GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

1. BUILDING CODE: FLORIDA BUILDING CODE, 2004 EDITION
2. GRAVITY LOADS:

LOCATION	UNIFORM LIVE LOAD	UNIFORM DEAD LOAD TOP CHORD	UNIFORM DEAD LOAD BOTTOM CHORD
ROOF	30 PSF	10 PSF	10 PSF
SLAB ON GRADE	100 PSF	-----	-----

LIVE LOAD REDUCTION ON SUPPORTING ELEMENTS SHALL BE IN ACCORDANCE WITH THE BUILDING CODE. NO LIVE LOAD REDUCTION OF ROOF LOADING IS PERMITTED. UNIFORM DEAD LOAD IS ADDITIVE TO ACTUAL STRUCTURAL WEIGHTS.

3. LATERAL LOADS:

A. THREE SECOND GUST WIND SPEED SHALL BE 147 MPH (ASCE 7-05), EXPOSURE C, I=1.0.

B. SOIL PREPARATION AND FOUNDATIONS

1. A COPY OF THE SUBSURFACE GEOTECHNICAL REPORT IS AVAILABLE FOR INSPECTION AS PART OF THE CONTRACT DOCUMENTS.
2. REMOVE 6" OF TOP SOIL CONTAINING ORGANIC MATERIAL FROM THE BUILDING PAD.
3. PROOF ROLL SUBGRADE AND REPAIR WEAK AREAS PER SPECIFICATION. FILL TO SUBGRADE ELEVATION SHOWN ON THE DRAWINGS WITH NON-EXPANSIVE FILL OR STABILIZED SOIL PER SPECIFICATION.
4. SOIL SUPPORTED FOUNDATIONS:

A. DESIGN BEARING PRESSURE (NET) IS 3,000 PSF FOR FOUNDATIONS BEARING ON UNDISTURBED SOIL OR APPROVED ENGINEERED FILL MATERIAL. BEARING MATERIALS SHALL BE VERIFIED BY A LICENSED SOIL ENGINEER.
B. ALL FOUNDATIONS ARE DESIGNED WITH FORMED SIDES. IF EARTH FORMED SIDES ARE APPROVED BY THE ENGINEER, THE TOP 7 1/4" SHALL BE FORMED TO THE DESIGN DIMENSION AND ONE INCH SHALL BE ADDED TO EACH SIDE OF THE EARTH FORMED AREA TO PROVIDE ADEQUATE COVER OVER THE REINFORCING AT THE CONTRACTOR'S EXPENSE.
C. REINFORCING SHALL BE SUPPORTED FROM ABOVE OR WITH 3" SBP (WITH BOTTOM PLATE) AT 4'-0" O.C. MAXIMUM FOR ALL FOUNDATION REINFORCING.
5. EXTERIOR SLABS SHALL SLOPE AWAY FROM THE STRUCTURE A MINIMUM OF 1/4" PER FOOT UNLESS NOTED OTHERWISE.

C. CAST-IN-PLACE CONCRETE

1. ALL STRUCTURAL CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH THE ACI 318-02 AND THE BUILDING CODE.
2. THE CONCRETE REQUIREMENTS ARE:

A. CEMENT SHALL BE TYPE I OR II CONFORMING TO ASTM C150.
B. FINE AND COURSE AGGREGATES SHALL CONFORM TO ASTM C33.
C. MIX REQUIREMENTS ARE:

LOCATION	MIN. F'C PSI	MIN. F'CI PSI	MAX. AIR CEM. PCY	W/C RATIO	ENT.
FOUNDATIONS	4000	N/A	470	0.50	5%+/-1%
PIERS	3000	N/A	423	0.55	NR
INTERIOR SLAB***	4000	N/A	564	0.50	NR
COLUMNS	4000	N/A	470	0.50	NR
BEAMS	4000	3000	470	0.50	NR

***SLAB ON GRADE SHALL HAVE A FLEXURAL STRENGTH OF 650 PSI.

D. CONCRETE CLEAR COVER OVER REINFORCING SHALL BE IN ACCORDANCE WITH ACI 318, AS LISTED BELOW, UNLESS NOTED OTHERWISE.

LOCATION	CLEAR COVER INCHES
CAST AGAINST EARTH	3
EXPOSED TO EARTH OR WEATHER #6 AND LARGER	2
EXPOSED TO EARTH OR WEATHER #5 AND SMALLER	1 1/2
SLABS AND WALLS NOT EXPOSED TO WEATHER	3/4
BEAMS AND COLUMNS NOT EXPOSED TO WEATHER	1 1/2
SLABS ON GRADE (COVER FROM TOP OF SLAB)	1 1/2

