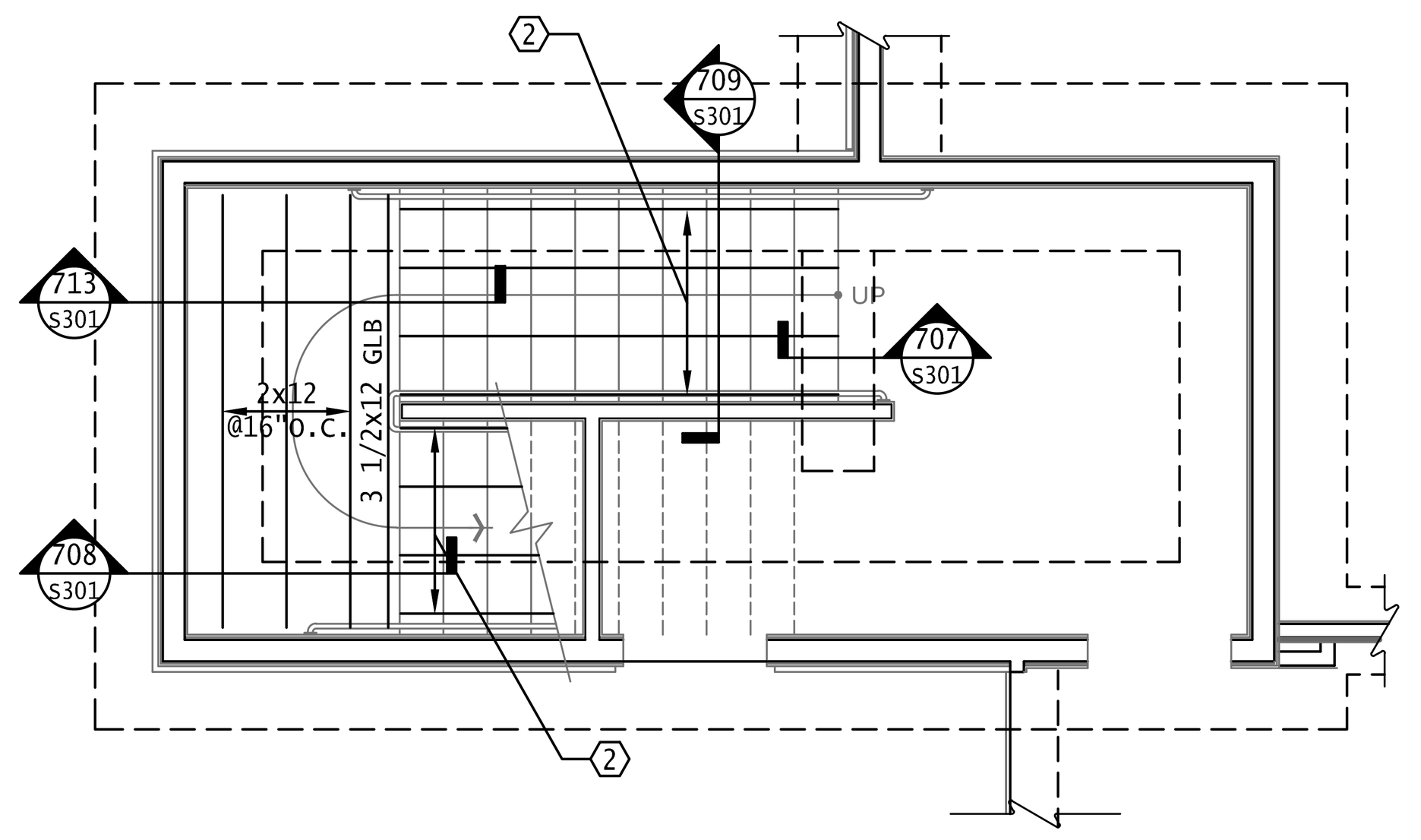
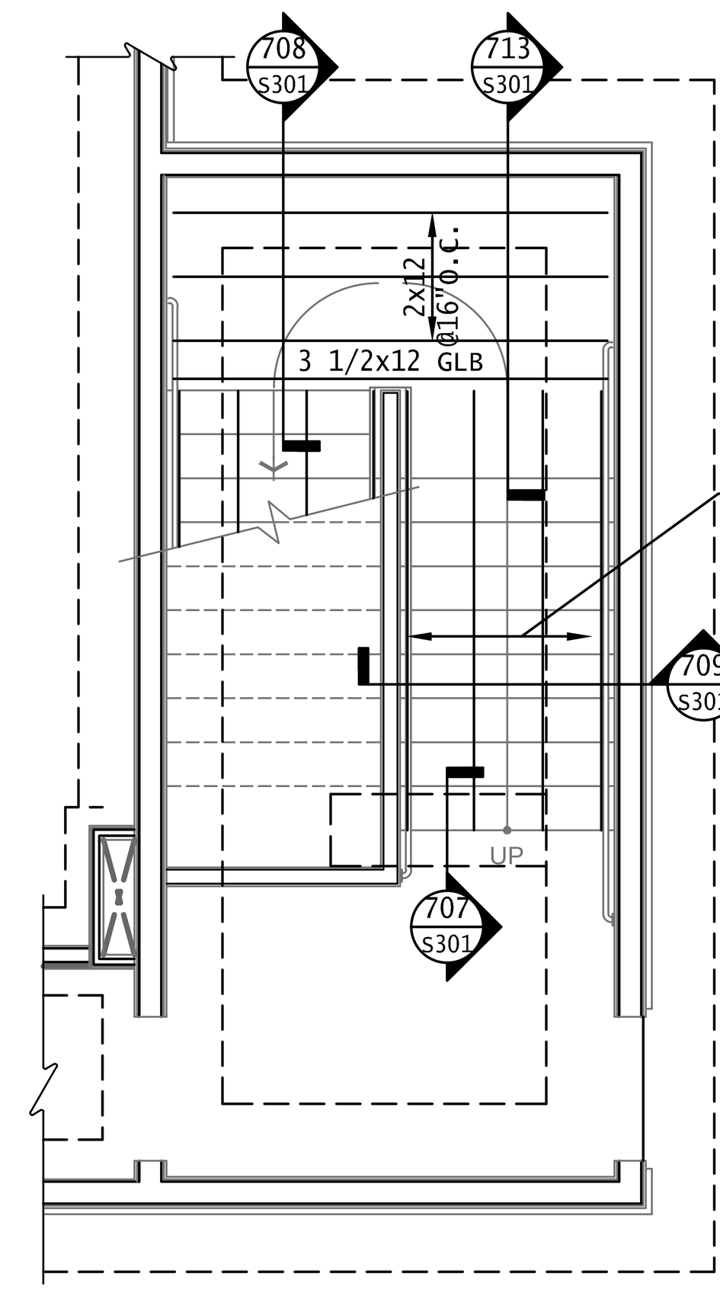
STAIR FRAMING PLAN NOTES:

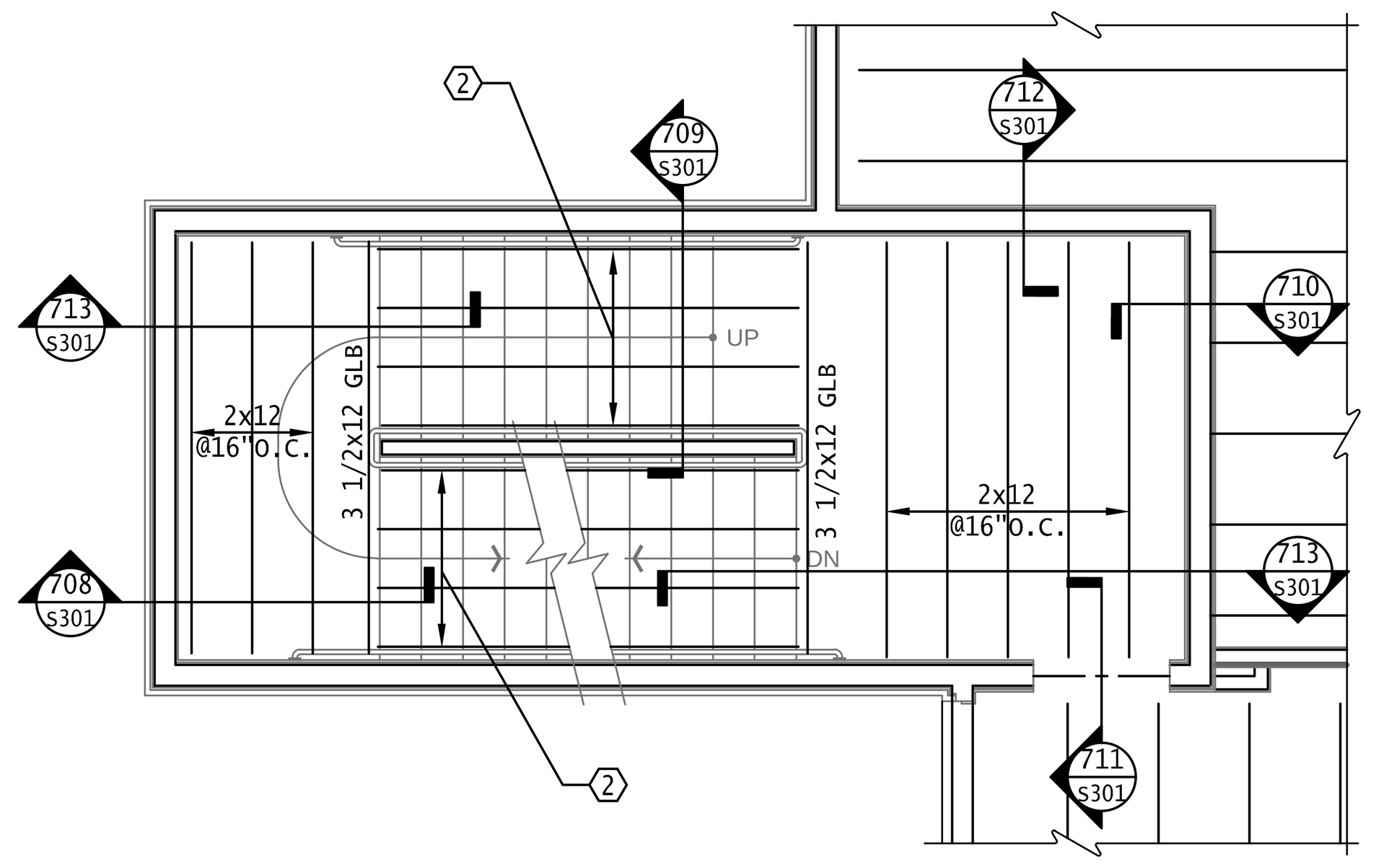
1. COORDINATE DIMENSIONS AND LOCATION WITH ARCHITECTURAL DRAWINGS.
2. 1 3/4x11 7/8 LVL STRINGERS AT 12" O.C., MAX NOTCH DEPTH = 5 1/2"



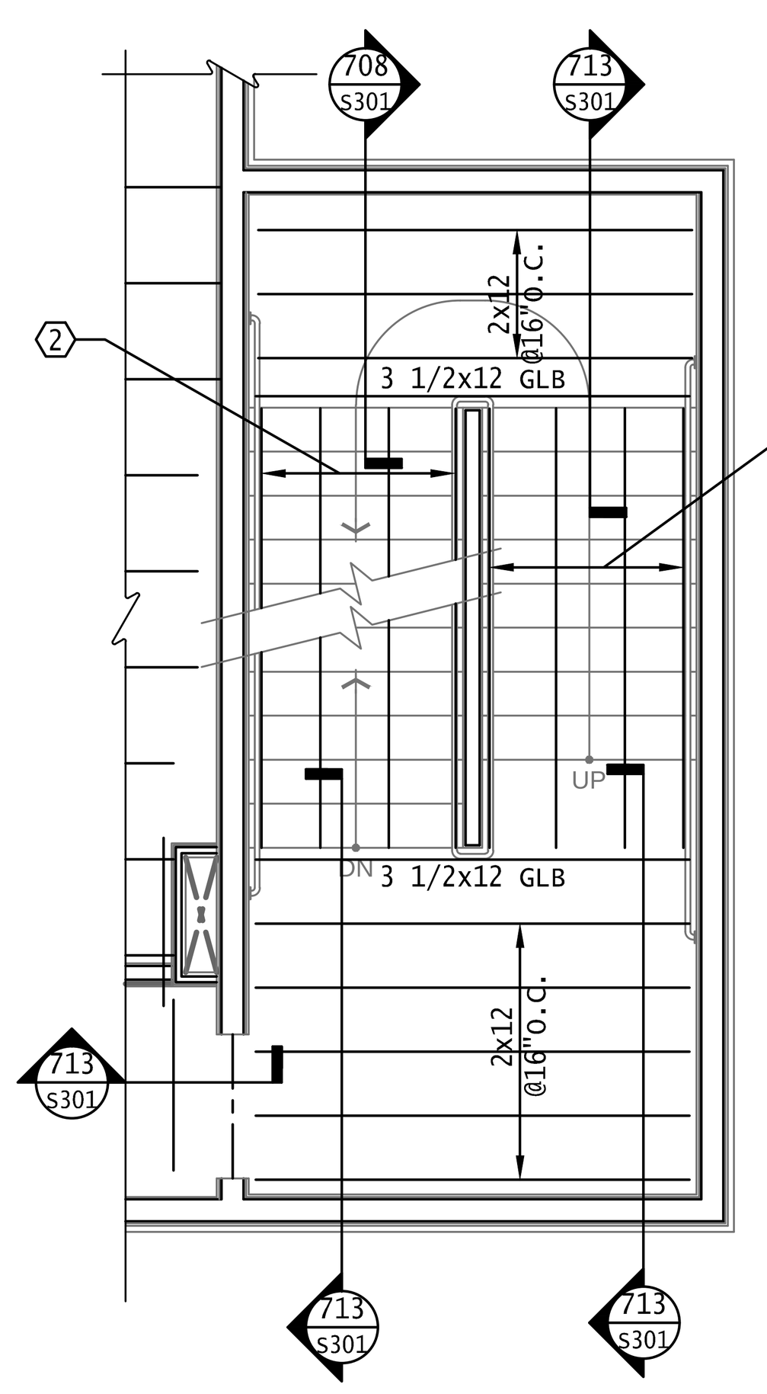
701 1ST LEVEL ENLARGED STAIR PLAN 1/4" = 1'-0"



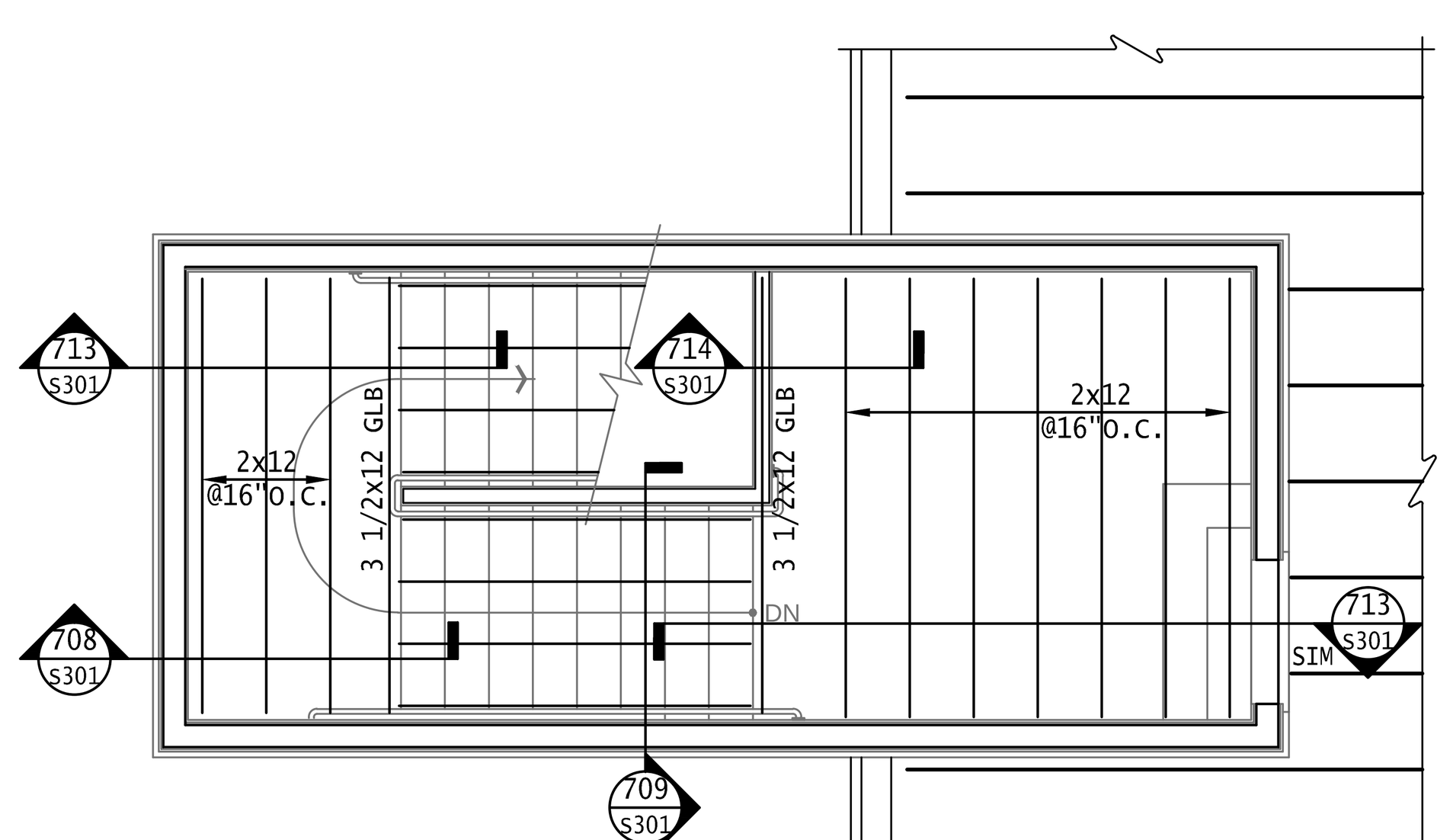
704 1ST LEVEL ENLARGED STAIR PLAN 1/4" = 1'-0"



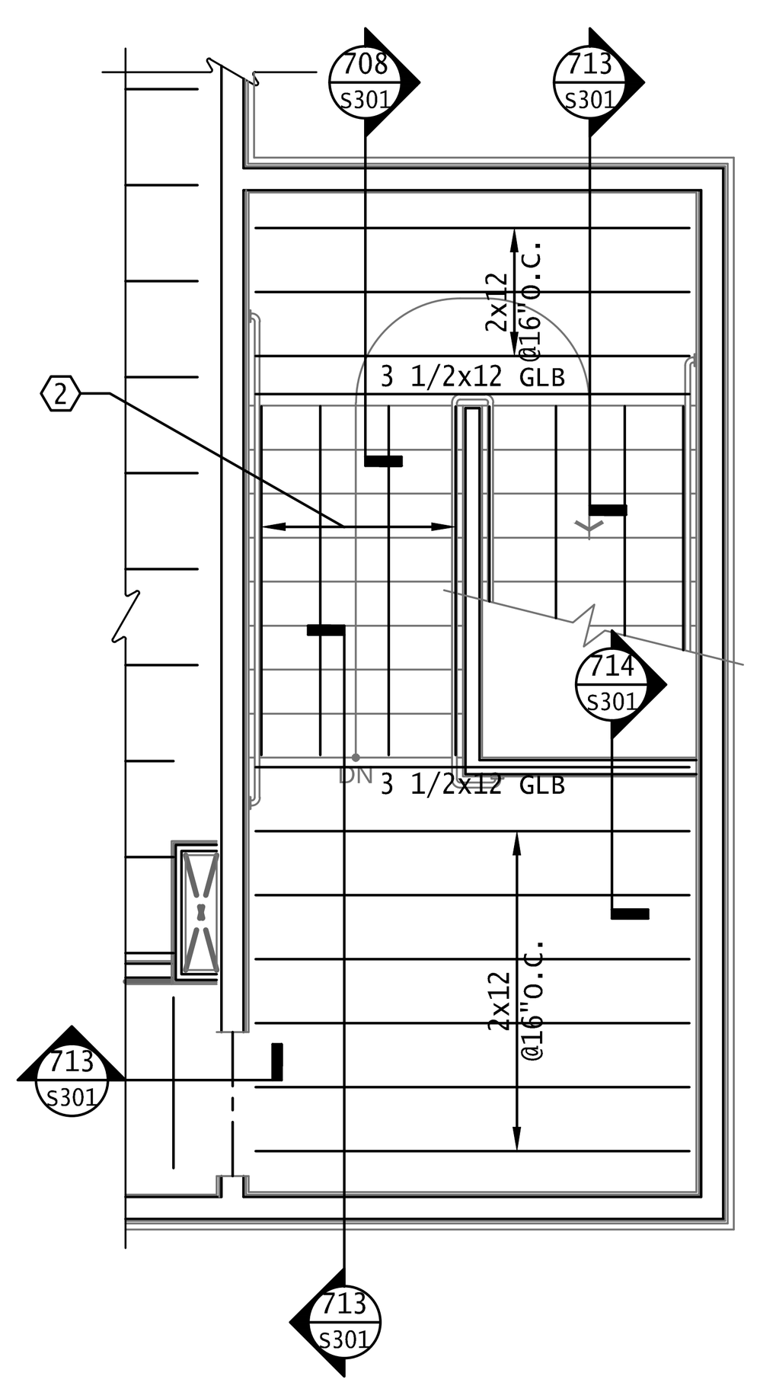
702 2ND THRU 4TH LEVEL ENLARGED STAIR PLAN 1/4" = 1'-0"



705 2ND THRU 3RD LEVEL ENLARGED STAIR PLAN 1/4" = 1'-0"

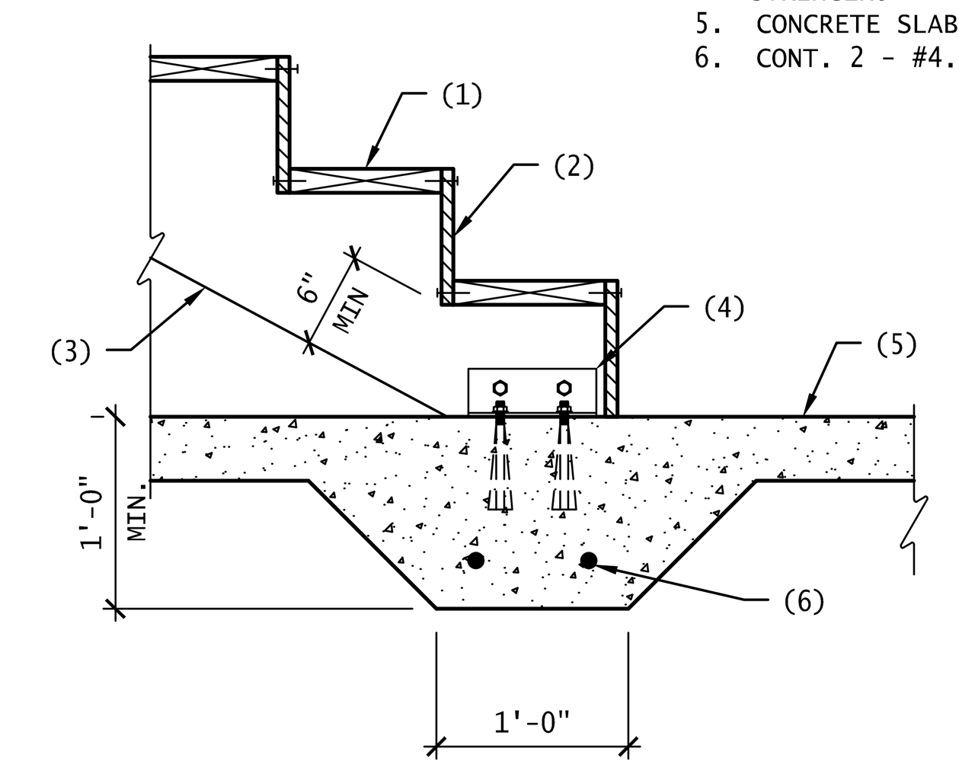


703 ROOF LEVEL ENLARGED STAIR PLAN 1/4" = 1'-0"

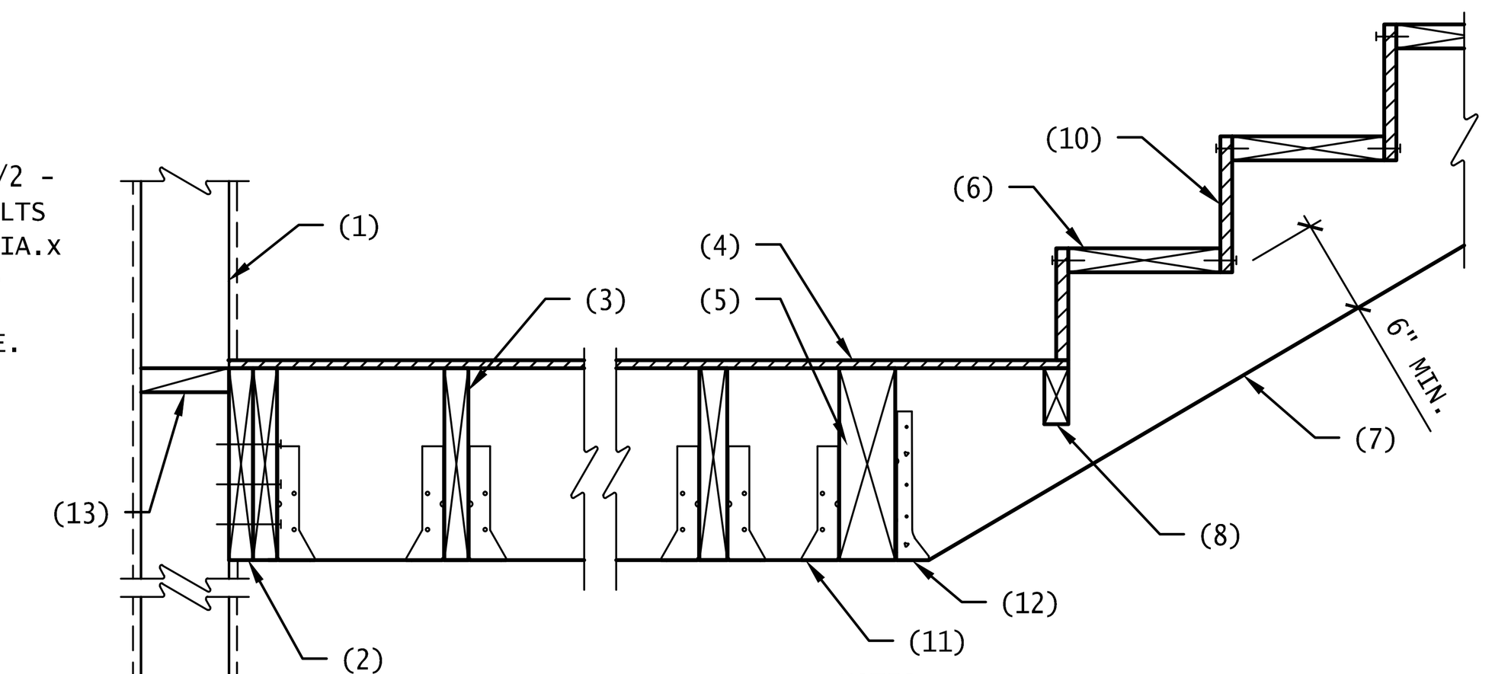


706 4TH LEVEL ENLARGED STAIR PLAN 1/4" = 1'-0"

NOTES:
1. 2x TREAD.
2. 3/4" RISER.
3. WOOD STRINGER.
4. L3x3x1/4x0'-8" LONG W/2 - 1/2" DIA. EXPANSION BOLTS INTO SLAB & 2 - 3/8" DIA.x 1 1/4" LAG SCREWS INTO STRINGER.
5. CONCRETE SLAB ON GRADE.
6. CONT. 2 - #4.



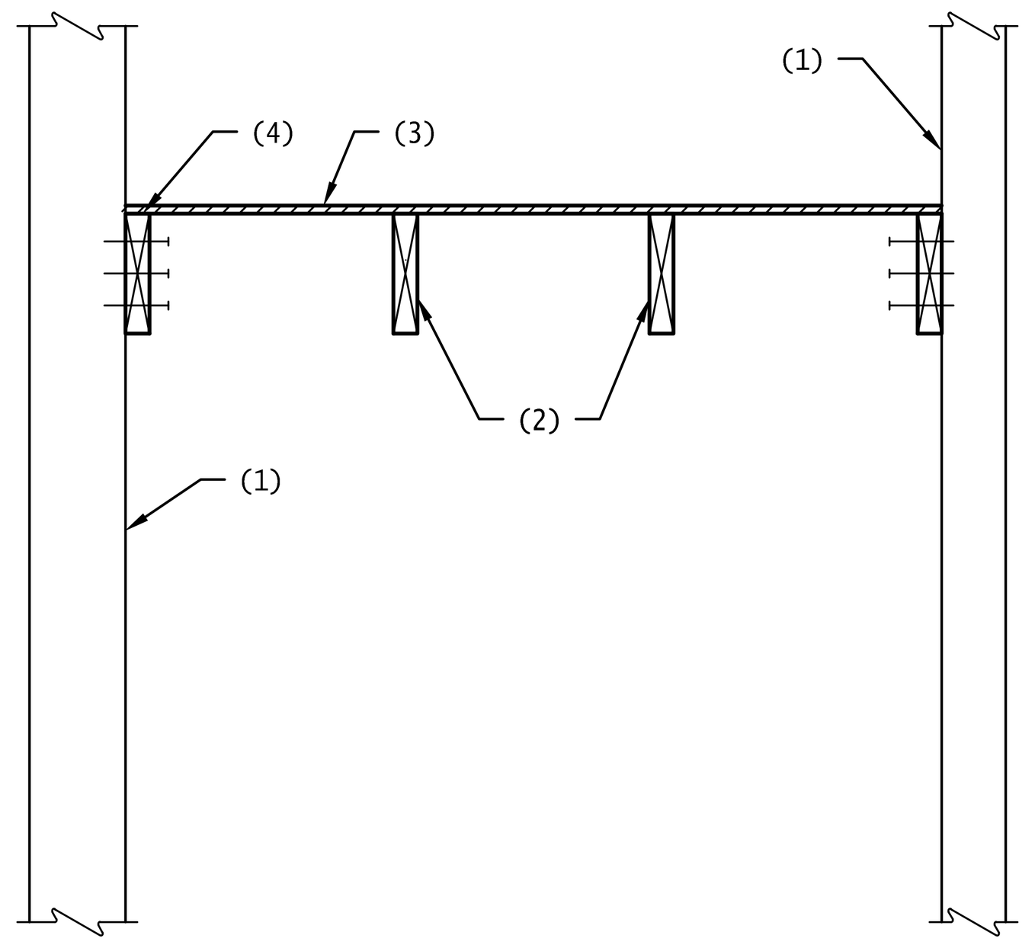
707 SECTION N.T.S.



NOTES:
1. WOOD STUD WALL.
2. CONTINUOUS 2 - 2x12 WOOD LEDGER W/3-16d NAILS EA. STUD.
3. WOOD JOIST.
4. PLYWOOD SHEATHING.
5. WOOD BEAM.
6. 2x TREAD.
7. WOOD STRINGER.
8. CONTINUOUS 2x BLOCKING.
9. FINISH FLOOR.
10. 3/4" RISER.
11. 2x12 BLOCKING AT 24" O.C. WITH SIMPSON LB212 HANGER EACH END.
12. SIMPSON HU9 W/ 18 - 16d NAILS INTO BEAM AND 6 - 10d NAILS INTO STRINGER.
13. CONTINUOUS 2x BLOCKING.

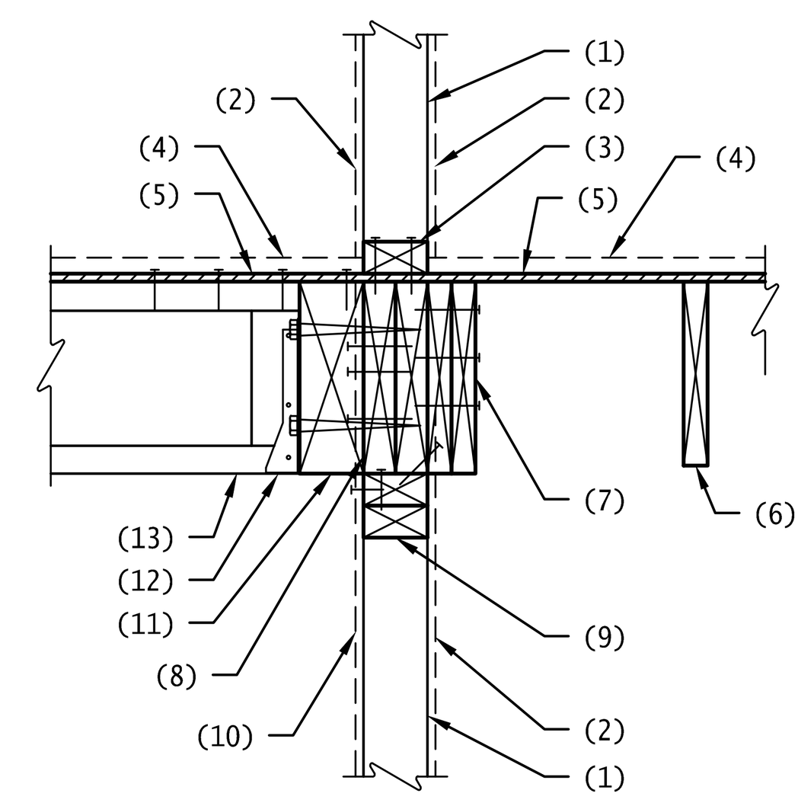
708 SECTION N.T.S.

NOTES:
1. WOOD STUD WALL.
2. WOOD STRINGER.
3. PLYWOOD SHEATHING.
4. WOOD STRINGER W/3 - 20d NAILS AT EACH STUD.



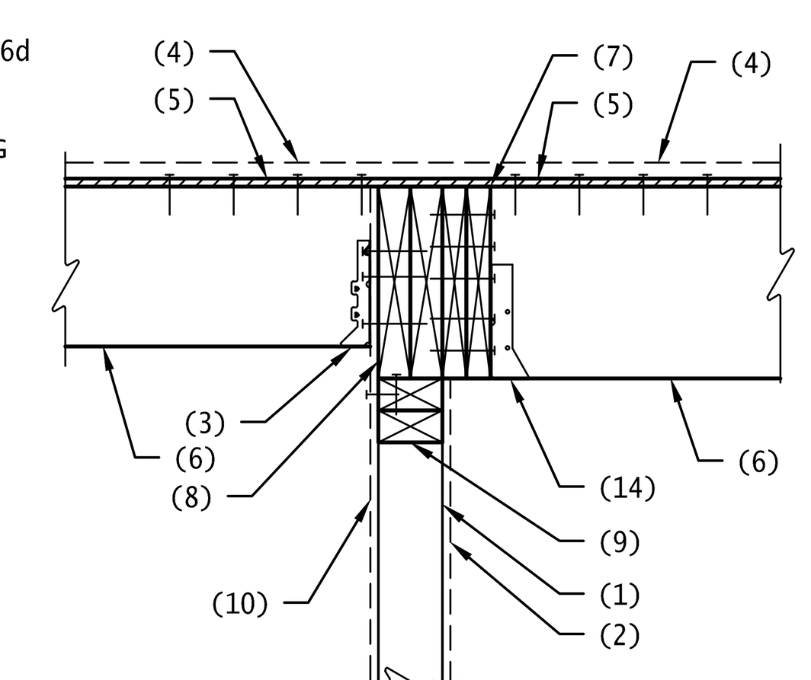
709 SECTION N.T.S.

NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. CONTINUOUS BOTTOM PLATE W/ 16d NAILS AT 12" O.C. STAGGERED, U.N.O.
4. GYPCRETE TOPPING PER ARCHITECTURAL.
5. PLYWOOD SHEATHING.
6. WOOD JOIST.
7. CONTINUOUS 2 - 2x12 WOOD LEDGER W/3-16d NAILS EA. STUD.
8. DOUBLE CONTINUOUS 1 1/4" iLEVEL RIMBOARD.
9. DOUBLE 2x TOP PLATE WITH 16d AT 12" O.C. U.N.O.
10. SHEATHING MATERIAL TO CONTINUE TO FLOOR SHEATHING ABOVE.
11. CONT. 4X12 WOOD LEDGER W/2-3/4" DIA.X6" EMBED LAG SCREWS AT 12" O.C.
12. SIMPSON HB TYPE HANGER.
13. WOOD I-JOIST.



