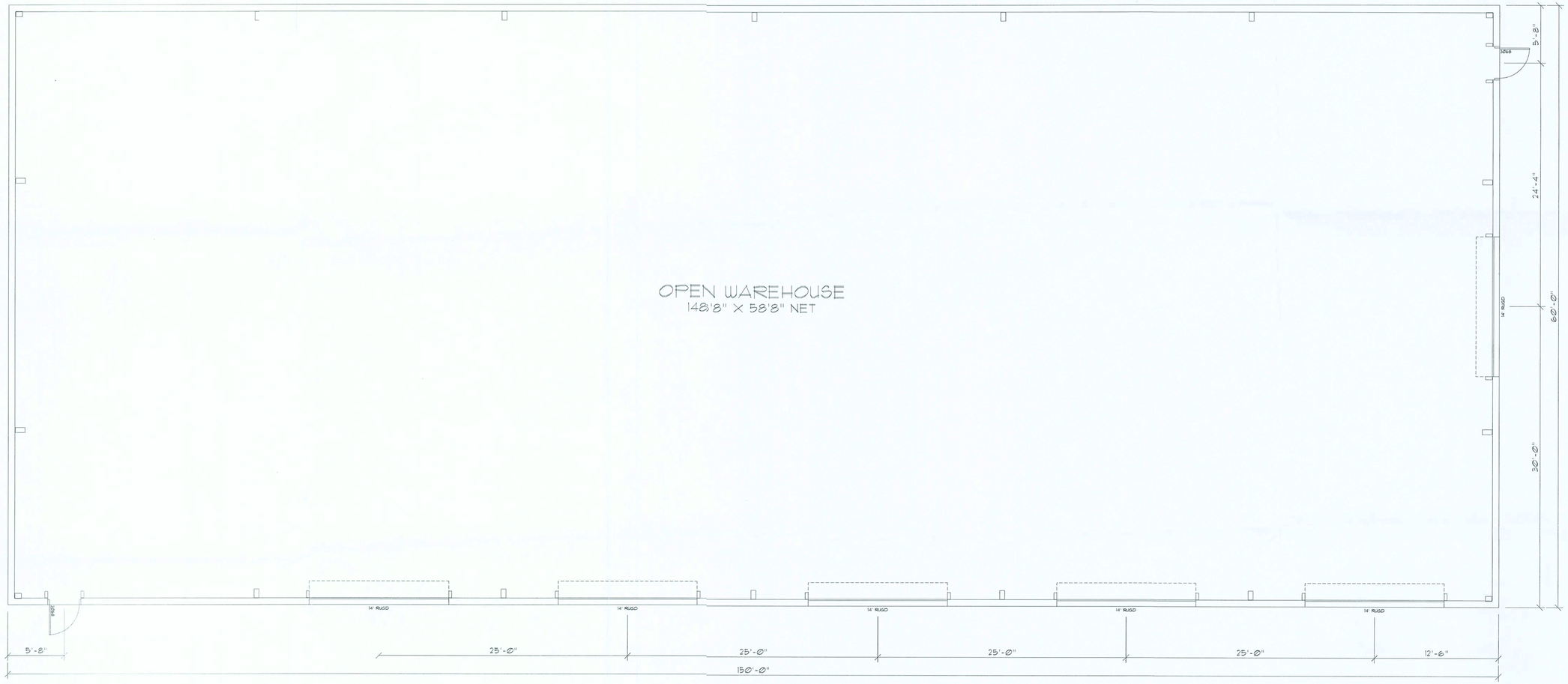

Floor PLAN

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

REVISION:

DRAWN:

rpg

METAL BUILDING FOUNDATION for:

UTILITY EQUIPMENT SERVICES

LAKE CITY, FLORIDA

FLOOR PLAN

Celebrating 47 Years of Service
1972 - 2019
N.P. Geisler, Architect
AR0007005

NICHOLAS PAUL GEISLER
ARCHITECT
N.C.A.R.B. Certified
1758 NW Brown Rd
Lake City, FL 32055
386-362-4349

DATE:

29 JUL 2019

COMM:

2K1927

SHEET:

A.1

1 OF 1

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for
FILE COPY
Codes
Compliance
PLANS EXAMINER

29 July 2019

AR0007005

Mesco Building Solutions

5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Builder/Contractor Responsibilities

Drawing Validity – These drawings, supporting structural calculations and design certification are based on the order documents as of the date of these drawings. These documents describe the material supplied by the manufacturer as of the date of these drawings. Any changes to the order documents after the date on these drawings may void these drawings, supporting structural calculations and design certification. The Builder/Contractor is responsible for notifing the building authority of all changes to the order documents which result in changes to the drawings, supporting structural calculations and design certification.

Builder Acceptance of Drawings – Approval of the manufacturer's drawings and design data affirms that the manufacturer has correctly interpreted and applied the requirements of the order documents and constitutes Builder/Contractor acceptance of the manufacturer's intrpretations of the order documents and standard product specifications, including its design, fabriation and quality criteria standards and tolerances. (April 2010 Section 4.4.1)

Code Official Approval – It is the responsibility of the Builder/Contractor to ensure that all project plans and specifications comply with the applicable requirements of any governing building authority. The Builder/Contractor is responsible for securing all required approvals and permits from the appropriate agency as required.

Building Erection – The Builder/Contractor is responsible for all erection of the steel and associated work in compliance with the Metal Building Manufacturers drawings. Temporary supports, such as temporary guys, braces, false work or other elements required for erection will be determined, furnished and installed by the erector (April 2010 Section 7.10.3) (CSA/S16–09 Section 29).

Discrepancies – Where discrepancies exist between the Metal Building plans and plans for other trades, the Metal Building plans will govern. (April 2010 Section 3.3)

Materials by Others – All interface and compatibility of any materials not furnished by the manufacturer are the responsibility of and to be coordinated by the Builder/Contractor or A/E firm. Unless specific design criteria concerning any interface between materials if furnished as a part of the order documents, the manufacturers assumptions will govern.

Modification of the Metal Building from Plans – The Metal Building supplied by the manufacturer has been designed according to the Building Code and specifications and the loads shown on this drawing. Modification of the building configuration, such as removing wall panels or braces, from that shown on these plans could affect the structural integrity of the building. The Metal Building Manufacturer or a Licensed Structural Engineer should be consulted prior to making any changes to the building configuration shown on these drawings. The Metal Building Manufacturer will assume no responsibility for any loads applied to the building not indicated on these drawings.

Foundation Design
The Metal Building Manufacturer is not responsible for the design, materials and workmanship of the foundation. Anchor rod plans prepared by the manufacturer are intended to show only location, diameter and projection of the anchor rods required to attach the Metal Building System to the foundation. It is the responsibility of the end customer to ensure that adequate provisions are made for specifying rod embedment, bearing values, tie rods and or other associated items embedded in the concrete foundation, as well as foundation design for the loads inposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. (MBMA 06 Sections 3.2.2 and A3)

ENGINEERING DESIGN CRITERIA

Building Code	FLORIDA BUILDING CODE, 6TH EDITION (2017)
Building Risk Category	Normal (Risk Category II)
Roof Dead Load	
Superimposed	2.20 psf
Collateral (3.00 psf Other)	3.00 psf
Roof Live Load	20.00 psf reduction allowed
Wind	
Ultimate Wind Speed (Vult)	120.00 mph
Nominal Wind Speed (Vasd)	92 mph (IBC section 1609.3.1)
Serviceability Wind Speed	76 mph
Wind Exposure Category	B
Internal Pressure Coef (GCpi)	0.18/-0.18
Loads for components not provided by building manufacturer	
Corner Areas (within 6.00' of corner)	23.70 psf pressure -31.61 psf suction
Other Areas	23.70 psf pressure -25.68 psf suction

These values are the maximum values required based on a 10 sq ft area.
Components with larger areas may have lower wind loads.

DEFLECTION CRITERIA

The material supplied by the manufacturer has been designed with the following minimum deflection criteria. The actual deflection may be less depending on actual load and actual member length.

BUILDING DEFLECTION LIMITS..... BLDG-A

Roof Limits	Rafters	Purlins	Panels
Live L/	180	150	60
Serviceability Wind L/	180	180	60
Total Gravity L/	120	120	60
Total Uplift L/	N/A	N/A	60

Frame Limits	Sidesway
Live H/	60
Serviceability Wind H/	60
Total Gravity H/	60

Wall Limits	Limit
Total Wind Panels L/	60
Total Wind Girts L/	120
Total Wind EW Columns L/	120

The Service Seismic limit as shown here is at service level loads.

PROJECT NOTES

Material properties of steel bar, plate, and sheet used in the fabrication of built-up structural framing members conform to ASTM A529, ASTM A572, ASTM A1011 SS, or ASTM A1011 HSLAS with a minimum yield point of 50 ksi. Material properties of hot rolled structural shapes conform to ASTM A992, ASTM A529, or ASTM A572 with a minimum specified yield point of 50 ksi. Hot rolled angles, other than flange braces, conform to ASTM 36 minimum. Hollow structural shapes conform to ASTM A500 grade B, minimum yield point is 42 ksi for round HSS and 46 ksi for rectangular HSS. Material properties of cold-formed light gage steel members conform to the requirements of ASTM A1011 SS Grade 55, ASTM A1011 HSLAS Grade 55 Class 1, ASTM A653 SS Grade 55, or ASTM A653 HSLAS Grade 55 Class 1 with a minimum yield point of 55 ksi. For Canada, material properties conform to CAN/CSA G40.20/G40.21 or equivalent.

All bolted joints with A325 Type 1 bolts are specified as snug-tightened joints in accordance with the Specification for Structural Joints Using ASTM A325 or A490 Bolts, December 31, 2009. Pre-tensioning methods, including turn-of-nut, calibrated wrench, twist-off-type tension-control bolts or direct-tension-indicator are NOT required. Installation inspection requirements for Snug Tight Bolts (Specification for Structural Joints Section 9.1) is suggested.

Design criteria as noted is as given within order documents and is applied in general accordance with the applicable provisions of the model code and/or specification indicated. Neither the metal building manufacturer nor the certifying engineer declares or attests that the loads as designated are proper for local provisions that may apply or for site specific parameters. The design criteria is supplied by the builder, project owner, or an Architect and/or Engineer of Record for the overall construction project.

This metal building system is designed as enclosed. All exterior components (i.e. doors, windows, vents, etc.) must be designed to withstand the specified wind loading for the design of components and cladding in accordance with the specified building code. Doors are to be closed when a maximum of 50% of design wind velocity is reached.

Framed openings, walk doors, and open areas shall be located in the bay and elevation as shown in the erection drawings. The cutting or removal of girts shown on the erection drawings due to the addition of framed openings, walk doors, or open areas not shown may void the design certifications supplied by the metal building manufacturer.

Roof and wall panels have been designed in accordance with section 2222.4 of the Florida Building Code.
Product approval numbers for the State of Florida, Department of Community Affairs per Product Rule 9B-72:
1. Panel Walls
   FL11917 PBR 26 gauge walls
2. Roofing Products
   FL11868.1 PBU 26 gauge roofs

X-Bracing is to be installed to a taut condition with all slack removed. Do not tighten beyond this state.

Using Southern Standard 5"x5" eave gutter with 4 x 5 downspouts, the roof drainage system has been designed using the method outlined in the MBMA Metal Building Systems Manual. Downspout locations have not been located on these drawings. The downspouts are to be placed on the building sidewalls at a spacing not to exceed 33.5 feet with the first downspout from both ends of the gutter run within 16.7 feet of the end. Downspout spacing that does not exceed the maximum spacing will be in compliance with the building code. The gutter and downspout system as provided by the manufacturer is designed to accommodate 10 in/hr rainfall intensity.

Drawing Index

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
Utility Truck Service
2618 SW Sisters Welcome Rd.
Lake City, FL 32025

Customer:
Simque Construction
518 SW Little Rd.
Lake City, FL 32024

☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

Drawing Status:

Scale:	NOT TO SCALE	
Drawn by:	EXJ	2/7/19
Checked by:	GDG	2/7/19
Project Engineer:	MAB	
Job Number:	16-B-88450	
Sheet Number:	E1 of 8	

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S. Harley Davidson, P.E.
Florida P.E. 38305

Drawing has been digitally signed.

S. HARLEY DAVIDSON LICENSE No. 38305 ★ STATE OF FLORIDA PROFESSIONAL ENGINEER

Feb 12, 2019

Download panel installation manuals from:
www.ncimanuals.com

Descargue los manuales de instalación del panel desde:
www.ncimanuals.com

BUILDING DESCRIPTIONS

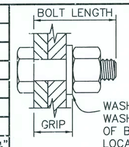
Building ID	Width	Length	Height	Slope
Building A	60'-0	150'-0	30'-0	1:12

1/2"ø A325 BOLT GRIP TABLE

GRIP	LENGTH
0 TO 9/16"	1 1/4" F.T.
Over 9/16" TO 1 1/16"	1 3/4" F.T.
Over 1 1/16" TO 1 5/16"	2"
Over 1 5/16" TO 1 9/16"	2 1/4"
Over 1 9/16" TO 1 13/16"	2 1/2"
Over 1 13/16" TO 2 1/16"	2 3/4"

LOCATIONS OF BOLTS LONGER THAN 2 3/4" NOTED ON ERECTION DRAWINGS

F.T. DENOTES FULLY THREADED

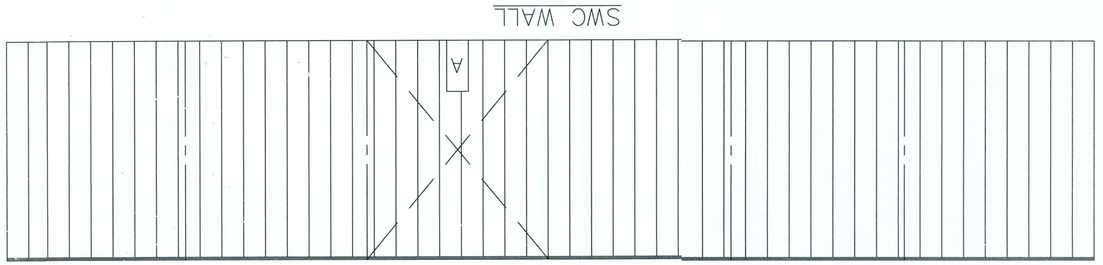


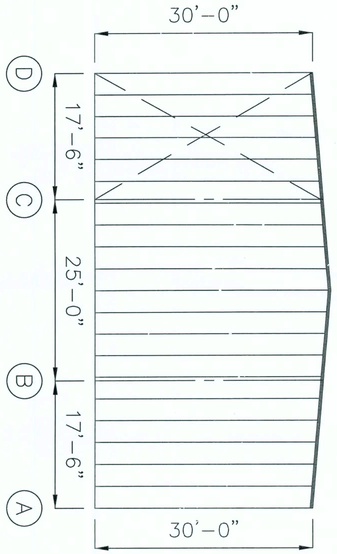
NOTE: FULL THREAD ENGAGEMENT IS DEEMED TO HAVE BEEN MET WHEN THE END OF THE BOLT IS FLUSH WITH THE FACE OF THE NUT.

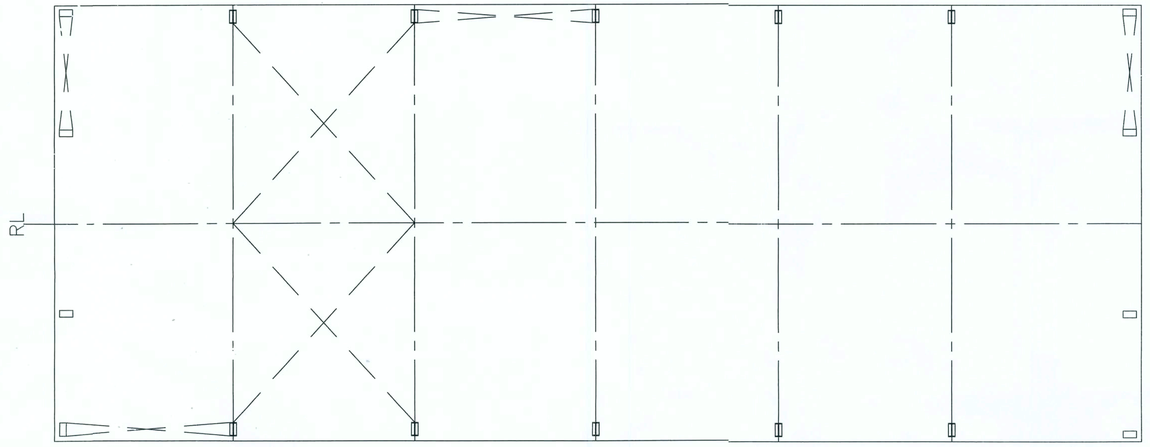
WASHER REQUIRED ONLY WHEN SPECIFIED. WASHER MAY BE LOCATED UNDER HEAD OF BOLT, UNDER NUT, OR AT BOTH AT LOCATIONS NOTED ON ERECTION DRAWINGS. ADD 5/32" FOR EACH WASHER TO MATERIAL THICKNESS TO DETERMINE GRIP.

