LEGALETT®

WORLDWIDE

Sweden | Canada | USA | Finland | Germany | Japan | Lithuania | Norway | Poland

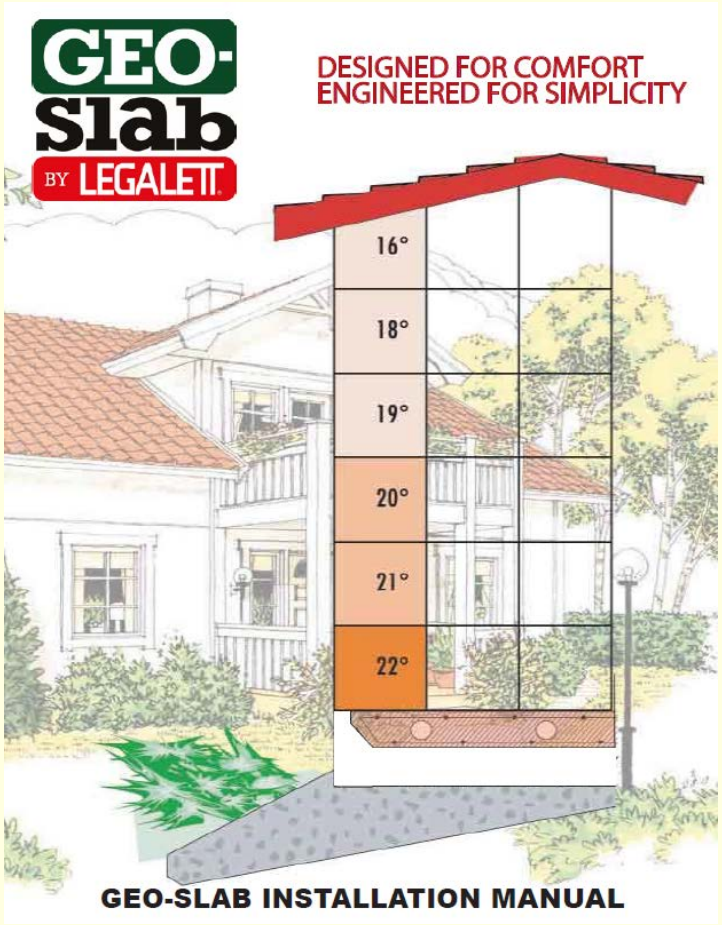
Understanding The Plans

LEGALETT engineered plans are job specific

Each detail, cross section and note has a purpose so don’t take short cuts.

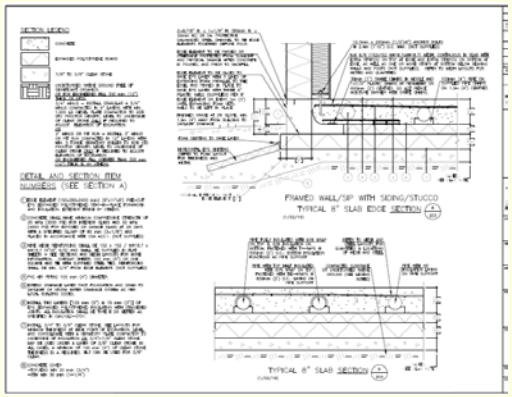
One or more reviews of the drawings is recommended before jobsite start up

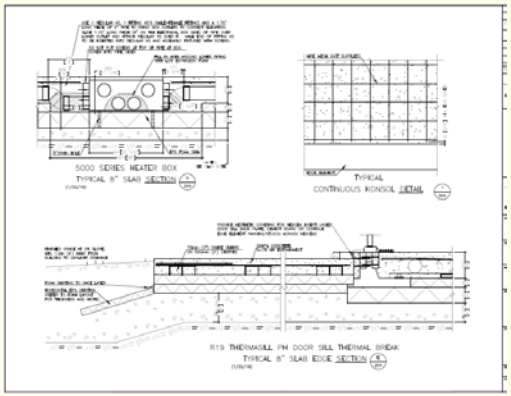
GEO-Slab Installation Manual

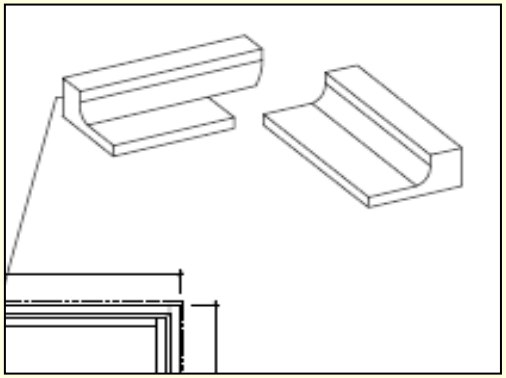


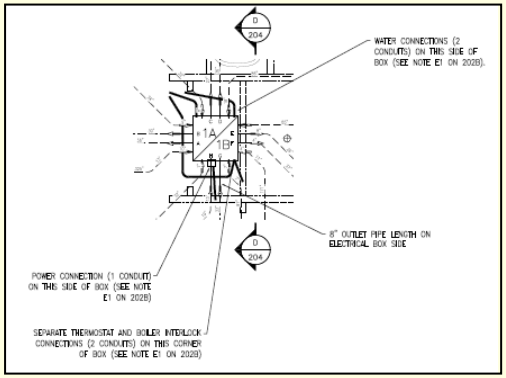
A Full Set Of Plans Is Provided

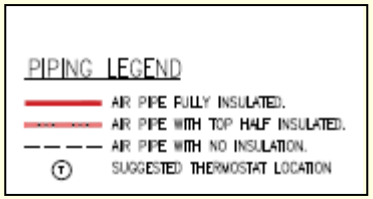
Details, material lists and easy installation tips specific to each project make for a seamless installation

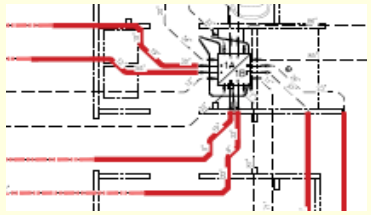






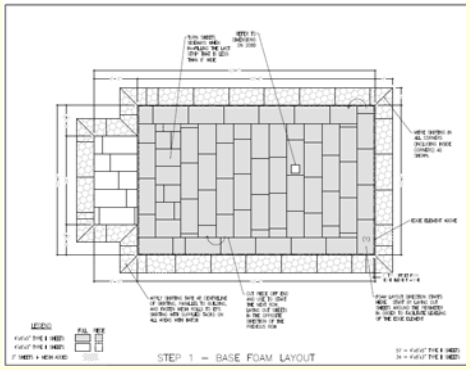


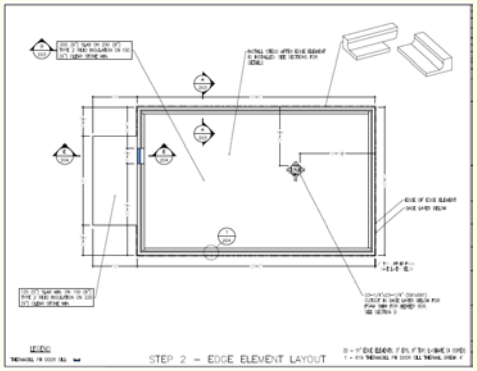


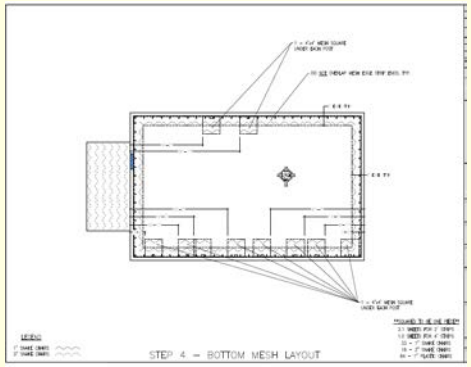


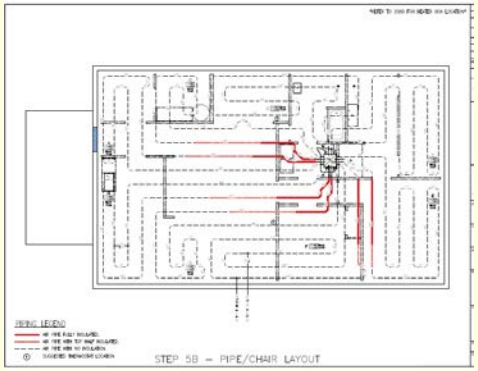
A Full Set Of Plans Is Provided

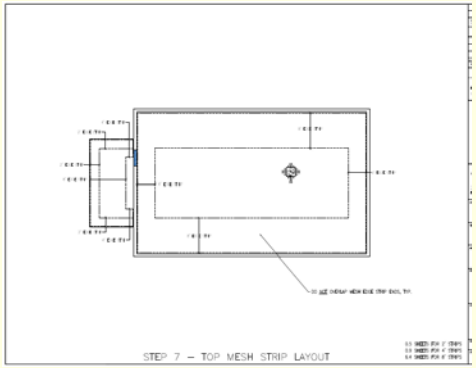
Installation is broken down into easy steps specific to each project











General Notes

- **General Notes are included in the drawing, which provide important project information.****

GENERAL NOTES

GENERAL NOTES: STRUCTURAL GEO–SLABS

GENERAL NOTES: LEGALETT HEATED GEO–SLABS

- **

BUILDING HEAT LOSS AND TOTAL BUILDING HEATING SYSTEM DESIGN BY OTHERS.
VENTILATION AIR MUST BE HEATED TO INDOOR AMBIENT TEMPERATURE BY OTHERS.
HEAT REQUIRED FOR INFILTRATION BY OTHERS.

Materials List

- **A Bill of Materials is included in the drawing, which outlines all the items that will be shipped with your order.**

0302 8" SLAB LEGALETT SUPPLIED MATERIALS — XXXX SAMPLE PROJECT

#	ITEM	QTY	PRODUCT DATA SHEET	REMARKS
7843	5500W FAN, EXCHANGERS, FAN FRAME	2 PC(S).	0550	
7842	5500E FAN, ELEMENTS, FAN FRAME	0 PC(S).	0551	
7058	5000 SHEET METAL BOX, 4"	2 PC(S).	0552	
7087	24V 3–WIRE DIGITAL PROGRAMMABLE THERMOSTAT (BWR)	4 PC(S).	0513	
7108	90° PVC ELBOW	109 PC(S).	0508	4 EXTRA
7109	45° PVC ELBOW	38 PC(S).	0508	4 EXTRA
7111	45° PVC FITTING ELBOW	24 PC(S).	0508	
7018	4" GALVANIZED STEEL CAP	8 PC(S).	0508	
7107	4" PVC LEGALETT RED PIPE	97 PC(S).	0508	
7095	30mm (1") CONTINUOUS CHAIRS FOR 6" & 8" SLABS	250 PC(S).	0514	
7079	40/50mm (2") CHAIRS FOR 4" UNHEATED PORCHES	0 PC(S).	0514	
7094	70mm (3") CONTINUOUS CHAIRS FOR 5" UNHEATED SLABS	0 PC(S).	0514	
7090	100mm (4") CONTINUOUS CHAIRS FOR 8" UNHEATED SLABS	0 PC(S).	0514	
7091	150mm (6") CONTINUOUS CHAIRS FOR 11" UNHEATED SLABS	18 PC(S).	0514	
7063	JOBSITE SIGN	1 PC(S).	0501	
7030	NEW CONSTRUCTION HEATER	0 PC(S).	0509	
7106	NEW CONSTRUCTION HEATER BOX	0 PC(S).	0509	
7057	CONSTRUCTION HEATER ADAPTER FOR 3000 SERIES HEATER	0 PC(S).	0509	
1152	14" EDGE ELEMENTS FOR 8" SLAB, 3" EPS, L–SHAPE	31 PC(S).	0507	9503 – 9 PC(S) COPED
1156	12" EDGE ELEMENTS FOR 6" SLAB, 2" EPS, L–SHAPE	0 PC(S).	0507	9503 – 0 PC(S) COPED
1164	11" EDGE ELEMENTS FOR 5" SLAB, 3" EPS, L–SHAPE	0 PC(S).	0507	9503 – 0 PC(S) COPED
8013	2–9/16" x 1–1/8" STEEL CAP	27 PC(S).	0507	
1188	5000 SHEET METAL BOX FOAM SHIM FOR 8" SLAB, 3" THK.	2 PC(S).	0530	
9000	EXPANDED POLYSTYRENE INSULATION SHEET 4'x8'x3", TYPE II	119 PC(S).	0514	3 EXTRA
9001	EXPANDED POLYSTYRENE INSULATION SHEET 4'x8'x2", TYPE II	0 PC(S).	0514	
1172	MESHED SIDE SKIRTING – EPS 2'x8'x2", TYPE II	0 PC(S).	0537	
1174	MESHED SIDE SKIRTING – EPS 4'x8'x3", TYPE II	8 PC(S).	0537	1 EXTRA
1173	MESHED CORNER SKIRTING SET – EPS 2'x8'x2", TYPE II	4 PC(S).	0537	
1153	CANADIAN PIPE SUPPORTS, 4" PIPE, 1" SADDLE	297 PC(S).	0508	
1166	4"x4"x3" 80mm CHAIR SPACER (BLOCK)	0 PC(S).	0514	
1169	4"x8"x2" THICKENED EDGE SPACER (BRICK)	0 PC(S).	0514	
8009	REBAR TIES	550 PC(S).	0514	
8012	SHEET METAL SCREWS	1,050 PC(S).	0508	
8016	21" TY–RAP, 0.19" WIDTH	100 PC(S).	0538	
1160	EPS PIPE INSULATION, 4", 60% WRAP	216 FEET	0514	1,872 SQ.FT. HEATED
1168	EPS PIPE INSULATION, 4", 40% WRAP	128 FEET	0514	178 SQ.FT. UNH. GARAGE
9500	TOTAL SLAB SQUARE FOOTAGE	2,050 SQ.FT.	0511	0 SQ.FT. PORCH

Reinforcing Schedule/Concrete Volumes

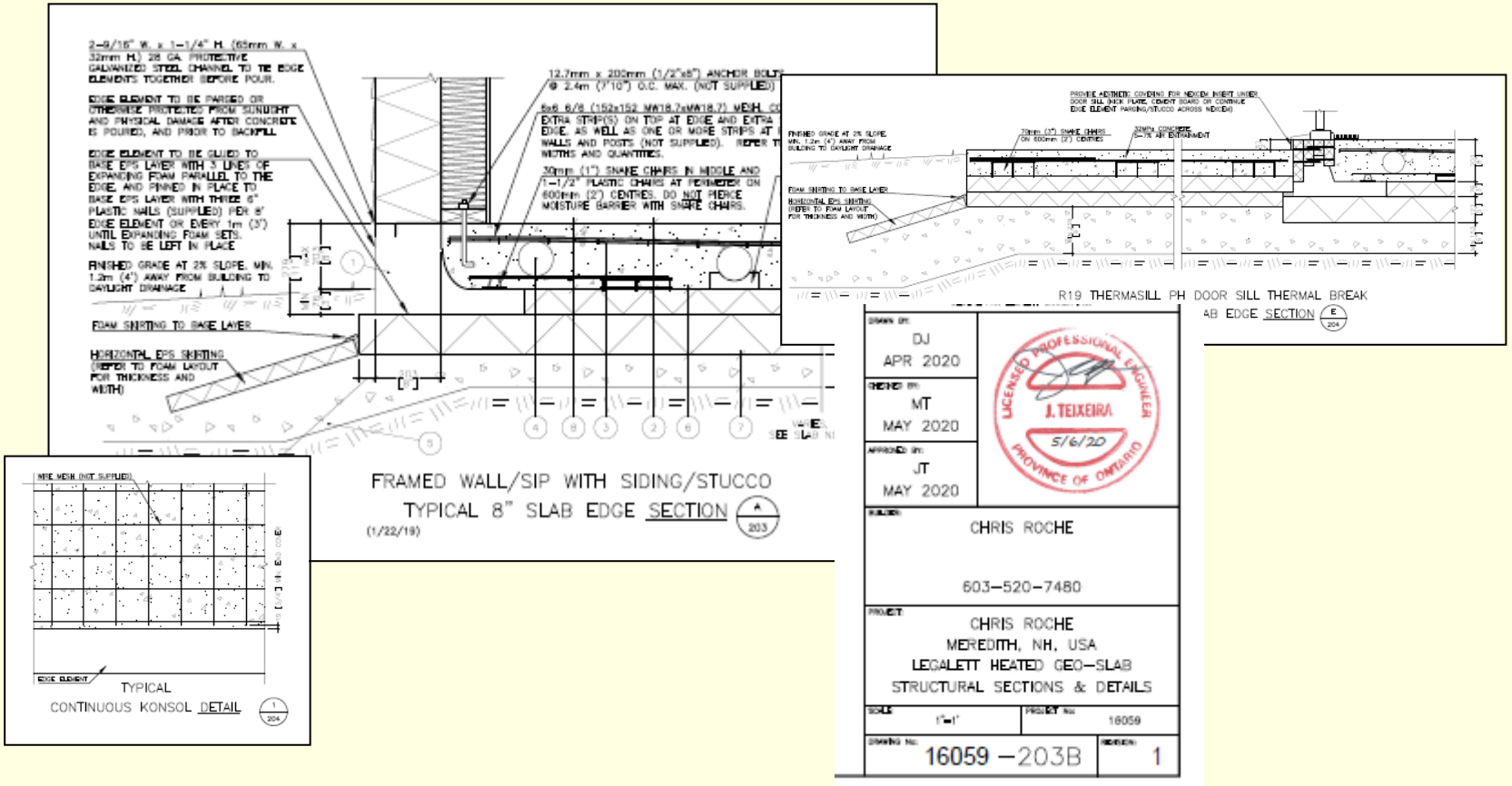
- Concrete volumes and a reinforcing steel schedule is also provided.

REINFORCING SCHEDULE/CONCRETE VOLUMES (SUPPLIED BY INSTALLER OR DISTRIBUTION CENTER)

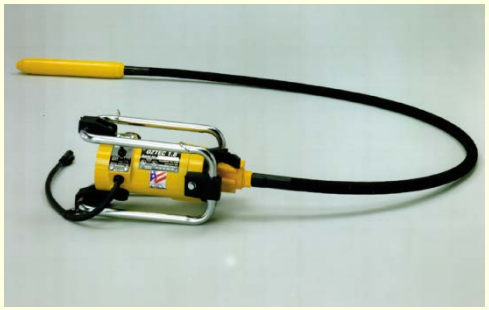
NO ADJUSTMENT FOR CONCRETE PUMP OR PIPING VOLUME. PIPE VOLUME IS 2.4 m3/ 3.1 YDS.

