

TABLE 1
BOW/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 RAFTER/BOW AND END POST SPACING (FEET)	AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS OR GIRTS (INCHES)	INTERIOR BOWS/RAFTERS	END BOWS/RAFTERS
I, II, III, or IV	B, C, or D	115 TO 150	89 TO 116	5.0	6	6	6
		151 TO 180	117 TO 138	4.0	6	6	6

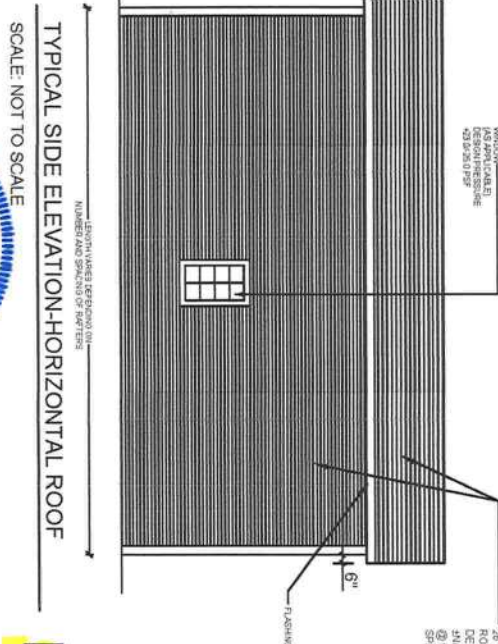
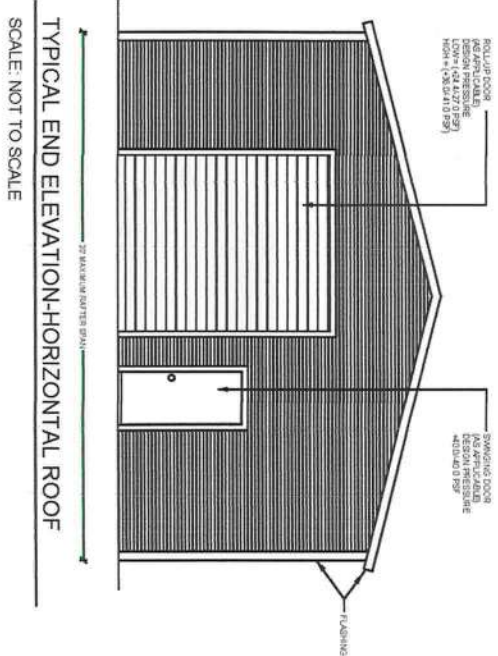
NOTES:
1. SPECIFICATIONS APPLICABLE TO 28 OR 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 4x4x8 GAUGE STEEL TUBE BOW/RAFTERS.
2. FASTENERS CONSIST OF "4400" SELF-DRILLING SCREWS WITH CONTROL SEAL WASHER.
3. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20 FEET OR LESS, AND ROOF SLOPES OF 14:12 PITCH. SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
4. GROUND ANCHOR REQUIREMENTS ARE 1 @ EACH CORNER AND ONE EVERY OTHER INTERIOR BOW/RAFTER POST LOCATION, AT MAXIMUM OF 10' O.C. AND BOTH SIDES OF POST.
5. GROUND ANCHORS ARE NOT REQUIRED WITH CONCRETE SLAB CONSTRUCTION.

WINDOW AND DOOR NOTE

EXTERIOR WINDOWS AND GLASS DOORS SHALL BE TESTED BY AN APPROVED INDEPENDENT TESTING LABORATORY AND BEAR A LABEL OR MARK OR OTHER APPROVED LABEL. THE LABEL SHALL INDICATE THE PRODUCT EVALUATION EVENT TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF THE FOLLOWING SPECIFICATION.
ANSI/HAMMOND 10115.207
THE CONSTRUCTION SHALL BE TESTED IN ACCORDANCE WITH ASTM E 330, STANDARD TEST METHOD FOR STRUCTURAL PERFORMANCE OF EXTERIOR WINDOWS, CURTAIN WALLS, AND DOORS BY UNIFORM STATIC AIR PRESSURE.
DESIGN WAS DONE IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE 7TH EDITION (FBC) 2020 SUPPLEMENTAL AMENDMENTS 2020 INTERNATIONAL BUILDING CODE (IBC), 2020 IRC, AND 2012 IBC.

