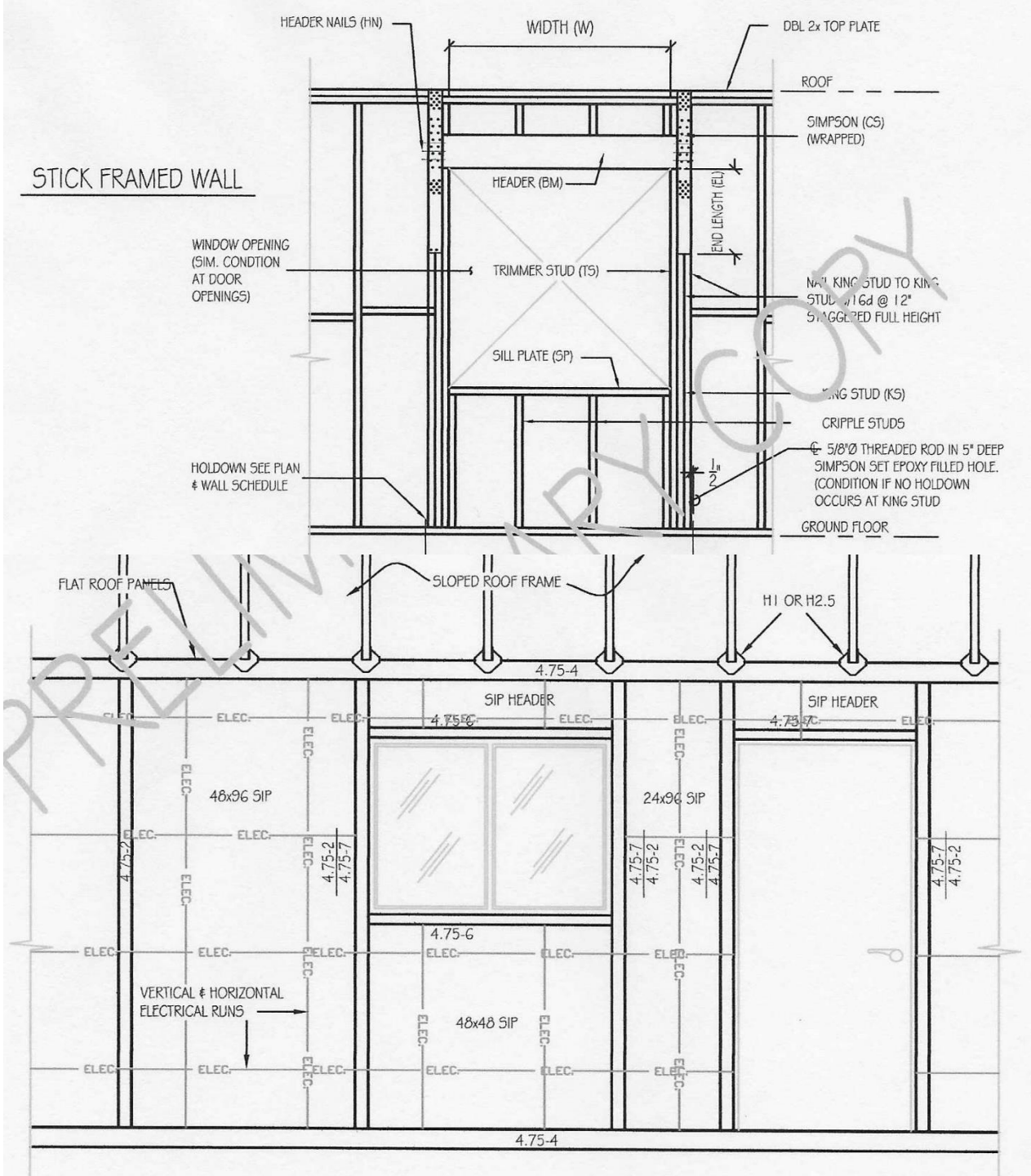
SIPs and CONNECTIONS

BUDDY BUILDING SYSTEM

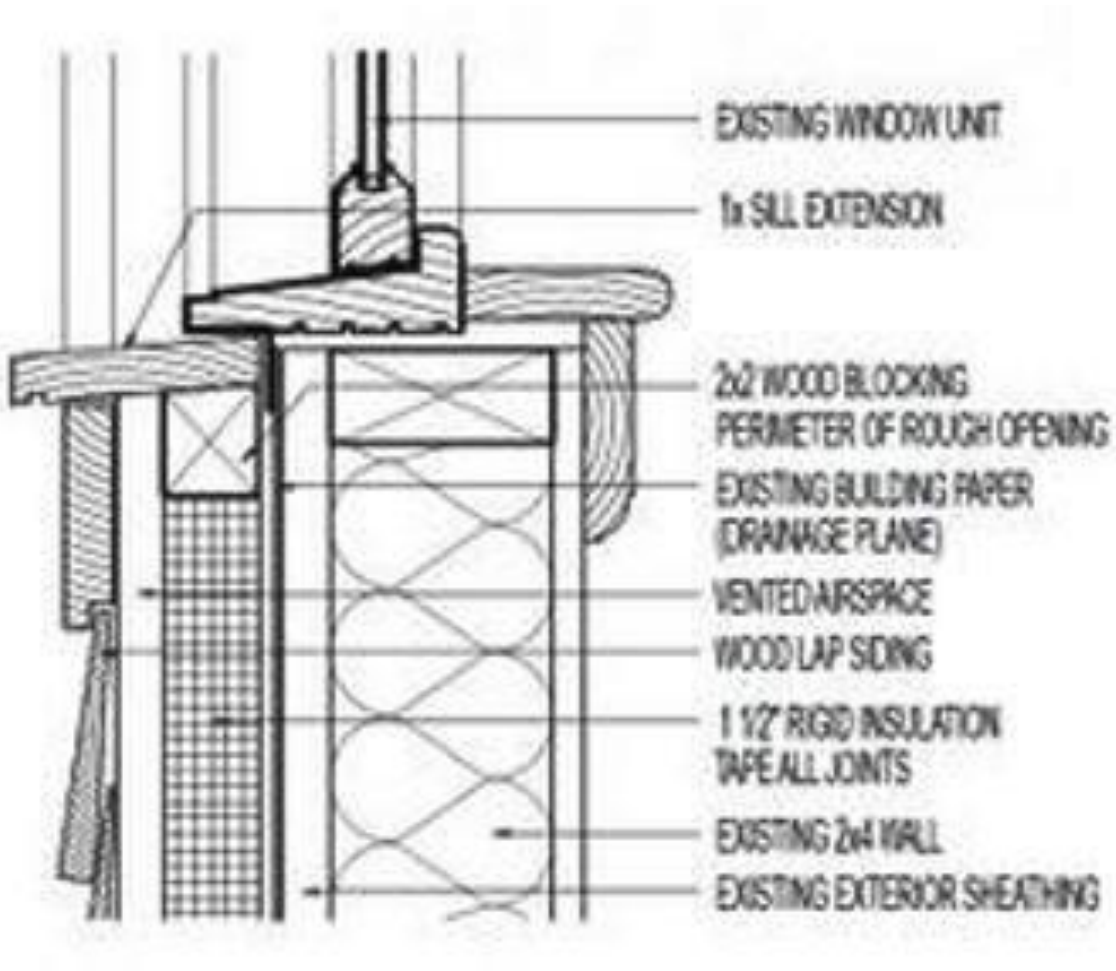
PATENTED BUILDING SYSTEM SINCE 2015. DESIGNED TO SIMPLIFY ASSEMBLY OF HOUSING, IMPROVE THE TIME OF CONSTRUCTION, THERMALLY IMPROVE THE BUILDING ENVELOPE AND BE CONSUMER FRIENDLY. TWO NON-SKILLED "BUDDIES" CAN ASSEMBLE THE PARTS AND BUILD A STRUCTURE WITH EASE.

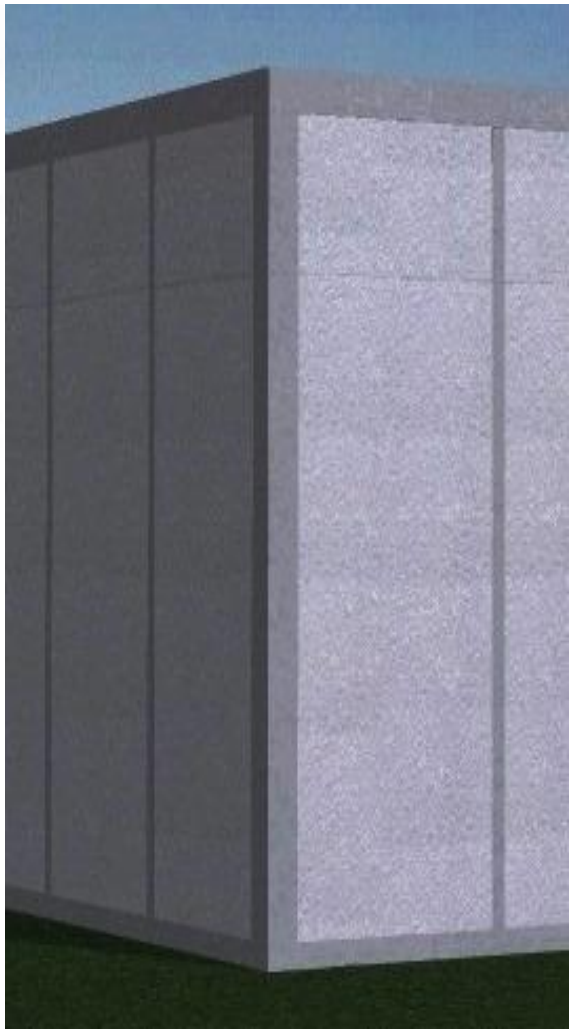
Traditional balloon stick framing is the common design used for assembly of part to accomplish building a residential home. This type of construction calls for many types and moving parts. Some of these components allow air leakage that reduces the energy efficiency of the home. (BBS) only has two parts plus fasteners.

STICK FRAMED FLOOR AND WALLS INCLUDE CLIPS, STRAPS, PAPER, SHEATHING, BATT INSULATION, SHEAT FOAM INSULATION, DRYWALL, SIDING, NAILS AND MULTIPLE CUTTINGS THAT WILL USE A LOT OF LABOR AND LEFT OVER SCRAP TO ACCOMPLISH THE TASK OF FLOOR, WALL AND CEILING. **BUDDY BUILDING SYSTEM USES THREE MAIN PARTS, SIPs, CONNECTIONS AND FASTENERS.**



WALL CONSTRUCTION IS SIMPLIFIED WITH USE OF TWO SKINS AND AN EPS CORE. THE 4.657” WALL RATES AS HIGH AS R-27



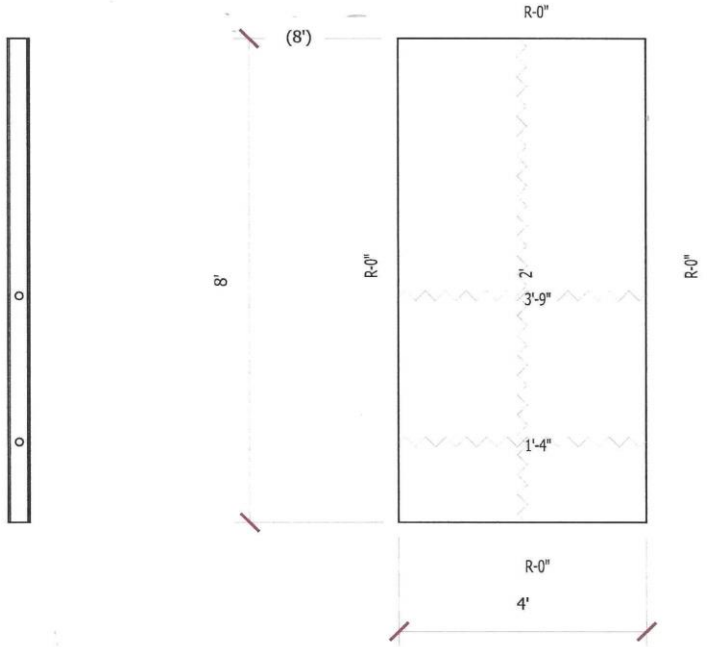


SIPs PANELS MEASURE 2-4 FEET BY 8-9-10-12 FEET, USING CELUKA SKINS. THESE SKINS WILL NOT DING, DENT, SCRATCH, AND RESISTS BUGS, MOISTURE AND ROT. CLASS I (A) RATED, BURN RATE FAILED TO IGNITE AND FLAME SPEAD INDEX AT 25. EPS IS PREDRILLED WITH ELECTRICAL RUNS.

