

1. CONSTRUCTION STANDARDS FOR ALL DRAINAGE SYSTEM COMPONENTS SHALL CONFORM TO THE LATEST EDITION OF THE "FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND AS SPECIFIED HEREIN.
2. ALL STORM WATER PIPES AND STRUCTURES SHALL BE INSTALLED ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
3. DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW THE COMPONENT BEING INSTALLED.
4. ALL PIPES AND STRUCTURES SHALL BE PLACED TRUE TO LINES AND GRADES AS DEPICTED ON THE APPROVED PLANS.
5. ALL PIPE JOINTS SHALL BE PROPERLY HONED AND FILTER FABRIC LINED USING A METHOD TO HOLD THE FABRIC IN PLACE DURING BACKFILL.
6. BACKFILL AND COMPACT TO THE SPRING-LINE (CENTER OF PIPE) ELEVATION AND REQUEST CITY INSPECTION AND APPROVAL BEFORE CONTINUING.
7. ALL WORK COVERED WITHOUT CITY INSPECTION WILL BE REQUIRED TO BE EXCAVATED AND INSPECTED AT THE CONTRACTOR'S EXPENSE.
8. TRENCHES SHALL BE BACKFILLED AND COMPACTED WITH CLEAN GRANULAR MATERIAL IN MAX 6" LIFTS WITH A MINIMUM COMPACTION OF 98 PERCENT (AASHTO-T180) IN PAVED AREAS AND 95 PERCENT (AASHTO-T180) IN UNPAVED AREAS.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS AT POINTS 1' ABOVE THE PIPE AND AT A MAX. 1' VERTICAL INTERVALS TO FINISH GRADE, AT A MAXIMUM SPACING OF 100 FEET, AND TO FURNISH COPIES OF TEST REPORTS PROMPTLY TO THE CITY'S INSPECTOR.
10. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE (RCP), HIGH DENSITY POLYETHYLENE (HDPE), POLYVINYL CHLORIDE (PVC) OR ALUMINUM CORRUGATED METAL PIPE (ACMP), AS SHOWN ON THE PLANS.
11. STORM DRAINAGE PIPES WITHIN PUBLIC RIGHT-OF-WAY SHALL BE A MINIMUM OF FIFTEEN (15) INCH RCP DIAMETER OR EQUIVALENT.
12. STORM INLETS, MANHOLES, AND CATCH BASINS SHALL BE EITHER POURED IN PLACE OR PRECAST REINFORCED CONCRETE. STRUCTURES SHALL BE REQUIRED AT EACH CHANGE OF PIPE SIZE OR CHANGE IN PIPE DIRECTION.



STANDARD CONSTRUCTION DETAIL

STORM DRAINAGE CONSTRUCTION NOTES

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13. STORM INLETS SHALL BE SPACED IN SUCH A MANNER AS TO ACCEPT ONE HUNDRED (100) PERCENT OF THE DESIGN STORM RUNOFF.
14. WET DETENTION PONDS SHALL BE EIGHT (8) FEET MINIMUM TO TWELVE (12) FEET MAXIMUM DEPTH BELOW THE DESIGN LOW OR NORMAL WATER STAGE.

15. MAXIMUM DISTANCES BETWEEN INLETS AND/OR JUNCTION BOXES:

<u>PIPES SIZE (INCHES)</u>	<u>LENGTH OF RUN (FEET)</u>
15	150
18	300
24 OR GREATER	400

16. ALL SWALES, DITCHES, AND DRY RETENTION POND SIDE SLOPES SHALL BE NO STEEPER THAT 4:1 (H:V) AND SHALL BE SODDED.
17. ALL RETENTION POND BACKSLOPES SHALL BE NO STEEPER THAN 3:1 (H:V) AND SHALL BE SODDED.
18. NORMAL ROADSIDE SWALES SHALL BE CONSTRUCTED TO A MAXIMUM DEPTH OF 18" BELOW THE OUTSIDE EDGE OF PAVEMENT OR CONCRETE CURB.
19. CONCRETE EROSION CONTROL MUST BE PROVIDED WHERE SWALES OR CULVERTS INTERCEPT DRAINAGE DITCHES.
20. A MINIMUM ONE FOOT (1') FREEBOARD ABOVE THE DESIGN HIGH WATER ELEVATION IS REQUIRED AT ALL POINTS AROUND WET RETENTION PONDS.
21. A MINIMUM SIX INCH (6") FREEBOARD ABOVE THE DESIGN HIGH WATER ELEVATION IS REQUIRED AT ALL POINTS AROUND DRY RETENTION PONDS.
22. POND INFLOW SHALL GENERALLY BE CONSTRUCTED WITH REINFORCED CONCRETE AND SHALL BE SUBJECT TO THE APPROVAL OF THE CITY.
23. OUTLET STRUCTURES ARE REQUIRED ON ALL PONDS. ALL OUTLET STRUCTURES SHALL BE PERMANENT CONCRETE OVERFLOW WEIRS OR CONCRETE OUTLET CONTROL STRUCTURES. NO SODDED WEIRS OR OTHER NON-PERMANENT OVERFLOW STRUCTURES SHALL BE ALLOWED.
24. SOIL EROSION CONTROL MEASURES SATISFACTORY TO THE CITY, SHALL BE EMPLOYED DURING CONSTRUCTION AND UPON COMPLETION OF THE POND.
25. THE CITY MAY REQUEST THAT THE DEVELOPER SUBMIT A REPORT BY A QUALIFIED HYDROLOGIST ON THE IMPACT THE POND WILL HAVE ON NEIGHBORING WATER TABLE ELEVATIONS BOTH DURING CONSTRUCTION AND AFTER POND COMPLETION. THE CITY MAY REQUIRE GROUNDWATER MONITORING DURING THE POND EXCAVATION.