GENERAL NOTES:

1. ALL STEEL SHALL BE 60 100 STEEL.
2. FASTEN METAL ROOF AND WALL PANELS TO FRAMING WITH 1/4" X 3/8" SELF-DRILLING FASTENERS WITH CONTROL SEAL WASHER @ 8" O.C. AVERAGE.
3. ALL FIELD CONNECTIONS SHALL BE "4400" SELF-DRILLING SCREWS.
4. ALL SHOP CONNECTIONS SHALL BE WELDED.
5. CONCRETE EXPANSION ANCHORS SHALL BE WELT ANCH-TITE OR EQUIVALENT. GROUND ANCHOR REQUIREMENTS ARE 1 @ EACH CORNER & ONE EVERY OTHER INTERIOR Rafter POST LOCATION, AT A MAXIMUM OF 10' O.C. AND BOTH SIDES OF Rafter POST. INTERIOR ANCHORS SHALL BE WELT ANCH-TITE OR EQUIVALENT. FOR CONCRETE FOOTING AND/OR CONCRETE SLAB CONSTRUCTION.
6. POST/RAFTER BRACING BRACE ON EVERY POST/RAFTER CONNECTION, EXCEPT FOR END WALLS.



NOTE:
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THE FOLLOWING IS A COMPLIANT TO THE FLORIDA BUILDING CODE 2020, THE EDITION AND ALSO 7-18 FOR WIND LOADS OF 180 MPH.
RAM A. GOEL, P.E. # 47431
REGISTERED PROFESSIONAL ENGINEER

PREFABRICATED UTILITY STRUCTURE

ELITE METAL MANUFACTURING, LLC
10121 88TH TRACE
LIVE OAK, FL 32060

Issue Date: 08-18-21

Revisions:

No.	Date	Description
1		

Job # 2173

Drawn By: S.K.

Checked By: R.G.

DR. RAM A. GOEL, PH.D., P.E.
F.P.E. 47431.

