

FBC APPROVED PRODUCTS LIST

FBC APPROVED PRODUCTS LIST				MAXIMUM ALLOWABLE WIND SPEED		
PRODUCT CATEGORY	SUB CATEGORY	MANUFACTURER	APPROVAL No. & DATE	QA EXPIRATION DATE	OPEN	PARTIALLY ENCLOSED
STRUCTURAL COMPONENTS	ROOF DECK	CAROLINA CARPORTS, INC. 26 Gauge AG Panel	FL6586-1-R7 12/12/23	04/05/27	180	180
STRUCTURAL COMPONENTS	STRUCTURAL WALL	CAROLINA CARPORTS, INC. 26 Gauge AG Panel	FL6702-1-R7 12/12/23	03/14/27	180	180
STRUCTURAL COMPONENTS	STRUCTURAL WALL	CAROLINA CARPORTS, INC. 26 Gauge Dutch Lap Wall Panel	FL6702-3-R7 12/12/23	03/14/27	N/A	143
EXTERIOR DOORS	SWINGING	ELIXIR DOOR AND METAL COMPANY Series 402-14	FL17996-3-R3 12/26/23	08/26/25	N/A	139
EXTERIOR DOORS	SWINGING	ELIXIR DOOR AND METAL COMPANY Series 407	FL17996-5-R3 12/26/23	08/19/25	N/A	155
EXTERIOR DOORS	ROLL-UP	ASTA INDUSTRIES INC. Model 203 (12 Max. Width)	FL8888-1-R7 11/06/23	12/31/24	N/A	174
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll Up Sheet Door (8' Max. Width)	FL16806-2-R6 12/13/23	04/05/27	N/A	180
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll-Up Sheet Door - (10' Max. Width)	FL16806-4-R6 12/13/23	04/05/27	N/A	172
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll-Up Sheet Door - (12' Max. Width)	FL16806-1-R6 12/13/23	04/05/27	N/A	154
EXTERIOR DOORS	ROLL-UP	CAROLINA CARPORTS, INC. Steel Roll-Up Sheet Door - (16' Max. Width)	FL41335-1-R1 12/13/23	04/05/27	N/A	142
WINDOWS	SINGLE HUNG	CGI WINDOWS AND DOORS Model SH 4000A	FL23358-2-R7 12/19/23	02/28/32	N/A	156

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

GENERAL NOTES:

- 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.
- THESE STRUCTURES ARE DESIGNED AS NON-HABITABLE UNTIL IT'S STORAGE BUILDINGS (RISK CATEGORY II) 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 EXERTS 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.
- ALL STEEL TUBING SHALL BE 50 KSI GALVANIZED STEEL. ALL FASTENERS SHALL BE GALVANIZED OR STAINLESS STEEL OR ZINC PLATED.
- 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.
- 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.
- 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-W14XW14 WELDED WIRE FABRIC COMPLYING WITH ASTM A 185, OR WITH SYNTHETIC FIBER REINFORCEMENT COMPLYING WITH ASTM C1116.
- 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 GROUND ANCHOR SIZE REQUIREMENTS.
- CONCRETE ANCHORS SHALL BE TAPCON REDHEAD LDT 1/2" x 5" OR EQUIVALENT.
- POST/RAFTER BRACING: BRACE ON EVERY POST/RAFTER CONNECTION, EXCEPT FOR END WALLS.
- SLAB FOUNDATION SUBGRADE SOILS SHALL BE TREATED AND COVERED WITH 6 MIL VAPOR RETARDER PER SECTION R318.1 OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) - RESIDENTIAL, AND SECTION 1816.1 OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) - BUILDING, SOIL LOAD BEARING PRESSURE OF 2000PSF IS ASSUMED.
- 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.
- FOR CONTINUOUS REINFORCING, MINIMUM BAR OVERLAP SHALL BE 40 BARS DIAMETERS (25" FOR #5 REBAR).
- TORNADO VELOCITY COMPLIANCE IS NOT REQUIRED FOR RISK I OR RISK II STRUCTURES PER SECTION R301.2.1.1 OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) - RESIDENTIAL AND SECTION 1603.1.4 OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) - BUILDING, AND ASCE 7-22

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	B or 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
BUILDING WIDTH (feet)	12								
	14								
	16								
	18								
	20								
	22								
	24								
	26								
	28								
	30								

DETAILS 10C AND 10D SHOWN ON SHEET 4 OF 6

METAL CARPORT INSTALLATION PLANS
AND DETAILS AND FRAMING AND
FASTENER SPECIFICATIONS

FOR CONSTRUCTION IN THE STATE OF FLORIDA

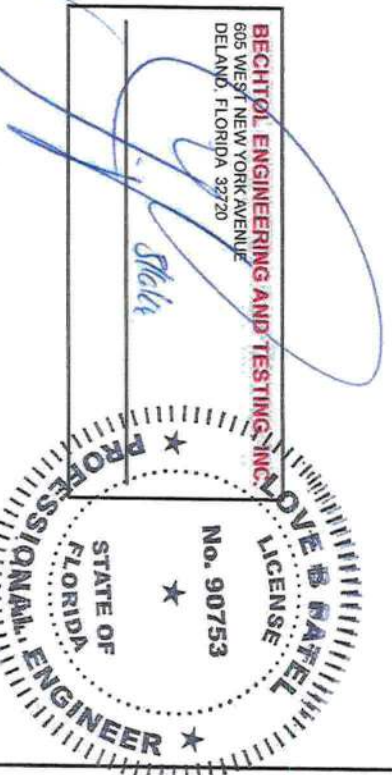
PREPARED FOR:
CAROLINA CARPORTS, INC.
P.O. BOX 1263
DOBSON, NORTH CAROLINA 27017

PREPARED BY:
BECHTOL ENGINEERING AND TESTING, INC.
605 WEST NEW YORK AVENUE
DELAND, FLORIDA 32720
Certificate of Authorization No. 00005492

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 605 OF THE FLORIDA BUILDING CODE, EIGHTH EDITION (2023).




BECHTOL ENGINEERING AND TESTING, INC.
605 WEST NEW YORK AVENUE
DELAND, FLORIDA 32720



CAROLINA CARPORTS, INC.