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26. ADEQUATE MAINTENANCE ACCESS AS APPROVED BY THE CITY SHALL BE PROVIDED AROUND THE ENTIRE PERIMETER OF ALL PONDS AND ASSOCIATED OUTFALLS DISCHARGING INTO AND OUT OF PONDS.
27. IN GENERAL, ALL RETENTION/DETENTION PONDS MUST BE CONSTRUCTED PRIOR TO ANY ROAD, PARKING LOT, OR BUILDING CONSTRUCTION COMMENCING OR AS CURRENT PERMIT CONDITIONS DICTATE.
28. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ANY DEWATERING PERMITS THAT MAY BE REQUIRED.
29. CULVERTS CROSSING RIGHT-OF-WAYS SHALL EXTEND FROM RIGHT-OF-WAY LINE TO RIGHT-OF-WAY LINE UNDER THE ROADWAY.
30. ALL STORM WATER DISCHARGE FROM RETENTION/DETENTION PONDS ARE REQUIRED TO BE CHanneled INTO DEFINED DRAINAGE PATHS TO EXISTING WATER BODIES, WETLANDS, DITCHES, ETC.
31. THE CITY OF SOUTH DAYTONA REQUIRES THE DEVELOPER TO TELEVISION ANY AND ALL STORM SEWER PIPE SYSTEMS IN THE PRESENCE OF THE CITY INSPECTOR BY A REPUTABLE COMPANY THAT ENGAGES IN THIS TYPE OF WORK. THE DVD SHALL BE IN HIGH QUALITY STANDARD RESOLUTION USING A CAMERA WITH SUITABLE LIGHTING TO ALLOW A CLEAR FOCUSED PICTURE OF THE ENTIRE INSIDE PIPE CIRCUMFERENCE. THE DVD SHALL BE NON-STOP WITH AUDIO DESCRIBING WHAT IS BEING VIEWED. COPIES OF DVD SHALL BE SUBMITTED IN DVD FORMAT ACCOMPANIED BY WRITTEN LOGS DESCRIBING THE CONDITION OF THE LINES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO REQUESTING FINAL INSPECTIONS. ANY DEFECTS NOTED SHALL BE CORRECTED PRIOR TO ACCEPTANCE BY THE CITY OR ISSUANCE OF CERTIFICATE OF OCCUPANCY.
32. IN ACCORDANCE WITH SECTION 3-58(F) ALL WET DETENTION PONDS SHALL INCLUDE AN AERATION FOUNTAIN TO ENSURE PROPER WATER QUALITY, ENHANCE MAINTENANCE, AND IMPROVE AESTHETICS. PONDS SHALL BE DESIGNED TO APPEAR NATURAL AND NON-GEOMETRIC.