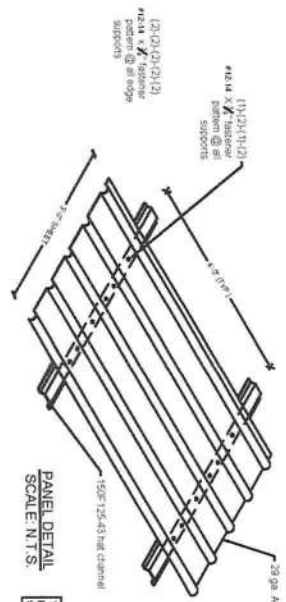
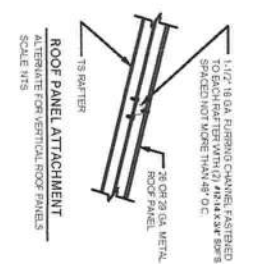
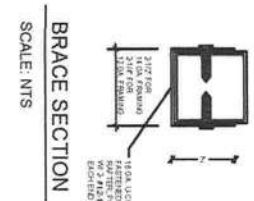
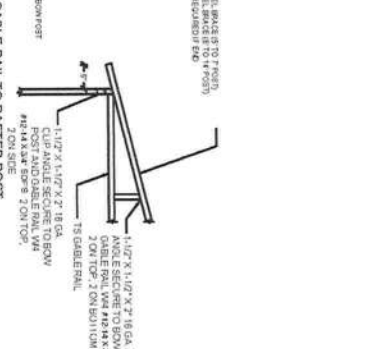
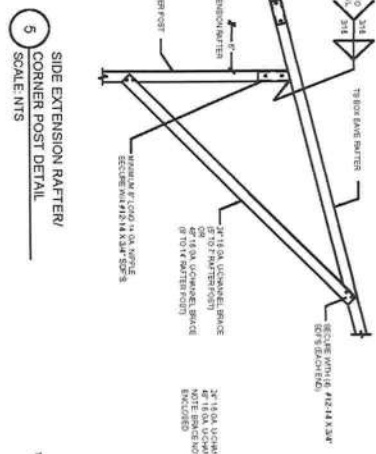
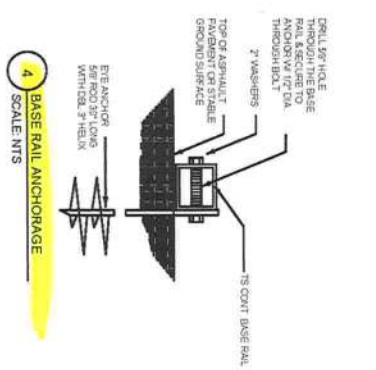
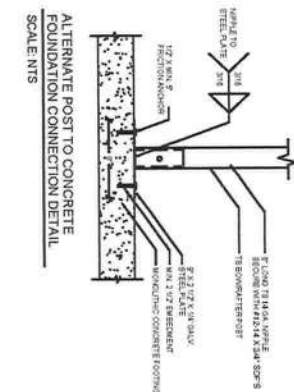
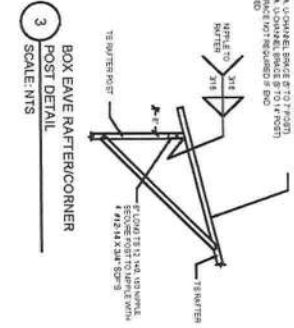
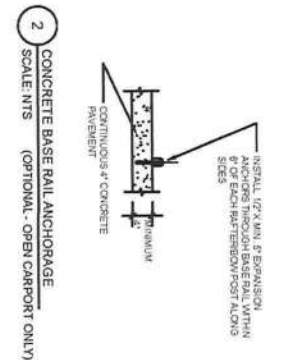
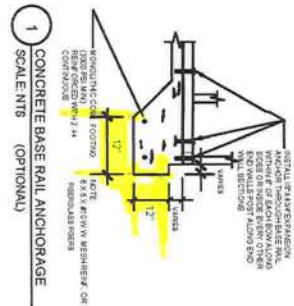
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SONEY FM
ENGINEERS

Full-time • On-call • Emergency



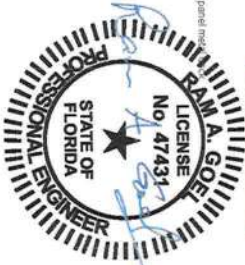
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THE FOLLOWING IS COMPLIANT TO THE FLORIDA
BUILDING CODE OF 2018 FOR
PREFABRICATED UTILITY STRUCTURE

3

PREFABRICATED UTILITY STRUCTURE

ELITE METAL MANUFACTURING, LLC
10121 88TH TRACE
LIVE OAK, FL 32060

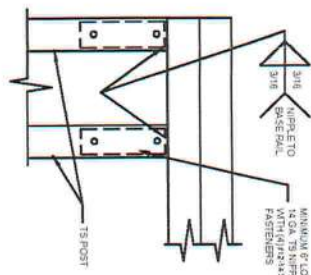


Ram Goel
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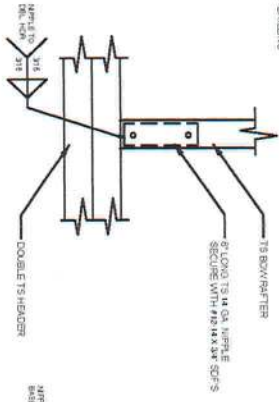
REVISIONS:	DATE	BY	DESCRIPTION
1	08-18-21	DR. RAM A. GOEL	ISSUE
2			
3			
4			
5			

Job # 2173
Drawn By: S.K.
Checked By: R.G.
Issue Date: 08-18-21

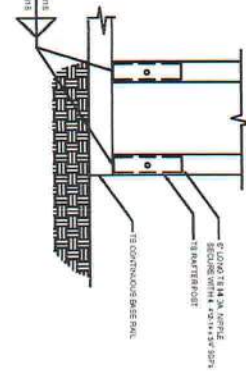




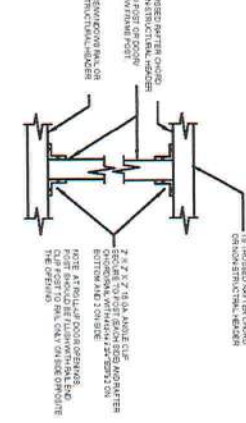
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SCALE: NTS