JOB NAME: Buddy Shelters

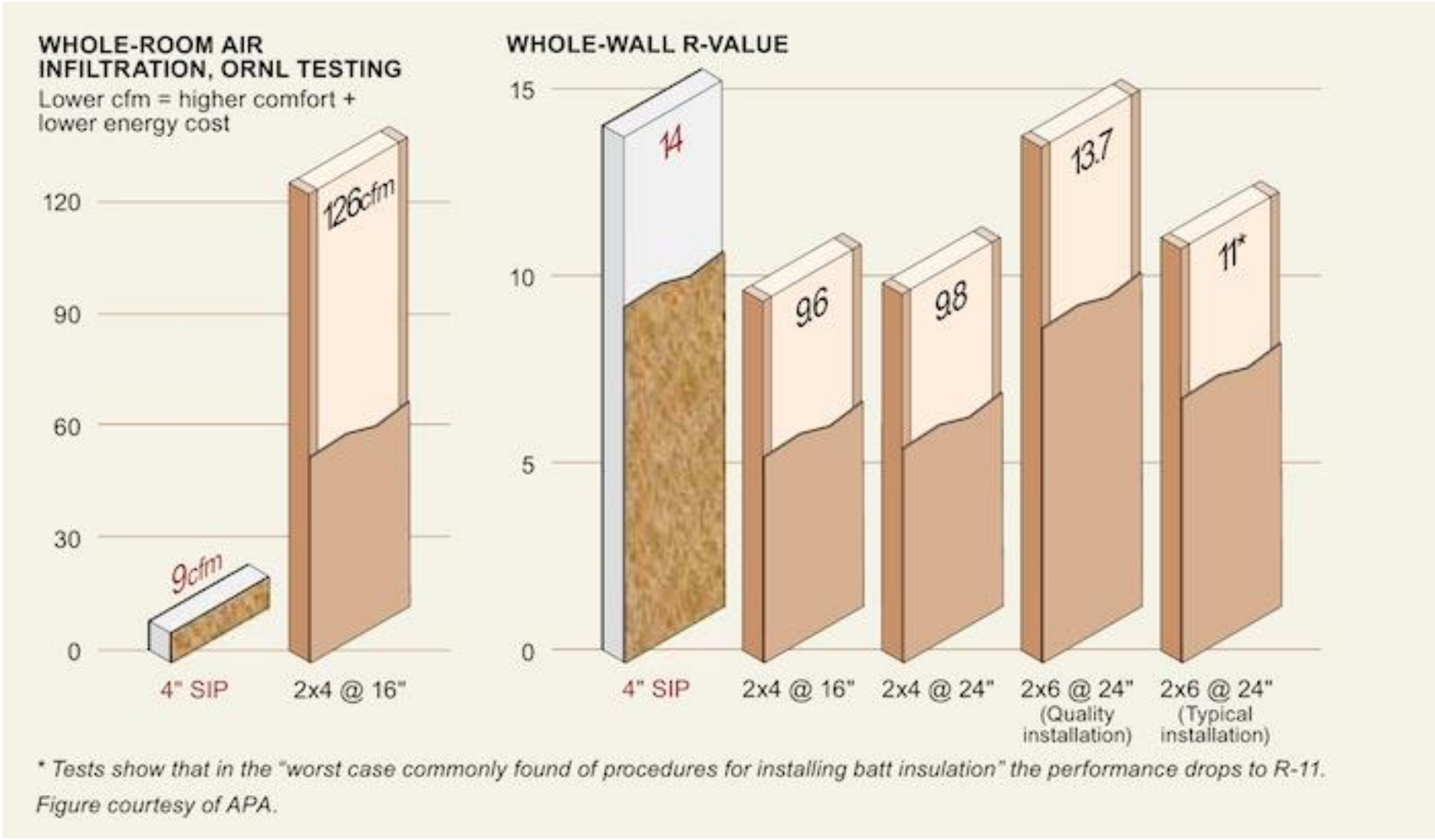
JOB #: 20180321-0001 DATE: 4/25/2018

No Lumber



THE ALUMINUM EXTRUSIONN CONNECTIONS ARE PREDRILLED OVER SIZED TO MATCH THE SIPs PANEL ELECTRICAL RUNS. THERE ARE THREE TYPES OF BASE SUPPORTS, CONCRETE FOUNDATION WALL, CONCRETE SLAB AND/OR POST AND BEAM. THE PANELS SPAN THE SUPPORT BASED ON ENGINEER'S DESIGN. WALLS AND CEILING ARE ENGINEERED TO SUPPORT WEIGHT, SHEAR AND WIND LOADS.

EPS USED WITH SKINS BOTH SIDES FORM AN AIR TIGHT INSULATED SYSTEM. TRADITIONAL FRAME WALLS WITH BATTS CAN BE RATED AT 38% LESS R-VALUE AND WITH 1,400% GREATER CFM HEAT LOSS

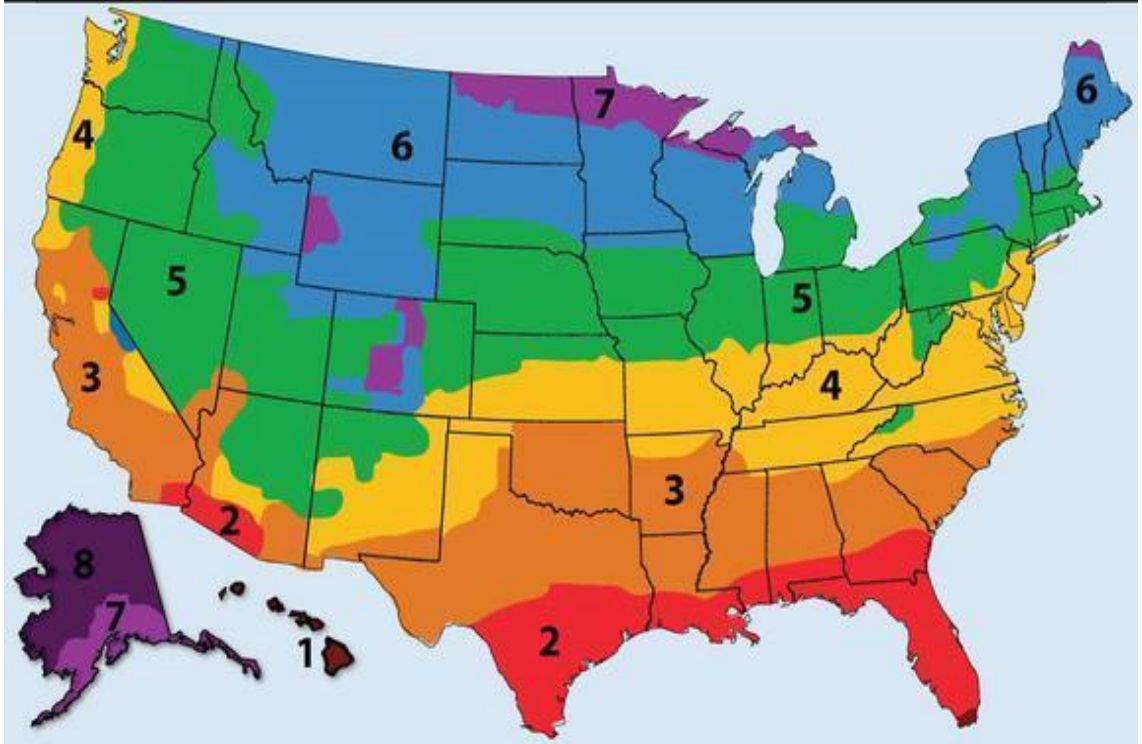


* *Tests show that in the "worst case commonly found of procedures for installing batt insulation" the performance drops to R-11.*

Figure courtesy of APA.

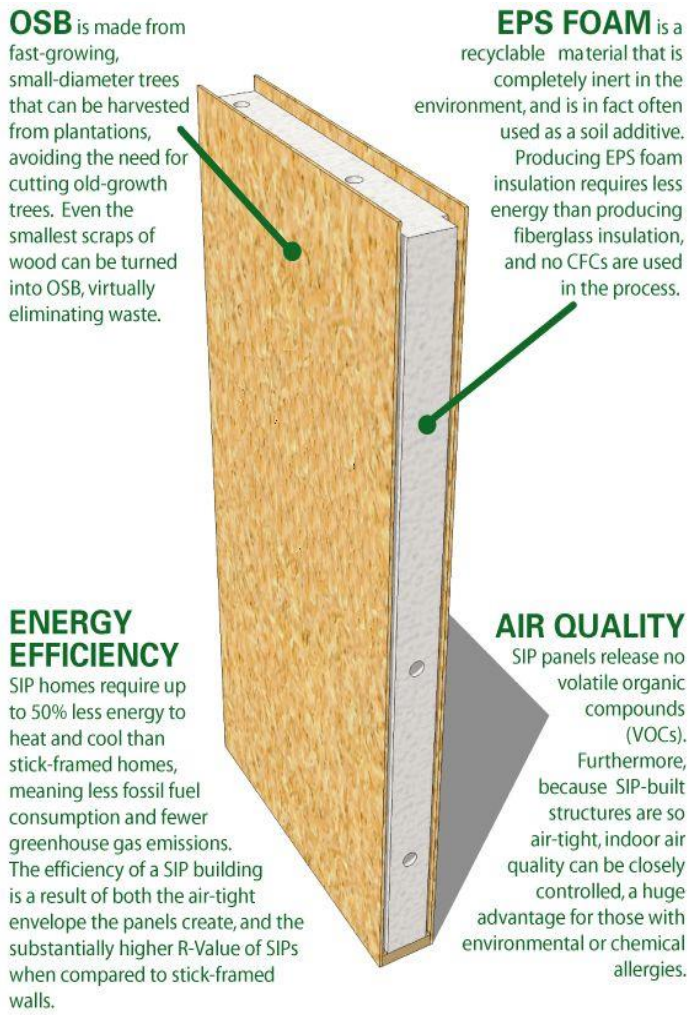
WASHINGTON STATE WALL R-17.5 (10.85EPS), FLOOR R-30 (18.6 EPS) AND ROOF R-49 (30.38 EPS) EPS 9CFM AND BATT (126CFM)

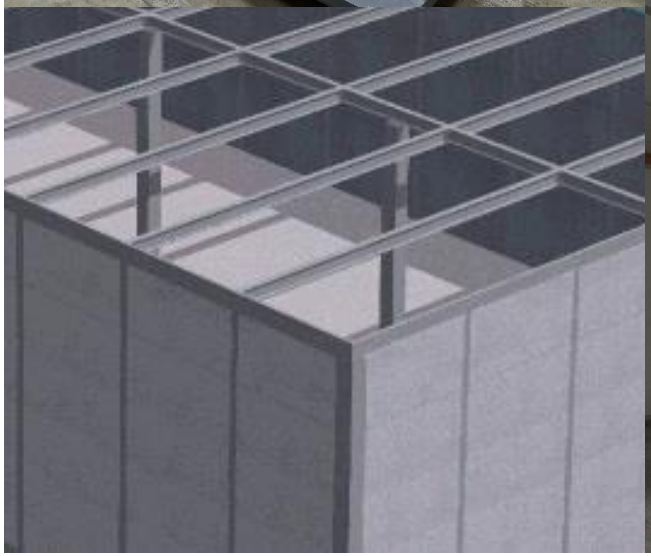
Recommended Insulation Levels *New, Wood-Framed Homes*



Zone	Heating System	Attic	Cathedral Ceiling	Wall Cavity	Floor
1	All	R30 to R49	R22 to R15	R13 to R15	R13
2	Gas, oil, heat pump	R30 to R60	R22 to R38	R13 to R15	R13
	Electric furnace				R19 to 25
3	All	R30 to R60	R22 to R38	R13 to R15	R25
4	All	R38 to R60	R30 to R38	R13 to R15	R25 to R30
5	Gas, oil, heat pump	R38 to R60	R30 to R38	R13 to R15	R25 to R30
	Electric furnace		R30 to R60	R13 to R21	
6 7 8	All	R49 to R60	R30 to R60	R13 to R21	R25 to R30

PANELS CAN BE CUT TO FIT IN WINDOWS AND DOORS. SILLS AND COMPONENT WRAPS ARE 100% ALUMINUM AND NOT SUBJECT TO ROT. HOLES ARE PREDRILLED FOR ELECTRICAL RUNS AND INTERIOR WALLS AND CEILING FURRED AREAS ARE USED TO ENTER EPS AND CONNECTION RUNS.

