NEW 3/ 2/ 1 CARPORT MONO/ HIP/ RIGHT SFR

HABITAT FOR HUMANITY

HOUSE: 241
PID: 9033-1076-04

MARION COUNTY, FLORIDA

2024-04-2662

STRUCTURAL APPROVAL
BY REX D. BROWN
PX4054
MARION COUNTY PLANS EXAMINER
(SEAL VERIFIED BY OTHERS)

BUILDING CODES

FACILITY DESCRIPTION

TYPE OF ROOF – SLOPED
ROOF MATERIAL – FIBERGLASS SHINGLES

BUILDING AND SITE INFORMATION

ZONING – R1
LAND USE – SINGLE FAMILY RESIDENTIAL

BUILDING HEIGHT

ACTUAL HEIGHT – 12'–4" (1 STORY)

BUILDING AREA TABULATION

TOTAL BUILDING AREA – 1576 SQ.FT.

SOIL BEARING CAPACITY

MINIMUM CODE REQUIREMENTS – 2000 LB PSF.
MINIMUM COMPACTION – 90% MOD. DRY DENSITY

TYPE OF CONSTRUCTION

TYPE V–B UNSPRINKLERED

OCCUPANCY CLASSIFICATION & LOAD

CLASSIFICATION – RESIDENTIAL

IMPORTANCE FACTOR – (1)

STRUCTURAL LOADS

ROOF LIVE LOADS – 20 P.S.F. REDUCIBLE
COLLATERAL LOAD – 2 P.S.F.
FLOOR LIVE LOADS – 40 P.S.F
ULTIMATE WIND SPEED – 140 M.P.H.
NOMINAL WIND SPEED – 108 M.P.H.
BASIC VELOCITY P.S.F. – 38.47 P.S.F. @ 33–0" MEAN ROOF HT.

FIRE RESISTANCE OF COMPONENTS

INTERIOR BEARING WALLS – N/A
EXTERIOR BEARING WALLS – N/A
COLUMNS AND BEAMS – N/A
ROOF/CEILING ASSEMBLY – N/A

PLUMBING REQUIREMENTS

RESIDENTIAL – N/A

	REQUIRED	PROVIDED
TOILET –	1	2
WASHER CONNECTION –	1	1
LAVATORY –	1	2
TUB –	1	2

EGRESS REQUIREMENTS

	REQUIRED	PROVIDED
MINIMUM NUMBER OF EXITS –	1	1
WIDTH OF EGRESS DOOR–	36" HINGED ENTRANCE DOOR	
FIRST FLOOR SLEEPING AREAS –	5 SQ.FT. OF GLASS IN ROOMS W/O DOORS TO THE EXTERIOR	

DESIGN CRITERIA

DESIGN WIND SPEED	140 MPH
RISK CATEGORY	II
EXPOSURE CATEGORY	C
INTERNAL WIND COEFFICIENT	+0.18 & –0.18
ALL COMPONENTS INCLUDING DOORS AND WINDOWS SHALL BE DESIGNED TO THE FOLLOWING PRESSURES:	

EFFECTIVE AREA	ALLOWABLE PRESSSURE (PSF)	
SQ. FT.	OUT	IN
10	24.9	–33.2
20	23.8	–31.0
50	22.4	–28.1
100	21.3	–25.9

ATTIC VENTILATION REQUIREMENTS

REQ'D: 1,576 SF / 300 = 5.26 SF
EAVE: 5.26/2 = 2.63 SF
RIDGEVENT: 7.78/2 = 2.63 SF
PROVIDED:
EAVE: 172 LF X 9/144/LF = 10.75 SF
RIDGEVENT: 24 LF X .167" = 4.01 SF

NOTE: RIDGE VENTING IS TO BE PROVIDED IN ADDITION TO SOFFIT VENTILATION

EXTERIOR DOOR MANUFACTURER:

SEE ATTACHED DATA

WINDOW MANUFACTURER:

SEE ATTACHED DATA

ROOF SHINGLE MANUFACTURER:

SEE ATTACHED DATA

DESIGN CODE REFERENCE

BUILDING CODE – FLORIDA RESIDENTIAL BUILDING CODE – 8th EDITION (2023)
ELECTRICAL CODE – NATIONAL ELECTRIC CODE – 2021 EDITION
PLUMBING CODE – FLORIDA PLUMBING CODE – 8th EDITION (2023)
MECHANICAL CODE – FLORIDA MECHANICAL CODE – 8th EDITION (2023)
FIRE CODE – FLORIDA FIRE PREVENTION CODE – 8th EDITION (2023)
GAS CODE – FLORIDA FUEL GAS CODE – 8th EDITION (2023)
NFPA 58 – LIQUEFIED PETROLIUM GAS – (2020)
NFPA 72 – NATIONAL FIRE ALARM CODE (2019)
NFPA 72E – AUTOMATIC DETECTION DEVICES (LATEST EDITION)
NFPA 101 – LIFE SAFETY CODE (2021)
NFPA 80 – FIRE DOORS AND WINDOWS (2019)
OSHA
ACI–318 – BUILDING REQUIREMENTS FOR REINFORCED CONCRETE (2019)
AISC CODE OF STANDARD PRACTICE (MANUAL OF STEEL CONSTRUCTION, 9th EDITION)
S–310 SPECIFICATIONS FOR THE DESIGN FABRICATION AND ERECTION OF STEEL

CONSTRUCTION NOTES

GENERAL

G01 – THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OR START OF CONSTRUCTION.
G02 – THE GENERAL CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, ALL WORKERS AND ALL OTHER PEOPLE PRESENT DURING CONSTRUCTION. HE SHALL SUPERVISE AND DIRECT THE WORK AND BE RESPONSIBLE FOR ALL CONSTRUCTION.
G03 – THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ANCHORS, EMBEDS, SUPPORTS, OR ANY OTHER ITEMS WHICH MAY EFFECT STRUCTURAL DRAWINGS.

FOUNDATION

F01 – ALL ORGANIC MATERIALS, REFUSE MATERIALS AND SOFT AREAS IN SOIL SHALL BE REMOVED AND THE SOIL PREPARED FOR AN ALLOWABLE BEARING PRESSURE OF 2000psi.
F02 – SHOULD THE CONTRACTOR DISCOVER ANY CONDITION WHICH COULD PREVENT THE ATTAINMENT OF THE STATED DESIGN PRESSURE, HE SHALL NOTIFY THE ARCHITECT OR ENGINEER IMMEDIATLY.

SLAB ON GRADE

F03 – COMPACT INTERIOR FILL TO 95% MINIMUM MAX DRY DENSITY (MODIFIED PROCTOR, ASTM D1557–58T OPTIMUM MOISTURE CONTENT). SOIL COMPACTION SHALL BE FIELD CONTROLLED BY A REPRESENTATIVE FROM A QUALIFIED LABORATORY APPROVED BY THE ENGINEER. EACH LAYER OF FILL SHALL NOT EXCEED 10" AND SHALL BE COMPACTED PRIOR TO THE PLACEMENT OF THE NEXT FILL LAYER.
F03 – ALL FLOOR SLABS SHALL BE PLACED UPON A 4" THICK SAND LAYER FOR FINE GRADING.

CONCRETE AND REINFORCING

C01 – CONCRETE WORK SHALL CONFORM TO ACI STANDARD BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318–19).
C02 – CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH AS FOLLOWS:
FOUNDATIONS, FILLED CELLS AND CONCRETE BEAMS – 3000psi
SLABS ON GRADE– 3000psi
C03 – ALL REBAR SHALL CONFORM TO ASTM–615, GRADE 40, AND SHALL LAP A MIMIMUM OF 25" AT ALL JOINTS. SLABS WITH FIBER MESH OR WELDED WIRE FABRIC SHALL CONFORM TO ASTM A–185–02.
C04 – COVER FOR ALL REINFORCING STEEL SHALL BE AS FOLLOWS (UNLESS NOTES):
ALL FOOTINGS – 3"
SLABS ON GRADE – 1–1/2" FROM TOP OF CONCRETE
ALL BEAMS – 1–1/2" ON STIRRUPS
C05 – VERTICAL REBAR WALL REINFORCING SHALL BE A STANDARD HOOK WITH A 25" PROJECTION ABOVE SLAB AND HAVE A MINIMUM 7" EMBEDMENT.

MASONRY

M01 – ALL MASONRY CONSTRUCTION SHALL COMFORM TO ACI STANDARD BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530–14).
M02 – ALL CONCRETE BLOCKS SHALL CONFORM TO ASTM C 90. 128 DAY STRENGTH MUST EQUAL 2000psi, FM SHALL EQUAL 1500psi LAID IN A RUNNING BOND.
M03 – ALL MORTAR SHALL BE TYPE S OR M.
M04 – REINFORCE ALL CMU WALLS WITH A CONTINUOUS HORIZONTAL BOND BEAM GROUTED SOLID AND REINFORCE WITH A MINIMUM OF (1) #5 REBAR WITH A 25" OVERLAP AT EACH JOINT.
M05 – WHERE SHOWN, ALL VERTICAL CELLS OF BLOCK MASONRY SHALL BE FILLED WITH 3000psi GROUT HAVING A 28 DAY STRENGTH OF 3000psi AND A GROUND SLUMP NOT LESS THAN 8". REINFORCE WITH A MINIMUM OF (1) #5 VERTICAL REBAR WITH A MINIMUM 25" OVERLAP AT EACH JOINT.
M06 – GROUT FOR FILLED CELLS SHALL BE POURED OR PUMPED IN LIFTS NOT TO EXCEED 10'–0" IN HEIGHT AND SHALL BE CONSOLIDATED AT THE TIME OF POURING BY RODDING OR VIBRATING.
M07 – PROVIDE KNOCKOUTS IN CMU AT TH BASE OF EACH FILLED CELL TO ALLOW VISUAL VERIFICATION OF COMPLETE GROUT PENETRATION.

STRUCTURAL LUMBER

L01 – ALL STRUCTURAL AND LOAD BEARING WALLS SHALL HAVE A MINIMUM FB OF 1200psi.
L02 – WALLS HIGHER THAN 9'–0" SHALL HAVE INTERMEDIATE BRIDGING SPACED NOT GREATER THAN 72" APART.
L03 – ALL LOAD BEARING WALLS SHALL HAVE A DOUBLE SYP No.2 TOP PLATE.
L04 – ALL WOOOD IN CONTACT WITH MASONRY OR CONCRETE SHALL SHALL BE PRESSURE TREATED.

STRUCTURAL STEEL

S01 – STEEL WORK SHALL CONFORM TO THE AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (USE THE LATEST EDITION).

DRAWING INDEX

ARCHITECTURAL

COVER – BUILDING CODE DATA
A1 – EXTERIOR ELEVATIONS
A2 – FLOOR PLAN
ELECTRICAL PLAN
DOOR AND WINDOW SCHEDULES
A3 – WALL SECTIONS & DETAILS
S1 – FOUNDATION PLAN
S2 – ROOF FRAMING PLAN
LINTEL PLAN

4/8/2024 7:37 AM

DRAWING ISSUE PERMIT 01 APRIL 2024

REVISED:

David P King
Digitally signed by David P King
DN: c=US, o=Florida, dnQualifier=A01410C0000017DA5DE3550000A392, cn=David P King
Date: 2024.04.08 07:54:02 -04'00'

SEAL

STATE OF FLORIDA
DAVID PAUL KING, JR.
AR0012999
REGISTERED ARCHITECT

GENERAL CONTRACTOR

David P. King, Jr
ARCHITECT
7500 SW 61ST AVE
SUITE 400
OCALA, FL. 34476
352.873.3737 (PH)
352.873.0737 (FAX)

REGISTRATIONS:
STATE OF FLORIDA AR 12,999
STATE OF GEORGIA 5044

PROJECT

NEW SINGLE FAMILY RESIDENCE

3/2/1 CARPORT RIGHT
CMU/ HIP/ MONO
FOR
HABITAT FOR
HUMANITY
HOUSE 241

PID : 9033-1076-04
MARION COUNTY, FLORIDA

DRAWN BY: DPK
CHECKED BY:
APPROVED BY: DPK
ARCHITECT'S PROJECT No.:

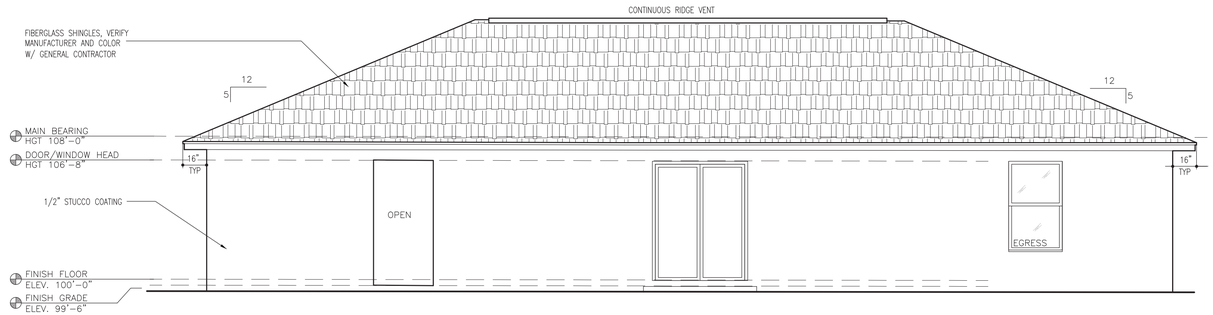
SHEET TITLE:

COVER
BUILDING CODE DATA

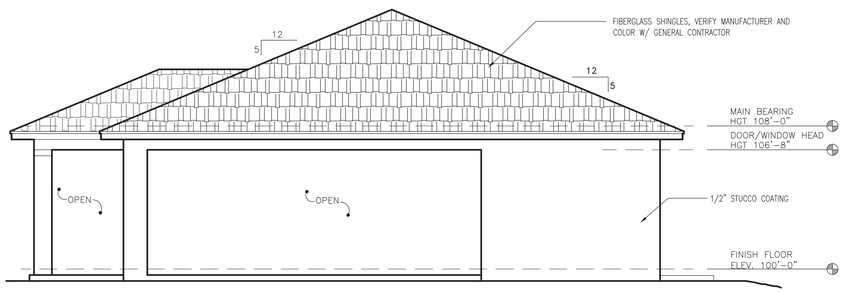
SHEET NUMBER

C

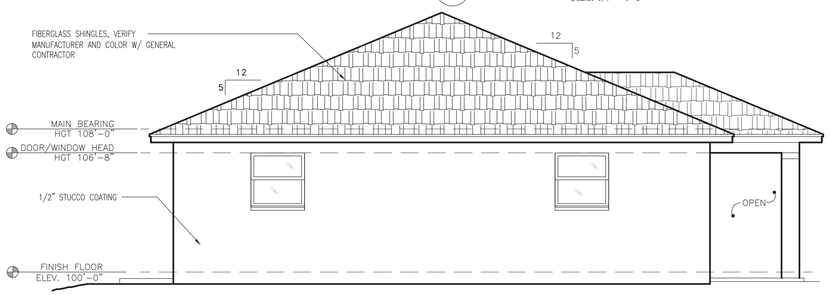
C:\USERS\DAVID\ONEDRIVE\2024\RESIDENTIAL\HABITAT 4 HUMANITY\MARION COUNTY HOUSES\MC 3_2_1 LEFT\PROJ01PES\9033-1076-04 RH MARION COUNTY 3_2_1 RIGHTHAND HOUSE 241.DWG



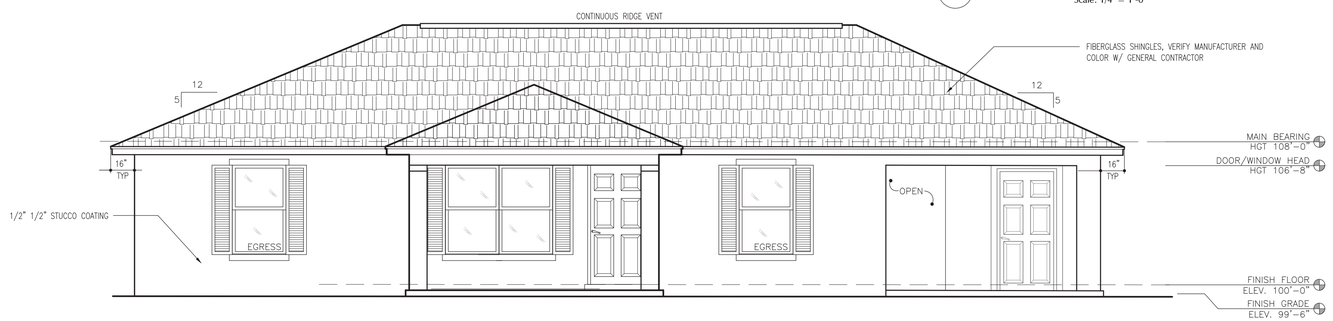
REAR ELEVATION
Scale: 1/4" = 1'-0"



