

DETERMINATION OF SEISMIC LOADS TO LFRS AT GRIDLINES - FLEXIBLE DIAPHRAGM ASSUMPTIONS  
 ASCE 7-05 CHAPTER 12 - SEISMIC REQUIREMENTS FOR BUILDING STRUCTURES  
 587 BURNETT STREET, SAN FRANCISCO

1. Input Data

	Floors					Exterior Walls			
	Roof	Type A (Floors)	Type B (Stairs)	Deck	RC Slab	Misc	Type a	Type b	Type c
DL (psf)	16	21	38	25	55	33	17	10	
LL (psf)	-	-	-	-	-	-	-	-	-

$V = 0.169 * W$  (Seismic Base Shear - Strength Level)  
 $V = 0.127 * W$  (Seismic Base Shear - ASD Level)  
 $V = 0.091 * W$  (Seismic Base Shear - ASD Level)

- 75% V for (E) Bldg per IEBC12 Section A4

Weight Check:

N-S = 651.0 kips  
 W-E = 656.4 kips  
 (0.83 %)

2. Determination of Tributary Loads

Loading Direction	Wall Gridline Location	Floor Level	Tributary Area Segment	Floor Type	Diaphragm Loads				Wall Loads				Seismic Weight		Seismic Load						
					Dead Load (psf)	Partition Loads (psf)	Length (feet)	Width (feet)	Area (ft²)	DL (lbs)	Wall Dead Load (psf)	Length (feet)	Height (feet)	Wall Area (ft²)	DL (lbs)	At Floor Level (lbs)	Sum (lbs)	At Floor Level (lbs)	Sum (lbs)		
N-S	3	R	TA74	R	16.0		11.00	7.00	77	1,232	a	17.00	20.00	4.50	90	1,530	20,438	20,438	1,850	1,850	
			TA75	R	16.0		26.50	11.50	305	4,876	b	10.00	20.00	4.50	90	900					
			TA76	R	16.0		56.00	8.50	476	7,616	a	17.00	56.00	4.50	252	4,284					
		6	TA74	F	21.0		11.00	7.00	77	1,617	a	17.00	20.00	9.00	180	3,060	31,441	51,879	2,847	4,697	
			TA75	F	21.0		26.50	11.50	305	6,400	b	10.00	20.00	9.00	180	1,800					
			TA76	F	21.0		56.00	8.50	476	9,996	a	17.00	56.00	9.00	504	8,568					
		5	TA74	F	21.0		11.00	7.00	77	1,617	a	17.00	20.00	9.00	180	3,060	31,441	83,320	2,847	7,543	
			TA75	F	21.0		26.50	11.50	305	6,400	b	10.00	20.00	9.00	180	1,800					
			TA76	F	21.0		56.00	8.50	476	9,996	a	17.00	56.00	9.00	504	8,568					
		4	TA74	F	21.0		11.00	7.00	77	1,617	a	17.00	20.00	9.00	180	3,060	31,441	114,760	2,847	10,390	
			TA75	F	21.0		26.50	11.50	305	6,400	b	10.00	20.00	9.00	180	1,800					
			TA76	F	21.0		56.00	8.50	476	9,996	a	17.00	56.00	9.00	504	8,568					
		3	TA50	RC	55.0		11.00	7.00	77	4,235	a	17.00	17.50	9.00	158	2,678	51,828	166,589	4,692	15,082	
			TA51	RC	55.0		23.00	9.00	207	11,385	b	10.00	17.50	9.00	158	1,575					
			TA52	RC	55.0		51.50	8.50	438	24,076	a	17.00	51.50	9.00	464	7,880					
		2																			
		1																			
		6	6	R	TA77	R	16.0		17.00	13.00	221	3,536	a	17.00	13.00	4.50	59	995	13,648	13,648	1,236
TA78	R				16.0		40.50	8.50	344	5,508	b	10.00	13.00	4.50	59	585					
TA79	R				16.0		13.00	4.50	59	936											
TA80	R				16.0		29.00	4.50	131	2,088											
6	TA77			F	21.0		17.00	13.00	221	4,641	a	17.00	13.00	9.00	117	1,989	19,993	33,640	1,810	3,046	
	TA78			F	21.0		40.50	8.50	344	7,229	b	10.00	13.00	9.00	117	1,170					
	TA79			B	38.0		13.00	4.50	59	2,223											
	TA80			F	21.0		29.00	4.50	131	2,741											
5	TA77			F	21.0		17.00	13.00	221	4,641	a	17.00	13.00	9.00	117	1,989	19,993	53,633	1,810	4,856	
	TA78			F	21.0		40.50	8.50	344	7,229	b	10.00	13.00	9.00	117	1,170					
	TA79			B	38.0		13.00	4.50	59	2,223											
	TA80			F	21.0		29.00	4.50	131	2,741											
4	TA77			F	21.0		17.00	13.00	221	4,641	a	17.00	13.00	9.00	117	1,989	19,993	73,626	1,810	6,666	
	TA78			F	21.0		40.50	8.50	344	7,229	b	10.00	13.00	9.00	117	1,170					
	TA79			B	38.0		13.00	4.50	59	2,223											
	TA80			F	21.0		29.00	4.50	131	2,741											
3	TA53			RC	55.0		54.00	13.00	702	38,610	a	17.00	13.00	9.00	117	1,989	41,769	115,395	3,782	10,447	
											b	10.00	13.00	9.00	117	1,170					
2																					
1																					

