It is recommended that foundation walls associated with truck loading docks or other walls with unbalanced earth loads be designed to resist combined lateral forces resulting from soil pressures and surcharges.
Foundation walls which are restrained at the top, are backfilled on one side with compacted granular fill, and have a perimeter foundation drainage system should be designed for an equivalent fluid unit weight of 65 lbs. per cu ft. (pcf).

Foundation walls subjected to surcharge loads from adjacent floor slabs or foundations should be designed for an additional uniform lateral pressure, over the entire height of the backfilled wall, equal to 0.5 times the surcharge pressure.

Below-grade walls which are not restrained (top free to rotate) and are not subjected to unbalanced hydrostatic pressures (have foundation drains or are located above the groundwater level), should be designed for an equivalent fluid unit weight of 40 pcf. Portions of walls not protected by a foundation drainage system and are located below the groundwater level should be designed for an equivalent fluid unit weight of 80 pcf.

Compacted Fill

Compacted Structural Fill used for the layer below the foundations, floor slab and the sidewalks, and adjacent to foundation walls should consist of a sandy gravel or gravelly sand, free of organic material, loam, trash, snow, ice, frozen soil, or other objectionable material, and should be well-graded within the following limits:

Sieve Size	Percent Finer By Weight
6 in.	100
No. 4	30 to 90
No. 40	10 to 50
No. 200	0 to 8

In open areas, compacted structural fill should be placed in layers not exceeding 8 in. in loose measure and compacted with self-propelled compaction equipment at approximately optimum moisture content to a dry density of at least 95 percent of the maximum dry density as determined by ASTM D1557. In confined areas, the loose layer thickness should be reduced to 6 in. and compaction performed by hand-guided compaction equipment.

Reused or Imported Compacted Fill should be used for constructing the detention pond embankments and for raises-in-grade beneath the building, parking areas and access roads to subgrade elevations. Fill that is reused from the site or imported to the site should conform to the requirements of MDOT Standard Specifications for Highways and Bridges, Section 703.19, Material for Embankment Construction.