

Western Michigan University – Campus Facility Development

Design Guidelines for Facilities Construction:

DESIGN GUIDELINE DG31-1 Storm Water Management

Western Michigan University Post-Construction Storm Water Control Policy

Western Michigan University in its endeavor to meet our storm water discharge commitments has developed this Post-Construction Storm Water Control Policy for new and redevelopment projects on University property.

The Design Guideline will be utilized on all new projects from this date forward by the University and its contracted Professionals.

original signed by Lowell Rinker

9-25-08

Mr. Lowell Rinker
Vice President Business and Finance
Western Michigan University

Effective Date

PART 1 – GENERAL GUIDELINES

The following guidelines have been established by Western Michigan University with the intent to meet best management practices for storm water management.

These guidelines are applicable to all projects on University property, including new and existing buildings, roads, sidewalks, and landscaping, that disturb one acre or more, including projects less than one acre that are part of a larger common plan of development that encompasses one acre or more or where significant runoff is expected. Any changes to the existing storm water runoff or the storm sewer system must be accomplished within the following guidelines and approved by the Office of Campus Facility Development.

Professional Service Contractors engaged in projects for the University shall follow, specify and include the requirements and practices identified in this Guideline in accordance with their Professional Services Agreement with the University.

PART 2 – DESIGN

The University will enforce the following design guidelines. Professional Service Contractor's shall include in their designs and specifications the following:

1. No new outfalls or discharges to the Arcadia Creek will be installed.
2. Existing outfall(s) and discharges will be maintained as necessary to operate at their existing capacities.
3. New project sites will be designed to attain a "0%" volume discharge increase or impact on the existing storm water drainage system.
4. At minimum, effluent limits and monitoring shall meet the State of Michigan "minimum treatment volume standard" and "channel protection criteria" as defined in The University's Storm Water Discharge Permit.

5. Designs shall utilize retainage and detainage systems to minimize the impact of the existing storm water system. Designs shall include maintainable sediment control.
6. All addition(s) & renovation(s) on campus shall require the use of computer modeling to determine and evaluate the design flow conditions of storm water systems and track changes to existing storm water system(s) downstream. Copies of these files are to be submitted to WMU Campus Facilities Department. These calculations shall include detention area sizing.
7. All additions & renovations project(s) on campus are required to provide electronic detailed site grading plans and specifications identifying: on-site drainage patterns, on site detention areas, storm drainage structure(s), pipe(s) with size and material selection, invert elevation(s), and geometric location(s) to WMU Campus Facilities Department.
8. Testing shall be specified and performed on all new project storm/sanitary drain systems to insure no cross connects are installed in the systems.
9. Streets and parking areas shall utilize runoff areas as much as can be accommodated to encourage infiltration.

PART 3 – CONTRACTOR REQUIREMENTS

Construction documents shall include the following:

1. Contractors are responsible to obtain all necessary erosion permits.
2. Best practices shall be required of the contractor for dust control, and runoff during construction.
3. Coal tar emulsions to seal asphalt surfaces are not allowed.
4. Wastewater generated from cutting, grinding, drilling, or hydro-demolition of concrete without authorization under an NPDES wastewater discharge permit is not permitted.

PART 4 – TESTING AND DOCUMENTATION

Specifications shall require the following at the completion of the construction of the plumbing, storm drains, storm and sanitary systems.

1. Ensure by testing, the separation of the storm and sanitary systems.
2. Test reports documenting what was done, how it was done, the date it was accomplished, and the results. These reports shall be submitted to the University's Campus Facility Development office.

PART 5 – OPERATION AND MAINTENANCE

Routine maintenance shall be provided, and maintenance schedules developed and implemented that are adequate to maintain pollution removal effectiveness at design performance and to ensure that the controls are maintained in a condition to reduce to the maximum extent practicable, the contribution of pollutants to the surface waters of the State.

END OF GUIDELINE