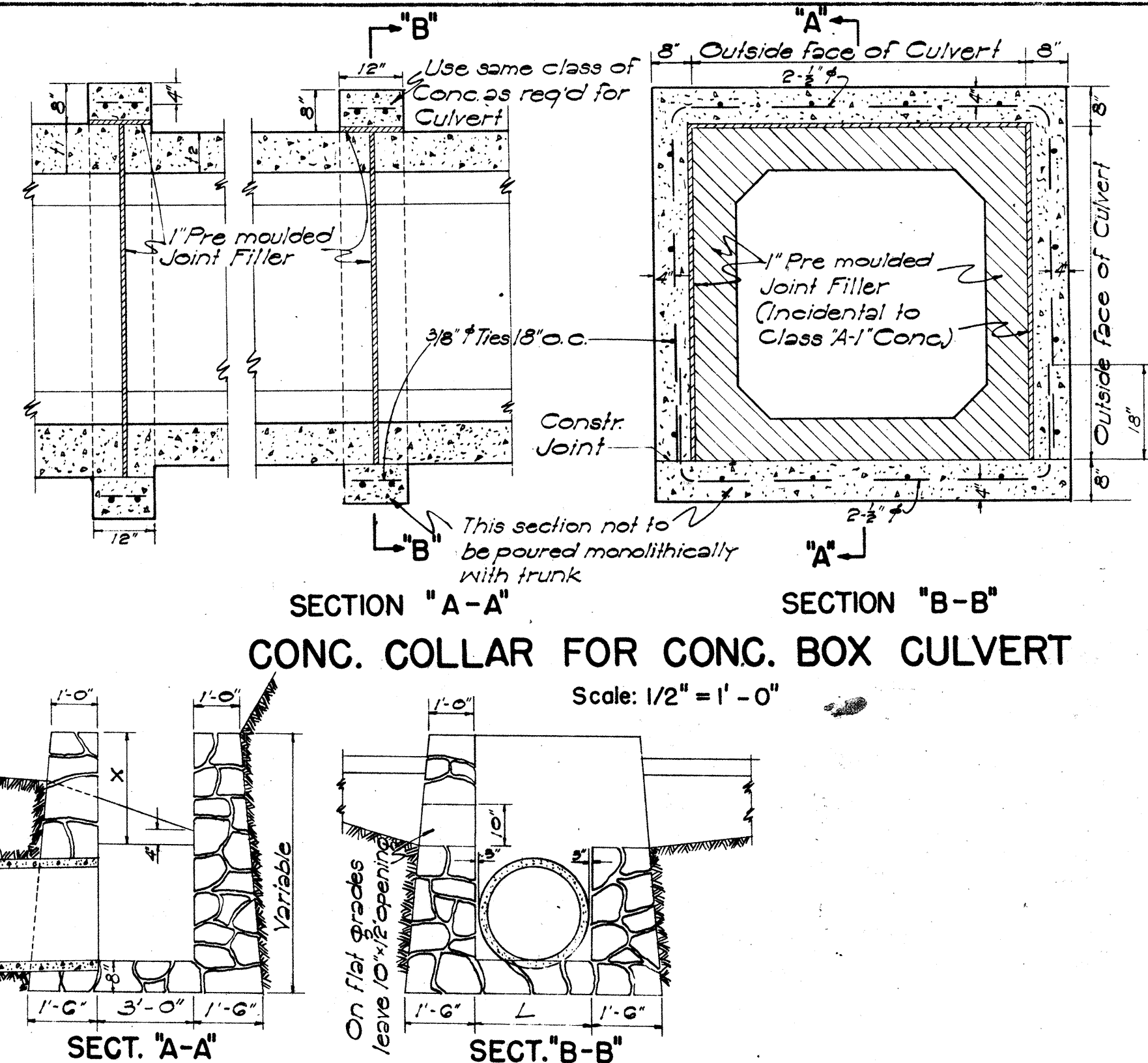


**DETAIL OF CONCRETE HEADWALL**  
Scale: 1/2" = 1'-0"

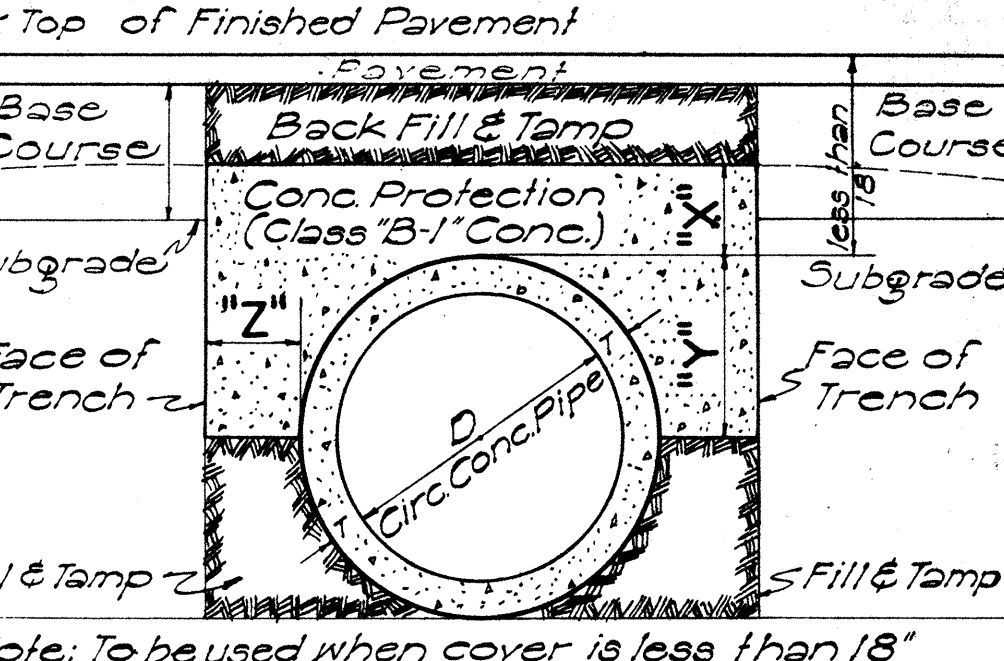
| D   | B     | L      | H     | Cast-in-Place Conc. Culvert Cu. Yds. | Conc. Pipe Culvert Cu. Yds. | Steel For One Headwall No. of Bars Size Length Lbs. |
|-----|-------|--------|-------|--------------------------------------|-----------------------------|-----------------------------------------------------|
| 18" | 1'-6" | 6'-0"  | 4'-0" | 0.92                                 | 1.00                        | 4 3/4" 7'-0" 93                                     |
| 24" | 1'-6" | 7'-6"  | 4'-6" | 1.25                                 | 1.38                        | 4 3/4" 7'-0" 93                                     |
| 30" | 2'-0" | 9'-0"  | 5'-0" | 1.95                                 | 2.17                        | 4 3/4" 8'-0" 111                                    |
| 36" | 2'-0" | 10'-6" | 5'-6" | 2.45                                 | 2.74                        | 4 3/4" 10'-0" 130                                   |
| 42" | 2'-6" | 12'-0" | 6'-0" | 3.87                                 | 4.66                        | 4 3/4" 11'-0" 149                                   |
| 48" | 2'-6" | 13'-6" | 6'-6" | 4.66                                 | 5.66                        | 4 3/4" 13'-0" 178                                   |

**DETAIL OF CONCRETE HEADWALL**  
Scale: 1/2" = 1'-0"

**SECTION "A-A" SECTION "B-B" CONC. COLLAR FOR CONC. BOX CULVERT**  
Scale: 1/2" = 1'-0"



**SECTION OF HIGH CEMENT RUBBLE MASONRY RETAINING WALL OR SEAWALL**



| X           | Y       | Z                                     |
|-------------|---------|---------------------------------------|
| 6" for 18"D |         | Z must be from pipe to face of trench |
| 7" " 24"D   |         |                                       |
| 8" " 30"D   |         |                                       |
| 9" " 36"D   | D/2 + T | Minimum = X                           |
| 10" " 42"D  |         | Maximum pay quantity will be Z=12"    |
| 11" " 48"D  |         |                                       |
| 12" " 54"D  |         |                                       |

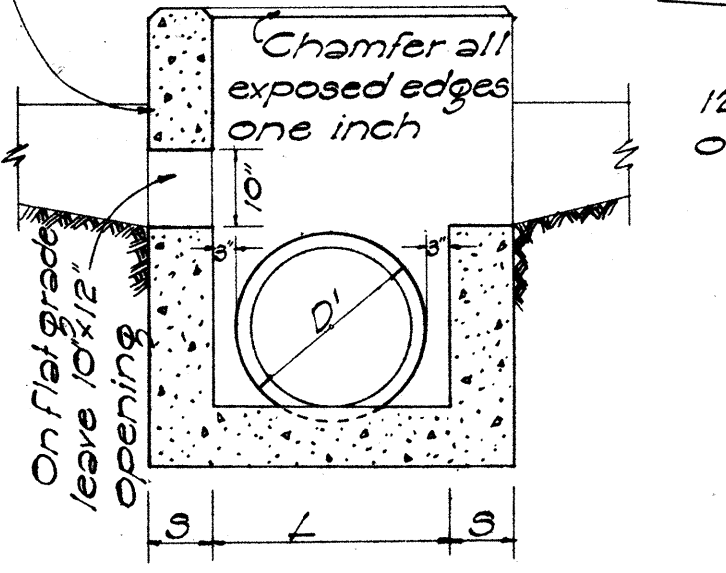
**SECT. OF CULVERT WITH CONC. PROTECTION**  
Scale: 1" = 1'-0"

**SECTION OF LOW MASONRY RETAINING WALL OR SEAWALL**

| D   | D   | L=D+G | Cu Yds. | Where Variables Equal |
|-----|-----|-------|---------|-----------------------|
| 23" | 18" | 2'-5" | 3.02    | 4'-6"                 |
| 30" | 24" | 3'-0" | 3.61    | 5'-0"                 |
| 37" | 30" | 3'-7" | 4.21    | 5'-6"                 |
| 44" | 36" | 4'-2" | 4.85    | 6'-0"                 |
| 51" | 42" | 4'-9" | 5.45    | 6'-6"                 |
| 58" | 48" | 5'-4" | 6.01    | 7'-0"                 |

NOTE: Dimension "X" is assumed as 2'-4" in figuring the above quantities.

NOTE: This type of structure shall also be used for the Drop Intakes of Syphons connected with Irrigation Ditches or Flumes with appropriate changes to dimensions. In this case all joints must be made water tight.



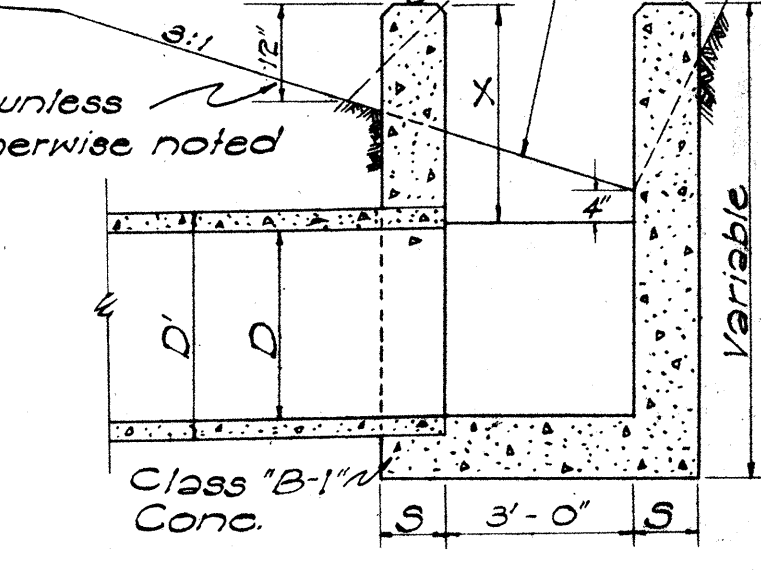
**SECTION "B-B"**

**DETAIL OF CONCRETE DROP INTAKE**  
Scale: 1/2" = 1'-0"

| D   | D   | L=D+G | Cu Yds. | Where Variables Equal |
|-----|-----|-------|---------|-----------------------|
| 23" | 18" | 2'-5" | 3.02    | 4'-6"                 |
| 30" | 24" | 3'-0" | 3.61    | 5'-0"                 |
| 37" | 30" | 3'-7" | 4.21    | 5'-6"                 |
| 44" | 36" | 4'-2" | 4.85    | 6'-0"                 |
| 51" | 42" | 4'-9" | 5.45    | 6'-6"                 |
| 58" | 48" | 5'-4" | 6.01    | 7'-0"                 |

NOTE: Dimension "X" is assumed as 2'-4" in figuring the above quantities.

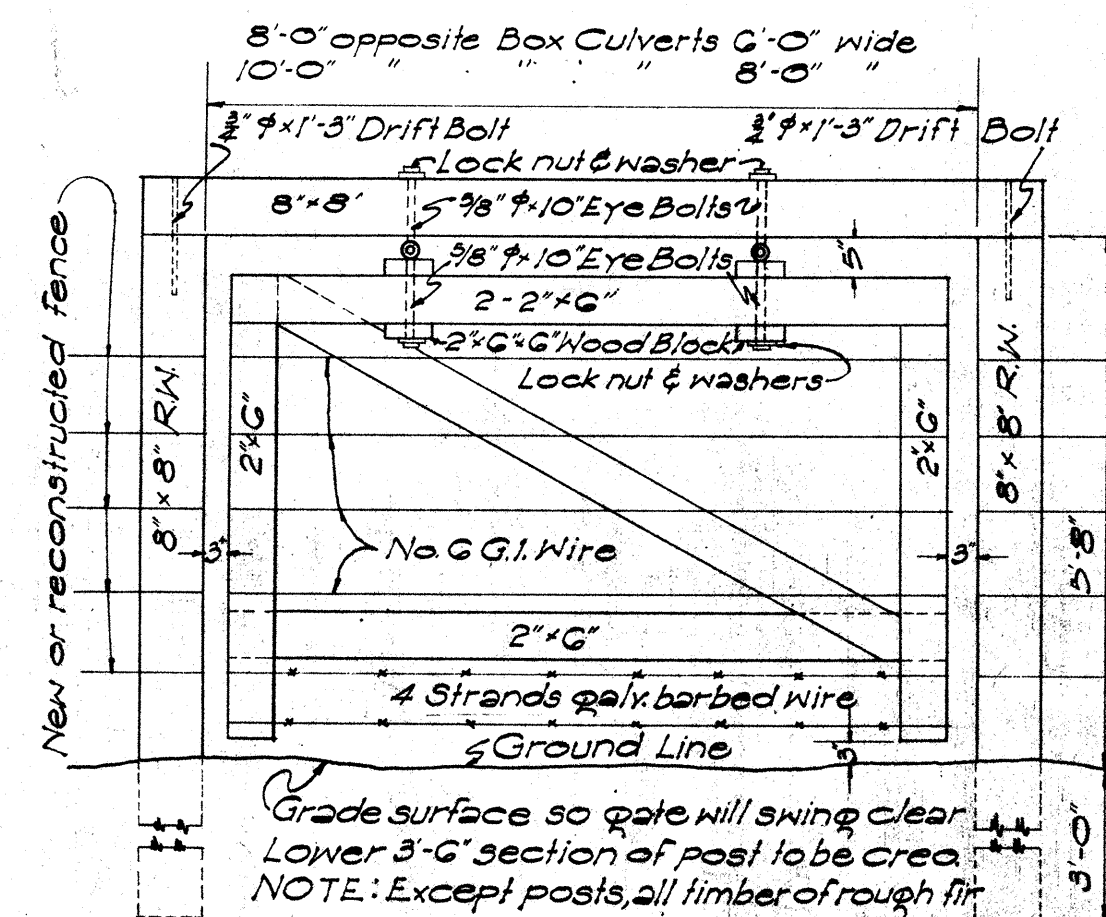
NOTE: This type of structure shall also be used for the Drop Intakes of Syphons connected with Irrigation Ditches or Flumes with appropriate changes to dimensions. In this case all joints must be made water tight.



**SECTION "A-A"**

TERRITORIAL HIGHWAY DEPARTMENT  
TERRITORY OF HAWAII  
STANDARD DETAILS  
DROP INTAKES, RETAINING WALLS,  
HEADWALLS, CONSTRUCTION JOINTS  
SCALES AS NOTED

APPROVED: *L. B. ...*  
TERRITORIAL HIGHWAY ENGINEER



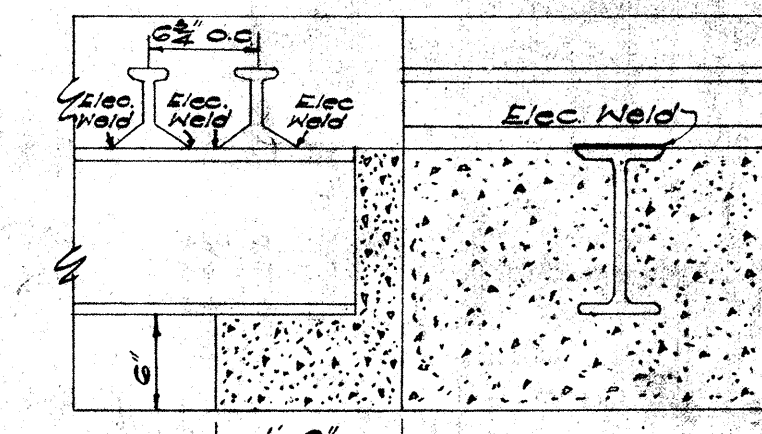
ELEVATION

LAYOUT SHOWING HURDLE PLACED  
BELOW CULVERT IN A POSITION  
WHICH WILL BE CATTLE TIGHT

| SCHEDULE FOR CHAIN LINK FENCE |                |          |           |                  |                |                 |          |
|-------------------------------|----------------|----------|-----------|------------------|----------------|-----------------|----------|
| Height of Fence               | Line Post      | End Post | Top Rail  | Depth of Footing | Top of Footing | Length of Posts |          |
|                               | Column         | Pipe     | Pipe      | End Line         | Size           |                 | End Line |
| 3'                            | 2.8" x 11' 10" | 3" O.D.  | 1.8" O.D. | 30" x 24"        | 8" sq.         | 5' 10"          |          |
| 4'                            | 2.8" x 11' 10" | 3" O.D.  | 1.8" O.D. | 30" x 24"        | 10" sq.        | 5' 10"          |          |
| 4' 6"                         | 2.8" x 11' 10" | 3" O.D.  | 1.8" O.D. | 30" x 24"        | 12" sq.        | 5' 10"          |          |
| 6'                            | 4.1" x 11' 10" | 3" O.D.  | 1.8" O.D. | 36" x 36"        | 12" sq.        | 5' 10"          |          |

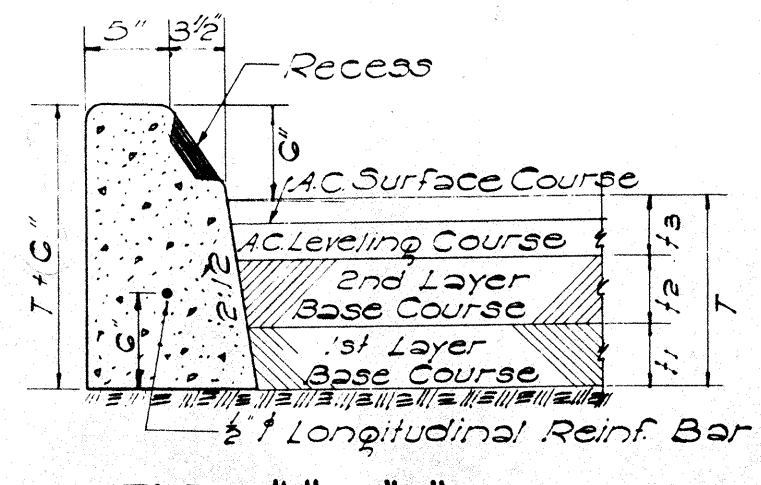
LONGITUDINAL SECTION

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

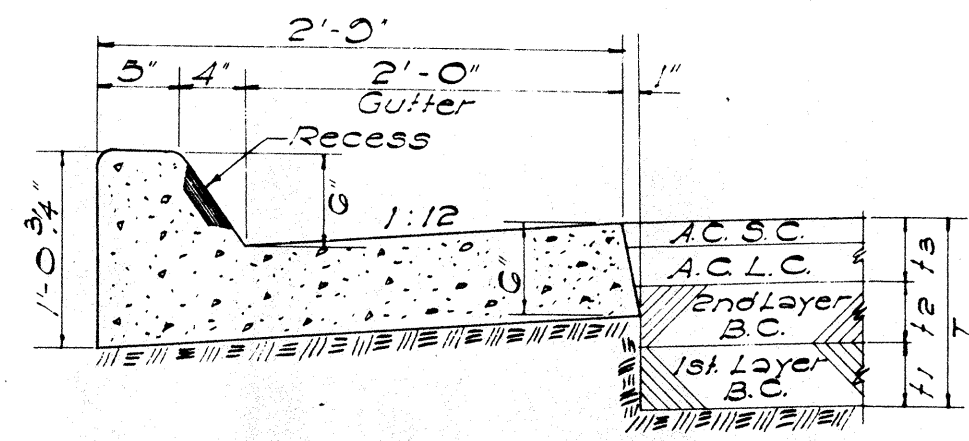


Scale:  $3/8" = 1' - 0"$

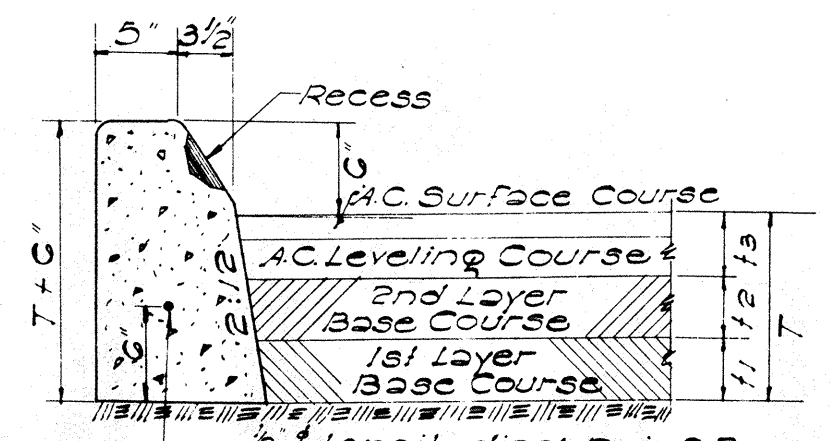
STANDARD DETAILS  
FENCES, GATES, GUARD RAILS,  
GUIDE POSTS, CATTLE GUARD  
SCALES AS NOTED