GENERIC PLANS FOR USE IN THE STATE OF FLORIDA
UP TO 30' WIDE

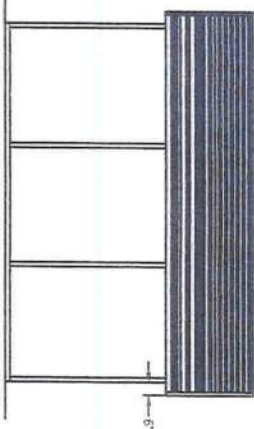
BECHTOL ENGINEERING AND TESTING, Inc.		DATE		1/1/2024	
DESIGN		SCALE		NTS	
CHECKED		PROJECT		G24001	
APPROVED		TB/1P		SHEET 1 OF 6	



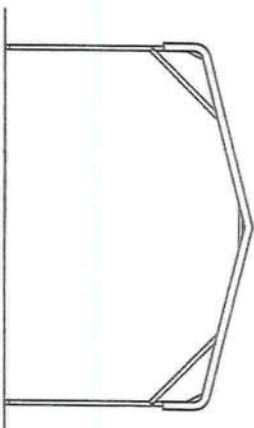
BECHTOL ENGINEERING
AND TESTING, Inc.

CONSTRUCTION, TRANSPORTATION, AND MATERIALS TESTING ENGINEERS
Certificate of Accreditation No. 00003592

BOW FRAME RAFTER OPEN CARPORT - HORIZONTAL ROOF



TYPICAL SIDE ELEVATION
NOT TO SCALE

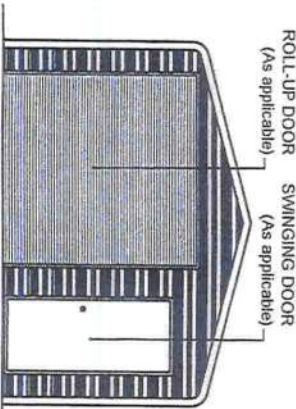


TYPICAL END ELEVATION
NOT TO SCALE

BOW FRAME RAFTER ENCLOSED BUILDING - HORIZONTAL ROOF



TYPICAL SIDE ELEVATION
NOT TO SCALE

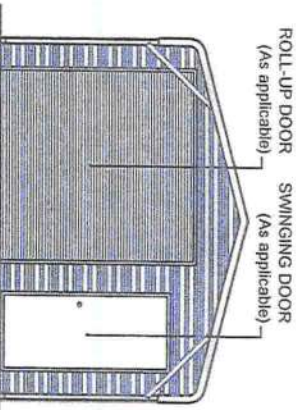


TYPICAL END ELEVATION
NOT TO SCALE

BOW FRAME RAFTER UTILITY BUILDING - HORIZONTAL ROOF

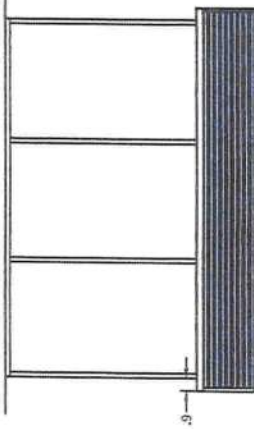


TYPICAL SIDE ELEVATION
NOT TO SCALE

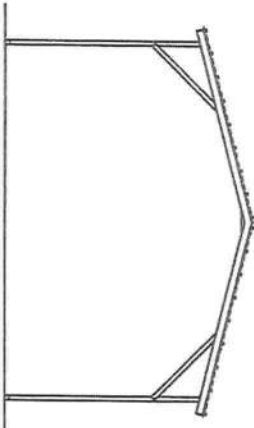


TYPICAL END ELEVATION
NOT TO SCALE

BOX EAVE FRAME RAFTER OPEN CARPORT - HORIZONTAL ROOF



TYPICAL SIDE ELEVATION
NOT TO SCALE

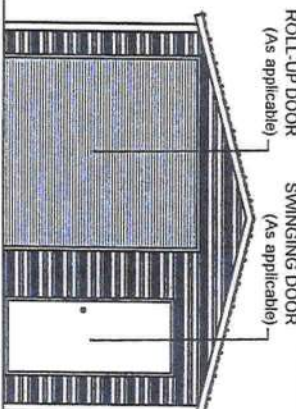


TYPICAL END ELEVATION
NOT TO SCALE

BOX EAVE FRAME RAFTER ENCLOSED BLDG - HORIZONTAL ROOF

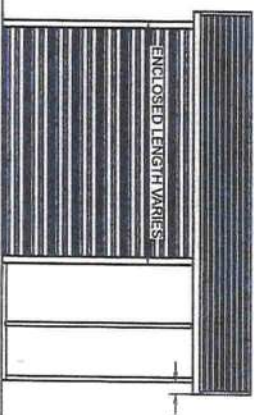


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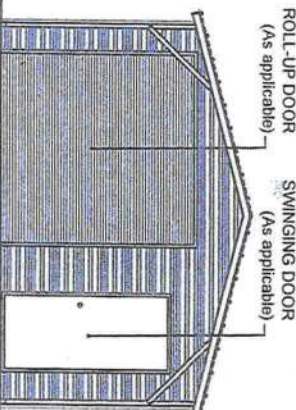


TYPICAL END ELEVATION
NOT TO SCALE

BOX EAVE FRAME RAFTER UTILITY BLDG - HORIZONTAL ROOF

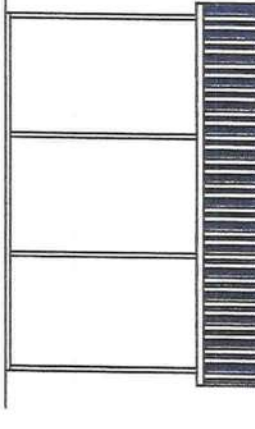


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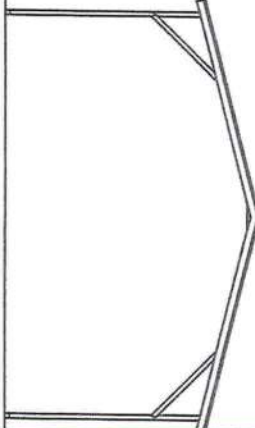


