

DESIGN CRITERIA

1. Related Sections: See related Division 33 Design Criteria and Division 22 Design Criteria for piping inside the building.
2. Guide specification includes both pre-cast and cast-in-place structures. The preferred option (which is typically available) is pre-cast structures, because they tend to be easier to construct and less costly. In the case where pre-cast structures are not available, the contractor has the option to install cast-in-place structures.
3. Piping materials include reinforced concrete pipe (RCP), PVC, SDR 26, HDPE, and ductile iron pipe (DIP). The contract documents should clearly identify which material to use for each individual pipe. If possible, RCP or PVC pipe should be used when allowed on local standards for storm sewer construction. Ductile iron pipe should only be used when cover over pipe is less than 2' from finished grade to top of pipe, assuming that agencies having jurisdiction will allow pipe to be installed with only this amount of cover. Also use ductile iron when required by local agencies having jurisdiction to address sewer and water main separation requirements. Delete any specifications that do not apply.
4. If local agencies having jurisdiction have standard drawings for the construction of storm drainage related items, include them in the Contract Documents. Confirm that no conflicts exist between local standard drawings and Project Specifications.
5. The stormwater system should consider the design guidance provided in "Technical Guidance for Implementing Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act" (EISA 2007). It is now a requirement that all federal projects be designed to meet the requirements of EISA 2007 Section 438.
6. Design criteria for design of stormwater management and storm drainage systems shall follow local or Installation criteria whenever possible. In the absence of local criteria, the following design guidelines should be followed:

Design Storm:	10-year event (piped flow) 100-year event (overland flow)
Initial Time of Concentration:	15 minutes
Flow Velocity (piped) :	2 fps min/10 fps max.

END OF SECTION