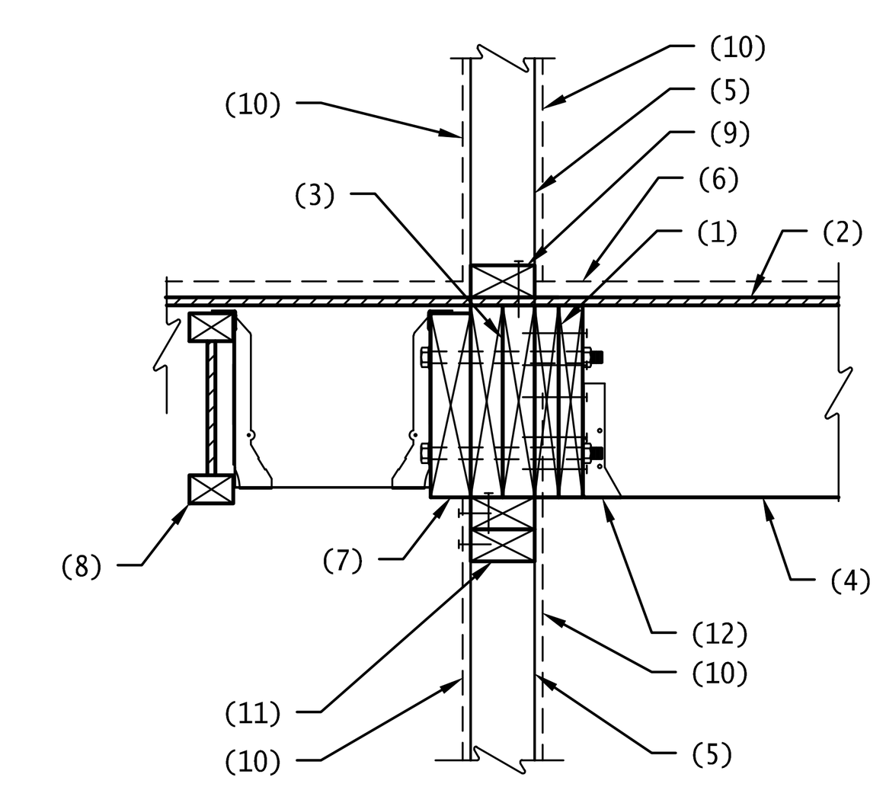
710 SECTION N.T.S.

NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. HSIMPSON LUS28 TYPE HANGER.
4. GYPCRETE TOPPING PER ARCHITECTURAL.
5. PLYWOOD SHEATHING.
6. WOOD JOIST.
7. CONTINUOUS 2 - 2x12 WOOD LEDGER W/5-16d NAILS EA. STUD.
8. DOUBLE CONTINUOUS 1 1/4" iLEVEL RIMBOARD.
9. DOUBLE 2x TOP PLATE WITH 16d AT 12" O.C. U.N.O.
10. SHEATHING MATERIAL TO CONTINUE TO FLOOR SHEATHING ABOVE.
11. SIMPSON LB212 HANGER.

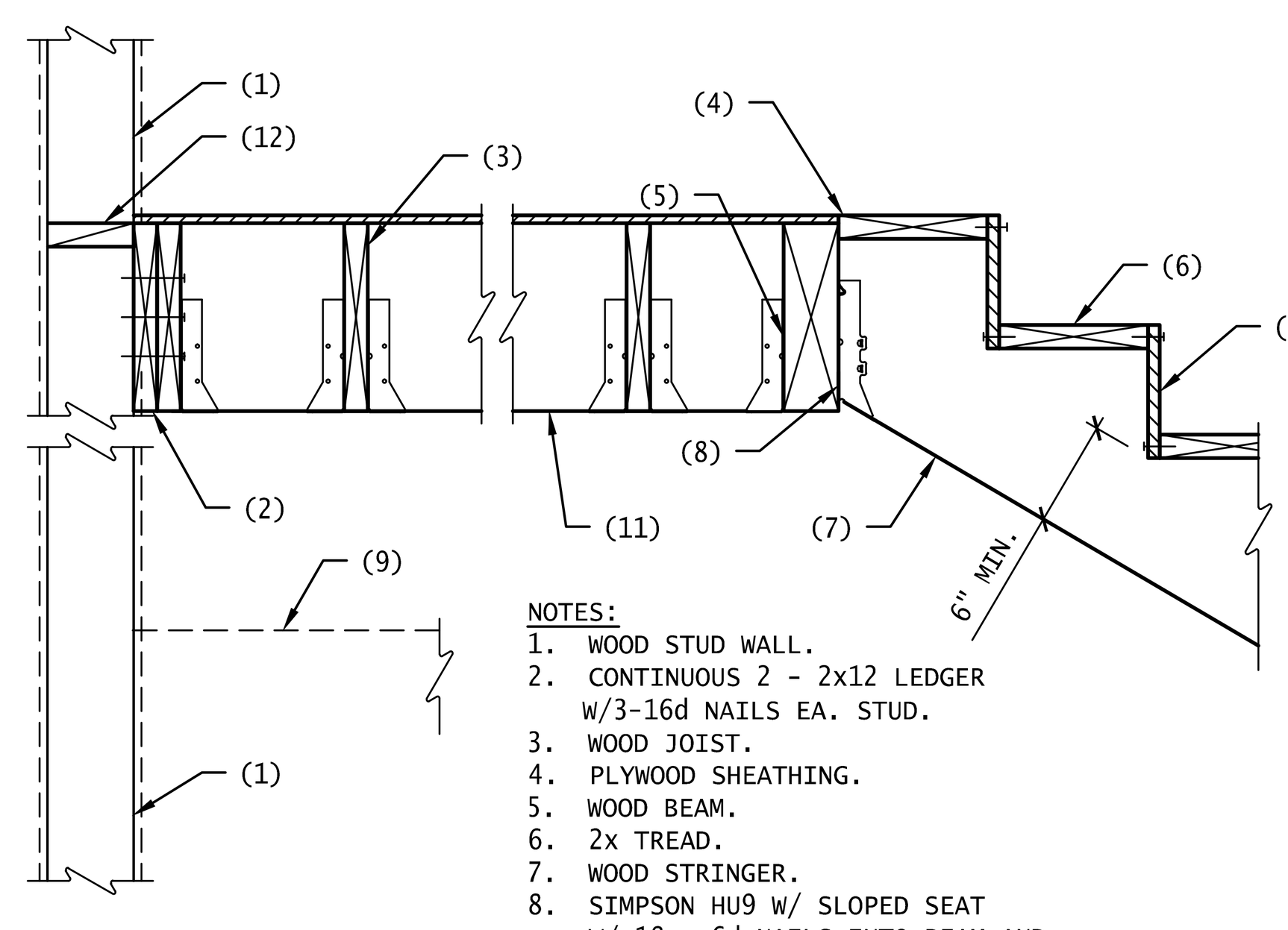


711 SECTION N.T.S.

NOTES:
1. CONT. 2 - 2x12 WOOD LEDGER W/ 5-16d NAILS EACH STUD.
2. PLYWOOD SHEATHING.
3. DOUBLE CONTINUOUS 1 1/4 " iLEVEL RIMBOARD.
4. WOOD JOIST.
5. WOOD STUD WALL.
6. GYPCRETE TOPPING PER ARCH'L.
7. 3x12 WOOD LEDGER WITH 2 - 3/4" DIA. THRU BOLTS AT 24" O.C..
8. WOOD I-JOIST.
9. CONTINUOUS BOTTOM PLATE WITH 16d NAILS AT 12" O.C. STAGGERED, U.N.O.
10. SHEATHING MATERIAL AS OCCURS.
11. DOUBLE 2x TOP PLATE WITH 16d NAILS AT 12" O.C. STAGGERED.
12. SIMPSON LB212 HANGER.



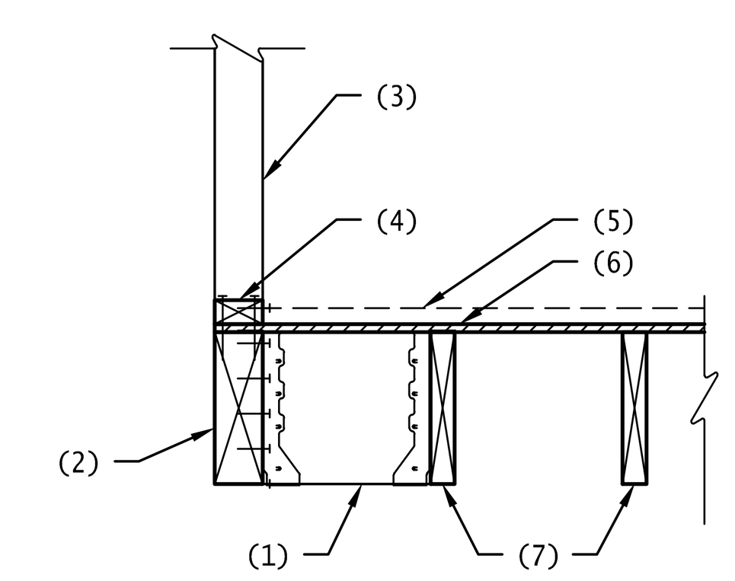
712 SECTION N.T.S.



NOTES:
1. WOOD STUD WALL.
2. CONTINUOUS 2 - 2x12 LEDGER W/3-16d NAILS EA. STUD.
3. WOOD JOIST.
4. PLYWOOD SHEATHING.
5. WOOD BEAM.
6. 2x TREAD.
7. WOOD STRINGER.
8. SIMPSON HU9 W/ SLOPED SEAT W/ 18 - 6d NAILS INTO BEAM AND 6 - 10d NAILS INTO STRINGER.
9. FINISH FLOOR.
10. 3/4" RISER.
11. 2x12 BLOCKING @ 24" O.C. W/ SIMPSON LB212 HANGERS.
12. CONTINUOUS 2x BLOCKING.

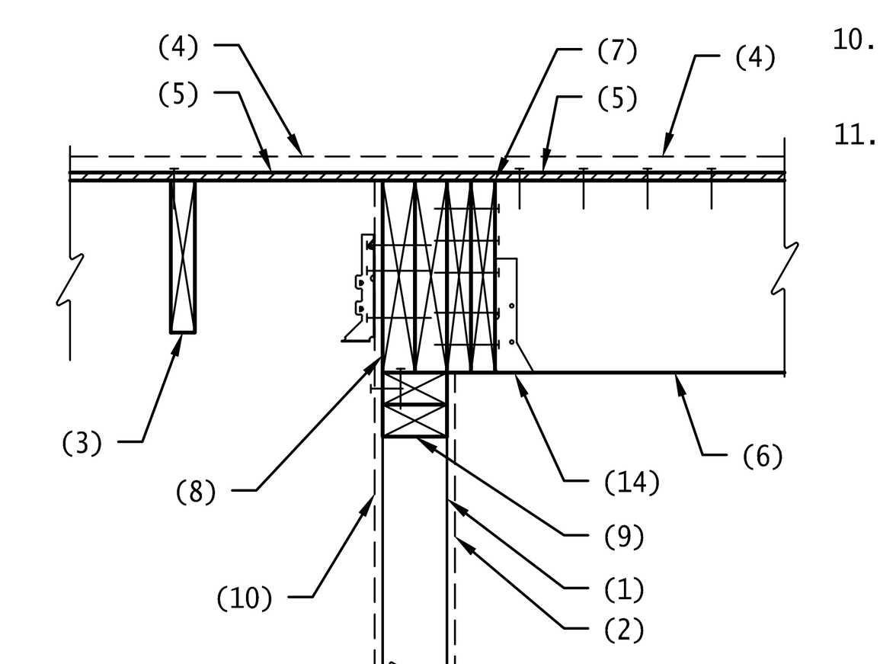
713 SECTION N.T.S.

NOTES:
1. 2x12 BLOCKING AT 24" O.C. WITH SIMPSON LB212 HANGER EACH END.
2. WOOD BEAM.
3. WOOD STUD WALL.
4. 2x PLATE WITH 16" NAILS AT 12" O.C.
5. GYPCRETE TOPPING PER ARCHITECTURAL.
6. PLYWOOD SHEATHING.
7. WOOD JOIST.



714 SECTION N.T.S.

NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. WOOD JOIST.
4. GYPCRETE TOPPING PER ARCHITECTURAL.
5. PLYWOOD SHEATHING.
6. WOOD JOIST.
7. CONTINUOUS 2 - 2x12 WOOD LEDGER W/5-16d NAILS EA. STUD.
8. DOUBLE CONTINUOUS 1 1/4" iLEVEL RIMBOARD.
9. DOUBLE 2x TOP PLATE WITH 16d AT 12" O.C. U.N.O.
10. SHEATHING MATERIAL TO CONTINUE TO FLOOR SHEATHING ABOVE.
11. SIMPSON LB212 HANGER.



713 SECTION N.T.S.

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Phone: 602-725-1083
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Email: gki@cox.net
GKI

Registered Professional Engineer (Structural) Certificate No. 46644 W. DAVID BIXLER Date Signed 10/20/15 Arizona, U.S.A. Expires 6/30/16

INN CODE # 16771-PHXCT

1170 S. Arizona Ave.
Chandler, Arizona, 85286

Holiday Inn Express & Suites

JOB NUMBER 1401

DATE 07-23-2015

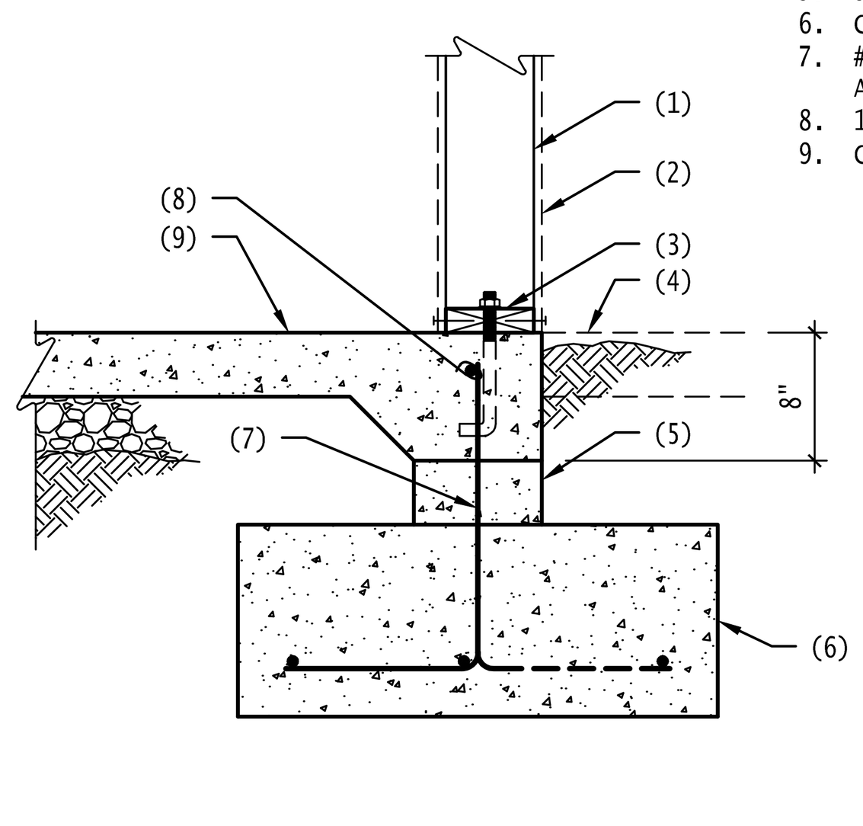
1 1st City Comments 09-11-2015

DAVID BIXLER & ASSOCIATES
8360 East Raintree Drive
Suite 110
Scottsdale, Arizona 85260
Phone: (480) 219-2886
Fax: (480) 588-8584
david.bixler@dbaaeng.com

Proj. No. 15-049

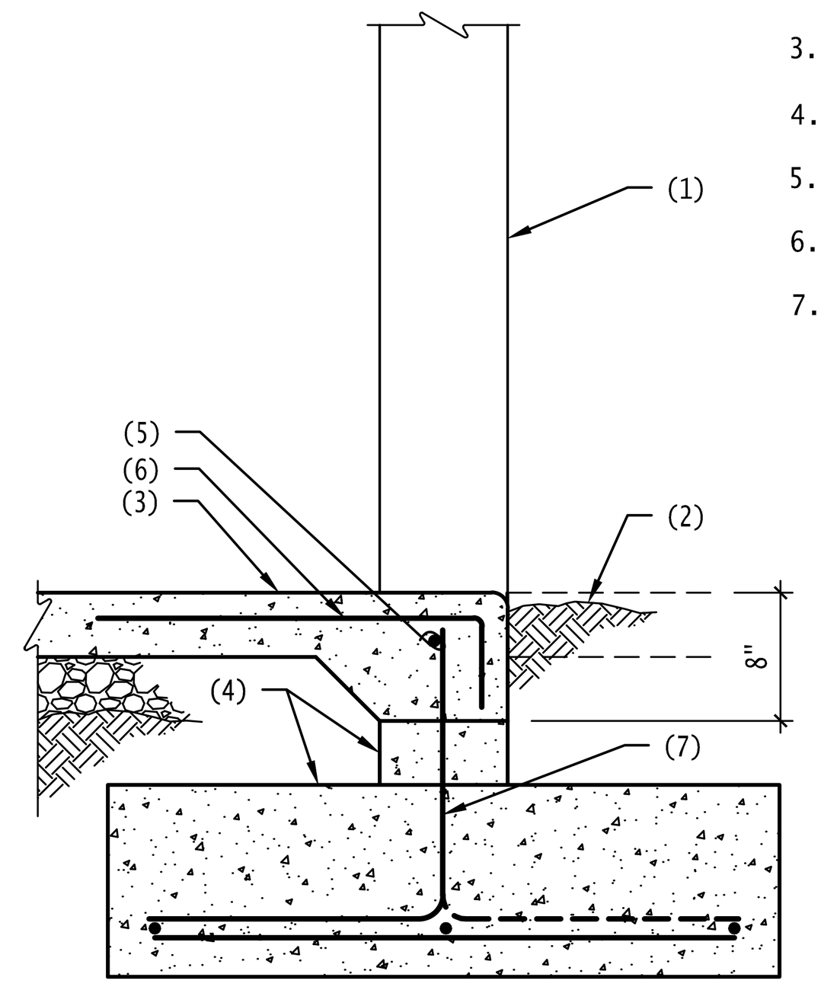
ENLARGED STAIR PLANS & DETAILS

S301



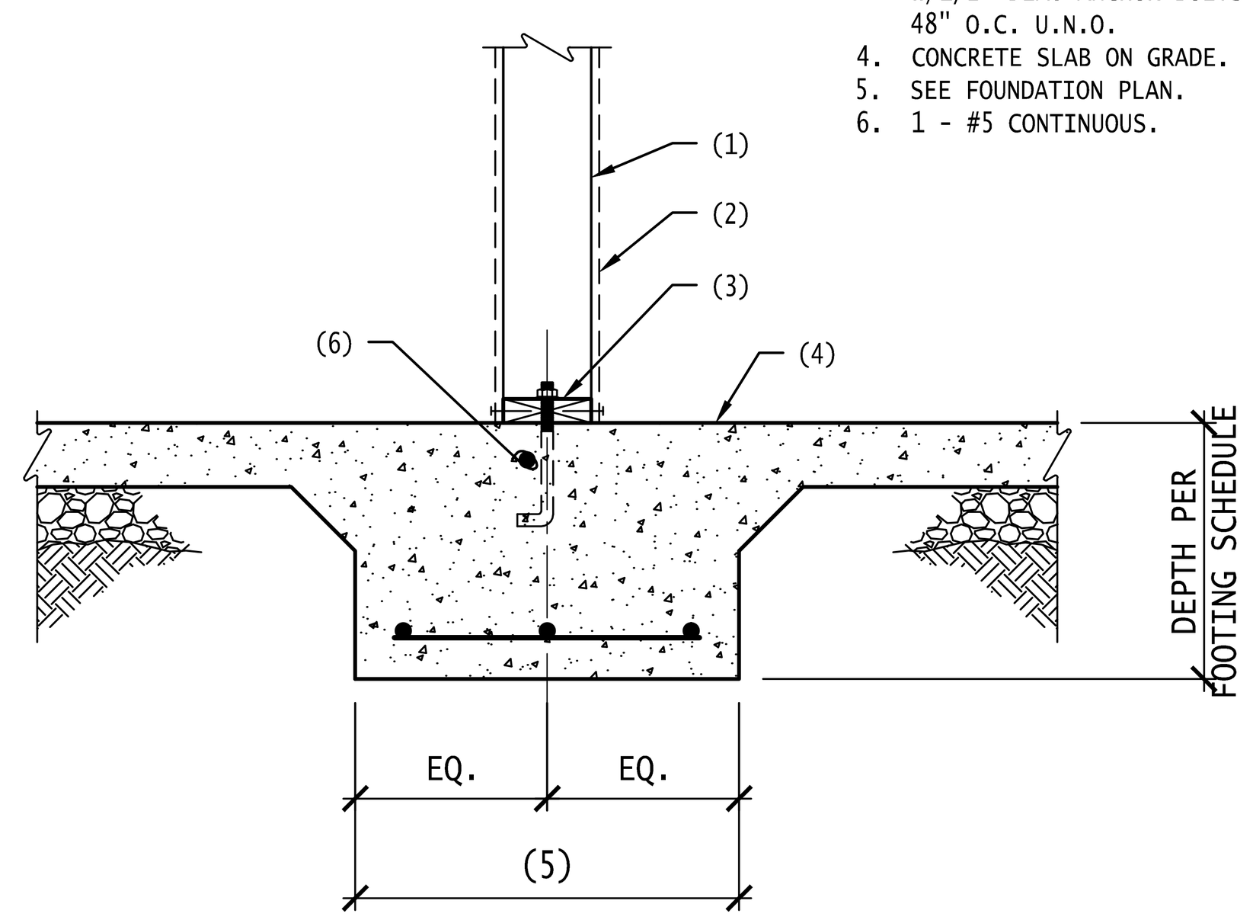
NOTES:
1. WOOD STUD WALL.
2. WALL SHEATHING AS OCCURS.
3. 2x CONTINUOUS WOOD PLATE W/1/2" DIA. ANCHOR BOLTS @ 48" O.C. U.N.O.
4. FINISHED GRADE OR CONCRETE SLAB, AS OCCURS.
5. 8" CONCRETE STEM WALL.
6. CONCRETE FOOTING.
7. #4 DOWELS @ 48" O.C., ALTERNATE BENDS.
8. 1-#4 CONTINUOUS.
9. CONCRETE SLAB ON GRADE.

101 SECTION N.T.S.



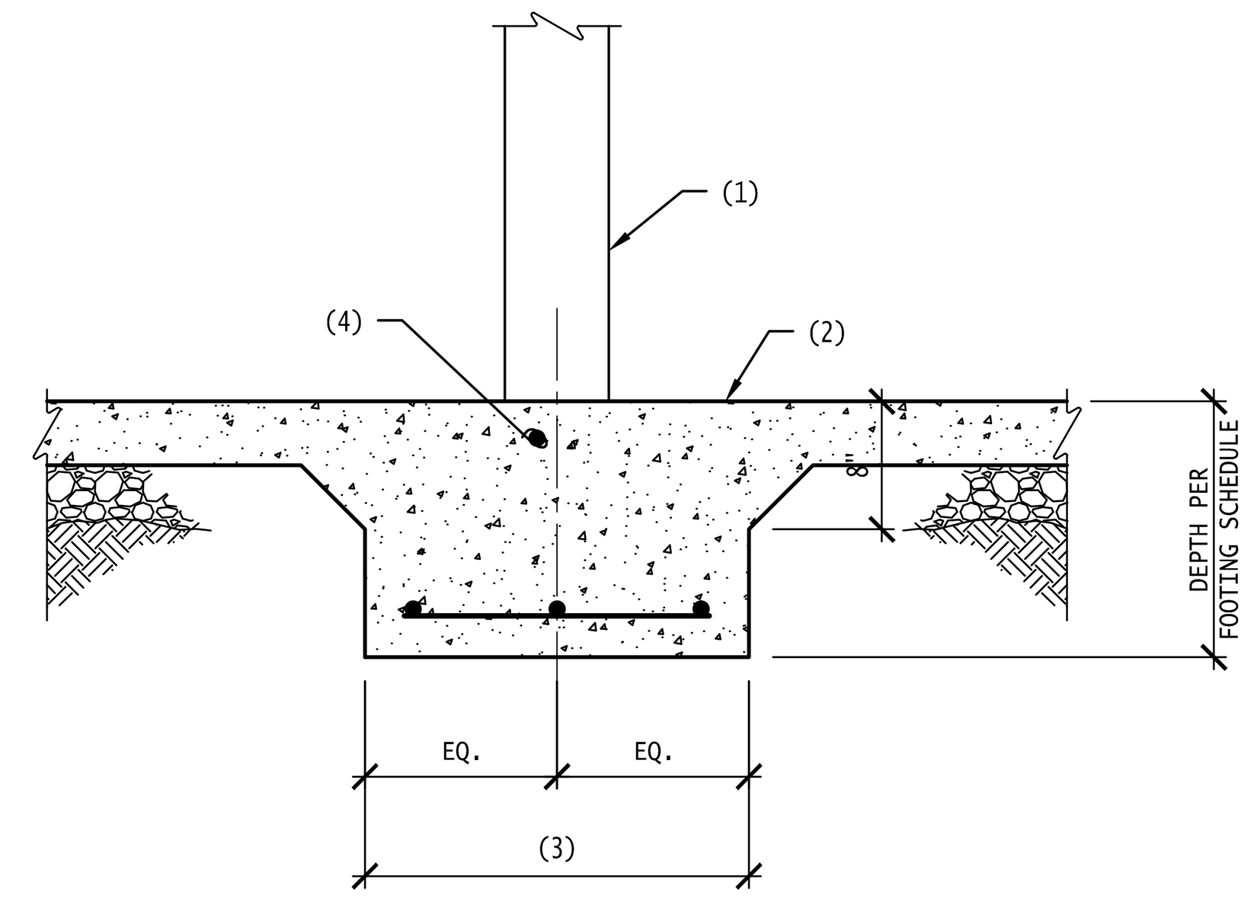
NOTES:
1. WALL BEYOND.
2. FINISHED GRADE OR CONCRETE SLAB ON GRADE AS OCCURS.
3. CONCRETE SLAB ON GRADE, TOOLED EDGE @ OPENING.
4. 8" CONCRETE STEM WALL & FOOTING.
5. CONTINUE REINFORCING FROM STEM WALL BEYOND.
6. #4 x 24" LONG DOWELS W/90° HOOK @ 12"O.C.
7. #3 @ 12" O.C. @ EXTERIOR SLAB.

102 SECTION N.T.S.



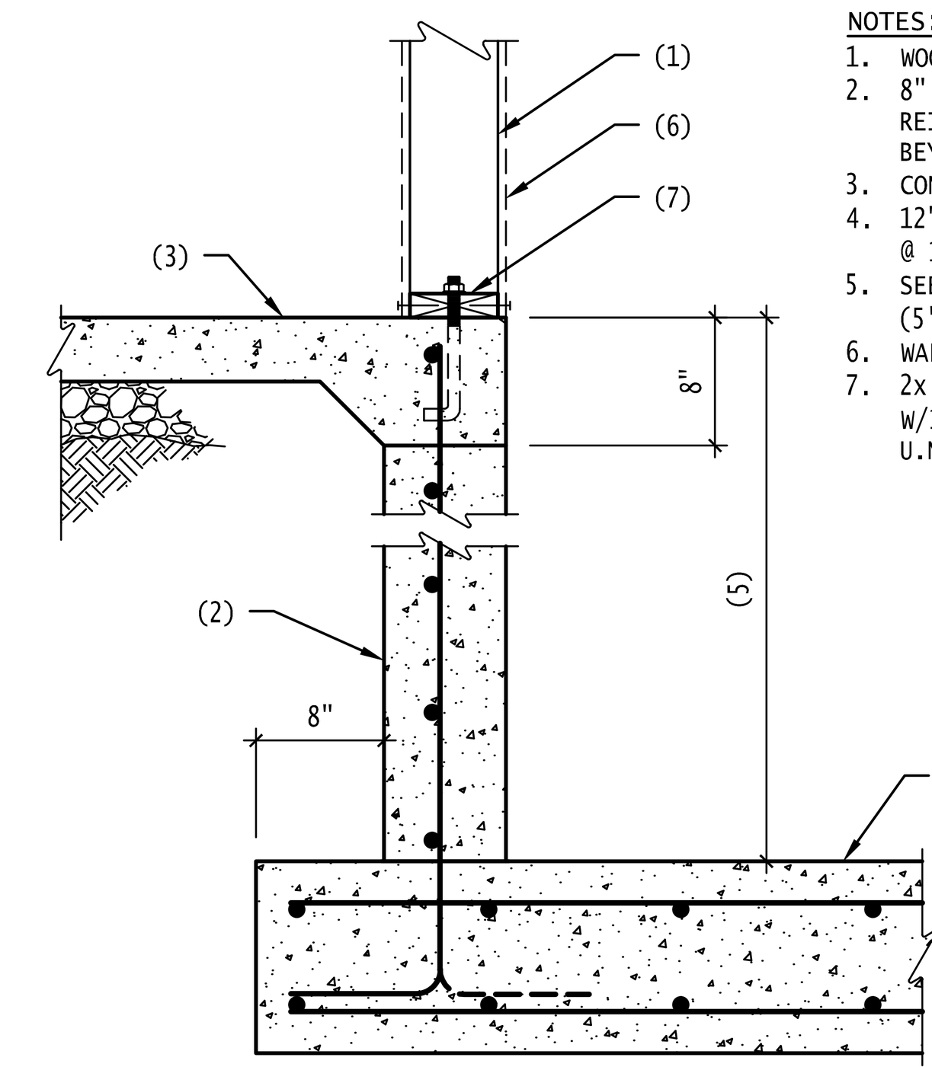
NOTES:
1. WOOD STUD WALL.
2. WALL SHEATHING AS OCCURS.
3. 2x CONTINUOUS WOOD PLATE W/1/2" DIA. ANCHOR BOLTS @ 48" O.C. U.N.O.
4. CONCRETE SLAB ON GRADE.
5. SEE FOUNDATION PLAN.
6. 1 - #5 CONTINUOUS.

103 SECTION N.T.S.



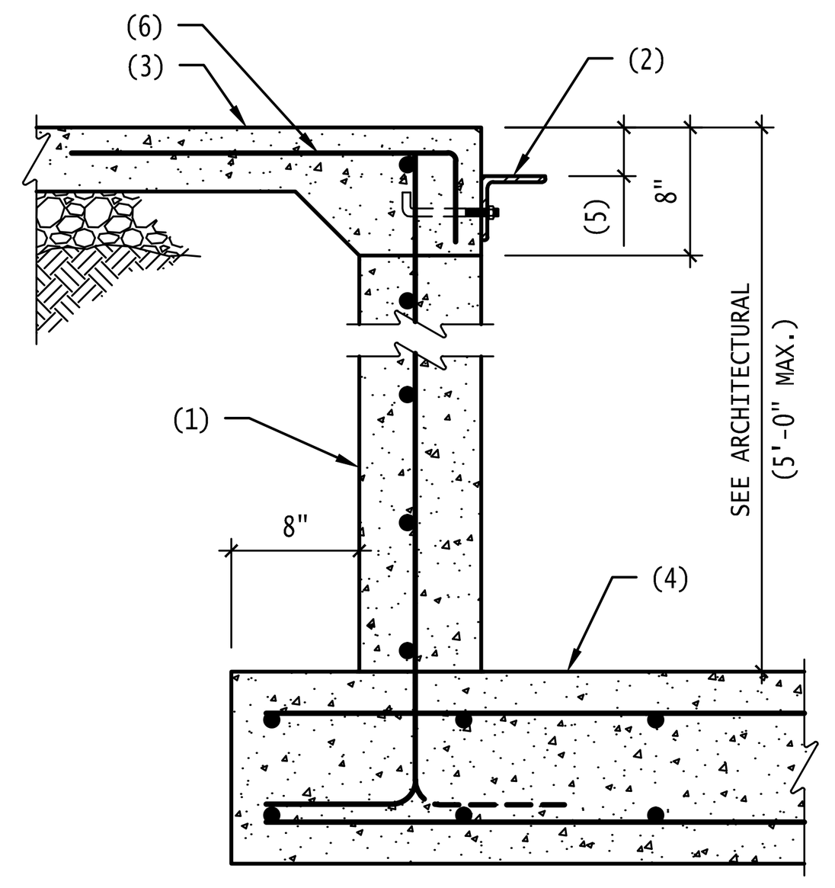
NOTES:
1. WALL BEYOND.
2. CONCRETE SLAB ON GRADE.
3. SEE FOUNDATION PLAN.
4. 1 - #5 CONTINUOUS.

104 SECTION N.T.S.



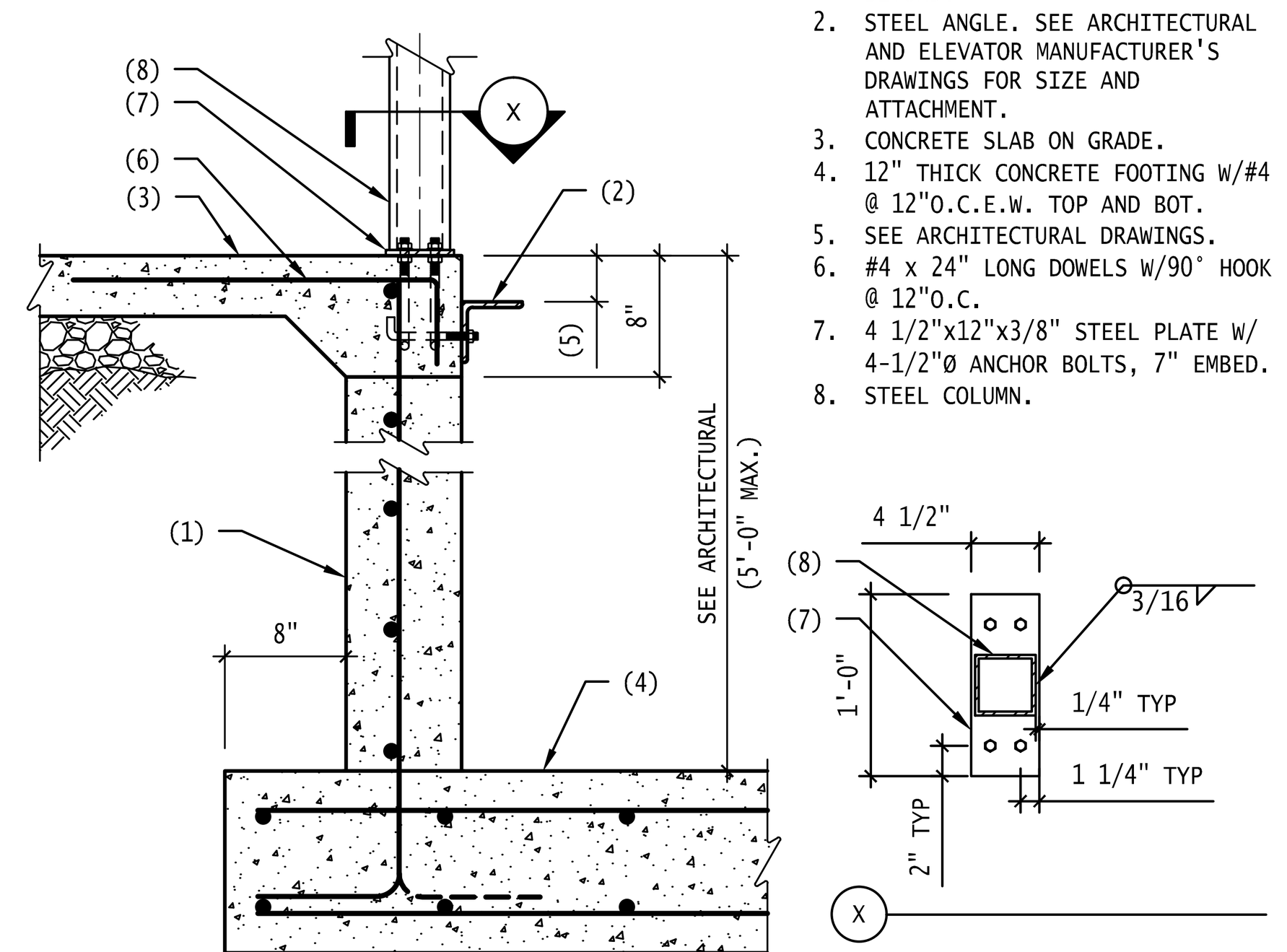
NOTES:
1. WOOD STUD WALL.
2. 8" CONCRETE STEM WALL WITH REINFORCING CONTINUOUS FROM BEYOND.
3. CONCRETE SLAB ON GRADE.
4. 12" THICK CONCRETE FOOTING W/#4 @ 12"O.C.E.W. TOP AND BOT.
5. SEE ARCHITECTURAL DRAWINGS (5'-0" MAX.).
6. WALL SHEATHING AS OCCURS.
7. 2x CONTINUOUS WOOD PLATE W/1/2"Ø ANCHOR BOLTS @ 48" O.C. U.N.O.