TYPICAL END ELEVATION
NOT TO SCALE

BOX EAVE FRAME RAFTER OPEN CARPORT - VERTICAL ROOF



TYPICAL SIDE ELEVATION
NOT TO SCALE

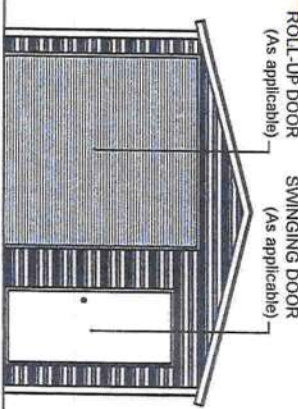


TYPICAL END ELEVATION
NOT TO SCALE

BOX EAVE FRAME RAFTER ENCLOSED BLDG - VERTICAL ROOF

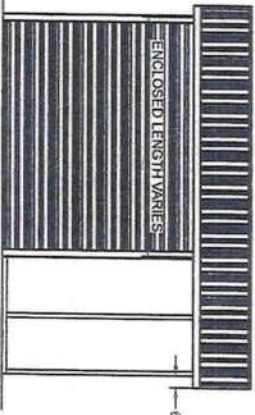


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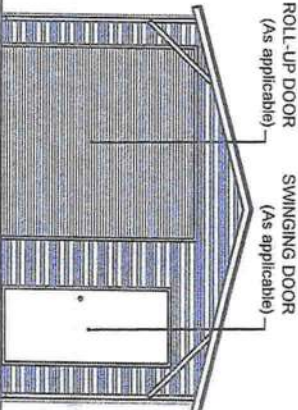


TYPICAL END ELEVATION
NOT TO SCALE

BOX EAVE FRAME RAFTER UTILITY BLDG - VERTICAL ROOF

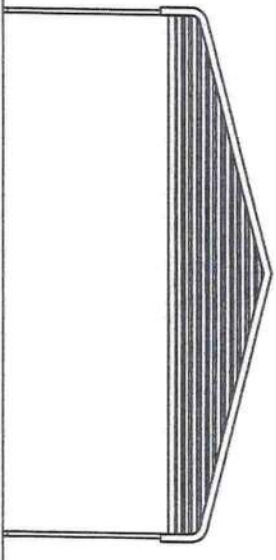


TYPICAL SIDE ELEVATION
NOT TO SCALE

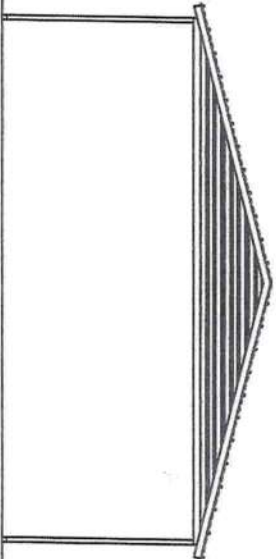


TYPICAL END ELEVATION
NOT TO SCALE

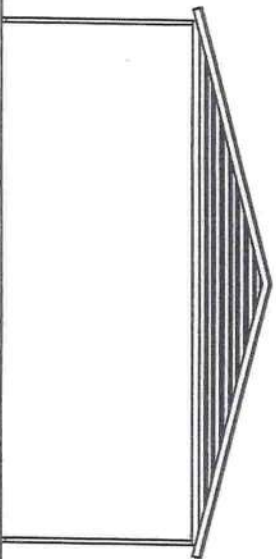
TYPICAL BOW RAFTER GABLE END ELEVATION
NOT TO SCALE



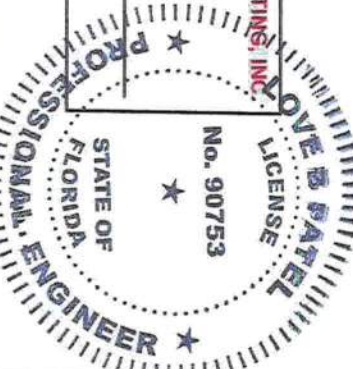
TYPICAL BOX EAVE RAFTER GABLE END ELEVATION
HORIZONTAL ROOF
NOT TO SCALE



TYPICAL BOX EAVE RAFTER GABLE END ELEVATION
VERTICAL ROOF
NOT TO SCALE



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605 WEST NEW YORK AVENUE
DELAND, FLORIDA 32720