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**ASCE 7-05 CHAPTER 12 - SEISMIC REQUIREMENTS FOR BUILDING STRUCTURES**  
**587 BURNETT STREET, SAN FRANCISCO**

**1. Input Data**

	Floors					Exterior Walls			
	Roof	Type A (Floors)	Type B (Stairs)	Deck	RC Slab	Misc	Type a	Type b	Type c
DL (psf)	16	21	38	25	55	33	17	10	
LL (psf)	-	-	-	-	-	-	-	-	-

$V = 0.169 * W$  (Seismic Base Shear - Strength Level)  
 $V = 0.127 * W$  (Seismic Base Shear - 75% V for (E) Bldg per IEBC12 Section A4)  
 $V = 0.091 * W$  (Seismic Base Shear - ASD Level)

**Weight Check:**

N-S = 651.0 kips  
 W-E = 656.4 kips  
 (0.83 %)

**2. Determination of Tributary Loads**

Loading Direction	Wall Gridline Location	Floor Level	Tributary Area Segment	Floor Type	Diaphragm Loads				Wall Loads				Seismic Weight		Seismic Load					
					Dead Load (psf)	Partition Loads (psf)	Length (feet)	Width (feet)	Area (ft <sup>2</sup> )	DL (lbs)	Wall Segment	Wall Dead Load (psf)	Length (feet)	Height (feet)	Wall Area (ft <sup>2</sup> )	DL (lbs)	At Floor Level (lbs)	Sum (lbs)	At Floor Level (lbs)	Sum (lbs)
N-S (Cont)	8	R	TA81	R	16.0		17.50	4.00	70	1,120	a	17.00	8.00	4.50	36	612	11,327	11,327	1,025	1,025
			TA82	R	16.0		13.00	4.50	59	936	b	10.00	8.00	4.50	36	360				
			TA83	R	16.0		30.00	4.50	135	2,160	a	17.00	17.50	4.50	79	1,339				
			TA84	R	16.0		60.00	5.00	300	4,800										
		6	TA81	F	21.0		17.50	4.00	70	1,470	a	17.00	4.00	9.00	36	612	15,483	26,810	1,402	2,427
			TA82	F	21.0		13.00	4.50	59	1,229	b	10.00	4.00	9.00	36	360				
			TA83	F	21.0		30.00	4.50	135	2,835	a	17.00	17.50	9.00	158	2,678				
		5	TA81	F	21.0		17.50	4.00	70	1,470	a	17.00	4.00	9.00	36	612	15,483	42,293	1,402	3,829
			TA82	F	21.0		13.00	4.50	59	1,229	b	10.00	4.00	9.00	36	360				
			TA83	F	21.0		30.00	4.50	135	2,835	a	17.00	17.50	9.00	158	2,678				
		4	TA81	F	21.0		17.50	4.00	70	1,470	a	17.00	4.00	9.00	36	612	14,144	56,437	1,281	5,110
			TA82	F	21.0		13.00	4.50	59	1,229	b	10.00	4.00	9.00	36	360				
			TA83	F	21.0		30.00	4.50	135	2,835	a	17.00	17.50	4.50	79	1,339				
		3	TA54	RC	55.0		10.00	9.50	95	5,225	a	17.00	9.50	9.00	86	1,454	31,569	88,006	2,858	7,968
			TA55	RC	55.0		46.00	9.50	437	24,035	b	10.00	9.50	9.00	86	855				
		2	TA25	B	38.0		24.00	5.00	120	4,560	a	17.00	0.00	9.00	0		4,560	92,566	413	8,380
											b	10.00	0.00	9.00	0					
		1																		
10	10	R	TA85	R	16.0		25.00	10.00	250	4,000						7,552	7,552	684	684	
			TA86	R	16.0		37.00	6.00	222	3,552										
		6	TA85	F	21.0		25.00	10.00	250	5,250						13,662	21,214	1,237	1,921	
			TA86	F	21.0		37.00	6.00	222	4,662										
			TA88	D	25.0		25.00	6.00	150	3,750										
		5	TA85	F	21.0		25.00	10.00	250	5,250						13,662	34,876	1,237	3,158	
			TA86	F	21.0		37.00	6.00	222	4,662										
			TA88	D	25.0		25.00	6.00	150	3,750										
		4	TA85	F	21.0		25.00	10.00	250	5,250	a	17.00	16.00	4.50	72	1,224	19,695	54,571	1,783	4,941
			TA86	F	21.0		37.00	6.00	222	4,662	b	10.00	16.00	4.50	72	720				
			TA88	D	25.0		25.00	6.00	150	3,750	a	17.00	25.00	4.50	113	1,913				
			TA87	R	16.0		34.00	4.00	136	2,176										
		3	TA56	RC	55.0		10.00	10.00	100	5,500	a	17.00	16.00	9.00	144	2,448	26,109	80,680	2,364	7,304
			TA57	B	38.0		48.00	4.00	192	7,296	b	10.00	16.00	9.00	144	1,440				
			TA58	B	38.0		14.00	5.00	70	2,660	a	17.00	25.00	9.00	225	3,825				
			TA59	F	21.0		35.00	4.00	140	2,940										
		2	TA27	B	38.0		24.00	5.00	120	4,560	a	17.00	10.00	9.00	90	1,530	17,150	97,830	1,553	8,857
			TA28	B	38.0		14.00	5.00	70	2,660	b	10.00	10.00	9.00	90	900				
TA29	F		21.0		35.00	5.00	175	3,675	a	17.00	25.00	9.00	225	3,825						
1																				

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 $V = 0.127 * W$  (Seismic Base Shear - 75% V for (E) Bldg per IEBC12 Section A4)  
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**Weight Check:**

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 (0.83 %)

