

# COVER SHEET

**A. MANUFACTURER INFORMATION:**

MAILING ADDRESS: P.O. BOX 9000  
 OXFORD, ME 04270

MANUFACTURING PLANT ADDRESS: ROUTE 121  
 OXFORD, ME 04270

EXPIRATION DATE OF CURRENT CERTIFICATION: APRIL 30th 2013

MANUFACTURER STATE CERTIFICATION NUMBER: MAINE: MF70000112  
 NEW HAMPSHIRE: M9308019  
 VERMONT: 50171  
 CONNECTICUT: N/A  
 RHODE ISLAND: Y9588  
 MASSACHUSETTS: MCS#137

**B. THIRD PARTY INSPECTION AGENCY INFORMATION:**

3rd PARTY INSPECTION AGENCY: T.R. ARNOLD & ASSOCIATES, INC.  
 3rd PARTY INSPECTION AGENCY AUTHORIZATION: I.A. #03  
 AGENCY AUTHORIZATION EXPIRATION DATE: APRIL 30th 2013  
 KEISER MODULAR SYSTEMS MANUAL APPROVAL DATE: APRIL 27th 2012

KEISER INDUSTRIES CERTIFIES THAT THIS DOCUMENT CONFORMS WITH THE SYSTEMS APPROVALS AND SPECIFICATIONS APPROVED BY T.R.A. AND IS IN COMPLIANCE WITH THE FOLLOWING STATE CODES: (ME) NH, MA, VT, RI, CT.  
 RT

**C. LOCATIONS OF INFORMATION LABELS:**

DATA PLATE: ONE PER DWELLING (SEE FLOOR PLAN)

STATE LABEL: ONE PER MODULE (SEE FLOOR PLAN)   
 (MA, N.H., CT, R.I.)

TRA LABEL: ONE PER MODULE (SEE FLOOR PLAN)   
 (ME, VT)

**D. INDEX OF INFORMATION:**

TOTAL NUMBER OF SHEETS IN EACH SET: 20

DWG/Pg#	DESCRIPTION	DWG. DATE	REV. DATE
1-2	ENERGY CALCULATION	8/3/12	
1-3	DATA SHEET	8/3/12	
1-4	SEALED TRUSS PRINT (U-1032 & U-1033)	8/1/12	
1-4A	SEALED TRUSS PRINT (U-1111)	8/1/12	
1	COVER SHEET	8/3/12	
2	1st FLR PLAN	8/3/12	
2A	2nd FLR PLAN	8/3/12	
3	ELEVATIONS	8/3/12	
4	FOUNDATION PLANS	8/3/12	
5	1st FLR ELECTRICAL PLAN	8/3/12	
5A	2nd FLR ELECTRICAL PLAN	8/3/12	
6	HEAT PLANS	BY OTHERS	
7	CONSTRUCTION DATA & REF. SHEET	8/3/12	
8	CROSS SECTION	8/3/12	
8A	ROOF CROSS SECTION	8/3/12	
8B	OFFSET ROOF CROSS SECTION	8/3/12	
8C	FLOOR FRAMING LAYOUT	8/3/12	
9	1st FLR VENT PLAN	8/3/12	
9A	2nd FLR DRAIN PLAN	8/3/12	
9C	PLUMBING LINE SCHEMATIC	8/3/12	
12	MODULAR FABRICATED STAIR DESIGN	8/3/12	

**E. BUILDING INFORMATION:**

BUILDER: HALLMARK HOMES

BUILDER'S ADDRESS: PO BOX 113

CITY, STATE, ZIP: TOPSHAM, ME 04086

SEND PLANS TO: 619 LEWISTON ROAD; ROUTE 196

RHODE ISLAND BUILDER'S LIC. #:

PROJECT LOCATION: 25 LUTHER STREET; LOT 16 , PORTLAND, ME 04108

MODEL DESIGNATION: 22'x28' w/16'x13' CUSTOM COLONIAL

USE GROUP: SINGLE FAMILY CONSTRUCTION CLASSIFICATION: VB

AREA: 1st FLR: 826.583 2nd FLR: 617.75 3rd FLR: N/A

VOLUME OF ENCLOSED SPACE: 11555 CUBIC FEET

HEIGHT ABOVE SILL: 29'-3 1/4" STORIES: 2

DESIGN OCCUPANCY LOAD:  
 1st FLR: N/A 2nd FLR: N/A 3rd FLR: N/A

SPECIAL SYSTEMS: FIRE ALARM TYPE: SMOKE DETECTORS U.L. 217-77  
 FIRE SUPPRESSION SYSTEM: N/A  
 (OTHER) : WHEN FLOOR AREA EXCEEDS 1200 S.F.  
 (2) U.L. 217-77 SMOKE DETECTORS ARE REQ'D. (RHODE ISLAND ONLY)

DESIGN LIVE LOADS: WALLS: 21 826.58800F: 42 PSF 1st FLR: 40 PSF  
 2nd FLR: 30 PSF (CAPE / COLONIAL) N/A (RANCH)  
 3rd FLR: N/A CORRIDORS: N/A INTERIOR WALLS: 5 PSF  
 STAIRS: 30 PSF (CAPE / COLONIAL) N/A (RANCH)  
 WIND HORIZONTAL: 90 MPH  
 EXPOSURE RATING: B UNLESS OTHERWISE SPECIFIED BY  
 ON-SITE BUILDER  
 GLAZING D.P. RATING: DP 40  
 SEISMIC HAZARD EXPOSURE: CATEGORY "c"  
 SPECIAL USE PROVISIONS: NOT TO BE BUILT WITHIN FIRE UNIT LIMITS  
 MUST BE LOCATED 6' FROM LOT LINE

**F. HEATING SYSTEM INFORMATION:**

SYSTEM TYPE: ELECTRIC RESISTANCE BASE BOARD & SPLIT-LOOP DUCTLESS  
 ELECTRIC HEAT PUMPS & A/C UNITS -- ON-SITE BY OTHERS

DESIGN TEMPRATURE DIFFRENCE: -20 OUTSIDE 72 INSIDE 92 TOTAL D.T.D.

FUEL: ELECTRIC, NATURAL, LPG, OIL

CHIMNEY/VENTING SYSTEM TYPE: OTHER THAN ELECTRIC HEAT-MASONRY  
 CHIMNEY BY BUILDER PER STATE & LOCAL  
 BUILDING CODE OR AN APPROVED EQUAL.

BASEMENT:  
 IF HOT WATER BOILER AND/OR WATER HEATER ARE INSTALLED IN BASEMENT,  
 THEN EITHER BASEMENT FOUNDATION WALLS MUST BE INSTALLED PER  
 STATE & LOCAL BUILDING CODE, OR THE BELOW THE FLOOR WATER LINES  
 MUST BE INSULATED PER STATE & LOCAL BUILDING CODE.

MAINE  
 Pg= 60 PSF  
 GROUND SNOW

**G. EXTERIOR ENVELOPE THERMAL PERFORMANCE INFORMATION:**

ELEMENT	CODE REQUIREMENT R-VALUE/U-VALUE	ACTUALS R-VALUE/U-VALUE
EXT. WALL	R-19/.05	R-40/.025
FLOOR OVER UNCONDITIONED BASEMENT OR EXTERIOR	R-19/.05	N/A
FLAT CEILING w/NO DECKING BEHIND K-WALL	R-38/.026	R-60/.0167
FLAT CEILING UNDER DECK IF UNFINISHED ABOVE	R-30/.033	N/A
VAULT CEILING AND SLOPE RAKES	R-38/.026	N/A
ENTRY DOORS	R-2.86/.35	R-6.67/.15
SPECIALTY DOORS	R-2.22/.45	R-3.7/.27
WINDOWS	R-2.86/.35	R-3.57/.28
SKYLIGHT	R-1.67/.6	N/A
FOUNDATIONS	R-10/.10	R-10/.10

**H. ATTIC VENTILATION:**

REQUIRED: (1) SQ. FT. PER (300) SQ. FT. OF CEILING AREA.  
 ACTUAL: 865.83 SQ. FT. CEILING AREA  
 2.89 SQ. FT. VENTILATION REQUIRED  
 3.49 SQ. FT. PROVIDED AT EAVES. (6.2 SQ. IN. PER LIN. FT.)  
 N/A SQ. FT. PROVIDED AT GABLE ENDS (54 SQ. IN. PER END)  
 5.14 SQ. FT. PROVIDED AT RIDGE. (18 SQ. IN. PER LIN. FT.)  
 TOTAL: 8.62 SQ. FT. PROVIDED

**H-1. BASEMENT/CRAWL SPACE VENTILATION:**

REQUIRED: (1) SQ. FT. PER (1500) SQ. FT. OF FLOOR AREA.  
 TOTAL MINIMUM: 0.55 SQ. FT. VENTILATION REQUIRED BY OTHERS

**I. APPLICABLE CODES:**

2003 INTERNATIONAL RESIDENTIAL CODE w/STATE AMENDMENTS  
 2003 INTERNATIONAL PLUMBING CODE  
 2008 NFPA-70 NATIONAL ELECTRICAL CODE  
 2001 NFPA-31 INSTALLATION OF OIL BURNING EQUIPMENT  
 2003 NFPA-101 LIFE SAFETY CODE w/STATE AMENDMENTS  
 2005 MAINE ENERGY CODE  
 2009 INTERNATIONAL ENERGY CONSERVATION CODE  
 2002 NFPA-54 NATIONAL FUEL GAS CODE  
 2001 NFPA-58 NATIONAL LP GAS CODE  
 MMHB RULES FOR RADON MITIGATION

**KEISER  
 INDUSTRIES INC.**

P.O. BOX 9000 RTE. 121  
 OXFORD, ME 04270

TEL: (207) 539-8883  
 FAX: (207) 539-4446

DWG NO.:  
 KIM 3976

LAYER NAME:  
 COVER

STYLE:  
 22'x28' w/16'x13'  
 CUSTOM COLONIAL

DEALER:  
 HALLMARK

CUSTOMER:  
 HOMESTART - LOT16

DATE:  
 8/3/12

DRAWN BY:  
 RT

CHECKED BY:

CODES:  
 2003 IRC  
 1&2 FAMILY DWELLING

REVISIONS	
DATE	ITEM

SCALE:  
 NOT TO SCALE

SHEET NO.  
 1

DWG NO.  
KIM 3976

GOTO VIEW:  
1SUBMTL

DATE:  
8/3/12

SUBMITTAL  
1st FLR PLAN

DRAWN BY:  
RT

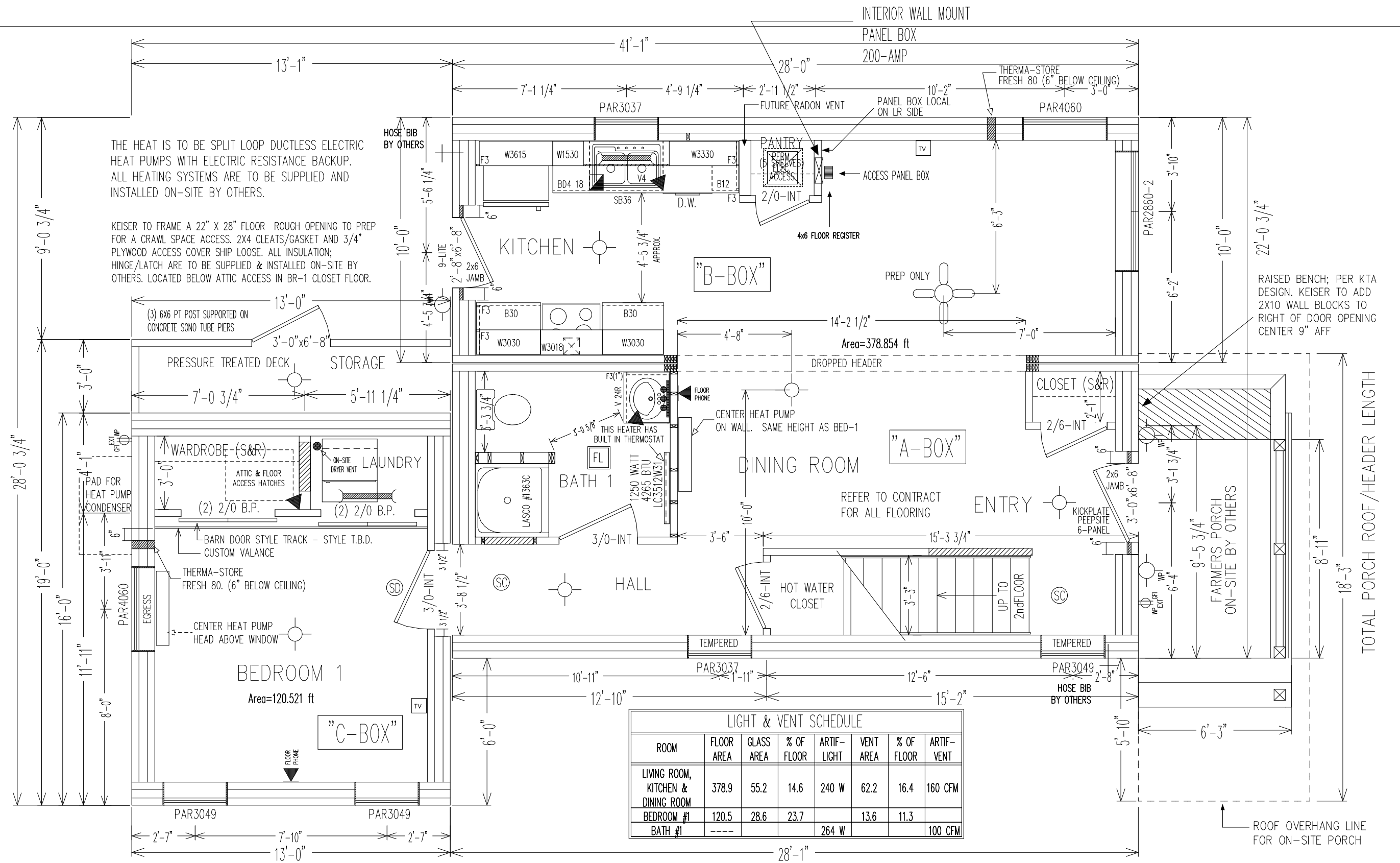
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DATE	ITEM

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

SHEET NO.

2



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DWG NO.  
KIM 3976

GOTO VIEW:  
2SUBMTL

DATE:  
8/3/12

SUBMITTAL  
2nd FLR PLAN  
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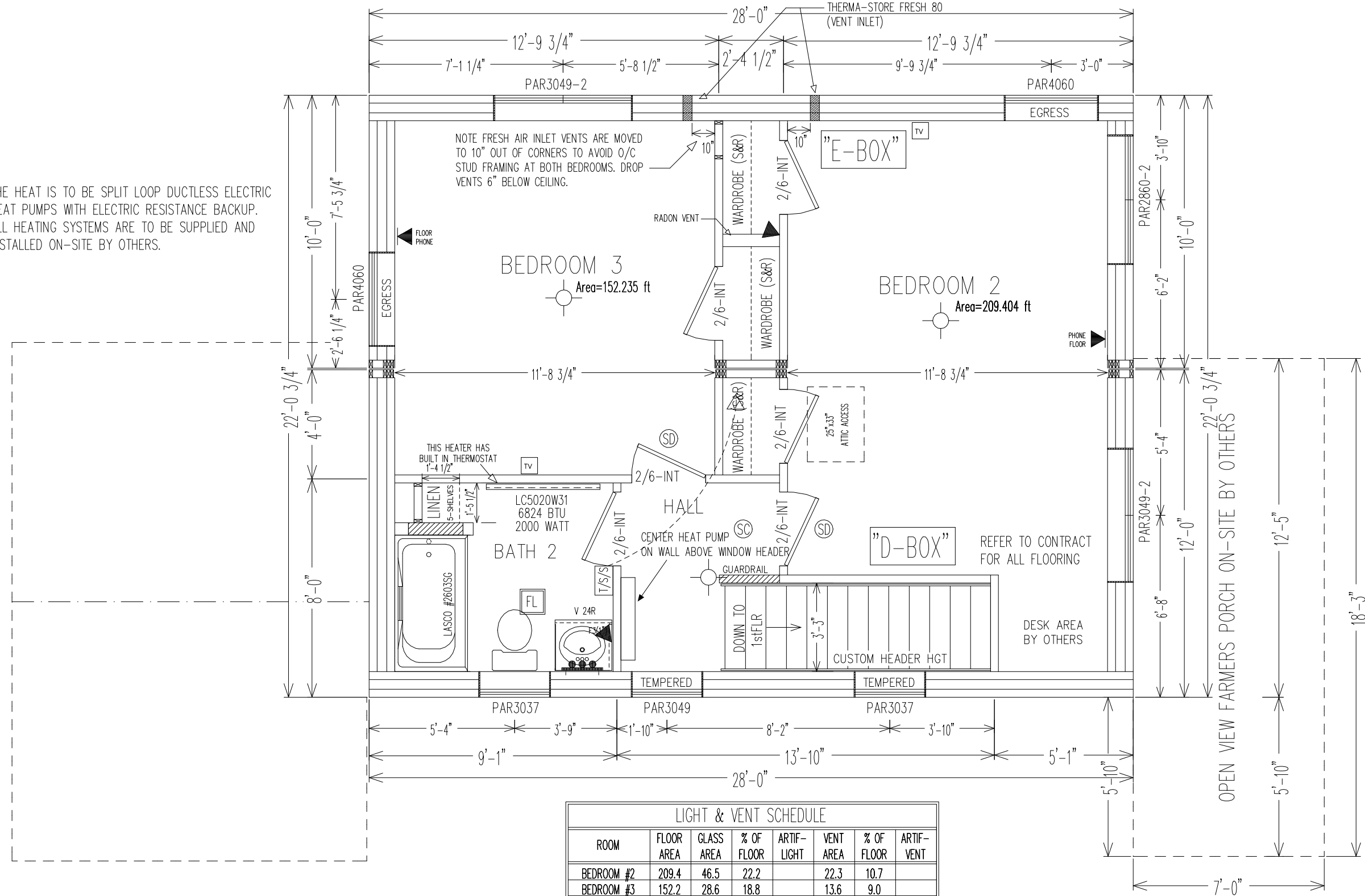
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SCALE:  
1/4"=1'-0"

SHEET NO.