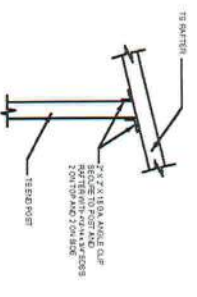
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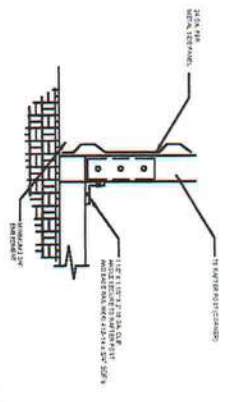
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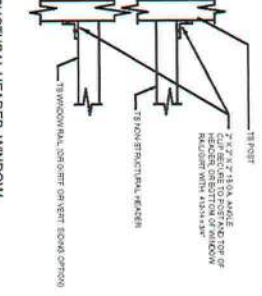
4 POST TO RAIL, TRUSS CHORD, OR NON-STRUCTURAL HEADER CONNECTION DETAIL
SCALE: NTS



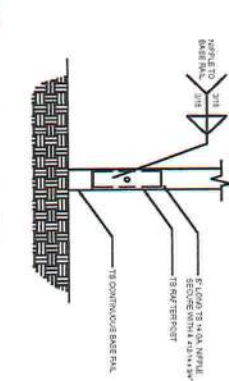
5 END POST/RAFTER CONNECTION DETAIL
SCALE: NTS



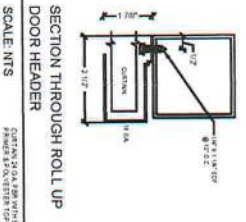
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SCALE: NTS



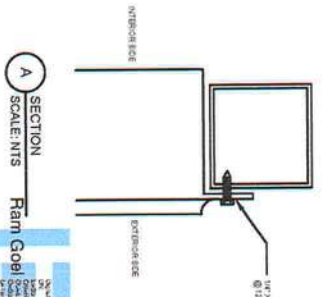
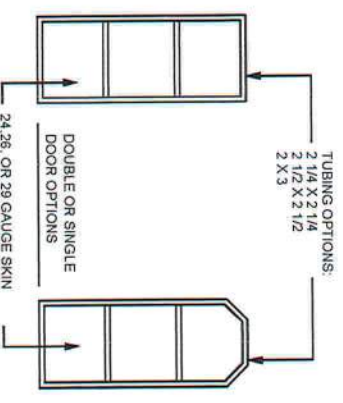
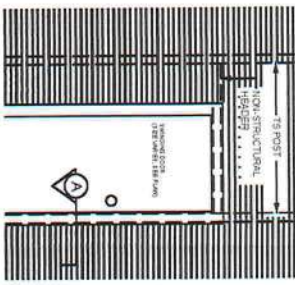
7 NON-STRUCTURAL HEADER WINDOW RAIL OR GIRT TO POST CONNECTION DETAIL
SCALE: NTS