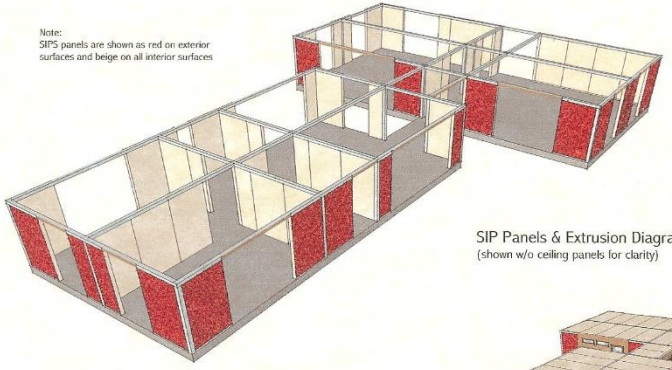




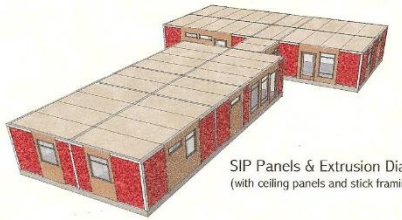
BUDDY BUILDING SYSTEM HOUSE

FRANK TROCINO ARCHITECT
YANBU SAUDI ARABIA

BUDDY HYBRID HOUSE
VANCOUVER WASHINGTON



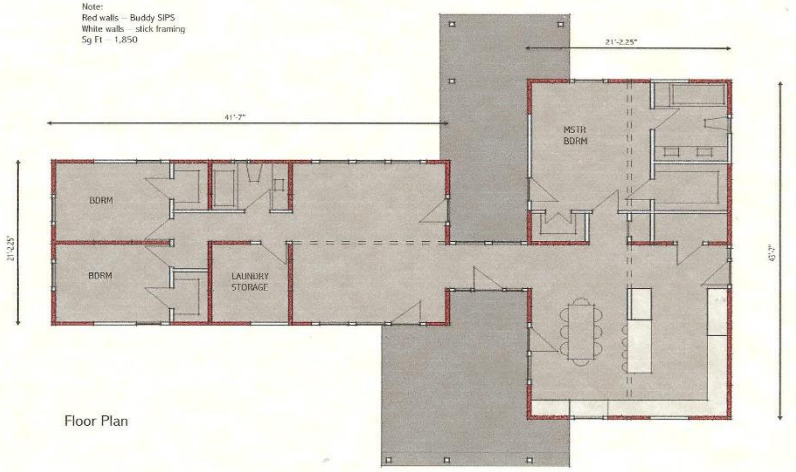
SIP Panels & Extrusion Diagram
(shown w/o ceiling panels for clarity)



SIP Panels & Extrusion Diagram
(with ceiling panels and stick framing)

FRANK TROCINO ARCHITECT
YANBU SAUDI ARABIA

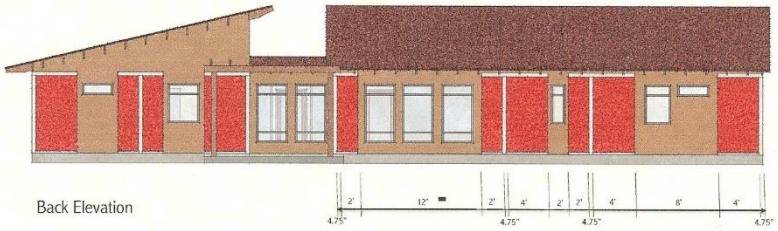
BUDDY HYBRID HOUSE
VANCOUVER WASHINGTON



Floor Plan

FRANK TROCINO ARCHITECT
YANBU SAUDI ARABIA

BUDDY HYBRID HOUSE
VANCOUVER WASHINGTON



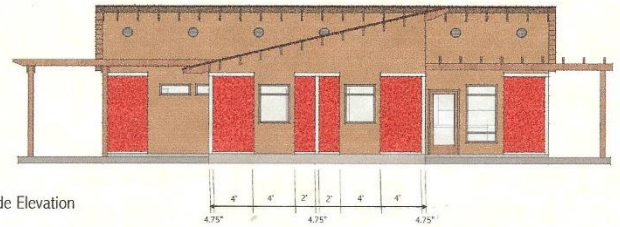
Back Elevation

Side Elevation

FRANK TROCINO ARCHITECT
YANBU SAUDI ARABIA

BUDDY HYBRID HOUSE
VANCOUVER WASHINGTON

Front Elevation

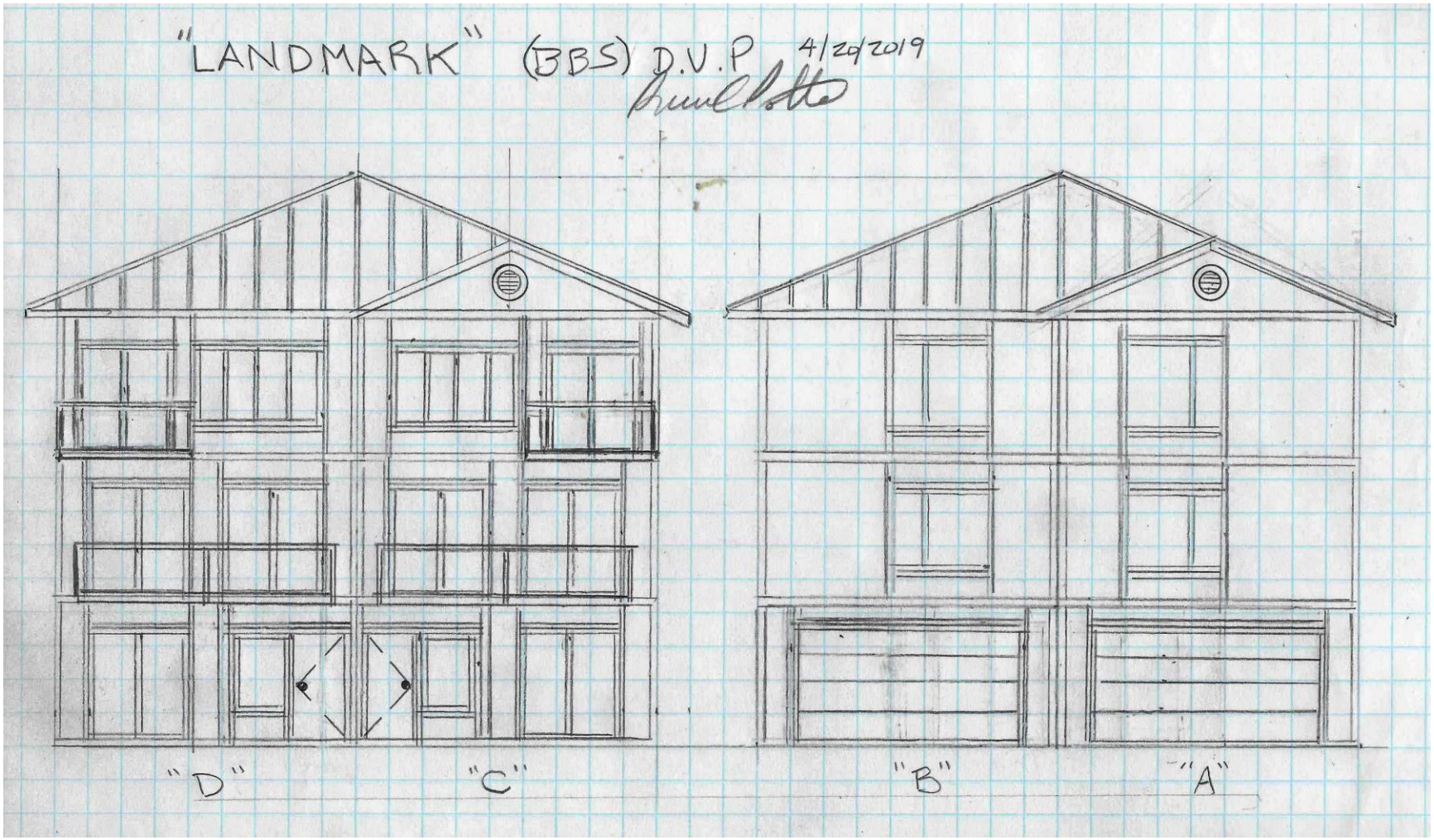


Side Elevation

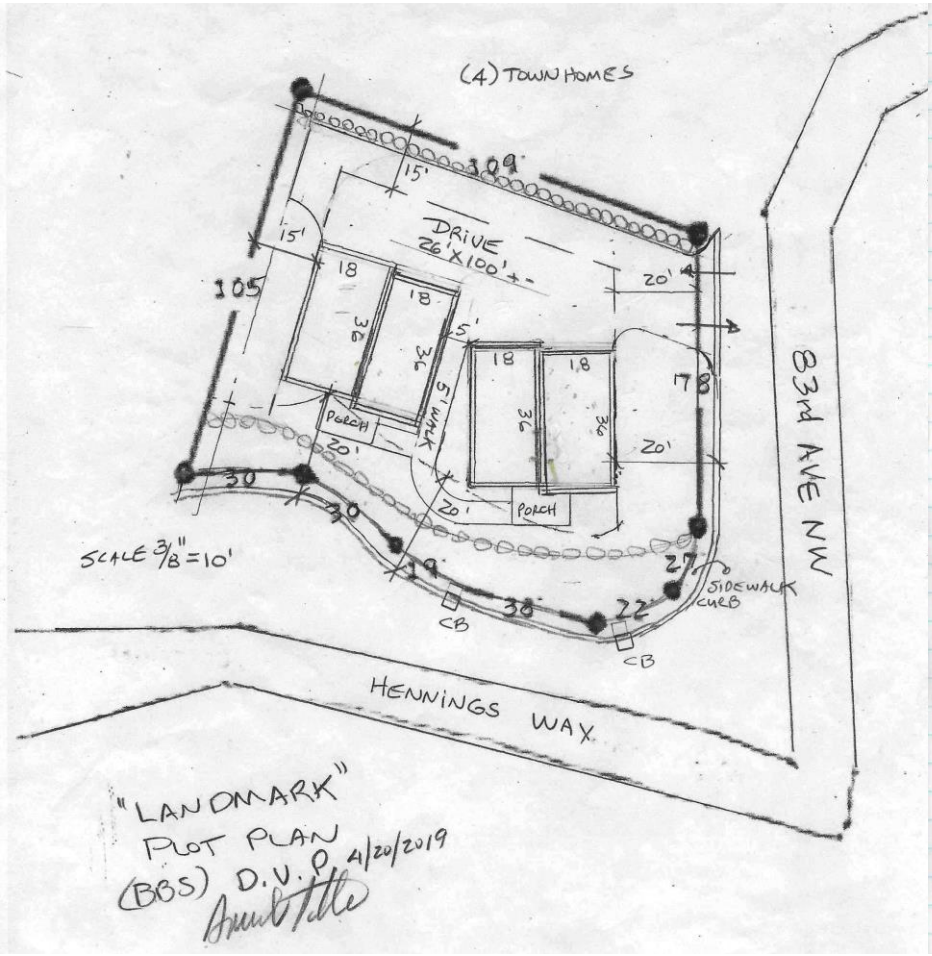
DESIGN/ENGINEERING CONSIDERS SIMILAR CONSTRAINTS AS STICK FRAMED STRUCTURES, HOWEVER THE (BBS) OFFERS MANY INCUDED SAFEGAURDS TO THEIR DESIGN. THIS ELIMINATES MANY COMPONENTS THAT ARE NEEDED IN STICK FRAME CONSTRUCTION AND MAKE ASSEMBLY EASIER TO UNDERSTAND.