2A

THE HEAT IS TO BE SPLIT LOOP DUCTLESS ELECTRIC HEAT PUMPS WITH ELECTRIC RESISTANCE BACKUP. ALL HEATING SYSTEMS ARE TO BE SUPPLIED AND INSTALLED ON-SITE BY OTHERS.



ROOM	FLOOR AREA	GLASS AREA	% OF FLOOR	ARTIF-LIGHT	VENT AREA	% OF FLOOR	ARTIF-VENT
BEDROOM #2	209.4	46.5	22.2		22.3	10.7	
BEDROOM #3	152.2	28.6	18.8		13.6	9.0	
BATH #2	----			264 W			100 CFM

ME STATE NOTES:

- 1. KITCHEN RANGE HOODS & MICROWAVES TO BE VENTED. EXHAUST TO EXTERIOR OF HOME
- 2. ALL BATHROOMS MUST BE EQUIPPED WITH A EXHAUST FAN. FAN TO HAVE A MINIMUM RATING OF 50 CFM AND RATED FOR A SOUND AT A MAXIMUM OF 3 SONE. EXHAUST TO EXTERIOR OF HOME.
- 3. ALL CLOTHES DRYER TO BE VENTED TO EXTERIOR OF HOME.
- 4. A 3" MINIMUM DIAMETER RADON VENT PIPE MUST BE INSTALLED UP THROUGH ALL THE BUILDING FLOORS AND INTO THE ATTIC ABOVE CONDITIONED SPACE TO ALLOW A 3' VERTICAL WORKSPACE. POWER SHALL BE RUN FROM A GENERAL LIGHTING
- 5. ALL JOINTS, SEAMS, PENETRATIONS, OPENINGS BETWEEN WINDOW AND DOOR ASSEMBLIES AND THEIR RESPECTIVE JAMBS AND FRAMING, AND OTHER SOURCES OF AIR LEAKAGE (INFILTRATION AND EXFILTRATION) THROUGH THE BUILDING THERMAL ENVELOPE SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED, WRAPPED OR OTHERWISE SEALED TO LIMIT UNCONTROLLED AIR MOVEMENT. (2003 IRC, N102.110)
- 6. DRAFT STOP MATERIALS SHALL BE DETERMINED IN ACCORDANCE WITH THE NATIONAL FENESTRATION RATING COUNCIL, INC. (NFRC), NFRC 100-2004.

DWG NO.  
KIM 3976

GOTO VIEW:  
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DATE:  
8/3/12

ELEVATIONS

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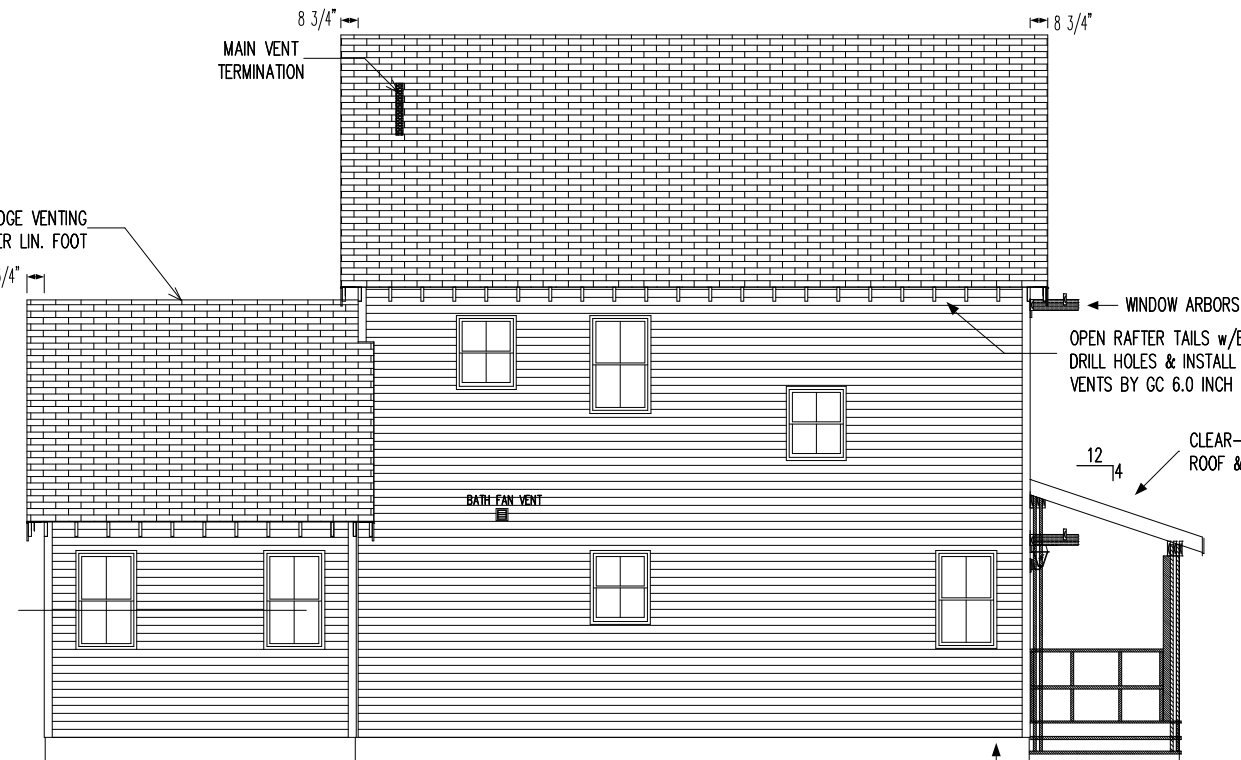
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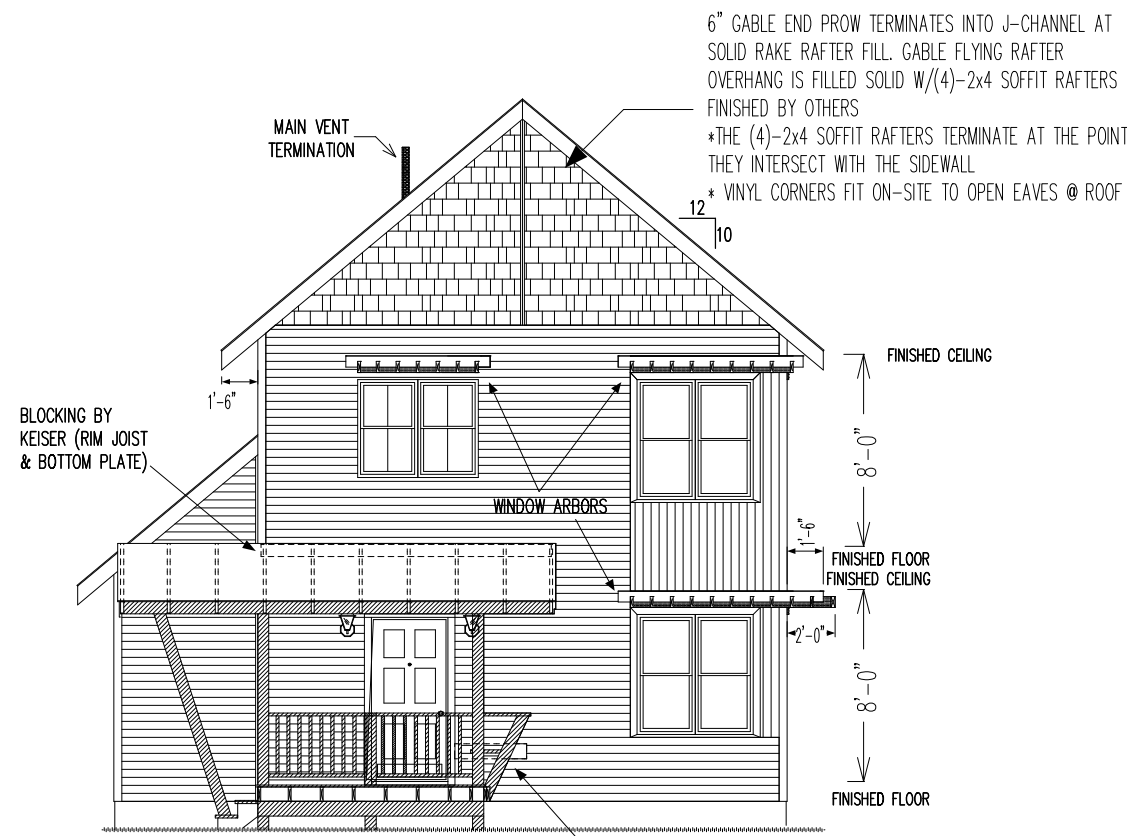
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SHEET NO.  
3

ELEVATIONS INTENDED FOR CONCEPTUAL PURPOSES ONLY; NOT TO BE USED FOR CONSTRUCTION PURPOSES.



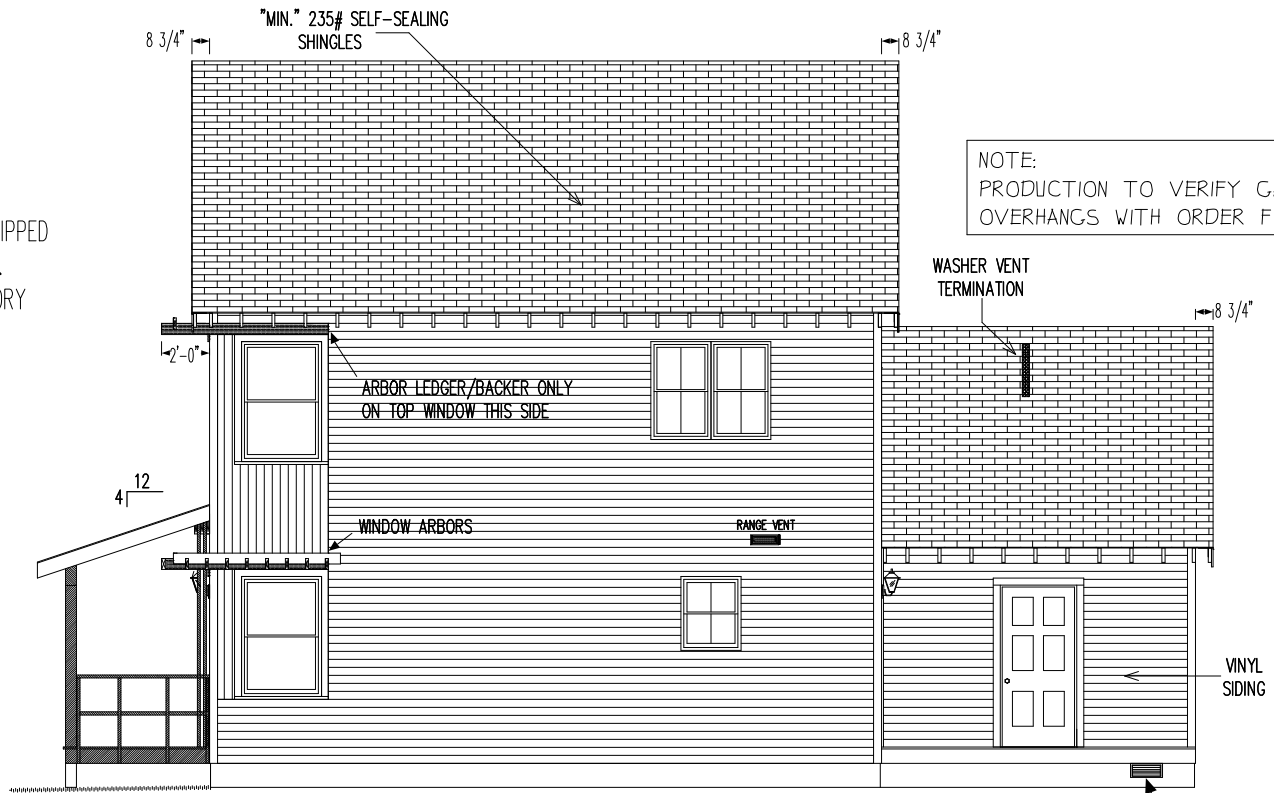
WEST ELEVATION LEFT



SOUTH ELEVATION FRONT

EXTERIOR STEPS, DECK SEATING TO BE ON-SITE BY OTHERS  
 PORCHES & DECKS TO BE ON-SITE BY OTHERS

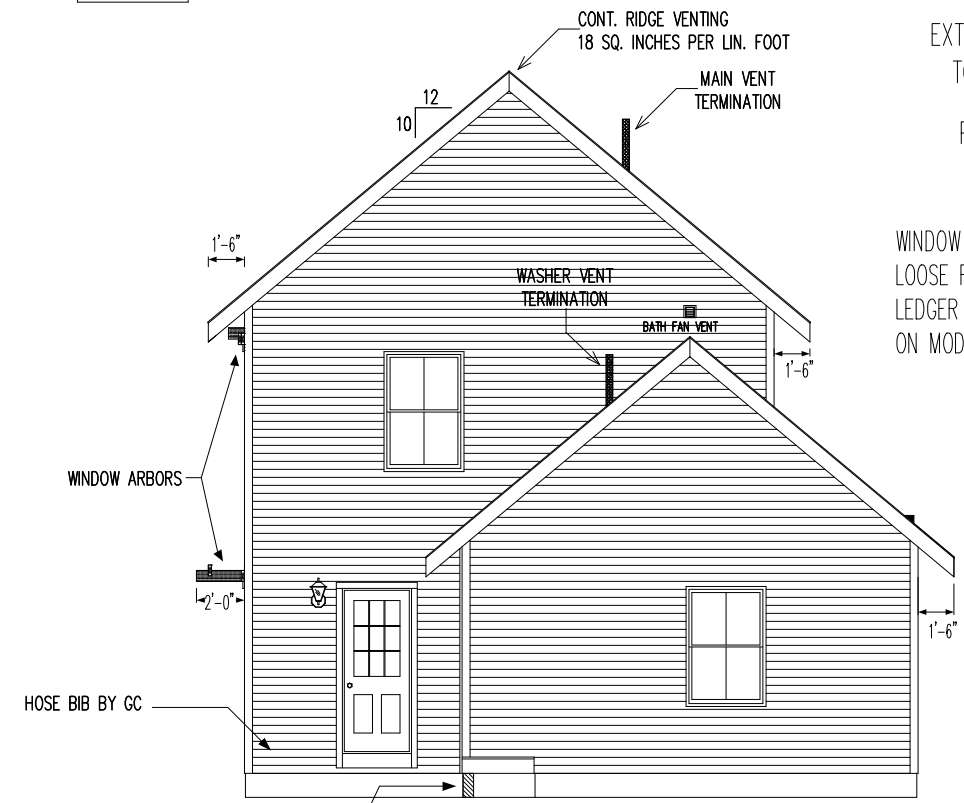
WINDOW ARBORs FRAMED BY KEISER & SHIPPED LOOSE FOR ON-SITE INSTALL BY OTHERS. LEDGER FOR ARBORs INSTALLED AT FACTORY ON MODULAR BOX



EAST ELEVATION RIGHT

NOTE: PRODUCTION TO VERIFY GABLE OVERHANGS WITH ORDER FORM

NOTE: ALL EXTERIOR STEPS, DECK SEATING, RAILINGS TO BE SUPPLIED AND INSTALLED ON-SITE BY OTHERS. SITE CONSTRUCTION TO BE COMPLIANT WITH ALL STATE & LOCAL CODES.



