

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
BUILDING 38
CAPE CORAL, FLORIDA

PROJECT BUILDING CODE INFORMATION

GENERAL INFORMATION

OCCUPANCY CLASSIFICATION:	FBC:	RESIDENTIAL, GROUP R-3
	NFPA:	ONE- AND TWO-FAMILY DWELLINGS
CONSTRUCTION TYPE:	FBC:	TYPE V-B
	NFPA:	TYPE V (000)
CHANGE OF OCCUPANCY:	N/A	
CLASSIFICATION OF WORK:	N/A	
MONITORED SPRINKLER SYSTEM:	NO	
ACCESSIBLE TO THE PHYSICALLY HANDICAP:	NO	
THRESHOLD BUILDING:	NO	
FIRE ALARM SYSTEM:	NO	

FBC TABLE 504.3 (ALLOWABLE HEIGHT ABOVE GRADE PLANE):

ALLOWABLE HEIGHT	40'-0"
ACTUAL HEIGHT	23'-5"
(AVG. HEIGHT OF HIGHEST ROOF, PER FBC DEFINITION)	

FBC TABLE 504.4 (ALLOWABLE STORIES ABOVE GRADE PLANE):

ALLOWABLE STORIES:	3
ACTUAL STORIES (Sa):	2

FBC TABLE 506.2 (ALLOWABLE AREA):

ALLOWABLE AREA FACTOR (At):	UNLIMITED
ALLOWABLE BUILDING AREA (Aa):	UNLIMITED
(Aa=At x Sa)	
ACTUAL BUILDING AREA (PER FBC DEFINITION):	6,300 S.F.
(SEE FLOOR PLANS FOR FLOOR AREAS)	

FBC-R 302.2 - TOWNHOUSE FIRE SEPARATION (PARTY WALL MIN. FIRE RESISTANCE RATING, HRS):
MIN. FIRE RESISTANCE RATING: 2 PROVIDED RATING: 2

TABLE 601 (FIRE-RESISTANCE RATING REQUIREMENTS FOR BLDG. ELEMENTS, HRS.):

BLDG. ELEMENT:	REQUIRED RATING:	PROVIDED RATING:
PRIMARY STRUCTURAL FRAME:	0	0
EXTERIOR BEARING WALLS:	0	0
INTERIOR BEARING WALLS:	0	0
NON-BEARING INTERIOR WALLS:	0	0
FLOOR CONSTRUCTION:	0	0
ROOF CONSTRUCTION:	0	0

TABLE 602 (FIRE-RESISTANCE RATING FOR EXT. WALLS BASED ON FIRE SEPARATION DISTANCE, FT.):

FIRE SEPARATION:	REQUIRED RATING:	PROVIDED RATING:
0 FT TO LESS 5 FT	-	N/A
5 FT TO LESS 10 FT	-	N/A
10 FT TO LESS 30 FT	-	N/A
30 FT AND OVER	0	0

APPLICABLE CODES:
2023 FLORIDA BUILDING CODE (FBC)
2023 FLORIDA BUILDING CODE, ACCESSIBILITY (FBC-A)
2023 FLORIDA BUILDING CODE, PLUMBING (FBC-P)
2023 FLORIDA BUILDING CODE, MECHANICAL (FBC-M)
2023 FLORIDA BUILDING CODE, ENERGY CONSERVATION (FBC-EC)
2017 NATIONAL ELECTRICAL CODE (NEC), NFPA 70
FLORIDA FIRE PREVENTION CODE, 8TH EDITION (FFPC)
2021 NFPA 1, FIRE CODE, 8TH EDITION
2021 NFPA 101, LIFE SAFETY, 8TH EDITION
LEE COUNTY LAND DEVELOPMENT CODE (LDC)
FLORIDA ADMINISTRATIVE CODE (FAC)
FLORIDA STATUTES (FS)

DESIGN WIND LOAD:

ULTIMATE DESIGN WIND SPEED V(ult):	160 MPH
NOMINAL DESIGN WIND SPEED V(asd):	124 MPH
RISK CATEGORY:	II
EXPOSURE CATEGORY:	C
INTERNAL PRESSURE COEFFICIENT:	+/- 0.18 (ENCLOSED BLDG.)

ABBREVIATIONS:

NL:	NO LIMIT
SF:	SQUARE FEET
N/A:	NOT APPLICABLE
NC:	NON-COMBUSTIBLE
NS:	NONSPRINKLERED
A:	PROTECTED
B:	UNPROTECTED
UA:	UNLIMITED AREA
NS:	NON-SPRINKLERED BUILDING
S:	SPRINKLERED BUILDING
S13R:	SPRINKLERED BUILDING (LOW-RISE RESIDENTIAL)
S1:	SPRINKLERED BUILDING (MAXIMUM ONE STORY)
SM:	SPRINKLERED BUILDING (TWO OR MORE STORIES)

NOTE:
G.C. SHALL COMPLY W/ FFPC 1: CHAPTER 16 SAFEGUARDS DURING BUILDING CONSTRUCTION.

SEPARATE PERMITS (NOT INCLUDED IN THIS SET OF DRAWINGS):
FLOOR TRUSSES, ROOF TRUSSES

ARCHITECT OF RECORD
- STRUCTURAL
- PLUMBING

MK ARCHITECTURE

ELECTRICAL, MECHANICAL

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COMPLIANCE STATEMENT

THESE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED BY A FLORIDA REGISTERED ARCHITECT. TO THE BEST OF OUR KNOWLEDGE THESE PLANS AND SPECIFICATIONS ARE DESIGNED IN COMPLIANCE WITH THE 2023 FLORIDA BUILDING CODE, INCLUDING SECTION 1609 FOR DESIGN WIND PRESSURES GENERATED BY AN ULTIMATE DESIGN WIND VELOCITY OF 160 MPH. THE FOLLOWING CODES ALSO APPLY TO THE PROJECT: THE 8TH EDITION OF THE FLORIDA FIRE PREVENTION CODE, CODE OF ORDINANCES OF LEE COUNTY AND FLORIDA STATUTES (F.S.) AS WELL AS OTHER CODES AND ORDINANCES AS ADOPTED BY LEE COUNTY OR THE CITY OF FORT MYERS.

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PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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MK ARCHITECTURE

MICHAEL K. SHEELEY
REG. # 0010564
STATE OF FLORIDA
MICHAEL K. SHEELEY
AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	COV

SHEET
A0.1

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C:\USERS\USER\MK ARCHITECTURE DROPBOX\MK DESIGN FILES\ACAD\DWGS\MK ARCH\MK25013-HABITAT TOWNHOUSES-DIPLOMAT SOUTH_-4 UNIT\CONSTRUCTION DOCUMENTS\MK25013-4-A0.1-COV-BLDG-38.DWG \ April 25, 2025

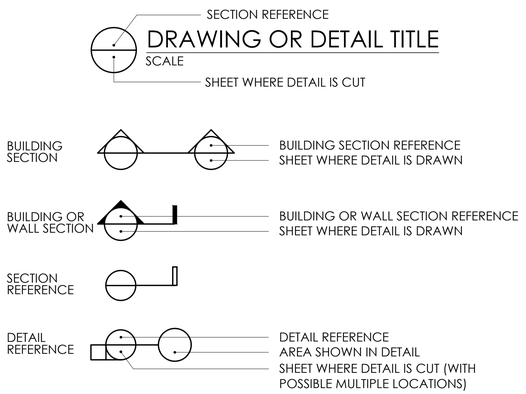
ABBREVIATIONS

A.B.	ANCHOR BOLT	HORIZ.	HORIZONTAL
A/C	AIR CONDITIONING	INSUL.	INSULATION
ACOUS.	ACOUSTICAL	L.V.P.	LUXURY VINYL PLANK
A.F.F.	ABOVE FINISHED FLOOR	MAX.	MAXIMUM
A.H.U.	AIR HANDLER UNIT	M.D.F.	MEDIUM-DENSITY FIBERBOARD
ALUM.	ALUMINUM	MEZZ.	MEZZANINE
APPROX.	APPROXIMATELY	MFGR.	MANUFACTURER
B.E.J.	BUILDING EXPANSION JOINT.	MIL.	MILLIMETER
BLDG.	BUILDING	MIN.	MINIMUM
B.O.	BOTTOM OF	M.O.	MASONRY OPENING
B.O.F.	BOTTOM OF FOOTING	M.R.	MOISTURE RESISTANT
B.R.G.	BEARING	N.I.C.	NOT IN CONTRACT
BURN.	BURNISHED	N.O.A.	NOTICE OF ACCEPTANCE
C/C	CENTER TO CENTER	N.T.S.	NOT TO SCALE
C.I.	CAST IRON	O.A.	OVERALL
C.I.P.	CAST IN PLACE	O.C.	ON CENTER
C.L.	CLEAR	O.H.	OPPOSITE HAND
C.M.U.	CONCRETE MASONRY UNIT	P.C.F.	POLISHED CONCRETE FLOOR
COL.	COLUMN	P. LAM.	PLASTIC LAMINATE
CONC.	CONCRETE	PL.	PLATE
C.O.	CLEAN OUT	P.T.	PRESSURE TREATED
CONST.	CONSTRUCTION	PTD.	PAINTED
CONT.	CONTINUOUS	REINF.	REINFORCED OR REINFORCING
C.J.	CONTROL JOINT	REQ.	REQUIRED
C.T.	CERAMIC TILE	R.O.	ROUGH OPENING
C.U.	CONDENSING UNIT	S.A.T.	SUSPENDED ACOUSTICAL TILE
℄	CENTERLINE	S.B.	SPLASHBLOCK
DIA.	DIAMETER	S.C.	SOLID CORE
DIM.	DIMENSION	SCH.	SCHEDULE
DWG.	DRAWING	S.F.	SQUARE FEET
D.S.	DOWNSPOUT	SHT.	SHEET
DTL	DETAIL	S.I.	SQUARE INCHES
EA.	EACH	SIM.	SIMILAR
ELEC.	ELECTRICAL	SQ.	SQUARE
ELEV.	ELEVATION OR ELEVATOR	S.S.	STAINLESS STEEL
E.J.	EXPANSION JOINT	S.S.M.	SOLID SURFACE MATERIAL
E.P.S.	EXPANDED POLYSTYRENE FOAM	STRUC.	STRUCTURAL
E.Q.	EQUAL	STL.	STEEL
ETC.	ETCETERA	S.V.F.	SHEET VINYL FLOORING
E.W.C.	ELECTRIC WATER COOLER	T.B.B.	TILE BACKER BOARD
EXH.	EXHAUST	T.G.	TEMPERED GLASS
EXIST.	EXISTING	T.O.	TOP OF
EXP.	EXPANSION	T.O.B.	TOP OF BEAM
F.D.	FLOOR DRAIN	T.O.M.	TOP OF MASONRY
F.E.	FIRE EXTINGUISHER	T.O.P.	TOP OF PRE-CAST
F.E.C.	FIRE EXTINGUISHER CABINET	T.O.S.	TOP OF SLAB
F.F.E.	FINISH FLOOR ELEVATION	T.O.W.	TOP OF WALL
FG.	FIBERGLASS	TYP.	TYPICAL
FIN.	FINISHED	U.L.	UNDERWRITERS LABORATORIES
FLR.	FLOOR	U.N.O.	UNLESS NOTED OTHERWISE
F.P.A.	FLORIDA PRODUCT APPROVAL	V.E.J.	VENEER EXPANSION JOINT
F.R.P.	FIBERGLASS REINFORCED PLASTIC	V.PL.	VENEER PLASTER
F.R.T.	FIRE RETARDANT TREATED	VERT.	VERTICAL
F.S.	FLOOR SINK	V.C.T.	VINYL COMPOSITION TILE
GA.	GAUGE	V.I.F.	VERIFY IN FIELD
GALV.	GALVANIZED	V.O.C.	VOLATILE ORGANIC COMPOUNT
G.C.	GENERAL CONTRACTOR	W/	WITH
G.W.B.	GYPSUM WALL BOARD	W.H.	WATER HEATER
HT.	HEIGHT	W.P.M.	WATERPROOF MEMBRANE
H.C.	HOLLOW CORE	W.R.	WATER RESISTANT
H.M.	HOLLOW METAL	WSCT.	WAINSCOT
HDWD.	HARDWOOD	W.W.F.	WELDED WIRE FABRIC
HDWR.	HARDWARE		

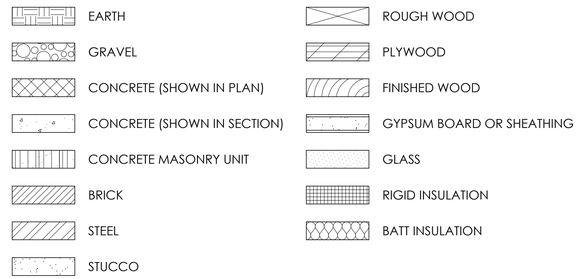
GENERAL NOTES

1. THE CONSTRUCTION DOCUMENT PACKAGE REPRESENTS THE BASIC PROJECT SCOPE AND CONSTRUCTION REQUIREMENTS AND ALL WORK ASSOCIATED W/ THIS PROJECT SHALL CONFORM TO ALL APPLICABLE CODES, LAWS AND LOCAL ENACTMENT ORDINANCES. THE CONTRACTOR, SUBCONTRACTOR AND/OR SUPPLIERS FOR THIS PROJECT SHALL EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS IN THEIR ENTIRETY. SUB-CONTRACTORS SHALL PREPARE BIDS FROM THE ENTIRE SET OF DOCUMENTS AND SHALL NOT BE ALLOWED TO BID BASED ON ONLY A PARTIAL REVIEW. ALL COSTS SUBMITTED SHALL BE BASED ON A THOROUGH KNOWLEDGE OF THE WORK AND THE MATERIALS REQUIRED. ANY DISCREPANCY AND/OR UNCERTAINTY AS TO WHAT MATERIAL OR PRODUCT IS TO BE USED SHOULD BE VERIFIED W/ THE OWNER AND/OR ARCHITECT PRIOR TO BID.
2. UNLESS OTHERWISE INDICATED, EXTERIOR DIMENSIONS ARE TO OUTSIDE FACE OF BLOCK AND CENTERLINE OF STRUCTURAL COLUMNS. INTERIOR DIMENSIONS ARE TO FACE OF STUD OR C.M.U. DIMENSIONS ARE NOMINAL AND MAY NOT REFLECT THE ACTUAL THICKNESS.
3. SEE CIVIL DRAWINGS FOR FINISH FLOOR AND GRADE ELEVATIONS, SIDEWALK, CURBS, ETC.
   A. THE GENERAL CONTRACTOR SHALL FILE A NOTICE OF COMMENCEMENT BEFORE START OF WORK IN ACCORDANCE W/ F.B.C. SECTION 105.8.
   B. ALL FINISH FLOOR ELEVATION MARKS REFER TO THE NORTH AMERICAN VERTICAL DATUM UNLESS OTHERWISE NOTED. SEE PROPERTY LEGAL SURVEY.
   C. CONTRACTOR PERFORMING THE WORK IS TO REFER TO STRUCTURAL PLANS FOR CONSTRUCTION ELEVATIONS. THE CONTRACTOR PERFORMING THE WORK TO COORDINATE UTILITY AND M.E.P. TRADES TO INSURE FINAL ELEVATIONS ARE MAINTAINED.
4. FILL ALL VOIDS BETWEEN TOP OF MASONRY, STRUCTURE AND DECK WITH SEMI-REFRACTORY SAFING INSULATION.
5. ALL METAL STUDS ARE TO BE 20 GAUGE UNLESS NOTED OTHERWISE.
6. ALL INTERIOR WALL AND CEILING FINISHES SHALL BE EITHER CLASS A OR B. ALL INTERIOR FLOOR FINISHES SHALL BE NOT LESS THAN CLASS II.
7. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS REQUIRED TO COMPLETE THE WORK WITH GOOD WORKMANSHIP AND ASSURE PROPER WORKING ORDER.
8. MODIFICATIONS TO EXISTING WHERE APPLICABLE, AND/OR INSTALLATION OF NEW FIRE SPRINKLER AND FIRE ALARM SYSTEMS REQUIRE SEPARATE PERMIT(S), AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
9. THESE PLANS ARE THE PROPERTY OF MK ARCHITECTURE, INC. AND SHALL NOT BE REPRODUCED, CHANGED OR USED IN ANY WAY WITHOUT THE EXPRESSED WRITTEN CONSENT OF MK ARCHITECTURE, INC.

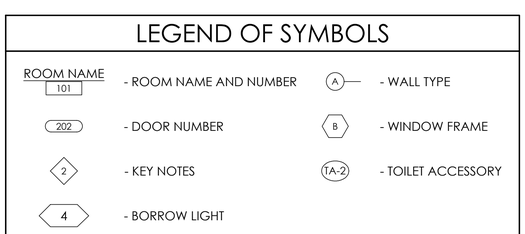
REFERENCE INDICATORS



MATERIALS LEGEND



LEGEND OF SYMBOLS



WOOD FURRING CHART

BLDG TYPE	FIRE TREATED		PRESERVATIVE TREATED		NO TREATMENT
	CONTACTING CMU / CONC.	OTHER	CONTACTING CMU / CONC.	OTHER	
I	X	X	X		
II	X	X	X		
III	X (A)		X		
IV	X (A)		X		
V			X		X

NOTES:
(A) IN EXTERIOR WALLS

SCOPE OF WORK

THE PROPOSED PROJECT IS A TOWNHOUSE WITH MULTIPLE UNITS TO BE BUILT ADJACENT TO OTHER SIMILAR TOWNHOUSES IN CAPE CORAL, FLORIDA. EACH INDIVIDUAL DWELLING UNIT IS SEPARATED BY A 2-HOUR FIRE RESISTANCE-RATED PARTY WALL AND IS CONSIDERED A ONE- AND TWO- FAMILY DWELLING.

FLORIDA PRODUCT APPROVAL

SECTION A:	DOORS			
#	COMPONENT	MANUFACTURER / MODEL	IMPACT	FL PA	EXP. DATE
1	SWINGING	THURMA-TRU CORPORATION / BENCHMARK DOORS	YES	FL# 13459.1	12/31/2026
2	SLIDING	PGT INDUSTRIES / SGD - 770	YES	FL# 251.4	2/17/2030
3	GARAGE	CLOPAY BUILDING PRODUCTS COMPANY / W7-09 PAN-2F153	YES	FL# 5684.2	12/31/2026

SECTION B:	WINDOWS			
#	COMPONENT	MANUFACTURER / MODEL	IMPACT	FL PA	EXP. DATE
1	FIXED	PGT INDUSTRIES / PW-7720A	YES	FL# 243.8	2/19/2029
2	HORIZ. SLIDER	PGT INDUSTRIES / HR-7710A	YES	FL# 242.4	8/23/2028

SECTION C:	ROOFING PRODUCTS		
#	COMPONENT	MANUFACTURER / MODEL	FL PA	EXP. DATE
1	ASPHALT SHINGLE	OWEN'S CORNING / DURATION SHINGLES	FL# 10674.1	12/31/2099
2	UNDERLAYMENT	SOPREMA, INC. / SOPREMA ROOF UNDERLAYMENTS	FL# 2569.1	5/9/2026

SECTION D:	STORM SHUTTERS		
#	COMPONENT	MANUFACTURER / MODEL	FL PA	EXP. DATE

SECTION E:	PANEL WALLS		
#	COMPONENT	MANUFACTURER / MODEL	FL PA	EXP. DATE
1	SOFFITS	AMERIMAX HOME PRODUCTS / STANDARD "V" PANEL	FL# 5896.1	12/31/2025

MASONRY FIRE RESISTANCE RATING

F.B.C. 2023: BASED ON SECTION 722 CALCULATED FIRE RESISTANCE

CALCULATED FIRE RESISTANCE

722.3.1.1 **Concrete masonry. Equivalent thickness. Concrete masonry unit plus finishes.** The equivalent thickness of concrete masonry assemblies is the sum of the equivalent thickness of the cmu plus the equivalent thickness of finishes:

$T_{eq} = T_e + T_{ef}$ (Equation 7-6) where: T_e = Equivalent thickness of cmu* ; T_{ef} = Equivalent thickness of finishes

722.3.1.2 *For partially grouted construction, T_e is the cmu value as determined by ASTM C140.

722.3.1.3 *For solid grouted construction, T_e is the actual thickness of the unit.

722.3.1.4 *For airspaces and cells filled with loose-fill materials below, the equivalent thickness is the actual thickness of the hollow cmu:

- Sand, pea gravel, crushed stone, or slag meeting ASTM C33
- Pumice, scoria, expanded shale, expanded clay, expanded slate, expanded slag, expanded fly ash, or cinders meeting ASTM C331
- Perlite meeting ASTM C549
- Vermiculite meeting ASTM C516

722.3.2.1 **Concrete masonry walls. Finish on nonfire-exposed side.** Concrete masonry walls and partitions with plaster or gypsum wallboard applied to the NON-fire-exposed side:
Equivalent thickness of plaster or gypsum wallboard corrected by factor from Table 722.2.1.4(1) and added to the equivalent thickness of the masonry.
That sum is used to determine the rating from Table 722.3.2.

722.3.2.2 **Finish on fire-exposed side.** Concrete masonry walls and partitions with plaster or gypsum wallboard applied to the fire-exposed side:
The time assigned to the finish per Table 722.2.1.4(2) is added to the rating for the concrete masonry alone, or to the sum of the concrete masonry and finish on the nonfire-exposed side per 722.3.2.1.

722.3.2.3 **Nonsymmetrical assemblies.** Where a wall may have no finish on one side, or different types of finishes on each side, perform calculations for each as a fire-exposed side and use the lower value. **Exception:** Exterior walls with more than 5 feet of horizontal separation, only the interior side will be assumed to be the fire-exposed side.

722.3.2.4 **Minimum concrete masonry fire-resistance.** Where the finish applied to a concrete masonry wall contributes to the fire-resistance rating, the masonry must provide at least half the total rating.

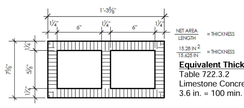
705.5 **Fire-Resistance Ratings** Exterior walls shall be fire-resistance rated in accordance with Tables 601 and 602. The required fire-resistance rating of exterior wall with a fire separation of greater than 10 feet shall be rated for exposure to fire from the inside. The required fire-resistance rating of exterior wall with a fire separation distance of less than or equal to 10 fett shall be rated for exposure to fire from both sides.

722.3.2 Concrete masonry walls.
The *fire-resistance rating* of walls and partitions constructed of concrete masonry units shall be determined from Table 722.3.2. The rating shall be based on the equivalent thickness of the masonry and type of aggregate used.

TABLE 722.3.2 MINIMUM EQUIVALENT THICKNESS (inches) OF BEARING OR NONBEARING CONCRETE MASONRY WALLS[a,b,c,d]

TYPE OF AGGREGATE	FIRE-RESISTANCE RATING (hours)																				
	¼	½	¾	1	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	9½
Pumice or expanded slag	3.1	4.6	5.7	6.7	8.5	10.1	11.6	13.0	14.3	15.6	16.8	18.0	19.1	20.2	21.3	22.4	23.4	24.4	25.4	26.4	27.4
Expanded shale, clay or slate	2.5	3.8	4.8	5.6	7.2	8.6	9.9	11.1	12.3	13.4	14.5	15.6	16.6	17.6	18.6	19.6	20.5	21.5	22.4	23.3	24.2
Limestone, cinders or unexpanded slag	2.5	3.8	4.8	5.6	7.2	8.6	9.9	11.1	12.3	13.4	14.5	15.6	16.6	17.6	18.6	19.6	20.5	21.5	22.4	23.3	24.2
Calcareous or siliceous gravel	3.2	4.8	6.0	7.0	8.9	10.6	12.1	13.6	15.0	16.3	17.6	18.8	20.0	21.1	22.2	23.3	24.4	25.4	26.4	27.4	28.4

For SI: 1 inch = 25.4 mm.
a. Values between those shown in the table can be determined by direct interpolation.
b. Where combustible members are framed into the wall, the thickness of solid material between the end of each member and the opposite face of the wall, or between members set in from opposite sides, shall not be less than 93 percent of the thickness shown in the table.
c. Requirements of ASTM C 55, ASTM C 73, ASTM C 90 or ASTM C 744 shall apply.
d. Minimum required equivalent thickness corresponding to the hourly fire-resistance rating for units with a combination of aggregate shall be determined by linear interpolation based on the percent by volume of each aggregate used in manufacture.



CONC. MASONRY UNIT (TYP.)
SCALE: N.T.S.

2 hr. Fire Rated Exterior Wall Assembly *(Table 722.2.1.4(2))*

Tef (required) = 4" equiv. thickness = 120 min.

Te (8" CMU)	=	*3.6"*
Te (5/8" Plaster)*	=	*.675" *(Portland cement-sand plaster applied directly to the concrete or concrete masonry)*
Tef	=	***4.22" > 4" (Equals ~ 125 min.)***
Te (5/8" Gyp Bd.)	=	*20 min.*
		145 min. > 120 min. required

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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ARCHITECTURE

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REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	SYMB

SHEET
A0.2

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ARCHITECTURAL OUTLINE SPECIFICATIONS

NOTE:
SEE CONSULTANT SHEETS FOR ALL CIVIL, STRUCTURAL, PLUMBING, MECHANICAL AND ELECTRICAL ITEMS SPECIFIC TO THIS PROJECT.

DIVISION 1: GENERAL REQUIREMENTS

A. NOTICES
1. THE GENERAL CONTRACTOR SHALL FILE A NOTICE OF COMMENCEMENT BEFORE START OF WORK IN ACCORDANCE W/ F.B.C. 2023, SECTION 105.8.

B. SHOP DRAWINGS/SUBMITTALS
1. ALL SHOP DRAWINGS REQUIRE ARCHITECT'S REVIEW.
2. PROVIDE ORIGINAL AND/OR SUBMIT ELECTRONICALLY UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ARCHITECT.
3. SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE W/ THE CONTRACT DOCUMENTS, ELEVATIONS, SIZES, ETC. THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE W. THE DESIGN INTENT OF THE CONTRACTOR DOCUMENTS ONLY.

C. RECORDS
1. MAINTAIN ONE (1) SET OF CONSTRUCTION DOCUMENTS IN FIELD OFFICE, NOT TO BE USED IN FIELD CONSTRUCTION, FOR USE AS 'AS-BUILT' RECORD. RECORDS SHALL BE KEPT DAILY USING COLORED PENCIL. AT COMPLETION OF CONSTRUCTION, REQUEST AND PAY FOR SET OF REPRODUCIBLES OF CONSTRUCTION DRAWINGS FROM ORIGINAL TRACINGS. PROVIDE SET TO ARCHITECT FOR HIS USE IN DOCUMENTING AS-BUILT CONDITIONS.

D. GUARANTY/WARRANTY
1. THE GENERAL CONTRACTOR SHALL, IN THE CASE OF WORK PERFORMED BY HIS SUB-CONTRACTORS AND WHERE GUARANTEES ARE REQUIRED, SECURE WARRANTIES FROM SAID SUB-CONTRACTORS AND DELIVER COPIES OF SAME TO ARCHITECT UPON COMPLETION OF WORK.
2. THE GENERAL CONTRACTOR SHALL AND HEREBY WARRANT ALL WORK PERFORMED BY HIM DIRECTLY AND FOR WHICH GUARANTEES ARE APPLICABLE FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE OF THE WORK.

E. SPECIALTY ENGINEERED PRODUCTS
1. THE FOLLOWING SYSTEMS AND COMPONENTS REQUIRE FABRICATION AND ERECTION DRAWINGS PREPARED BY DELEGATED ENGINEER, SECURED BY THE GENERAL CONTRACTOR:
   a. TRUSS FRAMING SYSTEMS
   b. LOUVERS
   c. CANOPIES
   d. AWNINGS
   e. STRUCTURAL PRE-CAST SYSTEMS
   f. PRE-FABRICATED STAIRS AND RAILINGS
2. SUBMITTALS SHALL IDENTIFY THE PROJECT, APPLICABLE CODES AND LIST THE DESIGN CRITERIA. SUBMITTALSSHALL ALSO SHOW ALL DETAILS AND PLANS NECESSARY FOR PROPER FABRICATION AND INSTALLATION.CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCT UTILIZED. GENERIC PRODUCTSWILL NOT BE ACCEPTED.
3. SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED UNDER DIRECT SUPERVISION AND CONTROL OF THE DELEGATED ENGINEER.
4. SHOP DRAWINGS AND CALCULATIONS REQUIRE THE SEAL, DATE AND SIGNATURE OF THE DELEGATEDENGINEER.

DIVISION 2: SITE WORK

A. TERMITE PROTECTION ALL SOILS TO BE CHEMICALLY TREATED FOR TERMITE PROTECTION ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND IN ACCORDANCE WITH F.B.C. 2023, SECTION 1816. A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY THE LICENSED PEST CONTROL COMPANY THAT CONTAINS THE FOLLOWING STATEMENT: 'THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT IS IN ACCORDANCE W/ THE RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES.

DIVISION 3: NON STRUCTURAL CONCRETE

A. ALL NON-STRUCTURAL CONCRETE IS TO BE BATCH MIXED BY A CONCRETE MANUFACTURER AND DELIVERED TO SITE. ALL CONCRETE MUST HAVE AT LEAST 3000 PSI COMPRESSIVE STRENGTH. REINFORCING WILL BE AS SHOWN ON THE DRAWINGS.

DIVISION 4: MASONRY

A. MORTAR
1. COLORED MORTAR IS TO COMPLY WITH THE LATEST REQUIREMENTS OF ASTM C91. PROPERLY MIXED WITH 2-1/4 TO 3 PARTS SAND, CONFORMING TO ASTM C 144, THE MORTAR SHOULD EXCEED REQUIREMENTS OF ASTM C 270 FOR TYPE N, TYPE S OR TYPE M AS SPECIFIED BY THE ARCHITECT. FIELD MIXING WITH BAGS OF COLOR ON SITE WILL NOT BE ALLOWED.
2. GRAY MORTAR IS TO BE MANUFACTURERS STANDARD GRAY MORTAR MIXED AS DIRECTED BY MANUFACTURER TO PROVIDE A TYPE N, S OR M FORMULATION AS REQUIRED.

B. CONCRETE MASONRY UNITS
1. ALL CONCRETE MASONRY UNITS MUST FULLY COMPLY WITH ASTM C-90 SPECIFICATION FOR HOLLOW LOAD BEARING UNITS, TYPE II, NON-MOISTURE CONTROLLED. REFER TO DRAWING FOR SIZES. MATERIAL MAKEUP IS TO BE AS REQUIRED BY THE 2023 FLORIDA BUILDING CODE FOR RATED AND NON-RATED APPLICATIONS.

C. MASONRY REINFORCING
1. WALL REINFORCING SHALL BE BY DUR-O-WAL, INC., HECKMAN BUILDING PRODUCTS, INC. OR HOHMANN AND BARNARD, INC. OF THE TYPE SPECIFIED OR AS REQUIRED TO MEET APPLICABLE CODES AND STRUCTURAL REQUIREMENTS.

DIVISION 5: METALS

A. MISCELLANEOUS METALS
1. ALL STEEL STAIRS, LADDERS AND STEEL RAILINGS ARE TO BE ASSEMBLED USING THE CRITERIA OF THE AISC.
2. ALL ALUMINUM STAIRS AND LADDERS ARE TO BE 6061-T6 ALLOY.
3. ALL ALUMINUM RAILINGS, ETC. ARE TO BE 6063-T52 ALLOY WITH AN ANODIZED OR POWDER COAT FINISH.

DIVISION 6: WOOD

A. LUMBER AND PLYWOOD
1. FRAMING LUMBER SHALL BE S4S, NO. 2 OR BETTER, HEM-FIR, LIGHT FRAMING STUD GRADE, HAVING A MOISTURE CONTENT NOT EXCEEDING NINETEEN (19) PERCENT WHEN DELIVERED TO THE JOBSITE. WOOD NAILERS ON STEEL FRAMING AND CONCRETE BEAMS SHALL BE NO. 2 KD SOUTHERN PINE PRESSURE-TREATED, SUPPLIED AT FIFTEEN (15) PERCENT MOISTURE CONTENT, OR LESS.
2. FURRING STRIPS, WOOD LATH AND PLASTER GROUNDS SHALL BE PRESSURE TREATED, #2 COMMON SOUTHERN YELLOW PINE, 1" BY 2". METAL FURRING MAY BE SUBSTITUTED IN LIEU OF WOOD FRAMING. WOOD FURRING SHALL BE FIRE-RESISTANT TREATED IN TYPE I, II AND IV CONSTRUCTION (NON-COMBUSTIBLE).
3. NAILS SHALL BE OF SIZE AND TYPE COMMONLY USED FOR FRAMING AND FINISH WORK. ALL NAILS ON THE EXTERIOR SHALL BE HOT-DIPPED GALVANIZED. FASTENERS FOR SECURING MISCELLANEOUS FIXTURES, EQUIPMENT, GROUNDS, BLOCKING, STRUCTURAL SUPPORTS, ETC. SHALL BE EQUAL TO THOSE OF MOLLY CONSTRUCTION PRODUCTS, OF TYPE SUITABLE FOR THE SPECIFIC APPLICATION, ACCORDING STANDARD CONSTRUCTION PRACTICE.
4. INTERIOR WOOD TRIM, INCLUDING WOOD BASES AND MISCELLANEOUS TRIM, SHALL BE OF STOCK DESIGN, OF PAINT GRADE WHITE PINE OR FIR.
5. TREATED FRAMING: ALL FRAMING LUMBER WITH A WOOD PRESERVATIVE SHALL BE PRESSURE TREATED BY THE WOLMAN OR CELCURE PROCESS OF #2 COMMON YELLOW PINE.
6. ALL PLYWOOD SHALL BE OF THE THICKNESS SHOWN ON THE DRAWINGS. PLYWOOD SHALL CONFORM TO COMMERCIAL STANDARDS ISSUED BY THE U.S. DEPARTMENT OF COMMERCE. PLYWOOD SHALL BE A-B GRADE, ROTARY CUT, WHERE BOTH SIDES ARE EXPOSED. A-C GRADE SHALL BE USED WHERE ONE SIDE IS EXPOSED AND B-C AS SPECIFIED FOR LAMINATE WORK. ALL OTHER PLYWOOD SHALL BE C-C EXTERIOR OR APA-EXPOSURE 1. ALL PLYWOOD USED SHALL NOT HAVE ADDED UREA-FORMALDEHYDE.

B. SHELVING AND CABINETWORK
1. SHELVING
   a. SHELVING IN CABINETS SHALL BE MINIMUM ¾" THICK PLYWOOD WITH MELAMINE FINISH, UNLESS NOTED OTHERWISE ON DRAWINGS.
   b. SHELVES SPECIFIED IN AREAS OTHER THAN CABINETS SHALL BE MINIMUM [" THICK PLYWOOD W/ SOLID 1x2 WOOD EDGE, UNLESS NOTED OTHERWISE ON DRAWINGS.
   c. ALL SHELVING SHALL BE ADJUSTABLE, COMPLETE WITH ALL REQUIRED ACCESSORIES, AND HARDWARE.
2. CABINET WORK
   a. CABINET SIDE PANELS, EXTERIOR FRAMES, SOFFITS AND DOORS SHALL BE 5/8" THICK MINIMUM PLYWOOD WITH PLASTIC LAMINATE ON ALL EXTERIOR / INTERIOR SIDES AND FACES.
   b. TOPS SHALL BE B-C EXT. [" PLYWOOD, WITH PLASTIC LAMINATE ON EXPOSED SURFACES AND BACK SPLASHES.
   c. PLYWOOD SHALL NOT HAVE ADDED UREA-FORMALDEHYDE.
3. ALL CABINET WORK JOINTS SHALL BE GLUED AND NAILED UTILIZING A CASEIN GLUE THAT DRIES CLEAR.
4. PLASTIC LAMINATE FINISHING FOR EXTERIOR EXPOSED SURFACES SHALL BE 1/32" THICK AND 1/16" THICKNESS FOR COUNTERTOPS.
5. ALL EXPOSED PLYWOOD NOT RECEIVING PLASTIC LAMINATE TO BE PAINTED SEMI-GLOSS ENAMEL, OR MULTICOLOR SPRAY LACQUER FINISH. ALL FINISHES SHALL BE SHOP APPLIED BY CABINETMAKER. FILL AND SAND EDGES BEFORE PAINTING.
6. FLAKE BOARD SHALL BE EQUAL TO U.S. NOVOPLY.
7. VOLATILE ORGANIC COMPOUND (V.O.C.) LEVELS IN THE ADHESIVES AND GLUES USED SHALL NOT EXCEED THE V.O.C. LIMITS SET FORTH IN THE CURRENT EDITION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) RULE 1168.

DIVISION 7: THERMAL AND MOISTURE PROTECTION

A. VAPOR BARRIERS
THE MATERIALS AND INSTALLATION OF THE VAPOR BARRIER SHALL PROVIDE FOR A COMPLETE AND CONTINUOUS LOW PERMEANCE MEMBRANE SYSTEM FOR USE UNDER CONCRETE SLABS.
1. MATERIAL SHALL BE EQUAL TO STEGO WRAP VAPOR BARRIER (15 MIL) BY STEGO INDUSTRIES, LLC. OR AN APPROVED EQUAL.
2. PREPARATION:
   a. LEVEL AND COMPACT BASE MATERIAL
3. PERFORMANCE:
   a. PERMEANCE: EQUAL TO OR LESS THAN 0.01 PERMS (GRAINS/(FT2 · HR · INHG)) AS TESTED IN ACCORDANCE WITH ASTM E 1745 SECTION 7.1.
   b. THICKNESS: 15 MILS MINIMUM
   c. STRENGTH: ASTM E 1745 CLASS A.
4. INSTALLATION:
   a. INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM E1643 AND THE MANUFACTURER'S RECOMMENDATIONS.
   b. PROVIDE CONTINUOUS UNBROKEN AND PUNCTURE FREE MEMBRANE FROM EDGE OF SLAB TO EDGE OF SLAB.
   c. EXTEND MEMBRANE TO THE SLAB PERIMETER AND PROVIDE A CONTINUOUS SEAL TO THE FOUNDATION WALL, GRADE BEAM, OR SLAB ITSELF.
   d. OVERLAP SEAMS 6" AND TAPE ALL JOINTS AND SEAMS WITH MANUFACTURER'S TAPE.
   e. SEAL ALL PENETRATIONS AND PIPES PER MANUFACTURER'S INSTRUCTIONS.
5. VAPOR BARRIER ON OUTER FACE OF CMU IN BRICK OR STONE VENEERS IS TO BE FIBERED EMULSION DAMP PROOFING, BRUSH APPLIED.

B. FLASHING/WATERPROOFING
1. THROUGH WALL FLASHING IS TO BE PERM-A-BARRIER TOTAL 40 MIL. THICK BY W.R.GRACE CO. OR APPROVED EQUAL.
2. FLUID APPLIED MEMBRANE FLASHING TO BE FASTFLASH LIQUID FLASHING MEMBRANE BY PROSOCO OR APPROVED EQUAL.
3. PROVIDE CAULKING AND SEALING AT ALL EXT. DOOR AND WINDOWS. PROVIDE THRESHOLDS AND WEATHER STRIPPING AT ALL EXT. DOORS. ALL OTHER WATERPROOFING IS BY THE G.C.

C. INSULATION
1. THERMAL WALL INSULATION
   a. CERTAIN STUD WALLS SHALL HAVE 3½" THICK FIBERGLASS BATT INSULATION WHERE SHOWN ON THE FLOOR PLAN.
   b. EXTERIOR FURRED MASONRY WALLS SHALL HAVE ¾" THICK RIGID INSULATION BETWEEN PRESSURE-TREATED ONE (1) BY TWO (2) FURRING STRIPS @ 16" O.C. OR AS SHOWN ON DRAWINGS.
2. SOUNDPROOF ACOUSTICAL INSULATION:
   a. MINERAL WOOL INSULATION 80 BY ROCKWOOL OR APPROVED EQUAL.

D. ROOFING
1. SELF-ADHERED UNDERLAYMENT (A.K.A. MODIFIED PEEL AND STICK BASE SHEET) SHALL BE "POLYGLASS TU PLUS" OR APPROVED EQUAL. APPLICATION AND INSTALLATION IS TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. SHINGLE ROOF: SHINGLES ARE TO BE 'GAF TIMBERLINE ULTRA' OR APPROVED EQUAL. INSTALLATIONS IS TO BE IN ACCORDANCE W/ THE MANUFACTURER'S RECOMMENDATION, OVER MODIFIED PEEL AND STICK BASE SHEET.

DIVISION 8: DOORS, WINDOWS AND HARDWARE
SEE DRAWINGS FOR DOORS, WINDOWS AND HARDWARE

DIVISION 9: FINISHES

A. GYPSUM WALLBOARD, PLASTER AND STUCCO
1. GYPSUM WALLBOARD IS TO BE "SHEETROCK BRAND BOARD" BY UNITED STATES GYPSUM CO. OR APPROVED EQUAL. THICKNESS OF BOARD AND AREAS THAT ARE TO BE FIRE RATED WILL BE AS SHOWN ON DRAWINGS. ALL SCREWS, SPACKLE, TAPE, ETC. WILL BE AS RECOMMENDED BY THE WALLBOARD MFGR.
2. PLASTER LATH IS TO BE EXPANDED METAL (DIAMOND) LATH WIRED TO ¾" AND 1½" FURRING CHANNELS. SUSPENDED METAL LATH SHALL BE ⅜" RIB LATH. ALL SUSPENSION AND ASSEMBLY IS TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. ALL PLASTER (GYPSUM OR CEMENT) IS TO BE BY UNITED STATES GYPSUM COMPANY OR APPROVED EQUAL. MATERIALS AND MIXTURE ARE TO BE AS DIRECTED BY THE MANUFACTURER.
4. STUCCO IS TO BE MIXED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. IT IS TO BE APPLIED IN MULTIPLE COATINGS. FINISHED INSTALLATIONS ARE TO BE ½" OR ¾" THICK. FINISHED SURFACE DESIGN IS TO BE SELECTED BY ARCHITECT/OWNER. SUBSTRATE IS TO BE CONCRETE, CONCRETE MASONRY UNITS OR EXPANDED METAL LATH OVER 30# BUILDING FELT OVER PLYWOOD SHEATHING. FOR SUSPENDED APPLICATIONS, USE SYSTEM OUTLINED IN ITEM 3 ABOVE. ALL CORNER MOLDS, J-MOLDS, EXPANSION JOINTS, ETC. ARE TO BE BY "PLASTIC COMPONENTS" OR APPROVED EQUAL.
5. ORNAMENTATION ON STUCCO IS TO BE E.P.S. 1.5 # C.F. FOAM WITH A 80 MIL. URETHANE HARD COAT. ATTACHMENT ADHESIVE MUST BE COMPATIBLE WITH E.P.S. FOAM. ALWAYS CAULK TOP AND ENDS BUT DO NOT CAULK BOTTOM OF ALL APPLICATIONS.

B. CERAMIC TILE
1. CERAMIC TILE IS TO BE A FACTORY GLAZED CERAMIC UNIT OF STANDARD GRADE BY DALTILE CORPORATION OR APPROVED EQUAL. SIZES, FINISHES AND COLORS ARE TO BE SELECTED BY THE ARCHITECT. TILE IS TO BE THINSET OR CONVENTIONAL MORTAR METHOD. SEE DRAWINGS FOR METHOD OF INSTALLATION.
2. ALL SELECTIONS OF GROUT AND METHOD OF INSTALLATION WILL BE IN ACCORDANCE WITH THE TILE MANUFACTURER'S RECOMMENDATIONS. MATCHING GRID. (24"X48") WHERE SHOWN ON PLANS.
3. SCHLUTER FINISHING AND EDGE PROTECTION TRIMS ARE TO BE USED ON ALL CORNERS AND EXPOSED TILE EDGES AND INSTALLED AS PER MFGR'S RECOMMENDATIONS. NO BARE OR EXPOSED TILE EDGE IS ACCEPTABLE UNLESS NOTED OTHERWISE OR APPROVED BY OWNER/ARCHITECT.

C. FLOOR FINISHES
1. LUXURY VINYL TILE (LVT) SHALL BE 12"X12" TILES, COLOR AND STYLE AS SELECTED BY ARCHITECT/OWNER AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
2. CARPETING TO BE GLUE DOWN 26 OUNCE LOOP PILE, COLOR AND STYLE AS SELECTED BY ARCHITECT/OWNER, WITH TEN (10) YEAR COLOR WARRANTY AND TEN (10) YEAR WEAR WARRANTY, INSTALLATION TO BE PER MANUFACTURERS RECOMMENDATIONS.
3. VOLATILE ORGANIC COMPOUND (V.O.C.) LEVELS IN ADHESIVES SHALL NOT EXCEED THE V.O.C. LIMITS SET FORTH IN THE CURRENT EDITION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) RULE 1168.
4. NON-SKID TREATMENT ON EXT. WALKWAYS, BALCONIES AND PRE-CAST STAIRS.

D. WALL FINISHES
1. VINYL WALL COVERINGS ARE TO BE SELECTED BY OWNER.
2. NO VINYL WALL COVERING SHALL BE APPLIED TO INTERIOR FACE OF EXTERIOR WALLS.
3. DRYWALL FINISH AND TEXTURE SHALL BE SMOOTH U.N.O.

F. PAINTING
1. COLORS ARE TO BE SELECTED BY ARCHITECT AND/OR OWNER.
2. PREPARATION OF SUBSTRATE AND METHODS OF INSTALLATION ARE TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. BY STARTING WORK, THE PAINTER ACCEPTS THE SURFACES AS READY FOR PAINTING.
4. ALL SURFACES ARE TO BE CLEANED AND PREPARED PRIOR TO THE START OF ANY PAINTING.
5. PRIMING WILL CONSIST OF ONE COAT OF APPROVED PRIMER. ANY SURFACES NOT COMPLETELY COVERED WILL REQUIRE A SECOND COAT OF PRIMER PRIOR TO STARTING ANY FINISH WORK. LIGHTLY SAND BETWEEN COATS.
6. SAND PRIMED SURFACES PRIOR TO INSTALLATION OF FINISH MATERIALS.
7. ITEMS FACTORY/SHOP PRIMED ONLY NEED TOUCH UP WHERE REQUIRED PRIOR TO FINISHING.
8. FINISH COATING WILL CONSIST OF TWO COATS OF SPECIFIED MATERIAL. LIGHTLY SAND BETWEEN COATS.
9. WHERE NATURAL FINISHES ARE SPECIFIED FOR INTERIOR USE, APPLY STAIN WITH A BRUSH OR RAG TO OBTAIN THE CORRECT COLOR AND UNIFORMITY.
10. AFTER STAIN HAS DRIED, APPLY TWO COATS OF SEALER (VARNISH OR POLYURETHANE). SAND BETWEEN COATS WITH FINE STEEL WOOL. TOUCH UP ANY AREAS WHICH ARE NOT COMPLETELY COATED.

DIVISION 10: SPECIALTIES

A. TOILET ACCESSORIES
SEE TOILET ACCESSORY SCHEDULE ON DRAWINGS.

DIVISION 11: EQUIPMENT (NOT APPLICABLE)

DIVISION 12: FURNISHINGS (NOT APPLICABLE)

DIVISION 13: SPECIAL CONSTRUCTION (NOT APPLICABLE)

PROGRESS SET - NOT FOR CONSTRUCTION

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No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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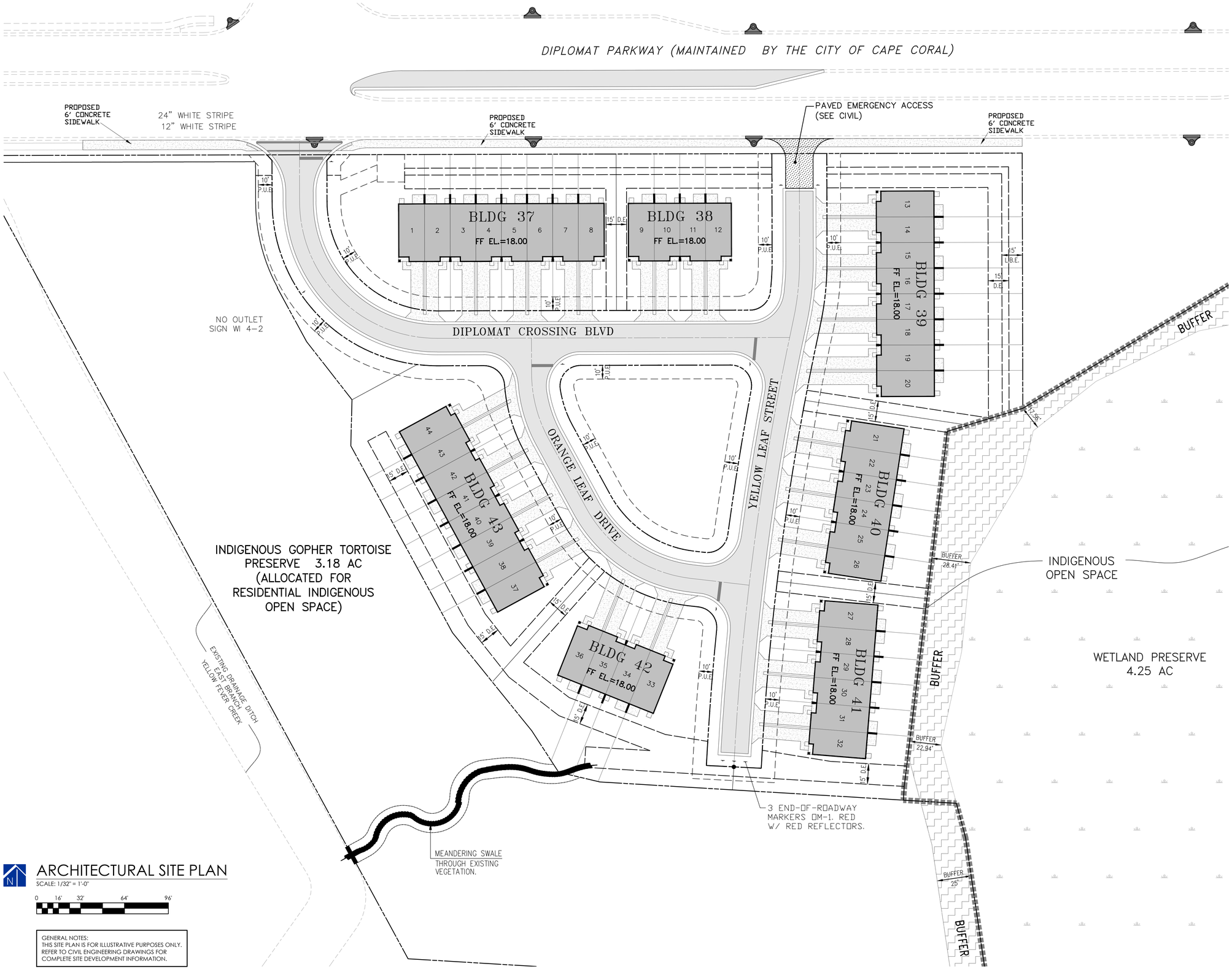
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ARCHITECTURAL SITE PLAN

SCALE: 1/32" = 1'-0"

0 16' 32' 64' 96'

GENERAL NOTES:
THIS SITE PLAN IS FOR ILLUSTRATIVE PURPOSES ONLY.
REFER TO CIVIL ENGINEERING DRAWINGS FOR COMPLETE SITE DEVELOPMENT INFORMATION.

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

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OCCUPANT LOAD CHART

				FBC 2020 (TABLE 1004.5)		FFPC (TABLE 7.3.1.2)	
MARK	FUNCTION / SPACE	USE OCCUPANCY	AREA (SF)	OCCUPANT LOAD FACTOR	OCCUPANT LOAD	OCCUPANT LOAD FACTOR	OCCUPANT LOAD
101	UNIT A	RESIDENTIAL	1,512	1 / 200	8	1 / 200	8
102	UNIT A	RESIDENTIAL	1,512	1 / 200	8	1 / 200	8
103	UNIT A	RESIDENTIAL	1,512	1 / 200	8	1 / 200	8
104	UNIT A	RESIDENTIAL	1,512	1 / 200	8	1 / 200	8
TOTAL OCCUPANT LOAD				32		32	
MINIMUM EGRESS WIDTH (OCCUPANT LOAD * 0.2) (IN.)				6.4000		6.4000	

LIGHT-FRAME TRUSS IDENTIFYING SIGN

1. G.C. SHALL PROVIDE A LIGHT-FRAME TRUSS IDENTIFYING SIGN 'MY-SAFETY-SIGN S-8707' OR APPROVED EQUAL, ATTACHED PER MFGR'S SPECIFICATIONS.
2. THE SIGN PROVIDED SHALL MEET THE FOLLOWING CRITERIA:
   - A. THE SIGN MUST CONTAIN AN APPROVED BRIGHT RED REFLECTIVE MALTESE CROSS SYMBOL, MEASURING 8X8, W/ THE DESIGNATION LETTER 'R' WITHIN THE CENTER CIRCLE.
   - B. THE SIGN MUST BE PERMANENTLY ATTACHED TO THE FACE OF THE STRUCTURE ON A CONTRASTING BACKGROUND.
3. SEE PARTIAL EXT. ELEVATION 'B' ON THIS SHEET FOR MOUNTING LOCATION.

MARKING AND IDENTIFICATION

N.F.P.A. 101 8.3.2.4 - EACH NEW FIRE WALL, FIRE PARTITION, SMOKE BARRIER, SMOKE PARTITION, OR ANY OTHER NEW WALL REQUIRED TO HAVE PROTECTED OPENINGS SHALL BE PERMANENTLY IDENTIFIED W/ SIGNS OR STENCILING ABOVE ANY DECORATIVE CEILING AND IN CONCEALED SPACES W/ THE WORDING 'FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS' OR SIMILAR LANGUAGE. SUCH SIGNS OR STENCILING SHALL BE IN 4" HIGH LETTER, ½" STROKE, AND NOT MORE THAN 15'-0" O.C.