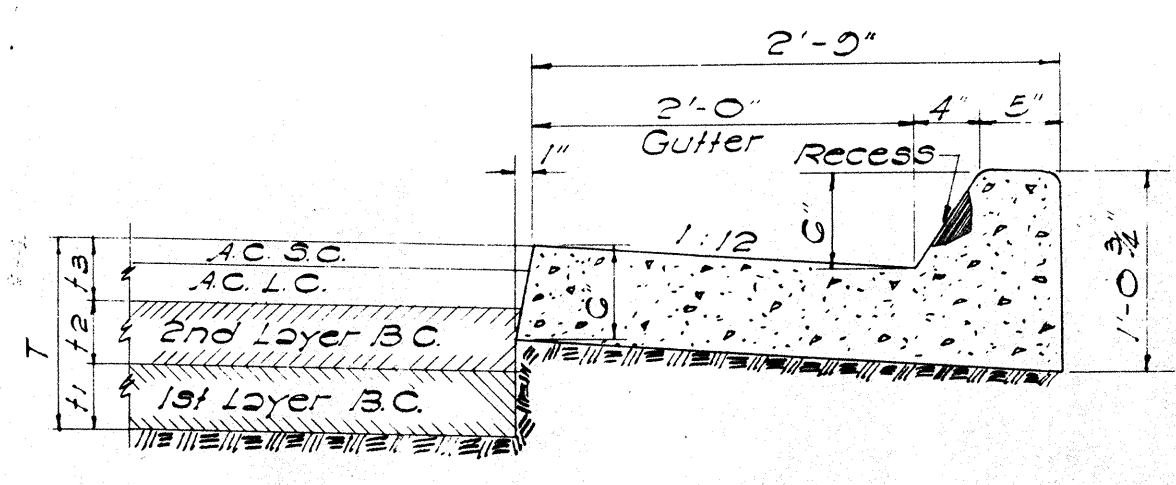
TYPE "A" & "B" CURB  
SCALE: 1" = 1'-0"



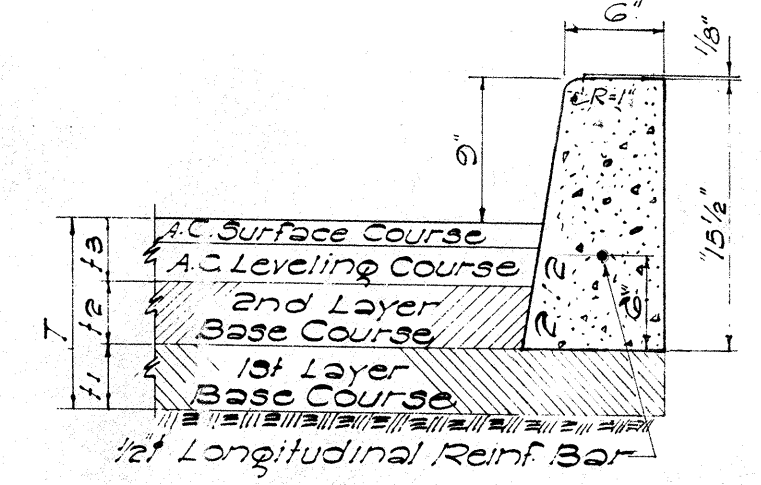
TYPE "AG" & "BG" CURB & GUTTER  
SCALE: 1" = 1'-0"



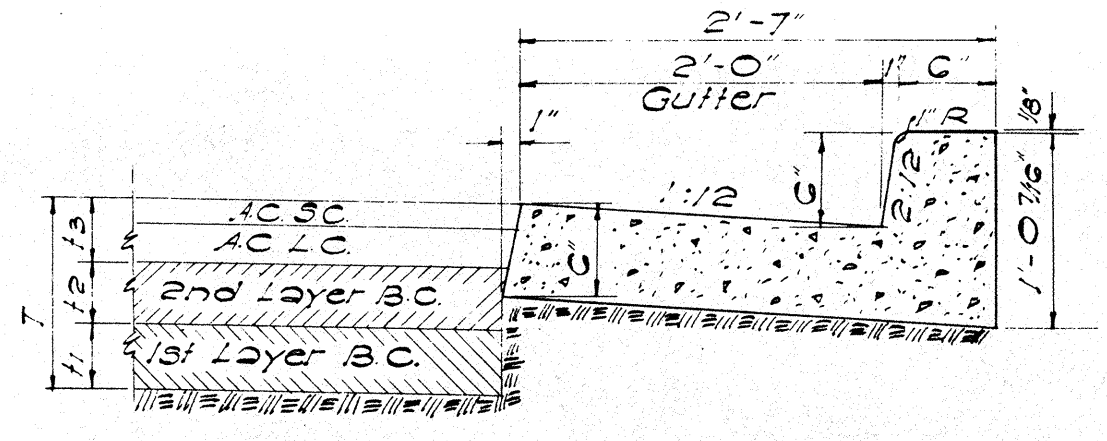
TYPE "C" CURB  
SCALE: 1" = 1'-0"



TYPE "CG" CURB & GUTTER  
SCALE: 1" = 1'-0"

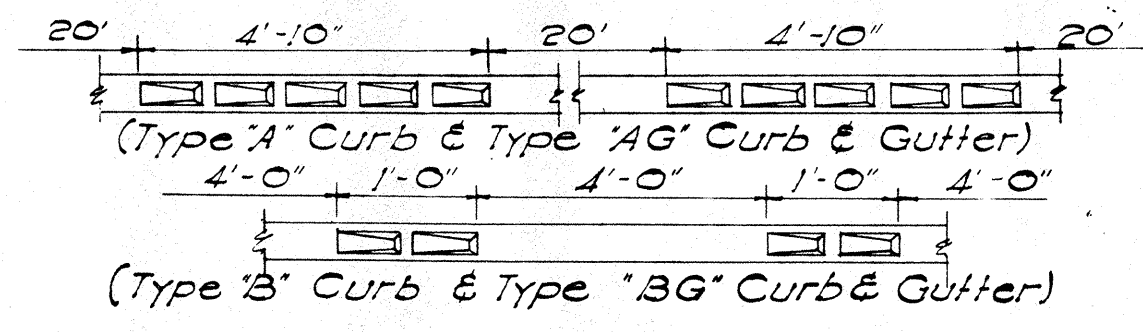


TYPE "D" CURB  
SCALE: 1" = 1'-0"

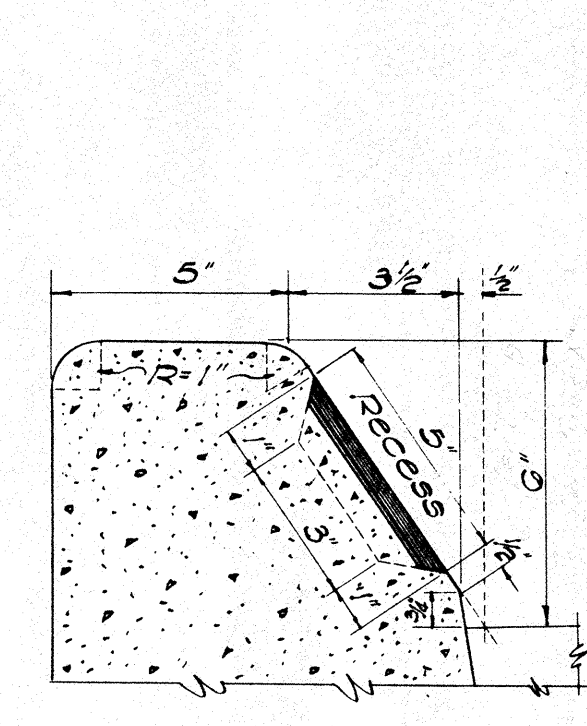


TYPE "DG" CURB & GUTTER  
SCALE: 1" = 1'-0"

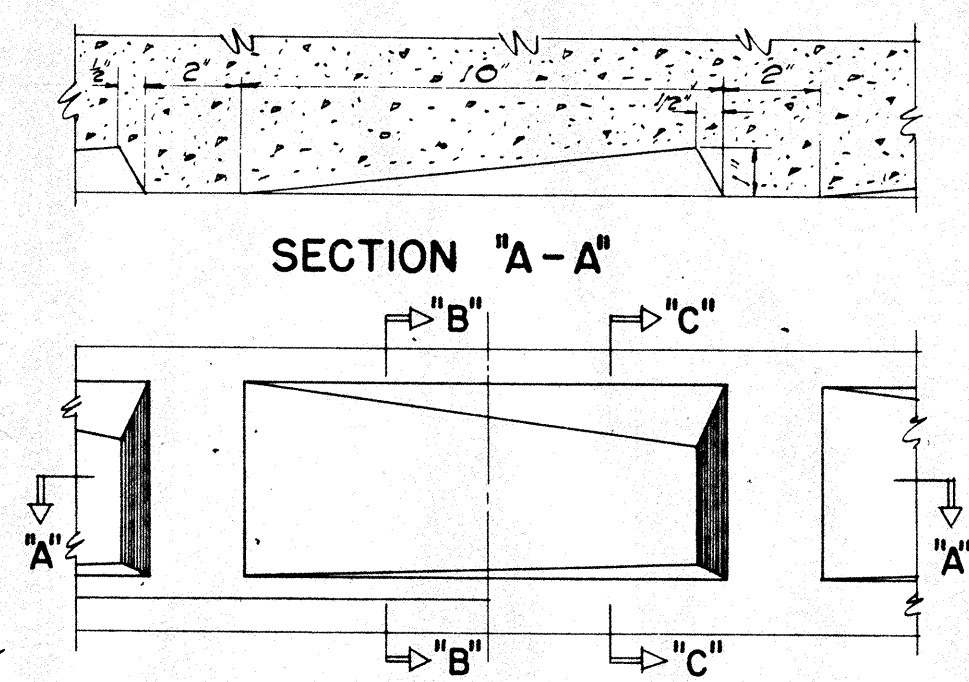
General Note Covering All Types of Curbs:  
Occasionally curb rests on first layer of base course. See typical sections.



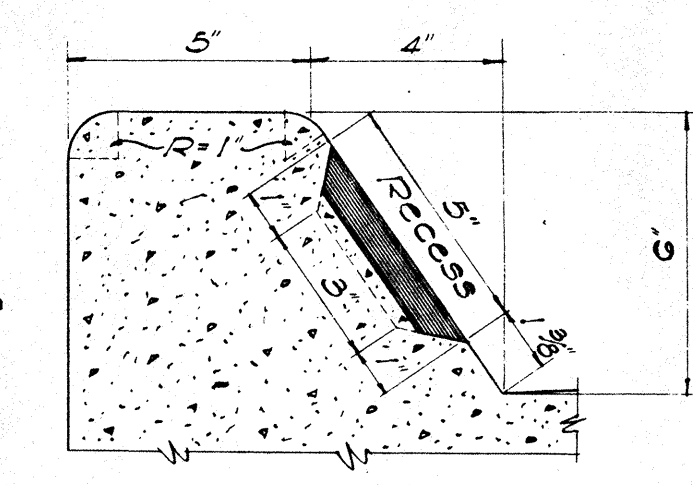
TYPE AND SPACING OF RECESSES



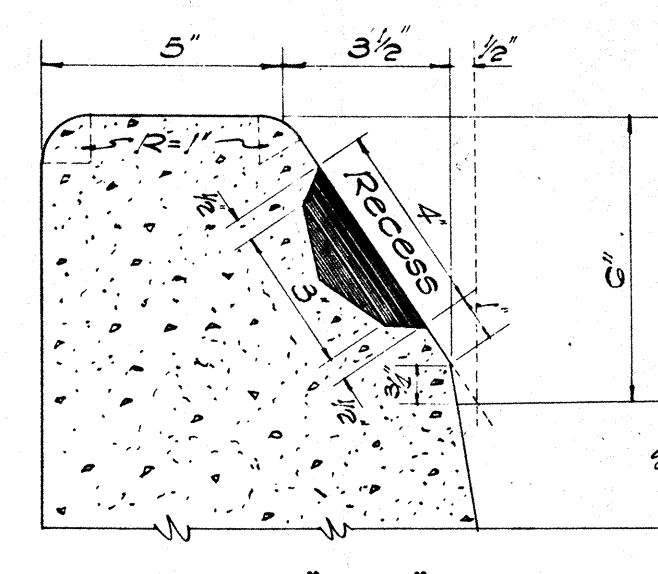
SECTION "B-B"  
TYPE "A" & "B" CURB



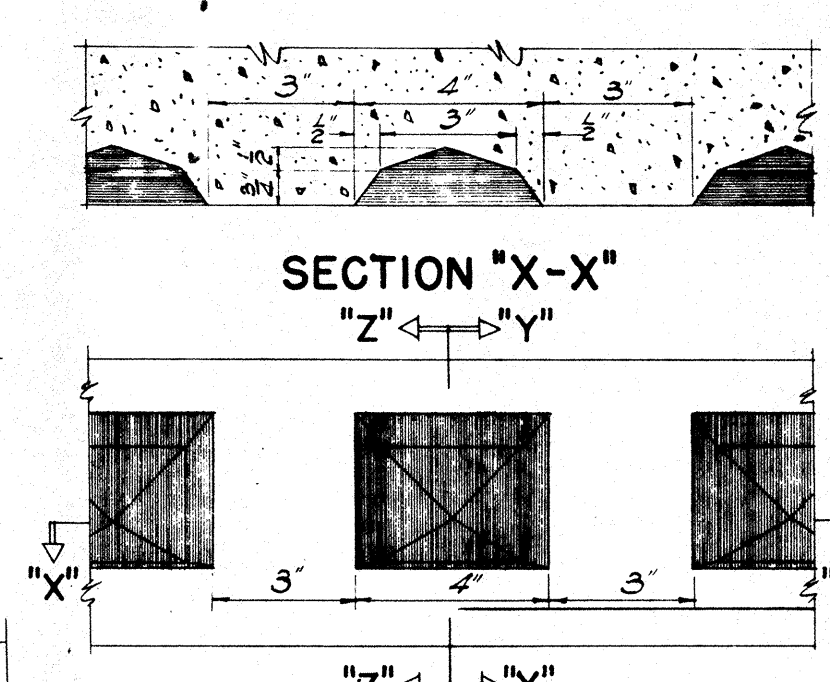
ELEVATION  
SCALE: 3" = 1'-0"



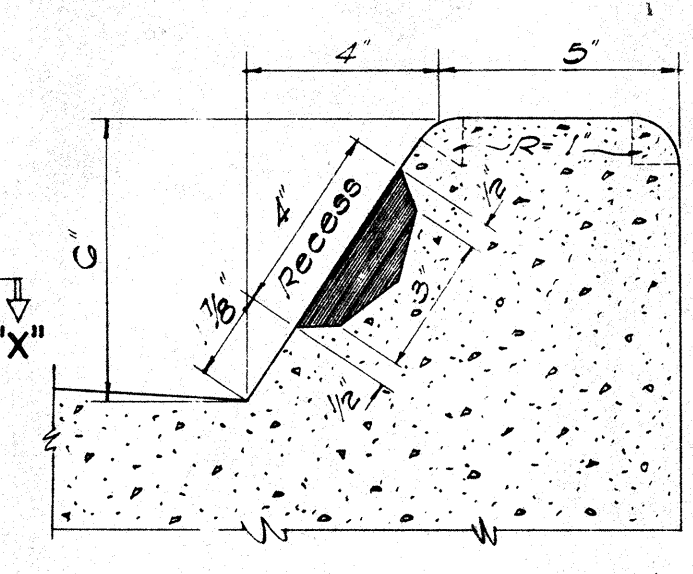
SECTION "C-C"  
TYPE "AG" & "BG" CURB



SECTION "Y-Y"  
TYPE "C" CURB

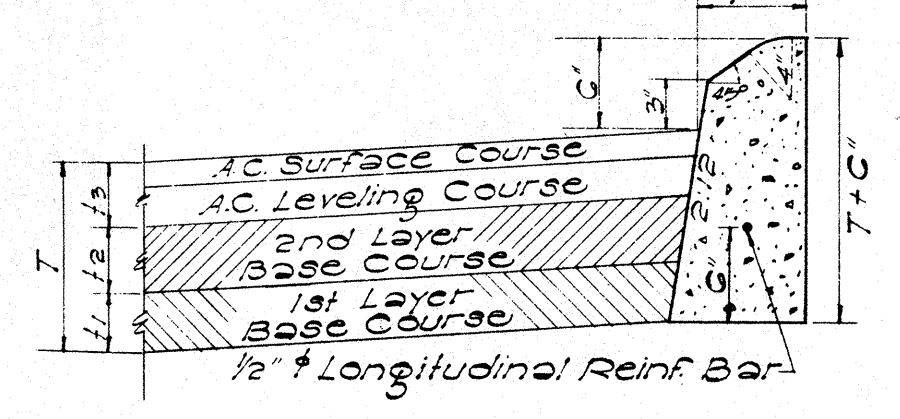


ELEVATION  
SCALE: 3" = 1'-0"



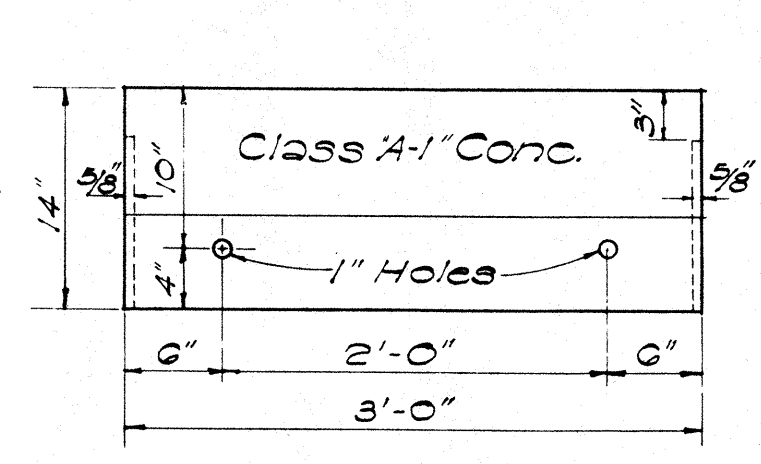
SECTION "Z-Z"  
TYPE "CG" CURB

- NOTES:
- Types "AG", "BG", "CG", "DG" and "EG" Concrete Curbs and Gutters are to be poured monolithically.
  - Types "A", "B", and "C" Curbs and Types "AG", "BG" and "CG" Curbs and Gutters occur at Median Strips and Traffic Islands.
  - Shaded area in Curbs are to be painted with an approved white lacquer. (One Coat)
  - All Concrete Curbs and Gutters shown herein are to be of Class "A-1" Conc. and Cast-in-Place.

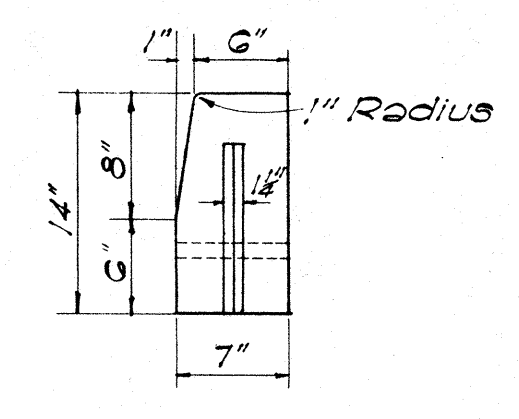


TYPE "F" CURB  
SCALE: 1" = 1'-0"

# DETAILS OF CAST-IN-PLACE CONC. CURBS AND GUTTERS

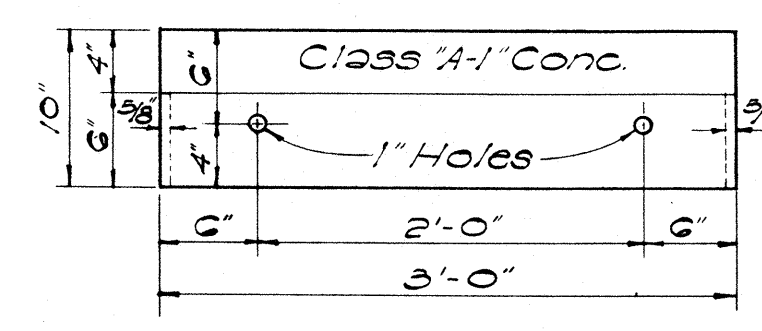


FRONT ELEV.