105 SECTION N.T.S.



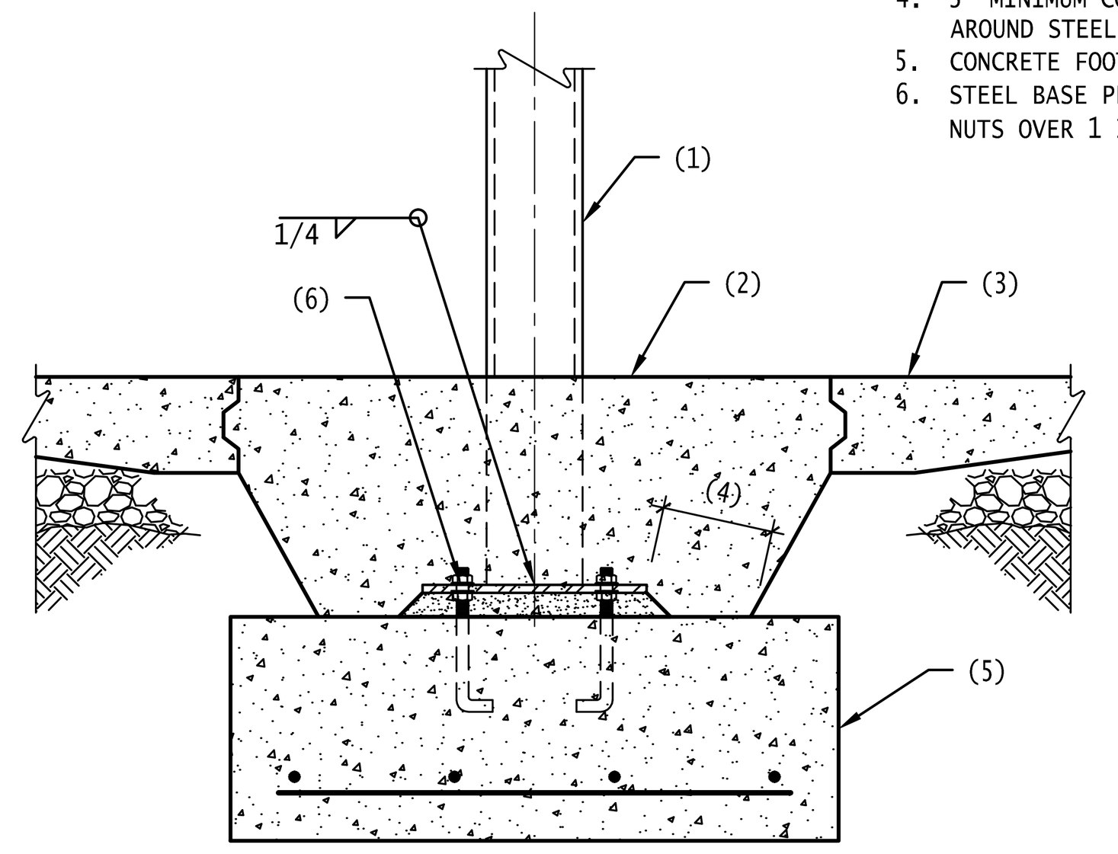
NOTES:
1. 8" CONCRETE STEM WALL WITH REINFORCING CONTINUOUS FROM BEYOND.
2. STEEL ANGLE. SEE ARCHITECTURAL AND ELEVATOR MANUFACTURER'S DRAWINGS FOR SIZE AND ATTACHMENT.
3. CONCRETE SLAB ON GRADE.
4. 12" THICK CONCRETE FOOTING W/#4 @ 12"O.C.E.W. TOP AND BOT.
5. SEE ARCHITECTURAL DRAWINGS.
6. #4 x 24" LONG DOWELS W/90° HOOK @ 12"O.C.

106 SECTION N.T.S.



NOTES:
1. 8" CONCRETE STEM WALL WITH REINFORCING CONTINUOUS FROM BEYOND.
2. STEEL ANGLE. SEE ARCHITECTURAL AND ELEVATOR MANUFACTURER'S DRAWINGS FOR SIZE AND ATTACHMENT.
3. CONCRETE SLAB ON GRADE.
4. 12" THICK CONCRETE FOOTING W/#4 @ 12"O.C.E.W. TOP AND BOT.
5. SEE ARCHITECTURAL DRAWINGS.
6. #4 x 24" LONG DOWELS W/90° HOOK @ 12"O.C.
7. 4 1/2"x12"x3/8" STEEL PLATE W/ 4-1/2"Ø ANCHOR BOLTS, 7" EMBED.
8. STEEL COLUMN.

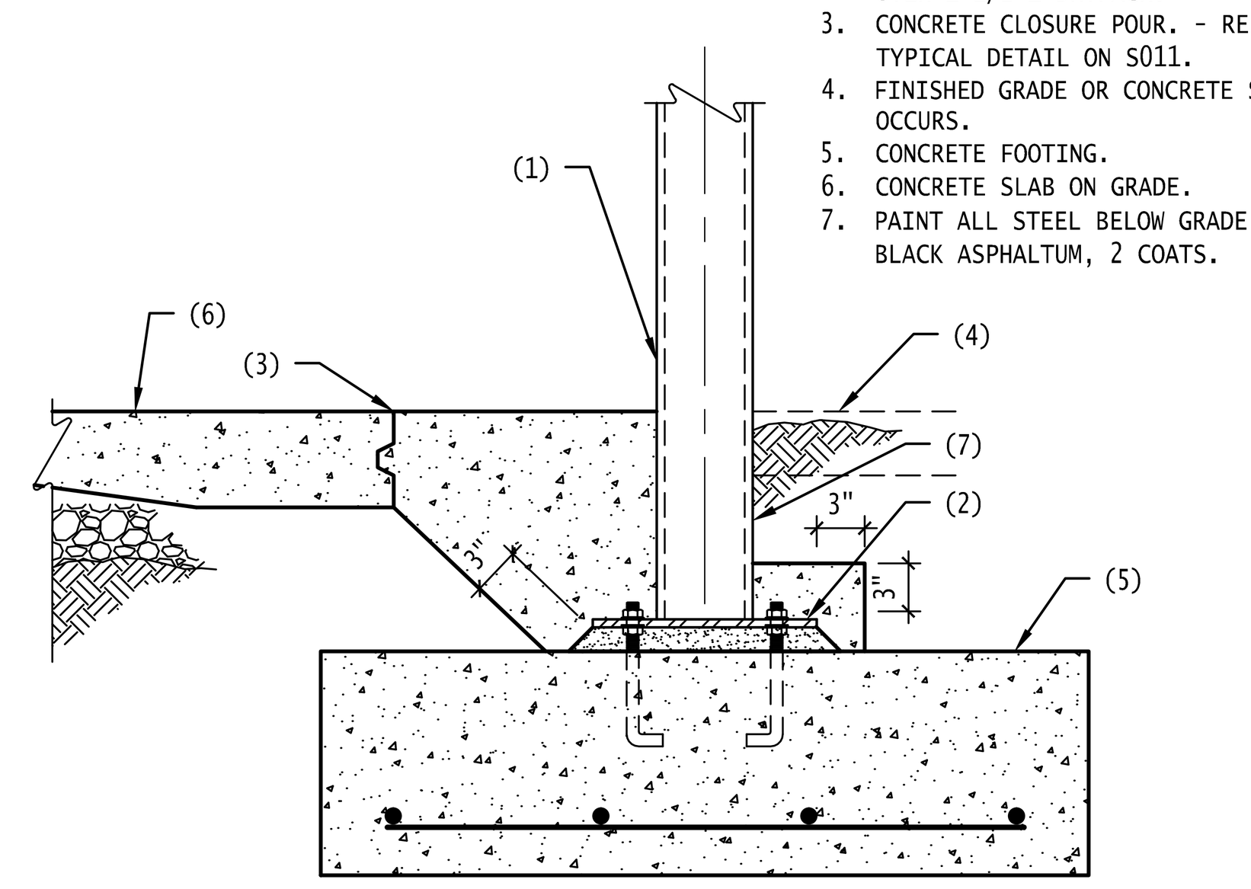
107 SECTION N.T.S.



NOTES:
1. STEEL COLUMN.
2. CONCRETE CLOSURE POUR AROUND COLUMN - SEE TYPICAL DETAIL.
3. CONCRETE SLAB ON GRADE.
4. 3" MINIMUM CONCRETE COVER ALL AROUND STEEL BELOW GRADE.
5. CONCRETE FOOTING.
6. STEEL BASE PLATE WITH DOUBLE NUTS OVER 1 1/2"± DRYPACK.

NOTE: PAINT ALL STEEL BELOW GRADE W/ BLACK ASPHALTUM, 2 COATS.

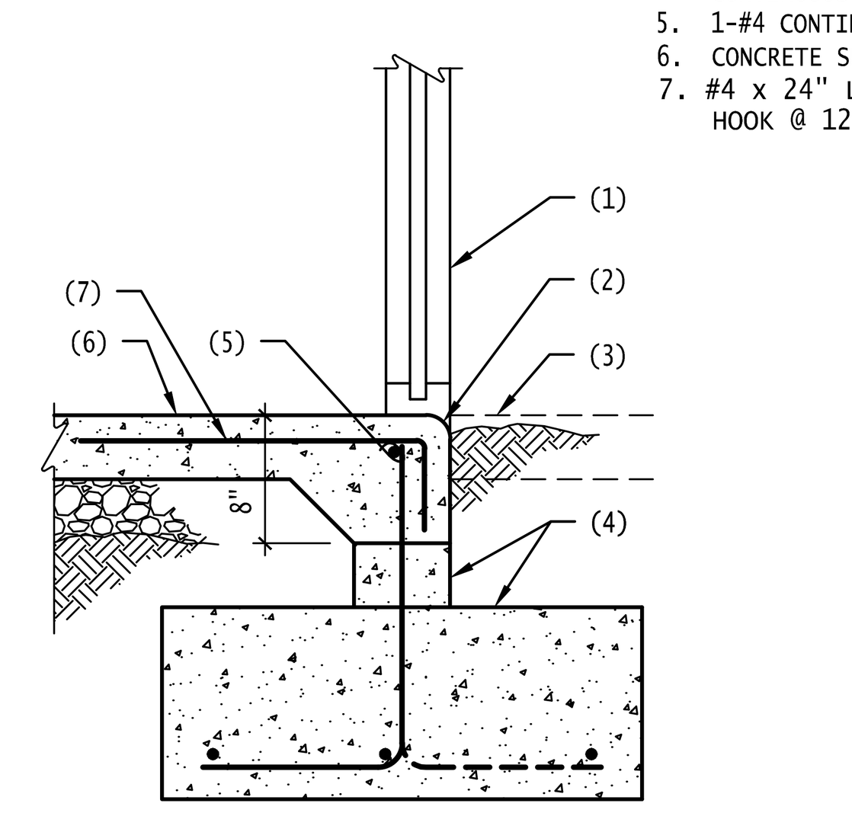
108 SECTION N.T.S.



NOTES:
1. STEEL COLUMN.
2. STEEL BASE PLATE WITH DOUBLE NUTS OVER 1 1/2"± DRYPACK.
3. CONCRETE CLOSURE POUR. - REFER TO TYPICAL DETAIL ON S011.
4. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
5. CONCRETE FOOTING.
6. CONCRETE SLAB ON GRADE.
7. PAINT ALL STEEL BELOW GRADE W/ BLACK ASPHALTUM, 2 COATS.

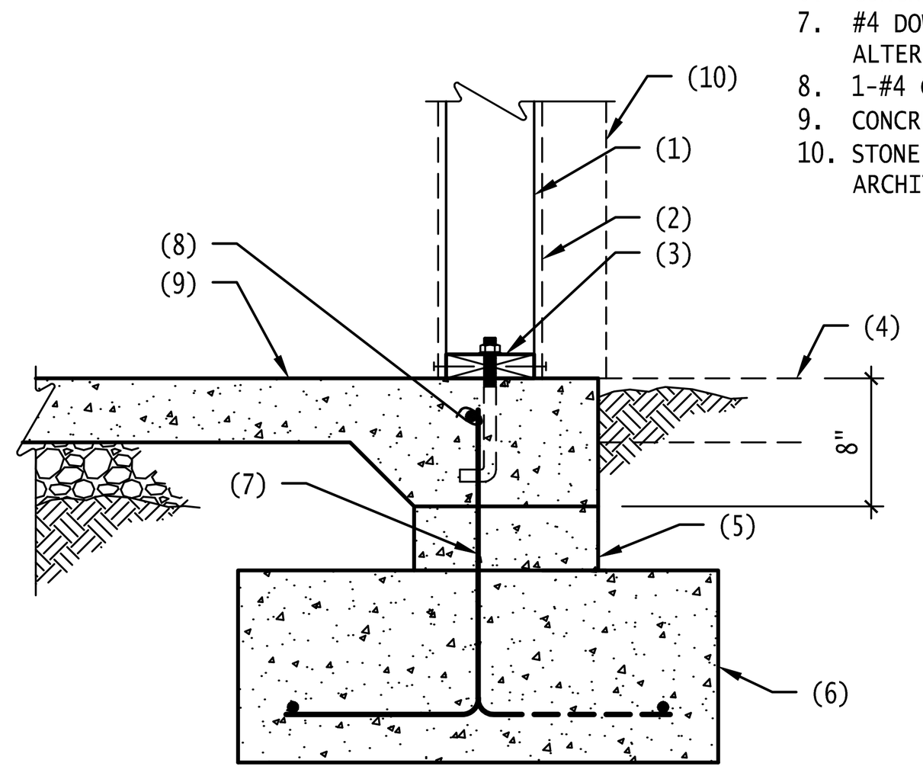
NOTE: PAINT ALL STEEL BELOW GRADE W/ BLACK ASPHALTUM, 2 COATS.

109 SECTION N.T.S.



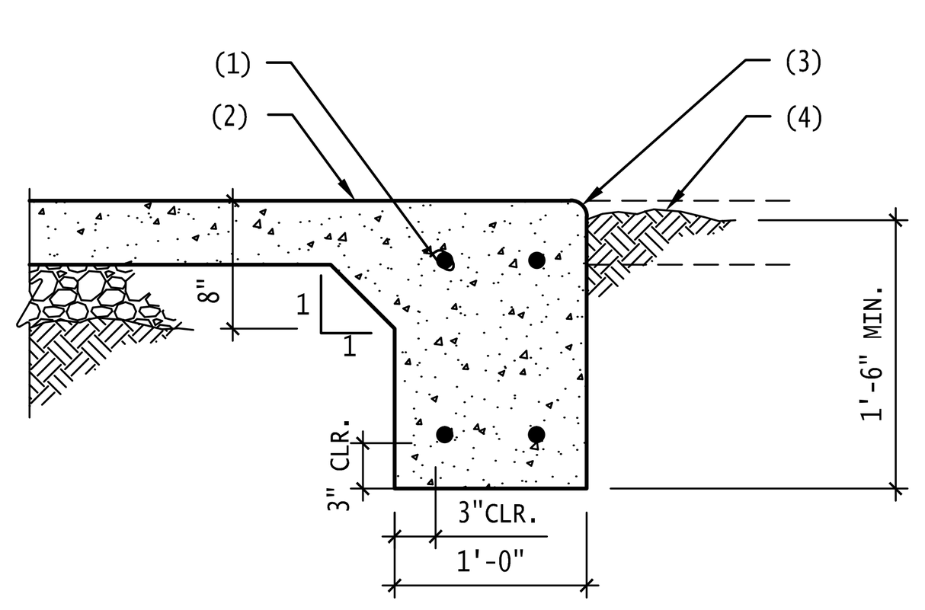
NOTES:
1. CURTAIN WALL, STOREFRONT OR LOUVER - SEE ARCHITECTURAL.
2. TOOLED EDGE.
3. FINISHED GRADE OR CONCRETE SLAB WHERE OCCURS.
4. 8" CONCRETE STEM WALL AND FOOTING WITH REINFORCING CONTINUOUS FROM BEYOND.
5. 1-#4 CONTINUOUS.
6. CONCRETE SLAB ON GRADE.
7. #4 x 24" LONG DOWELS W/90° HOOK @ 12"O.C.

110 SECTION N.T.S.



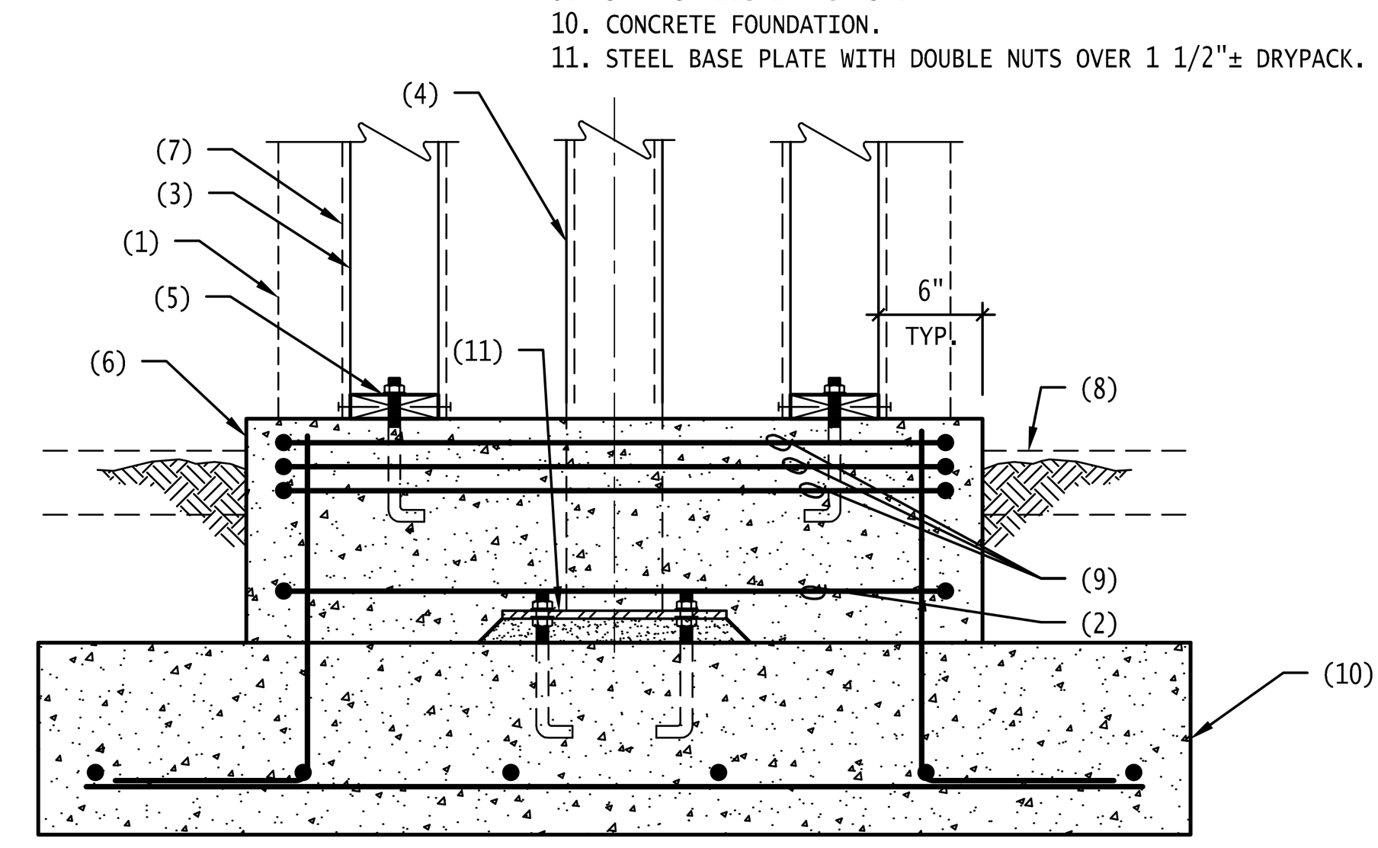
NOTES:
1. WOOD STUD WALL.
2. WALL SHEATHING AS OCCURS.
3. 2x CONTINUOUS WOOD PLATE W/1/2" DIA. ANCHOR BOLTS @ 48" O.C. U.N.O.
4. FINISHED GRADE OR CONCRETE SLAB, AS OCCURS.
5. 12" CONCRETE STEM WALL.
6. CONCRETE FOOTING.
7. #4 DOWELS @ 48" O.C., ALTERNATE BENDS.
8. 1-#4 CONTINUOUS.
9. CONCRETE SLAB ON GRADE.
10. STONE VENEER PER ARCHITECTURAL DRAWINGS.

111 SECTION N.T.S.



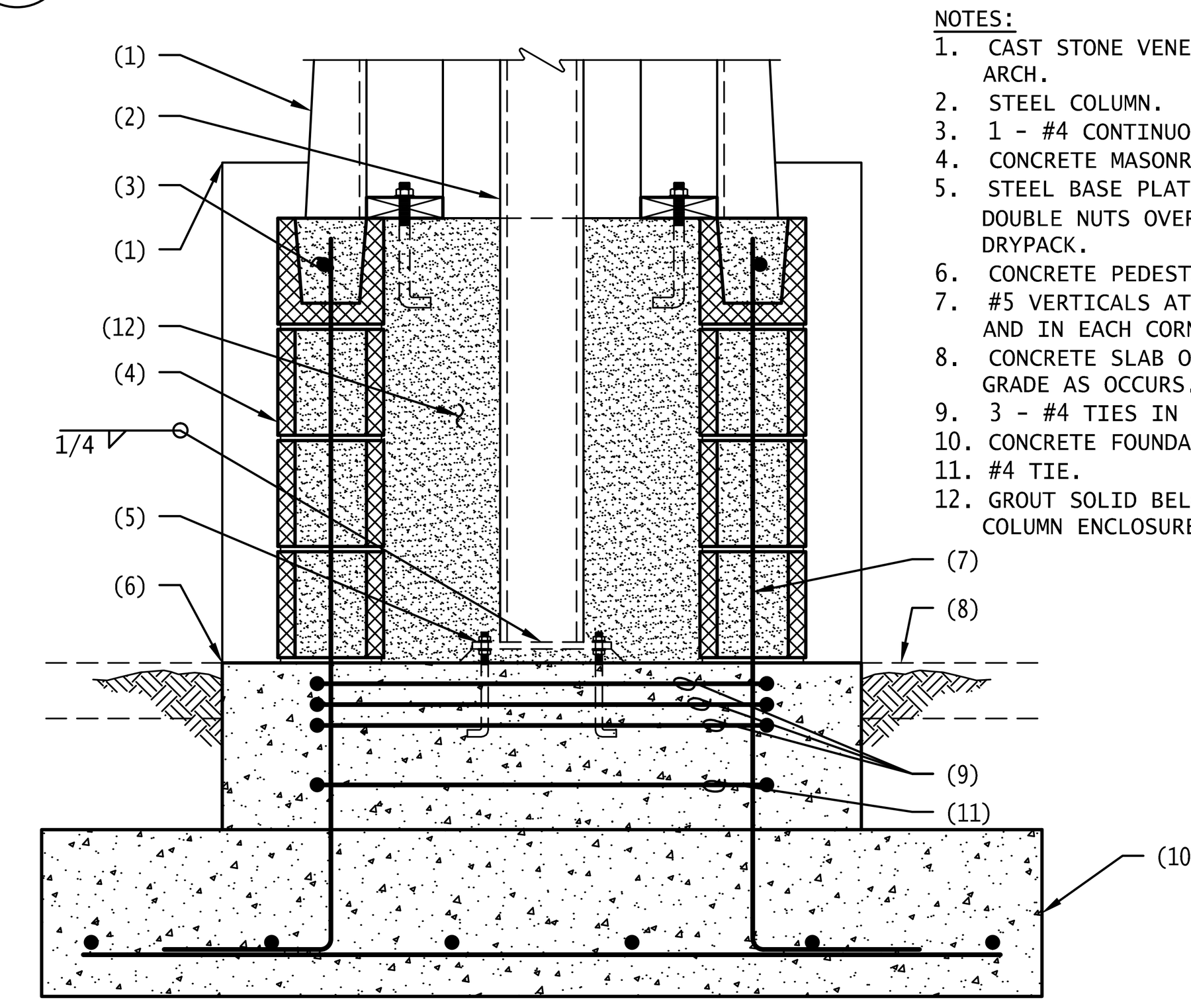
NOTES:
1. 2-#4 CONTINUOUS TOP & BOTTOM.
2. CONCRETE SLAB ON GRADE.
3. TOOLED EDGE.
4. FINISHED GRADE OR CONCRETE SLAB ON GRADE AS OCCURS.

112 SECTION N.T.S.



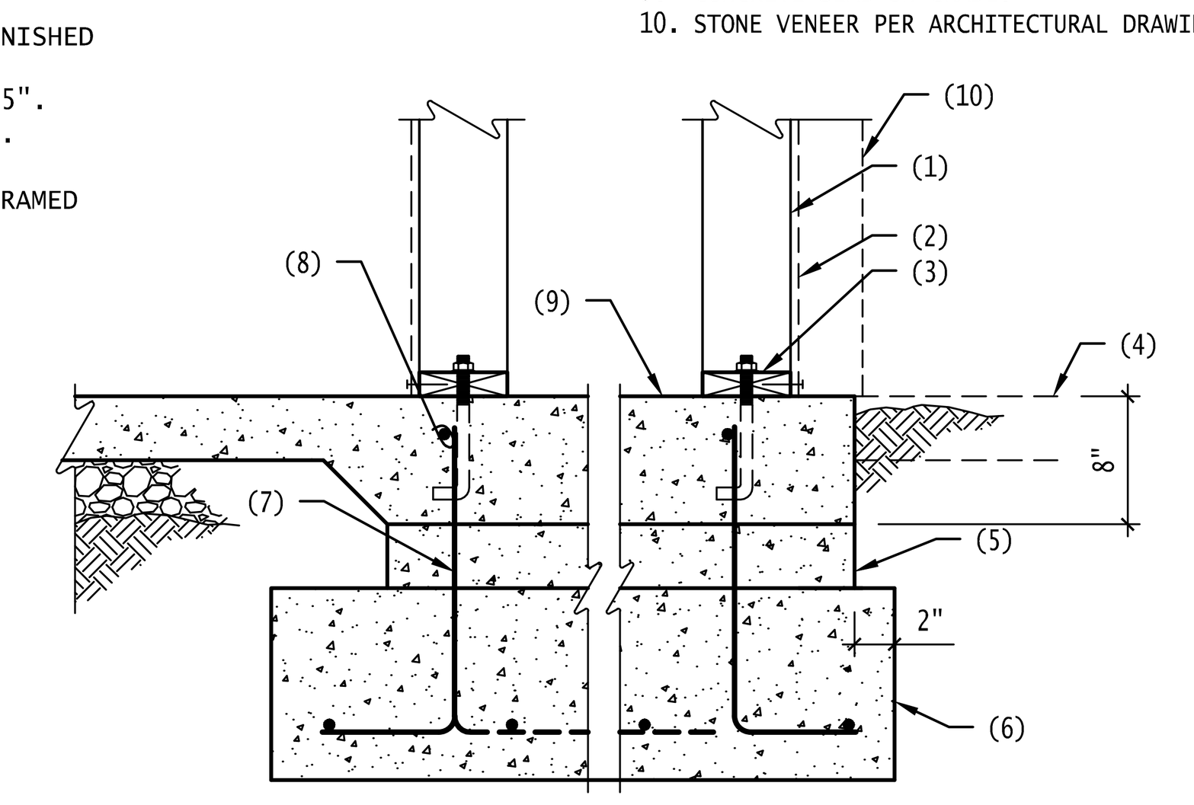
NOTES:
1. STONE VENEER PER ARCHITECTURAL DRAWINGS.
2. #3 TIES @ 12"O.C.
3. WOOD STUD WALL.
4. STEEL COLUMN.
5. 2x CONTINUOUS WOOD PLATE W/1/2"Ø A.B. @ 24"O.C.
6. CONCRETE PEDESTAL.
7. SHEATHING AS OCCURS.
8. CONCRETE SLAB OR FINISHED GRADE AS OCCURS.
9. 3 - #3 TIES IN TOP 5".
10. CONCRETE FOUNDATION.
11. STEEL BASE PLATE WITH DOUBLE NUTS OVER 1 1/2"± DRYPACK.

113 SECTION N.T.S.



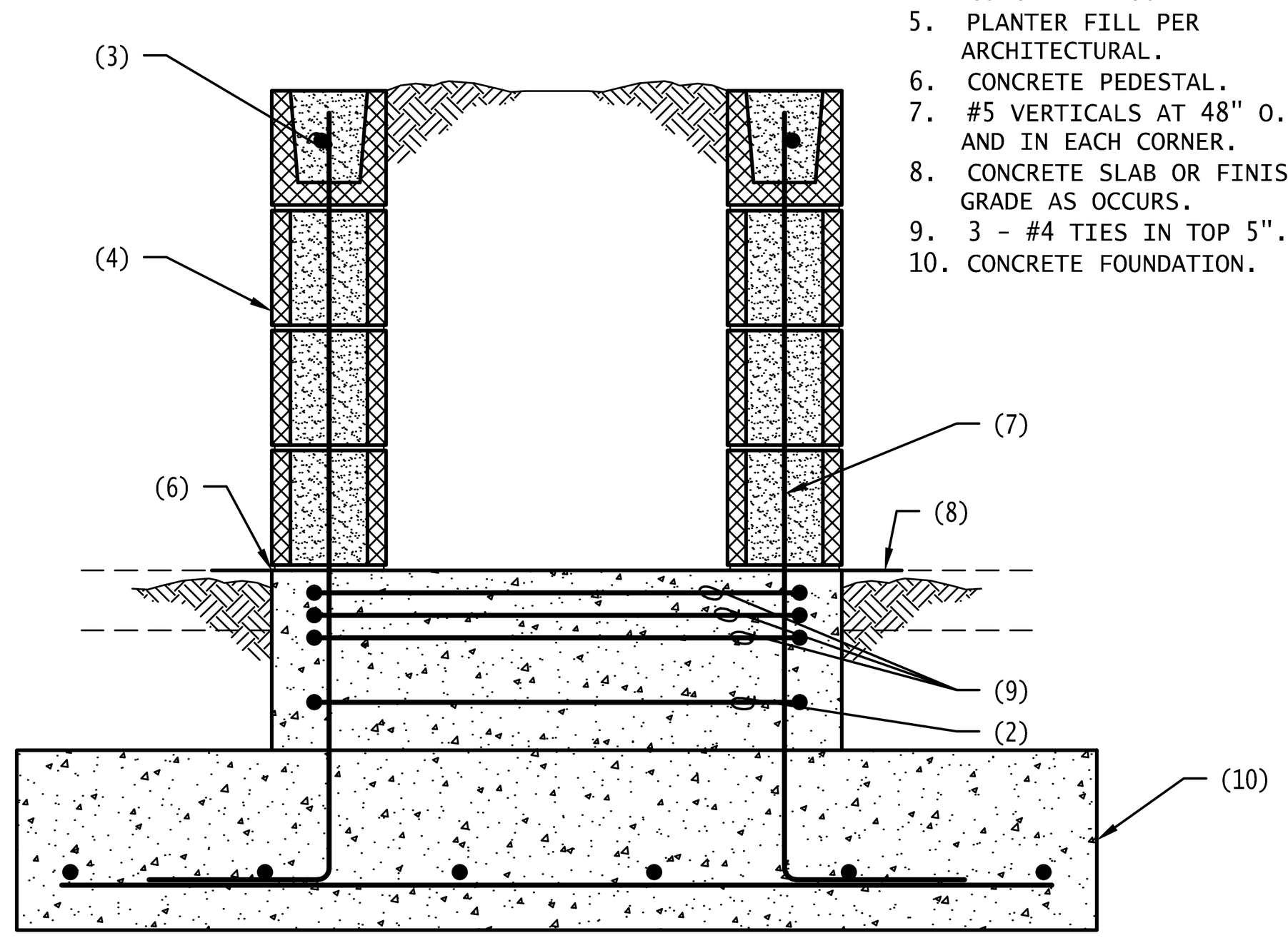
NOTES:
1. CAST STONE VENEER PER ARCH.
2. STEEL COLUMN.
3. 1 - #4 CONTINUOUS.
4. CONCRETE MASONRY WALL.
5. STEEL BASE PLATE WITH DOUBLE NUTS OVER 1 1/2"± DRYPACK.
6. CONCRETE PEDESTAL.
7. #5 VERTICALS AT 48" O.C. AND IN EACH CORNER.
8. CONCRETE SLAB OR FINISHED GRADE AS OCCURS.
9. 3 - #4 TIES IN TOP 5".
10. CONCRETE FOUNDATION.
11. #4 TIE.
12. GROUT SOLID BELOW FRAMED COLUMN ENCLOSURE.

114 SECTION N.T.S.



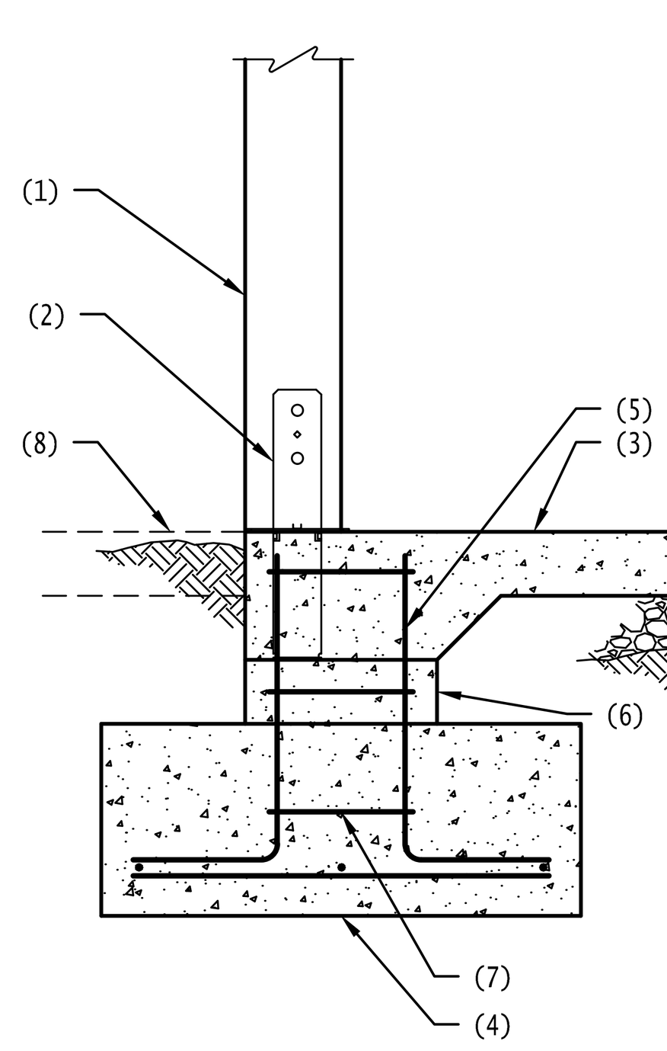
NOTES:
1. WOOD STUD WALL.
2. WALL SHEATHING AS OCCURS.
3. 2x CONTINUOUS WOOD PLATE W/1/2" DIA. ANCHOR BOLTS @ 48" O.C. U.N.O.
4. FINISHED GRADE OR CONCRETE SLAB, AS OCCURS.
5. 12" CONCRETE STEM WALL.
6. CONCRETE FOOTING.
7. #4 DOWELS @ 48" O.C., ALTERNATE BENDS.
8. 1-#4 CONTINUOUS.
9. CONCRETE SLAB ON GRADE.
10. STONE VENEER PER ARCHITECTURAL DRAWINGS.

115 SECTION N.T.S.



NOTES:
1. NOT USED.
2. #4 TIES.
3. 1 - #4 CONTINUOUS.
4. CONCRETE MASONRY WALL.
5. PLANTER FILL PER ARCHITECTURAL.
6. CONCRETE PEDESTAL.
7. #5 VERTICALS AT 48" O.C. AND IN EACH CORNER.
8. CONCRETE SLAB OR FINISHED GRADE AS OCCURS.
9. 3 - #4 TIES IN TOP 5".
10. CONCRETE FOUNDATION.

116 SECTION N.T.S.



NOTES:
1. WOOD COLUMN.
2. COLUMN BASE.
3. CONCRETE SLAB ON GRADE.
4. CONCRETE FOOTING.
5. 4-#5 HOOKED DOWELS.
6. 12" SQUARE CONCRETE PEDESTAL.
7. #3 TIES AT 8" O.C.
8. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.

NOTE:
AT CONTRACTOR'S OPTION, MASONRY STEM WALL MAY BE USED W/SAME REINFORCING.

