

CONSTRUCTION APPROACH WARNING SIGNS

|                                      | SHAPE | SIZE    | COLOR | SIGN NO. |
|--------------------------------------|-------|---------|-------|----------|
| Symbol (Pavement Transition)         | D     | 36"x36" | B-O   | W4-2     |
| Two Way Traffic (Symbol)             | D     | 48"x48" | B-O   | W6-3     |
| Road Construction _____ Ft.          | D     | 24"x18" |       |          |
| Detour _____ Ft.                     | D     | 48"x48" | B-O   | W20-1    |
| Street Road Closed _____ Ft.         | D     | 48"x48" | B-O   | W20-2    |
| One Lane Road _____ Ft.              | D     | 48"x48" | B-O   | W20-3    |
| Right Left Lane Closed _____ Mile    | D     | 48"x48" | B-O   | W20-4    |
| Flagman _____ Ft.                    | D     | 48"x48" | B-O   | W20-5    |
| Road Machinery Ahead                 | D     | 48"x48" | B-O   | W20-7    |
| Road Work _____ Mile                 | D     | 48"x48" | B-O   | W21-3    |
| Shoulder Work                        | D     | 48"x48" | B-O   | W21-4    |
| Road Closed Ahead-Local Traffic Only | D     | 30"x30" | B-O   | W21-5    |
| Road Closed to Thru Traffic          | R     | 60"x30" | B-W   | R11-3    |
|                                      | R     | 60"x30" | B-W   | R11-4    |

DETOUR ROUTE SIGNS

|                            |   |         |     |       |
|----------------------------|---|---------|-----|-------|
| Detour (Appropriate Arrow) | R | 30"x24" | B-O | M4-9  |
| Detour (Appropriate Arrow) | R | 48"x18" | B-O | M4-10 |
| Do Not Pass                | R | 24"x30" | B-W | R4-1  |
| Two-Way Keep Right         | R | 24"x30" | B-W | R6-4  |
| Large Arrow                | D | 48"x24" | B-O | W1-6  |

MISCELLANEOUS WARNING SIGNS

|                               |          |             |     |       |
|-------------------------------|----------|-------------|-----|-------|
| Turn Arrow - Right Angle      | D        | 30"x30"     | B-O | W1-1  |
| Turn Arrow - 45° Angle        | D        | 30"x30"     | B-O | W1-2  |
| Reverse Turn Arrow            | D        | 30"x30"     | B-O | W1-3  |
| Reverse Curve Arrow           | D        | 30"x30"     | B-O | W1-4  |
| Stop Ahead                    | D        | 36"x36"     | B-O | W3-1  |
| Yield Ahead                   | D        | 36"x36"     | B-O | W3-2  |
| Road Narrows                  | D        | 30"x30"     | B-O | W5-1  |
| Narrow Bridge                 | D        | 30"x30"     | B-O | W5-2  |
| One-Lane Bridge               | D        | 36"x36"     | B-O | W5-3  |
| Divided Highway (Symbol)      | D        | 36"x36"     | B-O | W6-1  |
| Divided Highway Ends (Symbol) | D        | 36"x36"     | B-O | W6-2  |
| Bump                          | D        | 30"x30"     | B-O | W8-1  |
| Dip                           | D        | 30"x30"     | B-O | W8-2  |
| Pavement Ends                 | D        | 30"x30"     | B-O | W8-3  |
| Soft Shoulder                 | D        | 30"x30"     | B-O | W8-4  |
| Slippery When Wet (Symbol)    | D        | 30"x30"     | B-O | W8-5  |
| Right Lane Ends               | D        | 30"x30"     | B-O | W9-1  |
| Lane Ends - Merge Left        | D        | 36"x36"     | B-O | W9-2  |
| Double Arrow - Downward       | D        | 24"x24"     | B-O | W12-1 |
| Advisory Speed Plate          | R        | 24"x24"     | B-O | W13-1 |
| No Passing Zone               | Triangle | 36"x48"x48" | B-O | W14-3 |
| Men Working                   | D        | 30"x30"     | B-O | W21-1 |
| Fresh Oil                     | D        | 30"x30"     | B-O | W21-2 |
| No Left Turn (Symbol)         | R        | 24"x24"     | B-W | R3-2  |
| Keep Right (Symbol)           | R        | 24"x30"     | B-W | R4-7  |
| End Construction              | R        | 60"x24"     | B-O | G20-2 |

NOTE

Signs, Barricades etc., as specified in "Manual on Uniform Traffic Control Devices," U.S. Department of Commerce, Bureau of Public Roads, Washington, D.C.

SHAPE

D Diamond  
R Rectangular

SIZE

48"x48" for Rural Application. Smaller size can be used in Urban Areas

COLOR

B-O Black on Orange  
B-W Black on White

ETROPOLITAN  
ADE COUNTY

APPROVED

REVISED

9/5/78

STANDARD ROAD DETAIL

•TYPICAL TRAFFIC CONTROL•

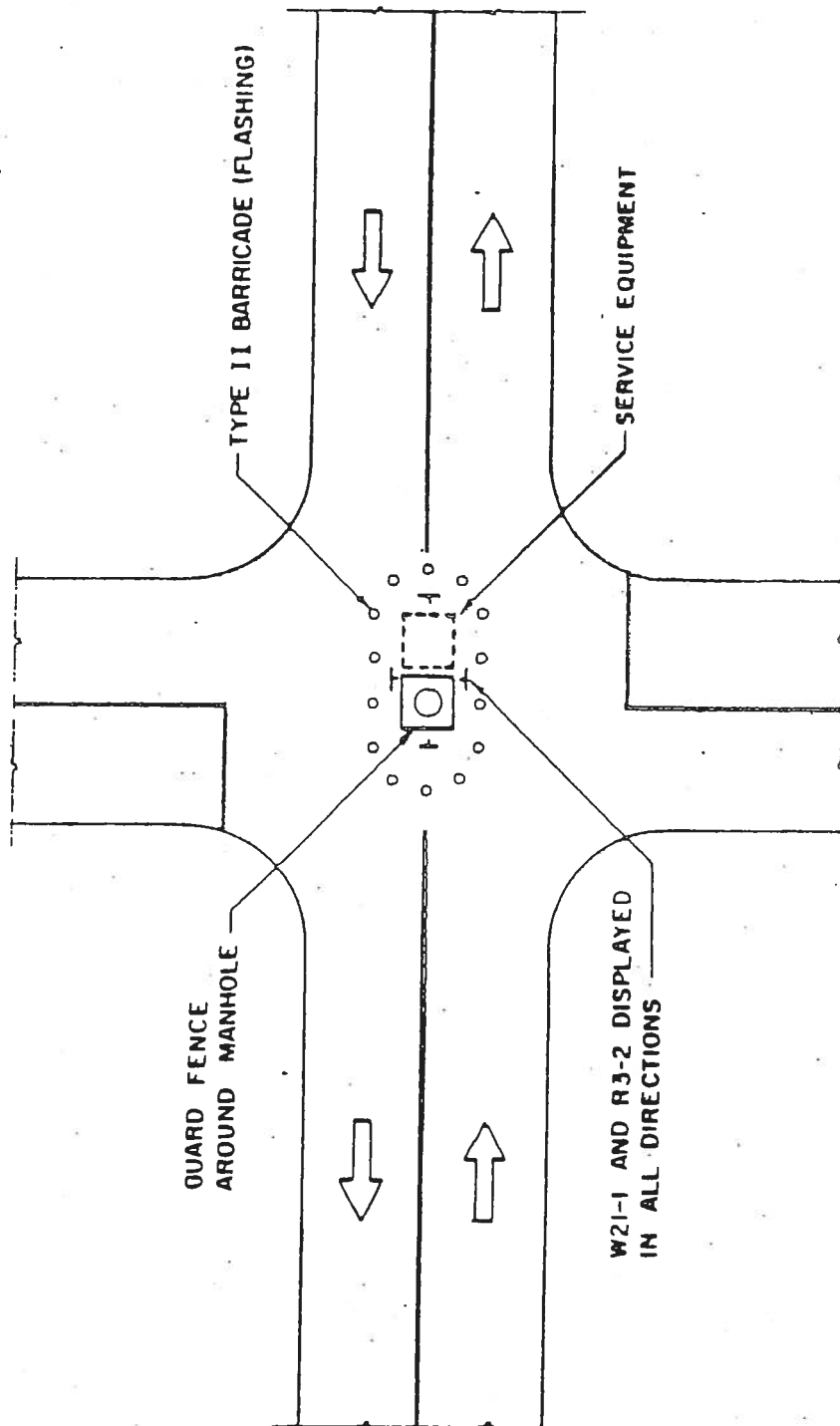
SIGNS

R

19.1

DEPARTMENT OF  
TRAFFIC AND

8/8/62



- NOTES
- 1 LOCATE EQUIPMENT TO PROVIDE LEAST RESTRICTION TO MAJOR STREET WITHOUT BLOCKING THROUGH MOVEMENTS
  - 2 ALL SERVICE EQUIPMENT TO HAVE FLASHING LIGHTS.
  - 3 DISPLAY ADDITIONAL W21-1, 750 FEET IN ADVANCE ON RURAL ROADS

| SIGNS | ITEM | CROSS REF | SPEC REF |
|-------|------|-----------|----------|
|       |      | R-191     |          |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED

8 / 8 / 62

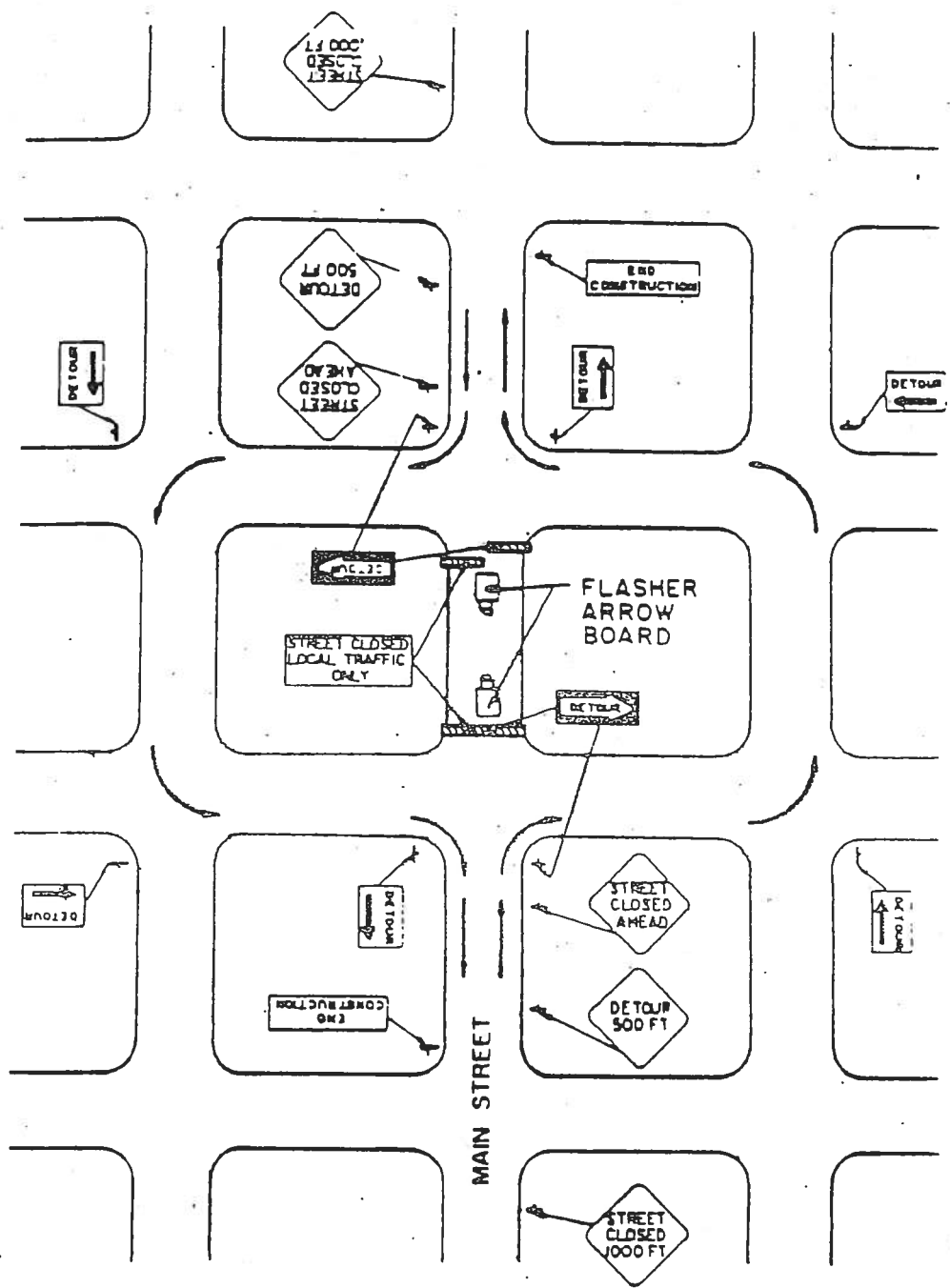
REVISED

8/3/66

10/22/76

STANDARD ROAD DETAIL  
TYPICAL TRAFFIC CONTROL  
(UTILITY REPAIR)

R  
19.2  
SHEET 1 OF 3



— TYPE III BARRICADE

|            |           |          |
|------------|-----------|----------|
| BARRICADES | R-9 E     |          |
| SIGNS      | R-9       |          |
| ITEM       | CROSS REF | SPEC REF |

METROPOLITAN  
DADE COUNTY  
DEPARTMENT OF  
TRAFFIC AND  
TRANSPORTATION

APPROVED

8/8/62

REVISED

7/7/88

6/10/74

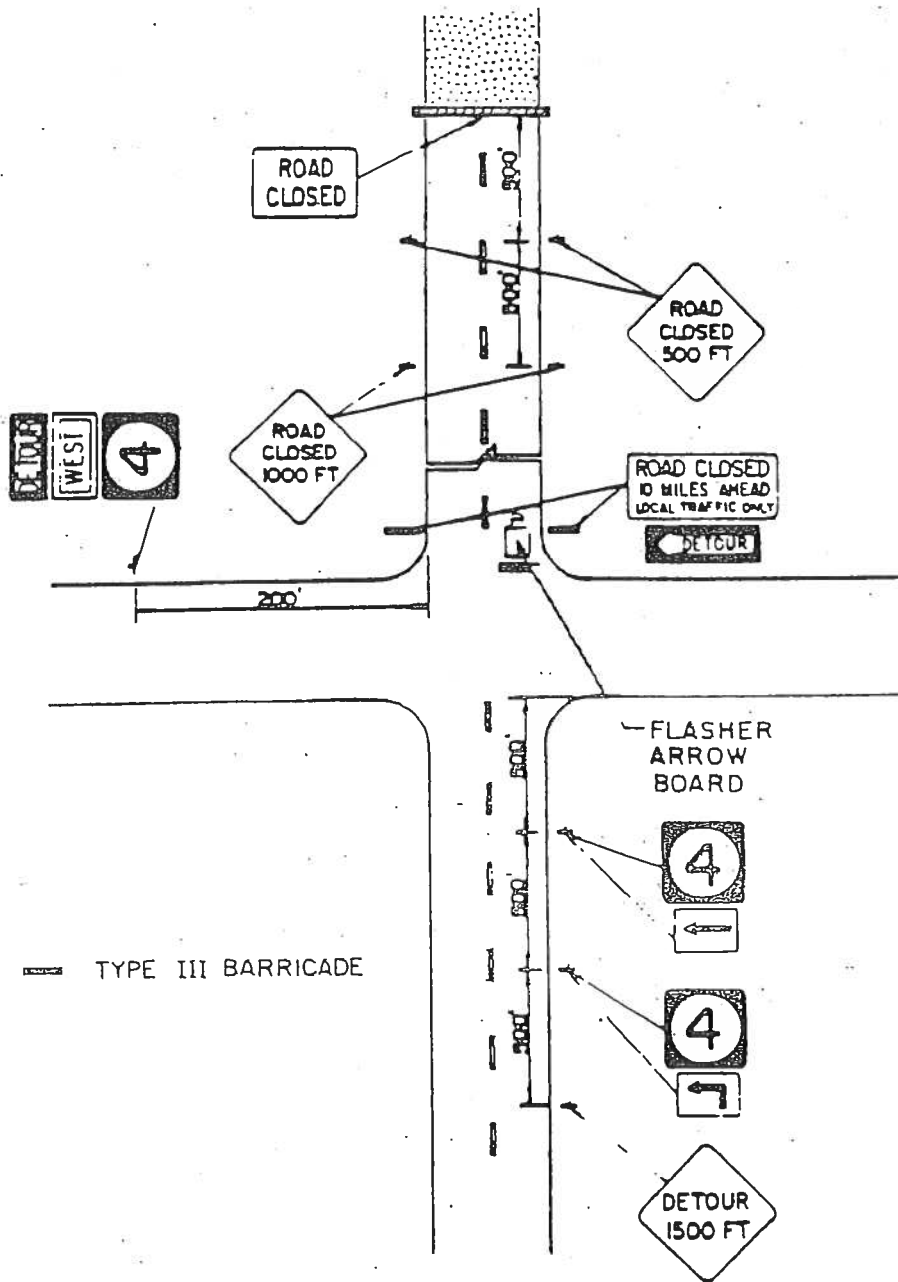
STANDARD ROAD DETAIL

•TYPICAL TRAFFIC CONTROL•  
(DETOUR)

R

19.2

SHEET 2 OF 3



#### NOTES

- 1 REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
- 2 PROPER ROUTING WITH COMPLETE SIGNING TO BE PROVIDED BACK TO ORIGINAL ROUTE

|            |                    |
|------------|--------------------|
| BARRICADES | R-19 6             |
| SIGNS      | R-19 1             |
| ITEM       | CROSS REF SPEC REF |

METROPOLITAN  
DADE COUNTY  
DEPARTMENT OF  
TRAFFIC AND  
TRANSPORTATION

APPROVED

8 / 8 / 62

REVISED

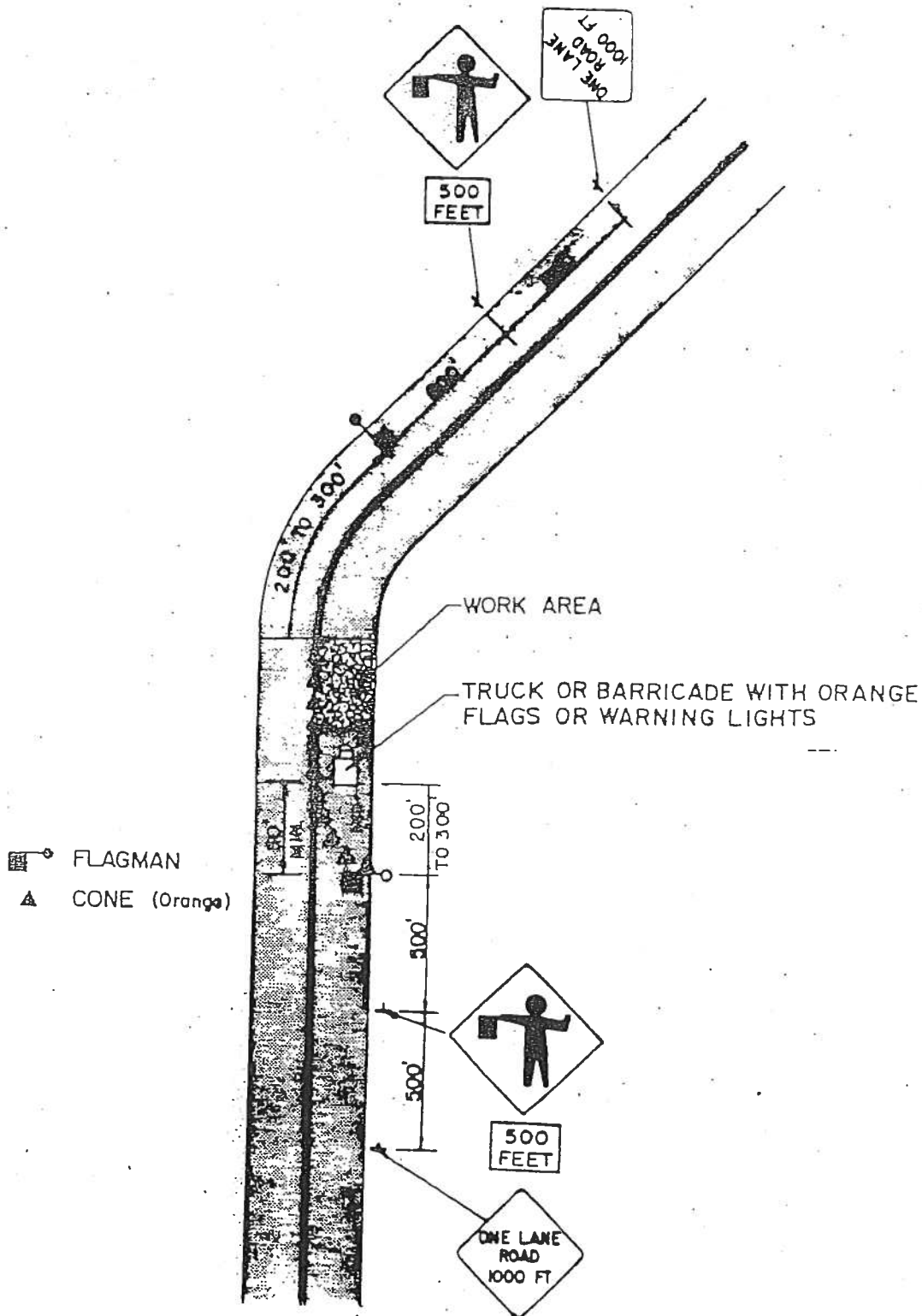
7 / 7 / 88

6 / 10 / 74

STANDARD ROAD DETAIL  
TYPICAL TRAFFIC CONTROL  
ROAD CLOSED BEYOND  
DETOUR POINT

R  
19.2

SHEET 3 OF 3



NOTE: TYPICAL APPLICATION-DAYTIME MAINTENANCE OPERATION OF SHORT DURATION ON A 2-LANE ROADWAY AND FLAGGING IS PROVIDED

|            |            |            |
|------------|------------|------------|
| BARRICADES | R-19.6     |            |
| SIGNS      | R-19.1     |            |
| ITEM       | CROSS REF. | SPEC. REF. |

CHANNELIZATION DEVICES  
SEPARATE WORK AREA FROM  
TRAVELEDWAY.

WORK AREA

NOTES:

1. LIGHTS SHOULD BE PROVIDED TO MARK FLAGMAN STATIONS AND BARRICADING AT NIGHT, AS NEEDED.
2. WARNING LIGHTS SHOULD BE USED TO MARK CHANNELIZATION DEVICES AT NIGHT AS NEEDED.
3. EXTEND BARRICADING TO A POINT WHERE IT IS VISIBLE TO APPROACHING TRAFFIC.

NO. 00181800  
043

TYPE I BARRICADE  
FLAGMAN  
DRUM

NOTE: TYPICAL APPLICATION ON 2-LANE  
ROADWAY WHEN ONE LANE IS  
CLOSED AND FLAGGING IS PROVIDED.

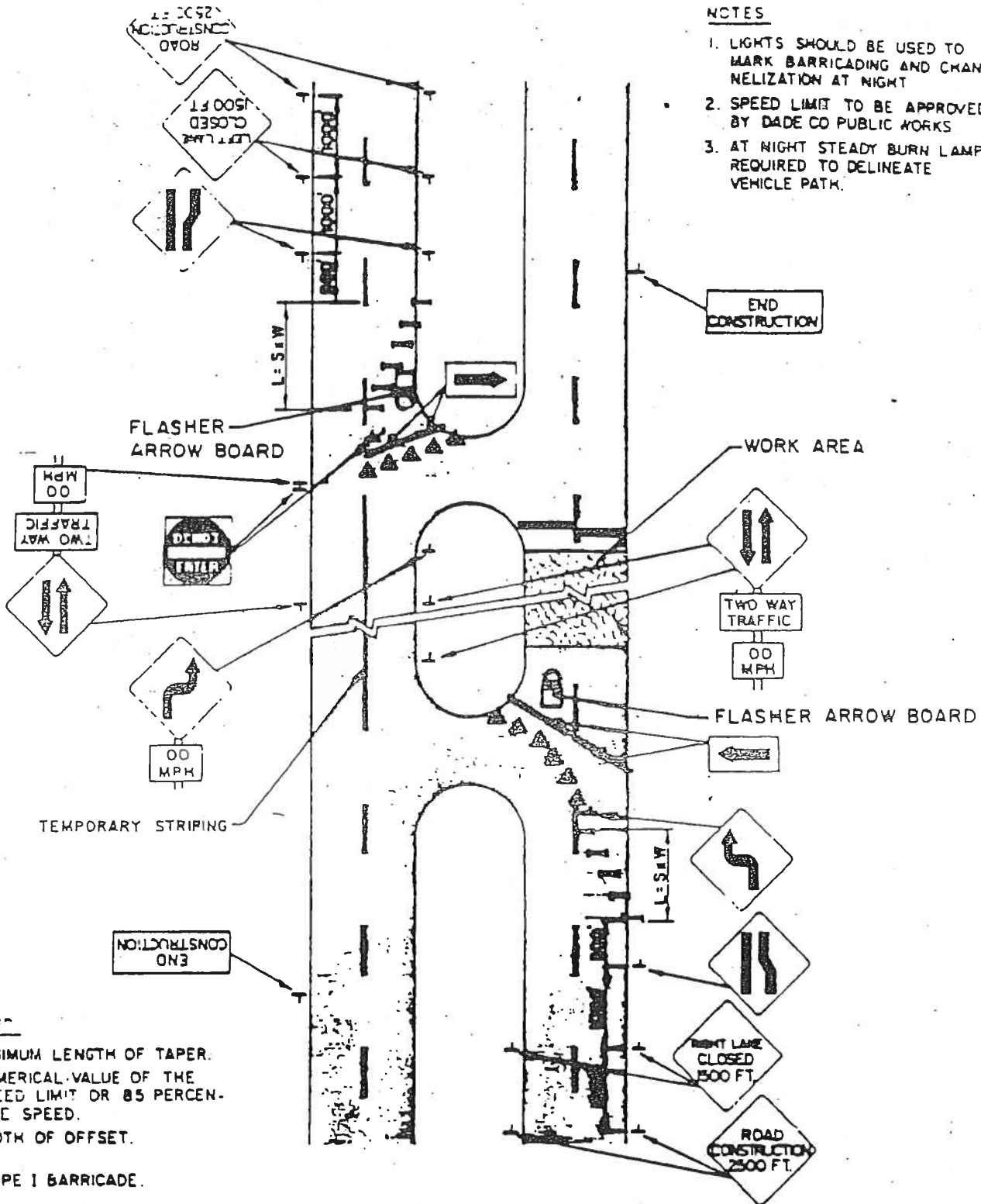
|            |              |              |
|------------|--------------|--------------|
| BARRICADES | R-19 6       |              |
| SIGNS      | R-19 1       |              |
| ITEM       | CROSS<br>REF | SPEC.<br>REF |

|                              |                   |                                          |                                                             |
|------------------------------|-------------------|------------------------------------------|-------------------------------------------------------------|
| METROPOLITAN<br>DADE COUNTY  | APPROVED          | REVISED                                  | STANDARD ROAD DETAIL                                        |
| DEPARTMENT OF<br>TRAFFIC AND | <u>8 / 8 / 62</u> | <u>10 / 26 / 90</u><br><u>7 / 7 / 88</u> | • TYPICAL TRAFFIC CONTROL •<br>2 LANE ROAD - 1 LANE BLOCKED |

R  
19.4

# NOTES

1. LIGHTS SHOULD BE USED TO MARK BARRICADING AND CHANNELIZATION AT NIGHT
2. SPEED LIMIT TO BE APPROVED BY DADE CO PUBLIC WORKS
3. AT NIGHT STEADY BURN LAMPS REQUIRED TO DELINEATE VEHICLE PATH.



## LEGEND

L = MINIMUM LENGTH OF TAPER.  
 S = NUMERICAL VALUE OF THE SPEED LIMIT OR 85 PERCENTILE SPEED.  
 W = WIDTH OF OFFSET.

— TYPE I BARRICADE.

— TYPE III BARRICADE.

△ CONE (ORANGE).

□ FLASHER ARROW BOARD.

|            |            |            |
|------------|------------|------------|
| BARRICADES | R-19.6     |            |
| SIGNS      | R-19.1     |            |
| ITEM       | CROSS REF. | SPEC. REF. |

METROPOLITAN  
DADE COUNTY  
DEPARTMENT OF  
TRAFFIC AND  
TRANSPORTATION

APPROVED

8/8/62

REVISED

6/4/86

7/7/86

STANDARD ROAD DETAIL  
 TYPICAL TRAFFIC CONTROL  
 4 LANE DIVIDED ROADWAY  
 (1 ROADWAY CLOSED)

R  
19.5

SHEET 1 OF 5

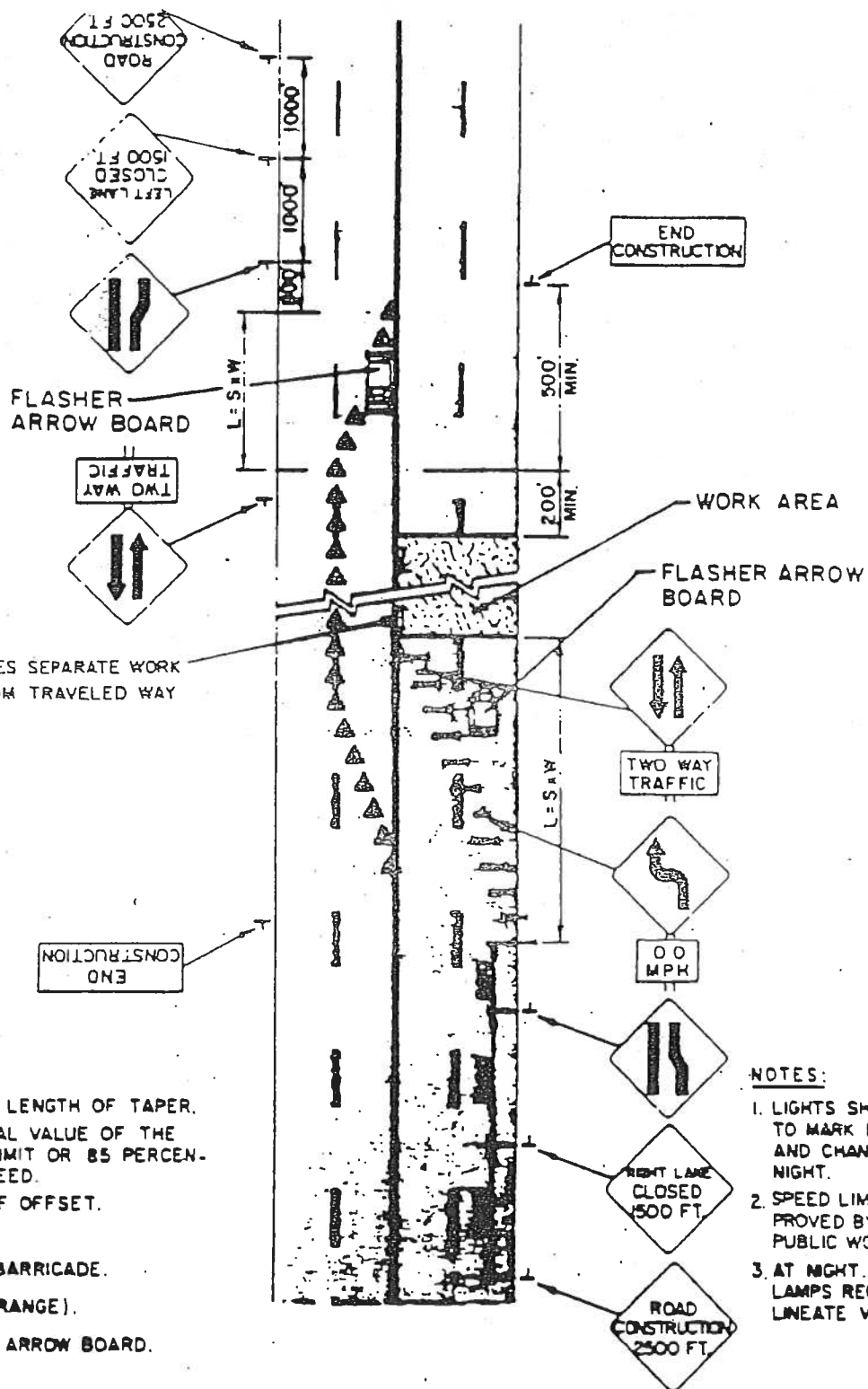
# **LEGEND:**

L = MINIMUM LENGTH OF TAPER.  
 S = NUMERICAL VALUE OF THE  
 SPEED LIMIT OR 85 PERCENT-  
 TILE SPEED.  
 W = WIDTH OF OFFSET.

— TYPE I BARRICADE.

△ CONE (ORANGE).

FLASHER ARROW BOARD.



# **NOTES:**

1. LIGHTS SHOULD BE USED TO MARK BARRICADES AND CHANNELIZATION AT NIGHT.
2. SPEED LIMIT TO BE APPROVED BY DADE CO PUBLIC WORKS
3. AT NIGHT, STEADY BURN LAMPS REQUIRED TO DELINEATE VEHICLE PATH.

|            |            |           |
|------------|------------|-----------|
| BARRICADES | R-19.6     |           |
| SIGNS      | R-19.1     |           |
| ITEM       | CROSS REF. | SPEC REF. |

METROPOLITAN  
 DADE COUNTY  
 DEPARTMENT OF  
 TRAFFIC AND  
 TRANSPORTATION

APPROVED

8/8/62

REVISED

6/4/86

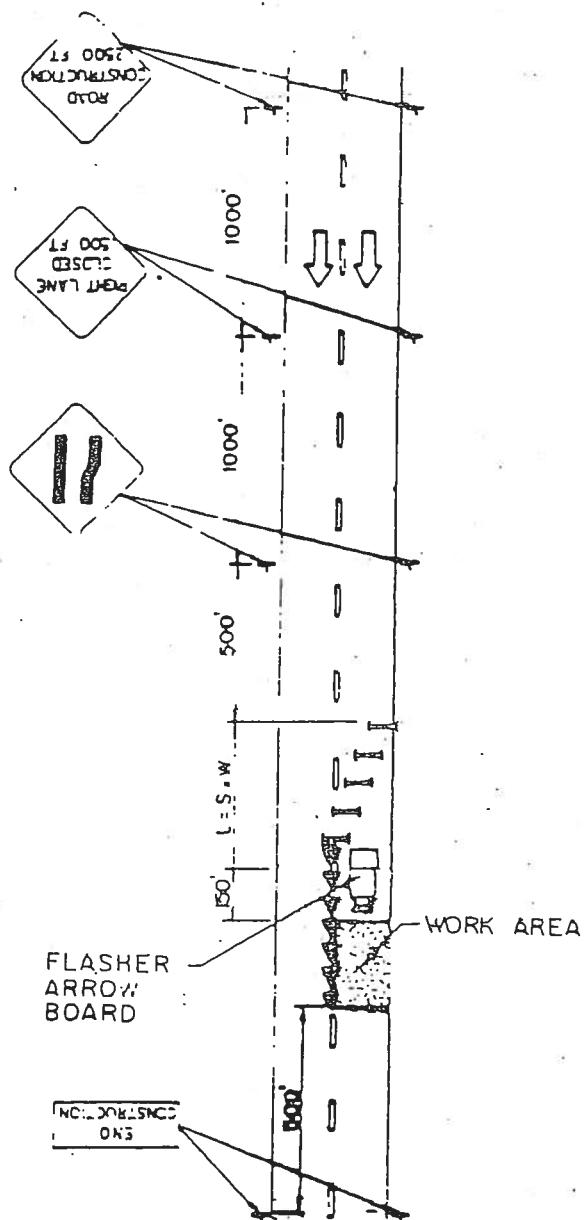
7/7/88

STANDARD ROAD DETAIL  
 TYPICAL TRAFFIC CONTROL  
 4 LANE UNDIVIDED ROADWAY  
 (2 LANES CLOSED)

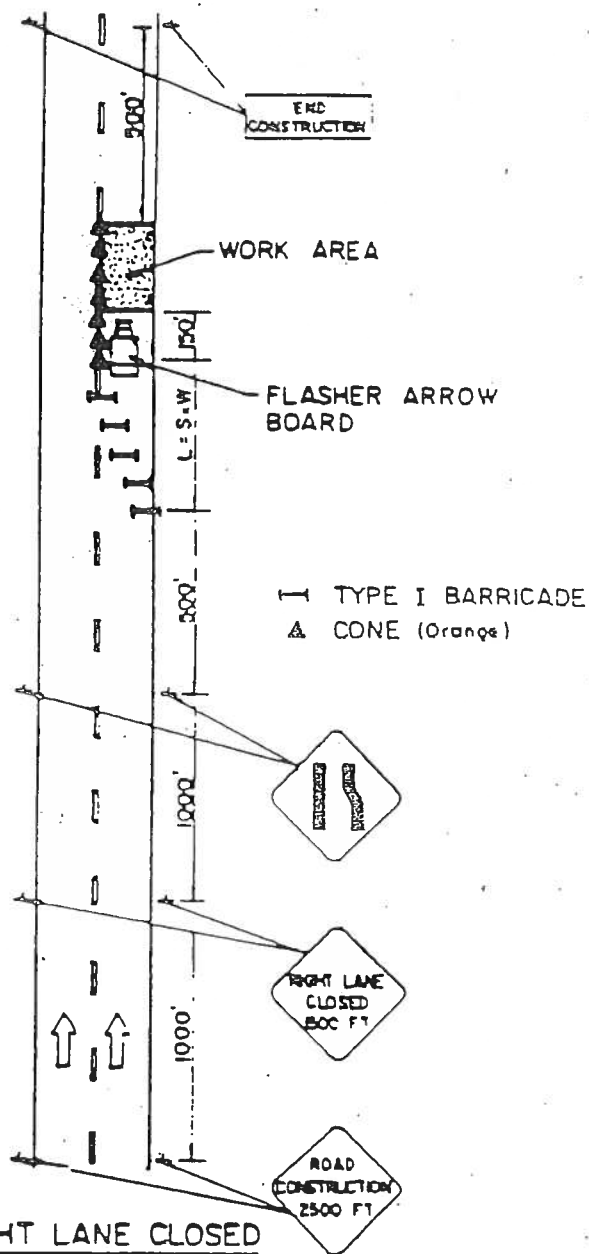
**R**  
**19.5**

SHEET 2 OF 5





LEFT LANE CLOSED



RIGHT LANE CLOSED

NOTE

L = Minimum Length of Taper  
 S = Numerical Value of the Speed Limit  
 or 85 Percentile Speed  
 W = Width of Offset

|            |              |             |
|------------|--------------|-------------|
| BARRICADES | R-19 5       |             |
| SIGNS      | R-19 1       |             |
| ITEM       | CROSS<br>REF | SPEC<br>REF |

ETROPOLITAN  
DADE COUNTY  
DEPARTMENT OF  
TRAFFIC AND  
TRANSPORTATION

APPROVED

8 / 3 / 66

REVISED

7/7/88

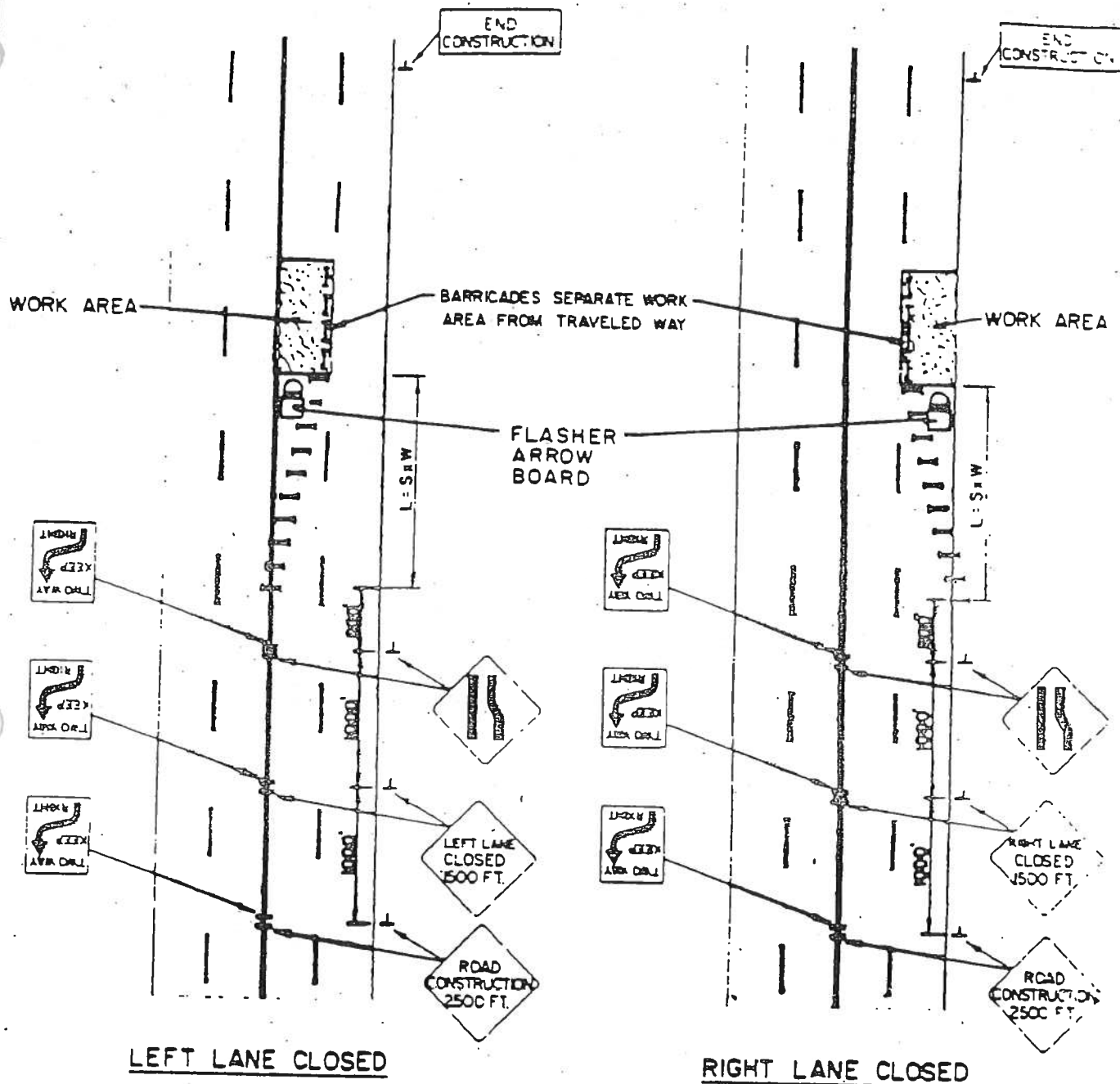
6/10/74

6/4/86

STANDARD ROAD DETAIL  
 •TYPICAL TRAFFIC CONTROL•  
 4 LANE DIVIDED ROADWAY  
 (1 LANE CLOSED)

R  
19.5

SHEET 2 OF 2



#### LEGEND:

- L = MINIMUM LENGTH OF TAPER.  
 S = NUMERICAL VALUE OF THE SPEED LIMIT OR 85 PERCENTILE SPEED.  
 W = WIDTH OF OFFSET.  
 I TYPE I BARRICADE.  
 A FLASHER ARROW BOARD.

