

Important Note About House Plans

House Plans are fully integrated sets of construction drawings created by BSC for specific locations and climates. The sets include floor plans, detailed framing plans and wall framing elevations, exterior elevations and sections, advanced framing and enclosure details, as well as mechanical and electrical plans.

Through our multi-disciplinary team approach, interior, framing and mechanical layouts are designed and coordinated well before the start of construction. Duct layouts are not only shown on the mechanical plan but on the framing plan as well. This level of coordination limits changes made in the field and helps to ensure assemblies and systems are installed as designed.

Please Note

Please note that House Plans are posted as examples of high performance housing designs and are not to be used for construction. If you wish to use these plans as a basis for a house design, you should keep the following in mind:

- Most state and local governments require that a set of drawings be stamped by an architect licensed to practice locally
- Foundation plans need to be developed for the specific site and climate
- While these drawings were developed to be compliant with the then-current IRC code, you will need to meet your local building code requirements
- Finally, since materials and products specified in the drawings may not be available in all locations, you will need to carefully research any substitutions to verify compatibility and performance.

COLD CLIMATE

THREE BEDROOM - BASEMENT

SQUARE FOOTAGES

BASEMENT	816 SQ FT
FIRST FLOOR	816 SQ FT
SECOND FLOOR	444 SQ FT

LIST OF DRAWINGS

A-1	FOUNDATION / BASEMENT / FIRST FLOOR FRAMING PLANS
A-2	FIRST AND SECOND FLOOR PLANS / WALL FRAMING ELEVATIONS
A-3	SECOND FLOOR FRAMING / ROOF FRAMING / ROOF PLANS
A-4	BUILDING SECTIONS AA AND BB
A-5	BUILDING ELEVATIONS / WALL SECTION
A-6	DETAILS
M-1	MECHANICAL PLANS
E-1	ELECTRICAL PLANS

