

STRUCTURAL NOTES

GENERAL NOTES

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND ETC. DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
2. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCES TO ENSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY BRACING, TEMPORARY BRACING (AND ANCHORING FOOTINGS), CURBS OR TIEDOWNS.
3. ADDITIONAL OBSERVATIONS AS A RESULT OF REJECTION OF WORK COMPLETED OR OF AERIAL OBSERVATIONS DUE TO THE DEFICIENCIES IN WORK OBSERVED WILL BE AT THE EXPENSE OF THE CONTRACTOR.
4. ALL STRUCTURAL SHOP DRAWINGS TO BE REVIEWED BY JOB SUPERVISOR/INSPECTOR IN ADDITION TO ALL PERSONNEL DEEMED BY CONTRACTOR PROPER TO SUBMITTAL TO ENGINEER FOR APPROVAL.
5. ALL SHOP DRAWING RESUBMITTALS SHALL INCLUDE A WRITTEN DETAILED LIST OF LOCATIONS AND DESCRIPTIONS OF ALL CHANGES MADE FROM PREVIOUS SUBMITTAL. LIST SHALL BE SPECIFIC AND GENERAL NOTES SUCH AS "DIMENSIONS CORRECTED" ARE NOT ACCEPTABLE.

DESIGN CODES:

- 2003 INTERNATIONAL BUILDING CODE.
- ACI 318-02 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY.
- 1987 NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.

DESIGN LOADS:

THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED WITH THE FOLLOWING SUPERIMPOSED LOADINGS:

ROOF:	SNOW LOAD	30 psf ± DRIFT #
	DEAD LOAD	15 psf
WIND:	BASIC WIND SPEED	100 mph
	EXPOSURE CATEGORY	B
	IMPORTANCE FACTOR	0.85
SEISMIC:	USE GROUP	I
	PERFORMANCE CATEGORY	A
	SITE CLASSIFICATION	D

FOUNDATIONS:

ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2,000 psf ON COMPACTED FILL BEFORE CONSTRUCTION COMMENCES. SOIL BEARING CAPACITY SHALL BE VERIFIED BY A SUBSURFACE INVESTIGATION, AS WELL AS FIELD AND LABORATORY TEST PERFORMED BY A CERTIFIED TESTING LABORATORY, WHOSE REPORT WILL INCLUDE ANALYSIS AND RECOMMENDATIONS FOR SITE PREPARATION IN ORDER TO BEAR THE FOUNDATION LOADS. ABOVE REPORT SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW BEFORE FOUNDATION CONSTRUCTION BEGINS.

CHEMICAL ANCHORS:

SHALL BE A POLYMER INJECTION SYSTEM SUCH AS RAMSEY "EPOXY" MOLLY "PARAMOUNT HV" SIKA "SICRA INJECTION SEL", "MIL-HIGH STRENGTH EPOXY", OR APPROVED EQUIV. INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER'S REPRESENTATIVE.

ANCHOR BOLTS:

SHALL BE A36 THREADED ROD. PROVIDE HOT DIP GALVANIZED FINISH ON ALL ANCHOR BOLTS PERMANENTLY EXPOSED TO EXTERIOR OR IN CONTACT WITH PRESSURE TREATED WOOD.

CONCRETE TESTING:

1. CONCRETE TESTING SHALL BE PAID FOR BY THE CONTRACTOR. TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST-IN-PLACE CONCRETE:

- A) ASTM C143 - STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE.
- B) ASTM C39 - STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS. A SEPARATE TEST SHALL BE CONDUCTED FOR EACH COLUMN FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. PROVIDE CYLINDER(S) QUANTITIES AND TEST AGE AS FOLLOWS:
  - 1 AT 7 DAYS
  - 2 AT 28 DAYS

PROVIDE ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

PENETRATIONS:

NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBERS OTHER THAN AS SHOWN ON THESE DRAWINGS WITHOUT PREVIOUS APPROVAL OF THE ENGINEER.

