1. STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE PROVISIONS OF THE 2009 INTERNATIONAL BUILDING CODE. 2. THE BUILDING STRUCTURE HAS BEEN DESIGNED TO RESIST THE FOLLOWING CODE PRESCRIBED LOADS:

<u>/ </u>	ROOFTYPICAL FLOORPRIVATE BALCONY		
	ROOF	20	PSF
	TYPICAL FLOOR	40	PSF
	PRIVATE BALCONY	100	PSF
	PUBLIC ROOMS AND CORRIDO	DR100	PSF
	GARAGE	40	PSF
10W	LOADS		
	GROUND SNOW LOAD, Pg	5	PSF
	SNOW IMPORTANCE FACTOR,	ls	.1.0
	SNOW EXPOSURE FACTOR, C	e	.0.9
	THERMAL FACTOR, Ct	***************************************	1.0

	SNOW IMPORTANCE FACTOR, Is
WIND	LOADS
	BASIC WIND SPEED (THREE SECOND GUST), V3s90 N

EXPOSURE CATEGORY SEISMIC LOADS

SEISMIC USE GROUP	
SEISMIC IMPORTANCE FACTOR, IE	1.0
SPECTRAL RESPONSE COEFFICIENT, SS	12.2%
SPECTRAL RESPONSE COEFFICIENT, S1	5.1%d
SITE CLASS	
SEISMIC DESIGN CATEGORY	A

- 3. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKMEN AND OTHER PERSONS DURING CONSTRUCTION.
- 4. THE STRUCTURAL DRAWINGS SHALL NOT BE SCALED FOR DETERMINATION OF QUANTITY, LENGTH OR FIT OF MATERIALS.
- 5. PRINCIPAL OPENINGS ARE INDICATED ON THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SLEEVES, BLOCKOUTS, INSERTS, CURBS, OPENINGS AND SLAB DEPRESSIONS NOT
- 6. CONTRACTOR SHALL COMPARE STRUCTURAL AND ARCHITECTURAL DRAWINGS AND REPORT ANY DISCREPANCY TO THE ARCHITECT PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL MEMBERS.
- 7. CONTRACTOR SHALL INSURE THAT CONSTRUCTION MATERIALS WHOSE WEIGHT EXCEEDS THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS ARE NOT STORED ON STRUCTURALLY SUPPORTED FLOOR OR
- 8. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING OF ALL STRUCTURAL WORK AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONDITION WHICH, IN HIS OR HER OPINION, MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS IN THE STRUCTURE.
- 9. LOADINGS FOR MECHANICAL EQUIPMENT ARE BASED ON THE UNIT(S) SHOWN ON THE STRUCTURAL DRAWINGS. ANY CHANGES IN TYPE, SIZE, WEIGHT OR NUMBER OF UNIT(S) SHALL BE REPORTED TO THE ARCHITECT PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL MEMBERS OR MECHANICAL
- 10. REPRODUCTION OF THE STRUCTURAL DRAWINGS, EITHER IN PART OR IN WHOLE, FOR SUBMITTALS OR SHOP DRAWINGS IS NOT PERMITTED. SUCH SUBMITTALS AND SHOP DRAWINGS MAY BE REJECTED.
- 11. CONTRACTOR SHALL SCHEDULE SITE OBSERVATION VISITS WITH THE ENGINEER OF RECORD AND/OR TESTING LABORATORY A MINIMUM OF FORTY-EIGHT HOURS PRIOR TO THE REQUIRED TIME OF THE VISIT.
- 12. CONTRACTOR SHALL ALLOW TEN (10) WORKING DAYS FOR THE ENGINEER TO REVIEW EACH STRUCTURAL SUBMITTAL OR SHOP DRAWING.

