

FBC APPROVED PRODUCTS LIST

PRODUCT CATEGORY	SUB CATEGORY	MANUFACTURER	APPROVAL No. & DATE	QA EXPIRATION DATE	MAXIMUM ALLOWABLE WIND SPEED		
					OPEN	ENCLOSED	PARTIALLY ENCLOSED
STRUCTURAL COMPONENTS	ROOF DECK	CAROLINA CARPORTS, INC. 26 Gauge AG Panel	FL6596.1-R6 12/15/20	04/05/27	180	180	180
STRUCTURAL COMPONENTS	STRUCTURAL WALL	CAROLINA CARPORTS, INC. 26 Gauge AG Panel	FL6702.1-R6 12/15/20	03/14/27	180	180	180
STRUCTURAL COMPONENTS	STRUCTURAL WALL	CAROLINA CARPORTS, INC. 26 Gauge Dutch Lap Wall Panel	FL6702.3-R6 12/15/20 **	03/14/27	N/A	164	143
STRUCTURAL COMPONENTS	FLOOD VENT	CRAWL SPACE DOOR SYSTEMS, INC. 16x8 Flood Vent	FL29622.1-R1 02/28/21	09/30/22	N/A	N/A	N/A
EXTERIOR DOORS	SWINGING	ELIXIR DOOR AND METAL COMPANY Series 402-14	FL17996.3-R2 02/28/21	08/28/25	N/A	139	139
EXTERIOR DOORS	SWINGING	ELIXIR DOOR AND METAL COMPANY Series 407	FL17996.5-R2 02/28/21	08/19/25	N/A	174	155
EXTERIOR DOORS	ROLL-UP	ASTA INDUSTRIES INC. Model 203 (12' Max. Width)	FL8888.1-R6 02/09/21	12/31/21	N/A	180	174
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll Up Sheet Door (12' Max. Width)	FL16806.1-R5 12/16/20	04/05/27	N/A	179	154
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll-Up Sheet Door - (8' Max. Width)	FL16806.2-R5 12/16/20	04/05/27	N/A	180	160
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll-Up Sheet Door - (16' Max. Width)	FL16806.3-R5 12/16/20	04/05/27	N/A	155	133
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll-Up Sheet Door - (10' Max. Width)	FL16806.4-R5 12/16/20	04/05/27	N/A	180	172
WINDOWS	SINGLE HUNG	MI WINDOWS AND DOORS Model 185SH	FL17499.1-R8 11/27/20	10/17/23	N/A	175	157

NOTES:

1. DOORS AND WINDOWS SHOWN MAY BE SUBSTITUTED FOR DIFFERENT PRODUCT LINES AND/OR MODELS, PROVIDED THE FOLLOWING CONDITIONS ARE MET:

A. PRODUCT SHALL HAVE A VALID FBC PRODUCT APPROVAL.

B. COMPONENTS ARE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION REQUIREMENTS

** MAXIMUM POST SPACING FOR DUTCH LAP IS 4'0"

2. FRAMING CONNECTIONS FOR DOOR AND WINDOW FRAMES REMAIN THE SAME FOR SUBSTITUTED PRODUCTS. HEADERS AND WINDOW RAILS MAY BE RAISED OR LOWERED AS NECESSARY TO ACCOMMODATE SUBSTITUTED PRODUCT.

TABLE 1

RAFTER FRAME, END POST, GROUND ANCHOR AND PANEL FASTENER SPACING SPECIFICATIONS

RISK CATEGORY	WIND EXPOSURE CATEGORY	ULTIMATE WIND SPEED (MPH)	NOMINAL WIND SPEED (MPH)	MAXIMUM POST / RAFTER SPACING (FEET)	AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS OR GIRTS (INCHES)	
					INTERIOR POSTS/RAFTERS	END POSTS/RAFTERS
I	C	110 TO 150	89 TO 116	5.0	6	6
		151 TO 180	117 TO 139	4.0	6	6

NOTES:

1. Specifications applicable to 26 gauge metal roof and wall panels fastened directly to 12 or 14 gauge steel tube framing, or 18 gauge hat channel roof purlins.

2. Specifications applicable only for mean roof height of 20 feet or less, and roof slopes of 7" to 27" (1.5:12 to 6:12 pitch). Spacing requirements for other roof heights and/or slopes may vary.

GROUND ANCHOR SCHEDULE

ULTIMATE WIND SPEED (mph)

110 120 130 140 150 160 170 180

30" Anchor Detail 1D

48" Anchor Detail 1C

60" Anchor Detail 1C

DETAILS 1C AND 1D SHOWN ON SHEET 4 OF 6

METAL CARPORT INSTALLATION PLANS AND DETAILS AND FRAMING AND FASTENER SPECIFICATIONS

FOR CONSTRUCTION IN THE STATE OF FLORIDA

PREPARED FOR:

CAROLINA CARPORTS, INC.

