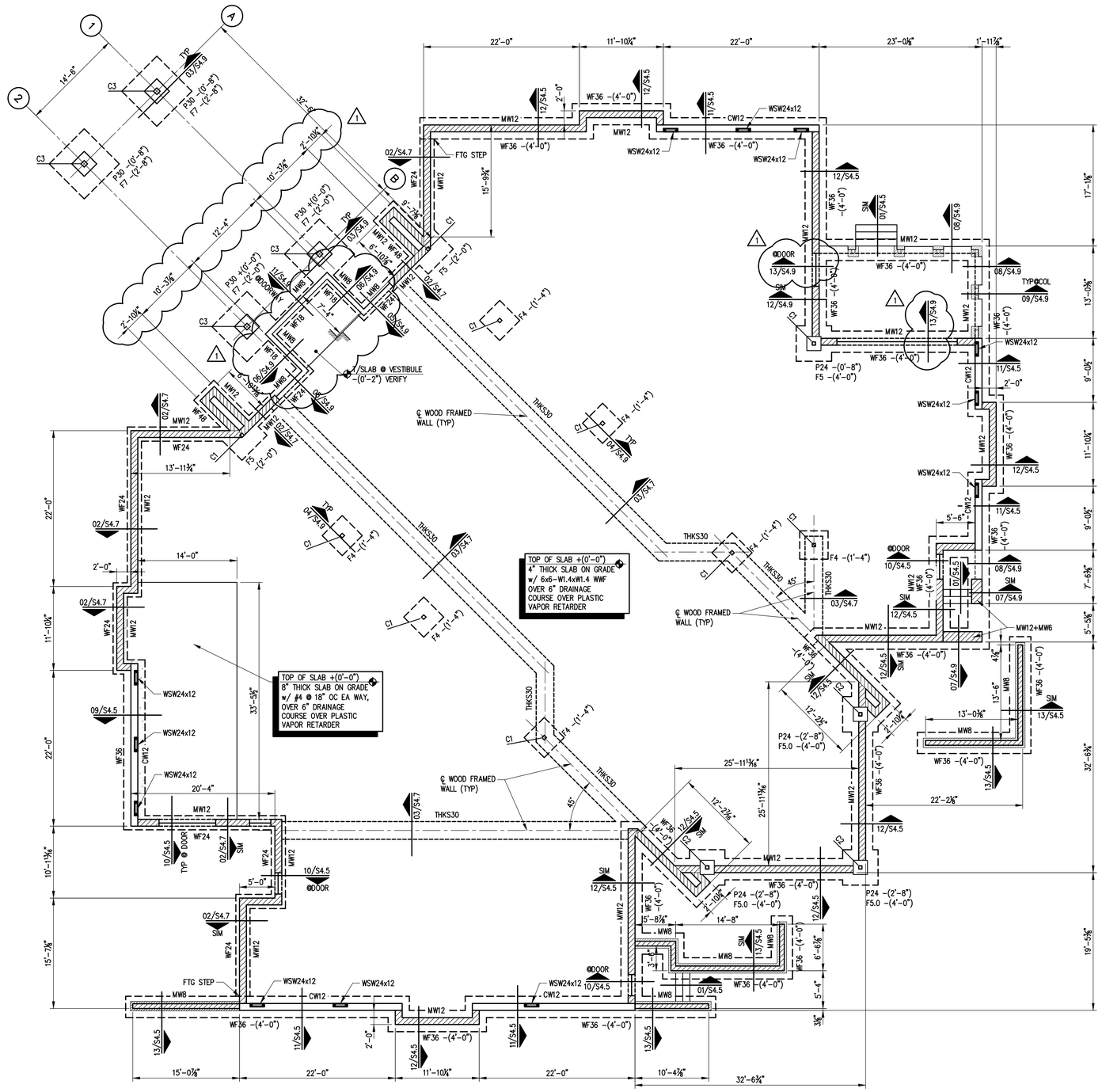


FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

0' 1' 2' 4' 8' 16'

PLAN NORTH

PLAN NOTES

1. ELEVATIONS (±), ARE FROM NOMINAL FIRST FLOOR ELEV +(0'-0"), SEE CIVIL DRAWINGS.
2. SEE S4.1 FOR GENERAL NOTES, S4.2 FOR SPECIAL INSPECTIONS, AND S4.3 FOR SCHEDULES.
3. SEE ARCH DWGS FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
4. "WSW24x12" INDICATES SIMPSON 'STRONG-WALL' WOOD SHEAR WALL. SEE S5.1 FOR DETAILS.
5. TOP OF FOOTING ELEVATION = -2'-0" UNO
6. TOP OF SLAB ELEVATION = +0'-0" UNO
7. TOP OF CONCRETE WALL ELEVATION = +0'-0" UNO
8. TOP OF CMU WALL ELEVATION = VARIES, SEE DETAILS AND ARCH DRAWINGS
9. SEE ARCH, MEP & CIVIL DRAWINGS FOR SLAB SLOPES, DEPRESSIONS, FLOOR DRAINS, FLOOR BOXES AND OTHER SLAB EMBEDDED ITEMS NOT SHOWN HERE.
10. SEE CIVIL DRAWINGS FOR EXTERIOR WALKS, CURBS AND OTHER PAVEMENT.

ISSUE DATE:
08-21-2017 PERMIT/CONSTRUCTION
STAMPING SET 3/2/2018

REVISION:
1 09-30-2017 ESI-001

STATE OF MICHIGAN
C. RODNEY McCOMAS
ENGINEER
NO. 39008
PROFESSIONAL ENGINEER
C. Rodney McComas

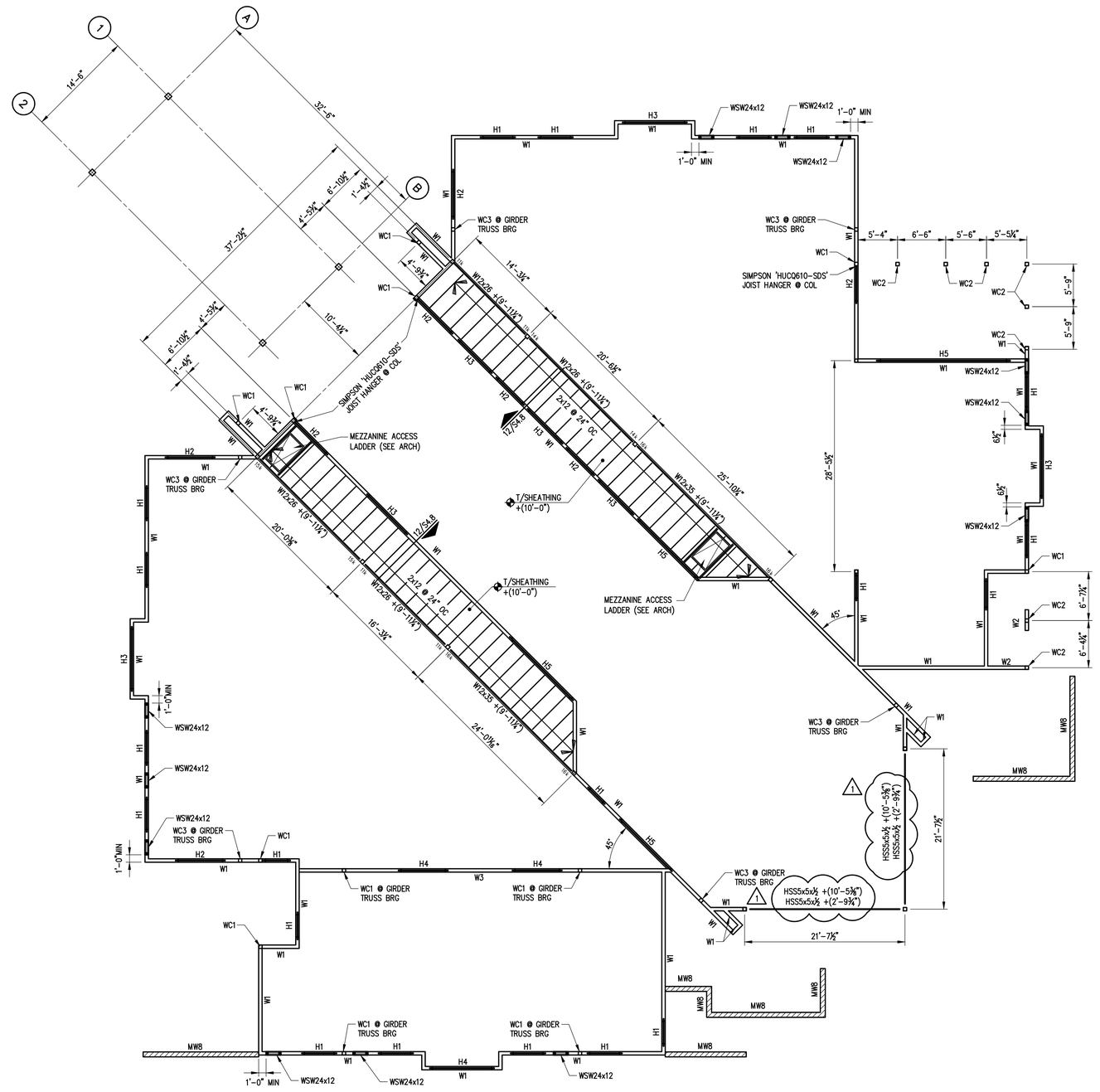
JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
WWW.JSTARCHITECTS.COM
J. STUART TODD, INC.
2919 WELBORN STREET, SUITE 101, DALLAS, TEXAS 75219 | 214.522.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
S1.1

JOB NUMBER: 16238

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.



WALL & MEZZANINE FRAMING PLAN

SCALE: ⅛" = 1'-0"

0' 1' 2' 4' 8' 16'

PLAN NORTH

PLAN NOTES

1. ELEVATIONS ±, ARE FROM NOMINAL FIRST FLOOR ELEV +(0'-0"), SEE CIVIL DRAWINGS FOR ELEVATION WITH RESPECT TO SEA LEVEL.
2. SEE S4.1 FOR GENERAL NOTES, S4.2 FOR SPECIAL INSPECTIONS, AND S4.3 FOR SCHEDULES.
3. SEE ARCH DWGS FOR DIMENSIONS NOT SHOWN.
4. SEE ARCH DWGS FOR OPENING SIZES, LOCATIONS AND ELEVATIONS.
5. "WSW24x12" DENOTES SIMPSON 'STRONG-WALL' WOOD SHEAR WALL. SEE S5.1 FOR DETAILS.

ISSUE DATE:
08-21-2017 PERMIT/CONSTRUCTION
STAMPING SET 3/2/2018

REVISION:
1 09-30-2017 ESI-001

STATE OF MICHIGAN — PROFESSIONAL ENGINEER — REGISTERED
C. RODNEY McCOMAS ENGINEER NO. 39008
SIGNATURE

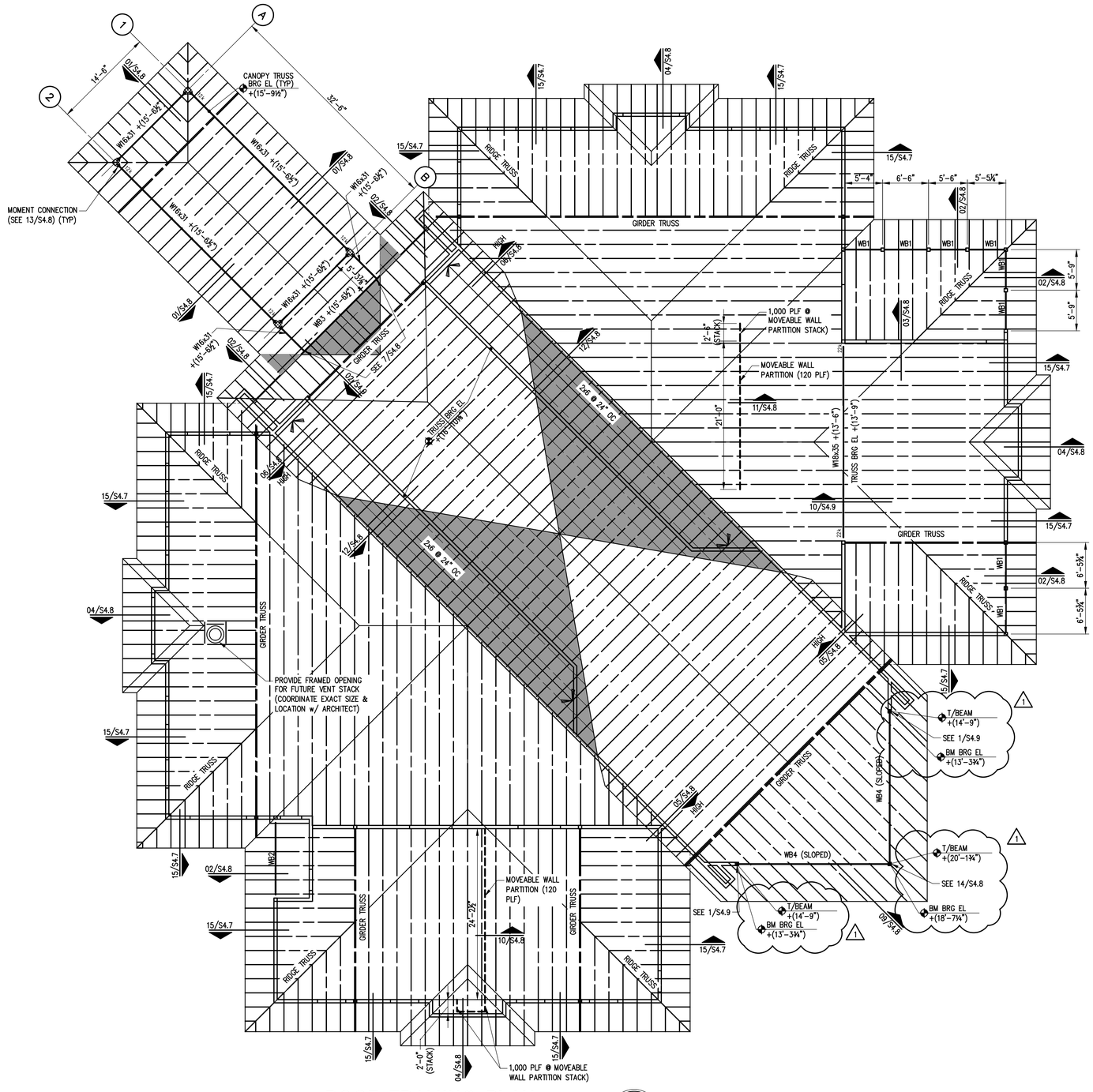
JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
WWW.JSTARCHITECTS.COM
J. STUART TODD, INC.
2919 WELBORN STREET, SUITE 101, DALLAS, TEXAS 75219 | 214.522.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
S2.1

JOB NUMBER: 16238

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.



ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"

PLAN NORTH

PLAN NOTES

1. ELEVATIONS ±, ARE FROM NOMINAL FIRST FLOOR ELEV +(0'-0"), SEE CIVIL DRAWINGS.
2. SEE S4.1 FOR GENERAL NOTES, S4.2 FOR SPECIAL INSPECTIONS, AND S4.3 FOR SCHEDULES.
3. SEE ARCH DWGS FOR DIMENSIONS NOT SHOWN.
4. COORDINATE DECK OPENINGS – EXACT SIZE AND LOCATION, WITH MECH CONTRACTOR AND EQUIPMENT SUPPLIER.
5. PLYWOOD ROOF DECK TO BE 5/8" APA RATED 40/20 SHEATHING w/ PANEL CLIPS SEE TYPICAL NAILING PATTERN DETAIL.
6. (SHADED AREA) INDICATES PORTION OF ROOF w/ OVERBUILD TRUSS FRAMING (SEE 8/S4.8).
7. ROOF FRAMING SHOWN REPRESENTS PREFABRICATED METAL PLATE CONNECTED WOOD ROOF TRUSSES (UNO). MAXIMUM TRUSS SPACING = 24". TRUSS BRG EL. = +12'-0" UNO

ISSUE DATE:

08-21-2017	PERMIT/CONSTRUCTION
STAMPING SET 3/2/2018	

REVISION:

1	09-30-2017 ESI-001

STATE OF MICHIGAN
C. RODNEY McCOMAS
ENGINEER
NO. 39008
PROFESSIONAL ENGINEER
LICENSED

JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
WWW.JSTARCHITECTS.COM
J. STUART TODD, INC.
2919 WELBORN STREET, SUITE 101, DALLAS, TEXAS 75219 | 214.522.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.

S3.1

JOB NUMBER: 16238

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.

ABBREVIATIONS LIST

AR	ANCHOR RODS	MAT'L	MATERIAL
ACI	AMERICAN CONCRETE INSTITUTE	MAX	MAXIMUM
ADD'L	ADDITIONAL	MBM	METAL BUILDING MFR
ADH	ADHESIVE	MCJ	MASONRY CONTROL JT
ADJ	ADJACENT	MECH	MECHANICAL
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	MEZZ	MEZZANINE
		MFR	MANUFACTURER
AFF	ABOVE FINISHED FLOOR	MIN	MINIMUM
AGGR	AGGREGATE	MISC	MISCELLANEOUS
AHU	AIR HANDLING UNIT	MO	MASONRY OPENING
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MOM	MOMENT
		MSW	MASONRY SHEAR WALL
AISI	AMERICAN IRON AND STEEL INSTITUTE	MSL	MEAN SEA LEVEL
		MTL	METAL
ALUM	ALUMINUM	MW	MASONRY WALL
ALT	ALTERNATE	NIC	NOT IN CONTRACT
APA	AMERICAN PLYWOOD ASSOCIATION	NO	NUMBER
APPROX	APPROXIMATE	NS	NEAR SIDE
ARCH	ARCHITECT	NTS	NOT TO SCALE
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	O/O	OUT TO OUT
		OA	OVERALL
AWS	AMERICAN WELDING SOCIETY	OC	ON CENTER
L	ANGLE	OD	OUTSIDE DIAMETER
BB	BOND BEAM	OF	OUTSIDE FACE
B/B	BACK TO BACK	OH	OVER HEAD
BC	BOTTOM CHORD	OPNG	OPENING
BD	BOARD	OPP	OPPOSITE
BLDG	BUILDING	OPP HD	OPPOSITE HAND
BLK	BLOCK	OSB	ORIENTED STRAND BOARD
BM	BEAM	OSL	OUTSTANDING LEG
BOTT	BOTTOM	OVS	OVERSIZE HOLE
BRDG	BRABGINGPLATE	PAF	POWDER ACTUATED FASTENER
BRG	BEARING	PC	PRECAST
BRK	BRICK	PL	PLATE
BS	BOTH SIDES	PLF	POUNDS PER LINEAR FOOT
BSMT	BASEMENT	PLYWD	PLYWOOD
BTWN	BETWEEN	PNL	PANEL
BUC	BUILT UP COLUMN	PROJ	PROJECTION
c	CAMBER	PSF	POUNDS PER SQUARE FOOT
C/C	CENTER TO CENTER	PSI	POUNDS PER SQUARE INCH
CANT	CANTILEVER	PSL	PARALLEL STRAND LUMBER
CFS	COLD FORMED STEEL	PT	PRESSURE TREATED
CJ	CONTROL AND OR CONSTRUCTION JOINT	PTN	PARTITION
		PVMT	PAVEMENT
CL	CENTERLINE	R	RADIUS
CLR	CLEAR	RD	ROOF DRAIN
CMU	CONCRETE MASONRY UNIT	REF	REFERENCE
COL	COLUMN	REINF	REINFORCE(D) (ING) (MENT)
COORD	COORDINATE	REQ'D	REQUIRED
COMP	COMPACTED	REV	REVISION/REVISED
CONC	CONCRETE	RO	ROUGH OPENING
CONN	CONNECTION	RRD	ROOF RELIEF DRAIN
CONST	CONSTRUCTION	RTN	RETURN
CONT	CONTINUOUS	RTU	ROOF TOP UNIT
CTR	CENTER	RW	RETAINING WALL
CTRD	CENTERED	SCHED	SCHEDULE
DIA	DIAMETER	SECT	SECTION
DIAG	DIAGONAL	SHT	SHEET
DIM	DIMENSION	SIM	SIMILAR
DL	DEAD LOAD	SJ	SAWCUT JOINT
DLT	DEEP LEG TRACK	SJI	STEEL JOIST INSTITUTE
DO	DITTO	SL	SLOPED
DN	DOWN	SLRS	SEISMIC LOAD RESISTING SYSTEM
DTL	DETAIL		
DWG	DRAWING	SPA	SPACE(S)
DWL	DOWEL	SPECS	SPECIFICATIONS
EA	EACH	SQ	SQUARE
EE	EACH END	SS	STAINLESS STEEL
EF	EACH FACE	SSL	SHORT SLOTTED HOLES
ENG	ENGINEER	STD	STANDARD
ELEV	ELEVATION	STIFF	STIFFENERS
ELECT	ELECTRICAL	STL	STEEL
EOD	EDGE OF DECK	STRUCT	STRUCTURAL
EOS	EDGE OF SLAB	SW	SHEAR WALL
EQ	EQUAL	SYMM	SYMMETRICAL
EQUIV	EQUIVALENT	T&B	TOP AND BOTTOM
ES	EACH SIDE	T&G	TONGUE AND GROOVE
EW	EACH WAY	TB	TIE BEAM
EX	EXISTING	TC	TOP CHORD
EXP	EXPANSION	TEMP	TEMPERATURE
EXT	EXTERIOR	TF	TRENCH FOOTING
F/	FACE OF	THK	THICK
FD	FLOOR DRAIN	THKS	THICKENED SLAB
FDN	FOUNDATION	THR'D	THREADED
FIN	FINISH	TL	TOTAL LOAD
FLR	FLOOR	TOP'G	TOPPING
FLG	FLANGE	TRANS	TRANSVERSE
FS	FAR SIDE	TYP	TYPICAL
FTG	FOOTING	UNO	UNLESS NOTED OTHERWISE
GA	GAUGE	VERT	VERTICAL
GALV	GALVANIZED	VIF	VERIFY IN FIELD
GB	GRADE BEAM	w/	WITH
GC	GENERAL CONTRACTOR	WD	WOOD
GL	GLULAM	WO	WINDOW OPENING (MASONRY)
GR	GRADE	WP	WORKING POINT
HC	HOLLOW CORE	WT	WEIGHT
HD	HOLD DOWN	WWF	WELDED WIRE FABRIC
HGT	HEIGHT		
HORIZ	HORIZONTAL		
HP	HIGH POINT		
HS	HEADED STUD		
HSS	HOLLOW STRUCTURAL SECTION		
ID	INSIDE DIAMETER		
IF	INSIDE FACE		
INFO	INFORMATION		
INT	INTERIOR		
INV	INVERT		
JST	JOIST		
JT	JOINT		
K	KIP		
KO	KNOCK OUT		
LB	POUND		
LDG	LEDGE		
LG	LONG		
LL	LIVE LOAD		
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		
LNTL	LINTEL		
LSL	LONG SLOTTED HOLES		
LONG	LONGITUDINAL		
LP	LOW POINT		
LVL	LAMINATED VENEER LUMBER		
MAS	MASONRY		

ELEVATION TOP AND BOTTOM OF LIST

T/	ELEVATION, TOP OF
B/	ELEVATION, BOTTOM OF
T/BB	TOP OF BOND BEAM
T/BM	TOP OF BEAM
T/CONC	TOP OF CONCRETE
T/F	TOP OF FOOTING
T/LDG	TOP OF LEDGE
T/MAS	TOP OF MASONRY
T/P	TOP OF PIER
T/SLAB	TOP OF SLAB
T/STL	TOP OF STEEL
T/W	TOP OF WALL
T/GB	TOP OF GRADE BEAM
T/CAIS	TOP OF CAISSON
B/PL	BOTTOM OF PLATE
B/F	BOTTOM OF FOOTING

SYMBOLS

ø	DIAMETER
°	DEGREE
◆	ELEVATION
±	PLUS OR MINUS

SAWN LUMBER NOTES

W1. Size, species and grade for sawn lumber shall be as follows. All lumber shall be grade-stamped:

Size	Design Species	Design Grade	Alternate Species	Alternate Grade
2x4, 2x6	Spruce-Pine-Fir (SPF)	No.1/No.2	Douglas Fir-Larch (North)	No.1/No.2
2x8, 2x10, 2x12	Southern Pine (SP)	No. 1	Douglas Fir-Larch	No.1 & Better
4x4 and Larger	Southern Pine (SP)	No. 1	Douglas Fir-Larch	No.1 & Better

W2. All wood, connections, accessories, and erection shall be in conformance with the current edition of NFPA National Design Specification.
W3. All connectors shall be Simpson Strong-Tie, galvanized, unless otherwise approved by the Engineer of Record.
W4. All bolts, washers and nuts shall be carbon steel, unless noted.
W5. All nails to be common type.
W6. All sill plates shall be treated with preservative treatment.
W7. All exterior lumber permanently exposed to weather shall be pressure-treated.
W8. Attach all sill plates to studs with (4) 8d common nails (toenail) or (2) 16d common nails (end nail).
W9. Attach all top plates to studs with (2) 16d nails.
W10. Comply with International Building Code Table 2304.9.1 for all fasteners not indicated.
W11. See Wood Framed Wall Schedule and Shear Wall Schedule for additional fastening requirements.
W12. Provide double joists and headers at all floor or roof openings exceeding typical sheathing span. Provide single headers to support sheathing at edges of openings less than typical sheathing span.