MARK	NO. BARS	SIZE	LENGTH	DESCRIPTION	REMARKS
106000	16	#4	20'	CUT INTO 10'–0" PIECES	EDGE LOADS
WWF	26 SH. 152 X 152 / MW18.7 X MW18.7 IN 8' X 20' FLAT SHEETS				6X6, 6 GAUGE
25 CONC.	0 m3/ 0 YDS. 25 MPa/3500 PSI, 3/4" AGGREGATE, NO AIR, NO CHLORIDE ADDITIVES				INTERIOR SLABS
32 CONC.	34.0 m3/ 44.5 YDS. 32 MPa/4500 PSI, 3/4" AGGREGATE, AIR, NO CHLORIDE ADDITIVES				EXPOSED SLABS (INCL. GARAGE)

Structural Details



Some Of The Tools You Will Need



Materials You Will Need

- **Materials - Suggested**
- 1. rebar stakes and string line
- 2. Wire mesh and rebar as per drawing
- 3. Rebar Dowels (ICF walls)
- 4. Rigid or flexible 1" electrical conduit, complete with fittings, locknuts and PVC cement to sleeve water lines
- 5. ½” or 3/4” oxygen barrier PEX for water lines (cut ends at 45° for ease of installation in sleeves)
- 6. Wire pulling lubricant and or pull string for long water line runs
- 7. Patio stone or cinder block or large stone to weigh down furnace box

Tools You Will Need

- **Tools - Suggested**
- 1. Auto leveling laser with receiver - 2nd receiver helpful for larger slabs
- 2. Saws - handsaw, keyhole/pruning saw, miter saw, battery reciprocating saw with long blade and circular saw
- Leaf blower
- 3. Utility knife, extendable blade recommended such as H-1 Olfa
- 4. Battery drills with magnetic 1/4" hex drivers and #2 (red) Robertson
- 5. Tape measures
- 6. Chalk line with red chalk
- 7. Drywall T-square
- 8. Framing Square
- 9. Magic markers, pencils
- 10. Hammers – claw, small sledge and rubber mallet

Tools You Will Need

- 12. Bolt cutter
- 13. Shovel and wheelbarrow
- 14. Landscaping rake (36" wide) and comb rake
- 15. Rebar tie spinners
- 16. Generator if power not available (including gas, oil)
- 17. Extension cords
- 18. Flood lights if required for night work
- 19. Small (18") plate packer or small vibrating roller
- 20. Hearing, eye, hand, foot and head protection
- 21. Architectural drawings for building to verify dimensions, possible interferences (floor drains, plumbing etc.), conduit locations and verify heater box locations are in appropriate locations
- 22. Scale ruler - 1:100 and 1:50 (or 1:25 depending on plan scale)
- 23. Provide for waste disposal
- 24. Low Expansion foam gun and foam canisters

Insulated Formwork

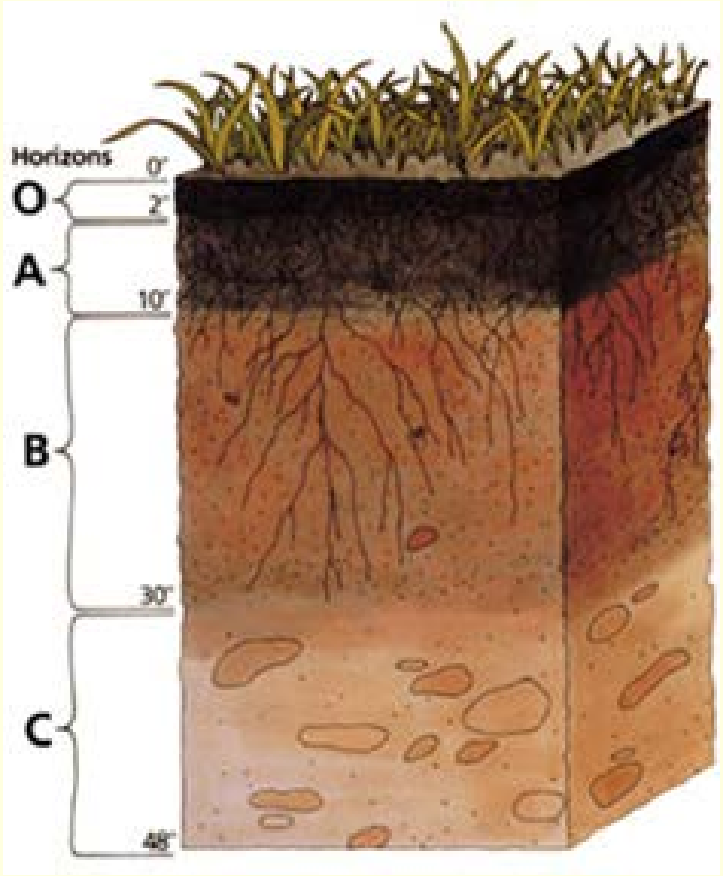
- **Wire cut EPS billets contain the edge elements, insulated pipe caps and pipe support chairs.**

Legalett GEO-Slab

Site Work

What Are Organics

- **Organics are black soil layers (O and A) that contain leaves and plant matter that can decompose and settle**
- **Minor roots are acceptable (B)**



Establish Building Footprint

- **Set up string lines 3-4 ft. outside of the building footprint to allow for excavation**
- **Remove surface soils to correct elevation to allow for the overall depth of Legalett assembly.**

Site Preparation

- **Place sufficient clear stone for easy trenching of under slab services 6”+ **** more stone allows for easier trenching of utilities

**Refer to Excavation and Skirting Product Data Sheet to determine excavation depth.

Excavate With Drainage to Daylight

- **Ensure gravity drainage to daylight**

**** Do not create a swimming pool effect ****

Raising The Grade

- **Build up grade with compacted fill only if required.**
- **This can be pit run, sand, “A” or “B” gravel or 3” “breaker run”.**
- **Fill must be compacted in 6”- 12” lifts.**
- **(3” breaker run shown)**

Drainage Layer

- **Build up over sub base with ¾ clear stone and level with a Bob Cat or dozer.**
- **Extend stone 2 feet outside of building footprint**
- **(3/4” clear stone shown)**

Place and Level Stone

- **A dozer with a self levelling blade can be used on larger projects**

A Stone Slinger Makes it Easy

- **Alternately a Stone Slinger can also be used to place the stone.**

Leveling with 3/8” (10 mm) stone

(OPTIONAL)

- **Place 1” – 2” of pea gravel (3/8” clear stone) on top of the ¾” stone to make final leveling easier**
- **Level to +/- ¼” around the perimeter and to within ½” everywhere else using a small vibrating plate packer.**
- **If 3/8” stone is not used, level ¾” stone as above.**

Plumbing and Services

- **Locate and place plumbing risers and all other slab services.**
- **- Water, Electric, Gas, etc..**
- **** Clear stone placed in trenches for main lines prior to stone going down will make it easier to dig later.**

Final Leveling

- **Re-level after plumber to within ¼” of desired elevation under edge elements and within ½” everywhere else.**

- **Compaction is *not* required again.**

Slab Penetrations

- **All services must be in place before the insulation is installed.**

Check List For Delivery

Have an area large enough for a tractor trailer to back into ready
Also an area large enough to place all the materials

Minimum of 4 able bodied people onsite to unload the truck will be needed

Note: 1 hour unload time is provided. Longer unload times may be back charged
Wear safety protective gear including gloves and safety boots.

Delivery of Materials

- **All materials including heating pipes and fittings, protected skirting, insulated form work, and snake chairs to support wire reinforcing are shipped to site**

EPS Blocks

- **Wire cut EPS billets contain the edge elements and insulated pipe caps.**
- **Pipe support chairs will be in a separate box.**

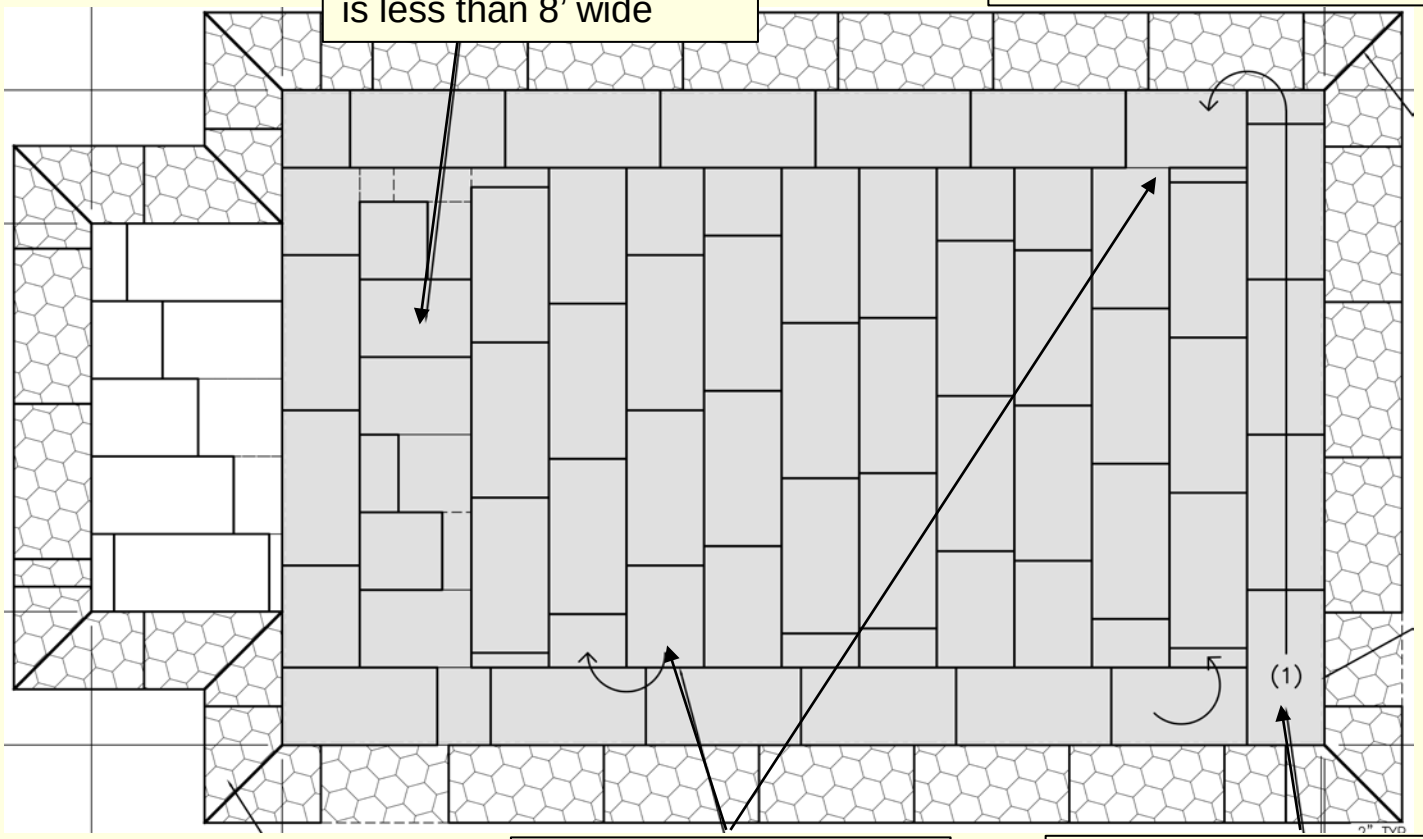
Installing EPS Form Work

Step 1

Base Foam Layout

Turn sheets side ways to infill the last strip that is less than 8' wide

Cut off piece is used to start returning rows



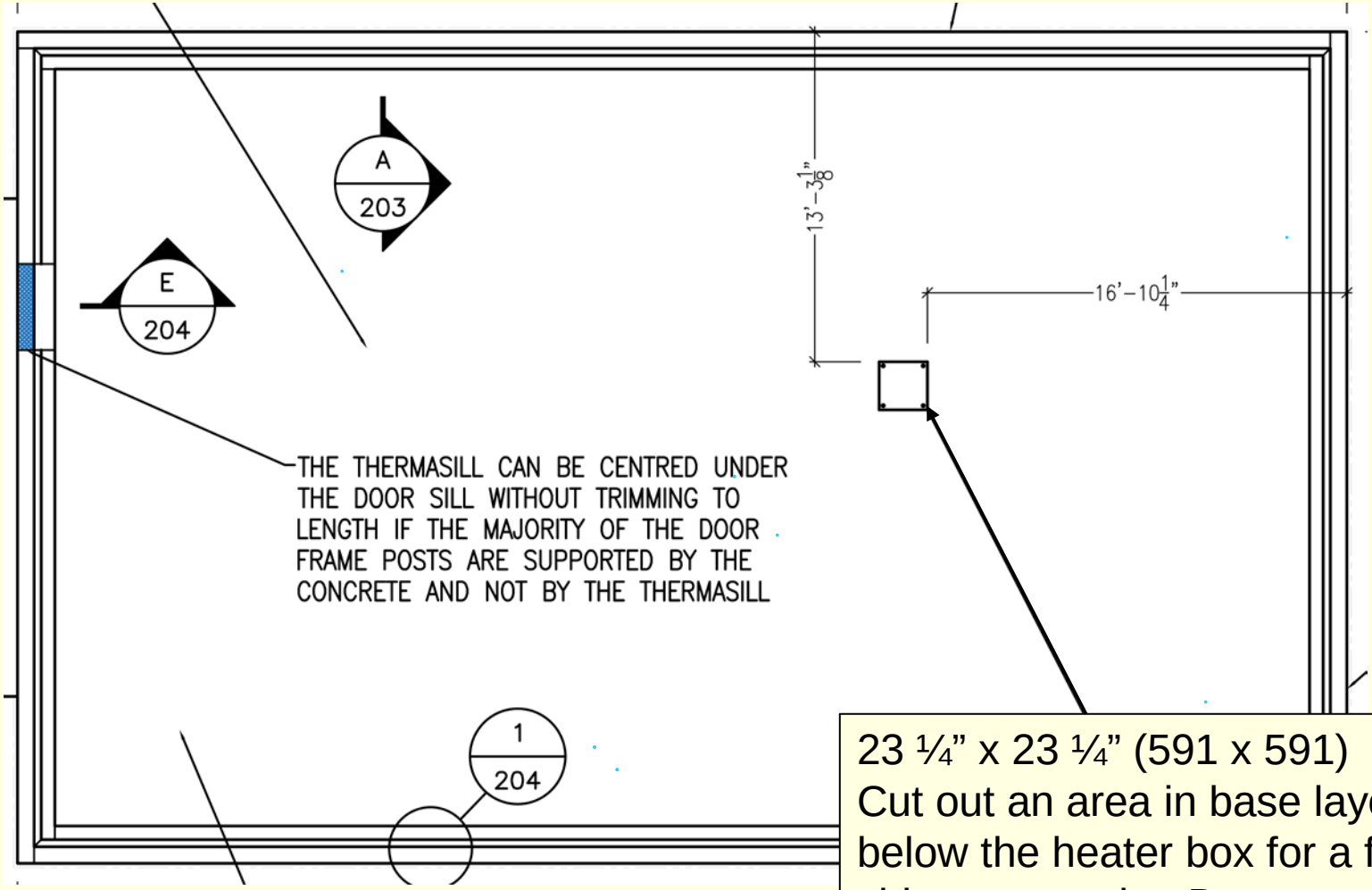
Cut off piece used to start returning rows

Start by laying out 4 x 8 sheets of EPS around the perimeter

Begin By Placing EPS Base Layer

Chalk Lines as per Legalett Dimensions

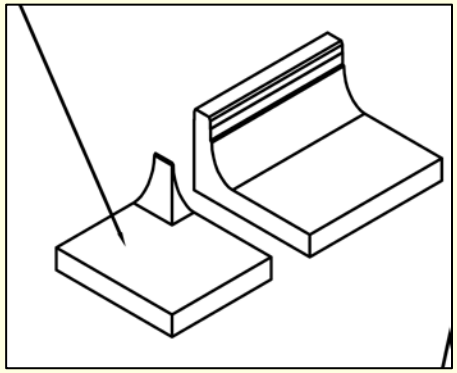
Step 2 Edge Element Layout



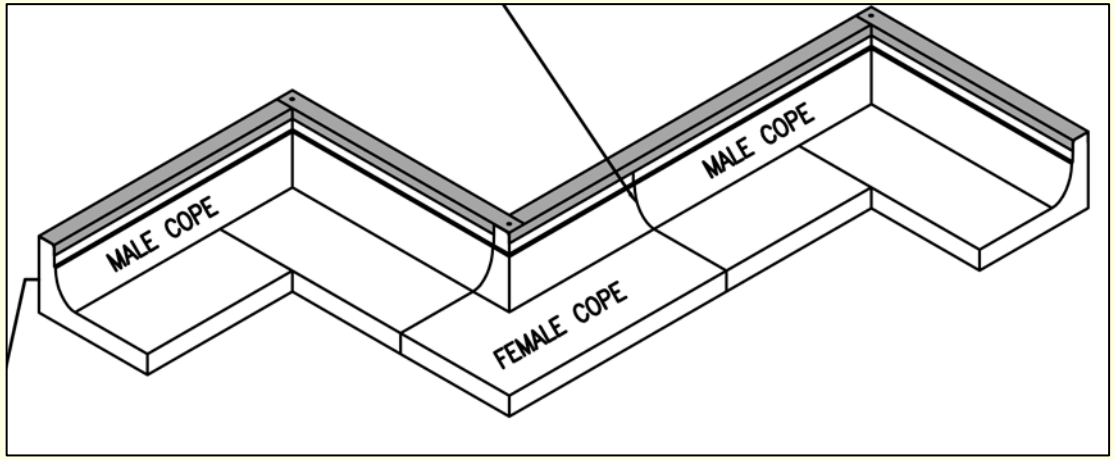
23 ¼" x 23 ¼" (591 x 591)
Cut out an area in base layer below the heater box for a foam shim see section D

Step 2 Edge Element Layout

There will be 4 unused female copes that will need to be cut off so the remaining straight edge elements can be used



Short jogs in the wall that require back to back male and female copes will require the straight parts of the male and female copes to be trimmed to length



Place Pre-Cut Corners

- **All 90-degree corners come already coped.**
- **All other angles will need to be cut on site.**

Place Edge Elements

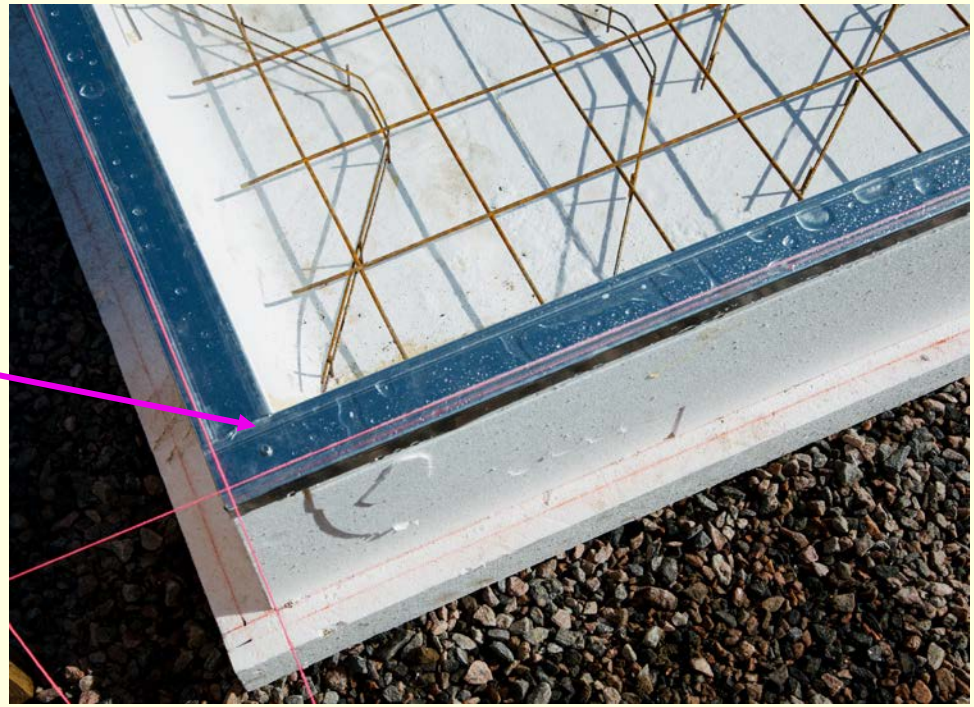
- Use plastic stakes and EPS adhesive foam provided to attach edge elements to base layer

Form Support with 6” Plastic Nails

- **Locking the Edge elements to the base with EPS foam and the plastic stakes eliminates the need to back fill or use whalers to support the edge during concrete placement.**

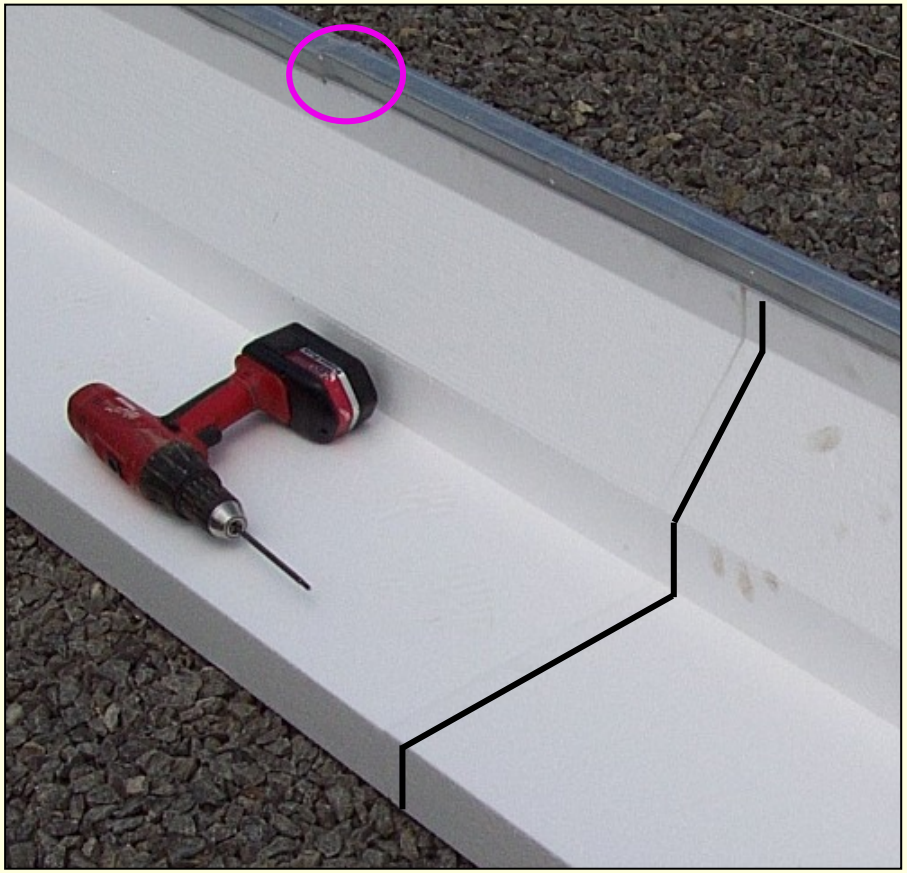
Finished Corner

- **Lock the corners together by screwing through overlapped metal cap provided.**



Staggered Joints

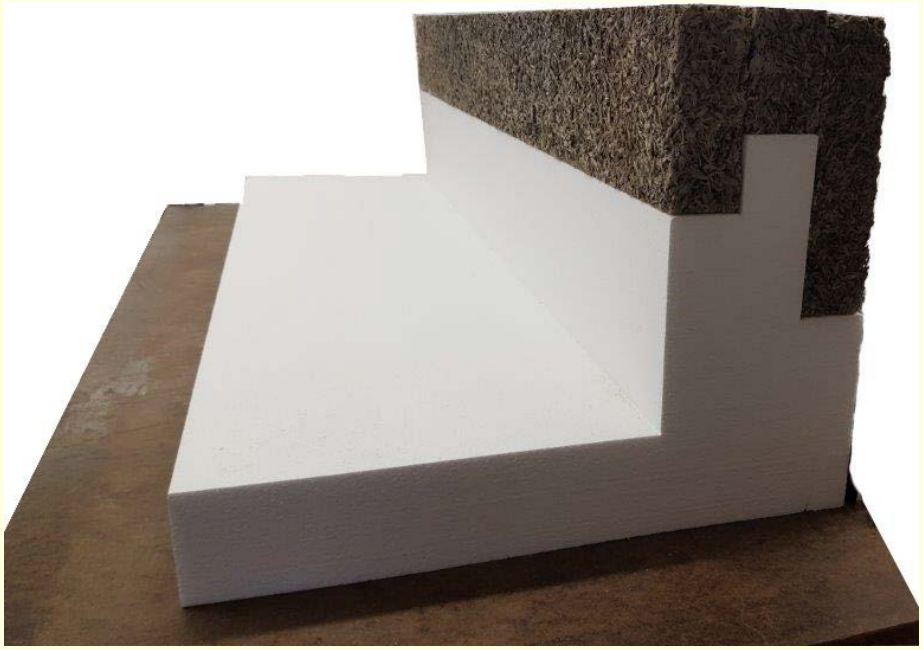
- **Stagger the joints of the metal caps with those of the edge elements.**



ThermaSill PH

ThermaSill PH provides a minimum R14 at thresholds and can be sized to fit any wall thickness or R value requirements.