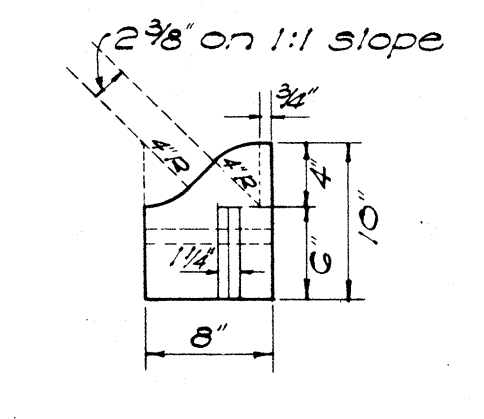


END ELEV.

PRECAST CONC. CURB  
SCALE: 1" = 1'-0"

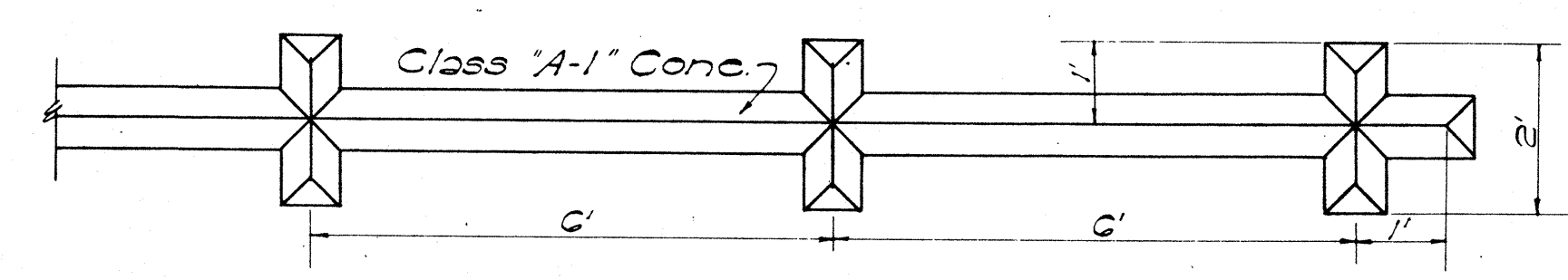


FRONT ELEV.

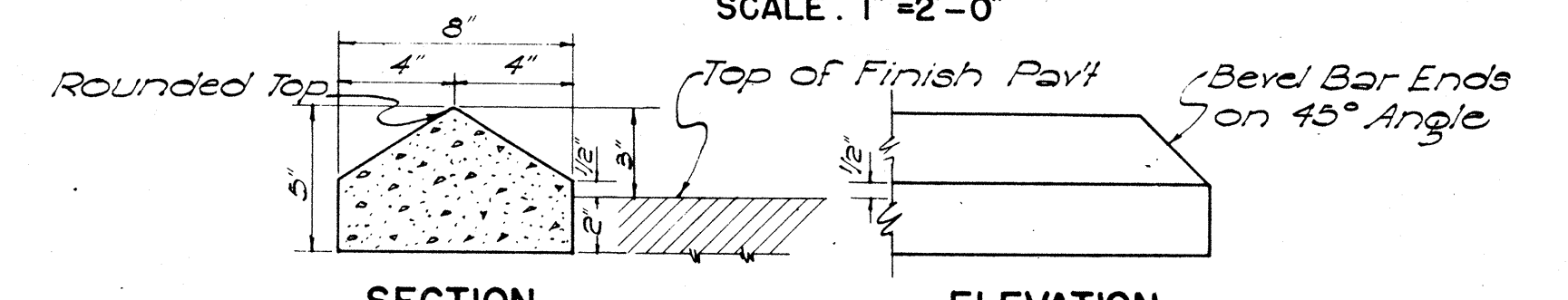


END ELEV.

PRECAST CONC. ROLL CURB  
SCALE: 1" = 1'-0"

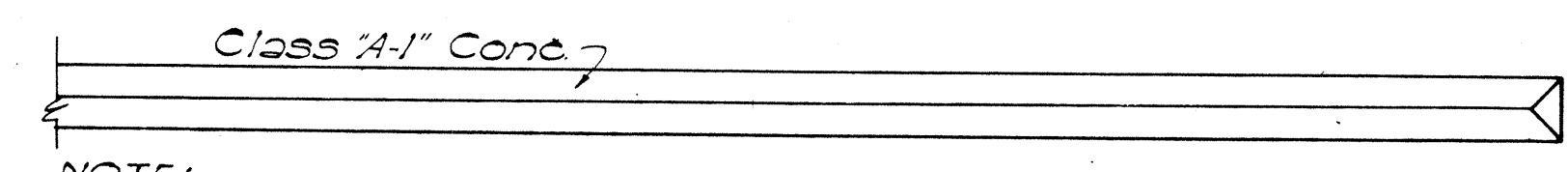


PLAN  
SCALE: 1" = 2'-0"



SECTION  
RAISED TRAFFIC BARS

SCALE: 1" = 6"

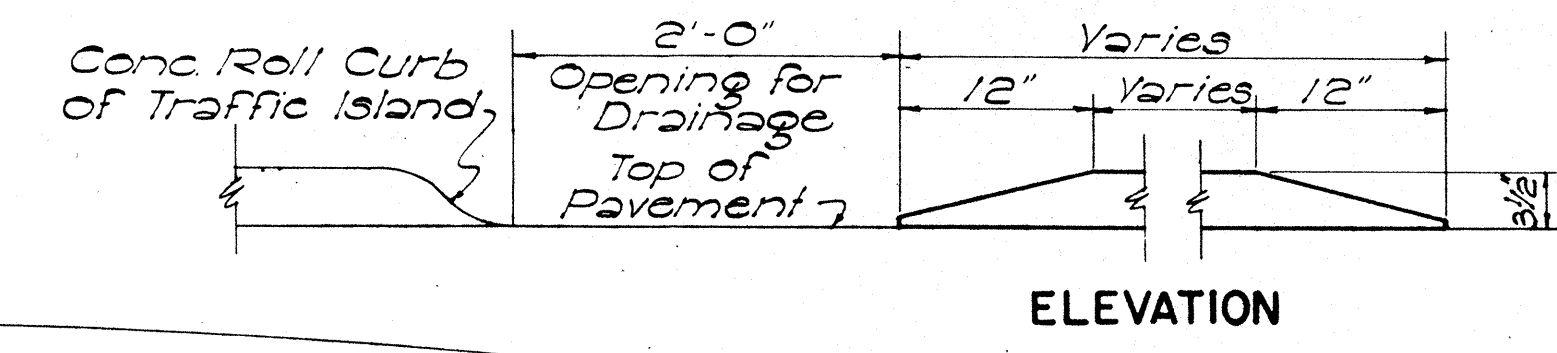


PLAN

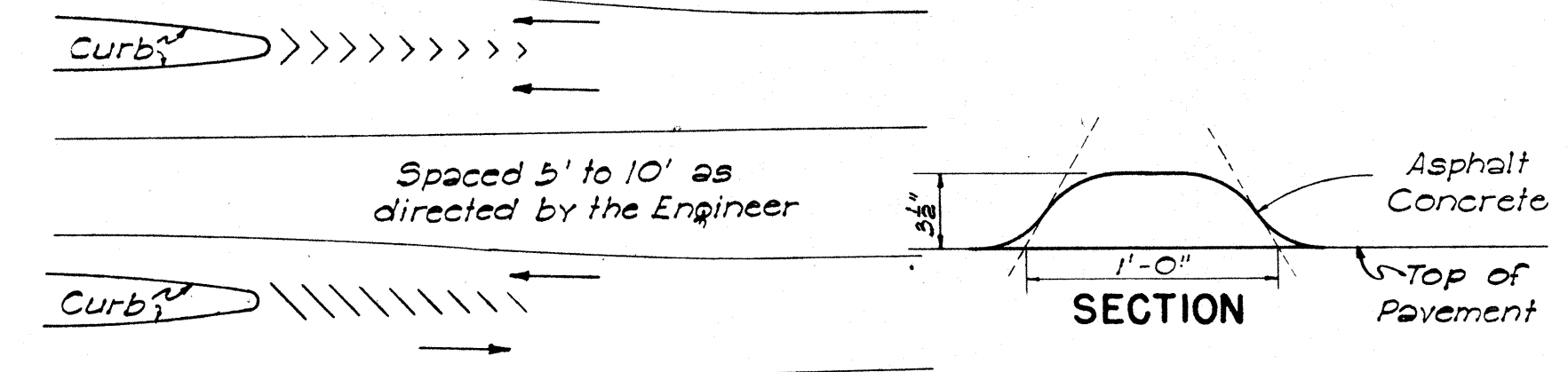
RAISED JIGGLE BARS  
SCALE: 1" = 2'-0"

NOTE:  
Section and Elevation for Jiggle Bars are same as the Traffic Bars.

NOTE:  
Paint all exposed surfaces of bars with beaded white traffic lacquer.

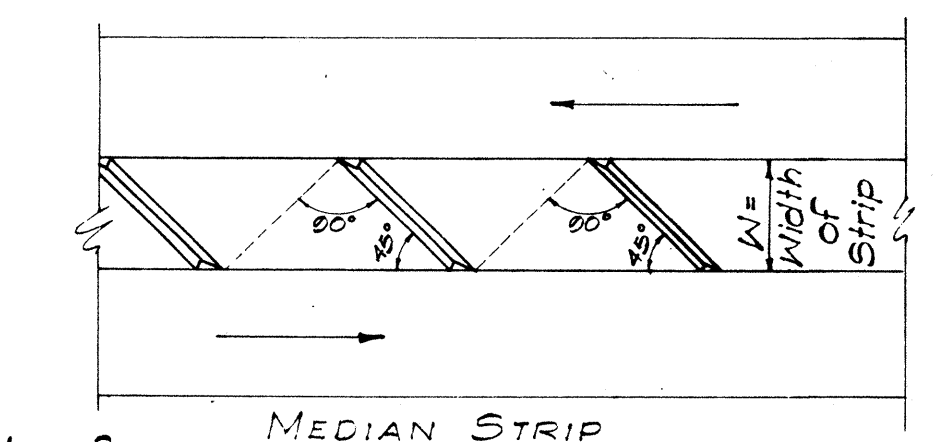


ELEVATION

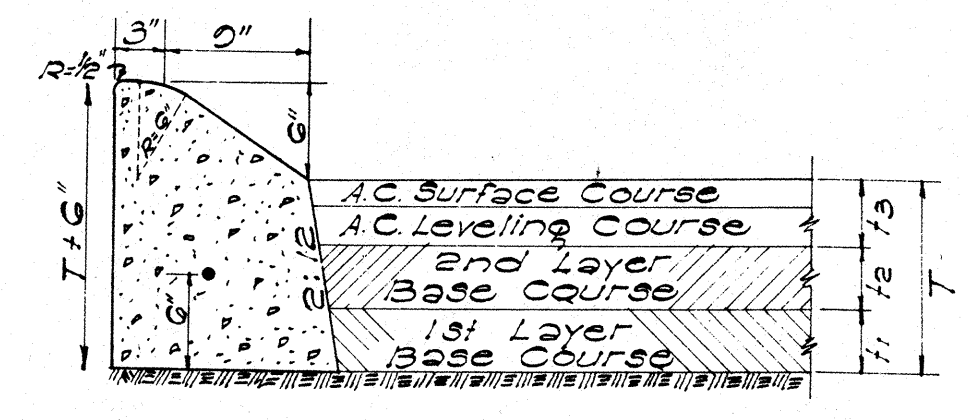


SECTION

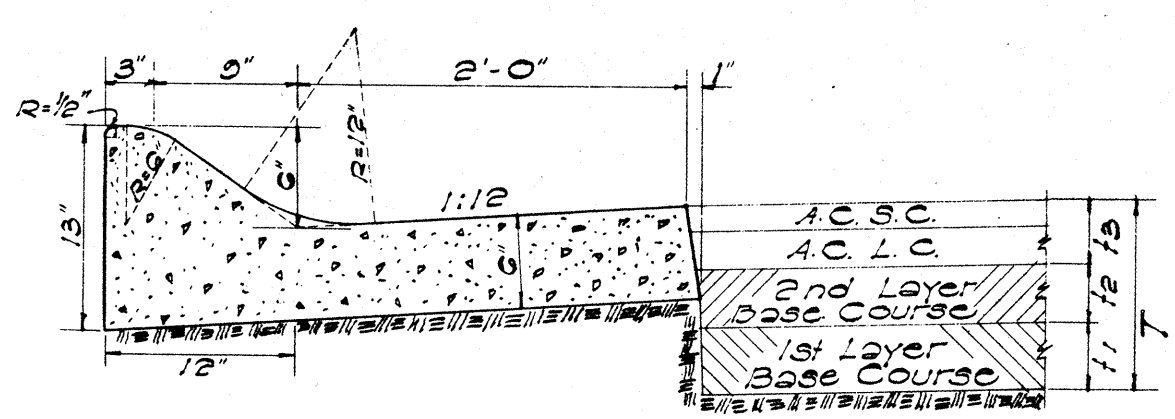
A.C. ROLL CURB  
NOT TO SCALE



LAYOUT OF JIGGLE BARS  
NOT TO SCALE



TYPE "E" CAST-IN-PLACE CONCRETE CURB  
SCALE: 1" = 1'-0"

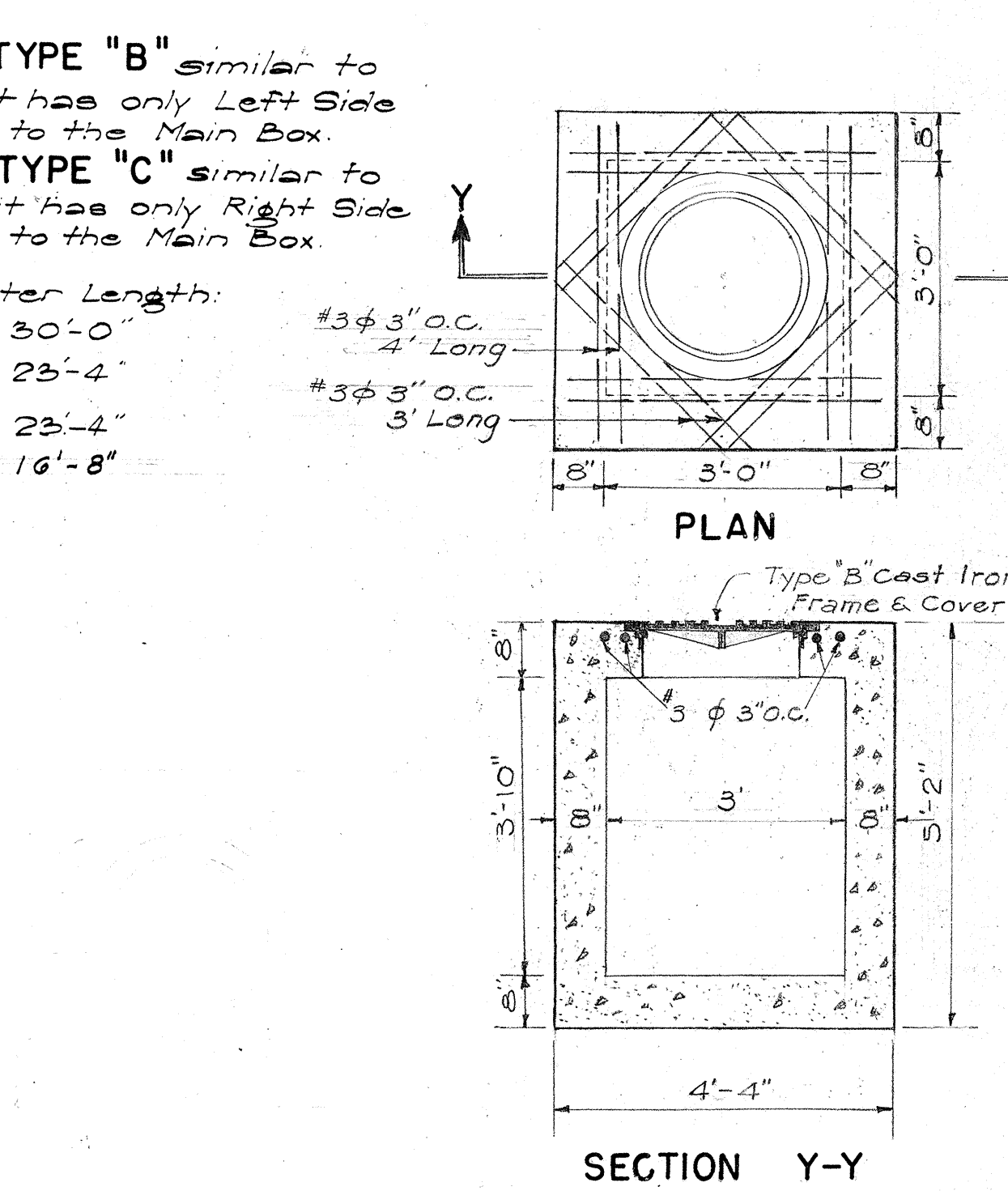
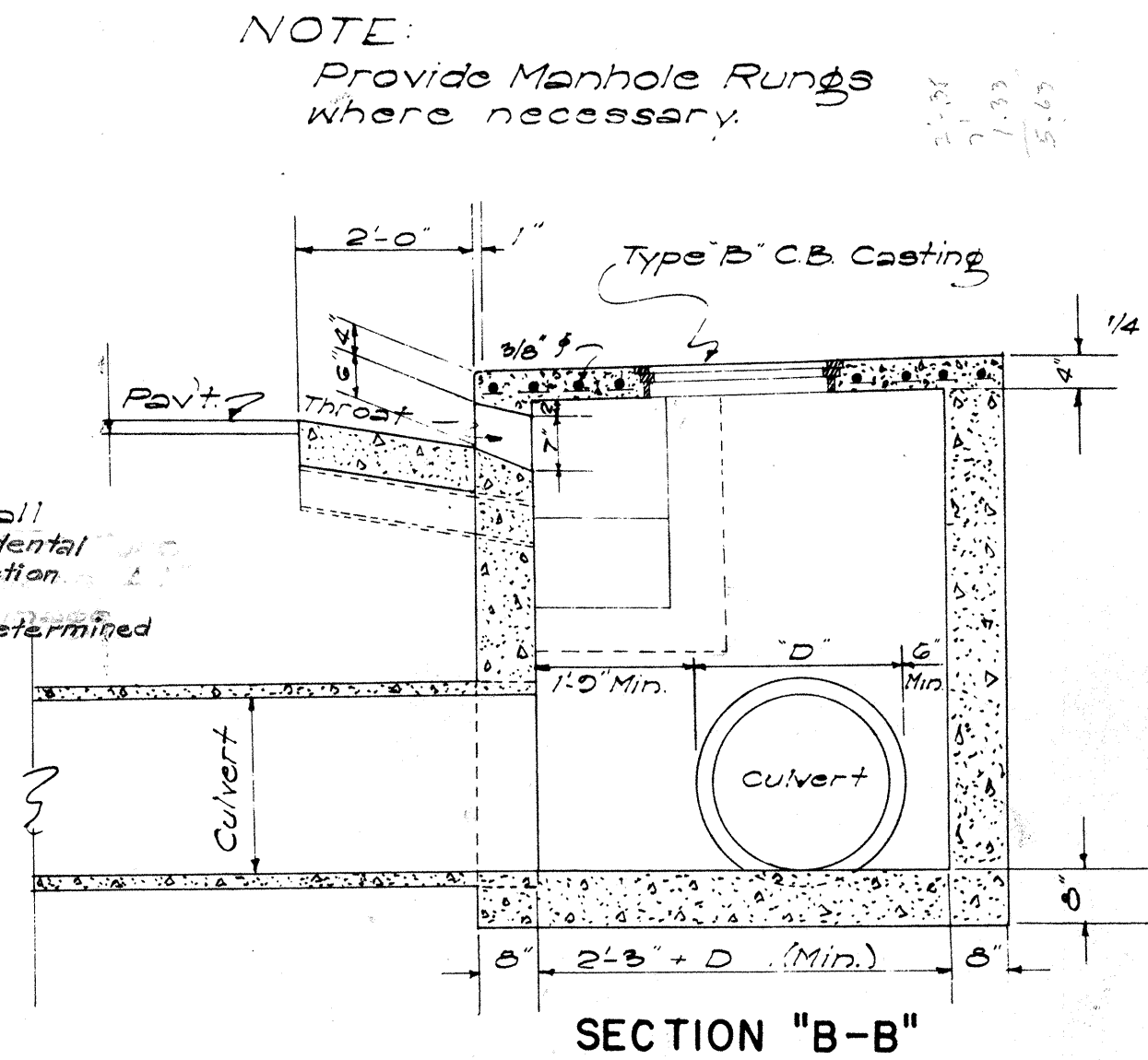
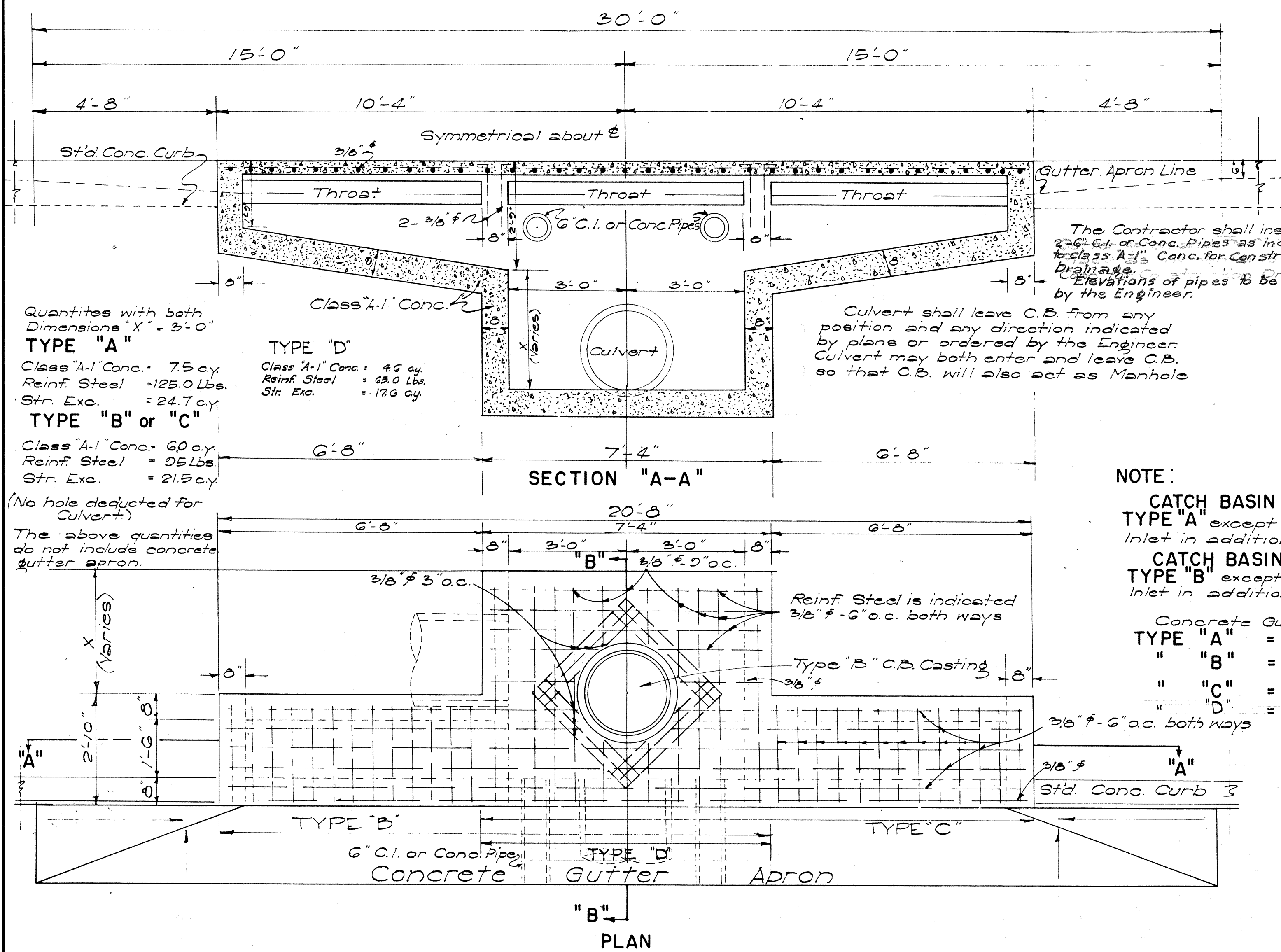


