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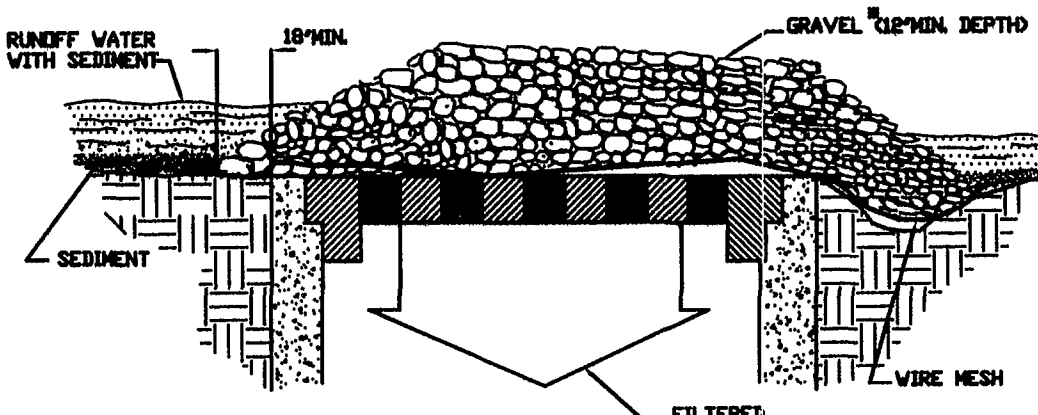
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CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO THE FOLLOWING MINIMUM STANDARDS:

- MS-1: THOUGH TS / PS LABELS ARE SHOWN GENERALLY ON THE PLANS, THE CONTRACTOR SHALL SEED ALL AREAS NOT INDICATED TO BE OTHERWISE STABILIZED WITH PERMANENT SEED MIXTURE WITHIN 7 DAYS OF REACHING FINAL GRADE OR WITH TEMPORARY SEED MIXTURE ANY AREA YET TO REACH FINAL GRADE BUT THAT IS NOT PROPOSED TO BE ACTIVELY INVOLVED IN THE WORK WITHIN 30 DAYS. THESE SEED MIXTURES AND APPLICATION SPECIFICATIONS ARE SHOWN HEREON. THE CONTRACTOR SHALL HONOR THE CLEARING AND GRADING LIMITS SHOWN ON THE PLAN.
- MS-2: THE CONTRACTOR SHALL STABILIZE WITH TS AND PROTECT FROM EROSION, WITH ANY APPLICABLE METHOD, ALL STOCKPILES AND ANY ON-SITE OR OFF-SITE BORROW OR SPOIL AREAS, AS APPLICABLE. APPROVAL OF THIS PLAN DOES NOT COVER OFF-SITE BORROW OR SPOIL AREAS. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- MS-3: WHERE TS/PS ARE NOT APPLICABLE PROVIDE OTHER MEANS OF STABILIZATION (CRS, ETC.) WITHIN 7 DAYS OF REACHING FINAL GRADE OR WITHIN 30 DAYS WHERE THE AREA IS YET TO REACH FINAL GRADE BUT IS NOT PROPOSED TO BE ACTIVELY INVOLVED IN THE WORK.
- MS-4: ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED IN ADVANCE OF THE WORK THEY ARE INTENDED TO PROTECT.
- MS-5: EARTHEN CONTROLS AND STRUCTURES SHALL BE STABILIZED IMMEDIATELY UPON INSTALLATION.
- MS-6: WHERE A SEDIMENT TRAP (<3 ACRES OF DRAINAGE) OR SEDIMENT BASIN (>3 ACRES OF DRAINAGE) ARE INDICATED CALCULATIONS SHOWN ARE BASED ON OUTLINED DRAINAGE AREAS. CONTRACTOR SHALL HONOR INDICATED DRAINAGE DIVIDES AND CONFORM TO VOLUMES, DETAILS, ETC. PROVIDED ON PLANS.
- MS-7: CARE HAS BEEN TAKEN IN DESIGN TO MINIMIZE DRAINAGE OVER SLOPES AND PROVIDE A SUITABLE PROTECTIVE STABILIZATION METHOD. CONTRACTOR SHALL PROTECT SLOPE AREAS DURING AND AFTER CONSTRUCTION FROM CONCENTRATED RUNOFF AND THE EROSION EFFECTS OF WIND AND RAIN. STABILIZE AS SOON AS PRACTICAL TO MINIMIZE EROSION.
- MS-8: WHERE CONCENTRATED RUNOFF HAS BEEN ROUTED DOWN SLOPES CARE HAS BEEN TAKEN TO DESIGN AN ADEQUATE CHANNEL OR DRAIN. CONTRACTOR SHALL INSTALL THESE MEASURES ALONG WITH THEIR STABILIZATION AS SOON AS PRACTICAL TO PROTECT SLOPE. NOT APPLICABLE, NO CHANNELS OR DRAINS ARE PROPOSED OVER SLOPES.
- MS-9: NOT APPLICABLE; SEEPAGE THROUGH SLOPES IS NOT ANTICIPATED TO BE ENCOUNTERED ON THIS PROJECT.
- MS-10: INLET OR CULVERT INLET PROTECTION IS PROPOSED FOR THE INLETS OF ALL STORM SEWERS OR CULVERTS ON-SITE. RLD SHALL INSURE PROPER INSTALLATION AND ASSURE ADEQUATE SIZING BASED ON DRAINAGE AREA OF EACH INLET.
- MS-11: RLD SHALL VERIFY THAT ADEQUATE CHANNEL LININGS AND PROPER OUTLET PROTECTION IS IN PLACE PRIOR TO OPERATION OF STORM SEWER SYSTEM.
- MS-12: WHEN WORKING IN AND AROUND A LIVE WATERCOURSE, THE CONTRACTOR SHALL TAKE GREAT CARE TO MINIMIZE IMPACT ON THE STREAM. ASSURE THAT PROPER PERMITS FROM DEQ / USACE ARE IN HAND PRIOR TO COMMENCING SUCH WORK. (NOT APPLICABLE).
- MS-13: WHERE MORE THAN 2 TRIPS IN 6 MONTHS ARE EXPECTED ACROSS A LIVE WATERCOURSE OBTAIN THE NECESSARY PERMIT AND INSTALL A TEMPORARY STREAM CROSSING. (NOT APPLICABLE).
- MS-14: OTHER FEDERAL, STATE, AND LOCAL REGULATIONS MUST BE MET WHEN WORKING IN LIVE WATERCOURSES. (NOT APPLICABLE).
- MS-15: THE BED AND BANKS OF DISTURBED WATERCOURSES MUST BE STABILIZED IMMEDIATELY. (NOT APPLICABLE).
- MS-16: REGARDING UTILITY INSTALLATIONS, NO MORE THAN 500 LF OF TRENCH MAY BE OPEN AT A GIVEN TIME. EXCAVATED MATERIAL SHALL BE PLACED ON UPHILL SIDE OF TRENCH. EFFLUENT OF ANY Dewatering SYSTEM USED MUST BE FILTERED. TRENCHES SHALL BE PROPER BACKFILLED AND COMPACTED PER DETAIL AND SPECS. COMPLETED INSTALLATION SHALL BE RE-STABILIZED IMMEDIATELY.
- MS-17: THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING MUD FROM TRUCKS AND / OR OTHER EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT THE STREETS ARE IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
- MS-18: SEE MAINTENANCE UNDER ESC NARRATIVE FOR CE, IP, SF, AND TS/PS AT A MINIMUM.
- MS-19: INCREASES IN STORMWATER VOLUME, VELOCITY, AND PEAK RUNOFF HAVE BEEN ADDRESSED IN THE PLAN PER CALCULATIONS SUBMITTED FOR REVIEW. RESPONSIBLE LAND DISTURBER SHALL PAY PARTICULAR ATTENTION TO OFF-SITE AREAS CONTRIBUTING RUNOFF TO THE SITE, OFF-SITE LOCATIONS RECEIVING RUNOFF FROM THIS PROJECT, AND PROPER OPERATION OF STORMWATER MANAGEMENT PRACTICES ON-SITE. ALL DITCHES, SWALES, AND NATURAL WATERCOURSES DOWNSTREAM OF THIS PROJECT SHALL BE FIELD INSPECTED DURING AND AFTER CONSTRUCTION BY THE RLD TO ENSURE COMPLIANCE WITH DCR'S MS-19. IF EROSION OR SODUR IS OCCURRING THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL CORRECTIVE MEASURES.

GENERAL EROSION AND SEDIMENT CONTROL NOTES,  
ROANOKE COUNTY, VIRGINIA

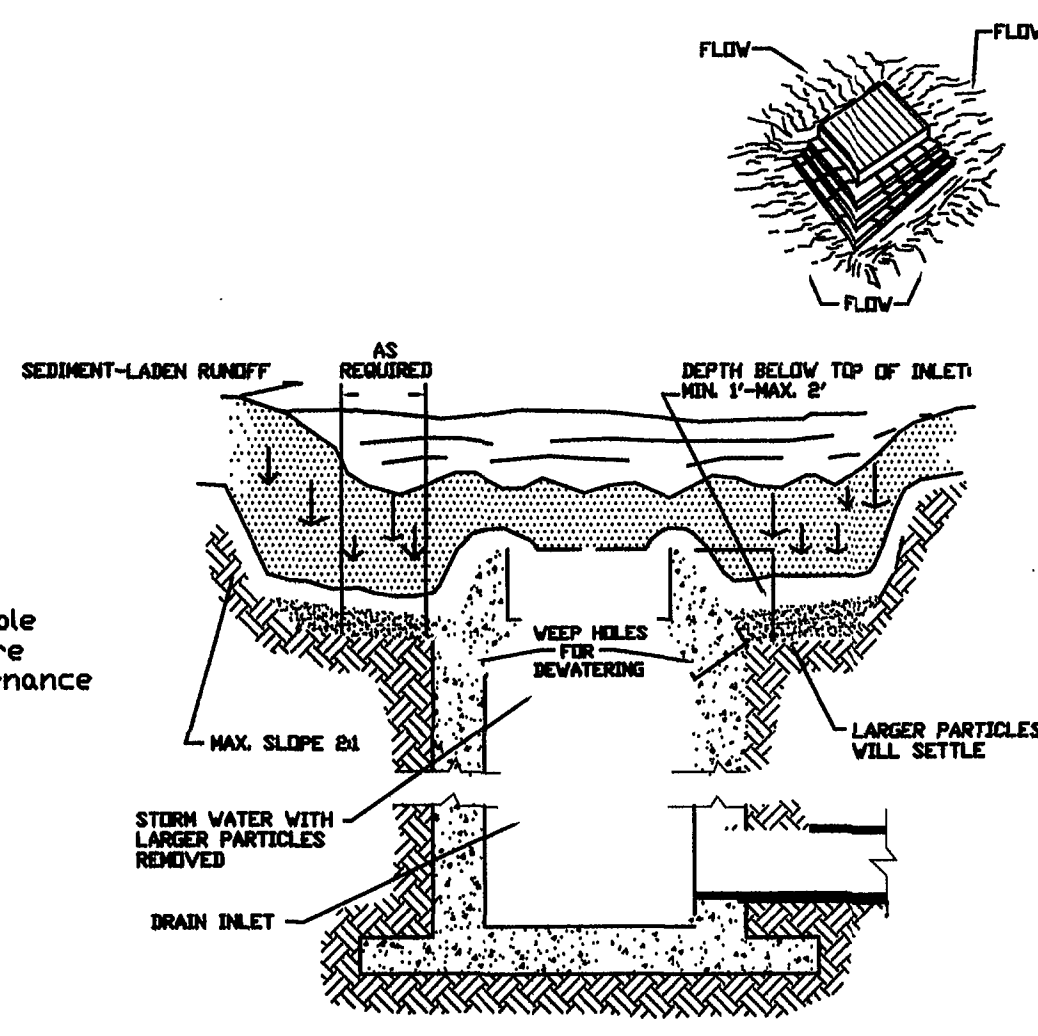
- ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
- ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE ONSITE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND NARRATIVE, AS WELL AS A COPY OF THE LAND DISTURBING PERMIT, SHALL BE MAINTAINED ON THE SITE AT ALL TIMES. THE EROSION AND SEDIMENT CONTROL ADMINISTRATOR WILL DELIVER THESE MATERIALS AT THE ONSITE PRECONSTRUCTION CONFERENCE.
- ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING THE LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- ES-8: DURING DEWATERING OPERATION, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY. AN INSPECTION REPORT MUST BE FILED WITH THE BOYETOURT COUNTY EROSION AND SEDIMENT CONTROL ADMINISTRATOR ONCE EVERY TWO WEEKS, BEGINNING WITH COMMENCEMENT OF THE LAND DISTURBING ACTIVITY, AND WITHIN 48 HOURS OF ANY RUNOFF-PRODUCING RAINFALL EVENT. FAILURE TO SUBMIT A REPORT WILL BE GROUNDS FOR IMMEDIATE REVOCATION OF THE LAND DISTURBING PERMIT. REPORTS MUST BE POSTMARKED WITHIN 24 HOURS OF THE DEADLINE. A STANDARD INSPECTION REPORT FORM WILL BE SUPPLIED, WHICH SHOULD BE COPIED AS NECESSARY. THIS PROVISION IN NO WAY WAIVES THE RIGHT OF BOYETOURT COUNTY PERSONNEL TO CONDUCT SITE INSPECTIONS, NOR DOES IT DENY THE RIGHT OF THE PERMITTEE (S) TO ACCOMPANY THE INSPECTOR (S).
- CONSTRUCTION SEQUENCE**
1. THE CONTRACTOR'S CERTIFIED RESPONSIBLE LAND DISTURBER (RLD) SHALL BE NAMED AND A COPY OF HIS RLD CERTIFICATE SHALL BE PROVIDED TO THE ROANOKE COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT AT LEAST TWO (2) DAYS PRIOR TO THE PRECONSTRUCTION MEETING. RLD SHALL ALSO ATTEND THE PRECONSTRUCTION MEETING.
  2. CONTRACTOR SHALL APPLY FOR DCR LAND DISTURBANCE PERMIT AT LEAST TWO (2) DAYS PRIOR TO LAND DISTURBANCE AND PROVIDE ROANOKE COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT A COPY OF SAID PERMIT WITHIN FIVE (5) DAYS OF ISSUANCE.
  3. THE LOCATION OF ALL OFFSITE FILL OR BORROW AREAS ASSOCIATED WITH THIS CONSTRUCTION PROJECT WILL BE PROVIDED TO ROANOKE COUNTY COMMUNITY DEVELOPMENT. AN EROSION AND SEDIMENT CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THESE AREAS. NO OFFSITE BORROW OR FILL AREAS ARE ANTICIPATED WITH THIS DEVELOPMENT.
  4. INSTALL THE CONSTRUCTION ENTRANCE AND SILT FENCE AS THE FIRST STEP IN THE CONSTRUCTION PROCESS.
  5. INSTALL THE SEDIMENT TRAPS AND THEIR RESPECTIVE DIVERSION DIKES, DIVERSION CHANNELS, AND DIVERSION CHANNELS AS SOON AS GRADING OPERATIONS BEGIN IN THE AFFECTED AREAS. THE CONSTRUCTION PROCESS SHOULD BE SEQUENCED AS MUCH AS POSSIBLE SO THAT EACH AREA IS SEEDDED AND STABILIZED PRIOR TO BEGINNING GRADING OPERATIONS IN ANOTHER AREA.
  6. INSTALL TYPE "C" DITCH AND THE STORM DRAIN FROM "M" TO "Q" ALONG WITH THE STORMWATER CONVEYANCE CHANNELS (TYPE "A" AND "B" DITCHES) PRIOR TO BEGINNING ANY GRADING OPERATIONS IN THAT AREA. THE INTENT OF INSTALLING THIS PORTION OF DITCH AND STORM DRAIN IS TO CONVEY THE OFFSITE DRAINAGE DURING THE CONSTRUCTION SITE WITHOUT ACCUMULATING ANY SEDIMENT LADEN RUNOFF.
  7. THE OUTFALL FOR SEDIMENT TRAP No. 2 SHALL BE THE STORMWATER CONVEYANCE CHANNEL AS SHOWN ON THE PLAN OR THE STORM DRAIN FROM "Q" TO "M" DEPENDING ON SEQUENCING OF CONSTRUCTION.
  8. INSTALL CONSTRUCTION ROAD STABILIZATION AS SOON AS THE ROAD IS AT SUBGRADE.
  9. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, I.E. SEDIMENT TRAPS, DIVERSION CHANNELS, FILL DIVERSIONS, DIVERSION DIKES, ETC., SHALL BE REMOVED AFTER THOSE AFFECTED AREAS HAVE BEEN BROUGHT TO FINAL GRADE AND AFTER PERMANENT VEGETATION HAS BEEN ESTABLISHED.



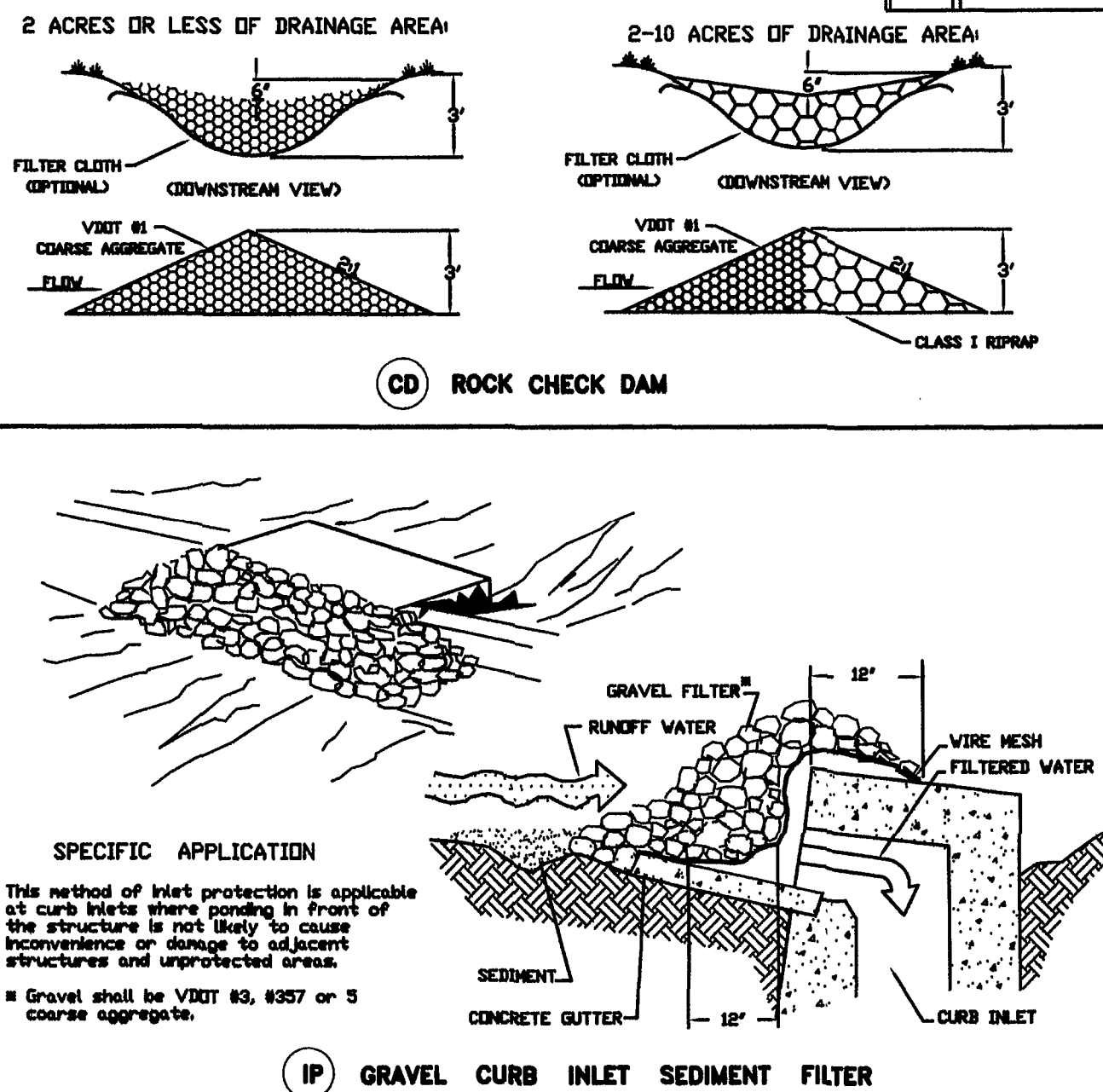
**SPECIFIC APPLICATION**  
This method of inlet protection is applicable where heavy concentrated flows are expected, but not where ponding around the structure might cause excessive inconvenience or damage to adjacent structures and unprotected areas.  
■ Gravel shall be VDOT #3, #357 or #5 coarse aggregate.

IP GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

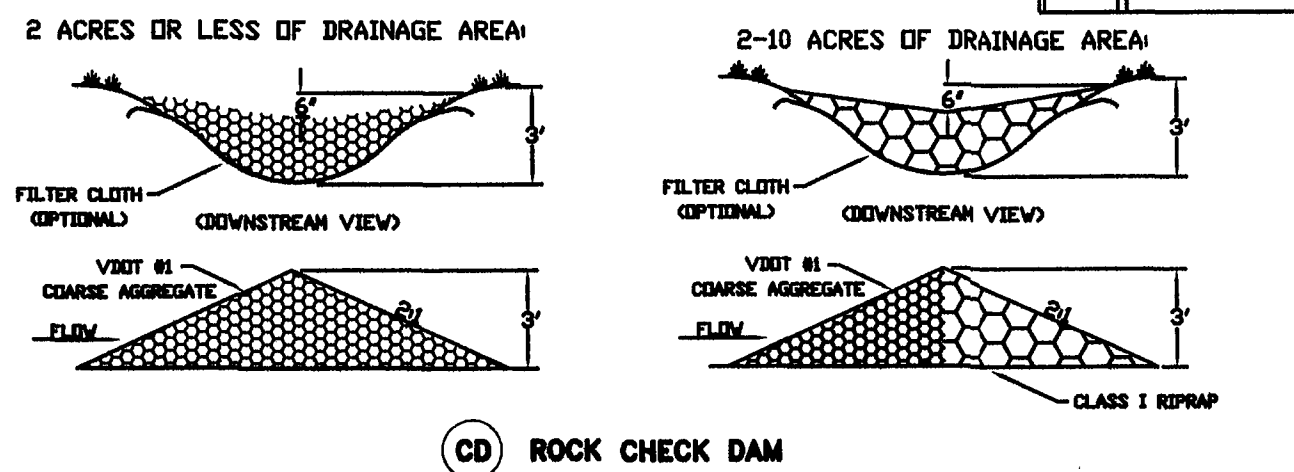
**SPECIFIC APPLICATION**  
This method of inlet protection is applicable where heavy flows are expected and where an overflow capability and ease of maintenance are desirable.