3. CONCRETE REINFORCING SHALL MEET THE FOLLOWING:

A. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60. REINFORCING BARS REQUIRED TO BE WELDED SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706 GRADE 60. WELDING OF REINFORCING OTHER THAN SPECIFIED IS PROHIBITED.
B. WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ASTM A185.
C. ALL REINFORCING SHALL BE CONTINUOUS. CONTINUOUS BARS SHALL LAP IN ACCORDANCE WITH TABLE A UNLESS NOTED OTHERWISE. PROVIDE BENT BARS AT ALL CORNERS.
D. WELDED WIRE FABRIC SHALL LAP ONE FULL SQUARE PLUS 2".
E. SHOP DRAWINGS SHALL BE SUBMITTED WITH REINFORCING STEEL DETAILED IN ACCORDANCE WITH ACI 315.

4. FORMING AND EMBEDMENTS SHALL MEET THE FOLLOWING:

A. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" INSIDE FORMS OR TOOLED TO 3/4" RAD., UNLESS NOTED OTHERWISE.
B. SLABS ON GRADE SHALL HAVE CONSTRUCTION JOINTS AND CONTROL JOINTS (SAWN JOINTS), LOCATED AS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL LOCATE SLAB JOINTS ON SHOP DRAWINGS.
C. WHERE NECESSARY, VERTICAL CONSTRUCTION JOINTS SHALL BE LOCATED AT MIDSPAN. ALL JOINTS SHALL BE THOROUGHLY CLEANED AND PURPOSELY ROUGHENED TO 1/4" PRIOR TO PLACING ADJACENT CONCRETE.
D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL FORMING, TEMPORARY BRACING AND SHORING.
E. NO ALUMINUM SHALL BE EMBEDDED IN CONCRETE. CONDUITS AND PIPING EMBEDDED IN CONCRETE SHALL BE SPACED A MINIMUM OF FOUR DIAMETERS AND THE OUTSIDE DIAMETER SHALL BE LESS THAN 30% OF THE MEMBER THICKNESS PLACED BETWEEN LAYERS OF REINFORCING.

D. MASONRY

1. ALL MASONRY HAS BEEN DESIGNED BASED ON ALL MASONRY RECEIVING SPECIAL FIELD INSPECTION.
2. CONCRETE MASONRY UNITS (CMU) MATERIALS SHALL BE:

A. ALL CONCRETE MASONRY UNITS (CMU) SHALL BE TWO CELL LIGHTWEIGHT AGGREGATE UNITS WITH A SPECIFIED MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI ON NET AREA (1000 PSI ON GROSS AREA) AT 28 DAYS CONFORMING TO ASTM C90. CMU LOCATED BELOW GRADE, SHALL BE NORMAL WEIGHT AGGREGATE UNITS.
B. ALL MORTAR SHALL BE TYPE "S" OR "M" WITH A MINIMUM MORTAR COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS CONFORMING TO ASTM C270. THE MINIMUM COMPRESSIVE STRENGTH (f'M) OF A PRISM ASSEMBLED OF CMU AND MORTAR SHALL BE 2000 PSI AT 28 DAYS ON THE NET AREA.
C. CMU GROUT SHALL CONFORM TO ASTM C476 WITH 3/8" AGGREGATE WITH THE FOLLOWING REQUIREMENTS: MIN F'C=3000 PSI, MIN CEMENT=611 PCY, MAX W/C RATIO=0.65
D. REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF ASTM A615, GR 60.
E. JOINT REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF ASTM A82 WIRE WITH A MINIMUM YIELD GREATER THAN 70 KSI. LONGITUDINAL WIRES SHALL BE 9 GA (0.1483" DIA) WITH TRUSS TYPE WIRES CONNECTED AT 16" CENTERS. REINFORCING SHALL BE MILL GALVANIZED PER ASTM A641, CLASS 3.