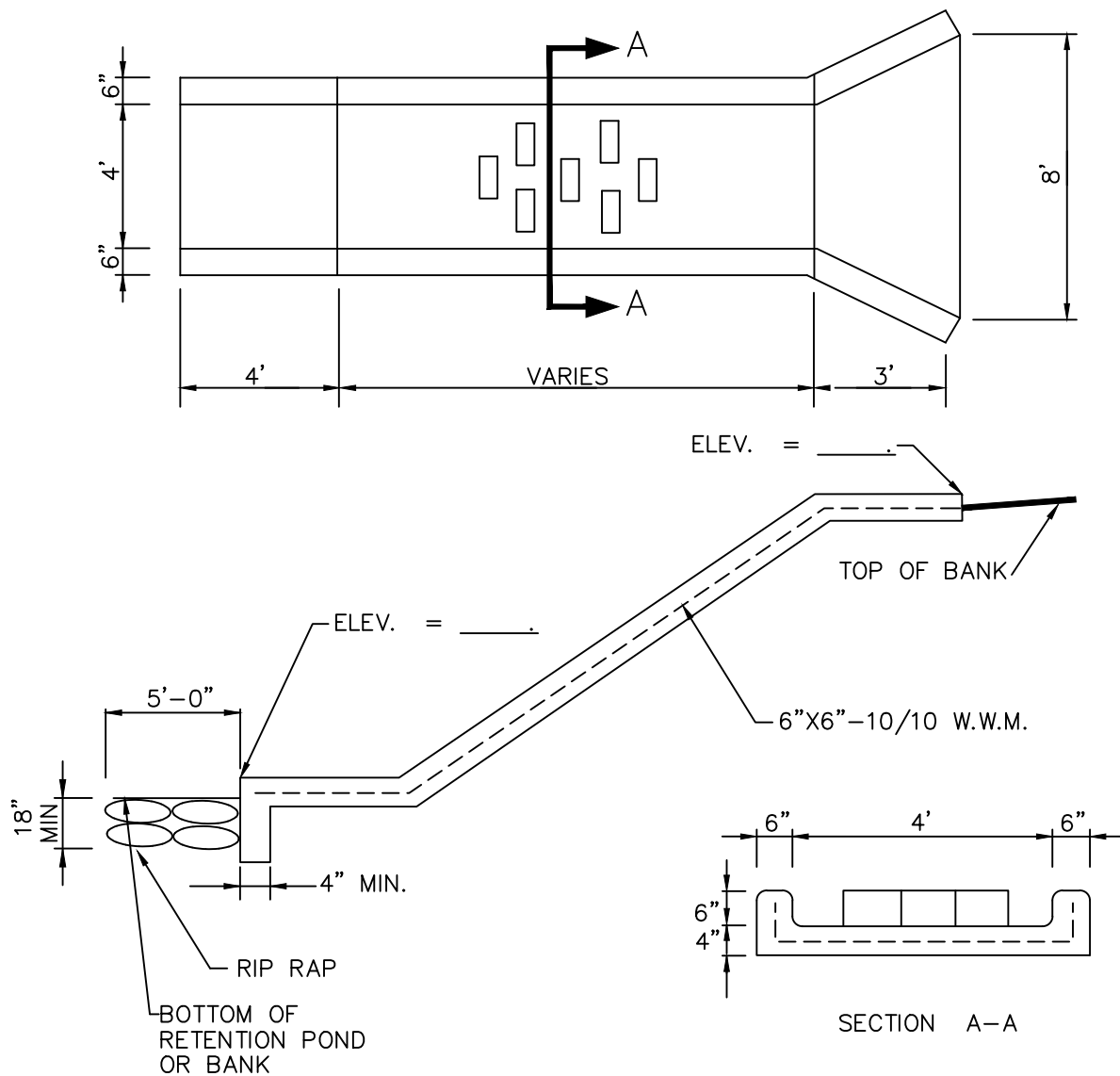
STANDARD CONSTRUCTION DETAIL

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1. CONCRETE SPILLWAY TO BE 28 DAY, 2500 P.S.I., 4" THICK.
2. PLACE SOD AT LEAST 5' AROUND ALL STRUCTURE EDGES ABOVE STANDING WATER.
3. ALL EXPOSED CORNERS TO BE ROUNDED @ 3/4" MINIMUM RADIUS.

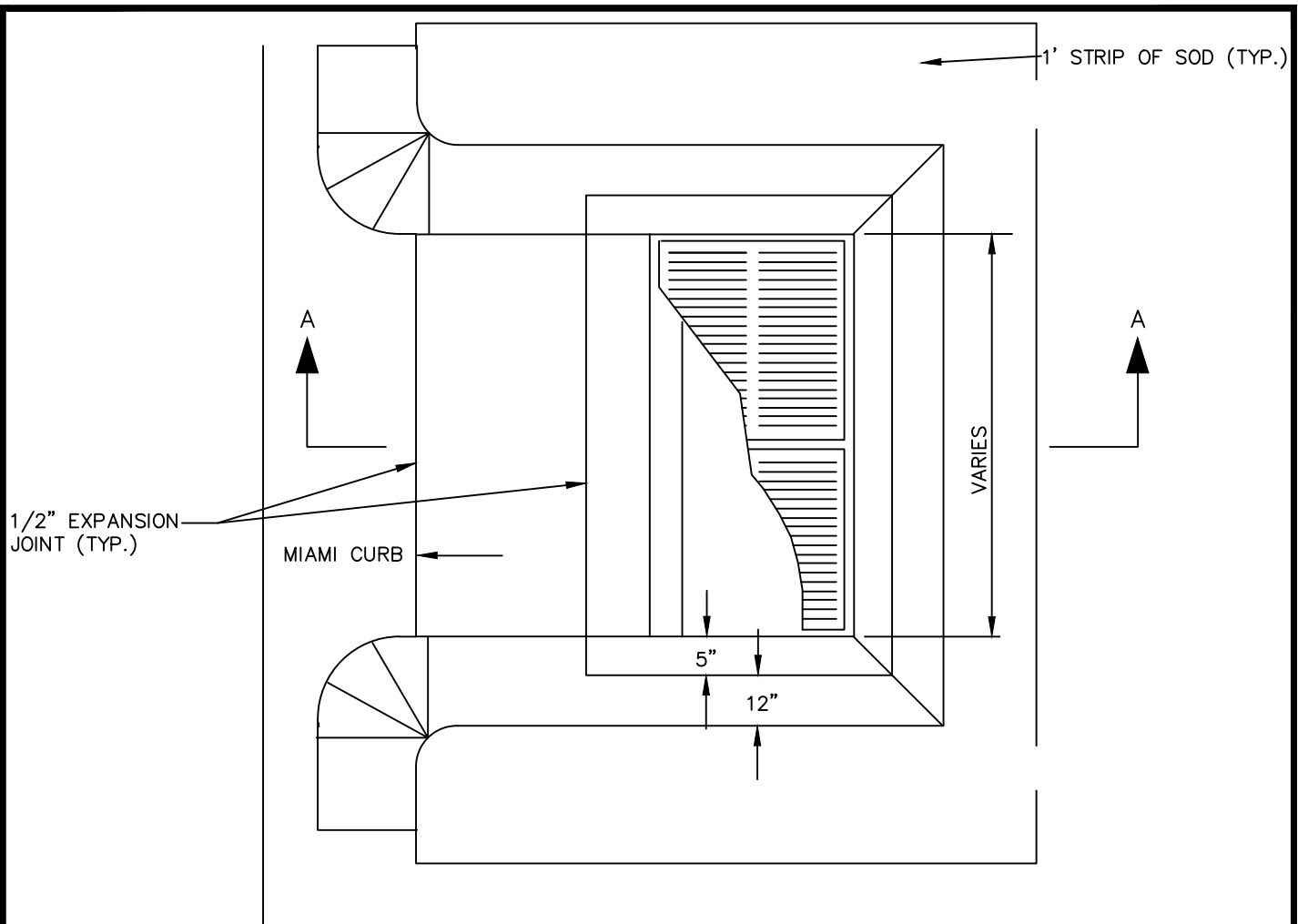


STANDARD CONSTRUCTION DETAIL CONCRETE SPILLWAY NTS.

