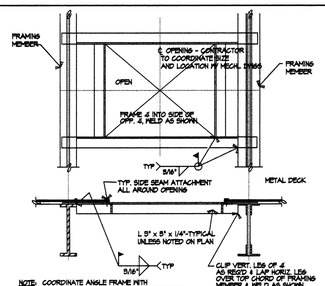
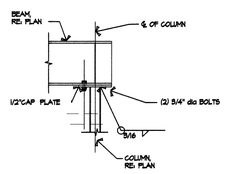


NOTE: COORDINATE ANGLE FRAME WITH ROOF SLOPE AND INSULATION REQUIREMENTS.

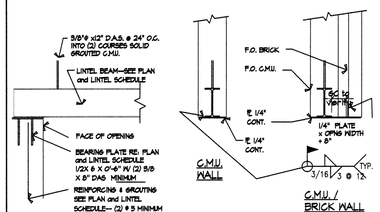
SECTION SCALE: 3/4" = 1'-0" — 1 / S3

TYPICAL ROOF OPNG FRAME



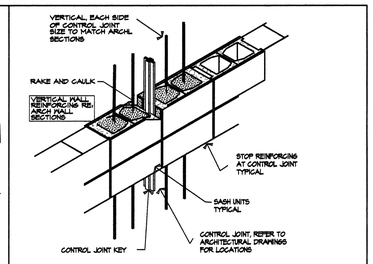
SECTION SCALE: 3/4" = 1'-0" — 2 / S3

BEAM/ COLUMN CONNECTION



SECTION SCALE: 3/4" = 1'-0" — 3 / S3

TYPICAL LINTEL DETAILS and BEAM BRG PLATE

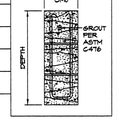


SECTION SCALE: 3/4" = 1'-0" — 4 / S3

TYPICAL CONTROL JOINT

REINFORCED MASONRY LINTEL SCHEDULE

LINTEL MARK	MINIMUM REINFORCING	DEPTH	BEARING LENGTH
BBI	8" BOND BEAM 2 - #5 @ BTM	8"	8"



NOTES:
1. EXTEND REINFORCING 8" EACH SIDE OF OPENING, MINIMUM.
2. ALL CELLS SHALL BE FULLY GROUTED.
3. THIS MASONRY LINTEL SCHEDULE APPLIES WHEN THE LINTEL OCCURS IN A NON-LOAD BEARING WALL OR FOR RUNNING BOND WALLS WHEN THE DISTANCE TO STRUCTURAL BEARING ABOVE HEAD
4. OF OPENING EQUALS OR EXCEEDS 1/2 THE OPENING WIDTH.
5. USE #9 RECTANGULAR STIRRUPS AT 16" O.C. FOR LINTELS GREATER THAN 8' DEEP WHEN CONSTRUCTED WITH 8" DEEP UNITS.
   MINIMUM END BEARING TO BE 8" (UNLESS NOTED OTHERWISE, REINFORCED W/ (2) #5 VERT. (MIN.)
6. BOND BEAM LINTELS SHALL BE FILLED WITH 3000 PSI GROUT.

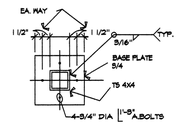
REINFORCED MASONRY LINTEL SCHEDULE — 5 / S3

LOOSE STEEL LINTEL SCHEDULE

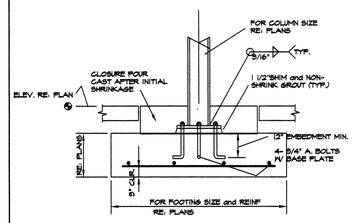
LINTEL MARK	BEAM SIZE	BOTTOM PLATE	VERTICAL PLATE	BEARING EACH END	VERTICAL REINF
L-1	SEE DWG S2.1 FOR LINTEL SIZES				
L-2					
L-3					

LINTEL NOTES:
1. ALL MASONRY OPENINGS REQUIRE A LINTEL. UNLESS A LINTEL IS SPECIFIED FOR AN OPENING, PROVIDE A 'MARK L1' LINTEL FOR BIDDING
2. STEEL LINTELS SHALL HAVE BOTTOM PLATE BEARING 8" MINIMUM EACH END.
3. STEEL LINTEL BOTTOM PLATES SHALL BE 1 INCH LESS THAN THE NOMINAL WIDTH OF THE WALL.
4. VERTICAL PLATES AT STEEL LINTELS ONLY NEED TO BE PROVIDED AT LINTELS SUPPORTING BRICK VENEER. GC TO VERIFY CLEARANCE TO VERT PLATE FOR BRICK.