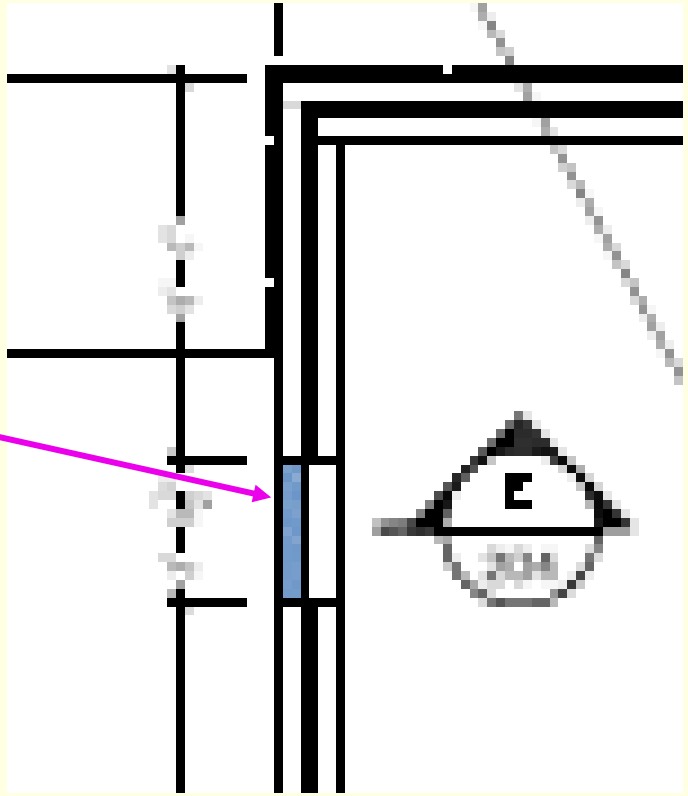
Made from EPS and NEXCEM it can be screwed into, supports loads, is fire rated.



“Exclusively from Legalett “

ThermaSill PH

- **Insert ThermaSill PH as per location on Legalett supplied plans**

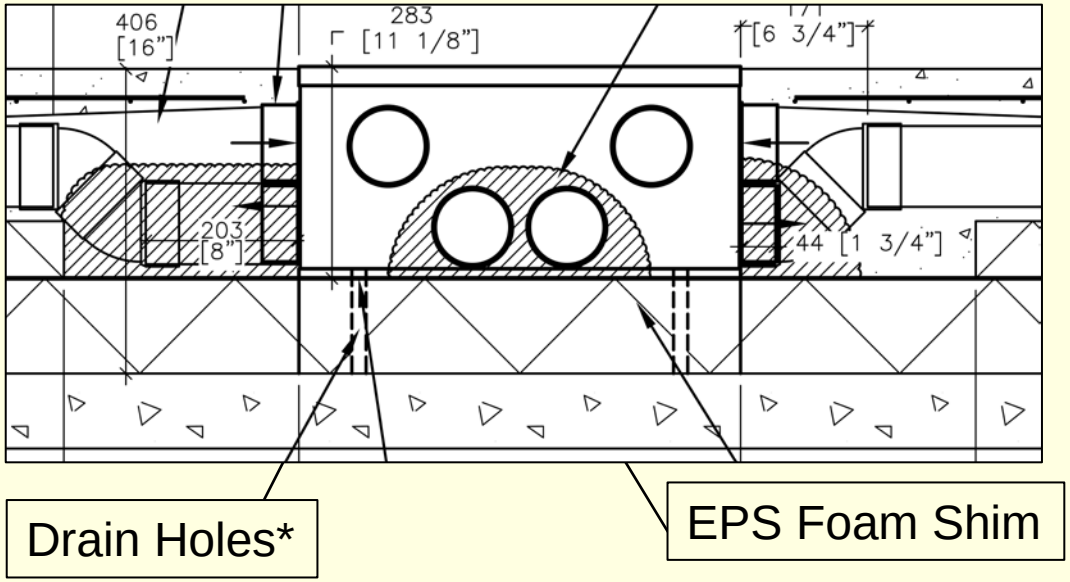


ThermaSill PH

- **Bend up one edge of the metal track and screw through the metal to hold ThermaSill PH in place**

Heater Box Bottom Drain Shim

- **Place foam drain shim in area below heater box**

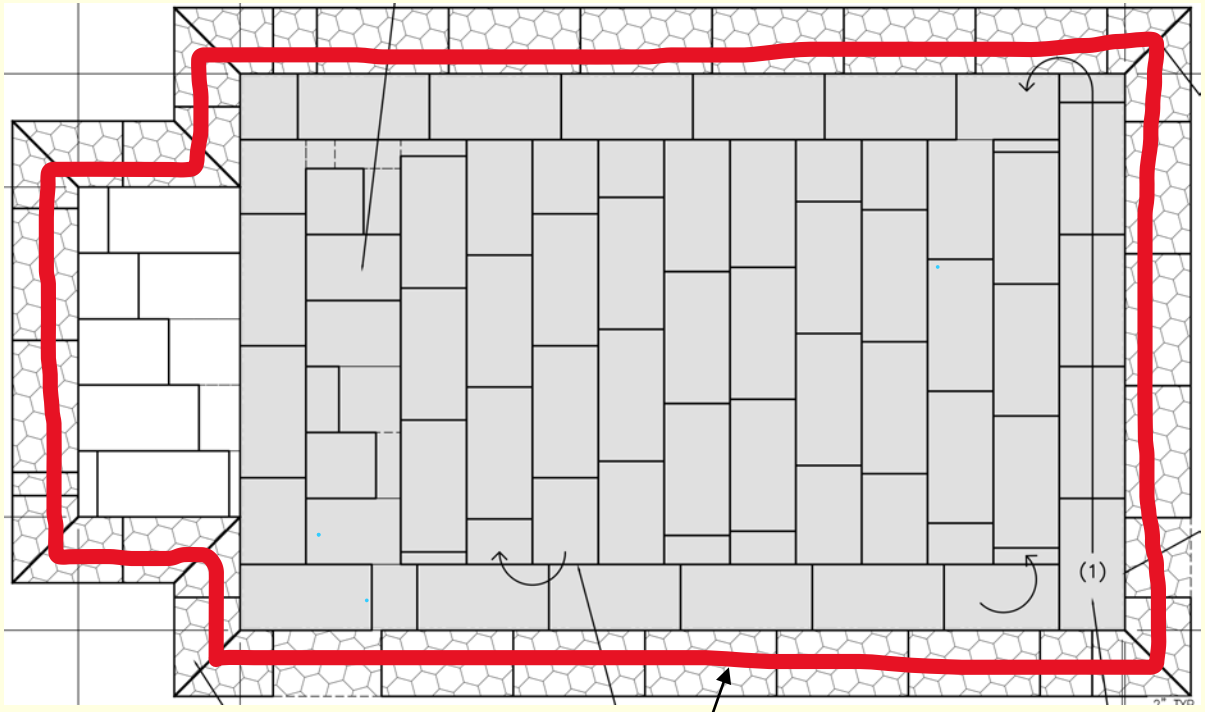


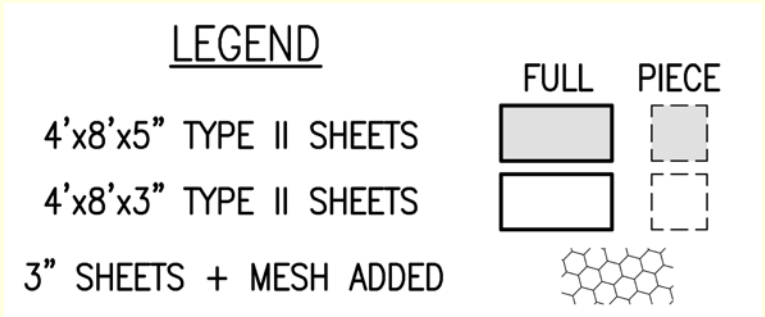
* If using Stego membrane, puncture the membrane at the drain hole locations

Step 1

Porches and Skirting

Add porches and skirting as shown

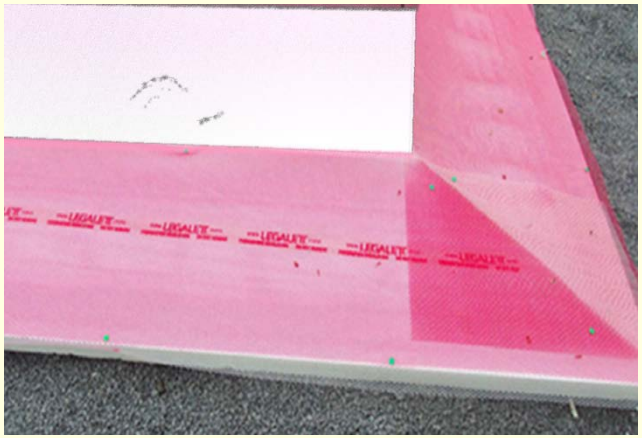




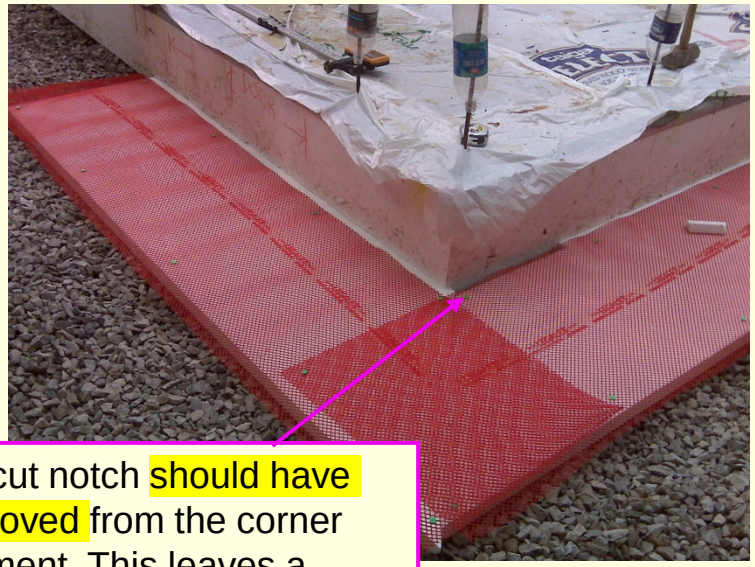
Appy Legalett tape at centerline of skirting. Fasten mesh rolls to EPS with supplied tacks

Corner Skirting

Right



Wrong

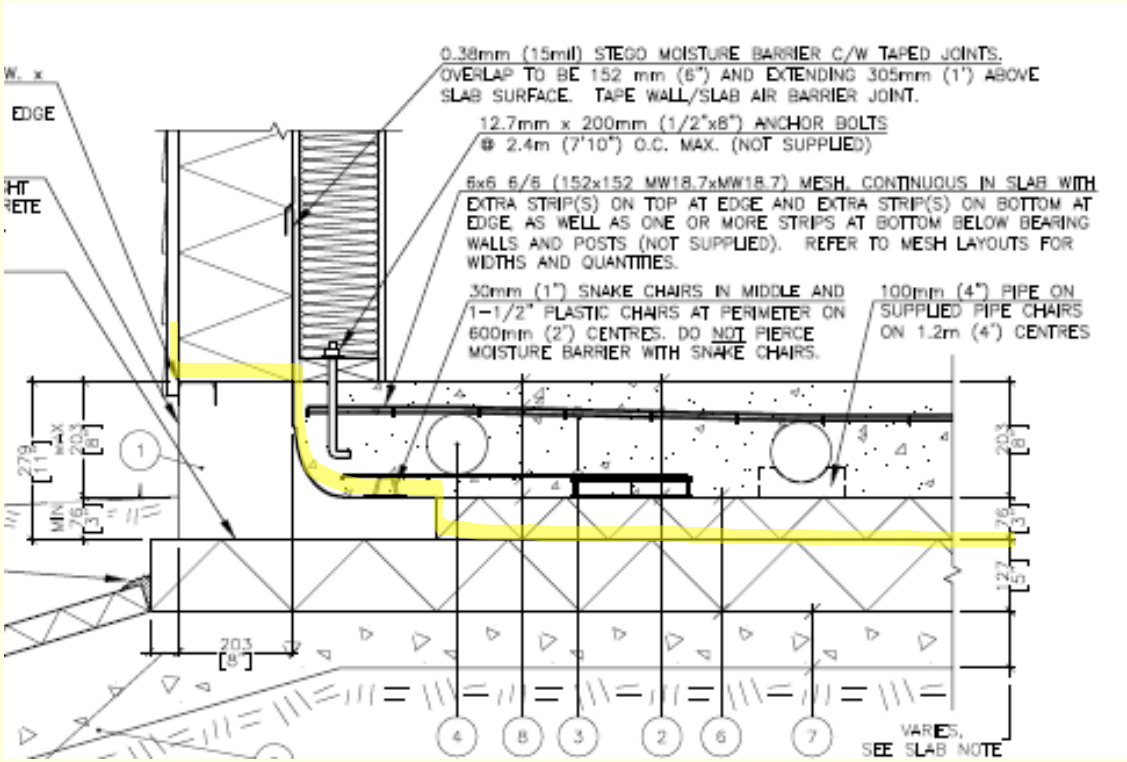


This pre-cut notch should have been removed from the corner edge element. This leaves a space between the skirting and the corner edge element which could allow frost to penetrate. Install prior to pour where practical.

Install Stego Membrane (when specified)

NOTE:

Do not proceed to Step 3 until Stego membrane has been installed



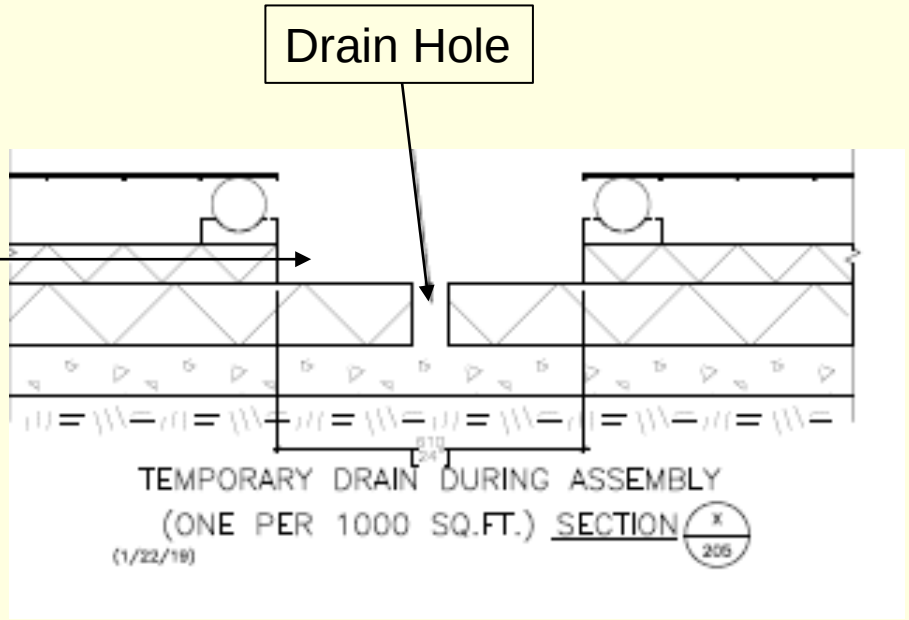
Stego outline in yellow is sandwiched between the 2 layers of EPS

Installing Stego Membrane

Roll out membrane 6” past the edge element and tape all seams with Stego tape (supplied by Legalett)

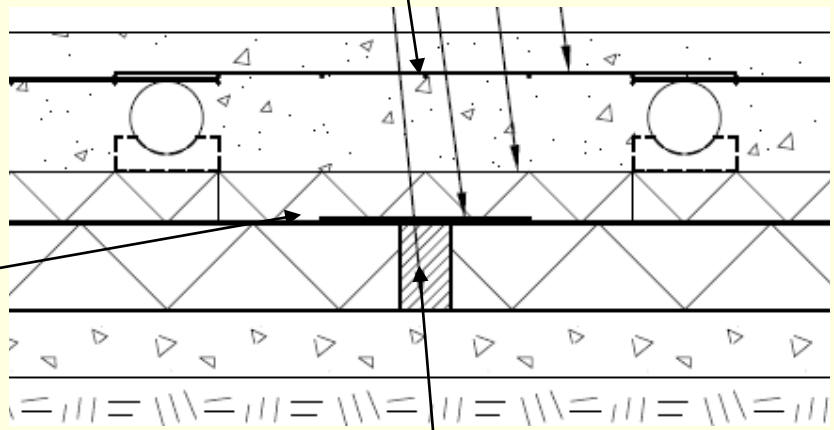
Temporary Drain* For Stego

- During assembly leave a 2’ x 2’ area and drill a 3” hole in the center of it every 1000 sq.ft. to allow water to drain
- * Note: This is only required if a membrane is being used