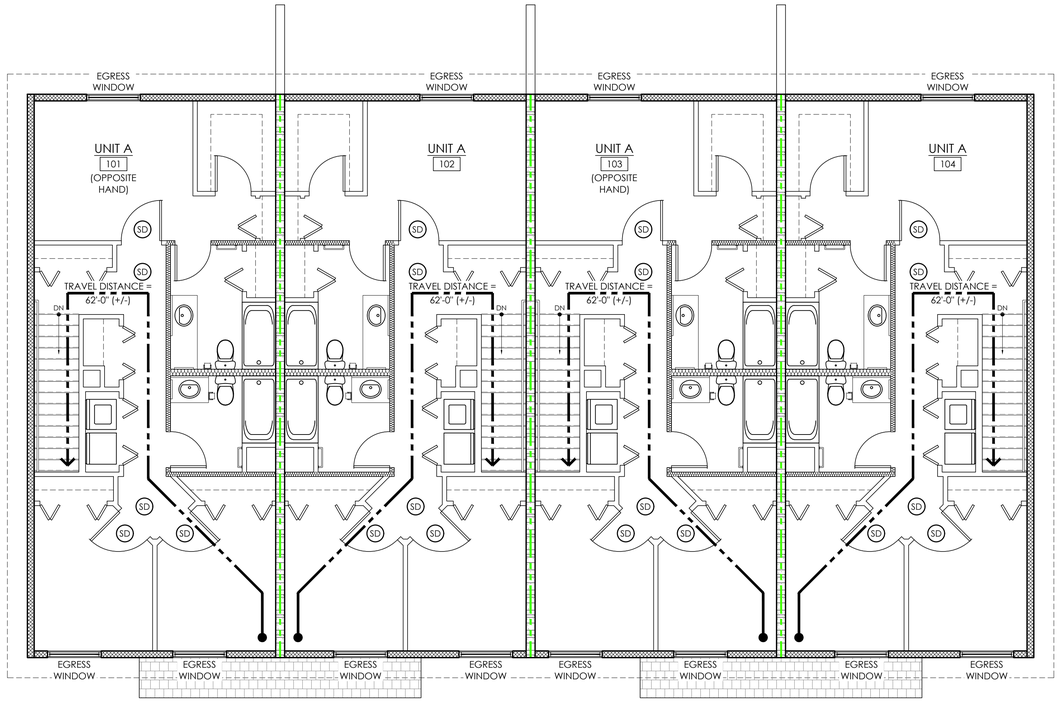
GENERAL NOTES

1. OCCUPANCY REFERS TO THE PURPOSE FOR WHICH A BUILDING OR OTHER STRUCTURE, OR PART THEREOF, IS USED OR INTENDED TO BE USED.
2. THE TYPE OF OCCUPANCY THAT THIS PARTICULAR BUILDING REPRESENTS IS RESIDENTIAL: REGARDLESS OF OCCUPANT LOAD. (NFPA1, FIRE CODE, DEFINITIONS)
3. THE OCCUPANT LOAD OF A BUILDING PERTAINS TO THE TOTAL NUMBER OF PERSONS THAT MIGHT OCCUPY A BUILDING OR PORTION THEREOF AT ANY ONE TIME.
4. THE OVERCROWDING OF A BUILDING MEANS A SITUATION WHERE THE OCCUPANT LOAD EXCEEDS THE EXIT CAPACITY OR THE POSTED OCCUPANT LOAD.
5. THIS BUILDING IS TO MEET THE GENERAL REQUIREMENTS OF CHAPTER 4, "GOALS AND OBJECTIVE", OF (NFPA 1, FIRE CODE)
6. THE MEANS OF EGRESS FACILITIES, CONSTRUCTION TYPE, PROTECTION, AND OTHER SAFEGUARDS IN THE BUILDING SHALL COMPLY WITH THE MOST RESTRICTIVE FIRE AND LIFE SAFETY REQUIREMENTS OF THE OCCUPANCIES INVOLVED.
7. BUILDINGS OR PORTIONS OF BUILDINGS, EXCEPT FOR ROUTINE MAINTENANCE OR REPAIR, SHALL NOT BE OCCUPIED DURING CONSTRUCTION, REPAIR, OR ALTERATION WITHOUT THE APPROVAL OF THE "AUTHORITY HAVING JURISDICTION" IF REQUIRED MEANS OF EGRESS ARE IMPAIRED OR REQUIRED FIRE PROTECTION SYSTEMS ARE OUT OF SERVICE.
8. PER CHAPTER 10, "GENERAL SAFETY REQUIREMENTS", (NFPA 1, FIRE CODE) - EMERGENCY PLANS SHALL BE PROVIDED FOR ASSEMBLY TYPE OCCUPANCIES. PLANS SHALL BE INCLUDE THE PROCEDURES FOR REPORTING OF EMERGENCIES, OCCUPANT AND STAFF RESPONSE TO EMERGENCIES, THE TYPE AND COVERAGE OF BUILDING FIRE PROTECTION SYSTEMS, AND OTHER ITEMS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE OWNER OR OPERATOR OF THE BUILDING IS TO ASSURE THAT EMERGENCY PLANS BE REVIEWED AND UPDATED ANNUALLY.
9. AS PART OF A RESIDENTIAL OCCUPANCY FOR ALL CORRIDORS' AND LOBBIES' INTERIOR WALL AND CEILING FINISH MATERIALS COMPLYING WITH SECTION 12.5 OF NFPA 1, FIRE CODE, SHALL BE CLASS "A" OR CLASS "B". ALL OTHER OCCUPIED AREAS SHALL BE CLASS "A" OR "B".
10. AS PART OF A RESIDENTIAL AREA, ALL INTERIOR WALL AND CEILING FINISH MATERIALS SHALL BE CLASS "A", CLASS "B", OR CLASS "C" FOR AN OCCUPANT OF 300 PERSONS OR FEWER.
11. NEW INTERIOR FLOOR FINISH IN EXIT ACCESS CORRIDORS AND IN SPACES NOT SEPARATED FROM THEM BY WALLS COMPLYING WITH 38.3.3.3 OF NFPA101, SHALL NOT BE LESS THAN CLASS II.
12. ALL WALKING SURFACES SHALL BE SLIP RESISTANT UNDER FORESEEABLE CONDITIONS, THE WALKING SURFACE OF EACH ELEMENT IN THE MEANS OF EGRESS SHALL BE UNIFORMLY SLIP RESISTANT ALONG THE NATURAL PATH OF TRAVEL. CHAPTER 7, SECTION 7.1.6.4, LIFE SAFETY 101.
13. ALL CONTENTS AND FURNISHINGS SHALL COMPLY WITH CHAPTER 10, SECTION 10.3 "CONTENTS AND FURNISHINGS" OF LIFE SAFETY 101.
14. ALL DEVICES IN CONNECTION WITH THE PREPARATION OF FOOD SHALL BE INSTALLED AND OPERATED TO AVOID HAZARD TO THE SAFETY OF OCCUPANTS. ALL DEVICES IN CONNECTION WITH THE PREPARATION OF FOOD SHALL BE OF AN APPROVED TYPE AND SHALL BE INSTALLED IN AN APPROVED MANNER.
15. THE ELEVATION OF FLOOR SURFACES ON BOTH SIDES OF A DOOR OPENING SHALL NOT VARY BY MORE THAN (½") UNLESS THE BUILDING IS EXISTING.
16. PER FBC 718.4.2 DRAFTSTOPPING IS NOT REQUIRED IN BUILDINGS EQUIPPED THROUGHOUT W/ AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE W/ 903.3.1.2 PROVIDED THAT AUTOMATIC SPRINKLERS ARE INSTALLED IN THE COMBUSTIBLE CONCEALED SPACE WHERE THE DRAFTSTOPPING IS BEING OMITTED.

LIFE SAFETY CODE

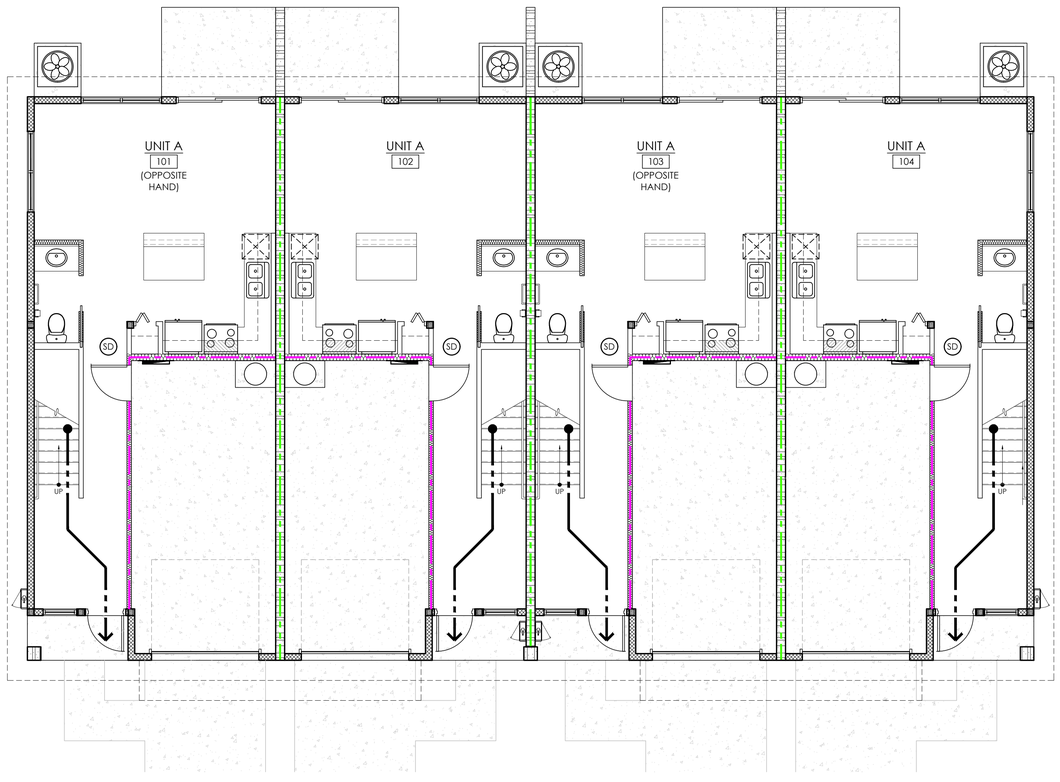
NFPA 101, CHAPTER 24 ONE- AND TWO- FAMILY DWELLINGS

1. IN DWELLINGS OF TWO ROOMS OR MORE, EVERY ROOF SHALL HAVE NOTE LESS THAN ONE PRIMARY MEANS OF ESCAPE AND ONE SECONDARY MEANS OF ESCAPE, PER SEC. 24.2.2.1.1.
   - a. THE PRIMARY MEANS OF ESCAPE SHALL BE A DOOR, STAIRWAY, OR RAMP PROVIDING A MEANS OF UNOBSTRUCTED TRAVEL TO THE OUTSIDE OF THE DWELLING UNIT AT STREET OR THE FINISHED GROUND LEVEL, PER SEC. 24.2.2.2.
   - b. THE SECONDARY MEANS OF ESCAPE SHALL BE AN OUTSIDE WINDOW THAT PROVIDES AN OPENING OF NOT LESS THAN 5.7 SQUARE FEET. THE WIDTH SHALL NOT BE LESS THAN 20 INCHES, AND THE HEIGHT SHALL NOT BE LESS THAN 24 INCHES. THE BOTTOM OF THE OPENING SHALL BE NOT MORE THAN 44 INCHES ABOVE THE FLOOR. SUCH MEANS OF ESCAPE IS ACCEPTABLE PER SEC. 24.2.2.3.3.
2. DOORS IN THE PATH OF TRAVEL OF A MEANS OF ESCAPE, OTHER THAN BATHROOM DOORS IN ACCORDANCE WITH SEC. 24.2.4.2 AND DOORS SERVICE A ROOM NOT EXCEEDING 70 SQUARE FEET, SHALL BE NOT LESS THAN 28 INCHES WIDE, PER SEC. 24.2.4.1.
3. DOORS SHALL BE NOT LESS THAN 6'-6" IN NOMINAL HEIGHT, PER SEC. 24.2.4.3.
4. FOR INTERIOR STAIRWAYS, MANUAL LIGHTING CONTROLS SHALL BE REACHABLE WITHOUT TRAVERSING ANY STEP OF THE STAIR, PER SEC. 24.2.5.3.
5. THE CLEAR WIDTH OF STAIRS, LANDINGS, AND PORCHES SHALL NOT BE LESS THAN 36 INCHES, PER SEC. 24.2.5.4.
6. THE CLEAR WIDTH OF HALLWAYS SHALL NOT BE LESS THAN 36 INCHES, PER SEC. 24.2.6.1.
7. SMOKE ALARMS OR A SMOKE DETECTION SYSTEM SHALL BE PROVIDED, PER SEC. 24.3.4.
   - a. SMOKE ALARMS SHALL BE INSTALLED IN EVERY SLEEPING AREA, OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE SLEEPING ROOMS, AND ON EACH LEVEL OF THE DWELLING UNIT, PER SEC. 24.3.4.1.1.
   - b. IN EXISTING ONE- AND TWO- FAMILY DWELLINGS, APPROVED SMOKE ALARMS POWERED BY BATTERIES SHALL BE PERMITTED, PER SEC. 24.3.4.1.3.
7. CARBON MONOXIDE ALARMS OR CARBON MONOXIDE DETECTORS SHALL BE PROVIDED WHERE DWELLING UNITS WITH COMMUNICATING ATTACHED GARAGES EXIST, PER SEC. 24.3.4.2.



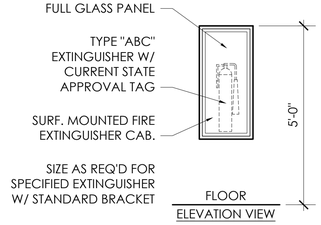
SECOND FLOOR LIFE SAFETY PLAN

SCALE: 3/16" = 1'-0"



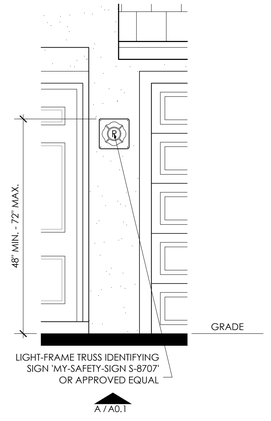
FIRST FLOOR LIFE SAFETY PLAN

SCALE: 3/16" = 1'-0"



FIRE EXTINGUISHER DETAILS

SCALE: N.T.S.



EXTERIOR ELEVATION (PARTIAL)

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

LIFE SAFETY PLAN LEGEND

- (SD) COMINATION SMOKE AND CARBON MONOXIDE DETECTOR
- TRAVEL DISTANCE

WALL TYPE LEGEND

- 2 HR. RATED 8" CONCRETE MASONRY WALL
- 6" EXT. WD. STUD WALL W/ INSULATION AND VINYL SIDING OVER ⅝" EXT. GRADE PLYWD. ON EXT. SIDE
- 1-HR. RATED 4" OR 6" WD. STUD WALL
- 4" OR 6" WD. STUD WALL W/ BATT INSULATION
- 4" OR 6" WD. STUD WALL

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
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CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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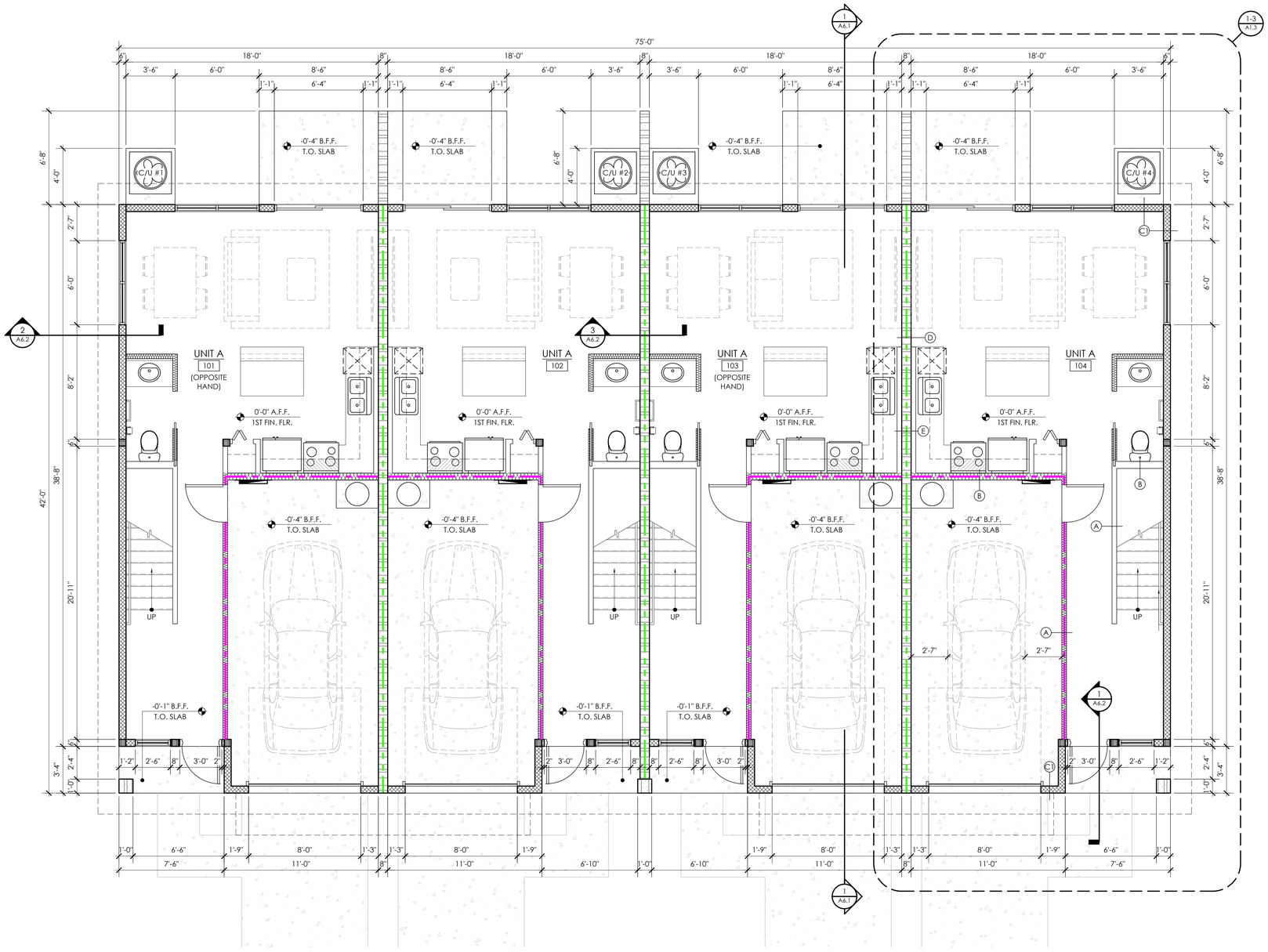
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REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	LIFE

SHEET
A0.5

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FIRST FLOOR OVERALL PLAN

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

0 4' 8' 12'

GENERAL NOTES:

1. DASHED FURNITURE/FIXTURES NOT IN CONTRACT.
2. SEE WALL TYPE DETAILS ON SHEET 'A6.1'

AREA TABULATION	
SINGLE TOWNHOUSE	
FIRST FLOOR AREA UNDER A/C	2,010 S.F
SECOND FLOOR AREA UNDER A/C	3,150 S.F.
GARAGE	1,040 S.F.
COVERED ENTRY	100 S.F.
TOTAL AREA:	6,300 S.F.

WALL TYPE LEGEND	
	2 HR. RATED 8" CONCRETE MASONRY WALL
	6" EXT. WD. STUD WALL W/ INSULATION AND VINYL SIDING OVER ⅝" EXT. GRADE PLYWD. ON EXT. SIDE
	1-HR. RATED 4" OR 6" WD. STUD WALL
	4" OR 6" WD. STUD WALL W/ BATT INSULATION
	4" OR 6" WD. STUD WALL

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CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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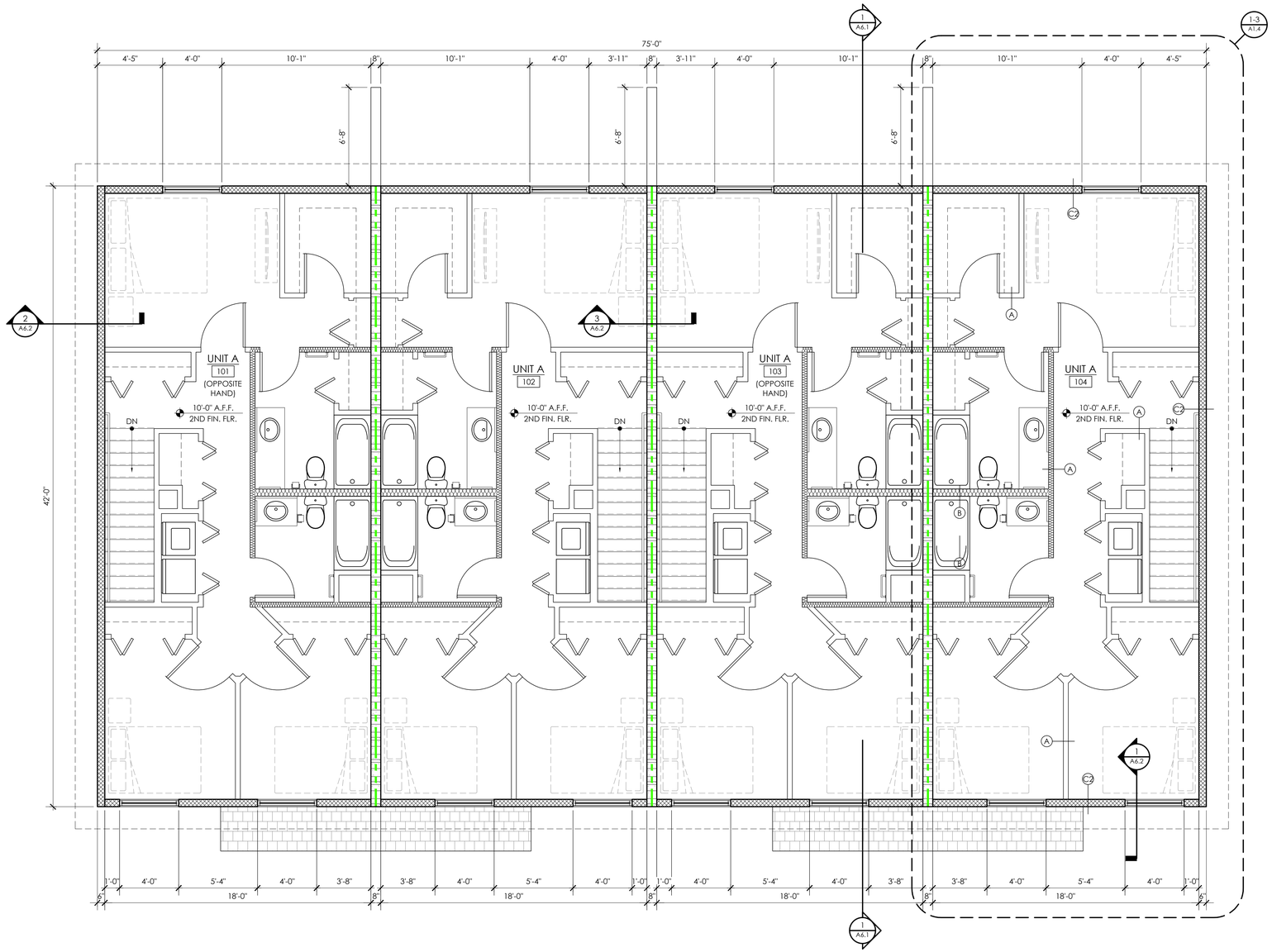
ARCHITECTURE

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REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	FLR

SHEET
A1.1

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SECOND FLOOR OVERALL PLAN

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

0 4' 8' 12'

GENERAL NOTES:

1. DASHED FURNITURE/FIXTURES NOT IN CONTRACT.
2. SEE WALL TYPE DETAILS ON SHEET 'A6.1'

AREA TABULATION	
SINGLE TOWNHOUSE	
FIRST FLOOR AREA UNDER A/C	2,010 S.F
SECOND FLOOR AREA UNDER A/C	3,150 S.F.
GARAGE	1,040 S.F.
COVERED ENTRY	100 S.F.
TOTAL AREA:	6,300 S.F.

WALL TYPE LEGEND	
	2 HR. RATED 8" CONCRETE MASONRY WALL
	6" EXT. WD. STUD WALL W/ INSULATION AND VINYL SIDING OVER ⅝" EXT. GRADE PLYWD. ON EXT. SIDE
	1-HR. RATED 4" OR 6" WD. STUD WALL
	4" OR 6" WD. STUD WALL W/ BATT INSULATION
	4" OR 6" WD. STUD WALL

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
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CONSTRUCTION DOCUMENTS FOR
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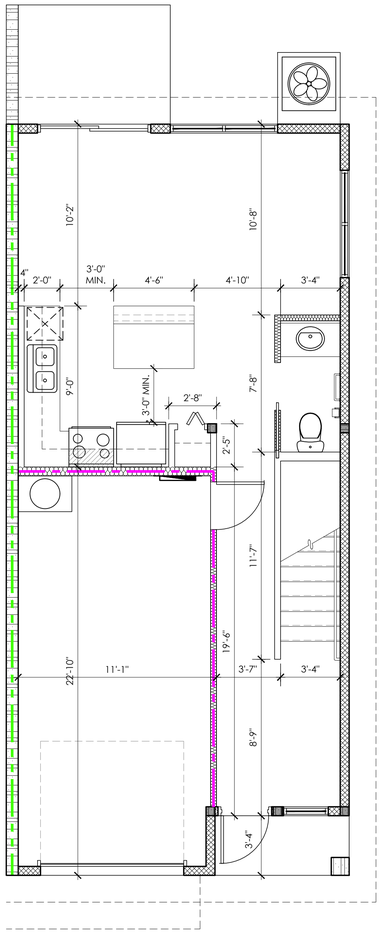
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SHEET
A1.2

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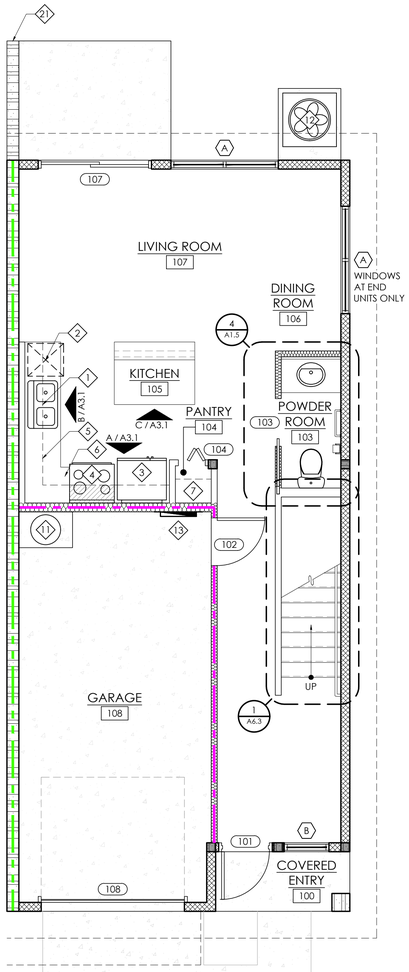
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FIRST FLOOR: "UNIT A" DIMENSIONED PLAN

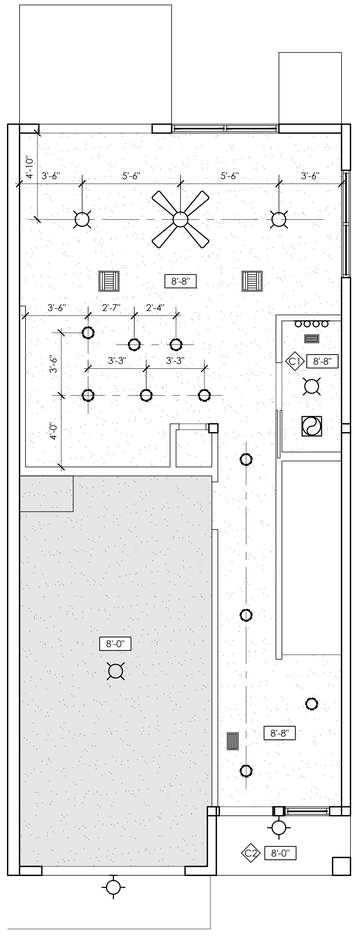
1 / A1.3 — SCALE: 1/4" = 1'-0"

0 4' 8' 12'



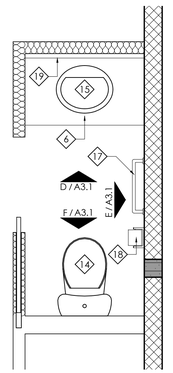
FIRST FLOOR: "UNIT A" NOTED PLAN

2 / A1.3 — SCALE: 1/4" = 1'-0"



FIRST FLOOR: "UNIT A" REFLECTED CEILING PLAN

3 / A1.3 — SCALE: 1/4" = 1'-0"

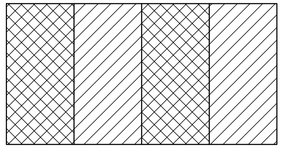


ENLARGED BATHROOM PLAN

4 / A1.3 — SCALE: 1/2" = 1'-0"

"UNIT A" LOCATION

"UNIT A (O.H.)" LOCATION



FIRST FLOOR: "4-UNIT TOWNHOUSE" KEY PLAN

SCALE: N.T.S.

CEILING PLAN LEGEND

- X'-X" — CEILING HEIGHT A.F.F.
- GYPSUM BOARD CEILING
- TYPE "X" GYPSUM BOARD CEILING
- GYPSUM BOARD CEILING
- RETURN AIR DIIFFUSER
- SUPPLY AIR DIFFUSER
- CEILING FAN
- RECESSED LIGHT
- VANITY LIGHT
- WALL SCONCE
- SURFACE MOUNTED LIGHT
- EXHAUST FAN

CEILING PLAN KEYNOTES

- C1 — MOISTURE RESISTANT (MR) GYPSUM BOARD
- C2 — EXTERIOR GYPSUM SOFFIT
- C3 — SOLID ALUM. SOFFIT

CEILING PLAN GENERAL NOTES

1. REFER TO ELECTRICAL AND MECHANICAL PLANS FOR CEILING MOUNTED FIXTURES.
2. CEILING HEIGHTS NOTED ON PLAN ARE REFERENCED TO INTERIOR FLOOR STRUCTURE DIRECTLY BELOW THE CEILING AND DO NOT REFLECT THE THICKNESS OF FINISH FLOOR MATERIALS.
3. CEILING IN CONDITIONED SPACE SHALL BE ONE LAYER OF SAG RESISTANT GYPSUM BOARD (PAINTED) ON METAL FURRING @ 16" O.C. OR MECHANICALLY FASTED TO UNDERSIDE OF FLOOR OR ROOF FRAMING.

FLOOR PLAN KEYNOTES

1 STAINLESS STEEL SINK	12 CONDENSING UNIT
2 DISHWASHER	13 RECESSED ELEC. PANEL
3 REFRIGERATOR	14 WATER CLOSET
4 FULL-SIZED RANGE	15 LAVATORY
5 WALL-MOUNTED CABINETS	16 BATHTUB
6 BASE CABINETS AND COUNTERTOP	17 TOWEL BAR
7 18" VENITLATED SHELVES	18 TOILET TISSUE DISPENSER
8 12" VENTILATED SHELVES	19 WALL-MOUNTED GLASS MIRROR
9 WASHER	20 RECESSED MEDICINE CABINET
10 DRYER	21 LOW CMU WALL (T.O. WALL @ 8'-0" A.F.F.)
11 WATER HEATER	22 LOW CMU WALL, BELOW

WALL TYPE LEGEND

- 2 HR. RATED 8" CONCRETE MASONRY WALL
- 6" EXT. WD. STUD WALL W/ INSULATION AND VINYL SIDING OVER ⅝" EXT. GRADE PLYWD. ON EXT. SIDE
- 1-HR. RATED 4" OR 6" WD. STUD WALL
- 4" OR 6" WD. STUD WALL W/ BATT INSULATION
- 4" OR 6" WD. STUD WALL

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
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CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
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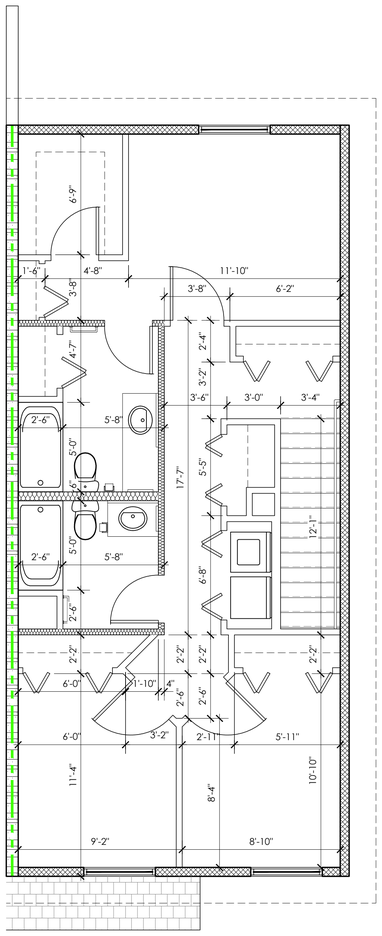
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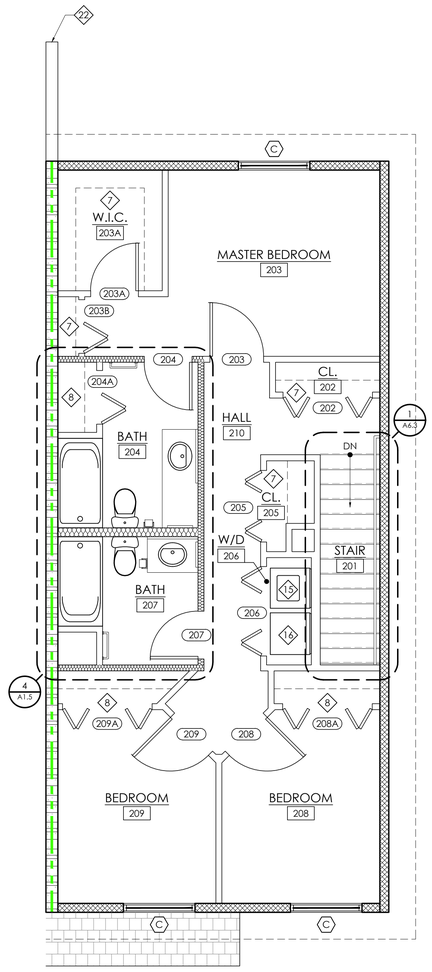
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CAD REF:	FLR

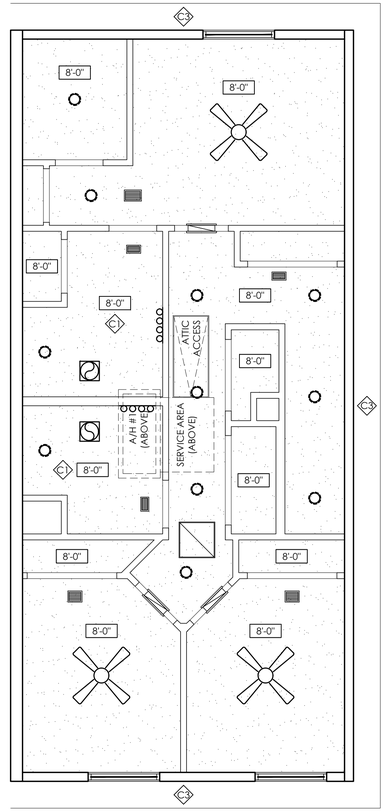
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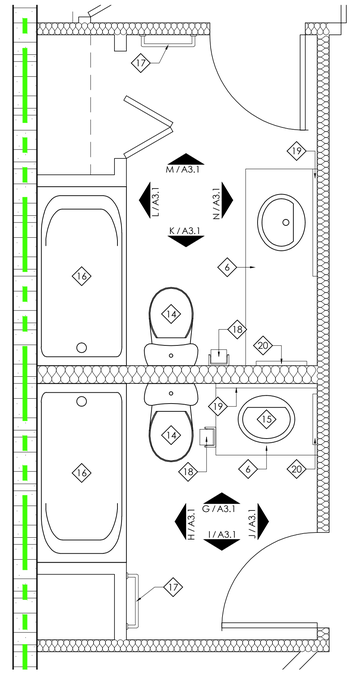
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4 / A1.4 ENLARGED BATHROOM PLAN

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

1 / A1.4 SECOND FLOOR: "UNIT A" DIMENSIONED PLAN

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

0 4' 8' 12'

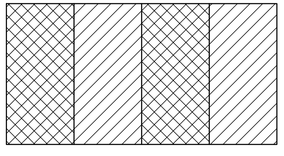
2 / A1.4 SECOND FLOOR: "UNIT A" NOTED PLAN

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

3 / A1.4 SECOND FLOOR: "UNIT A" REFLECTED CEILING PLAN

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

"UNIT A" LOCATION "UNIT A (O.H.)" LOCATION



SECOND FLOOR: "4-UNIT TOWNHOUSE" KEY PLAN

SCALE: N.T.S.

CEILING PLAN KEYNOTES

- C-1 MOISTURE RESISTANT (MR) GYPSUM BOARD
- C-2 EXTERIOR GYPSUM SOFFIT
- C-3 SOLID ALUM. SOFFIT

CEILING PLAN GENERAL NOTES

1. REFER TO ELECTRICAL AND MECHANICAL PLANS FOR CEILING MOUNTED FIXTURES.
2. CEILING HEIGHTS NOTED ON PLAN ARE REFERENCED TO INTERIOR FLOOR STRUCTURE DIRECTLY BELOW THE CEILING AND DO NOT REFLECT THE THICKNESS OF FINISH FLOOR MATERIALS.
3. CEILING IN CONDITIONED SPACE SHALL BE ONE LAYER OF SAG RESISTANT GYPSUM BOARD (PAINTED) ON METAL FURRING @ 16" O.C. OR MECHANICALLY FASTED TO UNDERSIDE OF FLOOR OR ROOF FRAMING.

FLOOR PLAN KEYNOTES

1 STAINLESS STEEL SINK	12 CONDENSING UNIT
2 DISHWASHER	13 RECESSED ELEC. PANEL
3 REFRIGERATOR	14 WATER CLOSET
4 FULL-SIZED RANGE	15 LAVATORY
5 WALL-MOUNTED CABINETS	16 BATHTUB
6 BASE CABINETS AND COUNTERTOP	17 TOWEL BAR
7 18" VENITLATED SHELVES	18 TOILET TISSUE DISPENSER
8 12" VENTILATED SHELVES	19 WALL-MOUNTED GLASS MIRROR
9 WASHER	20 RECESSED MEDICINE CABINET
10 DRYER	21 LOW CMU WALL (T.O. WALL @ 8'-0" A.F.F.)
11 WATER HEATER	22 LOW CMU WALL, BELOW

CEILING PLAN LEGEND

X'-X" CEILING HEIGHT A.F.F.	CEILING FAN
GYPSUM BOARD CEILING	RECESSED LIGHT
TYPE "X" GYPSUM BOARD CEILING	VANITY LIGHT
GYPSUM BOARD CEILING	WALL SCONCE
RETURN AIR DIFFUSER	SURFACE MOUNTED LIGHT
SUPPLY AIR DIFFUSER	EXHAUST FAN

WALL TYPE LEGEND

- 2 HR. RATED 8" CONCRETE MASONRY WALL
- 6" EXT. WD. STUD WALL W/ INSULATION AND VINYL SIDING OVER ⅝" EXT. GRADE PLYWD. ON EXT. SIDE
- 1-HR. RATED 4" OR 6" WD. STUD WALL
- 4" OR 6" WD. STUD WALL W/ BATT INSULATION
- 4" OR 6" WD. STUD WALL

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

MK Architecture LLC
8200 College Parkway, Suite 101
Fort Myers, Florida 33919
239.482.2121
AR10564 ID6790
www.MK-ARCH.com

ARCHITECTURE

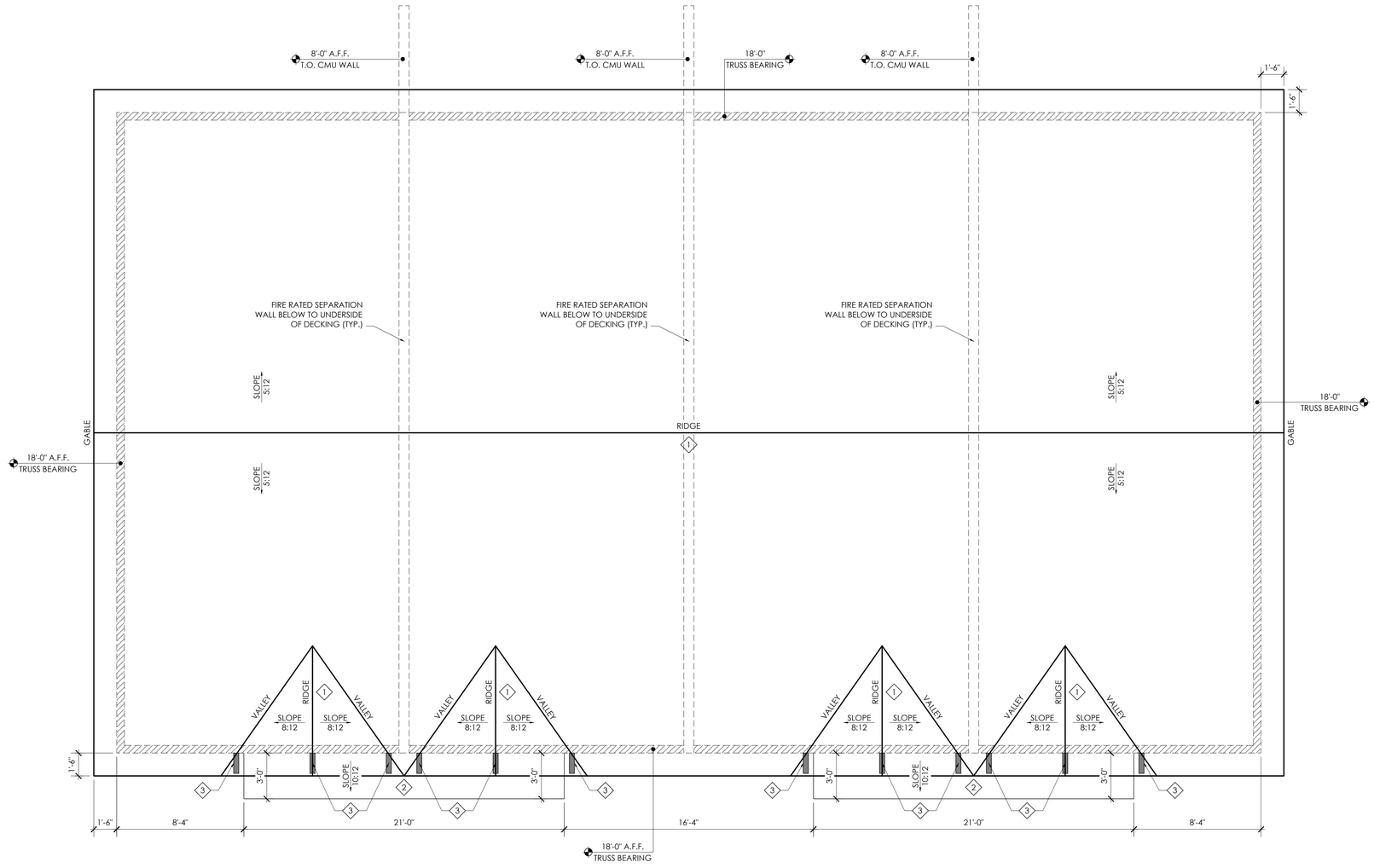
MICHAEL K. SHEELEY
REG. # 0010564
STATE OF FLORIDA
MICHAEL K. SHEELEY
AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	FLR

SHEET
A1.4

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ROOF PLAN

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

0 4' 8' 12'

ROOF PLAN GENERAL NOTES

1. PRE-ENG. ROOF TRUSSES @ 24" O.C.
2. COORDINATION OF CONSTRUCTION INCLUDING VERIFICATION OF DIMENSIONS AND FIELD CONDITIONS, IS THE RESPONSIBILITY OF THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN FIRM PRIOR TO CONSTRUCTION.
3. ROOF PLAN FOR DESIGN PURPOSES ONLY. TRUSS MFGR. TO SUBMIT ENGINEERED TRUSS DRAWINGS FOR APPROVAL.
4. ALL BEARINGS TAKEN FROM FIN. FLR. ELEV. 0'-0".

ROOF PLAN KEYNOTES

1. PITCHED ROOF W/ FIBERGLASS SHINGLES
2. PITCHED SHED ROOF W/ FIBERGLASS SHINGLES
3. PRE-FAB. COMPOSITE TRIM BRACKET ATTACHED PER MFGR'S SPECIFICATIONS

LEGEND

- 8" CONCRETE MASONRY WALL BELOW
- 2x6 WOOD FRAMING BELOW

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

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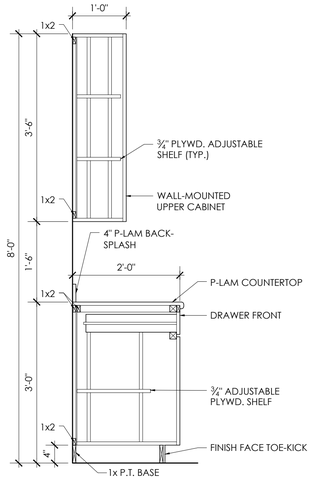
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DRWN. BY:	SLVB
CAD REF:	ROOF

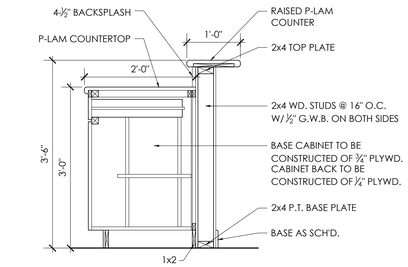
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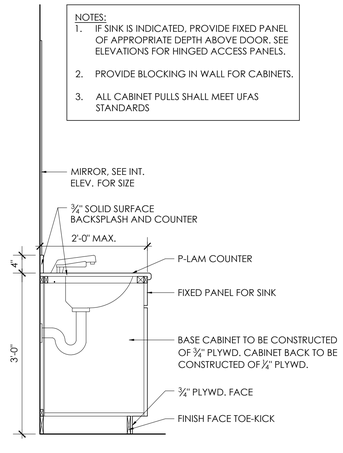
C:\USERS\USER.VMK ARCHITECTURE DROPBOX\MK DESIGN FILES\ACAD\DWGS\MK ARCH\MK25013-HABITAT TOWNHOUSES-DIPLOMAT SOUTH\~4-UNIT\CONSTRUCTION DOCUMENTS\MK25013-4-A2-ROOF.DWG \ April 25, 2025



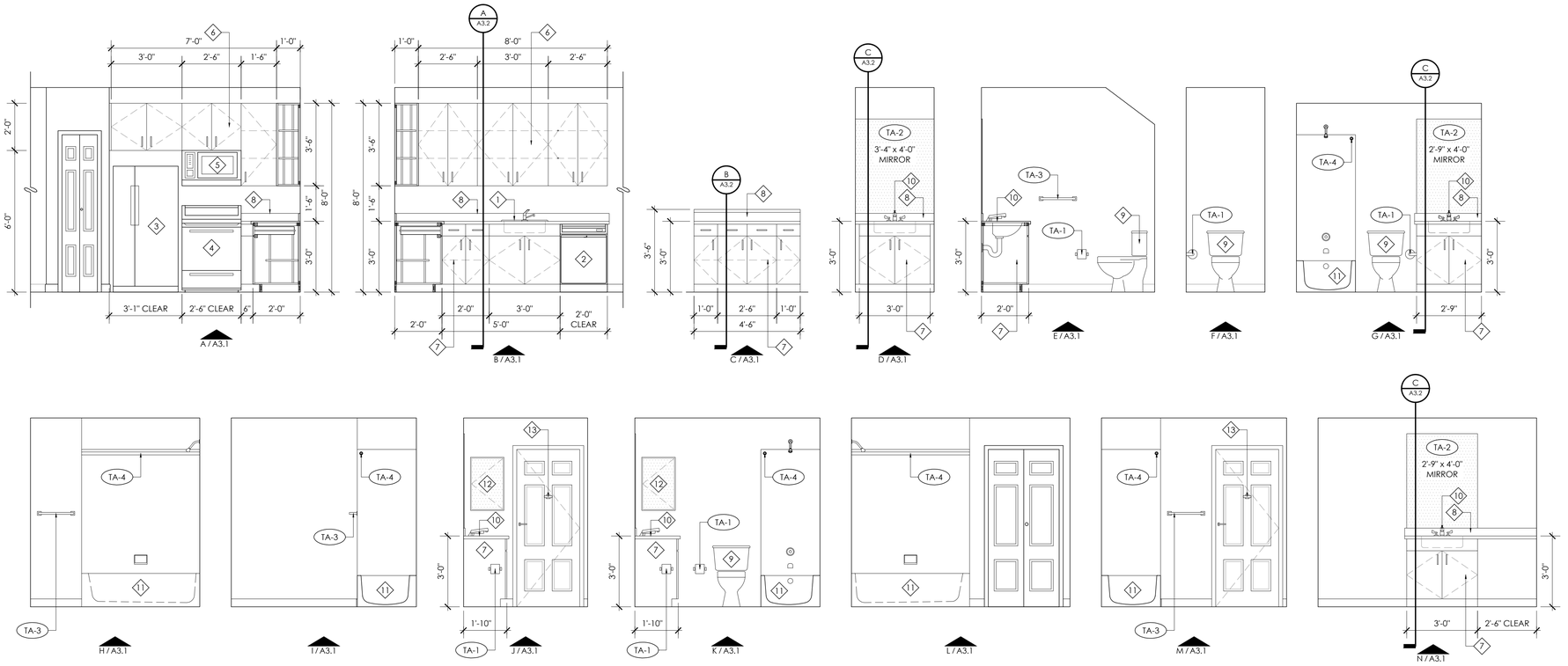
A A3.1 **CASEWORK SECTION**
SCALE: 3/4" = 1'-0"



B A3.1 **COUNTER SECTION**
SCALE: 3/4" = 1'-0"



C A3.1 **LAVATORY SECTION**
SCALE: 3/4" = 1'-0"



INTERIOR ELEVATIONS
SCALE: 3/8" = 1'-0"

TOILET ACCESSORY SCHEDULE

MARK	DESCRIPTION	MANUFACTURER / MODEL	MOUNTING LOCATION	MOUNTING HEIGHT
TA-1	TOILET TISSUE DISPENSER	BOBRICK - MODEL #B-6851	TOP	20"
TA-2	MIRROR	BOBRICK - MODEL #B-165	BOTTOM	
TA-3	TOWEL BAR	BOBRICK - MODEL #B-6737	TOP	48"
TA-4	SHOWER CURTAIN ROD	BOBRICK - MODEL #B-6107 W/ 204-I HOOKS AND 204-2 SHOWER CURTAIN	C/L	78"

TOILET ACCESSORY NOTES

1. G.C. SHALL PROVIDE ALL WALL REINFORCEMENTS NECESSARY FOR COMPLETE INSTALLATION OF TOILET ACCESSORIES AS RECOMMENDED BY MANUFACTURERS.
2. G.C. SHALL VERIFY WITH OWNER, PRIOR TO COMMENCEMENT, RESPONSIBILITY OF SUPPLYING TOILET ACCESSORIES. G.C. SHALL BE RESPONSIBLE FOR FINAL INSTALLATION.
3. SEE INTERIOR ELEVATIONS FOR SIZE AND MOUNTING HEIGHTS OF MIRRORS.

INTERIOR ELEVATION KEYNOTES

1 STAINLESS STEEL SINK	8 4" BACKSPLASH
2 DISHWASHER	9 WATER CLOSET
3 REFRIGERATOR	10 LAVATORY
4 FULL-SIZED RANGE	11 BATHTUB
5 MICROWAVE	12 RECESSED MEDICINE CABINET
6 WALL-MOUNTED CABINETS	13 ROBE HOOK
7 BASE CABINETS AND COUNTERTOP	

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

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DOOR SCHEDULE

LOCATION		DOOR							FRAME						SPECIFIC INFORMATION			FL PRODUCT APPROVAL #
MARK	ROOM NAME	MATERIAL	TYPE	WTH.	HT.	THK.	GLAZING	FINISH	MATERIAL	TYPE	HEAD	JAMB	THRESH.	FINISH	RATING	HDWE.	NOTES	
UNIT A																		
101	FOYER	FIBERGLASS	1	2'-8"	6'-8"	1 3/8"		PAINT	H.M.	A	15 / A4.2	16 / A4.2	17 / A4.2	PAINT		1	1	FL# 13459.1
102	HALL	STEEL	1	2'-8"	6'-8"	1 3/8"		PAINT	H.M.	A	8 / A4.2	9 / A4.2	18 / A4.2	PAINT	45 MIN.	1	1, 2	
103	POWDER ROOM	WOOD	2	2'-8"	6'-8"	1 3/8"		PAINT	WOOD	A	1 / A4.2	2 / A4.2		PAINT		3		
104	PANTRY	WOOD	4	1'-6"	6'-8"	1 3/8"		PAINT	WOOD	A	6 / A4.2	7 / A4.2		PAINT		3		
107	PATIO	ALUM. / GLS.	5	6'-0"	6'-8"		LOW-E	POWDER	ALUM.		10 / A4.2	11 / A4.2	12 / A4.2	POWDER		3	1, 3	FL# 251.4
108	GARAGE	STEEL	6	8'-0"	7'-0"			FACTORY						FACTORY		3		FL# 5684.2
202	CL.	WOOD	3	(2) 2'-6"	6'-8"	1 3/8"		PAINT	WOOD	B	6 / A4.2	7 / A4.2		PAINT		3		
203	MASTER BEDROOM	WOOD	1	3'-0"	6'-8"	1 3/8"		PAINT	WOOD	A	13 / A4.2	14 / A4.2		PAINT		2		
203A	W.I.C.	WOOD	1	2'-8"	6'-8"	1 3/8"		PAINT	WOOD	A	13 / A4.2	14 / A4.2		PAINT		2		
203B	CL.	WOOD	3	2'-8"	6'-8"	1 3/8"		PAINT	WOOD	A	6 / A4.2	7 / A4.2		PAINT		3		
204	BATH	WOOD	1	2'-8"	6'-8"	1 3/8"		PAINT	WOOD	A	13 / A4.2	14 / A4.2		PAINT		2		
204A	CL.	WOOD	3	3'-0"	6'-8"	1 3/8"		PAINT	WOOD	A	6 / A4.2	7 / A4.2		PAINT		3		
205	CL.	WOOD	3	(2) 2'-0"	6'-8"	1 3/8"		PAINT	WOOD	B	6 / A4.2	7 / A4.2		PAINT		3		
206	W/D	WOOD	3	(2) 2'-6"	6'-8"	1 3/8"		PAINT	WOOD	B	6 / A4.2	7 / A4.2		PAINT		3		
207	BATH	WOOD	1	3'-0"	6'-8"	1 3/8"		PAINT	WOOD	A	13 / A4.2	14 / A4.2		PAINT		2		
208	BEDROOM	WOOD	1	3'-0"	6'-8"	1 3/8"		PAINT	WOOD	A	13 / A4.2	14 / A4.2		PAINT		2		
208A	CL.	WOOD	3	(2) 2'-6"	6'-8"	1 3/8"		PAINT	WOOD	B	6 / A4.2	7 / A4.2		PAINT		3		
209	BEDROOM	WOOD	1	3'-0"	6'-8"	1 3/8"		PAINT	WOOD	A	13 / A4.2	14 / A4.2		PAINT		2		
209A	CL.	WOOD	3	(2) 2'-6"	6'-8"	1 3/8"		PAINT	WOOD	B	6 / A4.2	7 / A4.2		PAINT		3		

DOOR SCHEDULE NOTES

GENERAL

G1. PROVIDE A COMPLETE SET OF RUBBER SILENCERS FOR ALL DOORS.
G2. ALL DOOR FINISHES AND TRIM SHALL BE SELECTED / APPORVED BY THE INTERIOR DESIGNER.

SPECIFIC

1. PROVIDE WEATHER STRIPPING.
2. PROVIDE RATED DOOR, FAME, CLOSER, AND HARDWARE
3. IMPACT RESISTANT, LOW-E GLAZING.

RESIDENTIAL HARDWARE SCHEDULE

NOTE: PROVIDED RATED & LABELED HARDWARE DOORS & FRAMES IN ALL RATED LOCATIONS

BASED ON:

- HINGES - HAGER
- LOCKS - SCHLAGE "F" SERIES
- CLOSERS (IF REQUIRED) - LCN
- STOPS - IVES, ROCKWOOD
- THRESHOLDS, DOOR BOTTOMS, SEALS - PEMKO

HARDWARE SET #1 - ENTRANCE

• 1 ½" PR. EACH HAG HINGES	1191 4.5 x 4.5 US32D
• 1 EACH SCH ENTRANCE	A53PD JAZZ US26D
• 1 EACH SCH DEADBOLT	B36N US26D
• 1 EACH ROC STOP	409 US32D
• 1 EACH PEM THRESHOLD	2005AT
• 1 EACH PEM SEAL	PK55D

HARDWARE SET #2 - PRIVACY

• 1 ½" PR. EACH HAG HINGES	1191 4.5 X 4.5 US32D
• 1 EACH SCH PRIVACY	A40S JAZZ US26D
• 1 EACH ROC STOP	409 US32D

HARDWARE SET #3 - MISC.