117 SECTION N.T.S.

GERALD R. KESLER, INC. ARCHITECTS
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Phoenix, AZ 85042
Phone: 602-725-1083
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Email: gki@cox.net
GKI

Registered Professional Engineer (Structural) CERTIFICATE NO. 46644 W. DAVID BIXLER DATE SIGNED 10/20/15 ARIZONA, U.S.A. Expires 6/30/16

INN CODE # 16771-PHXCT
1170 S. Arizona Ave.
Chandler, Arizona, 85286

Holiday Inn Express & Suites

JOB NUMBER 1401
DATE 07-23-2015
1 1st City Comments 09-11-2015

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Scottsdale, Arizona 85260
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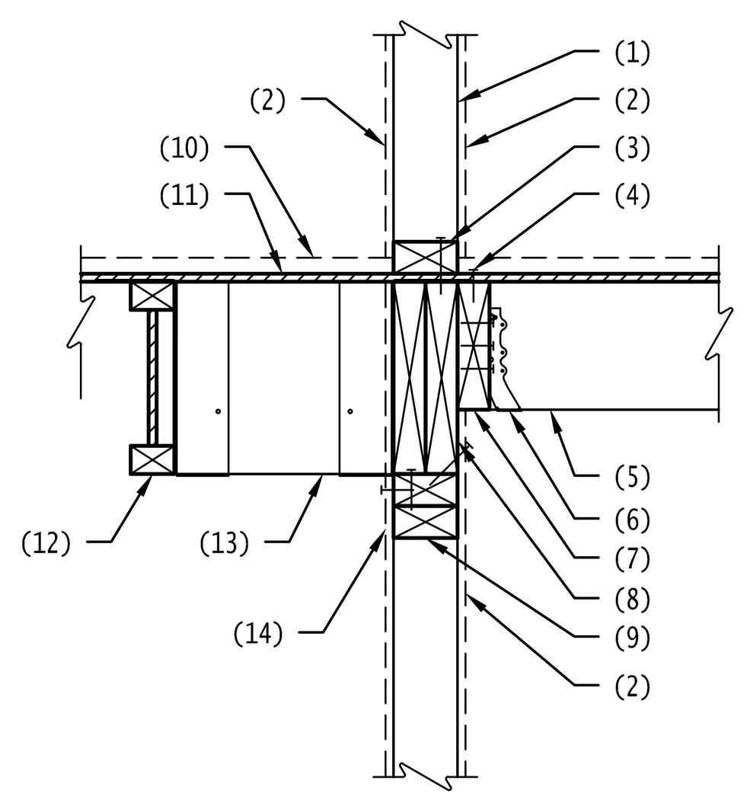
Proj. No. 15-049

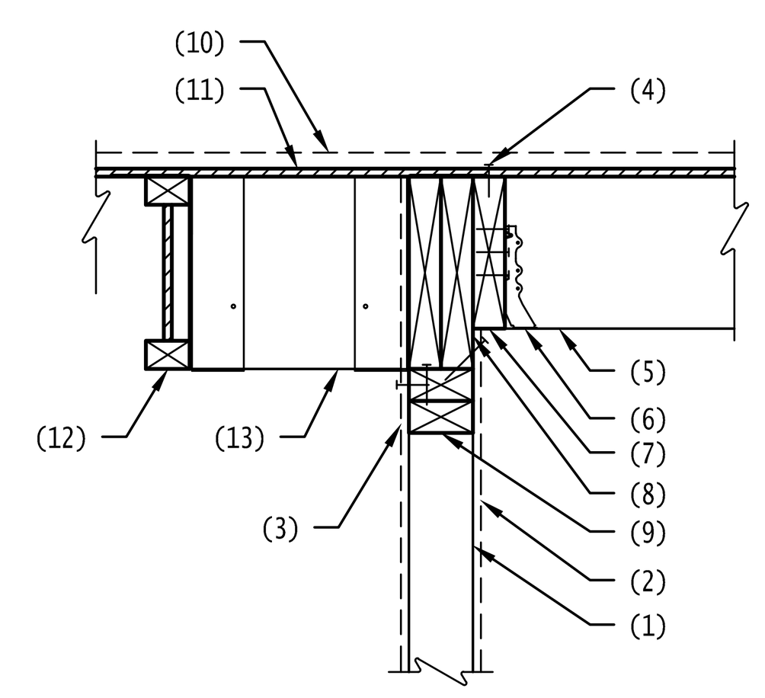
FOUNDATION SECTION & DETAILS

S401



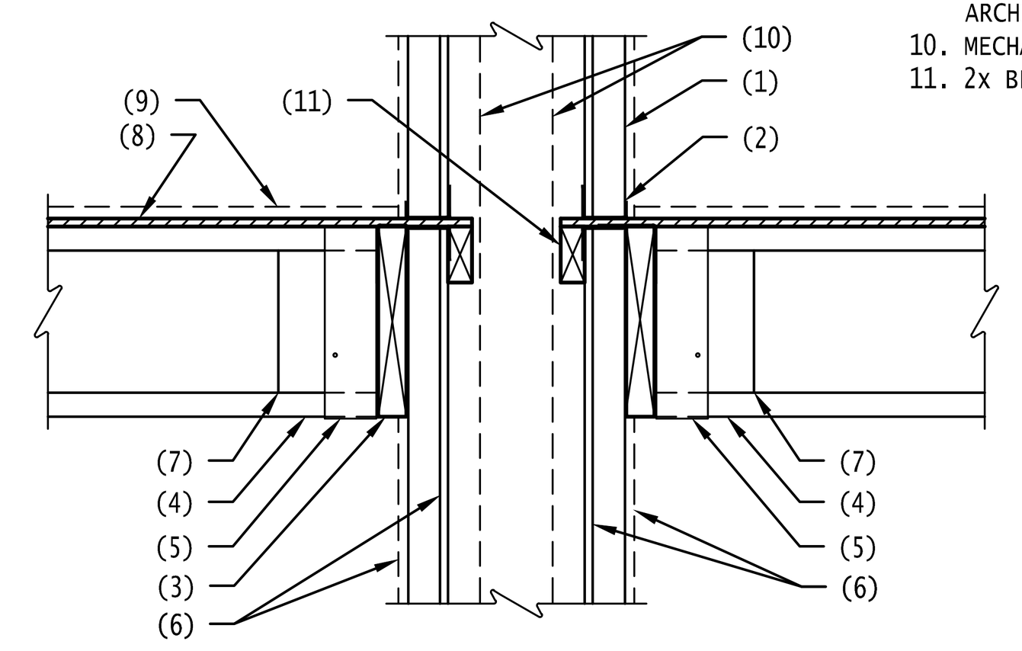
NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. CONTINUOUS BOTTOM PLATE W/ 16d NAILS AT 12" O.C. STAGGERED, U.N.O.
4. EDGE NAILING.
5. WOOD JOIST.
6. SIMPSON LUS28 HANGER.
7. 2x8 LEDGER WITH 3-16d NAILS AT 12" O.C.
8. DOUBLE CONTINUOUS 1 1/4" iLEVEL RIMBOARD.
9. DOUBLE 2x TOP PLATE WITH 16d AT 12" O.C. U.N.O.
10. GYPCRETE TOPPING PER ARCHITECTURAL.
11. PLYWOOD SHEATHING.
12. WOOD I-JOIST.
13. 12" I-JOIST BLOCKING AT 24" O.C. WITH SIMPSON LB212 HANGERS.
14. SHEATHING MATERIAL TO CONTINUE TO FLOOR SHEATHING ABOVE.

201 SECTION N.T.S.



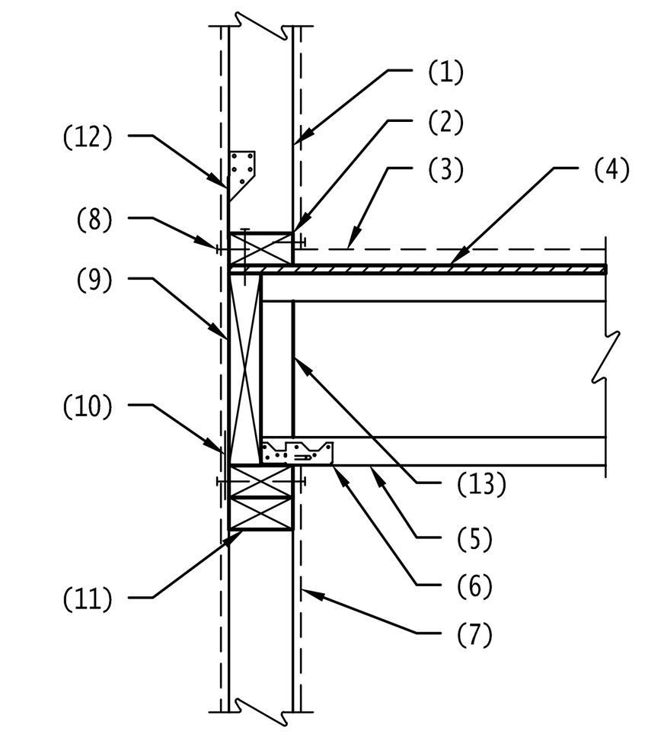
NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. SHEATHING MATERIAL TO CONTINUE TO FLOOR SHEATHING ABOVE.
4. EDGE NAILING.
5. WOOD JOIST.
6. SIMPSON LUS28 HANGER.
7. 2x8 LEDGER WITH 3-16d NAILS AT 12" O.C.
8. DOUBLE CONTINUOUS 1 1/4" iLEVEL RIMBOARD.
9. DOUBLE 2x TOP PLATE WITH 16d AT 12" O.C.
10. GYPCRETE TOPPING PER ARCHITECTURAL.
11. PLYWOOD SHEATHING.
12. WOOD I-JOIST.
13. 12" I-JOIST BLOCKING AT 24" O.C. WITH SIMPSON LB212 HANGERS.

202 SECTION N.T.S.



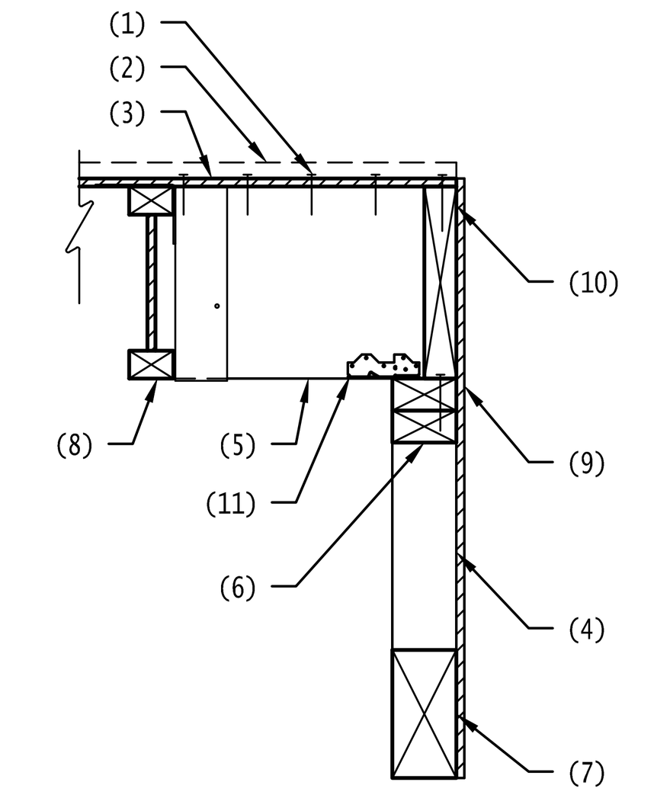
NOTES:
1. 2 1/2" DEEP C-H STUDS AT 24"O.C.
2. 2 1/2" J-SHAPED RUNNERS (TYPICAL TOP & BOTTOM @ C-H STUDS).
3. WOOD BEAM W/SIMPSON LB212 HANGERS EACH END.
4. WOOD I-JOIST.
5. SIMPSON HB TYPE HANGER.
6. SHEATHING AS OCCURS.
7. WEB STIFFENER.
8. PLYWOOD SHEATHING.
9. GYPCRETE TOPPING PER ARCHITECTURAL DRAWINGS.
10. MECHANICAL DUCT.
11. 2x BLOCKING.

203 SECTION N.T.S.



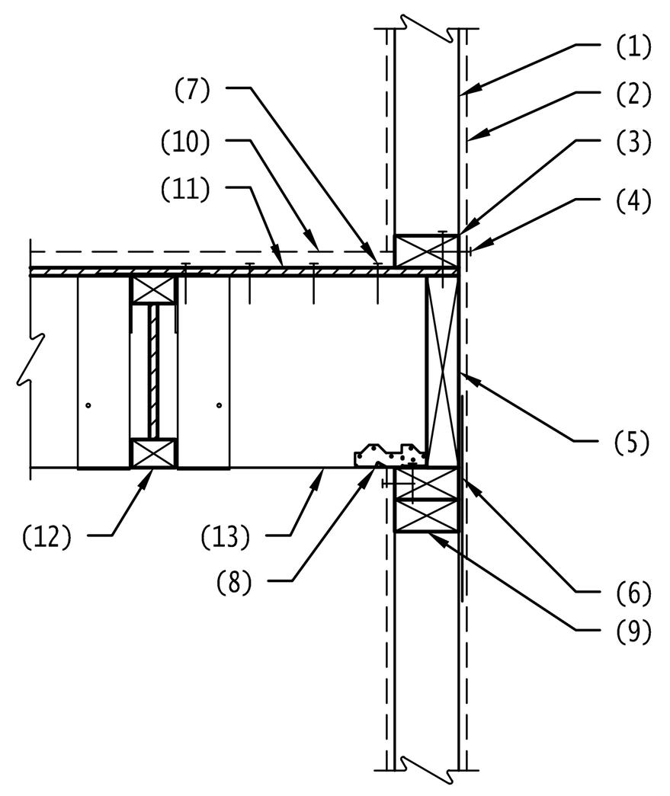
NOTES:
1. WOOD STUD WALL.
2. CONTINUOUS BOTTOM PLATE WITH 16d NAILS AT 12" O.C., U.N.O.
3. GYPCRETE TOPPING PER ARCHITECTURAL.
4. PLYWOOD SHEATHING.
5. WOOD I-JOIST.
6. SIMPSON A35 AT EVERY JOIST.
7. SHEATHING MATERIAL AS OCCURS.
8. EDGE NAILING.
9. CONTINUOUS 1 1/4" iLEVEL RIMBOARD.
10. SIMPSON LTP4 AT 16" O.C. TO RIMBOARD.
11. DOUBLE 2x CONTINUOUS TOP PLATE WITH 16d AT 12" O.C.
12. SIMPSON H2.5 EACH STUD.
13. WEB STIFFENER.

204 SECTION N.T.S.



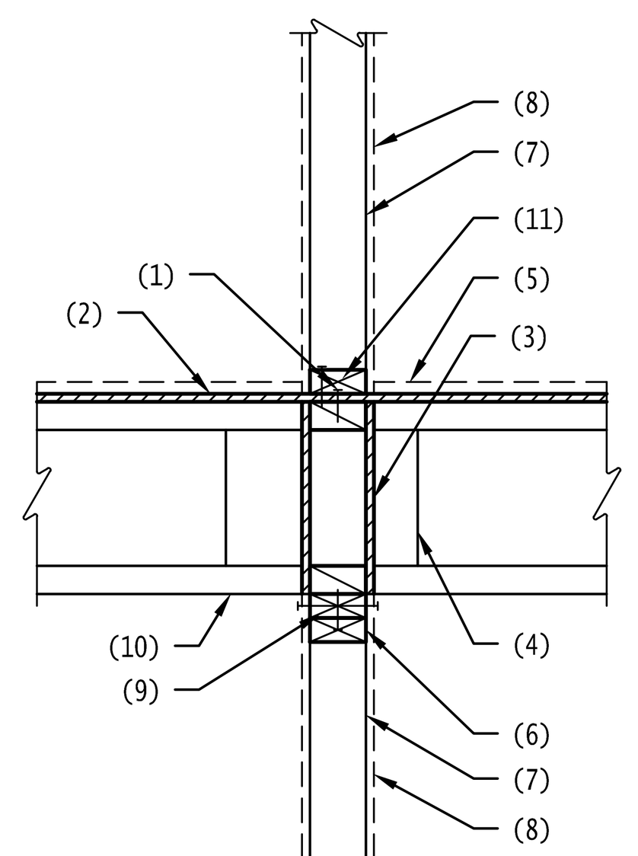
NOTES:
1. 8d NAILS AT 4" O.C. AT BLOCKING.
2. GYPCRETE TOPPING PER ARCHITECTURAL.
3. PLYWOOD SHEATHING.
4. WOOD STUD WALL.
5. 2x12 BLOCKING AT 48" O.C. WITH SIMPSON LB212 TYPE HANGER.
6. DOUBLE 2x CONTINUOUS TOP PLATE WITH 16d AT 12" O.C. STAGGERED.
7. WOOD LINTEL.
8. WOOD I-JOIST.
9. SHEATHING MATERIAL AS OCCURS.
10. CONTINUOUS 1 1/4" iLEVEL RIMBOARD.
11. SIMPSON A35 AT 24" O.C.

205 SECTION N.T.S.



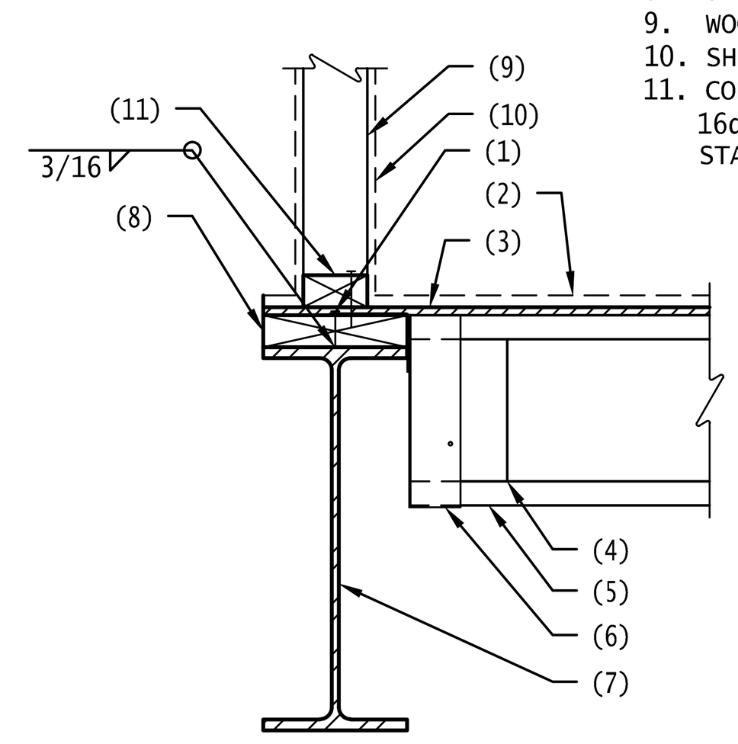
NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. CONTINUOUS BOTTOM PLATE WITH 16d NAILS AT 12" O.C. STAGGERED, U.N.O.
4. EDGE NAILING.
5. CONTINUOUS 1 1/4" iLEVEL RIMBOARD.
6. SIMPSON LPT4 AT 16" O.C.
7. 8d NAILS AT 4" O.C. AT BLOCKING.
8. SIMPSON A35 AT 24" O.C.
9. DOUBLE 2x TOP PLATE WITH 16d AT 12" O.C.
10. GYPCRETE TOPPING PER ARCHITECTURAL.
11. PLYWOOD SHEATHING.
12. WOOD I-JOIST.
13. 2x12 BLOCKING AT 24" O.C. WITH SIMPSON LB212 HANGERS. CONTINUE BLOCKING FOR 2 BAYS.

206 SECTION N.T.S.



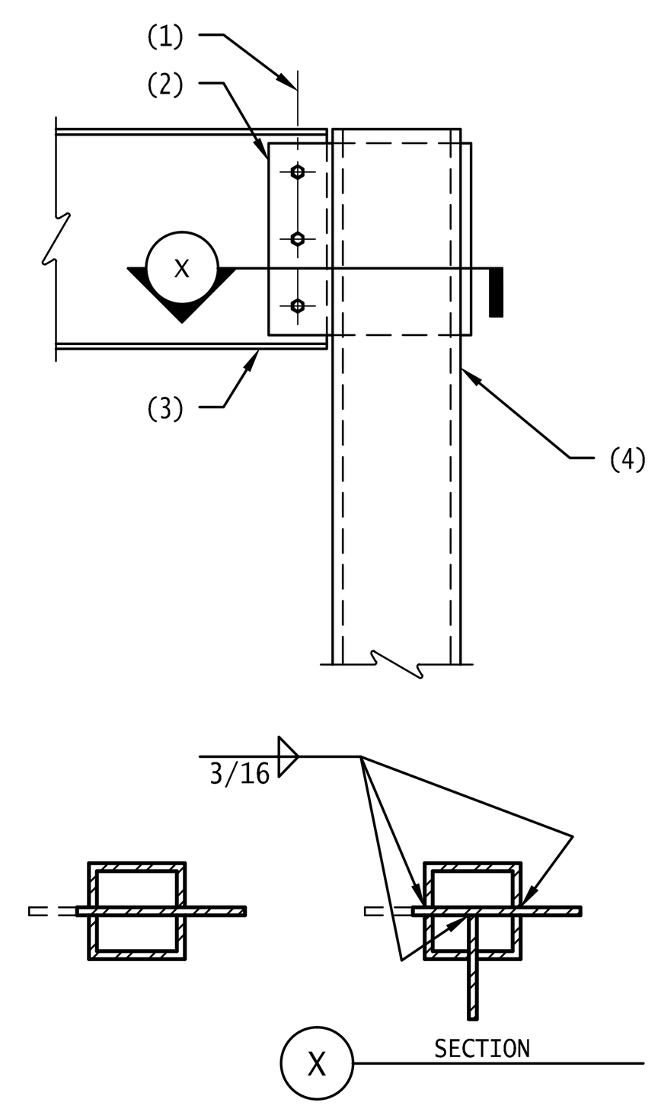
NOTES:
1. EDGE NAILING.
2. PLYWOOD SHEATHING.
3. REFER TO TYPICAL PLYWOOD SHEAR PANEL DETAIL ON SHEET S031.
4. WEB STIFFENER.
5. GYPCRETE TOPPING PER ARCHITECTURAL.
6. DOUBLE 2x CONTINUOUS TOP PLATE WITH 16d NAILS AT 12" O.C.
7. WOOD STUD WALL.
8. SHEATHING MATERIAL AND ATTACHMENT AS OCCURS.
9. 3 - 16d PER PANEL - STAGGERED TOP & BOTTOM.
10. WOOD I-JOIST (STAGGER OVER SUPPORTS).
11. 2x CONTINUOUS PLATE.

207 SECTION N.T.S.



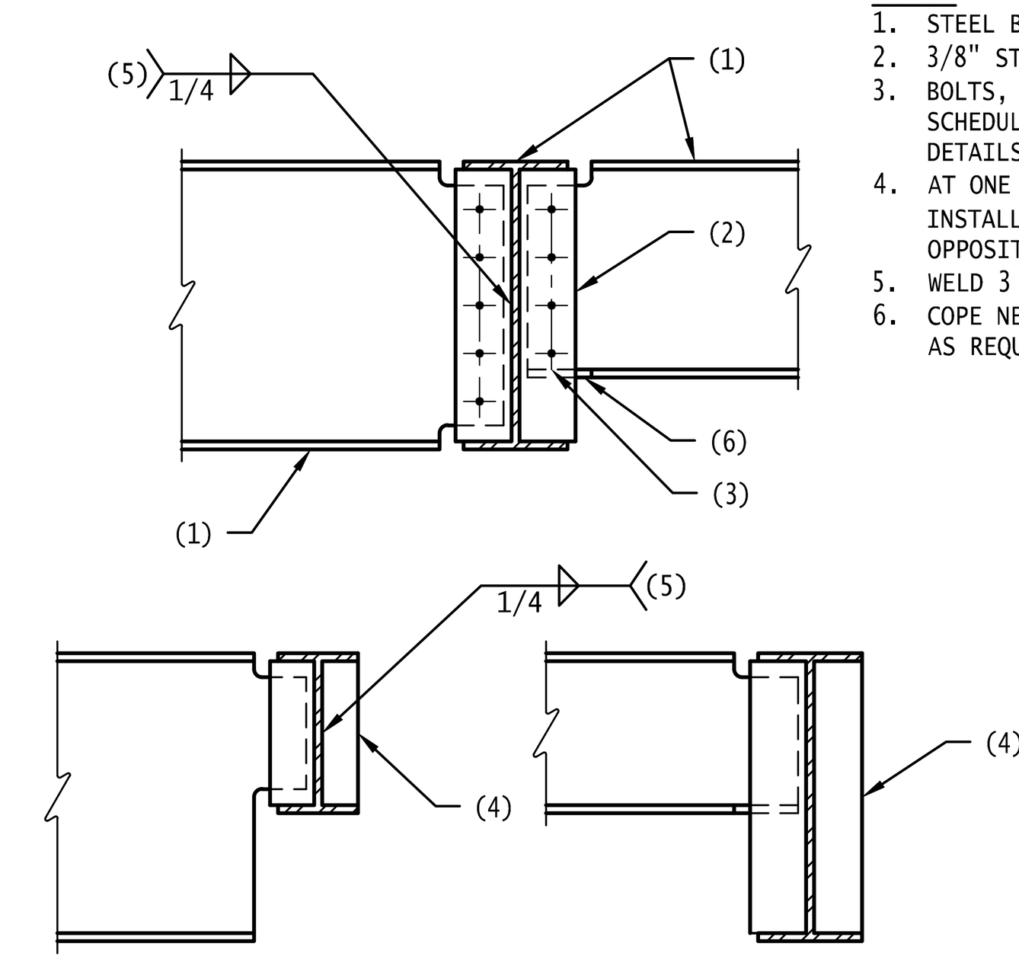
NOTES:
1. 1/2" STUDS WELDED TO STEEL BEAM AT 24" O.C., COUNTERSUNK.
2. GYPCRETE TOPPING PER ARCHITECTURAL.
3. PLYWOOD SHEATHING.
4. WEB STIFFENER.
5. WOOD I-JOIST.
6. SIMPSON HB TYPE HANGER.
7. STEEL BEAM.
8. 3x WOOD NAILER.
9. WOOD STUD WALL.
10. SHEATHING MATERIAL AS OCCURS.
11. CONTINUOUS BOTTOM PLATE WITH 16d NAILS AT 12" O.C. STAGGERED, U.N.O.

208 SECTION N.T.S.



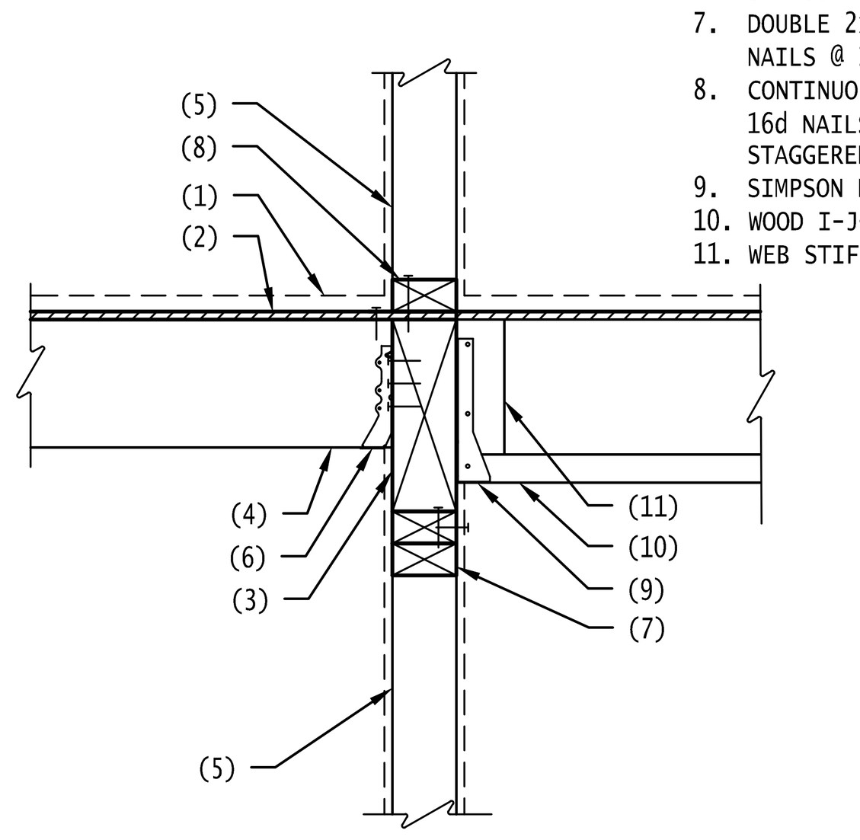
NOTES:
1. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
2. 3/8" STEEL THRU PLATE - 5/8" STEEL THRU PLATE WHERE "D" = 27" OR GREATER.
3. STEEL BEAM.
4. STEEL COLUMN.

209 SECTION N.T.S.



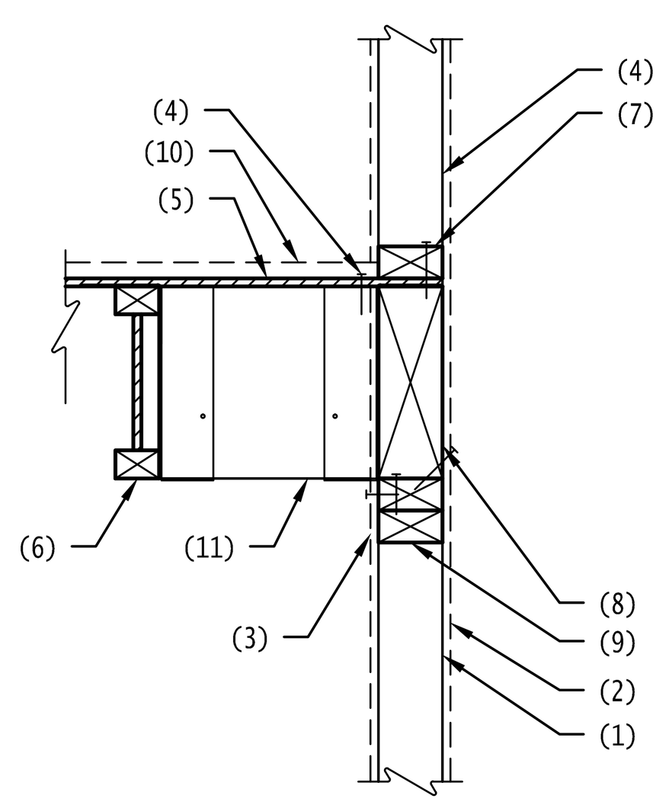
NOTES:
1. STEEL BEAM.
2. 3/8" STEEL SHEAR PLATE.
3. BOLTS, SEE TYPICAL BOLT SCHEDULE FOR ADDITIONAL DETAILS.
4. AT ONE SIDED CONNECTIONS, INSTALL 3/8" STIFFENER PLATE OPPOSITE SHEAR PLATE.
5. WELD 3 SIDES TYPICAL.
6. COPE NEAR SIDE OF BEAM FLANGE AS REQUIRED.

210 SECTION N.T.S.



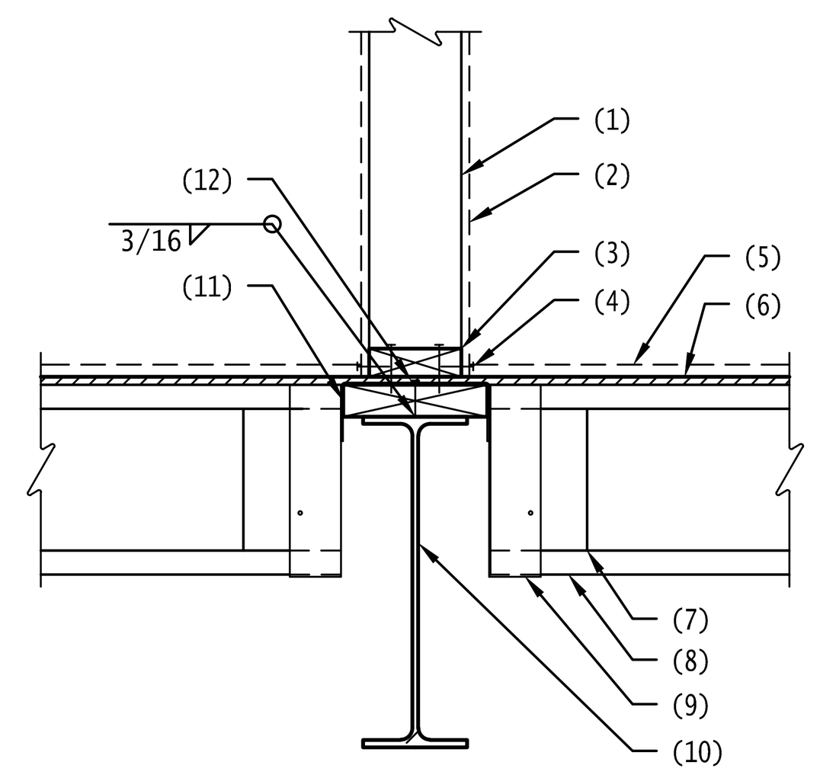
NOTES:
1. GYPCRETE TOPPING PER ARCHITECTURAL.
2. PLYWOOD SHEATHING.
3. 4x12 WOOD BEAM.
4. WOOD JOIST.
5. WOOD STUD WALL.
6. SIMPSON HU210TF HANGER.
7. DOUBLE 2x TOP PLATE WITH 16d NAILS @ 12" O.C.
8. CONTINUOUS BOTTOM PLATE WITH 16d NAILS AT 12" O.C. STAGGERED, U.N.O.
9. SIMPSON HB TYPE HANGER.
10. WOOD I-JOIST.
11. WEB STIFFENER.

211 SECTION N.T.S.



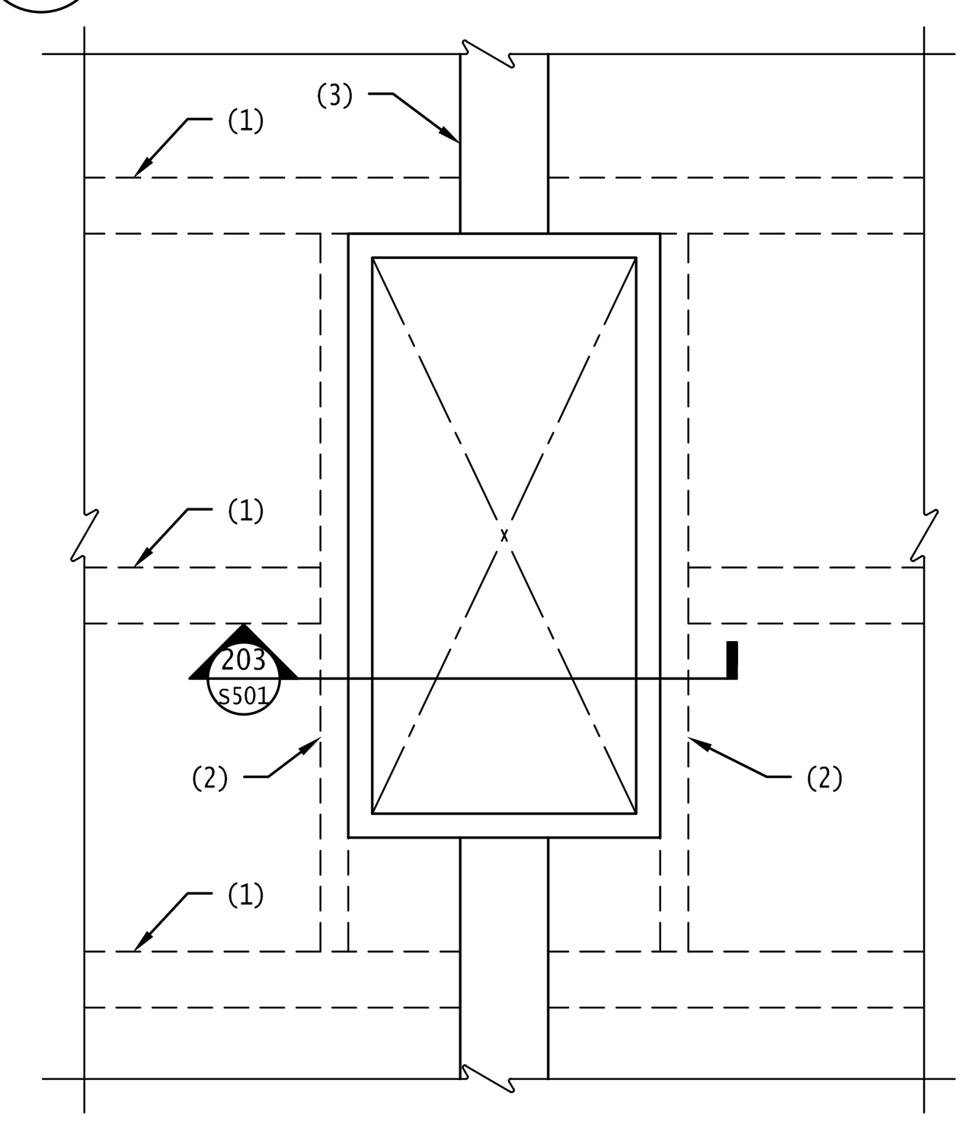
NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. SHEATHING MATERIAL TO CONTINUE TO FLOOR SHEATHING ABOVE.
4. EDGE NAILING.
5. PLYWOOD SHEATHING.
6. WOOD I-JOIST.
7. CONTINUOUS BOTTOM PLATE W/16d NAILS AT 12" O.C. STAGGERED, U.N.O.
8. 6x12 WOOD BEAM.
9. DOUBLE 2x TOP PLATE WITH 16d AT 12" O.C.
10. GYPCRETE TOPPING PER ARCHITECTURAL.
11. 2x12 BLOCKING AT 24" O.C. WITH SIMPSON LB212 HANGER EACH END.

212 SECTION N.T.S.



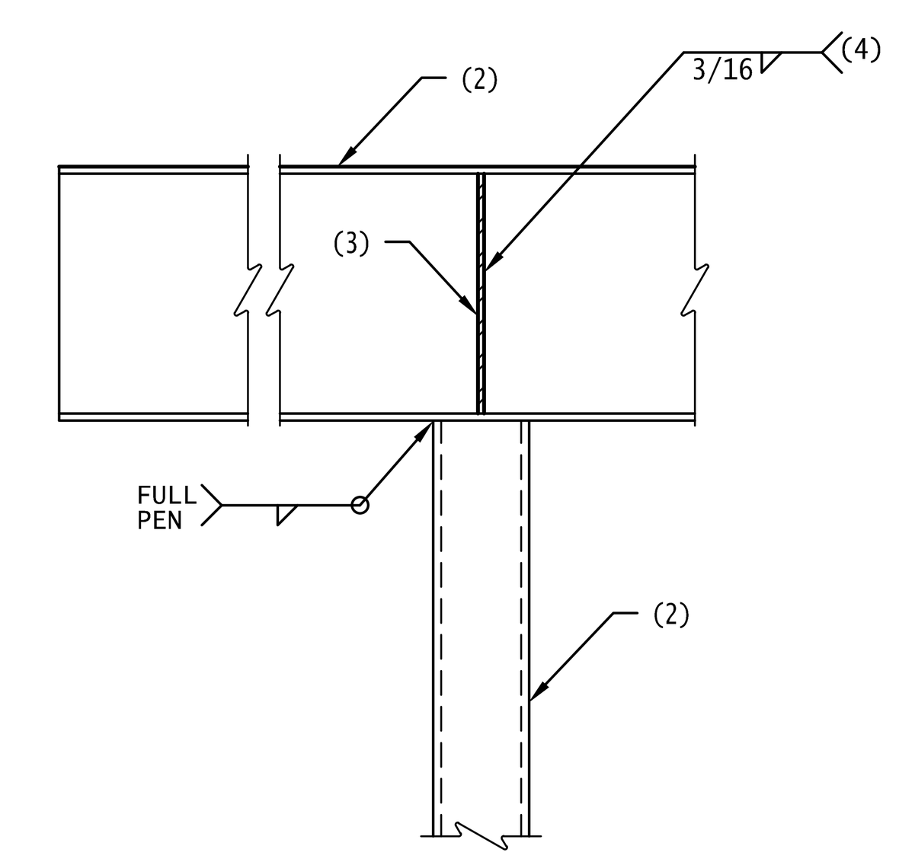
NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. CONTINUOUS 2x WOOD PLATE WITH 16d NAILS AT 12" O.C. STAGGERED.
4. EDGE ATTACHMENT.
5. GYPCRETE TOPPING PER ARCHITECTURAL.
6. PLYWOOD SHEATHING.
7. WEB STIFFENER.
8. WOOD I-JOIST.
9. SIMPSON HB TYPE HANGER.
10. STEEL BEAM.
11. 3x WOOD NAILER.
12. 1/2" STUDS WELDED TO STEEL BEAM AT 24" O.C., COUNTERSUNK.

