4-1 FOUNDATION DESIGN DATA SHEET

Table 1. Foundation Data

Support No.	Finished Grade Elevation (ft)	Bottom Of Footing Elevation (ft)	Footing Dimensions (ft)		Permissible Settlement under Service Load (in)*
			B	*L*	
Abutment 1					
Bent 2					
Abutment 3					

* Based on CALTRANS' current practice, the total permissible settlement for a shallow footing is one inch for multi-structures with continuous spans or multi-column bents, one inch for single span structures with diaphragm abutments, and two inches for single span structures with seat abutments. Different permissible settlement under service loads may be allowed if a structural analysis verifies that required level of serviceability is met.

Table 2. Scour Data

Support No.	Long Term (Degradation and Contraction) Scour Elevation (ft)	Short Term (Local) Scour Depth (ft)
Abut 1		
Bent 2		
Bent 3		
Abut 4		

Table 3. LRFD Service-I Limit State Loads for Controlling Load Combination[1]

Support No.	Total Load					Permanent Load[2]				
	P_{Total} (kips) Net	M_X (kip-ft)	M_Y (kip-ft)	V_X (kips)	V_Y (kips)	P_{Perm} (kips) Net	M_X (kip-ft)	M_Y (kip-ft)	V_X (kips)	V_Y (kips)
Abutment 1			N/A	N/A				N/A	N/A	
Bent 2				N/A	N/A				N/A	N/A
Abutment 3			N/A	N/A				N/A	N/A	

1. Controlling load combination is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundation on rock.

2. See Table 3.4.1-2 in the AASHTO LRFD Bridge Design Specifications for components of permanent load. Total and Permanent Loads are NET for Service-I Limit State.

Table 4. LRFD Strength, Construction and Extreme Event Loads for Controlling Load Combinations

Support No.	Strength/Construction Limit State (Controlling Group)[1]					Extreme Event Limit State (Controlling Group)[1]				
	P_{Total} (kips) Gross	M_X (kip-ft)	M_y (kip-ft)	V_X (kips)	V_Y (kips)	P_{Total} (kips) Gross	M_X (kip-ft)	M_Y (kip-ft)	V_X (kips)	V_Y (kips)
Abutment 1			N/A	N/A		N/A	N/A	N/A	N/A	N/A
Bent 2				N/A	N/A					
Abutment 3			N/A	N/A		N/A	N/A	N/A	N/A	N/A

1. Controlling load combination is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundation on rock.