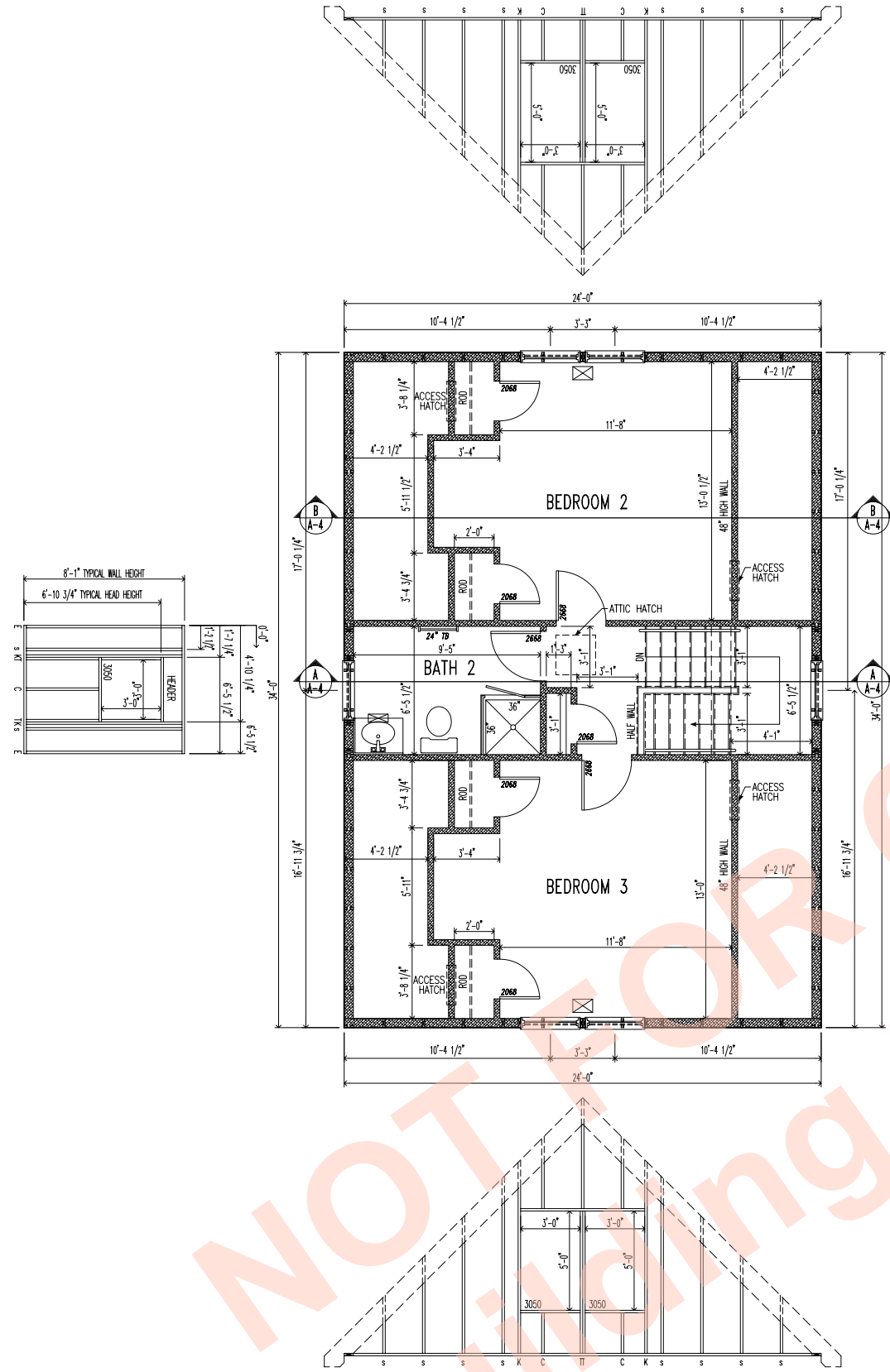


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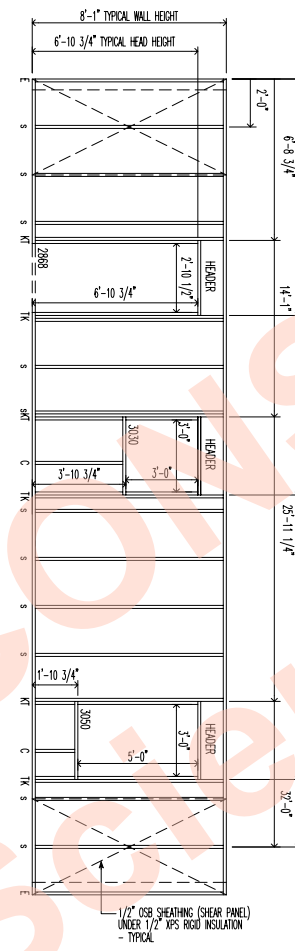
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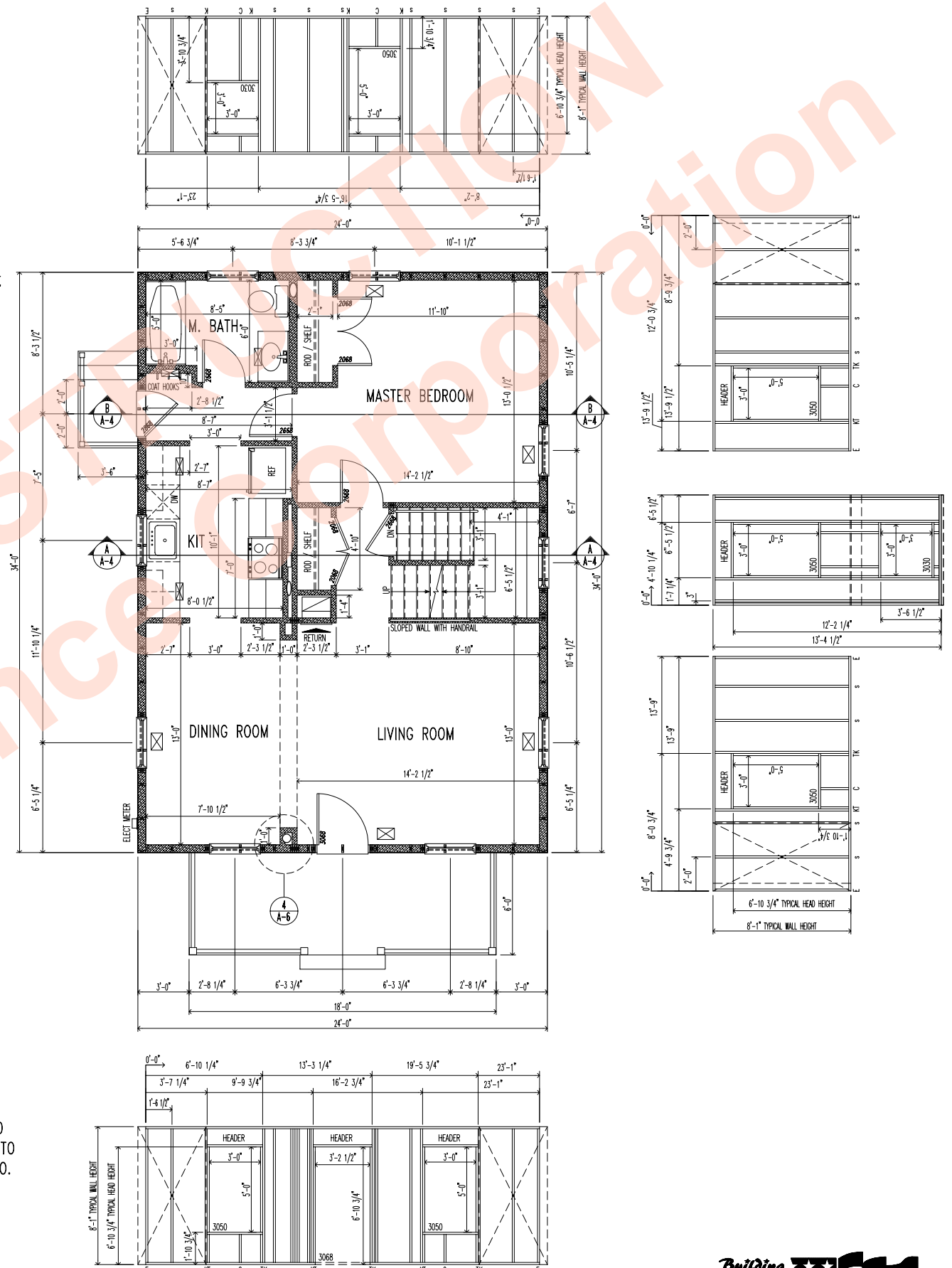




2 | SECOND FLOOR PLAN
SCALE 1/8" = 1'-0"



NOTE: METAL STRAPS CAN BE USED IN LIEU OF SHEATHING PANELS. IF STRAPS ARE USED BLOCKING MUST BE PROVIDED TO FASTEN FRONT PORCH RAILS TO.



1 | FIRST FLOOR PLAN
SCALE 1/8" = 1'-0"



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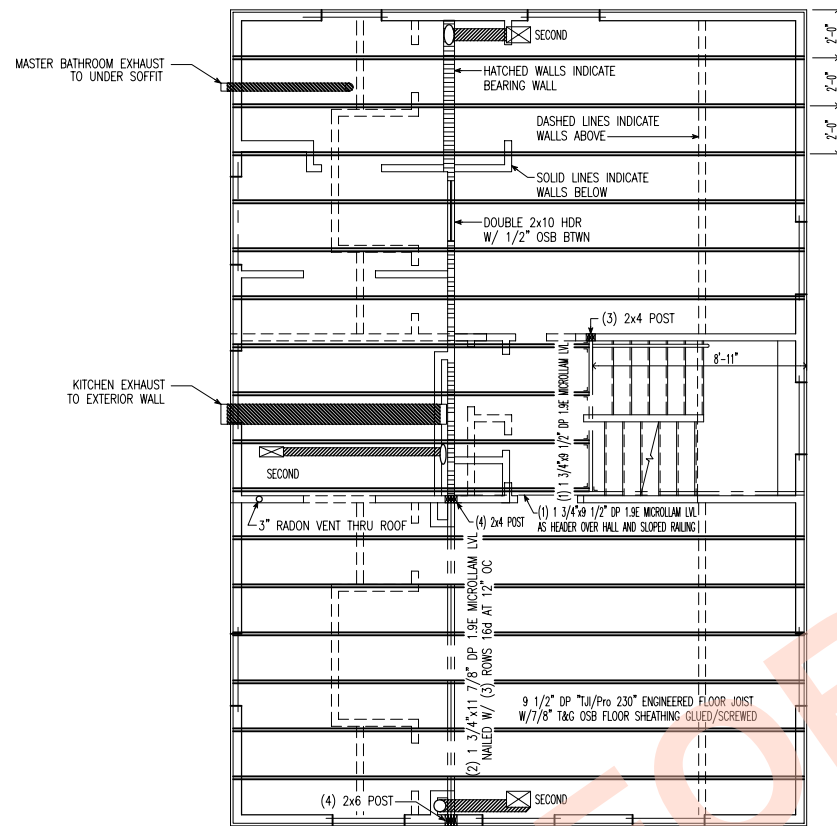
THREE BEDROOM HOUSE
COLD CLIMATE

FIRST AND SECOND FLOOR FRAMING PLANS
SCALE AS NOTED

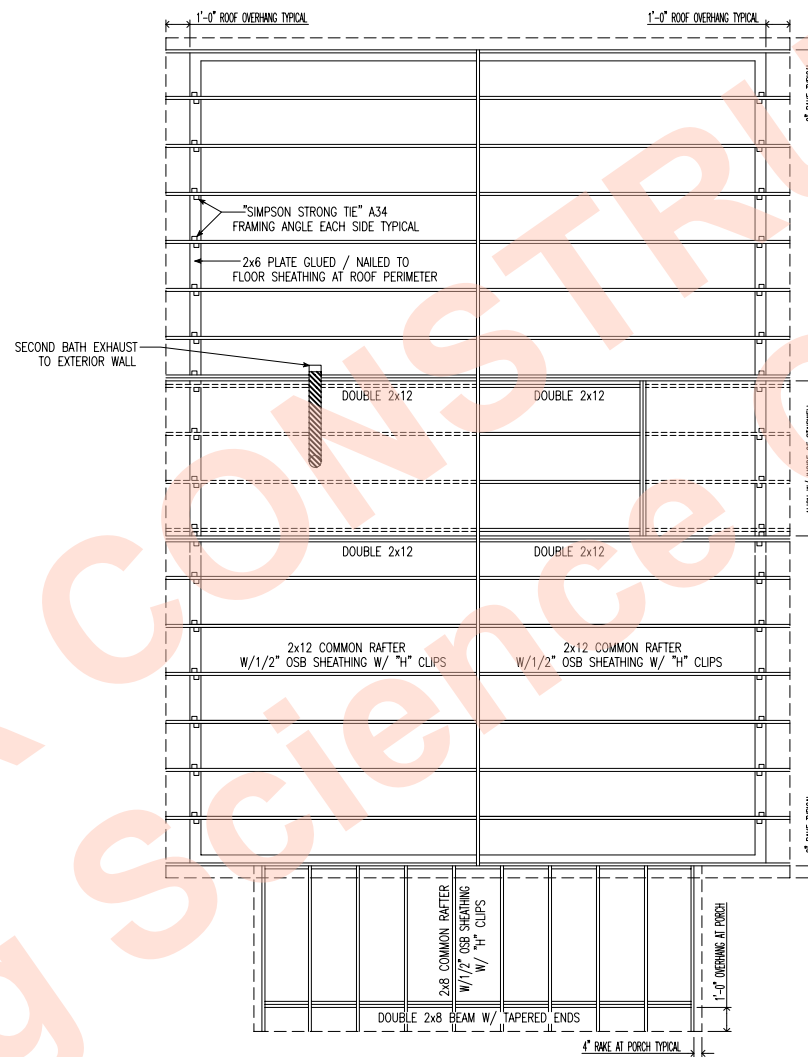
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A-2