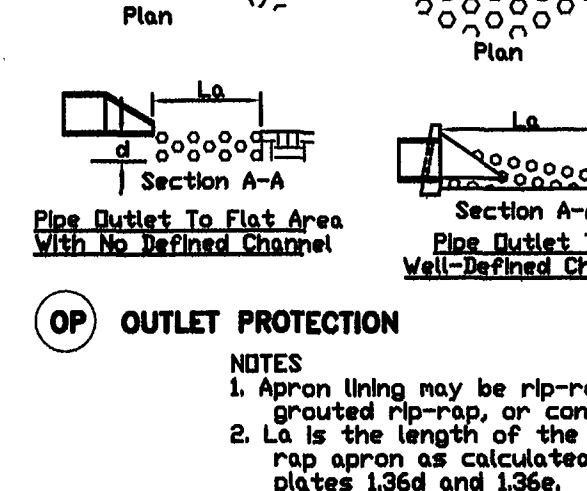
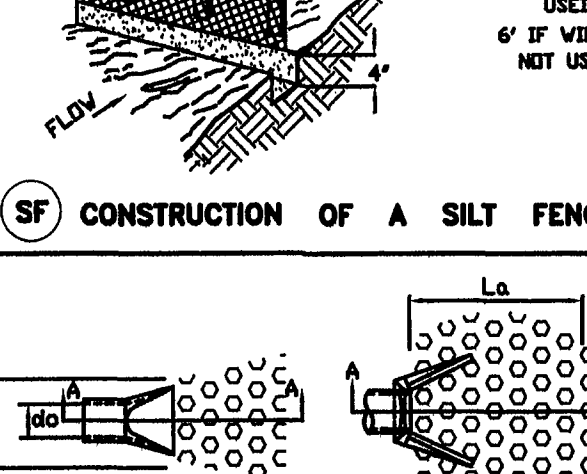
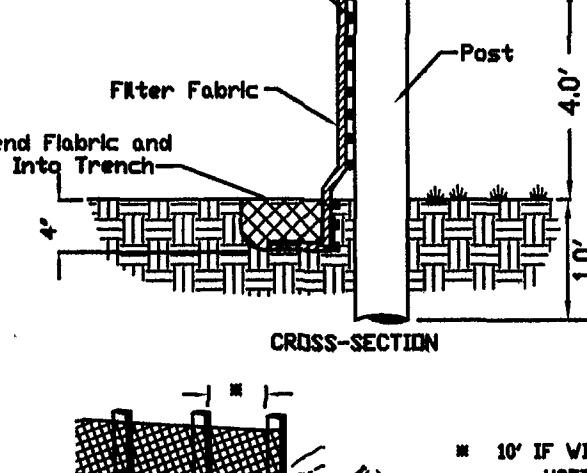
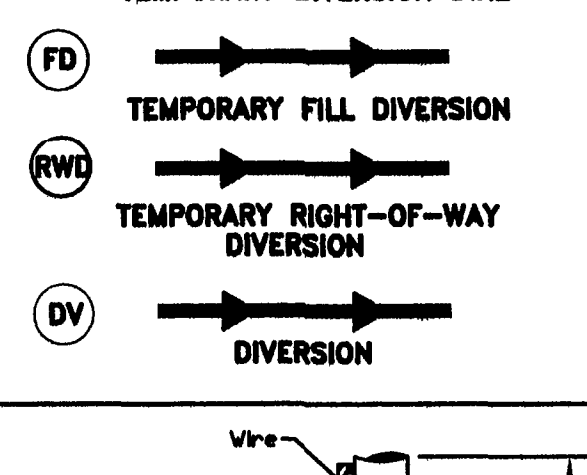
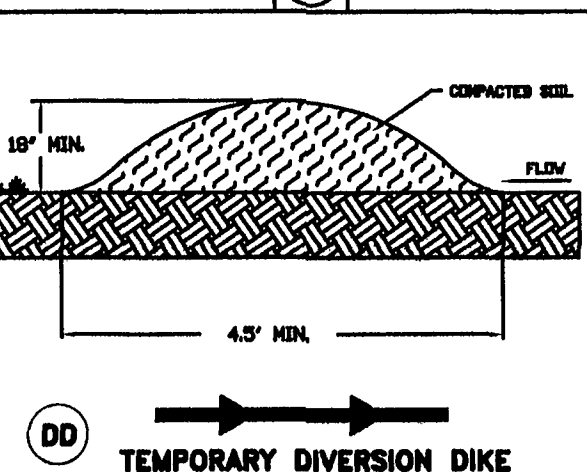
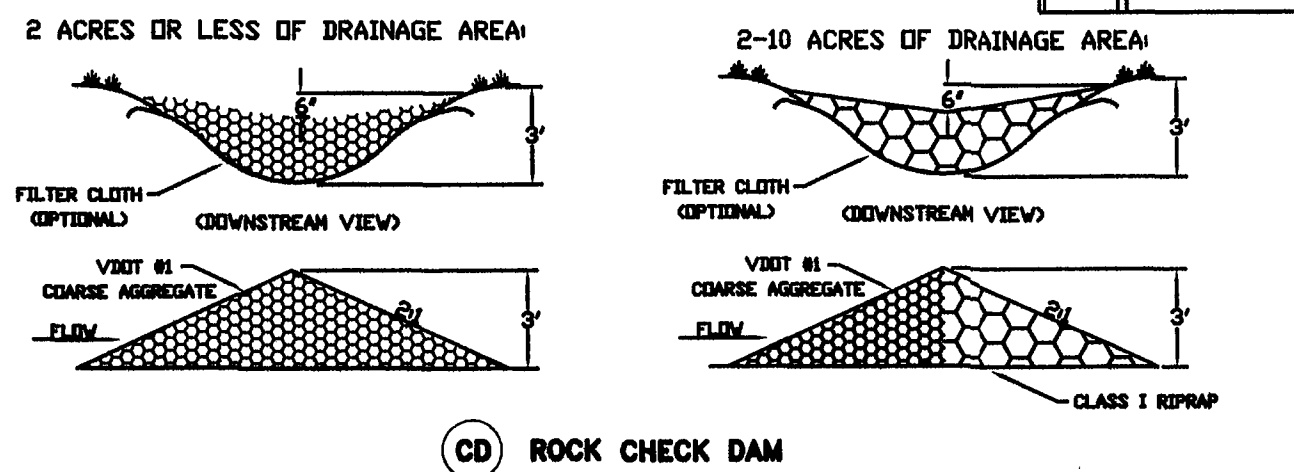
IP EXCAVATED DROP INLET SEDIMENT TRAP



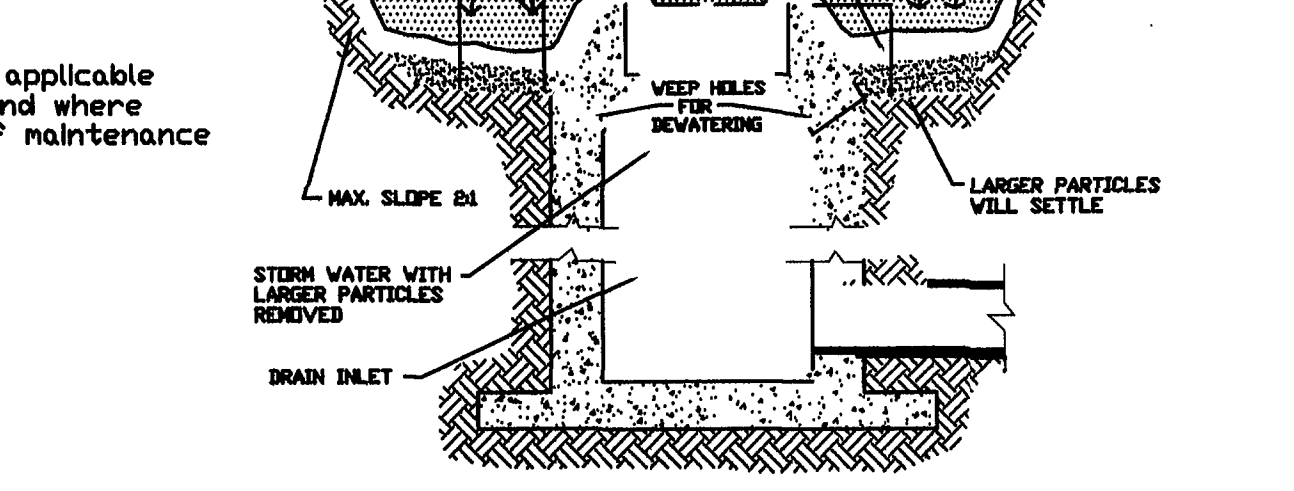
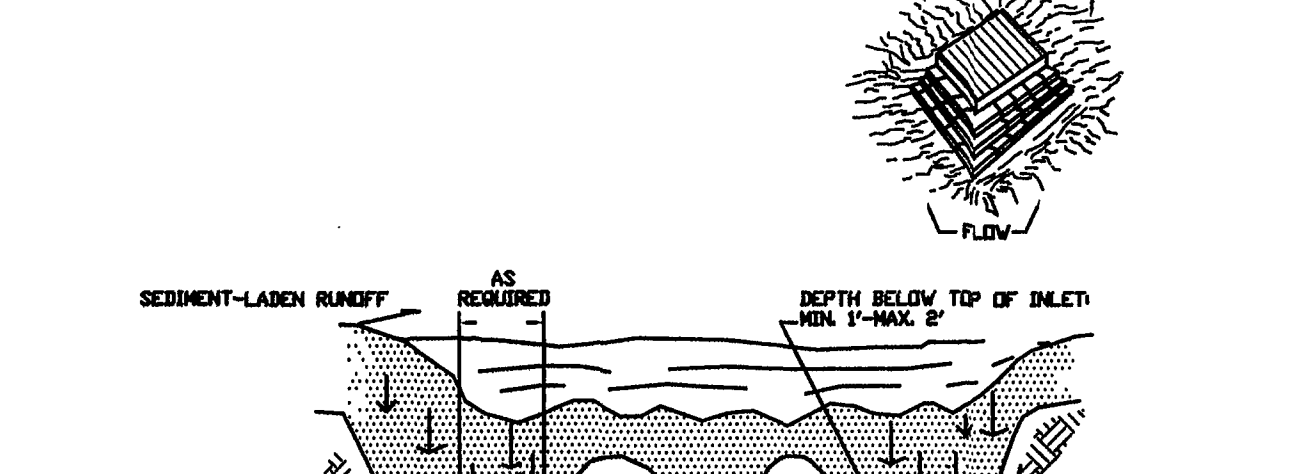
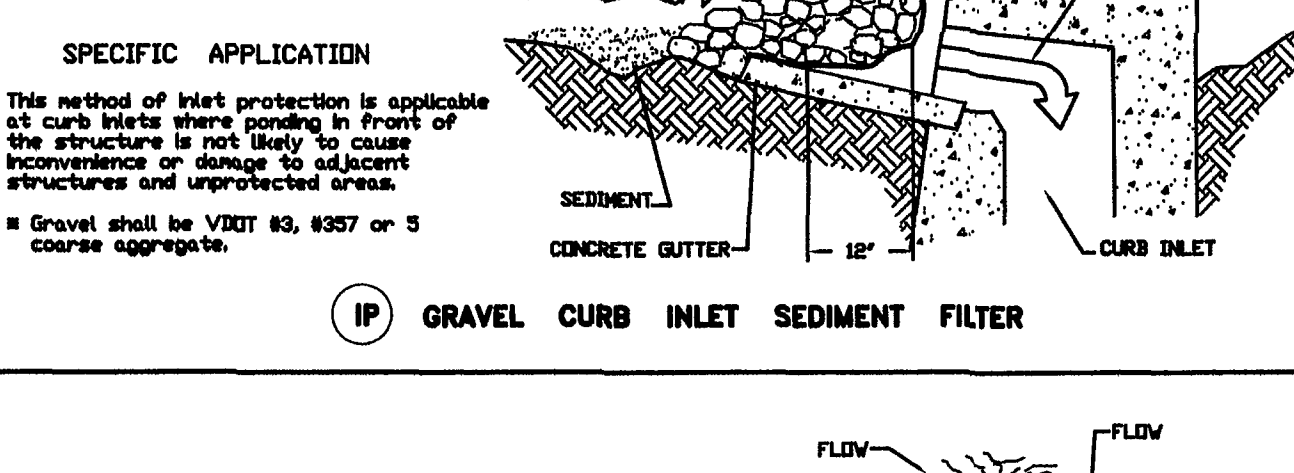
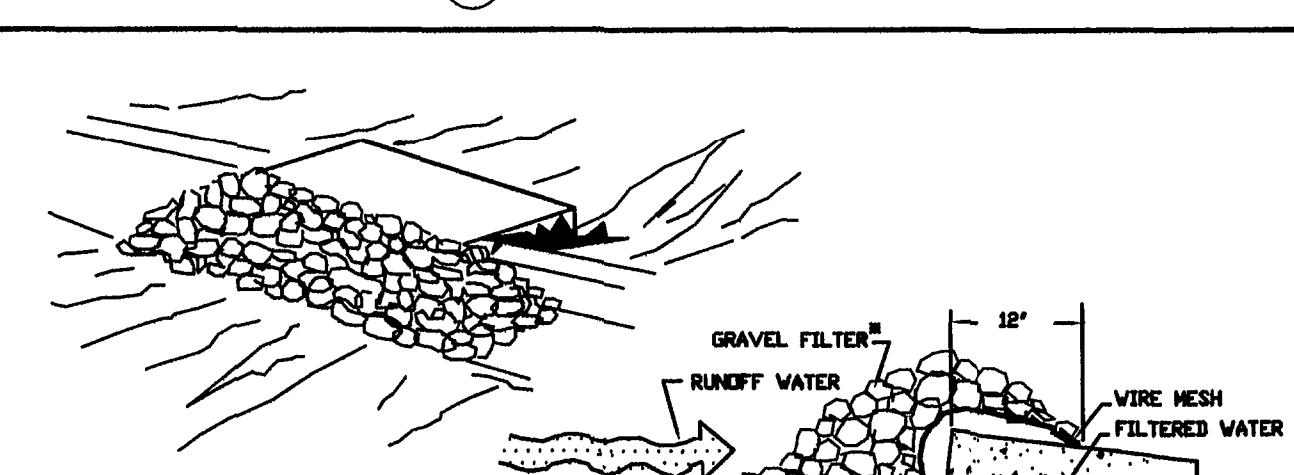
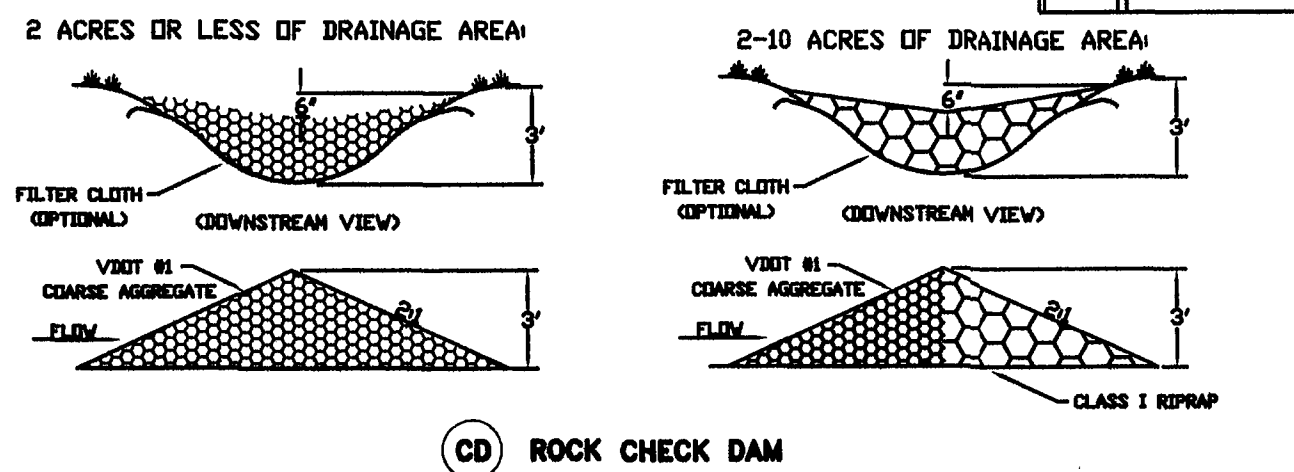
IP GRAVEL CURB INLET SEDIMENT FILTER



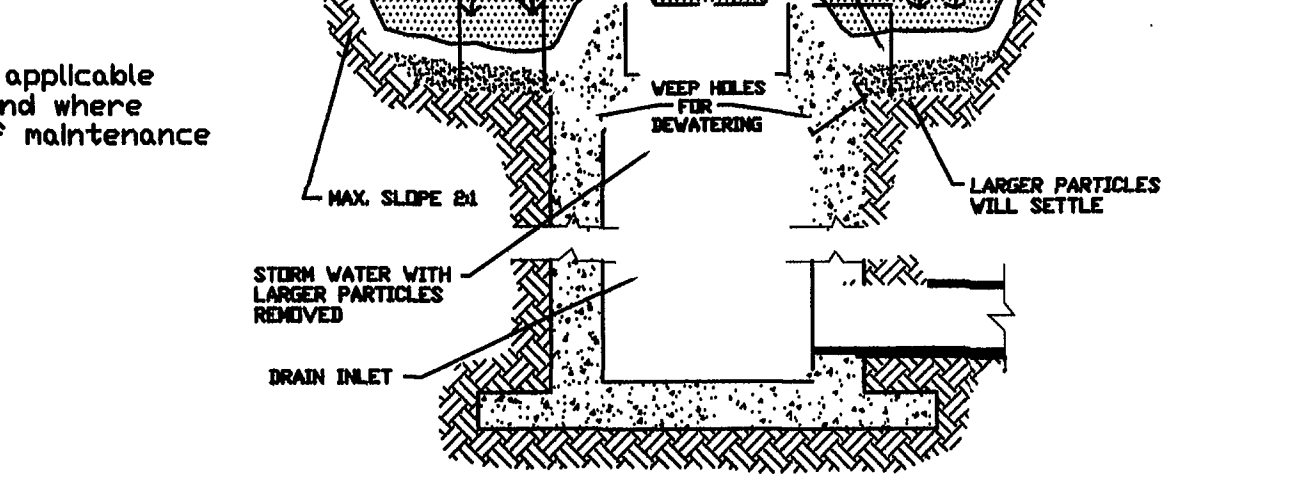
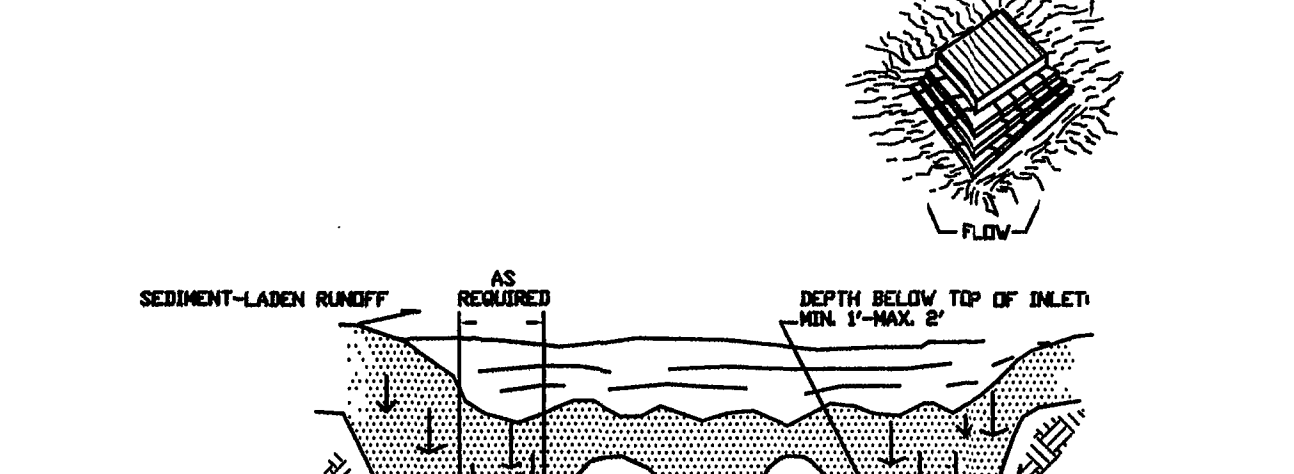
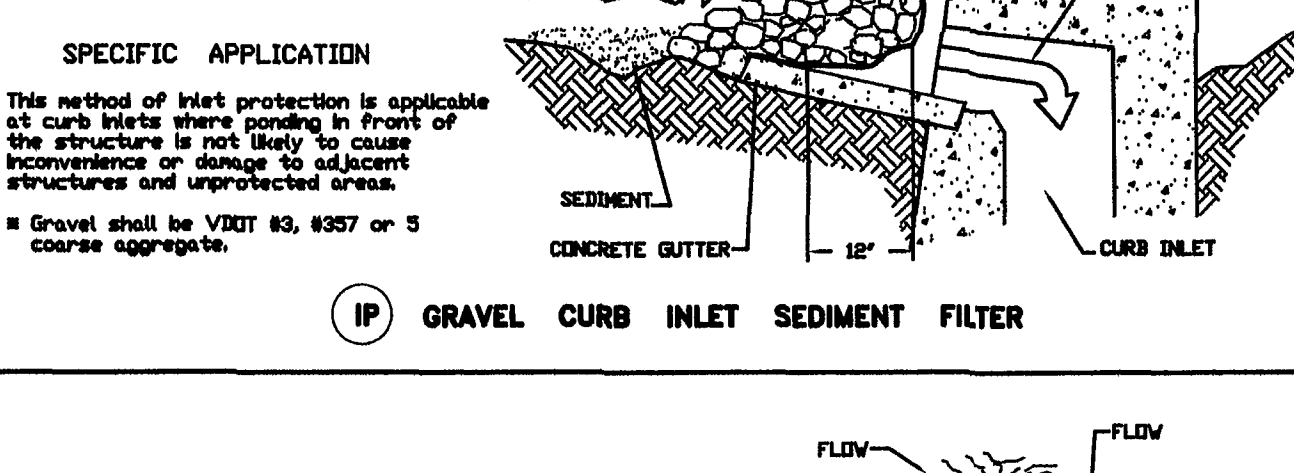