FOUNDATION NOTES

- 1. THE BUILDING FOUNDATION DESIGN IS BASED ON THE PROJECT GEOTECHNICAL REPORT PREPARED BY REED ENGINEERING GROUP, INC (PROJECT NO. 13998) DATED DECEMBER 15, 2006 AND A SUPPLEMENTAL LETTER DATED MAY 2, 2007. REFER TO SHEET SG1.01 FOR PARKING GARAGE FOUNDATION INFORMATION.
- 2. THE BUILDING FOUNDATION DESIGN IS BASED ON A POTENTIAL VERTICAL MOVEMENT, PVM, ON THE ORDER OF ONE (1) INCH OR LESS. IF THIS VALUE IS NOT ACCEPTABLE TO THE OWNER OR TENANTS, THE FOUNDATION DESIGN
- 3. THE BUILDING FOUNDATION SHALL CONSIST OF A SHALLOW, MONOLITHIC, EARTH-FORMED, POST-TENSIONED REINFORCED CONCRETE STIFFENED SLAB AND BEAM SYSTEM. GRADE BEAMS HAVE BEEN PROPORTIONED FOR AN ALLOWABLE BEARING PRESSURE OF 3,000 PSF.
- 4. ALL UNEXPOSED SURFACES OF FOOTINGS/GRADE BEAMS AT THE BUILDING SHALL BE EARTH-FORMED. PROVIDE FORMWORK FOR ALL EXPOSED SURFACES AND THE UPPER TWELVE (12) INCHES OF ALL EXTERIOR FOOTINGS/GRADE BEAMS.
- 5. THE SLAB ON GRADE FOUNDATIONS SHALL BE PLACED ON A TEN (10) MIL VAPOR RETARDER OVER EITHER TWELVE (12) INCHES OF SELECT FILL OR SIX (6) INCHES OF TIME STABILIZED CLAY SOIL THE UNDERLYING SOILS. SHALL BE PRESWELLED BY EITHER WATER PRESSURE INJECTION TO A DEPTH OF TEN (10) FEET OR MECHANICAL EXCAVATION/RECOMPATION TO A DEPTH OF EIGHT (8) FEET IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT. IF WATER PRESSURE INJECTION IS USED, THE INJECTION PROCESS SHALL BE COMPLTED PRIOR TO THE BEGINNING OF EXCAVATION FOR THE PARKING GARAGE.
- INFORMATION ABOVE IS PRESENTED ONLY AS A SUMMARY OF THE PROJECT GEOTECHNICAL REPORT. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COMPLYING WITH THE RECOMMENDATIONS CONTAINED IN THE PROJECT GEOTECHNICAL REPORT.
- 7. IT IS RECOMMENDED THAT THE BUILDING OWNER RETAIN A QUALIFIED INDEPENDENT INSPECTION SERVICE TO VERIFY BEARING STRATA, LOCATION, DIMENSIONS, SELECT FILL PLACEMENT/COMPACTION AND REINFORCEMENT SIZE AND PLACEMENT.
- BECAUSE OF THE ELAPSED TIME, THE CURRENT SOIL CONDITIONS MAY DIFFER SIGNIFICANTLY FROM THE SAMPLES THAT WERE USED IN THE DEVELOPMENT OF THE PROJECT GEOTECHNICAL REPORT REFERENCED ABOVE. THEREFORE, IT IS RECOMMENDED THAT THE BUILDING OWNER CONSULT WITH THE PROJECT GEOTECHNICAL ENGINEER TO DETERMINE. IF THE FOUNDATION DESIGN PARAMETERS ARE CONSISTENT WITH THE CURRENT SOIL CONDITIONS.

STRUCTURAL CONCRETE NOTES

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 301 AND ACI 318. ALL CONCRETE SHALL BE LABORATORY DESIGNED AND CONTROLLED.
- 2. UNLESS NOTED OTHERWISE, ALL CONCRETE SHALL HAVE SAND AND GRAVEL OR CRUSHED STONE COARSE AGGREGATES AND A CORRESPONDING TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH OF 3,000 PSI. ALL CONCRETE THAT WILL BE PERMANENTLY EXPOSED TO WEATHER SHALL CONTAIN AN AIR ENTRAINING AGENT THAT PROVIDES FOUR (4) TO SIX (6) PERCENT AIR BY VOLUME.
- 3. CONCRETE ON WOOD DECK SHALL HAVE SAND AND LIGHTWEIGHT COARSE AGGREGATE AND A CORRESPONDING TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH OF 3,000 PSI, UNLESS NOTED OTHERWISE. UNIT WEIGHT OF IN PLACE LIGHTWEIGHT CONCRETE SHALL NOT EXCEED ONE HUNDRED FIFTEEN (115) POUNDS PER CUBIC FOOT. CONCRETE SHALL BE REINFORCED WITH NYCON-RC FIBER REINFORCEMENT AS MANUFACTURED BY NYCON, INC. OR APPROVED SUBSTITUTE. DOSING AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.
- 4. CONCRETE PROTECTION FOR STEEL REINFORCEMENT SHALL BE AS FOLLOWS (SEE ACI 318, SECTION 7.7 FOR CONDITIONS NOT INDICATED): ALL CONCRETE PLACED AGAINST SOIL...
- WALLS, BEAMS AND COLUMNS... ..AT SLAB MID-DEPTH SLABS ON GRADE.... FORMED GRADE BEAMS......3" BOTTOM, 2" SIDES, 1 1/2" TOP 5. LOCATE JOINTS TO LEAST IMPAIR STRENGTH AND APPEARANCE OF STRUCTURE. LOCATE HORIZONTAL JOINTS IN CONCRETE ONLY WHERE THEY
- NORMALLY OCCUR OR WHERE INDICATED ON PLAN. LOCATE VERTICAL JOINTS IN THE MIDDLE THIRD OF SPAN. 6. ROUGHEN SURFACE OF HORIZONTAL OR NEARLY HORIZONTAL CONSTRUCTION

JOINTS SO THAT AGGREGATE SHALL BE EXPOSED UNIFORMLY, LEAVING NO

7. THE PLACEMENT OF SLEEVES OR OPENINGS THRU CONCRETE MEMBERS IS PROHIBITED UNLESS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS OR APPROVED IN WRITING BY THE ENGINEER OF RECORD.

LAITANCE, LOOSENED PARTICLES OR DAMAGED CONCRETE.

