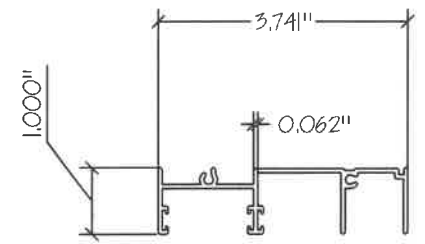
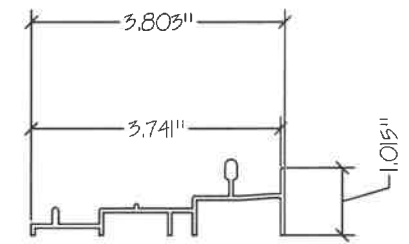


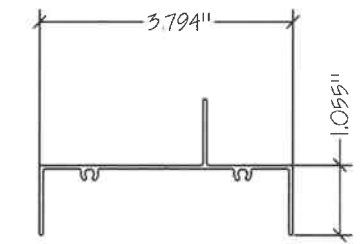
① WINDOW/ DOOR FRAME HEAD



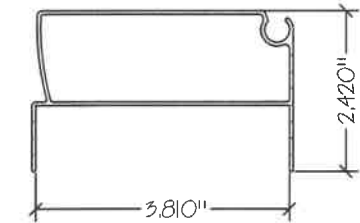
② WINDOW/ DOOR FRAME JAMB



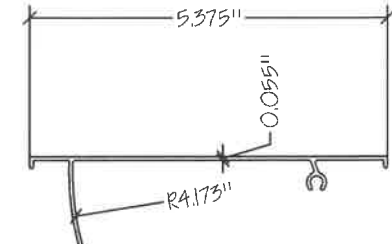
③ WINDOW/ DOOR FRAME SILL



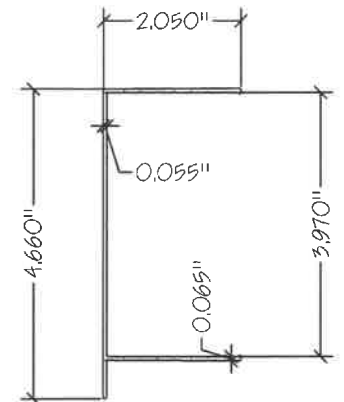
④ TRANSOM FRAME



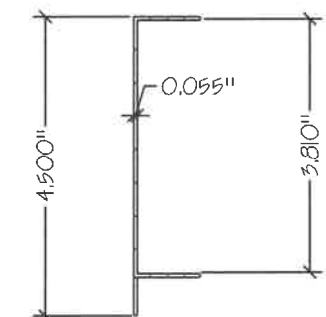
⑤ HEADER BASE



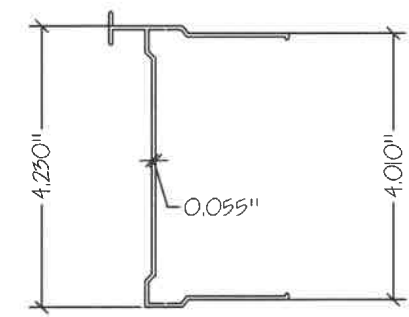
⑥ HEADER ARM



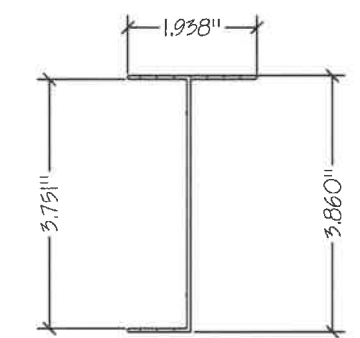
⑦ 4" EXPANDER



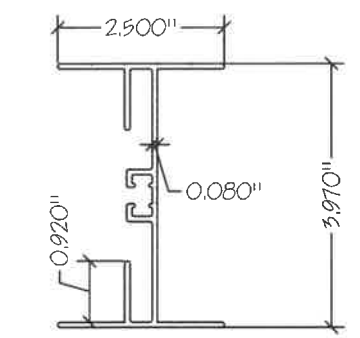
⑧ 4" F-CHANNEL



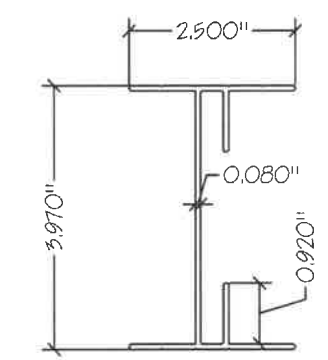
⑨ 4" HANGER BASE



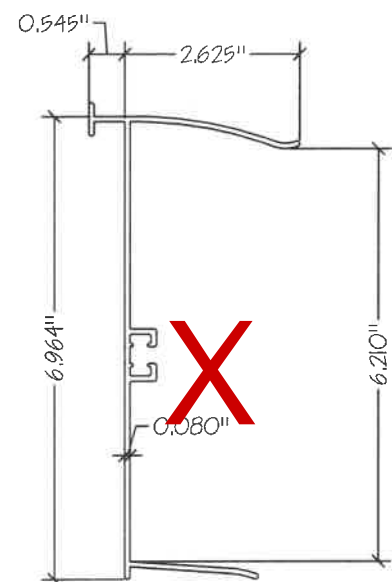
⑩ 4" SILL EXTRUSION



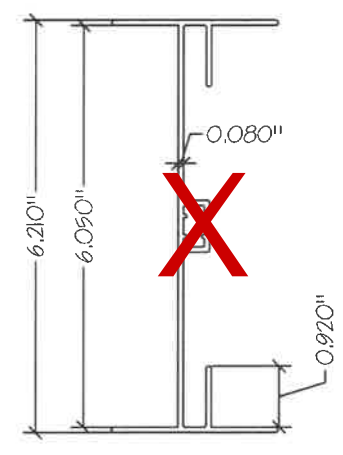
⑪ 4" I-SECTION THERM



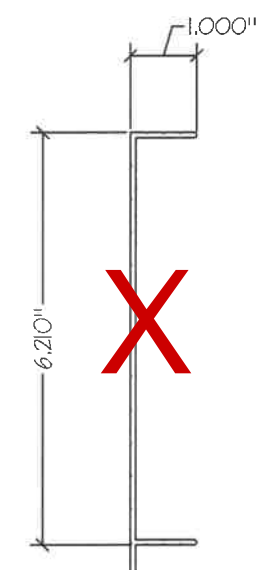