Temporary Drain Covered

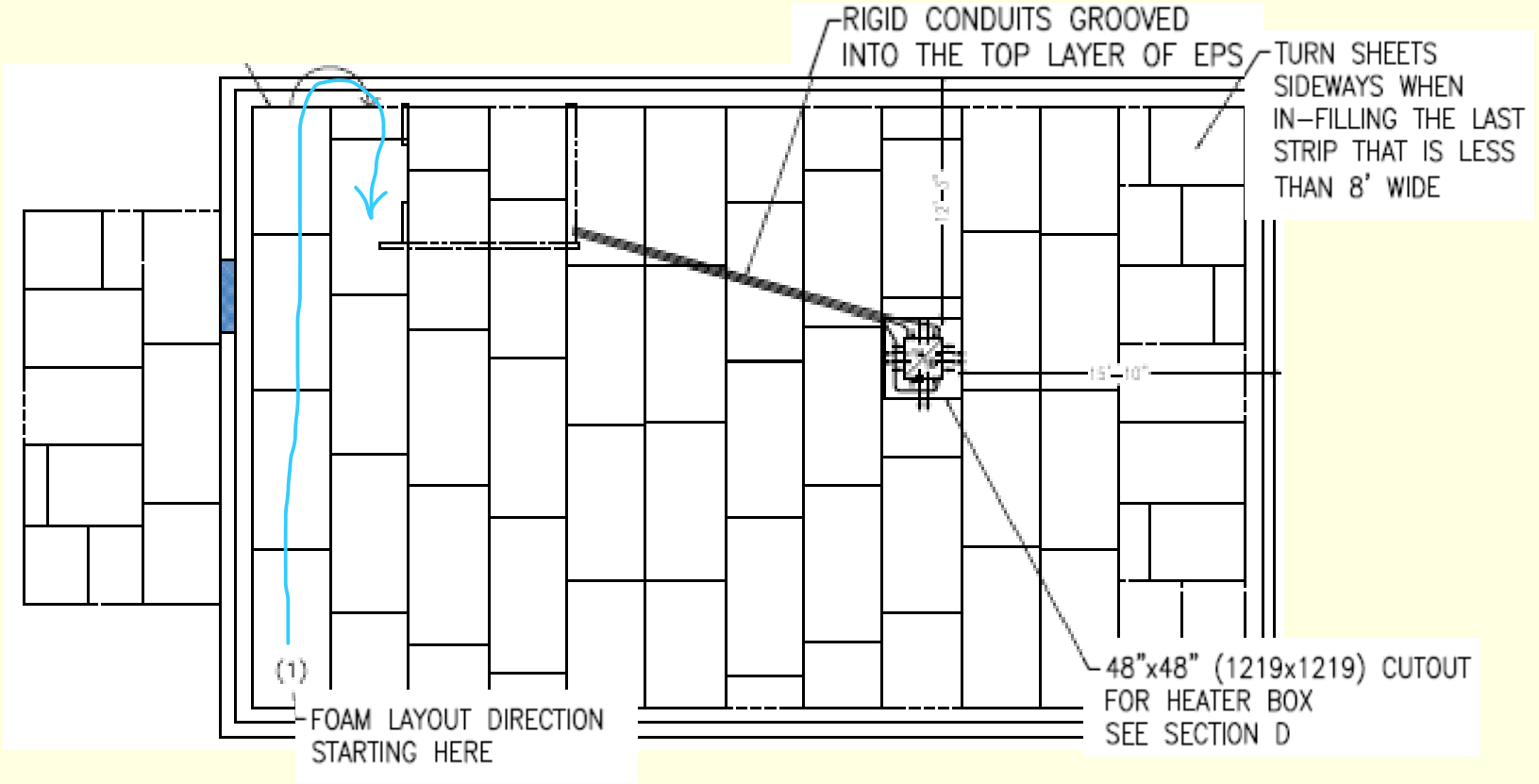
Cover hole in mesh with 1 layer of 3’ x 3’ mesh



Before concrete placement patch over filled drain hole and patch and seal seams with Stego seaming tape and install top layer of EPS

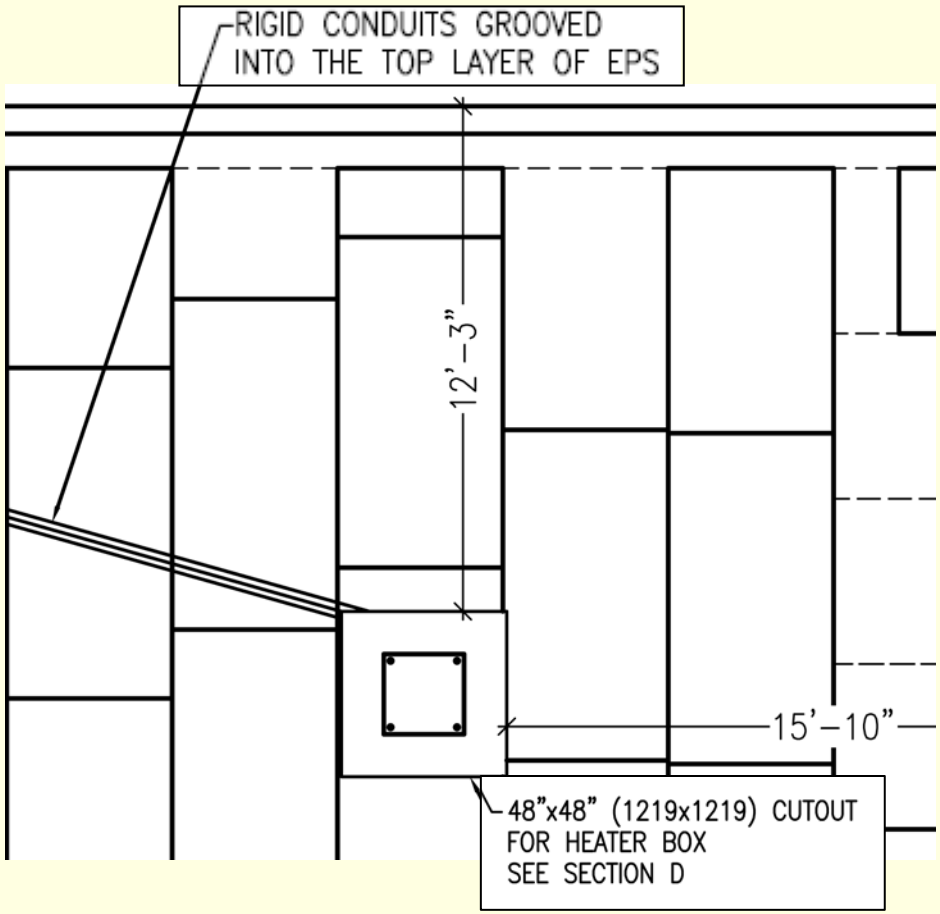
Fill temporary drain hole with low expansion foam

Step 3 Top Infill Foam Layout



Install Rigid Conduit Sleeves

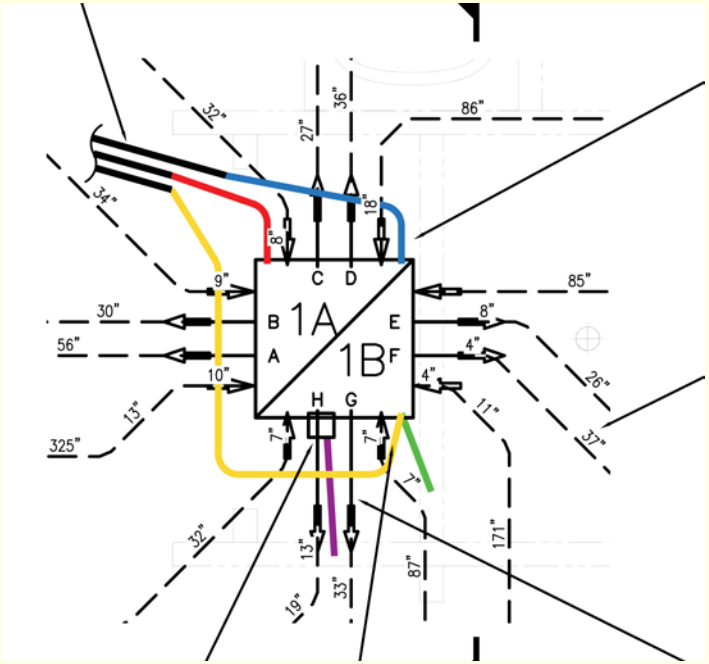
Do not proceed to step 4 until Rigid conduit for water lines and boiler interlock have been installed and the 48’ x 48” cut out has been done.



Step 4

Install Heater Distribution Box

The heater distribution box must be oriented as per the drawings supplied.

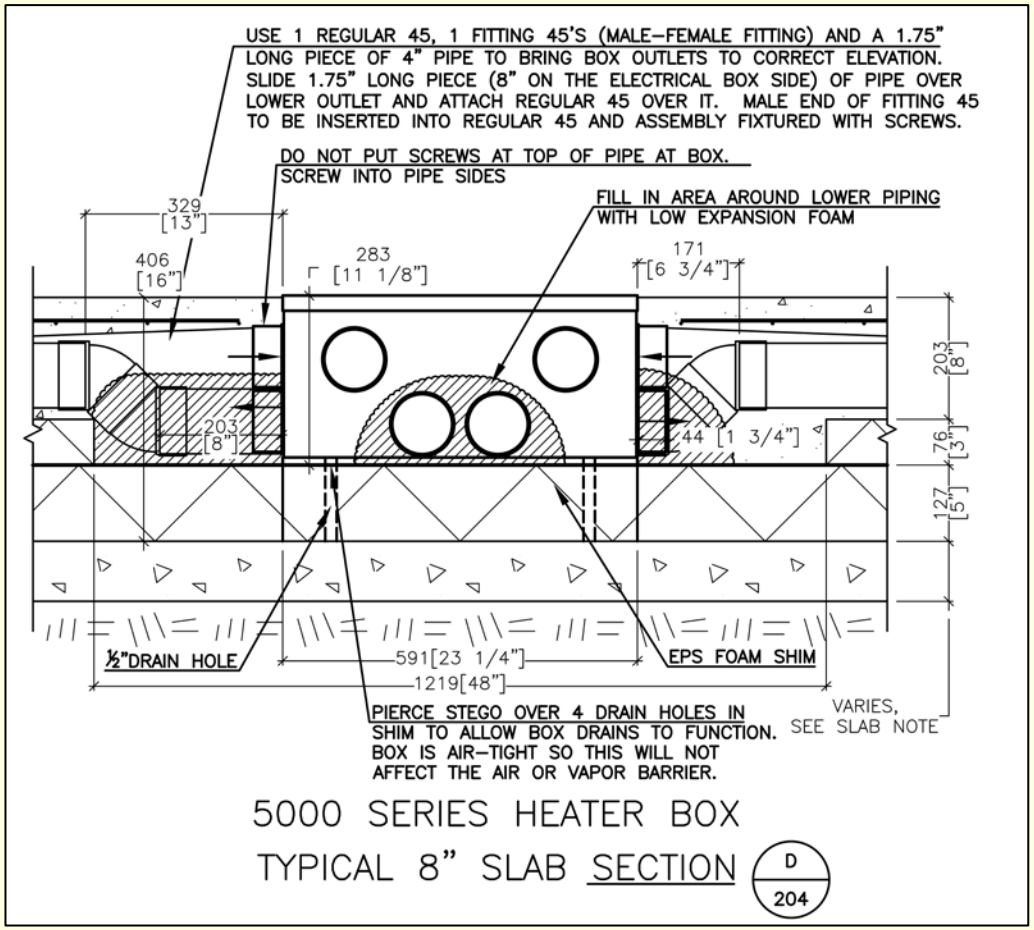


IMPORTANT NOTICE – ALWAYS INSTALL CONDUITS BEFORE AIR PIPING

10' FLEXIBLE CONDUIT	PC. #	SLEEVES USED FOR	CONNECTS TO	NOTES
3/4" FLEX CONDUIT CUT INTO 3 PIECES	1	INSERT POWER	POWER RECEPTACLE BOX ON HEATER	TURNS UP INTO ADJACENT WALL
	2	THERMOSTAT WIRING	THERMOSTAT WIRE INLET ON HEATER BOX	TURNS UP INTO ADJACENT WALL
	3	BOILER INTERLOCK WIRING	BOILER INTERLOCK WIRE INLET ON HEATER BOX	RUNS TO BOILER ROOM THROUGH RIGID CONDUIT UNDER CONCRETE THROUGH CHANNEL CUT INTO TOP LAYER OF EPS
1" FLEX CONDUIT CUT INTO 2 PIECES	1 & 2	OXYGEN BARRIER PEX	WATER SUPPLY AND RETURN LOCATIONS ON HEATER BOX	RUNS TO BOILER ROOM THROUGH RIGID CONDUIT UNDER CONCRETE THROUGH CHANNEL CUT INTO TOP LAYER OF EPS

REFER TO 208B FOR HEATER BOX LOCATION (PLACE HEATER BOX DIRECTLY ON SHIM)

5000 series Heater Box

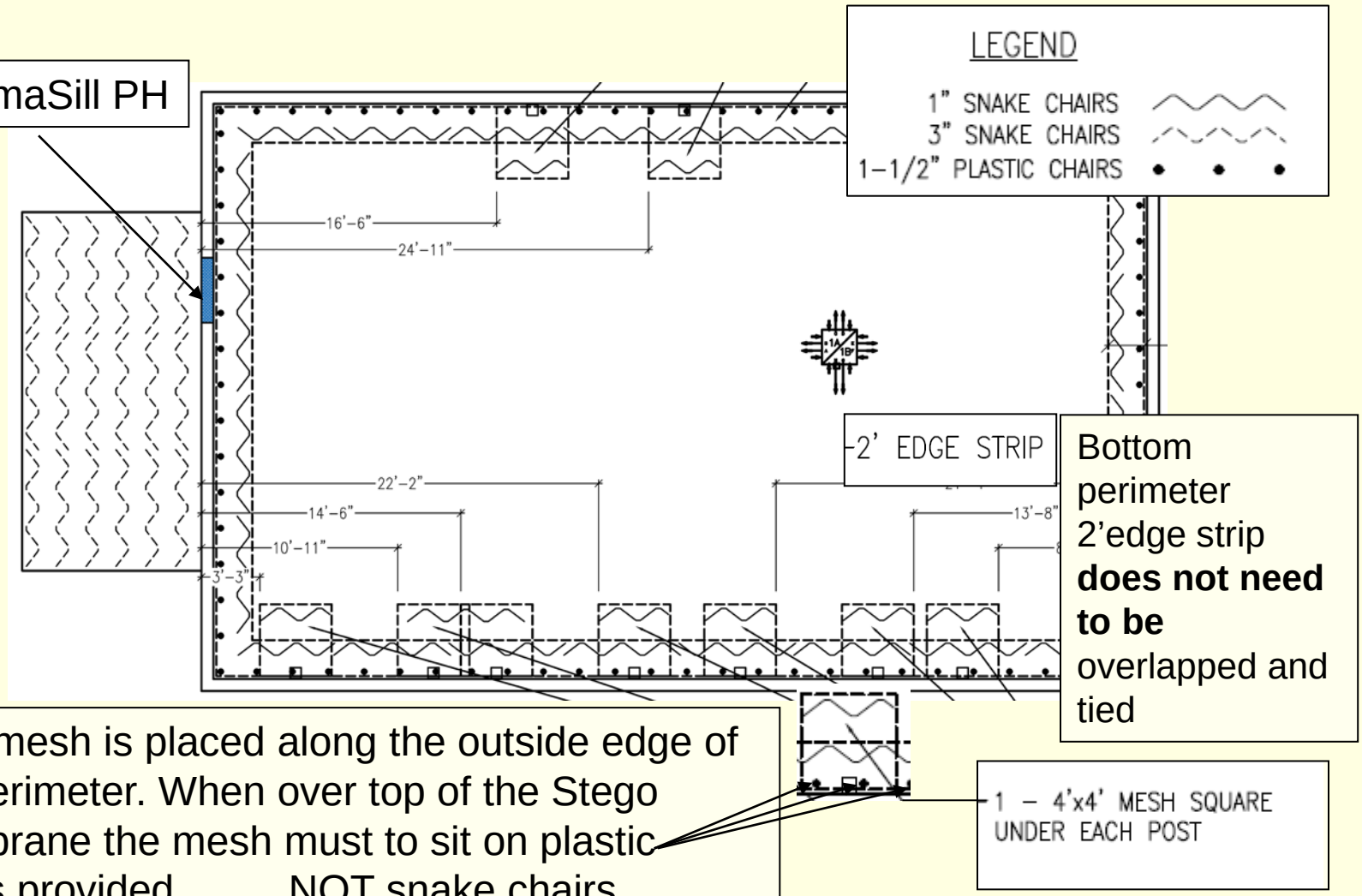


5000 series Heater Box

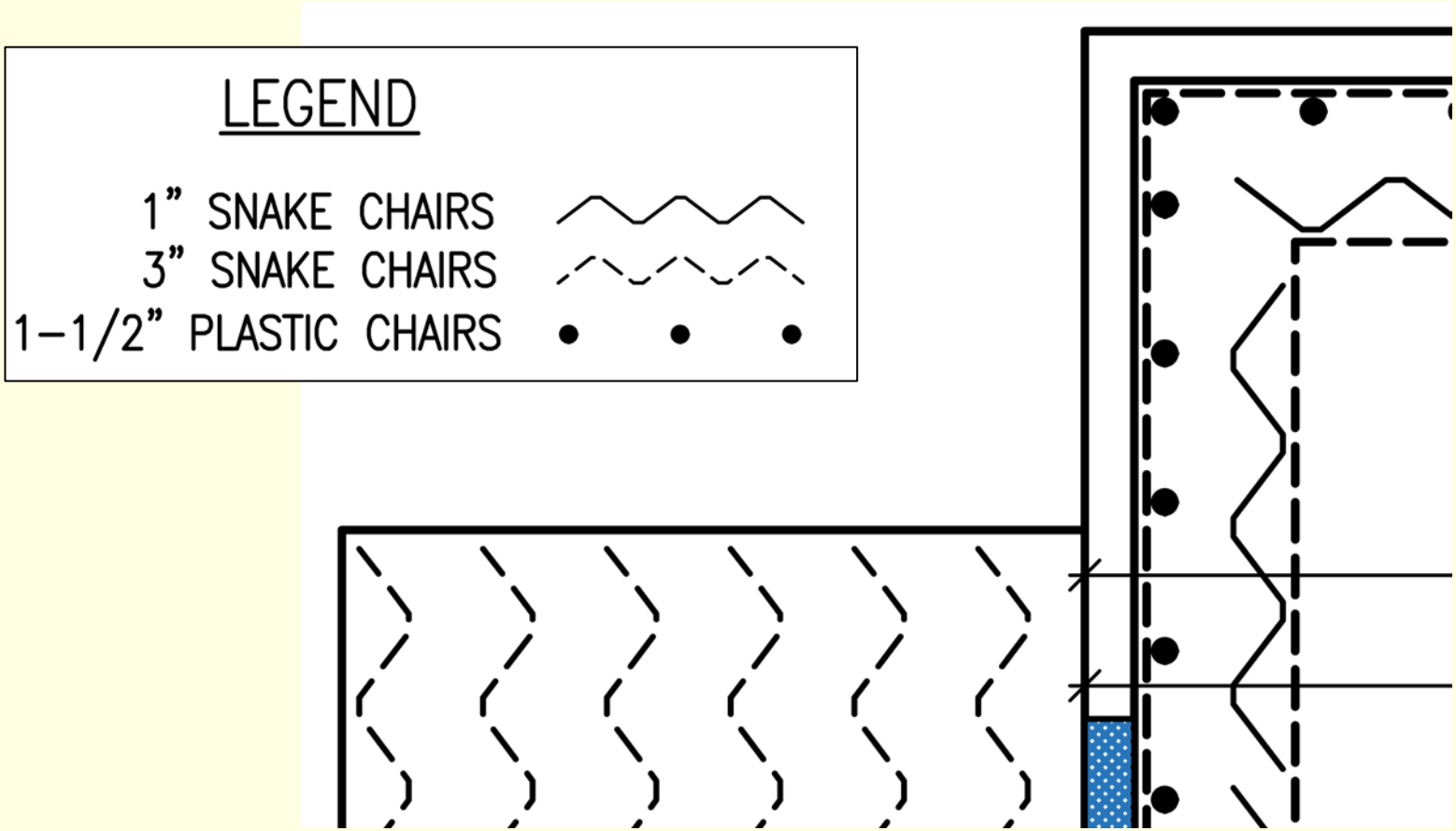
Installing Bottom Mesh

Step 5

Bottom Mesh Layout



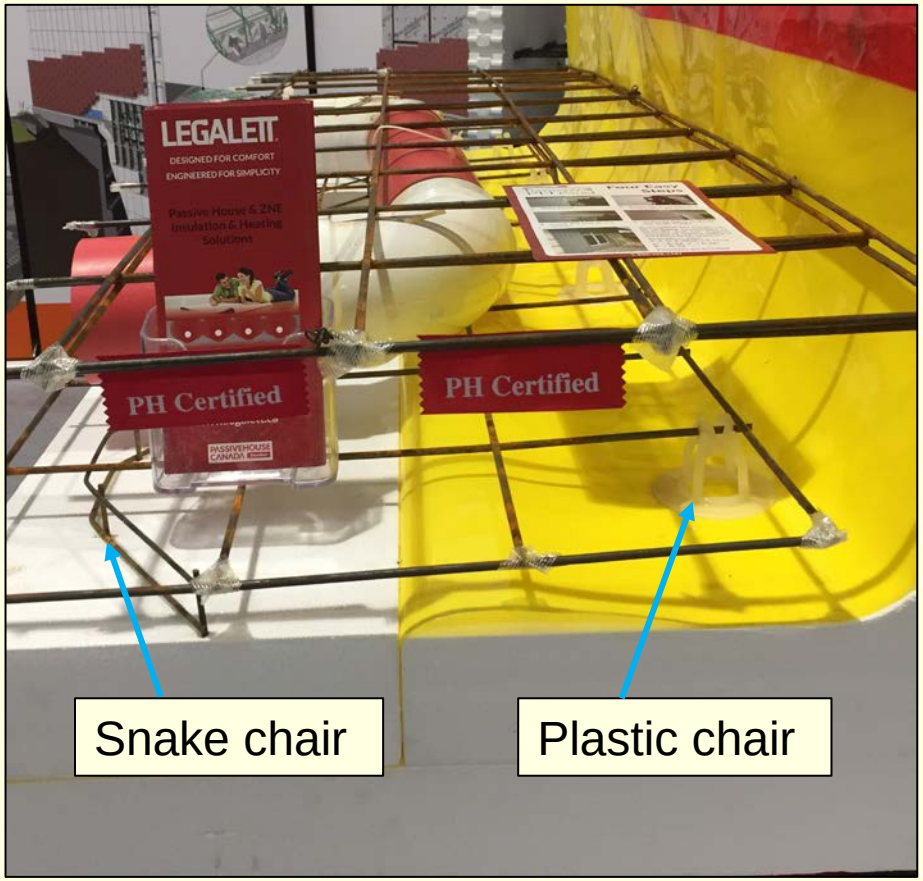
Place Snake and Plastic Chairs



Base Layer Perimeter Reinforcement

Bottom mesh sits on 1 row of snake chairs and 1 row of plastic chairs where it is over top of the Stego Membrane