TYPE "EG" CAST-IN-PLACE CONC. CURB & GUTTER  
SCALE: 1" = 1'-0"

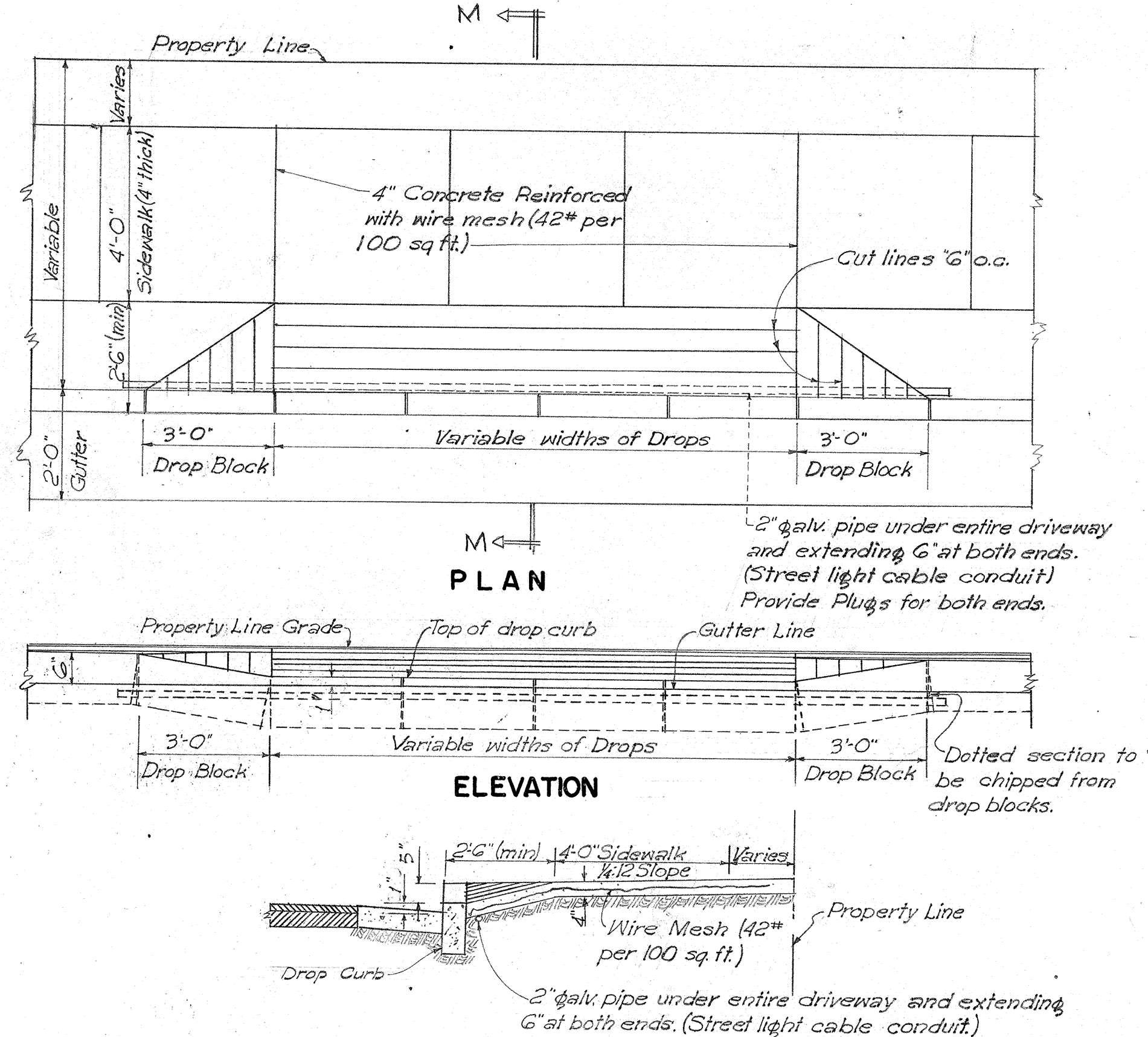
TERRITORIAL HIGHWAY DEPARTMENT  
TERRITORY OF HAWAII  
STANDARD DETAILS  
CONCRETE CURBS,  
CONCRETE CURBS & GUTTERS  
SCALES AS NOTED

DATE: 6-23-53  
DESIGNED BY: C. L. Calisto  
DRAWN BY: C. L. Calisto  
CHECKED BY: C. L. Calisto  
ORIGINAL PLAN NO. 5743.17  
NOTE BOOK NO. 5743.17

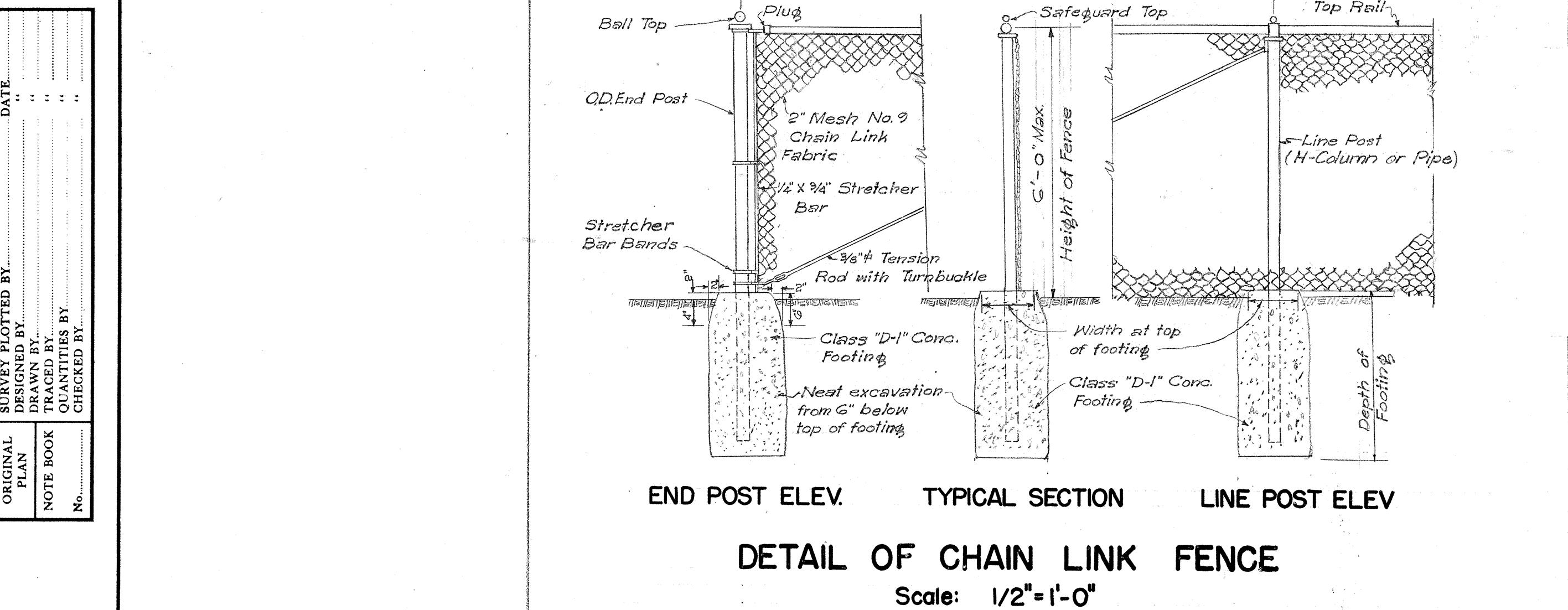
APPROVED: *B. E. Nutt*  
TERRITORIAL HIGHWAY ENGINEER



**DETAIL OF STORM DRAIN MANHOLE**  
Scale: 1/2" = 1'-0"



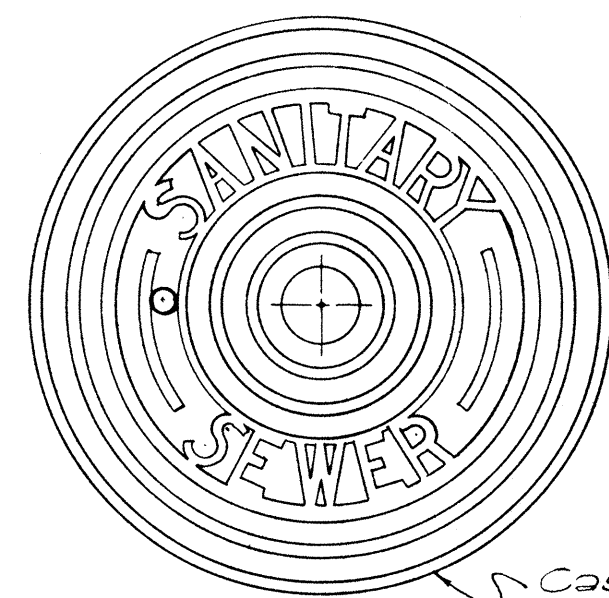
**DETAIL OF DROP DRIVEWAYS**  
Scale: 3/8" = 1'-0"



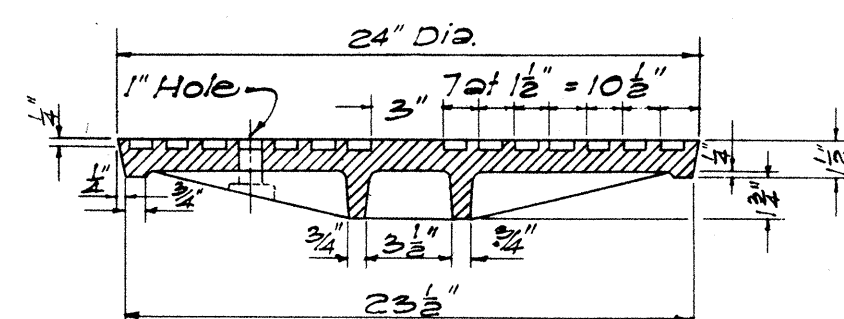
| SCHEDULE FOR CHAIN LINK FENCE |                    |               |               |                           |                     |                 |       |       |  |
|-------------------------------|--------------------|---------------|---------------|---------------------------|---------------------|-----------------|-------|-------|--|
| Height of Fence               | Line Post H Column | End Post Pipe | Top Rail Pipe | Depth of Footing End Line | Top of Footing Size | Length of Posts |       |       |  |
| 3'                            | 1.875"/ft          | 1 1/8" O.D.   | 2" O.D.       | 1 3/8" O.D.               | 30" 24"             | 8" sq           | 5'-6" | 5'-0" |  |
| 4'                            | 1.875"/ft          | 1 1/8" O.D.   | 2" O.D.       | 1 3/8" O.D.               | 30" 24"             | 10" sq          | 6'-6" | 6'-0" |  |
| 5'                            | 1.875"/ft          | 1 1/8" O.D.   | 2 1/8" O.D.   | 1 3/8" O.D.               | 36" 36"             | 12" sq          | 8'-0" | 8'-0" |  |
| 6'                            | 2.25"/ft           | 2 1/4" O.D.   | 3" O.D.       | 1 3/8" O.D.               | 42" 42"             | 12" sq          | 9'-0" | 9'-0" |  |

APPROVED: *Bruce E. Hutter*  
TERRITORIAL HIGHWAY ENGINEER

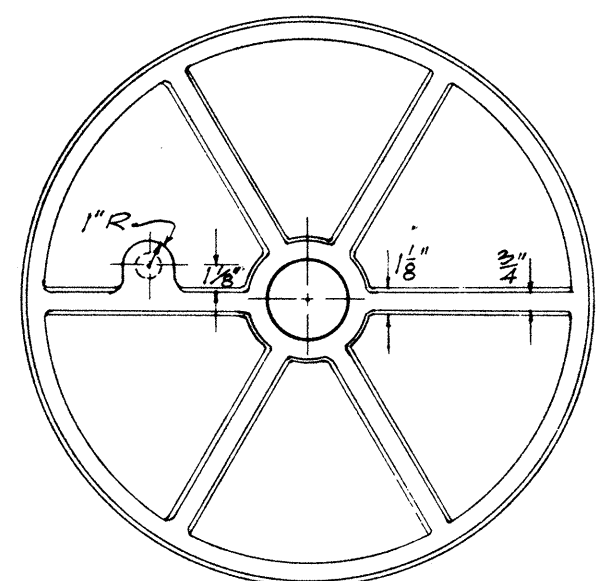
TERRITORIAL HIGHWAY DEPARTMENT  
TERRITORY OF HAWAII  
STANDARD DETAILS  
MISCELLANEOUS  
SCALES AS NOTED



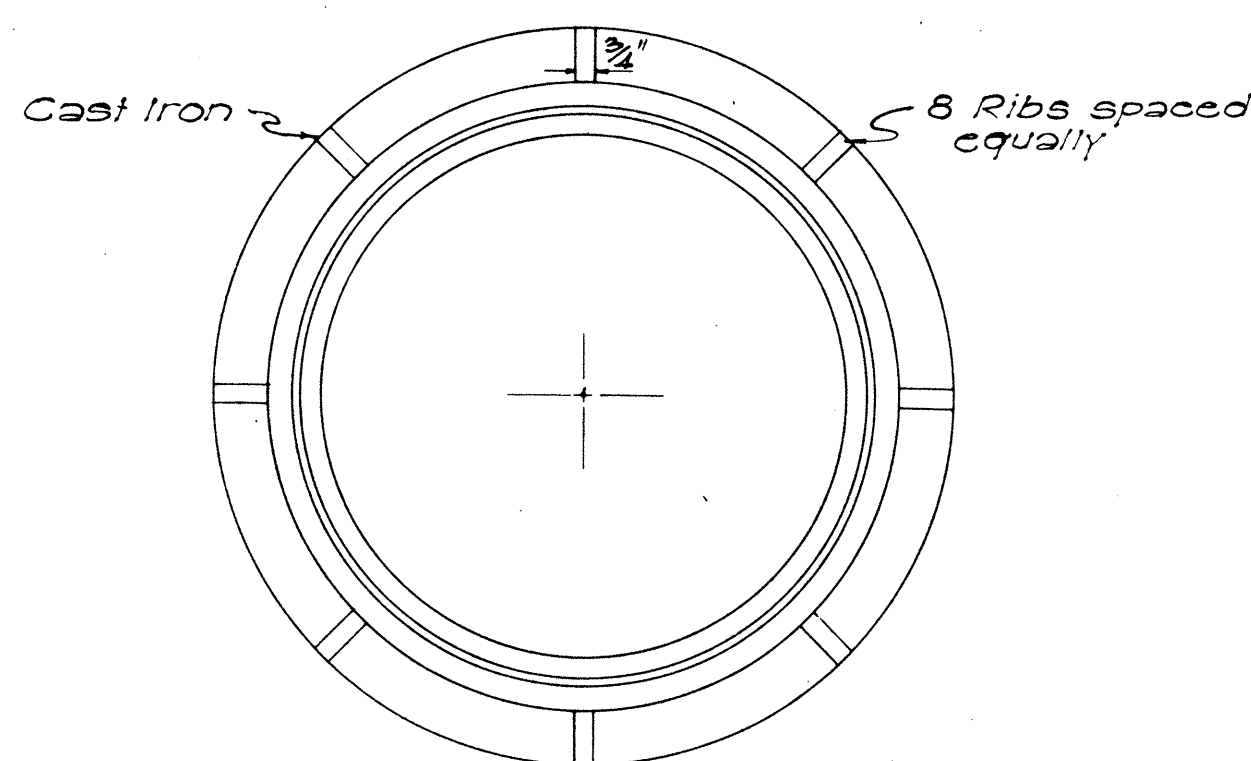
TOP VIEW OF COVER



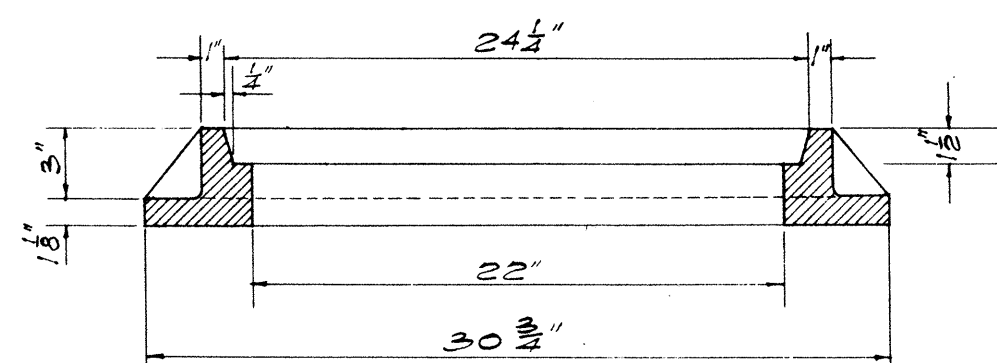
SECTION



BOTTOM VIEW OF COVER



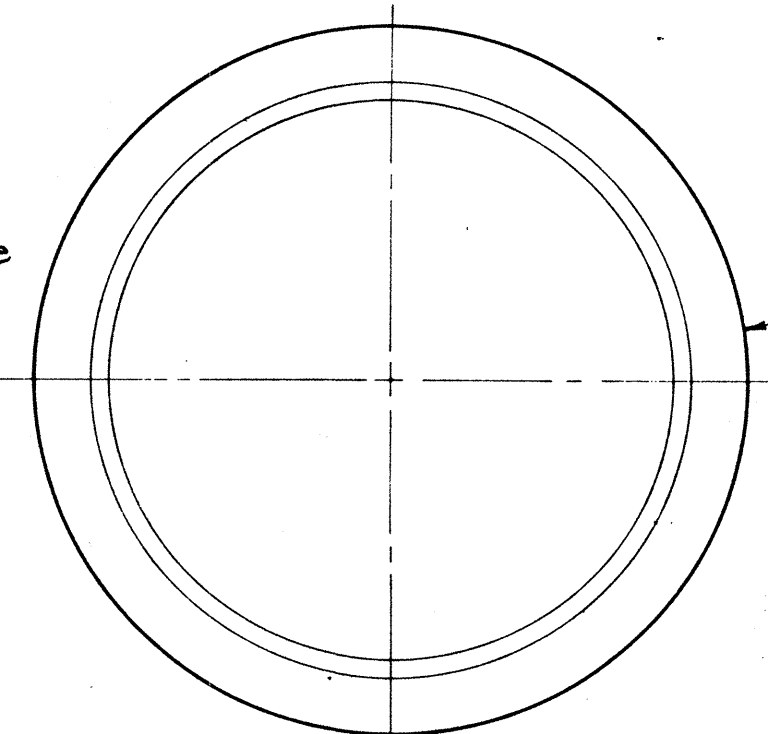
PLAN OF RIM



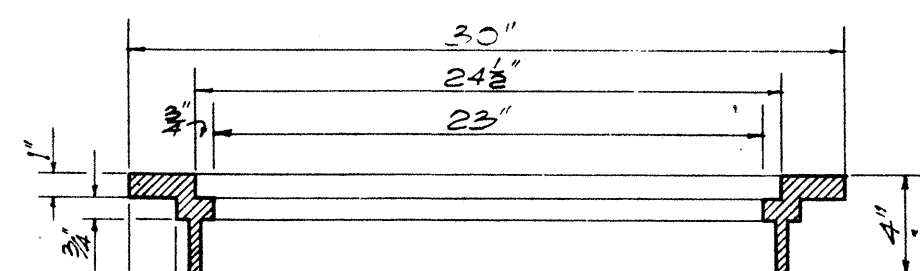
SECTION OF RIM  
DETAILS OF TYPE "C"  
MANHOLE CASTINGS

SCALE: 1-1/2" = 1'-0"

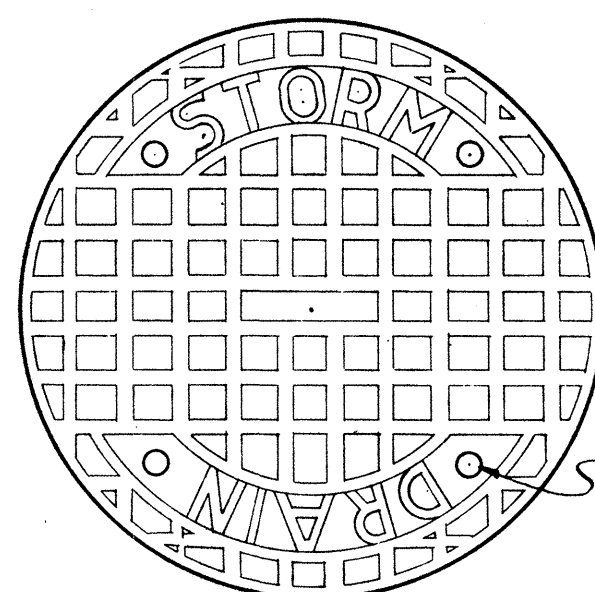
NOTE:  
The Cover for Water Manhole shall be the same as for Sanitary Sewer except that the word "WATER" shall be substituted for "SANITARY SEWER". The frames for Sanitary Sewer and Water Covers shall be the same.