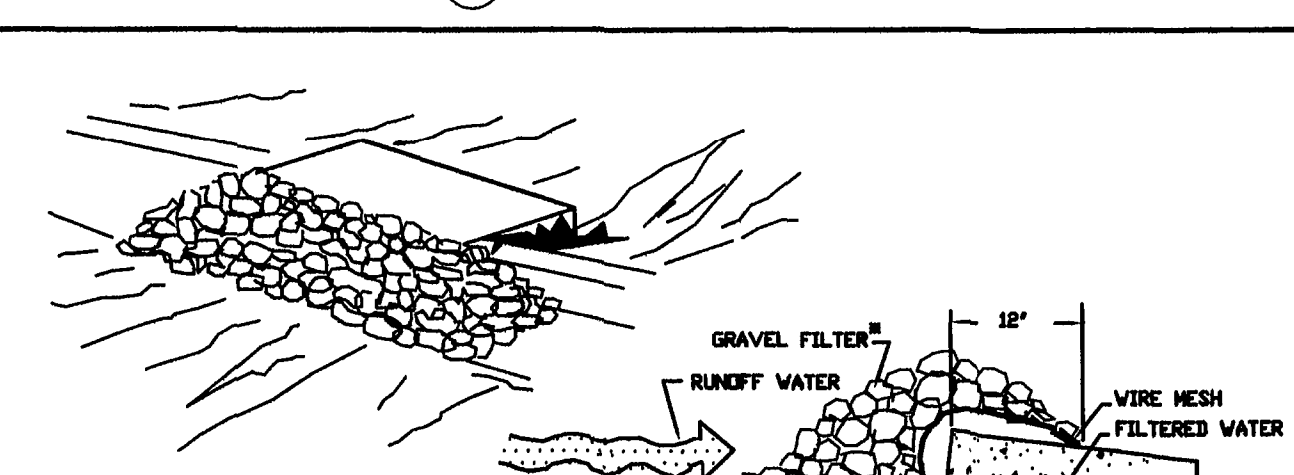
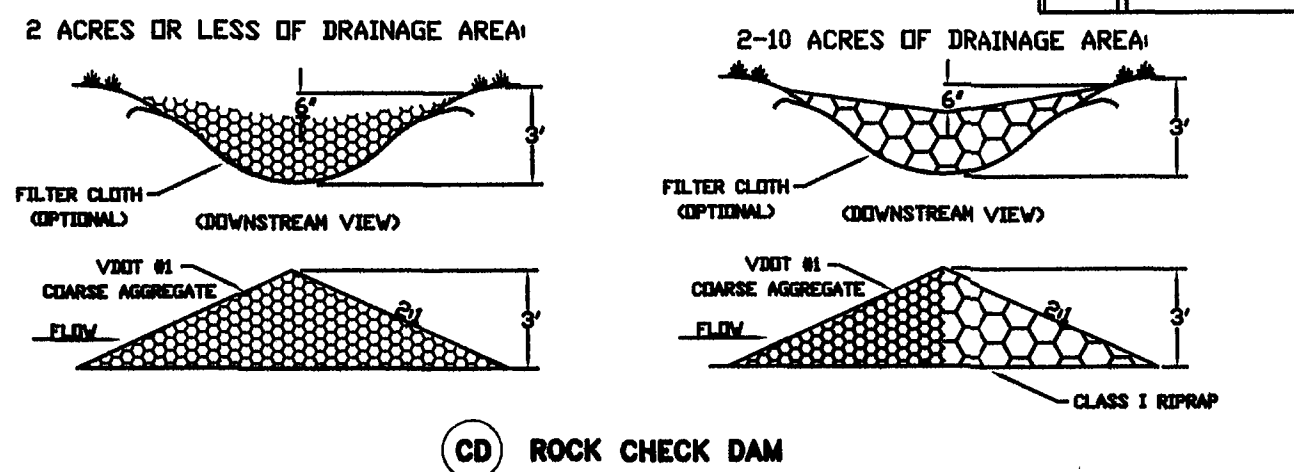
CD ROCK CHECK DAM



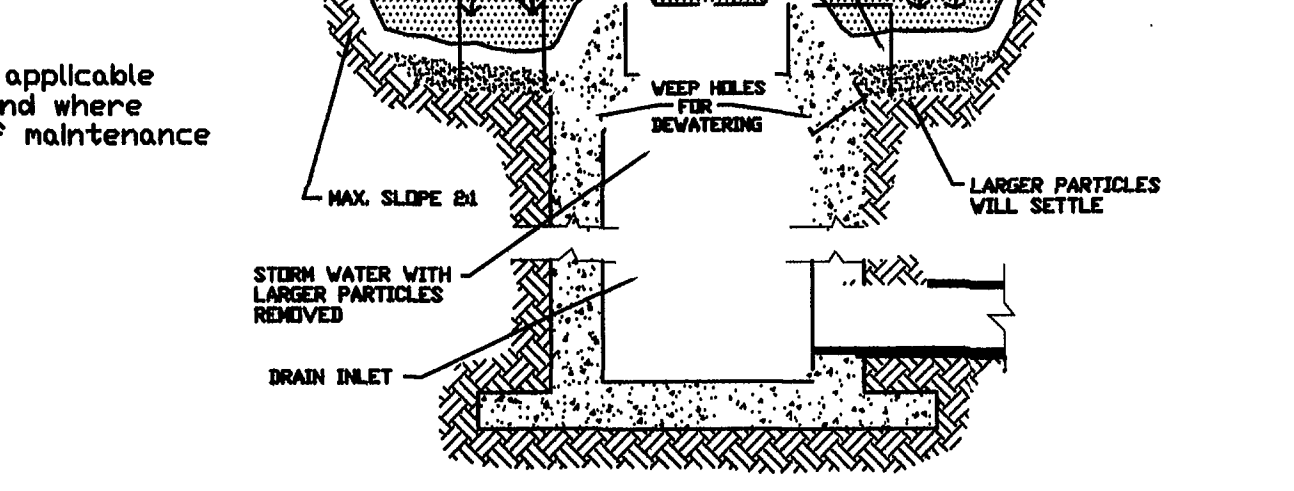
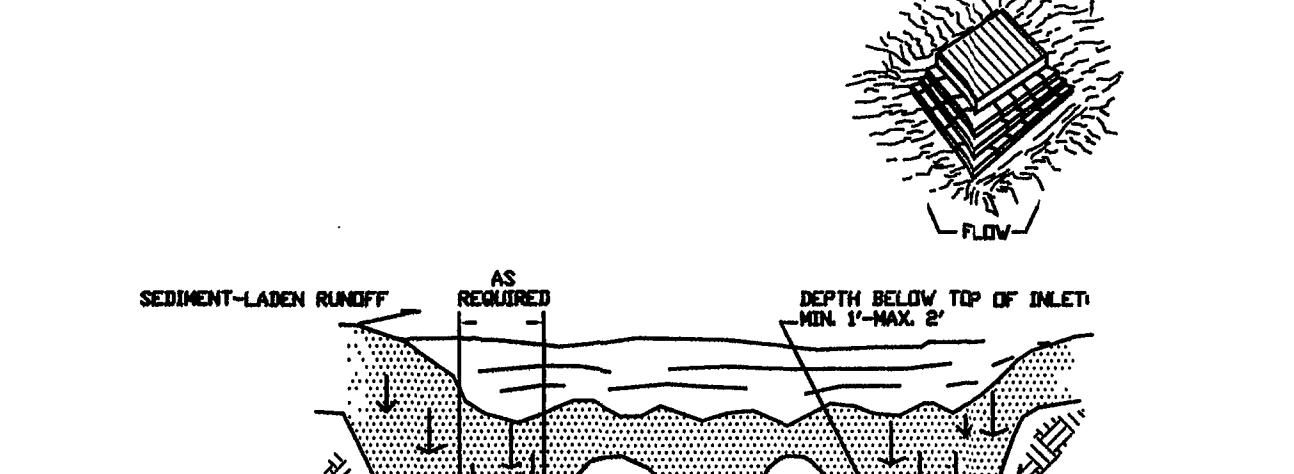
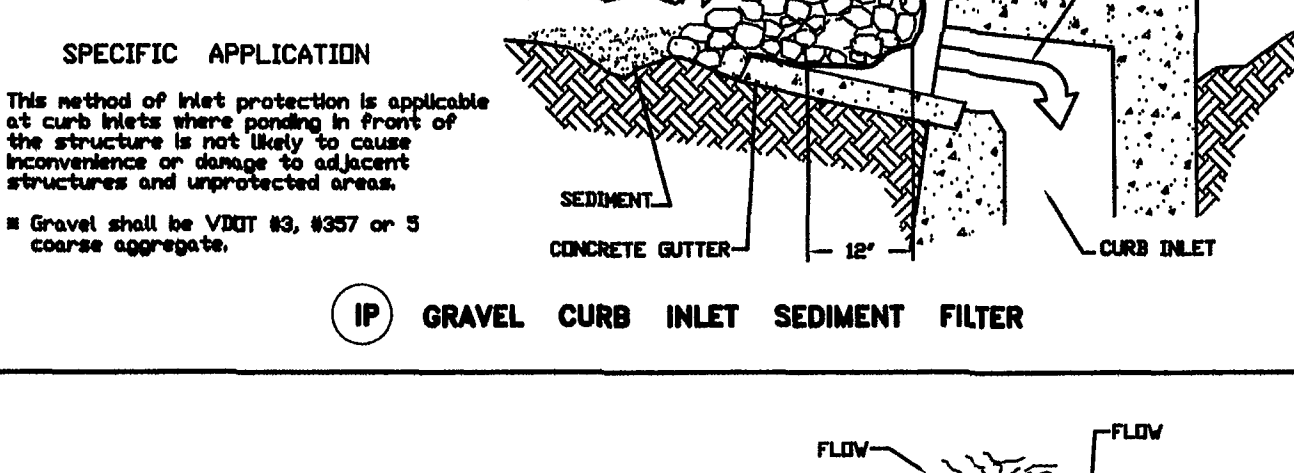
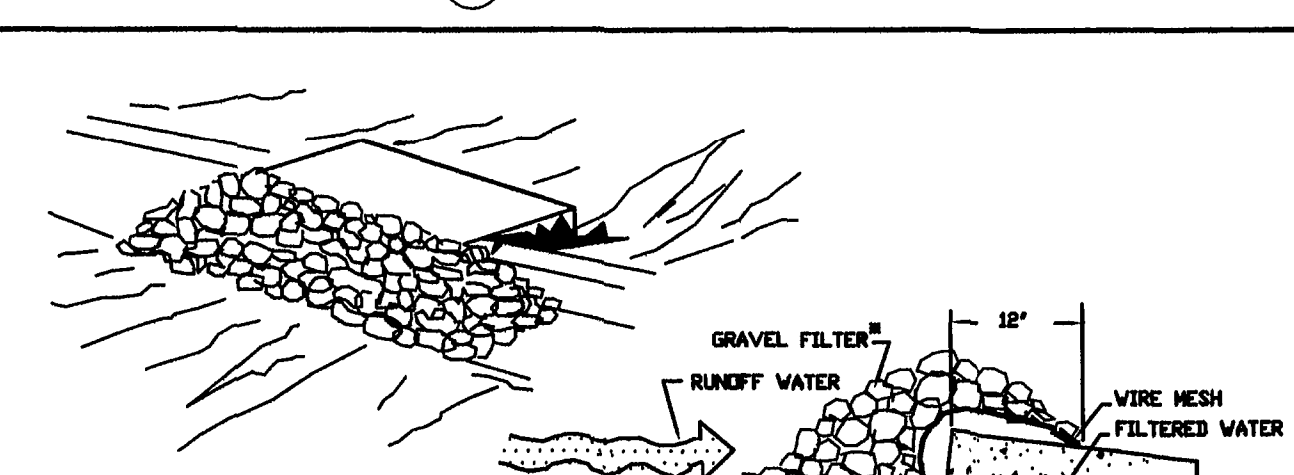
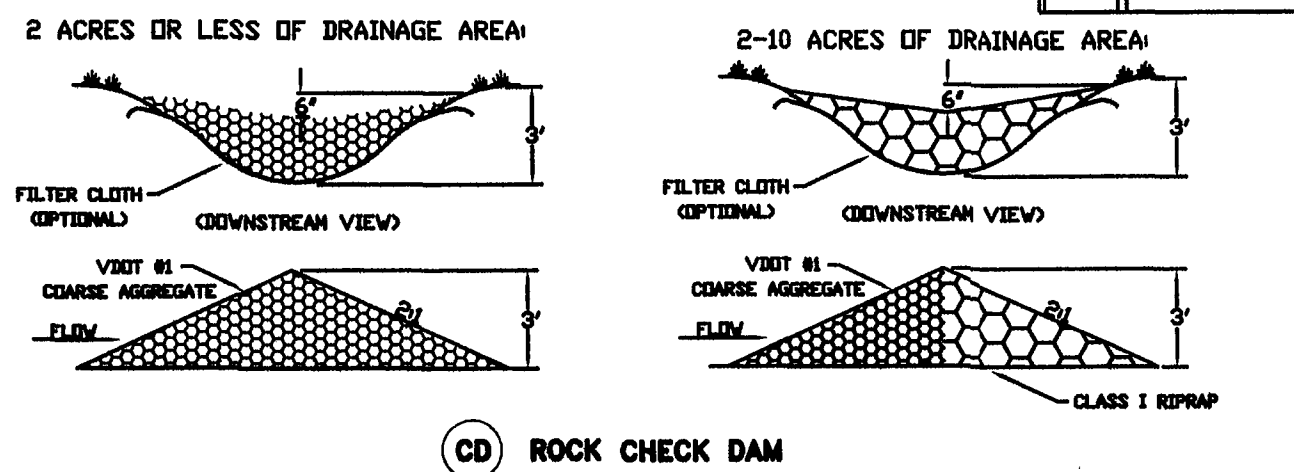
OP OUTLET PROTECTION



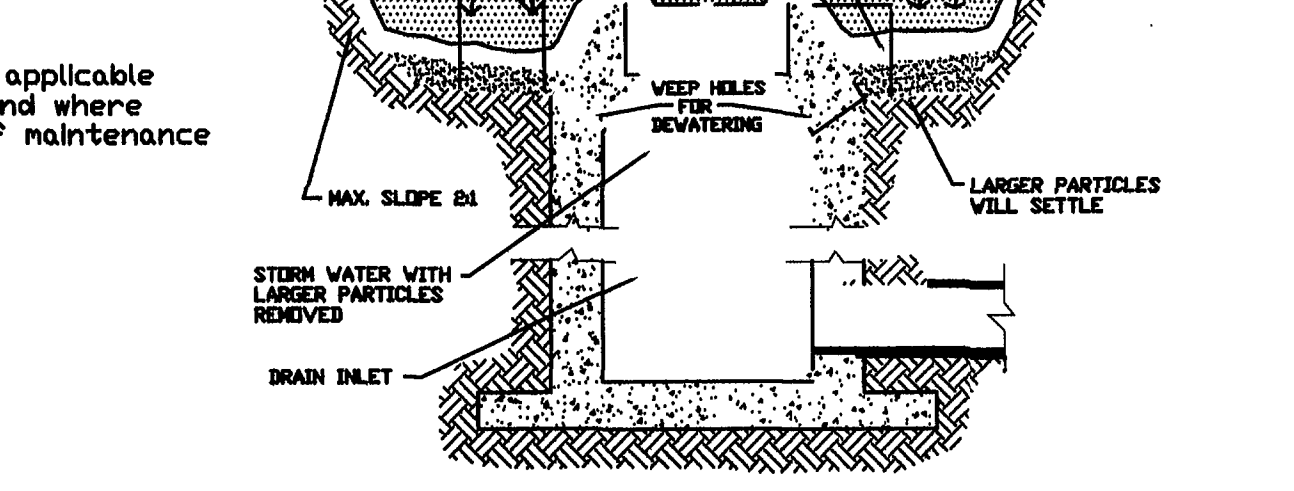
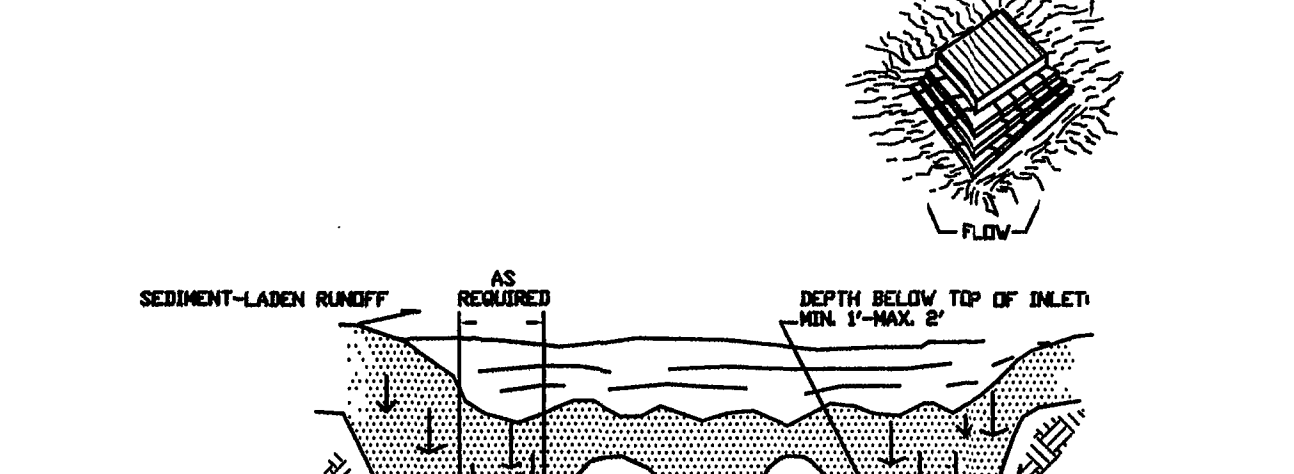
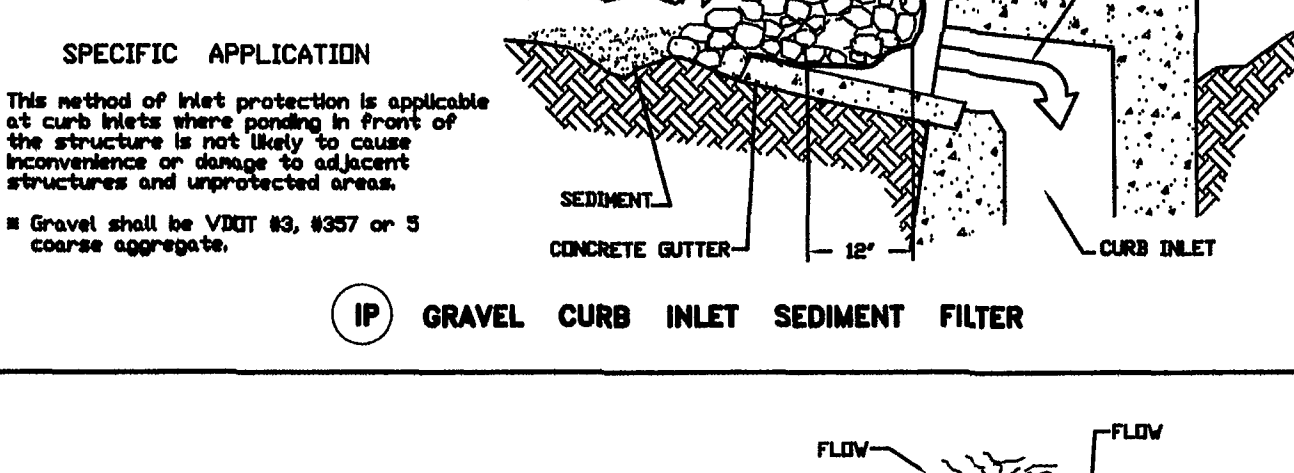
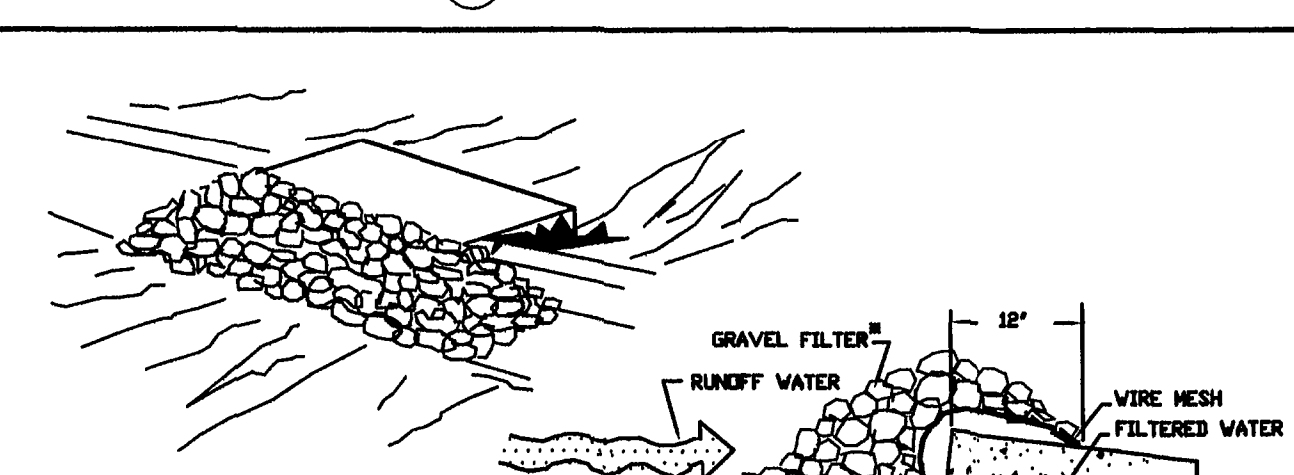
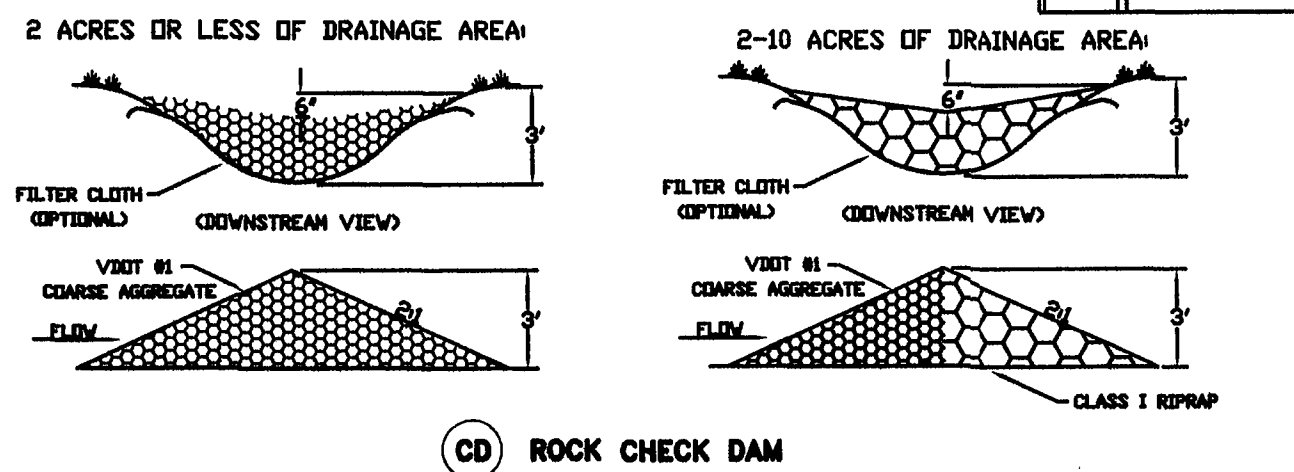
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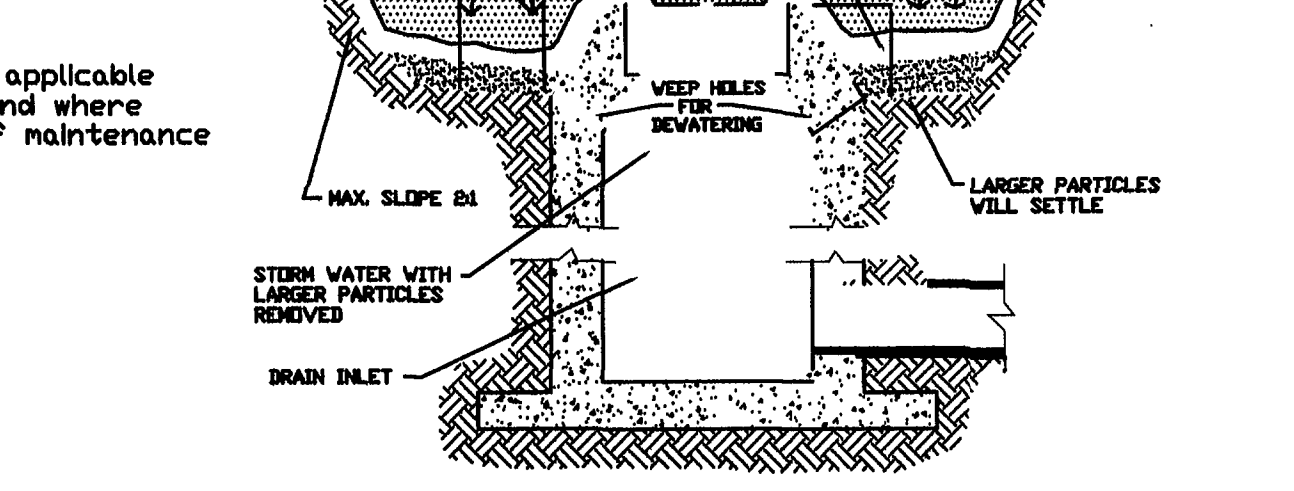
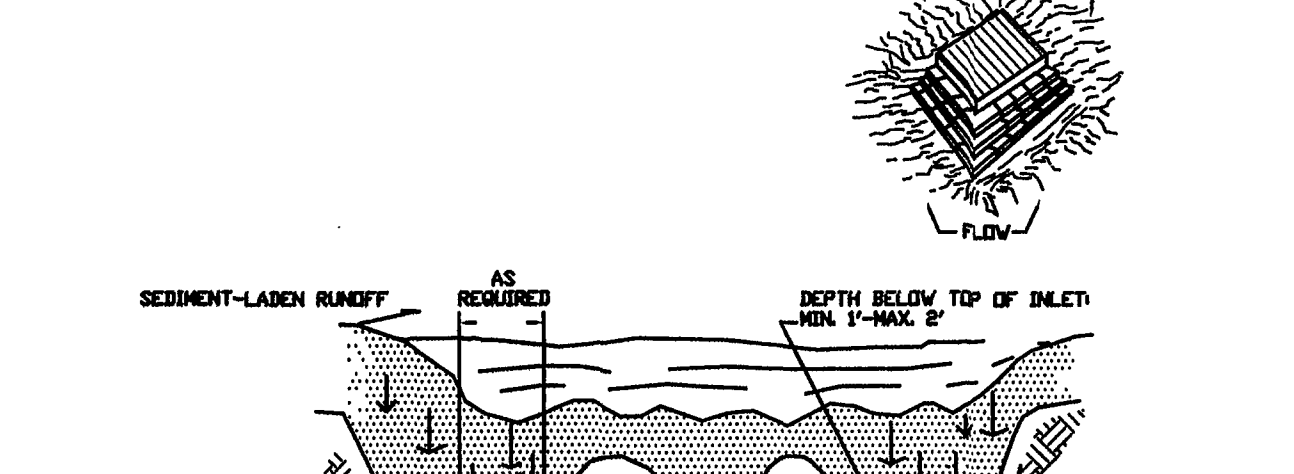
