

3-Point Acceleration Design Response Spectrum

SCDOT v3.2 - 06/01/2023

Project ID:	P041314	Latitude:	32.8420
Route:	I-526	County:	10 - Charleston
Project:	I-526 & Long Point Road Interchange		
		Longitude:	79.8707

Designer:	N. Harman - Support
Date:	7/13/2023

Design EQ	PGA	S _{DS}	S _{D1}	M _W	R	PGV	D ₅₋₉₅	T _o
	g	g	g	-	km	inches/sec	sec	sec
FEE	0.23	0.48	0.23	7.30	25.40	8.70	23.85	0.17
SEE	0.45	0.95	0.75	7.30	26.13	28.62	23.96	0.20

Fundamental Period of Structure, T ₀	Range of Interest		V _{s,H} *	H	T _{NH}	
	sec				sec	
sec	0.5*T ₀	2.0*T ₀	ft/sec	ft	(4*H)/V _{s,H} *	(6*H)/V _{s,H} *
0.00	0.00	0.00	1234.34	320.00	0.20	1.56
0.00	0.00	0.00	H = B-C Boundary			

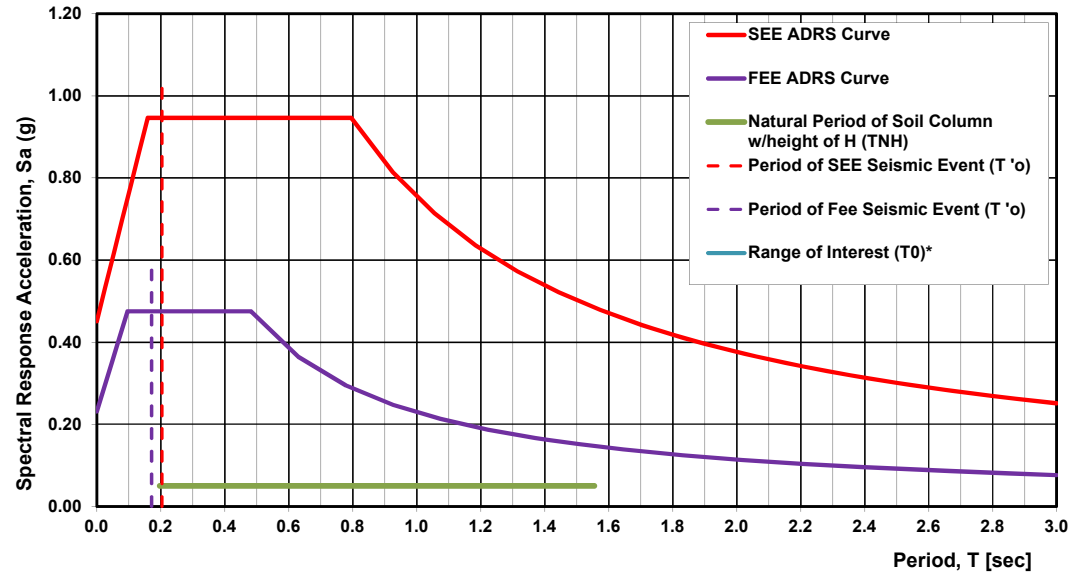
H = B-C Boundary

Damping:	5%
Geologic Condition:	Geologically Realistic (Q = 100)*
ADRS Location within Soil Column:	SCCP
	At Ground Surface

South Carolina Coastal Plain

*Same Geologic Condition as used in SCENARIO_PC (2006)

SC Seismic ADRS Curve



FEE Data		SEE Data	
T	S _a	T	S _a
0.00	0.231	0.00	0.451
0.02	0.272	0.03	0.534
0.03	0.313	0.05	0.616
0.05	0.353	0.08	0.699
0.06	0.394	0.11	0.781
0.08	0.435	0.13	0.864
To	0.475	To	0.946
0.10	0.475	0.16	0.946
0.13	0.475	0.21	0.946
0.16	0.475	0.27	0.946
0.19	0.475	0.32	0.946
0.22	0.475	0.37	0.946
0.26	0.475	0.42	0.946
0.29	0.475	0.48	0.946
0.32	0.475	0.53	0.946
0.35	0.475	0.58	0.946
0.39	0.475	0.64	0.946
0.42	0.475	0.69	0.946
0.45	0.475	0.74	0.946
0.48	0.475	Ts	0.946
0.63	0.364	0.80	0.946
0.78	0.294	0.93	0.814
0.93	0.247	1.06	0.714
1.07	0.213	1.18	0.636
1.22	0.187	1.31	0.573
1.37	0.167	1.44	0.522
1.52	0.151	1.57	0.479
1.67	0.137	1.70	0.442
1.81	0.126	1.83	0.411
1.96	0.117	1.96	0.384
2.11	0.108	2.09	0.360
2.26	0.101	2.22	0.339
2.41	0.095	2.35	0.320
2.56	0.090	2.48	0.304
2.70	0.085	2.61	0.288
2.85	0.080	2.74	0.275
3.00	0.076	2.87	0.262
		3.00	0.251