CONCRETE MIX DESIGN:

1. SHALL BE MIX DESIGNED BY A RECOGNIZED TESTING LABORATORY TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED OR BETTER WITH A PLASTIC AND AIR CONTAINABLE MIX.
- 4,000 psi - ALL CONCRETE
2. SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIVOKELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFYING CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ASTM STANDARD C94 FOR FRESHLY MIXED CONCRETE. TESTING TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MEASURING METHOD USED TO DETERMINE THE WATER CONTENT IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THE RESULT OF THE TESTING LAB IS NOT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. ALL SLABS OF WORK ORDERED UNDER THIS CONTRACTING AGREEMENT SHALL BE STANDARD C309 TYPE I AND SHALL HAVE A FLUORIDE DYE. THE UNFINISHED CONCRETE SHALL BE PROTECTED FROM FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. ALL SCUTTED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECREATED. LEFT. CALCIUM CHLORIDE SHALL NOT BE UTILIZED. OTHER ADJUVANTS MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.
3. CONCRETE SHALL UTILIZE TYPE I/II CEMENT.
4. THE CONCRETE STRENGTHS SHOWN IN THE SECTION ABOVE AND IN THE SPECIFICATIONS ARE MINIMUM COMPRESSIVE STRENGTHS. THE ENGINEER SHALL DETERMINE IF THE CONCRETE IS ACCEPTABLE, OR TO BE REMOVED, OR TO RECEIVE SPECIAL GRADING OF COMPRESSIVE STRENGTHS ARE LESS THAN SPECIFIED.
5. ALL CONCRETE EXPOSED TO WEATHER OR EARTH SHALL BE AIR ENTRAINED TO 5% TO 7%.
6. WATER REDUCING ADJUVANTS MAY BE USED IN THE CONCRETE MIX. PLASTICIZERS AND SUPER-PLASTICIZERS MAY BE USED ONLY WHEN WRITTEN PERMISSION OF THE ENGINEER IS GIVEN.
7. NO SALTS OF ANY KIND MAY BE USED IN CONCRETE BEFORE OBTAINING THE ENGINEER'S WRITTEN PERMISSION FOR THEIR USE.

CONCRETE AND REINFORCING PLACEMENT:

1. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 301 AND ACI 117 EXCEPT AS MODIFIED BELOW.
- ACI 117 ITEM 4.3.1.1. ELEVATIONS OF SLABS-ON-GRADE TOP OF SLAB ELEVATION SHALL BE WITHIN A 3/8" ENVELOPE EITHER SIDE OF THE THEORETICAL DESIGN SURFACE.
- ACI 117 ITEM 4.5.7. FLOOR FINISH TOLERANCES AS MEASURED BY PLACING A FREESTANDING(UNLEVELLED) 10 FT. STRAIGHTEDGE ANYWHERE ON THE SLAB AND ALLOWING IT TO REST UPON TWO HIGH SPOTS WITHIN 28 DAYS. AFTER SLAB CONCRETE PLACEMENT, THE CLEARANCE BETWEEN THE STRAIGHTEDGE, AND THE FLOOR SHALL NOT EXCEED 1/4".
2. ALL REINFORCING STEEL TO BE ASTM A615, GRADE 60 (#4 AND LARGER) EXCEPT WHERE NOTED OTHERWISE. REINFORCING SHALL NOT BE WELDED.
3. WELDED WIRE FABRIC TO CONFORM TO ASTM A785 AND SHALL BE FREE FROM OIL, SCALE AND RUST. PLACE WIRE FABRIC IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND THE SPECIFICATIONS' MINIMUM LAPS SHALL BE ONE SPACE PLUS 2".
4. ALL REINFORCING STEEL BARS TO BE DETAILED AND PLACED IN ACCORDANCE WITH THE LATEST AIA MANUALS.
5. LAP ALL REINFORCING SPLICES IN CONCRETE A MINIMUM OF 48 BAR DIAMETERS OR 24 INCHES, WHICHEVER IS GREATER, UNLESS NOTE OTHERWISE ON DRAWINGS (CLASS B SPLICES).
6. PROVIDE CORNER BARS OF SAME BAR DIAMETER AS SPECIFIED FOR THE WALL, BEAM OR FOOTING. PROVIDE MINIMUM OF 48 BAR DIAMETER LAP FOR ALL CORNER BARS, UNLESS NOTED OTHERWISE.
7. PROVIDE FOUNDATION DOWELS AS SHOWN. MINIMUM SIZE DOWELS TO BE #4, UNLESS OTHERWISE NOTED. ALL VERTICAL REINFORCING STEEL IN COLUMNS AND PIERIS, OR VERTICAL REINFORCING IN WALLS, SHALL DOWEL INTO THE FOOTINGS WITH SAME SIZE AND QUANTITY DWEL AS VERTICAL REINFORCING.
8. WHERE SHOWN ON THE DRAWINGS, PROVIDE WELD PLATES, WELDMENTS, OR CONCRETE INSERTS FOR FASTENING AND SECURING OTHER COMPONENTS. CONCRETE INSERTS SHALL BE FURNISHED BY THE CONTRACTOR. WELDMENTS, THEM AND INSTALLED BY THE CONTRACTOR CASTING THE CONCRETE AROUND THEM. CLIP ANGLES SHALL BE FURNISHED BY THE CONTRACTOR REQUIRING THEM.
9. REINFORCING STEEL SHALL RECEIVE CONCRETE COVER AS FOLLOWS:
 

DESCRIPTION	MINIMUM COVER
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
EXPOSED TO EARTH OR WEATHER	2"
#6 THROUGH #18 BARS	1 1/2"
#5 BARS OR SMALLER	1"
NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH THE GROUND, SLABS AND WALLS	1 1/2"
#11 BARS OR SMALLER	1"
#14 AND #18	1 1/2"
BEAMS AND COLUMNS	1 1/2"
10. PROVIDE TWO (2) #5'S, ONE AT EACH FACE, UNLESS NOTED OTHERWISE, AROUND ALL OPENINGS GREATER THAN 12"x12" IN CAST-IN-PLACE CONCRETE. EXTEND REINFORCING 2'-0" BEYOND OPENING IN BOTH DIRECTIONS. CONTACT ENGINEER FOR ALL OPENINGS GREATER THAN 12"x12" FOR DESIGN.
11. COLD WEATHER AND HOT WEATHER PROVISIONS OF AC 308 AND 309 (CURRENT EDITIONS), RESPECTIVELY, SHALL BE MAINTAINED.

WOOD:

1. STRUCTURAL 2x WOOD COMPONENTS HAVE BEEN DESIGNED AS SPRUCE-PINE-FIR (SPF) OR HEM-FIR (HPF) NO.2 OR BETTER AND SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE FIBER STRESSES AND PROPERTIES:
 

MODULUS OF ELASTICITY (E)	1,300,000 PSI
BENDING (F <sub>b</sub> )	800 PSI
SHEAR (F <sub>v</sub> )	70 PSI
2. WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PROTECTED OR PRESSURE TREATED IN ACCORDANCE WITH AIC-109.
3. MEMBER SIZES SHOWN ARE NOMINAL UNLESS NOTED OTHERWISE.
4. BOLTS IN WOOD ARE MACHINE BOLTS, UNLESS OTHERWISE NOTED. MACHINE BOLTS SHALL HAVE A SHANK DIAMETER WITHIN 1/64" OF THAT SPECIFIED. BOLTS ARE ASTM 307 STEEL. BOLT HOLES IN WOOD SHALL BE 1/32" OVER SIZE. BOLTS IN CONTACT WITH MASONRY SHALL BE 1/16" OVER SIZE. PROVIDE STANDARD CUT WASHERS UNDER HEAD AND OVER THE BEARINGS AGAINST WOOD. WHERE STEEL SILE PLATES ARE USED FOR CONNECTION, THE PLATE SHALL BE USED AS A TEMPLATE.

WOOD SHEATHING:

1. PLYWOOD FLOOR, ROOF AND WALL SHEATHING ARE DESIGNED AS DIAPHRAGMS AND SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 23 OF THE INTERNATIONAL BUILDING CODE.
2. SHEATHING SHALL BE FASTENED IN ACCORDANCE WITH PLANS SHOW SPECIAL NAILING REQUIREMENTS AND WITH THE APPROPRIATE SCHEDULE IN CHAPTER 23, UNLESS NOTED OTHERWISE.
3. IN GENERAL, SHEETS SHALL BE 4'-0"x8'-0" AND SHALL BE LAP'D WITH FACE PLIES ACROSS FRAMING MEMBERS AND WITH EDGES STAGGERED 4'-0". NO PANEL SHALL BE USED WHICH IS LESS THAN 2" IN WIDTH ON FLOORS AND ROOFS. SHEATHING SHALL BE CONTINUOUS ACROSS 2 SPANS, MINIMUM.

ENGINEERED WOOD TRUSSES:

1. ENGINEERED WOOD TRUSS SYSTEMS SHALL BE DESIGNED BY SUPPLIER TO THE CONFIGURATION AND LOAD-CARRYING CAPACITY SHOWN ON THE DRAWINGS AND SPECIFICATIONS. TRUSSES SHALL BE DESIGNED TO SUSTAIN SELF WEIGHT OF THE TRUSSES AND UNIFORM LOADS AS INDICATED ON THIS SHEET AND AS FOLLOWS:
  - A) ROOF DEAD LOAD: TOP CHORD = 5 psf  
BOT. CHORD = 10 psf
  - B) ROOF SNOW LOAD: UNIFORM = 30 psf  
DRIFT = SEE CODE  
OVERHANG = 60 psf
  - C) WIND UPLIFT: SEE UPLIFT PLAN
2. ROOF TRUSSES SHALL BE DESIGNED FOR A MAXIMUM VERTICAL DEFLECTION OF 1/240 LIVE LOAD AND 1/240 TOTAL LOAD.
3. ALTERNATE TRUSS LAYOUTS ARE ACCEPTABLE ONLY AS A CHANGE ORDER WHICH WILL INCLUDE ENGINEERING CHARGES TO THE CONTRACTOR FOR REDesign FOR REVIEW PRIOR TO FABRICATION.
4. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW AND SPECIFY ALL CONNECTOR TYPES UTILIZED WITHIN TRUSSES, AS WELL AS CONNECTORS UTILIZED IN ALL OTHER CONNECTIONS AND ATTACHMENTS BETWEEN TRUSSES OR COMPONENTS SUPPLIED AS PART OF THE ENGINEERED TRUSS SYSTEM. AN ERECTION DRAWING SHALL BE INCLUDED IDENTIFYING ALL TRUSS SYSTEM COMPONENTS, AS WELL AS ALL PERMANENT BRACING REQUIRED FOR TRUSS DESIGN. SHOP DRAWINGS SHALL BEAR THE SIGNATURE AND SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH DAKOTA.

WOOD FRAMING CONNECTORS:

1. CONNECTOR MODEL NUMBERS SHOWN ARE "Strong-Tie" CONNECTORS AS MANUFACTURED BY "SWANSON Strong-Tie Co., 1450 DODDLE DR., PO BOX 1568, SAN LEANDRO, CA 94577. SUBSTITUTIONS ARE ACCEPTABLE ONLY WITH THE APPROVAL OF THE STRUCTURAL ENGINEER.
2. ALL CONNECTORS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM-A653. CONNECTORS IN CONTACT WITH PRESSURE TREATED MATERIALS SHALL BE G-60 COATING. CONNECTORS NOT IN CONTACT WITH TREATED MATERIALS SHALL HAVE STANDARD G-60 COATING.

MANUFACTURED WOOD STRUCTURAL COMPONENTS:

1. MEMBERS DESIGNATED "L.V." SHALL BE LAMINATED GENEER LUMBER AS MANUFACTURED BY BOISE CASCADE CORPORATION (VERSA-LAM), TRUSS JOIST CORPORATION (MICRO-LAM), ALPINE ENGINEERED PRODUCTS (ASP-LVL), OTHER WOOD PRODUCTS (LONG-LAM LVL) OR APPROVED EQUAL, AND SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE FIBER STRESSES AND PROPERTIES:
 

MODULUS OF ELASTICITY (E)	2,600,000 PSI
BENDING (F <sub>b</sub> )	2,800 PSI
SHEAR (F <sub>v</sub> )	285 PSI

SPECIAL INSPECTION AND TESTING:

1. SPECIAL INSPECTION AND MINIMUM TESTING SHALL BE PERFORMED IN ACCORDANCE WITH 2003 IBC, TABLE 1704.3 (STEEL), 1704.4 (CONCRETE) AND 1704.5.1 (WOODWORK).
2. INSPECTION SHALL BE PROVIDED BY AN INDEPENDENT TESTING AGENCY APPOINTED AT THE CONTRACTOR'S EXPENSE. ALL INSPECTION REPORTS SHALL MEET THE INSPECTION QUALIFICATIONS FOR EACH MATERIAL TYPE AS INDICATED IN THE SPECIFICATIONS.
3. ANY MATERIAL OR PLACEMENT DEVIATIONS FROM DRAWINGS SHOWN ON THE DRAWINGS OR IN SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION IBC 2003 (TABLE 1704.4)

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE	PERIODIC STATUS	REQUIRED ON THIS PROJECT
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT		X	ACI 318-02, 4.5, 21-7.2	1903.8, 1903.7, 1907.2, 1914.4	PRIOR TO STARTING PLACES WHERE CONCRETE TO BE SAMPLED	YES
2. INSPECTION OF REINFORCING STEEL, INCLUDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5B		X	ACI 318-02, 4.5, 21-7.2	1907.2, 1914.4	WELDING OF REINFORCING NOT PERMITTED	NO
3. INSPECT BOLT TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN WORKLOAD		X	ACI 318-02, 4.5, 21-7.2	1912.5		NO
4. VERIFYING USE OF REQUIRED DESIGN MIX		X	ACI 318-02, 4.5, 21-7.2	1903.1, 1903.7, 1907.2, 1914.2, 1914.2	EACH TIME FRESH CONCRETE SAMPLED	NO
5. SAMING FRESH CONCRETE AND PERFORMING SLUMP, AIR CONTENT AND DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS		X	ACI 318-02, 4.5, 21-7.2	1903.8, 1903.7, 1914.2, 1914.2, 1914.2	EACH TIME FRESH CONCRETE SAMPLED	YES
6. INSPECTION OF CONCRETE AND SPECIFIC PLACEMENT FOR PROPER APPLICATION (SCHEDULE)		X	ACI 318-02, 4.5, 21-7.2	1903.8, 1903.7, 1914.2, 1914.2, 1914.2	EACH TIME FRESH CONCRETE SAMPLED	YES
7. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	ACI 318-02, 4.5, 21-7.2	1903.1, 1903.1, 1914.2, 1914.2	(1) UNFINISHED CONCRETE FOR CURING AND CURING TYPES OF CURING PLACED FOR ENTIRE PROJECT	NO
8. INSPECTION OF PRESTRESSED CONCRETE, INCLUDING LOCATION OF PRESTRESSING FORCES		X	ACI 318-02, 4.5, 21-7.2	1903.1, 1903.1, 1914.2, 1914.2		NO
9. CHECKING ON BEARING PRELIMINARY LOADS IN THE SUBMERGENT SYSTEM		X	ACI 318-02, 4.5, 21-7.2	1903.1, 1903.1, 1914.2, 1914.2		NO
10. DIRECTION OF PRECAST CONCRETE MEMBERS		X	ACI 318-02, 4.5, 21-7.2	1903.1, 1903.1, 1914.2, 1914.2	PRIOR TO ERECTION	NO
11. VERIFICATION OF #4-STEEL CONCRETE STRENGTH, PRIOR TO CASTING OF CONCRETE IN PRESTRESSED CONCRETE AND PRIOR TO REMOVAL OF SHORES & FORMS FROM BEAMS & STRUCTURAL SLABS		X	ACI 318-02, 4.5, 21-7.2	1906.2		NO

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ANCHOR BOLTS:

SHALL BE A36 THREADED ROD. PROVIDE HOT DIP GALVANIZED FINISH ON ALL ANCHOR BOLTS PERMANENTLY EXPOSED TO EXTERIOR OR IN CONTACT WITH PRESSURE TREATED WOOD.

CONCRETE TESTING:

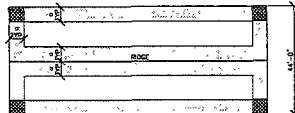
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PENETRATIONS:

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WIND UPLIFT PLAN

WIND UPLIFT PRESSURES		
PRESSURE (PSF)		
WIND DIRECTION	WIND GUST (MPH)	EXTERNAL WIND AREA (SQUARE FEET)
		0-10
		10-20
		20-30
		30-40
		40-50
WINDWARD	10	16
	16	23
	23	30
	30	37
LEEWARD	16	16
	23	23
	30	30
	37	37

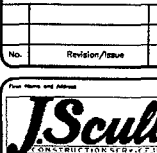
NOTE: PRESSURE VALUES ARE GUSTS WITH WIND SPEEDS. PRESSURES FOR SLABS DESIGN, SUBJECT TO WIND FROM VALUES SHOWN FOR NET DESIGN PRESSURE.



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No.	Revision/Issue	Date



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Project Name and Address  
EVERGREEN APT. GARAGES  
STRUCTURAL NOTES,  
INSPECTION TABLE &  
WIND UPLIFT PLAN

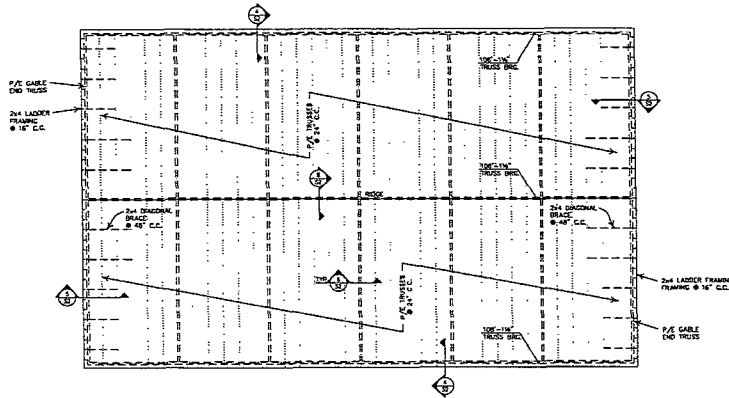
Project No. 04-18-08

Scale NTS

04-18-08

NTS

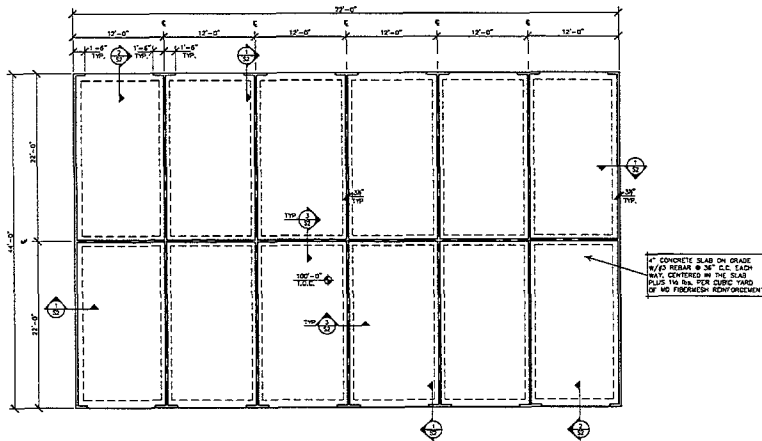
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**ROOF FRAMING PLAN**  
SCALE: 1/8"=1'-0"

**ROOF FRAMING PLAN NOTES**

- VERIFY ALL DIMENSIONS & ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION COMMENCES.
- ELEVATIONS ON THE STRUCTURAL DRAWINGS REFER TO THE TOP OF CONCRETE REFERENCE ELEVATION SET AT 100'-0".
- ALL ROOF SHEATHING SHALL BE APA 24/20 SPAN RATED SHEATHING 15/32" THICK (1/2" NOMINAL). PROVIDE NAIL-CLIPS.
- ALL GARAGE DOOR HEADERS TO BE (2)3x12 W/30LD BLOOMING W/1/2"CHIFFLE AND (2)2x4 HT STUDS W/30MPSON CODE STRAP AT EACH DOOR SEC SECTION 7/32.