P.O. BOX 1263

DOBSON, NORTH CAROLINA 27017

PREPARED BY:

BECHTOL ENGINEERING AND TESTING, INC.

605 WEST NEW YORK AVENUE

DELAND, FLORIDA 32720

Certificate of Authorization No. 00005492

GENERAL NOTES:

1. THESE PLANS PERTAIN ONLY TO THE STRUCTURE, INCLUDING MAIN WIND FORCE RESISTING SYSTEM, COMPONENTS AND CLADDING, AND BASE RAIL ANCHORAGE. OTHER DESIGN ISSUES, INCLUDING BUT NOT LIMITED TO PLUMBING, ELECTRICAL, INGRESS/EGRESS, PROPERTY SET-BACKS, FINISH FLOOR ELEVATION AND SLOPE, OR OTHER LOCAL ZONING REQUIREMENTS ARE THE RESPONSIBILITY OF OTHERS.

2. THESE STRUCTURES ARE DESIGNED AS NON-HABITABLE UTILITY/STORAGE BUILDINGS (RISK CATEGORY I) CAPABLE OF SUPPORTING DEAD LOAD OF THE STRUCTURE AND APPLICABLE LIVE AND WIND LOADS. IMPROVEMENTS NOT SPECIFICALLY ADDRESSED HEREIN, INCLUDING DOORS, WINDOWS, OR OTHER COMPONENTS NOT LISTED IN THE FBC APPROVED PRODUCTS LIST (THIS SHEET), AND NOT PROVIDED AND INSTALLED BY CAROLINA CARPORTS, INC., WHICH EXERT ADDITIONAL LOADS ON THE STRUCTURE SHALL BE AT THE OWNER'S RISK. BECHTOL ENGINEERING AND TESTING, INC., SHALL NOT BE RESPONSIBLE FOR STRUCTURAL DAMAGE OR FAILURE DUE TO THE APPLICATION OF ADDITIONAL LOADS.

3. ALL STEEL TUBING SHALL BE 50 KSI GALVANIZED STEEL. ALL FASTENERS SHALL BE GALVANIZED OR STAINLESS STEEL OR ZINC PLATED.

4. ALL COMPONENTS AND CLADDING SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND SHALL MEET THE DESIGN PRESSURES REQUIRED BY THE FLORIDA BUILDING CODE (FBC) AT THE LOCATION OF THE BUILDING WITHIN THE STATE OF FLORIDA.

5. ALL FIELD FRAMING CONNECTIONS SHALL BE #12-14 x 3/4" SELF DRILLING SCREWS WITHOUT CONTROL SEAL WASHER. ALL SHOP FRAMING CONNECTIONS SHALL BE WELDED.

6. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. THE REINFORCING STEEL SHALL BE MINIMUM GRADE 40. CONCRETE SLAB FOUNDATIONS SHALL BE REINFORCED WITH 6X6-W1 .4XW1 .4 WELDED WIRE FABRIC COMPLYING WITH ASTM A 185, OR WITH SYNTHETIC FIBER REINFORCEMENT COMPLYING WITH ASTM C1116.

7. BASE RAIL GROUND ANCHOR REQUIREMENTS: ONE WITHIN 6" OF EVERY POST LOCATION, AND BOTH SIDES OF OPENINGS WHERE BASE RAIL IS ABSENT. GROUND ANCHORS ARE NOT REQUIRED FOR CONCRETE FOOTING AND/OR CONCRETE SLAB CONSTRUCTION. SEE GROUND ANCHOR SCHEDULE (THIS SHEET) FOR SPECIFIC TYPE GROUND ANCHOR REQUIREMENTS.

8. CONCRETE ANCHORS SHALL BE TAPCON REDHEAD LDT 1/2" x 5" OR EQUIVALENT OR WEJ-IT ANKR-TITE MODEL AT1252, OR SLEEVE ANCHOR MODEL HSA 1260, OR EQUIVALENT.

9. POST/RAFTER BRACING: BRACE ON EVERY POST/RAFTER CONNECTION, EXCEPT FOR END WALLS.

10. SLAB FOUNDATION SUBGRADE SOILS SHALL BE TERMITE TREATED AND COVERED WITH 6 MIL VAPOR RETARDER PER SECTION R318.1 OF THE FBC SEVENTH EDITION (2020) - RESIDENTIAL, AND SECTION 1816.1 OF THE FBC SEVENTH EDITION (2020) - BUILDING. MINIMUM ALLOWABLE FOUNDATION SOIL CONTACT BEARING PRESSURE OF 2,000 PSF IS ASSUMED.

11. 14 GA FRAMING: 2-1/2" x 2-1/2" TUBE STEEL (TS) WITH 2-1/4" x 2-1/4" TS NIPPLES.
12 GA FRAMING: 2-1/4" x 2-1/4" TS WITH 2" x 2" TS NIPPLES.

