

Casa de Dios

Ventilated Improved Pit Latrine



Construction Plans

In Association with Baja Christian Ministries www.bajachristian.org
Rev. December 1, 2004

Downloads (PDF) available on-line at www.teamcasa.org

Also available – Casa House plans – Casita Plans

Special Thanks to Hector Rubio for his service and help in creating these plans.

CAD files available upon request.

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Notes For Latrine Construction Plans

1. IMPORTANT Note: As the most common dimension for block is 8"x8"x16", I have added a course layout for this block size. If a different size of block is used, adjust the course layout to insure proper inside dimensions. Detail 2 - 3
2. The latrine should be orientated so the vent pipe is facing the equator (South in Mexico). This one of the most important features as the block (DO NOT PAINT THE VENT PIPE) ABS pipe must be heated by the sun to promote ventilation.
3. The ABS vent pipe must be at least 3 1/2". The larger the better, however, the hole in the concrete cap should not be any larger than 4".
4. The entire vent must stay on the outside of the latrine to permit good heating by the sun.
5. The pit should be as deep as manpower and or money can provide.
6. If the soil is hard clay, it will fill much faster. This soil will not require as many courses of block.
7. If the soil is sandy, then the block should go as deep as possible.
8. Use mortar sparingly on the lower courses or leave hole in the block as to allow for liquid to pass into the lower levels of the soil.
9. Make sure the mortar is good and tight for the top five or six courses. This will prevent liquids from seeping into the topsoil around the latrine.
10. Latrine framing can be nailed to the cap via RAMSET (powdered actuated nailer) type nailer or bolts can be cast into the cap.
11. Toilet risers are available from Fiberfab in Azusa CA

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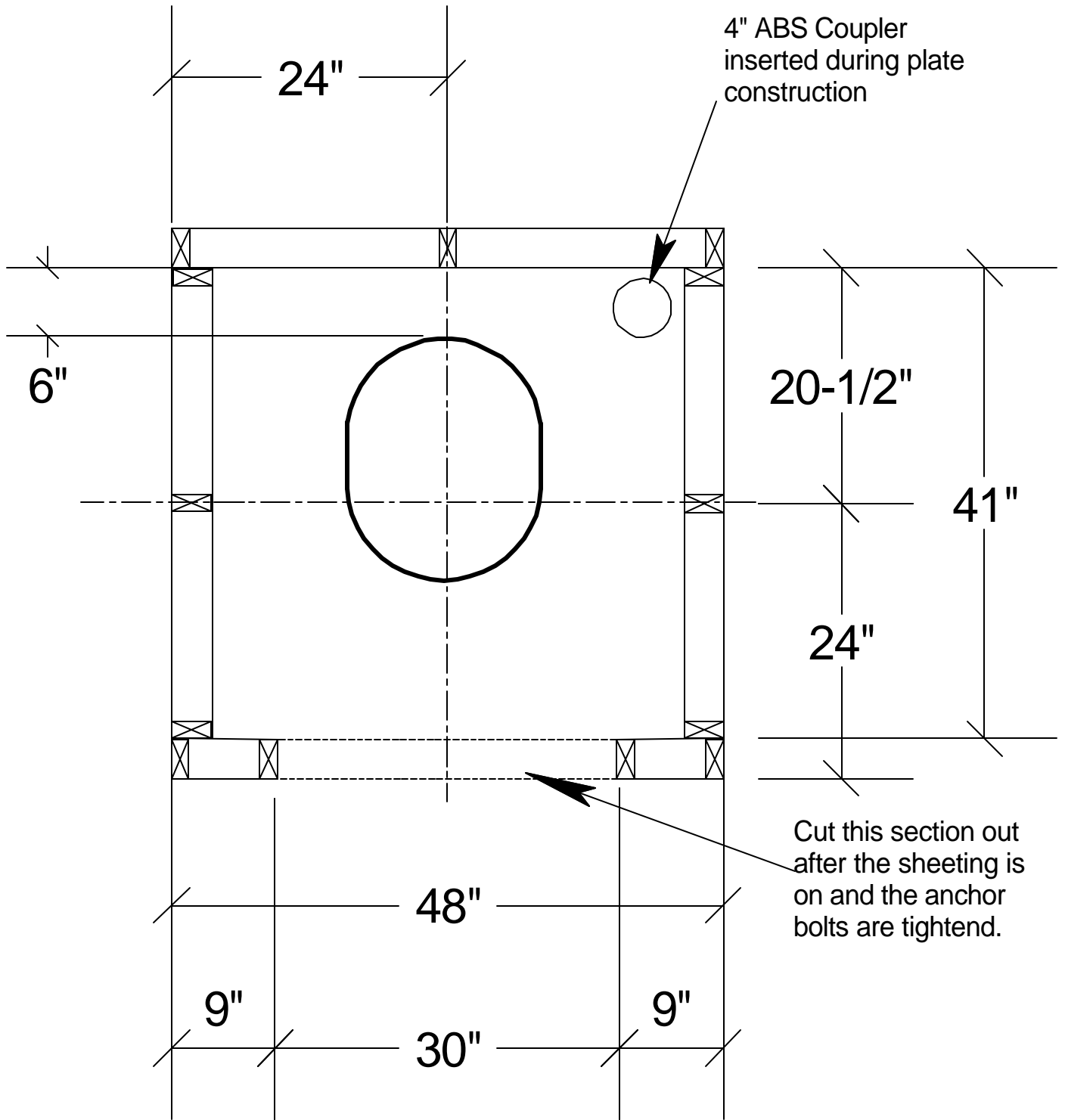
Footnotes:
Toilet Risers
Fibrefab
1030 W. Foothill Bl
Azusa CA
+1 (626) 633-0288