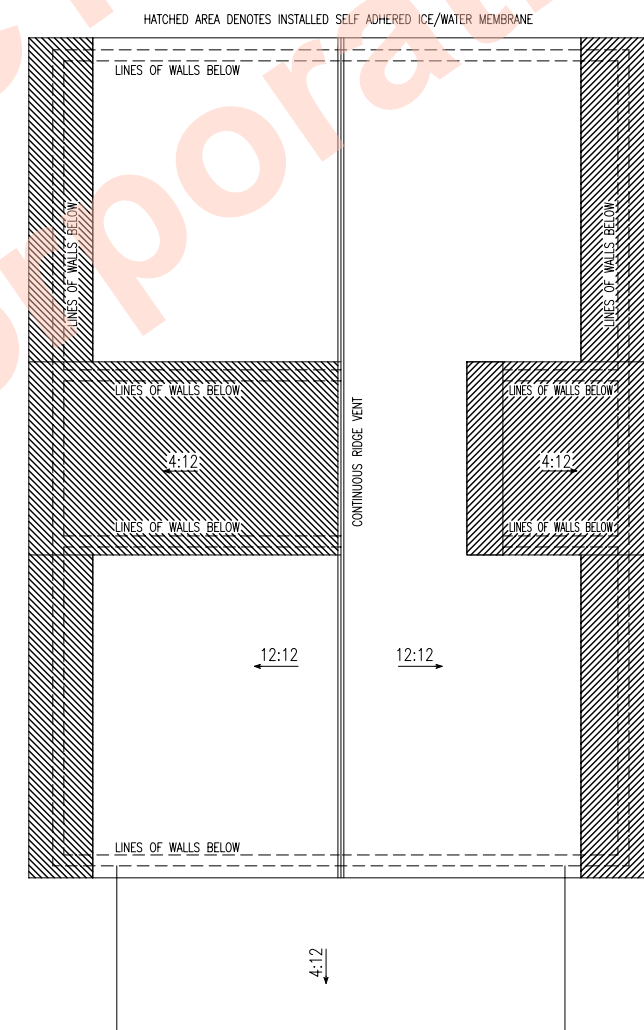
FILE: COLD CLIMATE HOUSE.DWG



1 | SECOND FLOOR FRAMING
SCALE 1/8" = 1'-0"

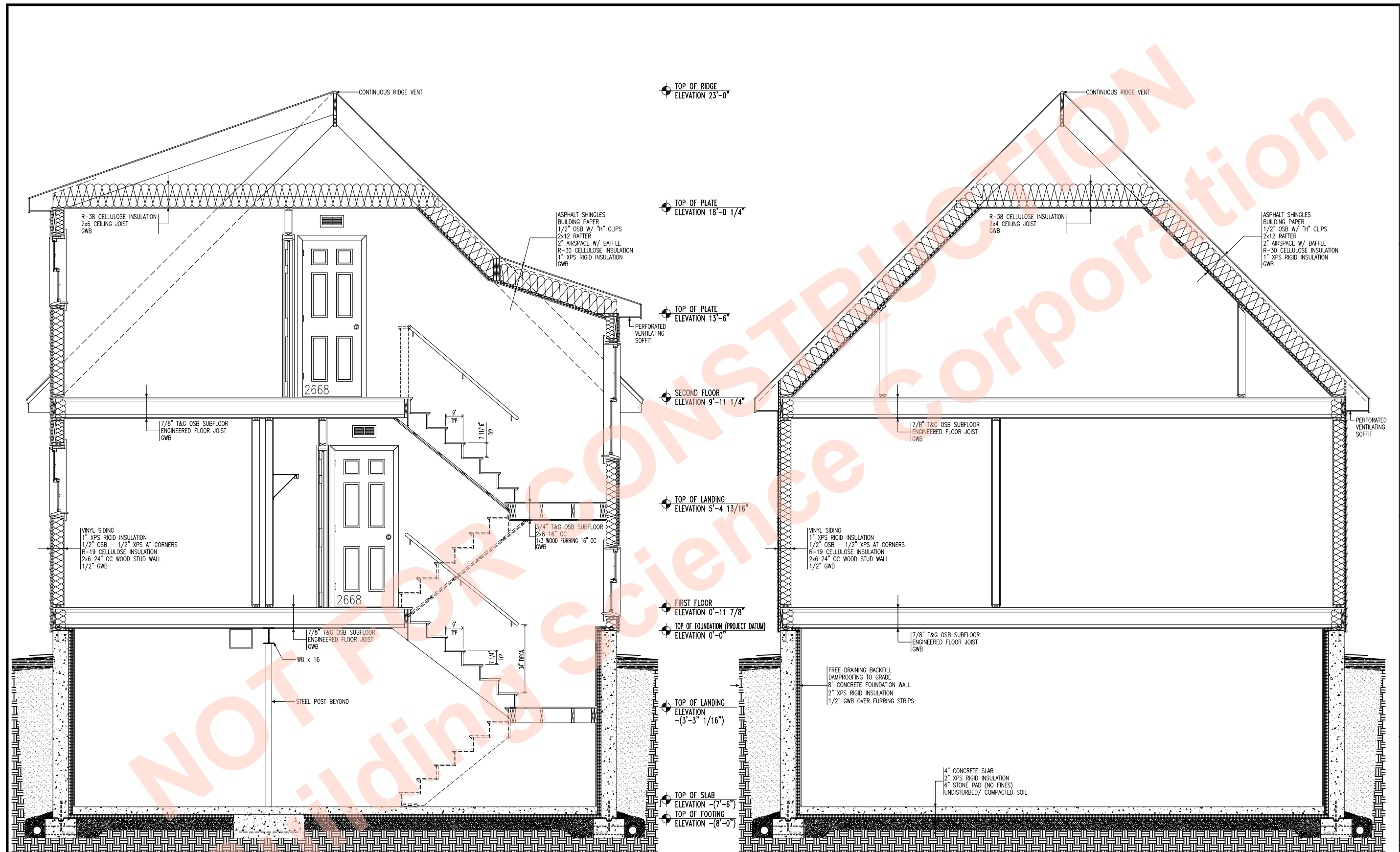


2 | ROOF FRAMING
SCALE 1/8" = 1'-0"



3 | ROOF PLAN
SCALE 1/8" = 1'-0"





1 | BUILDING SECTION AA
SCALE 1/4" = 1'-0"

2 | BUILDING SECTION BB
SCALE 1/4" = 1'-0"

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THREE BEDROOM HOUSE
COLD CLIMATE

