



# TOWN OF BLUFFTON WATERSHED MANAGEMENT DRAINAGE AS-BUILT CHECKLIST

DEVELOPMENT NAME & PHASE: \_\_\_\_\_  
ADDRESS & TMS: \_\_\_\_\_  
DEVELOPER/EMAIL/PHONE: \_\_\_\_\_  
ENGINEER/EMAIL/PHONE: \_\_\_\_\_  
CONTRACTOR/EMAIL/PHONE: \_\_\_\_\_  
TOWN FILE #: \_\_\_\_\_

- Appointment:** An appointment may be scheduled with a plan reviewer after the plans have been revised in address any/all outstanding comments. Please call 843.705-7805 to schedule an appointment.
- Submit electronically, include a copy of this completed checklist and as-built plans in pdf format, and georeferenced as-built plans in TIFF format to: [wbaugher@townofbluffton.com](mailto:wbaugher@townofbluffton.com).

## **MATERIAL CHECKLIST:**

- Date of survey with professional surveyor's seal, accuracy statement of  $\pm$  six-inch tolerance for horizontal dimensions and  $\pm$  one hundredth of a foot for vertical dimensions.
- Engineer of Record As-Built Certification.
- Location Map with north arrow. Reference nearest road intersection and storm water permit (if applicable) on as-built drawing.
- Scaled Drawing of the drainage facility including: Pipe Material, Diameter, Length, Slope and invert elevations. Include same information for the first leg of existing downstream drainage pipe if connecting into an existing system.
- Locate roof, gutter and/or yard drains that tie-into storm drainage boxes (if applicable).
- Specify Structures (i.e. Curb Inlet, Catch Basin, Junction Box, etc.) include top elev's and pertinent throat elevations.
- Datum used for as-built drawing.
- Finished floor elevation for all major buildings for commercial areas and pad elevation for residential (if applicable).
- Limits of underground detention features and/or engineered water quality treatment devices (if applicable).
- Locate drainage conveyance channels (i.e. - swales/ditching) with spot elevations to demonstrate proper grading to convey runoff to appropriate catch basins/yard inlets at a frequency of no less than every 50' for swales less than 18" deep and at a frequency of no less than every 100' for ditches/swales more than 18" deep. Provided contours are desired.
- Location and attribute data for all storm water infrastructure, green infrastructure, and easements in GIS format. See Schema for details on format.



**TOWN OF BLUFFTON WATERSHED MANAGEMENT  
DRAINAGE AS-BUILT CHECKLIST**

**POND CHECKLIST:**

- Provide location of pond, property lines, road R/Ws, and other easements. Include pond access easement if applicable
- Top of wall or dike elevation.  Width of dike at top of dike.
- Emergency spillway invert elevation. Show a min. of 4 elevs.  Width of emergency spillway.
- Provide schematic of pond section showing top/bottom elevations, normal WSE, side slopes (and littoral shelf if applicable).

**Pond Table:**

Pond Identifier	Top of Pond Bank Elev. (Design/Actual)	Bottom of Pond Elev. (Design/Actual)	WSE (Design/Actual)	Orifice IE (Design/Actual)
A				
B				
C				

- Provide detail of outfall structure showing actual as-built elevations and dimensions to nearest hundredth of a foot.
- Provide schematic detail of any other BMPs/LID products (i.e. – pervious pvtm/pavers, bio-swales, underground detention, etc., with brief maintenance schedule of each on the as-built drawing.
- Show constructed pond contours at 1-foot elevations (to include pond bottom) and pertinent spot elevations. Provide area (SF) of each pond contour. Enter ‘as-built’ values beside ‘designed’ values. Example: Actual Value. Or provide table for each pond depicting the same.
- Required Water Quality Volume. (Choose one of the three options below)
  - 1.)  WQV provided meets or exceeds WQV required.
  - 2.)  WQV provided has deviated more than 5% below the design parameters. Engineer will reroute all storms to confirm adequacy. Engineer shall utilize ‘Flow Rate Table’ below to organize data for this option OR if there are any inconsistencies with the outfall structure and the approved plans. Provide stage/storage output file and input parameters. **Note that this information will be submitted separately from the as-built document.**
  - 3.)  WQV provided has deviated more than 10% below design parameters. Owner will make field adjustments.