Latrine Materials List

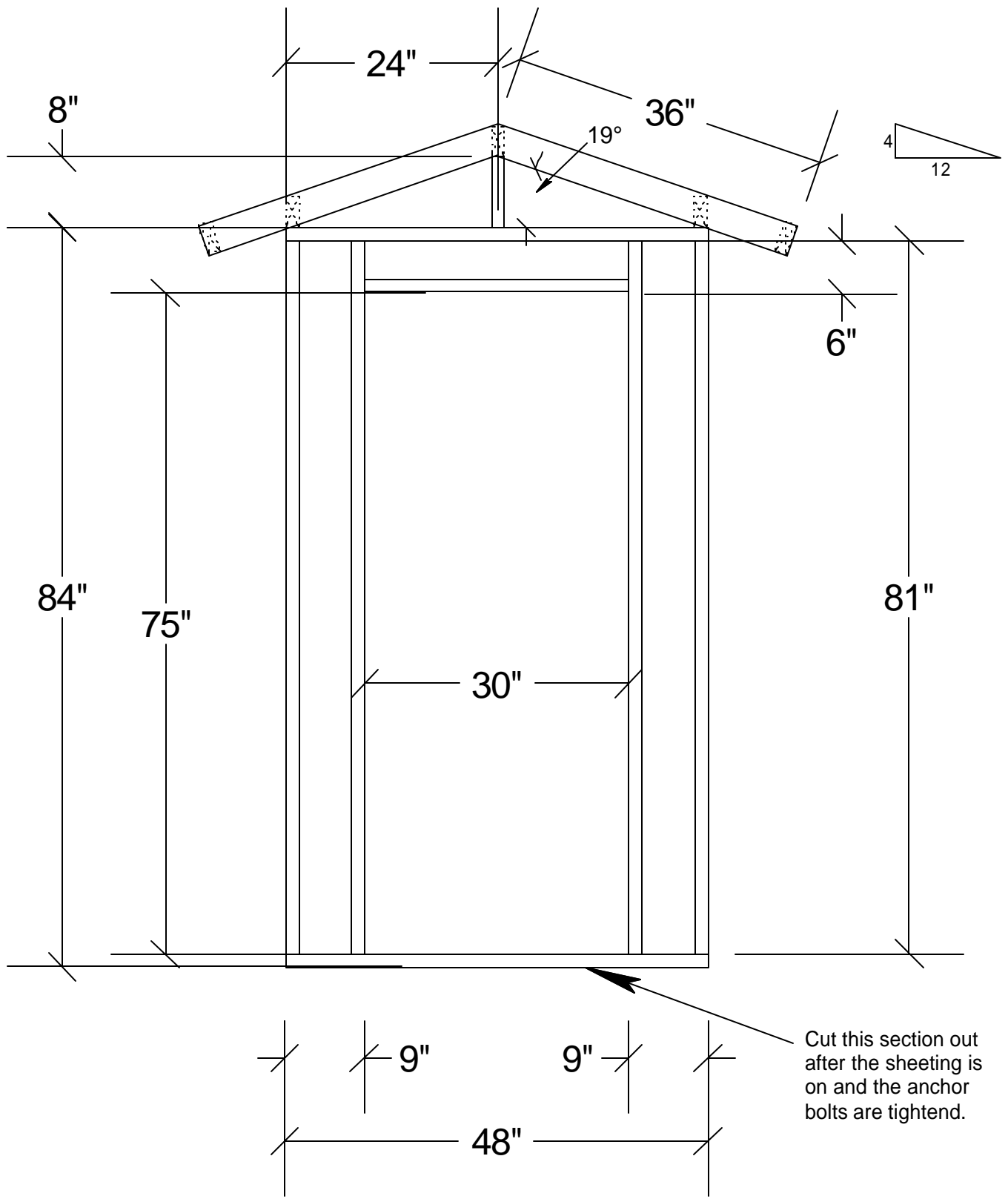
- 25 - 2"x4"x8' Studs
- 15 - 1"x4"x8' Trim
- 6 - 4'x8' plywood
- 1 - 10' ABS 4" pipe
- 2 - 4" ABS street L's 90 deg. Elbows
- 1- 4" ABS connector
- 1 roll of plumbers tape
- 1 packet of roofing shingles
- 3 yards of Felt Paper
- 3 – 2" or 3" FLAT door hinges
- 2 yards of flyscreen
- 1 - screen door spring and latch
- 1 can of ABS glue
- 1 fiberglass taza
- 1 plastic toilet seat
- 2 tubes of caulk
- 1 toilet paper holder
- 5lbs 16p nails
- 5lbs 8p nails
- 5lbs roofing nails

