



# KNOX COUNTY, TENNESSEE DEVELOPMENT CERTIFICATION CHECKLIST

Date: \_\_\_\_\_ Property owner: \_\_\_\_\_

Certifying engineer: \_\_\_\_\_ Certifying surveyor (as-built): \_\_\_\_\_

Project Name: \_\_\_\_\_

Address: \_\_\_\_\_

Proposed use of this property: \_\_\_\_\_

**The Development Certification process is necessary in order for a construction bond or performance bond to be released, as described in the Knox County Stormwater Management Manual.**

### CERTIFICATION REQUIREMENTS:

- | <input checked="" type="checkbox"/><br>Date |  |
|---|--|
| <input type="checkbox"/> _____              | <b>A. Submit as-built drawings which meet the minimum requirements of this checklist.</b>  |
| <input type="checkbox"/> _____              | <b>B. Submit complete stormwater design calculations (signed &amp; stamped by a professional engineer) showing that the as-built conditions meet the minimum design criteria in the Knox County Stormwater Management Ordinance. Include all inputs and methods.</b>           |
| <input type="checkbox"/> _____              | <b>C. Submit roadway material inspection reports by a qualified geotechnical firm (if not inspected directly by Knox County Engineering).</b>  |
| <input type="checkbox"/> _____              | <b>D. Conduct the final site inspection using the Site Inspection Checklist in Appendix E.</b>   |
| <input type="checkbox"/> _____              | <b>E. Ensure that all roadway, drainage, stormwater BMPs, and water quality structure easements are properly delineated on a recorded plat.</b>  |
| <input type="checkbox"/> _____              | <b>F. Ensure that the Operations and Maintenance Plan is recorded at the Knox County Register of Deeds and also denoted on the recorded plat.</b>  |
| <input type="checkbox"/> _____              | <b>G. Submit a statement from a registered geotechnical engineer certifying that any retaining walls 4 feet or taller, that may potentially affect public right-of-way or safety of the general public, have been constructed in accordance with the approved design plan.</b> |

### AS-BUILT DRAWINGS - GENERAL INFORMATION:

- |                              |                             |                              |  |
|------------------------------|-----------------------------|------------------------------|--|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>1. Does the title block have same project name, address, and contact persons as original plans?</b>   |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>2. Are seal and signature for the certifying Engineer &amp; Surveyor shown on the as-built drawings?</b>  |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>3. Does each as-built drawing contain survey benchmarks or other reference point?</b>   |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>4. Does each as-built drawing contain a north arrow, bar scale, and coordinates?</b>  |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>5. Is construction complete and have disturbed areas been adequately stabilized to prevent soil erosion?</b>  |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>6. Are the footprints for all impervious surfaces constructed as part of the approved Stormwater Management Plan?</b>   |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>7. Does each as-built drawing contain the following statement along with the Registered Land Surveyors' stamp, signature, and license number:</b><br><i>I hereby certify that I have surveyed the land boundaries and easements shown hereon in accordance with accuracy requirements for a Category I survey and that the ratio for precision of the unadjusted survey is not less than 1:10,000. I further certify that I have located all natural and manmade features shown hereon in accordance with the current Standards of Practice as adopted by the Tennessee State Board of Examiners for Land Surveyors. I certify the location, elevation and description of these features.</i> |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>8. Does each as-built drawing contain the following statement along with the registered Engineer's stamp, signature, and license number:</b><br><i>Based on site observations and/or information provided by a registered Land Surveyor, I hereby certify that all grading, drainage, structures, and/or systems, erosion and sediment control practices including facilities, and vegetative measures have been completed in substantial conformance with the approved plans and specifications.</i>   |

### AS-BUILT DRAWINGS - STORM DRAINAGE STRUCTURES (Pipes, Culverts, Bridges, Inlets, Endwalls, Junction Boxes, Catch Basins, etc.):

- |                              |                             |                              |  |
|------------------------------|-----------------------------|------------------------------|--|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>1. Are all drainage pipes and structures located correctly on the drawings?</b>   |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>2. Is each drainage pipe labeled with slope, length, size or diameter, material, and inverts?</b>   |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>3. Is each drainage structure labeled with top and invert elevations, size, material, and detail #?</b>   |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>4. Is pump system data included (location, pump make and model, capacity, switch design, inlet and discharge sizes, maximum and minimum water surface, and head-flow curves)?</b> |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <b>5. Are all drainage structures located in the drainage easement?</b>  |



