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STORM WATER SYSTEM

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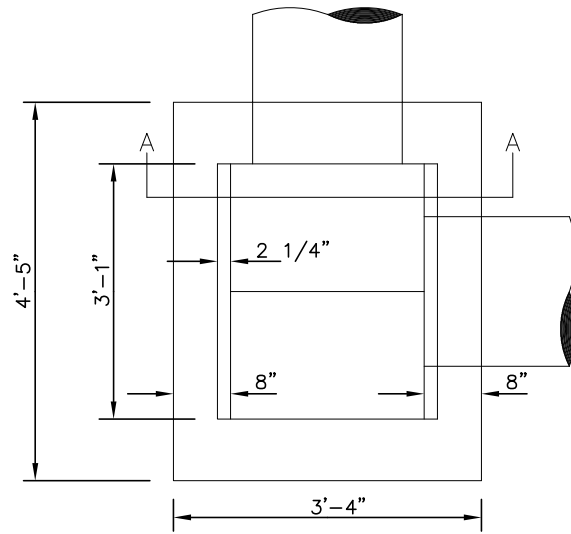
STORM WATER SYSTEM

STANDARD DETAIL

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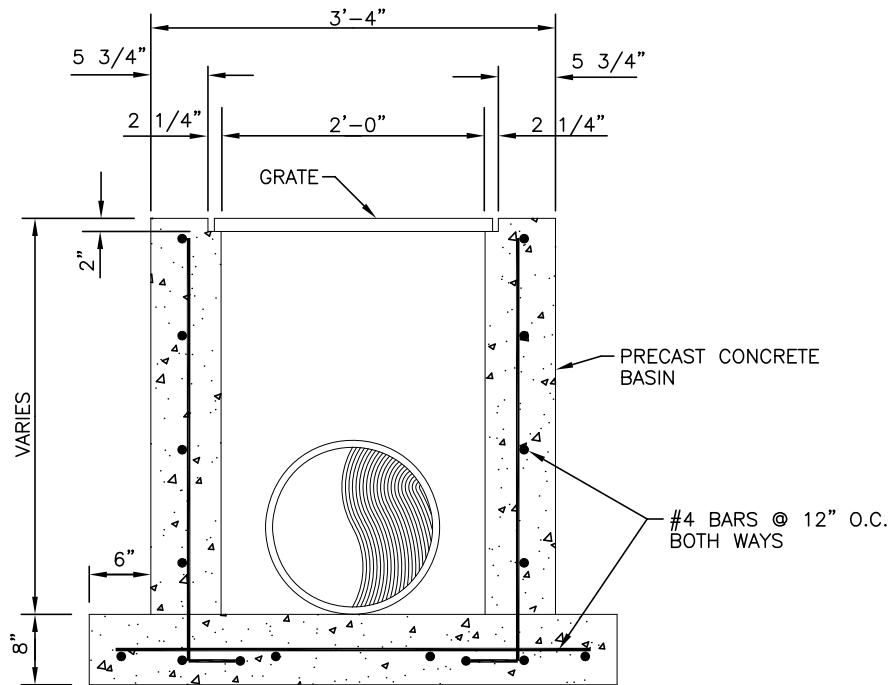
PLATE NO. D-0

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PLAN

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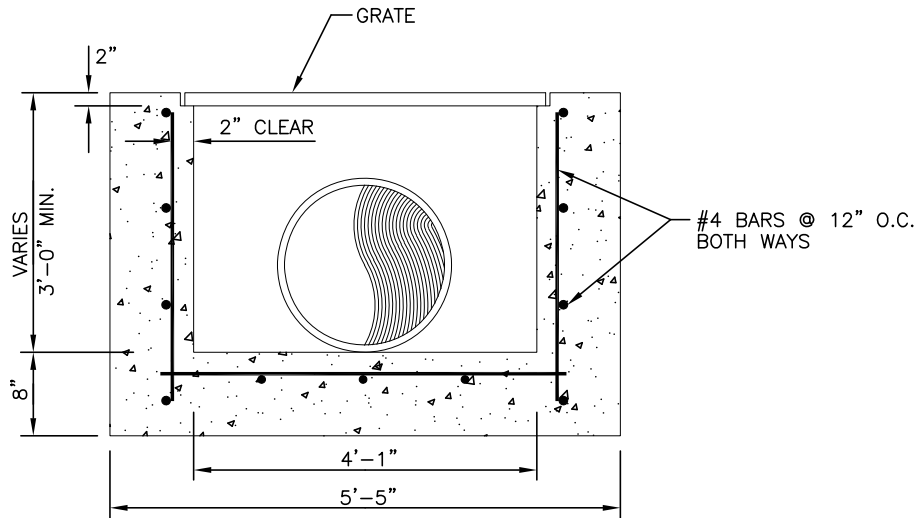
SECTION A-A

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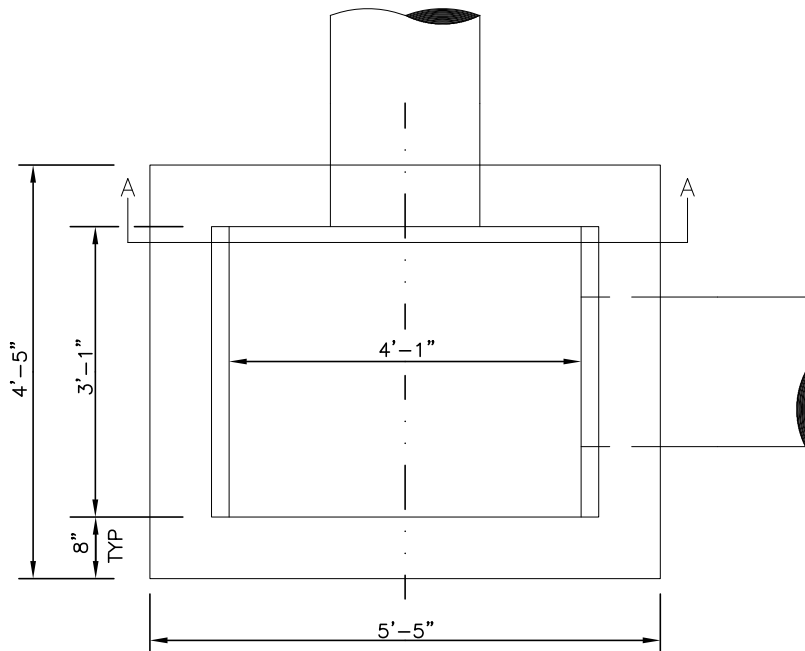
STORM WATER SYSTEM

STANDARD DETAIL	
TYPE C CATCH BASIN	
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SECTION A-A

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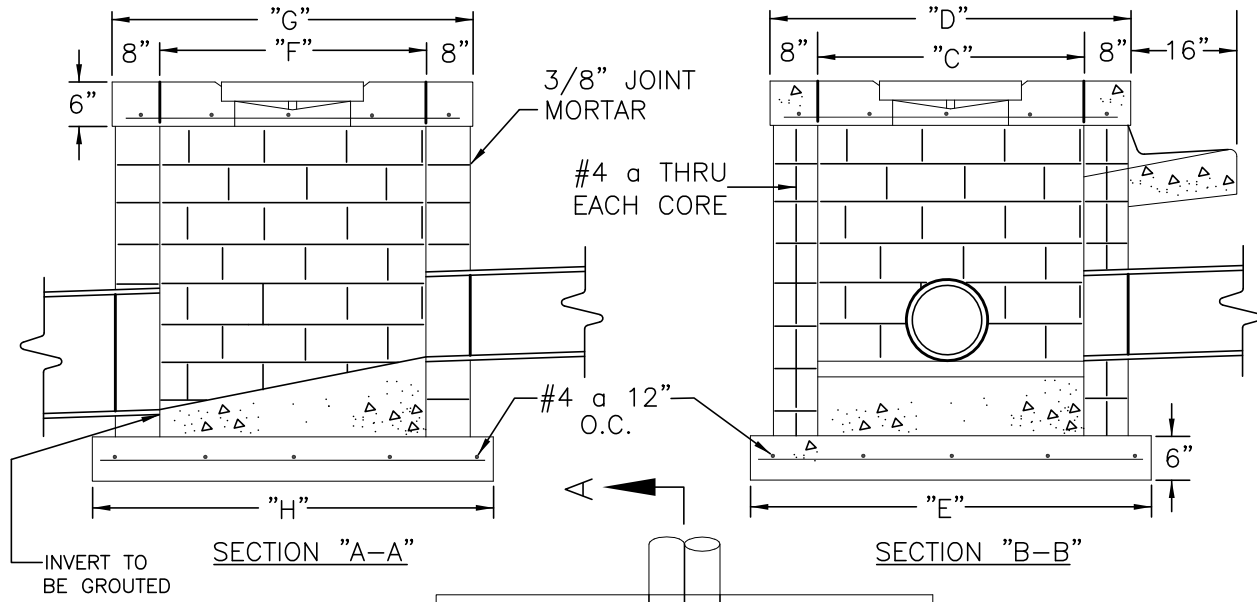
STORM WATER SYSTEM

STANDARD DETAIL

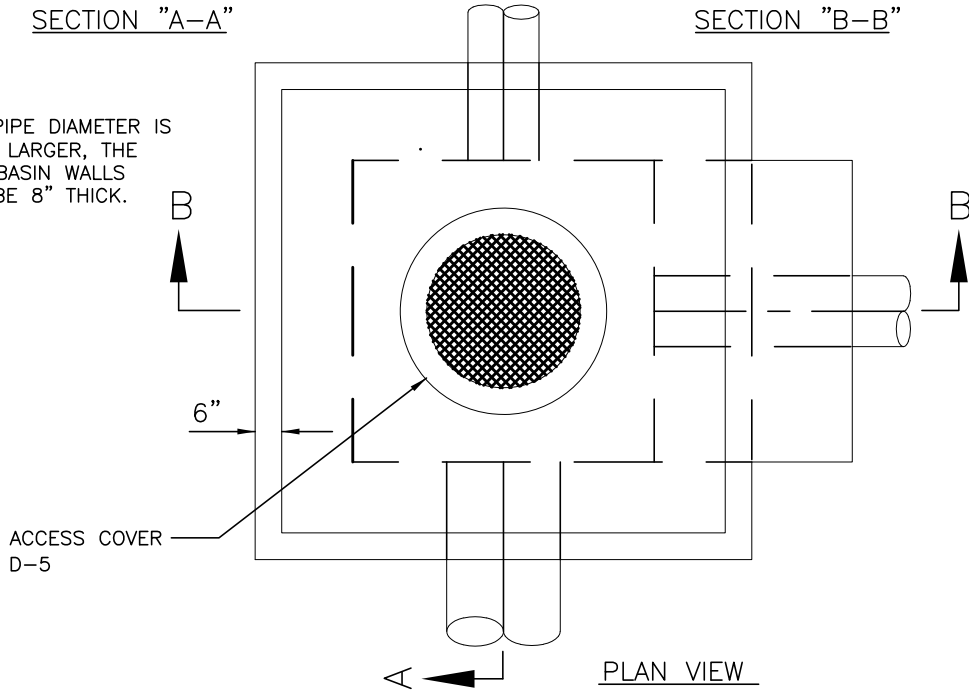
TYPE D CATCH BASIN

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NOTE: WHEN PIPE DIAMETER IS 36" OR LARGER, THE CATCH BASIN WALLS SHALL BE 8" THICK.



NOTE: DIMENSIONS PER PER DETAIL D-4

- A) FILL BLOCKS WITH 3000 PSI CONCRETE, USE #4 ROD IN EACH BLOCK, 16" O.C.
- B) 2" MINIMUM COVER ON ALL REBAR.
- C) USE #4 REBARS ON 6" CENTERS BOTH WAYS ON LID. BOTH WAYS ON FLOOR SLAB.
- D) SEE SHEET D-4 FOR GENERAL NOTES AND DIMENSION INDEX.
- E) ALL EXPOSED CORNERS AND EDGES TO BE CHAMFERED 3/4".
- F) PRECAST BOXES AS SPECIFIED IN CURRENT F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY CITY OF PUNTA GORDA.