8. PROVIDE CHAMFERS AND REVEALS AS INDICATED IN THE ARCHITECTURAL

REINFORCING STEEL NOTES

- 1. ALL DETAILING OF STEEL REINFORCEMENT AND ACCESSORIES SHALL CONFORM TO ACI COMMITTEE 315 PUBLICATION SP-66, "ACI DETAILING
- 2. DEFORMED BAR REINFORCEMENT SHALL BE DOMESTIC NEW BILLET STEEL IN CONFORMANCE WITH ASTM A615, GRADE 60.
- 3. WELDED WIRE FABRIC SHALL BE ELECTRICALLY WELDED, COLD-DRAWN WIRE IN CONFORMANCE WITH ASTM A185, GRADE 65. WELDED WIRE FABRIC SHALL BE PLACED IN FLAT SHEETS ONLY.
- 4. LAP WELDED WIRE FABRIC AT LEAST 1 1/2 SQUARES PLUS WIRE END EXTENSIONS BUT NOT LESS THAN TWELVE (12) INCHES, UNLESS NOTED OTHERWISE. EXTEND MESH ACROSS SUPPORTING BEAMS AND WALLS.
- 5. FIBER REINFORCEMENT FOR CONCRETE SHALL BE NYCON—RC FIBERS AS MANUFACTURED BY NYCON, INC. OR APPROVED SUBSTITUTE. DOSING AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.

POST-TENSION SLAB-ON-GRADE NOTES

- 1. POST-TENSIONING MATERIALS INCLUDING TENDONS AND ANCHORAGES SHALI CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATION FOR UNBONDED SINGLE STRAND TENDONS" PUBLISHED BY THE POST—TENSIONING
- 2. POST-TENSIONING TENDONS SHALL BE FABRICATED IN A PLANT THAT IS CURRENTLY CERTIFIED BY THE PTI IN ACCORDANCE WITH THE "MANUAL FOR CERTIFICATION OF PLANS PRODUCING UNBONDED SINGLE-STRAND TENDONS" PUBLISHED BY THE PTI.
- 3. INSTALLATION AND STRESSING OF POST—TENSIONING MATERIALS INCLUDING TENDONS AND ANCHORAGES SHALL BE IN ACCORDANCE WITH THE SECOND FOR POST-TENSIONED SLAB-ON-GROUND CONSTRUCTION" PUBLISHED BY
- 4. POST-TENSIONING TENDONS SHALL BE UNBONDED, SHEATHED AND COATED 1/2 INCH IN DIAMETER SEVEN (7) WIRE STRAND CABLE AND SHALL CONFORM TO A416, 270 KSI.
- 5. POST-TENSIONING TENDON DRAPES AND OFFSET CURVES SHALL APPROXIMATE A PARABOLIC PROFILE BETWEEN INFLECTION POINTS. TOTAL DRAPE OF THE BOTTOM BEAM TENDONS SHALL BE ACHIEVED WITHIN A HORIZONTAL DISTANCE FROM THE ANCHORAGE THAT DOES NOT EXCEED TWO (2) TIMES THE BEAM DEPTH.
- 6. POST-TENSIONING TENDONS AND CONVENTIONAL REINFORCEMENT SHALL BE PLAÇED TO ALLOW ADEQUATE CLEAR DISTANCE AROUND CONVENTIONAL REINFORCEMENT IN ACCORDANCE WITH ACI 318.
- 7. POST-TENSIONING TENDONS SHALL BE SECURED TO A SUFFICIENT NUMBER OF POSITIONING DEVICES TO ENSURE CORRECT LOCATION DURING CONCRETE PLACEMENT, TENDONS SHALL BE SUPPORTED AT FOUR (4) FEET ON CENTER MAXIMUM.
- 8. AFTER TENDONS ARE PLACED AND FIRMLY SUPPORTED, TENDONS SHALL BE INSPECTED FOR DAMAGE AND REPAIRED. ALL CUTS OR TEARS IN TENDON SHEATHING SHALL BE TAPED PRIOR TO CONCRETE PLACEMENT.
- 9. POST-TENSIONING TENDONS SHALL NOT BE DISTURBED BY CONCRETING EQUIPMENT OR LABORERS DURING CONCRETE PLACEMENT.
- 10. CONCRETE STRENGTH AT TRANSFER OF POST-TENSIONING FORCE SHALL BE A MINIMUM OF 2,000 PSI.
- 11. POST-TENSIONING SLAB TENDONS SHALL BE STRESSED BEFORE POST-TENSIONING BEAM TENDONS. 12. TO REDUCE SHRINKAGE CRACKING, POST-TENSIONING TENDONS MAY BE
- PARTIALLY STRESSED TO 30% OF FULL STRESS ON THE DAY AFTER CONCRETE PLACEMENT. IN ADDITION, A SPRAY—APPLIED LIQUID CURING COMPOUND IN ACCORDANCE WITH ASTM C309 MAY BE APPLIED AFTER FINISHING BUT PRIOR TO THE STRESSING OPERATION.
- 13. TEMPORARY JACKING FORCES IN POST-TENSIONING TENDONS SHALL NOT EXCEED EIGHTY (80) PERCENT OF ULTIMATE TENDON STRENGTH (0.8Fpu) STRESS IN TENDÒNŚ AFTER ANCHORAGE SHALL NOT EXCEED SEVENTY (70) PERCENT OF ULTIMATE TENDON STRENGTH (0.7Fpu)
- 14. CONTRACTOR SHALL SUBMIT POST—TENSIONING TENDON ELONGATION REPORTS THAT INCLUDE THE SPECIFIED ELONGATIONS, FIELD MEASURED ELONGATIONS AND THE DIFFERENCE BETWEEN THESE TWO (2) VALUES EXPRESSED AS PERCENTAGE OF THE SPECIFIED VALUE FOR ÉACH TENDON. FIELD MEASUREMENTS OF ELONGATIONS SHALL NOT DIFFER FROM SPECIFIED VALUES BY MORE THAN TEN (10) PERCENT OR 1/8 INCH, WHICHEVER IS
- 15. AFTER STRESSING OF THE POST-TENSIONING TENDONS IS COMPLETED AND WITH THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD, THE POST-TENSION TENDON ENDS SHALL BE CUT OR BURNED OF TO WITHIN ONE (1) INCH OF THE SLAB EDGE.
- 16. COAT THE POST-TENSIONING STRESSING ACHORAGE WITH CORROSION PREVENTAVIE MATERAIL (ASPHALTIC PAINT OR SIMILAR PRODUCT). EXPOSED RECESS SHALL THEN BE FILLED SLUSH WITH NON-SHRINK GROUT THAT ATTAINS A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.
- 17. THE CONTRACTOR SHALL NOT INSTALL DRILL—IN OR POWDER—ACTUATED FASTENERS IN POST-TENSIONED MEMBERS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD.