12. ENCLOSED AREAS REQUIRING FLOOD OPENINGS MUST HAVE A MINIMUM OF TWO (2) OPENINGS ON EXTERIOR WALLS. OPENINGS SHOULD BE INSTALLED ON AT LEAST TWO (2) SIDES OF ENCLOSED AREA, WITH BASE OF OPENINGS SET WITHIN 1-FOOT OF THE HIGHER OF INTERIOR OR EXTERIOR GRADE. REQUIRED TOTAL NUMBER OF FLOOD VENTS NOTED IN THE FBC APPROVED PRODUCTS LIST SHALL BE BASED ON ONE (1) FLOOD VENT PER EVERY 305 SQUARE FEET OF ENCLOSED AREA. SEE TYPICAL FLOOD VENT FRAMING PLAN, SHEET 5 OF 6.

THIS IS TO CERTIFY THAT THE CALCULATIONS AND SPECIFICATIONS HEREIN HAVE BEEN PREPARED BY THE UNDERSIGNED PROFESSIONAL ENGINEER, AND ARE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1609 OF THE FLORIDA BUILDING CODE, SEVENTH EDITION (2020).

LOVE & PATEL

BECHTOL ENGINEERING AND TESTING, INC.

605 WEST NEW YORK AVENUE

DELAND, FLORIDA 32720

No. 90753

STATE OF FLORIDA

PROFESSIONAL ENGINEER

CAROLINA CARPORTS, INC.

GENERIC PLANS FOR USE IN THE STATE OF FLORIDA

BECHTOL ENGINEERING AND TESTING, INC.

605 WEST NEW YORK AVENUE

DELAND, FLORIDA 32720

CREATING GEOTECHNICAL, ENVIRONMENTAL, AND WATER-RELATED TESTING ENGINEERS

Certificate of Authorization No. 00005492

FILED

DATE 06/04/2021

CHARGE mkb

SCALE NTS

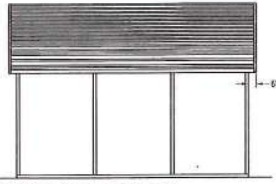
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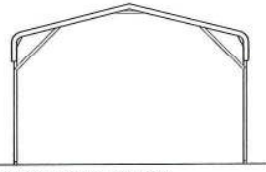
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SHEET 1 OF 6

BOW FRAME RAFTER OPEN CARPORT - HORIZONTAL ROOF

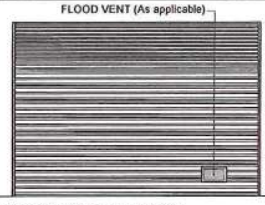


TYPICAL SIDE ELEVATION
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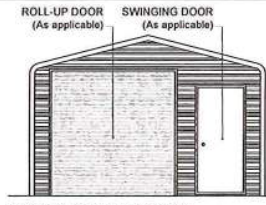


TYPICAL END ELEVATION
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BOW FRAME RAFTER ENCLOSED BUILDING - HORIZONTAL ROOF

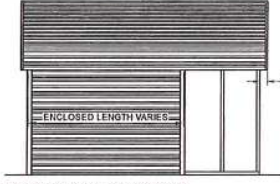


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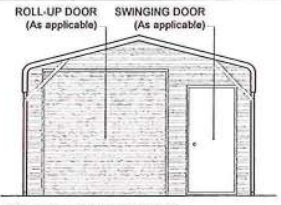


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BOW FRAME RAFTER UTILITY BUILDING - HORIZONTAL ROOF

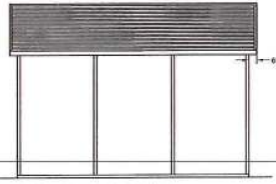


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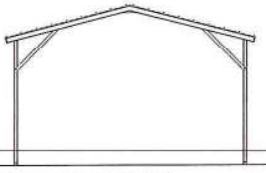


TYPICAL END ELEVATION
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BOX EAVE FRAME RAFTER OPEN CARPORT - HORIZONTAL ROOF

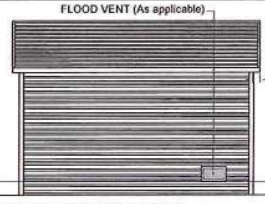


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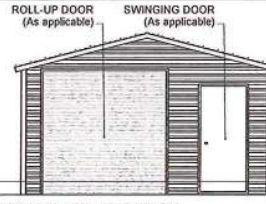


TYPICAL END ELEVATION
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BOX EAVE FRAME RAFTER ENCLOSED BLDG - HORIZONTAL ROOF

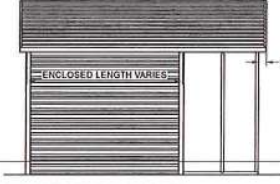


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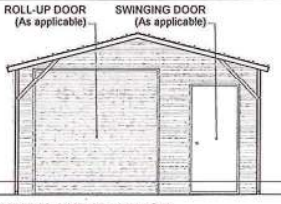