213 SECTION N.T.S.



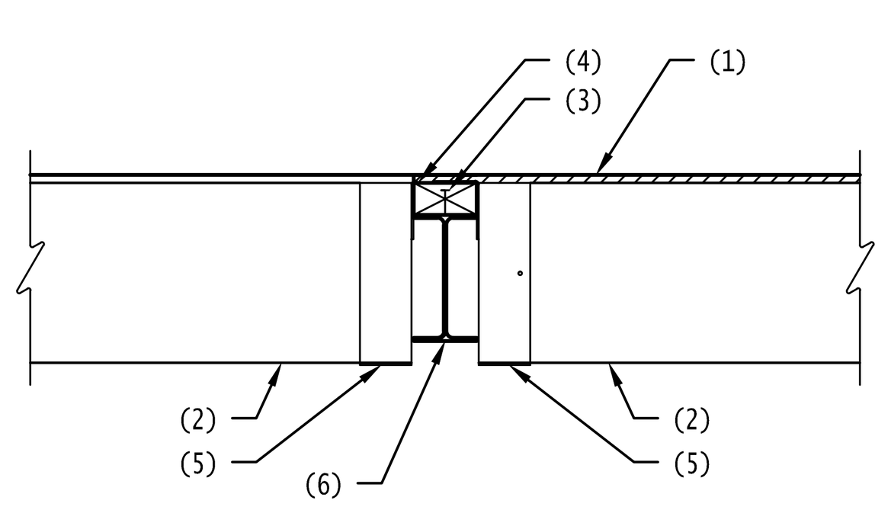
NOTES:
1. WOOD I JOIST.
2. 2x10 WOOD BEAM.
3. WOOD STUD WALL.

214 SECTION N.T.S.



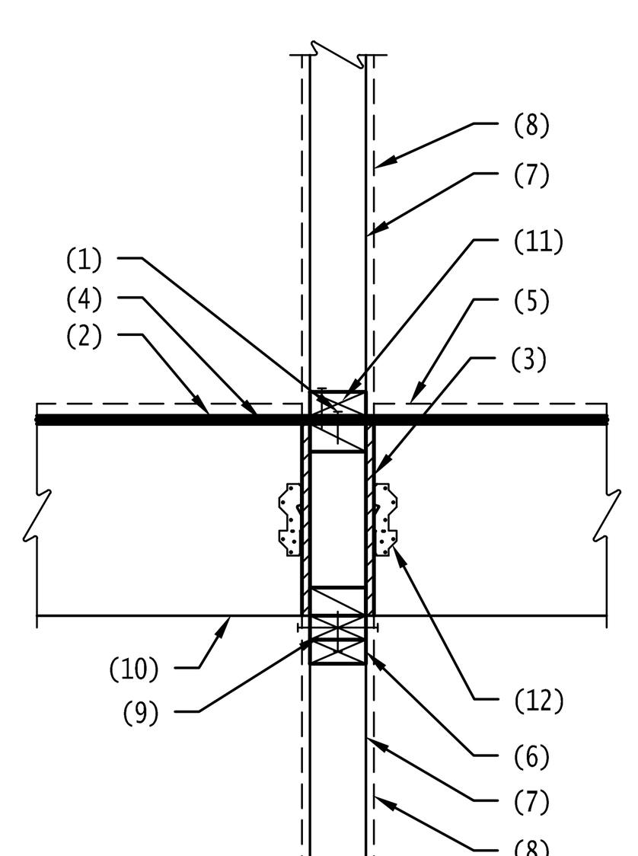
NOTES:
1. STEEL BEAM.
2. STEEL COLUMN.
3. 3/8" STIFFENER PLATE, EACH SIDE.
4. WELD 3 SIDES.

215 SECTION N.T.S.



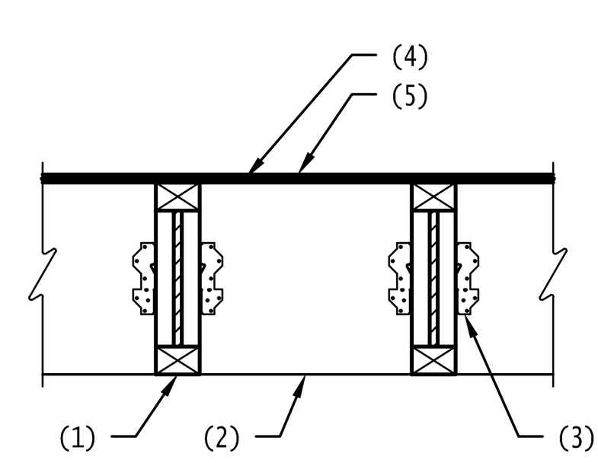
NOTES:
1. PLYWOOD SHEATHING.
2. WOOD JOIST.
3. 1/2" STUDS WELDED TO BEAM AT 24" O.C., COUNTERSUNK.
4. 3x WOOD NAILER.
5. SIMPSON LB TYPE HANGER.
6. STEEL BEAM.

216 SECTION N.T.S.



NOTES:
1. EDGE NAILING.
2. PLYWOOD SHEATHING.
3. REFER TO TYPICAL PLYWOOD SHEAR PANEL DETAIL ON SHEET S031.
4. SIMPSON CS16 STRAP.
5. GYPCRETE TOPPING PER ARCHITECTURAL.
6. DOUBLE 2x CONTINUOUS TOP PLATE WITH 16d NAILS AT 12" O.C.
7. WOOD STUD WALL.
8. SHEATHING MATERIAL AND ATTACHMENT AS OCCURS.
9. 3 - 16d PER PANEL - STAGGERED TOP & BOTTOM.
10. MICROLAM BLOCKING.
11. 2x CONTINUOUS PLATE.
12. SIMPSON A35 CLIP.

217 SECTION N.T.S.



NOTES:
1. WOOD I-JOIST.
2. WOOD BLOCKING.
3. SIMPSON A35 CLIP.
4. SIMPSON CS16 STRAP.
5. PLYWOOD SHEATHING.

218 SECTION N.T.S.

GERALD R. KESLER, INC.
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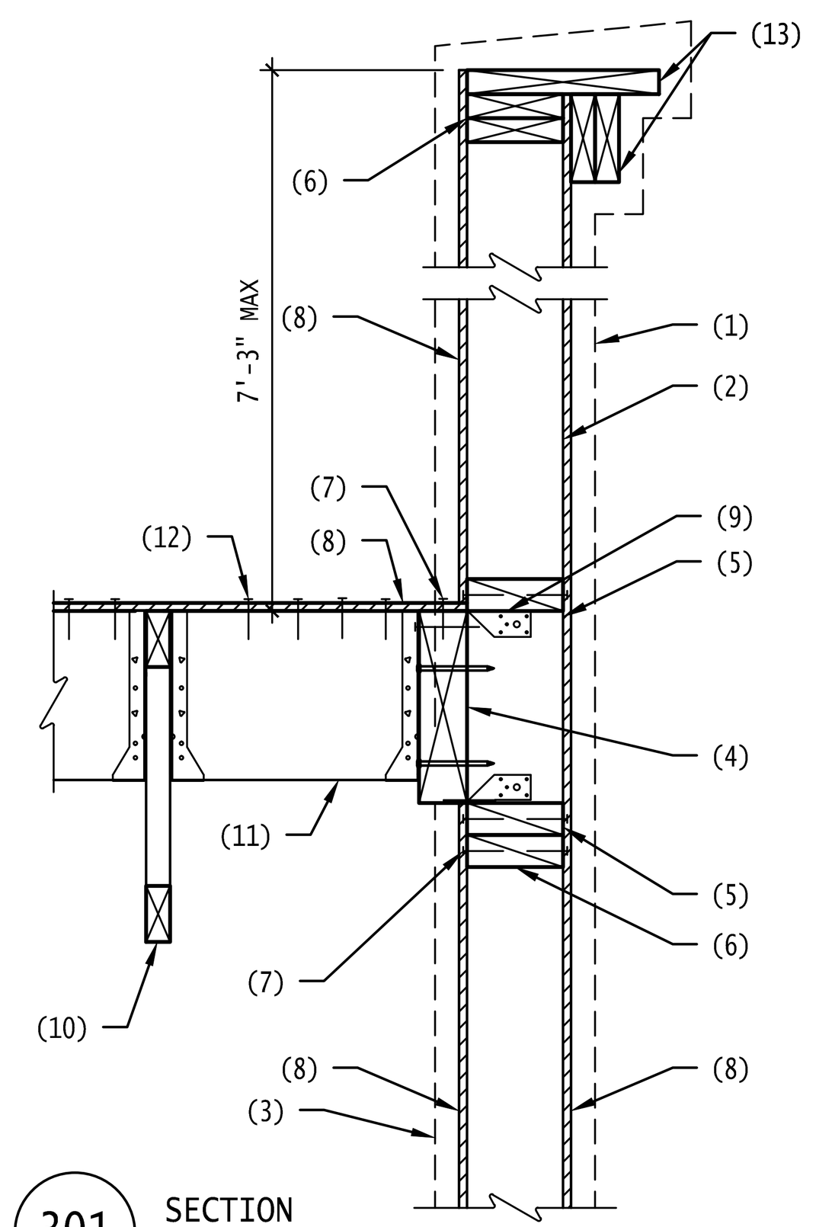
Proj. No. 15-049

UNLESS THIS DRAWING IS SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER, IT IS A PRELIMINARY DESIGN AND SHALL NOT BE USED FOR CONSTRUCTION.

JOB NUMBER
1401
DATE
07-23-2015
1 1st City Comments 09-11-2015
2 RFI #1 01-13-2016

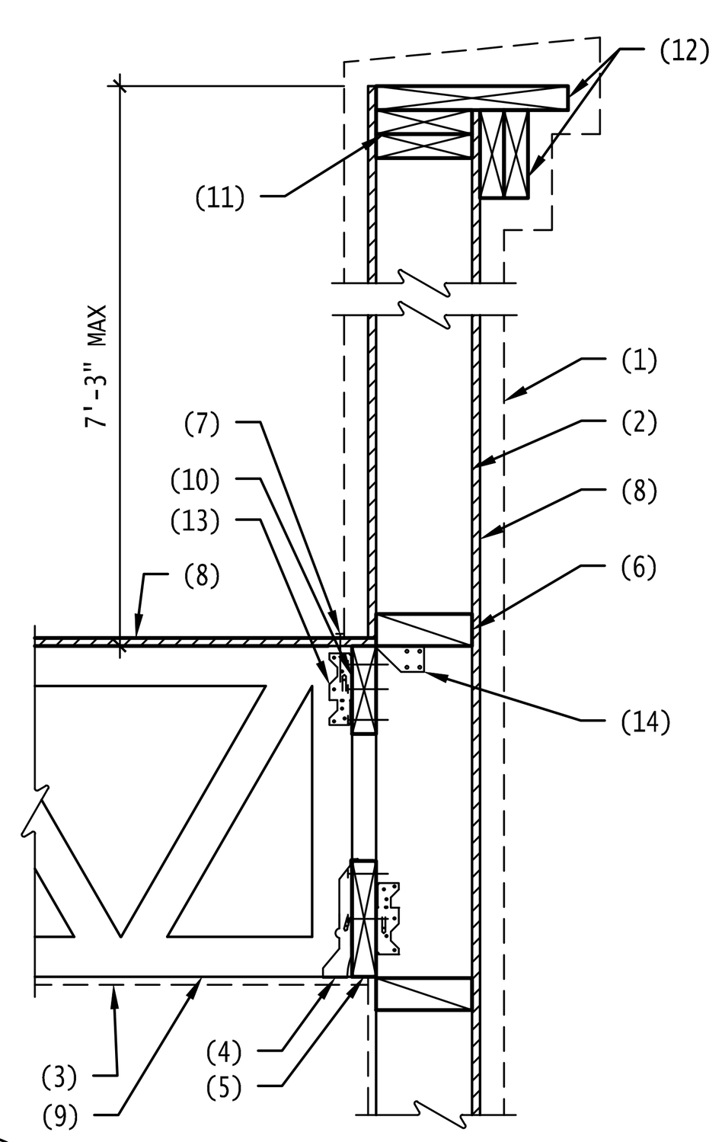
FLOOR FRAMING SECTIONS & DETAILS

S501



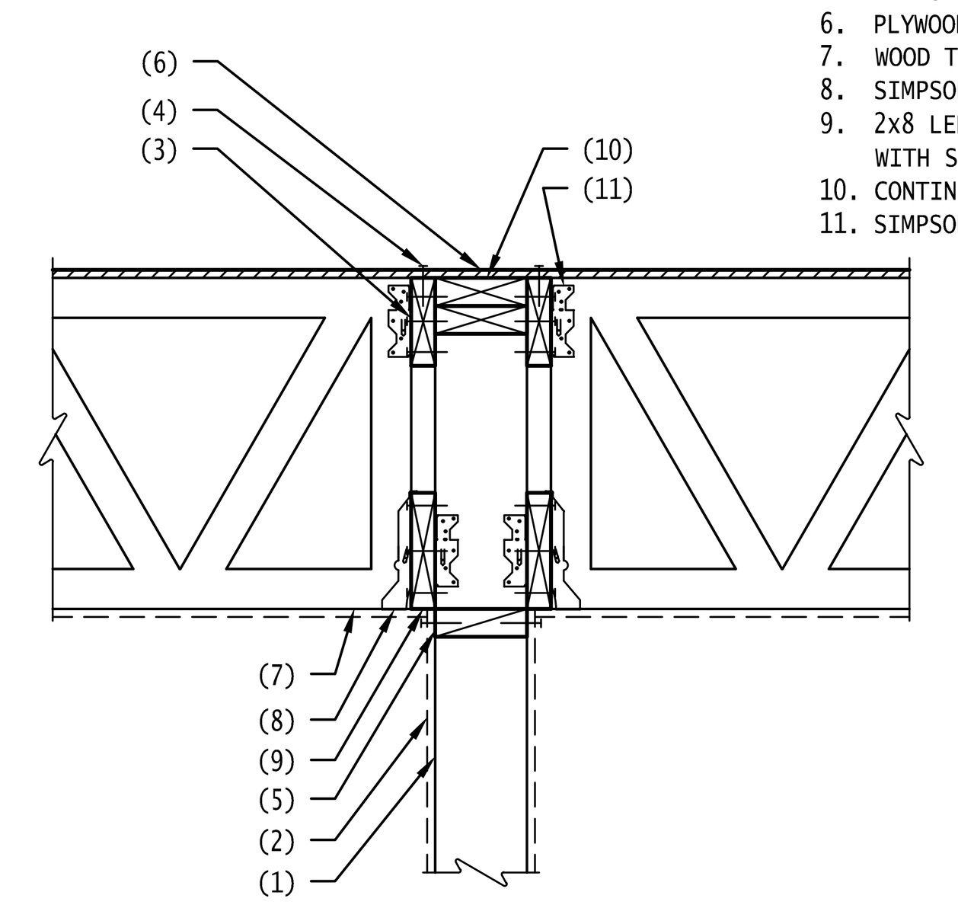
NOTES:
1. ARCHITECTURAL FINISH.
2. WOOD STUD WALL.
3. SHEATHING MATERIAL AS OCCURS.
4. CONT. 3x12 LEDGER w/ 2 - 1/4"Ø x 3" EMBED LAG SCREWS AT EACH STUD.
5. CONT. 2x BLOCKING.
6. DOUBLE 2x TOP PLATE W/ 16d NAILS AT 12" O.C.
7. EDGE NAILING.
8. PLYWOOD SHEATHING.
9. SIMPSON H3 CLIP TOP AND BOTTOM AT EACH STUD.
10. WOOD TRUSS.
11. 2x12 BLOCKING AT 24" O.C. W/ HU212 HANGER. CONTINUE BLOCKING FOR 2 BAYS.
12. 8d NAILS AT 4" O.C. AT BLOCKING.
13. 2X FRAMING PER ARCHITECTURAL.

301 SECTION N.T.S.



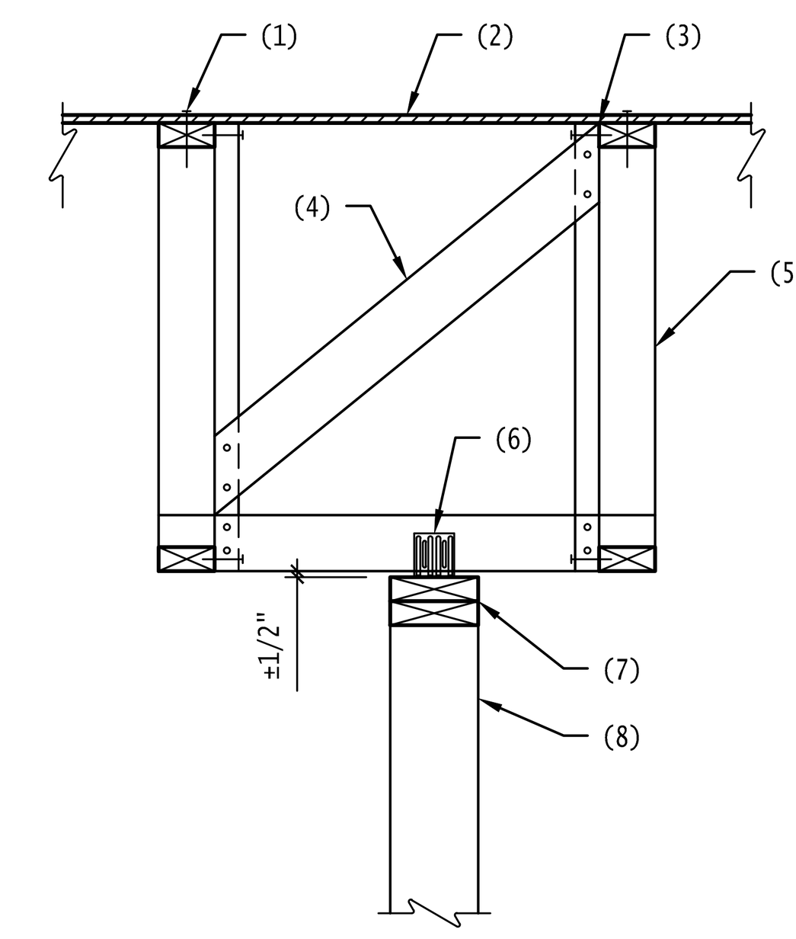
NOTES:
1. ARCHITECTURAL FINISH.
2. WOOD STUD WALL.
3. SHEATHING MATERIAL AS OCCURS.
4. SIMPSON JB26 HANGER.
5. 2x8 LEDGER WITH 3 - 16d NAILS WITH SIMPSON A35 PER STUD.
6. CONT. 2x BLOCKING.
7. EDGE NAILING.
8. PLYWOOD SHEATHING.
9. WOOD TRUSS.
10. 2x6 NAILER WITH 2 - 16d NAILS PER STUD.
11. DOUBLE 2x TOP PLATE W/ 16d NAILS AT 12" O.C.
12. 2X FRAMING PER ARCHITECTURAL.
13. SIMPSON A35 PER TRUSS.
14. SIMPSON H2.5 PER STUD.

302 SECTION N.T.S.



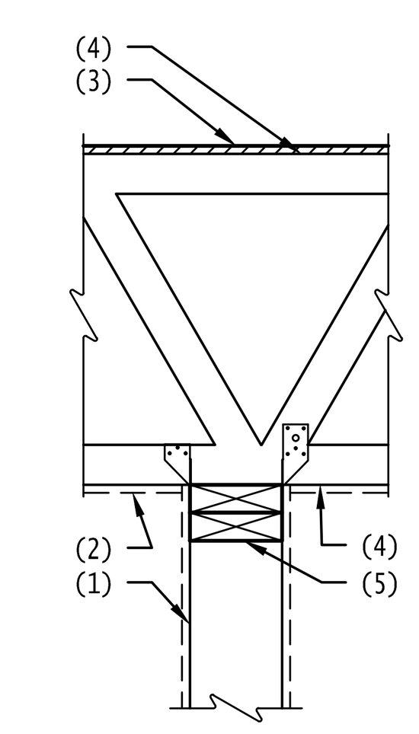
NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. 2x6 NAILER WITH 2 - 16d NAILS PER STUD.
4. EDGE NAILING.
5. 2x BLOCKING WITH 3 - 16d NAILS PER BLOCK.
6. PLYWOOD SHEATHING.
7. WOOD TRUSS.
8. SIMPSON JB26 HANGER.
9. 2x8 LEDGER WITH 3 - 16d NAILS WITH SIMPSON A35 PER STUD.
10. CONTINUOUS DOUBLE TOP PLATE.
11. SIMPSON A35 PER TRUSS.

303 SECTION N.T.S.



NOTES:
1. EDGE NAILING.
2. PLYWOOD SHEATHING.
3. 2x4 FRAMING WITH 3 - 16d NAILS AT TOP AND BOTTOM TRUSS CHORD.
4. 2x4 WITH 3 - 16d EACH END.
5. PREFABRICATED WOOD TRUSSES.
6. SIMPSON DTC CLIP.
7. DOUBLE TOP PLATE WITH 16d AT 12" O.C.
8. 2x6 STUDS AT 24" O.C.

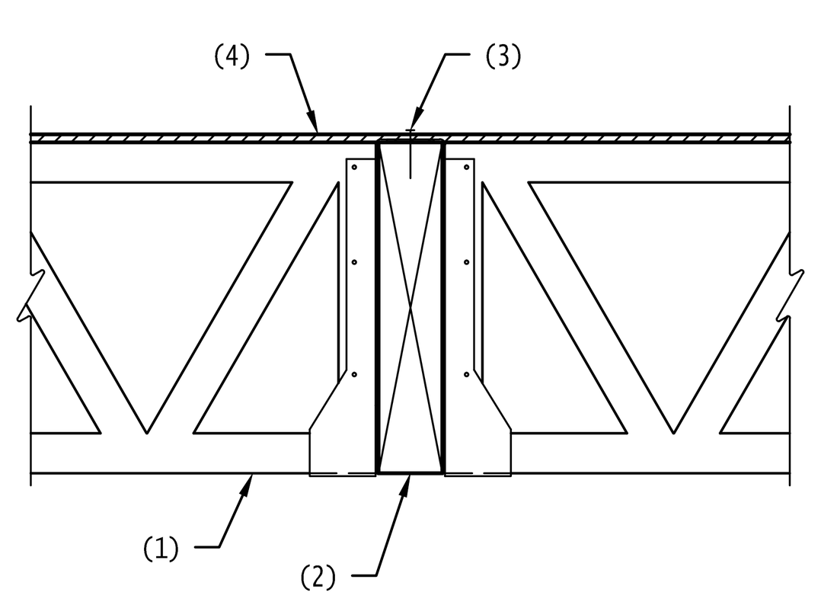
304 SECTION N.T.S.



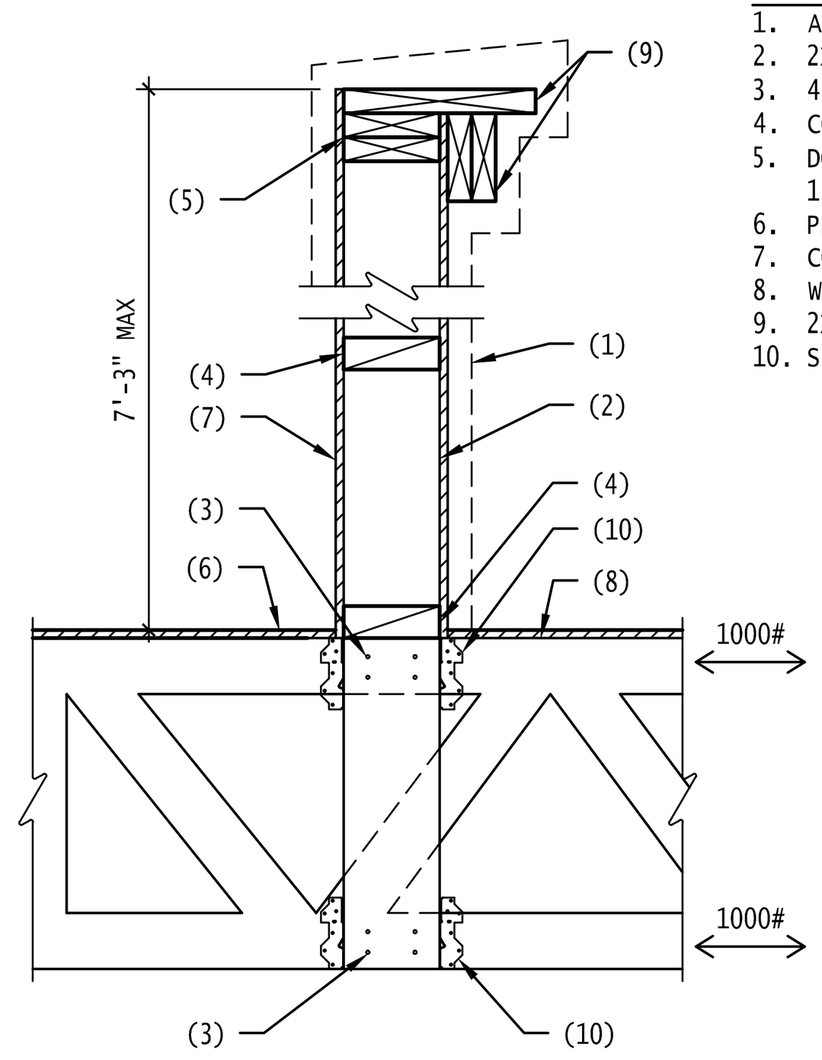
NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. PLYWOOD SHEATHING.
4. WOOD TRUSS.
5. CONTINUOUS DOUBLE TOP PLATE W/ SIMPSON H2.5 CLIP EACH SIDE.

305 SECTION N.T.S.

NOTES:
1. PREFAB WOOD TRUSS WITH SIMPSON MIT49.5 HANGER.
2. WOOD BEAM.
3. EDGE NAILING.
4. PLYWOOD SHEATHING.

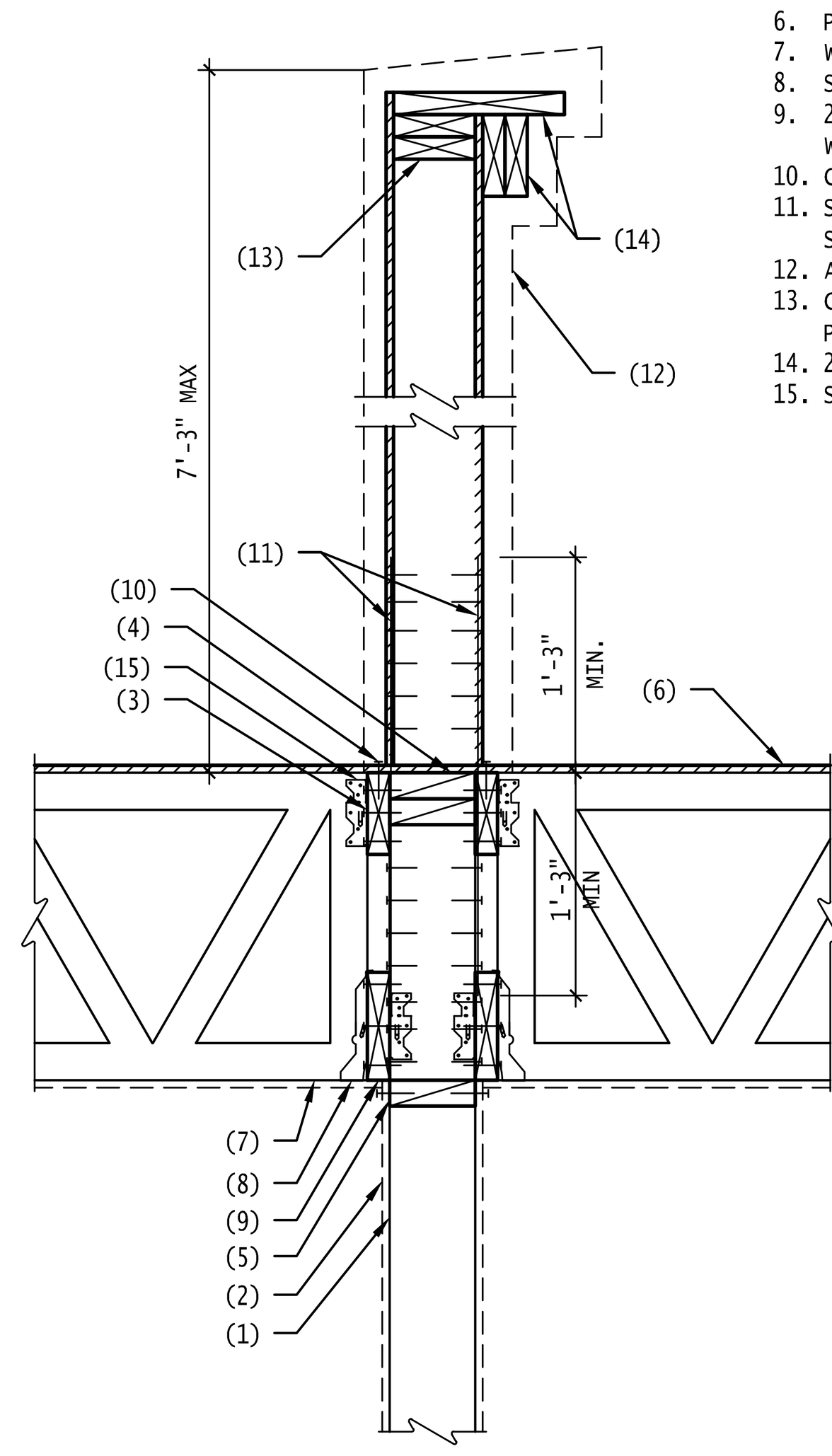


306 SECTION N.T.S.



NOTES:
1. ARCHITECTURAL FINISH.
2. 2x6 WOOD STUD @ EACH TRUSS.
3. 4-12d NAILS.
4. CONT. 2x BLOCKING.
5. DOUBLE 2x TOP PLATE W/ 16d NAILS AT 12" O.C.
6. PLYWOOD SHEATHING.
7. CONTINUOUS BOTTOM PLATE.
8. WOOD TRUSS.
9. 2x FRAMING PER ARCHITECTURAL.
10. SIMPSON A35 CLIP EACH SIDE.

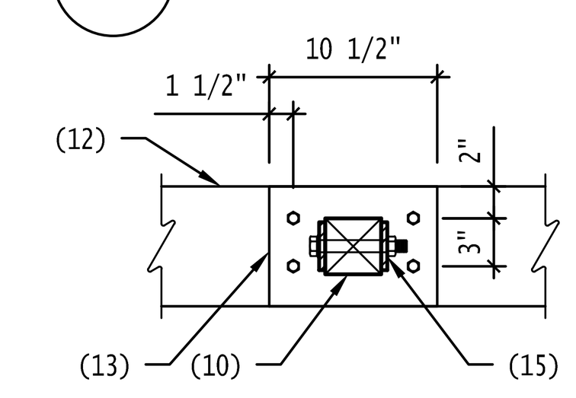
307 SECTION N.T.S.



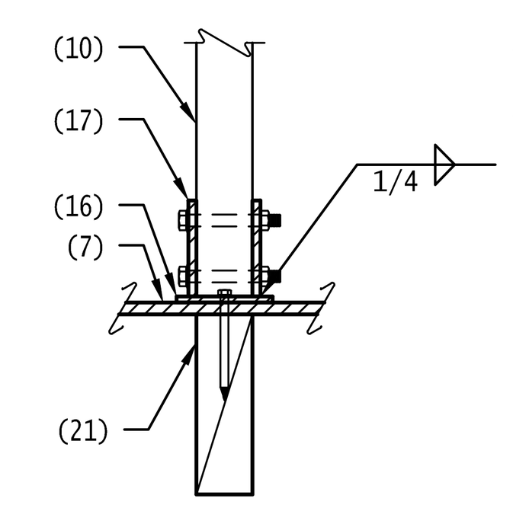
NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. 2x6 NAILER WITH 2 - 16d NAILS PER STUD.
4. EDGE NAILING.
5. 2x BLOCKING WITH 3 - 16d NAILS PER BLOCK.
6. PLYWOOD SHEATHING.
7. WOOD TRUSS.
8. SIMPSON JB26 HANGER.
9. 2x8 LEDGER WITH 3 - 16d NAILS WITH SIMPSON A35 PER STUD.
10. CONTINUOUS DOUBLE BLOCKING.
11. SIMPSON CS14 STRAP EACH SIDE STUD W/ 26-10d NAILS.
12. ARCHITECTURAL FINISH.
13. CONTINUOUS 2x DOUBLE TOP PLATE W/16d NAILS AT 12" O.C.
14. 2x FRAMING PER ARCHITECTURAL.
15. SIMPSON A35 PER TRUSS.

308 SECTION N.T.S.

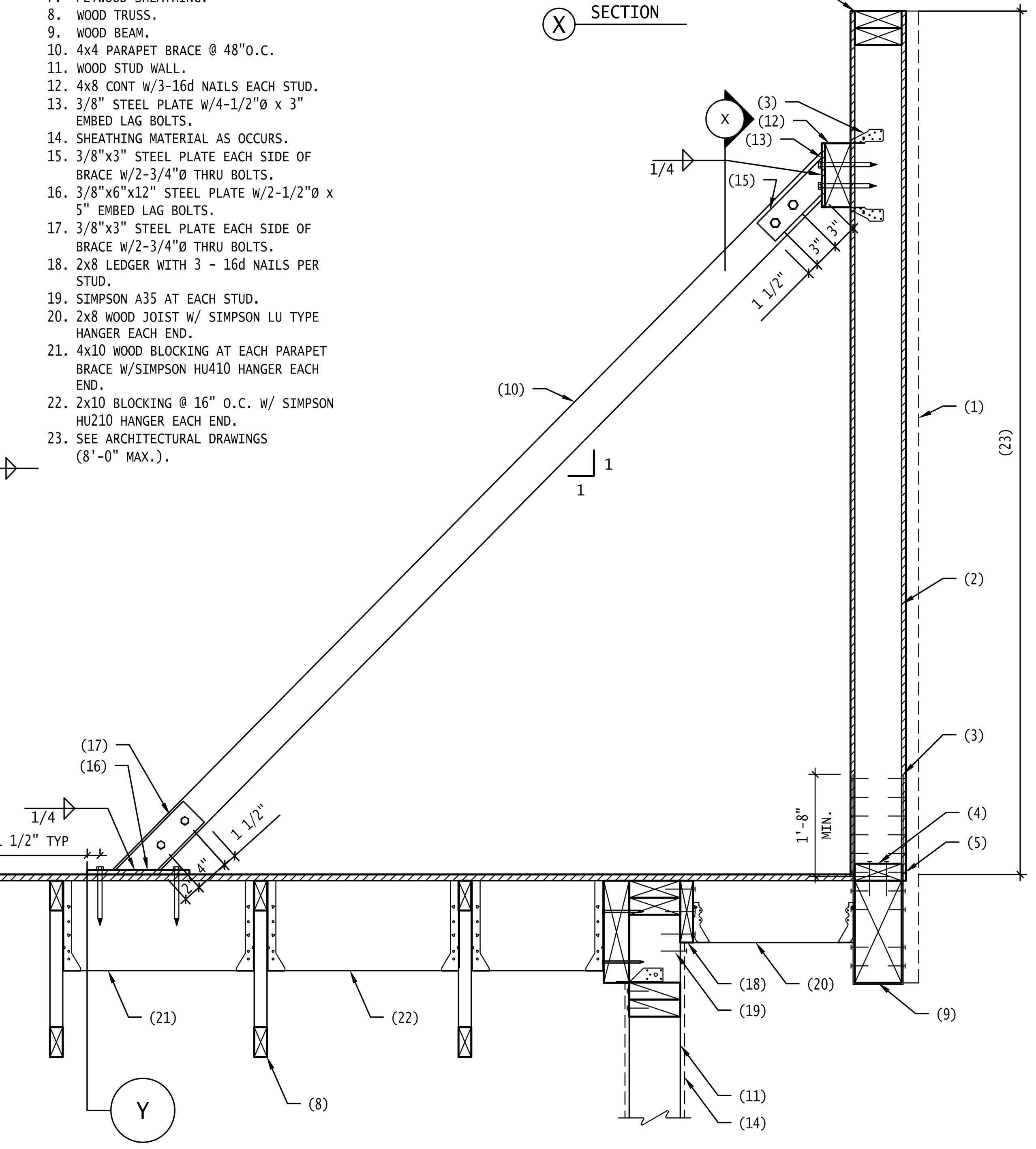
NOTES:
1. ARCHITECTURAL FINISH.
2. WOOD STUD WALL (DOUBLE STUDS AT BRACE ATTACHMENT LOCATIONS).
3. SIMPSON H2.5A CLIP TOP & BOTTOM.
4. 2x PLATE CONTINUOUS WITH 2-16d NAILS AT 12" O.C.
5. EDGE NAILING.
6. DOUBLE 2x TOP PLATE.
7. PLYWOOD SHEATHING.
8. WOOD TRUSS.
9. WOOD BEAM.
10. 4x4 PARAPET BRACE @ 48"O.C.
11. WOOD STUD WALL.
12. 4x8 CONT W/3-16d NAILS EACH STUD.
13. 3/8" STEEL PLATE W/4-1/2"Ø x 3" EMBED LAG BOLTS.
14. SHEATHING MATERIAL AS OCCURS.
15. 3/8"x3" STEEL PLATE EACH SIDE OF BRACE W/2-3/4"Ø THRU BOLTS.
16. 3/8"x6"x12" STEEL PLATE W/2-1/2"Ø x 5" EMBED LAG BOLTS.
17. 3/8"x3" STEEL PLATE EACH SIDE OF BRACE W/2-3/4"Ø THRU BOLTS.
18. 2x8 LEDGER WITH 3 - 16d NAILS PER STUD.
19. SIMPSON A35 AT EACH STUD.
20. 2x8 WOOD JOIST W/ SIMPSON LU TYPE HANGER EACH END.
21. 4x10 WOOD BLOCKING AT EACH PARAPET BRACE W/SIMPSON HU410 HANGER EACH END.
22. 2x10 BLOCKING @ 16" O.C. W/ SIMPSON HU210 HANGER EACH END.
23. SEE ARCHITECTURAL DRAWINGS (8'-0" MAX.).



