

SPECIFICATIONS AND REQUIREMENTS FOR DEWATERING

THIS PROJECT WILL REQUIRE THE DISCHARGE OF CONSTRUCTION DEWATERING AND TURBID LADEN RUNOFF FROM THE SITE TO BE DIRECTED AND DISCHARGED THROUGH A DIRTBAG. THIS DESCRIPTION ALSO CONTAINS APPENDED MATERIALS DESCRIBING THE DIRTBAGS REFERRED TO IN THIS NARRATIVE.

OVERVIEW:
THE PROJECT WILL BENEFIT FROM SEDIMENT SUMP TREATMENT TANKS. HOWEVER, IT IS RECOGNIZED THAT WEATHER CONDITIONS ARE NOT ALWAYS PREDICTABLE; THERE MAY BE EXCEPTIONAL PERIODS WHEN CONSTRUCTION ACTIVITY RESULTS IN HIGHLY TURBID WATER WHICH IS NOT CONSIDERED DESIRABLE TO DISCHARGE TO THE TANKS, OR LIMITED ACTIVITY IS REQUIRED THAT MAY NOT BE EASILY ACCOMMODATED BY THE SEDIMENT SUMP TREATMENT TANKS.

THE APPLICANT SHALL TAKE ALL NECESSARY ACTIONS TO ENSURE THAT ITS ACTIVITIES OR THOSE OF ITS AGENTS DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS ON THE SITE DURING THE CONSTRUCTION AND OPERATION OF THE PROJECT COVERED BY THIS APPROVAL. IN THESE CASES THE TREATMENT TANKS SHALL BE USED.

THESE SPECIFICATIONS HAVE BEEN DEVELOPED FOR THE PURPOSE OF ADDRESSING CONSTRUCTION DEWATERING ACTIVITIES WITH THE CONTINGENCY THAT UNPREDICTABLE WEATHER CAN CREATE. THE SPECIFICATION IS INTENDED TO "SHARE THE RISK" BETWEEN THE CONTRACTOR AND OWNER. IT IS ANTICIPATED THAT THIS METHOD WILL ALLOW THE BASE BID FOR THE PROJECT TO HAVE A REDUCED BUILT-IN CONTINGENCY COST FOR CERTAIN WEATHER-RELATED FACTORS.

ACCEPTABLE METHODS OF DISCHARGING CONSTRUCTION SITE RUNOFF:

DEWATERING OF THE CONSTRUCTION SITE SHALL BE ACCOMPLISHED USING ONE OF THE FOLLOWING MEASURES:

- THE DIRECTION OF THE RUNOFF TO THE SEDIMENTATION BASIN BY GRAVITY FLOW, FOLLOWED BY TREATMENT TANKS IF NECESSARY.
- THE PUMPING OF DIRTBAGS WITH A DISCHARGE TO THE TREATMENT TANKS IF NECESSARY OR THE CITY OF PORTLAND STORM DRAIN SYSTEM.
- THE PUMPING OF CONSTRUCTION SITE WATER AND COLLECTED RUNOFF TO A DIRTBAG (PATENTED PRODUCT BY ACF ENVIRONMENTAL PRODUCTS) WITH RELEASE TO THE POTENTIAL ROAD IF THE CONTRACTOR RECEIVED PORTLAND WATER DISTRICT APPROVAL.

A DIRTBAG AND SPECIFICATIONS FOR DEWATERING DETAIL
N.T.S.

REQUIREMENTS FOR DIRTBAGS:

THE SITE CONTRACTOR SHALL INCLUDE THE PRICE OF INSTALLING, OPERATING, AND REMOVAL AND DISPOSAL OF FOUR DIRTBAGS AS PART OF THE BASE BID. A UNIT PRICE SHALL BE PROVIDED FOR ADDITIONAL DIRTBAGS.

AT ALL TIMES THERE MUST BE AN UNUSED DIRTBAG AVAILABLE FOR EMERGENCY USE.

AT ALL TIMES (AFTER INITIAL SITE PREPARATION), THE CONTRACTOR SHALL HAVE ONE DIRTBAG ACTIVE OR READY FOR USE. THE DIRTBAGS SHALL BE FIELD LOCATED BY THE CONTRACTOR BUT ARE NOT TO BE INSTALLED IN ANY "CRITICAL" AREA. (THE SITE CRITICAL AREAS ARE SHOWN ON THE EROSION-SEDIMENT CONTROL PLAN). THE DIRTBAG SHALL BE INSTALLED ON A PREPARED SUBGRADE. THIS SUBGRADE SHALL CONSIST OF THE INSTALLATION OF A LAYER OF MIRAFI 600X, AND 12 INCHES OF CLEAN SAND AND 6 INCHES OF 3/4 INCH CRUSHED STONE. THE PLAN DIMENSION OF THE CRUSHED STONE PAD SHALL EXCEED THE PLAN AREA OF THE DIRTBAG BY AT LEAST TWO FEET IN ALL DIRECTIONS. THE DIRTBAG SHALL NOT BE INSTALLED ON AN UNDERLYING SLOPE OF GREATER THAN 15 PERCENT.