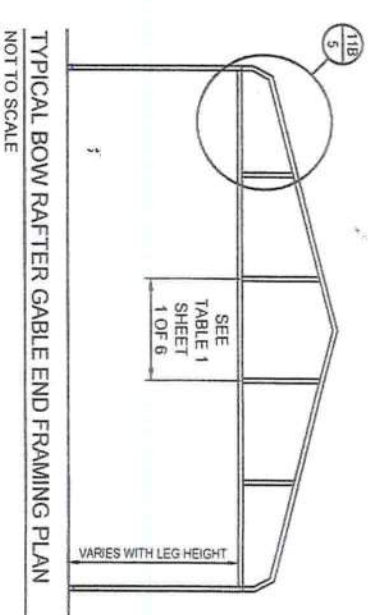
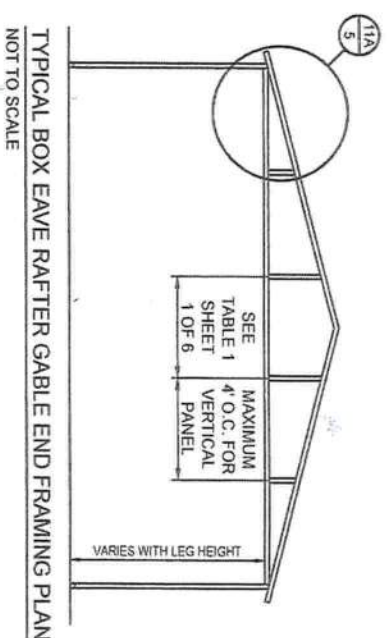
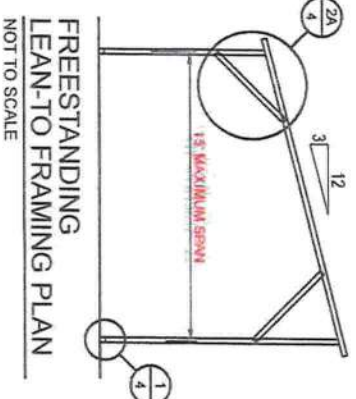
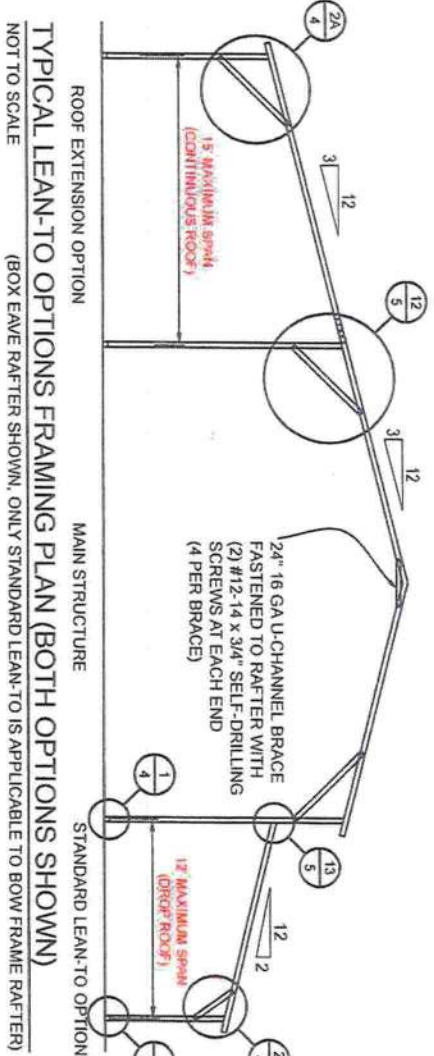
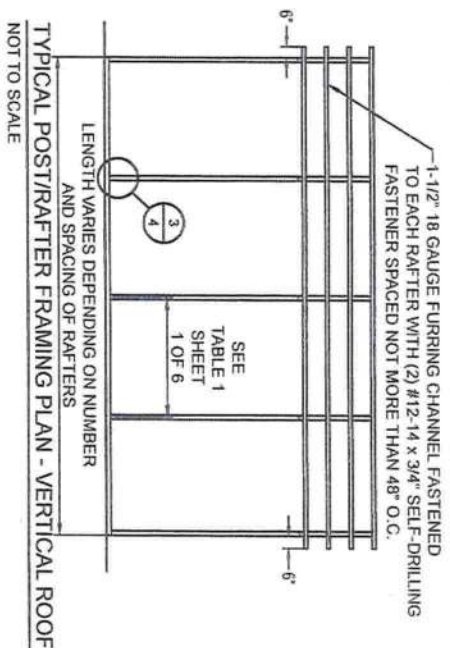
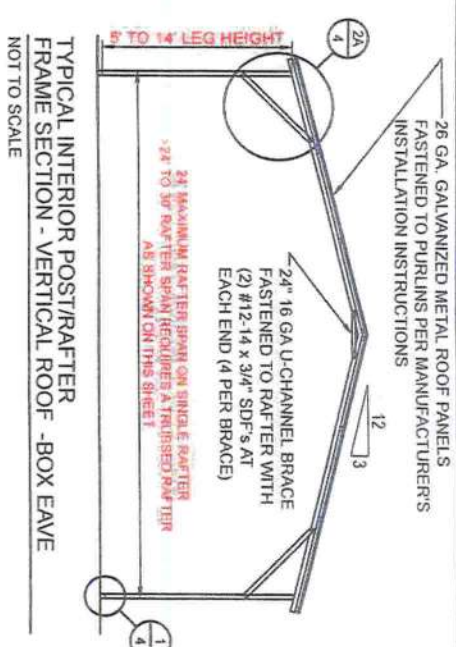
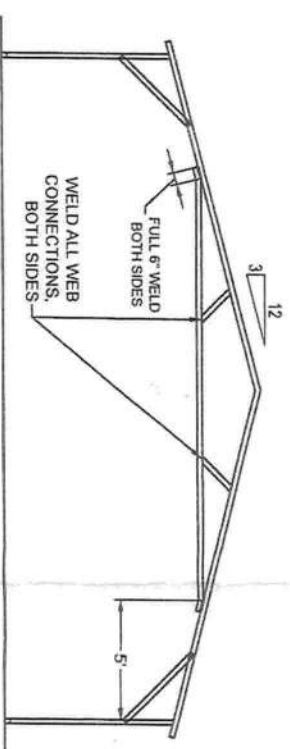
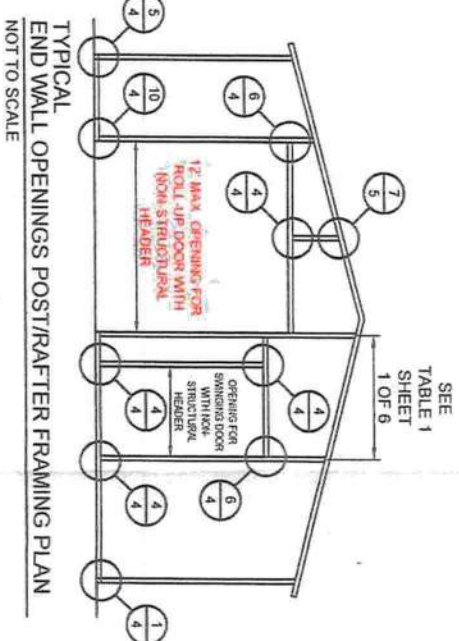
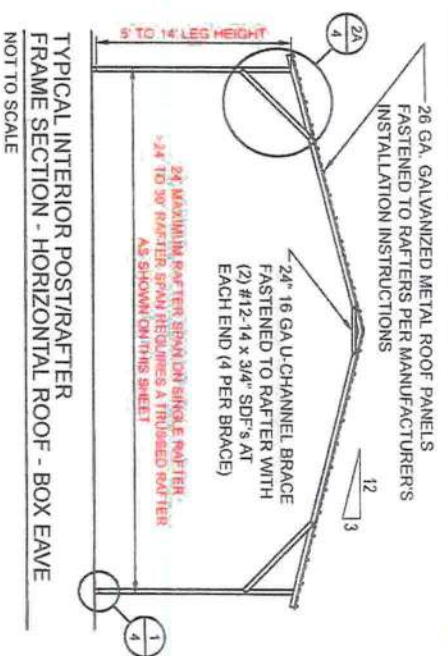
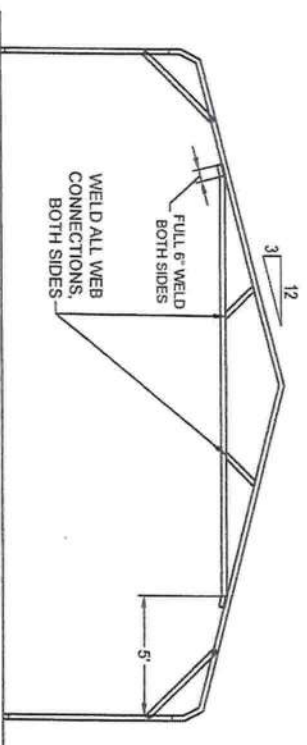
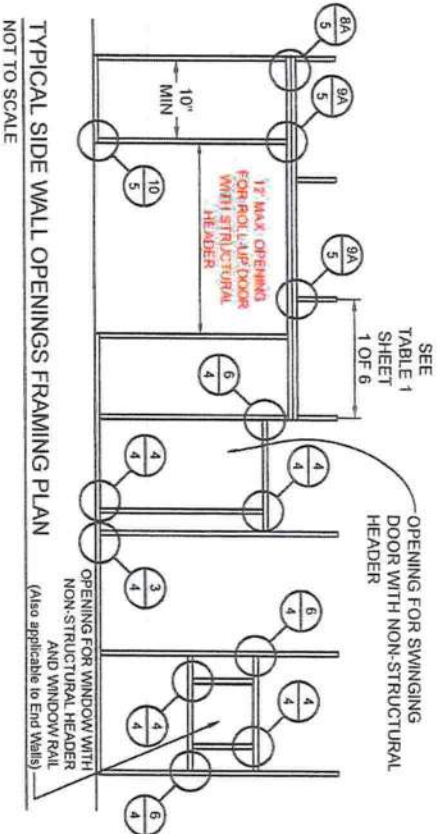
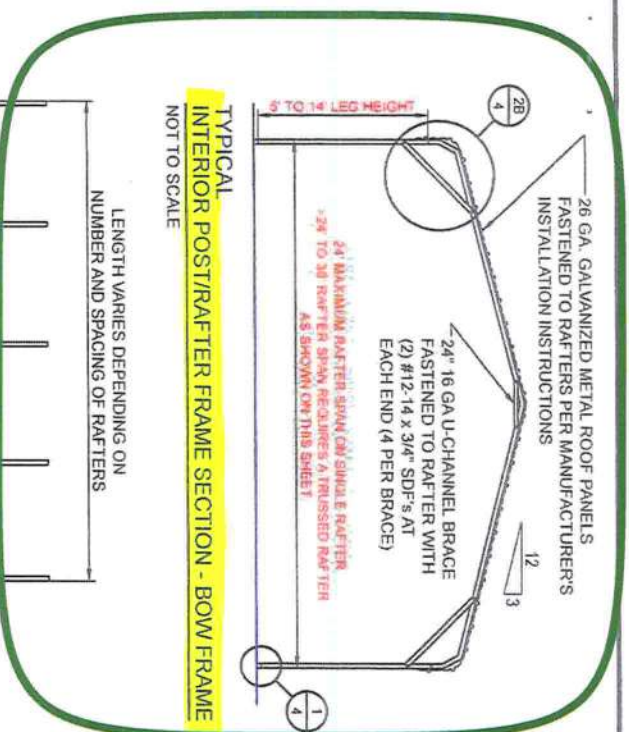