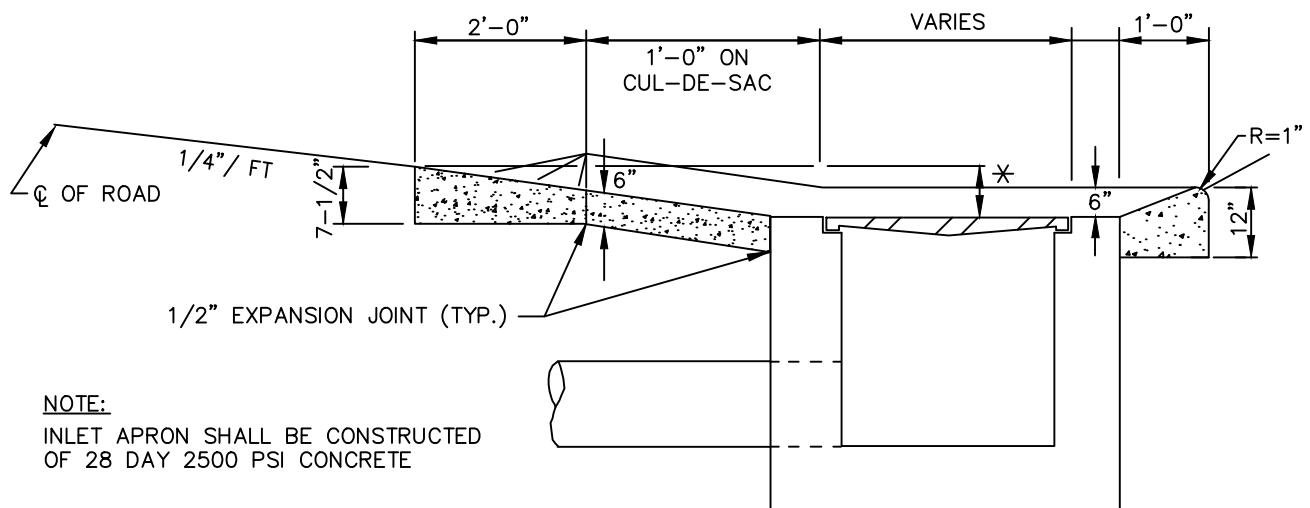
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PLAN VIEW



NOTE:

INLET APRON SHALL BE CONSTRUCTED
OF 28 DAY 2500 PSI CONCRETE

* TOP OF INLET TO BE 3" MIN TO 6" MAX
BELOW EDGE OF PAVEMENT

SECTION A-A

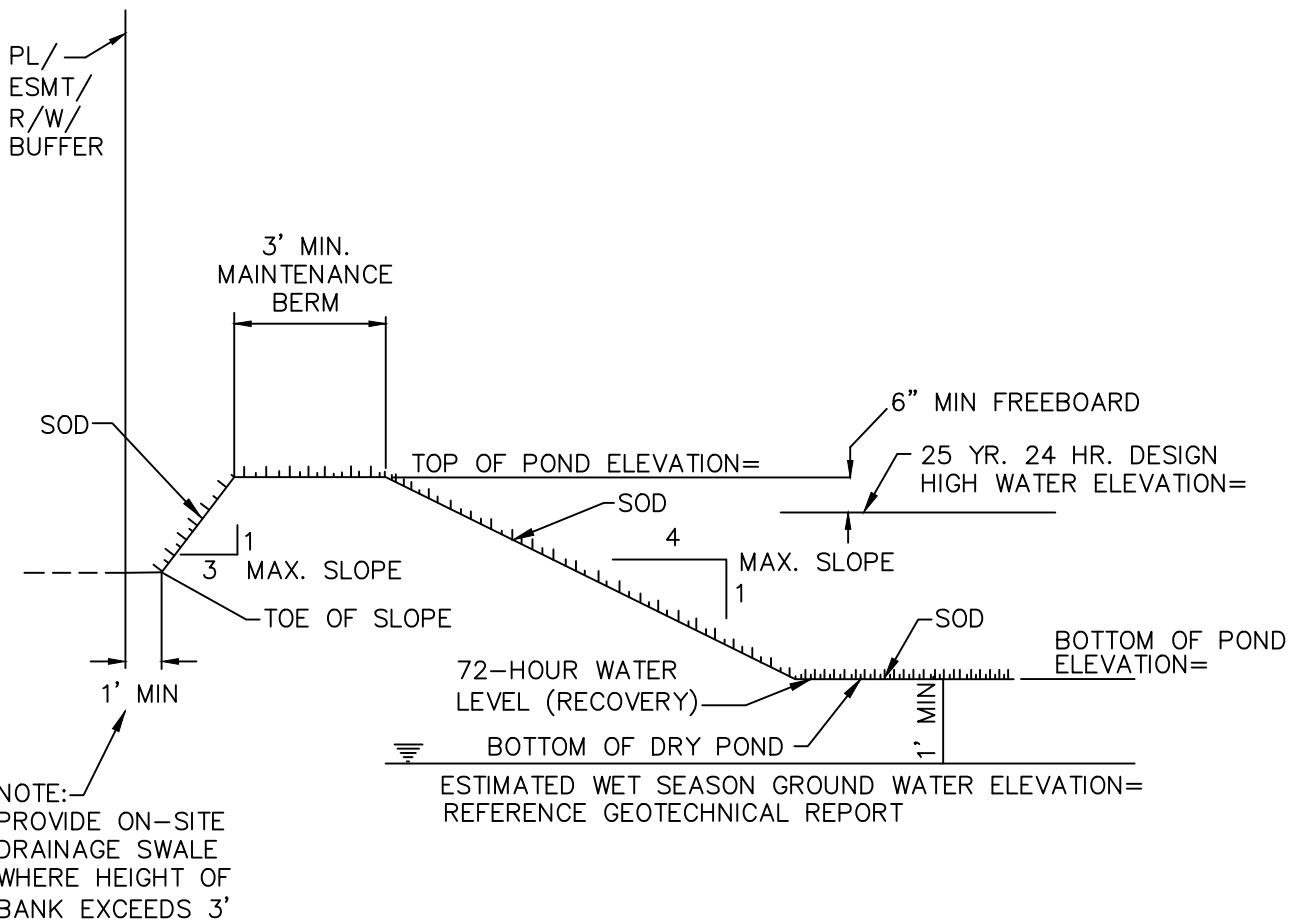


STANDARD CONSTRUCTION DETAIL
STORM INLET APRON
NTS

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NOTES:

1. PROVIDE DESIGN DATA WHERE INDICATED (=)
2. WATER LEVEL MUST RECOVER TO BOTTOM OF POND AT OR BEFORE 72 HOURS AFTER STORM
3. PROVIDE SPILLWAY DETAILS
4. MUCK GROWN SOD IS NOT ACCEPTABLE FOR POND BOTTOM. SOD TO BE PLACED ON BOTTOM MUST BE GROWN IN SAND. PLEASE COORDINATE WITH ENGINEER OR LANDSCAPE ARCHITECT PRIOR TO PLACEMENT



STANDARD CONSTRUCTION DETAIL

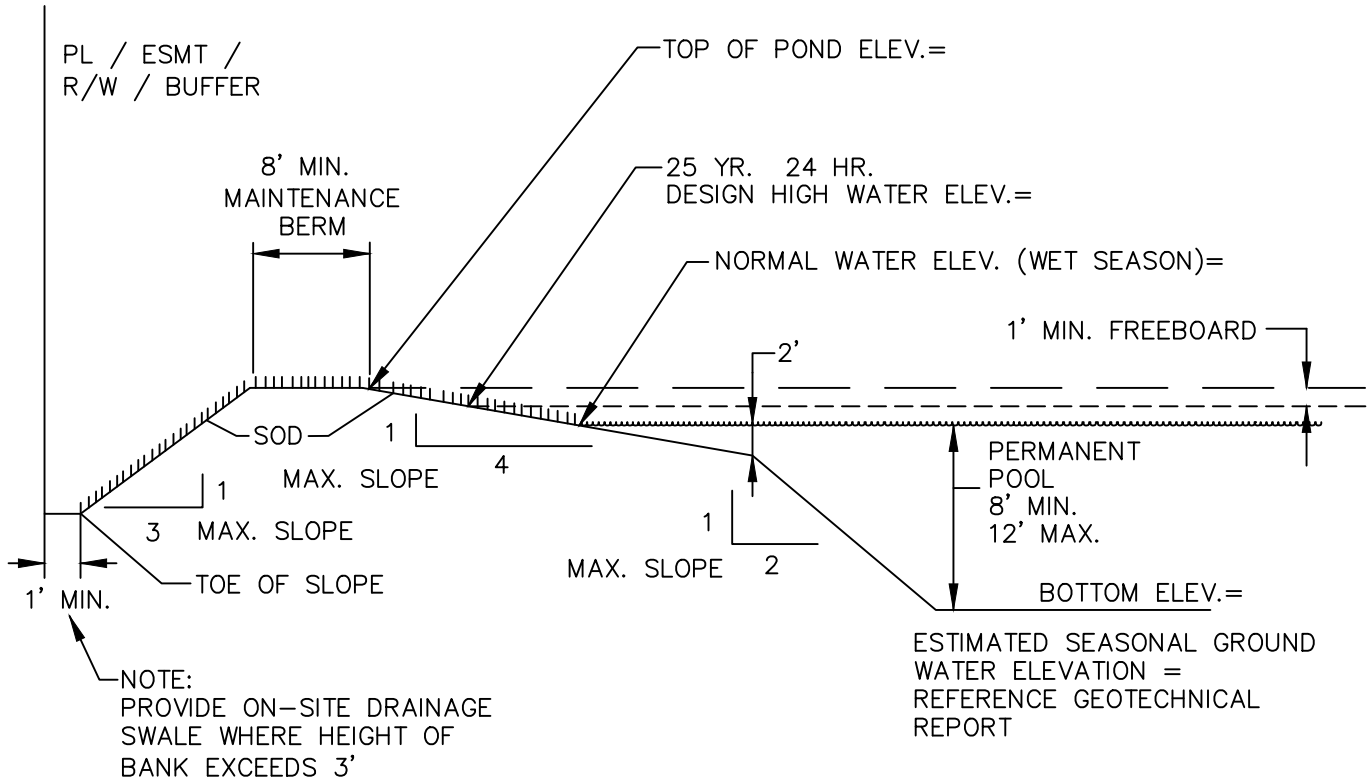
DRY RETENTION POND

NTS.