NORTH ELEVATION REAR

NOTE: REFER TO BUILDERS REFERENCE MANUAL FOR DETAILS AND SPECIFICATIONS.  
THIS PLAN CAN BE USED FOR FINAL CONSTRUCTION -- (8/3/12)

**KEISER**  
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OXFORD, ME 04270  
TELE: (207) 539-8883  
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DWG NO.  
KIM 3976

GOTO VIEW:  
FOUND

DATE:  
8/3/12

FOUNDATION

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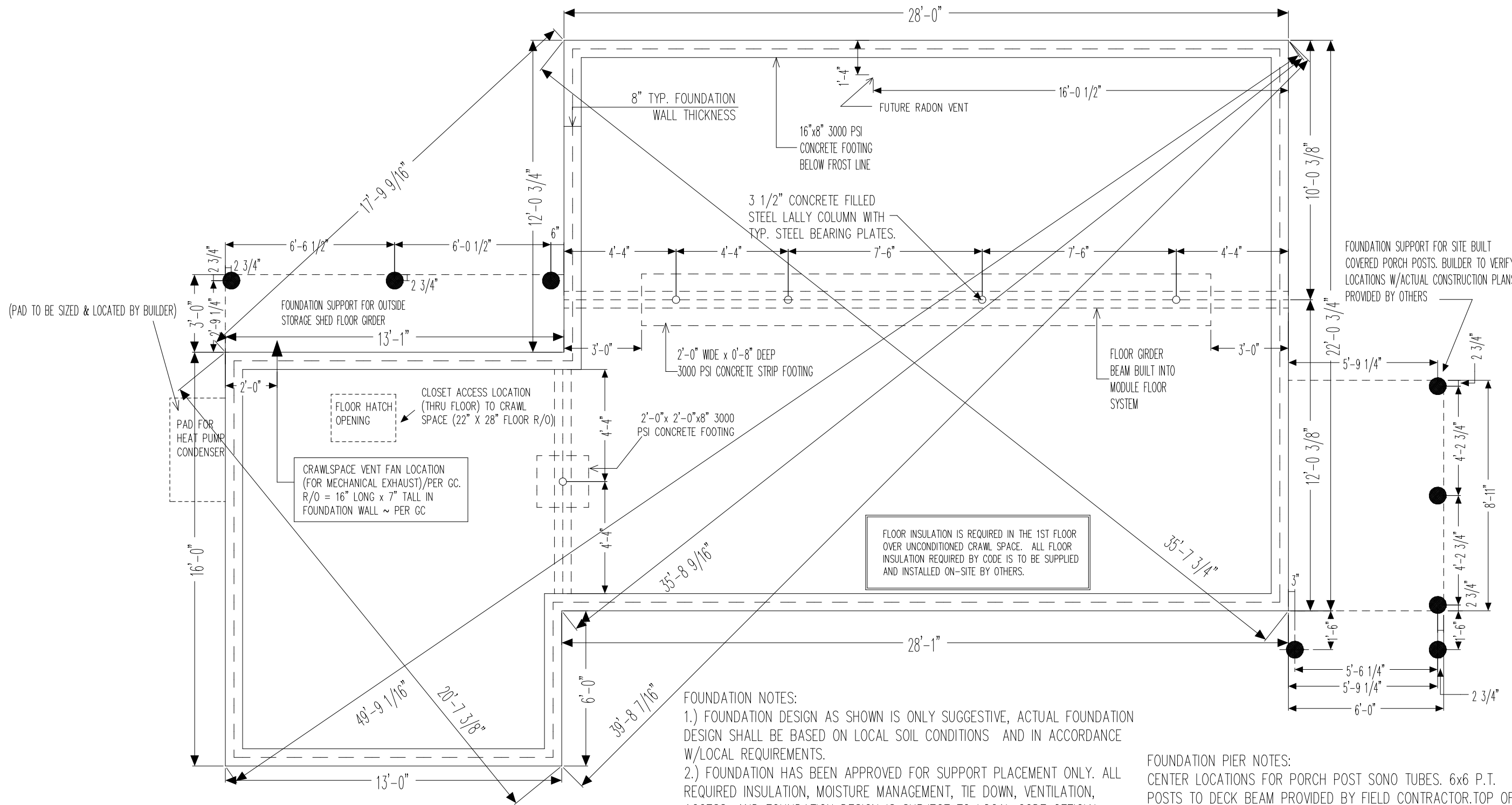
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DATE	ITEM

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

SHEET NO.

4



**CRAWLSPACE NOTES:**  
UNVENTED/ CONDITIONED CRAWL SPACE WILL REQUIRE COMPLIANCE w/2009-IRC SECTION R408.  
THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL CRAWLSPACE CODE COMPLIANCE.

- FOUNDATION NOTES:**
- 1.) FOUNDATION DESIGN AS SHOWN IS ONLY SUGGESTIVE, ACTUAL FOUNDATION DESIGN SHALL BE BASED ON LOCAL SOIL CONDITIONS AND IN ACCORDANCE W/LOCAL REQUIREMENTS.
  - 2.) FOUNDATION HAS BEEN APPROVED FOR SUPPORT PLACEMENT ONLY. ALL REQUIRED INSULATION, MOISTURE MANAGEMENT, TIE DOWN, VENTILATION, ACCESS, AND FOUNDATION DESIGN IS SUBJECT TO LOCAL CODE OFFICIAL INSPECTION.
  - 3.) (IF APPLICABLE) FIREPLACE OR CHIMNEY FOOTING TO BE SIZED BY G.C.
  - 4.) 3000 PSF. SOIL BEARING CAPACITY.
  - 5.) CONCRETE COMPRESSIVE STRENGTH 3000 PSI. CAPACITY.
  - 6.) SEE INSULATION, VENTILATION & PORCH PIER NOTES ABOVE

- FOUNDATION PIER NOTES:**
1. PIERS TO BE FLUSH WITH FINISH GRADE.
  2. 6x6 P.T. POSTS SUPPLIED BY F.C. FOR SET.
  3. PIERS TO HAVE POST TIE DOWN BY OTHERS.
  4. 6x6 POSTS FLUSH w/FACE OF DECK GIRDER.

DWG NO.  
KIM 3976

GOTO VIEW:  
1ELEC

DATE:  
8/3/12

1st FLR  
ELECTRICAL PLAN

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SCALE:  
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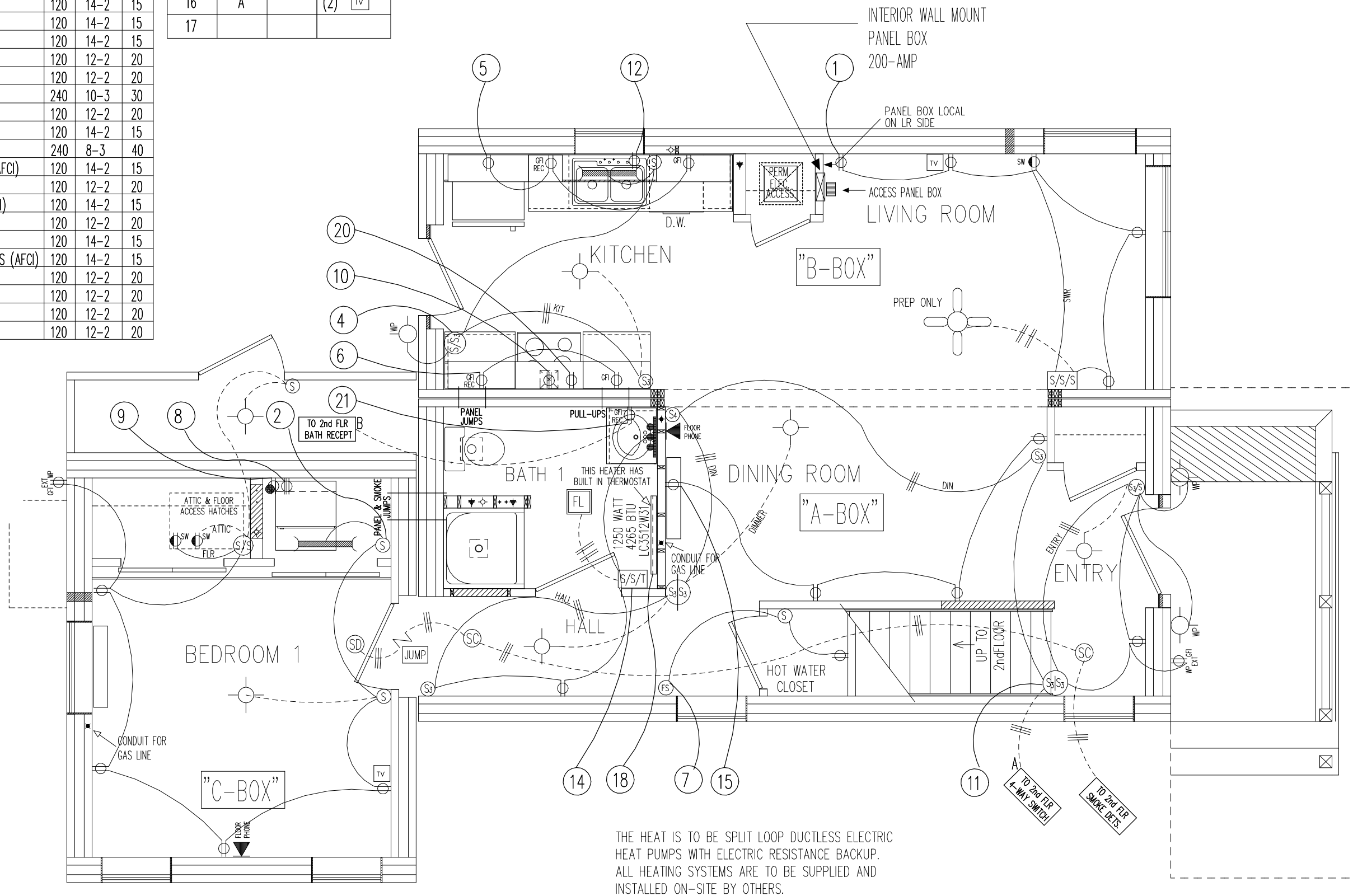
SHEET NO.

5

# 1st FLR COLONIAL ME 2008 NEC

DESCRIPTION OF CIRCUITS				
NO.	SERVING	VOLT	WIRE	AMP
1	LIV RM;LTS,REC (AFCI)	120	14-2	15
2	BED1;LTS,REC (AFCI)	120	14-2	15
3	BED2;LTS,REC (AFCI)	120	14-2	15
4	KITCHEN;LTS (AFCI)	120	14-2	15
5	KITCHEN;REC	120	12-2	20
6	KITCHEN;REC	120	12-2	20
8	DRYER	240	10-3	30
9	WASHER	120	12-2	20
7	BOILER	120	14-2	15
10	RANGE	240	8-3	40
11	DINING;LTS; ENTRY;LTS;REC (AFCI)	120	14-2	15
12	DISHWASHER	120	12-2	20
14	BATH1;LTS;HALL;LTS;REC (AFCI)	120	14-2	15
15	DINING; REC (AFCI)	120	12-2	20
16	BED3;LTS,REC (AFCI)	120	14-2	15
17	BATH2;LTS; HALL;LTS;REC SD'S (AFCI)	120	14-2	15
18	BATH1 HEATER	120	12-2	20
19	BATH2 HEATER	120	12-2	20
20	MICROWAVE	120	12-2	20
21	BATH; REC (GFI)	120	12-2	20

@ ELECTRICAL ACCESS				
14-2	14-3	12-2	LOW VOLTS	
3	SMOKES	19	(2)	PHONE
16	A		(2)	TV
17				



THE HEAT IS TO BE SPLIT LOOP DUCTLESS ELECTRIC  
HEAT PUMPS WITH ELECTRIC RESISTANCE BACKUP.  
ALL HEATING SYSTEMS ARE TO BE SUPPLIED AND  
INSTALLED ON-SITE BY OTHERS.

# 2nd FLR COLONIAL ME 2008 NEC

DWG NO.  
KIM 3976

GOTO VIEW:  
2ELEC

DATE:  
8/3/12

2nd FLR  
ELECTRICAL PLAN

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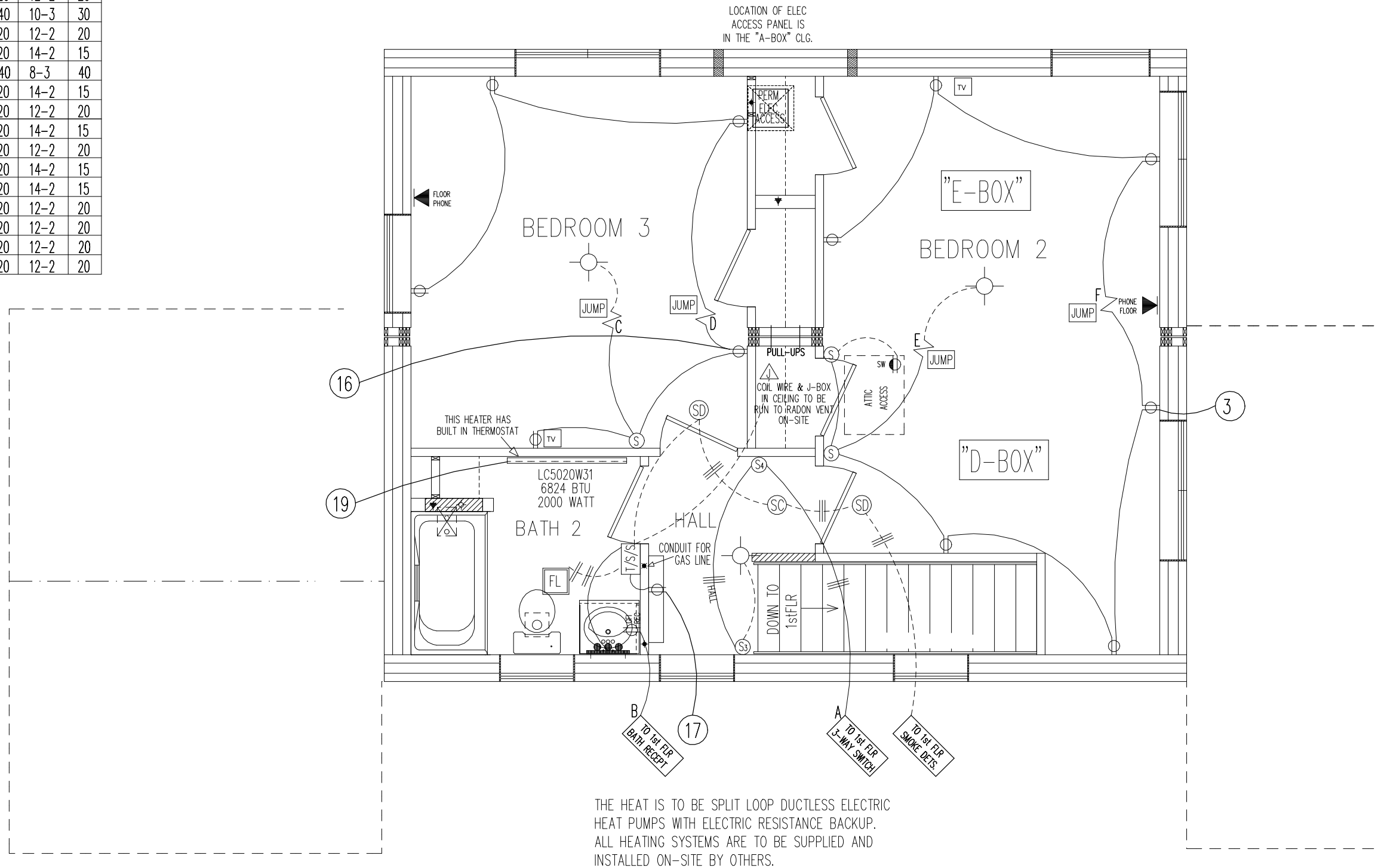
DATE	ITEM

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

SHEET NO.  
5A

DESCRIPTION OF CIRCUITS				
NO.	SERVING	VOLT	WIRE	AMP
1	LIV RM; LTS; REC (AFCI)	120	14-2	15
2	BED1; LTS; REC (AFCI)	120	14-2	15
3	BED2; LTS; REC (AFCI)	120	14-2	15
4	KITCHEN; LTS (AFCI)	120	14-2	15
5	KITCHEN; REC	120	12-2	20
6	KITCHEN; REC	120	12-2	20
8	DRYER	240	10-3	30
9	WASHER	120	12-2	20
7	BOILER	120	14-2	15
10	RANGE	240	8-3	40
11	DINING; LTS; ENTRY; LTS; REC (AFCI)	120	14-2	15
12	DISHWASHER	120	12-2	20
14	BATH1; LTS; HALL; LTS; REC (AFCI)	120	14-2	15
15	DINING; REC (AFCI)	120	12-2	20
16	BED3; LTS; REC (AFCI)	120	14-2	15
17	BATH2; LTS; HALL; LTS; REC SD'S (AFCI)	120	14-2	15
18	BATH1 HEATER	120	12-2	20
19	BATH2 HEATER	120	12-2	20
20	MICROWAVE	120	12-2	20
21	BATH; REC (GFI)	120	12-2	20

@ ELECTRICAL ACCESS			
14-2	14-3	12-2	LOW VOLTS
3	SMOKES	19	(2) ◀ PHONE
16	A	B	(2) TV
17			



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GOTO VIEW:  
DATA

DATE:  
8/3/12

DATA SHEET

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DATE	ITEM

SCALE:  
NOT TO SCALE

SHEET NO.