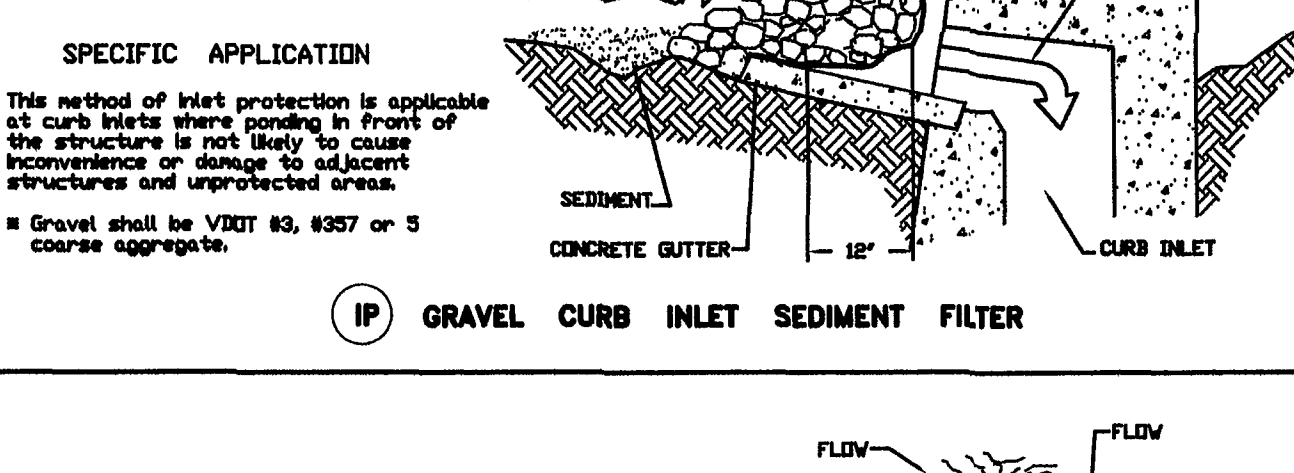
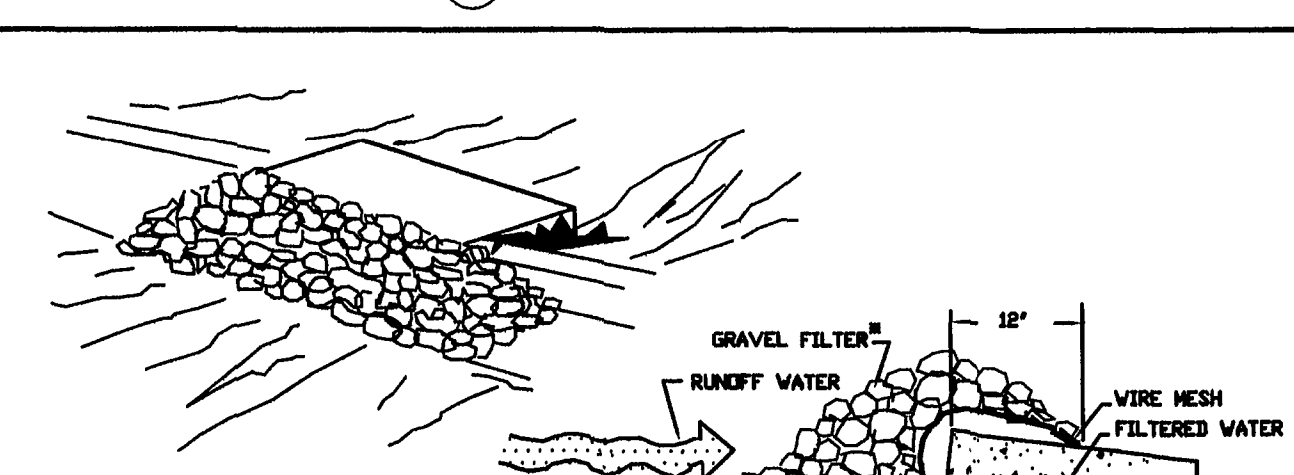
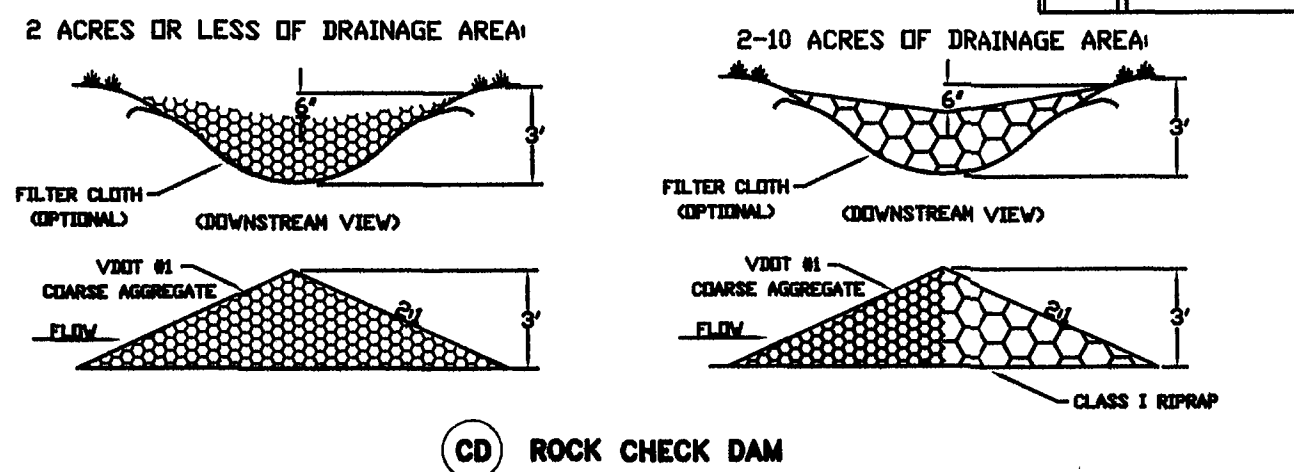
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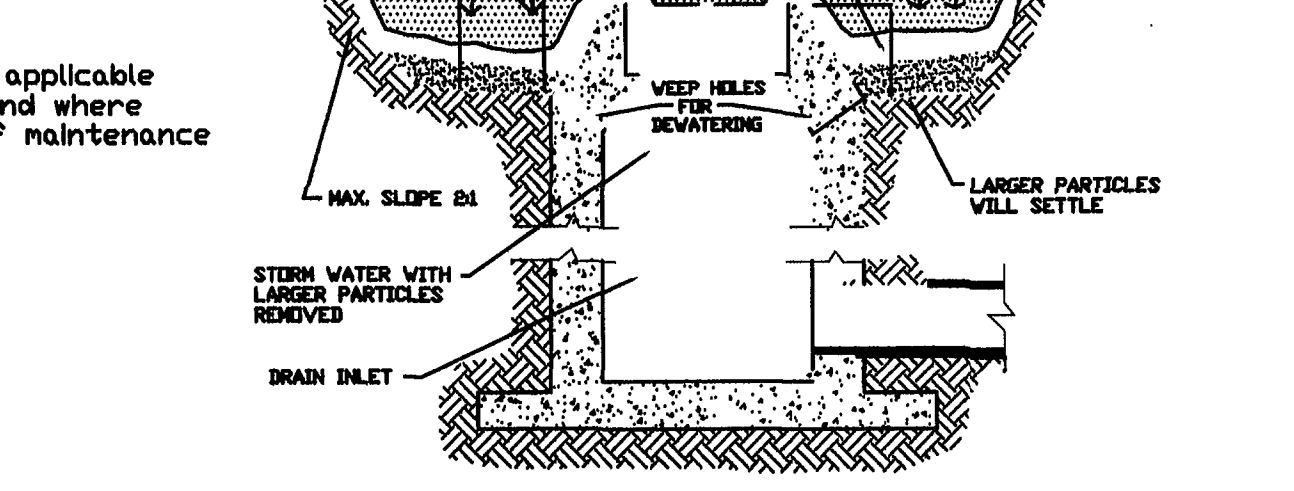
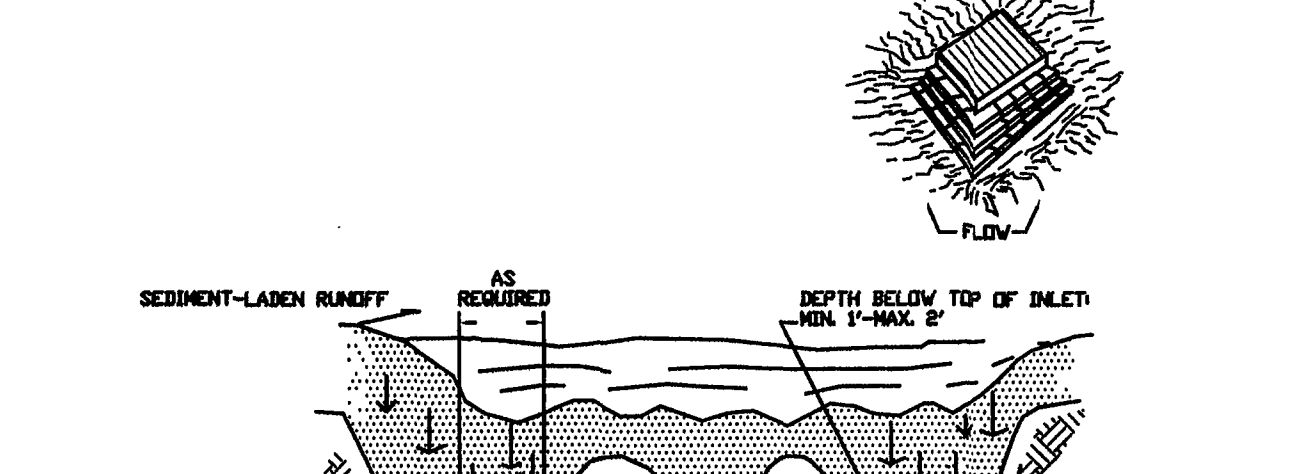
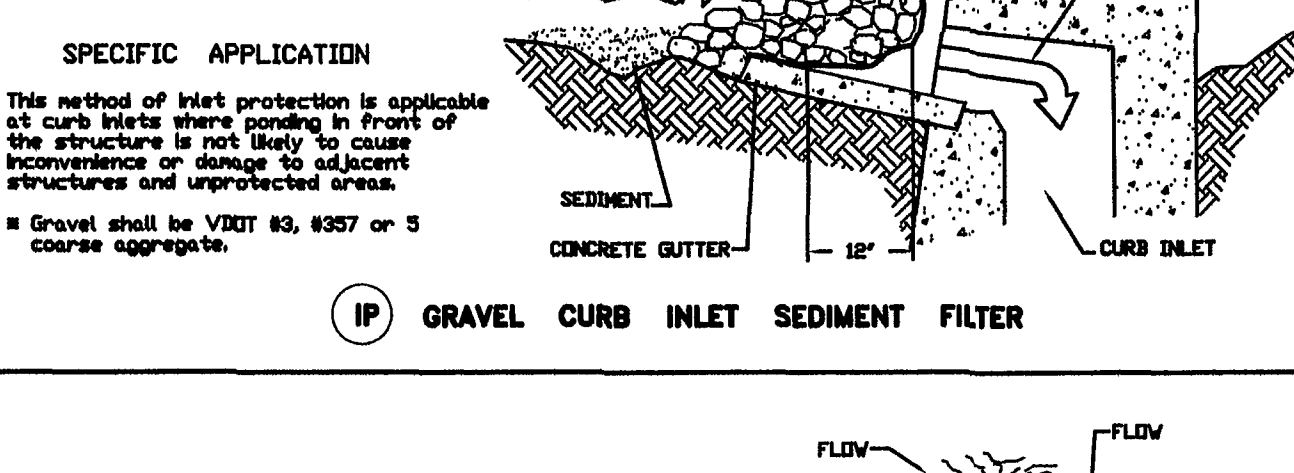
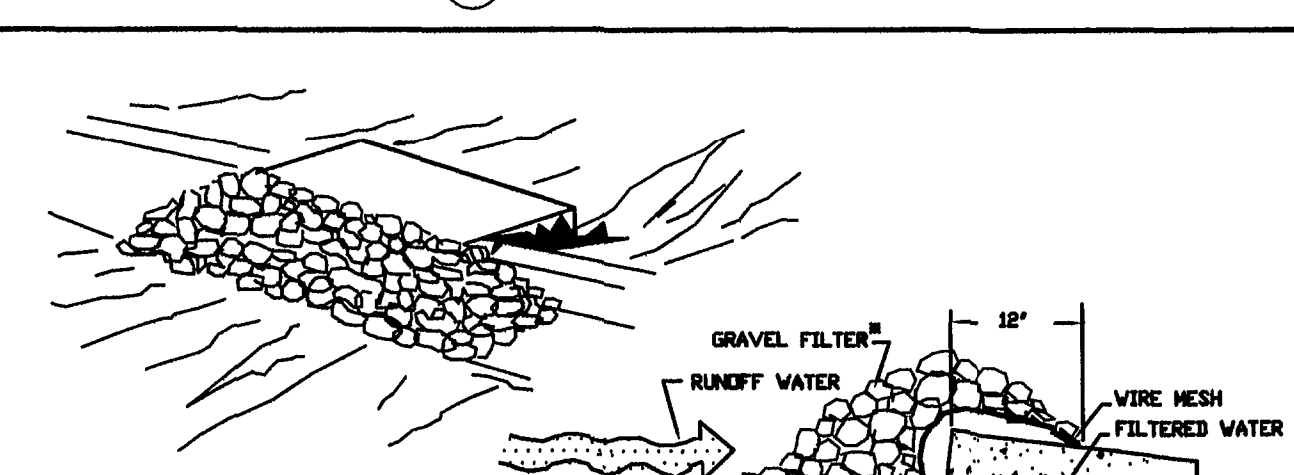
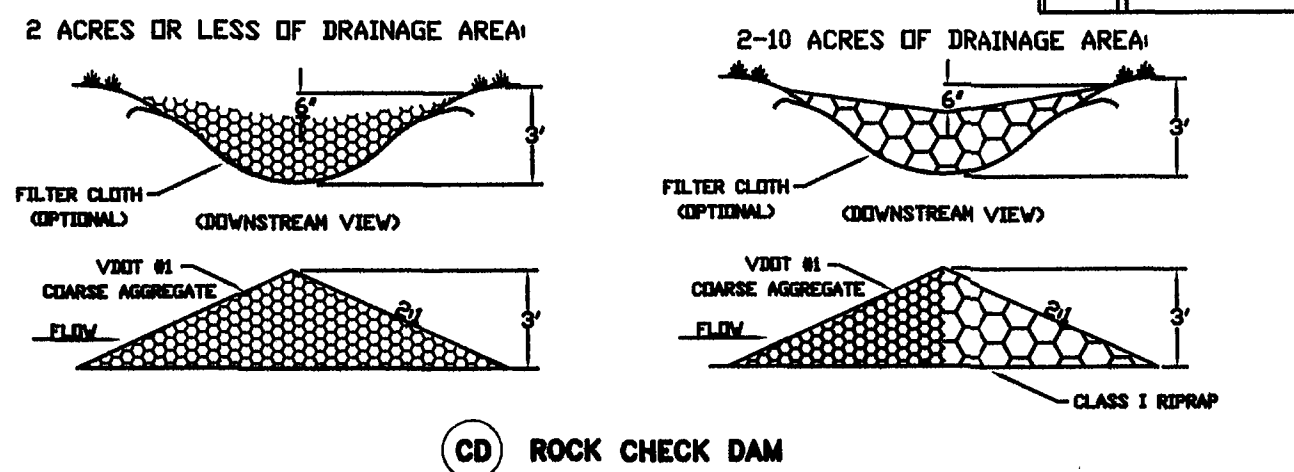
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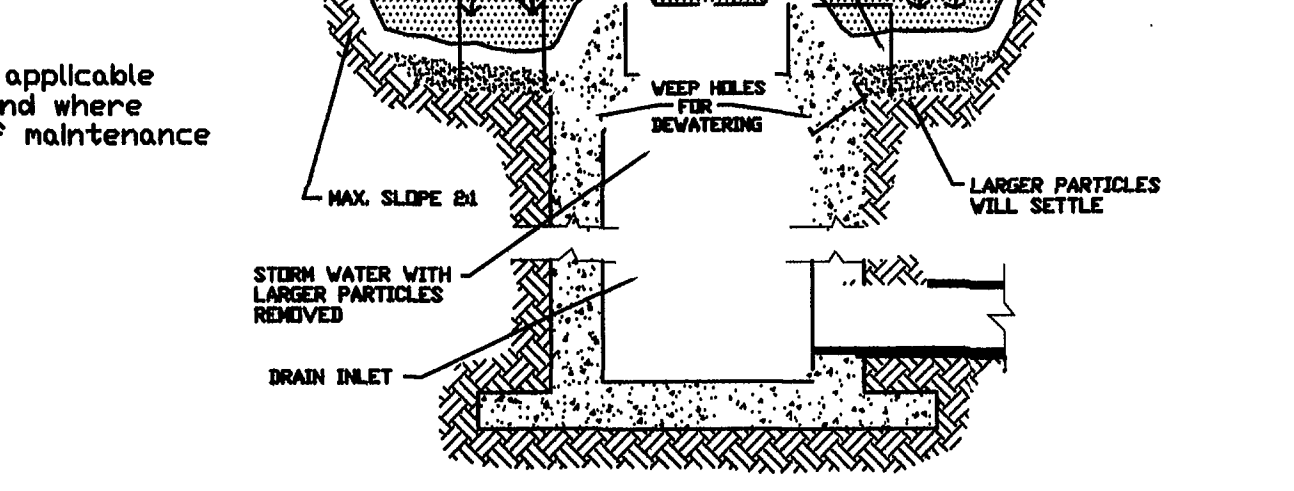
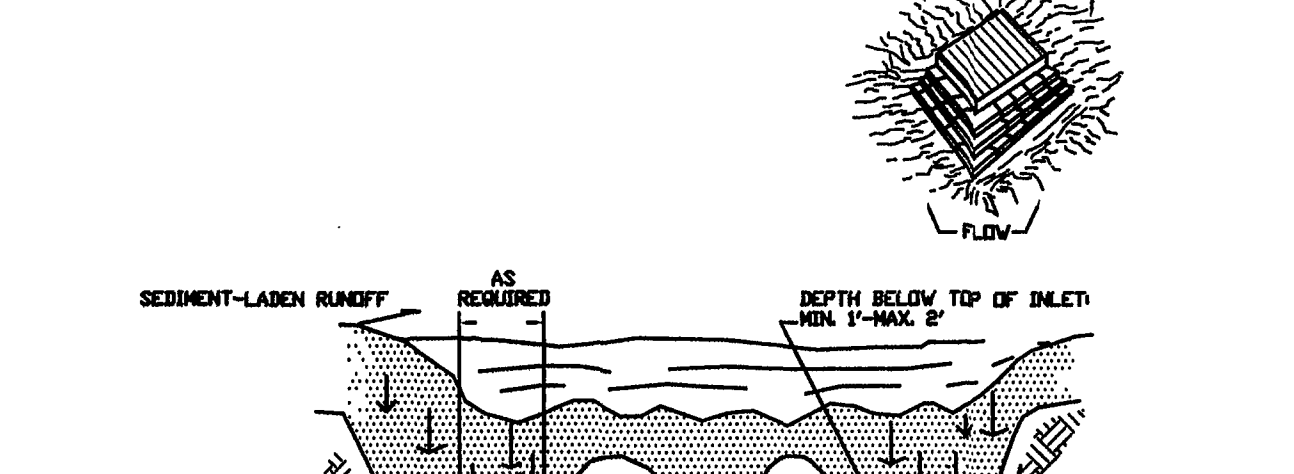
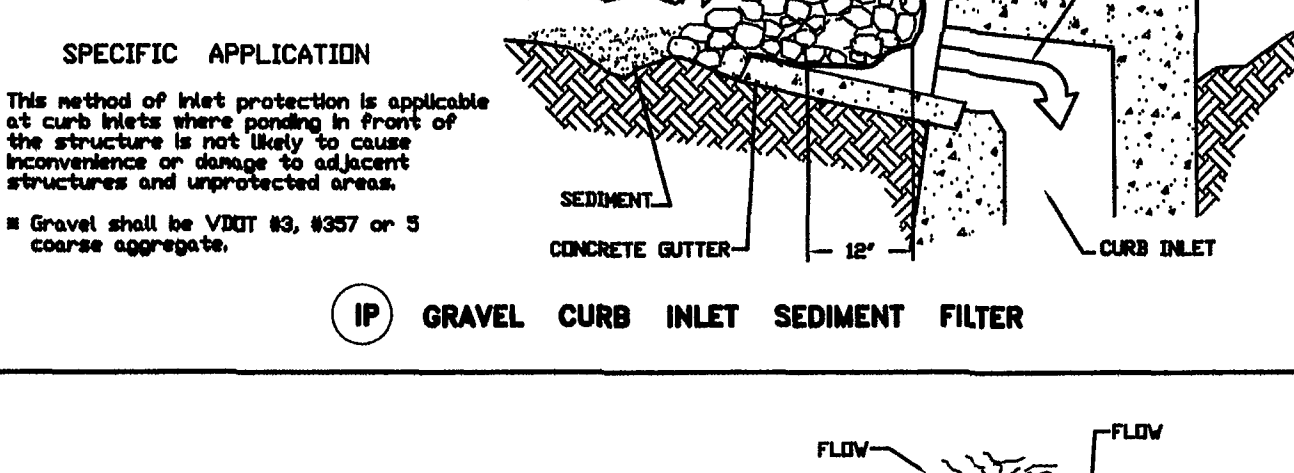
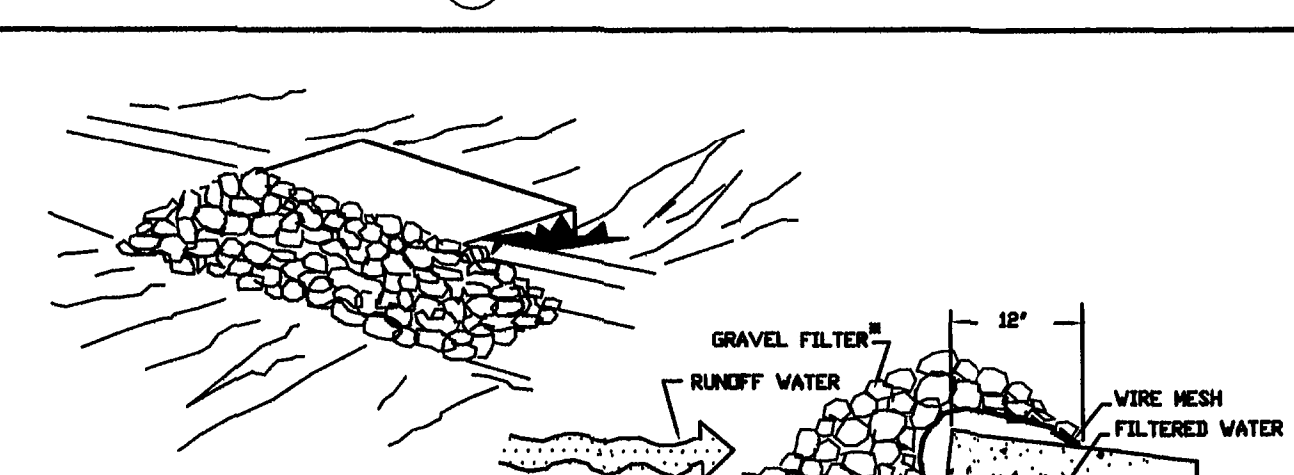
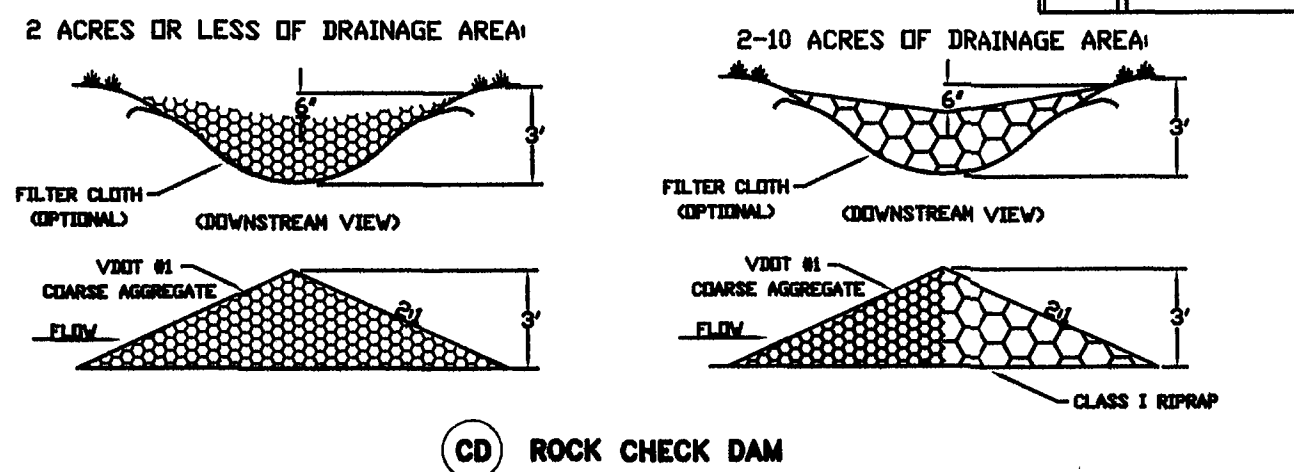
