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Appendix A

A.1 Calculation - Selection of section dimensions of 4 storied building 7.5m span

The section dimension of slabs and beams are selected so that the deflection criterion could be satisfied. It is assumed that the flexural and shear resistance required will be provided by using sufficient amount of reinforcement.

Slab thickness

Select thickness as 250 mm

Clear cover to r/f	$= 20$ mm
Effective depth (Assuming r/f bars of 12 mm Φ)	$= 250 - 20 - 10/2$
	$= 225$ mm
Span / Effective depth	$= 7500 / 225$
	$= 33.33$
Basic (Span/ Eff depth) for continuous slabs	$= 26$
Required modification factor for tension r/f	$= 33.33/26$
	$= 1.28$

This can be easily achieved. Therefore, use slab thickness of 250 mm

Beam dimensions

Select depth as 750 mm

Clear cover to r/f $= 25$ mm

Effective depth (assuming r/f bars and links of 20 mm Φ and 10 mm Φ)

$= 750 - 25 - 10 - 20/2$

$= 705$ mm

Long span / effective depth $= 7500 / 705 = 10.63$

This is a reasonable value.

Also select beam width as 300 mm

Therefore, use beam dimensions of 750mm x 300mm

Column dimensions

Select, floor to floor height = 3.6 m
 Considering a typical internal column loaded from a tributary area of 7.5m x 7.5 m

Self weight of slab   = 7.5 x 7.5 x 0.25 x 24   = 337.5 kN

Weight of finishes and services (1.5 kN/m^2) = 7.5 x 7.5 x 1.5 = 84.375 kN

Weight of partitions (1.0 kN/m^2)   = 7.5 x 7.5 x 1 = 56.25kN

Weight of beams   = (7.5 + 7.5) x (0.75-0.25) x 24 x 0.3

                                            =54kN

Total dead load   = 532.125 kN

Imposed Loads (2.5 kN/m^2)   = 7.5 x 7.5 x 2.5 = 140.625 kN

Design load per floor = 1.4 x 532.125 + 1.6 x 140.625 = 969.975kN

Ground to 4$\underline{^{th}}$ floor

Trial column size from ground to 4th floor = 450 mm x 450 mm

Total column load at groundfloor = 4 x 969.975 + 0.45x 0.45 x 3.6 x 4 x 24 x 1.4

                = 3,977.88kN

Assuming columns are axially loaded primarily and Grade 30 concrete with tor steel
reinforcement (fy = 460 N/mm2) percentage of 2.0% of gross cross section,

$$N = 0.35 A_c f_{cu} + 0.67 A_{sc} f_y$$

$$N = 0.35 Ac \times 30 + 0.67 \times 0.02 A_c \times 460$$

$$N = 16.66 Ac$$

$$A_c = N/16.66$$

$$= 3,977.88 \times 1000 / 16.66$$

$$= 238,769.31 mm^2$$

Assumed size of 450 mm x 450 mm is approximately satisfactory.

A.2 Calculation-A specimen calculation for interior slab panel for conventional slab beam.

Shorter span BM coefficient	=	0.024
Longer span BM coefficient	=	0.24
Interior support BM coefficient	=	0.032
Dead load	=	$0.25 \times 24 + 1.5 + 1$
	=	$8.5 \text{ kN} / \text{m}^2$
Imposed load (office building)	=	$2.5 \text{ kN} / \text{m}^2$
Design Load	=	$1.4 \times 8.5 + 1.6 \times 2.5$
	=	$15.9 \text{ kN} / \text{m}^2$

BM for shorter span (before distribution)	$= 0.024 (15.9) (7.5)^2$
	=21.46kNm/m
BM for shorter span (after distribution)	=20.84kNm/m
K	$=M/bd^2*f_{cu}$
	$= 20.84*10^6/(1000*225^2*30)$
	=0.014
Hence compression r/f not required.)	
Z	$=d*(0.5+(0.25-k/0.9)^{0.5}$
	=0.98d<0.95d
Z	=0.95d
	=213.75mm
Area of reinforcement required	=M/0.87fyZ
	$=243.62\text{mm}^2$
Minimum r/f requirement	$=325\text{mm}^2$

Provide T10 200mm spacing

<u>Check for deflection[1]-Table 3.11.</u>

f_s	=	$(5*f_y*A_s \text{ required})/(8*A_s \text{ provided})$
	=	178.28

f_1	=	2
Allowable deflection	=	f1*(span/effective depth)
	=	2*26 (interior panel)
Actual deflection	=	Actual span/Actual effective depth
	=	7500/225
	=	33.33
Actual deflection	<	Allowable deflection

Hence deflection ok.

T10 200mm spacing satisfactory.

BM for Longer span (BM before dis.)	$= 0.024 \, (15.9) \, (7.5)^2$
	$=21.46$kNm/m
BM for Longer span (BM after dis.)	$=20.71$kNm/m

Similarly T10 @200mm c/c

BM for Interior support (BM before dis.)	=	$0.032 \, (15.9) \, (7.5)^2$
	=	28.62kNm/m
BM for Interior support (BM after dis.)	=	31.17kNm/m

Similarly T10 @200mm c/c

A.3 Calculation-A Specimen calculation for interior slab panel for flat slab.

It will be assumed that the slab is without drops, and the maximum value of effective diameter will be employed for column heads.[3].-Example 16

Slab thickness

Maximum value of h_C	$=(1/4)(7.5) = 1.875$ ^{m}

Assuming trial $^{span}/_{depth}$ of 32

Effective depth	$= \, ^{7500}/_{32} = 234.375$
H	$= 234.375 + 20 + 5$
	$= 259.375$
	Assumed depth as 250mm
d_{long}	$= 250 - 20 - \,^{10}/_2 = 225mm$
d_{short}	$= 225 - 10 = 215$ mm
d_{av}	$= 220$ mm
Panel Area	$= 7.5\,^m \times 7.5^m = 56.26\,^{m2}$
Self load	$= 0.25 \times 56.25 \times 24$
	$= 337.5$ kN
Finishes	$= 1.5 \times 56.25$
	$= 84.375$ kN
Partition	$= 1.0 \times 56.25$
	$= 56.25$ kN
Total dead load	$= 478.125$ kN
Total Imposed Load	$= 2.5 \times 56.25$
	$= 140.625$ kN
Design load	$= 1.4 \times 478.125$
	$+ 1.6 \times 140.625$
	$= 894.375$ kN

<u>BM long way [1]-Table 3.19.</u>

Effective span	=7.5-(2/3)*1.875m
	=6.25m
Span moment	= (0.071) (894.375) 6.25
	= 396.88kNm

<u>Check for deflection</u>

Total span moment	=396.88kN/m
M/bd^2	$=396.88 \times 10^6/(7500)(225^2)$
	=1.04

If $A_{s,required}=A_{s,provided}$, $f_s=288N/mm^2$

Modification factor for tension r/f	=1.38
Allowable span/effective depth	=26*1.38=35.88
Actual span/effective depth	=7500/225=33.33

Allowable span/effective depth>Actual span/effective depth

Hence ok.

<u>[1]-Table 3.20.</u>

Column Strip (3.75^m)	= (0.55) ×396.88
	= 218.28kNm
Column Strip per m	=58.2kNm

Similarly T12 @150mm c/c

Mid Strip (3.75^m)	= (0.45) ×396.88
	= 178.6kNm
Mid Strip per m	=47.63kNm

Similarly T12 @200mm c/c

Support moment	=(0.055)(894.375) (6.25)
	= 307.44kNm

Column Strip (3.75^m)	= 0.75 × (307.44)
	= 230.58kNm

Total reinforcement requirement	= 2695mm^2
As per BS code clause3.7.3.1	
Total reinforcement requirement for	=2695*2/3
Central half of the column strip	=1796mm^2

Reinforcement requirement per m	=1796/1.875
	=957.87mm^2

Similarly T12 @100mm c/c for central half of column strip and edges T12 @ 200mmc/c

Mid Strip (3.75^m)	= 0.25× (307.44)
	= 76.86kNm
Mid Strip per m	=20.45kNm

Similarly T12 @250mm c/c

Check for shear

If square columns are used size of column head	=(π(1.875/2)^2)$^{0.5}$
	=1.66m
Perimeter of column head	=1.66*4
	=6.64m
1st critical perimeter	=(2*1.5*0.22+1.66)*4
	=2.32*4m
Area within perimeter	=2.32*2.32
	=5.38m^2
v_t	=894.375Kn
$v_{effective}$	=(1.15)*894.375kN
	=1028.53kN

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v_{max} $=V/bd$

                                     $=1028.53*10^3/(6.64*10^3*220)$

                                     $=0.7$

Load on 1st perimeter $=(894.375/56.25)*(56.25-5.38)$

                                     $=808.8kN$

v $=(1.15*808.8*10^3)/2.32*4*10^3*220$

                                     $=0.45N/mm^2$

Reinforcement provided at the support for 3.75m length ⎤ $=3394.3mm^2$
Longer direction   ⎦

Reinforcement provided at the support for 3.75m length ⎤ $=3394.3mm^2$
Shorter direction   ⎦

Reinforcement provided at the support for 3.75m length ⎤ $=3394.35mm^2$
(Average)   ⎦

$V_c=0.79*(100*A_s/bd)^{1/3}*(400/d)^{1/4}/1.25$
$V_c=0.79*(100*3394.3/3750*220)^{1/3}*(400/220)^{1/4}/1.25$
$V_c=0.79*(0.74)*(1.16)/1.25=0.68/1.25=0.54$

$v < v_c$

Hence shear r/f not required.

Similar calculation has been done for 8.0m and 8.5m span flat slabs.

For 8.0m span v $=0.52N/mm^2$

              v_c $=0.53N/mm^2$

Shear r/f marginally ok.

For 8.5m span v $=0.54N/mm^2$

              v_c $=0.51N/mm^2$

Shear not satisfactory.

Shear reinforcement to be provided.

APPENDIX B.1

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
1	0	COMB1	Combination	-1,746.90	-28.67	-28.67	0.00	0.00
1	0.375	COMB1	Combination	-1,744.35	-28.67	-28.67	10.75	10.75
1	0.375	COMB1	Combination	-1,744.35	-28.67	-28.67	10.75	10.75
1	0.75	COMB1	Combination	-1,741.80	-28.67	-28.67	21.51	21.51
1	0.75	COMB1	Combination	-1,741.80	-28.67	-28.67	21.51	21.51
1	1.125	COMB1	Combination	-1,739.25	-28.67	-28.67	32.26	32.26
1	1.125	COMB1	Combination	-1,739.25	-28.67	-28.67	32.26	32.26
1	1.5	COMB1	Combination	-1,736.70	-28.67	-28.67	43.01	43.01
2	0	COMB1	Combination	-1,538.69	-42.83	-42.83	-61.56	-61.56
2	0.9	COMB1	Combination	-1,532.57	-42.83	-42.83	-23.01	-23.01
2	0.9	COMB1	Combination	-1,532.57	-42.83	-42.83	-23.01	-23.01
2	1.8	COMB1	Combination	-1,526.44	-42.83	-42.83	15.54	15.54
2	1.8	COMB1	Combination	-1,526.44	-42.83	-42.83	15.54	15.54
2	2.7	COMB1	Combination	-1,520.32	-42.83	-42.83	54.08	54.08
2	2.7	COMB1	Combination	-1,520.32	-42.83	-42.83	54.08	54.08
2	3.6	COMB1	Combination	-1,514.20	-42.83	-42.83	92.63	92.63
3	0	COMB1	Combination	-1,136.32	-66.32	-66.32	-120.30	-120.30
3	0.9	COMB1	Combination	-1,130.20	-66.32	-66.32	-60.61	-60.61
3	0.9	COMB1	Combination	-1,130.20	-66.32	-66.32	-60.61	-60.61
3	1.8	COMB1	Combination	-1,124.07	-66.32	-66.32	-0.92	-0.92
3	1.8	COMB1	Combination	-1,124.07	-66.32	-66.32	-0.92	-0.92
3	2.7	COMB1	Combination	-1,117.95	-66.32	-66.32	58.76	58.76

Element Forces - Frames for 7.5m conventional slab

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
3	2.7	COMB1	Combination	-1,117.95	-66.32	-66.32	58.76	58.76
3	3.6	COMB1	Combination	-1,111.83	-66.32	-66.32	118.45	118.45
4	0	COMB1	Combination	-724.39	-65.11	-65.11	-117.30	-117.30
4	0.9	COMB1	Combination	-718.26	-65.11	-65.11	-58.70	-58.70
4	0.9	COMB1	Combination	-718.26	-65.11	-65.11	-58.70	-58.70
4	1.8	COMB1	Combination	-712.14	-65.11	-65.11	-0.09	-0.09
4	1.8	COMB1	Combination	-712.14	-65.11	-65.11	-0.09	-0.09
4	2.7	COMB1	Combination	-706.02	-65.11	-65.11	58.51	58.51
4	2.7	COMB1	Combination	-706.02	-65.11	-65.11	58.51	58.51
4	3.6	COMB1	Combination	-699.89	-65.11	-65.11	117.11	117.11
5	0	COMB1	Combination	-307.23	-77.22	-77.22	-130.63	-130.63
5	0.9	COMB1	Combination	-301.10	-77.22	-77.22	-61.13	-61.13
5	0.9	COMB1	Combination	-301.10	-77.22	-77.22	-61.13	-61.13
5	1.8	COMB1	Combination	-294.98	-77.22	-77.22	8.37	8.37
5	1.8	COMB1	Combination	-294.98	-77.22	-77.22	8.37	8.37
5	2.7	COMB1	Combination	-288.86	-77.22	-77.22	77.87	77.87
5	2.7	COMB1	Combination	-288.86	-77.22	-77.22	77.87	77.87
5	3.6	COMB1	Combination	-282.73	-77.22	-77.22	147.37	147.37
6	0	COMB1	Combination	-2,909.71	-2.38	-0.18	0.00	0.00
6	0.375	COMB1	Combination	-2,907.16	-2.38	-0.18	0.07	0.89
6	0.375	COMB1	Combination	-2,907.16	-2.38	-0.18	0.07	0.89
6	0.75	COMB1	Combination	-2,904.61	-2.38	-0.18	0.14	1.78
6	0.75	COMB1	Combination	-2,904.61	-2.38	-0.18	0.14	1.78
6	1.125	COMB1	Combination	-2,902.06	-2.38	-0.18	0.20	2.67
6	1.125	COMB1	Combination	-2,902.06	-2.38	-0.18	0.20	2.67