LOOSE STEEL LINTEL SCHEDULE/ LINTEL SCHEDULE — 6 / S3

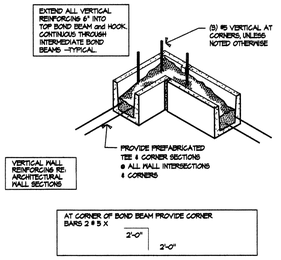


A. BOLT SETTING PLANS — 7 / S3



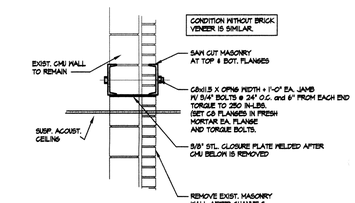
SECTION SCALE: 3/4" = 1'-0" — 8 / S3

COLUMN on FTG PAD



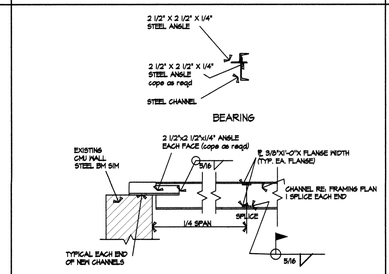
SECTION SCALE: 3/4" = 1'-0" — 9 / S3

TYPICAL CORNER MASONRY REINFORCING



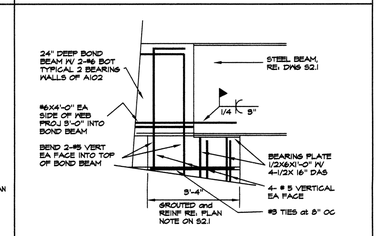
SECTION SCALE: 3/4" = 1'-0" — 10 / S3

HEADER AT EXISTING MASONRY WALL



SECTION SCALE: 3/4" = 1'-0" — 11 / S3

RTU SUPPORT AT EXISTING ROOF



TYPICAL BOTH JAMBS OF PRESIDIUM OPENING

SECTION SCALE: 3/4" = 1'-0" — 12 / S3

STEEL BEAM BEARING at PRESIDIUM OPENING

GENERAL NOTES PERTAINING TO ALL STRUCTURAL DRAWINGS

These notes supplement the specifications which shall be referred to for additional requirements. In the event of a conflict, the more restrictive requirement shall govern.

1) Concrete has been designed and shall be constructed in accordance with the American Concrete Institute Building Code (A.C.I. 318, latest edition) and (A.C.I. 301) "Standard Specifications for Structural Concrete". Section 1.8 "Inspection" of A.C.I. 318 is deleted in entirety, see "Field Observations" paragraph. All concrete, except as noted otherwise, shall be of stone aggregate concrete, 3,000 psi minimum compressive strength at 28 days.
   Grouting dowels: Drill a 3/4" x 1 1/2" hole for each #5 dowel. Clean out the holes with a brush and air compressor, inspect hole with a light and mirror to assure clean concrete surfaces before grouting. Fill holes with Ceramic 6 epoxy, as manufactured by ITW Ramset/Redhead. Insert #5 dowel into epoxy. Do not disturb dowel until epoxy has set.

2) Reinforcing is to be new billet steel A.S.T.M. A615, grade 60 except ties & stirrups shall be grade 40.
   Bars to be welded must meet ASTM A706 with a maximum carbon equivalent of .48% for #7 & larger and .55% for #6 & smaller. Welded wire fabric shall be in accordance with A.S.T.M. A185. Provide corner bars to match all horizontal reinforcing in cast-in-place walls. Provide lap splices as follow: "#5 = 26", #4 = 21" or as indicated on drawings.

3) Bar Placing: All reinforcing shall be placed in a manner so as to avoid displacement when placing concrete. Bars shall be placed to clearances noted on drawings. Placing shall be in accordance with C.R.S.I. "Placing Reinforcing Bars". The bar placer is to familiarize himself with all details shown on the structural drawings and shall use these drawings in conjunction with approved shop drawings for placement of reinforcing.

4) Structural steel including cast-in angles, plates or other sections shall be detailed and erected in accordance with the American Institute of Steel Construction (A.I.S.C.) Specifications and Code of Standard Practice. Use A992, Fy=50KSI for W shapes, A36 for plates, angles and channels, unless otherwise noted on the drawings. Use A307 bolts unless noted otherwise on the drawings.
   Where steel plates or angles are welded to reinforcing bars, use reinforcing bars as outlined in Item 2 above.
   Use E70XX electrodes for all welding. Welding of rebar anchors to angles or plates to be equal to 1.5 As Fy of rebar unless otherwise noted. Tubular steel columns shall conform to ASTM A500 B (46 ksi).