3. HORIZONTAL WALL REINFORCING

A. PROVIDE BOND BEAM COURSES IN ALL WALLS AT THE TOP OF WALL OR PARAPET, AT FLOOR LEVELS (ABOVE GRADE), AT TOP OF OPENINGS OR IMMEDIATELY ABOVE LINTELS, BELOW OPENINGS AND AT BEARING LOCATIONS. BOND BEAMS SHALL BE REINFORCED AS FOLLOWS:

WALL TYPE	BOND BEAM REINF.
8" CMU	2-#5

ALL INTERIOR STRUCTURAL WALLS (SHEAR AND/OR BEARING) SHALL HAVE INTERMEDIATE BOND BEAMS LOCATED AT THE SAME LEVELS AS EXTERIOR BOND BEAMS.

4. VERTICAL REINFORCING

A. PROVIDE VERTICAL REINFORCING (NORMAL REINFORCING) IN GROUT FILLED CELLS AS SPECIFIED ON THE PLANS, UNLESS NOTED OTHERWISE.
B. PROVIDE AN ADDITIONAL VERTICAL REINFORCING BAR WITH DOWELS INTO SUPPORTING MEMBERS, WITH SAME SIZE AND LENGTH AS THE NORMAL REINFORCING BAR, AT THE FOLLOWING LOCATIONS UNLESS NOTED OTHERWISE:
1. ON EACH SIDE OF A CONTROL OR ISOLATION JOINT
2. AT INTERSECTION OF WALLS
3. EACH SIDE OF A WALL OPENING
4. AT EACH END OF WALL
5. AT EACH BEAM BEARING
C. VERTICAL REINFORCING SHALL EXTEND CONTINUOUSLY FROM THE TOP OF THE SUPPORTING MEMBER TO EMBED AT LEAST 6" INTO THE TOP BOND BEAM. THERE SHALL BE A DOWEL, CAST INTEGRAL WITH THE SUPPORTING MEMBER, FOR EACH VERTICAL REINFORCING BAR EXCEPT AS NOTED.

5. REINFORCING SHALL MEET THE FOLLOWING LAP, SPLICE AND EMBEDMENT REQUIREMENTS:

REINF. BAR SIZE	LAP OR SPLICE LENGTH IN WALL	FOUNDATION EMBEDMENT WITH HOOK INTO FOUND.	DOWELS STRAIGHT EMBEDMENT INTO FOUND.
JOINT	16"	N/A	N/A
4	24"	8"	15"
5	30"	10"	19"

HOOKS IF USED SHALL BE ACI STANDARD HOOKS.

6. CELLS WHICH CONTAIN REINFORCING STEEL (VERTICAL CELLS, BOND BEAMS, LINTELS AND PILASTERS) SHALL BE FILLED SOLIDLY WITH GROUT.
7. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR UNOBSTRUCTED CONTINUOUS VERTICAL CELL.
8. BOND BEAM AND JOINT REINFORCING FOR INTERIOR AND EXTERIOR WALLS SHALL BE CONTINUOUS THROUGHOUT, EXCEPT AT CONTROL AND ISOLATION JOINTS, IT SHALL BE AS FOLLOWS:

A. INTERMEDIATE REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS. REINFORCEMENT IN BOND BEAMS AT FLOOR AND ROOF DIAPHRAGM LEVELS SHALL BE CONTINUOUS.
B. AT ISOLATION JOINTS, ALL REINFORCING SHALL BE DISCONTINUOUS.

9. BARS AROUND PERIMETER OF OPENINGS SHALL EXTEND NOT LESS THAN 40 BAR DIAMETERS OR 24", WHICHEVER IS LARGER, BEYOND THE CORNER OF THE OPENING. VERTICAL JAMB BARS SHALL BE THE SAME SIZE AND NUMBER AS THE NORMAL VERTICAL REINFORCING.
10. SEE PLANS FOR LINTELS OVER OPENINGS.
11. LOCATION AND DETAILS OF CONTROL AND ISOLATION JOINTS IN REINFORCED MASONRY SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS. THE MAXIMUM SPACING OF CONTROL OR ISOLATION JOINTS SHALL BE AT A LENGTH TO HEIGHT RATIO OF 4:1 OR 60'-0"O.C., WHICHEVER IS LESS. CONTRACTOR SHALL SUBMIT A JOINT LAYOUT PLAN FOR APPROVAL PRIOR TO CONSTRUCTION.
12. ALL MASONRY IN CONTACT WITH SOIL SHALL BE NORMAL WEIGHT UNITS AND HAVE ALL VOIDS FILLED WITH GROUT.

