

/STEEL STRUCTURE

/DUCTILE MOMENT RESISTING STEEL FRAME

STRESS CHECK TYPE-----	1
NUMBER OF FRAMES TO BE CHECKED-----	1
NUMBER OF LOAD COMBINATIONS-----	5
ETABS LIVE LOAD CONDITION NUMBER-----	2

NUMBER OF REPLACED MATERIAL PROPERTIES-----	0
NUMBER OF REPLACED COLUMN PROPERTIES-----	0
NUMBER OF REPLACED BEAM PROPERTIES-----	0
NUMBER OF REPLACED BRACE PROPERTIES-----	0

TYPE OF UNITS (ENGLISH, MKS OR SI)-----	M
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EXECUTION MODE-----	0	
INTERACTION STRESS RATIO CUTOFF-----	.0000	
SHEAR STRESS RATIO CUTOFF-----	.0000	
COLUMN INTERACTION DETAIL FLAG-----	1	
BEAM INTERACTION DETAIL FLAG-----	1	
BRACE INTERACTION DETAIL FLAG-----	1	
COLUMN SHEAR STRESS CHECK FLAG-----	1	
BEAM SHEAR STRESS CHECK FLAG-----	1	
BRACE SHEAR STRESS CHECK FLAG-----	1	
MAP OF COLUMN INTERACTION STRESS RATIOS FLAG----	1	
MAP OF BEAM INTERACTION STRESS RATIOS FLAG-----	1	
MAP OF COLUMN CONTINUITY PLATES FLAG-----	1	
MAP OF COLUMN DOUBLER PLATES FLAG-----	1	

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STRESS CHECK LOADING COMBINATION DATA

LOAD	I	II	III	A	B	DYN-1	DYN-2	DYN-3
1	1.000	1.000	.000	.000	.000	.000	.000	.000
2	.750	.750	.000	.750	.000	.000	.000	.000
3	.750	.750	.000	-.750	.000	.000	.000	.000
4	.750	.750	.000	.000	.750	.000	.000	.000
5	.750	.750	.000	.000	-.750	.000	.000	.000

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MATERIAL PROPERTIES

MAT	MAT	ELASTIC		UNIT	POISSONS		YIELD	MAJOR	MINOR
ID	TYPE	MODULUS		WEIGHT	RATIO		FY	FB	FB
1	S	.210E+11	.780E+04		.300	.250E+08	.150E+08	.185E+08	
2	S	.210E+11	.780E+04		.300	.250E+08	.150E+08	.150E+08	
3	C	.210E+10	.240E+04		.150				

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SECTION PROPERTIES FOR COLUMNS

MAT		SECTION	MAJOR		MINOR	FLANGE	WEB
ID	ID	TYPE	DIM	DIM	THICK	THICK	
1	1	ISECT	.250	.250	.014	.009	
2	1	ISECT	.588	.300	.020	.012	
3	1	ISECT	.500	.200	.016	.010	
4	2	BOX	.350	.350	.019	.015	
5	2	BOX	.588	.300	.020	.015	
6	2	BOX	.500	.200	.016	.010	
7	3	RECT	.550	.550	.000	.000	
8	3	RECT	.900	.600	.000	.000	

9	3	RECT	.800	.500	.000	.000
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ANALYSIS SECTION PROPERTIES FOR COLUMNS

MINOR		AXIAL	MAJOR	MINOR	TORSION	MAJOR	
ID	A	AV	AV	J	I	I	
1	.009	.002	.006	.4938E-06	.1058E-03	.3647E-04	
2	.019	.007	.010	.1844E-05	.1133E-02	.9008E-04	
3	.011	.005	.005	.6725E-06	.4604E-03	.2137E-04	
4	.023	.011	.013	.6194E-03	.4406E-03	.3986E-03	
5	.028	.018	.012	.1006E-02	.1380E-02	.4241E-03	
6	.016	.010	.006	.2806E-03	.5458E-03	.1059E-03	
7	.303	.252	.252	.1289E-01	.7626E-02	.7626E-02	
8	.540	.450	.450	.3803E-01	.3645E-01	.1620E-01	
9	.400	.333	.333	.2038E-01	.2133E-01	.8333E-02	

AISC STRESS CHECK SECTION PROPERTIES FOR COLUMNS

MINOR ID	MAJOR	MINOR	MAJOR	MINOR	MAJOR	
	S	S	Z	Z	R	R
1	.001	.000	.001	.000	.108	.064
2	.004	.001	.004	.001	.247	.070
3	.002	.000	.002	.000	.204	.044
4	.003	.002	.003	.003	.139	.133
5	.005	.003	.006	.003	.220	.122
6	.002	.001	.003	.001	.186	.082

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SECTION PROPERTIES FOR BEAMS

MAT		SECTION	DEPTH		DEPTH	BEAM	FLANGE
WEB		TYPE	BELOW		ABOVE	WIDTH	THICK
ID	ID						
THICK							
1	1	ISECT	.300	.000	.150	.009	.007
2	1	ISECT	.350	.000	.175	.011	.007
3	1	ISECT	.450	.000	.200	.014	.009
4	1	ISECT	.600	.000	.200	.017	.011
5	1	ISECT	.582	.000	.300	.017	.012
6	1	ISECT	.588	.000	.300	.020	.012

7	3	RECT		.500	.000	.350	.000	.000
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ANALYSIS SECTION PROPERTIES FOR BEAMS

		AXIAL	MAJOR	MINOR		TORSION	MAJOR	
MINOR		A	AV	AV		J	I	I
ID								
1		.005	.002	.002	.9558E-07	.6933E-04	.5069E-05	
2		.006	.002	.003	.1861E-06	.1312E-03	.9835E-05	
3		.009	.004	.005	.4509E-06	.3226E-03	.1869E-04	
4		.013	.007	.006	.8680E-06	.7442E-03	.2273E-04	
5		.017	.007	.009	.1259E-05	.9788E-03	.7658E-04	
6		.019	.007	.010	.1844E-05	.1133E-02	.9008E-04	
7		.175	.146	.146	.4058E-02	.3646E-02	.1786E-02	

AISC STRESS CHECK SECTION PROPERTIES FOR BEAMS

MINOR ID	MAJOR	MINOR	MAJOR	MINOR	MAJOR	
	S	S	Z	Z	R	R
1	.000	.000	.001	.000	.124	.033
2	.001	.000	.001	.000	.146	.040
3	.001	.000	.002	.000	.185	.045
4	.002	.000	.003	.000	.239	.042
5	.003	.001	.004	.001	.242	.068
6	.004	.001	.004	.001	.247	.070

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FRAME NUMBER----- 1
FRAMING TYPE----- 1
COLUMN PROPERTY REPLACEMENT CODE----- 0
BEAM PROPERTY REPLACEMENT CODE----- 0
BRACE PROPERTY REPLACEMENT CODE----- 0

FRAME ID NUMBER----- 1
NUMBER OF STORY LEVELS----- 4
NUMBER OF COLUMN LINES----- 12
NUMBER OF BAYS----- 17

NUMBER OF BRACING ELEMENTS-----	0	
NUMBER OF PANEL ELEMENTS-----	0	
NUMBER OF COLUMN LATERAL LOAD PATTERNS-----		0
NUMBER OF BEAM SPAN LOAD PATTERNS-----	24	
MAXIMUM NUMBER OF LOADS PER BEAM SPAN-----		5

/STEEL STRUCTURE
/DUCTILE MOMENT RESISTING STEEL FRAME

FRAME ID FRAME-A
LEVEL ID RF

AISC SPECIFICATION, PART 1 (ELASTIC)
COLUMN AXIAL FORCE AND BIAXIAL MOMENT INTERACTION STRESS CHECK

COL SECTION CHECK STRESS STRESS AISC MAXIMUM CONT-PL DBLR-PL
COMPACT

ID	TYPE	TYPE	RATIO	POINT	<LC> EQUATION	AXIAL	AREA	THICK
FLAGS								
5	I-SECT					11.2	.17	
		(C)	.271	TOP	< 3> (1.6-2)	1.3		
6	I-SECT					11.2	.17	

		(C)	.396 BOTTOM < 3> (1.6-2)	1.9		
7	I-SECT				11.2	.17
		(C)	.396 BOTTOM < 2> (1.6-2)	2.0		
8	I-SECT				11.2	.17
		(C)	.271 TOP < 2> (1.6-2)	1.5		
		(T)	.145 BOTTOM < 4> (1.6-1b)	.0		
9	I-SECT				11.2	.17
		(C)	.259 BOTTOM < 3> (1.6-2)	1.3		
10	I-SECT				11.2	.17
		(C)	.437 BOTTOM < 3> (1.6-2)	1.9		
11	I-SECT				11.2	.17
		(C)	.437 BOTTOM < 2> (1.6-2)	2.0		
12	I-SECT				11.2	.17
		(C)	.259 BOTTOM < 2> (1.6-2)	1.5		
		(T)	.131 TOP < 5> (1.6-1b)	.0		

/STEEL STRUCTURE
/DUCTILE MOMENT RESISTING STEEL FRAME

FRAME ID FRAME-A
LEVEL ID 2F

AISC SPECIFICATION, PART 1 (ELASTIC)
COLUMN AXIAL FORCE AND BIAXIAL MOMENT INTERACTION STRESS CHECK

COL SECTION CHECK STRESS STRESS AISC MAXIMUM CONT-PL DBLR-PL
COMPACT

 ID TYPE TYPE RATIO POINT <LC> EQUATION AXIAL AREA THICK
FLAGS

1	I-SECT					11.2	.22	
		(C)	.558	BOTTOM	< 3> (1.6-2)	1.8		
		(T)	.464	BOTTOM	< 2> (1.6-1b)	.5		

2	I-SECT				11.2	.22
		(C)	.594 BOTTOM < 3> (1.6-2)	2.1		
3	I-SECT				11.2	.22
		(C)	.594 BOTTOM < 2> (1.6-2)	2.2		
4	I-SECT				11.2	.22
		(C)	.558 BOTTOM < 2> (1.6-2)	1.8		
		(T)	.464 BOTTOM < 3> (1.6-1b)	.5		
5	I-SECT				18.0	1.97
		(C)	.765 BOTTOM < 3> (1.6-2)	6.0		
6	I-SECT				18.0	1.97
		(C)	.797 TOP < 3> (1.6-2)	11.5		
7	I-SECT				18.0	1.97
		(C)	.797 TOP < 2> (1.6-2)	11.5		
8	I-SECT				18.0	1.97
		(C)	.765 BOTTOM < 2> (1.6-2)	6.0		
9	I-SECT				18.0	.75
		(C)	.738 BOTTOM < 3> (1.6-2)	5.1		
10	I-SECT				18.0	.75

11	I-SECT	(C)	.877 TOP	< 2> (1.6-2)	9.7		
						18.0	.75
12	I-SECT	(C)	.877 TOP	< 3> (1.6-2)	9.7		
						18.0	.75
		(C)	.738 BOTTOM	< 2> (1.6-2)	5.5		

/STEEL STRUCTURE
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FRAME ID FRAME-A
LEVEL ID 1F

AISC SPECIFICATION, PART 1 (ELASTIC)
COLUMN AXIAL FORCE AND BIAXIAL MOMENT INTERACTION STRESS CHECK

COL SECTION CHECK STRESS STRESS AISC MAXIMUM CONT-PL DBLR-PL
COMPACT

ID	TYPE	TYPE	RATIO	POINT	<LC> EQUATION	AXIAL	AREA	THICK
FLAGS								
1	I-SECT					18.0	.67	
		(C)	.371	BOTTOM	< 3> (1.6-2)	5.9		
2	I-SECT					18.0	.67	

		(C)	.380 BOTTOM < 3> (1.6-2)	10.7		
3	I-SECT				18.0	.67
		(C)	.380 BOTTOM < 2> (1.6-2)	10.7		
4	I-SECT				18.0	.67
		(C)	.371 BOTTOM < 2> (1.6-2)	5.9		
5	I-SECT				18.0	2.23
		(C)	.512 BOTTOM < 3> (1.6-2)	13.0		
6	I-SECT				18.0	2.23
		(C)	.559 BOTTOM < 3> (1.6-1b)	29.8		
7	I-SECT				18.0	2.23
		(C)	.559 BOTTOM < 2> (1.6-1b)	29.8		
8	I-SECT				18.0	2.23
		(C)	.512 BOTTOM < 2> (1.6-2)	13.0		
9	I-SECT				18.0	.67
		(C)	.467 BOTTOM < 3> (1.6-2)	8.8		
10	I-SECT				18.0	.67
		(C)	.518 BOTTOM < 3> (1.6-2)	18.7		
11	I-SECT				18.0	.67

12	I-SECT	(C)	.518 BOTTOM < 2> (1.6-2)	18.7	18.0	.67
		(C)	.467 BOTTOM < 2> (1.6-2)	9.3		

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FRAME ID FRAME-A
LEVEL ID RF

AISC SPECIFICATION, PART 1 (ELASTIC)
BEAM AXIAL FORCE AND BIAXIAL MOMENT INTERACTION STRESS CHECK

BEAM SECTION CHECK STRESS STRESS AISC MAXIMUM CON-SHR CON-SHR
COMPACT

ID	TYPE	TYPE	RATIO	POINT	<LC> EQUATION	AXIAL	END-I	END-J
FLAGS								
4	I-SECT					3.8	3.7	
		(T)	.206	END-I	< 3> (BENDING)	.0		
5	I-SECT					2.9	2.9	

		(T)	.136	END-J	< 2> (BENDING)	.0		
6	I-SECT						3.7	3.8
		(T)	.206	END-J	< 2> (BENDING)	.0		
7	I-SECT						3.8	3.7
		(T)	.192	END-I	< 3> (BENDING)	.0		
8	I-SECT						2.9	2.9
		(T)	.125	END-J	< 2> (BENDING)	.0		
9	I-SECT						3.7	3.8
		(T)	.192	END-J	< 2> (BENDING)	.0		
12	I-SECT						4.3	4.3
		(T)	.256	END-I	< 5> (BENDING)	.0		
13	I-SECT						4.3	4.3
		(T)	.326	END-I	< 5> (BENDING)	.0		
16	I-SECT						5.0	5.0
		(T)	.332	END-I	< 5> (BENDING)	.0		
17	I-SECT						5.0	5.0
		(T)	.359	END-I	< 5> (BENDING)	.0		

/STEEL STRUCTURE
/DUCTILE MOMENT RESISTING STEEL FRAME

FRAME ID FRAME-A
LEVEL ID 2F

AISC SPECIFICATION, PART 1 (ELASTIC)
BEAM AXIAL FORCE AND BIAXIAL MOMENT INTERACTION STRESS CHECK

BEAM SECTION CHECK STRESS STRESS AISC MAXIMUM CON-SHR CON-SHR
COMPACT

ID	TYPE	TYPE	RATIO	POINT	<LC> EQUATION	AXIAL	END-I	END-J
FLAGS								
1	I-SECT					3.8	3.8	
		(T)	.314	END-I	< 3> (BENDING)	.0		
2	I-SECT					2.9	2.9	

