DPS | Montgomery County
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Submittal Requirements for Commercial Retaining Walls

Permits

A permit is required to install a retaining wall if the retained height is over 30 inches or is supporting any surcharge load (sloped soil, pedestrian/vehicular traffic, etc.), or impounds Class I, II or IIA liquids, or crosses a lot line. Attached or offset guards (guardrails) are required along open-sided walking surfaces of retaining walls when within 36" horizontally to the edge of the open side. The basis of design for the guardrail and anchorage/foundation shall be included in the permit application. Fences may be proposed in lieu of guardrails, but they shall meet the same design criteria as guardrails and the complete design be submitted with the retaining wall application.

A permit application for a retaining wall installed on the private property line must be accompanied by a letter of approval from the adjacent property owner. A separate permit will be needed for any segment of the retaining wall on crossing a lot line. Occasionally, lot conditions require approvals from other agencies such as easement holders, or homeowner associations. Any dispute as to whether a retaining wall or guardrail has extended into a neighbor's property or questions about the location of property lines is a legal matter to be resolved by the property owners. Any retaining wall or guardrail installed within the County right of way will not be permitted and will be required to be removed. A retaining wall is considered an accessory structure if it exceeds the height of 6' - 6."

Submittal Documents

The submittal as a minimum shall include the following:

1. **Site Plan**

   Scaled professionally prepared drawing showing: property lines, existing structures, elevations, proposed wall location, easements, utilities. Etc.

2. **Geotechnical Report:**

   A geotechnical engineering report prepared by the Geotechnical Engineer of record of the project is required for the design of retaining walls. As a minimum the report shall include the following information:

   A. Soil boring logs
   B. Soil profiles
   C. Soil classifications
   D. Ground water conditions
   E. Soil unit weights
   F. Soil internal friction angels
   G. Recommended active and passive soil pressures
   H. Recommended Surcharge

3. **Design Calculations:**
The calculations shall include the following:

A. A summary of the soil parameters used in the design.
B. Design loads
- Retained soils
- Retained ground water
- Surcharge from all applicable sources, including, but not limited to equipment and vehicles, tower cranes, fire truck loadings, material stockpiles, structures and improvements, etc.

C. All relevant safety factors shall be shown.
D. Input and output from computer programs used for the analysis and design of the retaining walls and/or hand computations verifying the results.
E. Global slope stability analysis.

4. **Plans and Sections:**

A. A plan to show all adjacent utilities, facilities, pertinent topographic information.
B. Retaining wall elevation and plan locations.
C. Details of all wall sections including reinforcing, wall footing, schedules, adjacent facilities, guardrails, etc.
D. Structural Notes: Notes showing the applicable codes and standards, soil properties utilized in the design, assumed design surcharge, material properties (Concrete, reinforcing, masonry etc.), general construction notes and limitations set by SER.
E. If the location of the proposed retaining wall is adjacent to fire truck access, then the fire truck access drawing shall be submitted.

5. **Guardrails & Vehicle Barriers:**

A. Guards are required along open-sided walking surfaces of retaining walls when within 36" horizontally to the edge.
   a. Guards shall be minimum 42" high and shall not permit the passage of a 4" sphere.
   b. Guards shall be adequate in strength and attachment in accordance with Section 1607.9.1.
B. Vehicle barriers shall be incorporated within proximity of drive lane or parking and meet the strength requirements for vehicle type and velocities in accordance with Section 1607.10.

6. **Special Inspection for Retaining Walls:**

Retaining walls over 7 feet in retained height or of unusual design shall also meet the submittal criteria for Montgomery County Special Inspection Program. A Special Inspections (Complex Structure) review takes place after initial submittal of the project. And includes review of the submitted Statement of Special Inspections, inspector qualifications and inspections service contract documents. Upon preliminary approval the Complex Structure team will contact the applicant to set up a pre-construction meeting to conclude the Complex Structures review.

See Montgomery County Special Inspection Manual and the Statement of Special Inspection Form.

Drawings to be submitted for the scope of work shall meet the requirements listed under "**Submittal Guidelines for Commercial Permits.**"