E. STRUCTURAL STEEL

1. STRUCTURAL STEEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE AND AISC SPECIFICATIONS NINTH EDITION. SHOP DRAWINGS SHALL BE REQUIRED FOR ALL STRUCTURAL STEEL.
2. STRUCTURAL STEEL SHALL MEET THE FOLLOWING REQUIREMENTS UNLESS NOTED OTHERWISE ON THE DRAWINGS:

TYPE	ASTM	GRADE
ANGLES, CHANNELS AND PLATES	A36	-----
ANCHOR BOLTS	A1554 W/S1	-----
STRUCTURAL BOLTS	A325	-----

3. ALL MISCELLANEOUS STEEL CONNECTIONS SHALL BE FABRICATED AS SPECIFIED ON THE PLANS. ALL STEEL SHALL BE HOT DIPPED GALVANIZED (ASTM A 153, CLASS C).
4. ALL WELDING SHALL BE IN ACCORDANCE WITH THE LATEST AWS CODE. ALL WELD SHALL USE E70XX ELECTRODES.
5. ALL LIGHT GAGE STEEL CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE OR EQUIVILENT. ALL CONNECTORS SHALL BE STAINLESS STEEL.
6. FABRICATED LIGHT-GAGE ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER FOR THE LOADS SHOWN IN THE DESIGN CRITERIA OF THE GENERAL NOTES AND THE WIND PRESSURES SHOWN ON 1/S001. GIRDER TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER. SHOP DRAWINGS, ERECTION PLAN AND CALCULATIONS OF THE MEMBERS SHALL BE SUBMITTED BEARING THE SEAL OF AN ENGINEER LICENSED IN THE STATE OF FLORIDA. MANUFACTURER SHALL SHOW SIZE AND LOCATION OF ALL REQUIRED BRACING (TEMPORARY AND PERMANENT) ON SHOP DRAWINGS.
7. STEEL ROOF DECK SHALL BE 1 1/2" DEEP, 22 GA., WIDE RIB METAL DECKING SHALL HAVE A MINIMUM YIELD STRENGTH OF 33,000 PSI, A MINIMUM I OF 0.169 IN4/FT, A MINIMUM Sp OF 0.186 IN3, AND A MINIMUM Sn OF 0.192 IN3. DECKING SHALL RECEIVE FINISH PER SPECIFICATION. DECKING SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SUPPORTS. EACH DECK UNIT SHALL BE ATTACHED TO SUPPORTING MEMBERS AND ADJACENT PANELS PER DIAPHRAGM ATTACHMENT DETAIL.

F. MISCELLANEOUS

1. CONCRETE PADS FOR MECHANICAL AND ELECTRICAL EQUIPMENT ON FLOORS SHALL BE 3 1/2" HIGH UNLESS OTHERWISE NOTED AND REINFORCED WITH #3 BARS ON 12" O.C. EACH WAY, 1 1/2" FROM TOP OF SLAB. WHEN THE PAD EXCEEDS 10" IN THICKNESS, REINFORCE WITH #3 BARS ON 12" O.C. EACH WAY, TOP AND BOTTOM. ANCHOR PAD TO SLAB WITH #4 DOWELS AT 24" O.C. EACH WAY, CAST OR CHEMICALLY ADHERED INTO SUPPORTING SLAB.
2. CONTRACTOR SHALL SUPPLY ALL ITEMS FOR ATTACHING MECHANICAL AND ELECTRICAL EQUIPMENT TO THE BUILDING STRUCTURE TO RESIST ALL LOADS INCLUDING SEISMIC FORCES. ATTACHMENT SHALL BE MADE SO AS NOT TO OVERSTRESS STRUCTURAL MEMBERS. COORDINATE THE ATTACHMENTS AND LOCATIONS OF THE EQUIPMENT WITH THE STRUCTURAL SHOP DRAWINGS. REFER TO THE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
3. SUBSTITUTION OF EXPANSION ANCHORS FOR ADHESIVE ANCHORS OR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS WILL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER IN ADVANCE.
4. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING ADDITIONAL SERVICES:
   A. VERIFICATION OF ALL DIMENSIONS, ELEVATIONS, OPENING SIZES, AND MECHANICAL EQUIPMENT WEIGHTS PRIOR TO STARTING WORK.
   B. REMOVE ALL ABANDONED FOUNDATIONS, UTILITIES, PIPELINES, ETC. THAT INTERFERE WITH NEW CONSTRUCTION.
   C. REVIEW AND APPROVE ALL SHOP DRAWINGS PRIOR TO SUBMITTAL, NOTING CHANGES MADE WHICH DO NOT COMPLY WITH DESIGN DRAWINGS.
   D. PROVIDE TEMPORARY BRACING AND SHORING TO PREVENT EXCESSIVE DEFLECTIONS AND DAMAGE DURING CONSTRUCTION. DESIGN OF TEMPORARY BRACING AND SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
   E. SUPPORT OF CEILING SYSTEMS, FOLDING PARTITIONS, TOILET PARTITIONS, COUNTERS, MISCELLANEOUS EQUIPMENT, AND WINDOW SYSTEMS SHALL BE DEFINED IN THE ARCHITECTURAL PLANS.

