

**Rigid Pavement Design Analysis**  
Based on AASHO Interim Guide for Design of Pavement Structures

P.I. No.	751580-	Project No.	NH000-0056-01(061)	County	Fulton
Description	SR 400 @ Northridge Rd. Interchange	Location	SR 400 and Ramps	Type Section	JPCP
Begin Project	Just West of Dunwoody Place	End Project	Just East of Somerset Ct.	Project Length	0.4-mile

Traffic Data

Begin Design Year	2014	Begin one way AADT, VPD	16200
End Design Year	2034	Ending one way AADT, VPD	17900
Total Truck %	6	Mean one way AADT, VPD	17050

Design Loading

Mean one way AADT		LDF (%)		Volume (%)		ESAL Factor	Daily ESAL
17050	*	70	*	94.00	Vehicles	0.004	45
17050	*	70	*	4.00	SU	0.500	239
17050	*	70	*	2.00	MU	2.680	640
Total Daily ESAL's							924
Total Design Period ESALs			=	6,745,200			

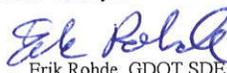
Design Data

Terminal Serviceability, (Pt)	2.5	Working Stress	450 psi	Soil Support Value	2
Subgrade Modulus, k	110	Subbase Modulus, k <sub>1</sub>	175	Subbase Modulus, k <sub>2</sub>	175
Trial Depth of PCC Pavement, inches		9.00	Calculated Stress from Equation, psi		503.0
% Overstressed	11.8	% Underdesigned	10.5	Balanced Thickness	9.58

Recommended Rigid Pavement Structure

9 inches Plain Portland Cement with 1.25 inch diameter dowel bars  
0 inches of 19 mm Superpave Asphaltic Concrete Interlayer  
10 inches Graded Aggregate Base

Prepared By

  
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Date 11/28/2012

Recommended By

  
Consultant Design Phase Leader

Date

11/28/12

Approved By

  
State Pavement Engineer

Date

11/29/12