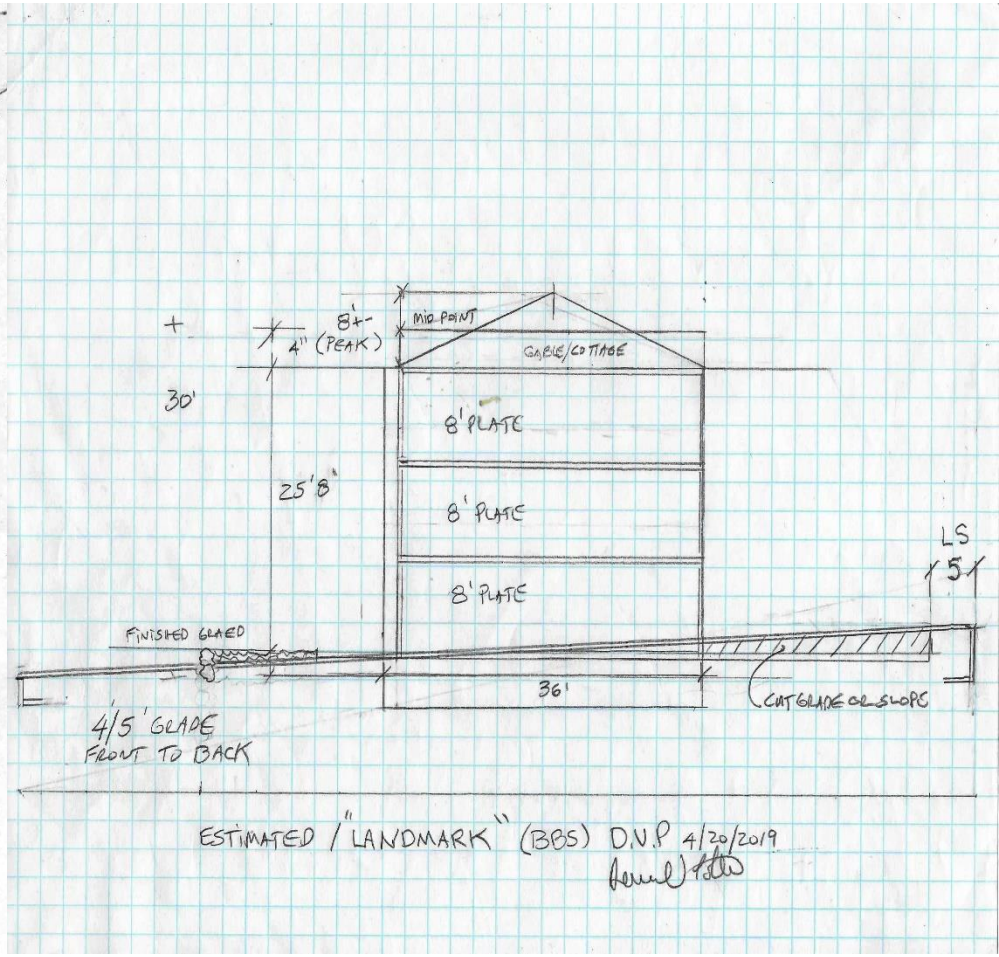
STANWOOD TOWNHOUSES “LANDMARK” (BBS)

