

## 6. Load Combinations

### 6.1. Define Load Combinations for Serviceability State

SLC1:	1.0 DL + 0.5 LL + 1.0 MECH
SLCS01:	0.90 DL + 0.714 SRSS
SLCS02:	0.90 DL - 0.714 SRSS
SLCS03:	1.0 DL + 0.375 LL + MECH + 0.536 SRSS
SLCS04:	1.0 DL + 0.375 LL + MECH - 0.536 SRSS
SLCW1:	1.0DL+1.0 Wind(x & y) <sup>(1)</sup>
SLCW2:	1.0DL-1.0 Wind(x & y) <sup>(1)</sup>

### 6.2. Define Load Combinations for Ultimate State

ULC1:	1.4 DL + 1.6 MECH + 1.6 LL	0.5 $C_{a-1}$
ULCS01	1.29 DL + MECH + 0.5 LL + 1.0 SRSS	[1.2+0.5x0.18x1=1.29]
ULCS02	1.29 DL + MECH + 0.5 LL - 1.0 SRSS	
ULCS03	1.11 DL + MECH + 0.5 LL - 1.0 SRSS	
ULCS04	1.11 DL + MECH + 0.5 LL + 1.0 SRSS	
ULCS05	0.81 DL + 1.0 SRSS	[1.2-0.5x0.18x1=0.81]
ULCS06	0.81 DL - 1.0 SRSS	
ULCS07	0.99 DL + 1.0 SRSS	
ULCS08	0.99 DL - 1.0 SRSS	
ULCUP01	1.4 DL + 1.6 MECH + 1.6 LL + 1.2 UPLIFT	
ULCUP02	1.0 DL + 1.2 UPLIFT	
ULCUP03	1.4 DL + 1.2 UPLIFT + 1.4 WIND(x & y) <sup>(1)</sup>	
ULCUP04	1.4 DL + 1.2 UPLIFT - 1.4 WIND(x & y) <sup>(1)</sup>	
ULCUP05	1.0 DL + 1.2 UPLIFT + 1.4 WIND(x & y) <sup>(1)</sup>	
ULCUP06	1.0 DL + 1.2 UPLIFT - 1.4 WIND(x & y) <sup>(1)</sup>	
ULCUP07	1.4 DL + 1.2 UPLIFT	
ULCUP08	1.2DL + 1.2 MECH + 1.2 LL + 1.2 UPLIFT + 1.2 WIND(x & y) <sup>(1)</sup>	
ULCUP09	1.2DL + 1.2 MECH + 1.2 LL + 1.2 UPLIFT - 1.2 WIND(x & y) <sup>(1)</sup>	
ULCUP10	1.2DL + 1.2 MECH + 1.2 LL + 1.2 UPLIFT	
ULCW01	1.2 DL + 1.2 MECH + 1.2 LL + 1.2 WIND(x & y) <sup>(1)</sup>	
ULCW02	1.2 DL + 1.2 MECH + 1.2 LL - 1.2 WIND(x & y) <sup>(1)</sup>	
ULCW03	1.0 DL + 1.4 WIND(x & y) <sup>(1)</sup>	
ULCW04	1.0 DL - 1.4 WIND(x & y) <sup>(1)</sup>	
ULCW05	1.4 DL + 1.4 WIND(x & y) <sup>(1)</sup>	
ULCW06	1.4 DL - 1.4 WIND(x & y) <sup>(1)</sup>	

### 6.3. Define Load Combinations for Pile Design

SLC1:	1.0 DL + 0.5 LL + 1.0 MECH	
SLCS01	0.90 DL + 0.714 SRSS	[1/1.4=0.714 SRSS]
SLCS02	0.90 DL - 0.714 SRSS	
SLCS03	1.0 DL + 0.375 LL + MECH + 0.536 SRSS	[0.75x(1/1.4)=0.536]
SLCS04	1.0 DL + 0.375 LL + MECH - 0.536 SRSS	
SLCW05	0.8 DL + 0.4LL + 0.8 MECH +0.8 WIND(x & y) <sup>(1)</sup>	
SLCW06	0.8 DL + 0.4LL + 0.8 MECH -0.8 WIND(x & y) <sup>(1)</sup>	

(1)- When wind loads are derived from wind tunnel test results, WIND(x & Y) may be taken conservatively as the Envelope of all possible wind load combinations as prescribed by Wind Tunnel specialist.