



Construction Manual

www.ReddiForm.com

800-734-8268

Construction Manual

ReddiForm is in compliance with the following organizations:

International Residential Code

The Department of Housing and Urban Development (HUD)
Federal Housing Authority (FHA)
Oregon Department of Energy
Approved for use in Ireland
Prescriptive Code for ICFS
ARPAE Approved Puerto Rico.

**Building codes and standard construction practices must always be followed.
Construction Manual details are recommendations, not design specifications.**



ReddiForm is manufactured with Modified Expanded Polystyrene (EPS) foam because of its fire performance, structural performance, and environmental advantages. Modified EPS contains no formaldehydes or toxic chemicals, and uses fewer resources to manufacture than other insulation products. EPS provides you with superior thermal performance to better insulate your buildings. No harmful CFC's have ever been used to manufacture it.

Recycle job site scrap.



You can now recycle your job site scrap through a network of manufacturers, re-processors, and retailers across the country. EPS is a valuable resource that can be recycled and remanufactured.

You'll be helping us protect the environment.





Housatonic
Habitat for
Humanity

Working together to help build dreams

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Ron Ardres
CEO ReddiForm
P.O. Box 165
Oakland, NJ 07436

Ron,

June 7, 2004

I wanted to drop you a note to thank you for all of your help personally with our latest Habitat for Humanity project, and let you know how ecstatic we are about ReddiForm wall systems.

As this is not your first Habitat project, you are very aware of the fact that we build homes with the help of many unskilled volunteers. We have had our fair share of delays in the past building traditional block foundations, not to mention walls that were not perfectly square when completed.

ReddiForm's "Lego type" assembly allowed us to erect the entire foundation, including vertical and horizontal rebar, using the same volunteers, in only a few hours. The foundation walls were poured solid with concrete the next day. Two months of work (building 3 days a week) finished in two days! Additionally, it is level, square, plumb and already insulated.

You have changed the way this Habitat for Humanity affiliate builds houses forever. With the quality, speed, volunteer friendliness and price of a ReddiForm foundation, we will be able to help build houses for even more families than ever before.

Once again I would like to thank you personally for coming to the site and providing our volunteers with your support. It is a compliment to you personally and to ReddiForm wall systems that I can say, we couldn't have done it without you.... until you showed us just how easy it was.... now we can!

Sincerely,

Pieter Van Munching
Construction Supervisor/Director
Housatonic Habitat for Humanity

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FACTS ABOUT ReddiForm EXPANDED POLYSTYRENE (EPS):

EPS is manufactured from expandable polystyrene beads containing a hydrocarbon blowing agent and a flame-retardant additive. It is a **closed cell**, lightweight, resilient, foamed plastic composed of hydrogen and carbon atoms. There are two common types of polystyrene foam, extruded polystyrene, XEPS (popularly known by its Dow trademark, Styrofoam), and expanded polystyrene (EPS).

Both expanded polystyrene and extruded polystyrene are used extensively as thermal insulation in industrial, commercial and residential construction.

During the processing of EPS, steam heat softens the beads and causes the blowing agent to expand to produce moisture-resistant multi-cellular particles which increase in size up to 40 times their original volume.

Following a period of stabilization, during which time the beads lose their moisture, the blowing agent condenses out and air diffuses into their cellular structure, the pre-expanded beads are molded into ReddiForm blocks. Tolerances of molded EPS is .05% per foot.

The benefits of EPS thermal insulation products are: lightweight, stable long term thermal resistance, no R-value loss over time*, and cost effective when compared to other rigid board insulation's on the basis of R-value.

Is EPS a water, vapor or air barrier?

EPS is considered water resistant and vapor permeable and at the density and thickness of ReddiForm blocks, the material acts as both a vapor retarder and an air barrier. This characteristic essentially moves the dew point to the exterior side of the concrete wall, minimizing interior humidity in the summer, and at the same time eliminating air infiltration in all seasons which is recognized as a major cause of R-value loss in fiberglass insulation.

Since houses built with ReddiForm are extremely airtight, the use of an air exchanger or heat recovery ventilation system is recommended, or an HVAC system must be correctly downsized.

Is EPS foam toxic?

EPS is an inert, non-biodegradable organic plastic foam which will not rot and is highly resistant to mildew. According to National Bureau of Standards Combustion Tests, data collected from seven labs concluded that under the worst case fire scenario, fumes from EPS are no more toxic than those from wood (Douglas Fir).

*1985 Study conducted by Structural Research, Inc. for NRCA, MRCA, and SPI.

Is EPS Flammable?

The requirements of all the major code organizations for foam plastics is that they have a flame spread of not more than 75 and a smoke development rating of not more than 450. The foam used in ReddiForm has a flame spread rating of 15 and a smoke development rating of 125 based on ASTM E84-87 tests, well below the code requirements.

Ignition/Temperatures of Various Products

| Self Ignition Temperature | | | |
|---------------------------|-----|-----|--|
| °C | | °F | |
| Paper | 230 | 445 | |
| Pine | 207 | 406 | |
| White Oak | 210 | 410 | |
| Modified E.P.S. | 491 | 915 | |

The chart illustrates that both Pine and White Oak ignite at a much lower temperature than modified E.P.S.

Source: Fire Prevention handbook, 17th Edition

| |
|--|
| Code requires a 15 minute thermal barrier to be attached to all foam in living areas. |
|--|

The Flexibility of ReddiForm

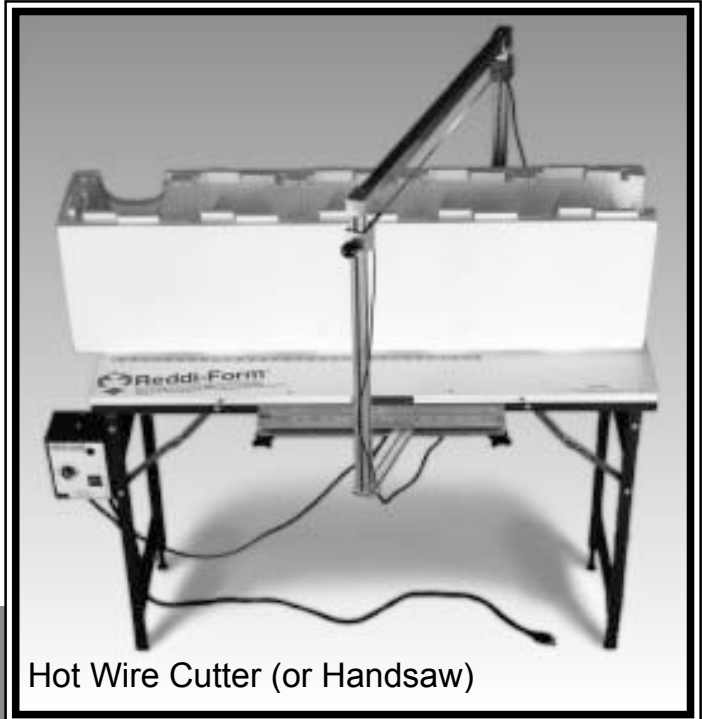
ReddiForm was designed to be the least expensive and the most versatile ICF on the market.

1. The weight of the 6" core block is 50 lbs per square foot including concrete and steel. This makes it ideal for curtain walls in high rise construction. It can reduce the dead weight design on beams and columns. This is also an advantage when designing in seismic areas.
 2. High retaining walls can be designed as Free Standard Tolerance by reducing the need for large footings. It can also be scribed to rocky areas thereby reducing the need for extra blasting.
 3. Ideal for theaters and areas where sound reduction is necessary. (52 STH)
 4. Circles, Curves, Arches, and Brick-shelves are easily done onsite with ReddiForm.
-

SECTION 1

BASIC MATERIALS AND TOOLS

Hot Wire Cutter or Handsaw
Pageris Dispensing Gun
Cordless Drill
Key Hole Saw
Chalk Line + Dry Line
Rebar Bender Cutter
Scaffolding
Scaffold Planks



Step Ladder
Tape Measure
4' Level
Transit
OlyLog Screws - 12"
Hammer
Sharpie Marking Pens

SECTION 2

DESCRIPTION OF BASIC COMPONENTS

FORMS COME IN TWO SIZES

- The 5" ReddiForm are 8" wide x 48" long x 12" high with six vertical 5" cores.

Not available in U.S. A.

- The 6" ReddiForm are **9-5/8" wide x 48" long x 12" high**, with five vertical 6" cores.

Applicable to residential & commercial projects of multiple stories.

The forms are molded in four shapes:

Standard, Corner, Closed End (*FIGURE 1*), and a Pilaster form (*FIGURE 2*). All forms are reversible (side-to-side and top-to-bottom) and interlock without regard to direction. Therefore, the corner form can be used for right and left hand corners. The corner form becomes a "T" form by cutting out the core pattern from the closed side of the form (*FIGURE 1*). The design of the interlocking teeth assures that the vertical cores align whether running in a straight line or at 90° angles. Lines on the forms between cores indicate cutting locations.

FASTENING STRIPS

A plastic fastening strip or 1/8" x 1 3/8" masonite (*FIGURE 3*) is an accessory item which is not an integral part of the ReddiForm system. This strip is inserted into the top and bottom of each block, and forms a continuous horizontal connector between rows to which any material can be screwed or nailed. The horizontal placement provides for easy location of the strip at any point, reducing cutting and waste. They are designed to be used on every third course. The fastening strip is designed to be used in combination with EPS compatible adhesives to fasten furring strips or sheetrock to the wall. On the exterior of an ICF wall, a vertical fastening system on some ICF systems is most effective for horizontal siding while a horizontal strip on ReddiForm is most effective for vertical or diagonal siding, sheetrock, or furring strips. SEE SECTION FIVE for more details.

REINFORCEMENT

Refer to the Structural Chart on page 65 in Section 6 "Miscellaneous Details" for the proper amount and placement of reinforcing rods. Check any design to assure its adequacy for local codes .

Rebar must be placed within ACI tolerances. It is recommended that rebar be placed using ReddiForm Rebar Chairs and/or No-Tie Rebar Chairs. These practical rebar chairs are designed to eliminate tying, ensuring better placement of the steel (*FIGURE 4*). The structural chart used in this manual refers to walls using the rebar chairs, and gives the wall maximum structural efficiency.

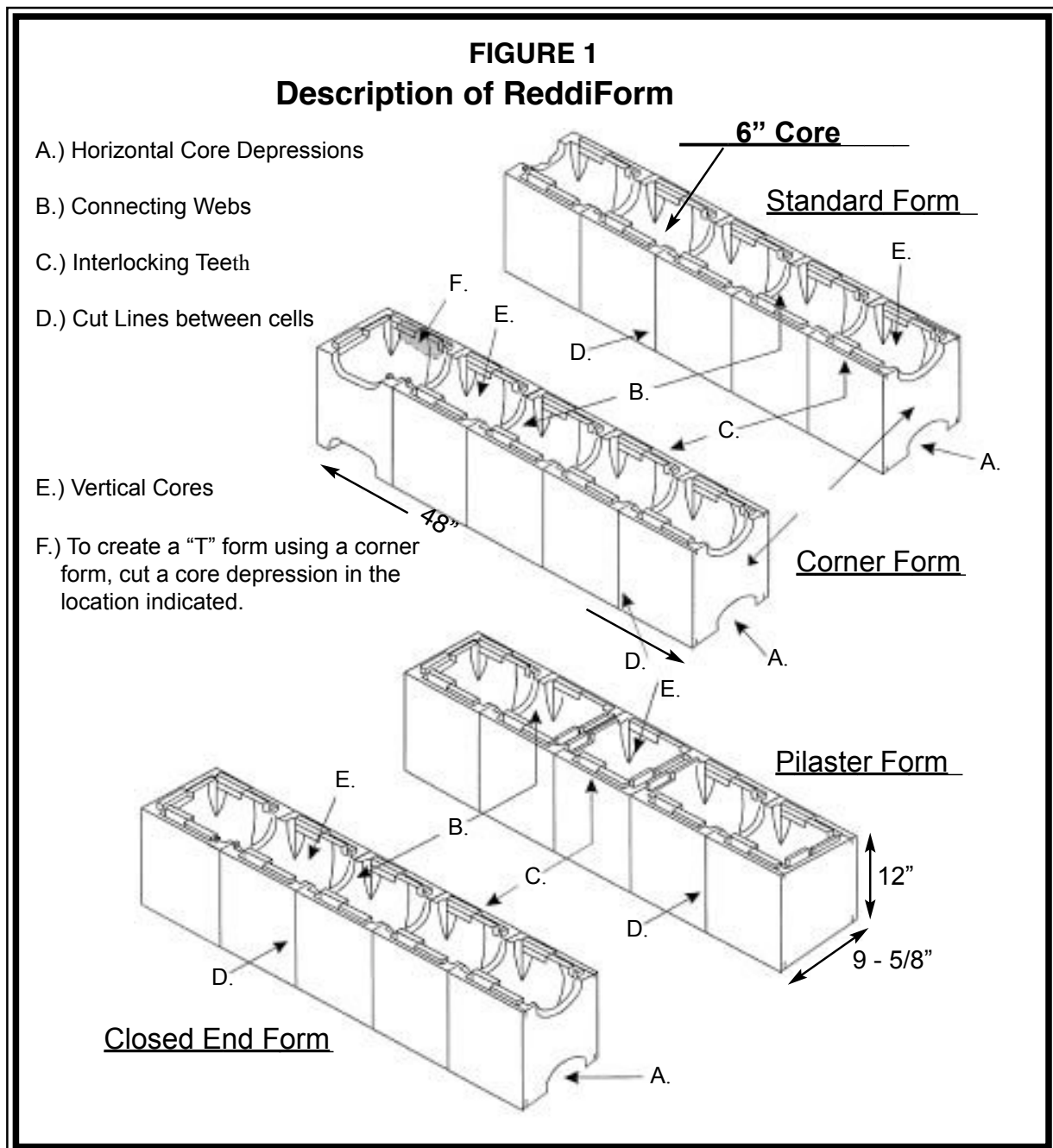
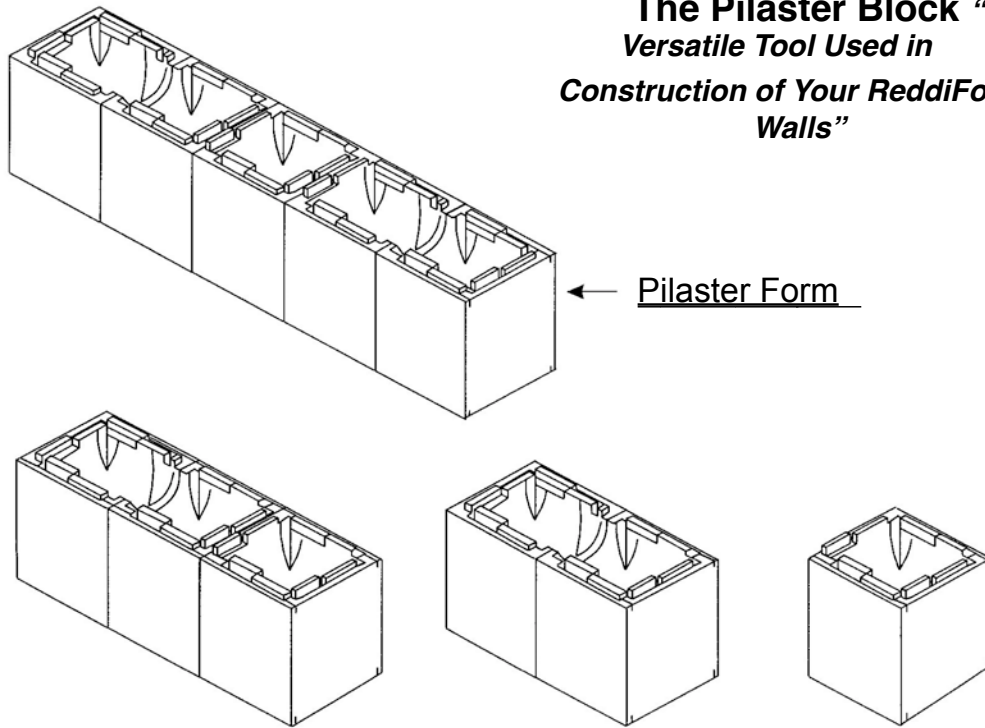


FIGURE 2
The Pilaster Block “A
Versatile Tool Used in
Construction of Your ReddiForm
Walls”



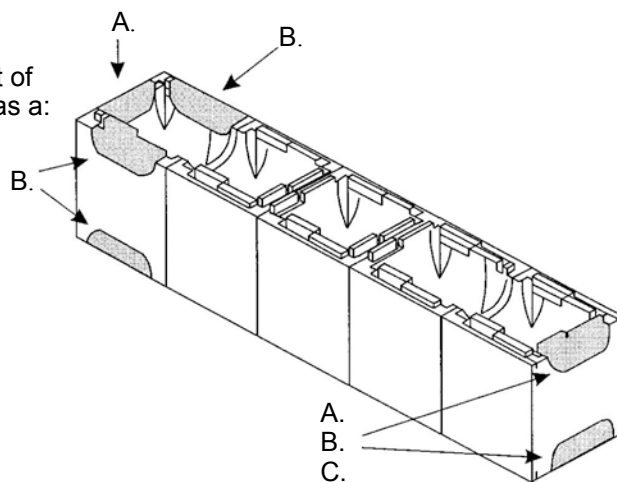
The Pilaster Form can be used as a full form, or cut and used in sections of 3 cores, 2 cores, or 1 core.

It can be used to build pilasters simply.

With the appropriate areas cut out of the Pilaster Form, it can be used as a:

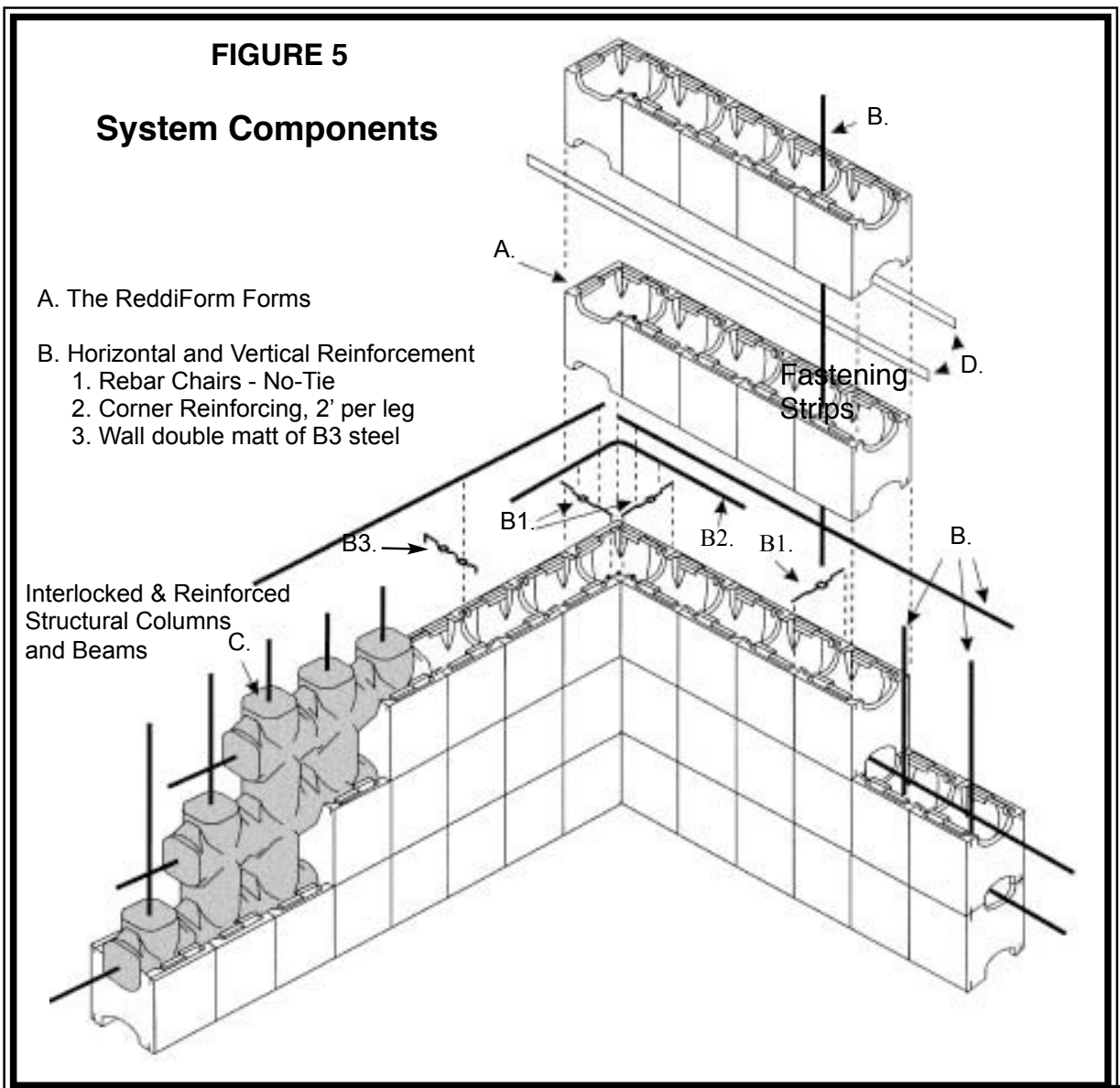
- A. Standard Form
- B. Corner or “Tee” Form
- C. Closed End Form

Cut out the foam where you need to tie it into your wall system.



CONCRETE

Standard applications require a minimum 2,500 PSI mix concrete. It is recommended that it be poured at a 4" to 6" slump, with a maximum aggregate size of 1/2"; pea gravel works best if available. Placement of the concrete is most easily accomplished using a small concrete line pump with a 2" to 2 1/2" hose. However it can be placed by hand, bucket, or by a concrete boom pump truck.



SECTION 3

BASIC INSTALLATION

DESIGN NOTE: The Length Conversion Chart on pages 62 - 63 is a valuable resource for efficiently designing and building with ReddiForm. However if your design is complete, and it would be difficult to convert it to ReddiForm modules, the system adaptability makes it easy to construct walls of ANY length. It will require minimal cutting of the forms, and a brace at the seam near the center of the wall.

FOOTINGS

- 1 Footings should be level and not less than 16" wide. The footings can be keyed or rebar may be drilled or cast in place. If for any reason footings are not level, foam blocks can be scribed and cut, or foam shims can be used with foam adhesive applied to the space to level the first course.
- 2 After footings are poured, and layout and building lines are established, start your first course. The more accurate the footing the easier it is to build walls.
- 3 After footing is poured and set, mark layout as in any standard construction project.

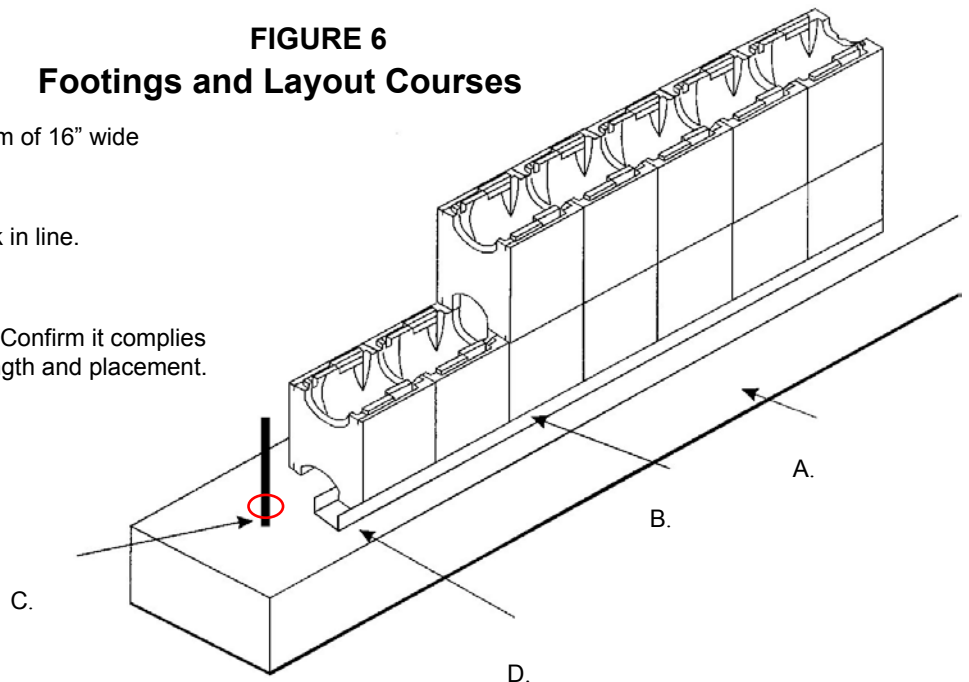
FIGURE 6
Footings and Layout Courses

- A. Footings, should be a minimum of 16" wide
- B. 1 x 2" U-Channel to hold block in line.
- C. Rebar to pin footing into wall. Confirm it complies with engineering specs for length and placement.

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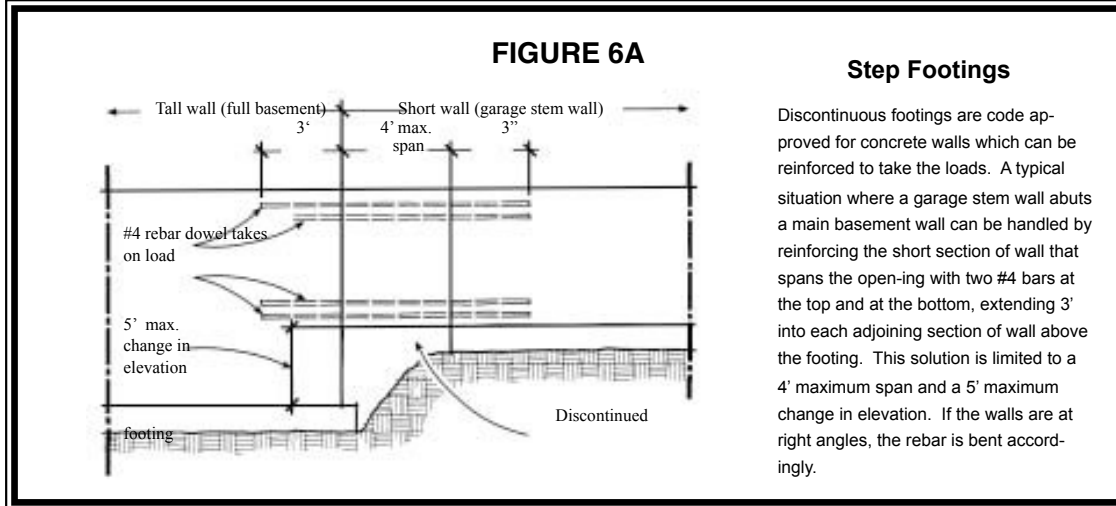
Preferred Methods

- D. Blocks can be glued using adhesive, or **wet-set** to a dry line immediately after pouring the footing. *Wet-set is the fastest method of construction, and vertical rebar layout is apparent.*



Indent the wet footing concrete approximately 1" x 1-1/2" deep next to & on the inside of the footing rebar stub. The indent will receive the vertical wall rebar keeping it centered in the concrete column.

Note --> O in drawing.



LAYOUT

Layout begins with a **complete first course** of forms starting at the corners and working toward the center of the walls followed by a second **course with overlapped units** similar to breaking the seams on floor and roof sheathing.

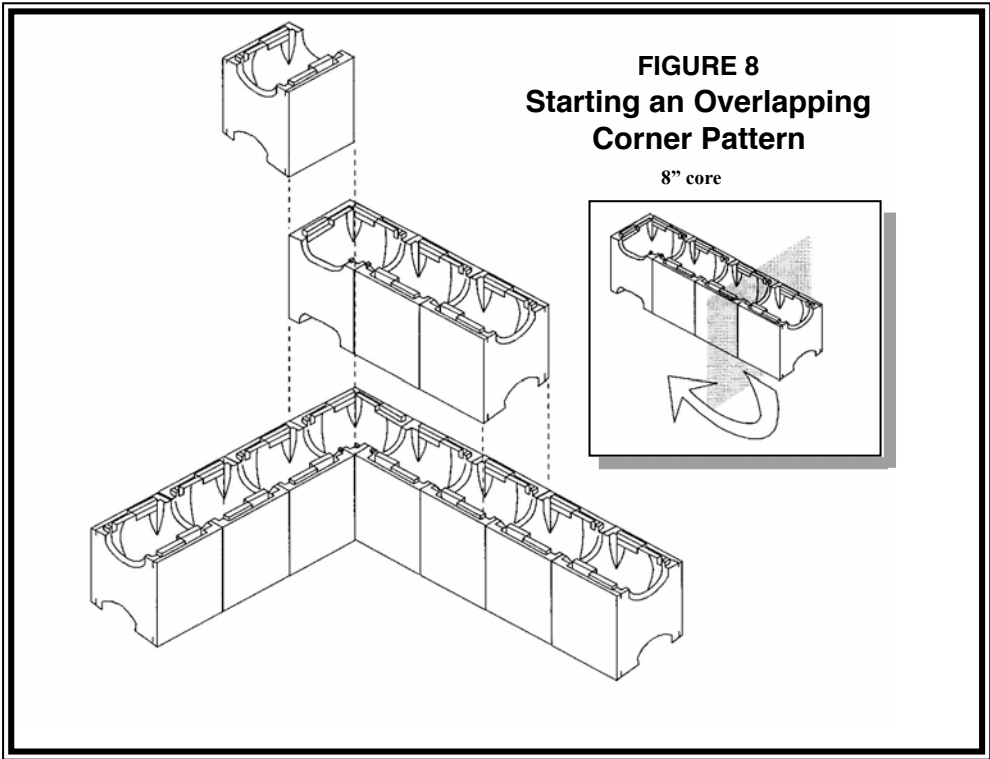
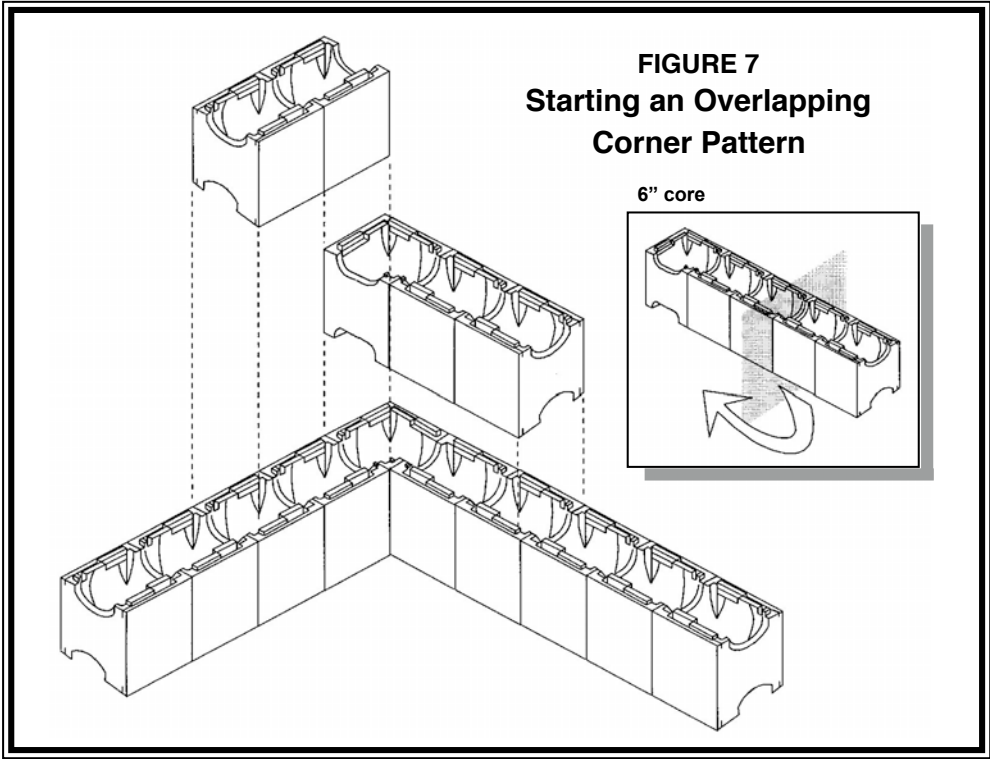
6" Core. Second course is started at the corners. (See Fig. 7.) A corner block is cut at the cell line as pictured between the third and fourth cells. This starts the over lapping pattern. This pattern or bond keeps the wall straight. Start each corner in this fashion and proceed to the center of the wall.