#### NOTES:

1. LIGHTS SHOULD BE USED TO MARK BARRICADING AND CHANNELIZATION AT NIGHT.
2. SPEED LIMIT TO BE APPROVED BY DADE CO PUBLIC WORKS.
3. AT NIGHT STEADY BURN LAMPS REQUIRED TO DELINEATE VEHICLE PATH.

|            |           |          |
|------------|-----------|----------|
| BARRICADES | R-19.6    |          |
| SIGNS      | R-19.1    |          |
| ITEM       | CROSS REF | SPEC REF |

METROPOLITAN  
DADE COUNTY  
DEPARTMENT OF  
TRAFFIC AND  
TRANSPORTATION

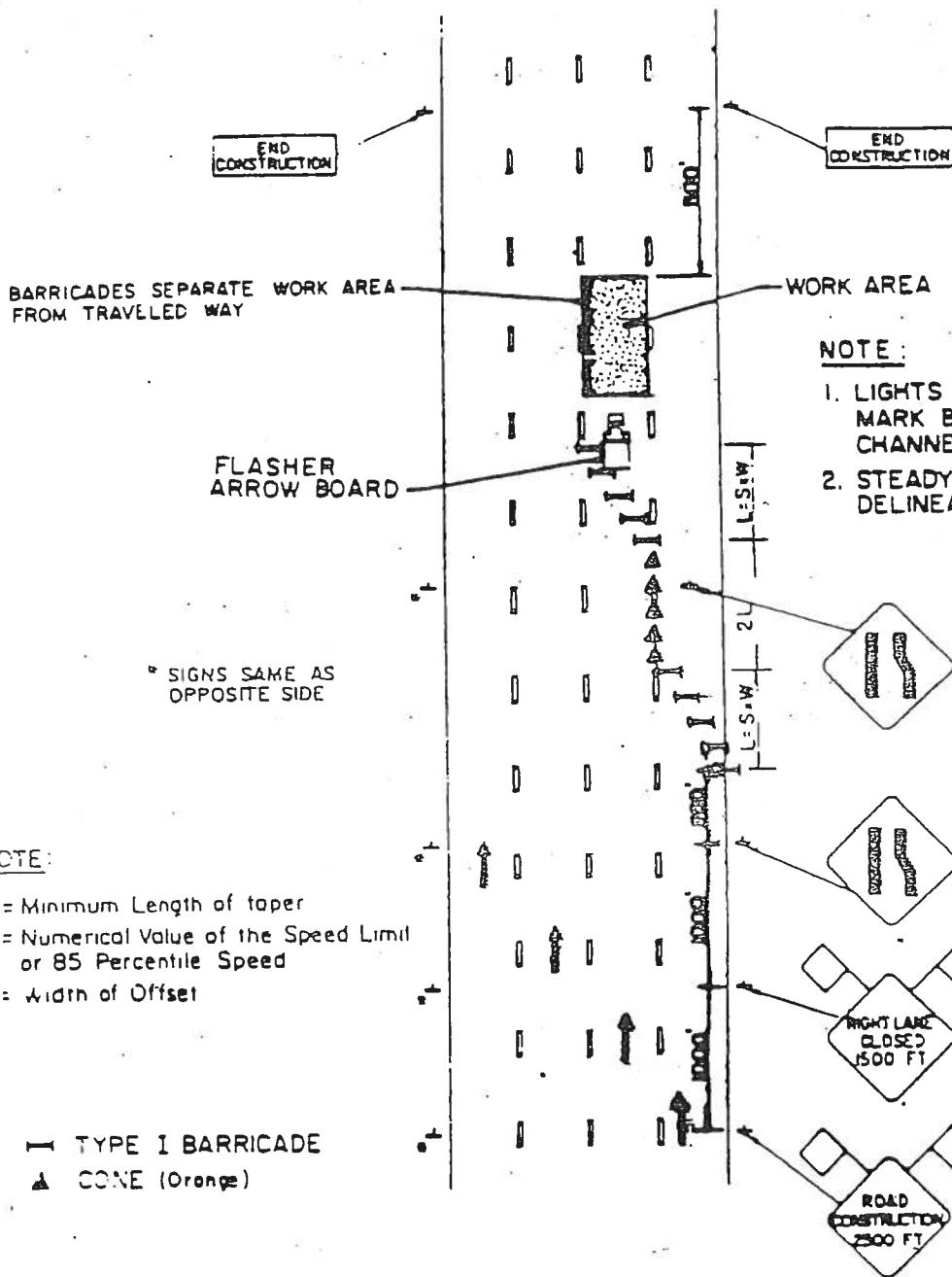
APPROVED  
8/3/66

REVISED  
7/7/88  
6/10/74  
6/4/86

STANDARD ROAD DETAIL  
TYPICAL TRAFFIC CONTROL  
4 LANE UNDIVIDED ROADWAY  
(1 LANE CLOSED)

R  
19.5

SHEET 4 OF 5



FLASHERS AND/OR FLAGS CAN BE USED TO CALL ATTENTION TO THE EARLY WARNING SIGNS IF NEEDED

|            |           |
|------------|-----------|
| BARRICADES | R-196     |
| SIGNS      | R-191     |
| ITEM       | CROSS REF |
|            | SPEC REF  |

METROPOLITAN  
DADE COUNTY  
DEPARTMENT OF  
TRAFFIC AND  
TRANSPORTATION

APPROVED

6/10/74

REVISED

6/4/86

7/7/88

STANDARD ROAD DETAIL  
 • TYPICAL TRAFFIC CONTROL •  
 MULTI-LANE ROADWAY  
 (MULTIPLE LANES CLOSED)

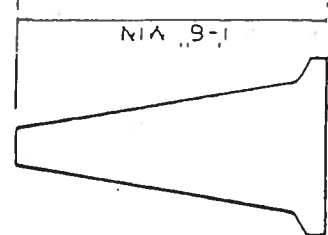
R  
19.5

SHEET 3 OF 5

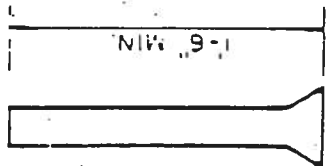
STANDARD ROAD DETAIL  
•TYPICAL TRAFFIC CONTROL•  
BARRICADES

R  
19.6

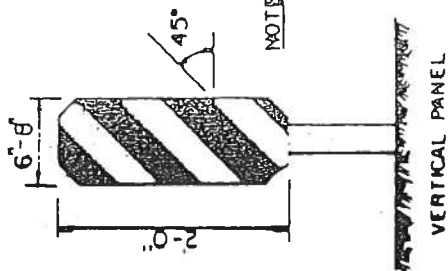
SHEET 1 OF 2



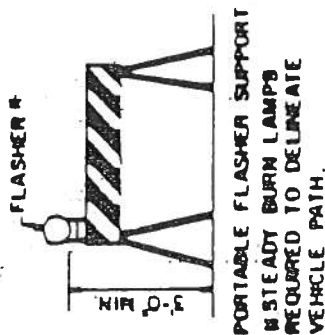
CONES  
(ORANGE)



(BASE VARIES)

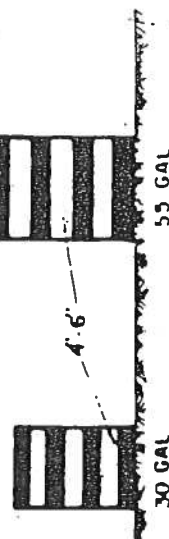


VERTICAL PANEL



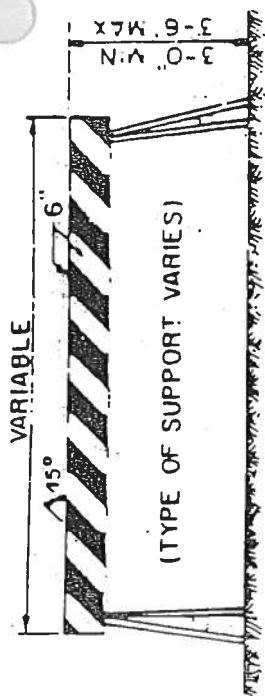
PORTABLE FLASHER SUPPORT  
W/ STEADY BURN LAMPS  
REQUIRED TO DELINEATE  
VEHICLE PATH.

THE DRUMS ARE TO BE PREDOMINATELY  
ORANGE, BUT A MINIMUM OF 2 WHITE  
STRIPES PER DRUM IS REQUIRED

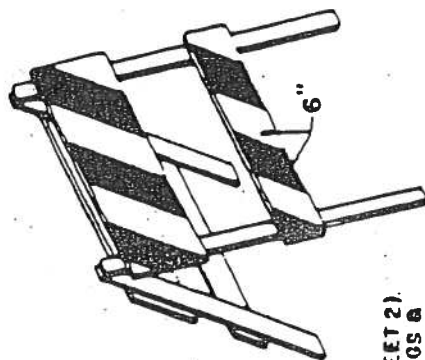


DRUMS

CHANNELIZING DEVICES

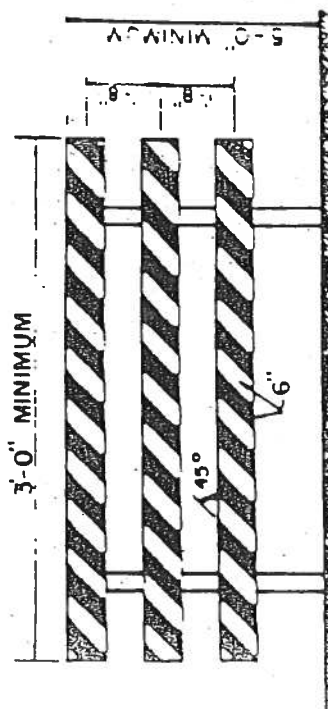


TYPE I



TYPE II

NOTE: FOR DIMENSIONS NOT  
SHOWN, SEE TABLE (SHEET 2).  
FOR BARRICADE MARKINGS &  
STRIPING, SEE NOTES 1,2 (SHEET 2).



TYPE III

BARRICADES

TABLE

| BARRICADE CHARACTERISTICS |                                |                  |                  |  |
|---------------------------|--------------------------------|------------------|------------------|--|
| ITEM                      | I                              | II               | III              |  |
| RAIL LENGTH               | 6'-8'                          | 3' MIN - 4' MAX  | 3' MIN - VAR MAX |  |
| RAIL WIDTH                | 8' MIN - 12" MAX               | 8' MIN - 12" MAX | 8' MIN - 12" MAX |  |
| STRIPE WIDTH              | 6"                             | 6"               | 6"               |  |
| HEIGHT                    | 3' MIN                         | 3' MIN           | 5' MIN           |  |
| FRAME TYPE                | DEMOUNTABLE OR HEAVY "A" FRAME | LIGHT "A" FRAME  | POST OR SKIDS    |  |
| MOBILITY                  | MOVABLE                        | PORTABLE         | PERMANENT        |  |

NOTES.

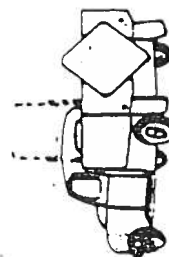
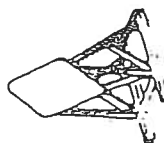
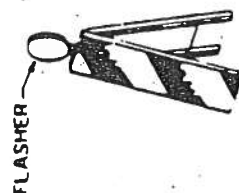
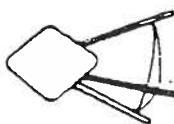
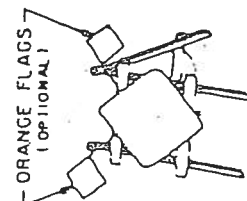
- 1 MARKINGS FOR BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE STRIPES
- 2 DIAGONAL STRIPES SHALL SLOPE DOWNWARD TOWARD THE SIDE OF THE BARRICADE ON WHICH TRAFFIC WILL PASS



FLASHER ARROW  
(TRAILER MOUNT)



FLASHER ARROW  
(TRUCK MOUNT)



PORTABLE AND TEMPORARY MOUNTINGS

METROPOLITAN  
DADE COUNTY  
DEPARTMENT OF  
TRAFFIC AND  
TRANSPORTATION

APPROVED

6/10/74

REVISED

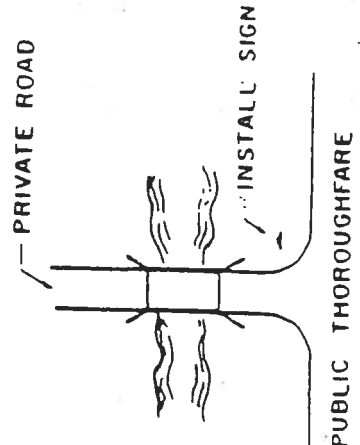
10/22/76

9/5/76

6/4/86

STANDARD ROAD DETAIL  
•TYPICAL TRAFFIC CONTROL•  
BARRICADES

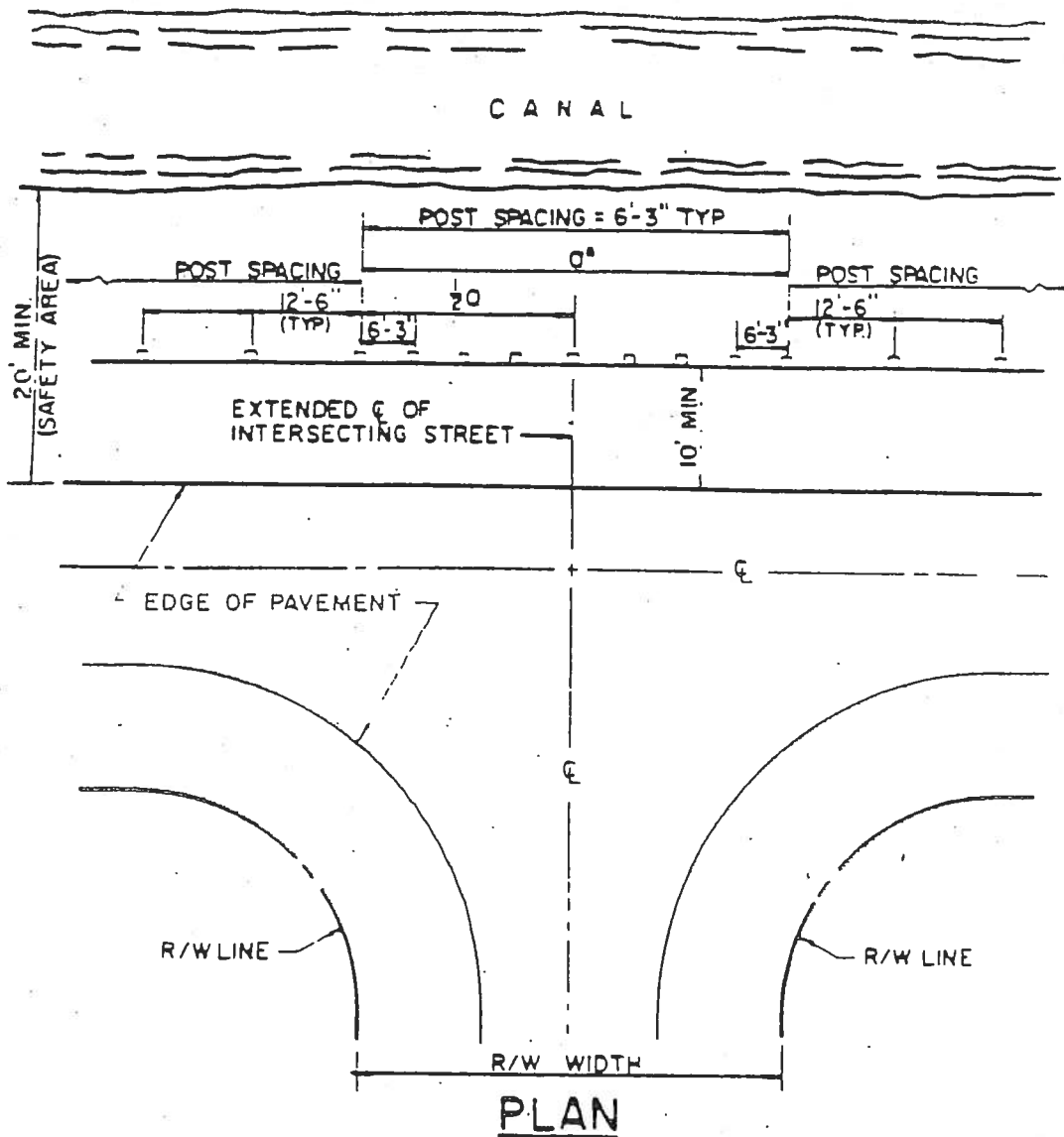
R  
19.6  
SHEET 2 OF 2



SHAPE: 18" x 48" RECTANGLE WITH 1/2" RADIUS CURVES.  
 MATERIAL: .080 GAUGE ALUMINUM  
 COLOR: BLACK ON WHITE (REFLECTORIZED)  
 MOUNTING: MAY BE ON 1 OR 2 U-IRONS OR POSTS

| CULVERT CROSSING | BC-12 | CROSS REF | SPEC REF |
|------------------|-------|-----------|----------|
| ITEM             |       |           |          |

|                                                           |                    |                     |                                                                       |           |
|-----------------------------------------------------------|--------------------|---------------------|-----------------------------------------------------------------------|-----------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br>8/3/66 | REVISED<br><br><br> | STANDARD ROAD DETAIL<br>APPROACH SIGN FOR<br>PRIVATE CULVERT CROSSING | R<br>19.7 |
|                                                           | SHEET 1 OF 1       |                     |                                                                       |           |



**NOTE.**

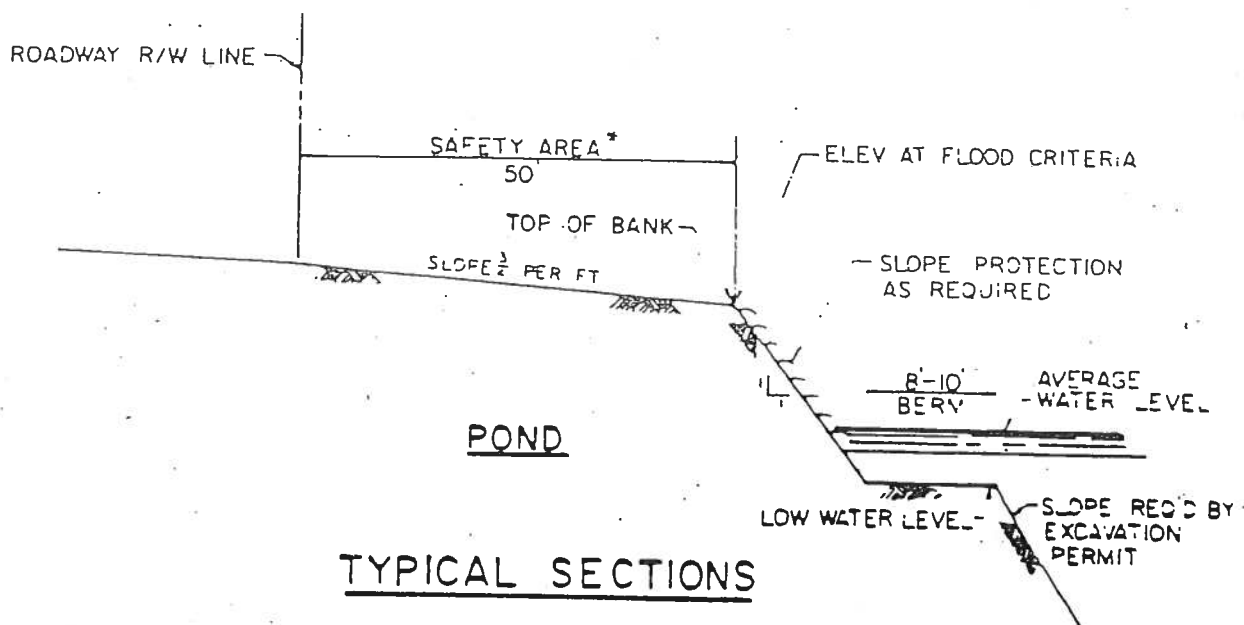
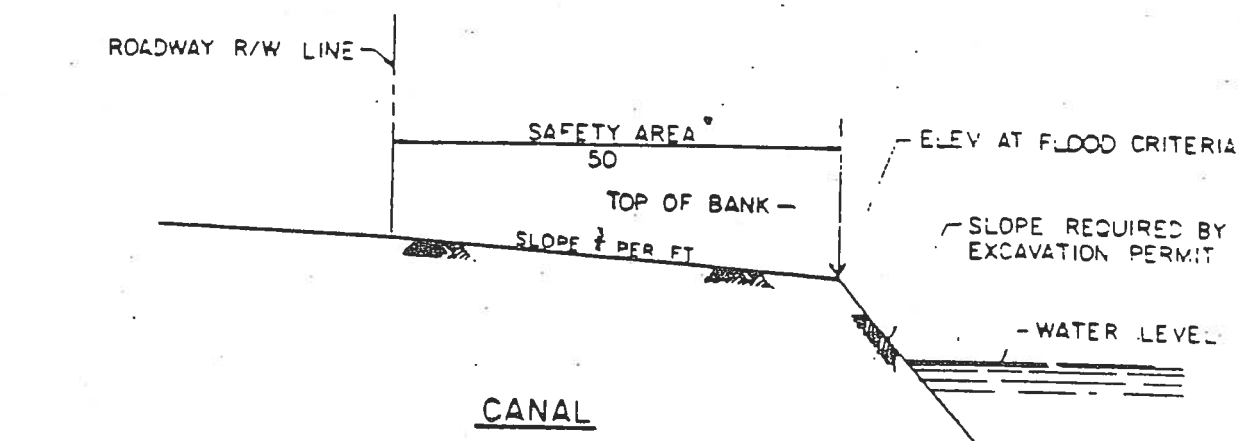
1. INSTALLATION TO BE PARALLEL WITH PAVEMENT EDGE

| R/W WIDTH         | Q        |
|-------------------|----------|
| 50ft, 60ft, 70ft  | 50' min  |
| 80ft, 86ft, 100ft | 100' min |

\*IF GUARDRAIL IS NOT CONTINUOUS (R206) PROVIDE ANCHOR ENDS TYPE I OR II AT EACH END OF DISTANCE "Q".

|                |                    |
|----------------|--------------------|
| GUARDRAIL POST | R 20               |
| GUARDRAIL      | R-202              |
| ITEM           | CROSS REF SPEC REF |

|                                                           |                   |                                         |                                                                                                   |                       |
|-----------------------------------------------------------|-------------------|-----------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br>6/5/6 | REVISED<br>6/1/62<br>5/17/72<br>6/23/77 | STANDARD ROAD DETAIL<br>GUARDRAIL INSTALLATION<br>AT T-INTERSECTION ADJACENT<br>TO CANAL OR DITCH | R<br>20.4<br>SHEET OF |
|-----------------------------------------------------------|-------------------|-----------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------|



## TYPICAL SECTIONS

### NOTES

- 1 THE DESIRABLE SAFETY WIDTH SHALL NORMALLY BE 50' OR MORE AS SHOWN ABOVE THE ABSOLUTE MINIMUM WIDTH SHALL BE 15' SPECIAL APPROVAL MUST BE OBTAINED AND GUARDRAIL OR OTHER SAFETY DEVICES PROVIDED FOR WIDTHS LESS THAN 50'. WHERE THE WATER AREA LIES OUTSIDE OF A HORIZONTAL ROADWAY CURVE, THE NECESSARY SAFETY REQUIREMENTS SHALL INCLUDE SAFETY DEVICES AS APPROVED BUT NOT LIMITED TO, HORIZONTAL DISTANCES, GUARDRAIL, ETC.
- 2 ACCESS TO CANAL OR POND FOR MAINTENANCE PURPOSES TO BE APPROVED BY PUBLIC WORKS DEPARTMENT.
- 3 SOLID SO2 OR GRASS AND MULCH SAFETY AREA.

| ITEM | CROSS REF | SPEC REF |
|------|-----------|----------|

|                                                           |                    |                              |                                                                                         |                           |
|-----------------------------------------------------------|--------------------|------------------------------|-----------------------------------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br>6/1/62 | REVISED<br>5/17/72<br>3. C B | STANDARD ROAD DETAIL<br>ROADWAY SHOULDER<br>REQUIREMENTS ALONG<br>CANAL & POND FRONTAGE | R<br>20.6<br>SHEET 1 OF 2 |
|-----------------------------------------------------------|--------------------|------------------------------|-----------------------------------------------------------------------------------------|---------------------------|



ROADWAY R/W LINE

SAFETY AREA

20' MIN

SLOPE 7:1 PER FT

ELEV AT FLOOD CRITERIA (MIN)

AVERAGE LOW MONTH WATER LEVEL (W.C. 24)

MAX SLOPE 7:1

ARTERIAL STREET

ROADWAY R/W LINE

SAFETY AREA

ELEV AT FLOOD CRITERIA (MIN)

AVERAGE LOW MONTH WATER LEVEL (W.C. 24)

MAX SLOPE 7:1

LOCAL STREET

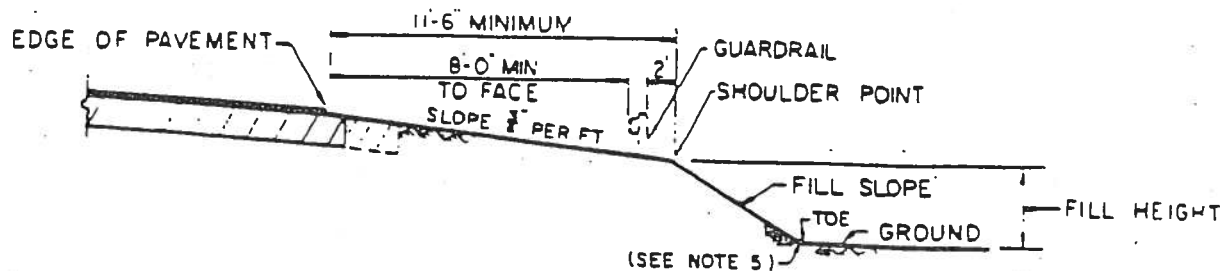
# TYPICAL SECTIONS

## NOTES

- 1 WHERE THE WATER AREA LIES OUTSIDE OF A HORIZONTAL ROADWAY CURVE, THE NECESSARY SHOULDER SAFETY REQUIREMENTS SHALL INCLUDE SAFETY DEVICES AS APPROVED BUT NOT LIMITED TO, HORIZONTAL DISTANCES, GUARDRAIL ETC
- 2 SOLID SOD OR GRASS AND MULCH SAFETY AREA
- 3 20' MINIMUM OFFSET TO TOP OF LAKE SLOPE MAY BE DELETED WHERE CURB AND GUTTER ROADWAY IS PROVIDED

| ITEM | CROSS<br>REF | SPEC<br>REF |
|------|--------------|-------------|

|                             |          |         |                                                                                 |           |
|-----------------------------|----------|---------|---------------------------------------------------------------------------------|-----------|
| METROPOLITAN<br>DADE COUNTY | APPROVED | REVISED | STANDARD ROAD DETAIL<br>ROADWAY SHOULDER<br>REQUIREMENTS ALONG<br>LAKE FRONTAGE | R<br>20.6 |
| PUBLIC WORKS<br>DEPARTMENT  | 5/7/72   |         |                                                                                 |           |



### TYPICAL SECTION

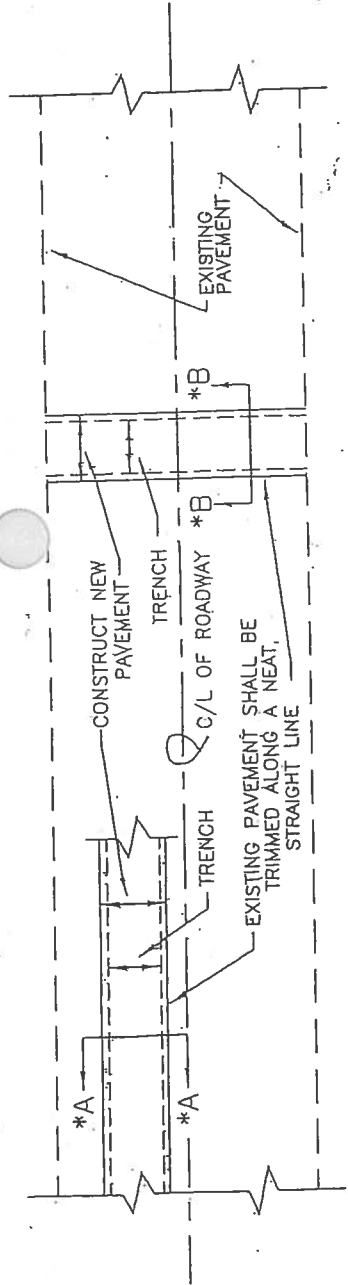
| MAXIMUM FILL SLOPES |            |
|---------------------|------------|
| FILL HEIGHT (FT)    | FILL SLOPE |
| 0 - 2               | 6:1        |
| 2 - 6               | 4:1        |
| 6 - 10              | 3:1        |
| ABOVE 10            | 2:1        |

#### NOTES

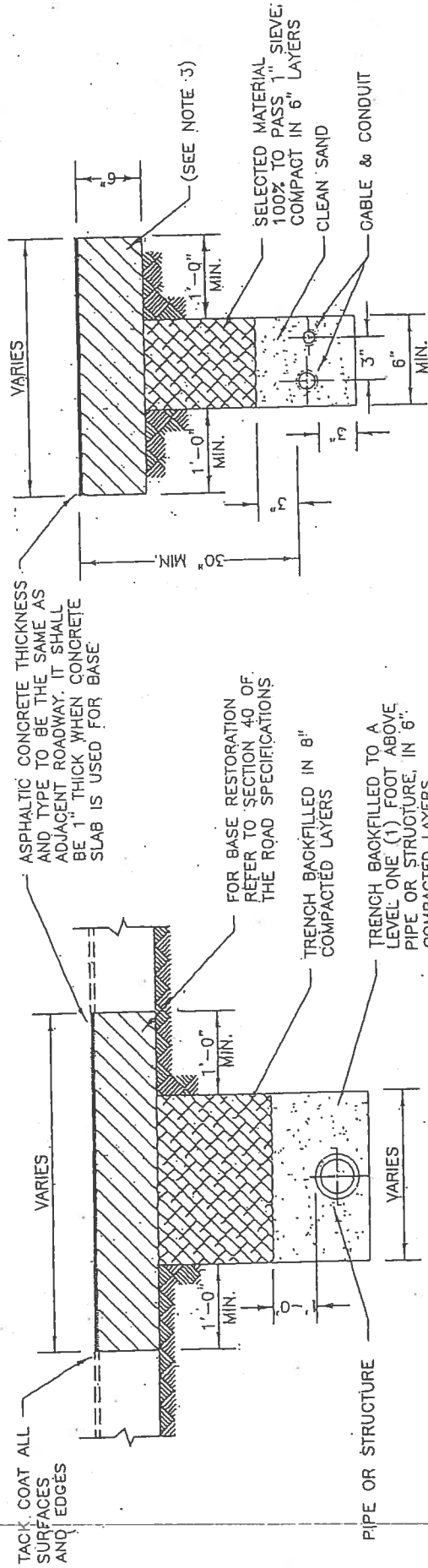
- 1 MINIMUM SHOULDER WIDTH SHALL BE 11'-6"
- 2 GUARDRAIL REQUIRED WHEN SHOULDER WIDTH IS 20' OR LESS AND FILL HEIGHT IS GREATER THAN 2'
- 3 WHEN FILL HEIGHT IS 2' OR LESS, NO GUARDRAIL IS REQUIRED
- 4 GUARDRAIL FACE TO BE NO CLOSER THAN 8' FROM PAVEMENT EDGE  
BACK OF GUARDRAIL TO BE PLACED 2' INSIDE SHOULDER POINT.
- 5 WHEN ROADWAY LIES ADJACENT TO LAKE FRONTAGE, THEN TOE OF SLOPE  
GROUND ELEVATION MUST BE MINIMUM FLOOD CRITERIA ELEVATION
- 6 GUARDRAIL MAY NOT BE REQUIRED IF 6:1 FILL SLOPES ARE CONSTRUCTED  
OUTSIDE SHOULDER LIMITS AND MEET REQUIREMENTS OF RECOVERY AREA

|                |              |             |
|----------------|--------------|-------------|
|                |              |             |
| END ANCHORAGES | R-203        |             |
| GUARDRAIL POST | R-20         |             |
|                |              |             |
| ITEM           | CROSS<br>REF | SPEC<br>REF |

|                                                               |                        |                    |                                                               |                           |
|---------------------------------------------------------------|------------------------|--------------------|---------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br><br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br><br>6/1/62 | REVISED<br>5/17/72 | STANDARD ROAD DETAIL<br><br>GUARDRAIL REQUIREMENTS<br>ON FILL | R<br>20.7<br>SHEET 1 OF 1 |
|                                                               |                        | 6/23/77            |                                                               |                           |



PLAN



SECTION A-A & B-B

DIRECT BURIAL  
CABLE OR CONDUIT

- NOTES:
- 1.- PAVEMENT RESTORATION FOR LONGITUDINAL CUTS SHALL INCLUDE FULL LANE WIDTH RESURFACING FOR EACH LANE WITHIN WHICH THE CUT EXTENDS.
  - 2.- IN SOME CASES IT WILL BE NECESSARY TO OVERLAY MORE THAN ONE (1) LANE WITH ASPHALTIC CONCRETE TO SATISFY PAVEMENT SLOPE.
  - 3.- CONTRACTOR MAY ELECT TO BACKFILL WITH 1:10 SAND-CEMENT MIX.

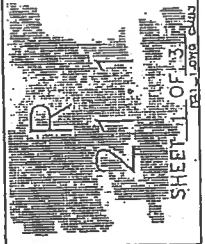
| ITEM            | CROSS REF. | SPEC. REF. |
|-----------------|------------|------------|
| MT. RESTORATION |            | SEC 40     |
| LITY PLACEMENT  | G-21       | SEC 133    |
| PHALIC CONCRETE |            | SEC 51     |
| SE COURSE       |            |            |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/5/61

REVISED  
5/17/72  
7/14/80  
6/4/86

STANDARD ROAD DETAIL  
PAVEMENT RESTORATION FOR  
TRENCHES CUT IN PUBLIC  
RIGHTS-OF-WAY







# BRIDGE AND CULVERT DETAILS

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
E S E

REVISED

8-13-66

5-1-72

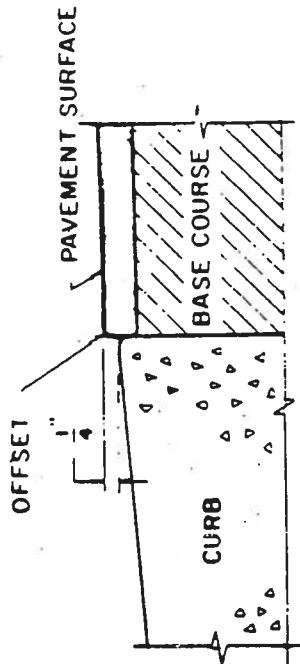
6-23-77

STANDARD ROAD DETAIL

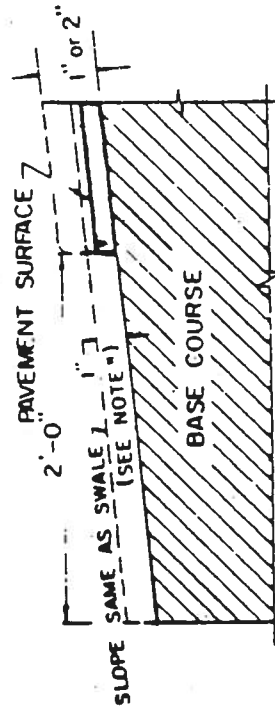
PAVEMENT ENDINGS

R  
22.1

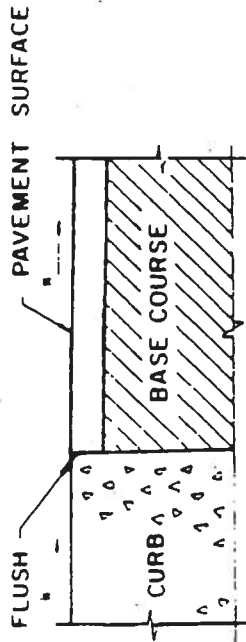
SHEET 1 OF 1



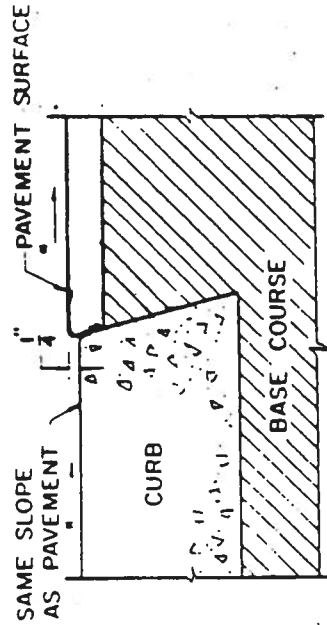
PAVEMENT ENDING ADJACENT TO  
6" 9" DRIVEWAY CURBS AND  
VALLEY GUTTERS



PAVEMENT ENDING FOR  
1" OR 2" PAVEMENT



PAVEMENT ENDING ADJACENT  
TO TYPE 'A' MEDIAN CURB



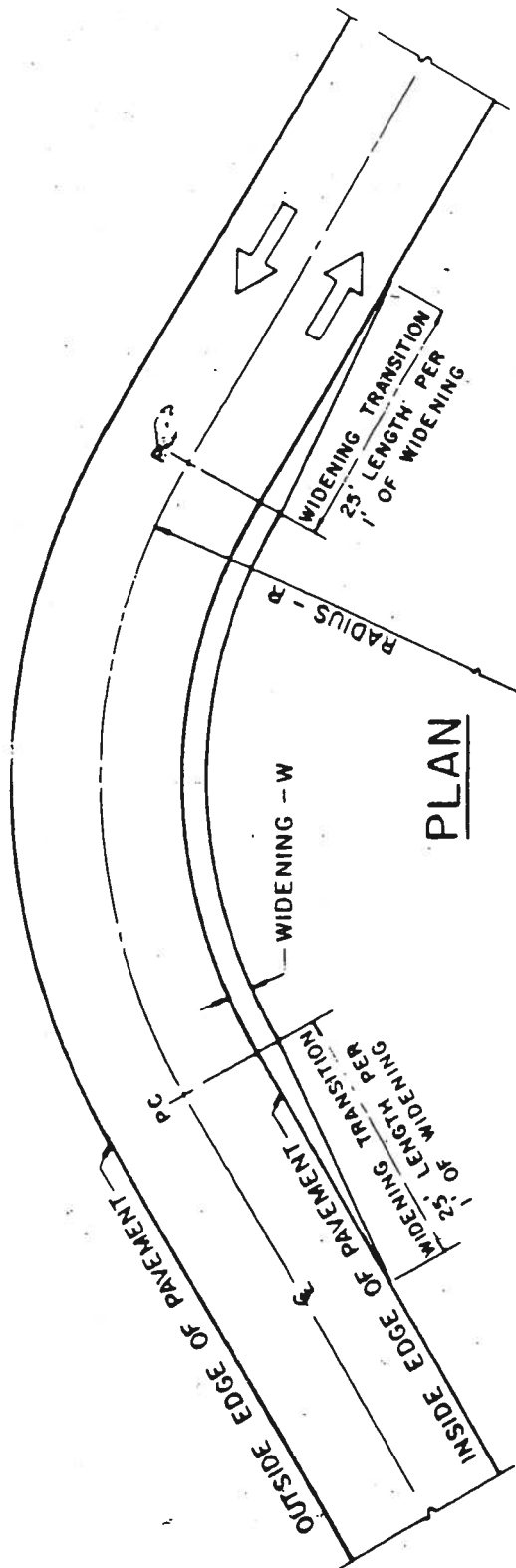
PAVEMENT ENDING ADJACENT  
TO TYPE 'C' MEDIAN CURB

NOTE WHEN 2" PAVEMENT IS SPECIFIED,  
CONTINUE FIRST 1" COURSE  
OVER 2'-0" BASE EXTENSION SO  
MAXIMUM DIFFERENCE IS 1"

NOTE

CROSS SLOPE ON GUTTER  
SAME AS PAVEMENT CROSS-SLOPE

| ITEM | CURB & GUTTER |          | MEDIAN CURB |          |
|------|---------------|----------|-------------|----------|
|      | CROSS REF     | SPEC REF | CROSS REF   | SPEC REF |
|      | R-141         |          | R-142       |          |



**PLAN**

**NOTES:**

- 1 WIDENING IS TO BE APPLIED TO INSIDE OF CURVE ONLY.
- 2 PAVEMENT WIDENING IS TO BE CONSTRUCTED SIMULTANEOUSLY WITH THE NORMAL ROADWAY PAVEMENT.
- 3 THE TYPICAL SECTION OF THE NORMAL ROADWAY IS TO BE ADJUSTED TO ACCOMMODATE THE WIDENING.
- 4 FOR CURB AND GUTTER ROADWAY SECTIONS, NO WIDENING IS REQUIRED.

| R              | W  |
|----------------|----|
| 500' & OVER    | 0  |
| 100' - 500'    | 2' |
| LESS THAN 100' | 3' |

| ITEM | CROSS REF | SPEC REF |
|------|-----------|----------|
|      |           |          |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

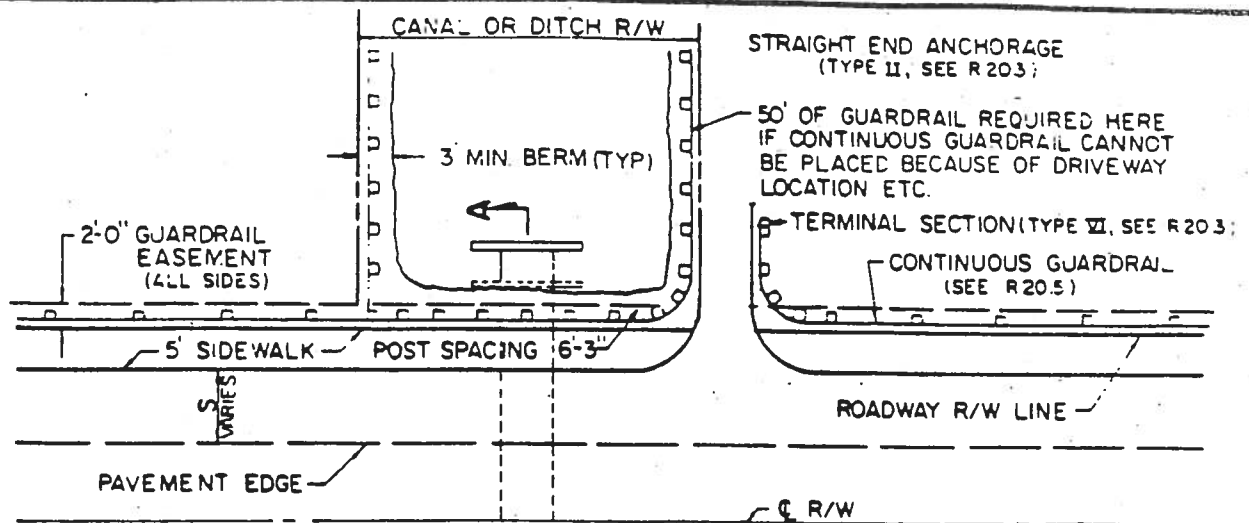
APPROVED  
7/30/62

REVISED

STANDARD ROAD DETAIL  
PAVEMENT WIDENING  
ON 2-LANE  
RESIDENTIAL STREET

**R**  
**24.1**  
SHEET 1 OF 1

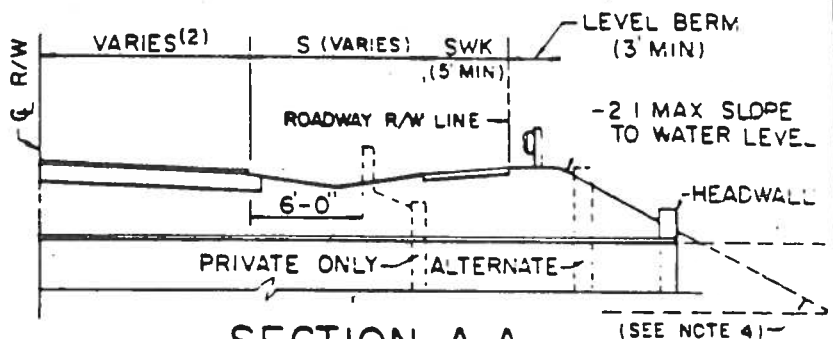




## PLAN

### NOTES:

- 1 WIDTH OF TYPICAL SECTION FOR A PRIVATE CROSSING MAY BE REDUCED TO PROVIDE NO LESS THAN 10' OF PAVEMENT WITH 6' SHOULDERS
- 2 PRIVATE CROSSING MUST BE POSTED WITH AN APPROVED SIGN ENTITLED "PRIVATE CROSSING NOT A PUBLIC THOROUGHFARE."
- 3 PRIVATE ROAD DESIGN LOADING SHALL BE IN ACCORDANCE WITH THE PROPOSED USE OF THE STRUCTURE BUT SHALL NOT BE LESS THAN H20-44.
- 4 HEADWALLS MAY BE ELIMINATED IF DESIGNED AS SHOWN FILL SLOPE TO BE SODDED TO WATER LEVEL USE 3:1 SLOPE BELOW WATER LEVEL.
- 5 MINIMUM COVER OVER CULVERT TO BE APPLIED AT THE LOWEST ROADWAY SECTION ELEVATION.
- 6 APPROPRIATE VERTICAL CURVES FOR ROADWAY PROFILE GRADES SHALL BE USED FOR DESIGN SPEEDS IN ACCORDANCE WITH AASHTO STANDARDS FOR STOPPING SIGHT DISTANCES.