BUILDING SECTIONS
SCALE AS NOTED

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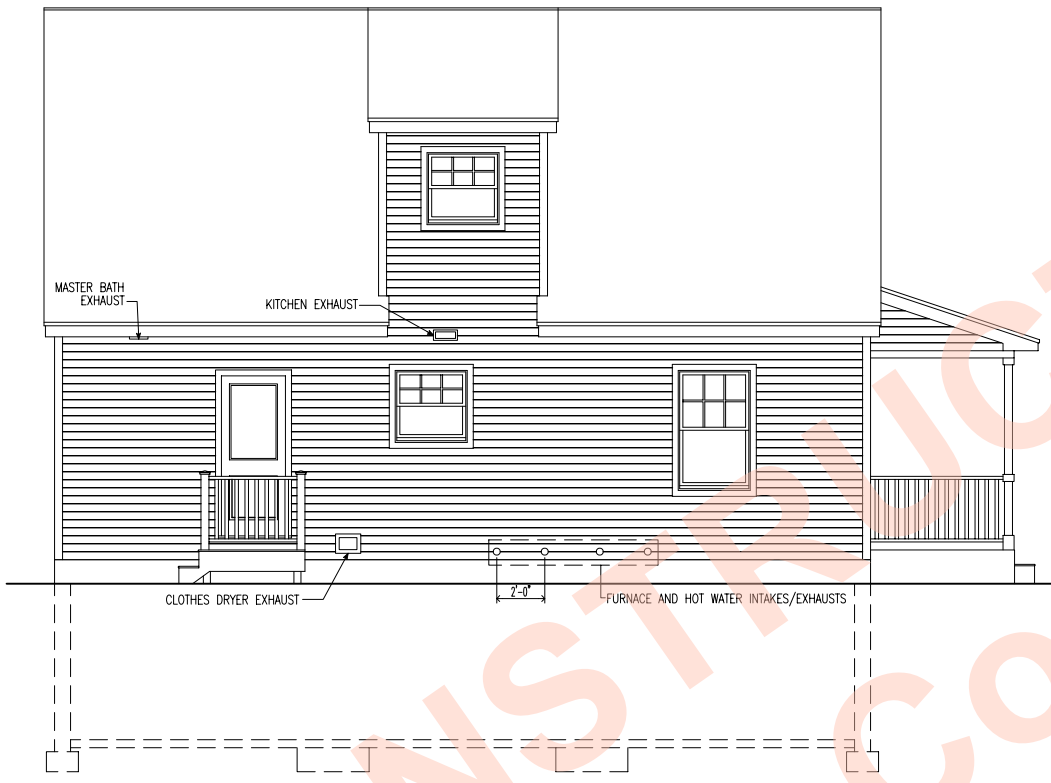
A-4

FILE: COLD CLIMATE HOUSE.DWG

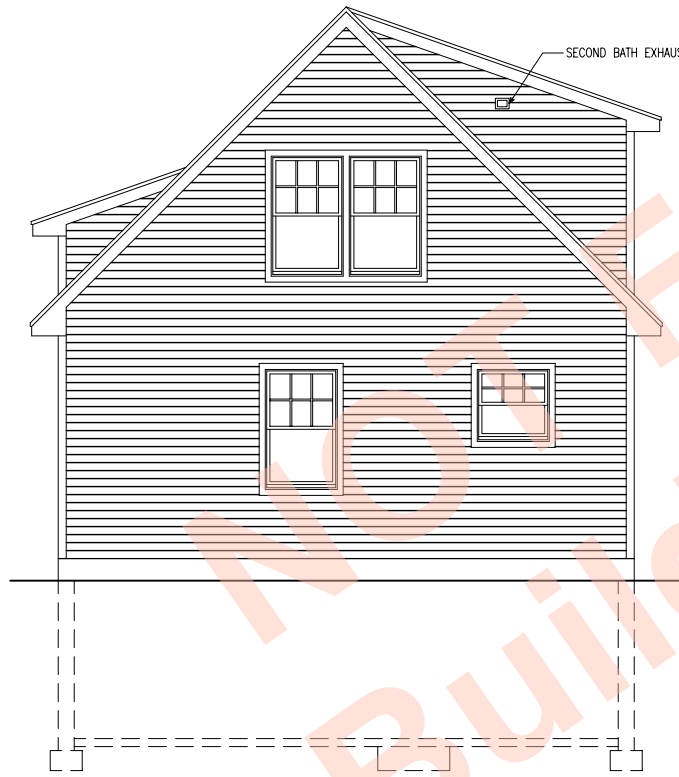




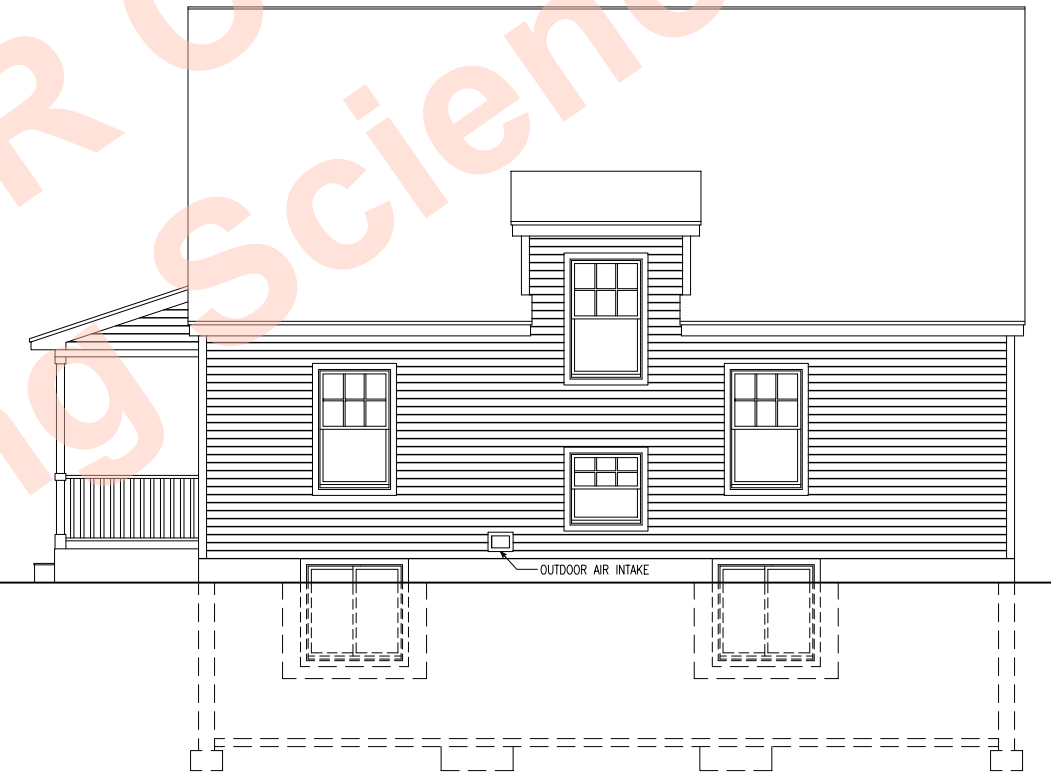
5 | FRONT ELEVATION
SCALE 1/8" = 1'-0"