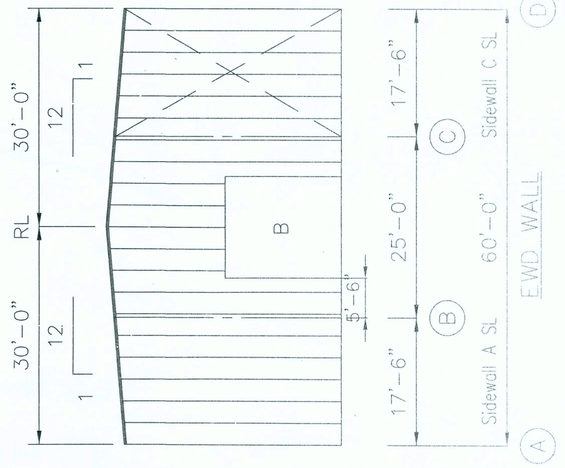
COVERING

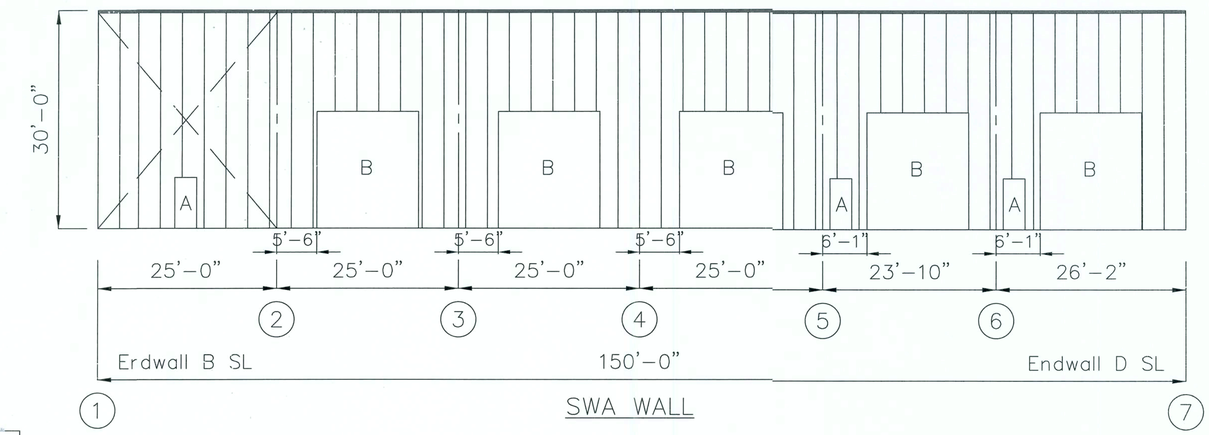
SURFACE	GAGE	COLOR	TYPE
ROOF	26	Galvalume	PBR Panel
SWA WALL	26	TBD Signature 300 Color	PBR Panel
SWC WALL	26	TBD Signature 300 Color	PBR Panel
EWB WALL	26	TBD Signature 300 Color	PBR Panel
EWD WALL	26	TBD Signature 300 Color	PBR Panel











ACCESSORY SCHEDULE

ID	QTY	DESCRIPTION
A	4	3070M Walk Door
B	6	DBCI 14'X16' Series 5000 Overhead Door
C		

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Customer:
Simaje Construction
518 SW Little Rd.
Lake City, FL 32024

Project Name & Location:
Utility Truck Service
2618 SW Sisters Welcome Rd.
Lake City, FL 32025

Drawing Status:
☐ Preliminary (Not For Construction).
☐ For Approval (Not For Construction).
☒ For Construction Permit
☐ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	jam 1/23/19
Checked by:	xxx
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E2 of 8

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S. Harley Davidson, P.E.
Florida P.E. 38305

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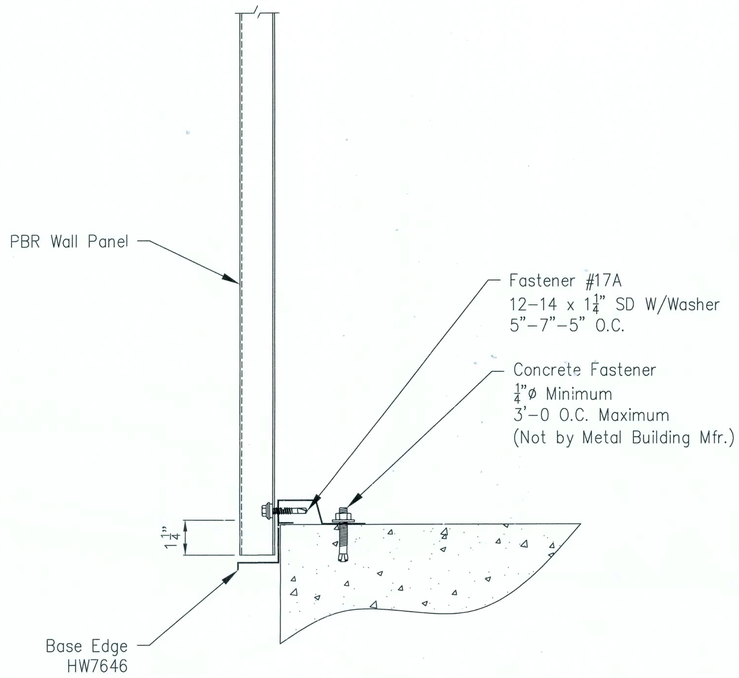
S. HARLEY DAVIDSON
LICENSE
No. 38305
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Feb 12, 2019



Base Section Typical

Wall panel must be held off of base trim a minimum of ¼" to prevent bottom of wall panel from rusting.

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Checked by:	xxx
Project Engineer:	MAB
Job Number:	16–B–88450
Sheet Number:	E3 of 8

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Feb 12, 2019

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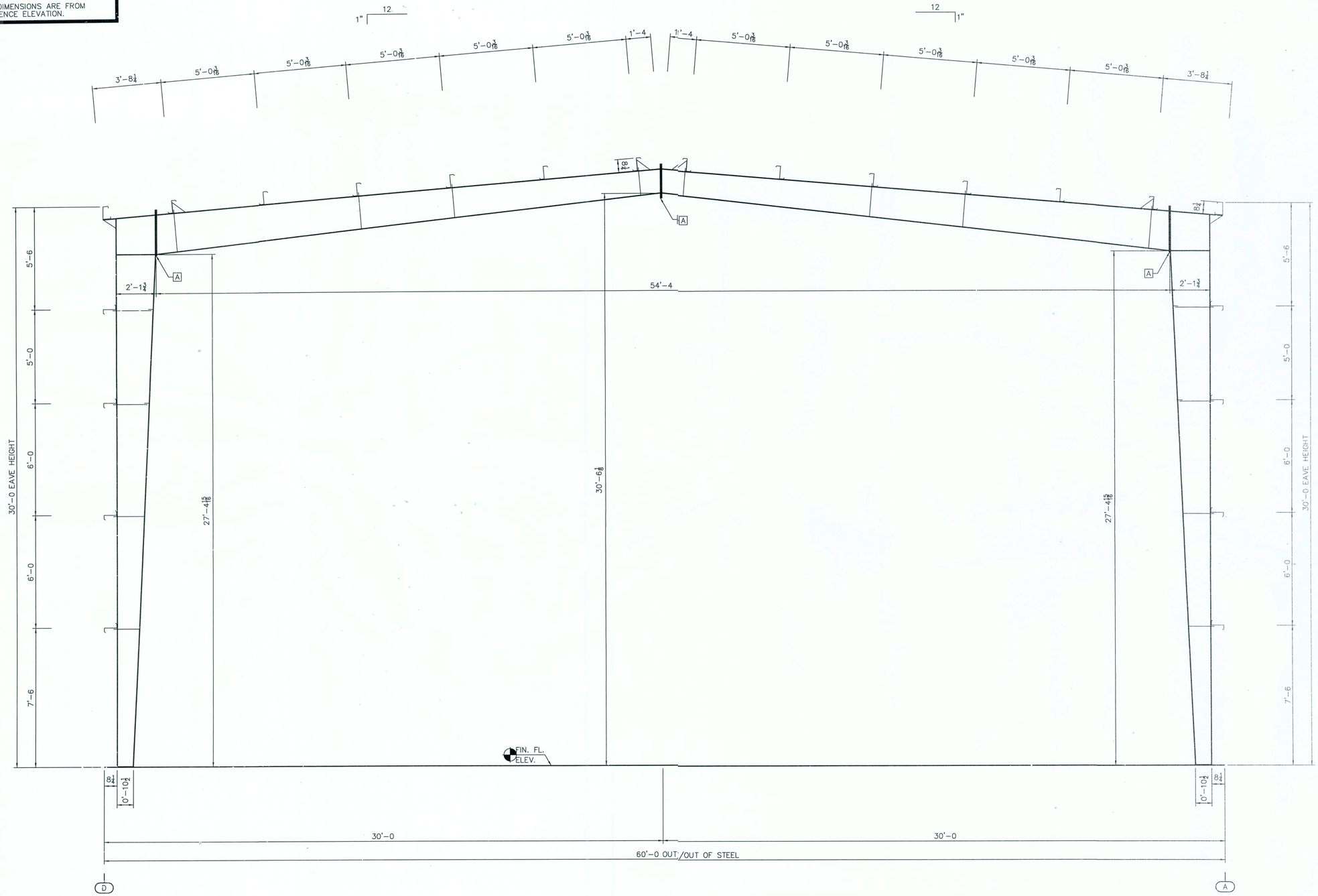
GENERAL NOTES
FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).

VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.



CROSS SECTION AT FRAME LINE "2"

	SPLICE BOLT TABLE			
CONN.	QTY. SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(8) ¾ X 2"	A325 B&N	0	0

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

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Scale:	NOT TO SCALE
Drawn by:	EXJ 2/7/19
Checked by:	GDG 2/7/19
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E4 of 8

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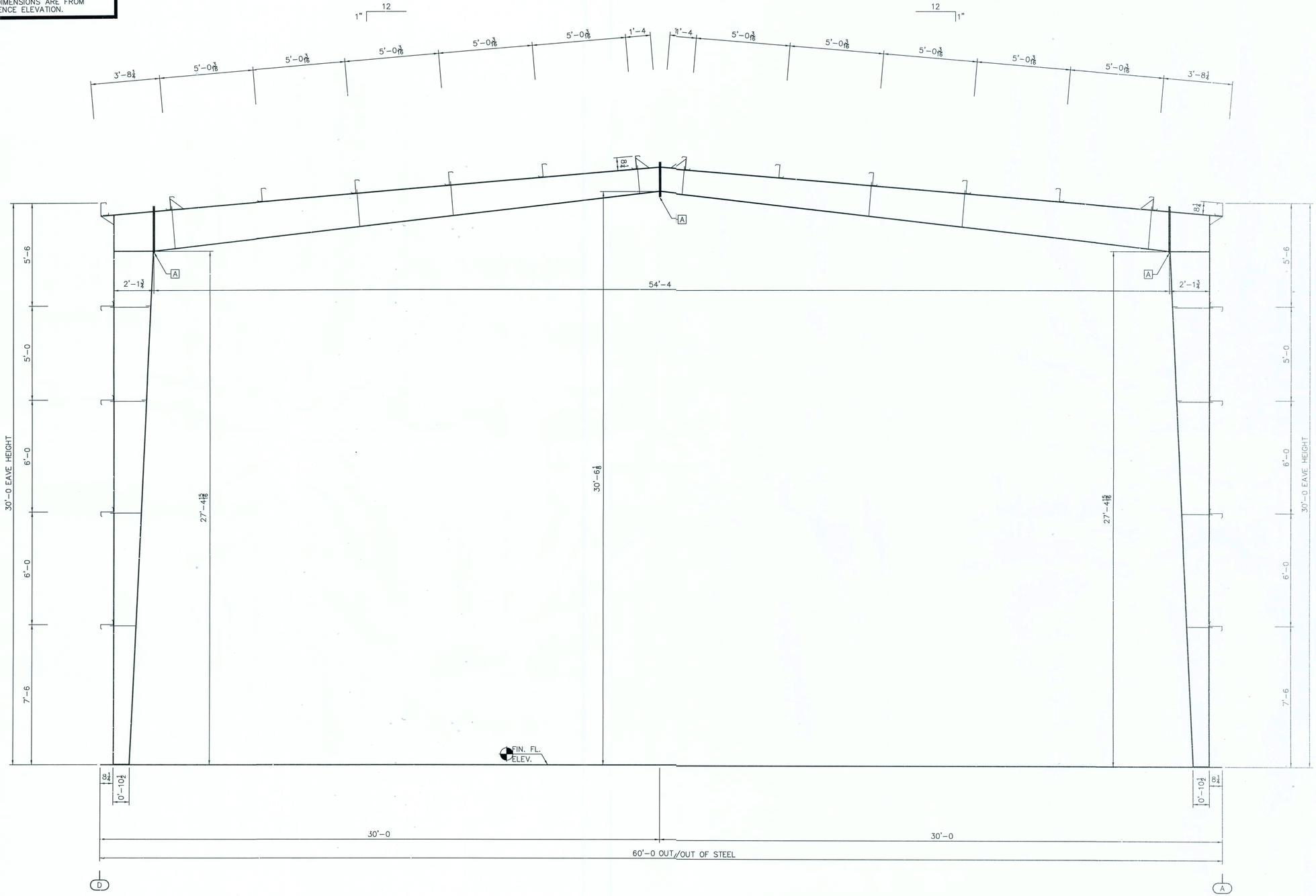

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	SPLICE BOLT TABLE			
CONN.	QTY. SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(8) ¾ X 2"	A325 B&N	0	0

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
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Scale:	NOT TO SCALE
Drawn by:	EXJ 2/7/19
Checked by:	GDG 2/7/19
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E5 of 8

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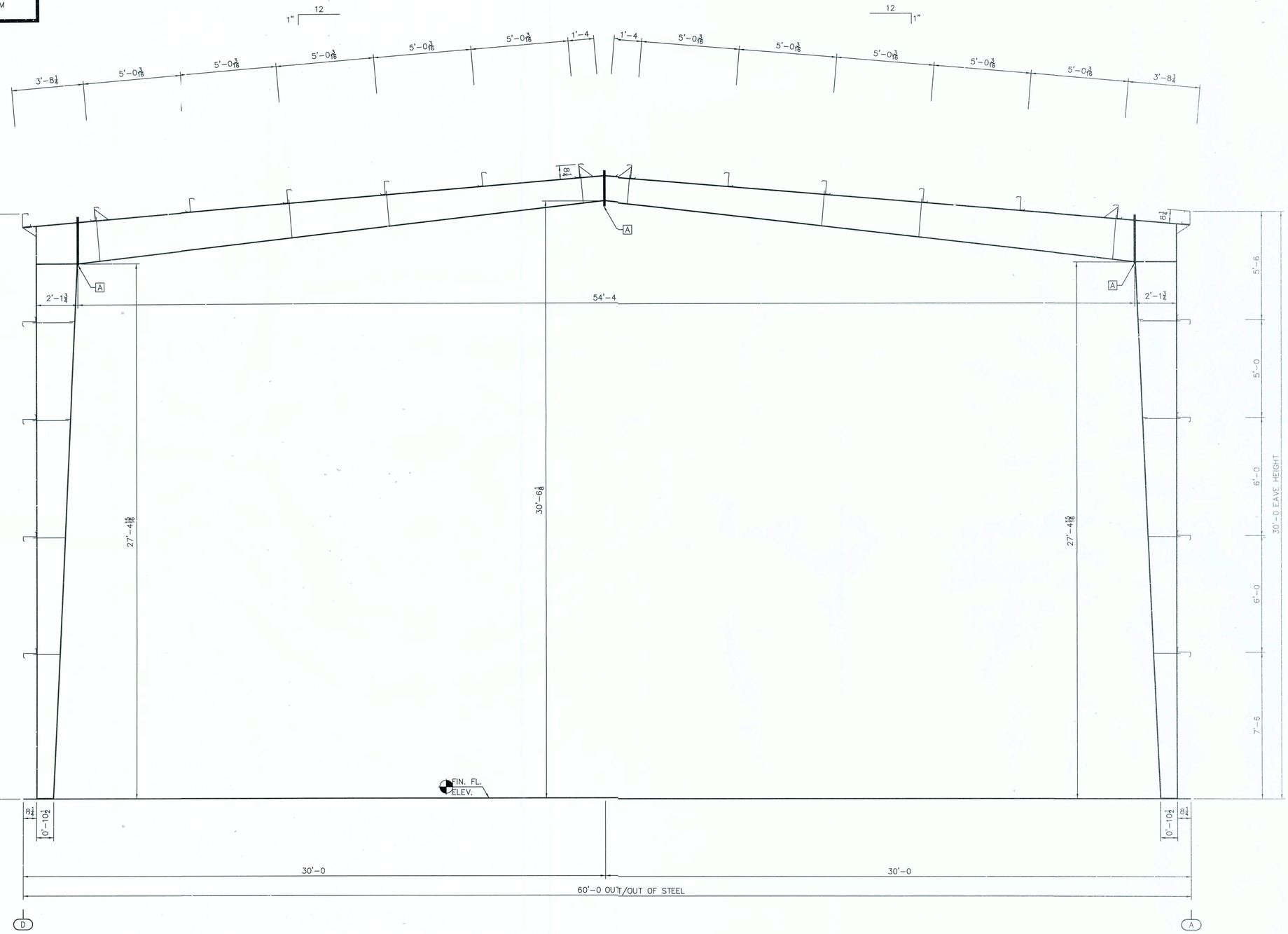

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	SPLICE BOLT TABLE				
CONN.	QTY.	SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(8)	¾ X 2"	A325 B&N	0	0

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

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518 SW Little Rd.
Lake City, FL 32024

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Scale:	NOT TO SCALE
Drawn by:	EXJ 2/7/19
Checked by:	GDG 2/7/19
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E6 of 8

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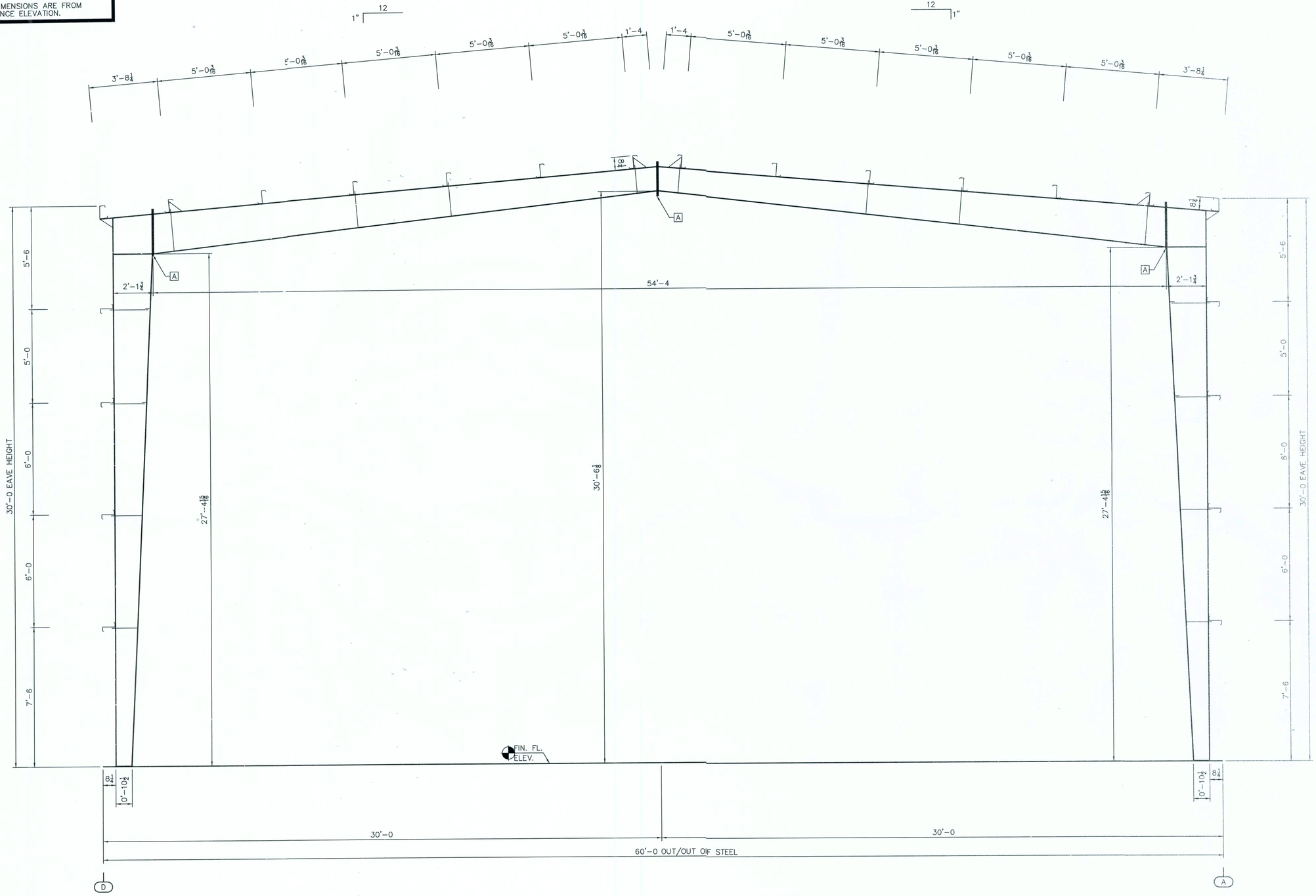

