

E T A B S / C O N K E R

Concrete Frame Design Processor for ETABS

Version 6.20

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12 Aug 2022 09:57:15

ETABS\_FILE:2F110.PST/CONKER\_FILE:C10.CNK

FILE : DESCON FOR 2F BUILDING      FILE : SHEDC  
 MOMENT RESISTING CONCRETE FRAME    UNITS : KG-M-S

DESIGN CODE TYPE-----	2 (ACI 318-89)
NUMBER OF FRAMES TO BE DESIGNED/CHECKED----	1
NUMBER OF LOAD COMBINATIONS-----	34
ETABS DEAD LOAD CONDITION NUMBER-----	1
ETABS LIVE LOAD CONDITION NUMBER-----	2
NUMBER OF REDEFINED MATERIAL PROPERTIES----	0
NUMBER OF COLUMN DESIGN PROPERTY SETS-----	0
NUMBER OF BEAM DESIGN PROPERTY SETS-----	0
NUMBER OF CURVES PER INTERACTION VOLUME----	11
NUMBER OF POINTS PER INTERACTION CURVE-----	21
CODE FOR PRINTING INTERACTION CURVES-----	0
CODE FOR UNITY PHI FACTOR OVER RIDE-----	0
TYPE OF UNITS (ENGLISH, MKS OR SI)-----	M
EXECUTION MODE-----	0
FLAG FOR MAP OF BEAM FLEXURAL STEEL-----	1
FLAG FOR MAP OF BEAM SHEAR STEEL-----	1
FLAG FOR MAP OF COLUMN DESIGN/CHECK-----	1
FLAG FOR MAP OF COLUMN SHEAR STEEL-----	1
FLAG FOR MAP OF JOINT SHEAR STRESS RATIOS--	1
FLAG FOR MAP OF B/C MOMENT CAPACITY RATIOS-	1

FILE : DESCON FOR 2F BUILDING

FILE : SHEDC

MOMENT RESISTING CONCRETE FRAME

UNITS : KG-M-S

## DESIGN LOADING COMBINATION DATA

LOAD TYPE		I	II	III	A	B	C	D1	D2
1	0	1.200	1.600	0.000	0.000	0.000	0.000	0.000	0.000
2	0	1.200	1.000	0.300	1.000	0.000	0.000	0.000	0.000
3	0	1.200	1.000	0.300	0.000	1.000	0.000	0.000	0.000
4	0	1.200	1.000	0.300	-1.000	0.000	0.000	0.000	0.000
5	0	1.200	1.000	0.300	0.000	-1.000	0.000	0.000	0.000
6	0	1.200	1.000	1.000	0.300	0.000	0.000	0.000	0.000
7	0	1.200	1.000	1.000	0.000	0.300	0.000	0.000	0.000
8	0	1.200	1.000	1.000	-0.300	0.000	0.000	0.000	0.000
9	0	1.200	1.000	1.000	0.000	-0.300	0.000	0.000	0.000
10	0	1.200	1.000	-0.300	1.000	0.000	0.000	0.000	0.000
11	0	1.200	1.000	-0.300	0.000	1.000	0.000	0.000	0.000
12	0	1.200	1.000	-0.300	-1.000	0.000	0.000	0.000	0.000
13	0	1.200	1.000	-0.300	0.000	-1.000	0.000	0.000	0.000
14	0	1.200	1.000	-1.000	0.300	0.000	0.000	0.000	0.000
15	0	1.200	1.000	-1.000	0.000	0.300	0.000	0.000	0.000
16	0	1.200	1.000	-1.000	-0.300	0.000	0.000	0.000	0.000
17	0	1.200	1.000	-1.000	0.000	-0.300	0.000	0.000	0.000
18	0	0.900	0.000	0.300	1.000	0.000	0.000	0.000	0.000
19	0	0.900	0.000	0.300	0.000	1.000	0.000	0.000	0.000
20	0	0.900	0.000	1.000	0.300	0.000	0.000	0.000	0.000
21	0	0.900	0.000	1.000	0.000	0.300	0.000	0.000	0.000
22	0	0.900	0.000	0.300	-1.000	0.000	0.000	0.000	0.000
23	0	0.900	0.000	0.300	0.000	-1.000	0.000	0.000	0.000
24	0	0.900	0.000	1.000	-0.300	0.000	0.000	0.000	0.000
25	0	0.900	0.000	1.000	0.000	-0.300	0.000	0.000	0.000
26	0	0.900	0.000	-0.300	1.000	0.000	0.000	0.000	0.000
27	0	0.900	0.000	-0.300	0.000	1.000	0.000	0.000	0.000
28	0	0.900	0.000	-1.000	0.300	0.000	0.000	0.000	0.000
29	0	0.900	0.000	-1.000	0.000	0.300	0.000	0.000	0.000