⑫ 4" NON-THERM I-SECTION



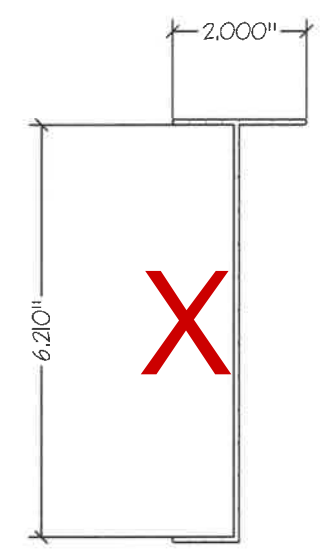
⑬ 6" HANGER BASE



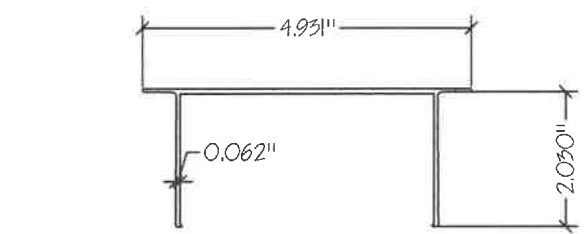
⑭ 6" I-BEAM



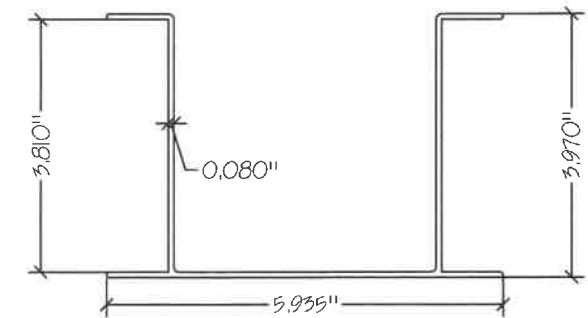
⑮ 6" F-CHANNEL



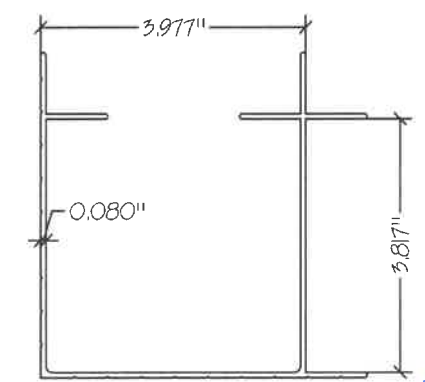
⑯ 6" SILL



⑰ 4" POST SLEEVE/ WING PANEL CAP



⑱ 4" POST SLEEVE



⑳ CORNER POST

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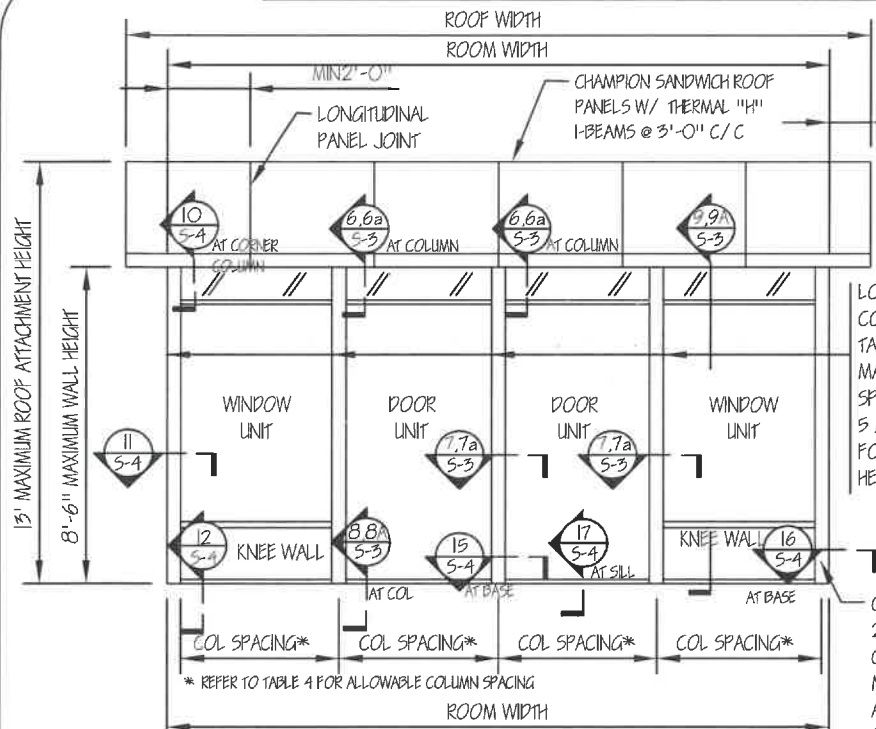
**CHAMPION WINDOWS AND PATIO ROOMS**  
 4" Wall System with Studio Style Roof  
**SECTION DETAILS**

DATE: 2/13/19	
SCALE: NTS	
Drawn by: MJG	
REV:	DATE:
SHEET: 1 OF 5	

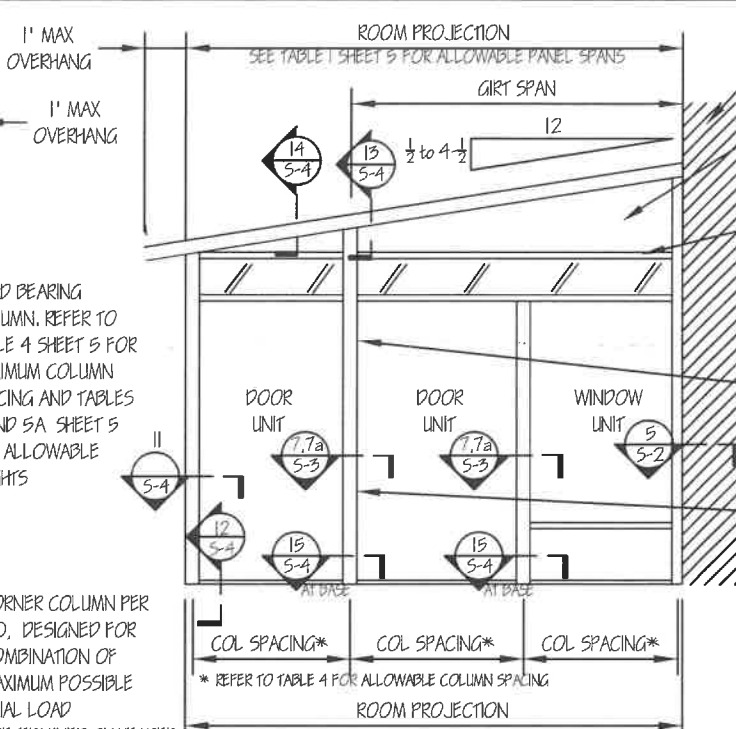


4/5/2022

NOTE: ALTERNATE COMBINATION OF DOORS, WINDOWS, TRANSOMS AND KNEE WALLS ARE PERMITTED PROVIDED THE SPECIFIED HEIGHT AND SPACING LIMITATIONS ARE ADHERED TO.