7

ELECTRICAL SYMBOL LEGEND

FL	100 CFM. FAN/LIGHT COMBO EXT. EXH.	⊕	DUPLEX RECEPTACLES
Ⓢ	SINGLE POLE SWITCH	⊕	GROUND FAULT RECEPTACLE
Ⓢ/Ⓢ	DOUBLE GANG SWITCHES	⊕	GROUND FAULT PROTECTED REC.
Ⓢ/Ⓢ	DOUBLE GANG 3-WAY/SINGLE SWITCH	⊕	SWITCHED RECEPTACLE
Ⓢ	THREE WAY SWITCH	⊕	RANGE / DRYER RECEPTACLE
Ⓢ	ELECTRICAL CONDUIT	⊕	WATERPROOF GFI RECEPTACLE
Ⓢ	FOUR WAY SWITCH	⊕	DEDICATED RECEPTACLE
Ⓢ/Ⓢ	DOUBLE GANG 4-WAY/SINGLE SWITCH	⊕	U.L. APPROVED SMOKE DETECTOR
Ⓢ/Ⓢ/Ⓢ	TRIPLE GANG 3-WAY/SINGLE/SINGLE	⊕	COMPACTABLE PHOTO. ELEC. DETECTOR (MASS.)
FS	FIRE SAFETY SWITCH	⊕	RANGE HOOD 160 CFM. EXH. TO EXT.
Ⓢ	PHONE JACK	⊕	WALL MOUNTED INCANDESCENT LIGHT
TV	TELEVISION JACK	⊕	SURFACE MOUNTED INCANDESCENT LIGHT
Ⓢ	PANEL BOX	⊕	JUNCTION BOX
Ⓢ	WIRE IN WALL OR PARTITION	⊕	THERMOSTAT
Ⓢ	WIRE IN CEILING OR FLOOR	⊕	PADDLE FAN
Ⓢ	THREE WIRE	⊕	RECESSED LIGHT
Ⓢ	HOME RUN TO PANEL BOX	⊕	HEAT/FAN/LIGHT
12	CIRCUIT # LABEL	⊕	FLOURESCENT
Ⓢ	CATEGORY 5	⊕	OUTSIDE LIGHT
JUMP	JUMP	⊕	PUCK LIGHT
EMERGENCY LIGHT	EMERGENCY LIGHT	⊕	4' MED CAB
EXIT	EXIT SIGN	⊕	4' LIGHT BAR
UNDER CAB LIGHT	UNDER CAB LIGHT	⊕	CARBON MONOXIDE DET.
FLOOD LIGHT	FLOOD LIGHT	⊕	3 BULB LIGHT BAR
TRACK LIGHT	TRACK LIGHT	⊕	MED CAB
COMBO CO/SMOKE DET.	COMBO CO/SMOKE DET.	⊕	SPEAKER
		⊕	SOFFIT RECESSED LIGHT

BUILDER REFERANCE MANUAL PAGE INFORMATION

SECTION 6	PAGE
A. FOUNDATION-	25-27
B. RANCH-	28-30
C. RAISED RANCH-	31-34
D. CAPE (AND DORMERS)-	35-41
E. GAMBREL (AND DORMERS)-	42-46
F. SALT-BOX (AND DORMERS)-	40-41, 47-50
G. EXPANDABLE COLONIAL-	51-54
H. 4-BOX COLONIAL-	51-54
I. OPTIONAL ROOF PITCHES-	55-59
J. ELECTRICAL-	60-63
K. PLUMBING-	64-71

FLOOR PLAN SYMBOL LEGEND

C.C. -	CHINEY CHASE LOCATION. 2" MIN. CLEARANCE TO COMBUSTIBLES FOR CHIMNEY. FIRE STOPPING MUST BE INSTALLED ON-SITE BY OTHERS SUBJECT TO LOCAL CODE OFFICAL, HAVING JURISDICTION, INSPECTIONS.
C.-	CLOSET WITH SHELF AND ROD
L. -	LINEN CLOSET WITH (3) SHELVES
S.W. -	STAIRWELL
W.C. -	WATER CLOSET - DEMAND LIMIT MAX. 1.6 GALLONS PER FLUSH (MASS.)
ⓈD	SMOKE DETECTOR LOCATION
Ⓢ	STATE AND TRA INSIGNIA LOCATIONS
■	DATA PLATE LOCATION

WINDOW CALL SIZE	UNIT SIZE	ROUGH OPENING	TYPE	LIGHT FT. <sup>2</sup>	VENT FT. <sup>2</sup>	SQ. FT.
3037	29 1/2" x 36 1/2"	30 1/2" x 37 1/2"	SINGLE HUNG	5.61	2.59	7.71
3049	29 1/2" x 48 1/2"	30 1/2" x 49 1/2"	SINGLE HUNG	7.56	3.59	10.21
2860	27 1/2" x 59 1/2"	28 1/2" x 60 1/2"	SINGLE HUNG	8.94	4.33	11.67
*4060	39 1/2" x 59 1/2"	40 1/2" x 60 1/2"	SINGLE HUNG	13.48	6.47	16.67

NOTE: SAFETY GLAZING TO BE PROVIDED FOR WINDOWS IN HAZARDOUS LOCATIONS  
NOTE: WINDOWS ARE NFRC RATED  
NOTE: 2-WIDE DH COMBINE (2) 1-WIDE AND SUBTRACT 1/2" FROM R/O WIDTH  
\*MEETS EGRESS REQUIREMENTS

FEEDER & NEUTRAL LOAD

LIGHTING AND SMALL APPLIANCE      HOT WATER BASEBOARD

- 1.) LIGHTING: TOTAL FLOOR AREA = 1444.333 X 3=4333.999VA
- 2.) SMALL APPLIANCE: 5 CIRCUITS X 1500= 7500 VA
- 3.) LAUNDRY: 1 CIRCUIT X 1500= 1500VA

1st 3000VA @ 100% = 3000 VA  
REMAINDER @ 35% = 3616.5 VA  
TOTAL = 6616.5 VA

	LINE A	NEUTRAL	LINE B
LIGHTING AND SMALL APPLIANCE: VA + 240 = AMPERES =	27.6	27.6	27.6
HEATING AND COOLING	7.1	7.1	0
1) FURNACE BLOWER	0	0	0
2) HEATING ELEMENT	0	0	0
3) AIR CONDITIONER	0	0	0
LARGEST FAN(S) - ADD 25% APPLIANCE LOADING	0	2.4	2.4
1) EXHAUST FAN	1.6	1.6	0
2) WATER HEATER	18.8	0	18.8
3) DISHWASHER	9.0	9.0	0
4) DISPOSAL	0	5.0	5.0
4) MICROWAVE	0	6.0	6.0
TOTAL APPLIANCE - AMP X .75 WITH APPLIANCES	22.1	16.2	22.4
CLOTHING DRYER	23.3	16.3	23.3
RANGE	33.3	23.3	33.3
SERVICE CONDUTOR AMPACITY (TOTAL)=	113.3	92.9	108.9
USING 200 AMP SERVICE			

DESCRIPTION OF CIRCUITS

NO.	SERVING	VOLT	WIRE	AMP
1	LIV RM;LTS,REC (AFCI)	120	14-2	15
2	BED1;LTS,REC (AFCI)	120	14-2	15
3	BED2;LTS,REC (AFCI)	120	14-2	15
4	KITCHEN;LTS (AFCI)	120	14-2	15
5	KITCHEN;REC	120	12-2	20
6	KITCHEN;REC	120	12-2	20
8	DRYER	240	10-3	30
9	WASHER	120	12-2	20
7	BOILER	120	14-2	15
10	RANGE	240	8-3	40
11	DINING;LTS; ENTRY;LTS;REC (AFCI)	120	14-2	15
12	DISHWASHER	120	12-2	20
14	BATH1;LTS;HALL;LTS;REC (AFCI)	120	14-2	15
15	DINING; REC (AFCI)	120	12-2	20
16	BED3;LTS,REC (AFCI)	120	14-2	15
17	BATH2;LTS; HALL;LTS;REC SD'S (AFCI)	120	14-2	15
18	BATH1 HEATER	120	12-2	20
19	BATH2 HEATER	120	12-2	20
20	MICROWAVE	120	12-2	20
21	BATH; REC (GFI)	120	12-2	20

LIGHT & VENT SCHEDULE

ROOM	FLOOR AREA	GLASS AREA	% OF FLOOR	ARTIF-LIGHT	VENT AREA	% OF FLOOR	ARTIF-VENT
LIVING ROOM, KITCHEN & DINING ROOM	378.9	55.2	14.6	240 W	62.2	16.4	160 CFM
BEDROOM #1	120.5	28.6	23.7		13.6	11.3	
BEDROOM #2	209.4	46.5	22.2		22.3	10.7	
BEDROOM #3	152.2	28.6	18.8		13.6	9.0	
BATH #1	----			264 W			100 CFM
BATH #2	----			264 W			100 CFM

STANDARD -EXTERIOR (INSWING) DOOR SCHEDULE

DOOR CALL SIZE	WIDTH	HEIGHT	ROUGH OPENING	MATERIAL	MANUFACTURER	TYPE
3068 6-PANEL	3'-0"	6'-8"	38 1/2" X 82 1/2"	INSUL. CORE	MASONITE	EXT HINGED
2868 9-LITE	2'-8"	6'-8"	34 1/2" X 82 1/2"	INSUL. CORE	MASONITE	EXT HINGED
STANDARD-INTERIOR DOOR SCHEDULE						
DOOR CALL SIZE	WIDTH	HEIGHT	ROUGH OPENING	NOTE:		
2/6-INT	2'-6"	6'-8"	2-8 1/2" X 6'-10 1/2"	EXTERIOR DOOR THICKNESS = 1 3/4"		
2/3	3'-0"	6'-8"	3-2 1/2" X 6'-10 1/2"	INTERIOR DOOR THICKNESS = 1 3/8"		
2	2'-0"-BP	2'-0"	6'-8"	2-1 1/4" X 6'-11 1/4"	INT- BY-PASS	

<sup>2</sup>OFFERED AS A 6-PANEL DOOR  
<sup>3</sup>OFFERED AS A 15-LITE DOOR  
ALL INTERIOR DOORS MAY ALSO BE USED AS DOUBLE FRENCH STYLE  
ALL INTERIOR DOORS AVAILABLE IN HOLLOW CORE MASONITE, SOLID CORE MASONITE, AND SOLID PINE



REFERENCE KEISER INDUSTRIES INSTALLATION MANUAL FOR ALL ON-SITE CONNECTION DETAILS.

**KEISER INDUSTRIES INC.**  
 P.O. BOX 9000 RTE. 121  
 OXFORD, ME 04270  
 TELE: (207) 539-8883  
 FAX: (207) 539-4446

DWG NO.  
 KIM 3976

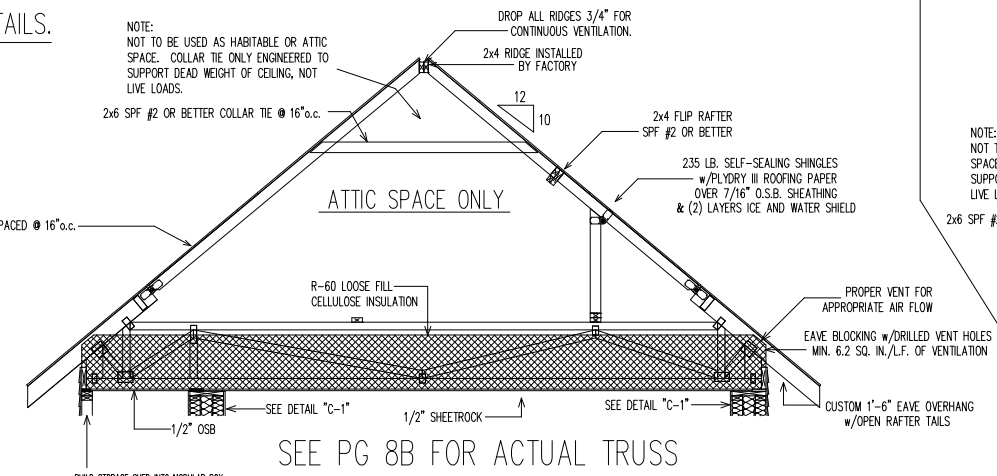
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 SECTION

DATE:  
 8/3/12

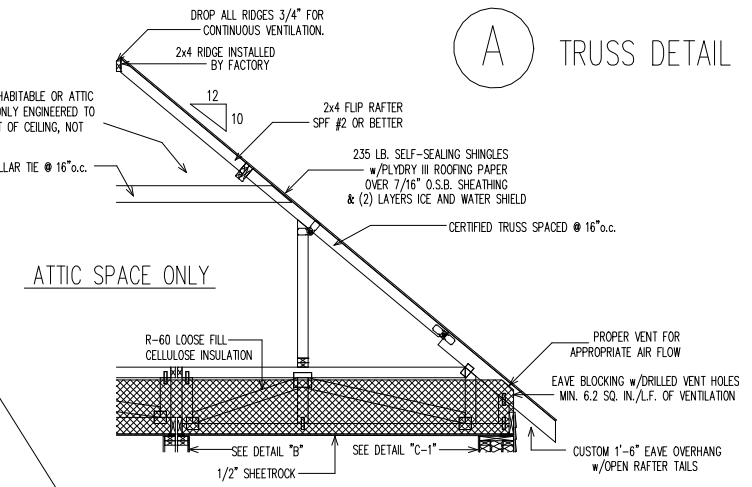
TYPICAL COLONIAL  
 CROSS SECTION  
 w/ TRUSSED ROOF

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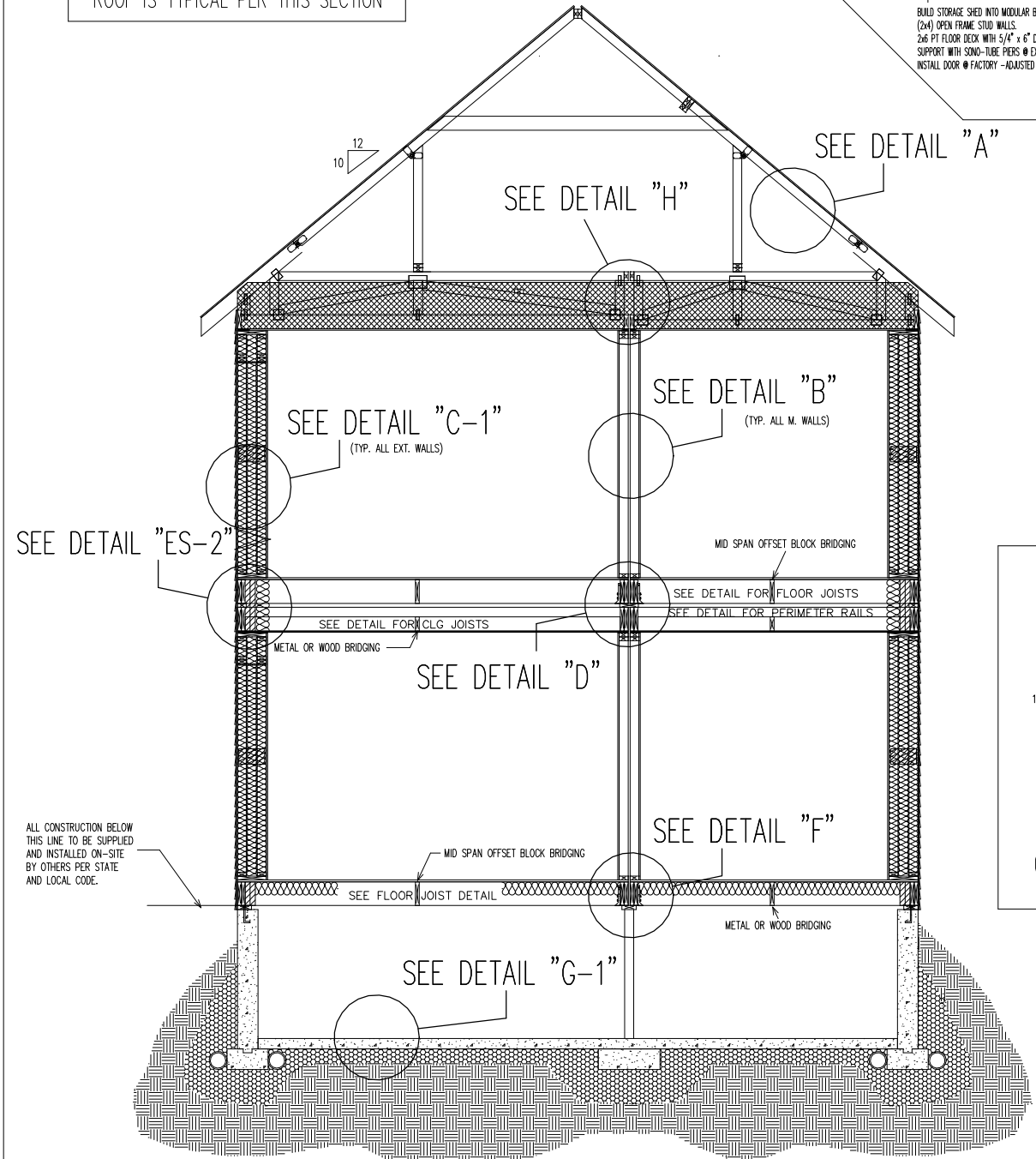
FOR ACTUAL ROOF COMPONENTS  
 SEE PG'S 8A-8B. ALL INSULATION &  
 CONSTRUCTION DETAILS BELOW  
 ROOF IS TYPICAL PER THIS SECTION



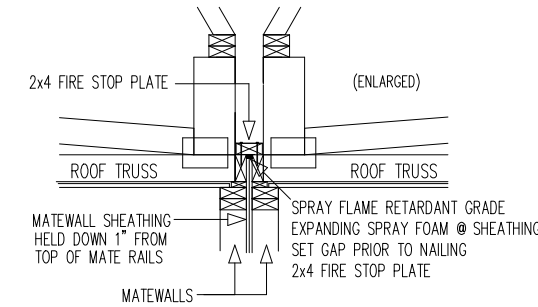
**A-11** OFFSET RAFTER ROOF DETAIL



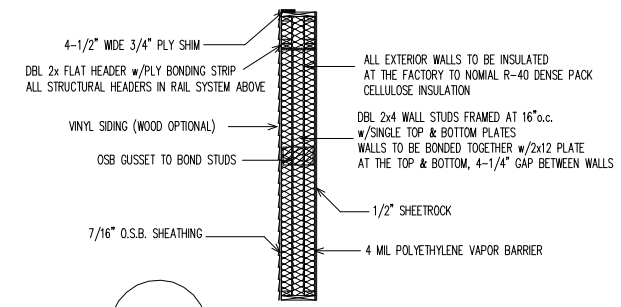
SEE PG 8A FOR ACTUAL TRUSS



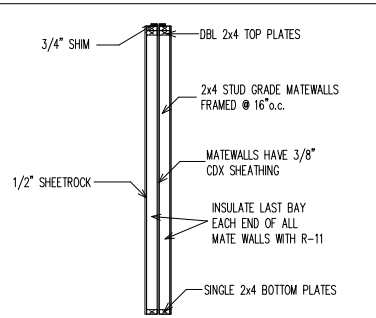
ALL CONSTRUCTION BELOW  
 THIS LINE TO BE SUPPLIED  
 AND INSTALLED ON-SITE  
 BY OTHERS PER STATE  
 AND LOCAL CODE.