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STORM WATER SYSTEM

STANDARD DETAIL	
FABRICATED CATCH BASIN	
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GENERAL NOTES

1. CONCRETE SHALL BE CLASS "1" AS SPECIFIED IN SECTION 345 OF FLORIDA D.O.T. SPECIFICATIONS.
2. SEE SECTION 425-2.2 "MORTAR" OF FLORIDA D.O.T. SPECIFICATIONS.
3. IRON CASTING SPECIFIED IN SECTION 962-8 OF FLORIDA D.O.T. SPECIFICATIONS. SEE SECTION 425-5.
4. REINFORCEMENT STEEL AS SPECIFIED IN SECTIONS 415 & 931-1.1 OF FLORIDA D.O.T. SPECIFICATIONS.
5. SEE SECTION 425-3.2 "GRATINGS" OF FLORIDA D.O.T. SPECIFICATIONS.
6. SEE SECTION 125 "EXCAVATION FOR STRUCTURES" OF FLORIDA D.O.T. SPECIFICATIONS.
7. PRECAST TO BE F.D.O.T. STANDARDS WITH MINIMUM TRAFFIC BEARING 8" THICKNESS.

PRECAST

NON-TRAFFIC 6"

BLOCK

8" EITHER WAY

PIPE SIZE	TYPE	DIMENSION		INDEX			
		"C"	"D"	"E"	"F"	"G"	"H"
12"	RCP	2'8"	4'	5'	4'	5'4"	6'4"
15"	RCP	"	"	"	"	"	"
18"	RCP	"	"	"	"	"	"
14"X23"	RCP	"	"	"	"	"	"
24"	RCP	3'4"	4'8"	5'8"	"	"	"
30"	RCP	4'	5'4"	6'4"	"	"	"
19"X30"	RCP	"	"	"	"	"	"
24"X38"	RCP	5'	6'4"	"	"	"	"
36"	RCP	5'	6'4"	"	"	"	"
66"	RCP	8'5"	9'9"	10'9"	4'8"	6'0"	7'0"

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STORM WATER SYSTEM

STANDARD DETAIL

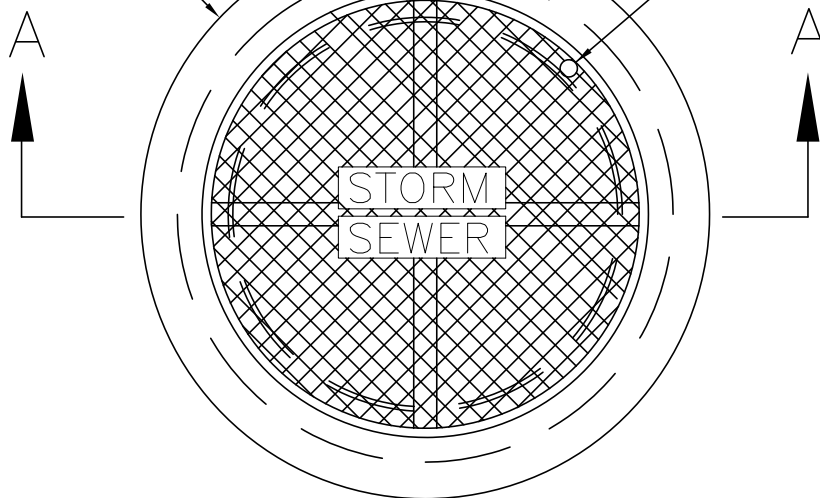
DRAINAGE CONTROL SHEET

PLATE NO. D-4

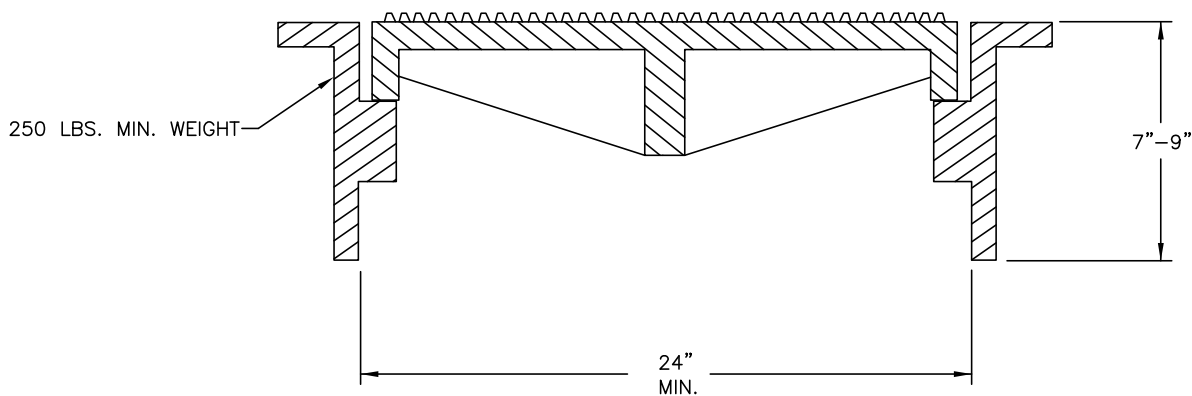
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150 LBS. MIN. WEIGHT

PICK UP HOLE



NOTE: COVER TO BE CAST WITH RAISED LETTERS. 1 1/2" MIN. HEIGHT.



SECTION A-A

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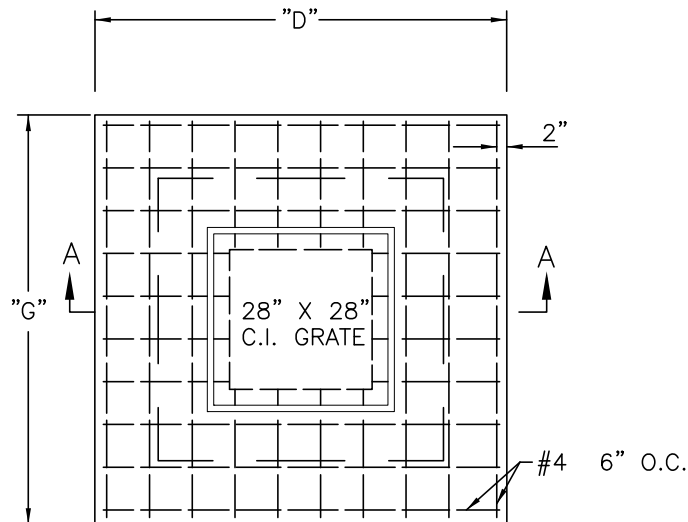
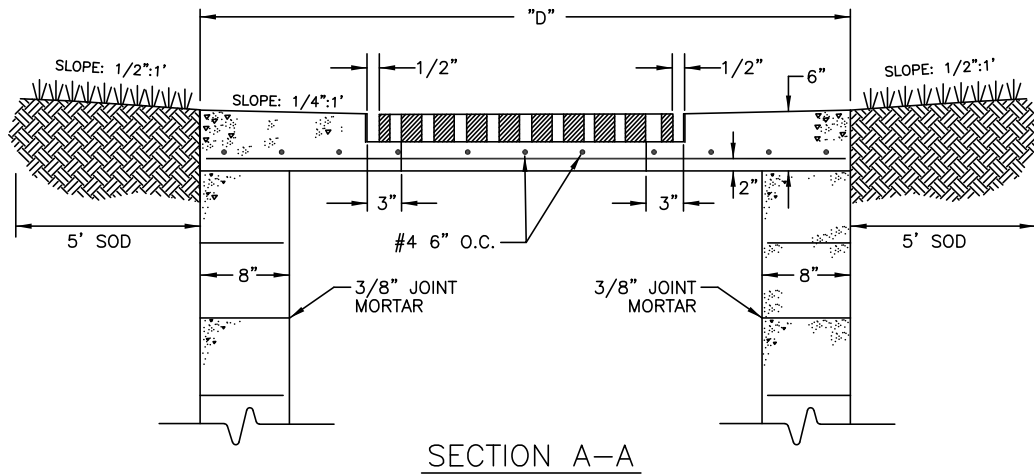
STORM WATER SYSTEM

STANDARD DETAIL

ACCESS COVER

PLATE NO. D-5

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NOTE: DIMENSIONS "D" & "G" PER DETAIL D-4

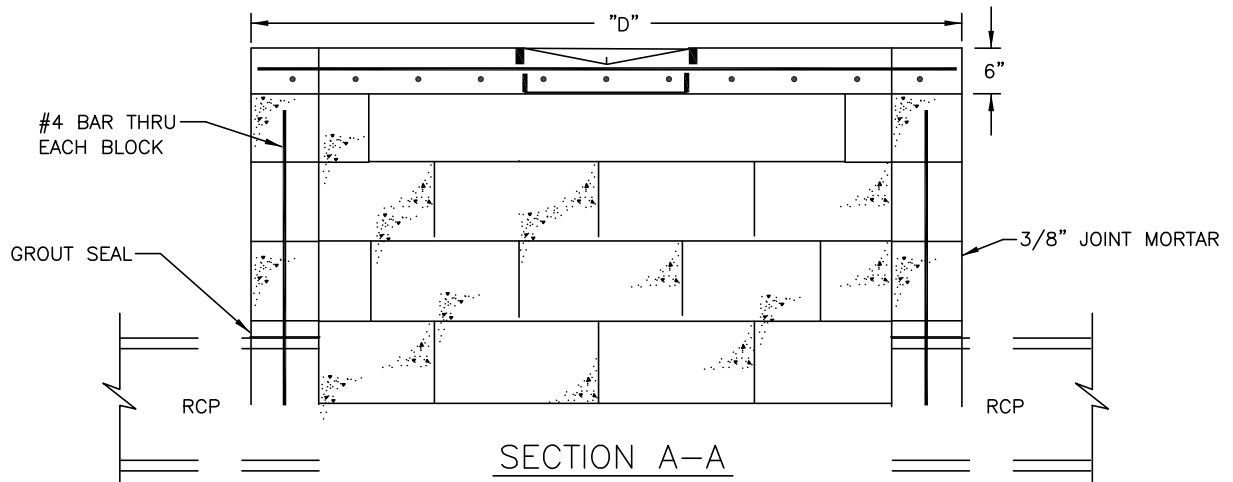
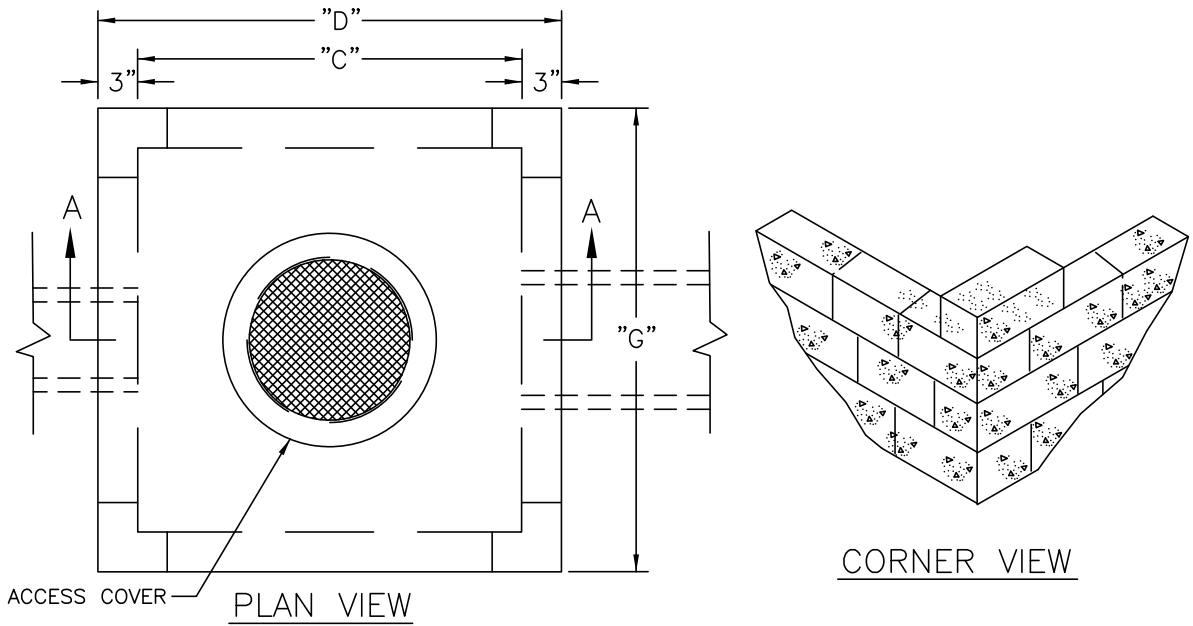
- A) ALTERNATE C.I. GRATES, 18"X 24", 24"X 24", 28"X 36".
- B) SOD TO BE PLACED A MINIMUM OF 5' AROUND BOX.
- C) FOLLOWING MATERIALS ARE SPECIFIED IN CURRENT FLORIDA D.O.T. SPEC'S., SEC 346 CONCRETE, SEC 962-8 IRON CASTING, SEC 931-1 REINFORCED STEEL.
- D) FILL BLOCKS WITH 3,000 P.S.I. CONCRETE (EACH CELL), USE # 4 ROD IN EACH BLOCK, 16" O/C.
- E) USE #4 ROD ON 6" CENTERS BOTH WAYS ON LID.
- F) PRECAST BOXES TO CURRENT F.D.O.T. SPECIFICATIONS ARE AN ACCEPTABLE ALTERNATE; HOWEVER ALL BOXES MUST BE A MINIMUM 8".
- G) INVERT TO BE GROUTED.
- H) PRECAST BOXES AS SPECIFIED IN CURRENT F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY CITY OF PUNTA GORDA.