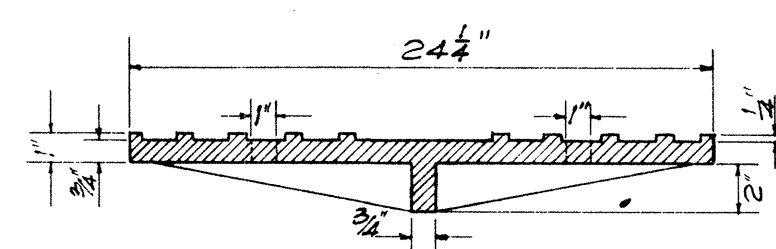
PLAN OF RIM



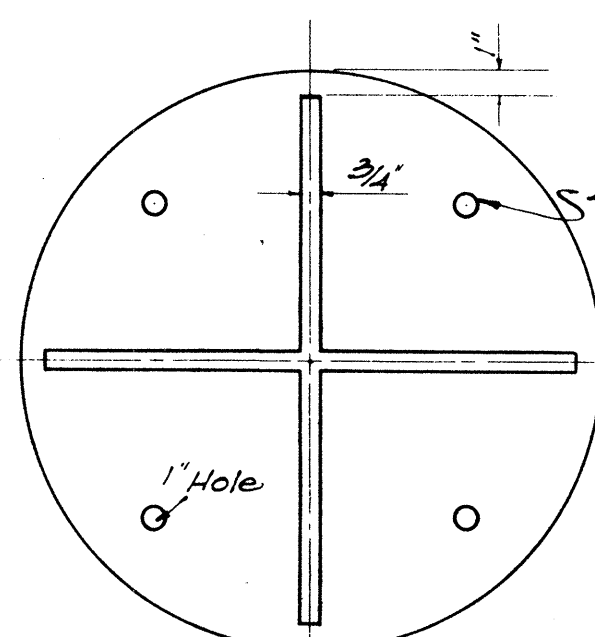
SECTION OF RIM



TOP VIEW OF COVER



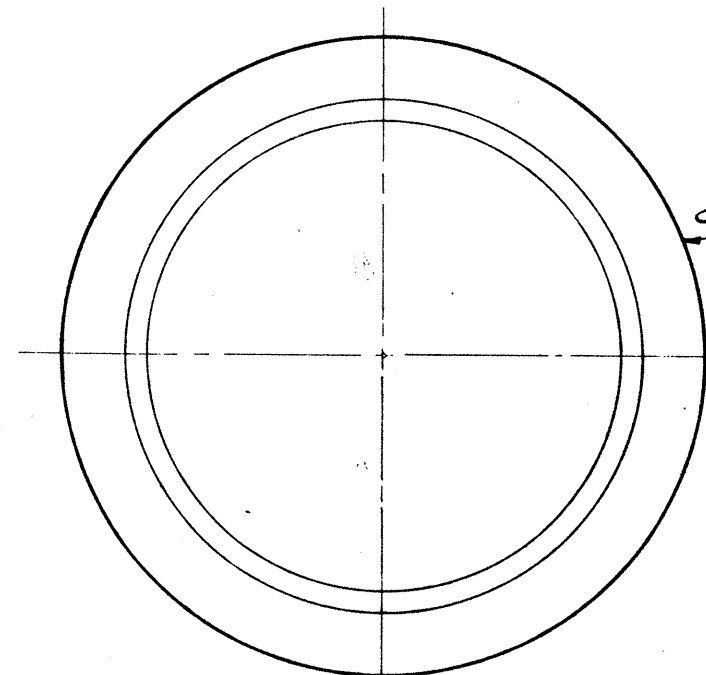
SECTION



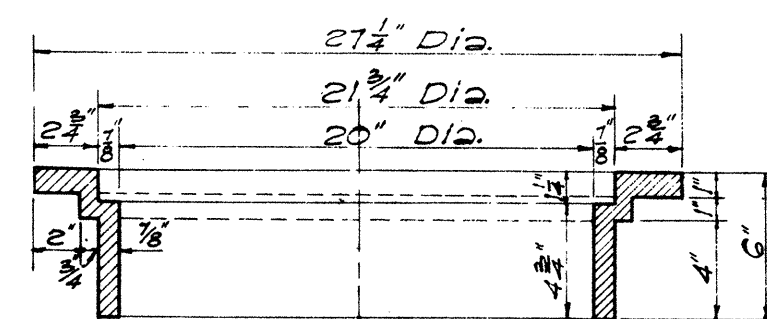
BOTTOM VIEW OF COVER

DETAILS OF TYPE "B"  
CATCH BASIN CASTINGS

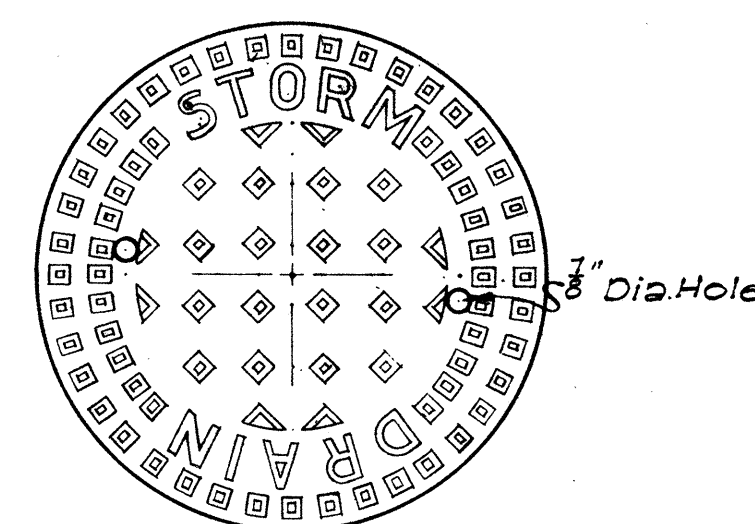
SCALE: 1-1/2" = 1'-0"



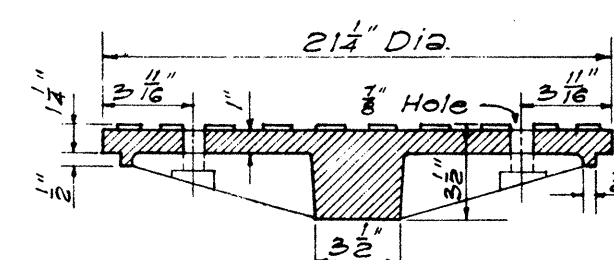
PLAN OF RIM



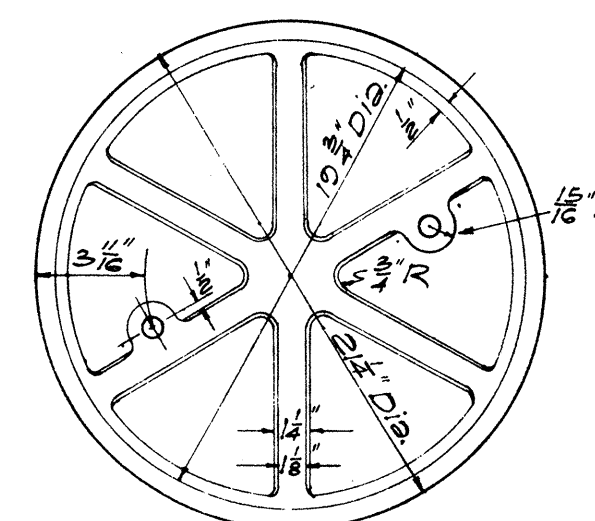
SECTION OF RIM



TOP VIEW OF COVER



SECTION

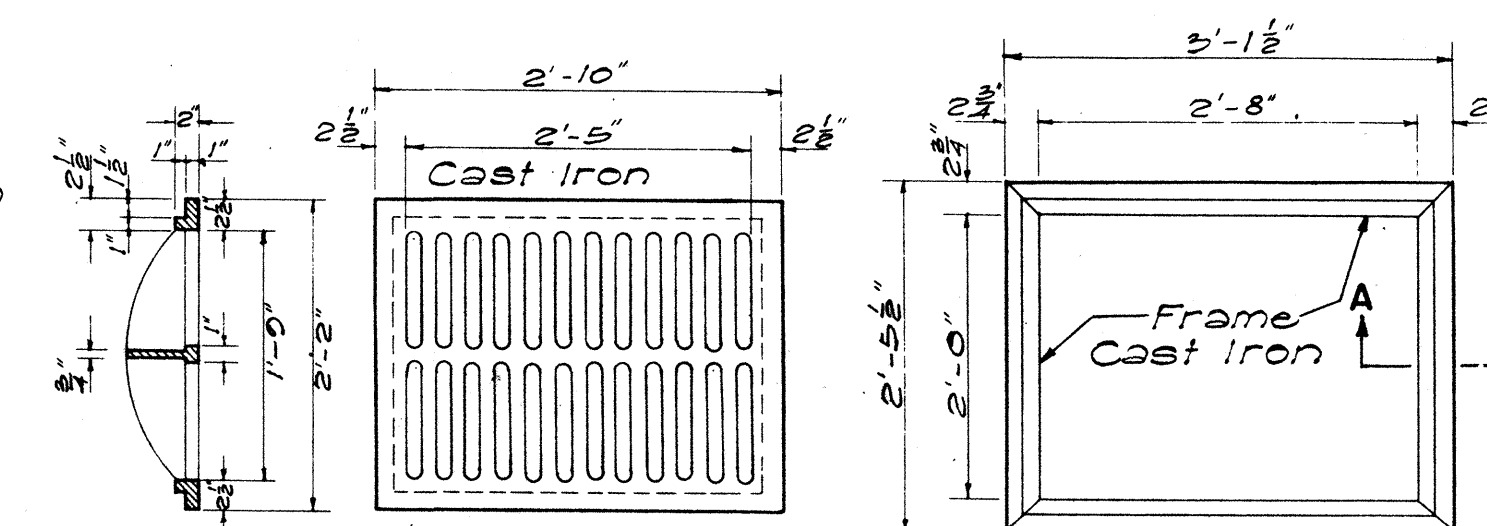


BOTTOM VIEW OF COVER

DETAILS OF TYPE "A"  
MANHOLE CASTINGS

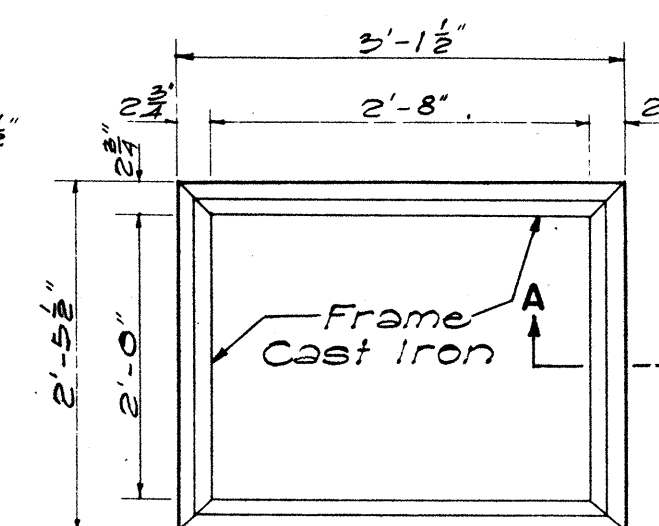
SCALE: 1-1/2" = 1'-0"

NOTE: Stock Pattern From Novelty Foundry ~ Honolulu



SECTION

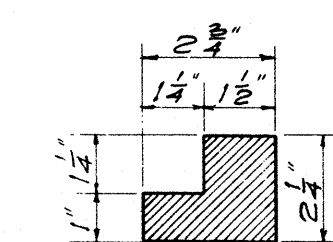
TOP VIEW



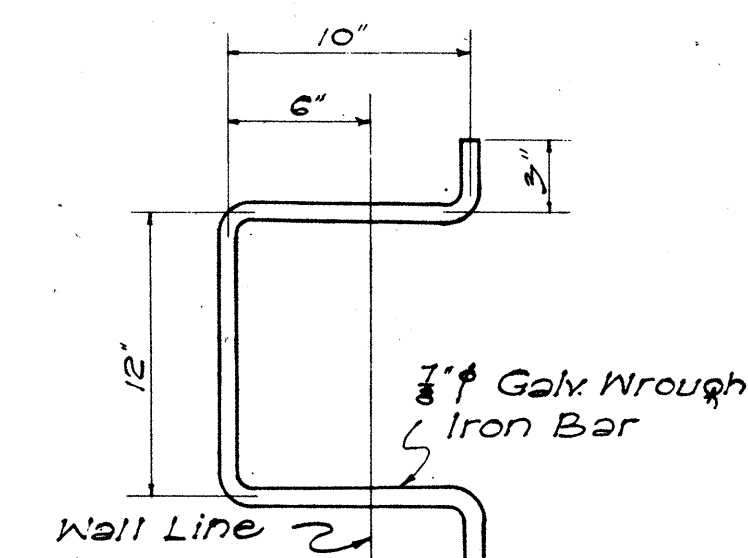
TOP VIEW

TYPE C C.I. FRAME AND GRATING

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



SECTION "A-A"  
SCALE 3" = 1'-0"



MANHOLE RUNG

SCALE: 1-1/2" = 1'-0"

ORIGINAL PLAN  
DESIGNED BY  
NOTED BY  
QUANTITIES BY  
CHECKED BY

SURVEY PLOTTED BY  
DATE  
DATE  
DATE  
DATE  
DATE

APPROVED: DATE 6-23-55

*R. E. Hutter*  
TERRITORIAL HIGHWAY ENGINEER

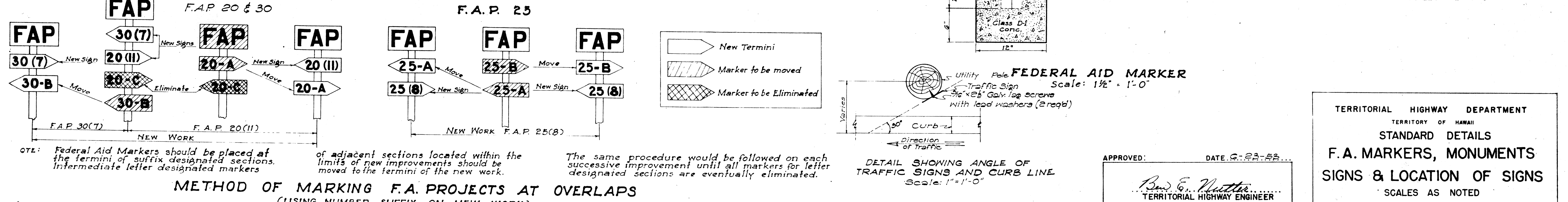
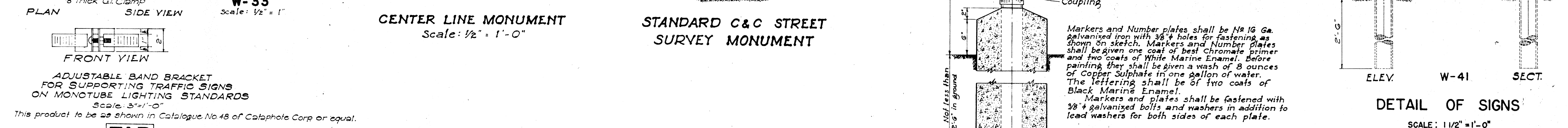
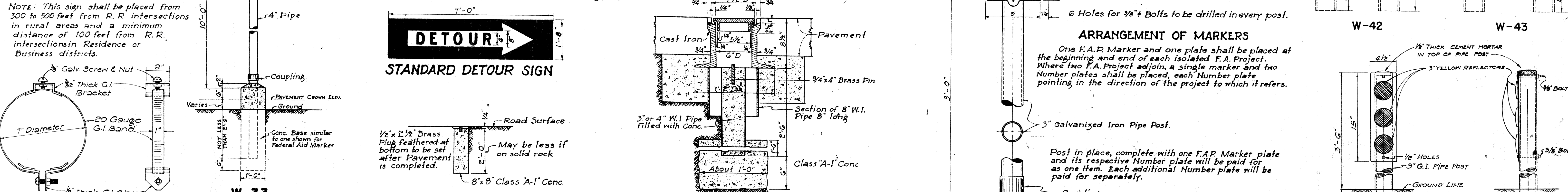
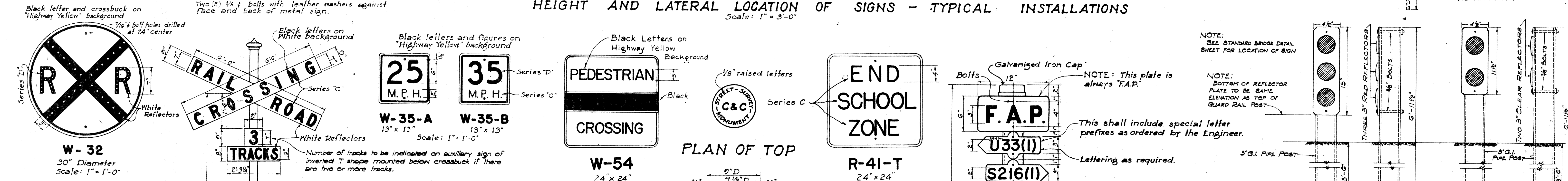
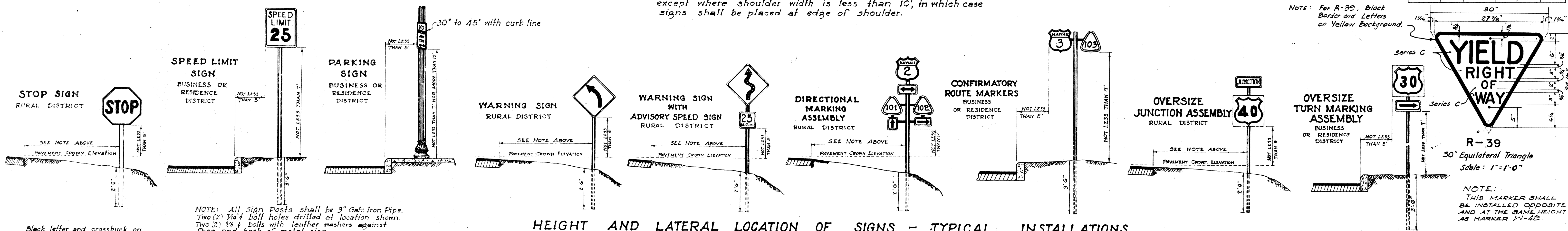
TERRITORIAL HIGHWAY DEPARTMENT  
TERRITORY OF HAWAII  
STANDARD DETAILS  
CATCH BASIN AND  
MANHOLE CASTINGS  
SCALES AS NOTED

SHEET NO 5 OF 8 SHEETS

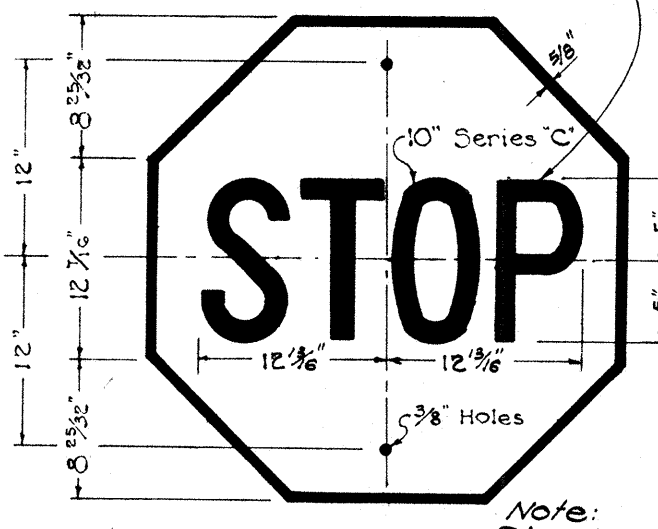
5743.19

NOTE: All signs shall be placed 10' from edge of pavement except where shoulder width is less than 10', in which case signs shall be placed at edge of shoulder.