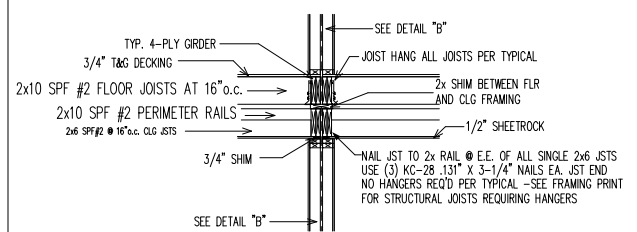
**H** MATE RAIL FIRE STOP DETAIL



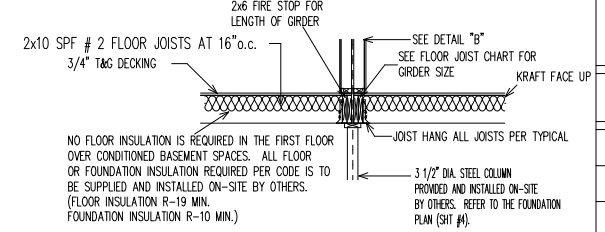
**C-1** EXT. WALL DETAIL



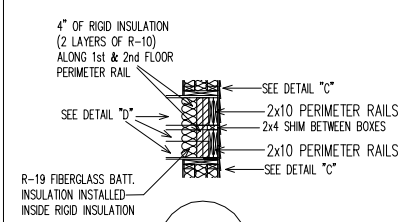
**B** MATE WALL DETAIL



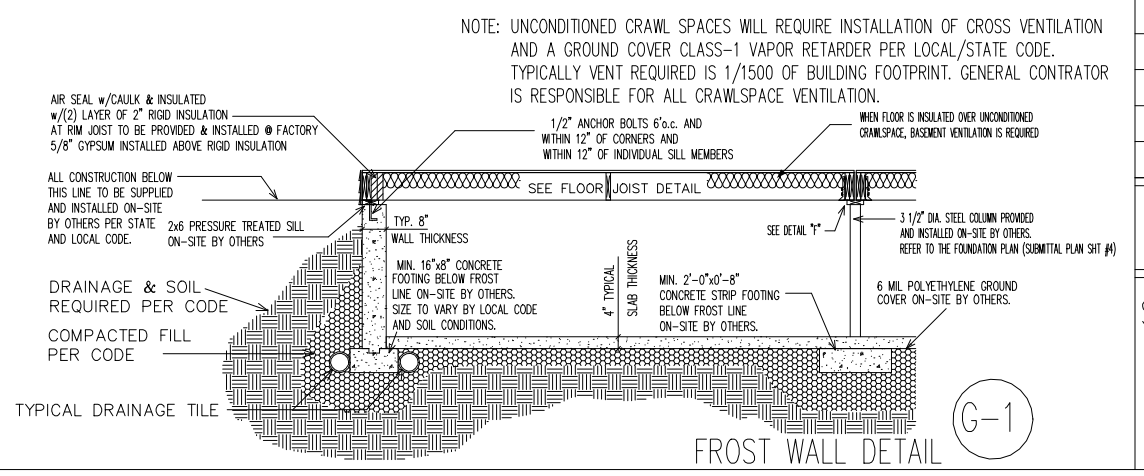
**D** FLOOR/CLG DETAIL



**F** FLOOR JOIST DETAIL (1st FLR)



**ES-2** EXT. FLR/CLG RAIL DETAIL



**G-1** FROST WALL DETAIL

R: \\_Drawings\JOBS\KIM\04colonial\3976-Homestart\_Lot16 (12-005).aec

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 RT

FOR HELP CALL:  
 ENGINEERING

REVISIONS	
DATE	ITEM

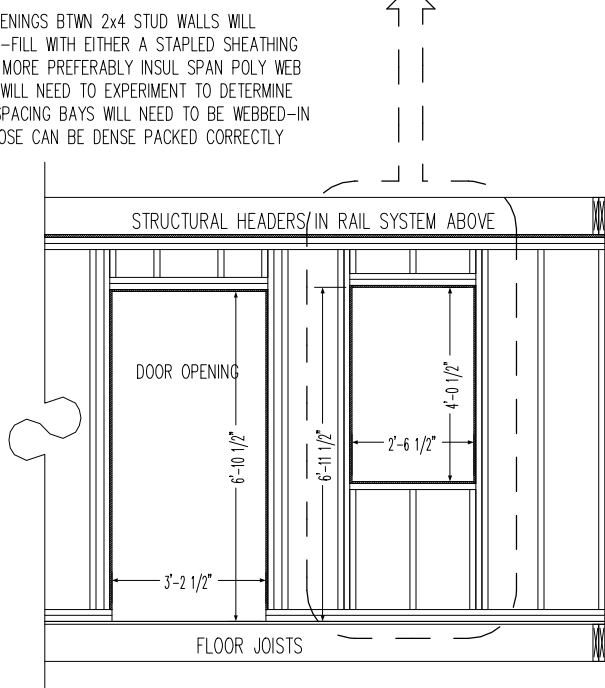
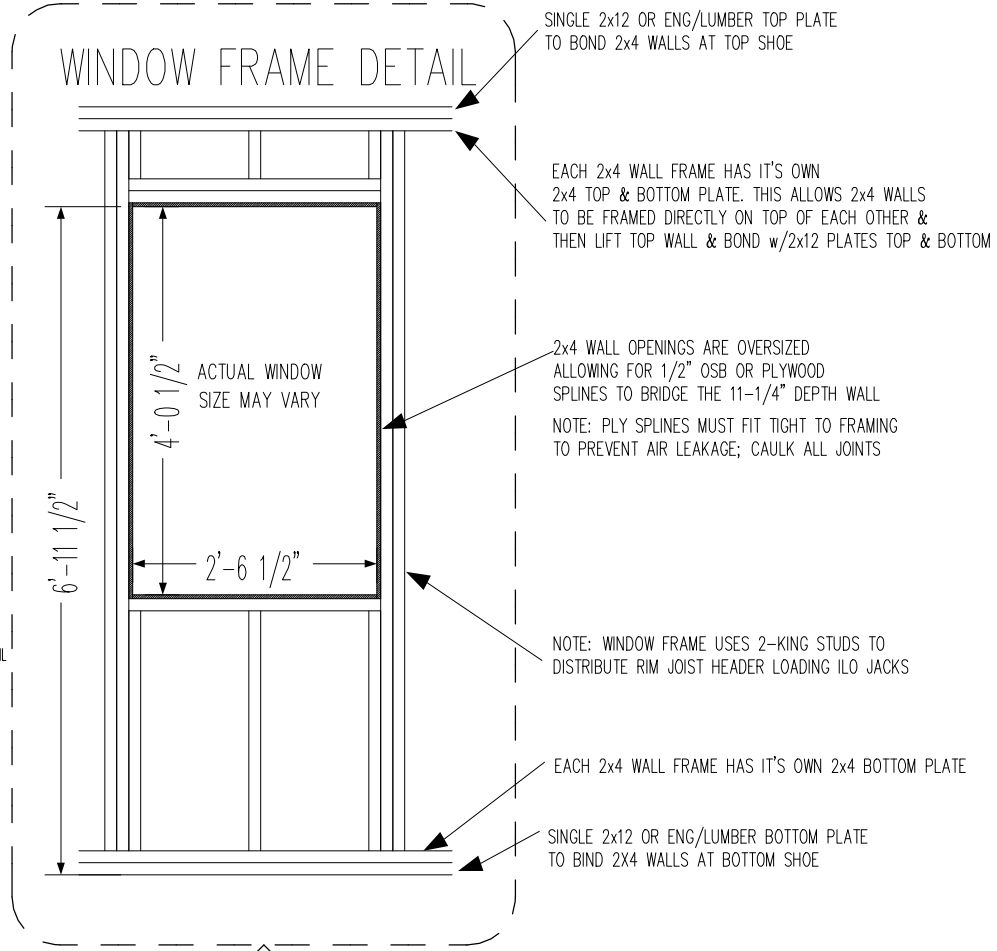
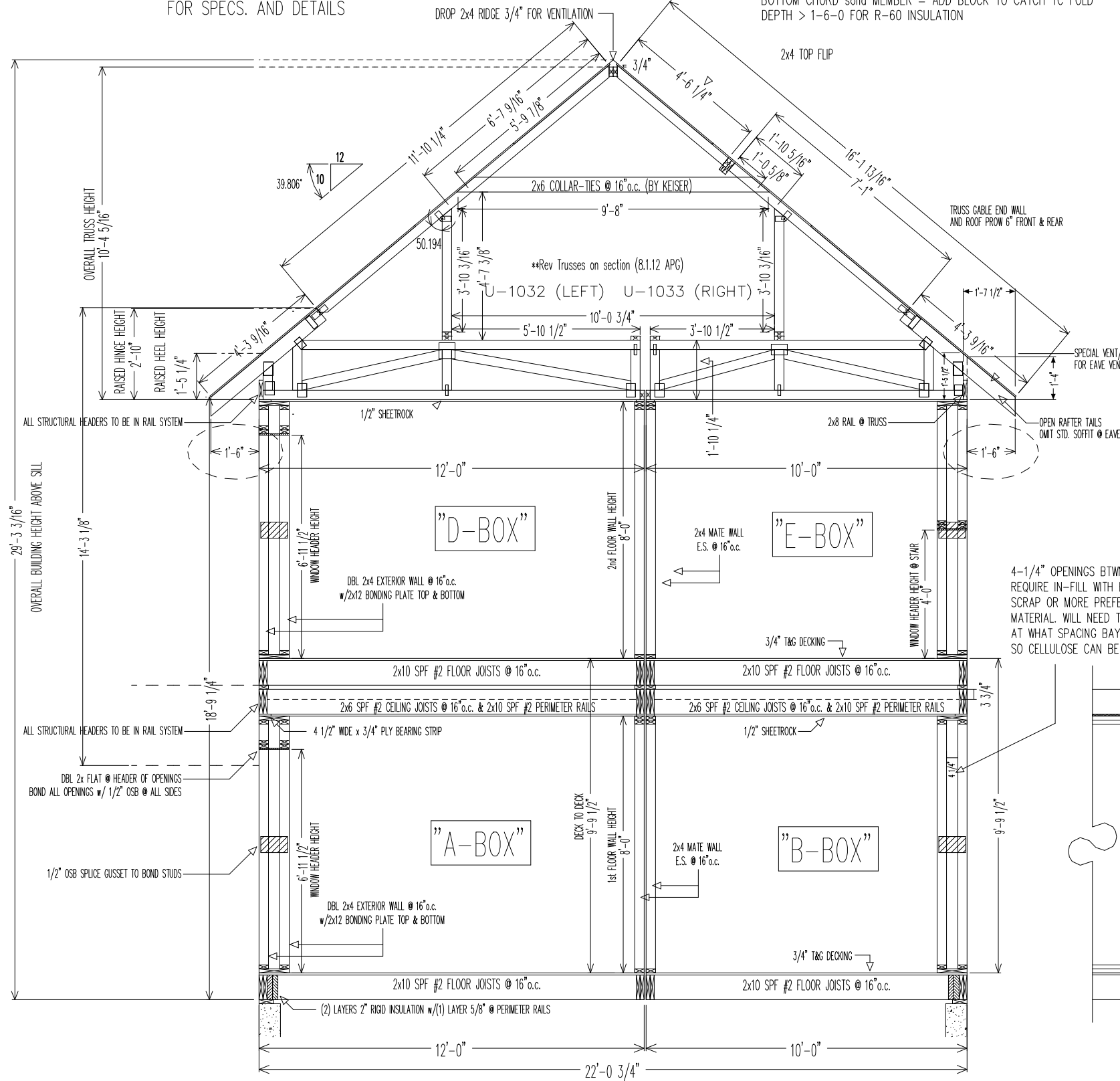
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 NOT TO SCALE

SHEET NO.  
 8

22'-0 3/4" WIDE 10/12 TRUSS

SEE MANUFACTURER'S DWGS.  
FOR SPECS. AND DETAILS

TRUSS ~ U-1032 & U-1033 (UPDATE REQUIRED)  
09-IBC; (Pg)= 60PSF GROUND SNOW; WIND =110MPH @ 35FT  
SPACING = 16" O/C; PITCH = 10/12  
HI-HINGE HGT = 2-10-0; HI HEEL HGT = 1-5-4 (OVER END OF BC)  
OVERHANG CUSTOM = 1-6-0 (BEYOND EXT WALL FACE!)  
DBL FOLD TRUSS (ADD TOP FLIP AS SHOWN)  
BOTTOM CHORD solid MEMBER = ADD BLOCK TO CATCH TC FOLD  
DEPTH > 1-6-0 FOR R-60 INSULATION



DOUBLE CHECK THIS TRUSS PRINT TO ACTUAL TRUSSES BEFORE STARTING CEILING/ROOF  
& CALL DRAFTING OFFICE WITH ANY DEVIATIONS IN MEASUREMENTS

MZH - 11-1/4" R-40 wall details

DWG NO.  
KIM 3976  
LAYER NAME:  
SECTION

DATE:  
8/3/12

22'-0 3/4" WIDE COLONIAL  
10/12 TRUSS DETAIL  
U-1032 & U-1033 (60psf; 16" o.c. DESIGN)  
R:\DRAWINGS\JOBS\KIM\04COLONIAL\3976-HOMESTART\_LOT16 (12-005)  
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RT/APG

REVISIONS	
DATE	ITEM

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

SHEET NO.  
8A

# 19'-0" WIDE 10/12 TRUSS

SEE MANUFACTURER'S DWGS.  
FOR SPECS. AND DETAILS

## TRUSS DESIGN PARAMETERS: FOR U-1111

09-IBC; (Pg)= 60PSF GROUND SNOW; WIND =110MPH @ 35FT  
 SPACING = 16" O/C; PITCH = 10/12  
 HI-HINGE HGT = 2-10-0; HI HEEL HGT = 1-5-4 (OVER END OF BC)  
 OVERHANG CUSTOM = 1-6-0 (BEYOND EXT WALL FACE!)  
 DBL FOLD TRUSS (ADD TOP FLIP AS SHOWN)  
 BOTTOM CHORD solid MEMBER = ADD BLOCK TO CATCH TC FOLD  
 DEPTH > 1-6-0 FOR R-60 INSULATION

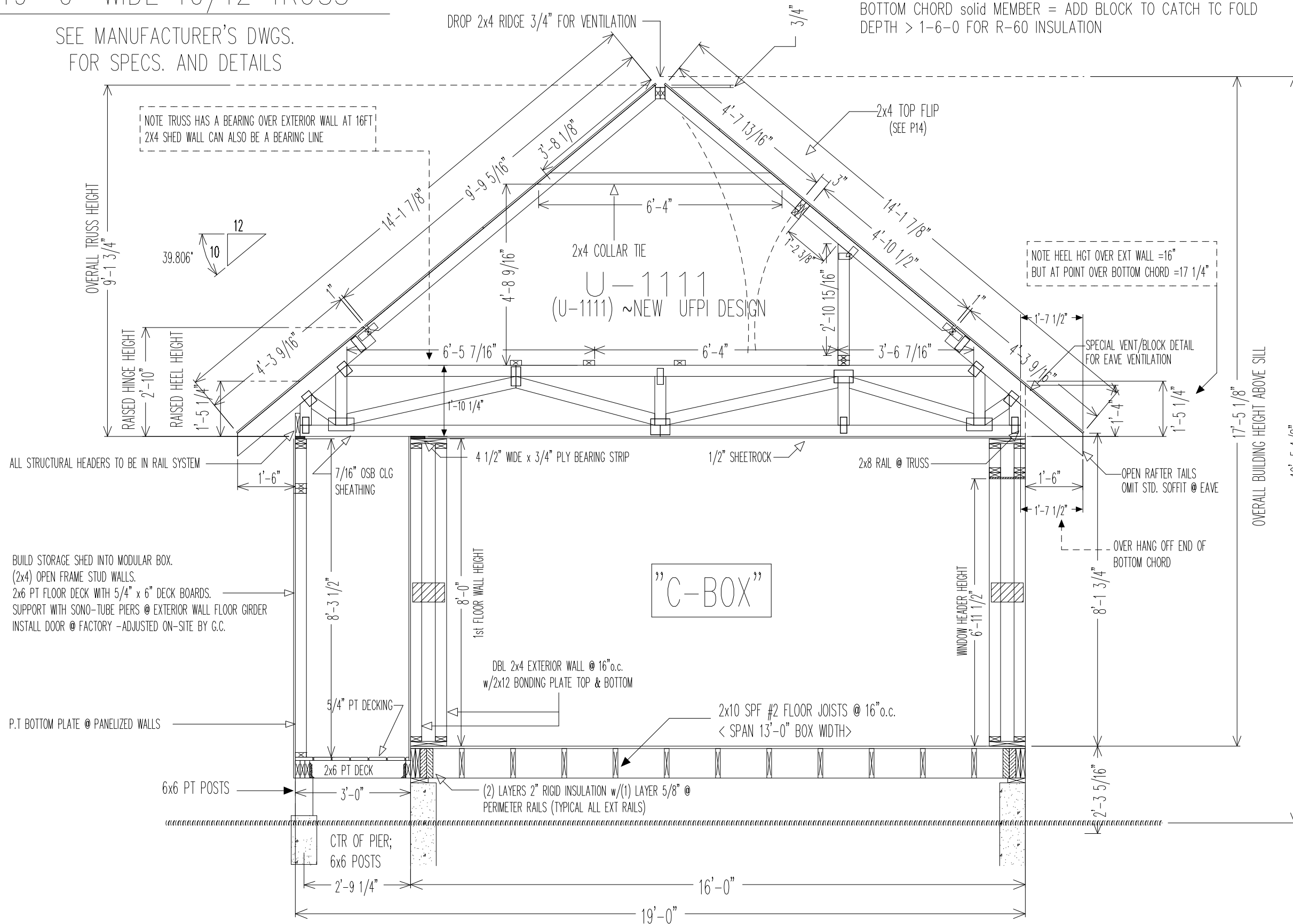
**KEISER**  
 INDUSTRIES INC.  
 P.O. BOX 9000 RTE. 121  
 OXFORD, ME 04270  
 TELE: (207) 539-8883  
 FAX: (207)539-4446

DWG NO.  
KIM 3976

LAYER NAME:  
SECTION

DATE:  
8/3/12

19'-0" WIDE OFFSET  
 10/12 TRUSS DETAIL  
 U-1111 (60psf; 16" o.c. DESIGN)  
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DATE	ITEM