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NOTES:

1. SOD IS TO BE PLACED TO EDGE OF WATER EXCEPT IN LITTORAL PLANTING AREAS.
2. A MINIMUM OF ONE FOOT OF FREEBOARD IS REQUIRED BETWEEN DESIGN HIGH WATER ELEVATION AND TOP OF BANK.
3. PROVIDE DESIGN DATA WHERE INDICATED (=)
4. PROVIDE SPILLWAY & DRAWDOWN DETAILS
5. IN ACCORDANCE WITH SECTION 3-58(F) ALL WET DETENTION POND SHALL INCLUDE AN AERATION FOUNTAIN TO ENSURE PROPER WATER QUALITY, ENHANCE MAINTENANCE AND IMPROVE AESTHETICS. PONDS SHALL BE DESIGNED TO APPEAR NATURAL AND NONGEOMETRIC.

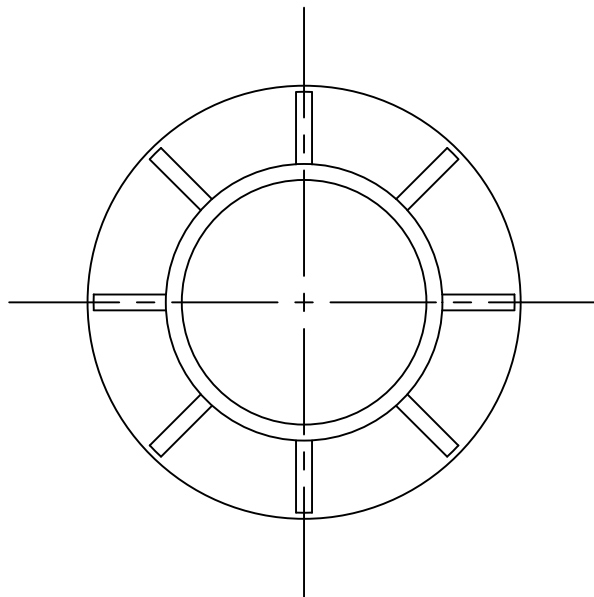


STANDARD CONSTRUCTION DETAIL
WET RETENTION POND
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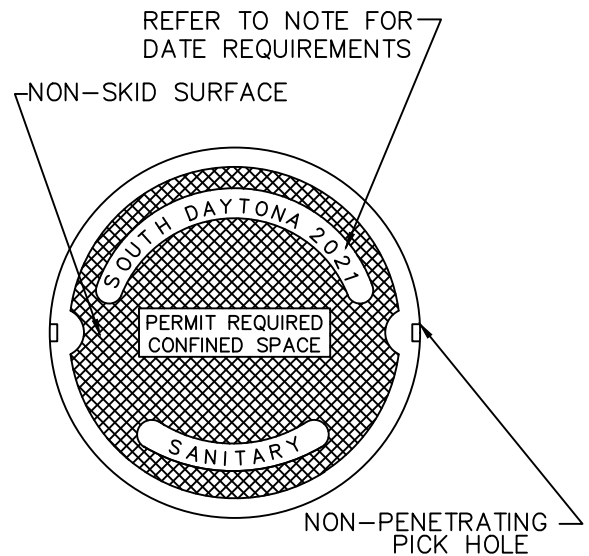
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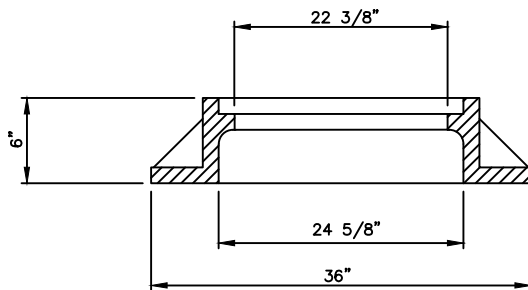
RING TOP VIEW



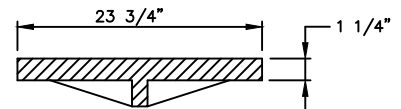
COVER DETAIL

N.T.S.

NOTE: FOR PRIVATELY OWNED STORM DRAINAGE SYSTEMS REMOVE CITY OF SOUTH DAYTONA NAME.



RING SECTION



COVER SECTION

NOTE: YEAR STAMP TO MATCH CASTING YEAR

U. S. FOUNDRY 195E OR APPROVED EQUAL

COVER TYPE	LOAD RATING	COVER WEIGHT	TOTAL WEIGHT
E	HEAVY DUTY	130	325

FOR MANHOLES IN FL. D.O.T. R/W OR AS DETERMINED BY THE CITY. THE COVER TYPE SHALL BE - BJ HEAVY DUTY 200 LBS W/ ORS.