STANWOOD TOWNHOUSE FRONT AND BACK PROPOSED VIEWS

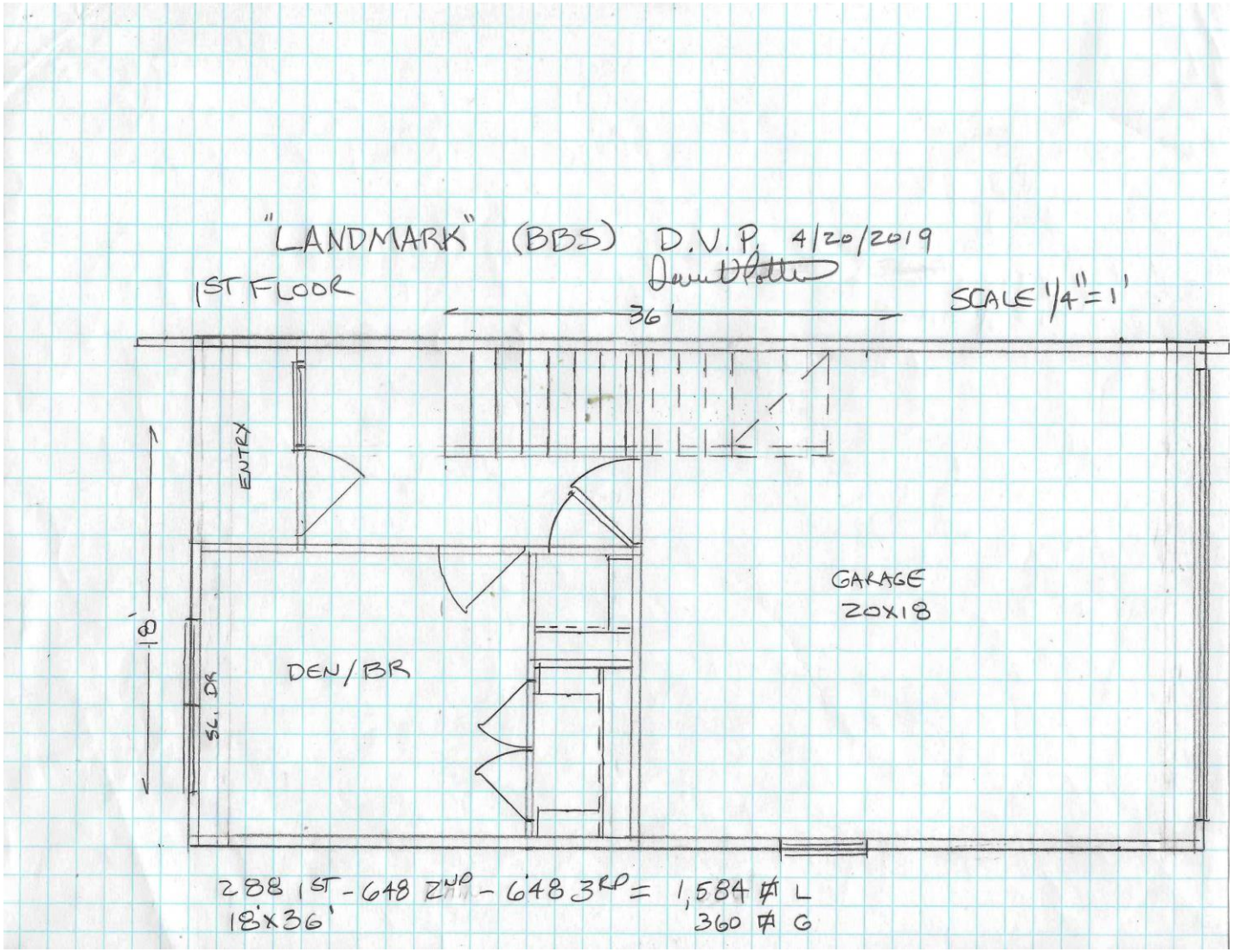


STANWOOD PLOT PLAN AND GRADE CONSIDERATIONS FOR 4-TOWNHOUSES

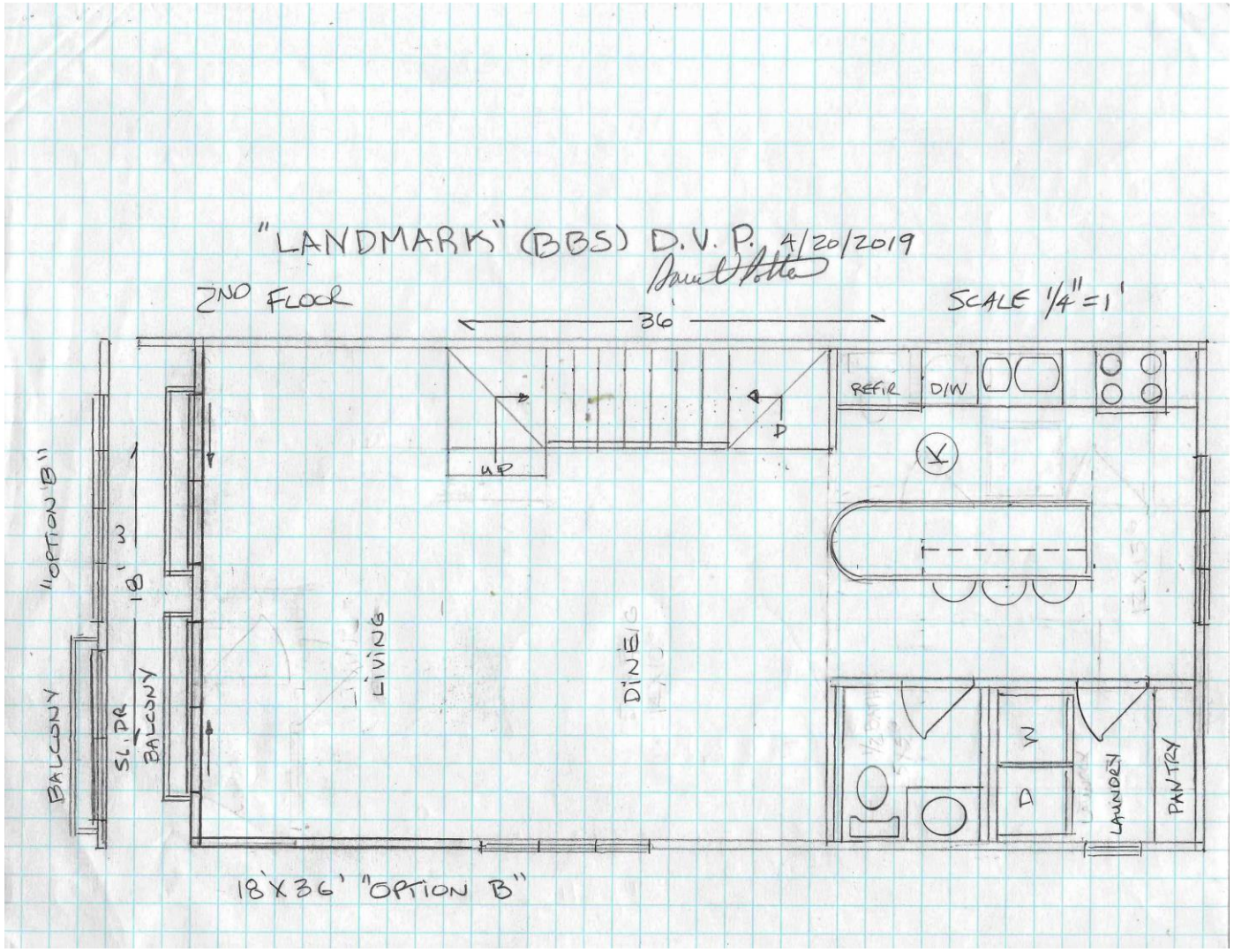




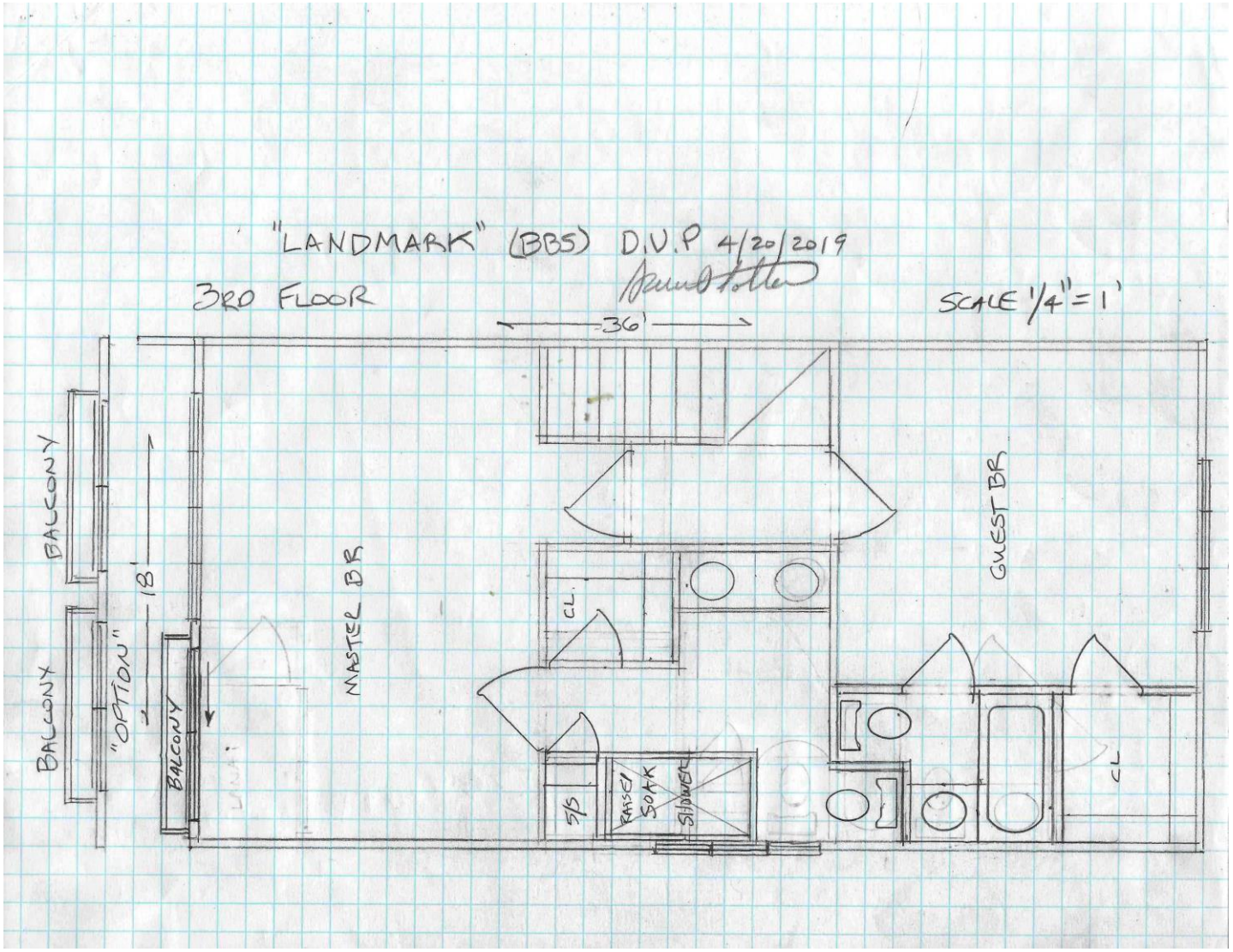
MAIN FLOOR PLAN



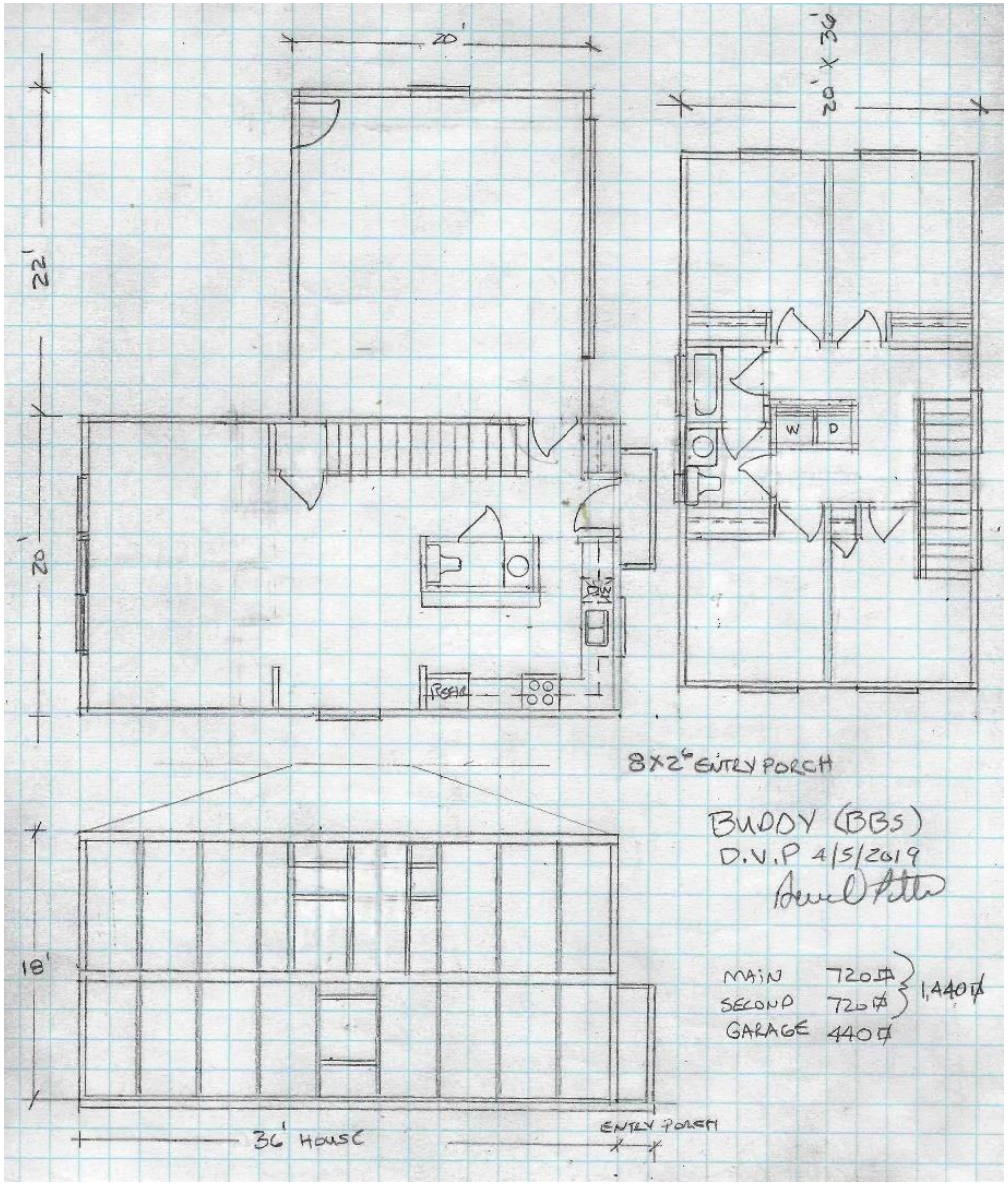
SECOND FLOOR PLAN



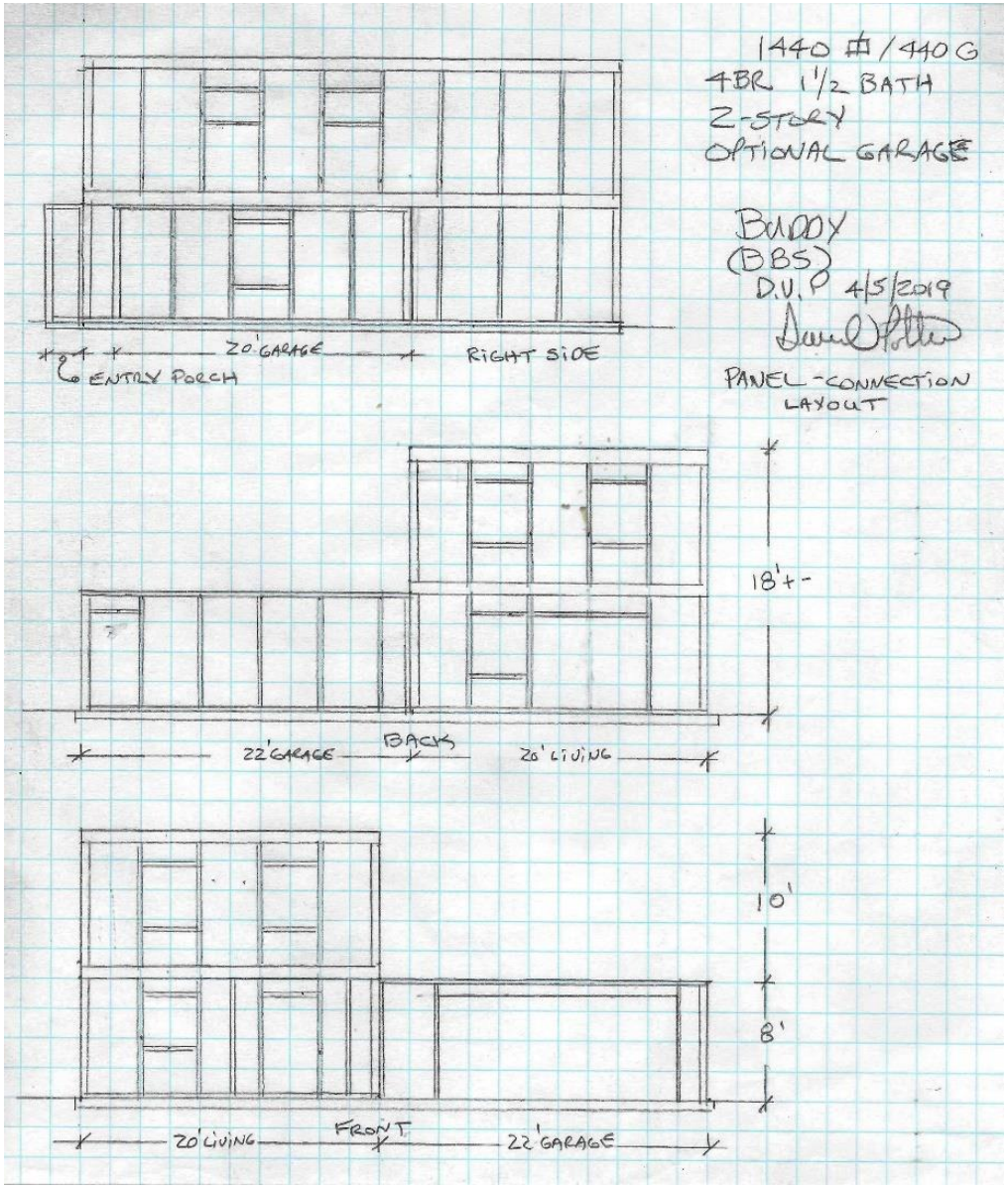