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

SHEET NO.  
8B

DWG NO.  
KIM 3976

GOTO VIEW:  
FRAMING

DATE:  
8/3/12

FLOOR FRAMING  
1st & 2nd FLR

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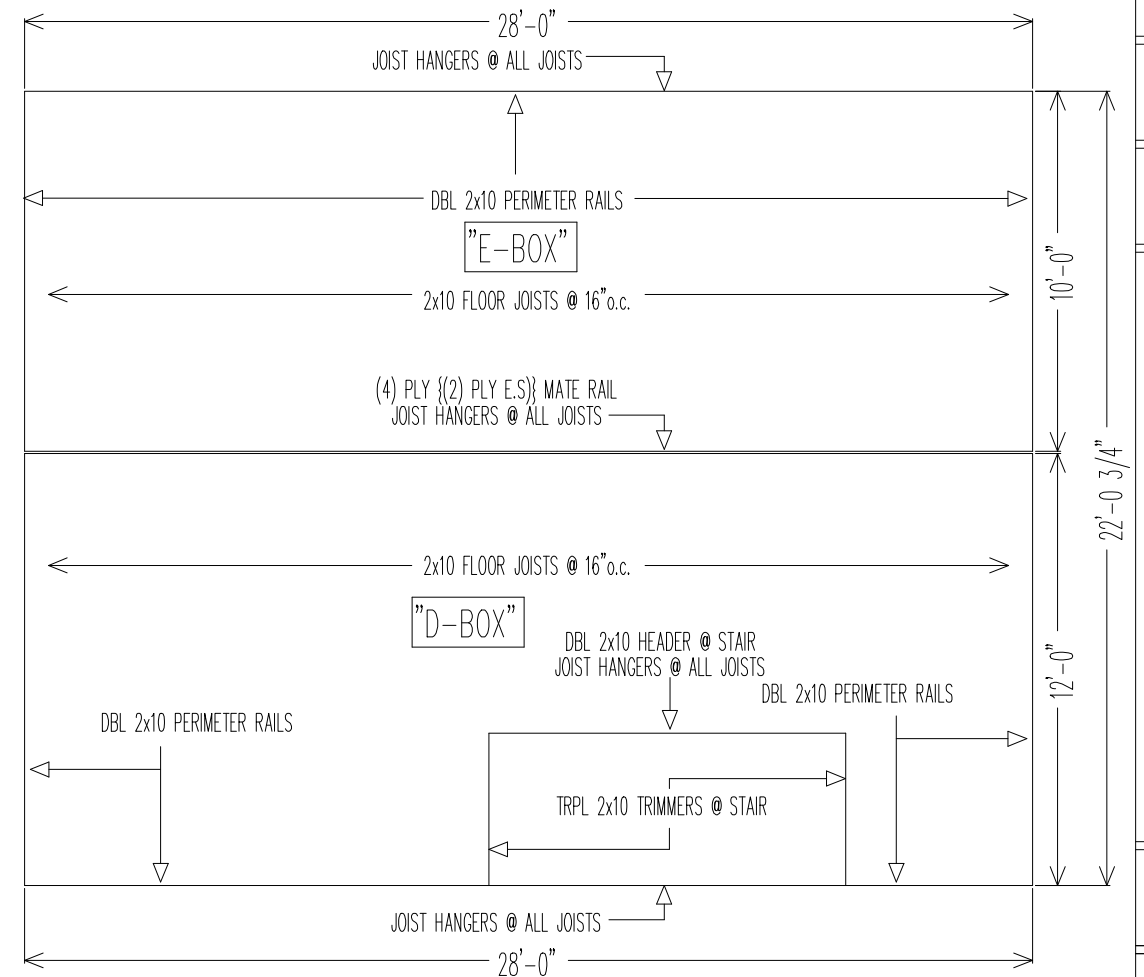
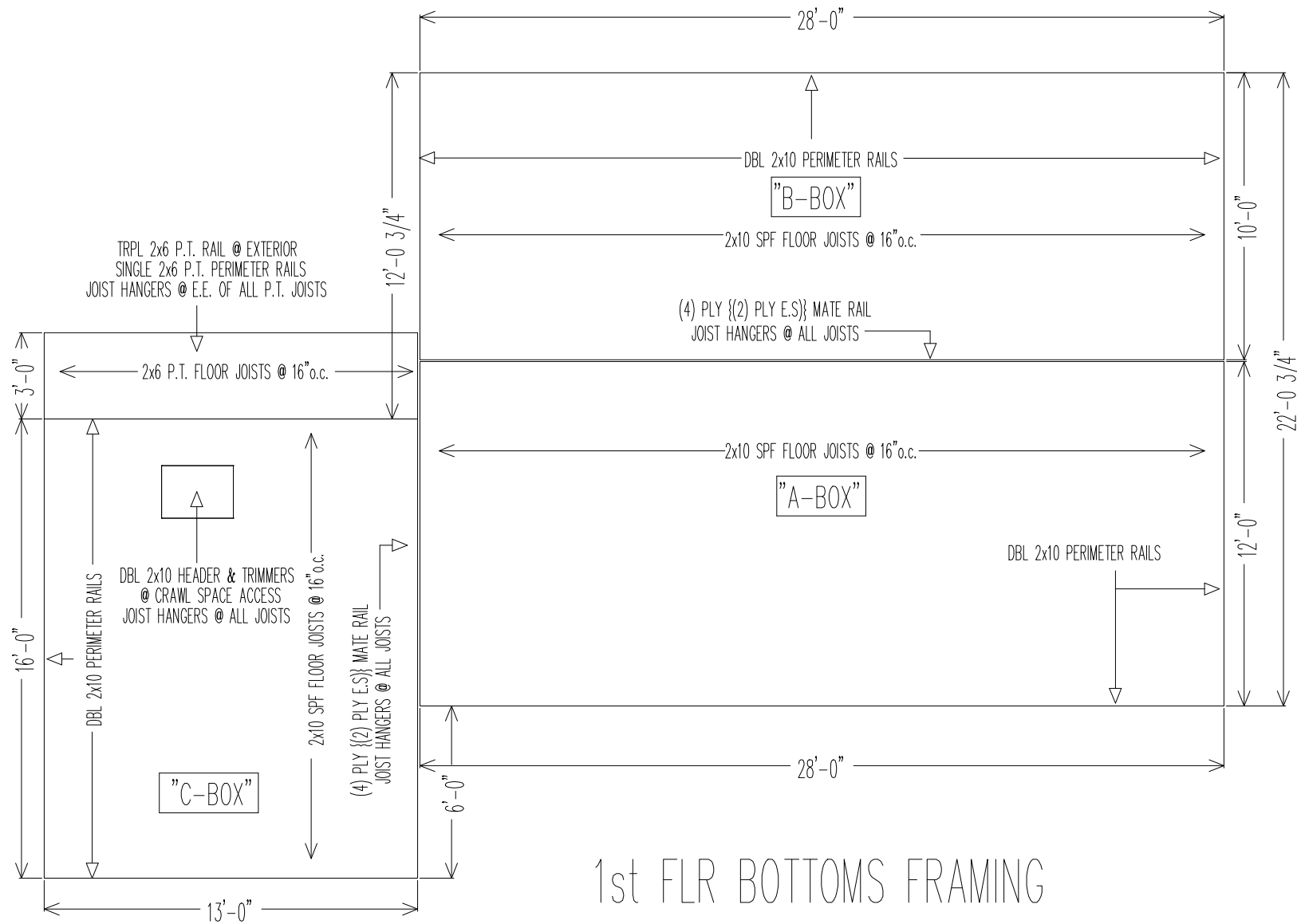
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REVISIONS

DATE	ITEM

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

SHEET NO.  
8C



DWG NO.  
KIM 3976

GOTO VIEW:  
1VENT

DATE:  
8/3/12

PLUMBING  
1st FLR  
VENT PLAN

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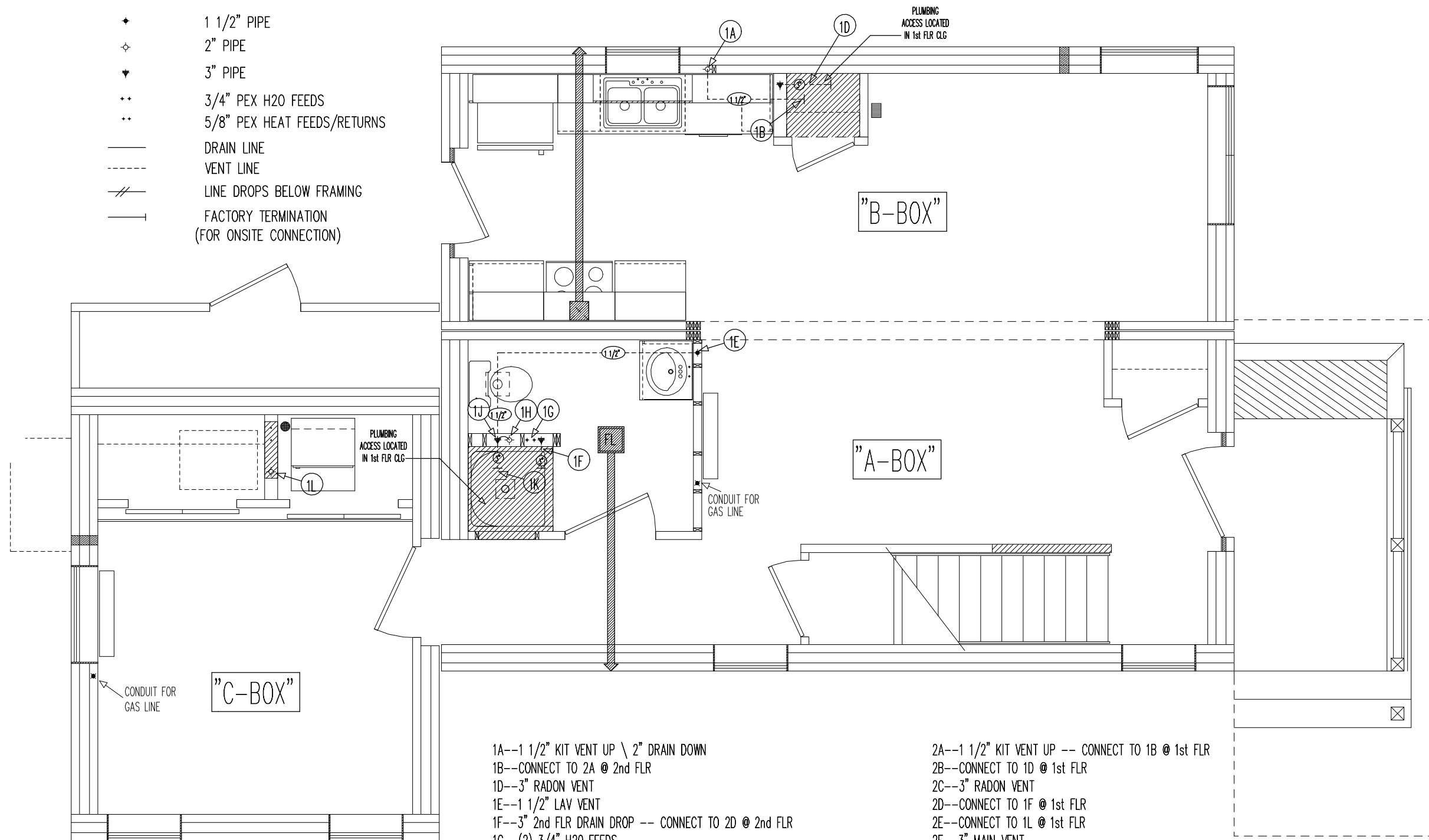
SCALE:  
1/4"=1'-0"

SHEET NO.

9

➤ SYMBOL LEGEND

- ◆ 1 1/2" PIPE
- ◇ 2" PIPE
- ▼ 3" PIPE
- ◆◆ 3/4" PEX H2O FEEDS
- ◆◆ 5/8" PEX HEAT FEEDS/RETURNS
- DRAIN LINE
- - - VENT LINE
- /// LINE DROPS BELOW FRAMING
- |— FACTORY TERMINATION (FOR ONSITE CONNECTION)



- 1A--1 1/2" KIT VENT UP \ 2" DRAIN DOWN
- 1B--CONNECT TO 2A @ 2nd FLR
- 1D--3" RADON VENT
- 1E--1 1/2" LAV VENT
- 1F--3" 2nd FLR DRAIN DROP -- CONNECT TO 2D @ 2nd FLR
- 1G--(2) 3/4" H2O FEEDS
- 1H--2" FUTURE VENT
- 1J--3" MAIN/STOOL/SHOWER VENT \ SHOWER DRAIN
- 1K--CONNECT TO 2E @ 2nd FLR
- 1L--2" WASHER VENT & DRAIN

- 2A--1 1/2" KIT VENT UP -- CONNECT TO 1B @ 1st FLR
- 2B--CONNECT TO 1D @ 1st FLR
- 2C--3" RADON VENT
- 2D--CONNECT TO 1F @ 1st FLR
- 2E--CONNECT TO 1L @ 1st FLR
- 2F--3" MAIN VENT
- 2G--2" SHOWER/STOOL VENT \ SHOWER DRAIN
- 2H--1 1/2" LAV VENT & DRAIN

DWG NO.  
 KIM 3976

GOTO VIEW:  
 2DRAIN

DATE:  
 8/3/12

PLUMBING  
 2nd FLR  
 DRAIN PLAN

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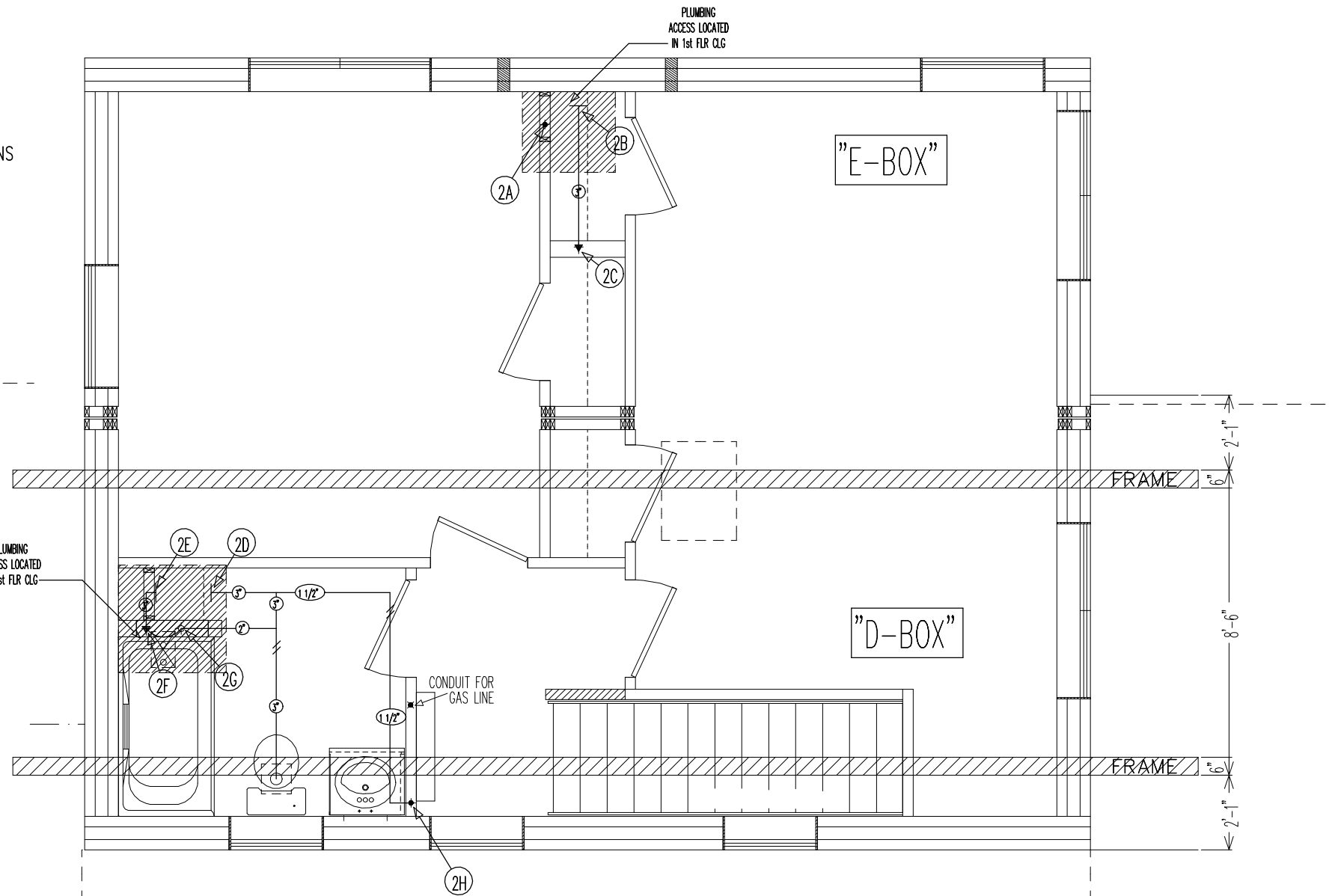
DATE	ITEM

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

SHEET NO.  
 9A

➤ SYMBOL LEGEND

- ◆ 1 1/2" PIPE
- ◇ 2" PIPE
- ▼ 3" PIPE
- ◆◆ 3/4" PEX H2O FEEDS
- ◆◆ 5/8" PEX HEAT FEEDS/RETURNS
- DRAIN LINE
- - - VENT LINE
- /// LINE DROPS BELOW FRAMING
- | FACTORY TERMINATION (FOR ONSITE CONNECTION)