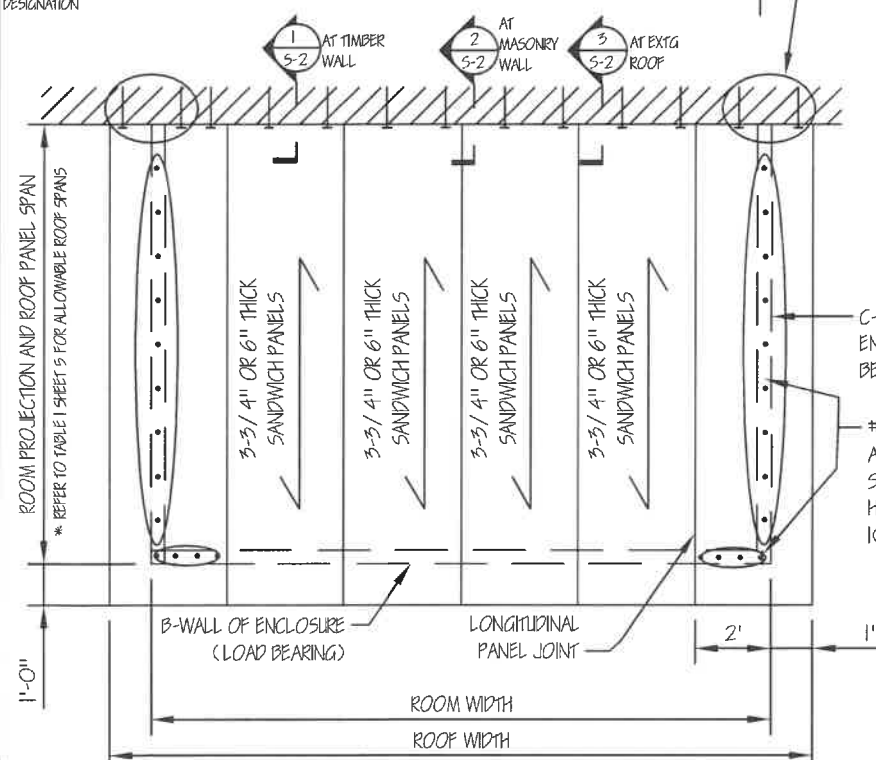
PATIO ENCLOSURE FRONT ELEVATION



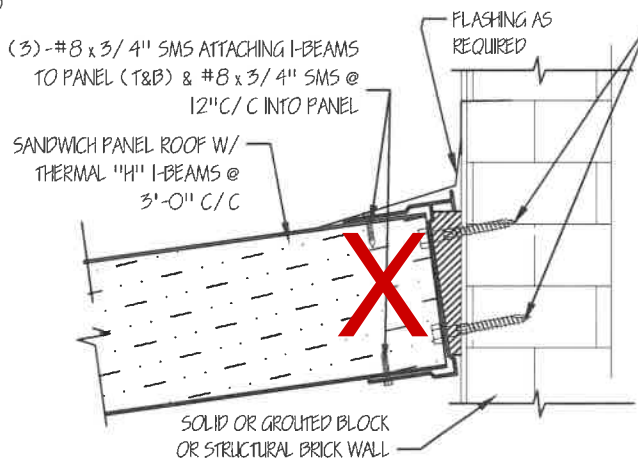
PATIO ENCLOSURE SIDE ELEVATION

WIND ZONE*	MAX ROOM PROJECTION (FT)
1	1.1 X ROOM WIDTH
2	1.0 X ROOM WIDTH
3	0.9 X ROOM WIDTH
4	0.8 X ROOM WIDTH

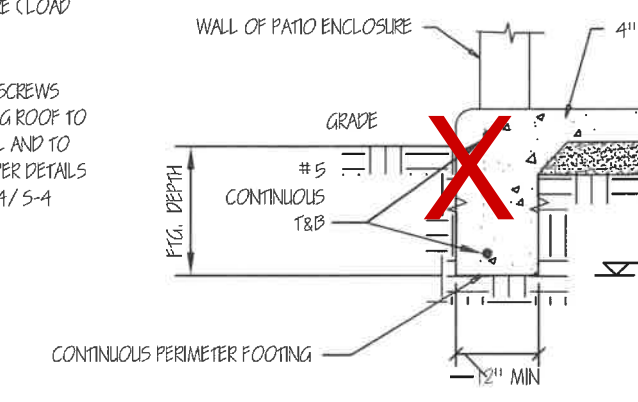
2 SETS OF 5/16" X 3/4" LAG SCREWS WITH 1" Ø WASHER @ 16" C/C CONNECTING EACH END OF THE ROOF DIAPHRAGM TO A TIMBER FRAMED STRUCTURE OR  
 2 SETS OF (2) -1/4" X 3-3/4" HILTI KWIK-CON II+ ANCHORS @ 12" C/C CONNECTING THE END OF THE ROOF DIAPHRAGM TO A MASONRY STRUCTURE.



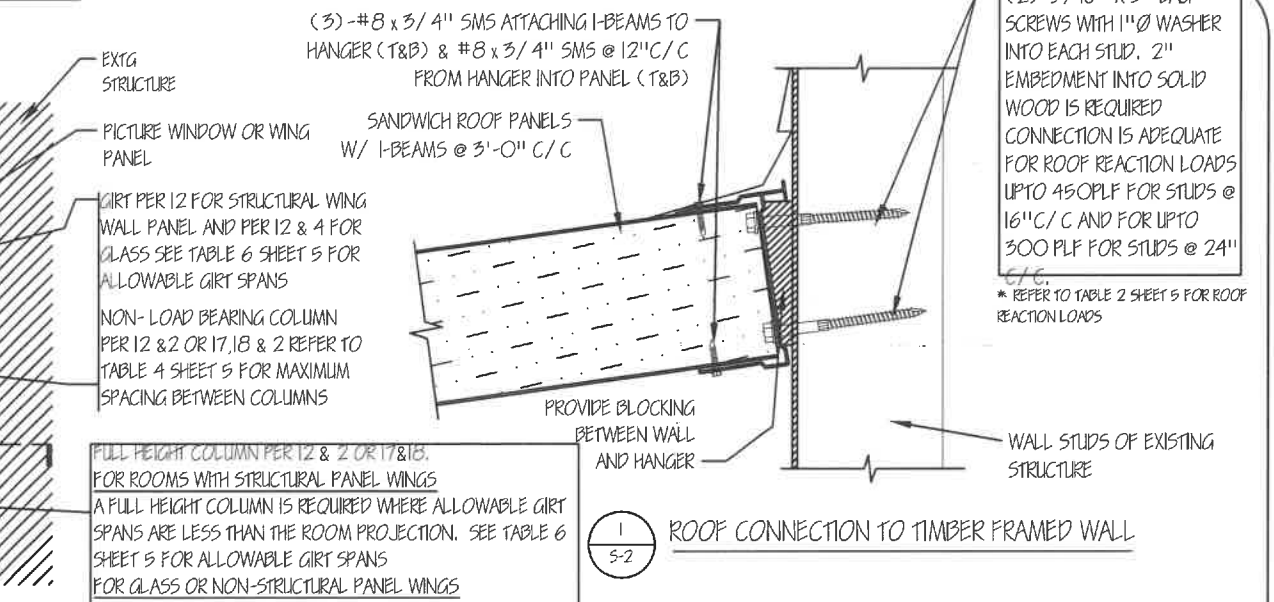
PATIO ROOM ROOF PLAN



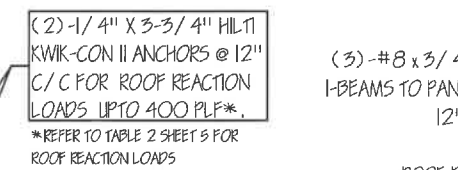
2 ROOF TO MASONRY WALL CONNECTION DETAIL