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STORM WATER SYSTEM

STANDARD DETAIL
 NON-TRAFFIC BEARING
 GRATE INLET

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- A) DROP INLET IS NOT DESIGNED FOR VEHICULAR TRAFFIC.
- B) NUMBER OF SIDES OPEN FOR DRAINAGE DEPENDS UPON REQUIREMENTS.
- C) FOLLOWING MATERIALS ARE SPECIFIED IN CURRENT FLORIDA D.O.T. SPECIFICATIONS SEC 345 CONCRETE, SEC 962-8 IRON CASTING, SEC 931-1 REINFORCED STEEL.
- D) FILL BLOCKS WITH 3,000 P.S.I. CONCRETE (EACH CELL), USE #4 ROD IN EACH BLOCK, 16" O/C.
- E) USE #4 ROD ON 6" CENTERS BOTH WAYS ON COVER.
- F) SEE SHEET D-4 GENERAL NOTES AND DIMENSIONS INDEX.
- G) PRECAST BOXES TO CURRENT F.D.O.T. SPECIFICATIONS ARE AN ACCEPTABLE ALTERNATE.
- H) INVERT TO BE GROUTED.

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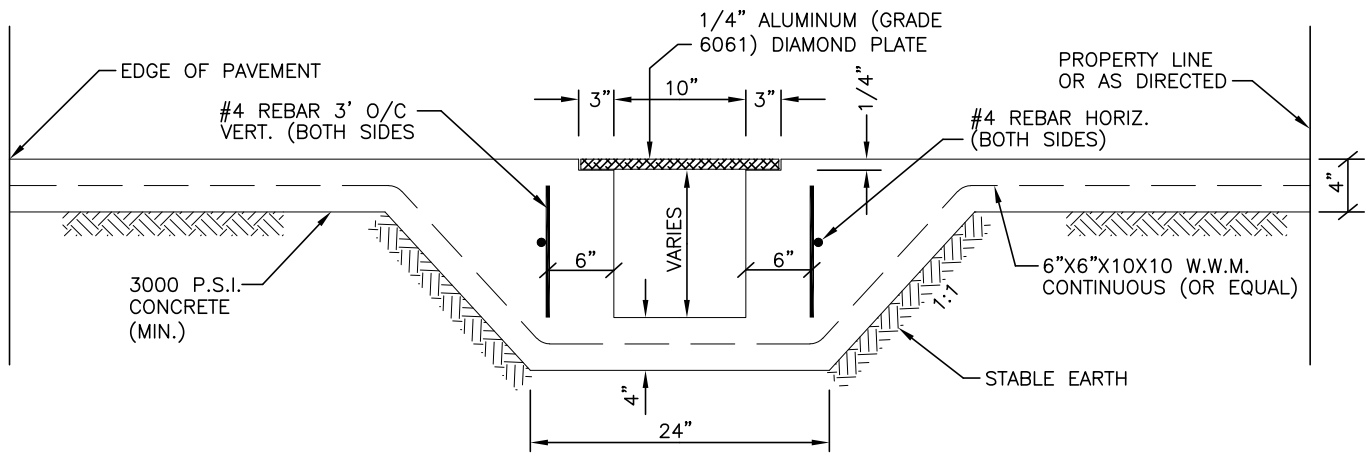
STORM WATER SYSTEM

STANDARD DETAIL

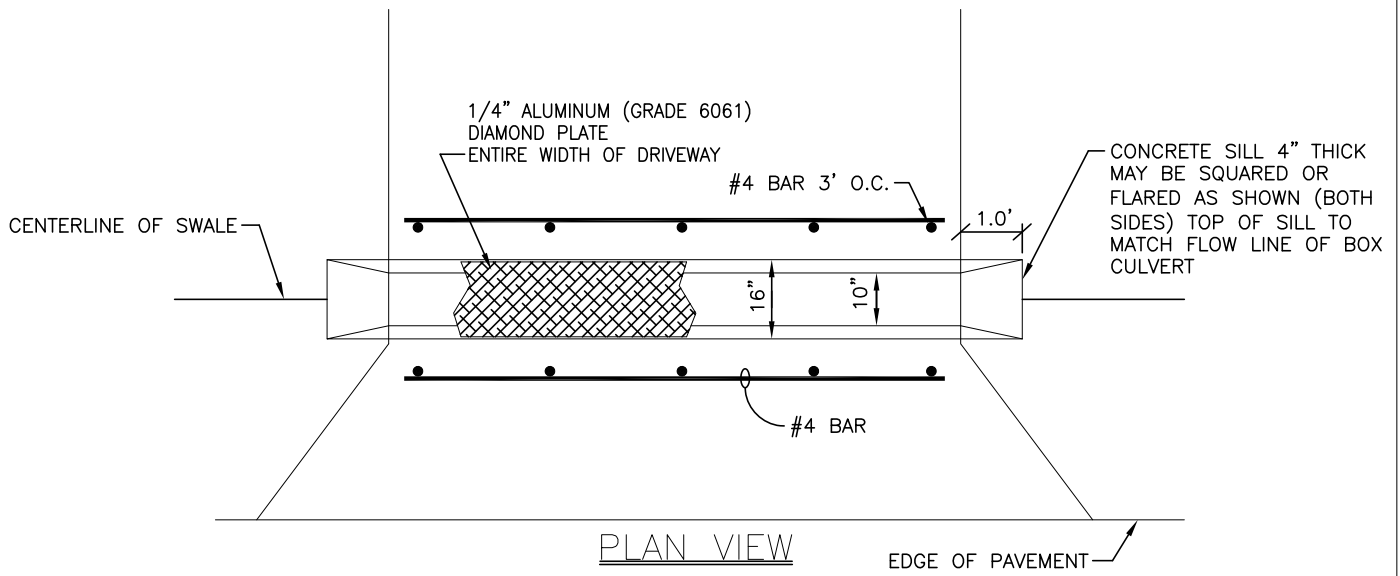
FABRICATED DROP INLET

PLATE NO. D-7

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SECTION
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PLAN VIEW
N.T.S.

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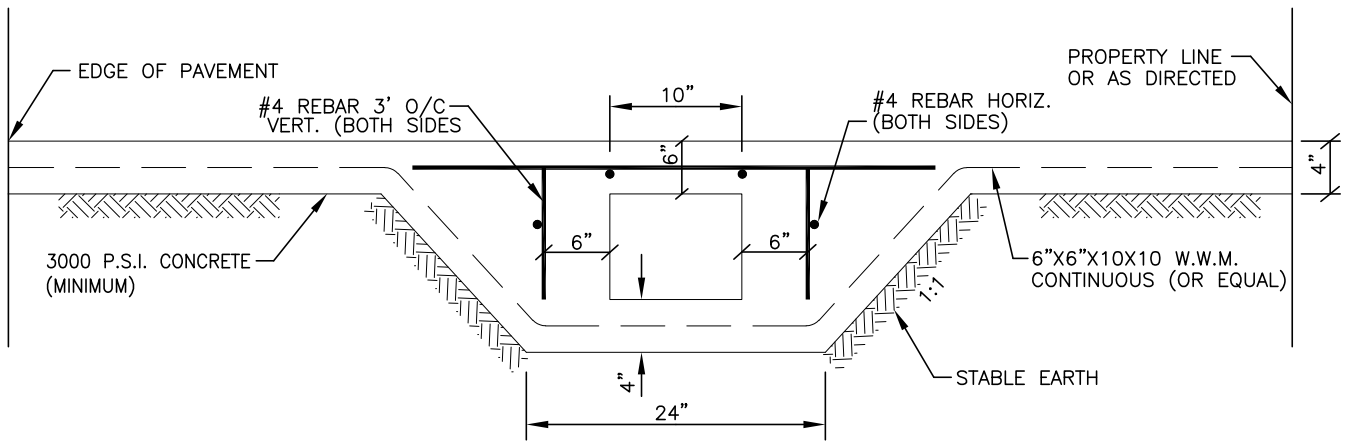
STORM WATER SYSTEM

STANDARD DETAIL

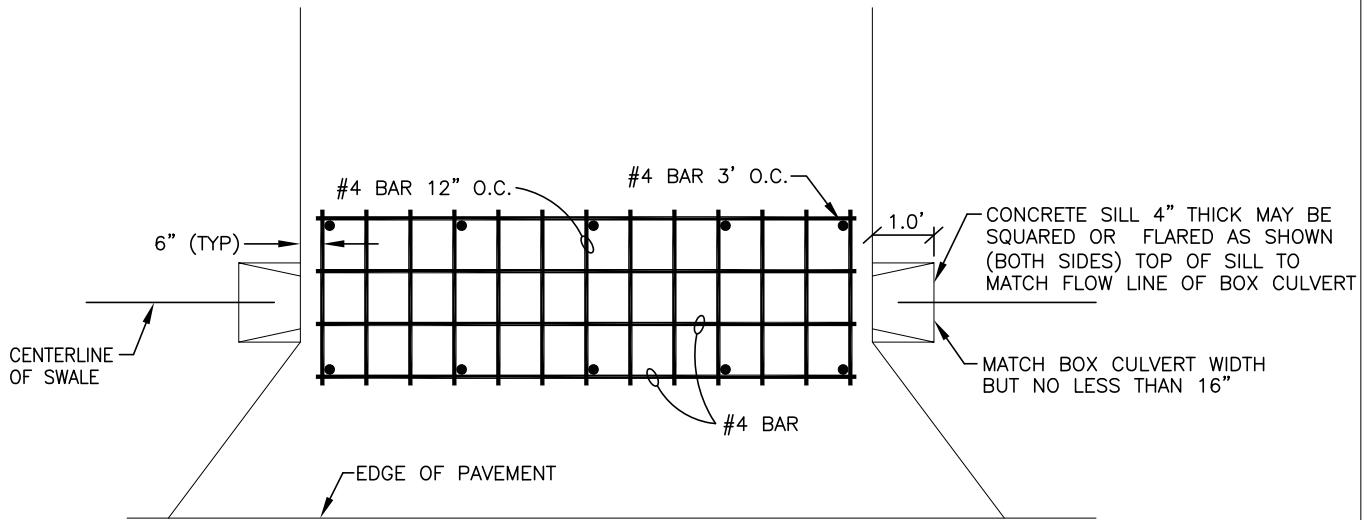
BOX CULVERT WITH ALUMINUM DIAMOND PLATE (NEW DRIVEWAY)

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SECTION
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PLAN VIEW
N.T.S.