ENGINEERED WOOD NOTES

EW1. All manufactured engineered wood listed as been designed using product data from Weyerhaeuser Corporation. Engineered wood members supplied by other manufacturer's shall meet or exceed the criteria for the designated Weyerhaeuser Corporation product for the span, spacing, and loads indicated in the construction documents.
EW2. All properties listed are for dry-use conditions.
EW3. All connectors shall be manufactured by Simpson Strong-Tie Company.
EW4. Contractor shall provide a complete installation of Manufactured engineered wood members, including but not limited to, all blocking, stiffeners, and similar items.
EW5. Manufactured engineered wood shall be designed by the supplier to meet the project requirements indicated in the construction documents. Layout and design of members shall be signed and sealed by a Professional Engineer licensed to practice in the state of Michigan, and submitted to the Engineer of Record for review.
EW6. All engineered wood shall be commercial grade.
EW7. All engineered wood permanently exposed to weather shall be pressure-treated, coated or sealed. Comply with manufacture's recommendations.

LVL1. Manufactured Laminated Veneer Lumber designated as LVL shall be supplied with the following minimum material properties, for 12" depths:

Extreme Fiber Stress in Bending, Edgewise:	2,600 psi
Extreme Fiber Stress in Shear, Horizontal:	285 psi
Modulus of Elasticity, Edgewise:	1,900,000 psi

PSL1. Manufactured Parallel Strand Lumber designated as PSL shall be supplied with the following minimum material properties, for 12" depths:

Extreme Fiber Stress in Bending, Edgewise:	2,900 psi (Beam - 2.0E Parallam PSL)
Extreme Fiber Stress in Bending, Edgewise:	2,400 psi (Column - 1.8E Parallam PSL)
Modulus of Elasticity, Edgewise:	2,000,000 psi (Beam 2.0E)
Modulus of Elasticity, Edgewise:	1,800,000 psi (Column 1.8E)
Extreme Fiber Stress in Shear, Horizontal:	290 psi (Beam)

PSL2. For all PSL members permanently or partially exposed to exterior conditions, provide the following:
PSL Parallam Plus Service Level SL2 AWPA Use Category UC3B

OWT1. Manufactured Wood Open Web Trusses designated as Open Web Trusses shall be supplied to meet the minimum loading and depth requirements as indicated on the drawings, and the following:

Roof Maximum Total Deflection	Span / 240
Roof Maximum Live Deflection	Span / 360

WOOD STRUCTURAL PANEL NOTES

WS1. All wood structural panels shall be plywood conforming to DOC PS-1 or DOC PS-2, or, oriented-strand-board (OSB) conforming to DOC PS-2. Sheathing shall meet the following minimum requirements, unless noted otherwise:

Roof: 19/32", Exposure 1, Structural 1, Span Rating 40/20, Square Edge, Nailed
Wall: 15/32", Exposure 1, Structural 1, Span Rating 32/16, Square Edge,Nailed

WS2. Roof structural panel joints shall be staggered. Provide panel clips for all roof sheathing.
WS3. All structural panels shall have long dimension perpendicular to supports. Provide 1/8" gap for all sheathing joints.
WS4. Space all nails 3/8" minimum from panel or supporting member edge. Nails to penetrate supporting members by 1-5/8" minimum.
WS5. Edge of openings through roofs or walls shall be nailed per boundary nailing requirements indicated in typical detail.
WS6. See architectural roof plan to establish all elevations, openings, equipment and other requirements not indicated on structural drawings.
WS7. All nails to be 10d common, unless noted otherwise. For fastening not indicated, comply with International Building Code Table 2304.9.1.
WS8. All structural panels permanently exposed to weather shall be pressure-treated.

MANUFACTURED WOOD TRUSSES NOTES

WT1. Shop-fabricated, metal-plate-connected wood roof trusses shall be designed for the following gravity loads (allowable stress design), in addition to other loads indicated:

Top Chord Dead& Top Chord Live	See General Notes
Bottom Chord Dead	10 psf (Local Load, not added to Top Chord)
Wind: Net Uplift	15 psf
Wind: On Gable End Verticals	20 psf

WT2. All bolts, washers and nuts shall be carbon steel.
WT3. All trusses connector plates shall be galvanized.
WT4. All trusses shall be spaced at 24" o.c., unless noted otherwise.
WT5. All standard, hip, valley, scissor, girder and other misc. trusses and supplemental roof framing not shown, shall be designed and provided by the truss manufacturer and contractor. Truss manufacturer and contractor shall be responsible for the final truss layout.
WT6. All truss layouts, profiles and configurations are conceptual. Final layout and design shall be by truss manufacturer/supplier.
WT7. Girder truss design loading shall take into account additional concentrated loads from other trusses.
WT8. See architectural drawings for actual dimensions, roof overhangs, fascia heights, etc.
WT9. All connectors shall be Simpson Strong-Tie Company, galvanized. All connectors not shown on drawings shall be designed by the truss manufacturer, except the following:
Truss Wood to Wood Connections:

End of Single Truss to Double Top Plate:	H2.5T	(545lb uplift, 135lb shear)
End of girder truss to perpendicular top plate:	LGT2	2-ply girder truss (2050lb uplift)
	LGT3-SDS2.5	3-ply girder truss (3685lb uplift)
	LGT4-SDS3	4-ply girder truss (4060lb uplift)
End of girder truss to non-perpendicular top plate:	MST12	Each side of girder truss

SHALLOW FOUNDATION AND SLAB ON GRADE NOTES

SF1. Soil to be stripped, compacted and tested in accordance with the recommendations of the soils engineer and project specifications.
SF2. Footings shall be placed on firm, undisturbed soil or on engineered fill. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
SF3. Slabs shall be placed on compacted, free-draining, frost-free drainage course. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve. All fill shall be compacted to a minimum dry density of 95% of the modified Proctor maximum dry density (ASTM-D1557), placed in 6" to 8" lifts. Pea gravel may not be used as fill. Utility trenches and excavations under the foundations or slabs shall meet the same requirements. See soils investigation report for further recommendations.
SF4. Undercutting of the soil for foundation and/or slab placement may be required. These drawings do not indicate the entire scope of undercutting, fill or bad soil removal that may be required to attain the design soil bearing pressures. It is the responsibility of the contractor to obtain a soils investigation report, before bidding, to assess the extent of excavation and compaction that may be required to meet the design criteria. The contractor shall retain the services of a soils engineer to monitor all backfilling operations and to inspect footing bearing material. A report certified by the soils engineer shall be furnished to the architect/engineer verifying that all foundations were placed on a material capable of sustaining the design bearing pressures.
SF5. If dewatering is required, sumps shall not be placed within the foundation excavation.
SF6. Maintain a maximum slope between adjacent footing bearing elevations of 2 horizontal to 1 vertical. Maintain a 2 horizontal to 1 vertical slope next to existing foundations to avoid undermining foundations.
SF7. No horizontal joints are permitted in any foundation. Vertical joints are permitted only in wall footings.
SF8. Shallow foundations may be earth-formed where the excavation permits. If earth-forming is used, add 2" to the width and length of all foundations.
SF9. The bottom of all foundations shall be a minimum of local frost depth (-3'-6") below final grade.

CAST-IN-PLACE CONCRETE NOTES

RC1. All concrete shall have the following 28 day compressive strengths:

STRENGTH	LOCATION
3000 psi-0% AE	All foundations and footings
4000 psi-6% AE	Exterior slabs, piers, walls, columns, grade beams and concrete exposed to freezing
4000 psi-0% AE	Interior slabs, fill for metal deck and all other interior concrete

RC2. All reinforcing shall conform to the following concrete cover:

COVER	LOCATION
3"	Foundations & Footings: All surfaces; Exterior Slabs: Bottom; Grade Beams & Trench Footings: All surfaces; All concrete cast against soil
2"	Exterior Walls, All Piers & All Pilasters: All surfaces; Exterior Slabs: Top; All exterior concrete
1 1/2"	Interior beams, columns & walls: All surfaces; All concrete not exposed to weather or in contact with ground
3/4"	Interior slabs & Walls

RC3. Welded Wire Fabric (WWF) for slabs and fill for metal deck shall be placed in the upper-third of the slab or fill. See details.
RC4. All reinforcing steel shall be detailed, supplied and placed in accordance with ACI 315, ACI 318 and CRSI MSP-1.
RC5. All reinforcing steel shall be shop fabricated and, where applicable, shall be wired together and conform to ASTM A-615, Grade 60.
RC6. Chamfer edges of exposed concrete 3/4", unless noted otherwise.
RC7. Contractor shall make four, 6"x12" test cylinders for each 50 cubic yards of concrete poured for each days operation. Break 1 at 7 days, 2 at 28 days and retain spare.
RC8. All welded wire fabric shall conform to ASTM A185, Fy(min) of 65 ksi. All welded wire fabric laps shall be 8".
RC9. All finished concrete, concrete formwork and falsework shall be in accordance with ACI 301. Contractor is solely responsible for the design and construction of all formwork, falsework and shoring.
RC10. Provide sleeves for all openings in grade beams or walls to totally separate pipe from concrete.
RC11. Foundations may be earth-formed where the excavation permits. If earth-forming is used, add 2" to the width, length & thickness of all foundations.
RC12. Plastic Vapor Retarder: ASTM E 1745, Class A, not less than 10 mils (0.25 mm) thick, see specifications. Include manufacturer's recommended adhesive or pressure-sensitive joint tape.
RC13. Fiber Reinforcement, if indicated on drawings, shall be 100% virgin polypropylene in collated, fibrillated form, complying with ASTM C 1116, minimum length of 3/4". Minimum dosage = 1.5 pounds per cubic yard.
RC14. Adhesive Anchors and Adhesives Used for Reinforcing Anchorage:
1. The adhesive anchor system used for post-installed anchorage to concrete shall conform to the requirements of the most recently published ACI 355.4.
2. Adhesive anchors indicated are the Basis-of-Design. Approved equal meeting ACI 355.4 is permitted.
3. Bulk-mixed adhesives are not permitted.
4. Anchors shall be supplied as an entire system with manufacturer's recommendations adhered to.
5. Adhesive anchors shall be installed by qualified personnel trained to install adhesive anchors.
6. Installation of adhesive anchors horizontally or upwardly inclined shall be performed by personnel certified by the ACI/CRSI Adhesive Anchor Installer Certification program.
7. Adhesive anchors installed in horizontal or upwardly inclined orientations shall be continuously inspected during installation by an inspector specially approved for that purpose.

RC15. Bonding agent for bonding fresh concrete to hardened concrete: ASTM C 1059/C 1059M, Type II, nonredispersible, acrylic emulsion or styrene butadiene.

MASONRY AND REINFORCED MASONRY NOTES

M1. Minimum 28 day compressive strength of concrete masonry units shall be 2800 p.s.i. based on net area of the unit. Specified design compressive strength of masonry shall be f'm = 2000 p.s.i. All units for exterior walls, load-bearing walls and shear walls shall be normal weight block.
M2. All mortar shall be Type S. No admixtures may used unless approved by architect/engineer. Mortar shall not be used for grouting cores or filling bond beams.
M3. All block shall be laid in a running bond pattern.
M4. Course grout shall be used where grouting is required. Slump shall be 8" +/- 1". Minimum grout compressive strength shall be 3000 p.s.i.
M5. All reinforcing shall be ASTM A615 Grade 60 (Fy=60 ksi). Lap all reinforcing a minimum of 48 bar diameters.
M6. Center vertical reinforcing in block cores, unless noted otherwise.
M7. See architectural and specifications for all control joint locations. Reinforcing in bond beams shall be discontinuous at control joints.
M8. Provide ladder type horizontal joint reinforcement at 16" o.c. Side rods and cross rods shall be #9 wire, galvanized, see specifications. Cut joint reinforcement at control joints.
M9. Provide "L" bars at all bond beam corners as required.
M10. Fill cores of block solid with grout three (3) full courses below the bearing of all beams or lintels supported on masonry.
M11. See typical schedules for masonry and steel lintels not indicated on plans.
M12. All masonry units below grade to be grouted solid.
M13. All cores with reinforcing steel shall be grouted solid, full height of wall.

STRUCTURAL STEEL NOTES

SS1. All structural steel shall conform to the following:

W Shapes	ASTM A992, Grade 50.
Angles, Channels, Plates, Bars	ASTM A36 (Fy=36 ksi)
HSS Tubes	ASTM A500, Grade B (Fy=46 ksi)
HSS Pipes	ASTM A500, Grade B (Fy=42 ksi)
Anchor Rods	ASTM F1554, Grade 36

SS2. All steel shall be detailed, fabricated and erected in accordance with:
AISC 360 "Specification for Structural Steel Buildings", Allowable Strength Design (ASD)
AISC 303 "Code of Standard Practice"
SS3. If beam reaction is not indicated, design connection for minimum 10 k reaction.
SS4 All bolted connections shall be made with 3/4" diameter, A325 bolts with nuts and washers, unless otherwise noted. All connections shall be shear bearing connections tightened to snug-tight condition, unless otherwise noted.
SS5. All shop and field welds shall be made using E70 electrodes or equivalent.
SS6. All headed concrete anchors shall be ASTM A108 (Fy=50 ksi), 3/4" diameter x 4" after welding, unless noted otherwise.
SS7. Steel fabricator shall obtain the size and location of all openings for grilles, louvers, etc. before proceeding with the fabrication and erection of any required frames.
SS8. Provide temporary bracing of the structure until all permanent lateral support is in place.
SS9. Structure Stability: The entire roof and/or floor decking materials must be fully erected and connected to the supporting steel before temporary, erection bracing is removed.

GENERAL NOTES

G1. BUILDING CODES:

Model Code:	International Building Code 2012
Local Code:	Michigan Building Code 2014
Model Code Standard:	ASCE 7-10
Steel Standard:	AISC 360-10, ASD 14th Edition
Concrete Standard:	ACI 318-11
Masonry Standard:	ACI 530-11, ASD
Wood Standard:	ANSI/AWC NDS-2012, AWC SDPWS-2008
Risk Category:	II, Normal Risk
Exposure Category:	C, Open terrain

G2. ROOF DESIGN LOADS:

Location	Dead	Live	Snow
All Roofs	25 psf	20 psf	25 psf + Drift

G3. FLOOR DESIGN LOADS:

Location	Dead	Live	Partition
All Areas	50 psf	100 psf	N/A

G4. SOIL DESIGN CRITERIA
Report by: McDowell & Associates, Dated 02-27-2017
Allowable Net Bearing Pressure:

Spread Footings:	2500 psf
Wall Footings:	2500 psf
Soil Density:	110 pcf
Frost Depth:	42" inches below final grade

Lateral Earth Pressures:

Active:	36 psf
At-Rest:	55 psf
Passive:	330 psf

Groundwater:

Design Elev. Below Slab:	6 ft
Saturated Soil Density:	125 pcf

G5. SNOW DESIGN CRITERIA

Ground Snow Load:	25 psf
Design Roof Snow Load:	25 psf
Importance Factor:	1.0
Exposure Factor:	1.0 Partially Exposed
Thermal Factor:	1.0 Heated Structure

G6. WIND DESIGN CRITERIA

Wind Speed:	115 mph
ASD Wind Speed:	90 mph
Enclosure Classification:	Enclosed
Gust Factor:	0.85
Internal Pressure Coef.:	0.18

G7. SEISMIC DESIGN CRITERIA

Importance Factor:	1.0
Mapped Spectral Response, Ss:	0.089
Mapped Spectral Response, S1:	0.046
Site Class:	D
Design Spectral Response, Sds:	0.095
Design Spectral Response, Sd1:	0.074
Seismic Design Category, SDC:	B
Overstrength Factor, Omega:	3
Seismic Response Coef., Cs:	0.015
Response Modification R:	6.5
Unfactored Base Shear, V:	1.5% W
Analysis Procedure:	Equivalent Lateral Force Analysis
Seismic Force Resisting System:	A. Bearing Wall Systems 15. Light-frame (wood) walls sheathed with wood structural panels rated for shear resistance.

G8. Reactions and forces indicated are unfactored, Allowable Strength Design (ASD) loads.
G9. If drawings and specifications are in conflict, the most stringent restrictions and requirements shall govern. Contractor shall bring all discrepancies to the attention of the engineer immediately.
G10. Verify all existing conditions prior to any construction or fabrication. If different than shown, notify engineer/architect immediately for modification of drawings.
G11. All contractors are required to coordinate their work with all disciplines to avoid conflicts. The architectural, mechanical, electrical and plumbing aspects are not in the scope of these drawings. Therefore, all required materials and work may not be indicated. It is the contractor's responsibility to coordinate these drawings with all other construction documents. Refer to architectural drawings for all dimensions not shown on these drawings. Locations, sizes and numbers of all openings may not be completely indicated in the structural drawings. The respective contractor shall verify their work with all other disciplines.
G12. The contract documents represent the structure only. They do not indicate the method of construction. The contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not limited to, bracing, shoring, underpinning, etc. the Engineer of Record is not responsible for the contractor's means, methods, techniques, sequences or safety procedures during construction.
G13. Notes and details shall take precedence over general structural notes. Where no details or sections are shown, construction shall conform to similar work on the project. Typical sections and details may not be cut on the plans, but apply unless noted otherwise.
G14. Provisions for future expansion:
Vertical: None
Horizontal: None

DELEGATED DESIGN REQUIREMENTS

SSE1. A Specialty Structural Engineer (SSE), registered in the state of the project, shall be responsible for the structural design of the following products and systems complying with specific performance and design criteria indicated.

1. Structural Steel Connections, except as shown on drawings.
AISC Option 2 (Detailer): Simple shear connections.
AISC Option 3 (SSE): All other connections not shown.
2. Shop Fabricated Wood trusses, wood girders, wood bracing and accessories.
3. Stairs & Railings

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.

ISSUE DATE:
08-21-2017
PERMIT/CONSTRUCTION
STAMPING SET
3/2/2018
REVISION:

STATE OF MICHIGAN
C. RODNEY McCOMAS
ENGINEER
NO. 39008
PROFESSIONAL ENGINEER REGISTERED

J. STUART TODD, INC. ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
W W W . J S T A R C H I T E C T S . C O M
J. STUART TODD, INC.
2919 WELBORN STREET, SUITE 101, DALLAS, TEXAS 75219 | 214.522.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
S4.1
JOB NUMBER: 16238

STATEMENT OF SPECIAL INSPECTIONS - MASONRY

Item	Continuous	Periodic	Detailed Instructions and Frequencies
MASONRY CONSTRUCTION (IBC 1705.4)			
PRIOR TO CONSTRUCTION (ARTICLE 1.15, TMS-602/ACI 530.1-11):			
Review material certificates, mix designs, test results and construction procedures		X	Verify that materials conform to the requirements of the approved construction documents. Mix design, test results, material certificates, and construction procedures should be submitted for review. Mortar mix designs shall conform to ASTM C 270 while grout shall conform to ASTM C 476. Material certificates shall be provided for the following: reinforcement; anchors, ties, fasteners, and metal accessories; masonry units; mortar and grout materials. Construction procedures for cold-weather or hot- weather construction shall be reviewed.
AS CONSTRUCTION BEGINS (TABLE 1.19.2, TMS-402/ACI 530-11):			
Proportions of site-prepared mortar		X	Verify that mortar is of the type and color specified on the construction documents, that it conforms to ASTM C 270, and that it is mixed in accordance with Article 2.6 A of TMS-602/ACI 530.1-11.
Construction of mortar joints		X	Verify that mortar joints comply with Article 3.3 B of TMS-602/ACI 530.1-11.
Location of reinforcement, connectors, and prestressing tendons and anchorages		X	Verify that reinforcement is placed in accordance with Article 3.4 of TMS-602/ACI 530.1-11. Prestressing tendons shall be placed per Article 3.6 A.
PRIOR TO GROUTING (TABLE 1.19.2, TMS-402/ACI 530-11):			
Grout space		X	Verify that grout space is free of mortar droppings, debris, loose aggregate, and other deleterious materials and that cleanouts are provided per Article 3.2 D and 3.2 F of TMS-602/ACI 530.1-11. *Continuous inspection is required for Risk Category IV buildings.*
Grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages		X	Verify that reinforcement, joint reinforcement, wall ties, anchor bolts and veneer anchors comply with the approved construction documents and Section 1.6 of TMS 402/ACI 530-11.
Placement of reinforcement, connectors, and prestressing tendons and anchorages		X	Verify that reinforcement, joint reinforcement, wall ties, anchor bolts and veneer anchors are installed in accordance with the approved construction documents and Articles 3.2 E, 3.4, and 3.6 A of TMS 602/ACI 530.1-11. *Continuous inspection is required for Risk Category IV buildings.*
Proportions of site-prepared grout and prestressing grout for bonded tendons		X	Verify that grout is proportioned per ASTM C 476 and has a slump between 8-11 inches. Self-consolidated grout shall not be proportioned onsite. (see Articles 2.6 B and 2.4 G.1.b of TMS 602/ACI 530.1-11. *Continuous inspection is required for Risk Category IV buildings.*
Construction of mortar joints		X	Verify that mortar joints are placed in accordance with Article 3.3 B of TMS 602/ACI 530.1-11.
DURING MASONRY CONSTRUCTION:			
Size and location of structural elements		X	Verify the locations of structural elements with respect to the approved plans and confirm that tolerances meet the requirements of Article 3.3 F of TMS 602/ACI 530.1-11.
Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction.		X	Verify that correct anchorages and connections are provided per the approved plans and Sections 1.16.4.3 and 1.17.1 of TMS 402/ACI 530-11. *Continuous inspection is required for Risk Category IV buildings.*
Preparation, construction, and protection of masonry during cold weather (<40°F) or hot weather (>90°F).		X	Verify that cold-weather construction is performed in accordance with Article 1.8 C of TMS 602/ACI 530.1-11 and hot weather construction per Article 1.8 D of TMS 602/ACI 530.1-11.
Observation of grout specimens, mortar specimens, and/or prisms		X	Confirm that specimens/prisms are performed as required by Article 1.4 of TMS-602/ACI 530.1-11. *Continuous inspection is required for Risk Category IV buildings.*
MINIMUM TESTING:			
Verification of Slump Flow and Visual Stability Index (VSI) for self- consolidating grout		X	Compressive strength tests should be performed in accordance with ASTM C 1019 for slump flow and ASTM C 1611 for VSI.
Verification of proportions of materials in premixed or pre-blended mortar and grout		X	Verify that proportions for mortar meet ASTM C 270 and proportions for grout meet ASTM C 476. This applies to *Risk Category IV buildings only.*

STATEMENT OF SPECIAL INSPECTIONS - STRUCTURAL STEEL

Item	Continuous	Periodic	Detailed Instructions and Frequencies
STRUCTURAL STEEL (IBC 1705.2.1, 1705.11.1 & 1705.12.2)			
PRIOR TO WELDING (TABLE N5.4-1, AISC 360-10):			
Verify welding procedures (WPS) and consumable certificates	X		
Material identification		X	Verify type and grade of material.
Welder identification		X	A system shall be maintained by which a welder who has welded a joint or member can be identified.
Fit-up groove welds		X	Verify joint preparation, dimensions, cleanliness, tacking, and backing.
Access holes		X	Verify configuration and finish.
Fit-up of fillet welds		X	Verify alignment, gaps at root, cleanliness of steel surfaces, and tack weld quality and location.
DURING WELDING (TABLE N5.4-2, AISC 360-10):			
Use of qualified welders		X	Verify that welders are appropriately qualified.
Control and handling of welding consumables		X	Verify packaging and exposure control.
Cracked tack welds		X	Verify that welding does not occur over cracked tack welds.
Environmental conditions		X	Verify win speed is within limits as well as precipitation and temperature.
WPS followed		X	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques		X	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
AFTER WELDING (TABLE N5.4-3, AISC 360-10):			
Welds cleaned		X	Verify that welds have been propyl cleaned.
Size, length, and location of welds	X		
Welds meet visual acceptance criteria	X		
Arc strikes	X		
k-area	X		
Backing & weld tabs removed	X		
Repair activities	X		
Document acceptance or rejection of welded joint/member	X		
NONDESTRUCTIVE TESTING (SECTION N5.5, AISC 360-10):			
CJP welds (Risk Cat. II)		X	Ultrasonic testing shall be performed on 10% of CJP groove welds in butt, T- and corner joints subject to transversely applied tension loading in materials 5/16- inch thick or greater. Testing rate must be increased if > 5% of welds tested have unacceptable defects.
CJP welds (Risk Cat. III or IV)	X		***A reduction in the rate of ultrasonic testing is allowed per Section N5.5e.***
Access holes (flange > 2”)	X		
Welded joints subject to fatigue	X		
PRIOR TO BOLTING (TABLE N5.6-1, AISC 360-10): (*Not required if only snug-tight joints are specified [per Section N5.6(1) of AISC 360-10).*			
Certifications of fasteners	X		
Fasteners marked		X	Verify that fasteners have been marked in accordance with ASTM requirements.
Proper fasteners for joint		X	Verify grade, type, and bolt length if threads are excluded from the shear plane.
Proper bolting procedure		X	Verify proper procedure is used for the joint detail.
Connecting elements		X	Verify appropriate faying surface condition and hole preparation, if specified, meet requirements.
Pre-installation verification testing		X	Observe and document verification testing by installation personnel for fastener assemblies and methods used.
Proper storage		X	Verify proper storage of bolts, nuts, washers, and other fastener components.
DURING BOLTING (TABLE N5.6-2, AISC 360-10):			(Not required if only snug-tight joints are specified [per Section N5.6(1) of AISC 360-10). (Not required for pretensioned joints using turn-of-the-nut method with match-marking, direct-tension-indicators, or twist-off type tension control method [per Section N5.6(2) of AISC 360-10).
Fastener assemblies		X	Verify that fastener assemblies are of suitable condition, paced in all holes, and washers are positioned as required.
Snug-tight prior to pretensioning		X	Verify that joints are brought to snug-tight condition prior to pretensioning operation.
Fastener component		X	Verify that fastener component is not turned by wrench prevented from rotating.
Pretensioned fasteners		X	Verify that fasteners are Pretensioned in accordance with RCSC Specification, progressing systematically from the most rigid point toward the free edges.
AFTER BOLTING (TABLE N5.6-3, AISC 360-10):			
Document acceptance or rejection of bolted connections	X		
OTHER STEEL INSPECTIONS (SECTION N5.7, AISC 360-10; Tables J8-1 & J10-1, AISC 341-10):			
Structural steel details		X	All fabricated steel or steel frames shall be inspected to verify compliance with the details shown in the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection.
Anchor rods and other embedments supporting structural steel		X	Shall be on the premises during the placement of anchor rods and other embedments supporting structural steel for compliance with construction documents. Verify the diameter, grade, type, and length of the anchor rod or embedded item, and the extent or depth of embedment prior to placement of concrete.