THIRD FLOOR PLAN



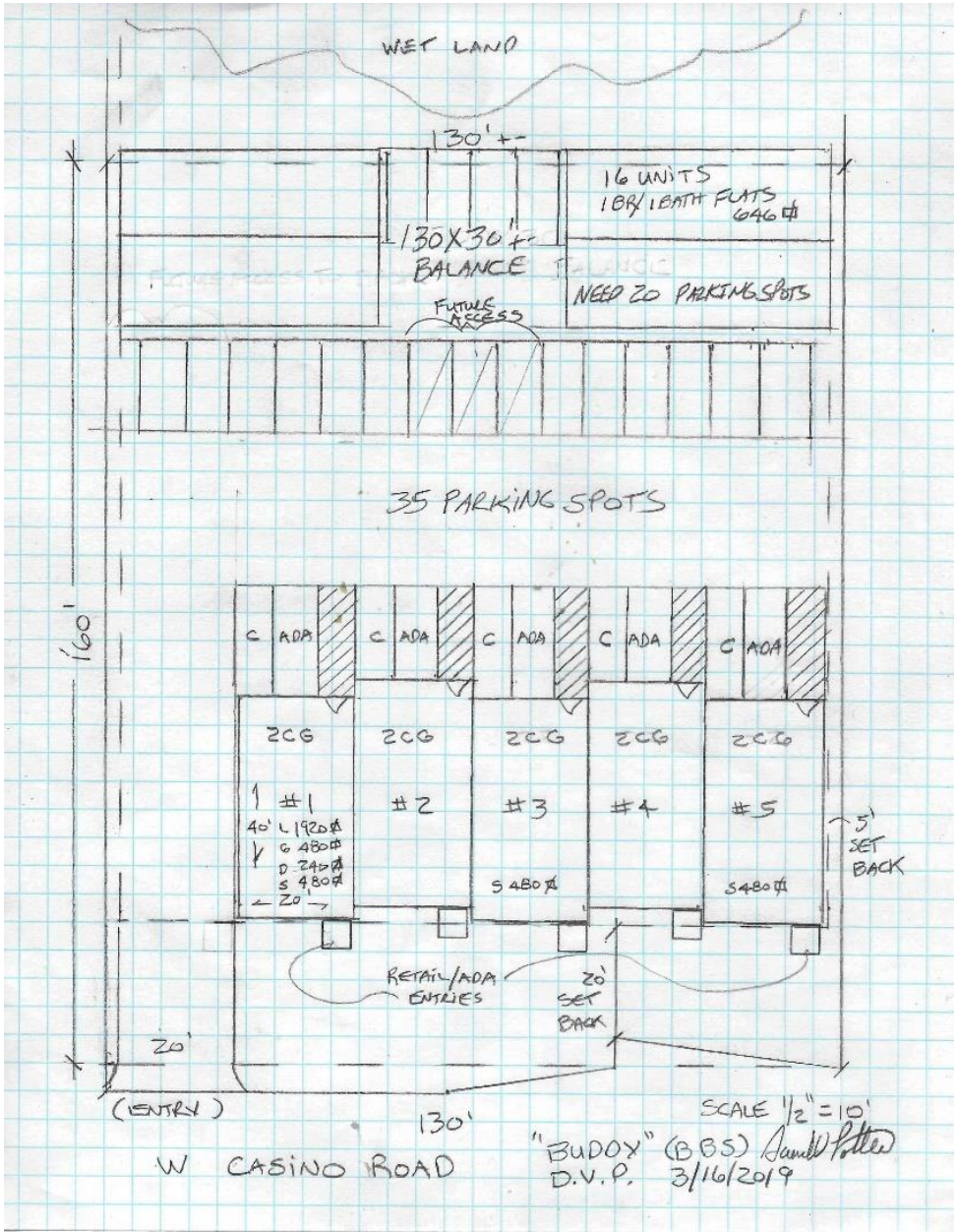
CLT 2-STORY MATERIAL POSSIBLE



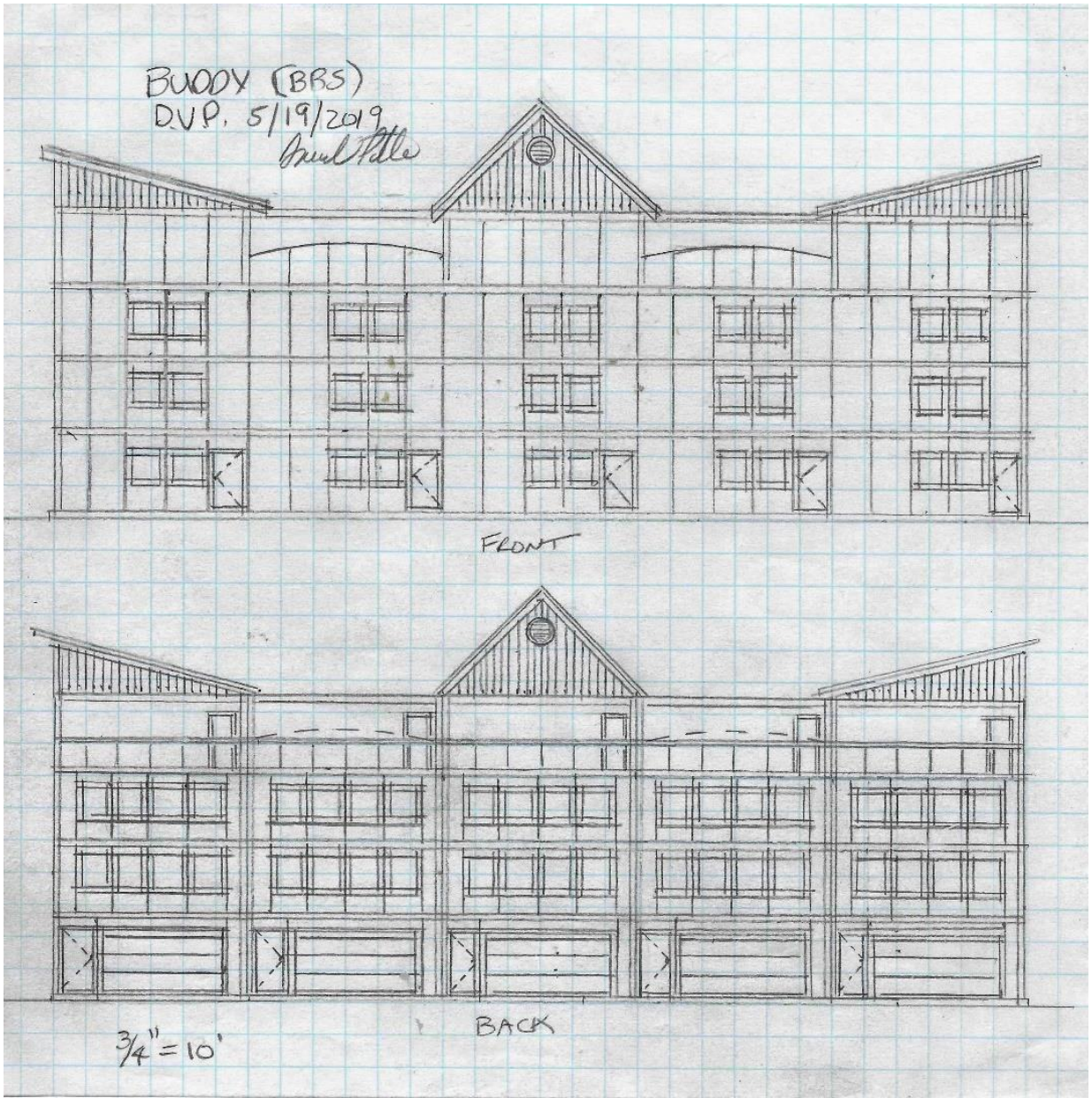
CLT 2-STORY MATERIAL VIEWS



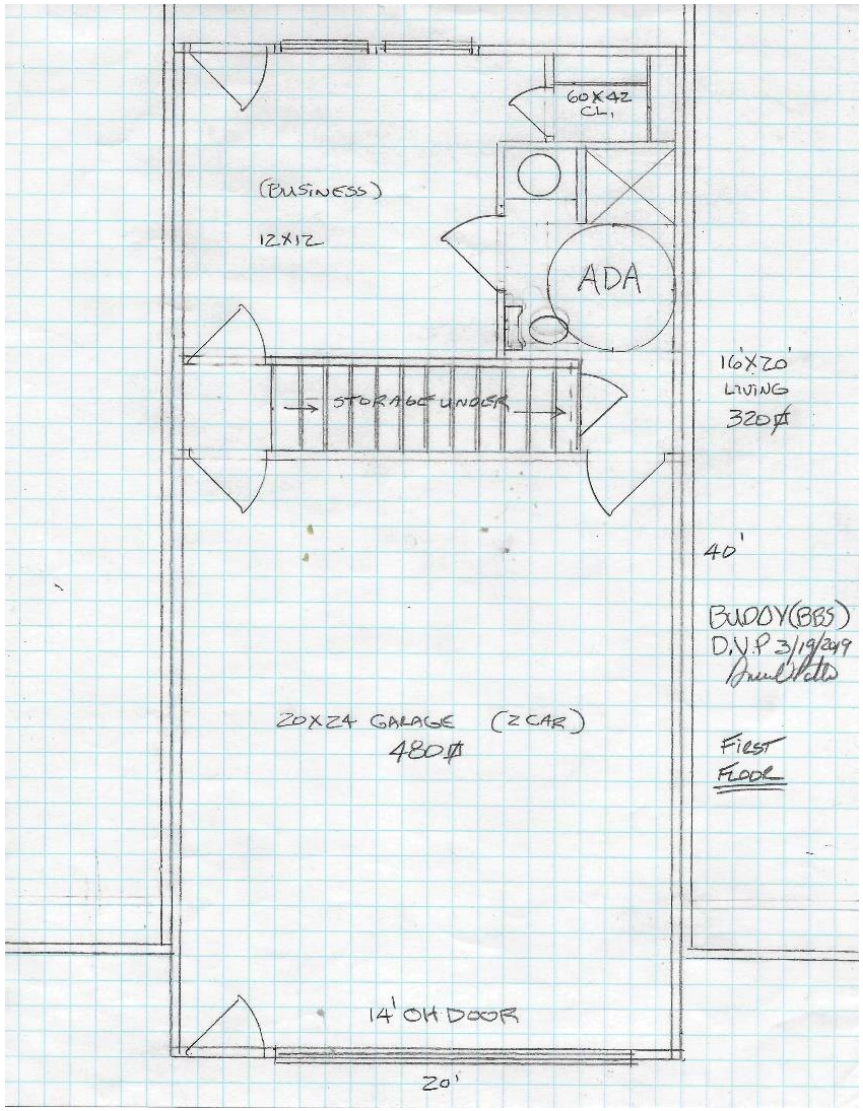
CLT CASINO ROAD POSSSIBLE

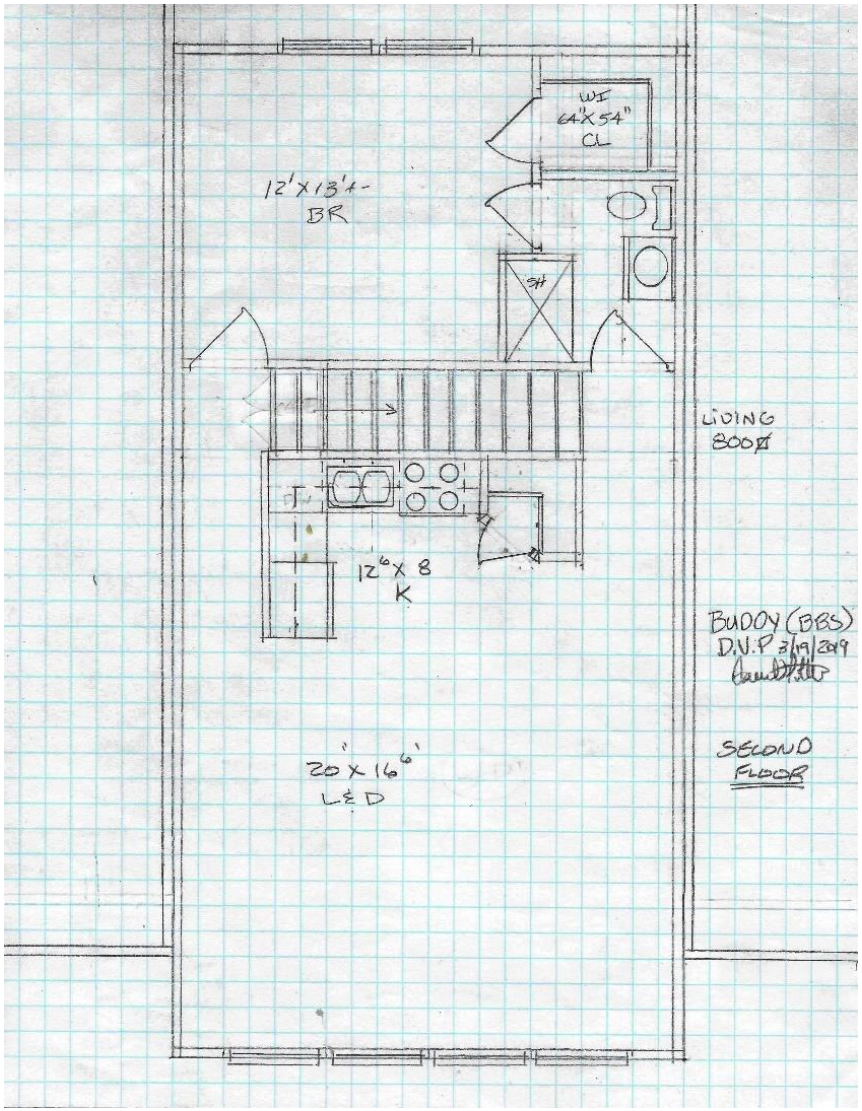


CLT C/R VIEWS OF FRONT & BACK

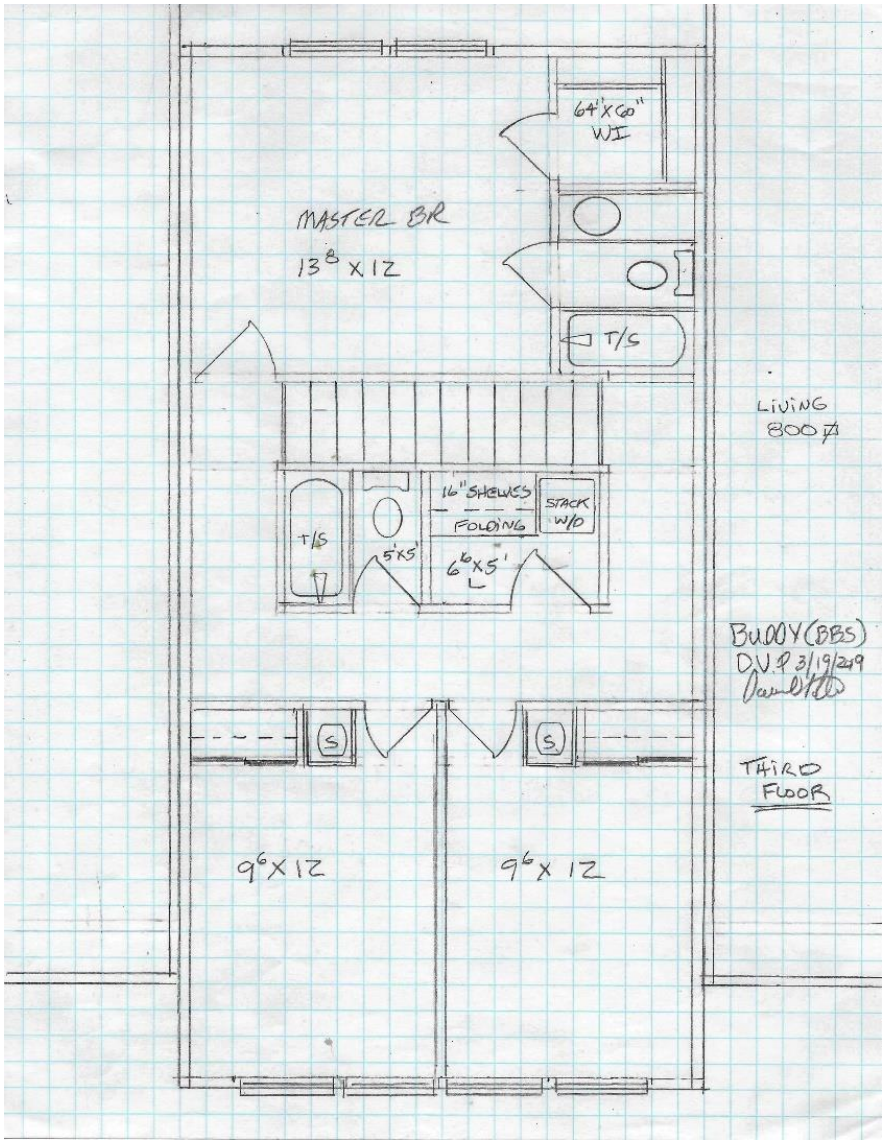


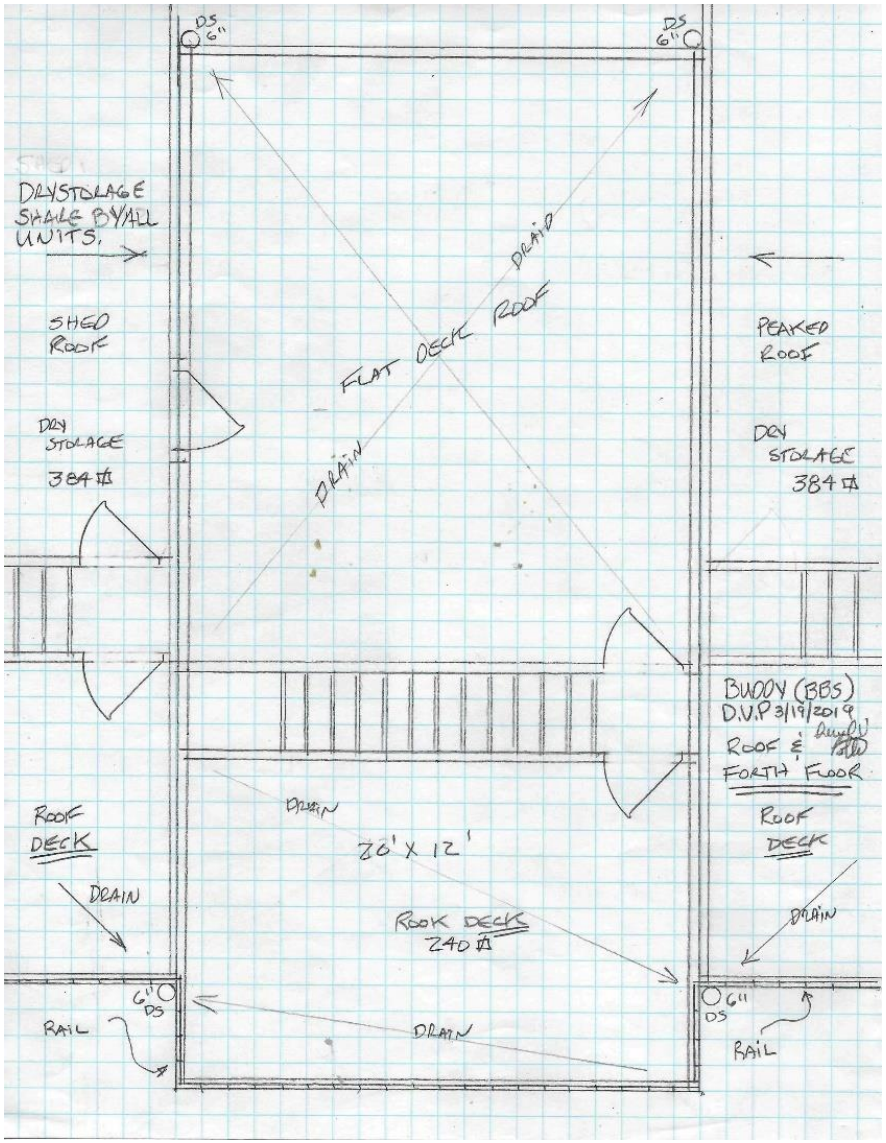