Element Forces - Frames for 7.5m conventional slab

				Element Forces - Frames for 7.5m conventional slab				
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
6	1.5	COMB1	Combination	-2,899.51	-2.38	-0.18	0.27	3.56
7	0	COMB1	Combination	-2,659.05	-45.34	4.07	5.27	-49.63
7	0.9	COMB1	Combination	-2,652.93	-45.34	4.07	1.61	-8.83
7	0.9	COMB1	Combination	-2,652.93	-45.34	4.07	1.61	-8.83
7	1.8	COMB1	Combination	-2,646.81	-45.34	4.07	-2.05	31.98
7	1.8	COMB1	Combination	-2,646.81	-45.34	4.07	-2.05	31.98
7	2.7	COMB1	Combination	-2,640.68	-45.34	4.07	-5.70	72.78
7	2.7	COMB1	Combination	-2,640.68	-45.34	4.07	-5.70	72.78
7	3.6	COMB1	Combination	-2,634.56	-45.34	4.07	-9.36	113.59
8	0	COMB1	Combination	-1,971.43	-94.61	5.58	11.07	-172.36
8	0.9	COMB1	Combination	-1,965.31	-94.61	5.58	6.05	-87.21
8	0.9	COMB1	Combination	-1,965.31	-94.61	5.58	6.05	-87.21
8	1.8	COMB1	Combination	-1,959.19	-94.61	5.58	1.03	-2.06
8	1.8	COMB1	Combination	-1,959.19	-94.61	5.58	1.03	-2.06
8	2.7	COMB1	Combination	-1,953.06	-94.61	5.58	-3.99	83.09
8	2.7	COMB1	Combination	-1,953.06	-94.61	5.58	-3.99	83.09
8	3.6	COMB1	Combination	-1,946.94	-94.61	5.58	-9.01	168.23
9	0	COMB1	Combination	-1,279.65	-91.24	2.83	5.71	-164.62
9	0.9	COMB1	Combination	-1,273.52	-91.24	2.83	3.16	-82.51
9	0.9	COMB1	Combination	-1,273.52	-91.24	2.83	3.16	-82.51
9	1.8	COMB1	Combination	-1,267.40	-91.24	2.83	0.60	-0.40
9	1.8	COMB1	Combination	-1,267.40	-91.24	2.83	0.60	-0.40
9	2.7	COMB1	Combination	-1,261.28	-91.24	2.83	-1.95	81.72
9	2.7	COMB1	Combination	-1,261.28	-91.24	2.83	-1.95	81.72
9	3.6	COMB1	Combination	-1,255.15	-91.24	2.83	-4.50	163.83

				Element Forces - Frames for 7.5m conventional slab				
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
10	0	COMB1	Combination	-585.48	-117.11	4.69	6.91	-193.42
10	0.9	COMB1	Combination	-579.36	-117.11	4.69	2.69	-88.01
10	0.9	COMB1	Combination	-579.36	-117.11	4.69	2.69	-88.01
10	1.8	COMB1	Combination	-573.23	-117.11	4.69	-1.53	17.39
10	1.8	COMB1	Combination	-573.23	-117.11	4.69	-1.53	17.39
10	2.7	COMB1	Combination	-567.11	-117.11	4.69	-5.76	122.79
10	2.7	COMB1	Combination	-567.11	-117.11	4.69	-5.76	122.79
10	3.6	COMB1	Combination	-560.99	-117.11	4.69	-9.98	228.19
11	0	COMB1	Combination	-2,803.35	-2.05	0.00	0.00	0.00
11	0.375	COMB1	Combination	-2,800.80	-2.05	0.00	0.00	0.77
11	0.375	COMB1	Combination	-2,800.80	-2.05	0.00	0.00	0.77
11	0.75	COMB1	Combination	-2,798.24	-2.05	0.00	0.00	1.54
11	0.75	COMB1	Combination	-2,798.24	-2.05	0.00	0.00	1.54
11	1.125	COMB1	Combination	-2,795.69	-2.05	0.00	0.00	2.30
11	1.125	COMB1	Combination	-2,795.69	-2.05	0.00	0.00	2.30
11	1.5	COMB1	Combination	-2,793.14	-2.05	0.00	0.00	3.07
12	0	COMB1	Combination	-2,556.38	-43.95	0.00	0.00	-47.98
12	0.9	COMB1	Combination	-2,550.26	-43.95	0.00	0.00	-8.42
12	0.9	COMB1	Combination	-2,550.26	-43.95	0.00	0.00	-8.42
12	1.8	COMB1	Combination	-2,544.14	-43.95	0.00	0.00	31.13
12	1.8	COMB1	Combination	-2,544.14	-43.95	0.00	0.00	31.13
12	2.7	COMB1	Combination	-2,538.01	-43.95	0.00	0.00	70.69
12	2.7	COMB1	Combination	-2,538.01	-43.95	0.00	0.00	70.69
12	3.6	COMB1	Combination	-2,531.89	-43.95	0.00	0.00	110.25
13	0	COMB1	Combination	-1,902.41	-92.35	0.00	0.00	-167.96

Element Forces - Frames for 7.5m conventional slab

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
13	0.9	COMB1	Combination	-1,896.29	-92.35	0.00	0.00	-84.85
13	0.9	COMB1	Combination	-1,896.29	-92.35	0.00	0.00	-84.85
13	1.8	COMB1	Combination	-1,890.16	-92.35	0.00	0.00	-1.74
13	1.8	COMB1	Combination	-1,890.16	-92.35	0.00	0.00	-1.74
13	2.7	COMB1	Combination	-1,884.04	-92.35	0.00	0.00	81.38
13	2.7	COMB1	Combination	-1,884.04	-92.35	0.00	0.00	81.38
13	3.6	COMB1	Combination	-1,877.92	-92.35	0.00	0.00	164.49
14	0	COMB1	Combination	-1,233.47	-89.72	0.00	0.00	-161.74
14	0.9	COMB1	Combination	-1,227.35	-89.72	0.00	0.00	-80.99
14	0.9	COMB1	Combination	-1,227.35	-89.72	0.00	0.00	-80.99
14	1.8	COMB1	Combination	-1,221.22	-89.72	0.00	0.00	-0.25
14	1.8	COMB1	Combination	-1,221.22	-89.72	0.00	0.00	-0.25
14	2.7	COMB1	Combination	-1,215.10	-89.72	0.00	0.00	80.50
14	2.7	COMB1	Combination	-1,215.10	-89.72	0.00	0.00	80.50
14	3.6	COMB1	Combination	-1,208.97	-89.72	0.00	0.00	161.24
15	0	COMB1	Combination	-555.85	-115.34	0.00	0.00	-190.55
15	0.9	COMB1	Combination	-549.73	-115.34	0.00	0.00	-86.74
15	0.9	COMB1	Combination	-549.73	-115.34	0.00	0.00	-86.74
15	1.8	COMB1	Combination	-543.61	-115.34	0.00	0.00	17.06
15	1.8	COMB1	Combination	-543.61	-115.34	0.00	0.00	17.06
15	2.7	COMB1	Combination	-537.48	-115.34	0.00	0.00	120.86
15	2.7	COMB1	Combination	-537.48	-115.34	0.00	0.00	120.86
15	3.6	COMB1	Combination	-531.36	-115.34	0.00	0.00	224.67
16	0	COMB1	Combination	-2,909.71	-2.38	0.18	0.00	0.00
16	0.375	COMB1	Combination	-2,907.16	-2.38	0.18	-0.07	0.89

Element Forces - Frames for 7.5m conventional slab

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
16	0.375	COMB1	Combination	-2,907.16	-2.38	0.18	-0.07	0.89
16	0.75	COMB1	Combination	-2,904.61	-2.38	0.18	-0.14	1.78
16	0.75	COMB1	Combination	-2,904.61	-2.38	0.18	-0.14	1.78
16	1.125	COMB1	Combination	-2,902.06	-2.38	0.18	-0.20	2.67
16	1.125	COMB1	Combination	-2,902.06	-2.38	0.18	-0.20	2.67
16	1.5	COMB1	Combination	-2,899.51	-2.38	0.18	-0.27	3.56
17	0	COMB1	Combination	-2,659.05	-45.34	-4.07	-5.27	-49.63
17	0.9	COMB1	Combination	-2,652.93	-45.34	-4.07	-1.61	-8.83
17	0.9	COMB1	Combination	-2,652.93	-45.34	-4.07	-1.61	-8.83
17	1.8	COMB1	Combination	-2,646.81	-45.34	-4.07	2.05	31.98
17	1.8	COMB1	Combination	-2,646.81	-45.34	-4.07	2.05	31.98
17	2.7	COMB1	Combination	-2,640.68	-45.34	-4.07	5.70	72.78
17	2.7	COMB1	Combination	-2,640.68	-45.34	-4.07	5.70	72.78
17	3.6	COMB1	Combination	-2,634.56	-45.34	-4.07	9.36	113.59
18	0	COMB1	Combination	-1,971.43	-94.61	-5.58	-11.07	-172.36
18	0.9	COMB1	Combination	-1,965.31	-94.61	-5.58	-6.05	-87.21
18	0.9	COMB1	Combination	-1,965.31	-94.61	-5.58	-6.05	-87.21
18	1.8	COMB1	Combination	-1,959.19	-94.61	-5.58	-1.03	-2.06
18	1.8	COMB1	Combination	-1,959.19	-94.61	-5.58	-1.03	-2.06
18	2.7	COMB1	Combination	-1,953.06	-94.61	-5.58	3.99	83.09
18	2.7	COMB1	Combination	-1,953.06	-94.61	-5.58	3.99	83.09
18	3.6	COMB1	Combination	-1,946.94	-94.61	-5.58	9.01	168.23
19	0	COMB1	Combination	-1,279.65	-91.24	-2.83	-5.71	-164.62
19	0.9	COMB1	Combination	-1,273.52	-91.24	-2.83	-3.16	-82.51
19	0.9	COMB1	Combination	-1,273.52	-91.24	-2.83	-3.16	-82.51

Element Forces - Frames for 7.5m conventional slab								
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
19	1.8	COMB1	Combination	-1,267.40	-91.24	-2.83	-0.60	-0.40
19	1.8	COMB1	Combination	-1,267.40	-91.24	-2.83	-0.60	-0.40
19	2.7	COMB1	Combination	-1,261.28	-91.24	-2.83	1.95	81.72
19	2.7	COMB1	Combination	-1,261.28	-91.24	-2.83	1.95	81.72
19	3.6	COMB1	Combination	-1,255.15	-91.24	-2.83	4.50	163.83
20	0	COMB1	Combination	-585.48	-117.11	-4.69	-6.91	-193.42
20	0.9	COMB1	Combination	-579.36	-117.11	-4.69	-2.69	-88.01
20	0.9	COMB1	Combination	-579.36	-117.11	-4.69	-2.69	-88.01
20	1.8	COMB1	Combination	-573.23	-117.11	-4.69	1.53	17.39
20	1.8	COMB1	Combination	-573.23	-117.11	-4.69	1.53	17.39
20	2.7	COMB1	Combination	-567.11	-117.11	-4.69	5.76	122.79
20	2.7	COMB1	Combination	-567.11	-117.11	-4.69	5.76	122.79
20	3.6	COMB1	Combination	-560.99	-117.11	-4.69	9.98	228.19
21	0	COMB1	Combination	-1,746.90	-28.67	28.67	0.00	0.00
21	0.375	COMB1	Combination	-1,744.35	-28.67	28.67	-10.75	10.75
21	0.375	COMB1	Combination	-1,744.35	-28.67	28.67	-10.75	10.75
21	0.75	COMB1	Combination	-1,741.80	-28.67	28.67	-21.51	21.51
21	0.75	COMB1	Combination	-1,741.80	-28.67	28.67	-21.51	21.51
21	1.125	COMB1	Combination	-1,739.25	-28.67	28.67	-32.26	32.26
21	1.125	COMB1	Combination	-1,739.25	-28.67	28.67	-32.26	32.26
21	1.5	COMB1	Combination	-1,736.70	-28.67	28.67	-43.01	43.01
22	0	COMB1	Combination	-1,538.69	-42.83	42.83	61.56	-61.56
22	0.9	COMB1	Combination	-1,532.57	-42.83	42.83	23.01	-23.01
22	0.9	COMB1	Combination	-1,532.57	-42.83	42.83	23.01	-23.01
22	1.8	COMB1	Combination	-1,526.44	-42.83	42.83	-15.54	15.54