**AS-BUILT DRAWINGS - STORMWATER BMPs**

- Yes  No  N/A 1. Do all plan views correctly show stormwater BMPs at a readable scale, with 1-foot contours where 2-foot contours do not show sufficient detail?
- Yes  No  N/A 2. Are locations and invert elevations for all pipe/ditch outfalls into stormwater BMPs shown?
- Yes  No  N/A 3. Are BMP and access easements shown and labeled? Are all conflicts avoided?
- Yes  No  N/A 4. Does the plan include accurate details of outlet structures, including all orifices and weirs, such as size, diameter, invert elevation, means of anchoring, underdrain systems, etc?
- Yes  No  N/A 5. Do stormwater BMPs provide for the treatment of the water quality volume to a minimum standard of 80% TSS removal, in accordance with the Knox County Stormwater Manual? Are computations provided that are adequate to support 80% TSS removal?
- Yes  No  N/A 6. Do stormwater BMPs provide for the capture and discharge of the channel protection volume over no less than a 24-hour period? Are computations provided that are adequate to support the channel protection standard?
- Yes  No  N/A 7. Do stormwater BMPs provide for the attenuation of the peak discharges for the 2-, 10-, 25- and 100-year storm events in accordance with the Knox County Stormwater Management Ordinance? Are computations provided adequate to prove attenuation?
- Yes  No  N/A 8. Has minimum freeboard of 1 foot been provided between 100-year storm and top of berm?
- Yes  No  N/A 9. Are manufacturer's identification number, make, model, and size for all proprietary BMPs shown on the plans?
- Yes  No  N/A 10. Does the property's Operation and Maintenance Manual include and address each type of BMP?

**AS-BUILT DRAWINGS - PUBLIC STREETS AND JOINT PERMANENT EASEMENTS**

- Yes  No  N/A 1. Are street right-of-way, easement boundaries, and street centerlines shown and labeled?
- Yes  No  N/A 2. Are all structures within the public right-of-way or public easement shown and labeled (such as: pavement, curb, gutter, inlet, catch basin, manhole, pipe, streetlight, retaining wall, pole, sidewalk, large tree, utility structure, structural sign, or ornamental structure)?
- Yes  No  N/A 3. Is the street profile (to scale) with the as-built elevations at 50' increments, or as necessary, to ensure a smooth profile? Are street grades and K values provided?
- Yes  No  N/A 4. Is the typical street cross section shown with widths and all pavement depths?

**AS-BUILT DRAWINGS - WATER QUALITY BUFFERS**

- Yes  No  N/A 1. Are water quality buffers shown and labeled correctly on drawings (outer boundaries and zone boundaries, if applicable, should be shown)?
- Yes  No  N/A 2. Are water quality buffer areas clearly marked on the plan with the statement "Water Quality Buffer. Do Not Disturb."?
- Yes  No  N/A 3. Have permanent markers been installed correctly on the site?
- Yes  No  N/A 4. Is the type of legal instrument (covenants, deed restriction, etc.) that will be used to serve and maintain the buffer stated on the drawing?

**AS-BUILT DRAWINGS - WATER QUALITY CREDIT AREAS**

The following questions pertain to water quality credit areas only.

- Yes  No  N/A 1. Which WQv credits were received in the development of this site (check all that apply):
  - 1. Natural area preservation credit
  - 2. Managed area preservation credit
  - 3. Stream and vegetated buffers credit
  - 4. Vegetated channels credit
  - 5. Impervious area disconnection credit
  - 6. Environmentally sensitive large-lot neighborhood credit
- Yes  No  N/A 2. For credits 1, 2, 3, and 6: Does the plan clearly show the outer boundaries of all open spaces, and indicate the intended vegetation and use of space?
- Yes  No  N/A 3. For credit 2: Does the plan include a Vegetative Management Plan that indicates how the vegetation in the Managed Area will be managed in a stormwater-friendly manner?
- Yes  No  N/A 4. For credits 4 and 6: Are the location of the vegetated channels clearly indicated on the drawing and constructed in conformance with design requirements stated in the Knox County Stormwater Management Manual? Provide slope, length, size, and vegetation type (e.g., fescue grass, Bermuda grass, etc.).
- Yes  No  N/A 5. For credits 5 and 6: Are locations of disconnected downspouts clearly indicated on the drawings and labeled with the statement "This downspout shall remain disconnected from the impervious surfaces and shall forever be discharged onto pervious surfaces".