H. PREFABRICATED METAL BUILDING

1. THE BUILDING SHALL BE A PREFABRICATED METAL STRUCTURE OF THE SIZE AND CONFIGURATION SHOWN. THE BUILDING SHALL BE FABRICATED ACCORDING TO AISC, MBMA AND AISI LATEST SPECIFICATIONS. WHEN CONFLICTS OCCUR BETWEEN AISC, MBMA, AND AISI, THE MOST STRINGENT SHALL CONTROL. THE DIMENSIONAL TOLERANCES OUTLINED IN THE AWS CODE UNDER WORKMANSHIP AND THE TOLERANCES APPLICABLE TO ROLL FORMED STEEL UNDER THE AISC "STANDARD MILL PRACTICE" SECTION SHALL BE REQUIRED IN THE FABRICATION OF THE STEEL BUILDING FRAMES.
2. THE BUILDING SHALL BE DESIGNED ACCORDING TO THE AISC, MBMA AND AISI LATEST SPECIFICATIONS. WHEN CONFLICTS OCCUR, THE MOST STRINGENT SHALL GOVERN. THE FOLLOWING ARE ADDITIONAL DESIGN REQUIREMENTS:

A. A COMPLETE DESIGN ANALYSIS SHOWING ALL CALCULATIONS FOR THE RIGID FRAMES (INCLUDING CONNECTIONS), GIRTS, PURLINS, BRACING AND ANCHOR BOLTS FOR WIND AND SEISMIC LOADS, A LAYOUT OF ANCHOR BOLTS AND OTHER EMBEDDED ITEMS SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE DETAILS OF ALL MAIN MEMBERS, TYPICAL CONNECTIONS (SHOWING BOLT HOLES AND WELDS), AND ERECTION DRAWINGS. SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED BEARING THE SEAL OF AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
B. THE BUILDING SHALL BE DESIGNED TO SUPPORT ALL MECHANICAL EQUIPMENT, INCLUDING SPRINKLERS, EXHAUST SYSTEMS, BASKETBALL EQUIPMENT, AND ALL OTHER SUCH DEVICES. ADDITIONAL GIRTS OR PURLINS SHALL BE PLACED IN CONVENIENT LOCATIONS FOR ATTACHMENT OF ALL EQUIPMENT.
C. THE FOLLOWING CRITERIA SHALL APPLY:

1. THE BARE BUILDING FRAME SHALL BE DESIGNED TO LIMIT THE LATERAL DEFLECTION TO THE HEIGHT IN INCHES DIVIDED BY 180 (H/180) AND SHALL BE MEASURED AT THE EAVE. LATERAL DEFLECTIONS SHALL BE BASED UPON USING 10 YEAR RECURRENCE (3/4 OF THE WIND PRESSURES DETERMINED USING THE BASIC WIND SPEED PER GENERAL STRUCTURAL NOTES, SECTION A).
2. THE LATERAL DEFLECTION OF THE WALL CLADDING AND GIRTS SHALL BE LIMITED TO THEIR LENGTH, IN INCHES, DIVIDED BY 240 (L/240). DEFLECTIONS SHALL BE BASED ON CLADDING PRESSURES DEFINED IN THE BUILDING CODE FOR THE FULL WIND SPEED IN GENERAL STRUCTURAL NOTES, SECTION A.
3. PURLINS SHALL BE DESIGNED FOR SUPERIMPOSED LOADS AS NOTED IN SECTION A, OF THE GENERAL STRUCTURAL NOTES. VERTICAL DEFLECTION OF ROOF PURLINS SHALL BE LIMITED TO THEIR LENGTH, IN INCHES, DIVIDED BY 240 (L/240).
4. VERTICAL DEFLECTIONS OF RIGID FRAMES SHALL BE LIMITED TO THEIR SPAN, IN INCHES, DIVIDED BY 240 (L/240). THIS DEFLECTION SHALL INCLUDE SPECIAL LOADS WHERE APPLICABLE.
5. MINIMUM WEB THICKNESS OF RIGID FRAMES SHALL BE 3/16" AND THE MINIMUM FLANGE THICKNESS OF RIGID FRAMES SHALL BE 3/8". WEBS SHALL BE WELDED CONTINUOUSLY TO FLANGES FROM BOTH SIDES.