## SECTION A-A

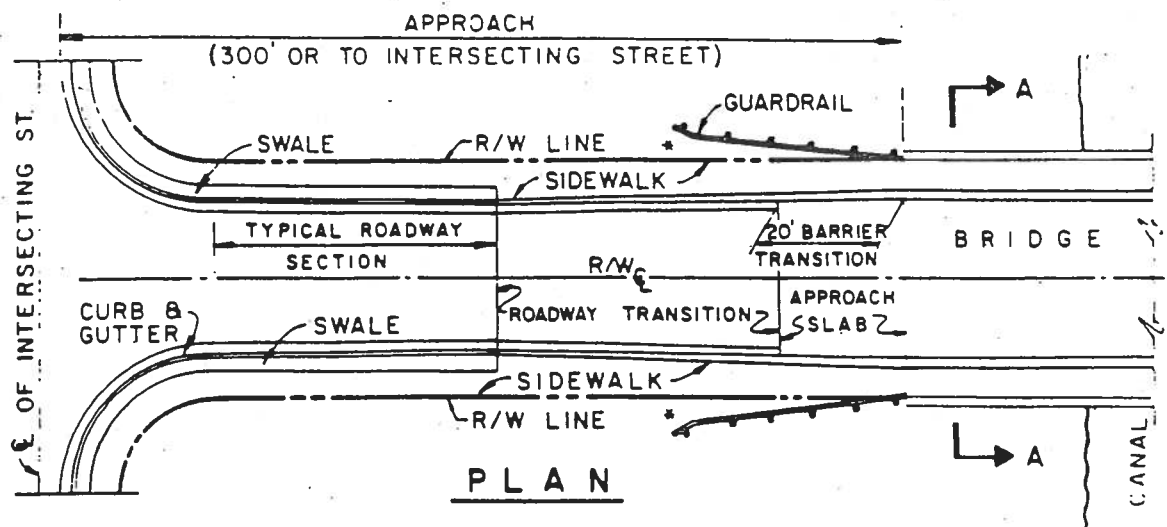
| PUBLIC   |        | PRIVATE    |
|----------|--------|------------|
| 2 LANE   | 4 LANE | 2 LANE (2) |
| HS-20-44 |        | H20-44 (4) |

TABLE FOR LOADING

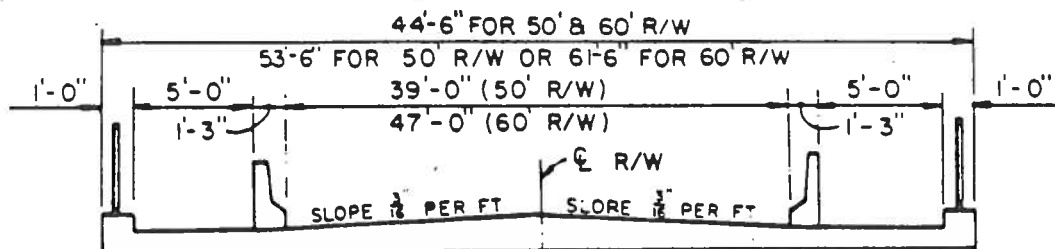
\* SEE STD DETAIL R-497

|                    |            |           |
|--------------------|------------|-----------|
| GUARDRAIL POST     | R-20       |           |
| GUARDRAIL          | R-20.3     |           |
| STD SIDEWALK TRANS | R-32       |           |
| CONC SIDEWALK      | R-3        | SEE R-4   |
| ITEM               | CROSS REF. | SPEC REF. |

|                                                           |                     |                    |                                                                  |                           |
|-----------------------------------------------------------|---------------------|--------------------|------------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED:<br>6/5/83 | REVISED<br>6/24/77 | STANDARD BRIDGE AND CULVERT DETAIL<br>CULVERT CROSSING<br>TYPE B | BC<br>1.2<br>SHEET 1 OF 1 |
|                                                           |                     | 8/15/83            |                                                                  |                           |



**PLAN**



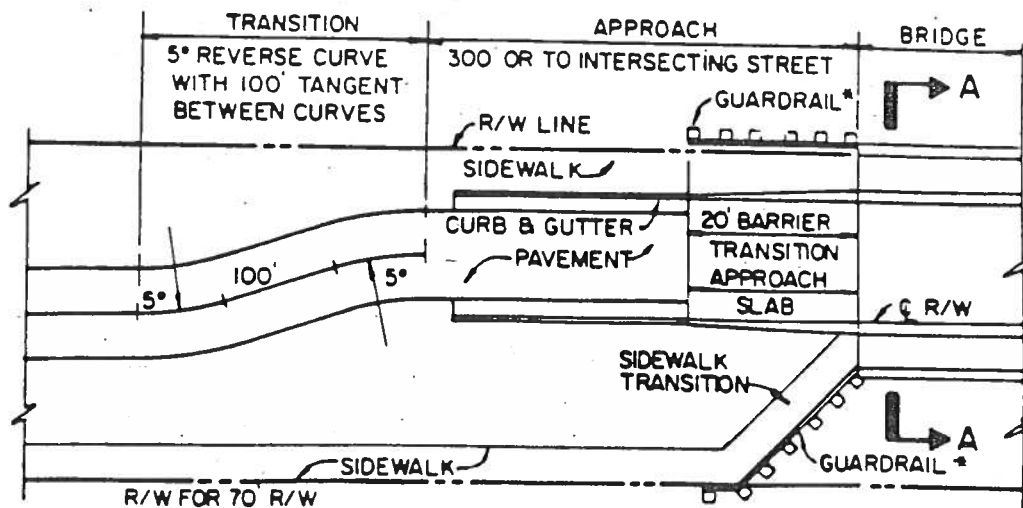
**SECTION A-A**  
(FOR R-1.2 & R-2.2 ROADWAY)

**NOTES:**

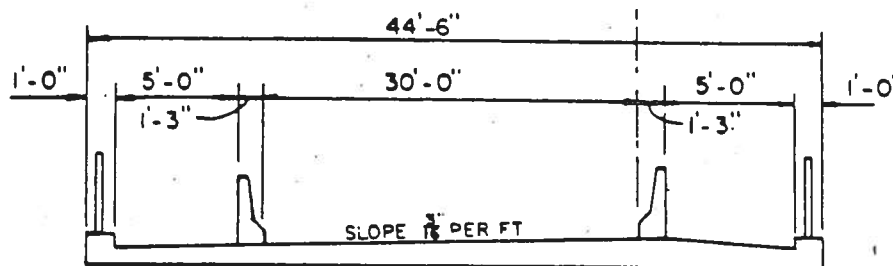
1. WHEN SWALE SECTION IS SPECIFIED AS SHOWN ON R-1.1 AND R-2.1, THE FOLLOWING ALTERNATE METHODS OF CONSTRUCTION MAY BE USED.
  - a. CONSTRUCT BRIDGE WIDTH FOR FULLY DEVELOPED ROADWAY SECTION OR R-2.2 RESPECTIVELY.
  - b. CONSTRUCT BRIDGE WITH CURB & GUTTER APPROACHES TO FIRST INTERSECTING STREET OR FOR 300' WHICHEVER APPLIES. BARRIER TO BARRIER WIDTH TO BE 30' (R-1.1 & R-2.1 ROADWAY).
- \* 2. A 2'-0" GUARDRAIL EASEMENT BEHIND ROADWAY RIGHT-OF-WAY WILL BE REQUIRED FOR APPROACH GUARDRAIL.
3. BRIDGE SHALL HAVE A DESIGN LOADING OF HS 20-44.

|                |           |          |
|----------------|-----------|----------|
| CONC. SIDEWALK | R-3       | SEC. 4.5 |
| GUARDRAIL      | R-20.2    |          |
| GUARDRAIL POST | R-20      |          |
| ITEM           | CROSS REF | SPEC REF |

|                                                           |                    |                                         |                                                                                                                      |                           |
|-----------------------------------------------------------|--------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br>6/5/86 | REVISED<br>10/12/83<br>5/7/72<br>6/2/77 | STANDARD BRIDGE AND CULVERT DETAIL<br>BRIDGE CROSS-SECTION AND<br>LOADING REQUIREMENTS FOR<br>50' & 60' RIGHT-OF-WAY | BC<br>2.1<br>SHEET 1 OF 1 |
|                                                           |                    |                                         |                                                                                                                      |                           |



**PLAN**



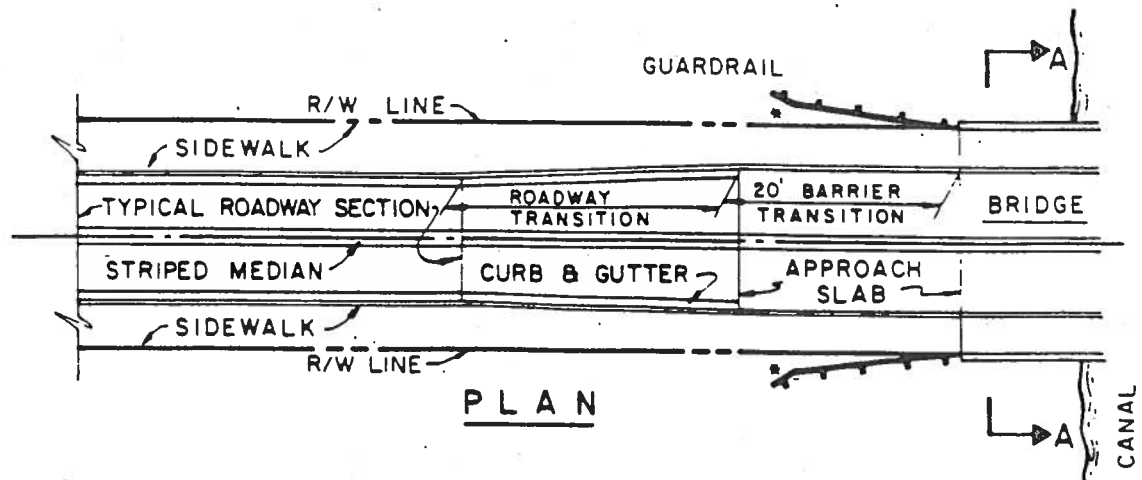
**SECTION A-A**  
(FOR R-3.1 & R-8.1 ROADWAY)

**NOTE**

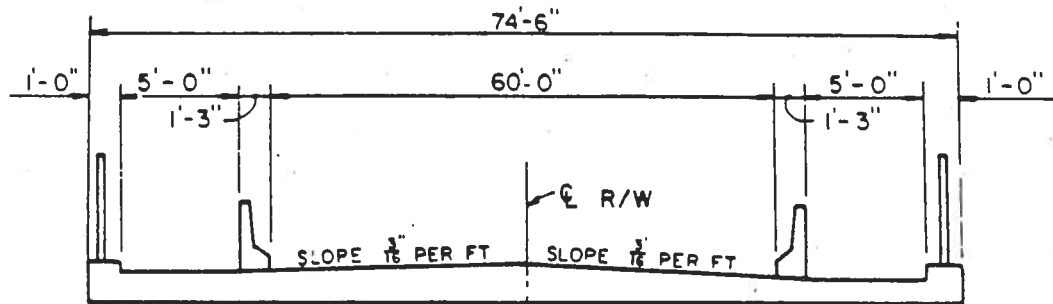
1. CONSTRUCT ONE HALF BRIDGE SECTION TO FIT FINAL LOCATION FULLY DEVELOPED BRIDGE SECTION. EXTEND BRIDGE BEYOND CENTER LINE OF RIGHT-OF-WAY AND CONSTRUCT BARRIER & SIDEWALK WHICH ARE TO BE REMOVED WHEN REMAINING PORTION OF BRIDGE IS CONSTRUCTED.
- \* 2 A 2'-0" GUARDRAIL EASEMENT BEHIND ROADWAY RIGHT-OF-WAY WILL BE REQUIRED FOR APPROACH GUARDRAIL
3. BRIDGE SHALL HAVE A DESIGN LOADING OF HS-20-44.

|                |           |          |
|----------------|-----------|----------|
| CONC SIDEWALK  | R-3.1     | SEC 45   |
| GUARDRAIL      | R-20.2    |          |
| GUARDRAIL POST | R-20      |          |
| ITEM           | CROSS REF | SPEC REF |

|                                                           |                    |                                           |                                                                                                                |                           |
|-----------------------------------------------------------|--------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br>6/5/86 | REVISED<br>10/12/83<br>5/17/72<br>6/25/77 | STANDARD BRIDGE AND CULVERT DETAIL<br>BRIDGE CROSS-SECTION AND<br>LOADING REQUIREMENTS FOR<br>70' RIGHT-OF-WAY | BC<br>2.2<br>SHEET 1 OF 2 |
|                                                           |                    |                                           |                                                                                                                |                           |



PLAN



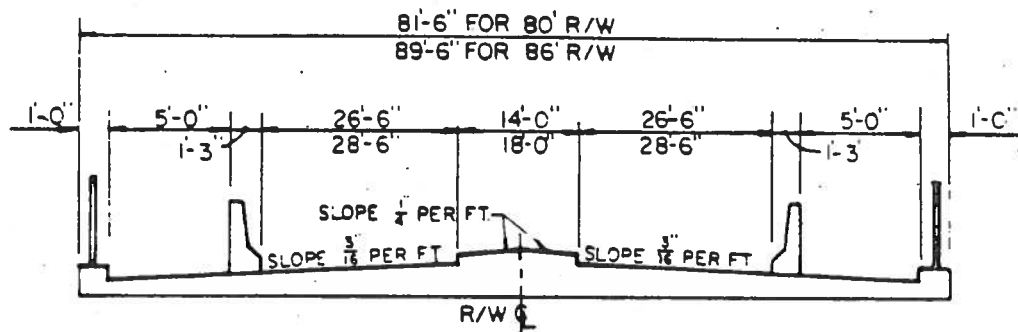
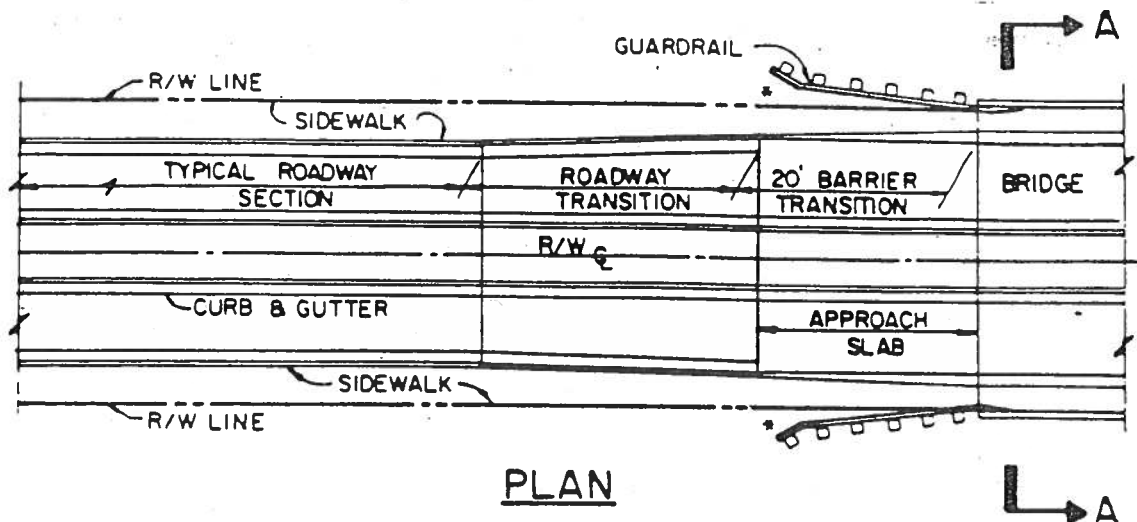
SECTION A-A  
(FOR R-3.2 ROADWAY)

NOTES:

- \* 1. A 2'-0" GUARDRAIL EASEMENT BEHIND ROADWAY RIGHT-OF-WAY WILL BE REQUIRED FOR APPROACH GUARDRAIL.
2. BRIDGE SHALL HAVE A DESIGN LOADING OF HS-20-44.

|                |           |          |
|----------------|-----------|----------|
| CONC. SIDEWALK | R 3.2     | SEC. 45  |
| GUARDRAIL      | R 2C 3    |          |
| GUARDRAIL POST | R 2C 1    |          |
| ITEM           | CROSS REF | SPEC REF |

|                                                           |                         |                                        |                                                                                                                |                           |
|-----------------------------------------------------------|-------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br><br>1/30/81 | REVISED<br><br>_____<br>_____<br>_____ | STANDARD BRIDGE AND CULVERT DETAIL<br>BRIDGE CROSS SECTION AND<br>LOADING REQUIREMENTS FOR<br>70' RIGHT-OF-WAY | BC<br>2.2<br>SHEET 2 OF 2 |
|                                                           |                         |                                        |                                                                                                                |                           |

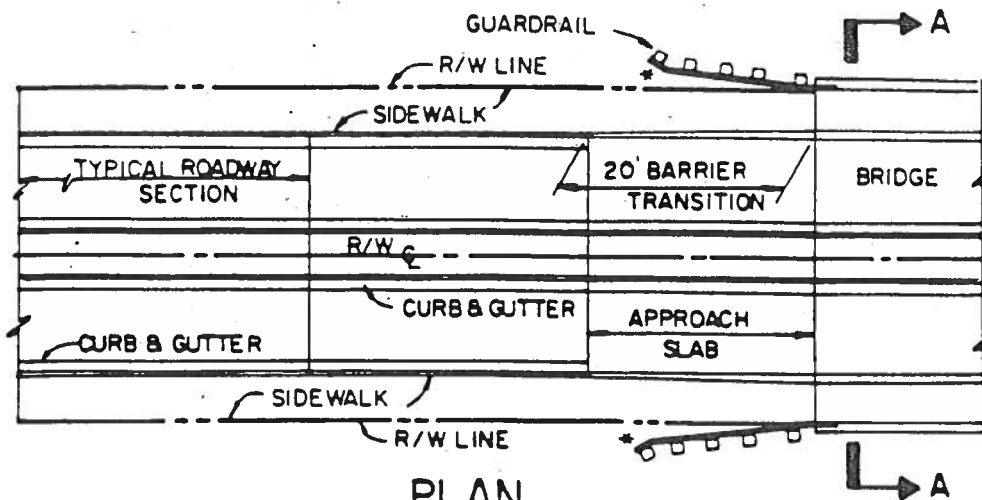


#### NOTES

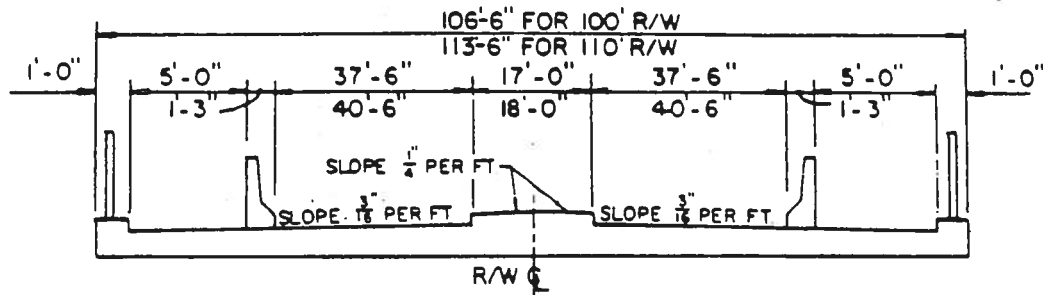
1. WHEN ROADWAY TYPICAL SECTION FOR ONE HALF RIGHT-OF-WAY IS SPECIFIED AS SHOWN ON R-8.1 THE FOLLOWING ALTERNATE METHOD OF CONSTRUCTION MAY BE USED.
  - a. CONSTRUCT BRIDGE WIDTH FOR FULLY DEVELOPED ROADWAY SECTION R-4.4 OR R-4.5
  - b. CONSTRUCT ONE HALF BRIDGE SECTION TO FIT FINAL LOCATION OF FULLY DEVELOPED SECTION. CONSTRUCT TEMPORARY GUARDRAIL ON THE MEDIAN SIDE OF THE BRIDGE.
- \* 2. A 2'-0" GUARDRAIL EASEMENT BEHIND ROADWAY RIGHT-OF-WAY WILL BE REQUIRED FOR APPROACH GUARDRAIL.
3. BRIDGE SHALL HAVE A DESIGN LOADING OF HS 20-44.

|                |           |          |
|----------------|-----------|----------|
| GUARDRAIL      | R-20.2    |          |
| GUARDRAIL POST | R-20      |          |
| ITEM           | CROSS REF | SPEC REF |

|                                                               |                         |                    |                                                                                                                      |                           |
|---------------------------------------------------------------|-------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br><br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br><br>5/17/72 | REVISED<br>6/24/77 | STANDARD BRIDGE AND CULVERT DETAIL<br>BRIDGE CROSS-SECTION AND<br>LOADING REQUIREMENTS FOR<br>80' & 86' RIGHT-OF-WAY | BC<br>2.3<br>SHEET 1 OF 1 |
|                                                               |                         | 10/2/83            |                                                                                                                      |                           |



**PLAN**



**SECTION A-A**

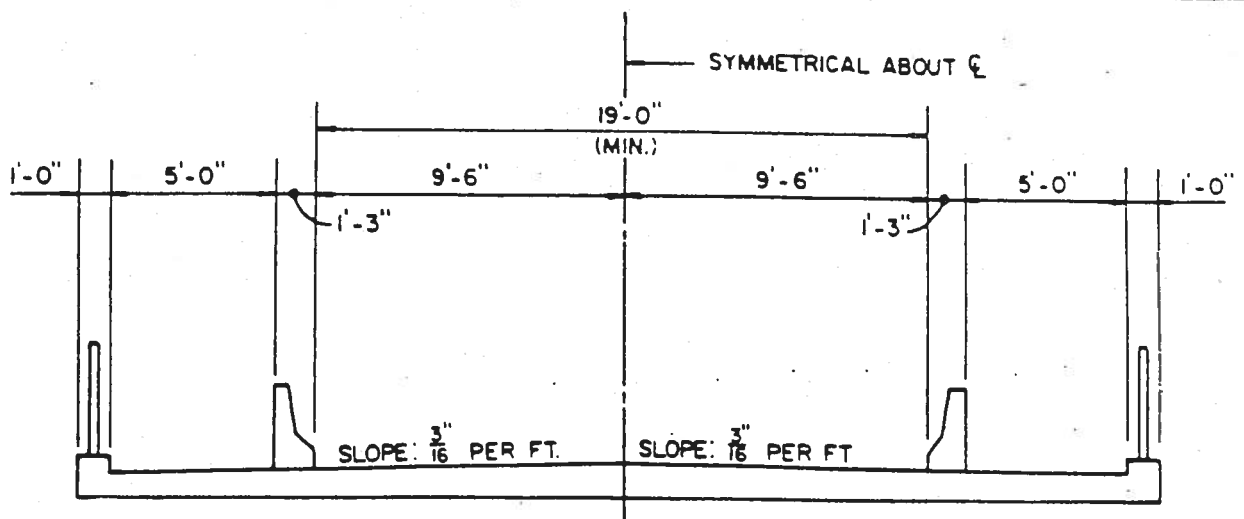
( FOR R-5.2 & R-6.2 ROADWAY )

**NOTES**

1. WHEN ROADWAY TYPICAL SECTION FOR ONE HALF RIGHT OF WAY IS SPECIFIED AS SHOWN ON R-81 THE FOLLOWING ALTERNATE METHODS OF CONSTRUCTION MAY BE USED.
  - a. CONSTRUCT BRIDGE WIDTH FOR FULLY DEVELOPED ROADWAY SECTION R-5.2 OR R-6.2
  - b. CONSTRUCT ONE HALF BRIDGE SECTION TO FIT FINAL LOCATION OF FULLY DEVELOPED SECTION. CONSTRUCT TEMPORARY GUARDRAIL ON THE MEDIAN SIDE OF BRIDGE.
- \* 2. A 2'-0" GUARDRAIL EASEMENT BEHIND ROADWAY RIGHT OF WAY WILL BE REQUIRED FOR APPROACH GUARDRAIL.
3. BRIDGE SHALL HAVE A DESIGN LOADING OF HS-20-44.

|                |           |          |
|----------------|-----------|----------|
| CONC SIDEWALK  | R-3       | SEC 45   |
| GUARDRAIL      | R-2C 2    |          |
| GUARDRAIL POST | P-20      |          |
| ITEM           | CROSS REF | SPEC REF |

|                                                           |                     |                                |                                                                                                                        |                           |
|-----------------------------------------------------------|---------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br>5/17/72 | REVISED<br>6/24/77<br>10/12/83 | STANDARD BRIDGE AND CULVERT DETAIL<br>BRIDGE CROSS-SECTION AND<br>LOADING REQUIREMENTS FOR<br>100' & 110' RIGHT-OF-WAY | BC<br>2.4<br>SHEET 1 OF 1 |
|                                                           |                     |                                |                                                                                                                        |                           |



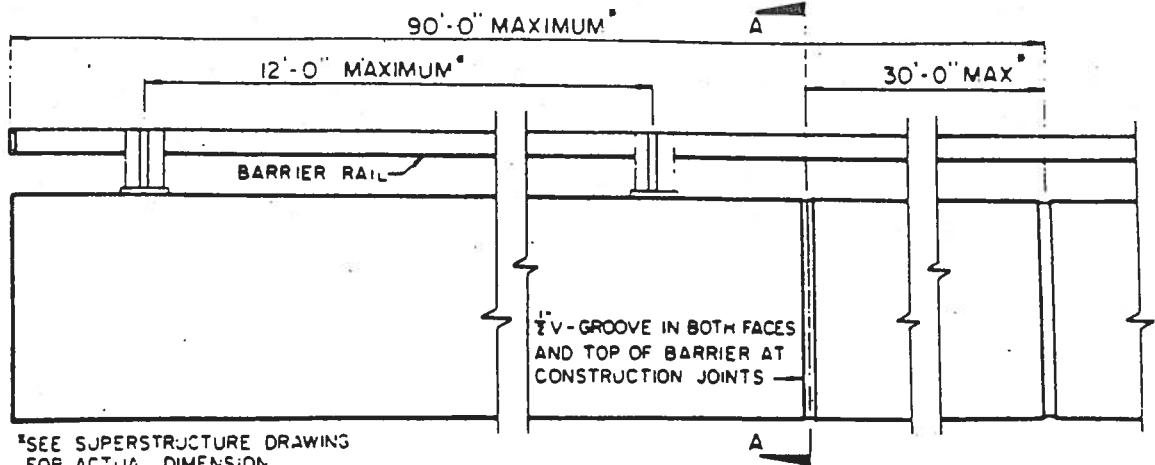
## TYPICAL SECTION

### NOTES:

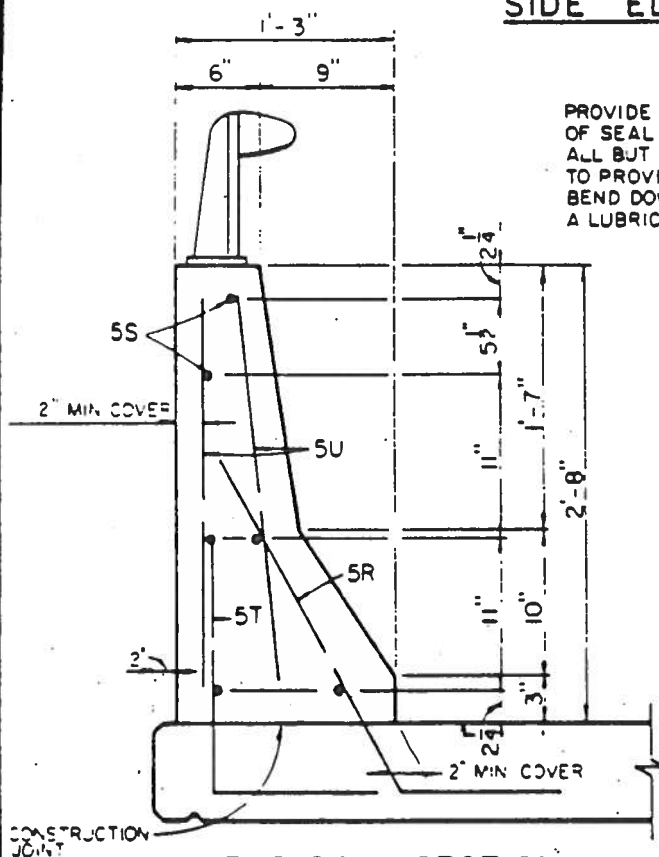
1. SIDEWALK MAY BE DELETED FROM ONE SIDE OF PRIVATE BRIDGE.
2. PRIVATE BRIDGE MUST BE POSTED WITH AN APPROVED SIGN ENTITLED: "PRIVATE CROSSING, NOT A PUBLIC THOROUGHFARE." \*
3. PRIVATE BRIDGE DESIGN LOADING SHALL BE IN ACCORDANCE WITH THE PROPOSED USE OF THE STRUCTURE BUT SHALL NOT BE LESS THAN HS-20-44.
4. GUARDRAIL REQUIREMENTS TO BE SAME AS FOR A PUBLIC BRIDGE.

|                  |           |          |
|------------------|-----------|----------|
|                  |           |          |
| APPROACH SIGN *  | R-197     |          |
| CULVERT CROSSING | BC-1.2    |          |
| ITEM             | CROSS REF | SPEC REF |

|                                                           |                    |                                         |                                                                                                                 |                           |
|-----------------------------------------------------------|--------------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br>6/5/61 | REVISED<br>8/3/66<br>5/7/72<br>10/12/83 | STANDARD BRIDGE AND CULVERT DETAIL<br>BRIDGE CROSS SECTION AND<br>LOADING REQUIREMENTS FOR<br>PRIVATE CROSSINGS | BC<br>2.5<br>SHEET 1 OF 1 |
|                                                           |                    |                                         |                                                                                                                 |                           |

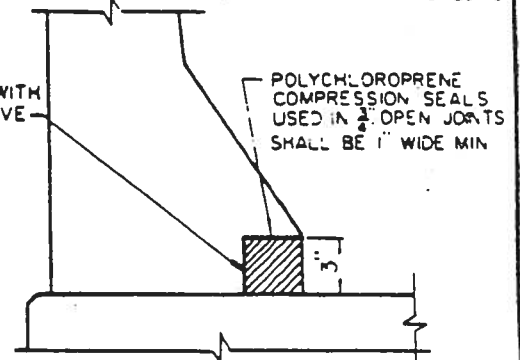


**SIDE ELEVATION**



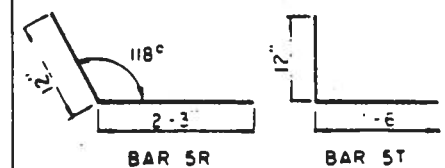
**TYPICAL SECTION**

NOTE: ALL CONTACTING SURFACES BETWEEN THE COMPRESSION SEAL AND THE CONCRETE SHALL BE THOROUGHLY COATED WITH A LUBRICATING ADHESIVE



**SECTION A-A**

**BENDING DIAGRAMS**



NOTE ALL BAR DIMENSIONS ARE CUT-TO-OUT

**NOTES**

- 1 CLASS II CONCRETE SHALL BE USED IN BARRIER.
- 2 REINFORCING STEEL SHALL BE 60 GRADE.
- 3 CYLINDER STRENGTH OF THE CONCRETE SHALL BE 3,400 PSI MINIMUM AT 28 DAYS.

|                    |           |          |
|--------------------|-----------|----------|
| BRIDGES & CULVERTS | BC 2-24   | SEC DE   |
| ITEM               | CROSS REF | SPEC REF |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/24/77

REVISED

STANDARD BRIDGE AND CULVERT DETAIL

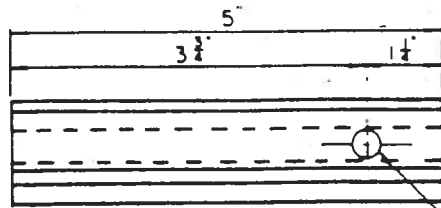
CONCRETE PARAPET  
WALL

BC  
2.6

SHEET 1 OF 3

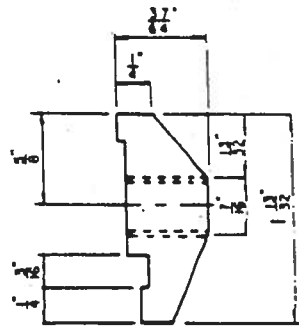


|                                                           |                         |                                                                    |                           |
|-----------------------------------------------------------|-------------------------|--------------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | REVISED<br><br><br><br> | STANDARD BRIDGE AND CULVERT DETAIL<br><br>CONCRETE PARAPET<br>WALL | BC<br>2.6<br>SHEET 2 OF 3 |
| APPROVED<br>6-24-77                                       | <br><br><br>            |                                                                    |                           |

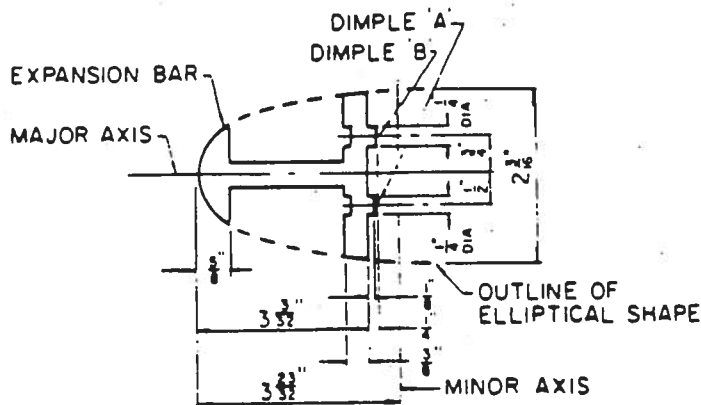


STAINLESS STEEL HEX CAP  
SCREW WITH ALUMINUM WASHER

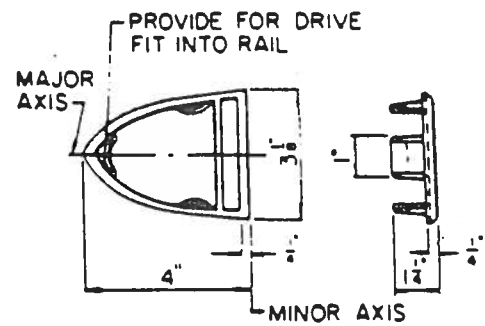
RAIL CLAMP BAR



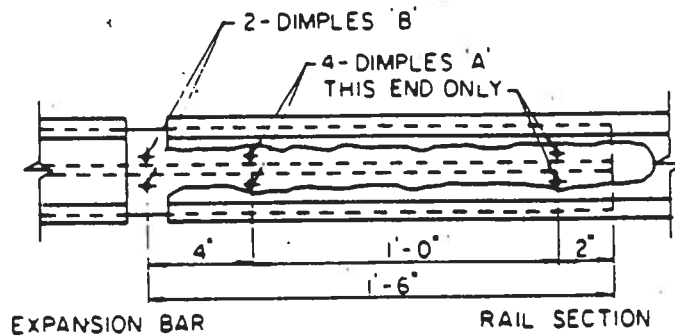
VIEW B-B



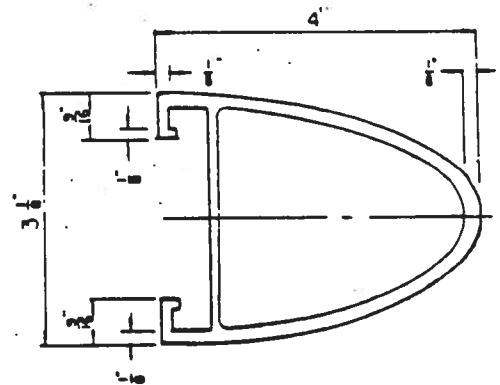
SECTION C-C



RAIL END CAP



RAIL SPLICE



RAIL

| ITEM | CROSS<br>REF | SPEC<br>REF |
|------|--------------|-------------|

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/24/77

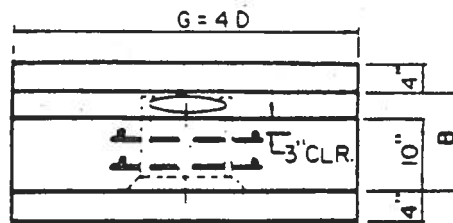
REVISED

STANDARD BRIDGE AND CULVERT DETAIL

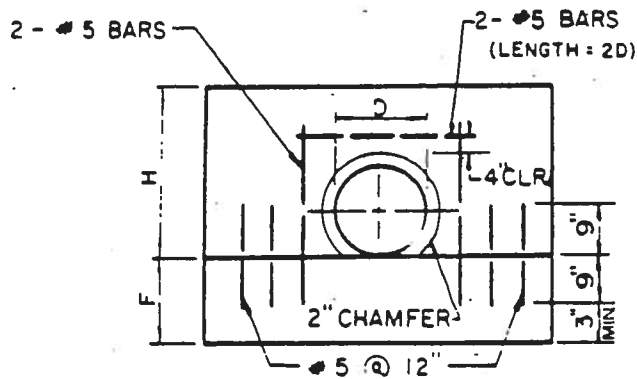
CONCRETE PARAPET  
WALL

BC  
2.6

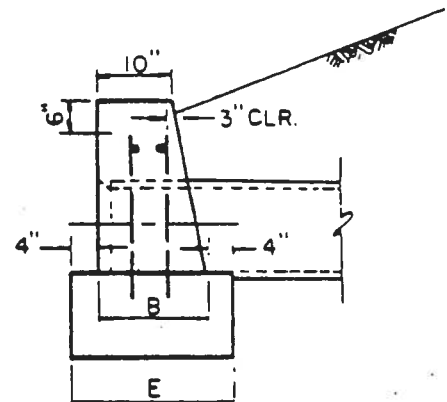
5-FT 3 OF 3



PLAN



FRONT ELEVATION



SIDE ELEVATION

| DIMENSIONS |        |        |       |        |       |
|------------|--------|--------|-------|--------|-------|
| D          | B      | E      | F     | G      | H     |
| 12"        | 1'-2"  | 1'-10" | 1'-0" | 4'-0"  | 2'-0" |
| 15"        | 1'-2"  | 1'-10" | 1'-2" | 5'-0"  | 2'-3" |
| 18"        | 1'-3"  | 1'-11" | 1'-3" | 6'-0"  | 2'-6" |
| 24"        | 1'-4"  | 2'-0"  | 1'-4" | 8'-0"  | 3'-0" |
| 30"        | 1'-6"  | 2'-2"  | 1'-6" | 10'-0" | 3'-6" |
| 36"        | 1'-8"  | 2'-4"  | 1'-8" | 12'-0" | 4'-0" |
| 42"        | 1'-10" | 2'-6"  | 2'-0" | 14'-0" | 4'-6" |
| 48"        | 2'-1"  | 2'-9"  | 2'-0" | 16'-0" | 5'-0" |
| 54"        | 2'-5"  | 3'-1"  | 2'-4" | 18'-0" | 5'-6" |

NOTES:

1. ALL EXPOSED EDGES ARE TO BE CHAMFERED 1" EXCEPT WHERE NOTED.
2. ALL REINFORCING SHALL HAVE A MINIMUM COVER OF 2" EXCEPT WHERE NOTED.

|            |           |          |
|------------|-----------|----------|
| FILL SLOPE | R-207     |          |
| ITEM       | CROSS REF | SPEC REF |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/1/62

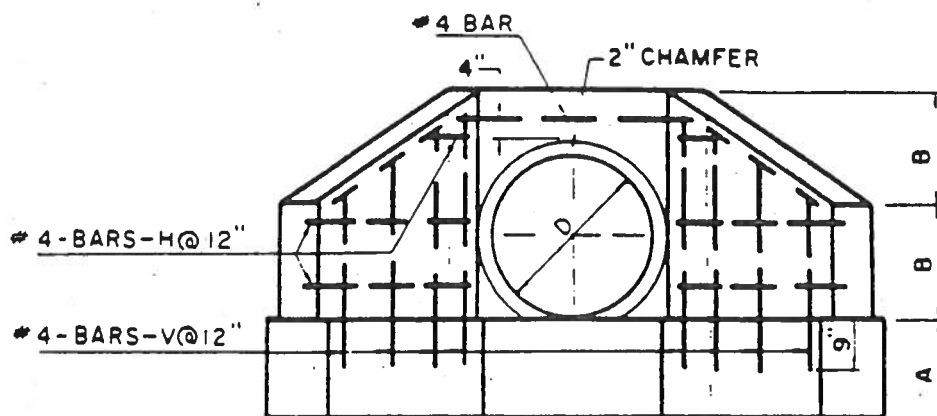
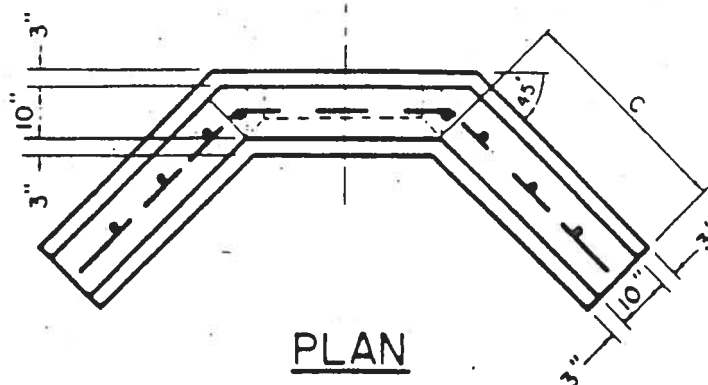
REVISED  
8/10/66  
E 26 77

STANDARD BRIDGE AND CULVERT DETAIL

STRAIGHT CONCRETE  
HEADWALL

BC  
3.1

SHEET 1 OF 1



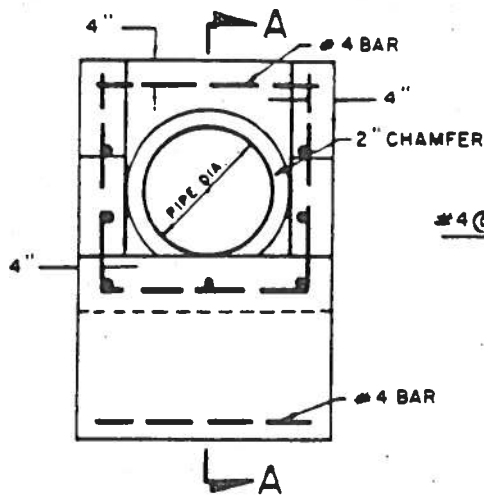
| TABLE OF DIMENSIONS |       |       |       |       |       |       |       |       |  |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| D                   | 18"   | 24"   | 30"   | 36"   | 42"   | 48"   | 54"   | 60"   |  |
| A                   | 1'-3" | 1'-4" | 1'-6" | 1'-8" | 2'-0" | 2'-0" | 2'-6" | 3'-0" |  |
| B                   | 1'-3" | 1'-6" | 1'-9" | 2'-0" | 2'-3" | 2'-6" | 2'-9" | 3'-0" |  |
| C                   | 2'-6" | 3'-0" | 3'-6" | 4'-0" | 4'-6" | 5'-0" | 5'-6" | 6'-0" |  |

#### NOTES:

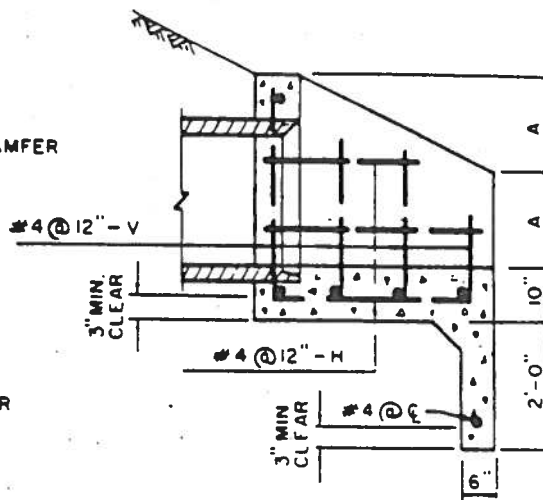
1. ALL EXPOSED EDGES SHALL BE CHAMFERED 1", EXCEPT AT PIPE ENDS AS NOTED.
2. VERTICAL REINFORCING BARS SHALL BE PLACED EQUIDISTANT BETWEEN WALL FACES AS SHOWN

| ITEM | CROSS<br>REF | SPEC<br>REF |
|------|--------------|-------------|

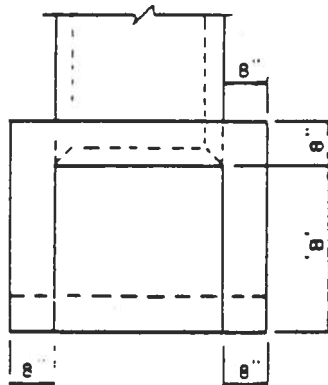
|                                                           |                    |                    |                                                                               |                        |
|-----------------------------------------------------------|--------------------|--------------------|-------------------------------------------------------------------------------|------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br>6/1/62 | REVISED<br>6-24-77 | STANDARD BRIDGE AND CULVERT DETAIL<br><br>CONCRETE HEADWALL<br>WITH 45° WINGS | BC<br>3.2<br>S-EE-1-CF |
|                                                           |                    |                    |                                                                               |                        |



ELEVATION



SECTION A-A



PLAN

TABLE OF DIMENSIONS

| PIPE DIA | 18"   | 24"   | 30"    | 36"   | 42"   | 48"    | 54"   | 60"   |
|----------|-------|-------|--------|-------|-------|--------|-------|-------|
| A        | 1'-3" | 1'-6" | 1'-9"  | 2'-0" | 2'-3" | 2'-6"  | 2'-9" | 3'-0" |
| B        | 2'-2" | 2'-6" | 2'-10" | 3'-2" | 3'-6" | 3'-10" | 4'-2" | 4'-6" |