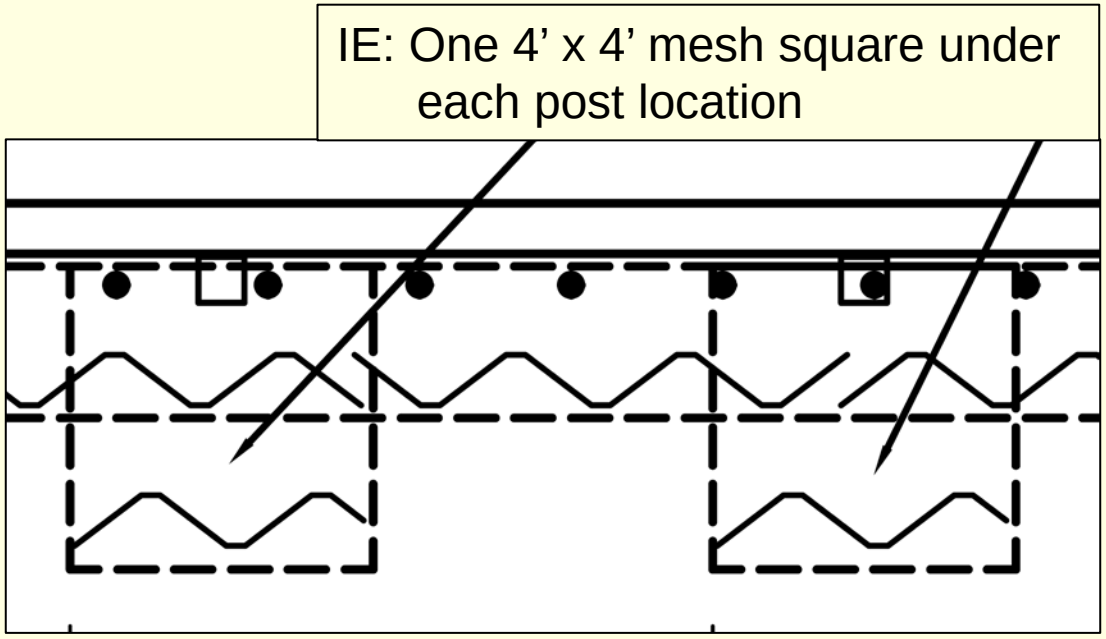
Do not overlap the mesh



Bearing Wall Reinforcement

- **Install reinforcement under any bearing walls with supplied chairs, as per design provided.**

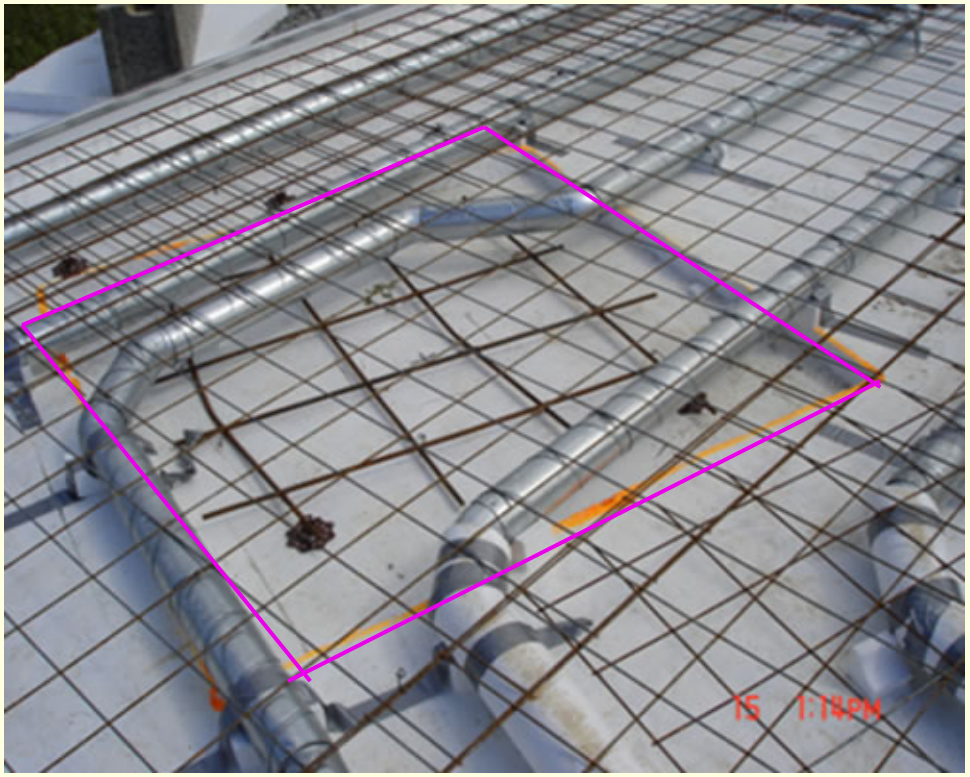
Point Load Reinforcement



Install reinforcement under any point loads as per drawings provided.

Point Load Reinforcement

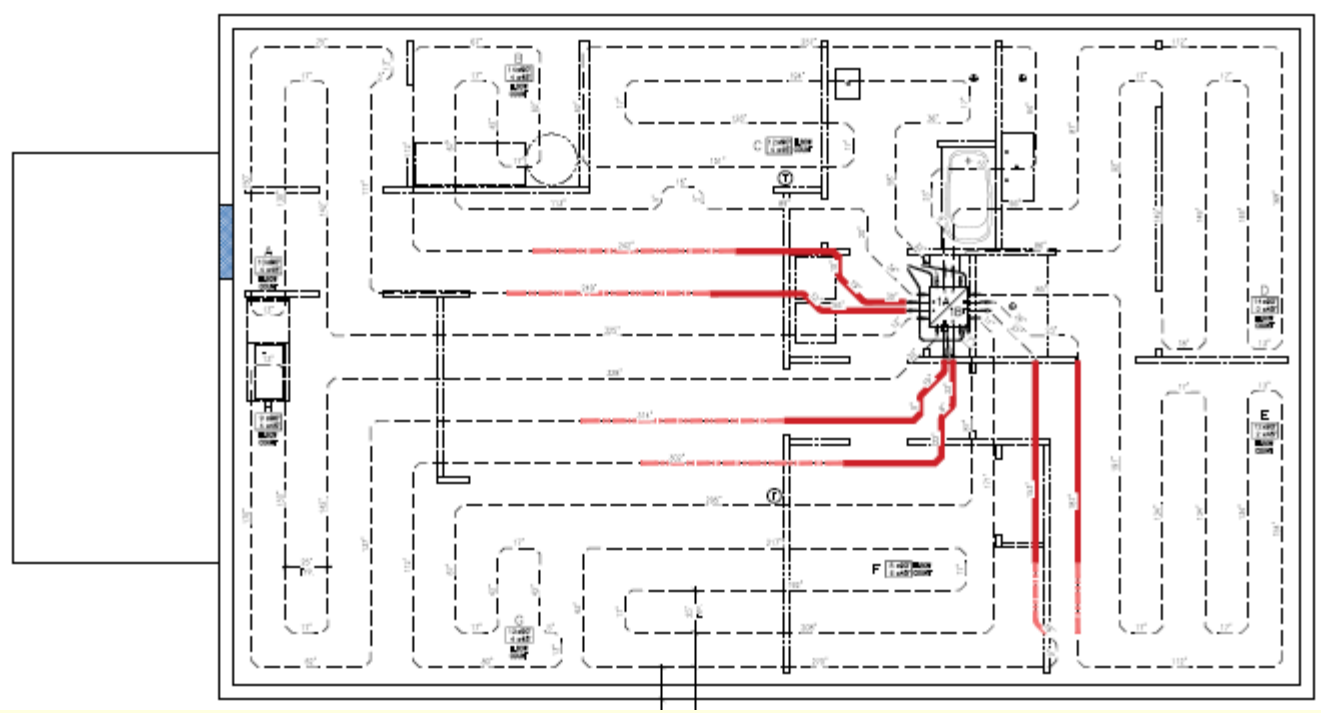
Higher loads up to 100,000lbs can be designed for by increasing concrete thickness and amount of reinforcing in those areas.

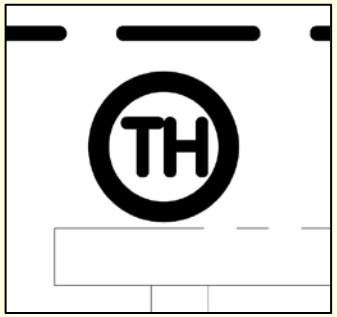


Installing The Heating System

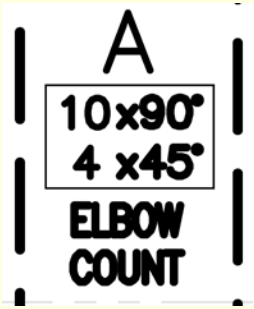
Step 6

Pipe Layout

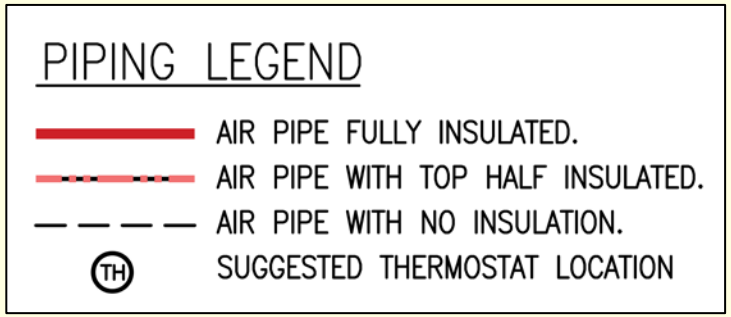




Thermostats are located

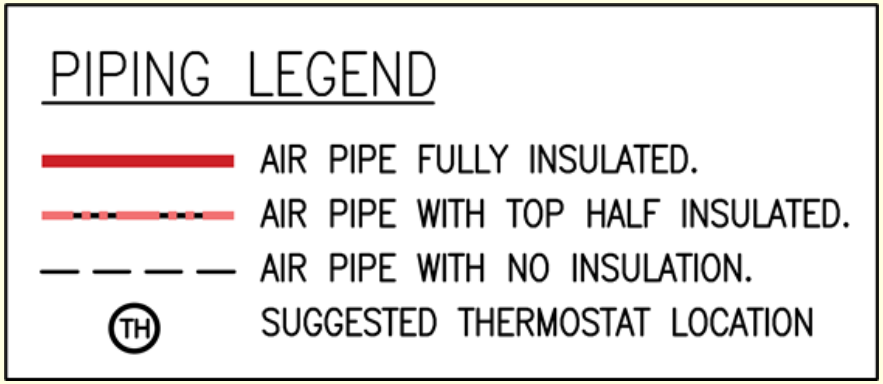


Elbow Qty per loop is shown



Pipe Insulation Layout

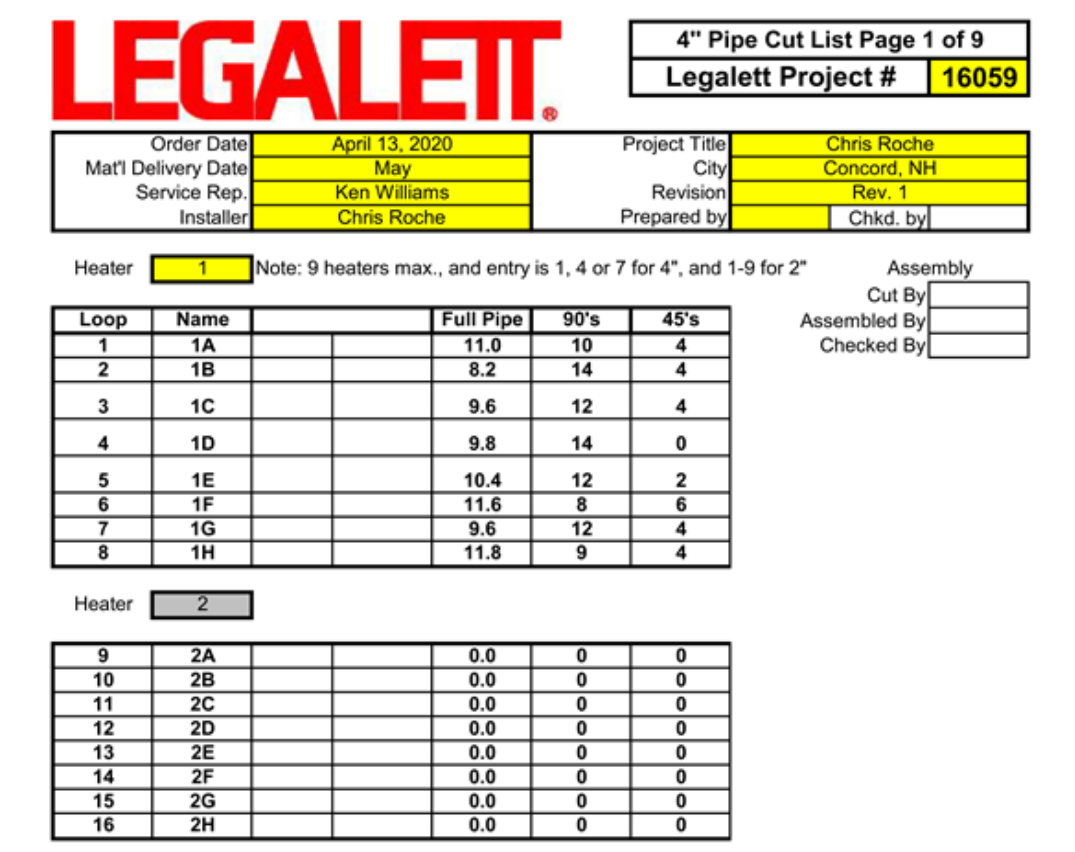
- **The shop drawings will indicate where pipe insulation is required.**
- **Refer to the legend for where full insulation is needed or half insulation is needed.**



Pipe Summary Number Of Loops

A Pipe Cut List accompanies every project.

The cover page summarizes the runs



LEGALETT

4" Pipe Cut List Page 1 of 9

Legalett Project # 16059

Order Date	April 13, 2020	Project Title	Chris Roche
Mat'l Delivery Date	May	City	Concord, NH
Service Rep.	Ken Williams	Revision	Rev. 1
Installer	Chris Roche	Prepared by / Chkd. by	

Heater 1 Note: 9 heaters max., and entry is 1, 4 or 7 for 4", and 1-9 for 2"

Assembly
Cut By
Assembled By
Checked By

Loop	Name			Full Pipe	90's	45's
1	1A			11.0	10	4
2	1B			8.2	14	4
3	1C			9.6	12	4
4	1D			9.8	14	0
5	1E			10.4	12	2
6	1F			11.6	8	6
7	1G			9.6	12	4
8	1H			11.8	9	4

Heater 2

9	2A			0.0	0	0
10	2B			0.0	0	0
11	2C			0.0	0	0
12	2D			0.0	0	0
13	2E			0.0	0	0
14	2F			0.0	0	0
15	2G			0.0	0	0
16	2H			0.0	0	0

Pipe Cut List

There is a pipe cut list for each loop with the individual lengths of each piece and the type of elbow that is needed at each connection

LEGALETT

4" Pipe Cut List Page 2 of 9	
Legalett Project #	16059

Order Date	April 13, 2020	Project Title	Chris Roche
Mat'l Delivery Date	May	City	Concord, NH
Service Rep.	Ken Williams	Revision	Rev. 1
Installer	Chris Roche	Prepared by / Chkd. by	

Component	Cut Length inches	Cut Length mm	Joining Fitting	Cut/ Assembled
1	56	1,416		
2			45°	
3	12	308		
4			45°	
5	249	6,315		
6			90°	
7	117	2,968		
8			90°	
9	5	128		
10			90°	
11	13	320		
12			90°	
13	75	1,898		
14			90°	
15	150	3,802		
16			90°	
17	13	320		
18			90°	
19	130	3,294		
20			90°	
21	17	443		
22			90°	
23	142	3,599		
24			90°	
25	325	8,254		
26			45°	
27	13	323		
28			45°	
29	10	263		
30				

Assembly

Cut By	
Assembled By	
Checked Prior to Shipping By	

Loop	1A
Pipe	11.0 pcs.
90's	10
45's	4

Initial Cuts		
inches	mm	fitting

Plastic Pipe Cutting Station

Set up a work area close to the slab to cut all pipe lengths as per the

“Cut List” provided.

Measure cut length from small end of pipe. When remaining bell end pipe is too short hammer it on to next full length with rubber mallet and continue cutting for no waste

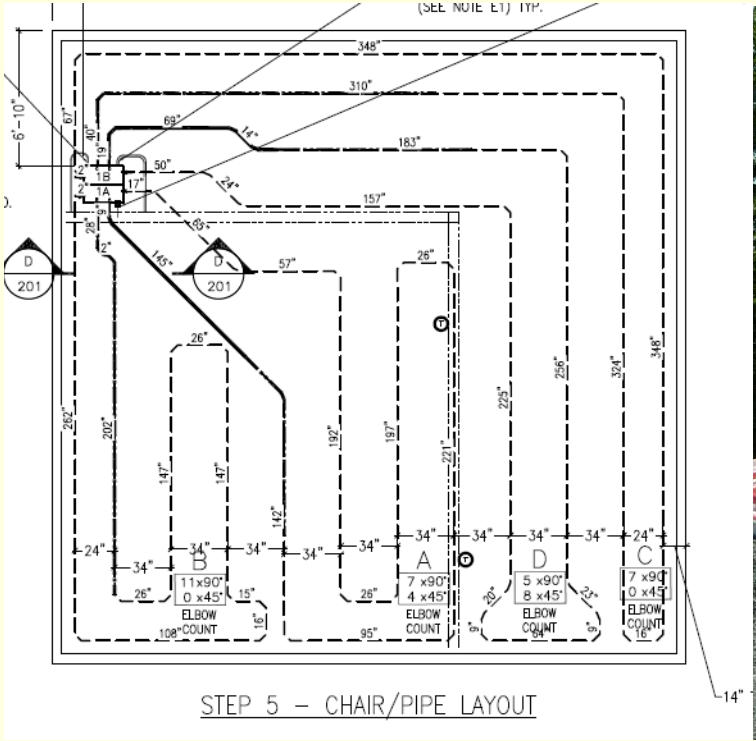
Use a very sharp fine tooth (80 tooth) carbide trim blade to prevent burring for plastic pipe.

