

# CC PLAN REQUIREMENTS FOR SANITARY SEWER

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## DESIGN INFORMATION

- Sanitary sewers shall be extended at a minimum depth of 10' throughout the entire tributary area. This requirement applies to all types all types of development, with or without a basement.
- Sanitary sewer shall be extended through the development site to surrounding properties to accommodate any upstream tributary area.
- The Sanitary Sewer Design Manual is available at the following link:  
<https://www.columbus.gov/files/sharedassets/city/v/1/utilities/documents/sewer-publications/sanitarydesignmanual.pdf>

## GENERAL PLAN REQUIREMENTS

- 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.

## TITLE SHEET

### LOCATION MAP:

The map shall show the relative location of the project including major streets and corporation limits; no scale is required.

### INDEX/TRIBUTARY AREA MAP:

The entire tributary area, including offsite areas, shall be clearly delineated with distinct line type. The map shall show sewer alignment and numbered structures and existing sewers with applicable plan numbers. The map shall include, but not be limited to following corporation limits, floodplain, benchmarks, reference points, ownership information. The map scale shall be 1"=200'; no break lines will be accepted.

### BENCHMARKS:

A suitable benchmark shall be provided for every 1,000 lineal feet of sewer shown on the plan, with a minimum of two. The benchmarks shall be labeled as NGVD 1929 or NAVD 1988 with the alternate datum information indicated in parenthesis. Additionally, a description of the source benchmark shall be provided.

### ESTIMATE OF QUANTITIES:

An accurate estimate of items being constructed under the sewer plan shall be included. If the project is phased, each phase shall be broken out in separate quantities and a total column shall be included.

## **STANDARD DRAWINGS:**

List all standard construction drawings applicable to the project.

## **GENERAL NOTES:**

General notes shall be included on the title sheet. If space on the title sheet is insufficient, general notes shall be continued on second sheet.

## **NOTE TO PERMIT CLERK, CONTRACTOR AND CONSTRUCTION INSPECTOR:**

If service lines are installed in conjunction with the mainline sewers this note shall be inserted on the title sheet near the title block and enclosed in a heavy lined box that is easily seen.

## **SIGNATURE BLOCK:**

Along with the necessary signature and date lines, the signature block shall contain the following note: "Signatures below signify only concurrence with the general purpose and general location of the project. All technical details remain the responsibility of the engineer preparing the plan." and Approval for sanitary sewers only

## **PROJECT TITLE:**

Plan shall be title "Sanitary sewers for <Project Name>". If applicable, the phase/section/part shall be noted in the title.

# **PLAN**

## **NORTH ARROW:**

Plan shall be oriented that the north arrow is pointed toward the top or left margin of the sheet.

## **STATIONING:**

Plans shall be submitted with continuous stationing along the centerline of the pipe from the downstream 0+00 station of the project through the longest length of sewer run. Station equations or negative stationing in the proposed sewer centerline will not be accepted.

## **MANHOLE NUMBERING:**

The manhole numbering shall conform to the station with the lowest manhole number being correlated to the lowest stationing number. The next longest continuous run of sewer shall be restarted at 0+00 station, but manhole numbers shall continue increasing chronologically. This shall apply for each subsequent run of shorter sewer length.

## **SCALE:**

Plan and profile views shall be prepared at a horizontal scale of 1"=60".

## **LINE WEIGHTS:**

Appropriate line weights are to be used for the various items shown on the plans. The proposed sewer should be the heaviest solid line type and weight used.

## **PROPERTY CROSSINGS:**

All properties, through which the sewer passes and all adjacent properties shall have indicated on the plan the property owner's name, address and parcel identification number.

## **UTILITIES:**

All existing and proposed utilities and sewer lines shall be shown on the plan and clearly identified as to type, size, location and ownership.

## **SERVICE SCHEDULE:**

Provide a service schedule including the following column headings: Manhole/Station, Wye Station, Riser Length, End of Service and Permit Number

## **STATE PLANE COORDINATES:**

Provide Ohio South Zone state plane coordinates for each proposed structure and provide blank columns for as-built coordinates. Provide derivation of coordinates. Also include a minimum of four (4) horizontal control points described as to location. Show and label the reference points on the plan view and index map.

## **BEARING AND DISTANCE:**

All sewer centerlines shall be delineated and described by bearing and distance measurements. This information can be provided in a table format.

## **EASEMENTS:**

Show easements and label as proposed or existing. For all existing sewer easements provide deed book and page number or instrument number.

## **STREET NAMES:**

Street names shall be clearly labeled and, where applicable, break lines shown.

## **PHASE LINE:**

For phased projects, the phase/part/section limits shall be clearly indicated. The phase line is for sewer phasing only, not lot phasing.

## **LOT LINES/LOT NUMBERS:**

Lot lines, lot dimensions and lot number shall be clearly indicated.

## **SETBACKS/ENCROACHMENTS:**

Setbacks and encroachments shall be clearly indicated on the plan view.

## **PROFILE**

### **SCALE:**

Horizontal scale shall be 1"=60'. Vertical scale for all sewer profiles shall be 1"=10'.

### **STATIONING AND CUT INFORMATION:**

Sewer centerline station, surface elevation above centerline of sewer, invert elevation

and required cut information shall be provided at the beginning and end of all provides and all 100' station intervals. Station equations or negative station on the plan will not be accepted.

## **UTILITY AND OTHER CROSSINGS:**

All utility crossings, whether existing or proposed, shall be shown as accurately as possible on the sewer profile and identified as to their type and size. Watercourse features and street crossing shall also be identified in the profile.

## **STRUCTURES:**

All structures shall be labeled as to type, centerline station location, invert, and top of casting elevations. Existing structures shall be drawing using dashed lines and proposed structures shall be drawn using solid lines.

## **BACKFILL, BACKING, I/I AND ENCASEMENT:**

Specify type of backfill and the limits of the backfill. Concrete backing, concrete encasement, and I/I reference details, when specified, shall also be shown in the profile with the limits delineated. Concrete encasement of flexible pipe shall be provided from manhole to manhole.

## **GROUND SURFACES:**

Existing and proposed ground surfaces shall be shown and clearly marked, using a dashed and solid line weight respectively.

## **PROFILE INFORMATION:**

For each run of pipe, the pipe size, length and slope (%) shall be indicated.

## **PHASE LINE:**

For phased projects, the phase/part/section limits shall be shown above each profile section.

## **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:**

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