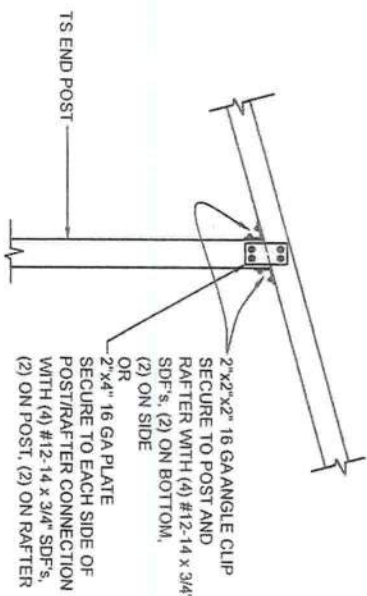
CAROLINA CARPORTS, INC.

GENERIC PLANS FOR USE IN THE STATE OF FLORIDA
UP TO 30' WIDE

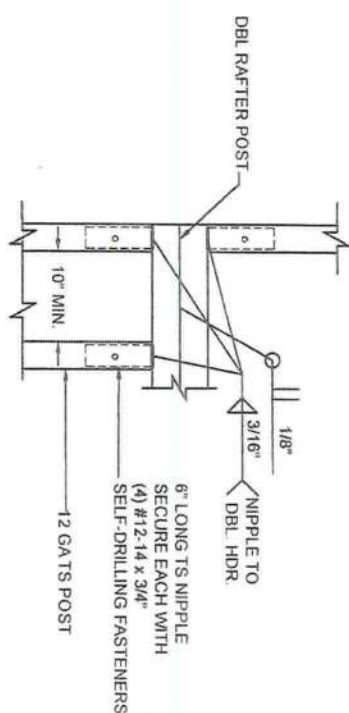
BECHTOL ENGINEERING
AND TESTING, INC.
CONSULTING GEOTECHNICAL, ENVIRONMENTAL, AND MATERIALS TESTING SERVICES
Certified of Authority No. 00009292