ADHESIVE AND DRILL-IN ANCHOR NOTES

- 1. UNLESS NOTED OTHERWISE, ADHESIVE ANCHORS SHALL BE INSTALLED WITH SIMPSON STRONG-TIE SET HIGH STRENGTH EPOXY IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.
- 2. UNLESS NOTED OTHERWISE, HEAVY DUTY SCREW ANCHORS SHALL BE SIMPSON STRONG-TIE TITEN HD ANCHORS INSTALLED IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER.
- 3. UNLESS NOTED OTHERWISE, WEDGE ANCHORS SHALL BE SIMPSON STRONG-TIE STRONG-BOLT ANCHORS INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.

STRUCTURAL STEEL NOTES

- 1. ALL STRUCTURAL STEEL DETAILING, FABRICATION AND INSTALLATION SHALL CONFORM TO THE STANDARDS OF THE AMERICAN INSTITUTE OF STEEL
- 2. PROVIDE NEW DOMESTIC STRUCTURAL STEEL IN ACCORDANCE WITH THE FOLLOWING:
 - WIDE FLANGE SHAPES... CHANNELS, PLATES AND ANGLESASTM A36 STFFL TUBE.... ..ASTM A500, GRADE EASTM A53 (TYPES E OR S), GRADE E
- 3. THE DETAILER SHALL DESIGN ALL CONNECTIONS TO RESIST FIFTY (50) PERCENT OF THE ALLOWABLE SHEAR CAPACITY OF THE BEAM, UNLESS NOTED OTHERWISE. AS A MINIMUM, PROVIDE THE NUMBER OF BOLTS SHOWN BELOW FOR EACH BEAM SIZE:

BEAM SIZE	NUMBER OF BOLTS
W8 & W10	2 MINIMUM
W12, W14, W16	3 MINIMUM
W18 & W21	4 MINIMUM
W24 & W27	5 MINIMUM
W30 & W33	
W36 & W40	7 MINIMUM

- CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE 3/4 INCH DIAMETER ASTM A325-N BOLTS, UNLESS NOTED OTHERWISE.
- 5. ANCHOR BOLTS SHALL BE UNFINISHED THREADED FASTENERS THAT CONFORM TO ASTM A307, GRADE A BOLTS AND NUTS WITH HEXAGONAL
- 6. SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED EXCEPT AS SPECIFICALLY INDICATED IN STRUCTURAL DRAWINGS.
- 7. ERECT ALL STEEL BEAMS WITH NATURAL OR SPECIFIED CAMBER UP.
- 8. UNLESS NOTED OTHERWISE, HOT DIP GALVANIZE ALL STRUCTURAL STEEL MEMBERS AND EMBEDS EXPOSED TO WEATHER OR SOIL AND WHERE INDICATED ON DRAWINGS. GALVANIZING SHALL CONFORM TO ASTM A123.
- 9. TOUCH UP FIELD WELDS ON GALVANIZED ITEMS WITH PAINT CONFORMING TO TT-P-641.
- 10. ALL STAIRS, LANDINGS AND SUPPORTS SHALL BE DESIGNED BY THE STAIR MANUFACTURER. THE MINIMUM DESIGN LIVE LOAD FOR STAIRS AND ACCESSORIES SHALL BE ONE HUNDRED (100) POUNDS PER SQUARE. FOOT. CONTRACTOR SHALL SUBMIT COMPLETE DESIGN CALCULATIONS AND SHOP DRAWINGS. SUBMITTALS SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.

- 1. WELDING OF STRUCTURAL STEEL SHALL CONFORM TO AWS D1.1. USE E70XX ELECTRODES FOR FIELD AND SHOP WELDS. USE ONLY LOW-HYDROGEN ELECTRODES ON ASTM A242, A514, A572 AND A588 STEEL.
- 2. WELDS NOT INDICATED IN DRAWINGS SHALL BE MINIMUM SIZE CONTINUOUS FILLET WELD IN ACCORDANCE WITH AWS D1.1. FILLET WELDS SHALL BE CONTINUOUS, UNLESS NOTED OTHERWISE.
- 3. PROVIDE FILLET WELDS AT ALL CONTACT JOINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE CAPACITY OF THE
- SMALLER MEMBER AT THE JOINT, UNLESS NOTED OTHERWISE. 4. ALL GROOVE WELDS SHALL BE FULL PENETRATION, UNLESS NOTED
- AUTOMATICALLY END WELD HEADED STUDS AND DEFORMED BARS WHERE MNDICATED ON DRAWINGS. STUDS SHALL CONFORM TO ASTM A108.