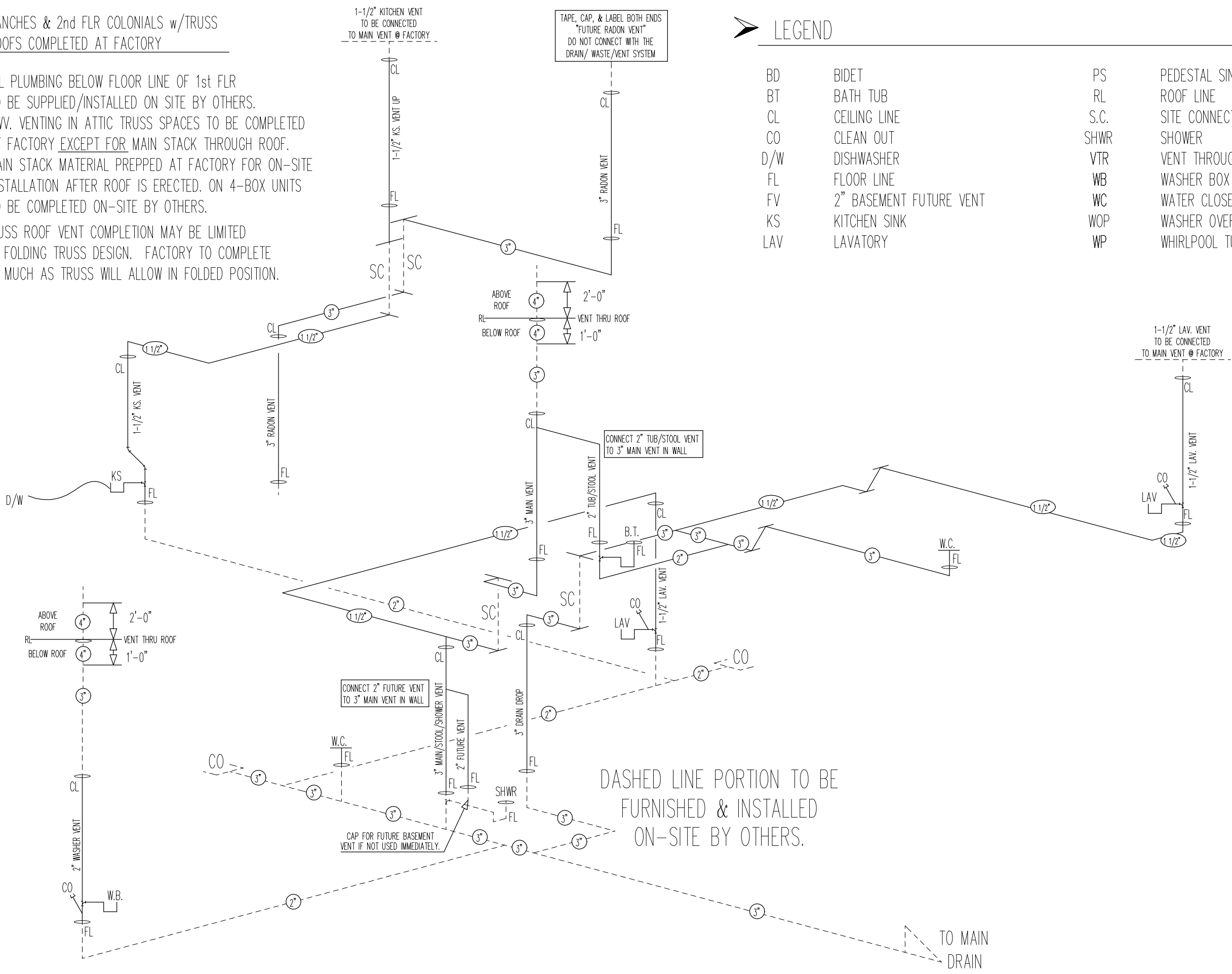


- 1A--1 1/2" KIT VENT UP \ 2" DRAIN DOWN
- 1B--CONNECT TO 2A @ 2nd FLR
- 1D--3" RADON VENT
- 1E--1 1/2" LAV VENT
- 1F--3" 2nd FLR DRAIN DROP -- CONNECT TO 2D @ 2nd FLR
- 1G--(2) 3/4" H2O FEEDS
- 1H--2" FUTURE VENT
- 1J--3" MAIN/STOOL/SHOWER VENT \ SHOWER DRAIN
- 1K--CONNECT TO 2E @ 2nd FLR
- 1L--2" WASHER VENT & DRAIN

- 2A--1 1/2" KIT VENT UP -- CONNECT TO 1B @ 1st FLR
- 2B--CONNECT TO 1D @ 1st FLR
- 2C--3" RADON VENT
- 2D--CONNECT TO 1F @ 1st FLR
- 2E--CONNECT TO 1L @ 1st FLR
- 2F--3" MAIN VENT
- 2G--2" SHOWER/STOOL VENT \ SHOWER DRAIN
- 2H--1 1/2" LAV VENT & DRAIN

RANCHES & 2nd FLR COLONIALS w/TRUSS  
ROOFS COMPLETED AT FACTORY

- \* ALL PLUMBING BELOW FLOOR LINE OF 1st FLR TO BE SUPPLIED/INSTALLED ON SITE BY OTHERS. DWV. VENTING IN ATTIC TRUSS SPACES TO BE COMPLETED AT FACTORY EXCEPT FOR MAIN STACK THROUGH ROOF. MAIN STACK MATERIAL PREPPED AT FACTORY FOR ON-SITE INSTALLATION AFTER ROOF IS ERECTED. ON 4-BOX UNITS TO BE COMPLETED ON-SITE BY OTHERS.
- \* TRUSS ROOF VENT COMPLETION MAY BE LIMITED BY FOLDING TRUSS DESIGN. FACTORY TO COMPLETE AS MUCH AS TRUSS WILL ALLOW IN FOLDED POSITION.



LEGEND

BD	BIDET	PS	PEDESTAL SINK
BT	BATH TUB	RL	ROOF LINE
CL	CEILING LINE	S.C.	SITE CONNECTION
CO	CLEAN OUT	SHWR	SHOWER
D/W	DISHWASHER	VTR	VENT THROUGH ROOF
FL	FLOOR LINE	WB	WASHER BOX STAND PIPE
FV	2" BASEMENT FUTURE VENT	WC	WATER CLOSET
KS	KITCHEN SINK	WOP	WASHER OVERFLOW PAN
LAV	LAVATORY	WP	WHIRLPOOL TUB

**KEISER**  
INDUSTRIES INC.  
P.O. BOX 9000 RTE. 121  
OXFORD, ME 04270  
TELE: (207) 539-8883  
FAX: (207)539-4446

DWG NO.  
KIM 3976

GOTO VIEW:  
PTREE

DATE:  
8/3/12

PLUMBING LINE  
SCHEMATICS

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REVISIONS

DATE	ITEM

SCALE:  
NOT TO SCALE

SHEET NO.  
90

DWG NO.  
KIM 3976

GOTO VIEW:  
STAIR

DATE:  
8/3/12

40" BOXED CARPET (1) PIECE STAIR  
STRICT STAIR  
22'-0 3/4" WIDE COLONIAL

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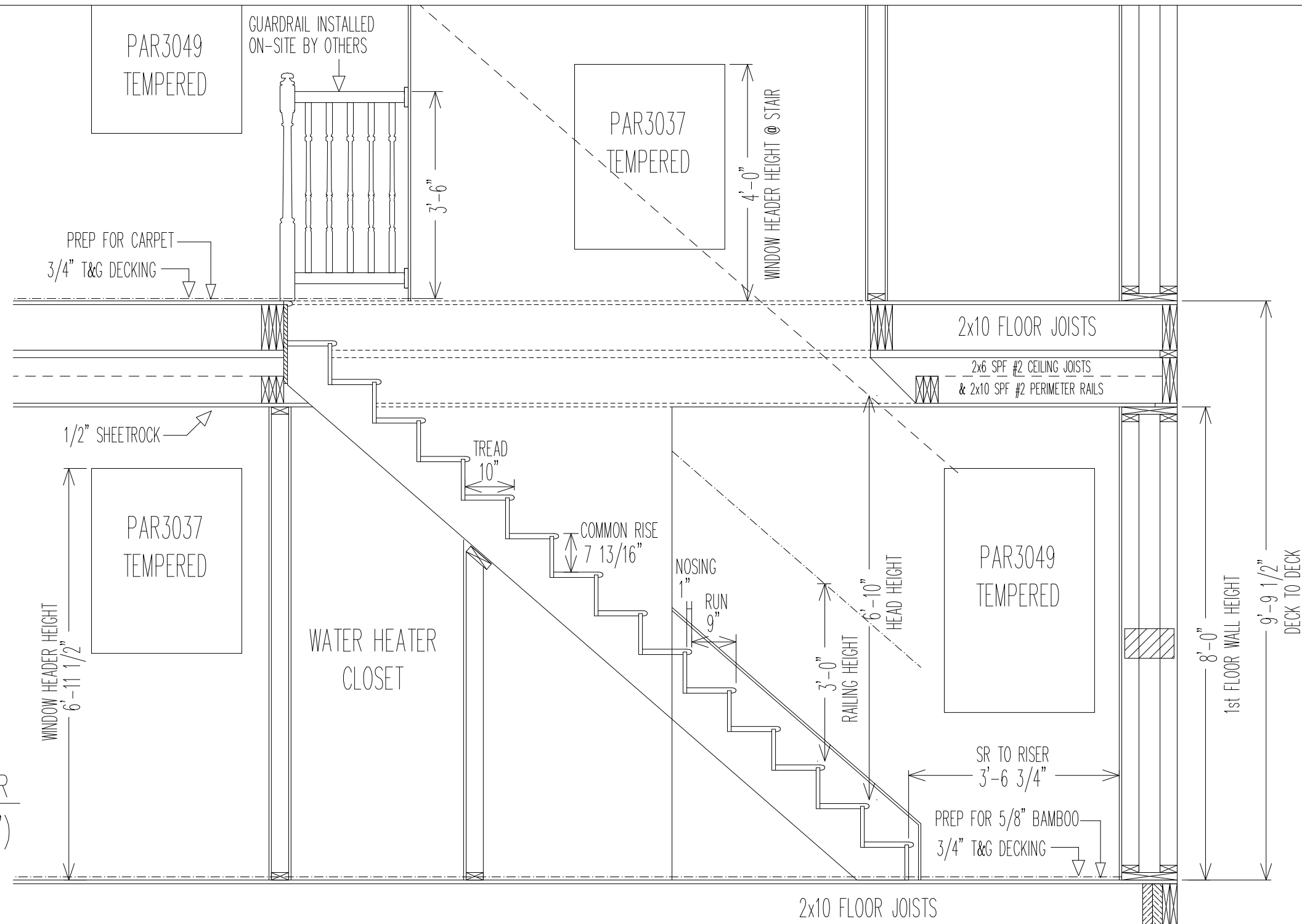
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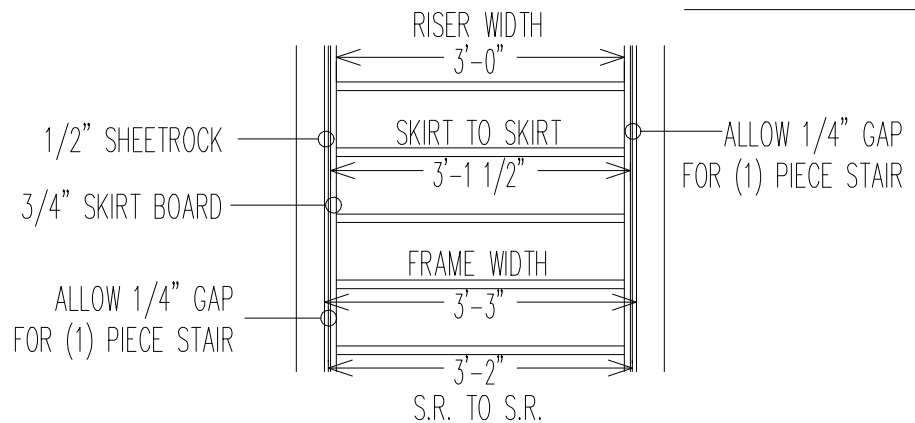
SCALE:  
1/2" = 1'-0"

SHEET NO.

12



39" BOXED CARPET STAIR  
TREAD SYP 5/4 (1 1/16")  
RISER 3/4" PLY



- \* RAILING HEIGHT TO BE BETWEEN 34" & 38"
- \* ALL BALUSTERS TO BE INSTALLED MAX 3 7/8" SPACE BETWEEN @ WIDEST PART OF OPENING
- \* CONTINUOUS HAND RAIL TO BE INSTALLED ON-SITE @ EXTERIOR WALL





# REScheck Software Version 4.4.3 Compliance Certificate

Project Title: KIM 3976

Energy Code: **2009 IECC**  
 Location: **Portland, Maine**  
 Construction Type: **Single Family**  
 Glazing Area Percentage: **12%**  
 Heating Degree Days: **7378**  
 Climate Zone: **6**

Construction Site:  
 25 Luther Street  
 Lot 16  
 Portland, ME 04108

Owner/Agent:  
 Hallmark Homes  
 PO Box 113  
 619 Lewiston Road; Route 196  
 Topsham, ME 04086  
 207-729-1057

Designer/Contractor:  
 Robert Tolliver  
 Kesier Homes  
 P.O. Box 9000  
 56 Mechanic Falls Road  
 Oxford, ME 04270  
 888-333-1748

**Compliance: Passes using UA trade-off**

Compliance: **19.9% Better Than Code**      Maximum UA: **241**      Your UA: **193**

The % Better or Worse Than Code index reflects how close to compliance the house is based on code trade-off rules.  
 It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Glazing or Door U-Factor	UA
Ceiling: Raised or Energy Truss	866	60.0	0.0		15
Wall: Wood Frame, 16" o.c.	1987	40.0	0.0		74
Single Hung Windows: Vinyl Frame:Triple Pane with Low-E	226			0.280	63
6-Panel Door: Solid	20			0.150	3
9-Lite Door: Glass	20			0.270	5
Crawl 1: Solid Concrete or Masonry Wall height: 5.0' Depth below grade: 4.0' Insulation depth: 5.0' Inside below-grade depth: 0.0'	691	0.0	10.0		33

*Compliance Statement:* The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2009 IECC requirements in REScheck Version 4.4.3 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Robert Tolliver

Name - Title

Signature

8/3/2012

Date

**Project Notes:**

Meets 2005 MMHB Energy Standards.

MAINE [One and Two Family Including Townhouses ]

MANUFACTURER'S DATA PLATE		FACTORY INSTALLED EQUIPMENT																															
Manufacturer <u>KEISER HOMES</u> Address <u>56 MECHANIC FALLS RD. (P.O. BOX 9000)</u> City, State, Zip <u>OXFORD, ME 04270</u>		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">EQUIPMENT</th> <th style="width: 40%;">MANUFACTURER</th> <th style="width: 40%;">MODEL NO.</th> </tr> </thead> <tbody> <tr><td>Heating</td><td></td><td></td></tr> <tr><td>Cooling</td><td></td><td></td></tr> <tr><td>Range/Burner</td><td></td><td></td></tr> <tr><td>Oven</td><td>Frigidaire</td><td>FFEF3011LB</td></tr> <tr><td>Refrigerator</td><td>Frigidaire</td><td>FFHT1814LB</td></tr> <tr><td>Water Heater</td><td></td><td></td></tr> <tr><td>Dish Washer</td><td>Frigidaire</td><td>FFBD2409LB</td></tr> <tr><td>Disposal</td><td></td><td></td></tr> <tr><td>Hydro-Massage Tub</td><td></td><td></td></tr> </tbody> </table>		EQUIPMENT	MANUFACTURER	MODEL NO.	Heating			Cooling			Range/Burner			Oven	Frigidaire	FFEF3011LB	Refrigerator	Frigidaire	FFHT1814LB	Water Heater			Dish Washer	Frigidaire	FFBD2409LB	Disposal			Hydro-Massage Tub		
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LISTED INDUSTRIALIZED BUILDING		Note: (1) All 1st floor insulation over unconditioned basement spaces to be provided & installed "on-site" by others per state & local code requirements Note: (2) Wind Speed= 3sg Note: (3)																															
Model	22'x28' w/16'x13' Custom Colonial																																
Occupancy Classification	I&2 FAMILY	Const. Class	"VB"																														
Manufacturer's Serial No(s).	KIM 3976 ABCDE																																
Date of Manufacture	DATE =???	Plan Approval No.	N/A																														
Date Data Plate Attached	DATE =???																																
Permissible Gas Type(s)	LP AND OR NATURAL GAS																																
Electric Rating	200 AMP																																
Test Voltage/Time	1080 Volts for 1 second																																
Water Supply: Test Procedure	100psi for 15min																																
Floor Design Live Load	40psf 1st / 30psf 2nd / 60psf BALCONY	Design Wind Speed And Exposure	90mph/Exp. B (2)																														
Ground Snow Load	60 PSF	Roof Design Live Load	42 PSF																														
Exterior Wall Fire Rating	N/R	Seismic Design Category	Category "C"																														
Winter Design Temp.: Inside	+72 F	Outside	-20 F																														
U <sub>0</sub> : Ceiling	0.017	Wall	0.025																														
		Floor	0.053 (1)																														
		Shipping Weight(s)	Standard 14-wide Module = Estimated Box Weight = 600PL																														
		TRA Label No(s).	??????; ??????; ??????; ??????																														
		State Insignia No(s).	????????-ME																														

Follow precisely all instructions with this building. Foundations, Installation and Utility Connections are subject to inspection by local authorities.