CONSTRUCTION DEWATERING OPERATIONS:

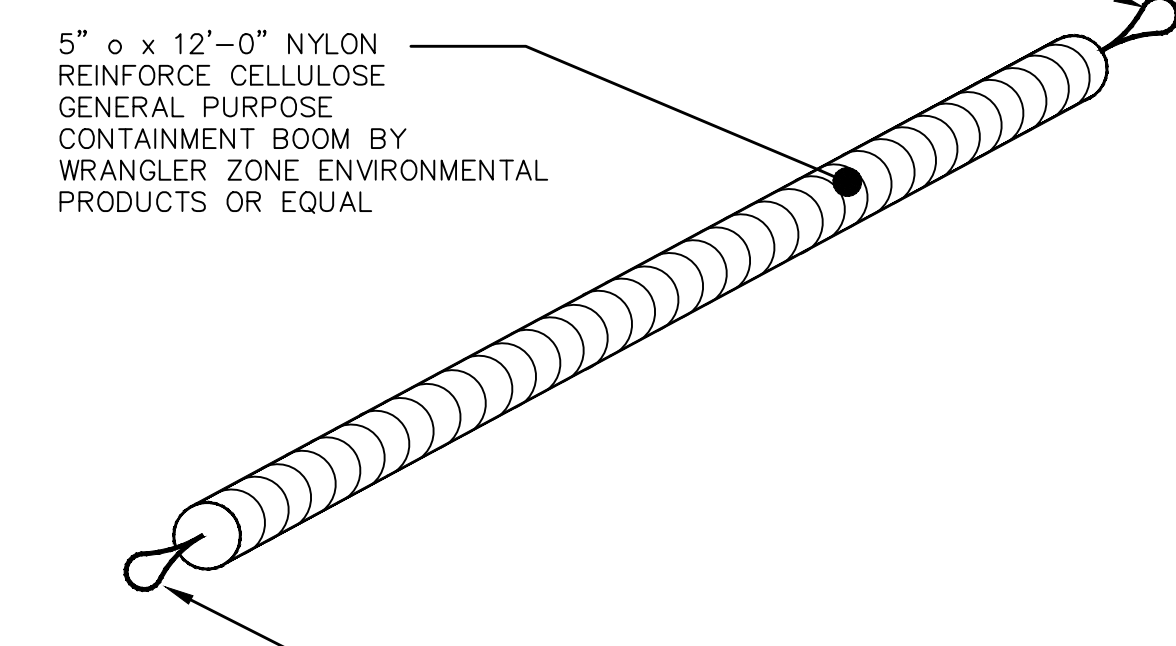
ALL CONSTRUCTION DEWATERING OPERATIONS ARE THE RESPONSIBILITY OF THE SITE CONTRACTOR. IT SHALL BE THE SITE CONTRACTOR WHO IS RESPONSIBLE FOR SELECTING THE SITE FOR THE DIRTBAG. THE SELECTION OF THE USE OF THE DIRTBAG OR THE SEDIMENTATION BASIN FOR DIRECTING DEWATERING, EXCEPT THAT THE OWNER MAY DIRECT THE SITE CONTRACTOR TO ALTER THE SELECTED OPERATION IF TURBID DISCHARGE ARE OBSERVED.

WINTER OPERATIONS:

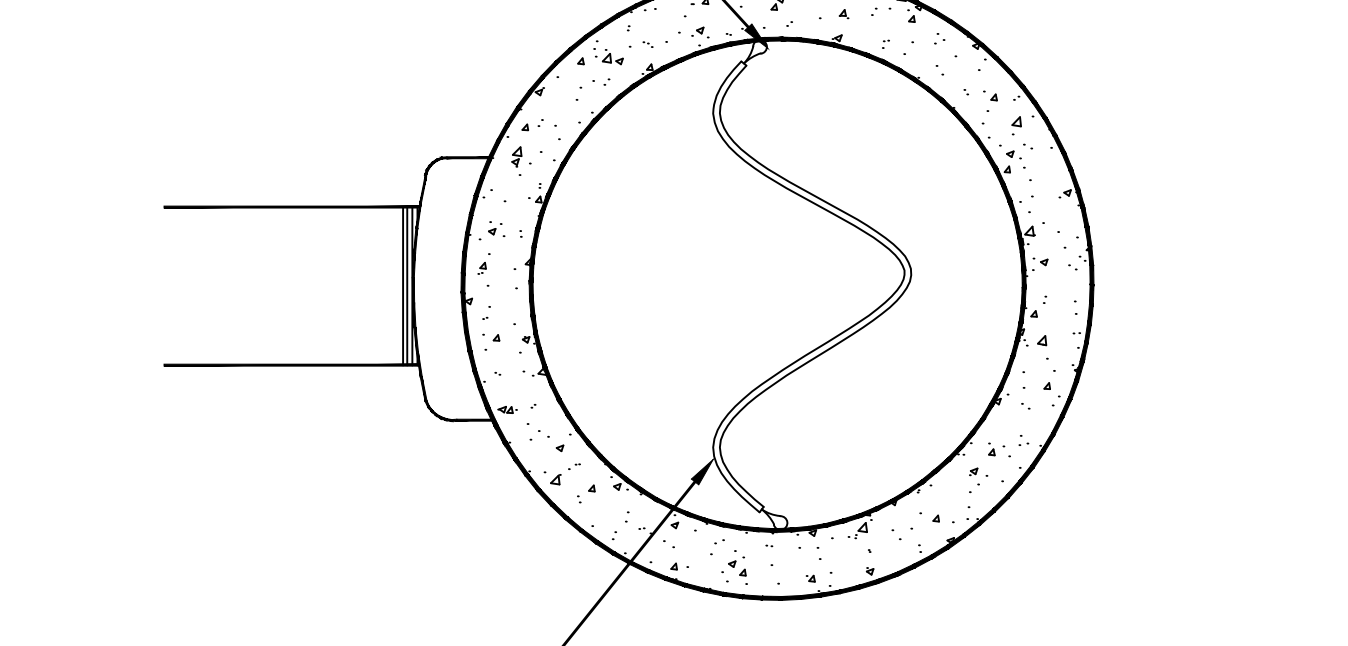
IN THE EVENT THAT WINTER OPERATIONS ARE REQUIRED, THE CONTRACTOR SHALL "POLY" ENCLOSE, AND PROVIDE TEMPORARY HEAT TO PREVENT THE DIRTBAG FROM SUBSTANTIAL FREEZING.

RECORD KEEPING:

THE WEEKLY EROSION-SEDIMENT CONTROL REPORTS PREPARED IN ACCORDANCE WITH THE NPDES PERMIT SHALL MAINTAIN A LOG OF THE LOCATION, USE, AND REMOVAL OF DIRTBAGS. IN THE EVENT THAT THE STONE UNDER THE DIRTBAG BECOMES HIGHLY CONTAMINATED WITH FINES, THE NEXT DIRTBAG SHALL BE INSTALLED IN A DIFFERENT LOCATION.



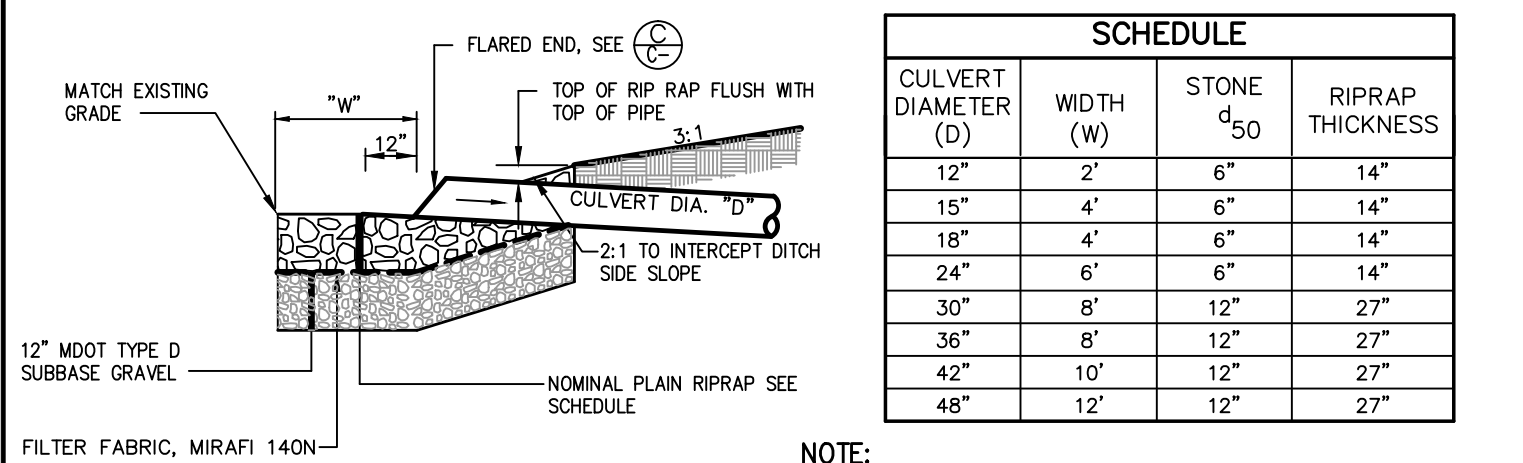
PROVIDE TEMPORARY ATTACHMENT FOR END OF BOOM ON CATCH BASIN SIDES OPPOSITE OUTLET PIPE



SET BOOM INSIDE CATCH BASIN IN SERPENTINE PATTERN. INSTALL PRIOR TO PLACEMENT OF BINDER PAVEMENT

B TEMPORARY WATER QUALITY MEASURE INSIDE OF CATCH BASINS
N.T.S.