SHEAR CONNECTOR NOTES

- 1. SHEAR CONNECTORS FOR COMPOSITE CONSTRUCTION SHALL BE 3/4 INCH DIAMETER, 4 1/2 INCH LONG HEADED STUDS AS MANUFACTURED BY TRW, NELSON DIVISIÓN OR APPROVED SUBSTITUTE. STUDS SHALL CONFORM TO
- 2. SEE TYPICAL SHEAR CONNECTOR PLACING DETAIL FOR FIELD PLACEMENT OF
- 3. AUTOMATICALLY END WELD SHEAR CONNECTORS THROUGH DECK TO SUPPORTING STRUCTURAL MEMBERS IN FIELD, IN ACCORDANCE WITH AWS D1.1 AND THE SHEAR CONNECTOR MANUFACTURER'S RECOMMENDATIONS.
- 4. REMOVE CERAMIC FERRULES FROM CONNECTOR AND DECK BEFORE PLACING

REINFORCED CONCRETE MASONRY NOTES

- 1. REINFORCED CONCRETE MASONRY WALL CONSTRUCTION HAS BEEN DESIGNED FOR A MINIMUM COMPRESSION STRENGTH (f'm) OF 1.500 PSI. THIS VALUE SHALL BE VERIFIED IN ACCORDANCE WITH NOMA TR 75B, "SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF LOAD-BEARING CONCRETE
- 2. CONCRETE BLOCK SHALL BE ASTM C90, GRADE N, TYPE 1, LIGHT-WEIGHT UNITS OF EIGHT (8) INCH NOMINAL THICKNESS WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,900 PSI ON THE NET AREA OF THE BLOCK.
- 3. MORTAR SHALL BE TYPE "M" OR "S" IN ACCORDANCE WITH ASTM C270 AND SHALL HAVE A TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH OF 2,500 PSI OR 1,800 PSI, RESPECTIVELY. AGGREGATES FOR MORTAR SHALL CONFORM TO ASTM C144.
- 4. GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8 INCH AND A 28-DAY COMPRESSIVE STRENGTH OF 2,000 PSI. AGGREGATES FOR GROUT SHALL CONFORM TO ASTM C404.
- 5. LAP SPLICE LENGTH FOR CONTINUOUS DEFORMED BAR REINFORCEMENT IN CONCRETE MASONRY CONSTRUCTION SHALL BE AS FOLLOWS:

#3	BARS	INCHES	MINIMU
#4	BARS25	INCHES	MINIMU
<i>#</i> 5	BARS31	INCHES	MINIMU
#6	BARS57	INCHES	MINIMU

- 7. ALL CELLS CONTAINING REINFORCING BARS, BOLTS OR OTHER METAL FABRICATIONS SHALL BE GROUTED SOLID. ANY CELLS AT OR BELOW FINISHED GRADE SHALL BE GROUTED SOLID.
- 8. REINFORCED CONCRETE MASONRY CONSTRUCTION SHALL BE RUNNING BOND, UNLESS NOTED OTHERWISE.

STRUCTURAL WOOD NOTES

1. ALL WOOD FRAMING SHALL BE KILN-DRIED WITH A MAXIMUM MOISTURE CONTENT AT TIME OF INSTALLATION OF NINETEEN (19) PERCENT AND SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:

MEMBER	MATERIAL	DESIGN PROPERTIES
2x BEAMS, HEADERS, JOISTS, SILL PLATES	#2 GRADE SOUTHERN PINE (SYP)	Fb = 975 PSI Fv = 90 PSI E = 1,600,000 PSI
LAMINATED VENEER LUMBER BEAMS (LVL)	TRUSJOIST 1.9E MICROLLAM LVL	Fb = 2,600 PSI Fv = 285 PSI Fc = 2,510 PSI E = 1,900,000 PSI
PARALLELL STRAND LUMBER BEAMS (PSL)	TRUSJOIST 2.0E PARALLAM PSL	Fb = 2,900 PSI Fv = 290 PSI Fc = 2,900 PSI E = 2,000,000 PSI
ANTHONY POWER BEAM (APB)	ANTHONY 30F POWER BEAM	Fb = 3,000 PSI Fv = 290 PSI E = 2,100,000 PSI
BEARING PLATES, LEDGERS	#2 GRADE SOUTHERN-PINE (SYP)	Fb = 975 PSI Fv = 90 PSI E = 1,600,000 PSI
WALL STUDS/POST COLUMNS, U.N.O.	STUD GRADE DOUGLAS FIR-LARCH (DFL)	Fb = 675 PSI Fc = 825 PSI E = 1,400,000 PSI
		- 0.000 01 715 4007

- ALLOWABLE STRESSES ARE UNFACTORED AND ARE BASED ON THE 1997 NATIONAL DESIGN SPECIFICATION, PUBLISHED BY THE NATIONAL FOREST
- 2. THE CONTRACTOR SHALL SUBMIT, PRIOR TO THE FABRICATION OR INSTALLATION OF MATERIALS, A WRITTEN SUBSTITUTION REQUEST TO THE ENGINEER FOR REVIEW OF ANY PROPOSED LUMBER SPECIES OR GRADE
- 3. SILL PLATES AND OTHER MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED FOR MOISTURE RESISTANCE.
- 4. MASONRY VENEERS SHALL NOT BE SUPPORTED BY WOOD MEMBERS. THE CONTRACTOR SHALL BRING ANY SUCH CONDITIONS TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE FABRICATION OR INSTALLATION OF STRUCTURAL MEMBERS.