**Flow Rate Table: (Submitted separately from as-built document if option #2 is chosen above)**

Pond Identifier	Storm Frequency	Pre-developed release rates as indicated in original design (cfs)	Post-developed release rates as indicated in original design (cfs)	Actual release rates based on as-built survey of detention pond (cfs)	Post-developed pond staging as indicated in original design (ft)	Actual pond staging based on as-built survey of detention pond (ft) (Top of Dam = ____')
A	2					
	5					
	10 *					
	25					
	50					
	100					

(\*Note: include time series output if this project requires a drawdown time requirement.)

- Locate Forebay(s), Isolation Dam(s) or Isolation Box(s) recognizing appropriate features.
- Locate outlet erosion protection. Specify dimensions: width and length in feet.



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### OTHER COMMENTS:

- Provide executed Maintenance Agreement.
- Include redlined mark-up if this is an as-built re-submittal.
- Include notes or comments from BMP field inspection or LID test performed.

### AS-BUILT SUMMARY: (To be completed by Town Reviewer)

- Passed  Town reviewer to notify engineer to forward electronic file (GIS files with attributed data and georeferenced TIFF/PDF file) to the Town of Bluffton IT Department.
- Failed  Owner's engineer will re-calculate/certify/resubmit.
- Failed  Owner will make field adjustments as necessary.

### FAQ:

Exporting Shapefiles with attribute data from Civil3D:

<https://knowledge.autodesk.com/support/autocad-map-3d/learn-explore/caas/CloudHelp/cloudhelp/2019/ENU/MAP3D-Use/files/GUID-55FE7920-51ED-42AB-B52C-0AC25C198E46-htm.html>

Steps on georeferencing a PDF/Image in AutoCAD:

<https://knowledge.autodesk.com/support/autocad/troubleshooting/caas/sfdarticles/sfdarticles/How-to-properly-scale-an-image-after-inserting-into-AutoCAD.html>

See the following document for GIS Data Schema guidelines:

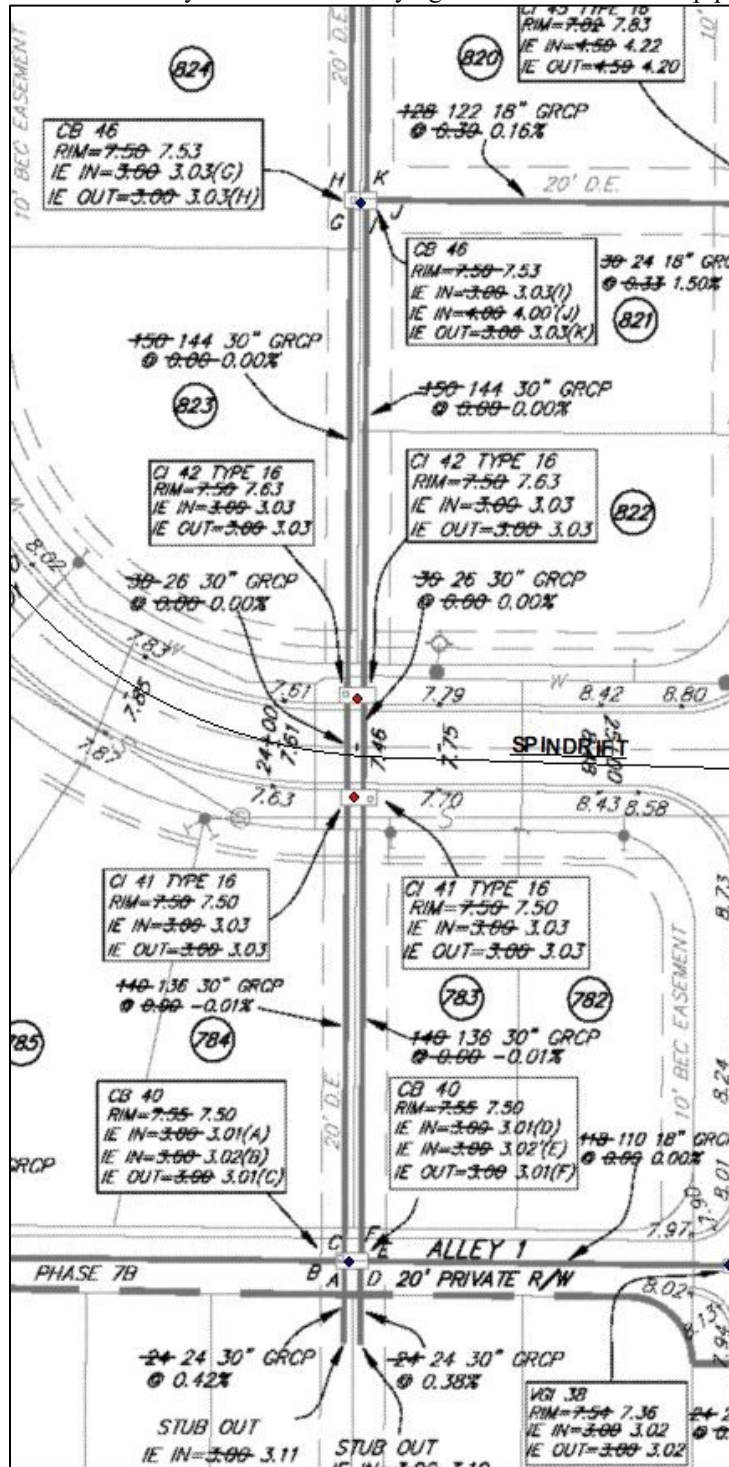
*Link to data schema excel sheet.*



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## Example Scenarios:

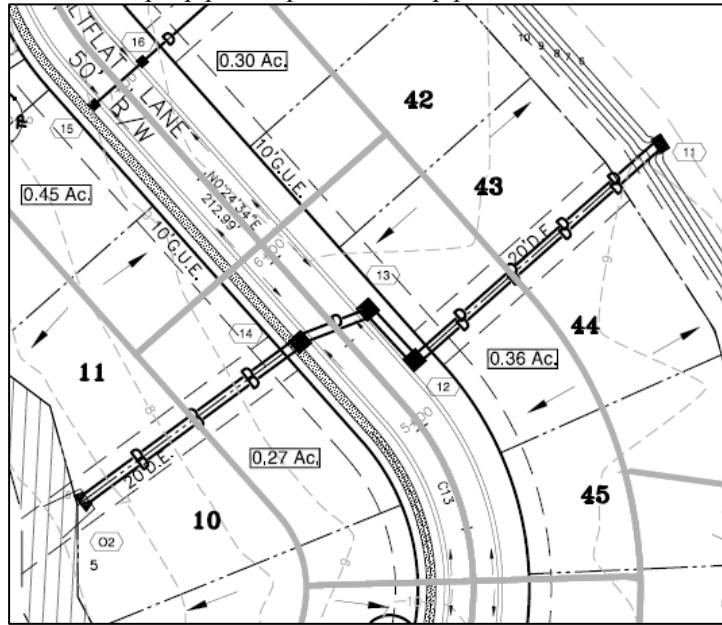
Ideally, we want to be able to identify data for every pipe (single and multiple runs) and all invert elevations at structures. This image is labeled in a way that makes identifying data for structures and pipes efficient.





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When multiple pipes are present, each pipe needs to be identified.



Junction Box 4 is missing an invert elevation value.