Special Inspector Shall:

1. Be approved by the Building Official prior to performing any duties.
2. Provide proof of licensure as a special inspector in the state of Michigan for each type of inspection.
3. Inspection reports are to meet the requirements of IBC 1704.2.4 and local standards.
4. Inspection reports shall be submitted per IBC12, 1704.2, within 48 hours of performing inspections.
5. A final inspection report shall be submitted following completion of the project documenting the types of special inspections performed and a statement indicating that the structure is in compliance with the approved construction documents and applicable codes (see IBC 1704.2.4).

STRUCTURAL OBSERVATIONS (IBC 1704.5)

Item	Proposed Frequency	Name of Structural Oserver
Footings & Piers	Periodic	
Mat Foundations	N/A	
Deep Foundations	N/A	
Grade Beams	Periodic	
Concrete Walls	N/A	
Masonry Walls	Periodic	
Wood Walls	Periodic	
Steel Moment Frames	Periodic	
Steel Braced Frames	N/A	
Concrete Moment Frames	N/A	
Concrete Diaphragms	N/A	
Steel Deck Diaphragms	N/A	
Wood Diaphragms	Periodic	
Post-tensioned Deck	N/A	
Other:		
Other:		
Other:		
Other:		

Structural Observer Shall:

1. Provide proof of licensure as a licensed professional/structural engineer in the state of Michigan.
2. If structural observations are performed by individuals other than the design professional in responsible charge, they should first be approved by the Building Official.
3. At the conclusion of work a final structural observation report must be submitted to the Building Official noting any deficiencies which, to the best of the structural observer’s knowledge, have not been resolved (see IBC 1704.5).

STATEMENT OF SPECIAL INSPECTIONS - SOILS & FOUNDATIONS

Item	Continuous	Periodic	Detailed Instructions and Frequencies
SOILS CONSTRUCTION (IBC 1705.6)			
Verify subgrade is adequate to achieve design bearing capacity		X	Prior to placement of concrete.
Verify excavations extend to proper depth and material		X	Prior to placement of compacted fill or concrete.
Verify that subgrade has been appropriately prepared prior to placing compacted fill		X	Prior to placement of compacted fill.
Perform classification and testing of compacted fill materials		X	All materials shall be checked at each lift for proper classifications and gradations not less than once for each 10,000ft² of surface area.
Verify proper materials, densities and lift thicknesses during placement and compaction.	X		

STATEMENT OF SPECIAL INSPECTIONS - CONCRETE

Item	Continuous	Periodic	Detailed Instructions and Frequencies
CONCRETE CONSTRUCTION (IBC 1705.3 & 1705.12.1)			
Reinforcing steel, including prestressing tendons		X	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer’s instructions and/or evaluation report.
Cast-in bolts & embeds		X	Inspection of anchors or embeds cast in concrete is required when allowable loads have been increased or where strength design is used.
Post-installed anchors or dowels		X	All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report.
Use of required mix design		X	Verify that all mixes used comply with the approved construction documents; ACI 318: Ch. 4, 5.2-5.4; and IBC 1904.3, 1913.2, 1913.3.
Concrete sampling for strength tests, slump, air content, and temperature	X		
Concrete & shotcrete placement	X		
Curing temperature and techniques		X	Verify that the ambient temperature for concrete is kept at > 50°F for at least 7 days after placement. High-early-strength concrete shall be kept at > 50°F for at least 3 days. Accelerated curing methods may be used (see ACI 318: 5.11.3). The ambient temperature for shotcrete shall be > 40°F for the same period of time as noted for concrete. Shotcrete shall be kept continuously moist for at least 24 hours after shotcreting. All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded.
Strength verification		X	Verify that adequate strength has been achieved prior to the removal of shores and forms or the stressing of post-tensioned tendons.
Formwork		X	Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents.

STATEMENT OF SPECIAL INSPECTIONS - WOOD

Item	Continuous	Periodic	Detailed Instructions and Frequencies
WOOD CONSTRUCTION (IBC 1705.5, 1705.10.1 & 1705.11.2)			
High-load diaphragms		X	Verify thickness and grade of sheathing, size of framing members at panel edges, nail/staple diameters and length, and the number of fastener lines and fastener spacing per approved plans. ***Performed by code inspection firm.***
Wood trusses spanning > 60-feet		X	Verify that temporary and permanent truss bracing is installed in accordance with approved truss package. ***Performed by code inspection firm.***
Structural wood		X	If fastener spacing is < 4”o.c.: Verify that proper nailing, bolting, anchoring and other fastening of shear walls, diaphragms, drag struts, braces, and holdowns. ***Performed by code inspection firm.***

1717 East 116th Street, Suite 200
Carmel, Indiana 46032

317-580-0402
www.mccomaseng.com
Job No MEI 17056

C. Rodney McComas, P.E.

ISSUE DATE:
08-21-2017 PERMIT/CONSTRUCTION
STAMPING SET 3/2/2018

REVISION:

STATE OF MICHIGAN C. RODNEY McCOMAS ENGINEER NO. 39008 LICENSED PROFESSIONAL ENGINEER

JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
W W W . J S T A R C H I T E C T S . C O M
J. STUART TODD, INC.
2919 WELBORN STREET, SUITE 101, DALLAS, TEXAS 75219 | 214.522.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
S4.2

JOB NUMBER: 16238

WOOD FRAMED WALL SCHEDULE

MARK	STUDS	STUD SPACING	TOP PLATE	BOTTOM PLATE	SILL PLATE ANCHORS	SHEATHING FASTENERS (FIELD)	SHEATHING FASTENERS (EDGE)
W1	2x6 No.1/No.2 SPF	16" OC	(2) 2x6	(1) 2x6 TREATED	⅝"ø TITEN HD SCREW ANCHORS @ 48" OC	8d @ 12" OC	8d @ 6" OC
W2	2x6 No.1/No.2 SPF TREATED	16" OC	(2) 2x6	(1) 2x6 TREATED	⅝"ø TITEN HD SCREW ANCHORS @ 48" OC	8d @ 12" OC	8d @ 6" OC
W3	2x6 No.1/No.2 SPF	12" OC	(3) 2x6	(1) 2x6	⅝"ø TITEN HD SCREW ANCHORS @ 48" OC	8d @ 12" OC	8d @ 6" OC

WOOD FRAMED WALL SCHEDULE NOTES:
1. See shearwall schedule for additional requirements.
2. Additional schedules, notes and details shall apply. Most stringent requirements shall be used.
3. All nail sizes are "Common" type. Substitutions are not allowed.
4. See Arch drawings for wall sheathing required. For drywall sheathing, use #8 screws in lieu of 8d nails.

WOOD COLUMN SCHEDULE

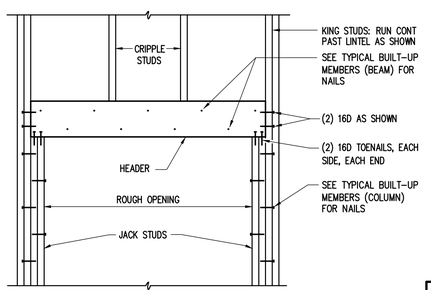
MARK	ACTUAL SIZE	MATERIAL	POST BASE	COLUMN CAP	REMARKS
WC1	5½"x5½"	No.1 S.PINE	SIMPSON "ABU66Z"	SIMPSON "ECCQ66SDS2.5"	
WC2	5½"x5½"	No.2 S.PINE (TREATED)	SIMPSON "ABU66Z"	SIMPSON "CCQ66SDS2.5"	
WC3	5¼"x5¼"	1.8E PSL	SIMPSON "ABU66Z"	SIMPSON "ECCQ66SDS2.5"	

WOOD COLUMN SCHEDULE NOTES
1. Wood species per typical notes on S401.
2. All parallam columns manufactured by Weyerhaeuser.
3. All post bases and post caps by Simpson Strong-Tie. See Simpson literature for installation instructions.
4. Simpson connectors & fasteners in contact with pressure treated lumber shall be stainless steel or coated with a protective coating intended for use with pressure treated lumber.

WOOD BEAM SCHEDULE

MARK	SIZE/TYPE	END CONDITION	CONNECTOR
WB1	3-PLY 2x8 No.1 S.PINE	COLUMN BEARING	SEE COLUMN SCHED
WB2	3-PLY 2x12 No.1 S.PINE	COLUMN BEARING	SIMPSON "ECCQ66SDS2.5" UNO
WB3	5¼"x11⅞" PSL or 3-PLY 1¾"x11⅞" LVL	COLUMN & BEAM BEARING	SIMPSON "ECCQ66SDS2.5" UNO
WB4	5¼"x18" PSL or 3-PLY 1¾"x18" LVL	COLUMN BEARING	SEE DETAIL

WOOD BEAM SCHEDULE NOTES:
1. See Header Schedule for typical wall opening framing requirements.
2. All connectors are Simpson Strong-Tie.
3. Simpson connectors & fasteners in contact with pressure treated lumber shall be stainless steel or coated with a protective coating intended for use with pressure treated lumber.



OPENING ELEVATION

WOOD HEADER SCHEDULE

MARK	SPECIES/GRADE	MEMBER	JACK STUDS	KING STUDS
H1	No.1 S.PINE	(3) 2x8	(2) 2x6	(2) 2x6
H2	No.1 S.PINE	(3) 2x10	(2) 2x6	(3) 2x6
H3	No.1 S.PINE	(3) 2x12	(2) 2x6	(3) 2x6
H4	2.0E LVL	(3) 1¾"x9¼" LVL	(2) 2x6	(3) 2x6
H5	2.0E LVL	(3) 1¾"x14" LVL	(3)2x6	(3) 2x6

WALL FOOTING SCHEDULE NOTES:
1. See plan for header locations.
2. See detail above for header information.
3. Provide ½" thick plywood between plys as needed to match supporting wall thickness.

COLUMN FOOTING SCHEDULE

FTG MARK	FOOTING SIZE			REINF EACH WAY		REMARKS
	WIDTH	LENGTH	THICK	NO	SIZE	
F4	4'-0"	4'-0"	12"	5	#5	
F5	5'-0"	5'-0"	24"	6	#5	
F7	7'-0"	7'-0"	24"	8	#6	TOP & BOTTOM

COLUMN FOOTING SCHEDULE NOTES:
1. See plan for actual footings used.
2. Provide 3" concrete cover on bars.
3. Use concrete brick or CRSI Class 3, CHCP wire bar supports at 3'-0".

STEEL COLUMN SCHEDULE

MARK	SIZE	BASEPLATE			ANCHOR RODS		WELD TO BASE PLATE
		THICK	WIDTH	LENGTH	NO	SIZE	
C1	HSS5x5x¼	¾"	11"	11"	4	¾" DIA	¼" FILLET ALL-AROUND
C2 /1	HSS5x5x⅝	¾"	12"	12"	4	¾" DIA	5/16" FILLET ALL-AROUND /1
C3	HSS8x8x⅝	1¼"	16"	16"	4	1" DIA	⅜" FILLET ALL-AROUND

COLUMN SCHEDULE NOTES:
1. See typical details for column base construction and anchor rod requirements.

CONCRETE PIER SCHEDULE

MARK	WIDTH	LENGTH	VERT REINF		TIES	
			NO	SIZE	NO	SPACING
P24	24"	24"	4	#8	#3	12"
P30	30"	30"	8	#7	#3	12"

PIER SCHEDULE NOTES:
1. See plan for actual piers used.
2. Provide 1½" concrete cover over ties.
3. Provide (3) ties @ 3" OC top of pier; remainder of ties spaced as indicated above.
4. Space first tie 3" from top of footing, last tie 2" from top of pier. See typical pier elevation for for additional tie and vertical bar placement.
5. Provide CRSI Typ Bar Bend No T5 for all ties.
6. Provide CRSI Typ Bar Bend No T9 additional ties for all piers with more than four vertical bars.

THICKENED SLAB SCHEDULE

MARK	SIZE		LONGITUDINAL REINF		TRANSVERSE REINF	
	WIDTH	THICK	NO	SIZE	SIZE	SPACING
THKS30	30"	16"	4	#6	#4	8'-0"

WALL FOOTING SCHEDULE NOTES:
1. See plan for actual footings used.
2. Provide 3" concrete cover on bars.
3. Use concrete brick or CRSI Class 3, CHCP wire bar supports at 3'-0".

WALL FOOTING SCHEDULE

FTG MARK	FOOTING SIZE		LONGITUDINAL REINF		TRANSVERSE REINF	
	WIDTH	THICK	NO	SIZE	SIZE	SPACING
WF18	18"	24"	2	#6	#4	8'-0" OC
WF24	24"	24"	3	#6	#4	8'-0" OC
WF36	36"	24"	4	#6	#4	8'-0" OC
WF48	48"	24"	5	#6	#4	8'-0" OC

WALL FOOTING SCHEDULE NOTES:
1. See plan for footing locations and elevations.
2. Provide 3" concrete cover on bars.
3. Use concrete brick or CRSI Class 3, CHCP wire bar supports at 3'-0".
4. Locate reinforcing at bottom of footing UNO.

MASONRY WALL SCHEDULE

WALL MARK	TYPE	REINFORCING				LOCATION	COMMENTS
		HORIZ	VERT	DOWELS	BOND BEAM		
MW6	6" CMU	NOTE 4	#5 @ 32"	#5 @ 32"	(2)#4xCONT	CENTER	GROUT SOLID
MW8	8" CMU	NOTE 4	#5 @ 24"	#5 @ 24"	(2)#4xCONT	CENTER	
MW12	12" CMU	NOTE 4	(2)#5 @ 32"	(2)#5 @ 32"	(2)#5xCONT	SIDES	GROUT SOLID

MASONRY WALL SCHEDULE NOTES:
1. See plan for actual walls used.
2. Provide 2" cover from outside face for bars in each face.
3. Grout all cores with rebar solid, unless noted otherwise.
4. Provide ladder type horizontal reinforcement @ 16" oc. Side and cross rods shall be #9 wire, galvanized, see specifications. Cut joint reinf. at all control joints.
5. Reinforcing steel in bond beams shall be continuous across control joints unless noted otherwise.
6. Provide bond beam with (2) #5 cont @ top of wall, and @ each floor level, unless noted otherwise. See schedule for additional bond beams.

BRICK LINTEL SCHEDULE

FOR ALL LINTELS NOT INDICATED ON PLANS

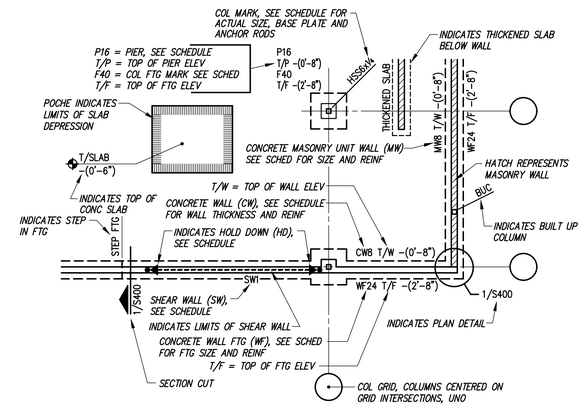
CLEAR OPENING	STEEL ANGLE
Up to 5'-0"	L 3½ x 3½ x 5/16
5'-1" to 7'-0"	L 5 x 3½ x 5/16 (LLV)
7'-1" to 10'-0"	L 6 x 3½ x 5/16 (LLV)

TYPICAL BRICK LINTEL SCHEDULE NOTES:
1. All lintels shall have 8" bearing at each end.
2. All exterior lintels shall be hot-dipped galvanized.
3. All interior lintels shall be shop primed with two coats of epoxy paint.

CONCRETE WALL SCHEDULE

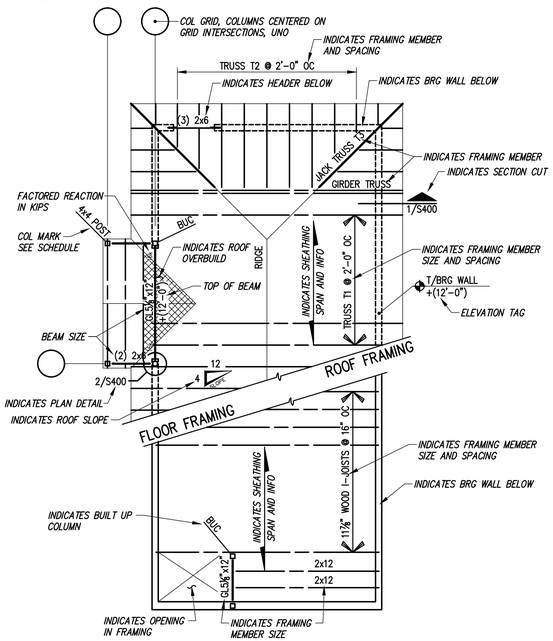
MARK	THICKNESS	REINFORCING			LOCATION
		HORIZ	VERT	DOWELS	
CW8	8"	#4 @ 12"	#4 @ 12"	#4 @ 12"	CENTER
CW12	12"	#5 @ 12"	#5 @ 12"	#5 @ 12"	EACH FACE

CONCRETE WALL SCHEDULE NOTES:
1. See plan for actual walls used.
2. Provide 1½" concrete cover.
3. Provide wheel spacers or CRSI Typ Bar Bend No T5 at 3'-0" each way to assure adequate concrete cover.
4. See sections for all bars not included in schedule.



FOUNDATION PLAN LEGEND

SCALE: NTS



FRAMING PLAN LEGEND

SCALE: NTS

ISSUE DATE:
08-21-2017 PERMIT/CONSTRUCTION
STAMPING SET 3/2/2018

REVISION:
/1 09-30-2017 ESI-001

STATE OF MICHIGAN — C. RODNEY McCOMAS ENGINEER NO. 39008 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES: 12/31/2018

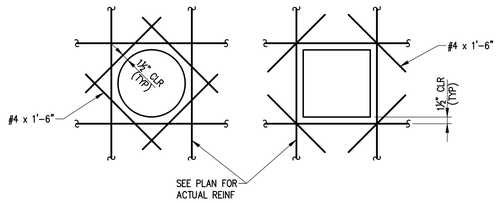
JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
WWW.JSTARCHITECTS.COM
J. STUART TODD, INC.
2919 WELBORN STREET | SUITE 101 DALLAS, TEXAS 75219 | 214.522.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
S4.3

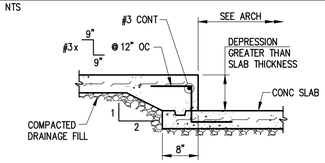
JOB NUMBER: 16238

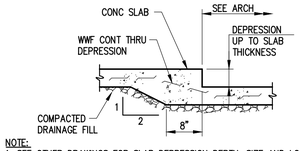
1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.



TYPICAL SLAB ON GRADE OPENING REINFORCING (H)

SCALE: NTS

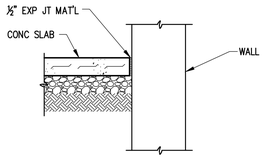




NOTE:
1. SEE OTHER DRAWINGS FOR SLAB DEPRESSION DEPTH, SIZE AND LOCATIONS, UNO

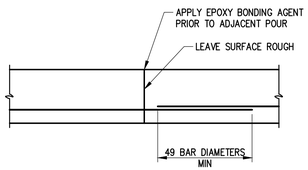
TYPICAL DEPRESSED SLAB (J)

SCALE: NTS



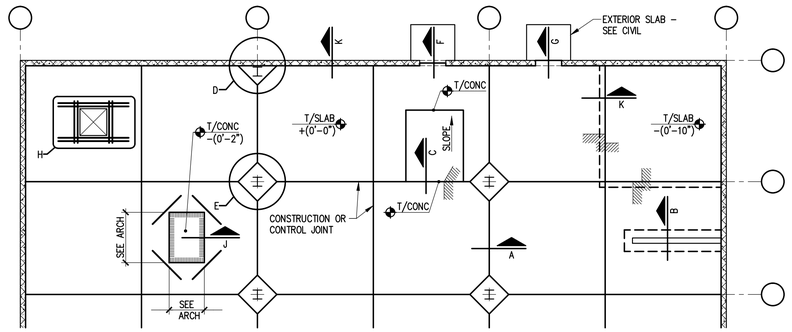
TYPICAL EXPANSION JOINT AT WALL (K)

SCALE: NTS



TYPICAL WALL FOOTING CONSTRUCTION JOINT (L)

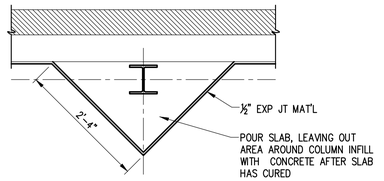
SCALE: NTS



TYPICAL SLAB ON GRADE KEY PLAN

SCALE: NTS

NOTES:
1. KEY PLAN ILLUSTRATES CONSTRUCTION CONCEPTS ONLY. SEE PLAN FOR ACTUAL DIMENSIONS AND ARRANGEMENTS.

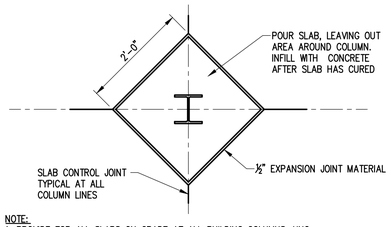


OUTSIDE WALL CONDITION

NOTE:
1. PROVIDE FOR ALL SLABS ON GRADE AT ALL BUILDING COLUMNS, UNO

TYPICAL COLUMN ISOLATION JOINT (D)

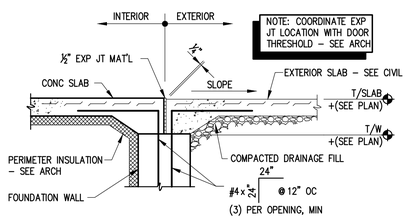
SCALE: NTS



NOTE:
1. PROVIDE FOR ALL SLABS ON GRADE AT ALL BUILDING COLUMNS, UNO

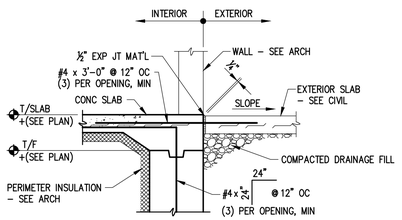
TYPICAL COLUMN ISOLATION JOINT (E)

SCALE: NTS



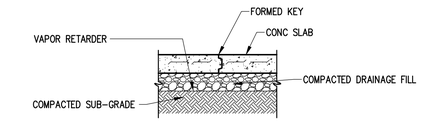
TYPICAL SECTION AT ENTRY (F)

SCALE: NTS



SECTION AT EXTERIOR CONCRETE SLAB (G)

SCALE: NTS

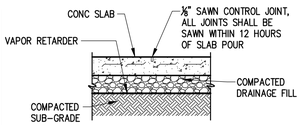


NOTE:
1. CONTRACTOR TO PROVIDE CONSTRUCTION JOINT LAYOUT.