WOOD SHEATHING NOTES

- UNLESS NOTED OTHERISE, FLOOR SHEATHING SHALL BE TONGUE—AND— GROOVE, EXPOSURE 1, 3/4 INCH THICK APA RATED SHEATHING WITH A MINIMUM PANEL INDEX OF 48/24. PROVIDE A CONTINUOUS BEAD OF CONSTRUCTION ADHESIVE BETWEEN SHEATHING AND EACH SUPPORT. ADHESIVES SHALL MEET APA SPECIFICATION AFG-01 AND BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 2. UNLESS NOTED OTHERISE, ROOF SHEATHING SHALL BE TONGUE-AND-GROOVE, EXPOSURE 1, 3/4 INCH THICK APA RATED SHEATHING WITH A MINIMUM PANEL INDEX OF 48/24. PROVIDE A CONTINUOUS BEAD OF CONSTRUCTION ADHESIVE BETWEEN SHEATHING AND EACH SUPPORT ADHESIVES SHALL MEET APA SPECIFICATION AFG-01 AND BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ROOF SHEATHING THAT IS EXPOSED ON THE UNDERSIDE SHALL BE BONDED WITH EXTERIOR GLUE. PROVIDE STANDARD EDGE CLIPS AT MID-SPAN BETWEEN ALL SUPPORTS.
- WHERE SPECIFIED, EXTERIOR WALL SHEATHING SHALL BE EXPOSURE 1 15/32 INCH THICK APA RATED SHEATHING WITH A MINIMUM PANEL INDEX OF 32/16.
- 4. EXTERIOR WALL SHEATHING AT CURVED WALLS SHALL BE COMPRISED OF TWO (2) LAYERS OF EXPOSURE 1, 1/4 INCH THICK APA RATED SHEATHING. APPLY A COAT OF CONSTRUCTION ADHESIVE BETWEEN LAYERS AND STAGGER PANEL EDGES. ATTACH SHEATHING TO LIGHTGAGE STUDS WITH #8 TEK SCREWS SPACED AT SIX (6) INCHES ON CENTER AT PANEL EDGES AND TWELVE (12) INCHES ON CENTER AT INTERMEDIATE SUPPORTS.

WOOD FLOOR AND ROOF FRAMING NOTES

- 1. NOTCHES ON THE ENDS OF CONVENTIONAL LUMBER JOISTS SHALL NOT EXCEED ONE FOURTH OF THE JOIST DEPTH, HOLES BORED IN JOISTS SHALL NOT BE WITHIN TWO (2) INCHESTOF THE TOP OR BOTTOM OF THE JOIST AND THE DIAMETER OF ANY HOLE SHALL NOT EXCEED ONE THIRD OF THE DEPTH OF THE JOIST. NOTCHES IN THE TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED ONE SIXTH OF THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. THE GENERAL CONTRACTOR SHALL COORDINATE THESE GUIDELINES WITH OTHER TRADES.
- 2. HOLES AND NOTCHES IN BEAMS AND HEADERS ARE NOT PERMITTED UNLESS
- VERIFIED IN WRITING BY THE ENGINEER OF RECORD. 3. BEAMS COMPRISED OF TWO (2) MEMBERS OR MORE MEMBERS SHALL BE GLUED AND NAILED TOGETHER WITH A MINIMUM OF TWO (2) ROWS OF 16d NAILS AT TWELVE (12) INCHES ON CENTER. BEAMS COMPRISED OF THREE (3) OR MORE MEMBERS SUPPORTING LOAD THROUGH SIDE HANGERS SHALL HAVE ADDITIONAL 1/2 INCH DIAMETER THRU BOLTS AT EIGHTEEN (18) INCHES ON CENTER STAGGERED TOP AND BOTTOM, USE 1/2 INCH PLYWOOD OR MEMBERS OF SAME DEPTH AS REQUIRED TO FLUSH OUT
- 4. SPLICING OF MEMBERS SHALL NOT BE PERMITTED UNLESS SHOWN ON THE
- PLANS OR VERIFIED IN WRITING BY THE ENGINEER. 5. INSTALL MEMBERS TRUE, PLUMB AND LEVEL AND PROVIDE ADEQUATE
- TEMPORARY BRACING AND SHORING UNTIL FINAL CONNECTIONS ARE MADE 6. DURING CONSTRUCTION, THE HEIGHT OF STOCK PILES OF GYPSUM SHEATHING STORED ON ANY WOOD FRAMED LEVEL SHALL NOT EXCEED THE

GREATER OF TWENTY-SIX (26) SHEETS OR SIXTEEN (16) INCHES.