Element Forces - Frames for 7.5m conventional slab

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
22	1.8	COMB1	Combination	-1,526.44	-42.83	42.83	-15.54	15.54
22	2.7	COMB1	Combination	-1,520.32	-42.83	42.83	-54.08	54.08
22	2.7	COMB1	Combination	-1,520.32	-42.83	42.83	-54.08	54.08
22	3.6	COMB1	Combination	-1,514.20	-42.83	42.83	-92.63	92.63
23	0	COMB1	Combination	-1,136.32	-66.32	66.32	120.30	-120.30
23	0.9	COMB1	Combination	-1,130.20	-66.32	66.32	60.61	-60.61
23	0.9	COMB1	Combination	-1,130.20	-66.32	66.32	60.61	-60.61
23	1.8	COMB1	Combination	-1,124.07	-66.32	66.32	0.92	-0.92
23	1.8	COMB1	Combination	-1,124.07	-66.32	66.32	0.92	-0.92
23	2.7	COMB1	Combination	-1,117.95	-66.32	66.32	-58.76	58.76
23	2.7	COMB1	Combination	-1,117.95	-66.32	66.32	-58.76	58.76
23	3.6	COMB1	Combination	-1,111.83	-66.32	66.32	-118.45	118.45
24	0	COMB1	Combination	-724.39	-65.11	65.11	117.30	-117.30
24	0.9	COMB1	Combination	-718.26	-65.11	65.11	58.70	-58.70
24	0.9	COMB1	Combination	-718.26	-65.11	65.11	58.70	-58.70
24	1.8	COMB1	Combination	-712.14	-65.11	65.11	0.09	-0.09
24	1.8	COMB1	Combination	-712.14	-65.11	65.11	0.09	-0.09
24	2.7	COMB1	Combination	-706.02	-65.11	65.11	-58.51	58.51
24	2.7	COMB1	Combination	-706.02	-65.11	65.11	-58.51	58.51
24	3.6	COMB1	Combination	-699.89	-65.11	65.11	-117.11	117.11
25	0	COMB1	Combination	-307.23	-77.22	77.22	130.63	-130.63
25	0.9	COMB1	Combination	-301.10	-77.22	77.22	61.13	-61.13
25	0.9	COMB1	Combination	-301.10	-77.22	77.22	61.13	-61.13
25	1.8	COMB1	Combination	-294.98	-77.22	77.22	-8.37	8.37
25	1.8	COMB1	Combination	-294.98	-77.22	77.22	-8.37	8.37

Element Forces - Frames for 7.5m conventional slab								
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
25	2.7	COMB1	Combination	-288.86	-77.22	77.22	-77.87	77.87
25	2.7	COMB1	Combination	-288.86	-77.22	77.22	-77.87	77.87
25	3.6	COMB1	Combination	-282.73	-77.22	77.22	-147.37	147.37
26	0	COMB1	Combination	-2,909.71	-0.18	-2.38	0.00	0.00
26	0.375	COMB1	Combination	-2,907.16	-0.18	-2.38	0.89	0.07
26	0.375	COMB1	Combination	-2,907.16	-0.18	-2.38	0.89	0.07
26	0.75	COMB1	Combination	-2,904.61	-0.18	-2.38	1.78	0.14
26	0.75	COMB1	Combination	-2,904.61	-0.18	-2.38	1.78	0.14
26	1.125	COMB1	Combination	-2,902.06	-0.18	-2.38	2.67	0.20
26	1.125	COMB1	Combination	-2,902.06	-0.18	-2.38	2.67	0.20
26	1.5	COMB1	Combination	-2,899.51	-0.18	-2.38	3.56	0.27
27	0	COMB1	Combination	-2,659.05	4.07	-45.34	-49.63	5.27
27	0.9	COMB1	Combination	-2,652.93	4.07	-45.34	-8.83	1.61
27	0.9	COMB1	Combination	-2,652.93	4.07	-45.34	-8.83	1.61
27	1.8	COMB1	Combination	-2,646.81	4.07	-45.34	31.98	-2.05
27	1.8	COMB1	Combination	-2,646.81	4.07	-45.34	31.98	-2.05
27	2.7	COMB1	Combination	-2,640.68	4.07	-45.34	72.78	-5.70
27	2.7	COMB1	Combination	-2,640.68	4.07	-45.34	72.78	-5.70
27	3.6	COMB1	Combination	-2,634.56	4.07	-45.34	113.59	-9.36
28	0	COMB1	Combination	-1,971.43	5.58	-94.61	-172.36	11.07
28	0.9	COMB1	Combination	-1,965.31	5.58	-94.61	-87.21	6.05
28	0.9	COMB1	Combination	-1,965.31	5.58	-94.61	-87.21	6.05
28	1.8	COMB1	Combination	-1,959.19	5.58	-94.61	-2.06	1.03
28	1.8	COMB1	Combination	-1,959.19	5.58	-94.61	-2.06	1.03
28	2.7	COMB1	Combination	-1,953.06	5.58	-94.61	83.09	-3.99

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
28	2.7	COMB1	Combination	-1,953.06	5.58	-94.61	83.09	-3.99
28	3.6	COMB1	Combination	-1,946.94	5.58	-94.61	168.23	-9.01
29	0	COMB1	Combination	-1,279.65	2.83	-91.24	-164.62	5.71
29	0.9	COMB1	Combination	-1,273.52	2.83	-91.24	-82.51	3.16
29	0.9	COMB1	Combination	-1,273.52	2.83	-91.24	-82.51	3.16
29	1.8	COMB1	Combination	-1,267.40	2.83	-91.24	-0.40	0.60
29	1.8	COMB1	Combination	-1,267.40	2.83	-91.24	-0.40	0.60
29	2.7	COMB1	Combination	-1,261.28	2.83	-91.24	81.72	-1.95
29	2.7	COMB1	Combination	-1,261.28	2.83	-91.24	81.72	-1.95
29	3.6	COMB1	Combination	-1,255.15	2.83	-91.24	163.83	-4.50
30	0	COMB1	Combination	-585.48	4.69	-117.11	-193.42	6.91
30	0.9	COMB1	Combination	-579.36	4.69	-117.11	-88.01	2.69
30	0.9	COMB1	Combination	-579.36	4.69	-117.11	-88.01	2.69
30	1.8	COMB1	Combination	-573.23	4.69	-117.11	17.39	-1.53
30	1.8	COMB1	Combination	-573.23	4.69	-117.11	17.39	-1.53
30	2.7	COMB1	Combination	-567.11	4.69	-117.11	122.79	-5.76
30	2.7	COMB1	Combination	-567.11	4.69	-117.11	122.79	-5.76
30	3.6	COMB1	Combination	-560.99	4.69	-117.11	228.19	-9.98
31	0	COMB1	Combination	-4,553.86	-6.74	-6.74	0.00	0.00
31	0.375	COMB1	Combination	-4,551.31	-6.74	-6.74	2.53	2.53
31	0.375	COMB1	Combination	-4,551.31	-6.74	-6.74	2.53	2.53
31	0.75	COMB1	Combination	-4,548.76	-6.74	-6.74	5.05	5.05
31	0.75	COMB1	Combination	-4,548.76	-6.74	-6.74	5.05	5.05
31	1.125	COMB1	Combination	-4,546.21	-6.74	-6.74	7.58	7.58
31	1.125	COMB1	Combination	-4,546.21	-6.74	-6.74	7.58	7.58

Element Forces - Frames for 7.5m conventional slab

				Element Forces - Frames for 7.5m conventional slab				
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
31	1.5	COMB1	Combination	-4,543.66	-6.74	-6.74	10.10	10.10
32	0	COMB1	Combination	-4,441.99	4.71	4.71	4.51	4.51
32	0.9	COMB1	Combination	-4,435.87	4.71	4.71	0.27	0.27
32	0.9	COMB1	Combination	-4,435.87	4.71	4.71	0.27	0.27
32	1.8	COMB1	Combination	-4,429.74	4.71	4.71	-3.97	-3.97
32	1.8	COMB1	Combination	-4,429.74	4.71	4.71	-3.97	-3.97
32	2.7	COMB1	Combination	-4,423.62	4.71	4.71	-8.21	-8.21
32	2.7	COMB1	Combination	-4,423.62	4.71	4.71	-8.21	-8.21
32	3.6	COMB1	Combination	-4,417.49	4.71	4.71	-12.45	-12.45
33	0	COMB1	Combination	-3,310.37	7.58	7.58	15.35	15.35
33	0.9	COMB1	Combination	-3,304.25	7.58	7.58	8.52	8.52
33	0.9	COMB1	Combination	-3,304.25	7.58	7.58	8.52	8.52
33	1.8	COMB1	Combination	-3,298.13	7.58	7.58	1.70	1.70
33	1.8	COMB1	Combination	-3,298.13	7.58	7.58	1.70	1.70
33	2.7	COMB1	Combination	-3,292.00	7.58	7.58	-5.12	-5.12
33	2.7	COMB1	Combination	-3,292.00	7.58	7.58	-5.12	-5.12
33	3.6	COMB1	Combination	-3,285.88	7.58	7.58	-11.94	-11.94
34	0	COMB1	Combination	-2,210.80	3.10	3.10	6.60	6.60
34	0.9	COMB1	Combination	-2,204.68	3.10	3.10	3.81	3.81
34	0.9	COMB1	Combination	-2,204.68	3.10	3.10	3.81	3.81
34	1.8	COMB1	Combination	-2,198.55	3.10	3.10	1.01	1.01
34	1.8	COMB1	Combination	-2,198.55	3.10	3.10	1.01	1.01
34	2.7	COMB1	Combination	-2,192.43	3.10	3.10	-1.78	-1.78
34	2.7	COMB1	Combination	-2,192.43	3.10	3.10	-1.78	-1.78
34	3.6	COMB1	Combination	-2,186.31	3.10	3.10	-4.57	-4.57

Element Forces - Frames for 7.5m conventional slab								
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
35	0	COMB1	Combination	-1,129.90	5.74	5.74	7.90	7.90
35	0.9	COMB1	Combination	-1,123.78	5.74	5.74	2.74	2.74
35	0.9	COMB1	Combination	-1,123.78	5.74	5.74	2.74	2.74
35	1.8	COMB1	Combination	-1,117.66	5.74	5.74	-2.42	-2.42
35	1.8	COMB1	Combination	-1,117.66	5.74	5.74	-2.42	-2.42
35	2.7	COMB1	Combination	-1,111.53	5.74	5.74	-7.59	-7.59
35	2.7	COMB1	Combination	-1,111.53	5.74	5.74	-7.59	-7.59
35	3.6	COMB1	Combination	-1,105.41	5.74	5.74	-12.75	-12.75
36	0	COMB1	Combination	-4,393.88	-6.67	0.00	0.00	0.00
36	0.375	COMB1	Combination	-4,391.33	-6.67	0.00	0.00	2.50
36	0.375	COMB1	Combination	-4,391.33	-6.67	0.00	0.00	2.50
36	0.75	COMB1	Combination	-4,388.78	-6.67	0.00	0.00	5.00
36	0.75	COMB1	Combination	-4,388.78	-6.67	0.00	0.00	5.00
36	1.125	COMB1	Combination	-4,386.23	-6.67	0.00	0.00	7.50
36	1.125	COMB1	Combination	-4,386.23	-6.67	0.00	0.00	7.50
36	1.5	COMB1	Combination	-4,383.67	-6.67	0.00	0.00	10.00
37	0	COMB1	Combination	-4,274.83	4.83	0.00	0.00	4.61
37	0.9	COMB1	Combination	-4,268.71	4.83	0.00	0.00	0.27
37	0.9	COMB1	Combination	-4,268.71	4.83	0.00	0.00	0.27
37	1.8	COMB1	Combination	-4,262.59	4.83	0.00	0.00	-4.08
37	1.8	COMB1	Combination	-4,262.59	4.83	0.00	0.00	-4.08
37	2.7	COMB1	Combination	-4,256.46	4.83	0.00	0.00	-8.42
37	2.7	COMB1	Combination	-4,256.46	4.83	0.00	0.00	-8.42
37	3.6	COMB1	Combination	-4,250.34	4.83	0.00	0.00	-12.76
38	0	COMB1	Combination	-3,204.40	7.90	0.00	0.00	15.91

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
38	0.9	COMB1	Combination	-3,198.27	7.90	0.00	0.00	8.81
38	0.9	COMB1	Combination	-3,198.27	7.90	0.00	0.00	8.81
38	1.8	COMB1	Combination	-3,192.15	7.90	0.00	0.00	1.70
38	1.8	COMB1	Combination	-3,192.15	7.90	0.00	0.00	1.70
38	2.7	COMB1	Combination	-3,186.03	7.90	0.00	0.00	-5.41
38	2.7	COMB1	Combination	-3,186.03	7.90	0.00	0.00	-5.41
38	3.6	COMB1	Combination	-3,179.90	7.90	0.00	0.00	-12.52
39	0	COMB1	Combination	-2,139.78	3.42	0.00	0.00	7.17
39	0.9	COMB1	Combination	-2,133.66	3.42	0.00	0.00	4.10
39	0.9	COMB1	Combination	-2,133.66	3.42	0.00	0.00	4.10
39	1.8	COMB1	Combination	-2,127.54	3.42	0.00	0.00	1.02
39	1.8	COMB1	Combination	-2,127.54	3.42	0.00	0.00	1.02
39	2.7	COMB1	Combination	-2,121.41	3.42	0.00	0.00	-2.05
39	2.7	COMB1	Combination	-2,121.41	3.42	0.00	0.00	-2.05
39	3.6	COMB1	Combination	-2,115.29	3.42	0.00	0.00	-5.13
40	0	COMB1	Combination	-1,078.27	6.52	0.00	0.00	8.99
40	0.9	COMB1	Combination	-1,072.14	6.52	0.00	0.00	3.13
40	0.9	COMB1	Combination	-1,072.14	6.52	0.00	0.00	3.13
40	1.8	COMB1	Combination	-1,066.02	6.52	0.00	0.00	-2.74
40	1.8	COMB1	Combination	-1,066.02	6.52	0.00	0.00	-2.74
40	2.7	COMB1	Combination	-1,059.90	6.52	0.00	0.00	-8.60
40	2.7	COMB1	Combination	-1,059.90	6.52	0.00	0.00	-8.60
40	3.6	COMB1	Combination	-1,053.77	6.52	0.00	0.00	-14.46
41	0	COMB1	Combination	-4,553.86	-6.74	6.74	0.00	0.00
41	0.375	COMB1	Combination	-4,551.31	-6.74	6.74	-2.53	2.53