RIGHT ELEVATION
Scale: 1/4" = 1'-0"



LEFT ELEVATION
Scale: 1/4" = 1'-0"



FRONT ELEVATION
Scale: 1/4" = 1'-0"

4/8/2024 7:37 AM

DRAWING ISSUE PERMIT 01 APRIL 2024

REVISED:

STRUCTURAL APPROVAL
BY REX D. BROWN
PX4054
MARION COUNTY PLANS EXAMINER
(SEAL VERIFIED BY OTHERS)

SEAL

STATE OF FLORIDA
DAVID PAUL KING, JR
AR0012999
REGISTERED ARCHITECT

GENERAL CONTRACTOR

David P. King, Jr
ARCHITECT
7500 SW 61ST AVE
SUITE 400
OCALA, FL. 34476
352.873.3737 (PH)
352.873.0737 (FAX)

REGISTRATIONS:
STATE OF FLORIDA AR 12,999
STATE OF GEORGIA 5044

PROJECT

NEW SINGLE FAMILY RESIDENCE

3/2/1 CARPORT RIGHT
CMU/ HIP/ MONO

FOR

HABITAT FOR HUMANITY

HOUSE 241

PID : 9033-1076-04
MARION COUNTY, FLORIDA

DRAWN BY: DPK
CHECKED BY:
APPROVED BY: DPK

ARCHITECT'S PROJECT No.:

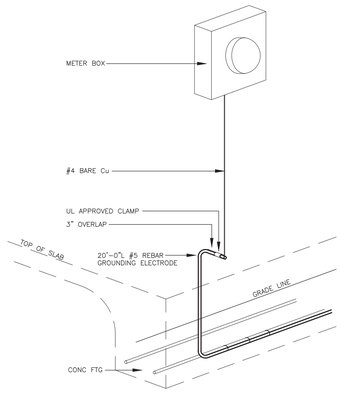
SHEET TITLE:

EXTERIOR ELEVATIONS

SHEET NUMBER

A1

C:\USERS\DAVID\ONEDRIVE\2024\RESIDENTIAL\HABITAT 4 HUMANITY\MARION COUNTY HOUSES\MC 3_2_1 LEFT\PROJ\TYPE3\9033-1076-04 RH MARION COUNTY 3_2_1 RIGHTHAND HOUSE 241.DWG



GROUNDING ELECTRODE SYSTEM DETAIL

NOT TO SCALE NEC-250-50(C)

PROVIDE INTERSYSTEM BONDING TERMINATION BLOCK IN ACCORDANCE WITH FRBC CHAPTER 3609.3

GENERAL ELECTRICAL NOTES:

1. ALL SPECIAL OUTLETS AND LIGHTING AS SHOWN TO BE COORDINATED & VERIFIED WITH GENERAL CONTRACTOR

ELECTRICAL NOTES	
TYPE OF PROTECTION	PROTECTED DEVICE OR AREA
AFIC	FAMILY RM, LIVING RM, DINING RM, SUNROOM, PARLOR, LIBRARY, DEN, RECREATION RM, CLOSET,
AFIC/ GFIC	KITCHENS AND LAUNDRY RM (125V) DEVICES, IN BEDROOM AND HALLWAYS WHERE RECEPTACLE IS WITHIN 6' OF A SINK, BASEMENT
GFIC	KITCHENS (250V) DEVICES, WHERE RECEPTACLE IS WITHIN 6' OF A SINK, LAUNDRY (250V) DEVICE GARAGE (125 AND 250V) DEVICES, OUTDOOR RECEPTACLES (125 AND 250V) DEVICES, OUTDOOR OUTLETS (A/C AND SIMILAR, SUMP PUMPS AND BATHROOMS

1. ALL OUTLETS AND LIGHTING AS SHOWN TO BE COORDINATED & VERIFIED WITH GENERAL CONTRACTOR

2. PER NEC210.8 – SEE CHART THIS PAGE FOR LOCATION OF ARC/ GFIC FAULT PROTECTION LOCATIONS AND MEANS OF COMPLIANCE

ELECTRICAL LEGEND

NOT ALL SYMBOLS USED ON THIS PROJECT

	SURFACE MOUNTED LIGHT	$	SINGLE SWITCH
	WALL MOUNTED LIGHT	$3	3-WAY SWITCH
	WALL MOUNTED SCONCE LIGHT	$4	4-WAY SWITCH
RC	RECESSED CAN LIGHT	$RC	REMOTE CONTROL SWITCH
WP GFI	VAPOR-PROOF RECESSED	$D	DIMMER SWITCH
P	PENDANT LIGHT	DB	DOOR BELL CONNECTION
RC EB	RECESSED EYEBALL CAN LIGHT	CH	DOOR CHIME
	EXHAUST FAN W/ LIGHT	TV	TV OUTLET
	EXHAUST FAN	PH	PHONE OUTLET
	UNDER CABNET	DA	DATA OUTLET
	RECESSED LED LIGHT	J	JUNCTION BOX (FUTURE FIXTURE)
	DOUBLE BULB LED LIGHT	T	THERMOSTAT
	TRACK LIGHTING	DISC	CUT-OFF SWITCH
	EXTERIOR FLOODLIGHT	SS	SURROUND SOUND BASE
P/L	EXTERIOR PATH LIGHT		SURROUND SOUND SPEAKER
	220 OUTLET		200 AMP ELEC. PANEL
	110 OUTLET		METER
	110V RECEPTACLE (SWITCHED)	VAC	CENTRAL VAC STATION
	QUAD RECEPTACLE		INTERCOM STATION
	UNDER COUNTER 110 OUTLET	D	CARBON MONOXIDE AND SMOKE DETECTOR (COMBO OR SEPERATE)
WP GFI	WATER-PROOF OUTLET		GARBAGE DISPOSAL
GFI	GROUND FAULT OUTLET		CEILING FAN W/ PULL CHAIN FOR LIGHT
WP GFI	WP GFI SOFFIT OUTLET		
	GFI FLOOR OUTLET		CEILING FAN W/ LIGHT
GATS	GENERATOR AUTO TRANSFER SWITCH		

WINDOW SCHEDULE

MARK	DESCRIPTION	ROUGH OPENING BLOCK	HEADER	SQ. FTG	REMARKS	WIND PRESSURE
W1	25 SH	38" x 62"	LT4	15.000	EGRESS	24.9 / -33.3
W2	(2) 25 SH	74" x 62"	LT8	30.000		23.8 / -31.0
W3	25 SH	38" x 62"	LT4	15.000	EGRESS	24.9 / -33.3
W4	23 SH	38" x 38"	LT4	9.000		24.9 / -33.3
W5	23 SH	38" x 38"	LT4	9.000		24.9 / -33.3
W6	25 SH	38" x 62"	LT4	15.000	EGRESS	24.9 / -33.3

VERIFY ALL WINDOW AND DOOR SIZES, TYPES, MANUFACTURER AND LOCATION W/ OWNER PRIOR TO CONSTRUCTION.

VERIFY ALL ROUGH OPENING DIMENSIONS WITH WINDOW AND DOOR MANUFACTURER.

PROVIDE CONTINUOUS WEATHER STRIPPING AND EXTRUDED THRESHOLD AT EXTERIOR DOOR LOCATIONS.

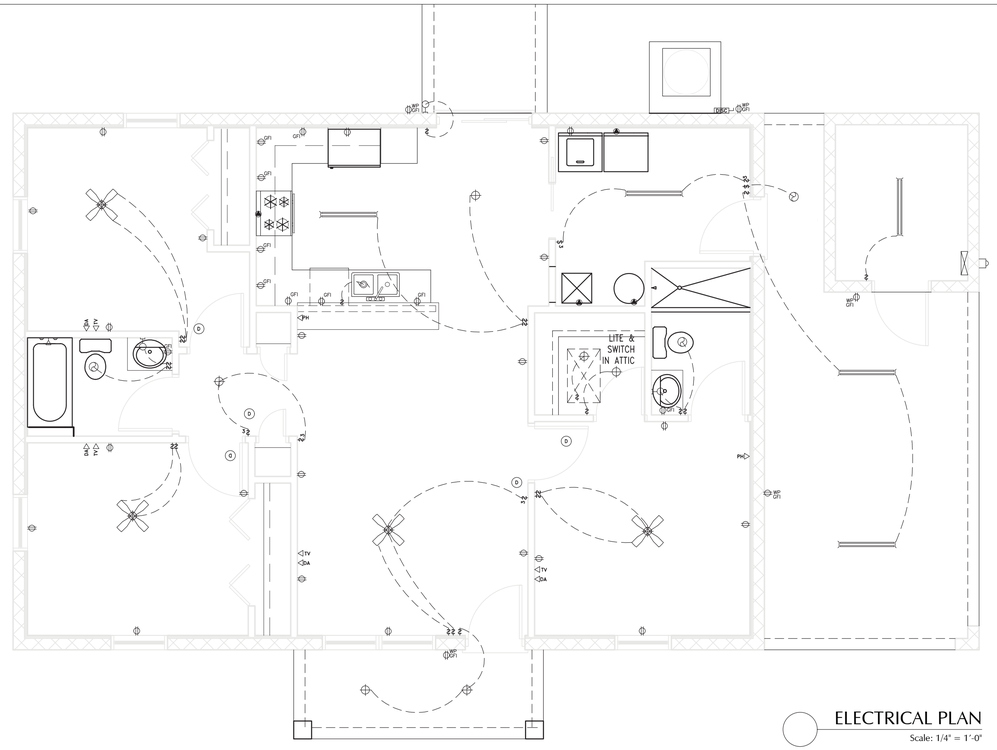
DOOR SCHEDULE

MARK	DESCRIPTION	ROUGH OPENING BLOCK	HEADER	SQ. FTG	REMARKS	WIND PRESSURE
D1	3068 SC ENTRY DOOR	40" x 82"	LT23	28.33	SC PANEL DOOR DR	23.8 / -31.0
D2	5068 SLIDING GLASS DOOR	64" x 82"	LT8	33.00	SLIDING GLS DR	23.8 / -31.0
D3	3080 SC DOOR	40" x 82"	LT23	28.33	SC PANEL DOOR DR	23.8 / -31.0
D4	3080 SC DOOR	40" x 82"	LT23	28.33	SC FLUSH DOOR DR	23.8 / -31.0

*REFER TO "CAST-CRETE" LINTEL SCHEDULE.

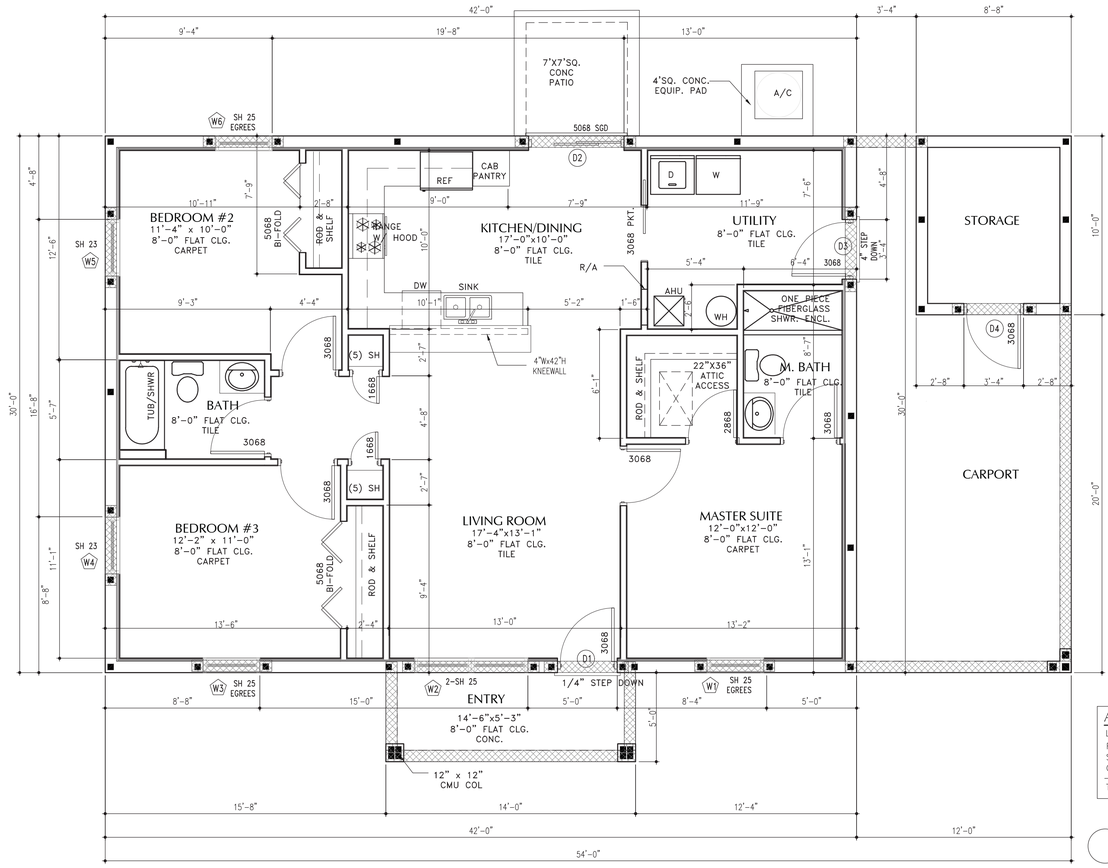
VERIFY ALL DOOR SIZES, TYPES, MANUFACTURER AND LOCATION W/ OWNER PRIOR TO CONSTRUCTION.

VERIFY ALL ROUGH OPENING DIMENSIONS WITH DOOR MANUFACTURER.