CLT C/R 1-2 FLOOR PLANS



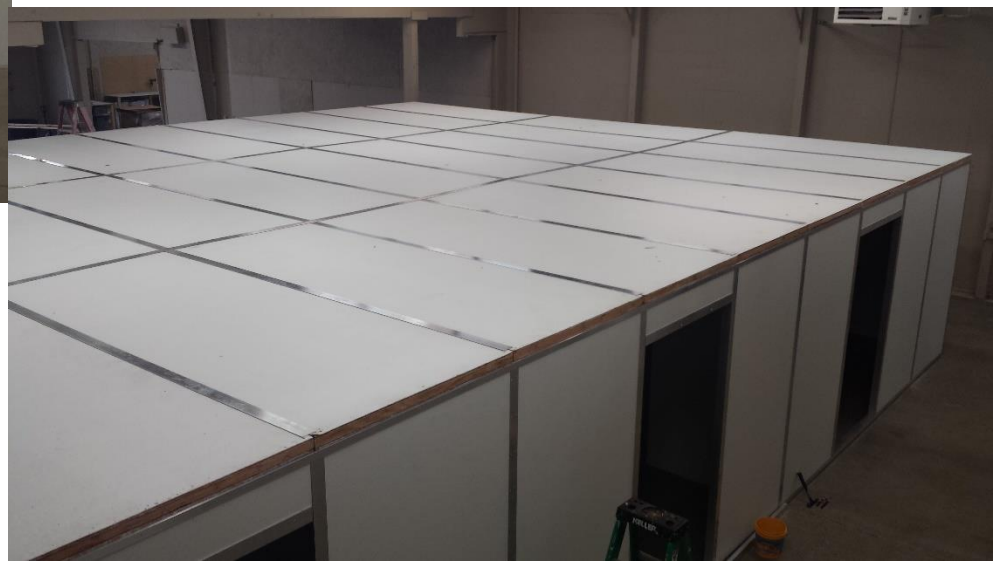


CLT C/R 3-T0P DECK PLANS



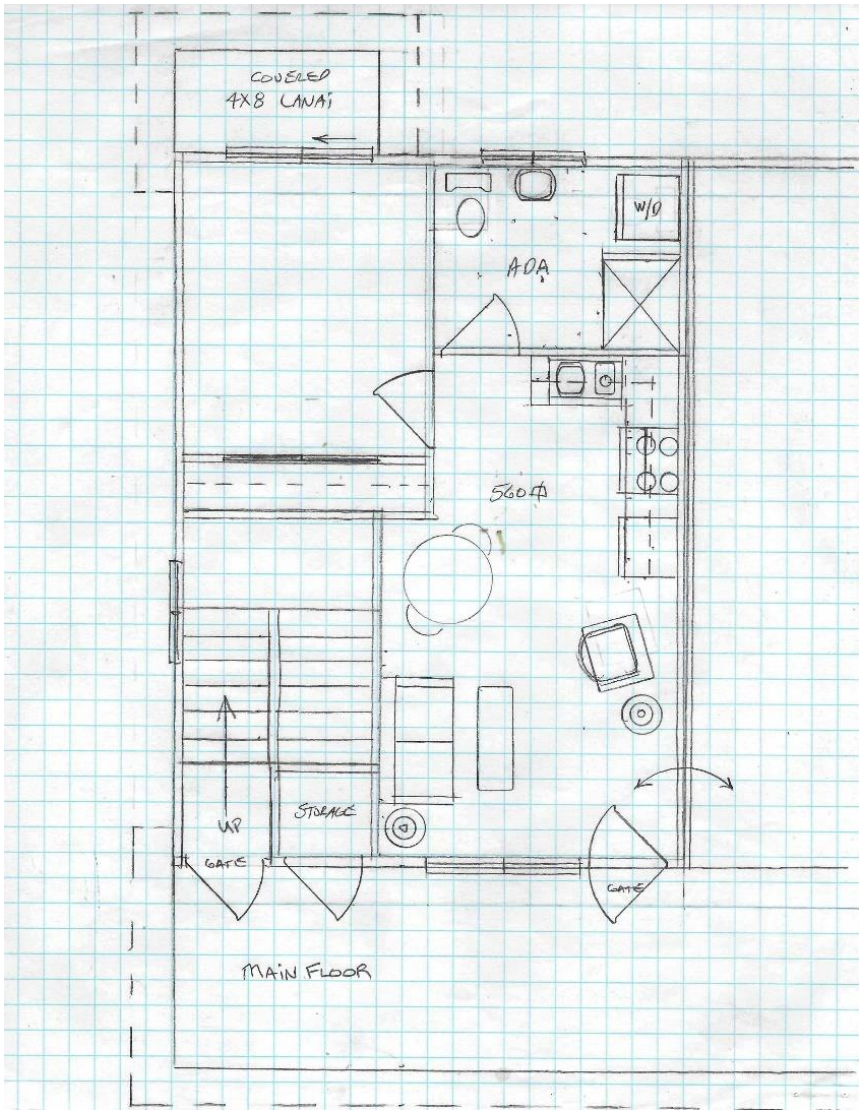


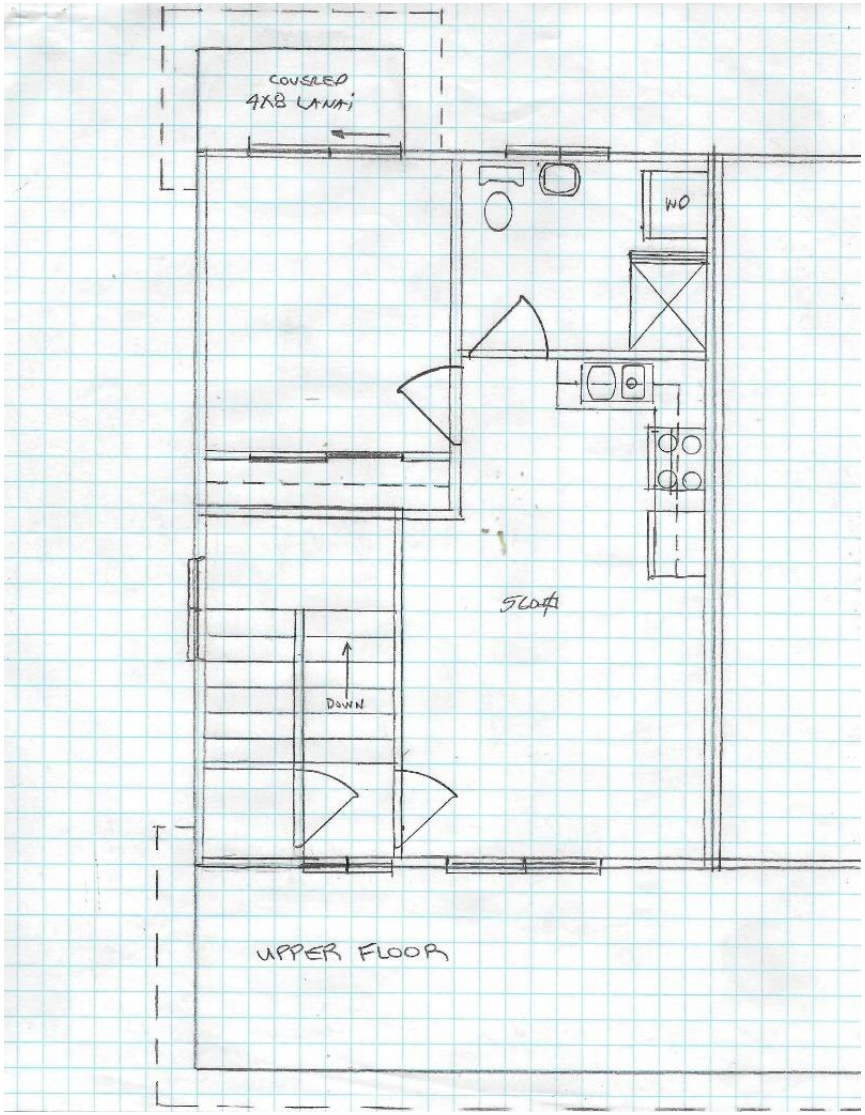
(BBS) FLOOR, WALLS AND CEILING KITS AND/OR BUILDING PRODUCTS. ENVELOPE BUILDING FAST WITH EASE AND VERY CONSUMER FRIENDLY. SKILLED TRADES FOLLOW TO FINISH OUT AS NEEDED.