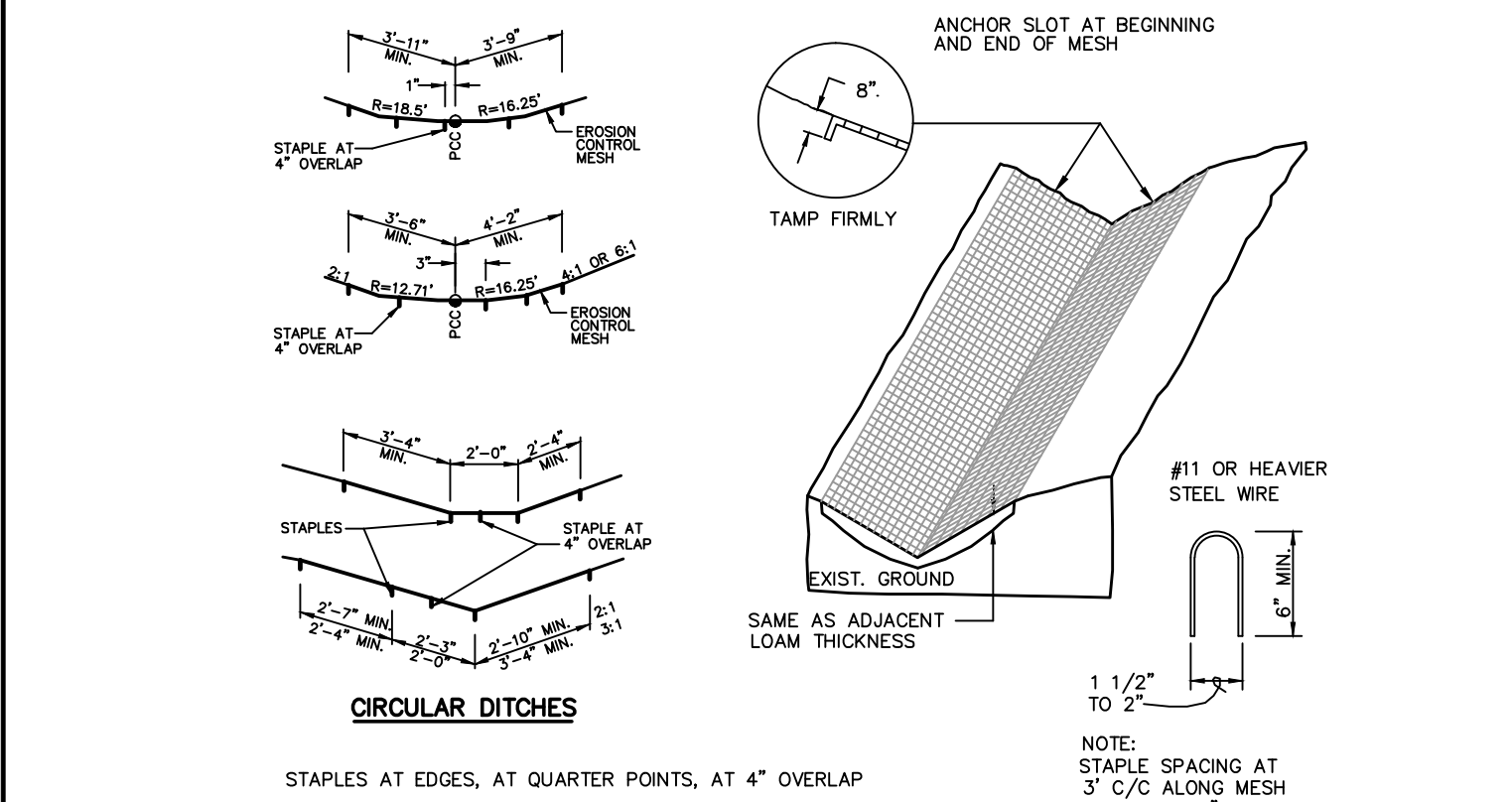
- NOTES:**
1. REQUIRED FOR ALL CATCH BASINS WHICH RECEIVE RUNOFF FROM PAVED AREAS.
 2. REFER TO EROSION CONTROL REPORT FOR ADDITIONAL INFORMATION.
 3. CONTRACTOR MAY SELECT OTHER TYPE OF EQUIVALENT OIL ABSORBENT PRODUCTS.
 4. SUBMITTALS ARE REQUIRED FOR THESE ITEMS.