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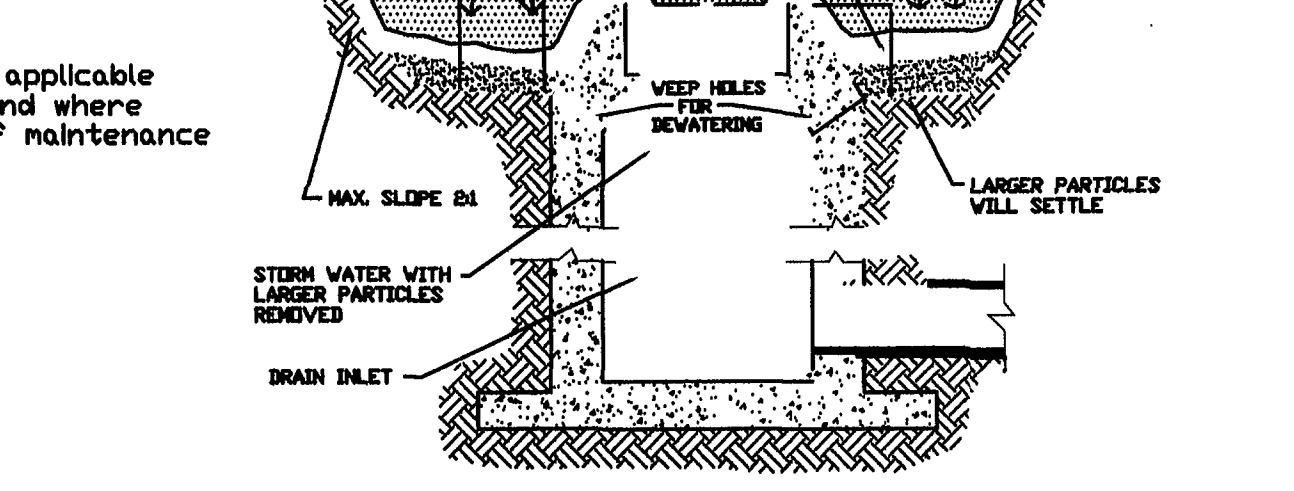
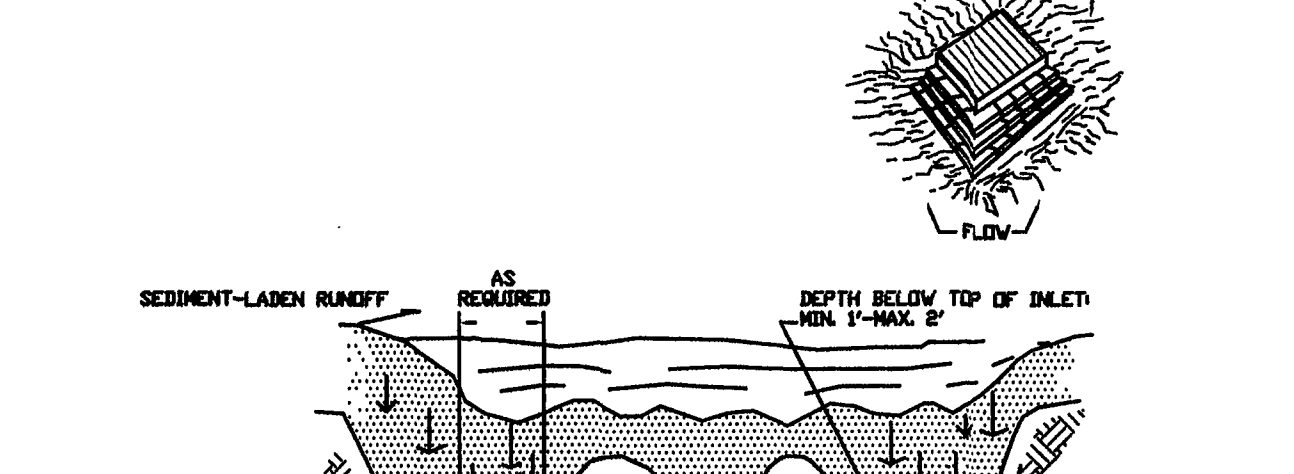
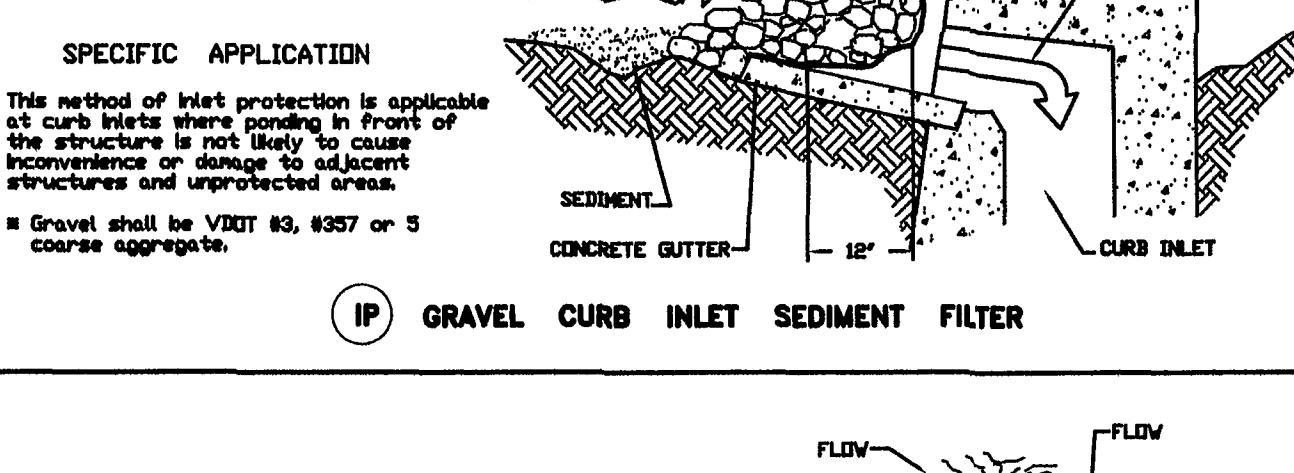
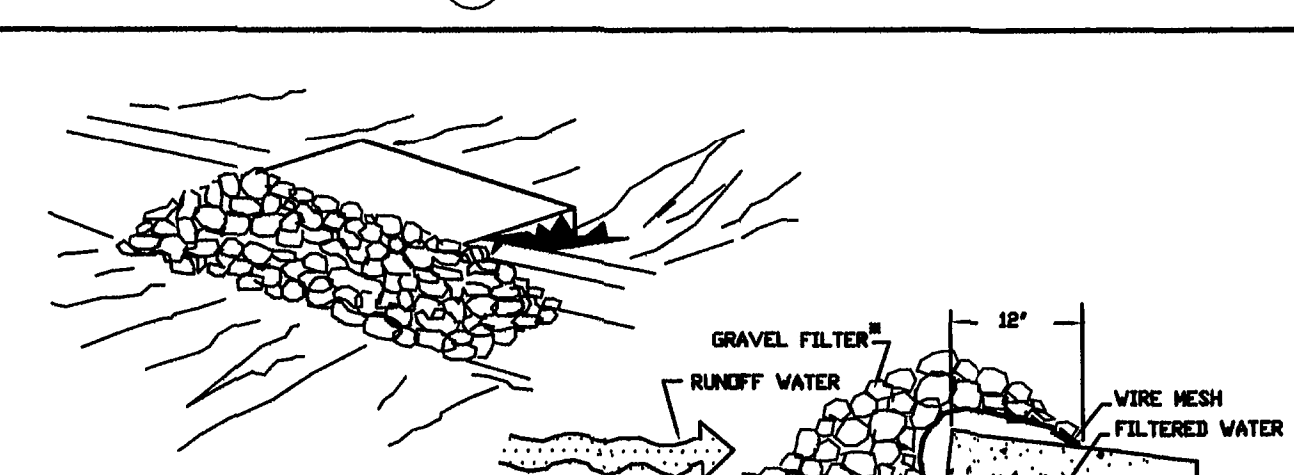
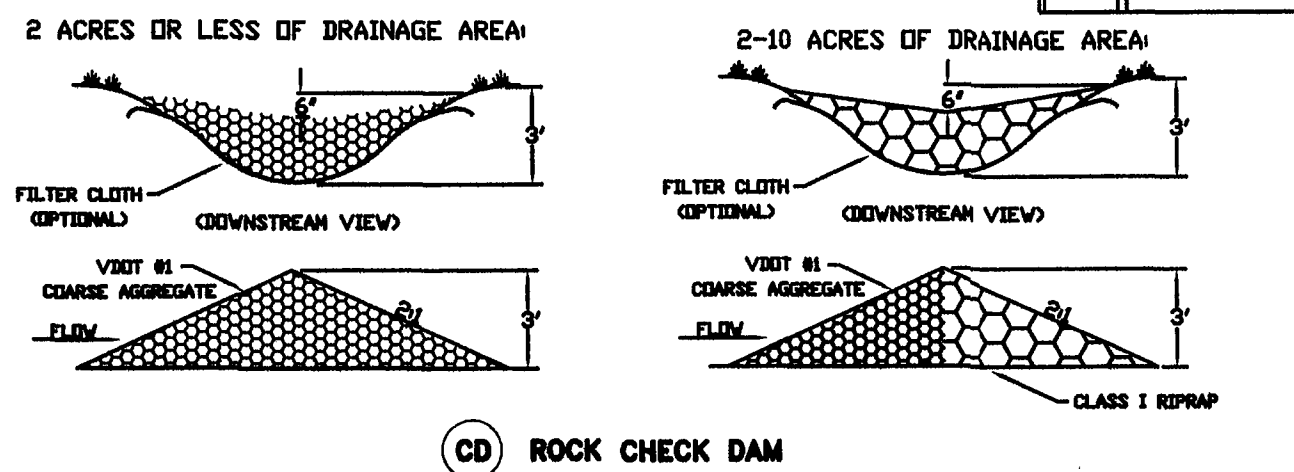
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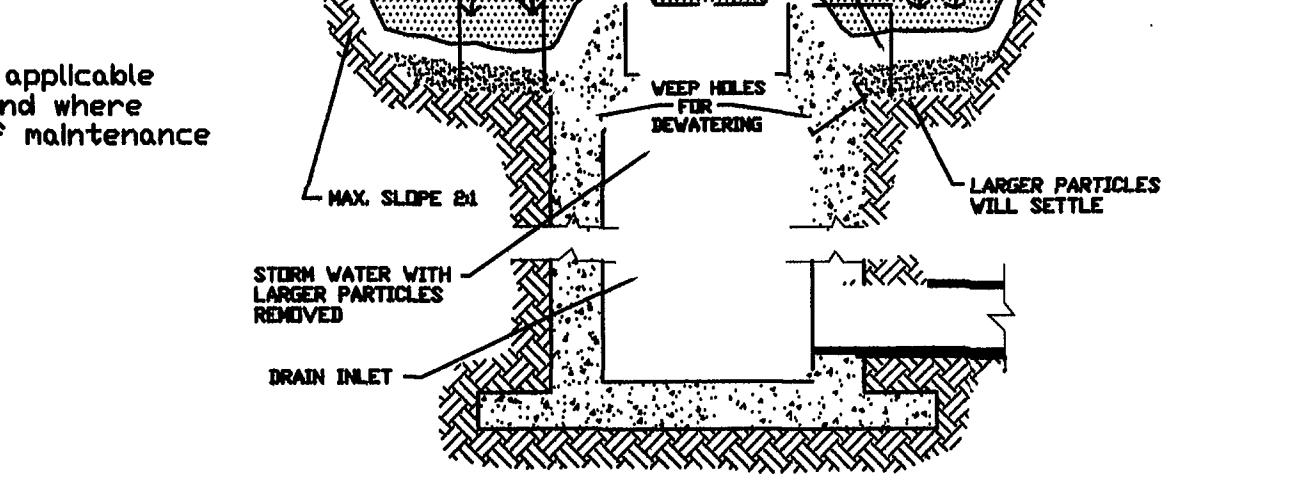
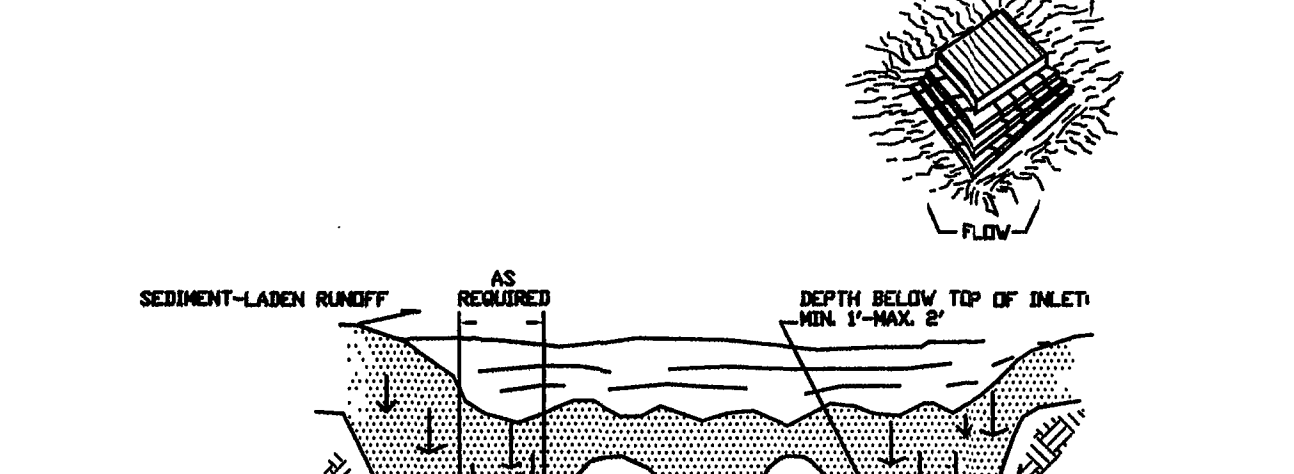
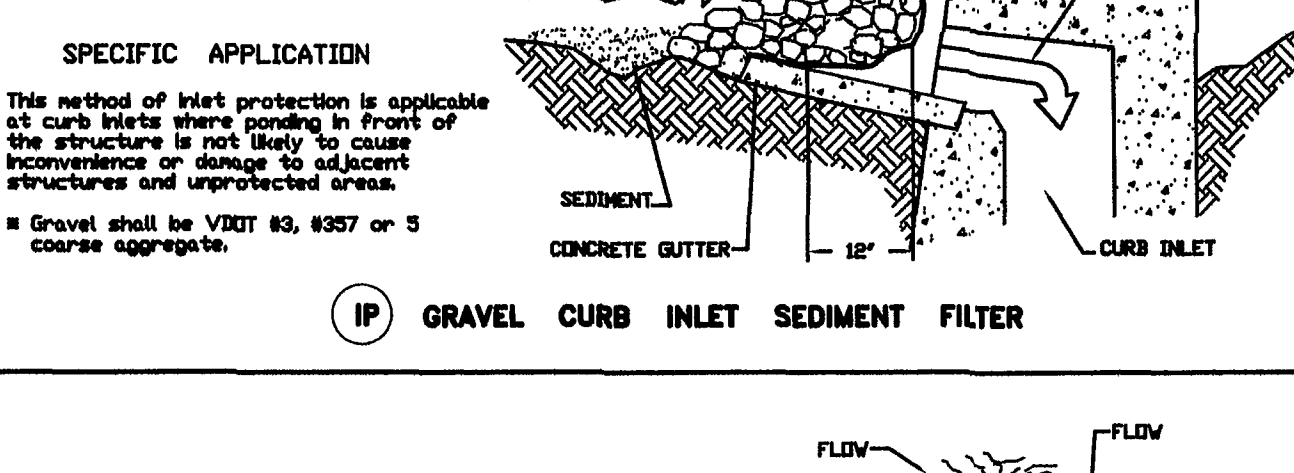
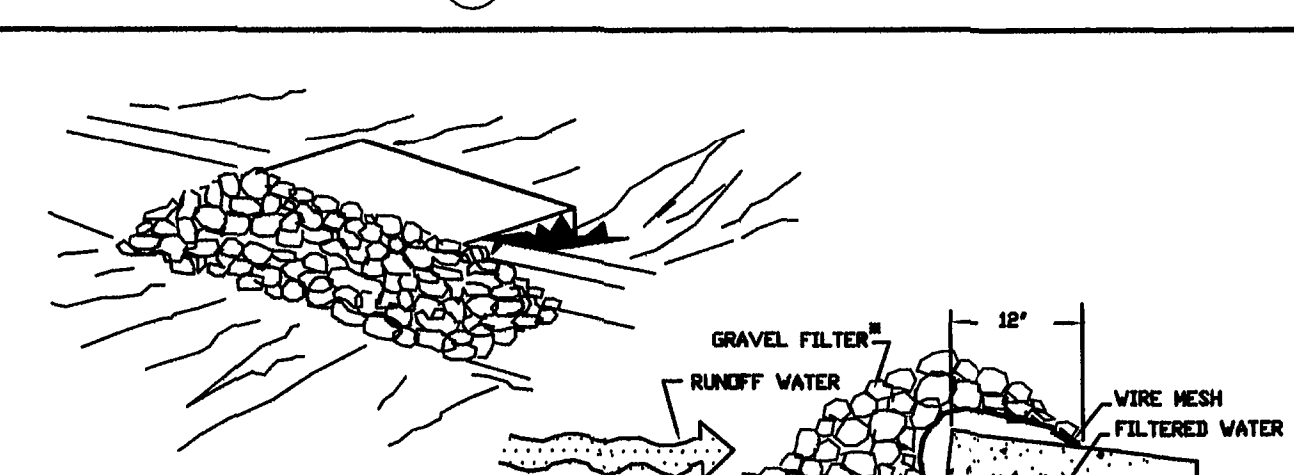
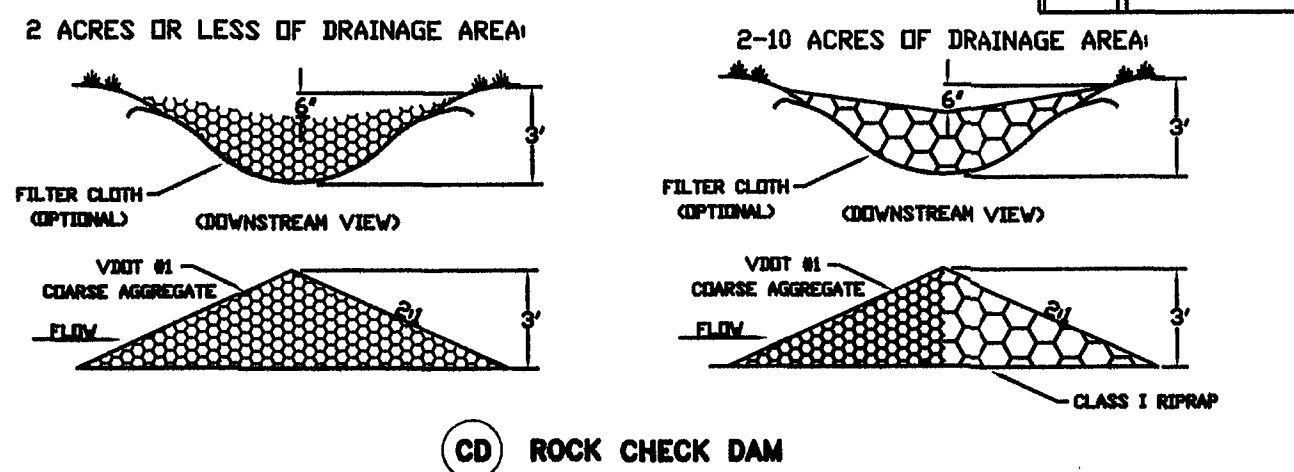
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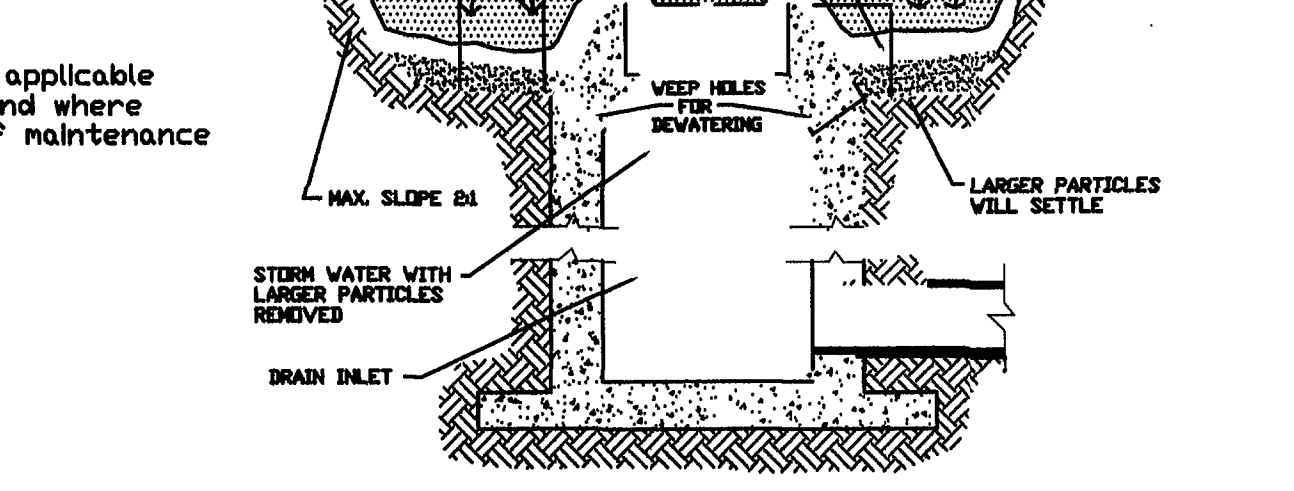
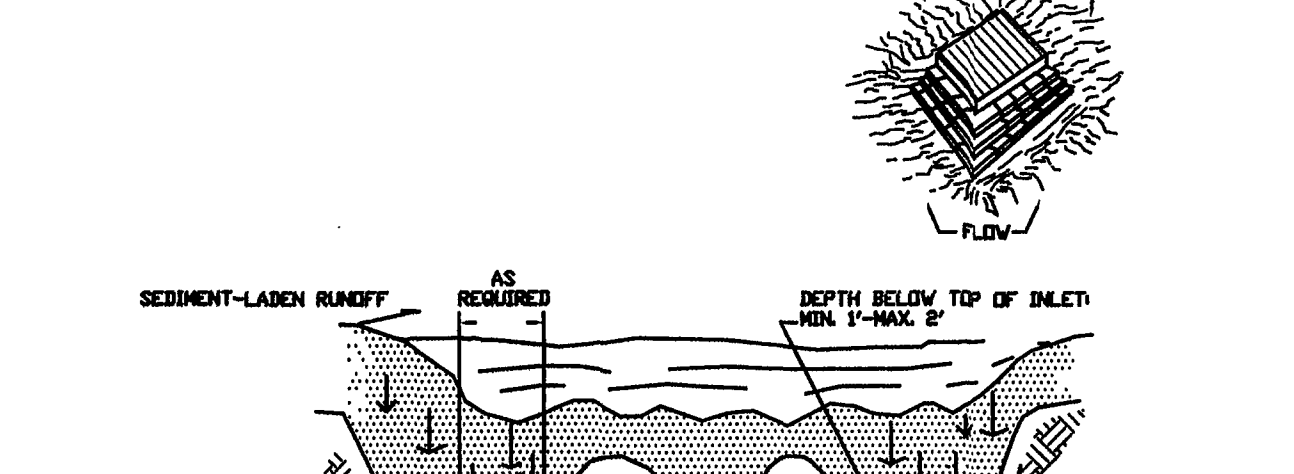