In Ground List

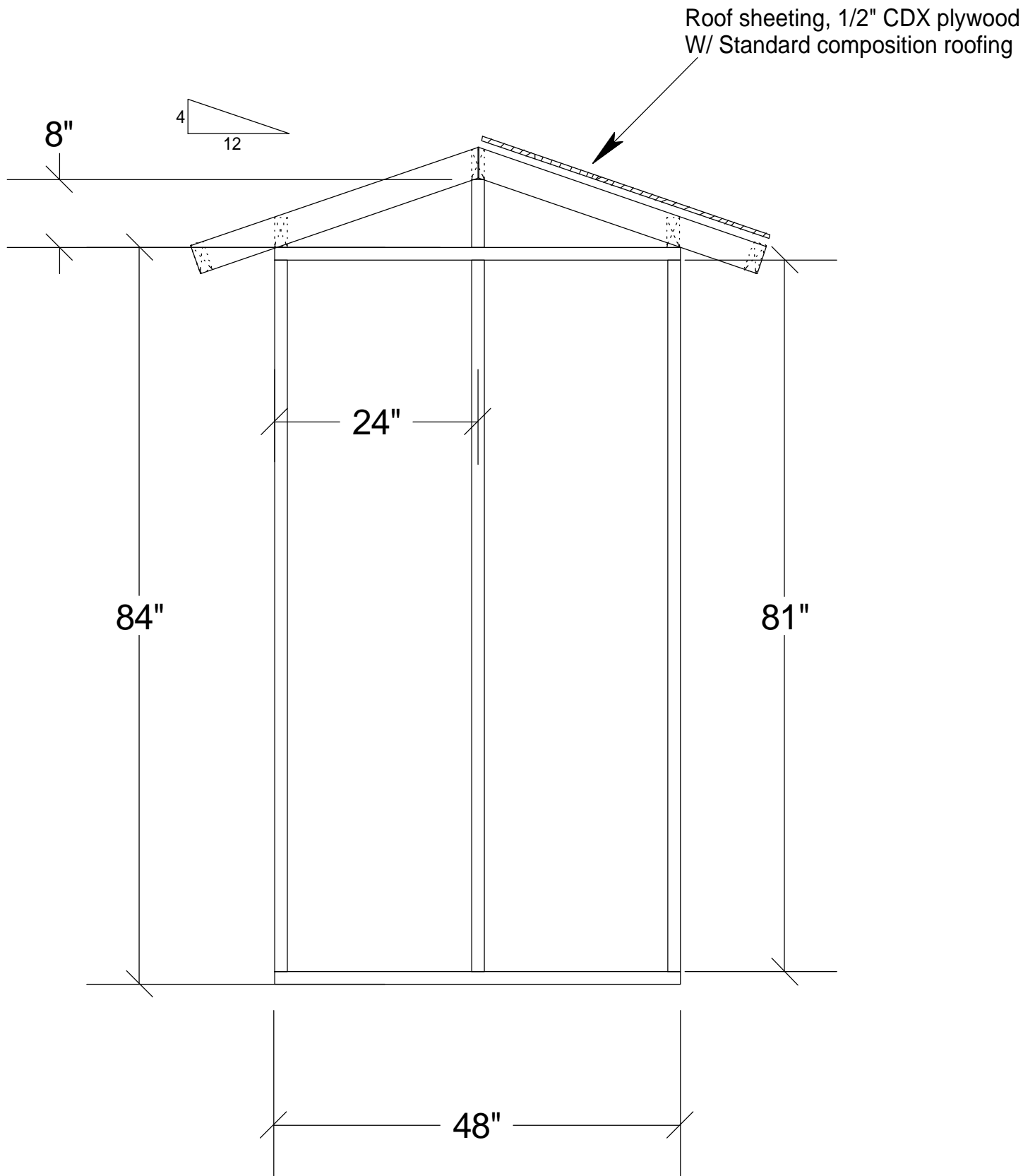
- 120 concrete blocks (+or-)
- 4 sacks Portland cement
- 1 yard of sand
- 1/3 yard 3/4 rock
- 4 -#3 or #4 rebar
- 4 - 2"x4"x8' Studs
- 1 - 4'x4' plywood
- 10 - 6"x1/2" anchors with nuts and washers