4 TURNED DOWN FOOTING DETAIL

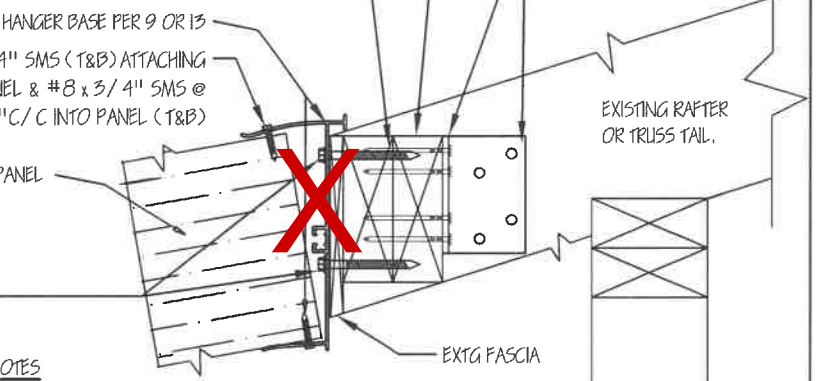


1 ROOF CONNECTION TO TIMBER FRAMED WALL

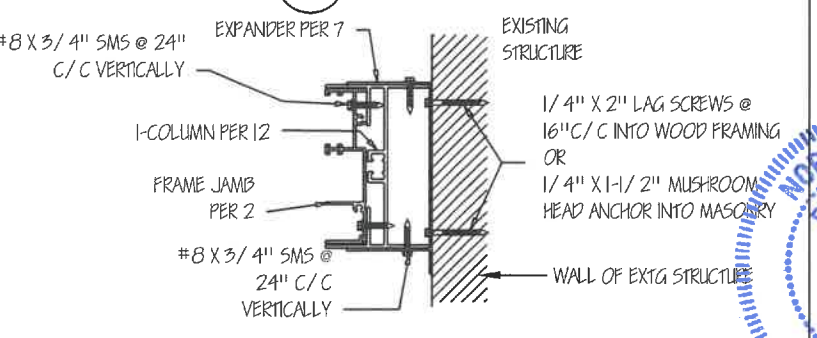


ROOF REACTION\*

NOTES:  
 1. WOOD FRAMING SHALL HAVE A MINIMUM SPECIFIC GRAVITY = 0.43  
 2. FOR RAFTERS/ TRUSSES @ 16" C/C THE MAXIMUM ALLOWABLE PATIO ROOM ROOF REACTION LOAD FOR THIS CONNECTION = 400 PLF  
 3. FOR RAFTERS/ TRUSSES @ 24" C/C THE MAXIMUM ALLOWABLE ROOF REACTION LOAD FOR THIS CONNECTION = 350 PLF  
 4. A STRUCTURAL ANALYSIS OF THE EXTG ROOF FRAMING MEMBERS ABILITY TO CARRY THE NEW LOADS IS BEYOND THE SCOPE OF THIS PACKAGE AND SHOULD BE PERFORMED BY OTHERS



3 PATIO ROOM ROOF TO EXTG ROOF DETAIL



5 SIDEWALL TO EXTG STRUCTURE CONNECTION DETAIL

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CHAMPION WINDOWS AND PATIO ROOM  
 4" Wall System with Studio Style Roof  
 ELEVATION AND SECTION DETAILS

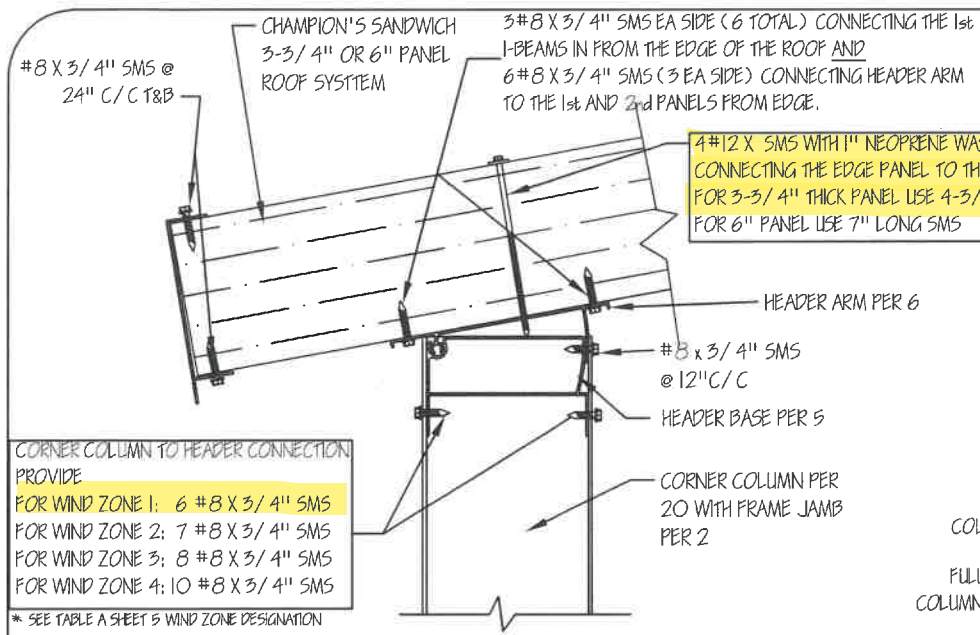
DATE: 2/13/19  
 SCALE: NTS  
 Drawn by: MJG  
 REV: DATE:

SHEET: 2 OF 5  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 SEAL 026759  
 MARTIN J. GROSS  
 4/15/2022