ELECTRICAL PLAN

Scale: 1/4" = 1'-0"



FLOOR PLAN

Scale: 1/4" = 1'-0"

AREA CALCULATIONS	
LIVING AREA:	1,146 SF
FRONT PORCH:	70 SF
STORAGE:	87 SF
CARPORT:	273 SF
TOTAL –	1,576 SF

4/8/2024 7:37 AM

DRAWING ISSUE PERMIT 01 APRIL 2024

REVISED:

STRUCTURAL APPROVAL
BY REX D. BROWN
PX4054
MARION COUNTY PLANS EXAMINER
(SEAL VERIFIED BY OTHERS)

SEAL

STATE OF FLORIDA
DAVID PAUL KING, JR
AR0012999
REGISTERED ARCHITECT

GENERAL CONTRACTOR

David P. King, Jr
ARCHITECT
7500 SW 61ST AVE
SUITE 400
OCALA, FL. 34476
352.873.3737 (PH)
352.873.0737 (FAX)

REGISTRATIONS:
STATE OF FLORIDA AR 12,999
STATE OF GEORGIA 5044

PROJECT

NEW SINGLE FAMILY RESIDENCE

3/2/1 CARPORT RIGHT
CMU/ HIP/ MONO

FOR

HABITAT FOR HUMANITY

HOUSE 241

PID : 9033-1076-04
MARION COUNTY, FLORIDA

DRAWN BY: DPK

CHECKED BY:

APPROVED BY: DPK

ARCHITECT'S PROJECT No.:

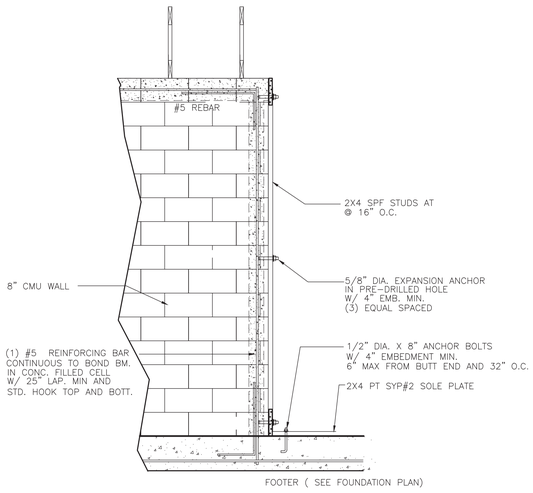
SHEET TITLE:

FLOOR PLAN
ELECTRICAL PLAN

SHEET NUMBER

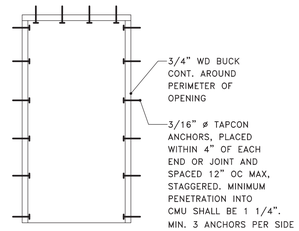
A2

C:\USERS\DAVID_ONEDRIVE\2024 RESIDENTIAL\HABITAT 4 HUMANITY\MARION COUNTY HOUSES\MC 3_2_1 LEFT_PROTOTYPES\9033-1076-04 RHMARION COUNTY 3_2_1 RIGHTHAND HOUSE 241.DWG



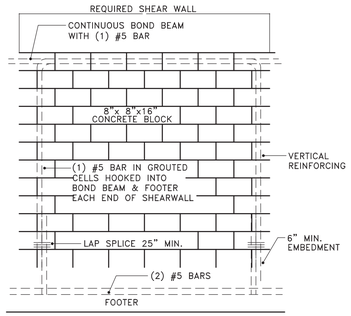
WOOD FRAMED INTERIOR WALL CONNECTION DETAIL

SCALE : 1/2" = 1'-0"



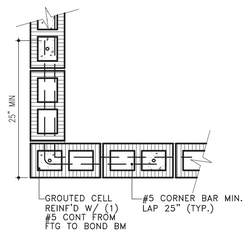
6 WINDOW/ DOOR BUCK ELEVATION

NOT TO SCALE



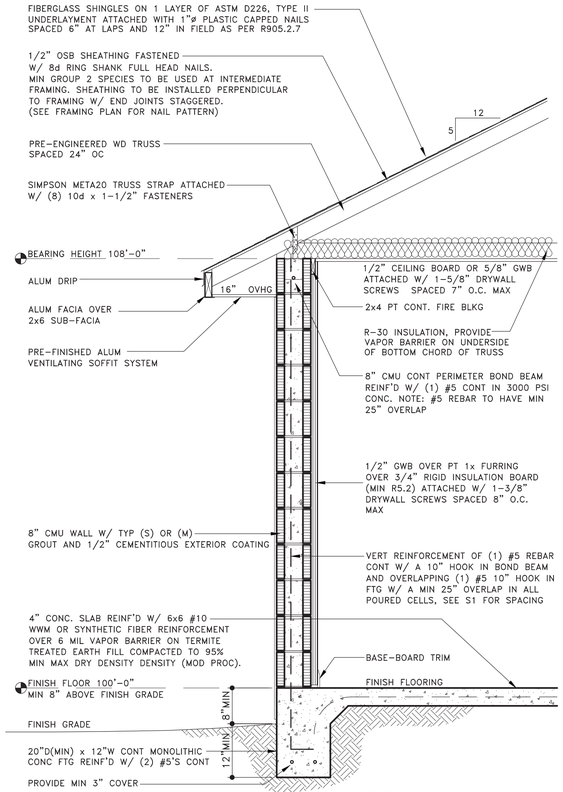
4 SHEAR WALL DETAIL

NOT TO SCALE



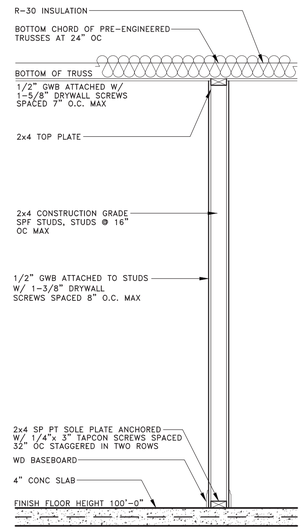
7 BOND BEAM CONTINUITY DETAIL

SCALE: 3/4" = 1'-0"



TYPICAL WALL SECTION

SCALE: 3/4" = 1'-0"



INTERIOR FRAME WALL SECTION

SCALE: 3/4" = 1'-0"

4/8/2024 7:37 AM

DRAWING ISSUE PERMIT 01 APRIL 2024

REVISED:

STRUCTURAL APPROVAL
BY REX D. BROWN
PX4054
MARION COUNTY PLANS EXAMINER
(SEAL VERIFIED BY OTHERS)

SEAL

STATE OF FLORIDA
DAVID PAUL KING, JR
AR0012999
REGISTERED ARCHITECT

GENERAL CONTRACTOR

David P. King, Jr
ARCHITECT
7500 SW 61ST AVE
SUITE 400
OCALA, FL. 34476
352.873.3737 (PH)
352.873.0737 (FAX)

REGISTRATIONS:
STATE OF FLORIDA AR 12,999
STATE OF GEORGIA 5044

PROJECT

NEW SINGLE FAMILY RESIDENCE

3/2/1 CARPORT RIGHT
CMU/ HIP/ MONO

FOR

HABITAT FOR HUMANITY

HOUSE 241

PID : 9033-1076-04
MARION COUNTY, FLORIDA

DRAWN BY: DPK
CHECKED BY:
APPROVED BY: DPK
ARCHITECT'S PROJECT No.:

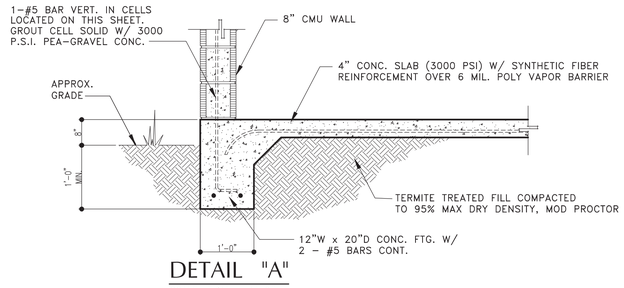
SHEET TITLE:

SECTION DETAIL

SHEET NUMBER

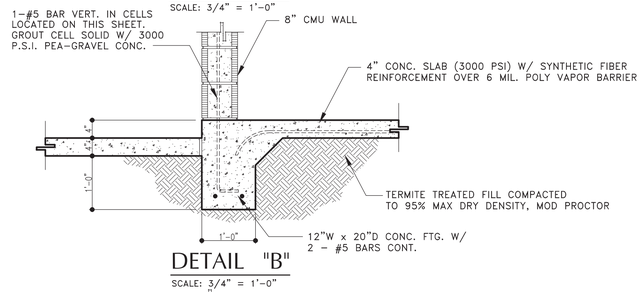
A3

C:\USERS\DAVID_ONEDRIVE_2024 RESIDENTIAL\HABITAT 4 HUMANITY\MARION COUNTY HOUSES\MC 3_2_1 LEFT_PROTOTYPES\9033-1076-04 RH\MARION COUNTY 3_2_1 RIGHTHAND HOUSE 241.DWG



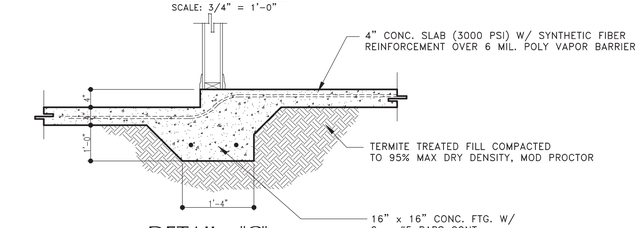
DETAIL "A"

SCALE: 3/4" = 1'–0"



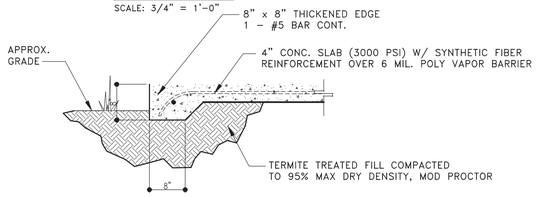
DETAIL "B"

SCALE: 3/4" = 1'–0"



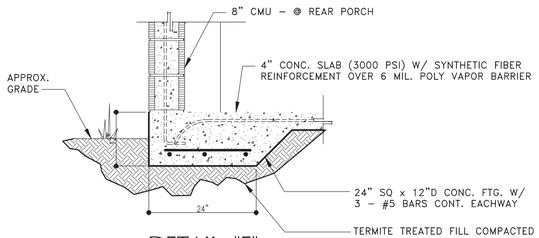
DETAIL "C"

SCALE: 3/4" = 1'–0"



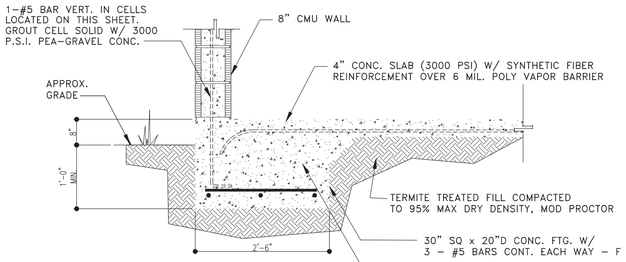
DETAIL "D"

SCALE: 3/4" = 1'–0"



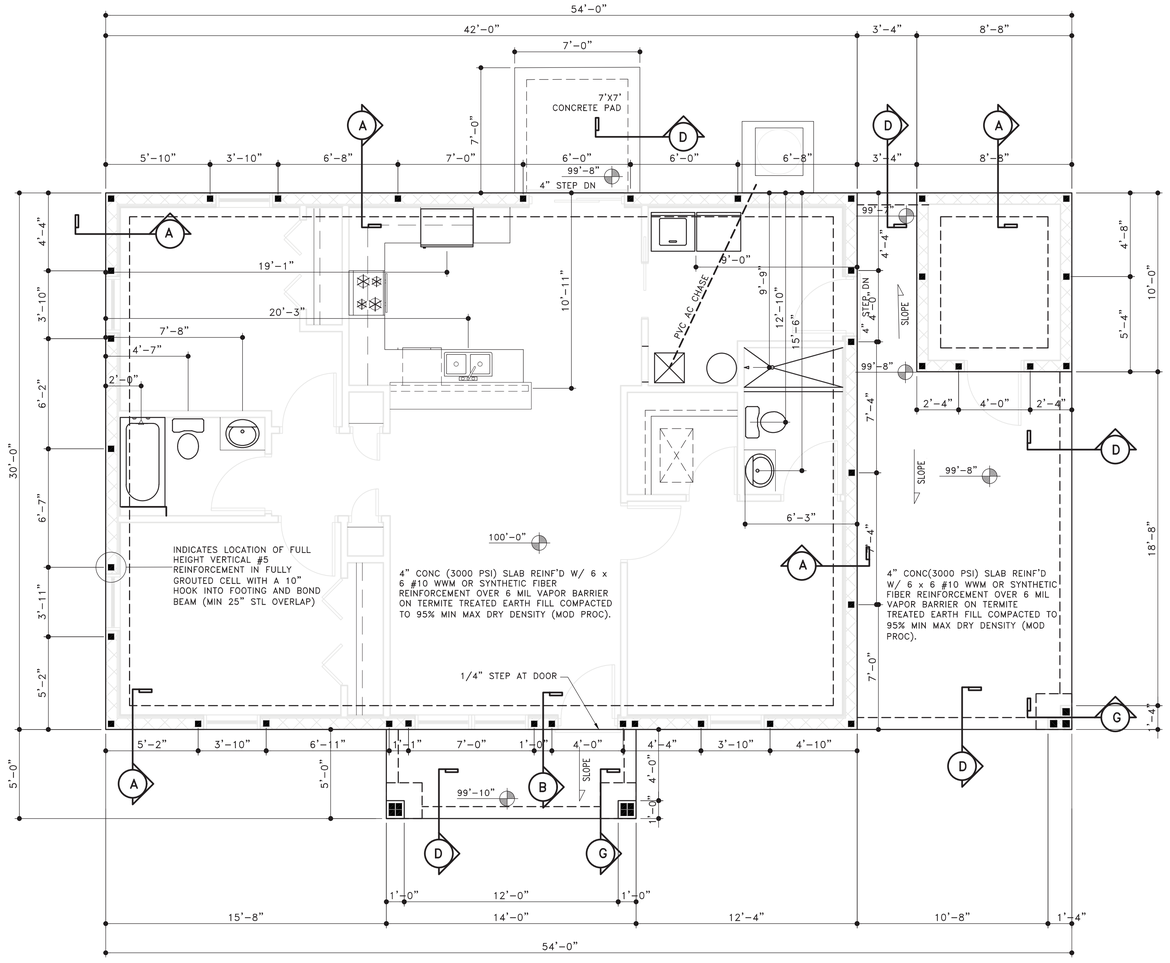
DETAIL "E"

SCALE: 3/4" = 1'–0"



DETAIL F & G

SCALE: 3/4" = 1'–0"



FOUNDATION PLAN

Scale: 1/4" = 1'–0"

4/8/2024 7:37 AM

C:\USERS\DAVID\ONEDRIVE\2_2024\RESIDENTIAL\HABITAT 4 HUMANITY\MARION COUNTY HOUSES\MC 3_2_1 LEFT\PROTOTYPES\9033-1076-04 RH\MARION COUNTY 3_2_1 RIGHTHAND HOUSE 241.DWG

DRAWING ISSUE PERMIT 01 APRIL 2024

REVISED:

STRUCTURAL APPROVAL
BY REX D. BROWN
PX4054
MARION COUNTY PLANS EXAMINER
(SEAL VERIFIED BY OTHERS)

SEAL

STATE OF FLORIDA
DAVID PAUL KING, JR
AR0012999
REGISTERED ARCHITECT

GENERAL CONTRACTOR

David P. King, Jr
ARCHITECT
7500 SW 61ST AVE
SUITE 400
OCALA, FL. 34476
352.873.3737 (PH)
352.873.0737 (FAX)

REGISTRATIONS:
STATE OF FLORIDA AR 12,999
STATE OF GEORGIA 5044

PROJECT

NEW SINGLE FAMILY RESIDENCE

3/2/1 CARPORT RIGHT
CMU/ HIP/ MONO

FOR

HABITAT FOR HUMANITY

HOUSE 241

PID : 9033-1076-04
MARION COUNTY, FLORIDA

DRAWN BY: DPK

CHECKED BY:

APPROVED BY: DPK

ARCHITECT'S PROJECT No.:

SHEET TITLE:

FOUNDATION PLAN
ROOF FRAMING PLAN

SHEET NUMBER

S1

8" PRECAST & PRESTRESSED LI-LINTELS 2005 VERSION

MARK	LENGTH & TYPE	GRAVITY							
		8U8	8F8–0B	8F12–0B	8F16–0B	8F20–0B	8F24–0B	8F28–0B	8F32–0B
			8F8–1B	8F12–1B	8F16–1B	8F20–1B	8F24–1B	8F28–1B	8F32–1B
LT1	2'–10" (34") PRECAST	2231	3069	4605	6113	7547	8974	10394	11809
			3069	4605	6113	7547	8974	10394	11809
LT2	3'–6" (42") PRECAST	2231	3069	3719	5163	6607	8054	9502	10951
			3069	4605	6113	7547	8974	10394	11809
LT3	4'–0" (48") PRECAST	1966	2561	2751	3820	4890	5961	7034	8107
			2693	4605	6113	7547	8974	10394	11809
LT4	4'–6" (54") PRECAST	1599	1969	2110	2931	3753	4576	5400	6224
			2189	4375	6113	7547	8672	10294	11809
LT5	5'–4" (64") PRECAST	1217	1349	1438	1999	2560	3123	3686	4249
			1663	3090	5365	7547	7342	8733	10127
LT6	5'–10" (70") PRECAST	1062	1105	1173	1631	2090	2549	3009	3470
			1451	2622	4360	7168	6036	7181	8328
LT7	6'–6" (78") PRECAST	908	1238	2177	3480	3031	3707	4383	5061
			1238	2177	3480	5381	8360	10394	8825
LT8	7'–6" (90") PRECAST	743	1011	1729	2632	2205	2698	3191	3685
			1011	1729	2661	3898	5681	8467	6472
LT9	9'–4" (112") PRECAST	554	699	1160	1625	2564	3486	2818	3302
			752	1245	1843	2564	3486	4705	6390
LT10	10'–6" (126") PRECAST	475	535	890	1247	2093	2777	2163	2536
			643	1052	1533	2093	2781	3643	4754
LT11	11'–4" (136") PRECAST	362	582	945	1366	1846	2423	3127	4006
			582	945	1366	1846	2423	3127	4006
LT12	12'–0" (144") PRECAST	337	540	873	1254	1684	2193	2805	3552
			540	873	1254	1684	2193	2805	3552
LT13	13'–4" (160") PRECAST	296	471	755	1075	1428	1838	2316	2883
			471	755	1075	1428	1838	2316	2883
LT14	14'–0" (168") PRECAST	279	424	706	1002	1326	1697	2127	2630
			442	706	1002	1326	1697	2127	2630
LT15	14'–8" (176") PRESTRESSED	N.R.	NR	NR	NR	NR	NR	NR	NR
			458	783	1370	1902	2245	2517	2712
LT16	15'–4" (184") PRESTRESSED	N.R.	NR	NR	NR	NR	NR	NR	NR
			412	710	1250	1733	2058	2320	2513
LT17	17'–4" (208") PRESTRESSED	N.R.	NR	NR	NR	NR	NR	NR	NR
			300	548	950	1326	1609	1849	2047
LT18	19'–4" (232") PRESTRESSED	N.R.	NR	NR	NR	NR	NR	NR	NR
			235	420	750	1037	1282	1515	1716
LT19	21'–4" (256") PRESTRESSED	N.R.	NR	NR	NR	NR	NR	NR	NR
			180	340	598	845	1114	1359	1468
LT20	22'–0" (264") PRESTRESSED	N.R.	NR	NR	NR	NR	NR	NR	NR
			165	315	550	784	1047	1285	1399
LT21	24'–0" (288") PRESTRESSED	N.R.	NR	NR	NR	NR	NR	NR	NR
			129	250	450	654	884	1092	1222