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	SPLICE BOLT TABLE				
CONN.	QTY.	SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(8)	¾ X 2"	A325 B&N	0	0

Revision	Date	By	Ck'd
Description			

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
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Scale: NOT TO SCALE
Drawn by: EXJ 2/7/19
Checked by: GDG 2/7/19
Project Engineer: MAB
Job Number: 16-B-88450
Sheet Number: E7 of 8

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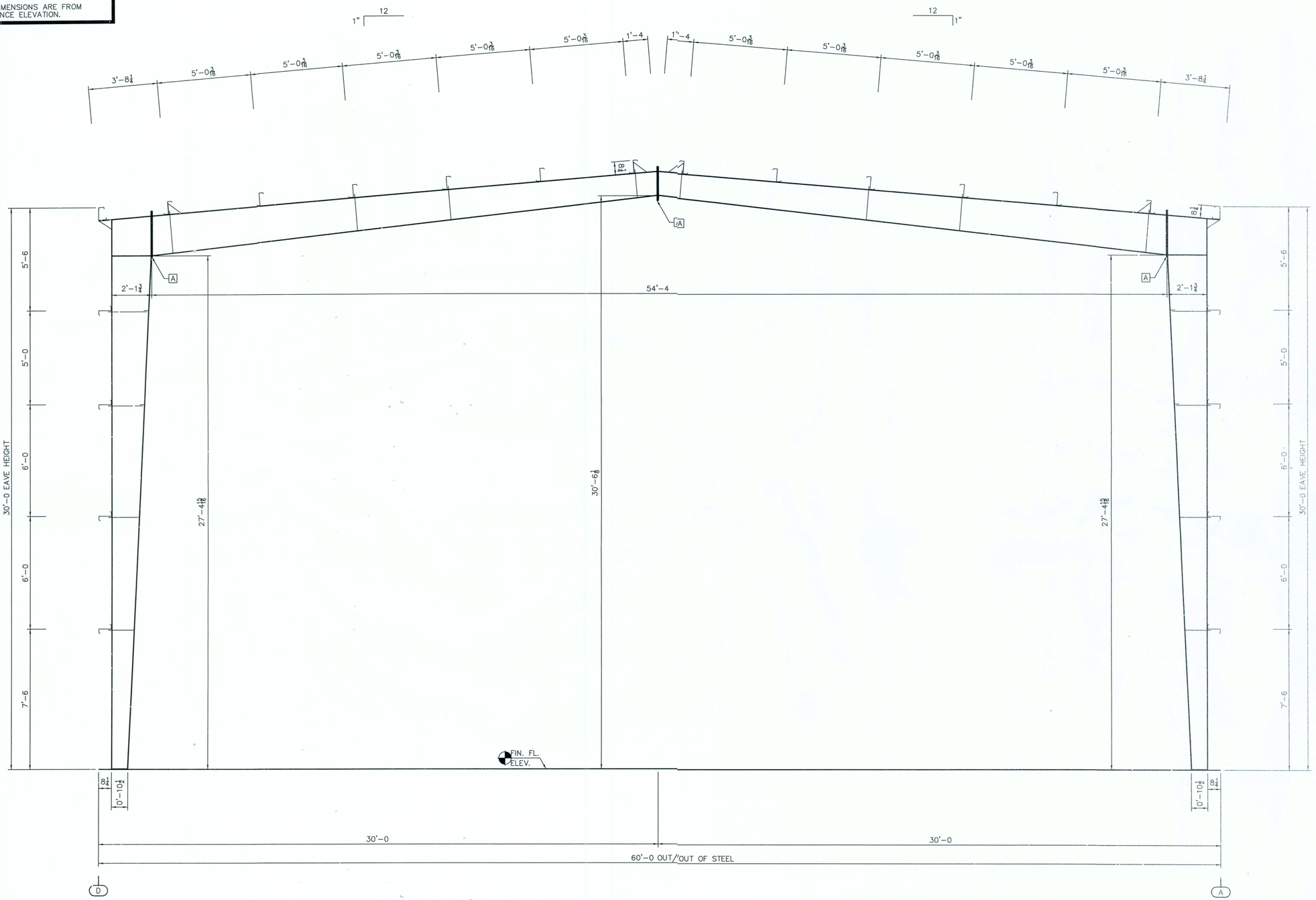

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SPLICE BOLT TABLE				
CONN.	QTY. SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(8) ¾ X 2"	A325 B&N	0	0

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
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Checked by:	GDG 2/7/19
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E8 of 8

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Florida P.E. 38305

Drawing has been digitally signed.

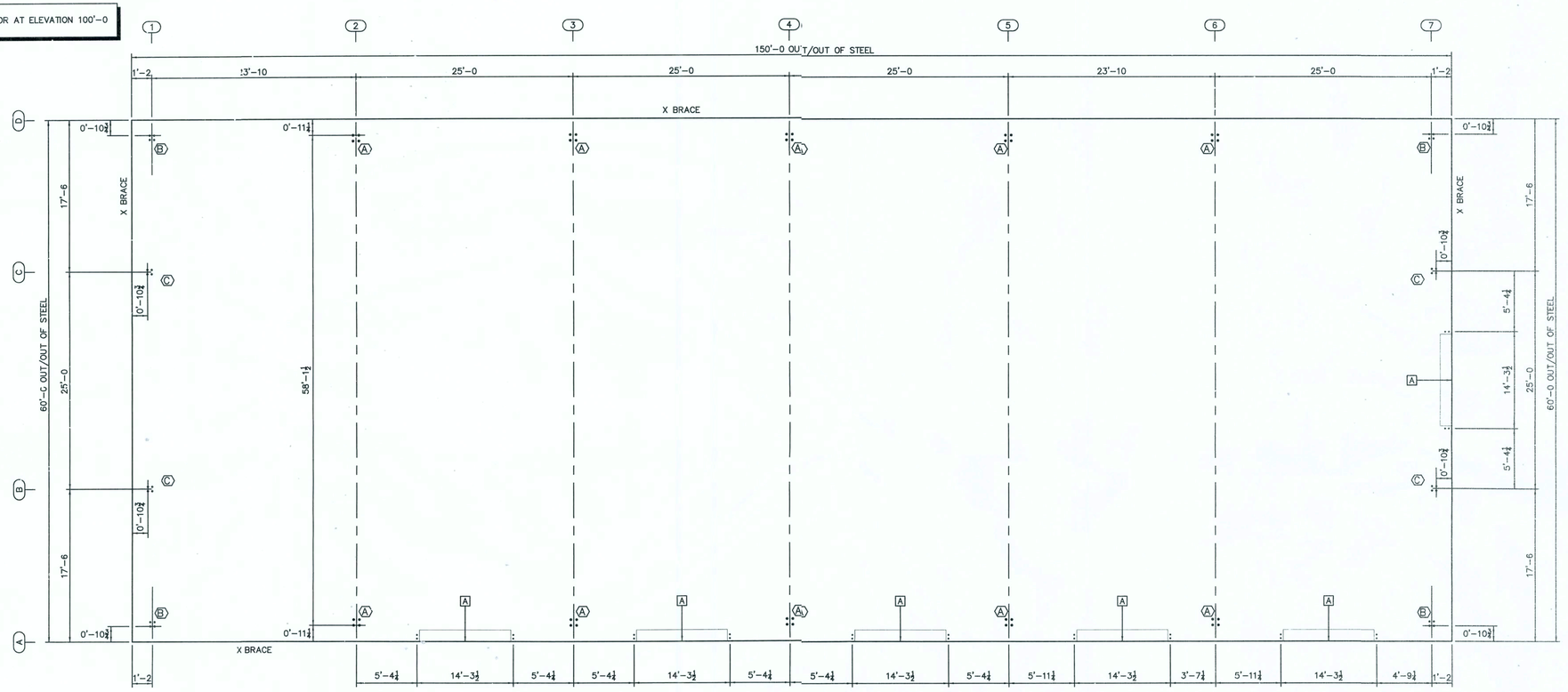
S. HARLEY DAVIDSON LICENSE No. 38305 STATE OF FLORIDA PROFESSIONAL ENGINEER

Feb 12, 2019

Anchor Rod Drawings

1) This drawing is for anchor rod placement only and is not foundation design.
2) Foundation must be square and level with all anchor rods true in size, location, and projection.
3) Projection shown must be held to keep threads clear of finished concrete.
4) This structural design data includes magnitude and location of design loads and support conditions, material properties, and type and size of major structural members necessary to show compliance with the Order Documents at the time of this issue. Any change to building loads or dimensions may change structural member sizes and locations shown. This structural design data will be superseded and voided by any future mailing.
5) Anchor rod size is determined by shear and tension at the bottom of the base plate. The length of the anchor rod and method of load transfer to the foundation are to be determined by the foundation engineer, and are not provided by the manufacturer.
6) Anchor rods are ASTM F1554 Gr. 36 material unless noted otherwise.
7) 3000 psi concrete compressive strength (f'c) is assumed for the purpose of column base plate design unless otherwise noted.

FINISH FLOOR AT ELEVATION 100'-0



ANCHOR ROD SETTING PLAN

SWC
EWB KEY PLAN EWD
SWA

ACCESSORY SCHEDULE			
MARK	DESCRIPTION	DETAIL	QUAN.
A	14'-0 X 16'-0 FRAMED OPENINGS	D	6

ANCHOR BOLTS TO BE DESIGNED BY FOUNDATION ENGINEER USING DIAMETERS SHOWN IN THIS TABLE.

ANCHOR ROD DESCRIPTION	QUANTITY
⅞"ø DIAMETER X	56
¾"ø DIAMETER X	40

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Customer: SUMTER CONSTRUCTION
518 SW LITTLE RD.
LAKE CITY FL 32024
DAVID SIMQUE

Project Name & Location: UTILITY TRUSS SERVICE
2515 SW SISTERS WELCOME
LAKE CITY FL 32025-2933

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erection Installation

Scale: NOT TO SCALE
Drawn by: EXJ 2/6/19
Checked by: GDG 2/6/19
Project Engineer: MAB
Job Number: 16-9-88450-1
Sheet Number: F1 of 3

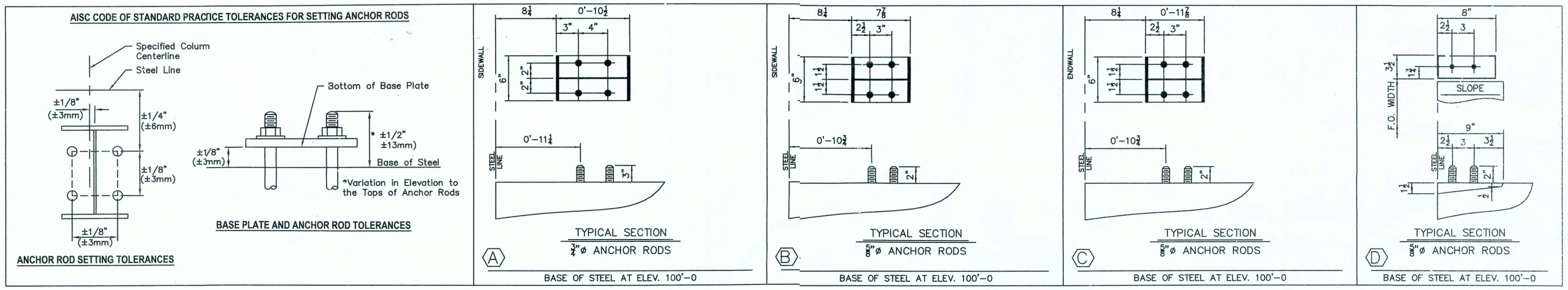
The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Florida P.E. 38305
DAVIDSON ENGR'G

Drawing has been digitally signed.

S. HARLEY DAVIDSON LICENSE No. 38305 STATE OF FLORIDA PROFESSIONAL ENGINEER

Feb 07, 2019



Scale: NOT TO SCALE

Drawn by: EXJ 2/6/19

Checked by: GDG 2/6/19

Project Engineer: MAB

Job Number: 16-B-88450-1

Sheet Number: F2 of 3

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Florida P.E. 38305

Drawing has been digitally signed.

S. HARLEY DAVIDSON LICENSE No. 38305 STATE OF FLORIDA PROFESSIONAL ENGINEER

Feb 07, 2019

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Customer:
SIMQUE CONSTRUCTION
518 SW LITTLE RD.
LAKE CITY FL 32024
DAVID SIMQUE

Project Name & Location:
UTILITY TRUCK SERVICE
2618 SW SISTERS WELCOME
LAKE CITY FL 32025-2933

Drawing Status:
- [ ] Preliminary (Not For Construction)
- [ ] For Approval (Not For Construction)
- [ ] For Construction Permit
- [x] For Erector Installation

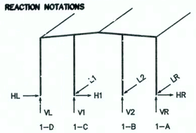
Revision	Date	Description	By	Ck'd

FRAME DESCRIPTION: Enclosed EWB
USER NAME: mabello JOB NAME: 88450A
DATE: 1/25/19 FILE: REW3BLDG1
PAGE: EW-1

PATH: R:\jobs\Active\Eng\16-B-88450\ver01-mabello\BLDG-A\run01\

SUPPORT REACTIONS FOR EACH LOAD GROUP
NOTE: All reactions are in kips and kip-ft.
TIME: 12:31:18

REACTION NOTATIONS



LOAD GROUP REACTION TABLE

COLUMN	1-D			1-C			1-B			1-A		
LOAD GROUP	HL	VL	LL	H1	V1	L1	H2	V2	L2	HR	VR	LR
D	0.0	0.5	0.	0.	1.3	0.0	0.	1.3	0.0	0.0	.5	0.
C	0.0	0.3	0.	0.	0.9	0.0	0.	0.9	0.0	0.0	.3	0.
L	0.0	1.5	0.	0.	5.4	0.0	0.	5.4	0.0	0.0	15	0.
W+	0.0	−2.4	0.	0.	−8.0	5.8	0.	−8.0	5.8	0.0	−17	7.8
W−	0.0	−2.4	0.	0.	−8.0	−6.5	0.	−8.0	−6.5	0.0	10	0.
WR	0.0	4.6	0.	4.1	−14.9	0.0	0.	−8.0	0.0	0.0	−.4	0.
WL	−4.1	−9.6	0.	0.	−0.7	0.0	0.	−8.0	0.0	0.0	−.4	0.

LOAD GROUP DESCRIPTION

D	:	DEAD LOAD
C	:	COLLATERAL LOAD
L	:	LIVE LOAD
W+	:	WIND LOAD AS AN INWARD ACTING PRESSURE
W−	:	WIND LOAD AS AN OUTWARD ACTING SUCTION
WR	:	WIND FORCE FROM THE RIGHT
WL	:	WIND FORCE FROM THE LEFT

NOTES

1) THE REACTIONS PROVIDED ARE BASED ON THE ORDER DOCUMENTS AT THE TIME OF MAILING. ANY CHANGES TO BUILDING LOADS OR DIMENSIONS MAY CHANGE THE REACTIONS. THE REACTIONS WILL BE SUPERSEDED AND VOIDED BY ANY FUTURE MAILING.
2) THE REACTIONS PROVIDED HAVE BEEN CREATED WITH THE FOLLOWING LAYOUT (UNLESS NOTED OTHERWISE).
 a) A REACTION TABLE IS PROVIDED WITH THE REACTIONS FOR EACH LOAD GROUP.
 b) RIGID FRAMES
  (1) GABLED BUILDINGS
   (a) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE LEFT SIDE OF THE BUILDING, AS SHOWN ON THE ANCHOR ROD DRAWING, FROM THE OUTSIDE OF THE BUILDING.
   (b) INTERIOR COLUMNS ARE SPACED FROM LEFT SIDE TO RIGHT SIDE.
  (2) SINGLE SLOPE BUILDINGS
   (a) LEFT COLUMN IS THE LOW SIDE COLUMN.
   (b) RIGHT COLUMN IS THE HIGH SIDE COLUMN.
   (c) INTERIOR COLUMNS ARE SPACED FROM LOW SIDE TO HIGH SIDE.
 c) ENDWALLS
  (1) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE WALL FROM THE OUTSIDE.
  (2) INTERIOR COLUMNS ARE SPACED FROM LEFT TO RIGHT.
 d) ANCHOR ROD SIZE IS DETERMINED BY SHEAR AND TENSION AT THE BOTTOM OF THE BASE PLATE. THE LENGTH OF THE ANCHOR ROD AND METHOD OF LOAD TRANSFER TO THE FOUNDATION ARE TO BE DETERMINED BY THE FOUNDATION ENGINEER.
 e) ANCHOR RODS ARE ASTM F1554 Gr. 36 MATERIAL UNLESS NOTED OTHERWISE ON THE ANCHOR ROD LAYOUT DRAWING.
 f) X-BRACING
  (1) ROD BRACING REACTIONS HAVE BEEN INCLUDED IN VALUES SHOWN IN THE REACTION TABLES.
  (2) FOR IBC AND UBC BASED BUILDING CODES, WHEN X-BRACING IS PRESENT IN THE SIDEWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ AND RBDWEQ) DO NOT INCLUDE THE AMPLIFICATION FACTOR, Ω_0
  (3) FOR CANADA BUILDING CODE (NBC), WHEN X-BRACING IS PRESENT IN THE SIDEWALL OR ENDWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ & RBDWEQ) ARE MULTIPLIED BY FORCE REDUCTION FACTOR, R_d, WHEN SPECIFIED SHORT-PERIOD SPECTRAL ACCELERATION RATIO $I_E F_a S_a(0.2)$ IS GREATER THAN 0.45.
3) REACTIONS ARE PROVIDED AS UN-FACTORED FOR EACH LOAD GROUP APPLIED TO THE COLUMN. THE FOUNDATION ENGINEER WILL APPLY THE APPROPRIATE LOAD FACTORS AND COMBINE THE REACTIONS IN ACCORDANCE WITH THE BUILDING CODE AND DESIGN SPECIFICATIONS TO DETERMINE BEARING PRESSURES AND CONCRETE DESIGN. THE FACTORS APPLIED TO LOAD GROUPS FOR THE STEEL COLUMN DESIGN MAY BE DIFFERENT THAN THE FACTORS USED IN THE FOUNDATION DESIGN.
 a) FOR PROJECTS USING ULTIMATE DESIGN WIND SPEEDS SUCH AS 2012 IBC, 2015 IBC, OR 2014 FLORIDA BUILDING CODE, THE WIND LOAD REACTIONS ARE AT A STRENGTH VALUE WITH A LOAD FACTOR OF 1.0.
 b) FOR IBC CODES, THE SEISMIC REACTIONS PROVIDED ARE AT A STRENGTH LEVEL AND DO NOT CONTAIN THE RHO FACTOR.
 c) FOR NBCC CODES, THE SEISMIC REACTIONS PROVIDED DO NOT CONTAIN THE $R_d R_o$ FACTOR.

