



Assumptions:

Local City Road: Min. Cross-Section - 20' total width

Gravel Surface Road.

Poor soils due to floodplain

No curb or enclosed drainage

low traffic → 10,000 - 30,000 ESAL (through design life)

US Climatic Region II (ASHRAE Guide for Design of Pavement Structures)

Agg. Thickness 10"

Include subgrade geotextile

Existing Agg. Surface is potholed, weak subgrade. Assume full reconstruct.

$L = 2,700'$

$W = 20'$

$LW - Mi = \frac{20'}{12} * \frac{2700'}{5280'} = 0.85 \text{ in. mi}$

Assume 0.5' of exc/emb buildup over 1/2 width of roadway

$2700 * 0.5' * \frac{20'}{2} = 13,500 \text{ CF}$
 $= 1,500 \text{ CY}$

1% const. survey (no curbs, drainage, asphalt)

4% TP & OT (off alignment work)

10% mob (typical)

2% EL (build in floodplain)