TYPICAL SLAB CONSTRUCTION JOINT

SCALE: NTS

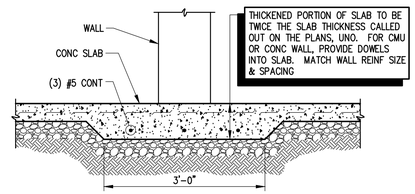
SLAB THICK	MAX JOINT SPACING	JOINT DEPTH	WWF DEPTH FROM TOP
4"	13'-0"	1"	1½"
5"	15'-0"	1¼"	1½"
6"	15'-0"	1½"	2"
7"	18'-0"	1¾"	2"
8"	20'-0"	2"	2½"
9"	24'-0"	2¼"	2½"
10"	25'-0"	2½"	3"
12"	25'-0"	3"	3½"



NOTE:
1. CONTRACTOR TO PROVIDE CONTROL JOINT LAYOUT, BASED ON MAXIMUM JOINT SPACING, U.N.O.

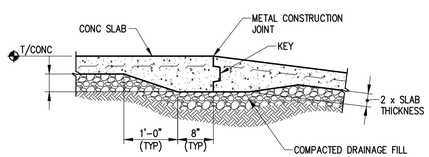
TYPICAL SLAB CONTROL JOINT (A)

SCALE: NTS

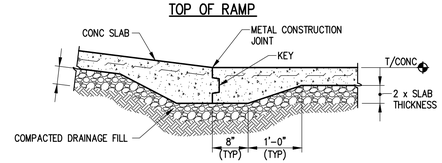


TYPICAL THICKENED SLAB (B)

SCALE: NTS



TOP OF RAMP



BOTTOM OF RAMP

TYPICAL CONCRETE RAMP DETAILS (C)

SCALE: NTS

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056

C. Rodney McComas, P.E.

ISSUE DATE:
08-21-2017
PERMIT/CONSTRUCTION
STAMPING SET 3/2/2018

REVISION:

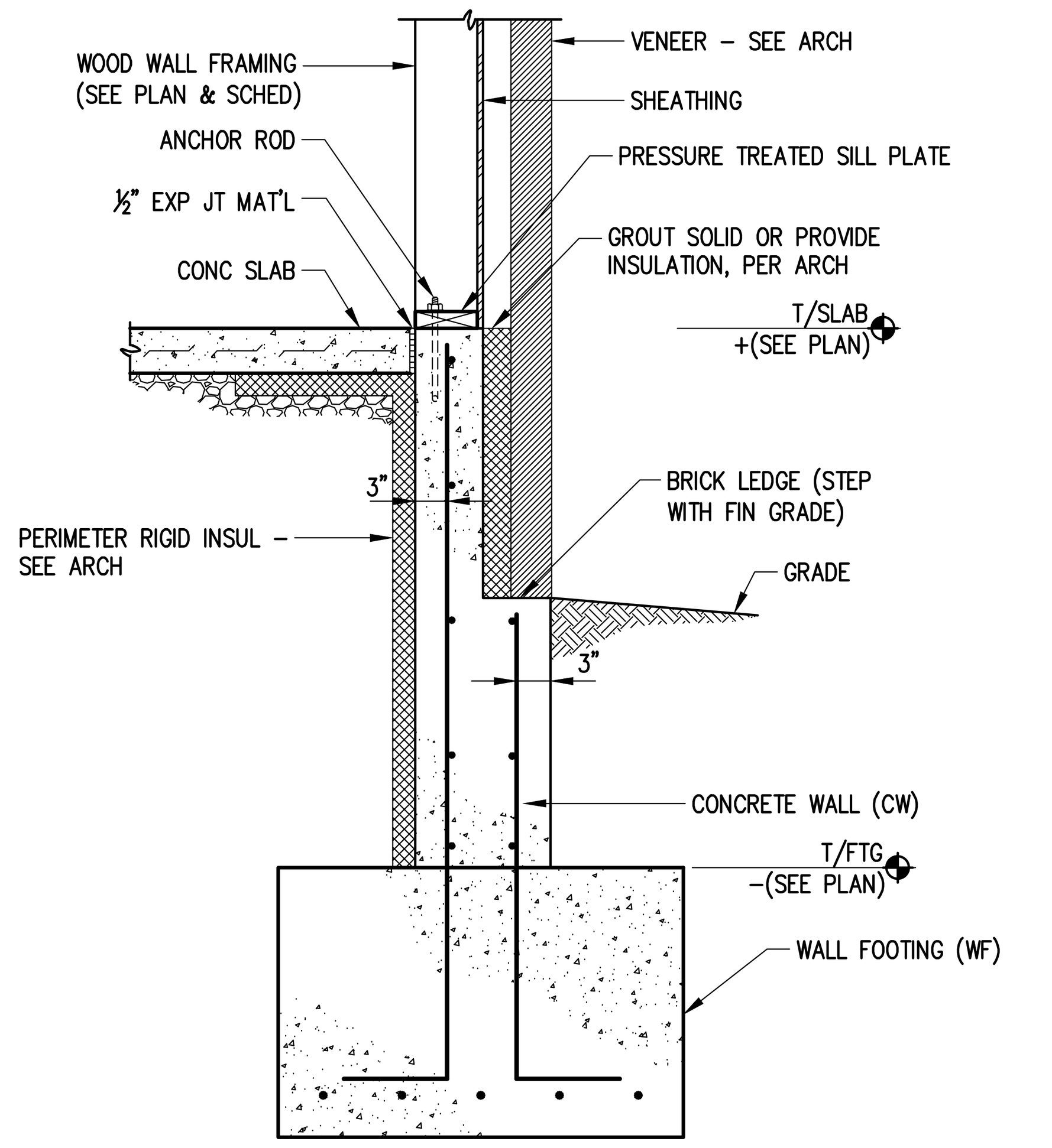
STATE OF MICHIGAN
REGISTERED PROFESSIONAL ENGINEER
C. RODNEY McCOMAS
ENGINEER
NO. 39008

JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
WWW.JSTARCHITECTS.COM
J. STUART TODD, INC.
2919 WELBORN STREET, SUITE 101, DALLAS, TEXAS 75219 | 214.522.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