TYPICAL END ELEVATION
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BOX EAVE FRAME RAFTER UTILITY BLDG - HORIZONTAL ROOF

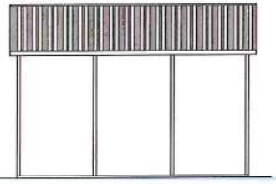


TYPICAL SIDE ELEVATION
NOT TO SCALE



TYPICAL END ELEVATION
NOT TO SCALE

BOX EAVE FRAME RAFTER OPEN CARPORT - VERTICAL ROOF

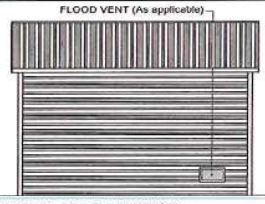


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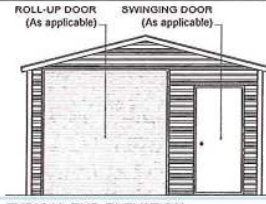


TYPICAL END ELEVATION
NOT TO SCALE

BOX EAVE FRAME RAFTER ENCLOSED BLDG - VERTICAL ROOF

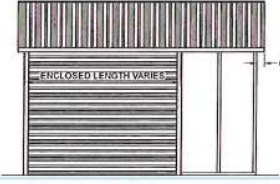


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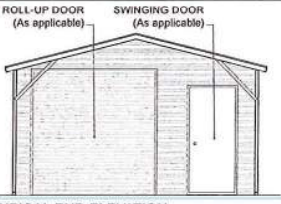


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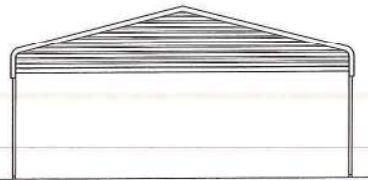
BOX EAVE FRAME RAFTER UTILITY BLDG - VERTICAL ROOF



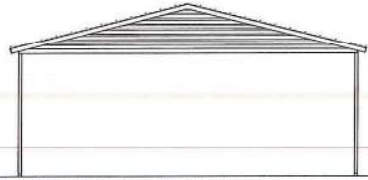
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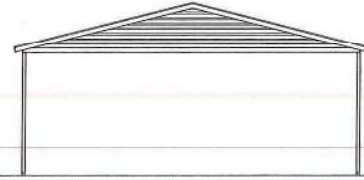
TYPICAL END ELEVATION
NOT TO SCALE



TYPICAL BOW RAFTER GABLE END ELEVATION
NOT TO SCALE



TYPICAL BOX EAVE RAFTER GABLE END ELEVATION
NOT TO SCALE



TYPICAL BOX EAVE RAFTER GABLE END ELEVATION
NOT TO SCALE

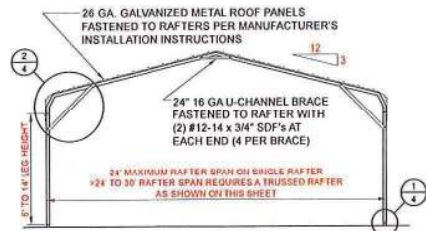
BECHTOL ENGINEERING AND TESTING, INC.
605 WEST NEW YORK AVENUE
DELAND, FLORIDA 33720

LOVE B. PATE
LICENSE
No. 90753
STATE OF FLORIDA
PROFESSIONAL ENGINEER

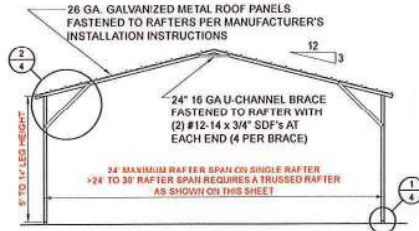
CAROLINA CARPORTS, INC.
GENERIC PLANS FOR USE IN THE STATE OF FLORIDA

DESIGNED BY	mb	DATE	06/04/2021
CHECKED BY	tb	SCALE	NTS
APPROVED BY	tb	FIG. NO.	G21001
		SHEET 2 OF 6	

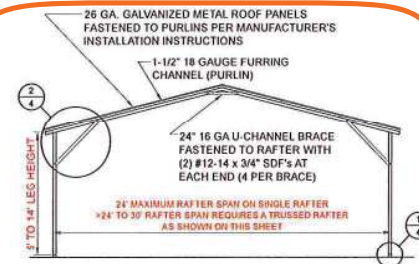
BECHTOL ENGINEERING AND TESTING, INC. IS AN EQUAL OPPORTUNITY/AFRICAN AMERICAN/ASIAN/PACIFIC ISLANDER/AMERICAN INDIAN/ALASKA NATIVE/HISPANIC/LATINO/BLACK/WHITE/OTHER COMPANY.