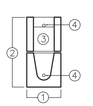
8" RECESS LINTELS

2005 VERSION

MARK	LENGTH & TYPE	GRAVITY							
		8RU6	8RF6–0B	8RF10–0B	8RF14–0B	8RF18–0B	8RF22–0B	8RF26–0B	8RF30–0B
			8RF6–1B	8RF10–1B	8RF14–1B	8RF18–1B	8RF22–1B	8RF26–1B	8RF30–1B
LT22	4'–4" (52") PRECAST	1635	1749	3355	3280	4349	5421	6493	7567
			1891	3699	5206	6639	8060	9479	10893
LT23	4'–6" (54") PRECAST	1494	1596	3063	2992	3968	4946	5924	6904
			1756	3699	5206	6639	8060	9479	10893
LT24	5'–8" (68") PRECAST	866	920	1770	1716	2277	2839	3402	3966
			1167	2481	4567	6389	8060	7917	9311
LT25	5'–10" (70") PRECAST	810	859	1653	1600	2124	2649	3174	3700
			1113	2342	4242	6639	8060	7402	8706
LT26	6'–8" (80") PRECAST	797	901	1825	3120	5048	7747	9448	7360
			901	1825	3120	5048	7915	9479	10893
LT27	7'–6" (90") PRECAST	669	755	1490	2459	3776	5743	7239	5623
			755	1490	2459	3776	5743	8998	10893
LT28	9'–8" (116") PRECAST	411	466	999	1568	2253	3129	4091	3146
			526	999	1568	2253	3129	4150	5891

NOTE: CUT LINTELS TO FIT, AS REQUIRED

DESIGNATION FOR ALL LINTELS ON THIS PROJECT –



LT## – ## AFF — HEIGHT OF LINTEL BOTTOM ABOVE FINISH FLOOR

KEY TYPE REFERENCE

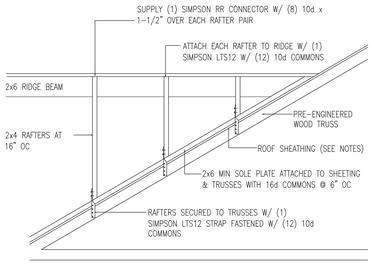
F = FILLED WITH GROUT / U = UNFILLED (3)

8F16–1B/1T — QUANTITY OF #5 REBAR AT TOP AND BOTTOM OF CAVITY (4)

NOMINAL HEIGHT (2)

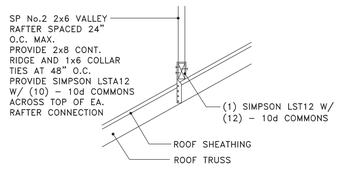
NOMINAL WIDTH (1)

NOTE: LINTELS BY OTHER MFRS, HAVING EQUIVALENT OR GREATER CAPACITY, BY BE USED ALSO



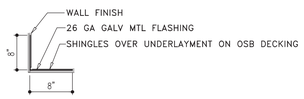
CONVENTIONAL VALLEY FRAMING DETAIL

NOT TO SCALE



VALLEY FRAMING

NOT TO SCALE

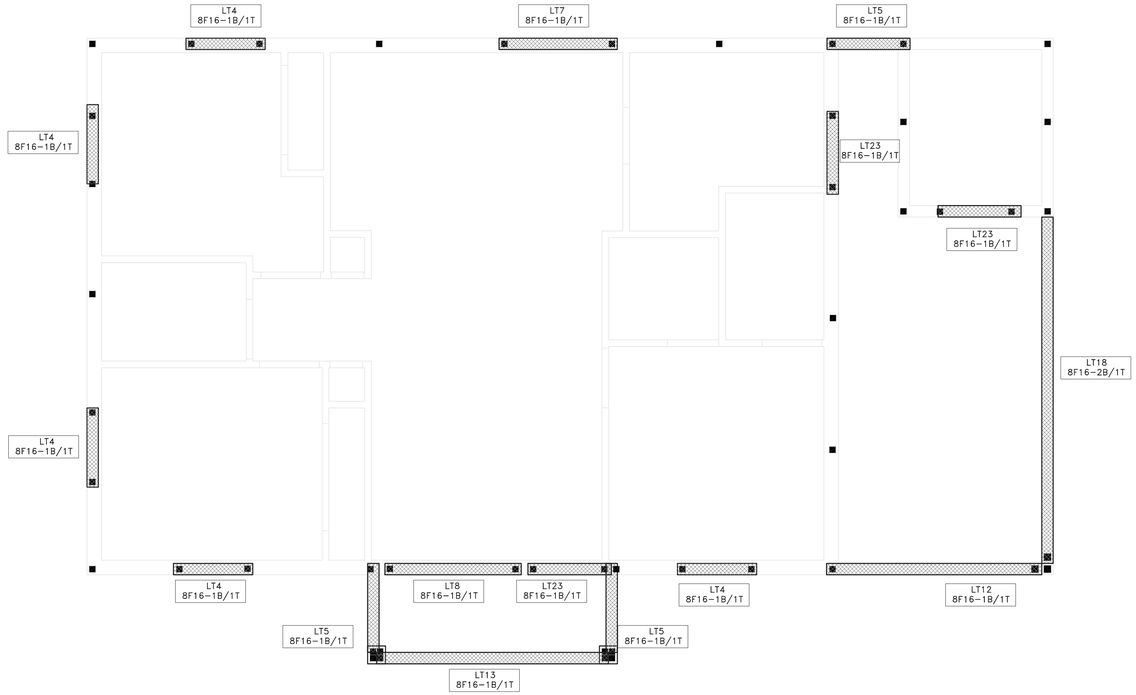


WALL FLASHING

NOT TO SCALE

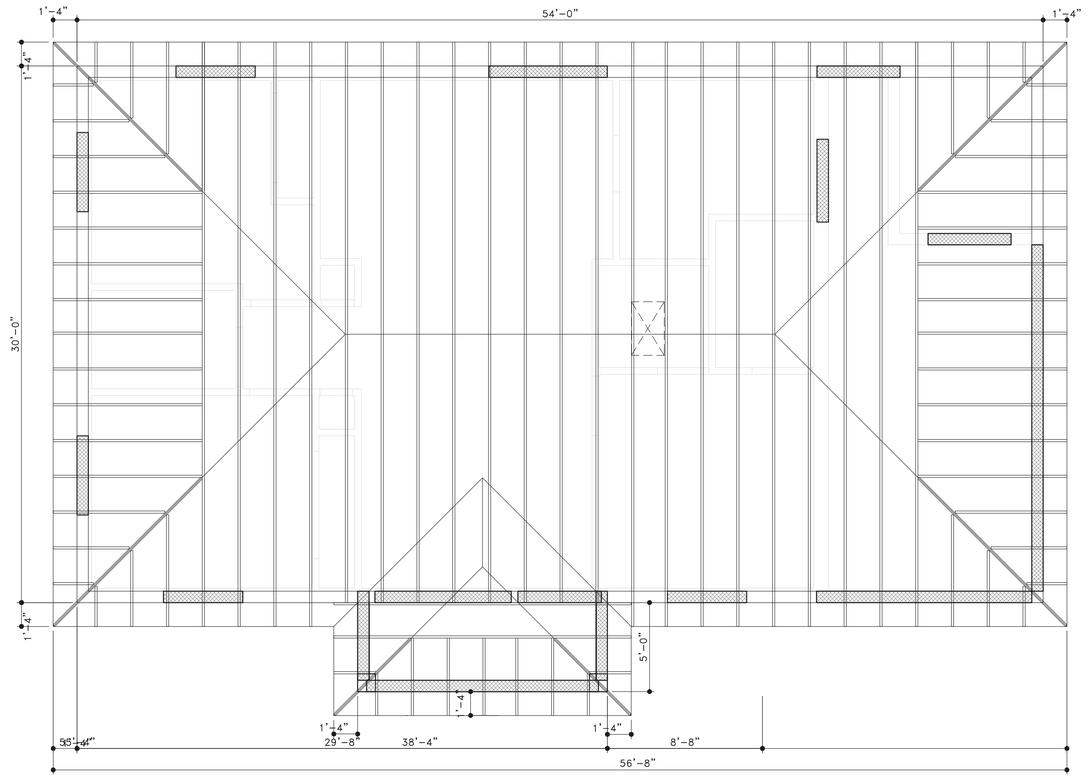
VALLEY FLASHING

NOT TO SCALE



LINTEL PLAN

Scale: 1/4" = 1'-0"



ROOF FRAMING PLAN

Scale: 1/4" = 1'-0"

ROOF ANCHOR SCHEDULE

MARK	UPLIFT	ANCHOR	FLORIDA APPROVAL #
TYP. CMU	1450	(1) SIMPSON META20 FASTENED W/ (8) 10d x 1–1/2" COMMONS	FL11473.10
(A) TRUSS TO CMU	2500	(2) SIMPSON HETA20 FASTENED W/ (9) 16d COMMONS EACH	FL11473.4
TYP. WD	905	(1) SIMPSON H10A W/ (18) 10d x 1–1/2" COMMONS	FL10456.7
TYP. GABLE TRUSS TO CMU	1465	(1) SIMPSON MSTAM24 W/ (9) 10d COMMONS AND (5) 1/4"x1–3/4" TITEN SCREWS	FL11473.11
TYP. VALLEY FRAMING	805	(1) SIMPSON LTS12 STRAP W/ (12) 10d COMMONS (EACH END)	FL10456.15
TYP. CONVENTIONAL FRAMING	805	(1) SIMPSON LTS12 STRAP W/ (12) 10d COMMONS	FL10456.15
	130	(2) SIMPSON RR CONNECTORS W/ (8) 10d x 1–1/2" COMMONS @ EACH RAFTER PAIR	FL10466.29
(B) – BEAM TO CMU WALL	1345	(1) SIMPSON HUC210–3 W/ (18)16d AND (14)1/4" X 2 3/4" TITEN SCREW	FL10531.10

TRUSS ENGINEERING NOTES

TRUSS LAYOUT SHOWN DEPICTS DESIGN INTENT ONLY. TRUSS MFR SHALL SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A FLORIDA REGISTERED ENGINEER. UPLIFT ANCHORAGE AND LOADS MUST BE PROVIDED W/TRUSS PROFILES.

PROVIDE A CONTINUOUS LOAD PATH BETWEEN FOUNDATION AND ROOF SYSTEM. ALL CONNECTORS SHALL BE INSTALLED PER MRF'S RECOMMENDATIONS. FASTENERS NOT OTHERWISE SPECIFIED ON DRAWINGS SHALL BE IN ACCORDANCE W/ FBC 2023 8th EDITION

ROOF SHEATHING NOTES

ALL SHEATHING SHALL BE ATTACHED TO ROOF FRAMING W/ 8d RING SHANK FULL HEAD NAILS

WITHIN 48" OF EAVE 6" OC EDGES AND 6" AT INTERMEDIATE FRAMING

WITHIN 48" OF RIDGE 6" OC EDGES AND 6" AT INTERMEDIATE FRAMING

WITHIN 60" OF RAKE EAVE 4" OC EDGES AND 4" AT INTERMEDIATE FRAMING

ALL OTHER AREAS 6" OC EDGES AND 6" AT INTERMEDIATE FRAMING

ALL ROOF SHEATHING SHALL BE NOMINAL 1/2" SHEATHING ADA RATED FOR 24" SPACING ROOF APPLICATIONS

4/8/2024 7:37 AM

DRAWING ISSUE PERMIT 01 APRIL 2024

REVISED:

STRUCTURAL APPROVAL
BY REX D. BROWN
PX4054
MARION COUNTY PLANS EXAMINER
(SEAL VERIFIED BY OTHERS)

SEAL

STATE OF FLORIDA
DAVID PAUL KING JR
AR0012999
REGISTERED ARCHITECT

GENERAL CONTRACTOR

David P. King, Jr
ARCHITECT
7500 SW 61ST AVE
SUITE 400
OCALA, FL. 34476
352.873.3737 (PH)
352.873.0737 (FAX)

REGISTRATIONS:
STATE OF FLORIDA AR 12,999
STATE OF GEORGIA 5044

PROJECT

NEW SINGLE FAMILY RESIDENCE

3/2/1 CARPORT RIGHT
CMU/ HIP/ MONO

FOR

HABITAT FOR HUMANITY

HOUSE 241

PID : 9033–1076–04
MARION COUNTY, FLORIDA

DRAWN BY: DPK

CHECKED BY:

APPROVED BY: DPK

ARCHITECT'S PROJECT No.:

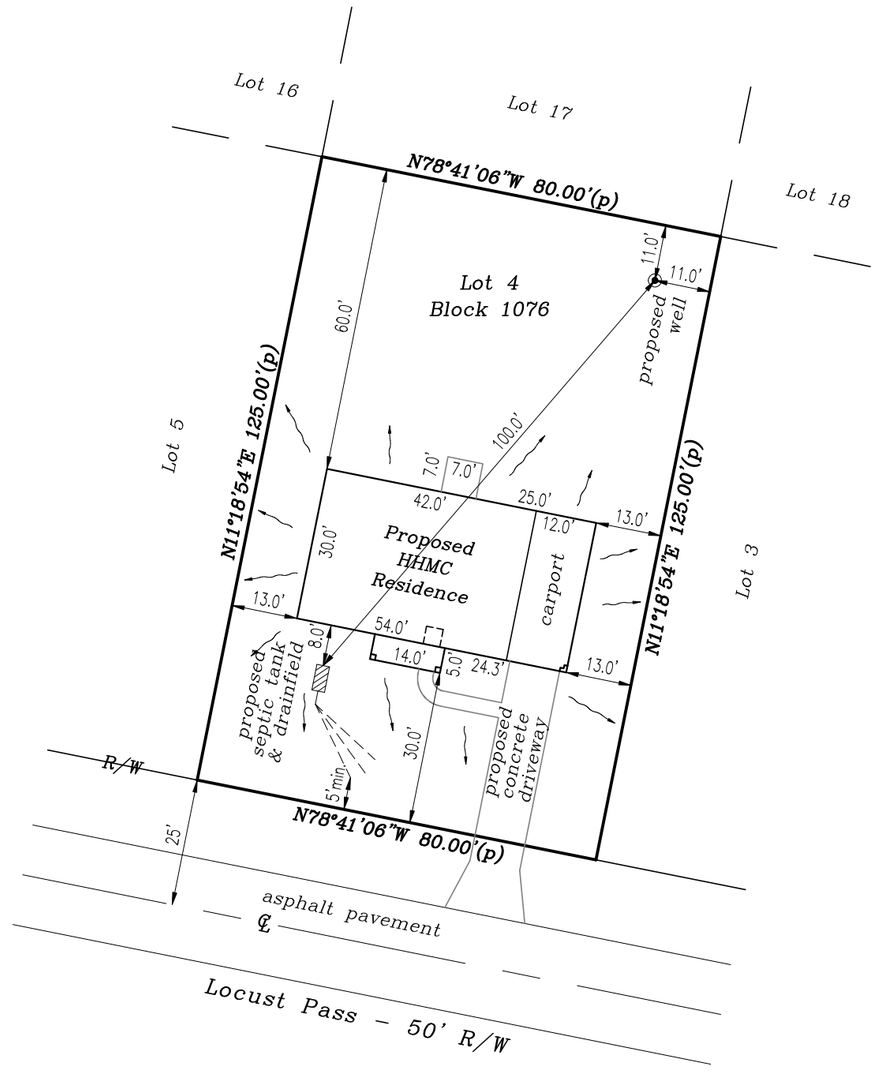
SHEET TITLE:

ROOF FRAMING PLAN
LINTEL PLAN

SHEET NUMBER

S2

C:\USERS\DAVID_ONEDRIVE\2024 RESIDENTIAL\HABITAT 4 HUMANITY\MARION COUNTY HOUSES\MC 3.2.1 LEFT\PROTOTYPES\9033–1076–04 RH\MARION COUNTY 3.2.1 RIGHTHAND HOUSE 241.DWG



SITE PLAN for Parcel ID#: 9033–1076–04

SCALE: 1" = 30'

N

DESCRIPTION (*provided by client or their agent*):

Lot 4, Block 1076, SILVER SPRINGS SHORES, UNIT 33, according to the plat thereof recorded in Plat Book J, Pages 294–301, of the Public Records of Marion County, Florida.