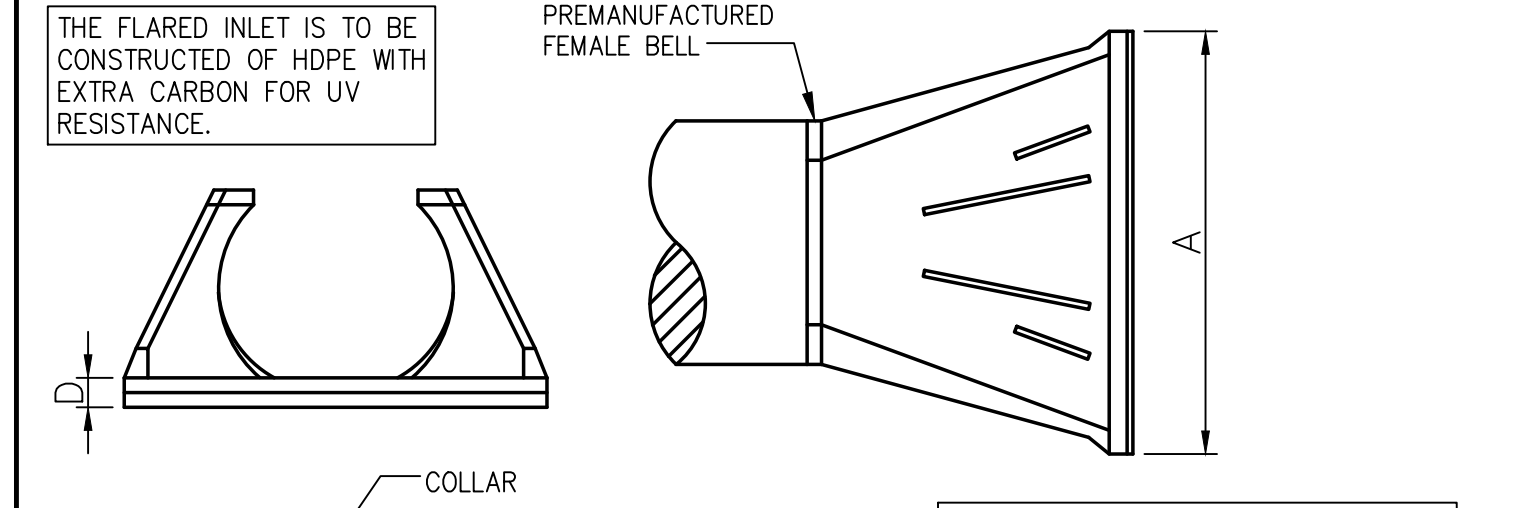
CULVERT DIAMETER (D)	WIDTH (W)	STONE d50	RIPRAP THICKNESS
12"	2'	6"	14"
15"	4'	6"	14"
18"	4'	6"	14"
24"	6'	6"	14"
30"	8'	12"	27"
36"	8'	12"	27"
42"	10'	12"	27"
48"	12'	12"	27"

NOTE:
RIPRAP GRADATION AND PLACEMENT - THE RIPRAP GRADATION SHALL BE A WELL-GRADED MIX FROM ABOUT 1.5 TIMES THE D SIZE TO ABOUT 25 PERCENT OF THE D SIZE. THE RIPRAP STONES SHALL BE CAREFULLY PLACED WORKING FROM THE TOE OF THE SLOPE UPWARD. THE STONES SHOULD BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12 INCHES ONTO THE GEOTEXTILE. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH UNIFORMLY SLOPED SURFACE.

C PIPE/CULVERT INLET APRON
N.T.S.