Element Forces - Frames for 7.5m conventional slab

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3

Element Forces - Frames for 7.5m conventional slab

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
41	0.375	COMB1	Combination	-4,551.31	-6.74	6.74	-2.53	2.53
41	0.75	COMB1	Combination	-4,548.76	-6.74	6.74	-5.05	5.05
41	0.75	COMB1	Combination	-4,548.76	-6.74	6.74	-5.05	5.05
41	1.125	COMB1	Combination	-4,546.21	-6.74	6.74	-7.58	7.58
41	1.125	COMB1	Combination	-4,546.21	-6.74	6.74	-7.58	7.58
41	1.5	COMB1	Combination	-4,543.66	-6.74	6.74	-10.10	10.10
42	0	COMB1	Combination	-4,441.99	4.71	-4.71	-4.51	4.51
42	0.9	COMB1	Combination	-4,435.87	4.71	-4.71	-0.27	0.27
42	0.9	COMB1	Combination	-4,435.87	4.71	-4.71	-0.27	0.27
42	1.8	COMB1	Combination	-4,429.74	4.71	-4.71	3.97	-3.97
42	1.8	COMB1	Combination	-4,429.74	4.71	-4.71	3.97	-3.97
42	2.7	COMB1	Combination	-4,423.62	4.71	-4.71	8.21	-8.21
42	2.7	COMB1	Combination	-4,423.62	4.71	-4.71	8.21	-8.21
42	3.6	COMB1	Combination	-4,417.49	4.71	-4.71	12.45	-12.45
43	0	COMB1	Combination	-3,310.37	7.58	-7.58	-15.35	15.35
43	0.9	COMB1	Combination	-3,304.25	7.58	-7.58	-8.52	8.52
43	0.9	COMB1	Combination	-3,304.25	7.58	-7.58	-8.52	8.52
43	1.8	COMB1	Combination	-3,298.13	7.58	-7.58	-1.70	1.70
43	1.8	COMB1	Combination	-3,298.13	7.58	-7.58	-1.70	1.70
43	2.7	COMB1	Combination	-3,292.00	7.58	-7.58	5.12	-5.12
43	2.7	COMB1	Combination	-3,292.00	7.58	-7.58	5.12	-5.12
43	3.6	COMB1	Combination	-3,285.88	7.58	-7.58	11.94	-11.94
44	0	COMB1	Combination	-2,210.80	3.10	-3.10	-6.60	6.60
44	0.9	COMB1	Combination	-2,204.68	3.10	-3.10	-3.81	3.81
44	0.9	COMB1	Combination	-2,204.68	3.10	-3.10	-3.81	3.81

				Element Forces - Frames for 7.5m conventional slab				
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
44	1.8	COMB1	Combination	-2,198.55	3.10	-3.10	-1.01	1.01
44	1.8	COMB1	Combination	-2,198.55	3.10	-3.10	-1.01	1.01
44	2.7	COMB1	Combination	-2,192.43	3.10	-3.10	1.78	-1.78
44	2.7	COMB1	Combination	-2,192.43	3.10	-3.10	1.78	-1.78
44	3.6	COMB1	Combination	-2,186.31	3.10	-3.10	4.57	-4.57
45	0	COMB1	Combination	-1,129.90	5.74	-5.74	-7.90	7.90
45	0.9	COMB1	Combination	-1,123.78	5.74	-5.74	-2.74	2.74
45	0.9	COMB1	Combination	-1,123.78	5.74	-5.74	-2.74	2.74
45	1.8	COMB1	Combination	-1,117.66	5.74	-5.74	2.42	-2.42
45	1.8	COMB1	Combination	-1,117.66	5.74	-5.74	2.42	-2.42
45	2.7	COMB1	Combination	-1,111.53	5.74	-5.74	7.59	-7.59
45	2.7	COMB1	Combination	-1,111.53	5.74	-5.74	7.59	-7.59
45	3.6	COMB1	Combination	-1,105.41	5.74	-5.74	12.75	-12.75
46	0	COMB1	Combination	-2,909.71	-0.18	2.38	0.00	0.00
46	0.375	COMB1	Combination	-2,907.16	-0.18	2.38	-0.89	0.07
46	0.375	COMB1	Combination	-2,907.16	-0.18	2.38	-0.89	0.07
46	0.75	COMB1	Combination	-2,904.61	-0.18	2.38	-1.78	0.14
46	0.75	COMB1	Combination	-2,904.61	-0.18	2.38	-1.78	0.14
46	1.125	COMB1	Combination	-2,902.06	-0.18	2.38	-2.67	0.20
46	1.125	COMB1	Combination	-2,902.06	-0.18	2.38	-2.67	0.20
46	1.5	COMB1	Combination	-2,899.51	-0.18	2.38	-3.56	0.27
47	0	COMB1	Combination	-2,659.05	4.07	45.34	49.63	5.27
47	0.9	COMB1	Combination	-2,652.93	4.07	45.34	8.83	1.61
47	0.9	COMB1	Combination	-2,652.93	4.07	45.34	8.83	1.61
47	1.8	COMB1	Combination	-2,646.81	4.07	45.34	-31.98	-2.05

Element Forces - Frames for 7.5m conventional slab								
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
47	1.8	COMB1	Combination	-2,646.81	4.07	45.34	-31.98	-2.05
47	2.7	COMB1	Combination	-2,640.68	4.07	45.34	-72.78	-5.70
47	2.7	COMB1	Combination	-2,640.68	4.07	45.34	-72.78	-5.70
47	3.6	COMB1	Combination	-2,634.56	4.07	45.34	-113.59	-9.36
48	0	COMB1	Combination	-1,971.43	5.58	94.61	172.36	11.07
48	0.9	COMB1	Combination	-1,965.31	5.58	94.61	87.21	6.05
48	0.9	COMB1	Combination	-1,965.31	5.58	94.61	87.21	6.05
48	1.8	COMB1	Combination	-1,959.19	5.58	94.61	2.06	1.03
48	1.8	COMB1	Combination	-1,959.19	5.58	94.61	2.06	1.03
48	2.7	COMB1	Combination	-1,953.06	5.58	94.61	-83.09	-3.99
48	2.7	COMB1	Combination	-1,953.06	5.58	94.61	-83.09	-3.99
48	3.6	COMB1	Combination	-1,946.94	5.58	94.61	-168.23	-9.01
49	0	COMB1	Combination	-1,279.65	2.83	91.24	164.62	5.71
49	0.9	COMB1	Combination	-1,273.52	2.83	91.24	82.51	3.16
49	0.9	COMB1	Combination	-1,273.52	2.83	91.24	82.51	3.16
49	1.8	COMB1	Combination	-1,267.40	2.83	91.24	0.40	0.60
49	1.8	COMB1	Combination	-1,267.40	2.83	91.24	0.40	0.60
49	2.7	COMB1	Combination	-1,261.28	2.83	91.24	-81.72	-1.95
49	2.7	COMB1	Combination	-1,261.28	2.83	91.24	-81.72	-1.95
49	3.6	COMB1	Combination	-1,255.15	2.83	91.24	-163.83	-4.50
50	0	COMB1	Combination	-585.48	4.69	117.11	193.42	6.91
50	0.9	COMB1	Combination	-579.36	4.69	117.11	88.01	2.69
50	0.9	COMB1	Combination	-579.36	4.69	117.11	88.01	2.69
50	1.8	COMB1	Combination	-573.23	4.69	117.11	-17.39	-1.53
50	1.8	COMB1	Combination	-573.23	4.69	117.11	-17.39	-1.53

APPENDIX B.2

<table>
<tr><td colspan="9" align="center">Element Forces - Frames for 7.5m Flat slab</td></tr>
<tr><th>Frame</th><th>Station</th><th>OutputCase</th><th>CaseType</th><th>P</th><th>V2</th><th>V3</th><th>M2</th><th>M3</th></tr>
<tr><td>Text</td><td>m</td><td>Text</td><td>Text</td><td>KN</td><td>KN</td><td>KN</td><td>KN-m</td><td>KN-m</td></tr>
<tr><td>1</td><td>0</td><td>COMB1</td><td>Combination</td><td>-1,745.88</td><td>-28.05</td><td>-28.05</td><td>0.00</td><td>0.00</td></tr>
<tr><td>1</td><td>0.375</td><td>COMB1</td><td>Combination</td><td>-1,743.33</td><td>-28.05</td><td>-28.05</td><td>10.52</td><td>10.52</td></tr>
<tr><td>1</td><td>0.375</td><td>COMB1</td><td>Combination</td><td>-1,743.33</td><td>-28.05</td><td>-28.05</td><td>10.52</td><td>10.52</td></tr>
<tr><td>1</td><td>0.75</td><td>COMB1</td><td>Combination</td><td>-1,740.78</td><td>-28.05</td><td>-28.05</td><td>21.04</td><td>21.04</td></tr>
<tr><td>1</td><td>0.75</td><td>COMB1</td><td>Combination</td><td>-1,740.78</td><td>-28.05</td><td>-28.05</td><td>21.04</td><td>21.04</td></tr>
<tr><td>1</td><td>1.125</td><td>COMB1</td><td>Combination</td><td>-1,738.23</td><td>-28.05</td><td>-28.05</td><td>31.55</td><td>31.55</td></tr>
<tr><td>1</td><td>1.125</td><td>COMB1</td><td>Combination</td><td>-1,738.23</td><td>-28.05</td><td>-28.05</td><td>31.55</td><td>31.55</td></tr>
<tr><td>1</td><td>1.5</td><td>COMB1</td><td>Combination</td><td>-1,735.68</td><td>-28.05</td><td>-28.05</td><td>42.07</td><td>42.07</td></tr>
<tr><td>2</td><td>0</td><td>COMB1</td><td>Combination</td><td>-1,537.46</td><td>-44.73</td><td>-44.73</td><td>-63.22</td><td>-63.22</td></tr>
<tr><td>2</td><td>0.9</td><td>COMB1</td><td>Combination</td><td>-1,531.34</td><td>-44.73</td><td>-44.73</td><td>-22.96</td><td>-22.96</td></tr>
<tr><td>2</td><td>0.9</td><td>COMB1</td><td>Combination</td><td>-1,531.34</td><td>-44.73</td><td>-44.73</td><td>-22.96</td><td>-22.96</td></tr>
<tr><td>2</td><td>1.8</td><td>COMB1</td><td>Combination</td><td>-1,525.22</td><td>-44.73</td><td>-44.73</td><td>17.29</td><td>17.29</td></tr>
<tr><td>2</td><td>1.8</td><td>COMB1</td><td>Combination</td><td>-1,525.22</td><td>-44.73</td><td>-44.73</td><td>17.29</td><td>17.29</td></tr>
<tr><td>2</td><td>2.7</td><td>COMB1</td><td>Combination</td><td>-1,519.09</td><td>-44.73</td><td>-44.73</td><td>57.55</td><td>57.55</td></tr>
<tr><td>2</td><td>2.7</td><td>COMB1</td><td>Combination</td><td>-1,519.09</td><td>-44.73</td><td>-44.73</td><td>57.55</td><td>57.55</td></tr>
<tr><td>2</td><td>3.6</td><td>COMB1</td><td>Combination</td><td>-1,512.97</td><td>-44.73</td><td>-44.73</td><td>97.80</td><td>97.80</td></tr>
<tr><td>3</td><td>0</td><td>COMB1</td><td>Combination</td><td>-1,135.16</td><td>-70.54</td><td>-70.54</td><td>-128.24</td><td>-128.24</td></tr>
<tr><td>3</td><td>0.9</td><td>COMB1</td><td>Combination</td><td>-1,129.04</td><td>-70.54</td><td>-70.54</td><td>-64.76</td><td>-64.76</td></tr>
<tr><td>3</td><td>0.9</td><td>COMB1</td><td>Combination</td><td>-1,129.04</td><td>-70.54</td><td>-70.54</td><td>-64.76</td><td>-64.76</td></tr>
<tr><td>3</td><td>1.8</td><td>COMB1</td><td>Combination</td><td>-1,122.91</td><td>-70.54</td><td>-70.54</td><td>-1.28</td><td>-1.28</td></tr>
<tr><td>3</td><td>1.8</td><td>COMB1</td><td>Combination</td><td>-1,122.91</td><td>-70.54</td><td>-70.54</td><td>-1.28</td><td>-1.28</td></tr>
<tr><td>3</td><td>2.7</td><td>COMB1</td><td>Combination</td><td>-1,116.79</td><td>-70.54</td><td>-70.54</td><td>62.21</td><td>62.21</td></tr>
</table>