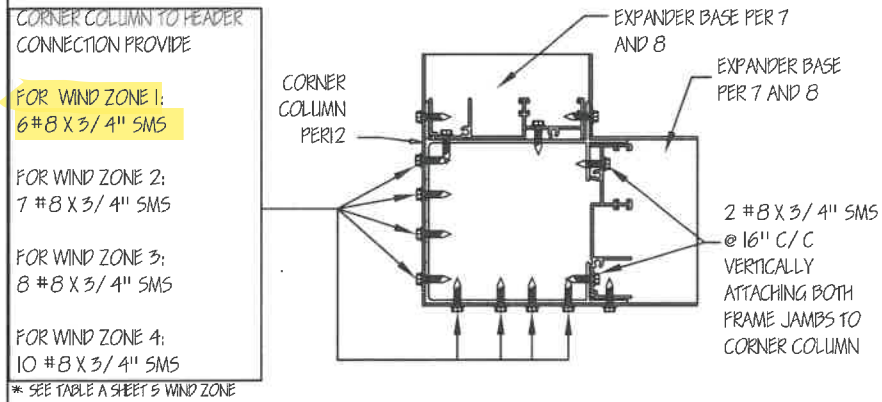






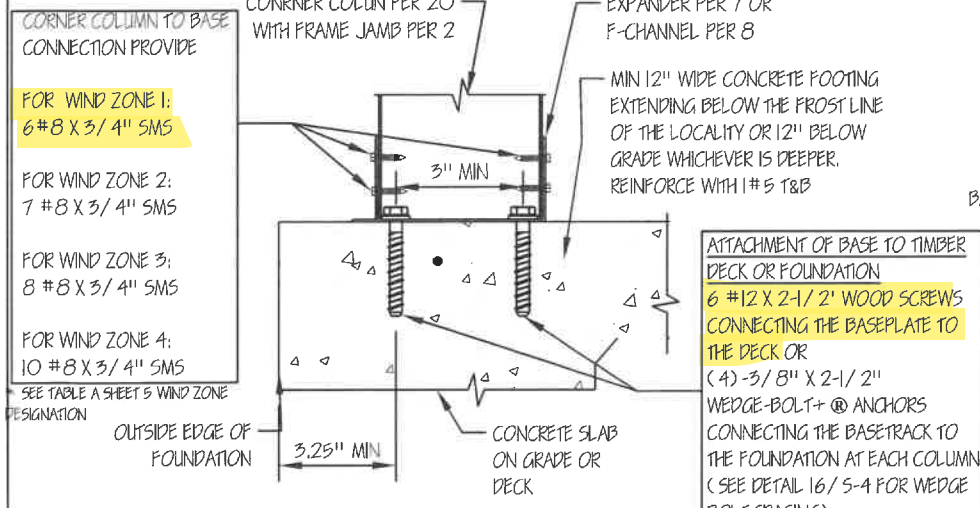
CORNER COLUMN TO HEADER CONNECTION PROVIDE  
 FOR WIND ZONE 1: 6 #8 X 3/4" SMS  
 FOR WIND ZONE 2: 7 #8 X 3/4" SMS  
 FOR WIND ZONE 3: 8 #8 X 3/4" SMS  
 FOR WIND ZONE 4: 10 #8 X 3/4" SMS  
 \* SEE TABLE A SHEET 5 WIND ZONE DESIGNATION

10 CORNER COLUMN TO ROOF CONNECTION



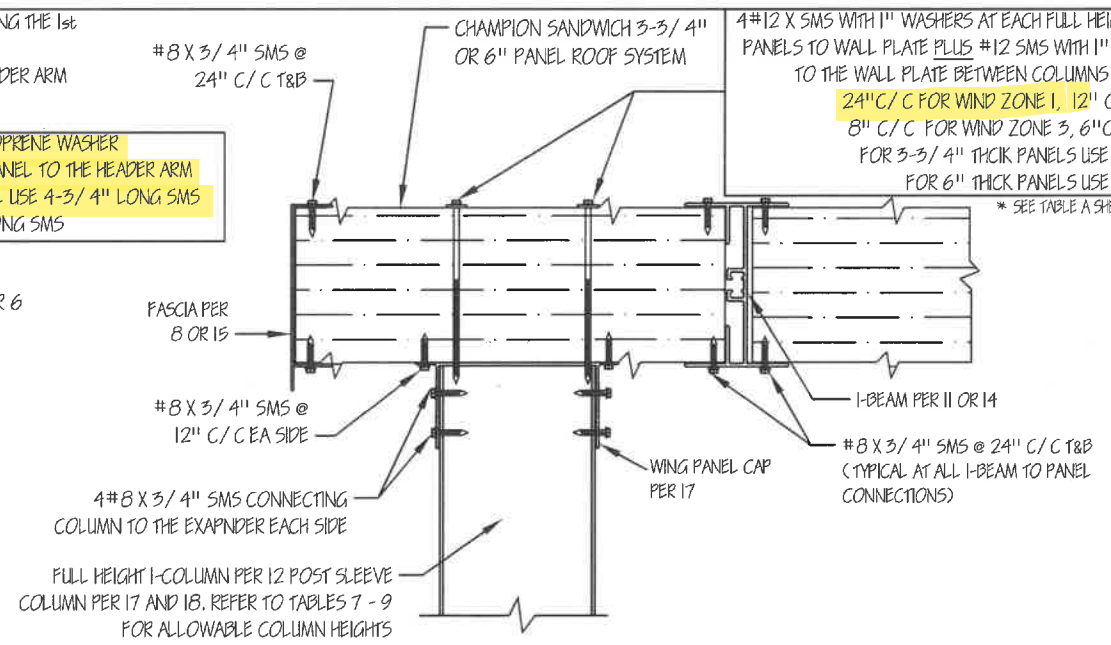
CORNER COLUMN TO HEADER CONNECTION PROVIDE  
 FOR WIND ZONE 1: 6 #8 X 3/4" SMS  
 FOR WIND ZONE 2: 7 #8 X 3/4" SMS  
 FOR WIND ZONE 3: 8 #8 X 3/4" SMS  
 FOR WIND ZONE 4: 10 #8 X 3/4" SMS  
 \* SEE TABLE A SHEET 5 WIND ZONE

11 CORNER COLUMN TO BASE CONNECTION

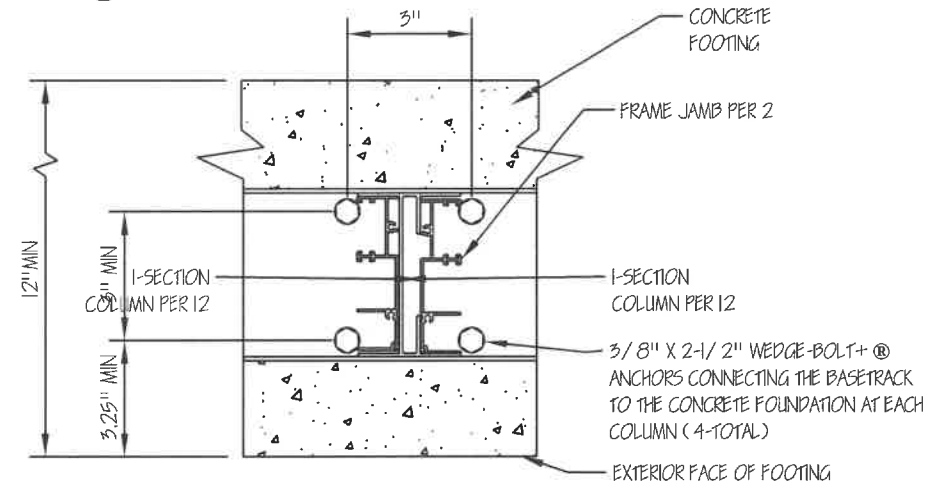


CORNER COLUMN TO BASE CONNECTION PROVIDE  
 FOR WIND ZONE 1: 6 #8 X 3/4" SMS  
 FOR WIND ZONE 2: 7 #8 X 3/4" SMS  
 FOR WIND ZONE 3: 8 #8 X 3/4" SMS  
 FOR WIND ZONE 4: 10 #8 X 3/4" SMS  
 \* SEE TABLE A SHEET 5 WIND ZONE DESIGNATION