Note. The third course is the same as the first course and the fourth is the same as the second. Continue in this fashion until the top elevation is reached.

Where the forms meet at the center of the wall, they should butt loosely. Cut forms as needed with a hand saw or hot wire cutter.

There should be only one cut per row, and the cut line should create a single vertical line from top of wall to bottom of wall where the left part A meets the right part B. The first row, part A, begins at a corner and ends as a full block near the center. The first row, part B, is cut to whatever length is required to meet into part A. The second row, part A, ends at the same point in the center as the first row, part A, and a block is cut into 2 or 3 cells to end there because the corner block was cut into 2 & 3 cells to break the seams along the wall. (See Figure 7). The second row, part B, is cut as required to meet Part A, just as was done on the first row. Keeping the cuts lined up vertical is the result.

A helpful option is to align the walls at the cut seam using short pieces of the fastening strip. Placing a brace at the seam will also protect the cut block from expanding when filled with concrete as well as keep the walls aligned.



A Helpful Hint on Maintaining Straight and Plumb Walls

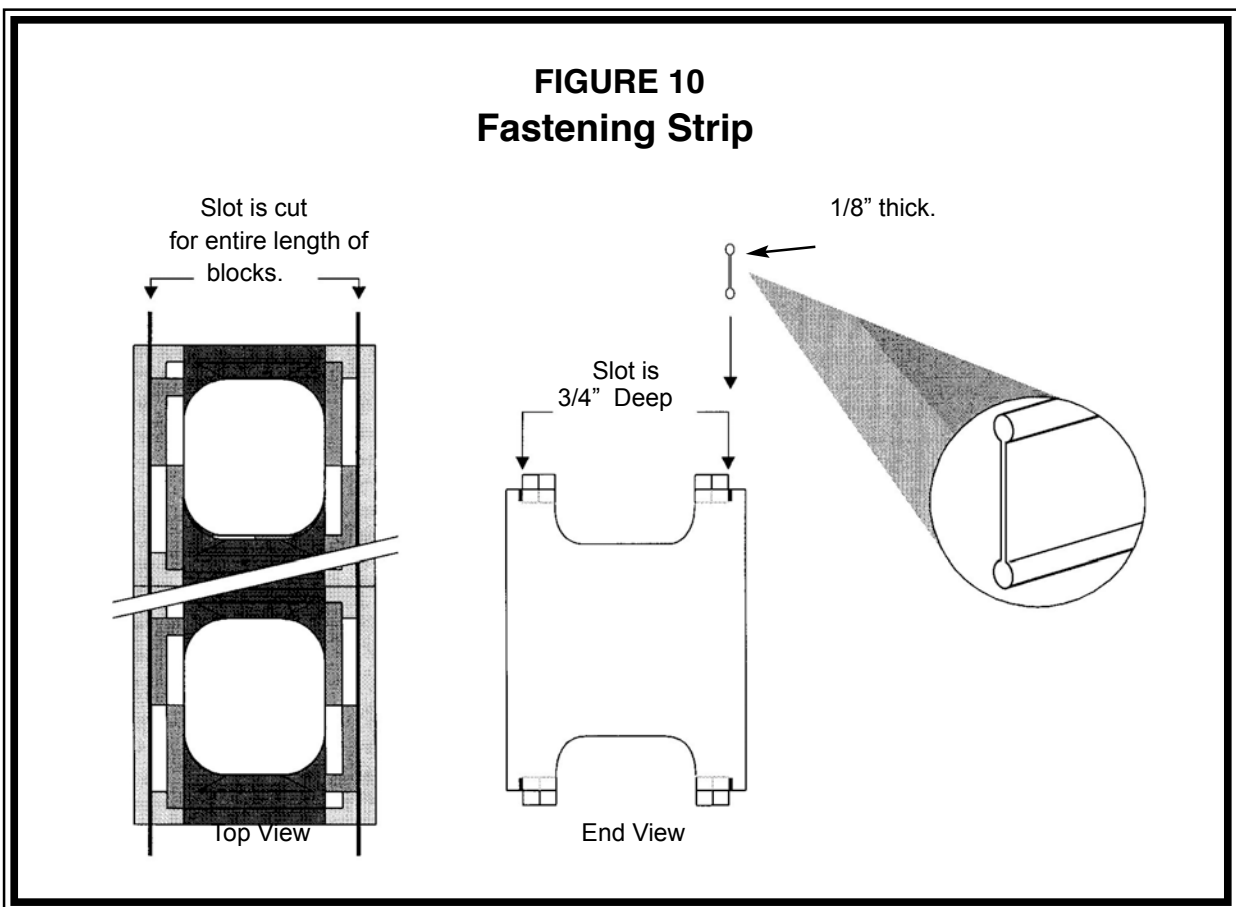
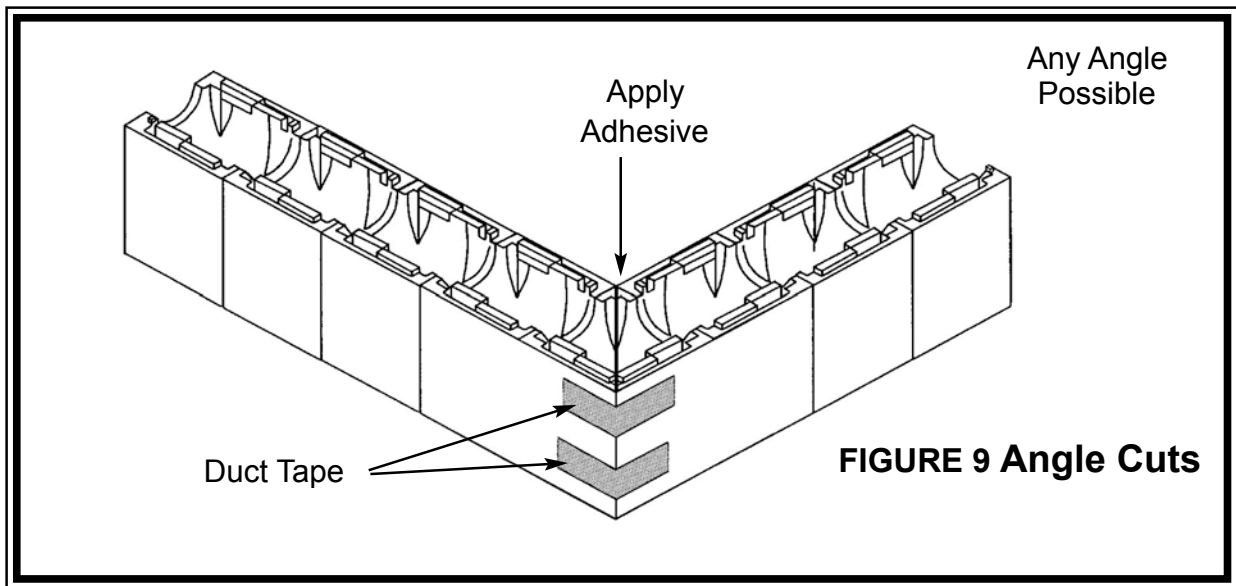
At the center of the wall where the cuts occur, mark these cut lengths with a magic marker. These cuts should remain the same length for the entire height of the wall in order to keep the corner points plumb.

Angles in a wall can be achieved by cutting the block at one half the degrees of the angle, and flipping the cut off piece over then continuing along the wall. Use plastic fastening strips cut to small lengths, bend them to the angle, and place them in the groove. Once the wall is erected and plumb support it by glueing the angle together, then add duct tape as shown in figure 9. An option is to use two 2x4 at the exterior point of the angle which are fastened together with plumber's tape or a material of your choice, then OlyLog screwed to a 2x4 on the interior of the angle. this brace may also be diagonally braced back to a stake.

When erecting basement walls with fire place ash dumps leave the basement side open. This can be blocked in later by the fire place contractor. It allows the ash dump to be parged with fire rock and cement to prevent the foam from melting, and also allows for better placement of thimbles.

Do not cut the connecting webs under any circumstances other than to create solid lintels which require 2x4 backing and OlyLog screws before being filled with concrete.

Do not foam any forms until the wall has been plumbed, aligned and braced. Foaming prior to this a Unprevent correct alignment.



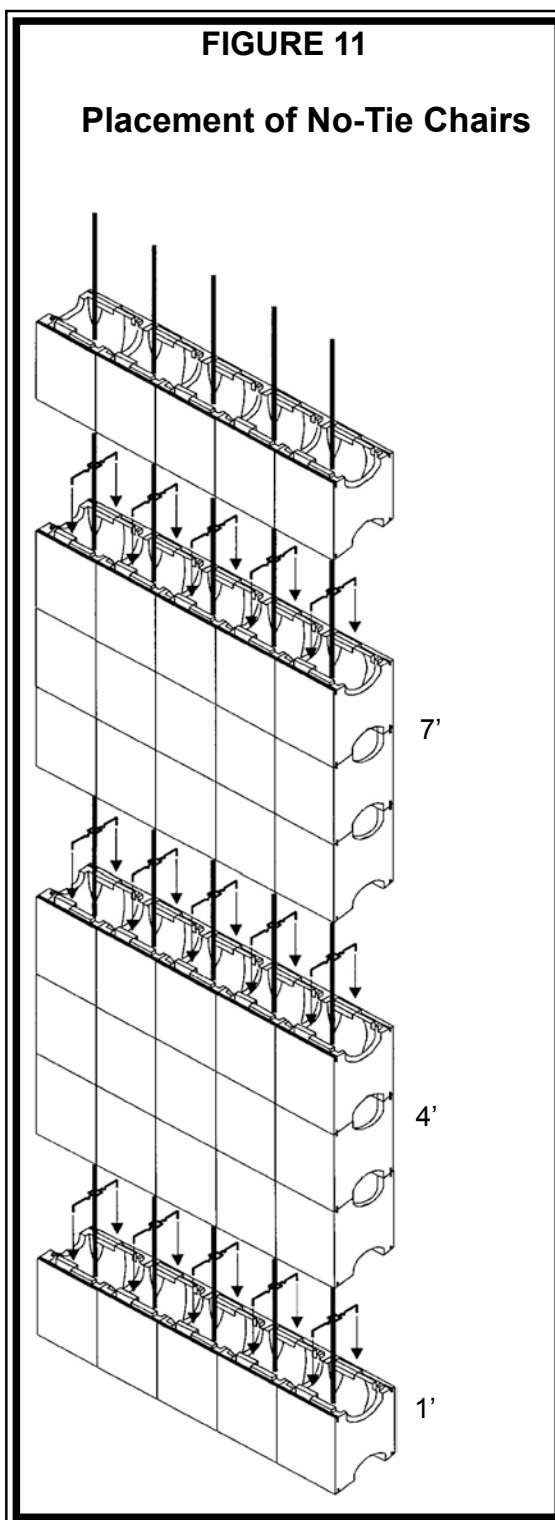
SECTION 4 ERECTING THE WALL

After the footings and layout courses are completed, the remainder of the wall is erected by snapping the forms into position. Continue the overlap patterns established in the layout courses over the remaining courses of the wall.

REINFORCEMENT

The required rebar specifications are shown in the charts on pages 62 -65. The No-Tie Rebar Chairs are used to secure rebar in the desired position (FIGURE 11). Install the rebar chairs by sticking them into the top of the forms every 4' O.C. in the required courses. The use of the rebar chairs is the recommended method of rod placement and helps add to the structural stability of the wall by more exactly controlling the location, and facilitates the before pouring steel-in-place code inspection. Consult with your building inspector prior to starting to familiarize yourself with the proper procedure for obtaining any required code inspections.

Check that placement is according to your engineering specifications.



BRACING

Bracing should be installed once you have erected 4 or 5 courses of block, or sooner if in a high wind area. Bracing should be at intervals of 9' to 10'. A 2" x 4" is attached to either side of the wall and secured with 12" OlyLog screws near the bottom, center and top on taller walls, or near the top and bottom on shorter stem walls. A 9" short tail snap tie may also be used to connect the 2x4's. Refer to FIGURES 12, 13, 14 & 15.

This is the minimum recommended bracing. Bracing can be adjusted or added as conditions require. It must be adequate to safely support the wall under all conditions, especially in high wind locations

OLYLOG® Screws Olympic Manufacturing 800-633-3800

or

Check with your local lumberyard.

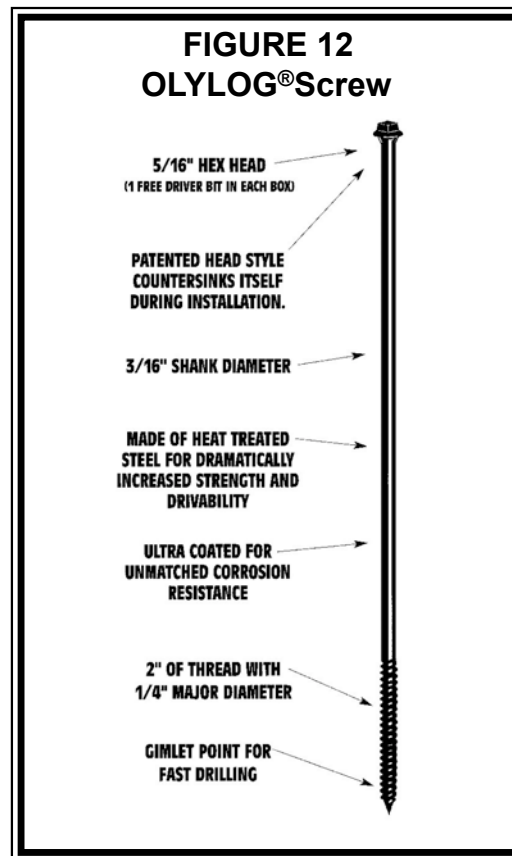


FIGURE 13
Bracing Methods

- A. Footing
- B. Vertical 2" x 4" braces.
- C. 2" x 4" Kicker Brace
- D. Stake or fasten to solid surface.

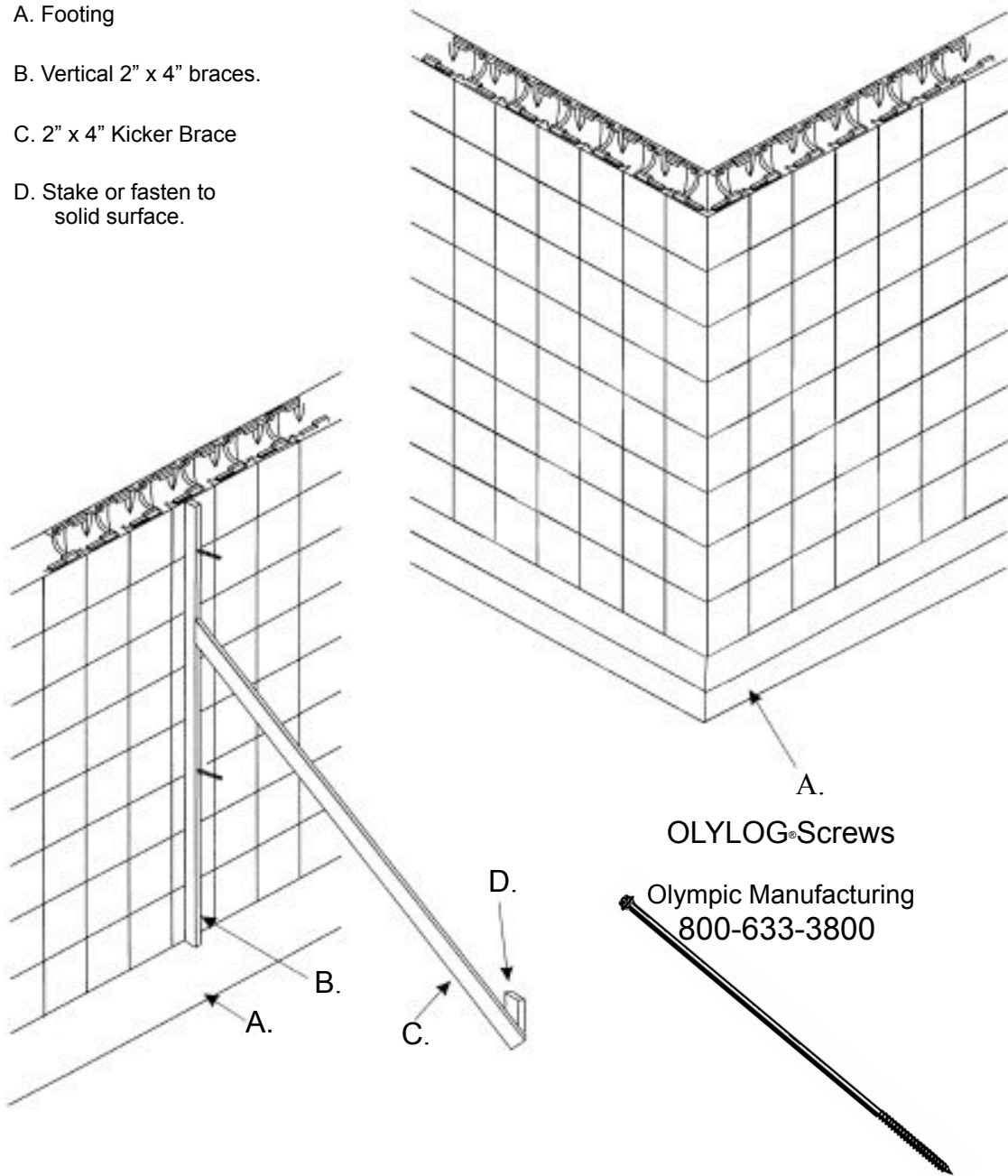


FIGURE 14 MFG Brace/Scaffold System

Drill Holes for snap ties in center of foam core so the ties can be removed and used on following projects.

There are several bracing/scaffolding systems available commercially:

Amazing Brace
www.lakeland-multitrade.com
905-372-7413

Panel jack
www.reechcraft.com
888-600-6160

Sea Systems
www.sea-sys.com
505-538-2671

Giraffe
www.giraffebracing.com
888-849-0375

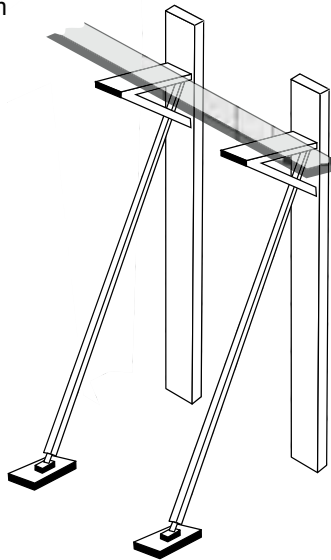
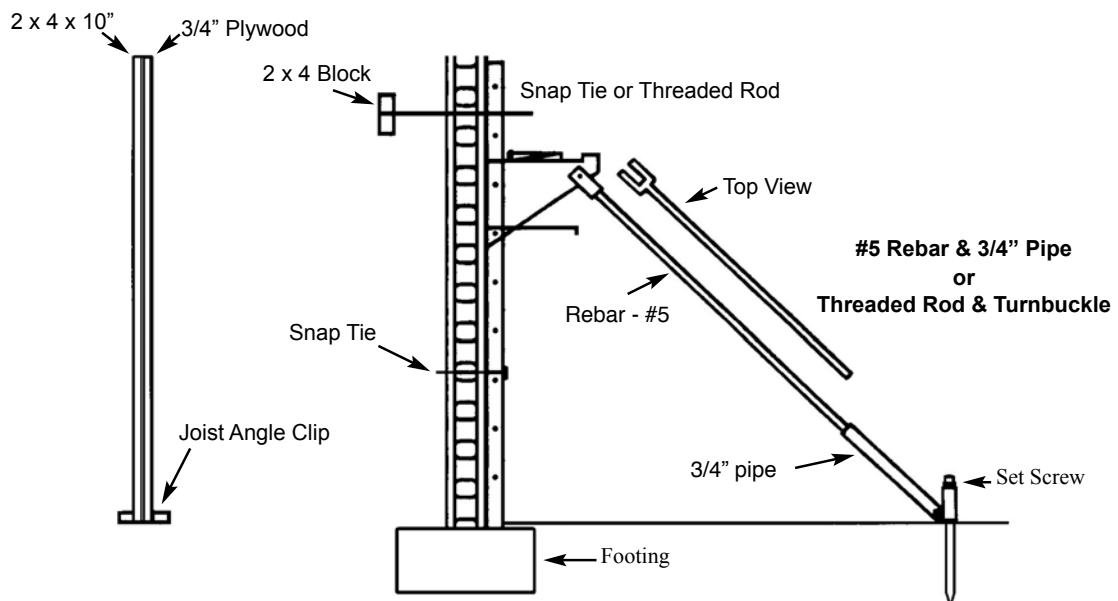


FIGURE 15 ReddiForm Wall Brace and Scaffold



OPENINGS

Openings of any kind can be placed within the ReddiForm system. The 2" x10" material should be treated lumber or lumber covered with plastic or tarpaper on the concrete side. A frame of 1 x 3's or plywood should be fastened to the outer edges of both sides of the frame to add support to cut block, and to keep the frame centered in the wall. The 1x or plywood can then be fastened to the plastic fastening strips. Build the frame using Figure 16 as a guide.

Frames are placed in position as the wall is erected and the forms cut to meet the frame as each course of block is installed. To attach the frame to the concrete use 1/2" anchor bolts or 40D galvanized spikes set prior to pouring. Anchor bolts must be countersunk so that the nut and washer do not encroach into the opening. Frames may also be fastened with power-actuated nails or Tapcons after the pour.

Frame Options:

Synthetic frames which stay in place are available from: V-Buck at 218-863-1708

Plywood at 3/4". When using plywood add temporary bracing to keep frames plumb and square.

A 2x6 can be used as a frame inserted and glued into the wall between the foam.

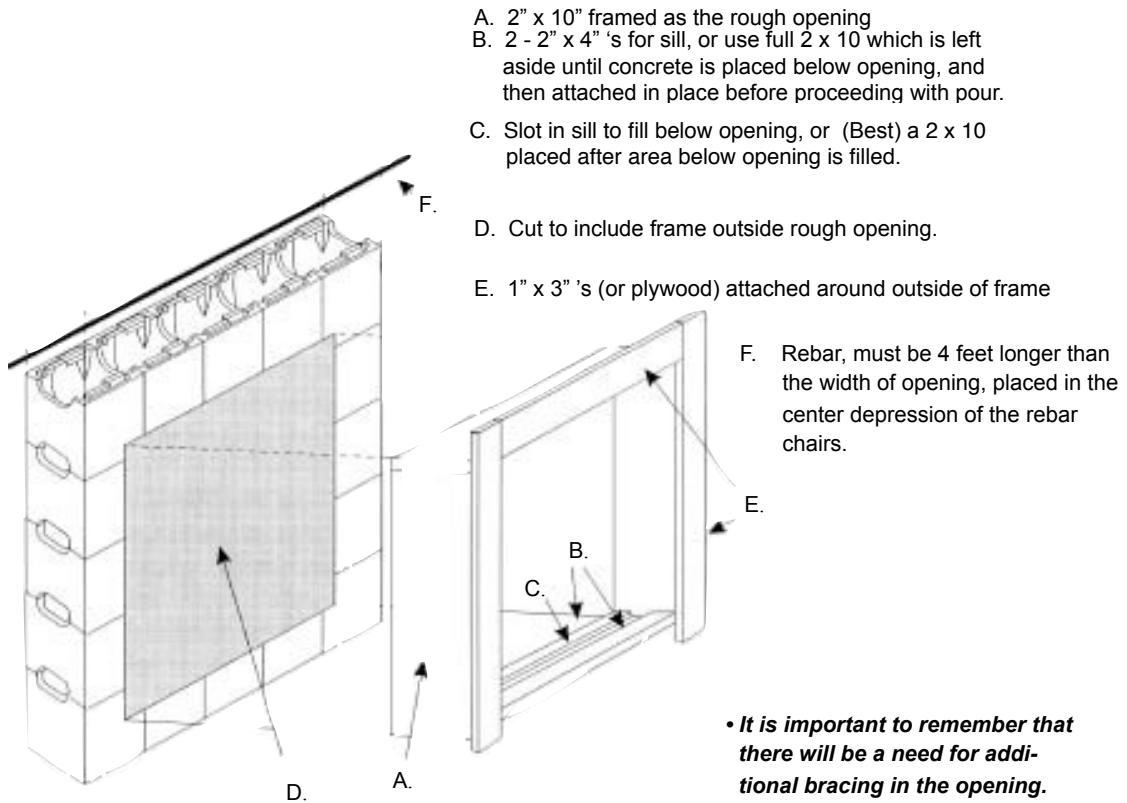
Rigid foam may be glued to the rough opening and temporarily braced. After pour remove ridge foam and fasten window or door directly to concrete. Window and door manufacturers offer a masonry clip to fasten to concrete.