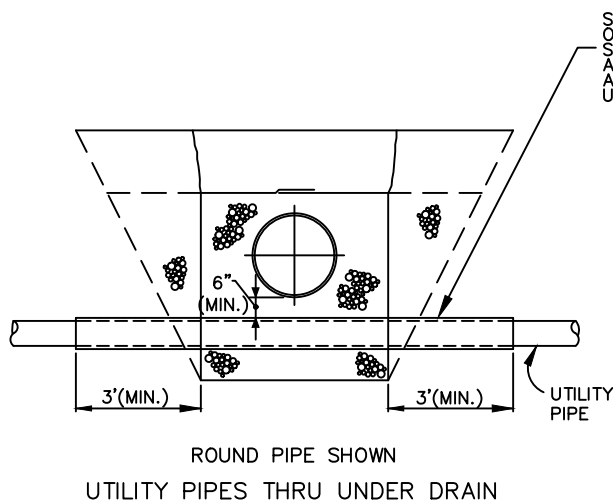
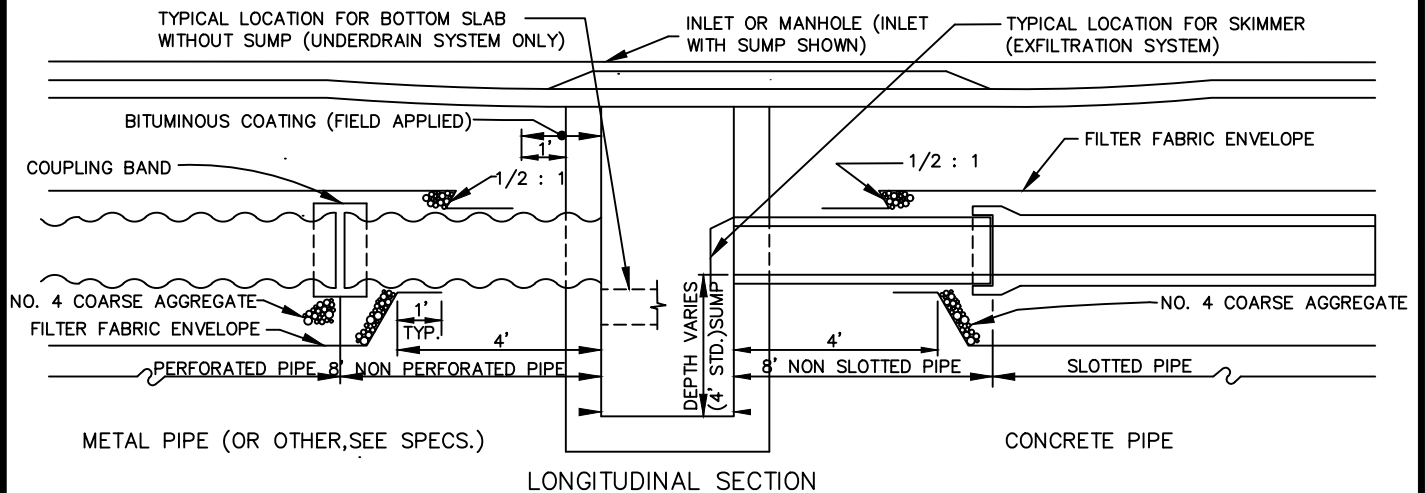


STANDARD CONSTRUCTION DETAIL
MANHOLE RING AND COVER DETAIL
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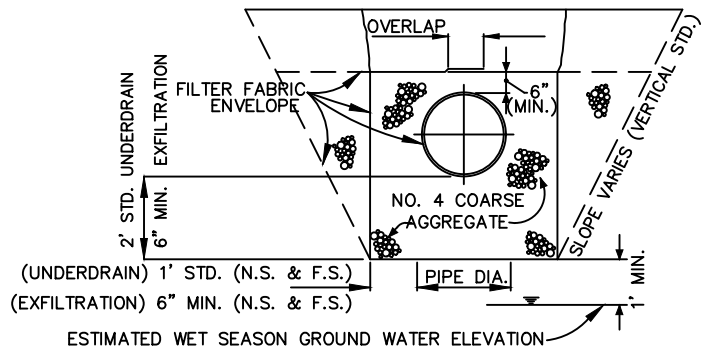
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STEEL, CAST OR DUCTILE IRON SLEEVE. ONLY CAST IRON AND DUCTILE IRON SANITARY SEWER AND WATER MAINS, AND STEEL WATER MAINS WILL BE ALLOWED TO PASS DIRECTLY THROUGH UNDER DRAIN (WITHOUT SLEEVE).



UNDER DRAIN AND EXFILTRATION SYSTEMS

NOT TO SCALE

NOTES:

1. UNDER DRAIN AND FILTRATION SYSTEMS SHALL CONSIST OF PERFORATED OR SLOTTED PIPE WRAPPED IN A FILTER FABRIC SLEEVE AND SURROUNDED BY FILTER AGGREGATE ALSO WRAPPED WITH FILTER FABRIC. EXFILTRATION SYSTEM REQUIRES FILTER FABRIC AT AGGREGATE ENVELOPES ONLY.
2. FILTER AGGREGATE SHALL BE GRAVEL, SLAG, CRUSHED ROCK, OR CRUSHED STONE CONFORMING TO THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR COARSE AGGREGATE, #4 STONE.
3. FILTER FABRIC SHALL BE A NON WOVEN FABRIC MADE FROM POLYETHYLENE OR POLYPROPYLENE. THE FABRIC SHALL BE INERT TO MOST SOIL CHEMICALS, RESISTANT TO ACIDS AND ALKALIS WITHIN A pH RANGE OF THREE (3) TO ELEVEN (11), AND NON BIODEGRADABLE. FILTER FABRIC SHALL WEIGH AT LEAST SIX (6) OUNCES PER SQUARE YARD AND SHALL BE AT LEAST FIFTY (50) MILS THICK.
4. INLET SUMP/SKIMMER OR EQUIVALENT PRETREATMENT IS REQUIRED FOR EXFILTRATION SYSTEM.
5. COMMERCIAL CHAMBER DETENTION SYSTEMS MAY BE SUBSTITUTED FOR THE PERFORATED PIPE EXFILTRATION SYSTEMS WITH THE APPROVAL OF THE CITY ENGINEER.