NOTES:

1) Bearings based on an assumed meridian as shown hereon. 2) Underground improvements, if any, not located. 3) Public records have not been searched for rights of ways, easements, restrictions, reservations and/or other instruments of record. 4) This survey has been prepared for the sole and exclusive benefit of the parties named hereon and shall not be relied upon by any other individual or entity.

DRAINAGE:

1) Existing drainage pattern shall be maintained or improved. 2) All roof runoff (including downspouts) shall be directed toward the street or toward a drainage retention area. Roof runoff shall not be directed toward adjacent parcels of land. 3) Finish ground surface shall slope away from the house.

LEGEND:

Cn = curve number
BSL = building setback line
CB = Chord Bearing
CL = centerline
R/W = right of way
= fire hydrant
= water meter
= septic tank

PC = point of curvature (R) = radial
DUE = drainage & utility easement
UE = utility easement
ou = overhead utility lines
conc = concrete cov = covered
= water valve
= light pole
= 4" well

d = deed call p = plat call
fm = field measurement
= electric utility box
= telephone junction box
= cable TV junction box
= utility junction box
= utility pole
= proposed flowline

D.W. HIRST & ASSOCIATES, INC.

PROFESSIONAL LAND SURVEYORS
13560 SE 36th Avenue, Summerfield, FL 34491
P.O. BOX 3159, Belleview, Florida 34421
(352) 347–6775 dwhlandsurveying@aol.com

SITE PLAN
FOR
Habitat for Humanity of Marion County

DATE OF SKETCH: March 20, 2024
FIELD BOOK: NA PAGE: NA
FILE NO: 24–2851 DC FILE: 24–2851.txt
DWG FILE: 24–2851(HHMC) Site Plan.dwg
DRAWN BY: BL CHK BY: DWH

REVISIONS	DATE	BY

PRODUCT APPROVAL SPECIFICATION SHEET

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and approval numbers on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. Statewide approved products are listed online at www.floridabuilding.org.

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
1. EXTERIOR DOORS			
A. SWINGING	PLASTPRO	FIBERGLASS EXTERIOR DOOR	FL17347.1
B. SLIDING			
C. SECTIONAL/ROLL UP			
D. OTHER			
2. WINDOWS			
A. SINGLE/DOUBLE HUNG	CUSTOM WINDOW SYSTEMS, INC.	VINYL SINGLE HUNG - MODEL 8100	FL4091-R10
B. HORIZONTAL SLIDER			
C. CASEMENT			
D. FIXED			
E. MULLION	CUSTOM WINDOW SYSTEMS, INC.	FACTORY-INSTALLED	FL4091-R10
F. SKYLIGHTS			
G. OTHER			
3. PANEL WALL			
A. SIDING			
B. SOFFITS	PLYGEM	VINYL SOFFIT	FL33919.1
C. STOREFRONTS			
D. GLASS BLOCK			
E. OTHER			
4. ROOFING PRODUCTS			
A. ASPHALT SHINGLES	OWENS CORNING	ASPHALT SHINGLES	FL10674.13
B. NON-STRUCT METAL			
C. ROOFING TILES			
D. SINGLE PLY ROOF			
E. OTHER	GAF	LOW PROFILE ROOF RIDGE VENT	FL6267.15
	ATLAS	SUMMIT 60 UNDERLAYMENT	FL21350-R4
5. STRUCT COMPONENTS			
A. WOOD CONNECTORS	SIMPSON STRONG TIE	LTS12 STRAP	FL10456.7
B. WOOD ANCHORS	SIMPSON STRONG TIE	MEM20 (CMU/TRUSS)	FL11473.3
C. TRUSS PLATES	ALPINE ENG. PRODUCTS	STRUCTURAL TRUSS PLATES	FL1999.3
D. INSULATION FORMS			
E. LINTELS	MARION MASONRY MAT'LS.	PRECAST LINTEL	FL12193-R5
F. OTHERS			
6. NEW EXTERIOR			
A. ENVELOPE PRODUCTS			
A.			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; **(1)** copy of the product approval **(2)** performance characteristics which the product was tested and certified to comply with **(3)** copy of the applicable manufacturer's installation requirements. Further, I understand these products may have to be removed if approval cannot be demonstrated during inspection.

Applicant Signature

4/12/24
Date

RESIDENTIAL ENERGY CONSERVATION CODE DOCUMENTATION CHECKLIST

Florida Department of Business and Professional Regulation
Simulated Performance Alternative (Performance) Method

Applications for compliance with the 2023 Florida Building Code, Energy Conservation via the Residential Simulated Performance Alternative shall include:

- ☐ *This checklist*
- ☐ *Form R405-2023 report*
- ☐ *Input summary checklist that can be used for field verification (usually four pages/may be greater)*
- ☐ *Energy Performance Level (EPL) Display Card (one page)*
- ☐ *HVAC system sizing and selection based on ACCA Manual S or per exceptions provided in Section R403.7*
- ☐ *Mandatory Requirements (five pages)*

Required prior to CO:

- ☐ *Air Barrier and Insulation Inspection Component Criteria checklist (Table R402.4.1.1 - one page)*
- ☐ *A completed 2023 Envelope Leakage Test Report (usually one page); exception in R402.4 allows dwelling units of R-2 Occupancies and multiple attached single family dwellings to comply with Section C402.5*
- ☐ *If Form R405 duct leakage type indicates anything other than "default leakage", then a completed 2023 Duct Leakage Test Report - Performance Method (usually one page)*

FORM R405-2023

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Habitat for Humanity House 241 TBDLocust Pass	Builder Name:	
Street:	TBD Locust Pass	Permit Office:	Marion
City, State, Zip:	Ocala, FL, 34472	Permit Number:	
Owner:		Jurisdiction:	521400
Design Location:	FL, Ocala	County:	Marion(Florida Climate Zone 2)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Detached
3. Number of units, if multiple family	1
4. Number of Bedrooms	3
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	1146
Conditioned floor area below grade (ft²)	0

7. Windows(113.0 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.33	113.00 ft²
SHGC:	SHGC=0.23	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		2.373 ft
Area Weighted Average SHGC:		0.230

8. Skylights	Description	Area
U-Factor:(AVG)	N/A	N/A ft²
SHGC(AVG):	N/A	

9. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R= 0.0	1146.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(1152.0 sqft.)	Insulation	Area
a. Concrete Block - Int Insul, Exterior	R=5.2	1152.00 ft²
b. N/A		
c. N/A		
d. N/A		

11. Ceiling Types(1146.0 sqft.)	Insulation	Area
a. Flat ceiling under att (Vented)	R=30.0	1146.00 ft²
b. N/A		
c. N/A		

12. Roof(Comp. Shingles, Vented)	Deck R=0.0	1242 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Main, AH: Main	6	218
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	22.6	SEER2:15.00

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Heat Pump	22.0	HSPF2:7.50

16. Hot Water Systems	
a. Electric	Cap: 50 gallons
	EF: 0.950
b. Conservation features	
	None
17. Credits	Pstat

Glass/Floor Area: 0.099

Total Proposed Modified Loads: 34.43

Total Baseline Loads: 36.87

PASS

NOTE: Proposed residence must have annual total normalized Modified Loads that are less than or equal to 95 percent of the annual total loads of the standard reference design in order to comply.

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: Maggie Sims

DATE: 04/05/2024 Energycalcs.net 386-775-0908

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: _____

DATE: 4/5/24

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL: _____

DATE: _____

- **Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.**
- **Default duct leakage does not require a Duct Leakage Test Report.**
- **Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires a PERFORMANCE envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2).**

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Habitat for Humanity House 241 TBDLocust Pass			Address type:	Street Address
Building Type:	User	Bedrooms:	3	Lot #:	---
Owner:		Conditioned Area:	1146	Block/SubDivision:	---
Builder Home ID:		Total Stories:	1	PlatBook:	---
Builder Name:		Worst Case:	No	Street:	TBD Locust Pass
Permit Office:	Marion	Rotate Angle:	0	County:	Marion
Jurisdiction:	521400	Cross Ventilation:		City, State, Zip:	Ocala, FL, 34472
Family Type:	Detached	Whole House Fan:			
New/Existing:	New (From Plans)	Terrain:	Suburban		
Year Construct:	2024	Shielding:	Suburban		
Comment:					

CLIMATE

√ Design Location	Tmy Site	Design Temp 97.5%	Design Temp 2.5%	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily temp Range
___ FL, Ocala	FL_OCALA_MUNI_(AWOS)	28	91	70	75	1144.5	51	Medium

BLOCKS

√ Number	Name	Area	Volume
___ 1	Block1	1146	9168 cu ft

SPACES

√ Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___ 1	Main	1146	9168	Yes	4	3	Yes	Yes	Yes

FLOORS (Total Exposed Area = 1146 sq.ft.)

√ #	Floor Type	Space	Exposed Perim(ft)	Area	R-Value Perim.	R-Value Joist	U-Factor	Slab Insul. Vert/Horiz	Tile	Wood	Carpet
___ 1	Slab-On-Grade Edge Ins	Main	137	1146 sqft	0	---	0.304	0 (ft)/0 (ft)	0.00	0.00	1.00

ROOF

√ #	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
___ 1	Hip	Composition shingles	1242 ft²	0 ft²	Medium	N	0.75	No	0.9	No	0	22.62

ATTIC

√ #	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___ 1	Full attic	Vented	300	1146 ft²	N	N

CEILING (Total Exposed Area = 1146 sq.ft.)

√ #	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
___ 1	Flat ceiling under attic(Vented)	Main	30.0	Blown	1146.0ft²	0.053	0.11	Wood

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

WALLS (Total Exposed Area = 1152 sq.ft.)

√ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area sq.ft.	U-Factor	Sheath R-Value	Frm. Frac.	Solar Absor.	Below Grade
___ 1	SW	Exterior	Conc. Blk - Int Ins	Main	5.2	28.0	0	8.0	0	224.0	0.128		0	0.45	0 %
___ 2	SW	Exterior	Conc. Blk - Int Ins	Main	5.2	14.0	0	8.0	0	112.0	0.128		0	0.45	0 %
___ 3	SE	Exterior	Conc. Blk - Int Ins	Main	5.2	30.0	0	8.0	0	240.0	0.128		0	0.45	0 %
___ 4	NE	Exterior	Conc. Blk - Int Ins	Main	5.2	42.0	0	8.0	0	336.0	0.128		0	0.45	0 %
___ 5	NW	Exterior	Conc. Blk - Int Ins	Main	5.2	30.0	0	8.0	0	240.0	0.128		0	0.45	0 %

DOORS (Total Exposed Area = 40 sq.ft.)

√ #	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
___ 1	SW		Insulated	Main	None	0.40	3.00	0	6.00	8	20.0ft²
___ 2	SE		Insulated	Main	None	0.40	3.00	0	6.00	8	20.0ft²

WINDOWS (Total Exposed Area = 113 sq.ft.)

√ #	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Storm	Total Area (ft²)	Same Units	Width (ft)	Height (ft)	--Overhang-- Depth (ft)	Sep. (ft)	Interior Shade	Screen
___ 1	SW	1	Vinyl	Low-E Double	Y	0.33	0.23	N	N	30.0	2	3.00	5.00	1.3	1.3	Drapes/blinds	None
___ 2	SW	2	Vinyl	Low-E Double	Y	0.33	0.23	N	N	30.0	2	3.00	5.00	5.3	1.3	Drapes/blinds	None
___ 3	NE	4	Vinyl	Low-E Double	Y	0.33	0.23	N	N	20.0	1	4.00	5.00	1.3	1.3	Drapes/blinds	None
___ 4	NE	4	Vinyl	Low-E Double	Y	0.33	0.23	N	N	15.0	1	3.00	5.00	1.3	1.3	Drapes/blinds	None
___ 5	NW	5	Vinyl	Low-E Double	Y	0.33	0.23	N	N	18.0	2	3.00	3.00	1.3	1.3	Drapes/blinds	None

INFILTRATION

√ #	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
___ 1	Wholehouse	Proposed ACH(50)	0.00036	1070	58.68	110.17	0.1155	7.0	All	9168 cu ft

MASS

√ #	Mass Type	Area	Thickness	Furniture Fraction	Space
___ 1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Main

HEATING SYSTEM

√ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	---Geothermal HeatPump--- Entry	Power	Volt	Current	Ducts	Block
___ 1	Electric Heat Pump	Split/Single	210318449	HSPF2: 7.50	22.0		0.00	0.00	0.00	sys#1	1

COOLING SYSTEM

√ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	Air Flow cfm	SHR	Duct	Block
___ 1	Central Unit	Split/Single	210318449	SEER2:15.0	22.6	790	0.84	sys#1	1

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

HOT WATER SYSTEM

√	#	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixture Flow	Pipe Ins.	Pipe length
___	1	Electric	None	Main	0.95 (0.93)	50.00 gal	60 gal	120 deg	Standard	None	99

	Recirculation System	Recirc Control Type	Loop length	Branch length	Pump power	DWHR	Facilities Connected	Equal Flow	DWHR Eff	Other Credits
___ 1	No		NA	NA	NA	No	NA	NA	NA	None

DUCTS

√	Duct #	Supply Location	Supply R-Value	Supply Area	Return Location	Return R-Value	Return Area	Leakage Type	Air Handler	CFM 25 TOT	CFM 25 OUT	QN OUT	RLF	HVAC # Heat	HVAC # Cool
___	1	Attic	6.0	218 ft²	Main	6.0	55 ft²	Default Leakage	Main	(Default)	(Default)			1	1

MECHANICAL VENTILATION

√	Type	Supply CFM	Exhaust CFM	HRV	Fan	Run Time	Heating System	Cooling System
___	None	0.0	0.0	0.0	0.0 W	0 %	1 - Electric Heat Pump	1 - Central Unit

TEMPERATURES

Programable Thermostat: Y Ceiling Fans: N

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]	[X]	[ ]	[ ]	[ ]
Heating	[X]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]
Venting	[ ]	[ ]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[ ]

√	Thermostat Schedule: HERS 2006 Reference Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
___	Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
		PM	80	80	78	78	78	78	78	78	78	78	78	78
___	Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
		PM	78	78	78	78	78	78	78	78	78	78	78	78
___	Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68
		PM	68	68	68	68	68	68	68	68	68	68	66	66
___	Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68
		PM	68	68	68	68	68	68	68	68	68	68	66	66

FORM R405-2023

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 93

The lower the EnergyPerformance Index, the more efficient the home.

