

STRUCTURAL SCOPE OF WORK:
THE STRUCTURAL SCOPE OF WORK IS INTENDED TO ADDRESS THE STRUCTURAL ROOF REPAIRS & COMPLETE ROOF COVERING REPLACEMENT AT THE EXISTING SIMMONS RESIDENCE LOCATED AT 312 SW Gemini Gln, Fort White, Columbia Co., FL 32038 PARCEL 25-7S-16-04321-047. THE ENGINEERED DRAWINGS (PLANS) HERE-IN PROVIDE FOR THE REPAIR OF REPAIR TO THE EXISTING ROOF FRAMING AND ASSOCIATED SHEATHING, AT THE SUBJECT SITE ONLY, AND THE REPAIR DETAILS WITHIN ARE NOT TO BE USED FOR ANY OTHER PURPOSE.

- GENERAL NOTES:
- STRUCTURAL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST FLORIDA BUILDING CODE (FBC 2023-8TH EDITION).
 - THE MOST STRINGENT REQUIREMENTS APPLY IN CASE OF CONFLICT BETWEEN STANDARDS, LOCAL CODES, AND THESE DRAWINGS.
 - OBTAIN ALL REQUIRED PERMITS FOR THE PROPER LEGAL EXECUTION OF THE WORK DESCRIBED IN THESE DRAWINGS.
 - CONTRACTOR TO PROVIDE A CONTINUOUS LOAD PATH FROM RAFTERS TO FOUNDATION FOR ALL NEW CONSTRUCTION AND PROPER SHORING/RESHORING OF LOAD-BEARING ELEMENTS DURING CONSTRUCTION.
 - ALL DIMENSIONS INDICATED ON THESE DRAWINGS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.
 - CONTACT THE ENGINEER OF RECORD (EOR) IF ANY UNFORESEEN CONDITIONS ARE ENCOUNTERED. FAILURE BY THE CLIENT OR CONTRACTOR TO NOTIFY THE EOR, RELIEVES THE EOR OF COSTS OF REMEDYING THE DEFECT.
 - THE EOR SHALL NOT BE RESPONSIBLE FOR AND WILL NOT HAVE CONTROL OR CHARGE OVER THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION, NOR WILL THE EOR BE RESPONSIBLE FOR CONTRACTOR'S SAFETY PRECAUTIONS OR FAILURE TO PERFORM THE WORK IN ACCORDANCE WITH THESE DRAWINGS. FURTHERMORE, THE EOR SHALL NOT BE RESPONSIBLE FOR THE OMISSIONS AND ERRORS OF THE CONTRACTOR, SUB-CONTRACTORS, OR ANY OF THEIR RELATED AGENTS.

- CODES AND DESIGN CRITERIA:
ALL CONSTRUCTION IS TO BE PERFORMED IN CONFORMANCE WITH THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, UNLESS NOTED OTHERWISE (UNO.):
- AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE), ASCE 7-22: "MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES"
 - AMERICAN CONCRETE INSTITUTE (ACI), ACI 318-19: "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), "STEEL CONSTRUCTION MANUAL, 2017" - 15TH EDITION
 - NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION - 2018
 - THE MASONRY SOCIETY (TMS), TMS402/602-16: "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES" - 2016
 - WOOD FRAME CONSTRUCTION MANUAL (WFCM) FOR ONE- AND TWO-FAMILY DWELLINGS - 2018

DESIGN LOADS:	
DEAD LOAD - ROOF (D)	10 PSF
LIVE LOAD - UNINHABITABLE ATTIC - NOT FOR STORAGE (L)	10 PSF
LIVE LOAD - ROOF (L _r)	20 PSF
FLOOR LIVE LOAD (L)	40 PSF

- FOUNDATION NOTES:
- FOUNDATION DESIGN IS BASED ON 2,000 PSF MINIMUM SOIL BEARING PRESSURE. CONTRACTOR TO CONFIRM FOUNDATION BEARING CAPACITY.
 - PROVIDE TESTING ON SOIL COMPACTION PRIOR TO CONCRETE PLACEMENT OPERATIONS. SOIL COMPACTION SHOULD ACHIEVE 95% MODIFIED PROCTOR DENSITY.
 - BEARING SOILS SHALL BE FREE OF ORGANIC MATERIAL AND FREE OF WATER PRIOR TO CONCRETE PLACEMENT.
 - FOUNDATIONS SHALL BE ALLOWED TO SETTLE PRIOR TO VERTICAL CONSTRUCTION.
 - SLAB FOUNDATION SUBGRADE SOILS SHALL BE TERMITE TREATED.