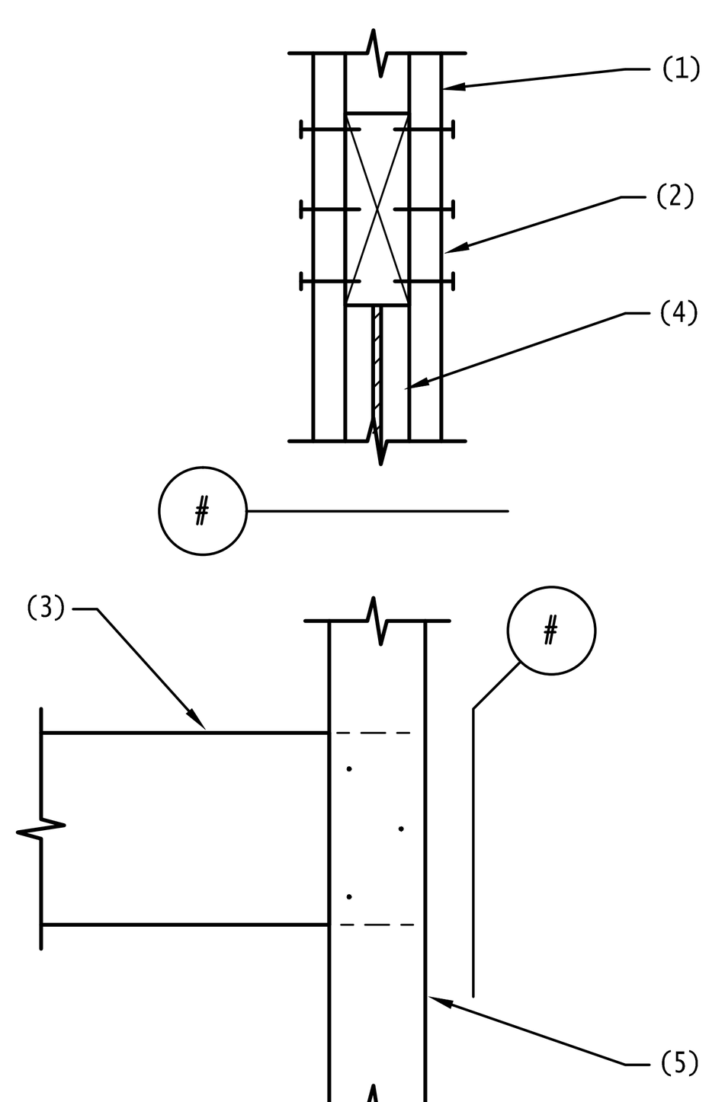
X SECTION



Y SECTION

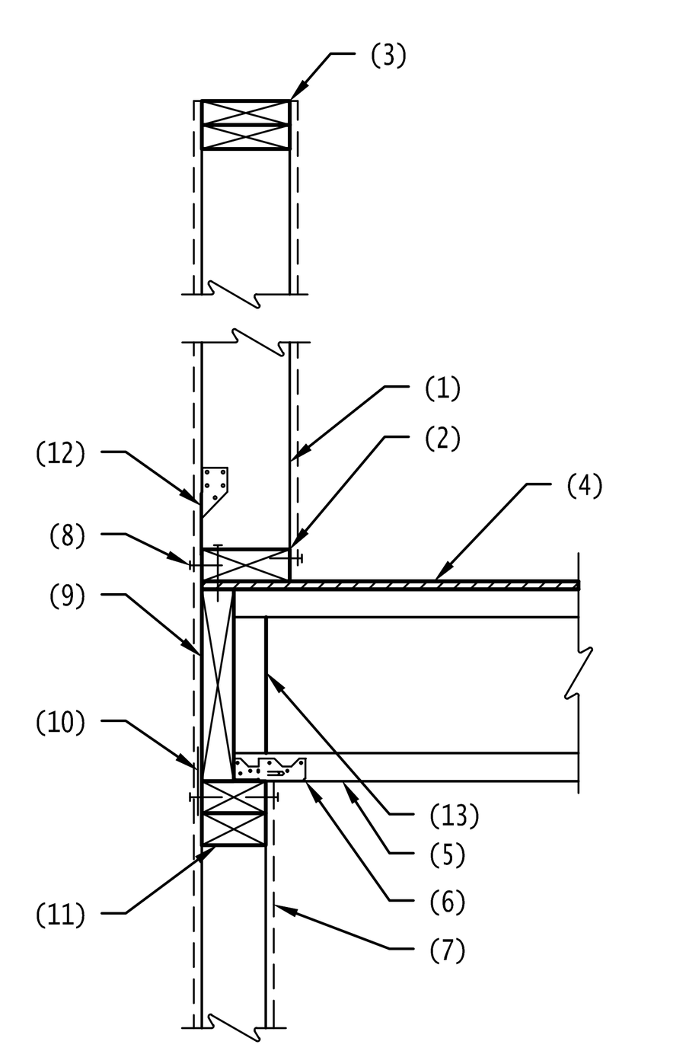


309 SECTION N.T.S.



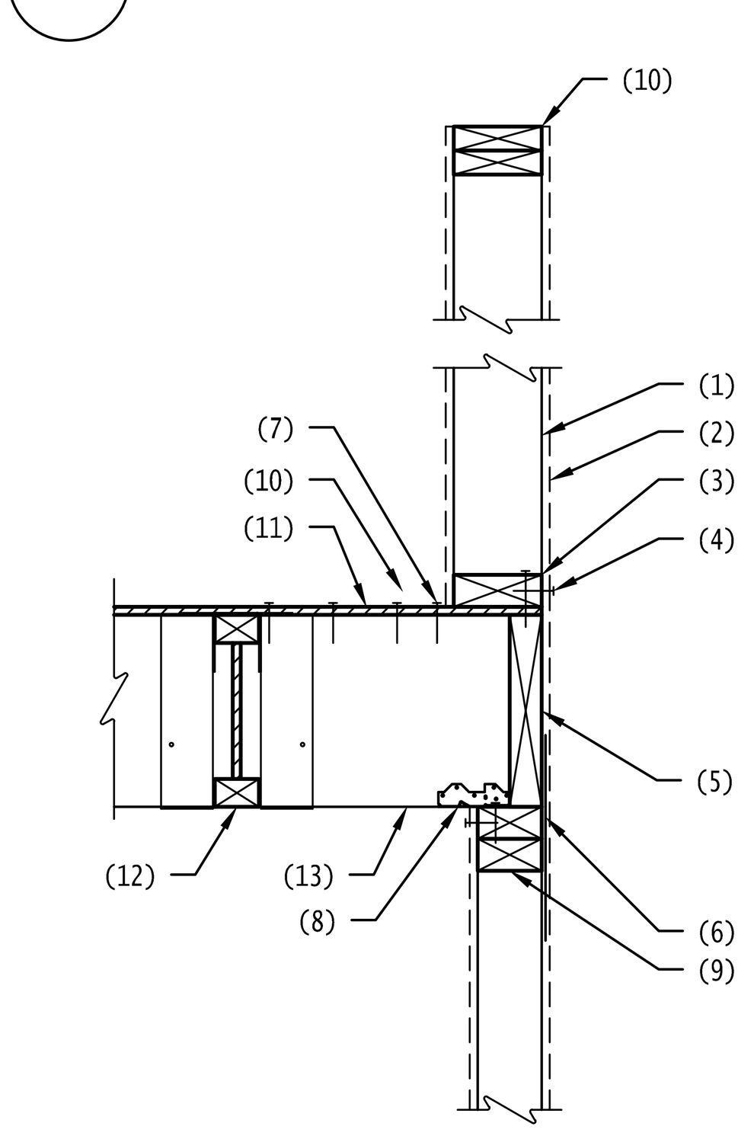
NOTES:
1. FRAMING ABOVE NOT SHOWN FOR CLARITY.
2. RUN STUD ALONG SIDE OF BEAM AND NAIL WITH (3) 16d MINIMUM.
3. WOOD BEAM.
4. MULTIPLE STUD BENEATH BEAM BEARING WITH PLYWOOD FILLER AS REQUIRED - NAIL TOGETHER WITH 16d AT 12" O.C.
5. WOOD STUD.

310 SECTION N.T.S.



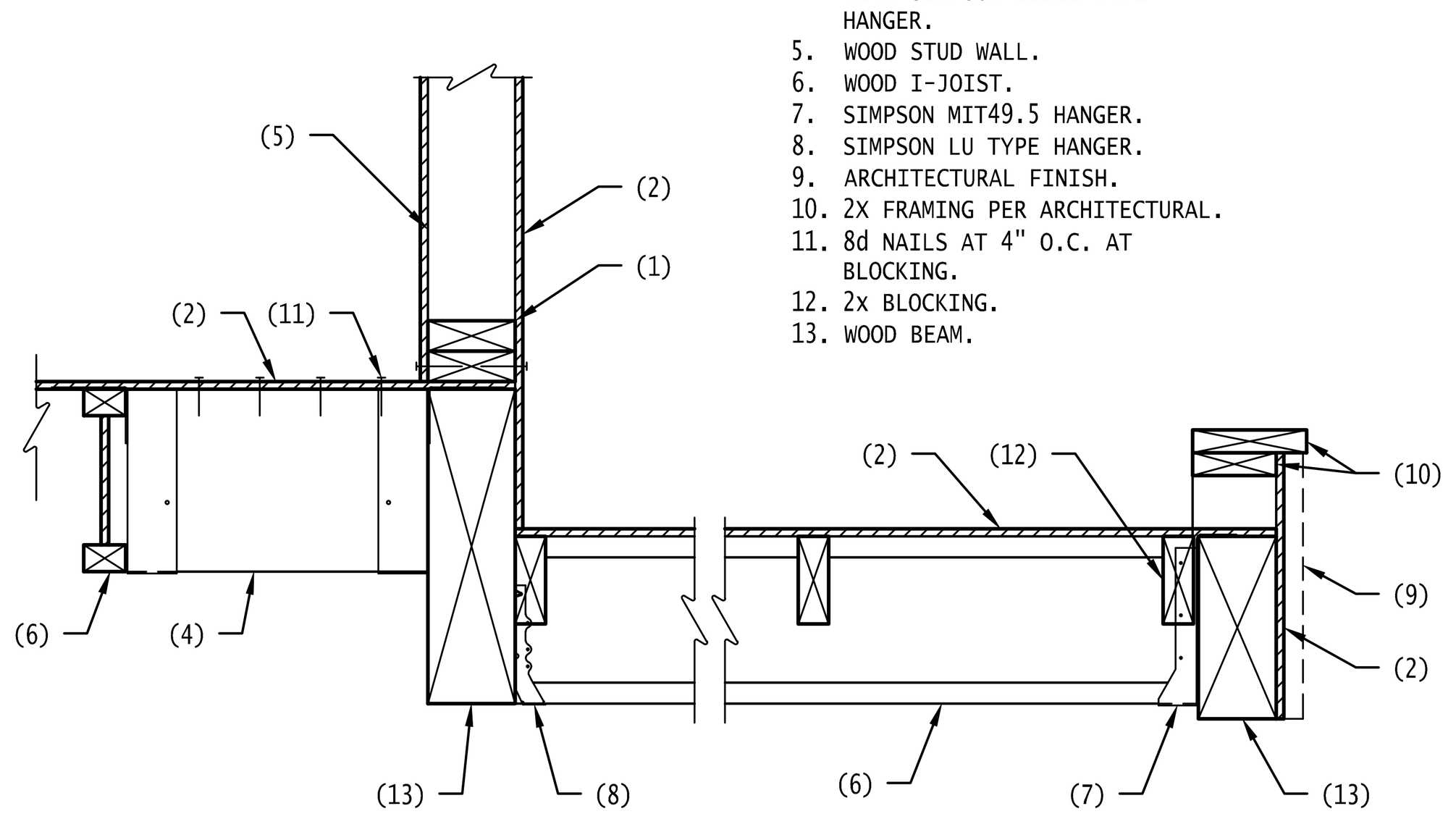
NOTES:
1. WOOD STUD WALL.
2. CONTINUOUS BOTTOM PLATE WITH 16d NAILS AT 12" O.C., U.N.O.
3. DOUBLE 2x TOP PLATE.
4. PLYWOOD SHEATHING.
5. WOOD I-JOIST.
6. SIMPSON A35 AT EVERY JOIST.
7. SHEATHING MATERIAL AS OCCURS.
8. EDGE NAILING.
9. CONTINUOUS 1 1/4" ¹LEVEL RIMBOARD.
10. SIMPSON LTP4 AT 16" O.C. TO RIMBOARD.
11. DOUBLE 2x CONTINUOUS TOP PLATE WITH 16d AT 12" O.C.
12. SIMPSON H2.5 EACH STUD. 13. WEB STIFFENER.

311 SECTION N.T.S.



NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. CONTINUOUS BOTTOM PLATE WITH 16d NAILS AT 12" O.C. STAGGERED, U.N.O.
4. EDGE NAILING.
5. CONTINUOUS 1 1/4" ¹LEVEL RIMBOARD.
6. SIMPSON LPT4 AT 16" O.C.
7. 8d NAILS AT 4" O.C. AT BLOCKING.
8. SIMPSON A35 AT 24" O.C.
9. DOUBLE 2x TOP PLATE WITH 16d AT 12" O.C.
10. DOUBLE 2x TOP PLATE.
11. PLYWOOD SHEATHING.
12. WOOD I-JOIST.
13. 2x12 BLOCKING AT 24" O.C. WITH SIMPSON LB212 HANGERS. CONTINUE BLOCKING FOR 2 BAYS.

312 SECTION N.T.S.



NOTES:
1. DOUBLE 2x BOTTOM PLATE.
2. PLYWOOD SHEATHING.
3. DOUBLE 2x TOP PLATE.
4. 2x12 BLOCKING AT 48" O.C. WITH SIMPSON LB212 TYPE HANGER.
5. WOOD STUD WALL.
6. WOOD I-JOIST.
7. SIMPSON MIT49.5 HANGER.
8. SIMPSON LU TYPE HANGER.
9. ARCHITECTURAL FINISH.
10. 2X FRAMING PER ARCHITECTURAL.
11. 8d NAILS AT 4" O.C. AT BLOCKING.
12. 2x BLOCKING.
13. WOOD BEAM.

313 SECTION N.T.S.

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Registered Professional Engineer (Structural)
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W. DAVID BIXLER
DATE SIGNED 10/20/15
ARIZONA, U.S.A.
Expires 6/30/16

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DATE
07-23-2015
⚠ 1st City Comments
09-11-2015

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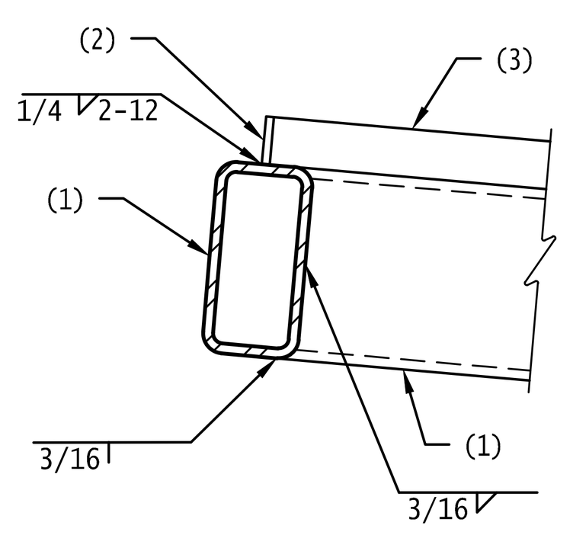
Proj. No. 15-049

ROOF FRAMING SECTIONS & DETAILS

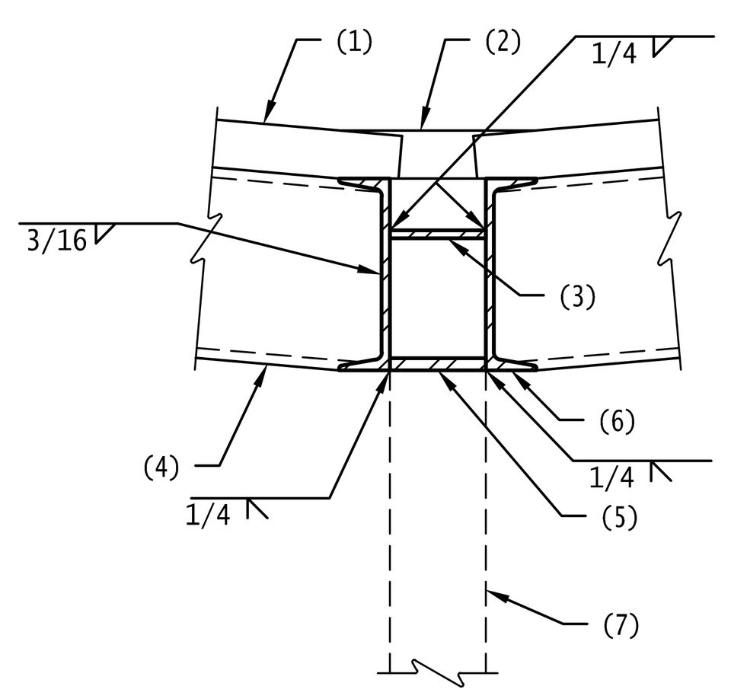
S601

NOTES:
1. HSS 12"x6"x5/8".
2. 3"x3"x1/2" THK CONT. PLATE.
3. STEEL DECK.



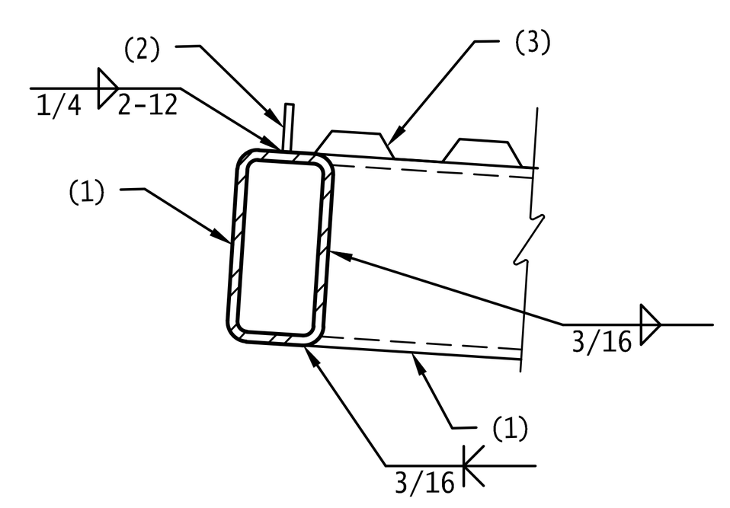
314 SECTION
N.T.S.

NOTES:
1. STEEL DECK.
2. 3"x1/2" THICK STEEL PLATE.
3. 6" WIDE x 1/2" THICK STEEL PLATE GUTTER.
4. HSS 12"x6"x5/8".
5. 6" WIDE x 3/4" THICK CONTINUOUS STEEL PLATE.
6. STEEL BEAM.
7. COLUMN AS OCCURS.



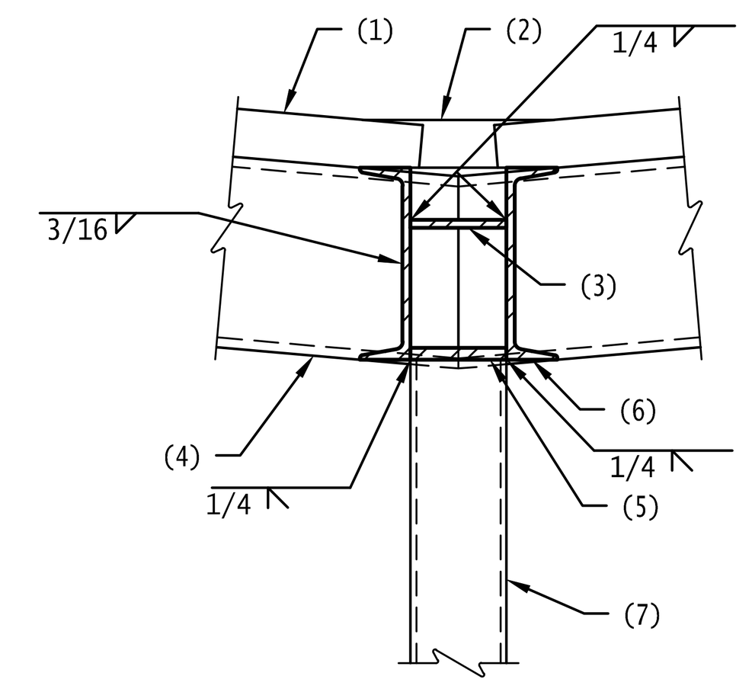
315 SECTION
N.T.S.

NOTES:
1. HSS 12"x6"x5/8".
2. 3"x3"x1/2" THK CONT. PLATE.
3. STEEL DECK.



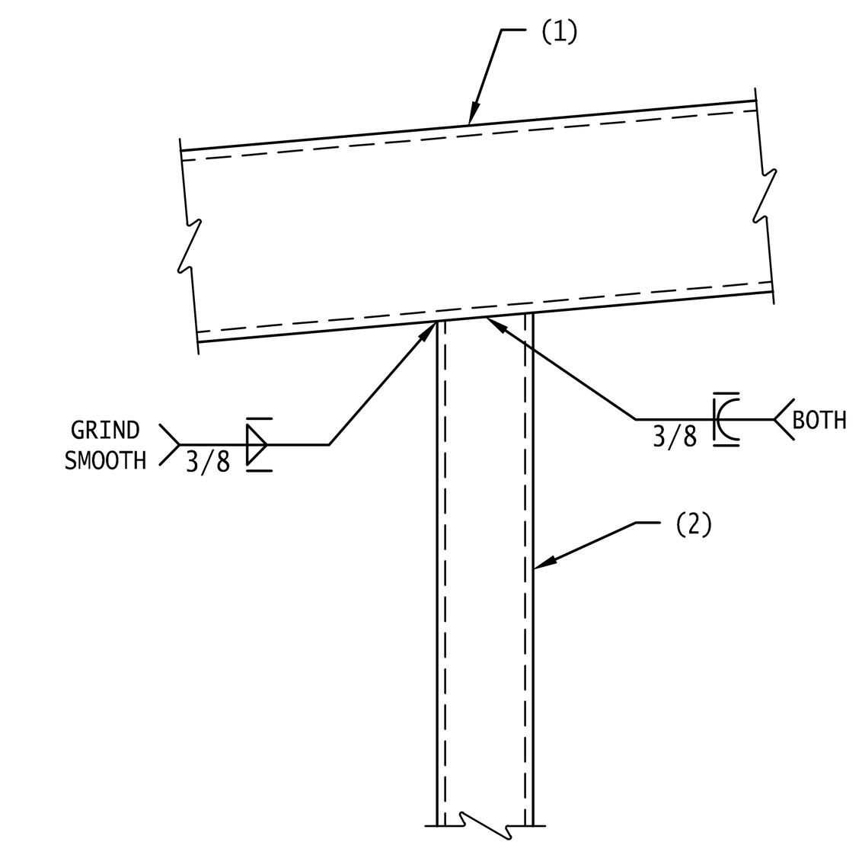
316 SECTION
N.T.S.

NOTES:
1. STEEL DECK.
2. 3"x1/2" THICK STEEL PLATE.
3. 6" WIDE x 1/2" THICK STEEL PLATE GUTTER.
4. HSS 12"x6"x5/8" KNUCKLE BEAM.
5. 6" WIDE x 3/4" THICK CONTINUOUS STEEL PLATE.
6. STEEL BEAM.
7. STEEL COLUMN.



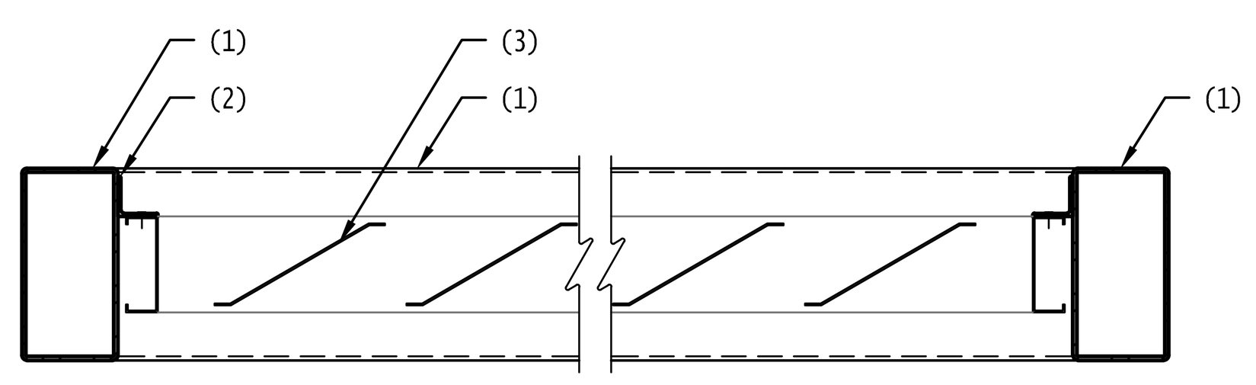
317 SECTION
N.T.S.

NOTES:
1. STEEL BEAM.
2. STEEL COLUMN.



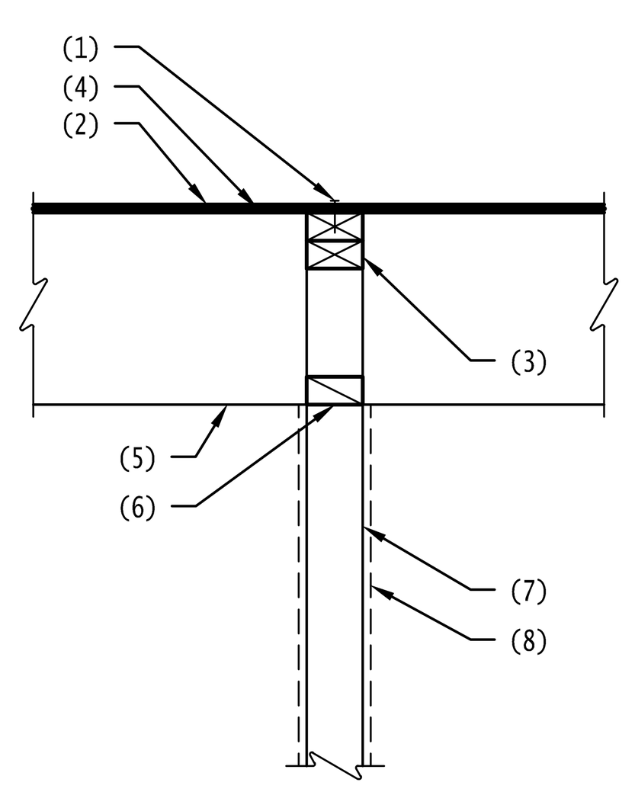
318 SECTION
N.T.S.

NOTES:
1. STEEL BEAM.
2. CONT. 2 1/4x2 1/4x1/4.
3. ALUMINUM GRILLE BY MANUFACTURER.



319 SECTION
N.T.S.

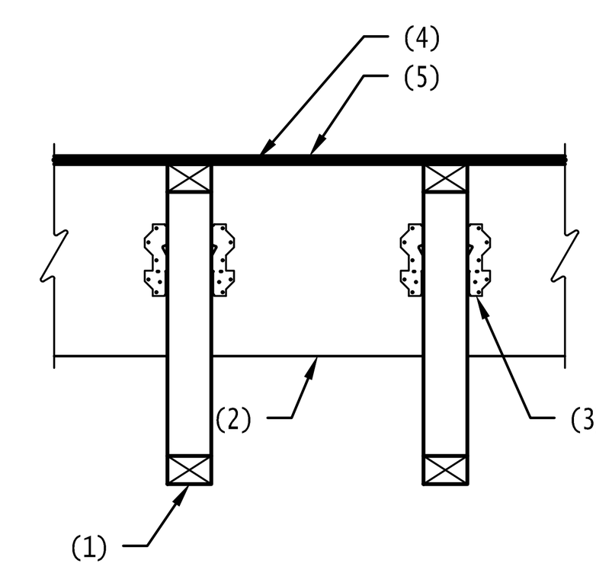
NOTES:
1. EDGE NAILING.
2. PLYWOOD SHEATHING.
3. DOUBLE 2x CONTINUOUS TOP PLATE WITH 16d NAILS AT 12" O.C.
4. SIMPSON CS16 STRAP.
5. MICROLAM BLOCKING.
6. 2x CONTINUOUS BLOCKING.
7. WOOD STUD WALL.
8. SHEATHING MATERIAL AND ATTACHMENT AS OCCURS.



1

320 SECTION
N.T.S.

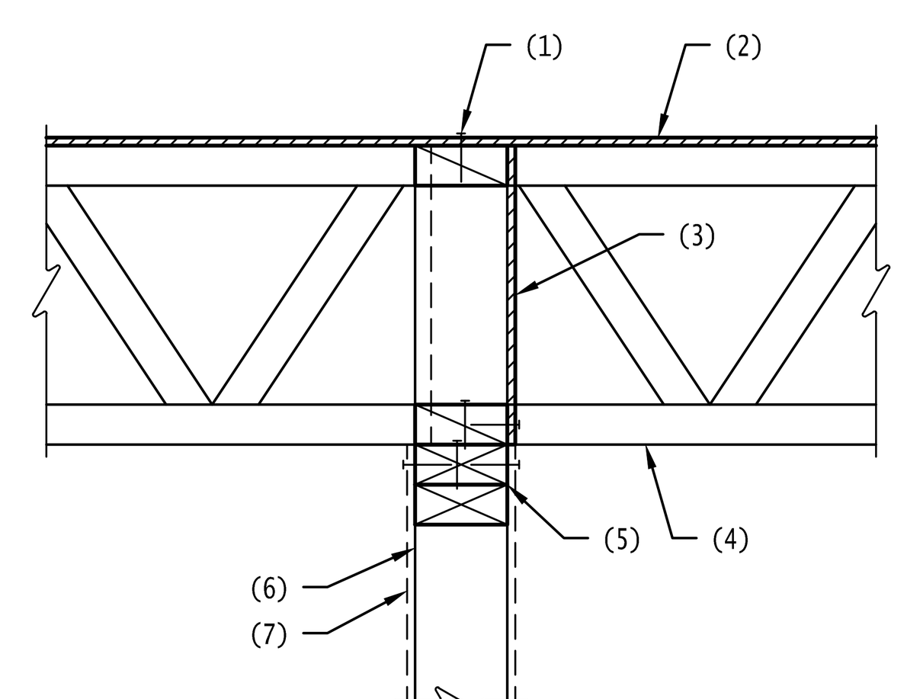
NOTES:
1. WOOD TRUSS.
2. WOOD BLOCKING.
3. SIMPSON A35 CLIP.
4. SIMPSON CS16 STRAP.
5. PLYWOOD SHEATHING.



1

321 SECTION
N.T.S.

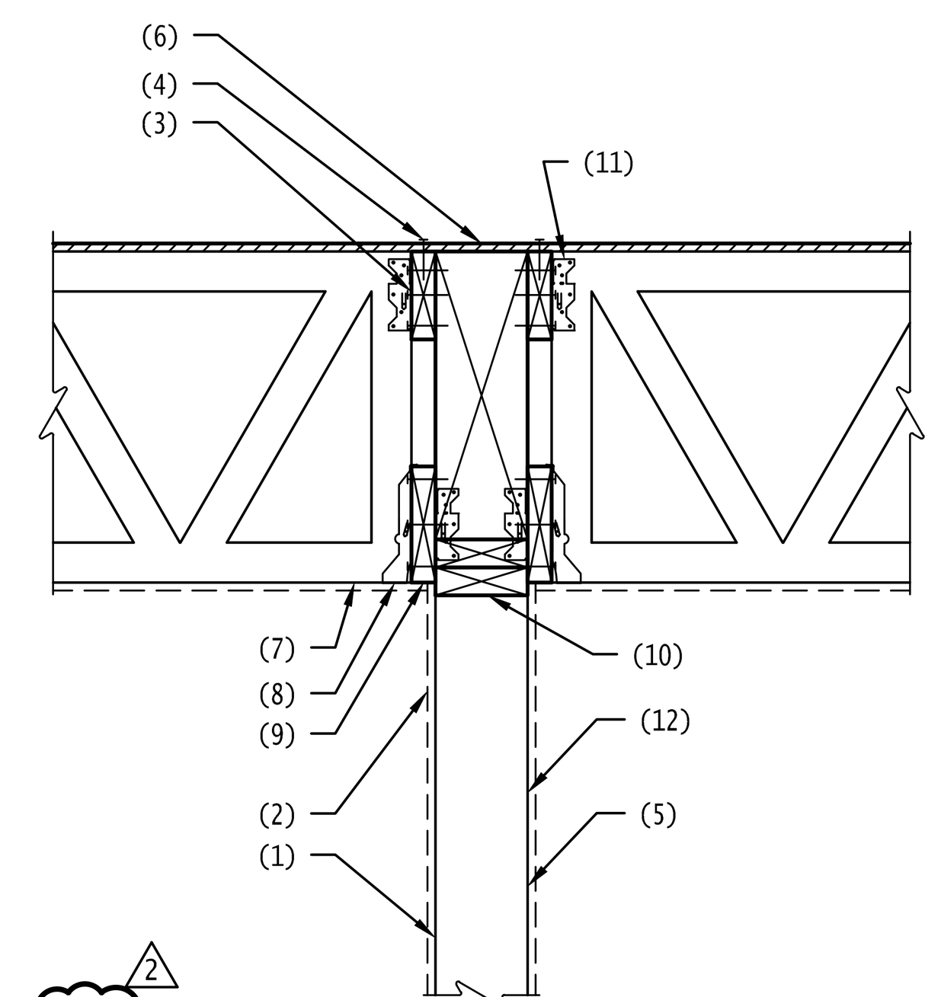
NOTES:
1. EDGE NAILING.
2. PLYWOOD SHEATHING.
3. SHEAR PANEL PER TYPICAL DETAIL.
4. PREFAB WOOD TRUSS.
5. CONTINUOUS DOUBLE 2x TOP PLATE WITH 16d NAILS AT 12" O.C.
6. WOOD STUD WALL.
7. SHEATHING MATERIAL AS OCCURS.



2

322 SECTION
N.T.S.

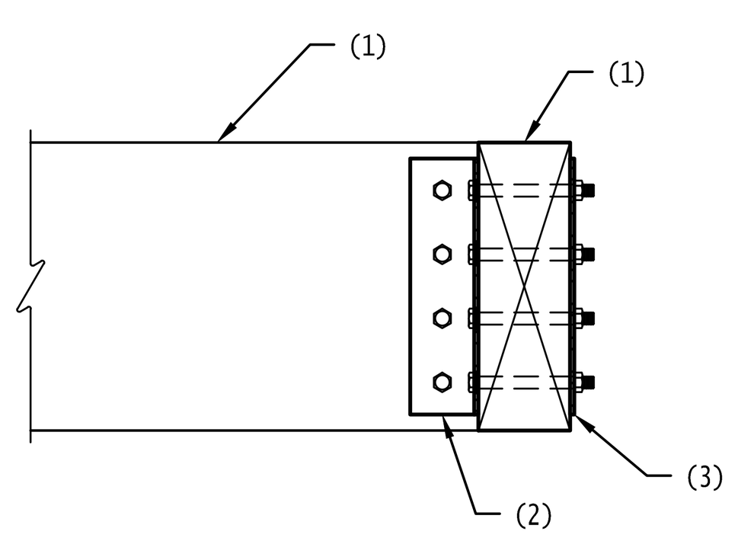
NOTES:
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AS OCCURS.
3. 2x6 NAILER WITH 2 - 16d NAILS PER STUD.
4. EDGE NAILING.
5. 2x BLOCKING WITH 3 - 16d NAILS PER BLOCK.
6. PLYWOOD SHEATHING.
7. WOOD TRUSS.
8. SIMPSON JB26 HANGER.
9. 2x8 LEDGER WITH 3 - 16d NAILS WITH SIMPSON A35 PER STUD.
10. CONTINUOUS DOUBLE TOP PLATE.
11. SIMPSON A35 PER TRUSS.
12. 5 1/8x18 GLB.