TBD Locust Pass,Ocala,FL,34472

1. New construction or existing		New (From Plans)
2. Single family or multiple family		Detached
3. Number of units, if multiple family		1
4. Number of Bedrooms		3
5. Is this a worst case?		No
6. Conditioned floor area above grade (ft²)		1146
Conditioned floor area below grade (ft²)		0
7. Windows**	Description	Area
a. U-Factor:	Dbl, U=0.33	113.00 ft²
SHGC:	SHGC=0.23	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		2.373 ft
Area Weighted Average SHGC:		0.230
8. Skylights	Description	Area
U-Factor:(AVG)	N/A	N/A ft²
SHGC(AVG):	N/A	

9. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R= 0.0	1146.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(1152.0 sqft.)	Insulation	Area
a. Concrete Block - Int Insul, Exterior	R=5.2	1152.00 ft²
b. N/A		
c. N/A		
d. N/A		

11. Ceiling Types(1146.0 sqft.)	Insulation	Area
a. Flat ceiling under att (Vented)	R=30.0	1146.00 ft²
b. N/A		
c. N/A		

12. Roof(Comp. Shingles, Vented)	Deck R=0.0	1242 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Main, AH: Main	6	218
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	22.6	SEER2:15.00

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Heat Pump	22.0	HSPF2:7.50

16. Hot Water Systems	
a. Electric	Cap: 50 gallons
	EF: 0.950
b. Conservation features	
	None
17. Credits	Pstat

I certify that this home has complied with the Florida Energy Efficiency Code for Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: 4/5/24

Address of New Home: TBD Locust Pass City/FL Zip: Ocala,FL,34472

*Note: This is not a Building Energy Rating. If your Index is below 70, your home may qualify for energy efficient mortgage (EEM) incentives if you obtain a Florida Energy Rating. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

Florida Building Code, Energy Conservation, 8th Edition (2023)
Mandatory Requirements for Residential Performance, Prescriptive and ERI Methods

ADDRESS:	TBD Locust Pass Ocala, FL 34472	Permit Number:

MANDATORY REQUIREMENTS - See individual code sections for full details.

SECTION R401 GENERAL

☐ **R401.3 Energy Performance Level (EPL) display card - (Mandatory).** The building official shall require that an energy performance level (EPL) display card be completed and certified by the builder to be accurate and correct before final approval of the building for occupancy. Florida law (Section 553.9085, Florida Statutes) requires the EPL display card to be included as an addendum to each sales contract for both presold and nonpresold residential buildings. The EPL display card contains information indicating the energy performance level and efficiencies of components installed in a dwelling unit. The building official shall verify that the EPL display card completed and signed by the builder accurately reflects the plans and specifications submitted to demonstrate code compliance for the building. A copy of the EPL display card can be found in Appendix RD.

SECTION R402 BUILDING THERMAL ENVELOPE

☐ **R402.2.10.1 Slab-on-grade floor insulation installation (Mandatory).** Where installed, the insulation shall extend downward from the top of the slab on the outside or inside of the foundation wall. Insulation located below grade shall be extended the distance provided in Table R402.1.2, or the distance of the proposed design as applicable, by any combination of vertical insulation, insulation extending under the slab or insulation extending out from the building. Insulation extending away from the building shall be protected by pavement or by not less than 10 inches (254 mm) of soil. The top edge of the insulation installed between the exterior wall and the edge of the interior slab shall be permitted to be cut at a 45-degree (0.79 rad) angle away from the exterior wall.

☐ **R402.2.11.1 Crawl space walls insulation installation (Mandatory).** Where crawl space wall insulation is installed, it shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches (610 mm). Exposed earth in unvented crawl space foundations shall be covered with a continuous Class I vapor retarder in accordance with the Florida Building Code, Building, or Florida Building Code, Residential, as applicable. All joints of the vapor retarder shall overlap by 6 inches (153 mm) and be sealed or taped. The edges of the vapor retarder shall extend not less than 6 inches (153 mm) up the stem wall and shall be attached to the stem wall.

☐ **R402.4 Air leakage (Mandatory).** The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.5.

> **Exception:** Dwelling units of R-2 Occupancies and multiple attached single family dwellings shall be permitted to comply with Section C402.5.

☐ **R402.4.1 Building thermal envelope.** The building thermal envelope shall comply with Sections R402.4.1.1 and R402.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.

☐ **R402.4.1.1 Installation.** The components of the building thermal envelope as listed in Table R402.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R402.4.1.1, as applicable to the method of construction. Where required by the code official, an approved third party shall inspect all components and verify compliance.

☐ **R402.4.1.2 Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding seven air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Dwelling units with an air leakage rate less than three air changes per hour shall be provided with whole-house mechanical ventilation in accordance with Section R403.6.1 of this code and Section M1507.3 of the Florida Building Code, Residential. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

> **Exception:** Testing is not required for additions, alterations, renovations, or repairs, of the building thermal envelope of existing buildings in which the new construction is less than 85 percent of the building thermal envelope.

During testing:
1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.
7. If an attic is both air sealed and insulated at the roof deck, interior access doors and hatches between the conditioned space volume and the attic shall be opened during the test and the volume of the attic shall be added to the conditioned space volume for purposes of reporting an infiltration volume and calculating the air leakage of the home.

Florida Building Code, Energy Conservation, Mandatory Requirements (2023 Continued)

☐ **R402.4.2 Fireplaces.** New wood-burning fireplaces shall have tight-fitting flue dampers or doors, and outdoor combustion air. Where using tight-fitting doors on factory-built fireplaces listed and labeled in accordance with UL 127, the doors shall be tested and listed for the fireplace. Where using tight-fitting doors on masonry fireplaces, the doors shall be listed and labeled in accordance with UL 907.

☐ **R402.4.3 Fenestration air leakage.** Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cfm per square foot (1.5 L/s/m2), and swinging doors no more than 0.5 cfm per square foot (2.6 L/s/m2), when tested according to NFRC 400 or AAMA/ WDMA/CSA 101/I.S.2/A440 by an accredited, independent laboratory and listed and labeled by the manufacturer.

Exception: Site-built windows, skylights and doors.

☐ **R402.4.4 Rooms containing fuel - burning appliances.** In Climate Zones 3 through 8, where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening shall be located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms shall be sealed and insulated in accordance with the envelope requirements of Table R402.1.2, where the walls, floors and ceilings shall meet not less than the basement wall R-value requirement. The door into the room shall be fully gasketed and any water lines and ducts in the room insulated in accordance with Section R403. The combustion air duct shall be insulated where it passes through conditioned space to a minimum of R-8.

Exceptions:

1. Direct vent appliances with both intake and exhaust pipes installed continuous to the outside.
2. Fireplaces and stoves complying with Section R402.4.2 and Section R1006 of the Florida Building Code, Residential.

☐ **R402.4.5 Recessed lighting.** Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E283 at a 1.57 psf (75 Pa) pressure differential. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

☐ **R402.4.6 Air-sealed electrical and communication boxes.** Air-sealed electrical and communication boxes that penetrate the air barrier of the building thermal envelope shall be caulked, taped, gasketed, or otherwise sealed to the air barrier element being penetrated. Air-sealed boxes shall be buried in or surrounded by insulation. Air-sealed boxes shall be marked in accordance with NEMA OS 4. Air-sealed boxes shall be installed in accordance with the manufacturer's instructions.

SECTION R403 SYSTEMS

R403.1 Controls

☐ **R403.1.1 Thermostat provision (Mandatory).** At least one thermostat shall be provided for each separate heating and cooling system

☐ **R403.1.3 Heat pump supplementary heat (Mandatory).** Heat pumps with supplementary electric-resistance heaters shall have controls that limit supplemental heat operation to only those times when one of the following applies:

1. The vapor compression cycle cannot provide the necessary heating energy to satisfy the thermostat setting.
2. The heat pump is operating in defrost mode.
3. The vapor compression cycle malfunctions.
4. The thermostat malfunctions

☐ **R403.3.2 Sealing (Mandatory).** All ducts, air handlers, filter boxes and building cavities that form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers, shall be constructed and sealed in accordance with Section C403.2.9.2 of the Commercial Provisions of this code and shall be shown to meet duct tightness criteria below.

Duct tightness shall be verified by testing in accordance with ANSI/RESNET/ICC 380 by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i), Florida Statutes, to be "substantially leak free" in accordance with Section R403.3.3.

☐ **R403.3.2.1 Sealed air handler.** Air handlers shall have a manufacturer's designation for an air leakage of no more than 2 percent of the design airflow rate when tested in accordance with ASHRAE 193.

☐ **R403.3.3 Duct testing (Mandatory).** Ducts shall be pressure tested to determine air leakage by one of the following methods:

1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.

2 Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exceptions;

1. A duct air leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.
2. Duct testing is not mandatory for buildings complying by Section 405 of this code. Duct leakage testing is required for Section R405 compliance where credit is taken for leakage, and a duct air leakage Qn to the outside of less than 0.080 (where Qn = duct leakage to the outside in cfm per 100 square feet of conditioned floor area tested at 25 Pascals) is indicated in the compliance report for the proposed design.

A written report of the results of the test shall be signed by the party conducting the test and provided to the code official

Florida Building Code, Energy Conservation, Mandatory Requirements (2023 Continued)

☐ **R403.3.5 Building cavities (Mandatory).** Building framing cavities shall not be used as ducts or plenums

☐ **R403.4 Mechanical system piping insulation (Mandatory).** Mechanical system piping capable of carrying fluids above 105°F (41°C) or below 55°F (13°C) shall be insulated to a minimum of R-3.

☐ **R403.4.1 Protection of piping insulation.** Piping insulation exposed to weather shall be protected from damage, including that caused by sunlight, moisture, equipment maintenance and wind, and shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall not be permitted.

☐ **R403.5.1 Heated water circulation and temperature maintenance systems (Mandatory).** If heated water circulation systems are installed, they shall be in accordance with Section R403.5.1.1. Heat trace temperature maintenance systems shall be in accordance with Section R403.5.1.2. Automatic controls, temperature sensors and pumps shall be accessible. Manual controls shall be readily accessible.

☐ **R403.5.1.1 Circulation systems.** Heated water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Gravity and thermosiphon circulation systems shall be prohibited. Controls for circulating hot water system pumps shall start the pump based on the identification of a demand for hot water within the occupancy. The controls shall automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is no demand for hot water.

☐ **R403.5.1.2 Heat trace systems.** Electric heat trace systems shall comply with IEEE 515.1 or UL 515. Controls for such systems shall automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping in accordance with the times when heated water is used in the occupancy.

☐ **R403.5.2 Demand recirculation water systems (Mandatory).** Where installed, demand recirculation water systems shall have controls that comply with both of the following:

1. The control shall start the pump upon receiving a signal from the action of a user of a fixture or appliance, sensing the presence of a user of a fixture or sensing the flow of hot or tempered water to a fixture fitting or appliance.
2. The control shall limit the temperature of the water entering the cold water piping to 104°F (40°C).

☐ **R403.5.5 Heat traps (Mandatory).** Storage water heaters not equipped with integral heat traps and having vertical pipe risers shall have heat traps installed on both the inlets and outlets. External heat traps shall consist of either a commercially available heat trap or a downward and upward bend of at least 3 ½ inches (89 mm) in the hot water distribution line and cold water line located as close as possible to the storage tank.

R403.5.6 Water heater efficiencies (Mandatory).

☐ **R403.5.6.1.1 Automatic controls.** Service water-heating systems shall be equipped with automatic temperature controls capable of adjustment from the lowest to the highest acceptable temperature settings for the intended use. The minimum temperature setting range shall be from 100°F to 140°F (38°C to 60°C).

☐ **R403.5.6.1.2 Shut down.** A separate switch or a clearly marked circuit breaker shall be provided to permit the power supplied to electric service systems to be turned off. A separate valve shall be provided to permit the energy supplied to the main burner(s) of combustion types of service water-heating systems to be turned off.

☐ **R403.5.6.2 Water-heating equipment.** Water-heating equipment installed in residential units shall meet the minimum efficiencies of Table C404.2 in Chapter 4 of the Florida Building Code, Energy Conservation, Commercial Provisions, for the type of equipment installed. Equipment used to provide heating functions as part of a combination system shall satisfy all stated requirements for the appropriate water-heating category. Solar water heaters shall meet the criteria of Section R403.5.6.2.1.

☐ **R403.5.6.2.1 Solar water-heating systems.** Solar systems for domestic hot water production are rated by the annual solar energy factor of the system. The solar energy factor of a system shall be determined from the Florida Solar Energy Center Directory of Certified Solar Systems. Solar collectors shall be tested in accordance with ISO Standard 9806, Test Methods for Solar Collectors, and SRCC Standard TM-1, Solar Domestic Hot Water System and Component Test Protocol. Collectors in installed solar water-heating systems should meet the following criteria:

1. Be installed with a tilt angle between 10 degrees and 40 degrees of the horizontal; and
2. Be installed at an orientation within 45 degrees of true south.

☐ **R403.6 Mechanical ventilation (Mandatory).** The building shall be provided with ventilation that meets the requirements of the Florida Building Code, Residential, or Florida Building Code, Mechanical, as applicable, or with other approved means of ventilation including: Natural, Infiltration or Mechanical means. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

☐ **R403.6.1 Whole-house mechanical ventilation system fan efficacy.** When installed to function as a whole-house mechanical ventilation system, fans shall meet the efficacy requirements of Table R403.6.1.

Exception: Where an air handler that is integral to tested and listed HVAC equipment is used to provide whole-house mechanical ventilation, the air handler shall be powered by an electronically commutated motor.

TABLE R403.6.1
WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM FAN EFFICACY

FAN LOCATION	AIRFLOW RATE MINIMUM (CFM)	MINIMUM EFFICACY[a] (CFM/WATT)	AIRFLOW RATE MAXIMUM (CFM)
HRV or ERV	Any	1.2 cfm/watt	Any
Range hoods	Any	2.8 cfm/watt	Any
In-line fan	Any	3.8 cfm/watt	Any
Bathroom, utility room	10	2.8 cfm/watt	<90
Bathroom, utility room	90	3.5 cfm/watt	Any

For SI: 1 cfm = 28.3 L/min.

a. When tested in accordance with HVI Standard 916

☐ **R403.6.2 Ventilation Air.** Residential buildings designed to be operated at a positive indoor pressure or for mechanical ventilation shall meet the following criteria:

1. The design air change per hour minimums for residential buildings in ASHRAE 62.2, Ventilation for Acceptable Indoor Air Quality, shall be the maximum rates allowed for residential applications.

2. No ventilation or air-conditioning system make-up air shall be provided to conditioned space from attics, crawlspaces, attached enclosed garages or outdoor spaces adjacent to swimming pools or spas.

3. If ventilation air is drawn from enclosed space(s), then the walls of the space(s) from which air is drawn shall be insulated to a minimum of R-11 and the ceiling shall be insulated to a minimum of R-19, space permitting, or R-10 otherwise.

R403.7 Heating and cooling equipment.

☐ **R403.7.1 Equipment sizing (Mandatory).** Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on the equipment loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies, based on building loads for the directional orientation of the building. The manufacturer and model number of the outdoor and indoor units (if split system) shall be submitted along with the sensible and total cooling capacities at the design conditions described in Section R302.1. This Code does not allow designer safety factors, provisions for future expansion or other factors that affect equipment sizing. System sizing calculations shall not include loads created by local intermittent mechanical ventilation such as standard kitchen and bathroom exhaust systems. New or replacement heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed.

Florida Building Code, Energy Conservation, Mandatory Requirements (2023 Continued)

☐ **R403.7.1.1 Cooling equipment capacity.** Cooling only equipment shall be selected so that its total capacity is not less than the calculated total load but not more than 1.15 times greater than the total load calculated according to the procedure selected in Section R403.7, or the closest available size provided by the manufacturer's product lines. The corresponding latent capacity of the equipment shall not be less than the calculated latent load.
The published value for AHRI total capacity is a nominal, rating-test value and shall not be used for equipment sizing. Manufacturer's expanded performance data shall be used to select cooling-only equipment. This selection shall be based on the outdoor design dry-bulb temperature for the load calculation (or entering water temperature for water-source equipment), the blower CFM provided by the expanded performance data, the design value for entering wet-bulb temperature and the design value for entering dry-bulb temperature.

Design values for entering wet-bulb and dry-bulb temperatures shall be for the indoor dry bulb and relative humidity used for the load calculation and shall be adjusted for return side gains if the return duct(s) is installed in an unconditioned space.

Exceptions:

1. Attached single- and multiple-family residential equipment sizing may be selected so that its cooling capacity is less than the calculated total sensible load but not less than 80 percent of that load.
2. When signed and sealed by a Florida-registered engineer, in attached single- and multiple-family units, the capacity of equipment may be sized in accordance with good design practice.

R403.7.1.2 Heating equipment capacity.

☐ **R403.7.1.2.1 Heat pumps.** Heat pump sizing shall be based on the cooling requirements as calculated according to Section R403.7.1.1, and the heat pump total cooling capacity shall not be more than 1.15 times greater than the design cooling load even if the design heating load is 1.15 times greater than the design cooling load.

☐ **R403.7.1.2.2 Electric resistance furnaces.** Electric resistance furnaces shall be sized within 4 kW of the design requirements calculated according to the procedure selected in Section R403.7.1.

☐ **R403.7.1.2.3 Fossil fuel heating equipment.** The capacity of fossil fuel heating equipment with natural draft atmospheric burners shall not be less than the design load calculated in accordance with Section R403.7.1.