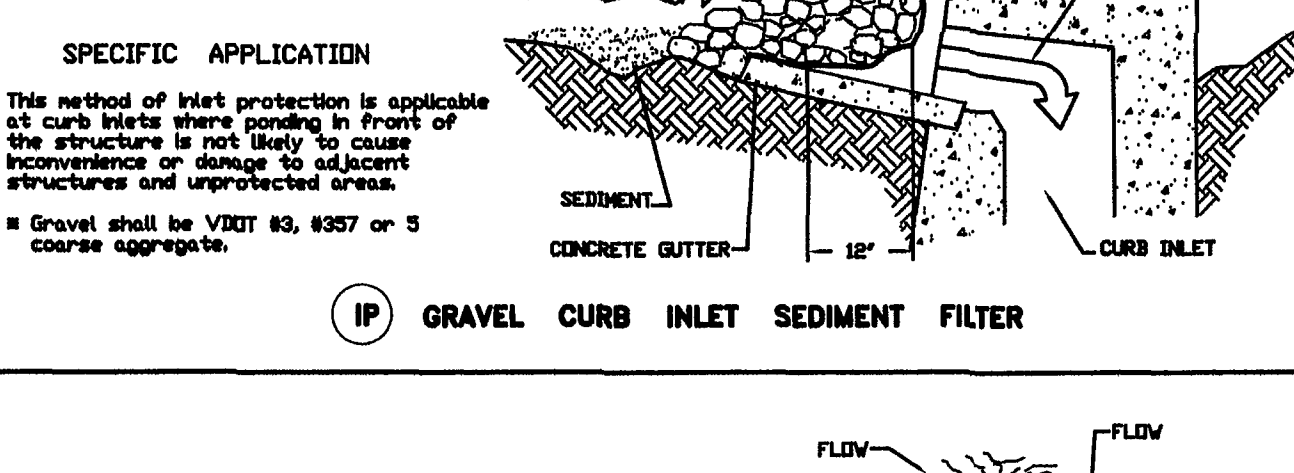
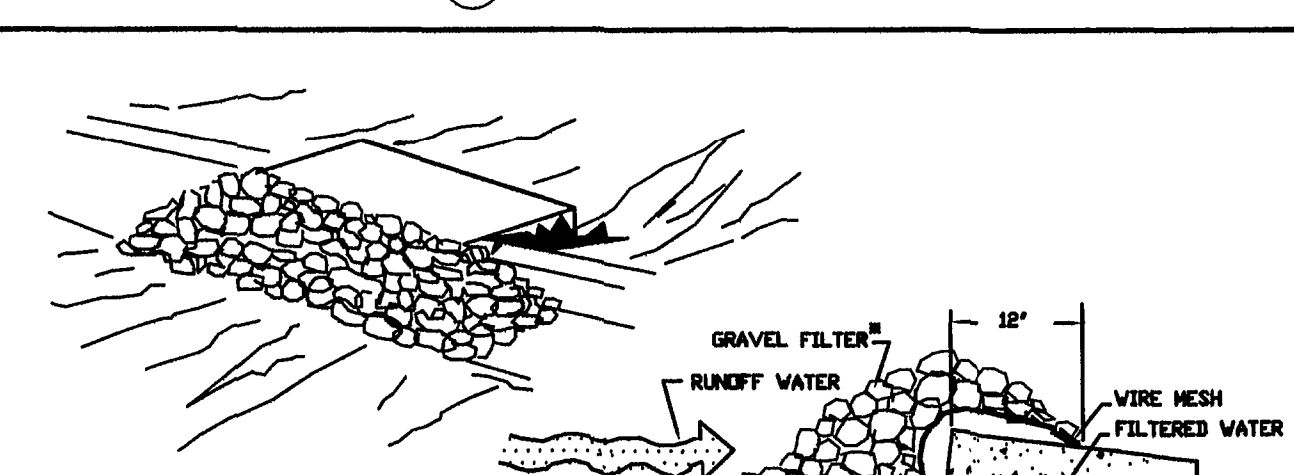
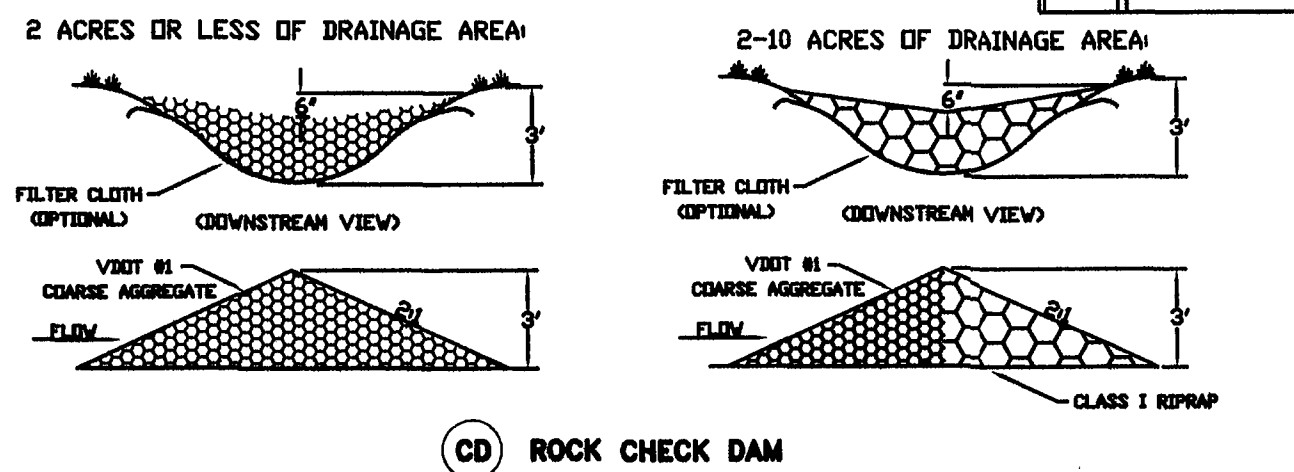
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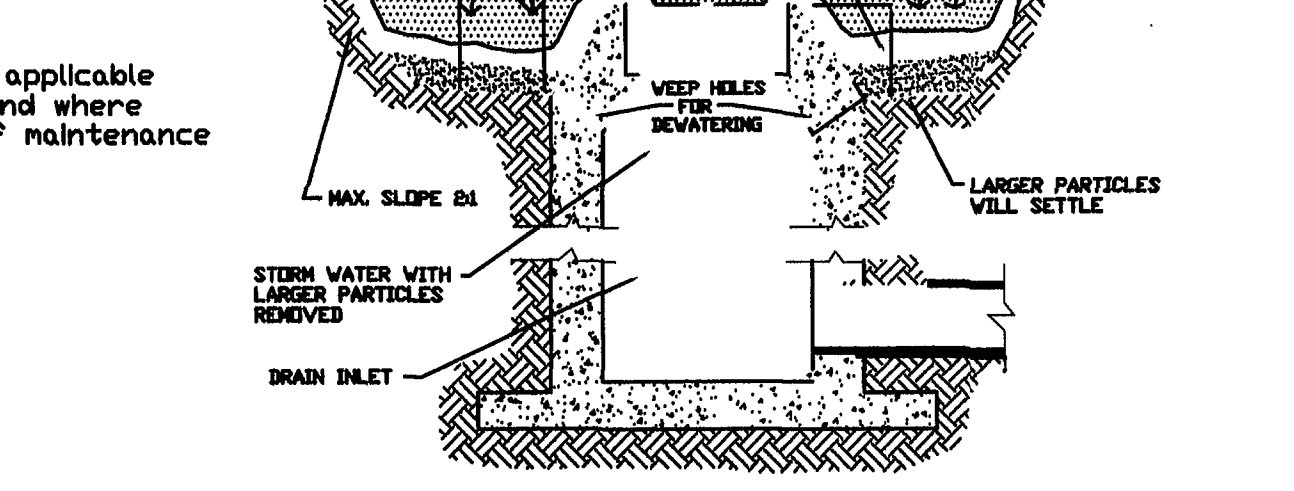
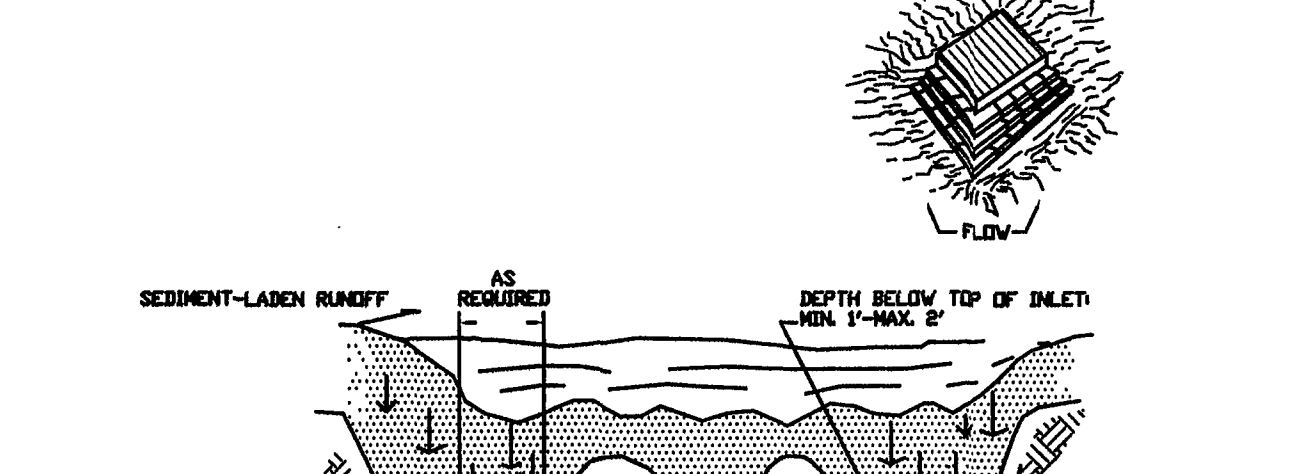
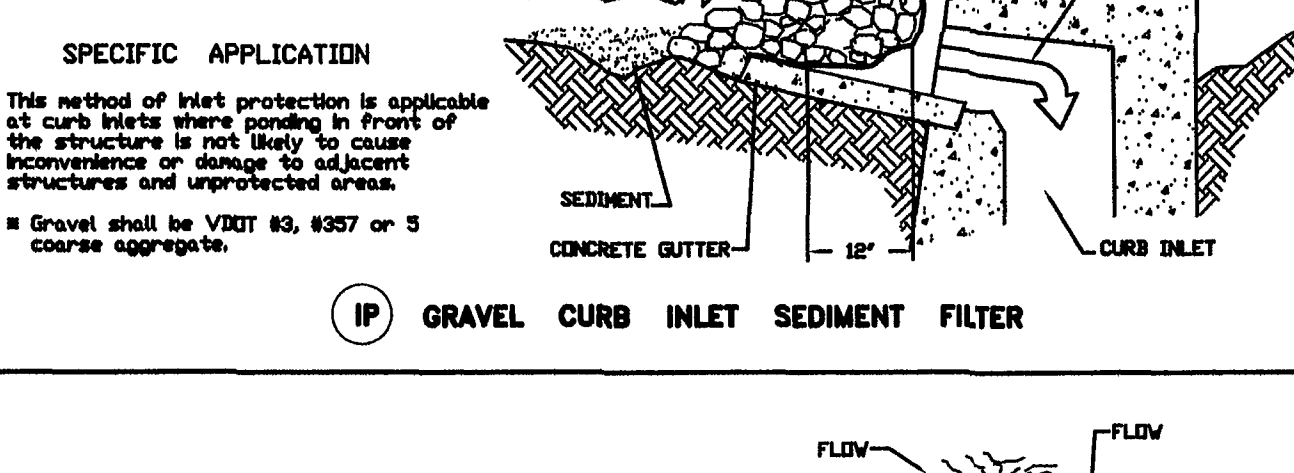
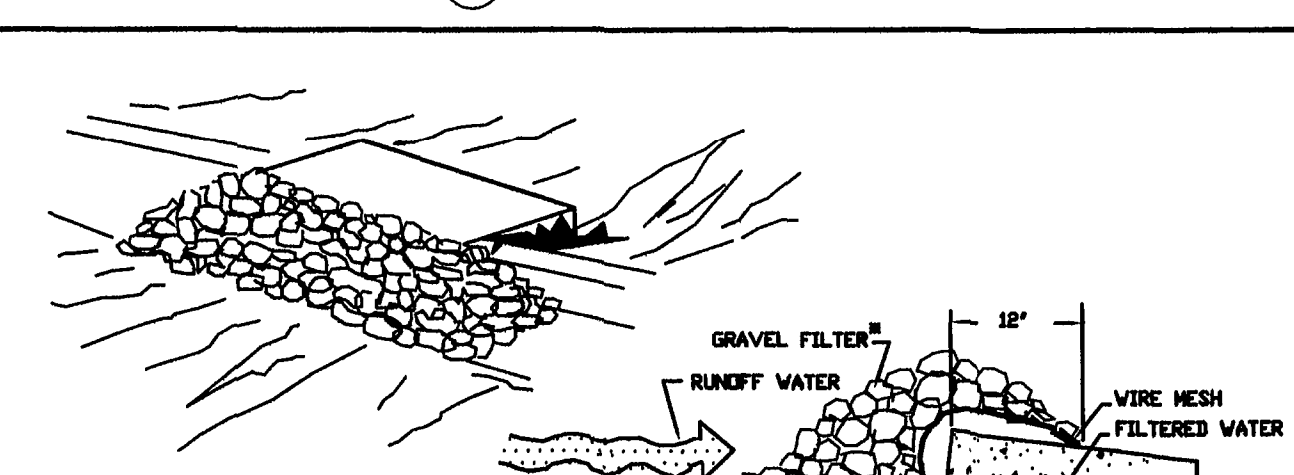
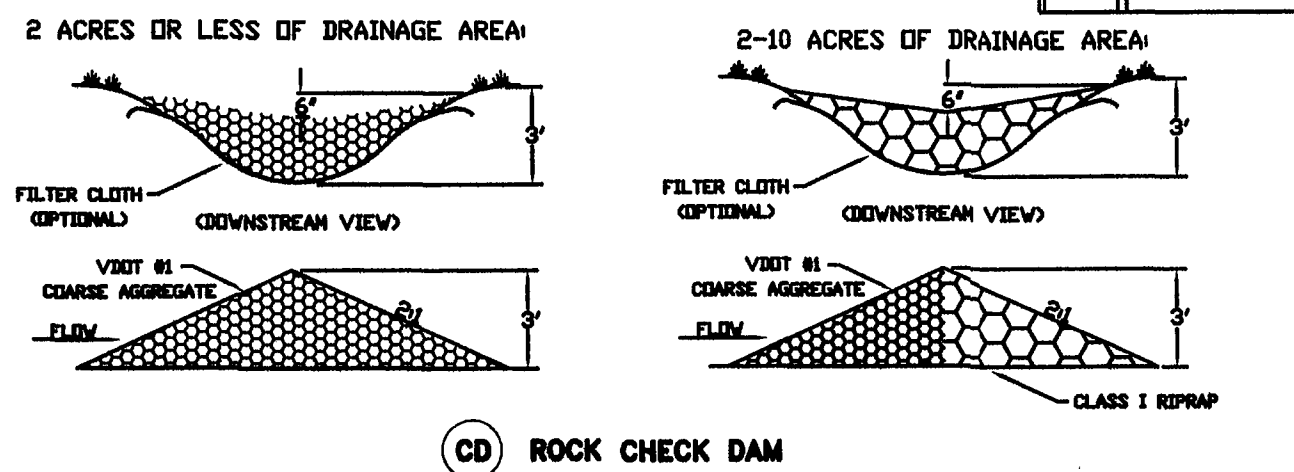
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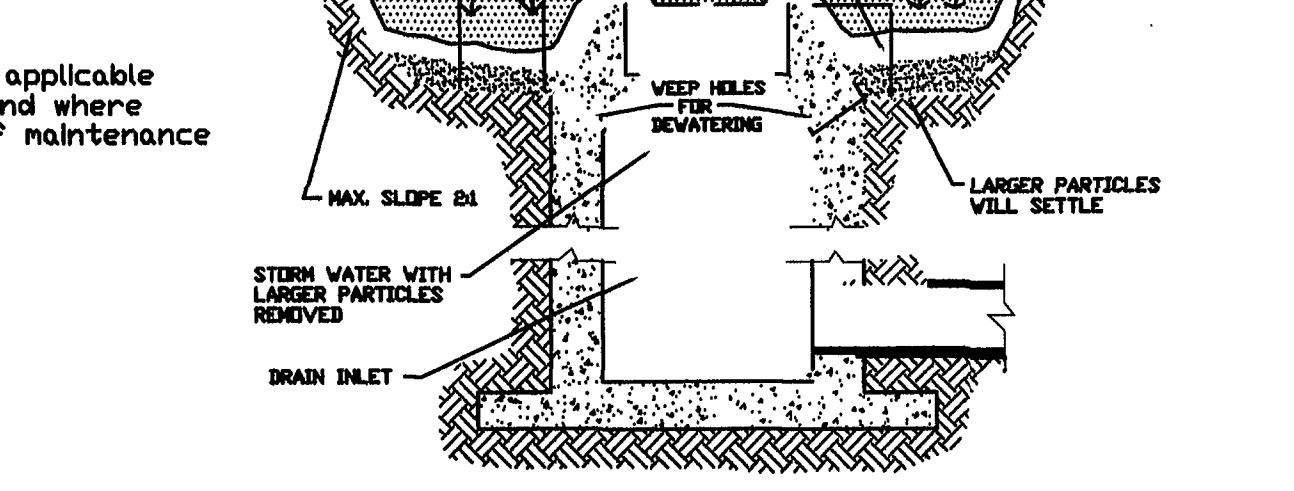
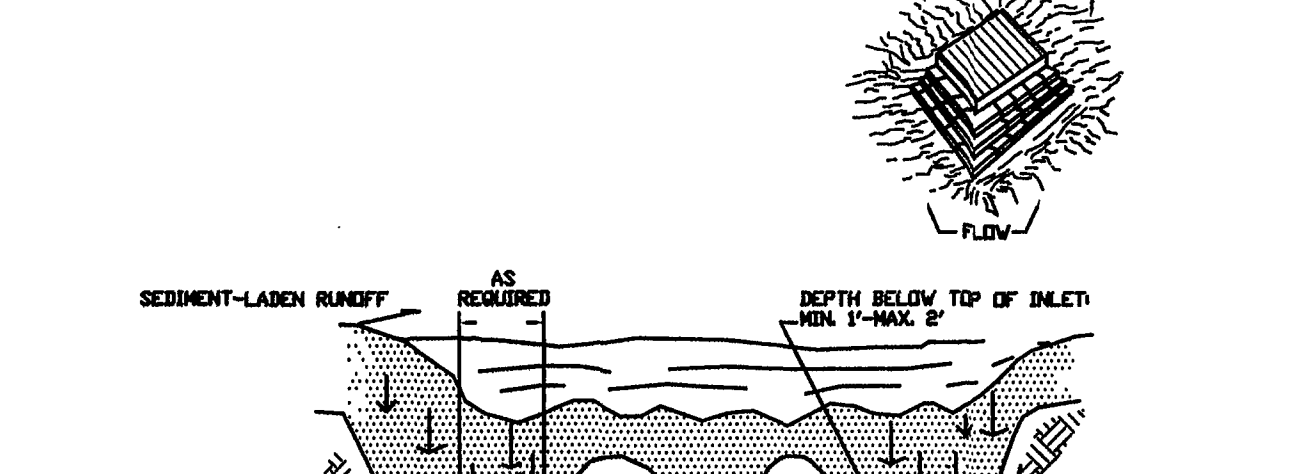
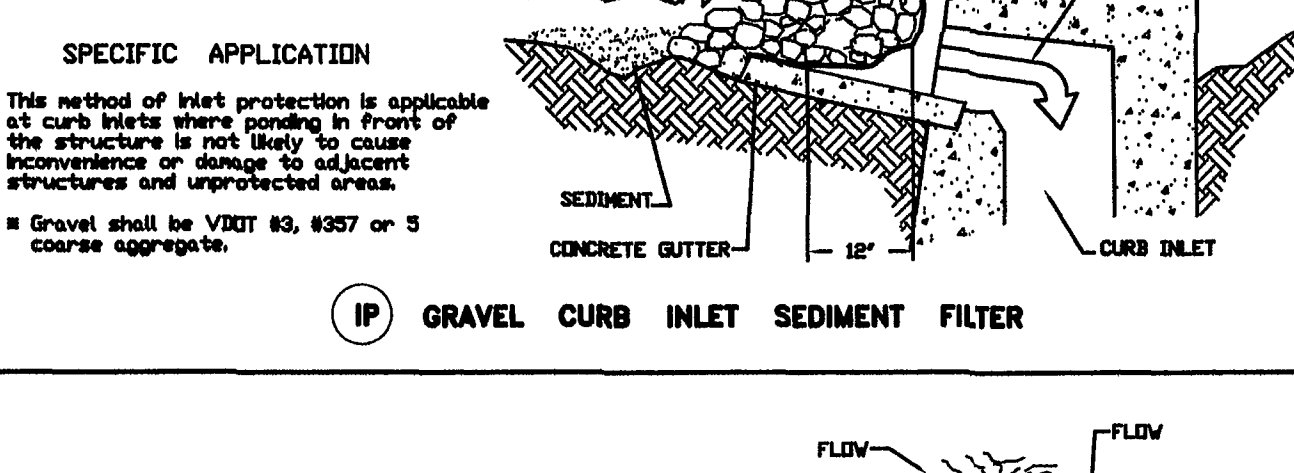
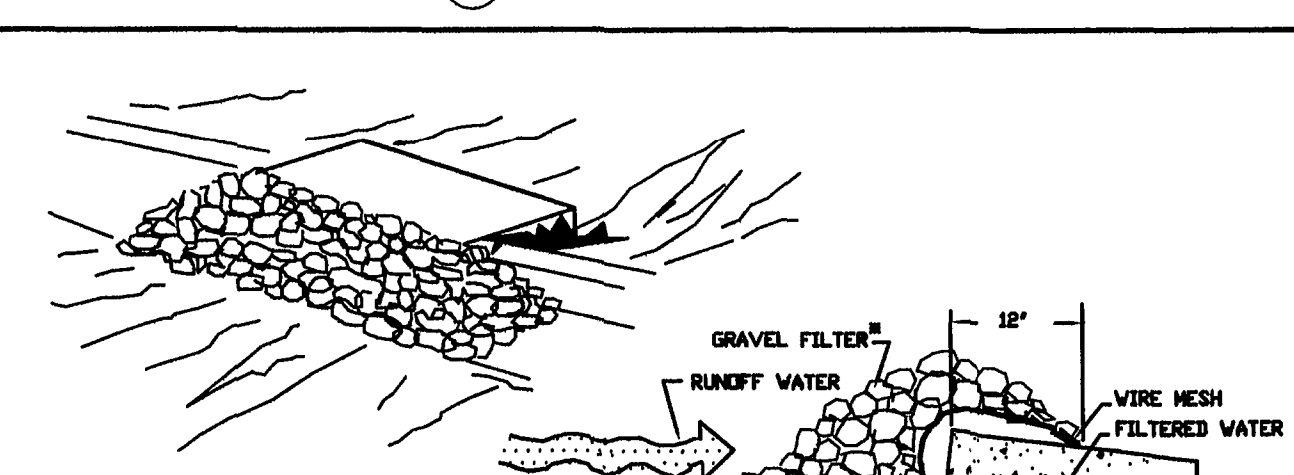
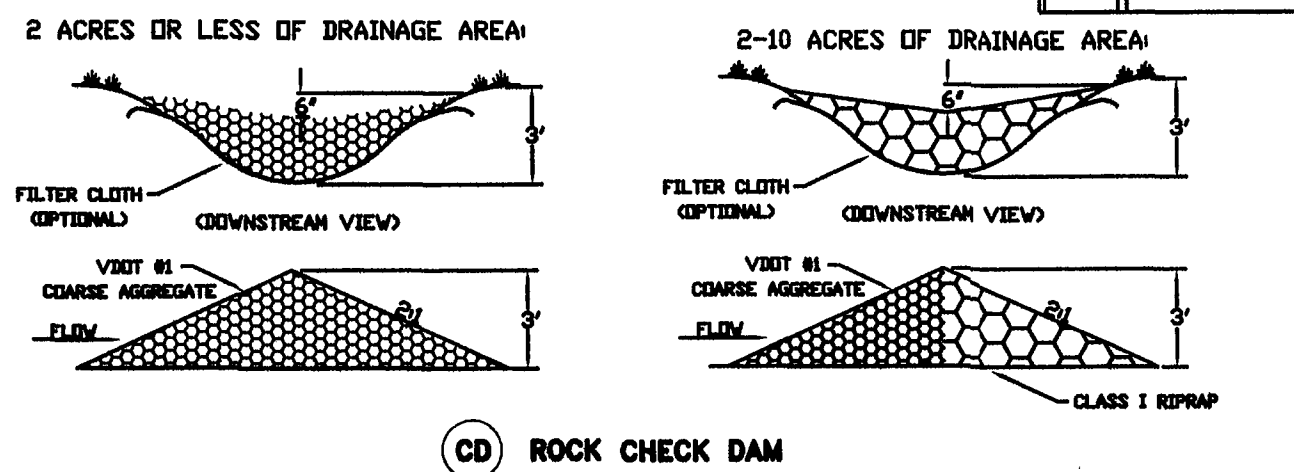