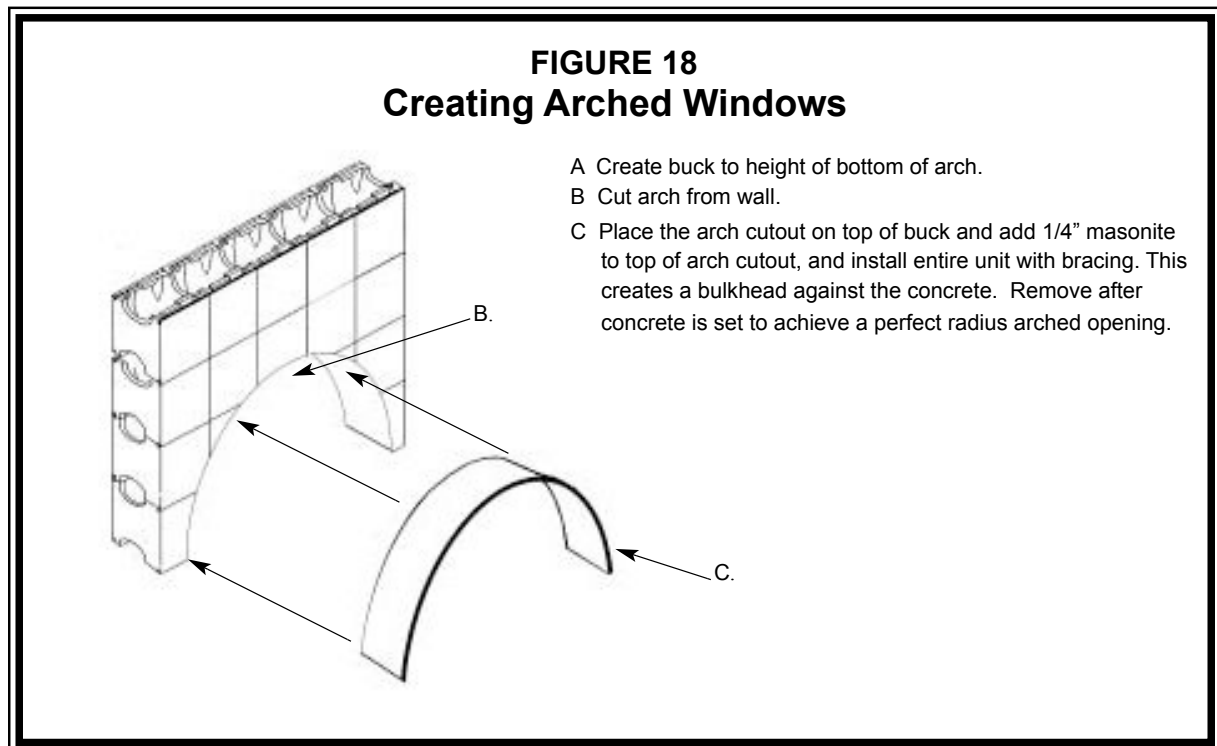
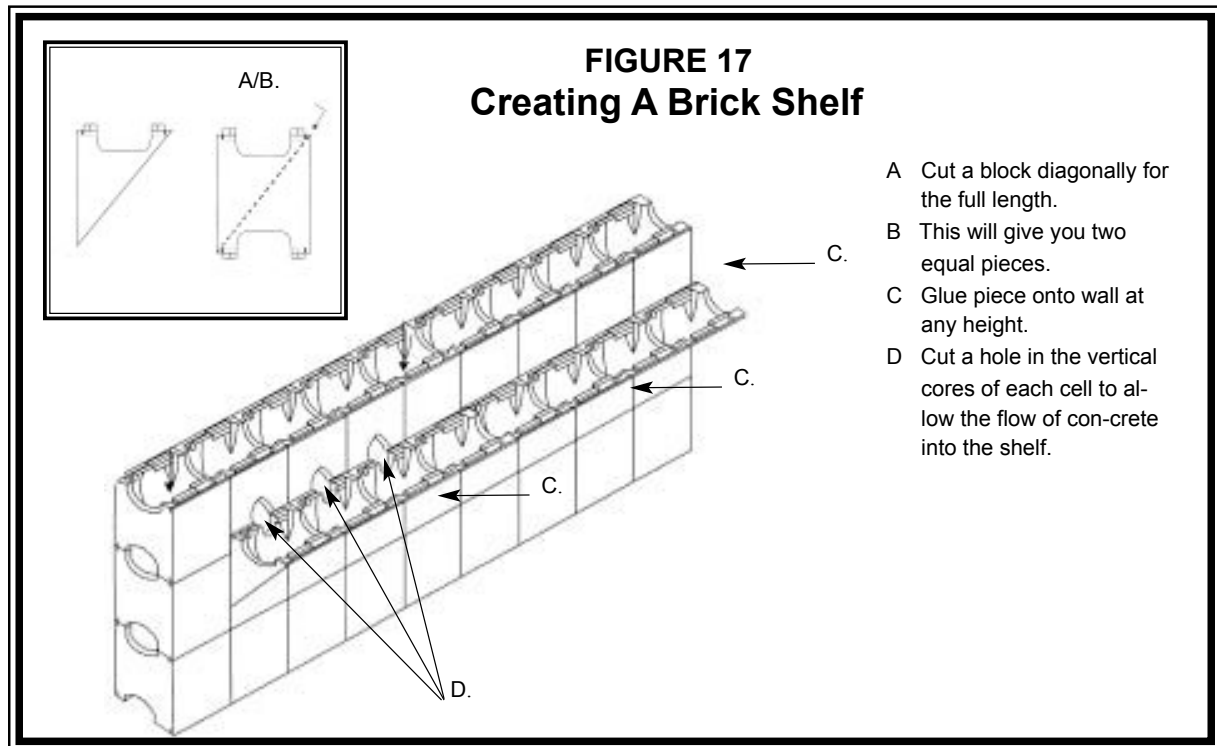
Curved windows are easy since there is no metal or plastic ties. Simply cut through the entire block at the desired radius, insert a piece of masonite in the cut, replace the cutout form, and support it to pour the wall then remove the support, cutout form, and masonite.

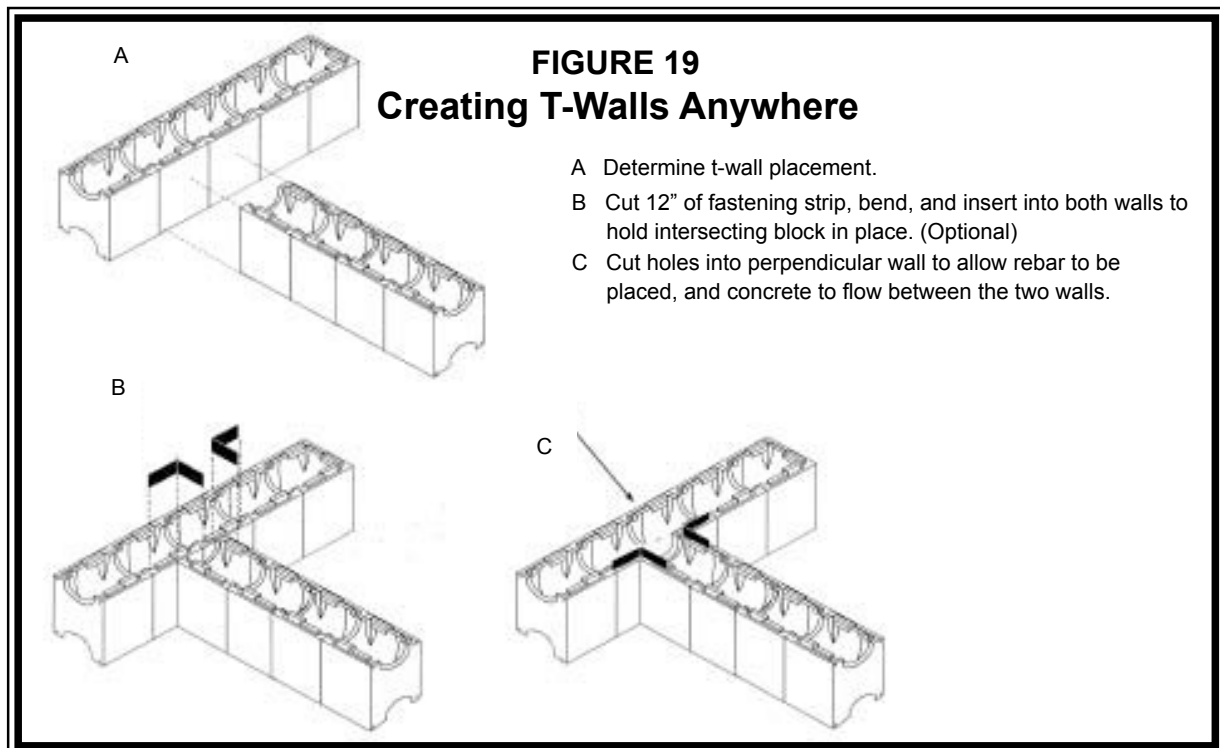
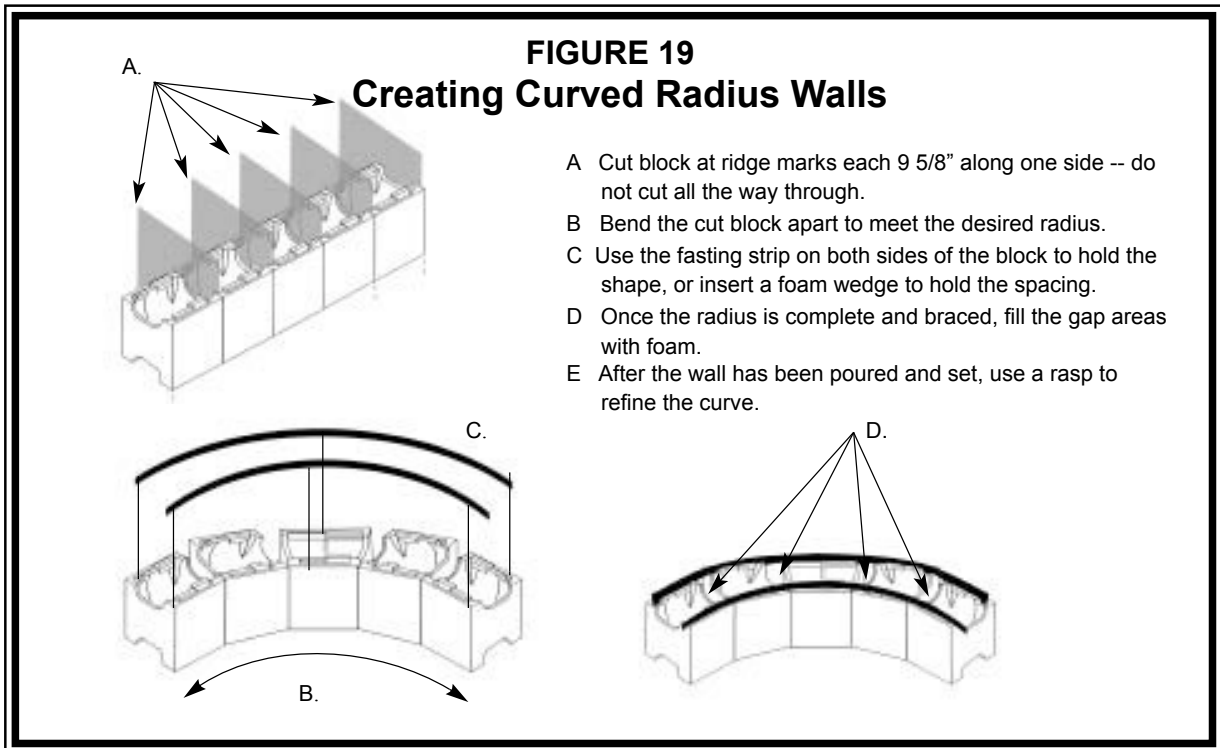
On large openings, concrete should not be placed completely on one side of the opening before placing on the other side. Both sides should be filled uniformly, negating the force of the wet concrete. Place bracing so that it can oppose the forces of the wet concrete. Placement of header reinforcement is shown as item "F" in FIGURE 16. A header of wood or steel may also be used. This requires forming an adequate bearing pocket on both sides of the opening. Header design should be according to engineered specifications.

The last course or two must be glued using a EPS compatible adhesive. This will eliminate forms from lifting or floating up from concrete pressure, or being bumped up by concrete back-flow, a wayward pump hose, or an installers stumble.

FIGURE 16 Openings and Header Construction

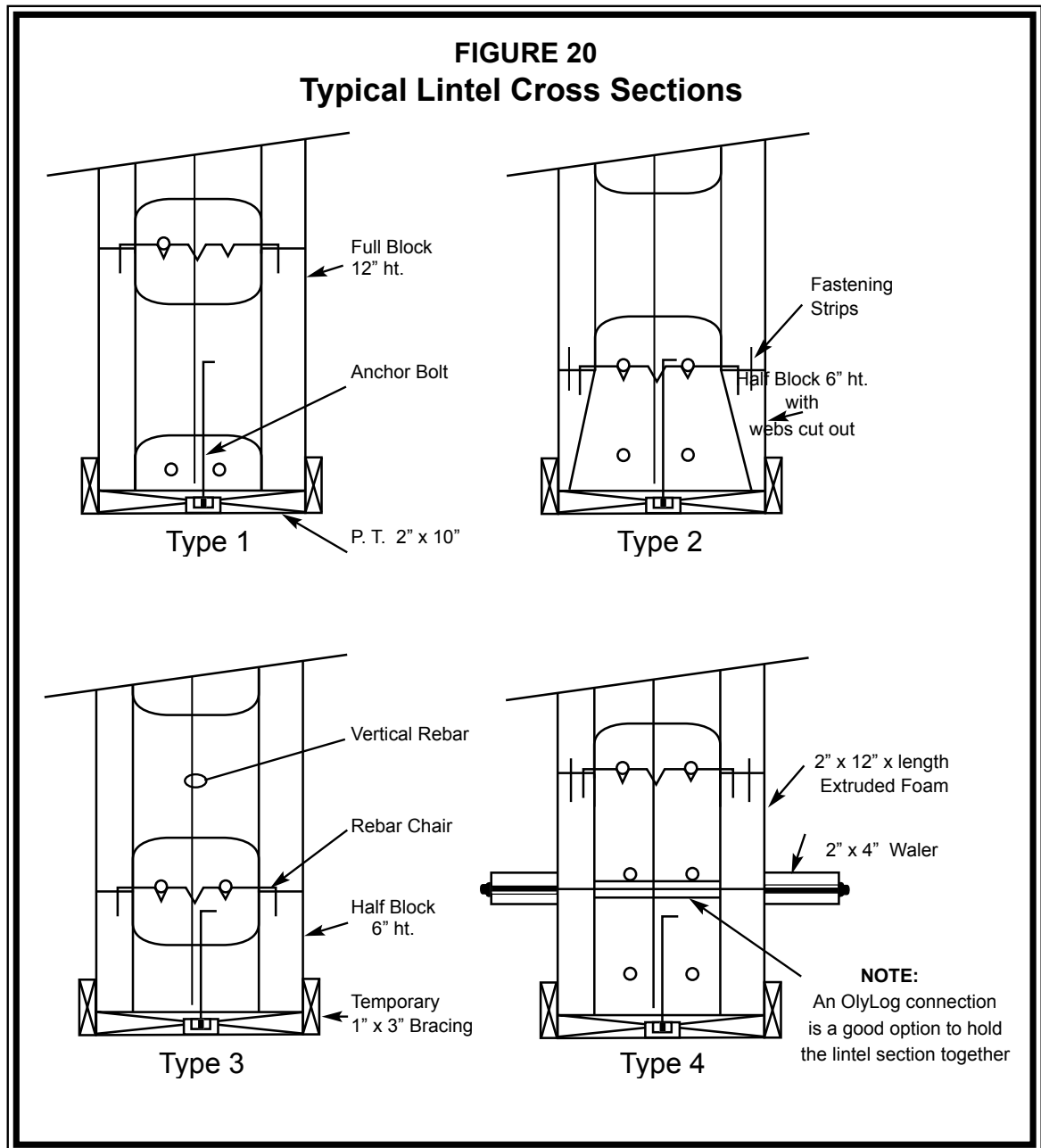






TYPICAL DOOR AND WINDOW LENTEL

A minimum of two No. 5 Grade 60 reinforcing bars are to be provided around all window and door openings. Powers Steel and Wire Inc. offers: a steel lintel design complete with structural design for loads. Adapts easily to ReddiForm contact. Powers Steel Lintel can be contacted at 4118 E. Elmwood St., Phoenix, AZ. 85040 • Phone 602-437-1160 • Fax 602-437-5409



ESTIMATING MATERIAL REQUIREMENTS

ReddiForm Block Required

Calculate the total square footage of the walls, excluding the large openings, and then divide by 4. This is the total number of blocks required. For the number of 90° corner blocks, count the number of corners, multiply by the height in feet. This gives the number of corner blocks required. Subtract that number from the total number of blocks to get the number of straight block required. Since the blocks have no top or bottom, and are non-directional, the waste factor is approximately 2% or less.

Steel Below Grade

Each 6" core block requires 4' of horizontal rebar and 5' of vertical rebar in basement walls. Do not forget to add for overlaps—approximately 2%. Overlaps (splices) are 40 x the diameter of the bar used (#4 bar is 1/2" x 40 diameters equal 20" overlap).

Steel Above Grade or in Stem Walls

The specifications vary with height of wall, wind exposure and speed. Please consult our charts, or call us.

Estimating Concrete Required

Every 80 sq. ft. of wall surface = 1 yard of concrete.

In all cases, always add a normal percentage for spillage, and a percentage for the pump if required.

Concrete Specifications:

Minimum 2,500 PSI in 28 days.

Aggregate at 1/2", Pea Gravel works best.

Slump 4" to 6".

FINAL CHECK AND POURING NOTES

After the wall is completely erected, and all openings are in place, the wall should be checked for plumb, level, and squareness. Make any necessary adjustments.

Now is the time to foam in gaps and openings.

The concrete may be placed by any desired method. A pump is the easiest and least time consuming. However, it may also be placed directly from the chute of the truck especially on walls below grade or at height reachable above grade. When pumping, a 2" or 2-1/2" hose is best. Use of larger hoses cuts down on mobility and productivity unless the hose is controlled or suspended from a boom. The pump rate on a boom pump should be carefully monitored, and a double elbow attached to the end of the hose—**this is a must**, as it will greatly reduce the force of the falling concrete and keep you free from the spattering concrete. The use of a rolling scaffold, or scaffolding the entire job, will speed up the process.

If you are going to continue upward with subsequent pours, be sure to cover the interlocking teeth on both sides of the form to keep the interlock free of concrete. Optional protective methods include Plastic Wrap - 18" (Available at Costco & similar), Duct Tape or a Metal U Channel.

Some contractors prefer to use a water hose to clean the block after the pour is complete.

Remember the rebar overlapping for the next pour.

Hints for Successful Pouring

Use the same accepted pouring practices as for conventionally formed walls. The pouring should be controlled and carefully monitored.

Use the connecting web on the top course of the wall to ease the flow of concrete into the cells. Hitting the web first creates a downward force on the forms and reduces the force imposed on the wall by letting the concrete gently flow into the lower cores.

Floating or lifting of the top row may occur if the slump is too high or if the pumping is too fast near the top of the wall. To avoid this problem, it is recommended that you **glue the last course**. The pour begins near a corner (Avoid starting near openings) and run hose back and forth until the concrete is at the top. Then continue around, completely filling the forms until the pour is complete (*fig. 19*). By pouring in this manner you will remove extra pressures on the form since concrete is flowing rather than dropping. It will also solidify the form work to the footing and allow the rest of the form work to relax. Pouring in this fashion does the following:

- Continues to settle the concrete along the angle created in the initial corner.

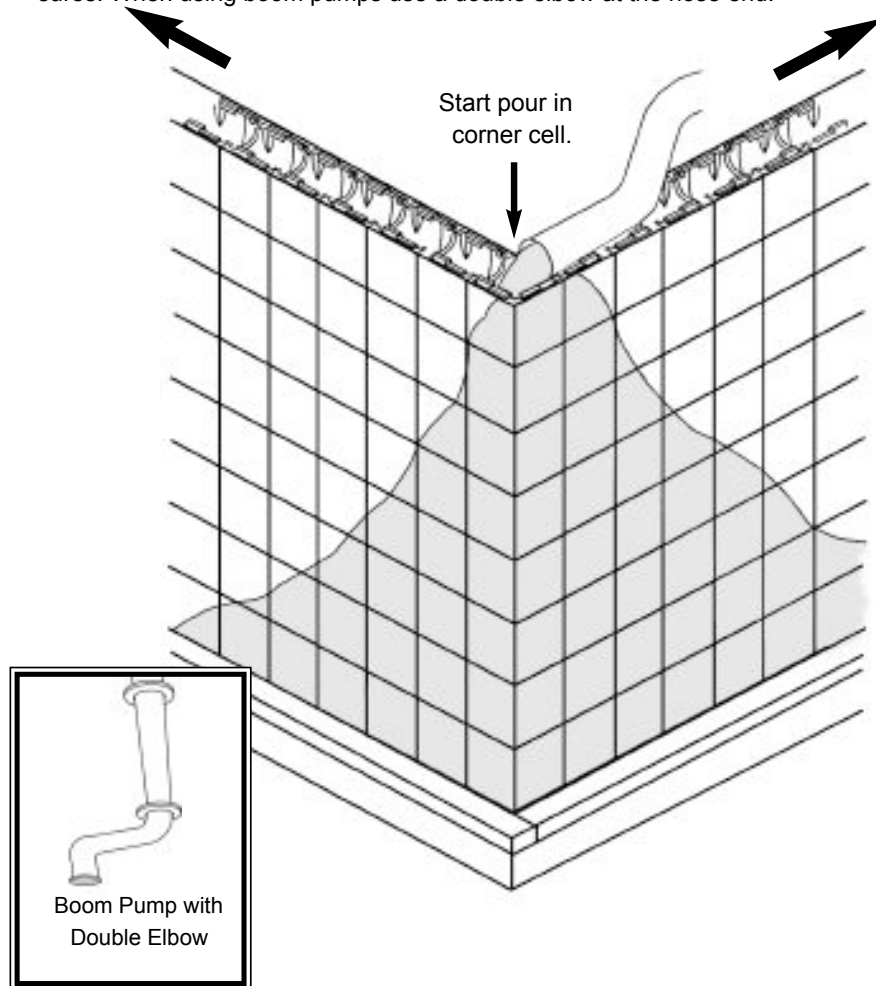
- Keeps the cells clean in front of the concrete to allow a visual check of the flowing concrete to ensure that the wall is filling completely.

- Prevents upward pressure from lifting the forms up by flowing the concrete through the cells instead of dropping it directly to the bottom.

- Pressure along the cell overlaps & the compressed teeth will force the wall straight.

FIGURE 21
Beginning the Concrete Pour

Start pour near the corner (Avoid starting near openings) and run hose back and forth until the concrete is at the top. Continue to near next corner, stop, move to corner and fill as for the first corner then return to where the pour was stopped and finish completely filling the forms. Let the concrete fall on foam webs to further reduce pressures. When using boom pumps use a double elbow at the hose end.



When Pouring 10' height the form may compress slightly due to the weight of the concrete. Allow for this movement in your final measurements.

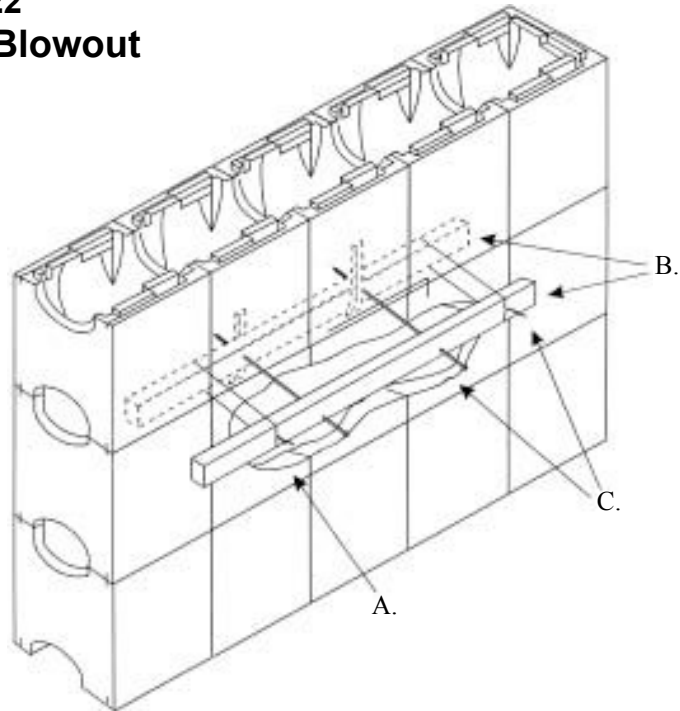
Consolidation of concrete can be accomplished by internal vibration, external vibration, or hand rodding. Although, internal vibration has typically been used, it is more difficult to accomplish within the forms due to the amount of steel within the cells and the narrow width of the cells, and the vibrator may hang up on the steel and rebar chairs. You can use concrete vibrators, by placing them on the vertical steel which will vibrate and consolidate the concrete. Other methods include a large plate vibratory sander, a reciprocating saw without a blade, or a block of wood and a hammer. Any of these methods work to meet A.C.I. requirements for consolidation. New smaller internal vibrators designed for ICFs are available, and reduce the problems associated with larger vibrators.

When forms are handled properly blowouts should not occur. If there is a blowout in a ReddiForm wall, the wall will stay intact (unlike conventionally formed walls) but an opening will be created that can easily be fixed (FIGURE 20). First, remove the piece of wall that has blown out, clean the concrete spill around the area and replace the blown out piece. Use lumber on each side of the wall secured through the wall by OlyLog screws or lengths of tie wire to secure the area. Re-pour the blown out area. Remove the lumber after the concrete is set.

Note: Concrete loss due to this type of blowout is minimal. You will not lose the entire wall, and can continue your pour quickly.

FIGURE 22
Correcting a Blowout

- A. Damaged area to be cleaned and replaced.
- B. Wood used as support.
- C. Connect wood with Olylog screws.



FINAL CHECK

When the wall is poured, and the concrete is still wet, check the wall again for plumb and alignment. There is time to readjust if necessary. **This should be done with care, and attention to safety.**

NOTES ON BACKFILLING

Walls should not be back filled until the first floor is in place.
Concrete within a 'foam form' stays green longer, and the wall is more susceptible to deflection.

Follow the ACI and local building code.

IRC code section 404.1.7

Backfill shall not be placed against the wall until the wall has sufficient strength and has been anchored to the floor above, or has been sufficiently braced to prevent damage by the backfill. Exception: Bracing is not required for walls supporting less than 4 feet of unbalanced backfill.

SECTION 5

FASTENING TO THE ReddiForm WALL

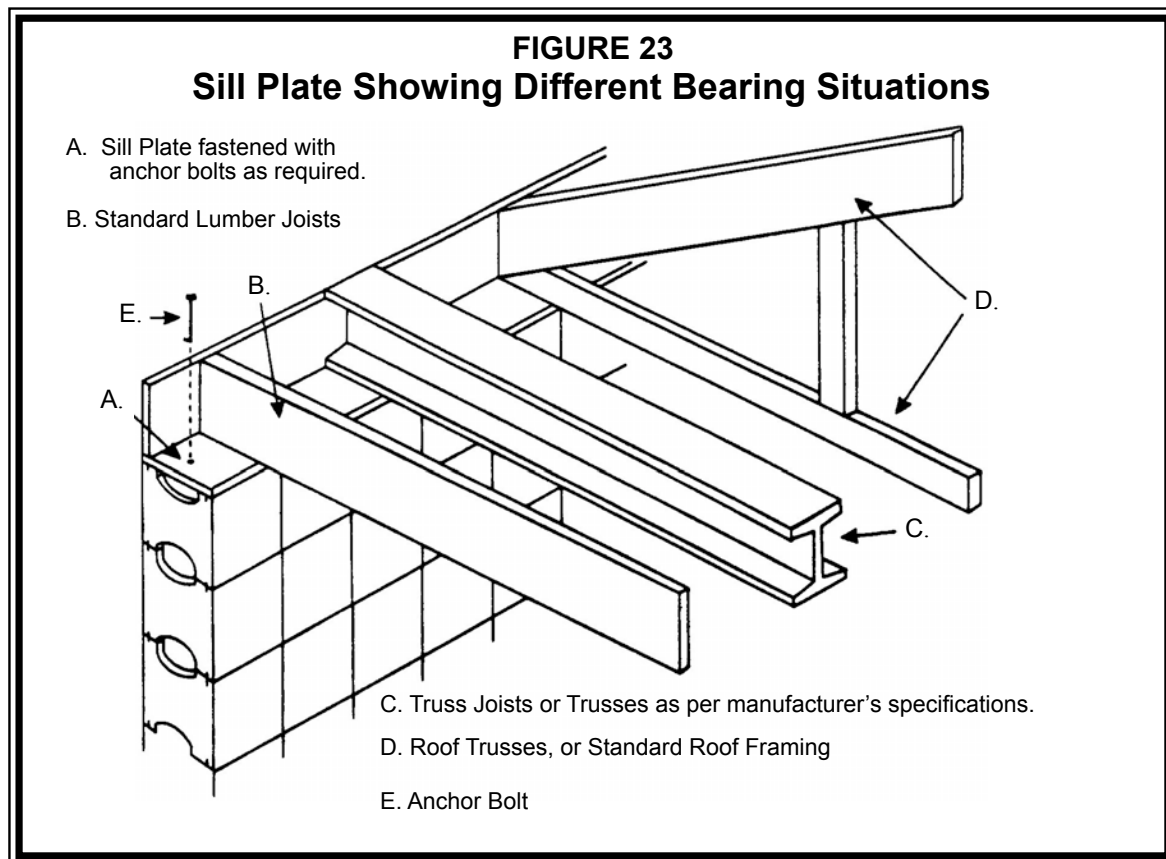
FLOORS

Attachment methods for walls, floors, and roofs include various options. Floors can be attached using conventional methods or newer methods developed specifically for ICF construction. The following are just a few of the methods.

When using ReddiForm for foundation walls only, joists may be supported on top of the wall using a conventional sill plate. A 2" x 10" is the recommended size for the sill plate however a 2" x 8" will cover the 2" of exterior foam and all of the concrete. Sill plates can be cut and drilled prior to filling the walls, placed while the concrete is still wet, and the anchor bolts set. The following day the bolts are tightened. This method does not allow for adjusting out the crown in the lumber if present. Since concrete shrinks slightly the sill plate will seal to the foam when it is tightened down which may eliminate the need for sill sealing material. Ensure that the sill material is straight as it can't be straightened after it is set.

GOOD: When building additional stories with ReddiForm, a ledger is directly attached to the form. Drill or saw holes in the foam approximately 5" in diameter at the center of every other vertical column. Drill holes in the ledger corresponding to the centers of the holes in the wall, and insert anchor bolts. Temporarily support the ledger strip with 2" x 4" 's, and secure the ledger to the wall with all-thread, 9" short-tail snap ties, tie wire or OlyLog screws at approximately every 8' along the ledger or as needed to ensure the ledger is secured tight enough to the form to prevent leakage of the concrete. When the concrete is poured, it flows against the ledger giving the bolt the needed support. (FIGURE 22).