**2. Determination of Tributary Loads**

Loading Direction	Wall Gridline Location	Floor Level	Tributary Area Segment	Floor Type	Diaphragm Loads				Wall Loads				Seismic Weight		Seismic Load							
					Dead Load (psf)	Partition Loads (psf)	Length (feet)	Width (feet)	Area (ft <sup>2</sup> )	DL	Wall Segment	Wall Dead Load (psf)	Length (feet)	Height (feet)	Wall Area (ft <sup>2</sup> )	DL (lbs)	At Floor Level (lbs)	Sum (lbs)	At Floor Level (lbs)	Sum (lbs)		
N-S (Cont)	11	R	TA89	R	16.0		25.00	4.00	100	1,600	a	17.00	4.00	4.50	18	306	3,999	3,999		362	362	
																						b
		a	17.00	25.00	4.50	113	1,913															
								6	TA89	F	21.0		25.00	4.00	100	2,100			a	17.00	4.00	9.00
		b	10.00	4.00	9.00	36	360															
								a	17.00	25.00	9.00	225	3,825									
		5	TA89	F	21.0		25.00							4.00	100	2,100			a	17.00	4.00	9.00
								b	10.00	4.00	9.00	36	360									
	a	17.00	25.00	9.00	225	3,825																
							4	TA89	F	21.0		25.00	4.00	100	2,100	a	17.00	4.00	9.00	36	612	17,047
	b	10.00	4.00	9.00	36	360																
								TA90	D	25.0		25.00	6.00	150	3,750	a	17.00	25.00	4.50	113	1,913	
	a	17.00	34.00	4.00	136	2,176																
TA92							R	16.0		59.00	6.50	384	6,136	a	17.00	25.00	4.50	113	1,913			
	a	17.00	10.50	9.00	95	1,607																
3							TA60	RC	55.0		10.00	4.00	40	2,200	b	10.00	10.50	9.00	95	945	17,873	60,212
	TA61	B	38.0		14.00	4.00																
TA62							F	21.0		35.00	4.00	140	2,940	a	17.00	10.50	9.00	95	1,607	15,673	75,885	1,419
	TA63	F	21.0		59.00	6.50																
2							TA31	B	38.0		14.00	4.00	56	2,128	a	17.00	6.50	9.00	59	995	10,043	85,928
	TA32	F	21.0		35.00	4.00																
TA33							F	21.0		59.00	6.50	384	8,054									
	14	R																				
6																						
		5																				
4							TA93	R	16.0		11.50	16.00	184									
		b	10.00	20.00	4.50	90								900								
TA94							R	16.0		39.00	7.00	273	4,368		a	17.00	41.00	4.50	185	3,137		
		TA95	R	16.0		12.50								13.50							169	2,700
TA96							R	16.0		13.50	3.00	41	648									
		TA97	R	16.0		9.00								1.50	14	216						
3							TA84	F	21.0		11.50	16.00	184				3,864	a	17.00	20.00	9.00	180
	b	10.00	20.00	9.00	180	1,800																
TA85							F	21.0		39.00	7.00	273	5,733	a	17.00	41.00	9.00	369	6,273			
	TA86	F	21.0		12.50	13.50														169	3,544	
TA87							F	21.0		13.50	3.00	41	851									
	TA88	F	21.0		9.00	1.50								14	284							
2							TA34	F	21.0		11.50	16.00	184			3,864	a	17.00	20.00	9.00	180	3,060
	b	10.00	20.00	9.00	180	1,800																
TA35							F	21.0		39.00	7.00	273	5,733	a	17.00	41.00	9.00	369	6,273			
	TA36	F	21.0		12.50	13.50														169	3,544	
TA37							F	21.0		13.50	3.00	41	851									
	TA38	F	21.0		9.00	1.50								14	284							
1							TA02	F	21.0		11.50	16.00	184			3,864	a	17.00	20.00	9.00	180	3,060
	b	10.00	20.00	9.00	180	1,800																
TA03							F	21.0		39.00	7.00	273	5,733	a	17.00	41.00	9.00	369	6,273			
	TA04	F	21.0		12.50	13.50														169	3,544	
TA05							F	21.0		13.50	3.00	41	851									
	TA06	F	21.0		9.00	1.50								14	284							

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LL (psf)	-	-	-	-	-	-	-	-	-

V = 0.169 \*W (Seismic Base Shear - Strength Level)  
 V = 0.127 \*W ( " " - 75% V for (E) Bldg per IEBEC12 Section A4)  
 V = 0.091 \*W (Seismic Base Shear - ASD Level)

Weight Check:

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2. Determination of Tributary Loads