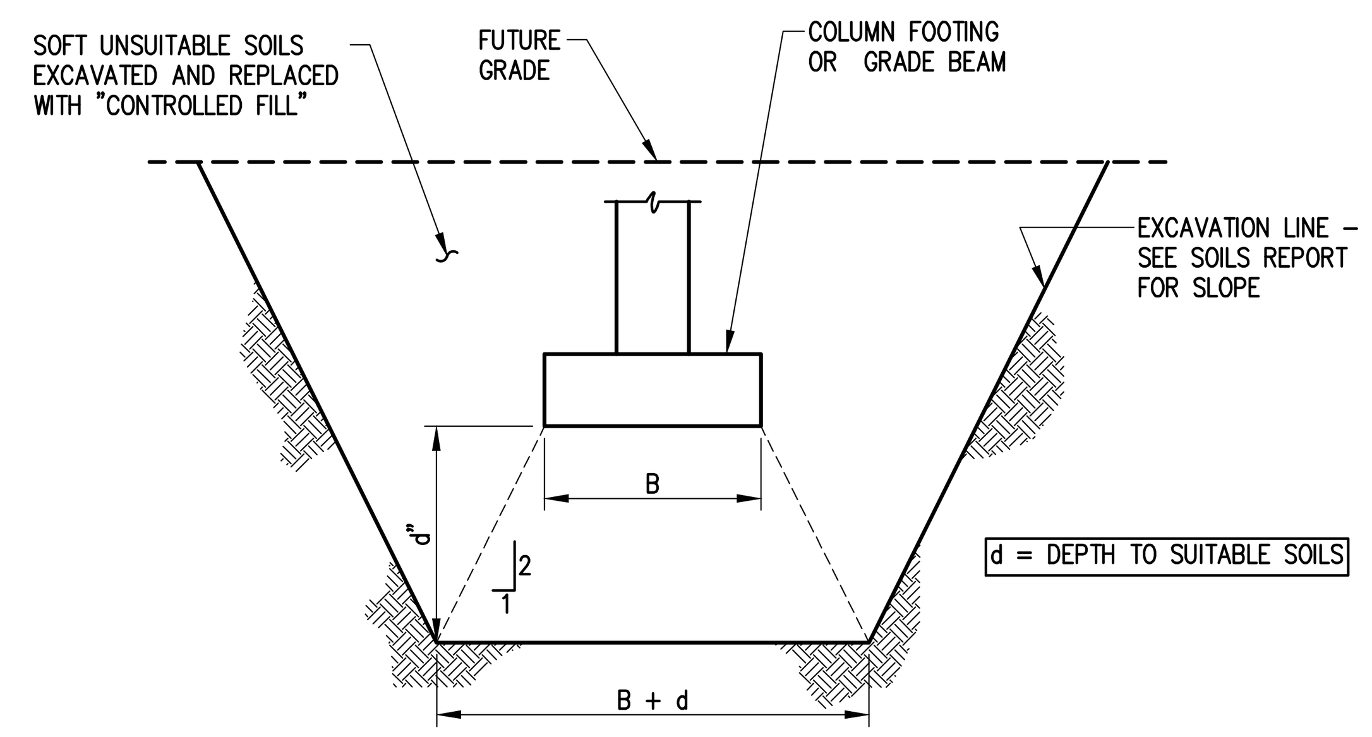
SHEET NO.
S4.4

JOB NUMBER: 16238



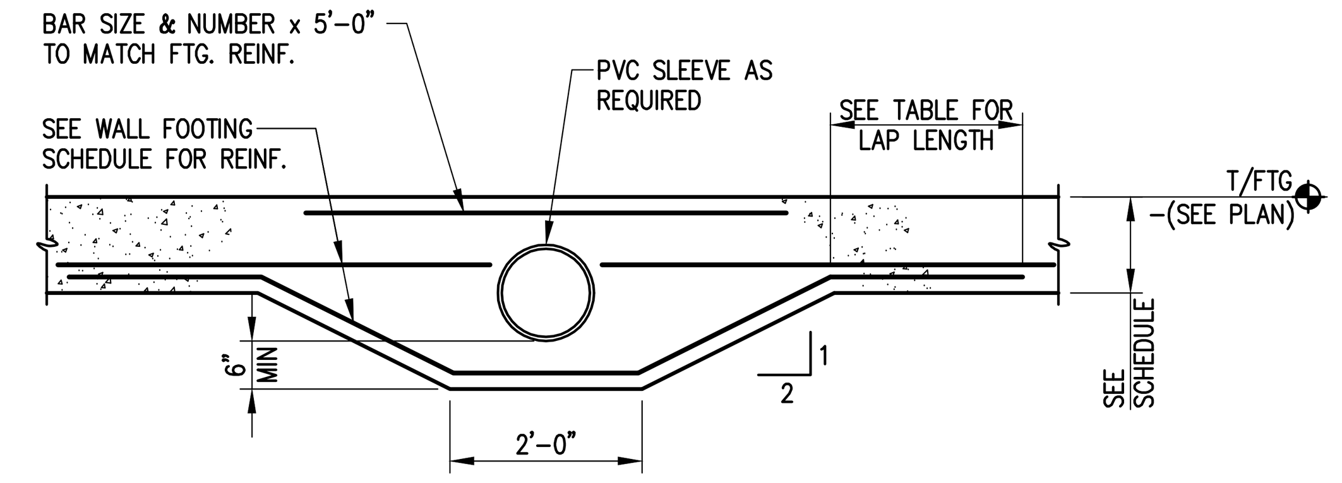
WALL FTG SECTION

SCALE: ¾" = 1'-0" DET019_17056 11 S4.5



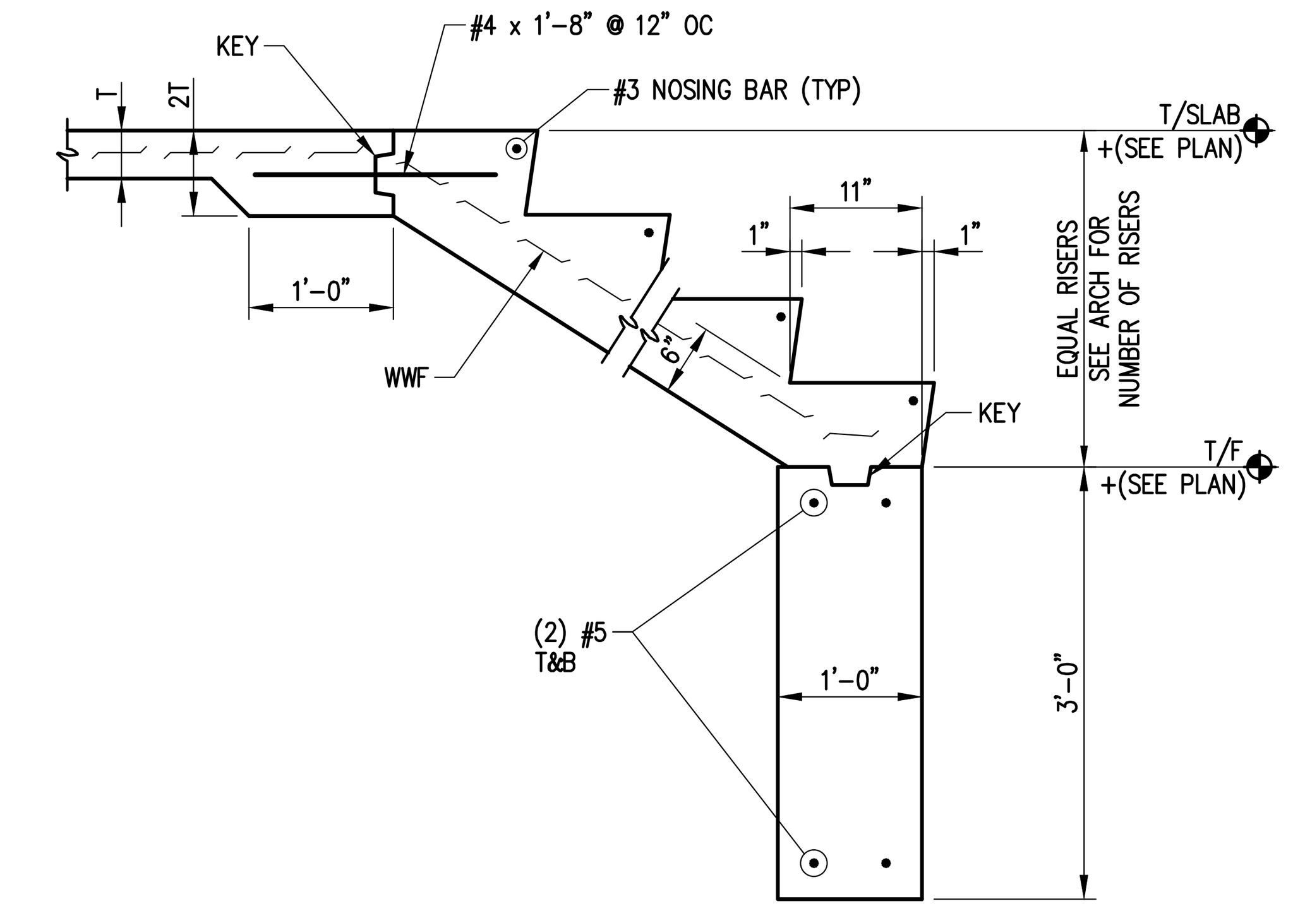
"CONTROLLED FILL" DETAIL

SCALE: NTS FDN-059 07 S4.5



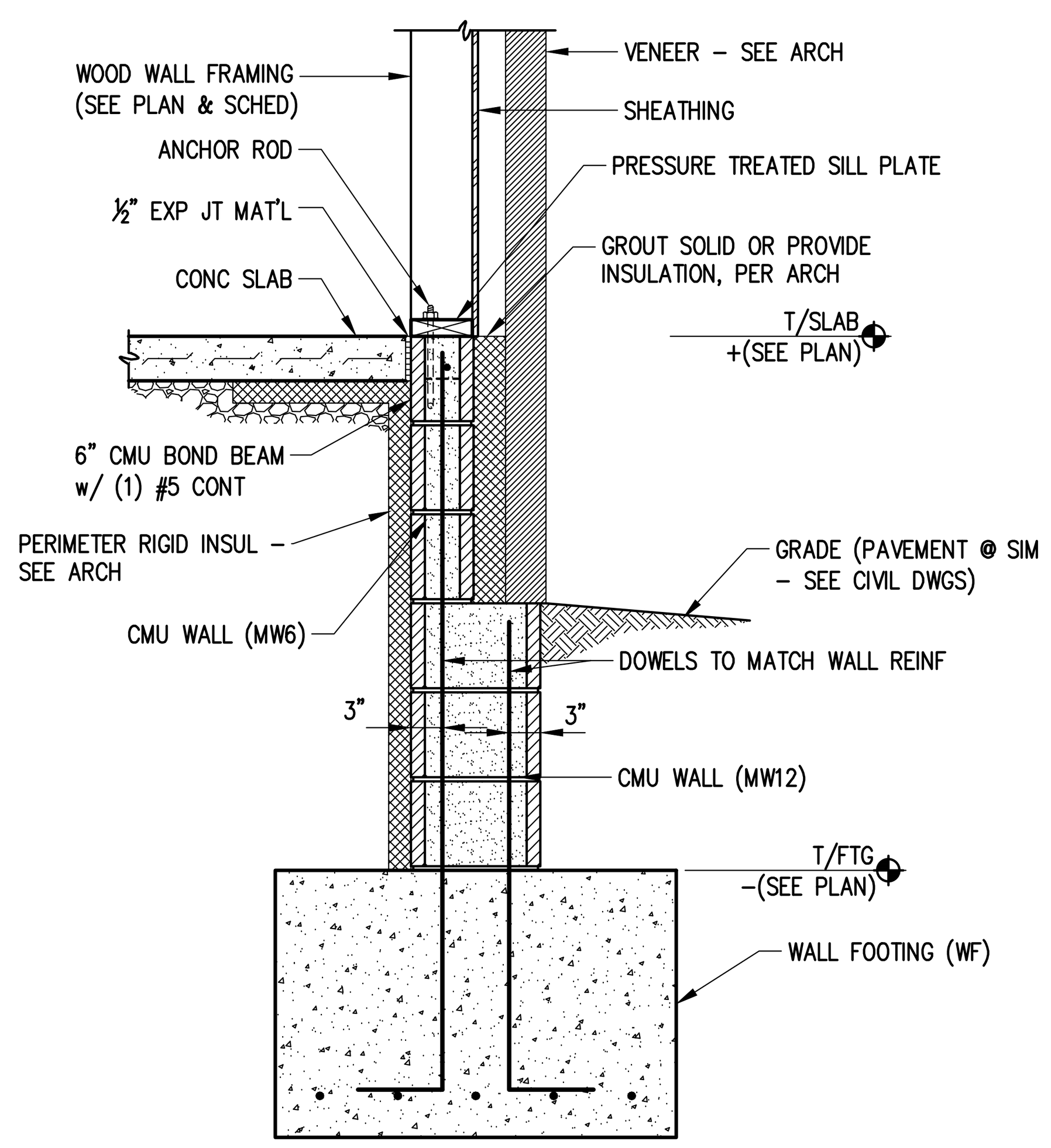
TYPICAL SLEEVE DETAIL AT WALL FOOTING

SCALE: NTS FDN-055 04 S4.5



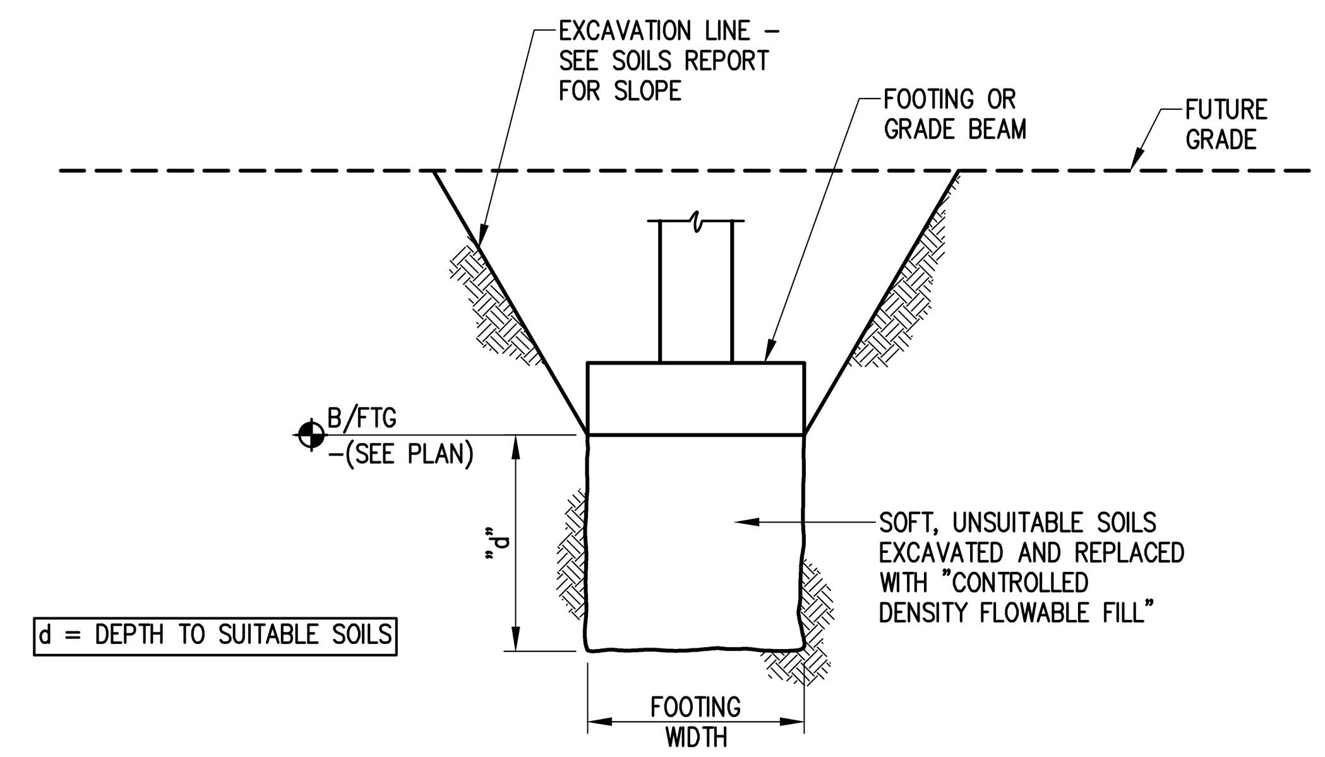
CONCRETE STAIR SECTION

SCALE: ¾" = 1'-0" CONC-003 01 S4.5



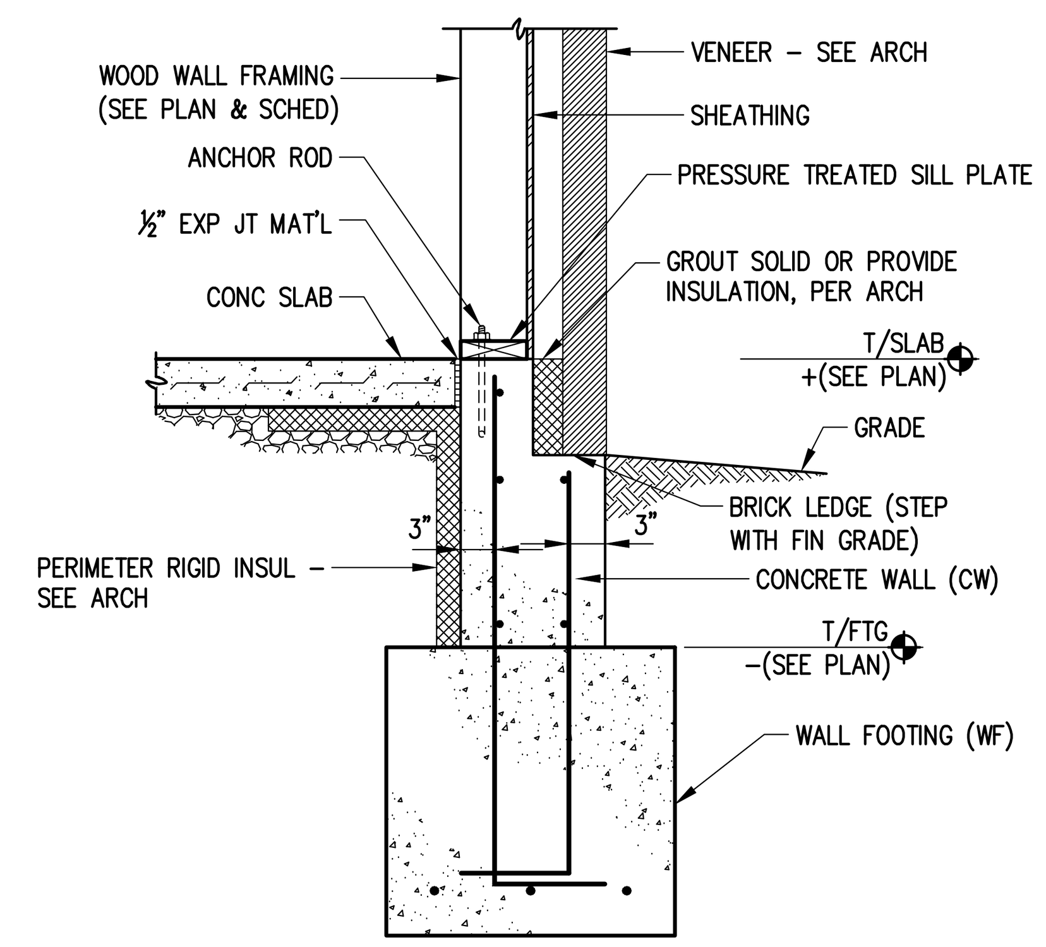
WALL FTG SECTION

SCALE: ¾" = 1'-0" DET020_17056 12 S4.5



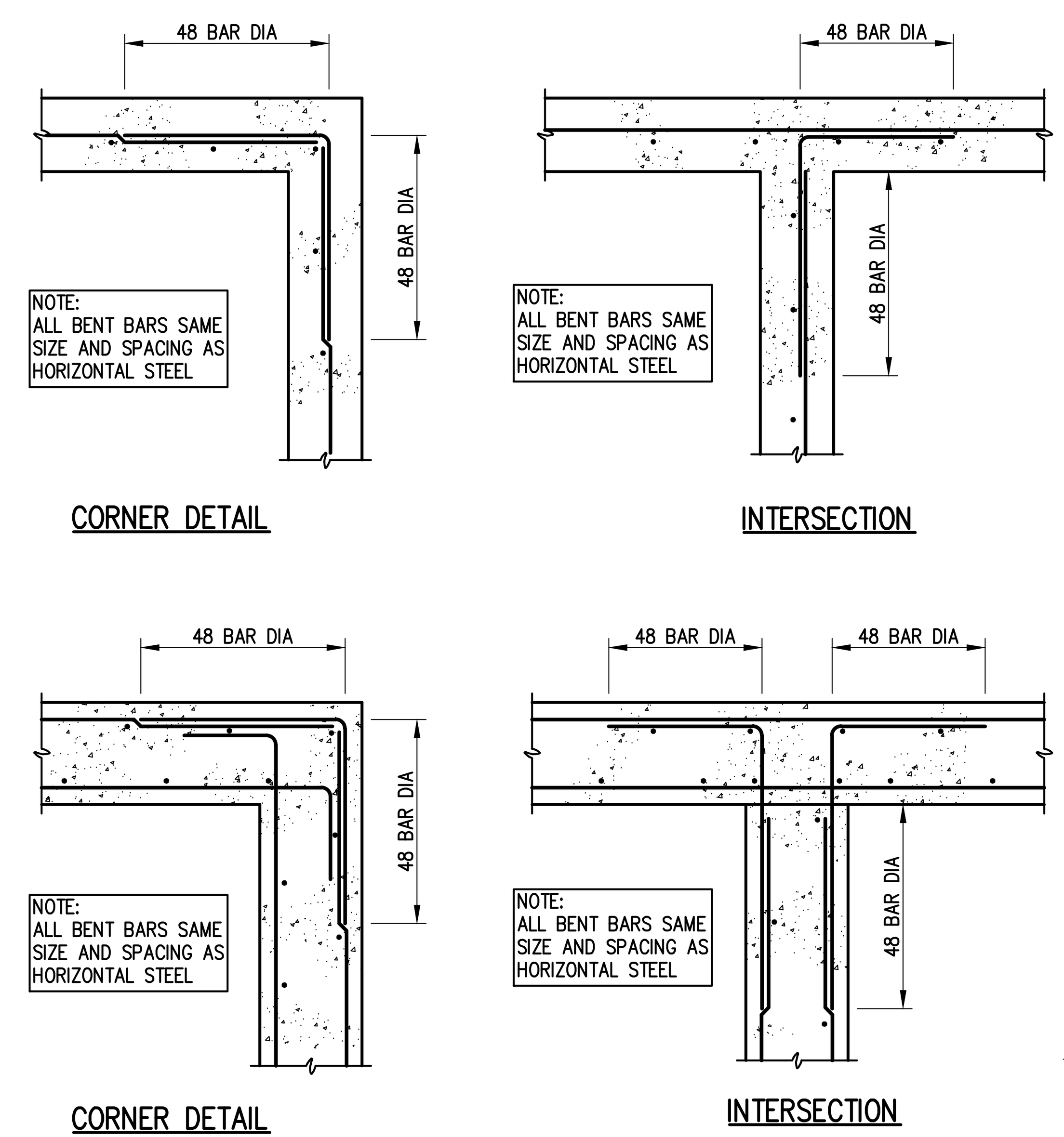
"CONTROLLED DENSITY FLOWABLE FILL" DETAIL

SCALE: NTS FDN-060 08 S4.5



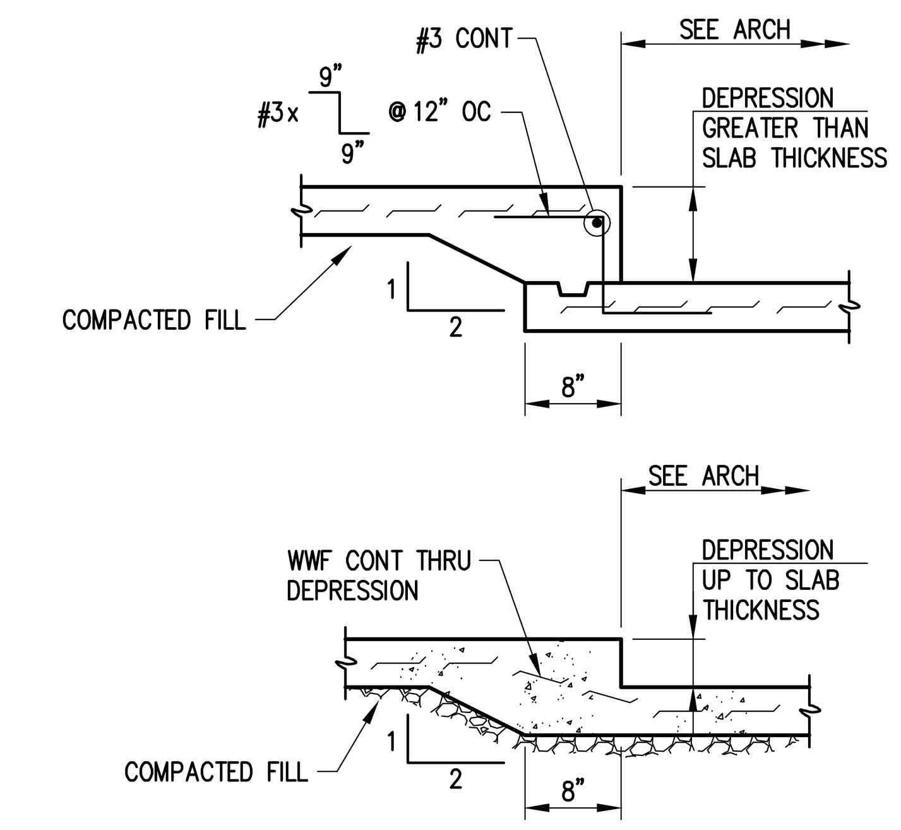
WALL FTG SECTION

SCALE: ¾" = 1'-0" DET018_17056 09 S4.5



TYPICAL REINFORCED WALL DETAILS

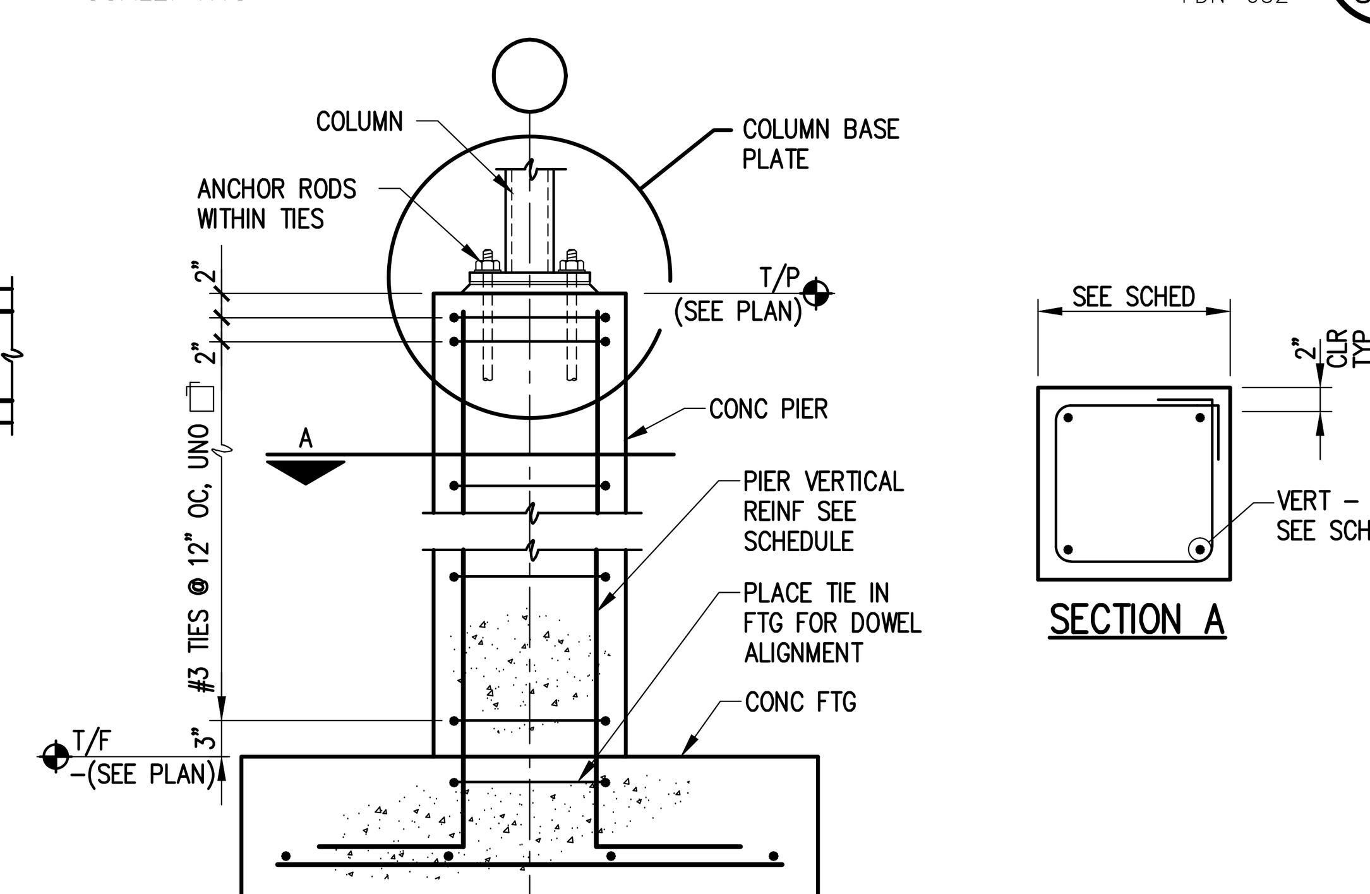
SCALE: NTS FDN-026 05 S4.5



NOTE:
1. SEE OTHER DRAWINGS FOR SLAB DEPRESSION DEPTH, SIZE AND LOCATIONS, UNO

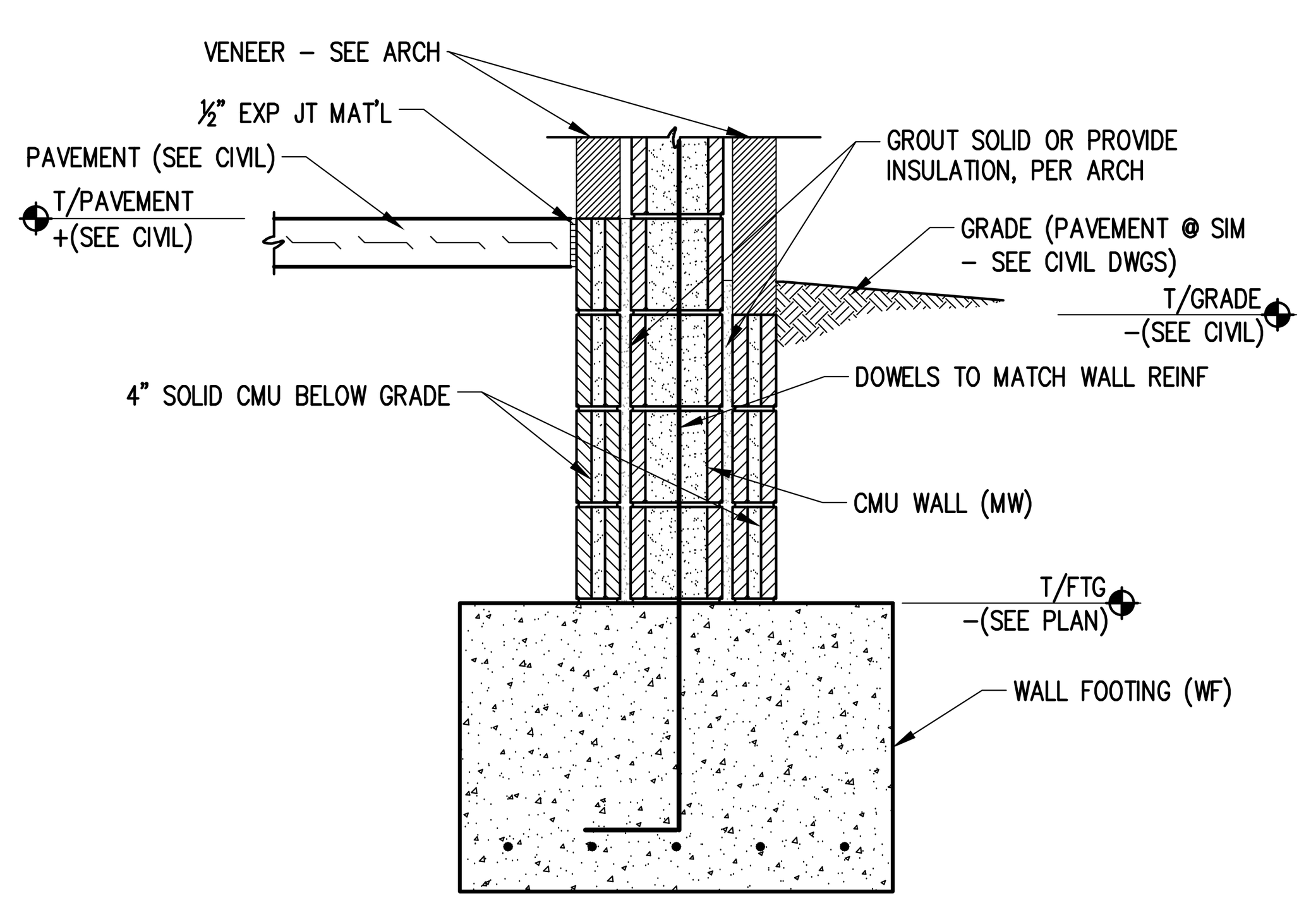
TYPICAL DEPRESSED SLAB

SCALE: NTS FDN-052 02 S4.5



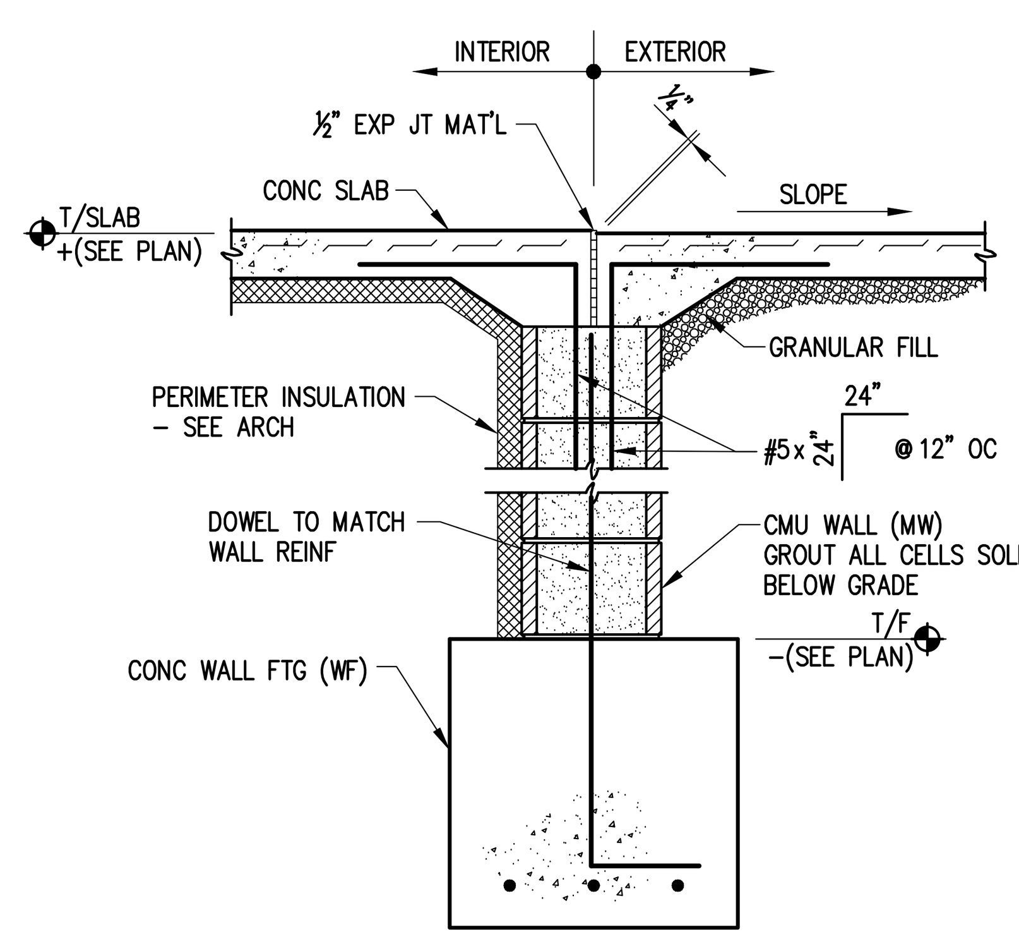
TYPICAL PIER ELEVATION

SCALE: NTS FDN-014A 03 S4.5



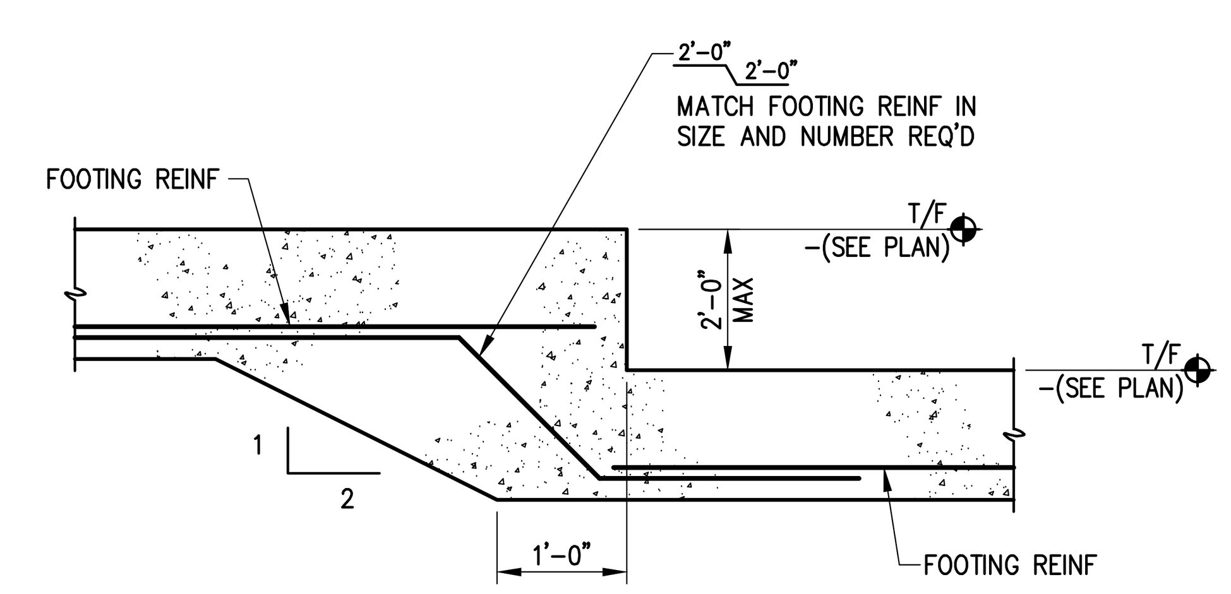
WALL FTG SECTION

SCALE: ¾" = 1'-0" DET021_17056 13 S4.5



TYPICAL SECTION AT ENTRY

SCALE: NTS FND-004C 10 S4.5



TYPICAL FOOTING STEP

SCALE: NTS FDN-016 06 S4.5

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.

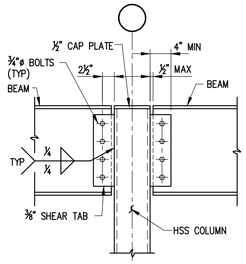
ISSUE DATE:
08-21-2017
PERMIT/CONSTRUCTION
STAMPING SET
3/2/2018
REVISION:

STATE OF MICHIGAN — C. RODNEY McCOMAS ENGINEER NO. 39008 — LICENSED PROFESSIONAL ENGINEER

JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
WWW.JSTARCHITECTS.COM
J. STUART TODD, INC.
2919 WELBORN STREET, SUITE 101, DALLAS, TEXAS 75219 | 214.522.4033

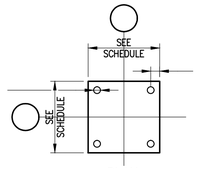
L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
S4.5
JOB NUMBER: 16238



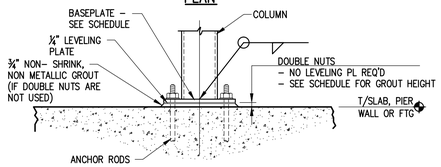
SIMPLE BEAM @ TOP OF COL

ANCHOR ROD	DOUBLE NUT GROUT HEIGHT
¾"ø	2"
⅞"ø	2"
1"ø	2"
1⅛"ø	2"
1¼"ø	2"
1½"ø	2"
2"ø	3"
2½"ø	3"



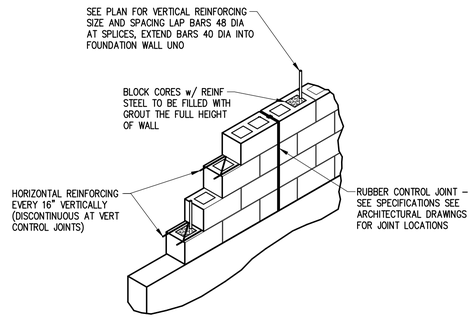
PLAN

ANCHOR ROD	HOLE DIAMETER	EDGE DISTANCE
¾"ø	1⅛"ø	1½"
⅞"ø	1⅜"ø	1¾"
1"ø	1½"ø	2"
1⅛"ø	1⅝"ø	2¼"
1¼"ø	1¾"ø	2½"
1½"ø	2"ø	3"
2"ø	2½"ø	4"
2½"ø	3"ø	4½"



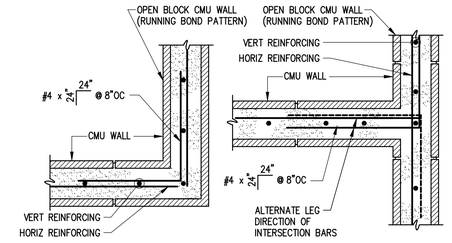
TYPICAL COLUMN BASE DETAIL

SCALE: ¾"=1'–0" STL–002 07 S4.6



TYPICAL MASONRY WALL REINFORCING

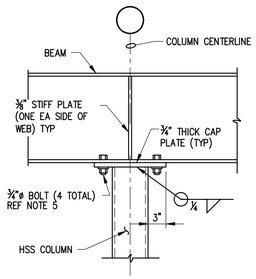
SCALE: NTS MAS–009 04 S4.6



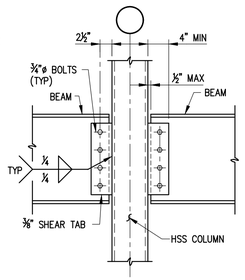
A TYPICAL CORNER B TYPICAL INTERSECTION

TYPICAL BOND BEAM CORNER BAR DETAIL

SCALE: NTS MAS–005 01 S4.6



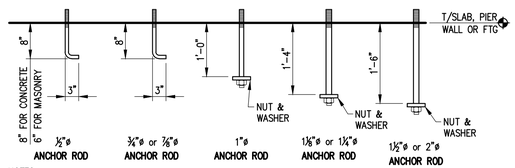
CONTINUOUS BEAM



SIMPLE BEAM (MID COLUMN)

TYPICAL STEEL BEAM CONNECTIONS

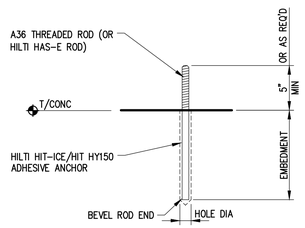
SCALE: NTS STL–004 10 S4.6



NOTES:
1. SEE SCHEDULE OR SECTIONS FOR REQUIRED ANCHOR ROD SIZE AND SPACING.
2. PROVIDE NUTS AND WASHERS FOR ALL ANCHOR RODS.