☐ **R403.7.1.3 Extra capacity required for special occasions.** Residences requiring excess cooling or heating equipment capacity on an intermittent basis, such as anticipated additional loads caused by major entertainment events, shall have equipment sized or controlled to prevent continuous space cooling or heating within that space by one or more of the following options:

1. A separate cooling or heating system is utilized to provide cooling or heating to the major entertainment areas.
2. A variable capacity system sized for optimum performance during base load periods is utilized.

☐ **R403.8 Systems serving multiple dwelling units (Mandatory).** Systems serving multiple dwelling units shall comply with Sections C403 and C404 of the Florida Building Code, Energy Conservation—Commercial Provisions in lieu of Section R403.

☐ **R403.9 Snow melt and ice system controls (Mandatory).** Snow- and ice-melting systems, supplied through energy service to the building, shall include automatic controls capable of shutting off the system when the pavement temperature is above 50°F (10°C), and no precipitation is falling and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40°F (4.8°C).

☐ **403.10 Pools and permanent spa energy consumption (Mandatory).** The energy consumption of pools and permanent spas shall be in accordance with Sections R403.10.1 through R403.10.5.

☐ **R403.10.1 Heaters.** The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater mounted on the exterior of the heater, or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater.
Gas-fired heaters shall not be equipped with continuously burning ignition pilots.

☐ **R403.10.2 Time switches.** Time switches or other control methods that can automatically turn off and on according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- and waste-heat-recovery pool heating systems
3. Where pumps are powered exclusively from on-site renewable generation.

☐ **R403.10.3 Covers.** Outdoor heated swimming pools and outdoor permanent spas shall be equipped with a vapor-retardant cover on or at the water surface or a liquid cover or other means proven to reduce heat loss.

Exception: Where more than 70 percent of the energy for heating, computed over an operation season, is from site-recovered energy, such as from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required

☐ **R403.10.4 Gas- and oil-fired pool and spa heaters.** All gas- and oil-fired pool and spa heaters shall have a minimum thermal efficiency of 82 percent for heaters manufactured on or after April 16, 2013, when tested in accordance with ANSI Z 21.56. Pool heaters fired by natural or LP gas shall not have continuously burning pilot lights.

☐ **R403.10.5 Heat pump pool heaters.** Heat pump pool heaters shall have a minimum COP of 4.0 when tested in accordance with AHRI 1160, Table 2, Standard Rating Conditions-Low Air Temperature. A test report from an independent laboratory is required to verify procedure compliance. Geothermal swimming pool heat pumps are not required to meet this standard.

☐ **R403.11 Portable spas (Mandatory).** The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP-14

☐ **R403.13 Dehumidifiers (Mandatory).** If installed, a dehumidifier shall conform to the following requirements:

1. The minimum rated efficiency of the dehumidifier shall be greater than 1.7 liters/ kWh if the total dehumidifier capacity for the house is less than 75 pints/day and greater than 2.38 liters/kWh if the total dehumidifier capacity for the house is greater than or equal to 75 pints/day.
2. The dehumidifier shall be controlled by a sensor that is installed in a location where it is exposed to mixed house air.
3. Any dehumidifier unit located in unconditioned space that treats air from conditioned space shall be insulated to a minimum of R-2.
4. Condensate disposal shall be in accordance with Section M1411.3.1 of the Florida Building Code, Residential.

☐ **R403.13.1 Ducted dehumidifiers.** Ducted dehumidifiers shall, in addition to conforming to the requirements of Section R403.13, conform to the following requirements:

1. If a ducted dehumidifier is configured with return and supply ducts both connected into the supply side of the cooling system, a backdraft damper shall be installed in the supply air duct between the dehumidifier inlet and outlet duct.
2. If a ducted dehumidifier is configured with only its supply duct connected into the supply side of the central heating and cooling system, a backdraft damper shall be installed in the dehumidifier supply duct between the dehumidifier and central supply duct.
3. A ducted dehumidifier shall not be ducted to or from a central ducted cooling system on the return duct side upstream from the central cooling evaporator coil.
4. Ductwork associated with a dehumidifier located in unconditioned space shall be insulated to a minimum of R-6.

SECTION R404
ELECTRICAL POWER AND LIGHTING SYSTEMS

☐ **R404.1 Lighting equipment (Mandatory).** All permanently installed luminaires, excluding those in kitchen appliances, shall have an efficacy of at least 45 lumens-per-watt or shall utilize lamps with an efficacy of not less than 65 lumens-per-watt.

R404.1.1 Lighting equipment (Mandatory). Fuel gas lighting systems shall not have continuously burning pilot lights.

SECTION R405
SIMULATED PERFORMANCE ALTERNATIVE
(PERFORMANCE)

☐ **R405.2 Mandatory requirements.** Compliance with this section requires that the mandatory provisions identified in Section R401.2 be met. All supply and return ducts not completely inside the building thermal envelope shall be insulated to a minimum of R-6, except site-wrapped supply ducts not completely inside the building thermal envelope shall be insulated to a minimum of R-8.

☐ **R405.2.1 Ceiling insulation.** Ceilings shall have an insulation level of at least R-19, space permitting. For the purposes of this code, types of ceiling construction that are considered to have inadequate space to install R-19 include single assembly ceilings of the exposed deck and beam type and concrete deck roofs. Such ceiling assemblies shall be insulated to at least a level of R-10.

☐ **R405.2.2 Building air leakage testing.** Building or dwelling air leakage testing shall be in accordance with Sections R402.4 through R402.4.1.2. If an air leakage rate below seven air changes per hour at a pressure of 0.2 inch w.g. (50 pascals) is specified for the proposed design, testing shall verify the air leakage rate does not exceed the air leakage rate of the proposed design instead of seven air changes per hour.

☐ **R405.2.3 Duct air leakage testing.** In cases where duct air leakage lower than the default Qn to outside of 0.080 (where Qn = duct leakage to the outside in cfm per 100 square feet of conditioned floor area tested at 25 Pascals) is specified for the proposed design, testing in accordance with Section R403.3.2 shall verify a duct air leakage rate not exceeding the leakage rate of the proposed design. Otherwise, in accordance with Section R403.3.3, duct testing is not mandatory for buildings complying by Section R405.

SECTION R406
ENERGY RATING INDEX
COMPLIANCE ALTERNATIVE

☐ **R406.2 Mandatory requirements.** Compliance with this section requires that the provisions identified in Sections R401 through R404 labeled as "mandatory" and Section R403.5.3 of the 2015 International Energy Conservation Code be met. For buildings that do not utilize on-site renewable power production for compliance with this section, the building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table 402.1.1 or 402.1.3 of the 2009 International Energy Conservation Code. For buildings that utilize on-site renewable power production for compliance with this section, the building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table R402.1.2 or Table R402.1.4 of the 2015 International Energy Conservation Code.

Exception: Supply and return ducts not completely inside the building thermal envelope shall be insulated to a minimum of R-6.

☐ **R406.2.1 Site-wrapped supply ducts.** Site-wrapped supply ducts not completely inside the building thermal envelope shall be insulated to a minimum of R-8.

2023 - AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA-TABLE 402.4.1.1[a]

Project Name:	Habitat for Humanity House 241 TBDLocust Pass	Builder Name:	
Street:	TBD Locust Pass	Permit Office:	Marion
City, State, Zip:	Ocala, FL, 34472	Permit Number:	
Owner:		Jurisdiction:	521400
Design Location:	FL, Ocala	County:	Marion(Florida Climate Zone 2)

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA	CHECK
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.	
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.	
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.	
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.		
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.	
Floors (including above-garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.	
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawlspace walls.	
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.		
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity spaces.	
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.		
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the finished surface.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.	
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.	
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.	
Electrical, communication, and other equipment boxes, housings, and enclosures	Boxes, housings, and enclosures that penetrate the air barrier shall be caulked, taped, gasketed, or otherwise sealed to the air barrier element being penetrated. All concealed openings into the box, housing, or enclosure shall be sealed. The continuity of the air barrier shall be maintained around boxes, housings, and enclosures that penetrate the air barrier. Alternatively, air-sealed boxes shall be installed in accordance with R402.4.6	Boxes, housings, and enclosures shall be buried in or surrounded by tightly fitted insulation.	
HVAC register boots	HVAC supply and return register boots that penetrate building thermal envelope shall be sealed to the sub-floor, wall covering or ceiling penetrated by the boot.		
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids voids between fire sprinkler cover plates and walls or ceilings.		

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

Envelope Leakage Test Report (Blower Door Test)
Residential Prescriptive, Performance or ERI Method Compliance
2023 Florida Building Code, Energy Conservation, 8th Edition

Jurisdiction: 521400	Permit #:

Job Information

Builder:	Community:	Lot: NA
Address: TBD Locust Pass		
City: Ocala	State: FL	Zip: 34472

Air Leakage Test Results *Passing results must meet either the Performance, Prescriptive, or ERI Method*

○ **PRESCRIPTIVE METHOD**-The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 7 air changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Climate Zones 1 and 2.

● **PERFORMANCE or ERI METHOD**-The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding the selected ACH(50) value, as shown on Form R405-2023 (Performance) or R406-2023 (ERI), section labeled as infiltration, sub-section ACH50.

ACH(50) specified on Form R405-2023-Energy Calc (Performance) or R406-2023 (ERI): 7.000

_____ x 60 ÷ 9168 = _____
CFM(50) Building Volume ACH(50)

☐ **PASS**

☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.

Method for calculating building volume:
○ Retrieved from architectural plans
● Code software calculated
○ Field measured and calculated

R402.4.1.2 Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding seven air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Dwelling units with an air leakage rate less than three air changes per hour shall be provided with whole-house mechanical ventilation in accordance with Section R403.6.1 of this code and Section M1507.3 if the *Florida Building Code, Residential.* Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), *Florida Statues,*or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the *code official.* Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope.*

During testing:
1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, back draft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.
7. If an attic is both sealed and insulated at the roof deck, interior access doors and hatches between the conditioned space volume and the attic shall be opened during the test and the volume of the attic shall be added to the conditioned space volume for purposes of reporting the infiltration volume and calculating the air leakage of the home.

Testing Company

Company Name: _____ Phone: _____

I hereby verify that the above Air Leakage results are in accordance with the 2023 8th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above.

Signature of Tester: _____ Date of Test: _____

Printed Name of Tester: _____

License/Certification #: _____ Issuing Authority: _____

wrightsoft

Building Analysis
Entire House
Habitat for Humanity

Job: EC:9146868
Date: April 5th, 2024
By: Energycalcs.net

Energycalcs.net 267 deleon road, Debary, FL 32713 Phone: 386-775-0908 Email: Info@energycalcs.net

Project Information

For: House 241
Locust Pass, Ocala, FL 34472

Design Conditions

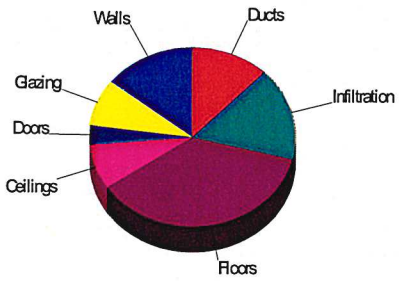
Location:
Ocala, FL, US
Elevation: 87 ft
Latitude: 29°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	34	91
Daily range (°F)	-	17 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	75
Design TD (°F)	36	16
Relative humidity (%)	50	50
Moisture difference (gr/lb)	31.8	44.4
Infiltration:		
Method	Simplified	
Construction quality	Average	
Fireplaces	0	

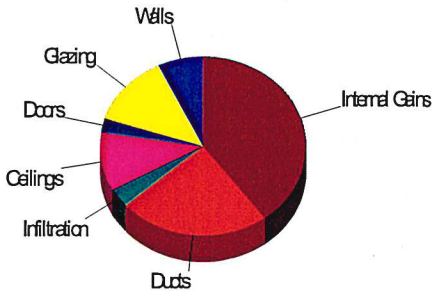
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	2.4	2328	14.5
Glazing	11.9	1342	8.4
Doors	14.0	564	3.5
Ceilings	1.2	1306	8.1
Floors	5.2	5862	36.6
Infiltration	2.4	2686	16.7
Ducts		1948	12.1
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	
Total		**16036**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.4	1303	7.2
Glazing	20.7	2344	12.9
Doors	11.4	459	2.5
Ceilings	1.7	1914	10.5
Floors	0	0	0
Infiltration	0.6	625	3.4
Ducts		4304	23.7
Ventilation		0	0
Internal gains		7220	39.7
Blower		0	0
Adjustments		0	
Total		**18169**	**100.0**



Latent Cooling Load = 2691 Btuh
Overall U-value = 0.094 Btuh/ft²-°F, Window / Floor Area = 10.0 %

Data entries checked.

wrightsoft

Project Summary
Entire House
Habitat for Humanity

Job: EC:9146868
Date: April 5th, 2024
By: Energycalcs.net

Energycalcs.net 267 deleon road, Debary, FL 32713 Phone: 386-775-0908 Email: Info@energycalcs.net

Project Information

For: House 241
Locust Pass, Ocala, FL 34472

Notes:

Design Information

Weather: Ocala, FL, US

Winter Design Conditions

Outside db	34	°F
Inside db	70	°F
Design TD	36	°F

Summer Design Conditions

Outside db	91	°F
Inside db	75	°F
Design TD	16	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	44	gr/lb

Heating Summary

Structure	14089	Btuh
Ducts (R-6.0)	1948	Btuh
Central vent (0 cfm) (none)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	16036	Btuh

Sensible Cooling Equipment Load Sizing

Structure	13865	Btuh
Ducts (R-6.0)	4304	Btuh
Central vent (0 cfm) (none)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	y	
Rate/swing multiplier	1.00	
Equipment sensible load	18169	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1134	1134
Volume (ft³)	9072	9072
Air changes/hour	0.45	0.23
Equiv. AVF (cfm)	68	35

Latent Cooling Equipment Load Sizing

Structure	1847	Btuh
Ducts	844	Btuh
Central vent (0 cfm) (none)	0	Btuh
Equipment latent load	2691	Btuh
Equipment Total Load (Sen+Lat)	20859	Btuh
Req. total capacity at 0.84 SHR	1.8	ton

Heating Equipment Summary

Make	GOODMAN
Trade	
Model	GSZB402410
AHRI ref	210318449

Efficiency	7.5 HSPF2	
Heating input		
Heating output	22000	Btuh @ 47°F
Temperature rise	0	°F
Actual air flow	0	cfm
Air flow factor	0	cfm/Btuh
Static pressure	0.40	in H2O

Space thermostat
Capacity balance point = 0 °F

Cooling Equipment Summary

Make	GOODMAN
Trade	
Cond	GSZB402410
Coil	AMST24BU14
AHRI ref	210318449

Efficiency	12.5 EER2, 15 SEER2	
Sensible cooling	18984	Btuh
Latent cooling	3616	Btuh
Total cooling	22600	Btuh
Actual air flow	790	cfm
Air flow factor	0.043	cfm/Btuh
Static pressure	0.40	in H2O
Load sensible heat ratio	0.87	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Manual S Compliance Report

Entire House

Habitat for Humanity

Job: EC:9146868
Date: April 5th, 2024
By: Energycalcs.net

Energycalcs.net 267 deleon road, Debary, FL 32713 Phone: 386-775-0908 Email: Info@energycalcs.net

Project Information

For: House 241
Locust Pass, Ocala, FL 34472

Cooling Equipment

Design Conditions

Outdoor design DB:	91.4°F	Sensible gain:	18169	Btuh	Entering coil DB:	76.7°F
Outdoor design WB:	75.7°F	Latent gain:	2691	Btuh	Entering coil WB:	63.3°F
Indoor design DB:	75.0°F	Total gain:	20859	Btuh		
Indoor RH:	50%	Estimated airflow:	790	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP			
Manufacturer:	GOODMAN		Model:	GSZB402410+AMST24BU14
Actual airflow:	790	cfm		
Sensible capacity:	19000	Btuh	105% of load	
Latent capacity:	3600	Btuh	134% of load	
Total capacity:	22600	Btuh	108% of load	SHR: 84%

Heating Equipment

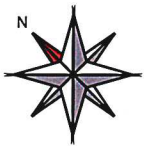
Design Conditions

Outdoor design DB:	34.0°F	Heat loss:	16036	Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F					