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<tr><th colspan="9" align="center">Element Forces - Frames for 7.5m Flat slab</th></tr>
<tr><th>Frame</th><th>Station</th><th>OutputCase</th><th>CaseType</th><th>P</th><th>V2</th><th>V3</th><th>M2</th><th>M3</th></tr>
<tr><th>Text</th><th>m</th><th>Text</th><th>Text</th><th>KN</th><th>KN</th><th>KN</th><th>KN-m</th><th>KN-m</th></tr>
</thead>
<tbody>
<tr><td>3</td><td>2.7</td><td>COMB1</td><td>Combination</td><td>-1,116.79</td><td>-70.54</td><td>-70.54</td><td>62.21</td><td>62.21</td></tr>
<tr><td>3</td><td>3.6</td><td>COMB1</td><td>Combination</td><td>-1,110.66</td><td>-70.54</td><td>-70.54</td><td>125.69</td><td>125.69</td></tr>
<tr><td>4</td><td>0</td><td>COMB1</td><td>Combination</td><td>-723.00</td><td>-68.58</td><td>-68.58</td><td>-123.73</td><td>-123.73</td></tr>
<tr><td>4</td><td>0.9</td><td>COMB1</td><td>Combination</td><td>-716.88</td><td>-68.58</td><td>-68.58</td><td>-62.00</td><td>-62.00</td></tr>
<tr><td>4</td><td>0.9</td><td>COMB1</td><td>Combination</td><td>-716.88</td><td>-68.58</td><td>-68.58</td><td>-62.00</td><td>-62.00</td></tr>
<tr><td>4</td><td>1.8</td><td>COMB1</td><td>Combination</td><td>-710.76</td><td>-68.58</td><td>-68.58</td><td>-0.28</td><td>-0.28</td></tr>
<tr><td>4</td><td>1.8</td><td>COMB1</td><td>Combination</td><td>-710.76</td><td>-68.58</td><td>-68.58</td><td>-0.28</td><td>-0.28</td></tr>
<tr><td>4</td><td>2.7</td><td>COMB1</td><td>Combination</td><td>-704.63</td><td>-68.58</td><td>-68.58</td><td>61.45</td><td>61.45</td></tr>
<tr><td>4</td><td>2.7</td><td>COMB1</td><td>Combination</td><td>-704.63</td><td>-68.58</td><td>-68.58</td><td>61.45</td><td>61.45</td></tr>
<tr><td>4</td><td>3.6</td><td>COMB1</td><td>Combination</td><td>-698.51</td><td>-68.58</td><td>-68.58</td><td>123.17</td><td>123.17</td></tr>
<tr><td>5</td><td>0</td><td>COMB1</td><td>Combination</td><td>-305.74</td><td>-81.60</td><td>-81.60</td><td>-137.66</td><td>-137.66</td></tr>
<tr><td>5</td><td>0.9</td><td>COMB1</td><td>Combination</td><td>-299.62</td><td>-81.60</td><td>-81.60</td><td>-64.22</td><td>-64.22</td></tr>
<tr><td>5</td><td>0.9</td><td>COMB1</td><td>Combination</td><td>-299.62</td><td>-81.60</td><td>-81.60</td><td>-64.22</td><td>-64.22</td></tr>
<tr><td>5</td><td>1.8</td><td>COMB1</td><td>Combination</td><td>-293.50</td><td>-81.60</td><td>-81.60</td><td>9.22</td><td>9.22</td></tr>
<tr><td>5</td><td>1.8</td><td>COMB1</td><td>Combination</td><td>-293.50</td><td>-81.60</td><td>-81.60</td><td>9.22</td><td>9.22</td></tr>
<tr><td>5</td><td>2.7</td><td>COMB1</td><td>Combination</td><td>-287.37</td><td>-81.60</td><td>-81.60</td><td>82.66</td><td>82.66</td></tr>
<tr><td>5</td><td>2.7</td><td>COMB1</td><td>Combination</td><td>-287.37</td><td>-81.60</td><td>-81.60</td><td>82.66</td><td>82.66</td></tr>
<tr><td>5</td><td>3.6</td><td>COMB1</td><td>Combination</td><td>-281.25</td><td>-81.60</td><td>-81.60</td><td>156.10</td><td>156.10</td></tr>
<tr><td>6</td><td>0</td><td>COMB1</td><td>Combination</td><td>-2,825.43</td><td>-1.78</td><td>-0.37</td><td>0.00</td><td>0.00</td></tr>
<tr><td>6</td><td>0.375</td><td>COMB1</td><td>Combination</td><td>-2,822.88</td><td>-1.78</td><td>-0.37</td><td>0.14</td><td>0.67</td></tr>
<tr><td>6</td><td>0.375</td><td>COMB1</td><td>Combination</td><td>-2,822.88</td><td>-1.78</td><td>-0.37</td><td>0.14</td><td>0.67</td></tr>
<tr><td>6</td><td>0.75</td><td>COMB1</td><td>Combination</td><td>-2,820.33</td><td>-1.78</td><td>-0.37</td><td>0.27</td><td>1.33</td></tr>
<tr><td>6</td><td>0.75</td><td>COMB1</td><td>Combination</td><td>-2,820.33</td><td>-1.78</td><td>-0.37</td><td>0.27</td><td>1.33</td></tr>
<tr><td>6</td><td>1.125</td><td>COMB1</td><td>Combination</td><td>-2,817.77</td><td>-1.78</td><td>-0.37</td><td>0.41</td><td>2.00</td></tr>
<tr><td>6</td><td>1.125</td><td>COMB1</td><td>Combination</td><td>-2,817.77</td><td>-1.78</td><td>-0.37</td><td>0.41</td><td>2.00</td></tr>
</tbody>
</table>

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
6	1.5	COMB1	Combination	-2,815.22	-1.78	-0.37	0.55	2.67
7	0	COMB1	Combination	-2,575.19	-45.49	4.27	5.57	-49.29
7	0.9	COMB1	Combination	-2,569.07	-45.49	4.27	1.72	-8.35
7	0.9	COMB1	Combination	-2,569.07	-45.49	4.27	1.72	-8.35
7	1.8	COMB1	Combination	-2,562.95	-45.49	4.27	-2.12	32.59
7	1.8	COMB1	Combination	-2,562.95	-45.49	4.27	-2.12	32.59
7	2.7	COMB1	Combination	-2,556.82	-45.49	4.27	-5.97	73.53
7	2.7	COMB1	Combination	-2,556.82	-45.49	4.27	-5.97	73.53
7	3.6	COMB1	Combination	-2,550.70	-45.49	4.27	-9.81	114.46
8	0	COMB1	Combination	-1,904.68	-91.30	5.93	11.67	-169.15
8	0.9	COMB1	Combination	-1,898.56	-91.30	5.93	6.33	-86.98
8	0.9	COMB1	Combination	-1,898.56	-91.30	5.93	6.33	-86.98
8	1.8	COMB1	Combination	-1,892.44	-91.30	5.93	1.00	-4.81
8	1.8	COMB1	Combination	-1,892.44	-91.30	5.93	1.00	-4.81
8	2.7	COMB1	Combination	-1,886.31	-91.30	5.93	-4.34	77.36
8	2.7	COMB1	Combination	-1,886.31	-91.30	5.93	-4.34	77.36
8	3.6	COMB1	Combination	-1,880.19	-91.30	5.93	-9.68	159.53
9	0	COMB1	Combination	-1,236.27	-78.88	3.17	6.31	-145.53
9	0.9	COMB1	Combination	-1,230.15	-78.88	3.17	3.46	-74.53
9	0.9	COMB1	Combination	-1,230.15	-78.88	3.17	3.46	-74.53
9	1.8	COMB1	Combination	-1,224.03	-78.88	3.17	0.61	-3.53
9	1.8	COMB1	Combination	-1,224.03	-78.88	3.17	0.61	-3.53
9	2.7	COMB1	Combination	-1,217.90	-78.88	3.17	-2.24	67.46
9	2.7	COMB1	Combination	-1,217.90	-78.88	3.17	-2.24	67.46
9	3.6	COMB1	Combination	-1,211.78	-78.88	3.17	-5.09	138.46

Element Forces - Frames for 7.5m Flat slab

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3

Element Forces - Frames for 7.5m Flat slab

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
10	0	COMB1	Combination	-568.30	-117.13	5.53	8.15	-182.22
10	0.9	COMB1	Combination	-562.18	-117.13	5.53	3.17	-76.80
10	0.9	COMB1	Combination	-562.18	-117.13	5.53	3.17	-76.80
10	1.8	COMB1	Combination	-556.05	-117.13	5.53	-1.80	28.61
10	1.8	COMB1	Combination	-556.05	-117.13	5.53	-1.80	28.61
10	2.7	COMB1	Combination	-549.93	-117.13	5.53	-6.78	134.02
10	2.7	COMB1	Combination	-549.93	-117.13	5.53	-6.78	134.02
10	3.6	COMB1	Combination	-543.81	-117.13	5.53	-11.75	239.44
11	0	COMB1	Combination	-2,711.57	-1.22	0.00	0.00	0.00
11	0.375	COMB1	Combination	-2,709.02	-1.22	0.00	0.00	0.46
11	0.375	COMB1	Combination	-2,709.02	-1.22	0.00	0.00	0.46
11	0.75	COMB1	Combination	-2,706.46	-1.22	0.00	0.00	0.91
11	0.75	COMB1	Combination	-2,706.46	-1.22	0.00	0.00	0.91
11	1.125	COMB1	Combination	-2,703.91	-1.22	0.00	0.00	1.37
11	1.125	COMB1	Combination	-2,703.91	-1.22	0.00	0.00	1.37
11	1.5	COMB1	Combination	-2,701.36	-1.22	0.00	0.00	1.83
12	0	COMB1	Combination	-2,464.75	-45.32	0.00	0.00	-48.85
12	0.9	COMB1	Combination	-2,458.63	-45.32	0.00	0.00	-8.05
12	0.9	COMB1	Combination	-2,458.63	-45.32	0.00	0.00	-8.05
12	1.8	COMB1	Combination	-2,452.50	-45.32	0.00	0.00	32.74
12	1.8	COMB1	Combination	-2,452.50	-45.32	0.00	0.00	32.74
12	2.7	COMB1	Combination	-2,446.38	-45.32	0.00	0.00	73.53
12	2.7	COMB1	Combination	-2,446.38	-45.32	0.00	0.00	73.53
12	3.6	COMB1	Combination	-2,440.26	-45.32	0.00	0.00	114.32
13	0	COMB1	Combination	-1,829.75	-91.72	0.00	0.00	-169.69

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
13	0.9	COMB1	Combination	-1,823.63	-91.72	0.00	0.00	-87.14
13	0.9	COMB1	Combination	-1,823.63	-91.72	0.00	0.00	-87.14
13	1.8	COMB1	Combination	-1,817.50	-91.72	0.00	0.00	-4.59
13	1.8	COMB1	Combination	-1,817.50	-91.72	0.00	0.00	-4.59
13	2.7	COMB1	Combination	-1,811.38	-91.72	0.00	0.00	77.95
13	2.7	COMB1	Combination	-1,811.38	-91.72	0.00	0.00	77.95
13	3.6	COMB1	Combination	-1,805.26	-91.72	0.00	0.00	160.50
14	0	COMB1	Combination	-1,185.55	-79.75	0.00	0.00	-147.03
14	0.9	COMB1	Combination	-1,179.42	-79.75	0.00	0.00	-75.25
14	0.9	COMB1	Combination	-1,179.42	-79.75	0.00	0.00	-75.25
14	1.8	COMB1	Combination	-1,173.30	-79.75	0.00	0.00	-3.48
14	1.8	COMB1	Combination	-1,173.30	-79.75	0.00	0.00	-3.48
14	2.7	COMB1	Combination	-1,167.18	-79.75	0.00	0.00	68.30
14	2.7	COMB1	Combination	-1,167.18	-79.75	0.00	0.00	68.30
14	3.6	COMB1	Combination	-1,161.05	-79.75	0.00	0.00	140.07
15	0	COMB1	Combination	-535.15	-118.60	0.00	0.00	-184.54
15	0.9	COMB1	Combination	-529.02	-118.60	0.00	0.00	-77.80
15	0.9	COMB1	Combination	-529.02	-118.60	0.00	0.00	-77.80
15	1.8	COMB1	Combination	-522.90	-118.60	0.00	0.00	28.95
15	1.8	COMB1	Combination	-522.90	-118.60	0.00	0.00	28.95
15	2.7	COMB1	Combination	-516.77	-118.60	0.00	0.00	135.69
15	2.7	COMB1	Combination	-516.77	-118.60	0.00	0.00	135.69
15	3.6	COMB1	Combination	-510.65	-118.60	0.00	0.00	242.43
16	0	COMB1	Combination	-2,825.43	-1.78	0.37	0.00	0.00
16	0.375	COMB1	Combination	-2,822.88	-1.78	0.37	-0.14	0.67

			Element Forces - Frames for 7.5m Flat slab					
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
16	0.375	COMB1	Combination	-2,822.88	-1.78	0.37	-0.14	0.67
16	0.75	COMB1	Combination	-2,820.33	-1.78	0.37	-0.27	1.33
16	0.75	COMB1	Combination	-2,820.33	-1.78	0.37	-0.27	1.33
16	1.125	COMB1	Combination	-2,817.77	-1.78	0.37	-0.41	2.00
16	1.125	COMB1	Combination	-2,817.77	-1.78	0.37	-0.41	2.00
16	1.5	COMB1	Combination	-2,815.22	-1.78	0.37	-0.55	2.67
17	0	COMB1	Combination	-2,575.19	-45.49	-4.27	-5.57	-49.29
17	0.9	COMB1	Combination	-2,569.07	-45.49	-4.27	-1.72	-8.35
17	0.9	COMB1	Combination	-2,569.07	-45.49	-4.27	-1.72	-8.35
17	1.8	COMB1	Combination	-2,562.95	-45.49	-4.27	2.12	32.59
17	1.8	COMB1	Combination	-2,562.95	-45.49	-4.27	2.12	32.59
17	2.7	COMB1	Combination	-2,556.82	-45.49	-4.27	5.97	73.53
17	2.7	COMB1	Combination	-2,556.82	-45.49	-4.27	5.97	73.53
17	3.6	COMB1	Combination	-2,550.70	-45.49	-4.27	9.81	114.46
18	0	COMB1	Combination	-1,904.68	-91.30	-5.93	-11.67	-169.15
18	0.9	COMB1	Combination	-1,898.56	-91.30	-5.93	-6.33	-86.98
18	0.9	COMB1	Combination	-1,898.56	-91.30	-5.93	-6.33	-86.98
18	1.8	COMB1	Combination	-1,892.44	-91.30	-5.93	-1.00	-4.81
18	1.8	COMB1	Combination	-1,892.44	-91.30	-5.93	-1.00	-4.81
18	2.7	COMB1	Combination	-1,886.31	-91.30	-5.93	4.34	77.36
18	2.7	COMB1	Combination	-1,886.31	-91.30	-5.93	4.34	77.36
18	3.6	COMB1	Combination	-1,880.19	-91.30	-5.93	9.68	159.53
19	0	COMB1	Combination	-1,236.27	-78.88	-3.17	-6.31	-145.53
19	0.9	COMB1	Combination	-1,230.15	-78.88	-3.17	-3.46	-74.53
19	0.9	COMB1	Combination	-1,230.15	-78.88	-3.17	-3.46	-74.53