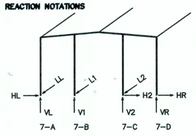
THE MANUFACTURER DOES NOT PROVIDE "MAXIMUM" LOAD COMBINATION REACTIONS. HOWEVER, THE INDIVIDUAL LOAD REACTIONS PROVIDED MAY BE USED BY THE FOUNDATION ENGINEER TO DETERMINE THE APPLICABLE LOAD COMBINATIONS FOR HIS/HER DESIGN PROCEDURES AND ALLOW FOR AN ECONOMICAL FOUNDATION DESIGN.

FRAME DESCRIPTION: Enclosed EWB
USER NAME: mabello JOB NAME: 88450A
DATE: 1/25/19 FILE: REW4BLDG1
PAGE: EW-2

PATH: R:\jobs\Active\Eng\16-B-88450\ver02-mabello\BLDG-A\run01\

SUPPORT REACTIONS FOR EACH LOAD GROUP
NOTE: All reactions are in kips and kip-ft.
TIME: 07:17:02

REACTION NOTATIONS



LOAD GROUP REACTION TABLE

COLUMN	7-A			7-B			7-C			7-D		
LOAD GROUP	HL	VL	LL	H1	V1	L1	H2	V2	L2	HR	VR	LR
D	0.0	0.6	0.	0.	1.4	0.0	0.	1.4	0.0	0.0	0.6	0.
C	0.0	0.3	0.	0.	1.0	0.0	0.	1.0	0.0	0.0	0.3	0.
L	0.0	1.5	0.	0.	5.5	0.0	0.	5.5	0.0	0.0	1.5	0.
W+	0.0	−2.5	1.9	0.	−8.3	5.8	0.	−8.3	5.8	0.0	−2.5	0.
W−	0.0	−2.5	−2.2	0.	−8.3	−6.5	0.	−8.3	−6.5	0.0	−2.5	0.
WR	0.0	−2.5	0.	0.	−8.3	0.0	0.	−0.8	0.0	4.2	−10.0	0.
WL	0.0	−2.5	0.	0.	−8.3	0.0	−4.2	−15.4	0.0	0.0	4.7	0.

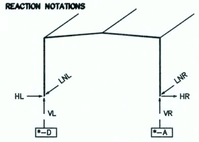
LOAD GROUP DESCRIPTION

D	:	DEAD LOAD
C	:	COLLATERAL LOAD
L	:	LIVE LOAD
W+	:	WIND LOAD AS AN INWARD ACTING PRESSURE
W−	:	WIND LOAD AS AN OUTWARD ACTING SUCTION
WR	:	WIND FORCE FROM THE RIGHT
WL	:	WIND FORCE FROM THE LEFT

FRAME ID: #28
os 60./30./25. 20./120./0.
USER NAME: mabello JOB NAME: 88450A
DATE: 1/24/19 FILE: frames_2_8.fra
PAGE: 28-2

SUPPORT REACTIONS FOR EACH LOAD GROUP
*LOCATION: Gridlines: 2 3 4 5 6
NOTES: (1) All reactions are in kips and kip-ft.
(2) Primary wind load cases are not concurrent.
(3) X-bracing reactions (RBPULW and RBUPEQ) are combined withLWL and LEQ groups only.
TIME: 11:04:50

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 2 3 4 5 6

COLUMN	*-D			*-A		
LOAD GROUP	HL	VL	LWL	HR	VR	LWR
DL	0.7	2.7	0.0	−0.7	2.7	0.0
LL	2.6	9.0	0.0	−2.6	9.0	0.0
COLL	0.7	2.2	0.0	−0.7	2.3	0.0
WL1	−7.9	−15.8	0.0	−3.0	−7.6	0.0
WL2	−8.9	−9.9	0.0	−2.0	−1.7	0.0
WL3	3.0	−7.6	0.0	7.9	−15.8	0.0
WL4	2.0	−1.7	0.0	8.9	−9.9	0.0
LWL1	1.6	−12.8	0.0	−1.2	−10.6	0.0
RBUPLW	0.1	−9.3	−7.8	−0.1	−9.3	−7.8
LWL2	1.2	−10.6	0.0	−1.6	−12.8	0.0
LWL3	0.8	−6.9	0.0	−0.2	−4.6	0.0
LWL4	0.2	−4.6	0.0	−0.6	−6.9	0.0
RBDWLW	−0.0	9.3	0.0	0.0	9.3	0.0

LOAD GROUP DESCRIPTION

DL	:	Roof Dead Load
LL	:	Roof Live Load
COLL	:	Roof Collateral Load
WL1	:	Wind from Left to Right with +GCpi
WL2	:	Wind from Left to Right with −GCpi
WL3	:	Wind from Right to Left with +GCpi
WL4	:	Wind from Right to Left with −GCpi
LWL1	:	Windward Corner Left with +GCpi
RBUPLW	:	Upward Acting Rod Brace Load from Long. Wind
LWL2	:	Windward Corner Right with +GCpi
LWL3	:	Windward Corner Left with −GCpi
LWL4	:	Windward Corner Right with −GCpi
RBDWLW	:	Downward Acting Rod Brace Load from Long. Wind

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9599 Fax 214-687-9737

Project Name & Location:
UTILITY TRUCK SERVICE
2618 SW SISTERS WELCOME
LAKE CITY FL 32025-2933

Customer:
SIMQUE CONSTRUCTION
518 SW LITTLE RD.
LAKE CITY FL 32024
DAVID SIMQUE

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	EXJ 2/6/19
Checked by:	GDG 2/6/19
Project Engineer:	MAB
Job Number:	16-B-88450-1
Sheet Number:	F3 of 3

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Florida P.E. 38305
DRAWTRA ENGETA

Drawing has been digitally signed.

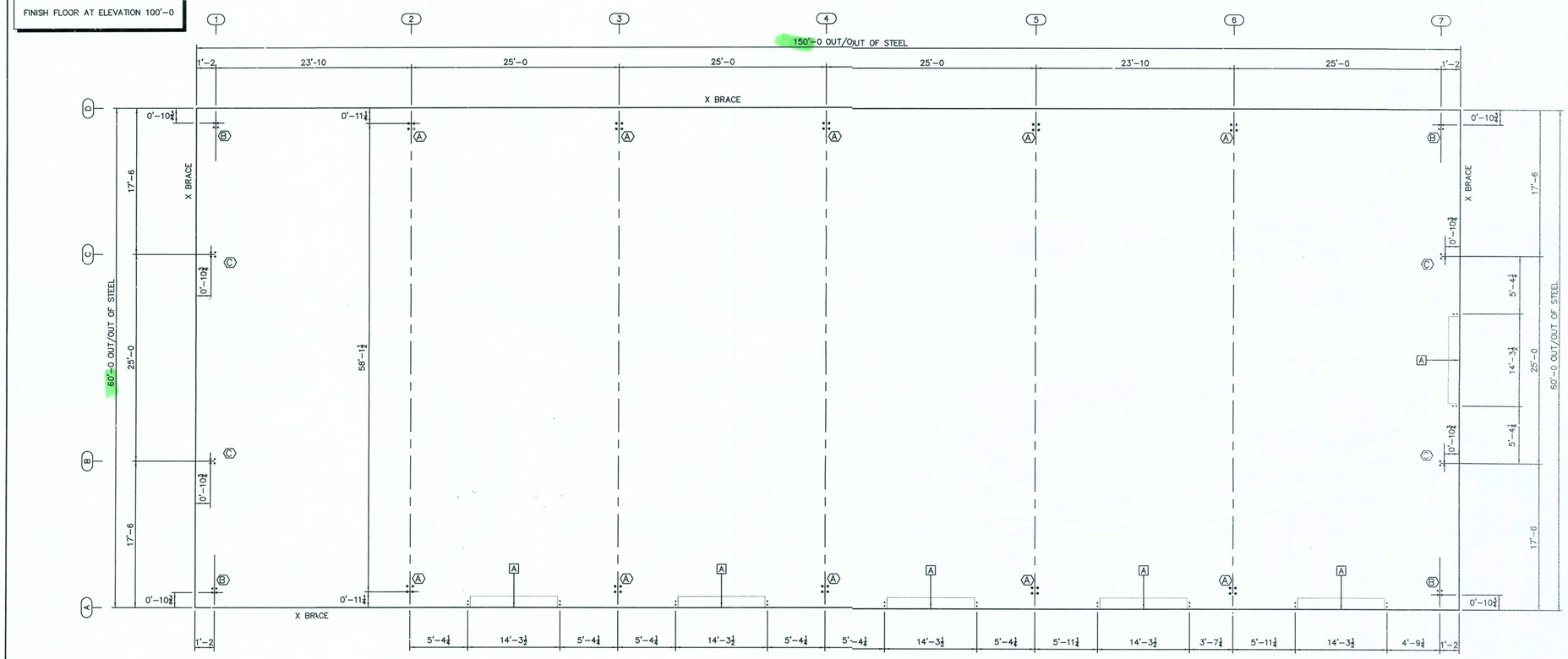
S. HARLEY DAVIDSON
LICENSE
No. 38305
STATE OF FLORIDA
PROFESSIONAL ENGINEER

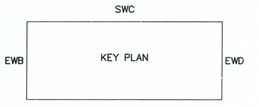
Feb 07, 2019

Anchor Rod Drawings

1) This drawing is for anchor rod placement only and is not foundation design.
2) Foundation must be square and level with all anchor rods true in size, location, and projection.
3) Projection shown must be held to keep threads clear of finished concrete.
4) This structural design data includes magnitude and location of design loads and support conditions, material properties, and type and size of major structural members necessary to show compliance with the Order Documents at the time of this issue. Any change to building loads or dimensions may change structural member sizes and locations shown. This structural design data will be superseded and voided by any future mailing.
5) Anchor rod size is determined by shear and tension at the bottom of the base plate. The length of the anchor rod and method of load transfer to the foundation are to be determined by the foundation engineer, and are not provided by the manufacturer.
6) Anchor rods are ASTM F1554 Gr. 36 material unless noted otherwise.
7) 3000 psi concrete compressive strength (fc) is assumed for the purpose of column base plate design unless otherwise noted.

FINISH FLOOR AT ELEVATION 100'-0





ACCESSORY SCHEDULE			
MARK	DESCRIPTION	DETAIL	QUAN.
A	14'-0 X 16'-0 FRAMED OPENINGS	D	6

ANCHOR BOLTS TO BE DESIGNED BY FOUNDATION ENGINEER USING DIAMETERS SHOWN IN THIS TABLE.	
ANCHOR ROD DESCRIPTION	QUANTITY
⅝ "ø DIAMETER X	56
¾ "ø DIAMETER X	40

min. 2 fire extinguishers
min. 2 exit/emergency lights
light weight Truss Marker
address numbers
Knox Boxes

ANCHOR ROD SETTING PLAN

APPROVED (Subject to Revisions)
Life Safety Services
Columbia County Fire Rescue
Florida State Fire Inspector # 136418
By: _____ Date: 1-18-19

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9939 Fax 214-687-9737

Customer: SIMPLE CONSTRUCTION
515 SW LITTLE RD
LAKE CITY, FL 32024
DAVID SIMOUE

Project Name & Location:
TRUSS STORAGE
2618 SW SISTERS WELCOME
LAKE CITY FL 32025-2833

Drawing Status:
☐ Preliminary Not For Construction
☐ For Approval (Not For Construction)
☐ For Construction
☒ For Erector Installation

Scale: NOT TO SCALE
Drawn by: EXJ 2/6/19
Checked by: GDG 2/6/19
Project Engineer: MAB
Job Number: 16-B-88450-1
Sheet Number: F1 of 3

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Florida P.E. 38305
DRAWING ENVELOPE

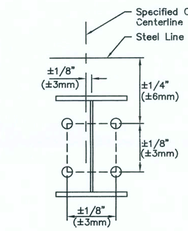
Drawing has been digitally signed.

S. HARLEY DAVIDSON
LICENSE
No. 38305
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

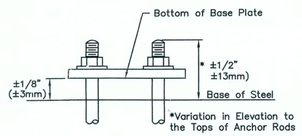
Feb 07, 2019

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for
FILE COPY
Code
Permit
Plans Ex.

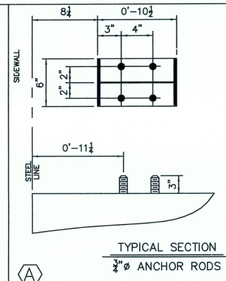
AISC CODE OF STANDARD PRACTICE TOLERANCES FOR SETTING ANCHOR RODS



ANCHOR ROD SETTING TOLERANCES

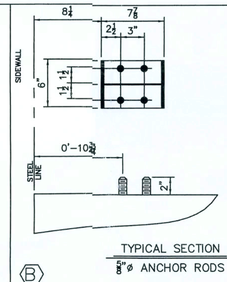


BASE P.ATE AND ANCHOR ROD TOLERANCES



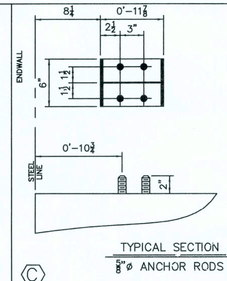
TYPICAL SECTION
¾"ø ANCHOR RODS

Ⓐ BASE OF STEEL AT ELEV. 100'–0



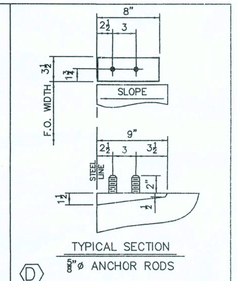
TYPICAL SECTION
⅝"ø ANCHOR RODS

Ⓑ BASE OF STEEL AT ELEV. 100'–0



TYPICAL SECTION
⅝"ø ANCHOR RODS

Ⓒ BASE OF STEEL AT ELEV. 100'–0



TYPICAL SECTION
⅝"ø ANCHOR RODS

Ⓓ BASE OF STEEL AT ELEV. 100'–0

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
1524 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
UTILITY TRUCK SERVICE
2618 SW SISTERS WELCOME
LAKE CITY FL 32025-2933

Customer:
SIMCOE CONSTRUCTION
518 SW LITTLE RD.
LAKE CITY FL 32024
DAVID SIMCOE

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	EXJ 2/6/19
Checked by:	GDG 2/6/19
Project Engineer:	MAB
Job Number:	16-B-88450-1
Sheet Number:	F2 of 3

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Florida P.E. 38305

DRNMFBA ENMEIA

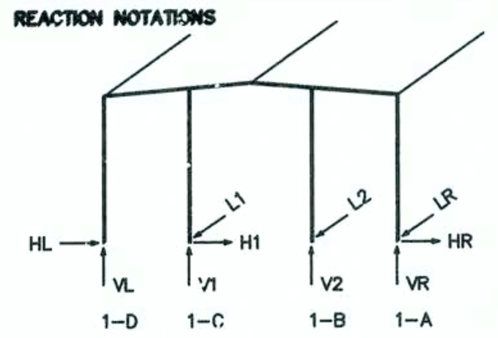
Drawing has been digitally signed.

S. HARLEY DAVIDSON
LICENSE
No. 38305
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Feb 07, 2019

PATH: R:\jobs\Active\Eng\16-B-88450\ver01-mabello\BLDG-A\run01\	FRAME DESCRIPTION: Endwall EWB	USER NAME: mabello JOB NAME: 88450A	DATE: 1/25/19 PAGE: EW-1 FILE: REW3BLDG1
SUPPORT REACTIONS FOR EACH LOAD GROUP NOTE: All reactions are in kips and kip-ft.			TIME: 12:31:18

REACTION NOTATIONS



LOAD GROUP REACTION TABLE

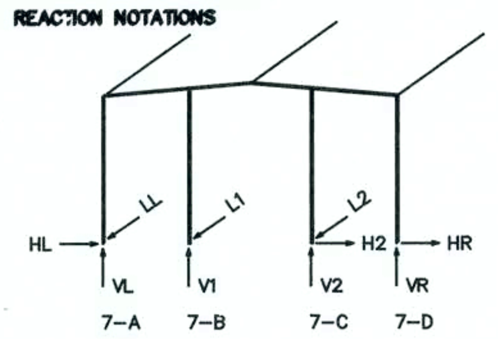
COLUMN	1-D			1-C			1-B			1-A		
LOAD GROUP	HL	VL	LL	H1	V1	L1	H2	V2	L2	HR	VR	LR
D	0.0	0.5	0.	0.	1.3	0.0	0.	1.3	0.0	0.0	0.5	0.
C	0.0	0.3	0.	0.	0.9	0.0	0.	0.9	0.0	0.0	0.3	0.
L	0.0	1.5	0.	0.	5.4	0.0	0.	5.4	0.0	0.0	1.5	0.
W+	0.0	−2.4	0.	0.	−8.0	5.8	0.	−8.0	5.8	0.0	−11.7	7.8
W−	0.0	−2.4	0.	0.	−8.0	−5.5	0.	−8.0	−6.5	0.0	7.0	0.
WR	0.0	4.6	0.	4.1	−14.9	0.0	0.	−8.0	0.0	0.0	−2.4	0.
WL	−4.1	−9.6	0.	0.	−0.7	0.0	0.	−8.0	0.0	0.0	−2.4	0.