CODE REFERENCE PLATE

THIS MANUFACTURED STRUCTURE HAS BEEN CONSTRUCTED IN CONFORMANCE WITH THE FOLLOWING CODES:	
<input checked="" type="checkbox"/>	2008* NATIONAL ELECTRICAL CODE®
<input type="checkbox"/>	INTERNATIONAL BUILDING CODE
<input type="checkbox"/>	INTERNATIONAL MECHANICAL CODE
<input checked="" type="checkbox"/>	2003** INTERNATIONAL PLUMBING CODE
<input checked="" type="checkbox"/>	2009 INTERNATIONAL ENERGY CONSERVATION CODE
<input checked="" type="checkbox"/>	2003* INTERNATIONAL RESIDENTIAL CODE
<input type="checkbox"/>	INTERNATIONAL FUEL GAS CODE
<input type="checkbox"/>	INTERNATIONAL FIRE CODE
<input type="checkbox"/>	UNIFORM BUILDING CODE
<input type="checkbox"/>	UNIFORM PLUMBING CODE
<input type="checkbox"/>	UNIFORM MECHANICAL CODE
<input type="checkbox"/>	NATIONAL STANDARD PLUMBING CODE
<input type="checkbox"/>	
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	MMHB Rules for Radon Mitigation
<input checked="" type="checkbox"/>	*w/State Amendments c8-1/4" max rise 9" min run Basement Stair Geometry allowed w/design
<input checked="" type="checkbox"/>	** Plumbing not reg by the MMHB may be subject to ME State Internal Plumbing (2000UPC*) -pending AHJ input
<input checked="" type="checkbox"/>	2001 NFPA-31 Inst. of Oil Burning Equip.
<input checked="" type="checkbox"/>	2001 NFPA 58 LP Gas Code
<input checked="" type="checkbox"/>	2002 NFPA 54 National Fuel Gas Code
<input checked="" type="checkbox"/>	2005 Maine Energy Code (02-385 Chapter 110)

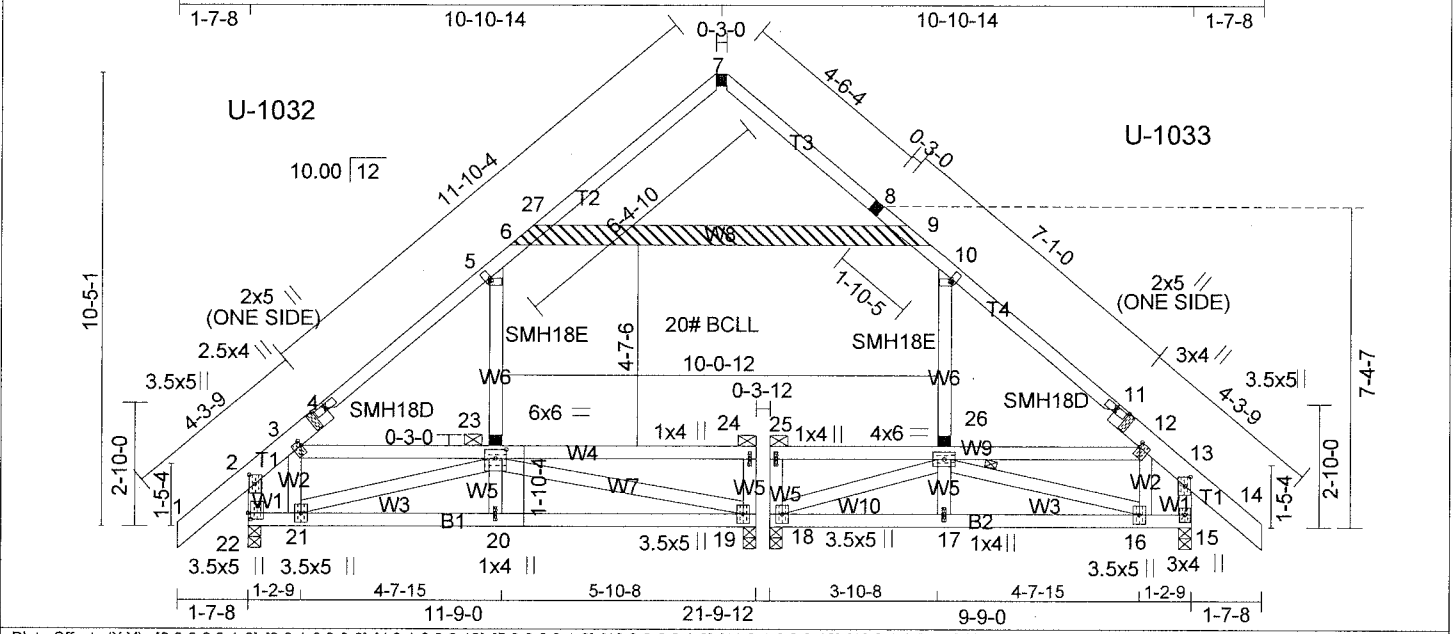


Plate Offsets (X,Y): [2:0-2-8,0-1-8], [3:0-1-8,0-0-0], [4:0-1-8,0-3-12], [5:0-0-0,0-1-0], [10:0-0-0,0-1-0], [11:0-1-8,0-3-12], [12:0-1-8,0-0-4], [13:0-2-8,0-1-8], [22:0-1-12,0-0-12], [23:0-3-0,0-2-8]

<b>LOADING (psf)</b> TCLL 42.9 (Ground Snow=60.0) TCDL 10.0 BCLL 0.0 * BCDL 10.0	<b>SPACING</b> 1-4-0 Plates Increase 1.15 Lumber Increase 1.15 Rep Stress Incr YES Code IBC2009/TPI2007	<b>CSI</b> TC 0.59 BC 0.18 WB 0.89 (Matrix)	<b>DEFL</b> in (loc) l/defl L/d Vert(LL) -0.05 20 >999 240 Vert(TL) -0.08 19-20 >999 180 Horz(TL) 0.23 15 n/a n/a	<b>PLATES GRIP</b> MT20 197/144 MT18HS 0/0 Weight: 127 lb FT = 0%
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**LUMBER**  
TOP CHORD 2x4 SPF 2100F 1.8E \*Except\*  
T1: 2x6 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF 2100F 1.8E  
WEBS 2x4 SPF Stud \*Except\*  
W1, W4, W9: 2x4 SPF No.2, W8: 2x6 SPF No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end vertical[R]  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
JOINTS 1 Brace at Jt(s): 23, 24, 25, 26

**REACTIONS (lb/size)** 22=579/0-3-8 (min. 0-1-8), 19=385/0-3-8 (min. 0-1-8), 15=501/0-3-8 (min. 0-1-8), 18=420/0-3-8 (min. 0-1-8)  
Max Horz 22=300(LC 8)  
Max Uplift 22=284(LC 10), 19=127(LC 8), 15=367(LC 10), 18=25(LC 9)  
Max Grav 22=701(LC 15), 19=415(LC 3), 15=613(LC 16), 18=496(LC 16)

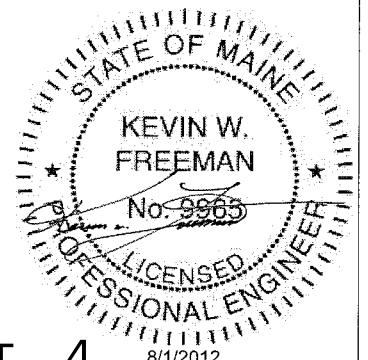
**FORCES (lb) - Maximum Compression/Maximum Tension**  
TOP CHORD 1-2=0/155, 2-3=455/237, 3-4=252/404, 4-5=241/432, 5-6=271/364, 6-27=353/78, 7-27=348/98, 7-8=232/104, 8-9=382/86, 9-10=296/329, 10-11=0/294, 11-12=68/287, 12-13=386/239, 13-14=0/155, 2-22=553/326, 13-15=512/319  
BOT CHORD 21-22=280/329, 20-21=454/1130, 19-20=454/1130, 17-18=76/978, 16-17=76/978, 15-16=41/180  
WEBS 10-26=734/87, 5-23=637/268, 3-23=329/280, 23-24=2/4, 3-21=56/245, 25-26=3/4, 12-26=180/41, 12-16=0/260, 19-24=69/2, 18-25=48/0, 20-23=0/168, 17-26=0/128, 19-23=1184/476, 21-23=962/187, 16-26=857/37, 18-26=1081/84, 6-9=46/372

**REQUIRED FIELD JOINT CONNECTIONS - Maximum Compression (lb)/ Maximum Tension (lb)/ Maximum Shear (lb)/ Maximum Moment (lb-in)**  
6=46/373/2/0, 7=198/106/186/0, 8=330/88/147/0, 9=46/372/0/0, 23=637/268/0/0, 26=734/87/0/0

- NOTES**
- 1) Wind: ASCE 7-05; 110mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-05; Pg=60.0 psf (ground snow); Ps=42.9 psf (roof snow); Category II, Exp C; Partially Exp.; Ct=1.1
  - 3) Roof design snow load has been reduced to account for slope.
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 14.0 psf or 2.00 times flat roof load of 46.2 psf on overhangs non-concurrent with other live loads.
  - 6) This truss has been designed for basic load combinations, which include cases with reductions for multiple concurrent live loads.
  - 7) All plates are MT20 plates unless otherwise indicated.
  - 8) See BEH18 DETAILS for plate placement.
  - 9) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - 10) All additional member connections shall be provided by others for forces as indicated.
  - 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 12) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 284 lb uplift at joint 22, 127 lb uplift at joint 19, 367 lb uplift at joint 15 and 25 lb uplift at joint 18.
  - 14) This truss has been designed in accordance with the 2009 IBC Section 2303.4.6, 2009 IRC Section 802.10.2.
  - 15) Attic space shown is not designed for occupancy.
  - 16) Take precaution to keep the chords in plane, any bending or twisting of the hinge plate must be repaired before the building is put into service.
  - 17) The field-installed members are an integral part of the truss design. Retain a design professional to specify final field connections and temporary supports. All field-installed members must be properly fastened prior to applying any loading to the truss. This design anticipates the final set position.

The professional engineering seal indicates that a licensed professional has reviewed the design under the standards referenced within this document, not necessarily the current state building code. The engineering seal is not an approval to use in a specific state. The final determination on whether a truss design is acceptable under the locally adopted building code rest with the building official or designated appointee.

E-signed by Kevin Freeman



I - 4 8/1/2012

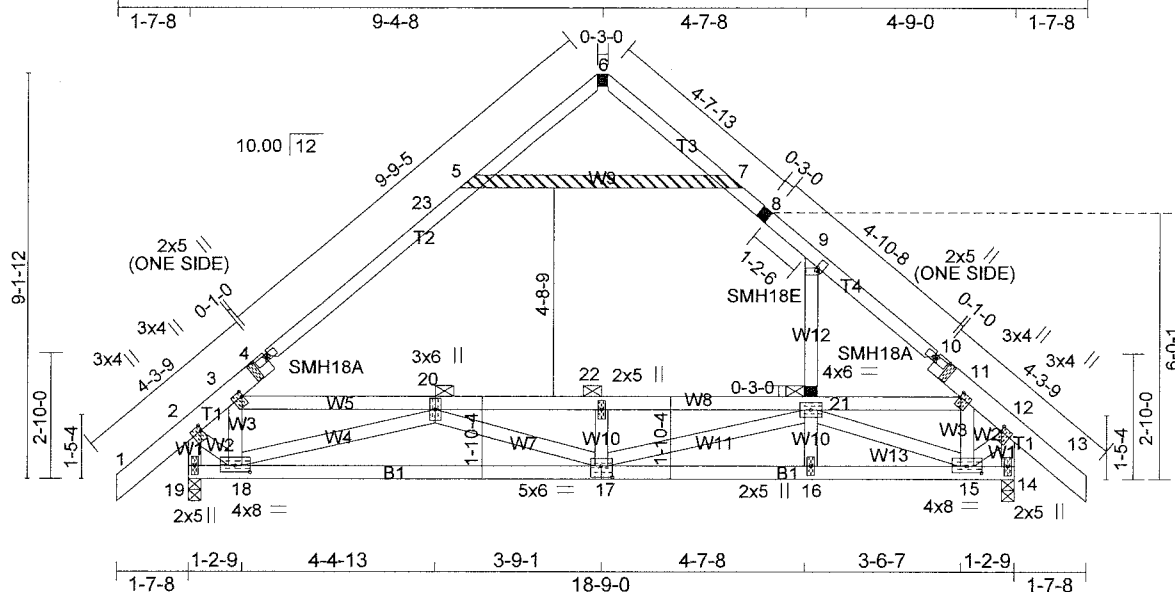


Plate Offsets (X, Y): [2:0-1-8,0-0-4], [3:0-1-8,0-0-4], [4:0-1-8,0-4-12], [4:0-1-0,0-0-0], [9:0-0-0,0-1-0], [10:0-1-8,0-4-12], [10:0-1-0,0-0-0], [11:0-1-8,0-0-4], [12:0-1-8,0-0-4], [15:0-4-0,0-1-12], [17:0-3-0,0-3-0], [18:0-4-0,0-1-12]

<b>LOADING (psf)</b> TCLL 42.9 (Ground Snow=60.0) TCDL 10.0 BCLL 0.0 * BCDL 10.0	<b>SPACING</b> Plates Increase 1.4-0 Lumber Increase 1.15 Rep Stress Incr YES Code IBC2009/TPI2007	<b>CSI</b> TC 0.30 BC 0.22 WB 0.32 (Matrix)	<b>DEFL</b> in (loc) l/defl L/d Vert(LL) -0.07 17-18 >999 240 Vert(TL) -0.17 17-18 >999 180 Horz(TL) 0.02 14 n/a n/a	<b>PLATES GRIP</b> MT20 197/144 MT18HS 0/0 Weight: 107 lb FT = 0%
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<b>LUMBER</b> TOP CHORD 2x4 SPF 2100F 1.8E *Except* T1: 2x6 SPF 2100F 1.8E BOT CHORD 2x4 SPF 2100F 1.8E WEBS 2x4 SPF Stud *Except* W6,W1,W5,W8,W9: 2x4 SPF No.2	<b>BRACING</b> TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins. BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. JOINTS 1 Brace at Jt(s): 20, 21, 22
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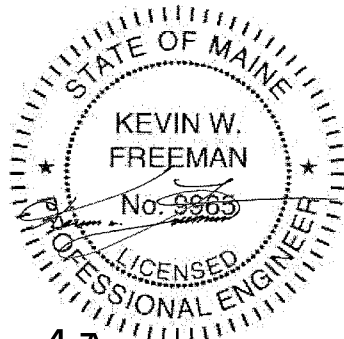
**REACTIONS** (lb/size) 14=742/0-3-8 (min. 0-1-8), 19=741/0-3-8 (min. 0-1-8)  
Max Horz 19=267(LC 8)  
Max Uplift 14=302(LC 10), 19=302(LC 9)  
Max Grav 14=899(LC 2), 19=899(LC 2)

**FORCES (lb) - Maximum Compression/Maximum Tension**  
TOP CHORD 1-2=0/155, 2-3=535/199, 3-4=785/264, 4-23=651/278, 5-23=573/291, 5-6=-181/62, 6-7=-186/56, 7-8=491/310, 8-9=568/301, 9-10=689/350, 10-11=750/333, 11-12=-496/224, 12-13=0/155  
BOT CHORD 18-19=-268/267, 17-18=-2/657, 16-17=-192/863, 15-16=-192/863, 14-15=-1/0  
WEBS 2-19=-969/290, 12-14=-901/330, 9-21=-251/268, 3-20=-156/84, 20-22=-719/211, 21-22=-720/211, 11-21=-219/227, 3-18=-376/167, 11-15=-424/251, 16-21=90/92, 17-22=-11/5, 17-21=-78/341, 15-21=-584/272, 5-7=-439/347, 18-20=-392/165, 17-20=-135/261, 2-18=-103/650, 12-15=-147/593

**REQUIRED FIELD JOINT CONNECTIONS** - Maximum Compression (lb)/ Maximum Tension (lb)/ Maximum Shear (lb)/ Maximum Moment (lb-in)  
5=446/349/8/0, 6=114/63/112/0, 7=439/347/0/0, 8=519/305/170/0, 21=251/268/0/0

- NOTES**
- 1) Wind: ASCE 7-05; 110mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-05; Pg=60.0 psf (ground snow); Ps=42.9 psf (roof snow); Category II; Exp C; Partially Exp.; Ct=1.1
  - 3) Roof design snow load has been reduced to account for slope.
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 14.0 psf or 2.00 times flat roof load of 46.2 psf on overhangs non-concurrent with other live loads.
  - 6) This truss has been designed for basic load combinations, which include cases with reductions for multiple concurrent live loads.
  - 7) All plates are MT20 plates unless otherwise indicated.
  - 8) See BEH18 DETAILS for plate placement.
  - 9) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
  - 10) All additional member connections shall be provided by others for forces as indicated.
  - 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 12) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 302 lb uplift at joint 14 and 302 lb uplift at joint 19.
  - 14) This truss has been designed in accordance with the 2009 IBC Section 2303.4.6, 2009 IRC Section 802.10.2.
  - 15) Take precaution to keep the chords in plane, any bending or twisting of the hinge plate must be repaired before the building is put into service.
  - 16) The field-installed members are an integral part of the truss design. Retain a design professional to specify final field connections and temporary supports. All field-installed members must be properly fastened prior to applying any loading to the truss. This design anticipates the final set position.

E-signed by Kevin Freeman



**I-4A** 8/1/2012

The professional engineering seal indicates that a licensed professional has reviewed the design under the standards referenced within this document, not necessarily the current state building code. The engineering seal is not an approval to use in a specific state. The final determination on whether a truss design is acceptable under the locally adopted building code rest with the building official or designated appointee.

**WARNING - Verify design parameters and READ NOTES**

This building component has only been designed for the loads noted on this drawing. Construction and lifting forces have not been considered. The builder is responsible for lifting methods and system design. Builder responsibilities are defined under TPI1. This design is based only on parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult BCSI 1-06 from the Wood Truss Council of America and Truss Plate Institute Recommendation available from WTCA, 6300 Enterprise LN, Madison, WI 53719 J:\support\MitekSupp\templates\lufp.tpe© copyright 2012 by: Universal Forest Products, Inc.

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PHONE (616)-364-6161 FAX (616)-365-0060 GRAND RAPIDS, MI 49525