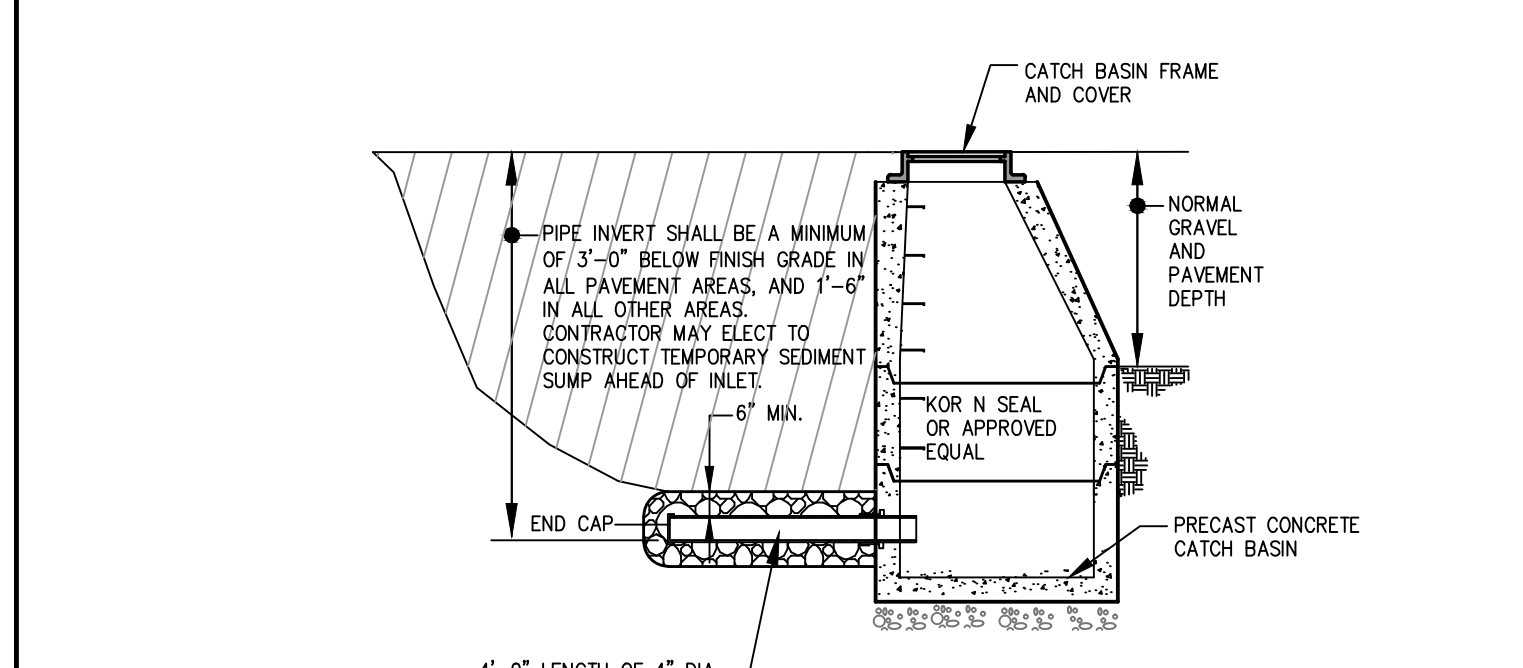


E EROSION CONTROL MESH
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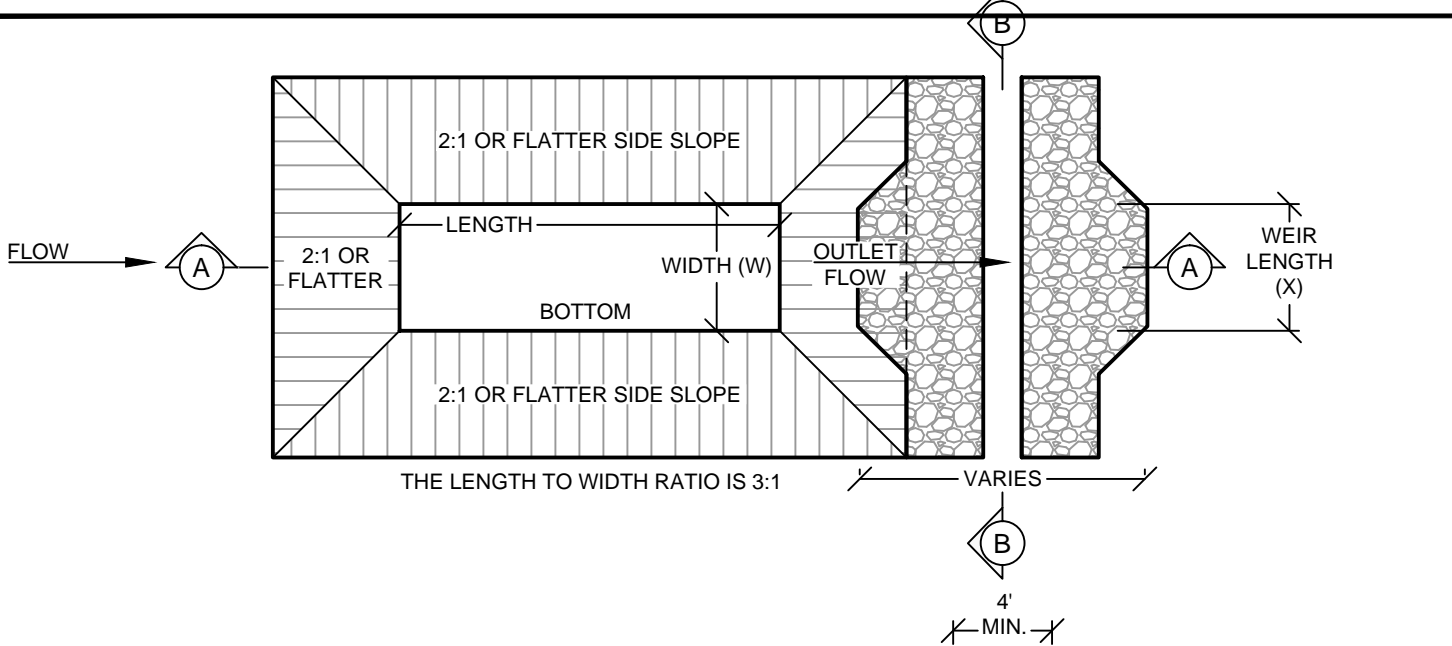
DIMENSION	PIPE DIAMETER		
	10\"/>		
A	24\"/>		
B	14.5\"/>		
C	33\"/>		
D	6\"/>		