LOAD GROUP DESCRIPTION

D : DEAD LOAD
C : COLLATERAL LOAD
L : LIVE LOAD
W+ : WIND LOAD AS AN INWARD ACTING PRESSURE
W− : WIND LOAD AS AN OUTWARD ACTING SUCTION
WR : WIND FORCE FROM THE RIGHT
WL : WIND FORCE FROM THE LEFT

PATH: R:\jobs\Active\Eng\16-B-88450\ver02-mabello\BLDG-A\run01\	FRAME DESCRIPTION: Endwall EWD	USER NAME: mabello JOB NAME: 88450A	DATE: 1/25/19 PAGE: EW-2 FILE: REW4BLDG1
SUPPORT REACTIONS FOR EACH LOAD GROUP NOTE: All reactions are in kips and kip-ft.			TIME: 07:17:02

REACTION NOTATIONS



LOAD GROUP REACTION TABLE

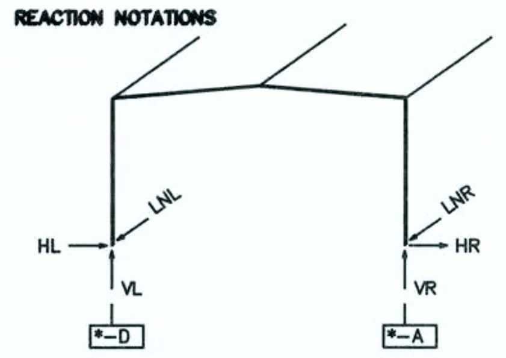
COLUMN	7-A			7-B			7-C			7-D		
LOAD GROUP	HL	VL	LL	H1	V1	L1	H2	V2	L2	HR	VR	LR
D	0.0	0.6	0.	0.	1.4	0.0	0.	1.4	0.0	0.0	0.6	0.
C	0.0	0.3	0.	0.	1.0	0.0	0.	1.0	0.0	0.0	0.3	0.
L	0.0	1.5	0.	0.	5.5	0.0	0.	5.5	0.0	0.0	1.5	0.
W+	0.0	−2.5	1.9	0.	−8.3	5.8	0.	−8.3	5.8	0.0	−2.5	0.
W−	0.0	−2.5	−2.2	0.	−8.3	−6.5	0.	−8.3	−6.5	0.0	−2.5	0.
WR	0.0	−2.5	0.	0.	−8.3	0.0	0.	−0.8	0.0	4.2	−10.0	0.
WL	0.0	−2.5	0.	0.	−8.3	0.0	−4.2	−15.4	0.0	0.0	4.7	0.

LOAD GROUP DESCRIPTION

D : DEAD LOAD
C : COLLATERAL LOAD
L : LIVE LOAD
W+ : WIND LOAD AS AN INWARD ACTING PRESSURE
W− : WIND LOAD AS AN OUTWARD ACTING SUCTION
WR : WIND FORCE FROM THE RIGHT
WL : WIND FORCE FROM THE LEFT

	FRAME ID #26 cs 60./30./25. 20./120./0.	USER NAME: mabello JOB NAME: 88450A	DATE: 1/24/19 PAGE: 26-2 FILE: frames_2_6.fra
SUPPORT REACTIONS FOR EACH LOAD GROUP *LOCATION: Gridlines: 2 3 4 5 6 NOTES: (1) All reactions are in kips and kip-ft. (2) Primary wind load cases are not concurrent. (3) X-bracing reactions (RBPULW and RBUPEQ) are combined withLWL and LEQ groups only.			TIME: 11:04:50

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 2 3 4 5 6

COLUMN	*-D			*-A		
LOAD GROUP	HL	VL	LNL	HR	VR	LNR
DL	0.7	2.7	0.0	−0.7	2.7	0.0
LL	2.6	9.0	0.0	−2.6	9.0	0.0
COLL	0.7	2.2	0.0	−0.7	2.3	0.0
WL1	−7.9	−15.8	0.0	−3.0	−7.6	0.0
WL2	−8.9	−9.9	0.0	−2.0	−1.7	0.0
WL3	3.0	−7.6	0.0	7.9	−15.8	0.0
WL4	2.0	−1.7	0.0	8.9	−9.9	0.0
LWL1	1.6	−12.8	0.0	−1.2	−10.6	0.0
RBUPLW	0.1	−9.3	−7.8	−0.1	−9.3	−7.8
LWL2	1.2	−10.6	0.0	−1.6	−12.8	0.0
LWL3	0.6	−6.9	0.0	−0.2	−4.6	0.0
LWL4	0.2	−4.6	0.0	−0.6	−6.9	0.0
RBDWLW	−0.0	9.3	0.0	0.0	9.3	0.0

LOAD GROUP DESCRIPTION

DL : Roof Dead Load
LL : Roof Live Load
COLL : Roof Collateral Load
WL1 : Wind from Left to Right with +GCpi
WL2 : Wind from Left to Right with −GCpi
WL3 : Wind from Right to Left with +GCpi
WL4 : Wind from Right to Left with −GCpi
LWL1 : Windward Corner Left with +GCpi
RBUPLW : Upward Acting Rod Brace Load from Long. Wind
LWL2 : Windward Corner Right with +GCpi
LWL3 : Windward Corner Left with −GCpi
LWL4 : Windward Corner Right with −GCpi
RBDWLW : Downward Acting Rod Brace Load from Long. Wind

NOTES

1) THE REACTIONS PROVIDED ARE BASED ON THE ORDER DOCUMENTS AT THE TIME OF MAILING. ANY CHANGES TO BUILDING LOADS OR DIMENSIONS MAY CHANGE THE REACTIONS. THE REACTIONS WILL BE SUPERSEDED AND VOIDED BY ANY FUTURE MAILING.

2) THE REACTIONS PROVIDED HAVE BEEN CREATED WITH THE FOLLOWING LAYOUT (UNLESS NOTED OTHERWISE).
- a) A REACTION TABLE IS PROVIDED WITH THE REACTIONS FOR EACH LOAD GROUP.
- b) RIGID FRAMES
  - (1) GABLED BUILDINGS
    - (a) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE LEFT SIDE OF THE BUILDING, AS SHOWN ON THE ANCHOR ROD DRAWING, FROM THE OUTSIDE OF THE BUILDING.
    - (b) INTERIOR COLUMNS ARE SPACED FROM LEFT SIDE TO RIGHT SIDE.
  - (2) SINGLE SLOPE BUILDINGS
    - (a) LEFT COLUMN IS THE LOW SIDE COLUMN.
    - (b) RIGHT COLUMN IS THE HIGH SIDE COLUMN.
    - (c) INTERIOR COLUMNS ARE SPACED FROM LOW SIDE TO HIGH SIDE.
- c) ENDWALLS
  - (1) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE WALL FROM THE OUTSIDE.
  - (2) INTERIOR COLUMNS ARE SPACED FROM LEFT TO RIGHT.
- d) ANCHOR ROD SIZE IS DETERMINED BY SHEAR AND TENSION AT THE BOTTOM OF THE BASE PLATE. THE LENGTH OF THE ANCHOR ROD AND METHOD OF LOAD TRANSFER TO THE FOUNDATION ARE TO BE DETERMINED BY THE FOUNDATION ENGINEER.
- e) ANCHOR RODS ARE ASTM F1554 Gr. 36 MATERIAL UNLESS NOTED OTHERWISE ON THE ANCHOR ROD LAYOUT DRAWING.
- f) X-BRACING
  - (1) ROD BRACING REACTIONS HAVE BEEN INCLUDED IN VALUES SHOWN IN THE REACTION TABLES.
  - (2) FOR IBC AND UBC BASED BUILDING CODES, WHEN X-BRACING IS PRESENT IN THE SIDEWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ AND RBDWEQ) DO NOT INCLUDE THE AMPLIFICATON FACTOR, Ω_0.
  - (3) FOR CANADA BUILDING CODE (NBC), WHEN X-BRACING IS PRESEIT IN THE SIDEWALL OR ENDWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ & RBDWEQ) ARE MULTIPLIED BY FORCE REDUCTION FACTOR, Rd, WHEN SPECIFIED SHORT-PERIOD SPECTRAL ACCELERATION RATIO $I_E F_a S_a(0.2)$ IS GREATER THAN 0.45.

3) REACTIONS ARE PROVIDED AS UN-FACTORED FOR EACH LOAD GROUP APPLIED TO THE COLUMN. THE FOUNDATION ENGINEER WILL APPLY THE APPROPRIATE LOAD FACTORS AND COMBINE THE REACTIONS IN ACCORDANCE WITH THE BUILDING CODE AND DESIGN SPECIFICATIONS TO DETERMINE BEARING PRESSURES AND CONCRETE DESIGN. THE FACTORS APPLIED TO LOAD GROUPS FOR THE STEEL COLUMN DESIGN MAY BE DIFFERENT THAN THE FACTORS USED IN THE FOUNDATION DESIGN.
- a) FOR PROJECTS USING ULTIMATE DESIGN WIND SPEEDS SUCH AS 2012 IBC, 2015 IBC, OR 2014 FLORIDA BUILDING CODE, THE WIND LOAD REACTIONS ARE AT A STRENGTH VALUE WITH A LOAD FACTOR OF 10.
- b) FOR IBC CODES, THE SEISMIC REACTIONS PROVIDED ARE AT A STRENGTH LEVEL AND DO NOT CONTAIN THE RHO FACTOR.
- c) FOR NBCC CODES, THE SEISMIC REACTIONS PROVIDED DO NOT CONTAIN THE R_d*R_o FACTOR.

THE MANUFACTURER DOES NOT PROVIDE "MAXIMUM" LOAD COMBINATION REACTIONS. HOWEVER, THE INDIVIDUAL LOAD REACTIONS PROVIDED MAY BE USED BY THE FOUNDATION ENGINEER TO DETERMINE THE APPLICABLE LOAD COMBINATIONS FOR HIS/HER DESIGN PROCEDURES AND ALLOW FOR AN ECONOMICAL FOUNDATION DESIGN.

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Customer: SIMQUE CONSTRUCTION, 518 SW LITTLE RD., LAKE CITY FL 32024, DAVID SIMQUE

Project Name & Location: UTILITY TRUCK SERVICE, 2618 SW SISTERS WELCOME, LAKE CITY FL 32025-2933

Drawing Status: ☐ Preliminary (Not For Construction) ☐ For Approval (Not For Construction) ☐ For Construction Permit ☒ For Erector Installation

Scale: NOT TO SCALE
Drawn by: EXJ 2/6/19
Checked by: GDG 2/6/19
Project Engineer: MAB
Job Number: 16-B-88450-1
Sheet Number: F3 of 3

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Florida P.E. 38305

DRMMEA ENMETA

Drawing has been digitally signed.

S. HARLEY DAVIDSON ★ LICENSE No. 38305 ★ STATE OF FLORIDA ★ PROFESSIONAL ENGINEER

Feb 07, 2019

Builder/Contractor Responsibilities

Drawing Validity – These drawings, supporting structural calculations and design certification are based on the order documents as of the date of these drawings. These documents describe the material supplied by the manufacturer as of the date of these drawings. Any changes to the order documents after the date on these drawings may void these drawings, supporting structural calculations and design certification. The Builder/Contractor is responsible for notifying the building authority of all changes to the order documents which result in changes to the drawings, supporting structural calculations and design certification.

Builder Acceptance of Drawings – Approval of the manufacturer's drawings and design data affirms that the manufacturer has correctly interpreted and applied the requirements of the order documents and constitutes Builder/Contractor acceptance of the manufacturer's interpretations of the order documents and standard product specifications, including its design, fabrication and quality criteria standards and tolerances. (April 2010 Section 4.4.1)

Code Official Approval – It is the responsibility of the Builder/Contractor to ensure that all project plans and specifications comply with the applicable requirements of any governing building authority. The Builder/Contractor is responsible for securing all required approvals and permits from the appropriate agency as required.

Building Erection – The Builder/Contractor is responsible for all erection of the steel and associated work in compliance with the Metal Building Manufacturers drawings. Temporary supports, such as temporary guys, braces, false work or other elements required for erection will be determined, furnished and installed by the erector (April 2010 Section 7.10.3) (CSA/S16–09 Section 29).

Discrepancies – Where discrepancies exist between the Metal Building plans and plans for other trades, the Metal Building plans will govern. (April 2010 Section 3.3)

Materials by Others – All interface and compatibility of any materials not furnished by the manufacturer are the responsibility of and to be coordinated by the Builder/Contractor or A/E firm. Unless specific design criteria concerning any interface between materials if furnished as a part of the order documents, the manufacturers assumptions will govern.

Modification of the Metal Building from Plans – The Metal Building supplied by the manufacturer has been designed according to the Building Code and specifications and the loads shown on this drawing. Modification of the building configuration, such as removing wall panels or braces, from that shown on these plans could affect the structural integrity of the building. The Metal Building Manufacturer or a Licensed Structural Engineer should be consulted prior to making any changes to the building configuration shown on these drawings. The Metal Building Manufacturer will assume no responsibility for any loads applied to the building not indicated on these drawings.

Foundation Design
The Metal Building Manufacturer is not responsible for the design, materials and workmanship of the foundation. Anchor rod plans prepared by the manufacturer are intended to show only location, diameter and projection of the anchor rods required to attach the Metal Building System to the foundation. It is the responsibility of the end customer to ensure that adequate provisions are made for specifying rod embedment, bearing values, tie rods and or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. (MBMA 06 Sections 3.2.2 and A3)

Mesco Building Solutions

5244 Bear Creek Court, Irving, Texas 75061

Voice 214-687-9999 Fax 214-687-9737

ENGINEERING DESIGN CRITERIA

Building Code	FLORIDA BUILDING CODE, 6TH EDITION (2017)
Building Risk Category	Normal (Risk Category II)
Roof Dead Load	
Superimposed	2.20 psf
Collateral (3.00 psf Other)	3.00 psf
Roof Live Load	20.00 psf reduction allowed
Wind	
Ultimate Wind Speed (Vult)	120.00 mph
Nominal Wind Speed (Vasd)	92 mph (IBC section 1609.3.1)
Serviceability Wind Speed	76 mph
Wind Exposure Category	B
Internal Pressure Coef (GCpi)	0.18/-0.18

Loads for components not provided by building manufacturer
Corner Areas (within 6.00' of corner) 23.70 psf pressure -31.61 psf suction
Other Areas 23.70 psf pressure -25.68 psf suction
These values are the maximum values required based on a 10 sq ft area.
Components with larger areas may have lower wind loads.

DEFLECTION CRITERIA

The material supplied by the manufacturer has been designed with the following minimum deflection criteria. The actual deflection may be less depending on actual load and actual member length.

BUILDING DEFLECTION LIMITS.....: BLDG-A

Roof Limits		Rafters	Purlins	Panels
Live:	L/	180	150	60
Serviceability Wind:	L/	180	180	60
Total Gravity:	L/	120	120	60
Total Uplift:	L/	N/A	N/A	60

Frame Limits		Sidesway
Live:	H/	60
Serviceability Wind:	H/	60
Total Gravity:	H/	60

Wall Limits		Limit
Total Wind Panels:	L/	60
Total Wind Girts:	L/	120
Total Wind EW Columns:	L/	120

The Service Seismic limit as shown here is at service level loads.

PROJECT NOTES

Material properties of steel bar, plate, and sheet used in the fabrication of built-up structural framing members conform to ASTM A529, ASTM A572, ASTM A1011 SS, or ASTM A1011 HSLAS with a minimum yield point of 50 ksi. Material properties of hot rolled structural shapes conform to ASTM A992, ASTM A529, or ASTM A572 with a minimum specified yield point of 50 ksi. Hot rolled angles, other than flange braces, conform to ASTM 36 minimum. Hollow structural shapes conform to ASTM A500 grade B, minimum yield point is 42 ksi for round HSS and 46 ksi for rectangular HSS. Material properties of cold-formed light gage steel members conform to the requirements of ASTM A1011 SS Grade 55, ASTM A1011 HSLAS Grade 55 Class 1, ASTM A653 SS Grade 55, or ASTM A653 HSLAS Grade 55 Class 1 with a minimum yield point of 55 ksi. For Canada, material properties conform to CAN/CSA G40.20/G40.21 or equivalent.

All bolted joints with A325 Type 1 bolts are specified as snug-tightened joints in accordance with the Specification for Structural Joints Using ASTM A325 or A490 Bolts, December 31, 2009. Pre-tensioning methods, including turn-of-nut, calibrated wrench, twist-off-type tension-control bolts or direct-tension-indicator are NOT required. Installation inspection requirements for Snug Tight Bolts (Specification for Structural Joints Section 9.1) is suggested.

Design criteria as noted is as given within order documents and is applied in general accordance with the applicable provisions of the model code and/or specification indicated. Neither the metal building manufacturer nor the certifying engineer declares or attests that the loads as designated are proper for local provisions that may apply or for site specific parameters. The design criteria is supplied by the builder, project owner, or an Architect and/or Engineer of Record for the overall construction project.

This metal building system is designed as enclosed. All exterior components (i.e. doors, windows, vents, etc.) must be designed to withstand the specified wind loading for the design of components and cladding in accordance with the specified building code. Doors are to be closed when a maximum of 50% of design wind velocity is reached.

Framed openings, walk doors, and open areas shall be located in the bay and elevation as shown in the erection drawings. The cutting or removal of girts shown on the erection drawings due to the addition of framed openings, walk doors, or open areas not shown may void the design certifications supplied by the metal building manufacturer.

Roof and wall panels have been designed in accordance with section 2222.4 of the Florida Building Code.
Product approval numbers for the State of Florida, Department of Community Affairs per Product Rule 9B-72:
1. Panel Walls
   FL11917 PBR 26 gauge walls
2. Roofing Products
   FL11868.1 PBU 26 gauge roofs

X-Bracing is to be installed to a taut condition with all slack removed. Do not tighten beyond this state.

Using Southern Standard 5"x5" eave gutter with 4 x 5 downspouts, the roof drainage system has been designed using the method outlined in the MBMA Metal Building Systems Manual. Downspout locations have not been located on these drawings. The downspouts are to be placed on the building sidewalls at a spacing not to exceed 33.5 feet with the first downspout from both ends of the gutter run within 16.7 feet of the end. Downspout spacing that does not exceed the maximum spacing will be in compliance with the building code. The gutter and downspout system as provided by the manufacturer is designed to accommodate 10 in/hr rainfall intensity.

Drawing Index

Download panel installation manuals from:
www.ncimanuals.com

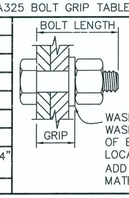
Descargue los manuales de instalación del panel desde:
www.ncimanuals.com

BUILDING DESCRIPTIONS

Building ID	Width	Length	Height	Slope
Building A	60'–0	150'–0	30'–0	1:12

1/2"ø A325 BOLT GRIP TABLE

GRIP	LENGTH
0 TO 9/16"	1 1/4" F.T.
Over 9/16" TO 1 1/16"	1 3/4" F.T.
Over 1 1/16" TO 1 5/16"	2"
Over 1 5/16" TO 1 9/16"	2 1/4"
Over 1 9/16" TO 1 13/16"	2 1/2"
Over 1 13/16" TO 2 1/16"	2 3/4"
LOCATIONS OF BOLTS LONGER THAN 2 3/4" NOTED ON ERECTION DRAWINGS	
F.T. DENOTES FULLY THREADED	



NOTE: FULL THREAD ENGAGEMENT IS DEEMED TO HAVE BEEN MET WHEN THE END OF THE BOLT IS FLUSH WITH THE FACE OF THE NUT.