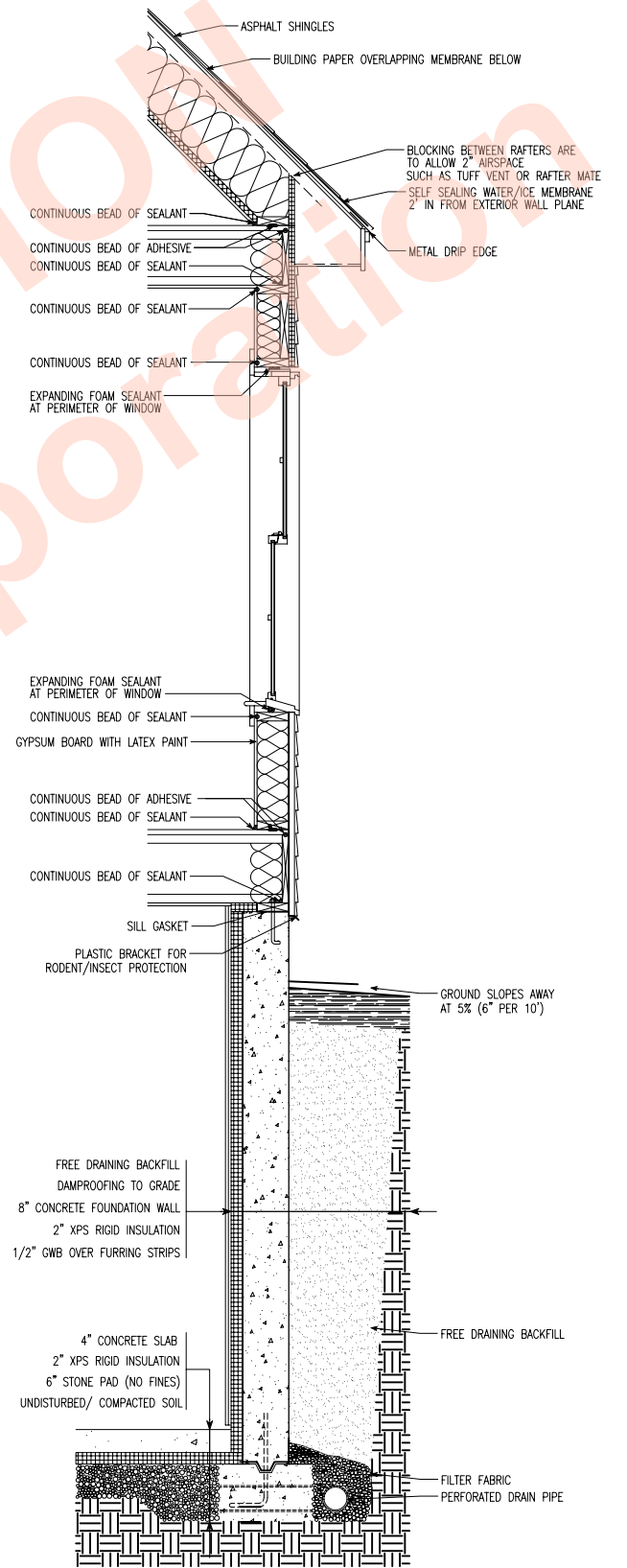
3 | LEFT SIDE ELEVATION
SCALE 1/8" = 1'-0"



4 | REAR ELEVATION
SCALE 1/8" = 1'-0"



2 | RIGHT SIDE ELEVATION
SCALE 1/8" = 1'-0"



1 | WALL SECTION
SCALE 3/8" = 1'-0"

ARCHITECT: BUILDING SCIENCE CORPORATION
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PROJECT: THREE BEDROOM HOUSE
COLD CLIMATE

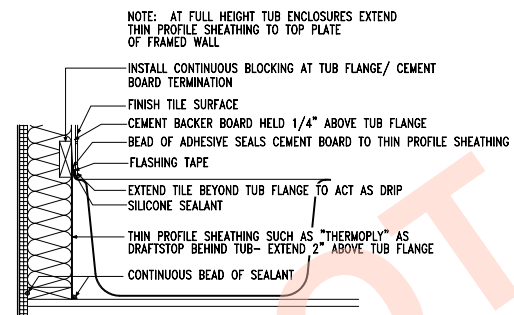
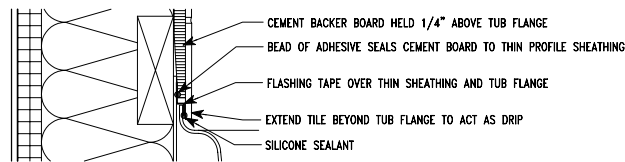
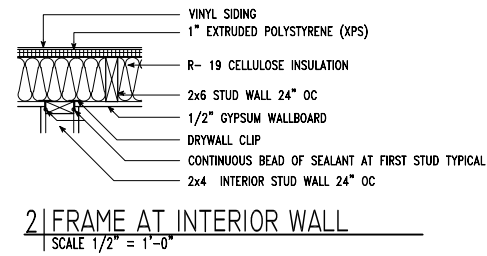
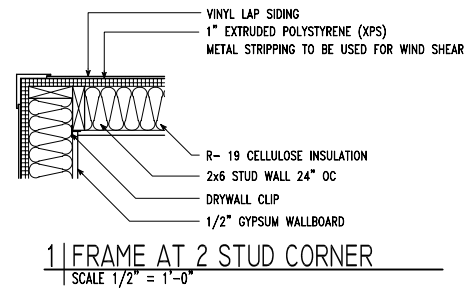
BUILDING ELEVATIONS WALL SECTION
SCALE AS NOTED

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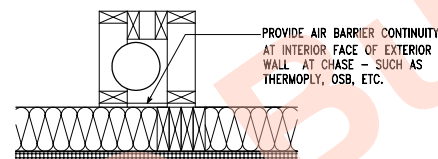
A-5

FILE: COLD CLIMATE HOUSE.DWG

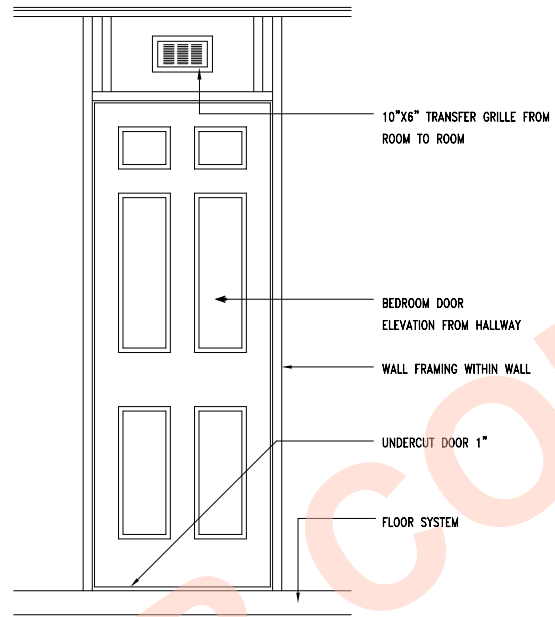
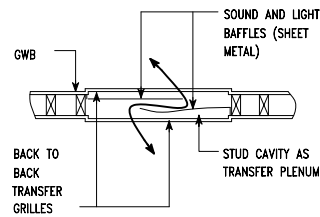




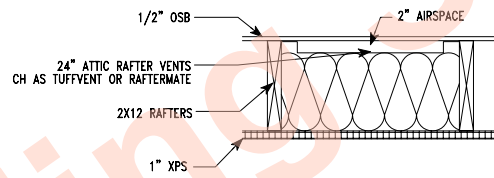
3 | FRAME AT FLANGED BATHTUB (WITH CLOSEUP)
SCALE 1/2" = 1'-0"