NOTES

1. ALL EXPOSED EDGES SHALL BE CHAMFERED 1", EXCEPT AS NOTED.
2. ALL REINFORCING SHALL HAVE A MIN. COVER OF 2" EXCEPT WHERE NOTED

|            |           |          |
|------------|-----------|----------|
| FILL SLOPE | R-207     |          |
| ITEM       | CROSS REF | SPEC REF |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/1/62

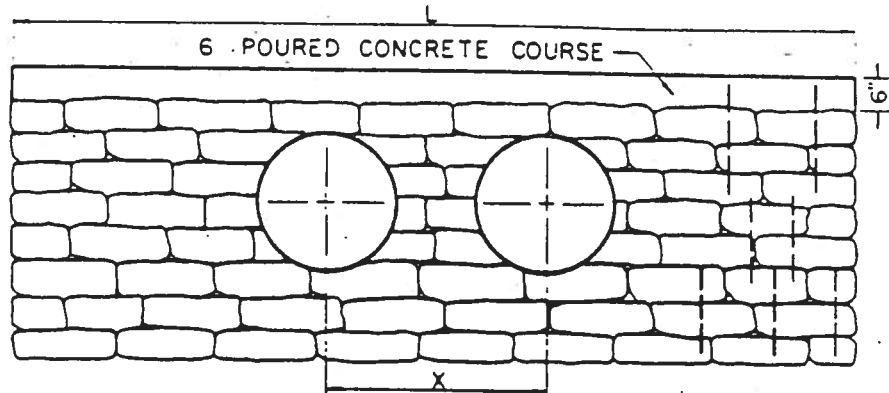
REVISED  
6/24/77

STANDARD BRIDGE AND CULVERT DETAIL

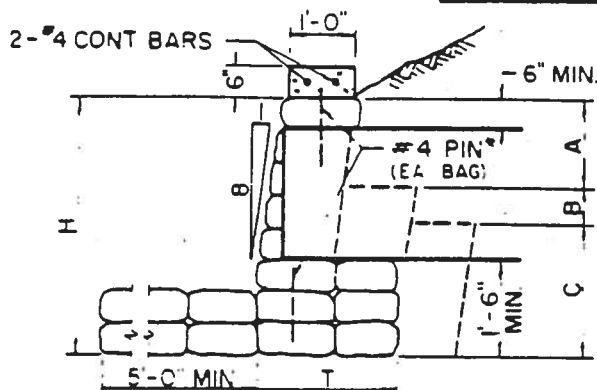
CONCRETE HEADWALL  
'U' TYPE

BC  
3.3

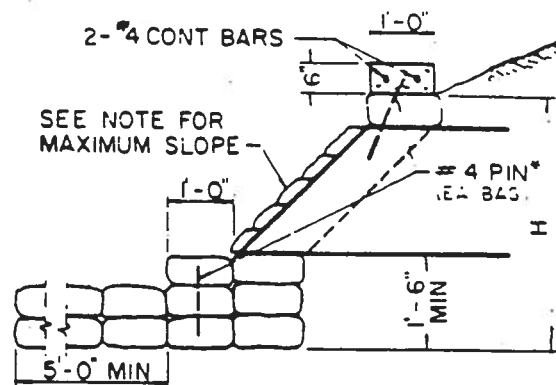
SHEET 1 OF 1



**FRONT ELEVATION**



**TYPICAL SECTION  
STRAIGHT END PIPE**



**TYPICAL SECTION  
BEVEL END PIPE**

| TABLE OF DIMENSIONS |      |     |     |     |      |     |       |          |      |           |      |             |
|---------------------|------|-----|-----|-----|------|-----|-------|----------|------|-----------|------|-------------|
| PIPE SIZE           | H    | T   | A   | B   | C    | X   | L     | ONE PIPE | L    | TWO PIPES | L    | THREE PIPES |
| 24                  | 4-5  | 2-0 | 2-0 | 2-5 | 0-0  | 3-5 | 9-8   | 13-1     | 16-6 | 24-0      | 36-0 | 48-0        |
| 30                  | 5-0  | 2-0 | 2-0 | 3-0 | 0-0  | 4-3 | 11-3  | 15-6     | 19-9 | 24-0      | 36-0 | 48-0        |
| 36                  | 5-1  | 2-0 | 2-0 | 3-7 | 0-0  | 5-1 | 12-11 | 18-0     | 23-0 | 29-2      | 36-0 | 48-0        |
| 42                  | 6-3  | 3-0 | 2-0 | 2-0 | 2-3  | 6-0 | 14-7  | 20-7     | 26-7 | 32-7      | 36-0 | 48-0        |
| 48                  | 6-10 | 3-0 | 2-0 | 2-0 | 2-10 | 6-9 | 16-3  | 23-0     | 29-9 | 36-6      | 48-0 | 60-0        |
| 54                  | 7-6  |     |     |     |      | 7-8 | 18-0  | 25-8     | 33-4 | 40-0      | 48-0 | 60-0        |
| 60                  | 8-2  |     |     |     |      | 8-6 | 19-9  | 28-3     | 36-9 | 45-3      | 54-0 | 66-0        |
| 66                  | 8-7  |     |     |     |      |     | 21-7  |          |      |           |      |             |
| 72                  | 9-3  |     |     |     |      |     | 22-6  |          |      |           |      |             |
| 84                  | 10-7 |     |     |     |      |     | 24-6  |          |      |           |      |             |
| 96                  | 11-1 |     |     |     |      |     | 26-6  |          |      |           |      |             |
| 108                 | 13-3 |     |     |     |      |     | 28-6  |          |      |           |      |             |
| 120                 | 14-7 |     |     |     |      |     | 30-6  |          |      |           |      |             |
| 132                 | 15-1 |     |     |     |      |     | 32-6  |          |      |           |      |             |
| 144                 | 17-3 |     |     |     |      |     | 34-6  |          |      |           |      |             |

NOTE: BEVEL SLOPE SHALL NOT BE GREATER THAN 1H FOR SINGLE TIER CONSTRUCTION WHEN THE PIPE BEVEL IS GREATER THAN 1H. HEADWALLS SHALL BE CONSTRUCTED AS REQUIRED FOR STRAIGHT END PIPES.

|            |              |             |
|------------|--------------|-------------|
|            |              |             |
| FILL SLOPE | R-207        |             |
|            |              |             |
| ITEM       | CROSS<br>REF | SPEC<br>REF |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

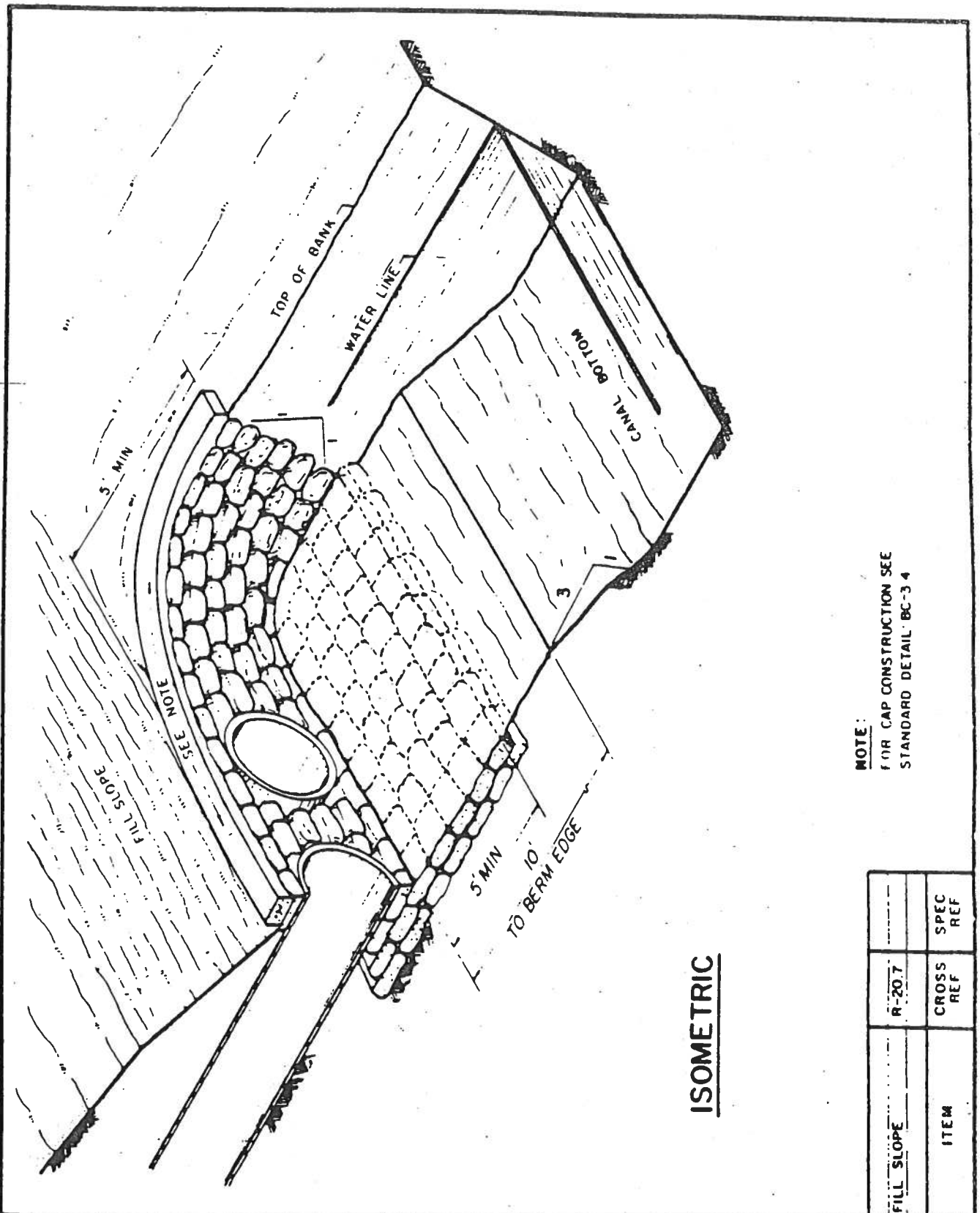
APPROVED  
6/1/62

REVISED  
8/10/66  
5/7/72  
6/24/77

STANDARD BRIDGE AND CULVERT DETAIL  
STRAIGHT SAND-CEMENT  
RIP RAP HEADWALL

BC  
3.4

SHEET 1 OF 1



ISOMETRIC

NOTE:  
FOR CAP CONSTRUCTION SEE  
STANDARD DETAIL BC-3.4

|            |           |          |
|------------|-----------|----------|
| FILL SLOPE | R-20.7    |          |
| ITEM       | CROSS REF | SPEC REF |

|                                                           |                               |                           |                                                                           |                           |
|-----------------------------------------------------------|-------------------------------|---------------------------|---------------------------------------------------------------------------|---------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br><u>6 / 1 / 62</u> | REVISED<br><u>8/10/66</u> | STANDARD BRIDGE AND CULVERT DETAIL<br><br>SAND-CEMENT RIP RAP<br>HEADWALL | BC<br>3.5<br>SHEET 1 OF 1 |
|                                                           |                               | <u>5/17/72</u>            |                                                                           |                           |
|                                                           |                               | <u>6/24/77</u>            |                                                                           |                           |

# GENERAL DETAILS





EL. 5.00

EL. 5.26

EL. 5.70

EL. 6.29

0.00 \* NATIONAL GEODETIC VERTICAL DATUM

0.00 CITY OF MIAMI MLW BAY

0.00 U.S.C.E. MLW BAY

0.00 U.S.C.E. MLW OCEAN

0.26'

0.78'

1.29'

\* Same Elevation and Datum previously called:  
U.S.C. & G.S. 1929 MEAN SEA LEVEL  
SEA LEVEL DATUM OF 1929

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED

6/5/6

REVISED

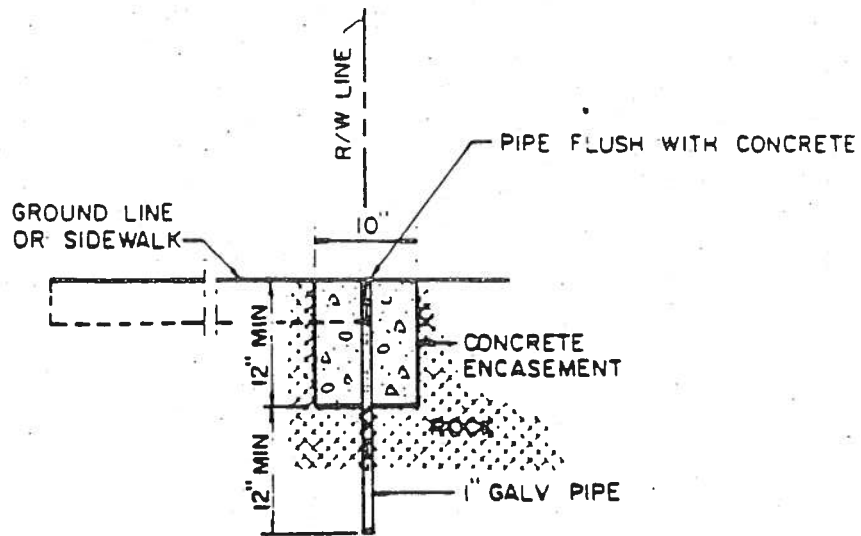
4/5/74

6/20/77

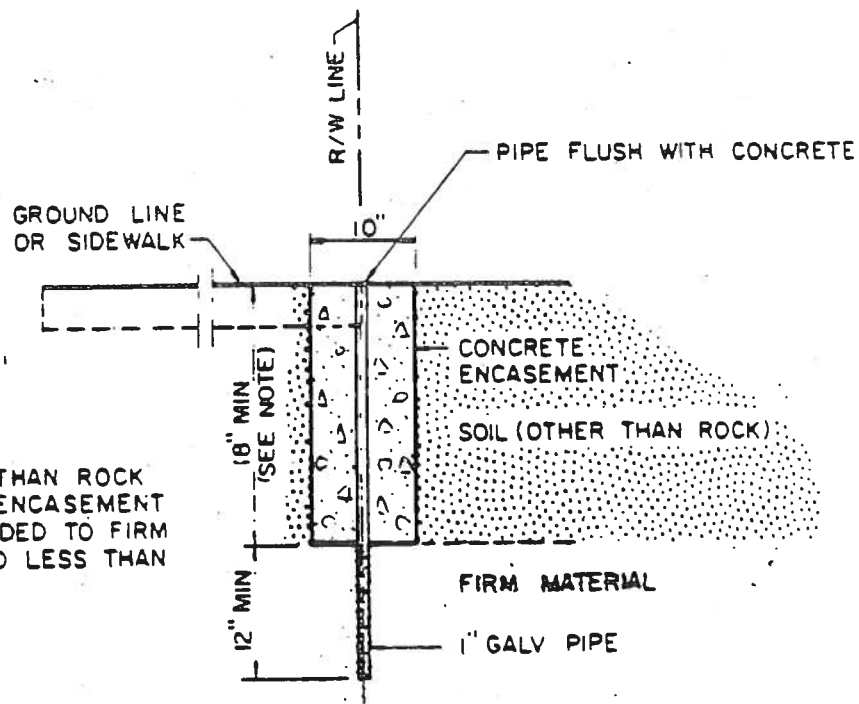
GENERAL DETAIL  
DATUM PLANE  
RELATIONSHIPS

G  
1.1

SHEET 1 OF 1



### INSTALLATION IN ROCK



#### NOTE

- FOR SOIL OTHER THAN ROCK THE CONCRETE ENCASEMENT SHALL BE EXTENDED TO FIRM MATERIAL, BUT NO LESS THAN 18 INCHES

### INSTALLATION IN SOIL (OTHER THAN ROCK)

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

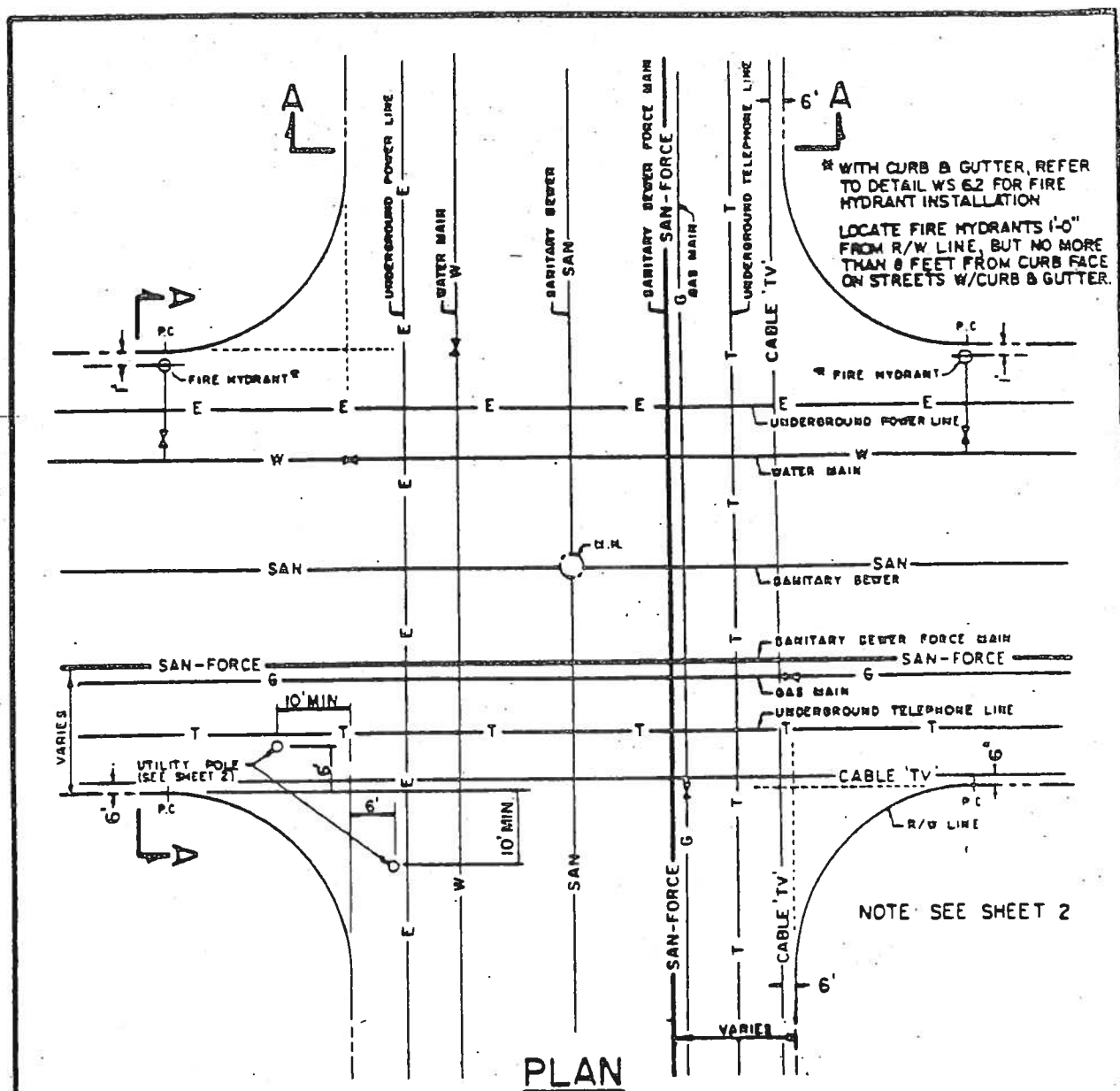
APPROVED  
6/5/6

REVISED

GENERAL DETAIL  
PERMANENT REFERENCE  
MONUMENT

G  
1.2

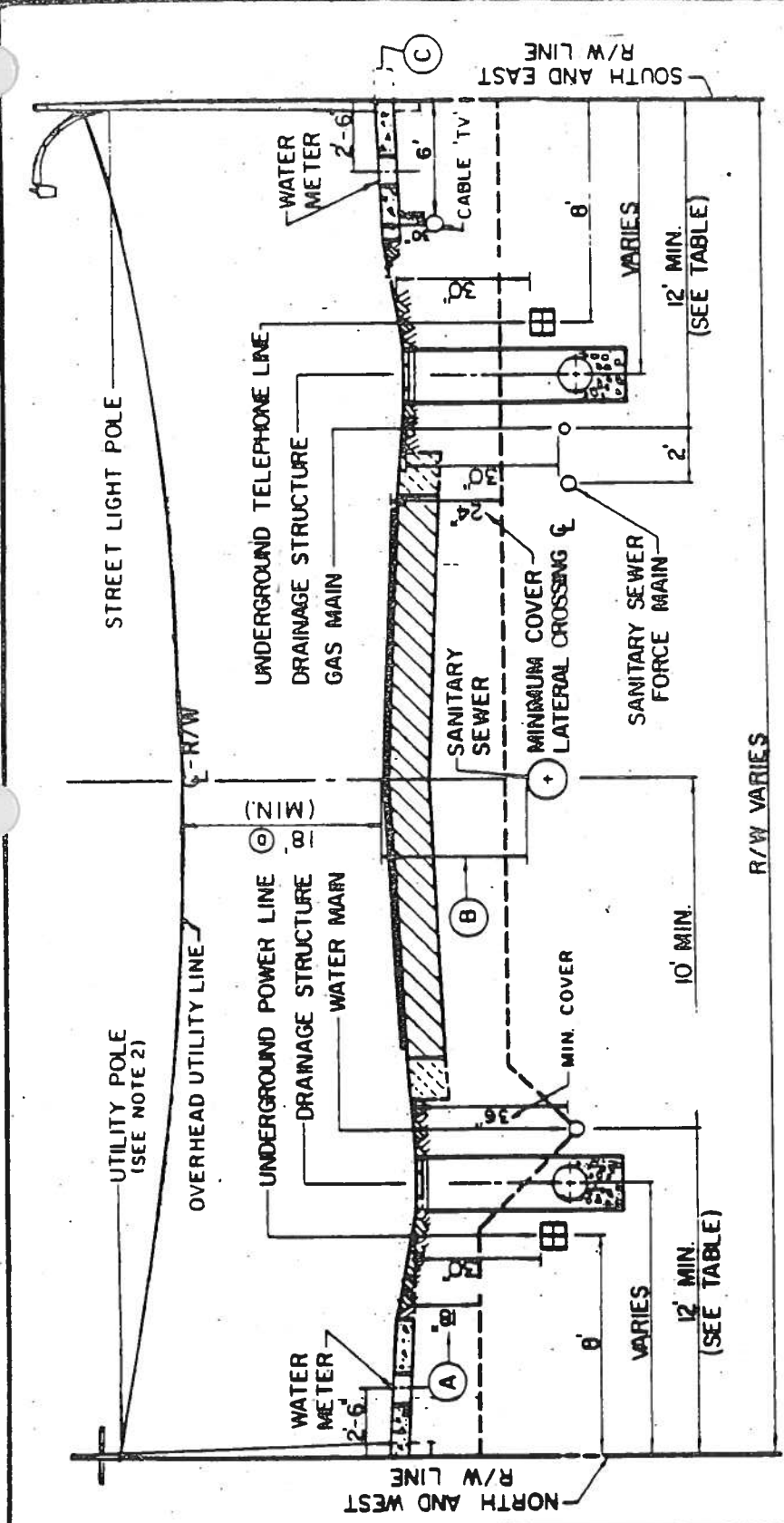
SHEET 1 OF 1



# **NOTES:**

1. ALL MAIN VALVES AT INTERSECTIONS SHALL BE LOCATED AT THE INTERSECTION OF THE MAIN WITH THE PROJECTION OF THE R/W LINE.
2. ALL SANITARY SEWER MANHOLES AT INTERSECTIONS SHALL BE LOCATED AT THE CENTERLINE OF THE INTERSECTING STREETS.
3. FIRE HYDRANTS AT INTERSECTIONS SHALL BE LOCATED OPPOSITE THE P.C. OF THE R/W LINE.
4. ALL UNDERGROUND UTILITIES SHALL BE PLACED PARALLEL OR PERPENDICULAR TO THE CENTERLINE OF RIGHT OF WAY.

|                                                                     |                            |                                      |                                                                                                        |                                   |
|---------------------------------------------------------------------|----------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------|
| <p>METROPOLITAN<br/>DADE COUNTY<br/>PUBLIC WORKS<br/>DEPARTMENT</p> | <p>APPROVED<br/>6/5/81</p> | <p>REVISED<br/>6/4/86<br/>7/7/88</p> | <p>GENERAL DETAIL<br/>UTILITY PLACEMENT WITHIN<br/>PUBLIC RIGHT-OF-WAY<br/>FOR RESIDENTIAL STREETS</p> | <p>G<br/>2.1<br/>SHEET 1 OF 4</p> |
|---------------------------------------------------------------------|----------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------|



## SECTION A-A

### NOTES:

1. ALL CONSTRUCTION OR ADJUSTMENT OF UNDERGROUND UTILITIES MUST BE COMPLETED BEFORE FINAL ASPHALTIC CONCRETE SURFACE MAY BE PLACED.
2. ON STREETS WITH CURB & GUTTER PLACE UTILITY POLES AT THE R/W LINE AND FIRE HYDRANTS 11'0" FROM R/W LINE (SEE G 2.1, SHEETS 1, 3)
3. WHERE UTILITY CROSSES ARTERIAL, USE MINIMUM 36" COVER THROUGH ARTERIAL.
4. (SEE SHEET 4, NOTE 6)

| R/W Widths | Sewer and Water Main OFFSETS |
|------------|------------------------------|
| 50'        | 12'                          |
| 60'        | 15'                          |
| 70'        | 17'                          |

(A) MINIMUM COVER FOR LATERAL NOT CROSSING CENTERLINE.

(B) MINIMUM COVER FOR SANITARY SEWER  
1) 24" FOR EXTRA STRENGTH V.C. PIPE  
AND FOR SCHEDULE 80 C.I. PIPE.  
2) 36" FOR OTHER PIPE.

(C) WATER METER SHALL BE PLACED AT OUTER EDGE OF SIDEWALK WHEN SIDEWALK ALREADY EXISTS, WHEN CONDITIONS PERMIT.

(D) MAINTAIN 18' MIN. VERTICAL CLEARANCE AT ALL TIMES. REF: NAT'L ELECTRICAL CODE 1990 HANDBOOK, SEC. 225.18 & 230.24(b)

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/5/61

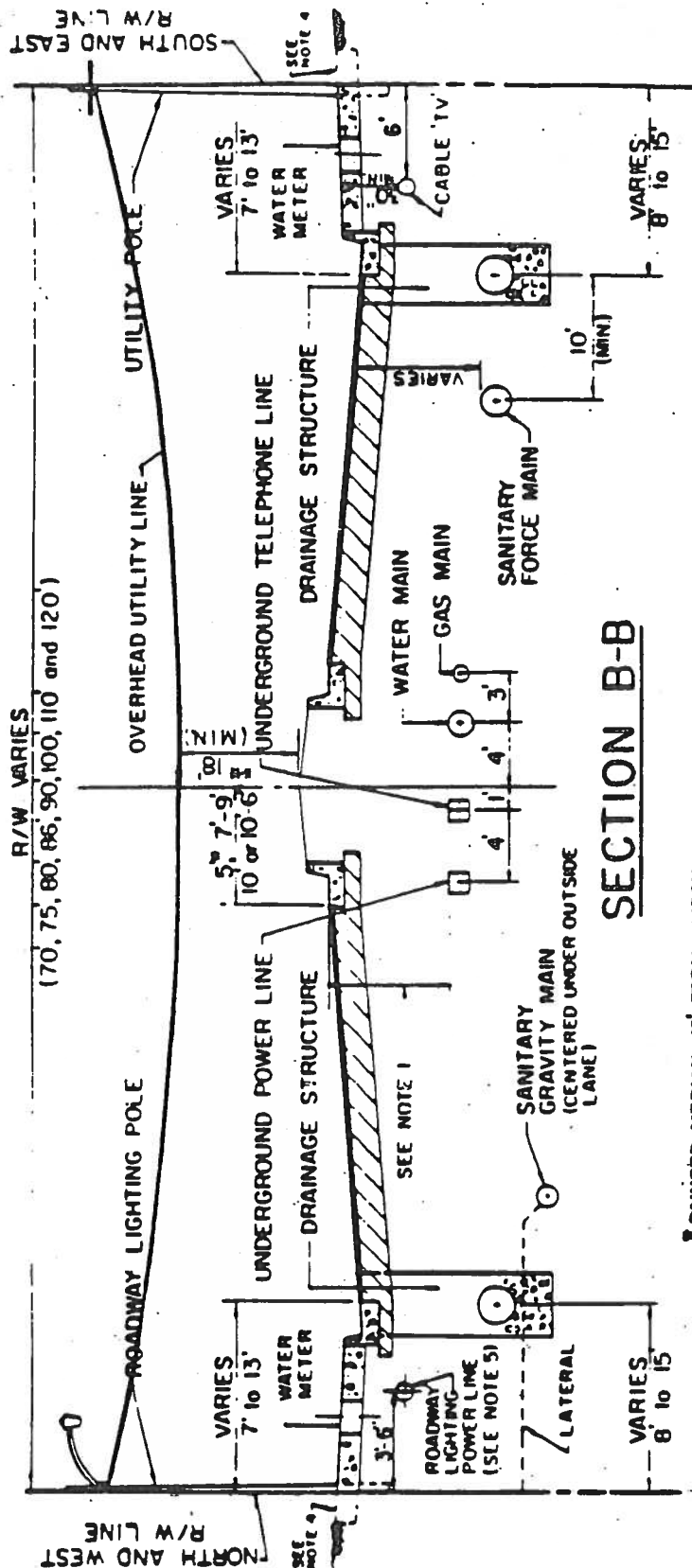
REVISED  
8/28/80  
7/7/88  
6/20/90

GENERAL DETAIL  
UTILITY PLACEMENT WITHIN  
PUBLIC RIGHT-OF-WAY  
FOR RESIDENTIAL STREETS

G  
2.1

SHEET 2 OF 4





# SECTION B-B

PAINTED MEDIAN, 10' TOTAL WIDTH

**NOTES:**

- 1 PROVIDE MINIMUM 36" COVER ON ALL UTILITIES. GREATER COVER MAY BE REQUIRED ON UTILITIES LARGER THAN 24" AT INTERSECTING ARTERIALS.
  - 2 NO UTILITY POLES TO BE PLACED ON ARTERIALS EXCEPT BY SPECIAL APPROVAL.
  - 3 PLACE FIRE HYDRANTS 1'-0" FROM BACK OF SIDEWALK (R/W LINE), EXCEPT IN AREAS W/ CURB & GUTTER. FIRE HYDRANTS SHALL NOT BE MORE THAN 8 FEET FROM FACE OF CURB.
  - 3A. MAINTAIN 18' MIN. VERTICAL CLEARANCE AT ALL TIMES. REF: NAT'L ELECTRICAL CODE 1990 HANDBOOK, SEC. 225.18 & 230.24(b)
- |                                           |                   |         |
|-------------------------------------------|-------------------|---------|
| HYDRANT INSTALLATION<br>UTILITY PLACEMENT | WS-62<br>G-211(R) | SECT DB |
|-------------------------------------------|-------------------|---------|
- 4 PLACE WATER METER AT OUTER EDGE OF SIDEWALK WHEN SIDEWALK ALREADY EXISTS, WHEN CONDITIONS PERMIT.
  5. ROADWAY LIGHTING POWER LINE COVER 12" TO 36." AS REQUIRED BY EXISTING CONDITIONS.
  6. PROVIDE NOT LESS THAN 48 HOURS NOTIFICATION TO ALL OWNERS OF ANY EXISTING UTILITY FACILITIES IN THE PROPOSED AREA OF WORK. IN ADDITION THE PERMITTEE AND/OR HIS CONTRACTOR ALONG WITH THE OWNER OF THE UTILITY MUST COOPERATE TO DETERMINE THE EXACT LOCATION (FIELD EXPOSURE AS WARRANTED) OF THE RESPECTIVE UTILITY FACILITIES, BY WHATEVER MEANS AVAILABLE.

| HYDRANT INSTALLATION<br>UTILITY PLACEMENT | WS 6.2<br>G-2 (11/13) | SECT DB     |
|-------------------------------------------|-----------------------|-------------|
| ITEM                                      | CROSS<br>REF          | SPEC<br>REF |

G  
2.1

SHEET 4 OF 4

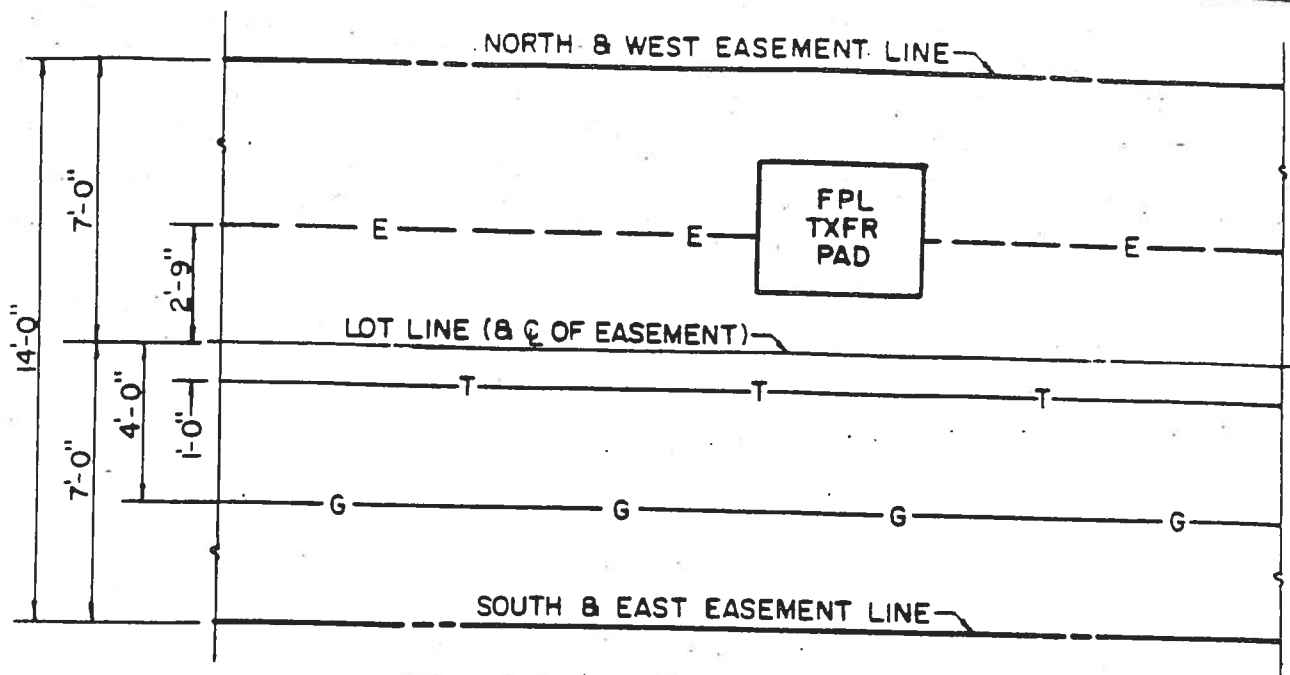
**METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT**

APPROVED  
5 / 17 / 72

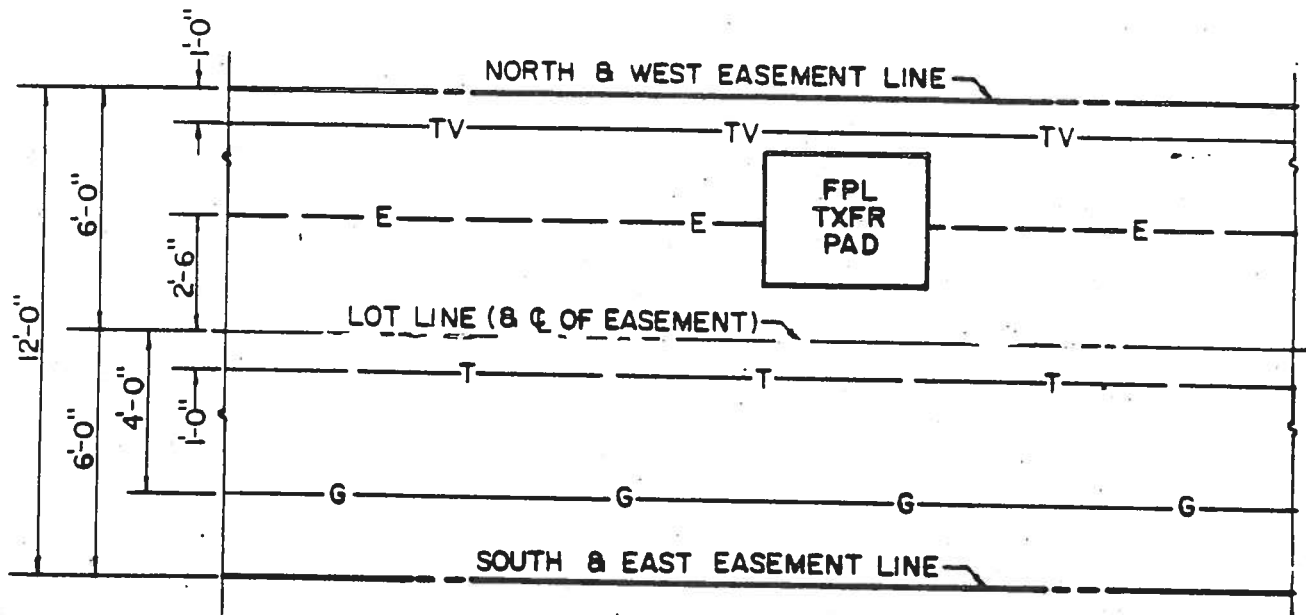
REVISED  
6 / 4 / 86  
7 / 7 / 88  
6 / 20 / 90

## GENERAL DETAIL

# UTILITY PLACEMENT WITHIN PUBLIC RIGHT-OF-WAY FOR ARTERIAL STREETS



### UTILITY LOCATION IN 14' EASEMENT



### UTILITY LOCATION IN 12' EASEMENT

#### NOTES:

1. ALL UNDERGROUND UTILITY LINES SHALL HAVE A MINIMUM 24" VERTICAL CLEARANCE BELOW FINISHED GRADE. VERTICAL CLEARANCE BETWEEN LINES TO BE DECIDED BY UTILITY COMPANIES INVOLVED.
2. WATER AND SEWER LINES LOCATED IN STREET RIGHT-OF-WAY. (SEE G-2.1)

FOR JOINT TRENCH APPLICATION  
SEE G-2.2-3

|                       |            |            |
|-----------------------|------------|------------|
| UTILITY IN PUBLIC R/W | G-2.1      |            |
| ITEM                  | CROSS REF. | SPEC. REF. |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/5/91

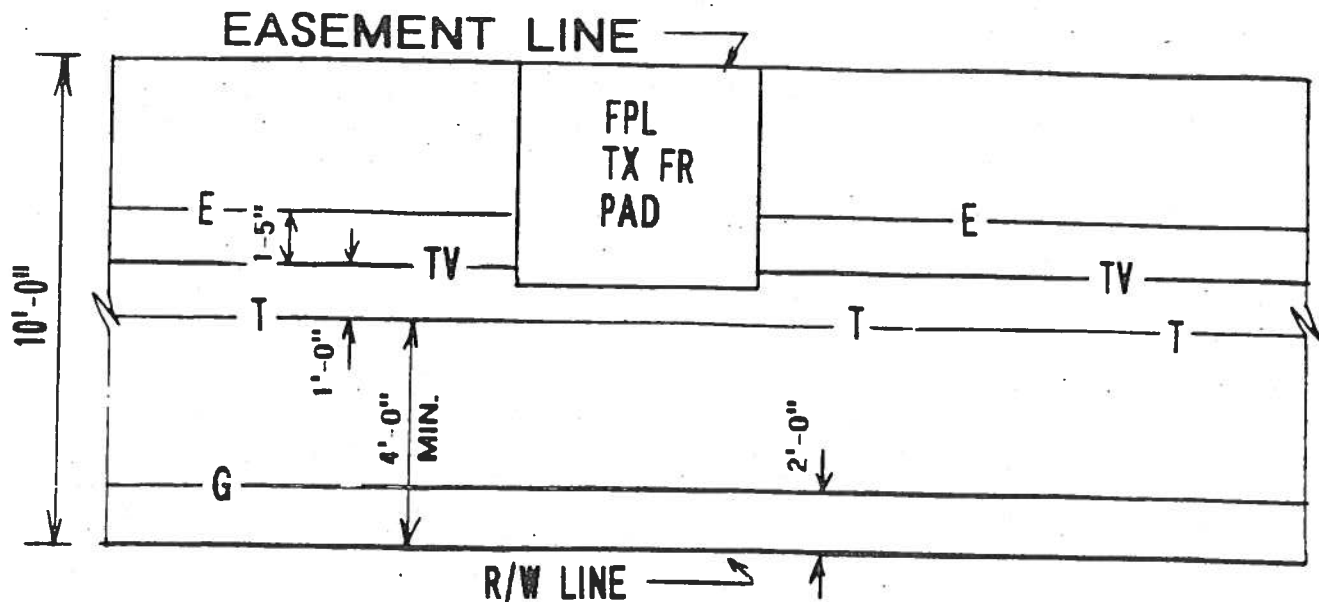
REVISED

6/4/86  
6/8/95  
2/27/80

GENERAL DETAIL

UTILITY PLACEMENT WITHIN  
REAR LOT EASEMENT

G  
2.2



## UTILITY LOCATION IN 10' EASEMENT

FOR JOINT TRENCH APPLICATION  
SEE G-2.2-3

### NOTES

1. ALL UNDERGROUND UTILITY LINES SHALL HAVE A MINIMUM 24" VERTICAL CLEARANCE BELOW FINISHED GRADE. VERTICAL CLEARANCE BETWEEN LINES TO BE DECIDED BY UTILITY COMPANIES INVOLVED.
2. WATER AND SEWER LINES LOCATED IN STREET RIGHT-OF-WAY. (SEE G-2.1)

**METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT**

**APPROVED**  
  
**6/8/95**

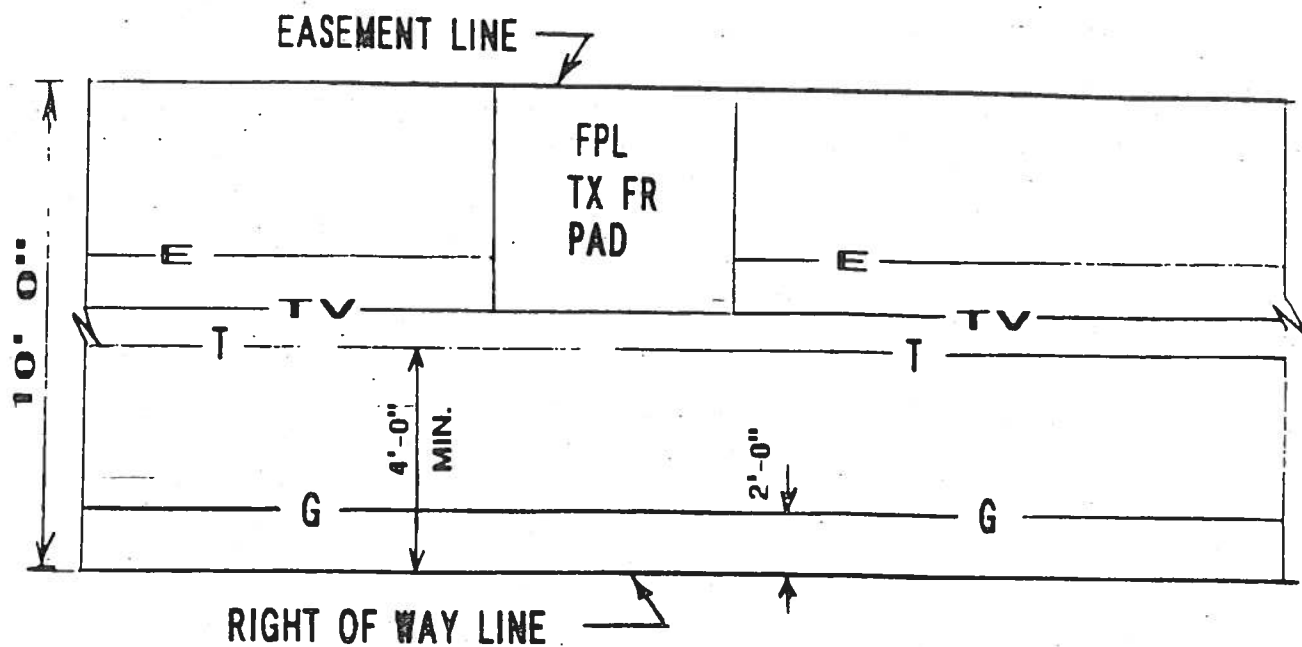
**REVISED**

**GENERAL DETAIL  
UTILITY PLACEMENT  
WITHIN EASEMENT**

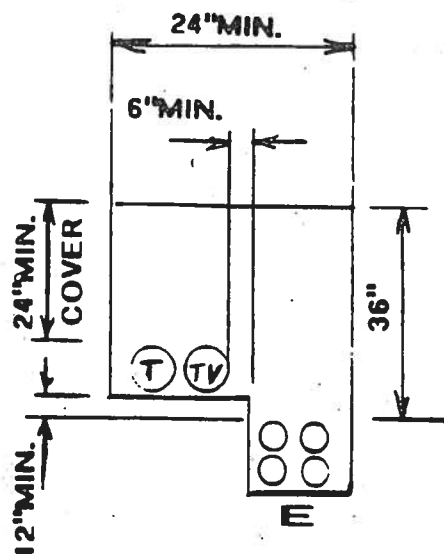
**G  
2.2**

**SHEET 2 of 3**





## UTILITY LOCATION IN 10' EASEMENT



## TYPICAL JOINT TRENCH

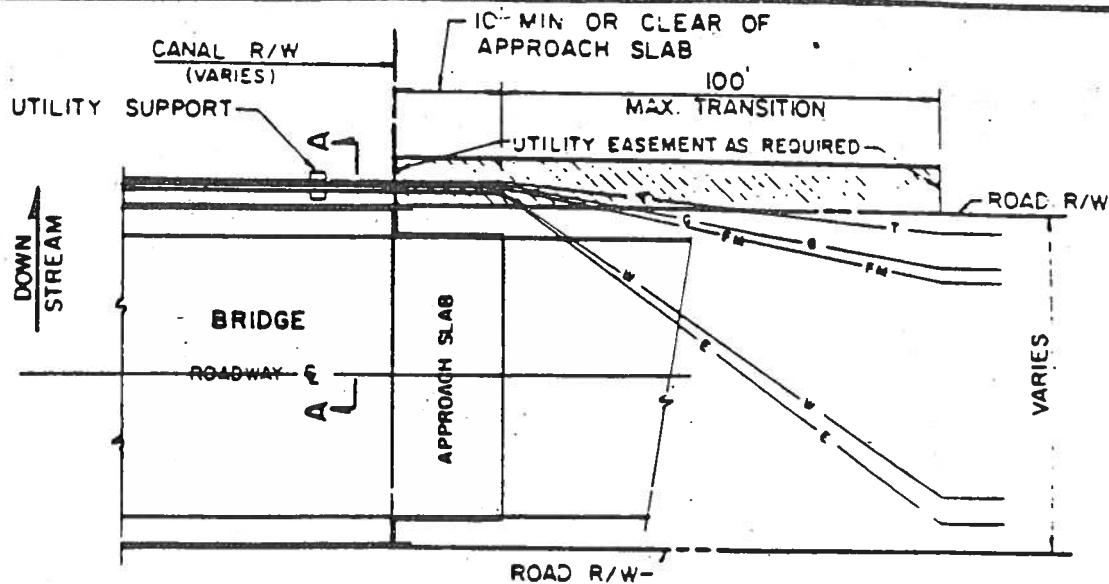
### NOTES

1. ALL UNDERGROUND UTILITY LINES SHALL HAVE A MINIMUM 24" VERTICAL CLEARANCE BELOW FINISHED GRADE.

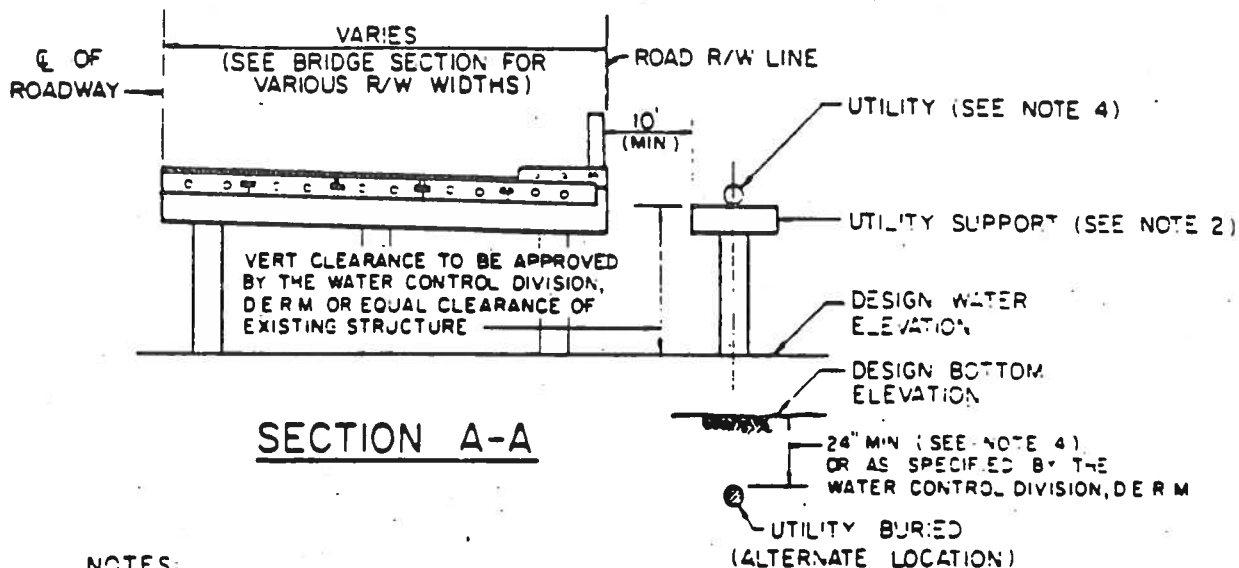
2. WATER AND SEWER LINES LOCATED IN STREET RIGHT-OF-WAY. (SEE G-2.1)

3) All cables installed in joint trench must be either in conduits or if direct buried cable then each utility shall bundle and secure its facilities every ten (10) feet or less to insure proper placement.

|                                                           |                        |         |                                                                       |                          |
|-----------------------------------------------------------|------------------------|---------|-----------------------------------------------------------------------|--------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br><br>6/8/95 | REVISED | GENERAL DETAIL<br>UTILITY PLACEMENT WITHIN<br>EASEMENT (JOINT TRENCH) | G<br>2.2<br>SHEET 3 of 3 |
|-----------------------------------------------------------|------------------------|---------|-----------------------------------------------------------------------|--------------------------|



PLAN



SECTION A-A

NOTES:

- 1 ELEVATED UTILITY CROSSING SHALL BE ON THE DOWN STREAY SIDE OF BRIDGE
- 2 HORIZONTAL CLEARANCE BETWEEN PILING SHALL EQUAL EXISTING BRIDGE PILING OR BE APPROVED BY THE PUBLIC WORKS DEPARTMENT
- 3 ALL UTILITIES (WHERE PRACTICABLE), SHOULD UTILIZE THE SAME SUPPORTING STRUCTURE
- 4 UTILITY COMPANY SHALL RELOCATE AT THEIR EXPENSE, ANY UTILITY CROSSING (BOTH ELEVATED AND/OR BURIED), WHICH WOULD INTERFERE WITH FUTURE DEEPENING OR WIDENING OF CANALS, OR WIDENING OF BRIDGES
- 5 WATER AND SEWER MAINS TO BE LOCATED IN ACCORDANCE WITH THE FLORIDA STATE BOARD OF HEALTH REGULATIONS
- 6 CLASS III PERMIT REQUIRED FOR ALL UTILITY CROSSINGS OVER COUNTY CANALS

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/1/62

REVISED  
5/17/72  
4/5/74  
4 6/8

GENERAL DETAIL  
UTILITY PLACEMENT AT ROAD  
(OR PROPOSED ROAD) CROSSING  
OF CANAL

G  
2.3

SHEET 1 OF 1

# ROAD SYMBOLS

|                                                    | EXISTING | PROPOSED |
|----------------------------------------------------|----------|----------|
| ROAD CENTER LINE                                   |          |          |
| BASE OR SURVEY LINE                                |          |          |
| RIGHT OF WAY LINE<br>(PLATS AND DRAINAGE PLANS)    |          |          |
| RIGHT OF WAY LINE<br>(ALL OTHER PLANS)             |          |          |
| R/W LINE LIMITED ACCESS                            |          |          |
| ROAD PAVEMENT<br>(PAVING AND DRAINAGE PLANS)       |          |          |
| ROAD PAVEMENT<br>(ALL OTHER PLANS)                 |          |          |
| DITCH                                              |          |          |
| SIDEWALK                                           |          |          |
| CURB                                               |          |          |
| CURB AND GUTTER                                    |          |          |
| DRIVEWAY OR TURNOUT                                |          |          |
| GROUND ELEVATION (TO 0.1 FT.)                      |          |          |
| IMPROVEMENT OR<br>STRUCTURE ELEVATION (TO 0.0 FT.) |          |          |
| PROFILE LINE                                       |          |          |
| CONTOUR LINE                                       |          |          |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/5/6

REVISED

6/1/62

4/6/81

GENERAL DETAIL  
STANDARD SYMBOLS  
(ROAD)

G  
3.1

SHEET 1 OF 1

# UTILITY SYMBOLS

|                                                     | EXISTING                  | PROPOSED                  |
|-----------------------------------------------------|---------------------------|---------------------------|
| FIRE HYDRANT                                        |                           |                           |
| POWER POLE                                          |                           |                           |
| TELEPHONE POLE                                      |                           |                           |
| TELEPHONE-POWER POLE                                |                           |                           |
| STREET LIGHT POLE                                   |                           |                           |
| OTHER POLE                                          |                           |                           |
| GUY ANCHOR                                          |                           |                           |
| SPAN WIRE                                           |                           |                           |
| TELEPHONE DUCT                                      |                           |                           |
| ELECTRIC CABLE, OVERHEAD                            |                           |                           |
| ELECTRIC CABLE, UNDERGROUND                         |                           |                           |
| TELEPHONE OR POWER MANHOLE                          |                           |                           |
| ELECTRIC PULL BOX                                   |                           |                           |
| MANHOLE - ELECTRIC, TELEPHONE,<br>SANITARY OR STORM | E MH SAN MH<br>T MH SD MH | E MH SAN MH<br>T MH SD MH |
| GAS MAIN                                            |                           |                           |
| WATER MAIN                                          |                           |                           |
| STORM SEWER                                         |                           |                           |
| SANITARY SEWER                                      |                           |                           |
| CATCH BASIN OR INLET                                |                           |                           |
| GAS OR WATER METER                                  |                           |                           |
| GAS OR WATER VALVE                                  |                           |                           |
| TRAFFIC SIGNAL                                      |                           |                           |
| PEDESTRIAN SIGNAL                                   |                           |                           |

NOTE ALL UTILITIES (UNDERGROUND) SHOULD SPECIFY MATERIAL USED

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/5/61

REVISED  
6/1/62  
5/7/72  
4/6/8

GENERAL DETAIL  
STANDARD SYMBOLS  
(UTILITY)

G  
3.2

SHEET 1 OF 1

# MISCELLANEOUS

FENCE

PROPOSED — X — X —  
EXISTING — \* — \* —

RAILROAD TRACK

SINGLE ———  
DOUBLE ———

BRIDGE

EXISTING BRIDGE  
(PROPOSED - SOLID  
LINES) [Dashed rectangle]

CULVERT

EXISTING CULVERT  
(PROPOSED - SOLID  
LINES) [Dashed rectangle]

BUILDING

SPECIFY TYPE OF  
CONSTRUCTION [L-shaped dashed outline]

LAWN SPRINKLER

○

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/5/61

REV: SEC

6/1/62

5/17/72

4/6/8

GENERAL DETAIL  
STANDARD SYMBOLS  
(MISCELLANEOUS)

G  
3.3

SHEET 1 OF 1

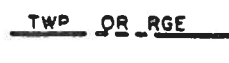
## SURVEYORS SYMBOLS

BENCH MARK B.M.  B.M. <sup>2</sup>.....

PERMANENT REFERENCE  
MONUMENT P.R.M. 

SECTION CORNER  
MON IN PLACE   
REF POINT 

COUNTY LINE 

TOWNSHIP OR  
RANGE LINE 

SECTION LINE 

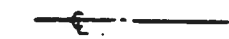
QUARTER SECTION LINE 

CITY LIMIT 

LIMITED ACCESS  
RIGHT OF WAY LINE 

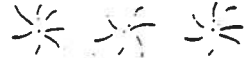
BASE OR SURVEY LINE 

PROPERTY OR  
BLOCK LINE 

CENTER LINE 

## NATURAL FEATURES

SHORELINE OR BANK 

PALM TREES 

FRUIT OR SHADE TREES 

PINE TREES 

BUSHES 

HEDGE 

GRASS 

MARSH OR SWAMP 

## ARCHITECTURAL AND STRUCTURAL SYMBOLS

CONCRETE 

METAL 

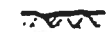
REINFORCING BARS 

WIRE MESH 

WOOD 

SAND 

RIPRAP 

EARTH 

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/5/6

REVISED  
6/1/62  
4/6/81

GENERAL DETAIL  
STANDARD SYMBOLS  
(SURVEYORS, NATURAL FEATURES,  
ARCHITECTURAL AND STRUCTURAL)

G  
3.4  
5-55-1 OF 1

# ABBREVIATIONS

|                            |          |                                |        |
|----------------------------|----------|--------------------------------|--------|
| ASBESTOS CEMENT SEWER PIPE | A.C.S.P. | WROUGHT IRON                   | W I    |
| ASBESTOS CEMENT WATER PIPE | A.C.W.P. | POINT OF CURVATURE             | P C    |
| CAST IRON                  | C.I.     | POINT OF INTERSECTION          | P I    |
| CAST IRON PIPE             | C.I.P.   | POINT OF TANGENCY              | P.T.   |
| CONCRETE SEWER PIPE        | C.S.P.   | POINT ON TANGENT               | P.O.T. |
| CORRUGATED METAL PIPE      | C.M.P.   | POINT OF REVERSE CURVE         | P.R.C. |
| CORRUGATED METAL ARCH PIPE | C.M.A.P. | POINT OF VERTICAL CURVATURE    | P.V.C. |
| GALVANIZED IRON            | G.I.     | POINT OF VERTICAL INTERSECTION | P.V.I. |
| REINFORCED CONCRETE PIPE   | R.C.P.   | POINT OF VERTICAL TANGENCY     | P.V.T. |
| VITRIFIED CLAY PIPE        | V.C.P.   |                                |        |

## NOTE:

FOR EXTRA STRENGTH PIPE ADD THE LETTER 'X' TO THE ABBREVIATION.

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
E S/E

REVISED  
6/1/62

GENERAL DETAIL  
STANDARD SYMBOLS  
(ABBREVIATIONS)

G  
3.5  
SHEET 1 OF 1

# STANDARD \*COLOR CODE FOR IDENTIFYING UNDERGROUND UTILITIES

| <u>UTILITY &amp; PRODUCT TYPE</u>               | <u>IDENTIFYING COLOR</u>      |
|-------------------------------------------------|-------------------------------|
| ELECTRIC POWER DISTRIBUTION<br>AND TRANSMISSION | SAFETY RED                    |
| MUNICIPAL ELECTRIC SYSTEMS                      | SAFETY RED                    |
| GAS DISTRIBUTION AND TRANSMISSION               | HIGH VISIBILITY SAFETY YELLOW |
| OIL DISTRIBUTION AND TRANSMISSION               | HIGH VISIBILITY SAFETY YELLOW |
| DANGEROUS MATERIALS, PRODUCT LINES              | HIGH VISIBILITY SAFETY YELLOW |
| TELEPHONE AND TELEGRAPH SYSTEMS                 | SAFETY ALERT ORANGE           |
| CABLE TELEVISION                                | SAFETY ALERT ORANGE           |
| POLICE AND FIRE COMMUNICATIONS                  | SAFETY ALERT ORANGE           |
| WATER SYSTEMS, SLURRY PIPELINES                 | SAFETY PRECAUTION BLUE        |
| SEWER SYSTEMS                                   | SAFETY GREEN                  |
| TREATED WASTE WATER PIPE LINES                  | SAFETY BROWN                  |

NOTE - UTILITY LOCATION TO BE MARKED  
PRIOR TO ANY INTENDED TRENCHING  
OR EXCAVATING.

\* AMERICAN PUBLIC WORKS ASSOCIATION  
IDENTIFYING COLOR CODING SPECIFICATION

|                                                           |                         |                                    |                                                                         |                                                                                |
|-----------------------------------------------------------|-------------------------|------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br><br>3/3 '78 | REVISED<br>_____<br>_____<br>_____ | GENERAL DETAIL<br><br>UNDERGROUND UTILITIES<br>(IDENTIFYING COLOR CODE) | <div style="text-align: center;"> <b>G</b><br/> <b>3.6</b> </div> SHEET 1 OF 1 |
|-----------------------------------------------------------|-------------------------|------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------|



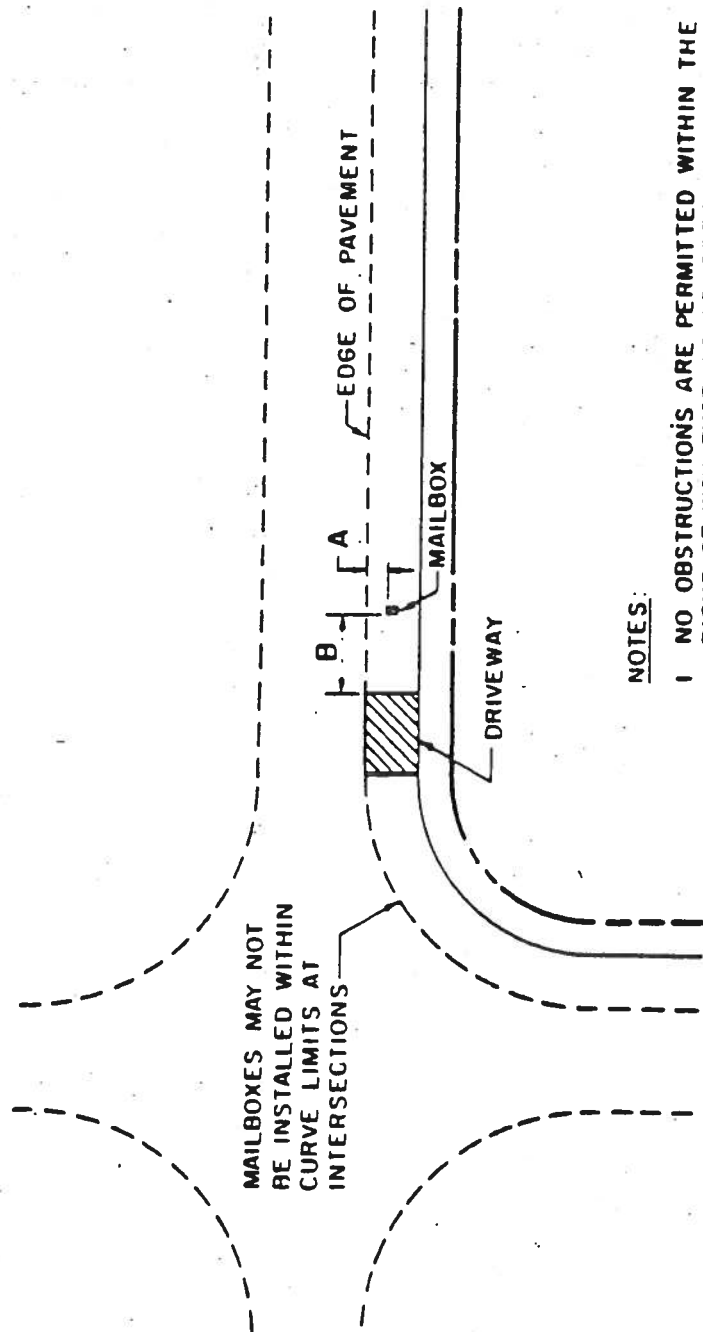
METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/1/62

REVISED

GENERAL DETAIL  
LOCATION OF MAILBOXES  
WITHIN PUBLIC RIGHT OF WAY

G  
4.1  
SHEET 1 OF 1



NOTES:

- 1 NO OBSTRUCTIONS ARE PERMITTED WITHIN THE RIGHT OF WAY THAT WOULD PRECLUDE A MAIL CARRIER FROM PULLING OFF TRAFFIC LANES OF PAVEMENT TO MAKE DOOR DELIVERIES
- 2 THE MAILBOX SHOULD BE SET  $3\frac{1}{2}'$  TO  $4'$  ABOVE THE ROADWAY
- 3 THE MAILBOX MUST BE LOCATED SO THAT THE MAIL CARRIER DOES NOT HAVE TO LEAVE HIS VEHICLE IN ORDER TO PLACE MAIL IN BOX

| DIMENSIONS | MAILBOX OFFSET - FEET |             |
|------------|-----------------------|-------------|
|            | ARTERIAL              | RESIDENTIAL |
| A          | 10                    | 3           |
| B          | 10                    | 10          |

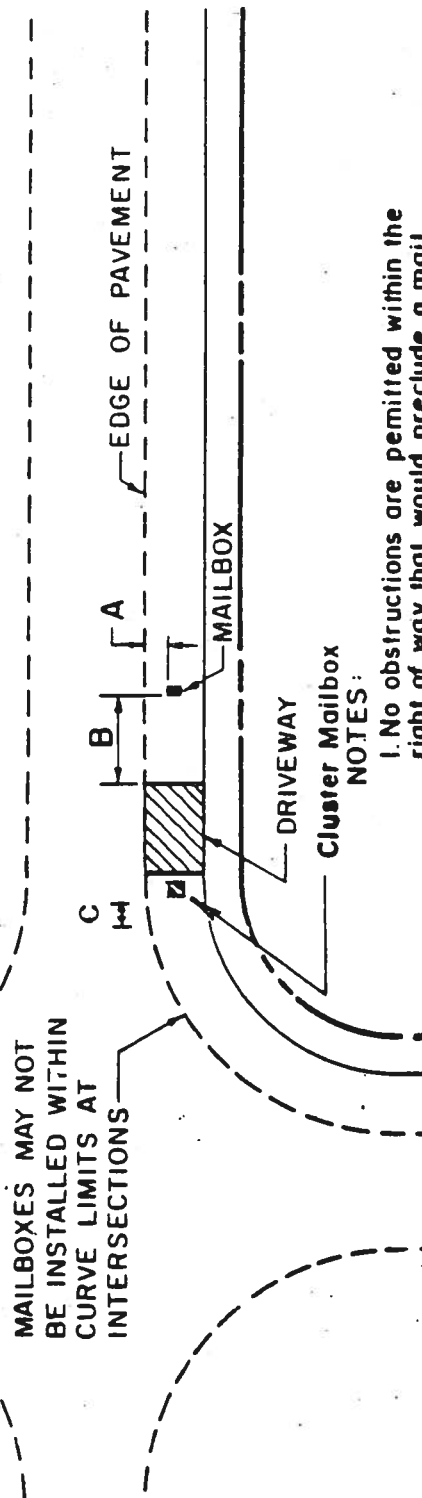
| ITEM | CROSS REF |  | SPEC REF |  |
|------|-----------|--|----------|--|
|      |           |  |          |  |
|      |           |  |          |  |
|      |           |  |          |  |

APPROVED  
6/1/62

REVISED  
7/26/94  
6-1-95

GENERAL DETAIL  
LOCATION OF MAILBOXES  
WITHIN PUBLIC RIGHT OF WAY

G  
4.1  
SHEET 1 OF 1



| DIMENSIONS | MAILBOX OFFSET |             |
|------------|----------------|-------------|
|            | ARTERIAL       | RESIDENTIAL |
| A          | 10'            | 8"          |
| B          | 10'            | 12"         |
| C          | 15'            | 15'         |

Mailbox offset shall mean

A-The distance from the edge of pavement to the mailbox support.

The front edge of a mailbox shall not be closer than 8" to the edge of pavement.

B-The distance from the edge of pavement of a driveway to the side edge of a mailbox.

C-The distance from the curve limit and edge of a cluster mailbox.

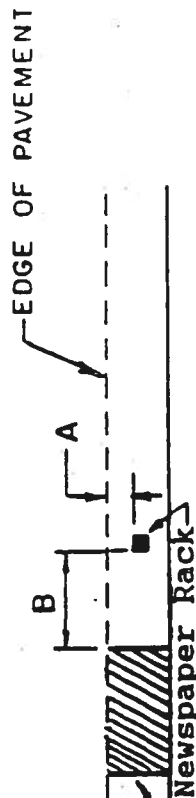
NOTES:

1. No obstructions are permitted within the right of way that would preclude a mail carrier from pulling off traffic lanes of pavement to make door deliveries.
2. The mailbox should be set 3 1/2' to 4' above the roadway.
3. The mailbox must be located so that the mail carrier does not have to leave his vehicle in order to place mail in box.
4. A lot with frontage of less than 50' shall place the mailbox at the right property line as determined by facing the structure on the property, or at a common joint use location if both property owners agree.
5. The footprint of a mailbox shall be limited to 48" x 48" x 5'.
6. The slab upon which mailboxes are placed shall not exceed ground level height.
7. The installation of any mailbox shall not violate any of the provisions of the Americans with Disabilities Act (ADA).

NOTES:

- 1) Newspaper racks and newspaper storage racks to be used for vending and distribution may be placed in the public right-of-way. The number of newspaper racks and newspaper storage racks at any given location will be dictated by the individual geographic location and it relates to the requirements contained in the code and in this detail.
- 2) Newspaper racks and newspaper storage racks will be secured by the use of internal weights with a minimum aggregate weight of 125 pounds.
- 3) No newspaper racks to be located within road center medians.

Newspaper Racks may not be installed within curve limits at intersection



- 4) Newspaper racks and newspaper storage racks can be placed at the back of a sidewalk or bike-path if no room exists on the suale, provided that all applicable current (36 inches minimum clearance) or future ADA and State statute requirements are met.
- 5) Owners name and phone number to be placed on newspaper rack.
- 6) A numbered newspaper rack decal to be placed on face of rack. Decal will be issued upon payment of permit fee which is established by Administrative Order.
- 7) A certificate of insurance and a hold harmless agreement is required where the owner agrees to indemnify and hold Dade County harmless from any and all liability which may arise by virtue of Dade County permitting the installation of these items within the public right of way.
- 8) Any non conforming newspaper racks will be subject to a daily fine in compliance with Chapter 8CC of the County Code.
- 9) Owner shall remove newspaper rack within 5 business days of a request when the location interferes with road or utility construction. Failure to remove within 5 business days will result in the County or the contractor removing and disposing of the newspaper rack.
- 10) Newspaper racks must be kept in good repair and kept free of any graffiti.
- 11) Where newspaper racks and/or newspaper storage racks cause a traffic flow safety problem, as determined by a traffic engineering evaluation, the newspaper racks and/or newspaper storage racks will have to be removed from that location.
- 12) For arterial roads with curb and gutter and no suale, newspaper racks and newspaper storage racks shall be placed at the back of the sidewalk providing the minimum ADA clearance requirements are met. For arterial roads without curb and gutter and a suale, the offset shall be 10 feet.

| DIMENSIONS | ARTERIAL | NEWSPAPER RACK OFFSET | RESIDENTIAL |
|------------|----------|-----------------------|-------------|
| A          | 10'-0"   |                       | 6'          |
| B          | 10'      |                       | 5'          |
| C          | 15'      |                       | 15'         |

Newspaper Rack Offset shall mean:

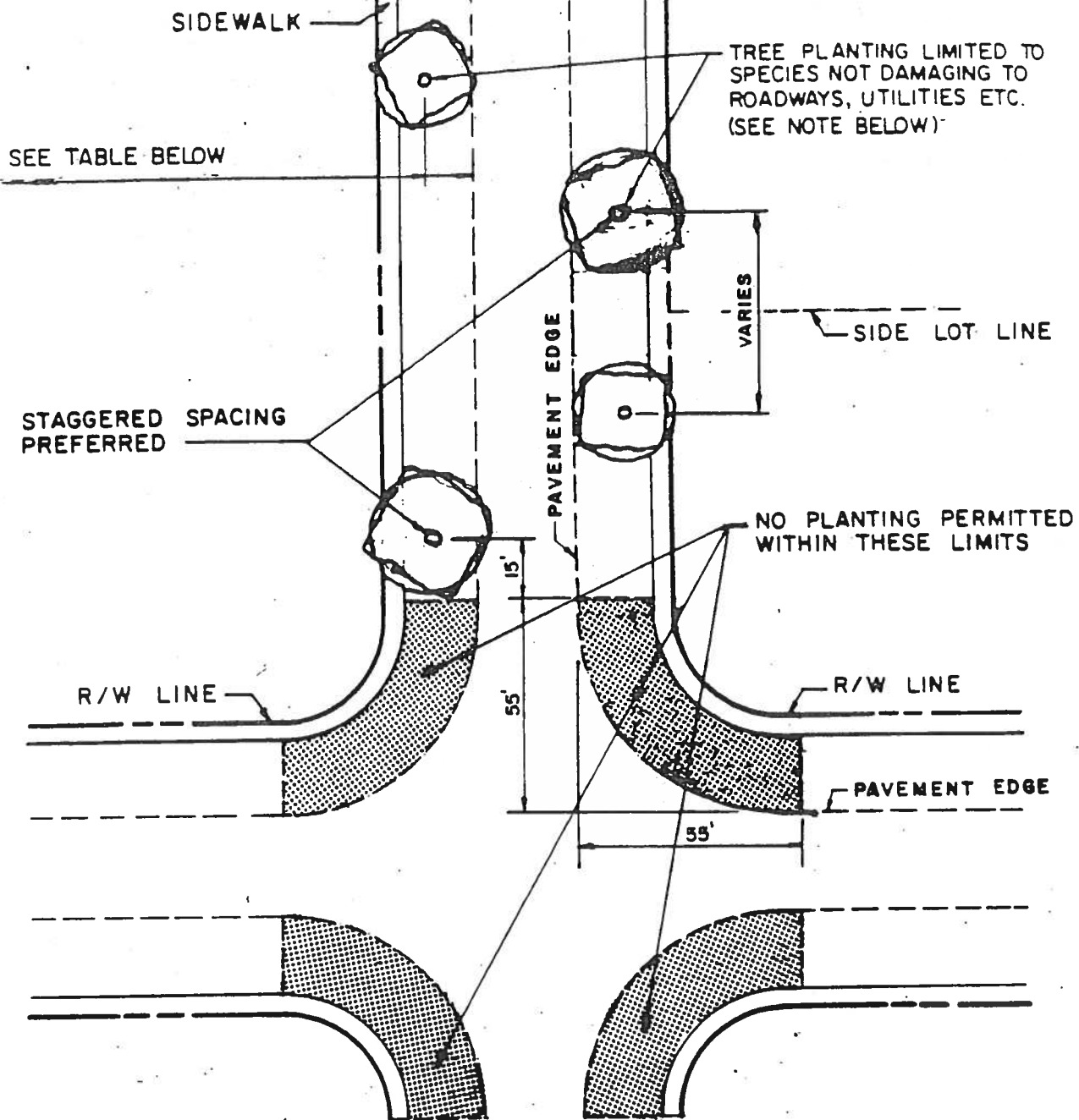
A - The distance from the edge of pavement to the newspaper rack.

B - The distance from the edge of pavement of a driveway to the side edge of newspaper rack.

C - The distance from the curve limit and edge of a newspaper rack.

\* See Note 12

| ITEM | CROSS REF. | SPEC. REF. |
|------|------------|------------|
|      |            |            |
|      |            |            |
|      |            |            |



## PLAN

### NOTE: \*

FOR ADDITIONAL INFORMATION  
CONCERNING R/W PLANTING,  
REFER TO "POLICY ON PLANTING  
WITHIN PUBLIC RIGHT-OF-WAY"  
IN DADE COUNTY.

| ROADWAYS           | DESIGN SPEED |           |                |
|--------------------|--------------|-----------|----------------|
|                    | BELOW 35 mph | 35-45 mph | 50 mph & ABOVE |
| NO CURB & GUTTER   | 6'           | 14'       | 30' *          |
| WITH CURB & GUTTER | 4'           | 4'        | 14'            |

| ITEM | CROSS<br>REF. | SPEC.<br>REF. |
|------|---------------|---------------|
|------|---------------|---------------|

## GENERAL DETAIL LOCATION OF PLANTING WITHIN PUBLIC R/W

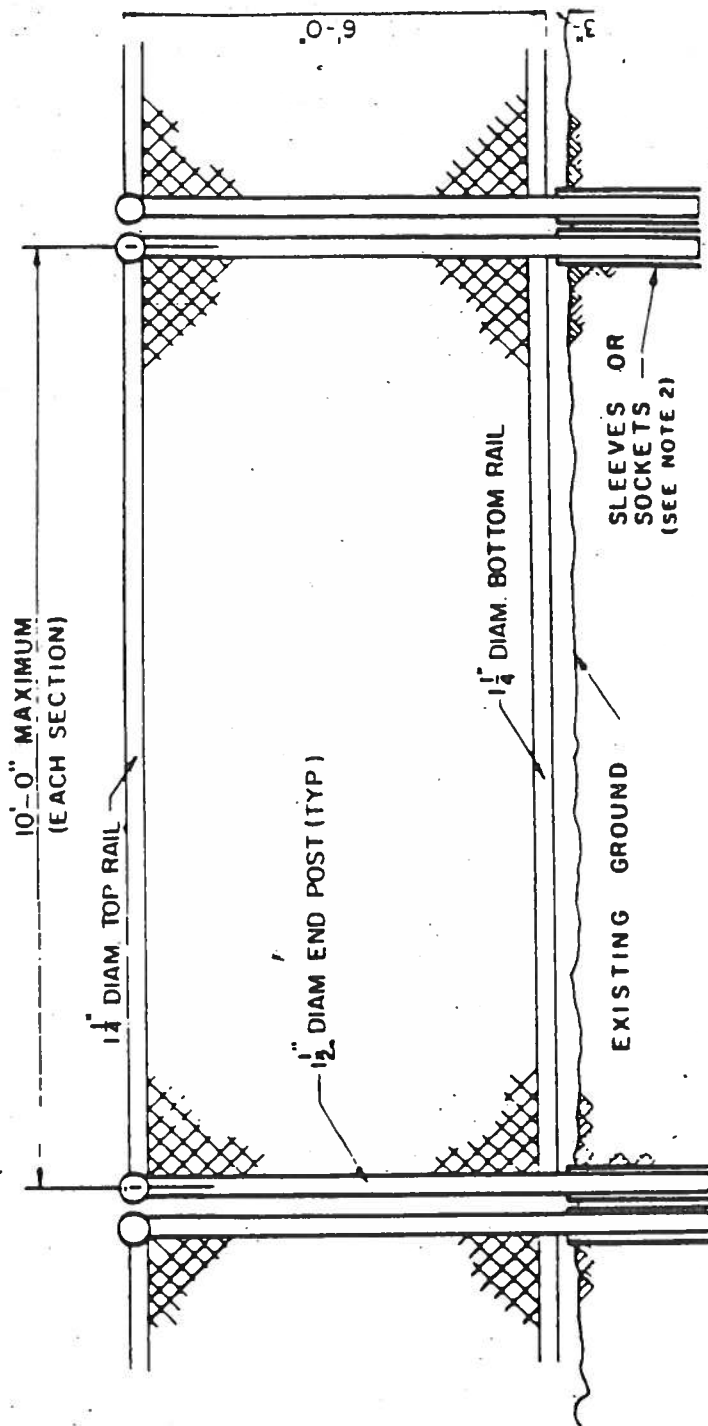
METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/11/64

REVISED  
6-1-95  
5/12/80  
5/1/85

G  
5.1

SHEET 1 OF 1



#### NOTES

- 1 EACH SECTION SHALL HAVE (2) END POSTS, (1) TOP RAIL, (1) BOTTOM RAIL AND WIRE MESH
- 2 ALL END POSTS TO BE SET IN SLEEVE OR SOCKETS FOR EASY REMOVAL AND REPLACEMENT
- 3 POSTS AND RAILS SHALL BE GALVANIZED STEEL OR ALUMINUM
- 4 WIRE MESH SHALL BE GALVANIZED, AS WELL AS ALL FITTINGS AND HARDWARE
- 5 PERMIT REQUIRED FROM THE BUILDING AND ZONING DEPARTMENT FOR INSTALLATION

| TYPE | CROSS<br>REF | SPEC.<br>REF |
|------|--------------|--------------|
|      |              |              |
|      |              |              |

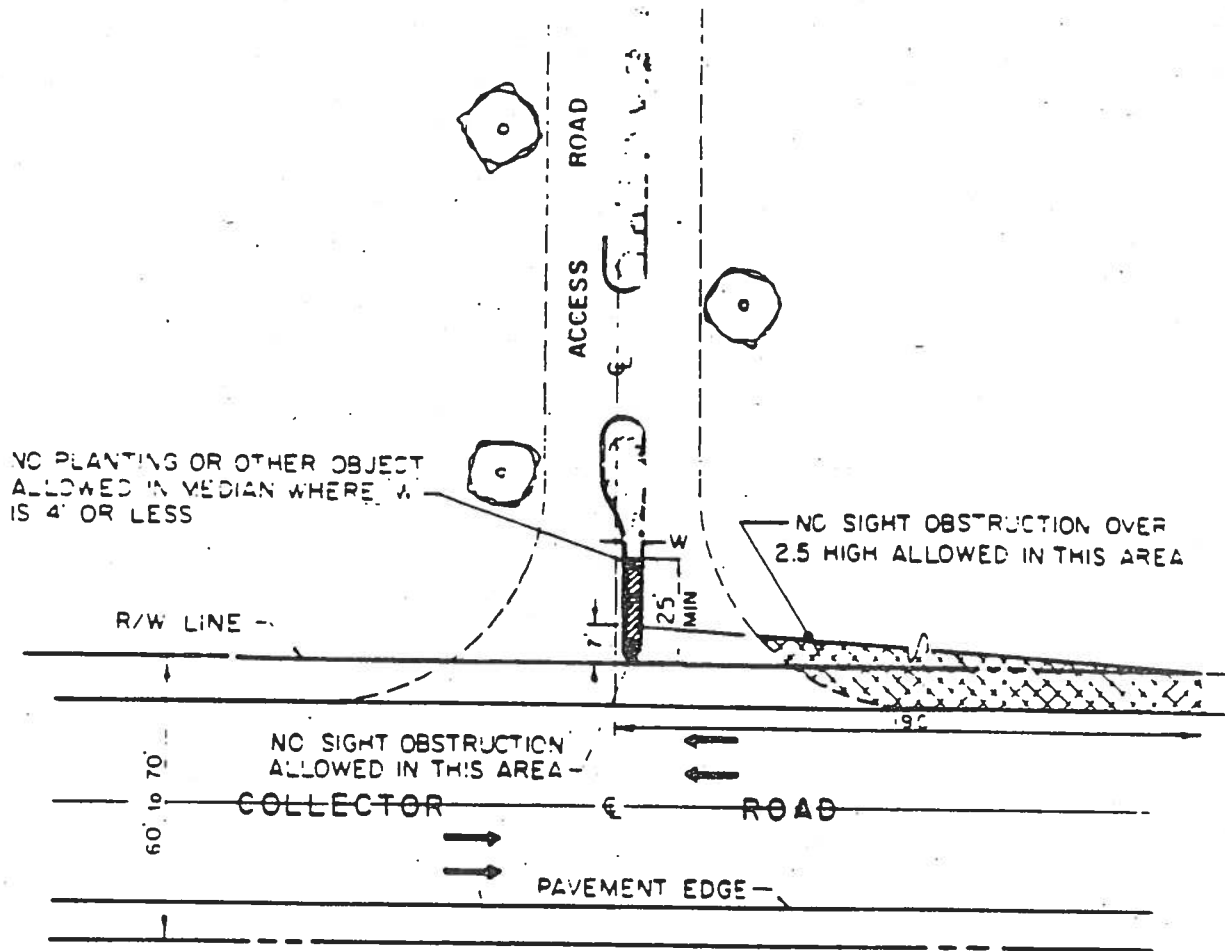
METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
4/9/68

REVISED  
6/24/77

### GENERAL DETAIL FENCES WITHIN CANAL MAINTENANCE EASEMENTS

G  
5.2  
SHEET 1 OF 1



PLAN

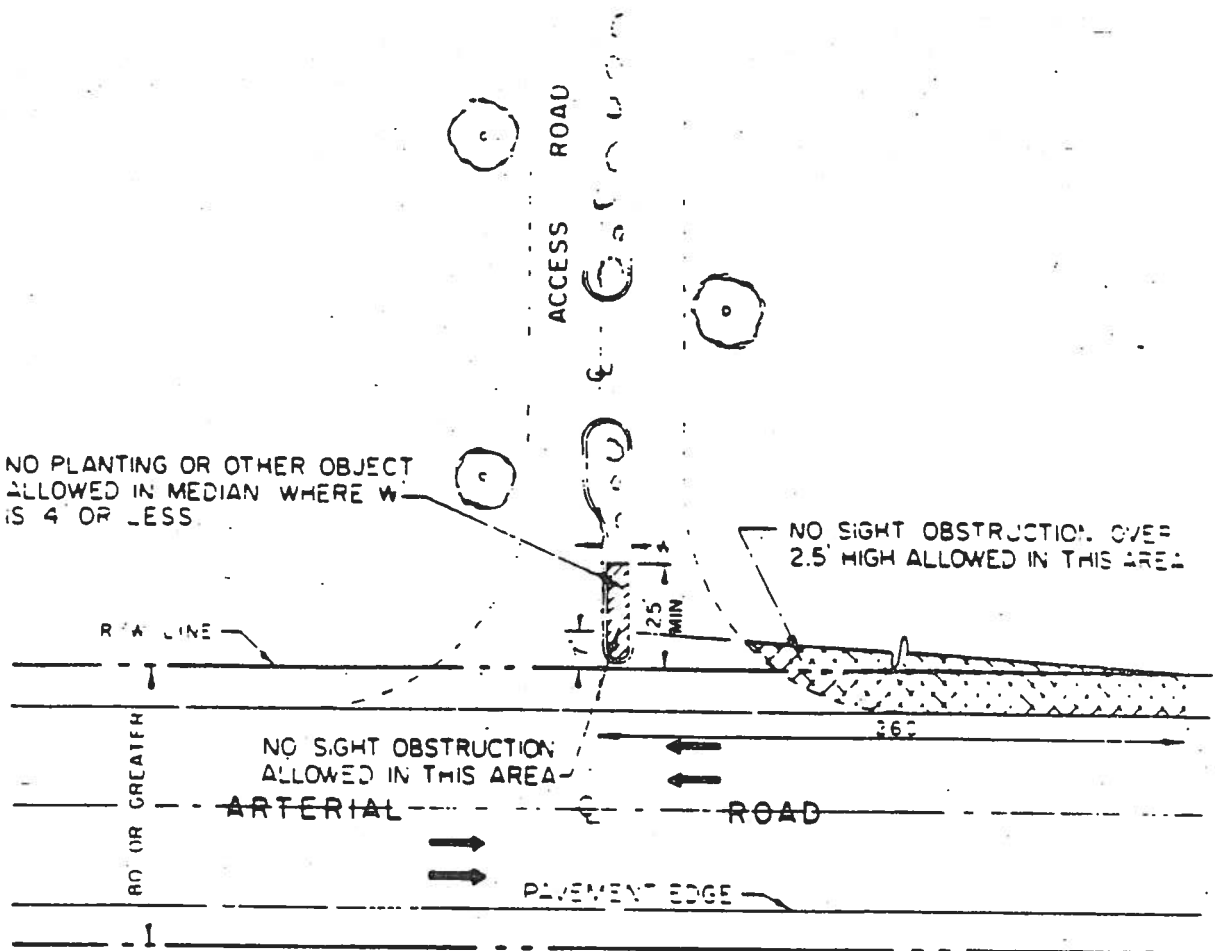
NOTE

FOR ADDITIONAL INFORMATION  
CONCERNING R/W PLANTING  
REFER TO 'LANDSCAPE MANUAL',  
SECTION-4g OF DADE COUNTY

|                 |              |             |
|-----------------|--------------|-------------|
| SIGHT TRIANGLE  |              | 33          |
| PLANTING IN PAV | 3-5          |             |
| ITEM            | CROSS<br>REF | SPEC<br>REF |

|                                                           |                     |                             |                                                                       |                        |
|-----------------------------------------------------------|---------------------|-----------------------------|-----------------------------------------------------------------------|------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br>5/17/72 | REV. SEC<br>4 E 8<br>6 4/8E | GENERAL DETAIL<br>SIGHT RESTRICTIONS FOR<br>ACCESS TO COLLECTOR ROADS | G<br>5.3<br>SHEET OF 2 |
|                                                           |                     |                             |                                                                       |                        |

NO PLANTING OR OTHER OBJECT  
ALLOWED IN MEDIAN WHERE W  
IS 4' OR LESS.