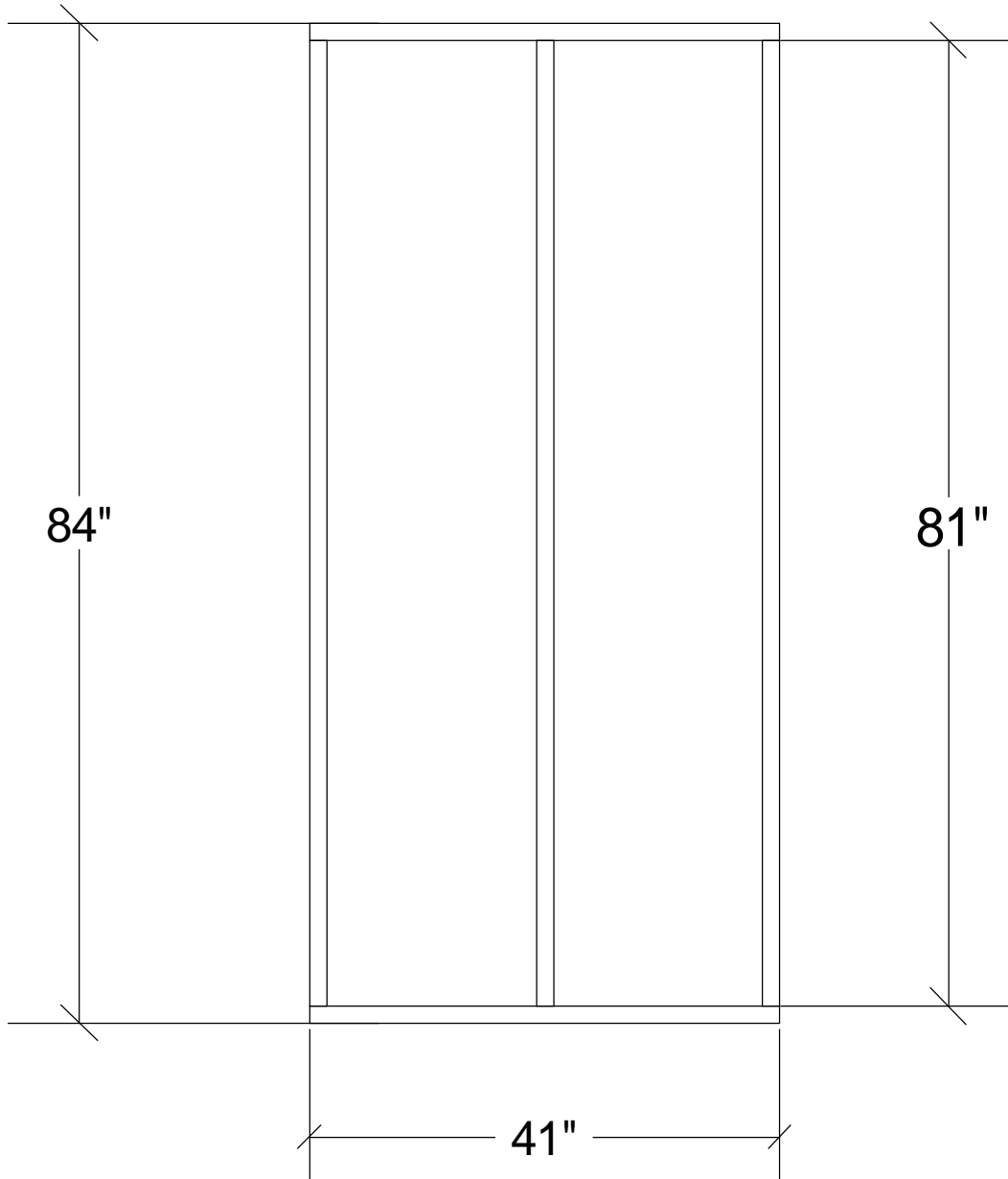
Latrine Floor Plan



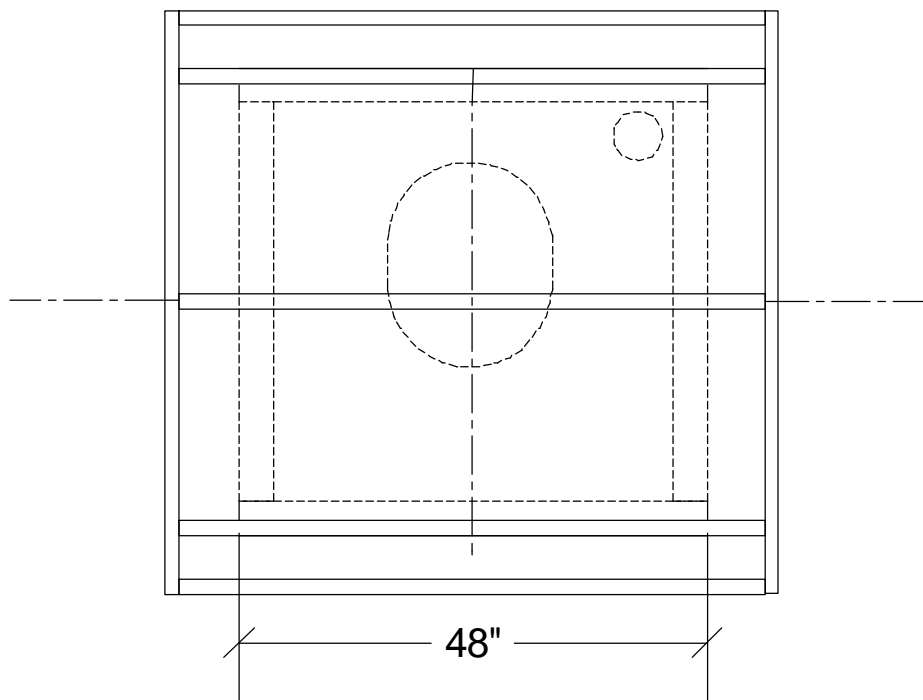