Loading Direction	Wall Gridline Location	Floor Level	Tributary Area Segment	Floor Type	Diaphragm Loads				Wall Loads				Seismic Weight		Seismic Load					
					Dead Load (psf)	Partition Loads (psf)	Length (feet)	Width (feet)	Area (ft*2)	DL	Wall Segment	Wall Dead Load (psf)	Length (feet)	Height (feet)	Wall Area (ft*2)	DL (lbs)	At Floor Level (lbs)	Sum (lbs)	At Floor Level (lbs)	Sum (lbs)
W-E	A	R	TB75	R	16.0		46.00	5.00	230	3,680	a	17.00	5.00	4.50	23	383	6,515	6,515	590	590
				F	21.0	46.00	5.00	230	4,830	a	17.00	5.00	9.00	45	765	11,250	17,765	1,019	1,608	
		D	25.0	6.00	5.00	30	750	a	17.00	5.00	9.00	45	765	11,250	29,015	1,019	2,627			
		F	21.0	46.00	5.00	230	4,830	a	17.00	5.00	9.00	45	765	11,250	29,015	1,019	2,627			
		D	25.0	6.00	5.00	30	750	a	17.00	5.00	9.00	45	765	11,250	29,015	1,019	2,627			
		F	21.0	46.00	5.00	230	4,830	a	17.00	5.00	4.50	23	383	11,548	40,563	1,045	3,672			
		D	25.0	6.00	5.00	30	750	a	17.00	5.00	9.00	45	765	11,548	40,563	1,045	3,672			
		R	16.0	22.00	5.00	110	1,760	b	10.00	24.00	4.50	108	1,080	11,548	40,563	1,045	3,672			
		R	16.0	22.00	5.00	110	1,760	b	10.00	22.00	9.00	198	1,980	11,548	40,563	1,045	3,672			
		RC	55.0	45.00	5.00	225	12,375	a	17.00	5.00	9.00	45	765	22,245	62,808	2,014	5,686			
		F	21.0	22.00	5.00	110	2,310	a	17.00	5.00	9.00	45	765	22,245	62,808	2,014	5,686			
		F	21.0	22.00	5.00	110	2,310	b	10.00	67.00	9.00	603	6,030	22,245	62,808	2,014	5,686			
		F	21.0	22.00	5.00	110	2,310	a	17.00	5.00	9.00	45	765	5,055	67,863	458	6,144			
		b	10.00	22.00	9.00	198	1,980	5,055	67,863	458	6,144									
F	21.0	22.00	5.00	110	2,310	a	17.00	5.00	9.00	45	765	5,055	72,918	458	6,602					
b	10.00	22.00	9.00	198	1,980	5,055	72,918	458	6,602											
B	R	TB78	TB79	R	16.0	45.00	8.00	360	5,760	a	17.00	13.50	4.50	61	1,033	12,050	12,050	1,091	1,091	
				R	16.0	48.00	5.50	264	4,224	a	17.00	13.50	4.50	61	1,033	12,050	12,050	1,091	1,091	
		F	21.0	45.00	8.00	360	7,560	a	17.00	13.50	9.00	122	2,066	19,260	31,310	1,744	2,835			
		F	21.0	48.00	5.50	264	5,544	a	17.00	13.50	9.00	122	2,066	19,260	31,310	1,744	2,835			
		D	25.0	6.00	13.50	81	2,025	a	17.00	13.50	9.00	122	2,066	19,260	50,570	1,744	4,578			