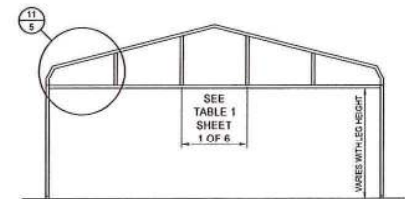
TYPICAL
INTERIOR RAFTER/POST FRAME SECTION - BOW FRAME
NOT TO SCALE



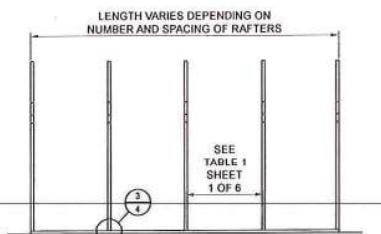
TYPICAL INTERIOR RAFTER/POST
FRAME SECTION - BOX EAVE - HORIZONTAL ROOF
NOT TO SCALE



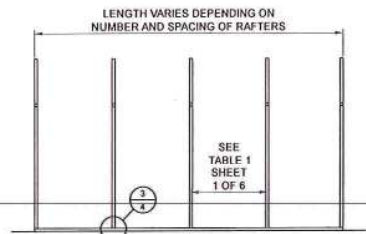
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RAFTER/POST FRAME SECTION - VERTICAL ROOF
NOT TO SCALE



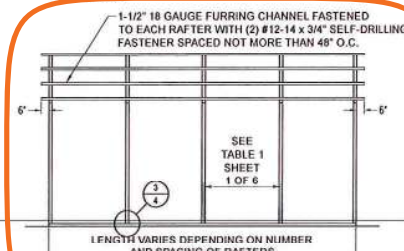
TYPICAL BOW RAFTER GABLE END FRAMING PLAN
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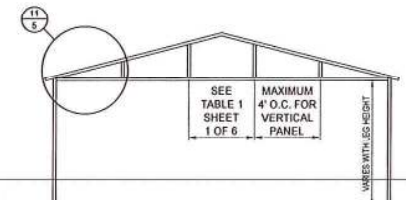
TYPICAL RAFTER/POST FRAMING PLAN - BOW FRAME
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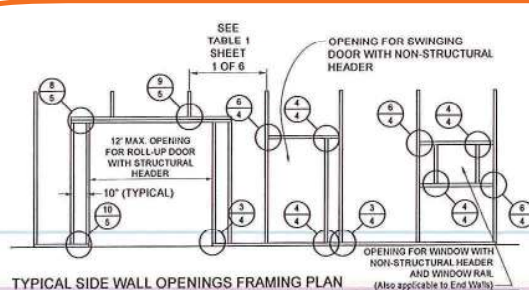
TYPICAL RAFTER/POST FRAMING PLAN - BOX EAVE
NOT TO SCALE



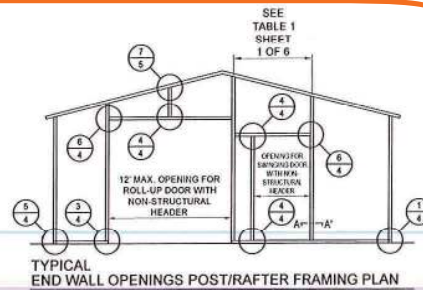
TYPICAL
POST/RAFTER FRAMING PLAN - VERTICAL ROOF
NOT TO SCALE



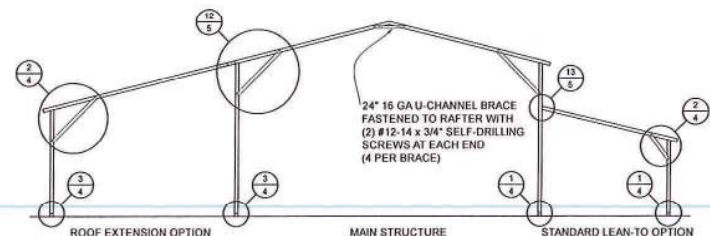
TYPICAL BOX EAVE RAFTER GABLE END FRAMING PLAN
NOT TO SCALE



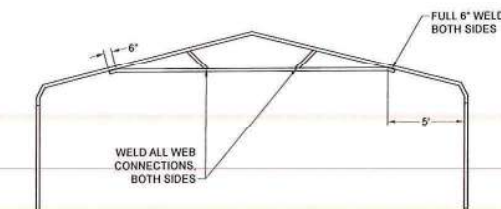
TYPICAL SIDE WALL OPENINGS FRAMING PLAN
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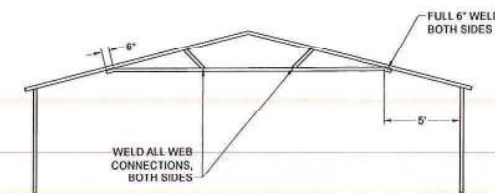
TYPICAL
END WALL OPENINGS POST/RAFTER FRAMING PLAN
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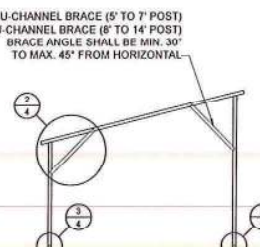
TYPICAL LEAN-TO OPTIONS FRAMING PLAN (BOTH OPTIONS SHOWN)
NOT TO SCALE
(BOX EAVE RAFTER SHOWN, ONLY STANDARD LEAN-TO OPTION APPLICABLE TO BOW FRAME RAFTER)