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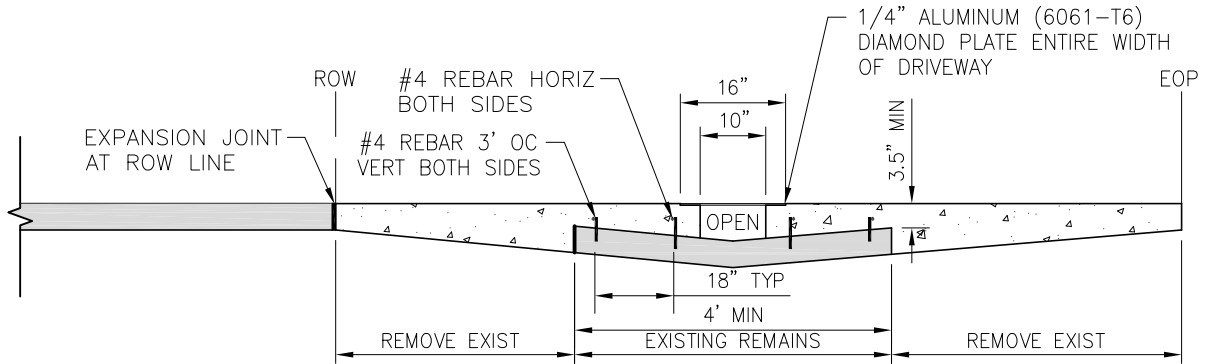
STANDARD DETAIL

CONCRETE BOX CULVERT

PLATE NO. D-9

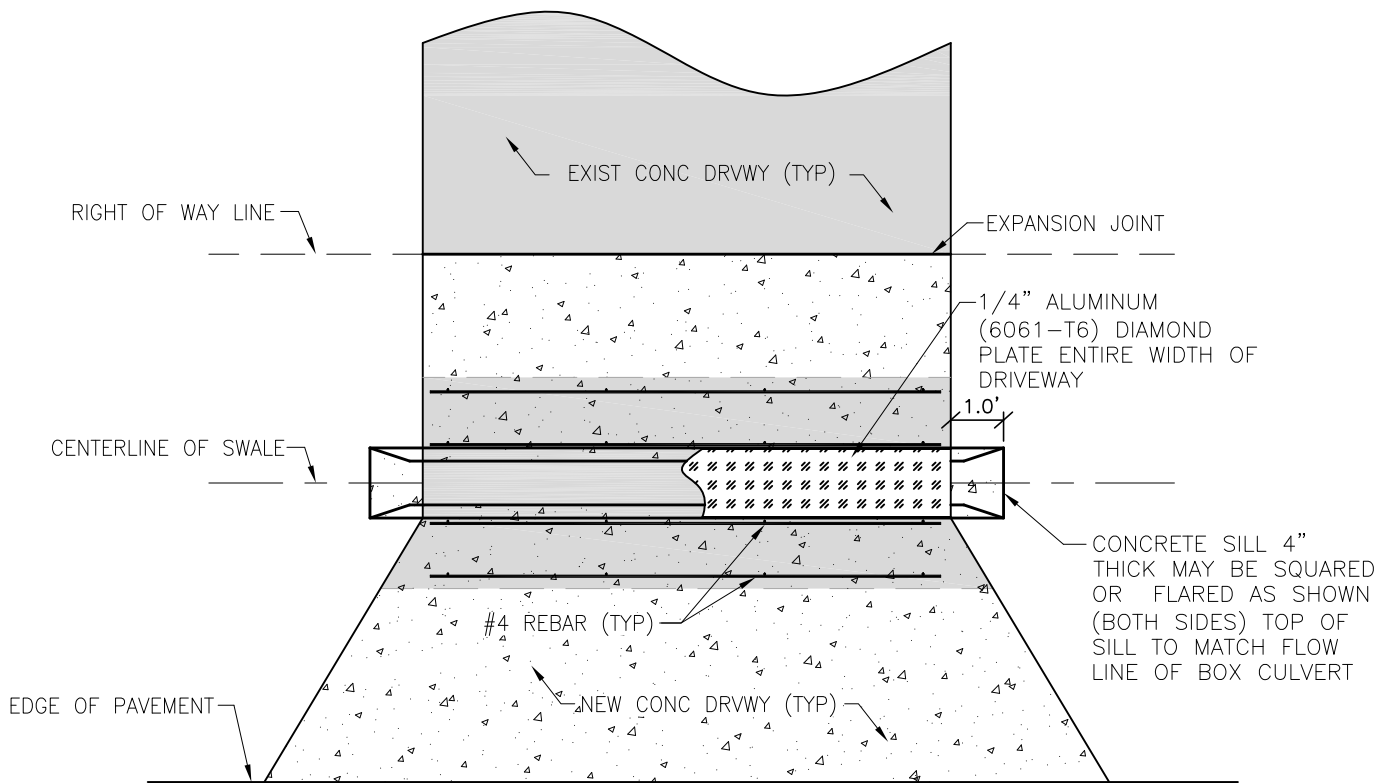
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MINIMUM SIZE REQUIRED FOR BOX CULVERT: 10" WIDTH - 5" DEPTH



SECTION

N.T.S.



PLAN VIEW

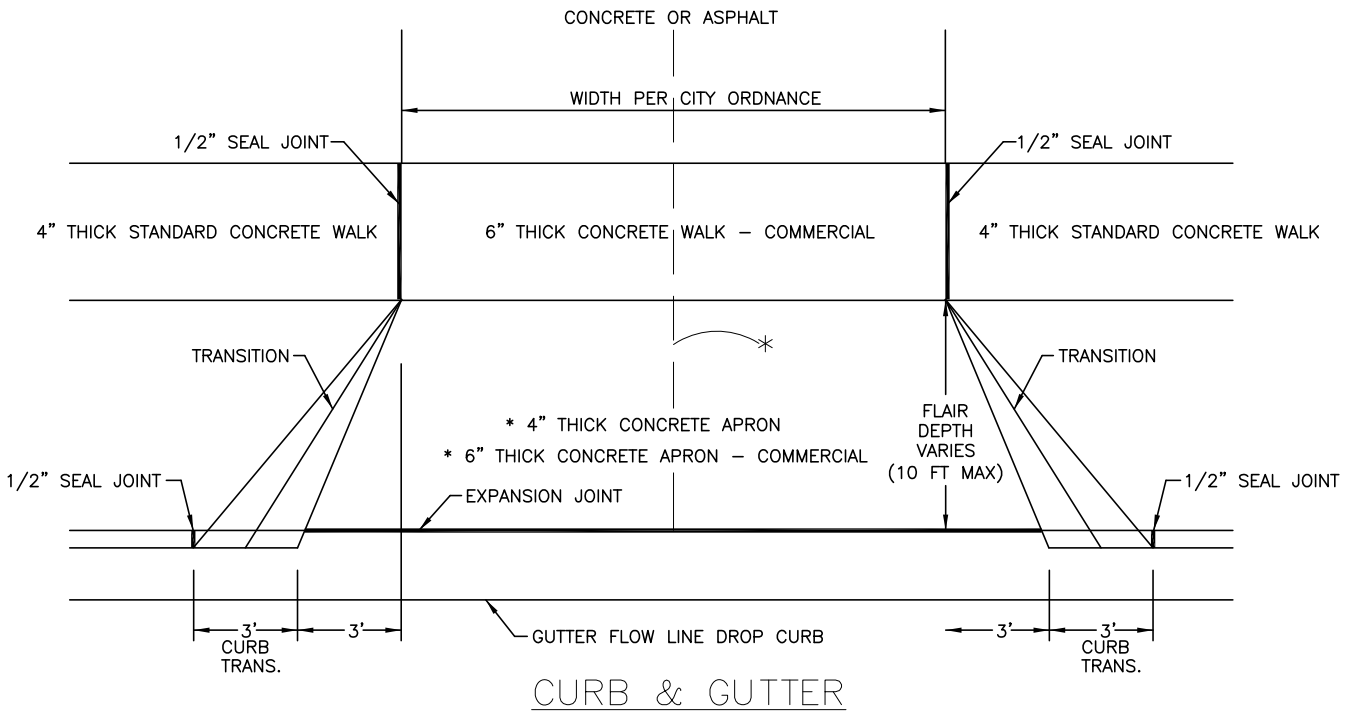
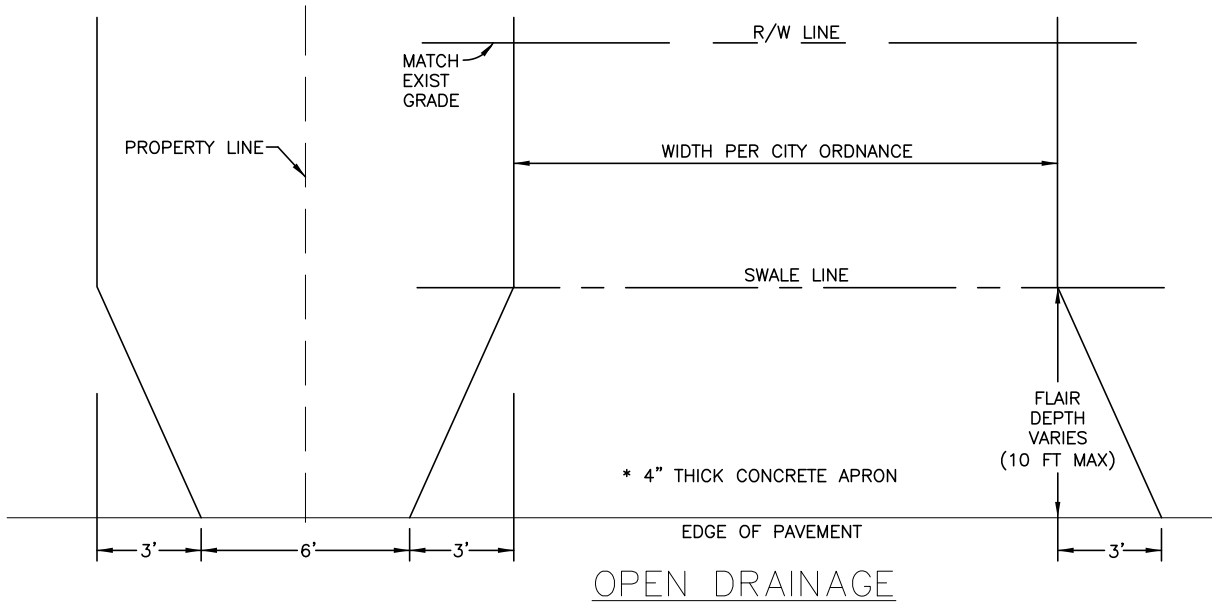
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STORM WATER SYSTEM

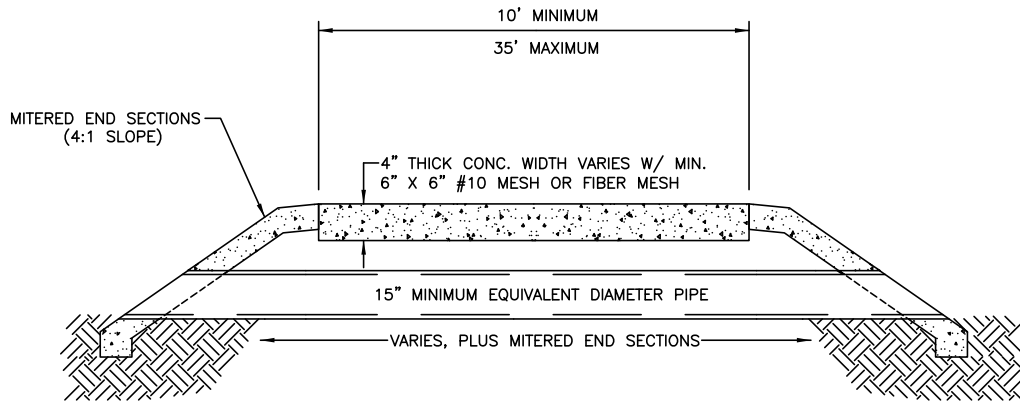
STANDARD DETAIL
 BOX CULVERT WITH ALUMINUM
 DIAMOND PLATE
 (EXISTING DRIVEWAY)

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- (A) CONSTRUCT WITH 4" REINFORCED CONCRETE (3,000 psi) WITH 6" x 6" # 10 MESH OR FIBER MESH CONCRETE
- (B) DRIVEWAYS ADJACENT TO PAVED ROADWAY MUST HAVE MINIMUM 3' APRON.
- (C) EXISTING DRAINAGE FLOWLINE TO BE MAINTAINED. PIPING MAY BE REQUIRED AT THE CITY'S DISCRETION.
- (*) 1/8" JOINTS PLACED AT 10' INTERVALS FOR DRIVEWAYS OVER 20' WIDE. JOINTS IN CURB AND GUTTER TO MATCH JOINTS IN DRIVEWAYS.

