Forsyth County Department of Engineering

110 E. Main Street, Suite 120 | Cumming, Georgia 30040 | 770-781-2165 | forsythco.com

WALL PLAN CHECKLIST

Reviewed by: _____ Reviewer Contact: _____
Project Name: _____ Project Number: _____
Submittal Number: _____ Date of Review: _____

Please address all items marked with a red "**X**" below, as well as any additional comments on this checklist or on the redlined plans. A green "✓" or "**n/a**" indicates compliance. **Please return this checklist with annotated responses.**

General Information:

_____ 1. List Planning Department requirements for wall design (UDC, overlay conditions, or other performance standards) found with the LDP files on the CSS portal. If you have any questions, contact David Jenkins, DDJenkins@forsythco.com.

_____ 2. Provide name of Developer and/or Owner with their address and telephone number.

_____ 3. Add the following notes to each plan sheet:

_____ a. "All improvements to conform with Forsyth County Construction Standards and Specifications, latest edition."

_____ b. "Notify Forsyth County Inspector 24-hours before the beginning phase of construction. (770) 781-2165."

_____ 4. Seal and signature of registered professional engineer on all plan sheets.

_____ 5. Provide an encroachment agreement for any work that will extend beyond the property line.

Plans:

_____ 6. Provide a site plan that clearly depicts the location of the wall(s) on the site and the distance to buildings.

_____ a. For MSE wall(s), depict the extent of the wall reinforcement on the site plan. Reinforcement for walls located off the public Right of Way shall not extend into the public Right of Way.

_____ b. For CIP wall(s), depict the extent of the wall footing on the site plan. The footing for walls located off the public Right of Way shall not extend into the public Right of Way.

_____ 7. Provide a drainage plan that clearly depicts locations, sizes, and inverts of pipes, headwalls, manholes, inlets, and outlet control structures.

_____ a. All RCP pipe penetrating MSE Walls shall have a GDOT standard headwall at the inlet and / or outlet end of the pipe.

_____ 8. Provide a grading plan that clearly depicts the location of the wall(s) on the site.

_____ a. Grading plan shall show existing and proposed contours at 2' intervals (MSL) on each side of the wall(s).

_____ b. Grading plan shall show top and bottom of wall elevations along the full length of the wall(s).

_____ 9. Provide wall cross sections for each wall with distance to building labeled.

_____ a. Provide conveyance swale at top of wall(s) to capture runoff from upstream drainage areas and minimize drainage over top of wall. A note to direct water from top of wall(s) is not sufficient. For swales receiving water from offsite drainage areas, the swale shall be designed for the 100-yr storm event.

_____ b. Where MSE wall(s) are adjacent to standing water, stormwater ponds or streams, provide minimum 2' deep stone from bottom of wall to 2' above the 100-year WSE.

_____ c. For MSE wall(s), provide 100' water tight zone behind wall(s).

_____ 10. Provide wall profiles for each wall and label top and bottom of wall(s) at changes in elevation or slope.

_____ a. All storm drainage adjacent to or penetrating the wall shall be designed to Forsyth County standards.

_____ b. Show proper erosion control for outlet of pipes penetrating wall(s).

_____ c. Provide 100-year WSE for wall(s) adjacent to standing water, stormwater ponds or streams.

_____ d. For MSE wall(s), provide dimension between reinforcement layers. Maximum reinforcement spacing of 24 inches.

_____ e. For MSE wall(s), label type of reinforcement and embedment depth. Provide minimum 0.70 reinforcement length / wall height ratio.

_____ f. For MSE wall(s), indicate location of concrete load transfer structure where storm drainage penetrates wall(s).

Details:

_____ 11. Provide details for minimum 42" fence or handrail with mid-rails on all walls over 30" in height. References to handrail or fence by others are not sufficient.

_____ a. Provide fence or handrail materials and dimensions of rail spacing for handrails.

_____ b. Include post size, materials, spacing, and foundation / embedment detail unless Sleeve-It will be installed.

_____ c. Wood materials are not acceptable for post, fence, or handrail.

_____ 12. Provide detail for concrete load transfer structure around storm drainage through wall(s).

_____ 13. Provide detail for splash pad or erosion control protection for pipes penetrating wall(s).

_____ **14.** Provide details for retaining wall materials including block type, size, and weight.

_____ **15.** Provide waterstop detail and indicate waterstop locations for all CIP walls adjacent to standing water.

_____ **16.** Walls must be constructed out of material with a minimum seventy-year life span.

Calculations:

_____ 17. Provide complete design calculations with seal and signature of a registered Professional Engineer.

_____ 18. For all retaining walls, design calculations shall include the following minimum Factor of Safety.

_____ a. Base Sliding FS 1.5

_____ b. Overturning FS 2.0

_____ c. Bearing Capacity FS 2.0

_____ 19. For MSE walls, design calculations shall include the following additional minimum Factor of Safety.

_____ a. Sliding along Reinforcing Layers FS 1.5

_____ b. Reinforcement Pullout FS 1.5

_____ c. Reinforcement Tensile Overstress FS 1.5

_____ d. Facing Connection Break / Pullout FS 1.5

_____ 20. For MSE walls, design calculations meeting FHWA or NCMA methodology and prepared using either version indicated or newer version of MSEW 3.0, SrWall 2.1, ReSSA 2.0, GSlope, or PCSTABLE6 shall include the following additional minimum Factor of Safety.

_____ a. Deep Seated Failure Analysis (Bishop) FS 1.3

_____ b. 2-Part Wedge Translational Failure Analysis (Spencer) FS 1.3

_____ c. 3-Part Wedge (Spencer) FS 1.3

_____ d. Rapid Drawdown (Bishiop) FS 1.1 – Provide for walls adjacent to standing water.

_____ 21. Provide design calculations for handrail or fence in accordance with 2018 IBC Section 1607.8.1, with 50 plf load, unless designed as an MSE wall and Sleeve-It will be installed. In that case, identify use of Sleeve-It on plans.

Complete Application:

A complete application will include the following:

_____ One electronic copy (PDF) of the wall plans, wall calculations, and the checklist initialed by the submitter.

All wall plans to be submitted to Wallplans@forsythco.com.

Additional Comments: