

STRUCTURAL NOTES:

GENERAL:

1. WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE 2003 INTERNATIONAL BUILDING CODE & THE LOCAL BUILDING DEPARTMENT RULES & REGULATIONS.
2. DO NOT SCALE DRAWINGS. WORK THESE DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING DRAWINGS, AS WELL AS THE SPECIFICATIONS.
3. CONSTRUCTION MATERIALS PLACED ON FRAMED CONSTRUCTION SHALL BE DISTRIBUTED SUCH THAT THE LOAD DOES NOT EXCEED THE DESIGN LIVE LOAD.
4. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES FOR PROCEDURE OF CONSTRUCTION, SAFETY PRECAUTIONS AND INCIDENTS THAT RESULT FROM SUCH.

EXISTING CONDITIONS

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MEASURE ALL REQUIRED FIELD DIMENSIONS AND TO VERIFY ALL EXISTING CONDITIONS THAT ARE SHOWN ON THE DRAWINGS. SHOULD ANY OF THE CONDITIONS PROVE TO BE NOT AS SHOWN ON THE DRAWINGS, THE ENGINEER SHALL BE IMMEDIATELY INFORMED BEFORE PROCEEDING WITH ANY OF THE WORK.

DESIGN LOADS

1. LIVE LOADS:
ROOF LIVE LOAD = 20 PSF (SNOW)
FLOOR LIVE LOAD = 40 PSF (RESIDENTIAL)
WIND 30 MPH WIND SPEED ZONE, EXPOSURE B
SEISMIC USE GROUP I

FOUNDATIONS

1. ALL NEW FOOTINGS TO BEAR ON COMPACTED LOW EXPANSIVE ENGINEERED FILL WITH AN ALLOWABLE BEARING PRESSURE OF 2000 PSF UNLESS NOTED OTHERWISE. SEE GEOTECHNICAL EVALUATION BY WESTERN TECHNOLOGIES DATED NOVEMBER 23, 2005 FOR ADDITIONAL INFORMATION.
2. A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD OBSERVE EXCAVATIONS PRIOR TO PLACEMENT OF CONCRETE TO EVALUATE & VERIFY SOIL PROPERTIES & BEARING CONDITIONS.
3. ALL EXCAVATIONS FOR FOUNDATIONS SHALL COMPLY WITH OSHA REQUIREMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EXCAVATIONS INCLUDING DESIGN AND INSTALLATION OF ANY REQUIRED SHORING OR SHEETING NECESSARY TO MAINTAIN STABILITY OF ADJACENT SLOPES, ROADS, FOUNDATIONS, UTILITIES, HOIST OF WATS & DRAINAGES.
4. FOUNDATION DRAINS SHALL BE INSTALLED PER THE SOILS SOLS REPORT AND ARCHITECTURAL DRAWINGS.
5. DO NOT BACKFILL AGAINST FOUNDATION WALLS UNTIL 1ST FLOOR DRYWALL IS CONSTRUCTED & INTERIOR CONC. SLABS ARE POURED.

CONCRETE

1. ALL CONCRETE WORK SHALL COMPLY WITH THE ACI BUILDING CODE 318-09.
2. ALL CONCRETE SHALL HAVE TYPE I PORTLAND CEMENT & SHALL BE NORMAL WEIGHT WITH A MINIMUM ULTIMATE COMP. STRENGTH OF 3000 PSI AT 28 DAYS.
3. NO ADMIXTURE SHALL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE ENGINEER.
4. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60. ALL BARS TO BE CONTINUOUS UNLESS NOTED OTHERWISE. NO WELDING OF REINFORCING STEEL SHALL BE PERMITTED EXCEPT AS APPROVED AND DETAILED BY THE ENGINEER.
5. WELDED WIRE FABRIC SHALL CONFORM TO AISC. LAP ALL WIRE FABRIC 6" MINIMUM.
6. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING FOR CONCRETE POUR. NO "NET STABBING" OF REINFORCING STEEL SHALL BE PERMITTED.
7. ANCHOR BOLTS SHALL CONFORM TO ASTM A305. SET ANCHOR BOLTS WITH TEMPLATES AT BASE PLATES AND BEARING PLATES. EXPANSION BOLTS SHALL BE HELD SWICK BOLTS OR APPROVED EQUIVALENT. FOLLOW MANUFACTURERS INSTRUCTIONS FOR INSTALLATION.
8. LAP SPICES, WHERE PERMITTED SHALL BE 2'-0" MIN. UNLESS NOTED OTHERWISE. PROVIDE CORNER BARS OF EQUAL SIZE & SPACING AS HORIZONTAL BARS AROUND ALL CORNERS & INTERSECTIONS. PROVIDE 2-#5 BARS WITH A 2'-0" MIN. PROJECTION BEYOND SIDES OF ALL CORNERS IN ALL WALLS & SLABS.
9. DRYSTACK GROUT SHALL BE 5000 PSI DABCO 153 NON SHRINK GROUT OR OR APPROVED EQUIVALENT. GROUT SHALL BE INSTALLED AT MEMBER BEARING PLATES PRIOR TO INSTALLATION. GROUT SHALL BE INSTALLED AT COLUMN BEARING PLATES AFTER COLUMN IS PLUMBED, BUT PRIOR TO FLOOR OR ROOF INSTALLATION.
10. ALL CONCRETE WORK SHALL COMPLY WITH THE ACI 308.1 STANDARD FOR COLD WEATHER CONCRETING.

METAL DECK

1. ALL ROOF DECK TO BE 1/2" DEEP TYPE 'B' AS MANUFACTURED BY UNITED STEEL DECK, OR EQUAL, AND BE GALVANIZED. GAGE TO BE AS SHOWN ON DWGS.
2. ALL DECK SHALL BE PLACED CONTINUOUSLY OVER THREE OR MORE SPANS, EXCEPT IN AREAS WHERE THERE IS ONLY ONE SPAN.
3. ALL DECK TO BE CONNECTED TO SUPPORTING STEEL WITH 5/8" FUSIBLE WELD AT EACH FLUTE.
4. ALL SIDE LAPS OF DECK TO BE CONNECTED WITH NO. 7X 7/16" PAN HEAD SCREWS AT 36" O.C. MAX.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL FOR BUILDINGS - 9TH EDITION AND ALL CURRENT SUPPLEMENTS.
2. ALL WELDING WORK AND WELDING INSPECTION WORK SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE (AWS D1.1:2002) ALL WELDING WORK SHALL BE DONE BY AWS CERTIFIED WELDERS. THE FIELD WELDING SHALL BE DONE BY THE MANUAL SHIELDED METAL ARC WELDING METHOD.
3. ALL STEEL SHAPES, PLATES, BARS, RODS, AND ANCHOR BOLTS, SHALL CONFORM TO ASTM A992. ALL TUBES TO BE ASTM A500, GRADE B. ALL PIPE STEEL SHALL BE ASTM A53, GRADE B.
4. ALL BOLTS SHALL BE ASTM A305 BOLTS. PROVIDE A MINIMUM OF TWO BOLTS & WASHERS PER CONNECTION, UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
5. ALL NEW STEEL WITHIN THE BUILDING IS TO BE PAINTED WITH RED OXIDE PRIMER OVER WIRE BRUSHED STEEL AS PER SSPC SP2.
6. SHOP DRAWINGS DETAILING ALL MEMBERS, CONNECTIONS, AND LAYOUT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
7. ALL FIELD WELDING & FULL PENETRATION WELDS MUST BE INSPECTED BY A CERTIFIED WELDING INSPECTOR.