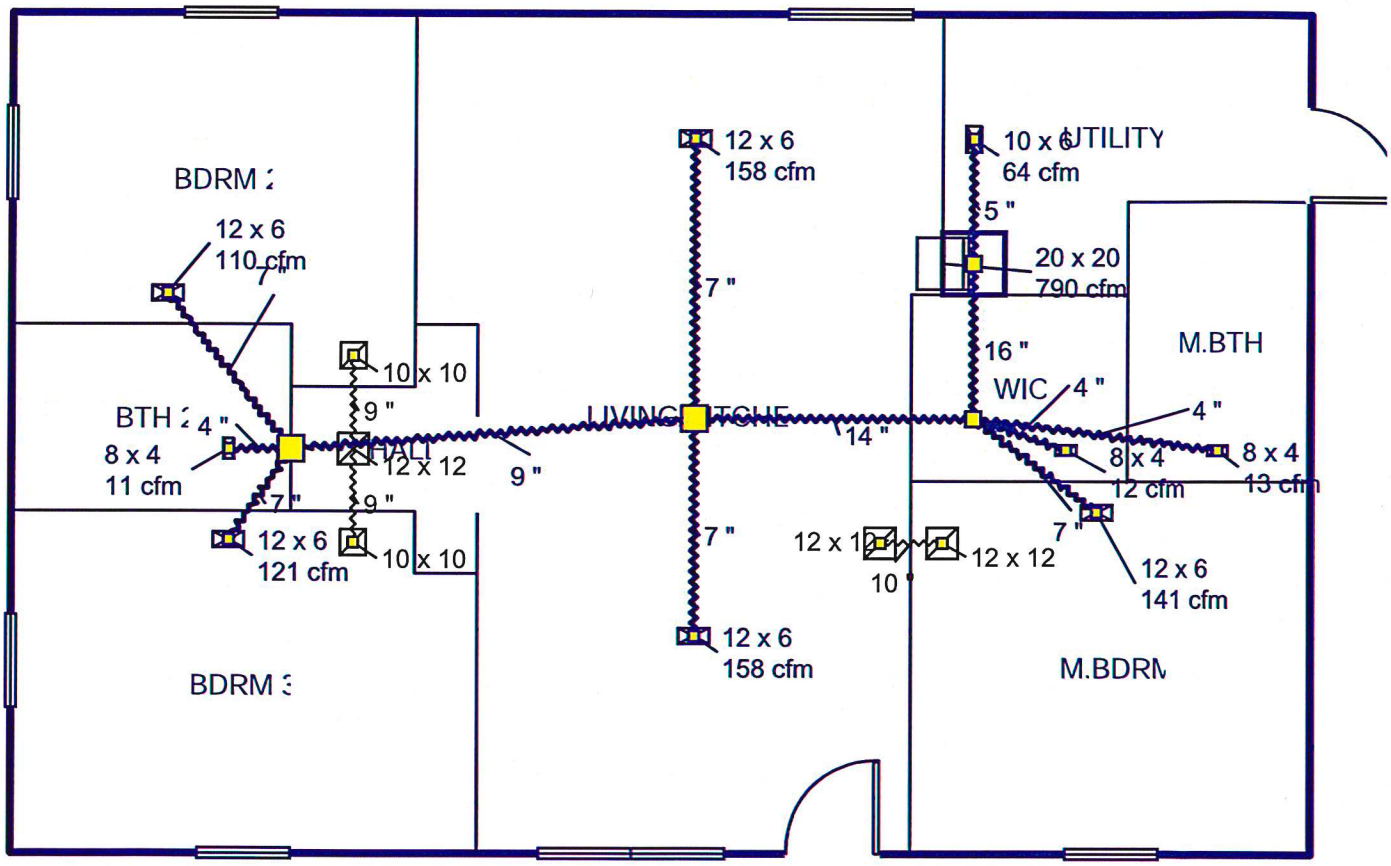
Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP					
Manufacturer:	GOODMAN		Model:	GSZB402410+AMST24BU14		
Actual airflow:	0	cfm				
Output capacity:	22000	Btuh	137% of load		Capacity balance:	0 °F
Supplemental heat required:	0	Btuh			Economic balance:	0 °F

Meets all requirements of ACCA Manual S.



Level 1



Job #: EC:9146868 **Performed by Energycalcs.net for:** House 241 Locust Pass Ocala, FL 34472	**Habitat for Humanity** Energycalcs.net 267 deleon road Debary, FL 32713 Phone: 386-775-0908 Info@energycalcs.net	Scale: 1 : 71 Page 1 Right-Suite® Universal 2023 23.0.05 RSU15637 2024-Apr-05 11:51:57 ...ty House 241 TBD Locust Pass.rup

wrightsoft

Duct System Summary

Entire House

Habitat for Humanity

Job: EC:9146868
Date: April 5th, 2024
By: Energycalcs.net

Energycalcs.net 267 deleon road, Debary, FL 32713 Phone: 386-775-0908 Email: Info@energycalcs.net

Project Information

For: House 241
Locust Pass, Ocala, FL 34472

	Heating	Cooling
External static pressure	0.40 in H2O	0.40 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.40 in H2O	0.40 in H2O
Supply / return available pressure	0.200 / 0.200 in H2O	0.200 / 0.200 in H2O
Lowest friction rate	0.245 in/100ft	0.245 in/100ft
Actual air flow	0 cfm	790 cfm
Total effective length (TEL)	163 ft	

Supply Branch Detail Table

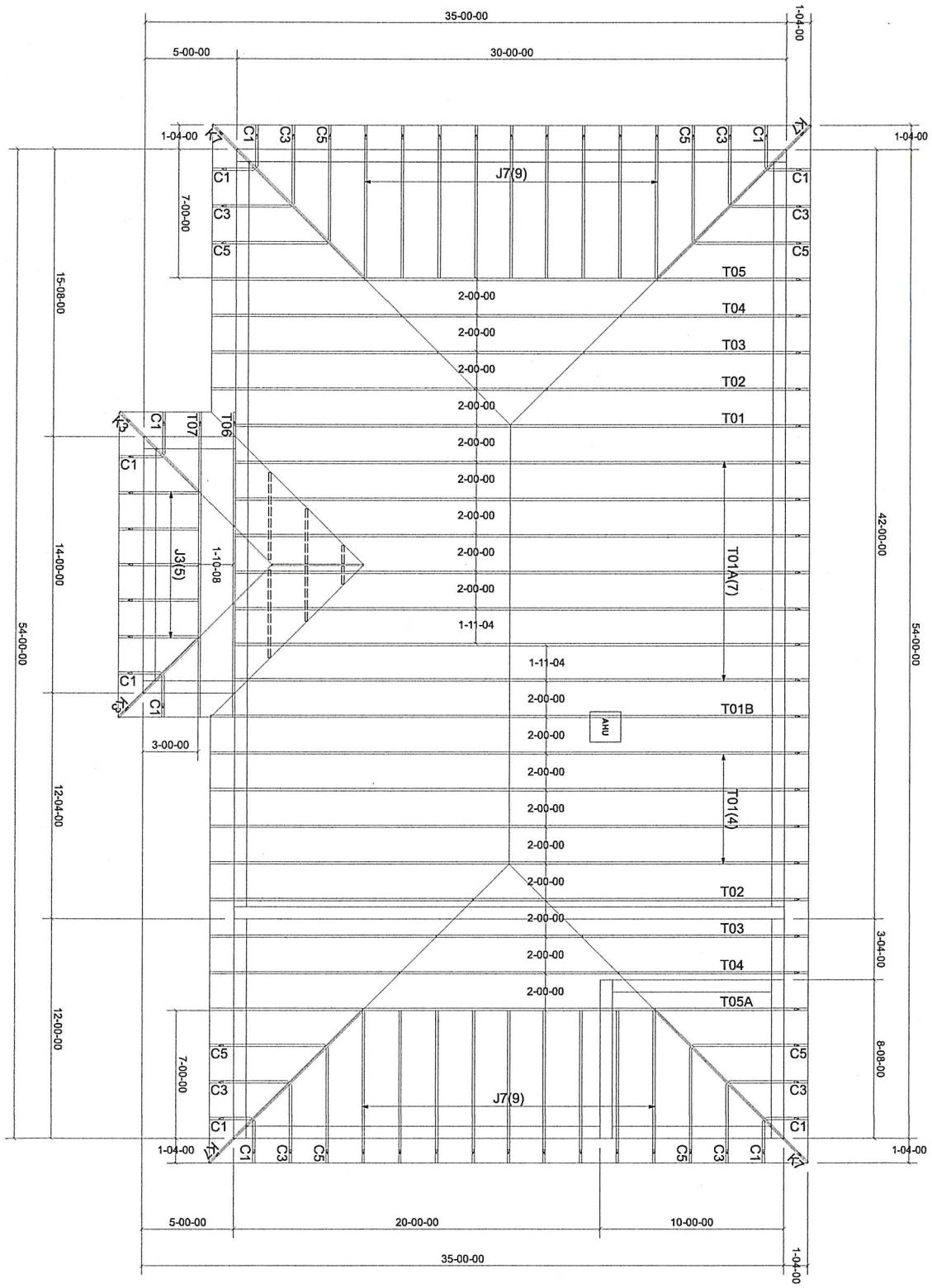
Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
BDRM 2	c 2539	0	110	0.245	7.0	0x0	VlFx	33.4	130.0	st3
BDRM 3	c 2792	0	121	0.249	7.0	0x0	VlFx	30.6	130.0	st3
BTH 2	c 250	0	11	0.252	4.0	0x0	VlFx	29.0	130.0	st3
LIVING/KITCHEN	c 3639	0	158	0.305	7.0	0x0	VlFx	21.0	110.0	st2
LIVING/KITCHEN-A	c 3639	0	158	0.301	7.0	0x0	VlFx	23.0	110.0	st2
M.BDRM	c 3248	0	141	0.400	7.0	0x0	VlFx	10.0	90.0	st1
M.BTH	c 300	0	13	0.388	4.0	0x0	VlFx	13.1	90.0	st1
UTILITY	c 1474	0	64	0.541	5.0	0x0	VlFx	4.0	70.0	
WIC	c 287	0	12	0.407	4.0	0x0	VlFx	8.2	90.0	st1

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st3	Peak AVF	0	243	0.245	549	9.0	0 x 0	VinlFlx	st2
st2	Peak AVF	0	559	0.245	523	14.0	0 x 0	VinlFlx	st1
st1	Peak AVF	0	726	0.245	520	16.0	0 x 0	VinlFlx	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x 0	0	790	0	0	0	0	0x 0		VlFx	



RoMac BUILDING SUPPLY

200 East Main Street
Leesburg, FL 34748
Ph: 352-787-5334
Fx: 352-326-2404

Customer Name
Habitat for Humanity of Marion Co

Job Name
Habitat House 241 Carport Right CMU

Designer
Kala Edwards 4/10/2024

Job #
240929

Ro-Mac Lumber & Supply Inc.
200 East Main Street
Leesburg FL 34748
Business: (352) 787-5334
www.romaclumber.com

Quotation

Job # 240929
Status Quote
Quote 04/10/2024

Customer

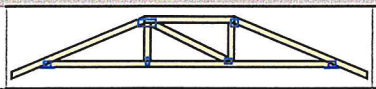
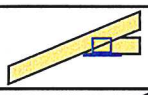
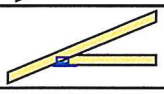
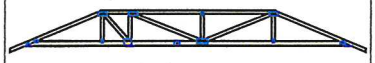
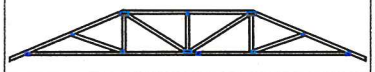
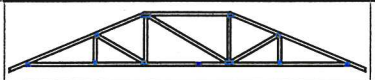
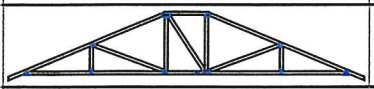
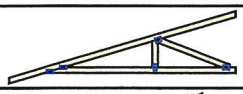
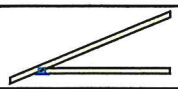
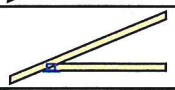
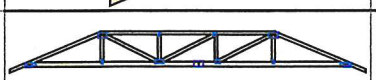
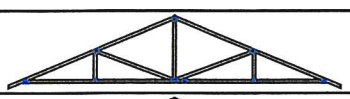
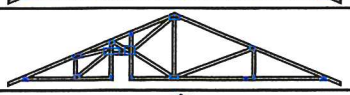
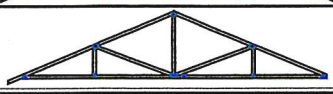
Habitat for Humanity of Marion Co
1321 SE 25th Loop
Ocala FL 34471

Project

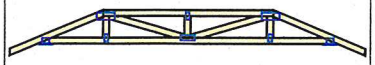
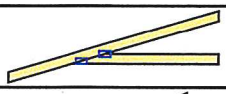
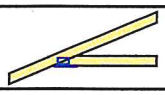
Habitat House 241 Carport Right CMU
Locust Pass
-
Ocala FL 34472

Sales Rep. Roger Sandor
Designer Kala Edwards

Roof Loading
20-7-0-10

Label	Profile	Qty / Ply	TC Pitch / BC Pitch	Span / Height	TC / BC	L-OH / R-OH	L-Cant / R-Cant	L-Heel / R-Heel	Wt. / Tot. Wt.
Group:									
T06		1 1-ply	5 /12	14-00-00 2-10-13	2 x 4 2 x 4	1-04-00 1-04-00	- -	4-01 4-01	59 59
C1		12 1-ply	5 /12	1-00-00 1-03-07	2 x 4 2 x 4	1-04-00 -	- -	4-01 9-01	5 65
C3		8 1-ply	5 /12	3-00-00 2-01-07	2 x 4 2 x 4	1-04-00 -	- -	4-01 1-07-01	12 93
T05A		1 1-ply	5 /12	30-00-00 3-09-07	2 x 4 2 x 6	1-04-00 1-04-00	- -	4-01 4-01	161 161
T04		2 1-ply	5 /12	30-00-00 4-07-07	2 x 4 2 x 4	1-04-00 1-04-00	- -	4-01 4-01	146 292
T03		2 1-ply	5 /12	30-00-00 5-05-07	2 x 4 2 x 4	1-04-00 1-04-00	- -	4-01 4-01	145 289
T02		2 1-ply	5 /12	30-00-00 6-03-07	2 x 4 2 x 4	1-04-00 1-04-00	- -	4-01 4-01	150 299
K7		4 1-ply	3.54 /12	9-10-13 3-09-05	2 x 4 2 x 4	1-10-10 -	- -	3-13 3-02-13	41 165
J7		18 1-ply	5 /12	7-00-00 3-09-07	2 x 4 2 x 4	1-04-00 -	- -	4-01 3-03-01	24 432
C5		8 1-ply	5 /12	5-00-00 2-11-07	2 x 4 2 x 4	1-04-00 -	- -	4-01 2-05-01	18 143
T05		1 1-ply	5 /12	30-00-00 3-09-07	2 x 4 2 x 6	1-04-00 1-04-00	- -	4-01 4-01	161 161
T01		5 1-ply	5 /12	30-00-00 7-01-07	2 x 4 2 x 4	1-04-00 1-04-00	- -	4-01 4-01	139 693
T01B		1 1-ply	5 /12	30-00-00 7-01-07	2 x 4 2 x 4	1-04-00 1-04-00	- -	4-01 4-01	166 166
T01A		7 1-ply	5 /12	30-00-00 7-01-07	2 x 4 2 x 4	1-04-00 -	- -	4-01 4-01	136 955

Customer	Project	Reference
Habitat for Humanity of Marion Co	Habitat House 241 Carport Right CMU	240929

Label	Profile	Qty Ply	TC Pitch BC Pitch	Span Height	TC BC	L-OH R-OH	L-Cant R-Cant	L-Heel R-Heel	Wt. Tot. Wt.
T07		1 1-ply	5 /12	14-00-00 2-01-07	2 x 4 2 x 4	1-04-00 1-04-00	- -	4-01 4-01	63 63
K3		2 1-ply	3.54 /12	4-02-15 2-01-05	2 x 4 2 x 4	1-10-10 -	- -	3-13 1-06-13	16 32
J3		5 1-ply	5 /12	3-00-00 2-01-07	2 x 4 2 x 4	1-04-00 -	- -	4-01 1-07-01	12 58
	Roof Truss Totals:								

Ancillary Items

QTY	TYPE	DESCRIPTION	LENGTH	LABEL
2	Dimension Lumber	2x6 SP No.2	16-00-00	2x6x16 SP No.2
1	Dimension Lumber	2x8 SP No.2	16-00-00	2x8x16 SP No.2