NOTE: For R-39, Black Border and Letters on Yellow Background.

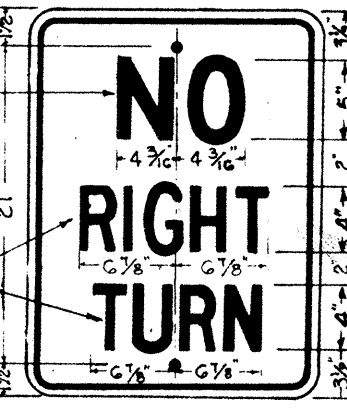


White Letters and Border on Red Background. Letters to be ReflectORIZED.

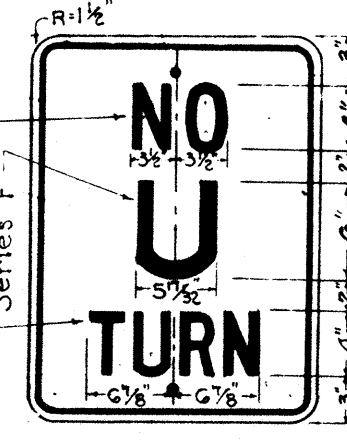


R-1

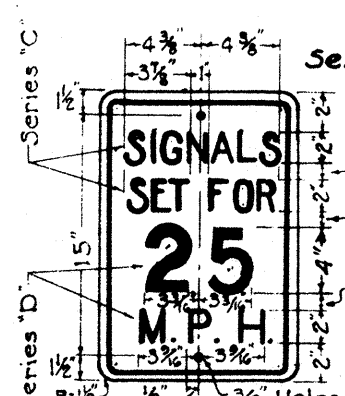
Black Letters on White Background



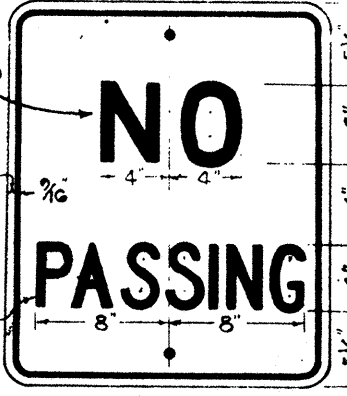
R-6



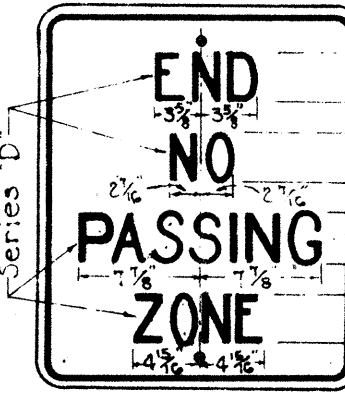
R-8



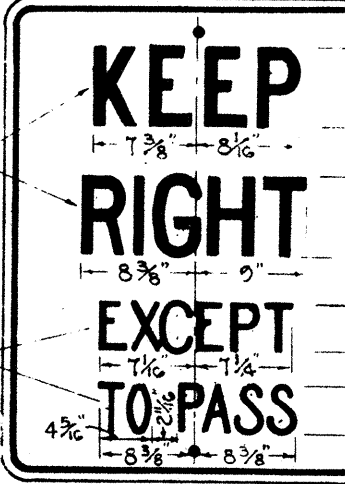
R-10



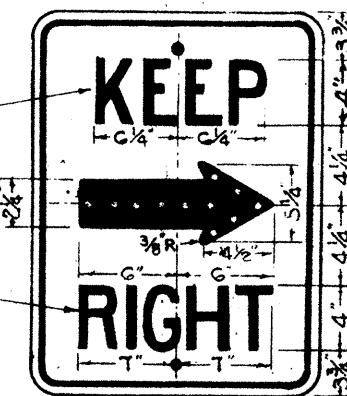
R-11



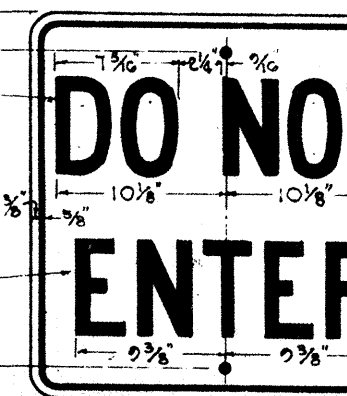
R-12



R-13

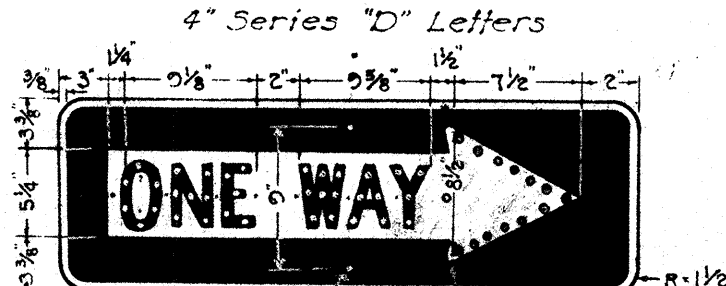


R-14

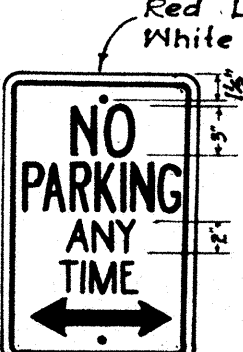


R-15

Black letters, White Arrows on Black background, White Border and White Reflectors.



R-16-R



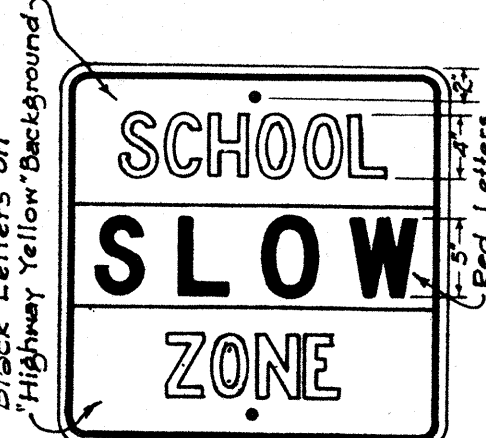
R-18



R-26



R-29



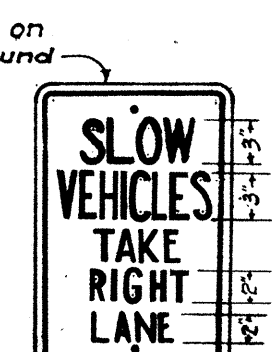
R-41-S



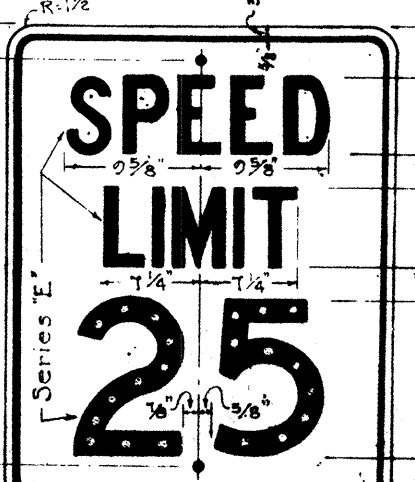
R-42-S



R-43-S



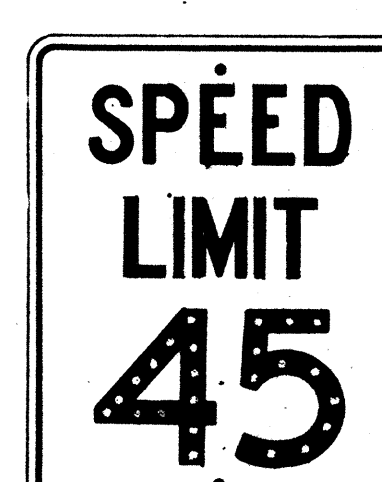
R-44-S



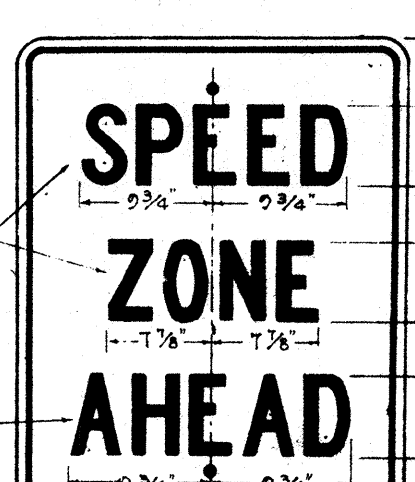
R-102-A



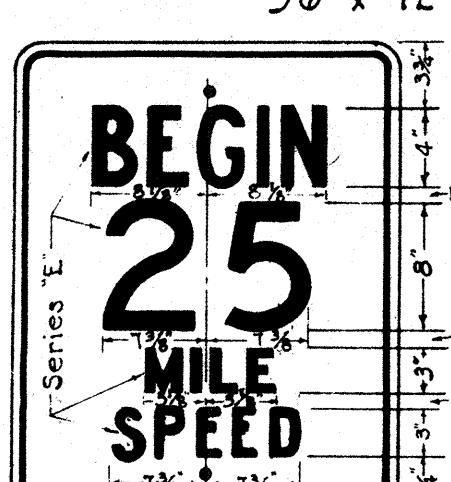
R-102-B



R-102-C



R-104



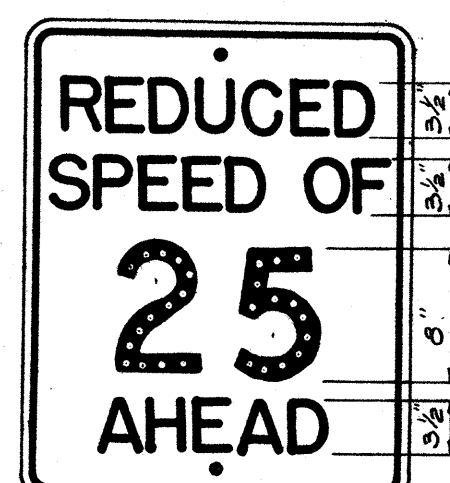
R-105-A



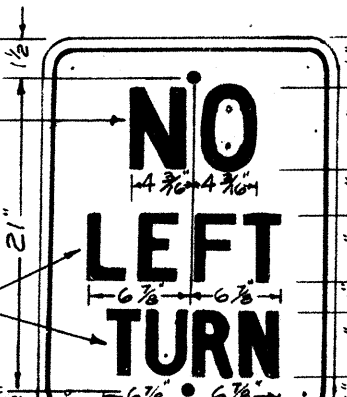
R-105-B



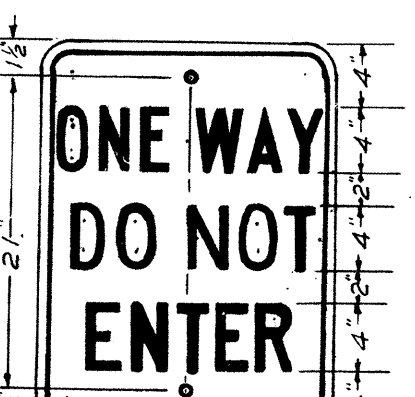
R-105-C



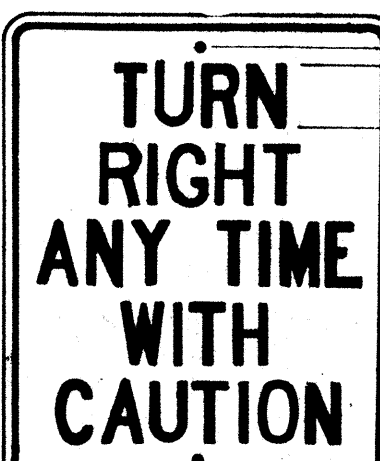
R-104-A



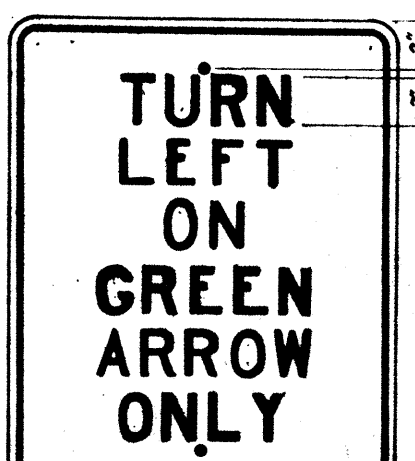
R-7



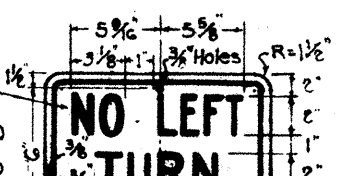
R-66



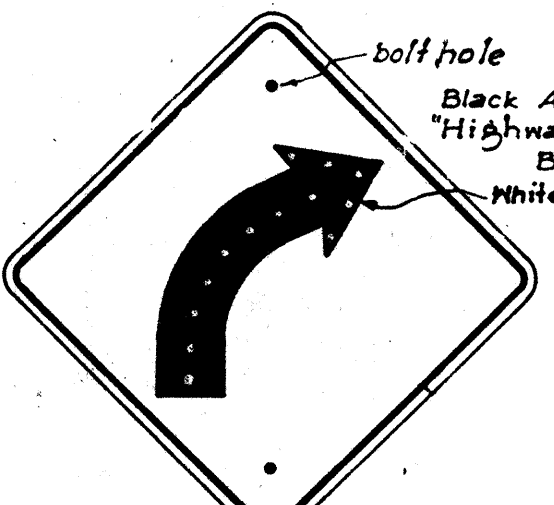
R-106



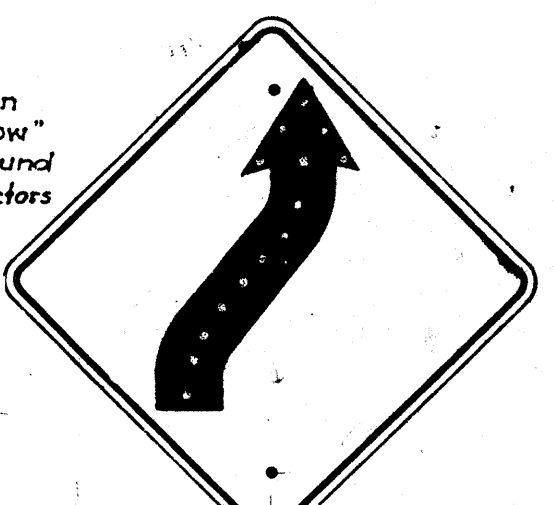
R-107-A



R-107



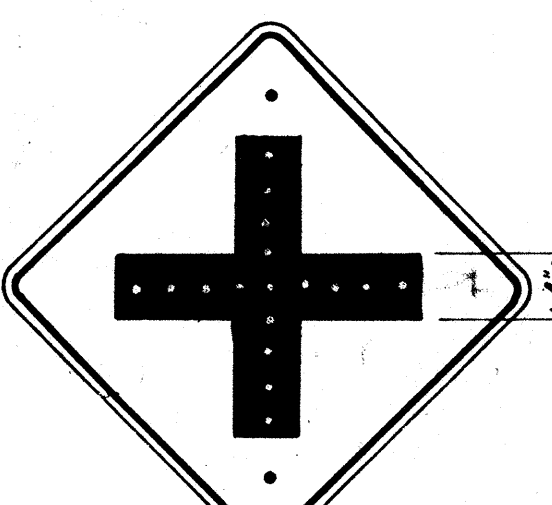
W-2-R



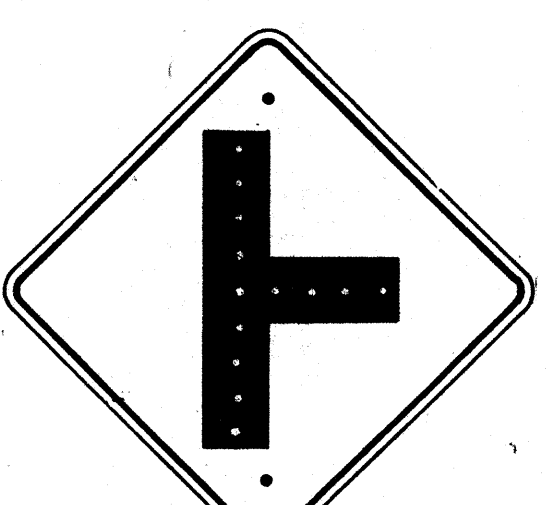
W-4-R



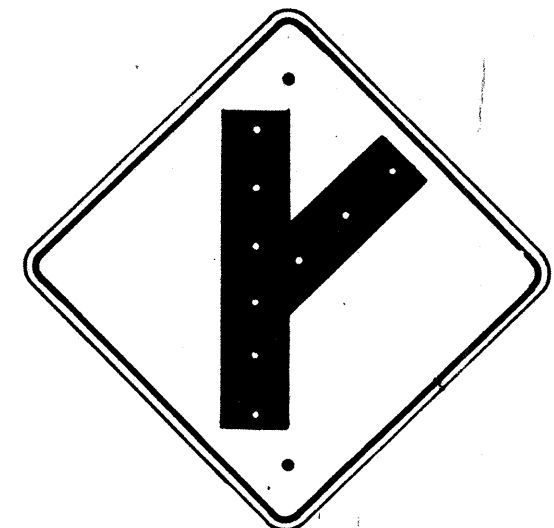
W-5-R



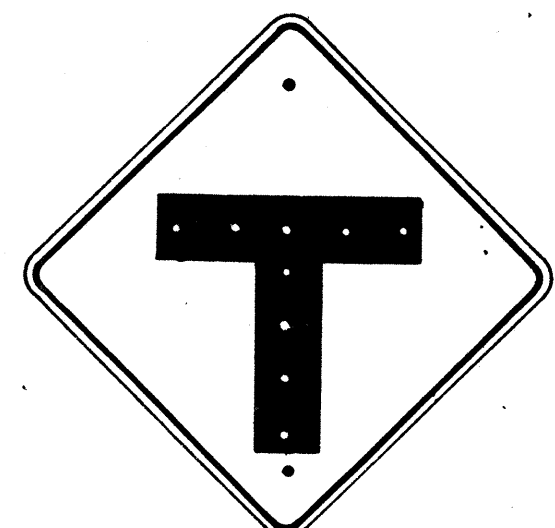
W-6



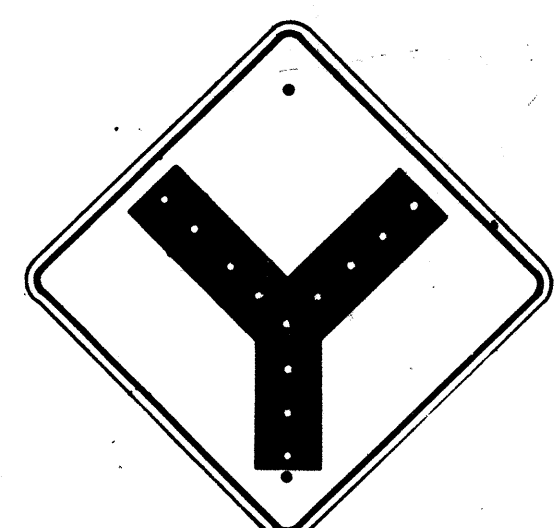
W-7



W-8-R



W-9



W-10



W-13



W-14



W-14-A



W-19



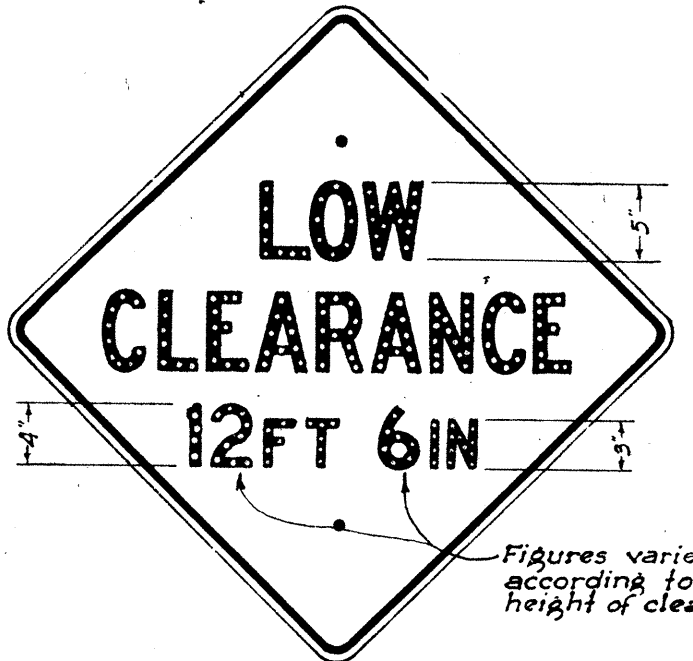
W-20



W-21



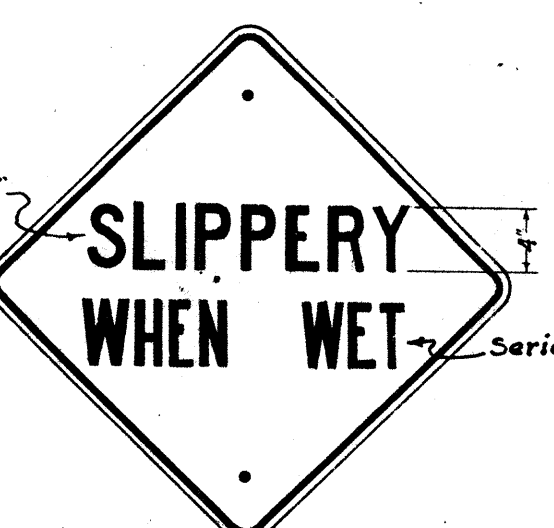
W-22



W-24



W-25



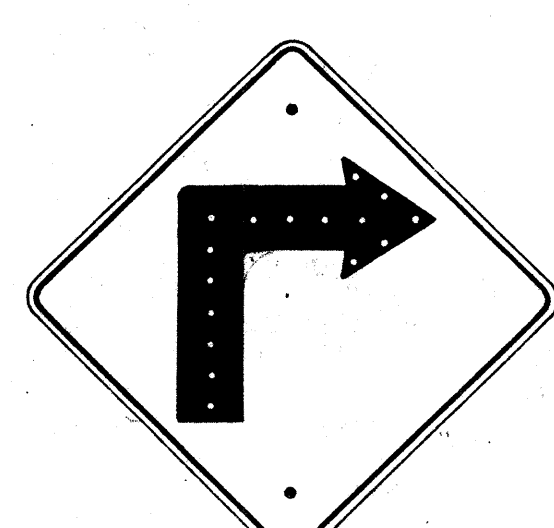
W-29



W-59



W-39



W-1-R

Unless otherwise specified, all signs shall conform with requirements of "Manual on Uniform Traffic Control Devices for Streets and Highways."