ETABS\_FILE:2F110.PST/CONKER\_FILE:C10.CNK

FILE : DESCON FOR 2F BUILDING  
MOMENT RESISTING CONCRETE FRAME

FILE : SHEDC  
UNITS : KG-M-S

## MATERIAL PROPERTIES

ID	TYPE	ELASTIC MODULUS {Kg/sqm}	POISSONS RATIO	UNIT WEIGHT {Kg/cum}	UNIT MASS	COEFF OF EXPANSION
1	C	0.2600E+10	0.2000	0.2400E+04	0.2446E+03	0.1000E-04
2	C	0.2600E+10	0.2000	0.2400E+04	0.2446E+03	0.1000E-04
3	M	0.2100E+10	0.1670	0.2400E+04	0.2446E+03	0.1000E-04

## MATERIAL PROPERTIES FOR DESIGN

ID	TYPE	YIELD	STRENGTH	YIELD	STRENGTH	ALLOWABLES	
		FY {Kg/sqm}	FC(FM) {Kg/sqm}	FYS {Kg/sqm}	FCS(FMS) {Kg/sqm}	FBMAJ {Kg/sqm}	FBMIN {Kg/sqm}
1	C	0.420E+08	0.280E+07	0.280E+08	0.280E+07		
2	C	0.280E+08	0.280E+07	0.280E+08	0.280E+07		
3	M	0.000E+00	0.500E+06	0.000E+00	0.500E+06		

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## SECTION PROPERTIES FOR COLUMNS

SECT ID	SECTION TYPE	MAT ID	MAJOR DIM {m}	MINOR DIM {m}	CONCRETE COVER {m}	AREA OF BARS 1 {sqm}	AREA OF BARS 2 {sqm}
1	RR	1	0.6000	0.4000	0.04000	0.00000	0.00000
2	RR	1	0.3000	0.3000	0.03000	0.00000	0.00000

FILE : DESCON FOR 2F BUILDING

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MOMENT RESISTING CONCRETE FRAME

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## SECTION PROPERTIES FOR BEAMS

SECT ID	SECT TYPE	MAT ID	DEPTH BELOW {m}	DEPTH ABOVE {m}	BEAM WIDTH {m}	SLAB THICK {m}	SLAB WIDTH {m}	TOP COVER {m}	BOTTOM COVER {m}
1	RCB	1	0.6000	0.0000	0.3500	0.0000	0.0000	0.06000	0.06000
2	RCB	1	0.5000	0.0000	0.3000	0.0000	0.0000	0.05000	0.05000

FILE : DESCON FOR 2F BUILDING

FILE : SHEDC

MOMENT RESISTING CONCRETE FRAME

UNITS : KG-M-S

## SECTION PROPERTIES FOR BEAMS

SECT	TOP STEEL	BOT STEEL	TOP STEEL	BOT STEEL
ID	END-I	END-I	END-J	END-J
	{ sqm}	{ sqm}	{ sqm}	{ sqm}
1	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
2	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00



FILE : DESCON FOR 2F BUILDING  
MOMENT RESISTING CONCRETE FRAME

FILE : SHEDC  
UNITS : KG-M-S

FRAME NUMBER----- 1  
FRAMING TYPE----- 1 (SEISMIC)  
COLUMN PROPERTY REASSIGNMENT FLAG----- 0  
BEAM PROPERTY REASSIGNMENT FLAG----- 0  
YIELD OVERSTRENGTH FACTOR----- 1.25