OPTIONAL 24'-1\"/>



OPTIONAL 24'-1\"/>



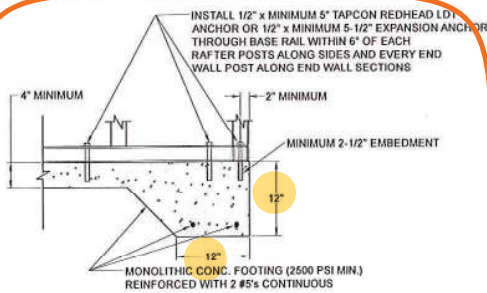
FREESTANDING
LEAN-TO FRAMING PLAN
NOT TO SCALE

BECHTOL ENGINEERING AND TESTING, INC.
805 WEST NEW YORK AVENUE
DELAND, FLORIDA 32720
No. 90753
STATE OF FLORIDA
PROFESSIONAL ENGINEER

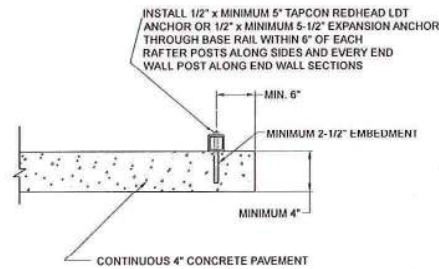
CAROLINA CARPORTS, INC.
GENERIC PLANS FOR USE IN THE STATE OF FLORIDA

FILED	DATE	06/04/2021
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ENGINEER	tb	PROJECT NO.
APPROVED	TB	SHEET 3 OF 6

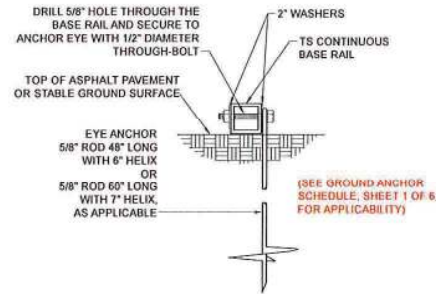
BECHTOL ENGINEERING AND TESTING, INC.
CONSULTING GEOTECHNICAL, ENVIRONMENTAL, AND WATER TESTING ENGINEERS
Certificate of Authorization No. 000002



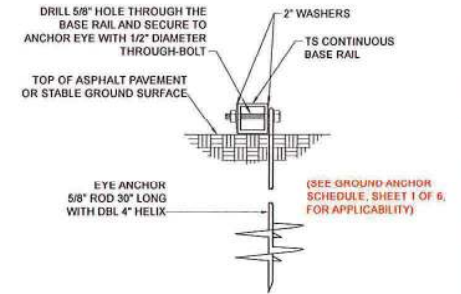
1A CONCRETE BASE RAIL ANCHORAGE
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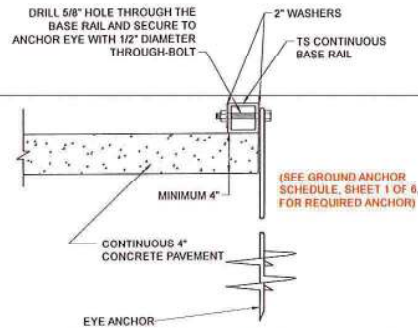
1B CONCRETE BASE RAIL ANCHORAGE
Not To Scale (OPTIONAL - OPEN CARPORTS ONLY)



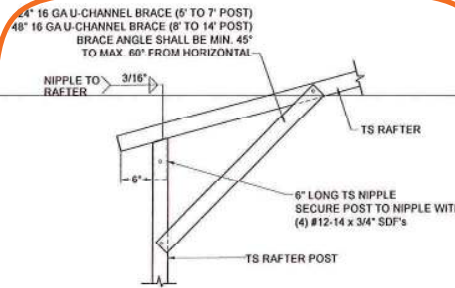
1C BASE RAIL DEEP ANCHORAGE
Not To Scale



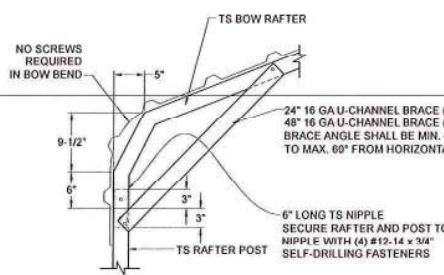
1D BASE RAIL ANCHORAGE
Not To Scale



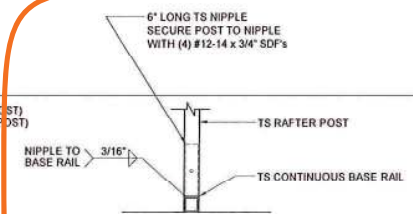
1E CONCRETE BASE RAIL ANCHORAGE
Not To Scale (OPEN CARPORTS WHERE SLAB EDGE DISTANCE DOES NOT MEET MINIMUM EDGE DISTANCE SHOWN IN DETAIL 1B)