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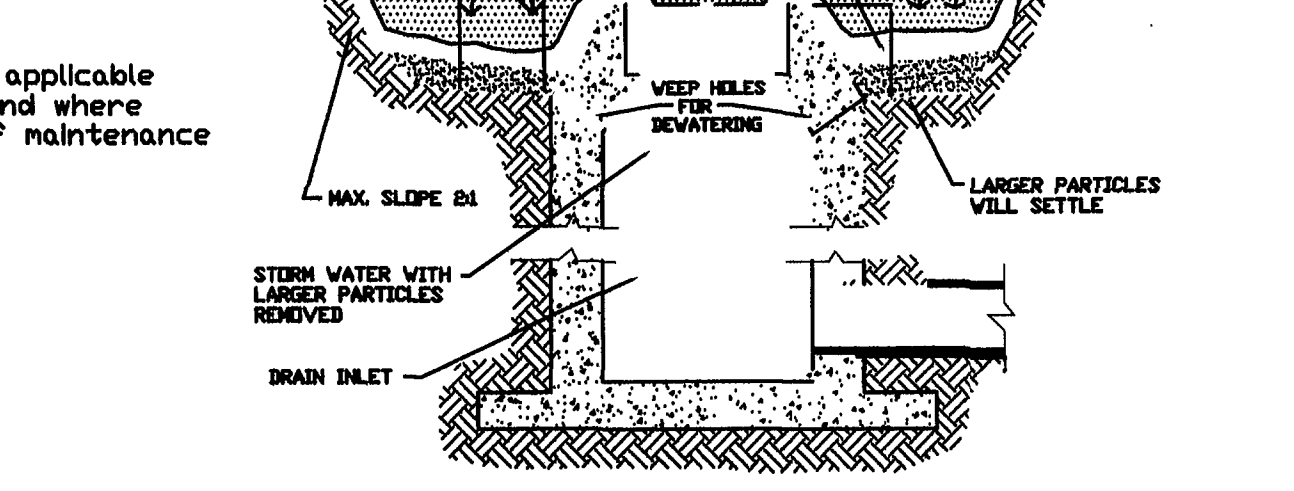
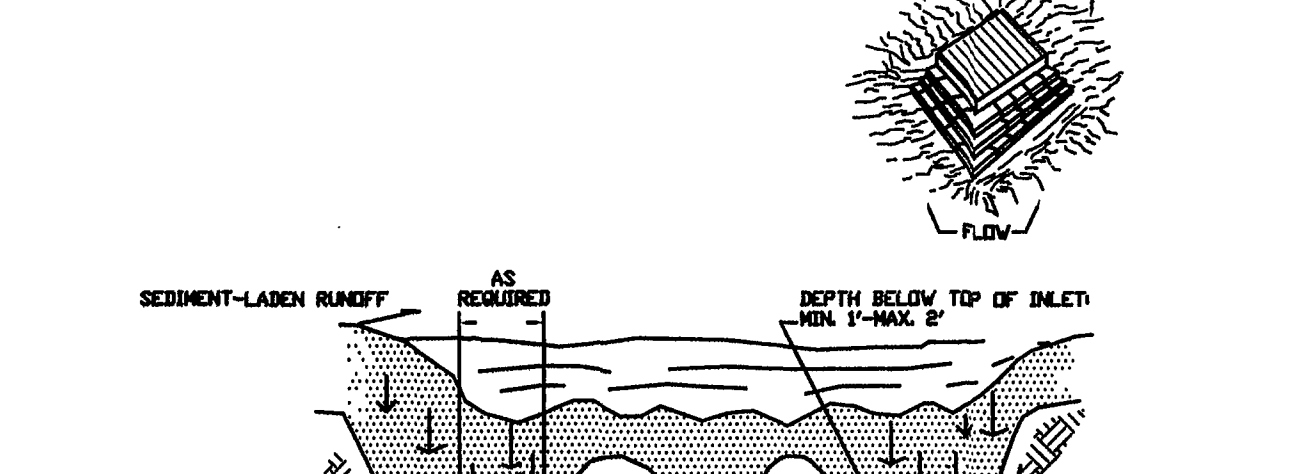
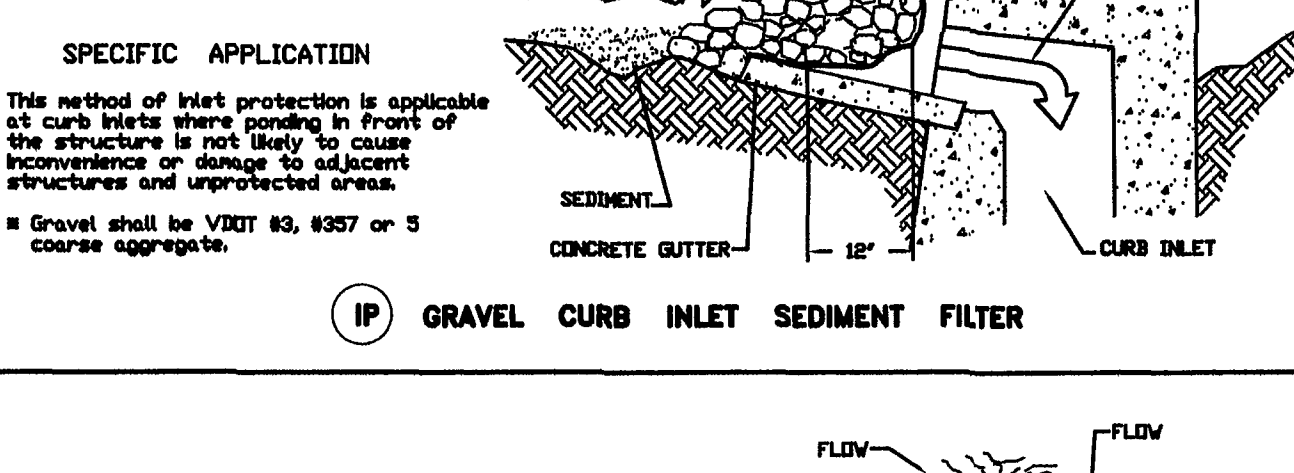
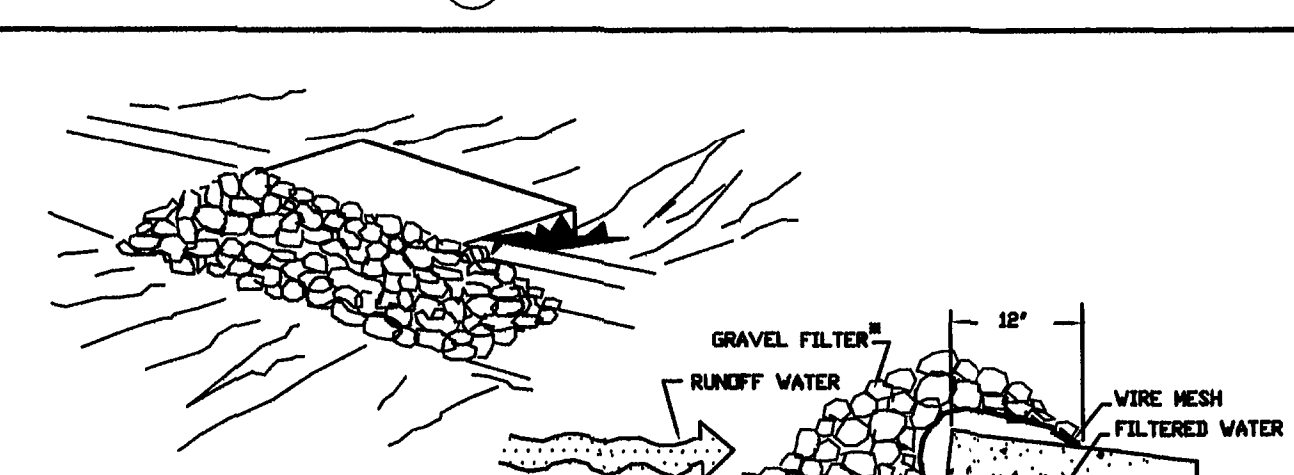
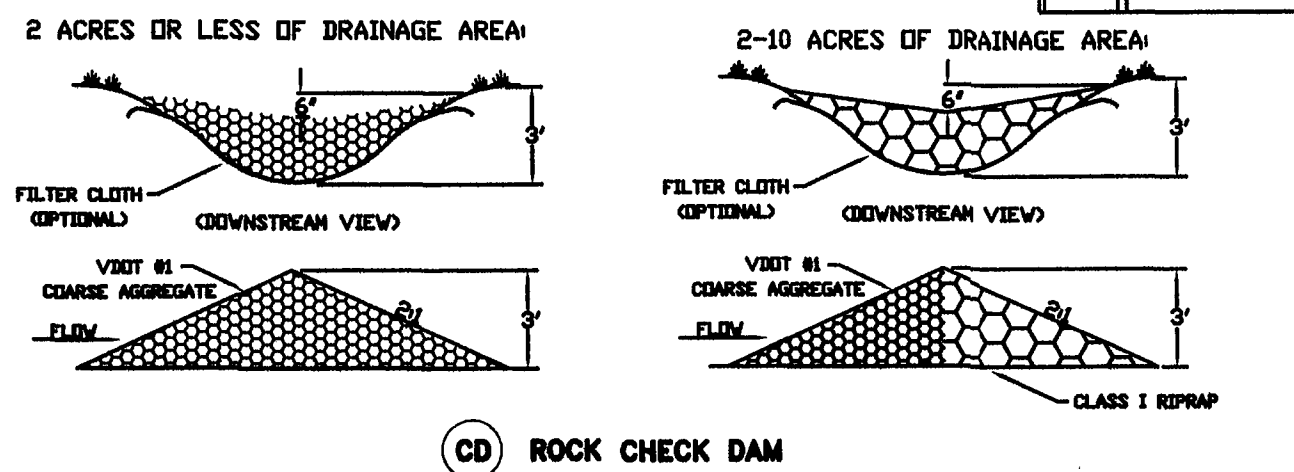
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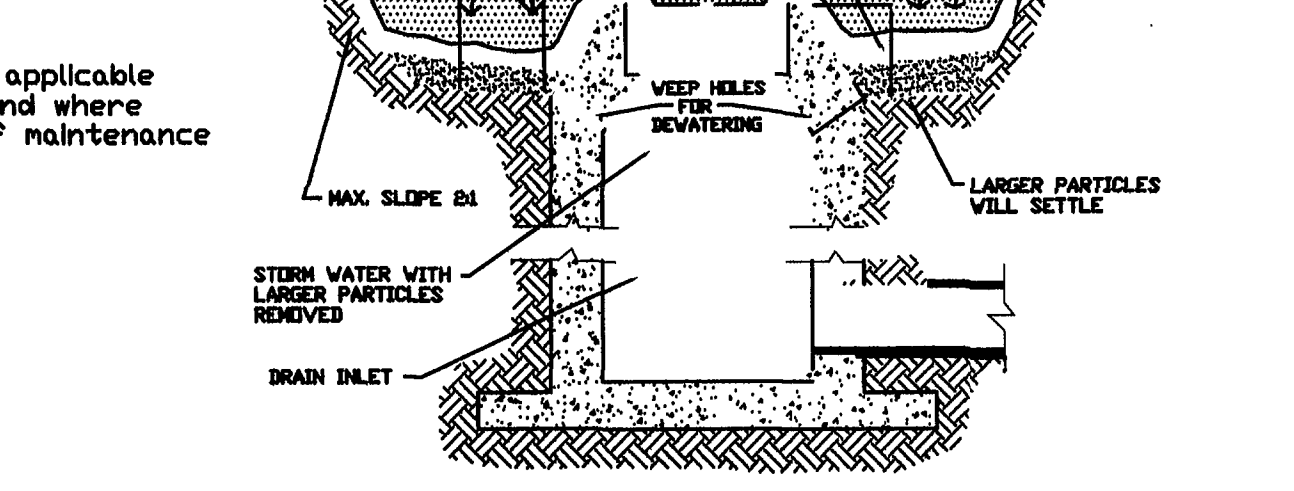
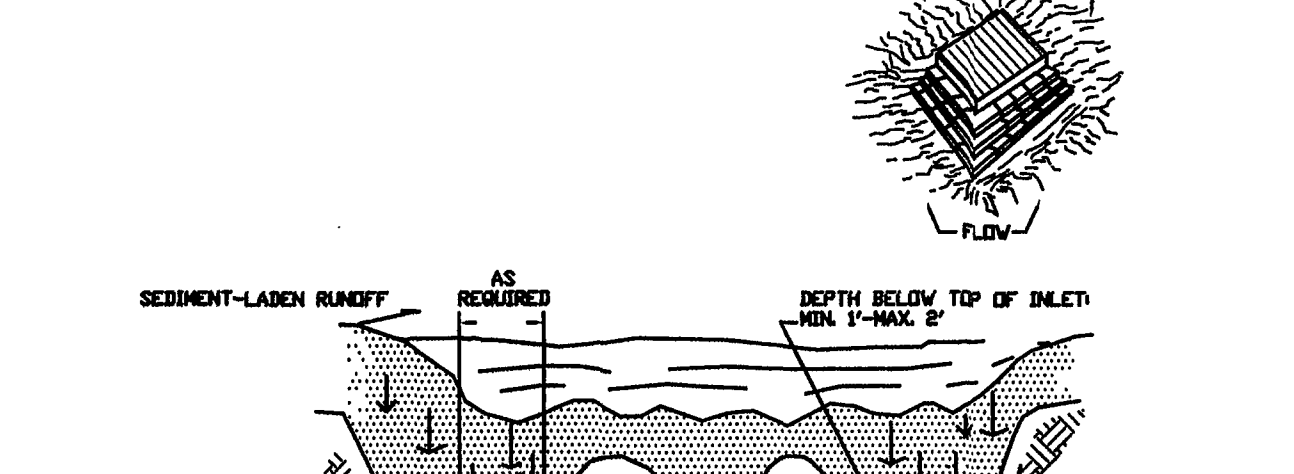
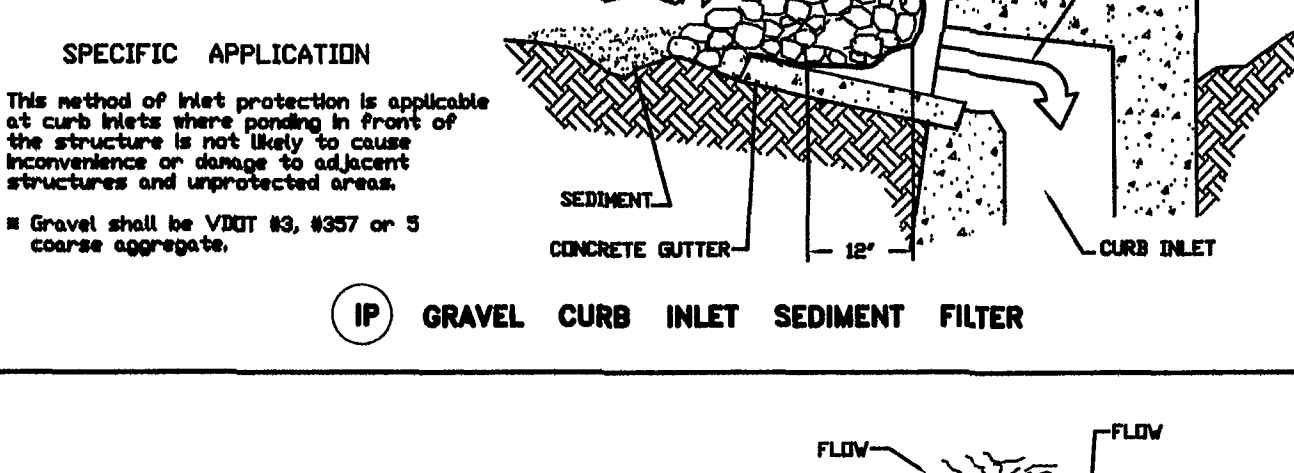
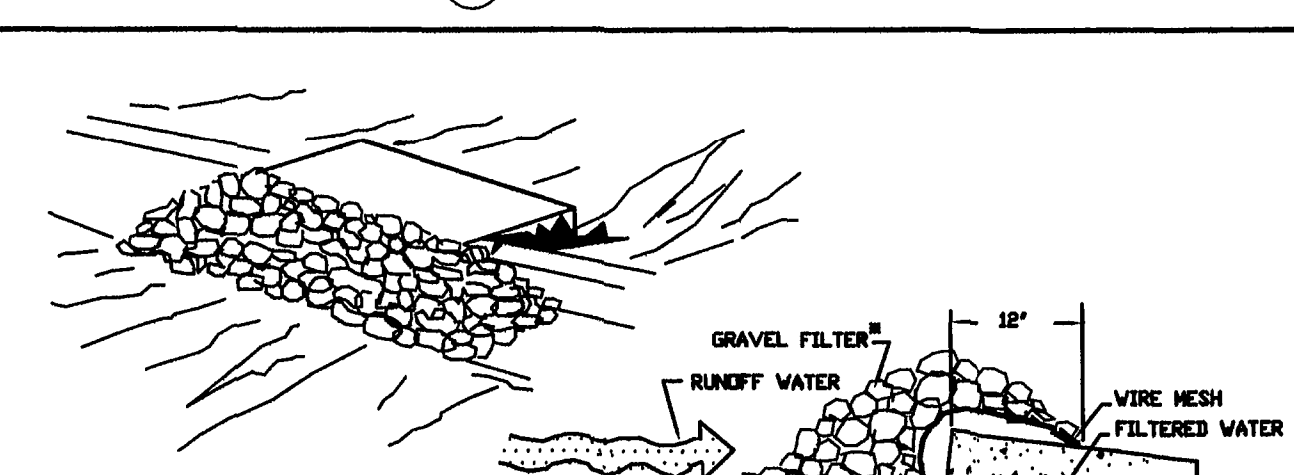
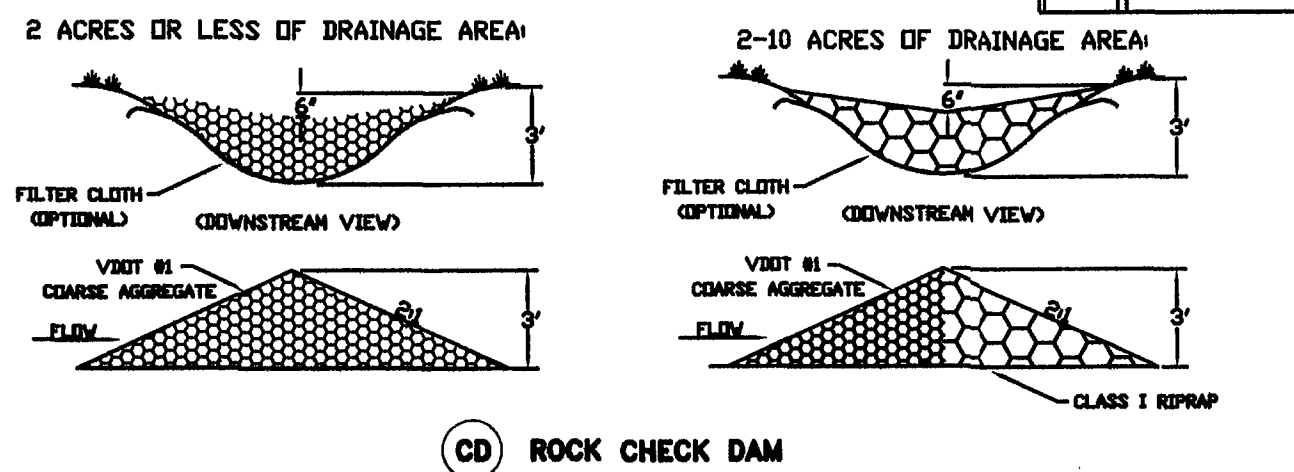
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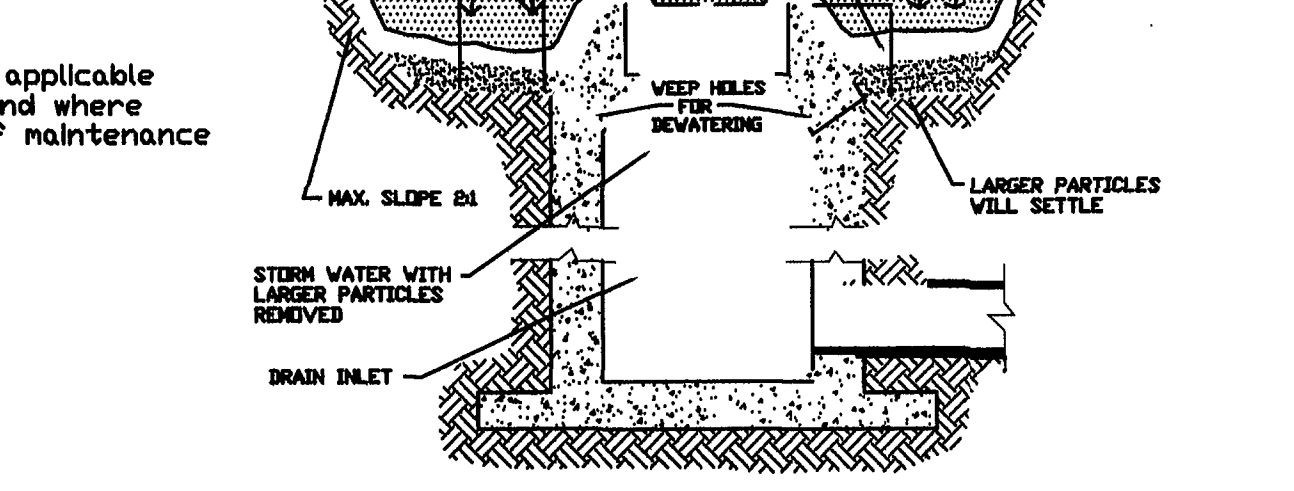
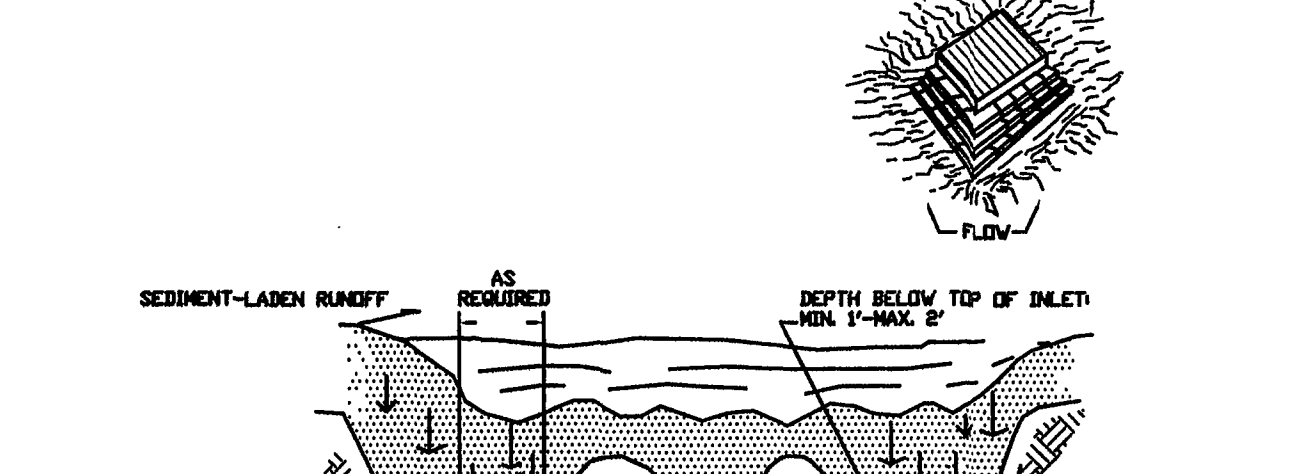
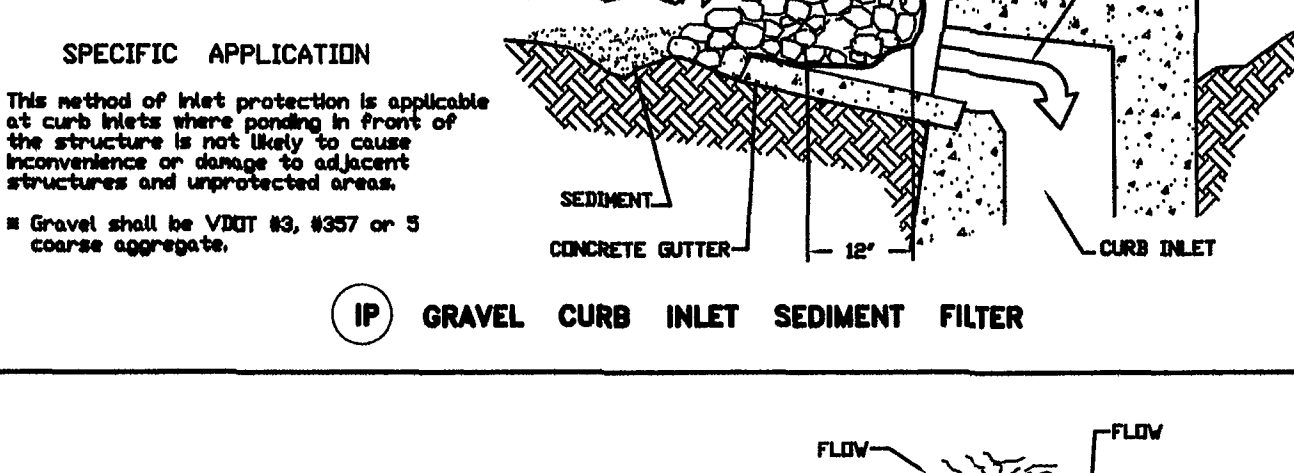
