

CC PLAN REQUIREMENTS FOR STORM SEWER

DESIGN INFORMATION

For design criteria, please follow the Storm Water Drainage Manual and erosion and sedimentation control specifications which can be viewed at the following:

http://utilities.columbus.gov/DOSD/PDFs/FULL%20SWDM_MARCH_06.pdf

<http://utilities.columbus.gov/DOSD/PDFs/erosion%20manual.pdf>

GENERAL PLAN REQUIREMENTS

Stormwater BMP and outfall form (This information shall be forwarded by OSS to Jeff Cox, DOSD, 1250 Fairwood Avenue)

PREPARATION:

All plans submitted for approval shall be prepared, signed and sealed by a Professional Engineer who is licensed in the State of Ohio.

PLAN SIZE/TYPE:

All plans shall be submitted on standard 22" high x 34" wide. Mylar submittal shall be high quality 4 mil thickness mylar.

MASTER DRAINAGE PLAN:

Project Title

North arrow and scale (north is to left or top of the page)

Project boundaries

Existing and proposed topography at two-foot contour intervals

Pre-development and post-development sub-basins

Location and capacity of the immediate downstream receiving waterway or drainage system

Pre-development and post-development major routing flow paths

Soil type by sub-basin

Tier I and Tier II streams and Stream Corridor Protection Zones

Proposed stormwater facilities

Existing field tile locations

Lines designating the phases of multiphase development projects

Lot lines, streets, right-of-ways, setbacks, and easements

Flood Hazard limits and classifications

Regulated wetlands

All outfalls identified with major outfalls clearly labeled

CALCULATIONS:

Stream Corridor Protection Zone and Floodplain Compensation

Stream Corridor Protection Zone (SCPZ) sizing calculations

Floodplain fill volume calculations

Compensatory floodplain fill volume calculations

Impervious Area

Storm sewers

Pipe sizing calculations

Hydraulic grade line check calculations

Pavement spread calculations

Inlet spacing/capacity calculations

Spread and depth calculations

Inlet tributary area map(s)

Culverts

Hydrologic calculations

Hydraulic calculations/overtopping analysis

Tributary area map

Constructed Open Watercourses

Ditch sizing calculations

Tributary area map

HEC-2 analysis, if required

Flood routing

Hydrologic and hydraulic calculations

Detention

Pre-development flow calculations

Post-development flow calculations

Critical Storm determination calculations

Stage-discharge curve

Stage-storage curve

Routing calculations

Storage Volume Table (shown on plans)

Stormwater Quality Best Management Practices (BMP's)

Water quality volume (WQv) calculations

Drawdown calculations

Required areas for media filters (Group 2)

Design and design flow rate for swale and filters strips (Group 3)

BMP Maintenance plan

Commercial Activity Areas

Location shown and area clearly delineated

Standard Industrial Classification (SIC) identified

Materials handling areas clearly delineated

High-risk and low-risk pollutant source identified

On-site storm and sanitary sewer systems including discharges and outfalls shown

If applicable, oil/water separator, spill containment (110% of volume stored) and treatment systems shown

Area covered from rainfall with cover or roof of required dimensions

Area graded to minimize runoff

Appropriate methods for material disposal shown including sanitary sewer or other

TITLE SHEET:

Correct project title

Location map

Bench marks

Estimated quantities

Standard drawings

General notes

Signature block

PLAN VIEW:

North Arrow orientation

Proper structure numbering

Scale

Reference point

Property information

Stream identification

100 year flood plain limits (if different from SCPZ limits)
SCPZ limits

Floodplain fill and compensatory volume location and limits

Stormwater facilities size, types, and location

Water quality BMPs

Detention facilities (include maximum ponding limits)

Storm sewers

Open channels

Flood routing

Culverts

Proposed and existing easements

Agricultural field tiles

Existing and proposed utilities

Proper structure and pipe annotation

Stormwater Pollution Prevention Plan (SWP3)

PROFILE VIEW:

Scale

Stationing

Utility, street, driveway, and stream crossings

Proper structure and pipe annotation

Granular backfill and encasement limits

Proper ground surface line types

DETAILS AND CROSS SECTIONS:

Open channel and flood routing swale cross-sections

Culvert profiles

Elevation information

Flow and velocity data

Stormwater BMP details

Plan view

Elevation view

Volume and drawdown data

Planting list

Detention Ponds

Cross section(s)

Elevation information

Forebay details

Outlet structure details

MAINTENANCE OF TRAFFIC (MOT) PLAN:

All work in the R/W requires a detailed MOT plan. The plan will be determined by the type of work performed and must be specific to that work. A detailed MOT plan may consist of drum and cone locations and spacing (see OMUTCD part 6 figure 6F-4), use of temporary pavement, use of temporary markings, detour routes, detour and work zone warning signage (OMUTCD table 6C-1), flashing arrow panels, barricades, street closures, pedestrian detours and sidewalk barricades with signage, proper taper rates in accordance with OMUTCD part 6 Table 6C-2, flagging set-ups when used, covering of existing signs and signal heads, temporary vehicle detection, and signal timing changes. All items shall be clearly labeled, stationed (or distances shown from the nearest intersection). Special attention must be given to provide the safest and least inconvenient plan for motorists, pedestrians and bicycles alike.

TEMPORARY AND PERMANENT TRAFFIC CONTROL NOTES (Date 1-20-2005):

Temporary and permanent traffic control notes shall be inserted with ALL plans dealing with work in the R/W. These notes shall be modified to coincide with the scope of work being performed with the R/W along with the maintenance of traffic plan. The notes related to the MOT, specific for the project, should be included as part of the GENERAL NOTES for the plan.

INTERSECTIONS (UNSIGNALIZED):

ITEMS SHOWN ON PLANS:

All existing/proposed traffic control items shall be shown within the project limit and 200 feet beyond the project limits having each intersection shown in full when work is performed within the R/W. Items to include are pavement markings, lane widths (dimensioned), all driveways and curb cuts, signage, street names, R/W lines, sidewalks, ADA ramps, crosswalks, utility poles/manholes, street lighting, hydrants and valves.

INTERSECTIONS (SIGNALIZED):

MOT NOTES:

Any work to be performed within 400 feet of a signalized intersection shall have "Maintenance of Traffic Notes (Signalized)" included with the temporary and permanent traffic control notes. These notes shall be modified to coincide with the work performed with the area of the signalized intersection