TYPICAL ANCHOR ROD DETAILS

SCALE: ¾" = 1'–0" STL–002A 08 S4.6

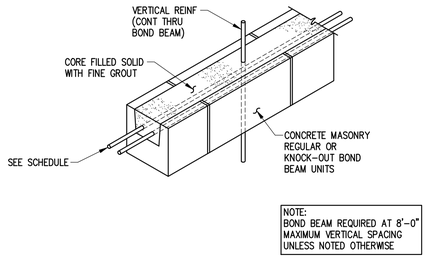


ANCHOR ROD DIAMETER	EMBEDMENT DEPTH	HOLE DIAMETER
¾"	10"	1³⁄₁₆"
⅞"	11¼"	1⁵⁄₁₆"
1"	12⅜"	1⅛"
1¼"	15"	1½"

NOTE:
1. INSTALL RODS AND ADHESIVE IN ACCORDANCE w/ MFR'S INSTRUCTIONS.
2. CURE TIME OF 4 HOURS IS REQ'D @ 32° TEMP.

ANCHOR ROD REPLACEMENT DETAIL

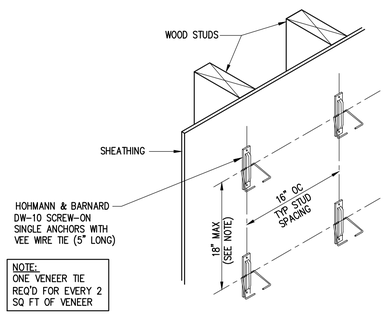
SCALE: 1½" = 1'–0" STL–081 09 S4.6



NOTE:
BOND BEAM REQUIRED AT 8'–0" MAXIMUM VERTICAL SPACING UNLESS NOTED OTHERWISE

TYPICAL BOND BEAM

SCALE: NTS MAS–011A 05 S4.6

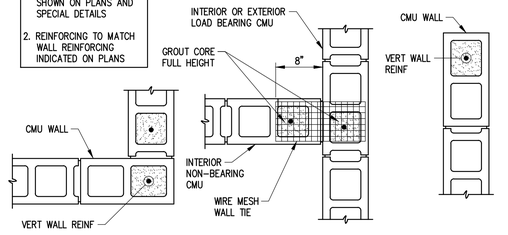


NOTE:
ONE VENEER TIE REQ'D FOR EVERY 2 SQ FT OF VENEER

VENEER ANCHOR

SCALE: NTS MAS–021 06 S4.6

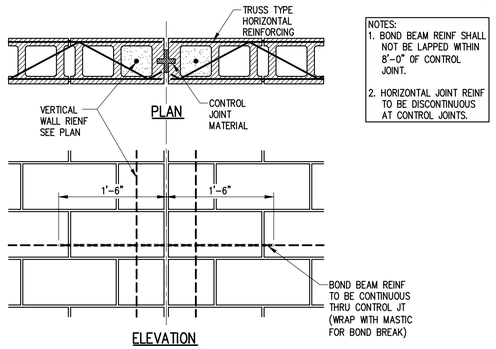
NOTES:
1. REINFORCING SHOWN IS IN ADDITION TO REINFORCING SHOWN ON PLANS AND SPECIAL DETAILS
2. REINFORCING TO MATCH WALL REINFORCING INDICATED ON PLANS



A TYPICAL CORNER B TYPICAL INTERSECTION C TYPICAL JAMB

TYPICAL MASONRY WALL REINFORCING

SCALE: NTS MAS–007 02 S4.6



NOTES:
1. BOND BEAM REINF SHALL NOT BE LAPPED WITHIN 8'–0" OF CONTROL JOINT.
2. HORIZONTAL JOINT REINF TO BE DISCONTINUOUS AT CONTROL JOINTS.

ELEVATION

TYPICAL MASONRY CONTROL JOINT

SCALE: NTS (SEE ARCHITECTURAL FOR LOCATION) MAS–008 03 S4.6

ISSUE DATE:
08-21-2017
PERMIT/CONSTRUCTION
STAMPING SET
3/2/2018

REVISION:

STATE OF MICHIGAN
C. RODNEY McCOMAS
ENGINEER
NO. 39008
REGISTERED PROFESSIONAL ENGINEER

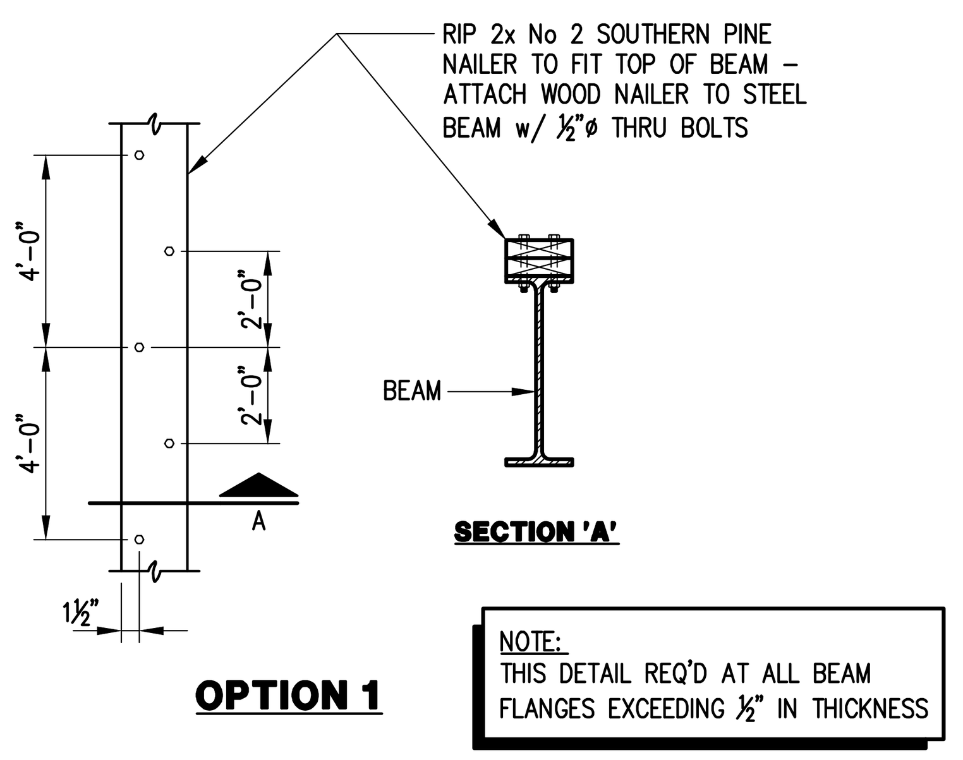
JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
WWW.JSTARCHITECTS.COM
J. STUART TODD, INC.
2919 WELBORN STREET | SUITE 101 DALLAS, TEXAS 75219 | 214.522.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

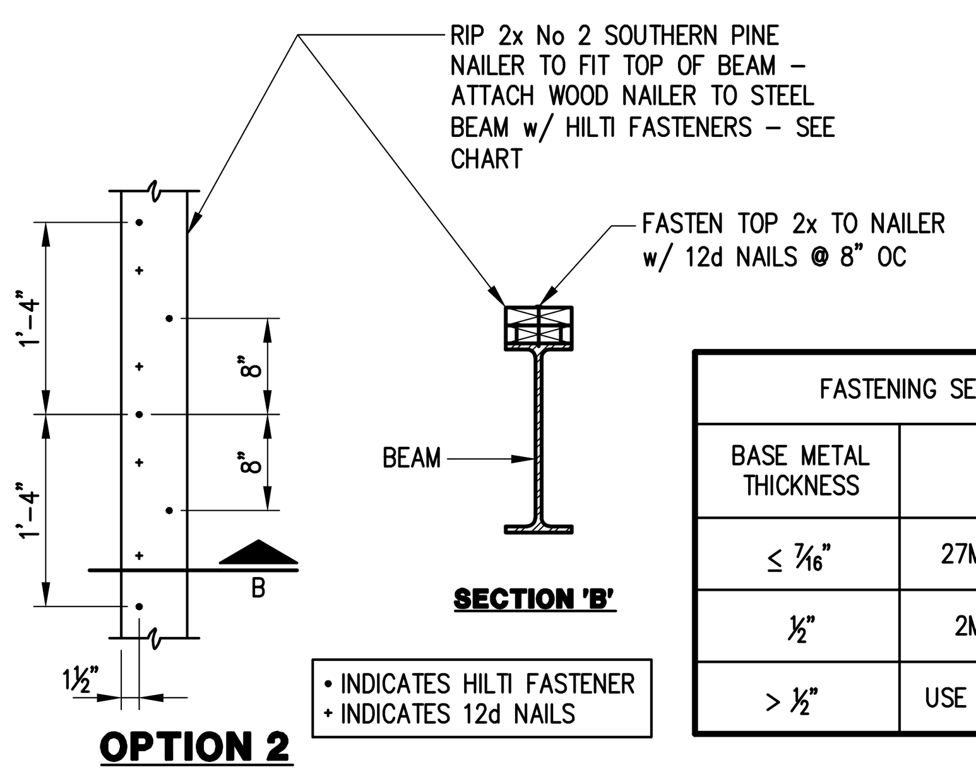
SHEET NO.
S4.6

JOB NUMBER: 16238

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.



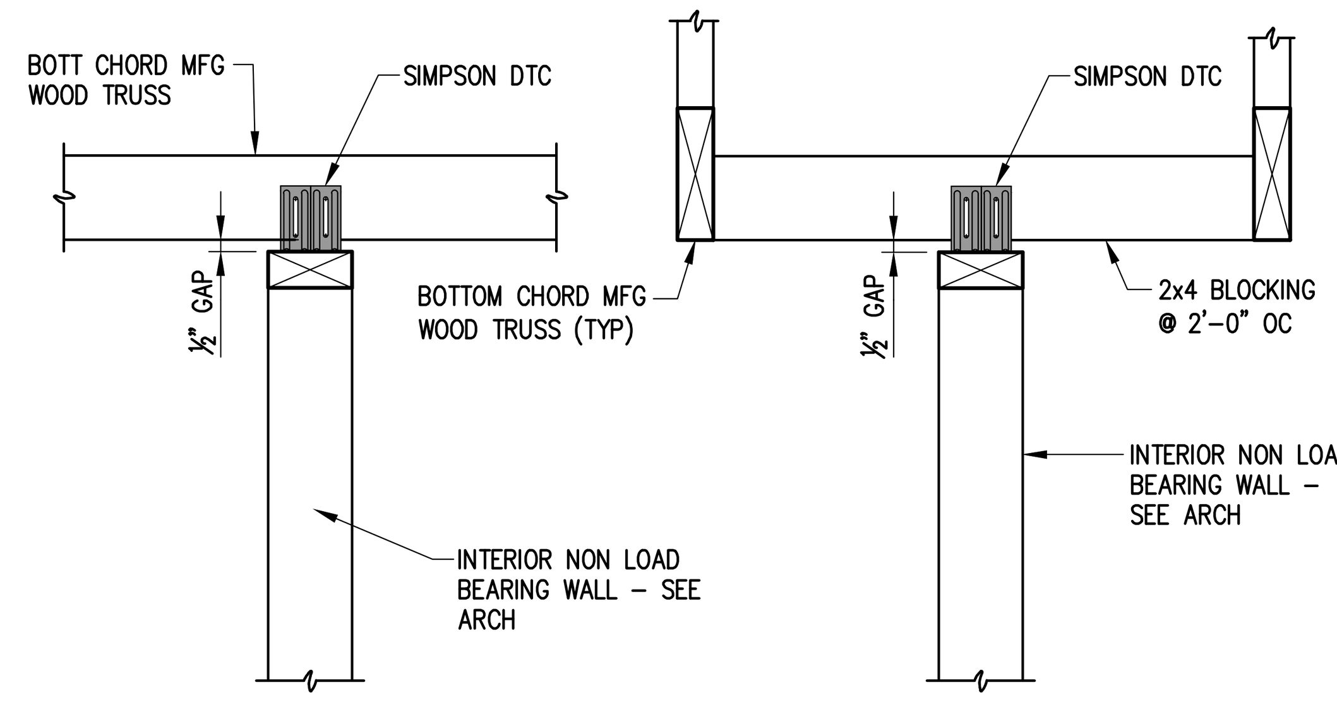
NOTE: THIS DETAIL REQ'D AT ALL BEAM FLANGES EXCEEDING ½" IN THICKNESS



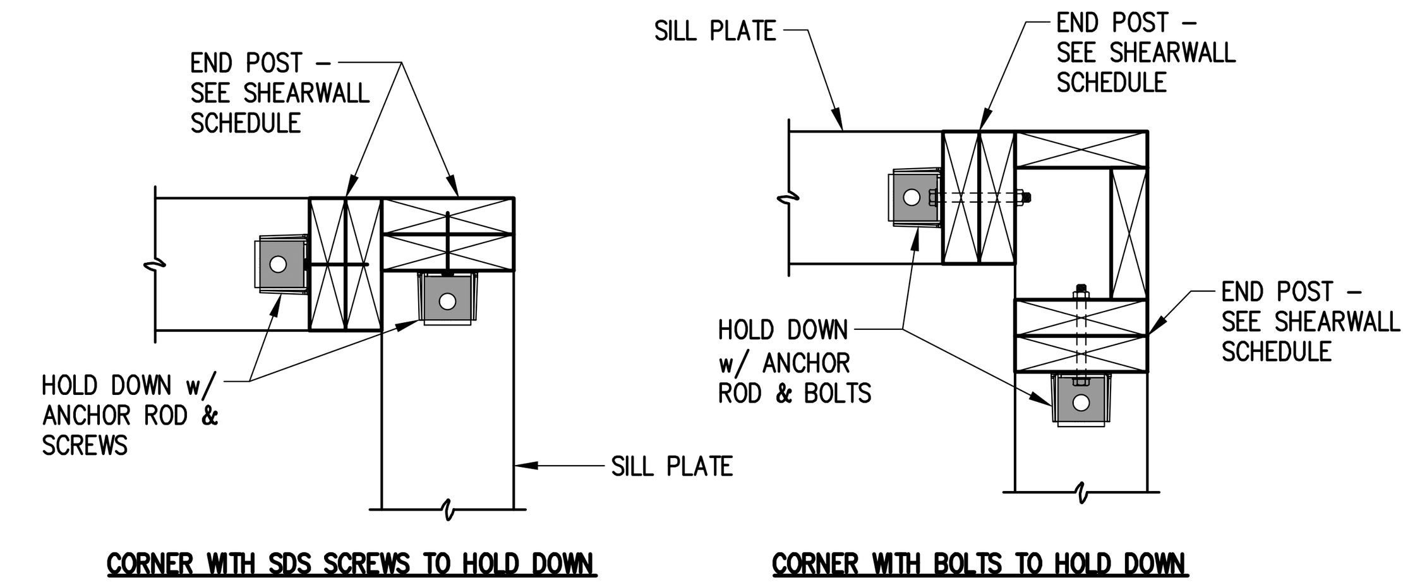
• INDICATES HILTI FASTENER
• INDICATES 12d NAILS