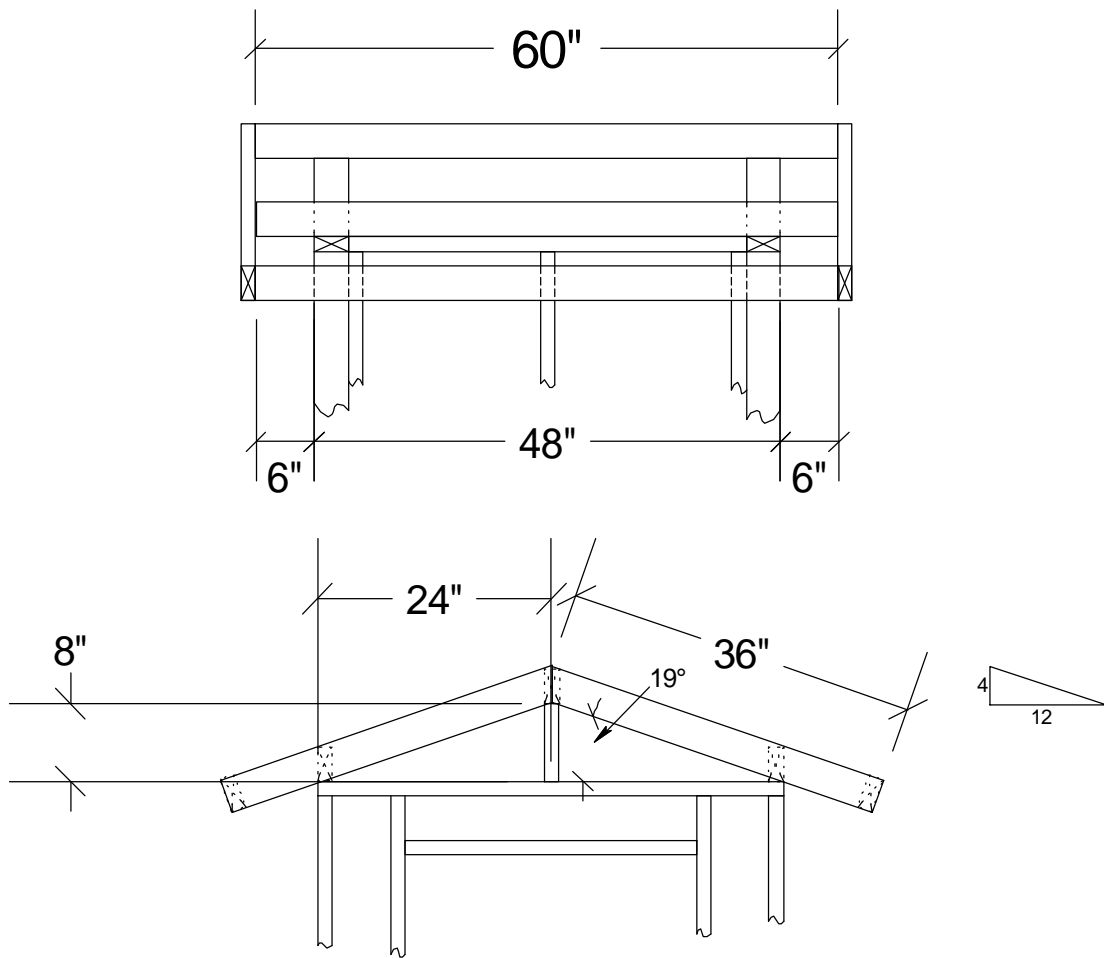
Front Elevation - Door