WASHER REQUIRED ONLY WHEN SPECIFIED. WASHER MAY BE LOCATED UNDER HEAD OF BOLT, UNDER NUT OR AT BOTH AT LOCATIONS NOTED ON ERECTION DRAWINGS. ADD 5/32" FOR EACH WASHER TO MATERIAL THICKNESS TO DETERMINE GRIP.

Revision	Date	By	Ck'd

Description

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
Utility Truck Service
2618 SW Sisters Welcome Rd.
Lake City, FL 32025

Customer:
Simque Construction
518 SW Little Rd.
Lake City, FL 32024

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	EXJ 2/7/19
Checked by:	GDG 2/7/19
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E1 of 8

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S. Harley Davidson, P.E.
Florida P.E. 38305

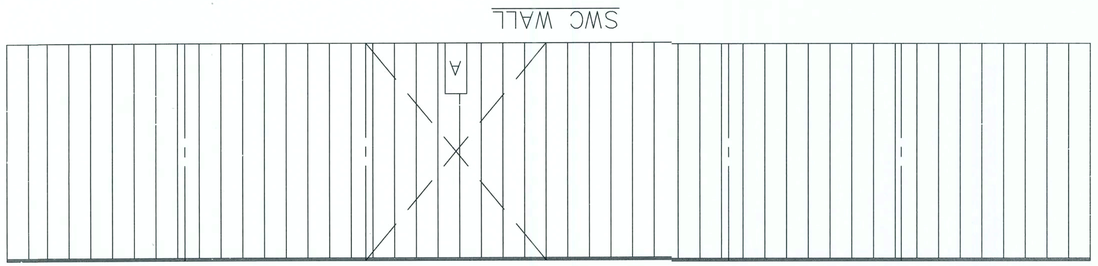
Drawing has been digitally signed.

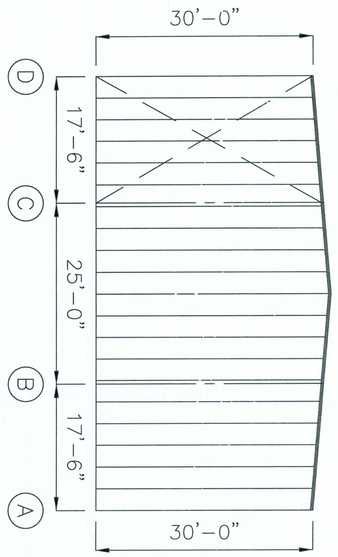
S. HARLEY DAVIDSON LICENSE No. 38305 STATE OF FLORIDA PROFESSIONAL ENGINEER

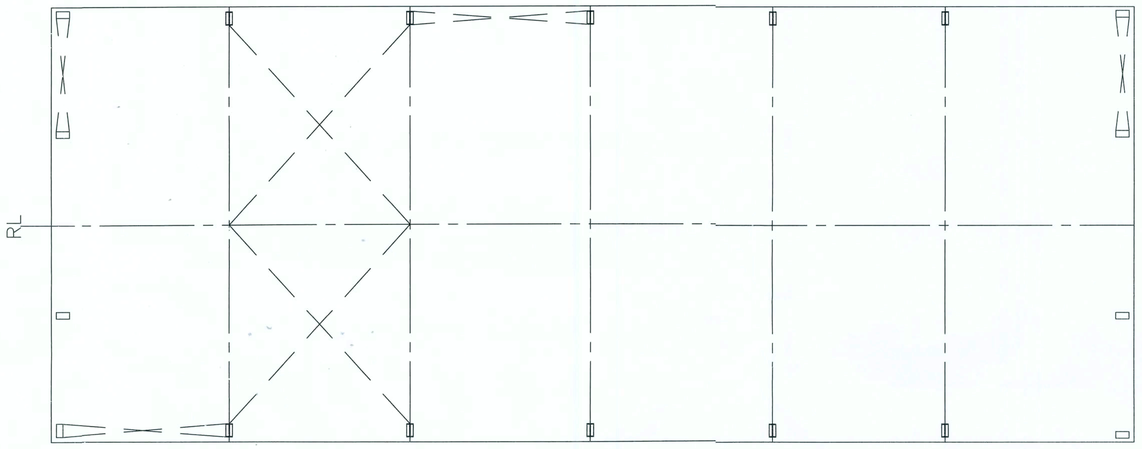
Feb 12, 2019

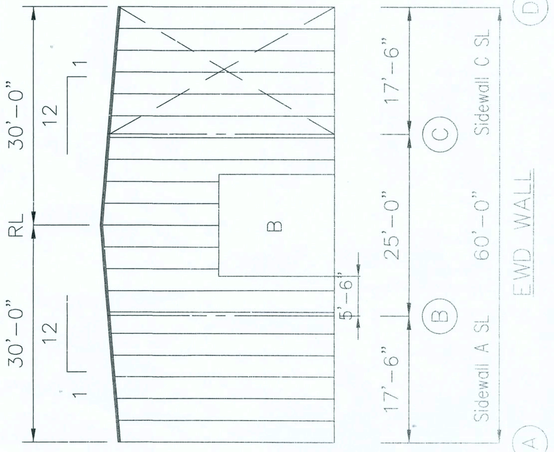
COVERING

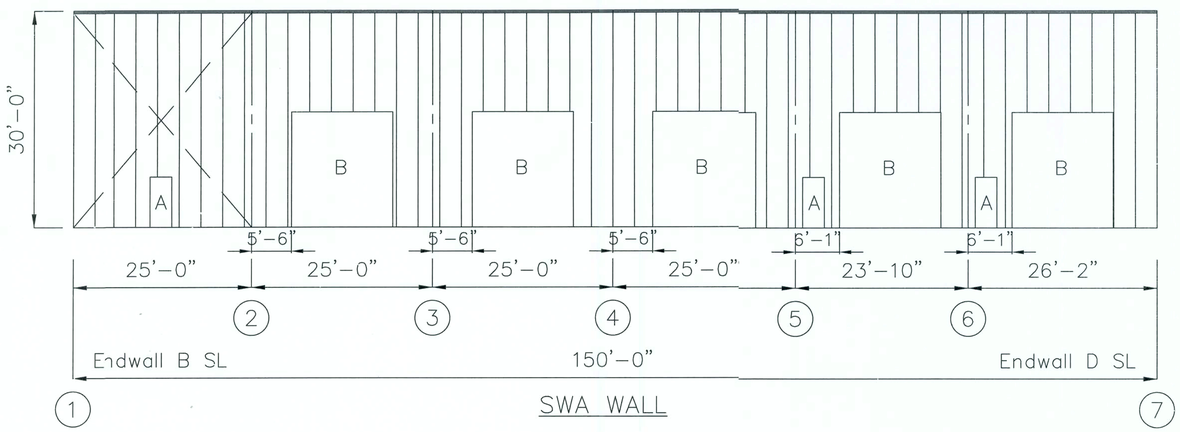
SURFACE	GAGE	COLOR	TYPE
ROOF	26	Galvalume	PBR Panel
SWA WALL	26	TBD Signature 300 Color	PBR Panel
SWC WALL	26	TBD Signature 300 Color	PBR Panel
EWB WALL	26	TBD Signature 300 Color	PBR Panel
EWD WALL	26	TBD Signature 300 Color	PBR Panel











ACCESSORY SCHEDULE

ID	QTY	DESCRIPTION
A	4	3070M Walk Door
B	6	DBCI 14'X16' Series 5000 Overhead Door
C		

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
Utility Truck Services
2618 SW Sisters Welcome Rd.
Lake City, FL 32025

Customer:
Simcue Construction
518 SW Little Rd.
Lake City, FL 32024

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	jam 1/23/19
Checked by:	xxx
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E2 of 8

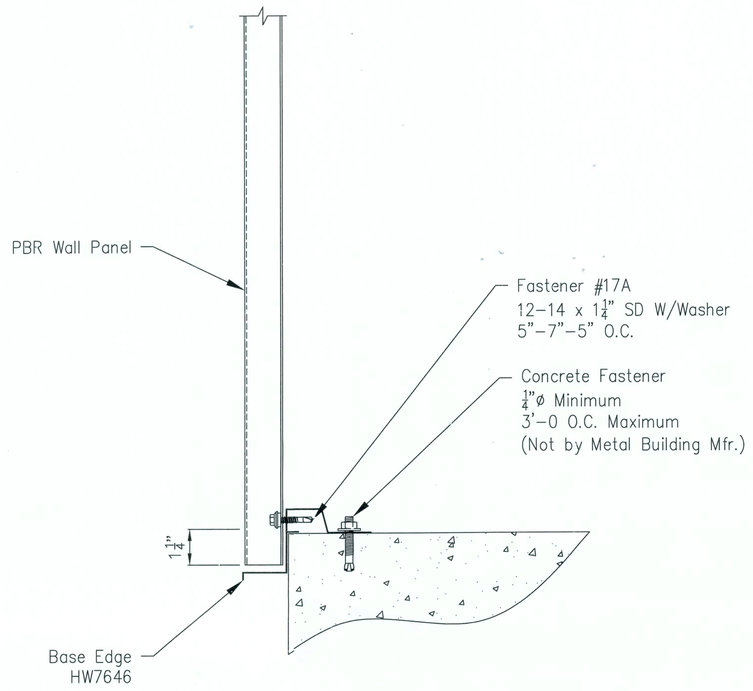
The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Florida P.E. 38305

Drawing has been digitally signed.

S. HARLEY DAVIDSON
LICENSE
No. 38305
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Feb 12, 2019



Base Section Typical

Wall panel must be held off of base trim a minimum of ¼" to prevent bottom of wall panel from rusting.

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
Utility Truck Service
2618 SW Sisters Welcome Rd.
Lake City, FL 32025

Customer:
Simque Construction
518 SW Little Rd.
Lake City, FL 32024

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

Scale: NOT TO SCALE
Drawn by: jam 1/23/19
Checked by: xxx
Project Engineer: MAB
Job Number: 16-B-88450
Sheet Number: E3 of 8

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S. Harley Davidson, P.E.
Florida P.E. 38305

Drawing has been digitally signed.

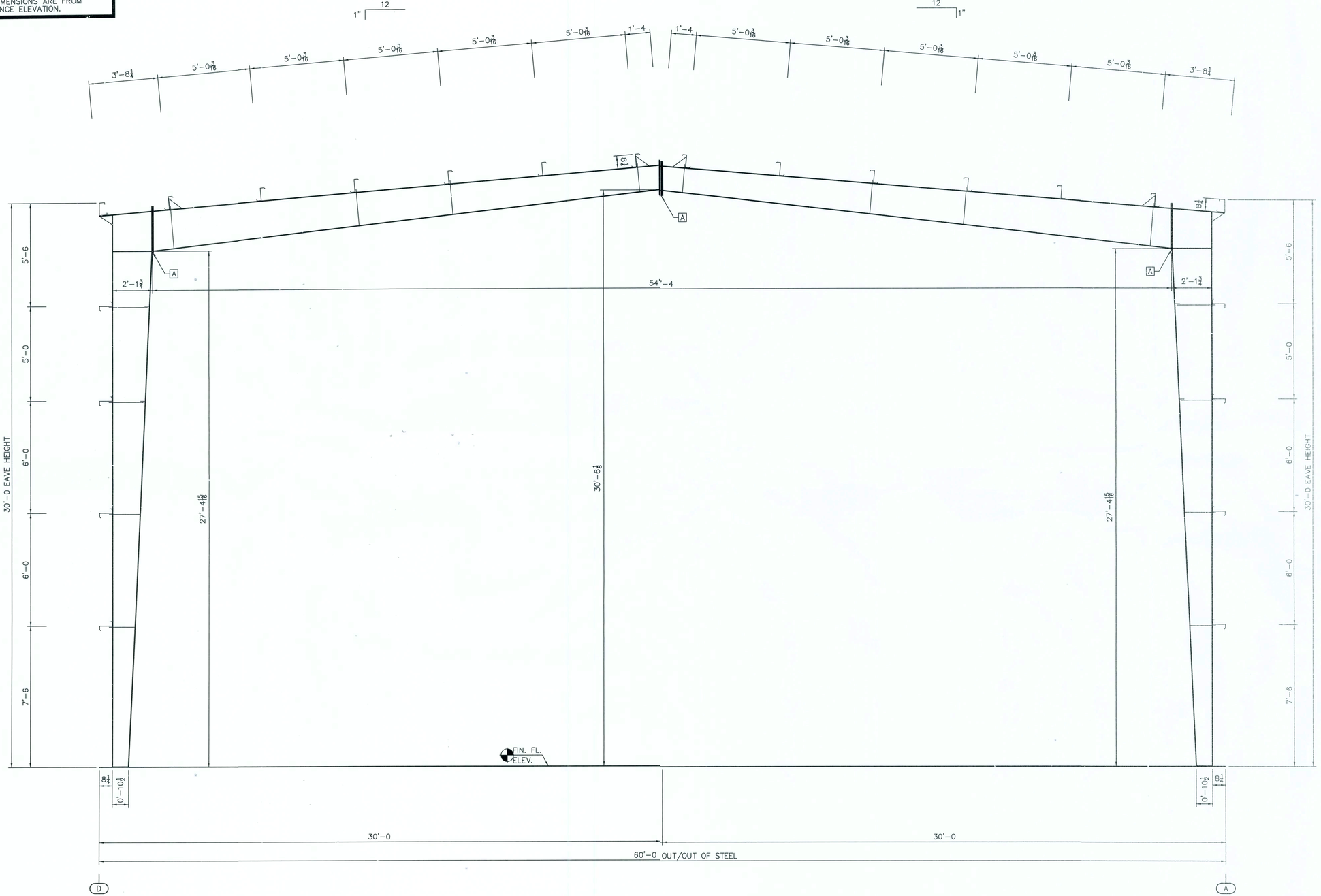
S. HARLEY DAVIDSON
LICENSE
No. 38305
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Feb 12, 2019

OY/PROJECTS\XDS-V8-00-00 FRAME = Active/Eng/16-B-88450/ver01-mabello/BLDG-A/Drftg/x26L 1/24/19 11:04:50
OY/PROJECTS\XDS-V8-00-00 FB SET = Eng/16-B-88450/ver01-mabello/BLDG-A/DRFTG/x26L

GENERAL NOTES
FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).

VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.



CROSS SECTION AT FRAME LINE "2"

	SPLICE BOLT TABLE				
CONN.	QTY.	SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(8)	¾ X 2"	A325 B&N	0	0

Revision	Date	By	Ck'd	Description

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
Utility Truck Service
2618 SW Sisters Welcome Rd.
Lake City, FL 32025

Customer:
Simaue Construction
518 SW Little Rd.
Lake City, FL 32024

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	EXJ 2/7/19
Checked by:	GDG 2/7/19
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E4 of 8

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification s limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Florida P.E. 38305

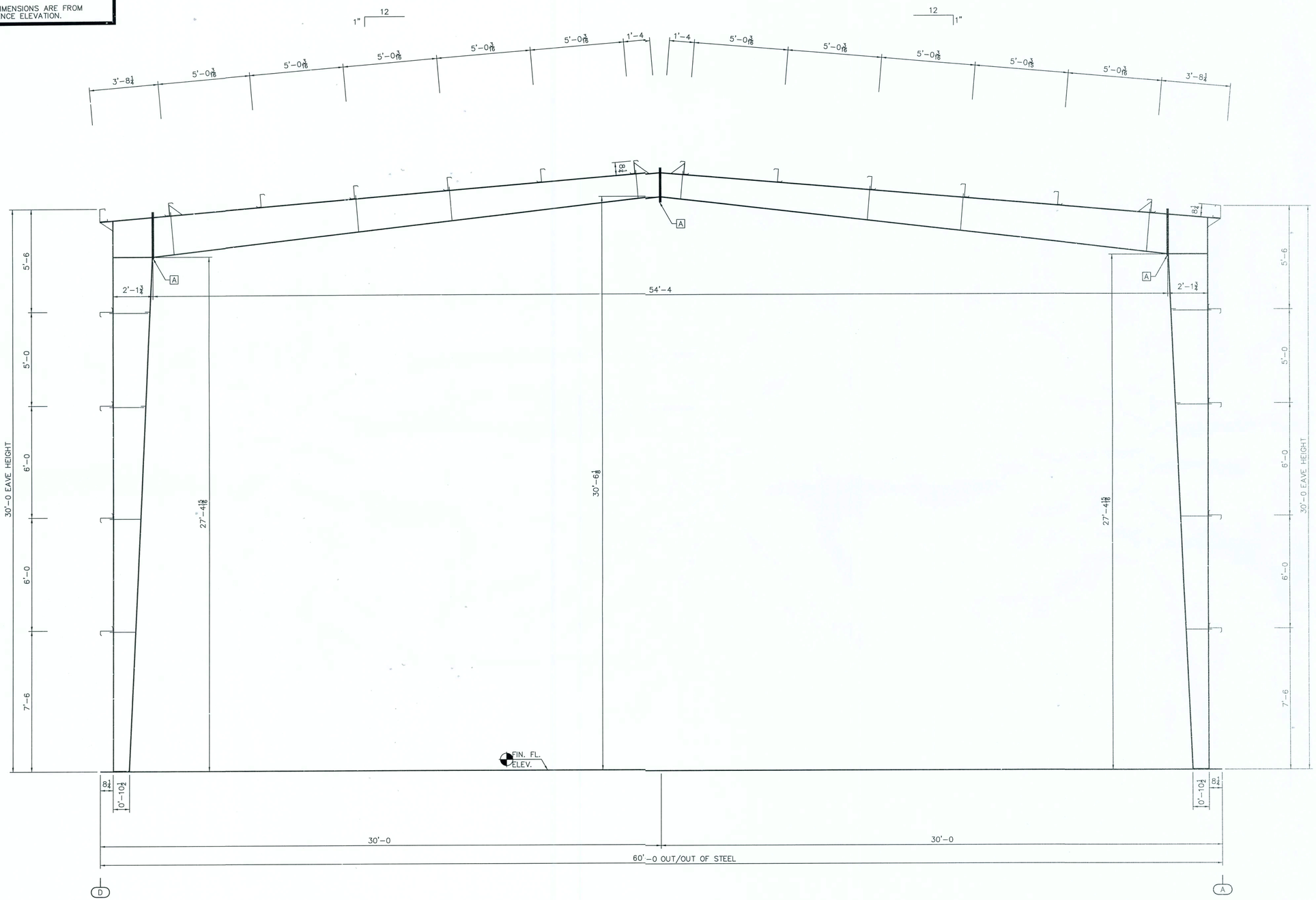
Drawing has been digitally signed.