REVISION	DATE	SCALE
000001	1/1/2024	NTS
CS / ID	PROJ. NO.	G24001
APPROVED	TB / LP	SHEET 2 OF 6

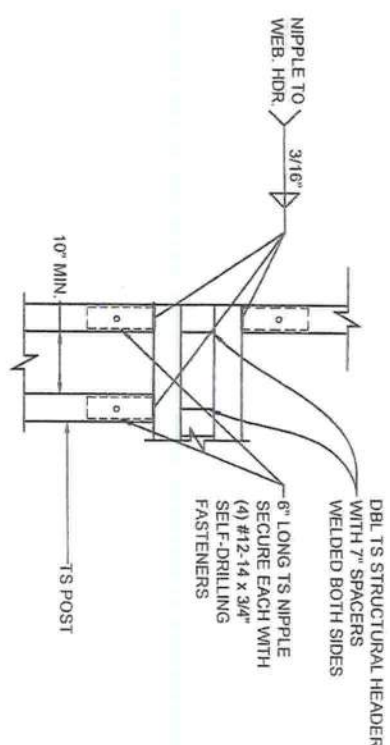




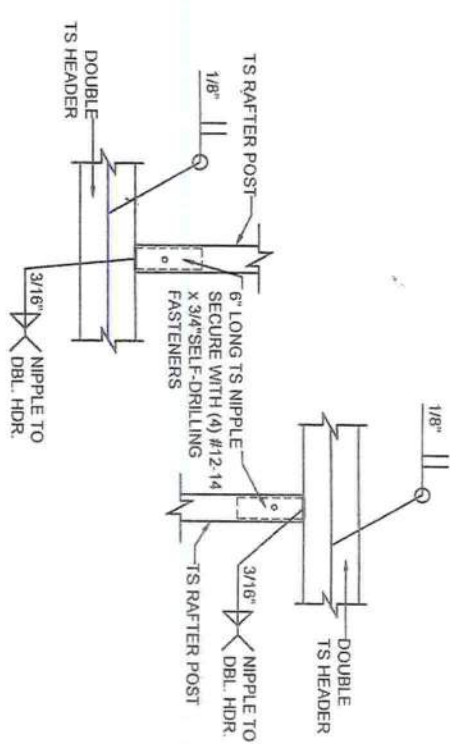
7
END POST/RAFTER CONN. DETAIL
Not To Scale



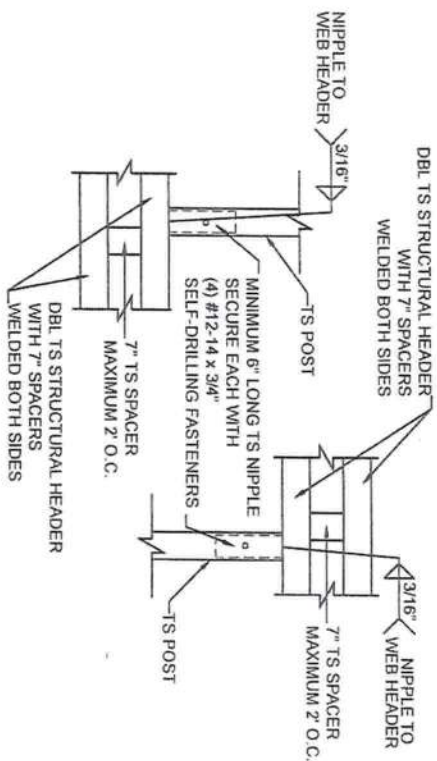
8A
RAFTER POST/DBL. HEADER DETAIL
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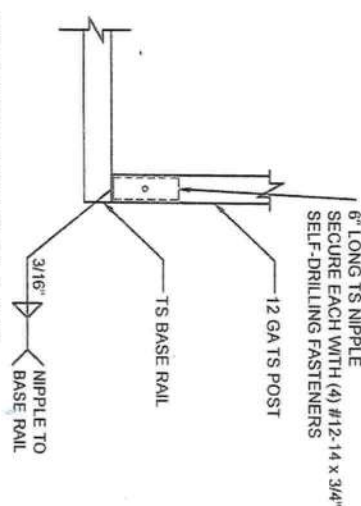
8B
RAFTER POST/WEB HEADER DETAIL
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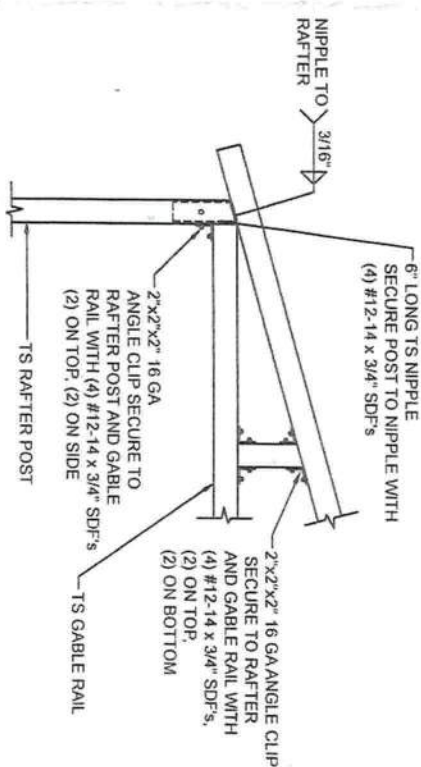
9A
RAFTER POST/HEADER DETAIL
Not To Scale



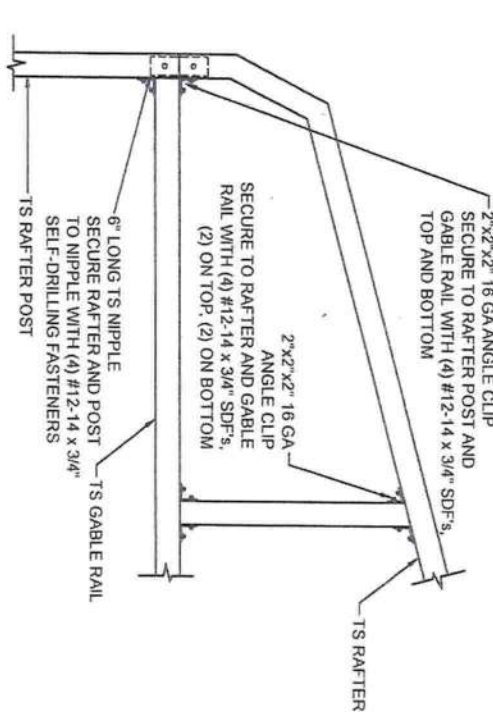
9B
STRUCTURAL HEADER TO POST CONNECTION DETAIL
Not To Scale