D FLARED INLETS FOR 10\"/>



- NOTE:**
1. THE SUBGRADE DRAINAGE INLET SHALL BE USED TO PROVIDE SITE DRAINAGE UNTIL SUBBASE GRAVEL OR LOAM IS PLACED.
 2. THIS INLET DRAIN IS REQUIRED FOR ALL CATCH BASINS OF 4\"/>
 3. THE CITY OF PORTLAND DPS SHALL APPROVE USE OF THE INLET DRAIN FOR ANY STRUCTURES IN THE CITY R.O.W.

F INLET SUBGRADE DRAINAGE DETAIL
FOR ONSITE CATCH BASINS ONLY
N.T.S.

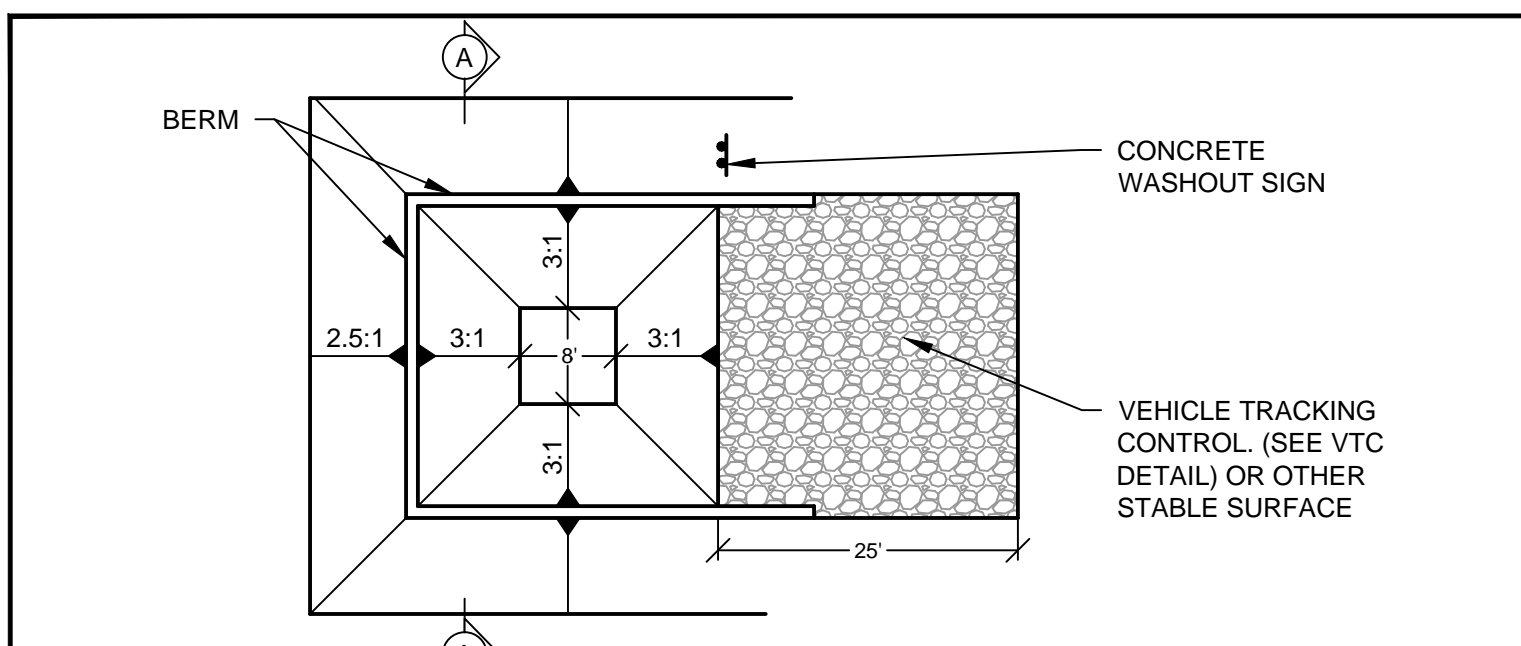


SEDIMENT TRAP NOTES

1. THE MAXIMUM STRUCTURE LIFE IS 2 YEARS.
2. THE STORAGE AREA IS 3500 CUBIC FT. PER ACRE.
3. THE MAXIMUM EMBANKMENT HEIGHT (8 FT.) SHALL BE MEASURED ON THE DOWNSTREAM SIDE.
4. THE LENGTH/WIDTH RATIO MAY BE ADJUSTED BECAUSE OF SITE CONDITIONS WHEN APPROVED BY THE ENGINEER.
5. WIDTH (W) OF THE SEDIMENT TRAP IS APPROXIMATELY EQUAL TO THE WEIR LENGTH (X).
6. SEDIMENT TRAP DESIGN SHALL BE APPROVED BY THE ENGINEER.