FRAME ID NUMBER----- 1  
NUMBER OF STORY LEVELS----- 3  
NUMBER OF COLUMN LINES----- 8  
NUMBER OF BAYS----- 9  
NUMBER OF BRACING ELEMENTS----- 0  
NUMBER OF PANEL ELEMENTS----- 0  
NUMBER OF COLUMN LATERAL LOAD PATTERNS----- 0  
NUMBER OF BEAM SPAN LOAD PATTERNS----- 0  
MAXIMUM NUMBER OF LOADS PER BEAM SPAN----- 4

FILE : DESCON FOR 2F BUILDING      FILE : SHEDC  
 MOMENT RESISTING CONCRETE FRAME    UNITS : KG-M-S

## DESIGN OF BEAM ELEMENTS (ACI 318-89)

FRAME ID .... /REINFORCEMENT CONCRETE FRAME

LEVEL ID .... RF

BAY ID	BEAM SIZE WIDTH X DEPTH {m} {m}	STRESS POINT	/-FACTORED -MOMENT {T-m}	LOADS & +MOMENT {T-m}	COMBOS-//--REQUIRED SHEAR M{top} M{bot} V {/m} {T} {sqcm} {sqcm} {sqcm}	REBAR--/ M{top} M{bot} V {/m} {sqcm} {sqcm} {sqcm}
1	0.35 X 0.60	END I	11 < 4>	7 <26>	11 < 9>	6.33 6.33 8.81
		1/4-PT	4 <30>	6 < 2>	10 < 6>	6.33 6.33 7.62
		MIDDLE	3 < 0>	3 < 2>	8 < 6>	6.33 6.33 5.84
		3/4-PT	3 < 0>	4 < 4>	10 < 6>	6.33 6.33 7.98
		END J	11 < 2>	5 < 0>	12 < 9>	6.33 6.33 9.17
2	0.35 X 0.60	END I	11 < 4>	5 < 0>	12 < 9>	6.33 6.33 9.20
		1/4-PT	3 < 0>	4 < 2>	10 < 6>	6.33 6.33 8.00
		MIDDLE	3 < 0>	3 < 4>	7 < 6>	6.33 6.33 5.82
		3/4-PT	4 <26>	6 < 4>	10 < 6>	6.33 6.33 7.56
		END J	11 < 2>	7 <30>	11 < 9>	6.33 6.33 8.77
3	0.35 X 0.60	END I	11 < 4>	7 <26>	11 < 6>	6.33 6.33 8.73
		1/4-PT	4 <30>	6 < 2>	10 < 9>	6.33 6.33 7.54
		MIDDLE	3 < 0>	3 < 2>	8 < 9>	6.33 6.33 5.92
		3/4-PT	3 < 0>	3 < 4>	10 < 6>	6.33 6.33 8.05
		END J	10 < 2>	5 < 0>	12 < 9>	6.33 6.33 9.25
4	0.35 X 0.60	END I	10 < 4>	5 < 0>	12 < 6>	6.33 6.33 9.22
		1/4-PT	3 < 0>	3 < 2>	10 < 6>	6.33 6.33 8.01
		MIDDLE	3 < 0>	3 < 4>	8 < 6>	6.33 6.33 5.84
		3/4-PT	4 <26>	6 < 4>	10 < 6>	6.33 6.33 7.54
		END J	11 < 2>	7 <30>	11 < 6>	6.33 6.33 8.75
5	0.35 X 0.60					

END I	13 < 5>	7 <27>	12 < 9>	6.66	6.33	9.30
1/4-PT	4 <31>	6 < 3>	10 < 6>	6.33	6.33	7.88
MIDDLE	3 < 0>	4 < 7>	7 < 6>	6.33	6.33	5.37
3/4-PT	4 <27>	6 < 5>	10 < 9>	6.33	6.33	7.83
END J	13 < 3>	7 <31>	12 < 9>	6.57	6.33	9.25

