

ENGINEERS CHECKLIST FOR RETAINING WALL PERMIT
Baltimore County Department of Permits, Approvals and Inspections

Owner's engineer must sign & complete this checklist and submit appropriate calculations, drawings and responses.

Site / Development Plan

1. Justification statement is provided explaining why the walls are necessary instead of alternative grading and site layout.
2. No geogrid or tiebacks placed within any drainage & utility easements or rights-of-way **and** wall is located a distance away from any right-of-way or drainage and utility easement a distance equal to the wall height.
3. Cross sections provided through most critical wall sections showing relationships with roads, buildings and utilities (at least one cross section for each wall).
4. Location of all roads, walkways and other areas open to the public shown demonstrating that wall failure would not create hazard to the public.
5. Location of all utilities (both public and private) provided showing them to be outside of geogrid area and active earth pressure zone (according to Rankine method.) as applicable. Where utilities must cross retaining walls, suitable provisions are shown for protecting the pipelines and the walls and for future maintenance (e.g. encasement, sleeves, DIP instead of PVC Sanitary lines, wall openings around pipes, etc.).
6. No trees within the geogrid zone.
7. All buildings and structures are located so that their foundations do not depend on retaining walls for support. (Taking a 1:1 slope line from the outer edge of the base of a spread footing to the back of the retaining wall footing or geogrid-reinforced zone at its lowest grade elevation will demonstrate compliance with this requirement. Note that deep foundations (e.g. piers, underpinning) are also acceptable as long as they do not interfere with any geogrid or tiebacks.)
8. Zoning commissioner's order approving waiver of Section 32.4.414 (BCC) provided for walls located in riverine floodplain (Walls located in floodplain areas are considered "development" and are not be permitted by right.) Special engineering design for retaining walls subjected to water inundation or flooding due to any source (tidal or riverine) provided.
9. Site plan (and approved development plan if the development has one) provided.
10. Explanation provided of special conditions that require referral to DPW Bureau of Engineering & Construction for review of the wall design.

Retaining Wall Checklist (Continued)

Engineering

1. All pertinent DPW Design Manual requirements (see attached) as well as all applicable requirements of the Baltimore County Building Code have been met.
2. Design Calculations are sealed by Professional Engineer registered in the State of Maryland
3. Calculations include safety factors (overturning and sliding), design loads and slope conditions for both sides of the wall. Global Slope Stability analysis included if applicable.
4. For cut (excavated) walls near offsite property lines, lateral support of earth during construction as well as in the finished wall is provided.
5. Soil borings and geotechnical report for the wall (or explanation why this is not needed) provided.

Construction Drawings

1. Construction drawings submitted showing retaining wall profiles, elevations (existing & proposed), cross sections, material and construction method specifications and any utilities that penetrate, pass under or fall within the area influenced by the proposed wall.
2. All drainage provisions shown including aggregate or geotextile behind the wall, geogrid details and specifications as well as structural support details of any utility / storm drain pipe penetration through the wall as applicable.
3. Retaining wall design and details shown that address any ground water anticipated behind the retaining wall.

As-built Certifications

1. Field investigation report and wall certification as required by the DPW Design Manual sealed by a Professional Engineer registered in the State of Maryland received.
2. Note exists on plan that as a condition of the wall permit, as-built PE certification is required again if the wall is deconstructed and rebuilt in the future for maintenance purposes.

Engineer's signature: _____ Lic. No.: _____