		(T)	.168	END-J	< 2> (BENDING)	.0		
3	I-SECT						3.8	3.8
		(T)	.314	END-J	< 2> (BENDING)	.0		
4	I-SECT						7.3	7.8
		(T)	.425	END-J	< 2> (BENDING)	.0		
5	I-SECT						6.6	6.6
		(T)	.338	END-J	< 2> (BENDING)	.0		
6	I-SECT						7.8	7.3
		(T)	.425	END-I	< 3> (BENDING)	.0		
7	I-SECT						7.3	7.8
		(T)	.388	END-J	< 2> (BENDING)	.0		
8	I-SECT						6.6	6.6
		(T)	.316	END-J	< 2> (BENDING)	.0		
9	I-SECT						7.8	7.3
		(T)	.388	END-I	< 3> (BENDING)	.0		
10	I-SECT						4.2	4.4
		(T)	.309	END-J	< 4> (BENDING)	.0		
11	I-SECT						4.2	4.4

		(T)	.399	END-I	< 5> (BENDING)	.0		
12	I-SECT						7.7	7.5
		(T)	.376	END-J	< 4> (BENDING)	.0		
13	I-SECT						7.7	7.5
		(T)	.468	END-J	< 4> (BENDING)	.0		
14	I-SECT						4.9	5.2
		(T)	.423	END-J	< 4> (BENDING)	.0		
15	I-SECT						4.9	5.2
		(T)	.454	END-J	< 4> (BENDING)	.0		
16	I-SECT						9.7	9.5
		(T)	.544	END-I	< 5> (BENDING)	.0		
17	I-SECT						9.7	9.5
		(T)	.577	END-I	< 5> (BENDING)	.0		

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FRAME ID FRAME-A
LEVEL ID 1F

AISC SPECIFICATION, PART 1 (ELASTIC)
BEAM AXIAL FORCE AND BIAXIAL MOMENT INTERACTION STRESS CHECK

BEAM SECTION CHECK STRESS STRESS AISC MAXIMUM CON-SHR CON-SHR
COMPACT

ID	TYPE	TYPE	RATIO	POINT	<LC> EQUATION	AXIAL	END-I	END-J
FLAGS								
1	I-SECT					7.7	7.9	
		(T)	.285	END-J	< 2> (BENDING)	.0		
2	I-SECT					7.0	7.0	

		(T)	.298	END-J	< 2> (BENDING)	.0		
3	I-SECT						7.9	7.7
		(T)	.285	END-I	< 3> (BENDING)	.0		
4	I-SECT						7.7	7.9
		(T)	.364	END-J	< 2> (BENDING)	.0		
5	I-SECT						7.0	7.0
		(T)	.359	END-J	< 2> (BENDING)	.0		
6	I-SECT						7.9	7.7
		(T)	.364	END-I	< 3> (BENDING)	.0		
7	I-SECT						9.4	9.8
		(T)	.431	END-J	< 2> (BENDING)	.0		
8	I-SECT						9.3	9.3
		(T)	.489	END-J	< 2> (BENDING)	.0		
9	I-SECT						9.8	9.4
		(T)	.431	END-I	< 3> (BENDING)	.0		
10	I-SECT						7.9	8.0
		(T)	.310	END-J	< 4> (BENDING)	.0		
11	I-SECT						7.9	8.0

		(T)	.355	END-J	< 4> (BENDING)	.0		
12	I-SECT						8.0	7.8
		(T)	.313	END-I	< 5> (BENDING)	.0		
13	I-SECT						8.0	7.8
		(T)	.358	END-I	< 5> (BENDING)	.0		
14	I-SECT						10.2	10.5
		(T)	.523	END-J	< 4> (BENDING)	.0		
15	I-SECT						10.2	10.5
		(T)	.540	END-J	< 4> (BENDING)	.0		
16	I-SECT						10.5	10.2
		(T)	.530	END-I	< 5> (BENDING)	.0		
17	I-SECT						10.5	10.2
		(T)	.548	END-I	< 5> (BENDING)	.0		