6 0.35 X 0.60

END I	17 < 5>	9 < 0>	16 < 2>	8.71	6.33	12.16
1/4-PT	4 <31>	7 < 3>	14 < 6>	6.33	6.33	10.56
MIDDLE	4 < 0>	6 < 7>	8 <17>	6.33	6.33	6.15
3/4-PT	4 < 0>	7 < 5>	14 < 9>	6.33	6.33	10.55
END J	17 < 3>	8 < 0>	16 < 5>	8.53	6.33	12.16

7 0.35 X 0.60

END I	15 < 5>	9 <27>	12 < 9>	7.69	6.33	9.71
1/4-PT	5 <31>	7 < 3>	11 < 6>	6.33	6.33	8.29
MIDDLE	4 < 0>	4 < 7>	7 < 6>	6.33	6.33	5.78
3/4-PT	5 <27>	7 < 5>	11 < 6>	6.33	6.33	8.24
END J	15 < 3>	9 <31>	12 < 9>	7.43	6.33	9.66

ETABS\_FILE:2F110.PST/CONKER\_FILE:C10.CNK

FILE : DESCON FOR 2F BUILDING      FILE : SHEDC  
 MOMENT RESISTING CONCRETE FRAME    UNITS : KG-M-S

## DESIGN OF BEAM ELEMENTS (ACI 318-89)

FRAME ID .... /REINFORCEMENT CONCRETE FRAME

LEVEL ID .... 2F

BAY ID	BEAM SIZE WIDTH X DEPTH {m} {m}	STRESS POINT	/-FACTORED -MOMENT {T-m}	LOADS & +MOMENT {T-m}	COMBOS-//--REQUIRED SHEAR M{top} M{bot} V {/m} {T} {sqcm} {sqcm} {sqcm}	REBAR--/ M{top} M{bot} V {/m} {sqcm} {sqcm} {sqcm}
1	0.35 X 0.60	END I	20 < 4>	13 <26>	15 < 6>	10.27 6.72 11.98
		1/4-PT	8 <30>	10 < 2>	13 < 6>	6.33 6.33 10.35
		MIDDLE	5 < 0>	4 < 2>	10 < 9>	6.33 6.33 7.91
		3/4-PT	6 <26>	6 < 4>	14 < 9>	6.33 6.33 11.15
		END J	20 < 2>	10 < 0>	16 < 6>	10.35 6.33 12.78
2	0.35 X 0.60	END I	22 < 4>	11 < 0>	19 < 2>	11.35 6.33 15.11
		1/4-PT	6 < 0>	8 < 2>	17 < 9>	6.33 6.33 12.86
		MIDDLE	6 < 0>	7 < 4>	10 < 6>	6.33 6.33 8.05
		3/4-PT	7 <26>	11 < 4>	16 < 9>	6.33 6.33 12.15
		END J	22 < 2>	12 <30>	19 < 9>	11.40 6.33 14.85
3	0.35 X 0.60	END I	19 < 4>	12 <26>	15 < 6>	9.76 6.33 11.70
		1/4-PT	7 <30>	9 < 2>	13 < 9>	6.33 6.33 10.07
		MIDDLE	5 < 0>	5 < 2>	9 < 9>	6.33 6.33 7.38
		3/4-PT	5 <26>	6 < 4>	14 < 9>	6.33 6.33 10.61
		END J	19 < 2>	9 < 0>	16 < 6>	9.52 6.33 12.24
4	0.35 X 0.60	END I	19 < 4>	9 < 0>	16 < 9>	9.52 6.33 12.25
		1/4-PT	5 <30>	7 < 2>	14 < 9>	6.33 6.33 10.59
		MIDDLE	5 < 0>	5 < 4>	9 < 9>	6.33 6.33 7.30
		3/4-PT	7 <26>	9 < 4>	13 < 6>	6.33 6.33 10.07
		END J	19 < 2>	12 <30>	15 < 6>	9.77 6.33 11.72
5	0.35 X 0.60					