CITY OF PUNTA GORDA 326 WEST MARION AVENUE PUNTA GORDA, FL. 33950 (941) 575-5050	STORM WATER SYSTEM	STANDARD DETAIL	
		STANDARD DRIVEWAY DETAILS	
		PLATE NO. D-11	OCT. 2020



TYPICAL DRIVEWAY

- NOTE: 1) GRADES AND LOCATIONS WILL BE APPROVED FOR ALL CAP & RCP PIPE INSTALLATIONS.
- 2) ACTUAL REQUIRED PIPE DIAMETER WILL BE BASED ON FLOW REQUIRED TO PASS THROUGH PIPE SO AS NOT TO IMPOUND WATER UPSTREAM.
- 3) PIPE SIZE TO BE DETERMINED AND APPROVED BY CITY OF PUNTA GORDA ENGINEERING DIVISION.

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STORM WATER SYSTEM

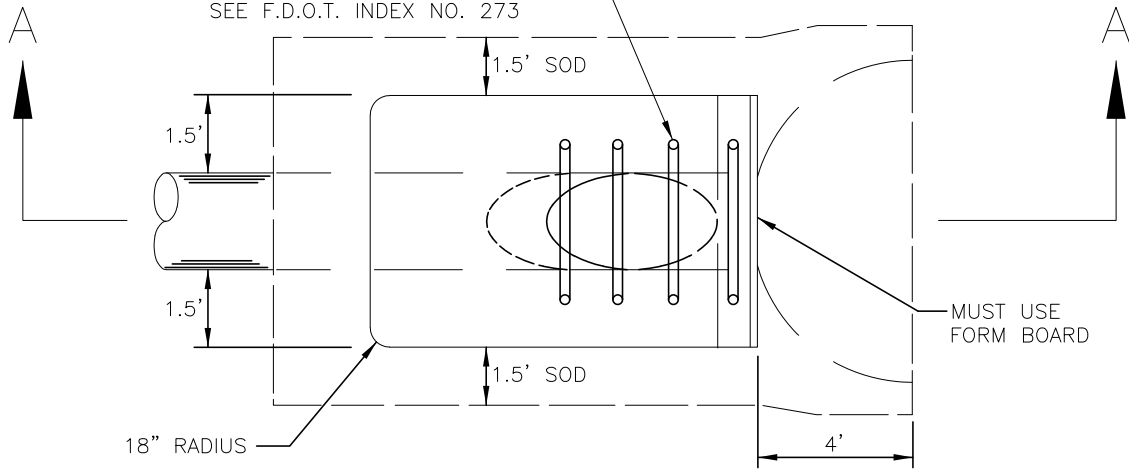
STANDARD DETAIL

TYPICAL DRIVEWAY
PIPE CROSS SECTION

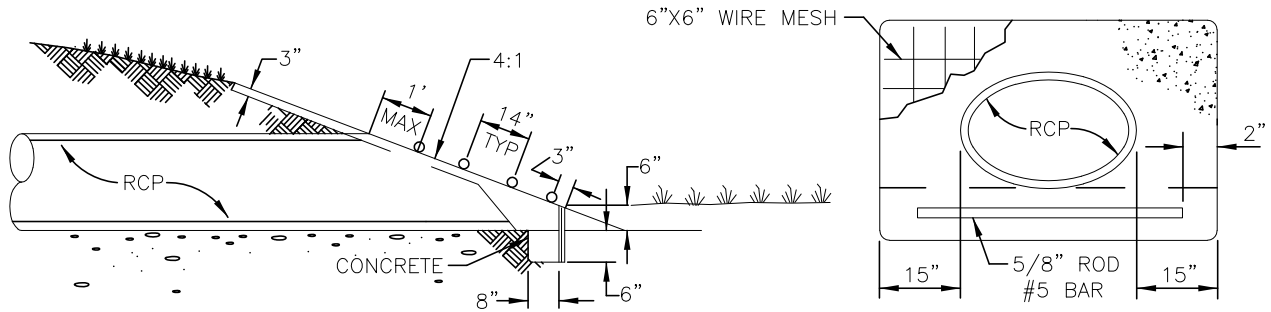
PLATE NO. D-12

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NOTE: ON SIDE DRAIN M.E.S., BARS ONLY TO BE USED ON ROUND PIPE 30" IN DIA. & GREATER, ELLIPTICAL PIPE 19" X 30" & GREATER, AND ARCH PIPE 35" X 24" OR GREATER. FOR BAR SIZE SEE F.D.O.T. INDEX NO. 273



PLAN VIEW



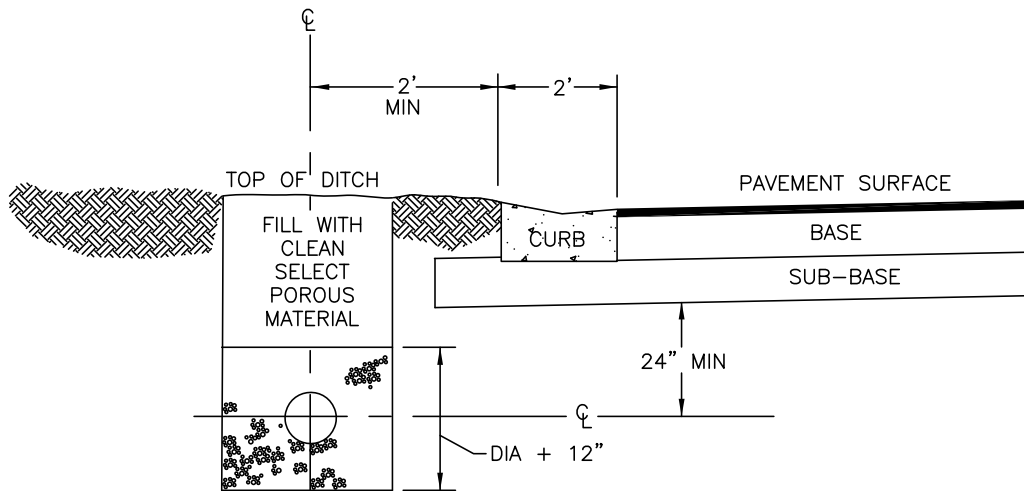
SECTION A-A

SOD TO BE PLACED 1.5 FT AROUND THE PERIMETER OF THE WALL, SOD TO MATCH EXISTING.

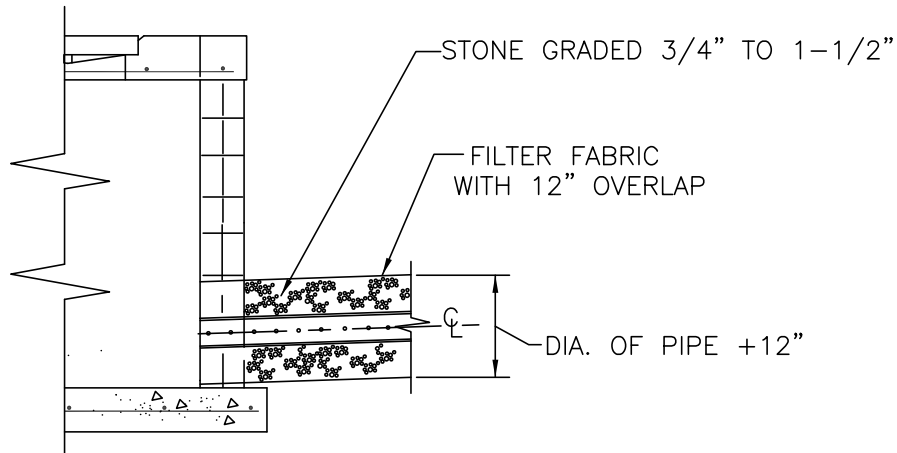
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STORM WATER SYSTEM

STANDARD DETAIL	
DRIVEWAY AND ROAD PIPE MITERED END SECTION	
PLATE NO. D-13	OCT. 2020



UNDERDRAIN PLACEMENT



UNDERDRAIN TIE TO INLET

- A) UNDERDRAIN SHALL BE AS SPECIFIED IN SECTION 440 OF CURRENT FDOT SPECIFICATIONS.
- B) 6" TO 8" PERFORATED PIPE AS REQUIRED.
- C) BACKFILL WITH CLEAN SELECT FILTER MATERIAL TO LINES SHOWN ON PLANS.
- D) LOCATION OR NEED FOR UNDERDRAIN TO BE APPROVED BY CITY OF PUNTA GORDA.

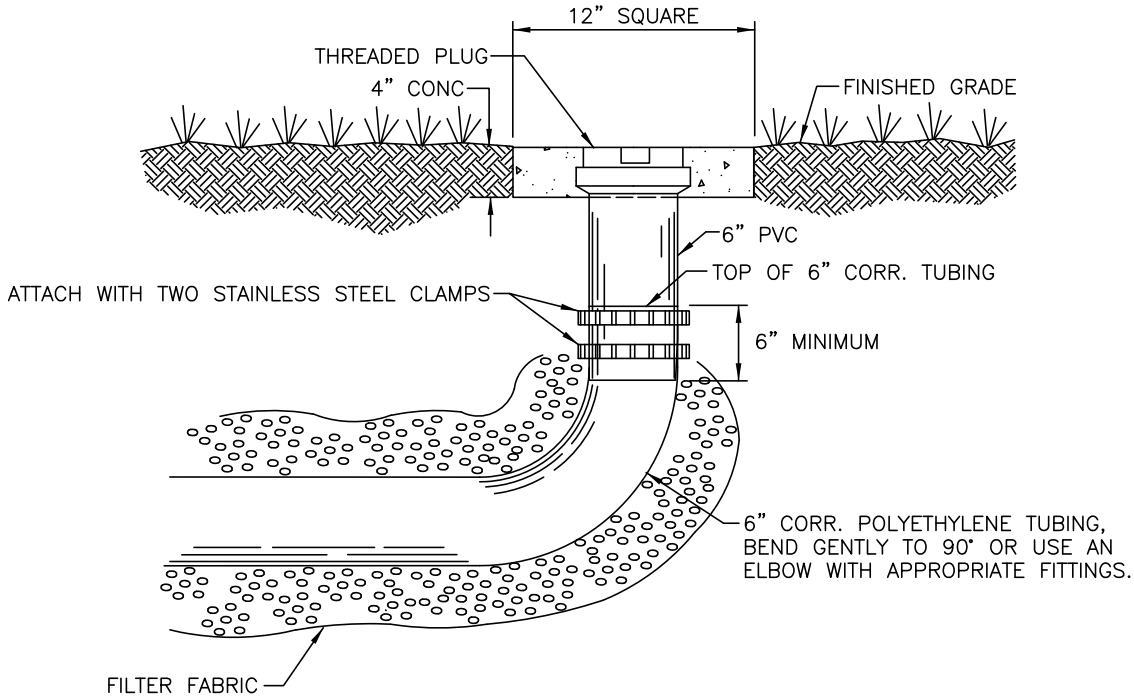
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STORM WATER SYSTEM

STANDARD DETAIL

TYPICAL UNDERDRAIN

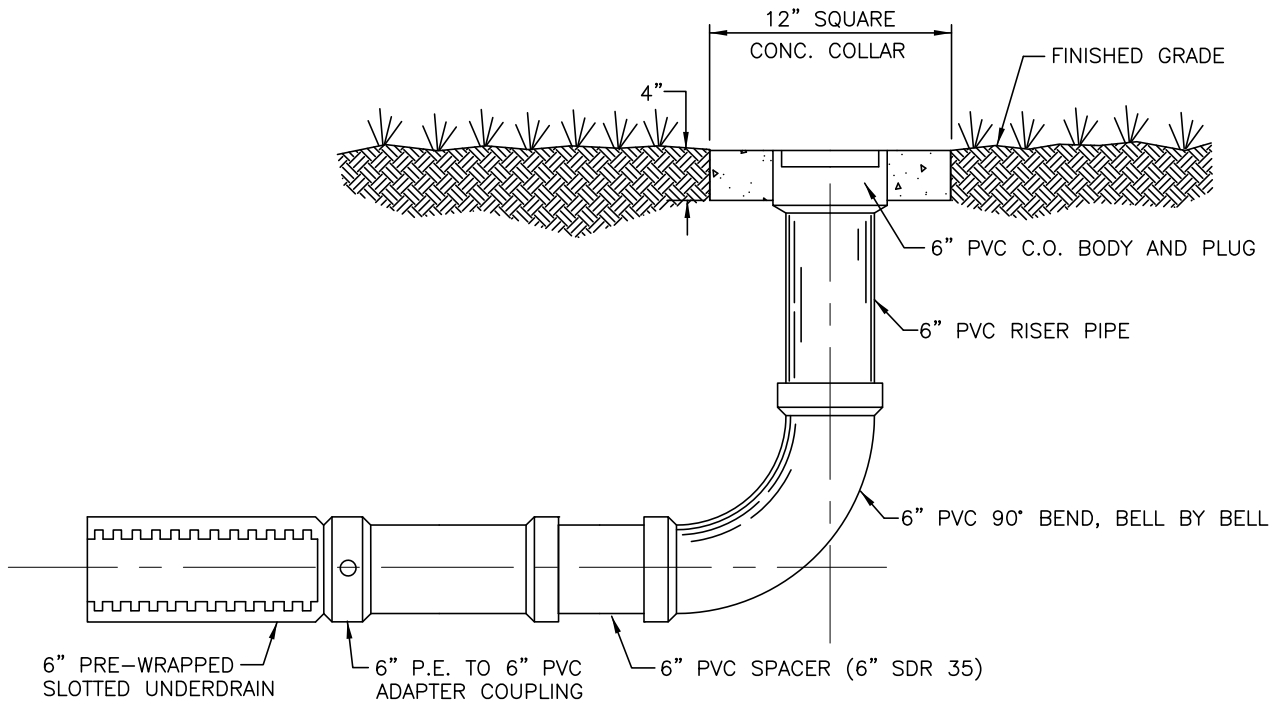
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CORRUGATED POLYETHYLENE TUBING
UNDERDRAIN CLEAN-OUT DETAIL

1. CORRUGATED POLYETHYLENE TUBING WITH A PROTECTIVE WRAP, UNLESS OTHERWISE NOTED, MAY BE USED FOR UNDERDRAIN APPLICATIONS ASSOCIATED WITH ROADWAY CONSTRUCTION PROVIDING THE FOLLOWING SPECIFICATIONS ARE MET:
 - A) THE CORRUGATED POLYETHYLENE TUBING MUST MEET THE REQUIREMENTS OF ASTM F-405.
 - B) THE CORRUGATED POLYETHYLENE TUBING MUST HAVE A FILTER WRAP OF ACCEPTABLE QUALITY.
 - C) THE ENVELOPE MATERIAL SURROUNDING THE TUBING SHALL BE CRUSHED STONE OR WASHED SHELL. THE THICKNESS OF THE ENVELOPE MATERIAL SHALL BE EQUAL TO OR GREATER THAN THE DIAMETER OF THE TUBING, PLUS 12".
 - D) CORRUGATED POLYETHYLENE TUBING WILL NOT BE ACCEPTABLE UNDER ROADWAYS.
 - E) EXTRA CARE MUST BE TAKEN DURING PLACEMENT TO MAINTAIN PROPER LINE AND GRADE, TO BE PLACED W/ SLOPE OF ROAD.
 - F) A CLEAN-OUT MUST BE CONSTRUCTED AT THE END OF EACH RUN OF UNDER-DRAIN. MAXIMUM SPACING EVERY 100 FEET.
 - G) SOD 3' AROUND 12" SQUARE OR AS DIRECTED BY CITY OF PUNTA GORDA.

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		UNDERDRAIN (FLEXIBLE)	
		PLATE NO. D-15	OCT. 2020



UNDERDRAIN CLEAN-OUT DETAIL

NOTE: SPACING NO GREATER THAN 100 FEET.

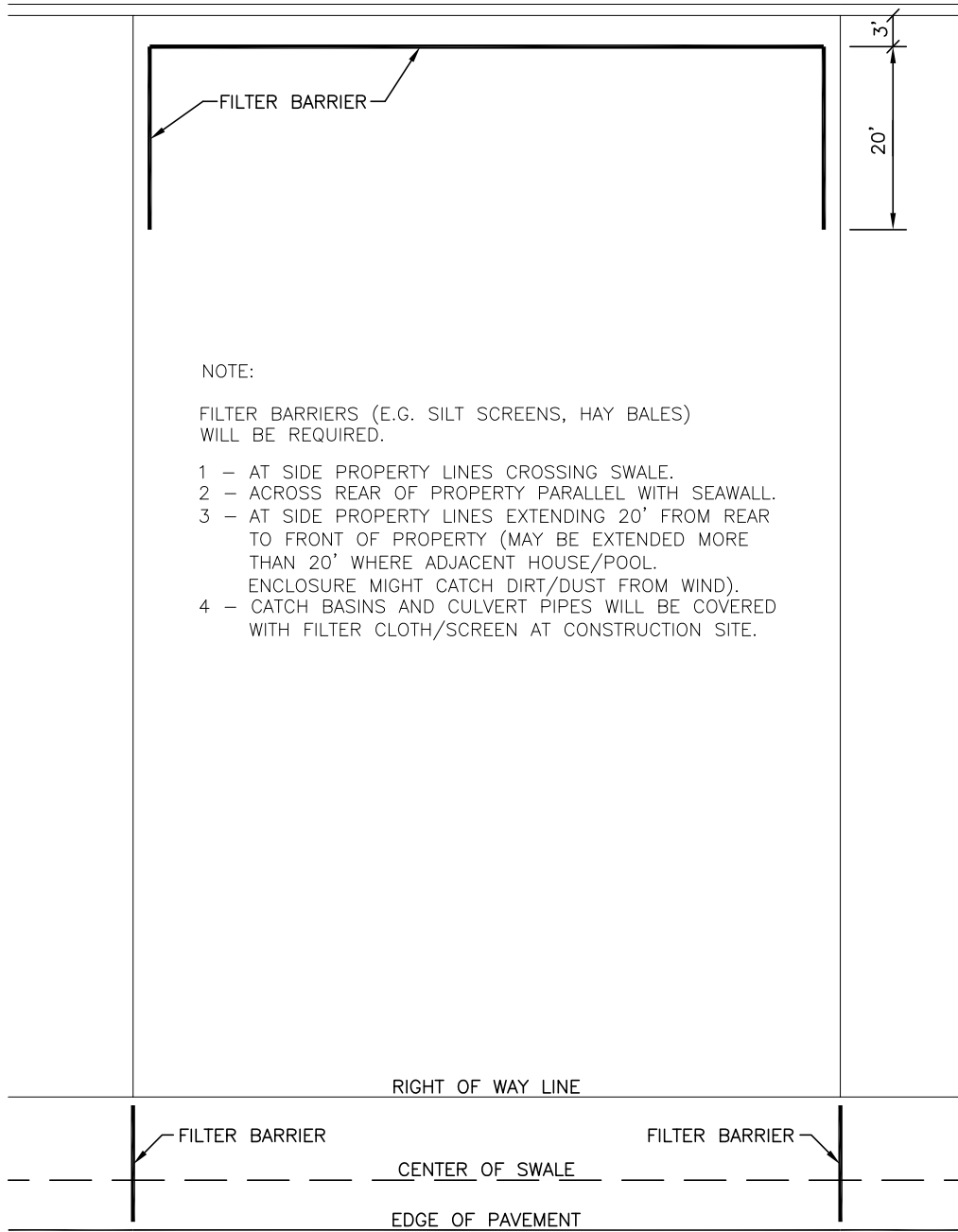
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STORM WATER SYSTEM

STANDARD DETAIL	
UNDERDRAIN CLEAN-OUT	
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WATERWAY

CONCRETE SEAWALL



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STANDARD DETAIL

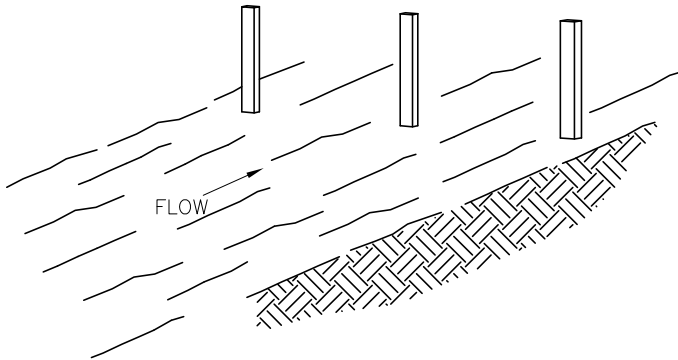
FILTER BARRIER
 REQUIREMENTS

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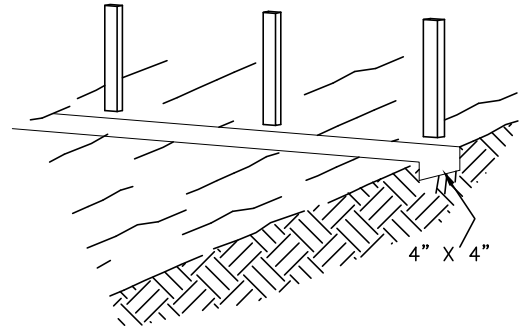
RECOMMENDED EROSION CONTROL BARRIERS

FOR ADDITIONAL INFORMATION OR ASSISTANCE WITH A PARTICULAR SITE SPECIFIC EROSION CONTROL PROBLEM PLEASE CONTACT THE CITY OF PUNTA GORDA ENGINEERING DIVISION AT 575-5050

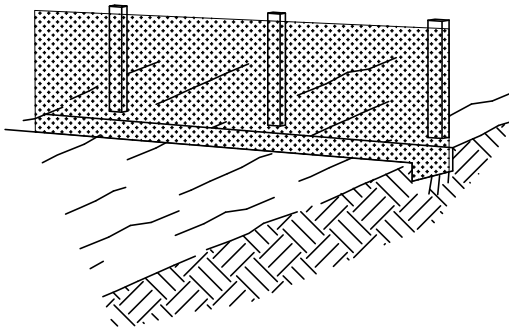
1. SET THE STAKES



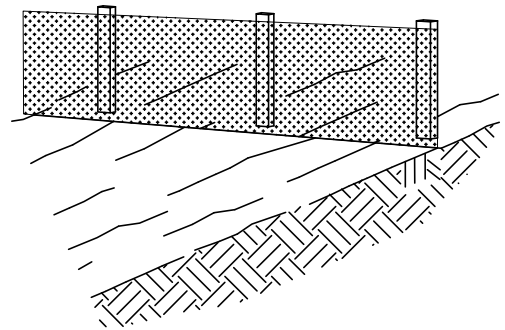
2. EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF STAKES



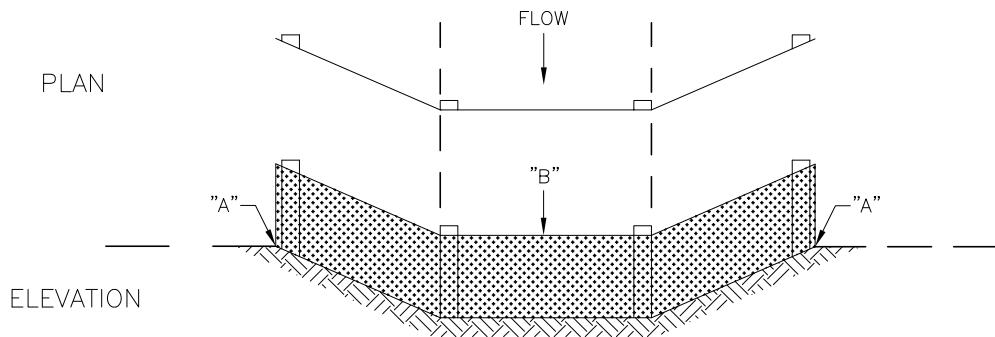
3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



CONSTRUCTION OF A FILTER BARRIER



POINTS "A" SHOULD BE HIGHER THAN POINT "B".