Placing Pipe

- **Use a rubber mallet to attach elbows and fittings to the pipe.**

Placing Pipe

- **Once all the pipe is in place adjust the position of the loops so they match the provided layout.**

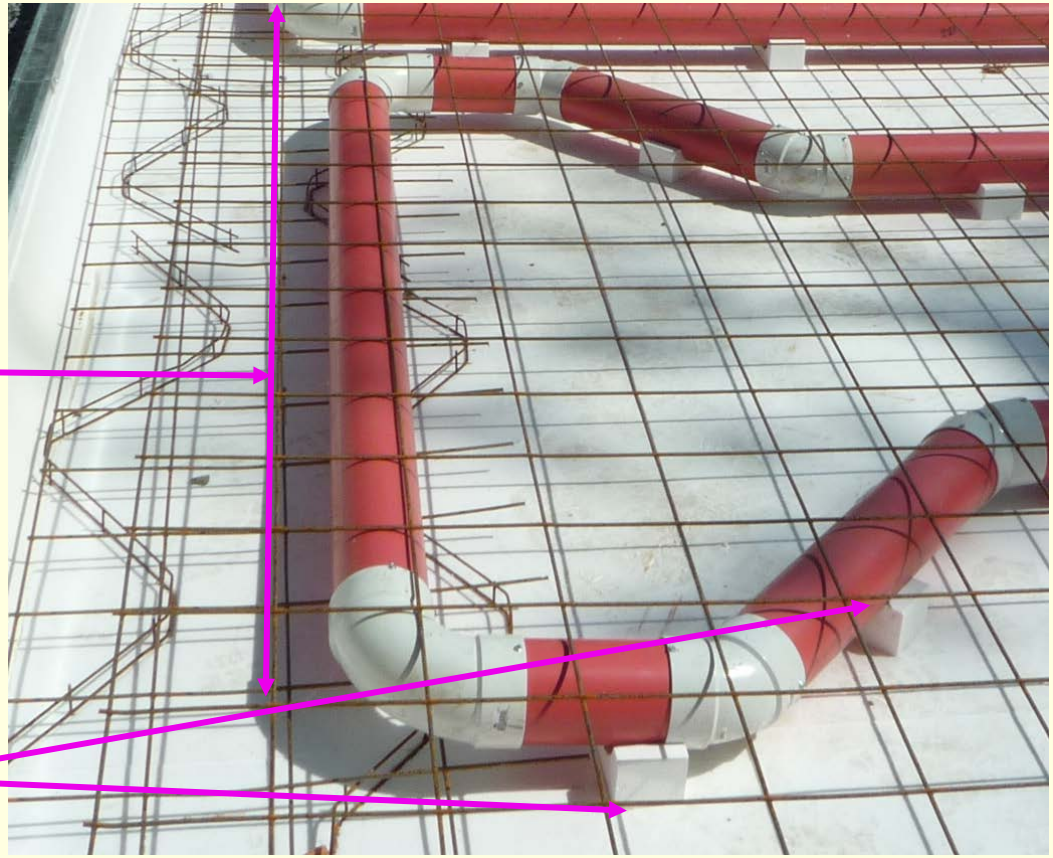


Placing 4” Pipe

- **Secure elbows and connectors to the pipe with 2 screws**
- **The use of duct tape or sealant is *not required*.**

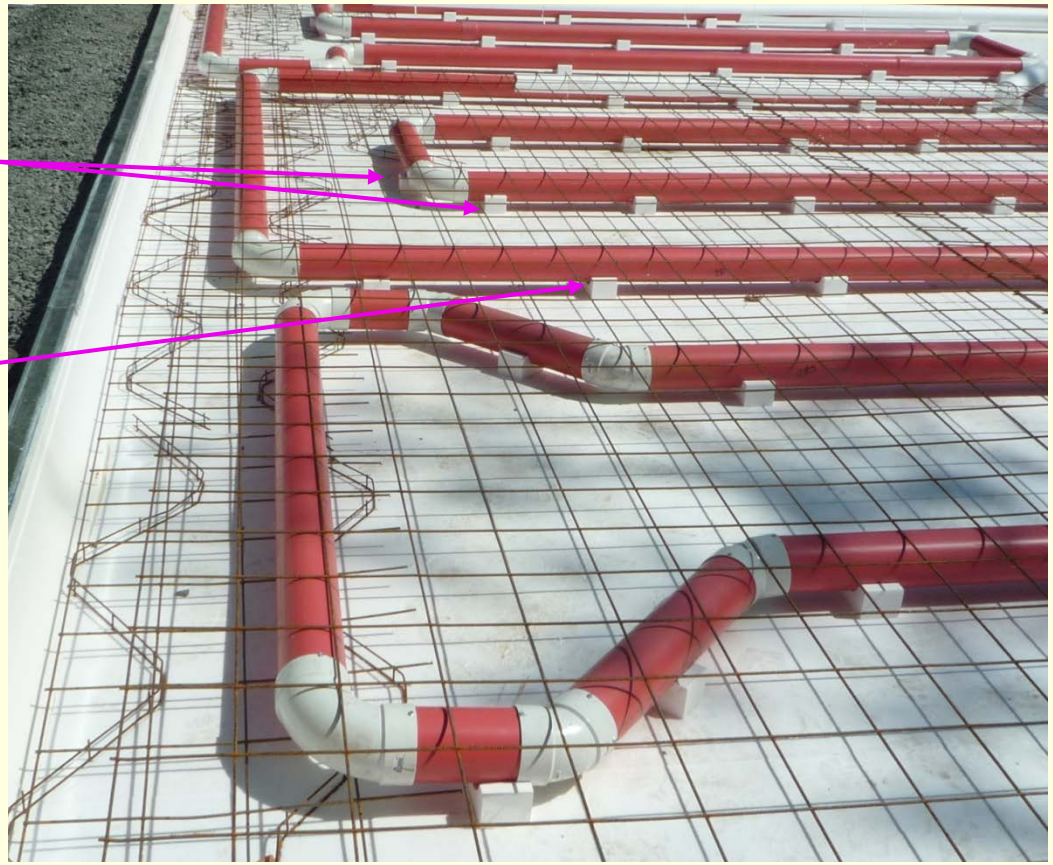
Pipe Support

- **The pipe is supported at the perimeter on the wire mesh below**
- **Foam Cradles in the infield every 3ft and on each side of a corner**



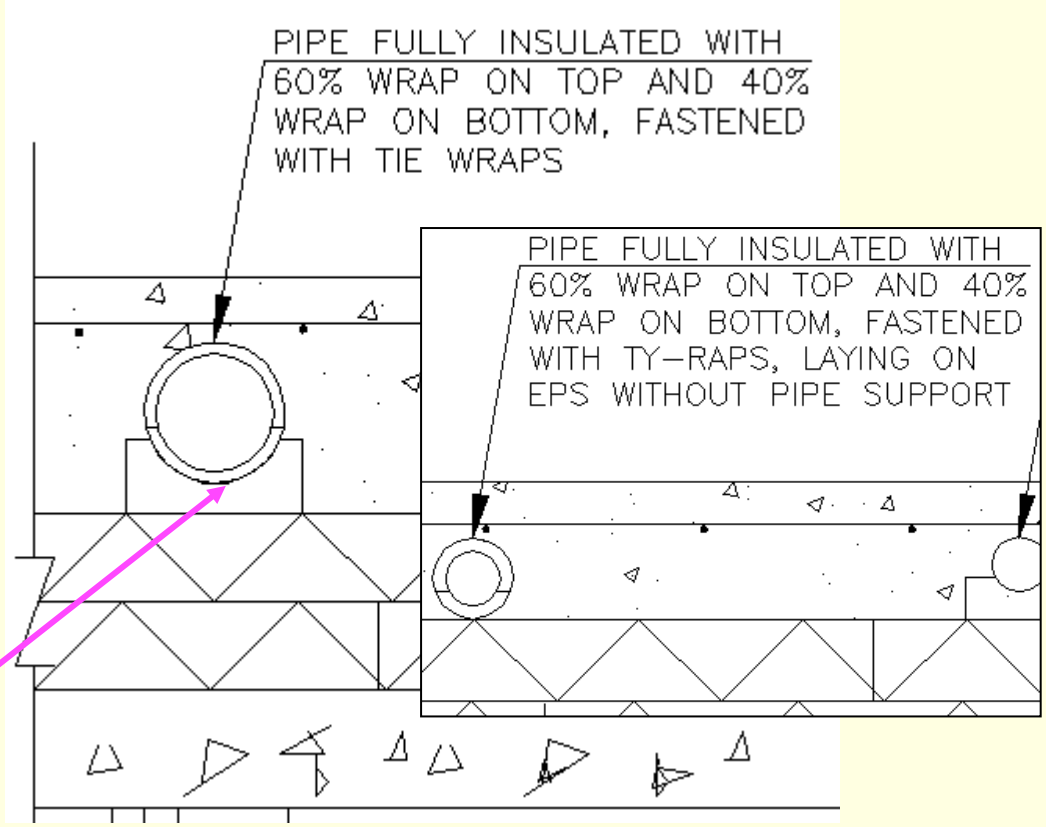
Pipe Support

- **Support each side of an elbow,**
- **Support every 3’ along the pipe with foam chairs provided.**
- **Pipe chairs not required over mesh strips for 4” pipe**



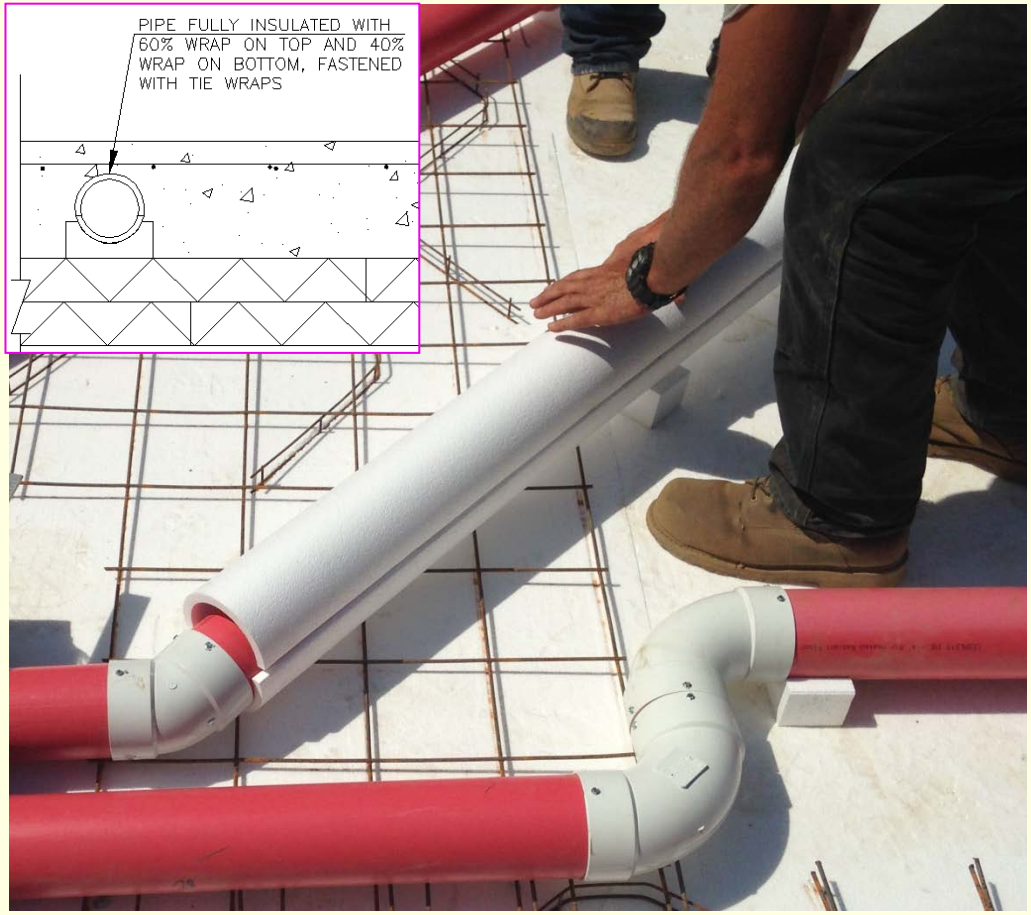
Complete Piping Insulation

- **Place the larger pipe cap on the top and the smaller pipe cap on the bottom of the supply pipes as per drawings, and secure with tie wraps provided.**
- **Use cradle supports where shown on plans**



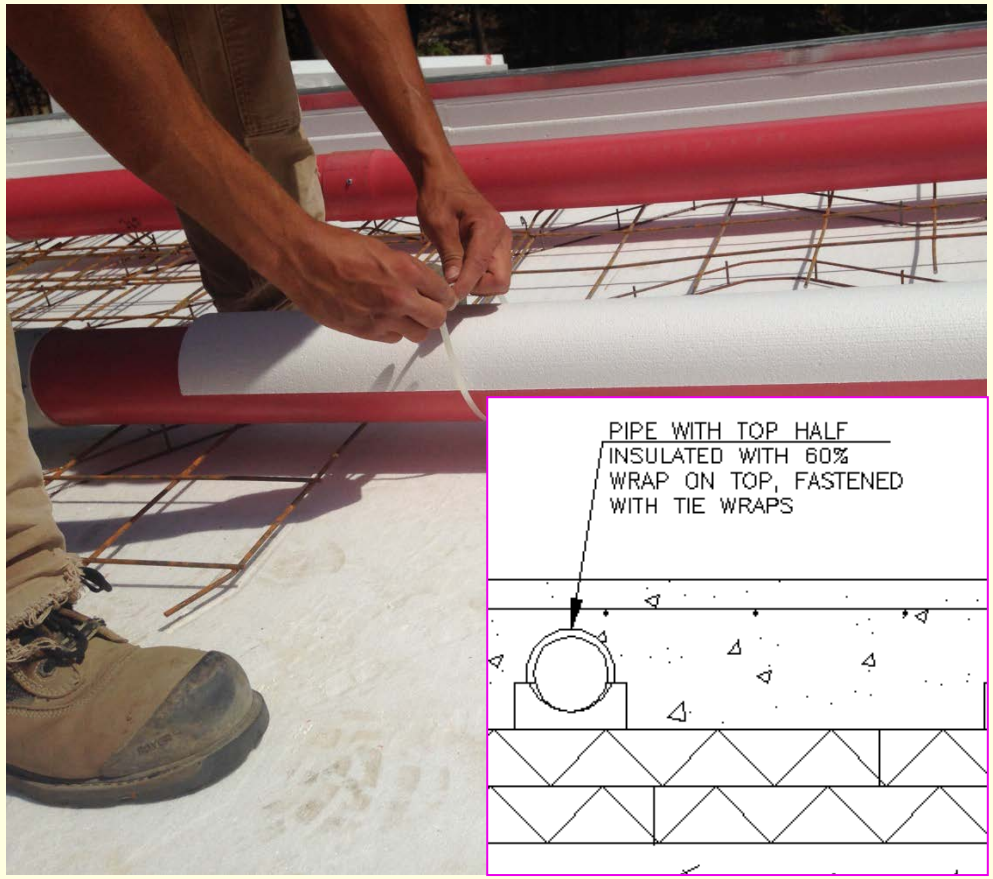
Complete Piping Insulation

- **Install pipe insulation over the top (60%) and bottom (40%) of supply pipes as per drawings, and secure with tie wraps provided.**
- **Large caps (60%) go on the top and small caps (40%) on the bottom**



Top Only Piping Insulation

- **Install pipe insulation over the top (60%) of supply pipes as per drawings, and secure with tie wraps provided.**
- **Large cap (60%) are only used on the top**



Do Not Insulate The Elbows

- **There is no need to insulate over the elbows - only insulate the straight pipe.**
- **Pipe capping provided does not include material for the elbows**

Seal Off Unused Inlets/Outlets

- **Ensure any unused inlets/outlets on the sheet metal furnace box are sealed off.**

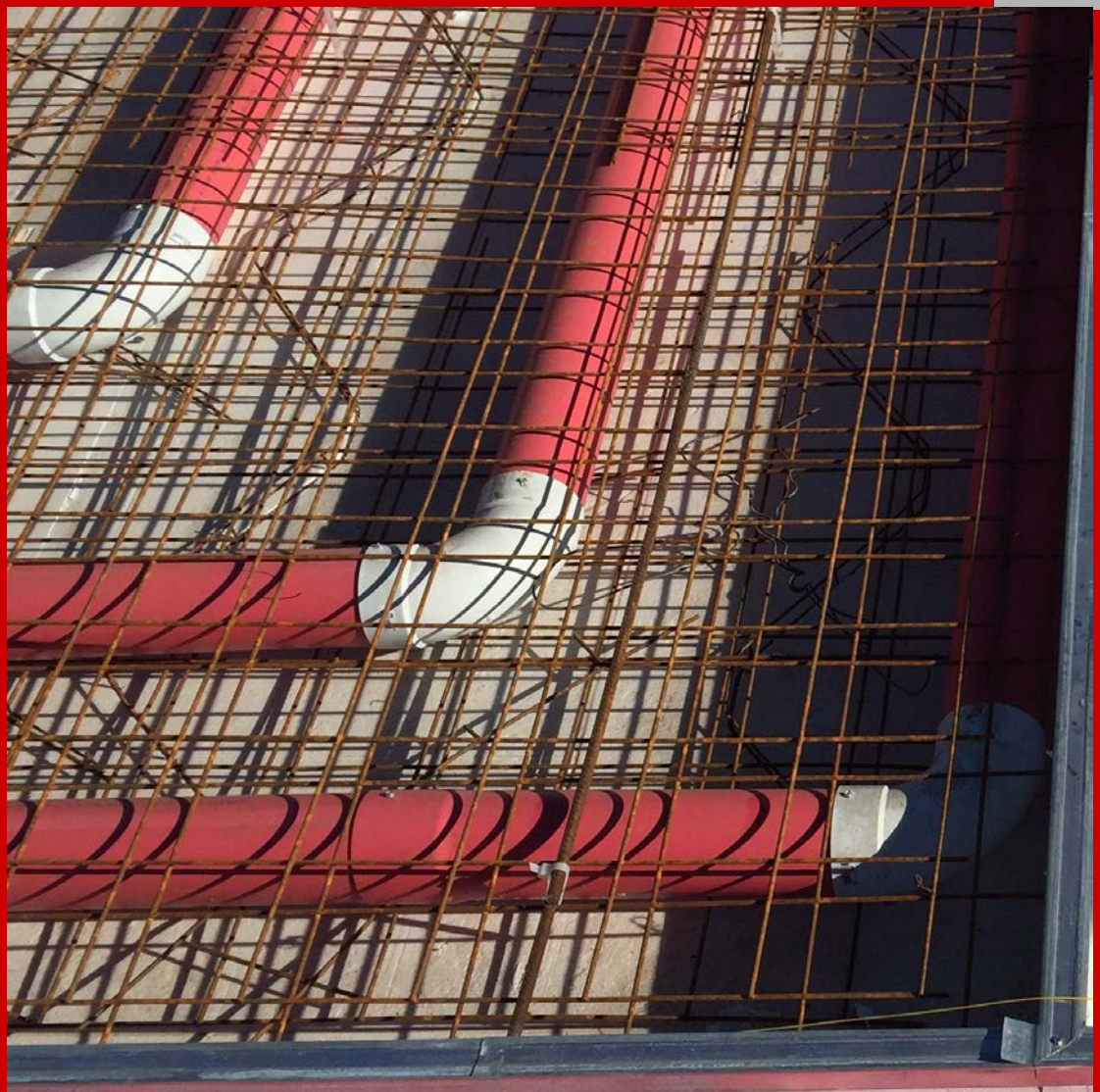
Slab Penetrations

- **Plumbing for drains can be formed around with a small wood form stop or a solid EPS block out that can be removed or drilled through later for easy access later.**