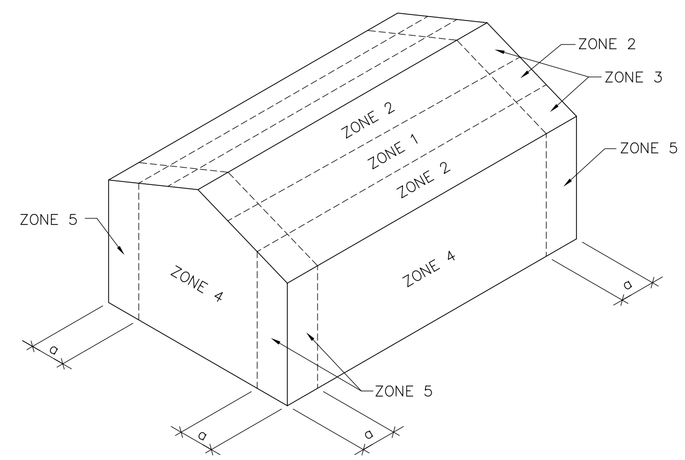
D. BRACING SHALL BE USED TO TAKE LATERAL DIAPHRAGM LOADS UNLESS THE METAL PANELS ARE THROUGH FASTENED TO THEIR SUPPORTS. LOAD TESTS ON METAL PANELS MUST BE SUBMITTED WHERE THESE ARE USED AS A DIAPHRAGM. IN SEISMIC ZONES C, 3 AND 4, METAL PANELS USED AS A DIAPHRAGM MUST BE A MINIMUM OF 22 GAGE.
E. ALL BRACING MEMBERS CONSIDERED TO BE IN TENSION ONLY SHALL HAVE A SLENDERNESS RATIO (kl/r) OF LESS THAN 300. COMPRESSION- TENSION MEMBERS SHALL HAVE A SLENDERNESS RATIO (kl/r) LESS THAN 200. CABLE BRACING IS SPECIFICALLY PROHIBITED. CONNECTIONS TO BEAMS AND COLUMNS SHALL BE INVESTIGATED FOR DEFORMATION IF CONNECTING TO THE WEB OF THE MEMBER.
F. PURLINS AND GIRTS SHALL BE CONSIDERED STRUCTURAL MEMBERS. DESIGN OF PURLINS AND GIRTS SHALL INCLUDE BRACING OF THE COMPRESSION FLANGES. PURLINS SHALL BE DESIGNED FOR THE COLLATERAL AND ANY SPECIAL LOADS SHOWN IN THE GENERAL NOTES, SECTION A. PANEL CONNECTIONS INTENDED TO SLIP SHALL NOT BE CONSIDERED AS BRACING. THROUGH FASTENED PANELS SHALL BE CONSIDERED BRACING FOR THE FLANGE THAT IS ATTACHED TO THE PANEL ONLY. COLLATERAL LOADS SHALL NOT BE CONSIDERED IN UPLIFT CALCULATIONS.