FASTENING SELECTION	
BASE METAL THICKNESS	HILTI FASTENER
≤ 7⁄16"	27MM LONG X-U
½"	2MM LONG DS
> ½"	USE OPTION 1, ABOVE

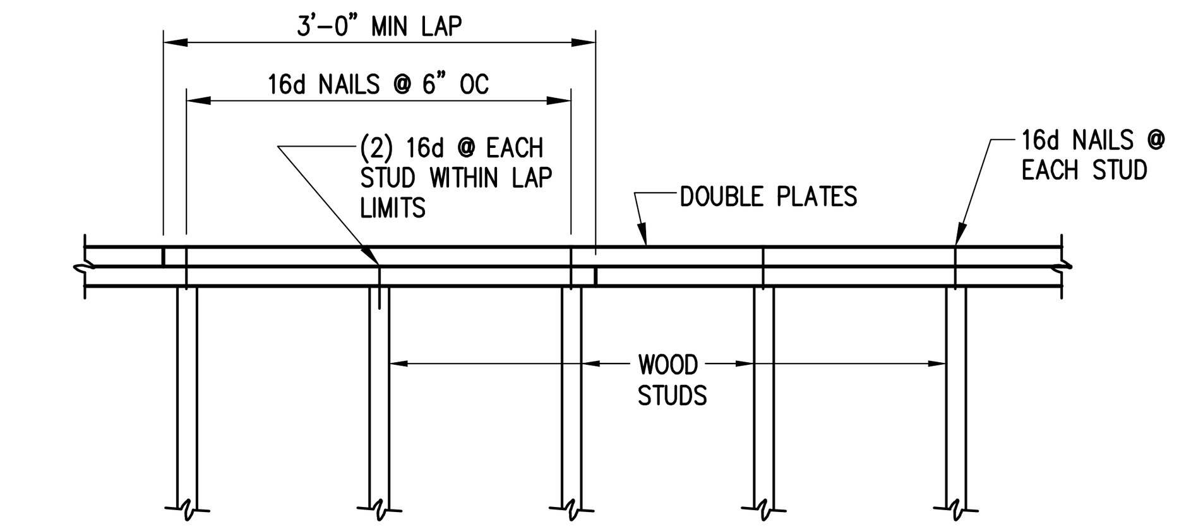
TYPICAL NAILER TO STEEL BEAM DETAILS 13 / S4.7
SCALE: NOT TO SCALE WOOD-024



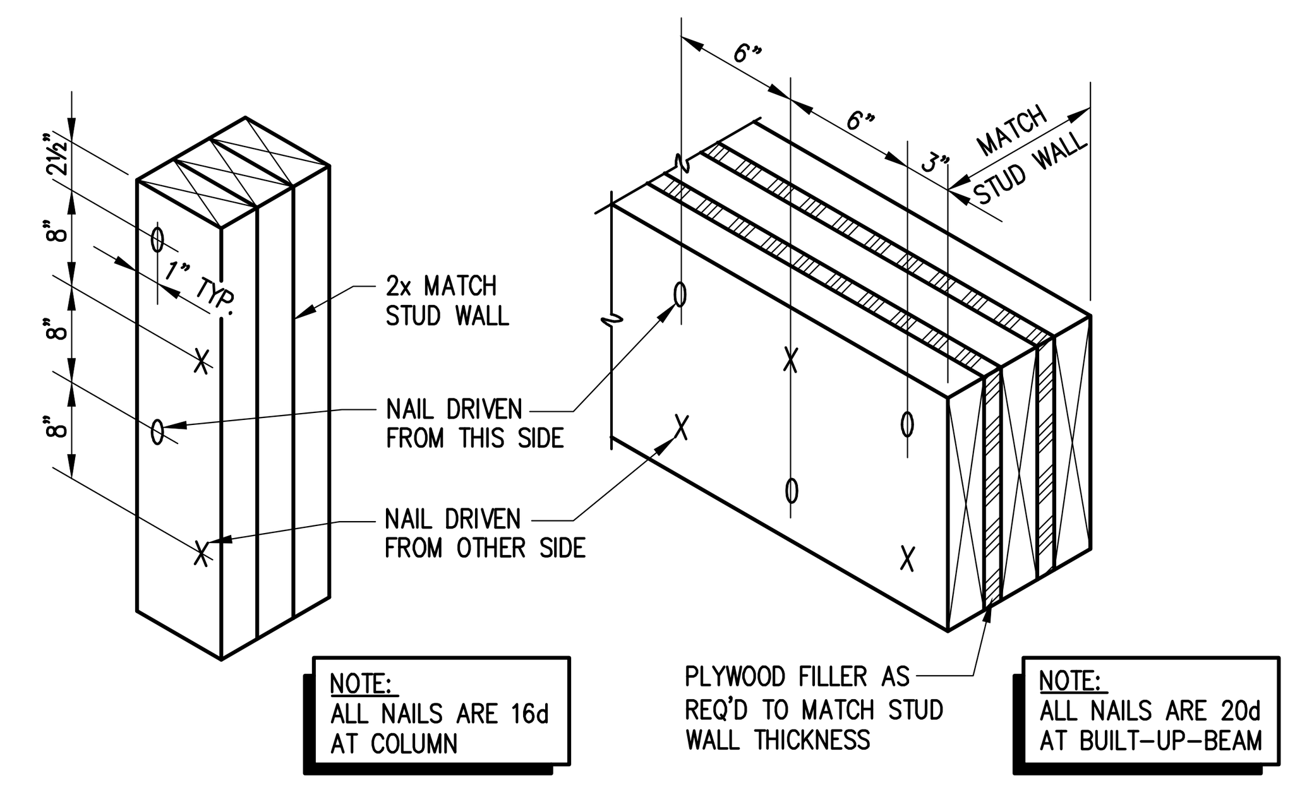
NON LOAD BEARING - INTERIOR WALL 09 / S4.7
SCALE: NOT TO SCALE WOOD-019



SILL PLATE DETAIL AT HOLD DOWN 05 / S4.7
SCALE: NOT TO SCALE WOOD-012



TYP DOUBLE TOP PLATE SPLICE 01 / S4.7
SCALE: ¾" = 1'-0" WOOD-023



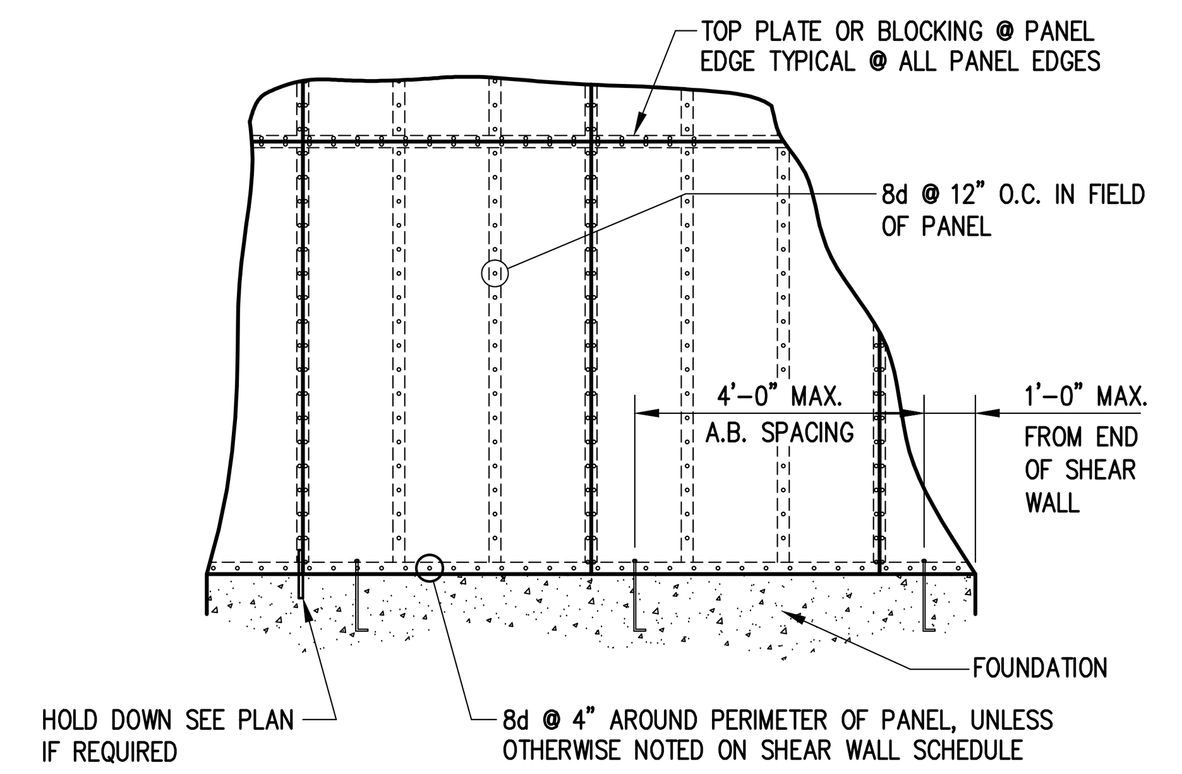
NOTE: ALL NAILS ARE 16d AT COLUMN

NOTE: ALL NAILS ARE 20d AT BUILT-UP-BEAM

TYPICAL BUILT-UP COLUMN

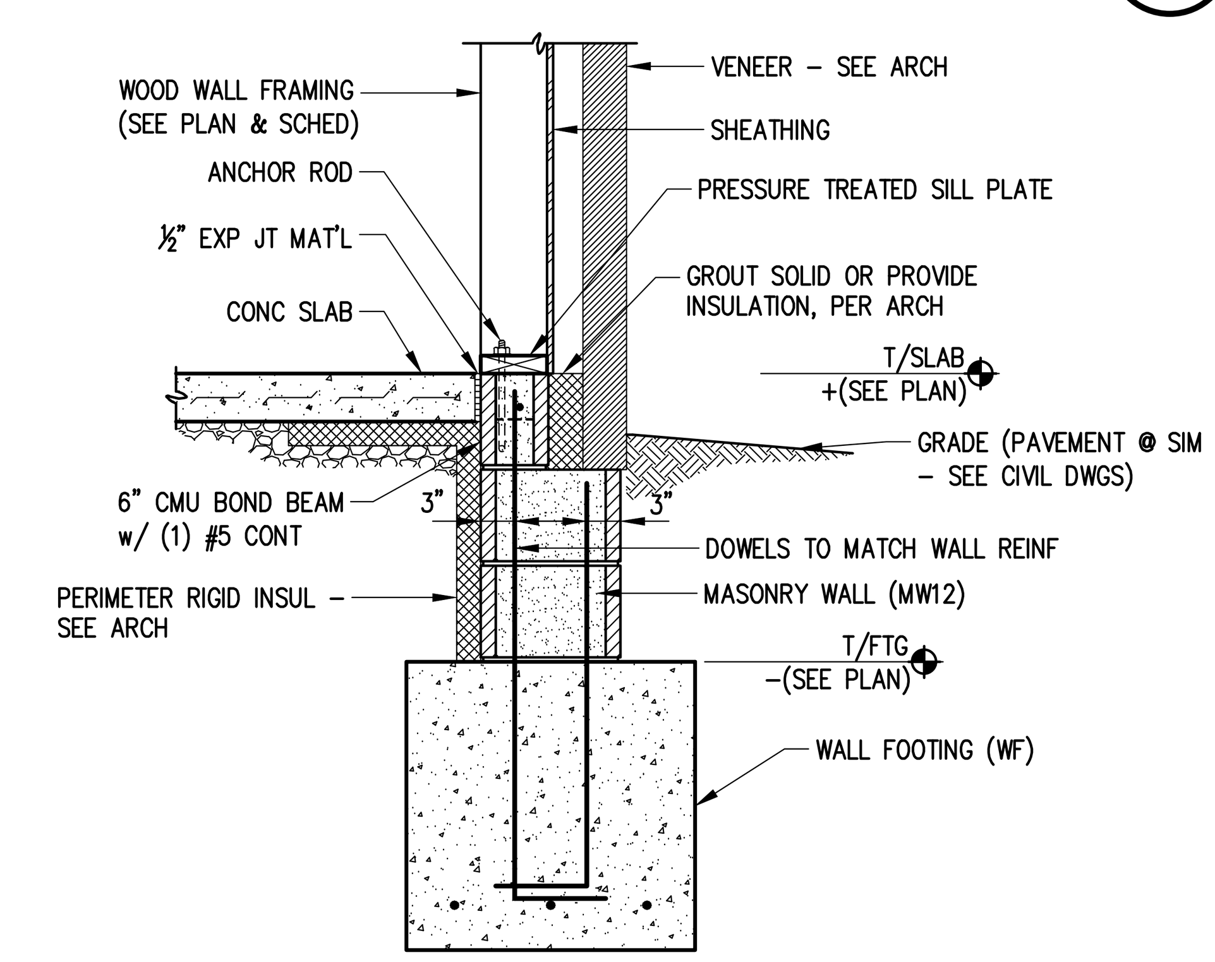
TYPICAL BUILT-UP BEAM

TYPICAL BUILT-UP MEMBERS 10 / S4.7
SCALE: NOT TO SCALE WOOD-020

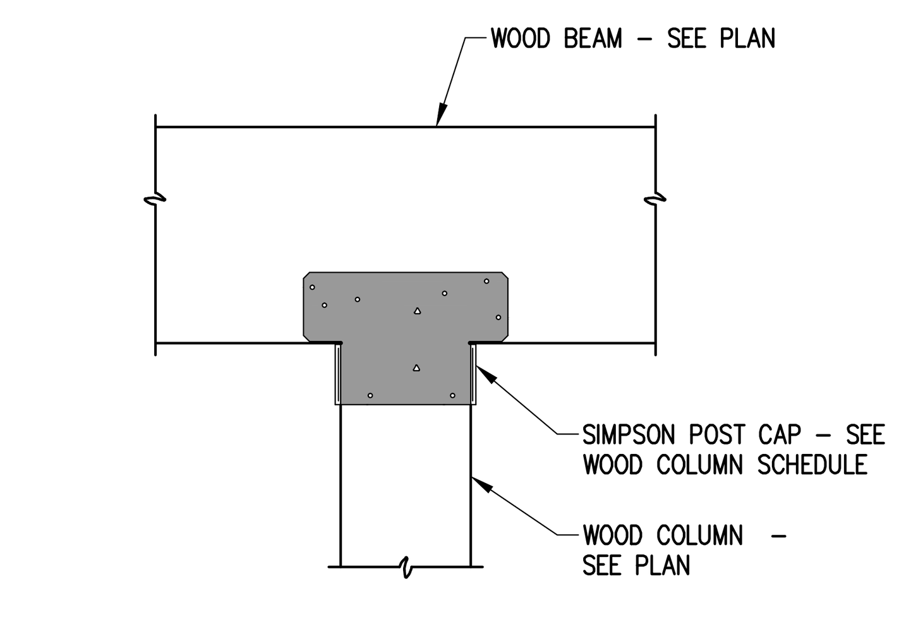


ALL PLYWOOD SHALL BE 15⁄32" STRUCTURAL I SHEATHING, EXPOSURE 1 MINIMUM. ORIENTED STRAND BOARD (OSB) WITH APA RATING MAY BE USED.

TYPICAL PLYWOOD SHEARWALL 06 / S4.7
SCALE: NOT TO SCALE WOOD-013

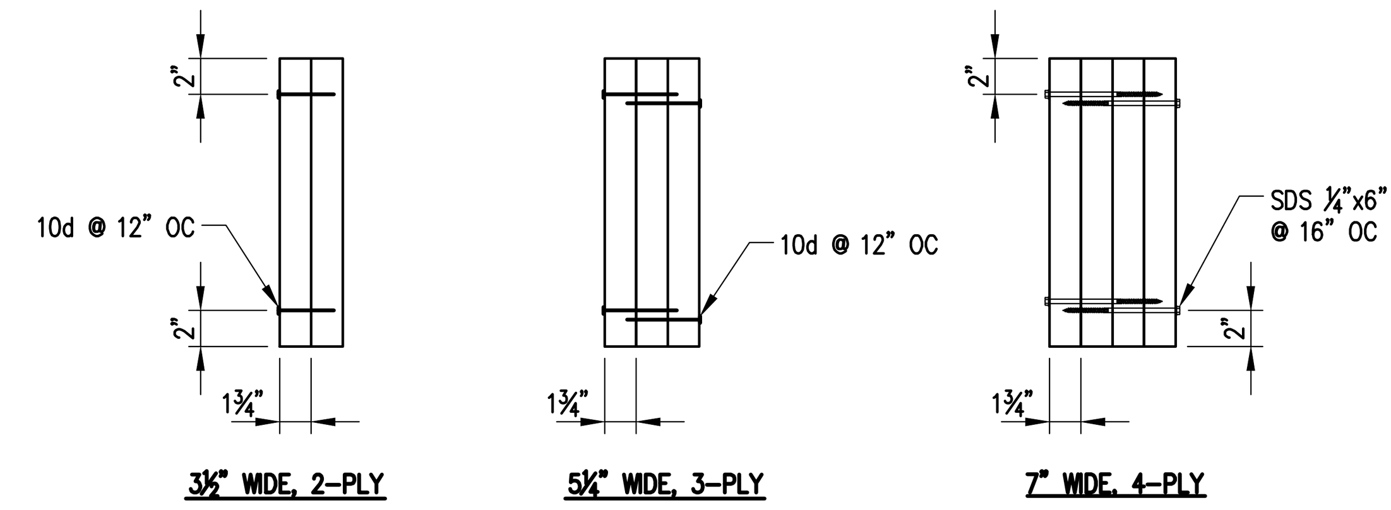


WALL FTG SECTION 02 / S4.7
SCALE: ¾" = 1'-0" WOOD-008



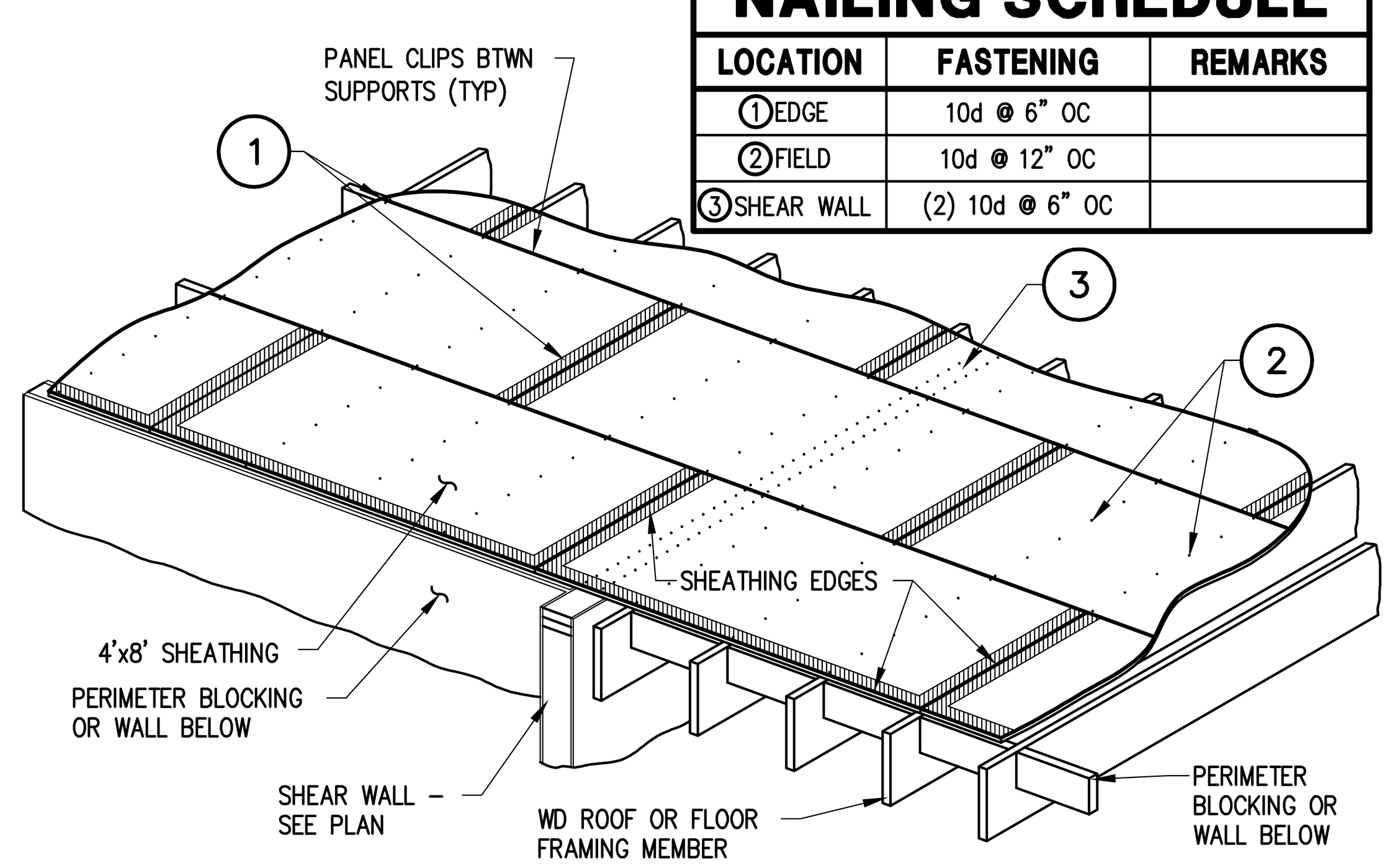
NOTE: USE "ECCENTRIC" POST CAP WHERE ONLY ONE BEAM FRAMES TO COLUMN.

POST CAP DETAIL 14 / S4.7
SCALE: NOT TO SCALE WOOD-025

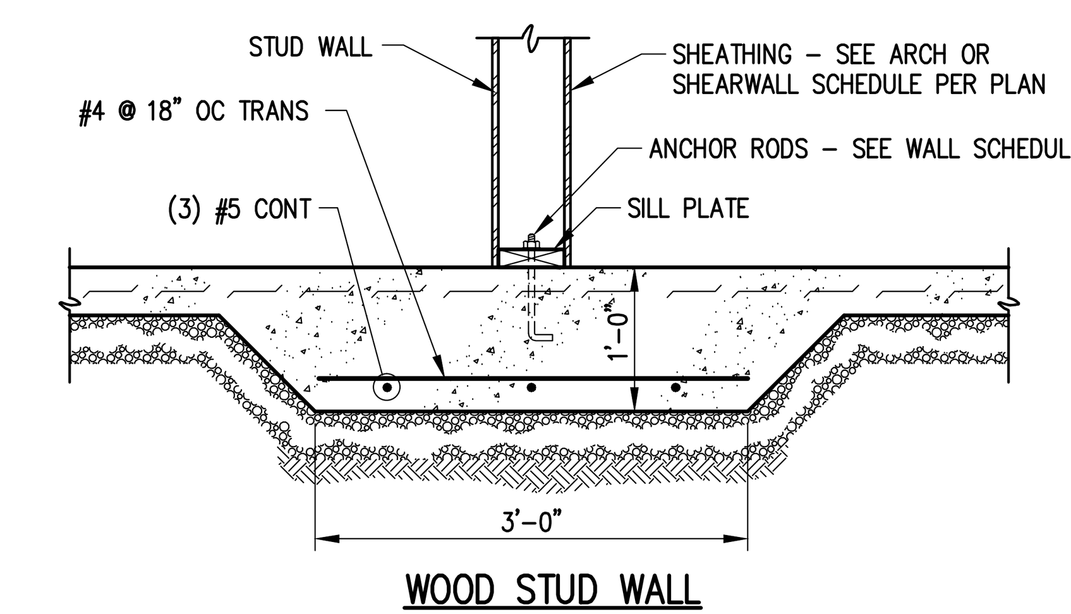


BUILT-UP LVL BEAMS 11 / S4.7
SCALE: NOT TO SCALE WOOD-021

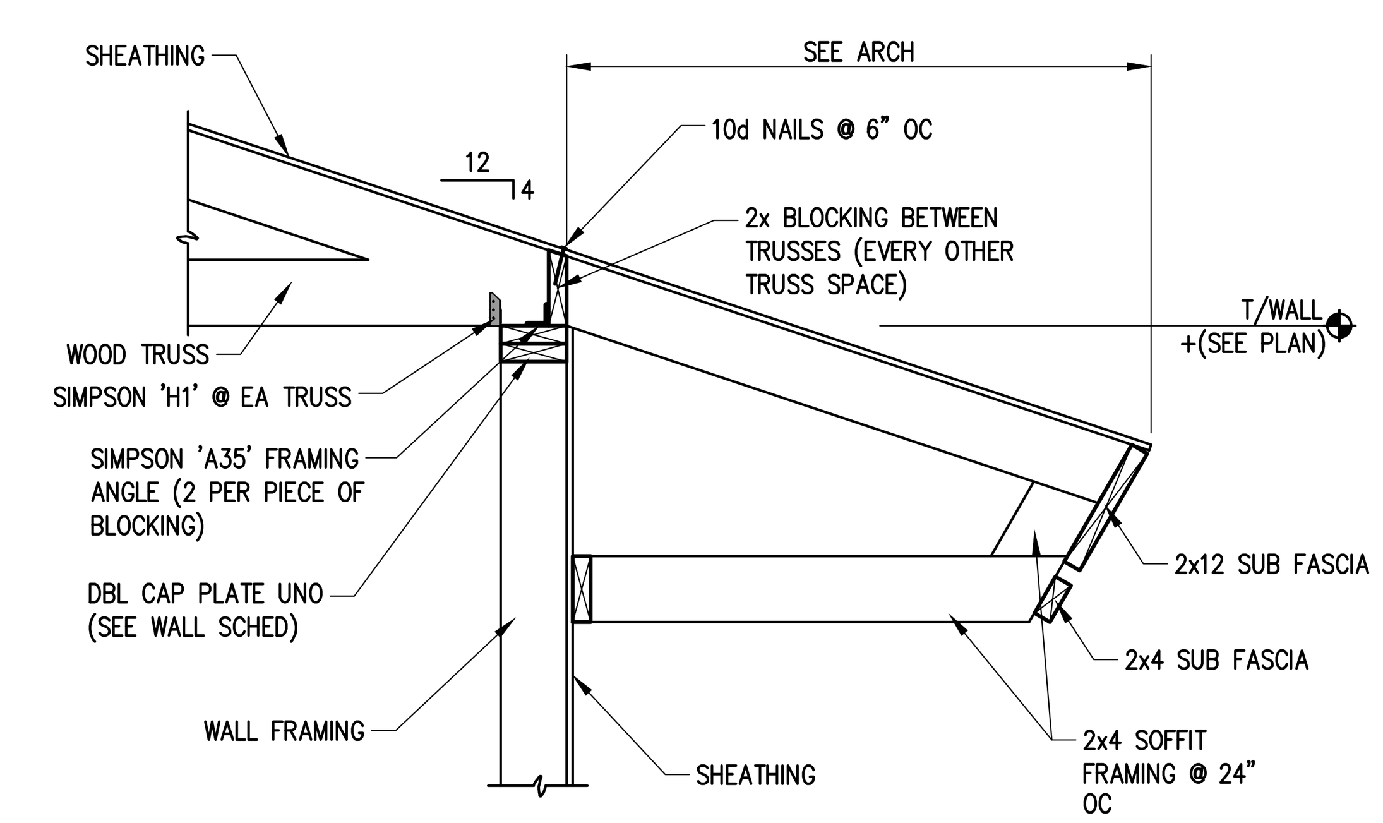
NAILING SCHEDULE		
LOCATION	FASTENING	REMARKS
① EDGE	10d @ 6" OC	
② FIELD	10d @ 12" OC	
③ SHEAR WALL	(2) 10d @ 6" OC	



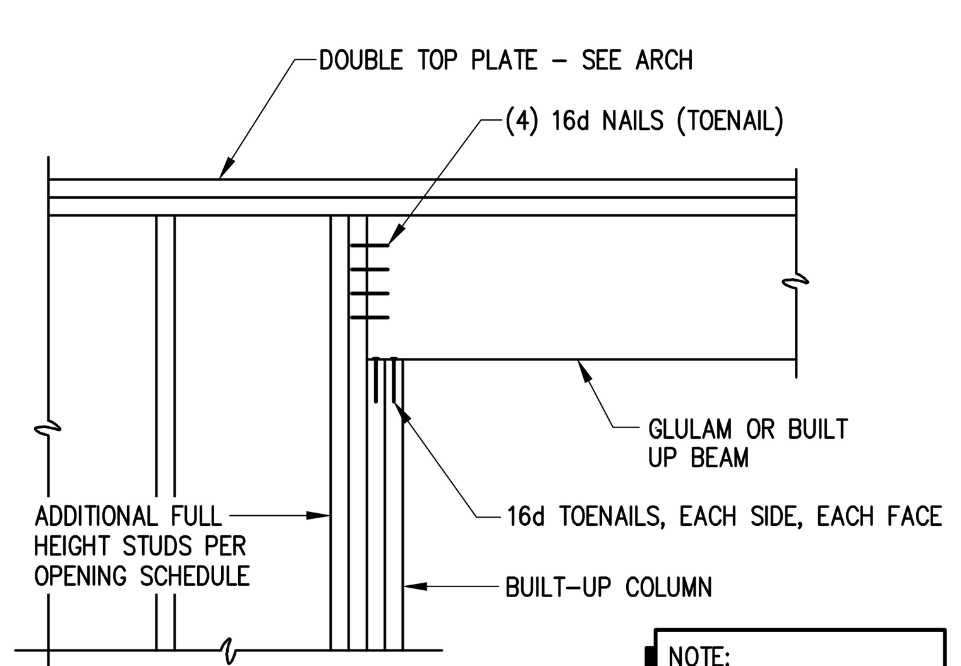
TYP ROOF/FLOOR NAILING PATTERN 07 / S4.7
SCALE: NTS (UNBLOCKED DIAPHRAGM) WOOD-014



TYP THICKENED SLAB @ INTERIOR BRG WALL 03 / S4.7
SCALE: NOT TO SCALE WOOD-010

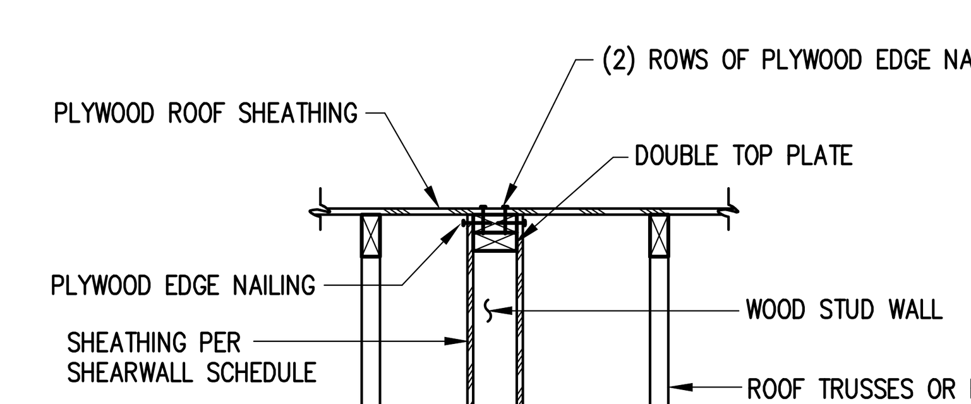


TYP ROOF SECTION 15 / S4.7
SCALE: ¾" = 1'-0" Wood-033



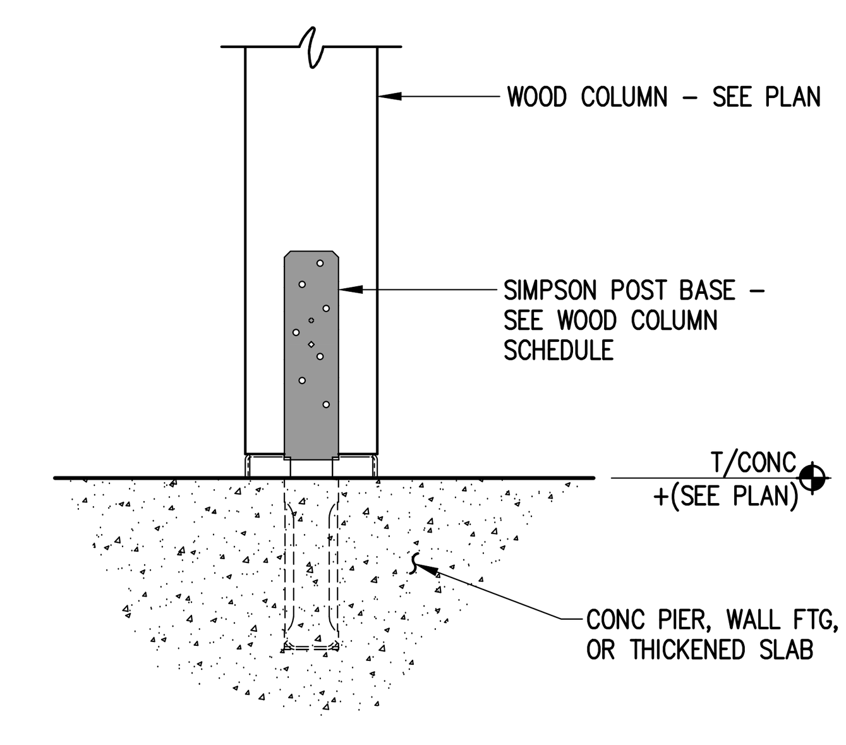
NOTE: SEE BUILT-UP MEMBER DETAIL FOR FASTENING REQUIREMENTS

TYPICAL BEAM BEARING 12 / S4.7
SCALE: ¾" = 1'-0" WOOD-022



NOTE: SEE TYPICAL ROOF/FLOOR NAILING PATTERN DETAIL FOR FASTENING REQUIREMENTS

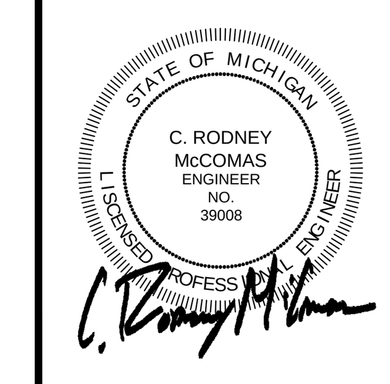
SHEARWALL AT ROOF 08 / S4.7
SCALE: NOT TO SCALE WOOD-018



POST BASE DETAIL 04 / S4.7
SCALE: NOT TO SCALE WOOD-011

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.