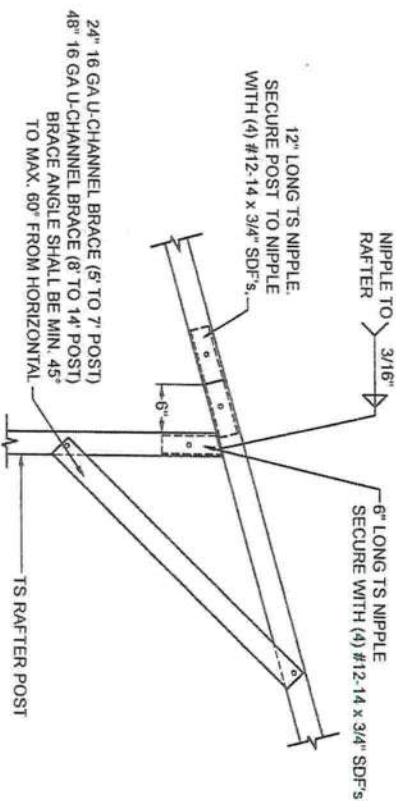
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FRAMEOUT/ROLL UP POST / BASE RAIL CONN. DETAIL
Not To Scale



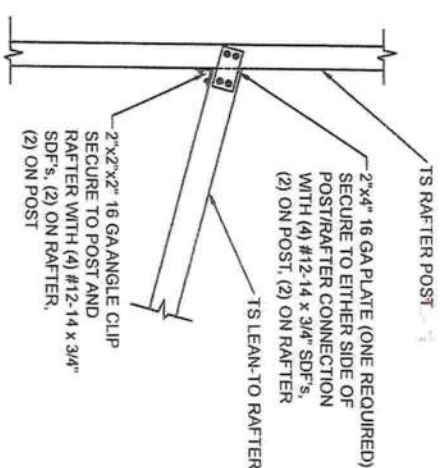
11A
GABLE RAIL TO RAFTER POST CONNECTION DETAIL
Not To Scale



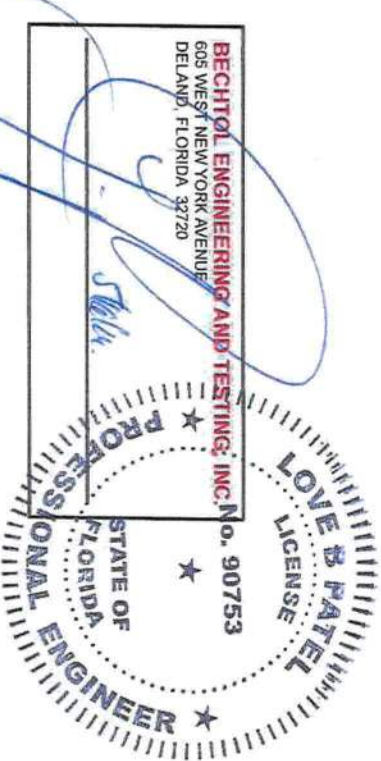
11B
GABLE RAIL TO RAFTER POST CONNECTION DETAIL
Not To Scale



12
SIDE EXTENSION RAFTER/POST DETAIL
Not To Scale



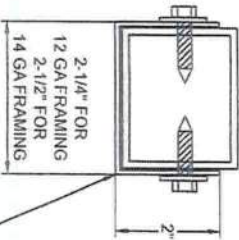
13
POST / LEAN-TO RAFTER CONN. DETAIL
Not To Scale



CAROLINA CARPORTS, INC.
GENERIC PLANS FOR USE IN THE STATE OF FLORIDA
UP TO 30' WIDE

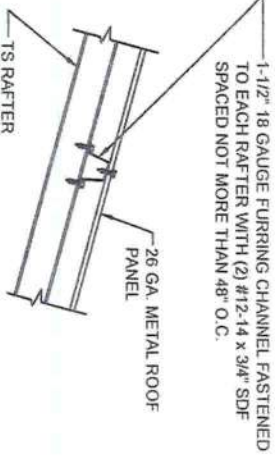
BECHTOL ENGINEERING AND TESTING, INC.		BECHTOL ENGINEERING AND TESTING, INC.	
605 WEST NEW YORK AVENUE DELAND, FLORIDA 32720		605 WEST NEW YORK AVENUE DELAND, FLORIDA 32720	
DESIGNED BY: CS	DATE: 5/14/24	CHECKED BY: CS	DATE: 1/1/2024
APPROVED BY: TB/LP		PROJECT NO.: G24001	SHEET 5 OF 6

VERTICAL SIDE OPTION



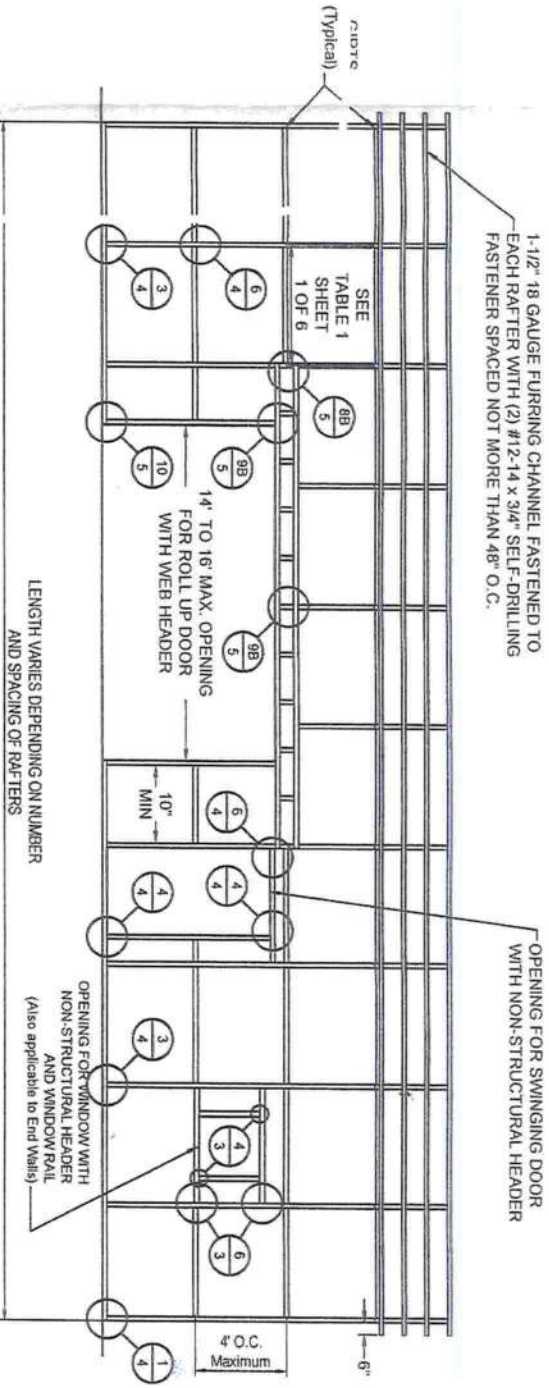
16 GAUGE U-CHANNEL BRACE FASTENED TO THE POST AND RAFTER WITH (2) #12-14 x 3/4" SDF'S AT EACH END (4 PER BRACE)