2

323 SECTION
N.T.S.

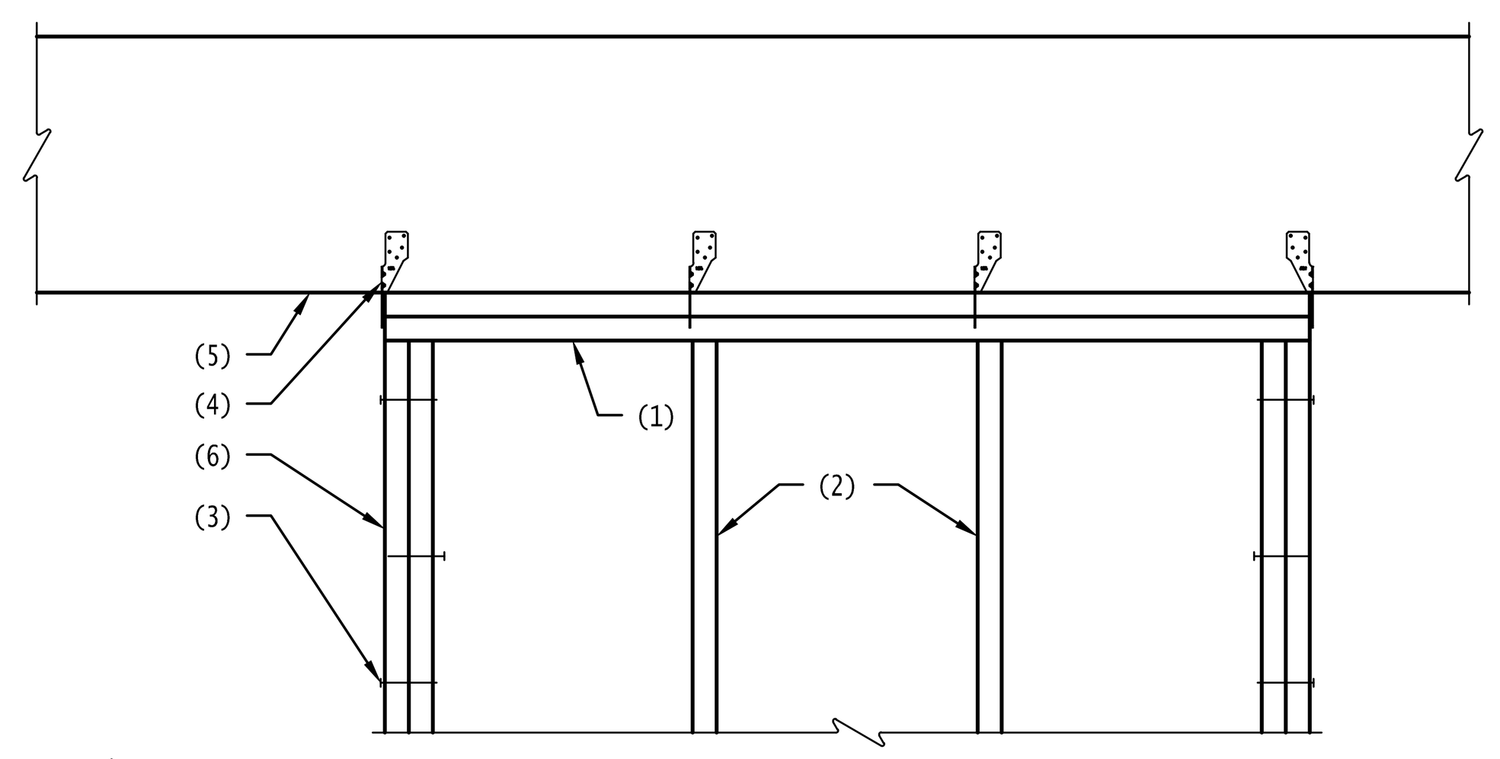
NOTES:
1. WOOD BEAM.
2. L4x4x1/4 EACH SIDE WITH 4-3/4"Ø THRU BOLTS.
3. 1/4"x16"x14" PLATE.



2

324 SECTION
N.T.S.

NOTES:
1. DOUBLE 2x TOP PLATE.
2. WOOD STUDS.
3. 16d AT 12" O.C. STAGGERED.
4. SIMPSON H2.5 EACH STUD.
5. SIDE OF BEAM. WOOD BEAM.
6. 2 STUDS UNDER BEAM BEARING.



2

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Proj. No. 15-049

ROOF FRAMING SECTIONS & DETAILS

S602

3042

SPECIFICATIONS

15010 GENERAL PROVISIONS:

1. SCOPE: THIS SECTION ESTABLISHES AND DESCRIBES REQUIRED STANDARDS OF QUALITY AND PERFORMANCE FOR PRODUCTS, SYSTEMS AND METHODS ENCOMPASSED BY DIVISION 15000. THIS SECTION ALSO SUMMARIZES THE VARIOUS SYSTEMS TO BE INSTALLED UNDER DIVISION 15000.

15010.1 SPECIAL CONDITIONS:

1. THE SPECIFICATIONS AND ACCOMPANYING DRAWINGS ARE INTENDED TO COVER SYSTEMS WHICH WILL FIT THE AVAILABLE SPACE, WHICH WILL NOT INTERFERE WITH THE GENERAL STRUCTURAL DESIGN. CAREFULLY EXAMINE THE DRAWINGS FOR ALL BRANCHES OF WORK AND BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIAL AND APPARATUS INTO THE BUILDING. NOTIFY ENGINEER/ARCHITECT OF ANY DISCREPANCIES, OMISSIONS OR QUESTIONS IMMEDIATELY.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY ARCHITECT/ ENGINEER OF ANY DISCREPANCIES PRIOR TO BIDDING. ANY EXTRA EXPENSES AS A RESULT OF FAILURE TO ADEQUATELY REVIEW THE EXISTING CONDITIONS WILL BE BORNE BY THE CONTRACTOR.
3. ALL EQUIPMENT SHALL BE UL OR ETL LISTED.

15010.2 REGULATIONS, CODES AND PERMITS:

GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL TAX FEES AND OTHER COSTS IN CONNECTION WITH WORK; FILE ALL NECESSARY PLANS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL REGULATING AUTHORITIES HAVING JURISDICTION; OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR WORK AND DELIVER SAME TO ARCHITECT BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR WORK.

15010.3 COORDINATION OF WORK:

DRAWINGS ARE DIAGRAMMATIC FOR PIPING, CONDUITS AND DUCTWORK THAT IS NOT INDICATED IN DETAIL. SIZES OF PIPING, CONDUITS, AND DUCTWORK AND THEIR LOCATIONS ARE INDICATED AS INSIDE CLEAR DIMENSIONS, BUT IS NOT INTENDED TO SHOW EVERY OFFSET OF FITTING OR EVERY STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED DURING INSTALLATION OF THE WORK. THE ALIGNMENT OF PIPING, CONDUIT, OR DUCTWORK SHALL BE VARIED FROM THAT INDICATED ON THE DRAWINGS WITHOUT EXTRA EXPENSE TO THE OWNER WHERE NECESSARY TO AVOID STRUCTURAL OR MECHANICAL DIFFICULTIES, OR TO AVOID THE WORK OF ANY OTHER TRADES.

15010.4 WORKMANSHIP:

PERFORM LABOR IN A THOROUGH AND COMPLETE WORKMANLIKE MANNER AND WITH ALL REASONABLE RAPIDITY TO THE SATISFACTION OF THE ARCHITECT.

15010.5 EXCAVATION AND BACKFILLING:

PERFORM ALL NECESSARY EXCAVATION, SHORING AND BACKFILLING REQUIRED FOR THE PROPER LAYING OF ALL PIPES AND CONDUITS INSIDE THE BUILDING AND PREMISES, AND OUTSIDE AS MAY BE NECESSARY.

15010.6 ALTERNATES:

1. ALTERNATE FIXTURES AND EQUIPMENT WILL BE ACCEPTED WITH PRIOR WRITTEN APPROVAL FROM THE ENGINEER.
2. ALTERNATE MATERIALS WILL ONLY BE ACCEPTABLE WITH PRIOR WRITTEN APPROVAL OF THE ENGINEER.
3. ADDITIONAL ENGINEERING REQUIREMENTS DUE TO ALTERNATE MATERIALS, FIXTURES OR EQUIPMENT WILL BE PERFORMED AT ENGINEERS STANDARD HOURLY RATES WITH A MINIMUM OF $250.00 PAYABLE BY CONTRACTOR PRIOR TO PERFORMANCE OF WORK.

15010.7 CUTTING AND PATCHING:

1. CUT COMPLETED CONSTRUCTION WORK ONLY IF SLEEVES, OPENING, CHASES, ETC., WERE INADVERTENTLY OMITTED AND ONLY WITH THE SPECIFIED APPROVAL OF THE ARCHITECT. IN NO CASE SHALL REINFORCING STEEL BE CUT WITHOUT THE SPECIFIC PERMISSION OF THE ARCHITECT.
2. WHERE CUTTING AND PATCHING OCCURS IN STREETS, SIDEWALKS, ALLEYS, AND THE LIKE, COOPERATE FULLY WITH THE OWNER AND MUNICIPAL AUTHORITIES TO MAINTAIN SAFE AND REQUIRED TRAFFIC FLOWS. NO EXTRAS WILL BE ALLOWED FOR TRAFFIC PATROLMEN OR OVERTIME WORK IF SUCH IS REQUIRED BY CITY, COUNTY, OR STATE OFFICIALS. PATCHING SHALL MEET ALL REQUIREMENTS OF MUNICIPAL OR OTHER GOVERNMENT BODIES.

15010.8 INSTALLATION INSTRUCTIONS:

1. ALL EQUIPMENT SHALL BE UL LISTED & INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. SHOULD ANY VARIANCE BETWEEN PLANS AND SPECIFICATIONS OCCUR WITH THESE INSTRUCTIONS, THE ARCHITECT OR ENGINEER SHOULD BE CONTACTED IMMEDIATELY SO THAT ANY VARIATIONS IN INSTALLATION CAN BE KNOWN BY ALL PARTIES CONCERNED.
2. UNLESS OTHERWISE NOTED ON THE EQUIPMENT SCHEDULE, ALL MECHANICAL EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATORS TO PREVENT THE TRANSMISSION OF VIBRATION AND MECHANICALLY TRANSMITTED SOUND TO THE BUILDING STRUCTURE. VIBRATION ISOLATORS SHALL BE SELECTED IN ACCORDANCE WITH THE WEIGHT DISTRIBUTION SO AS TO PRODUCE REASONABLY UNIFORM DEFLECTION.
3. INSTRUCT OWNER IN THE PROPER OPERATION AND MAINTENANCE OF EQUIPMENT. PROVIDE OWNER WITH BOUND OPERATING AND MAINTENANCE MANUALS, INCLUDE PARTS LIST, MAINTENANCE SCHEDULE, AND NAME, ADDRESS, AND PHONE NUMBER OF LOCAL PRODUCT REPRESENTATIVE.
4. PAINT INSIDE OF ALL DUCTWORK EXPOSED TO VIEW THRU GRILLES, REGISTERS & DIFFUSERS FLAT BLACK.
5. PROVIDE START-UP BY MANUFACTURER.

15010.9 GUARANTEE:

EACH COMPLETED SYSTEM SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR SHALL GUARANTEE EACH SYSTEM IN WRITING TO BE FREE OF DEFECTS OF MATERIAL AND WORKMANSHIP AND TO PERFORM SATISFACTORILY UNDER ALL CONDITIONS OF LOAD OR SERVICE. THE GUARANTEES SHALL PROVIDE THAT ANY ADDITIONAL CONTROLS, PROTECTIVE DEVICES, OR EQUIPMENT WILL BE PROVIDED AS NECESSARY TO MAKE THE SYSTEMS OR EQUIPMENT OPERATE SATISFACTORILY, THAT ANY FAULTY MATERIALS OR WORKMANSHIP WILL BE REPLACED OR REPAIRED, AND THAT ON FAILURE OF THE GUARANTOR TO DO THE ABOVE AFTER WRITTEN NOTICE FROM THE OWNER, THE OWNER MAY HAVE THE WORK DONE AT THE COST OF THE GUARANTOR. PROVIDE EXTENDED 5 YEAR WARRANTY ON ALL AIR CONDITIONING COMPRESSORS AND PARTS.

15020 BASIC MATERIALS AND METHODS:

SCOPE: THIS SECTION SETS FORTH PRODUCTS AND METHODS OF INSTALLATION FOR PLUMBING, HEATING, VENTILATION AND AIR CONDITIONING.

15020.1 SLEEVES:

WHERE PIPING, DUCTWORK, STACKS, ETC., PASSES THROUGH SUCH BUILDING ELEMENTS AS WALLS, FLOORS, ROOFS, FOOTINGS, ETC., PROVIDE SLEEVES UNLESS INDICATED OTHERWISE.

15020.2 HANGERS AND SUPPORTS:

SUPPORT HANGERS OF HORIZONTAL PIPE WITH VERTICALLY ADJUSTABLE HANGERS ON MALLEABLE SWIVEL RING OR WROUGHT STEEL CLEVIS TYPE HANGER SUSPENDED ON THREADED STEEL ROD HANGERS, EQUAL TO FEE AND MASON FIG. 199 AND FIG. 239 RESPECTIVELY WITH CLEVIS TYPE UTILIZED FOR LARGER PIPING.

15020.3 VALVES:

ALL VALVES SHALL BE CRANE, JENKINS, STOCKHAM OR MUELLER, DESIGNED FOR 125 PSI MINIMUM WORKING PRESSURE. ALL WATER VALVES SHALL BE FULL PORT BALL 1/4 TURN VALVES UNLESS OTHERWISE SPECIFIED OR REQUIRED FOR SPECIAL INSTALLATION OF FLOW CONTROL.

15030 INSULATION:

SCOPE: FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO INSTALL INSULATION MATERIAL TO DUCTWORK, PIPES AS INDICATED ON DRAWINGS AND AS SPECIFIED HEREIN. THIS SECTION SETS FORTH PRODUCTS AND METHODS OF INSTALLATION FOR PLUMBING, AIR CONDITIONING, HEATING, AND VENTILATION SYSTEMS. FLAME-SPREAD INDEX OF LESS THAN 25 AND SMOKE DEVELOPED RATING OF LESS THAN 50.

15030.1 DUCT INSULATION:

1. ALL CONCEALED SUPPLY AND RETURN DUCT WORK SHALL BE EXTERNALLY WRAPPED WITH 2" THICK - 2 PCF DENSITY FIBERGLASS (FOIL BACKING), WIRING IN PLACE WITH 18 GAUGE GALVANIZED WIRE, 18" O.C. (R-8)
2. EXTERIOR DUCTWORK TO BE LINED WITH 2" ACOUSTICAL DUCT LINER (3 PCF) (R-8).
3. LINE DUCTWORK WITHIN 10' OF FAN W/ 2" ACOUSTICAL DUCT LINER (3 PCF) (R-8).

15030.2 PIPE INSULATION:

1. INSULATE CONDENSATE DRAIN PIPING WITH ASJ/SSL II 1" THICK FIBERGLASS PIPE INSULATION. (R-3) MANVILLE PIPE INSULATION OR OWENS-CORNING PIPE INSULATION. ALL INSULATION SHALL BE INSTALLED AS DESCRIBED HEREIN AND SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE TRADE PRACTICES AND MANUFACTURERS RECOMMENDATIONS.
2. INSULATE DOMESTIC COLD/HOT/ RECIRCULATING WATER PIPING WITH ASJ/SSL II 1" THICK FIBERGLASS PIPE INSULATION. (R3) MANVILLE PIPE INSULATION OR OWENS-CORNING PIPE INSULATION. ALL INSULATION SHALL BE INSTALLED AS DESCRIBED HEREIN AND SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE TRADE PRACTICES AND MANUFACTURERS RECOMMENDATIONS.
3. REFRIGERANT PIPING (SUCTION) 1", (R2) CLOSED CELLULAR FOAM RUBBER.

15040 WATER SYSTEMS:

SCOPE: DETERMINE IN ADVANCE OF CONSTRUCTION, THE LOCATION OF ALL PIPING SLEEVES, HANGERS, FLOW LINE ELEVATION, ETC. INSTALL PIPING SUBSTANTIALLY AS INDICATED, PARALLEL WITH THE BUILDING WALLS, UNLESS INDICATED OTHERWISE. PROVIDE PRV WHERE INCOMING PRESSURE EXCEEDS 80 PSI.

15040.1 DOMESTIC WATER PIPING:

1. DOMESTIC WATER PIPING (ABOVE GROUND): WATER PIPING SHALL BE FLOWGUARD CPVC PIPING (UNO).

PIPING SIZES	PIPING TYPE
1/2" - 3/4"	FLOWGUARD GOLD CPVC PIPING
OR 1/2" - 3/4"	CROSS-LINKED POLYETHYLENE (PEX) PIPING*
1" - 2"	FLOWGUARD GOLD CPVC PIPING
2-1/2" - 8"	CORZAN CPVC PIPING

* PEX PIPING MAY ONLY BE SUBSTITUTED IN LIEU OF CPVC PIPING (HOT & COLD) AT FINAL CONNECTION (i.e. HOMERUNS) FROM MANIFOLDS TO GUEST ROOM PLUMBING FIXTURES. ALL OTHER DOMESTIC WATER PIPING, INCLUDING ALL PORTIONS OF THE DOMESTIC HOT WATER RECIRCULATION SYSTEM TO BE CPVC OR COPPER (SEE NOTE #6 BELOW).

2. DOMESTIC WATER PIPING (BELOW GROUND): COLD WATER PIPING SHALL BE FLOWGUARD CPVC PIPING. CONTRACTOR TO PROVIDE TRACER WIRE WITH ALL CPVC UNDERGROUND WATER PIPING.
3. HOT WATER TO BE LEFT FITTING AT ALL LOCATIONS.
4. PROVIDE FLOWGUARD FITTINGS, ADAPTERS, AND CONNECTORS. CONTRACTOR TO USE FLOWGUARD RECOMMENDED SOLVENTS AND CPVC CEMENTS. CONTRACTOR TO ADHERE TO MANUFACTURERS RECOMMENDED INSTALLATION METHODS.
5. PEX PIPING TO BE RATED FOR COLD AND HOT WATER APPLICATIONS. PEX PIPING TO COMPLY WITH ASTM F876/F877/F2023. PEX FITTINGS TO BE BRASS OR POLYSULFONE BARBED CRIMP RING STYLE CONFORMING TO ASTM F877.
6. CONTRACTOR MAY SUBSTITUTE COPPER TYPE 'L' FOR ANY PORTION OF THE DOMESTIC WATER SYSTEM(S).

15040.2 TEST AND INSPECTION:

1. DOMESTIC WATER PIPING SHALL BE PRESSURE TESTED AND PROVEN TIGHT WITH A MINIMUM OF 100 PSI HYDROSTATIC TEST. PRIOR TO SETTING FIXTURES, FLASH CIRCUITS, TEST, THEN BACKFILL.
2. NOTIFY ARCHITECT PRIOR TO TESTING. FINAL APPROVAL SHALL BE BY THE CITY INSPECTOR.

15050 WASTE WATER SYSTEMS:

SCOPE: DETERMINE IN ADVANCE OF CONSTRUCTION LOCATION OF ANY AND ALL EXISTING WASTE PIPING UNDERGROUND ON SITE, AND IN THE ADJOINING STREETS. PIPING WILL BE AS INDICATED AND PARALLEL WITH BUILDING UNLESS OTHERWISE DIRECTED. FURNISH AND INSTALL A COMPLETE SANITARY WASTE SYSTEM, INCLUDING CONNECTION TO CITY SEWERS AND BUILDING PLUMBING FIXTURES.

15050.1 SOIL AND WASTE INSTALLATION:

1. BURY ALL EXTERIOR SOIL LINES A MINIMUM OF 18" BELOW FINISHED GRADE.
2. SLOPE HORIZONTAL SOIL AND WASTE PIPES UNDER BUILDING 1/4" PER FOOT. SLOPE SHALL BE UNIFORM AND FREE OF DIPS, TRAPS, ETC.
3. ALL VENTS TO BE LOCATED A MINIMUM OF 10' FROM ANY OUTSIDE AIR INTAKE.
4. NOTIFY ENGINEER IMMEDIATELY IF UPPER MANHOLE RIM IS ABOVE FINISHED FLOOR. CONTRACTOR TO FIELD VERIFY.
5. UNDERGROUND NONMETALLIC SANITARY DRAINAGE PIPING SHALL BE INSTALLED WITH INSULATED COPPER TRACER WIRE. PER LOCAL CODE.

15050.2 PIPING:

1. STANDARD WEIGHT NO-HUB CAST IRON COATED INSIDE AND OUT.
2. NO-HUB CAST IRON FITTINGS.
3. UNDERGROUND CAST IRON PIPE SHALL BE SLEEVED WITH A MINIMUM OF 8 MIL POLYETHYLENE SLEEVE AND SURROUNDED BY A MINIMUM OF 6 INCHES OF SAND.

15050.3 TESTS AND INSPECTIONS

1. TEST SEWER, WASTE AND VENT PIPING UNDER A WATER PRESSURE EQUIVALENT TO THE HEIGHT OF THE HIGHEST VENT FOR NO LESS THAN 6 HOURS.
2. NOTIFY THE ARCHITECT PRIOR TO TESTING. APPROVAL WILL BE BY THE ARCHITECT, CITY INSPECTOR OR BOTH AS DIRECTED.

15055 OTHER PIPING SYSTEMS

1. CONDENSATE DRAIN (CD) & DRAIN (D) PIPING SHALL BE COPPER TYPE 'M' HARD DRAWN PIPE TRAPPED & VENTED EQUIPMENT, SLOPE 1/8"/FT, PROVIDE CLEANOUT CAP AT ENDS OF PIPE.
2. A. FUEL GAS PIPING ABOVE GROUND 2" AND SMALLER BLACK STEEL SCHEDULE 40 W/ CLASS 150 MALLEABLE IRON THREADED FITTINGS. PROVIDE SUPPORT EVERY 6'.

   B. FUEL GAS PIPING ABOVE GROUND 2 1/2" AND LARGER, BLACK STEEL SCHEDULE 40 W/ WROUGHT STEEL BUTTWELDED FITTINGS. PROVIDE SUPPORT EVERY 10'.

   C. FUEL GAS PIPING UNDERGROUND (NOT UNDER BUILDING) POLYETHYLENE PE 3406 W/ ANODELESS RISERS.
3. ROOF/DRAIN PIPING SHALL BE STANDARD WEIGHT NO HUB CAST IRON OVERFLOW.

15060 PLUMBING SPECIALTIES:

SCOPE: PROVIDE NEW FIXTURES, DRAINS, AND OTHER PLUMBING EQUIPMENT AS SPECIFIED HEREIN AND ON PLANS AND INSTALL TO OPERATE AS INTENDED.

15060.1 CLEANOUTS:

1. INTERIOR FINISHED FLOORS OR SIDEWALKS.
2. CONCRETE AND TILE FLOORS: "ZURN" A-1400-2 WITH SCORIATED NICKEL BRONZE TOP.
3. INTERIOR FINISHED WALLS: "ZURN" Z-1445-1.
4. OUTSIDE YARD CLEANOUTS: "ZURN" Z-1450-6 WITH 12"X12" POURED CONCRETE PAD AT GRADE.

NOTE: PROVIDE ALL CLEANOUTS WITH HEAVY THREADED BRONZE PLUGS.

15070 AIR DISTRIBUTION

WORK SPECIFIED HEREIN: FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO INSTALL THE AIR DISTRIBUTION SYSTEM AND RELATED ITEMS IN ACCORDANCE WITH LATEST EDITION "SMACNA" STANDARDS AND/OR LOCAL CODE REQUIREMENTS AS SPECIFIED HEREIN AND INDICATED ON PLANS. (WHICHEVER IS MORE STRINGENT) IN ACCORDANCE WITH UL181A OR 181B. FLEXIBLE DUCT WILL BE CLASS 1 (UL 181). ALL MATERIALS, PRODUCTS AND SEALING TO BE IN ACCORDANCE WITH UL 181A OR UL 181B.

15070.1 DUCTWORK:

THE DUCTWORK SHALL BE FABRICATED AND INSTALLED BY SKILLED MECHANICS IN A WORKMAN LIKE MANNER USING THE BEST PRACTICES OF THE TRADE AND BE MADE OF GALVANIZED SHEET METAL "DUCT SHEET" SIZED FROM THE FOLLOWING TABLE:

DIAMETER OR GREATEST DUCT DIMENSION	U.S. GAUGE FOR GALVANIZED	1"X 18 GA DUCT SUPPORT	TRAVERSE JOINTS AND GRAZING
UP TO 12"	24	10' ON CENTER	S-SLIP DRIVE SLIP 1" POCKET LOCK ON 8' CENTER.
UP TO 30"	22	10' ON CENTER	S-SLIP, 1" POCKET LOCK ON 8' CENTERS

15070.2 HVAC DUCT SMOKE DETECTORS:

IN AIR MOVING SYSTEMS SUPPLYING AIR IN EXCESS OF 2000 CFM TO AN ENCLOSED SPACE, PROVIDE LISTED, COMPATIBLE SMOKE DETECTORS MOUNTED RIGIDLY IN THE DUCT IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS TO AUTOMATICALLY SHUT OFF THE SYSTEM WITHIN 30 SECONDS BY INTERRUPTING THE POWER SOURCE OF THE AIR MOVING EQUIPMENT. DUCT DETECTOR SHALL ACTIVATE A VISIBLE AND AUDIBLE SIGNAL NORMALLY OCCUPIED LOCATIONS. WHERE FIRE DETECTION OR ALARM SYSTEMS ARE PROVIDED, THE SMOKE DETECTORS SHALL BE SUPERVISED BY SUCH SYSTEMS. SMOKE DETECTORS SHALL BE READILY ACCESSIBLE INCLUDING ACCESS DOORS, AND SHALL BE PERMANENTLY LABELED. PROVIDE L.E.D. INDICATOR LIGHT @ CEILING UNDER THE PROTECTED UNIT. INSTALL IN ACCORDANCE WITH 2006 IMC, SECTION 606 AND NFPA 72.

15070.3 HVAC IDENTIFICATION:

PROVIDE A SECURELY FASTENED NAME PLATE OF 1/16" THICK BLACK BAKELITE WITH ENGRAVED WHITE CORE LETTERS AND 4 EDGE BEVEL, 2 1/2"X 3/4" PERMANENTLY IDENTIFYING EACH UNIT AND AREA SERVED.

15070.4 AIR BALANCE:

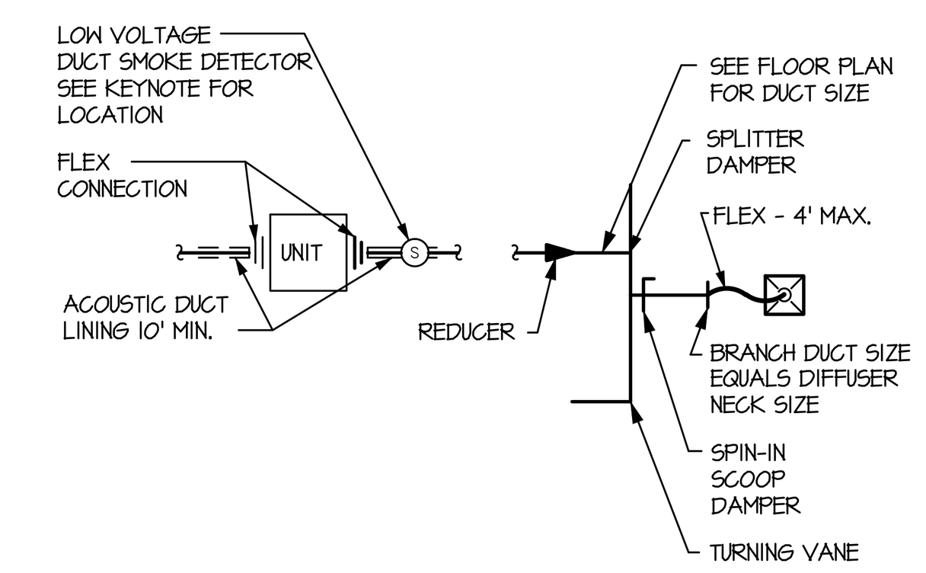
PROVIDE COMPLETE AIR BALANCE BY INDEPENDENT AABC OR NEBB CONTRACTOR AND PROVIDE REPORT TO OWNER AND ENGINEER, AND FOR REVIEW BY CITY IN ACCORDANCE WITH IMC 403.3.4 AND CMC 303.6.

15080 CONTROL:

WORK SPECIFIED HEREIN: FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES TO INSTALL A COMPLETE ELECTRICAL CONTROL SYSTEM AS SPECIFIED HEREIN, AND AS SHOWN ON PLANS.

TYPICAL SYMBOLS LIST

NOTE: NOT ALL MAY APPLY



DUCT CONSTRUCTION STANDARD

NTS

- DUCT UP / DOWN
- $ EVAPORATIVE COOLER WALL SWITCH
- EXHAUST
- —L/S— LIQUID SUCTION LINES
- RETURN GRILLE
- SUPPLY DIFFUSER (CD) 4-WAY THROW CFM
- SUPPLY DIFFUSER (CD) 3-WAY THROW CFM
- SUPPLY DIFFUSER (CD) 2-WAY THROW CFM
- (T) THERMOSTAT MOUNTED @ +4'-0" AFF
- E EXISTING
- E/R EXISTING TO BE RELOCATED
- R RELOCATED
- D DEMOLITION OF EXISTING FIXTURE
- N NEW, MATCH EXISTING
- FBO FURNISHED BY OTHERS
- —CD— CONDENSATE DRAIN (CD)
- —D— DRAIN (D)
- DRAIN VALVE AT 4'-0" AFF WITH HOSE END
- —CW— EXISTING COLD WATER
- —HW— EXISTING HOT WATER
- —S— EXISTING SOIL/WASTE
- —V— EXISTING VENT PIPING
- DOMESTIC COLD WATER (DCW)
- DOMESTIC HOT WATER (DHW)
- HOT WATER RETURN (HWR)
- —TW— TEMPERED WATER (TW)
- HOSE BIBB WITH VACUUM BREAKER (HB W/ VB)
- GAS COCK & DIRT LEG
- —G— GAS PIPING
- POINT OF CONNECTION
- PIPE DOWN
- PIPE "T" DOWN
- PIPE UP
- SHUT-OFF VALVE (SOV)
- SHUT-OFF VALVE IN CONCRETE YARD BOX WITH CAST IRON COVER
- SHUT-OFF VALVE ABOVE CEILING WITH ACCESS PANEL
- 4 B.V. MANUAL BALANCING VALVE (B.V.) INSTALL IN ACCESSIBLE LOCATION.
- SOIL/WASTE
- —GW— GREASY WATER
- SURFACE CLEAN OUT (SCO)
- 2-WAY SURFACE CLEAN OUT (SCO)
- UNION
- VENT PIPING (V)
- VENT THRU ROOF (VTR) LOCATE 10' FROM FRESH AIR SOURCE
- WALL CLEAN OUT (WCO)

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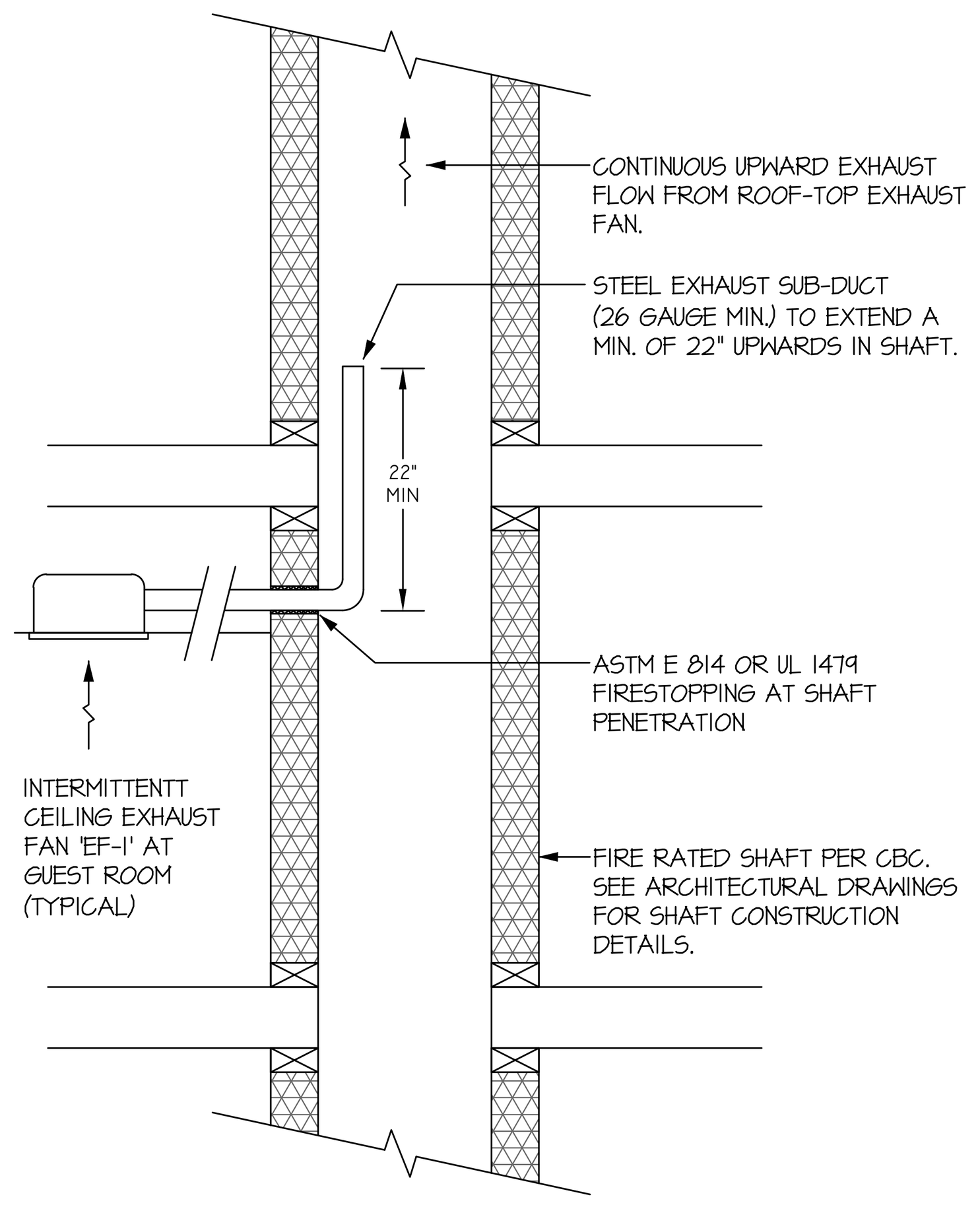
JOB NUMBER
TEA#15026

DATE
07-24-2015

MECHANICAL & PLUMBING SPECIFICATIONS

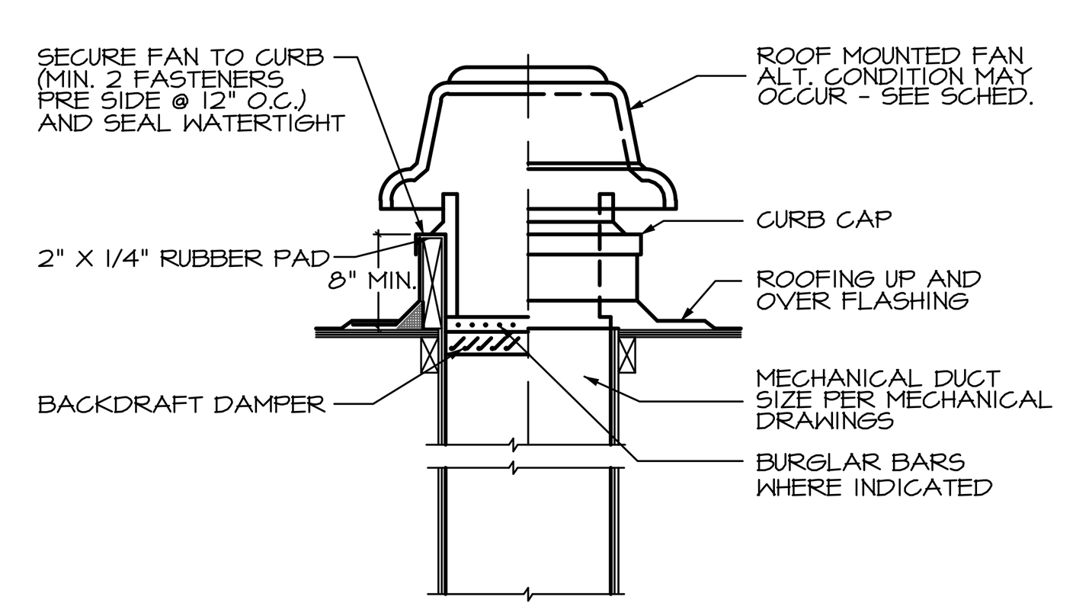
MPS



NOTE:
PER IMC 716.5.3 (EXCEPTION 1: 1.1) FIRE DAMPERS ARE NOT REQUIRED AT PENETRATIONS OF SHAFTS.
PER IMC 909.11 SMOKE DAMPERS ARE NOT REQUIRED AT PENETRATIONS OF SHAFTS IF 22" OF DUCTWORK IS MINIMUM 26 GAUGE AND ROOF-TOP FANS RUN CONTINUOUSLY.

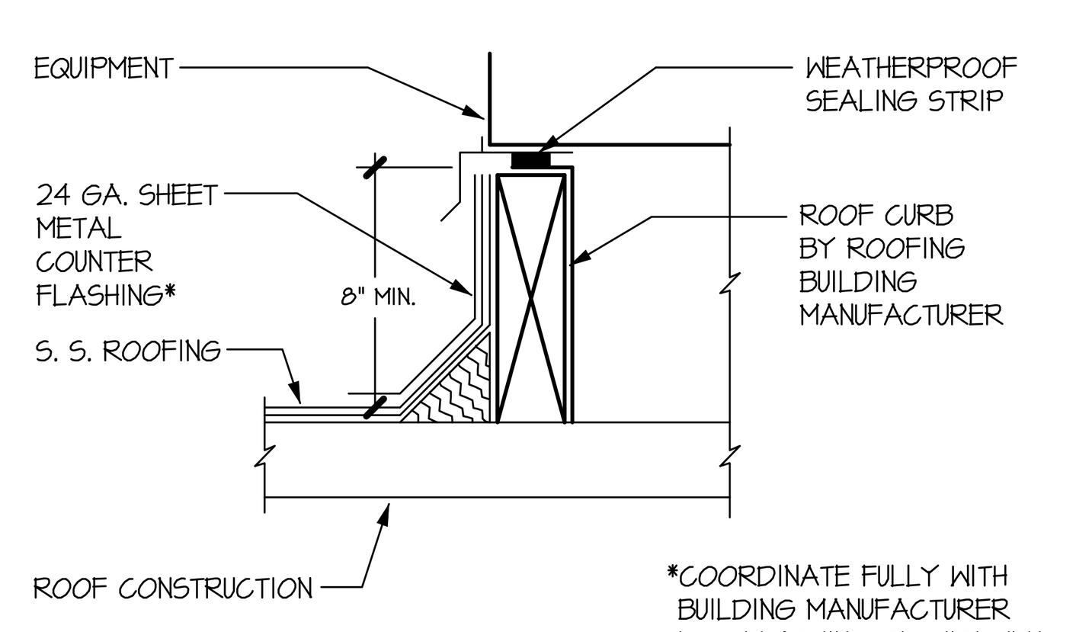
SCALE N.T.S.