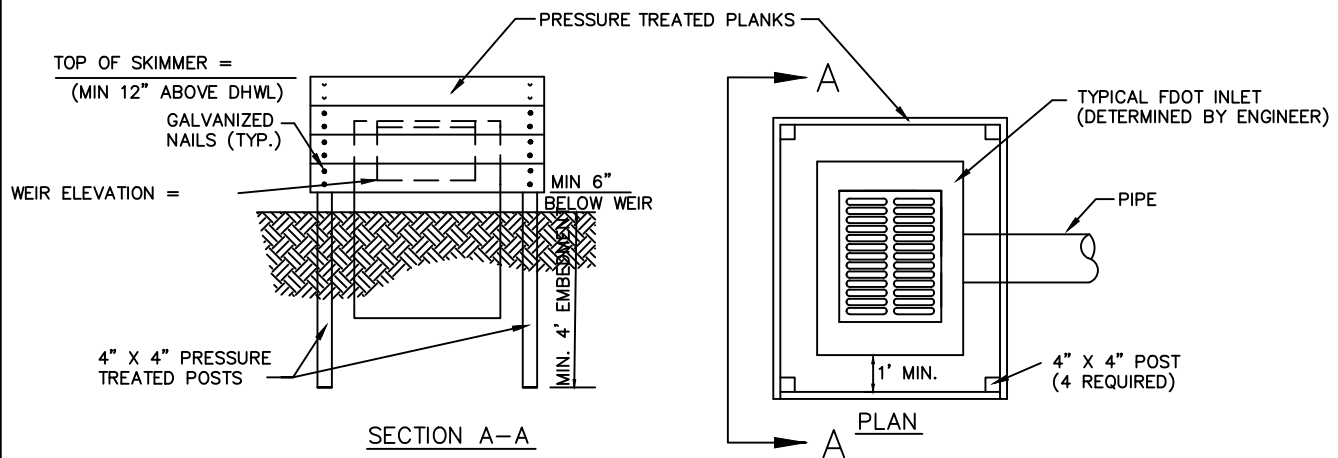


STANDARD CONSTRUCTION DETAIL UNDER DRAIN AND EXFILTRATION SYSTEMS NTS

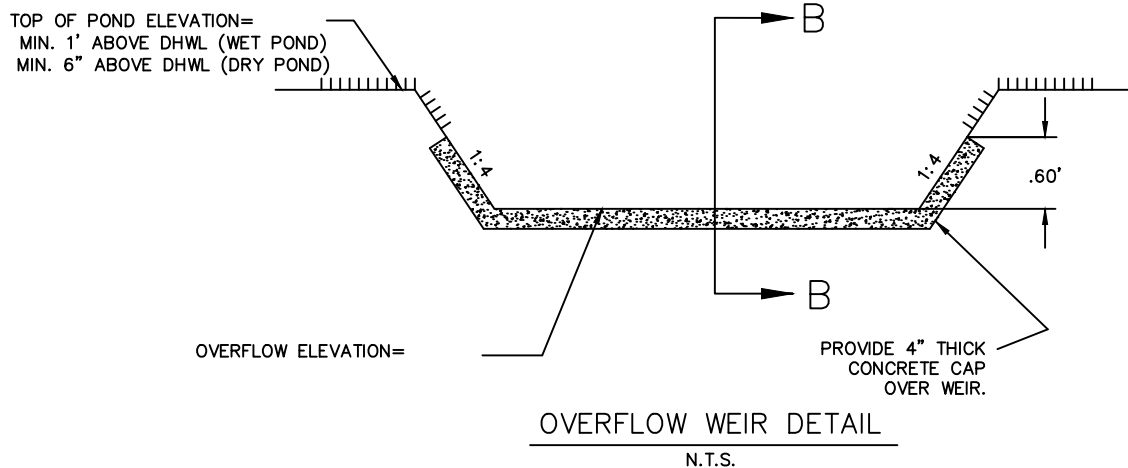
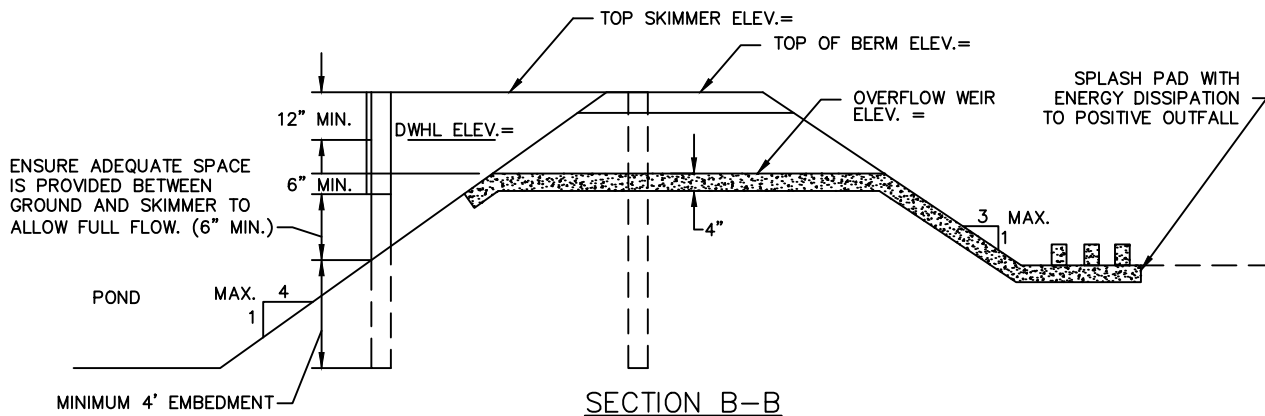
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CONTROL STRUCTURE



NOTE:
PROVIDE DESIGN DATA WHERE INDICATED (=)



STANDARD CONSTRUCTION DETAIL

SKIMMER DETAIL

NTS

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