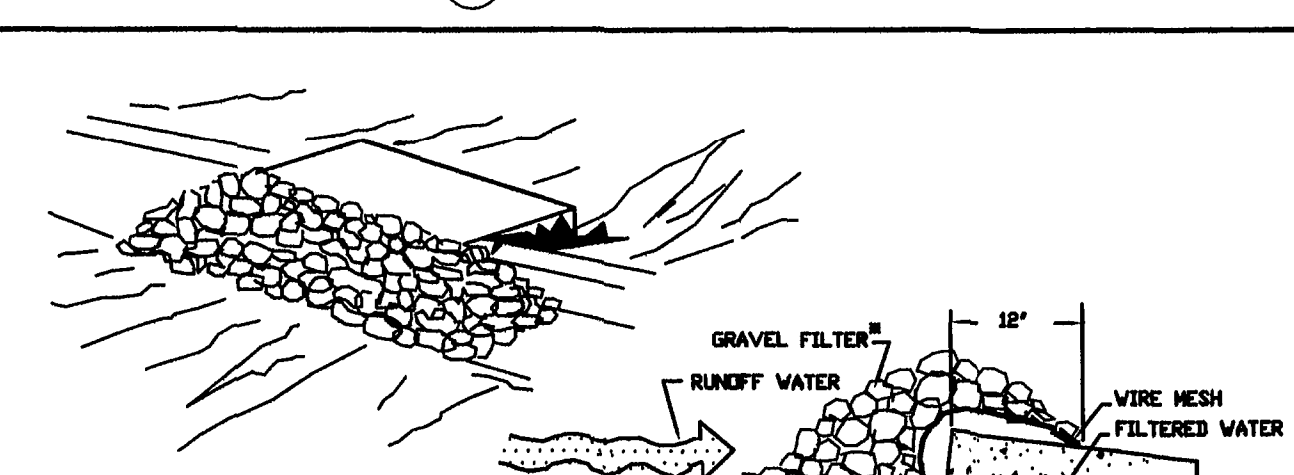
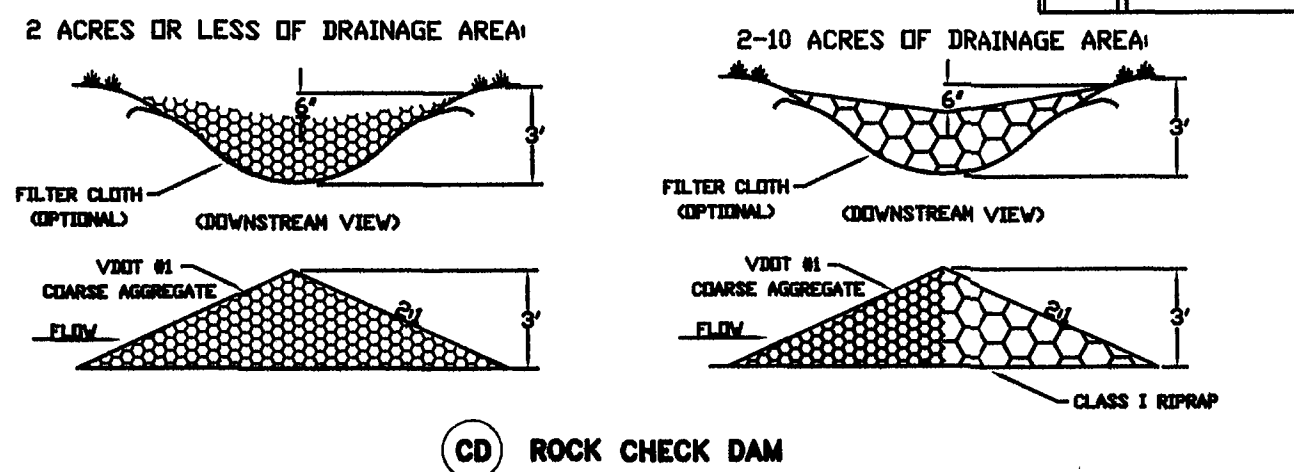
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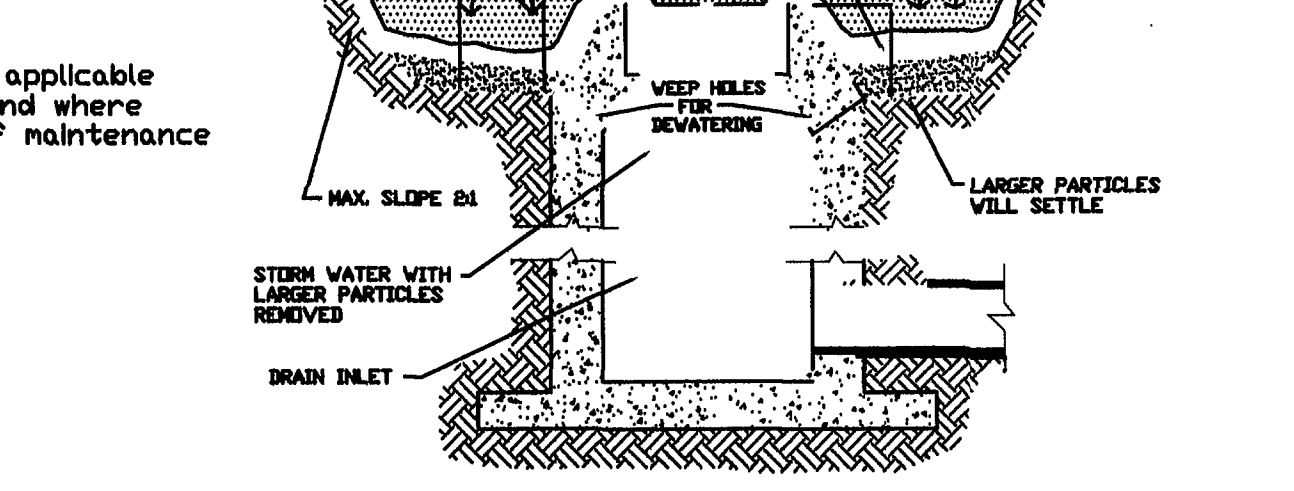
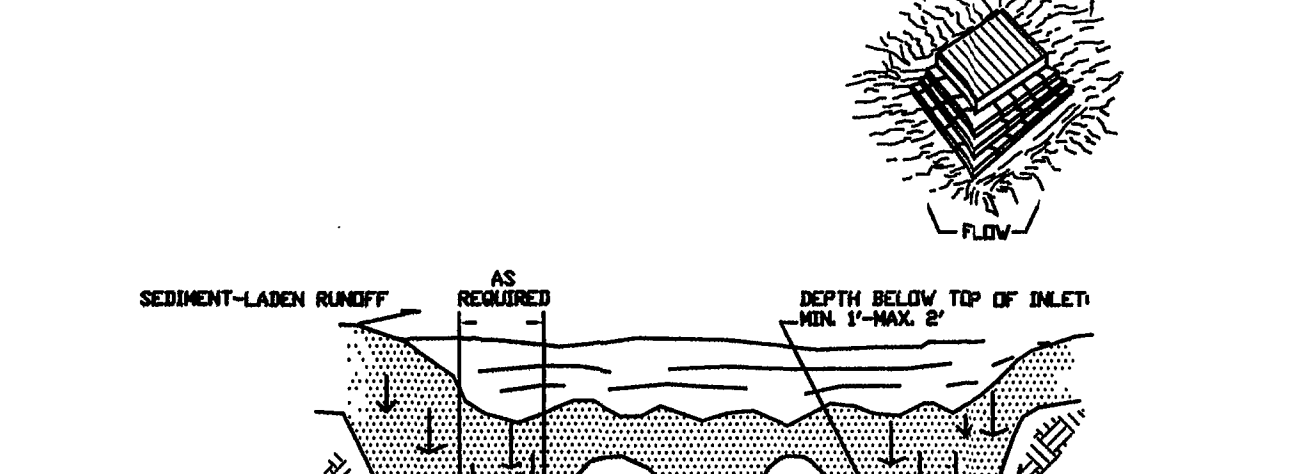
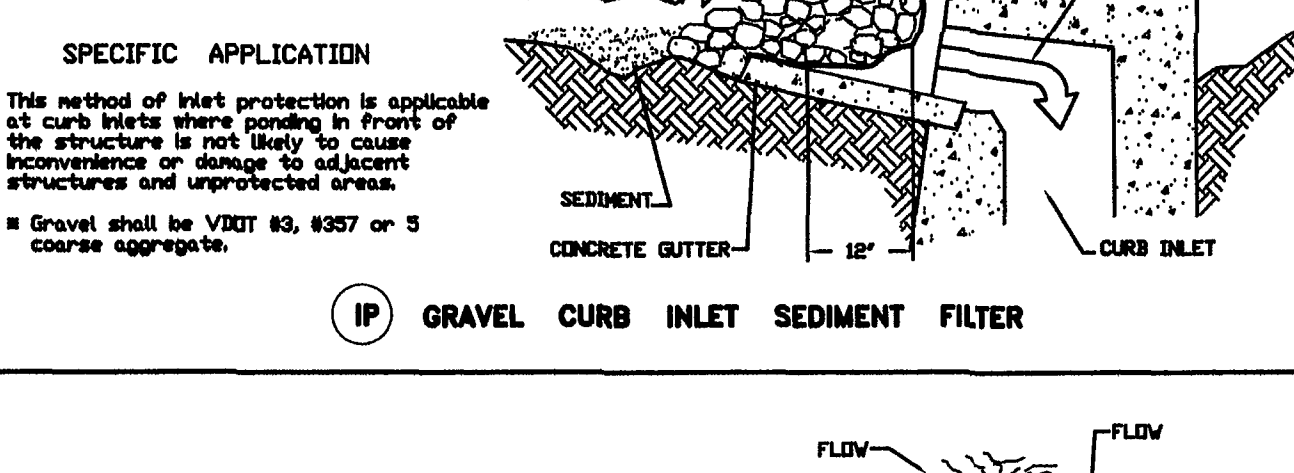
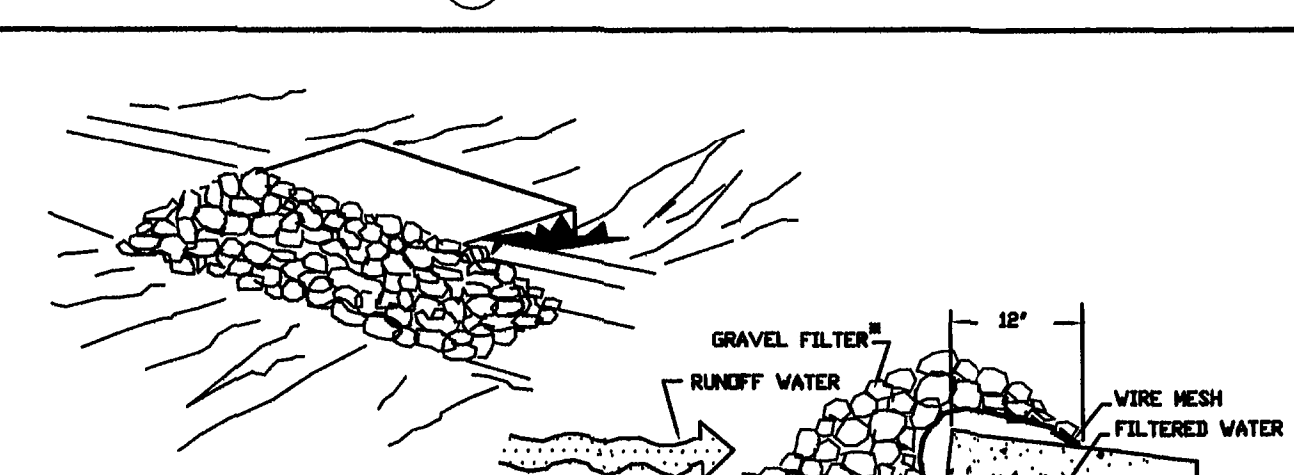
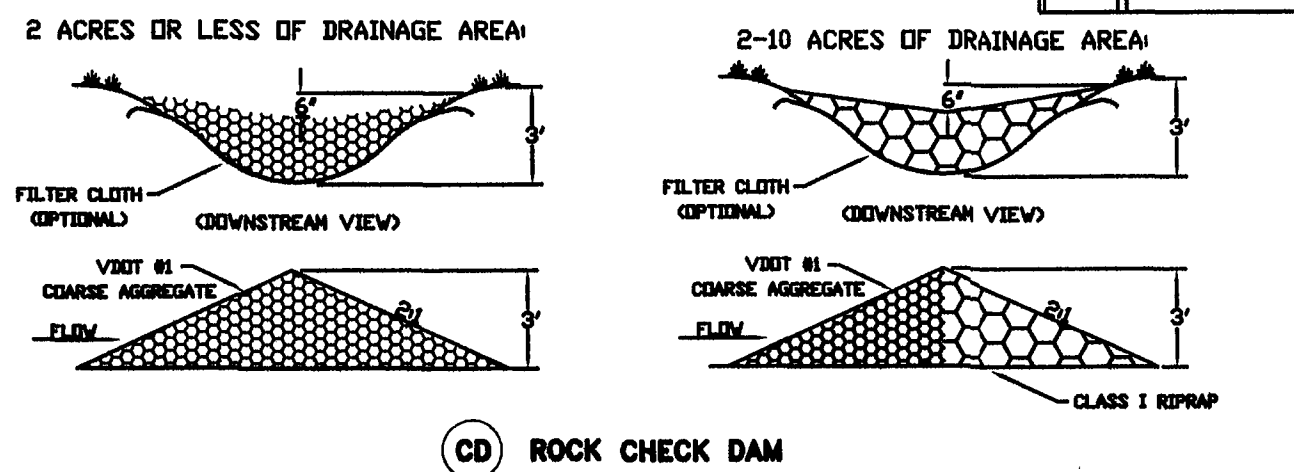
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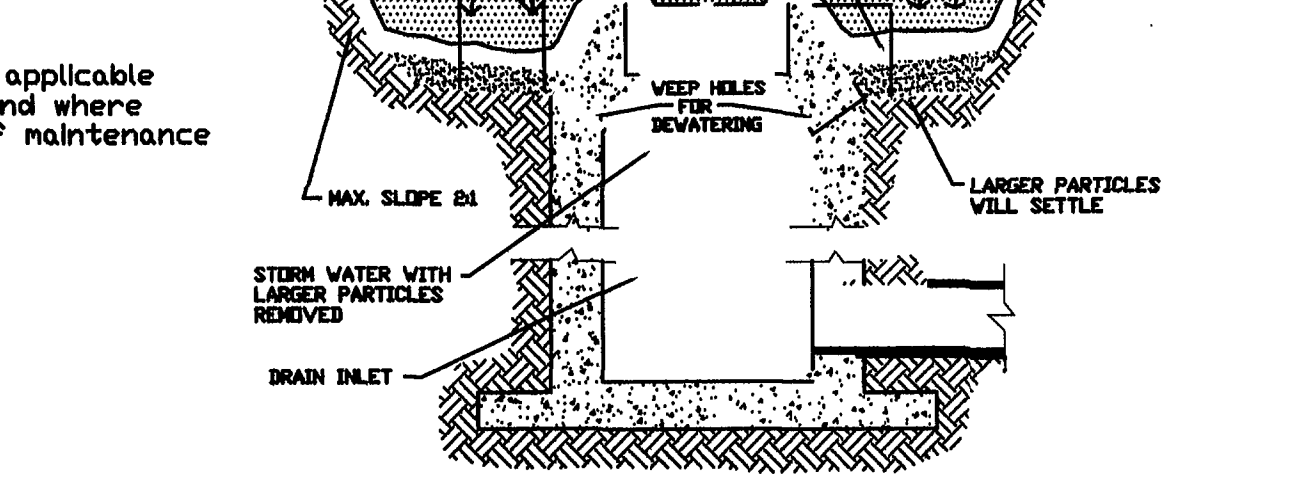
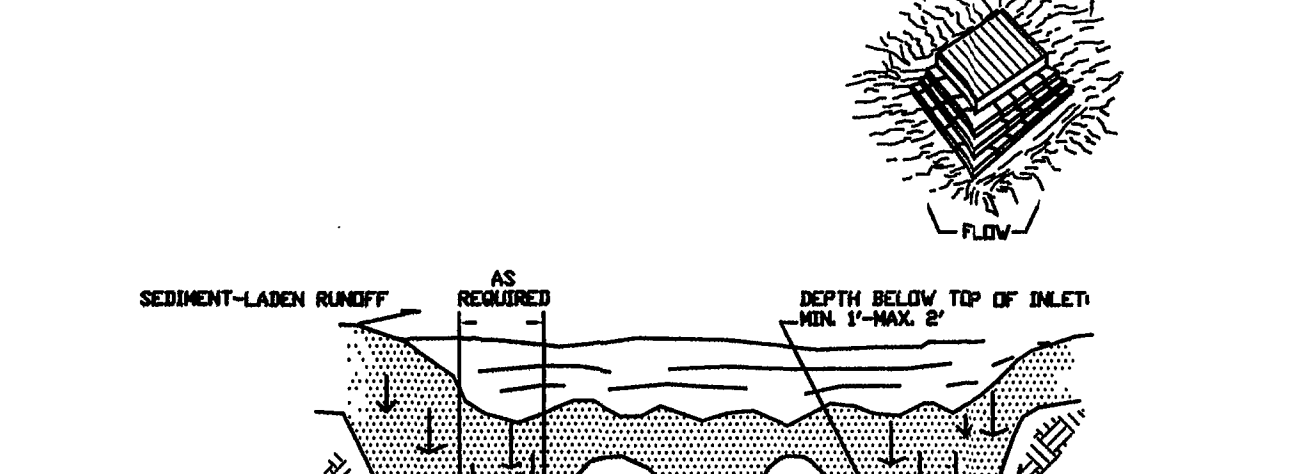
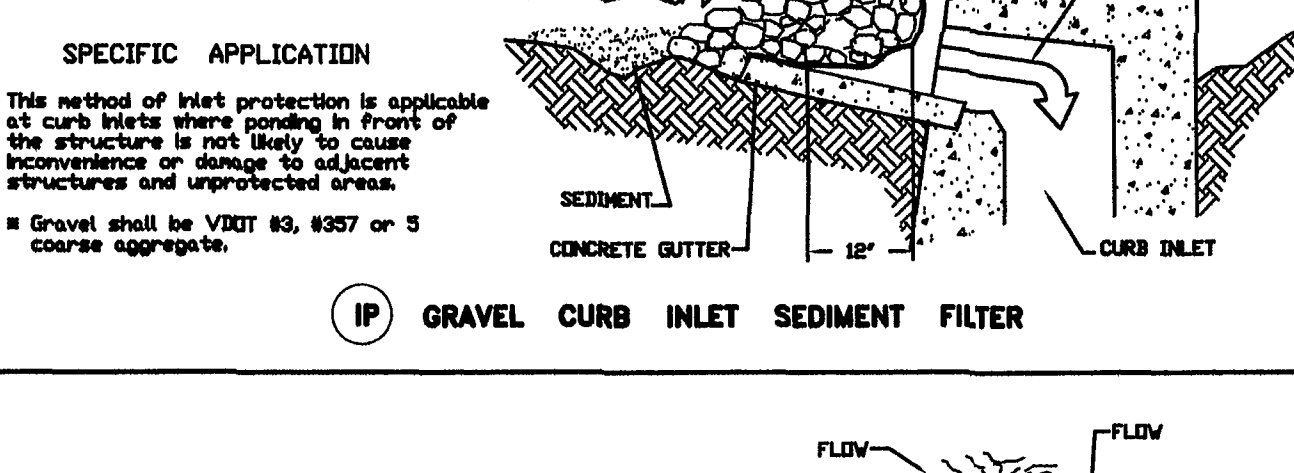
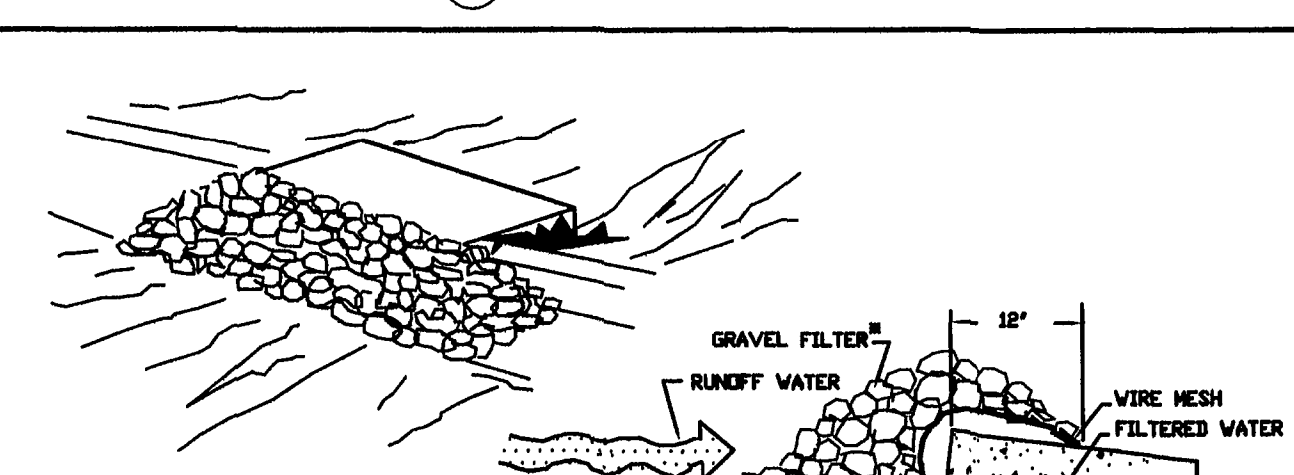
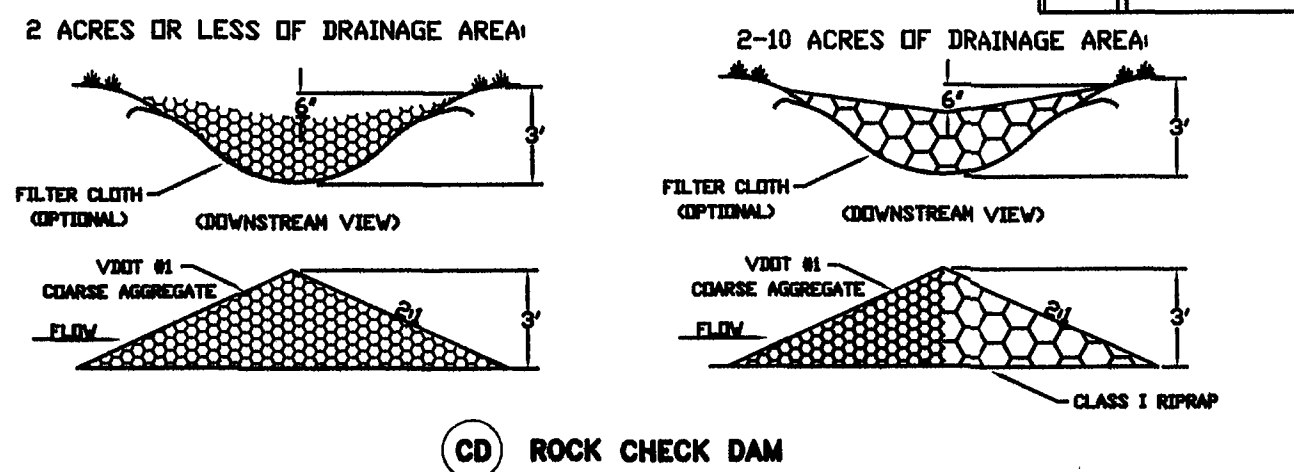
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