All letters and figures shall be of size and design shown and shall conform with "Standard Alphabets for Highway Signs" as set forth by the Public Roads Administration, Federal Works Agency. Series "C" letters and Series "D" numerals shall be used except where noted.

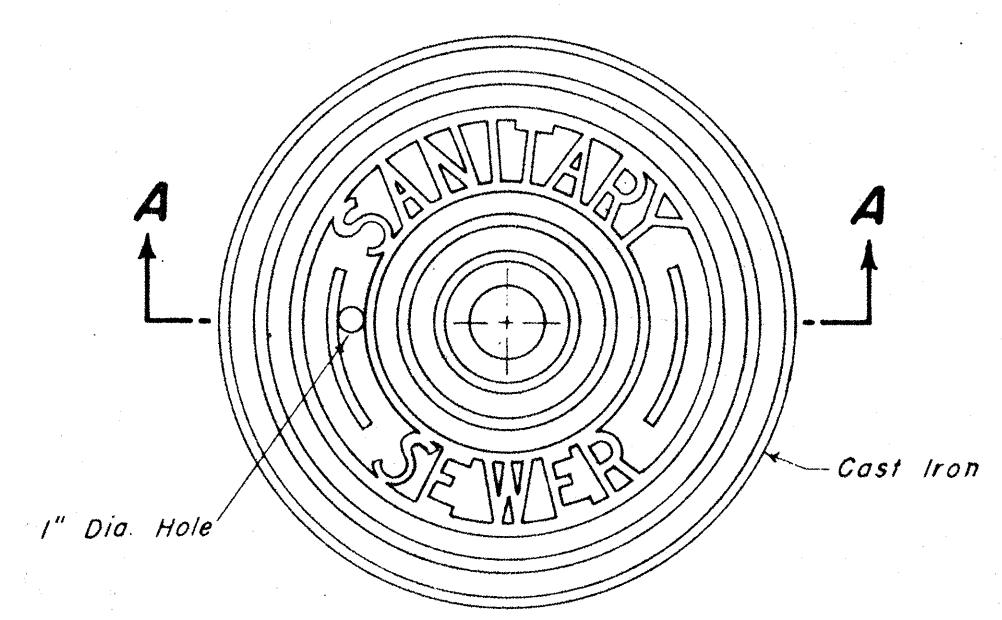
See Sht. No. 5743.21 for additional Signs.  
Note: All Regulatory (R) signs shall have black letters on a white background except where noted. All Warning (W) signs shall have black letters or figures on a "Highway Yellow" background. Signs shall be similar but opposite in direction. See Specifications for Materials and Finish.

TERRITORIAL HIGHWAY DEPARTMENT  
TERRITORY OF HAWAII  
**REGULATORY & WARNING SIGNS**  
Scale: 1" = 1'  
JUNE 23, 1953  
APPROVED: *B. E. Hutter*  
TERRITORIAL HIGHWAY ENGINEER

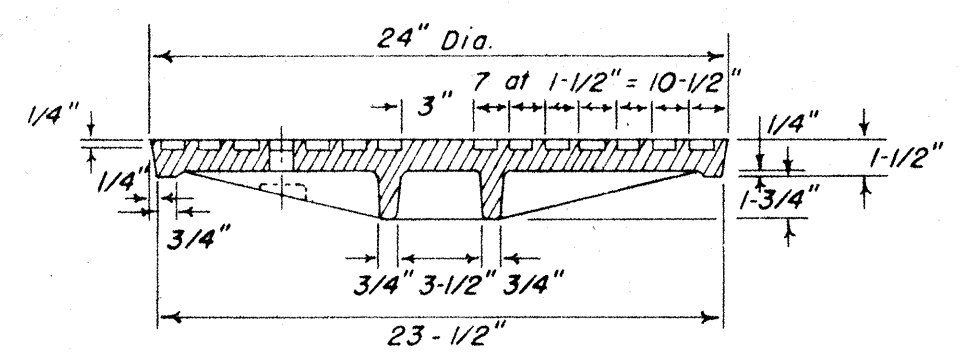
Notes: Sign R-1 has been revised 12/10/54

6/29/54

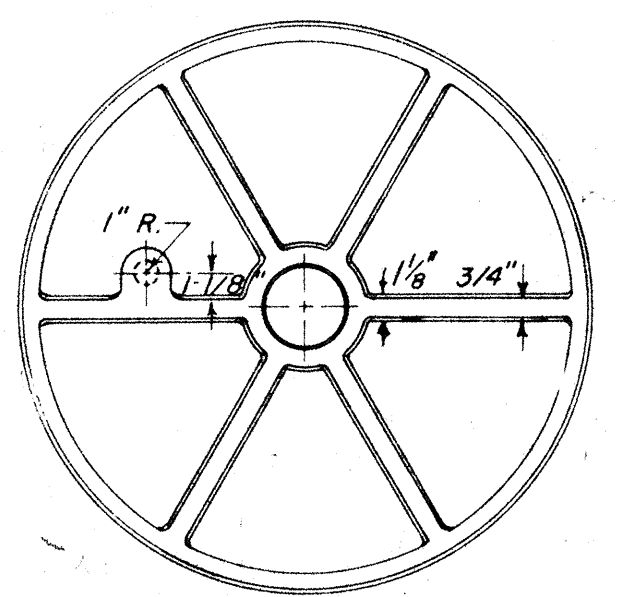
|                   |      |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DESIGNED BY       |      |
| TRACED BY         |      |
| QUANTITIES BY     |      |
| CHECKED BY        |      |
| NOTED BY          |      |



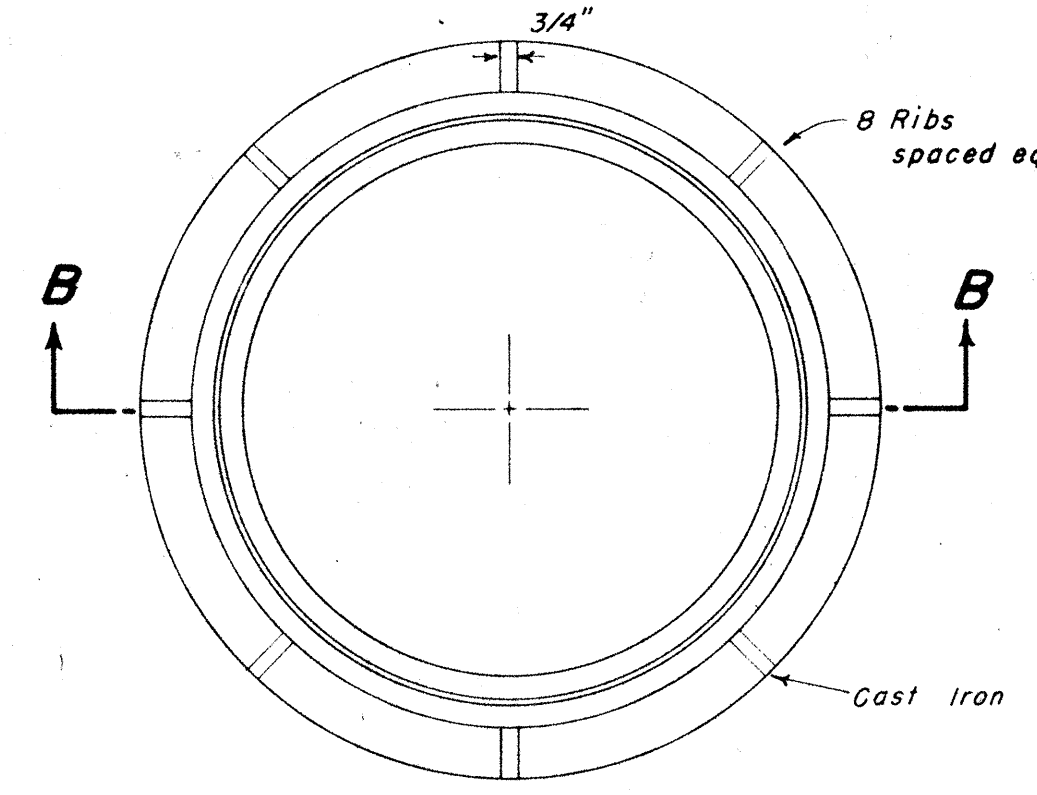
**PLAN OF MANHOLE COVER**  
Scale 1-1/2" = 1'-0"



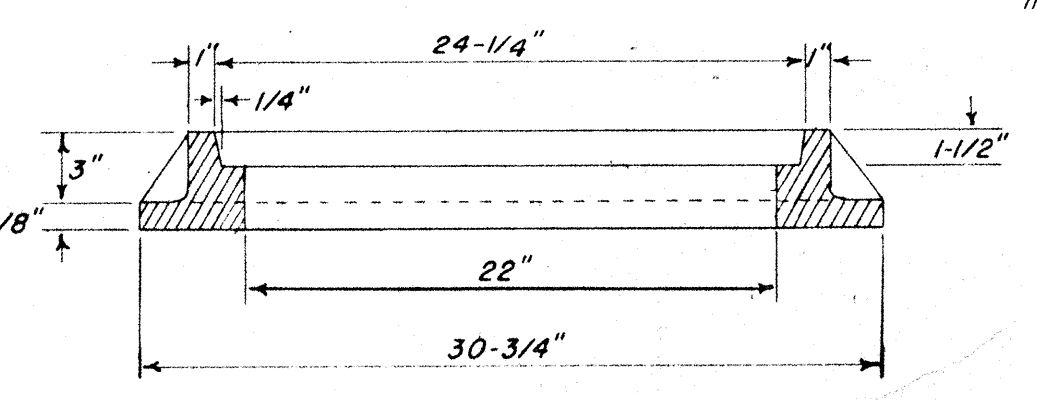
**SECTION A - A**



**BOTTOM VIEW OF COVER**  
Scale 1-1/2" = 1'-0"



**PLAN OF MANHOLE FRAME**  
Scale 1-1/2" = 1'-0"

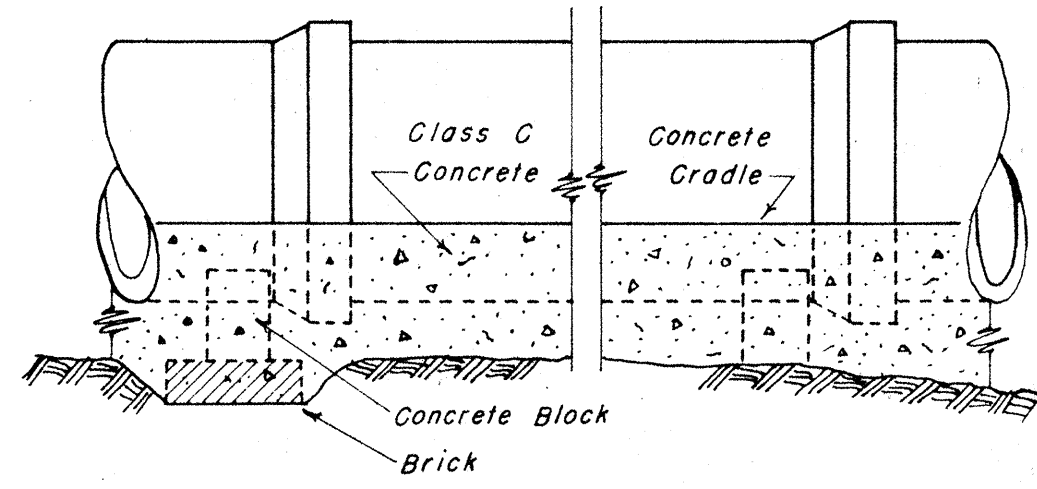


**SECTION B - B**

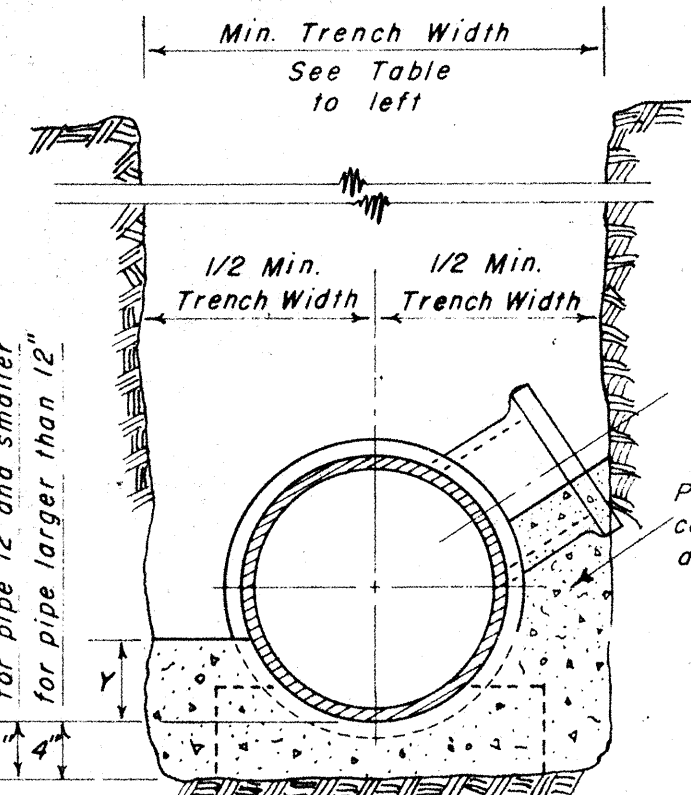
| TRENCH WIDTHS |            |  |
|---------------|------------|--|
| Pipe Size     | Min. Width |  |
| 6"            | 24"        |  |
| 8"            | 24"        |  |
| 10"           | 24"        |  |
| 12"           | 30"        |  |
| 15"           | 30"        |  |
| 18"           | 36"        |  |
| 21"           | 36"        |  |
| 24"           | 45"        |  |
| 27"           | 45"        |  |
| 30"           | 50"        |  |

Contractor shall set Concrete Blocks on undisturbed ground. Where ground is too low, the Contractor shall not heap up dirt under the Concrete Block but shall use Concrete Bricks to take up the deficiency, scraping away beneath Concrete Block to give sufficient room for Brick.

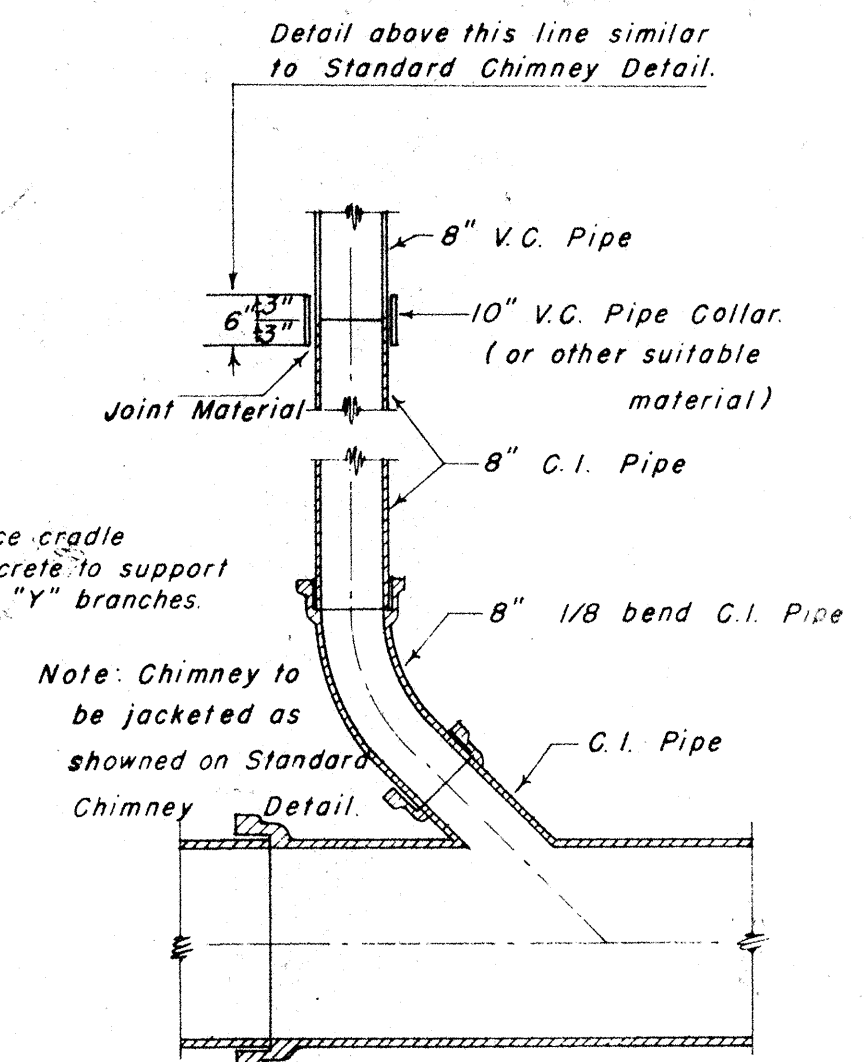
Note: Minimum width of cradle shall be minimum trench width.