BETTER: There are metal hangers developed for attaching floors. See Simpson Strong-Tie's ICFVL Ledger Connector System for wood or steel floors at www.strongtie.com or at 800 999-5099



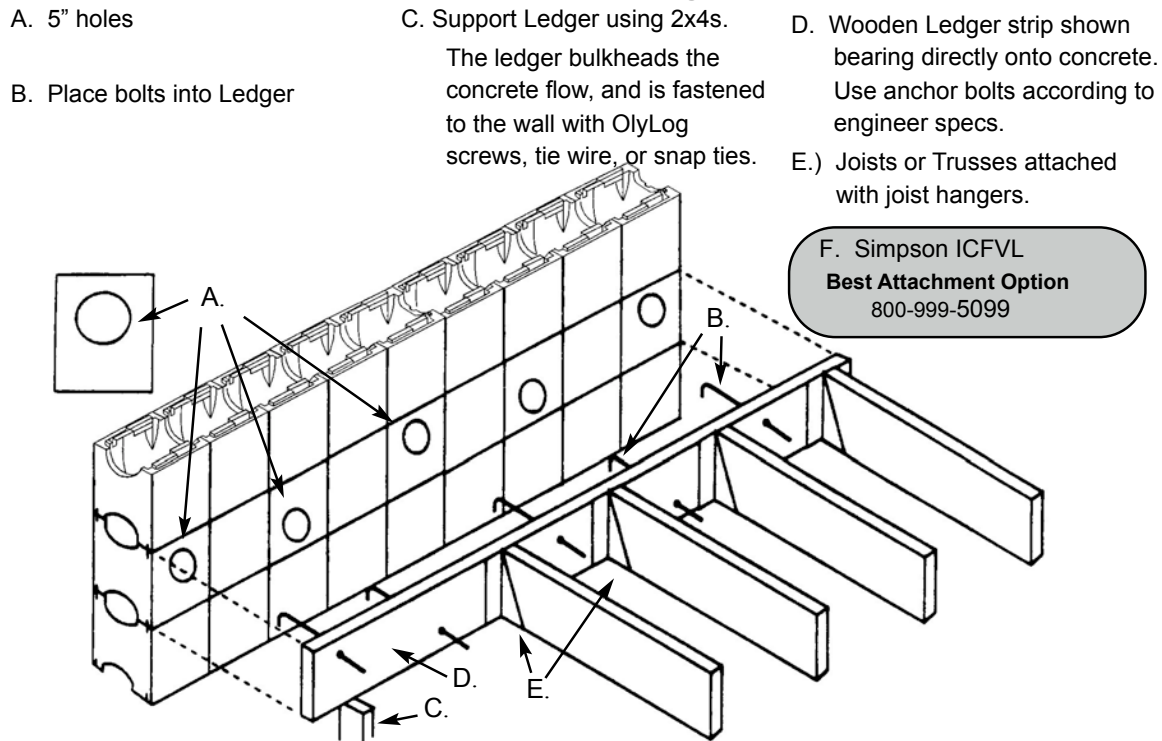
WALLS

Walls of dissimilar construction are attached to ReddiForm walls by fastening into the concrete structure of the ReddiForm wall. The concrete horizontal centerline is located behind the horizontal joints between courses. The easiest method is to install anchor bolts according to specifications before the wall is poured.

ROOFS

Roofs are attached just as with wood frame walls. A sill plate is attached on top of the wall then trusses or conventional framing can be easily attached (FIGURE 21). Gable ends can be easily constructed with ReddiForm. Stack the forms, strike lines to indicate the desired gable pitch, and cut the forms along those lines. Due to the reversibility of the form, the cutoff from one row or one side can be used on the next row or opposing side. Be cautious with steep angles on gable ends, and install additional bracing to securely hold the concrete in such a configuration.

FIGURE 24
Installation of Joists Using Anchor Bolts



FINISHES

The ReddiForm walls can be finished with any material and style desired. When using any unfamiliar methods or products test them in an inconspicuous area or on an extra form. This offers an opportunity to check for qualities such as color, aesthetics, bond, or degradation of the EPS foam. Some materials are incompatible with the EPS foam, and the most volatile and destructive of these is petroleum based coatings. A partial list of compatible finishes is included with this manual. See Section 7, "List of Compatible Products." Always follow the manufacturer's specifications.

***The ENTIRE wall below grade must be WATERPROOFED, not damp-proofed, using a system compatible with EPS foam.
 The wall itself WILL NOT stop water from entering the foundation.
 ALL below grade walls require waterproofing***

Waterproofing can be any of those on the “Compatible Products” list, or one of your choice. Fully adhered waterproofing membrane systems compatible with foam work very well and are among the least expensive.

Above grade finishes range from synthetic stone to real brick, and cedar siding to stucco. **Because ReddiForm is manufactured as an all foam product several manufacturers of stucco systems offer warranties on ReddiForm.**

Conventional siding or sidewall treatment is best accomplished by using wood or metal furring strips. These are attached vertically, horizontally, or diagonally to horizontal fastening strips, and also adhered to the block using an EPS compatible adhesives. Horizontal fastening strips allow any on center spacing which can reduce waste.

Optional methods of attaching furring strips:

Install with concrete nails the day following the pour.

Attach with screws before the pour so that the threads are embedded in concrete.

Power nail into the concrete with an air gun made specifically for attaching to concrete. Please contact ReddiForm at 800-734-8268 for more information.

The use of furring strips on exterior walls serves three functions:

1. It creates an air space which increases the R-value.
2. It permits air to circulate behind the siding which prevents moisture accumulation responsible for degradation of the wood siding and the paint or stain coating. In fact, most manufacturers of wood siding now recommend that an air space be left behind the siding.
3. It permits aluminum and vinyl siding to expand and contract.

The following is an excerpt from an article in the Journal of Light Construction, October 1996

Siding applied directly over rigid insulation sheathing has a history of failures. The consensus seems to be that rigid-foam sheathing is so impermeable that moisture absorbed by the siding (from direct rainfall or “splash back” at horizontal surfaces) cannot be buffered by temporary absorption in the underlying wood framing elements. The rigid insulation also prevents the wall framing from absorbing any of the heat generated by exposure to direct sun.

Depending on the action of the rain, sun, and temperature, the siding cups as moisture is driven back and forth through the siding. In this case, the peeling of the latex stain indicates that a solid-color stain was used. The surface film of stain lifts off the siding when underlying moisture tries to escape by migrating through the surface of the siding.

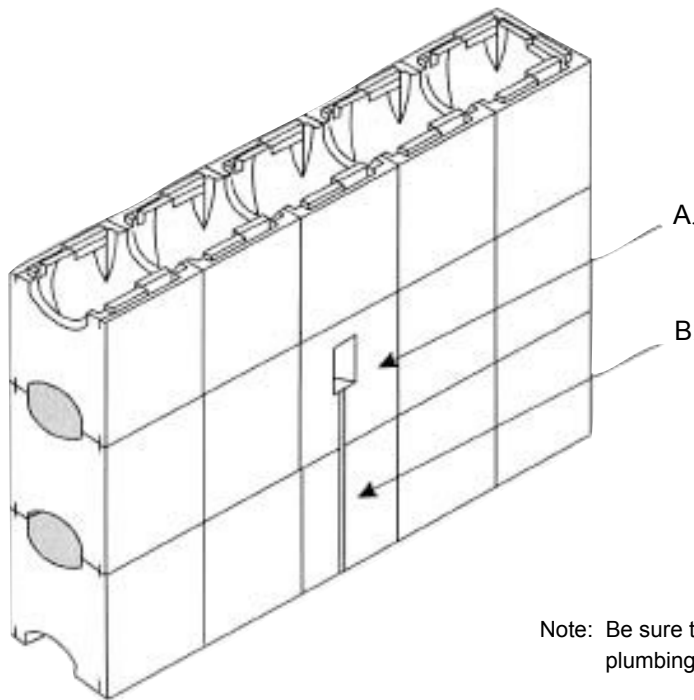
Inward cupping results when the interior surface of the siding is drier than the exterior surface, and the back of any siding exposed to direct sun will often be “baked dry” when the foam sheathing blocks heat transfer to the underlying framing. The siding should be installed over furring strips, creating what is called a “rain screen” cladding system. The resulting air space allows both heat and moisture to dissipate.

PLUMBING and ELECTRICAL

Piping to be brought in, with a diameter greater than 3", should be placed prior to pouring, or a sleeve provided to allow placement after pouring. Piping with a diameter of 3" or less can be brought in by drilling through the web after the pour has been completed. For interior piping with a diameter greater than 2", place in forms before pouring.

After pouring, electrical and plumbing is easily installed in the ReddiForm walls using a hot wire cutter, small electric chainsaw, router or hand tools. Electrical boxes are attached with adhesive or fastened directly to the concrete. Remodel boxes can be also be used. Wire is placed in a groove cut into the foam with a hot wire cutter, router, or the easiest and fastest is to use a small chain saw with a gauge attached to limit depth of cut to just less than 2". Follow all local electrical and plumbing codes when carrying out this task.

FIGURE 25
Electrical and Plumbing



- A. Use a hot wire cutter, router, or chainsaw with a depth gauge to cut away foam.
- B. Small channels are cut for wires or pipes.

Note: Be sure to follow all local electrical and plumbing codes. Safety is First

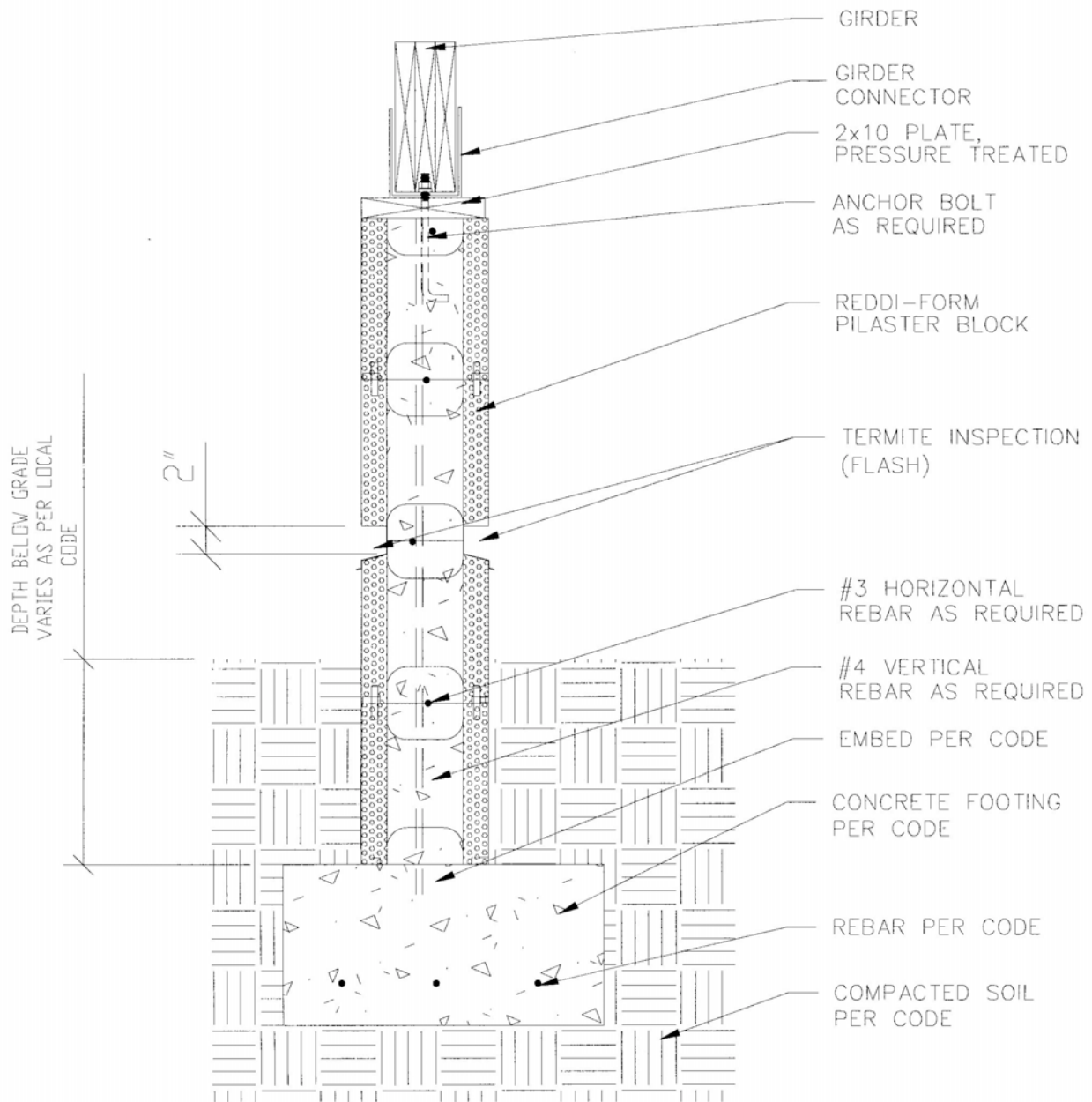
DRYWALL and MOLDING

Insert a 1/8" x 1 1/2" x 8' strip of high-density fiberboard (HDF), or light gauge metal into the horizontal groove in the block, and attach the sheetrock through the foam and into the strip.

Baseboard and other moldings can also be screwed to the plastic or metal behind the sheetrock using small head finishing screws or nails.

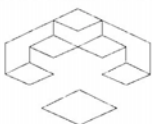
A preferred method for attaching molding is to glue and screw a 1/2" thick rip of plywood, slightly less in height than the base molding, directly to the foam prior to installing the sheetrock. Stand the sheetrock on end on the wood rip and glue and screw it to the foam above the rip. Nail the molding to the rip at the base of the sheetrock. Since the molding is higher than the rip it will cover the joint between the rip and the sheetrock. A similar technique can be used to attach built-up crown moldings.

Installing the sheetrock vertically, on end, eliminates the butt joints, and end of wall cutoffs can be used to begin on the next wall.



F1 REDDI-FORM PILING SUPPORT

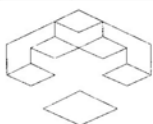
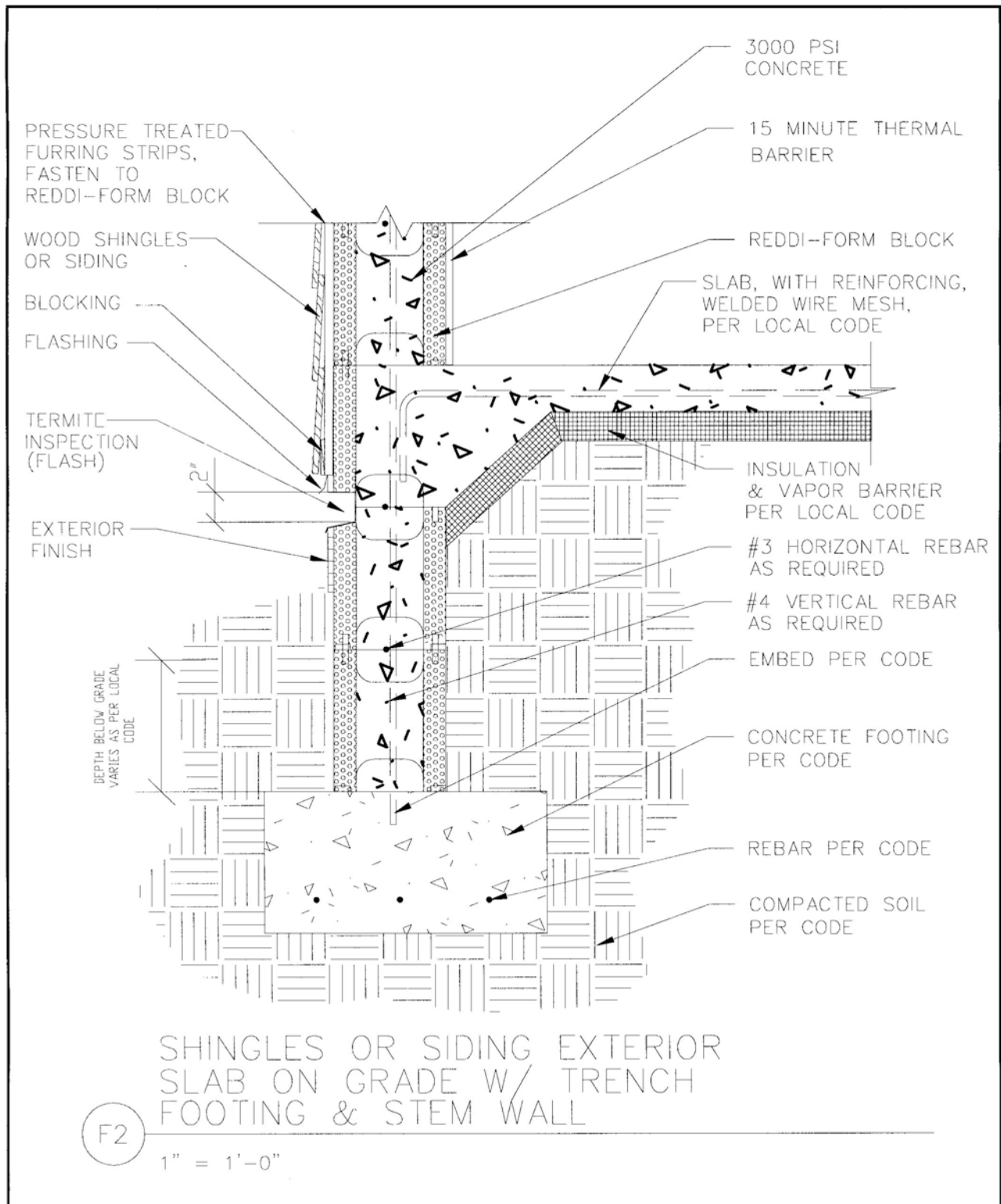
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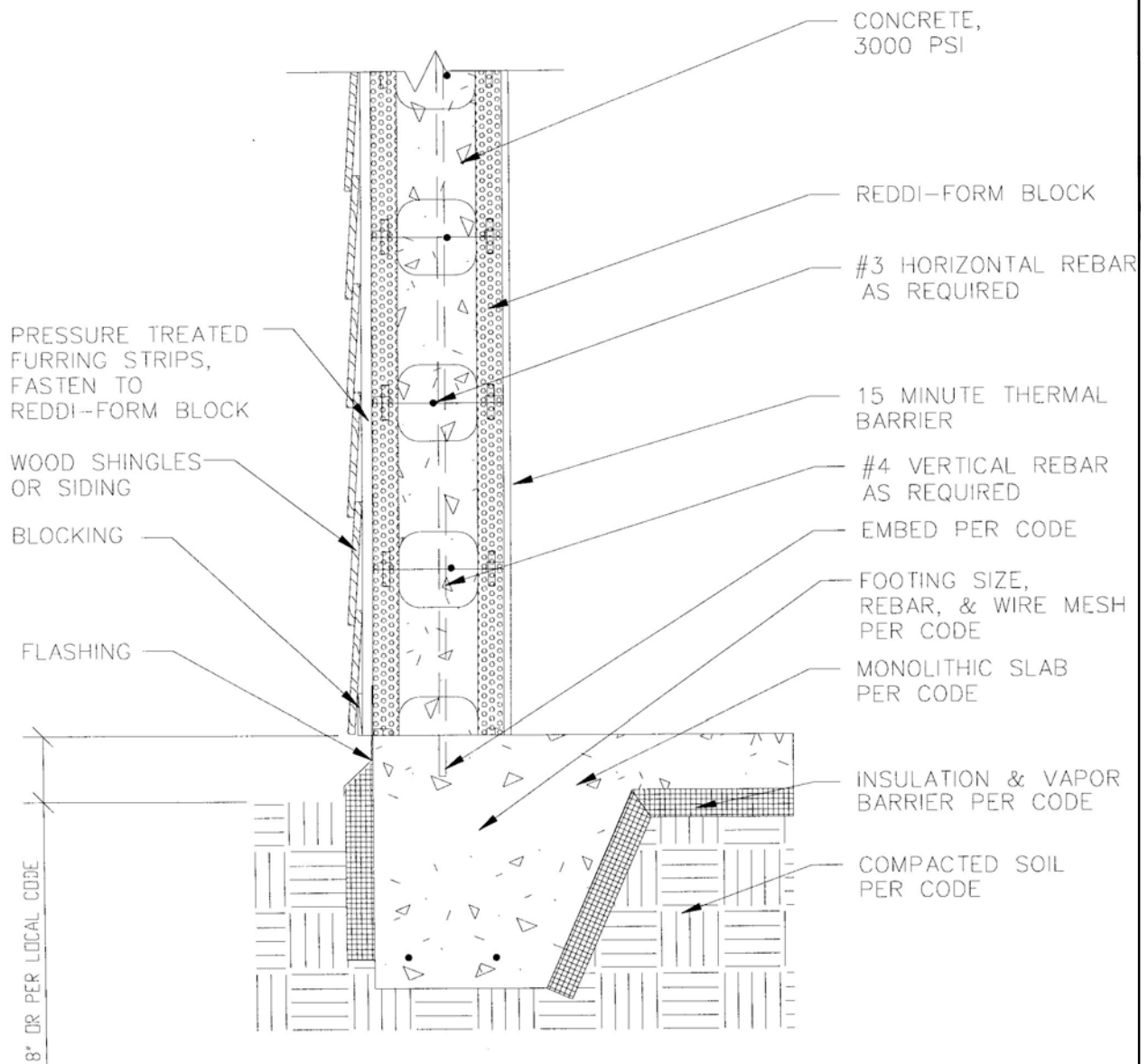
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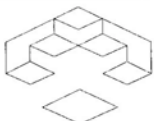
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WOOD OR SHINGLE EXTERIOR MONOLITHIC SLAB REDDIFORM WALL JUNCTION

F3

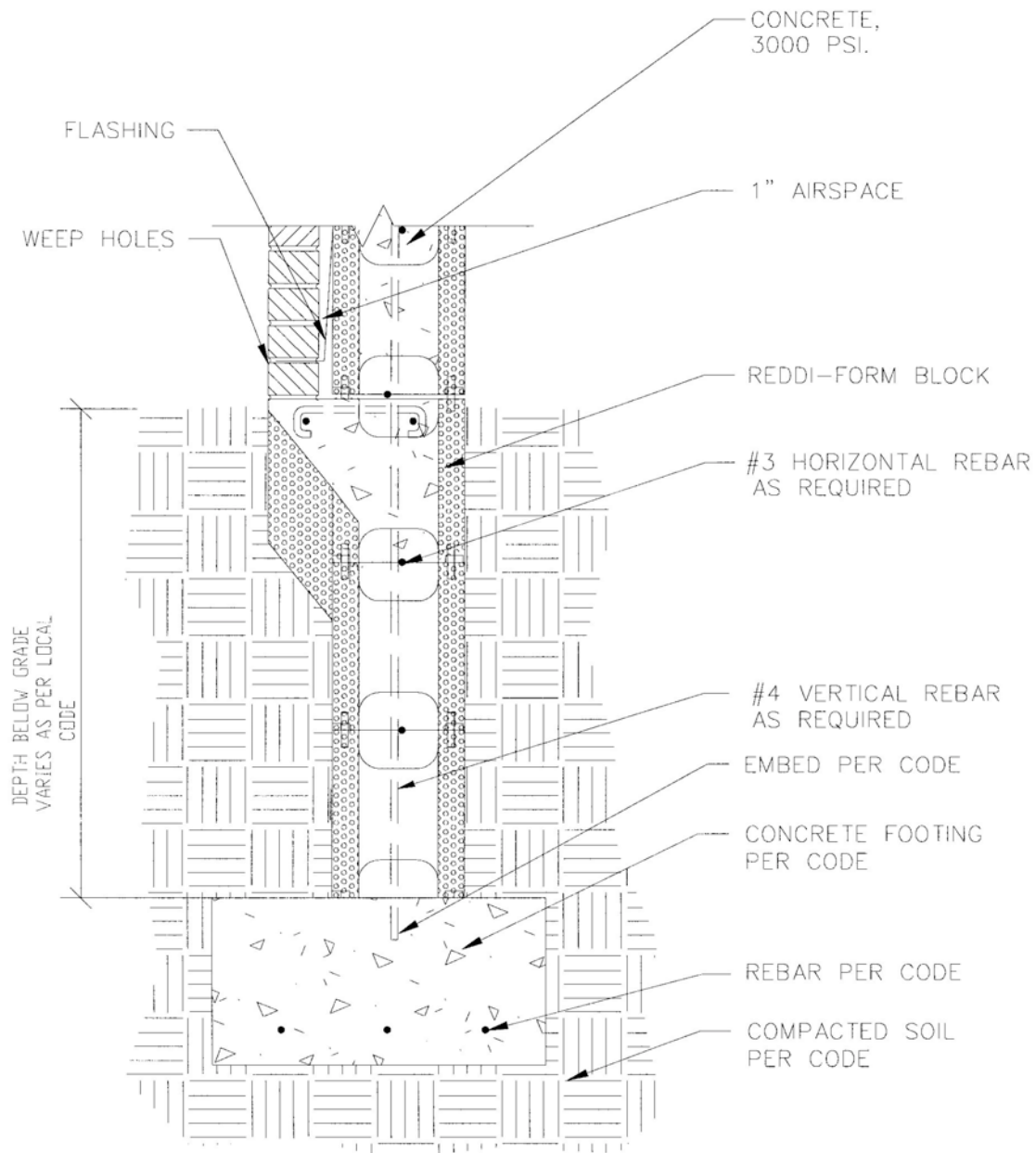
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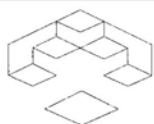
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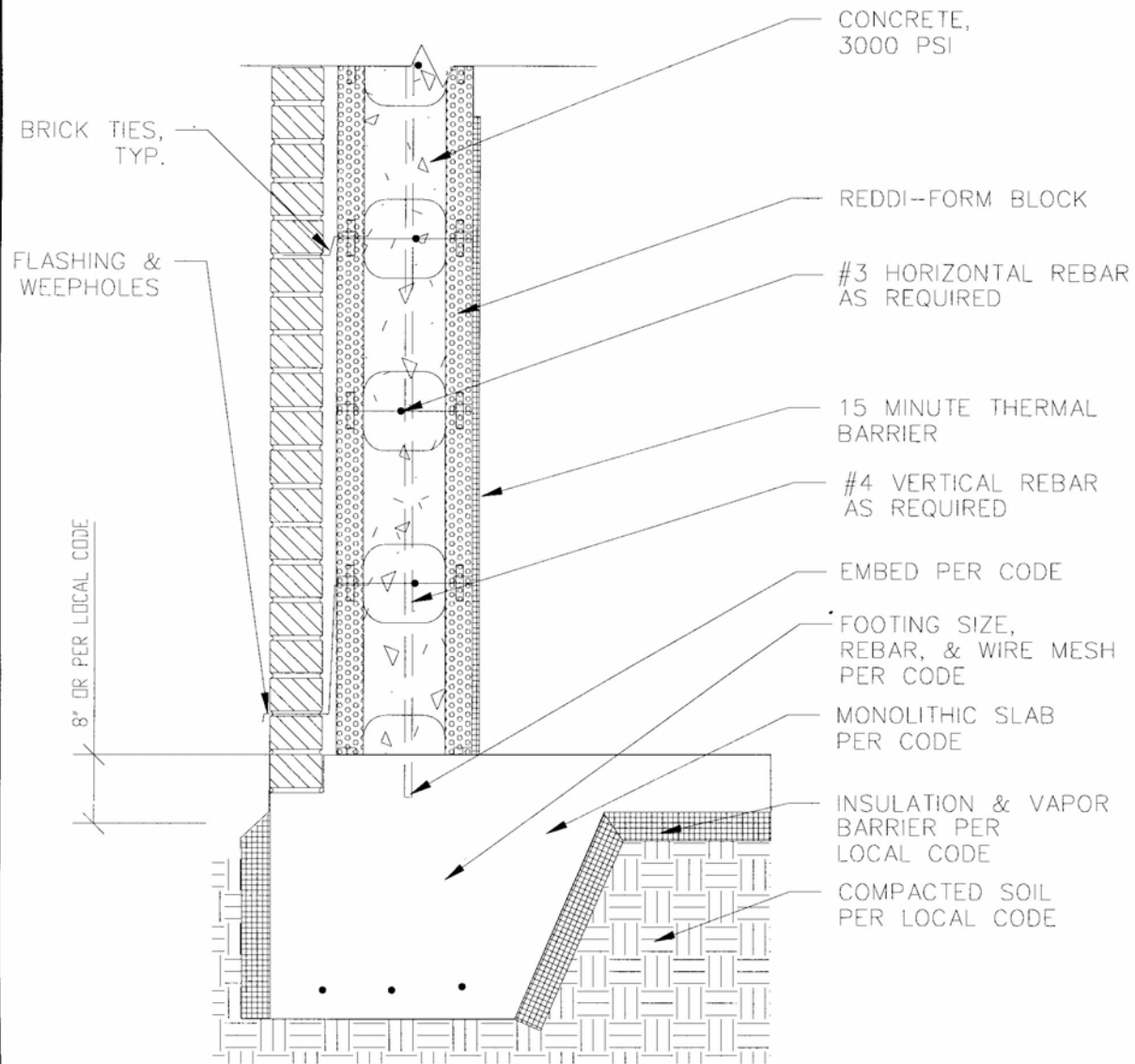
F4 BRICK VENEER W/ REDDI-FORM BLOCK
1" = 1'-0"