ALL HARDWARE PROVIDED BY DOOR SUPPLIER

HARDWARE SCHEDULE NOTES

1. ALL HARDWARE SETS BASED ONALL HARDWARE SETS BASED ON SINGLE LEAF DOOR. PROVIDE TWO SETS AS REQUIRED AND ALL ADDITIONAL HARDWARE AS NEEDED FOR ALL DOUBLE LEAF DOOR LOCATIONS.
2. FINAL FINISH ON ALL ITEMS IS TO MATCH FOR COLOR RANGE AND FINISH.
3. THIS HARDWARE SCHEDULE IS FOR REFERENCE ONLY. CONTRACTOR IS TO PROVIDE HARDWARE CONSULTANT TO WORK WITH ARCHITECT FOR COMPLETE HARDWARE PACKAGE UPON AWARD OF CONTRACT & PRIOR TO ORDERING DOORS, FRAMES OR HARDWARE.
4. USE NRP ON ALL EXTERIOR HINGES

ROOM FINISH SCHEDULE

MARK	ROOM NAME	FLOOR	BASE	WSCT.	WSCT. HT.	WALLS	CEILING	HEIGHT	NOTES
UNIT A									
100	COVERED ENTRY	CONC.				VINYL SIDING	STUCCO	8'-0"	
101	FOYER	CARPET	WOOD			G.W.B.	G.W.B.	8'-0"	
102	HALL	CARPET	WOOD			G.W.B.	G.W.B.	8'-0"	2
103	POWDER ROOM	V.C.T.	WOOD			M.R. G.W.B.	M.R. G.W.B.	8'-0"	1
104	PANTRY	V.C.T.	WOOD			G.W.B.	G.W.B.	8'-0"	
105	KITCHEN	V.C.T.	WOOD			G.W.B.	G.W.B.	8'-0"	
106	DINING ROOM	V.C.T.	WOOD			G.W.B.	G.W.B.	8'-0"	
107	LIVING ROOM	V.C.T.	WOOD			G.W.B.	G.W.B.	8'-0"	2
108	GARAGE	CONC.				G.W.B.	G.W.B.	8'-0"	
201	STAIR	CARPET	WOOD			G.W.B.	G.W.B.	8'-0"	
202	CL.	V.C.T.	WOOD			G.W.B.	G.W.B.	8'-0"	
203	MASTER BEDROOM	CARPET	WOOD			G.W.B.	G.W.B.	8'-0"	2
203A	W.I.C.	CARPET	WOOD			G.W.B.	G.W.B.	8'-0"	2
204	BATH	V.C.T.	WOOD			M.R. G.W.B.	M.R. G.W.B.	8'-0"	1
205	CL.	V.C.T.	WOOD			G.W.B.	G.W.B.	8'-0"	
206	LAUNDRY	V.C.T.	WOOD			M.R. G.W.B.	M.R. G.W.B.	8'-0"	1
207	BATH	V.C.T.	WOOD			M.R. G.W.B.	M.R. G.W.B.	8'-0"	1
208	BEDROOM	CARPET	WOOD			G.W.B.	G.W.B.	8'-0"	2
209	BEDROOM	CARPET	WOOD			G.W.B.	G.W.B.	8'-0"	2
210	HALL	CARPET	WOOD			G.W.B.	G.W.B.	8'-0"	2

FINISH SCHEDULE NOTES

GENERAL

G1. PROVIDE METAL REDUCER STRIP AT ALL EDGE AREAS OF CARPET.
G2. PROVIDE MARBLE THLD. AT EDGE OF ALL CERAMIC OR QUARRY TILE. SLOPE IF REQUIRED DUE TO FLOOR HEIGHT DIFFERENTIAL. MAXIMUM FINISHED HEIGHT DIFFERENTIAL TO BE ½".
G3. DRYWALL/G.W.B. FINISH TO BE LIGHT SKIP TROWEL UNLESS NOTED OTHERWISE.

SPECIFIC

1. PROVIDE MOISTURE RESISTANT G.W.B. IN ALL "WET AREAS" ADJACENT TO PLUMBING AND PLUMBING FIXTURES.
2. PROVIDE OPTION FOR V.C.T. OR CARPET IN THIS AREA.

WINDOW SCHEDULE

MARK	TYPE	WIDTH	HEIGHT	MATL.	FINISH	GLAZING	HEAD	JAMB	SILL	RATING	NOTES	F.P.A.#
A	HORIZ. SLIDER	6'-0"	4'-4"	ALUM.	POWDER	LOW-E	3 / A4.2	4 / A4.2	5 / A4.2		1, 2	FL# 242.4
B	FIXED	2'-6"	4'-4"	ALUM.	POWDER	LOW-E	3 / A4.2	4 / A4.2	5 / A4.2		1	FL# 243.8
C	HORIZ. SLIDER	4'-0"	4'-4"	ALUM.	POWDER	LOW-E	3 / A4.2	4 / A4.2	5 / A4.2		1, 2	FL# 242.4

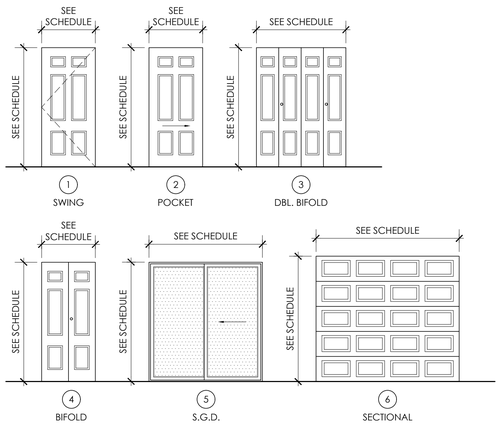
WINDOW SCHEDULE NOTES

GENERAL

G1. VERIFY WINDOW ROUGHT OPENINGS W/ WINDOW MFGR.
G2. WINDOWS SPECIFIED PER PRODUCT APPROVAL # OR APPROVED EQUAL.
G3. INSTALL ALL WINDOWS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
G4. ALL EXTERIOR WINDOWS AND GLAZING SYSTEMS ARE TO BE IMPACT-RATED.
G5. TEMPERED OR IMPACT RESISTANT GLASS IS REQUIRED WHEREVER GLASS IS 9 SQ. FT. OR LARGER AND WHEREVER GLASS IS 18" OR LESS A.F.F.

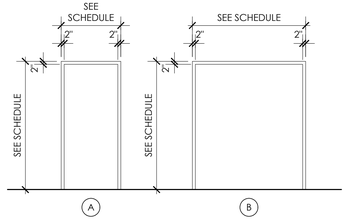
SPECIFIC

1. IMPACT RESISTANT WINDOW UNIT
2. EGRESS WINDOW



DOOR ELEVATIONS

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



DOOR FRAME ELEVATIONS

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

WINDOW ELEVATIONS

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

PROGRESS SET - NOT FOR CONSTRUCTION

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No:	REVISIONS
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ARCHITECTURE

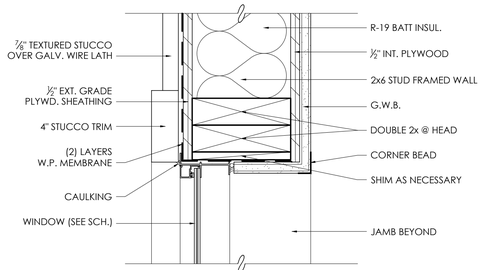
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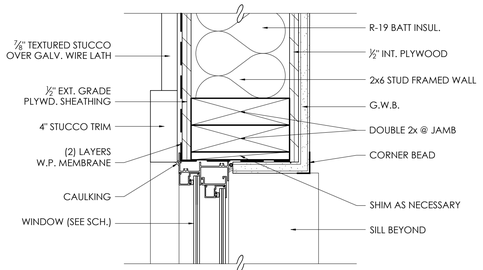
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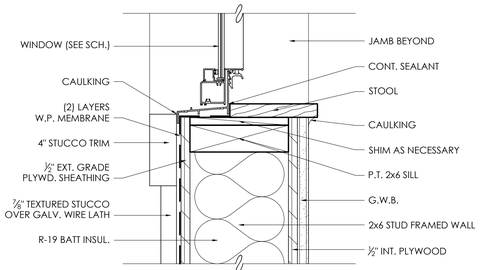
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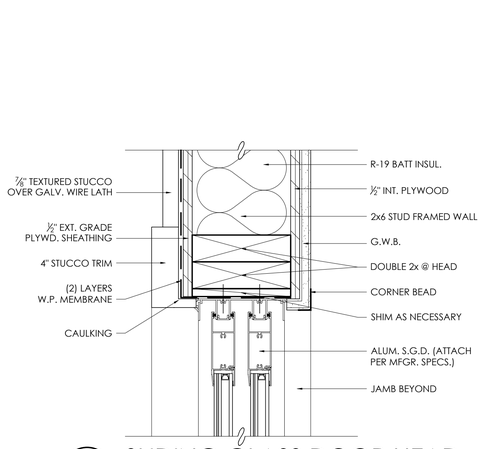
3 / A4.2 WINDOW HEAD
SCALE: 3" = 1'-0"



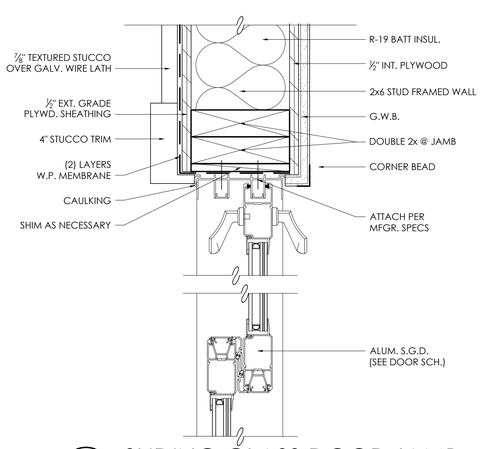
4 / A4.2 WINDOW JAMB
SCALE: 3" = 1'-0"



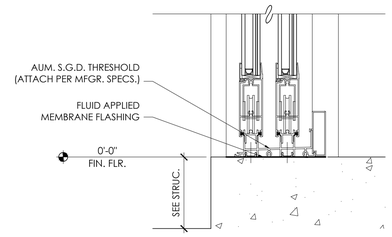
5 / A4.2 WINDOW SILL
SCALE: 3" = 1'-0"



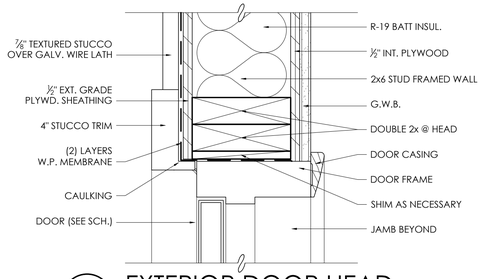
10 / A4.2 SLIDING GLASS DOOR HEAD
SCALE: 3" = 1'-0"



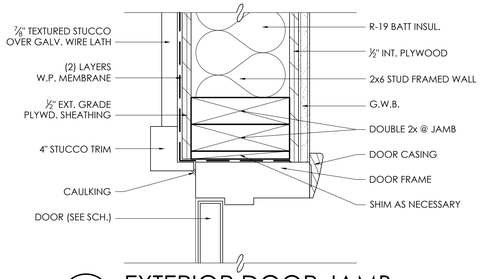
11 / A4.2 SLIDING GLASS DOOR JAMB
SCALE: 3" = 1'-0"



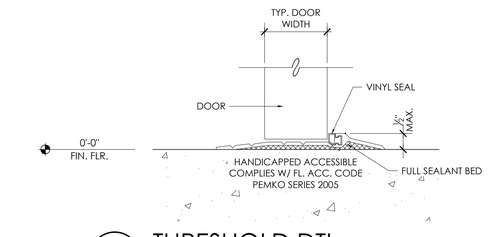
12 / A4.2 SLIDING GLASS DOOR THRESHOLD
SCALE: 3" = 1'-0"



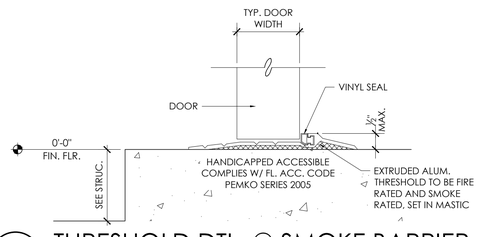
15 / A4.2 EXTERIOR DOOR HEAD
SCALE: 3" = 1'-0"



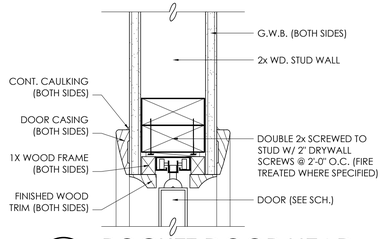
16 / A4.2 EXTERIOR DOOR JAMB
SCALE: 3" = 1'-0"



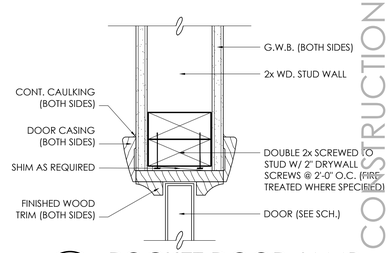
17 / A4.2 THRESHOLD DTL.
SCALE: 6" = 1'-0"



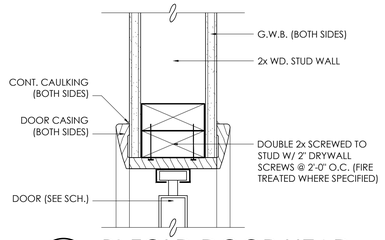
18 / A4.2 THRESHOLD DTL. @ SMOKE BARRIER
SCALE: 6" = 1'-0"



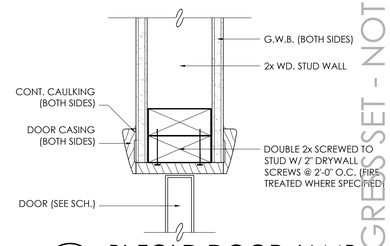
1 / A4.2 POCKET DOOR HEAD
SCALE: 3" = 1'-0"



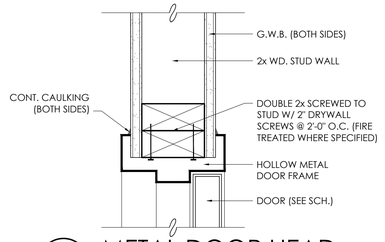
2 / A4.2 POCKET DOOR JAMB
SCALE: 3" = 1'-0"



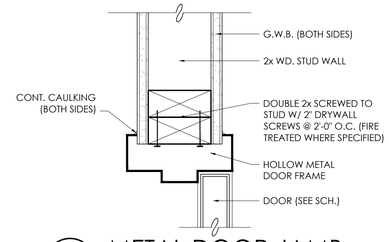
6 / A4.2 BI-FOLD DOOR HEAD
SCALE: 3" = 1'-0"



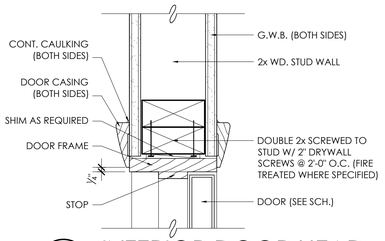
7 / A4.2 BI-FOLD DOOR JAMB
SCALE: 3" = 1'-0"



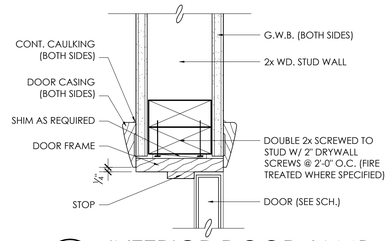
8 / A4.2 METAL DOOR HEAD
SCALE: 3" = 1'-0"



9 / A4.2 METAL DOOR JAMB
SCALE: 3" = 1'-0"



13 / A4.2 INTERIOR DOOR HEAD
SCALE: 3" = 1'-0"



14 / A4.2 INTERIOR DOOR JAMB
SCALE: 3" = 1'-0"

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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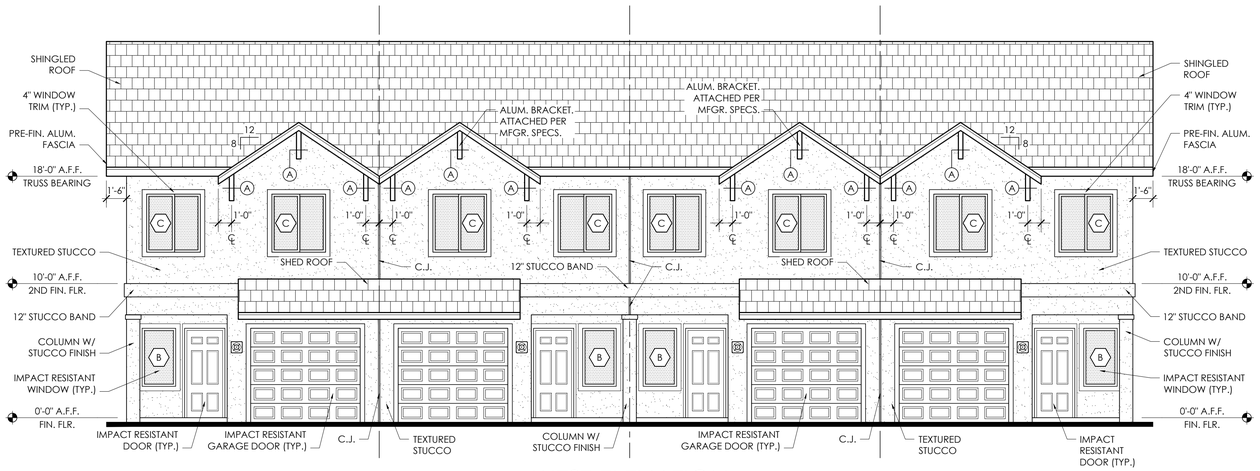
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REG. # 0010564
STATE OF FLORIDA
MICHAEL K. SHEELEY
AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	SCH

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A4.2

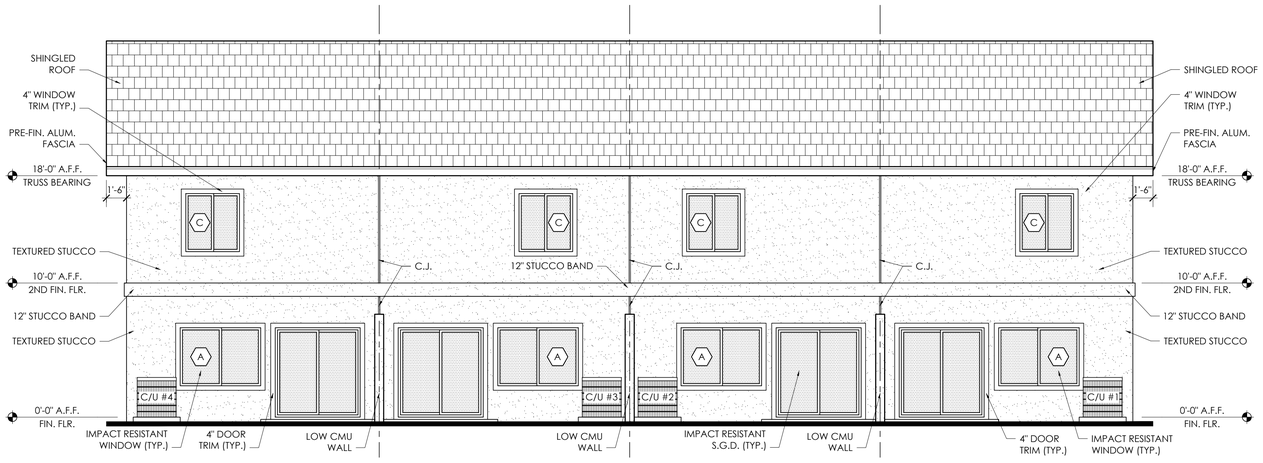
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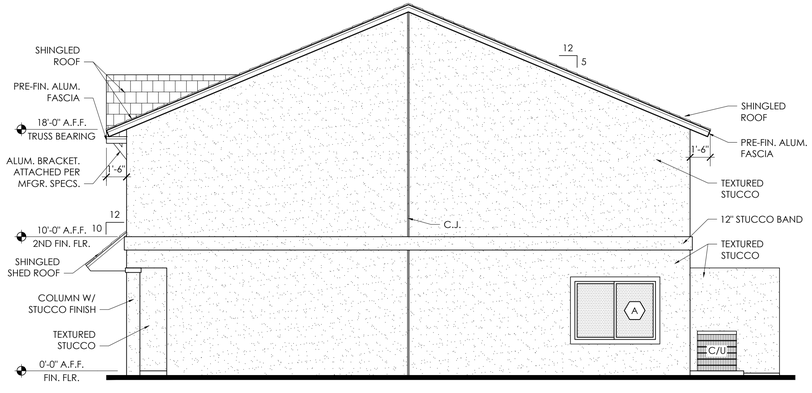
WEST ELEVATION

SCALE: 3/16" = 1'-0"



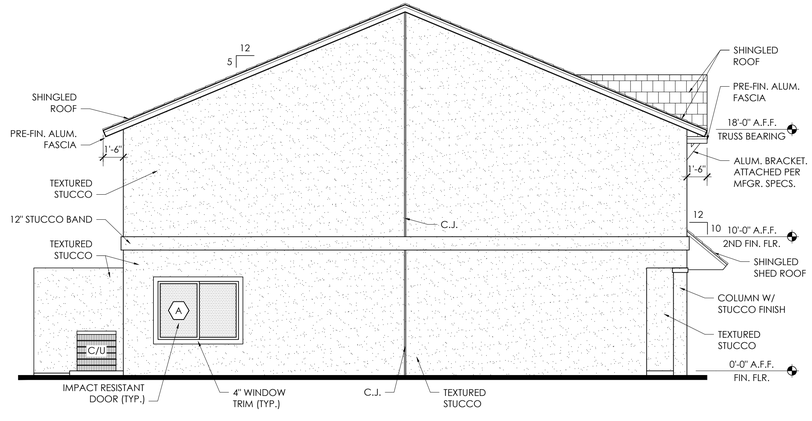
EAST ELEVATION

SCALE: 3/16" = 1'-0"



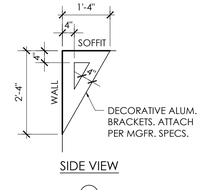
SOUTH ELEVATION

SCALE: 3/16" = 1'-0"



NORTH ELEVATION

SCALE: 3/16" = 1'-0"



SIDE VIEW

(A)

BRACKET DETAILS

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

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
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REGISTERED ARCHITECT

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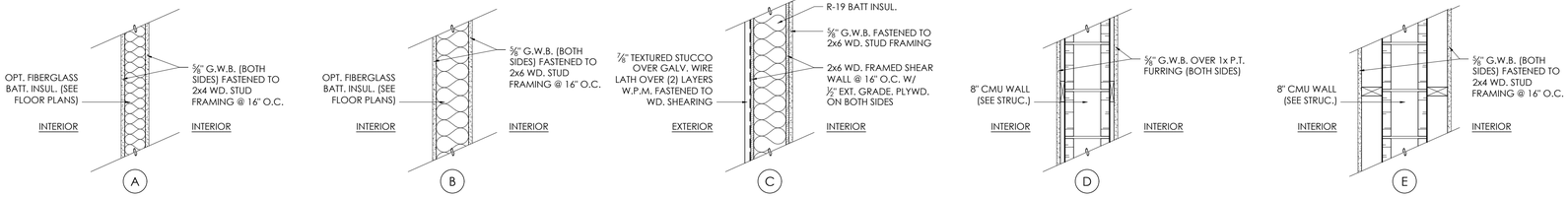
SHEET
A5.1

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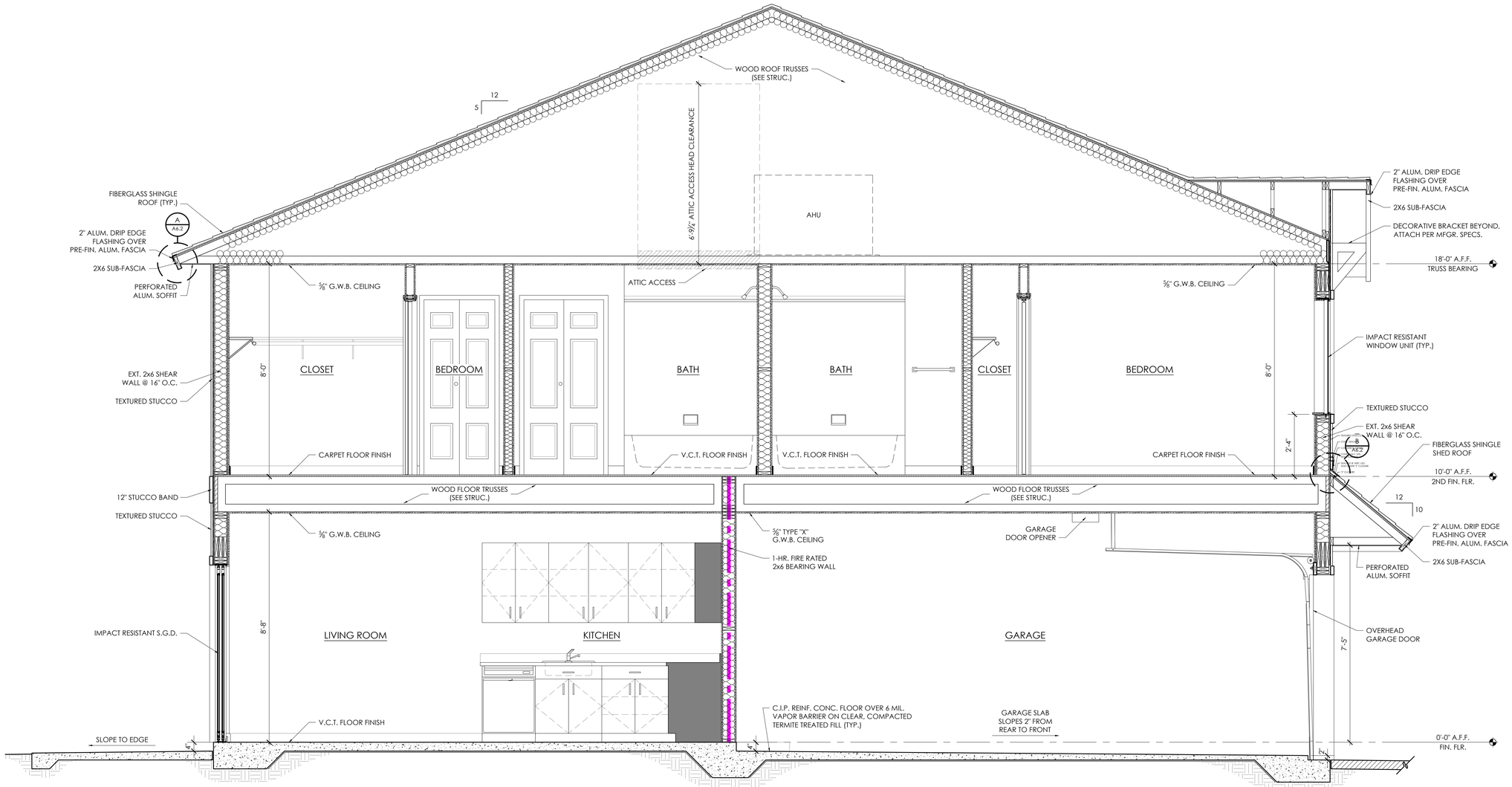
NOTES:

1. REFER TO STRUCTURAL DRAWINGS FOR C.M.U. WALL REINFORCING.
2. REFER TO EXTERIOR ELEVATION DRAWINGS FOR LOCATIONS OF CEMENT PLASTER SCORING, REVEALS, CONTROL JOINTS, AND OTHER SURFACE ORNAMENTATION.
3. SEE FLOOR PLAN DRAWINGS FOR LOCATIONS OF SOUND ATTENUATION INSULATION.
4. ALL EXPOSED CMU, STUCCO, AND GYPSUM BOARD SURFACES TO BE PAINTED.
5. SEE LIFE SAFTEY PLANS FOR WALL FIRE RATINGS REQUIREMENTS AND LOCATIONS.



WALL TYPE DETAILS

SCALE: 1" = 1'-0"



1 / A1.1 | A1.2

BUILDING SECTION

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

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
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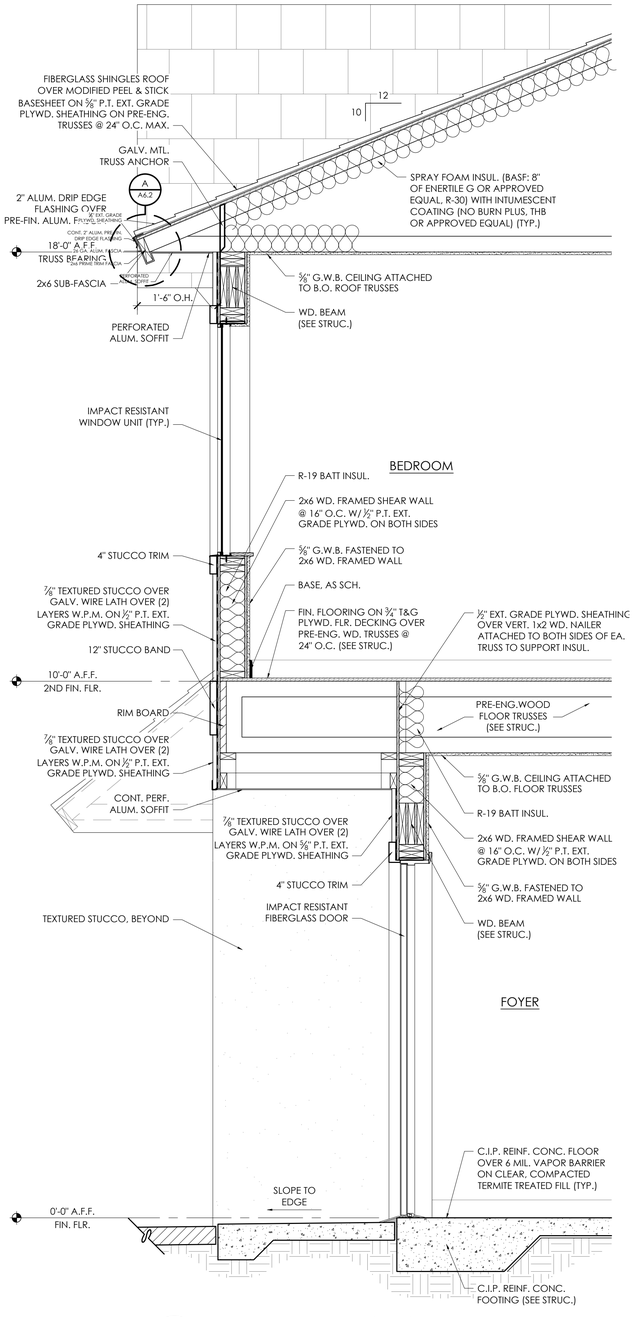
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STATE OF FLORIDA
MICHAEL K. SHEELEY
AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
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A6.1

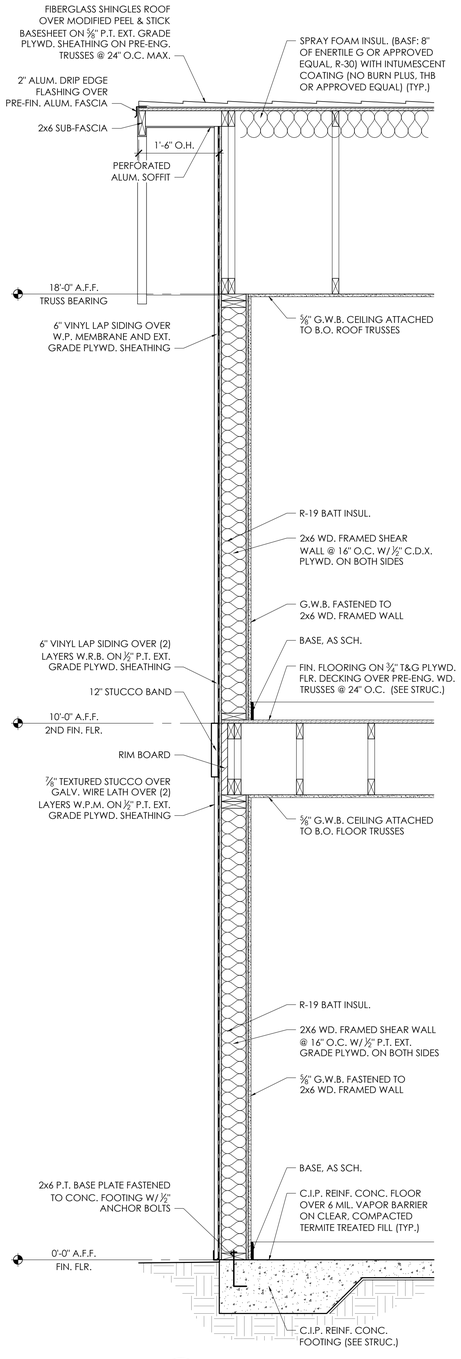
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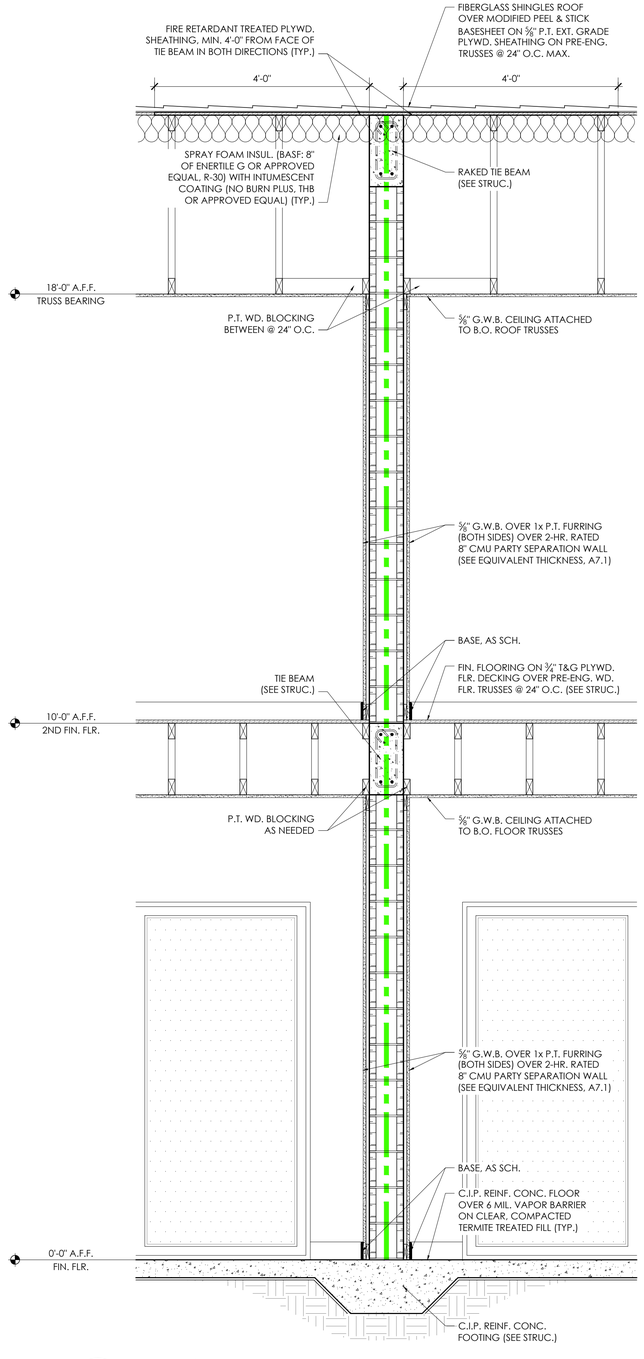
1 / A1.1 A1.2 — EXT. WALL SECTION

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



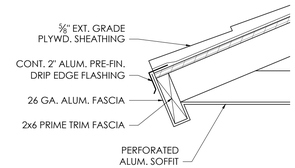
2 / A1.1 A1.2 — EXT. WALL SECTION

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



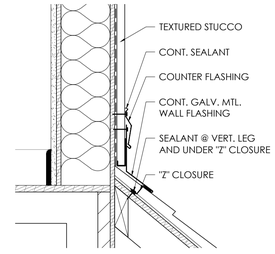
3 / A1.1 A1.2 — INT. CMU WALL SECTION

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



A / A6.1 A6.2 — FASCIA DTL.

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



B / A6.1 — FLASHING DTL.

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

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

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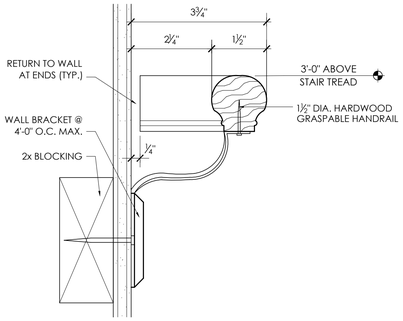
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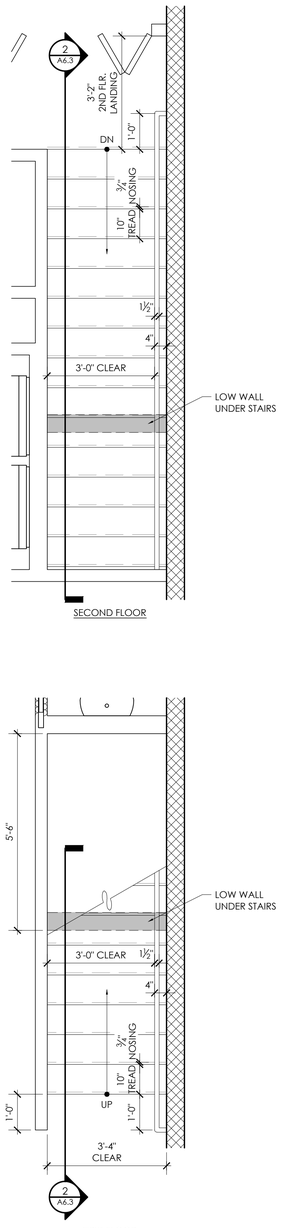
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WALL MOUNTED WD. HANDRAIL DETAIL

A / A6.3

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

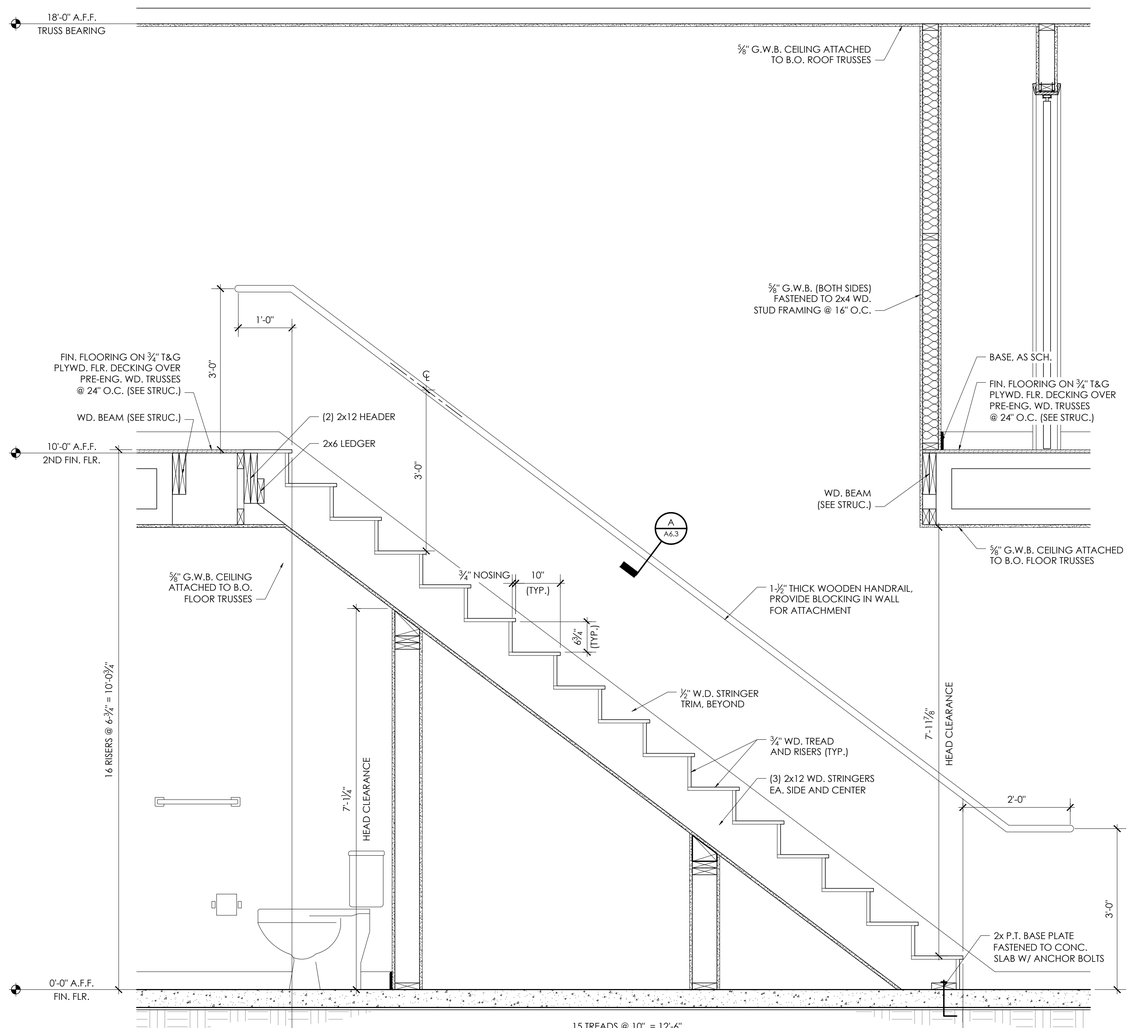


ENLARGED STAIR PLANS

1

A1.3	A1.4	A1.5	A1.6

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



STAIR SECTION

2 / A6.3

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

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
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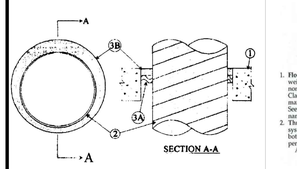
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System No. CAJ-7003
(Formerly System No. 319)
F Rating—3 Hr
T Rating—0 Hr
L Rating At Ambient—1 CFM/sq ft (See Item 4)
L Rating At 400 F—less than 1 CFM/sq ft (See Item 4)

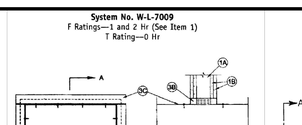


SECTION A-A

1. **Floor or Wall Assembly** — Min 4-1/2 in. thick, thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max area of opening is 18 in.
   See **Concrete Blocks (CAZT)** category in the Fire Resistance Directory for names of manufacturers.
2. **Through-Penetrant** — One steel duct to be installed within the firestop system with an annular space of 3 in. Duct to be rigidly supported on both sides of floor or wall assembly. The following types of through-penetrants may be used:
   A. **Steel Air Duct** — Min 26 gauge (0.021 in.) thick carbon steel duct having a max perimeter dimension of 216 in. and a max individual dimension of 84 in. Ducts with any dimension greater than 39 in., shall be provided with intermediate reinforcement in accordance with SMACNA HVAC Duct Construction Standards. Reinforcement to consist of min 1-1/2 in. by 1-1/2 in. by 1/8 in. thick transverse stiffening angles, approximately 2 in. less in length than the max dimension, screw attached 6 in. OC to the duct 3 in. beyond the top surface of the floor and both surfaces of the wall.
3. **Firestop System** — The firestop system shall consist of the following:
   A. **Duct Wrap Material*** — Nom 1-1/2 in thick, 6 pcf ceramic blanket totally encapsulated within foil-scrim facers. The steel duct shall be wrapped with one layer of duct wrap installed in accordance with the manufacturer's installation instructions, maintaining min. 3 in. transverse and longitudinal overlaps. All cut edges and ends shall be sealed with 3 in. wide pressure sensitive aluminum foil tape. A nom annular space of 3 in. is required between the insulated duct and the periphery of the opening.
      THERMAL CERAMICS INC—FireMaster Duct Wrap or FireMaster Duct Wrap+
   B. **Steel Banding Straps*** — Min 1/2 in. wide by 0.015 in. thick carbon steel banding straps used in conjunction with min 1 in. long stainless steel crimp clips. Banding straps spaced a max 12 in. OC and 1-1/2 in. from transverse joints of duct wrap.
   C. **Packing Material** — Min 4 in. thickness of unfaced scrap duct wrap material or min 3 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of the floor or both surfaces of wall as required to accommodate the required thickness of fill material.
   D. **Fill, Void or Cavity Material*** — Sealant — Min 1/2 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.
      Minnesota Mining & Mfg. Co.—CP 25WB+.

*Bearing the UL Classification Marking

System No. W-L-7009
F Ratings—1 and 2 Hr (See Item 1)
T Rating—0 Hr



SECTION A-A

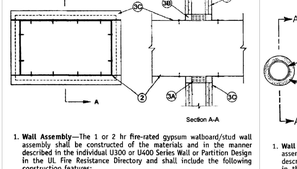
1. **Wall Assembly**—The 1 and 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. The opening in the wall to accommodate the steel duct (Item 2) shall be framed on all sides using lengths of studs installed between the vertical studs and attached to the studs at each end. The framed opening in the wall shall be a min 1-1/4 in. to a max 3 in. wider and higher than the width and height of the steel duct. Wood studs are used and the width of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be a min 1-1/4 in. wider and 4 in. higher than the dimensions of the steel duct such that, when the penetrating item is installed in the opening, a max 2 in. clearance is present between the steel duct and the framing in all four sides.
   B. **Wallboard, Gypsum***—5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design In the UL Fire Resistance Directory. Max area of opening is 188 sq in. with max dimensions of 12 in. for wood studs. Max area of opening is 325 sq in. with max dimensions of 25 in. for steel studs.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. **Steel Duct**—Nom 24 by 12 in. (or smaller) No. 24 gauge (or heavier) steel duct to be installed vertically or horizontally within the firestop system. The annular space between the steel duct and the periphery of the framed opening shall be a min 1/4 in. to a max 3 in. The steel duct to be rigidly supported on both sides of wall assembly. The max dimensions of the steel duct is dependent upon the hourly rating of the wall and type of stud used as tabulated below.

Fire Rating Of Wall Hr	Type Of Stud	Max Dimension Of Steel Duct
1	Steel	24 in. by 12 in.
2	Steel	12 in. by 12 in.
1	Wood	12 in. by 12 in.
2	Wood	12 in. by 12 in.

3. **Firestop System**—The firestop system shall consist of the following:
   A. **Packing Material**—Min 2-1/2 in. thickness of 3 pcf mineral wool batt insulation firmly packed between framed opening and steel duct as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Material*—Sealant**—In 2 hr fire rated assemblies, min 1-1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. In 1 hr fire rated assemblies, min 5/8 in. thickness of fill material applied within the annulus on both surfaces of wall.
      Specified Technologies Inc.—SpecSeal 100, 101,102 or 155 Sealant; LC 150, 151, 157 or 155 Sealant and Pensil 300 Sealant
   C. **Steel Retaining Angles**—Min 2 by 2 by 0.030 in. (No. 22 gauge) steel angles cut to fit the contour of the steel duct with a 1 in. lap on both surfaces of wall. Angles secured to steel duct with min No. 8 by 3/4 in. long steel sheet metal screws spaced a max 4 in. OC.

*Bearing the UL Classification Marking

System No. W-L-7019
F Rating—1 Hr
T Rating—1 Hr



SECTION A-A

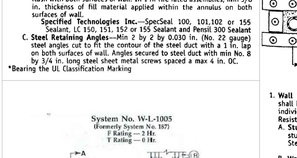
1. **Wall Assembly**—The 1 and 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. The opening in the wall to accommodate the steel duct (Item 2) shall be framed on all sides using lengths of steel studs installed between the vertical studs and attached to the studs at each end. The framed opening in the wall shall be a min 1-1/4 in. to a max 3 in. wider and higher than the width and height of the steel duct. Where steel studs are used and the width of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be a min 1-1/4 in. wider and 4 in. higher than the dimensions of the steel duct such that, when the penetrating item is installed in the opening, a max 2 in. clearance is present between the steel duct and the framing in all four sides.
   B. **Wallboard, Gypsum***—5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design In the UL Fire Resistance Directory. Max area of opening is 188 sq in. with max dimensions of 12 in. for wood studs. Max area of opening is 325 sq in. with max dimensions of 25 in. for steel studs.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. **Steel Duct**—Nom 24 by 12 in. (or smaller) No. 24 gauge (or heavier) steel duct to be installed vertically or horizontally within the firestop system. The annular space between the steel duct and the periphery of the framed opening shall be a min 1/4 in. to a max 3 in. The steel duct to be rigidly supported on both sides of wall assembly. The max dimensions of the steel duct is dependent upon the hourly rating of the wall and type of stud used as tabulated below.

Fire Rating Of Wall Hr	Type Of Stud	Max Dimension Of Steel Duct
1	Steel	24 in. by 12 in.
2	Steel	12 in. by 12 in.
1	Wood	12 in. by 12 in.
2	Wood	12 in. by 12 in.

3. **Firestop System**—The firestop system shall consist of the following:
   A. **Packing Material**—Min 2-1/2 in. thickness of 3 pcf mineral wool batt insulation firmly packed between framed opening and steel duct as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Material*—Sealant**—In 2 hr fire rated assemblies, min 1-1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. In 1 hr fire rated assemblies, min 5/8 in. thickness of fill material applied within the annulus on both surfaces of wall.
      Specified Technologies Inc.—SpecSeal 100, 101,102 or 155 Sealant; LC 150, 151, 157 or 155 Sealant and Pensil 300 Sealant
   C. **Steel Retaining Angles**—Min 2 by 2 by 0.030 in. (No. 22 gauge) steel angles cut to fit the contour of the steel duct with a 1 in. lap on both surfaces of wall. Angles secured to steel duct with min No. 8 by 3/4 in. long steel sheet metal screws spaced a max 4 in. OC.

*Bearing the UL Classification Marking

System No. W-L-1005
(Formerly System No. 107)
F Rating — 2 Hr
T Rating — 0 Hr

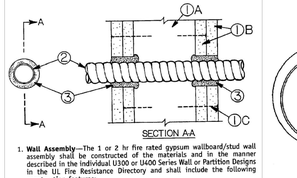


SECTION A-A

1. **Wall Assembly** — The 1 and 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**— Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.
   B. **Gypsum Board*** — Two layers of nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 6 in.
2. **Through Penetrant** — One metallic pipe or conduit to be centered within the firestop system. Pipe or conduit to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipe or conduit may be used:
   A. Steel Pipe— Nom 6 in. diam (or smaller) Schedule 5 (or heavier) steel pipe. A nom annular space of 3/4 in. is required within the firestop system.
   B. Conduit — Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit. A nom annular space of 3/4 in. is required within the firestop system.
3. Firestop System — The firestop system shall consist of the following:
   A. **Packing Material** — Min 4 in. thickness of 6 pcf ceramic fiber insulation firmly packed into opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Material*** — Sealant — Min 1/2 in. thick fire-resistive caulk applied within the annulus on both surfaces of wall. Caulk fill material to be installed such that a min 1/4 in. fillet is formed around the penetrating item.
      3M Fire Protection Products—Fire Barrier Caulk and Wrap Strip
      Tremco, Inc.—Tremco Fyre-Sil Sealant or Fyre-Sil S/L Sealant (for floor assemblies only)
   C. **Duct Wrap Materials*** — Nom 1-1/2 in. thick, 6 pcf ceramic blanket totally encapsulated within foil-scrim facers. The steel duct shall be wrapped with one layer of duct wrap installed in accordance with the manufacturer's installation instructions, maintaining min 3 in. transverse and longitudinal overlaps. The duct wrap shall be tightly butted to the floor or both surfaces of the wall. All cut edges and ends shall be sealed with 3 in. wide pressure sensitive aluminum foil tape. Duct wrap secured to steel duct with min No. 8 by 3/4 in. long stainless steel sheet metal screws spaced a max 12 in. OC and 1-1/2 in. from transverse joints of duct wrap.
      THERMAL CERAMICS INC—FireMaster Duct Wrap or FireMaster Duct Wrap+
      Tremco, Inc.—Tremco Fyre-Sil Sealant or Fyre-Sil S/L Sealant (for floor assemblies only)

*Bearing the UL Classification Mark

System No. W-L-1017
(Formerly System No. 328)
F Ratings—1 and 2 Hr (See Item 3)
T Rating—0 Hr
L Rating At Ambient—less than 1 CFM/sq ft
L Rating At 400 F—less than 1 CFM/sq ft

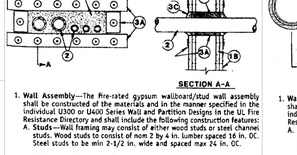


SECTION A-A

1. **Wall Assembly**—The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.
   B. **Wallboard, Gypsum***—Nom 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers and sheet orientation shall be as specified in the individual Wall and Partition Design. Diam of cut-out through-opening cut through gypsum wallboard on each side of wall assembly to be min 0 in. (point contact) to max 1 in. larger than outside diam of flexible metal conduit (Item 2) installed in through opening. Side edge of circular opening to be min 3 in. from nearest stud in wall cavity.
   C. **Fasteners**—When wood stud framing is employed, gypsum wallboard attached to studs with cement coated nails as specified in the individual Wall or Partition Design. When steel channel stud framing is employed, gypsum wallboard attached to studs with Type S self-drilling, self-tapping bugle-head steel screws as specified in the individual Wall or Partition Design.
2. **Through Penetrating Product***—Flexible Metal Conduit—Nom 4 in. diam (or smaller) aluminum or steel **Flexible Metal Conduits***. Max one flexible metal conduit to be installed near center of circular opening in gypsum wallboard. Flexible metal conduit to be rigidly supported on both sides of wall assembly.
   AFC Cable Systems, Inc.
3. **Fill, Void or Cavity Material*—Caulk**—Caulk fill material forced into annular space around entire circumference of through penetrating product to completely fill opening in gypsum wallboard layers on each side of the wall assembly. A min 5/8 in. thickness of caulk is required for the 1 hr F Rating. A min 1-1/4 in. thickness of caulk is required for the 2 hr F Rating.
   Minnesota Mining & Mfg. Co.—CP 25WB+

*Bearing the UL Classification Marking

System No. W-L-1020
(Formerly System No. 375)
F Rating—1 Hr
T Rating—1/2 Hr



SECTION A-A

1. **Wall Assembly**—The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
   B. **Wallboard, Gypsum***—One layer of nom 5/8 in. thick gypsum wallboard as specified in the Individual Wall and Partition Design. Max diam of opening is 4-3/4 in.
2. **Through Penetrants**—One metallic pipe, conduit or tubing to be installed within the firestop system. The space between pipe, conduit or tubing and periphery of opening shall be a min 1/4 in. to a max 3/8 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. **Steel Pipe**—Nom 4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
   B. **Iron Pipe**—Nom 4 in. diam (or smaller) cast or ductile iron pipe.
   C. **Conduit**—Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
   D. **Copper Tubing**—Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
   E. **Copper Pipe**—Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.
3. **Fill, Void or Cavity Material*—Caulk**—Min 1/2 in. thickness of fill material applied within the annulus on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the penetrating items.
   Tremco, Inc.—Fyre Shield or Fyre Sil Sealant.