- CAST-IN-PLACE CONCRETE:
- CAST-IN-PLACE CONCRETE WORK SHALL BE DONE IN ACCORDANCE TO ACI 318-19 - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
 - CAST-IN-PLACE CONCRETE SHALL BE NORMAL WEIGHT STRUCTURAL CONCRETE WITH A 28-DAY COMPRESSIVE STRENGTH (f_c) OF 3,000 PSI.
 - CONCRETE SHALL HAVE A MAXIMUM W/C RATIO OF 0.50 FOR FOOTINGS AND 0.45 FOR ALL OTHER CONCRETE.
 - DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 40 WITH A YIELD STRENGTH (f_y) OF 40 KSI.

- CONCRETE MASONRY:
- CONCRETE MASONRY WORK SHALL BE DONE IN ACCORDANCE WITH TMS 402/602-16 - BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES.
 - THE MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f_m) SHALL BE 1,500 PSI.
 - CONCRETE BLOCK SHALL BE NORMAL WEIGHT (MINIMUM 125 PCF) CONFORMING TO ASTM C90.
 - MORTAR SHALL BE TYPE S, M, OR N IN CONFORMANCE WITH ASTM C476.
 - USE HORIZONTAL LADDER TYPE JOINT REINFORCEMENT SPACED AT 16" O.C. VERTICALLY CMU WALL CONSTRUCTION
 - PROVIDE FULL MORTAR COVERAGE ON FACESHELL AND WEBS.

- WOOD FRAMING:
- WOOD FRAMING SHALL BE IN CONFORMANCE WITH THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION - 2018.
 - UTILIZE DRESSED SEASONED LUMBER, S4S, 19% MAX. MOISTURE CONTENT AT TIME OF DRESSING.
 - ALL WOOD FRAMING SHALL CONSIST OF SOUTHERN YELLOW PINE (SYP) #2 OR BETTER UNLESS NOTED OTHERWISE (UNO).
 - ROOF SHEATHING SHALL CONSIST OF 7/16" APA RATED STRUCTURAL SHEATHING ATTACHED WITH 8d x 2 ½" L RINGSHANK NAILS @ 6" O.C. ALONG EDGES & 6" O.C. IN FIELD (ALL ZONES).
 - WALL SHEATHING SHALL CONSIST OF 7/16" APA RATED STRUCTURAL SHEATHING ATTACHED WITH 8d x 2 ½" L RINGSHANK NAILS @ 6" O.C. ALONG EDGES & 6" O.C. IN FIELD (ALL ZONES).
 - WOOD IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED (P.T.) LUMBER. USE GALVANIZED NAILS IN P.T. LUMBER.
 - ALL FRAMING ANCHORS, CLIPS, STRAPS, ETC., SHALL BE MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY OR APPROVED EQUAL. ALL SPECIFIED FASTENERS MUST BE INSTALLED PER WRITTEN MANUFACTURER'S INSTRUCTIONS.

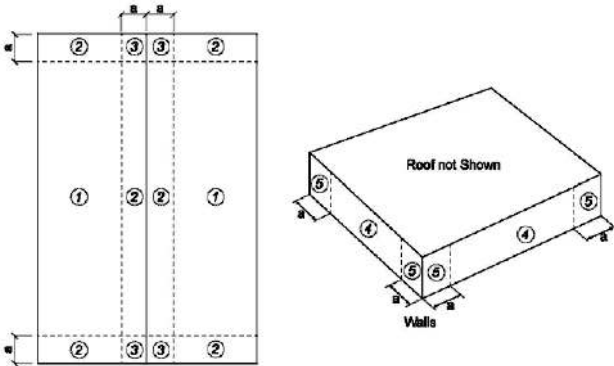
- WIND LOAD NOTES:
- ULTIMATE WIND PRESSURES TO BE USED IN THE DESIGN OF ALL COMPONENTS AND CLADDING ELEMENTS.
 - REFER TO WIND PRESSURE DIAGRAM FOR ZONE LOCATIONS AND EXTENTS.
 - POSITIVE PRESSURES ACT TOWARD COMPONENT SURFACES AND NEGATIVE PRESSURES ACT AWAY FROM COMPONENT SURFACES.
 - VALUES FOR OVERHANGS INCLUDE PRESSURE CONTRIBUTIONS FROM BOTH UPPER AND LOWER SURFACES.
 - LINEAR INTERPOLATION BETWEEN EFFECTIVE WIND AREA VALUES IS PERMITTED.