BRACE SECTION



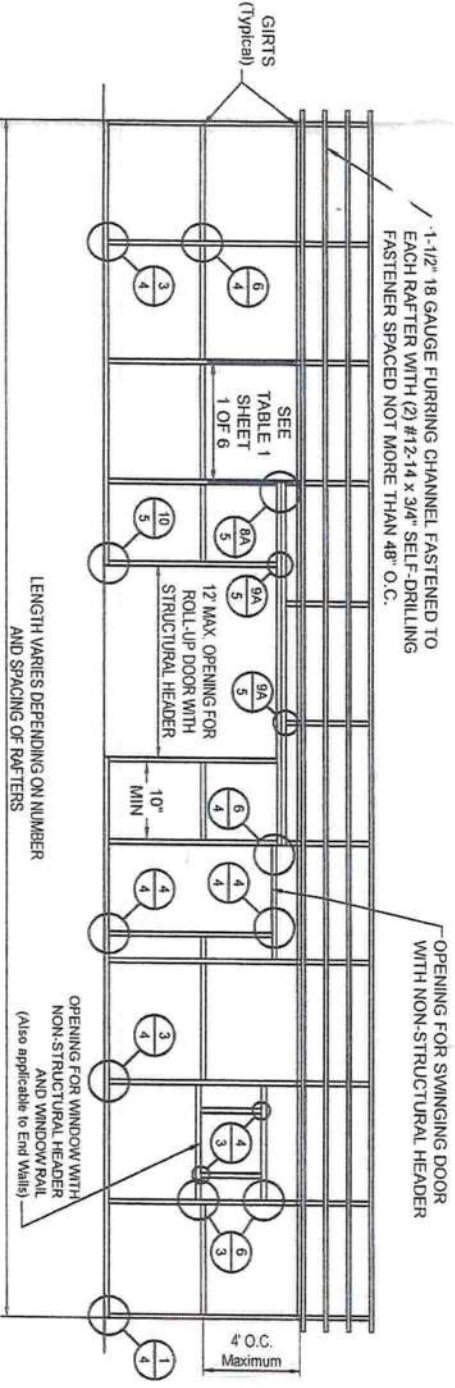
ROOF PANEL ATTACHMENT
(ALTERNATE FOR VERTICAL ROOF PANELS)

Not To Scale



TYPICAL PC ST/RAFTER/GIRT FRAMING PLAN (14' TO 16' WIDE MAX. OPENING)

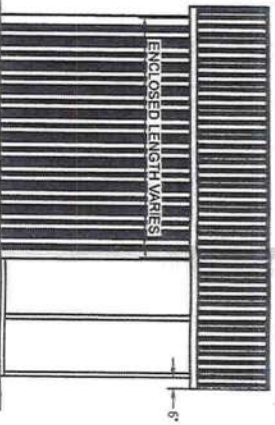
NOT TO SCALE



TYPICAL POST/RAFTER/GIRT FRAMING PLAN (12' WIDE MAX. OPENING)

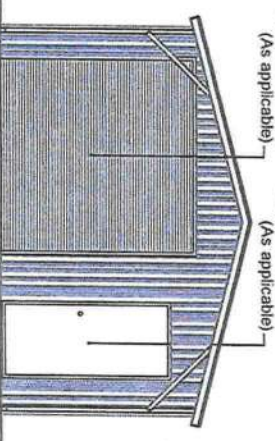
NOT TO SCALE

BOX EAVE FRAME RAFTER UTILITY BLDG - VERTICAL SIDES



TYPICAL SIDE ELEVATION

NOT TO SCALE



TYPICAL END ELEVATION

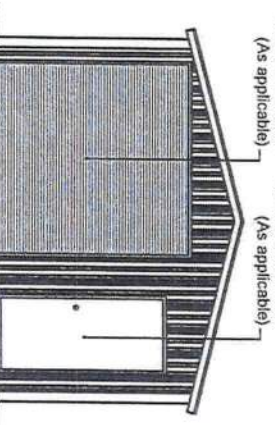
NOT TO SCALE

BOX EAVE FRAME RAFTER ENCLOSED BLDG - VERTICAL SIDES



TYPICAL SIDE ELEVATION

NOT TO SCALE



TYPICAL END ELEVATION

NOT TO SCALE

BECHTOL ENGINEERING AND TESTING, INC.
605 WEST NEW YORK AVENUE
DELAND, FLORIDA 32720

Sheila

LOVE & PATEL
No. 90753
STATE OF FLORIDA
PROFESSIONAL ENGINEER

CAROLINA CARPORTS, INC.
GENERIC PLANS FOR USE IN THE STATE OF FLORIDA
UP TO 30' WIDE

BECHTOL ENGINEERING AND TESTING, Inc.

REVISION	DATE	BY	DATE
5/14/24	1/1/2024	CS	NTS
CS / ID	PROJ. NO.	G24001	
APPROVED	TB / LP	SHEET 6 OF 6	

CONSULTING GEOTECHNICAL, ENVIRONMENTAL, AND MATERIALS TESTING ENGINEERS
CERTIFIED BY LABORATORY NO. 0002089