8 POST/BASE RAIL CONNECTION DETAIL
SCALE: NTS



9 SECTION THROUGH ROLL UP DOOR HEADER
SCALE: NTS



12 SECTION Ram GoB
SCALE: NTS



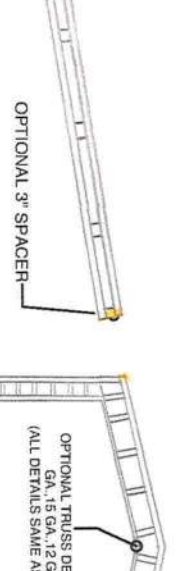
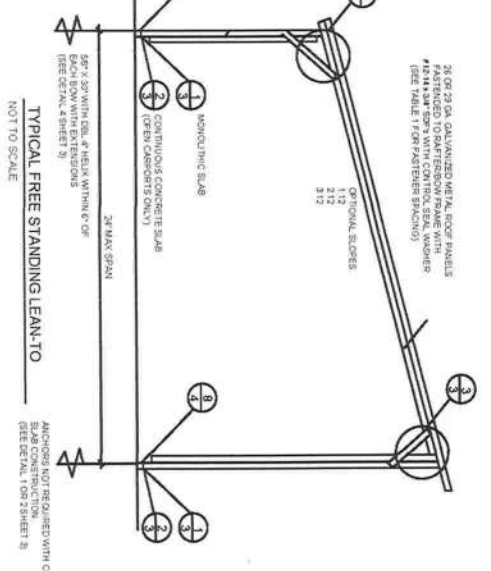
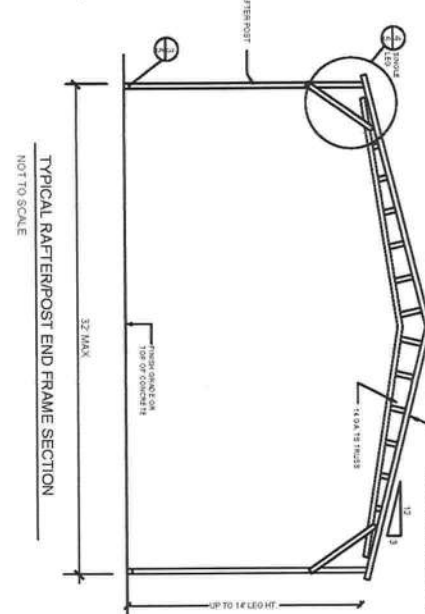
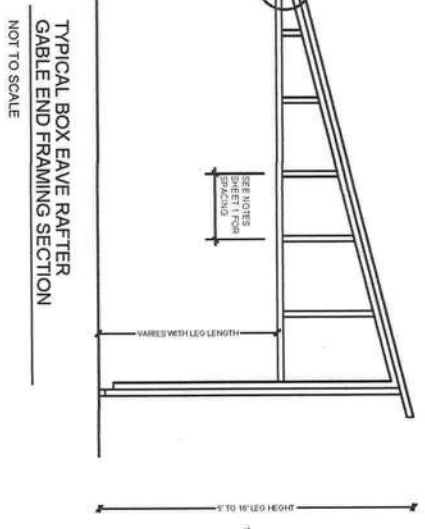
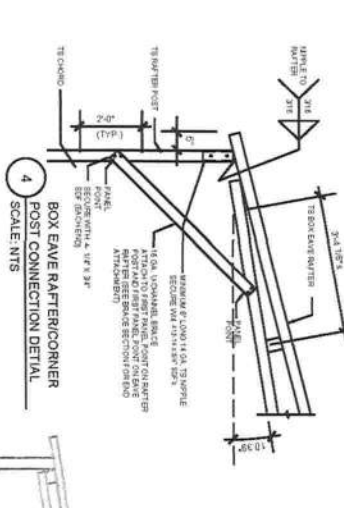
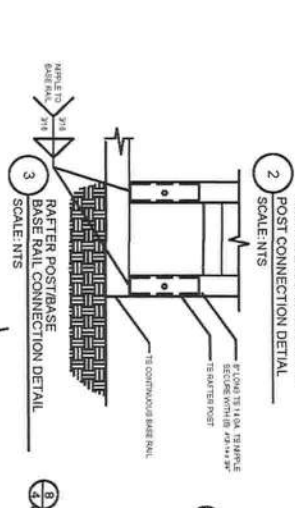
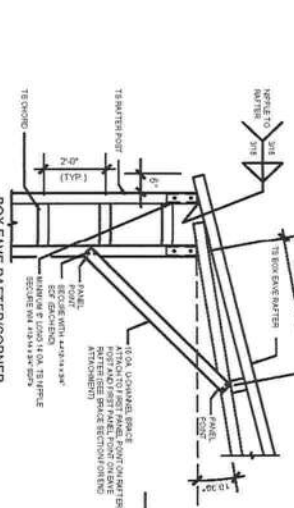
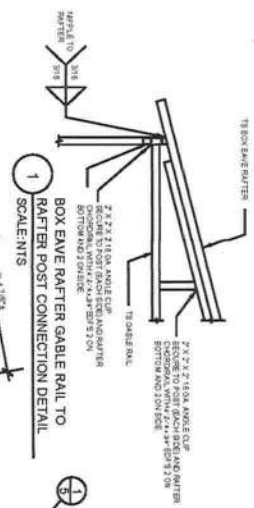
PREFABRICATED UTILITY STRUCTURE