*Bearing the UL Classification Marking

System No. W-L-1080
F Rating—1 Hr
T Rating—0 Hr
L Rating At Ambient—Less Than 1 CFM/sq ft
L Rating At 400 F—Less Than 1 CFM/sq ft

SECTION A-A

1. **Wall Assembly**—The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
   B. **Wallboard, Gypsum***—One layer of nom 5/8 in. thick gypsum wallboard, as specified in the Individual Wall and Partition Design. Max area of opening is 35.75 sq in. with max dimension of 11 in.
2. **Through Penetrants**—A max of three pipes or conduits to be installed within opening. Of the five through penetrants, only two of the pipes or conduits can have a nom diameter greater than 1 in. The annular space between pipes or conduits shall be 1/2 in. The annular space between pipes or conduits and periphery of opening shall be min 1/4 in. to max 3/4 in. Pipe or conduit to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or conduits may be used:
   A. **Steel Pipe**—Nom 2 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
   B. **Conduit**—Nom 2 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
3. **Firestop System**—The firestop system shall consist of the following:
   A. **Packing Material**—Min 1/2 in. thickness of ceramic fiber insulation as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Material*—Caulk**—Min 1/2 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the penetrating items.
      Tremco, Inc.—Fyre Shield or Fyre Sil Sealant.

*Bearing the UL Classification Marking

System No. W-L-7021
F Rating—1 Hr
T Rating—0 Hr

SECTION A-A

1. **Wall Assembly**—The 1 or 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. Additional studs shall be used to completely frame opening.
   B. **Wallboard, Gypsum***—One layer of nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 17 in.
2. **Steel Duct**—Nom 16 in. (or smaller) No. 22 gauge (or heavier) steel duct to be installed either concentrically or eccentrically within the firestop system. The annular space between the steel duct and the periphery of the framed opening shall be a min 1/4 in. to a max 3 in. The steel duct to be rigidly supported on both sides of wall assembly. The max dimensions of the steel duct is dependent upon the hourly rating of the wall and type of stud used as tabulated below.

Fire Rating Of Wall Hr	Type Of Stud	Max Dimension Of Steel Duct
1	Steel	24 in. by 12 in.
2	Steel	12 in. by 12 in.
1	Wood	12 in. by 12 in.
2	Wood	12 in. by 12 in.

3. **Firestop System**—The firestop system shall consist of the following:
   A. **Packing Material**—Min 2-1/2 in. thickness of 3 pcf mineral wool batt insulation firmly packed between framed opening and steel duct as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Material*—Sealant**—In 2 hr fire rated assemblies, min 1-1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. In 1 hr fire rated assemblies, min 5/8 in. thickness of fill material applied within the annulus on both surfaces of wall.
      Specified Technologies Inc.—SpecSeal 100, 101,102 or 155 Sealant; LC 150, 151, 157 or 155 Sealant and Pensil 300 Sealant
   C. **Steel Retaining Angles**—Min 2 by 2 by 0.030 in. (No. 22 gauge) steel angles cut to fit the contour of the steel duct with a 1 in. lap on both surfaces of wall. Angles secured to steel duct with min No. 8 by 3/4 in. long steel sheet metal screws spaced a max 4 in. OC.

*Bearing the UL Classification Marking

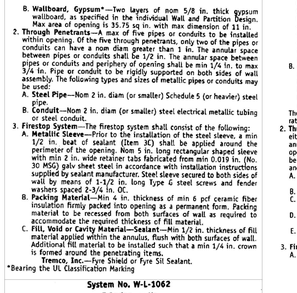
System No. W-L-1089
F Ratings—1 and 2 Hr (See Item 1)
T Rating—0 Hr

SECTION A-A

1. **Wall Assembly**—The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
   B. **Wallboard, Gypsum***—One layer of nom 5/8 in. thick gypsum wallboard as specified in the Individual Wall and Partition Design. Max diam of opening is 4-3/4 in.
2. **Through Penetrants**—One metallic pipe, conduit or tubing to be installed within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be a min 1/4 in. to a max 3/8 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. **Steel Pipe**—Nom 4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
   B. **Iron Pipe**—Nom 4 in. diam (or smaller) cast or ductile iron pipe.
   C. **Conduit**—Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
   D. **Copper Tubing**—Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
   E. **Copper Pipe**—Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.
3. **Fill, Void or Cavity Material*—Caulk**—Min 1/2 in. thickness of fill material applied within the annulus on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the penetrating items.
   Tremco, Inc.—Fyre Shield or Fyre Sil Sealant.

*Bearing the UL Classification Marking

System No. W-L-1100
F Rating—1 Hr
T Rating—0 Hr
L Rating At Ambient—Less Than 1 CFM/sq ft
L Rating At 400 F—Less Than 1 CFM/sq ft



SECTION A-A

1. **Wall Assembly**—The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
   B. **Wallboard, Gypsum***—One layer of nom 5/8 in. thick gypsum wallboard as specified in the Individual Wall and Partition Design. Max area of opening is 48 sq in. with max dimension of 12 in.
2. **Through Penetrants**—One metallic pipe, conduit or tubing to be installed within the firestop system. The space between pipe, conduit or tubing and periphery of opening shall be a min 1/4 in. to a max 3/8 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. **Steel Pipe**—Nom 4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
   B. **Iron Pipe**—Nom 4 in. diam (or smaller) cast or ductile iron pipe.
   C. **Conduit**—Nom 4 in. diam (or smaller) electrical metallic tubing or steel conduit.
   D. **Copper Tubing**—Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
   E. **Copper Pipe**—Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.
3. **Fill, Void or Cavity Material*—Caulk**—Min 1/2 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the penetrating items.
   Tremco, Inc.—Fyre Shield or Fyre Sil Sealant.

*Bearing the UL Classification Marking

System No. W-L-1101
F Rating—1 Hr
T Rating—0 Hr
L Rating At Ambient—Less Than 1 CFM/sq ft
L Rating At 400 F—Less Than 1 CFM/sq ft

SECTION A-A

1. **Wall Assembly**—The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
   B. **Wallboard, Gypsum***—One layer of nom 5/8 in. thick gypsum wallboard as specified in the Individual Wall and Partition Design. Max area of opening is 48 sq in. with max dimension of 12 in.
2. **Through Penetrants**—A max of three pipes or conduits to be installed within opening. Of the five through penetrants, only two of the pipes or conduits can have a nom diameter greater than 1 in. The annular space between pipes or conduits shall be 1/2 in. The annular space between pipes or conduits and periphery of opening shall be min 1/4 in. to max 3/4 in. Pipe or conduit to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or conduits may be used:
   A. **Steel Pipe**—Nom 2 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
   B. **Conduit**—Nom 2 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
3. **Firestop System**—The firestop system shall consist of the following:
   A. **Packing Material**—Min 2-1/2 in. thickness of 3 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Material*—Sealant**—In 2 hr fire-rated assemblies, 1/4 in. thickness of fill material applied within the annulus on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. fillet is formed around the penetrating item and lapping a min 1/4 in. beyond the periphery of the opening. In 1 hr fire-rated assemblies, a min 1/4 in. thickness of caulk is required around the penetrating item and lapping a min 1/2 in. beyond the periphery of the opening on both surfaces of wall.

*Bearing the UL Classification Marking

System No. W-L-1102
F Rating—2 & 3 Hr (See Item 1)
T Rating—0 Hr

SECTION A-A

1. **Floor or Wall Assembly**—Min 2-1/2 in. thick or more lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL **Classified Concrete Blocks***. The **F Rating is 2 hr and 3 hr for min 2-1/2 in. or min 4-1/2 in. thick assemblies.** Max area of opening is 576 sq in. with max dimension of 36 in. for 2 hr assemblies and 544 sq in. with max dimension of 34 in. for 3 hr assemblies.
   See **Concrete Blocks (CAZT)** category in the Fire Resistance Directory for names of manufacturers.
2. **Through-Penetrants**—One steel duct to be installed either concentrically or eccentrically within the firestop system. An annular space of min 0 in. (point contact) to max 4 in. is required within the firestop system for 3 hr assemblies. Steel duct to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of steel ducts may be used:
   A. **Steel Duct**—Nom 32 in. by 14 (or smaller) No. 22 gauge (or heavier) galv steel duct.
   B. **Steel Duct**—Nom 30 in. by 12 (or smaller) No. 24 gauge (or heavier) galv steel duct.
3. **Firestop System**—The firestop system shall consist of the following:
   A. **Packing Material**—Nom 1 in. thickness of tightly packed mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of caulk fill material.
   B. **Fill, Void or Cavity Material*—Caulk**—Min 1/2 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the penetrating item.
      Minnesota Mining & Mfg. Co.—Types FB-2000, FB-2000+.

*Bearing the UL Classification Marking

System No. W-L-5032
F Rating—2 Hr
T Rating—1 or 2 Hr (See Items 3 and 3A)

SECTION A-A

1. **Wall Assembly**—Min 6 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 11 in.
   See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. **Through Penetrants**—One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The annular space between pipe, conduit or tubing and periphery of opening shall be as specified in the individual Wall and Partition Designs. Diam of cut-out through-opening cut through gypsum wallboard on each side of wall assembly to be min 0 in. (point contact) to max 1 in. larger than outside diam of flexible metal conduit (Item 2) installed in through opening. Side edge of circular opening to be min 3 in. from nearest stud in wall cavity.
3. **Flexible Metal Conduit***—Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
   Specified Technologies Inc.—Pensil 100 Caulk.
4. **Fill, Void or Cavity Material*—Caulk**—Min 1/2 in. thickness of fill material applied within the annulus on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the penetrating item.
   Minnesota Mining & Mfg. Co.—Types FB-2000, FB-2000+.

*Bearing the UL Classification Marking

System No. W-J-3007
(Formerly System No. 257)
F Rating—2 Hr
T Ratings—0, 1/4 and 2 Hr (See Item 3C)

SECTION A-A

1. **Wall Assembly**—The 1 or 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. Additional studs shall be used to completely frame opening.
   B. **Wallboard, Gypsum***—One layer of nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 17 in.
2. **Steel Duct**—Nom 16 in. (or smaller) No. 22 gauge (or heavier) steel duct to be installed either concentrically or eccentrically within the firestop system. The annular space between the steel duct and the periphery of the framed opening shall be a min 1/4 in. to a max 3 in. The steel duct to be rigidly supported on both sides of wall assembly. The max dimensions of the steel duct is dependent upon the hourly rating of the wall and type of stud used as tabulated below.

Fire Rating Of Wall Hr	Type Of Stud	Max Dimension Of Steel Duct
1	Steel	24 in. by 12 in.
2	Steel	12 in. by 12 in.
1	Wood	12 in. by 12 in.
2	Wood	12 in. by 12 in.

3. **Firestop System**—The firestop system shall consist of the following:
   A. **Packing Material**—Min 2-1/2 in. thickness of 3 pcf mineral wool batt insulation firmly packed between framed opening and steel duct as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Material*—Sealant**—In 2 hr fire rated assemblies, min 1-1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. In 1 hr fire rated assemblies, min 5/8 in. thickness of fill material applied within the annulus on both surfaces of wall.
      Specified Technologies Inc.—SpecSeal 100, 101,102 or 155 Sealant; LC 150, 151, 157 or 155 Sealant and Pensil 300 Sealant
   C. **Steel Retaining Angles**—Min 2 by 2 by 0.030 in. (No. 22 gauge) steel angles cut to fit the contour of the steel duct with a 1 in. lap on both surfaces of wall. Angles secured to steel duct with min No. 8 by 3/4 in. long steel sheet metal screws spaced a max 4 in. OC.

*Bearing the UL Classification Marking

System No. W-L-1080
F Rating—1 Hr
T Rating—0 Hr
L Rating At Ambient—Less Than 1 CFM/sq ft
L Rating At 400 F—Less Than 1 CFM/sq ft

SECTION A-A

1. **Wall Assembly**—The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**—Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
   B. **Wallboard, Gypsum***—One layer of nom 5/8 in. thick gypsum wallboard as specified in the Individual Wall and Partition Design. Max area of opening is 48 sq in. with max dimension of 12 in.
2. **Through Penetrants**—One metallic pipe, conduit or tubing to be installed within the firestop system. The ann

BXUV.P522

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

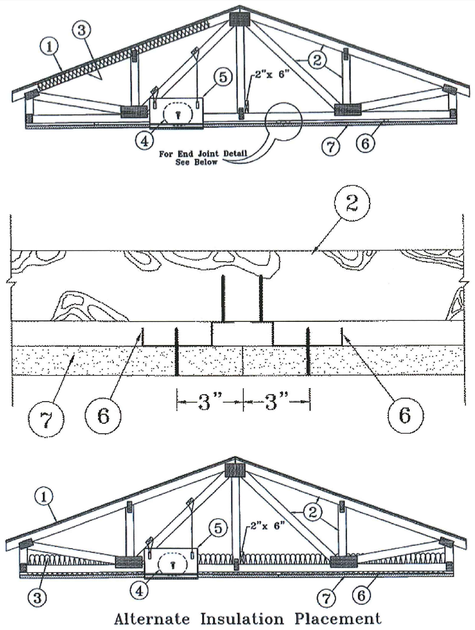
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. P522

May 22, 2021

Unrestrained Assembly Rating — 1 Hr
Finish Rating — 25 Min (See Items 3 or 3A)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



Alternate Insulation Placement

1. **Roofing System* —** Any UL Class A, B or C Roofing System (TGFU) or Prepared Roof Covering (TFWZ) acceptable for use over nom 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Nom 15/32 in. thick wood structural panels secured to trusses with No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Construction adhesive may be used with either the nails or staples.

2. **Trusses —** Pitched or parallel chord wood trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Truss members secured together with min. 0.0356 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width. Minimum parallel chord truss depth shall be 18 in. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 5-1/4 in. with a min roof slope of 3/12 and a min. area in the plane of the truss of 21 sq/ft. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in. if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate Insulation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing.

3. **Batts and Blankets* —** (Optional) — Required when Item 6B is used — Glass fiber insulation, secured to the wood structural panels with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. When **Steel Framing Members** (Item 6B) are used, max 3-1/2 in. thick insulation shall be draped over the furring channels (Item 6Ba) and gypsum board ceiling membrane, and friction-fitted between trusses and Steel Framing Members (Item 6Bd). The finished rating has only been determined when the insulation is secured to the decking.

3A. **Fiber, Sprayed* —** As an alternate to Item 3 (not evaluated for use with Item 6B) — Any thickness of spray-applied cellulose insulation material, having a min density of 0.5 lb/ft^3, applied with water, over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Fiber, Sprayed is applied with moisture in accordance with the application instructions supplied with the product. The finish rating when Fiber Sprayed is used has not been determined. Alternate application method: The fiber is applied without water or adhesive in accordance with the application instructions supplied with a minimum density of 0.5 lb/ft^3 over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Alternate application method: The fiber is applied without water or adhesive to a nominal density of 3.5 lb/ft^3 behind netting (Item 9) stapled to the rafters. The netting is stapled at both lower edges of the rafters creating a cavity to accept the cellulose fiber.
U S GREENFIBER L L C — INS735, INS745, INS750LD, and SANCTUARY for use with wet or dry application. INSS510LD, INSS515LD, INSS441LD, INS735, INS765LD, and INS773LD are to be used for dry application only.

3B. **Foamed Plastic* —** (As an alternate to Item 3 or 3A, Not Shown) — Spray foam insulation applied directly to the underside of the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft^3 density, while maintaining a minimum 8-1/2 in. clearance between the spray foam insulation and the gypsum board (Item 7). When spray foam insulation is used, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) installed at 6 in. OC to allow for maximum 3 in. spacing off ends of the gypsum board joints. Gypsum board (Item 7) to be installed using 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5K) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Not evaluated for use with Items 6A through 6F.
SES FOAM INC — Sucrasеal

3C. **Cavity Insulation - Batts and Blankets* or Fiber, Sprayed* —** (As described above) in Items 3 and 3A — (For Use with Item 7B, Not Shown) — Min. 3-1/2 in thick with no limit on maximum thickness fitted in the concealed space, draped over the resilient channel (Item 6G)/gypsum board (Item 7B) ceiling membrane.

3D. **Foamed Plastic* —** (As alternate to Item 3, 3A, or 3B, Not Shown) — Spray foam insulation applied directly to the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft^3 or 2.0 lb/ft^3 density, depending on the product installed. When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) spaced maximum 3 in. away from gypsum butt joints. Gypsum board (Item 7) to be installed using minimum 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5H) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Not evaluated for use with Items 6A through 6F.

BASF CORP — Enerfite® NM, Enerfite® G, FE178®, Spraytite® 178, Spraytite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, and Walltite® HP+

3E. **Foamed Plastic* —** (As an alternate to Item 3, 3A, 3B, 3C, or 3D, Not Shown) — Spray foam insulation applied directly to the underside of the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 17 in. at a nominal 0.5 lb/ft^3 density, while maintaining a minimum 1-1/2 in. clearance between the spray foam insulation and the gypsum board (Item 7). When spray foam insulation is used, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) installed at 6 in. OC to allow for maximum 3 in. spacing off ends of the gypsum board joints. Gypsum board (Item 7) to be installed using 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5K) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Not evaluated for use with Items 6A through 6F.
SES FOAM INC — EasySeal.5

3F. **Foamed Plastic* —** (As alternate to Item 3 - not to be used in combination with any alternates to item 3) — Spray foam insulation applied directly to the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 11 in. at a nominal 1.0 lb/ft^3 - 2.5 lb/ft^3 density, while maintaining a minimum 7 in. clearance between the spray foam insulation and the gypsum board (Item 7). When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board spaced maximum 3 in. away from gypsum butt joints. Gypsum board to be installed using minimum 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5K) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Only for use with Item 6 not evaluated for use with alternates to item 6.
CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.

4. **Air Duct* —** Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.

5. **Ceiling Damper* —** Max nom area, 324 sq in. Max square size, 18 in. by 18 in. rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max damper height is 14 in. Installed in accordance with manufacturers installation instructions provided with the damper. Max damper openings not to exceed 162 sq in. per 100 sq ft of ceiling area.
C&S AIR PRODUCTS — Model RD-521

POTTORFF — Model CFD-521

5A. **Alternate Ceiling Damper* —** Max nom area, 196 sq in. Max square size, 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max overall damper height is 7 in. Installed in accordance with the manufacturers installation instructions provided with the damper. Max damper openings not to exceed 98 sq in. per 100 sq ft of ceiling area.
C&S AIR PRODUCTS — Model RD-521-BT

POTTORFF — Model CFD-521-BT.

5B. **Alternate Ceiling Damper* —** Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-IP, RD-521-NP

POTTORFF — Models CFD-521-IP, CFD-521-NP

5C. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 75 sq in. with the length not to exceed 8-9/16 in. and the width not to exceed 8-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 38 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in

6. **Furring Channels —** Resilient channels formed of 25 MSG thick galv steel. Installed perpendicular to the trusses (Item 2), spaced a max of 16 in. OC when no insulation (Item 3 or 3A) is fitted in the concealed spaced, or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane, or when insulation (Item 3B, 3D or 3E) is applied to the underside of the roofing system (Item 1). Two courses of resilient channel positioned 6 in. OC at wallboard butt-joints (3 in. from each end of wallboard). Channels oriented opposite at wallboard butt-joints. Channel splices overlapped 4 in. beneath wood trusses. Channels secured to each truss with 1-1/4 in. long Type S screws.

6A. **Steel Framing Members* —** (Not Shown) — As an alternate to Item 6, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to trusses when no insulation (Items 3 or 3A) is fitted in the concealed space or 12 in. OC when insulation (Items 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane or 24 in. OC when insulation (Items 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane and a second layer of gypsum board is attached as described in Item 7 for steel framing members. Channels secured to trusses as described in Item 6Ab. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item 6Aa. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

6B. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6 and 6A.
a. **Furring Channels —** Hat-shaped furring channels, 7/8 in. deep by 2-5/8 in. wide at the base and 1-1/4 in. wide at the face, formed from No. 25 ga. galv steel, spaced max 16 in. OC perpendicular to trusses and Cold Rolled Channels (Item 6Bb). Furring channels secured to Cold Rolled Channels at every intersection with a 1/2 in. pan head self-drilling screw through each furring channel leg. Ends of adjoining channels overlapped 4 in. and tied together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap. Supplemental furring channels at base layer and outer layer gypsum board butt joints are not required. Batts and Blankets draped over furring channels as described in Item 3. Two layers of gypsum board attached to furring channels as described in Item 7.

b. **Cold Rolled Channels —** 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Bd). Adjoining lengths of cold rolled channels lapped min. 6 in. and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 6 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the truss (Item 2) at the top and bottom of the blocking at each Steel Framing Member (Item 6Bd) location.

d. **Steel Framing Members* —** Hangers spaced 48 in. OC. max along truss, and secured to the Blocking (Item 6Bc) on alternating trusses with a single 5/16 in. by 2 in. hex head lag bolt or four #6 1-1/4 in. drywall screws through mounting hole(s) on the hanger bracket. The two 1/4 in. long steel teeth on the hanger are embedded in the side of the blocking. Hanger positioned on blocking and leveling bolt height adjusted such that furring channels are flush with bottom of trusses before gypsum board installation. Spring gauge of hanger chosen per manufacturer's instructions.
KINETICS NOISE CONTROL INC — Type ICW.

6C. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6, 6A and 6B.
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep installed perpendicular to wood structural members. Channels spaced a max of 16 in. OC when no insulation (Item 3 or 3A) is fitted in the concealed space or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space. Channels secured to trusses as described in Item 6Cb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ca) to trusses (Item 2). Clips secured to the bottom chord of each truss (48 in. OC) with one No. 8 by 2-1/2 in. long coarse drywall screw through center grommet. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item 6Ca. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.
PLITEQ INC — Type Genie Clip

6D. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6, 6A, 6B and 6C.
a. **Main runners —** Installed perpendicular to trusses — Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft OC. Main runners hung a min of 2 in. from bottom chord of trusses with 12 SWG galv steel wire. Wires located a max of 48 in. OC.

b. **Cross tees or channels —** Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used at 8 in. from each side of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.

c. **Wall angles or channels —** Used to support steel framing member ends and for screw-attachment of the gypsum wallboard — Min 0.016 in. thick painted or galvanized steel angle with 1 in. legs or min. 0.016 in. thick painted or galvanized steel channel with a 1 by 1-1/2 by 1 in. profile, attached to walls at perimeter of ceiling with fasteners 16 in. OC.
CGC INC — Type DGL or RX

USG INTERIORS LLC — Type DGL or RX

6E. **Alternate Steel Framing Members* —** (Not Shown) — As an alternate to items 6, 6A, 6B, and 6C, furring channels and Steel Framing Members as described below.
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in deep, spaced 16 in OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to joists as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the trusses with one 2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the Gypsum Butt joints as described in Item 7.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

6F. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6 through 6E- Not for use with Items 3 or 3A. Main runners nom 12 ft long, spaced 72 in. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Cross tees, nom 6 ft long, installed perpendicular to main runners and spaced 24 in. OC. Additional 6 ft long cross tees required at each gypsum board end joint with butted gypsum board end joints centered between cross tees spaced 8 in. OC. The main runners and cross tees may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.
USG INTERIORS LLC — Type DGL or RX

6G. **Resilient Channels —** For Use With Item 7B - Formed from min 25 MSG galv steel installed perpendicular to trusses and spaced 16 in. OC. Channels secured to each truss with 1-5/8 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum panel end joint. Additional channels shall extend min 6 in. beyond each side edge of panel. Insulation, Item 3C is applied over the resilient channel/gypsum panel ceiling membrane.

6H. **Alternate Steel Framing Members* —** (Not Shown) — As an alternate to items 6 through 6G, furring channels and Steel Framing Members as described below.
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-1/2 in. wide by 7/8 in deep, spaced 16 in OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to joists as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the trusses with one 2-1/2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the Gypsum Butt joints as described in Item 7.
REGUPOL AMERICA — Type SonusClip

7. **Gypsum Board* —** One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to trusses. Attached to the resilient channels using 1 in. long Type S bugle-head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field when no insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane. When insulation (Item 3B, 3D or 3E) is installed in the concealed space, spray-applied to the underside of the roofing system (Item 1), screws are spaced a max of 8 in. OC along resilient channels, fasteners are increased in length to 1-1/4 in, and gypsum board butt joints shall be staggered min. 2 ft within the assembly, and occur between the main furring channels.
When **Steel Framing Members*** (Item 6A or 6C) are used, sheets installed with long dimension perpendicular to furring channels and side joints of sheet located beneath trusses. Gypsum board screws are driven through channel spaced 12 in. OC in the field when no insulation (Item 3 or 3A) is fitted in the concealed space, or 8 in. OC in the field when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane. Gypsum board butt joints shall be staggered min. 2 ft within the assembly, and occur between the main furring channels. At the gypsum board butt joints, each end of the gypsum board shall be supported by a single length of furring channel equal to the width of the wallboard plus 6 in. on each end. The furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to the trusses with one clip at each end of the channel. Screw spacing along the butt joint to attach the gypsum board to the furring channels shall be 8 in. OC. Second (outer) layer of gypsum board required when furring channels (Item 6A, a) are spaced 24 in. OC and insulation is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane. Outer layer of gypsum board attached to the furring channels using 1-5/8 in. long Type S bugle-head screws spaced 8 in. OC at butted joints and 12 in. OC in the field. Butted end joints of outer layer to be offset a minimum of 8 in. from base layer end joints. Butted side joints of outer layer to be offset minimum 18 in. from butted side joints of base layer.

When **Steel Framing Members** (Item 6B) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels (Item 6Ba). Base layer attached to the furring channels using 1 in. long Type S bugle head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the board. Butted end joints centered on the continuous furring channels. Butted base layer end joints to be offset a min of 16 in. in adjacent courses. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle head steel screws spaced 8 in. OC at butted end joints and 12 in. OC in the field. Butted end joints centered on the continuous furring channels and offset a min of 16 in. from butted end joints of base layer. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer.

When **Steel Framing Members** (Item 6C) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 72 in. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end, spaced approximately 2 in. in from joint. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Butt joint furring channels shall be attached with a RESILMOUNT Sound Isolation Clip secured to underside of every truss that is located over the butt joint. Over all Gypsum Board side joints, approximately 20 in. lengths of furring channel shall be installed parallel to trusses (Item 2) between main furring channels. Side joint furring channels shall be attached to underside of the joist with RESILMOUNT Sound Isolation Clips - located approximately 2 in. from each end of the approximate 20 in. length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

When **Steel Framing Members** (Item 6E) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from end joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel.

When alternate **Steel Framing Members*** (Item 6F) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board sheets installed with long dimension (side joints) perpendicular to the 6 ft long cross tees with the end joints staggered min 4 ft and centered between cross tees which are spaced 8 in. OC. Gypsum board side joints may occur beneath or between main runners. Prior to installation of the gypsum board sheets, backer strips consisting of nom 7-3/4 in. wide pieces of gypsum board are to be laid atop the cross tee flanges and centered over each butted end joint location. The backer strips are to be secured to the flanges of the cross tees at opposite corners of the backer strip with hold down clips to prevent the backer strips from being uplifted during screw-attachment of the gypsum board sheets. Gypsum board fastened to cross tees with 1 in. drywall screws spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the backer strip with No. 10 by 1-1/2 in. long Type G laminating screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board.

When **Steel Framing Members** (Item 6H) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one truss beyond the width of the gypsum panel and be attached to the adjacent trusses with one SonusClip at every truss involved with the butt joint.

CGC INC — Types C, IP-X2, IPC-AR

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

7A. **Gypsum Board* —** For use with Steel Framing Members (Item 6D) when Batts and Blankets* (Item 3) are not used - One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to the main runners. Gypsum board fastened to each cross tee or channel with five wallboard screws, with one screw located at the midspan of the cross tee or channel, one screw located 12 in. from and on each side of the cross tee or channel mid span and one screw located 1-1/2 in. from each gypsum board side joint. Except at wallboard end joints, wallboard screws shall be located on alternating sides of cross tee flange. At gypsum board end-joints, gypsum board screws shall be located 1/2 in. from the joint. Gypsum board fastened to main runners with wallboard screws 1/2 in. from side joints, midway between intersections with cross tees or channels (16 in. OC). End joints of adjacent gypsum board sheets shall be staggered not less than 32 in. Gypsum board sheets screw attached to leg of wall angle with wallboard screws spaced 12 in. OC. Joints treated as described in Item 7. For use with **Steel Framing Members*** (Item 6D) when **Batts and Blankets*** (Item 3) are used - Ratings limited to 1 Hour - 5/8 in. thick, 4 ft wide; installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Fastened to cross tees with 1 in. long steel gypsum board screws spaced 8 in. OC in the field and 8 in. OC along end joints. Fastened to main runners with 1 in. long gypsum board screws spaced midway between cross tees. Screws along sides and ends of boards spaced 3/8 to 1/2 in. from board edge. End joints of the sheets shall be staggered with spacing between joints on adjacent boards not less than 4 ft OC.
CGC INC — Type C or IP-X2

UNITED STATES GYPSUM CO — Type C or IP-X2

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Type C or IP-X2

7B. **Gypsum Board* —** For use with Items 3C and 6G. Nom 5/8 in. thick, 48 in. wide gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 8 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. Finish Rating with this ceiling system is 20 min.
CGC INC — Type ULIX

UNITED STATES GYPSUM CO — Type ULIX

8. **Finishing System —** (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board. **Alternate Ceiling Membrane** — Not Shown.

9. **Netting —** Fibrous, woven netting material fastened to underside of each joist with staples, with side joints overlapped.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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PROGRESS SET - NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

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ARCHITECTURE

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REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	UL

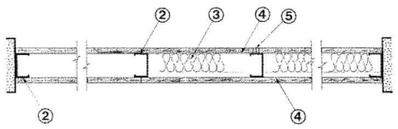
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C:\USERS\USER\MK ARCHITECTURE DROPBOX\MK DESIGN FILES\ACAD\DWGS\MK ARCH\MK25013-HABITAT TOWNHOUSES DIPLOMAT SOUTH\~COMMON\MK25013-A7-ULDWG \ April 25, 2025

Design No. U465

Nonbearing Wall Rating — 1 HR.



1. Floor and Ceiling Runners — (not shown) — Channel shaped runners, 3-5/8 in. wide (min), 1-1/4 in. legs, formed from min No. 25 MSG galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
2. Steel Studs — Channel shaped, 3-5/8 in. wide (min), 1-1/4 in. legs, 3/8 in. folded back returns, formed from min No. 25 MSG galv steel spaced 24 in. OC max.
3. Batts and Blankets* — (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity.
See Batts and Blankets (BZJZ) category for names of Classified companies.
3A. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 3) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft3. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft3.
U S GREENFIBER L L C — Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material)
3B. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 3) and Item 3A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation
4. Gypsum Board* — 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly. When attached to item 6 (resilient channels) or 6A (furring channels), wallboard is screw attached to furring channels with 1 in. long, Type S steel screws spaced 12 in. OC.
AMERICAN GYPSUM CO — Types AG-C, AGX-1
BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1.
CANADIAN GYPSUM COMPANY — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
CERTAINTEED GYPSUM INC —Types 1, EGRG, ProRoc Type X, ProRoc Type C.
CERTAINTEED GYPSUM CANADA INC — ProRoc Type C, ProRoc Type X or ProRoc Type Abuse-Resistant.
FEDERAL GYPSUM CO — PlasterRock
G-P GYPSUM CORP, SUB OF GEORGIA-PACIFIC CORP — Types 5, 9, C, DAP, DD, DA, DGG, DS, GPFS6.
LAFARGE NORTH AMERICA INC — Types LGFC2, LGFC2A, LGFC6, LGFC6A, LGFC-C, LGFC-C/A.
NATIONAL GYPSUM CO — Types FSK, FSK-C, FSK-G, FSW-C, FSW-G, FSW, FSW-3, FSW-5, FSW-6.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C, PG-11 or PG-9.
PANEL REY S A — Type PRX.
SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1
TEMPLE-INLAND FOREST PRODUCTS CORP — Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, TG-C, GreenGlas Type X.
UNITED STATES GYPSUM CO — Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
USG MEXICO S A DE C V — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

4A. Gypsum Board* — (As alternate to Item 4) - Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed. Panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. When used in widths other than 48 in., gypsum panels to be installed horizontally.
CANADIAN GYPSUM COMPANY — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
CERTAINTEED GYPSUM INC — ProRoc Type X, ProRoc Type C.
CERTAINTEED GYPSUM CANADA INC — ProRoc Type X, ProRoc Type C.
G-P GYPSUM CORP, SUB OF GEORGIA-PACIFIC CORP — Types DAP, DGG.
UNITED STATES GYPSUM CO — T ype AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
USG MEXICO S A DE C V — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
4B. Gypsum Board* — (As an alternate to Items 4 or 4A) — Nom 3/4 in. thick, 4 ft wide, installed as described in Item 4A with screw length increased to 1-1/4 in.
CANADIAN GYPSUM COMPANY — Types AR, IP-AR.
UNITED STATES GYPSUM CO — Types AR, IP-AR.
USG MEXICO S A DE C V — Types AR, IP-AR.
4C. Gypsum Board* — As an alternate to Items 4, 4A, and 4B - Nom. 5/8 in. thick gypsum panels, with square edges, applied horizontally. Gypsum panels fastened to framing with 1 in. long bugle head steel screws spaced a max 8 in. OC, with last 2 screws 3/4 in. and 4 in. from each edge of board. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs on interior walls need not be staggered.
TEMPLE-INLAND FOREST PRODUCTS CORP — GreenGlas Type X.
5. Joint Tape and Compound — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nominal 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges.

6A. Steel Framing Members (Not Shown)* — As an alternate to Item 3, furring channels and resilient sound isolation clip as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel.
b. Steel Framing Members* — Used to attach furring channels (Item a) to studs (Item 1). Clips spaced 48 in. OC., and secured to studs with 1-5/8 in. wafer or hex head Type S steel screw through the center grommet. Furring channels are friction fitted into clips.
PAC INTERNATIONAL INC — Type RSIC-1.
6B. Steel Framing Members* — Optional - Not Shown - Used as an alternate method to attach resilient channels (Item 6). Clips attached at each intersection of the resilient channel and the steel studs (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the wood stud with min. 1 in. long Type S-12 panhead steel screws through the center hole of the clip and the resilient channel flange.
KEENE BUILDING PRODUCTS CO INC — Type RC Assurance.
7. Wall and Partition Facings and Accessories* — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-510 panel is installed between the steel framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
QUIET SOLUTION INC — Type QuietRock QR-510.
*Bearing the UL Classification Mark

PROGRESS SET - NOT FOR CONSTRUCTION

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Contractors shall verify and be responsible for all dimensions and conditions of the job. MK Architecture, LLC shall be notified in writing of any variations or discrepancies from the dimensions, conditions and specifications shown by these drawings. All construction shall be in accordance with the current Florida Building Code.

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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MICHAEL K. SHEELEY
REG. # 0010564
STATE OF FLORIDA
MICHAEL K. SHEELEY
AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	UL

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STRUCTURAL SPECIFICATIONS

1: GENERAL REQUIREMENTS
CODE REQUIREMENTS - THE BUILDING STRUCTURE IS DESIGNED IN ACCORDANCE W/ THE SEVENTH EDITION (2020) OF THE FLORIDA BUILDING CODE. FOLLOW ALL APPLICABLE PROVISIONS FOR ALL PHASES OF CONSTRUCTION.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE IDENTICAL AND SHALL BE CONSTRUCTED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE IN THE WORK EXCEPT WHERE A DIFFERENT DETAIL IS SHOW.

THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES BETWEEN THE DRAWING AND EXISTING CONDITIONS TO THE DESIGNER PRIOR TO BIDDING AND AGAIN PRIOR TO COMMENCING WORK.

ALL BOLTS NUTS, WASHERS, STRAPS AND FASTENERS INCLUDING NAILS, SHALL BE HOT DIP GALV. CONT. ANCHORAGE SHALL BE PROVIDED BETWEEN ALL TRUSSES, WALL SECTIONS, BEAMS, POSTS, FOOTINGS W/ THE USE OF STRAPS AND CONNECTORS AS SPECIFIED HEREIN, EXCEPT FOR INT. FRAMING, UNLESS NOTED OTHERWISE.

IF ALUM. IS TO BE USED IN ANY AREAS ALL FASTENERS IN CONTACT SHALL BE ALUM. ALSO, OR A BARRIER SHALL BE PROVIDED TO PREVENT GALVANIC ACTION BETWEEN DISSIMILAR METALS.

ALL OPENINGS AND OPENING LOCATIONS ARE BASED IN NOMINAL MODULAR SIZES. DIMENSIONS MAY VARY DUE TO FURRING, BLOCKING, TRUSS ALIGNMENT, LOADING OR OTHER CONDITIONS NECESSARY TO COMPLETE CONSTRUCTION. DIMENSIONS MAY NOT BE IDENTICAL TO THE ACTUAL REQUIREMENT DUE TO THE MFGR. AND/OR SERIES THAT WAS SELECTED.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION W/ JOB SPECIFICATIONS AND ARCHITECTURAL , MECHANICAL, ELECTRICAL, PLUMBING AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR SLEEVES, DEPRESSIONS AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.

CONTRACTOR SHALL LOCATE ALL BURIED UTILITIES PRIOR TO EXCAVATION FOR BUILDING FOUNDATIONS. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF POTENTIAL CONFLICTS BETWEEN FOUNDATIONS AND BURIED UTILITIES.

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER BUILDING IS COMPLETE. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMP. BRACING, GUYS OR TIE DOWNS, AND SHALL BE REMOVED ONCE COMPLETE AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

2: FOUNDATIONS
FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2,500 P.S.F. ON COMPACTED FILL. BEFORE CONSTRUCTION COMMENCES, SOIL BEARING CAPACITY SHALL BE VERIFIED BY A SUBSURFACE GEOTECHNICAL INVESTIGATION, AS WELL AS FIELD AND LABORATORY TESTS PERFORMED BY A CERTIFIED TESTING LABORATORY, WHO'S REPORT SHALL INCLUDE ANALYSIS AND RECOMMENDATIONS FOR SITE PREPARATION IN ORDER TO BEAR THE FOUNDATION LOADS. ABOVE REPORT SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW BEFORE FOUNDATION CONSTRUCTION BEGINS.

ALL CONC. SLABS ON GRADE SHALL BE 4" THICK AND REINF. W/ 6X6 W1.4/1.4 W.W.M. OR FIBERMESH REINFORCING OVER VAPOR BARRIER AS SPECIFIED, U.N.O.

WHERE FIBERMESH REINFORCING IS USED CONC. MUST BE MIXED IN ACCORDANCE W/ MFGR'S RECOMMENDATIONS.

CENTER ALL FOOTINGS AND PIERS UNDER COLUMNS ABOVE, UNLESS SPECIFICALLY DIMENSIONED OTHERWISE.

PROVIDE TERMITE PROTECTION OVER WELL COMPACTED GRANULAR FILL (SEE ARCHITECTURAL OUTLINE SPECIFICATIONS)

ALL FOOTINGS TO EXTEND BELOW GRADE A MIN. OF 16" AT BEARING WALLS. INTERIOR BEARING FOOTINGS 6" INTO CONSTRUCTION FILL U.N.O.

FILL UNDER CONC. SLABS SHALL BE CLEAN SAND OR ROCK AND FREE OF DEBRIS AND OTHER DELETERIOUS MATERIAL. FILL SHALL BE COMPACTED TO A DENSITY OF AT LEAST 95% OF MODIFIED PROCTOR MAX. DRY DENSITY (A.S.T.M. D1557)

WELDED WIRE MESH SHALL CONFORM TO A.S.T.M.-A-185, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE W/ THE TYP. PLACE DETAILS OF A.C.I. STANDARDS AND SPECIFICATIONS. MIN. LAP SHALL BE ONE SPACE PLUS TWO (2) INCHES.

THE SIDES OF FOOTINGS MAY BE EARTH-FORMED IF THE EXCAVATION CAN BE KEPT VERT. CLEAN, AND STABLE, OTHERWISE, PLYWD. FORMS MUST BE USED.

3: SHOP DRAWING SUBMITTALS
SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT OR DIRECTLY TO THE ENGINEER PRIOR TO FABRICATION AND CONSTRUCTION REGARDING ALL STRUCTURAL ITEMS INCLUDING THE FOLLOWING.

CONC. MIX DESIGNS
CONC. AND MASONRY REINF.
PRE-ENGINEERED TRUSS DRAWINGS
PRE-CAST PLANK DRAWINGS
PRE-CAST STAIRS
CURTAIN WALLS
STEEL FABRICATION DRAWINGS
STEEL DETAIL DRAWINGS
STRUCTURAL STEEL CORROSION PROTECTION SPECIFICATION
OPEN WEB STEEL JOISTS
ITEMS CONSIDERED AS PART OF ASSEMBLY, I.E. WINDOWS ETC.
ANY OTHER PRE-CAST ITEMS.

DESIGN DRAWINGS, SHOP DRAWINGS AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS INCLUDING PRE-CAST CONC. MEMBERS, STRUCTURAL STEEL CONNECTIONS AND PRE-MANUFACTURED WOOD TRUSSES, SHALL BE THE RESPONSIBILITY OF A DELEGATE ENGINEER. AND SHALL BEAR THE SEAL AND SIGNATURE OF THE STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. AND SHALL BE BASED ON THE REQUIREMENTS OF THE F.B.C. THE ARCHITECT OR ENGINEER OF RECORD SHALL REVIEW THE CAPACITIES OF THE SHOP DRAWINGS DESIGN AGAINST THE STRUCTURAL LOADS AND MAKE CORRECTIONS AS REQUIRED. IF THE ENGINEER OF RECORD DOES SUPPLY THE STEEL TO STEEL CONNECTION DETAIL, THE DELEGATE ENGINEER SHALL STILL PRODUCE A SHOP DRAWINGS FOR REVIEW IF APPLICABLE.

IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO THE REVIEW AND ACCEPTANCE OF THE ENGINEER.

SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE W/ THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE W/ THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC. CONTRACTOR SHALL NOT BE REMOVED FROM THE RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS OR MIX DESIGNS BY THE ENGINEER'S REVIEW.

4: CAST-IN-PLACE
REINFORCED CONC. CONSTRUCTION SHALL CONFORM TO THE F.B.C. AND A.C.I. 318 'BUILDING CODE REQUIREMENTS FOR REINF. CONC.' CONC. STRENGTHS SHALL BE VERIFIED BY STANDARD 28 DAY CYLINDER TESTS PER A.S.T.M. C39 AND SHALL BE AS FOLLOWS:

FOUNDATIONS:
FC = 3,000 P.S.I.
BEAMS, COLUMNS, ALL OTHER ITEMS UNLESS OTHERWISE SPECIFIED:
FC = 4,000 P.S.I.

CEMENT SHALL CONFORM TO A.S.T.M. C150, TYPE 1. FLY ASH CONFORMING TO A.S.T.M. C618, FOR TYPE C, MAY BE USED TO REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C33 W/ A MAX. SIZE OF ¾". FINE AGGREGATE SHALL BE CLEAN, DURABLE, NATURAL SAND CONFORMING TO A.S.T.M. C33.

A WATER-REDUCING ADMIXTURE CONFORMING TO A.S.T.M. C494, USED IN STRICT ACCORDANCE W/ THE MFGR'S RECOMMENDATIONS, SHALL BE INCORPORATED IN CONC. DESIGN MIXES. A HIGH RANGE WATER-REDUCING ADMIXTURE CONFORMING TO A.S.T.M. C494, TYPE F OR G, MAY BE USED IN CONC. MIXES, PROVIDING THAT THE SLUMP DOES NOT EXCEED 8".

RESTRICT THE ADDITION OF MIX WATER AT THE JOB SITE. DO NOT ADD WATER W/O THE APPROVAL OF THE G.C. AND DO NOT EXCEED SLUMP LIMITATIONS OR TOTAL ALLOWABLE WATER TO CEMENT RATION. USE COLD WATER FROM THE TRUCK TANK AND REMIX TO ACHIEVE CONSISTENCY. THE REPORTS SHALL INDICATE HOW MUCH WATER WAS ADDED AT THE JOB SITE.

A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO PERFORM THE FOLLOWING CONCRETE TESTS ON SITE. ALL TESTS SHALL BE DONE AFTER THE ADDITION OF WATER TO THE MIX.
CYLINDER STRENGTH TESTS - A.S.T.N. C39; ONE SET OF FOUR CYLINDERS FOR EA. 50 CUBIC YARDS OR FRACTION THEREOF. TEST ONE CYLINDER @ 7 DAYS AND TWO @ 28 DAYS. HOLD THE FINAL CYLINDER IN RESERVE.
SLUMP TESTS - A.S.T.M. C143

ONE COPY OF ALL TEST REPORTS SHALL BE SENT DIRECTLY TO OWNER, ARCHITECT, STRUCTURAL ENGINEER AND G.C.

SLEEVES OPENINGS, CONDUIT AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE POURING. NO SLEEVE, OPENING, OR INSERT MAY BE PLACES IN BEAMS, JOISTS OR COLUMNS UNLESS APPROVED BY THE ENGINEER. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE THIRD OF THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAT THREE DIA. ON CENTERS.

PROVIDE ¾" CHAMFERS ON ALL EXPOSED CONC. EDGES, UNLESS NOTED OTHERWISE. WHERE INDICATED OR REQUIRED, SLOPE CONC. SLABS TO DRAINS SHOWN ON PLUMBING AND/OR ARCHITECTURAL DRAWINGS.

ALL CONC. SHALL BE CONSOLIDATED IN PLACE USING INTERNAL VIBRATORS AND CURED IMMEDIATELY AFTER FINISHING OPERATIONS.

UNDER SLAB VAPOR/MOISTURE BARRIER: STEGO 15 MIL. VAPOR BARRIER OR APPROVED EQUAL U.N.O.

CODES AND STANDARDS:
301 'SPEC FOR STRUCTURAL CONC. FOR BLDGS.'
305 'RECOMMENDED PRACTICE FOR NOT WEATHER CONCRETING.'
318 'BLDG. CODE REQUIREMENTS FOR REINF. CONC.'
315 'DETAILS AND DETAILING OF CONC. REINF.'

CONC. LAP SPLICE = 30 BAR DIA. U.N.O.

PROVIDE PROPERLY TIED SPACERS, CHAIRS, BOLSTERS, ETC. AS REQUIRED AND NECESSARY TO ASSEMBLE. PLACE AND SUPPORT ALL REINF. IN PLACE USE WIRE BAR TYPE SUPPORTS COMPLYING W/ C.R.S.I. RECOMMENDATIONS.

ALL SLABS SHALL BE POURED MONOLITHICALLY, EXCEPT FOR REQUIRED CONSTRUCTION JOINTS. PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL.

CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, SLEEVE AND SLAB RECESSES AS REQUIRED BY OTHER TRADES BEFORE CONC. IS PLACED.

SEE ARCHITECTURAL DRAWINGS FOR REQUIRED CONC. FINISHES.

U.N.O. SAW CUT CONSTRUCTION JOINTS ARE TO BE ¼" THE SLAB DEPTH AND SHOULD BE W/I 4 TO 12 HOURS AFTER FINISH. JOINT SPACING SHALL BE PER A.C.I. RECOMMENDATIONS UP TO A MAX. OF 15'.

A ¼" EXPANSION JOINT SHALL BE PROVIDED BETWEEN CONC. SLABS ADJOINING WALLS AND @ COLUMNS U.N.O.

SLOPE ALL BALCONIES, TERRACES AND WALKWAYS AWAY FROM THE BUILDING TO MAINTAIN POSITIVE DRAINAGE U.N.O. PROVIDE SLOPES IN SLABS WHERE FLOOR DRAINS ARE REQUIRED PER ARCHITECTURAL DRAWINGS.

5: WEATHER RESISTANCE
CONC. BALCONIES OR OTHER CONC. FLAT SURFACES EXPOSED TO THE WEATHER THROUGHOUT THE LIFE OF THE BLDG. SHALL BE TREATED W/ A CLEAR NONFLAMMABLE PENETRATING SEALER OF THE ALKYL-ALKOXY SILANE CLASSIFICATION, SUCH AS SONNEBORN PENETRATING SEALER 20, HYDROZO ENVIROSEAL 20 OR OTHER APPROVED WEATHER RESISTANCE SYSTEM. APPLICATION AND SURFACE PREPARATION SHALL BE IN ACCORDANCE W/ MFGR'S SPECIFICATIONS.

6: SHORING AND RE-SHORING
SHORING AND RE-SHORING SHALL CONFORM TO A.C.I. 347R-88. SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZ. MEMBERS BEFORE CONC. STRENGTH IS AT LEAST 70% OF DESIGN STRENGTH. AS DETERMINED BY FIELD CURE CYLINDERS. IN ADDITION, SHORING SHALL NOT BE REMOVED SOONER THAN RECOMMENDED BY A.C.I. 347R-88, SEC. 3.7.2.3. FORMWORK SHALL NOT BE REMOVED IN LESS THAN TEN (10) DAYS. ALL SHORING SHALL BE DESIGNED BY A DELEGATE ENGINEER AND REMOVAL OF SHORING SHALL BE CONDUCTED UNDER THEIR SUPERVISION.

7: REINFORCING STEEL
REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A615, GRADE 60, FOR DEFORMED BAR AND A.S.T.M. A185 FOR SMOOTH W.W.F. U.N.O. REINF. STEEL TO BE WELDED SHALL CONFORM TO A.S.T.M. A706. REINF. STEEL SHALL BE SECURELY TIED IN PLACE W/ #16 ANNEALED IRON WIRE.

ALL DETAILING AND ACCESSORIES SHALL CONFORM TO A.C.I. DETAILING MANUAL SP 66. PROVIDE CHAIRS, SPACERS, BOLSTERS AND ITEMS IN CONTACT W/ FORMS W/ HOT-DIP GALV. LEGS OR PLASTIC LEGS, ACCURATELY POSITION, SUPPORT AND SECURE REINF. AGAINST DISPLACEMENT BY FORMWORK CONSTRUCTION OR CONC. PLACEMENT OPERATIONS. 'WET-STICKING' OF REINF. IS PROHIBITED.

REQUEST CONC. COVER FOR REINF. STEEL U.N.O.
FOOTINGS 3" BOTTOM AND SIDES, 2" TOP
SLABS ¾"
COLUMNS 1½" TO TIES, 2" TOP
BEAMS 1½" TO STIRRUPS
WALLS 1½"

LAB SPLICE CONT. VERT. OR HORIZ. BARS IN CONC. MEMBERS IN ACCORDANCE W/ A.C.I. 318 LATEST EDITION, FOR CLASS 'B' TENSION LAP SPICES. DO NOT SPLICE CONT. TOP BARS IN BEAMS AT ENDS OF CLEAR SPANS. DO NOT SPLICE CONT. BOTTOM BARS IN BEAMS IN CLEAR SPANS BETWEEN SUPPORTS. SHOW ALL SPLICES ON SHOP DRAWINGS. SPLICE LOCATIONS AND METHODS SUBJECT TO APPROVAL OF STRUCTURAL ENGINEER.

AT SLAB RE-ENTRANT CORNERS, PROVIDE (2) #5X4'-0" DIAGONAL BARS. AT SLAB AND WALL OPENINGS PROVIDE A MIN. OF (2) #5 BARS ALL FOUR SIDES AND DIAGONALLY, EXTEND THESE BARS A LAP DISTANCE OR A MIN. OF 24" PAST THE OPENING OR HOOK BARS IF DISCONTINUOUS.

DOWEL ALL WALLS AND COLUMNS TO FOOTINGS W/ BAR SIZE AND SPACING TO MATCH VERT. REINF. UNLESS OTHERWISE SHOWN.

8: ADHESIVE ANCHORS
ADHESIVE ANCORS (EPOXY STYLE) SHALL HAVE THE I.C.C. E.S. OR I.A.P.M.O. U.E.S. EVALUATION REPORT INDICATE CONFORMANCE W/ CURRENT APPLICABLE I.C.C. E.S. ACCEPTANCE CRITERIA. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONC. HAVING A MIN. AGE OF 21 DAYS (A.C.I. 318-11 D.2.2.). ADHESIVE SHALL HAVE MAX. IN-SERVICE SHORT TERM TEMP. OF 150 F. AND MAX. IN-SERVICE LONG-TERM TEMP. OF 110 F. (A.C.I. 318-11 D.P.2.1), PRIOR TO INSTALLATION OF ADHESIVE ANCHORS IN HORIZ. OR UPWARDLY INCLINED ORIENTATIONS RESISTING SUSTAINED TENSION LOADS, INSTALLERS ARE REQUIRED TO BE CERTIFIED IN ACCORDANCE W/ THE A.C.I./C.R.S.I. ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM (A.C.I. 318-11 D.9.2.2) AND MUST BE CONT. INSPECTED (A.C.I. 318-11 D.9.2.4)

ACCEPTABLE ADHESIVE IN FOUNDATIONS, SLAB ON GRADE, COLUMNS AND WALLS ARE HIL TI HY-150 OR POWERS AC100+ GOLD OR SIMPSON AT-XP; IN BEAMS AND ELEVATED SLABS ARE HIL TI RE500 OR POWERS PRE1000+ OR SIMPSON SET-XP.

THREADED STUDS SHALL CONFORM TO A.S.T.M. A36 UNLESS NOTED OTHERWISE. PERMANENTLY EXPOSED STUDS SHALL BE STAINLESS STEEL NUTS AND WASHERS SHALL CONFORM TO SAME SPECIFICATIONS AS THE SUPPLIED ANCHOR RODS.

INSTALLATION SHALL BE IN CONFORMANCE W/ MFGR'S PRINTED LITERATURE. INSTALLATION SHALL ALSO INCLUDE BRUSHING AND CLEANING OF DRILLED HOLES W/ COMPRESSED AIR AS INSTRUCTED. INSTALLERS SHALL BE TRAINED BY THE MFGR'S REPRESENTATIVE. EMBEDMENT SHALL BE AS INDICATED ON THE STRUCTURAL DRAWINGS.

IDENTIFY POSITION OF REINF. STEEL AND OTHER EMBEDDED ITEMS PRIOR TO DRILLING HOLES FOR ANCHORS. EXERCISE CARE IN CORING OR DRILLING TO AVOID DAMAGING EXIST. REINF. OR EMBEDDED ITEMS. NOTIFY THE ENGINEER IF REINF. STEEL OR OTHER EMBEDDED ITEMS ARE ENCOUNTERED DURING DRILLING.

9: MASONRY
CONC. MASONRY UNITS SHALL BE A.S.T.M. C90-75, HOLLOW LOAD BEARING CONC. MASONRY UNITS, TYPE I, GRADE N-1, NORMAL WEIGHT.

MORTAR SHALL CONFORM TO A.S.T.M. C270 AND BE TYPE M OR S. SLUMP SHALL 8" TO 11".

PROVIDE DURO-O-WIRE AT 16" O.C. VERT. 9 GA. STEEL.

PROVIDE A FULL MORTAR BED ADJACENT TO GROUTED CELLS.

WHERE INDICATED ON THE DETAILS AND SEC. PROVIDE GRADE 60 REBAR IN FILLED CELLS. MAX. CELL SPACING SHALL NOT EXCEED 48" AT ANY TIME. SPACING SHOWN ON THE PLAN VIEW IS FOR ILLUSTRATION PURPOSES ONLY UNLESS SHOWN AT ADJACENT TO WALL OPENINGS.