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BRICK EXTERIOR AND REDDI-FORM WALL JUNCTION

F5

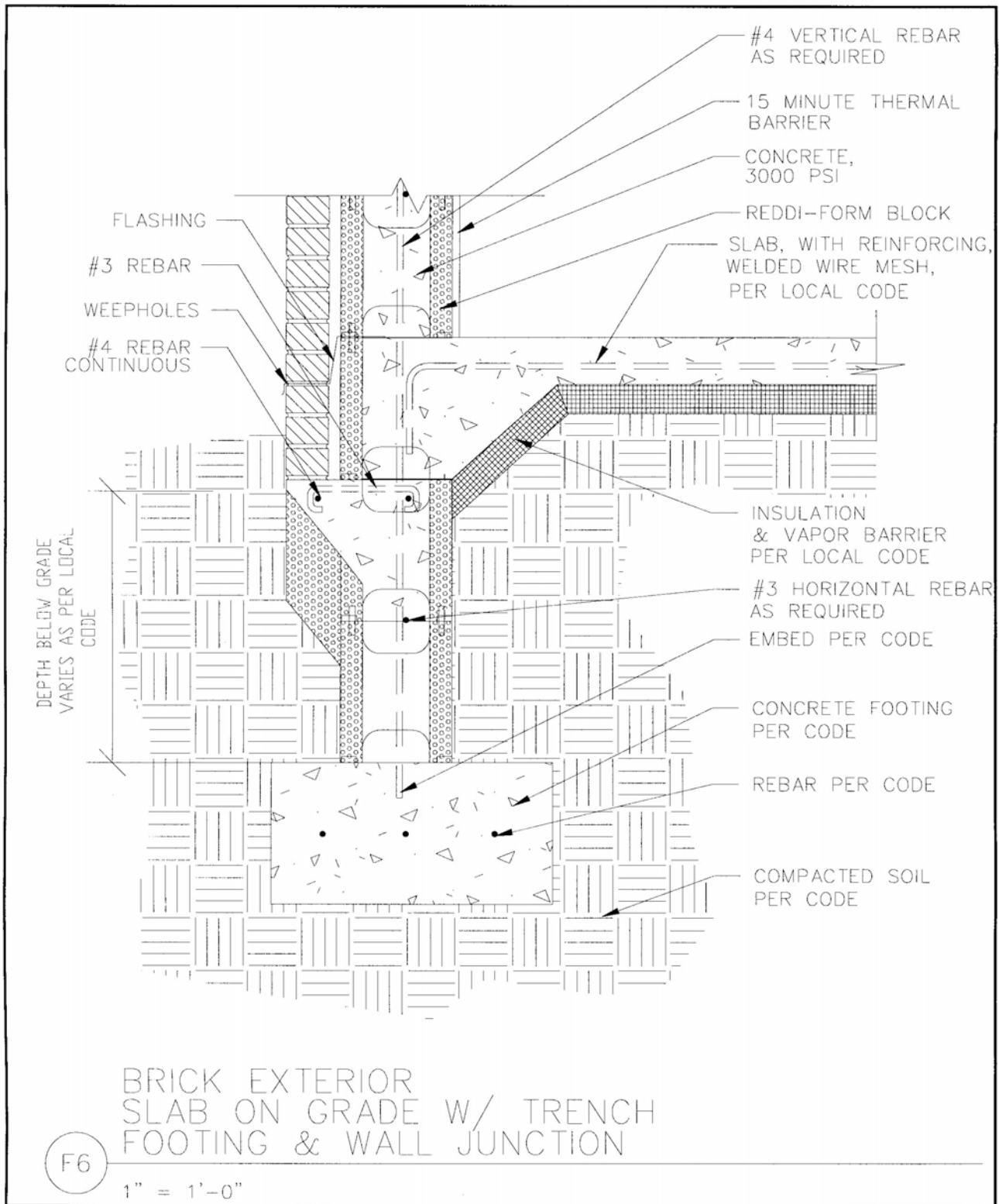
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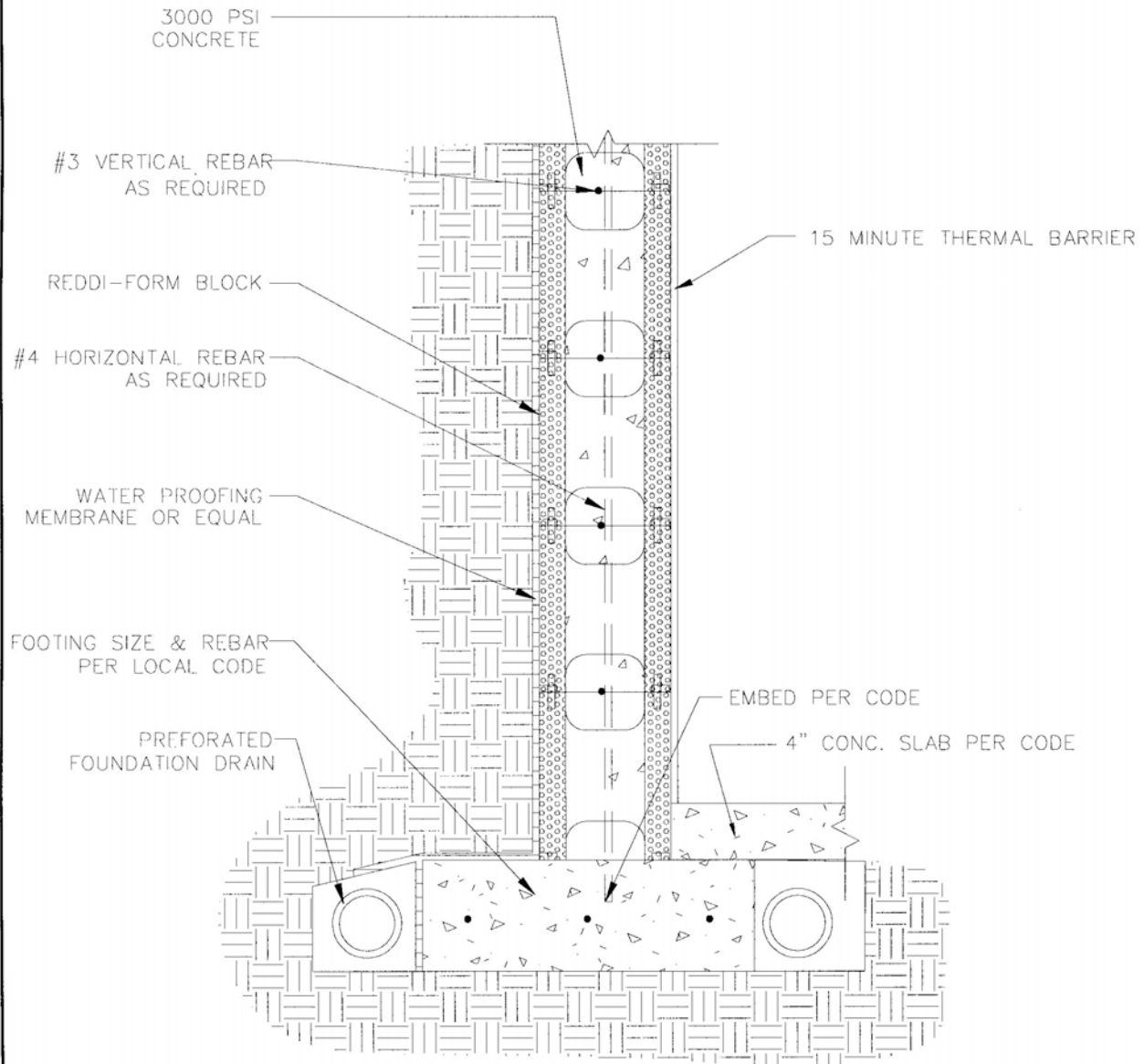
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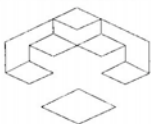
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F7

BASEMENT AND WALL FOOTING DETAIL

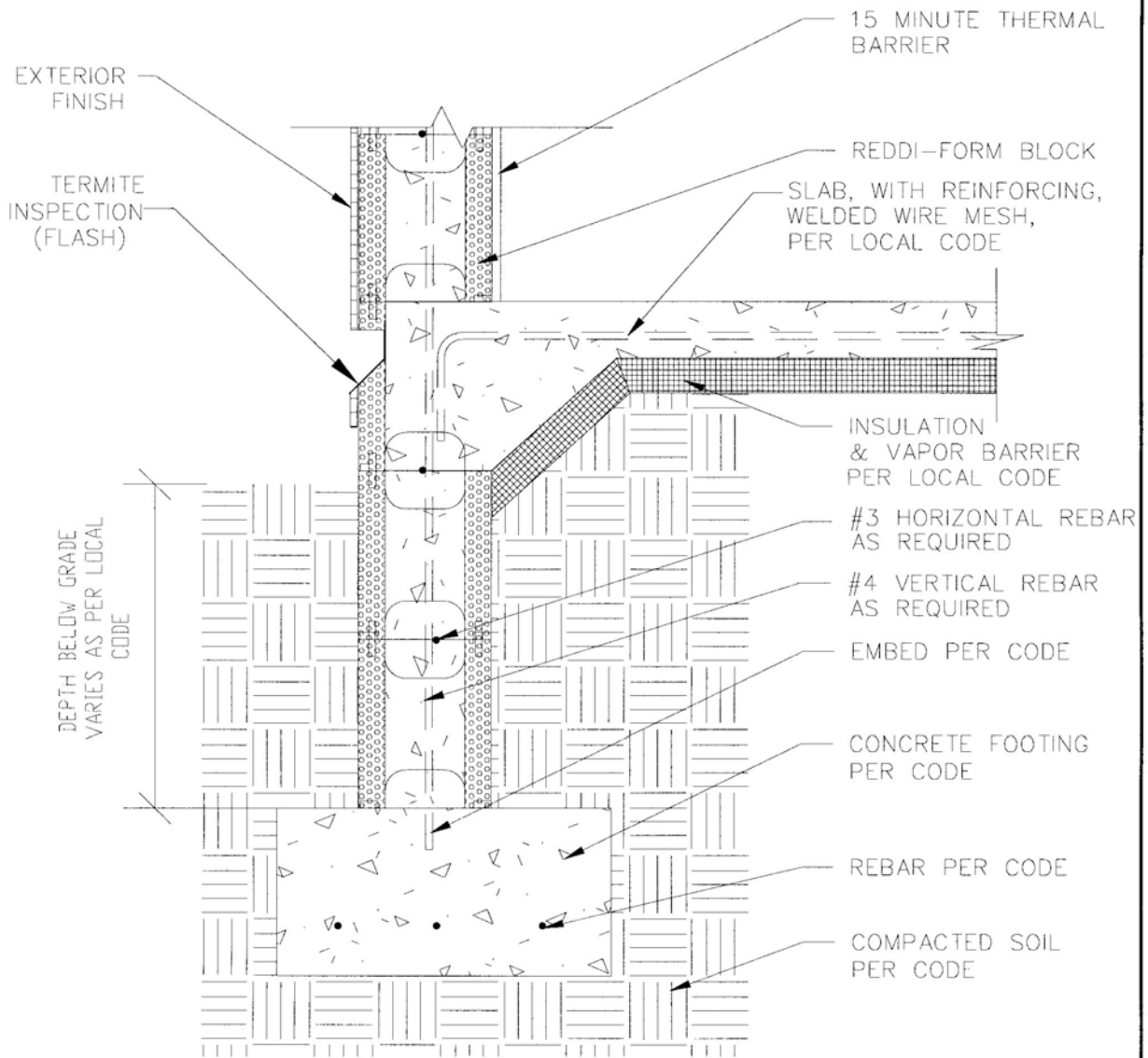
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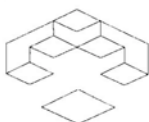
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SLAB ON GRADE W/ TRENCH
FOOTING & STEM WALL

F9

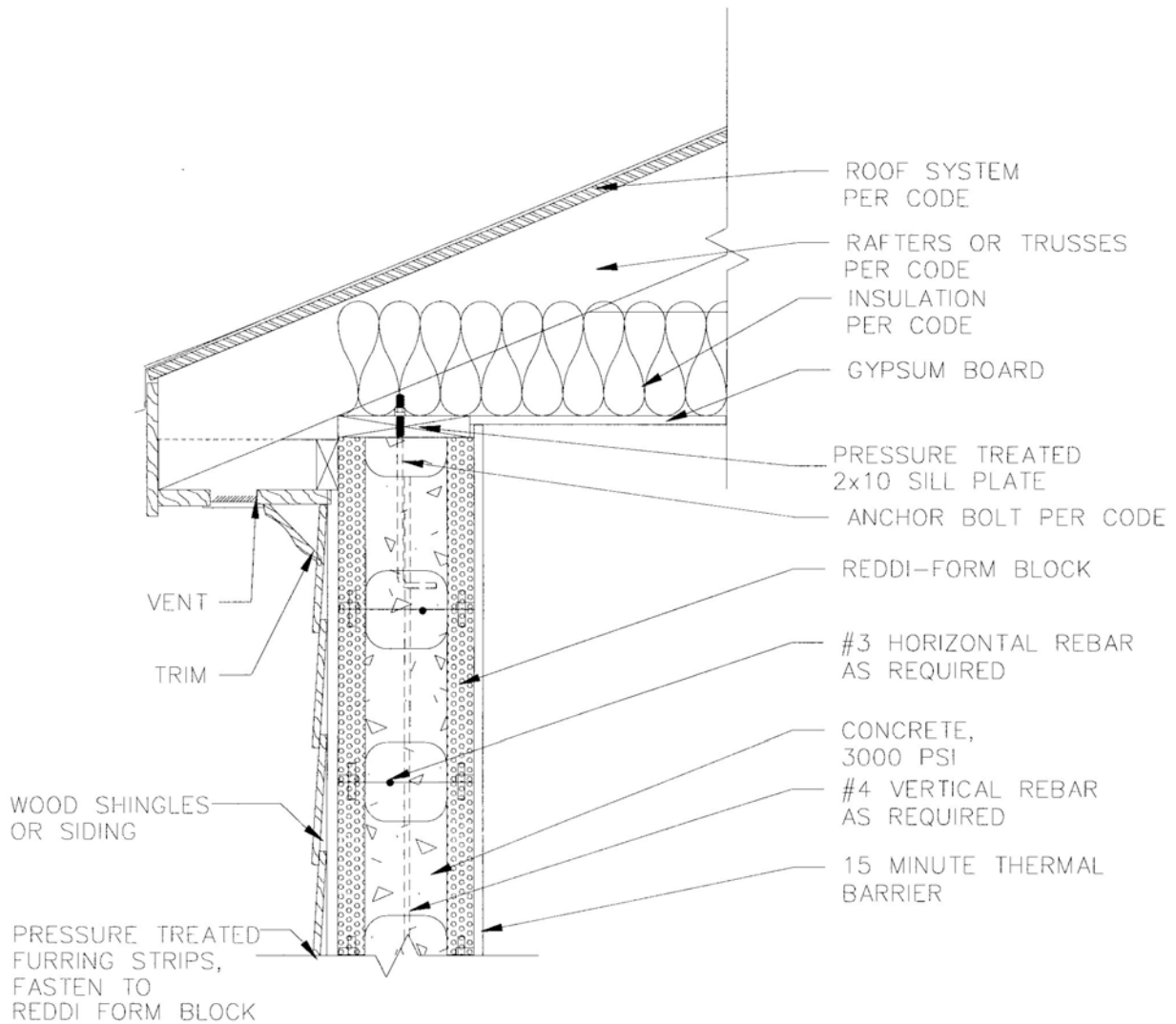
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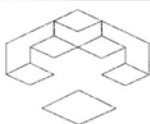
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WOOD OR SHINGLE EXTERIOR WALLTOP PLATE W/WOOD FRAMING & TYPICAL EAVE OVERHANG

R1

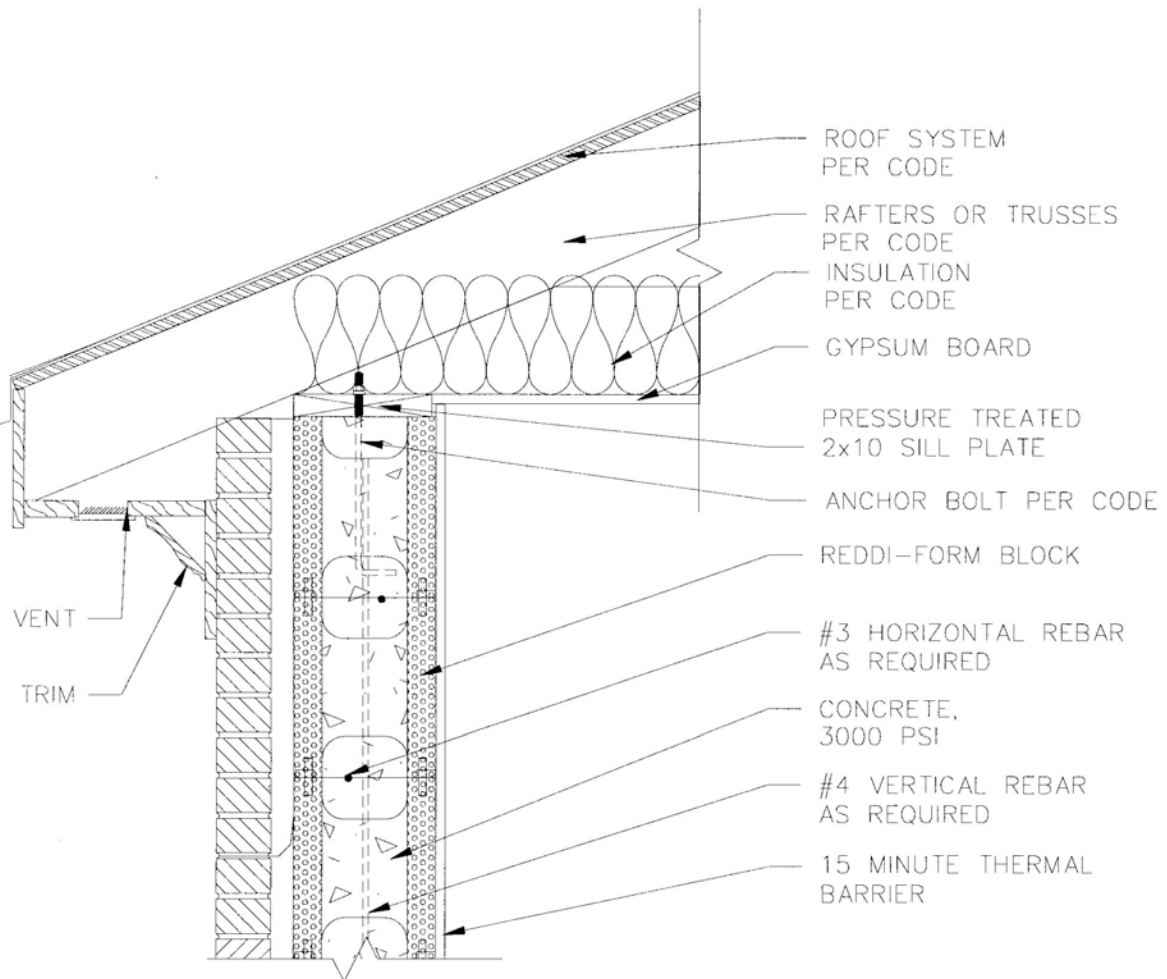
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BRICK EXTERIOR
WALLTOP PLATE W/WOOD FRAMING &
TYPICAL EAVE OVERHANG

R2

1" = 1'-0"



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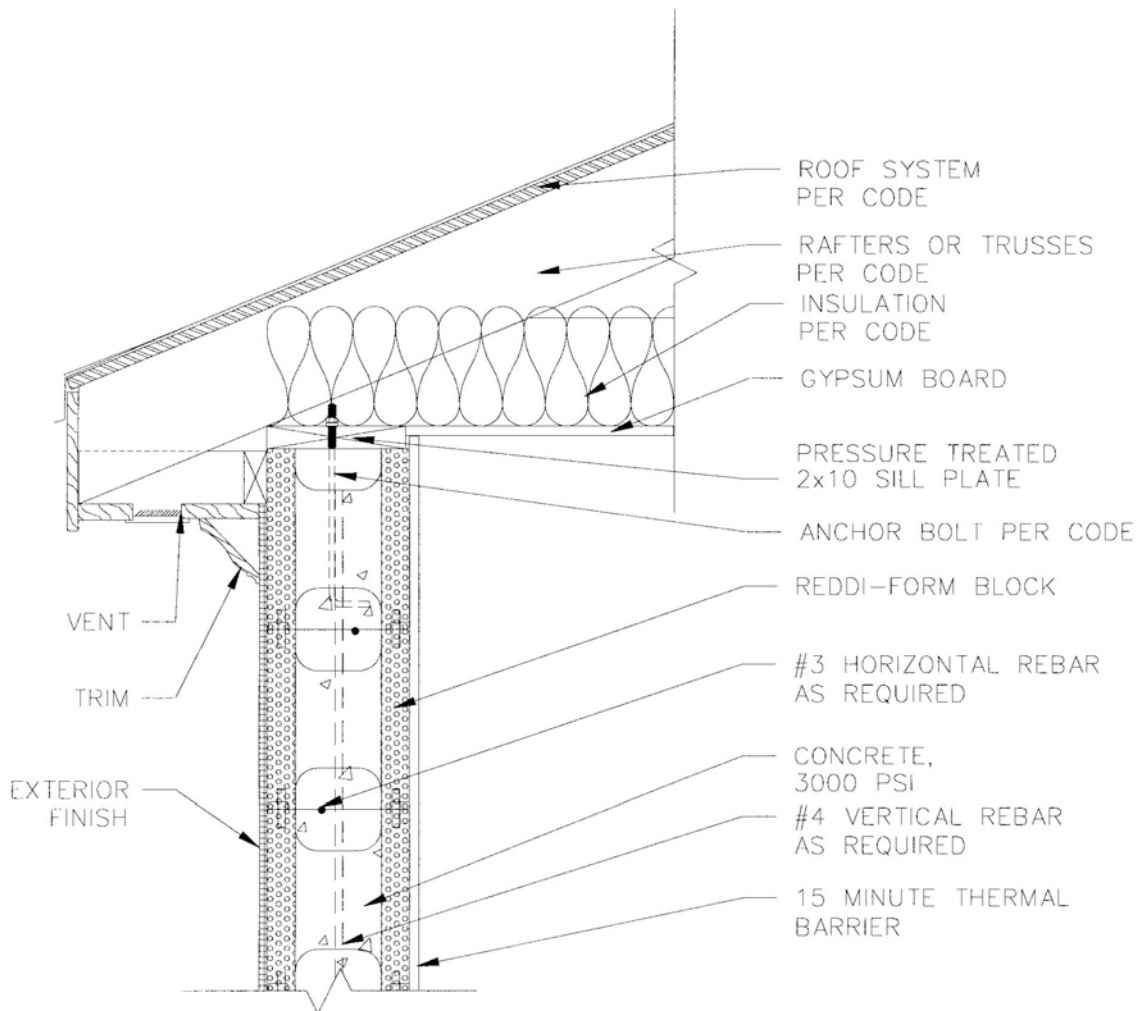
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JOB NUMBER SHEET

REDDI-FORM

R2



EXTERIOR FINISH SYSTEM WALLTOP PLATE W/WOOD FRAMING & TYPICAL EAVE OVERHANG

R3

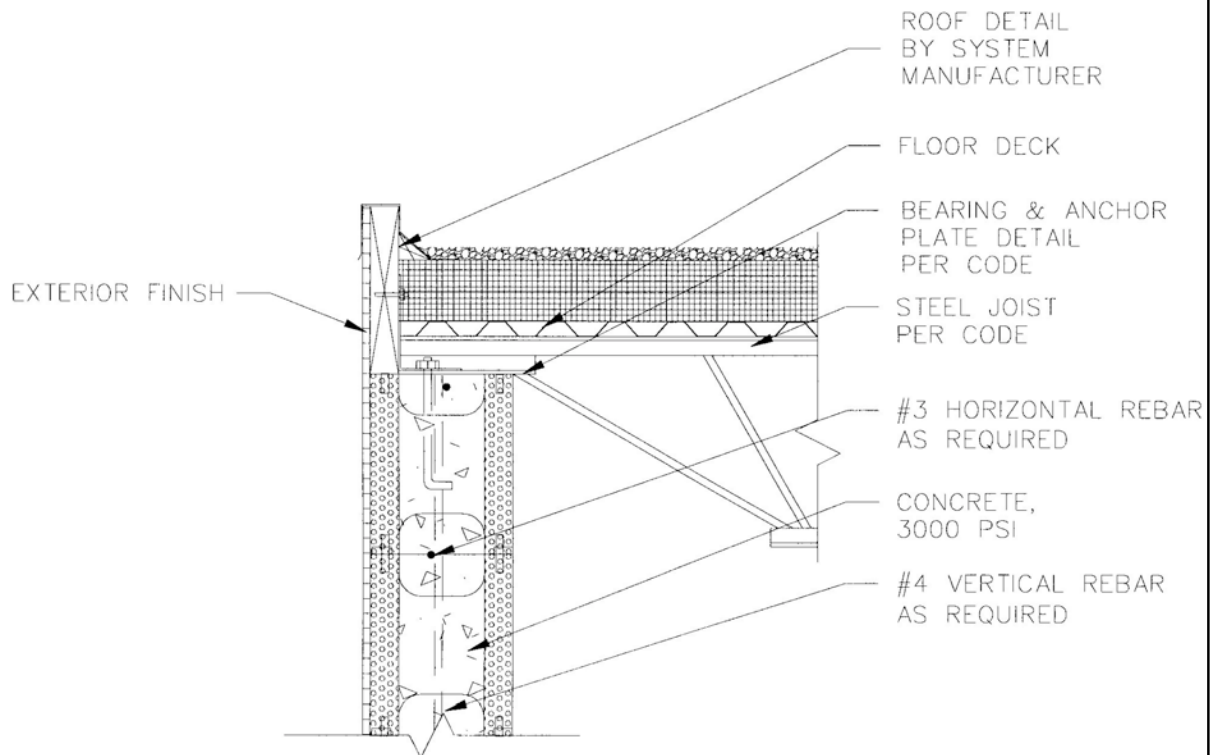
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FLAT ROOF CONNECTION W/ OPEN WEB STEEL JOIST

R4

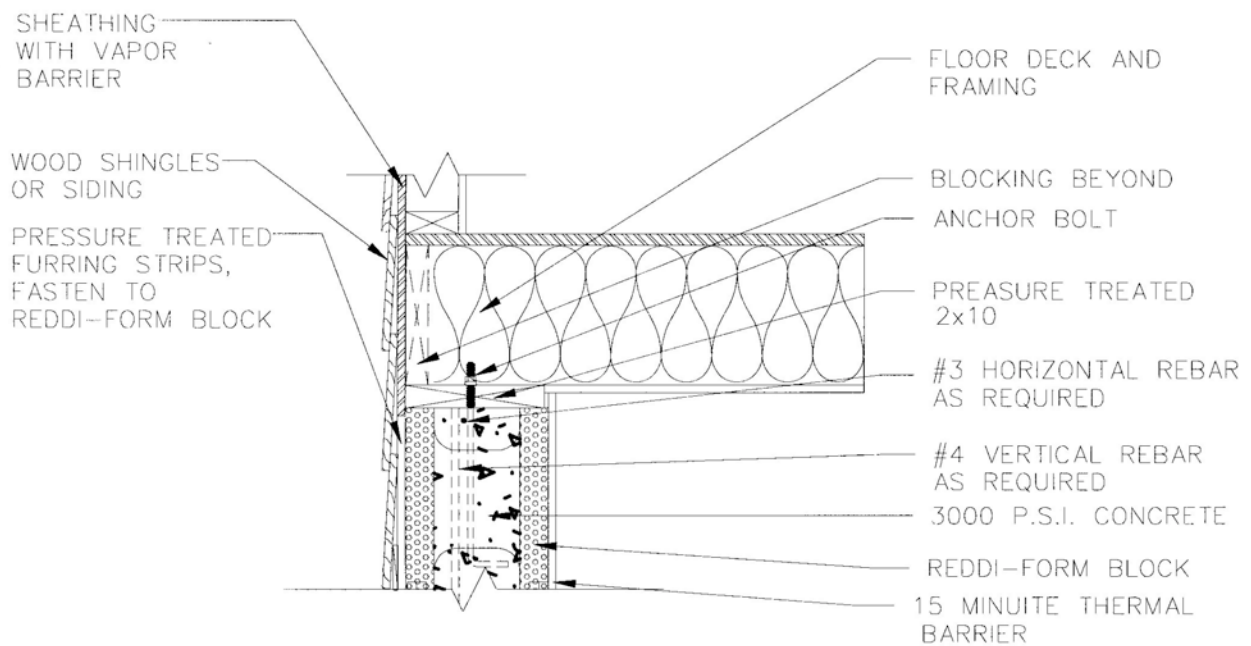
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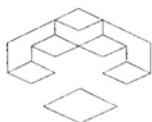
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WOOD SIDING EXTERIOR FLOOR & FOUNDATION WALL JUNCTION W/ WOOD FRAMING

W2

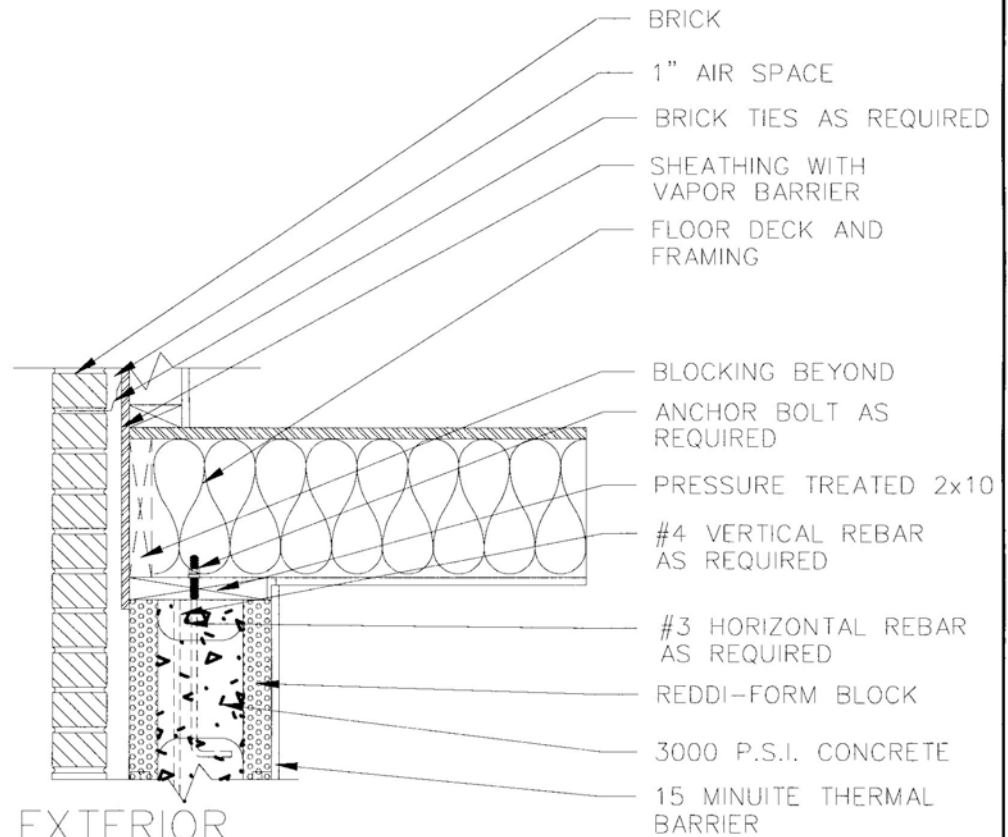
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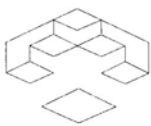
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BRICK EXTERIOR
FLOOR & FOUNDATION WALL JUNCTION
W/ WOOD FRAMING