HARLEY DAVIDSON LICENSE No. 38305 STATE OF FLORIDA PROFESSIONAL ENGINEER

Feb 12, 2019

GENERAL NOTES
FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).

VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.



CROSS SECTION AT FRAME LINE "3"

	SPLICE BOLT TABLE			
CONN.	QTY. SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(8) ¾ X 2"	A325 B&N	0	0

Revision:	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
Utility Truck Service
2618 SW Sisters Welcome Rd.
Lake City, FL 32025

Customer:
Simque Construction
518 SW Little Rd.
Lake City, FL 32024

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	EX 2/7/19
Checked by:	GDG 2/7/19
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E5 of 8

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S. Harley Davidson, P.E.
Florida P.E. 38305

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S. HARLEY DAVIDSON LICENSE No. 38305 STATE OF FLORIDA PROFESSIONAL ENGINEER

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OY/PROJECTS\XDS-V8-00-00 FB SET = Eng/16-B-88450/ver01-mabello/BLDG-A/DRFTG/x26L

GENERAL NOTES
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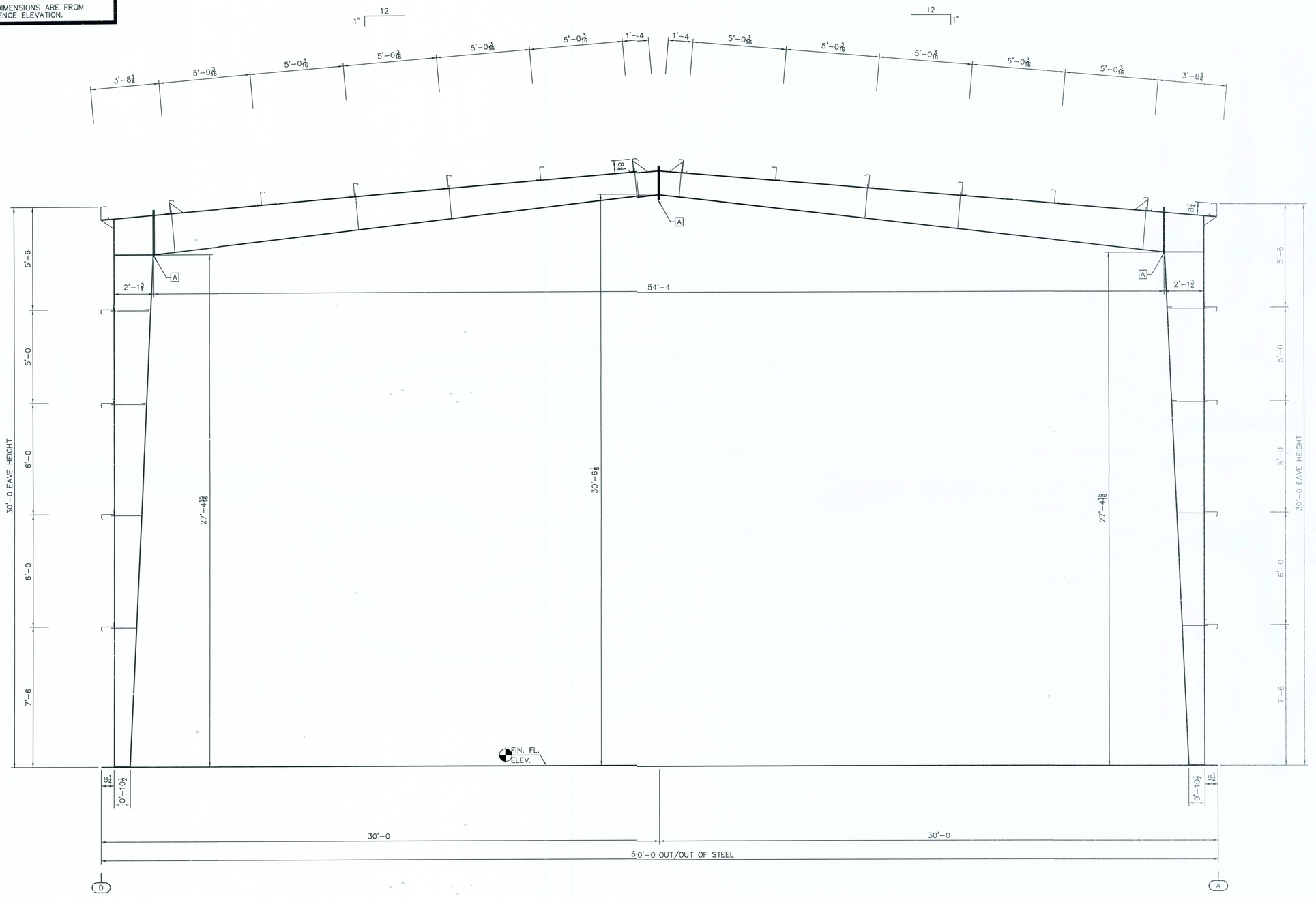
VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.



CROSS SECTION AT FRAME LINE "4"

	SPLICE BOLT TABLE				
CONN.	QTY.	SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(8)	¾ X 2"	A325 B&N	0	0

Revision	Date	By	Ck'd	Description

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
Utility Truck Service
2618 SW Sisters Welcome Rd.
Lake City, FL 32025

Customer:
Simaue Construction
518 SW Little Rd.
Lake City, FL 32024

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	EXJ 2/7/19
Checked by:	GDG 2/7/19
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E6 of 8

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S. Harley Davidson, P.E.
Florida P.E. 38305

Drawing has been digitally signed.

S. HARLEY DAVIDSON LICENSE No. 38305 STATE OF FLORIDA PROFESSIONAL ENGINEER

Feb 12, 2019

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OY/PROJECTS\XDS-V8-00-00 FB SET = Eng/16-B-88450/ver01-mabello/BLDG-A/DRFTG/x26L

GENERAL NOTES
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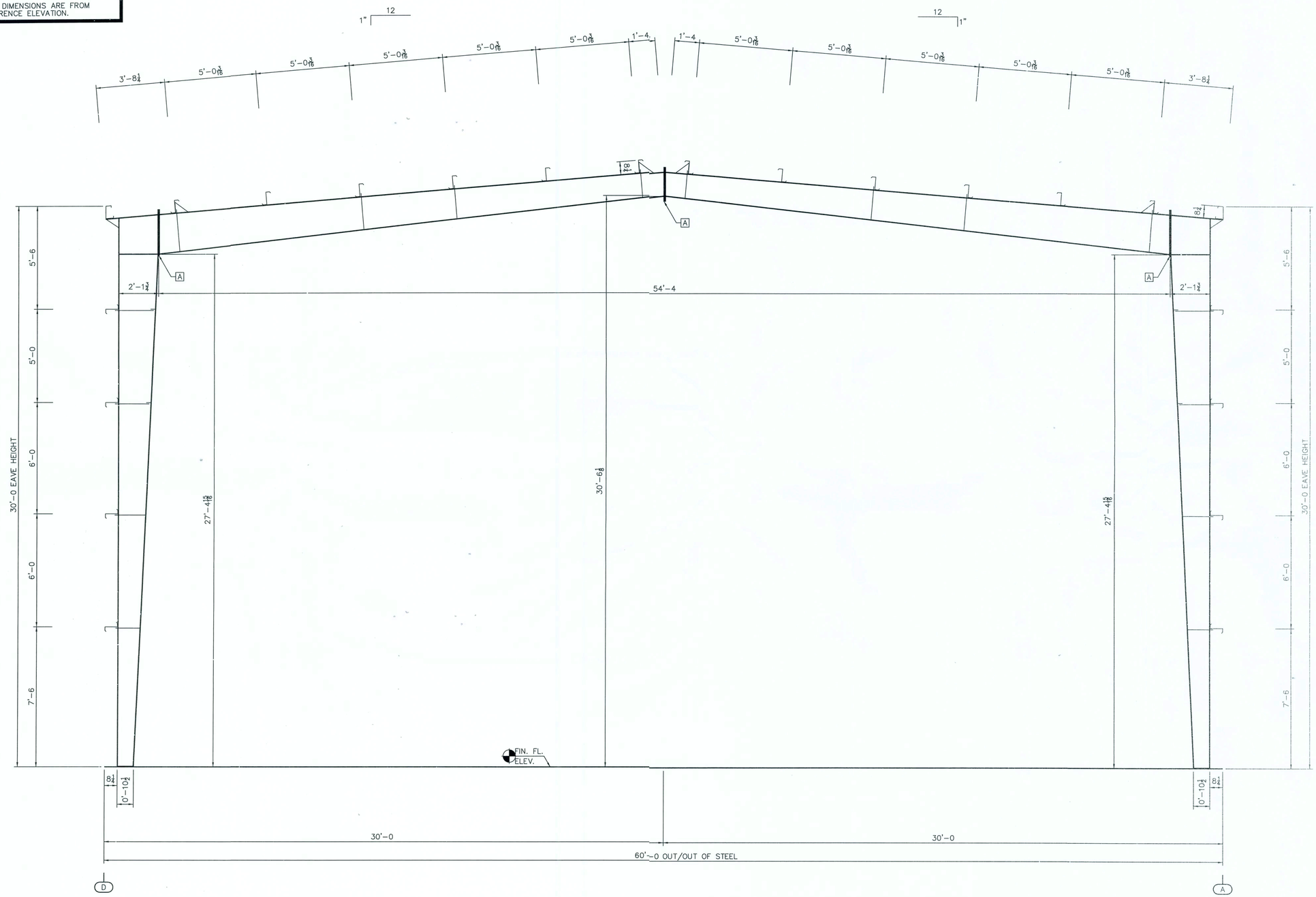

CROSS SECTION AT FRAME LINE "5"

	SPLICE BOLT TABLE				
CONN.	QTY.	SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(8)	¾ X 2"	A325 B&N	0	0

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
Utility Truck Service
2618 SW Sisters Welcome Rd.
Lake City, FL 32025

Customer:
Simque Construction
518 SW Little Rd.
Lake City, FL 32024

Drawing Status:
☐ Preliminary (Not For Construction)
☒ For Construction Permit
☐ For Approval (Not For Construction)
☐ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	EXJ 2/7/19
Checked by:	GDG 2/7/19
Project Engineer:	MAB
Job Number:	16-B-88450
Sheet Number:	E7 of 8

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S. Harley Davidson, P.E.
Florida P.E. 38305

Drawing has been digitally signed.

S. HARLEY DAVIDSON
LICENSE
No. 38305
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Feb 12, 2019

FIELD "AS-BUILT" NOTES

STRUCTURAL DESIGN CRITERIA:

1. THE DESIGN COMPLIES WITH THE REQUIREMENTS OF THE 2017 FLORIDA BUILDING CODE - SECTION 1609 AND OTHER REFERENCED CODES AND SPECIFICATIONS. ALL CODES AND SPECIFICATIONS SHALL BE LATEST EDITION AT TIME OF PERMIT.

2. WIND LOAD CRITERIA: RISK CATAGORY: 2, EXPOSURE "C"

BASED ON ANSI/ASCE 7-10. 2017 FBC 1609-A WIND VELOCITY: V_{ULT} = 120 MPH
V_{ASD} = 98 MPH

3. ROOF DESIGN LOADS:
SUPERIMPOSED DEAD LOADS: . . . . 20 PSF
SUPERIMPOSED LIVE LOADS: . . . . 20 PSF

4. FLOOR DESIGN LOADS:
SUPERIMPOSED DEAD LOADS: . . . . 25 PSF
SUPERIMPOSED LIVE LOADS:
COMMERCIAL . . . . 100 PSF
BALCONIES/CORRIDORS . . . . 80 PSF

5. WIND NET UPLIFT: ARE AS INDICATED ON PLANS

BUILDING COMPONENTS & CLADDING LOADS
MEAN BUILDING HEIGHT = 30.0', EXPOSURE "B"

	ZONE	AREA	Vult 110 MPH	Vult 120 MPH	Vult 130 MPH	Vult 140 MPH
ROOF 7° TO 27°	1	10	12.0 / -19.9	14.9 / -23.7	17.5 / -27.8	20.3 / -32.3
	1	20	11.4 / -19.4	13.6 / -23.0	16.0 / -27.0	18.5 / -31.4
	1	50	10.0 / -18.6	11.9 / -22.2	13.9 / -26.0	16.1 / -30.2
	2	10	12.5 / -34.7	14.9 / -41.3	17.5 / -48.4	20.3 / -56.2
	2	20	11.4 / -31.9	13.6 / -38.0	16.0 / -44.6	18.5 / -51.7
	2	50	10.0 / -28.2	11.9 / -33.6	13.9 / -39.4	16.1 / -45.7
	3	10	12.5 / -51.3	14.9 / -61.0	17.5 / -71.6	20.3 / -83.1
	3	20	11.4 /-47.9	13.6 / -57.1	16.0 / -67.0	18.5 / -77.7
	3	50	10.0 / -43.5	11.9 / -51.8	13.9 / -60.8	16.1 / -70.5
WALL	4	10	21.8 / -23.6	25.9 / -34.7	30.4 / -33.0	35.3 / -38.2
	4	20	20.8 / -22.6	24.7 / -26.9	29.0 / -31.6	33.7 / -36.7
	4	50	19.5 / -21.3	23.2 / -25.4	27.2 / -29.8	31.6 / -34.6
	5	10	21.8 / -29.1	25.9 / -34.7	30.4 /-40.7	35.3 / -47.2
	5	20	20.8 / -27.2	24.7 / -32.4	29.0 / -38.0	33.7 / -44.0
	5	50	19.5 / -24.6	23.2 / -29.3	27.2 / -34.3	31.6 / -39.8

HEIGHT & EXPOSURE ADJUSTMENT COEFFICIENTS
FOR BUILDING COMPONENTS & CLADDING

BLDG HEIGHT	EXPOSURE "B"	EXPOSURE "C"	EXPOSURE "D"
15	1.00	1.21	1.47
20	1.00	1.29	1.55
25	1.00	1.35	1.61
30	1.00	1.40	1.66

NOTE!
REFER TO THE METAL BUILDING SHOP DRAWINGS PREPARED BY MESCO CORPORATION, FOR EXACT LOCATION OF ALL EMBEDDED ANCHOR BOLTS.

NOTE!
ADDED FILL SHALL BE APPLIED IN 12" LIFTS - EA. LIFT SHALL BE CONPACTED TO 98% DRY COMPACTION PER THE "MODIFIED PROCTOR" METHOD.

NOTE!
THE DESIGN WIND SPEED FOR THIS PROJECT IS 120 MPH PER 2017 FBC 6th ED. 1609 AND LOCAL JURISDICTION REQUIREMENTS

NOTE!
ALL ANCHOR BOLTS ARE ASTM GRADE A36 STEEL ROD, THREADED 3 1/2", BLACK AND FREE FROM RUST AND SCALE

NOTE!
THIS PROJECT IS TYPE 5 UNPROTECTED CONSTRUCTION PER 2017 FBC TABLE 503 AND TABLE 600

GENERAL STRUCTURAL NOTES

G E N E R A L:

1. THE DRAWINGS ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT, DESIGN AND EXTENT OF THE WORK AND ARE PARTIALLY DIAGRAMMATIC. THEY ARE NOT INTENDED TO BE SCALED FOR ROUGH-IN MEASUREMENTS, OR TO SERVE AS SHOP DRAWINGS OR PORTIONS THEREOF.

2. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL OR SECTION IS SHOWN.

3. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR AND ALL THE SUBCONTRACTORS SHALL VERIFY ALL GRADES, LINES, LEVELS, DIMENSIONS AND COORDINATE EXISTING CONDITIONS AT THE JOB SITE WITH THE PLANS AND SPECIFICATIONS. THEY SHALL REPORT ANY INCONSISTENCIES OR ERRORS IN THE ABOVE TO THE ARCHITECT/ENGINEER BEFORE COMMENCING WORK. THE CONTRACTOR AND HIS SUBCONTRACTORS SHALL LAY OUT THEIR WORK FROM ESTABLISHED REFERENCE POINTS AND BE RESPONSIBLE FOR ALL LINES, ELEVATIONS AND MEASUREMENTS IN CONNECTION WITH THEIR WORK.

4. IF ANY ERRORS OR OMISSIONS APPEAR IN THE DRAWINGS, GENERAL NOTES OR OTHER DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF SUCH OMISSION OR ERROR PRIOR TO PROCEEDING WITH ANY WORK WHICH APPEARS IN QUESTION. IN THE EVENT OF THE CONTRACTOR'S FAILING TO GIVE SUCH AN ADVANCED NOTICE, HE SHALL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY SUCH ERRORS OR OMISSIONS AND THE COST OF RECTIFYING THE SAME.

5. THE CONTRACTOR SHALL USE THE STRUCTURAL DRAWINGS AND SPECIFICATIONS TOGETHER WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND OTHER TRADE DRAWINGS AND SHOP DRAWINGS, TO LOCATE DEPRESSED SLABS, SLOPES, DRAINS, OUTLETS, RECESSES, OPENINGS, BOLT SETTING, SLEEVES, DIMENSIONS, ETC. NOTIFY ARCHITECT/ENGINEER, IN WRITING, OF ANY POTENTIAL CONFLICTS BEFORE PROCEEDING WITH THE WORK.

SHOP DRAWINGS AND DELEGATED ENGINEERING:

1. ALL SHOP DRAWINGS SHALL BE SUBMITTED FOR ARCHITECT'S REVIEW ONLY AFTER THEY HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR CONSTRUCTION METHODS, DIMENSIONS AND OTHER TRADE REQUIREMENTS, AND STAMPED WITH THE CONTRACTOR'S APPROVAL STAMP. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR DIMENSIONS, QUANTITIES, ENGINEERING DESIGN BY DELEGATED ENGINEERS, ERRORS OR OMISSIONS AS A RESULT OF REVIEWING ANY SHOP DRAWINGS. ANY ERRORS OR OMISSIONS MUST BE MADE GOOD BY THE CONTRACTOR, IRRESPECTIVE OF RECEIPT, CHECKING OR REVIEW OF DRAWINGS BY THE ENGINEER AND EVEN THOUGH WORK IS DONE IN ACCORDANCE WITH SUCH DRAWINGS.

