

asphalt pavement at locations just north and south of the existing truck bays. Based on the obtained cores, measured thickness results are presented in the following table:

Table 1: Asphalt Core Data

Core ID	Asphalt Thickness (in.)	Base Thickness (in.)
C-1	1.25	10.5 (limerock)
C-2	2.0	8.5 (limerock)

PAVEMENT DESIGN AND CONSTRUCTION RECOMMENDATIONS

The following pavement recommendations are based on the information presented above and our experience with similar projects with respect to the traffic loading anticipated (up to 10 passes per day). For this design, we have assumed a CBR value of 8 (representative of the SC and SM soils generally encountered near the surface within this area). Based on our review of common fire truck weights, we have used a truck loading of 55,000 pounds consisting of 24,000 pounds on the front axle and 31,000 pounds on the rear axle. The pavement design is limited to a rigid concrete pavement section where heavy-duty pavements (truck lanes) are required.

For the concrete pavement, we recommend using a minimum concrete thickness of 7 inches. The concrete utilized in the pavements should be air-entrained and have a modulus of rupture of at least 650 psi (compressive strength of 4500 psi). Beneath the concrete pavement, we recommend placing 6 inches of graded aggregate base (GAB) above the subgrade soils. The GAB should be compacted to at least 98% of the modified Proctor density (ASTM D1557) and the subgrade soils should be compacted to at least 98% of the standard Proctor density (ASTM D698). Both the subgrade and GAB should be proofrolled prior to base course and concrete placement, respectively, to check stability. Any areas which exhibit rutting or pumping should be repaired as recommended by our geotechnical engineer.

Table 2: Concrete Pavements

Layer Thickness (in.)	Material (GDOT)
7.0	Section 430 Portland Cement Concrete Pavement
6.0	Section 310 Graded Aggregate Construction
--	Section 209 Subgrade Construction

For this concrete pavement thickness, we recommend a contraction joint spacing of 15 feet with joints laid out to form approximately square panels (equal transverse and longitudinal joint spacings). Rectangular panels, with the long dimension no more than 1.25 times the short dimension, may be used when square panels are not feasible. Construction joints (if needed) should be doweled with dowels