GROUT SHALL BE 2,000 P.S.I. MIN. COMPRESSIVE STRENGTH AND MEET A.S.T.M. 476.

ALL CELLS CONTAINING VERT. BARS, BOND BEAMS AND ALL CELLS BELOW GRADE SHALL BE 48" UNLESS WITNESS HOLE OPENINGS ARE PROVIDED AT BOTTOM OF CELLS TO BE FILLED.

ALL WALLS SHALL BE 8" C.M.U. PARTIALLY REINF. MASONRY WALL W/ RUNNING BOND CONSTRUCTION W/ #5 @ 48" O.C. IN GROUT FILLED CELLS. ADD (1) #5 REINF. BAR EA. SIDE OF OPENINGS. IN OPENINGS EXCEEDING 8'-0" PROVIDE (1) #5 IN EA. OF (2) ADJACENT CELLS.

PROVIDE REINF. BARS AT CORNERS, INTERSECTIONS AND EA. SIDE OF OPENINGS. PROVIDE HOOKED DOWELS INTO FOOTINGS AND STRUCTURE ABOVE AND/OR BELOW TO PROVIDE CONTINUITY.

DO NOT PLACE CONDUITS, PIPES, ETC. IN CELLS W/ VERT. REINF. DO NOT RUN CONDUITS, PIPES, ETC. HORIZ. IN C.M.U. WALLS PARALLEL TO LENGTH OF WALL WHERE MASONRY WALLS ABUT CONC. COLUMNS TO BE PLACES PRIOR TO ERECTION OF MASONRY WALLS. PROVIDE DOVETAIL SLOTS BETWEEN COLUMN AND WALLS AND GROUT THE C.M.U. CELL CONTAINING THE DOVETAIL ANCHORS, OTHERWISE EXTEND C.M.U. HORIZ. JOINT REINF. THROUGH CONCRETE COLUMN.

IN THE EVENT A CONTRACTOR MISSES A FILLED CELL DOWEL OR HAS TO ADD ONE RETROACTIVELY THE CONTRACTOR SHALL DOWEL AND EPOXY THE MISSED REBAR A MIN. OF 12 BAR DIA. INTO THE EXIST. FOOTING AND INSTALL PER THE EPOXY SPECIFICATION PROVIDED HEREIN. THE DOWEL SHALL BE LONG ENOUGH TO PROVIDE THE REQUIRED EMBEDMENT AND THE REQUIRED LAP OF 48 BAR DIA. THEN BE SPLICED TO ANOTHER REBAR THAT IS CONT. TO THE TIE-BEAM ABOVE.

CONTROL JOINTS SHALL BE PROVIDED IN ALL CONC. MASONRY CONSTRUCTION AT LOCATIONS INDICATED ON THE ARCHITECTURAL DRAWINGS. HORIZ. WALL REINF. SHALL BE STOPPED EA. SIDE OF CONTROL JOINTS, SEE ARCHITECTURAL DRAWINGS FOR SEALANT REQUIREMENTS AT CONTROL JOINTS.

USE METAL LATH OR WIRE SCREEN FOR CAVITY CAPS. SHEET METAL, FELT, BLDG. PAPER OR LIKE MATERIALS ARE PROHIBITED.

10: TIE-BEAMS
TIE-BEAMS SHALL HAVE THE PREFIX DESIGNATION 'TB'. PROVIDE CAST-IN-PLACE CONT. TIE-BEAMS AROUND THE ENTIRE PERIMETER OF THE BLDG. U.N.O. SEE BEAM PLAN AND/OR SCH. FOR SIZE AND LOCATIONS.

TIE-BEAMS SHALL BE CONC. POURED AFTER THE BLOCK WALLS BELOW ARE IN PLACE. REINF. SHALL BE CONT. THROUGH TIE-BEAMS W/ MIN. LAP SPLICES OF 48 BAR DIA. AND BENT BARS AT CORNERS. USE METAL LATH, MORTAR OR SPECIAL UNITS TO CONFINE CONC. TO AREA REQUIRED, IN ACCORDANCE W/ A.C.I. 530.1 SEC. 3.5.B. SOLID MTL. OR FELT CAVITY CAPS ARE PROHIBITED.

11: PRE-CAST LINTELS
ALL LINTELS TO BE 'U' TYPE PRE-CAST CONC. UNITS EQUAL TO UNITS MFGR. BY CAST-CRETE CORP. AND PRE-STRESSED (AND ADDITIONALLY REINF. AS REQUIRED) IN ACCORDANCE W/ CAST-CRETE CORP. 'DESIGN MANUAL' LATEST EDITION, FOR THE SPAN LOADING CONDITION RELATIVE TO LINTEL LOCATION.

LINTEL SIZE IF NOT SHOWN ON THE PLANS SHALL BE 8F16-1B FOR OPENINGS LESS THAN 8 FEET AND 8F24-1B/1T FOR OPENINGS 8'-0" TO 12'-0". PROVIDE 8" MIN. BEARING FOR LINTELS UNLESS NOTED OTHERWISE.

12: WOOD FRAMING

ALL FRAMING SHALL BE SOUTHERN PINE #2 WITH THE ALLOWABLE FIBER STRESSES PER THE AWC NATIONAL DESIGN SPECIFICATION.

ALL FRAMING NAILS SHALL BE COMMON NAILS AND SHALL BE OF THE SIZE AND NUMBER INDICATED ON THE DRAWINGS. NAILING NOT SHOWN SHALL BE AS INDICATED IN TABLE 2304.9.1 OF THE FBC. BOLTS AND LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B 18.1. ALL BOLTS AND LAD SCREWS SHALL BE INSTALLED WITH STANDARD CUT WASHERS.

ALL WOOD FRAMING SHALL BE FABRICATED AND INSTALLED PER AITC, TPI, AND NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION. ALL STRUCTURAL WOOD MEMBERS SHALL BE SOUTHERN YELLOW PINE NO.2 , UNLESS NOTED OTHERWISE.

ALL WOOD MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH MASONRY, CONCRETE, OR SOIL SHALL BE PRESSURE TREATED IN ACCORDANCE W/ AITC-109.

ALL METAL CONNECTIONS AND FABRICATIONS SHALL COMPLY WITH AISC & NDS SPECIFICATIONS.
SOLID BLOCK ALL JOISTS AND RAFTERS AT INTERIOR POINT OF SUPPORT.
AT VOLUME CEILINGS CONDITIONS, ALIGN TRUSSES TO PROVIDE A SMOOTH AND UNBROKEN INTERIOR WALL SURFACE FROM FLOOR TO CEILING.

BRACE TRUSSES DURING ERECTION AND AFTER PERMANENT INSTALLATION TO COMPLY WITH TPI BWT-76.
DOUBLE TOP PLATES SHALL BE OVERLAPPED AT CORNERS AND SECURED WITH (2) 16D NAILS. MID-WALL SPLICES SHALL BE 48" MINIMUM W/2 ROWS OF 16D NAILS AT 6" O.C., STAGGERED.
FASTEN MULTIPLE PLY BEAMS, COLUMNS AND LVL'S TOGETHER PER DETAIL PROVIDED OR SEE MANUFACTURERS REQUIREMENTS

ALL CONNECTION HARDWARE SHALL BE GALVANIZED AND SUPPLIED BY SIMPSON STRONGTIE CO. OR EQUIVALENT. SUBMIT CUT SHEETS FOR ALL CONNECTION HARDWARE TO ENGINEER FOR APPROVAL.

STUDS SHALL BE DOUBLED AT ALL ANGLES AND AROUND ALL OPENINGS. STUDS SHALL BE TRIPPLED AT ALL CORNERS.

ALL OUTSIDE CORNERS SHALL BE BRACED WITH A DIAGONAL 1 X 4 LET INTO OUTSIDE EDGE OF 6" STUDS, UNLESS PLYWOOD SHEATHING IS INSTALLED.

METAL LINTELS OVER OPENINGS SHALL BE DOUBLE 2 X 8 HEADERS FOR SPANS UP TO 6'-0" AND DOUBLE 2 X 10 HEADERS FROM 6'-0" TO 7'-0". SEE PLANS FOR SPANS GREATER THAN 7'-0". ALSO PROVIDE 1/2" PLYWOOD SPACER PLATE BETWEEN BEAM PLYS. NAIL TOGETHER WITH 16D NAILS AT 12" ON CENTER TOP AND BOTTOM.

ALL NON-LOAD BEARING PARTITIONS SHALL BE 2X4 WOOD STUDS SPACED AT 16" O.C. STUDS DO NOT NEED TO BE DOUBLED FOR NON-LOAD BEARING PARTITIONS ONLY.

PLACE A SINGLE PLATE AT THE BOTTOM AND A DOUBLE PLATE AT THE TOP OF ALL STUD WALLS. 2X SOLE PLATES AT THE EDGES OF SLABS SHALL BE ATTACHED TO THE SLAB WITH SIMPSON MAS MUDSILL ANCHORS (WITH 6 10D NAILS) AT 4'-0" O.C. AT INTERIOR STUD WALLS, PROVIDE EITHER HILTI DN72 (WITH 7/8" DIAMETER 5/64" THICK WASHERS) POWDER DRIVEN FASTENERS AT 10' ON CENTER, OR 1/2" DIAMETER HILTI KWIC-BOLTS (EXPANSION ANCHORS) WITH 6" EMBEDMENT, AT 4'-0" O.C. RED-HEAD FASTENERS OF EQUIVALENT SIZES MAY BE USED. ALL OTHER SUBSTITUTIONS MUST BE APPROVED BY MCCARTHY AND ASSOCIATES, INC. PRIOR TO INSTALLATION. SEE THE SHEAR WALL SCHEDULE FOR SPECIAL SOLE PLATE ATTACHMENT AT SHEAR WALLS.

WALL SHEATHING SHALL BE: (SEE SHEAR WALL SCHEDULE FOR REQUIREMENTS AT SHEAR WALLS)

A) AT INTERIOR WALLS PROVIDE 1/2" OR 5/8" GYPSUM WALLBOARD. (SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS) EACH SIDE OF STUDS, NAILED WITH 5D COOLER NAILS AT 7" O.C. *(USE 6D COOLER NAILS FOR 5/8" WALLBOARDS) AT ALL SUPPORTS. PROVIDE SOLID 2X BLOCKING AT ALL SHEET EDGES. BLOCKING IS NOT REQUIRED AT NON-LOAD BEARING PARTITIONS.

B) AT EXTERIOR WALLS SHEATH THE INTERIOR FACE OF WALLS WITH GYPSUM WALLBOARD AS NOTED ABOVE FOR INTERIOR WALLS. SHEATH THE EXTERIOR FACE OF WALLS WITH 1/2" C-DX PLYWOOD (OR 7/16" O.S.B.) NAILED WITH 10D NAILS AT 6" O.C. AT ALL EDGE SUPPORTS AND 10D NAILS AT 12" O.C. AT ALL INTERMEDIATE SUPPORTS. PROVIDE SOLID DOUBLE 2X BLOCKING AT ALL SHEET EDGES. BLOCKING IS NOT REQUIRED AT NON-LOAD BEARING PARTITIONS.

FLOOR SHEATHING IS 3/4" TOUNGUE AND GROOVE C-C PLYWOOD, OR 23/32" O.S.B. GLUED AND NAILED WITH 10D NAILS AT 6" O.C. AT SUPPORTED EDGES, AND 10D NAILS AT 12" O.C. AT INTERMEDIATE SUPPORTS.

ROOF SHEATHING SHALL BE 5/8" PLYWOOD THAT CONFORMS WITH SECTION 2322.2 OF THE FBC2017, ATTACHED WITH 8D NAILS AT 6" O.C. AT SUPPORTED EDGES, AND 8D NAILS AT 12" O.C. AT INTERMEDIATE SUPPORTS. PROVIDE ONE PLYWOOD CLIP PER SPAN BETWEEN SHEET EDGES. PROVIDE SOLID 2X BLOCKING BETWEEN SUPPORTS AT ALL HIPS, RIDGES, VALLEYS, AND CHANGES IN ROOF SLOPE.

13: PREFABRICATED WOOD TRUSSES

DESIGN AND MANUFACTURE IN ACCORDANCE WITH TPI "DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES", LATEST EDITION.

TRUSS DIAGRAMS, IF SHOWN, ARE DIAGRAMMATIC ONLY. TRUSS DESIGNER TO DETERMINE AND ESTABLISH EXACT HEIGHT, LENGTH, LOCATION, SPACING, AND WEB MEMBER FOR EACH TRUSS. COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL ITEMS INCLUDING AIR HANDLER LOCATIONS, MECHANICAL ROOMS AND DUCT SPACE AND ROUTING.

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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DRWN. BY:	SLVB
CAD REF:	STRUC

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Contractors shall verify and be responsible for all dimensions and conditions of the

STRUCTURAL SPECIFICATIONS, CONT.

TRUSS LOADING SHALL BE AS FOLLOWS, IN ADDITION TO LOADS SHOWN ON THE DRAWINGS.
ROOF TRUSS LOADING:
PER ASCE7-10 LOAD TABLE PROVIDED
BOTTOM CHORD LIVE LOAD WIND UPLIFT WHERE EXPOSED (I.E. LANAIS, ENTRIES, PORCHES, BALCONIES, ETC.)

THE TRUSS SUBMITTAL PACKAGE SHALL INCLUDE TRUSS DESIGN DRAWINGS, TRUSS PLACEMENT DIAGRAM, AND TRUSS MEMBER PERMANENT BRACING. TRUSS DESIGN SHALL INCLUDE: SLOPE OR DEPTH, SPAN, SPACING, REQUIRED BEARING WIDTH, REACTIONS, AND REQUIRED PERMANENT BRACING.
TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR ALTERED WITHOUT SIGNED AND SEALED WRITTEN APPROVAL FROM TRUSS MANUFACTURER. ALL TRUSS AND PLY TO PLY CONNECTIONS TO BE DESIGNED BY TRUSS MANUFACTURER. TRUSS BOTTOM CHORD IS NOT BRACED BY CEILING. DESIGN BOTTOM CHORD TO BE UNBRACED OR PROVIDE BRACING.

THE WOOD TRUSS MANUFACTURER MUST PARTICIPATE IN A CODE APPROVED THIRD PARTY QUALITY ASSURANCE PROGRAM SUCH AS THE TRUSS PLATE INSTITUTE'S "QUALITY CONTROL INSPECTION PROGRAM" OR EQUIVALENT.

WOOD TRUSS MEMBERS AND CONNECTIONS SHALL BE DESIGNED FOR ALL LOADS SHOWN ON THE CONTRACT DOCUMENTS INCLUDING; LIVE, DEAD, WIND, AND CONCENTRATED. SEE MISCELLANEOUS SECTION FOR LIVE LOADS.

DURATION OF LOAD FACTORS:
ROOF DL+LL+WL 1.33
ROOF DL+LL 1.25

WOOD TRUSS DESIGN SHOP DRAWINGS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING INFORMATION:
A) SPAN LEGNTH, OVERHANG AND EAVE DIMENSIONS, SLOPE AND SPACING OF WOOD TRUSSES.
B) ALL DESIGN LOADS AND THEIR POINTS OF APPLICATION, VALLEY AND CONVENTIONAL FRAMING MUST BE CONSIDERED.
C) ADJUSTMENTS TO ALLOWABLE VALUES. (DURATION OF LOAD FACTORS, ETC.)
D) REACTIVE FORCES AND THEIR LOCATIONS.
E) BEARING TYPE AND MINIMUM BEARING LEGNTH.
F) DEFLECTIONS, SPAN AND REACTION.
G) METAL CONNECTOR PLATE TYPE, GAGUE, SIZE AND LOCATION.
H) LUMBER SIZE, SPECIES, GRADE AND MOISTURE CONTENT.
I) LOCATION AND CONNECTION DESIGN OF REQUIRED CONTINUOUS LATERAL BRACING
J) TRUSS SPLICES MUST BE DETAILED. THIS INCLUDES "PIGGY BACK" TRUSSES
K) CONNECTION DETAILS: TRUSS TO BEARING, TRUSS TO TRUSS, TRUSS TO TRUSS GIRDER, PIGGY BACK TO TRUSS, ETC.
L) BRACING: NOTE MINIMUM REQUIREMENTS BELOW.

DEFLECTIONS: (UNLESS NOTED OTHERWISE)
A) SPAN LIVE LOAD: LESS THAN OR EQUAL TO SPAN/360.
B) SPAN TOTAL LOAD: LESS THAN OR EQUAL TO SPAN/240.
C) REACTION LIVE LOAD: LESS THAN OR EQUAL TO TRUSS BEARING HEIGHT/480.
D) REACTION TOTAL LOAD: LESS THAN OR EQUAL TO TRUSS BEARING HEIGHT/360.

FIRE RETARDANT WOOD IS NOT ALLOWABLE.

SUPPORTS: WOOD TRUSSES SHALL BE DDESIGNED WITH AT LEAST ONE HORIZONTAL ROLLER CONNECTION PER SPAN SO THAT NO HORIZONTAL REACTIONS ARE INDUCED ON SUPPORTS UNDER DEAD OR LIVE LOADS.

WOOD TRUSSES MUST BE CHECKED FOR WIND, WIND VELOCITY, DESIGN VELOCITY PRESSURES, AND TYPE OF STRUCTURE FOR WIND, MUST BE SHOWN ON THE SUBMITTED SHOP DRAWINGS.

CONTINUOUS BOTTOM CHORD LATERAL BRACING IS REQUIRED AT A MINIMUM SPACING OF 10' O.C. UNLESS NOTED OTHERWISE. BOTTOM CHORD BRACING IS CONTINUOUS FROM ONE END OF THE BUILDING TO THE OTHER END.OVERLAP CONTINUOUS BRACING AT LEAST ONE TRUSS SPACE. USE A MINIMUM OF 2 X 4 GRADE MARKED LUMBER AT LEAST 10' LONG, WITH 2-16D NAILS AT INTERMEDIATE AND 3-16D NAILS AT END CONNECTIONS.

CROSS BRACING IS REQUIRED AT MINIMUM 10' O.C. UNLESS NOTED OTHERWISE. LOCATE CROSS BRACING AT OR NEAR THE BOTTOM CHORD BRACING. INSTALL CROSS BRACING AT EACH END AND AT 20' O.C. ALONG THE LENGTH OF THE LATERAL BRACING. CROSS BRACING IS ACCOMPLISHED BY ATTACHING DIAGONAL WEB BRACING TO OPPOSITE SIDES OF THE SAME GROUP OF SIMILAR WEB MEMBERS. SLOPE CROSS BRACING IN OPPOSITE DIRECTIONS AT APROXIMATELY 45 DEGREES FORMING A CROSS "X". USE A MINIMUM OF 2 X 4 GRADE MARKED LUMBER WITH AT LEAST 2-16D NAILS AT EACH CONNECTION.

TRUSS ERECTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING OF TRUSS SYSTEM DURING CONSTRUCTION.

HANDLING, INSTALLATION, AND BRACING OF WOOD TRUSSES SHALL BE IN ACCORDANCE WITH "HIB-91", PUBLISHED BY THE TRUSS PLATE INSTITUTE.

ALL WOOD TRUSSES SHALL BE FASTENED TO THEIR SUPPORTS WITH APPROVED HURRICANE CLIPS OR STRAPS.

CONTRACTOR SHALL ORDER AND INSTALL HURRICANE CLIPS OR STRAPS FOR THE UPLIFT AND LATERAL FORCES SHOWN ON THE SUBMITTED WOOD TRUSS DESIGN CALCULATIONS.

ALL CONNECTION HARDWARE SHALL BE GALVANIZED AND SUPPLIED BY SIMPSON STRONG-TI OR BY APPROVED EQUIVALENT MANUFACTURER.

ALL CONNECTION HARDWARE IS TO BE FULLY FASTENED PER MANUFACTURER'S REQUIREMENTS UNLESS NOTED OTHERWISE.

PILING OF PLYWOOD ON WOOD TRUSSES IN NOT ALLOWED.

INSTALLATION OF BROKEN, DAMAGED, WARPED, OR IMPROPERLY REPAIRED WOOD TRUSSES IS NOT ALLOWED.

IMPROPER OR UNAUTHORIZED FIELD ALTERATIONS OF WOOD TRUSSES IS NOT ALLOWED.

ALL CONNECTIONS AND BRACING MUST BE INSTALLED BEFORE SHEATHING THE ROOF.

GABLE ENDWALL TRUSSES MUST TRANSFER LATERAL LOADS TO THE SHEAR WALLS AND/OR THE ROOF DIAPHRAGM.

WOOD TRUSSES THAT DO NOT MEET INTERIOR LOAD BEARING WALLS MUST BE SHIMMED. DO NOT PULL WOOD TRUSSES DOWN TO INTERIOR BEARINGS.

WOOD TRUSS DESIGN ENGIEER MUST BE PROVIDED WITH A COPY OF THESE DRAWINGS AND SPECIFICATIONS.
SUBMITTALS: ALL SUBMITTALS SHALL BEAR THE EMBOSSED SEAL OF A LICENSED FLORIDA ENGINEER AND SHALL BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO WOOD TRUSS FABRICATION.
A. SUBMIT SEALED WOOD TRUSS DESIGN CALCULATIONS FOR EACH TYPE OF TRUSS.
B. SUBMIT SEALED WOOD TRUSS ERECTION PLAN, INCLUDING CONNECTION DETAILS AND PERMANENT BRIDGING REQUIREMENTS.
C. SUBMIT SEALED WOOD TRUSS TEMPORARY ERECTION BRACING PLAN.

14: PLYWOOD
PLYWOOD PANELS SHALL CONFORM TO THE REQUIREMENTS OF "U.S. PRODUCT STANDARD PS-1 FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD OR APA PRP-108 PERFORMANCE STANDARDS UNLESS OTHERWISE NOTED, PANELS SHALL BE APA RATED SHEATHING, EXPOSURE 1, OF THE THICKNESS AND SPAN RATING SHOWN ON THE DRAWINGS. IF NO SPECIFICATION IS GIVEN ON THE WALL SECTIONS PROVIDE 5/8" APA 32/16.

PLYWOOD INSTALLATION SHALL BE IN CONFORMANCE WITH APA RECOMMENDATIONS. ALLOW 1/8" SPACING AT PANEL EDGES, UNLESS OTHERWISE RECOMMENDED BY THE PANEL MANUFACTURER.

ALL ROOF, AND SHEAR WALL SHEATHING SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS, EXCEPT AS INDICATED ON THE DRAWINGS. STAGGER ENDS OF ADJACENT PANELS 4'-0".

ROOF SHEATHING SHALL BE BLOCKED, TONGUE-AND-GROOVE, OR HAVE EDGES SUPPORTED BY PLY CLIPS. ATTACH PLYWOOD PANELS TO SUPPORTING MEMBERS WITH 8D RING SHANK NAILS SPACED 4" ON CENTER ALONG THE PANEL EDGES AND AT 6" ON CENTER ALONG INTERMEDIATE SUPPORTS, UNLESS NOTED OTHERWISE.

SHEAR WALL SHEATHING SHALL BE BLOCKED WITH 2X FRAMING AT ALL PANEL EDGES. ATTACH PLYWOOD PANELS TO SUPPORTING MEMBERS WITH 8D NAILS SPACED 4" ON CENTER ALONG INTERMEDIATE SUPPORTS, UNLESS NOTED OTHERWISE ON DRAWINGS.

ATTACH PLYWOOD PANELS TO SUPPORTING MEMBERS WITH 8D NAILS SPACED 4" ON CENTER ALONG THE PANEL EDGES AND AT6" ON CENTER ALONG INTERMEDIATE SUPPORTS.

15: WOOD FRAMING CONNECTORS

FRAMING ACCESSORIES AND STRUCTURAL FASTENERS SHALL BE MANUFACTURED BY SIMPSON COMPANY (OR APPROVED EQUAL) AND OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. HANGERS NOT SHOWN SHALL BE SIMPSON HUS OF SIZE RECOMMENDED FOR MEMBER. ALL CONNECTORS SHALL BE GALVANIZED. UNLESS SHOWN OTHERWISE, INSTALL MAXIMUM SIZE AND NUMBER OF FASTENERS SHOWN IN LATEST SIMPSON CATALOG.

NAILING SCHEDULE:

CONNECTION	COMMON NAIL	NUMBER / SPACING
SOLE PLATE TO TRUSS OR BLOCKING	16D	16" O.C.
STUD TO STUD PLATE, TOENAIL	8D	4
DOUBLE STUDS, FACE NAIL	10D	24" O.C.
DOUBLE TOP PLATES, FACE NAIL	10D	16" O.C.
TOP PLATES LAPS AND INTERSECTIONS	10D	3
TRUSSES, LAPS OVER WALLS, FACE NAIL	16D	4
BUILT-UP CORNER STUDS	16D	24" O.C.
STUDS TO SOLE PLATE, END NAIL	16D	2

WHERE WOOD BEAMS/HEADERS ABUT WOOD COLUMNS, PROVIDE SIMPSON "HHUC" CONNECTORS WITH ALL NAILS SPECIFIED BY THE MANUFACTURER.

AT ALL WALLS SUPPORTING ROOF TRUSSES PROVIDE UPLIFT STRAPPING/CONNECTORS SHOWN IN THE TYPICAL WALL SECTION.

FASTENER SUBSTITUTIONS:

ALL NAILS ARE COMMON NAILS, UNLESS NOTED OTHERWISE. THE FOLLOWING FASTENERS ARE ACCEPTABLE SUBSTITUTIONS. ALL ALTERNATE FASTENERS SHALL BE SPACED AT THE SAME SPACING AS THE SCHEDULED FASTENERS.

SCHEDULED FASTENER	ALTERNATE FASTENER
8D COMMON NAIL	8D RINGSHANK NAIL D SCREW SHANK NAIL 0.131 P-NAIL
10D COMMON NAIL	10D RING SHANK NAIL 10D SCREW SHANK NAIL 0.148 P-NAIL
6D COOLER NAIL	#6 X 1-1/4" TYPE S OR W DRYWALL SCREW

NAIL ROOF SHEATHING W/ 8D NAILS AT 4" O.C. AT EDGES AND 10" O.C. AT INTERMEDIATE SUPPORTS EXCEPT AS FOLLOWS:
NAIL AND GLUE ALL SHEATHING TO THE STRUCTURE WITHIN 4'-0" OF ALL RIDGES AND EAVES (EDGE OF ROOF WHICH IS NOT A GABLE) AND WITHIN 5'-0" OF ALL GABLE ENDS AT 6" O.C. AT EDGES AND INTERMEDIATE SUPPORTS TYP.

ALL LANAI AND ENTRY CEILINGS EXPOSED TO WIND SHALL HAVE EXTERIOR BOARD OR STUCCO ON METAL LATH. NAILING PATTERN SHALL BE IN ACCORDANCE WITH FBC 2017. PROVIDE 8D NAILS 4" O.C. AT EDGE 6" O.C. INTERIOR MIN.

OPENINGS BETWEEN GARAGE AND GARAGE ATTIC SHALL BE SEPARATED FROM LIVING (HABITABLE) SPACES BY ½" GYPSUM BOARD AND BE EQUIPPED WITH 1⅜" (20 MINUTE FIRE RATED) SOLID CORE DOORS.

CEILING MATERIAL SHALL BE ⅝" DRYWALL OR ½" SAG RESISTANT.

16: EXPANSION AND SCREW ANCHORS
EXPANSION AND SCREW ANCHORS SHALL HAVE THE I.C.C. E.S. OR I.A.P.M.O. USE EVALUATION REPORT INDICATED CONFORMANCE W/ CURRENT APPLICABLE I.C.C. E.S. ACCEPTANCE CRITERIA.

ACCEPTABLE EXPANSION ANCHORS ARE HILTI KWIK-BOLT TZ. POWERS SD2 OR SIMPSON STRONG BOLT 2.

ALL WEDGE ANCHORS 'REDHEADS' SIMPSON TITAN 'TAPCON' OR SIMPSON TITAN H.D. BOLTS SHALL BE INSTALLED PER THE MFGR. GUIDELINES AND SPACING. EDGE DISTANCE AND EMBEDMENT, AS WELL AS INSTALLATION AND PREPARATION INSTRUCTIONS.

'TAPCONS' WHERE SPECIFIED SHALL BE ¼" DIA. SIMPSON TITAN SCREW W/ 1¾" EMBEDMENT. EDGE SPACING 1½" MIN. AND A SPACING OF 3".

'SIMPSON TITAN H.D.' OR 'L.D.T.' WHERE SPECIFIED SHALL BE AS FOLLOWS:

WHERE SPECIFIED AS ½" DIA. SHALL HAVE 4" EMBEDMENT U.N.O.:
EDGE DISTANCE OF 4½". SPACING OF 6" MIN. CONC. THICKNESS OF 10"

WHERE SPECIFIED AS ⅝" DIA. SHALL HAVE 5½" EMBEDMENT U.N.O.:
EDGE DISTANCE OF 5½" SPACING OF 6" CONC. THICKNESS OF 10"

WHERE SPECIFIED AS ¾" DIA. SHALL HAVE 6¼" EMBEDMENT U.N.O.:
EDGE DISTANCE OF 7⅝" SPACING OF 6" CONC. THICKNESS OF 10"

'REDHEAD' WHERE SPECIFIED SHALL BE AS FOLLOWS:

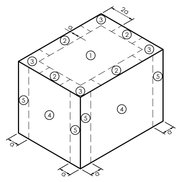
WHERE SPECIFIED AS ½" DIA. SHALL HAVE:
3⅜" EMBEDMENT INTO CONC. 5" CRITICAL EDGE DISTANCE, 6" CRITICAL SPACING, CONC. THICKNESS 1½ TIMES EMBEDMENT.

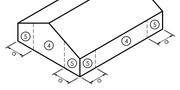
WHERE SPECIFIED AS ⅝" DIA. SHALL HAVE:
4½ EMBEDMENT INTO CONC. 6¼" CRITICAL EDGE DISTANCE, 6¼" CRITICAL SPACING, CONC. THICKNESS 1½ TIMES EMBEDMENT.

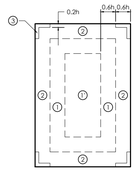
WHERE SPECIFIED AS ¾" DIA. SHALL HAVE:
5" EMBEDMENT INTO CONC. 7½" CRITICAL EDGE DISTANCE, 7" CRITICAL SPACING, CONC. THICKNESS 1½ TIMES EMBEDMENT.

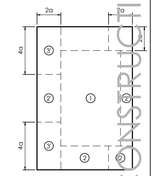
17: MISSED OR ADDING A MASONRY FILLED CELL
IN THE EVENT A CONTRACTOR MISSES A FILLED CELL DOWEL, OR HAS TO ADD ONE RETROACTIVELY, THE CONTRACTOR SHALL DOWEL AND EPOXY THE MISSED REBAR A MIN. OF 12 BAR DIA. INTO THE EXIST. FOOTING AND INSTALL PER THE EPXOY SPECIFICATION PROVIDED HEREIN. THE DOWEL SHALL BE LONG ENOUGH TO PROVIDE THE REQUIRED EMBEDMENT AND THE REQUIRED LAP OF 48 BAR DIA. THEN BE SPLICED TO ANOTHER REBAR THAT IS CONT. TO THE TIE BEAM ABOVE.

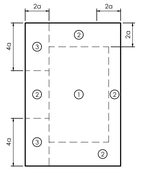
LOCATION OF COMPONENTS & CLADDING
WIND PRESSURE ZONES - ASCE 7-16

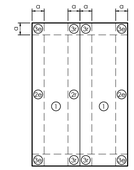

ROOFS w/ 0 ≤ 10°
& ALL WALLS h ≤ 60'

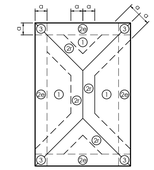

WALLS h ≤ 60' &
alt design h < 90'

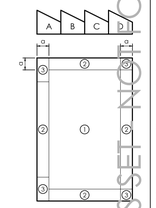

GABLE, SAWTOOTH, AND MULTISPAN GABLE
0 ≤ 7° & MONOSLOPE ≤ 3°
h ≤ 60' & alt design h < 90'


MONOSLOPE ROOFS
3° < 0 ≤ 7°
h ≤ 60' & alt design h < 90'


MONOSLOPE ROOFS
3° < 0 ≤ 7°
h ≤ 60' & alt design h < 90'


MULTISPAN GABLE & GABLE ROOFS
7° < 0 ≤ 45°


HIP ROOFS
7° < 0 ≤ 27°


SAWTOOTH 10° < 0 ≤ 45°
h ≤ 60' & alt design h < 90'

WIND LOADS - COMPONENTS & CLADDING: h ≤ 60'			
Kh (CASE 2) =	0.65	h =	23.3 ft
BASE PRESSURE (qh) =	41.0 psf	a =	4.2 ft
MINIMUM PARAPET ht =	0.0 ft	GCpi =	+/- 0.18
ROOF ANGLE (Θ) =	18.4 deg	qi =	41.0 psf
TYPE OF ROOF =	HIP	qh =	41.0 psf

ALLOWABLE WIND PRESSURES

	AREA	GCp +/- Gcpi				SURFACE PRESSURE (PSF)			
		10 SF	20 SF	100 SF	200 SF	10 SF	20 SF	100 SF	200 SF
ROOF	NEGATIVE ZONE 1	-1.48	-1.48	-1.18	-1.18	-60.6	-60.6	-48.3	-48.3
	NEGATIVE ZONE 2e	-1.98	-1.82	-1.44	-1.28	-81.1	-74.5	-59.1	-52.4
	NEGATIVE ZONE 2r	-2.58	-2.33	-1.73	-1.48	-105.7	-95.3	-71.1	-60.6
	NEGATIVE ZONE 3	-2.12	-1.94	-1.52	-1.33	-87.0	-79.5	-62.1	-54.6
	POSITIVE ALL ZONES	0.88	0.76	0.48	0.48	36.0	31.1	19.7	19.7
	OVERHANG ZONE 1	-1.8	-1.8	-2.0	-2.0	-73.7	-73.7	-81.9	-81.9
	OVERHANG ZONE 2e	-2.3	-2.25	-2.15	-2.1	-94.2	-92.3	-87.9	-86.0
	OVERHANG ZONE 2r	-2.9	-2.76	-2.44	-2.3	-118.8	-113.1	-99.9	-94.2
	OVERHANG ZONE 3	-3.04	-2.72	-1.98	-1.65	-124.6	-111.5	-80.9	-67.7
OVERHANG PRESSURES IN THE TABLE ABOVE ASSUME AN INTERNAL PRESSURE COEFFICIENT (Gcpi) OF 0.0									
OVERHANG SOFFIT PRESSURE EQUALS ADJ. WALL PRESSURE (WHICH INCLUDES INT. PRESSURE OF 7.4 psf)									

ALLOWABLE WIND PRESSURES

	AREA	GCp +/- Gcpi				SURFACE PRESSURE at h			
		10 SF	100 SF	200 SF	500 SF	10 SF	100 SF	200 SF	500 SF
WALL	NEGATIVE ZONE 4	-1.28	-1.10	-1.05	-0.98	-52.4	-45.2	-43.0	-40.1
	NEGATIVE ZONE 5	-1.58	-1.23	-1.12	-0.98	-64.7	-50.3	-45.9	-40.1
	POSITIVE ZONE 4 & 5	1.18	1.00	0.95	0.88	48.3	41.1	38.9	36.0

LOAD DESIGN CRITERIA
DESIGN WAS BASED ON STRENGTH AND DEFLECTION CRITERIA OF THE 2023 F.B.C. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS AND ALLOWABLES WERE USED FOR DESIGN. W/ LIVE LOADS REDUCED PER THE 2023 F.B.C.

ROOF: 20 PSF LL / 30 PSF SDL

FLOORS:
RESIDENTIAL: 40 PSF LL / 20 PSF SDL
STAIRS: 100 PSF LL

NOTE: LOADING ABOVE INCLUDES 5 PSF FOR SPRINKLER PIPING

DESIGN PARAMETERS

APPLICABLE CODES:
BUILDING CODE = FLORIDA BUILDING CODE, BUILDING 7TH EDITION 2023
MECHANICAL CODE = FLORIDA BUILDING CODE, MECHANICAL 2023
PLUMBING CODE = FLORIDA BUILDING CODE, PLUMBING 2023
FUEL GAS CODE = FLORIDA BUILDING CODE, FUEL GAS 2023
ELECTRICAL CODE = 2017 NATIONAL ELECTRIC CODE
FFPC = 2020 FLORIDA FIRE PREVENTION CODE
ACCESSIBILITY CODE = FLORIDA BUILDING CODE, ACCESSIBILITY 2023
ENERGY CODE = FLORIDA BUILDING CODE, ENERGY 2023

METHOD OF DESIGN:
DESIGNED PURSUANT TO FLORIDA BUILDING CODE CHAPTER 16, BUILDING 7TH EDITION 2023

IMPORTANCE FACTOR:
[ ] BUILDING CATEGORY I
[X] BUILDING CATEGORY II
[ ] BUILDING CATEGORY III
[ ] BUILDING CATEGORY IV

BUILDING OCCUPANCY CLASSIFICATION:
[ ] GROUP A - ASSEMBLY
[ ] GROUP B - BUSINESS
[ ] GROUP D - DAY CARE CENTER
[ ] GROUP E - EDUCATIONAL
[ ] GROUP F - FACTORY INDUSTRIAL
[ ] GROUP H - HAZARDOUS
[ ] GROUP I - INSTITUTIONAL
[ ] GROUP M - MERCANTILE
[X] GROUP R - RESIDENTIAL
[ ] GROUP S - STORAGE

BASIC WIND SPEED:
[X] 160 MPH (ULTIMATE)

BUILDING CONSTRUCTION TYPE:
[ ] TYPE I-A [ ] TYPE I-B [ ] TYPE II-A [ ] TYPE II-B [ ] TYPE III-A [ ] TYPE III-B [ ] TYPE IV [ ] TYPE V-A [X] TYPE V-B

EXPOSURE CATEGORY:
[ ] A [ ] C
[X] B [ ] D

WINDBORNE DEBRIS REGION:
[ ] NO
[X] YES
[X] IMPACT RESISTANT GLASS
[ ] IMPACT RESISTANT SHUTTERS
[ ] IMPACT RESISTANT STORM PANELS
[ ] IMPACT RESISTANT COMBINATION
[ ] OF GLASS & STORM PANELS

INTERNAL PRESSURE COEFFICIENTS:
[ ] 0.00 (OPEN)
[X] +0.18, -0.18 (ENCLOSED)
[ ] +.055, -0.55 (PARTIALLY ENCLOSED)

PROGRESS SET - NOT FOR CONSTRUCTION

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No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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ARCHITECTURE

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AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	STRUC

SHEET
S2

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WALL TYPE LEGEND

- 8" MASONRY BLOCK WALL W/ FILLED CELLS AND #5 BARS @ 24" O.C.
- 2x6 WOOD FRAMED SHEAR & BEARING WALL
- WINDOW ABOVE WOOD FRAMED WALL

KEYNOTES

1. 4" (MIN.) 3,000 P.S.I. CONC. SLAB ON GRADE W/ 6x6W2.9x2.9WWF OVER 10 MIL VAPOR BARRIER AND PEST TREATED SOIL COMPACTED IN 12" LIFTS TO 95% MODIFIED PROCTOR (TYP.). SEE SPECIFICATIONS.
2. 2x6 FRAMED SHEAR WALL W/ ½" CDX PLYWD. ON EACH FACE FASTENED W/ 10d NAILS @ 6" O.C. THROUGHOUT. PROVIDE 6x6 POST W/ HHDQ14 SIMPSON HOLD DOWN AT EACH END OF THE WALL (TYP.). (REFER TO MFGR'S INSTRUCTIONS FOR MORE DETAILS)
3. PRECAST CONDENSING UNIT SLAB BY MFGR (TYP.). SLAB TO BE ABOVE BASE FLOOD ELEVATION.

FOUNDATION NOTES

1. SEE SHEET 'S1' FOR GENERAL STRUCTURAL NOTES.
2. COORDINATE ALL DIMENSIONS AND ELEVATIONS W/ ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONAL INFORMATION.
3. CMU BLOCK REINFORCING IS TO BE #5 BARS @ 48" O.C. (TYP.) PLUS ADDED BARS AT ALL WINDOW AND DOOR JAMBS, CORNERS, INTERSECTIONS, DIRECTION CHANGES, ETC. IN OPENINGS EXCEEDING 8'-0", PROVIDE REINFORCING IN EACH OF (2) ADJACENT FILLED CELLS.
4. CMU BLOCK REINFORCING BELOW WINDOWS IS TO BE #5 BARS @ 48" O.C. (TYP.) PLUS ADDED (2) #5 BARS AT ALL POURED WINDOW SILLS.
5. ALL CONTINUOUS VERTICAL AND HORIZONTAL REINFORCING STEEL IN FOOTINGS, BEAMS, AND COLUMNS SHALL BE SPLICED A MINIMUM OF 48 BAR DIAMETER OR 24", WHICHEVER IS GREATER.
6. FOUNDATION: 3,000 PSI @ 28 DAYS, TYPE II CONCRETE, 6 BAGS.
7. FLOOR SLABS: 3,000 PSI @ 28 DAYS (4" CONCRETE ON 15 MIL. POLYETHYLENE VAPOR BARRIER ON 4" SAND FILL) MAX. SLUMP = 4", TYPE II CONCRETE, 6 BAG
   a. PROVIDE CONSTRUCTION JOINTS @ 300 SQ. FT. MAX. IN SLABS.
8. WALKS & DRIVES: 3,000 PSI @ 28 DAYS, TYPE II CONCRETE, 6 BAG WITH AIR ENTRAINMENT.
9. WHERE SHOWN, CORES OF BLOCK MASONRY SHALL BE FILLED WITH GROUT CONSISTED OF PEA GRAVEL CONCRETE WITH MAX. COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS AND REINFORCING STEEL AS INDICATION ON THE DRAWINGS.
10. ALL STEEL REINFORCEMENT TO BE COVERED WITH A MINIMUM 3" OF CONCRETE ON ALL SIDES.
11. PER ASCE PRESSURE DIAGRAMS AND TABLE ON SHEET SS.1, ALL WINDOW PRESSURES ARE TO BE (+25.3 / -27.5) EXCEPT FOR ANY WINDOWS ON THE CORNERS / ENDS OF THE BUILDING, WHICH ARE TO BE (+25.3 / -33.9).

FOOTING SCHEDULE

MARK	SIZE			REINFORCEMENT
	W	L	D	
TE-1	2'-0"	CONT.	1'-0"	(3) #5 BOTTOM, CONT.
TE-2	8"	CONT.	8"	(1) #5 CONT.
TS-1	1'-4"	CONT.	1'-0"	(2) #5 BOTTOM, CONT.
TS-2	2'-0"	CONT.	1'-0"	(3) #5 BOTTOM, CONT.

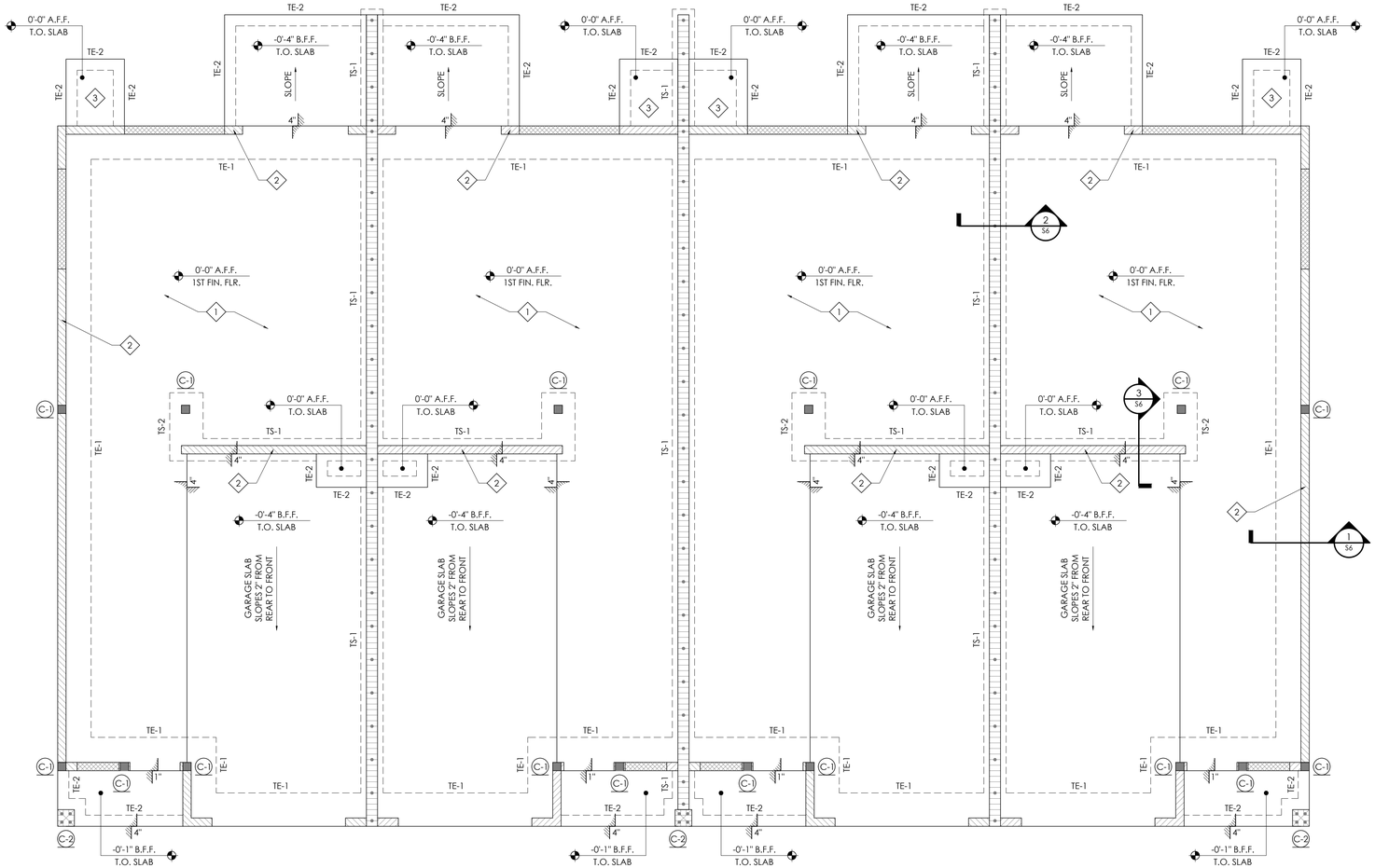
WALL, FLOOR, & ROOF SHEATHING

SPECIFICATION	TYPICAL NAILING
15/32 THICK PERSERVATIVE TREATED 24/16 PLYWD. SHEATHING	8d (2-½" ℄ COMMON @ 6" O.C. EDGE 12" O.C. FIELD

COLUMN SCHEDULE

MARK	SIZE	REINFORCEMENT
C1	(3) 2x6 WD. COLUMN	CBS-4.5 SIMPSON BASE EPCZ6 POST CAP
C2	1'-0" x 1'-0"	(4) #5

- COLUMN COMMENCES AT THIS LEVEL
- COLUMN CONTINUES FROM BELOW AND THRU THIS LEVEL
- COLUMN TOP TERMINATES AT THIS LEVEL



FOUNDATION PLAN

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

0 4' 8' 12'

PROGRESS SET - NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

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MICHAEL K. SHEELEY
REG. # 0010564
STATE OF FLORIDA
MICHAEL K. SHEELEY
AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	STRUC

SHEET
S3

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WALL TYPE LEGEND

- 8" MASONRY BLOCK WALL W/ FILLED CELLS AND #5 BARS @ 24" O.C.
- 2x6 WOOD FRAMED SHEAR & BEARING WALL
- WINDOW ABOVE WOOD FRAMED WALL

NOTE:
THE DESIGN PROFESSIONAL HAS CONSIDERED AND COORDINATED THE TRUSS LAYOUT LISTED BELOW INTO THE STRUCTURAL DESIGN. ANCHOR ALL MEMBERS AS RECOMMENDED. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE W/ CHAPTER 16 OF THE F.B.C. AND FOR DEAD AND LIVE LOADS PER REQUIREMENTS OF ASCE 7-10 AND DESIGN PRESSURES GENERATED BY A WIND VELOCITY OF 160 M.P.H.

TRUSS MFGR: T.B.D.
JOB #: T.B.D.
DATE: T.B.D.

ROOF FRAMING NOTES

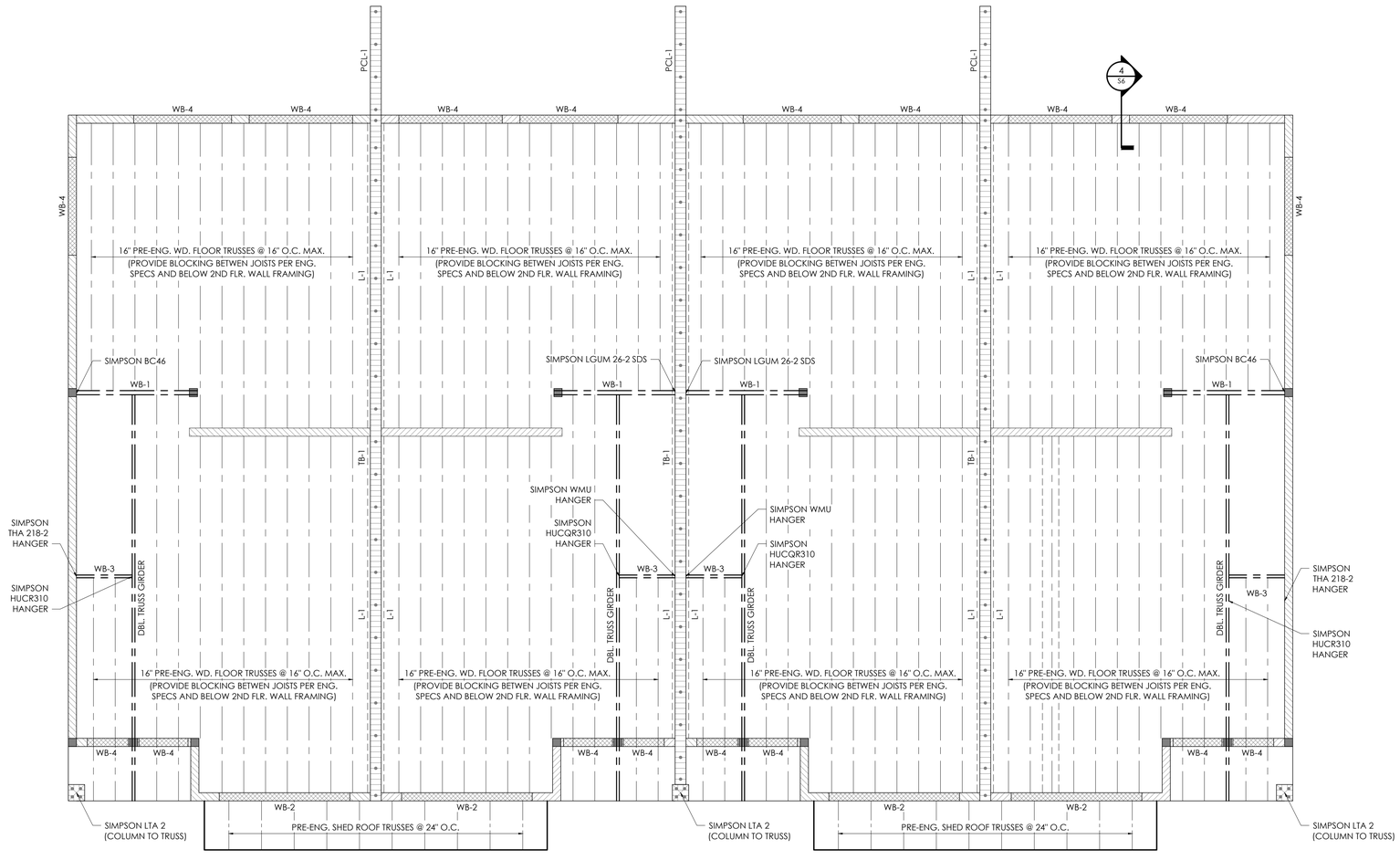
1. PRE-ENGINEERED ROOF TRUSSES SHALL BE SPACED AT 24" O.C. MAX. AND SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE FBC, LOCAL CODES, THE TRUSS PLATE INSTITUTE, AND THE ARCHITECTURAL/STRUCTURAL DRAWINGS. REFER TO ADDITIONAL DRAWINGS FOR CEILING HEIGHT AND SLOPE OVERHANG DIMENSIONS AND HEAD HEIGHT.
2. 2ND FLOOR FRAMING AND ROOF PLAN FOR DESIGN PURPOSES ONLY. TRUSS MANUFACTURERS TO SUBMIT TRUSS DRAWINGS AND PERMANENT BRACING SPECIFICATIONS SIGNED AND SEALED BY ENGINEER REGISTERED IN THE STATE OF FLORIDA. DESIGN ROOF TRUSS FOR WIND LOAD OF 160 MPH WIND SPEED, EXPOSURE B, IMPORTANCE FACTOR OF 1.0, CATEGORY (II) PER THE 2023 FBC. USE 10 PSF DEAD LOAD MAX. TO RESIST UPLIFT.
3. ALL TRUSS TO TRUSS CONNECTIONS SHALL BE DESIGNED BY TRUSS MANUFACTURER.
4. TYPICAL TRUSS TIE DOWN SIMPSON HETA16 U.N.O.
5. ALL WOOD FRAMING SHALL BE FABRICATED AND INSTALLED PER AITC, TPI, AND NATIONAL DESIGN SPECIFICATIONS, AND FBC 2023, CHAPTER 23 FOR WOOD CONSTRUCTION.
6. ALL STRUCTURAL AND EXTERIOR FRAMING LUMBER SHALL BE SOUTHERN PINE GRADE NO.2 OR BETTER.
7. ALL WOOD MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH MASONRY, CONCRETE, OR SOIL, SHALL BE PRESSURE TREATED.
8. CONTRACTOR SHALL PROVIDE ALL FASTENING DEVICES NECESSARY AND SUITED FOR EACH APPLICATION. FASTENINGS SUBJECT TO MOISTURE SHALL BE HOT DIPPED GALVANIZED TO ASTM A-153-80.
9. ALL EXTERIOR ROOF SHEATHING SHALL BE GRADE APA RATED ⅞" AND WALL SHEATHING SHALL BE EXTERIOR GRADE APA RATED ½" MINIMUM. FASTEN WITH 8D NAILS AT 4" O.C. AT EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS. SEE ROOF UPLIFT SCHEMATIC FOR ROOF SHEATHING CONNECTORS.
10. COORDINATE MECHANICAL EQUIPMENT LOADS W/ MECHANICAL DRAWINGS.
11. SEE ARCHITECTURAL DRAWINGS FOR SLOPES, DROPS, AND DRAIN LOCATIONS IN FLOOR SLAB.

BEAM SCHEDULE

MARK	TOP OF BEAM ELEV.	SIZE		REINFORCEMENT		NOTES
		W	D	TOP	BOTTOM	
TB-1	10'-0"	8"	16"	(2) #5	(2) #5	BOND BEAM f'c = 3,000 PSF MIN.
TB-2	VARIES	8"	20"	(2) #5	(2) #5	RAKED TIE BEAM (8x" x 20" MIN.)
PCL-1	8'-0"	8"	8"			(1) #5 BAR, PRE-CAST LINTEL
WB-1	10'-0"	3-⅛" x 1'-⅞" GLULAM				WOOD BEAM
WB-2	7'-0" (DOOR HEADER)	(3) 2x12				WOOD BEAM
WB-3	10'-0"	(2) 2x10				WOOD BEAM
WB-4	VARIES - DOOR / WINDOW HEADER (SEE ARCH.)	(3) 2x10				WOOD BEAM

LEDGER SCHEDULE

MARK	SIZE	REINFORCEMENT
L-1	P.T. 2x4	⅜" DIA. WEDGE ANCHORS W/ 3" EMBEDMENT INTO CONC. TIE BEAMS @ 24" O.C.