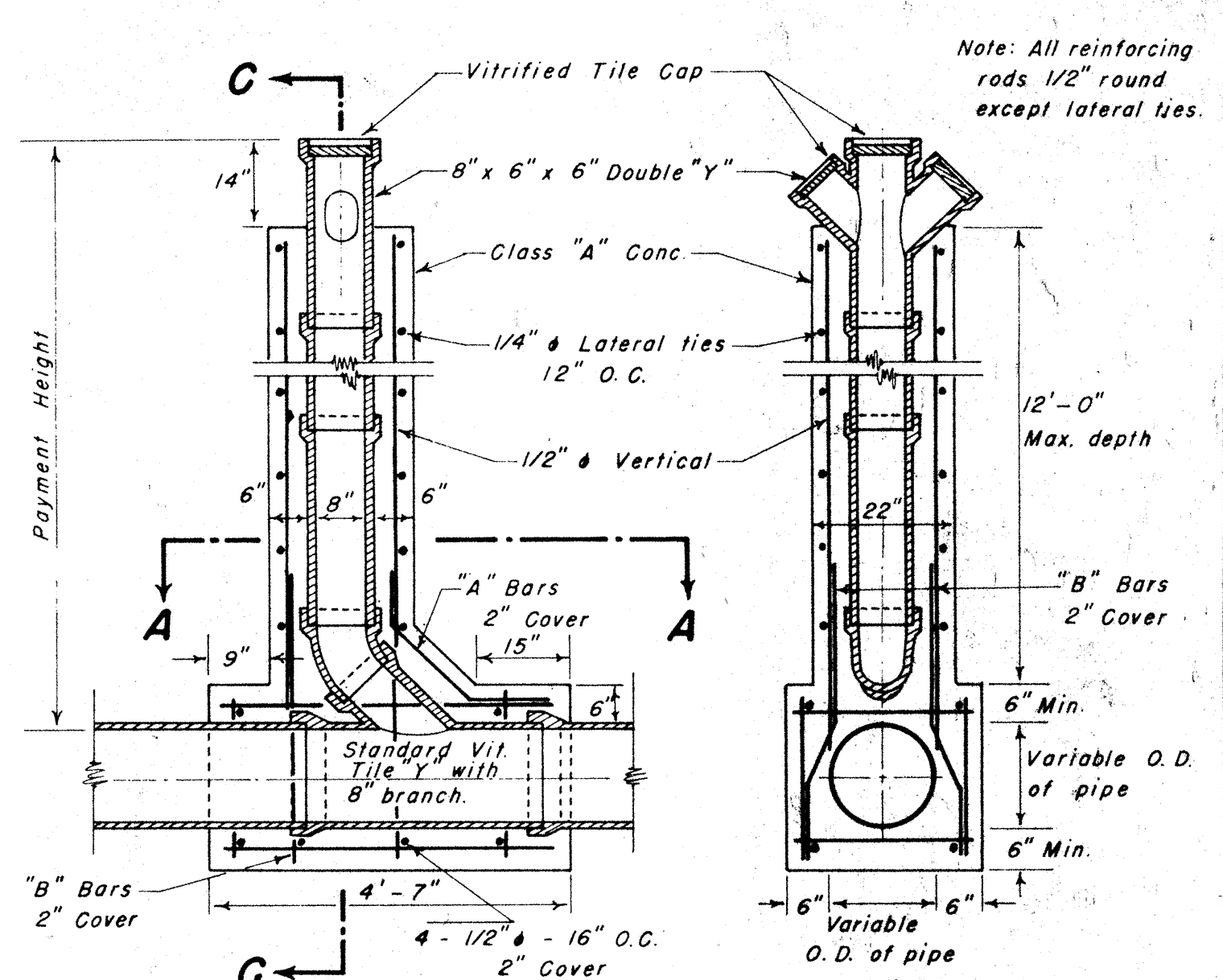
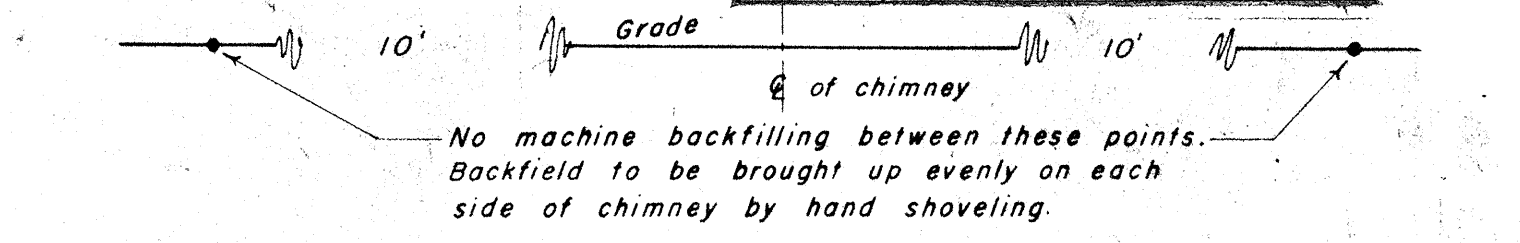
**ELEVATION SHOWING METHOD OF LAYING PIPE**



| DIM. OF CONC. CRADLE |     |
|----------------------|-----|
| Pipe Size            | "Y" |
| 6"                   | 3"  |
| 8"                   | 3"  |
| 10"                  | 3"  |
| 12"                  | 3"  |
| 15"                  | 4"  |
| 18"                  | 5"  |
| 21"                  | 5"  |
| 24"                  | 6"  |
| 27"                  | 7"  |
| 30"                  | 7"  |

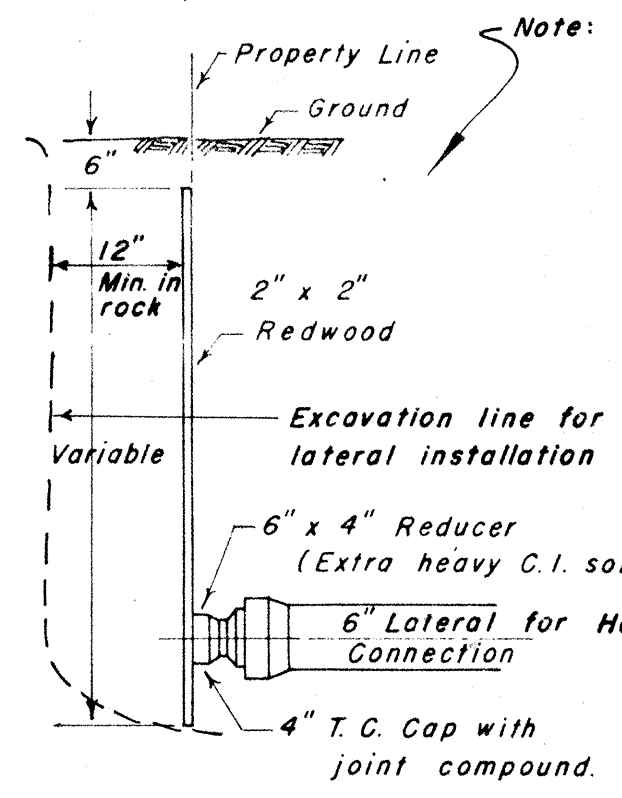


**CHIMNEY DETAIL FOR CAST IRON SEWER LINE**  
Scale 1/2" = 1'-0"

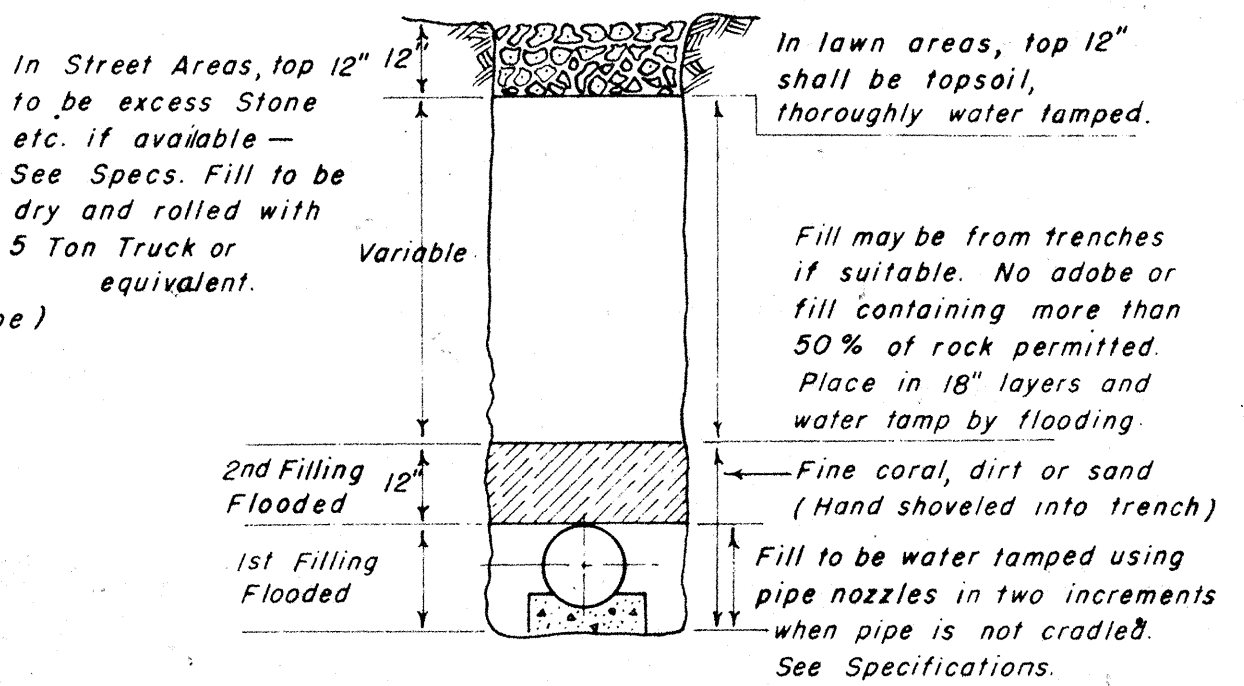


**SECTION B - B**  
Scale 1/2" = 1'-0"

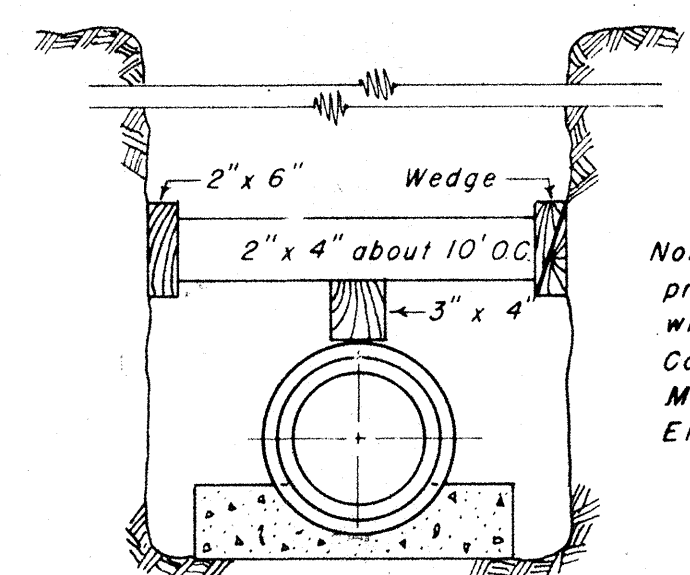
**SECTION C - C**  
Scale 1/2" = 1'-0"



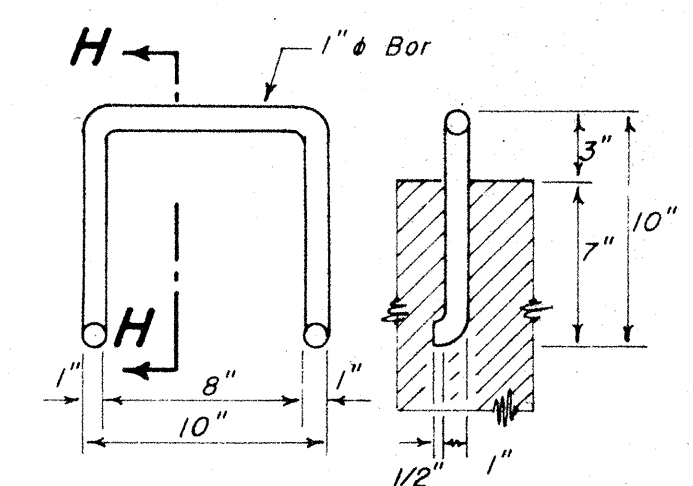
**CONSTRUCTION AT PROPERTY LINE**  
Scale 1/2" = 1'-0"



**METHOD OF BACKFILL**



**PIPE FLOATATION PREVENTION** Scale 1" = 1'-0"

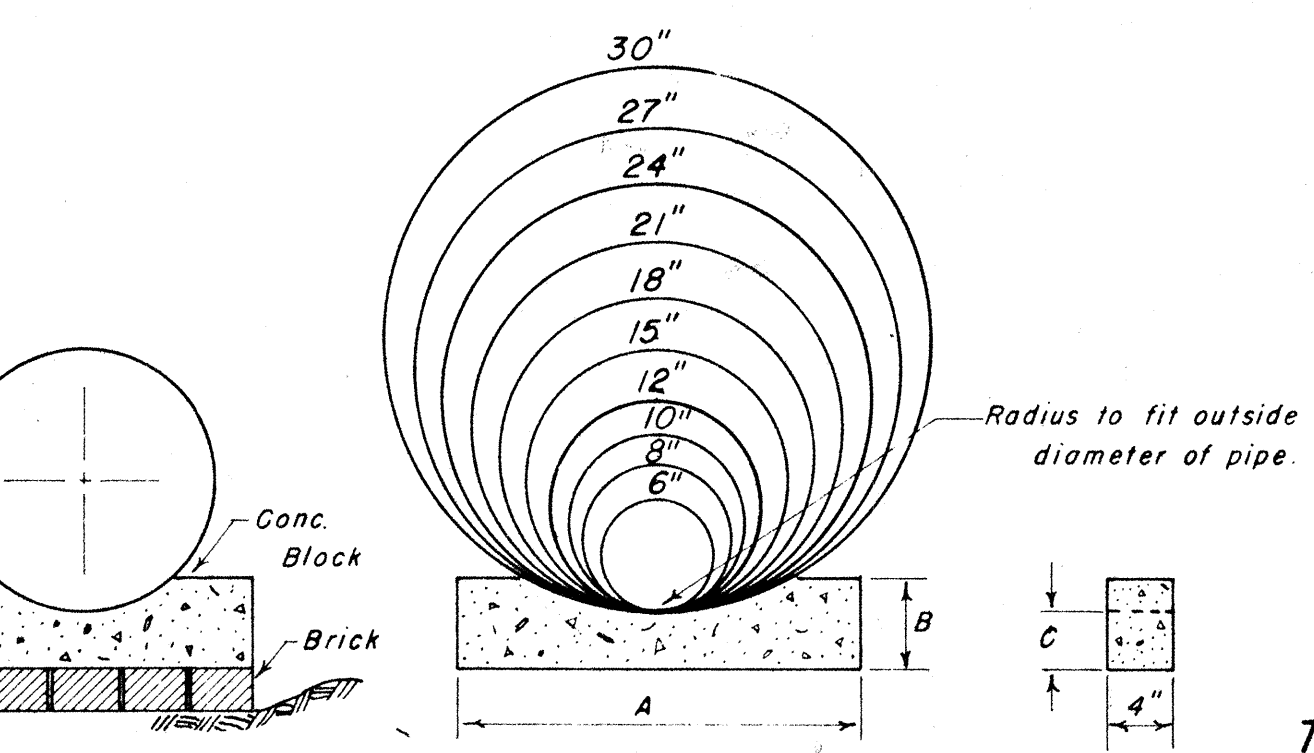


**PLAN SECTION H-H TYPE A RUNGS WROUGHT IRON M.H. STEPS**  
Scale 1-1/2" = 1'-0"

| STEEL SCHEDULE |       |         |        |
|----------------|-------|---------|--------|
| Mark           | Steel | Shape   | Req.   |
| "A"            | 1/2"  | 45°     | 2 Pcs. |
| "B"            | 1/2"  | 22-1/2° | 4 Pcs. |

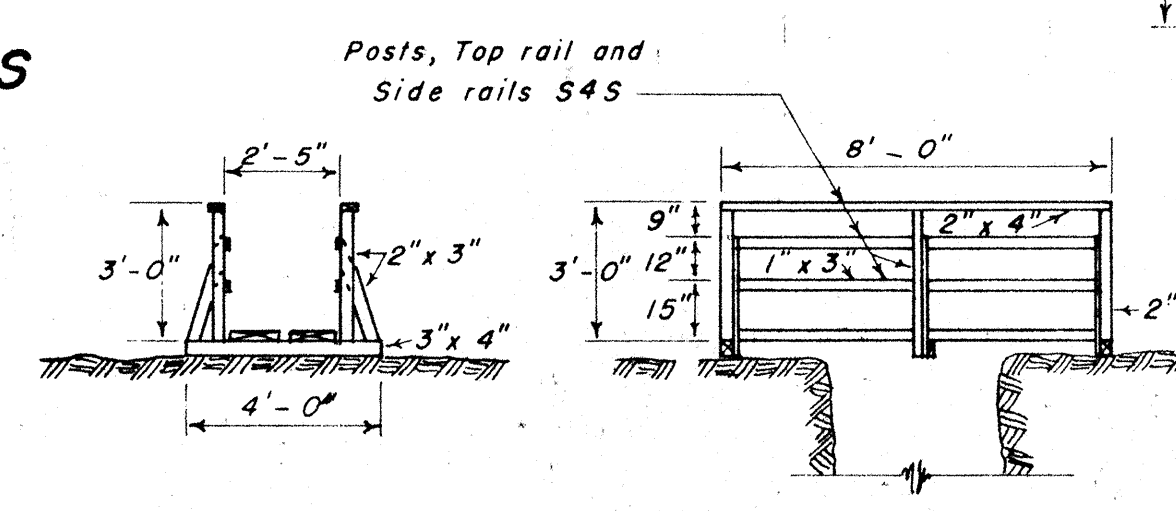
**CHIMNEY DETAILS**

Note: Dimensions shown may be varied to accommodate specific brand of pipe furnished by Contractor.  
When lateral sewers are constructed from the trunk sewer to the property line, the grade of such lateral sewer shall be 1/4" per lineal foot unless otherwise ordered by the engineer.

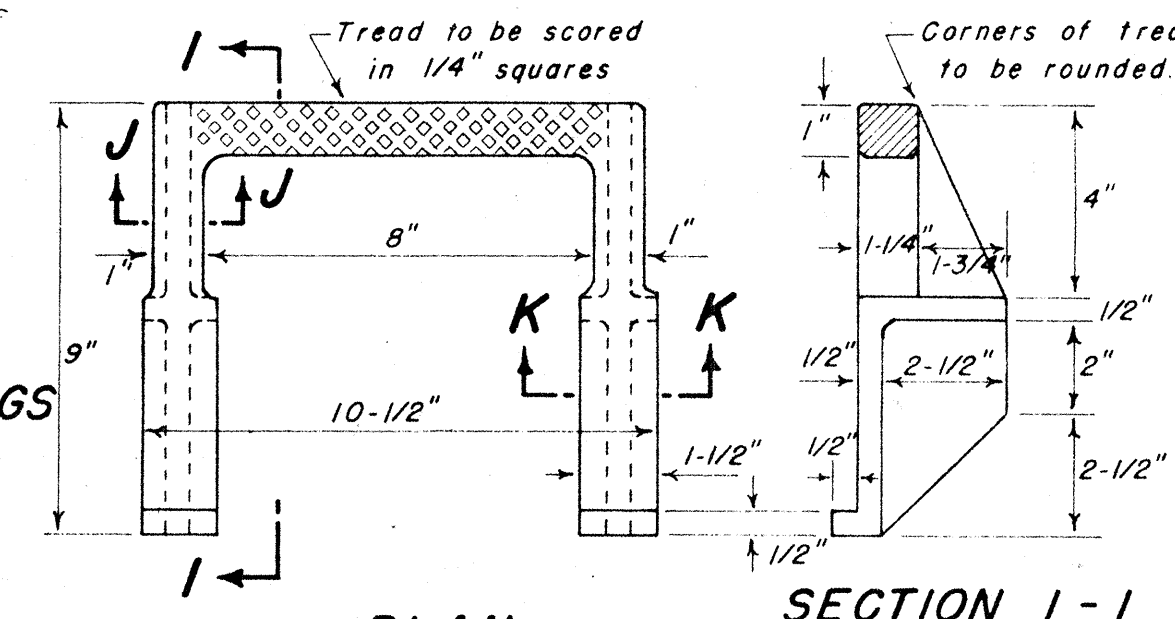


**DETAIL OF PRECAST CONCRETE BLOCKS**

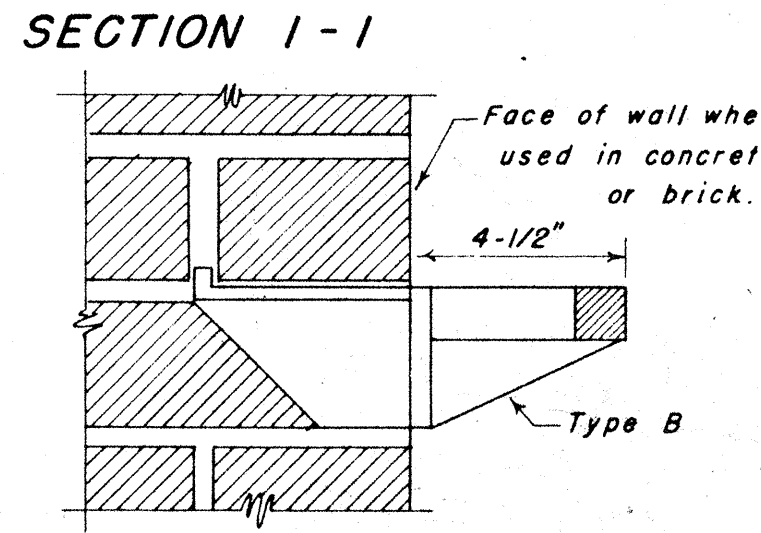
| CONCRETE BLOCK DIMENSIONS |        |     |     |
|---------------------------|--------|-----|-----|
| Pipe Size                 | "A"    | "B" | "C" |
| 6"                        | 1'-2"  | 6"  | 3"  |
| 8"                        | 1'-5"  | 6"  | 3"  |
| 10"                       | 1'-7"  | 6"  | 3"  |
| 12"                       | 1'-7"  | 6"  | 3"  |
| 15"                       | 1'-8"  | 6"  | 4"  |
| 18"                       | 1'-9"  | 6"  | 4"  |
| 21"                       | 1'-10" | 6"  | 4"  |
| 24"                       | 1'-11" | 6"  | 4"  |
| 27"                       | 2'-0"  | 6"  | 4"  |
| 30"                       | 2'-3"  | 6"  | 4"  |



**DETAILS WOODEN BRIDGE OVER TRENCHES AT ROAD CROSSINGS**  
Scale 1/4" = 1'-0"



**TYPE B RUNGS**  
Scale 3" = 1'-0"



**SECTION J-J SECTION K-K CAST IRON M.H. STEPS**  
Scale 3" = 1'-0"

**METHOD OF INSTALLATION**

Note: These details were prepared in the office of the Division of Sewers, City & County of Honolulu

**TERRITORIAL HIGHWAY DEPARTMENT**  
TERRITORY OF HAWAII  
**DIVISION OF SEWERS**  
**STANDARD DETAILS**  
**MAUKA ARTERIAL**  
**McCULLY SEPARATION**  
PROJECT No. U 59 (8)  
Scale: As Shown