



Borings 1 - 6 were drilled in the areas of the possible locations for the proposed salt storage facility. Based on the results of the borings, the proposed building may be supported on footing foundations designed for a net allowable bearing pressure of 3000 pounds per square foot (psf) as describe below.

In the following table we have summarized the shallowest depth/elevation at which in-situ native materials considered capable of supporting a design bearing stress of 3000 psf were encountered at each boring. Ground surface elevations and depths of existing fill are also shown. The recommended bearing stress of 3000 psf is typical and generally satisfactory for the construction of similar buildings in this area.

Boring Number	Ground Surface Elevation	Existing Fill Depth (Feet)	3000 PSF Design Bearing	
			Depth* (Feet)	Elevation*
1	785.5	3.0	3.0	782.5
2	786.0	3.0	3.0	783.0
3	786.5	3.0 T	3.0	783.5
4	785.5	1.6 T	3.0	782.5
5	786.5	0.8 P	1.0	785.5
6	786.0	1.1 T	1.5	784.5

\* Depth/elevation of 3000 psf native bearing soils rounded to lowest 0.5 foot.

T Buried clayey topsoil deposit; depth shown is to the bottom of the layer.

P Pavement section.

As shown in the above table, native soils considered suitable of 3000 psf design bearing were first found at relatively shallow depths of about 1 to 3 feet below existing grade (approximate Elevations 782.5 - 785.5) at the boring locations. They consist of tough to very tough native clay soils, exhibiting unconfined compressive strengths of 1.5 tsf or higher. In areas where foundation undercuts are performed to reach the 3000 psf native bearing soils, the footings may be placed at the bottom of the undercuts or the foundation overexcavations backfilled and footings constructed at design elevations in accordance with the following recommended procedure.

The base of the overexcavations should exceed footing dimensions by at least 12 inches along each side, 6 inches for every foot of overdig where the undercut exceeds 2.0 feet in depth. Replacement materials should consist of crushed stone, crushed gravel or recycled concrete between ¼ to 3 inches in size and containing no fines; IDOT gradations CA-1 and CA-7 meet these criteria. This “structural” fill should be spread in maximum 18-inch layers loose thickness, each lift to be densified using vibratory