G. SHORING AND RESHORING

1. CONTRACTOR WILL PROVIDE SHORING AND RESHORING DRAWINGS, ALONG WITH RE-SHORING SCHEDULE FOR ALL ELEVATED STRUCTURAL COMPONENTS, INCLUDING BUT NOT LIMITED TO BEAMS, SLABS, AND PRECAST JOIST. DRAWINGS TO BE SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL STRUCTURAL ENGINEER, FOR SUBMITTAL TO THE ARCHITECT AND STRUCTURAL ENGINEER. NO ELEVATED WORK MAY PROCEED WITHOUT THIS SUBMITTAL.
2. CONTRACTOR TO ALSO RETAIN SAME ENGINEER TO PROVIDE FIELD INSPECTIONS, ALONG WITH REPORTS, THAT ALL OF THE SHORING AND RE-SHORING IS COMPLETED AS PER HIS DRAWINGS AND SPECIFICATIONS, FOR EACH LEVEL OF WORK.
3. SHORING SCHEDULE TO PROVIDE TIME THAT SHORES MAY BE REMOVED IN ORDER TO REMOVE FORMWORK, AND SPECIFIC SEQUENCE OF THE REMOVAL OF THE SHORING AS IT PROGRESSES THRU THE HEIGHT OF THE BUILDING, WITH SUFFICIENT DETAIL AS TO THE NUMBER OF DAYS TO COMPLETE REMOVAL. ALSO, IF WOOD AND METAL SHORES ARE MIXED, THE SHORING PLANS TO NOT SPECIFY PERCENTAGES, BUT RATHER EXACT NUMBERS OF WOOD POST SHORES, METAL POST SHORES, OR METAL FRAMES.
4. SHORING DRAWINGS TO ALSO CONTAIN DETAIL OF CONNECTION OF HEADERS AT THE TOP OF THE SHORES.
5. NOTE, IF THESE SHORING AND RE-SHORING CONFLICT WITH ANY DIRECTIVES CONTAINED IN THE JOB SPECIFICATIONS, THEN THE GOVERNING GUIDELINES WILL BE THESE.

STRUCTURAL ABBREVIATIONS

ADD'L	– ADDITIONAL	LT. WT.	– LIGHTWEIGHT
ADJ.	– ADJACENT	MFR.	– MANUFACTURER
ALT.	– ALTERNATE	MAX.	– MAXIMUM
ALUM.	– ALUMINUM	MAT'L.	– MATERIAL
A.B.	– ANCHOR BOLT	MTL.	– METAL
&	– AND	MIN.	– MINIMUM
L	– ANGLE	MISC.	– MISCELLANEOUS
ARCH.	– ARCHITECTURAL	MECH.	– MECHANICAL
@	– AT	MPH	– MILES PER HOUR
BOT.	– BOTTOM	NOM.	– NOMINAL
BRG.	– BEARING	NTS	– NOT TO SCALE
BTWN.	– BETWEEN	NO.	– NUMBER
BLDG.	– BUILDING	O.C.	– ON CENTER
CL	– CENTERLINE	OPP.	– OPPOSITE
CLR.	– CLEAR	PL	– PLATE
COL.	– COLUMN	LBS.	– POUNDS
CONC.	– CONCRETE	PSF	– POUNDS PER SQUARE FOOT
CMU	– CONCRETE MASONRY UNIT	PSI	– POUNDS PER SQUARE INCH
CONN.	– CONNECTION	PREFAB.	– PREFABRICATED
CONT.	– CONTINUOUS	PROJ.	– PROJECTION
CJ	– CONSTRUCTION JOINT	R or RAD.	– RADIUS
DTL.	– DETAIL	REF.	– REFERENCE
DIAG.	– DIAGONAL	REINF.	– REINFORCING
DIA.	– DIAMETER	REQ'D.	– REQUIRED
DIM.	– DIMENSION	REV.	– REVISION
DIR.	– DIRECTION	RTU	– ROOF TOP UNIT
DWG.	– DRAWING	S	– STEEL I BEAM
DBL.	– DOUBLE	SCJ	– SAWN CUT JOINT
2L	– DOUBLE ANGLES	SCH.	– SCHEDULE
DWL.	– DOWEL	SEC.	– SECTION
EA.	– EACH	SHT.	– SHEET
EF	– EACH FACE	SLO	– SHORT LEG OUT
EW	– EACH WAY	SIM.	– SIMILAR
ELEC.	– ELECTRICAL	SJ	– STEEL JOIST
EL.	– ELEVATION	SPA.	– SPACE
EMBED.	– EMBEDMENT	SPEC.	– SPECIFICATIONS
EQUIP.	– EQUIPMENT	SPF	– SPRUCE PINE FIR
EXP.	– EXPANSION	SQ.	– SQUARE
EXP. JT.	– EXPANSION JOINT	STD.	– STANDARD
EXT.	– EXTERIOR	STL.	– STEEL
FABR.	– FABRICATOR	STIFF.	– STIFFENER
F.V.	– FIELD VERIFY	STR.	– STRAIGHT
FIN.	– FINISH	STRUCT.	– STRUCTURAL
FF	– FINISHED FLOOR	SYM.	– SYMMETRICAL
FLR.	– FLOOR	WT	– STRUCTURAL TEE
FTG.	– FOOTING	T & B	– TOP AND BOTTOM
FDN.	– FOUNDATION	THKN.	– THICKENED
GA.	– GAUGE OR GAGE	THRD.	– THREADED
GALV.	– GALVANIZED	TOC	– TOP OF CONCRETE
GR	– GRADE	TOF	– TOP OF FOOTING
GB	– GRADE BEAM	TOG	– TOP OF GRATING
HD. ST.	– HEADED STUD	TOJ	– TOP OF JOIST
HOR.	– HORIZONTAL	TOS	– TOP OF STEEL
INT.	– INTERIOR	TRANS.	– TRANSVERSE
INTERM.	– INTERMEDIATE	TS	– TUBE STEEL
ISO.	– ISOLATION	TYP.	– TYPICAL
JT.	– JOINT	UNO	– UNLESS NOTED OTHERWISE
K	– KIPS (1000 POUNDS)	VERT.	– VERTICAL
LOC.	– LOCATION	WWF	– WELDED WIRE FABRIC
LLBB	– LONG LEG BACK TO BACK	W	– WIDE FLANGE SHAPE
LLH	– LONG LEG HORIZONTAL	W/	– WITH
LLV	– LONG LEG VERTICAL	▶—	– MOMENT CONNECTION