ELITE METAL MANUFACTURING, LLC
10121 88TH TRACE
LIVE OAK, FL 32060

Job #	2173
Drawn By	S.K.
Checked By	R.G.
Issue Date	08-18-21
Revised	
By	
Date	

DR. RAM A. GOEL, PH.D., P.E.
F.P.E. 47431.
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THE FOLLOWING IS COMPLIANT TO THE FLORIDA WIND LOADS OF 140 MPH.

RAM A. GOEL, P.E. # 47431

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PREFABRICATED UTILITY STRUCTURE

ELITE METAL MANUFACTURING, LLC
10121 88TH TRACE
LIVE OAK, FL 32060

Issue Date: 08-18-21

Revisions:

Rev	Description
1	Initial Issue

Job # 2173

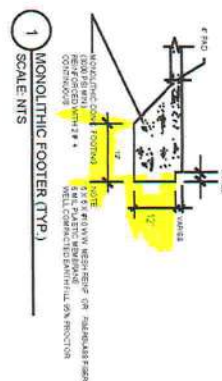
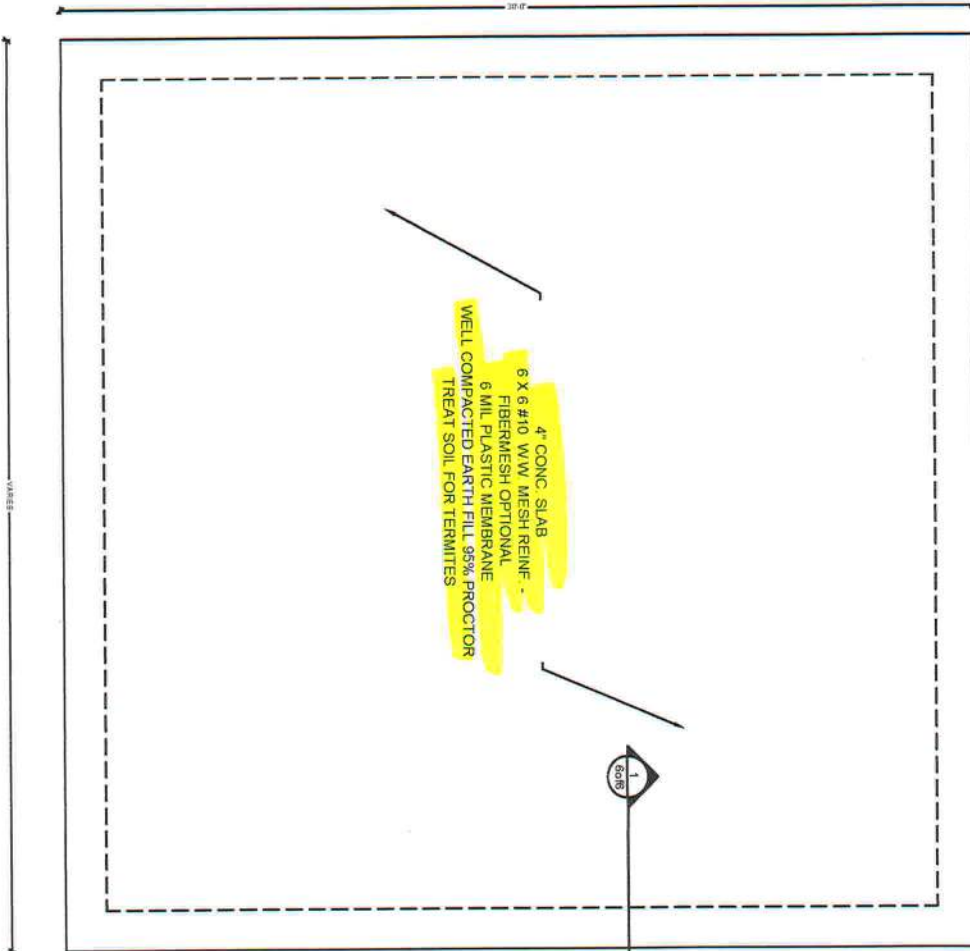
Drawn By: S.K.