**FOUNDATION & FLOOR SLAB PLAN**  
SCALE: 1/8"=1'-0"

**FOUNDATION PLAN NOTES**

- VERIFY ALL DIMENSIONS & ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION COMMENCES.
- ELEVATIONS ON THE STRUCTURAL DRAWINGS REFER TO THE TOP OF CONCRETE REFERENCE ELEVATION SET AT 100'-0".
- FLOOR SLAB ON GRADE SHALL BE 4" CONCRETE SLAB WITH #3 REBAR AT 36" C.C. EACH WAY, CENTERED IN THE SLAB. PLUS 1/4" IN. PER CUBIC YARD NO FIBERESH REINFORCEMENT.
- SLAB ON GRADE CONTROL JOINTS SHALL BE TOoled OR SAWCUT. THE JOINT PATTERN SHALL BE APPROXIMATELY SQUARE AND LIMITED TO AN AREA NOT TO EXCEED 2555.F. SEE PLAN (JOINTS TO BE CUT WITHIN 30 HOURS OF POURING SLAB).
- SEE ARCHITECTURAL DRAWINGS FOR SLOPES, DROPS, AND DRAIN LOCATIONS IN FLOOR SLABS.
- ALL EXTERIOR BEARING WALLS SHALL BE 2x4 STUDS @ 16" C.C. WITH W/30LIGHT BLOOMING & W/30 APA 24/20 SPAN RATED SHEATHING NAIL EDGES WITH 8d NAILS @ 8" C.C. AND 12" C.C. AT INTERMEDIATE SUPPORTS.
- ALL INTERIOR (GARAGE DIVIDER) WALLS SHALL BE 2x4 STUDS @ 2'-0" C.C. WITH W/30LIGHT BLOOMING & W/30 APA 24/20 SPAN RATED SHEATHING NAIL EDGES WITH 8d NAILS @ 8" C.C. AND 12" C.C. AT INTERMEDIATE SUPPORTS.
- PROVIDE W/30"X412" HOT DP GALVANIZED ANCHOR BOLT AT 48" C.C. TYPICAL AT WALLS WITH OVERHEAD DOORS PROVIDE W/30"X12" HOT DP GALVANIZED ANCHOR BOLT AT 16" C.C.



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No.	Revision/Issue	Date

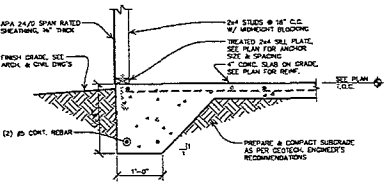


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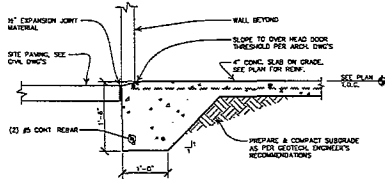
Project Name and Address:  
**EVERGREEN APT. GARAGES  
FOUNDATION, FLOOR SLAB  
& ROOF FRAMAING PLANS**

Project Location:  
**RAPID CITY, SOUTH DAKOTA**

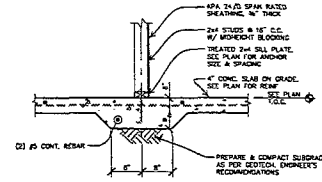
Project	Sheet
04-18-06	<b>S1</b>
Scale:	1/8" = 1'-0"



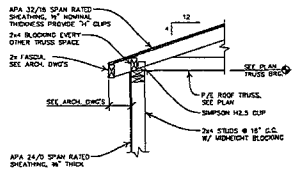
1 SECTION  
S2 3/4" = 1'-0"



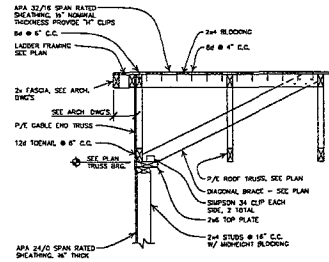
2 SECTION  
S2 3/4" = 1'-0"



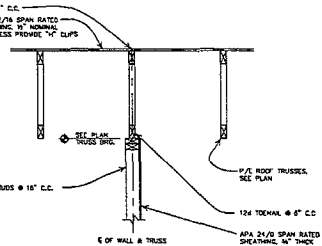
3 SECTION  
S2 3/4" = 1'-0"



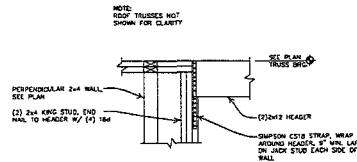
4 SECTION  
S2 3/4" = 1'-0"



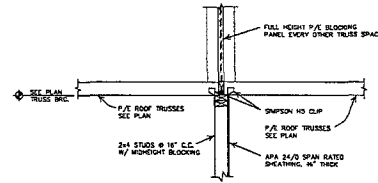
5 SECTION  
S2 3/4" = 1'-0"



6 SECTION  
S2 3/4" = 1'-0"



7 SECTION  
S2 3/4" = 1'-0"



8 SECTION  
S2 3/4" = 1'-0"



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No.	Revision/Issue	Date



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Project Name and Address  
EVERGREEN APT. GARAGES  
SECTIONS

RAPID CITY, SOUTH DAKOTA

Project	Sheet
04-18-06	S2
Scale	3/4" = 1'-0"