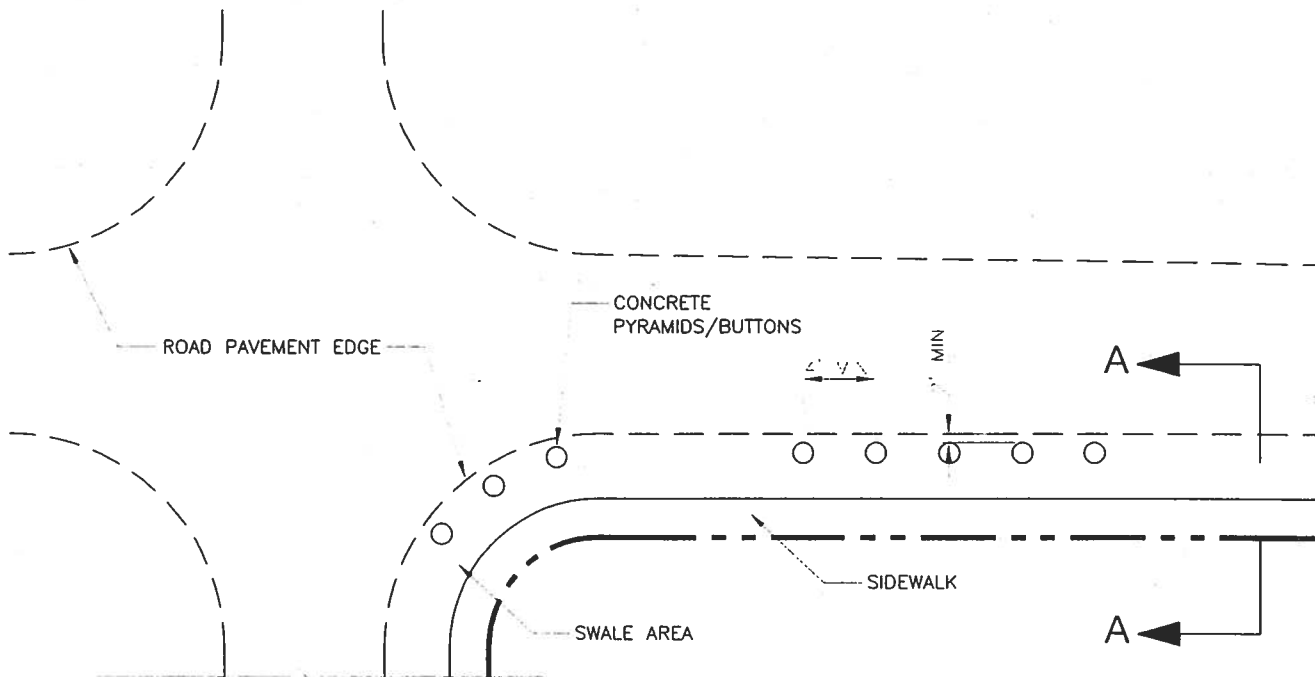
PLAN

NOTE

FOR ADDITIONAL INFORMATION  
CONCERNING R/W PLANTING,  
REFER TO "LANDSCAPE MANUAL",  
SECTION 4g OF DADE COUNTY.

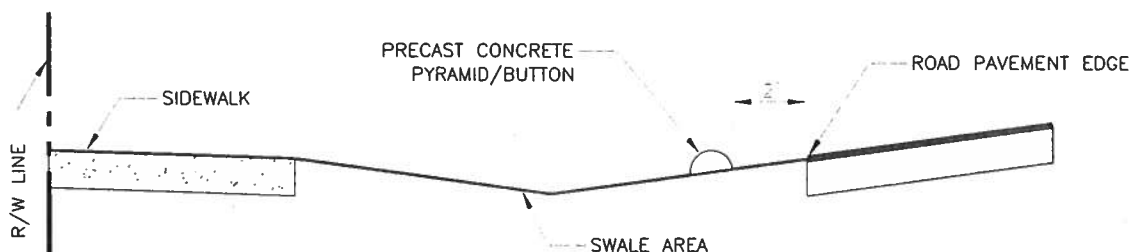
|                 |                      |
|-----------------|----------------------|
| SIGHT TRIANGLE  | 33                   |
| PLANTING IN R/W | 5.5                  |
| ITEM            | CROSS REF   SPEC REF |

|                                                           |                      |                                    |                                                                      |                          |
|-----------------------------------------------------------|----------------------|------------------------------------|----------------------------------------------------------------------|--------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br>E. S. SE | REVISED<br>_____<br>_____<br>_____ | GENERAL DETAIL<br>SIGHT RESTRICTIONS FOR<br>ACCESS TO ARTERIAL ROADS | G<br>5.3<br>SHEET 2 OF 2 |
|                                                           |                      |                                    |                                                                      |                          |



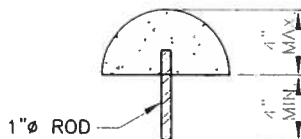
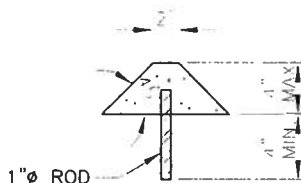
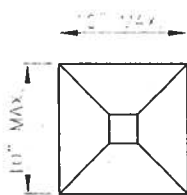
### PLAN

N.T.S.



### SECTION A-A

N.T.S.



### PLAN

### TYP. SECTION

### NOTE:

OTHER THAN THE CONCRETE BUTTON OR PYRAMID DESCRIBED HEREIN, NO OTHER OBJECT MAY BE PLACED IN THE RIGHT-OF-WAY AS A RESIDENTIAL MARKER.

## CONC. PYRAMID / BUTTON / DETAILS

N.T.S.

|                  |            |            |
|------------------|------------|------------|
| ASPHALT DRIVEWAY | R-12.5     |            |
| DRIVEWAY SPACING | R-12.2     |            |
| ASPHALT DRIVEWAY | R-12.3     | SEC. 145   |
| ITEM             | CROSS REF. | SPEC. REF. |

MIAMI-DADE  
COUNTY

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
5/8/2018

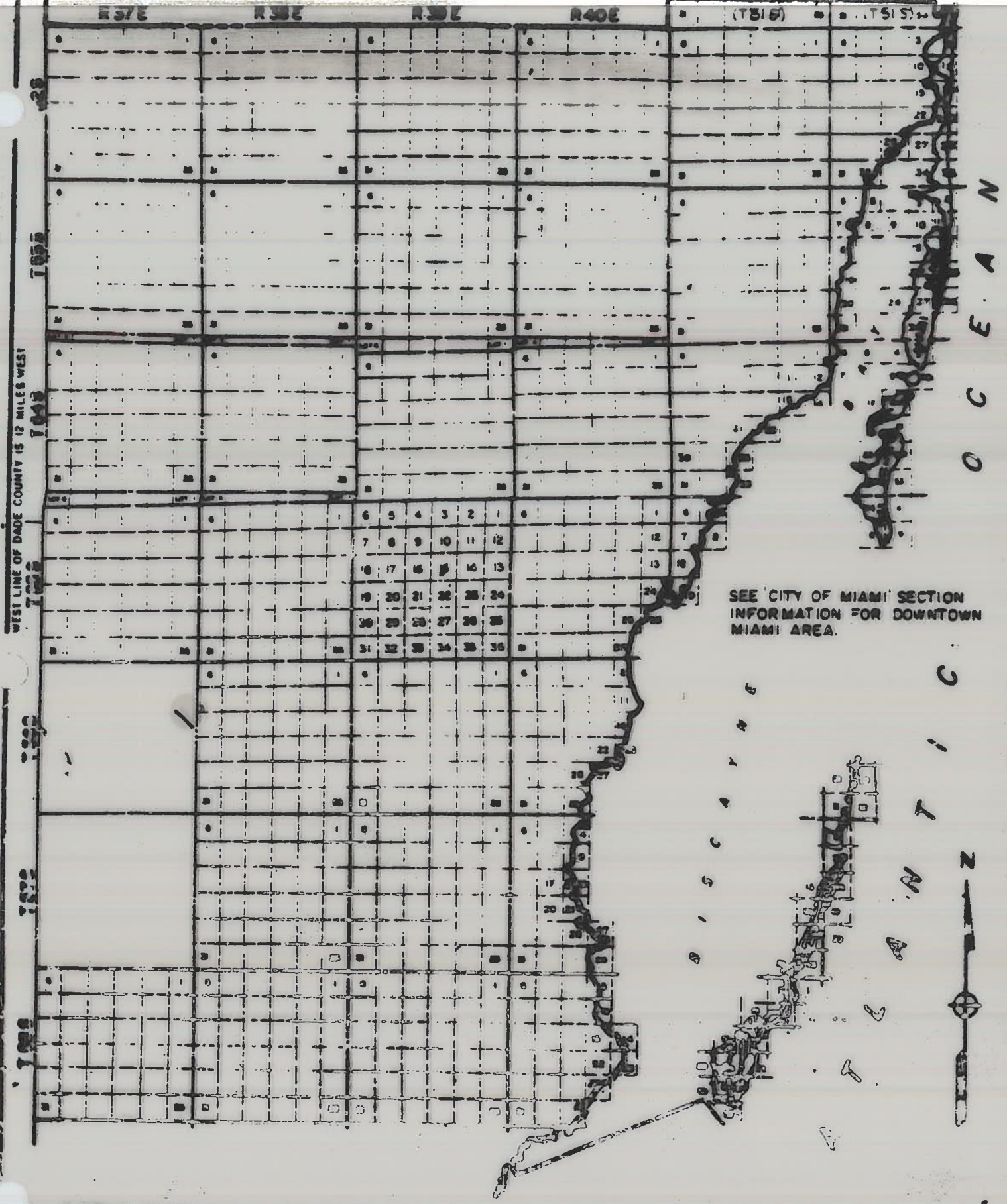
REVISED  
5/8/2018  
10/24/2017  
6/1/1995  
7/24/1974

GENERAL DETAIL  
LOCATION OF RESIDENTIAL  
ROADWAY MARKERS  
(WITHIN PUBLIC R/W)

G  
6.1

SHEET 1 OF 1





REPRODUCTION  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

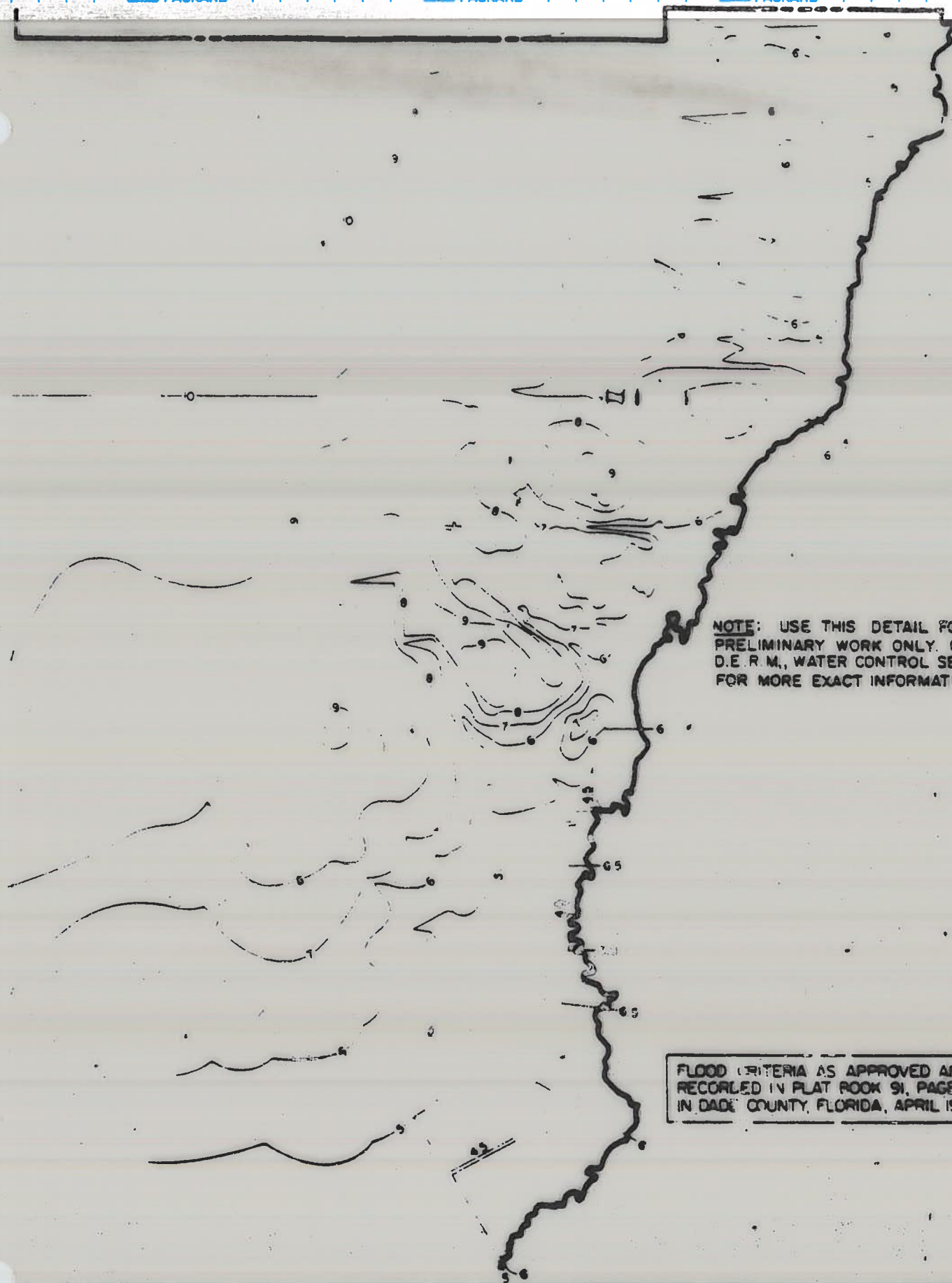
APPROVED  
6/23/77

GRAND

GENERAL DETAIL

TOWNSHIP, RANGE AND SECTION  
LOCATION IN DADE COUNTY

G  
71



NOTE: USE THIS DETAIL FOR  
PRELIMINARY WORK ONLY. CONTACT  
D.E.R.M., WATER CONTROL SECTION  
FOR MORE EXACT INFORMATION

FLOOD CRITERIA AS APPROVED AND  
RECORDED IN PLAT BOOK 91, PAGE 39,  
IN DADE COUNTY, FLORIDA, APRIL 1972

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED

6/24/77

REVISED

GENERAL DETAIL

FLOOD CRITERIA  
(USE WITH BASE MAP)

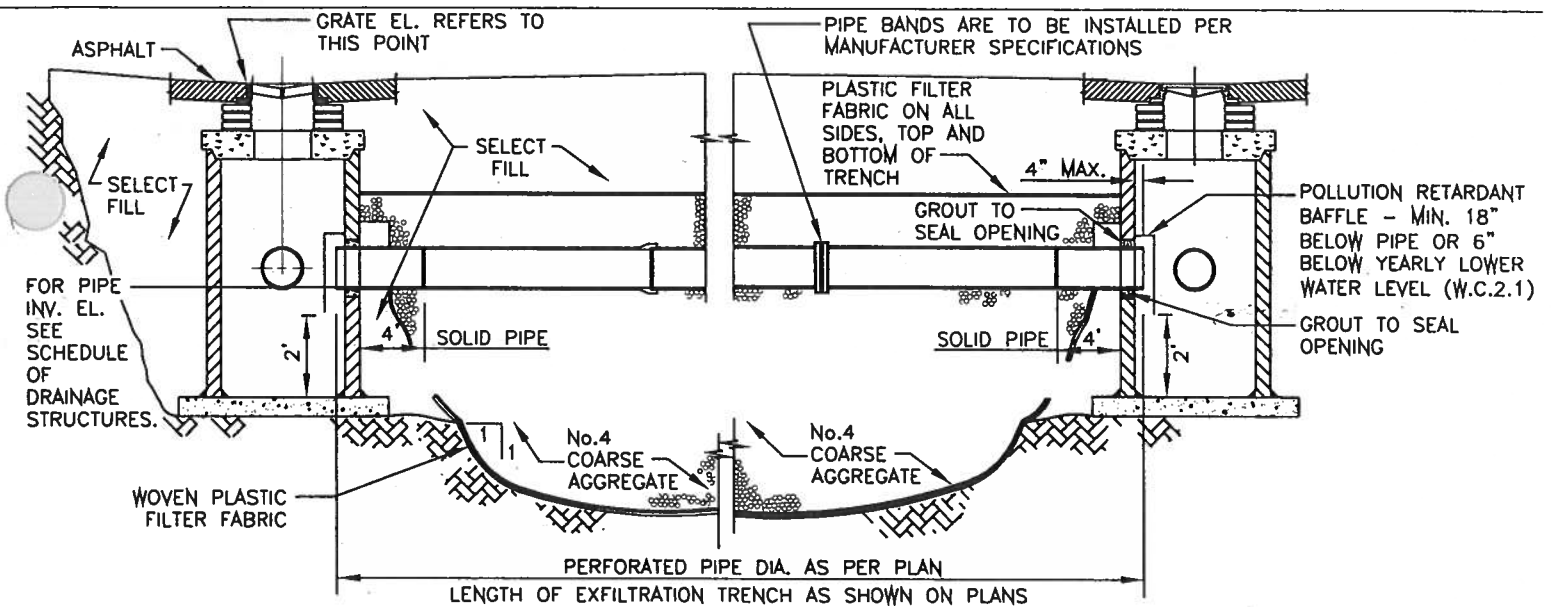
G

7.2

OVERLAP



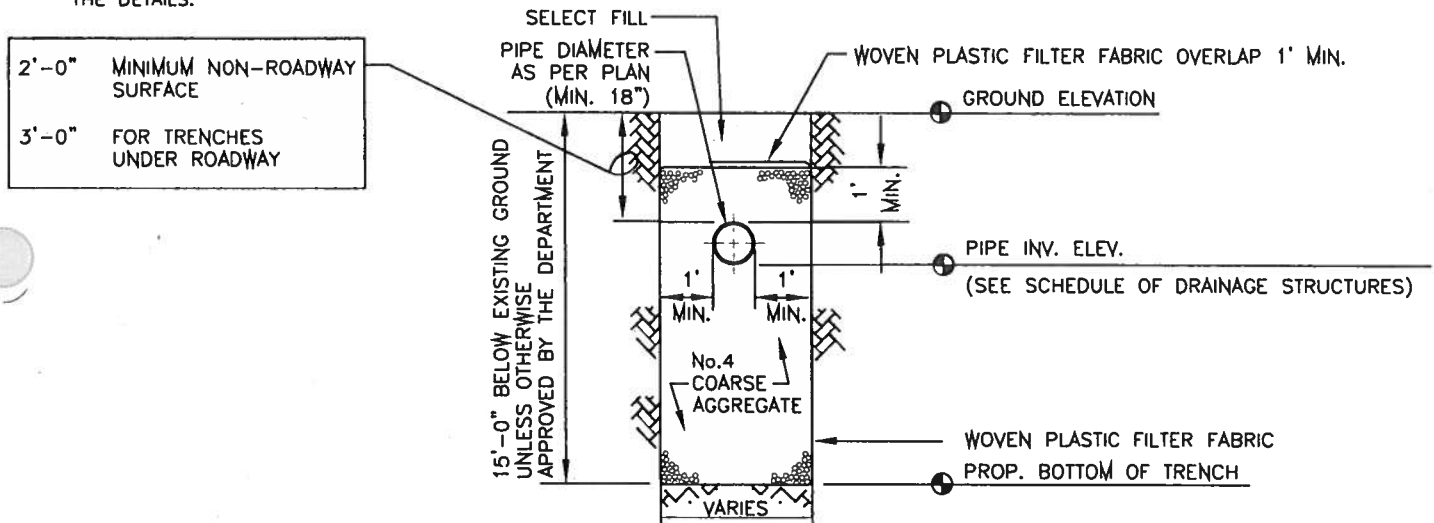
# STORM DRAINAGE DETAILS



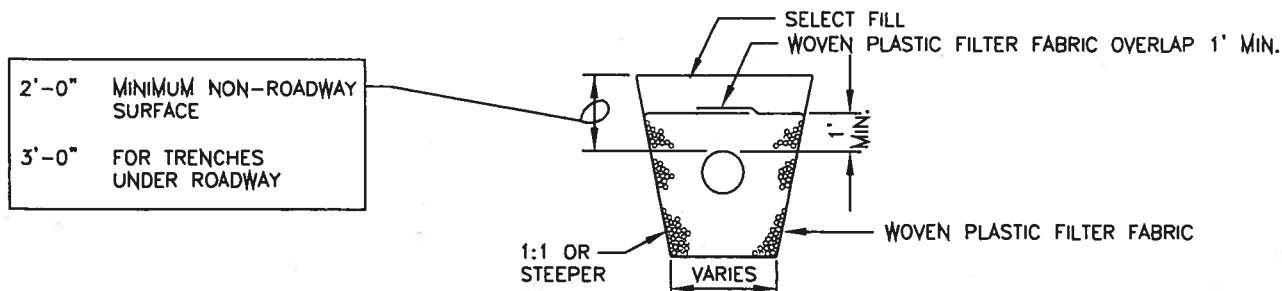
### LONGITUDINAL SECTION

#### NOTE

1-AFTER THE COARSE AGGREGATE HAS BEEN PLACED TO THE PROPER ELEVATION IT SHALL BE CAREFULLY WASHED DOWN WITH CLEAN WATER, OR TAMPERED, TO ALLOW FOR INITIAL SETTLEMENT THAT MAY OCCUR. IF SETTLEMENT DOES TAKE PLACE, ADDITIONAL No.4 COARSE AGGREGATE SHALL BE ADDED TO RESTORE THE PROPER ELEVATION SO THAT THE EXFILTRATION TRENCH IS COMPLETED IN ACCORDANCE WITH THE DETAILS.



### TRANSVERSE SECTION



### ALT. TRANS. SECTION\*

\* MAY BE USED IN AREAS WHERE TRENCH WALLS WILL NOT STAND VERTICAL, OR WHERE CAVE-IN BELOW THE WATER TABLE IS LIKELY TO OCCUR. TO BE USED AT THE ENGINEER'S DISCRETION.

#### NOTES (CONTINUED ON NEXT PAGE)

1. PLASTIC FILTER FABRIC SHALL BE WOVEN MONOFILAMENT POLYPROPYLENE GEOTEXTILE. PERMITTIVITY SHALL BE GREATER THAN 0.50 SEC AND FLOW RATE GREATER OR EQUAL TO 50 gal/min.
2. MAXIMUM EXFILTRATION RATE WHICH CAN BE USED IN CALCULATING FRENCH DRAIN LENGTH IS 0.1 cfs/lf.

MIAMI-DADE  
COUNTY

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
04/16/2015

REVISED  
02/08/2011  
09/26/2012  
10/19/2012

STANDARD STORM DRAINAGE DETAIL  
EXFILTRATION TRENCH  
(FRENCH DRAIN)

SD  
1.1

# NOTES CONTINUED

3. THE MINIMUM PIPE DIAMETER FOR DRAINAGE SYSTEM WITHIN THE ROADWAY RIGHT-OF-WAY SHALL BE 18 INCHES. 15 INCH PIPE MAY BE USED IN PRIVATE ROADWAYS.
4. NO TREES TO BE PLANTED WITHIN 5 FEET OF THE EDGE OF THE TRENCH.
5. TYPE "P" S.D. 2.6 STRUCTURE IS RECOMMENDED FOR SMALL DRAINAGE AREAS LESS THAN 0.2 ACRE PER CATCH BASIN.
6. TYPE "J" S.D. 2.6 STRUCTURE IS RECOMMENDED FOR AREAS LARGER THAN 0.2 ACRE.
7. ALL INVERTS OF PERFORATED PIPES TO BE AT MEAN HIGH OCTOBER WATER TABLE W.C. 2.2.
8. PIPES CAN BE ALLOWED BELOW MEAN HIGH OCTOBER WATER TABLE DUE TO UTILITY CONFLICTS OR IN ORDER TO PROVIDE THE REQUIRED MINIMUM COVER.
9. NEOPRENE GASKET REQUIRED FOR BAFFLES ON ALL CONTACT EDGES MOUNTED ON WALL.
10. OIL AND GREASE BAFFLE IS REQUIRED FOR ALL DRAINAGE STRUCTURES PRECEDING AN OUTFALL OR EXFILTRATION TRENCHES, IN PROJECTS LOCATED IN WELLFIELD PROTECTION AREAS, ROAD INTERSECTIONS WITH TRAFFIC LIGHTS, AND LARGE PARKING LOTS WHICH INCLUDE 15 PARKING SPACES OR MORE.
11. OIL AND GREASE BAFFLE MAY BE WAIVED IN SUBURBAN RESIDENTIAL AREAS.

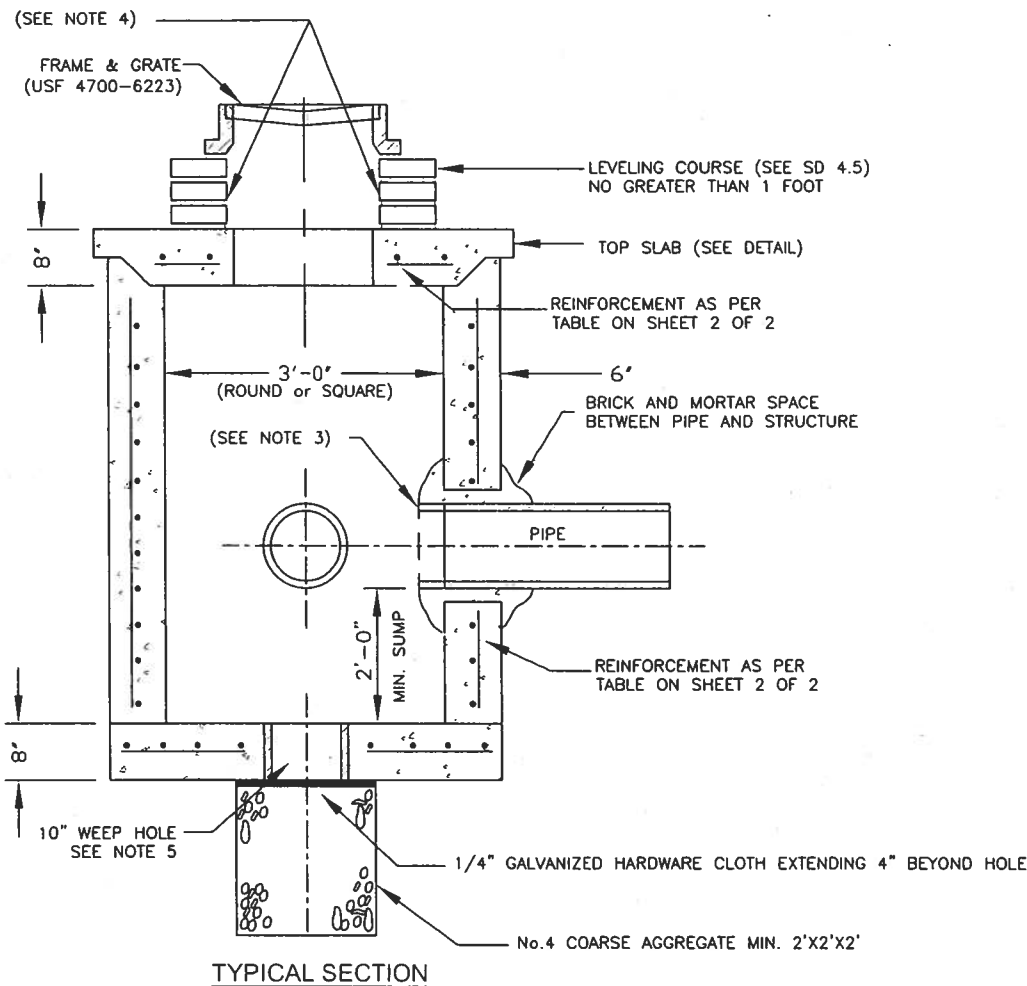
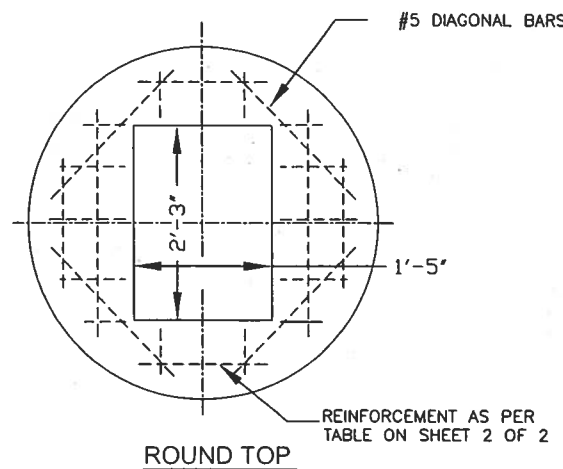
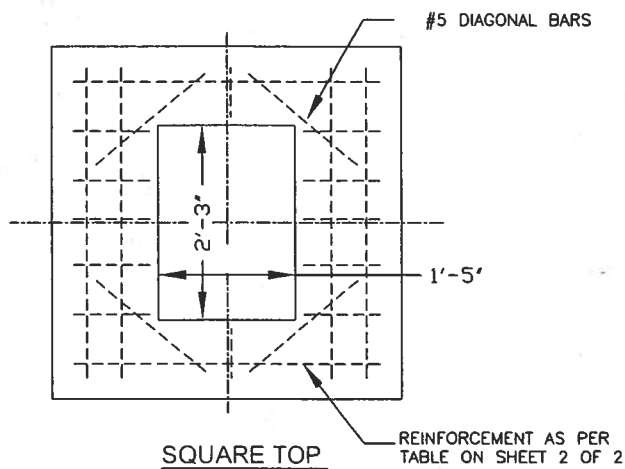
## GENERAL NOTES FOR PIPE CULVERTS

CONTRACTOR HAS THE OPTION OF INSTALLING ANY PIPE MEETING THE REQUIREMENTS OF SECTION 443-2 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS LONG AS THE MANUFACTURER IS LISTED, AT THE TIME OF PIPE INSTALLATION, IN FDOT'S LIST OF PRODUCERS WITH ACCEPTED QUALITY CONTROL PROGRAMS. PIPES WITH LESS THAN A 100-YEAR CERTIFICATION CANNOT BE USED ON SECTION LINE, HALF SECTION LINE, COLLECTOR ROADWAYS, AND ARTERIALS. 50-YEAR PIPE CERTIFICATION REQUIRED FOR ALL OTHER MINOR/LOCAL ROADWAYS.

| MINIMUM NUMBER OF PERFORATION IN PIPE CULVERTS |                                                             |                                                             |
|------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| PIPE DIAMETER<br>(inches)                      | OUTER SHELL                                                 | LINER                                                       |
|                                                | No. of $\frac{3}{8}$ " Dia. Holes<br>(PER LIN. FT. OF PIPE) | No. of $\frac{5}{8}$ " Dia. Holes<br>(PER LIN. FT. OF PIPE) |
| 15                                             | 100                                                         | 50                                                          |
| 18                                             | 120                                                         | 60                                                          |
| 24                                             | 160                                                         | 80                                                          |
| 30                                             | 200                                                         | 100                                                         |
| 36                                             | 240                                                         | 120                                                         |
| 42                                             | 275                                                         | 140                                                         |
| 48                                             | 315                                                         | 150                                                         |
| 54                                             | 355                                                         | 180                                                         |
| 60                                             | 395                                                         | 200                                                         |
| 72                                             | 470                                                         | 235                                                         |
| 84                                             | 550                                                         | 275                                                         |

### NOTE:

PERFORATIONS SHALL BE UNIFORMLY SPACED AROUND THE FULL PERIPHERY OF THE PIPE TO WITHIN 4" OF EACH END OF EACH LENGTH OF PIPE. THE NUMBER OF PERFORATIONS PER LINEAR FOOT OF PIPE AND THE DIAMETER OF THE PERFORATIONS SHALL BE AS SHOWN ON THE ABOVE TABLE.



**NOTES:**

- 1.- CAST TOP SLAB TO FIT WALL USED.
- 2.- USE 4,000 psi CONCRETE. (MINIMUM), MAXIMUM W/C=0.53, GRADE 60 STEEL FOR REBAR AND GRADE 65 FOR WWF.
- 3.- PIPES MAY EXTEND INTO CATCH BASIN A MAXIMUM OF 4".
- 4.- APPLY A SMOOTH LINE OF MORTAR 1/2" THICK INSIDE AND OUTSIDE.
- 5.- WEEP HOLES ARE TO BE USED WHEN THE YEARLY LOWEST WATER ELEVATION IS ABOVE THE TOP OF THE BOTTOM SLAB OF THE STRUCTURE.

MIAMI-DADE  
COUNTY

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
5/8/2018

REVISED  
5/8/2018  
9/16/2013  
9/26/2012  
2/8/2011

STANDARD STORM DRAINAGE DETAIL  
PRECAST CATCH BASIN  
(D-3)

SD  
2.2

### SQUARE STRUCTURE

| Standard Detail | Width (ft) | Length (ft) | Height (ft) | Wall Thickness (in) | Wall Steel | Top Slab Thickness (in) | Top Slab Steel | Bottom Slab Thickness (in) | Bottom Slab Steel |
|-----------------|------------|-------------|-------------|---------------------|------------|-------------------------|----------------|----------------------------|-------------------|
| 2.2             | 3          | 3           | 0.0 - 5.0   | 6                   | #4@10"H    | 8                       | #4@5"<br>E.W.  | 8                          | #4@10"<br>E.W.    |
|                 |            |             |             |                     | #4@10"V    |                         |                |                            |                   |
| 2.2             | 3          | 3           | 5.1 - 10.0  | 6                   | #4@7.5"H   | 8                       | #4@5"<br>E.W.  | 8                          | #4@10"<br>E.W.    |
|                 |            |             |             |                     | #4@10"V    |                         |                |                            |                   |
| 2.2             | 3          | 3           | 10.1-15.0   | 6                   | #5@7.5"H   | 8                       | #4@5"<br>E.W.  | 8                          | #4@10"<br>E.W.    |
|                 |            |             |             |                     | #4@10"V    |                         |                |                            |                   |

### ROUND STRUCTURE

| Standard Detail | Dia. (ft) | Height (ft) | Wall Thickness (in) | Wall Steel | Top Slab Thickness (in) | Top Slab Steel | Bottom Slab Thickness (in) | Bottom Slab Steel |
|-----------------|-----------|-------------|---------------------|------------|-------------------------|----------------|----------------------------|-------------------|
| 2.2             | 3         | 0.0 - 5.0   | 6                   | 8 X 8 W20  | 8                       | #4@5"<br>E.W.  | 8                          | #4@10"<br>E.W.    |
|                 |           |             |                     | #4@10"E.W. |                         |                |                            |                   |
| 2.2             | 3         | 5.1 - 15.0  | 6                   | 8 X 8 W20  | 8                       | #4@5"<br>E.W.  | 8                          | #4@10"<br>E.W.    |
|                 |           |             |                     | #4@10"E.W. |                         |                |                            |                   |

MIAMI-DADE  
COUNTY

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

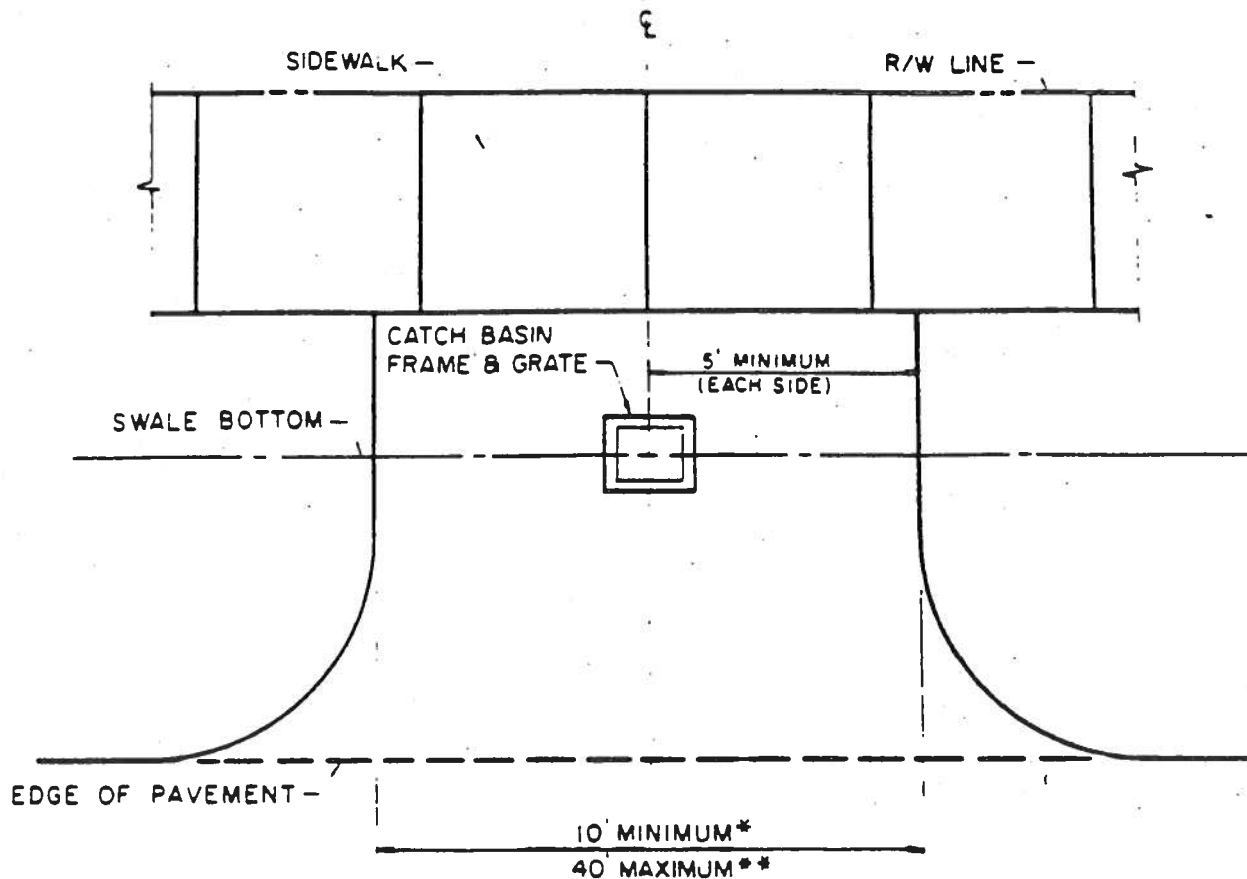
APPROVED  
5/8/2018

REVISED  
5/8/2018

STANDARD STORM DRAINAGE DETAIL  
PRECAST CATH BASIN  
( TYPE D-3 )

SD  
2.2

SHEET 2 OF 2



## PLAN

\*20' MINIMUM FOR COMMERCIAL  
DRIVEWAYS (SEE R-12.5)

\*\* FOR WIDTHS BETWEEN  
40' & 60' SEE R-12.2

|                   |              |             |
|-------------------|--------------|-------------|
| CATCH BASIN CONST |              | SEC 35C     |
| SEEPAGE DR CONST  |              | SEC 36D     |
| DRIVEWAYS         | R-12.5 TO    |             |
|                   | R-25 INC     |             |
| ITEM              | CROSS<br>REF | SPEC<br>REF |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
6/26/86

REVISED

5/17/72

5/4/86

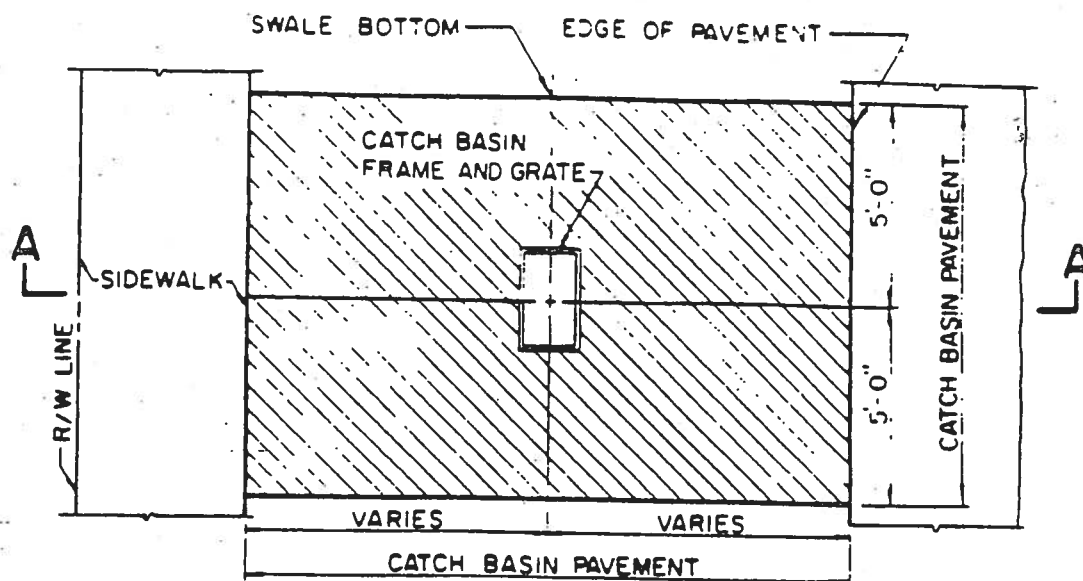
STANDARD STORM DRAINAGE DETAIL

CATCH BASIN LOCATION  
IN COMMERCIAL AND  
RESIDENTIAL DRIVEWAYS

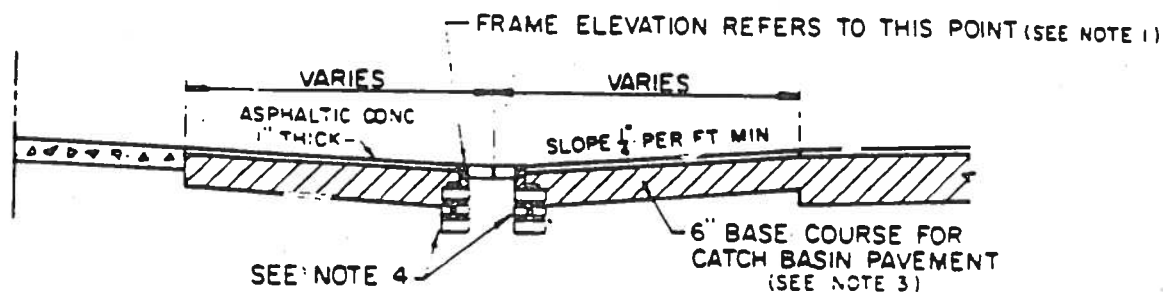
SD  
2.4

SHEET 1 OF 1





**PLAN**



**SECTION A-A**

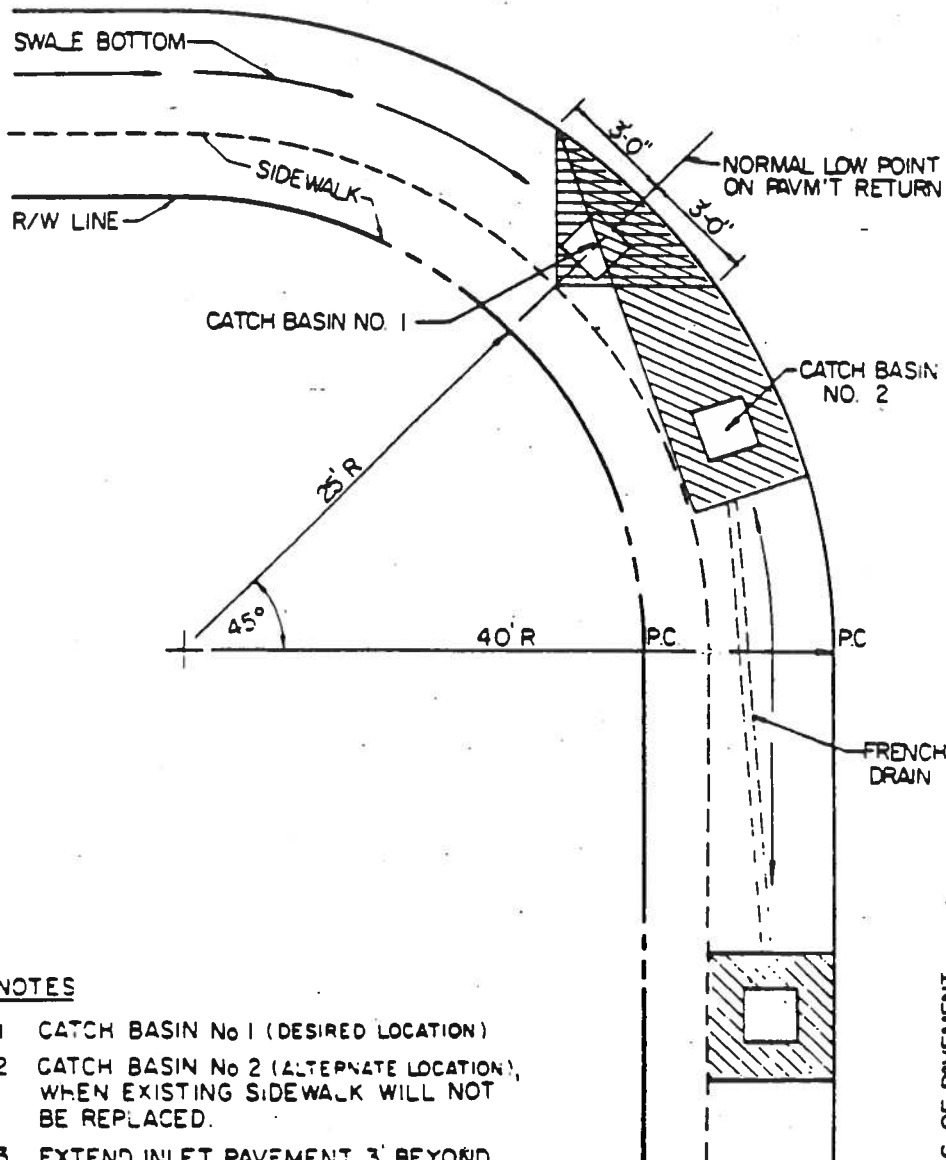
**NOTES**

1. FRAME ELEVATION SHALL BE AT LEAST 3" BELOW SWALE GRADE ELEVATIONS AS SHOWN ON DETAILS R-11 THRU R-81.
2. FRAME ELEVATION SHALL BE AT LOW POINT OF CATCH BASIN PAVEMENT.
3. 6" CONCRETE SLAB MAY BE SUBSTITUTED FOR 6" BASE COURSE. REINFORCING STEEL TO BE APPROVED BY PUBLIC WORKS DEPARTMENT.
4. A SMOOTH LINE OF MORTAR  $\frac{1}{2}$ " THICK INSIDE AND OUTSIDE.