Slab Penetration Details

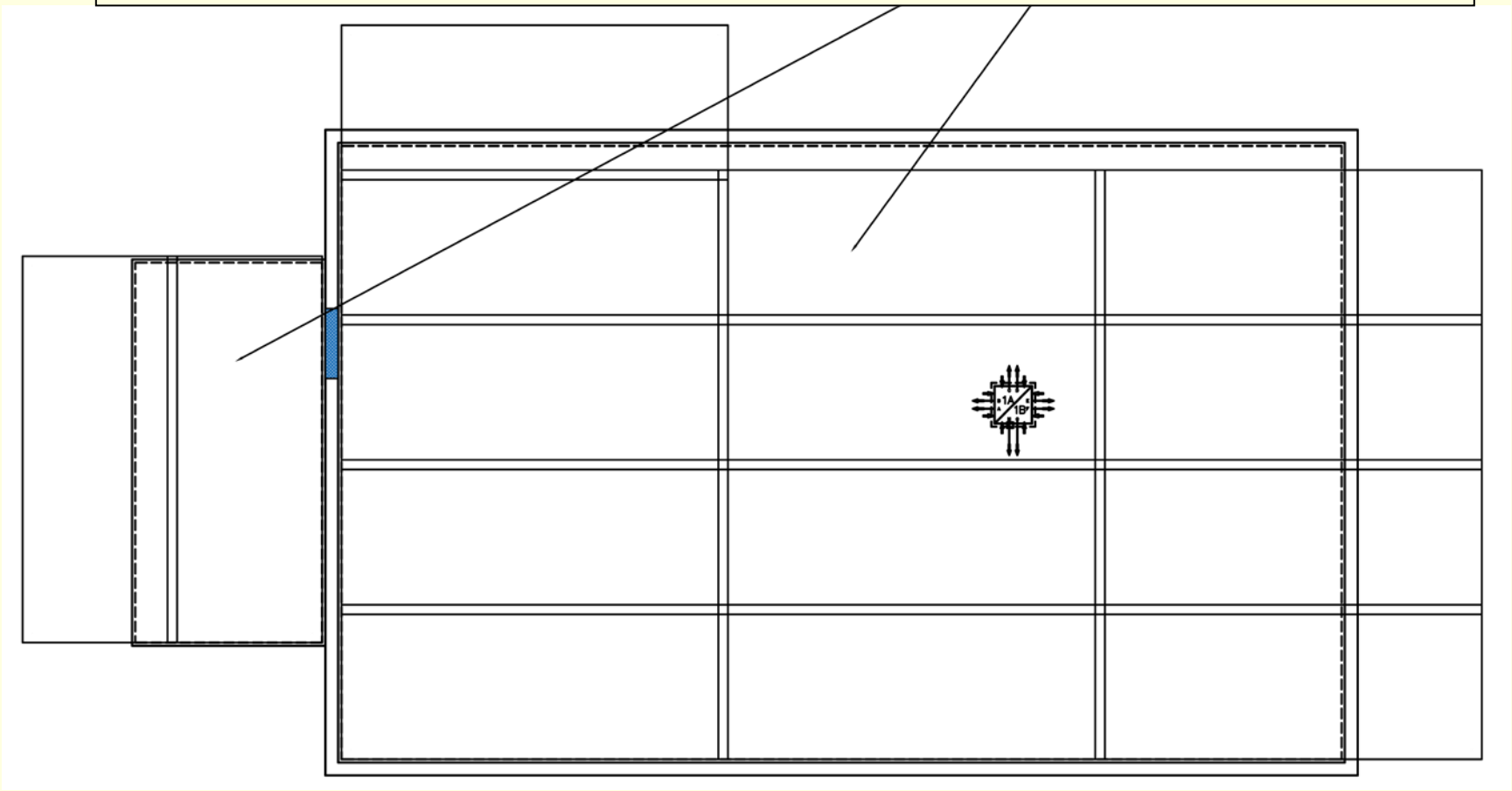
- **Detailed instructions are provided for:**
- **Recessed showers**
- **Elevator pits**
- **Sump pits**
- **Containment pits**
- **Sewage ejectors**
- **Radon Gas venting**
- **Trench drains**

Placing Upper Reinforcing Steel



Step 7 Continuous Top Mesh Layout

Continuous layer of mesh.
Overlap mesh 150mm (6”) (1 square) at all edges and tie with tie wire.
Use cut-offs from Full Sheets to fill in gaps



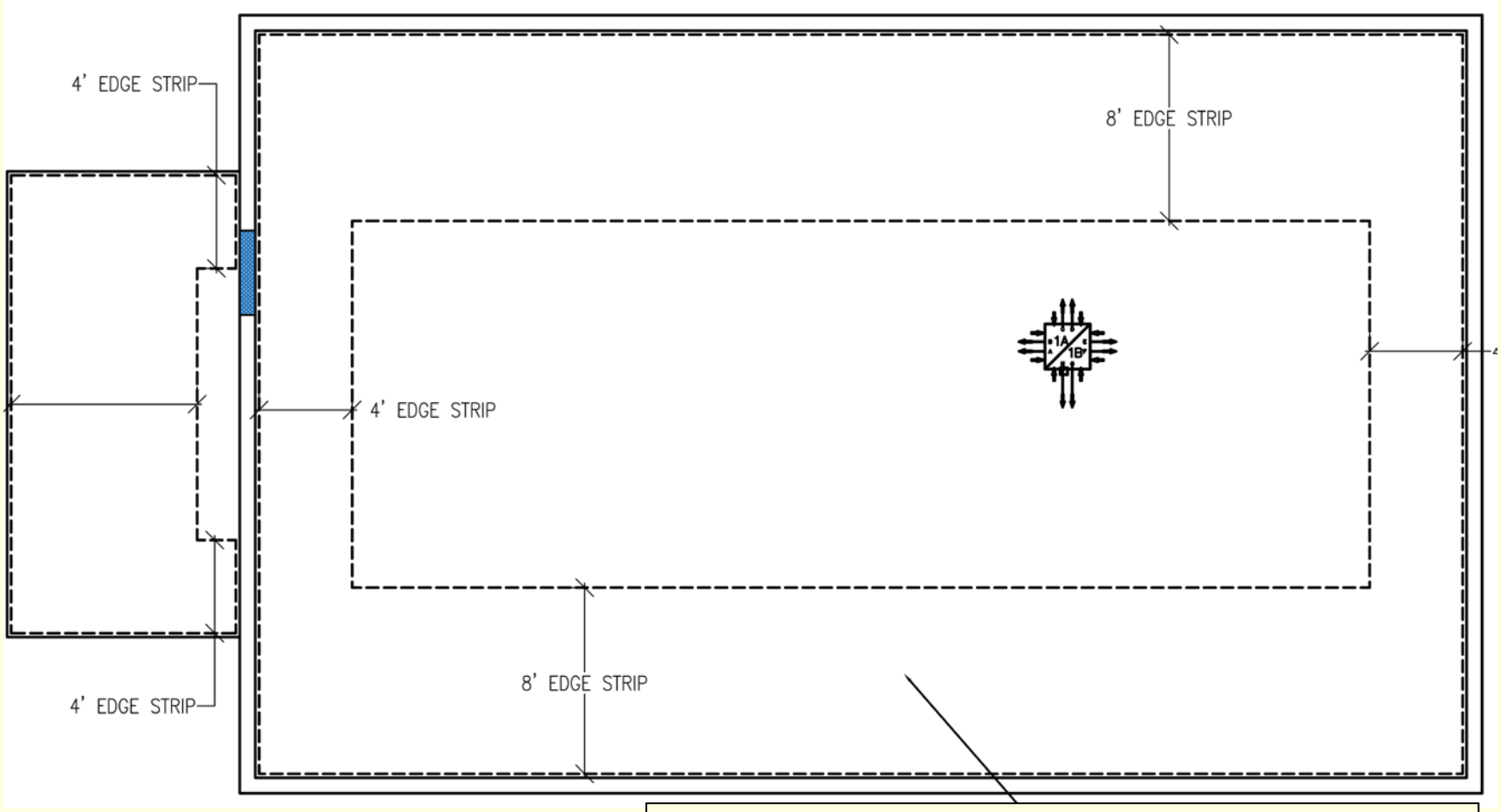
Top Reinforcing Mesh

- **Install top layer of reinforcing mesh on top of the heating pipe.**

Top Reinforcing Mesh

- **Overlap the mesh sheets by 6” (one square) in all directions and tie with provided metal ties at 2’ o.c.**

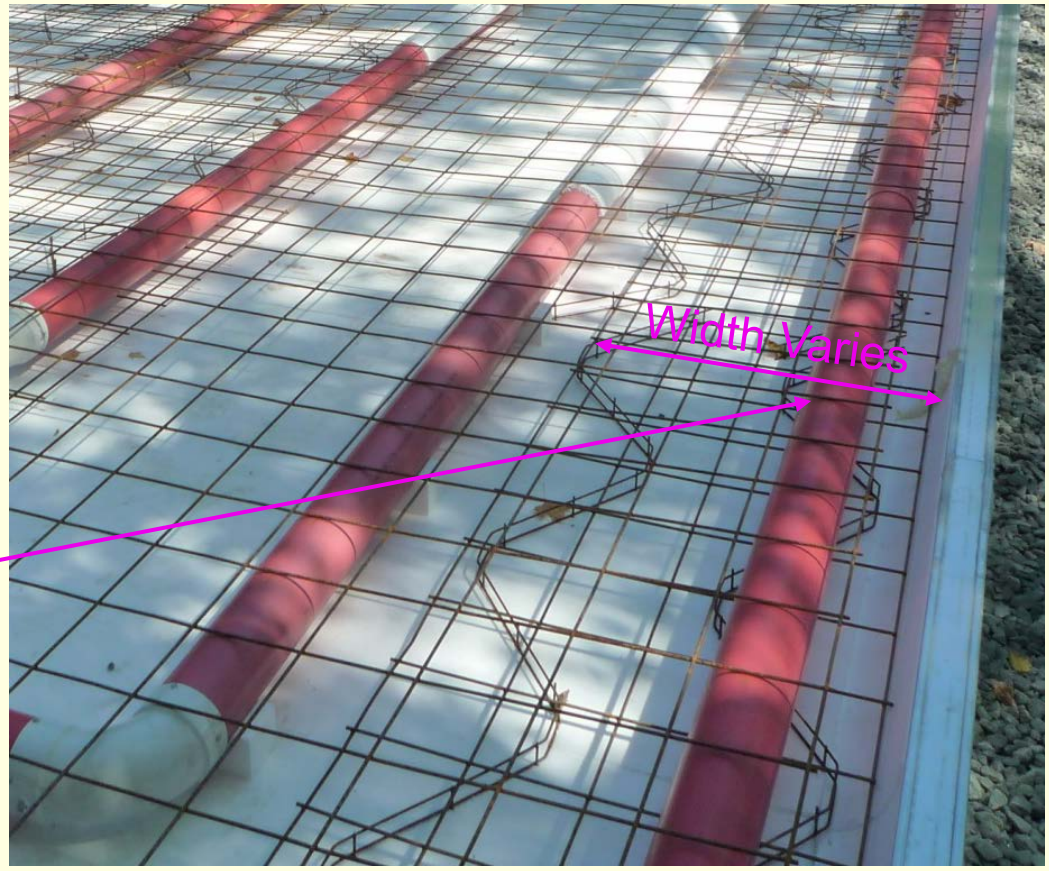
Step 8 Top Perimeter Mesh Strip Layout



Do not overlap perimeter edge mesh strips

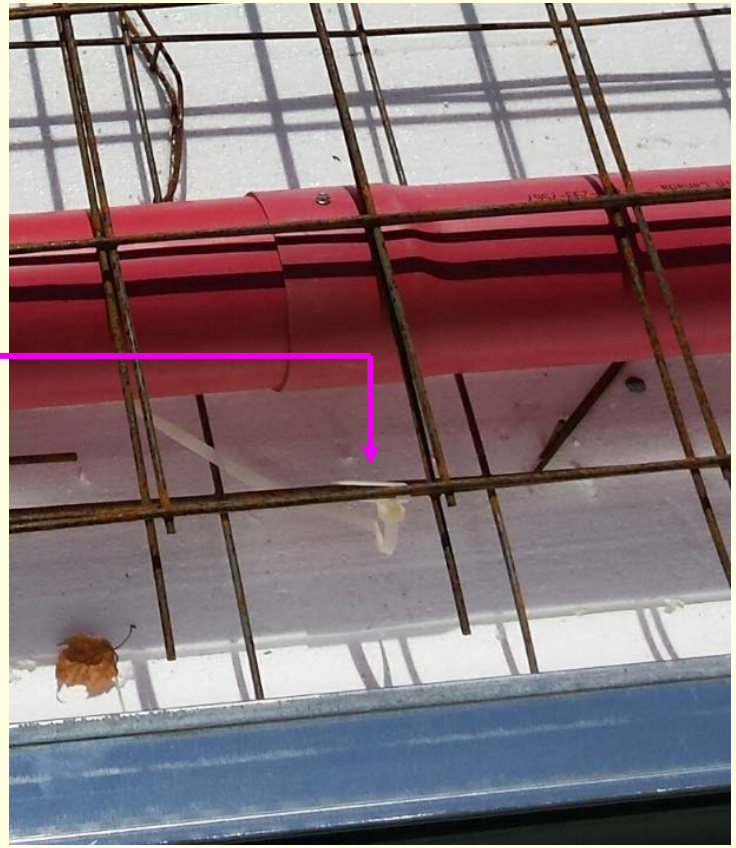
Top Perimeter Reinforcing Mesh

- **Add 6”x 6” 6/6 mesh all around the perimeter.**
- **Width can be found on the plans provided and will vary by project**



Perimeter Reinforcing Mesh

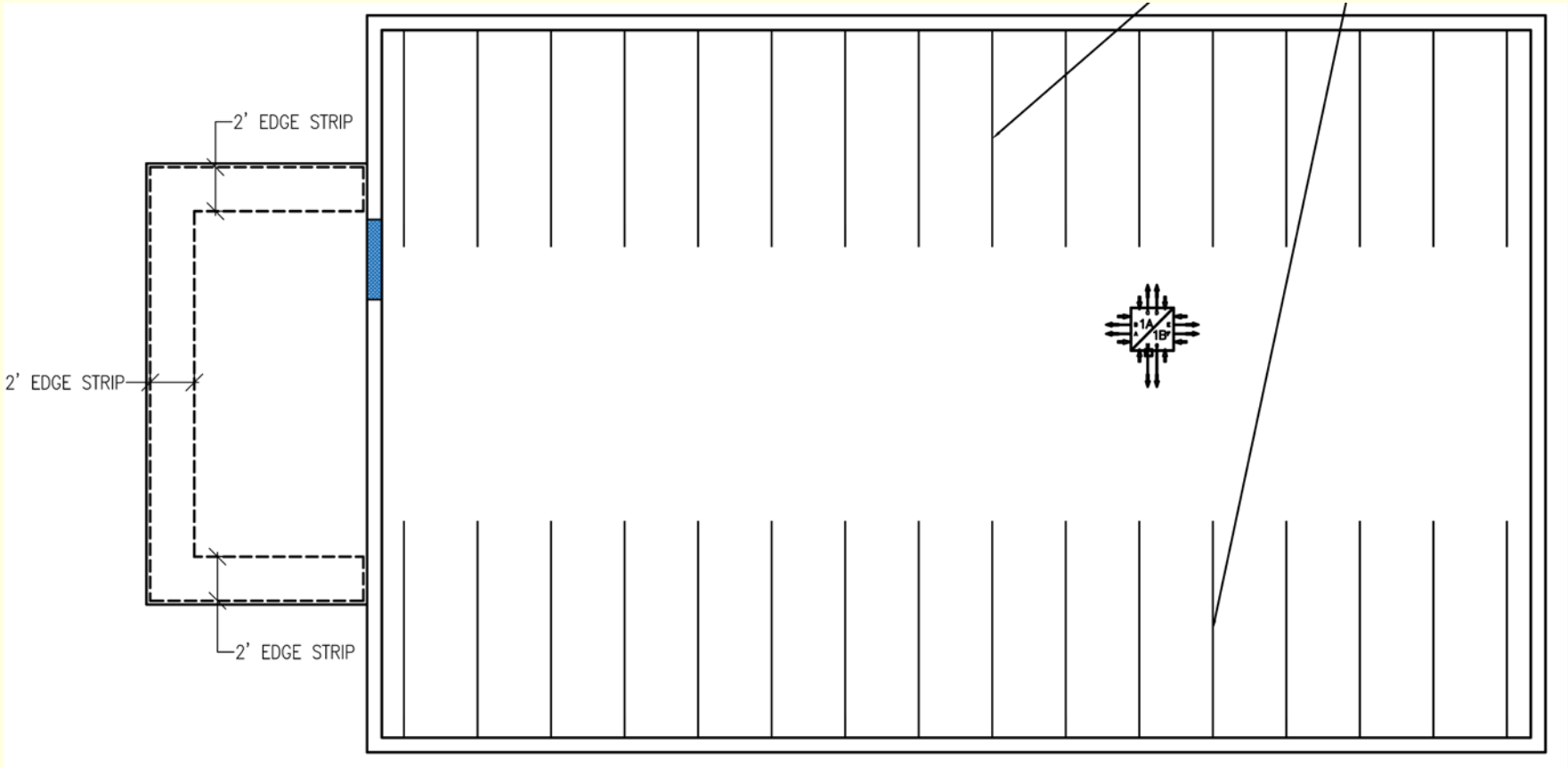
- **Tie top and bottom mesh layers together at the perimeter 48” O.C, with supplied plastic tie wraps.**
- * This is required to prevent the edges of the mesh from curling up when walking on it during concrete placement.



- **Tie interior mesh and any rebar together with metal wire ties.**

Step 9 Top Steel Layout

10m (#4) Bars x 3000 (10’-0”) @ 1000 (40”) O.C.



Place and Finish Concrete

Project Specific Training

Legalett's engineers provide personalised project specific on-line video training for each sold project.

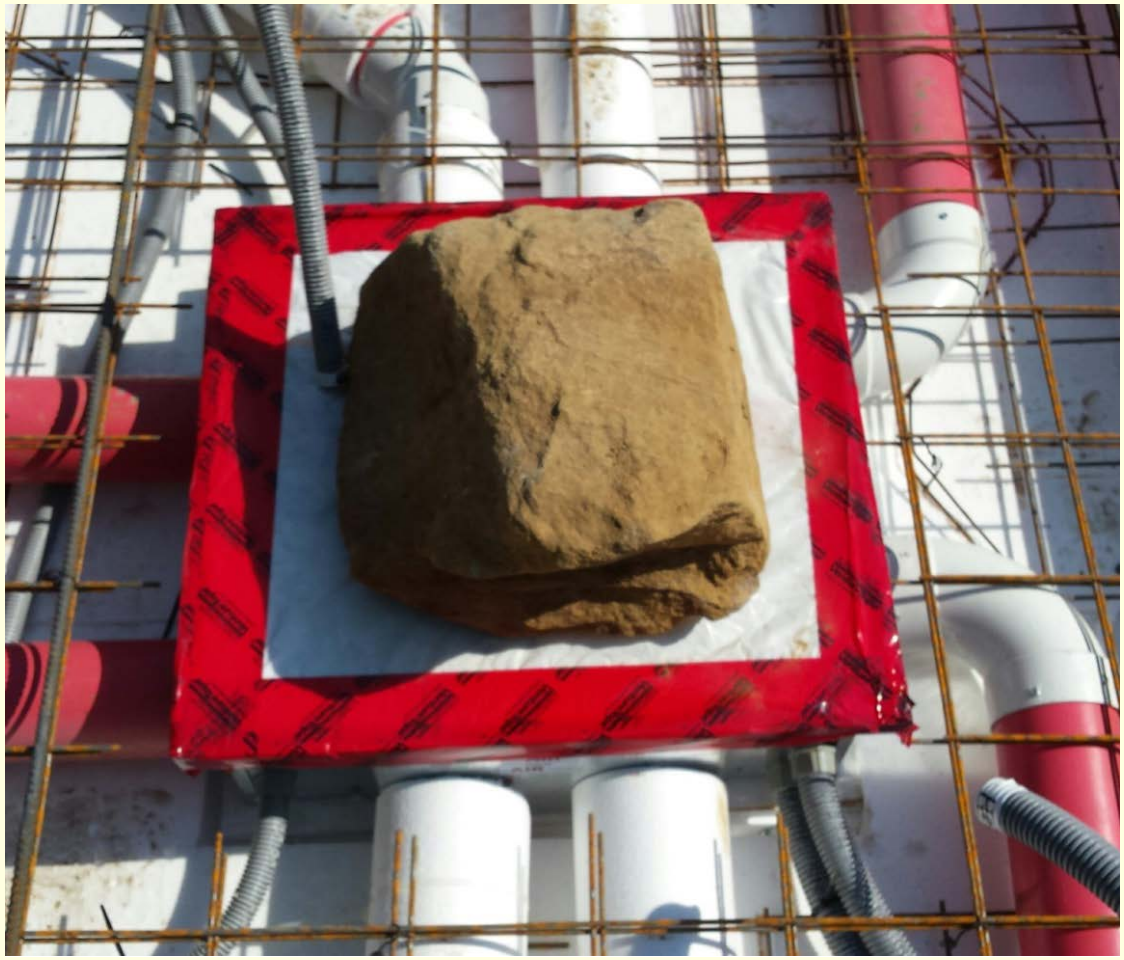
Call Legalett at (866)299-7567 ext 101 to learn more about why we may be the solution you have been looking for.