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
19	1.8	COMB1	Combination	-1,224.03	-78.88	-3.17	-0.61	-3.53
19	1.8	COMB1	Combination	-1,224.03	-78.88	-3.17	-0.61	-3.53
19	2.7	COMB1	Combination	-1,217.90	-78.88	-3.17	2.24	67.46
19	2.7	COMB1	Combination	-1,217.90	-78.88	-3.17	2.24	67.46
19	3.6	COMB1	Combination	-1,211.78	-78.88	-3.17	5.09	138.46
20	0	COMB1	Combination	-568.30	-117.13	-5.53	-8.15	-182.22
20	0.9	COMB1	Combination	-562.18	-117.13	-5.53	-3.17	-76.80
20	0.9	COMB1	Combination	-562.18	-117.13	-5.53	-3.17	-76.80
20	1.8	COMB1	Combination	-556.05	-117.13	-5.53	1.80	28.61
20	1.8	COMB1	Combination	-556.05	-117.13	-5.53	1.80	28.61
20	2.7	COMB1	Combination	-549.93	-117.13	-5.53	6.78	134.02
20	2.7	COMB1	Combination	-549.93	-117.13	-5.53	6.78	134.02
20	3.6	COMB1	Combination	-543.81	-117.13	-5.53	11.75	239.44
21	0	COMB1	Combination	-1,745.88	-28.05	28.05	0.00	0.00
21	0.375	COMB1	Combination	-1,743.33	-28.05	28.05	-10.52	10.52
21	0.375	COMB1	Combination	-1,743.33	-28.05	28.05	-10.52	10.52
21	0.75	COMB1	Combination	-1,740.78	-28.05	28.05	-21.04	21.04
21	0.75	COMB1	Combination	-1,740.78	-28.05	28.05	-21.04	21.04
21	1.125	COMB1	Combination	-1,738.23	-28.05	28.05	-31.55	31.55
21	1.125	COMB1	Combination	-1,738.23	-28.05	28.05	-31.55	31.55
21	1.5	COMB1	Combination	-1,735.68	-28.05	28.05	-42.07	42.07
22	0	COMB1	Combination	-1,537.46	-44.73	44.73	63.22	-63.22
22	0.9	COMB1	Combination	-1,531.34	-44.73	44.73	22.96	-22.96
22	0.9	COMB1	Combination	-1,531.34	-44.73	44.73	22.96	-22.96
22	1.8	COMB1	Combination	-1,525.22	-44.73	44.73	-17.29	17.29

Element Forces - Frames for 7.5m Flat slab

				Element Forces - Frames for 7.5m Flat slab				
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
22	1.8	COMB1	Combination	-1,525.22	-44.73	44.73	-17.29	17.29
22	2.7	COMB1	Combination	-1,519.09	-44.73	44.73	-57.55	57.55
22	2.7	COMB1	Combination	-1,519.09	-44.73	44.73	-57.55	57.55
22	3.6	COMB1	Combination	-1,512.97	-44.73	44.73	-97.80	97.80
23	0	COMB1	Combination	-1,135.16	-70.54	70.54	128.24	-128.24
23	0.9	COMB1	Combination	-1,129.04	-70.54	70.54	64.76	-64.76
23	0.9	COMB1	Combination	-1,129.04	-70.54	70.54	64.76	-64.76
23	1.8	COMB1	Combination	-1,122.91	-70.54	70.54	1.28	-1.28
23	1.8	COMB1	Combination	-1,122.91	-70.54	70.54	1.28	-1.28
23	2.7	COMB1	Combination	-1,116.79	-70.54	70.54	-62.21	62.21
23	2.7	COMB1	Combination	-1,116.79	-70.54	70.54	-62.21	62.21
23	3.6	COMB1	Combination	-1,110.66	-70.54	70.54	-125.69	125.69
24	0	COMB1	Combination	-723.00	-68.58	68.58	123.73	-123.73
24	0.9	COMB1	Combination	-716.88	-68.58	68.58	62.00	-62.00
24	0.9	COMB1	Combination	-716.88	-68.58	68.58	62.00	-62.00
24	1.8	COMB1	Combination	-710.76	-68.58	68.58	0.28	-0.28
24	1.8	COMB1	Combination	-710.76	-68.58	68.58	0.28	-0.28
24	2.7	COMB1	Combination	-704.63	-68.58	68.58	-61.45	61.45
24	2.7	COMB1	Combination	-704.63	-68.58	68.58	-61.45	61.45
24	3.6	COMB1	Combination	-698.51	-68.58	68.58	-123.17	123.17
25	0	COMB1	Combination	-305.74	-81.60	81.60	137.66	-137.66
25	0.9	COMB1	Combination	-299.62	-81.60	81.60	64.22	-64.22
25	0.9	COMB1	Combination	-299.62	-81.60	81.60	64.22	-64.22
25	1.8	COMB1	Combination	-293.50	-81.60	81.60	-9.22	9.22
25	1.8	COMB1	Combination	-293.50	-81.60	81.60	-9.22	9.22

Element Forces - Frames for 7.5m Flat slab

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
25	2.7	COMB1	Combination	-287.37	-81.60	81.60	-82.66	82.66
25	2.7	COMB1	Combination	-287.37	-81.60	81.60	-82.66	82.66
25	3.6	COMB1	Combination	-281.25	-81.60	81.60	-156.10	156.10
26	0	COMB1	Combination	-2,825.43	-0.37	-1.78	0.00	0.00
26	0.375	COMB1	Combination	-2,822.88	-0.37	-1.78	0.67	0.14
26	0.375	COMB1	Combination	-2,822.88	-0.37	-1.78	0.67	0.14
26	0.75	COMB1	Combination	-2,820.33	-0.37	-1.78	1.33	0.27
26	0.75	COMB1	Combination	-2,820.33	-0.37	-1.78	1.33	0.27
26	1.125	COMB1	Combination	-2,817.77	-0.37	-1.78	2.00	0.41
26	1.125	COMB1	Combination	-2,817.77	-0.37	-1.78	2.00	0.41
26	1.5	COMB1	Combination	-2,815.22	-0.37	-1.78	2.67	0.55
27	0	COMB1	Combination	-2,575.19	4.27	-45.49	-49.29	5.57
27	0.9	COMB1	Combination	-2,569.07	4.27	-45.49	-8.35	1.72
27	0.9	COMB1	Combination	-2,569.07	4.27	-45.49	-8.35	1.72
27	1.8	COMB1	Combination	-2,562.95	4.27	-45.49	32.59	-2.12
27	1.8	COMB1	Combination	-2,562.95	4.27	-45.49	32.59	-2.12
27	2.7	COMB1	Combination	-2,556.82	4.27	-45.49	73.53	-5.97
27	2.7	COMB1	Combination	-2,556.82	4.27	-45.49	73.53	-5.97
27	3.6	COMB1	Combination	-2,550.70	4.27	-45.49	114.46	-9.81
28	0	COMB1	Combination	-1,904.68	5.93	-91.30	-169.15	11.67
28	0.9	COMB1	Combination	-1,898.56	5.93	-91.30	-86.98	6.33
28	0.9	COMB1	Combination	-1,898.56	5.93	-91.30	-86.98	6.33
28	1.8	COMB1	Combination	-1,892.44	5.93	-91.30	-4.81	1.00
28	1.8	COMB1	Combination	-1,892.44	5.93	-91.30	-4.81	1.00
28	2.7	COMB1	Combination	-1,886.31	5.93	-91.30	77.36	-4.34

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
				Element Forces - Frames for 7.5m Flat slab				
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
28	2.7	COMB1	Combination	-1,886.31	5.93	-91.30	77.36	-4.34
28	3.6	COMB1	Combination	-1,880.19	5.93	-91.30	159.53	-9.68
29	0	COMB1	Combination	-1,236.27	3.17	-78.88	-145.53	6.31
29	0.9	COMB1	Combination	-1,230.15	3.17	-78.88	-74.53	3.46
29	0.9	COMB1	Combination	-1,230.15	3.17	-78.88	-74.53	3.46
29	1.8	COMB1	Combination	-1,224.03	3.17	-78.88	-3.53	0.61
29	1.8	COMB1	Combination	-1,224.03	3.17	-78.88	-3.53	0.61
29	2.7	COMB1	Combination	-1,217.90	3.17	-78.88	67.46	-2.24
29	2.7	COMB1	Combination	-1,217.90	3.17	-78.88	67.46	-2.24
29	3.6	COMB1	Combination	-1,211.78	3.17	-78.88	138.46	-5.09
30	0	COMB1	Combination	-568.30	5.53	-117.13	-182.22	8.15
30	0.9	COMB1	Combination	-562.18	5.53	-117.13	-76.80	3.17
30	0.9	COMB1	Combination	-562.18	5.53	-117.13	-76.80	3.17
30	1.8	COMB1	Combination	-556.05	5.53	-117.13	28.61	-1.80
30	1.8	COMB1	Combination	-556.05	5.53	-117.13	28.61	-1.80
30	2.7	COMB1	Combination	-549.93	5.53	-117.13	134.02	-6.78
30	2.7	COMB1	Combination	-549.93	5.53	-117.13	134.02	-6.78
30	3.6	COMB1	Combination	-543.81	5.53	-117.13	239.44	-11.75
31	0	COMB1	Combination	-4,050.65	-5.95	-5.95	0.00	0.00
31	0.375	COMB1	Combination	-4,048.10	-5.95	-5.95	2.23	2.23
31	0.375	COMB1	Combination	-4,048.10	-5.95	-5.95	2.23	2.23
31	0.75	COMB1	Combination	-4,045.55	-5.95	-5.95	4.46	4.46
31	0.75	COMB1	Combination	-4,045.55	-5.95	-5.95	4.46	4.46
31	1.125	COMB1	Combination	-4,043.00	-5.95	-5.95	6.69	6.69
31	1.125	COMB1	Combination	-4,043.00	-5.95	-5.95	6.69	6.69

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
31	1.5	COMB1	Combination	-4,040.45	-5.95	-5.95	8.92	8.92
32	0	COMB1	Combination	-3,937.43	2.66	2.66	2.68	2.68
32	0.9	COMB1	Combination	-3,931.31	2.66	2.66	0.29	0.29
32	0.9	COMB1	Combination	-3,931.31	2.66	2.66	0.29	0.29
32	1.8	COMB1	Combination	-3,925.18	2.66	2.66	-2.10	-2.10
32	1.8	COMB1	Combination	-3,925.18	2.66	2.66	-2.10	-2.10
32	2.7	COMB1	Combination	-3,919.06	2.66	2.66	-4.49	-4.49
32	2.7	COMB1	Combination	-3,919.06	2.66	2.66	-4.49	-4.49
32	3.6	COMB1	Combination	-3,912.94	2.66	2.66	-6.88	-6.88
33	0	COMB1	Combination	-2,945.33	4.06	4.06	8.02	8.02
33	0.9	COMB1	Combination	-2,939.20	4.06	4.06	4.36	4.36
33	0.9	COMB1	Combination	-2,939.20	4.06	4.06	4.36	4.36
33	1.8	COMB1	Combination	-2,933.08	4.06	4.06	0.71	0.71
33	1.8	COMB1	Combination	-2,933.08	4.06	4.06	0.71	0.71
33	2.7	COMB1	Combination	-2,926.96	4.06	4.06	-2.95	-2.95
33	2.7	COMB1	Combination	-2,926.96	4.06	4.06	-2.95	-2.95
33	3.6	COMB1	Combination	-2,920.83	4.06	4.06	-6.60	-6.60
34	0	COMB1	Combination	-1,966.71	1.55	1.55	3.52	3.52
34	0.9	COMB1	Combination	-1,960.59	1.55	1.55	2.13	2.13
34	0.9	COMB1	Combination	-1,960.59	1.55	1.55	2.13	2.13
34	1.8	COMB1	Combination	-1,954.46	1.55	1.55	0.73	0.73
34	1.8	COMB1	Combination	-1,954.46	1.55	1.55	0.73	0.73
34	2.7	COMB1	Combination	-1,948.34	1.55	1.55	-0.66	-0.66
34	2.7	COMB1	Combination	-1,948.34	1.55	1.55	-0.66	-0.66
34	3.6	COMB1	Combination	-1,942.22	1.55	1.55	-2.05	-2.05

The title "Element Forces - Frames for 7.5m Flat slab" spans the top of the table.