|                     |           |           |
|---------------------|-----------|-----------|
| INLET CONST         |           | SEC 355   |
| CATCH BASIN CONST   |           | SEC 350   |
| CATCH BASIN FR & GR | SD-2.3    |           |
| ITEM                | CROSS REF | SPEC. REF |

|                                                           |                         |                   |                                                                                              |                         |
|-----------------------------------------------------------|-------------------------|-------------------|----------------------------------------------------------------------------------------------|-------------------------|
| METROPOLITAN<br>DADE COUNTY<br>PUBLIC WORKS<br>DEPARTMENT | APPROVED<br><br>6/26/61 | REVISED<br>8/3/66 | STANDARD STORM DRAINAGE DETAIL<br>CATCH BASIN PAVEMENT<br>(OTHER THAN DRIVEWAY<br>LOCATIONS) | SD<br>2.5<br>SHEET OF 2 |
|                                                           |                         | 5/17/72<br>6/4/86 |                                                                                              |                         |

Q OF PAVEMENT



**NOTES**

- 1 CATCH BASIN No 1 (DESIRED LOCATION)
- 2 CATCH BASIN No 2 (ALTERNATE LOCATION), WHEN EXISTING SIDEWALK WILL NOT BE REPLACED.
- 3 EXTEND INLET PAVEMENT 3' BEYOND LOW POINT OF PAVEMENT RETURN.
- 4 CATCH BASIN NOT TO INTERFERE WITH PEDESTRIAN RAMPS

| ITEM | CROSS REF | SPEC REF |
|------|-----------|----------|

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED  
5/17/72

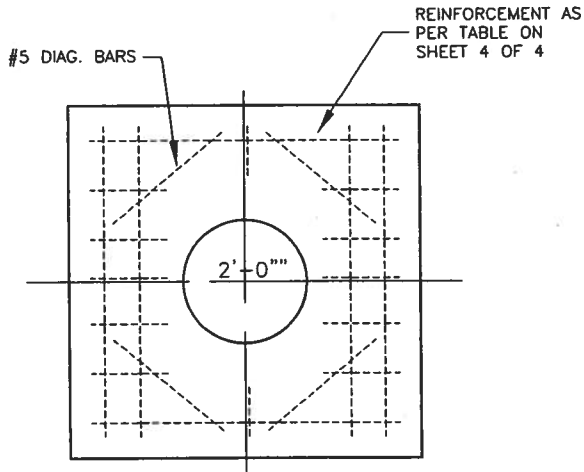
REVISED  
3/7/6

STANDARD STORM DRAINAGE DETAIL  
TYPICAL INLET PAVEMENT  
AT INTERSECTIONS

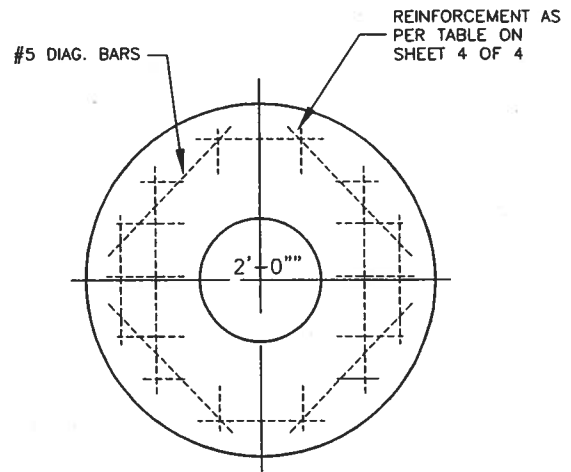
SD  
2.5

SHEET 2 OF 2

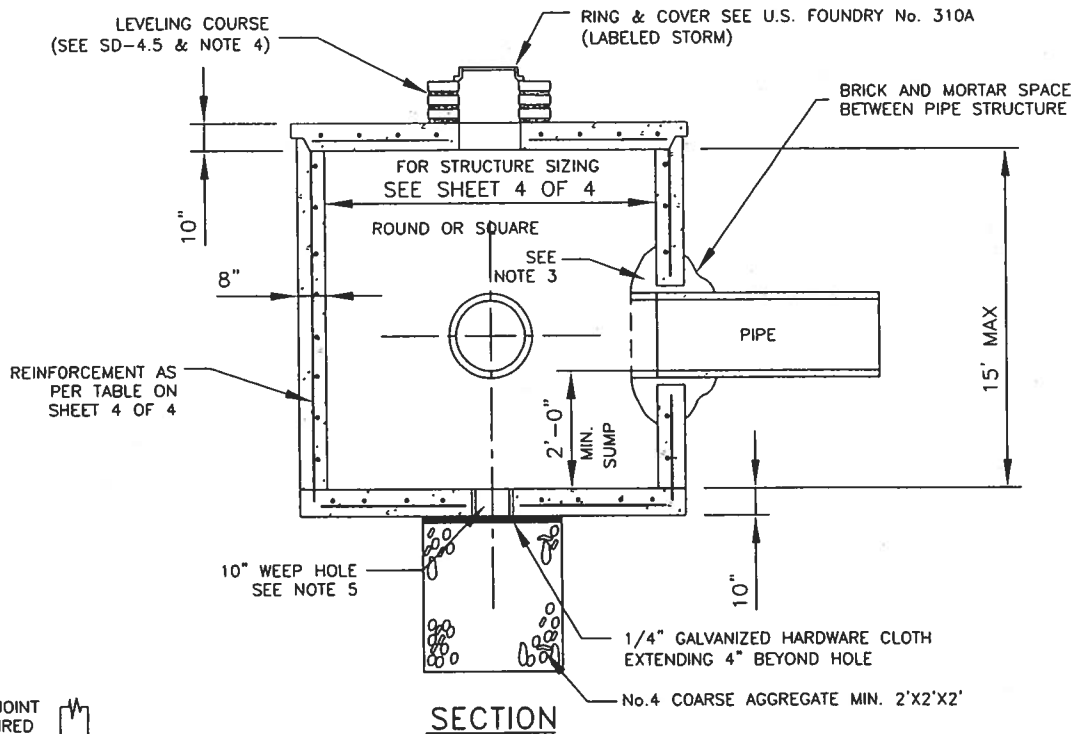
J-7T



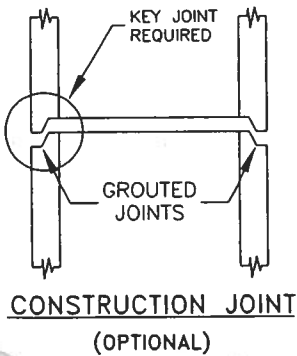
SQUARE TOP



ROUND TOP



SECTION



NOTES:

- 1.- CAST TOP SLAB TO FIT WALL USED.
- 2.- USE 4,000 psi CONCRETE. (MINIMUM), MAXIMUM W/C=0.53, GRADE 60 STEEL FOR REBAR AND GRADE 65 FOR WWF.
- 3.- PIPES MAY EXTEND INTO CATCH BASIN A MAXIMUM OF 4".
- 4.- APPLY A SMOOTH LINE OF MORTAR 1/2" THICK INSIDE AND OUTSIDE.
- 5.- WEEP HOLES ARE TO BE USED WHEN THE YEARLY LOWEST WATER ELEVATION IS ABOVE THE TOP OF THE BOTTOM SLAB OF THE STRUCTURE.

MIAMI-DADE  
COUNTY  
DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

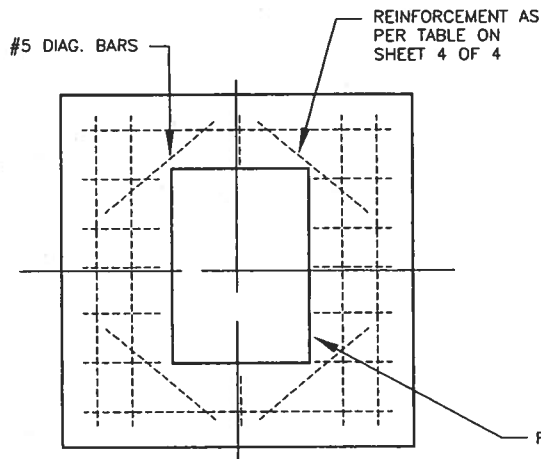
APPROVED  
5/8/2018

REVISED  
5/8/2018  
9/16/2013  
9/26/2012  
8/3/2011

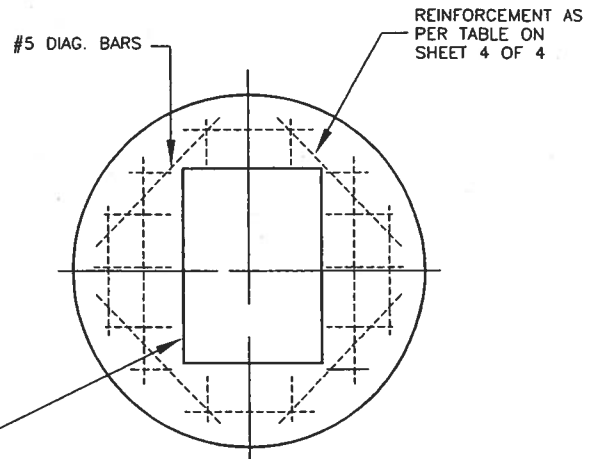
STANDARD STORM DRAINAGE DETAIL  
MANHOLE AND INLET  
(TYPE J)

SD  
2.6  
SHEET 1 OF 4

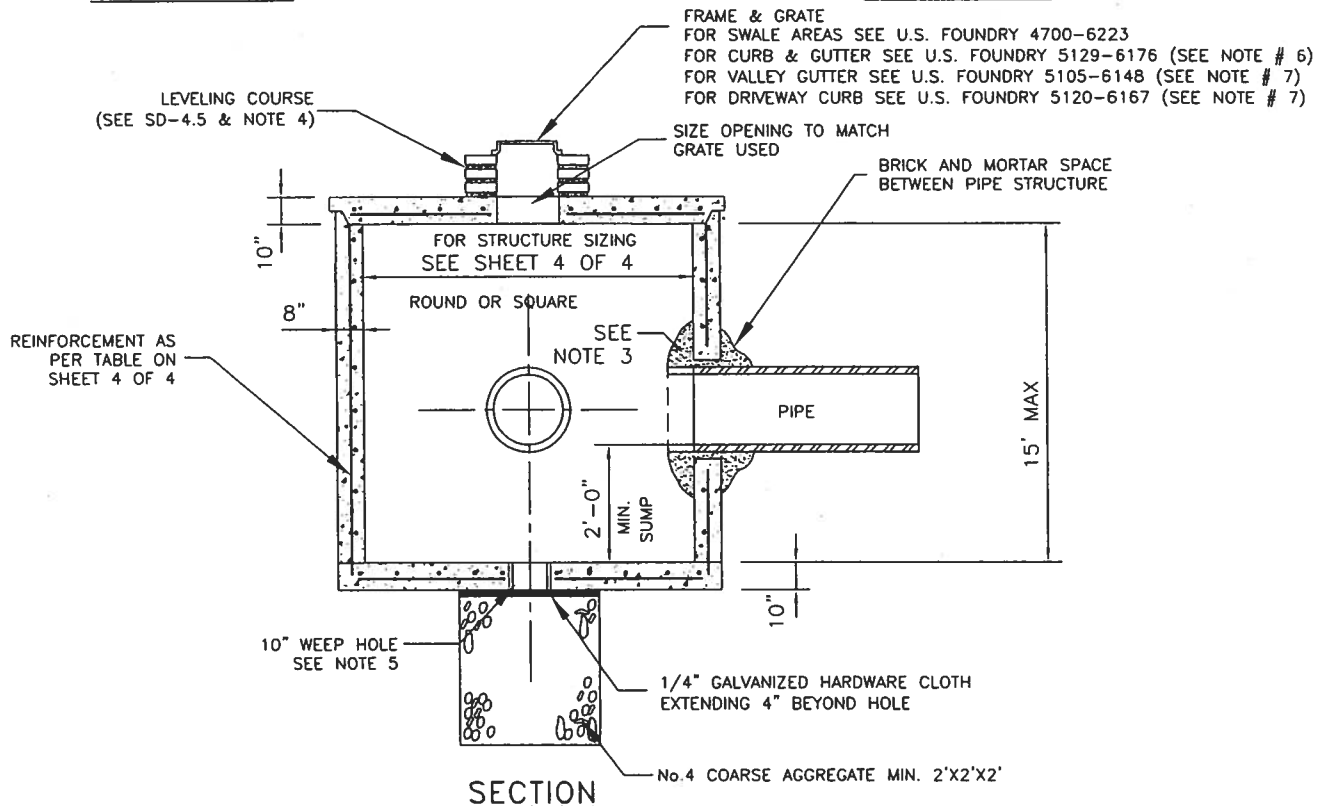
# J-10M



SQUARE TOP



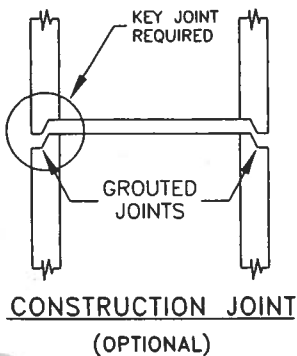
ROUND TOP



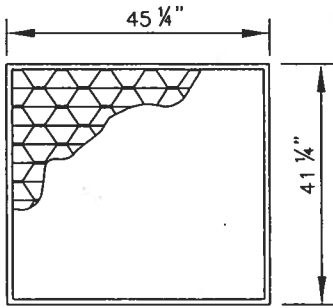
SECTION

## NOTES:

- 1- CAST TOP SLAB TO FIT WALL USED.
- 2- USE 4,000 psi CONCRETE (MINIMUM). MAXIMUM W/C=0.53 GRADE 60 STEEL FOR REBAR AND 65 FOR WWF.
- 3- PIPES MAY EXTEND INTO CATCH BASIN A MAXIMUM OF 4".
- 4- A SMOOTH LINE OF MORTAR 1/2" THICK INSIDE AND OUTSIDE.
- 5- WEEP HOLES ARE TO BE USED WHEN THE YEARLY LOWEST WATER ELEVATION IS ABOVE THE TOP OF THE BOTTOM SLAB OF THE STRUCTURE.
- 6- USF 5129-6176 MAY ONLY BE USED WHEN STRUCTURES ARE TO BE PLACED WITHIN THE RADIUS OF A CORNER AND ITS USE MUST BE APPROVED BY THE DEPARTMENT. THE USE OF THIS FRAME AND GRATE IS NOT INTENDED TO REPLACE STANDARD CURB INLET TOPS. FOR CURB INLETS PLEASE REFER TO FDOT DESIGN STANDARDS INDEX 210 AND 211. INSTALLATION IN OTHER LOCATIONS IS NOT PERMITTED UNLESS APPROVED BY THE DEPARTMENT AS A RESULT OF MITIGATING CIRCUMSTANCES.
- 7- ALTERNATIVE GRATE 5112-6143 MAY BE USED ON NON-RESIDENTIAL ROADWAYS.



J-10



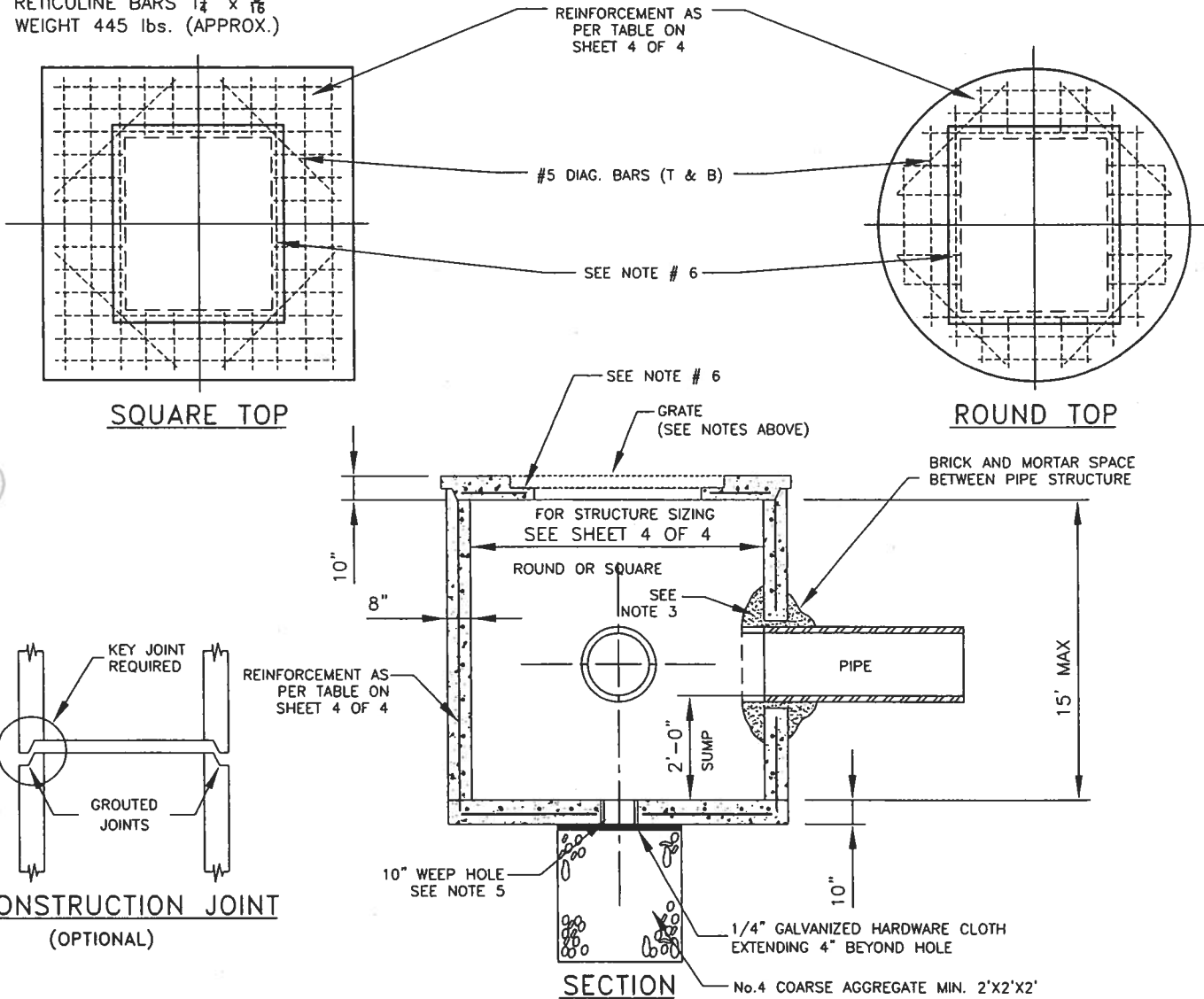
**NOTE:**

ANY GRATING THAT IS CAPABLE OF SUPPORTING H-20 LOADS MAY BE SUBSTITUTED FOR THE USF No. 6646 UPON APPROVAL BY THE DEPARTMENT PROVIDED IT MEETS THE FOLLOWING TWO CONDITIONS:

- 1- THE NET OPEN AREA OF THE GRATE MUST NOT BE LESS THAN THAT OF THE USF No. 6646.
- 2- THE MAXIMUM DISTANCE (MEASURED PERPENDICULAR) BETWEEN BARS DOES NOT EXCEED 3".
- 3- MANUFACTURER MUST BE LISTED IN FDOT'S QPL.

**STEEL GRATING**

U.S. FOUNDRY NO. 6646 GRATE (or EQUAL)  
 STRAIGHT BARS 6" x 1/4"  
 RETICULINE BARS 1 1/4" x 3/16"  
 WEIGHT 445 lbs. (APPROX.)



**NOTES:**

- 1- CAST TOP SLAB TO FIT WALL USED.
- 2- USE 4,000 psi CONCRETE (MINIMUM). MAXIMUM W/C=0.53 GRADE 60 STEEL FOR REBAR AND 65 FOR WWF.
- 3- PIPES MAY EXTEND INTO CATCH BASIN A MAXIMUM OF 4".
- 4- APPLY A SMOOTH LINE OF MORTAR 1/2" THICK INSIDE AND OUTSIDE.
- 5- WEEP HOLES ARE TO BE USED WHEN THE YEARLY LOWEST WATER ELEVATION IS ABOVE THE TOP OF THE BOTTOM SLAB OF THE STRUCTURE.
- 6- GRATE TO BE SUPPORTED ON ALL SIDES.
- 7- STRUCTURE IS NOT TO BE USED IN HEAVY TRAFFIC AREAS OR WHERE THEY WOULD BE SUBJECTED TO CONSTANT LOADING SUCH AS DRIVEWAY APPROACHES.

MIAMI-DADE  
 COUNTY  
 DEPARTMENT OF  
 TRANSPORTATION  
 AND PUBLIC WORKS

APPROVED  
 5/8/2018

REVISED  
 5/8/2018  
 9/16/2013  
 9/26/2012  
 8/3/2011

STANDARD STORM DRAINAGE DETAIL  
 MANHOLE AND INLET  
 (TYPE J)

SD  
 2.6

SHEET 3 OF 4

**SQUARE STRUCTURE**

| Standard Detail | Width (ft)<br>Min. | Length (ft)<br>Max. | Height (ft) | Wall Thickness (in) | Wall Steel          | Top Slab Thickness (in) | Top Slab Steel | Bottom Slab Thickness (in) | Bottom Slab Steel |
|-----------------|--------------------|---------------------|-------------|---------------------|---------------------|-------------------------|----------------|----------------------------|-------------------|
| 2.6             | 8                  | 8                   | 0.0 - 5.0   | 8                   | #4@7"H<br>#4@10"V   | 10                      | #6@6"<br>E.W.  | 10                         | #5@8.5"<br>E.W.   |
| 2.6             | 8                  | 8                   | 5.1 - 10.0  | 8                   | #6@7.5"H<br>#4@10"V | 10                      | #6@6"<br>E.W.  | 10                         | #5@8.5"<br>E.W.   |
| 2.6             | 8                  | 8                   | 10.1-15.0   | 8                   | #7@7"H<br>#4@10"V   | 10                      | #6@6"<br>E.W.  | 10                         | #5@8.5"<br>E.W.   |

**ROUND STRUCTURE**

| Standard Detail | Dia. (ft)<br>Min. | Dia. (ft)<br>Max. | Height (ft) | Wall Thickness (in) | Wall Steel                 | Top Slab Thickness (in) | Top Slab Steel | Bottom Slab Thickness (in) | Bottom Slab Steel |
|-----------------|-------------------|-------------------|-------------|---------------------|----------------------------|-------------------------|----------------|----------------------------|-------------------|
| 2.6             | 5                 | 7                 | 0.0 - 5.0   | 8                   | 8 x 8 W20 or<br>#4@10"E.W. | 10                      | #6@6"<br>E.W.  | 10                         | #5@8.5"<br>E.W.   |
| 2.6             | 5                 | 7                 | 5.1 - 10.0  | 8                   | 8 x 8 W20 or<br>#4@10"E.W. | 10                      | #6@6"<br>E.W.  | 10                         | #5@8.5"<br>E.W.   |
| 2.6             | 5                 | 7                 | 10.1 - 15.0 | 8                   | 8 x 8 W20 or<br>#4@10"E.W. | 10                      | #6@6"<br>E.W.  | 10                         | #5@8.5"<br>E.W.   |

**MIAMI-DADE  
COUNTY**

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

**APPROVED**  
5/8/2018

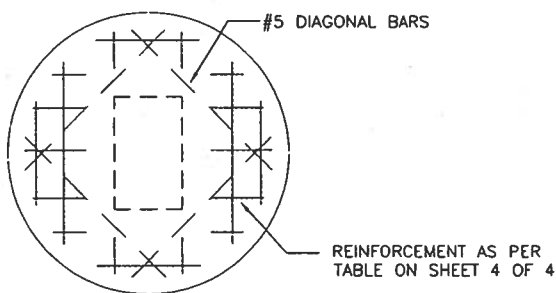
**REVISED**  
5/8/2018  
11/26/2012  
8/3/2011

**STANDARD STORM DRAINAGE DETAIL  
MANHOLE AND INLET  
(TYPE J)**

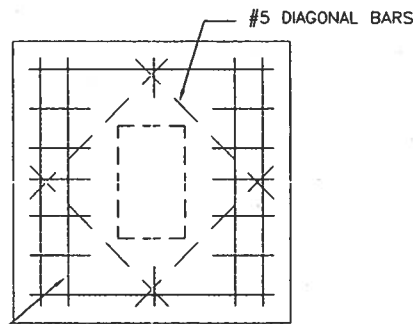
**SD  
2.6**

SHEET 4 OF 4

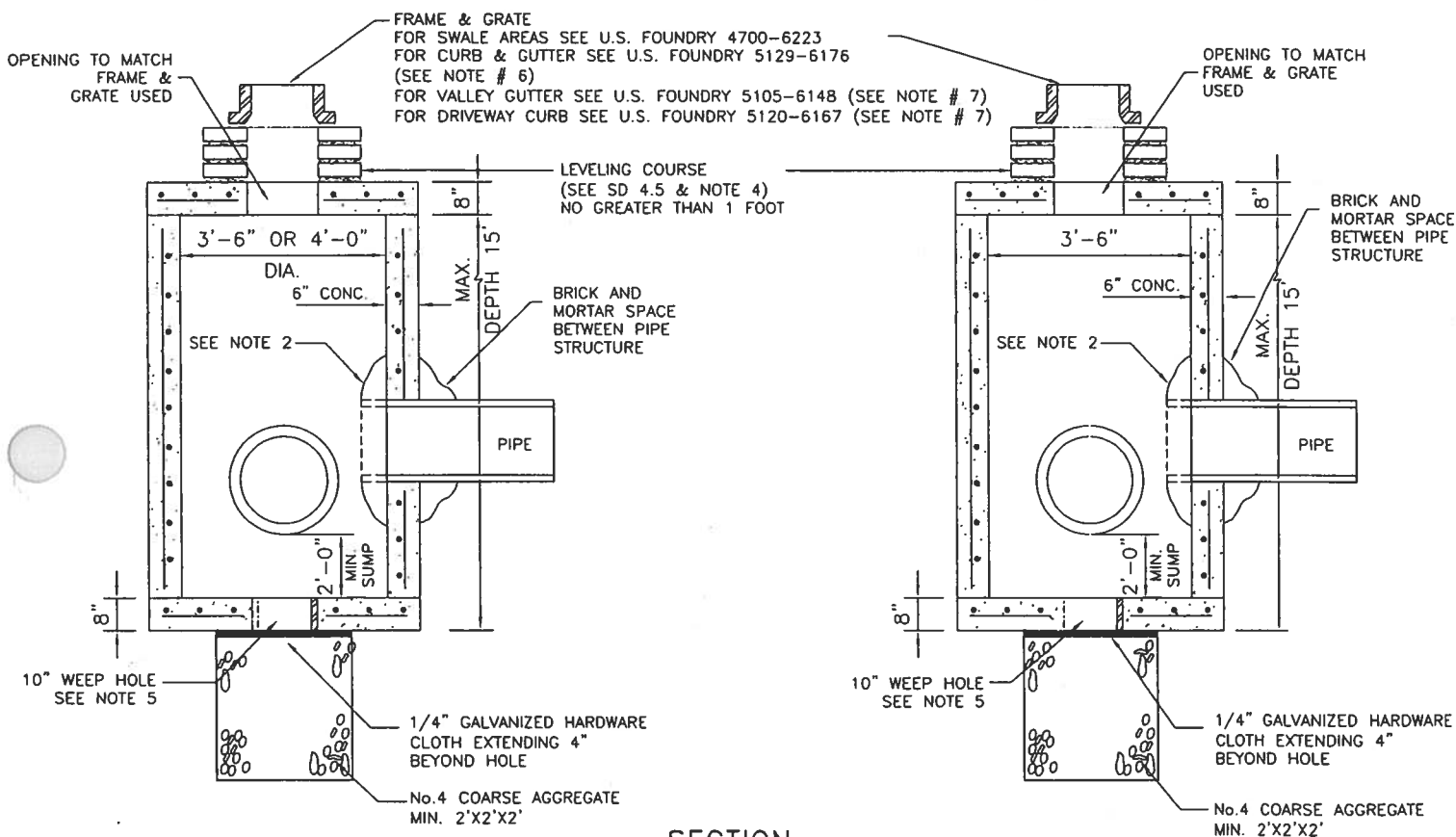




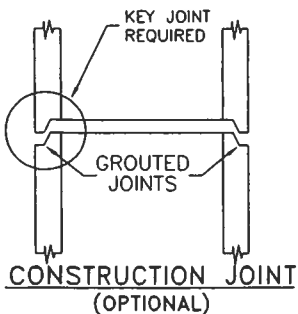
ROUND TOP



SQUARE TOP



SECTION



NOTES:

- 1.- CAST TOP SLAB TO FIT WALL USED.
- 2.- PIPES MAY EXTEND INTO CATCH BASIN A MAXIMUM OF 4".
- 3.- USE 4,000 psi CONCRETE. (MINIMUM), MAXIMUM W/C=0.53, GRADE 60 STEEL FOR REBAR AND GRADE 65 FOR WWF.
- 4.- A SMOOTH LINE OF MORTAR 1/2" THICK INSIDE AND OUTSIDE.
- 5.- WEEP HOLES ARE TO BE USED WHEN THE YEARLY LOWEST WATER ELEVATION IS ABOVE THE TOP OF THE BOTTOM SLAB OF THE STRUCTURE.
- 6.- USF 5129-6176 MAY ONLY USED WHEN STRUCTURES ARE TO BE PLACED WITHIN THE RADIUS OF A CORNER AND ITS USE MUST BE APPROVED BY THE DEPARTMENT. THE USE OF THIS FRAME AND GRATE IS NOT INTENDED TO REPLACE STANDARD CURB INLET TOPS. FOR CURB INLETS PLEASE REFER TO FDOT DESIGN STANDARDS INDEX 210 AND 211. INSTALLATION IN OTHER LOCATIONS IS NOT PERMITTED UNLESS APPROVED BY THE DEPARTMENT AS A RESULT OF MITIGATING CIRCUMSTANCES.

MIAMI-DADE  
COUNTY

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
5/8/2018

REVISED  
5/8/2018

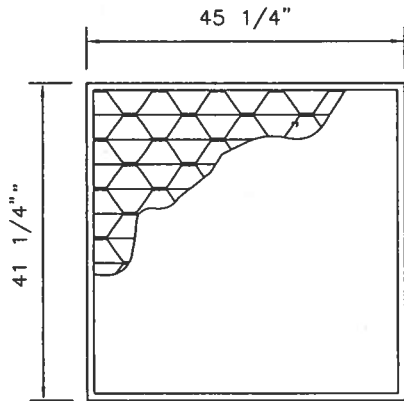
STANDARD STORM DRAINAGE DETAIL  
MANHOLE AND INLET  
(TYPE P)

SD  
2.7

SHEET 2 OF 4



# TYPE P-10



## STEEL GRATING

U.S. FOUNDRY NO. 6646

GRATE (or EQUAL)

STRAIGHT BARS  $6'' \times \frac{1}{4}''$

RETICULINE BARS  $1\frac{1}{4}'' \times \frac{3}{16}''$

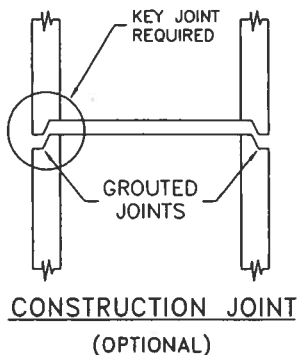
WEIGHT 445 lbs. (APPROX.)

### NOTE:

- ANY GRATING THAT IS CAPABLE OF SUPPORTING H-20 LOADS MAY BE SUBSTITUTED FOR THE U.S. FOUNDRY NO. 6646 UPON APPROVAL OF THE DEPARTMENT PROVIDING IT MEETS THE FOLLOWINGS CONDITIONS:

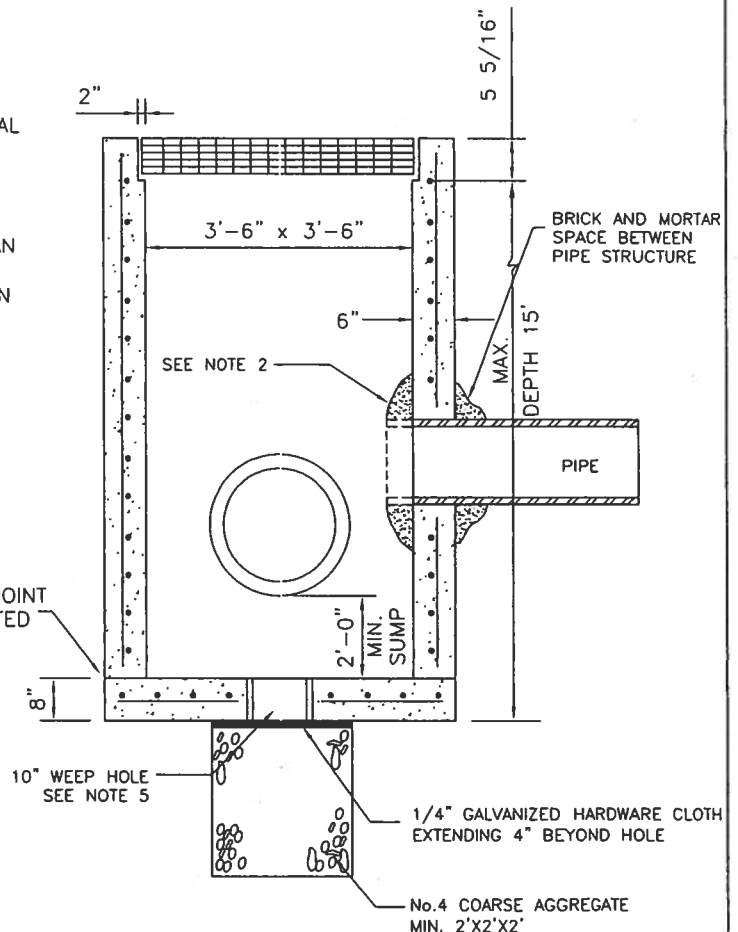
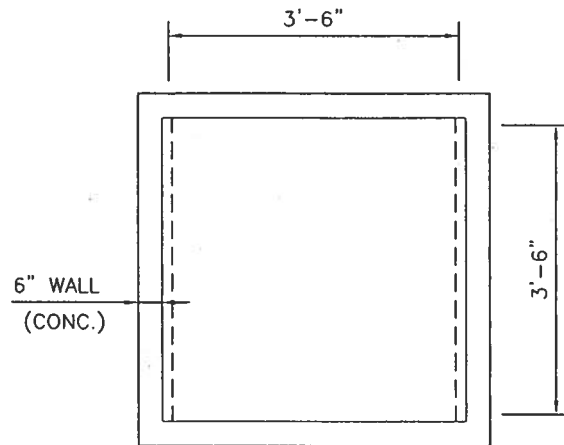
- MANUFACTURER MUST BE LISTED IN FDOT'S QPL.
- THE NET OPEN AREA OF THE GRATE MUST NOT BE LESS THAN THAT OF THE U.S. FOUNDRY NO. 6646.
- THE MAXIMUM DISTANCE (MEASURED PERPENDICULAR) BETWEEN BARS DOES NOT EXCEED 3".

- PIPES MAY EXTEND INTO CATCH BASIN MAXIMUM OF 4".
- USE 4,000 psi CONCRETE (MINIMUM), MAXIMUM W/C=0.53, GRADE 60 STEEL FOR REBAR AND GRADE 65 FOR WWF.
- WEEP HOLES ARE TO BE USED WHEN THE YEARLY LOWEST WATER ELEVATION IS ABOVE THE TOP OF THE BOTTOM SLAB OF THE STRUCTURE.



CONST. JOINT PERMITTED

## PLAN



MIAMI-DADE  
COUNTY

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
5/8/2018

REVISED  
5/8/2018

STANDARD STORM DRAINAGE DETAIL  
MANHOLE AND INLET  
(TYPE P)

SD  
2.7

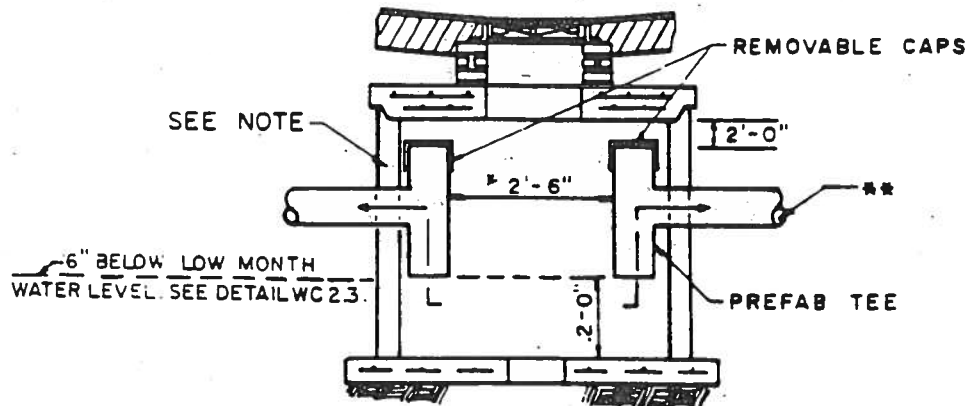
SHEET 3 OF 4

### SQUARE STRUCTURE

| Standard Detail | Width (ft) | Length (ft) | Height (ft) | Wall Thickness (in) | Wall Steel         | Top Slab Thickness (in) | Top Slab Steel  | Bottom Slab Thickness (in) | Bottom Slab Steel |
|-----------------|------------|-------------|-------------|---------------------|--------------------|-------------------------|-----------------|----------------------------|-------------------|
| 2.7             | 3.5        | 3.5         | 0.0 - 5.0   | 6.0                 | #4@10"H<br>#4@10"V | 8.0                     | #4@7"<br>E.W.   | 8.0                        | #4@10"<br>E.W.    |
| 2.7             | 3.5        | 3.5         | 5.1 - 10.0  | 6.0                 | #4@9"H<br>#4@10"V  | 8.0                     | #4@6"<br>E.W.   | 8.0                        | #4@10"<br>E.W.    |
| 2.7             | 3.5        | 3.5         | 10.1-15.0   | 6.0                 | #5@6"H<br>#4@10"V  | 8.0                     | #4@6.5"<br>E.W. | 8.0                        | #4@10"<br>E.W.    |

### ROUND STRUCTURE

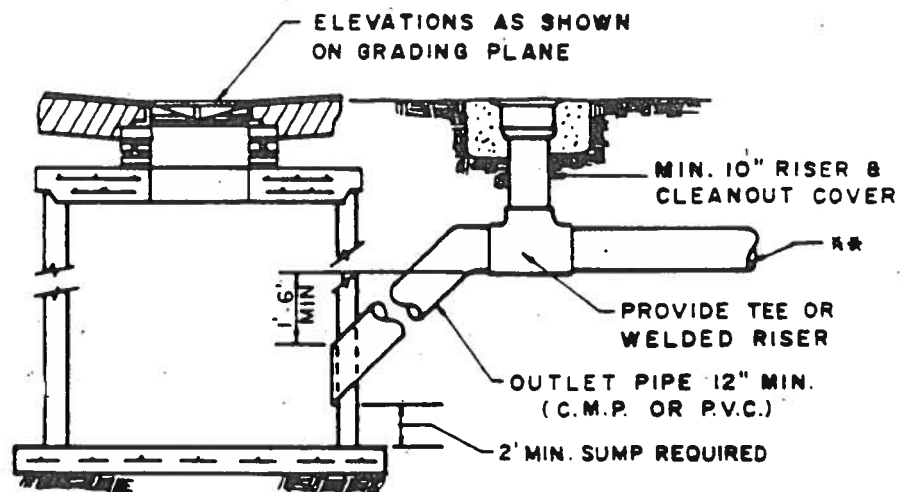
| Standard Detail | Dia. (ft) Min. | Dia. (ft) Max. | Height (ft) | Wall Thickness (in) | Wall Steel                 | Top Slab Thickness (in) | Top Slab Steel  | Bottom Slab Thickness (in) | Bottom Slab Steel |
|-----------------|----------------|----------------|-------------|---------------------|----------------------------|-------------------------|-----------------|----------------------------|-------------------|
| 2.7             | 3.5            | 4.0            | 0.0 - 5.0   | 6.0                 | 8 x 8 W20 or<br>#4@10"E.W. | 8.0                     | #4@7"<br>E.W.   | 8.0                        | #4@10"<br>E.W.    |
| 2.7             | 3.5            | 4.0            | 5.1 - 10.0  | 6.0                 | 8 x 8 W20 or<br>#4@10"E.W. | 8.0                     | #4@6"<br>E.W.   | 8.0                        | #4@10"<br>E.W.    |
| 2.7             | 3.5            | 4.0            | 10.1 - 15.0 | 6.0                 | 8 x 8 W20 or<br>#4@10"E.W. | 8.0                     | #4@6.5"<br>E.W. | 8.0                        | #4@10"<br>E.W.    |



#### NOTE

1. MINIMUM SIZE CATCH BASIN  
PER STD DETAIL SD 2.2 OR LARGER.
2. REINFORCEMENT PER APPLICABLE  
STD SD DETAIL - P.W. MANUAL PART I

- \* TWO (2) TEES AS SHOWN  
IF EXFILTRATION TRENCH AT  
BOTH SIDES OF STRUCTURE



- \*\* SET PIPE INVERT TO OCT WATER LEVEL.  
SEE DETAIL WC 2.2-SECTION D4, WATER CONTROL"

|                       |               |              |
|-----------------------|---------------|--------------|
| INLET CONST           |               | SEC 355      |
| CATCH BASIN CONST.    | SD-2.2        | SEC 350      |
| CATCH BASIN FR. & GR. | SD-2.3        |              |
| ITEM                  | CROSS<br>REF. | SPEC.<br>REF |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED

7/7/88

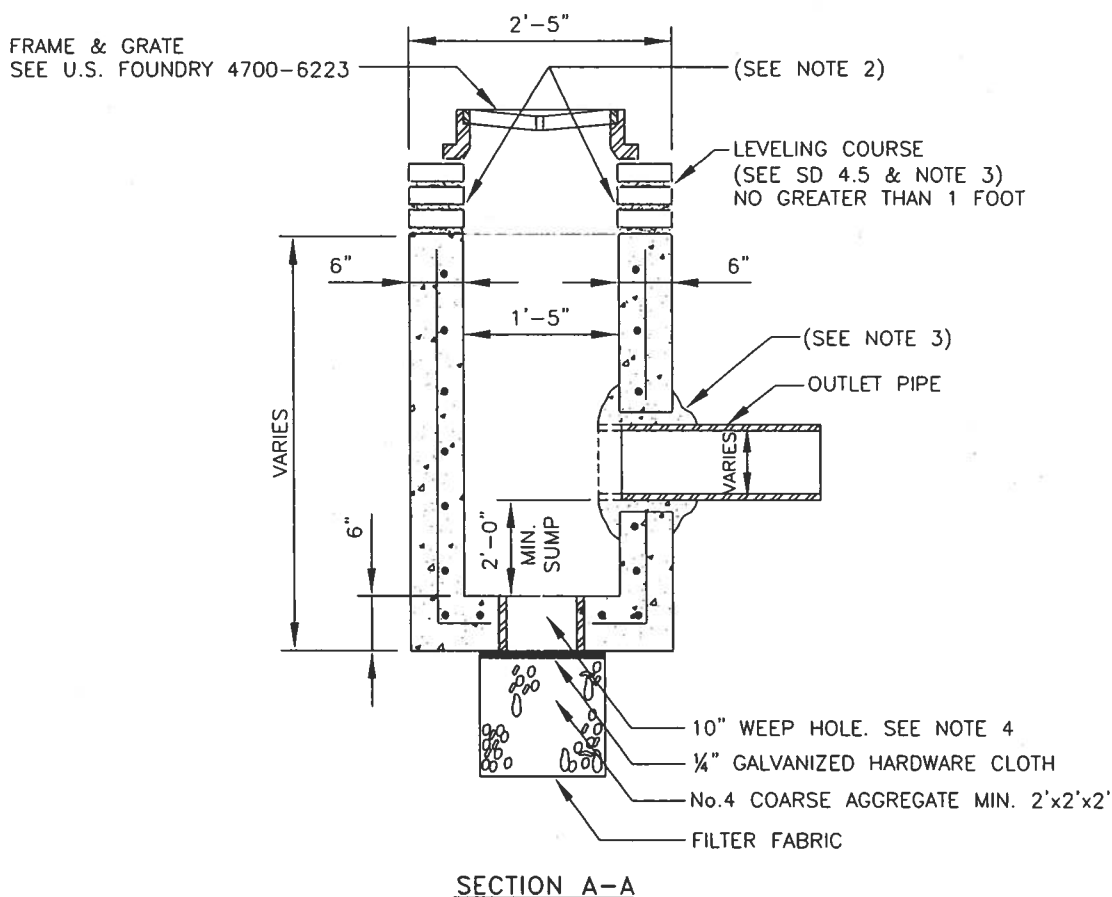
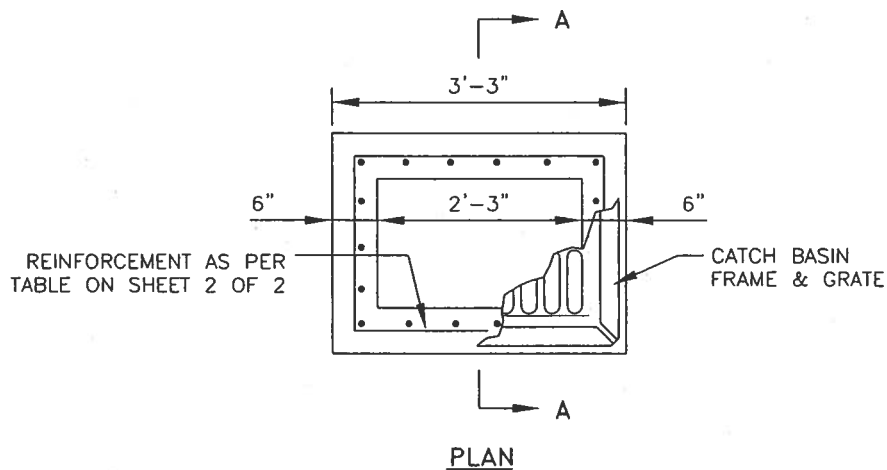
REVISED

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

STANDARD STORM DRAINAGE DETAIL  
CATCH BASIN  
WITH  
GREASE & OIL SEPARATOR

SD  
2.9

SHEET 1 OF 1



**NOTES:**

- 1.-PIPES MAY EXTEND INTO CATCH BASIN A MAXIMUM OF 4".
- 2.-USE 4,000 psi CONCRETE. (MINIMUM), MAXIMUM W/C=0.53, GRADE 60 STEEL FOR REBAR AND GRADE 65 FOR WWF.
- 3.-A SMOOTH LINE OF MORTAR 1/2" THICK INSIDE AND OUTSIDE.
- 4.-WEEP HOLES ARE TO BE USED WHEN THE YEARLY LOWEST WATER ELEVATION IS ABOVE THE TOP OF THE BOTTOM SLAB OF THE STRUCTURE.
- 5.-THIS STRUCTURE IS ONLY TO BE USED WHERE UTILITY CONFLICTS DO NOT ALLOW FOR INSTALLATION OF STANDARD STRUCTURES. THE INSTALLATION OF THIS STRUCTURE MUST BE APPROVED BY THE DEPARTMENT.