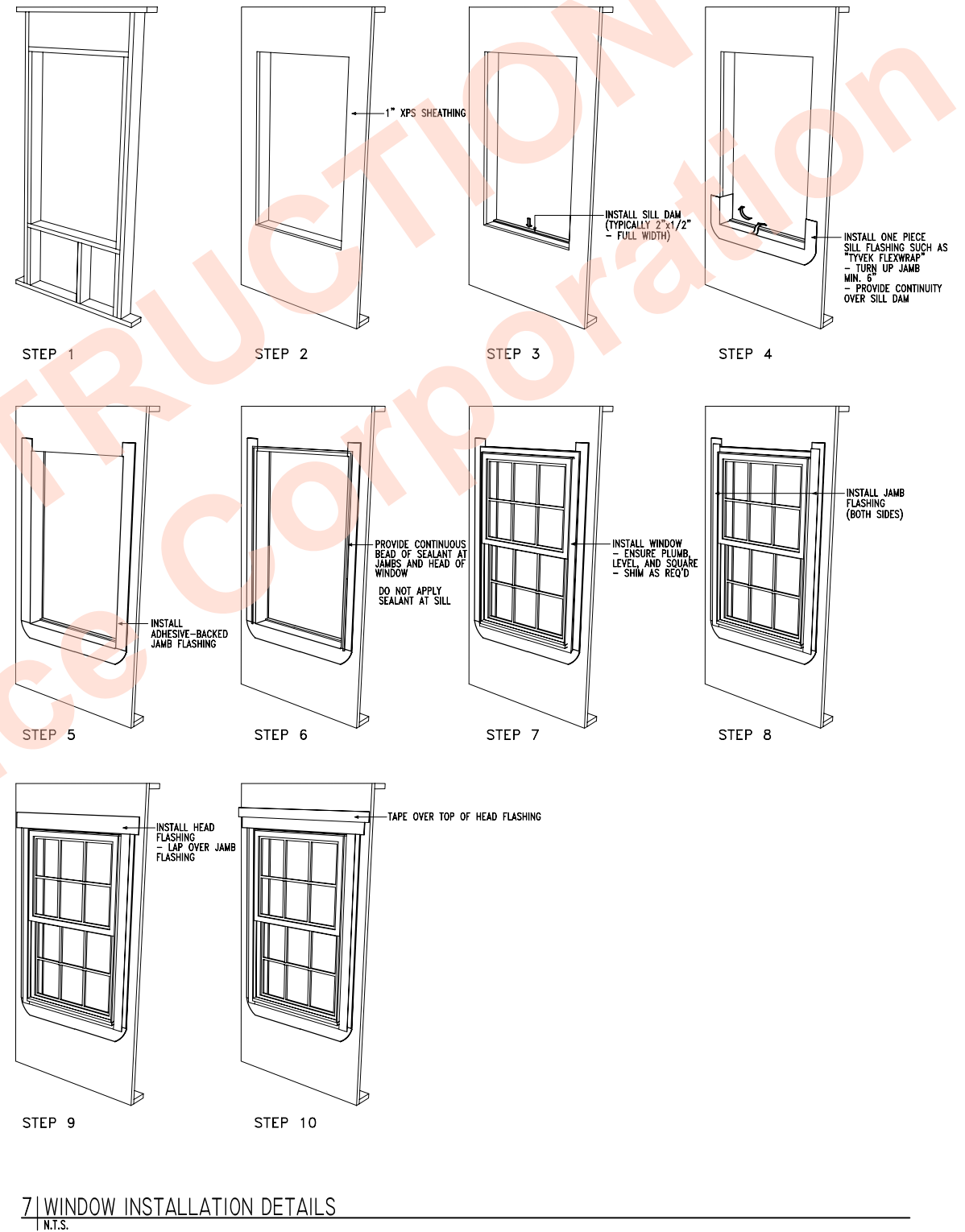
4 | FRAME AT BUILD OUT FOR HVAC DUCT
SCALE 1/2" = 1'-0"

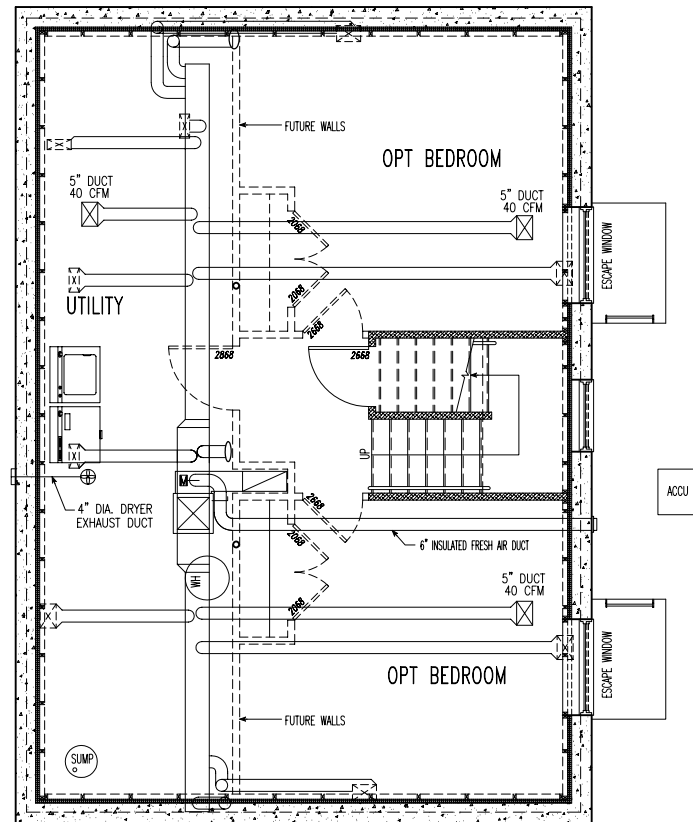


5 | DETAIL OVER DOOR TRANSFER GRILLE
SCALE 3/8" = 1'-0"



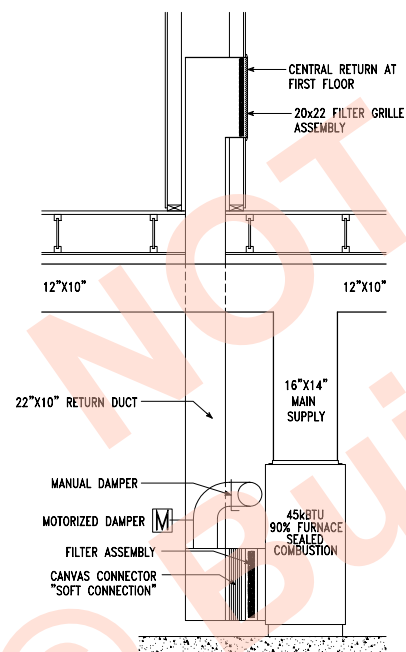
6 | ROOF FRAME SECTION
SCALE 1/2" = 1'-0"