COMMUNITY CENTER BUILDING:
BUILDING MEAN ROOF HEIGHT: 18'-8"
BUILDING EXPOSURE COEFF. @ ROOF: Kh= .89
VELOCITY PRESSURE @ ROOF HEIGHT: qh= 49.2 PSF
ROOF GUST FACTOR COEFF: Gh= .89
INTERNAL PRESSURE COEFF: GCpi=±.18

FOR MWFRS:

WINDWARD ROOF PRESSURES: -48.3 PSF
LEEWARD ROOF PRESSURES: -27.2 PSF
WINDWARD WALL PRESSURES: 43.9 PSF
LEEWARD WALL PRESSURES: -30.1 PSF

FOR COMPONENTS AND CLADDING:
WIND PRESSURE COEFF. ZONE:
a = 0.1 X WIDTH = 8 OR
a = 0.4 X HEIGHT = 7.5 NOT LESS THAN
a = 3
USE a = 7.5 FEET

MAXIMUM VERTICAL WIND LOAD (ROOF)

ZONE 1	
AREA	PRESSURE
10SF	-53.1 PSF
20SF	-51.6 PSF
50SF	-49.7 PSF

ZONE 2	
AREA	PRESSURE
10SF	-112.1 PSF
20SF	-101.8 PSF
50SF	-88.1 PSF

ZONE 3	
AREA	PRESSURE
10SF	-112.1 PSF
20SF	-101.8 PSF
50SF	-88.1 PSF

MAXIMUM VERTICAL WIND LOAD (OVERHANGS)

ZONE 2	
AREA	PRESSURE
10SF	-117.0 PSF
20SF	-117.0 PSF
50SF	-117.0 PSF

ZONE 3	
AREA	PRESSURE
10SF	-190.8 PSF
20SF	-173.0 PSF
50SF	-149.5 PSF

MAXIMUM HORIZONTAL WIND LOAD (WALLS)

ZONE 4	
AREA	PRESSURE
10SF	-62.9 PSF
	58.0 PSF
20SF	-60.3 PSF
	55.4 PSF
50SF	-56.9 PSF
	51.9 PSF

ZONE 5	
AREA	PRESSURE
10SF	-77.7 PSF
	58.0 PSF
20SF	-72.5 PSF
	55.4 PSF
50SF	-65.6 PSF
	51.9 PSF

1 / S001 **WIND LOADS**
NO SCALE

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CONSULTANT:

CLIENT / PROJECT NAME:

CITY OF MIAMI
ROBERT KING HIGH PARK
NEW BUILDING & SITE IMPROVEMENTS
7025 W. FLAGLER STREET, MIAMI, FLORIDA

GENERAL NOTES:

SHEET ISSUE:

MARK	DATE	DESCRIPTION
2	03/03/08	AS PER OWNERS COMMENTS
4	5/28/09	AS PER OWNERS COMMENTS
5	8/12/09	ADDENDUM

PROFESSIONAL SEAL:

ENGINEER OF RECORD:

FREDY TAIN, P.E.
P.E. NO. 61011 (FLORIDA)

NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BOX

SHEET TITLE:

GENERAL STRUCTURAL NOTES

SHEET INFORMATION:

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