WOOD STUD WALL NOTES

- 1. UNLESS NOTED OTHERWISE, PROVIDE AN EQUAL NUMBER OF 2x STUDS AT EACH END OF BUILT-UP BEAMS AS THE NUMBER OF MEMBERS IN THE BEAM. UNLESS NOTED OTHERWISE, PROVIDE FOUR (4) 2x STUDS AT EACH END OF ENGINEERED WOOD BEAMS. BUILT-UP STUD COLUMNS SHALL BE PROVIDED AT EACH LEVEL AND WITHIN THE FLOOR SYSTEM TO PROVIDE A CONTINUOUS LOAD PATH TO THE FOUNDATION. BUILT-UP STUD COLUMNS SHALL BE NAILED TOGETHER WITH 16d NAILS AT TWENTY (20) INCHES ON CENTER FOR THE FULL STUD HEIGHT.
- 2. BORED HOLES IN 2x4 STUDS SHALL NOT EXCEED 1 3/8 INCH FOR LOAD-BEARING WALLS AND 2 1/8 INCH IN NON-LOAD-BEARING WALLS. BORED HOLES IN 2x6 STUDS SHALL NOT EXCEED 2 1/2 INCH FOR LOAD-BEARING WALLS AND 3 1/4 INCH FOR NON-LOAD-BEARING WALLS. IN NO CASE SHALL THE EDGÉ OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD.
- 3. DOUBLE PLATES SHALL LAP A MINIMUM OF FOUR (4) FEET. JOINTS SHALL
- OCCUR AT CENTER OF A SUPPORTING STUD. 4. AT EXTERIOR WALL CORNER CONDITIONS, NOT LESS THAN THREE (3) STUDS SHALL BE INSTALLED.
- 5. AT CONTRACTOR'S OPTION, ENGINEERED FINGER-JOINTED STUDS MAY BE

WOOD CONNECTOR NOTES

- 1. NAILS, SPIKES, STAPLES, BOLTS, NUTS, WASHERS, ETC. SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 FOR EXTERIOR AND/OR TREATED WOOD LOCATIONS. PROVIDE PLAIN FINISH FASTENERES FOR INTERIOR LOCATIONS.
- 2. FRAMING CONNECTORS SHALL BE SIMPSON "STRONG-TIE" OR APPROVED SUBSTITUTE AND SHALL BE BUILDING CODE APPROVED FOR THE TYPE OF INSTALLATION INDICATED. FRAMING CONNECTORS THAT ARE EXPOSED TO EXTERIOR CONDITIONS AND/OR ARE IN CONTACT WITH TREATED WOOD SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 OR FABRICATED WITH A MINIMUM G185 GALVANIZED COATING IN ACCORDANCE WITH ASTM A653. ALL OTHER FRAMING CONNECTORS SHALL FOR SHALL BE FABRICATED WITH A MINIMUM G90 GALVANIZED COATING IN ACCORDANCE
- 3. UNLESS NOTED OTHERWISE, SILL PLATES AT THE BUILDING EXTERIOR SHALL BE FASTENED TO THE FOUNDATION WITH GALVANIZED 1/2 INCH DIAMETER, ASTM A307, ANCHOR BOLTS AT FOUR (4) FEET ON CENTER (MINIMUM OF TWO (2) BOLTS PER PLATE). AN ANCHOR BOLT SHALL BE LOCATED NO MORE THAN TWELVE (12) INCHES AND NO LESS THAN FOUR (4) INCHES FROM THE END OF EACH SILL PLATE. ANCHOR BOLTS SHALL BE PLACED WITH HEXAGONAL NUTS AND WASHERS WITH A MINIMUM OUTSIDE DIAMETER OF 1 3/8 INCHES. ANCHOR BOLTS SHALL BE PLACED WITH A MINIMUM OF SIX (6) INCHES OF EMBEDMENT INTO FOUNDATION CONCRETE
- 4. UNLESS NOTED OTHERWISE, SILL PLATES AT INTERIOR WALLS SHALL BE FASTENED TO THE FOUNDATION WITH HILTI X-CP 72P8S23 POWDER ACTUATED FASTENERS AT FOUR (4) FEET ON CENTER.