STRUCTURAL WOOD FRAMING

1. ALL WORK SHALL CONFORM WITH THE REQUIREMENTS OF THE ATC TIMBER CONSTRUCTION MANUAL 4TH EDITION PLUS THE NATIONAL DESIGN SPECIFICATION 1997 EDITION.
2. CONNECTORS: ALL CONNECTORS SHOWN ON THE DRAWINGS ARE AS MANUFACTURED BY THE SIMPSON CO., SAN LEANDRO, CA. CONNECTORS BY OTHER MANUFACTURERS SHALL BE DEEMED EQUIVALENT IF THEIR RATED CAPACITY IS AT LEAST EQUAL TO THE CONNECTOR SPECIFIED. FOLLOW MPFS RECOMMENDATION FOR NAILS AND BOLTS. FILL ALL HOLES UNLESS SPECIFICALLY SHOWN OTHERWISE.
3. SAWN LUMBER: ALL SAWN LUMBER FOR STRUCTURAL FRAMING SHALL BE KILN DRIED HEM-FIR GRADED AS PER THE LATEST NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION BY THE NATIONAL FOREST PRODUCTS ASSOCIATION AND THE WESTERN WOOD PRODUCTS ASSOCIATION AS FOLLOWS:
STRUCTURAL JOISTS 2x6 & LARGER, NO. 2 OR BETTER
PS = 1850 PSI
FV = 75 PSI
E = 1,800,000 PSI

FRAMING STUDS 2x4, STUD OR BETTER
PS = 675 PSI
Fv = 405 PSI
E = 800 PSI
FRAMING STUDS 2x6, NO. 2 OR BETTER
PS = 800 PSI
Fv = 405 PSI
E = 1,300 PSI

ALL SOLID TIMBER BEAMS, POSTS, & TRUSS COMPONENTS, DOUGLAS FIR-LARCH NO. 1
PS = 1300 PSI
Fv = 625 PSI
E = 825 PSI

SIZES SHOWN FOR SAWN LUMBER FRAMING ARE NOMINAL SIZES. PROVIDE SOLID BLOCKING BETWEEN ALL JOISTS & RAFTERS AT SUPPORT POINTS. PROVIDE SOLID BLOCKING TO MATCH POST AT FLOOR & ROOF FRAMING & OTHER SPACES AS REQUIRED FOR CONTINUOUS BEARING TO BEAM OR FOUNDATION SUPPORT. ALL NAILING NOT NOTED SHALL BE ACCORDING TO TABLE 2.3-1-1-1 OF THE UBC. DO NOT NOTICE OR SMALL JOISTS, BEAMS, OR LOAD BEARING STUDS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

4. MICROLAM LUMBER BEAMS VERTICALLY LAMINATED VENEER HEADERS & BEAMS INDICATED ON THE DRAWINGS AS "VL" ARE 1 3/4" THICK AS MANUFACTURED BY THE TRUS JOIST MACMILLAN CORP. OR EQUIVALENT. VL BEAMS SHALL BE INSTALLED IN ACCORDANCE WITH THE MPFS RECOMMENDATIONS. MULTIPLE MEMBERS SHALL BE FASTENED TOGETHER WITH 2 ROWS OF 16d COMMON NAILS @ 12" OC. PROVIDE 3 ROWS @ MULTIPLE MEMBERS 14" OR DEEPER. VL BEAMS SHALL NOT BE USED WHERE EXPOSED TO WEATHER OR IN DIRECT CONTACT WITH CONCRETE IN CONTACT WITH EARTH.

MICROLAM BEAMS & HEADERS
PS = 2500 PSI
Fv = 200 PSI
E = 1,800,000 PSI

5. GLUED LAMINATED BEAMS: INDICATED ON PLAN AS "GL" SHALL BE FABRICATED WITH LUMBER OF EITHER DOUGLAS FIR/LARCH OR SOUTHERN PINE. LAMINATED MEMBERS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR THE DESIGN & FABRICATION OF STRUCTURAL GLUED LAMINATED LUMBER PUBLISHED BY THE ATC. EXPOSED MEMBERS SHALL BE ARCHITECTURAL GRADE & SUPPLIED INDIVIDUALLY WRAPPED. LAMINATED MEMBERS SHALL BE BUILT UP USING 2" NOMINAL MATERIAL. SIZES SHOWN ON PLAN ARE ACTUAL SIZES.