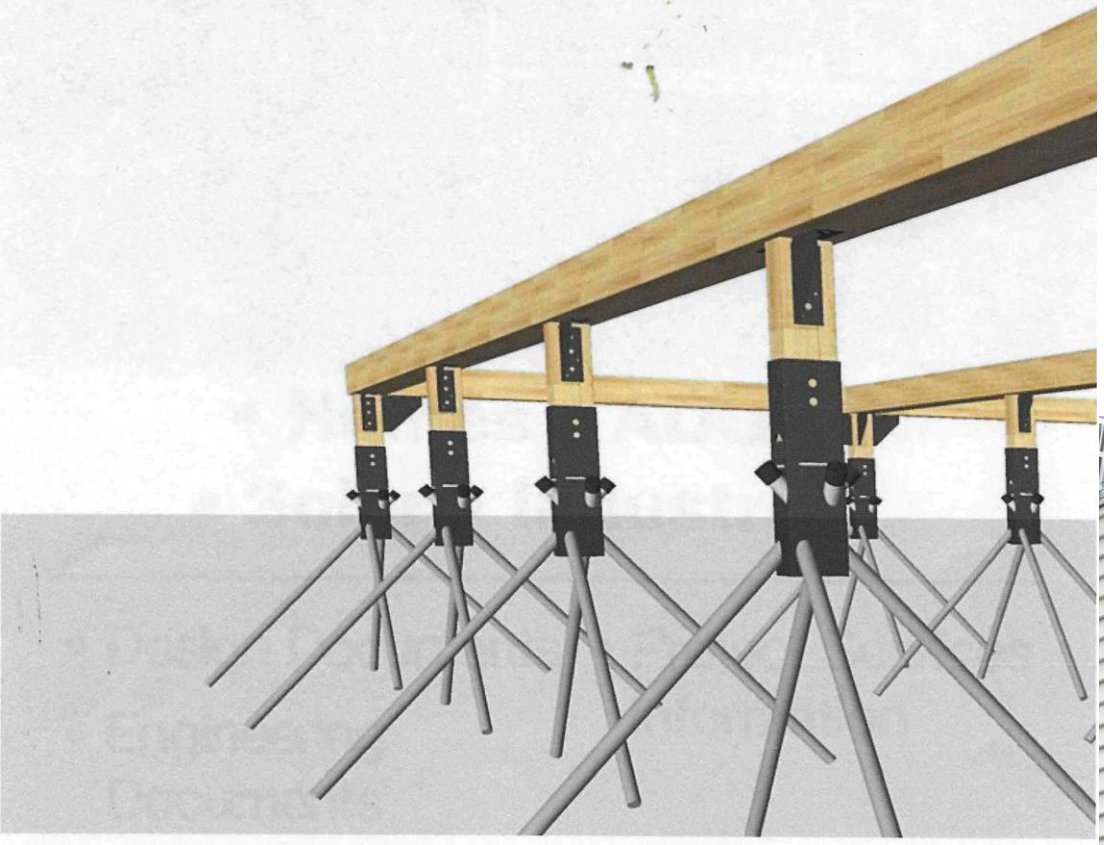


HERE IS AN EXAMPLE OF A FOUR-PLEX WITH FRONT PORCH AND BACK LANAI. SHOWS THE PRELIMINARY PANEL AND CONNECTION LAYOUT FOR THE STRUCTURE. ANY DESIGN TYPE ROOF IS ATTACHED TO THE ENVELOPE.

FLOOR 1 AND FLOOR 2 OF ONE SIDE OF THE STRUCTURE IS REPRESENTED. 580 SQUARE FEET OVERALL FOR AFFORDABLE UNITS.

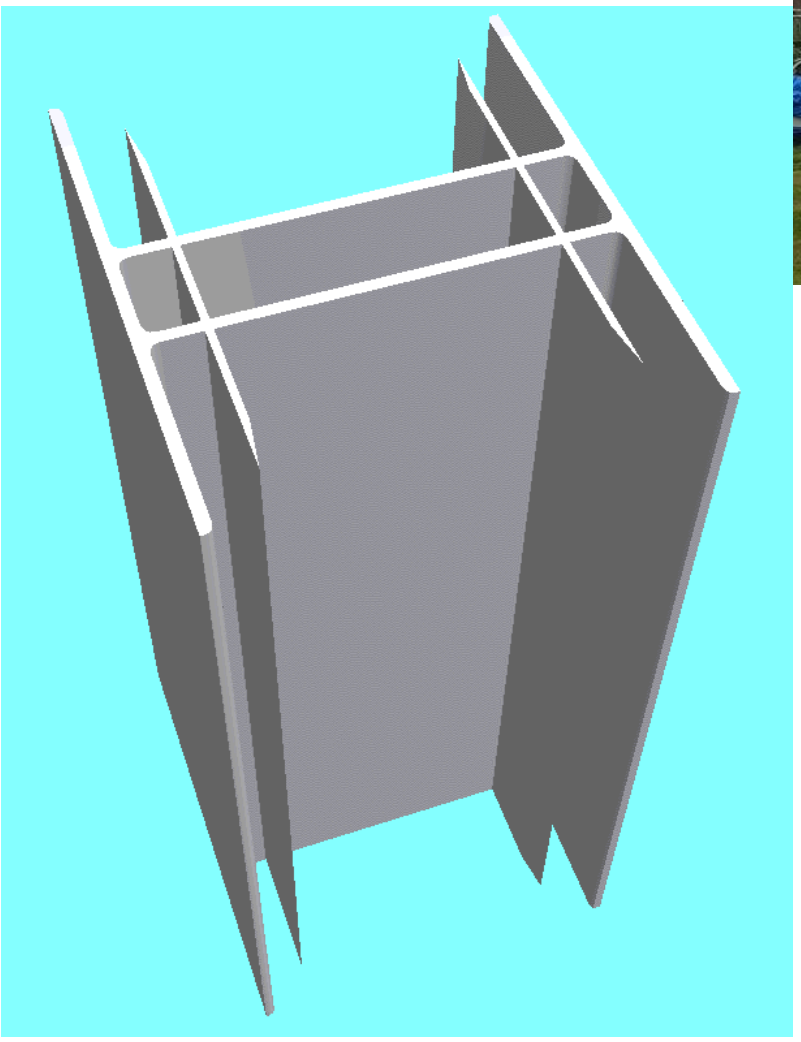


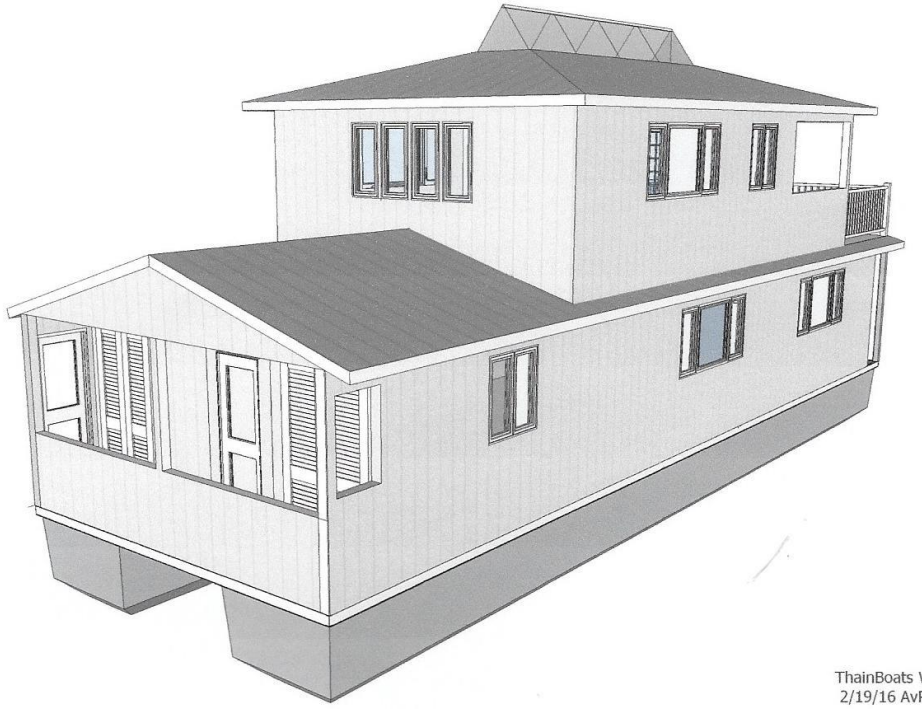


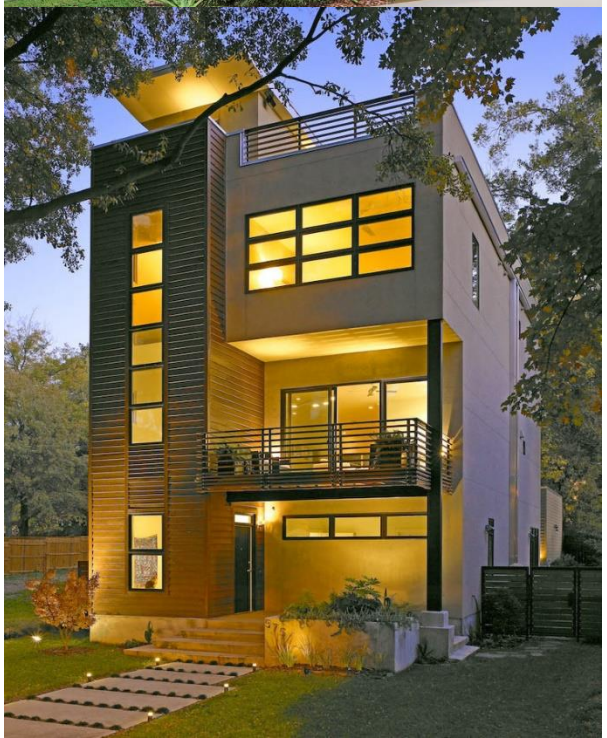


TO INHANSE THE SUSTAINABILITY OF THE ENVELOPE, YOU MAY USE A PIN FOUNDATION, EURO T&T STYLE .22 U-FACTOR WINDOW AND A EURO BALCONY TO BRING THE OUTSIDE INTO THE STRUCTURE FOR AN EXPANDED OPEN STYLE LIVING.

IN THE YEARS 2016-2017 THAIN BOATS BUILT A HOUSEBOAT ONSITE IN NJ. THEY USED THE BUDDY BUILDING SYSTEM ON THE MAIN FLOOR OVER THE WATER AND THE SECOND FLOOR, ONE AREA SPANNING 20 FEET.







DESIGN/BUILD IS SIMILAR TO BALLOON STICK FRAMING, HOWEVER EACH CAN BE MORE COMPLEX THAN ANOTHER. THE BUDDY BUILDING SYSTEM IS A COMPLETE ENVELOPE ONCE ASSEMBLED. THEN THE ARCHITECTURAL ROOF AND TRIMS ARE CONSIDERED, JUST LIKE STICK FRAMING. THE KEY DIFFERENCE IS WITH LESS PARTS AND CONSUMER FRIENDLY CONSTRUCTION. WALLS CAN BE PUT INTO PLACE FROM THE INTERIOR OF THE STRUCTURE.

260 PERSON POD UNITS – WITH COMMUNITY KITCHEN AND HYGIENE FACILITIES

LAST BUT NOT LEAST – COMMUNITIES FOR THOSE IN NEED OF TEMPORARY HOUSING AND SERVICES CAN BE GRAND

BUDDY BUILDING SYSTEM – "LANDMARK" – BUDDY SHELTERS, LLC.