SECOND FLOOR FRAMING PLAN

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

0 4' 8' 12'

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
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ARCHITECTURE

MICHAEL K. SHEELEY
REG. # 0010564
STATE OF FLORIDA
MICHAEL K. SHEELEY
AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	STRUC

SHEET
S4

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TRUSS MFGR: T.B.D.
JOB #: T.B.D.
DATE: T.B.D.

ROOF FRAMING NOTES

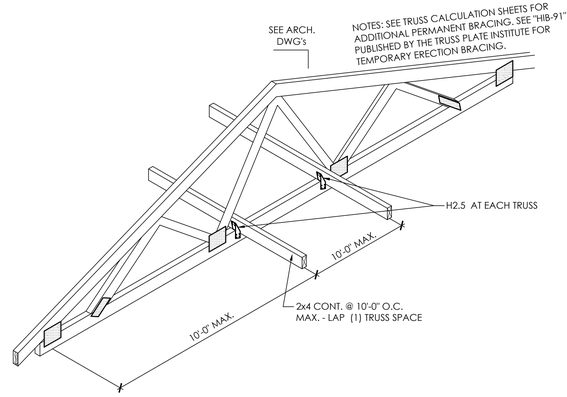
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BEAM SCHEDULE

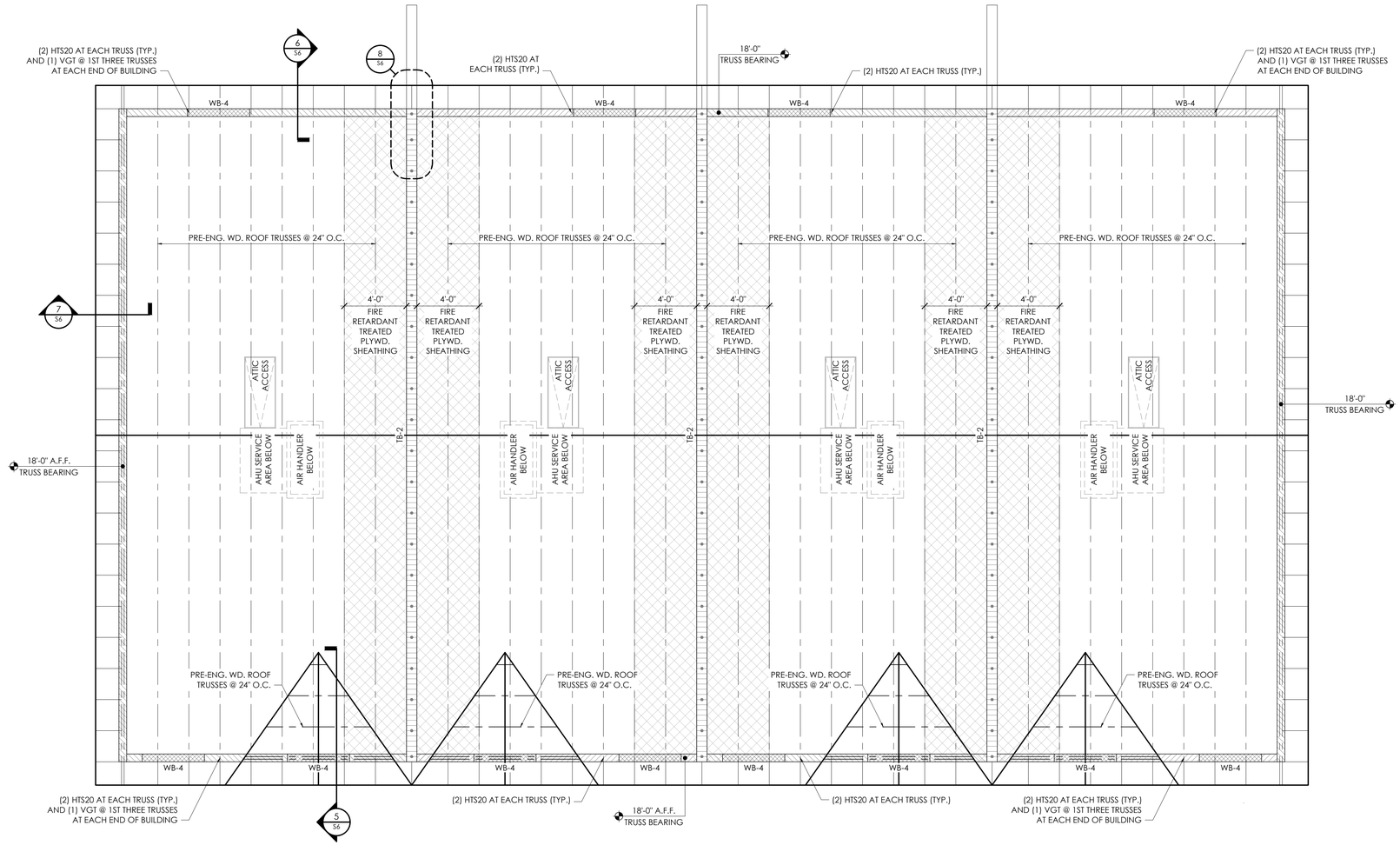
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		W	D	TOP	BOTTOM	
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PCL-1	8'-0"	8"	8"			(1) #5 BAR, PRE-CAST LINTEL
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WB-2	7'-0" (DOOR HEADER)	(3) 2x12				WOOD BEAM
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LEDGER SCHEDULE

MARK	SIZE	REINFORCEMENT
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MINIMUM TRUSS BRACING
SCALE: N.T.S.



ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

0 4' 8' 12'

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
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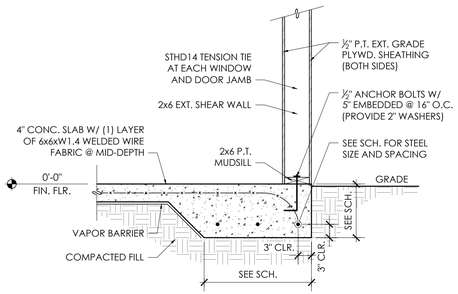
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AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	STRUC

SHEET
S5

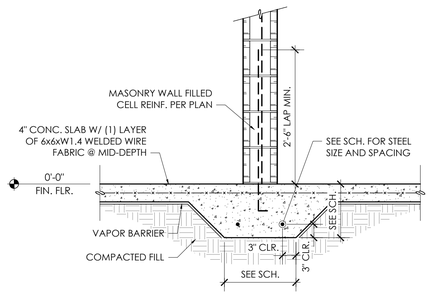
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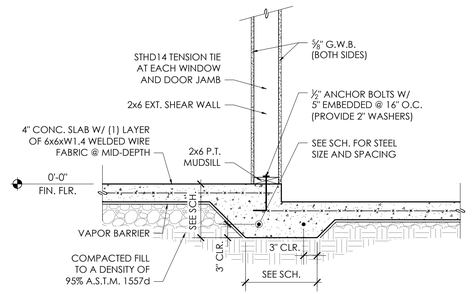
1 / S6 THICKENED SLAB EDGE

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



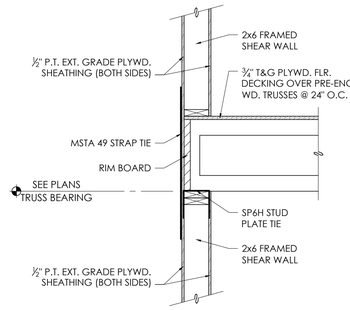
2 / S6 BEARING AT CMU

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



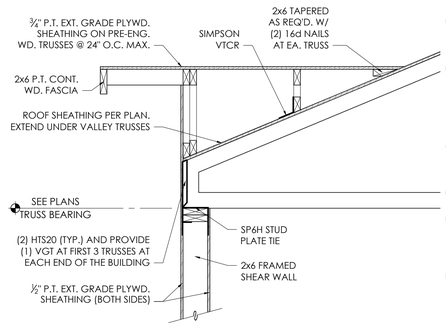
3 / S6 BEARING @ INTERIOR

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



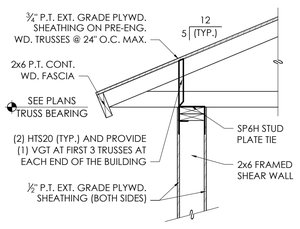
4 / S6 FLR. TRUSS BEARING @ EXT. WALL

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



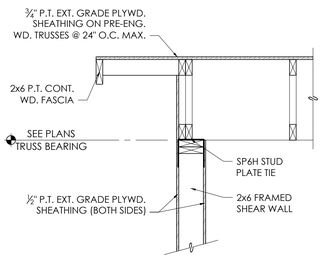
5 / S6 DORMER ROOF TRUSS BEARING

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



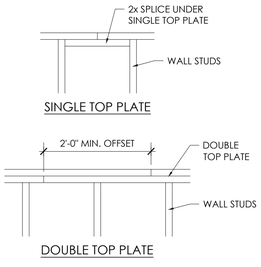
6 / S6 ROOF TRUSS BEARING

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



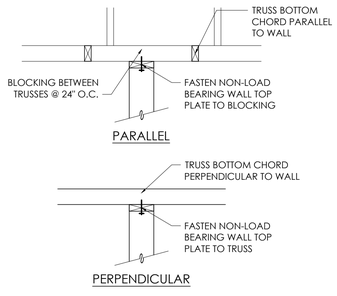
7 / S6 GABLE ROOF TRUSS BEARING

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



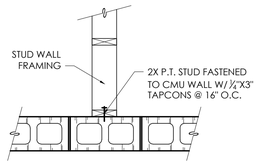
TYP. TOP PLATE SPLICE

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



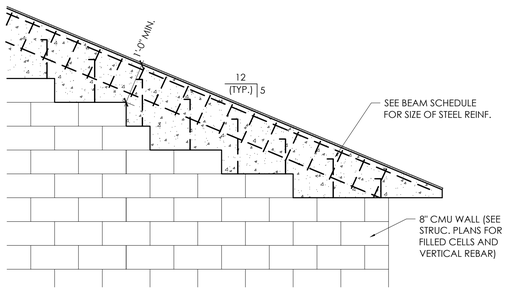
NON-LOAD BEARING WALL TO TRUSS

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



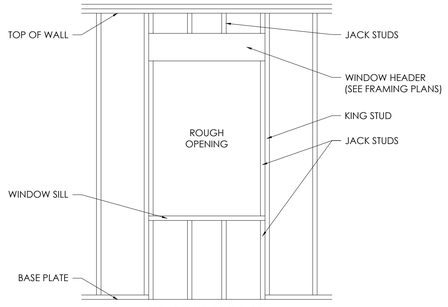
WOOD WALL TO CMU WALL

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

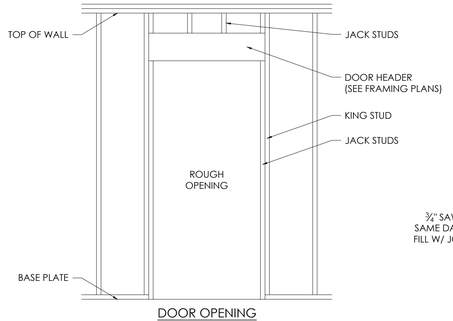


8 / S6 RAKED TIE BEAM DTL.

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



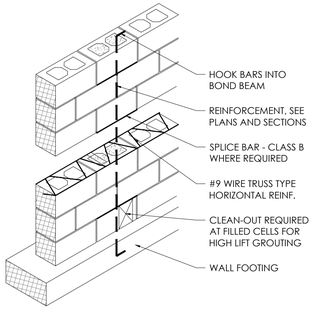
WINDOW OPENING



DOOR OPENING

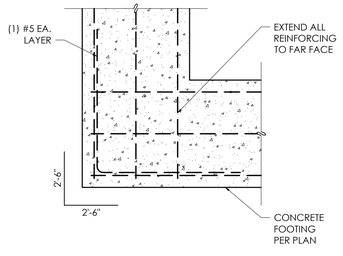
TYP. FRAMING AT OPENINGS

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



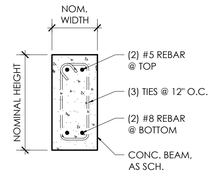
REINFORCING DTL.

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



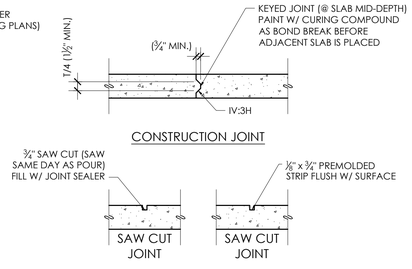
CORNER FOOTING DTL. (TYP.)

SCALE: N.T.S.



TIE BEAM DTL. (TYP.)

SCALE: 1" = 1'-0"



JOINT DTL. (TYP.)

SCALE: 1" = 1'-0"

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
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MECHANICAL NOTES & SPECIFICATIONS

1. GENERAL
 1.1. THE MECHANICAL PLAN SHALL COMPLY WITH INDICATED BUILDING CODES, ENERGY CODES, AND OTHER LOCALLY ADOPTED STANDARDS.

 1.2. THESE DRAWINGS WILL NOT BE UPDATED FOR FIELD CHANGES NOT PREVIOUSLY DISCUSSED WITH ENGINEER AND LETTERS TO PASS INSPECTION AS A RESULT OF SUCH DEVIATIONS WILL NOT BE PROVIDED. THESE DRAWINGS REPRESENT THE ENGINEER'S INTERPRETATION OF THE APPLICABLE CODES, HAVE BEEN REVIEWED BY THE LOCAL AHJ FOR CODE CONFORMANCE, AND ARE CONSIDERED CONTRACT DOCUMENTS.

 1.3. THESE DRAWINGS ARE INTENDED TO INDICATE CAPACITY, SIZE, LOCATION. DIRECTION AND GENERAL ARRANGEMENT, BUT NOT EXACT DETAILS OF CONSTRUCTION. THE FACT THAT ONLY CERTAIN FEATURES OF THE INSTALLATION ARE INDICATED MUST NOT BE TAKEN TO MEAN THAT OTHER SIMILAR OR DIFFERENT FEATURES WILL NOT BE REQUIRED.

 1.4. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS TO INSURE THAT EACH TRADE SHALL HAVE SUFFICIENT SPACE TO INSTALL THEIR EQUIPMENT (DUCTWORK, PIPING, ELECTRICAL WORK, ETC.).

 1.5. WORK SHALL INCLUDE ALL LABOR, MATERIALS, PERMITS AND OTHER COSTS AS ARE NECESSARY FOR THE INSTALLATION OF A COMPLETE AND SATISFACTORY OPERATIONAL PLUMBING SYSTEM.

 1.6. ALL EQUIPMENT FIXTURES, ETC. SHALL BE TESTED, ADJUSTED AND OPERATED AS INDICATED ON THE PLANS AND PLACED IN SATISFACTORY OPERATIONAL CONDITION BY THE CONTRACTOR. THIS CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP, MATERIALS AND EQUIPMENT TO BE FREE OF DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY. THIS IS IN ADDITION TO ANY WARRANTY OR GUARANTEE FROM THE EQUIPMENT MANUFACTURER. FURNISH THE OWNER WITH THE MANUFACTURER'S WRITTEN CERTIFICATES.

 1.7. HVAC SYSTEMS OR OTHER RELATED SYSTEMS INDICATED AS BEING UNDER "SEPARATE PERMIT" SHALL BE INTERPRETED AS A SEPARATE PERMIT PULLED BY THE HVAC CONTRACTOR WHICH INCLUDES DESIGN / PERMIT FEES, ENGINEERING FEES, UNLESS OTHERWISE DISCUSSED WITH THE GENERAL CONTRACTOR OR ENGINEER.

 1.8. UNLESS NOTED OTHERWISE, ALL MATERIALS SHALL BE NEW, COMPLETE, INCLUDE MANUFACTURER'S WARRANTY AND SHALL BE U.L. APPROVED IF APPLICABLE. ALL WORK SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.

 1.9. IN GENERAL, ALL DUCTWORK AND CONTROL WIRING SHALL BE RUN CONCEALED IN CEILING AND PIPE SPACES PROVIDED UNLESS NOTED OTHERWISE.

 1.10. VERIFY ALL DIMENSIONS FORM ARCHITECTURAL PLANS FOR FIELD DIMENSIONS. DO NOT SCALE CONSTRUCTION DOCUMENTS.

 1.11. BURIED PIPING NEAR FOUNDATIONS OR BEARING WALLS SHALL BE INSTALLED AND SHALL BE SLEEVED.

 1.12. HVAC SYSTEM INSTALLER SHALL PROVIDE ALL STRUCTURAL MEMBERS, SUPPORT BRACKETS, FLASHING, HARDWARE, ETC., REQUIRED TO INSTALL AND SUPPORT A COMPLETE OPERATIONAL SYSTEM.

 1.13. THESE DRAWINGS ARE DIAGRAMMATICAL. ALL RISES, DROPS, OR OFFSETS IN DUCTS AND PIPING NOT NECESSARILY SHOWN.

 1.14. DO NOT ROUTE ANY DUCTWORK OR PIPING ABOVE ELECTRIC PANELS, SWITCHGEAR, OR EQUIPMENT - OR WITHIN THE MINIMUM CLEAR SPACE FOR SWITCH GEAR REQUIRED BY ARTICLE 110 OF THE NEC. THIS INCLUDES INSTALLATIONS WITH A DROPPED (LAY-IN) OR DRYWALL CEILING. COORDINATION WITH ELECTRICAL CONTRACTOR REQUIRED.

 1.15. ALL DUCT DIMENSIONS INDICATED ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS, EXCLUDING INSULATION. ALL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA MANUAL, AND ENERGY CODE REQUIREMENTS.

 1.16. PROVIDE FLEXIBLE CANVAS DUCT CONNECTIONS FOR SHEET METAL DUCTS CONNECTING TO AIR HANDLING UNITS, ROOFTOP UNITS, AND, AND ALL OTHER EQUIPMENT CONTAINING MOTORS GREATER THAN 3/4 HP, OR AS OTHERWISE REQUIRED BY MANUFACTURERS INSTALLATION MANUAL.

 1.17. ALL CONTROL WIRING SHALL BE INSTALLED BY MECHANICAL CONTRACTOR AND BE AT MINIMUM IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. CONTROL WIRING SERVING UNITARY SPACE COOLING EQUIPMENT SHALL BE PROVIDED WITH PLENUM RATED, 8-WIRE COLOR CODED THERMOSTAT WIRE. INSTALL PER MANUFACTURERS INSTRUCTIONS AND TAPE UN-USED WIRING. ALL CONTROL WIRING SERVING COMMUNICATING SYSTEMS SHALL BE SHIELDED AND BE LOCATED 6' MINIMUM FROM INTERIOR LIGHTING OR OTHER ENERGIZED EQUIPMENT.

 1.18. ALL WALL MOUNTED THERMOSTATS SHALL BE LOCATED AND INSTALLED AWAY FROM DIRECT AIRSTREAM AND LOCATED 4'-0" AFF WHEN MEASURED FROM FINISHED FLOOR TO THE CENTER OF THE HIGHEST OPERABLE CONTROL BUTTON OR SWITCH.

 1.19. ALL CONDENSING UNITS INSTALLED ON-GRADE SHALL BE INSTALLED ON CONCRETE HOUSEKEEPING PAD.

2. SUBMITTALS AND SHOP DRAWINGS
 2.1. SUBMITTALS OR SHOP DRAWINGS SHALL BE PROVIDED TO THE GENERAL CONTRACTOR AND ENGINEER FOR REVIEW. THESE SUBMITTALS OR SHOP DRAWINGS SHALL INCLUDE ALL EQUIPMENT, MATERIALS, FIXTURES, APPLIANCES, PIPING MATERIALS, ETC. THE SHOP DRAWINGS WILL BE REVIEWED BY THE ENGINEER ON BEHALF OF THE OWNER AND/OR CLIENT, AND APPROVAL OF SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF COMPLIANCE WITH THESE DRAWINGS.

 2.2. THE SHOP DRAWINGS SHALL BE HIGHLIGHTED OR MARKED WITH CONSPICUOUS AND OBVIOUS NOTATIONS IDENTIFYING THE SPECIFIC EQUIPMENT, MATERIALS, FIXTURES, APPLIANCES, PIPING MATERIALS, ETC PROPOSED TO BE USED. SHOP DRAWINGS SUBMITTED TO ENGINEER THAT INCLUDE NON APPLICABLE INFORMATION, OR WHICH DO NOT INCLUDE SPECIFIC NOTATIONS AND/OR HIGHLIGHTING WILL NOT BE REVIEWED.

3. TEST & BALANCE
 3.1. THIS DRAWING AND SYSTEM(S) PERFORMANCE IS COMPLETELY CONTINGENT UPON A CERTIFIED TEST AND BALANCE PERFORMED BY A NEBB CERTIFIED TEST & BALANCE CONTRACTOR, INDEPENDENT OF THE INSTALLING MECHANICAL CONTRACTOR. ALL EQUIPMENT SHALL BE TESTED & BALANCED BY A NEBB CERTIFIED TEST AND BALANCE CONTRACTOR AND A COMPLETE REPORT SHALL BE PROVIDED TO THE ARCHITECT, ENGINEER, AND GENERAL CONTRACTOR. THE TEST SHALL BE DATED, INCLUDE INDOOR/OUTDOOR AMBIENT TEMPERATURES, AND SIGNED BY THE PERSON RESPONSIBLE FOR THE REPORT.

 3.2. THE TEST & BALANCE CONTRACTOR SHALL BE INDEPENDENT OF, AND HIRED BY THE MECHANICAL CONTRACTOR. THE TEST AND BALANCE CAN NOT BE OMITTED OR VALUE ENGINEERED FOR COST SAVINGS.

 3.3. THE TEST & BALANCE SHALL INCLUDE (AT MINIMUM) ENTERING/LEAVING AIR TEMPERATURES (DB/WB), EXTERNAL / TOTAL STATIC PRESSURE, TOTAL AIR FLOW RATES ENTERING AND LEAVING EQUIPMENT, AIRFLOW RATES FOR ALL SUPPLY, RETURN, EXHAUST, INTAKE OR SIMILAR AIR MOVEMENT DEVICES. THE TEST & BALANCE SHALL LIST INITIAL & FINAL AIR-FLOWS FOR ALL TESTED DEVICES.

4. EQUIPMENT & DEVICES
 4.1. ALL EQUIPMENT AND APPLIANCES SHALL BE STARTED, TESTED, ADJUSTED AND BALANCED FOR AIR DELIVERY AS INDICATED ON THE PLANS, AND PLACED IN SATISFACTORY OPERATIONAL CONDITION BY THE MECHANICAL CONTRACTOR. THIS CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP, MATERIALS AND EQUIPMENT TO BE FREE OF DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY. THIS IS IN ADDITION TO ANY WARRANTY OR GUARANTEE FROM THE EQUIPMENT MANUFACTURER. FURNISH THE OWNER WITH THE MANUFACTURER'S WRITTEN WARRANTEE CERTIFICATES.

 4.2. ALL EQUIPMENT SHALL BE PROPERLY SUPPORTED AND ISOLATED TO PREVENT NOISE AND VIBRATION TRANSMISSION UNO, OR UNLESS EQUIPMENT IS PRE-ISOLATED BY MANUFACTURER. ALL EXTERIOR EQUIPMENT SHALL BE MOUNTED, SUPPORTED, AND/OR BRACED TO WITHSTAND HURRICANE FORCE WINDS.

 4.3. ALL INTERIOR AIR HANDLING UNITS AND OTHER EQUIPMENT SERVING CONDITIONED AIR STREAMS SHALL BE INSTALLED LEVEL, AND WITH A GALVANIZED SHEET METAL DRAIN PAN UNDER EQUIPMENT, REGARDLESS OF SYSTEM LOCATION. THE DRAIN PAN BE EQUIPPED WITH A UL LISTED FLOAT SWITCH TO DISCONNECT COOLING UPON DETECTION OF WATER.

 4.4. THE PRIMARY DRAIN SHALL BE INSTALLED DIRECTLY TO OUTDOORS, OR AS OTHERWISE INDICATED, AND SHALL DISCHARGE AT A POINT WHICH WILL NOT CAUSE A NUISANCE. DO NOT DISCHARGE CONDENSATE DIRECTLY ON TO WALKWAY OR CONCRETE. THE PRIMARY CONDENSATE DRAIN LINE SHALL BE INSULATED WITH 3/4" ARMAFLEX INSULATION. PROVIDE SPLASH FOR ALL CONDENSATE PIPING DISCHARGING INTO LANDSCAPING.

 4.5. AIR HANDLING SYSTEMS AND EQUIPMENT CAPABLE OF EXCEEDING 2,000 CFM SHALL BE INSTALLED WITH A DUCT SMOKE DETECTOR ON THE SUPPLY OR OUTLET SIDE OF EQUIPMENT. DUCT SMOKE DETECTORS SHALL BE PROVIDED WITH AN INSPECTORS KEYED TEST STATION, AND/OR CONNECTED TO THE BUILDING'S FACP SYSTEM WHEN PRESENT.

 4.6. ALL PACKAGED DOWNFLOW UNITS SHALL BE PROVIDED WITH A WATER LEVEL MONITORING DEVICE.

 4.7. EQUIPMENT SHALL BE AS SCHEDULED AND MATCH BASIS OF DESIGN UNLESS OTHERWISE NOTED. ALTERNATE MANUFACTURERS SHALL INCLUDE, AND BE LIMITED TO:

4.7.1.	AC EQUIPMENT:	UPON PRIOR APPROVAL ONLY
4.7.2.	AC GRILLS:	PRICE, KRUEGER, TITUS, METAL-AIRE
4.7.3.	FANS:	GREENHECK, LOREN COOK, PENN-BERRY
4.7.4.	WALL LOUVERS:	POTTORFF, PRICE, RUSKIN

5. DUCTWORK
 5.1. REFER TO DUCTWORK SPECIFICATIONS ON THESE DRAWINGS FOR RESPECTIVE MATERIAL AND INSULATION BASED ON SYSTEM TYPE FOR THIS SPECIFIC PROJECT.

6. AIR DISTRIBUTION DEVICES
 6.1. ALL AIR DISTRIBUTION GRILLS SHALL BE WHITE ALUMINUM UNLESS NOTED OR SCHEDULED OTHERWISE.
 6.2. ALL DUCTWORK SERVING AIR DISTRIBUTION OUTLETS SHALL BE PROVIDED WITH A MANUAL AIR VOLUME DAMPER. THE MANUAL DAMPER SHALL BE TAGGED WITH AN ORANGE RIBBON IN ACCORDANCE WITH THE ENERGY CODE.
 6.3. ANY NON-ACCESSIBLE MANUAL DAMPERS SERVING AIR OUTLETS OR DISTRIBUTION DEVICES SHALL BE PROVIDED WITH A MANUAL OPPOSED BLADE DAMPRAIL OR CABLE OPERATED DAMPER ALL GRILLS SHALL BE CAPABLE OF AIR VOLUME ADJUSTMENT.
 6.4. ALL LINEAR GRILLS AND AIR DISTRIBUTION DEVICES WITH NON-ACCESSIBLE MANUAL DAMPERS SHALL BE PROVIDED WITH A MANUAL CABLE OPERATED DAMPER. THE ADJUSTMENT MECHANISM SHALL BE READILY ACCESSIBLE.

6. REFRIGERANT LINES
 6.1. ALL BELOW GRADE REFRIGERANT LINES SHALL BE ROUTED AND INSTALLED WITHIN PVC SLEEVE, INSTALLED WITH LONG SWEEPS TO ALLOW FOR FUTURE REPLACEMENT IF NECESSARY.
 6.2. REFRIGERANT SUCTION LINES TO BE INSULATED WITH 3/4" ARMAFLEX INSULATION.
 6.3. IN GENERAL, ALL REFRIGERANT LINES SHALL BE ROUTED IN CONCEALED SPACES AND PROTECTED FROM WEATHER AND ELEMENTS. PARTIALLY EXPOSED REFRIGERANT LINES INSTALLED OUTDOORS SHALL BE PROTECTED WITH UV RESISTANT COATING SIMILAR AND EQUAL TO ARMAFLEX WB FINISH UV RESISTANT COATING FOR FOAM INSULATION.
 6.4. REFRIGERANT ROUTED INTO BUILDING THROUGH PIPE CHASE OR SLEEVE SHALL BE SEALED AIR TIGHT WITH EXPANDING FOAM TO PREVENT AIR INFILTRATION OR EXFILTRATION THROUGH BUILDING ENVELOPE.

7. PLENUM SPACES
 7.1. THE NOTES BELOW SHALL APPLY TO ALL PLENUM SPACES AND MATERIALS WHETHER THEY ARE NEW OR EXISTING. THESE NOTES SHALL SUPERCEDE ALL OTHER NOTES LOCATED ON THESE DRAWINGS OR OTHER DRAWINGS INCLUDED FOR THIS PERMIT.
 7.2. ALL MATERIALS, EQUIPMENT, OR PIPING SHALL BE APPROVED FOR PLENUM USE IF INSTALLED WITHIN RETURN AIR PLENUMS OR PLENUM CLOSETS. PLENUM WRAPS MAY BE USED IF APPROVED BY AHJ PRIOR TO INSTALL.
 7.3. MATERIALS AND WRAPS SHALL MEET THE FLAME SPREAD INDEX OF NOT MORE THEN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.
 7.4. ALL PLENUM SPACES SHALL COMPLY WITH THE BUILDING CODE, THE MECHANICAL CODE (SECTION 602 IN ITS ENTIRETY), THE PLUMBING CODE, AND THE NATIONAL ELECTRIC CODE IN ADDITION TO ANY APPLICABLE NFPA STANDARDS OR LOCALLY ADOPTED CODES, AMENDMENTS OR ORDINANCES.

MECHANICAL SYMBOL LEGEND

DUCTWORK

24"x12"	SQ. DUCT SIZE (WIDTH X HEIGHT)
18"Ø	ROUND DUCT SIZE (DIAMETER)
(E)	EXISTING DUCT TO REMAIN
	DUCT TO BE DEMOLISHED
S/A	SUPPLY AIR
O/A	OUTDOOR AIR
R/A	RETURN AIR
T/A	TRANSFER AIR
E/A	GENERAL EXHAUST AIR
KED	GENERAL EXHAUST AIR
	REC. SUPPLY DUCT RISE/DROP ROUND SUPPLY DUCT RISE/DROP
	RECT. RETURN DUCT RISE/DROP ROUND RETURN DUCT RISE/DROP
	RECT. EXHAUST DUCT RISE/DROP ROUND EXHAUST DUCT RISE/DROP

SENSORS & DAMPERS

SYSTEM IDENTITY (TYP)	DUCT SMOKE DETECTOR
THERMOSTAT	DUCT TEMPERATURE SENSOR
HUMIDISTAT	PRESSURE SENSOR
TEMP SENSOR	DIFFERENTIAL PRESSURE SENSOR
HUMIDITY SENSOR	FIRE DAMPER
CARBON MONOXIDE DETECTOR	SMOKE DAMPER
CARBON DIOXIDE DETECTOR	FIRE / SMOKE COMBO DAMPER
CARBON MONOXIDE / NITROGEN DIOX. SENSOR	RADIATION DAMPER
REFRIGERANT GAS MONITOR	MOTORIZED DAMPER
HAZARDOUS GAS MONITOR	ZONE DAMPER

NOTE: ALL SENSORS, DAMPERS, AND DETECTORS TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS, BE MOUNTED AT THE APPROVED HEIGHT, AND REMAIN ACCESSIBLE FOR INSPECTION, RESETTING, REPAIR, AND REPLACEMENT; AS APPLICABLE. ALL SENSORS, DAMPERS, DEVICES, AND DETECTORS SHALL BE LISTED AND APPROVED AND INSTALLED IN A MANNER THAT MAINTAINS THE RESPECTIVE LISTING.

ABBREVIATIONS

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
ALT	ALTERNATE	MD	MOTORIZED DAMPER
AP	ACCESS PANEL	MECH	MECHANICAL
ARCH	ARCHITECT/ARCHITECTURAL	MFR	MANUFACTURER
BFF	BELOW FINISHED FLOOR	MIN	MINIMUM
BLW	BELOW	MISC	MISCELLANEOUS
BTU	BRITISH THERMAL UNITS	MTR	MOTOR
BTUH	BRITISH THERMAL UNITS PER HOUR	MU/A	MAKE-UP/AIR
CAP	CAPACITY	NC	NOISE CRITERIA
CB	CATCH BASIN	NC	NORMALLY CLOSED
CFM	CUBIC FEET PER MINUTE	NIC	NOT IN CONTRACT
CLG	CEILING	NO	NUMBER
CO	CLEAN OUT	NO	NORMALLY OPEN
CW	COLD WATER	NTS	NOT TO SCALE
D	DEGREE	O	OXYGEN
DB	DRY BULB	O/A	OUTSIDE AIR
DIA	DIAMETER	ORD	OVERFLOW ROOF DRAIN
DN	DOWN	PD	PRESSURE DROP
DW	DISTILLED WATER	PIV	POST INDICATOR VALVE
EA	EACH	PLBG	PLUMBING
EAT	ENTERING AIR TEMPERATURE	PRESS	PRESSURE
ELEC	ELECTRICAL	PRV	PRESSURE REDUCING VALVE
EQUIP	EQUIPMENT	PSI	POUNDS PER SQUARE INCH
EWC	ELECTRIC WATER COOLER	PSIG	POUNDS PER SQUARE INCH GAUGE
EWT	ENTERING WATER TEMPERATURE	PWR	POWER
E/A	EXHAUST AIR	R	DUCT RISER
EXIST	EXISTING	R/A	RETURN AIR
F	DEGREES FAHRENHEIT	RCP	RADIANT CEILING PANEL
FCO	FLOOR CLEAN OUT	RD	ROOF DRAIN
FD	FLOOR DRAIN	REC	RECESSED
FDC	FIRE DEPARTMENT CONNECTION	RED	REDUCER
FL	FLOOR	RH	RELATIVE HUMIDITY
FO	FUEL OIL	RL/A	RELIEF AIR
FOV	FUEL OIL VENT	RM	ROOM
FOR	FUEL OIL RETURN	RPM	REVOLUTIONS PER MINUTE
FOS	FUEL OIL SUPPLY	RW	RAIN WATER
FPM	FEET PER MINUTE	SF	SQUARE FOOT
FS	FLOOR SINK	S/A	SUPPLY AIR
FT	FOOT/FEET	SAN	SANITARY
FTR	FIN TUBE RADIATION	SF	SQUARE FOOT
GAL	GALLON	SD	SMOKE DAMPER
GF	GAS-FIRED	SM	SURFACE MOUNT
GC	GENERAL CONTRACTOR	SP	STANDPIPE
GPM	GALLONS PER MINUTE	SP	STATIC PRESSURE
GW	GREASE WASTE	STM	STEAM
HB	HOSE BIB	T	THERMOSTAT
HP	HORSE POWER	TD	TEMPERATURE DROP
HTG	HEATING	TDR	TRENCH DRAIN
HTR	HEATER	TEMP	TEMPERATURE
HW	HOT WATER	TYP	TYPICAL
HYD	HYDRANT	UG	UNDERGROUND
ID	INDIRECT	VAC	VACUUM
IN	INCH	V	VENT
INV	INVERT	VAV	VARIABLE AIR VOLUME
LB	POUND	VENT	VENTILATION
LB/HR	POUNDS PER HOUR	VTR	VENT THROUGH ROOF
LAT	LEAVING AIR TEMPERATURE	W	WASTE
LPG	LIQUEFIED PETROLEUM GAS	WB	WET BULB

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
EF	EXHAUST FAN	SP	SUMP PUMP
EDC	ELECTRIC DUCT COIL	UH	UNIT HEATER
		WH	WATER HEATER

SPLIT SYSTEM DX AIR CONDITIONING UNIT SCHEDULE

INDOOR UNIT							ELECTRICAL				UNIT	OUTDOOR UNIT				ELECTRICAL			SYSTEM DATA					UNIT	NOTES
MARK	SUPPLY CFM	O.A. CFM	EXT. S.P.	MANUFACTURER / MODEL NUMBER	HEAT TYPE	INPUT KW	VOLTAGE / PHASE	MTR FLA	MCA	MOCP	WEIGHT LBS	MARK	MANUFACTURER MODEL NUMBER	COMPR. QTY	TONS TOTAL	VOLTAGE/ PHASE	MCA	MOCP	EFFICIENCY EER2	EFFICIENCY SEER2	TOTAL MBH	SENS. MBH		WEIGHT LBS	
AHU-1	800	*0	0.5"	CARRIER / FJ5ANXB24	ELECTRIC	3.8 / 5.0	208-230 / 1	2.9	27.3 / 29.6	30 / 30	131	CU-1	CARRIER / 26SCA524-3	1	2.0	208-230/1	13.6	20	-	16.0	24.1	18.0		164.0	1 THRU 11

NOTES: * OUTDOOR AIR PROVIDED BY MEANS OF NATURAL VENTILATION, PER FLORIDA BUILDING CODE 5th EDITION (2014) - MECHANICAL, SECTION 402.2

1. PROVIDE AHU WITH SINGLE POINT POWER CONNECTION. COORDINATE WITH ELECTRICAL CONTRACTOR.
2. PROVIDE WITH DISCONNECT SWITCH.
3. PROVIDE UNIT WITH CORRECT PIPING CONNECTION ARRANGEMENT & SIDE ACCESS FOR CONSTRUCTION LIMITATIONS.
4. PROVIDE WITH CIRCUIT BREAKER COVER KIT.
5. PROVIDE WITH TXV FOR COMPONENT COMPATIBILITY.
6. PROVIDE WITH TIME DELAY RELAY KIT.
7. PROVIDE WITH HIGH CAPACITY LIQUID LINE DRIER.
8. PROVIDE WITH COMPRESSOR HARD START KIT.
9. PROVIDE WITH 24/7 WALL MOUNT HEATING/COOLING PROGRAMMABLE T'STAT PER UNIT REQUIREMENTS LISTED ABOVE
10. REFRIGERANT LINE SETS: THE MECHANICAL CONTRACTOR SHALL HAVE THE UNIT MANUFACTURER SIZE THE R454B PIPING BASED ON THE LENGTH OF RUNS.
11. INSTALL PRIMARY DRAIN LINE TO A CODE APPROVED DRAIN LOCATION. SEE THE MECHANICAL NOTES FOR SECONDARY DRAIN INSTALLATION.

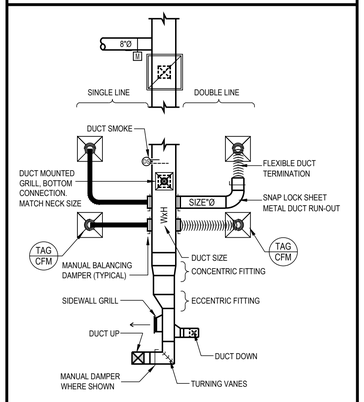
AIR DEVICE LEGEND

	SUPPLY AIR GRILL, CEILING / DUCT MOUNTED
	LINEAR AIR GRILL, CEILING MOUNTED
	ROUND SUPPLY AIR GRILL, CEILING / DUCT MOUNTED
	ROUND SUPPLY AIR GRILL, SIDEWALL MOUNTED
	RETURN AIR GRILL, CEILING / DUCT MOUNTED
	EXHAUST AIR GRILL, CEILING / DUCT MOUNTED

ANNOTATION & SYMBOL LEGEND

	CONNECT TO EXISTING
	POINT OF INTERFACE BETWEEN CONTRACTORS
	CONTINUATION OF PIPING OR SYSTEM, ANNOTATION BREAK
	DIRECTION OF FLOW
# #	KEYED NOTE
	EQUIPPED TO BE REMOVED / DEMOLISHED
	PIPING TO BE DEMOLISHED
# SHEET	DETAIL BUBBLE (DETAIL # / SHEET)
# SHEET #	ELEVATION BUBBLE
	REVISION CLOUD, DELTA / CHANGE MARK

GRAPHIC FLOOR PLAN LEGEND



CODE COMPLIANCE STATEMENT

ENTIRE INSTALLATION SHALL COMPLY WITH CODES BELOW, IN ADDITION TO ALL REFERENCED STANDARDS OR ANY OTHER LOCALLY ADOPTED AMENDMENTS.

FLORIDA BUILDING CODE:	2023 EDITION
FLORIDA ENERGY CODE:	2023 EDITION
FLORIDA FIRE CODE:	2023 EDITION
FLORIDA FUEL GAS CODE:	2023 EDITION
FLORIDA MECHANICAL CODE:	2023 EDITION
FLORIDA PLUMBING CODE:	2023 EDITION
FLORIDA FIRE PREVENTION CODE:	2023 EDITION
NATIONAL ELECTRICAL CODE:	2020 EDITION

TO THE BEST OF OUR KNOWLEDGE, THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE ABOVE INDICATED CODES.

FAN SCHEDULE

MARK	MANUFACTURER / MODEL NUMBER	CFM	STATIC PRESS.	AREA SERVED	FAN TYPE	DRIVE TYPE	VOLTAGE/ PHASE	WATTS/ AMPS	SONES	WEIGHT (LBS)	NOTES
EF-1	NUTONE / QTXE080	80	0.250	TOILET	CEILING EXHAUST	DIRECT	120 / 1	23.3 / 0.2	0.3	12.0	1 THRU 6

NOTES: FAN MANUFACTURER AND MODEL SHALL BE AS LISTED ABOVE OR APPROVED EQUAL.

1. PROVIDE WITH GRAVITY BACKDRAFT DAMPER
2. PROVIDE WITH PERMANENTLY LUBRICATED MOTOR WITH BUILT-IN THERMAL OVERLOAD PROTECTION AND DISCONNECT PLUG.
3. PROVIDE WITH MANUFACTURER'S WHITE PLASTIC GRILLE.
4. PROVIDE WITH PRE-WIRED SOLID STATE FAN SPEED CONTROLLER.
5. PROVIDE WITH 0-15 MINUTE TIME DELAY SWITCH, INTERLOCK WITH ROOM LIGHT SWITCH.
6. PROVIDE WITH HANGING VIBRATION ISOLATOR KIT.

AIR DISTRIBUTION SCHEDULE

MARK	MANUFACTURER	MODEL	SIZE	DIRECTION	NOTES
1	METALAIRE	LMH	8x4	1 WAY	COORDINATE FINAL COLOR OR FINISH WITH ARCHITECT PROVIDE WITH OPPOSED BLADE DAMPER
2	METALAIRE	LMH	8x6	1 WAY	COORDINATE FINAL COLOR OR FINISH WITH ARCHITECT PROVIDE WITH OPPOSED BLADE DAMPER
3	METALAIRE	LMH	10x6	1 WAY	COORDINATE FINAL COLOR OR FINISH WITH ARCHITECT PROVIDE WITH OPPOSED BLADE DAMPER
4	METALAIRE	LS4M	12x12	4 WAY	COORDINATE FINAL COLOR OR FINISH WITH ARCHITECT PROVIDE WITH OPPOSED BLADE DAMPER
A	METALAIRE	RH-1	10x6	TRANSFER	COORDINATE FINAL COLOR OR FINISH WITH ARCHITECT
B	METALAIRE	RH-1	18x18	RETURN	COORDINATE FINAL COLOR OR FINISH WITH ARCHITECT

PROGRESS SET - NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

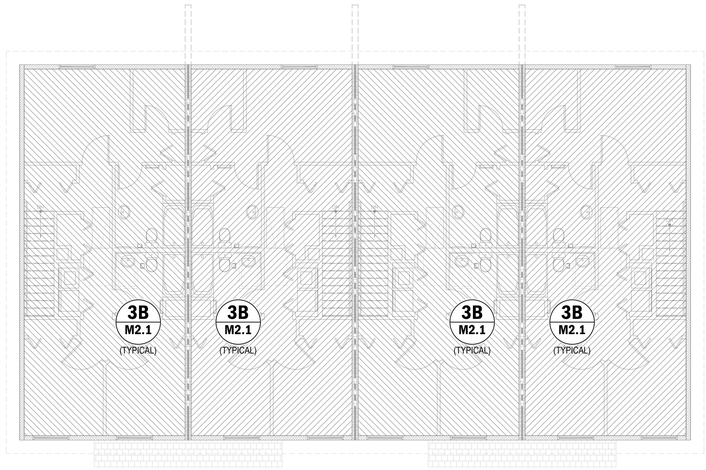
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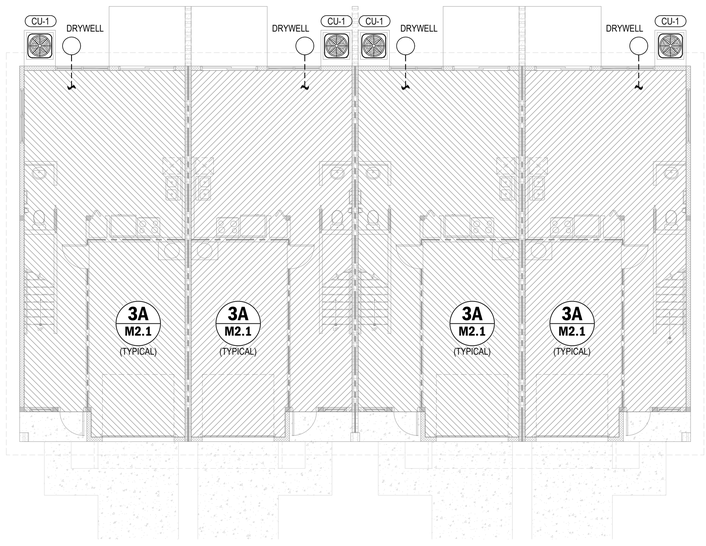
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MECHANICAL HVAC OVERALL PLAN - 2ND LEVEL

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



MECHANICAL HVAC OVERALL PLAN - 1ST LEVEL

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

GRAPHIC SCALE

1/8" = 1'-0"

8' 6' 4' 2' 0 8' 16'

PROGRESS SET - NOT FOR CONSTRUCTION

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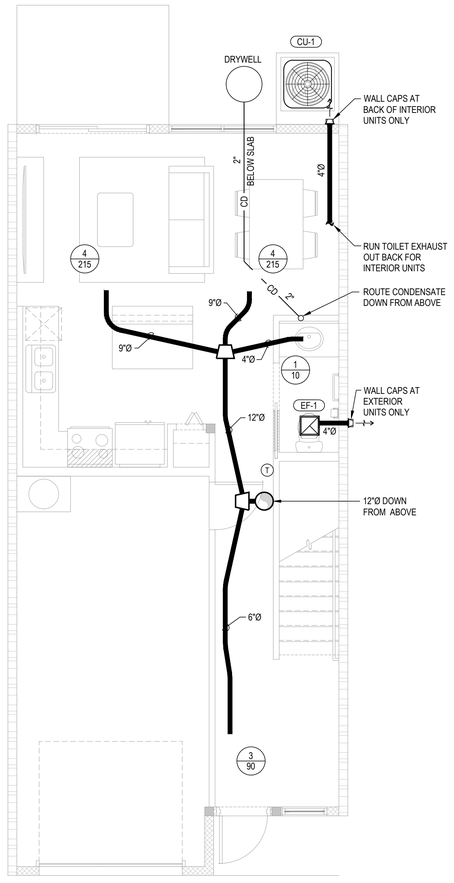
CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

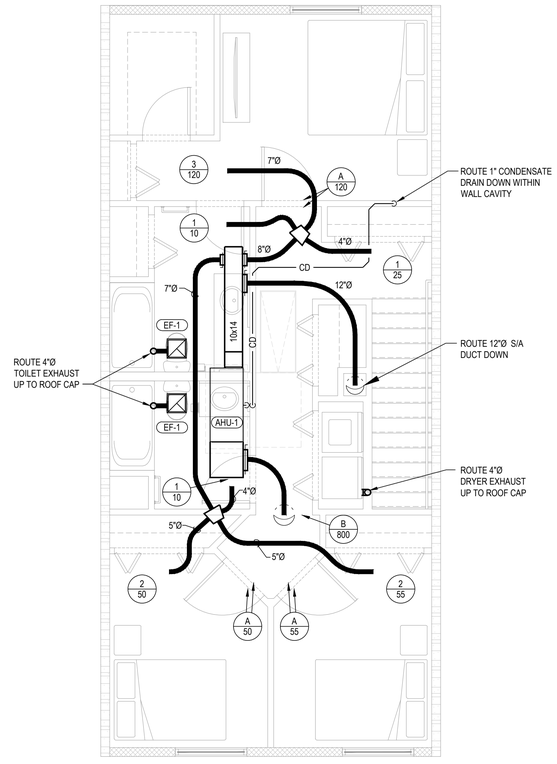
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JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	

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SHEET
M1.1C





3A M2.1 (TYPICAL) MECHANICAL HVAC PLAN - 1ST LEVEL

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

3B M2.1 (TYPICAL) MECHANICAL HVAC PLAN - 2ND LEVEL

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

GRAPHIC SCALE

1/4" = 1'-0" — 4' 3' 2' 1' 0 4' 8'

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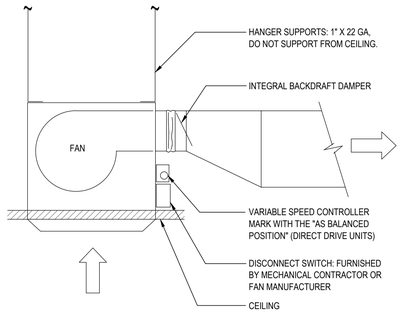
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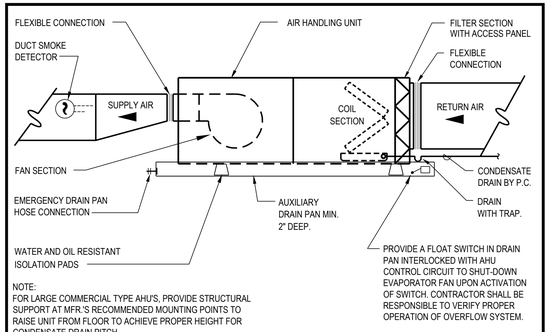
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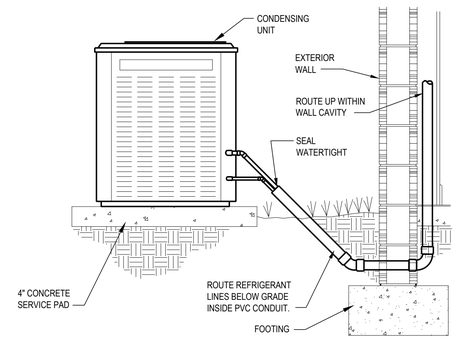
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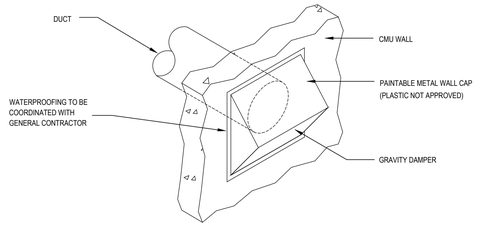
1	CEILING MOUNTED EXHAUST FAN DIAGRAM
M3.1C	NTS



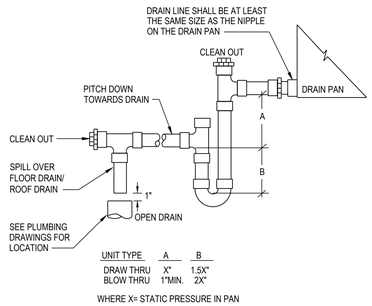
4	AIR HANDLING UNIT DIAGRAM
M3.1C	NTS



7	GRADE MOUNTED CONDENSING UNIT DIAGRAM
M3.1C	NTS

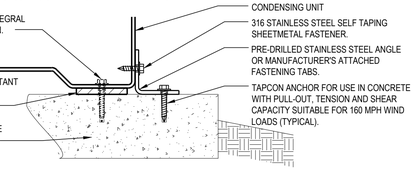


2	WALL CAP DIAGRAM
M3.1C	NTS



5	AIR CONDITIONING UNIT CONDENSATE DRAIN TRAP DIAGRAM
M3.1C	NTS

SECURE UNIT TO CONCRETE PAD WITH TAPCON FASTENERS AT UNIT MANUFACTURER'S RECOMMENDED LOCATIONS. WHERE CONDENSING UNIT FRAME IS NOT CONSTRUCTED TO ACCEPT FASTENERS FOR LOCAL WIND LOAD REQUIREMENTS, ALTERNATE MEANS OF SECURING SHALL BE USED AS NOTED BELOW.



NOTES:

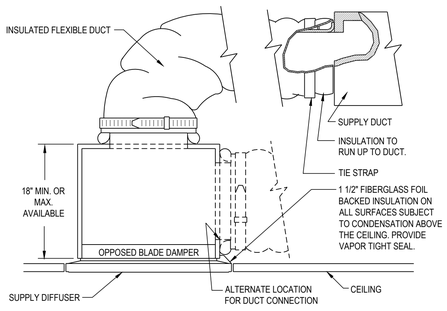
1. WHERE CONDENSING UNIT FRAME IS NOT CONSTRUCTED TO ACCEPT FASTENERS, PROVIDE VINYL JACKETED 1/4 INCH GALVANIZED STEEL CABLE AND 1 INCH, 316 STAINLESS STEEL EYEBOLTS WITH WEDGE TYPE STAINLESS STEEL ANCHORS FOR USE IN CONCRETE WITH PULL-OUT, TENSION AND SHEAR CAPACITY SUITABLE FOR 170 MPH WIND LOADS. LOOP CABLE OVER TOP OF UNIT WITH 2 INCH SLACK, THREAD THROUGH DISCHARGE GRILLE AND AVOID INTERFERING FAN OPERATION.

2. FACTORY INSTALLED LIFTING LUGS ON SUPPORT FRAME MAY BE USED IN LIEU OF LOOPING CABLE OVER UNIT.

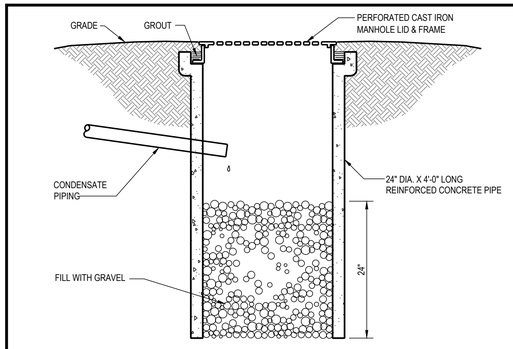
3. PROVIDE MINIMUM OF TWO ANCHOR ASSEMBLIES PER CONDENSING UNIT. LOCATE ON OPPOSITE CORNERS AND AS PER UNIT MANUFACTURERS RECOMMENDATIONS.

4. ALTERNATE ANCHORING DIAGRAMS AS APPROVED BY THE FLORIDA BUILDING CODE AND CONDENSING UNIT MANUFACTURER SHALL BE ACCEPTABLE.