		F	21.0	45.00	8.00	360	7,560	a	17.00	13.50	9.00	122	2,066	19,260	50,570	1,744	4,578			
		F	21.0	48.00	5.50	264	5,544	a	17.00	13.50	9.00	122	2,066	19,260	50,570	1,744	4,578			
		D	25.0	6.00	13.50	81	2,025	a	17.00	13.50	9.00	122	2,066	19,260	50,570	1,744	4,578			
		F	21.0	45.00	8.00	360	7,560	a	17.00	13.50	4.50	61	1,033	23,423	73,993	2,121	6,699			
		F	21.0	48.00	5.50	264	5,544	a	17.00	13.50	9.00	122	2,066	23,423	73,993	2,121	6,699			
		D	25.0	6.00	13.50	81	2,025	a	17.00	13.50	9.00	122	2,066	23,423	73,993	2,121	6,699			
		R	16.0	22.50	6.50	146	2,340	a	17.00	13.50	9.00	122	2,066	23,423	73,993	2,121	6,699			
		R	16.0	25.50	7.00	179	2,856	a	17.00	13.50	9.00	122	2,066	23,423	73,993	2,121	6,699			
		RC	55.0	45.00	5.00	225	12,375	a	17.00	13.50	9.00	122	2,066	42,050	116,043	3,807	10,506			
F	21.0	22.50	6.50	146	3,071	a	17.00	13.50	9.00	122	2,066	42,050	116,043	3,807	10,506					
RC	55.0	21.00	5.50	116	6,353	a	17.00	13.50	9.00	122	2,066	42,050	116,043	3,807	10,506					
RC	55.0	28.00	3.00	84	4,620	a	17.00	13.50	9.00	122	2,066	42,050	116,043	3,807	10,506					
B	38.0	24.00	8.50	204	7,752	a	17.00	13.50	9.00	122	2,066	42,050	116,043	3,807	10,506					
F	21.0	25.50	7.00	179	3,749	a	17.00	13.50	9.00	122	2,066	42,050	116,043	3,807	10,506					
F	21.0	22.50	6.50	146	3,071	a	17.00	13.50	9.00	122	2,066	16,637	132,680	1,506	12,012					
B	38.0	24.00	8.50	204	7,752	a	17.00	13.50	9.00	122	2,066	16,637	132,680	1,506	12,012					
F	21.0	25.50	7.00	179	3,749	a	17.00	13.50	9.00	122	2,066	16,637	132,680	1,506	12,012					
F	21.0	22.50	6.50	146	3,071	a	17.00	13.50	9.00	122	2,066	16,637	132,680	1,506	12,012					
F	21.0	25.50	7.00	179	3,749	a	17.00	13.50	9.00	122	2,066	16,637	132,680	1,506	12,012					
F	21.0	22.50	6.50	146	3,071	a	17.00	13.50	9.00	122	2,066	16,637	132,680	1,506	12,012					
F	21.0	25.50	7.00	179	3,749	a	17.00	13.50	9.00	122	2,066	16,637	132,680	1,506	12,012					
F	21.0	22.50	6.50	146	3,071	a	17.00	13.50	9.00	122	2,066	16,637	132,680	1,506	12,012					
F	21.0	25.50	7.00	179	3,749	a	17.00	13.50	9.00	122	2,066	16,637	132,680	1,506	12,012					