WIND LOAD DESIGN CRITERIA:	
PRESSURES DETERMINED FROM	
ASCE 7-22 CHAPTER 30 PART 1	130 MPH
ULTIMATE WIND VELOCITY (V _{ult})	II
RISK CATEGORY	B
WIND EXPOSURE CATEGORY	ENCLOSED
ENCLOSURE CLASSIFICATION	< 15 FT
MEAN ROOF HEIGHT	2-1/2 : 12
ROOF SLOPE	+/- 0.18
INTERNAL PRESSURE COEFFICIENT (G _{cpi})	3.80 FT
DIMENSION 'A' (EDGE ZONES)	COMPONENTS & CLADDING (C&C) PRESSURES DETERMINED FROM
COMPONENTS & CLADDING (C&C)	ASCE 7-22 CHAPTER 30 PART 1 FIGURES 30.3-1 & 30.3-2B

Wind Pressure Summary for C&C Roof & Wall based Upon Areas Ch 30 Pt 1 (Table 1)
All wind pressures include a Load Factor (LF) of 1.0

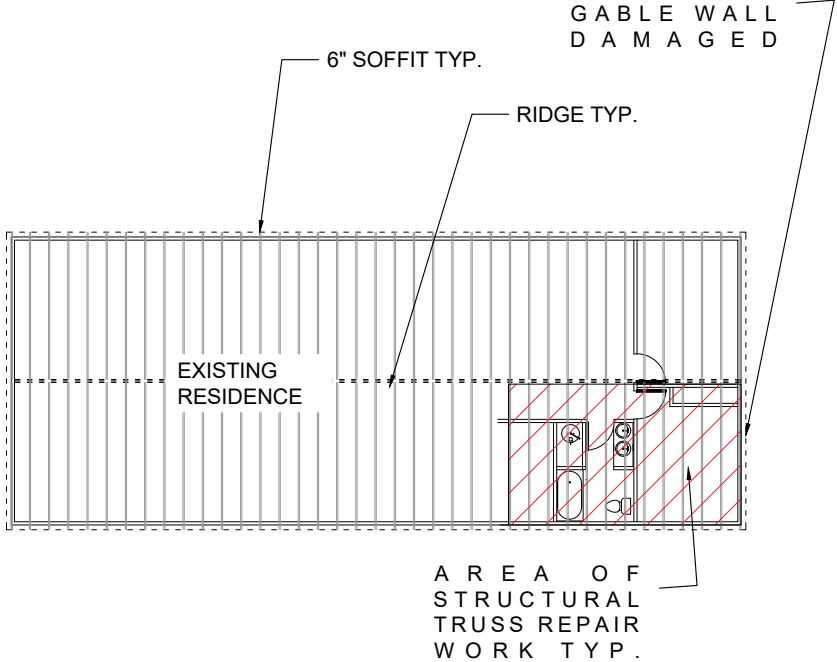
Zone	Figure	Pos A ≤	Neg A ≤	Pos A =	Neg A =	Pos A =	Neg A =	Pos A =	Neg A =
		10 ft ²	10 ft ²	20 ft ²	20 ft ²	50 ft ²	50 ft ²	100 ft ²	100 ft ²
		psf	psf	psf	psf	psf	psf	psf	psf
1	30.3-2B	16.43	-45.93	16.00	-39.49	16.00	-30.97	16.00	-24.53
2	30.3-2B	16.43	-60.68	16.00	-52.39	16.00	-41.43	16.00	-33.15
3	30.3-2B	16.43	-79.64	16.00	-68.22	16.00	-53.13	16.00	-41.71
4	30.3-1	24.86	-26.97	23.74	-25.85	22.26	-24.37	21.14	-23.25
5	30.3-1	24.86	-33.29	23.74	-31.05	22.26	-28.09	21.14	-25.85
Zone	Figure	Pos A =	Neg A =	Pos A =	Neg A =	Pos A >	Neg A >		
		200 ft ²	200 ft ²	300 ft ²	300 ft ²	500 ft ²	500 ft ²		
		psf	psf	psf	psf	psf	psf		
1	30.3-2B	16.00	-18.09	16.00	-16.00	16.00	-16.00		
2	30.3-2B	16.00	-24.86	16.00	-24.86	16.00	-24.86		
3	30.3-2B	16.00	-41.71	16.00	-41.71	16.00	-41.71		
4	30.3-1	20.02	-22.13	19.37	-21.47	18.54	-20.65		
5	30.3-1	20.02	-23.61	19.37	-22.30	18.54	-20.65		