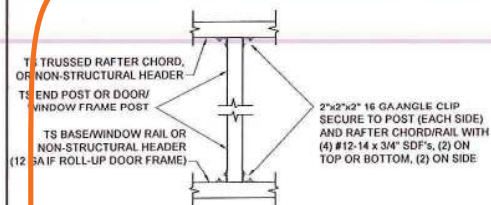
2A BOX EAVE RAFTER/POST DETAIL
Not To Scale



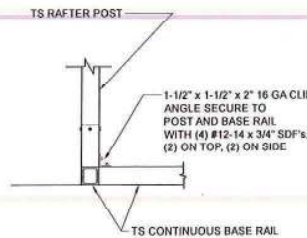
2B BOW RAFTER/POST DETAIL
Not To Scale



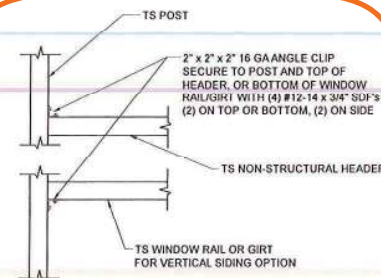
3 POST/BASE RAIL CONN. DETAIL
Not To Scale



4 POST TO RAIL, TRUSS CHORD, OR NON-STRUCTURAL HEADER CONN. DETAIL
Not To Scale



5 END POST/BASE RAIL CONN.
Not To Scale

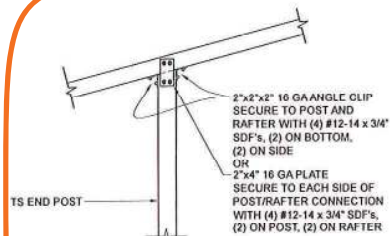


6 NON-STRUCTURAL HEADER, WINDOW RAIL, OR GIRTS TO POST CONN. DETAIL
Not To Scale

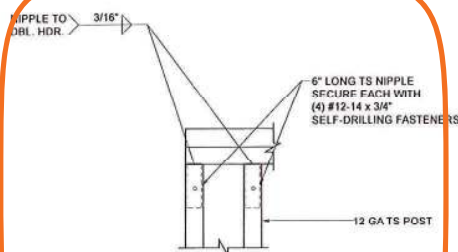


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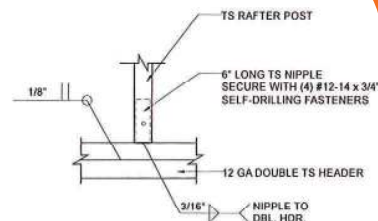
FILE	DATE	06/04/2021
DRAWN	mkb	NTS
CHECKED	tb	PROJ NO. G21001
APPROVED	tb	SHEET 4 OF 6



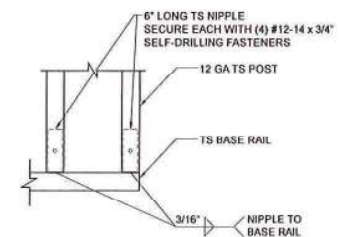
7 END POST/RAFTER CONN. DETAIL
Not To Scale



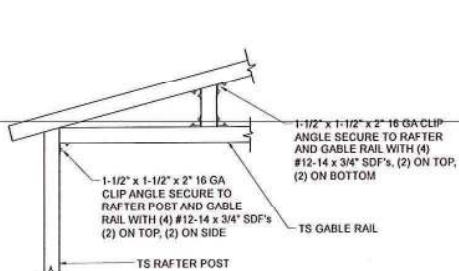
8 RAFTER POST/DBL. HEADER DETAIL
Not To Scale



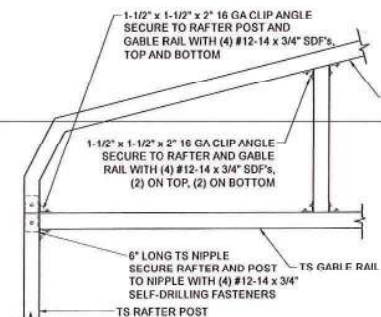
9 RAFTER POST/HEADER DETAIL
Not To Scale



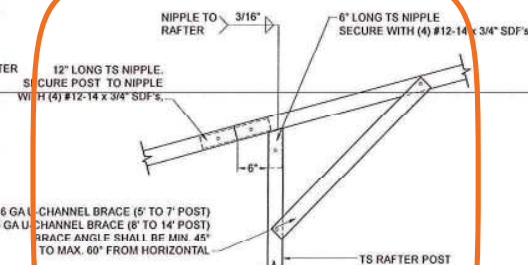
10 RAFTER POST/BASE RAIL CONNECTION DETAIL
Not To Scale