8	HURRICANE ANCHORING FOR CONDENSING UNIT DIAGRAM
M3.1C	NTS



3	FLEXIBLE DUCT CONNECTION TO AIR DEVICE DIAGRAM
M3.1C	NTS



6	DRYWELL DIAGRAM
M3.1C	NTS

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ELECTRICAL SPECIFICATIONS (NEC 2020)

GENERAL:

1. ENTIRE INSTALLATION TO COMPLY WITH THE (NFPA 70), NFPA STANDARDS AS APPLICABLE IN ADDITION TO SPECIFICATIONS AS OUTLINED BELOW. ALL ELECTRICAL WORK FOR THE ENTIRE PROJECT SHALL BE PERFORMED IN A NEAT AND CRAFTSMANLIKE MANNER BY PERSONS SKILLED IN THE TRADE, AND SHALL BE DONE UNDER THE SUPERVISION OF A MASTER ELECTRICIAN LICENSED TO DO WORK IN THE AREA WHERE THE PROJECT IS TO BE CONSTRUCTED. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST COPY OF THE NATIONAL ELECTRIC CODE PRESENTLY ENFORCED.

SCOPE:

2. THE PROJECT INCLUDES ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PROVIDE A COMPLETE ELECTRICAL INSTALLATION INCLUDING, BUT NOT LIMITED TO, POWER SERVICES (TEMPORARY, NORMAL, AND STAND-BY OR EMERGENCY), SWITCHBOARDS, AUTOMATIC TRANSFER SWITCHES, SERVICE ENTRANCE(S), DISCONNECTS, DISTRIBUTION PANELS, CONDUIT, WIRING, JUNCTION AND OUTLET BOXES, WIRING DEVICES AND COVER PLATES, LIGHTING FIXTURES, CONNECTION CHORDS, SPECIAL CONNECTIONS AND OUTLETS, ALL AS ILLUSTRATED ON THE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES, UTILITY COMPANIES, AND GOVERNING AUTHORITIES.

3. THE ELECTRICAL CONTRACTOR TO FURNISH A MINIMUM 100 AMP SINGLE PHASE TEMPORARY SERVICE. POWER COMPANY FEES AND MONTHLY ELECTRIC BILL TO BE PAID BY THIS CONTRACTOR.

CODES:

4. ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH ANSI, NFPA70, STATE OF FLORIDA LAWS, AND ALL LOCAL RULES AND REGULATIONS, INCLUDING THE NATIONAL ELECTRIC CODE AND ENERGY CODE IN EFFECT.

DRAWINGS:

5. THE DRAWINGS ARE DIAGRAMMATIC, AND DO NOT SHOW ALL CHANGES IN HEIGHT, STRUCTURAL MEMBERS, DUCTWORK, PIPING, BRACKETS AND ANY OTHER NUMBER OF ITEMS WHICH MIGHT CAUSE A CONFLICT. THIS CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH OTHER TRADES AS TO THE LOCATION OF HIS DEVICES AND NECESSARY AREAS FOR PANELS AND CONDUIT/WIRING RUNS. VERIFY AND COORDINATE ALL ELECTRICAL WORK WITH ALL TRADES TO PROVIDE A TIMELY INSTALLATION. ADDITIONAL CHARGES DUE TO LACK OF COORDINATION WILL NOT BE APPROVED.

MATERIAL:

1. ALL MATERIALS SHALL BE NEW, FREE FROM DEFECTS, AND SHALL BE LISTED BY AND BEAR THE U.L. LABEL WHERE SUBJECT TO APPROVAL. MATERIALS SHALL BE OF THE SAME MANUFACTURER OR BRAND FOR EACH TYPE OF MATERIAL, UNLESS DESIGNATED OTHERWISE.

FIXTURES:

1. ALL FIXTURES SHALL BE AS LISTED IN THE LIGHTING FIXTURE SCHEDULES. ALL FIXTURES SHALL BE UL LISTED OR EQUAL TESTING AGENCY, AND SHALL BE SPECIFICALLY LISTED FOR THE ENVIRONMENT IN WHICH THEY ARE INSTALLED.

PANELS:

1. ALL PANELS TO BE FURNISHED AS PER PANEL SCHEDULES PROVIDED. SQUARE D, GE, AND SIEMENS ARE ACCEPTABLE MANUFACTURERS.

2. ALL SWITCHBOARD AND OVERCURRENT DEVICES SHALL BE RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT; ADDITIONAL VERIFICATION WITH LOCAL UTILITY COMPANY DURING CONSTRUCTION IS REQUIRED.

DEVICES:

1. EXTERIOR DISCONNECT SWITCHES SHALL BE NEMA 3R ENCLOSURES AND ELECTRICALLY PROTECTED AS PER MANUFACTURER'S SPECIFICATIONS.

2. INTERIOR DISCONNECT SWITCHES SHALL BE NEMA 1 ENCLOSURES AND ELECTRICALLY PROTECTED AS PER MANUFACTURER'S SPECIFICATIONS.

3. DISCONNECTS LOCATED WITHIN CORROSIVE ENVIRONMENTS OR NEAR CORROSIVE STORED MATERIALS SHALL BE NEMA-4X.

4. EXTERIOR DISCONNECTS SERVING LIFT STATIONS SHALL BE NEMA-4X STAINLESS STEEL.

5. SWITCHES SHALL BE 20 AMP, SPECIFICATION GRADE TOGGLE SWITCHES, SIDE WIRED WITH GROUNDING TERMINAL; COLOR SHALL BE WHITE (UNLESS NOTED OTHERWISE) WITH MATCHING COVERPLATE; MOUNTING HEIGHT SHALL BE +48" AFF TO BOTTOM.

6. RECEPTACLES SHALL BE 15 AMP (MINIMUM), SPECIFICATION GRADE, SIDE WIRED WITH GROUNDING TERMINAL; COLOR SHALL BE WHITE (UNLESS NOTED OTHERWISE) WITH MATCHING COVERPLATE; MOUNTING HEIGHT NOTED IN SYMBOL LEGEND OR ON DRAWING.

7. ALL 15- AND 20-AMPERE, 125- AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN NEC 406.12 SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

8. ALL RECEPTACLES INSTALLED IN KITCHENS, KITCHEN COUNTER TOPS, OR WITHIN 6 FEET (6') OF A WATER SUPPLY (i.e.: SINK), SHALL BE GROUND FAULT CIRCUIT INTERRUPTER (G.F.C.I.) DEVICES WITH DOWNSTREAM DEVICES IDENTIFIED.

9. ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN BATHROOMS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.

BRANCH CIRCUIT WIRING:

10. ALL CONDUCTORS SHALL BE COPPER UNLESS EXPLICITLY OTHERWISE SPECIFIED ON PLANS.

11. MINIMUM BRANCH CIRCUIT WIRING SHALL BE #12 AWG THWN COPPER.

TYPICAL NOTES

12. EQUIPMENT FURNISHED AND PHYSICALLY INSTALLED BY "OTHERS". ALL ELECTRICAL CONNECTIONS EXTERNAL TO THE EQUIPMENT SHALL BE MADE BY THE ELECTRICAL CONTRACTOR. WIRE, CONDUIT, LUGS, RECEPTACLES, PIGTAILS, DISCONNECTS, ETC. AS MAY BE REQUIRED SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR.

NOTE: INCLUDE WORSE CONDITION IN PRICING. VERIFY ROUGH-IN LOCATIONS, TYPE OF CONNECTION AND AMPACITY REQUIRED FROM APPLICABLE EQUIPMENT DRAWINGS PRIOR TO INSTALLING ANY CONDUIT, CONDUCTORS OR BOXES.

10. WALL TELEPHONE/DATA OUTLET. INSTALL 2-GANG BOX WITH MODULAR TELEPHONE DEVICE IN COVER PLATE. INSTALL (1) 3/4" EMT CONDUIT TO ACCESSIBLE CEILING SPACE OR HOMERUN TO TELEPHONE/COMPUTER TERMINAL EQUIPMENT. HEIGHT, UNLESS NOTED, IS 18" ABOVE FINISH FLOOR.

11. PROVIDE LIGHT FIXTURE AND RECEPTACLE AT LOCATIONS INDICATED FOR HVAC MAINTENANCE LIGHTING. USE COMBINATION SWITCH AND RECEPTACLE FOR LIGHT CONTROL. FIELD DETERMINES EXACT LOCATION AND HEIGHT.

12. SWITCHED JUNCTION BOX IN CEILING FOR CEILING FAN OR LIGHT. NOTE: BOX MUST BE IDENTIFIED FOR FAN SUPPORT USE). ANCHOR TO STRUCTURE TO SUPPORT 75 LBS. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL FAN AND/OR LIGHT, AND ALL WIRING, INCLUDING SWITCH AND POWER LEGS. VERIFY AND COORDINATE FAN TYPE WITH OWNER.

13. IF THE CEILING SPACE OR HVAC CLOSETS IN THIS PROJECT WILL BE USED AS A RETURN AIR PLENUM THEN ALL MATERIALS AND COMPONENTS LOCATED ABOVE CEILING SPACE OR CLOSET (WITHIN RETURN AIR PLENUM) SHALL BE APPROVED FOR PLENUM USE (OR) SHALL BE WRAPPED WITH A UL LISTED AND APPROVED PLENUM WRAP AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS. MATERIALS AND WRAPS SHALL MEET THE FLAME SPREAD INDEX OF NOT MORE THEN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723. THIS NOTE SHALL APPLY TO ALL ITEMS LOCATED WITHIN THE RETURN AIR PLENUM SPACE WHETHER THEY ARE NEW OR EXISTING. ENTIRE PLENUM SPACE SHALL COMPLY WITH LOCAL BUILDING CODES. THIS NOTE SHALL SUPERCEDE ALL OTHER NOTES LOCATED ON THESE DRAWINGS OR OTHER DRAWINGS INCLUDED FOR THIS PERMIT.

GENERAL NOTES: ELECTRICAL

14. ALL ELECTRICAL SWITCHGEAR, PANELS, AND DEVICES SHALL BE INSTALLED 1'-0" ABOVE FLOOD ELEVATION. REFER TO ARCHITECTURAL DRAWINGS FOR FLOOD ELEVATION AND COORDINATE WITH GENERAL CONTRACTOR.

15. THE ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ALL ELECTRICAL SERVICE ROUGH-IN AND INSTALLATION DETAILS, FEES, WITH THE LOCAL POWER COMPANY/UTILITY FIELD ENGINEER PRIOR TO AND INCLUDE IN BID! ELECTRICAL METERING EQUIPMENT AND METERING DEVICES ARE REQUIRED TO BE APPROVED BY POWER COMPANY.

16. THE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH ALL STATE/LOCAL BUILDING CODES/ORDINANCES/REGULATIONS PRESENTLY IN EFFECT. IN ADDITION, COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.).

17. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE IN ORDER TO FAMILIARIZE THEM SELF WITH EXISTING CONDITIONS, FAILURE TO DO SO WILL NOT WARRANT ANY ADDITIONAL CHARGES TO THE OWNER.

18. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THEIR BID, ANY CUTTING OR PATCHING OF CONCRETE/ASPHALT PAVEMENTS, ETC. TO RUN ELECTRICAL.

19. ALL EQUIPMENT, FIXTURES, ETC. SHALL BE STARTED, TESTED, ADJUSTED AND PLACED IN SATISFACTORY OPERATING CONDITION. THIS CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP, MATERIALS AND EQUIPMENT TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY (C.O.), AND SHALL REPAIR ANY SUCH DEFECTS WITHOUT COST TO THE OWNER. ALL EQUIPMENT SHALL BE COVERED FOR THE DURATION OF THE MANUFACTURER'S GUARANTEE OR WARRANTY. THIS CONTRACTOR SHALL FURNISH THE OWNER WITH ALL MANUFACTURER'S GUARANTEE AND WARRANTIES.

20. HVAC AIR HANDLER AND CONDENSING UNIT CIRCUIT BREAKERS MUST BE U.L. LISTED AS "HACR" RATED IN ORDER TO USE NON-AUTO DISCONNECTS AT HVAC EQUIPMENT. IF NOT LISTED, THEN A FUSED DISCONNECT IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S NAMEPLATE REQUIREMENTS MUST BE INSTALLED AT THE EQUIPMENT.

21. THE ELECTRICAL, GENERAL, HVAC, AND PLUMBING CONTRACTOR(S) SHALL STRICTLY ADHERE TO THE FOLLOWING ITEMS WHEN DEALING WITH ELECTRICAL EQUIPMENT CLEARANCES:

   A. NO PIPING OR DUCTWORK OF ANY KIND SHALL BE INSTALLED ABOVE ANY SWITCHBOARD OR PANELBOARD. THIS AREA TO REMAIN CLEAN FROM THE EQUIPMENT TO 25' ABOVE OR TO THE BOTTOM OF THE STRUCTURAL SLAB.

   B. A CLEARANCE OF 36" MINIMUM SHALL BE MAINTAINED IN FRONT OF ELECTRICAL EQUIPMENT FOR THE ENTIRE WIDTH OF THE EQUIPMENT, PLUS A MINIMUM OF 30" TOTAL LEFT/RIGHT CLEARANCE.

GENERAL NOTES: ELECTRICAL (CONTINUED)

22. ALL "WEATHERPROOF" ("WP") DEVICES ARE TO BE INSTALLED WITH A WEATHER-SHIELDING COVER.

23. ALL ELECTRICAL CONDUITS NOT CONTAINING SPECIFIED CONDUCTORS SHALL HAVE A PULL WIRE INSTALLED.

24. DO NOT SCALE THE ELECTRICAL DRAWINGS; REFER TO THE ARCHITECTURAL PLANS FOR EQUIPMENT LOCATIONS, CABINETRY, CEILING GRIDS, DOOR SWINGS, ETC.

25. THE INTENT OF THESE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL ELECTRICAL INSTALLATION.

26. IT IS NOT THE INTENT OF THESE PLANS TO SHOW ALL DETAILS OF CONSTRUCTION. THE ELECTRICAL CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS SUCH AS HARDWARE, J-BOXES, CONDUIT FITTINGS, ETC., AS NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM INSTALLATION.

27. TECHNICIANS SKILLED IN THEIR TRADE SHALL PERFORM ALL ELECTRICAL INSTALLATIONS IN A PROFESSIONAL MANNER.

28. WIRE TO, AND MAKE CONNECTIONS AS NECESSARY, TO ALL PIECES OF EQUIPMENT (FURNISHED BY OTHERS), FOR COMPLETE AND SATISFACTORY OPERATION BY THE OWNER.

29. ALL ELECTRICAL PANELS SHALL BE LABELED WITH THEIR RESPECTIVE SOURCES PER NEC 408.4(B)

30. ALL SERVICE AND FEEDER CONDUITS SHALL HAVE EXPANSION FITTINGS WHEN PENETRATING SLABS, ETC. TO ALLOW FOR STRUCTURAL SETTLEMENT.

31. PROVIDE "PVC" CONDUITS STUBBED OUT, BELOW GRADE FOR ADDITIONAL SERVICES, IN ORDER TO PROVIDE CONCEALED TELEPHONE AND/OR DATA SERVICE ENTRANCE.

32. PROVIDE TIME CLOCKS WITH BATTERY BACK-UP TO CONTROL ALL SIGNAGE AND EXTERIOR LIGHTING CIRCUITS; SEE POWER RISER DIAGRAM FOR ADDITIONAL DETAILS.

33. ALL CONDUCTORS SHALL BE TYPE THHN/THWN, COPPER (CU) UNLESS OTHERWISE CALLED FOR ON THESE DOCUMENTS. SEE PANEL SCHEDULES AND RISER DIAGRAM.

34. ALL LIGHTING FIXTURES (INCLUDING THOSE PROVIDED BY OTHERS) ARE TO BE INSTALLED UNDER THIS CONTRACT. SEE SCHEDULE FOR FIXTURE RECOMMENDATIONS, LAMPS, ETC.

35. ALL LIGHTING BRANCH CIRCUITS TO BE WIRED WITH #16 SOLID AWG C_U CONTROL CONDUCTORS (GREY & PURPLE) FOR LIGHT FIXTURE CONTROL WIRING.

36. NOTICE TO CONTRACTOR: REVISIONS TO THESE DRAWINGS AND CERTIFICATION THEREOF WHICH MAY BE REQUIRED BECAUSE OF CONTRACTOR OPTED REVISIONS, SHALL BE COMPENSATED TO THE ENGINEER(S) BY THE REQUESTING CONTRACTOR. PAYMENT SHALL BE REQUIRED AT THE TIME OF CERTIFICATION DELIVERY.

INSTALLATION:

GENERAL:

37. ROUGH-IN LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS, AS WELL AS EQUIPMENT SIZE, TO AVOID CONFLICT WITH OTHER TRADES.

38. PRIOR TO ROUGH-IN, THE ELECTRICAL CONTRACTOR SHALL RELOCATE, AS DIRECTED BY THE OWNER/ARCHITECT, ANY PIECE OF EQUIPMENT IN THE VERTICAL AND/OR HORIZONTAL DIRECTION UP TO 15'-0" FROM THE LOCATION SHOWN ON THE DRAWINGS AT NO ADDITIONAL COSTS TO THE OWNER.

WIRING METHODS:

39. BELOW GRADE: SINGLE- OR MULTI-CONDUCTOR COPPER WIRE WITH GROUND, MEETING N.E.C. AND NEMA REQUIREMENTS, IN APPROVED NONMETALLIC CONDUIT. CONDUIT MAY BE RUN IN OR BELOW CONCRETE, AND CONCEALED IN WALLS TO FIRST BOXES. ALL PVC COMPONENTS (PIPING, FITTINGS, CEMENT, ETC.) SHALL BE FROM THE SAME MANUFACTURER.

40. EXTERIOR ABOVE GRADE: SINGLE- OR MULTI-CONDUCTOR COPPER WIRE WITH GROUND, MEETING N.E.C. AND NEMA REQUIREMENTS, IN APPROVED METALLIC OR NONMETALLIC CONDUIT. ALL COMPONENTS (PIPING, FITTINGS, ETC.) SHALL BE FROM THE SAME MANUFACTURER.

NOTE: MAXIMUM LENGTH OF FLEXIBLE CONDUIT SHALL BE SIX FEET (6').

41. EXTERIOR EQUIPMENT: SINGLE- OR MULTI-CONDUCTOR COPPER WIRE WITH GROUND, MEETING N.E.C. AND NEMA REQUIREMENTS, IN APPROVED LIQUIDTIGHT FLEXIBLE METALLIC OR NONMETALLIC CONDUIT (MINIMUM 3/4"). ALL COMPONENTS (PIPING, FITTINGS, ETC.) SHALL BE FROM THE SAME MANUFACTURER.

NOTE: MAXIMUM LENGTH OF FLEXIBLE CONDUIT BETWEEN MEANS OF DISCONNECT (OR JUNCTION BOX) AND EQUIPMENT SHALL BE THREE FEET (3').

42. INTERIOR: SINGLE- OR MULTI-CONDUCTOR COPPER WIRE WITH GROUND, MEETING N.E.C. AND NEMA REQUIREMENTS, IN APPROVED METALLIC (EMT) CONDUIT. ALL COMPONENTS (PIPING, FITTINGS, ETC.) SHALL BE FROM THE SAME MANUFACTURER. CONDUITS SHALL BE CONCEALED IN OR BEHIND CEILINGS, WALLS, OR FLOORS, EXCEPT WHERE EXPOSED RACEWAYS ARE SPECIFICALLY PERMITTED.

NOTE: EMT SHALL NOT BE INSTALLED IN LOCATIONS (1) SUBJECT TO SEVERE DAMAGE, (2) IN CONTACT WITH EARTH, (3) IN CONCRETE SLABS ON GRADE, (4) OTHER LOCATIONS AS LISTED IN N.E.C., ARTICLE 358.12.

43. ELECTRICAL SYSTEM EXPANSION: ANY PANELBOARD MOUNTED SO THAT ITS FRONT FACE IS FLUSH WITH THE FINISHED WALL SHALL HAVE ONE (1) 3/4" EMT CONDUIT INSTALLED FROM PANELBOARD TO ACCESSIBLE CEILING SPACE FOR EVERY FOUR (4) OR MAJOR FRACTION THEREOF, POLES INDICATED AS "SPACE" OR "SPARE" IN THE PANELBOARD SCHEDULE PER THESE DOCUMENTS.

44. ELECTRICAL BOXES: ALL OUTLET, DEVICE, AND JUNCTION BOXES SHALL BE STANDARD 4" SQUARE GALVANIZED STEEL OR APPROVED PLASTIC, 1-1/2" DEEP, WITH DEVICE RINGS OF THE SAME MATERIAL, UNLESS OTHERWISE NOTED. GALVANIZED BOXES SHALL BE MANUFACTURED BY APPLETON, NATIONAL, STEEL CITY, RACO OR APPROVED EQUAL. PLASTIC BOXES SHALL BE ALLIED, NELCO, CARLON, OR EQUAL. ALL ELECTRICAL BOXES MUST BE ACCESSIBLE AFTER CERTIFICATE OF OCCUPANCY.

EQUIPMENT:

45. WIRE TO, AND MAKE CONNECTIONS TO, ALL PIECES OF EQUIPMENT FURNISHED BY OTHERS FOR COMPLETE AND SATISFACTORY OPERATION BY OTHERS.

46. THIS CONTRACT TO INCLUDE CONNECTION OF LINE VOLTAGE ONLY. CONTROL WIRING TO BE BY THE HVAC CONTRACTOR.

GROUNDING:

47. THE ENTIRE ELECTRICAL GROUNDING SYSTEM SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF SECTION 250.66 AND 250.122 OF THE NATIONAL ELECTRIC CODE, INCLUDING BUT NOT LIMITED TO, THE ELECTRICAL SERVICE, ITS EQUIPMENT AND ENCLOSURE, CONDUITS AND OTHER CONDUCTIVE ENCLOSURES, NEUTRAL OR IDENTIFIED CONDUCTOR OF INTERIOR WIRING SYSTEM, MAIN PANELBOARD, POWER AND LIGHTING PANELBOARDS, NON-CURRENT-CARRYING METAL PARTS OF FIXED EQUIPMENT SUCH AS MOTORS, STARTER AND CONTROLLER CABINETS, INSTRUMENT CASES AND LIGHTING FIXTURES.

48. PROVIDE A SERVICE GROUND ACCORDING TO N.E.C. ARTICLE 250. THE MINIMUM INSTALLATION TO INCLUDE: BUILDING FOOTER/FOUNDATION REINFORCING STEEL TURNED UP OR OTHERWISE EXPOSED AT THE SERVICE LOCATION WITH APPROVED CONNECTOR TO BOND A GROUNDING CONDUCTOR SIZED PER TABLE 250 TO THE STEEL AND A DRIVEN ROD GROUND (MINIMUM 5/8" 8Y 8' DEEP) WITH #6 COPPER GROUNDING CONDUCTOR. IF AVAILABLE ON THE PREMISES, ALSO BOND METAL COLD WATER PIPING, METAL BUILDING FRAME AND GROUND RING WITH JUMPERS SIZED FROM 250-94.

49. ALL TELEPHONE, DATA, TELEVISION, AND OTHER TERMINAL EQUIPMENT SHALL BE BONDED TO THE GROUNDING ELECTRODE WITH MINIMUM #6 AWG-CU.

WARRANTY: NOTE

50. ELECTRICAL CONTRACTOR TO PROVIDE FULL WARRANTY (PARTS AND LABOR) ON ALL EQUIPMENT AND MATERIALS FURNISHED UNDER THE SCOPE OF WORK FOR A PERIOD OF ONE YEAR FROM THE CERTIFICATE OF OCCUPANCY.

51. E.C. SHALL PROVIDE OWNER AND ENGINEER WITH REPRODUCIBLE "AS-BUILT" DRAWINGS SHOWING ALL REQUIRED MODIFICATIONS THAT HAVE OCCURRED IN THE FIELD.

ELEVATOR ROOMS (AS APPLICABLE)

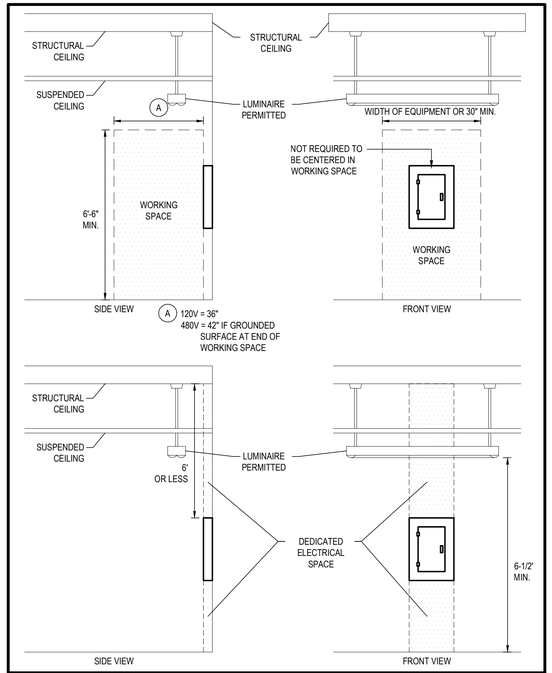
52. ALL ELEVATOR MACHINE ROOMS SHALL BE PROVIDED WITH A FUSED DISCONNECT FOR ALL EQUIPMENT INCLUDING EQUIPMENT ROOM AIR CONDITIONING SYSTEMS, LIGHTING, RECEPTACLES, ETC. (REGARDLESS OF PLAN SYMBOL) IN ACCORDANCE WITH ASME A17.1

SITE VERIFICATION NOTES

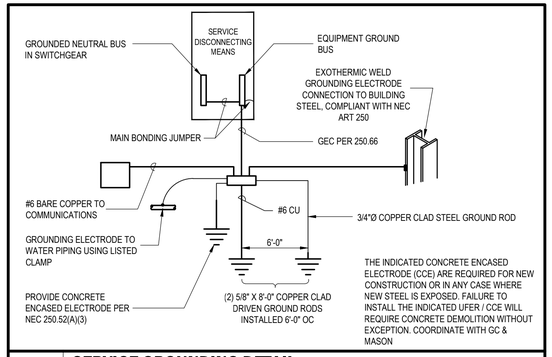
53. ALL ITEMS ON THESE DRAWINGS MARKED AS "EXISTING" OR "EXIST" SHALL BE VERIFIES IN FIELD ANY DIFFERENCES BETWEEN ITEMS OR EQUIPMENT INDICATED AS EXISTING SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OR ARCHITECT.

54. PRIOR TO CONSTRUCTION, THE ELECTRICAL CONTRACTOR SHALL VERIFY THAT THE PHASE TO PHASE VOLTAGE AVAILABLE IS EQUAL TO EACH OTHER, AND EQUAL TO VOLTAGE SHOWN ON THESE DRAWINGS. A DIFFERENCE IN PHASE TO PHASE VOLTAGE MAY INDICATE THE PRESENCE OF A "HIGH LEG" DELTA SYSTEM. ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR REQUIRED REVISIONS.

55. SPLIT PHASE CIRCUIT BREAKERS ARE NOT PERMITTED TO BE INSTALLED ON HIGH LEG DELTA SYSTEMS. HIGH LEG DELTA SYSTEMS SHALL BE LABELED PER 408.3 AND THE HIGH LEG CONDUCTOR TO BE MARKED PER 110.15.



1	ELECTRIC EQUIPMENT AND PANELS - WORKING SPACE
E0.1C	NTS



2	SERVICE GROUNDING DETAIL
E0.1C	NTS

CODE COMPLIANCE STATEMENT

ENTIRE INSTALLATION SHALL COMPLY WITH CODES BELOW, IN ADDITION TO ALL REFERENCED STANDARDS OR ANY OTHER LOCALLY ADOPTED AMENDMENTS.

FLORIDA BUILDING CODE:	2023 EDITION
FLORIDA ENERGY CODE:	2023 EDITION
FLORIDA FIRE CODE:	2023 EDITION
FLORIDA FUEL GAS CODE:	2023 EDITION
FLORIDA MECHANICAL CODE:	2023 EDITION
FLORIDA PLUMBING CODE:	2023 EDITION
FLORIDA FIRE PREVENTION CODE:	2023 EDITION
NATIONAL ELECTRICAL CODE:	2020 EDITION

TO THE BEST OF OUR KNOWLEDGE, THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE ABOVE INDICATED CODES.

ELECTRICAL PLAN LEGEND

(CLG = CEILING) (SW=INSTALL PER 210.62) (U) = USB / DUPLEX RECEPTACLE

- 120V DUPLEX RECEPTACLE @ 18"AFF
- 120V DUPLEX RECEPTACLE @ 44"AFF (ABOVE COUNTER) OR SPECIAL HEIGHT)
- SPECIAL PURPOSE RECEPTACLE (VERIFY NEMA CONFIGURATION)
- QUADPLEX RECEPTACLE @ 44"AFF 120V
- QUADPLEX RECEPTACLE @ 18"AFF 120V
- DUPLEX GFCI RECEPTACLE @ 18"AFF 120V
- DUPLEX GFCI RECEPTACLE @ 44"AFF (ABOVE COUNTER) OR SPECIAL HEIGHT)
- SIMPLEX (ABOVE COUNTER) OR SPECIAL HEIGHT)
- SINGLE-POLE TOGGLE SWITCH (OS= OCCUPANCY SENSOR) (T=TIMER)
- SINGLE-POLE DIMMER SWITCH (COMPATIBLE W/ LIGHT FIXTURE)
- WALL MOUNTED OCCUPANCY SENSOR
- CEILING MOUNTED OCCUPANCY SENSOR
- DATA/PHONE ROUGH-IN BOX W/ 1" CONDUIT STUBBED TO CLG)
- NON-FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- JUNCTION BOX (ACCESSIBLE)
- ELECTRICAL PANEL
- DIRECTIONAL SIGN (UL LISTED WITH 90 MINUTE BATTERY)
- DUAL HEAD EMERGENCY LIGHT (UL LISTED WITH 90 MIN. BATTERY)
- COAXIAL CABLE ROUGH IN BOX
- 120V RECEPTACLE COAXIAL CABLE, DATA ROUGH IN BOX - VERIFY FINAL HEIGHT
- CARD ACCESS READER ROUGH IN BOX

ELECTRICAL LEGEND NOTES

- VERIFY ALL RECEPTACLE MOUNTING HEIGHTS WITH OWNER
- LOW VOLTAGE INDICATED ON THESE DRAWINGS IS FOR ROUGH-IN BOX LOCATIONS ONLY AND DOES NOT INCLUDE ANY WIRING OR CABLING REQUIRED. ALL LOW VOLTAGE WILL BE PERMITTED SEPARATELY BY THE CONTRACTOR. THIS INCLUDES BUT IS NOT LIMITED TO DATA WIRING, SPEAKER WIRING, TV COAX WIRING ETC.

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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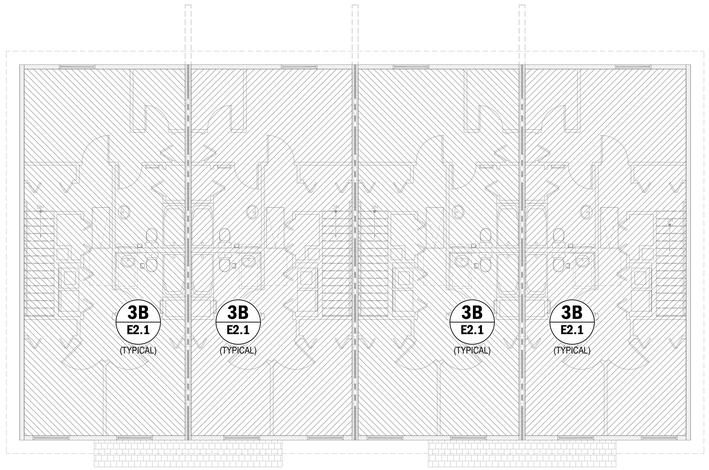
ARCHITECTURE

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	

SHEET
E0.1C

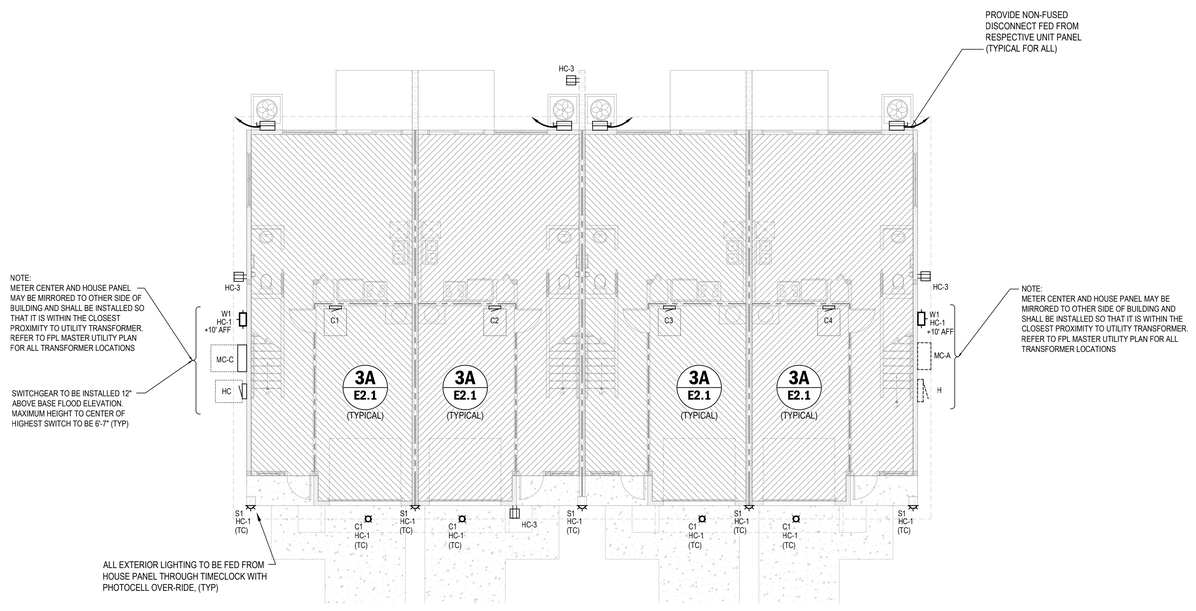
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ELECTRICAL POWER OVERALL PLAN - 2ND LEVEL

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



ELECTRICAL POWER OVERALL PLAN - 1ST LEVEL

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

GRAPHIC SCALE

1/8" = 1'-0"

8' 6' 4' 2' 0 8' 16'

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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ARCHITECTURE

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	

SHEET
E1.1C

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DWELLING UNIT ELECTRICAL LEGEND

SYMBOL	DEVICE SPECIFIC NOTES	HEIGHT
	GENERAL PURPOSE CONVENIENCE RECEPTACLE SPACING AS INDICATED OR PER 210.52(A)(1). 120V.	18"AFF
	GENERAL PURPOSE CONVENIENCE RECEPTACLE SPACING AS INDICATED OR PER 210.52(A)(1). GFCI PROTECTED. 120V.	18"AFF
	GENERAL PURPOSE CONVENIENCE RECEPTACLE SPACING AS INDICATED OR PER 210.52(A)(1). GFCI PROTECTED. INSTALLED ABOVE COUNTER TOP OR AT SPECIAL HEIGHT INDICATED. 120V.	44"AFF
	SIMPLEX RECEPTACLE (120V). PROVIDED FOR REFRIGERATORS/WASHING MACHINES OR AS INDICATED ON FLOOR PLAN.	44"AFF
	SPECIAL PURPOSE/APPLIANCE RECEPTACLE. RECEPTACLE CONFIGURATION SHALL BE PER MANUFACTURERS DATA.	AS NOTED
	SWITCHED RECEPTACLE CONNECTED TO SINGLE-POLE TOGGLE SWITCH. 120V.	18"AFF
V	DATA/PHONE OUTLET ROUCH-IN BOX.	18"AFF
(CO)	COMBINATION COAXIAL CABLE & DATA ROUGH-IN BOX	18"AFF
(A)	RECEPTACLE ON DEDICATED 20AMP, 120V. SMALL APPLIANCE BRANCH CIRCUIT PER NEC 210.11(C). PROVIDE WITH MAXIMUM SPACING OF 48" FOR APPLIANCE CIRCUITS SERVING KITCHEN COUNTER TOPS	VARIES U=DUAL USB DUPLEX RECEPTACLE
(R)	RECEPTACLE ON DEDICATED 20AMP, 120V. RESTROOM BRANCH CIRCUIT PER NEC 210.11(C)(3). RESTROOM BRANCH CIRCUITS SHALL NOT SERVE ANY OTHER LOADS OTHER THAN OTHER RESTROOM RECEPTACLES.	44"AFF
(WH)	ELECTRIC WATER HEATER: 30A, 240V JUNCTION BOX AND WHIP. PROVIDE LOCKABLE CIRCUIT BREAKER WITHIN ELECTRIC PANEL FOR ALL WATER HEATER CIRCUIT BREAKERS.	WALL
(AH)	AIR HANDLER: 60A RATED, 240V, NON-FUSED DISCONNECT MOUNTED ADJACENT TO AIR HANDLER PROVIDED WITH FLEXIBLE CONNECTION.	WALL
(CW)	CLOTHES WASHER: 20A, 120V. GFCI PROTECTED SIMPLEX RECEPTACLE MOUNTED ADJACENT TO CLOTHES WASHER.	40"AFF (STACKED W/D) 30"AFF (NON-STACKED W/D)
(RA)	ELECTRIC RANGE/OVEN: RECEPTACLE MOUNTED BEHIND RANGE. 125/250V NEMA 14-50R STRAIGHT BLADE (3P, 4-WIRE WITH NEUTRAL)	6"AFF
(CD)	ELECTRIC CLOTHES DRYER: RECEPTACLE MOUNTED BEHIND CLOTHES DRYER. 125/250V NEMA 14-30R STRAIGHT (3P, 4-WIRE WITH NEUTRAL)	40"AFF (STACKED W/D) 30"AFF (NON-STACKED W/D)
(GD)	GARBAGE DISPOSAL/DISHWASHER: SPLIT WIRED GFCI PROTECTED RECEPTACLE MOUNTED UNDER SINK. RECEPTACLE TO BE FED FROM 2-POLE CIRCUIT BREAKER THAT SIMULTANEOUSLY DISCONNECTS THE UN-GROUNDED CONDUCTORS FEEDING DISPOSAL & DISHWASHER. PROVIDE SWITCH FOR GARBAGE DISPOSAL MOUNTED ABOVE COUNTER. PROVIDE AIR SWITCH FOR GARBAGE DISPOSAL FOR ALL SINKS INSTALLED IN ISLANDS.	UNDER SINK
(MW)	MICROWAVE: SIMPLEX RECEPTACLE INSTALLED HORIZONTALLY WITHIN UPPER CABINET. RECEPTACLE TO BE FED FROM DEDICATED CIRCUIT.	ABOVE RANGE WITHIN UPPER CABINET
	ELECTRIC PANEL PROVIDED WITH CLEARANCES PER ARTICLE 100 OF THE NEC 2020. MINIMUM CLEARENCES SHALL BE 30" WIDE x 36" DEEP.	WALL
	LOW VOLTAGE STRUCTURED MEDIA BOX "SMB" FOR CAT 5/6,COAX, AND FIBER OPTIC LINE CABLE. PROVIDE WITH 6" CLEARANCE ON SIDES OF BOX FOR PROPER DOOR SWING OPERATION AND VENTILATION.	WALL
AS	COUNTER TOP AIR SWITCH KIT BY E.C. PROVIDE WITH AIR SWITCH CONTROLLER UNDER SINK FOR DISPOSAL.	--
$	SINGLE-POLE LIGHTING TOGGLE SWITCH	WALL
	NON-FUSED DISCONNECT SWITCH. AMPACITY RATING VARIES.	WALL
(CL)	PRE-WIRED FAN/LIGHT JUNCTION BOX WITH WHITE COVER PLATE. BOX SHALL BE WIRED WITH 3-WIRE AND RATED TO ACCEPT FUTURE FAN	CEILING
	CIRCUIT "HOME RUN". ROUTED DIRECTLY BACK TO ELECTRIC PANEL	--
(2)	COMBO SMOKE/CO DETECTOR, AC POWERED WITH BATTERY BACKUP INTERCONNECTED ALL OTHER SMOKE DETECTORS. MAINTAIN 9' FROM BATHROOM DOORS OR AIR GRILLS.	CEILING/ WALL
(EF)	EXHAUST FAN, COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION. INTERLOCK WITH LOCAL LIGHT SWITCH.	CEILING

DEVICE NOTES (GFCI/AFCI)

ARC-FAULT CIRCUIT-INTERRUPTER PROTECTION SHALL BE PROVIDED AS REQUIRED IN 210.12(A) (B), AND (C). THE ARC-FAULT CIRCUIT INTERRUPTER SHALL BE INSTALLED WITHIN ELECTRIC PANEL.

GROUND -FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL SHALL BE PROVIDED AS REQUIRED IN 210.8(A) THROUGH (D). THE GROUND FAULT CIRCUIT-INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION. ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN THE LOCATIONS SPECIFIED IN NEC 210.8(A)(1) THROUGH (11) SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL (IE. BATHROOMS, GARAGES/ACCESSORY BUILDINGS, OUTDOORS, CRAWL SPACES, KITCHENS (WHERE INSTALLED TO SERVICE THE COUNTERTOP SERVICES), SINKS (WHERE RECEPTACLES ARE INSTALLED WITH 6 FEET OF THE OUTSIDE EDGE OF THE SINK (INCLUDING RECEPTACLES SERVING GARBAGE DISPOSALS & DISHWASHERS, BOATHOUSES). DOWNSTREAM DEVICES OF THE GFCI SHALL BE IDENTIFIED.

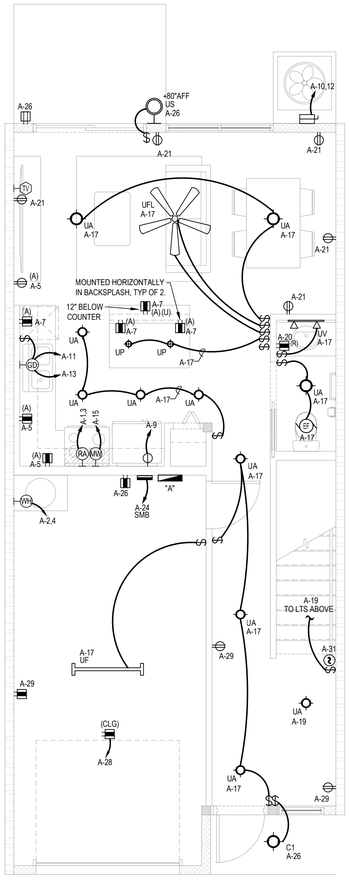
ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN DWELLING UNITS, ACCORDING TO N.E.C., SECTION 210.52 SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. [N.E.C. 406.12]

ALL GFCI RESET DEVICES TO BE LOCATED IN ELECTRIC PANEL.

DWELLING UNIT LUMINAIRE SCHEDULE

TAG	SYMBOL	DESCRIPTION	MANUFACTURER MODEL	WATTS LUMENS	NOTES
UA		6" ULTRA-THIN LOW PROFILE ENERGY STAR LED. DIMMABLE, 3000K, 90CRI.	RP LIGHTING: 8542-2 WH 90 3K	14W MAX 884lm	1,2,3,5
UAS		6" ULTRA-THIN LOW PROFILE ENERGY STAR LED. DIMMABLE, 3000K, 90CRI.	RP LIGHTING: 8542-2 WH 90 3K	14W MAX 884lm	1,2,3,5
UF		48" X 7" SURFACE MOUNT WRAP LED. 4000K, 90CRI, DAMP/ENERGY STAR LISTED.	MAXIM LIGHTING: 57523	40W 4200lm	1,2,3
UFL		52" SWEEP 5-BLADE MODERN CEILING FAN WITH INTEGRATED LED/PULL CHAIN, ENERGY STAR LISTED (MOTOR+LIGHT). COLOR TO BE SELECTED	RP LIGHTING: 1049LED1 TBD	50W MAX (2) 10W LED E26 BULBS	1,2,4
UP		DECORATIVE PENDANT - CLEAR GLASS MINI PENDANT, 5" DIAMETER 9.5" HEIGHT	SUNSET/LUMINANCE: F3459-80 3000K	10W SCREW IN LED A19 BULB	1
US		9"WIDE x 15" HIGH x 4" DEEP RECTANGULAR MODERN ADA COMPLIANT WALL SCONCE, FINISH TO BE SELECTED	BROWNLEE: 7115 TBD H15 VB0 35K ES	12W 957lm	1,3
UV		18" SLIM PROFILE LED LIGHT BAR VANITY FIXTURE, ENERGY STAR COMPLIANT, DAMP LOCATION LISTED	RP LIGHTING: 4907 BN 24	15W MAX 900lm	1,2,3
C1		4" ROUND LED DOWNLIGHT.	LITHONIA: LDN4 35/10 LO4 AR LS MVOLT GZ1	10.58W 1000lm	1,2,3

1. ALL FIXTURES SHALL BE UL LISTED AND APPROVED FOR THE ENVIRONMENT WHICH THEY WILL BE INSTALLED. FINAL FIXTURE TYPES AND SAMPLES SHALL BE PROVIDED TO OWNER APPROVED BY OWNER. CUT SHEETS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO ORDERING.
2. ENERGY STAR LISTED.
3. DAMP/SHOWER LISTED.
4. FAN/LIGHTS TO BE SEPARARATELY SWITCHED WITH 3-WIRE CABLE
5. IC RATED, CLOSET APPROVED.


A-10,12
A-26
+80"AFF US A-26
A-21
A-21
A-21
A-21
A-21
A-21
A-23
A-21
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A-21
A-21
A-21

(SERVICE CALCULATION)

METER CENTER: MC-C

ROOM
MOUNTING SURFACE
FED FROM UT-C
NOTE

VOLTS 208Y/120V 3P 4W
BUS AMPS 400
NEUTRAL 100%

AIC 65,000
MAIN BKR 400
LUGS STANDARD

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	150/2	PANEL C1	21	20.5		1-1/2"C,2#1/0,#1/0N,#6G
2	150/2	PANEL C2		21	20.5	1-1/2"C,2#1/0,#1/0N,#6G
3	150/2	PANEL C3	20.5		21	1-1/2"C,2#1/0,#1/0N,#6G
4	150/2	PANEL C4	21	20.5		1-1/2"C,2#1/0,#1/0N,#6G
5	125/2	PANEL HC		1.13	0.72	1-1/4"C,2#1,#1N,#6G
		TOTAL CONNECTED KVA BY PHASE	62.4	63.1	42.2	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

DWELLING UNIT LOADS

	KVA			KVA
LIGHTING AND RECEPTACLES	15.5	5,152 SF (3 VA/SF)	CONNECTED LOAD	154
SMALL-APPLIANCE	12		DWELLING UNITS	4
APPLIANCES	107		DEMAND FACTOR	(45%)
HEATING	20	(100%)	CALCULATED LOAD	69.5
COOLING	16.1	(0%)		

HOUSE LOADS

	CONN KVA	CALC KVA			CALC KVA
LIGHTING	1.13	1.41	(125%)	TOTAL HOUSE LOAD	2.13
RECEPTACLES	0.72	0.72	(50%>10)		

TOTAL LOAD

	KVA		KVA
TOTAL DWELLING UNIT LOAD	69.5	TOTAL LOAD	71.6
TOTAL HOUSE LOAD	2.13	BALANCED 3-PHASE LOAD	199 A

PANEL: HC

MOUNTING: SURFACE
FED FROM: MC-C

VOLTS: 208/120V 1-PH 3W
BUS AMPS: 125

FUSED AT: 125
AIC RATING: 22,000
MAIN BKR: MLO
LUGS: STANDARD

NOTE:

CKT #	CKT BKR	WIRE SIZE	EG SIZE	LOAD KVA	CIRCUIT DESCRIPTION	Φ	CIRCUIT DESCRIPTION	LOAD KVA	EG SIZE	WIRE SIZE	CKT BKR	CKT #
1	20/1	#12	#12	0.128	EXTERIOR LTS (TC)	A	SITE LIGHTING (TC)	1	#10	#10	20/1	2
3	20/1	#12	#12	0.72	RECEPTS	B	-	0			-/1	4
5	-/1			0	-	A	-	0			-/1	6
7	-/1			0	-	B	-	0			-/1	8
9	-/1			0	-	A	-	0			-/1	10
11	-/1			0	-	B	-	0			-/1	12
13	-/1			0	-	A	-	0			-/1	14
15	-/1			0	-	B	-	0			-/1	16
17	-/1			0	-	A	-	0			-/1	18
19	-/1			0	-	B	-	0			-/1	20
21	-/1			0	-	A	-	0			-/1	22
23	-/1			0	-	B	-	0			-/1	24

	CONN KVA	CALC KVA			CALC KVA
LIGHTING	1.13	1.41	(125%)	TOTAL LOAD	2.13
RECEPTACLES	0.72	0.72	(50%>10)	BALANCED LOAD	10.2 A
				PHASE A	122%
				PHASE B	77.9%

PANEL: A

MOUNTING: SURFACE
FED FROM:

VOLTS: 208/120V 1-PH 3W
BUS AMPS: 150

FUSED AT:
AIC RATING: 22,000
MAIN BKR: MLO
LUGS: STANDARD

NOTE:

CKT #	CKT BKR	WIRE SIZE	EG SIZE	LOAD KVA	CIRCUIT DESCRIPTION	Φ	CIRCUIT DESCRIPTION	LOAD KVA	EG SIZE	WIRE SIZE	CKT BKR	CKT #
1	50/2	#6	#10	10	RANGE/OVEN (RA)	A	WATER HEATER (WH)	4.5	#10	#10	30/2	2
3	|					B					|	4
5	20/1	#12	#12	1.5	APPLIANCE CKT (A)	A	AIR HANDLER (AH)	5	#10	#8	30/2	6
7	20/1	#12	#12	1.5	APPLIANCE CKT (A)	B					|	8
9	20/1	#12	#12	1	REFRIGERATOR (GFCI CB)	A	CONDENSING UNIT (CU)	2.83	#12	#12	20/2	10
11	20/1	#12	#12	1	DISPOSAL (GD)	B					|	12
13	20/1	#12	#12	1.5	DISHWASHER (GD)	A	CLOTHES DRYER (CD)	5	#10	#10	30/2	14
15	20/1	#12	#12	1.5	MICROWAVE (MW)	B					|	16
17	15/1	#14	#14	0.39	LIGHTS: 1ST FLR	A	CLOTHES WASHER (CW)	1	#12	#12	20/1	18
19	15/1	#14	#14	0.39	LIGHTS: 2ND FLR	B	BATH RECEPTS	0.39	#12	#12	20/1	20
21	15/1	#14	#14	0.39	RECEPTS: LIVING / DINING	A	BATH RECEPTS	0.39	#12	#12	20/1	22
23	15/1	#14	#14	0.39	RECEPTS: BED 1	B	STRUCTURED MEDIA BOX (SMB)	0.5	#12	#12	20/1	24
25	15/1	#14	#14	0.39	RECEPTS: BED 2	A	RECEPTS: EXTERIOR / GARAGE	0.39	#12	#12	20/1	26
27	15/1	#14	#14	0.39	RECEPTS: BED 3	B	DOOR OPENER	0.75	#12	#12	20/1	28
29	15/1	#14	#14	0.34	RECEPTS: ENTRY, HALL, ATTIC	A	(SPARE)	0			20/1	30
31	15/1	#14	#14	0.05	SMOKE DETECTORS	B	-	0			-/1	32
33	15/1			0	(SPARE)	A	-	0			-/1	34
35	-/1			0	-	B	-	0			-/1	36
37	-/1			0	-	A	-	0			-/1	38
39	-/1			0	-	B	SPD (SURGE SUPPRESSION)	0			30/2	40
41	-/1			0	-	A					|	42

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	3.86	1,288 SF (3 VA/SF)	GENERAL LOAD			
SMALL-APPLIANCE	3		UP TO 10 KVA	10	10	(100%)
APPLIANCES	26.8		OVER 10 KVA	23.6	9.45	(40%)
TOTAL GENERAL LOAD	33.6		MAX HEATING OR COOLING		4.03	(220.82(C)(1))
			TOTAL LOAD		23.5	
			BALANCED LOAD		113 A	
			PHASE A		101%	
			PHASE B		99.1%	

LUMINAIRE SCHEDULE

MARK	SYMBOL	DESCRIPTION	MODEL	VOLTS	WATTS	DRIVER	NOTES
C1		4" ROUND DOWNLIGHT, CLEAR, SPECULAR REFLECTOR 80CRI, 1000LM, 35K	LITHONIA: LDN4 35/10 LO4 AR LS MVOLT GZ1	120V 1P	10.58	0-10V/1%	
S1		9" WIDE X 15" HIGH X 4" DEEP RECTANGULAR MODERN ADA COMPLIANT WALL SCONCE, FINISH TO BE SELECTED. 957lm	BROWNLEE: 7115 TBD H115 VB0 35K ES	120V 1P	12		
W1		WALLPACK LED - 1650LM, SWITCHABLE CCT, SWITCHABLE PHOTOCELL	LITHONIA: WPX0 LED ALO SWW2 MVOLT PE DDBXD M2	120V 1P	13		

ALL FIXTURES TO BE REVIEWED AND APPROVED BY OWNER, ENGINEER, ARCHITECT, AND INTERIOR DESIGNER PRIOR TO CONSTRUCTION.

FAULT CURRENT SCHEDULE

DEVICE	FAULT	AIC RATING	L-L VOLTS	L-N VOLTS
UT-C	21,138	100,000	208V	120V
MC-C	14,408	65,000	208V	120V
HC	12,711	22,000	208V	120V
C1	11,056	22,000	208V	120V
C2	9,439	22,000	208V	120V
C3	8,073	22,000	208V	120V
C4	7,102	22,000	208V	120V

FEEDER LENGTHS INDICATED WITHIN FAULT CURRENT SCHEDULE ARE FOR REFERENCE ONLY AND SHALL NOT BE USED FOR BIDDING PURPOSES.

THE SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. THE FIELD MARKING SHALL INCLUDE THE DATE THE FAULT CURRENT CALCULATION WAS PERFORMED AND BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT IN WHICH IT IS INSTALLED PER SECTION 110.24(A)

VOLTAGE DROP SCHEDULE

DEVICE	FEEDER VOLTAGE DROP	FEEDER WIRE SIZE	FEEDER LENGTH	TOTAL VOLTAGE DROP
UT-C	0%		-	0%
MC-C	0.42%	(2)#3/0	63'	0.42%
HC	0.44%	#1	13'	1.55%
C1	0.8%	#1/0	28'	2.24%
C2	1.04%	#1/0	46'	2.48%
C3	1.31%	#1/0	65'	2.75%
C4	1.55%	#1/0	83'	2.99%

FEEDER LENGTHS INDICATED WITHIN VOLTAGE DROP SCHEDULE ARE REFERENCE ONLY AND SHALL NOT BE USED FOR BIDDING PURPOSES.