WIND ZONE DIAGRAM:



PROJECT:

EXISTING SIMMONS RESIDENCE
312 Gemini Gln,
Fort White, Columbia Co., FL 32038
PARCEL 25-7S-16-04321-047
JOB NO: FE24-145



PLAN VIEW SCALE: NTS



THIS ITEM HAS BEEN DIGITALLY
SIGNED & SEALED BY JOSEPH S.
FIELDEN, P.E. ON THE DATE
INDICATED BELOW. PRINTED
COPIES OF THIS DOCUMENT ARE
NOT CONSIDERED TO BE AN
OFFICIAL DOCUMENT. DIGITAL
SIGNATURES REQUIRE
VERIFICATION ON ANY
ELECTRONICS COPIES.

SHEET INDEX:

- S-1 GENERAL NOTES & WIND LOAD INFORMATION
S-2 ROOF FRAMING PLAN
S-3 STRUCTURAL DETAILS

Digitally
signed by
Joseph S
Fielden
Date:
2024.09.30
23:06:49
'-04'00



JOSEPH S. FIELDEN, P.E.
FLORIDA PE# 77726

DESIGNED BY: FIELDEN ENGINEERING, LLC.
542 NW 39th RD. UNIT #405
GAINESVILLE, FL 32607
FL CA# 34626
P: (352) 505-3995
E: jsfielden@gmail.com

FIELDEN
ENGINEERING
LLC.

PROJECT:
EXISTING SIMMONS RESIDENCE
312 Gemini Gln,
Fort White, Columbia Co., FL 32038
PARCEL 25-7S-16-04321-047
JOB NO: FE24-145