5) Bar joists (open web steel joists) shall conform to the specifications of the Steel Joist Institute and American Institute of Steel Construction. Submit statement of conformance to Steel Joist Institute specifications stamped by a Missouri registered professional engineer with shop drawings for engineers review prior to fabrication. Provide bolted connections of joists at columns using A325 bolts per OSHA requirements. Provide joist bridging as per the manufacturer's recommendations and as indicated on the drawings. All bridging and bridging anchors shall be completely installed before construction loads are placed on joists. Where bridging end is not attached to concrete or masonry wall provide "X"-bridging in last joist space. Bridging shall be welded to angle 3X3X1/4 X 1'-0"(except at LH joist x 2'-0") attached to CMU walls W/ 2- 3/8 anchor bolts. Additional erection requirements of OSHA shall be followed. SP joist shall be designed per the loading diagrams, as indicated on the drawings, except those supporting mechanical equipment shall be designed for 70% of the mech equip. weight plus normal roof loading.

6) Steel Roof Decking Material shall be of the size and type as indicated on the drawings. Product shall conform to the specifications of the Steel Deck Institute. Installation shall be as per the manufacturer's recommendations and as specified on the drawings. Unless noted otherwise on the drawings, provide continuous L 2 1/2 x 2 1/2 x 1/4 minimum at all deck edges. All roof deck openings shall be completely framed around with L 3 1/2 X 3 1/2 X 1/4 frame.

8) Foundations: In the absence of a geotechnical report for this project 2000 psf allowable soil bearing pressure has been ASSUMED. See the project specifications for soil testing requirements.

9) Concrete Masonry shall consist of lightweight concrete block with an ultimate compressive f'm of 1350 psi. Mortar shall be Type S ; grout shall develop a minimum compressive strength of 2000 psi at 28 days. Horizontal reinforcing shall be standard weight truss type "Dur-o-Wal" OR EQUAL at 16" o.c. unless noted otherwise on the drawings. Support vertical reinforcing at clearances shown at maximum 192 bar diameters or 10'-0", the lesser of the two. Provide pre-fabricated corner and tee sections at all wall corners and intersections, like 4'-0" grout lifts unless clean-outs are provided, in which case 20'-0" lifts may be used. Grouted cells shall be vibrated.

10) Shop Drawings: The contractor shall submit shop drawings for concrete mix designs, concrete reinforcing, structural steel, bar joists and steel deck, for the engineer's review prior to fabrication. Any fabrication done prior to return of the shop drawings will be at the contractor's risk, i.e. corrections to the fabricated product as necessitated by the engineer's review will be at the contractors expense. Submit one xerox and one print of the drawings and four copies of any required calculations to the structural engineer for review. Shop drawings shall be submitted through the architect for distribution, unless prior arrangements have been made, so as to allow 5 working days for review by the structural engineer.

11) Field Observations: The contractor shall inform the architect at least 24 hours prior to casting any concrete so as to allow the architect the opportunity to review the placement of embedded items.

12) Loads Used in Design:
   Roof Dead Load (total) ..... 20 psf
   Roof Live Load ..... 20 psf
   Wind ..... 90 MPH v3s, Exposure C

13) Dimensions & Discrepancies: The general contractor shall check ALL conditions and dimensions as shown on the drawings against the existing conditions. Verify all mechanical equipment weights and locations with the mechanical drawings. The contractor shall advise the structural engineer immediately of any discrepancies noted in the structural documents and obtain a clarification thereof before proceeding. Contractor requested modifications to the contract documents must be submitted in writing. Shop drawings submitted to the engineer for his review do not constitute "in writing" unless requested changes are specifically noted thereon. Changes by means of shop drawings and coordination thereof become the responsibility of the contractor.

Revision Number	Revision Date

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12/15/05

ADDITION AND ALTERATIONS TO EXISTING EUGENE FIELDS ELEMENTARY SCHOOL

MEXICO 59 SCHOOLS

AUDRIAN COUNTY MEXICO, MISSOURI

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STRUCTURAL DETAILS and GENERAL NOTES

Comm. No. #0533

Date: 10-31-2005

S3.1

PLOTTED: Dec 19, 2005

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