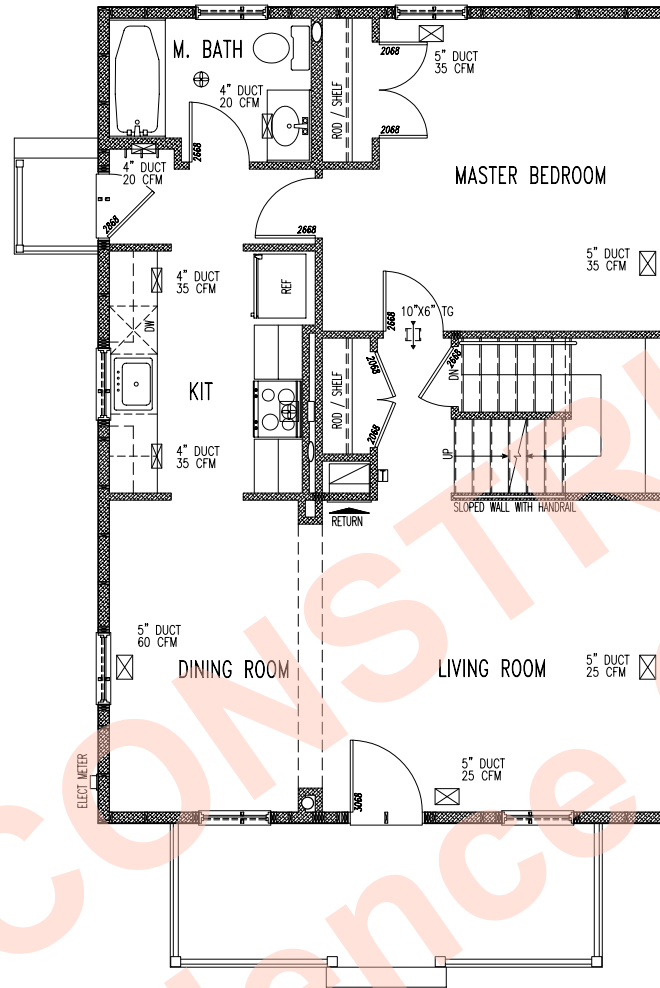
1 | BASEMENT REGISTER FLOWS

SCALE 1/8" = 1'-0"



4 | FURNACE DETAIL

SCALE 1/4" = 1'-0"



2 | FIRST FLOOR REGISTER FLOWS

SCALE 1/8" = 1'-0"

LEGEND	
	SUPPLY REGISTER
	OVER DOOR TRANSFER GRILLES
	TOILET EXHAUST FAN, PANSONIC FV-05VFL1
	KITCHEN EXHAUST FAN W/ LIGHT
	THERMOSTAT
	MOTORIZED DAMPER FOR O.A. CONTROL
	MANUAL DAMPER
	RETURN AIR FLOW

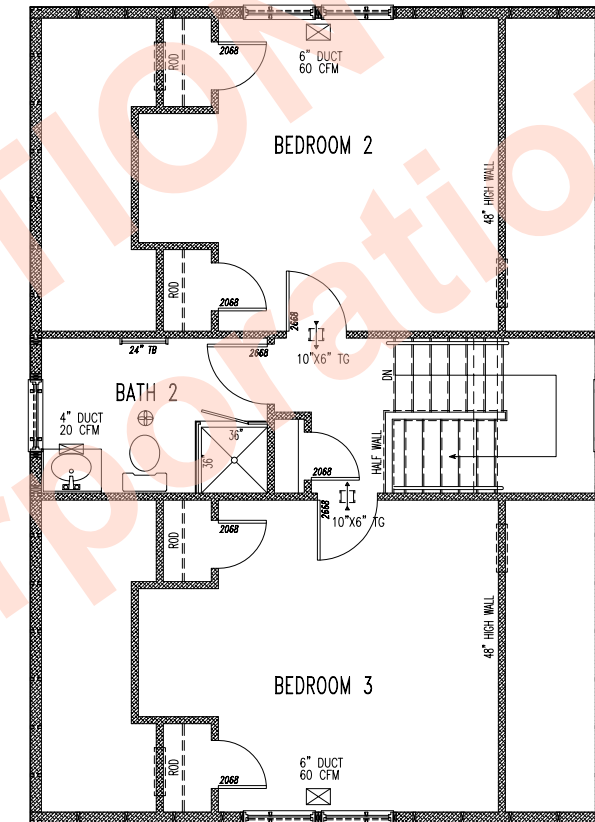
EQUIPMENT INFORMATION	
FURNACE	45.0 kBtu
DESIGN HEATING LOAD	25.0 kBtu/h
SYSTEM CFM	600 CFM
MAIN SUPPLY TRUNK	16"X14"
FRONT SUPPLY TRUNK	12"X10"
REAR SUPPLY TRUNK	12"X10"
RETURN TRUNK	22"X10"
RETURN GRILLE	22"X20"
SUPPLY TRUNK DESIGN VELOCITY	500 FPM
RETURN TRUNK DESIGN VELOCITY	550 FPM
RETURN GRILLE DESIGN VELOCITY	350 FPM

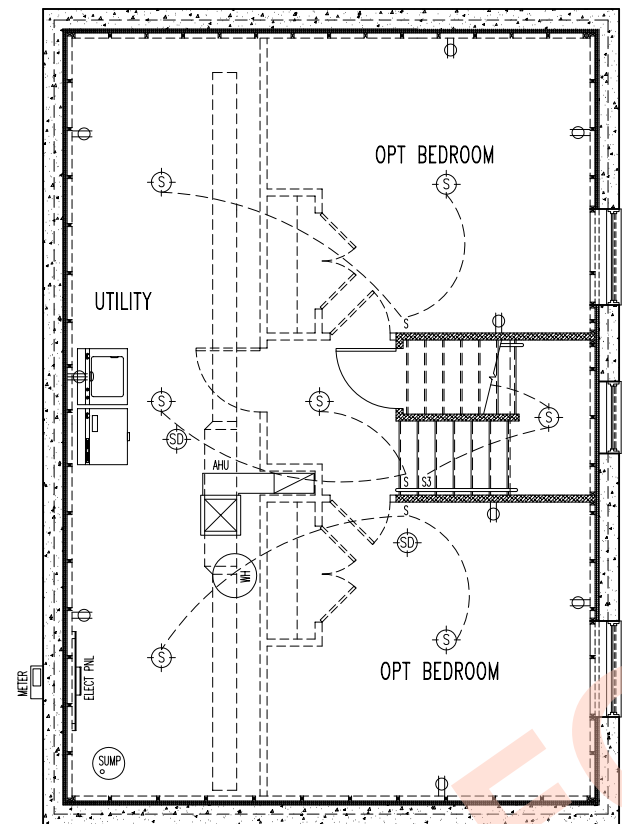
NOTES:

- ALL DUCTS TO BE SEALED WITH MASTIC AND LOCATED IN CONDITIONED SPACE.
- ALL REGISTERS TO BE ADJUSTABLE DIRECTIONAL MOUNTED WITH DAMPER.
- TRANSFER GRILLES PROVIDE PRESSURE RELIEF / PRESSURE EQUALIZATION BETWEEN CLOSED ROOMS AND COMMON AREAS (SEE SHEET A-6)
- DOORS TO BE UNDERCUT 1" BETWEEN TOP OF FINISH FLOOR AND UNDERSIDE OF DOOR
- AIR HANDLER LOCATED AND ACCESSED WITHIN INTERIOR CONDITIONED SPACE.
- RETURN DUCTED WITH TWO OFFSETS TO REDUCE SOUND AND VIBRATION.
- A FILTER WITH A MERV 12 RATING SHALL BE INSTALLED AT THE AIR HANDLER.
- OUTSIDE AIR PROVIDED TO RETURN SIDE OF SYSTEM WITH DAMPER CONTROL.
- 6" DIAMETER INSULATED OUTSIDE AIR DUCT FROM EXTERIOR SHALL BE INSTALLED WITH A MANUAL DAMPER TO SET FLOW. APRILAIRE 6" MECHANICAL DAMPER SHALL BE INSTALLED DOWNSTREAM OF MANUAL DAMPER. APRILAIRE VCS 8126 FAN CYCLER SHALL BE INSTALLED TO CONTROL MECHANICAL DAMPER. MECHANICAL DAMPER IS PROVIDED TO PREVENT EXCESS VENTILATION DURING PEAK LOAD USAGE. DAMPER SHUTS OFF DURING PEAK USE TO STOP OUTSIDE AIR FLOW TO RETURN FOR A PRESCRIBED AMOUNT OF TIME, THEREFORE PREVENTING OVERVENTILATION.