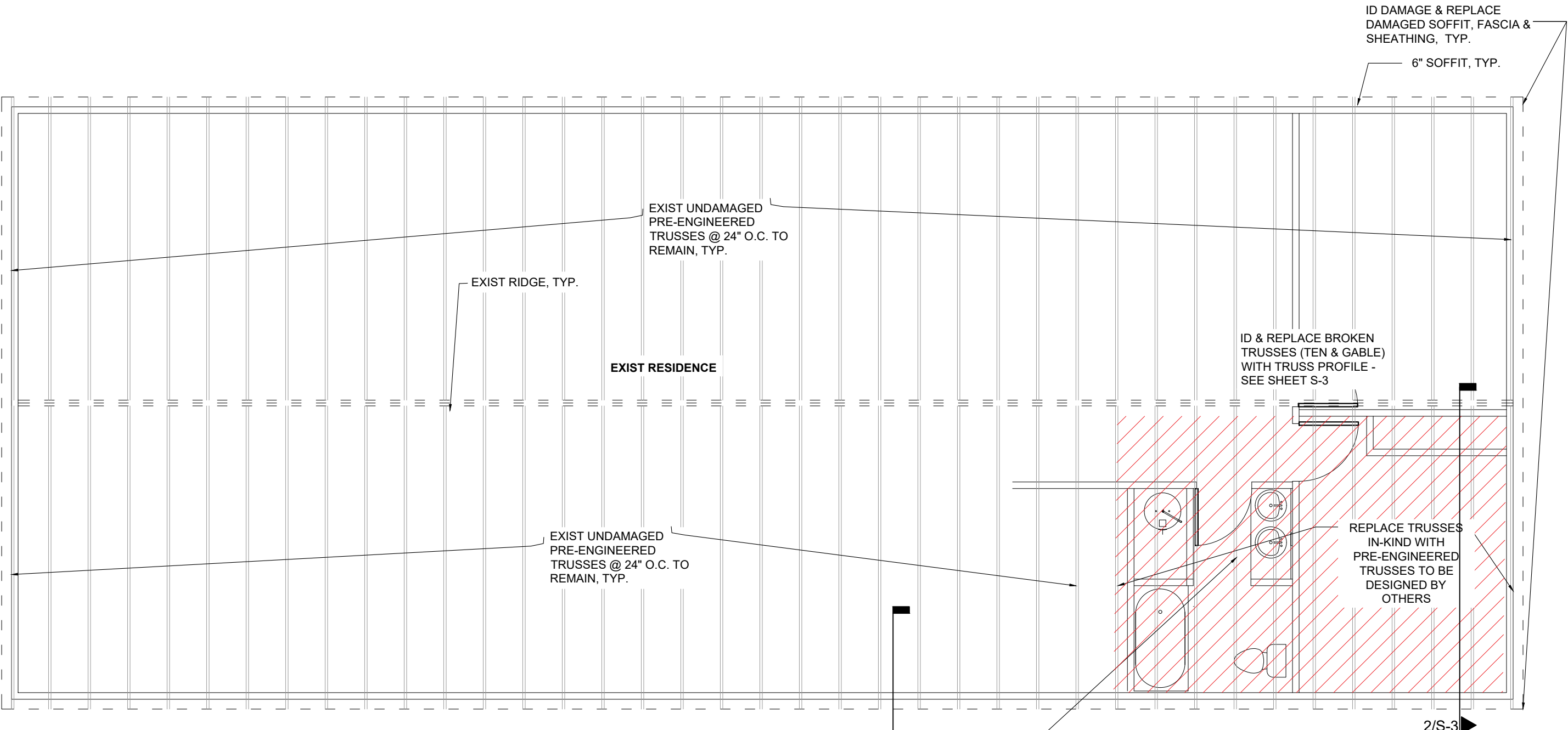
DATE ISSUED:

9/30/2024

REVISION:

GENERAL NOTES &
WIND LOAD
INFORMATION

SHEET
S-1



ROOF FRAMING PLAN NOTES:

1. ALL DIMENSIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.
2. CONTRACTOR TO PROVIDE A CONTINUOUS LOAD-PATH FOR ALL LOAD-BEARING FRAMING ELEMENTS DURING CONSTRUCTION.
3. ROOF SHEATHING SHALL BE REPLACED, IN-KIND, AS NEEDED WITH 7/16" APA RATED STRUCTURAL SHEATHING ATTACHED WITH 8d (0.131"Ø) X 2 1/2" L RINGSHANK NAILS @ 6" O.C. ALONG EDGES & 6" O.C. IN FIELD (ALL ZONES).
4. PROVIDE MINIMUM UNDERLAYMENT PER 1507.1.1.1 2023 FBC - 8TH EDITION
5. INSTALL NEW ROOFING OVER ENTIRE ROOF PER MANUF. WRITTEN INSTRUCTIONS TYP.

ROOF FRAMING PLAN
W/ PARTIAL FLOORPLAN



THIS ITEM HAS BEEN DIGITALLY SIGNED & SEALED BY JOSEPH S. FIELDEN, P.E. ON THE DATE INDICATED BELOW. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED TO BE AN OFFICIAL DOCUMENT. DIGITAL SIGNATURES REQUIRE VERIFICATION ON ANY ELECTRONIC COPIES.