PROPER PLACEMENT OF A FILTER BARRIER

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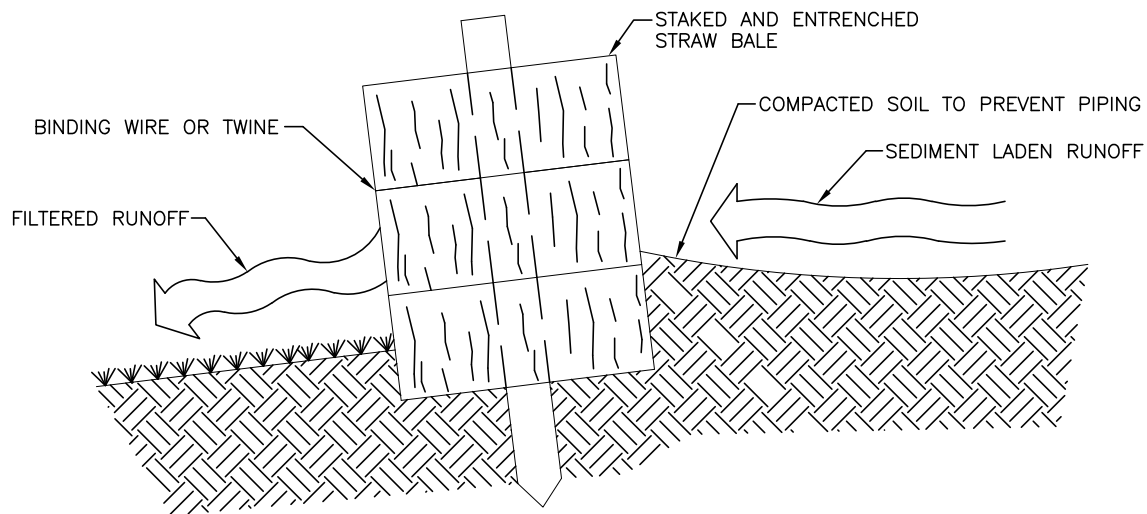
STORM WATER SYSTEM

STANDARD DETAIL

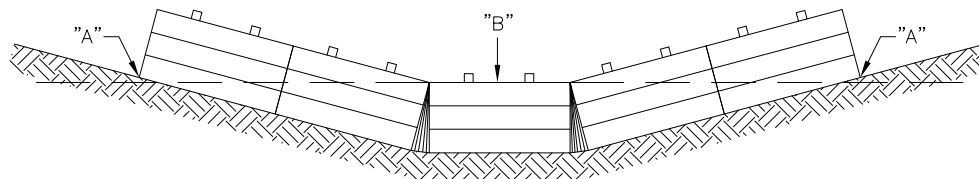
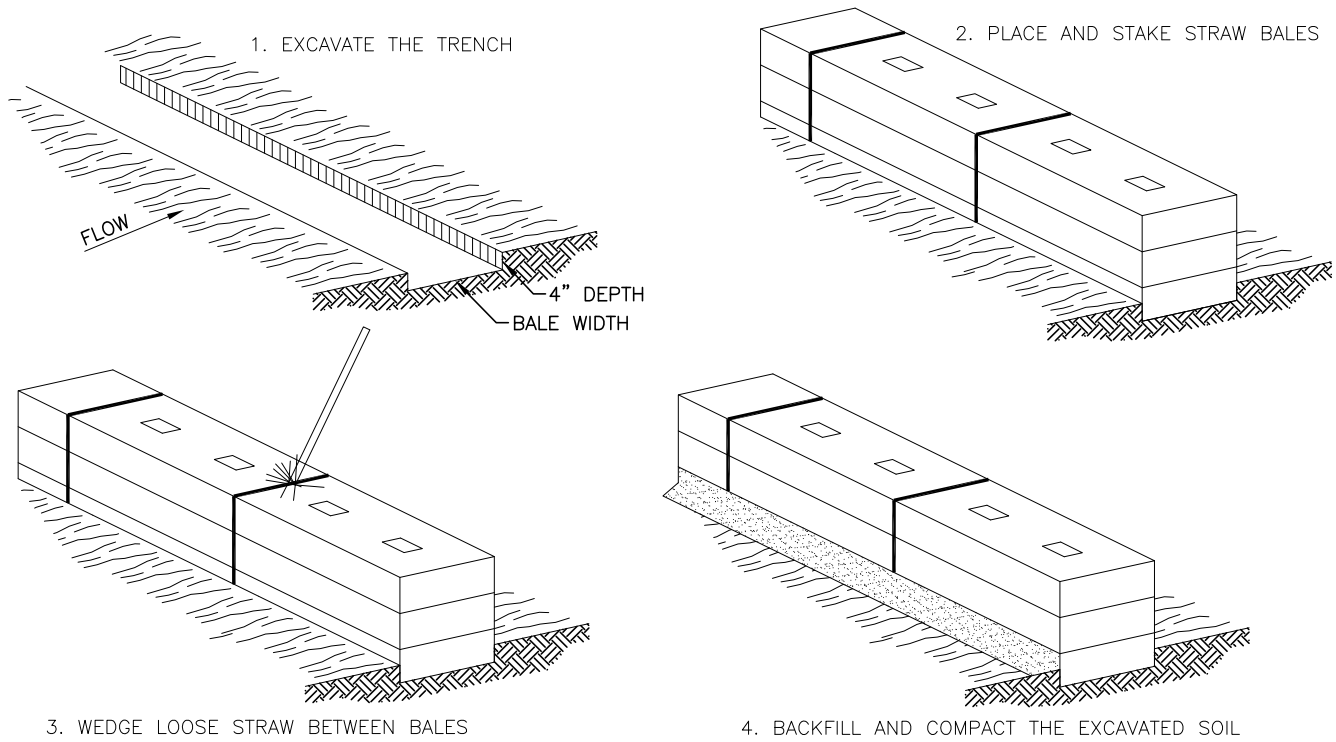
TYPICAL FILTER BARRIER

PLATE NO. D-18

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CROSS SECTION OF A PROPERLY INSTALLED STRAW BALE



POINTS "A" SHOULD BE HIGHER THAN POINT "B".

PROPOER PLACEMENT OF STRAW BALE BARRIER

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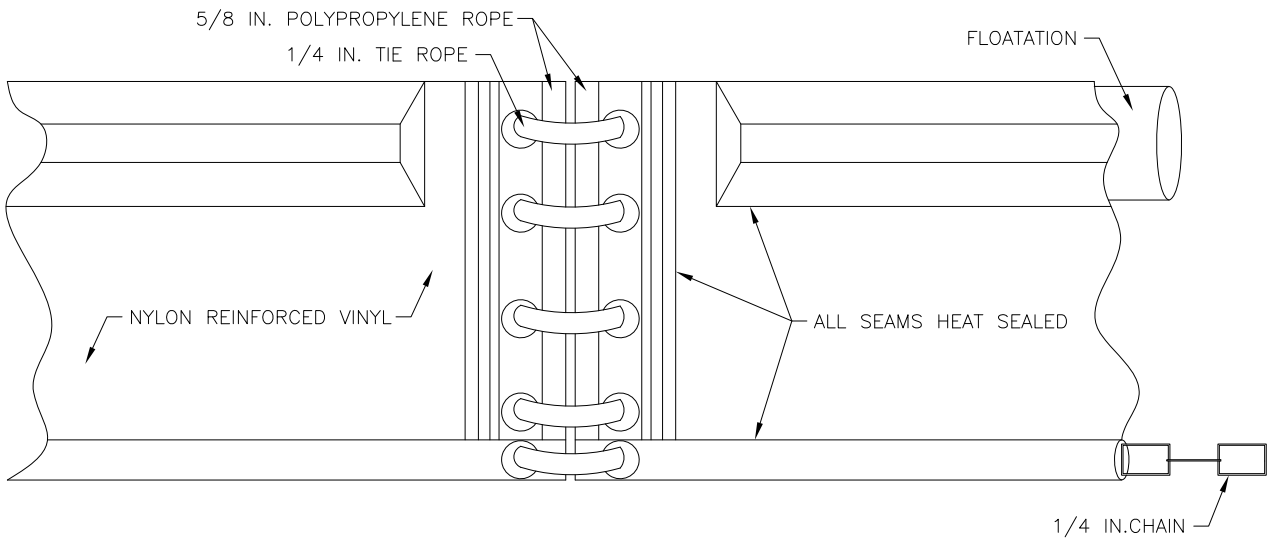
STORM WATER SYSTEM

STANDARD DETAIL

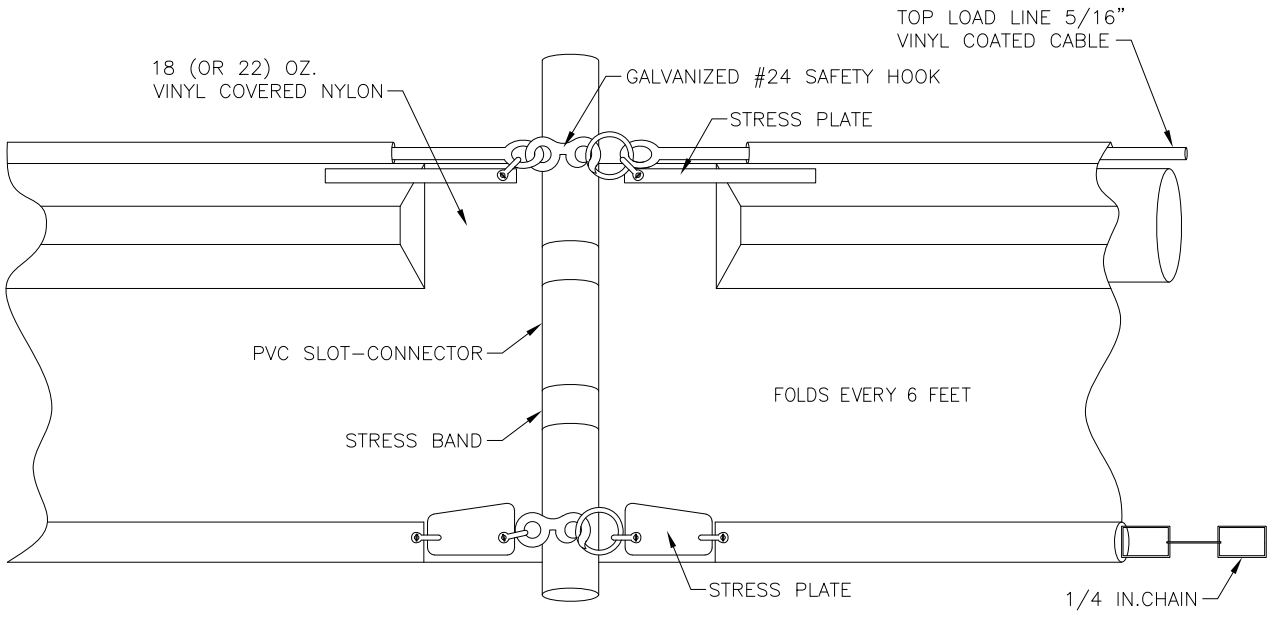
TYPICAL
STRAW BALE BARRIER

PLATE NO. D-19

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TYPE I FLOATING TURBIDITY BARRIER