2. *BEFORE STRUCTURAL INSPECTIONS CAN BE MADE ON A PORTION* OF THE STRUCTURE, ALL RELATED SHOP DRAWINGS, DELEGATED ENGINEERING, PRODUCT APPROVAL, MANUFACTURER'S DATA AND OTHER RELATED INFORMATION, MUST BE REVIEWED AND ACCEPTED BY THE ARCHITECT-OF-RECORD AND APPROVED BY THE BUILDING DEPARTMENT.

3. SHOP DRAWINGS SHALL CONTAIN ALL INFORMATION SHOWN ON THE STRUCTURAL PLANS (RELATED TO THE DELEGATED DESIGN) INCLUDING ALL DESIGN LOADS, IN ADDITION TO THE INFORMATION REQUIRED BY THE DELEGATED ENGINEER'S DESIGN.

4. ARCHITECT WILL REVIEW ALL SUBMITTED SHOP DRAWINGS, PREPARED AND SIGNED AND SEALED BY THE CONTRACTOR'S DELEGATED ENGINEER, ONLY FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT, REQUIRED LOADING AND COORDINATION WITH THE STRUCTURAL DESIGN.

5. CONTRACTOR SHALL SUBMIT TO THE ARCHITECT TWO SETS OF BLUE PRINTS OF THE STRUCTURAL SHOP DRAWINGS FOR ARCHITECT REVIEW, BEFORE STARTING FABRICATION. THE ARCHITECT WILL RETURN ONE MARKED UP AND STAMPED COPY TO THE CONTRACTOR. THE MARKED-UP COPY SHALL BE USED TO MAKE THE PRINTS REQUIRED FOR SHOP DRAWING DISTRIBUTION.

CONSTRUCTION MEANS AND METHODS:

1. THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE OR PROCEDURES, SAFETY PRECAUTIONS, SHORES, RESHORES, LATERAL BRACING AND PROGRAMS IN CONNECTION WITH THE PROJECT, ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. OUR SERVICES DO NOT GUARANTEE NOR ASSURE LIABILITY FOR THE JOB SAFETY, TEMPORARY SHORING AND BRACING AND THE PERFORMANCE OF THE CONTRACTOR.

2. THE CONTRACTOR IS RESPONSIBLE AND SHALL COMPLY WITH THE SAFETY REQUIREMENTS OF THE 2010 FLORIDA BUILDING CODE AND APPLICABLE LOCAL, STATE AND FEDERAL LAWS.

3. PROVIDE ALL SHORING, BRACING AND SHEETING AS REQUIRED FOR SAFETY, STRUCTURAL STABILITY AND FOR THE PROPER EXECUTION OF THE WORK. REMOVE WHEN WORK IS COMPLETED.

4. PROVIDE AND MAINTAIN GUARD LIGHTS AT ALL BARRICADES, RAILINGS, OBSTRUCTIONS IN THE STREETS, ROADS OR SIDEWALKS AND ALL TRENCHES OR PITS ADJACENT TO PUBLIC WALKS OR ROADS.

5. AT ALL TIMES, PROVIDE PROTECTION AGAINST WEATHER (RAIN, WIND, STORMS OR THE SUN), SO AS TO MAINTAIN ALL WORK, MATERIALS, APPARATUS AND FIXTURES FREE FROM INJURY OR DAMAGE.

6. AT THE END OF THE DAYS WORK, COVER ALL WORK LIKELY TO BE DAMAGED. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION SHALL BE REMOVED AND REPLACED WITH NEW WORK AT THE CONTRACTOR'S EXPENSE.

7. THE CONTRACTOR SHALL PAY FOR ALL DAMAGES TO ADJACENT STRUCTURES, SIDEWALKS AND TO STREETS OR OTHER PUBLIC PROPERTY OR PUBLIC UTILITIES.

FOUNDATIONS: (SPREAD FOOTINGS)

1. FOUNDATIONS ARE DESIGNED TO BEAR ON WELL COMPACTED GRADE OR CLEAN FILL OF AN ALLOWABLE BEARING CAPACITY OF 1,000 PSF MINMUM. FOR REQUIRED SOIL BEARING CAPASITIES GREATER THAN 1,000 PSF, A CERTIFIED TESTING LABORATORY SHALL BE ENGAGED BY THE OWNER TO VERIFY THAT THE REQUIRED BEARING CAPACITY WAS OBTAINED. SAID SOIL CAPACITY SHALL BE CERTIFIED AND TESTED BY A FLORIDA REGISTERED FOUNDATION ENGINEER, PRIOR TO CASTING OF CONCRETE IN THE FOOTINGS.

2. NATURAL GRADE (OR FILL) BELOW FOOTINGS SHALL BE COMPACTED TO 98 % MODIFIED PROCTOR (ASTM D-1557).

3. TOP OF WALL FOOTINGS TO BE AT THE SAME ELEVATION AS TOP OF COLUMN PAD FOOTINGS. STEP WALL FOOTING FROM HIGHER COLUMN FOOTING TO THE LOWER ONE (AS DETAILED ON THE PLANS).

4. BOTTOM OF ALL FOOTINGS TO BE A MINIMUM 1'-6" BELOW THE TOP OF CONCRETE SLAB ON GRADE (UNLESS OTHERWISE NOTED) OR MINIMUM 1'-0" BELOW FINISHED GRADE, WHICHEVER IS LOWER. IN THE EVENT THAT THE SLAB STEPS ON EACH SIDE OF THE FOOTING, THE FOOTING SHALL BE 1'-6" BELOW TOP OF THE LOWER SLAB.

5. REINFORCING IN THE CONTINUOUS WALL FOOTINGS (MONOLITHIC AND NON-MONOLITHIC) SHALL BE SPLICED 40 BAR DIAMETERS MINIMUM AND SHALL EXTEND CONTINUOUSLY THRU ALL FOOTING PADS.

6. ALL LONGITUDINAL REBARS IN THE CONTINUOUS WALL FOOTINGS, SHALL BE CONTINUED AT BENTS AND CORNERS BY BENDING THE REBARS 48 BAR DIAMETERS AROUND THE CORNERS OR ADDING MATCHING CORNER BARS, EXTENDING 48 BAR-DIAMETERS INTO FOOTING EACH SIDE OF CORNER OR BENT.

7. ALL FOOTINGS SHALL BE 12" MINIMUM THICKNESS.

8. WHEN GEO-TECHNICAL REPORTS ARE PROVIDED, ALL RECOMENDATIONS OF THE SOILS ENGINEER SHALL BE FOLLOWED AND THE DESIGN SOIL BEARING PRESSURE SHALL BE AS RECOMMENDED IN SUCH REPORTS, AND SUPERCEEDS PRESSURES INDICATED HEREIN.

CONCRETE SLABS ON GRADE:

1. ALL INTERIOR AND EXTERIOR SLABS AND WALKWAYS AS SHOWN ON THE STRUCTURAL OR ARCHITECTURAL PLANS, SHALL BE FOUR INCHES THICK MINIMUM REINFORCED WITH 6 X 6 - W1.4 X W1.4 WELDED WIRE FABRIC (UNLESS OTHERWISE NOTED).

2. ALL SLABS ON GRADE TO BE CONSTRUCTED IN ACCORDANCE WITH LATEST A.C.I - "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION" (A.C.I. - 302.1R)

3. *JOINTS SHALL BE PROVIDED IN ALL INTERIOR SLABS ON GRADE AT* LOC. INDICATED ON THE PLANS DIVIDING THE SLAB INTO SQUARE PANELS NOT TO EXCEED 20 X 20 FT. IN SIZE. CAST SLAB IN LONG ALTERNATE STRIPS. PROVIDE A CONTRACTION JOINT BETWEEN EACH STRIP. SEE PLAN FOR SAW-CUT, CONTRACTION AND ISOLATION JOINT DETAILS.

4. PROVIDE SAW-CUT JOINTS AT ALL SIDEWALKS AT A MAXIMUM SPACING OF FIVE FEET ON CENTERS AND ISOLATION JOINTS AT 20 FEET O.C. (U.O.N.).

5. FILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 12" AND COMPACTED TO 98 % MODIFIED PROCTOR (ASTM D-1557) WITHIN A DISTANCE OF 3 FEET BEYOND ALL FOOTING EDGES. TAKE AT LEAST ONE DENSITY TEST FOR EACH 1,600 SQ.FT. OF AREA AND 12" BELOW SURFACE. SEND RESULTS OF THE TEST TO OWNER, ARCHITECT AND ENGINEER.

CONCRETE AND REINFORCING:

1. CONCRETE DESIGN AND REINFORCEMENT IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (A.C.I. 318 - LATEST EDITION) AND WITH "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" - (A.C.I. 315 - LATEST EDITION).

2. ALL CONCRETE WORK IN ACCORDANCE WITH "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDING" (A.C.I. 301 - LATEST EDITION). PRODUCTION OF CONCRETE, DELIVERY, PLACING AND CURING TO BE IN ACCORDANCE WITH "HOT WEATHER CONCRETING" (A.C.I. 305R - LATEST EDITION).

3. ALL CONCRETE TO BE REGULAR WEIGHT WITH A DESIGN STRENGTH OF 3,000 P.S.I. AT 28 DAYS. MAXIMUM SLUMP 5".

4. ALL REINFORCING TO BE NEW BILLET STEEL CONFORMING TO THE LATEST A.S.T.M. A-615 GRADE 60, FABRICATED IN ACCORDANCE WITH C.R.S.I. MANUAL OF STANDARD PRACTICE AND PLACED IN ACCORDANCE WITH A.C.I. 315 AND C.R.S.I. MANUAL OF STANDARD PRACTICE.

5. CONCRETE COVER UNLESS OTHERWISE DETAILED ON DRAWINGS:

FOOTINGS: (BOTTOM). . . . . 3"
(TOP & SIDES) . . . . 2"

SLABS ON GRADE: CENTERED W/SLAB

6. BEAM REINFORCEMENT: LAPPED 36 BAR DIAMETER OR MINIMUM 18 INCHES. BOTTOM BARS SPLICED ONLY AT SUPPORTS, TOP BARS SPLICED ONLY AT MID-SPAN. ALL TOP BARS HOOKED AT NONCONTINUOUS EDGES (U.O.N.). ALL HOOKS TO BE STANDARD 90 DEGREE HOOKS AS REQUIRED (U.O.N.).

7. ADDED REINFORCEMENT: PROVIDE ADDITIONAL CORNER BARS BENT 36 INCHES MINIMUM EACH WAY AT "L" AND "T" CORNERS IN OUTER FACES OF ALL BEAMS TO MATCH ALL HORIZONTAL BAR (TOP, BOTTOM AND INTERMEDIATE REBARS).

8. SEE PLAN FOR MINIMUM SIZE CONCRETE TIE BEAM REQUIREMENTS.

REVISION:

DRAWN: NPG

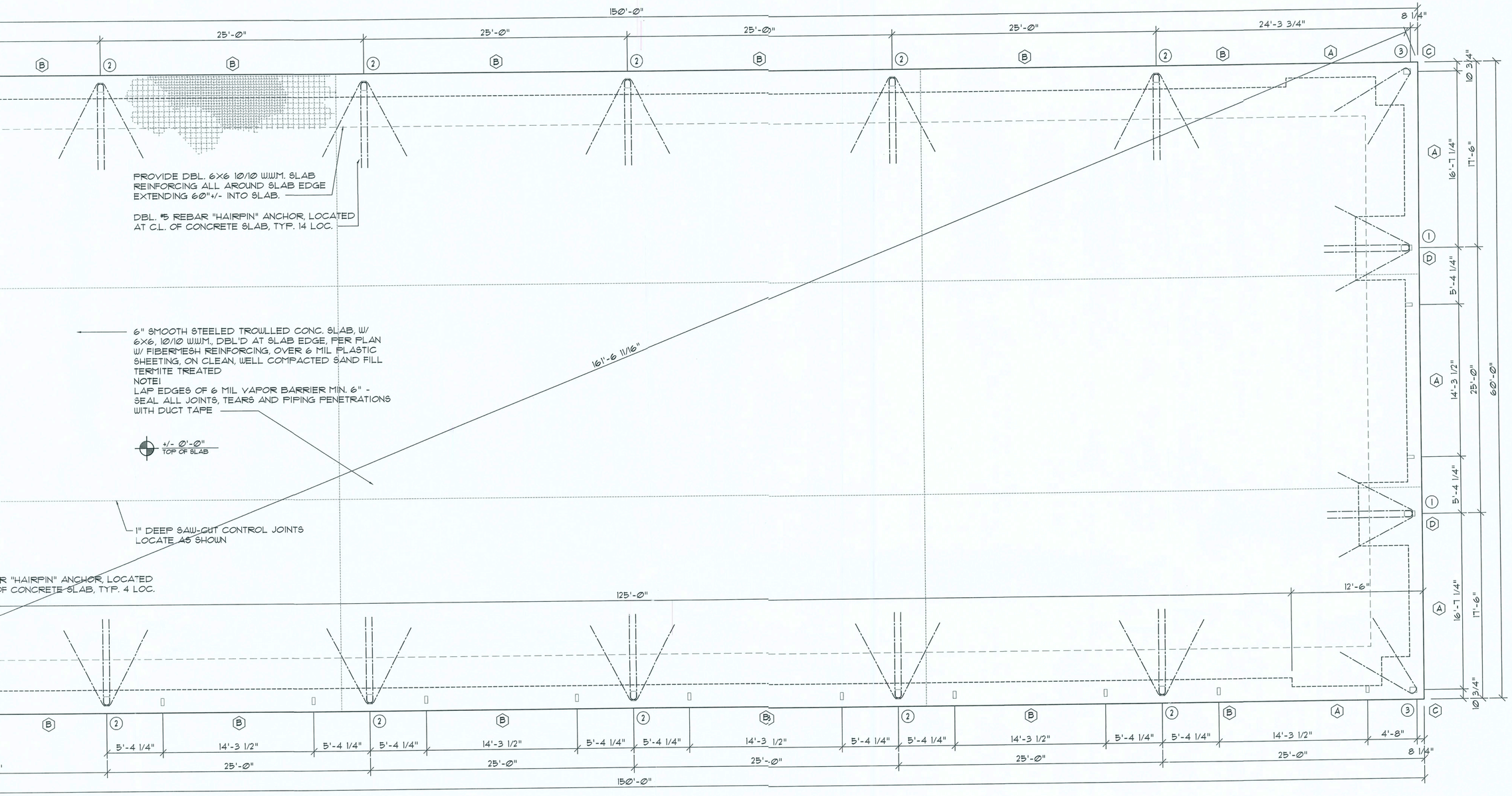
METAL BUILDING FOUNDATION for:
UTILITY EQUIPMENT SERVICES
LAKE CITY, FLORIDA
STRUCTURAL NOTES

Celebrating 47 Years of Service
1972 - 2019
N.P. Geisler, Architect
AR0007005

NICHOLAS PAUL GEISLER ARCHITECT
N.C.A.R.B. Certified
1758 NW Brown Rd.
Lake City, FL 32055
386-365-4355

DATE: 23 APR 2019
COMM: 2K1927
SHEET: S.2
2 OF 2

12 July 2019
AR0007005



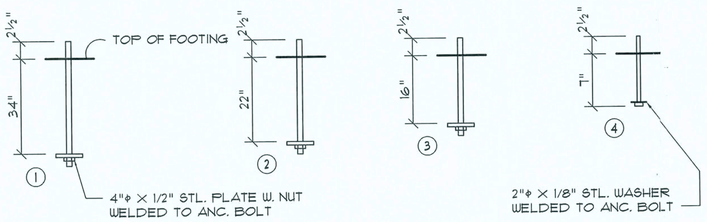
V FOUNDATION SIZING:

S AND DEVELOPED LENGTHS INDICATED IN
INED USING SHEAR FRICTION THEORY AS
UIDE No.1, SECTION 9.2, ASSUMING AN
STM A307 OR A36. THE COMBINED FORCES
STEEL FRAME RESULTING IN A VERTICAL
OUNDATION WERE DEVELOPED AS FOLLOWS:

PER BOLT
LT DUE TO DIRECTLY APPLIED LOAD = P/N
LT DUE TO SHEAR FRICTION = V / (n X u)

E RESISTED BY ANCHOR BOLT GROUP
CE TO BE RESISTED BY ANCHOR BOLT GROUP
R BOLTS
CTION (TAKEN AS 0.1 FOR UNGROUTED BASE
ROUTED BASE PLATES)

on PLAN



NOTE!
ALL ANCHOR BOLTS ARE ASTM GRADE A36 STEEL ROD, THREADED 3", OR GRADE A307, BLACK, AND FREE FROM RUST AND SCALE

NOTE!
ALL DOOR/ENTRY OPENINGS INDICATED ARE NET SIZE, AND REQUIRE 2 #4 ANCHOR BOLTS AT EACH SIDE OF THE OPENING
REFER TO METAL BUILDING SHOP DRAWINGS FOR DETAIL

Anchor Bolt DETAILS (1) (2) (3) (4)

SCALE: 1" = 1'-0"

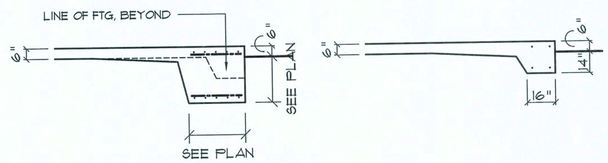
FOOTING SCHEDULE

(A) 16" X 18" X CONTINUOUS, FOOTING, W/ 2 #5 REBAR, BOTTOM, CONT., LAP SPLICE ALL REBAR A MINIMUM OF 40 BAR DIAMETERS - TYPICAL

(B) 26" X 26" X CONTINUOUS, FOOTING, W/ 4 #5 REBAR, TOP & BOTTOM, CONT., LAP SPLICE ALL REBAR A MINIMUM OF 40 BAR DIAMETERS - TYPICAL

(C) 48" X 48" X 20", FOOTING, W/ 5 #5 REBAR, EA. WAY, TOP & BOTTOM, CONT., BATTER SIDES OF FOOTING MIN. 15° - SEE SLAB DETAIL, BELOW

(D) 72" X 72" X 38"", FOOTING, W/ 7 #5 REBAR, TOP & BOTTOM, EACH WAY & BATTER SIDES OF FOOTING MIN. 15° - SEE SLAB DETAIL, BELOW



FOOTING @ MAIN FRAMES
SCALE: 1/4" = 1'-0"

FOOTING @ SLAB EDGE
SCALE: 1/4" = 1'-0"

REVISION:

DRAWN:
rpg

METAL BUILDING FOUNDATION for: UTILITY EQUIPMENT SERVICES

LAKE CITY, FLORIDA

FOUNDATION PLAN

Celebrating 47 Years of Service
1972 - 2019
N.P. Geisler, Architect
AR0007005

NICHOLAS PAUL GEISLER
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23 APR 2019
COMM:
2K1927

SHEET:
S.1
1 OF 2

12 July 2019
AR0007005