			Element Forces - Frames for 7.5m Flat slab					
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
35	0	COMB1	Combination	-997.67	4.40	4.40	5.69	5.69
35	0.9	COMB1	Combination	-991.55	4.40	4.40	1.73	1.73
35	0.9	COMB1	Combination	-991.55	4.40	4.40	1.73	1.73
35	1.8	COMB1	Combination	-985.42	4.40	4.40	-2.22	-2.22
35	1.8	COMB1	Combination	-985.42	4.40	4.40	-2.22	-2.22
35	2.7	COMB1	Combination	-979.30	4.40	4.40	-6.18	-6.18
35	2.7	COMB1	Combination	-979.30	4.40	4.40	-6.18	-6.18
35	3.6	COMB1	Combination	-973.18	4.40	4.40	-10.14	-10.14
36	0	COMB1	Combination	-3,934.41	-6.15	0.00	0.00	0.00
36	0.375	COMB1	Combination	-3,931.86	-6.15	0.00	0.00	2.31
36	0.375	COMB1	Combination	-3,931.86	-6.15	0.00	0.00	2.31
36	0.75	COMB1	Combination	-3,929.31	-6.15	0.00	0.00	4.61
36	0.75	COMB1	Combination	-3,929.31	-6.15	0.00	0.00	4.61
36	1.125	COMB1	Combination	-3,926.75	-6.15	0.00	0.00	6.92
36	1.125	COMB1	Combination	-3,926.75	-6.15	0.00	0.00	6.92
36	1.5	COMB1	Combination	-3,924.20	-6.15	0.00	0.00	9.23
37	0	COMB1	Combination	-3,815.68	3.39	0.00	0.00	3.42
37	0.9	COMB1	Combination	-3,809.56	3.39	0.00	0.00	0.37
37	0.9	COMB1	Combination	-3,809.56	3.39	0.00	0.00	0.37
37	1.8	COMB1	Combination	-3,803.43	3.39	0.00	0.00	-2.68
37	1.8	COMB1	Combination	-3,803.43	3.39	0.00	0.00	-2.68
37	2.7	COMB1	Combination	-3,797.31	3.39	0.00	0.00	-5.73
37	2.7	COMB1	Combination	-3,797.31	3.39	0.00	0.00	-5.73
37	3.6	COMB1	Combination	-3,791.18	3.39	0.00	0.00	-8.78
38	0	COMB1	Combination	-2,860.97	5.58	0.00	0.00	10.85

				Element Forces - Frames for 7.5m Flat slab				
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
38	0.9	COMB1	Combination	-2,854.85	5.58	0.00	0.00	5.82
38	0.9	COMB1	Combination	-2,854.85	5.58	0.00	0.00	5.82
38	1.8	COMB1	Combination	-2,848.73	5.58	0.00	0.00	0.80
38	1.8	COMB1	Combination	-2,848.73	5.58	0.00	0.00	0.80
38	2.7	COMB1	Combination	-2,842.60	5.58	0.00	0.00	-4.23
38	2.7	COMB1	Combination	-2,842.60	5.58	0.00	0.00	-4.23
38	3.6	COMB1	Combination	-2,836.48	5.58	0.00	0.00	-9.25
39	0	COMB1	Combination	-1,909.66	2.66	0.00	0.00	5.68
39	0.9	COMB1	Combination	-1,903.53	2.66	0.00	0.00	3.29
39	0.9	COMB1	Combination	-1,903.53	2.66	0.00	0.00	3.29
39	1.8	COMB1	Combination	-1,897.41	2.66	0.00	0.00	0.90
39	1.8	COMB1	Combination	-1,897.41	2.66	0.00	0.00	0.90
39	2.7	COMB1	Combination	-1,891.29	2.66	0.00	0.00	-1.50
39	2.7	COMB1	Combination	-1,891.29	2.66	0.00	0.00	-1.50
39	3.6	COMB1	Combination	-1,885.16	2.66	0.00	0.00	-3.89
40	0	COMB1	Combination	-960.74	6.66	0.00	0.00	8.87
40	0.9	COMB1	Combination	-954.62	6.66	0.00	0.00	2.88
40	0.9	COMB1	Combination	-954.62	6.66	0.00	0.00	2.88
40	1.8	COMB1	Combination	-948.50	6.66	0.00	0.00	-3.11
40	1.8	COMB1	Combination	-948.50	6.66	0.00	0.00	-3.11
40	2.7	COMB1	Combination	-942.37	6.66	0.00	0.00	-9.10
40	2.7	COMB1	Combination	-942.37	6.66	0.00	0.00	-9.10
40	3.6	COMB1	Combination	-936.25	6.66	0.00	0.00	-15.09
41	0	COMB1	Combination	-4,050.65	-5.95	5.95	0.00	0.00
41	0.375	COMB1	Combination	-4,048.10	-5.95	5.95	-2.23	2.23

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
41	0.375	COMB1	Combination	-4,048.10	-5.95	5.95	-2.23	2.23
41	0.75	COMB1	Combination	-4,045.55	-5.95	5.95	-4.46	4.46
41	0.75	COMB1	Combination	-4,045.55	-5.95	5.95	-4.46	4.46
41	1.125	COMB1	Combination	-4,043.00	-5.95	5.95	-6.69	6.69
41	1.125	COMB1	Combination	-4,043.00	-5.95	5.95	-6.69	6.69
41	1.5	COMB1	Combination	-4,040.45	-5.95	5.95	-8.92	8.92
42	0	COMB1	Combination	-3,937.43	2.66	-2.66	-2.68	2.68
42	0.9	COMB1	Combination	-3,931.31	2.66	-2.66	-0.29	0.29
42	0.9	COMB1	Combination	-3,931.31	2.66	-2.66	-0.29	0.29
42	1.8	COMB1	Combination	-3,925.18	2.66	-2.66	2.10	-2.10
42	1.8	COMB1	Combination	-3,925.18	2.66	-2.66	2.10	-2.10
42	2.7	COMB1	Combination	-3,919.06	2.66	-2.66	4.49	-4.49
42	2.7	COMB1	Combination	-3,919.06	2.66	-2.66	4.49	-4.49
42	3.6	COMB1	Combination	-3,912.94	2.66	-2.66	6.88	-6.88
43	0	COMB1	Combination	-2,945.33	4.06	-4.06	-8.02	8.02
43	0.9	COMB1	Combination	-2,939.20	4.06	-4.06	-4.36	4.36
43	0.9	COMB1	Combination	-2,939.20	4.06	-4.06	-4.36	4.36
43	1.8	COMB1	Combination	-2,933.08	4.06	-4.06	-0.71	0.71
43	1.8	COMB1	Combination	-2,933.08	4.06	-4.06	-0.71	0.71
43	2.7	COMB1	Combination	-2,926.96	4.06	-4.06	2.95	-2.95
43	2.7	COMB1	Combination	-2,926.96	4.06	-4.06	2.95	-2.95
43	3.6	COMB1	Combination	-2,920.83	4.06	-4.06	6.60	-6.60
44	0	COMB1	Combination	-1,966.71	1.55	-1.55	-3.52	3.52
44	0.9	COMB1	Combination	-1,960.59	1.55	-1.55	-2.13	2.13
44	0.9	COMB1	Combination	-1,960.59	1.55	-1.55	-2.13	2.13

Element Forces - Frames for 7.5m Flat slab

			Element Forces - Frames for 7.5m Flat slab					
Frame	**Station**	**OutputCase**	**CaseType**	**P**	**V2**	**V3**	**M2**	**M3**
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
44	1.8	COMB1	Combination	-1,954.46	1.55	-1.55	-0.73	0.73
44	1.8	COMB1	Combination	-1,954.46	1.55	-1.55	-0.73	0.73
44	2.7	COMB1	Combination	-1,948.34	1.55	-1.55	0.66	-0.66
44	2.7	COMB1	Combination	-1,948.34	1.55	-1.55	0.66	-0.66
44	3.6	COMB1	Combination	-1,942.22	1.55	-1.55	2.05	-2.05
45	0	COMB1	Combination	-997.67	4.40	-4.40	-5.69	5.69
45	0.9	COMB1	Combination	-991.55	4.40	-4.40	-1.73	1.73
45	0.9	COMB1	Combination	-991.55	4.40	-4.40	-1.73	1.73
45	1.8	COMB1	Combination	-985.42	4.40	-4.40	2.22	-2.22
45	1.8	COMB1	Combination	-985.42	4.40	-4.40	2.22	-2.22
45	2.7	COMB1	Combination	-979.30	4.40	-4.40	6.18	-6.18
45	2.7	COMB1	Combination	-979.30	4.40	-4.40	6.18	-6.18
45	3.6	COMB1	Combination	-973.18	4.40	-4.40	10.14	-10.14
46	0	COMB1	Combination	-2,825.43	-0.37	1.78	0.00	0.00
46	0.375	COMB1	Combination	-2,822.88	-0.37	1.78	-0.67	0.14
46	0.375	COMB1	Combination	-2,822.88	-0.37	1.78	-0.67	0.14
46	0.75	COMB1	Combination	-2,820.33	-0.37	1.78	-1.33	0.27
46	0.75	COMB1	Combination	-2,820.33	-0.37	1.78	-1.33	0.27
46	1.125	COMB1	Combination	-2,817.77	-0.37	1.78	-2.00	0.41
46	1.125	COMB1	Combination	-2,817.77	-0.37	1.78	-2.00	0.41
46	1.5	COMB1	Combination	-2,815.22	-0.37	1.78	-2.67	0.55
47	0	COMB1	Combination	-2,575.19	4.27	45.49	49.29	5.57
47	0.9	COMB1	Combination	-2,569.07	4.27	45.49	8.35	1.72
47	0.9	COMB1	Combination	-2,569.07	4.27	45.49	8.35	1.72
47	1.8	COMB1	Combination	-2,562.95	4.27	45.49	-32.59	-2.12

Frame	Station	OutputCase	CaseType	P	V2	V3	M2	M3
				Element Forces - Frames for 7.5m Flat slab				
Text	m	Text	Text	KN	KN	KN	KN-m	KN-m
47	1.8	COMB1	Combination	-2,562.95	4.27	45.49	-32.59	-2.12
47	2.7	COMB1	Combination	-2,556.82	4.27	45.49	-73.53	-5.97
47	2.7	COMB1	Combination	-2,556.82	4.27	45.49	-73.53	-5.97
47	3.6	COMB1	Combination	-2,550.70	4.27	45.49	-114.46	-9.81
48	0	COMB1	Combination	-1,904.68	5.93	91.30	169.15	11.67
48	0.9	COMB1	Combination	-1,898.56	5.93	91.30	86.98	6.33
48	0.9	COMB1	Combination	-1,898.56	5.93	91.30	86.98	6.33
48	1.8	COMB1	Combination	-1,892.44	5.93	91.30	4.81	1.00
48	1.8	COMB1	Combination	-1,892.44	5.93	91.30	4.81	1.00
48	2.7	COMB1	Combination	-1,886.31	5.93	91.30	-77.36	-4.34
48	2.7	COMB1	Combination	-1,886.31	5.93	91.30	-77.36	-4.34
48	3.6	COMB1	Combination	-1,880.19	5.93	91.30	-159.53	-9.68
49	0	COMB1	Combination	-1,236.27	3.17	78.88	145.53	6.31
49	0.9	COMB1	Combination	-1,230.15	3.17	78.88	74.53	3.46
49	0.9	COMB1	Combination	-1,230.15	3.17	78.88	74.53	3.46
49	1.8	COMB1	Combination	-1,224.03	3.17	78.88	3.53	0.61
49	1.8	COMB1	Combination	-1,224.03	3.17	78.88	3.53	0.61
49	2.7	COMB1	Combination	-1,217.90	3.17	78.88	-67.46	-2.24
49	2.7	COMB1	Combination	-1,217.90	3.17	78.88	-67.46	-2.24
49	3.6	COMB1	Combination	-1,211.78	3.17	78.88	-138.46	-5.09
50	0	COMB1	Combination	-568.30	5.53	117.13	182.22	8.15
50	0.9	COMB1	Combination	-562.18	5.53	117.13	76.80	3.17
50	0.9	COMB1	Combination	-562.18	5.53	117.13	76.80	3.17
50	1.8	COMB1	Combination	-556.05	5.53	117.13	-28.61	-1.80
50	1.8	COMB1	Combination	-556.05	5.53	117.13	-28.61	-1.80

APPENDIX C.1-BEAM SLAB-MATERIAL REQUIREMENT									
span		3.00	4.00	5.00	5.50	6.00	6.50	7.00	7.50
Concreting	slab	90.77	159.41	288.46	349.67	415.05	555.46	728.46	973.56
	beam	43.20	57.60	102.00	112.20	122.40	124.80	176.40	180.00
	column	30.60	30.60	29.25	39.81	39.81	39.81	62.78	62.78
Total		**164.57**	**247.61**	**419.71**	**501.68**	**577.26**	**720.07**	**967.64**	**1,216.34**
R/F	slab	7.44	13.10	19.15	23.02	29.16	35.33	37.28	44.01
	beam	7.56	10.30	19.67	21.48	35.14	37.76	41.37	44.04
	column	3.48	3.82	5.38	5.40	5.49	6.30	8.18	11.00
Total		**18.48**	**27.21**	**44.20**	**49.90**	**69.78**	**79.39**	**86.82**	**99.05**
Formwork	slab	496.08	915.28	1,470.60	1,793.00	2,147.40	2,544.32	2,974.84	3,438.96
	beam	442.80	601.47	980.49	1,102.74	1,229.58	1,301.85	1,757.43	1,851.33
	column	378.00	378.00	360.00	420.00	420.00	420.00	513.00	513.00
Total		**1,316.88**	**1,894.75**	**2,811.09**	**3,315.74**	**3,796.98**	**4,266.17**	**5,245.27**	**5,803.29**

| APPENDIX C.2-FLAT SLAB- MATERIAL REQUIREMENT									
span		**3.00**	**4.00**	**5.00**	**5.50**	**6.00**	**6.50**	**7.00**	**7.50**
Concreting	slab	90.77	159.41	288.46	349.67	415.05	555.46	728.46	973.56
	beam	17.28	23.04	40.80	44.88	48.96	49.92	70.56	72.00
	column	30.76	30.76	29.82	40.58	40.58	40.47	64.78	64.60
Total		**138.82**	**213.22**	**359.08**	**435.13**	**504.59**	**645.85**	**863.80**	**1,110.16**
R/F	slab	8.96	15.83	26.41	32.59	42.44	51.07	58.85	64.61
	beam	2.30	3.10	6.30	6.87	11.24	12.08	13.24	13.39
	column	3.06	3.27	4.58	4.61	4.67	5.36	6.95	9.35
Total		**14.32**	**22.2**	**37.28**	**44.01**	**58.35**	**68.51**	**79.03**	**87.34**
Formwork	slab	577.08	1,025.08	1,609.2	1946.00	2314.80	2726.12	3171.04	3649.56
	beam	177.12	249.39	420.21	487.26	558.90	607.53	840.51	905.97
	column	414.00	414.00	411.00	479.50	479.50	476.00	607.50	603.00
Total		**1,168.20**	**1,688.47**	**2,440.41**	**2,912.76**	**3,353.20**	**3,809.65**	**4,619.05**	**5,158.53**