TYPE II FLOATING TURBIDITY BARRIER

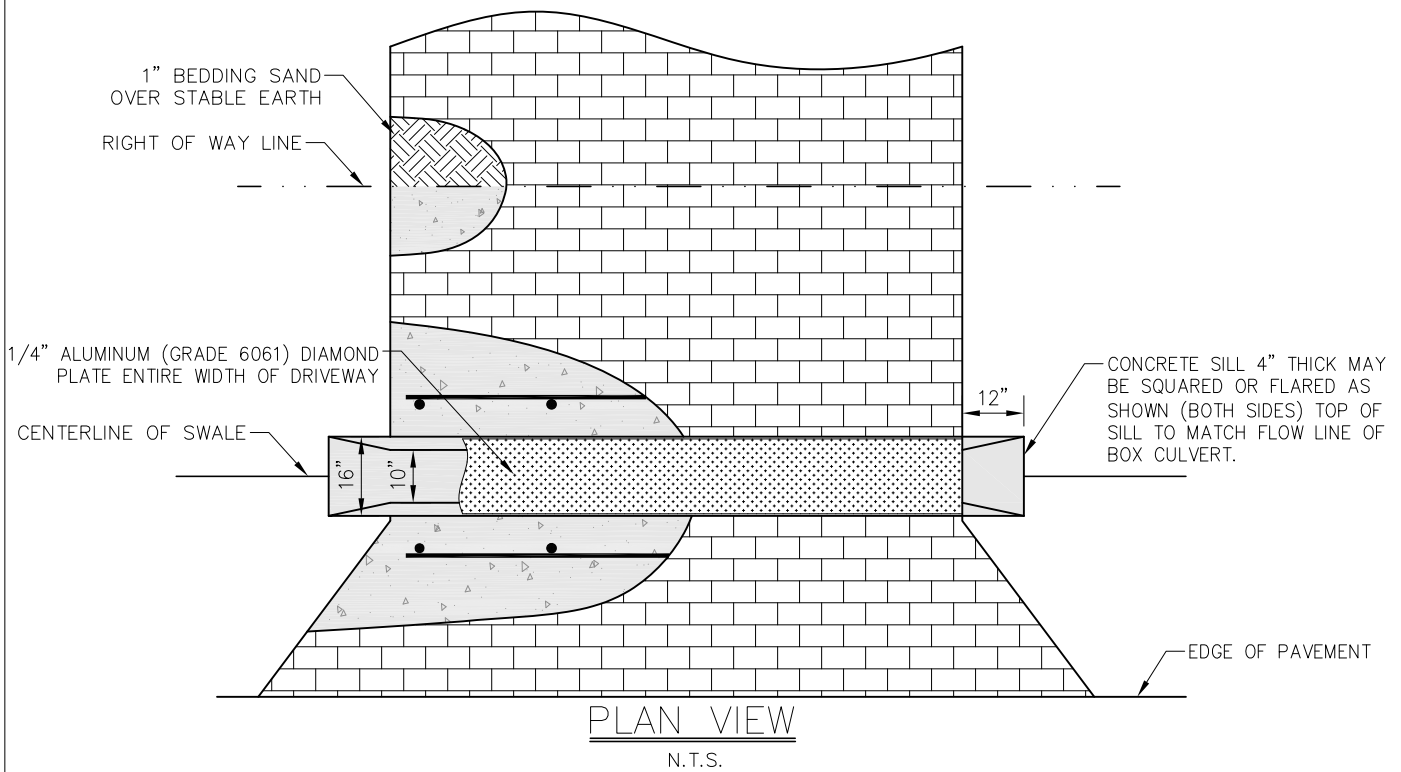
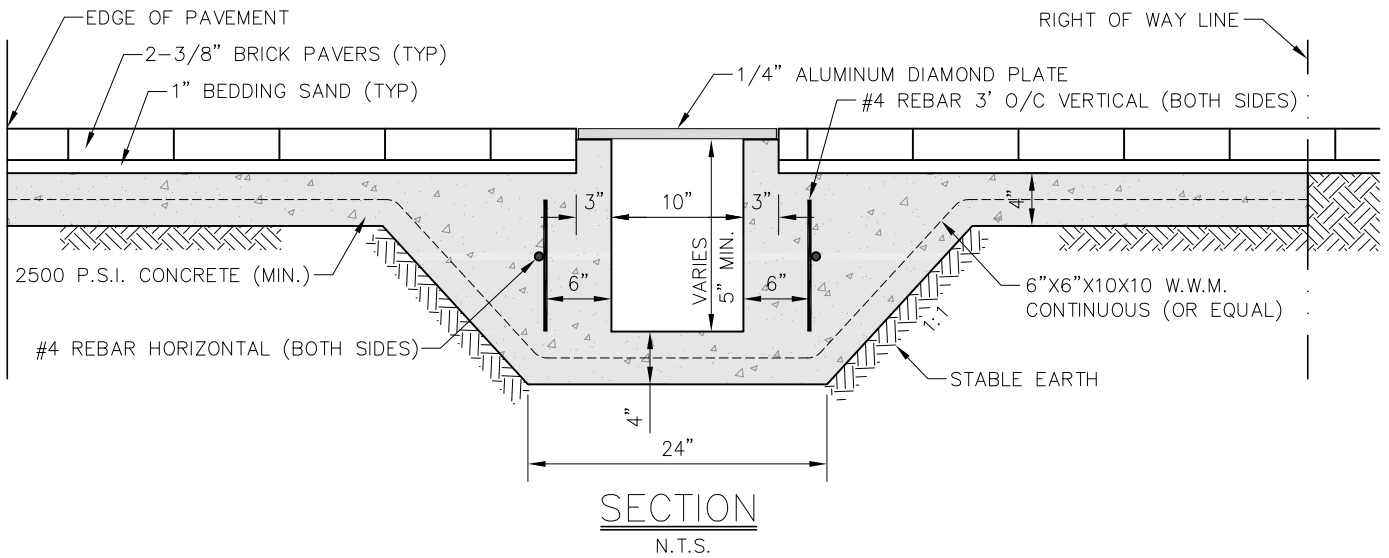
CITY OF PUNTA GORDA
326 WEST MARION AVENUE
PUNTA GORDA, FL. 33950
(941) 575-5050

STORM WATER SYSTEM

STANDARD DETAIL

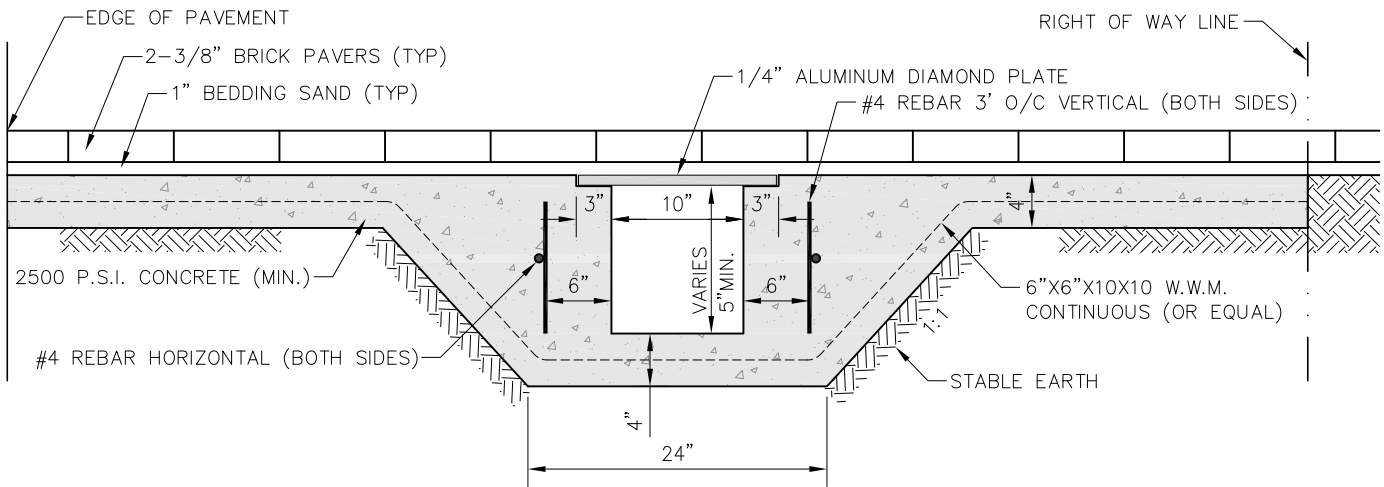
TYPICAL
TURBIDITY BARRIER

PLATE NO. D-20 | OCT. 2020

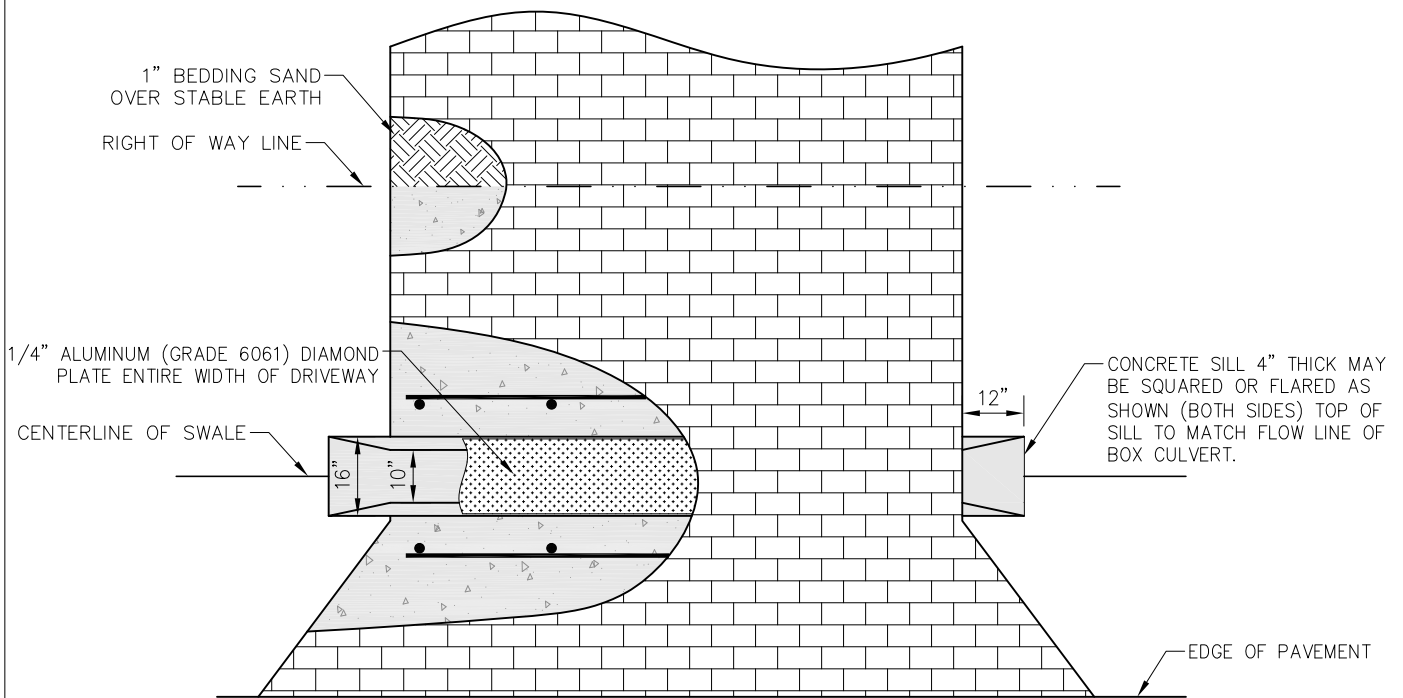


NOTE:
4" THICK CONCRETE *REQUIRED* BENEATH ALL PAVERS
WITHIN THE CITY OF PUNTA GORDA RIGHT OF WAY

CITY OF PUNTA GORDA 326 WEST MARION AVENUE PUNTA GORDA, FL. 33950 (941) 575-5050	STORM WATER SYSTEM	STANDARD DETAIL	
		BOX CULVERT @ PAVER DRIVE OPTION NO. 1	
		PLATE NO. D-21A	OCT. 2020



SECTION
N.T.S.



PLAN VIEW
N.T.S.

NOTE:
4" THICK CONCRETE *REQUIRED* BENEATH ALL PAVERS
WITHIN THE CITY OF PUNTA GORDA RIGHT OF WAY

CITY OF PUNTA GORDA 326 WEST MARION AVENUE PUNTA GORDA, FL. 33950 (941) 575-5050	STORM WATER SYSTEM	STANDARD DETAIL	
		BOX CULVERT @ PAVER DRIVE OPTION NO. 2	
		PLATE NO. D-21B	OCT. 2020