PREFABRICATED WOOD TRUSS NOTES

- T. DESIGN TRUSSES IN ACCORDANCE WITH THE "TRUSS PLATE INSTITUTE DESIGN SPECIFICATIONS FOR CONNECTOR PLATES." ALL TRUSSES SHALL BE GRADE STAMPED PER W.C.I.B. RULES.
- 2. THE CONTRACTOR SHALL COMPLY WITH "HANDLING AND INSTALLING AND BRACING METAL PLATE CONNECTED WOOD TRUSSES" (HIB-91) BY THE TRUSS PLATE INSTITUTE DURING THE INSTALLATION OF FLOOR AND ROOF
- 3. UNLESS NOTED OTHERWISE, FLOOR TRUSSES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER TO SUPPORT A TOTAL LOAD OF SIXTY (60) PSF, COMPOSED OF TWENTY (20) PSF DEAD LOAD (FIFTEEN (15) PSF ON THE TOP CHORD AND FIVE (5) PSF ON THE BOTTOM CHORD) AND FORTY (40) PSF LIVE LOAD FOR ALL SPAN CONDITIONS INDICATED ON THE DRAWINGS. UNLESS NOTED OTHERWISE. DEFLECTIONS SHALL BE LIMITED TO L/240 FOR TOTAL LOAD AND L/480 FOR LIVE LOAD ONLY.
- 4. EXTERIOR AND BALCONY FLOOR TRUSSES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER TO SUPPORT A TOTAL LOAD OF ONE-HUNDRED FIFTY (150) PSF, COMPOSED OF FIFTY (50) PSF DEAD LOAD (FORTY-FIVE (45) PSF ON THE TOP CHORD AND FIVE (5) PSF ON THE BOTTOM CHORD) AND ONE-HUNDRED (100) PSF LIVE LOAD FOR ALL SPAN CONDITIONS INDICATED ON THE DRAWINGS, UNLESS NOTED OTHERWISE. DEFLECTIONS SHALL BE LIMITED TO L/240 FOR TOTAL LOAD AND L/480 FOR LIVE LOAD
- 5. PUBLIC CORRIDOR FLOOR TRUSSES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER TO SUPPORT A TOTAL LOAD OF ONE-HUNDRED THIRTY (130) PSF, COMPOSED OF THIRTY (30) PSF DEAD LOAD (TWENTY-FIVE (25) PSF ON THE TOP CHORD AND FIVE (5) PSF ON THE BOTTOM CHORD) AND ONE-HUNDRED (100) PSF LIVE LOAD FOR ALL SPAN CONDITIONS INDICATED ON THE DRAWINGS, UNLESS NOTED OTHERWISE. DEFLECTIONS SHALL BE LIMITED TO L/240 FOR TOTAL LOAD AND L/480 FOR LIVE LOAD ONLY
- 6. ROOF TRUSSES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER TO SUPPORT A TOTAL LOAD OF FORTY (40) PSF, COMPOSED OF TWENTY (20) PSF DEAD LOAD (TEN (10) PSF ON THE TOP CHORD AND TEN (10) PSF ON THE BOTTOM CHORD) AND TWENTY (20) PSF LIVE LOAD FOR ALL SPAN CONDITIONS INDICATED ON THE DRAWINGS, UNLESS NOTED OTHERWISE. THE ROOF TRUSSES SHALL ALSO BE DESIGNED FOR A TEN (10) PSF ATTIC LIVE LOAD THAT DOES NOT ACT CONCURRENTLY WITH THE ROOF LIVE LOADS. IN ADDITION, ROOF TRUSSES SHALL BE DESIGNED TO SUPPORT ALL SNOW AND SNOW DRIFT LOADS REQUIRED BY THE BUILDING CODE NOTED ABOVE ROOF TRUSS DEFLECTIONS SHALL BE LIMITED TO L/180 FOR TOTAL LOAD AND L/240 FOR LIVE LOAD ONLY.
- 7. ROOF TRUSSES AND END ANCHORAGES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER FOR A NET UPLIFT OF FIFTEEN (15) PSF.
- 8. THE CONTRACTOR SHALL SUBMIT COMPLETE TRUSS SHOP DRAWINGS AND DESIGN CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. SHOP DRAWINGS SHALL INCLUDE FRAMING PLANS SHOWING ALL PREFABRICATED MEMBERS WITH MARK NUMBERS FOR EACH MEMBER TYPE.
- 9. PROVIDE ANCHORAGE, ERECTION BRACING, AND PERMANENT BRIDGING AS
- RECOMMENDED BY THE TRUSS MANUFACTURER. 10. AT FLOOR TRUSS GIRDERS, PROVIDE ONE (1) STUD BELOW EACH GIRDER SUPPORT FOR EVERY FIVE (5) FEET OF TRUSS GIRDER SPAN LENGTH. AS A MINIMUM, PROVIDE A MINIMUM OF THREE (3) STUDS AT EACH SUPPORT. BUILT-UP STUD COLUMNS SHALL BE PROVIDED AT EACH LEVEL AND WITHIN THE FLOOR SYSTEM TO PROVIDE A CONTINUOUS LOAD PATH TO THE FOUNDATION. BUILT-UP STUD COLUMNS SHALL BE NAILED TOGETHER WITH 16d NAILS AT TWENTY (20) INCHES ON CENTER FOR THE FULL STUD
- 11. AT ROOF TRUSS GIRDERS, PROVIDE ONE (1) STUD BELOW EACH GIRDER SUPPORT FOR EVERY TEN (10) FEET OF TRUSS GIRDER SPAN LENGTH. AS A MINIMUM, PROVIDE A MINIMUM OF TWO (2) STUDS AT EACH SUPPORT. BUILT-UP STUD COLUMNS SHALL BE PROVIDED AT EACH LEVEL AND WITHIN THE FLOOR SYSTEM TO PROVIDE A CONTINUOUS LOAD PATH TO THE FOUNDATION. BUILT-UP STUD COLUMNS SHALL BE NAILED TOGETHER WITH 16d NAILS AT TWENTY (20) INCHES ON CENTER FOR THE FULL STUD
- TRUSSES SHALL BE DESIGNED TO BEAR ONLY ON BEAMS AND WALLS SPECIFICALLY NOTED AS LOAD BEARING IN THE DRAWINGS.



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R. TRENT PERKIN

WAS AUTHORIZED BY R. TRENT PERKINS, P.E. 84264

> PARKIN - PERKINS - OLSEN CONSULTING ENGINEERING, INC 9330 LBJ Freeway Suite 1055 Dallas, Texas Fax 214.221.2252 Tel 214.221.2220 Project No. F-1479

REVISIONS



Dallas, TX 75204

214.520.8878

bgoarchitects.com DATE

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