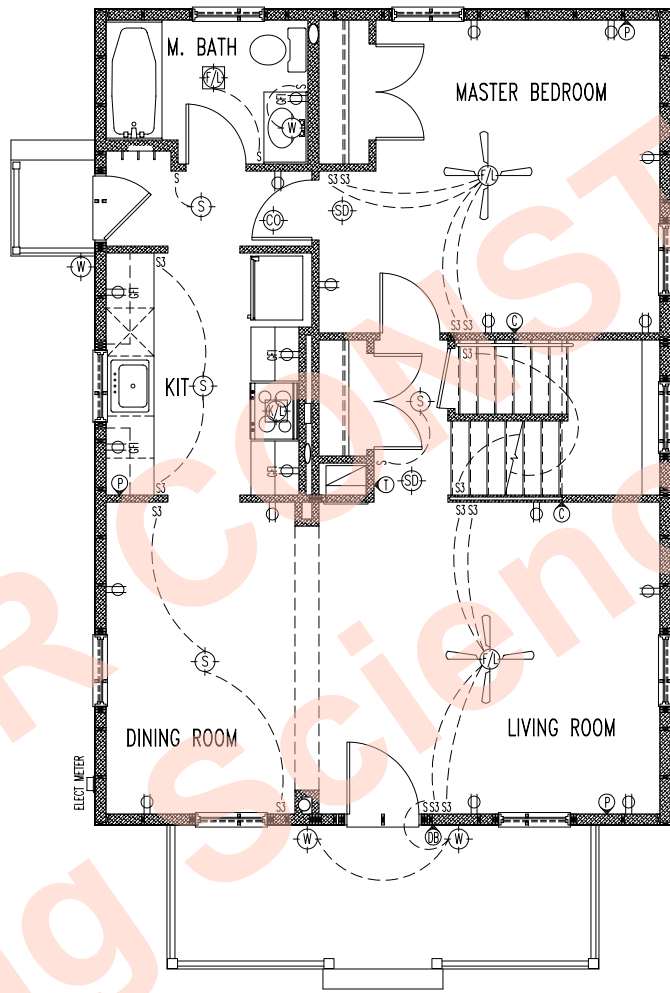
3 | SECOND FLOOR REGISTER FLOWS

SCALE 1/8" = 1'-0"

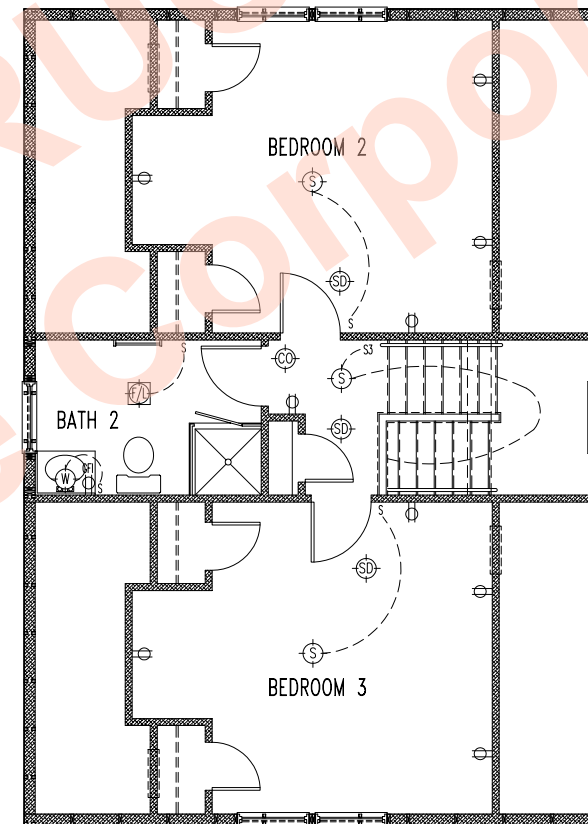




1 | BASEMENT ELECTRICAL PLAN
SCALE 1/8" = 1'-0"



2 | FIRST FLOOR ELECTRICAL PLAN
SCALE 1/8" = 1'-0"



3 | SECOND FLOOR ELECTRICAL PLAN
SCALE 1/8" = 1'-0"

NOTE: ASSUME 20A 220V CIRCUIT TO ACCU
20A 120V CIRCUIT TO AHU
30A 220V CIRCUIT TO WH
-PROVIDE CARBON MONOXIDE DETECTORS IF REQUIRED BY LOCAL CODE
-ALL WORK MUST COMPLY WITH MOST RECENT VERSION OF THE NATIONAL ELECTRIC CODE

- ELECTRICAL LEGEND**
- | SYMBOL | DESCRIPTION |
|-------------------|---|
| (S) | SURFACE MOUNTED LIGHT FIXTURE |
| (W) | WALL MOUNTED LIGHT FIXTURE |
| (D) | DROPPED LIGHT FIXTURE |
| (R) | RECESSED LIGHT FIXTURE |
| (R ₀) | RECESSED LIGHT FIXTURE (AIRTIGHT) |
| (R _W) | RECESSED LIGHT FIXTURE (WATERPROOF) |
| (P) | POLE LAMP (EXTERIOR-SITE) |
| (F) | FLOOD W/MOTION SENSOR |
| (SD) | SMOKE DETECTOR (INTERCONNECTED W/ BATTERY BACKUP) |
| (CO) | CARBON MONOXIDE DETECTOR (INTERCONNECTED W/ BATTERY BACKUP IF NEC.) |
| (EF) | EXHAUST FAN |
| (EF/L) | EXHAUST FAN / LIGHT COMBINATION |
| (EF/L) | KITCHEN EXHAUST FAN / LIGHT COMBINATION |
| (24) | FLOURESCENT STRIP LIGHT (SINGLE) (LENGTH IN INCHES) |
| (24) | FLOURESCENT STRIP LIGHT (DOUBLE) (LENGTH IN INCHES) |
| (24) | TRACK LIGHT (LENGTH IN INCHES) |
| (C) | CABLE TV / PHONE OUTLET |
| (DB) | DOOR BELL |
| (T) | THERMOSTAT |
| (D) | 110 VAC DUPLEX OUTLET |
| (D ₁) | 110 VAC DUPLEX OUTLET (TOP SWITCHED) |
| (D ₂) | 110 VAC DUPLEX OUTLET (GROUND FAULT INTERRUPTOR) |
| (D ₃) | 110 VAC DUPLEX OUTLET (WATERPROOF) |
| (DO) | DRYER OUTLET |
| (RO) | RANGE OUTLET |
| (S) | SINGLE POLE SWITCH |
| (S3) | THREE-WAY SWITCH |
| (S4) | FOUR-WAY SWITCH |
| (SD) | SWITCH WITH DIMMER |
| (SD3) | THREE-WAY SWITCH WITH DIMMER |
| (SD4) | FOUR-WAY SWITCH WITH DIMMER |
| (ST) | SWITCH WITH TIMER |
| (F) | CEILING FAN |
| (F/L) | CEILING FAN/LIGHT COMBINATION |
| (ACCU) | AIR COOLED CONDENSING UNIT |
| (AHU) | AIR HANDLING UNIT |
- NOTE: ALL SYMBOLS MAY NOT BE USED IN PLAN

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THREE BEDROOM HOUSE
COLD CLIMATE

ELECTRICAL FLOOR PLANS
SCALE AS NOTED

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E-1

FILE: COLD CLIMATE HOUSE.DWG