MIAMI-DADE  
COUNTY

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
5/8/2018

REVISED  
5/8/2018

STANDARD STORM DRAINAGE DETAIL  
SWALE INLET  
(TYPE D-1)

SD  
3.1

SHEET 1 OF 2

| RECTANGULAR BOX |            |             |             |                     |                    |                         |                |                            |                   |                      |
|-----------------|------------|-------------|-------------|---------------------|--------------------|-------------------------|----------------|----------------------------|-------------------|----------------------|
| Standard Detail | Width (ft) | Length (ft) | Height (ft) | Wall Thickness (in) | Wall Steel         | Top Slab Thickness (in) | Top Slab Steel | Bottom Slab Thickness (in) | Bottom Slab Steel | Bottom Slab Overhang |
| 3.1             | 1.42       | 2.25        | 0 - 5.0     | 6"                  | #4@10"H<br>#4@10"V | N/A                     | N/A            | 6"                         | #4@12" E.W.       | 6"                   |
| 3.1             | 1.42       | 2.25        | 5.1 - 10.0  | 6"                  | #4@10"H<br>#4@10"V | N/A                     | N/A            | 6"                         | #4@12" E.W.       | N/A                  |
| 3.1             | 1.42       | 2.25        | 10.1-15.0   | 6"                  | #4@6"H<br>#4@10"V  | N/A                     | N/A            | 8"                         | #4@12" E.W.       | N/A                  |

MIAMI-DADE  
COUNTY  
  
DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

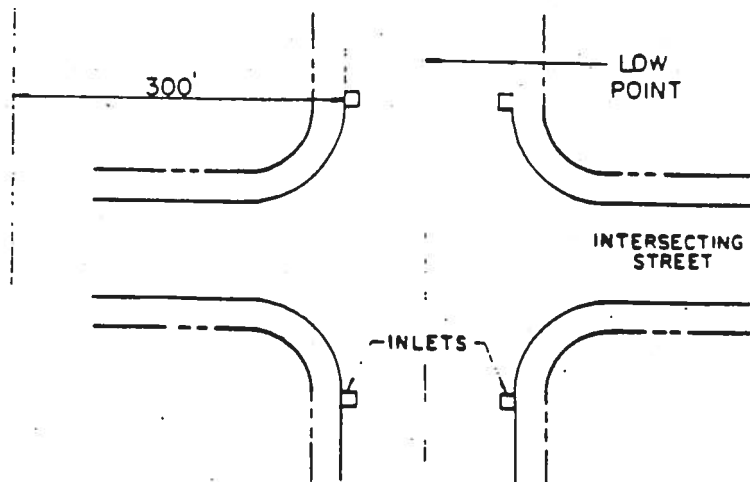
APPROVED  
5/8/2018

REVISED  
5/8/2018  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

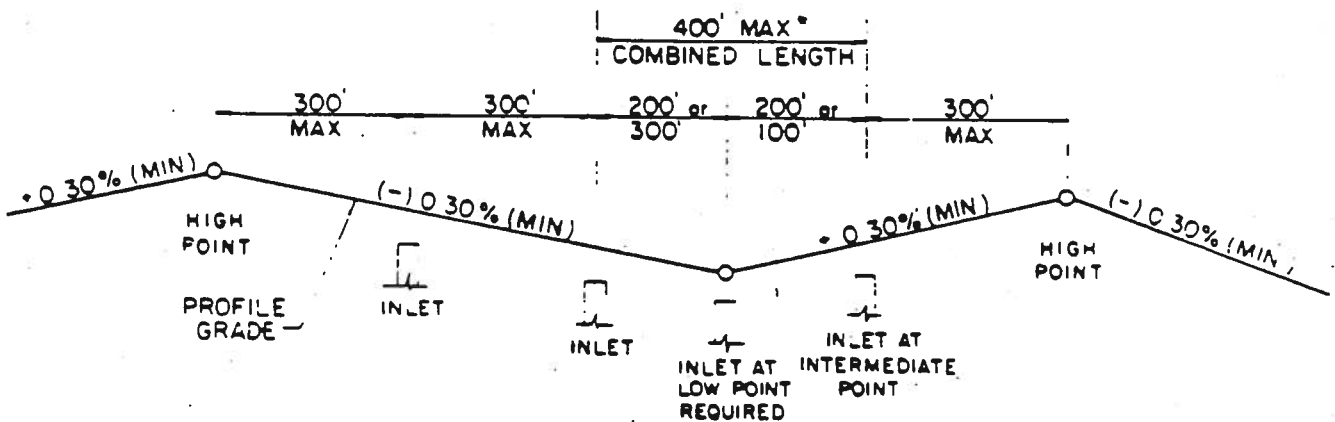
STANDARD STORM DRAINAGE DETAIL  
SWALE INLET  
( TYPE D-1 )

SD  
3.1

SHEET 2 OF 2



PLAN



PROFILE

NOTES

1. MAXIMUM TOTAL CURB DISTANCE LENGTH WHEN DRAINING INTO ONE (1) INLET AT LOW POINT. WHEN LOW POINT EXISTS AT INTERSECTING STREET AS SHOWN IN ABOVE PLAN, AND THERE IS AN INLET ON EACH CORNER, THEN THE 300' SPACING APPLIES.
2. THE HORIZONTAL DIMENSIONS DO NOT CONTROL DISTANCES BETWEEN POINTS OF INTERSECTIONS OF GRADE TANGENTS
3. USE ABOVE REQUIREMENTS ON PROJECTS WITH CURB & GUTTER ROAD SECTION ONLY.

|               |           |          |
|---------------|-----------|----------|
| WATER CONTROL |           | SEC D-4  |
| ITEM          | CROSS REF | SPEC REF |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

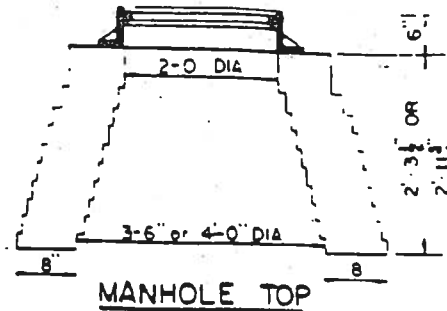
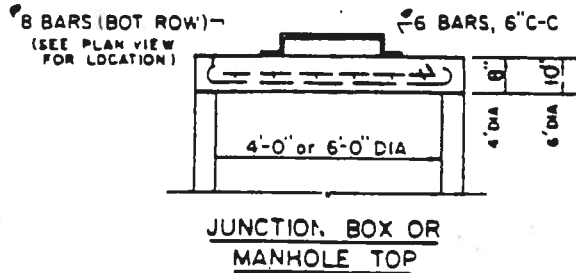
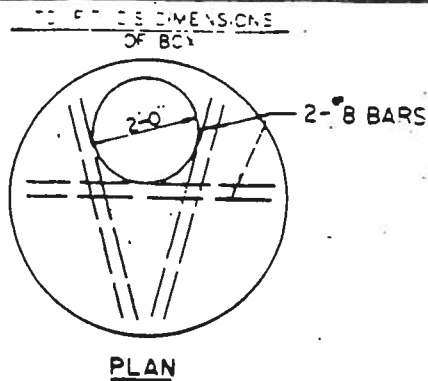
APPROVED  
5/17/72

REVISED  
6/4/86

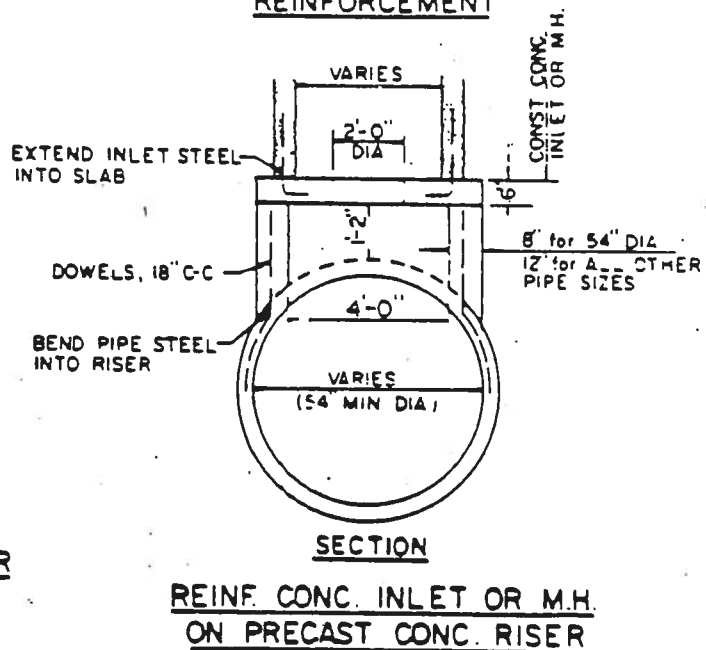
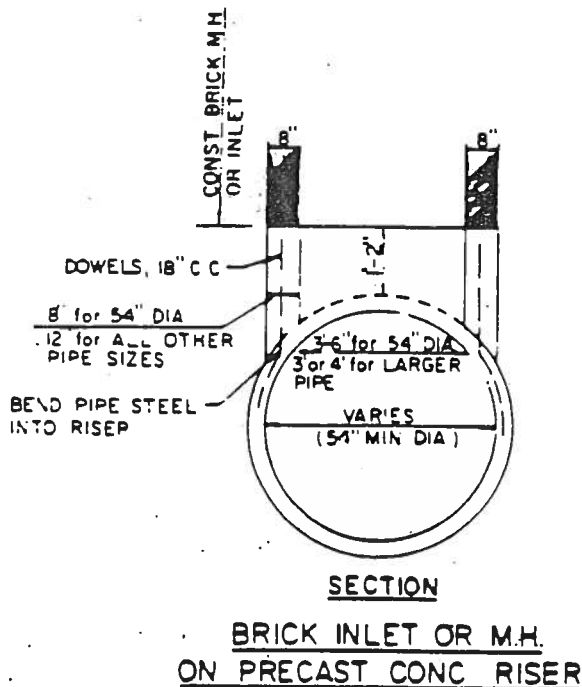
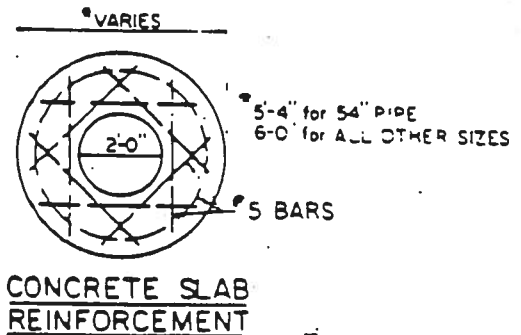
STANDARD STORM DRAINAGE DETAIL  
INLET SPACING FOR  
POSITIVE DRAINAGE SYSTEMS

SD  
3.5

SHEET 1 OF 1



NOTE UNIT MAY BE PRECAST OR CAST IN PLACE CONCRETE CONSTRUCTION WALL THICKNESS & STEEL SAME AS USED FOR SUPPORTING UNIT WALL ECCENTRIC CONE MAY BE USED



NOTE

THE INSIDE AND OUTSIDE OF BRICK WALLS SHALL BE PLASTERED WITH 1/2 CEMENT MORTAR THICK.

| MORTAR     |           | SEC 320  |
|------------|-----------|----------|
| M.H. CONST |           | SEC 340  |
| ITEM       | CROSS REF | SPEC REF |

METROPOLITAN  
DADE COUNTY  
PUBLIC WORKS  
DEPARTMENT

APPROVED

5/17/72

REVISED

6/4/86

STANDARD STORM DRAINAGE DETAIL  
JUNCTION BOX, MANHOLE TOP  
& PRECAST CONCRETE  
RISER DETAILS

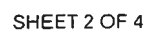
SD  
3.6

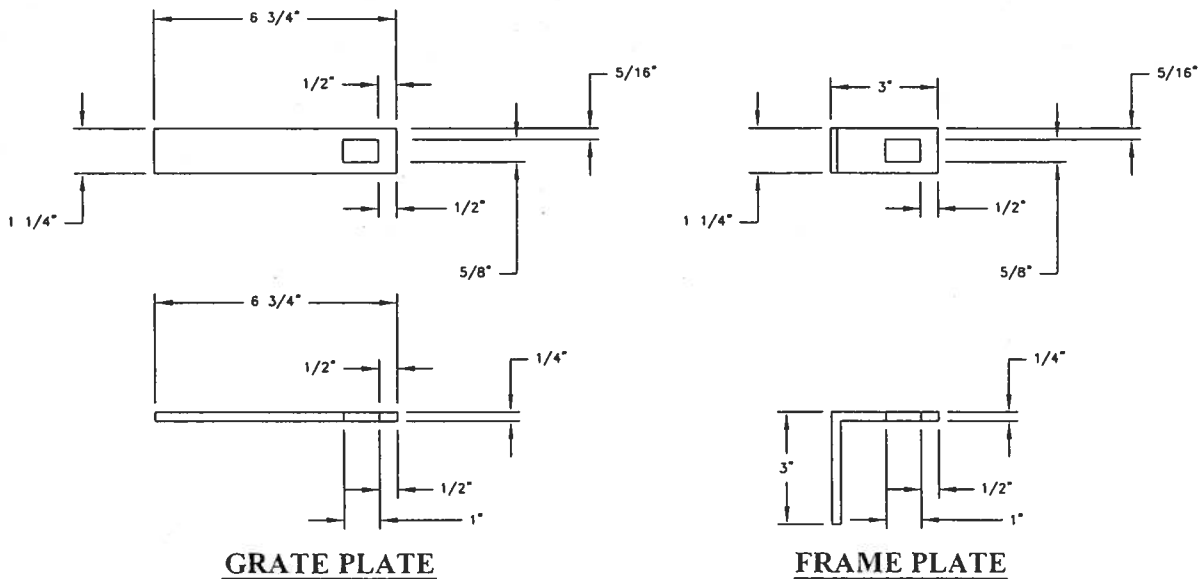
SHEET 1 OF 1





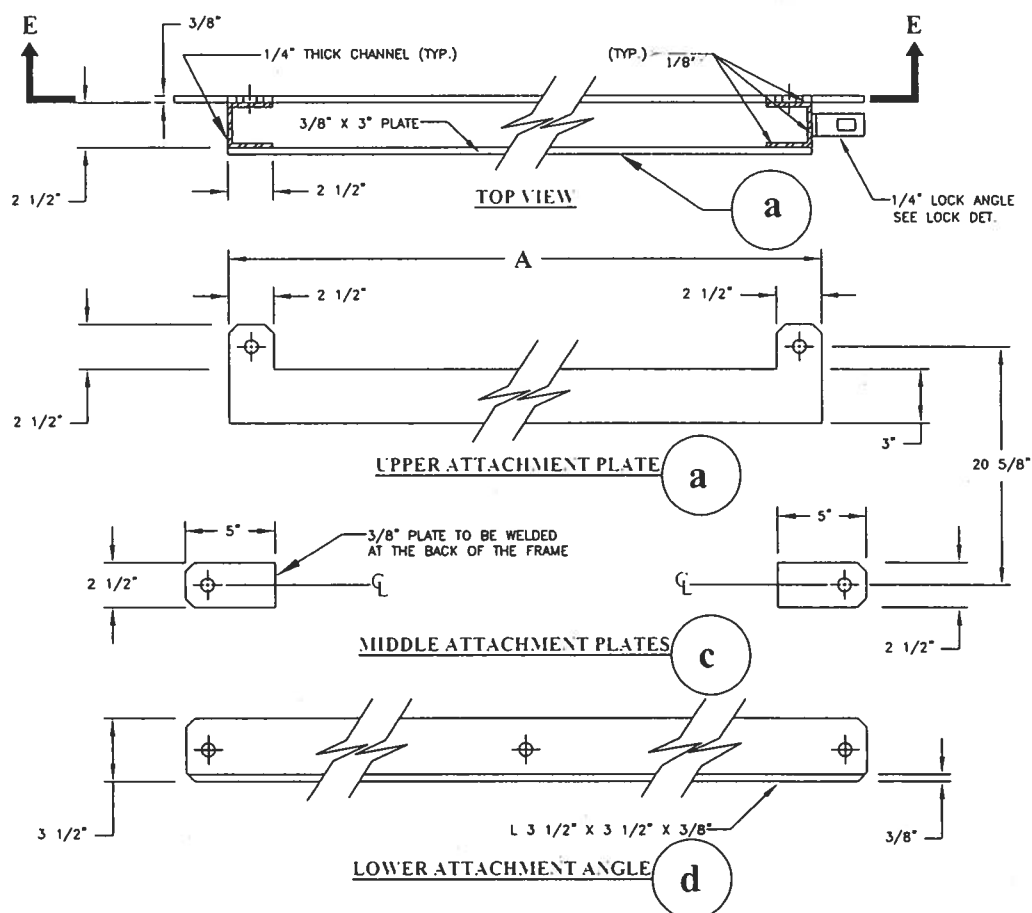






## LOCK DETAIL

NTS



## SECTION E - E

NTS

MIAMI-DADE  
COUNTY

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
5/8/2018

REVISED  
5/8/2018

STANDARD STORM DRAINAGE DETAIL

MANATEE GRATE

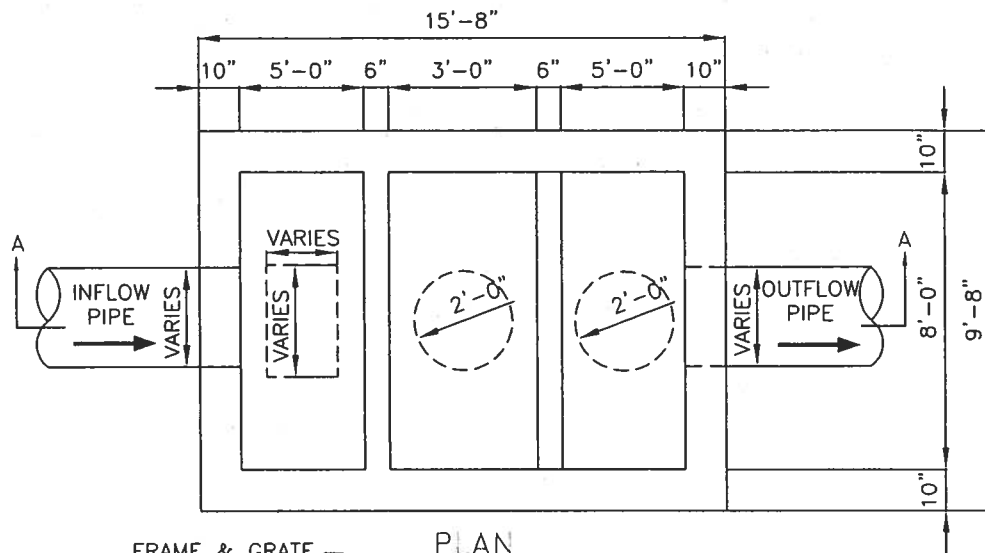
SD  
5.1

SHEET 3 OF 4

# MANATEE GRATE TABLE

| D  | A     | C      | E    | A1   | a          | b                   | c               | d                   | e               | No. of Bars @ 6" o.c. |
|----|-------|--------|------|------|------------|---------------------|-----------------|---------------------|-----------------|-----------------------|
| 18 | E+12" | VARIES | O.D. | A-1" | 3/8" PLATE | C1/4"X2 1/2"X2 1/2" | 3/8"X2 1/2"X5"  | L3 1/2"X3 1/2"X3/8" | C1/8"X1 1/4"X3" | 4                     |
| 24 | E+12" | VARIES | O.D. | A-1" | 3/8" PLATE | C1/4"X2 1/2"X2 1/2" | 3/8"X2 1/2"X5"  | L3 1/2"X3 1/2"X3/8" | C1/8"X1 1/4"X3" | 5                     |
| 30 | E+12" | VARIES | O.D. | A-1" | 3/8" PLATE | C1/4"X2 1/2"X2 1/2" | 3/8"X2 1/2"X5"  | L3 1/2"X3 1/2"X3/8" | C1/8"X1 1/4"X3" | 6                     |
|    | E+12" | VARIES | O.D. | A-1" | 3/8" PLATE | C1/4"X2 1/2"X2 1/2" | 3/8"X2 1/2"X5"  | L3 1/2"X3 1/2"X3/8" | C1/8"X1 1/4"X4" | 7                     |
|    | E+12" | VARIES | O.D. | A-1" | 3/8" PLATE | C1/4"X2 1/2"X2 1/2" | 3/8"X2 1/2"X5"  | L3 1/2"X3 1/2"X3/8" | C1/8"X1 1/4"X4" | 8                     |
| 48 | E+12" | VARIES | O.D. | A-1" | 3/8" PLATE | C1/4"X2 1/2"X2 1/2" | 3/8"X2 1/2"X5"  | L3 1/2"X3 1/2"X3/8" | C1/8"X1 1/4"X4" | 8                     |
| 54 | E+12" | VARIES | O.D. | A-1" | 3/4" PLATE | C1/2"X2 1/2"X2 1/2" | 3/4"X4 1/2"X10" | L3 1/2"X3 1/2"X1/2" | C1/8"X1 1/4"X4" | 10                    |
| 60 | E+12" | VARIES | O.D. | A-1" | 3/4" PLATE | C1/2"X2 1/2"X2 1/2" | 3/4"X4 1/2"X10" | L3 1/2"X3 1/2"X1/2" | C1/8"X1 1/4"X4" | 11                    |

# THREE CHAMBERS (3C)



PLAN  
N.T.S.

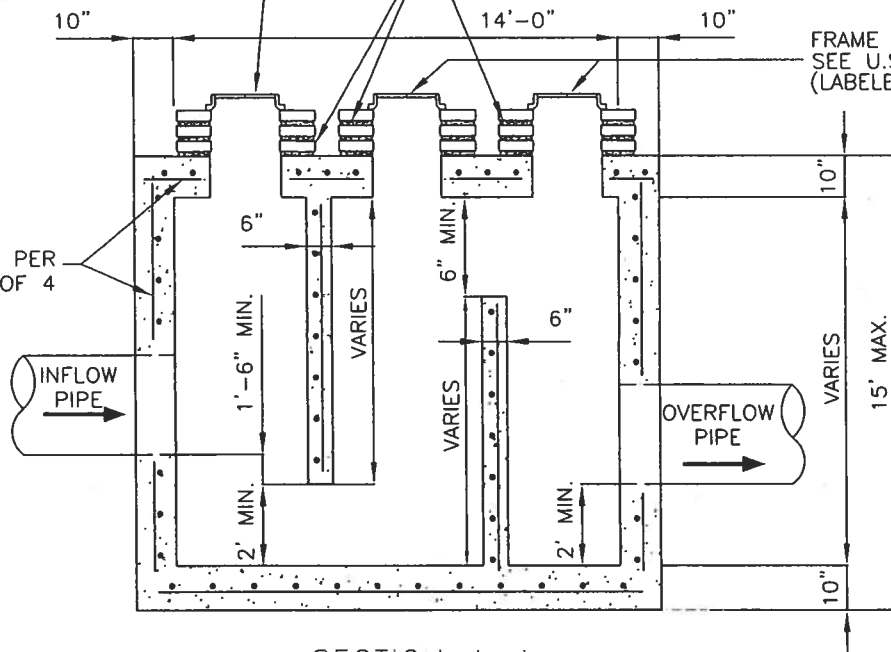
FOR SWALE AREAS SEE U.S. FOUNDRY 4700-6223  
FOR CURB & GUTTER SEE U.S. FOUNDRY 5129-6176  
(SEE NOTE # 5)  
FOR VALLEY GUTTER SEE U.S. FOUNDRY 5105-6148  
FOR DRIVEWAY CURB SEE U.S. FOUNDRY 5120-6167  
FOR MANHOLE SEE U.S. FOUNDRY 310A

FRAME & GRATE

LEVELING COURSE  
(SEE SD 4.5 & NOTE 4)

FRAME & COVER  
SEE U.S. FOUNDRY 310A  
(LABELED STORM)

REINFORCEMENT AS PER  
TABLE ON SHEET 4 OF 4



SECTION A-A  
N.T.S.

## NOTES:

- 1.- CAST TOP SLAB TO FIT WALL USED.
- 2.- PIPES MAY EXTEND INTO CATCH BASIN A MAXIMUM OF 4".
- 3.- USE 4,000 psi CONCRETE. (MINIMUM), MAXIMUM W/C=0.53, GRADE 60 STEEL FOR REBAR AND GRADE 65 FOR WWF.
- 4.- A SMOOTH LINE OF MORTAR 1/2" THICK INSIDE AND OUTSIDE.
- 5.- USF 5129-6176 MAY ONLY USED WHEN STRUCTURES ARE TO BE PLACED WITHIN THE RADIUS OF A CORNER AND ITS USE MUST BE APPROVED BY THE DEPARTMENT. THE USE OF THIS FRAME AND GRATE IS NOT INTENDED TO REPLACE STANDARD CURB INLET TOPS. FOR CURB INLETS PLEASE REFER TO FDOT DESIGN STANDARDS INDEX 210 AND 211. INSTALLATION IN OTHER LOCATIONS IS NOT PERMITTED UNLESS APPROVED BY THE DEPARTMENT AS A RESULT OF MITIGATING CIRCUMSTANCES.

MIAMI-DADE  
COUNTY

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
5/8/2018

REVISED  
5/8/2018  
9/27/2012

STANDARD STORM DRAINAGE DETAIL  
POLLUTION CONTROL STRUCTURE

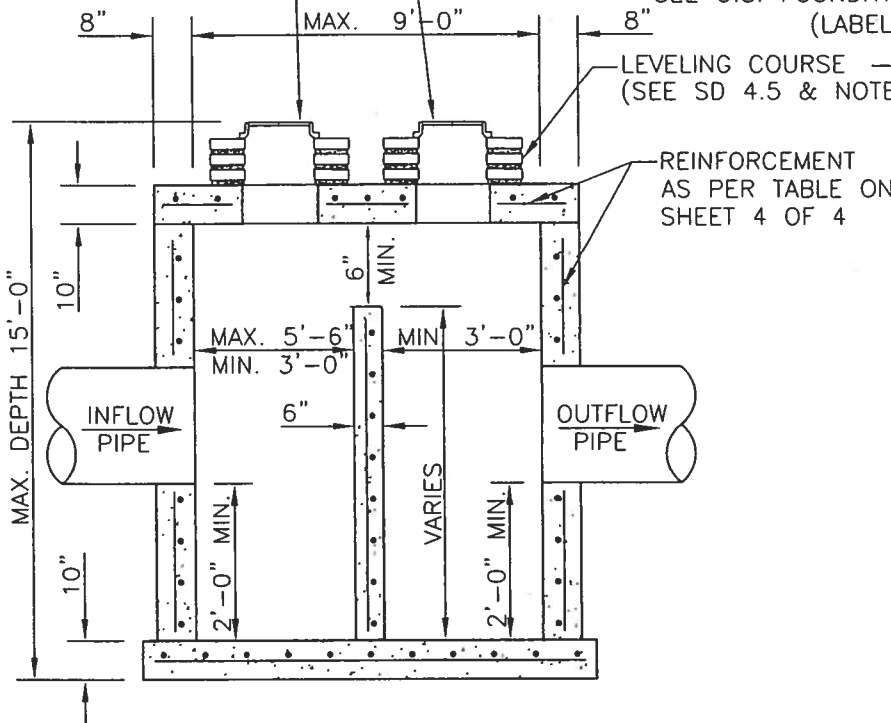
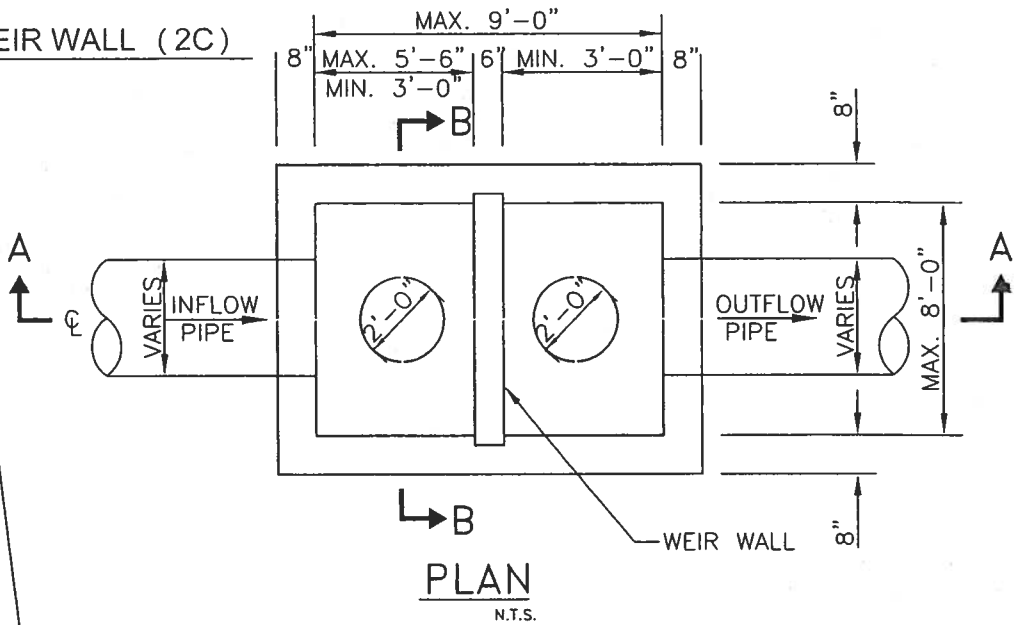
SD  
5.2

SHEET 1 OF 4

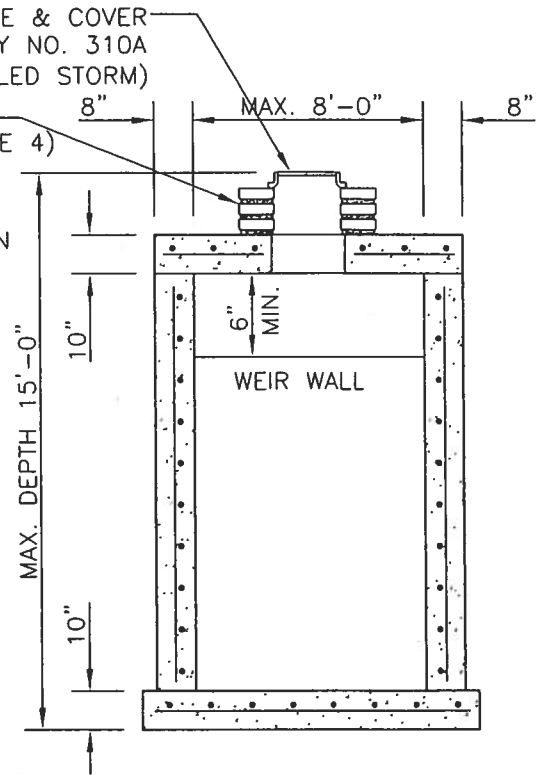
# TWO CHAMBERS WITH A WEIR WALL (2C)

FRAME & COVER  
SEE U.S.  
FOUNDRY NO. 310A  
(LABELED STORM)

FRAME & GRATE  
FOR SWALE AREAS SEE  
U.S. FOUNDRY  
4700-6223  
FOR CURB & GUTTER  
SEE U.S. FOUNDRY  
5129-6176  
(SEE NOTE # 5)  
FOR VALLEY GUTTER  
SEE U.S. FOUNDRY  
5105-6148  
FOR DRIVEWAY CURB  
SEE U.S. FOUNDRY  
5120-6167



SECTION A-A  
N.T.S.



SECTION B-B  
N.T.S.

## NOTES:

- 1.-CAST TOP SLAB TO FIT WALL USED.
- 2.-PIPES MAY EXTEND INTO CATCH BASIN A MAXIMUM OF 4".
- 3.-USE 4,000 psi CONCRETE. (MINIMUM), MAXIMUM W/C=0.53, GRADE 60 STEEL FOR REBAR AND GRADE 65 FOR WWF.
- 4.-A SMOOTH LINE OF MORTAR 1/2" THICK INSIDE AND OUTSIDE.
- 5.-IF USING THE FIRST CHAMBER AS AN INLET, A BAFFLE IS REQUIRED BEFORE THE FINAL OUTLET POINT.

MIAMI-DADE  
COUNTY

DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
5/8/2018

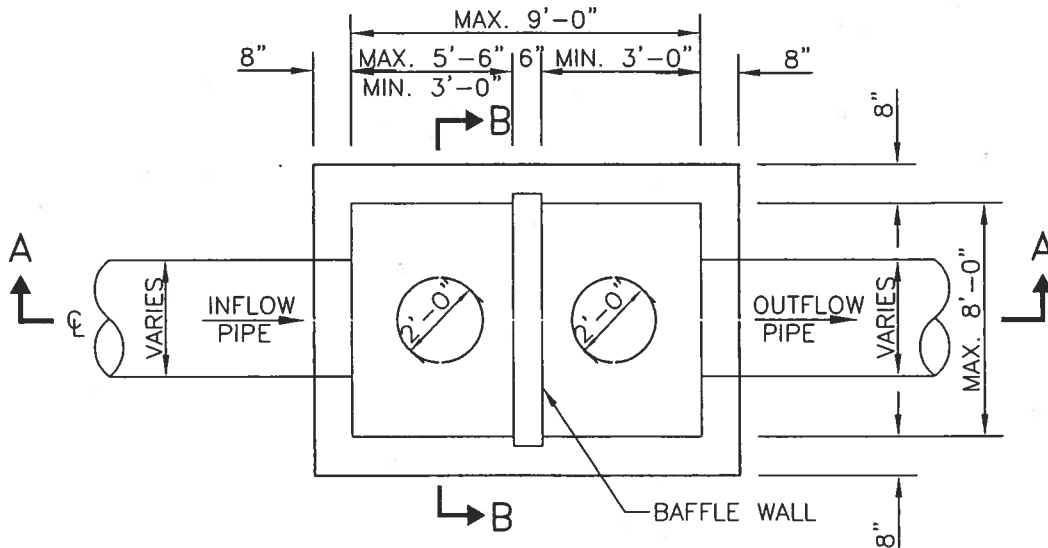
REVISED  
5/8/2018  
6/18/2014  
9/27/2012

STANDARD STORM DRAINAGE DETAIL  
POLLUTION CONTROL STRUCTURE

SD  
5.2

SHEET 2 OF 4

## TWO CHAMBERS WITH A BAFFLE WALL (2C)

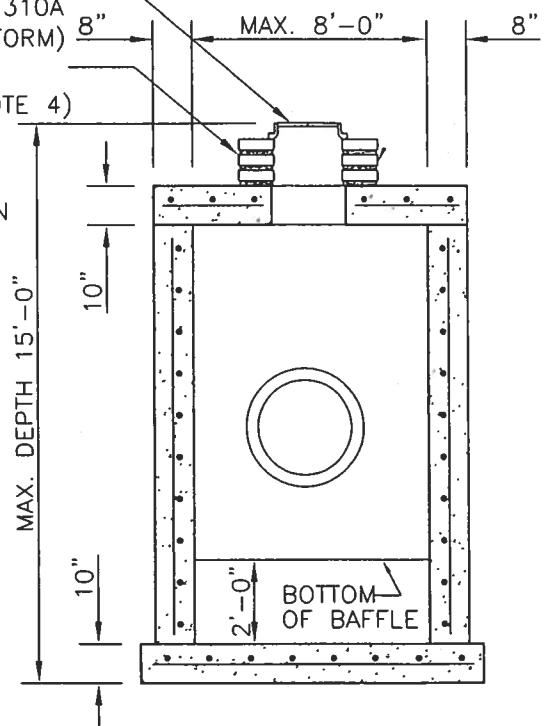
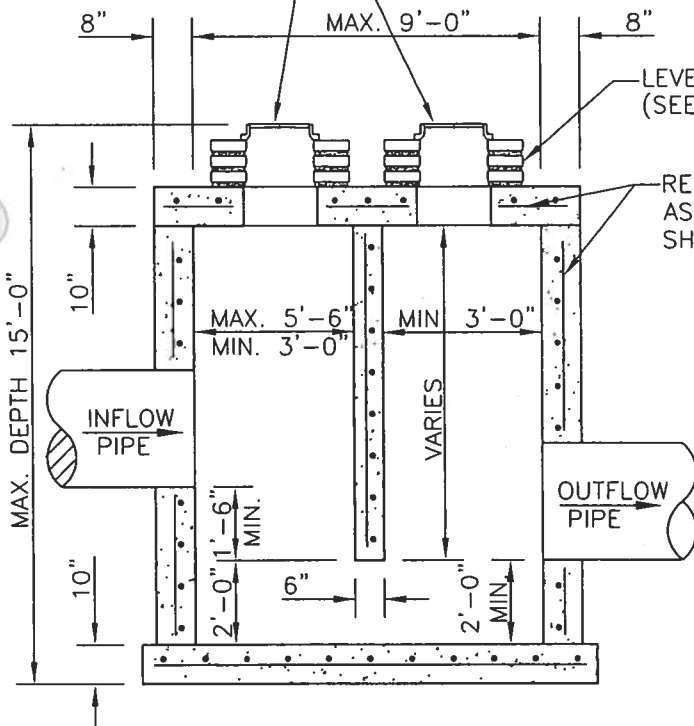


FRAME & COVER  
SEE U.S. FOUNDRY NO.  
310A  
(LABELED STORM)

FRAME & COVER  
SEE U.S. FOUNDRY  
NO. 310A  
(LABELED STORM)

LEVELING COURSE  
(SEE SD 4.5 & NOTE 4)

REINFORCEMENT  
AS PER TABLE ON  
SHEET 4 OF 4



### NOTES:

- 1.-CAST TOP SLAB TO FIT WALL USED.
- 2.-PIPES MAY EXTEND INTO CATCH BASIN A MAXIMUM OF 4".
- 3.-USE 4,000 psi CONCRETE. (MINIMUM), MAXIMUM W/C=0.53, GRADE 60 STEEL FOR REBAR AND GRADE 65 FOR WWF.
- 4.-A SMOOTH LINE OF MORTAR 1/2" THICK INSIDE AND OUTSIDE.
- 5.-INVERT ELEVATION OF OUTFLOW PIPE SHALL BE EQUAL OR HIGHER THAN BOTTOM ELEVATION OF BAFFLE WALL.
- 6.-BOTTOM ELEVATION OF BAFFLE WALL SHALL BE 6" BELOW LOW MONTH WATER LEVEL OR 1.5' FROM INFLOW PIPE.

MIAMI-DADE  
COUNTY  
  
DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
5/8/2018

REVISED  
5/8/2018  
9/27/2012

STANDARD STORM DRAINAGE DETAIL  
  
POLLUTION CONTROL STRUCTURE

SD  
5.2

SHEET 3 OF 4

**POLLUTION CONTROL STRUCTURE**

| Standard Detail | Width (ft) | Length (ft) | Height (ft) | Wall Thickness (in) | Wall Steel          | Top Slab Thickness (in) | Top Slab Steel | Bottom Slab Thickness (in) | Bottom Slab Steel | Bottom Slab Overhang (in) |
|-----------------|------------|-------------|-------------|---------------------|---------------------|-------------------------|----------------|----------------------------|-------------------|---------------------------|
| 5.2-3C          | 8.0        | 14.0        | 0.0 - 5.0   | 10.0                | #5@9.5"H<br>#4@10"V | 10.0                    | #6@6"<br>E.W.  | 10.0                       | #4@8"<br>E.W.     | 12.0                      |
| 5.2-3C          | 8.0        | 14.0        | 5.1 - 10.0  | 10.0                | #7@9"H<br>#4@10"V   | 10.0                    | #6@6"<br>E.W.  | 10.0                       | #4@8"<br>E.W.     | 12.0                      |
| 5.2-3C          | 8.0        | 14.0        | 10.1 - 15.0 | 10.0                | #8@8"H<br>#4@10"V   | 10.0                    | #6@6"<br>E.W.  | 10.0                       | #4@8"<br>E.W.     | 12.0                      |
| 5.2-2C          | 8.0        | 9.0         | 0.0 - 5.0   | 8.0                 | #5@9.5"H<br>#4@10"V | 10.0                    | #6@6"<br>E.W.  | 10.0                       | #4@8"<br>E.W.     | 12.0                      |
| 5.2-2C          | 8.0        | 9.0         | 5.1 - 10.0  | 8.0                 | #7@9"H<br>#4@10"V   | 10.0                    | #6@6"<br>E.W.  | 10.0                       | #4@8"<br>E.W.     | 12.0                      |
| 5.2-2C          | 8.0        | 9.0         | 10.1-15.0   | 8.0                 | #8@8"H<br>#4@10"V   | 10.0                    | #6@6"<br>E.W.  | 10.0                       | #4@8"<br>E.W.     | 12.0                      |

5.2-3C - POLLUTION CONTROL STRUCTURE 3 CHAMBER

5.2-2C - POLLUTION CONTROL STRUCTURE 2 CHAMBER

MIAMI-DADE  
COUNTY  
  
DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC WORKS

APPROVED  
  
5/8/2018

REVISED  
5/8/2018  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

STANDARD STORM DRAINAGE DETAIL  
  
POLLUTION CONTROL  
STRUCTURE

SD  
5.2

SHEET 4 OF 4