**DETERMINATION OF SEISMIC LOADS TO LFRS AT GRIDLINES - FLEXIBLE DIAPHRAGM ASSUMPTIONS**  
**ASCE 7-05 CHAPTER 12 - SEISMIC REQUIREMENTS FOR BUILDING STRUCTURES**  
**587 BURNETT STREET, SAN FRANCISCO**

**1. Input Data**

	Floors						Exterior Walls		
	Roof	Type A (Floors)	Type B (Stairs)	Deck	RC Slab	Misc	Type a	Type b	Type c
DL (psf)	16	21	38	25	55	33	17	10	
LL (psf)	-	-	-	-	-	-	-	-	-

$$V = 0.169 * W \text{ (Seismic Base Shear - Strength Level)}$$

$$V = 0.127 * W \text{ (75\% V for (E) Bldg per IEBC12 Section A4)}$$

$$V = 0.091 * W \text{ (Seismic Base Shear - ASD Level)}$$

Weight Check:

N-S = 651.0 kips  
W-E = 656.4 kips  
(0.83 %)

**2. Determination of Tributary Loads**

Loading Direction	Wall Gridline Location	Floor Level	Tributary Area Segment	Floor Type	Diaphragm Loads				Wall Loads					Seismic Weight		Seismic Load						
					Dead Load (psf)	Partition Loads (psf)	Length (feet)	Width (feet)	Area (ft <sup>2</sup> )	DL	Wall Segment	Wall Dead Load (psf)	Length (feet)	Height (feet)	Wall Area (ft <sup>2</sup> )	DL (lbs)	At Floor Level (lbs)	Sum (lbs)	At Floor Level (lbs)	Sum (lbs)		
W-E (Cont)	F	R	TB83	R	16.0		24.00	9.00	216	3,456	a	17.00	13.50	4.50	61	1,033	12,498	12,498	1,131	1,131		
			TB84	R	16.0		28.00	4.50	126	2,016	a	17.00	13.50	4.50	61	1,033						
			TB85	R	16.0		9.00	13.50	122	1,944												
			TB86	R	16.0		19.00	6.50	124	1,976												
			TB87	R	16.0		10.00	6.50	65	1,040												
		6	TB83	F	21.0		24.00	9.00	216	4,536	a	17.00	13.50	9.00	122	2,066	20,864	33,361	1,889	3,020		
			TB84	F	21.0		28.00	4.50	126	2,646	a	17.00	13.50	9.00	122	2,066						
			TB85	B	38.0		9.00	13.50	122	4,617												
			TB86	F	21.0		19.00	6.50	124	2,594												
			TB87	F	21.0		10.00	6.50	65	1,365												
		5	TB83	F	21.0		24.00	9.00	216	4,536	a	17.00	13.50	9.00	122	2,066	20,864	54,225	1,889	4,909		
			TB84	F	21.0		28.00	4.50	126	2,646	a	17.00	13.50	9.00	122	2,066						