APPENDIX- D
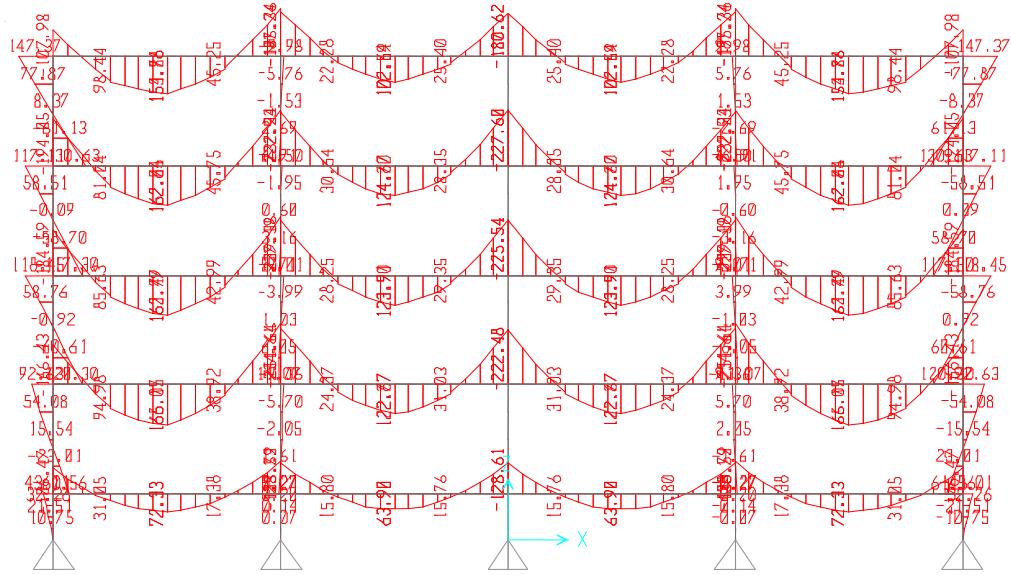
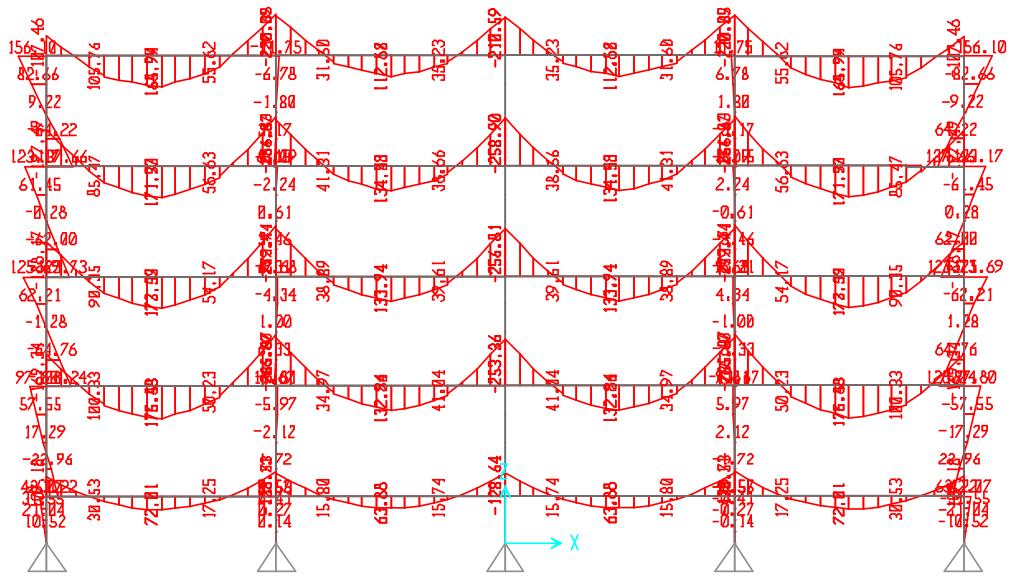D.1 Bending moment diagram for perimeter frame for 7.5m-conventional slab
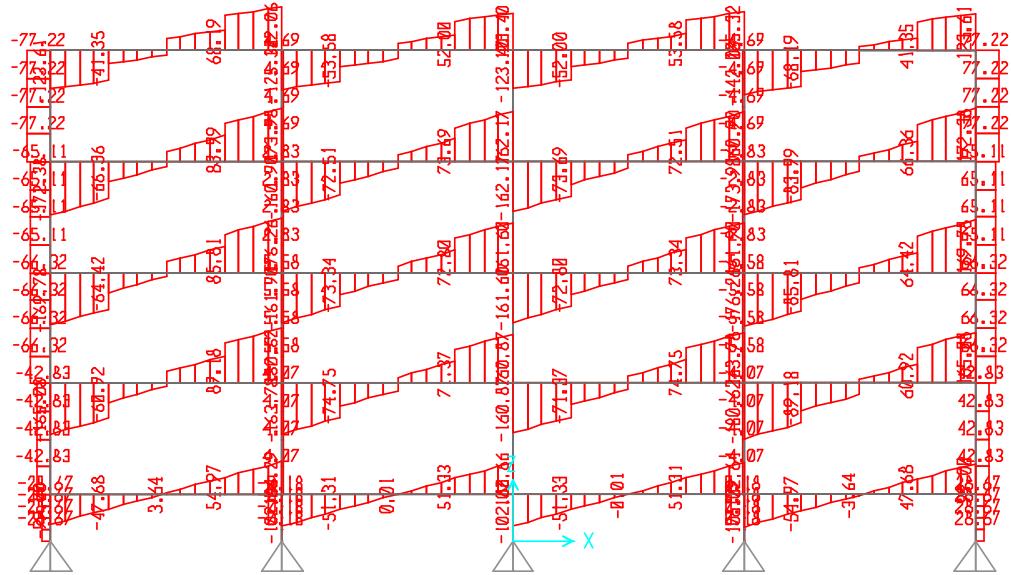
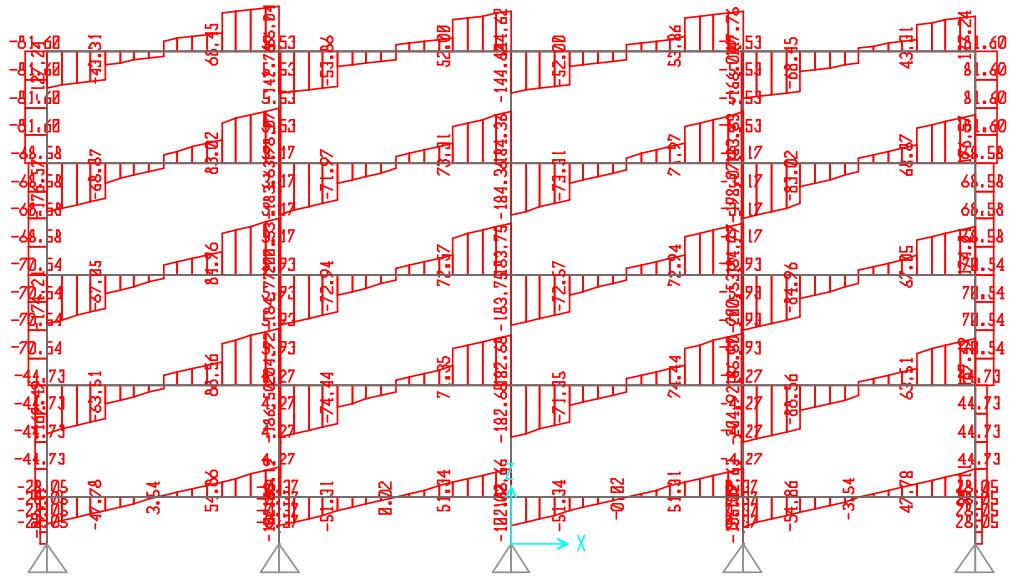D.2 Shear force diagram for perimeter framefor 7.5m-conventional slab
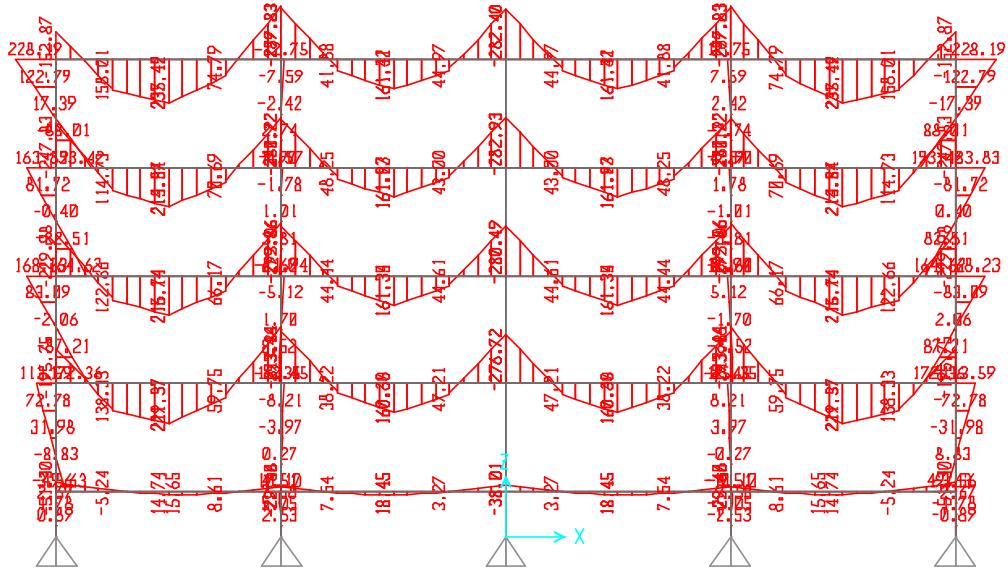
D.3 Bending moment diagram for internal frame for 7.5m-conventional slab
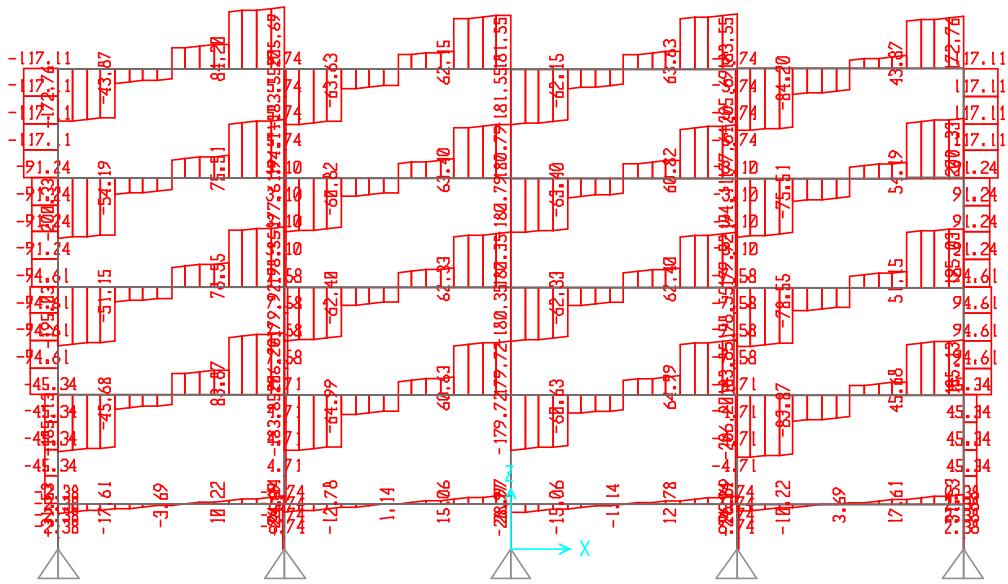
D.4 Shear Force diagram for internal frame for 7.5m-conventional slab

D.5Bending moment diagram for perimeter framefor 7.5m-flat slab

D.6Shear force diagram for perimeter frame for 7.5m-flat slab

APPENDIX-E

E.1-Mixing concrete Grade 30				
	UNIT	**QTY**	**RATE**	**AMOUNT**
Cement	Bags	31.00	1,100.00	34,100.00
Hire of mixture, vibrator, operator, fuel etc.	Days	0.33	7,800.00	2,600.00
skill labourer	Days	0.33	1,200.00	400.00
Water	L	600.00	2.00	1,200.00
Sand	Cubes	0.42	18,900.00	7,938.00
Un Skilled Labourer	Days	2.00	850.00	1,700.00
metal ¾"	Cubes	0.82	7,500.00	6,150.00
Rate for cube				54,088.00
Rate for m^3				19,112.37
Say				**19,000.00**

E.2-Mild steel/Tor steel reinforcement to lintols slab beams or columns bent to shape laid in position and tied with G I wire as directed				
	UNIT	**QTY**	**RATE**	**AMOUNT**
Smith	Day	20.00	1,500.00	30,000.00
Binding wire 16 BWG	kg	14.00	276.00	3,864.00
Tor steel	Mt	1.00	175,000.00	175,000.00
Un Skilled Labourer	Day	20.00	850.00	17,000.00
				225,864.00
Say				**225,000.00**

E.3-Sawn timber form work for Moulding,Assembling,Dismantling,Cleaning and labour

	UNIT	QTY	RATE	AMOUNT
Un Skilled Labourer	Day	6.00	850.00	5,100.00
Timber class 2 joists (4"x2")	m	10.00	400.00	4,000.00
Timber class 2 (2"x1")	m	8.00	56.00	448.00
Timber class 2 planks (1")	m^2	6.00	1500.00	9,000.00
nail 1"	Kg	1.20	264.00	316.80
Timber class 2 battens 2"x2"	m	14.00	156.00	2,184.00
Carpenter (Skilled Labourer)	Day	3.00	1200.00	3,600.00
2"x2" bracing for props	m	39.00	101.00	3,939.00
Rate for square				28,587.80
Rate for m^2				3,077.27
Say				**3,000.00**