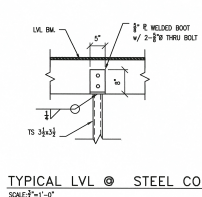
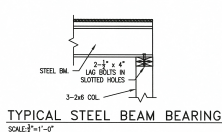
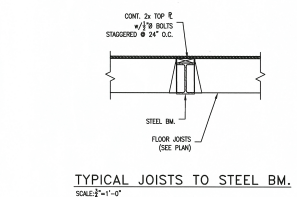
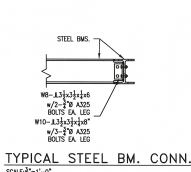
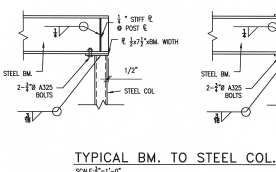
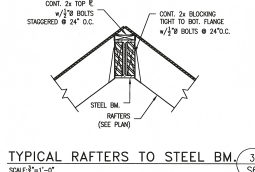
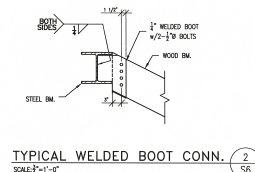
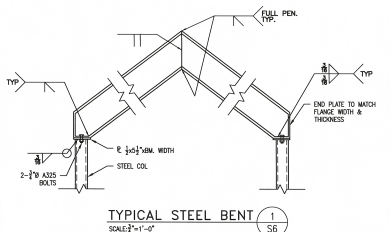
GLUED LAMINATED BEAMS:
PS = 2400 PSI
Fv = 180 PSI
E = 1,800,000 PSI

6. ENGINEERED WOOD JOISTS - ENGINEERED WOOD JOISTS INDICATED ON PLAN "EJ" SHALL BE AS MANUFACTURED BY TRUS-JOIST MACMILLAN OR APPROVED EQUIVALENT. ENGINEERED WOOD JOISTS, BLOCKING, BRACING, PLATES AND OTHER ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

7. PLANK SHEATHING, PLANKWOOD FOR ROOFS, FLOORS, & SHEAR WALL SHEATHING SHALL BE APA GRADE TRADEMARKED OSB WITH EXTERIOR GLUE. LAY UP PLANKWOOD WITH FACE GRAIN PERPENDICULAR TO SUPPORTS AND STAGGER JOINTS. ALL NAILING TO BE COMMON NAILS, NING SHAPED FOR FLOOR & ROOF SHEATHING. ALL FLOOR SHEATHING TO BE GLEUED & NAILED. ALL SIDES OF SHEAR WALL SHEATHING SHALL BE BLOCKED & NAILED.

NAILING SCHEDULE

USE	THICKNESS	SPACING	EDGE NAILING	FIELD NAILING
FLAT ROOF	1"	4"	6d @ 4" OC	6d @ 12" OC
SLOPED ROOF	1"	4"	6d @ 4" OC	6d @ 12" OC
FLOOR	2" & 16"	24"	16d @ 4" OC	16d @ 10" OC
SHEAR WALL	2"	24"	16d @ 3" OC	16d @ 10" OC



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Date	No.	Description
10-11-07	5	BD SET
9-25-07	4	FNDR. REVISION
9-5-07	3	FNDR. CONST. SET
8-22-07	2	75% STRUCT. PROGRESS
7-12-07	1	FOUNDATION PERMIT SET

Project
Stauder Ranch
Lot 7 - San Juan Ranch
814 Hull Ridge Road
Montrose, CO 81401

Drawn by	JP	Checked by	JP
Scale	SEE NOTES	Project no.	07018
Date	7-12-07		
Sheet no.			

NOTES & DETAILS