

# Stormwater Asbuilt GIS Data Requirements



## 1.0 General

- 1.1. *Files must be saved and submitted on a CD-ROM in a jewel case without using file compression. Files may also be submitted via flash (“thumb”) drive.*
- 1.2. *The CD label shall include the following:*
  - 1.2.1. Engineering Company Name with prepared by statement
  - 1.2.2. Project Name
  - 1.2.3. Date that data is burnt onto CD
  - 1.2.4. Designate CD as As-Built, Construction Plan or Other
- 1.3. *Files must be submitted in DWG format. Other acceptable formats include ESRI Shapefile or ESRI File Geodatabase*
- 1.4. *GIS data must comply with directions provided in Excel data template. Directions can be found on the ‘directions’ tab.*
- 1.5. *Each file should be for one section of development. Multiple sections will not be accepted in one file and care must be taken to clearly mark existing infrastructure facilities.*
- 1.6. *If multiple sections of a project are being submitted, files shall be placed in separate directories on the CD.*
- 1.7. *File names should make sense to a viewer who may not be familiar with the consulting firms naming conventions and be indicative of the contents of the file.*
- 1.8. *All pertinent drawing elements will reside in the primary drawing file. There shall be no cells, nodes, blocks, or reference files (x-refs) attached to the drawing.*
- 1.9. *Separate layers for structures, pipes, annotation etc. with a logical description for each layer.*
- 1.10. *Projection shall be referenced to NAD83, Indiana State Plane Coordinate System, East Zone, using U.S. Survey Feet and per the Hamilton County datum. Elevations shall be*

*in the NAVD 88 vertical datum. The coordinate location of the items listed below shall be obtained by a field survey and with vertical data that meets survey grade accuracy.*

- 1.11.** *Tie into section corners in the Indiana State Plane Coordinate System to insure proper orientation. Section corner tie sheets can be obtained from the Hamilton County Surveyor's web page.*
- 1.12.** *All easements shall be represented and drawn as closed polylines representing aggregate areas.*
- 1.13.** *Must have graphical representation of all off-site platted easements, right-of-ways, lot lines, etc. encompassing infrastructure improvements.*

## **2.0 As-Built - Infrastructure**

- 2.1.** *An Excel spreadsheet populated with As-Built data following the layout standard provided.*
- 2.2.** *If possible, an Object Data Table template can be used and will be populated with As-Built data.*
- 2.3.** *All Storm water Structure BMP's (water quality units, etc.) must be listed in the object data table or Excel template with their corresponding Structures. Non-Structural BMP's (Ponds, etc.) must be listed on the data table as well with their associated location.*
- 2.4.** *The digital construction file must be revised to show the exact As-Built location of the following items:*
  - 2.4.1.** *Point features of all storm water structures (inlets, manholes, etc.)*
  - 2.4.2.** *Detention Ponds with Normal Pool Elevation & Top of Bank drawn as a closed polylines. If Pond functions as BMP, indicate type of BMP in options provided on submittal spreadsheet.*
  - 2.4.3.** *Sub-Surface Drains located on streets, laterals, in swales, dry detention ponds, in non-structural BMPs.*

- 2.4.4. Flow line of open conveyances.
  - 2.4.5. Point features of BMP Structures
  - 2.4.6. Underground Detention Facilities
  - 2.4.7. Polygon feature of impervious surface area.
  - 2.4.8. Point features of all protection signage associated with BMPs
- 2.5.** *All storm water structures will have top of castings and invert elevations. Values for all infrastructure shall be the As-Built values and any design values will be crossed out with the design data still legible. (Unless values remain the same)*
- 2.6.** *Structures will be cells or blocks and have an appropriate Structure ID using the same attribute field name. i.e. STR\_NU*
- 2.7.** *All Infrastructure pipes will have a length, pipe size (in inches) and material listed.*
- 2.8.** *Infrastructure line work must be continuous polylines with a beginning and ending at a structure insertion point, connecting only two structures per line. Lines must be drawn with the direction of flow.*
- 2.9.** *Additionally, a digital copy of the record drawings (“as-built” plans) as well as finalized digital versions of all analyses, models, manuals, and reports that are consistent with the “as-built” conditions shall be submitted in accordance with section 103.01 of City of Carmel Stormwater Technical Standards Manual. It must be legible, contain all As-Built data including the profile sheets, and be reproducible to scale. The files must be a minimum of 300 dpi, rotated properly, and be stored in a separate folder on the CD.*