Checked By: R.G.

DR. RAM A. GOEL, PH.D., P.E.
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CONCRETE:
CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
COVER OVER REINFORCING STEEL:
FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE:
3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND
PREMANGLED IN CONTACT WITH EARTH OR EXPOSED TO THE EARTH OR WEATHER
AND 1 1/2\"

REINFORCING STEEL:
THE REINFORCING STEEL SHALL BE MINIMUM GRADE 40.
GALVANIZATION:
METAL ACCESSORIES FOR USE IN EXTERIOR WALL CONSTRUCTION NOT DIRECTLY EXPOSED TO
THE WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153, CLASS B2, METAL
PLATE CONNECTORS, SCREWS, BOLTS AND NAILS EXPOSED DIRECTLY TO THE WEATHER SHALL BE
IN STAINLESS STEEL, OR HOT DIP GALVANIZED.
REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED:
1. ALL REINFORCEMENT IS BENT COLD
2. THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN 6 BAR
DIAMETERS AND
3. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.
EXCEPTION: WHERE BENDING IS NECESSARY TO ALIGN BARS WITH A VERTICAL CELL, BARS PARTIALLY
EMBEDDED IN CONCRETE SHALL BE PERMITTED TO BE BENT AT A SLOPE NOT MORE THAN 1 OF
THE HORIZONTAL DISPLACEMENT TO 8 OF VERTICAL BAR LENGTH.



NOTE:
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THE FOLLOWING IS COMPLIANT TO THE FLORIDA
BUILDING CODE 2003, 7TH EDITION AND ASCE 7-10 FOR
WIND LOADS OF REGION 1.

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CONCRETE

ELITE METAL MANUFACTURING, LLC
10121 88TH TRACE
LIVE OAK, FL 32060

Job # 2173
Drawn By: S.K.
Checked By: R.G.
Issue Date: 08-18-21
Revisions: CHECKED

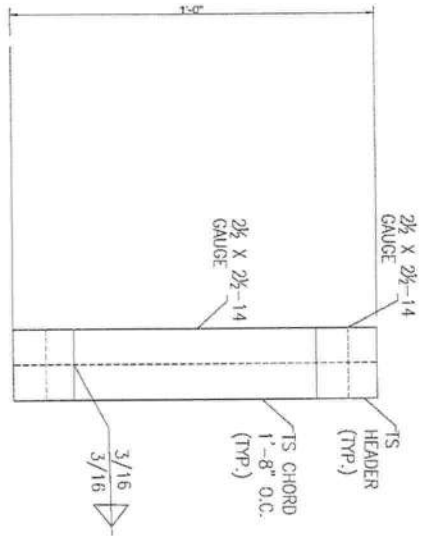
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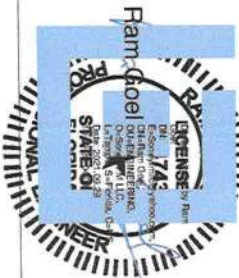


6

OPTIONAL HEADER



HEADER DETAIL FOR DOOR
OPENINGS: 12'-0" < LENGTH < 20'-0"
SCALE: 1/8" = 1'-0"



THE FOLLOWING IS COMPLIANT TO THE FLORIDA
BUILDING CODE, 2018 EDITION AND ASSE 718 FOR
LOADS OF 180 PSF

- NOTE:
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AND A COPY OF THE SEALS AND SIGNED BY
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THE PURPOSES OF THE BUILDING CODE.