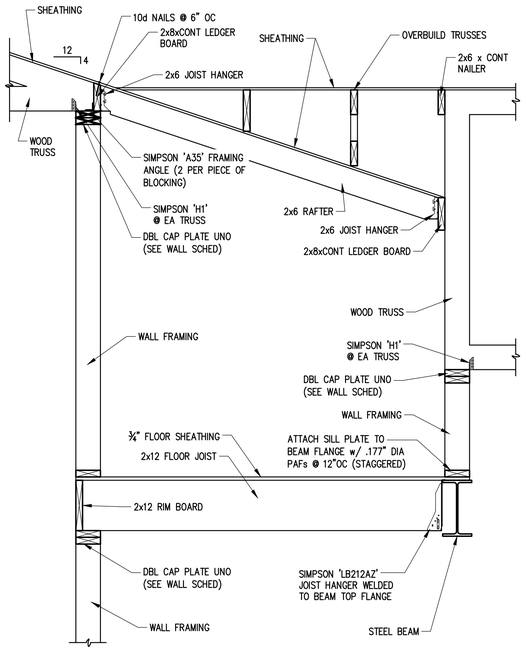
ISSUE DATE:
08-21-2017 PERMIT/CONSTRUCTION
STAMPING SET 3/2/2018
REVISION:



JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
W W W . J S T A R C H I T E C T S . C O M
J. STUART TODD, INC.
2919 WELBORN STREET, SUITE 101, DALLAS, TEXAS 75219 | 214.522.4033
© J.STUART TODD, INC.

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
S4.7
JOB NUMBER: 16238

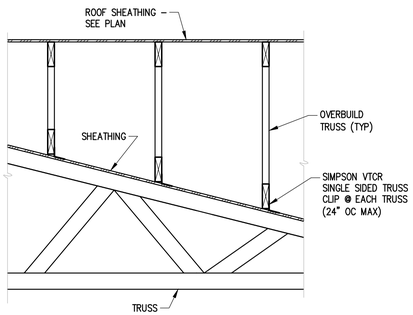


SECTION @ MECH MEZZANINE

SCALE: ¾" = 1'–0"

DET013_17056

12 S4.8

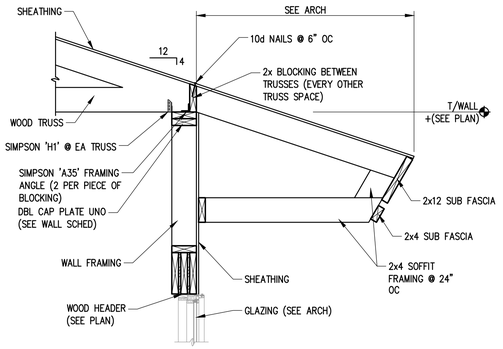


TYP OVERBUILD TRUSS DETAIL

SCALE: ¾" = 1'–0"

DET008_17056

08 S4.8

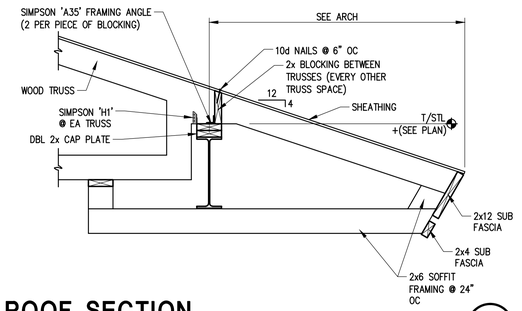


TYP ROOF SECTION @ WINDOW

SCALE: ¾" = 1'–0"

DET004_17056

04 S4.8

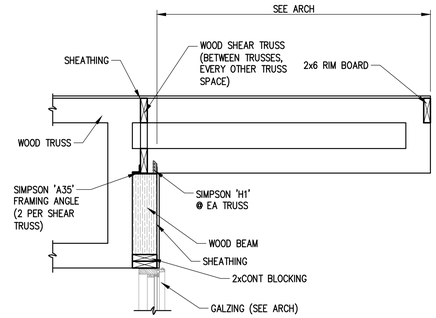


ROOF SECTION

SCALE: ¾" = 1'–0"

DET001_17056

01 S4.8

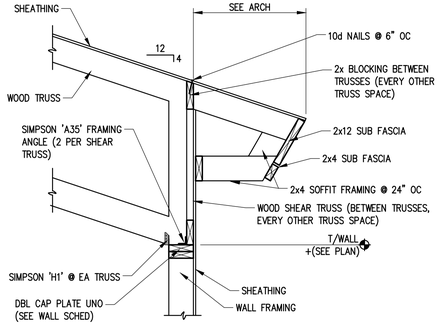


ROOF SECTION

SCALE: ¾" = 1'–0"

DET006_17056

09 S4.8

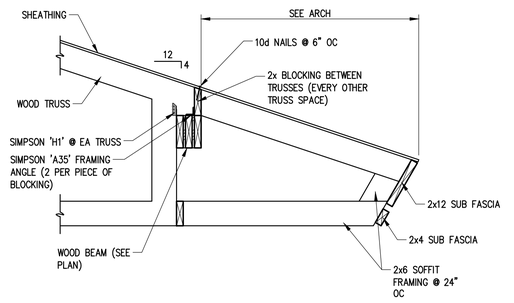


ROOF SECTION

SCALE: ¾" = 1'–0"

DET005_17056

05 S4.8

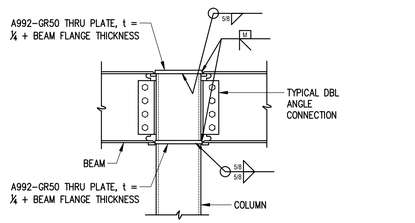


ROOF SECTION

SCALE: ¾" = 1'–0"

DET002_17056

02 S4.8

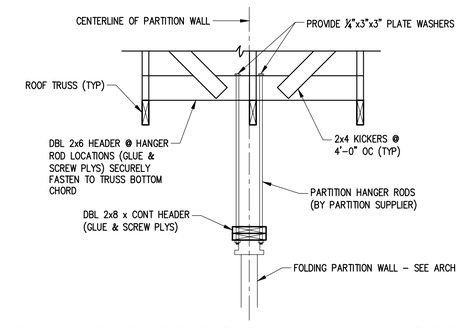


TYP HSS COL MOMENT CONN

SCALE: NOT TO SCALE

DET014_17056

13 S4.8

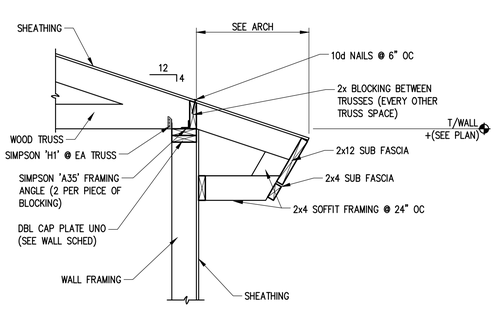


MOVABLE PARTITION WALL SUPPORT

SCALE: NOT TO SCALE

DET010_17056

10 S4.8

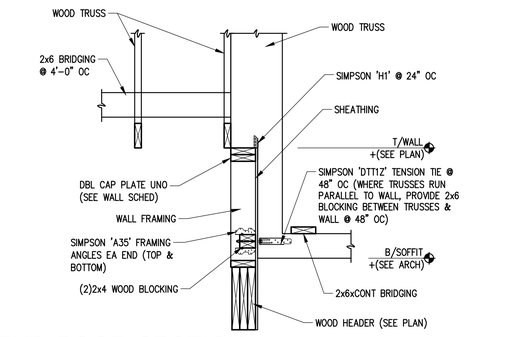


ROOF SECTION

SCALE: ¾" = 1'–0"

DET006_17056

06 S4.8

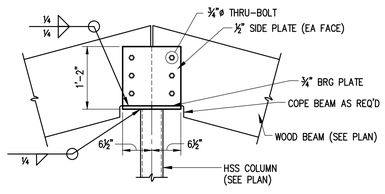


TYP ROOF SECTION

SCALE: ¾" = 1'–0"

DET003_17056

03 S4.8

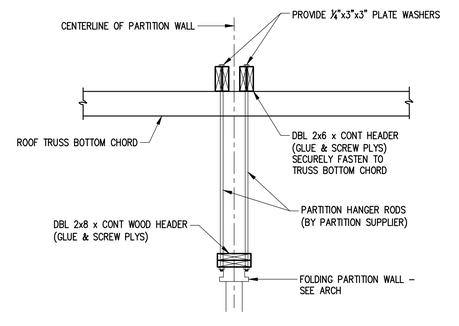


BEARING @ COLUMN

SCALE: ¾" = 1'–0"

DET015_17056

14 S4.8

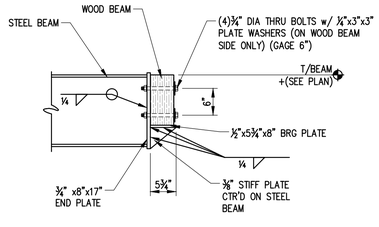


MOVABLE PARTITION WALL SUPPORT

SCALE: NOT TO SCALE

DET011_17056

11 S4.8



CONNECTION DETAIL

SCALE: ¾" = 1'–0"

DET007_17056

07 S4.8

ISSUE DATE:
08-21-2017
PERMIT/CONSTRUCTION
STAMPING SET 3/2/2018

REVISION:

STATE OF MICHIGAN
REGISTERED
C. RODNEY McCOMAS
ENGINEER
NO. 39008
PROFESSIONAL ENGINEER

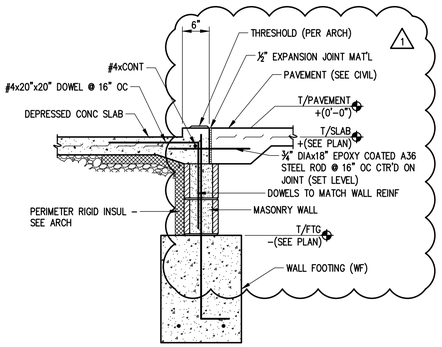
JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
WWW.JSTARCHITECTS.COM
J. STUART TODD, INC.
2919 WELBORN STREET, SUITE 101, DALLAS, TEXAS 75219 | 214.522.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
S4.8

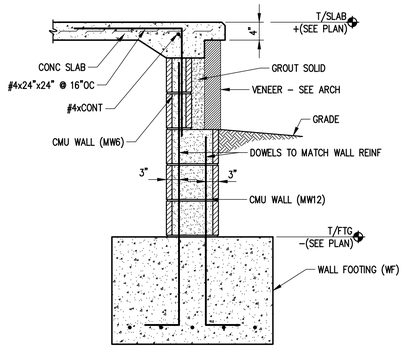
JOB NUMBER: 16238

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.



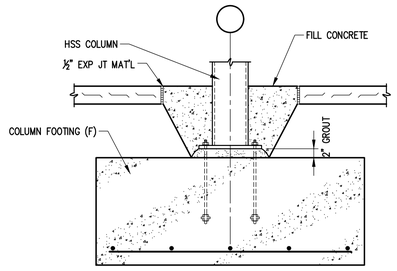
WALL FTG @ ENTRY

SCALE: ¾" = 1'–0" DET030_17056 — 11 / S4.9



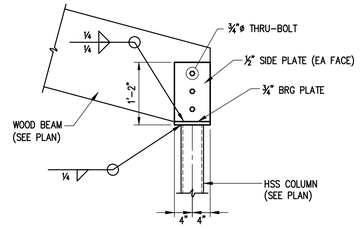
WALL FTG SECTION

SCALE: ¾" = 1'–0" DET027_17056 — 08 / S4.9



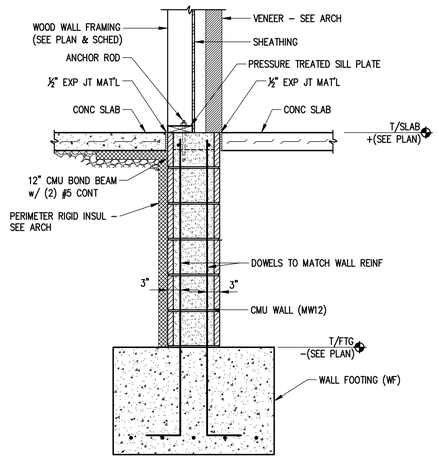
TYP SECTION @ COLUMN

SCALE: ¾" = 1'–0" DET024_17056 — 04 / S4.9



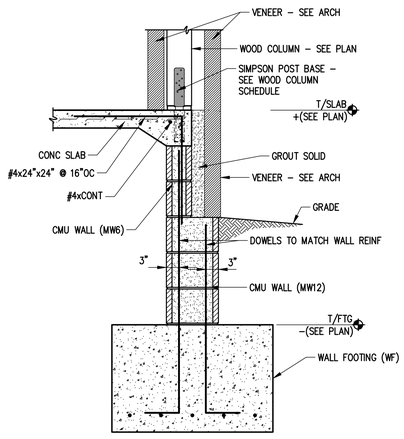
BEARING @ COLUMN

SCALE: ¾" = 1'–0" DET016_17056 — 01 / S4.9



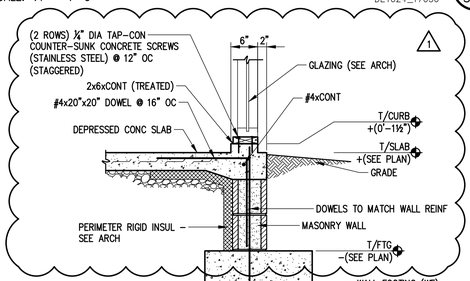
WALL FTG SECTION

SCALE: ¾" = 1'–0" DET031_17056 — 12 / S4.9



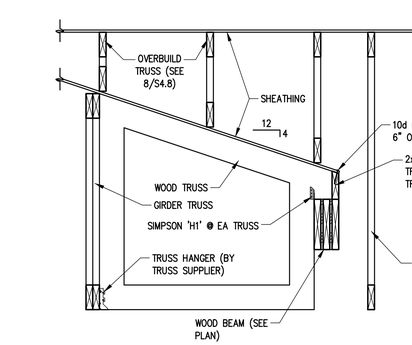
WALL FTG SECTION

SCALE: ¾" = 1'–0" DET028_17056 — 09 / S4.9



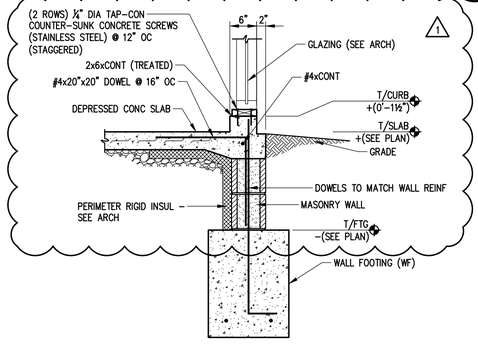
WALL FTG SECTION

SCALE: ¾" = 1'–0" DET026_17056 — 05 / S4.9



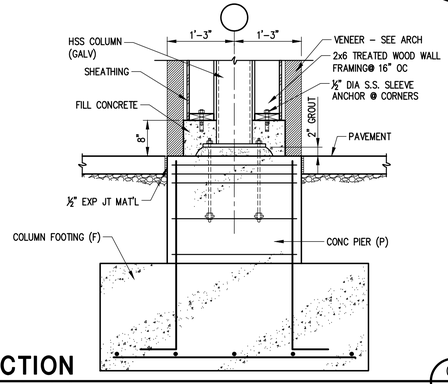
ROOF SECTION

SCALE: ¾" = 1'–0" DET017_17056 — 02 / S4.9



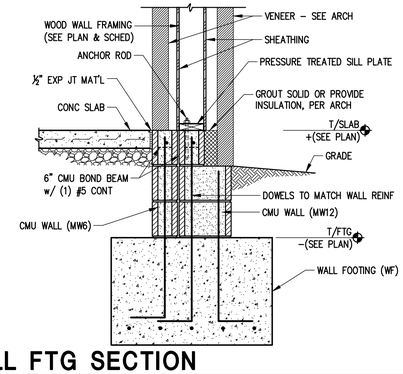
WALL FTG SECTION

SCALE: ¾" = 1'–0" DET025_17056 — 06 / S4.9



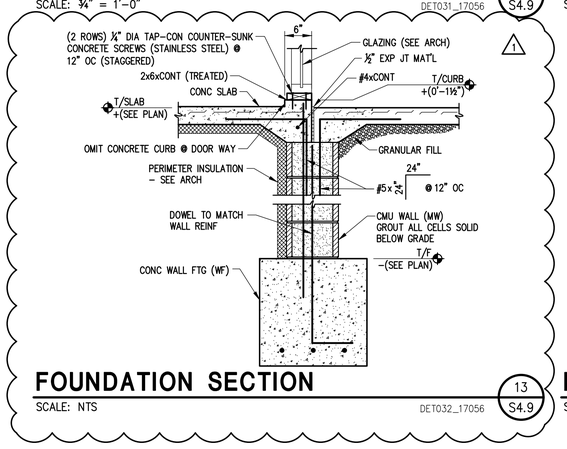
SECTION

SCALE: ¾" = 1'–0" DET023_17056 — 03 / S4.9



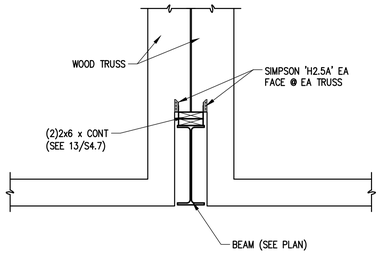
WALL FTG SECTION

SCALE: ¾" = 1'–0" DET022_17056 — 07 / S4.9



FOUNDATION SECTION

SCALE: NTS DET032_17056 — 13 / S4.9



ROOF SECTION

SCALE: ¾" = 1'–0" DET029_17056 — 10 / S4.9

ISSUE DATE:	
	08-21-2017
	PERMIT/CONSTRUCTION
	STAMPING SET
	3/2/2018
REVISION:	
1	09-30-2017
	ESI-001

STATE OF MICHIGAN — REGISTERED PROFESSIONAL ENGINEER — C. RODNEY McCOMAS ENGINEER NO. 39008 — EXPIRES: 12/31/2018

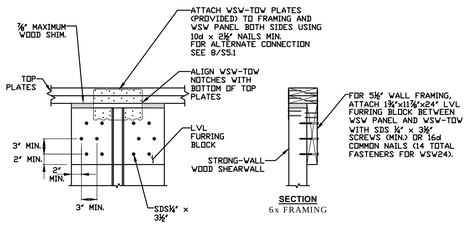
JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
W W W . J S T A R C H I T E C T S . C O M
J. STUART TODD, INC.
2919 WELBORN STREET, SUITE 101, DALLAS, TEXAS 75219 | 214.922.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
S4.9

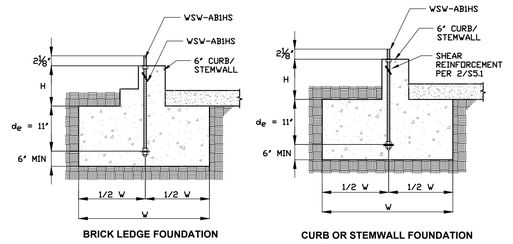
JOB NUMBER: 16238

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.



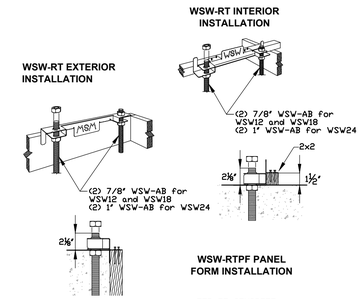
WSW TOP CONNECTION

SCALE: ¾" = 1'-0" SIMPSON_007 — 07 / S5.1



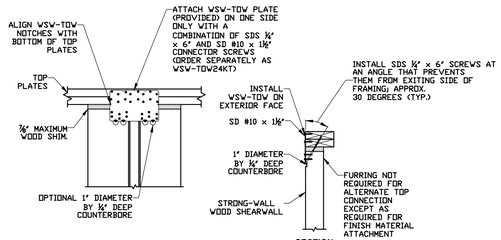
WSW ANCHORAGE SECTIONS

SCALE: ¾" = 1'-0" SIMPSON_003 — 03 / S5.1



WSW ANCHOR BOLT TEMPLATES

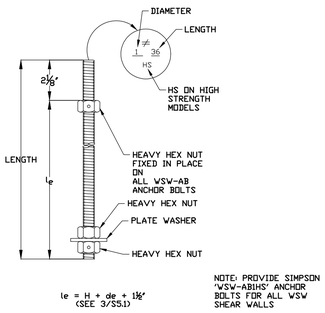
SCALE: ¾" = 1'-0" SIMPSON_001 — 01 / S5.1



WSW-TOW ALTERNATE CONNECTION KIT		
MODEL NO.	FASTENER QUANTITY	
	SD #10 x 1½"	SDS ¼" x 6"
WSW-TOW24KT	40	8

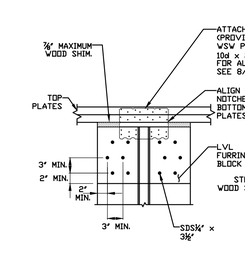
WSW ALTERNATE TOP CONNECTION

SCALE: ¾" = 1'-0" SIMPSON_008 — 08 / S5.1



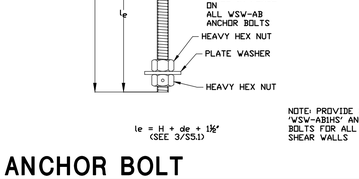
WSW ANCHOR BOLT

SCALE: ¾" = 1'-0" SIMPSON_004 — 04 / S5.1



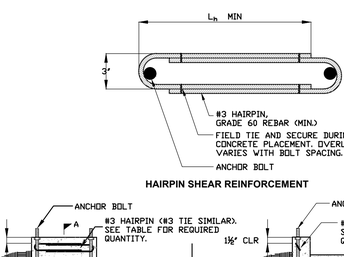
TRIM ZONE & ALLOWABLE HOLES

SCALE: ¾" = 1'-0" SIMPSON_009 — 09 / S5.1



WSW SHEAR WALL ELEVATION

SCALE: ¾" = 1'-0" SIMPSON_005 — 05 / S5.1

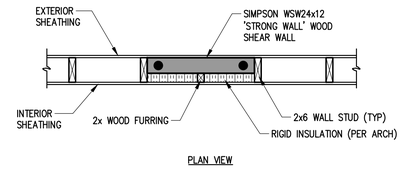


STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE					
MODEL	Lh OR Lh (in.)	WIND [4]			
		SHEAR REINFORCEMENT	MINIMUM CURB/ STEMWALL WIDTH (in.)	ASD ALLOWABLE SHEAR LOAD, V (lb.) [6]	
				UNCRACKED	CRACKED
WSW18	15	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE WSW	
WSW24	19	(1) #3 HAIRPIN	6		

NOTES:
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.
6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

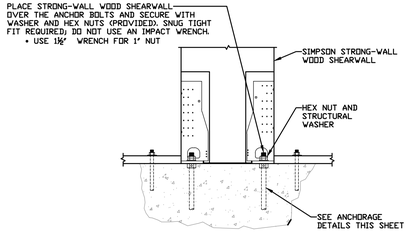
WSW SHEAR ANCHORAGE DETAILS

SCALE: ¾" = 1'-0" SIMPSON_002 — 02 / S5.1



WSW WALL DETAIL

SCALE: ¾" = 1'-0" SIMPSON_010 — 10 / S5.1



WSW BASE CONNECTION

SCALE: ¾" = 1'-0" SIMPSON_006 — 06 / S5.1

1717 East 116th Street, Suite 200
Carmel, Indiana 46032
317-580-0402
www.mccomaseng.com
Job No MEI 17056
C. Rodney McComas, P.E.

ISSUE DATE:
08-21-2017
PERMIT/CONSTRUCTION
STAMPING SET 3/2/2018
REVISION:

STATE OF MICHIGAN — REGISTERED PROFESSIONAL ENGINEER — C. RODNEY McCOMAS ENGINEER NO. 39008 — EXPIRES 6/30/2019

JST ARCHITECTS
ARCHITECTURE | PLANNING | MAUSOLEUM | CEMETERY | INTERIORS
W W W . J S T A R C H I T E C T S . C O M
J. STUART TODD, INC.
2919 WELBORN STREET | SUITE 101 DALLAS, TEXAS 75219 | 214.522.4033

L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
S5.1

JOB NUMBER: 16238