Thank you for your time and attention

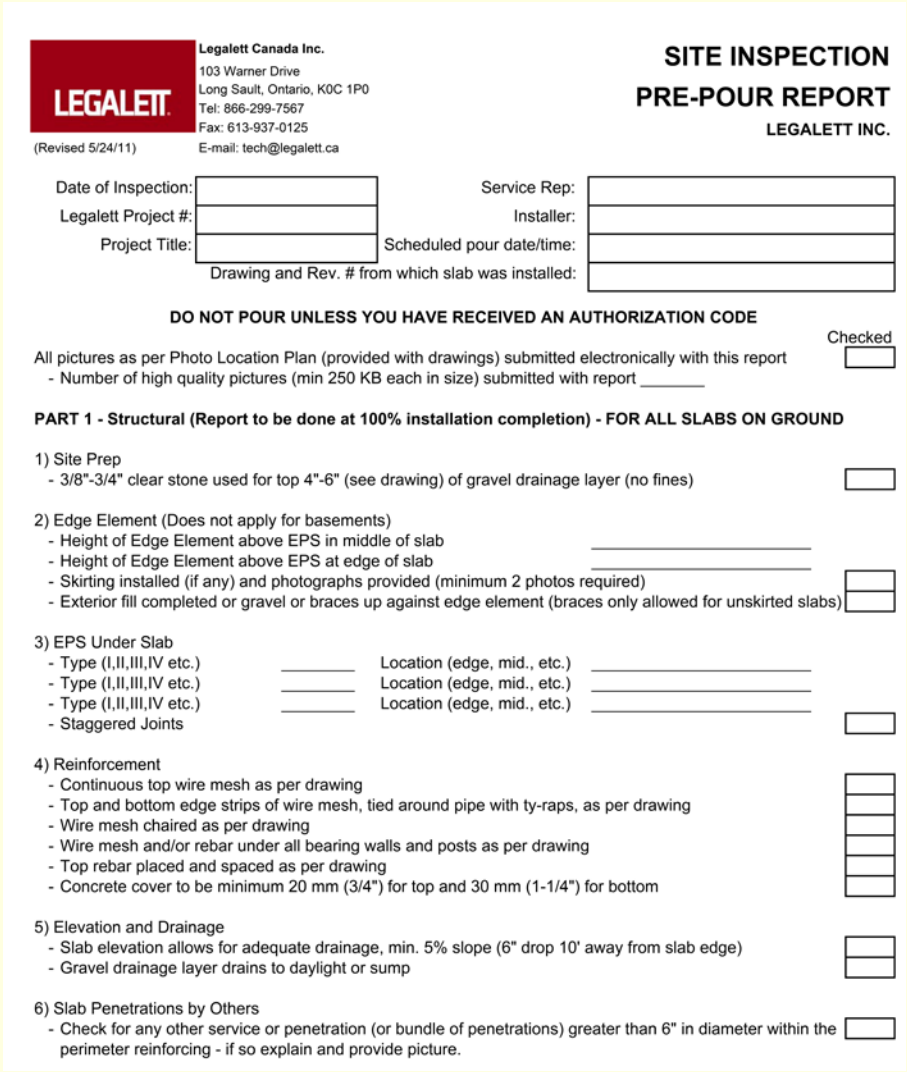
Getting Ready To Pour

Seal lid with poly and tape

Weigh down id to keep from floating



Pre Pour Checklist



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E-mail: tech@legalett.ca

(Revised 5/24/11)

SITE INSPECTION
PRE-POUR REPORT
LEGALETT INC.

Date of Inspection: ____ Service Rep: ____
Legalett Project #: ____ Installer: ____
Project Title: ____ Scheduled pour date/time: ____
Drawing and Rev. # from which slab was installed: ____

DO NOT POUR UNLESS YOU HAVE RECEIVED AN AUTHORIZATION CODE

Checked

All pictures as per Photo Location Plan (provided with drawings) submitted electronically with this report ☐
- Number of high quality pictures (min 250 KB each in size) submitted with report _____

PART 1 - Structural (Report to be done at 100% installation completion) - FOR ALL SLABS ON GROUND

1) Site Prep
- 3/8"-3/4" clear stone used for top 4"-6" (see drawing) of gravel drainage layer (no fines) ☐

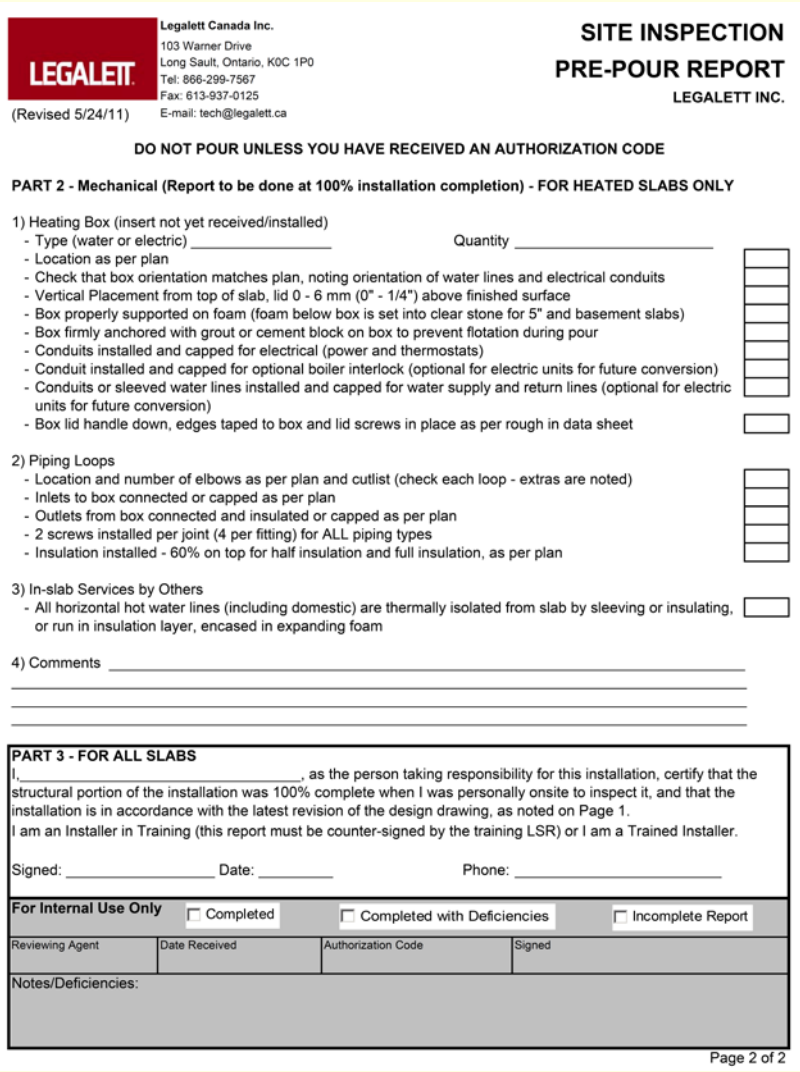
2) Edge Element (Does not apply for basements)
- Height of Edge Element above EPS in middle of slab _____
- Height of Edge Element above EPS at edge of slab _____
- Skirting installed (if any) and photographs provided (minimum 2 photos required) ☐
- Exterior fill completed or gravel or braces up against edge element (braces only allowed for unskirted slabs) ☐

3) EPS Under Slab
- Type (I,II,III,IV etc.) _____ Location (edge, mid., etc.) _____
- Type (I,II,III,IV etc.) _____ Location (edge, mid., etc.) _____
- Type (I,II,III,IV etc.) _____ Location (edge, mid., etc.) _____
- Staggered Joints ☐

4) Reinforcement
- Continuous top wire mesh as per drawing ☐
- Top and bottom edge strips of wire mesh, tied around pipe with ty-raps, as per drawing ☐
- Wire mesh chaired as per drawing ☐
- Wire mesh and/or rebar under all bearing walls and posts as per drawing ☐
- Top rebar placed and spaced as per drawing ☐
- Concrete cover to be minimum 20 mm (3/4") for top and 30 mm (1-1/4") for bottom ☐

5) Elevation and Drainage
- Slab elevation allows for adequate drainage, min. 5% slope (6" drop 10' away from slab edge) ☐
- Gravel drainage layer drains to daylight or sump ☐

6) Slab Penetrations by Others
- Check for any other service or penetration (or bundle of penetrations) greater than 6" in diameter within the perimeter reinforcing - if so explain and provide picture. ☐



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E-mail: tech@legalett.ca

(Revised 5/24/11)

SITE INSPECTION
PRE-POUR REPORT
LEGALETT INC.

DO NOT POUR UNLESS YOU HAVE RECEIVED AN AUTHORIZATION CODE

PART 2 - Mechanical (Report to be done at 100% installation completion) - FOR HEATED SLABS ONLY

1) Heating Box (insert not yet received/installed)
- Type (water or electric) _____ Quantity _____
- Location as per plan ☐
- Check that box orientation matches plan, noting orientation of water lines and electrical conduits ☐
- Vertical Placement from top of slab, lid 0 - 6 mm (0" - 1/4") above finished surface ☐
- Box properly supported on foam (foam below box is set into clear stone for 5" and basement slabs) ☐
- Box firmly anchored with grout or cement block on box to prevent flotation during pour ☐
- Conduits installed and capped for electrical (power and thermostats) ☐
- Conduit installed and capped for optional boiler interlock (optional for electric units for future conversion) ☐
- Conduits or sleeved water lines installed and capped for water supply and return lines (optional for electric units for future conversion) ☐
- Box lid handle down, edges taped to box and lid screws in place as per rough in data sheet ☐

2) Piping Loops
- Location and number of elbows as per plan and cutlist (check each loop - extras are noted) ☐
- Inlets to box connected or capped as per plan ☐
- Outlets from box connected and insulated or capped as per plan ☐
- 2 screws installed per joint (4 per fitting) for ALL piping types ☐
- Insulation installed - 60% on top for half insulation and full insulation, as per plan ☐

3) In-slab Services by Others
- All horizontal hot water lines (including domestic) are thermally isolated from slab by sleeving or insulating, or run in insulation layer, encased in expanding foam ☐

4) Comments _____

PART 3 - FOR ALL SLABS

I,_____, as the person taking responsibility for this installation, certify that the structural portion of the installation was 100% complete when I was personally onsite to inspect it, and that the installation is in accordance with the latest revision of the design drawing, as noted on Page 1.
I am an Installer in Training (this report must be counter-signed by the training LSR) or I am a Trained Installer.

Signed: _____ Date: _____ Phone: _____

For Internal Use Only ☐ Completed ☐ Completed with Deficiencies ☐ Incomplete Report

Reviewing Agent	Date Received	Authorization Code	Signed

Notes/Deficiencies:

Page 2 of 2

Pre Pour Checklist

Site Prep
- 3/8"-3/4" clear stone used for top 4"-6" (see drawing) of gravel drainage layer (no fines)

Edge Element (Does not apply for basements)
- Height of Edge Element above EPS in middle of slab _____
- Height of Edge Element above EPS at edge of slab _____
- Photographs of installed skirting (minimum 2 photos required)

Reinforcement
- Continuous top wire mesh as per drawing
- Top and bottom edge strips of wire mesh, tied around pipe with ty-raps, as per drawing
- Wire mesh chaired as per drawing
- Wire mesh and/or rebar under all bearing walls and posts as per drawing
- Top rebar placed and spaced as per drawing
- Concrete cover to be minimum 20 mm (3/4") for top and 30 mm (1-1/4") for bottom

Pre Pour Checklist

Heating Box (insert not yet received/installed)

- Type (water or electric) _____ Quantity _____
- Location as per plan
- Check that box orientation matches plan, noting orientation of water lines and electrical conduits
- Vertical Placement from top of slab, lid 0 - 6 mm (0" - 1/4") above finished surface
-Box firmly anchored with grout or cement block on box to prevent flotation during pour
- Conduits installed and capped for electrical (power and thermostats)
- Conduit installed and capped for optional boiler interlock (optional for electric units for future conversion)
- Box lid handle down, edges taped to box and lid screws in place as per rough in data sheet
-Box properly supported on foam (foam below box is set into clear stone for 5" and basement slabs)
-Conduits or sleeved water lines installed and capped for water supply and return lines (optional for electric

Pre Pour Checklist

Piping Loops

- Location and number of elbows as per plan and cutlist (check each loop - extras are noted)
- Inlets to box connected or capped as per plan
- Outlets from box connected and insulated or capped as per plan
- 2 screws installed per joint (4 per fitting) for ALL piping types
- Insulation installed - 60% on top for half insulation and full insulation, as per plan

In-slab Services by Others

All horizontal hot water lines (including domestic) are thermally isolated from slab by sleeving or insulating, or run in insulation layer, encased in expanding foam

Concrete Placement

- **Place concrete using a pencil vibrator around areas of congestion, heater boxes and doorway cutouts.**
- **Concrete must be vibrated to ensure full consolidation.**

Finishing Concrete

- **Leveling the surface with a vibrating screed helps in the consolidation.**

Post Concrete Placement

- **Keep top of slab moist for 3 days to minimize shrinkage cracking.**
- **This can be done by wetting the slab and tarping or covering with 6 mil poly.**

Windy Weather

- **In windy weather be sure to weigh down the assembled materials beforehand and have the perimeter stone banked up at the**

Pre-Pour Inspection

- **A pre-pour inspection is completed by a Legalett licensed inspector**

Dowels/Anchor Bolts

- **Install rebar dowels as per ICF manufacturers' specs around the slab perimeter or 8" anchor bolts for wood framing.**
- **Pre plan to ensure anchor bolts do not line up with stud positioning or door ways.**
- **Alternately, sleeve anchors maybe acceptable**

LEGALETT

4,400 SQ.FT. Single Family Residence

LOCATION : Cornwall, Ontario, Canada
BUILDER : Teixeira Construction
DESIGNER : Joshua Teixeira

- 4,400 sq. ft. two-story home with attached 1,450 sq. ft. heated garage was built with the lower 3,600 sq. ft. floor as a LEGALETT Foundation.
- The lower 3,600 sq. ft floor foundation is divided into five heating zones.
- Room-by-room temperature control is available, and each furnace in the living areas serves areas in the home where the floor is directly heated by the incoming sun in the winter. This allows the free solar heat to be shared throughout the house, transferred from a passively solar heated area to the rest of the floor via the air moving through the LEGALETT System.
- With effective use of passive solar energy, a highly efficient hot water tank, and a very well insulated envelope, this home is heated for less than $100/ month on average.

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Christian Community Centre

LOCATION : Thornhill, Ontario
BUILDER : Richard Koekebakker, Lynnwood Construction
DESIGNER : Jan J Wintjes Construction Source

- 6,000 sq.ft. church and community centre

- *Nine heating zones* were used to effectively control the temperature in a wide variety of heat loadings, varying from practically no windows to walls made almost entirely of glazing.

- The use of tile and similar floor coverings means that the parishioners will enjoy *warm feet* during times of reflection in the chapel and community centre, as well as meeting with friends in the open foyer areas.

- The ventilation system can be turned off completely during periods of low or non-occupancy, with *significant cost savings*. Even with the ventilation system off, the church will still be warm and quiet throughout. Energy bills were $1,600 for the entire 05/06 heating season.

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Energy Costs

for a 6,400 sq.ft. Assembly Building

CHRISTIAN COMMUNITY CHURCH , THORNHILL

Enbridge Gas Invoice dates	Total amount rendered	Accumulated Gas Charges	GST	Energy cost	
Dec 30'05	555.36	555.36	36.33	519.03	
Jan 31'06	579.98	1135.34	37.94	1061.07	
Feb 28'06	680.36	1815.70	44.51	1696.92	
Mar 30'06	292.57	2108.27	19.14	1970.35	
Apr 12'06	582.59	2690.86	18.96	2533.98	*
May 12'06	202.57	2893.43	13.25	2723.3	*
Jun 13'06	105.61	2999.04	6.91	2822	*
Jul 13'06	314.16	3313.20	17.76	3118.4	*
Aug 14'06	(158.64)	3154.56	-8.98	2968.74	*
Sep 13'06	127.48	3282.04	16.2	3080.02	*
Oct 13'06	(67.31)	3214.73	-3.01	3015.72	*
Nov 13'06	266.60	3481.33	18.9	3263.42	
	3,481.33		217.91		
	(1,896.84)		cooking + Dom Hot water 12 mos 2 apartments @	158.07	per month
		Apartments are heated electrically, but allow cooking , showers etc of three persons			
	1,584.49	**In-floor heating cost of chapel, offices, Lobby and community room (total 6400 Sqft)**			

LEGALETT

5,178 sq.ft. Merrickville Day Nursery School

LOCATION : Merrickville, Ontario
BUILDER : Teixeira Construction
DESIGNER : Smith Carter Architects & Engineers Inc.

- Designed as a sustainable, replicable demonstration project for other facilities such as nursing homes and health care centers this project features exterior walls of Insulating Concrete Forms. State-of-the-art windows minimize heat loss in winter and permit fresh air circulation in summer

- 3 Water Coil Units are used to service 12 Zones

- Long term benefits:
  - Low energy consumption
  - Excellent indoor air quality and comfort
  - Low environmental impact

http://www.merrickville-day-nursery-school.ca/new_building_new/index.html

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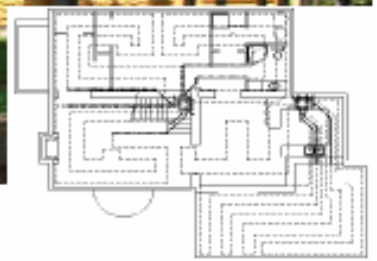

1,500 — 2,500 sq.ft. Log Homes

LOCATION : The Laurentians, Quebec
BUILDER : SMJ Construction
DESIGNER : Millette-Legare, Architects

- Fiddler Lake Resort is a self-contained SOLD OUT development of 80 luxury log homes 45 minutes North of Montreal.

- Electric Units Servicing 4 zones

For more information on this development visit the web site below
http://www.fiddlerlakeresort.com/

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Harbour View Café

LOCATION : Brighton, Ontario
BUILDER : DuCon Construction
DESIGNER : MOSS SUND Inc.

- A high water table mixed with an old land fill site found Legalett to be a perfect fit

- Legalett was used instead of pilings down to bedrock

- The building had a footprint of only 1200 sq ft. but had 15 corners and many slab penetrations required for restaurant and apartment services

- The owners, Jenny Hewitt and Bill Rudland, have commented that they are very impressed with the evenness of the heat in their floors and that it is costing less than expected to heat the building

- 2 - 5kW water coil units were used keeping the cost of providing heat to this project at a minimum

To see more about the resort visit: www.gosport.ca

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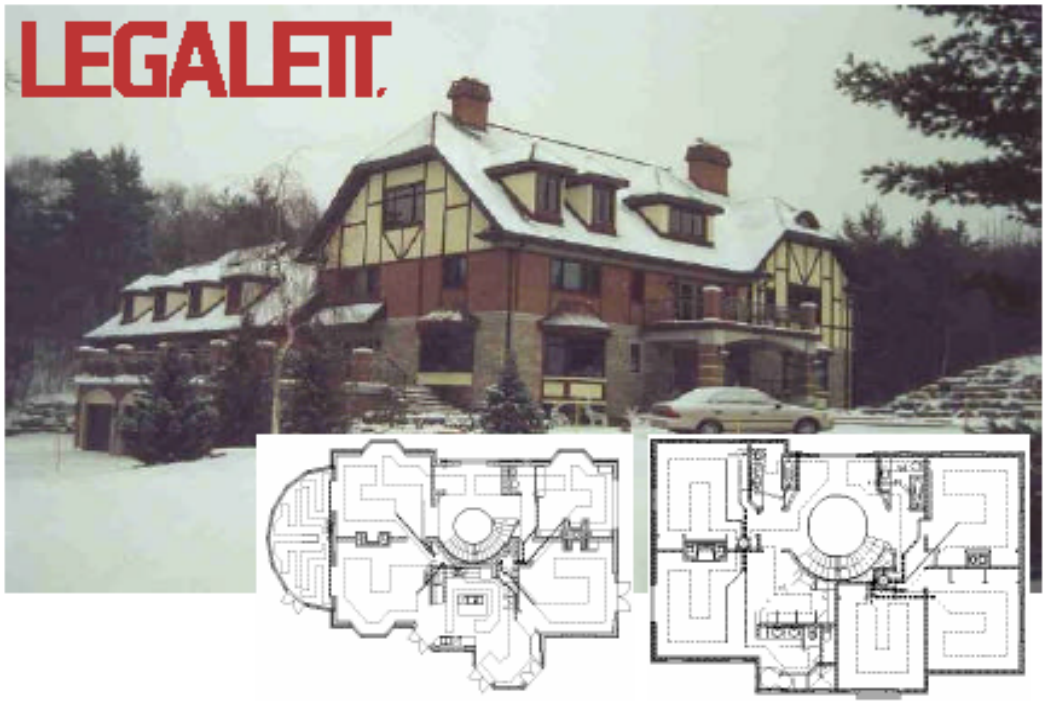

10,000 sq. ft. Residence

LOCATION : Toronto ,Ontario
BUILDER : Fiume and Associates Inc.
DESIGNER : Denis Bowman Architect

- Built in 2000, this 10,000 ft² -foundation and 2 floors features 9 water coils and 13 separate heating zones

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Legalett’s engineers provide personalised project specific on-line video training for each sold project.

Call Legalett at (866)299-7567 ext 101 to learn more about why we may be the solution you have been looking for.

Thank you for your time and attention