DR. Ram A. Goel, P.E. # 743
Professional Engineer
State of Florida
Mechanical Engineering

OPTIONAL HEADER

ELITE METAL MANUFACTURING, LLC
10121 88TH TRACE
LIVE OAK, FL 32060

7

Issue Date: 08-18-21

No.	Date	Description
1	08/18/21	Issue
2	08/18/21	Revised
3	08/18/21	Revised

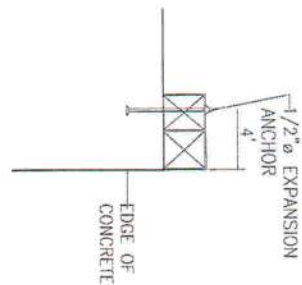
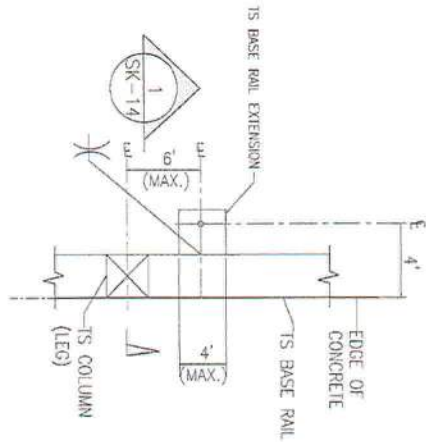
Job # 2173
Drawn By: S.K.
Checked By: R.G.

DR. RAM A. GOEL, P.E.
F.P.E. 47431.

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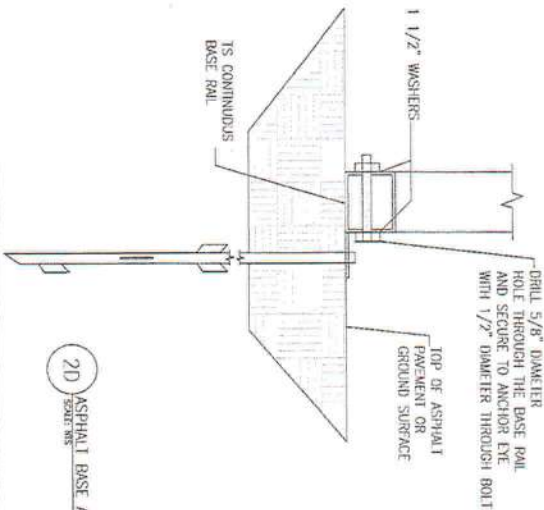
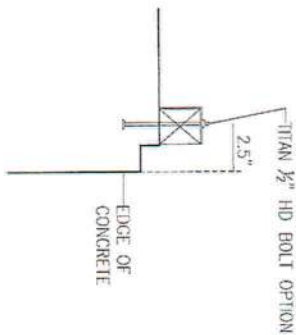
ADDITIONAL BASE RAIL ANCHORAGE OPTION



TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE

SCALE: NTS

SECTION 1
SCALE: NTS



20 ASPHALT BASE ANCHORAGE
SCALE: NTS



THE FOLLOWING IS COMPLIANT TO THE FLORIDA
BUILDING CODE 2020, THE EDITION AND ASCE 7-16 FOR
WIND LOADS OF 150 MPH.

NOTE:
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3. BEING REVIEWED BY AN ELECTRONIC DEVICE.
4. THE FOLLOWING IS COMPLIANT TO THE FLORIDA
BUILDING CODE 2020, THE EDITION AND ASCE 7-16 FOR
WIND LOADS OF 150 MPH.

Dr. Ram A. Goel, P.E. # 47431

ADDITIONAL BASE RAIL ANCHORAGE OPTION

ELITE METAL
10121 88
LIVE OAK,

RAM GOEL
MANUFACTURING, LLC

Design: Ram A. Goel
Drawn: Ram A. Goel
Checked: Ram A. Goel
Issue Date: 08-18-23
Revisions:
No. 1 Date Description
1 8/18/23 Initial Design
2 8/18/23 Final Design
3 8/18/23 Final Design
4 8/18/23 Final Design
5 8/18/23 Final Design
6 8/18/23 Final Design
7 8/18/23 Final Design
8 8/18/23 Final Design
9 8/18/23 Final Design
10 8/18/23 Final Design

Job # 2173
Drawn By: S.K.
Checked By: R.C.

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F.P.E. 47431.

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