Digitally signed
by Joseph S
Fielden
Date: 2024.09.30
'23:07:01 +04'00

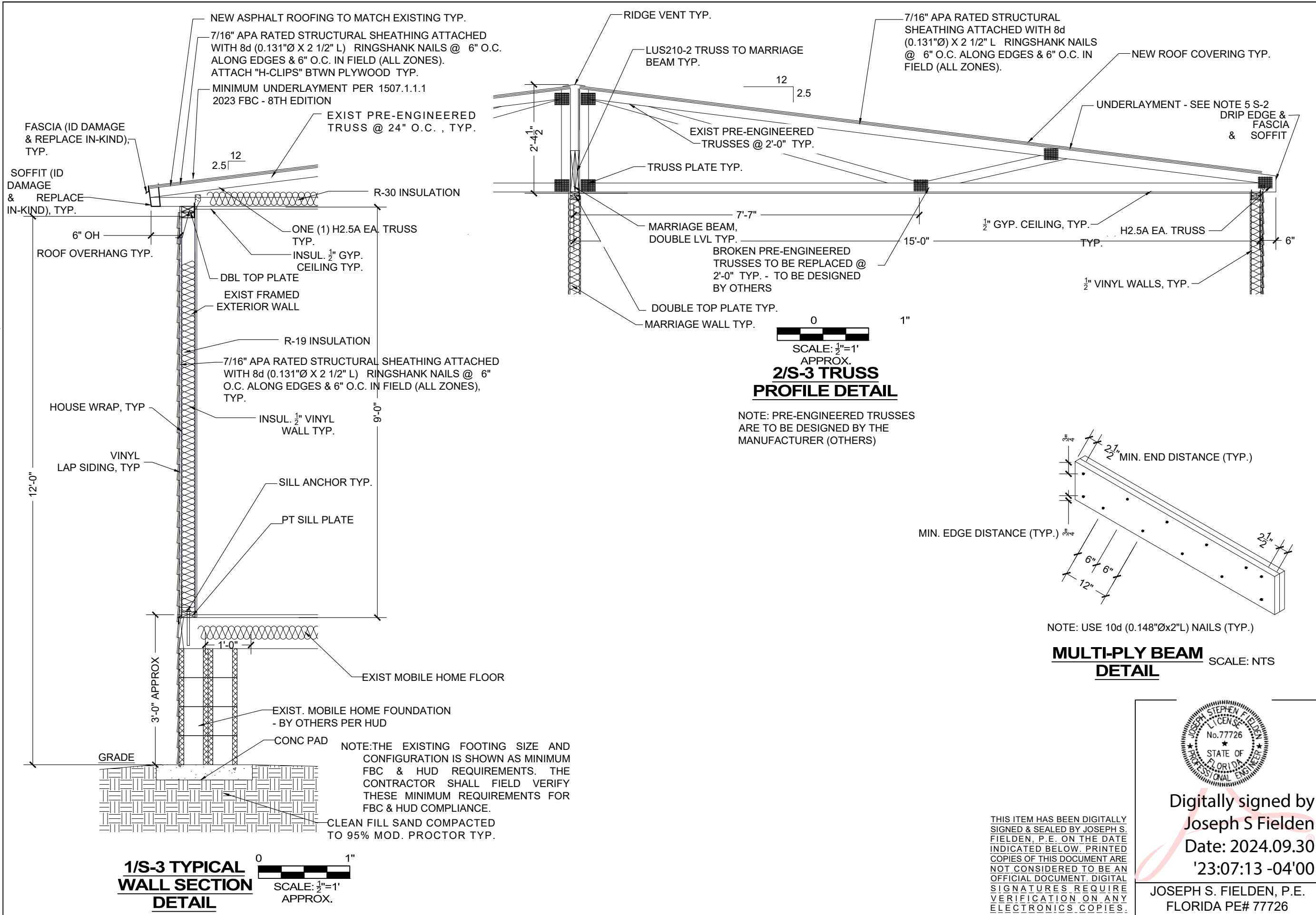


JOSEPH S. FIELDEN, P.E.
FLORIDA PE# 77726

DATE ISSUED:
9/30/2024
REVISION:
ROOF FRAMING PLAN
SHEET S-2

DESIGNED BY: FIELDEN ENGINEERING, LLC.
542 NW 39th RD. UNIT #405
GAINESVILLE, FL 32607
FL CA# 34626
P: (352) 505-3995
E: jsfielden@gmail.com

PROJECT:
EXISTING SIMMONS RESIDENCE
312 Gemini Gln,
Fort White, Columbia Co., FL 32038
PARCEL 25-7S-16-04321-047
JOB NO: FE24-145



DESIGNED BY:	FIELDEN ENGINEERING, LLC.
PROJECT:	EXISTING SIMMONS RESIDENCE
	312 Gemini Gln,
	Fort White, Columbia Co., FL 32038
	PARCEL 25-7S-16-04321-047
	JOB NO: FE24-145
DATE ISSUED:	9/30/2024
REVISION:	
STRUCTURAL DETAILS	
SHEET	
S-3	