DRAINAGE AREA (ACRES)	WEIR LENGTH (FEET)
1	41
2	6
3	8
4	10
5	12

G SEDIMENT TRAP
N.T.S.

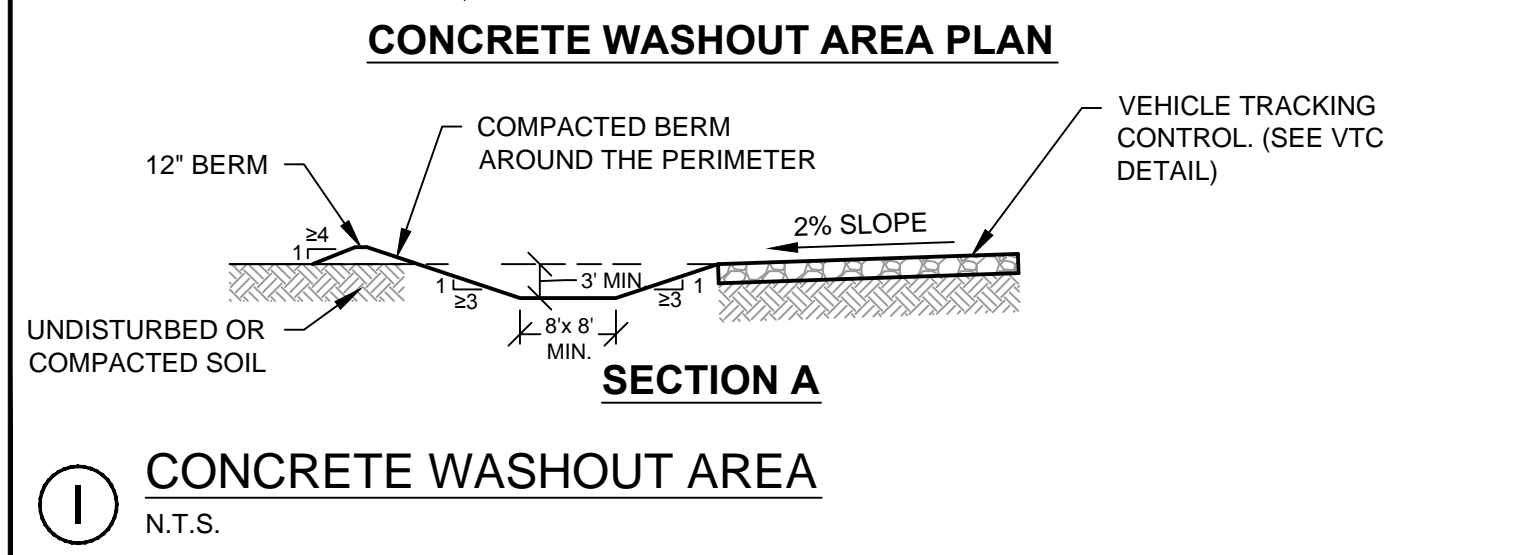


CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR CWA INSTALLATION LOCATION.
2. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON THE PROJECT.
3. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8 FT. x 8 FT. SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3 FT. DEEP. THE CONTRACTOR MAY WANT TO INCREASE THIS SIZE.
4. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1 FT.
5. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
6. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
7. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2 FT.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.



I CONCRETE WASHOUT AREA
N.T.S.

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT	midtown PORTLAND, MAINE
SHEET TITLE	EROSION AND SEDIMENT CONTROL DETAILS
CLIENT	THE FEDERATED COMPANIES
DATE	11.14.14
DESCRIPTION	FINAL LEVEL III SUBMISSION TO CITY OF PORTLAND
REVISIONS	

PROJECT: midtown
PORTLAND, MAINE

SHEET TITLE: EROSION AND SEDIMENT CONTROL DETAILS

CLIENT: THE FEDERATED COMPANIES

FST 100 YEARS

FAY, SPOFFORD & THORNDIKE
ENGINEERS • PLANNERS • SCIENTISTS
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FORMERLY DELUCA-HOFFMAN ASSOCIATES

DRAWN: KEV DATE: OCTOBER 2014
DESIGNED: WGH/BEK SCALE: N.T.S.
CHECKED: WGH/SRB JOB NO. SP-M037B
FILE NAME: 3062-DET EROS
SHEET C-6.1

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