			TB85	B	38.0		9.00	13.50	122	4,617												
			TB86	F	21.0		19.00	6.50	124	2,594												
			TB87	F	21.0		10.00	6.50	65	1,365												
		4	TB83	F	21.0		24.00	9.00	216	4,536	a	17.00	13.50	4.50	61	1,033	25,151	79,375	2,277	7,186		
			TB84	F	21.0		28.00	4.50	126	2,646	a	17.00	13.50	9.00	122	2,066						
			TB85	B	38.0		9.00	13.50	122	4,617												
			TB86	F	21.0		19.00	6.50	124	2,594												
			TB87	F	21.0		10.00	6.50	65	1,365												
			TB88	D	25.0		6.00	6.50	39	975												
			TB89	R	16.0		25.50	7.00	179	2,856												
		3	TB34	RC	55.0		28.00	9.00	252	13,860	a	17.00	13.50	9.00	122	2,066	42,317	121,692	3,831	11,017		
			TB35	B	38.0		24.00	6.50	156	5,928	a	17.00	13.50	9.00	122	2,066						
			TB36	F	21.0		25.50	7.00	179	3,749												
TB37	RC		55.0		30.00	4.50	135	7,425														
TB38	B		38.0		15.00	7.00	105	3,990														
2	TB55	B	38.0		24.00	6.50	156	5,928	a	17.00	13.50	9.00	122	2,066	18,966	140,658	1,717	12,735				
	TB56	F	21.0		25.50	7.00	179	3,749														
	TB58	B	38.0		15.00	7.00	105	3,990														
	TB59	F	21.0		22.00	7.00	154	3,234														
1	TB04	F	21.0		25.50	7.00	179	3,749	a	17.00	13.50	9.00	122	2,066	9,048	149,706	819	13,554				
	TB05	F	21.0		22.00	7.00	154	3,234														

**DETERMINATION OF SEISMIC LOADS TO LFRS AT GRIDLINES - FLEXIBLE DIAPHRAGM ASSUMPTIONS**  
**ASCE 7-05 CHAPTER 12 - SEISMIC REQUIREMENTS FOR BUILDING STRUCTURES**  
**587 BURNETT STREET, SAN FRANCISCO**

**1. Input Data**

	Floors					Exterior Walls			
	Roof	Type A (Floors)	Type B (Stairs)	Deck	RC Slab	Misc	Type a	Type b	Type c
DL (psf)	16	21	38	25	55	33	17	10	
LL (psf)	-	-	-	-	-	-	-	-	-

V = 0.169 \*W (Seismic Base Shear - Strength Level)  
 V = 0.127 \*W ( " " " " - 75% V for (E) Bldg per IEBEC12 Section A4)  
 V = 0.091 \*W (Seismic Base Shear - ASD Level)

**Weight Check:**

N-S = 651.0 kips  
 W-E = 656.4 kips  
 (0.83 %)