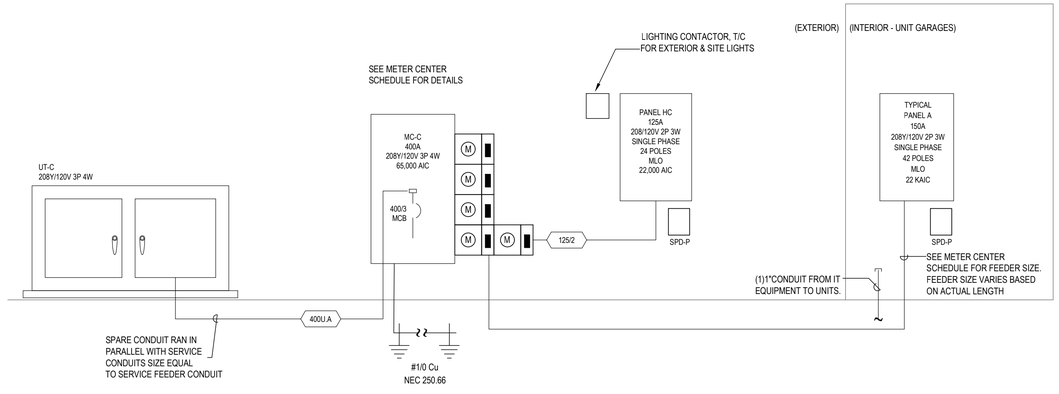
SPD SURGE SUPRESSION SCHEDULE

CALLOUT	QUANTITY	MANUFACTURER	MODEL NO.	kA / PHASE
SPDP	5	PQ PROTECTION	PQC100	100 kA

FEEDER SCHEDULE

ID	FEEDER AMPS	CONDUIT AND FEEDER
125/2	125	1-1/4"C,2#1,#1N,#6G
400U A	400	(2)3"C,3#3/0,#3/0N
600U	600	(2)3"C,3#350kcmil,#350kcmil N

SIZING METHOD: NEC 310.15



ELECTRICAL POWER RISER

SCALE: NTS

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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ARCHITECTURE

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	

SHEET
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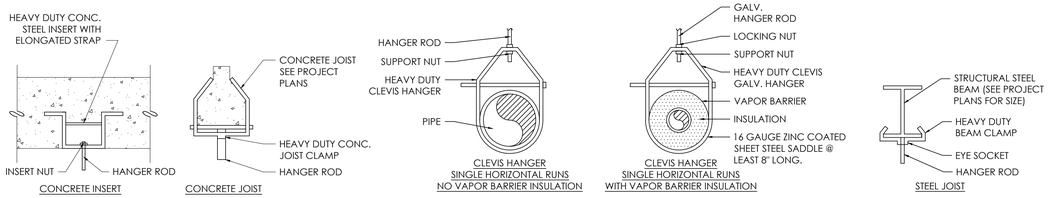
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PLUMBING NOTES AND SPECIFICATIONS:

1. THE PLUMBING PLAN SHALL COMPLY WITH THE 2020 BUILDING CODE, THE STATE OF FLORIDA ENERGY CODE AND ALL LOCAL CODES AS MAY BE APPLICABLE. SIX SHOP DRAWINGS SUBMITTALS OF ALL MAJOR EQUIPMENT SHALL BE REQUIRED FOR APPROVAL PRIOR TO ORDERING AND PROCUREMENT OF SAME.
2. PLANS ARE DIAGRAMMATIC ONLY, THEY ARE INTENDED TO INDICATE CAPACITY, SIZE, LOCATION, DIRECTION AND GENERAL ARRANGEMENT, BUT NOT EXACT DETAILS OF CONSTRUCTION. THE FACT THAT ONLY CERTAIN FEATURES OF THE INSTALLATION ARE INDICATED MUST NOT BE TAKEN TO MEAN THAT OTHER SIMILAR OR DIFFERENT FEATURES WILL NOT BE REQUIRED.
3. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS TO INSURE THAT EACH TRADE SHALL HAVE SUFFICIENT SPACE TO INSTALL THEIR EQUIPMENT (DUCTWORK, PIPING, ELECTRICAL WORK, ETC.
4. IN GENERAL, ALL PIPING SHALL BE RUN CONCEALED IN CEILINGS AND PIPE SPACES PROVIDED UNLESS NOTED OTHERWISE.
5. VERIFY ALL DIMENSIONS FROM ARCHITECTURAL PLANS FOR FIELD DIMENSIONS.
6. PROVIDE STOP OR ANGLE VALVES ON EACH WATER CONNECTION TO EACH PLUMBING FIXTURE.
7. BURIED PIPING NEAR FOUNDATION SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD PLUMBING CODE INSTRUCTIONS ON PROTECTION OF PIPES.
8. PLUMBING SYSTEM INSTALLER SHALL PROVIDE ALL STRUCTURAL MEMBERS, SUPPORT BRACKETS, FLASHING, HARDWARE, ETC. REQUIRED TO INSTALL A COMPLETE SYSTEM.
9. AN AIR CHAMBER/SHOCK ABSORBER WATER HAMMER ARRESTOR SHALL BE INSTALLED WHERE QUICK-CLOSING VALVES ARE USED TO PREVENT WATER HAMMER, SUCH AS ON WASHING MACHINES, ICE MAKERS, DISHWASHERS AND DRINKING FOUNTAINS. THE ARRESTOR SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, BE ACCESSIBLE, AND SHALL CONFORM TO ASSE 1010.
10. UNLESS NOTED OTHERWISE, ALL MATERIALS SHALL BE NEW, COMPLETE, INCLUDE MANUFACTURER'S WARRANTY AND SHALL BE UL APPROVED IF APPLICABLE. ALL WORK SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.
11. ALL RISERS AND DROPS IN PIPING NOT NECESSARILY SHOWN.
12. CONTRACTOR SHALL VERIFY ELEVATIONS OF UTILITY CONNECTIONS ON SITE PRIOR TO COMMENCING WORK.
13. COLD PIPING SHALL BE TYPE 'L' COPPER OR CPVC ABOVE GRADE AND SCHEDULE 40 SOLID PVC BELOW GRADE IN ACCORDANCE WITH FPC 2020 FPC CHAPTER 6.
14. ABOVE GRADE DWV PIPING SHALL BE AT A MINIMUM SCHEDULE 40 SOLID PVC TYPE DWV OR COEXTRUDED PIPING WITH CELLULAR CORE ALL UNDER GROUND OR ABOVE GROUND DRAINAGE PIPING SHALL BE IN ACCORDANCE TO FPC 2020 FPC CHAPTER 7. VENT PIPING TO BE CAST IRON IF LOCATED IN PLENUM. AAV VENTS ARE NOT PERMITTED TO BE INSTALLED IN RETURN PLENUM CEILING.
15. FIXTURES SHALL BE AS SCHEDULED OR AS SELECTED BY ARCHITECT. SEE LIST OF ACCEPTABLE MANUFACTURERS.
    - A. LAVS, SERVICE SINKS, WATER CLOSETS, URINALS, BATH TUBS: AMERICAN STANDARD, CRANE CO. ELJER PLUMBING WARE DIV. KOHLER CO.
    - B. STAINLESS STEEL SINKS: AMERICAN STANDARD, ELKAY MFG. CO., DAYTON
    - C. FAUCETS: AMERICAN STANDARD, CHICAGO FAUCET CO., DELTA FAUCET CO., ELJER PLUMBING WARE DIV., KOHLER CO., T&S BRASS, SPEAKER MAN.
    - D. FLUSH VALVES: COYONE & DELNAY CO., SLOAN VALVE CO.
    - E. WATER CLOSET SEATS: BEMIS MFG. CO., KOHLER CO., BENEKE CORP., FORBES-WRIGHT INDUSTRIES INC., CHURCH PRODUCTS, OLSONITE CORP., OLSONITE SEATS.
    - F. FIXTURE SUPPORTS: JOSAM MFG. CO., KOHLER CO., TYLER PIPE, ZURN INDUSTRIES INC., HYDROMECHANICS DIV.
    - G. ROOF DRAINS: ZURN OR SIOUX CHIEF.
16. THIS CONTRACTOR IS RESPONSIBLE FOR ALL HVAC CONDENSATE DRAINS INCLUDING PIPING, INSULATION THEREOF, AND DRYWELLS/RECEPTORS.
17. PLUMBING CONTRACTOR RESPONSIBILITY TO BE 5' BEYOND BUILDING LINE FINAL CONNECTION TO SITE UTILITIES TO BE PLUMBER'S RESPONSIBILITY.
18. PROVIDE CLEAN-OUTS AT EACH STACK RISER, AT EACH 90 DEGREE CHANGE IN HORIZONTAL DIRECTION, AND AT EACH EXIT FROM BUILDING.
19. PROVIDE MAIN SHUTOFF VALVE, RUBBER FACED CHECK VALVE, VACUUM, BREAKER AND HOSE BIB ON COLD WATER MAIN ENTERING THE BUILDING. PROVIDE SHUTOFF VALVE ON THE WATER SUPPLY PIPE TO EVERY WATER HEATER.
20. SILLCOCKS, HOSE BIBS, AND OTHER OPENINGS WITH A HOSE CONNECTION SHALL BE PROTECTED BY AN ATMOSPHERIC-TYPE VACUUM BREAKER OR PERMANENTLY ATTACHED HOSE CONNECTION VACUUM BREAKER.
21. CONNECT WATER MAIN TO VALVE OR STUB PROVIDED BY SITE UTILITY CONTRACTOR. PROVIDE FOR CHLORINATION OF FINAL WATER CONNECTION.
22. PROVIDE AT LEAST ONE 3" MAIN VENT-THRU-ROOF IN BUILDING.
23. PROVIDE AT ALL REFRIGERATOR LOCATIONS A MINIMUM ⅜" C.W. LINE ½" PETCOCK 6" ABOVE FLOOR. FURNISH 48" OF ½" SOFT COPPER TUBING FOR CONNECTION TO REFRIGERATOR.
24. INSULATE ALL DOMESTIC HOT WATER LINES WITH ARMAFLEX RUBBER INSULATION EXCEPT FOR CPVC PIPING.
25. WORK SHALL INCLUDE ALL LABOR, MATERIALS, PERMITS AND OTHER COSTS AS ARE NECESSARY FOR THE INSTALLATION OF A COMPLETE AND SATISFACTORY OPERATIONAL PLUMBING SYSTEM.
26. ALL EQUIPMENT FIXTURES, ETC. SHALL BE TESTED ADJUSTED AND OPERATED AS INDICATED ON THE PLANS AND PLACED IN SATISFACTORY OPERATIONAL CONDITION BY THE PLUMBING CONTRACTOR. THIS CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP, MATERIALS AND EQUIPMENT TO BE FREE OF DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF CERTIFICATE OR OCCUPANCY. THIS IS IN ADDITION TO ANY WARRANTY OR GUARANTEE FROM THE EQUIPMENT MANUFACTURER, FURNISH THE OWNER WITH THE MANUFACTURER'S WRITTEN CERTIFICATES.
27. PROVIDE ACCESS PANELS FOR ALL VALVES CONCEALED IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS.
28. SLEEVE AND/OR FIRESTOP ALL PENETRATIONS THROUGH RATED WALLS, CEILINGS AND FLOORS W/ UL LISTED ASSEMBLIES. FIRESTOP ASSEMBLIES SHALL BE EQUAL TO FOR FINAL FINISHES, FLASH AND COUNTER FLASH AND COUNTER-FLASH ROOF PENETRATIONS.
29. WHEN BEAM SLEEVE PENETRATIONS ARE NECESSARY, COORDINATE PENETRATIONS W/ ALL TRADES, THE ARCHITECT AND THE STRUCTURAL ENGINEER.
30. PROVIDE FOUNDATION PAD PENETRATION SLEEVES, ALLOW 1" MIN. CLEARANCE BETWEEN SLEEVE INSIDE SURFACE AND PIPE EXTERIOR.
31. PROVIDE AUTOMATIC TRAP PRIMERS FOR FLOOR DRAIN TRAP SEALS.
32. PROVIDE AN AIR GAP, WHEN REQUIRED BY CODE, SERVING INDIVIDUAL FIXTURES, DEVICES, APPLIANCES AND APPARATUS.
33. ALL EXPOSED PIPE AND FITTINGS IN FINISHED AREAS SHALL BE CHROME PLATED. MOUNT HOUSE BIBS 24" ABOVE FINISHED GRADE.
34. PROVIDE CLEANOUTS IN ACCORDANCE W/ ALL STATE AND LOCAL CODES. INSTALL CLEANOUT W/ COVER FLUSH TO FINISH SURFACE.
35. COORDINATE EXACT FLOOR DRAIN LOCATIONS W/ ARCHITECTURAL DRAWINGS. SET FLOOR DRAINS BELOW FINISHED FLOOR TO ALLOW FOR FLOOR SLOPING TO THE DRAIN.
36. COORDINATE PIPING W/ ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES. ANY PIPING RUN OVER PANELS SHALL BE RE-ROUTED AT NO ADDITIONAL COST.
37. ATTACH ALL WALL MOUNTED LAVATORIES TO FLOOR MOUNTED CARRIER DESIGNED TO WITHSTAND A VERTICAL LOAD OF 250 POUNDS ON THE FRONT OF THE FIXTURE.
38. PROVIDE SANITARY WASTE, VENT, DOMESTIC WATER, ETC. ROUGH-IN AND MAKE FINAL CONNECTIONS (TO INCLUDE PROVIDING ALL NECESSARY RELATED STOPS, VALVES, TRAPS, ETC. AND MAKE READY FOR USE) TO ALL EQUIP. WHETHER FURNISHED BY THIS CONTRACTOR OR FURNISHED BY OTHERS.

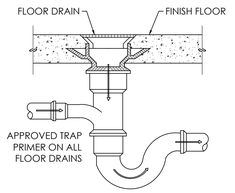
NOTE:
ALL TRADES TO PROVIDE
UL PENETRATION DETAILS (TYP.)



PIPE SUPPORT DETAILS

SCALE: N.T.S.

HANGER ROD SCHEDULE			
PIPE SIZE	ROD SIZE	PIPE SIZE	ROD SIZE
UP TO 2"	⅜"	4" THRU 6"	⅝"
2" TO 3"	½"	6" THRU 12"	⅞"



FLOOR DRAIN DETAIL

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

PLUMBING FIXTURE SCHEDULE - RESIDENTIAL

MARK	FIXTURE	MODEL	MATERIAL	ACCESORIES	CW	HW	SAN	VEN	REMARKS
KS-1	2 COMPARTMENT STAINLESS STEEL KITCHEN SINK	PROFLO PFSR332264BP 4 HOLE ELKAY MFG. CO.	STAINLESS STEEL	FAUCET: PROFLO PFXC3111GP STRAINER: ELKAY #LK-35 CHROME BASKET STRAINER	½"	½"	1½"	1½"	-
WC-1	WATER CLOSET FLOOR MTD. ELONG. BOWL, TANK TYPE	PROFLO PF1401T/PF5112	WHITE VITREOUS CHINA	SEAT: PFTSE2000WH SUPPLIES: ANGLE SUPPLY AND STOP VALVE	½"	-	3"	2"	CAULK AT FLOOR CONTACT W/ WHITE SILICONE SEALANT
L-1	SELF-RIMMING COUNTERTOP LAVATORY HOLES AT 4" O.C.	PROFLO PF194R	WHITE VITREOUS CHINA	FAUCET: PROFLO PFWS3016(CP)/BN - VERIFY SINGLE LEVER HANDLE AND TEMP. LIMIT STOP SUPPLIES: ANGLE VALVES W/ TUBE RISERS AND ESCUTCHEON PLATES	½"	½"	2"	2"	CAULK AT COUNTERTOP CONTACT W/ WHITE SILICONE SEALANT. PROVIDE O.C. W/ CUT-OUT TEMPLATE. FINAL FAUCET SELECTION BY OWNER
TUB	BATH TUB MIXING VALVE, SPRAY HEAD AND FLOOR DRAIN	ENCLOSURE BY OTHERS. BATHTUBS: PFB18R/PFB16L	-	FAUCET: PROFLO PFPF5611SCP BALANCING VALVE: PROFLO ACCUFIT PF3001LS	-	½"	2"	2"	-
WMB	WASHING MACHINE BOX	OATEY 38642	-	-	½"	½"	2	1½"	WASHING MACHINE BOX WITH QUARTTER TURN VALVES AND WATER HAMMER ARRESTORS
CO	EXTERIOR CLEANOUT	ZURN #CO-2530	DURA COATED CAST IRON BODY	INTEGRAL ANCHOR FLANGE, SECURED SCORIATED COVER W/ LIFTING DEVICE, COUNTERSINK BRASS PLUG W/ VANDAL-PROOF SECURED TOP.	¾"	-	LINE SIZE	-	SUPPLY PIPING AND HOSE BIBB TO BE SURFACE MOUNTED PROVIDE EXTENDED ANCHORS AS REQ'D. TO SECURELY ATTACH TO WALL. CAULK AT WALL CONTACT W/ SILICONE SEALANT
HB	EXTERIOR WALL HYDRANT, ANTI-SIPHON, NICKEL BRONZE FINISH	WOODFORD MODEL 74 SERIES	-	VACUUM BREAKER, HINGED COVER W/ OPERATING KEY. "WATER" STAMPED ON COVER, BRONZE BODY AND ALL BRONZE INTERIOR PARTS.	¾"	-	-	-	SUPPLY PIPING AND HOSE BIBB TO BE SURFACE MOUNTED PROVIDE EXTENDED ANCHORS AS REQ'D. TO SECURELY ATTACH TO WALL. CAULK AT WALL CONTACT W/ SILICONE SEALANT

EQUIPMENT SCHEDULE

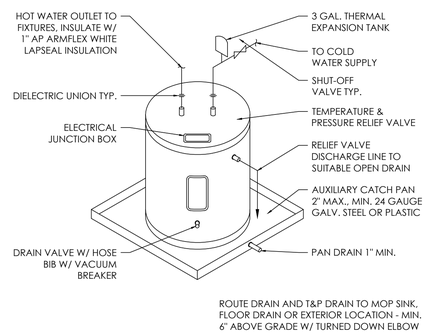
MARK	DESCRIPTION	MODEL	GALLON CAPACITY	ELEMENT KW	VOLT/PHASE	AMPS	CW	HW
EWH	ELECTRIC WATER HEATER - LOW BOY	MFGR: STATE MODEL: EN6-40-DOLBSW	48.0	4.5	208V/10	21.6	¾"	¾"

MISCELLANEOUS SCHEDULE

MARK	DESCRIPTION	MODEL	REMARKS
ET1	EXPANSION TANK	MFGR: AMTROL MODEL: ST	INNER BLADDER, PRECHARGED TO 40 PSIG.
ST1	WATER HAMMER ARRESTOR	MFGR: J.R. SMITH MODEL: 5205	PISTON TYPE WITH ½" PIPE SIZE CONNECTION FOR 1-11 FISXTURE UNITS

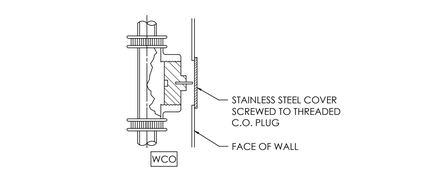
PLUMBING SYMBOLS:

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
CW	DOMESTIC WATER		PIPE SLOPED IN DIRECTION OF ARROW	PXX	PLUMBING FIXTURE DESIGNATION
HW	HOT WATER (120^ F)		PIPE UNION		VENT THRU ROOF
SAN	SANITARY SEWER PIPING		SAFETY RELIEF VALVE		YARD VALVE BOX W/ SHUT OFF VALVE
SSW	SITE SERVICE WATER		HOSE BIB OR WALL HYDRANT	ST	SANITARY SEWER RISER REFERENCE
ESS	SANITARY SEWER PIPING		BALL VALVE	DW	DOMESTIC WATER RISER
	VENT		WATER HAMMER ARRESTER W/ SHUT-OFF VALVE		FLOOR DRAIN
	GATE VALVE		WALL CLEAN-OUT		FLOOR CLEAN-OUT
	PIPE TURNING UP		END OF PIPE CLEAN-OUT		AIR ADMITTANCE VALVE
	PIPE TURNING DOWN		CLEAN-OUT TO GRADE (W/ 18"x18"x4" CONC. PAD) REFER TO DETAIL	FA	FROM ABOVE
	TEE DOWN			DN	DOWN
	TEE UP				
	DIRECTION OF FLOW IN PIPE				



LOW BOY ELECTRIC WATER HEATER DETAIL

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



TYPICAL CLEANOUT DETAILS

SCALE: N.T.S.

PROGRESS SET - NOT FOR CONSTRUCTION

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

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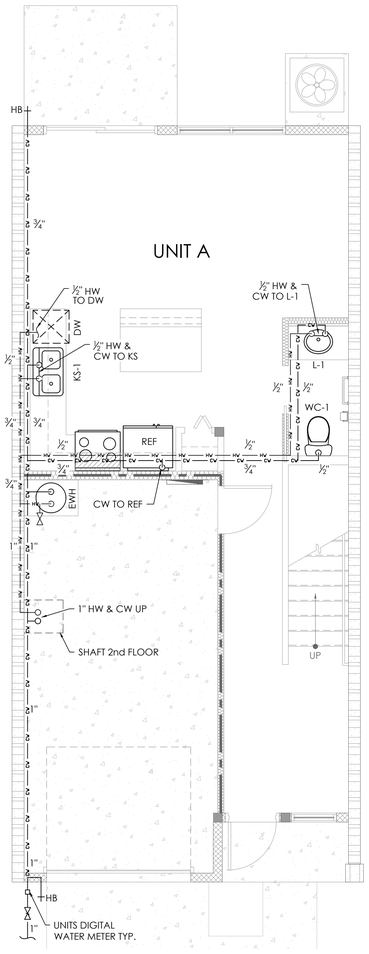
MICHAEL K. SHEELEY
REG. # 0010564
STATE OF FLORIDA
MICHAEL K. SHEELEY
AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	PLUMB

SHEET
P1

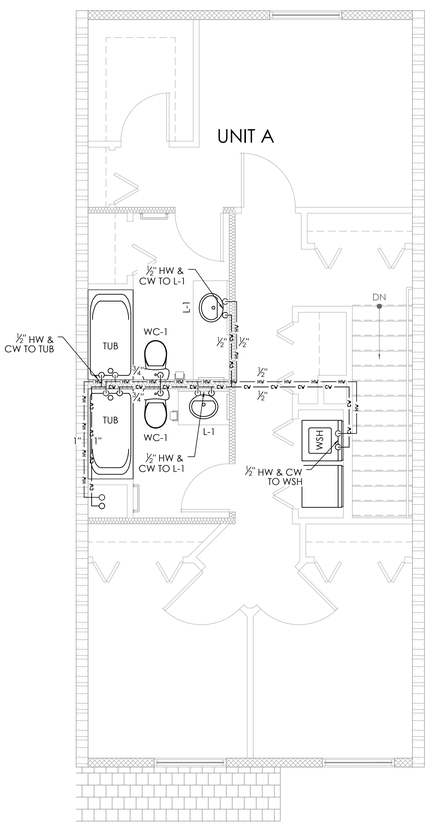
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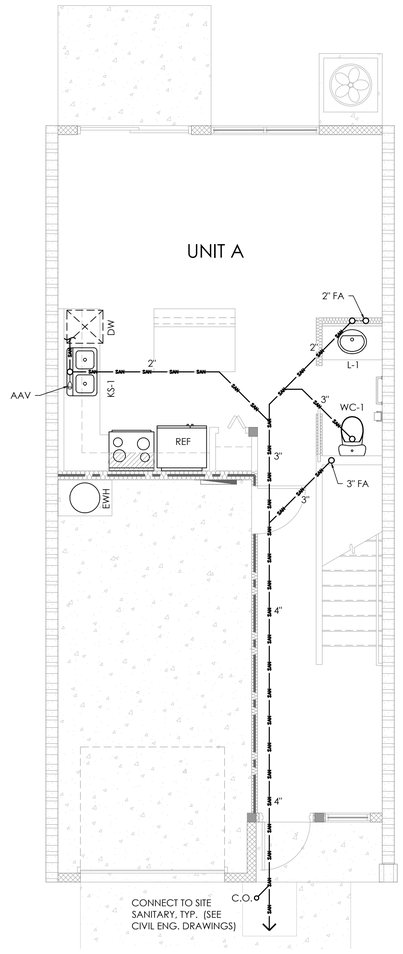
1st FLOOR WATER PLUMBING PLAN

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



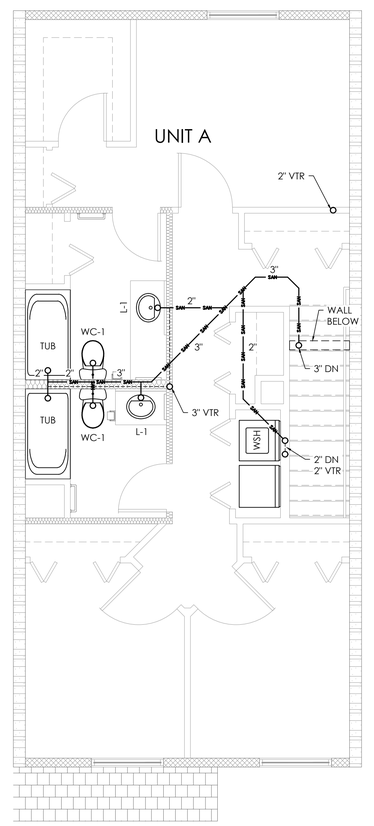
2nd FLOOR WATER PLUMBING PLAN

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



1st FLOOR UNIT SANITARY PLAN

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



2nd FLOOR UNIT SANITARY PLAN

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

PROGRESS SET - NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

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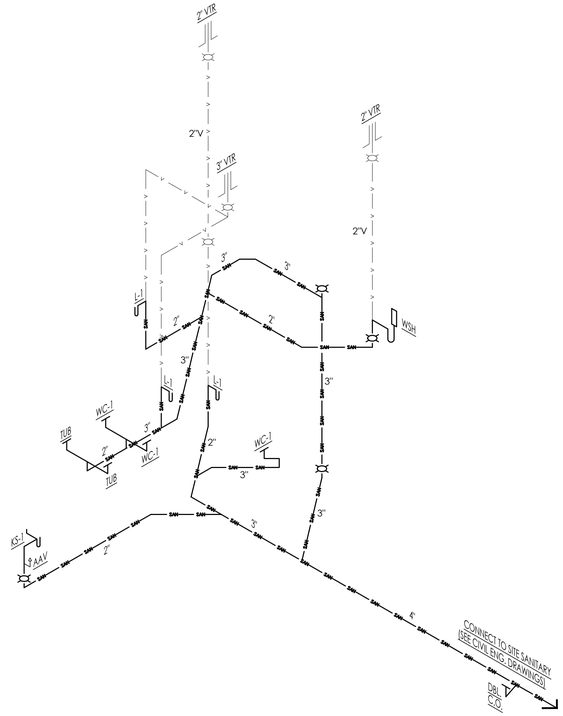
MICHAEL K. SHEELEY
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JOB:	MK25013
DATE:	4-30-25
DRWN. BY:	SLVB
CAD REF:	PLUMB

SHEET
P2

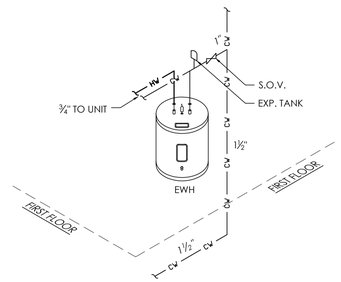
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SANITARY ISOMETRIC - UNIT A

SCALE: N.T.S.



WATER HEATER

SCALE: N.T.S.

PROGRESS SET - NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR
HABITAT FOR HUMANITY
DIPLOMAT SOUTH
4-UNIT TOWNHOUSE
(SEE COVER SHEET FOR FULL BUILDING ADDRESS)

No:	REVISIONS
1	-
2	-
3	-
4	-
5	-

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ARCHITECTURE

MICHAEL K. SHEELEY
REG. # 0010564
STATE OF FLORIDA
MICHAEL K. SHEELEY
AR0010564
REGISTERED ARCHITECT

JOB:	MK25013
DATE:	4-30-25
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CAD REF:	PLUMB

SHEET
P3

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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)*

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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 Diplomat South - 3BR	Builder Name:	
Street:	Diplomat Parkway	Permit Office:	
City, State, Zip:	Cape Coral, FL, 33903	Permit Number:	
Owner:		Jurisdiction:	Cape Coral
Design Location:	FL, Fort Myers	County:	Lee(Florida Climate Zone 1)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Attached
3. Number of units, if multiple family	1
4. Number of Bedrooms	3
5. Is this a worst case?	Yes
6. Conditioned floor area above grade (ft²)	1290
Conditioned floor area below grade (ft²)	0

7. Windows(129.6 sqft.)	Description	Area
a. U-Factor:	Sgl, U=0.55	129.63 ft²
SHGC:	SHGC=0.23	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		0.880 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	502.50 ft²
b. Floor over Garage	R= 0.0	229.00 ft²
c. other (see details)	R=	21.00 ft²

10. Wall Types(5817.5 sqft.)	Insulation	Area
a. Concrete Block - Int Insul, Exterior	R=4.1	4885.00 ft²
b. Frame - Wood, Exterior	R=11.0	640.00 ft²
c. Frame - Wood, Adjacent	R=11.0	292.50 ft²
d. N/A		

11. Ceiling Types(787.0 sqft.)	Insulation	Area
a. Single assembly, no ai (Unvented)	R=0.0	787.00 ft²
b. N/A		
c. N/A		

12. Roof(Comp. Shingles, Unvent)	Deck	R=19.0	853 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: 2nd Floor, Ret: 2nd Floor, AH: 2nd Floor	6	258
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	24.0	SEER2:16.00

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Strip Heat	17.0	COP:1.00

16. Hot Water Systems	
a. Electric	Cap: 40 gallons
	EF: 0.920
b. Conservation features	
	None
17. Credits	CF, Pstat

Glass/Floor Area: 0.101

Total Proposed Modified Loads: 95.33

Total Baseline Loads: 108.53

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: _____

DATE: _____

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

OWNER/AGENT: _____

DATE: _____

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 6.00 ACH50 (R402.4.1.2).

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Habitat For Humanity Diplomat South - 3BR			Address type:	Street Address
Building Type:	User	Bedrooms:	3	Lot #:	---
Owner:		Conditioned Area:	1290	Block/SubDivision:	---
Builder Home ID:		Total Stories:	2	PlatBook:	---
Builder Name:		Worst Case:	Yes	Street:	Diplomat Parkway
Permit Office:		Rotate Angle:	0	County:	Lee
Jurisdiction:	Cape Coral	Cross Ventilation:		City, State, Zip:	Cape Coral, FL, 33903
Family Type:	Attached	Whole House Fan:			
New/Existing:	New (From Plans)	Terrain:	Suburban		
Year Construct:	2025	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, Fort Myers	FL_FORT_MYERS_PAGE_FIE	46	93	70	75	205	58	Medium

BLOCKS

√	Number	Name	Area	Volume
___	1	Block1	1290	10653 cu ft

SPACES

√	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___	1	1st Flr	503	4357	Yes	0	0	Yes	Yes	Yes
___	2	2nd Floor	787	6296	No	4	3	Yes	Yes	Yes

FLOORS (Total Exposed Area = 753 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	1st Flr		502.5 sqft	0.0	---	0.710	0 (ft)/0 (ft)	1.00	0.00	0.00
___	2	Floor over Garage	2nd Floor	---	229 sqft	---	0.0	0.263	-------	1.00	0.00	0.00
___	3	Raised Floor	2nd Floor	---	21 sqft	---	0.0	0.301	-------	1.00	0.00	0.00

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Framing. Fract.	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
___	1	Gable or shed	Composition shingles	853 ft²	164 ft²	0.11	Medium	N	0.85	No	0.9	No	19	22.62

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___	1	No attic	Unvented	0	787 ft²	N	N

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

CEILING (Total Exposed Area = 787 sq.ft.)

√	#	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
	1	Single assembly, no airspace (Unvented)	2nd Floor	0.0	Blown	787.0ft²	0.050	0.11	Wood

WALLS (Total Exposed Area = 5818 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	N	Exterior	Conc. Blk - Int Ins	1st Flr	4.1	19.0	0	10.0	0	190.0	0.149		0	0.48	0.0 %
	2	E	Exterior	Conc. Blk - Int Ins	1st Flr	4.1	42.0	0	110.0	0	4620.0	0.149		0	0.48	0.0 %
	3	S	Exterior	Conc. Blk - Int Ins	1st Flr	4.1	7.0	6	10.0	0	75.0	0.149		0	0.48	0.0 %
	4	N	Garage	Frame - Wood	1st Flr	11.0	10.8	0	10.0	0	107.5	0.092		0.23	0.48	0.0 %
	5	N	Garage	Frame - Wood	1st Flr	11.0	18.0	6	10.0	0	185.0	0.092		0.23	0.48	0.0 %
	6	N	Exterior	Frame - Wood	2nd Floor	11.0	19.0	0	8.0	0	152.0	0.092		0.23	0.48	0.0 %
	7	E	Exterior	Frame - Wood	2nd Floor	11.0	42.0	0	8.0	0	336.0	0.092		0.23	0.48	0.0 %
	8	S	Exterior	Frame - Wood	2nd Floor	11.0	19.0	0	8.0	0	152.0	0.092		0.23	0.48	0.0 %

DOORS (Total Exposed Area = 20 sq.ft.)

√	#	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
	1	S		Insulated	1st Flr	None	0.40	3.00	0	6.00	8	20.0ft²

WINDOWS (Total Exposed Area = 130 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	N	1	Metal	Single (Tinted)	Y	0.55	0.23	Y	N	40.8	1	6.00	6.80	0.0	0.0	Drapes/blinds	Ex. 50%
	2	N	1	Metal	Single (Tinted)	Y	0.55	0.23	Y	N	26.0	1	6.00	4.33	0.0	0.0	Drapes/blinds	Ex. 50%
	3	S	3	Metal	Single (Tinted)	Y	0.55	0.23	Y	N	10.8	1	2.50	4.33	3.3	2.0	Drapes/blinds	Ex. 50%
	4	N	6	Metal	Single (Tinted)	Y	0.55	0.23	Y	N	17.3	1	4.00	4.33	1.5	1.0	Drapes/blinds	Ex. 50%
	5	S	8	Metal	Single (Tinted)	Y	0.55	0.23	Y	N	34.7	2	4.00	4.33	1.5	1.0	Drapes/blinds	Ex. 50%

INFILTRATION

√	#	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
	1	Wholehouse	Proposed ACH(50)	0.00031	1065	58.44	109.72	0.1447	6.0	All	10653 cu ft

GARAGE

√	#	Floor Area	Length	Width	Roof Area	Exposed Perimeter	Area Under Uncond.	Avg. Wall Height	Exposed Wall Insulation
	1	260 ft²	26.0 ft²	10.0 ft²	260 ft²	15 ft	31 ft	10 ft	0

MASS

√	#	Mass Type	Area	Thickness	Furniture Fraction	Space
	1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	1st Flr
	2	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	2nd Floor

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

HEATING SYSTEM

√	#	System Type	Subtype	AHRI #	Efficiency	Capacity kBtu/hr	----GeothermalHeatPump---- Entry	Power	Volt	Current	Ducts	Block
___	1	Electric Strip Heat	None		COP: 1.00	17.0		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	None/Single		SEER2:16.0	24.0	800	0.75	sys#1	1

HOT WATER SYSTEM

√	#	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixt. Flow	Trap	Pipe Ins.	Pipe length
___	1	Electric	None	Garage	0.92 (0.92)	40.0 gal	60 gal	120 deg	Standard	Yes	=>R-3	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	LeakageType	AHU Location	CFM 25 TOT|OUT	QN OUT	AHU SEALED	RLF	HVAC # Heat	HVAC # Cool
___	1	2nd Floor	6.0	258 ft²	2nd Floor	6.0	64 ft²	DefaultLeakage	2nd Floor	(Default) (Default)				1	1

TEMPERATURES

Programable Thermostat: Y Ceiling Fans: N

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

√	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* = 88

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

Diplomat Parkway,Cape Coral,FL,33903

1. New construction or existing		New (From Plans)
2. Single family or multiple family		Attached
3. Number of units, if multiple family		1
4. Number of Bedrooms		3
5. Is this a worst case?		Yes
6. Conditioned floor area above grade (ft²)		1290
Conditioned floor area below grade (ft²)		0

7. Windows**	Description	Area
a. U-Factor:	Sgl, U=0.55	129.63 ft²
SHGC:	SHGC=0.23	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		0.880 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	502.50 ft²
b. Floor over Garage	R= 0.0	229.00 ft²
c. other (see details)	R=	21.00 ft²

10. Wall Types(5817.5 sqft.)	Insulation	Area
a. Concrete Block - Int Insul, Exterior	R=4.1	4885.00 ft²
b. Frame - Wood, Exterior	R=11.0	640.00 ft²
c. Frame - Wood, Adjacent	R=11.0	292.50 ft²
d. N/A		

11. Ceiling Types(787.0 sqft.)	Insulation	Area
a. Single assembly, no ai (Unvented)	R=0.0	787.00 ft²
b. N/A		
c. N/A		

12. Roof(Comp. Shingles, Unvent)Deck	R=19.0	853 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: 2nd Floor, Ret: 2nd Floor, AH: 2nd Floor	6	258
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	24.0	SEER2:16.00

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Strip Heat	17.0	COP:1.00

16. Hot Water Systems	
a. Electric	Cap: 40 gallons EF: 0.920
b. Conservation features	None
17. Credits	CF, 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: _____

Address of New Home: Diplomat Parkway City/FL Zip: Cape Coral,FL,33903

*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:	DiplomatParkway Cape Coral, FL 33903	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.

☐ **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 thermalenvelope.
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 104ºF (40ºC).

☐ **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.

☐ **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 Diplomat South - 3BR	Builder Name:	
Street:	Diplomat Parkway	Permit Office:	
City, State, Zip:	Cape Coral, FL, 33903	Permit Number:	
Owner:		Jurisdiction:	Cape Coral
Design Location:	FL, Fort Myers	County:	Lee(Florida Climate Zone 1)

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 andcantilevered 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.		
Narrowcavities		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.	
Garageseparation	Air sealing shall be provided between the garage and conditionedspaces.		
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 otherequipment 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: Cape Coral	Permit #:

Job Information

Builder: Community: Lot: NA

Address: Diplomat Parkway

City: Cape Coral State: FL Zip: 33903

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): 6.000

_____ x 60 ÷ 10653 = _____
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

CompanyName:_____ 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: _____

Building Input Summary Report

PROJECT

Title:	Habitat For Humanity Diplomat South - 3BR			Address type:	Street Address
Building Type:	User	Bedrooms:	3	Lot #:	---
Owner:		Conditioned Area:	1290	Block/SubDivision:	---
Builder Home ID:		Total Stories:	2	PlatBook:	---
Builder Name:		Worst Case:	Yes	Street:	Diplomat Parkway
Permit Office:		Rotate Angle:	0	County:	Lee
Jurisdiction:	Cape Coral	Cross Ventilation:		City, State, Zip:	Cape Coral, FL, 33903
Family Type:	Attached	Whole House Fan:			
New/Existing:	New (From Plans)	Terrain:	Suburban		
Year Construct:	2025	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, Fort Myers	FL_FORT_MYERS_PAGE_FIE	46	93	70	75	205	58	Medium

UTILITY

√	Fuel	Unit	Utility Name	Monthly Fixed Cost	$/Unit
___	Electricity	kWh	EnergyGaugeDefault	0.00	0.13
___	Natural Gas	Therm	EnergyGaugeDefault	0.00	1.72
___	Fuel Oil	Gallon	EnergyGaugeDefault	0.00	3.40
___	Propane	Gallon	EnergyGaugeDefault	0.00	2.40

SURROUNDINGS

		Shade Trees				Adjacent Buildings		
Ornt	Type	Height	Width	Distance	Exist	Height	Width	Distance
N	None	0 ft	0 ft	0 ft		0 ft	0 ft	0 ft
NE	None	0 ft	0 ft	0 ft		0 ft	0 ft	0 ft
E	None	0 ft	0 ft	0 ft		0 ft	0 ft	0 ft
SE	None	0 ft	0 ft	0 ft		0 ft	0 ft	0 ft
S	None	0 ft	0 ft	0 ft		0 ft	0 ft	0 ft
SW	None	0 ft	0 ft	0 ft		0 ft	0 ft	0 ft
W	None	0 ft	0 ft	0 ft		0 ft	0 ft	0 ft
NW	None	0 ft	0 ft	0 ft		0 ft	0 ft	0 ft

BLOCKS

√	Number	Name	Area	Volume
___	1	Block1	1290	10653 cu ft

SPACES

√	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___	1	1st Flr	503	4357	Yes	0	0	Yes	Yes	Yes
___	2	2nd Floor	787	6296	No	4	3	Yes	Yes	Yes

Building Input Summary Report

FLOORS (Total Exposed Area = 753 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	1st Flr		502.5 sqft	0.0	---	0.710	0 (ft)/0 (ft)	1.00	0.00	0.00
___	2	Floor over Garage	2nd Floor	---	229 sqft	---	0.0	0.263	-------	1.00	0.00	0.00
___	3	Raised Floor	2nd Floor	---	21 sqft	---	0.0	0.301	-------	1.00	0.00	0.00

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Framing. Fract.	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
___	1	Gable or shed	Composition shingles	853 ft²	164 ft²	0.11	Medium	N	0.85	No	0.9	No	19	22.62

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___	1	No attic	Unvented	0	787 ft²	N	N

CEILING (Total Exposed Area = 787 sq.ft.)

√	#	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
___	1	Single assembly, no airspace (Unvented)	2nd Floor	0.0	Blown	787.0ft²	0.050	0.11	Wood

WALLS (Total Exposed Area = 5818 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	N	Exterior	Conc. Blk - Int Ins	1st Flr	4.1	19.0	0	10.0	0	190.0	0.149		0	0.48	0.0 %
___	2	E	Exterior	Conc. Blk - Int Ins	1st Flr	4.1	42.0	0	110.0	0	4620.0	0.149		0	0.48	0.0 %
___	3	S	Exterior	Conc. Blk - Int Ins	1st Flr	4.1	7.0	6	10.0	0	75.0	0.149		0	0.48	0.0 %
___	4	N	Garage	Frame - Wood	1st Flr	11.0	10.8	0	10.0	0	107.5	0.092		0.23	0.48	0.0 %
___	5	N	Garage	Frame - Wood	1st Flr	11.0	18.0	6	10.0	0	185.0	0.092		0.23	0.48	0.0 %
___	6	N	Exterior	Frame - Wood	2nd Floor	11.0	19.0	0	8.0	0	152.0	0.092		0.23	0.48	0.0 %
___	7	E	Exterior	Frame - Wood	2nd Floor	11.0	42.0	0	8.0	0	336.0	0.092		0.23	0.48	0.0 %
___	8	S	Exterior	Frame - Wood	2nd Floor	11.0	19.0	0	8.0	0	152.0	0.092		0.23	0.48	0.0 %

DOORS (Total Exposed Area = 20 sq.ft.)

√	#	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
___	1	S	Exterior	Insulated	1st Flr	None	0.40	3.00	0	6.00	8	20.0ft²

WINDOWS (Total Exposed Area = 130 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)	--Overhang-- Sep. (ft)	Interior Shade	Screen
___	1	N	1	Metal	Single (Tinted)	Y	0.55	0.23	Y	N	40.8	1	6.00	6.80	0.0	0.0	Drapes/blinds	Ex. 50%
___	2	N	1	Metal	Single (Tinted)	Y	0.55	0.23	Y	N	26.0	1	6.00	4.33	0.0	0.0	Drapes/blinds	Ex. 50%
___	3	S	3	Metal	Single (Tinted)	Y	0.55	0.23	Y	N	10.8	1	2.50	4.33	3.3	2.0	Drapes/blinds	Ex. 50%
___	4	N	6	Metal	Single (Tinted)	Y	0.55	0.23	Y	N	17.3	1	4.00	4.33	1.5	1.0	Drapes/blinds	Ex. 50%
___	5	S	8	Metal	Single (Tinted)	Y	0.55	0.23	Y	N	34.7	2	4.00	4.33	1.5	1.0	Drapes/blinds	Ex. 50%

Building Input Summary Report

INFILTRATION

√	#	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
___	1	Wholehouse	Proposed ACH(50)	0.00031	1065	58.44	109.72	0.1447	6.0	All	10653 cu ft

GARAGE

√	#	Floor Area	Length	Width	Roof Area	Exposed Perimeter	Area Under Uncond.	Avg. Wall Height	Exposed Wall Insulation
___	1	260 ft²	26.0 ft²	10.0 ft²	260 ft²	15 ft	31 ft	10 ft	0

MASS

√	#	Mass Type	Area	Thickness	Furniture Fraction	Space
___	1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	1st Flr
___	2	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	2nd Floor

HEATING SYSTEM

√	#	System Type	Subtype	AHRI #	Efficiency	Capacity kBtu/hr	----GeothermalHeatPump---- Entry	Power	Volt	Current	Ducts	Block
___	1	Electric Strip Heat	None		COP: 1.00	17.0		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	None/Single		SEER2:16.0	24.0	800	0.75	sys#1	1

HOT WATER SYSTEM

√	#	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixt. Flow	Trap	Pipe Ins.	Pipe length
___	1	Electric	None	Garage	0.92 (0.92)	40.0 gal	60 gal	120 deg	Standard	Yes	=>R-3	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	R-Value	Area	----------Return---------- Location	R-Value	Area	LeakageType	AHU Location	CFM 25 TOT|OUT	QN OUT	AHU SEALED	RLF	HVAC # Heat	Cool
___	1	2nd Floor	6.0	258 ft²	2nd Floor	6.0	64 ft²	DefaultLeakage	2nd Floor	(Default)	(Default)			1	1

TEMPERATURES

Programable Thermostat: Y Ceiling Fans: N

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

Building Input Summary Report

TEMPERATURES(Continued)

√	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

MISC ELECTRICAL LOADS

√	ID	Type	Screen	Location	Item	Quantity	Catagory	Operating	Schedule	Off Standby
___	1	Misc Elec Load	Simple Default	Main		1		1	HERS2011	1

APPLIANCES & LIGHTING SCHEDULES

Appliance Schedule: HERS2014 Schedule Type			Hours 1	2	3	4	5	6	7	8	9	10	11	12
Occupancy peak:	400 Btu	AM	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.980	0.460	0.270	0.270	0.270
%Released:	100 %	PM	0.270	0.270	0.270	0.270	0.330	0.610	1.000	1.000	0.930	0.930	0.930	0.930
refrig peak:	0 W	AM	0.824	0.804	0.784	0.764	0.744	0.734	0.744	0.754	0.764	0.794	0.814	0.854
%Released:	100 %	PM	0.854	0.864	0.884	0.904	0.925	0.945	0.925	0.915	0.904	0.894	0.874	0.854
cWash peak:	0 W	AM	0.200	0.100	0.050	0.050	0.050	0.075	0.200	0.375	0.500	0.800	0.950	1.000
%Released:	30 %	PM	0.875	0.850	0.800	0.625	0.625	0.600	0.575	0.550	0.625	0.700	0.650	0.375
E-cDry peak:	0 W	AM	0.200	0.100	0.050	0.050	0.050	0.075	0.200	0.375	0.500	0.800	0.950	1.000
%Released:	15 %	PM	0.875	0.850	0.800	0.625	0.625	0.600	0.575	0.550	0.625	0.700	0.650	0.375
dWash peak:	0 W	AM	0.139	0.050	0.028	0.024	0.029	0.090	0.169	0.303	0.541	0.594	0.502	0.443
%Released:	60 %	PM	0.376	0.396	0.334	0.323	0.344	0.448	0.791	1.000	0.800	0.597	0.383	0.281
E-rOven peak:	0 W	AM	0.057	0.057	0.057	0.057	0.057	0.114	0.171	0.286	0.343	0.343	0.343	0.400
%Released:	80 %	PM	0.457	0.343	0.286	0.400	0.571	1.000	0.857	0.429	0.286	0.229	0.171	0.114
TVs peak:	226 W	AM	0.100	0.050	0.050	0.050	0.100	0.200	0.400	0.450	0.400	0.200	0.100	0.100
%Released:	100 %	PM	0.050	0.050	0.150	0.450	0.850	1.000	0.950	0.800	0.500	0.250	0.150	0.100
cFan peak:	0 W	AM	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.250	0.250	0.250	0.250	0.250
%Released:	100 %	PM	0.250	0.250	0.250	0.250	0.250	0.250	0.550	0.600	0.600	0.600	0.600	0.600
lgts-in peak:	0 W	AM	0.160	0.150	0.160	0.180	0.230	0.450	0.420	0.260	0.190	0.160	0.120	0.110
%Released:	100 %	PM	0.160	0.170	0.250	0.270	0.340	0.550	0.600	0.880	1.000	0.880	0.510	0.280
lgts-out peak:	0 W	AM	1.000	1.000	1.000	1.000	1.000	0.750	0.750	0.000	0.000	0.000	0.000	0.000
%Released:	0 %	PM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.750	0.750	0.750	1.000
lgts-gar peak:	0 W	AM	0.000	0.000	0.000	0.000	0.000	0.500	0.750	1.000	0.750	0.500	0.000	0.000
%Released:	0 %	PM	0.000	0.000	0.500	0.500	0.750	1.000	0.750	0.500	0.000	0.000	0.000	0.000
MEL peak:	0 W	AM	0.500	0.500	0.500	0.750	0.750	0.850	1.000	1.000	1.000	1.000	0.900	0.900
%Released:	90 %	PM	0.900	0.900	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.850	0.750	0.750

Habitat For Humanity Diplomat 3br
HVAC Load Calculations

for

Elite Software

RHVAC Residential HVAC Loads

Prepared By:

Nick Stewart
NPS Consulting LLC
2534 Santa Barbara Place Ste 201
Cape Coral, Florida 33904
239-677-3004
Friday, May 23, 2025

Rhvac is an ACCA approved Manual J, D and S computer program.
Calculations are performed per ACCA Manual J 8th Edition, Version 2.50, and ACCA Manual D.

Project Report

General Project Information

Project Title:	Habitat For Humanity Diplomat 3br
Project Date:	Friday, May 23, 2025
Company Name:	NPS Consulting LLC
Company Representative:	Nick Stewart
Company Address:	2534 Santa Barbara Place Ste 201
Company City:	Cape Coral, Florida 33904
Company Phone:	239-677-3004
Company E-Mail Address:	Nick@NPSConsultingllc.com

Design Data

Reference City:		Fort Myers, Florida
Building Orientation:		Front door faces West
Daily Temperature Range:		Medium
Latitude:	26	Degrees
Elevation:	15	ft.
Altitude Factor:	0.999	

	Outdoor Dry Bulb	Outdoor Wet Bulb	Outdoor Rel.Hum	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	44	41.28	n/a	n/a	70	n/a
Summer:	92	78	54%	50%	75	58

Check Figures

Total Building Supply CFM:	799	CFM Per Square ft.:	0.631
Square ft. of Room Area:	1,266	Square ft. Per Ton:	766
Volume (ft³):	11,236		

Building Loads

Total Heating Required Including Ventilation Air:	13,711	Btuh	13.711	MBH
Total Sensible Gain:	17,563	Btuh	89	%
Total Latent Gain:	2,262	Btuh	11	%
Total Cooling Required Including Ventilation Air:	19,825	Btuh	1.65	Tons (Based On Sensible + Latent)

Notes

Rhvac is an ACCA approved Manual J, D and S computer program.
Calculations are performed per ACCA Manual J 8th Edition, Version 2.50, and ACCA Manual D.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads according to the manufacturer's performance data at your design conditions.

Load Preview Report

Scope	Net Ton	ft.³ /Ton	Area	Sen Gain	Lat Gain	Net Gain	Sen Loss	Sys Htg CFM	Sys Clg CFM	Sys Act CFM	Duct Size
Building	1.65	766	1,266	17,563	2,262	19,825	13,711	178	799	799	
System 1	1.65	766	1,266	17,563	2,262	19,825	13,711	178	799	799	10x15
Zone 1			1,266	17,563	2,262	19,825	13,711	178	799	799	10x15
1-1st Fl			479	8,013	1,176	9,189	7,793	101	364	364	4--6
2-2nd Fl			787	9,550	1,086	10,636	5,918	77	434	434	4--7

System 1 AHU-1 Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
G5223PGT: Glazing-PGT impact clear Low-E 52-23, outdoor insect screen with 50% coverage, U-value 0.52, SHGC 0.23	77.3	1,046	0	2,125	2,125
G6525PGT: Glazing-PGT impact clear Low-E 65-23, outdoor insect screen with 50% coverage, U-value 0.65, SHGC 0.25	52.1	879	0	1,596	1,596
11L: Door-Metal - Paper Honeycomb Core, U-value 0.56	20.1	293	0	315	315
13A-4ocb: Wall-Block, board insulation only, R-4 board insulation, open core, brick finish, U-value 0.148	1222.5	4,704	0	3,130	3,130
12B-0bw: Part-Frame, R-11 insulation in 2 x 4 stud cavity, no board insulation, brick finish, wood studs, U-value 0.097	292.5	454	0	482	482
18A-19: Roof/Ceiling-Roof Joists Between Roof Deck and Ceiling or Foam Encapsulated Roof Joists, Dark or Bold-Color Asphalt Shingle, Dark Metal, Dark Membrane, Dark Tar and Gravel, R-19 blanket or loose fill, U-value 0.051	787	1,044	0	1,124	1,124
22A-ph: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, heavy moist soil, U-value 1.358	94	3,319	0	0	0
20P-4: Floor-Over open crawl space or garage, Passive, R-4 board insulation, any cover, U-value 0.162	229	965	0	445	445
20P-11: Floor-Over open crawl space or garage, Passive, R-11 blanket insulation, any cover, U-value 0.078	21	43	0	20	20
Subtotals for structure:		12,747	0	9,237	9,237
People:	8		1,600	1,840	3,440
Equipment:			0	5,794	5,794
Lighting:	0			0	0
Ductwork:		0	0	0	0
Infiltration: Winter CFM: 34, Summer CFM: 17		964	662	315	977
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
AED Excursion:		0	0	377	377
System 1 AHU-1 Load Totals:		13,711	2,262	17,563	19,825

Check Figures

Supply CFM:	799	CFM Per Square ft.:	0.631
Square ft. of Room Area:	1,266	Square ft. Per Ton:	766
Volume (ft³):	11,236		

System Loads

Total Heating Required Including Ventilation Air:	13,711	Btuh	13.711	MBH
Total Sensible Gain:	17,563	Btuh	89	%
Total Latent Gain:	2,262	Btuh	11	%
Total Cooling Required Including Ventilation Air:	19,825	Btuh	1.65	Tons (Based On Sensible + Latent)

Notes

Rhvac is an ACCA approved Manual J, D and S computer program.
Calculations are performed per ACCA Manual J 8th Edition, Version 2.50, and ACCA Manual D.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads according to the manufacturer's performance data at your design conditions.

Manual S Performance Data - System 1 - AHU-1

Loads and Design Conditions

Cooling:

Outdoor Dry Bulb:	92	Sensible Gain:	17.563
Outdoor Wet Bulb:	78	Latent Gain:	2.262
Indoor Dry Bulb:	75	Total Gain:	19.825
Indoor RH:	50	Load SHR:	0.89
Supply Airflow:	799	Entering Dry Bulb:	75
		Entering Wet Bulb:	62.5

Heating:

Outdoor Dry Bulb:	44	Sensible Loss:	13.711
Indoor Dry Bulb:	70	Entering Dry Bulb:	70.0
Indoor RH:	30	Supply Airflow:	178

Equipment Performance Data at System Design Conditions

Cooling:
Model Type: Standard Air Conditioner, Outdoor Model: 26SCA524-3, Indoor Model: FJ5ANXB24
Nominal Capacity: 24.000, Manufacturer: Carrier

Entered Interpolation Data:

EWB °F	Air Flow CFM	ODB °F	Total Capacity MBtuh	Power Input kW	EDB 75 °F	
					S/T	Sensible Capacity MBtuh
62.5	799	92	24	0.2	0.75	18

Interpolation Results:

		Load	Percent of Load
Sensible Capacity:	18.000	17.563	102%
Latent Capacity:	6.000	2.262	265%
Total Capacity:	24.000	19.825	121%
Power Input:	0.20		

Heating:
Model Type: Electric Resistance, Model: , Nominal Capacity: 17.000, Manufacturer:

Results:

		Load	Percent of Load
Heating Capacity:	17.000	13.711	124%