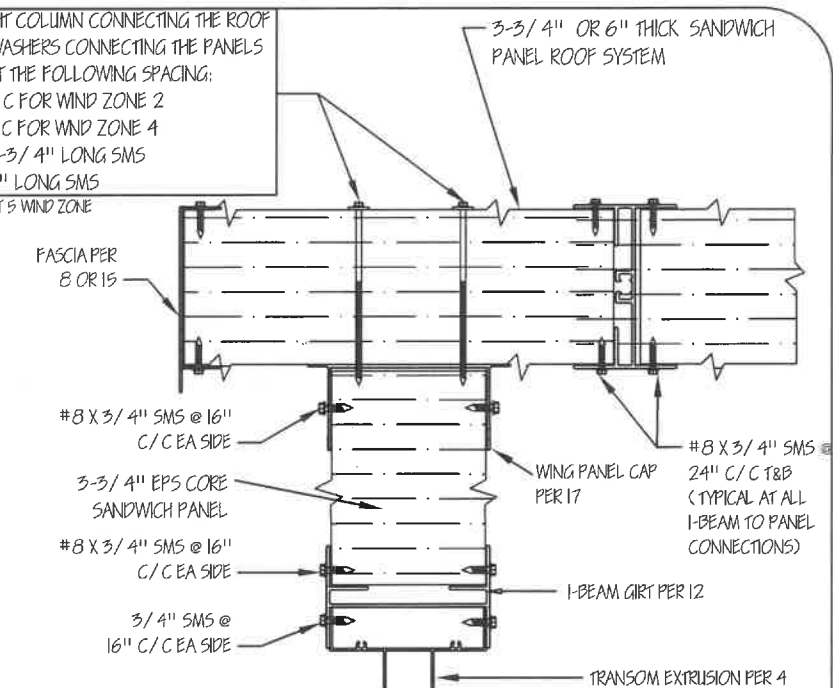
12 CORNER COLUMN TO FOUNDATION CONNECTION



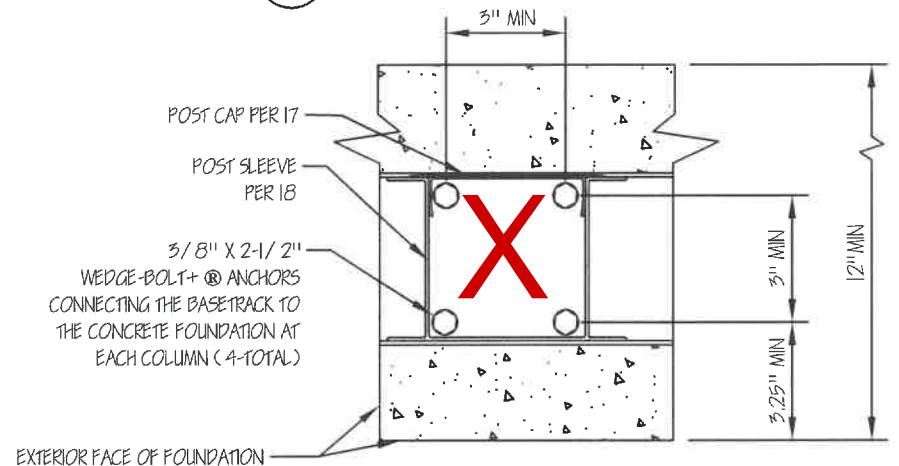
13 NON AXIAL BEARING COLUMN TO ROOF CONNECTION



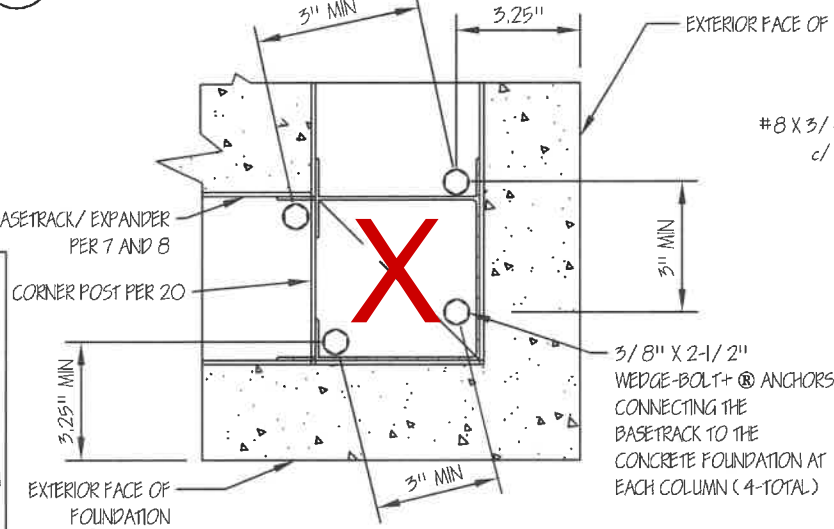
15 CONNECTION OF CENTER COLUMN PER 12 & 2 TO BASE/FOUNDATION



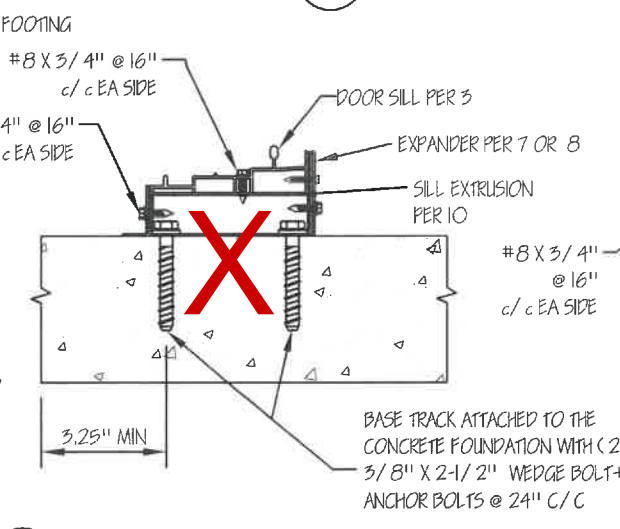
14 ROOF TO NON BEARING WALL CONNECTION



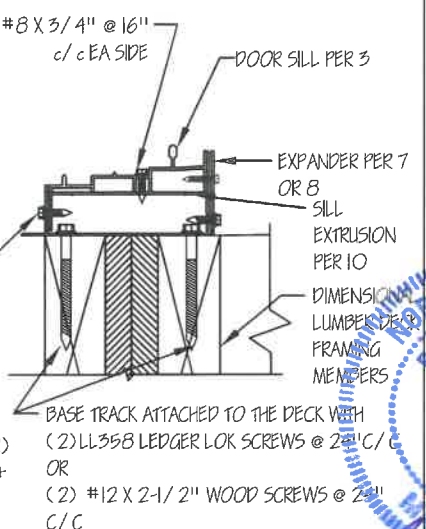
15A CONNECTION OF CENTER COLUMN PER 17 & 18 TO FOUNDATION



16 CORNER POST TO FOUNDATION CONNECTION



17 DOOR THRESHOLD TO FOUNDATION



17A DOOR THRESHOLD TO DECK

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CHAMPION WINDOWS AND PATIO ROOM  
 4" Wall System with Studio Style Roof  
 SECTION DETAILS

DATE: 2/13/19  
 SCALE: NTS  
 Drawn by: MJG  
 REV: DATE:

SEAL  
 028759  
 ENGINEER  
 PART 1 J 6083  
 SHEET 4 OF 5  
 A15/2022



STRENGTH DESIGN WIND SPEED	115 MPH RISK CAT II	130 MPH RISK CAT II	140 MPH RISK CAT II	150 MPH RISK CAT II
ALLOWABLE STRESS WIND SPEED	90 MPH	100 MPH	110 MPH	120 MPH
EXP B	WIND ZONE 1	WIND ZONE 2	WIND ZONE 3	WIND ZONE 4
EXP C	WIND ZONE 2	WIND ZONE 3	WIND ZONE 4	SPECIAL DESIGN REQUIRED
EXP D	WIND ZONE 3	WIND ZONE 4	SPECIAL DESIGN REQUIRED	SPECIAL DESIGN REQUIRED

- EXPOSURE CATEGORIES ARE AS DEFINED IN THE IRC, IBC AND ASCE-7
- TABLE APPLIES TO PATIO ROOMS WITH MEAN ROOF HEIGHTS UP TO 30' IN EXPOSURE B AND UP TO 15' IN EXPOSURES C AND D. FOR ROOMS IN EXPOSURE CATEGORIES C AND D WITH MEAN ROOF HEIGHTS BETWEEN 15' AND 30' THE NEXT HIGHEST WIND ZONE DESIGNATION SHALL BE SELECTED OR A SITE SPECIFIC DESIGN WILL BE UTILIZED.
- SITE SPECIFIC DETERMINATION OF WIND PRESSURES IS REQUIRED FOR SITES ON ISOLATED HILLS, RIDGES OR ESCARPMENTS THAT ARE ABRUPT CHANGES FROM THE GENERAL TOPOGRAPHY OF THE AREA.

PANEL SPAN (FT)	ROOF LIVE / SNOW LOAD (PSF)										WIND ZONE *			
	20	25	30	35	40	45	50	55	60	70	1	2	3	4
6	92	112	132	140	172	192	212	232	252	292	-98	-121	-145	-173
8	115	140	165	190	215	240	265	290	315	365	-109	-136	-163	-193
10	138	168	198	228	258	288	318	348	378	438	-120	-148	-179	-214
12	161	196	231	266	301	336	371	406	441	511	-132	-163	-197	-234
14	184	224	264	304	344	384	424	464	504		-143	-176	-213	-254
16	207	252	297	342	387	432					-155	-192	-232	-276
18	230	280	330	380							-166	-206	-250	-296
20	253	308									-178	-220	-266	-318

- TABLE 1 INCLUDES THE DEAD LOAD OF THE STANDARD ROOF PANEL. FOR OSB ROOF PANELS WITH ASPHALT SHINGLES, THE INPUT ROOF LOAD FOR THIS CHART SHALL EQUAL THE DESIGN SNOW / ROOF LIVE LOAD + 5PSF.
- NEGATIVE VALUES INDICATE LIFTUP LOADS

\* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

COLUMN SPACING (INCHES)	WIND ZONE *			
	1	2	3	4
60"	8.5'	8.5'	8.5'	8.0'
68"	8.5'	8.5'	8.0'	8.0'
78"	8.5'	8.0'	7.5'	---
84"	8.5'	7.5'	---	---
96"	8.0'	---	---	---

\* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

COLUMN SPACING (INCHES)	WIND ZONE *			
	1	2	3	4
60"	10' 0"	9' 5"	8' 10"	8' 5"
68"	9' 8"	9' 0"	8' 7"	8' 2"
78"	9' 3"	8' 8"	8' 2"	---
84"	9' 0"	8' 5"	---	---
96"	8' 8"	---	---	---

\* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

COLUMN SPACING (INCHES)	WIND ZONE *			
	1	2	3	4
60"	8.5'	8.5'	8.5'	8.5'
68"	8.5'	8.5'	8.5'	8.5'
78"	8.5'	8.5'	8.5'	---
84"	8.5'	8.5'	---	---
96"	8.5'	---	---	---

\* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

COLUMN SPACING (INCHES)	WIND ZONE *			
	1	2	3	4
60"	13' 0"	12' 2"	11' 2"	10' 5"
68"	12' 7"	11' 6"	10' 8"	10' 0"
78"	11' 10"	10' 10"	10' 2"	---
84"	11' 5"	10' 7"	---	---
96"	10' 10"	---	---	---

\* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

PANEL THICKNESS (IN)	LIVE LOAD (PSF)	ROOF SNOW LOAD (PSF)									
		20	25	30	35	40	45	50	55	60	70
3-3/4"	17'-4"	16'-8"	15'-5"	14'-5"	13'-7"	12'-10"	12'-2"	11'-6"	11'-0"	10'-7"	9'-10"
6"	20'	20'	19'-2"	17'-7"	16'-4"	15'-4"	14'-6"	13'-9"	13'-2"	12'-8"	11'-8"

ROOF DEFLECTION CRITERIA = L/120

- THE ALLOWABLE SPANS ARE BASED ON UNIFORM SNOW LOADING CONDITIONS.
- FOR OSB ROOF PANELS WITH ASPHALT SHINGLES, THE INPUT ROOF LOAD FOR THIS CHART SHALL EQUAL THE DESIGN SNOW / ROOF LIVE LOAD + 5PSF.

APPLIED LOAD* (PLF)	70	100	125	150	175	200	250	300	350	400	500
STANDARD HEADER	96"	78"	72"	64"	60"	56"	48"	N/A	N/A	N/A	N/A
HEADER WITH I-BEAM	96"	96"	96"	95"	88"	78"	72"	66"	60"	56"	48"

\* APPLIED LOAD IS THE LARGER OF THE APPLIED ROOF LOAD FROM SNOW LOADING OR FROM WIND LOADING DETERMINED FROM TABLE 2 SHEET 5

WIND ZONE	1	2	3	4
ALLOWABLE COLUMN SPACING	96"	84"	78"	68"

\* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

WIND ZONE	1	2	3	4
MAX GIRT SPAN (FT)	13' 6"	12' 3"	11' 2"	10' 3"

\* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

COLUMN SPACING (INCHES)	WIND ZONE *			
	1	2	3	4
60"	13' 0"	12' 0"	12' 0"	11' 2"
68"	13' 0"	12' 0"	11' 4"	10' 7"
78"	12' 9"	11' 7"	10' 9"	---
84"	12' 4"	11' 3"	---	---
96"	11' 8"	---	---	---

\* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

GENERAL NOTES AND SPECIFICATIONS

- THE STRUCTURAL DESIGN FOR CHAMPION PATIO ROOMS HAS BEEN PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF 2009, 2012, 2015 AND 2018 EDITIONS OF THE IRC CODES, 2019 RESIDENTIAL CODE OF OHIO, 2015 NEW YORK STATE RESIDENTIAL CODE, 2018 SOUTH CAROLINA RESIDENTIAL CODE, 2018 NORTH CAROLINA BUILDING CODE, 2018 KENTUCKY RESIDENTIAL CODE, 9th ED OF THE MASSACHUSETTS RESIDENTIAL CODE, 2019 RHODE ISLAND SEC-2 ONE AND TWO FAMILY DWELLING CODE, DENVER 2015 IRC, 2016 DENVER BUILDING CODE, 2020 GEORGIA AMENDMENTS AND UTILIZING THE FOLLOWING REFERENCED STANDARDS: 2005 AND 2010 EDITIONS OF ASCE 7, 2005 AND 2010 ALUMINUM DESIGN MANUAL, 2005, 2012 AND 2018 NDS FOR WOOD AND AAMA / NPEA / NSA 2100 FOR SUNROOMS.
- THESE PLANS COVER THE DESIGN OF THE PATIO ROOM AND ITS CONNECTION TO THE EXISTING STRUCTURE. THE STRUCTURAL ADEQUACY OF THE EXISTING STRUCTURE TO SUPPORT THE TRANSFERRED LOADS IS BEYOND THE SCOPE OF THIS PACKAGE AND SHOULD BE VERIFIED BY OTHERS.
- THE SNOW LOAD TABLES PRESENTED IN THIS PACKAGE ARE FOR UNIFORM ROOF SNOW LOADS. CONSIDERATION SHALL BE GIVEN TO SITE SPECIFIC CONDITIONS SUCH AS SLIDING, DRIFTING OR UNBALANCED SNOW LOADS.
- BASIC WIND SPEEDS ARE 3-SECOND GUST AT 33 FT ABOVE THE GROUND IN EXPOSURE C.
- SEISMIC DESIGN FOR ROOMS CONSTRUCTED IN SEISMIC DESIGN CATEGORIES D2 WITH UNIFORM ROOF SNOW LOADS UP TO 30PSF HAS BEEN CONSIDERED IN THIS PACKAGE. A SITE SPECIFIC SEISMIC EVALUATION IS REQUIRED FOR ENCLOSURES IN SDC D OR HIGHER WITH DESIGN ROOF SNOW LOADS IN EXCESS OF 30 PSF.
- THE PATIO ROOM PROJECTION SHALL BE A MAXIMUM OF 1.1 TIMES THE PATIO ROOM WIDTH.
- CHAMPION PATIO ENCLOSURES CAN BE CONSTRUCTED ON TIMBER FRAMED DECKS PROVIDED THE DECK AND ITS FOOTINGS HAVE BEEN ENGINEERED TO SAFELY CARRY THE ENCLOSURE'S AND THE DECK'S DESIGN LOADS.
- THE DOOR AND WINDOW UNITS USED IN THE CHAMPION PATIO ROOM SYSTEM, SUPPLIED BY ENCLOSURE SUPPLIERS LLC, ARE GLAZED WITH FULLY TEMPERED INSULATED GLASS CONFORMING TO THE REQUIREMENTS OF ANSI Z97.1 AND CPSC 16 CFR 1201 CATEGORY II. IN WIND BORNE DEBRIS REGIONS GLAZED OPENINGS SHALL BE PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GOVERNING CODE.
- THIS ENCLOSURE MEETS THE REQUIREMENTS OF A CATEGORY II SUNROOM AS DEFINED IN AAMA / NPEA / NSA 2100.

MATERIALS

- SOILS
- ALL FOOTINGS SHALL BEAR ON LEVEL (WITHIN 1:12) UNDISTURBED SOIL OR APPROVED ENGINEERING FILL WITH AN ALLOWABLE SOIL BEARING CAPACITY OF 1000 PSF. FOOTINGS SHALL EXTEND BELOW THE FROST LINE OF THE LOCALITY BUT NOT LESS THAN 12" BELOW GRADE.

CONCRETE

- ALL CONCRETE SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS AND WHERE EXPOSED TO THE EXTERIOR ENVIRONMENT SHALL HAVE AN ENTRAINED AIR CONTENT OF BETWEEN 5.0% TO 7.0%.
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 60 KSI DEFORMED BARS AND ASTM A885 MESH.

STRUCTURAL ALUMINUM

- ALL EXTRUSIONS SHALL BE AL 6063-T6 ALUMINUM PROVIDED BY ENCLOSURE SUPPLIERS LLC.
- ROOF PANELS SHALL BE 3-3/4" OR 6" THICK STANDARD OR OSB SANDWICH PANELS MANUFACTURED BY ENCLOSURE SUPPLIERS LLC.  
STANDARD ROOF PANEL SKINS CONSISTS OF 0.024" THICK ALUMINUM SHEETING (3105 H374). OSB ROOF PANELS SKINS CONSISTS OF A 0.024" ALUMINUM SHEETING AND 7/16" OSB COMBINED TOP SKINS AND A 0.024" ALUMINUM SHEETING BOTTOM SKIN.  
THE CORE FOR ALL PANELS SHALL BE ASTM C578 TYPE II EXPANDED POLYSTYRENE.  
THE PANELS SHALL BE A MAXIMUM OF THREE FEET (3') WIDE AND SHALL BE SLOTTED BETWEEN AL 6063-T6 I-BEAMS.  
THE ALLOWABLE PANEL SPAN CHART IN THIS PACKAGE APPLIES TO BOTH THE STANDARD AND OSB ROOF PANELS.

MECHANICAL FASTENERS

- SHEET METAL SCREWS (SMS) SHALL BE STAINLESS STEEL WITH TYPE AB SCREW THREADS.
- LAG SCREWS SHALL BE GALVANIZED STEEL "FULL BODIED" SCREWS WITH A MINIMUM BENDING YIELD STRENGTH OF 60,000 PSI FOR 3/8" DIAMETER AND 40,000 PSI FOR 5/8" AND LARGER DIAMETER. LAG SCREWS SHALL HAVE A MINIMUM EMBEDMENT DEPTH OF 8 X LAG SCREW DIAMETER
- WOOD SCREWS SHALL HAVE A MINIMUM BENDING YIELD STRENGTH OF 80,000 PSI
- LL358 LEDGER LOK® SCREWS BY FASTENMASTER AND SHALL HAVE A MINIMUM BENDING STRENGTH OF 185,000 PSI AND SHALL HAVE A MINIMUM EMBEDMENT OF 2" INTO THE MAIN WOOD SUPPORTING MEMBER.
- ANCHOR BOLTS INTO CONCRETE SHALL BE 3/8" X 2-1/2" WEDGE-BOLT+ ANCHORS BY POWERS FASTENERS.
- PIN ANCHORS SHALL BE ZAMAC NAILIN ANCHORS MANUFACTURED BY POWERS FASTENERS, BREWSTERS, NY OR EQUIVALENT
- FASTENERS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE STAINLESS STEEL OR SHALL BE HOT DIPPED GALVANIZED PER ASTM A153. HOT DIPPED CONNECTOR PRODUCTS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE ASTM-A653 COATING DESIGNATION G-185.

**CHAMPION ENCLOSURE SUPPLIERS**  
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PH: (513) 782-3900 FAX: (513) 782-3903

**CHAMPION WINDOWS AND PATIO ROOM**  
4" Wall System with Studio Style Roof  
**DESIGN TABLES AND NOTES**

DATE: 2/13/19

SCALE: NTS

Drawn by: MJG

REV:	DATE:
2019 RCO	7/19/19
2019 SC	8/8/19
DENVER CO	11/6/19

SHEET: 5 OF 5