END I	21 < 5>	11 <27>	16 < 9>	10.91	6.33	12.83
1/4-PT	6 <31>	9 < 3>	14 < 9>	6.33	6.33	10.84
MIDDLE	5 < 0>	5 < 9>	9 < 9>	6.33	6.33	7.02
3/4-PT	6 <27>	9 < 5>	14 < 6>	6.33	6.33	10.78
END J	21 < 3>	11 <31>	16 < 9>	10.80	6.33	12.76

6 0.35 X 0.60

END I	26 < 5>	13 < 0>	20 <20>	13.61	6.58	15.30
1/4-PT	7 < 0>	9 < 3>	20 < 9>	6.33	6.33	15.28
MIDDLE	7 < 0>	9 < 9>	11 < 6>	6.33	6.33	8.23
3/4-PT	7 < 0>	10 < 5>	19 < 6>	6.33	6.33	15.10
END J	26 < 3>	13 < 0>	19 <25>	13.78	6.65	15.17

7 0.35 X 0.60

END I	22 < 5>	11 < 0>	17 < 6>	11.25	6.33	13.09
1/4-PT	7 <31>	8 < 3>	14 < 9>	6.33	6.33	11.10
MIDDLE	5 < 0>	5 < 5>	9 < 6>	6.33	6.33	7.27
3/4-PT	7 <27>	10 < 5>	14 < 9>	6.33	6.33	10.84
END J	22 < 3>	12 <31>	16 < 9>	11.32	6.33	12.83

ETABS\_FILE:2F110.PST/CONKER\_FILE:C10.CNK

FILE : DESCON FOR 2F BUILDING

FILE : SHEDC

MOMENT RESISTING CONCRETE FRAME

UNITS : KG-M-S

## DESIGN OF BEAM ELEMENTS (ACI 318-89)

FRAME ID .... /REINFORCEMENT CONCRETE FRAME

LEVEL ID .... 2F

BAY ID	BEAM SIZE WIDTH X DEPTH {m} {m}	STRESS POINT	/-FACTORED -MOMENT {T-m}	LOADS & +MOMENT {T-m}	COMBOS-//--REQUIRED SHEAR M{top} M{bot} V {/m} {T} {sqcm} {sqcm} {sqcm}	REBAR--/ M{top} M{bot} V {/m} {sqcm} {sqcm} {sqcm}
8	0.30 X 0.50	END I	2 < 0>	2 < 0>	14 < 9>	4.52 4.52 13.00
		1/4-PT	3 <27>	3 < 5>	13 < 9>	4.52 4.52 12.60
		MIDDLE	5 <27>	5 < 5>	14 < 9>	4.52 4.52 12.86
		3/4-PT	7 < 3>	7 <31>	15 < 9>	4.52 4.52 13.62
		END J	10 < 3>	8 <31>	15 < 9>	5.90 5.03 14.11
9	0.30 X 0.50	END I	2 < 0>	2 < 0>	14 < 9>	4.52 4.52 13.29
		1/4-PT	3 <27>	3 < 5>	14 < 6>	4.52 4.52 12.88
		MIDDLE	5 <27>	5 < 5>	14 < 9>	4.52 4.52 12.96
		3/4-PT	7 <11>	7 <23>	15 < 9>	4.52 4.52 13.72
		END J	10 < 3>	9 <31>	15 < 9>	6.08 5.41 14.21

FILE : DESCON FOR 2F BUILDING      FILE : SHEDC  
 MOMENT RESISTING CONCRETE FRAME    UNITS : KG-M-S

## DESIGN OF BEAM ELEMENTS (ACI 318-89)

FRAME ID .... /REINFORCEMENT CONCRETE FRAME

LEVEL ID .... 1F

BAY ID	BEAM SIZE WIDTH X DEPTH {m} {m}	STRESS POINT	/-FACTORED -MOMENT {T-m}	LOADS & +MOMENT {T-m}	COMBOS-//-- SHEAR {T}	REQUIRED M{top} {sqcm}	REBAR--/ M{bot} {sqcm}	V {/m} {sqcm}
1	0.35 X 0.60	END I	18 < 4>	13 <26>	12 < 9>	8.98	6.38	9.27
		1/4-PT	7 <22>	8 <10>	11 < 9>	6.33	6.33	8.33
		MIDDLE	4 < 0>	3 < 0>	9 < 9>	6.33	6.33	6.82
		3/4-PT	7 <26>	7 < 4>	11 <14>	6.33	6.33	8.27
		END J	17 <10>	12 <22>	12 <17>	8.57	6.33	9.21
2	0.35 X 0.60	END I	18 <12>	11 <18>	13 <17>	9.13	6.33	10.30
		1/4-PT	6 <30>	7 < 2>	12 <17>	6.33	6.33	8.98
		MIDDLE	5 < 0>	3 < 0>	9 <28>	6.33	6.33	6.91
		3/4-PT	7 <18>	8 <12>	12 < 6>	6.33	6.33	8.97
		END J	18 < 2>	12 <30>	13 < 6>	9.42	6.33	10.29
3	0.35 X 0.60	END I	16 < 4>	11 <26>	11 < 9>	8.22	6.33	8.92
		1/4-PT	7 <22>	7 <10>	10 < 6>	6.33	6.33	7.98
		MIDDLE	4 < 0>	3 < 0>	8 <33>	6.33	6.33	6.48
		3/4-PT	6 <26>	7 < 4>	10 <14>	6.33	6.33	7.98
		END J	16 <10>	11 <22>	11 <17>	7.94	6.33	8.92
4	0.35 X 0.60	END I	16 <12>	11 <18>	11 <14>	7.88	6.33	8.87
		1/4-PT	6 <30>	7 < 2>	10 <14>	6.33	6.33	7.92
		MIDDLE	4 < 0>	3 < 0>	8 < 9>	6.33	6.33	6.43
		3/4-PT	6 <18>	7 <12>	10 < 6>	6.33	6.33	7.96
		END J	16 < 2>	11 <30>	11 < 9>	8.22	6.33	8.91
5	0.35 X 0.60							

END I	18 < 5>	12 <27>	12 <14>	9.07	6.33	9.15
1/4-PT	7 <23>	8 <11>	10 <14>	6.33	6.33	8.06
MIDDLE	4 < 0>	3 < 0>	8 <17>	6.33	6.33	6.31
3/4-PT	7 <19>	8 <13>	10 < 6>	6.33	6.33	8.01
END J	18 < 3>	12 <31>	12 < 6>	8.99	6.33	9.11

6 0.35 X 0.60

END I	20 <13>	10 <19>	14 <17>	10.25	6.33	11.25
1/4-PT	7 <23>	8 <11>	12 <14>	6.33	6.33	9.66
MIDDLE	5 < 0>	4 <34>	9 <14>	6.33	6.33	6.77
3/4-PT	7 <19>	8 <13>	12 < 9>	6.33	6.33	9.60
END J	20 < 3>	10 <31>	14 < 9>	10.25	6.33	11.19

7 0.35 X 0.60

END I	18 <13>	12 <19>	12 <14>	9.38	6.33	9.32
1/4-PT	7 <23>	8 <11>	11 <14>	6.33	6.33	8.22
MIDDLE	5 < 0>	3 < 0>	8 <17>	6.33	6.33	6.47
3/4-PT	7 <19>	8 <13>	10 < 6>	6.33	6.33	8.10
END J	18 < 3>	12 <31>	12 < 6>	9.28	6.33	9.20



ETABS\_FILE:2F110.PST/CONKER\_FILE:C10.CNK

FILE : DESCON FOR 2F BUILDING      FILE : SHEDC  
 MOMENT RESISTING CONCRETE FRAME    UNITS : KG-M-S

## DESIGN OF BEAM ELEMENTS (ACI 318-89)

FRAME ID .... /REINFORCEMENT CONCRETE FRAME

LEVEL ID .... 1F

BAY ID	BEAM SIZE WIDTH X DEPTH {m} {m}	STRESS POINT	/-FACTORED -MOMENT {T-m}	LOADS & +MOMENT {T-m}	COMBOS-//--REQUIRED SHEAR M{top} M{bot} V {/m} {T} {sqcm} {sqcm} {sqcm}	REBAR--/ M{top} M{bot} V {/m} {sqcm} {sqcm} {sqcm}
8	0.30 X 0.50	END I	2 < 0>	2 < 0>	14 < 6>	4.52 4.52 12.99
		1/4-PT	3 <27>	3 < 5>	14 < 9>	4.52 4.52 12.73
		MIDDLE	5 <27>	6 < 5>	13 <33>	4.52 4.52 12.38
		3/4-PT	7 <27>	8 < 5>	14 <17>	4.52 4.63 12.73
		END J	9 <27>	10 < 5>	14 <17>	5.78 5.85 13.02
9	0.30 X 0.50	END I	2 < 0>	2 < 0>	14 < 6>	4.52 4.52 13.06
		1/4-PT	3 <27>	3 < 5>	14 < 6>	4.52 4.52 12.80
		MIDDLE	5 <27>	6 < 5>	13 <17>	4.52 4.52 12.58
		3/4-PT	7 <27>	8 < 5>	14 <17>	4.52 4.67 12.96
		END J	10 <27>	10 < 5>	14 <17>	6.00 5.91 13.25

FILE : DESCON FOR 2F BUILDING      FILE : SHEDC  
 MOMENT RESISTING CONCRETE FRAME    UNITS : KG-M-S

## DESIGN OF COLUMN ELEMENTS (ACI 318-89)

FRAME ID .... /REINFORCEMENT CONCRETE FRAME

LEVEL ID .... RF

COL ID	COLUMN MAJOR {m}	SIZE X MINOR {m}	STR PT	/-----MOMENT INTERACTION-----/ PU {T}	MMAJ {T-m}	MMIN {T-m}	COMBO REBAR {sqcm}	/-----SHEAR DESIGN-----/ DIRN	VU {T}	COMBO A {/m}	DESIGN {sqcm}
1	0.60	X 0.40	RR					MAJOR	8	< 0>	6.42
								MINOR	8	< 0>	9.48
			TOP	9	3	2	<34> 24.00				
			BOT	9	3	2	<34> 24.00				
2	0.60	X 0.40	RR					MAJOR	12	< 0>	9.28
								MINOR	15	< 0>	17.75
			TOP	5	0	30	< 0> 49.17				
			BOT	5	0	22	< 0> 36.34				
3	0.60	X 0.40	RR					MAJOR	11	< 0>	8.28
								MINOR	8	< 0>	9.93
			TOP	9	3	2	<34> 24.00				
			BOT	9	3	2	<34> 24.00				
4	0.60	X 0.40	RR					MAJOR	8	< 0>	6.35
								MINOR	7	< 0>	9.27
			TOP	9	3	2	<34> 24.00				
			BOT	9	3	2	<34> 24.00				
5	0.60	X 0.40	RR					MAJOR	10	< 0>	8.05
								MINOR	14	< 0>	17.02
			TOP	5	0	30	< 0> 49.15				
			BOT	5	0	20	< 0> 32.39				
6	0.60	X 0.40	RR					MAJOR	9	< 0>	6.90
								MINOR	7	< 0>	9.28
			TOP	9	3	2	<34> 24.00				
			BOT	9	3	2	<34> 24.00				

FILE : DESCON FOR 2F BUILDING      FILE : SHEDC  
 MOMENT RESISTING CONCRETE FRAME    UNITS : KG-M-S

## DESIGN OF COLUMN ELEMENTS (ACI 318-89)

FRAME ID .... /REINFORCEMENT CONCRETE FRAME

LEVEL ID .... 2F

COL ID	COLUMN MAJOR {m}	SIZE X MINOR {m}	STR PT	/-----MOMENT PU {T}	INTERACTION MMAJ {T-m}	MINN {T-m}	COMBO REBAR {sqcm}	/-----SHEAR DIRN	VU {T}	DESIGN COMBO A {/m}	-----/ {sqcm}
1	0.60	X 0.40	RR	TOP	25	3	2 <34> 24.00	MAJOR	8 < 0>	6.28	
				BOT	25	2	1 <34> 24.00	MINOR	8 < 0>	9.47	
2	0.60	X 0.40	RR	TOP	25	0	18 < 0> 24.51	MAJOR	13 < 0>	10.31	
				BOT	25	0	20 < 0> 29.20	MINOR	14 < 0>	16.38	
3	0.60	X 0.40	RR	TOP	30	3	3 <34> 24.00	MAJOR	12 < 0>	9.53	
				BOT	30	2	2 <34> 24.00	MINOR	8 < 0>	10.15	
4	0.60	X 0.40	RR	TOP	24	3	2 <34> 24.00	MAJOR	8 < 0>	6.23	
				BOT	24	2	1 <34> 24.00	MINOR	7 < 0>	8.85	
5	0.60	X 0.40	RR	TOP	44	6	1 <34> 24.00	MAJOR	9 < 0>	7.41	
				BOT	17	0	19 < 0> 27.73	MINOR	12 < 0>	15.01	
6	0.60	X 0.40	RR	TOP	25	3	2 <34> 24.00	MAJOR	8 < 0>	6.46	
				BOT	25	2	1 <34> 24.00	MINOR	7 < 0>	8.86	
7	0.30	X 0.30						MAJOR	0 < 0>	0.00	

	RR						MINOR	0	< 0>	0.00
		TOP	4	0	0	<34>	9.00			
		BOT	4	0	0	<34>	9.00			
8	0.30	X	0.30				MAJOR	0	< 0>	0.00
	RR						MINOR	0	< 0>	0.00
		TOP	4	0	0	<34>	9.00			
		BOT	4	0	0	<34>	9.00			

FILE : DESCON FOR 2F BUILDING      FILE : SHEDC  
 MOMENT RESISTING CONCRETE FRAME    UNITS : KG-M-S

## DESIGN OF COLUMN ELEMENTS (ACI 318-89)

FRAME ID .... /REINFORCEMENT CONCRETE FRAME

LEVEL ID .... 1F

COL ID	COLUMN MAJOR {m}	COLUMN X MINOR {m}	STR PT	/-----MOMENT INTERACTION-----/ PU {T}	MMAJ {T-m}	MMIN {T-m}	COMBO REBAR {sqcm}	/-----SHEAR DESIGN-----/ DIRN	VU {T}	COMBO A {/m}	DESIGN {sqcm}
1	0.60	X 0.40	RR					MAJOR	8	< 0>	6.52
								MINOR	8	< 0>	10.05
			TOP	34	1	1	<34> 24.00				
			BOT	34	1	0	<34> 24.00				
2	0.60	X 0.40	RR					MAJOR	15	<13>	0.00
								MINOR	15	<12>	0.00
			TOP	67	2	1	<34> 24.00				
			BOT	67	2	1	<34> 24.00				
3	0.60	X 0.40	RR					MAJOR	13	<31>	10.40
								MINOR	9	< 0>	10.52
			TOP	42	1	1	<34> 24.00				
			BOT	42	1	1	<34> 24.00				
4	0.60	X 0.40	RR					MAJOR	8	< 0>	6.47
								MINOR	7	< 0>	9.25
			TOP	34	1	1	<34> 24.00				
			BOT	34	1	0	<34> 24.00				
5	0.60	X 0.40	RR					MAJOR	9	< 0>	7.32
								MINOR	13	< 0>	16.15
			TOP	60	2	1	<34> 24.00				
			BOT	60	2	1	<34> 24.00				
6	0.60	X 0.40	RR					MAJOR	8	< 0>	6.67
								MINOR	7	< 0>	9.25
			TOP	34	1	1	<34> 24.00				
			BOT	34	1	0	<34> 24.00				
7	0.30	X 0.30						MAJOR	0	< 0>	0.00

	RR						MINOR	0 < 0>	0.00
		TOP	6	0	0 <34>	9.00			
		BOT	6	0	0 <34>	9.00			
8	0.30 X	0.30					MAJOR	0 < 0>	0.00
	RR						MINOR	0 < 0>	0.00
		TOP	6	0	0 <34>	9.00			
		BOT	6	0	0 <34>	9.00			