**2. Determination of Tributary Loads**

Loading Direction	Wall Gridline Location	Floor Level	Tributary Area Segment	Floor Type	Diaphragm Loads				Wall Loads				Seismic Weight		Seismic Load								
					Dead Load (psf)	Partition Loads (psf)	Length (feet)	Width (feet)	Area (ft*2)	DL	Wall Segment	Wall Dead Load (psf)	Length (feet)	Height (feet)	Wall Area (ft*2)	DL (lbs)	At Floor Level (lbs)	Sum (lbs)	At Floor Level (lbs)	Sum (lbs)			
W-E (Cont)	H	R	TB91	R	16.0		48.00	13.00	624	9,984	a	17.00	13.00	4.50	59	995	11,973	11,973	1,084	1,084			
			6	TB91 TB93	F D	21.0 25.0		48.00 6.00	13.00 11.00	624 66	13,104 1,650	a	17.00	13.00	9.00	117	1,989	18,732	30,705	1,696	2,780		
			5	TB91 TB93	F D	21.0 25.0		48.00 6.00	13.00 11.00	624 66	13,104 1,650	a	17.00	13.00	9.00	117	1,989	18,732	49,437	1,696	4,476		
			4	TB91 TB93 TB92 TB94	F D R R	21.0 25.0 16.0 16.0		48.00 6.00 22.00 25.00	13.00 11.00 5.00 8.50	624 66 110 213	13,104 1,650 1,760 3,400	a	17.00	13.00	4.50	59	995	22,898	72,335	2,073	6,549		
			3	TB40 TB41 TB42 TB43	RC B F F	55.0 38.0 21.0 21.0		30.00 15.00 22.00 25.00	13.00 13.00 5.00 8.50	390 195 110 213	21,450 7,410 2,310 4,463	a	17.00	13.00	9.00	117	1,989	39,611	111,945	3,586	10,135		
			2	TB58 TB62 TB63	B F F	38.0 21.0 21.0		15.00 22.00 25.00	3.00 5.00 8.50	45 110 213	1,710 2,310 4,463	a	17.00	13.00	9.00	117	1,989	10,472	122,417	948	11,083		
			1	TB06 TB07	F F	21.0 21.0		22.00 25.00	5.00 8.50	110 213	2,310 4,463	a	17.00	13.00	9.00	117	1,989	8,762	131,178	793	11,876		
			L	R	TB95	R	16.0		46.00	14.00	644	10,304	a	17.00	14.00	4.50	63	1,071	14,516	14,516	1,314	1,314	
					6	TB95 TB96	F D	21.0 25.0		46.00 6.00	14.00 14.00	644 84	13,524 2,100	a	17.00	14.00	9.00	126	2,142	26,946	41,462	2,440	3,754
					5	TB95 TB96	F D	21.0 25.0		46.00 6.00	14.00 14.00	644 84	13,524 2,100	a	17.00	14.00	9.00	126	2,142	26,946	68,408	2,440	6,193
					4	TB95 TB96 TB97 TB98	F D R R	21.0 25.0 16.0 16.0		46.00 6.00 25.00 17.00	14.00 14.00 5.00 9.00	644 84 125 153	13,524 2,100 2,000 2,448	a	17.00	14.00	4.50	63	1,071	28,717	97,125	2,600	8,793
					3	TB44 TB45 TB46 TB47	RC B F F	55.0 38.0 21.0 21.0		30.00 15.00 25.00 17.00	8.50 12.00 5.00 9.00	255 180 125 153	14,025 6,840 2,625 3,213	a	17.00	14.00	9.00	126	2,142	41,697	138,822	3,775	12,568
					2	TB66 TB67	F F	21.0 21.0		25.00 17.00	5.00 9.00	125 153	2,625 3,213	a	17.00	14.00	9.00	126	2,142	11,805	150,627	1,069	13,637
					1	TB05 TB06	F F	21.0 21.0		25.00 17.00	5.00 9.00	125 153	2,625 3,213	a	17.00	5.00	9.00	45	765	10,428	161,055	944	14,581