EXHAUST SHAFT DETAIL: GUEST ROOMS



MD 0005

ROOF MTD. EXHAUST FAN DETAIL NTS



*COORDINATE FULLY WITH BUILDING MANUFACTURER FOR FLASHING REQUIREMENTS

MD 0001

EQUIPMENT ROOF MOUNTING DETAIL NTS

MECHANICAL GENERAL NOTES:

SEE ARCHITECTURAL DRAWINGS FOR ANY NECESSARY SCREENING OF EQUIPMENT.

SEE ELECTRICAL DRAWINGS FOR WIRING.

CONTRACTOR SHALL MAKE AVAILABLE FOR CITY INSPECTORS REVIEW THE AIR BALANCE REPORT.

MECHANICAL EQUIPMENT LIST:

- CD-1 TITUS SERIES OMNI CEILING DIFFUSER WITH OBD, STEEL CONSTRUCTION, LAY-IN, ROUND NECK ADAPTOR, OFF-WHITE. 24"x24" MODULE SIZE.
- CD-2 TITUS SERIES OMNI CEILING DIFFUSER WITH OBD, ALUMINUM CONSTRUCTION, GYP. BOARD, ROUND NECK ADAPTOR, OFF-WHITE. 12"x12" MODULE SIZE.
- SWS TITUS SERIES 272 FS SIDEWALL SUPPLY, SURFACE, STEEL CONSTRUCTION, OBD.
- LD-1 TITUS SERIES ML-39 LINEAR SLOT DIFFUSER, (4) 1" SLOTS, PROVIDE PLENUM AND SURFACE MOUNT.
- LR-1 TITUS SERIES ML-39 LINEAR SLOT RETURN, (6) 1" SLOTS, PROVIDE PLENUM AND SURFACE MOUNT.
- RG-1 TITUS SERIES 350 RL RETURN GRILLE, 3/4" SPACING, LAY-IN, STEEL CONSTRUCTION.
- RG-2 TITUS SERIES 350 RL RETURN GRILLE, 3/4" SPACING, GYP. BOARD, STEEL CONSTRUCTION.
- TG-1 TITUS SERIES 350 RL TRANSFER GRILLE, 3/4" SPACING, LAY-IN, STEEL CONSTRUCTION.
- L-1 RUSKIN ELF375 WALL LOUVER WITH BIRD SCREEN, COORDINATE WITH ARCHITECT FOR COLORS, AND LOCATIONS.

EXHAUST FAN SCHEDULE:

TAG	MAKE	MODEL	FLOW (CFM)	ESP (IN. WC)	STYLE	MOTOR (WATTS/HP)	ELECTRICAL (VOLTAGE)	WEIGHT (LBS)	SONES	NOTES:
EF-1	BROAN	QTR110	50	0.25"	CEILING FAN	FRAC. HP	120V - 1Ø	12	0.8	1,4,6
EF-2	GREENHECK	G-090-D	300-400	0.5"	CENT. ROOF DIRECT DRIVE	1/15 HP	120V - 1Ø	50	7.4	1,2,3
EF-3	GREENHECK	G-080-D	150-200	0.5"	CENT. ROOF DIRECT DRIVE	1/20 HP	120V - 1Ø	50	7.6	1,2,3
EF-4	GREENHECK	SP-A125	100	0.125"	CEILING FAN	53 W	120V - 1Ø	12	1.8	1,4,6
EF-5	GREENHECK	SP-A390	350	0.25"	CEILING FAN	135 W	120V - 1Ø	24	5.7	1,5,6

NOTES:
1. INSTALL UNIT PER MANUFACTURER'S RECOMMENDATIONS
2. ACCESSORIES: FACTORY ROOF CURB, STD. DISC. PREWIRED, BACKDRAFT DAMPER, SOLID-STATE SPEED CONTROLLER.
3. FAN TO RUN CONTINUOUSLY.
4. PROVIDE MANUAL WALL SWITCH
5. PROVIDE THERMOSTATIC CONTROLS
6. ACCESSORIES: BACKDRAFT DAMPER, VIBRATION ISOLATORS, SOLID-STATE SPEED CONTROLLER.

100% OSA MAKE-UP AIR UNIT SCHEDULE:

TAG	MANUF.	MODEL NUMBER	SUPPLY FAN			COOLING CAPACITY				HEATING CAPACITY (NATURAL GAS)				ELECTRICAL (208V-3PH)			WEIGHT (LBS)	NOTES:
			CFM	ESP	FAN (HP)	TOT.	SEN.	EAT	LAT	INPUT	OUTPUT	EAT	LAT	FLA	MCA	MOCP		
MUA-1	AAON	RN-020-8-0-EB09-384	5600	1.5"	5.0	251 MBH	251 MBH	115F/71F	70F/55F	405 MBH	328 MBH	32F	85F	88	95	125	2900	1,2

NOTES:
1. INSTALL UNIT PER MANUFACTURER'S RECOMMENDATIONS
2. PROVIDE: FACTORY ASSEMBLED 30" HIGH INSULATED ADAPTOR CURB/PLENUM, INTEGRAL NON-FUSED DISCONNECT SWITCH, STAINLESS STEEL DRAIN PAN, MERV-7 PRE-FILTER, MERV-12 FINAL FILTER, DUCT MOUNTED SMOKE DETECTOR.
3. CONTRACTOR TO PROVIDE COMPLETE CONTROLS SYSTEM FOR CONSTANT SUPPLY AIR TEMPERATURE CONTROL. PROVIDE ORION WATTMASTER CONTROLLER, DUCT AND SPACE TEPERATURE SENSORS AS REQUIRED FOR A COMPLETE OPERATIONAL SYSTEM.

SPLIT-SYSTEM HEAT PUMP SCHEDULE:

TAG	MANUF.	MODEL NUMBER		TOT. COOLING CAPACITY (MBH)	SEN. COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	AIR-FLOW @ 0.5" ESP (CFM)	AIR-HANDLER ELEC. (208V-1PH) (FLA/MCA/MOCP)	COND. UNIT ELEC. (208V-1PH) (FLA/MCA/MOCP)	EFFICIENCY (SEER/EER/HSPF)	AIR-HANDLER WEIGHT (LBS)	COND. UNIT WEIGHT (LBS)	NOTES:
		AIR HANDLER	COND. UNIT										
AH/HP-2	CARRIER	FV4CNF003L00	25HBC524A003	19.6	18.79	18.67	800	4.3 / 5.4 / 15	13.3 / 16.5 / 25	16.0 / 12.5 / 9.0	150	233	1,2,3,4,5
AH/HP-3	CARRIER	FV4CNB005L00	25HBC536A003	29.49	28.44	26.72	1200	4.3 / 5.4 / 15	17.9 / 22.1 / 35	15.5 / 12.5 / 8.5	172	257	1,2,3,4,5
AH/HP-3.5	CARRIER	FV4CNB005L00	25HBC542A003	35.15	33.62	33.38	1400	4.3 / 5.4 / 15	22.3 / 27.6 / 40	15.5 / 13.0 / 8.5	172	290	1,2,3,4,5
AH/HP-5	CARRIER	FV4CNB006L00	25HBC560A003	47.93	46.19	45.25	2000	6.8 / 8.5 / 15	27.6 / 34.2 / 50	14.5 / 12.0 / 8.5	207	345	1,2,3,4,5

NOTES:
1. DESIGN CONDITIONS: SUMMER = 80F/67F EAT (DB/WB), 115F AMBIENT WINTER = 70F EAT (DB), 32F (DB) AMBIENT
2. INSTALL UNIT PER MANUFACTURER'S RECOMMENDATIONS
3. CONDENSING UNITS: PROVIDE VIBRATION ISOLATORS, ANTI-SHORT CYCLE TIMER, TIME DELAY RELAY KIT.
4. AIR-HANDLERS: PROVIDE PROGRAMABLE THERMOSTAT, SPRING TYPE VIBRATION ISOLATORS, FILTER AND FILTER RACK.

PTAC SCHEDULE:

MARK	MANUF.	MODEL NUMBER	COOLING (MBH)	HEATING (MBH)	EFFICIENCY EER/COP	AIR-FLOW (HI/LO)	ELECTRICAL (208V-1PH) (MCA/MOCP)	SOUND (DBA)	WEIGHT (LBS)	NOTES:
PTAC-1	LG	LP123HD3B	12.0	10.6	11.9 / 3.5	420 / 353	19.5 / 20	50	106	1,2

NOTES:
1. INSTALL UNIT PER MANUFACTURER'S RECOMMENDATIONS,.
2. PROVIDE WALL SLEEVE, ARCHITECTURAL GRILLE, LEVELING LEG KIT, SUB-BASE, REMOTE T-STAT WITH 2-SPEED FAN CONTROL. VERIFY ACCESSORY AND CONTROL OPTIONS WITH OWNER PRIOR TO CONSTRUCTION.

△1

MINI-SPLIT SCHEDULE:

TAG	MANUF.	MODEL NUMBER		NOMINAL CAPACITY (MBH)	AIR-FLOW (LOW/MED/HIGH)	COND. UNIT ELEC. (208V-1PH) (FLA/MCA/MOCP)	EFFICIENCY (SEER/EER/HSPF)	AIR-HANDLER WEIGHT (LBS)	COND. UNIT WEIGHT (LBS)	NOTES:
		AIR HANDLER	COND. UNIT							
DAH-1/CU-1	LG	LSN121HSV3	LSU121HSV3	12.0	212/272/353	8.7 / 10 / 15	21.5 / 12.5 / 11.0	23	75	1,2
DAH-1.5/CU-1.5	LG	LCN187HV	LUU187HV	18.0	565/494/424	14.7 / 18.1 / 30	20.0 / 15.0 / 10.1	46	133	1,2,3

NOTES:
1. INSTALL UNIT PER MANUFACTURER'S RECOMMENDATIONS
2. PROVIDE PROGRAMMABLE THERMOSTAT, SPRING-TYPE VIBRATION ISOLATORS (AH), VIBRATION ISOLATION PAD (CU).
3. PROVIDE 'CASSETTE GRILLE (PT-UMC1).

ROOF TOP PACKAGED AIR CONDITIONER SCHEDULE:

MARK	MANUF.	MODEL NUMBER	TOT. COOLING CAPACITY (MBH)	SEN. COOLING CAPACITY (MBH)	AIR-FLOW @ 0.5" ESP (CFM)	OUTSIDE AIR (CFM)	ELECTRIC HEAT STRIP (KW)	ELECTRICAL: 208V-3PH		WEIGHT (LBS)
								MCA	MOCP	
AC-2	CARRIER	50ES-A30	23.4	19.5	1000	-	-	15.8	20	347

NOTES:
1. INSTALL UNIT PER MANUFACTURER'S RECOMMENDATIONS
2. PROVIDE PROGRAMMABLE THERMOSTAT AND SUBBASE (PER IECC REQUIREMENTS), VIBRATION ISOLATORS, ANTI-SHORT-CYCLE TIMER, TIME DELAY RELAY KIT, 8" ROOF CURB. PLACE TEMPERATURE SENSOR IN RETURN DUCT AND LOCATE THERMOSTAT IN MECHANICAL ROOM.
3. PROVIDE DUCT SMOKE DETECTOR IN RETURN DUCT, INTERLOCK WITH AIR MOVING EQUIPMENT TO SHUT UNIT DOWN ON ACTIVATION.
4. DESIGN CONDITIONS: SUMMER = 80F/67F EAT (DB/WB), 115F/71F (DB/WB) AMBIENT

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TEA#

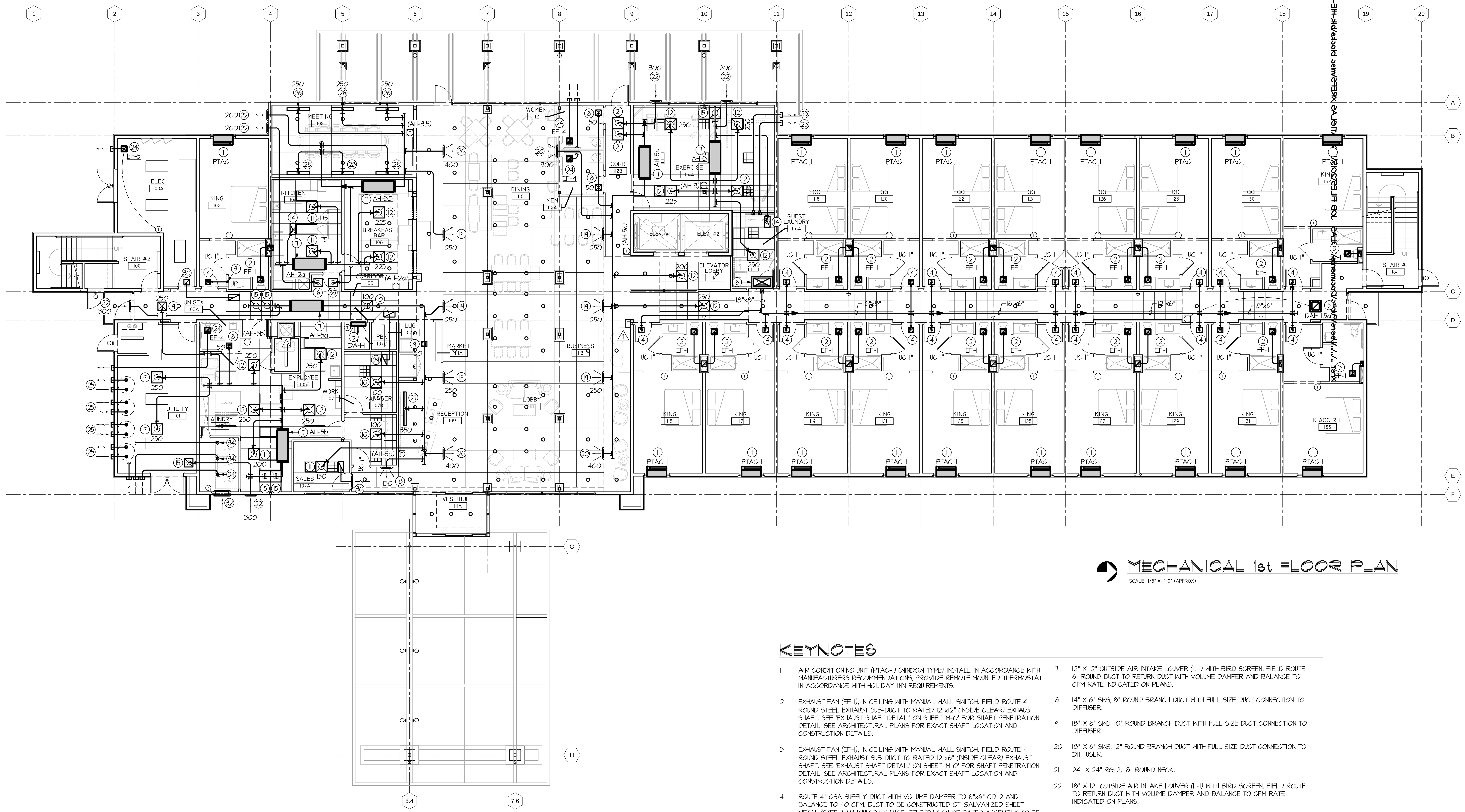
JOB NUMBER
TEA#15026

DATE
07-24-2015

△1 CITY COMMENTS
10-14-2015

MECHANICAL SCHEDULES

M-0



MECHANICAL 1st FLOOR PLAN

SCALE: 1/8" = 1'-0" (APPROX)

KEYNOTES

1 AIR CONDITIONING UNIT (PTAC-1) (WINDOW TYPE) INSTALL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, PROVIDE REMOTE MOUNTED THERMOSTAT IN ACCORDANCE WITH HOLIDAY INN REQUIREMENTS.

2 EXHAUST FAN (EF-1), IN CEILING WITH MANUAL WALL SWITCH. FIELD ROUTE 4" ROUND STEEL EXHAUST SUB-DUCT TO RATED 12"x12" (INSIDE CLEAR) EXHAUST SHAFT. SEE 'EXHAUST SHAFT DETAIL' ON SHEET 'M-0' FOR SHAFT PENETRATION DETAIL. SEE ARCHITECTURAL PLANS FOR EXACT SHAFT LOCATION AND CONSTRUCTION DETAILS.

3 EXHAUST FAN (EF-1), IN CEILING WITH MANUAL WALL SWITCH. FIELD ROUTE 4" ROUND STEEL EXHAUST SUB-DUCT TO RATED 12"x6" (INSIDE CLEAR) EXHAUST SHAFT. SEE 'EXHAUST SHAFT DETAIL' ON SHEET 'M-0' FOR SHAFT PENETRATION DETAIL. SEE ARCHITECTURAL PLANS FOR EXACT SHAFT LOCATION AND CONSTRUCTION DETAILS.

4 ROUTE 4" OSA SUPPLY DUCT WITH VOLUME DAMPER TO 6"x6" CD-2 AND BALANCE TO 40 CFM. DUCT TO BE CONSTRUCTED OF GALVANIZED SHEET METAL (STEEL), MINIMUM 24 GAUGE. PENETRATION OF RATED ASSEMBLY TO BE PROTECTED AS A 'THROUGH PENETRATION' IN ACCORDANCE WITH IMC SECTION 712. FIRESTOPING MATERIAL TO BE TESTED IN ACCORDANCE WITH ASTM E 119, ASTM E 814 OR UL 1479. VERIFY REQUIREMENTS WITH ARCHITECT PRIOR TO CONSTRUCTION.

5 DUCTLESS AIR HANDLER (DAH-#), INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE LIQUID/ SUCTION PIPING, SIZED AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS, FIELD ROUTE TO CORRESPONDING CONDENSING UNIT ON ROOF.

6 36"x18" (INSIDE CLEAR) OUTSIDE AIR SUPPLY SHAFT. SEE ARCHITECTURAL PLANS FOR EXACT SHAFT LOCATION/CONSTRUCTION DETAILS. PROVIDE AN ACCESSIBLE COMBINATION FIRE/SMOKE DAMPER AT ALL PENETRATIONS OF THE RATED SHAFT ASSEMBLY.

7 AIR HANDLING UNIT (AH-#) MOUNTED WITH SPRING TYPE VIBRATION ISOLATORS ON/ WITH RETURN AIR PLENUM WITH FULL SIZE DUCTS AND FLEX CONNECTORS. PROVIDE FULL-SIZE ACCESS PANEL WHERE LOCATED ABOVE HARD-LID CEILING. PROVIDE LIQUID/ SUCTION PIPING, SIZED AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS, FIELD ROUTE TO CORRESPONDING CONDENSING UNIT ON ROOF. DUCT SMOKE DETECTOR IN RETURN DUCT, INTERLOCK WITH AIR MOVING EQUIPMENT TO SHUT UNIT DOWN ON ACTIVATION.

8 6" X 6" CD-2, 6" ROUND NECK, 4-WAY THROW.

9 12" X 12" CD-2, 10" ROUND NECK, 4-WAY THROW.

10 24" X 24" CD-1, 6" ROUND NECK.

11 24" X 24" CD-1, 8" ROUND NECK.

12 24" X 24" CD-1, 10" ROUND NECK.

13 24" X 24" CD-1, 12" ROUND NECK. (1)

14 24" X 12" RG-1, 12" ROUND NECK.

15 24" X 24" RG-1, 18" ROUND NECK.

16 14" X 14" RG-2, 12" ROUND NECK.

17 12" X 12" OUTSIDE AIR INTAKE LOUVER (L-1) WITH BIRD SCREEN. FIELD ROUTE 6" ROUND DUCT TO RETURN DUCT WITH VOLUME DAMPER AND BALANCE TO CFM RATE INDICATED ON PLANS.

18 14" X 6" SWS, 8" ROUND BRANCH DUCT WITH FULL SIZE DUCT CONNECTION TO DIFFUSER.

19 18" X 6" SWS, 10" ROUND BRANCH DUCT WITH FULL SIZE DUCT CONNECTION TO DIFFUSER.

20 18" X 6" SWS, 12" ROUND BRANCH DUCT WITH FULL SIZE DUCT CONNECTION TO DIFFUSER.

21 24" X 24" RG-2, 18" ROUND NECK.

22 18" X 12" OUTSIDE AIR INTAKE LOUVER (L-1) WITH BIRD SCREEN. FIELD ROUTE TO RETURN DUCT WITH VOLUME DAMPER AND BALANCE TO CFM RATE INDICATED ON PLANS.

23 4" ROUND DRYER VENT FROM DRYER VENT BOX TO WALL CAP WITH BACKDRAFT DAMPER (NOT TO EXCEED 25' IN LENGTH WITH 5' PER 90° ELBOW). FIELD COORDINATE INSTALLATION WITH EQUIPMENT MANUFACTURER REQUIREMENTS.

24 EXHAUST FAN (EF-#), IN CEILING WITH FULL SIZE DUCT THRU ROOF TO CAP, MINIMUM OF 10' FROM OUTSIDE AIR INTAKE. FAN TO RUN CONTINUOUSLY U.N.O.

25 CONCENTRIC INTAKE/EXHAUST AT GAS WATER HEATER. INSTALL PER MANUFACTURER'S REQUIREMENTS. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.

26 4'-0" LD-1, 10" ROUND BRANCH DUCT TO PLENUM BOX.

27 6'-0" LD-1, 12" ROUND BRANCH DUCT TO PLENUM BOX.

28 4'-0" LR-1, 10" ROUND BRANCH DUCT TO PLENUM BOX.

29 12" X 24" TG-1 WITH 12" X 12" TRANSFER DUCT WITH 1/2" DUCT INSULATION TO 12" X 24" TG-1 WITH MINIMUM OF 1 ELBOW.

30 12" X 24" TG-1 WITH 12" X 12" TRANSFER DUCT WITH 1/2" DUCT INSULATION TO 12" X 12" TG-1 WITH MINIMUM OF 1 ELBOW.

31 4" ROUND OSA SUPPLY DUCT UP/DOWN TO/FROM ADJACENT LEVEL. SEE SHEET M-1/M-2 FOR CONTINUATION.

32 24" X 24" WALL LOUVER (L-1) WITH MOTORIZED DAMPER. DAMPER TO BE NORMALLY CLOSED AND TO OPEN UPON ACTIVATION OF ANY DRYER.

33 16" X 16" RG-2, 14" ROUND NECK.

34 6" ROUND DRYER VENT TO WALL CAP WITH BACKDRAFT DAMPER. FIELD VERIFY REQUIREMENTS WITH ACTUAL DRYER UNITS BEING SUPPLIED.

NOTE: ALL KEYNOTES MAY NOT BE USED ON THIS SHEET.

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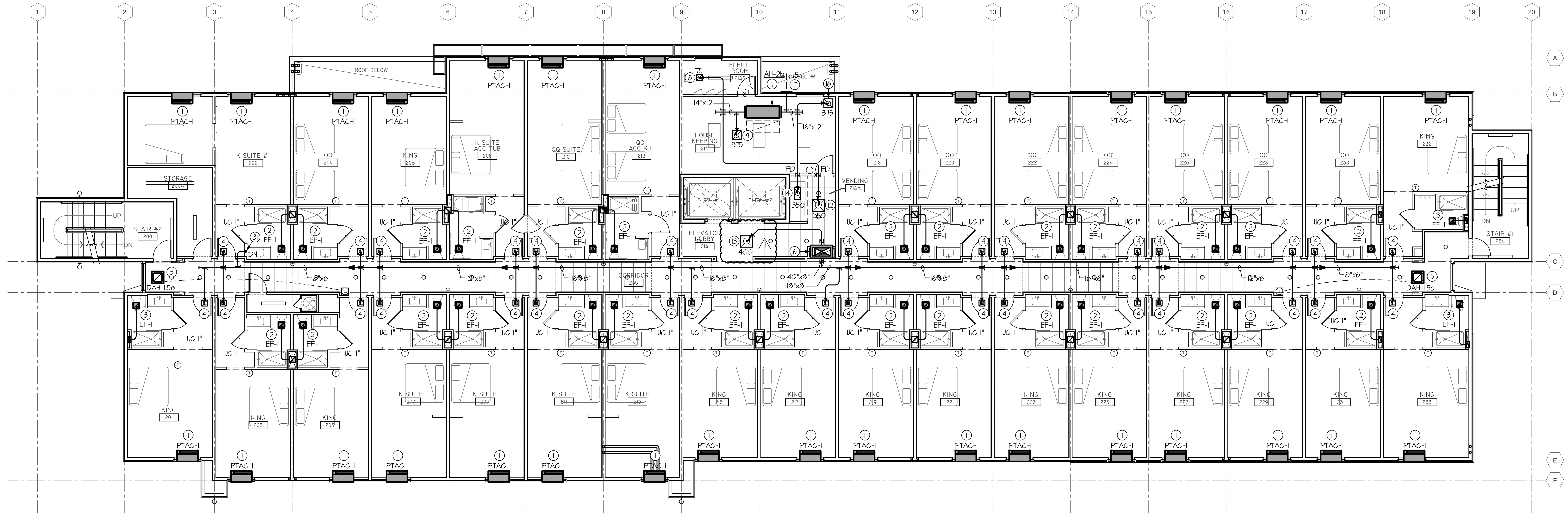
JOB NUMBER TEA#15026

DATE 07-24-2015

(1) CITY COMMENTS 10-14-2015

MECHANICAL 1ST FLOOR PLAN

M-1



MECHANICAL 2nd FLOOR PLAN

SCALE: 1/8" = 1'-0" (APPROX)

KEYNOTES

1 AIR CONDITIONING UNIT (PTAC-1) (WINDOW TYPE) INSTALL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, PROVIDE REMOTE MOUNTED THERMOSTAT IN ACCORDANCE WITH HOLIDAY INN REQUIREMENTS.

2 EXHAUST FAN (EF-1), IN CEILING WITH MANUAL WALL SWITCH. FIELD ROUTE 4" ROUND STEEL EXHAUST SUB-DUCT TO RATED 12"x12" (INSIDE CLEAR) EXHAUST SHAFT. SEE 'EXHAUST SHAFT DETAIL' ON SHEET 'M-0' FOR SHAFT PENETRATION DETAIL. SEE ARCHITECTURAL PLANS FOR EXACT SHAFT LOCATION AND CONSTRUCTION DETAILS.

3 EXHAUST FAN (EF-1), IN CEILING WITH MANUAL WALL SWITCH. FIELD ROUTE 4" ROUND STEEL EXHAUST SUB-DUCT TO RATED 12"x6" (INSIDE CLEAR) EXHAUST SHAFT. SEE 'EXHAUST SHAFT DETAIL' ON SHEET 'M-0' FOR SHAFT PENETRATION DETAIL. SEE ARCHITECTURAL PLANS FOR EXACT SHAFT LOCATION AND CONSTRUCTION DETAILS.

4 ROUTE 4" OSA SUPPLY DUCT WITH VOLUME DAMPER TO 6"x6" CD-2 AND BALANCE TO 40 CFM. DUCT TO BE CONSTRUCTED OF GALVANIZED SHEET METAL (STEEL), MINIMUM 24 GAUGE. PENETRATION OF RATED ASSEMBLY TO BE PROTECTED AS A 'THROUGH PENETRATION' IN ACCORDANCE WITH IMC SECTION 712. FIRESTOPING MATERIAL TO BE TESTED IN ACCORDANCE WITH ASTM E 119, ASTM E 814 OR UL 1479. VERIFY REQUIREMENTS WITH ARCHITECT PRIOR TO CONSTRUCTION.

5 DUCTLESS AIR HANDLER (DAH-#), INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE LIQUID/ SUCTION PIPING, SIZED AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS, FIELD ROUTE TO CORRESPONDING CONDENSING UNIT ON ROOF.

6 36"x18" (INSIDE CLEAR) OUTSIDE AIR SUPPLY SHAFT. SEE ARCHITECTURAL PLANS FOR EXACT SHAFT LOCATION/CONSTRUCTION DETAILS. PROVIDE AN ACCESSIBLE COMBINATION FIRE/SMOKE DAMPER AT ALL PENETRATIONS OF THE RATED SHAFT ASSEMBLY.

7 AIR HANDLING UNIT (AH-#) MOUNTED WITH SPRING TYPE VIBRATION ISOLATORS ON/ WITH RETURN AIR PLENUM WITH FULL SIZE DUCTS AND FLEX CONNECTORS. PROVIDE FULL-SIZE ACCESS PANEL WHERE LOCATED ABOVE HARD-LID CEILING. PROVIDE LIQUID/ SUCTION PIPING, SIZED AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS, FIELD ROUTE TO CORRESPONDING CONDENSING UNIT ON ROOF. DUCT SMOKE DETECTOR IN RETURN DUCT, INTERLOCK WITH AIR MOVING EQUIPMENT TO SHUT UNIT DOWN ON ACTIVATION.

8 6" X 6" CD-2, 6" ROUND NECK, 4-WAY THROW.

9 12" X 12" CD-2, 10" ROUND NECK, 4-WAY THROW.

10 24" X 24" CD-1, 6" ROUND NECK.

11 24" X 24" CD-1, 8" ROUND NECK.

12 24" X 24" CD-1, 10" ROUND NECK.

13 24" X 24" CD-1, 12" ROUND NECK. (1)

14 24" X 12" RG-1, 12" ROUND NECK.

15 24" X 24" RG-1, 18" ROUND NECK.

16 14" X 14" RG-2, 12" ROUND NECK.

17 12" X 12" OUTSIDE AIR INTAKE LOUVER (L-1) WITH BIRD SCREEN. FIELD ROUTE 6" ROUND DUCT TO RETURN DUCT WITH VOLUME DAMPER AND BALANCE TO CFM RATE INDICATED ON PLANS.

18 14" X 6" SWS, 8" ROUND BRANCH DUCT WITH FULL SIZE DUCT CONNECTION TO DIFFUSER.

19 18" X 6" SWS, 10" ROUND BRANCH DUCT WITH FULL SIZE DUCT CONNECTION TO DIFFUSER.

20 18" X 6" SWS, 12" ROUND BRANCH DUCT WITH FULL SIZE DUCT CONNECTION TO DIFFUSER.

21 24" X 24" RG-2, 18" ROUND NECK.

22 18" X 12" OUTSIDE AIR INTAKE LOUVER (L-1) WITH BIRD SCREEN. FIELD ROUTE TO RETURN DUCT WITH VOLUME DAMPER AND BALANCE TO CFM RATE INDICATED ON PLANS.

23 4" ROUND DRYER VENT FROM DRYER VENT BOX TO WALL CAP WITH BACKDRAFT DAMPER (NOT TO EXCEED 25' IN LENGTH WITH 5' PER 90° ELBOW). FIELD COORDINATE INSTALLATION WITH EQUIPMENT MANUFACTURER REQUIREMENTS.

24 EXHAUST FAN (EF-#), IN CEILING WITH FULL SIZE DUCT THRU ROOF TO CAP, MINIMUM OF 10' FROM OUTSIDE AIR INTAKE. FAN TO RUN CONTINUOUSLY U.N.O.

25 CONCENTRIC INTAKE/EXHAUST AT GAS WATER HEATER. INSTALL PER MANUFACTURER'S REQUIREMENTS. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.

26 4'-0" LD-1, 10" ROUND BRANCH DUCT TO PLENUM BOX.

27 6'-0" LD-1, 12" ROUND BRANCH DUCT TO PLENUM BOX.

28 4'-0" LR-1, 10" ROUND BRANCH DUCT TO PLENUM BOX.

29 12" X 24" TG-1 WITH 12" X 12" TRANSFER DUCT WITH 1/2" DUCT INSULATION TO 12" X 24" TG-1 WITH MINIMUM OF 1 ELBOW.

30 12" X 24" TG-1 WITH 12" X 12" TRANSFER DUCT WITH 1/2" DUCT INSULATION TO 12" X 12" TG-1 WITH MINIMUM OF 1 ELBOW.

31 4" ROUND OSA SUPPLY DUCT UP/DOWN TO/FROM ADJACENT LEVEL. SEE SHEET M-1/M-2 FOR CONTINUATION.

32 24" X 24" WALL LOUVER (L-1) WITH MOTORIZED DAMPER. DAMPER TO BE NORMALLY CLOSED AND TO OPEN UPON ACTIVATION OF ANY DRYER.

33 16" X 16" RG-2, 14" ROUND NECK.

34 6" ROUND DRYER VENT TO WALL CAP WITH BACKDRAFT DAMPER. FIELD VERIFY REQUIREMENTS WITH ACTUAL DRYER UNITS BEING SUPPLIED.

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JOB NUMBER
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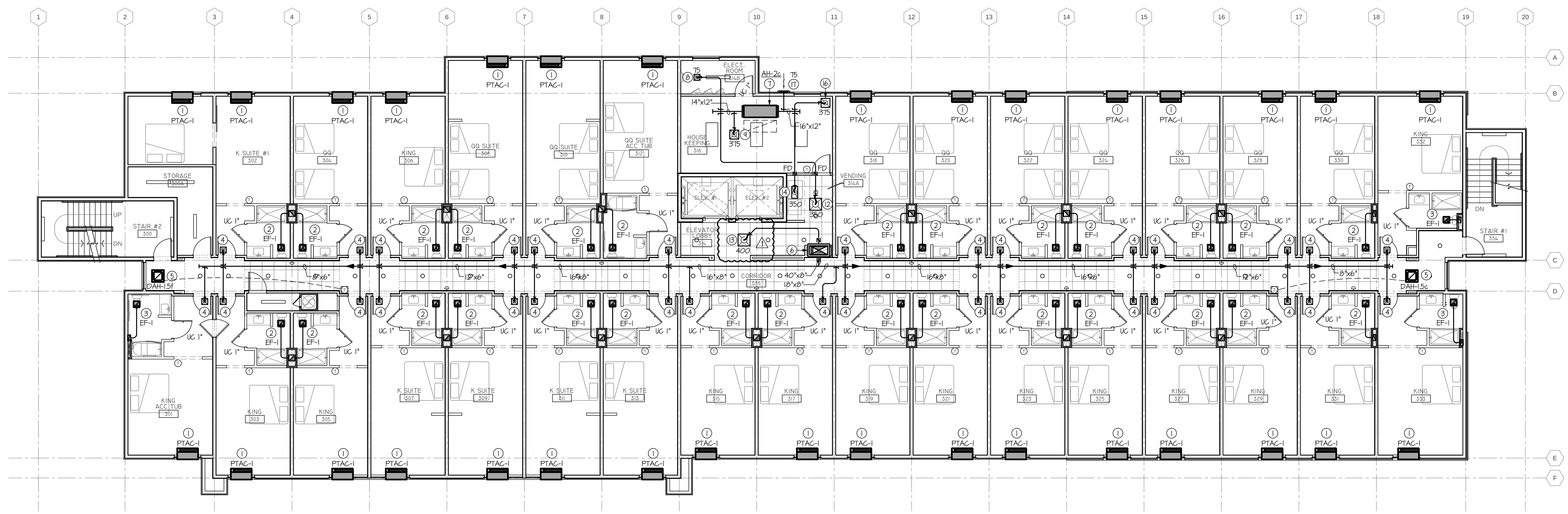
DATE
07-24-2015

(1) CITY COMMENTS
10-14-2015

MECHANICAL
2ND FLOOR PLAN

M-2



MECHANICAL 3rd FLOOR PLAN

SCALE: 1/8" = 1'-0" (APPROX)

KEYNOTES

1 AIR CONDITIONING UNIT (PTAC-1) (WINDOW TYPE) INSTALL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, PROVIDE REMOTE MOUNTED THERMOSTAT IN ACCORDANCE WITH HOLIDAY INN REQUIREMENTS.

2 EXHAUST FAN (EF-1), IN CEILING WITH MANUAL WALL SWITCH. FIELD ROUTE 4" ROUND STEEL EXHAUST SUB-DUCT TO RATED 12"x12" (INSIDE CLEAR) EXHAUST SHAFT. SEE 'EXHAUST SHAFT DETAIL' ON SHEET 'M-0' FOR SHAFT PENETRATION DETAIL. SEE ARCHITECTURAL PLANS FOR EXACT SHAFT LOCATION AND CONSTRUCTION DETAILS.

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6 36"x18" (INSIDE CLEAR) OUTSIDE AIR SUPPLY SHAFT. SEE ARCHITECTURAL PLANS FOR EXACT SHAFT LOCATION/CONSTRUCTION DETAILS. PROVIDE AN ACCESSIBLE COMBINATION FIRE/SMOKE DAMPER AT ALL PENETRATIONS OF THE RATED SHAFT ASSEMBLY.

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8 6" X 6" CD-2, 6" ROUND NECK, 4-WAY THROW.

9 12" X 12" CD-2, 10" ROUND NECK, 4-WAY THROW.

10 24" X 24" CD-1, 6" ROUND NECK.

11 24" X 24" CD-1, 8" ROUND NECK.

12 24" X 24" CD-1, 10" ROUND NECK.

13 24" X 24" CD-1, 12" ROUND NECK. (1)

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15 24" X 24" RG-1, 18" ROUND NECK.

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MECHANICAL
3RD FLOOR PLAN

M-3