W3

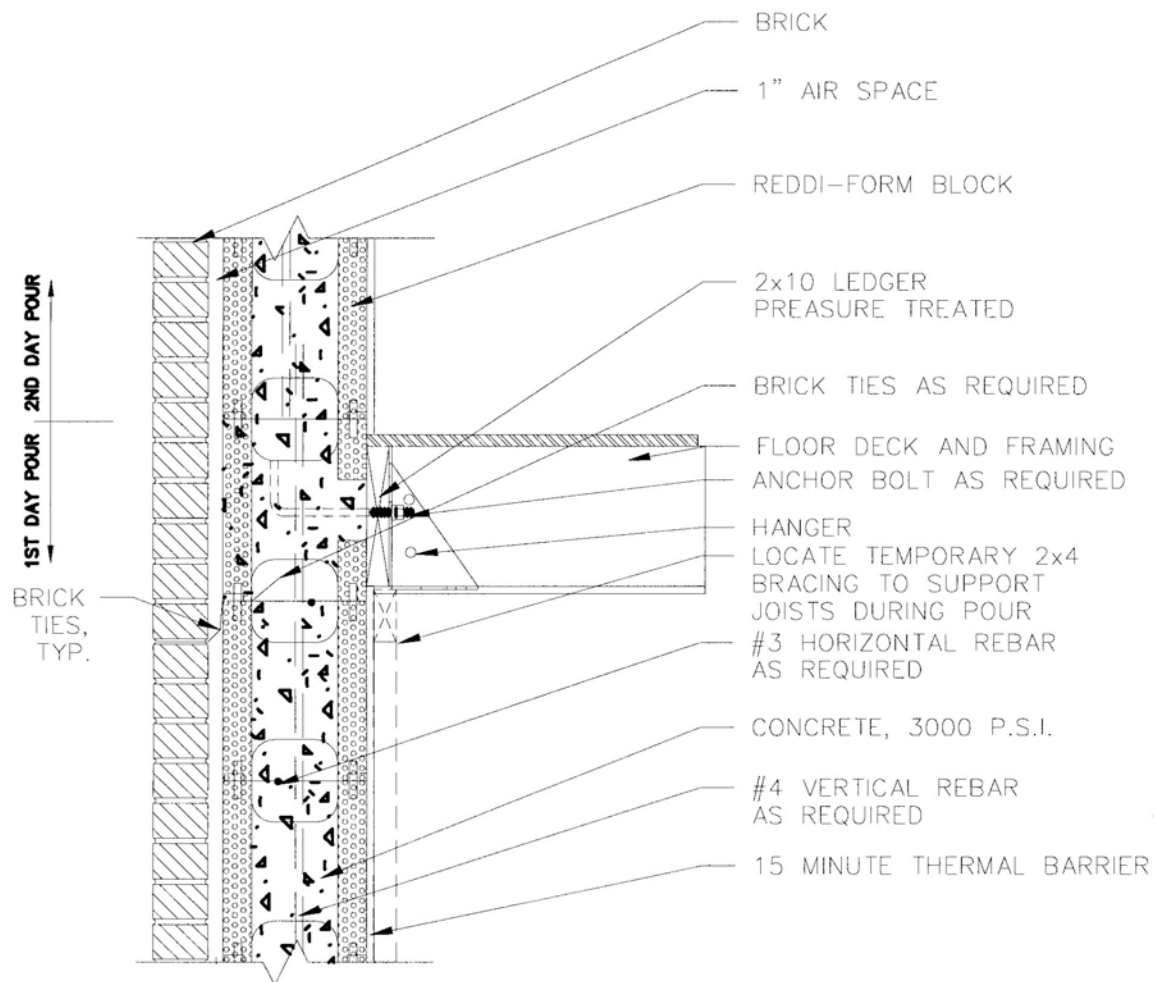
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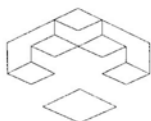
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BRICK EXTERIOR
FLOOR & WALL JUNCTION
W/ WOOD FLOOR JOIST

W4

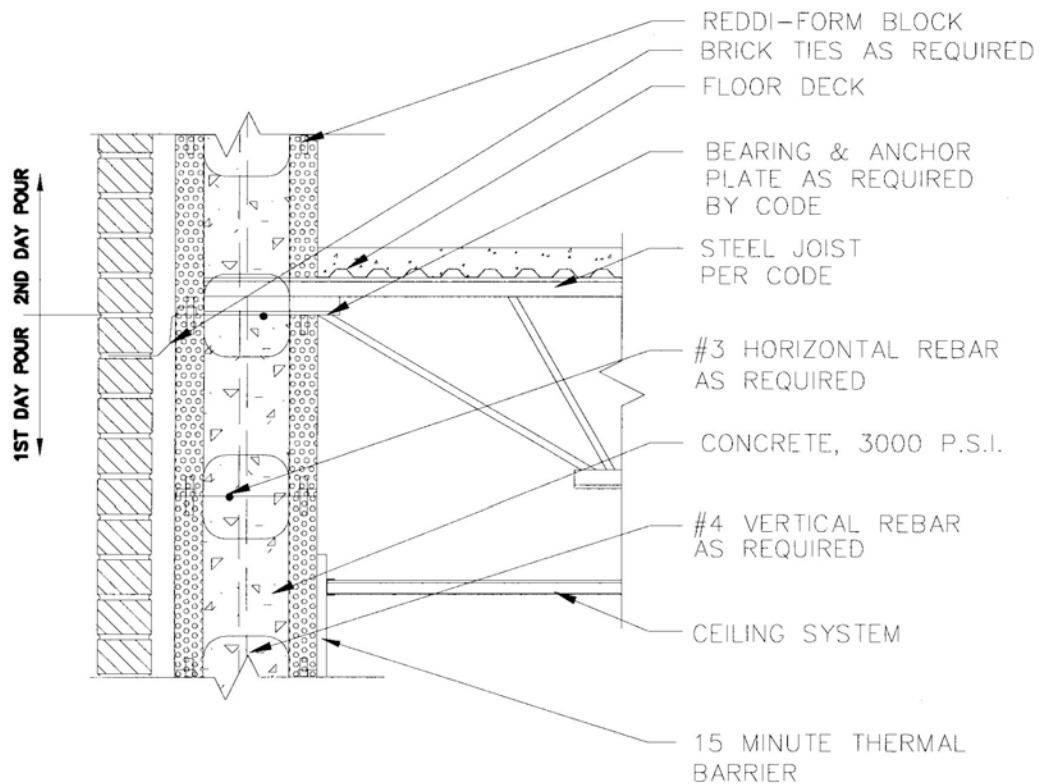
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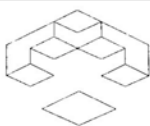
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| DATE: 6/25/96 | |
| JOB NUMBER | SHEET |
| REDDI-FORM | W4 |



BRICK EXTERIOR
FLOOR & WALL JUNCTION
W/ OPEN WEB STEEL JOIST

W5

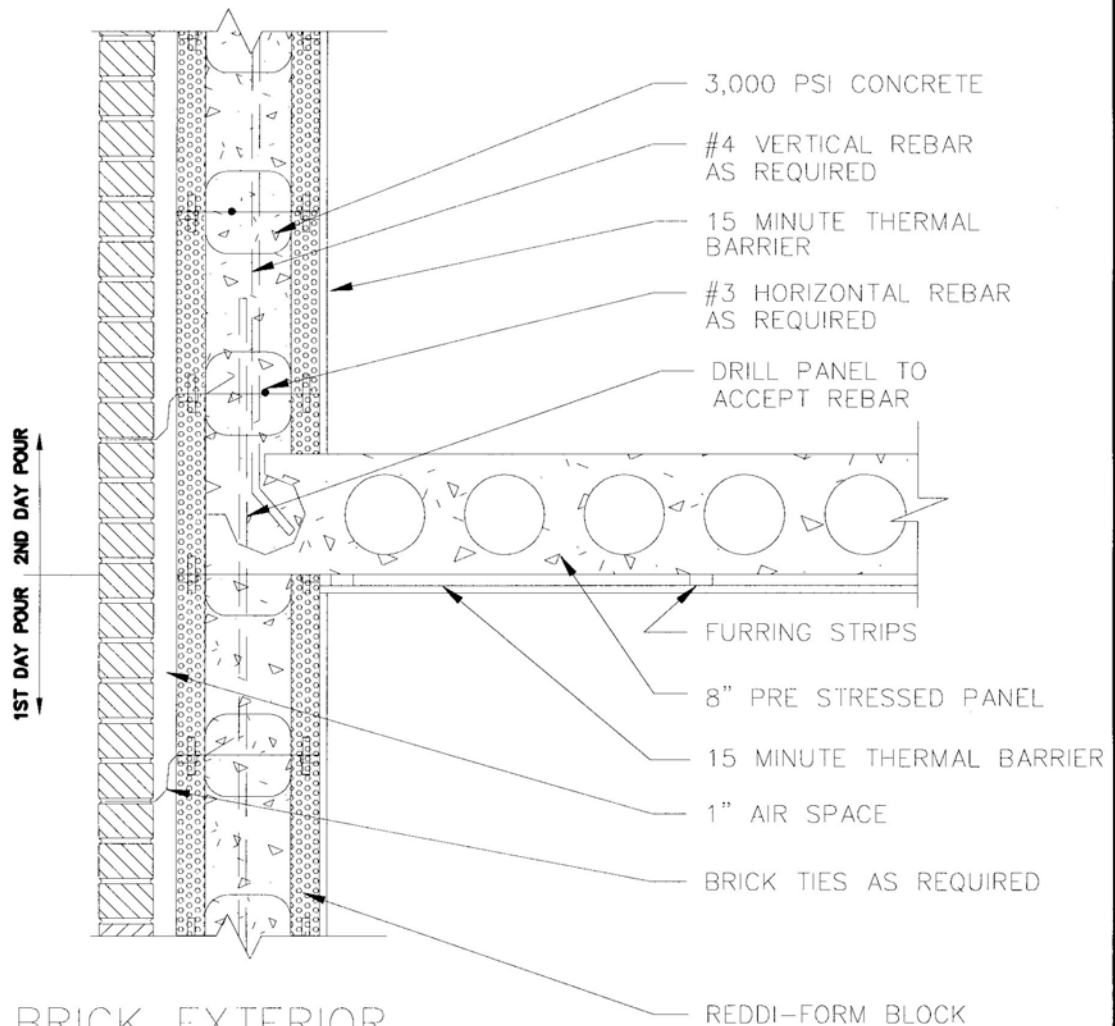
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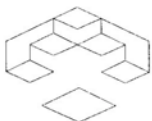
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| JOB NUMBER | SHEET |
| REDDI-FORM | W5 |



BRICK EXTERIOR
FLOOR & WALL JUNCTION
W/ PRECAST CONC. FLOOR

W6

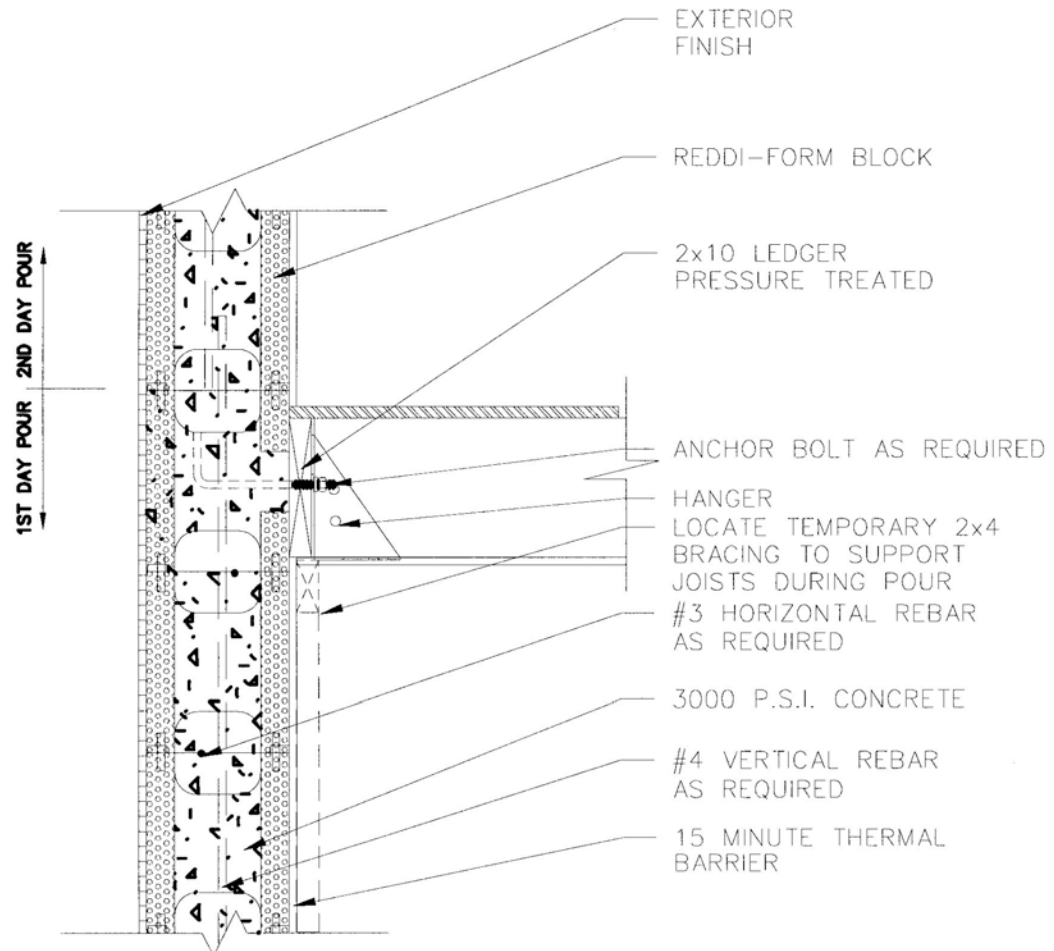
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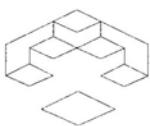
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| JOB NUMBER | SHEET |
| REDDI-FORM | W6 |



EXTERIOR FINISH SYSTEM
FLOOR & WALL JUNCTION
W/ WOOD FRAMING & EXTERIOR FINISH

W7

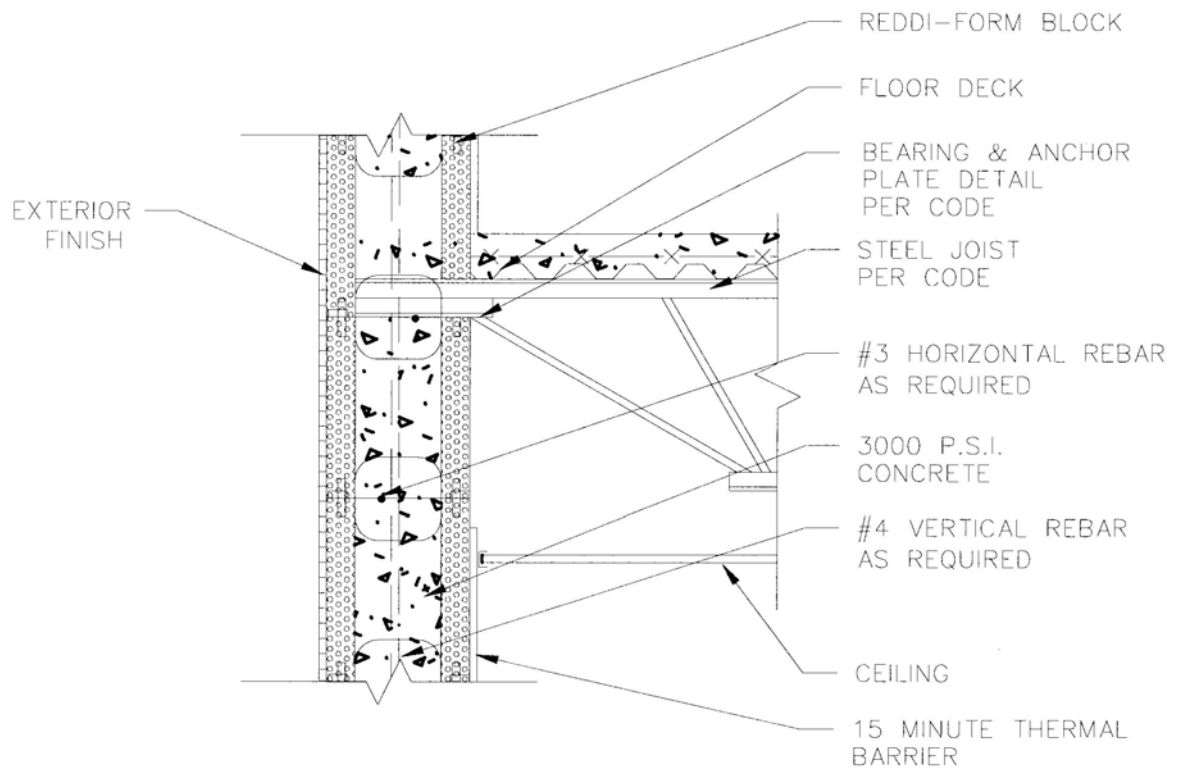
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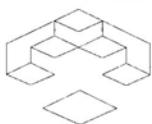
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| JOB NUMBER | SHEET |
| REDDI-FORM | W7 |



EXTERIOR FINISH SYSTEM
FLOOR & WALL JUNCTION
W/ OPEN WEB STEEL JOIST

W8

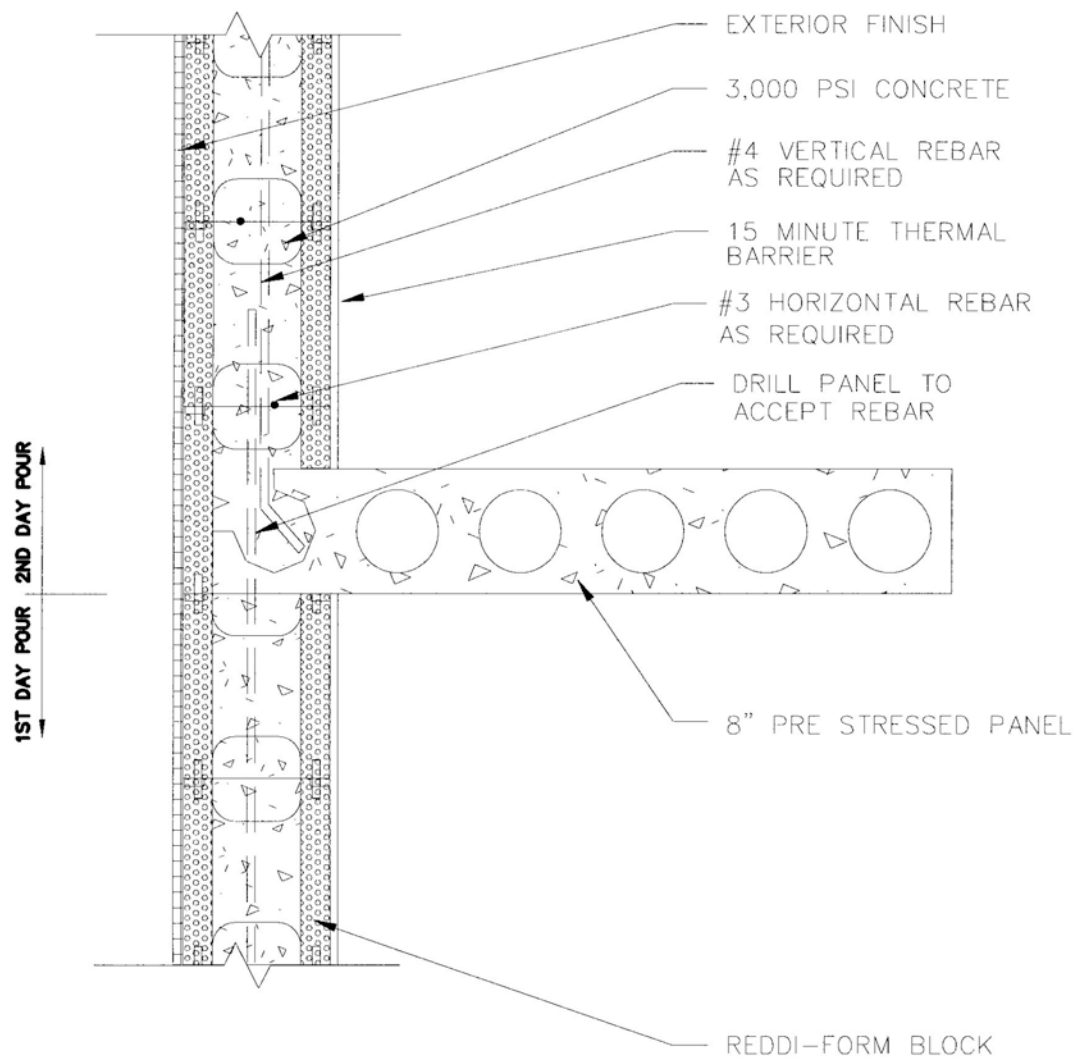
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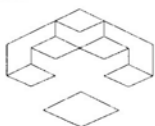
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| REDDI-FORM | W8 |



EXTERIOR FINISH SYSTEM
FLOOR & WALL JUNCTION
W/ PRECAST CONC. FLOOR

W9

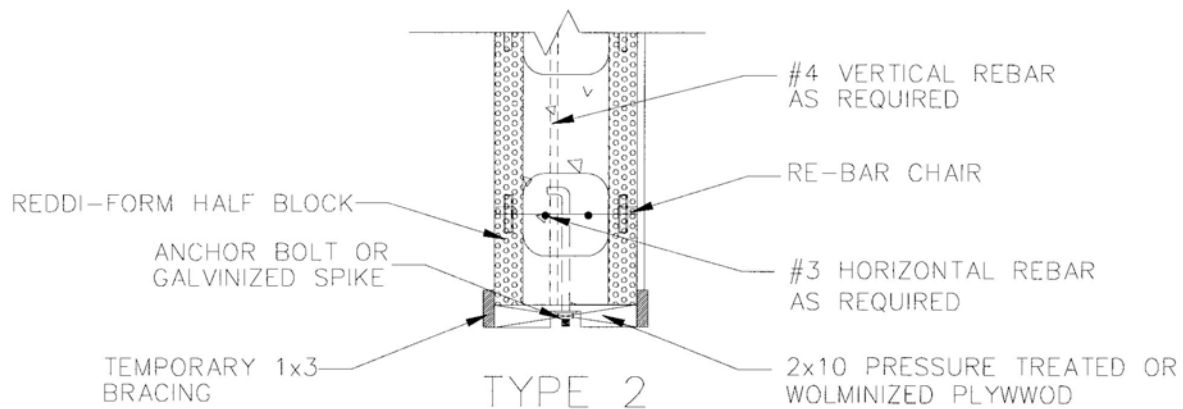
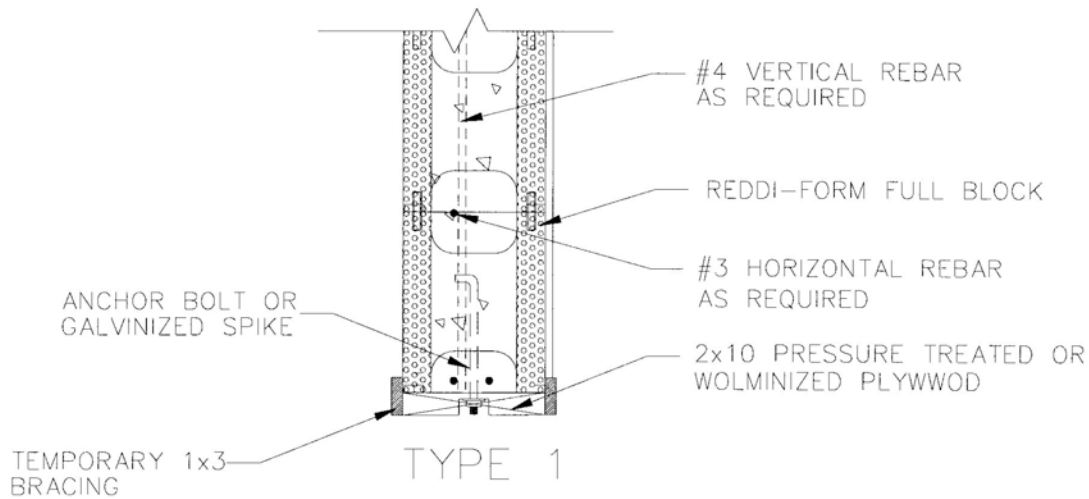
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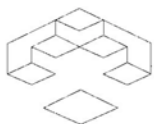


A MINIMUM OF TWO (2) NUMBER 5 GRADE 60 REINFORCING BARS ARE TO BE PROVIDED AROUND ALL WINDOW AND DOOR OPENINGS, WITH THE LINTELS REINFORCED AS SHOWN IN THE LINTEL TABLE

TYPICAL DOOR AND WINDOW LINTEL DETAILS

SU1

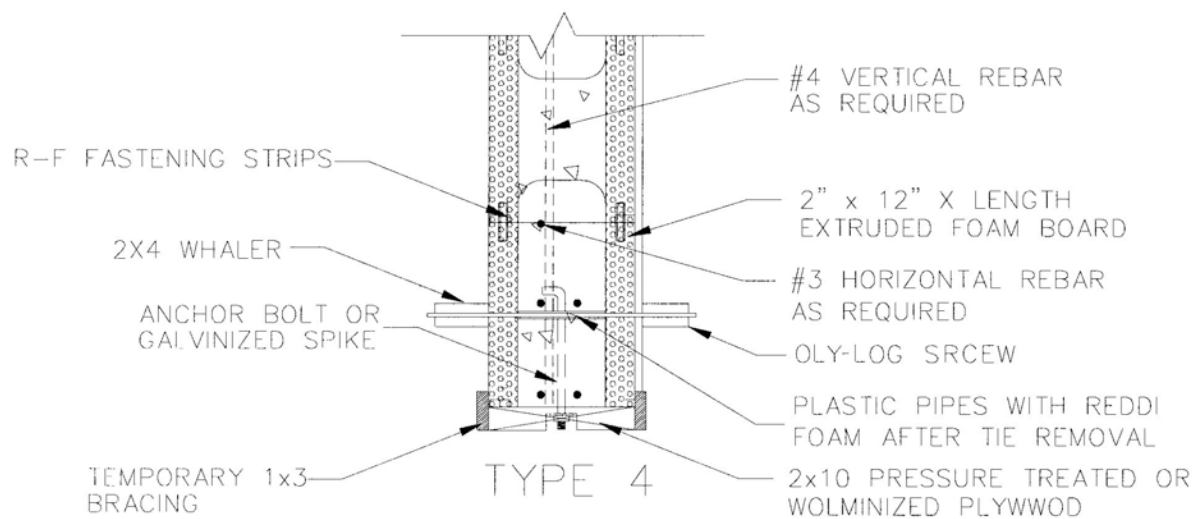
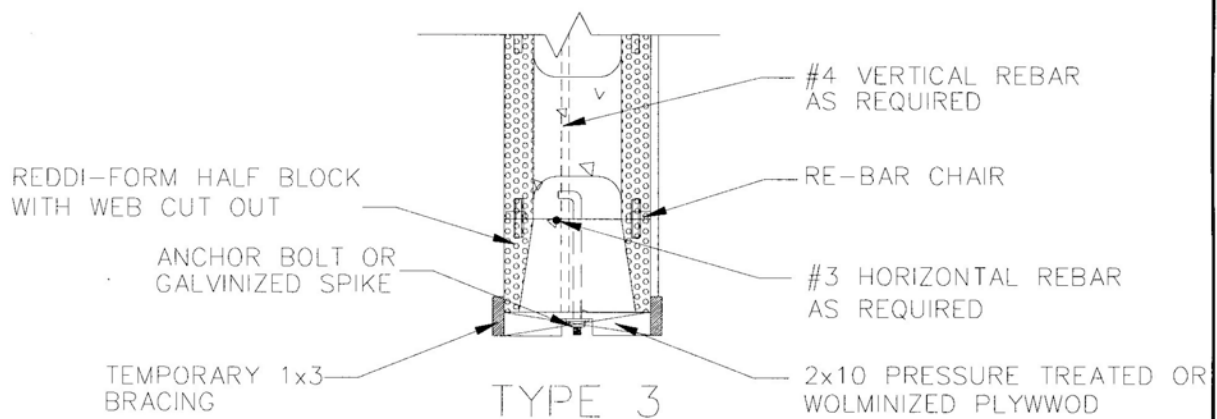
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|-----------------|-------------|
| DRAWN BY: | CHECKED BY: |
| SCALE: 1"=1'-0" | |
| DATE: 6/25/96 | |
| JOB NUMBER | SHEET |
| REDDI-FORM | SU1 |



A MINIMUM OF TWO (2) NUMBER 5 GRADE 60 REINFORCING BARS ARE TO BE PROVIDED AROUND ALL WINDOW AND DOOR OPENINGS, WITH THE LINTELS REINFORCED AS SHOWN IN THE LINTEL TABLE