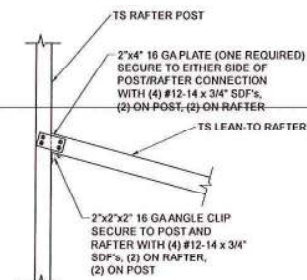
11A GABLE RAIL TO RAFTER POST CONNECTION DETAIL
Not To Scale



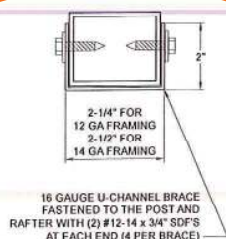
11B GABLE RAIL TO RAFTER POST CONNECTION DETAIL
Not To Scale



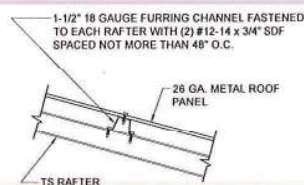
12 SIDE EXTENSION RAFTER/POST DETAIL
Not To Scale



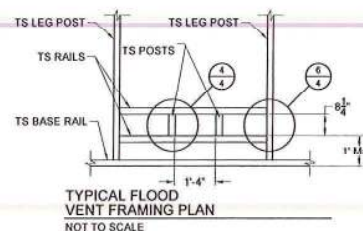
13 POST / LEAN-TO RAFTER CONN. DETAIL
Not To Scale



BRACE SECTION
Not To Scale



ROOF PANEL ATTACHMENT
(ALTERNATE FOR VERTICAL ROOF PANELS)
Not To Scale



TYPICAL FLOOD VENT FRAMING PLAN
NOT TO SCALE

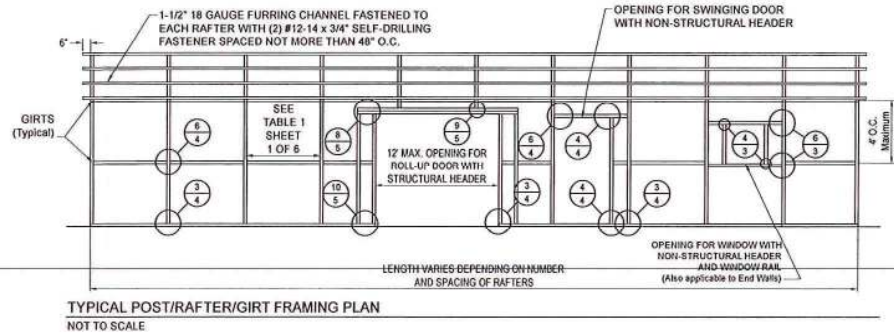
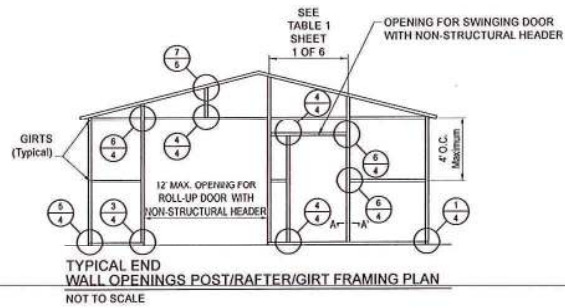


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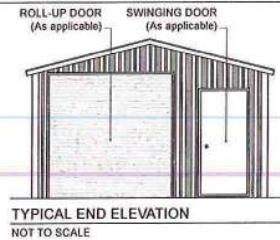
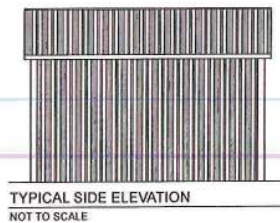
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	DRAWN	SCALE	NTS
	CHECKED	BY	G21001
	APPROVED	TB	SHEET 5 OF 6

SEE GENERAL NOTE No. 12, SHEET 1 OF 6.

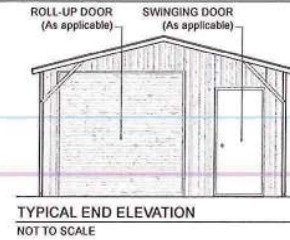
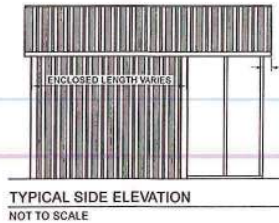
VERTICAL SIDE OPTION



BOX EAVE FRAME RAFTER ENCLOSED BLDG - VERTICAL SIDES



BOX EAVE FRAME RAFTER UTILITY BLDG - VERTICAL SIDES



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	DESIGNED BY	DATE
	DRWN	06/04/2021
	CHKD	SCALE
	APPROVED	NTS
PROJECT NO.		621001
SHEET NO.		SHEET 6 OF 6