TYPICAL DOOR AND WINDOW LINTEL DETAILS

SU2

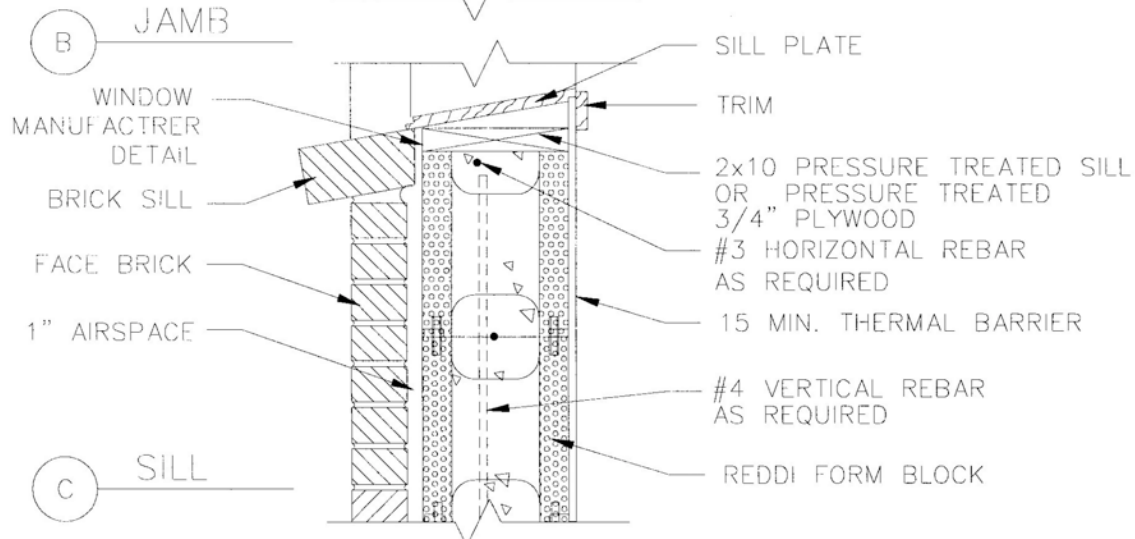
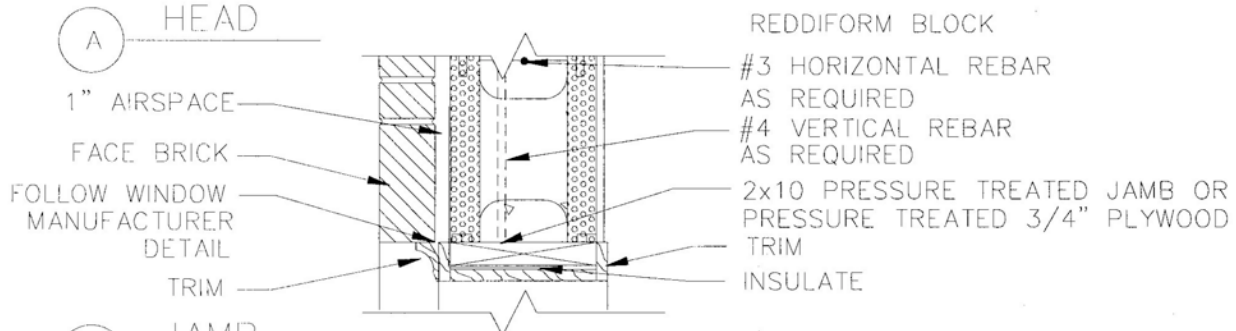
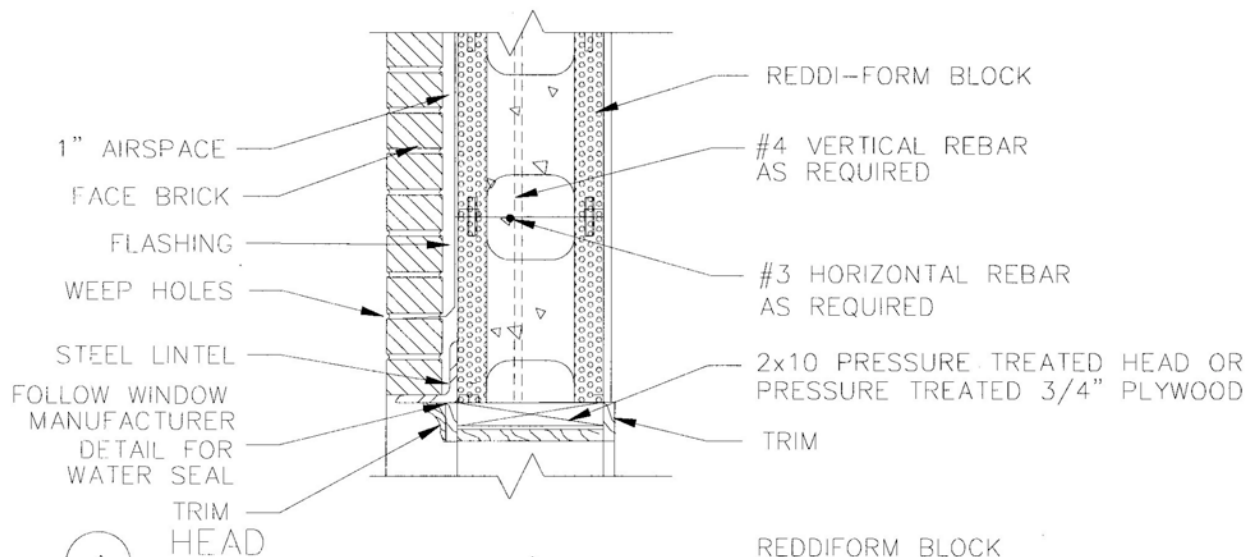
1" = 1'-0"



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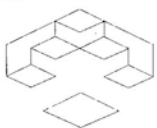
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| DATE: 6/25/96 | |
| JOB NUMBER | SHEET |
| REDDI-FORM | SU2 |



HEAD, JAMB, & SILL DETAIL
W/ BRICK VENEER

D2

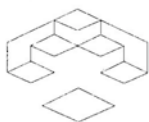
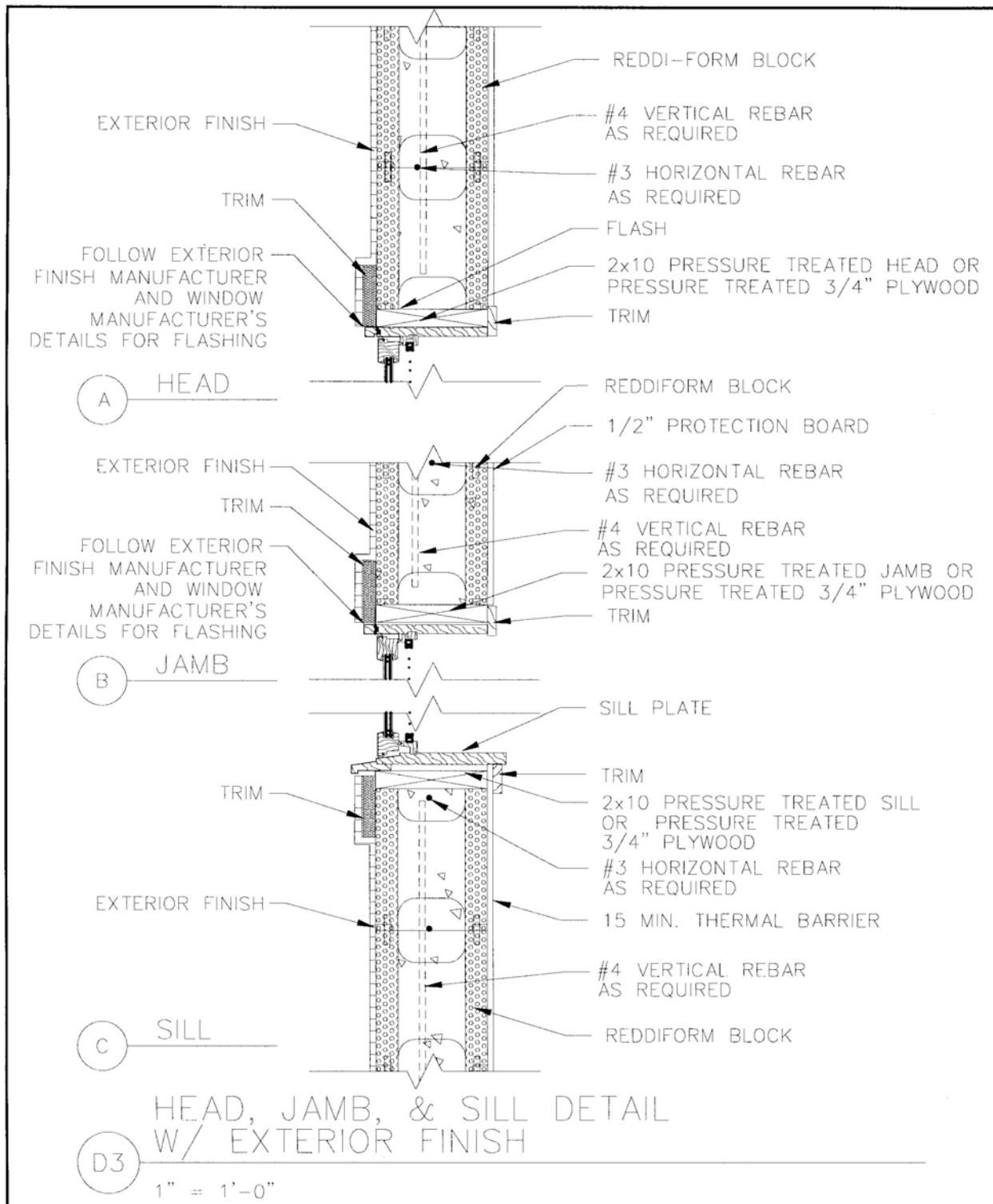
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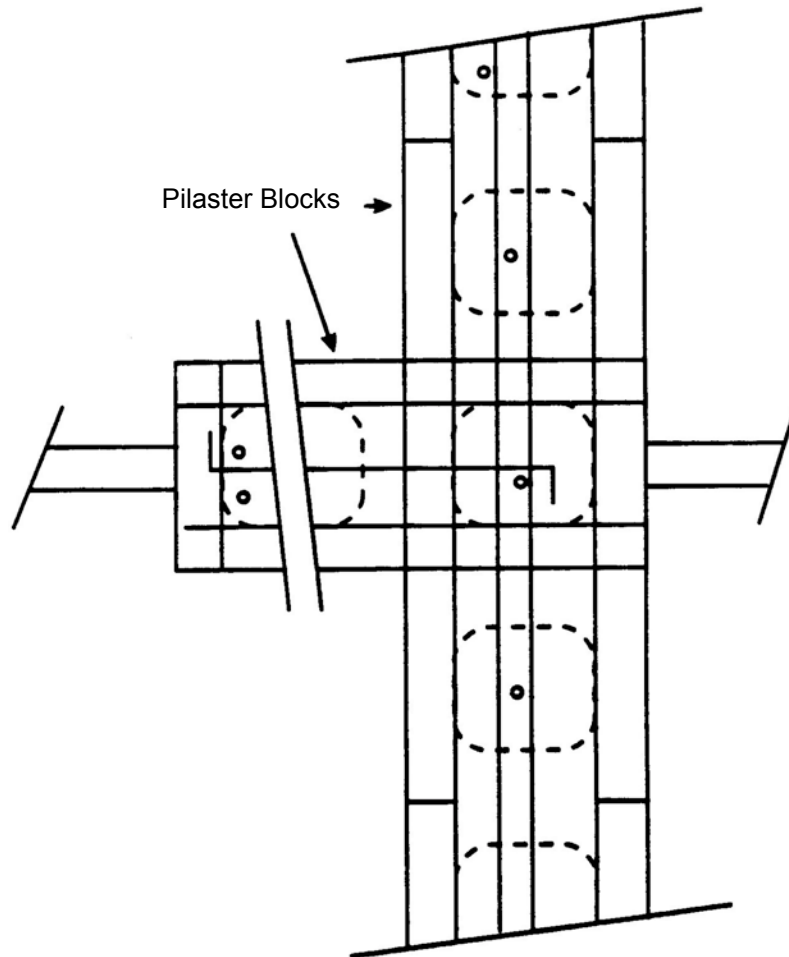
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| DATE: 6/25/96 | |
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| REDDI-FORM | D2 |



REDDI-FORM, INC.

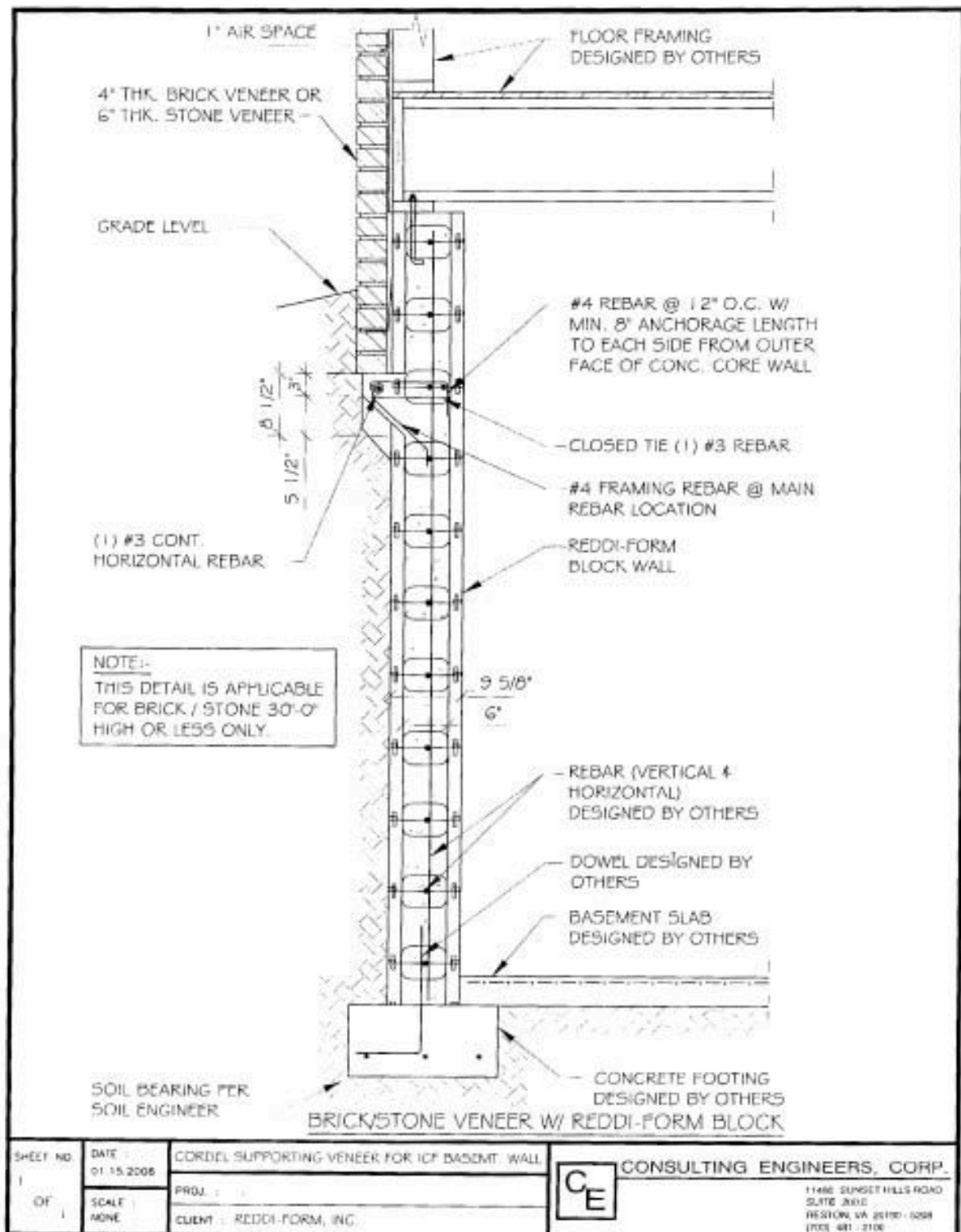
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| DATE: 6/25/96 | |
| JOB NUMBER | SHEET |
| REDDI-FORM | D3 |



Typical Pilaster Detail
Available by special order

Engineered Brick Shelf



ARCHITECTURAL SPECIFICATIONS

MANUFACTURER:

ReddiForm ICF

Phone: 406-587-4903 800-734-8268

Email: Rick@ReddiForm.com

SECTION 03100

STAY-IN-PLACE INSULATED CONCRETE FORMING SYSTEM

PART 1 --- GENERAL

ReddiForm refers to one component of an entire wall construction system.

1.01 SECTION INCLUDES

- A. ReddiForm insulated wall forms for concrete.
- B. Reinforcing.
- C. Concrete.

1.02 RELATED SECTIONS

- A. Section 03200: Concrete Reinforcement.
- B. Section 03250: Concrete Accessories.
- C. Section 03300: Cast-In Place Concrete.
- D. Section 03370: Concrete Curing.
- E. Section 06050: Fasteners and Adhesives.
- F. Section 06100: Rough Carpentry.
- G. Section 07100: Waterproofing.
- H. Section 07200: Insulation.
- I. Section 07240: EIFS.
- J. Section 07480: Exterior Wall Assemblies.

1.03 REFERENCES

- A. ASTM C-236 ----- Steady State Thermal Transmission by means of a "Hot Box."
 - B. ASTM E-84 ----- Flame Spread and Smoke Developed.
 - C. ASTM C-203 ----- Flexure Strength.
 - D. ASTM C-273 ----- Shear Strength.
 - E. ASTM D-1621----- Compressive Strength.
 - F. ASTM C-303 ----- Density.
 - G. ASTM C-272 ----- Water Absorption.
-

2.02 MATERIALS

ReddiForm is manufactured using 100% **Modified** Expanded Polystyrene from one of the following manufacturers: NOVA Chemicals, BASF, or, Huntsman Chemical. All of the raw materials used shall meet or exceed the following guidelines:

| Property | Test | Result |
|-------------------------------------|-------------|-------------------|
| Maximum Thickness | | 4 inches |
| Density | | 1.8 pcf |
| Color | | White |
| Maximum Recommended use Temperature | | 165 degrees F |
| R-value | ASTM C-236 | 20 |
| Flame Spread | ASTM E-84 | <25 |
| Smoke Developed | ASTM E-84 | <450 |
| Tensile Strength | MIL-P-19644 | 50 psi minimum |
| Water Absorption % by Volume | ASTM C-272 | <2% |
| Water Vapor Permeability (Perm-In) | | ASTM E-96 2.0-5.0 |
| Sound | ASTM E-336 | 52 STC |

For a complete list of accepted compatible materials refer to the manufacturer's Construction Manual. Any material may be used with ReddiForm upon obtaining notice of compatibility from the Manufacturer.

2.03 SOURCE QUALITY CONTROL

Test ReddiForm at the time of manufacture in accordance with ETL Laboratories "Report and Procedural Guide for complying with ETL classification in-plant labeling, and follow-up requirements for leave-in-place formwork for concrete" Report No. 513149. ETL Laboratories, Inc., Industrial Park, Cortland, New York 13045

PART 3 EXECUTION

3.01 INSTALLATION

The installation procedures are too extensive to list in this section, refer to the manufacturer's Construction Manual for all installation procedures. For additional or added installation information, ReddiForm can be contacted directly for consultation as to the uses of its products.

1.05 SUBMITTALS

Submit shop drawings and product data under provisions of Section [01300.] & [01340.]

Submit most recent version of manufacturer's text titled "Construction Manual", which contains specific installation instructions, and other important information needed for construction.

1.06 DELIVERY, STORAGE, AND HANDLING

ReddiForm is manufactured out of 100% expanded polystyrene (EPS). EPS has good resistance to acids, bases, salts and alcohol-based products, and poor resistance to fuel oils, solvents, ketones, esters and oil based chemicals. Where insects are a problem, protect ReddiForm with HDPE film.

Deliver in original manufacturer's wrapping clearly marked to identify contents.

When stored outdoors for extended periods protect product from direct sunlight.

MINIMUM VERTICAL WALL REINFORCEMENT

REDDIFORM FOUNDATION WALLS

| Wall Height Maximum Ft | Unbalanced Backfill Maximum Feet | Equivalent Fluid Density Maximum 30 pcf | Equivalent Fluid Density Maximum 45 pcf | Equivalent Fluid Density Maximum 60 pcf |
|---------------------------|---|--|--|--|
| 8 | 4 | #4 @ 48" | #4 @ 19 1/4" | #4 @ 19 1/4" |
| | 5 | #4 @ 19 1/4" | #4 @ 19 1/4" | #4 @ 9 5/8" |
| | 6 | #4 @ 9 5/8" | #4 @ 9 5/8" | #4 @ 9 5/8" |
| | 7 | #4 @ 9 5/8" | #4 @ 9 5/8" | #4 @ 9 5/8" |
| 9 | 4 | #4 @ 48" | #4 @ 19 1/4" | #4 @ 9 5/8" |
| | 5 | #4 @ 9 5/8" | #4 @ 9 5/8" | #4 @ 9 5/8" |
| | 6 | #4 @ 9 5/8" | #4 @ 9 5/8" | #4 @ 9 5/8" |
| | 7 | #4 @ 9 5/8" | #4 @ 9 5/8" | #4 @ 9 5/8" |
| | 8 | #4 @ 9 5/8" | #4 @ 9 5/8" | #4 @ 9 5/8" |
| 10 | 4 | #4 @ 48" | #4 @ 9 5/8" | #4 @ 9 5/8" |
| | 5 | #4 @ 9 5/8" | #4 @ 9 5/8" | #4 @ 9 5/8" |
| | 6 | #4 @ 9 5/8" | #5 @ 9 5/8" | #5 @ 9 5/8" |
| | 7 | #4 @ 9 5/8" | #5 @ 9 5/8" | #5 @ 9 5/8" |
| | 8 | #4 @ 9 5/8" | #5 @ 9 5/8" | #5 @ 9 5/8" |

Table is based on reinforcing bar with a minimum of 40,000 psi and concrete with a minimum compressive strength of 2,500 psi.

Spacing of rebar shall be permitted to be increased by 12 inches when reinforcing steel with a minimum yield strength of 60,000 psi is used. Reinforcement, when required, shall not be less than one #4 bar at 48 inches on center.

Deflection criterion is L/240, where L is the height of the basement wall in inches. Interpolation shall not be permitted.

Walls shall be laterally supported at the top before backfilling.

DESIGN WIND PRESSURE FOR USE WITH MINIMUM VERTICAL WALL REINFORCEMENT TABLES FOR ABOVE GRADE WALLS ¹

| Wind Speed (mph) | Design Wind Pressure (psf) | | | | | |
|------------------------|----------------------------|----|-----------------|---------------------------------|-----------------|------------------|
| | Enclosed ² | | | Partially Enclosed ² | | |
| | Exposure ³ | | | Exposure ³ | | |
| | B | C | D | B | C | D |
| 85 | 18 | 24 | 29 | 23 | 31 | 37 |
| 90 | 20 | 27 | 32 | 25 | 35 | 41 |
| 100 | 24 | 34 | 39 | 31 | 43 | 51 |
| 110 | 29 | 41 | 48 | 38 | 52 | 61 |
| 120 | 35 | 48 | 57 | 45 | 62 | 73 |
| 130 | 41 | 56 | 66 | 53 | 73 | 85 ⁴ |
| 140 | 47 | 65 | 77 | 61 | 84 ⁴ | 99 ⁴ |
| 150 | 54 | 75 | 88 ⁴ | 70 | 96 ⁴ | 114 ⁴ |

For SI: 1 psf = 0.0479 kN/m²; 1 mph = 1.6093 km/hr

¹This table is based on ASCE 7-98 components and cladding wind pressures using a mean roof height of 35 ft (10.7 m) and a tributary area of 10 ft² (0.9 m²).

²Enclosure Classifications: Used for the purpose of determining internal wind pressure. Buildings are classified as partially enclosed or enclosed as defined in ASCE 7 [4].

³Exposure Categories: Reflects the effect of the ground surface roughness on wind loads in accordance with ASCE 7 [4]. Exposure Category B includes urban and suburban areas, or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger. Exposure Category C includes open terrain with scattered obstructions having heights generally less than 30 ft (9.1 m) and shorelines in hurricane prone regions. Exposure D includes open exposure to large bodies of water in non-hurricane-prone regions.

⁴For wind pressures greater than 80 psf (3.8 kN/m²), design is required in accordance with accepted practice and approved manufacturer guidelines.

MINIMUM VERTICAL WALL REINFORCEMENT FOR REDDI-FORM CRAWLSPACE WALLS ^{1,2,3,4,5,6}

| WALL THICKNESS (inches) | MINIMUM VERTICAL REINFORCEMENT | | |
|-------------------------------|--|--|--|
| | MAXIMUM EQUIVALENT FLUID DENSITY | MAXIMUM EQUIVALENT FLUID DENSITY | MAXIMUM EQUIVALENT FLUID DENSITY |
| | 30 pcf | 45 pcf | 60 pcf |
| | | | |

6

#3 @ 19-1/4"

#3 @ 19-1/4"

3 @ 9-5/8";

Above Grade Walls - Minimum Vertical Wall Reinforcement

| Design Wind Pressure | Max. Unsupported Wall Height | Nonload-Bearing Wall or Supporting Roof | Supporting Light-Framed Second Story & Roof | Supporting ICF Second Story & Roof |
|----------------------|------------------------------|---|---|------------------------------------|
| 20 | 8 | #4@48 | #4@48 | #4@48 |
| | 9 | #4@48 | #4@48 | #4@48 |
| | 10 | #4@48 | #4@48 | #4@48 |
| 30 | 8 | #4@48 | #4@48 | #4@48 |
| | 9 | #4@48" | #4@48 | #4@48 |
| | 10 | #4@28 3/4 #5@48 | #4@28 3/4 #5@48 | #4@28 3/4 #5@48 |
| 40 | 8 | #4@28 3/4 #5@48 | #4@48 | #4@48 |
| | 9 | #4@28 3/4 #5@48 | #4@36 #5@48 | #4@36 #5@48 |
| | 10 | #4@19 1/4 #5@28 3/4 | #4@19 1/4 #5@28 3/4 | #4@19 1/4 #5@28 3/4 |
| 50 | 8 | #4@28 3/4 #5@48 | #4@36 #5@48 | #4@36 #5@48 |
| | 9 | #4@19 1/4 #5@28 3/4 | #4@19 1/4 #5@28 3/4 | ##4@19 1/4 #5@28 3/4 |
| | 10 | Design Required | Design Required | Design Required |
| 60 | 8 | #4@19 1/4 #5@28 3/4 | #4@19 1/4 #5@28 3/4 | #4@19 1/4 #5@28 3/4 |
| | 9 | #4@19 1/4 #5@28 3/4 | Design Required | Design Required |
| | 10 | Design Required | Design Required | Design Required |
| 70 | 8 | #4@19 1/4 #5@28 3/4 | #4@19 1/4 #5@28 3/4 | #4@19 1/4 #5@28 3/4 |
| | 9 | Design Required | Design Required | Design Required |
| | 10 | Design Required | Design Required | Design Required |
| 80 | 8 | #4@9 5/8 #5@19 1/4 | #4@9 5/8 #5@19 1/4 | #4@9 5/8 #5@19 1/4 |
| | 9 | Design Required | Design Required | Design Required |
| | 10 | Design Required | Design Required | Design Required |

Table is based on reinforcing bars with a min. of 40,000 psi and concrete with a min. compressive strength of 2,500 psi.

Deflection criterion is L/240, where L is the height of the wall story in inches.

Interpolation shall not be permitted.

Reinforcement spacing shall be permitted to be increased by 12 inches when reinforcing steel with a min. of 60,000 psi is used or #4 reinforcing bars shall be permitted to be substituted for #5 bars when reinforcing steel with a min. of 60,000 psi is used with the same spacing. Reinforcement shall not be less than one #4 bar at 48 inches on center.

Minimum Horizontal Wall Reinforcement Reddi-Form 6" and 8" core

| Reddi-Form wall type | Maximum Height of wall story | Location of Horizontal Reinforcement |
|-----------------------|------------------------------|--|
| Reddi-Form 6" (150mm) | 8 (2.4) | One No.4 bar within 12 inches (305 mm) of the top of the wall story and one No. 4 bar near mid-height of the wall story. |
| | 9 (2.7) | One No.4 bar within 12 inches (305 mm) of the top of the wall story and one No. 4 bar near third points in the wall story. |
| | 10 (3.0) | One No. 4 bar within 12 inches (305mm) of the top of the wall story and on No. 4 bar near third points in the wall story. |

ASTM Standard Reinforcement Bars

| Bar Size Designation | Pounds Per Foot | Diameter Inches | Cross Sec. Area Sq.. In. | Perimeter Inches |
|----------------------|-----------------|-----------------|--------------------------|------------------|
| #3 | .376 | .375 | .11 | 1.178 |
| #4 | .668 | .500 | .20 | 1.571 |
| #5 | 1.043 | .625 | .31 | 1.963 |
| #6 | 1.502 | .750 | .44 | 2.356 |
| #7 | 2.044 | .875 | .60 | 2.749 |
| #8 | 2.670 | 1.000 | .79 | 3.142 |

**Maximum Allowance Clear Spans for
Reddi-Form Lintels in Load-Bearing Walls^{1,2,3,4,5,6,7,8}
(No. 4 Bottom Bar Size)**

| Minimum Lintel Thickness, T ⁹ (inches) | Minimum Lintel Depth, D (inches) | Maximum Clear Span (feet-inches) | | | | | |
|---|----------------------------------|----------------------------------|------|--|-----|--|-----|
| | | Supporting Light-Frame Roof Only | | Supporting Light-Frame Second Story And Roof | | Supporting ICF Second Story And Light-Frame Roof ¹⁰ | |
| | | Maximum Ground Snow Load (psf) | | | | | |
| | | 30 | 70 | 30 | 70 | 30 | 70 |
| 6 | 12 | 3-7 | 2-10 | 2-5 | 2-0 | 2-0 | D/R |
| | 24 | 9-10 | 8-1 | 7-6 | 6-7 | 6-11 | 6-2 |

**Maximum Allowance Clear Spans for
Reddi-Form Lintels in Load-Bearing Walls^{1,2,3,4,5,6,7,8}
(No. 5 Bottom Bar Size)**

| Minimum Lintel Thickness, T ⁹ (inches) | Minimum Lintel Depth, D (inches) | Maximum Clear Span (feet-inches) | | | | | |
|--|---|--|------|---|------|--|-----|
| | | Supporting Light-Frame Roof Only | | Supporting Light-Frame Second Story And Roof | | Supporting ICF Second Story And Light-Frame Roof ¹⁰ | |
| | | Maximum Ground Snow Load (psf) | | | | | |
| | | 30 | 70 | 30 | 70 | 30 | 70 |
| 6 | 12 | 3-7 | 2-10 | 2-5 | 1-10 | 2-0 | D/R |
| | 24 | 12-2 | 10-0 | 9-3 | 8-3 | 8-7 | 7-8 |

For SI: 1 foot=25.4mm; 1psf=0.0479 kN/m²; 1 foot=0.3 m

¹Table values are based on concrete with a minimum specified compressive strength of 2,500 psi (17.2 MPa), reinforcing steel with a minimum yield strength of 40,000 psi (276 MPa), and a building width (floor and roof clear span) of 32 feet (9.8m); D/R indicates design required.

²Stirrups are not required for 12 in (304.8 mm) deep screen grid lintels. Stirrups shall be required at a maximum spacing of 12 inches (304.8 mm) on center for 24 in (609.6 mm) deep screen-grid lintels.

³Deflection criterion is L/240, where L is the clear span of the lintel in inches.

⁴Linear interpolation is permitted between ground snow loads and between lintel depths.

⁵Spans located in shaded cells shall be permitted to be multiplied by 1.2 when reinforcing steel with a minimum yield strength of 60,000 psi (414 MPa) is used.

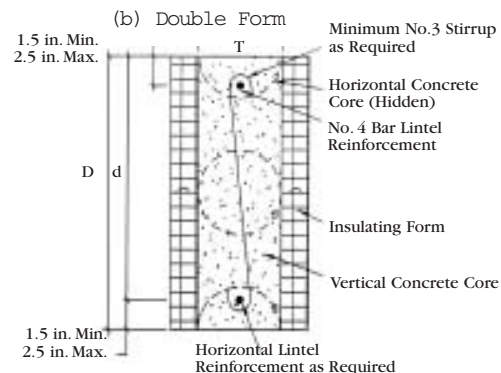
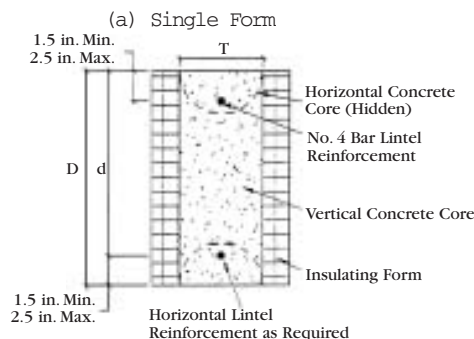
⁶Spans shall be permitted to be multiplied by 1.05 for a building width (floor and roof clear span) of 28 feet (8.5 m).

⁷Spans shall be permitted to be multiplied by 1.10 for a building width (floor and roof clear span) of 24 feet (7.3 m).

⁸Lintel thickness corresponds to the nominal screen-grid ICF wall thickness. For actual wall thickness, refer to section 2.0.

⁹Supported ICF Wall dead load is 53 psf (2.5kPa).

¹⁰Flat ICF lintels may be used in lieu of screen-grid lintels.



Maximum Allowance Clear Spans for Flat Lintels/Design Without Stirrups in Load-Bearing Walls ^{1,2,3,4,5,6,7} (No. 4 or No.5 Bottom Bar Size)

| Minimum Lintel Thickness, T ⁹ (inches) | Minimum Lintel Depth, D (inches) | Maximum Clear Span (feet-inches) | | | | | |
|--|-------------------------------------|----------------------------------|------|--|------|--|-----|
| | | Supporting Light-Frame Roof Only | | Supporting Light-Frame Second Story And Roof | | Supporting ICF Second Story And Light-Frame Roof ¹⁰ | |
| | | Maximum Ground Snow Load (psf) | | | | | |
| | | 30 | 70 | 30 | 70 | 30 | 70 |
| 6 | 12 | 4-8 | 4-4 | 4-3 | 3-11 | 3-10 | 3-7 |
| | 24 | 9-8 | 7-11 | 7-4 | 6-6 | 6-7 | 6-1 |

¹Spans located in shaded cells shall be permitted to be multiplied by 1.05 when concrete with a minimum compressive strength of 3,000 psi (20.7 MPa) is used or by 1.1 when concrete with a minimum compressive strength of 4,000 psi (27.6 MPa) is used.

²Supported ICF wall dead load varies based on wall thickness using 150 psf (2403kg/m³) concrete density.

Maximum Allowance Clear Spans for Flat Lintels/Design With Stirrups in Load-Bearing Walls ^{1,2,3,4,5,6,7} (No. 4 Bottom Bar Size)

| Minimum Lintel Thickness, T ⁹ (inches) | Minimum Lintel Depth, D (inches) | Maximum Clear Span (feet-inches) | | | | | |
|---|----------------------------------|----------------------------------|-----|--|-----|--|-----|
| | | Supporting Light-Frame Roof Only | | Supporting Light-Frame Second Story And Roof | | Supporting ICF Second Story And Light-Frame Roof ¹⁰ | |
| | | Maximum Ground Snow Load (psf) | | | | | |
| | | 30 | 70 | 30 | 70 | 30 | 70 |
| 6 | 12 | 6-8 | 5-5 | 5-0 | 4-5 | 4-6 | 4-1 |
| | 24 | 9-8 | 8-0 | 7-5 | 6-7 | 6-8 | 6-0 |

¹Table values are based on concrete with a minimum specified compressive strength of 2,500 psi (17.2 MPa), reinforcing steel with a minimum yield strength of 40,000 psi (276 MPa), and a building width (floor and roof clear span) of 32 feet (9.8m).

²Deflection criterion is L/240, where L is the clear span of the lintel in inches.

³Linear interpolation is permitted between ground snow loads and between lintel depths.

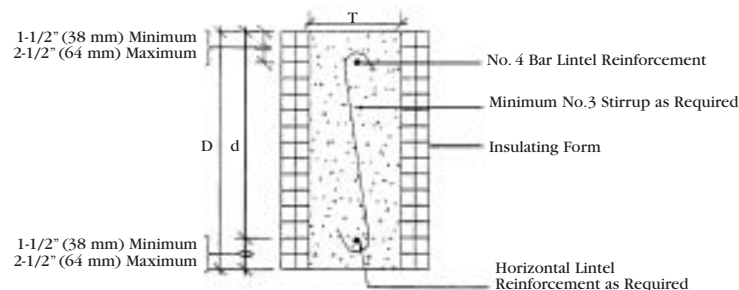
⁴Lintel depth, D, is permitted to include the available height of ICF wall located directly above the lintel, provided that the increased lintel depth spans entire length of the lintel.

⁵Spans located in shaded cells shall be permitted to be multiplied by 1.2 when reinforcing steel with a minimum yield strength of 60,000 psi (414 MPa) is used.

⁶Spans shall be permitted to be multiplied by 1.05 for a building width (floor and roof clear span) of 28 feet (8.5 m).

⁷Spans shall be permitted to be multiplied by 1.1 for a building width (floor and roof clear span) of 24 feet or less (7.3 m).

⁸Supported ICF wall dead load is 69 psf (33 kPa)



ICF Connectors

The ICF Ledger Connector System is engineered to solve the challenges of mounting wood or steel ledgers to insulated concrete form (ICF) walls. This flier provides information on the various products we have to serve the ICF market.

This year Simpson is introducing a new component of the system—the ICFVL—designed to provide both vertical and lateral, in-plane resistance. The system is still quick, versatile and easy to use but now provides so much more! Simpson's ICFVL is made from galvanized, 14 gauge steel. The embedded legs are embossed for additional stiffness and the holes allow for concrete to flow through and around the connector. The exposed flange on the face of the ICF provides a structural surface for mounting either a wood or steel ledger.



ATTACHMENT OF WOOD LEDGER

- Slip the appropriate ledger connector underneath the wood ledger (as shown)
- Install the eight ICF-D3 screws partially into the ledger
- Position the ledger level to the chalk line and drive the screws through the wood and into the ICFVL
- All screws should be located at least $\frac{1}{2}$ " from the edge of the ICFVL

Note: Do not splice at the ICFVL-W or ICFVL-CW's location.

INSTALLATION OF ICFVL:

- Snap a line for the bottom of the ledger and mark the on center spacing
- Use the ICFVL to mark the kerf locations in the ICF
- Cut the kerfs as marked
- Insert the ICFVL flush to the face of the ICF
- Place concrete (min $f'c = 2500$ psi).



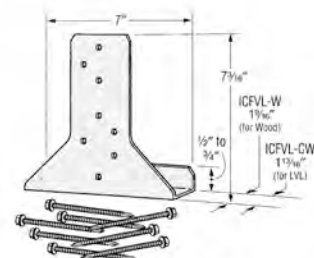
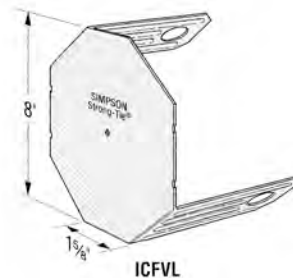
Installation tip: Use a screw through diamond hole in face of ICFVL and into web to hold in place during concrete pour (remove prior to ledger installation).



ATTACHMENT OF STEEL LEDGER

- Position the ledger level to the chalk line and drive the required number of screws through the steel ledger and into the ICFVL
- All screws should be located at least $\frac{1}{2}$ " from the edge of the ICFVL
- Space screws evenly

SIMPSON

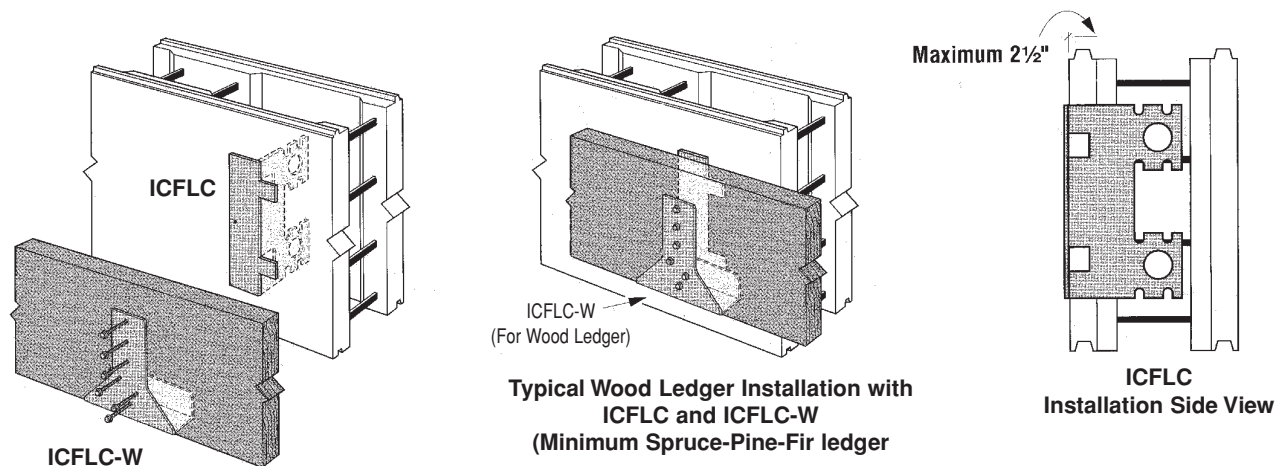


ICFVL-W and ICFVL-CW

800-999-5099
www.strongtie.com

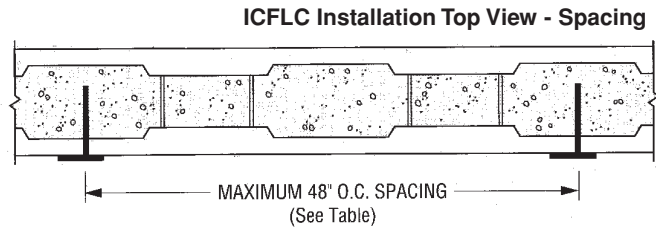
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F-ICFVL06 12/05 exp. 1/08

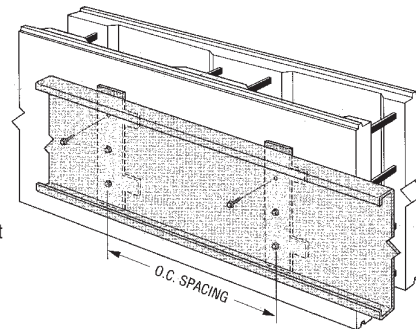


| ICFLC w/ ICFLC-W Spacing to Replace Anchor Bolts | | | | | | | |
|--|----------|----------|----------|------------------------|----------|----------|----------|
| 1/2" diameter bolts at | | | | 5/8" diameter bolts at | | | |
| 12" o.c. | 24" o.c. | 36" o.c. | 48" o.c. | 12" o.c. | 24" o.c. | 36" o.c. | 48" o.c. |
| 4' | 4' | 4' | 4' | 4' | 4' | 4' | 4' |
| 2-5/8" diameter bolts at | | | | 3/4" diameter bolts at | | | |
| 12" o.c. | 24" o.c. | 36" o.c. | 48" o.c. | 12" o.c. | 24" o.c. | 36" o.c. | 48" o.c. |
| 2' | 4' | 4' | 4' | 4' | 4' | 4' | 4' |

1. Maximum capacity is 2235 lbs. Allowable load is based on a safety factor of 3
2. No load duration increase is allowed.
3. Use 6-D3 screws (provided).



Requires 3 screws at each location.
Follow Table for on center spacing.



Typical Wood Ledger Installation with ICFLC
(Minimum 16 gauge steel ledger)

| Ledger (Gauge) | ICFLC Spacing to Replace Anchor Bolts | | | |
|-------------------|---------------------------------------|----------|------------------------|----------|
| | 1/2" diameter bolts at | | 5/8" diameter bolts at | |
| | 12" o.c. | 24" o.c. | 12" o.c. | 24" o.c. |
| 16(0.060) | 1'-3" | 2'-6" | 1' | 2' |
| 14(0.075) | 1' | 2'" | 0-9" | 1'-6" |

1. Maximum allowable load for ICFLC is 2235 lbs. Allowable load is based on a safety factor of 3
2. No load duration increase is allowed.
3. Use three 1/4"-14 x 3/4", #3 drill point screws (not provided).
Minimum screw shear capacity is 750 lbs.
4. Minimum tensile strength (Fu) of steel ledger is 60 ksi.

Length Conversion Chart for 6" - Fractional

| #CORES | LENGTH | #CORES | LENGTH | #CORES | LENGTH | #CORES | LENGTH |
|-----------|---------------|-----------|---------------|------------|---------------|------------|----------------|
| 1 | 0'-9 1/2" | 36 | 28'-9 1/2" | 71 | 56'-9 1/2" | 106 | 84'-9 1/2" |
| 2 | 1'-7" | 37 | 29'-7" | 72 | 57'-7" | 107 | 85'-7" |
| 3 | 2'-5" | 38 | 30'-5" | 73 | 58'-5" | 108 | 86'-5" |
| 4 | 3'-2 1/2" | 39 | 31'-2 1/2" | 74 | 59'-2 1/2" | 109 | 87'-2 1/2" |
| 5 | 4'-0" | 40 | 32'-0" | 75 | 60'-0" | 110 | 88'-0" |
| 6 | 4'-9 1/2" | 41 | 32'-9 1/2" | 76 | 60'-9 1/2" | 111 | 88'-9 1/2" |
| 7 | 5'-7" | 42 | 33'-7" | 77 | 61'-7" | 112 | 89'-7" |
| 8 | 6'-5" | 43 | 34'-5" | 78 | 62'-5" | 113 | 90'-5" |
| 9 | 7'-2 1/2" | 44 | 35'-2 1/2" | 79 | 63'-2 1/2" | 114 | 91'-2 1/2" |
| 10 | 8'-0" | 45 | 36'-0" | 80 | 64'-0" | 115 | 92'-0" |
| 11 | 8'-9 1/2" | 46 | 36'-9 1/2" | 81 | 64'-9 1/2" | 116 | 92'-9 1/2" |
| 12 | 9'-7" | 47 | 37'-7" | 82 | 65'-7" | 117 | 93'-7" |
| 13 | 10'-5" | 48 | 38'-5" | 83 | 66'-5" | 118 | 94'-5" |
| 14 | 11'-2 1/2" | 49 | 39'-2 1/2" | 84 | 67'-2 1/2" | 119 | 95'-2 1/2" |
| 15 | 12'-0" | 50 | 40'-0" | 85 | 68'-0" | 120 | 96'-0" |
| 16 | 12'-9 1/2" | 51 | 40'-9 1/2" | 86 | 68'-9 1/2" | 121 | 96'-9 1/2" |
| 17 | 13'-7" | 52 | 41'-7" | 87 | 69'-7" | 122 | 97'-7" |
| 18 | 14'-5" | 53 | 42'-5" | 88 | 70'-5" | 123 | 98'-5" |
| 19 | 15'-2 1/2" | 54 | 43'-2 1/2" | 89 | 71'-2 1/2" | 124 | 99'-2 1/2" |
| 20 | 16'-0" | 55 | 44'-0" | 90 | 72'-0" | 125 | 100'-0" |
| 21 | 16'-9 1/2" | 56 | 44'-9 1/2" | 91 | 72'-9 1/2" | | |
| 22 | 17'-7" | 57 | 45'-7" | 92 | 73'-7" | | |
| 23 | 18'-5" | 58 | 46'-5" | 93 | 74'-5" | | |
| 24 | 19'-2 1/2" | 59 | 47'-2 1/2" | 94 | 75'-2 1/2" | | |
| 25 | 20'-0" | 60 | 48'-0" | 95 | 76'-0" | | |
| 26 | 20'-9 1/2" | 61 | 48'-9 1/2" | 96 | 76'-9 1/2" | | |
| 27 | 21'-7" | 62 | 49'-7" | 97 | 77'-7" | | |
| 28 | 22'-5" | 63 | 50'-5" | 98 | 78'-5" | | |
| 29 | 23'-2 1/2" | 64 | 51'-2 1/2" | 99 | 79'-2 1/2" | | |
| 30 | 24'-0" | 65 | 52'-0" | 100 | 80'-0" | | |
| 31 | 24'-9 1/2" | 66 | 52'-9 1/2" | 101 | 80'-9 1/2" | | |
| 32 | 25'-7" | 67 | 53'-7" | 102 | 81'-7" | | |
| 33 | 26'-5" | 68 | 54'-5" | 103 | 82'-5" | | |
| 34 | 27'-2 1/2" | 69 | 55'-2 1/2" | 104 | 83'-2 1/2" | | |
| 35 | 28'-0" | 70 | 56'-0" | 105 | 84'-0" | | |

BOLD CHARACTERS DEFINE MULTIPLES OF UNCUT FORMS
 MAXIMUM TOLERANCE OF THIS CHART IS $\pm 1/4"$

Length Conversion Chart for 6" - Decimal

| # CORES | LENGTH | LENGTH METERS | # CORES | LENGTH | LENGTH METERS |
|-----------|---------------|---------------|-----------|---------------|---------------|
| 1 | 0'-9.6" | .244 | 36 | 28'-9.6" | 8.778 |
| 2 | 1'-7.2" | .488 | 37 | 29'-7.2" | 9.022 |
| 3 | 2'-4.8" | .732 | 38 | 30'-4.8" | 9.266 |
| 4 | 3'-2.4" | .975 | 39 | 31'-2.4" | 9.510 |
| 5 | 4'-0" | 1.219 | 40 | 32'-0" | 9.754 |
| 6 | 4'-9.6" | 1.463 | 41 | 32'-9.6" | 9.997 |
| 7 | 5'-7.2" | 1.707 | 42 | 33'-7.2" | 10.241 |
| 8 | 6'-4.8" | 1.951 | 43 | 34'-4.8" | 10.485 |
| 9 | 7'-2.4" | 2.195 | 44 | 35'-2.4" | 10.729 |
| 10 | 8'-0" | 2.438 | 45 | 36'-0" | 10.973 |
| 11 | 8'-9.6" | 2.682 | 46 | 36'-9.6" | 11.217 |
| 12 | 9'-7.2" | 2.926 | 47 | 37'-7.2" | 11.460 |
| 13 | 10'-4.8" | 3.170 | 48 | 38'-4.8" | 11.704 |
| 14 | 11'-2.4" | 3.414 | 49 | 39'-2.4" | 11.948 |
| 15 | 12'-0" | 3.658 | 50 | 40'-0" | 12.192 |
| 16 | 12'-9.6" | 3.901 | 51 | 40'-9.6" | 12.436 |
| 17 | 13'-7.2" | 4.145 | 52 | 41'-7.2" | 12.680 |
| 18 | 14'-4.8" | 4.389 | 53 | 42'-4.8" | 12.924 |
| 19 | 15'-2.4" | 4.633 | 54 | 43'-2.4" | 13.167 |
| 20 | 16'-0" | 4.877 | 55 | 44'-0" | 13.411 |
| 21 | 16'-9.6" | 5.121 | 56 | 44'-9.6" | 13.655 |
| 22 | 17'-7.2" | 5.364 | 57 | 45'-7.2" | 13.899 |
| 23 | 18'-4.8" | 5.608 | 58 | 46'-4.8" | 14.143 |
| 24 | 19'-2.4" | 5.852 | 59 | 47'-2.4" | 14.387 |
| 25 | 20'-0" | 6.096 | 60 | 48'-0" | 14.630 |
| 26 | 20'-9.6" | 6.340 | 61 | 48'-9.6" | 14.874 |
| 27 | 21'-7.2" | 6.584 | 62 | 49'-7.2" | 15.118 |
| 28 | 22'-4.8" | 6.828 | 63 | 50'-4.8" | 15.362 |
| 29 | 23'-2.4" | 7.071 | 64 | 51'-2.4" | 15.606 |
| 30 | 24'-0" | 7.315 | 65 | 52'-0" | 15.850 |
| 31 | 24'-9.6" | 7.559 | 66 | 52'-9.6" | 16.093 |
| 32 | 25'-7.2" | 7.803 | 67 | 53'-7.2" | 16.337 |
| 33 | 26'-4.8" | 8.047 | 68 | 54'-4.8" | 16.581 |
| 34 | 27'-2.4" | 8.291 | 69 | 55'-2.4" | 16.825 |
| 35 | 28'-0" | 8.534 | 70 | 56'-0" | 17.069 |

If this chart is used to locate centers of cells for rebar, remember to start first bar a 4.8" and 9.6" thereafter.

Bold characters define multiples of uncut forms.

Maximum tolerance of this chart is $\pm 1/4"$.

Unit Dimensions 9 5/8" Wide X 12" Tall X 48" Long



U. S. Department of Housing and Urban Development
Washington, D.C. 20410-8000

OFFICE OF THE ASSISTANT SECRETARY
FOR HOUSING-FEDERAL HOUSING COMMISSIONER

Mr. Henry J. Guarriello, Jr.
President
Reddi Form Incorporated
250 Canal Road
Fairless Hills, PA 19030

Dear Mr. Guarriello:

Thank you for your letter of May 19, 1992, concerning the Department of Housing and Urban Development's (HUD) acceptance of your Reddi Form Wall System for one and two-story dwellings. The stay in-place forms, reinforced concrete walls can be inspected in the field and accepted by HUD Field Office's. Therefore, your system does not, warrant or require a Structural Engineering Bulletin (SEB).

The reinforced concrete walls should be analyzed and designed by a registered structural engineer and be in accordance with the HUD Minimum Property Standards MPS), copy enclosed. You may note in the MPS the applicable construction code for a specific area is available through the HUD regional and field offices having jurisdiction. Technical assistance to HUD Field Offices to determine acceptability of individual designs may also be requested by the Field Offices from HUD Headquarters.

I appreciate your interest in innovative construction and the Department's programs. If you need additional information please contact Davis White on (202) 708-1929.

Sincerely,

A handwritten signature in cursive script, reading "Donald R. Fairman", is positioned above the typed name.

Donald R. Fairman
Chief, Standards and Products Branch
Manufactured Housing and Construction
Standards Division

Enclosure

SECTION 7: A PARTIAL LIST OF PRODUCTS COMPATIBLE WITH THE Reddi Form WALL SYSTEM

The following list of products is included for convenience only. It in no way endorses or recommends one product over others. This is not a comprehensive list. If there are any products or companies that would enhance this list, we will add them with each successive printing. Having ones name or product on this list does not constitute individual companies' approval or warranties. Please check with the companies before using products for warranty and use information relative to application on the Reddi Form wall system.

Waterproofing Systems

690 Canton Street Westwood, MA 02090
Chase Corp. / Royston Laboratories Div.
Pittsburgh, PA 15238
(412) 828-1500
(800) 245-3209
Pacific Polymers
12271 Monarch Street
Garden Grove, CA 92641
(714) 898-0025

PARASEAL Dual Membrane
Waterproofing
Mameco/Paramount
4475 175th Street
Cleveland, OH 44128
(800) 658-5500

POLYGUARD Waterproofing Membranes
Polyguard Products, Inc.
P.O. Box 755
Ennis, TX 75119
(214) 875-8421
(800) 541-4994
POLYKEN Technologies
(708) 392-4600 Westwood, MA 02090
(800) 248-7659

POLYKEN Technologies (Membrane Type)

(800) 248-7659 128 First Street (Blawnox)
PROTECTO WRAP Waterproofing
Membranes
Protecto Wrap Company 2255 S. Delaware Street
Denver, CO 80223
(303) 777-3001
(800) 759-9727

WR Grace, Inc.
Eastern Region Sales Office
2133 85th Street
North Bergen, NJ 07047
(201) 869-5220
(800) 862-7327

WR Meadows, Inc.
P.O. Box 543
Elgin, IL 60121
(708) 683-4500

VOLCLAY
American Colloid Co. 1500 W. Shore Drive
Arlington Heights, IL 60004 690 Canton Street
(708) 506-6195 Fax

**Waterproofing Systems
Type)**

Suite 500 3865 Hoepker Road
son, WI 53704
(800) 225-9001

THORO Foundation Coating
Thoro Systems Products
N.W. 38th Street
33166
(800) 327-1570

**Waterproofing Systems
Type)**

RPC, Inc. Rub-R-Wall
Portage Trail Ext.
OH 44313

Tuff-N-Dri
Wick Drive
Box 2155
Heath, OH 43056
(800) 876-5624

Drainage Systems

ENKADRIAN
Subsurface Drainage Matting
Type 9010 to 10' depth,
Type 9020 to 30' depth
American Enka Company
Enka, NC 28728
(704) 667-7713

GEOTECH Insulated Drainage Board /
GEOTECH Insulated Drainage Panel
Products, Inc.
Avenue Oakland, CA 94621
(415) 569-9681

MIRADRAIN Prefabricated Drainage
Styles 3000, 4000, 6000 & 9000
Mirafi, Inc.
P.O. Box 240967
Charlotte, NC 28224
(800) 438-1855

NICOLON Mirafi (**Stucco**)
3500 Parkway Lane Retro-Tek
Norcross, GA 30092 Madi-
(800) 685-9990 ext. 382

Exterior Coating Systems

DRYVIT Systems, Inc. 7800
One Energy Way Miami, FL
P.O. Box 1014
West Warwick, RI 02893
(401) 822-4100
(800) 566-7752 (**Spray-On**)

Grail Coat
73 Aurora Ave 1135 West
Ponce Inlet, FL 32127 Akron,
877-472-4528

Finestone Coatings 800 Irving
3000 W. Beecher Drive P.O.
Adrian, MI 49221
(800) 545-6555

Parex Inc.
P.O. Box 189 1870 Stone
Mt.-Lithonia Rd.
Redan, GA 30074
770-482-7872
Website: www.parex.com

Perma Crete
501 Metroplex Drive
Suite 115
Nashville, TN 37211
(615) 331-9200
(615) 834-1335 Fax Foam
(800) 60 PERMA 900A 77th
RUB-R-WALL
(800) 860-7721
California Stucco
85 Zabriskie Street Structure,
Hackensack, NJ 07601
(201) 342-0878

PLASTER GLAS Stucco System
Route 3, Box 211B1
San Antonio, TX 78218
POWERWALL Fiber Reinforced Stucco
System
Powerwall Corporation
2701 East Camelback Road, No. 450
Phoenix, AZ 85016
Rekto-Tek
Box 270 Madison, WI 53704
(800) 225-9001
This company will give a standard 5-year
for its product used on the Reddi Form Wall system.
Silpro
2 New England Way
(800) 343-1501
STO Exterior Wall Finish and
Insulation System
STO Industries, Inc.
P.O. Box 219
Quality Lane
Rutland, VT 05701
(800) 851-5533

SYNERGY Exterior Wall Finish and
Insulating System
Synergy Methods, Inc.
(800) 334-4303 Cranston, RI 02910

Weatherall Co., Inc.
Way
47111
(812) 256-3378
(800) 367-7068
(812) 256-2344 Fax
Vinyl Technologies Inc.
U Bock
P.O. Box 4238
Logan, Utah 84325
1-888-578-2852
Fax: 435-750-6948
Email: uti@uBock.com www.uBuck.com

Lintel Systems Barret Industries
Powers Steel & Wire
4118 E. Elmwood St. Phoenix, AZ 85040
Ph. 602-437-1160
Fax. 602-437-5409

Stone and Brick Veneers

Cultured Stone 3865 Hoepker Road P.O.
Napa, CA 94559
Inside CA - (800) 445-9877
Outside CA - (800) 225-7462 warranty
U.S. Brick System P.O. Box 907
Owosso, MI 48867
(800) 447-7440 Ayer, MA 01432

Footing Forming Drainage System

Form-A-Drain
Certain Teed Corp.
750 E. Swedesford Road
Valley Forge, PA 19482
(610) 341-6950

Tools

For hot wire tools, air nailer --- contact:
Reddi Form, Inc. 1367 Elmwood Avenue

Demand Products
1055 Nine North Drive 106 Industrial
Alpharetta, GA 30004 Charlestown, IN
1-800-325-7540
Fax: 888-534-8383

Wind Lock 1-877-468-5643- toll free
Email: sale@hotknife.com
Web: www.hotknife.com