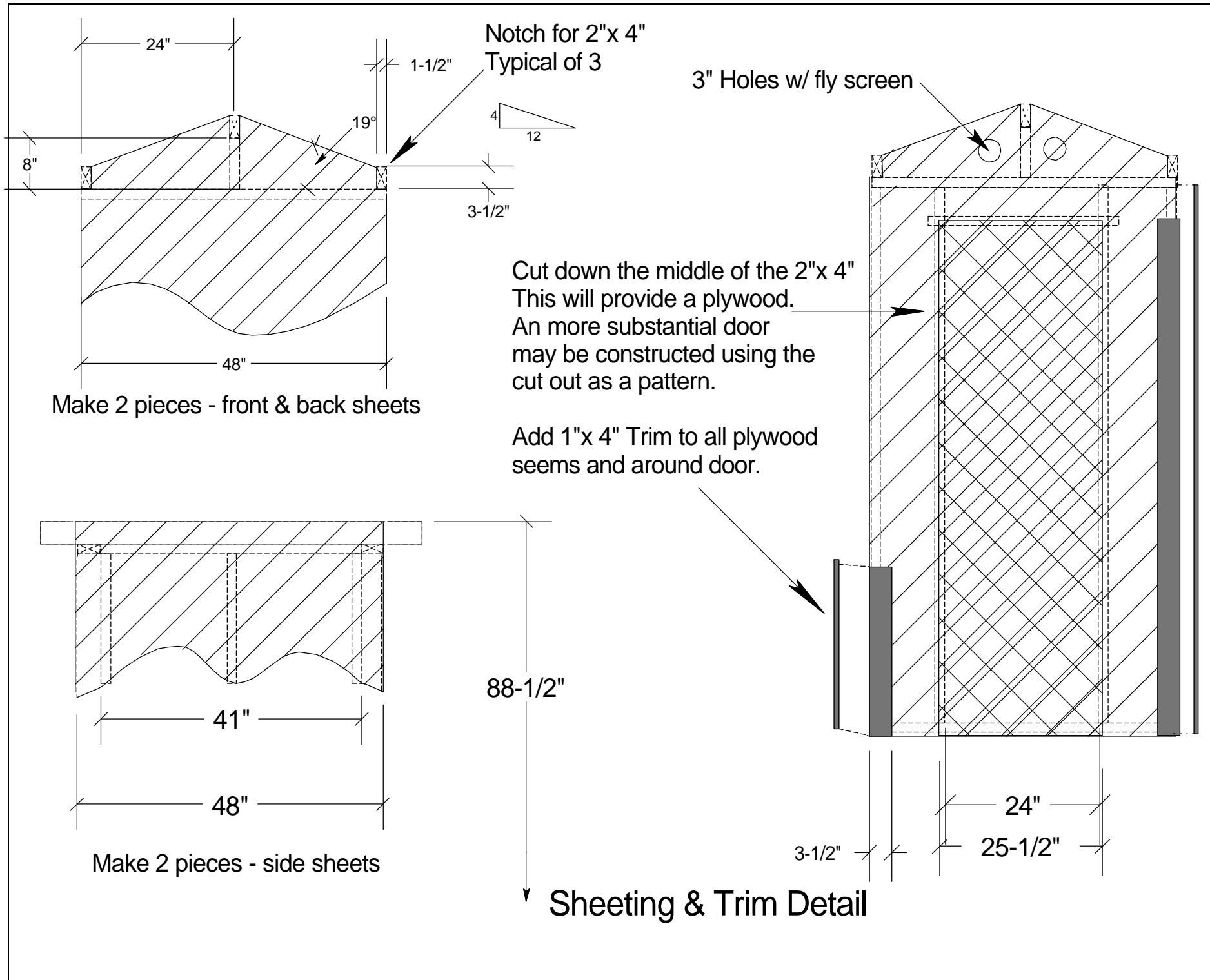
Rear Elevation



Side Elevation 2 Required



Roof Framing



Rev. 12.1.2004

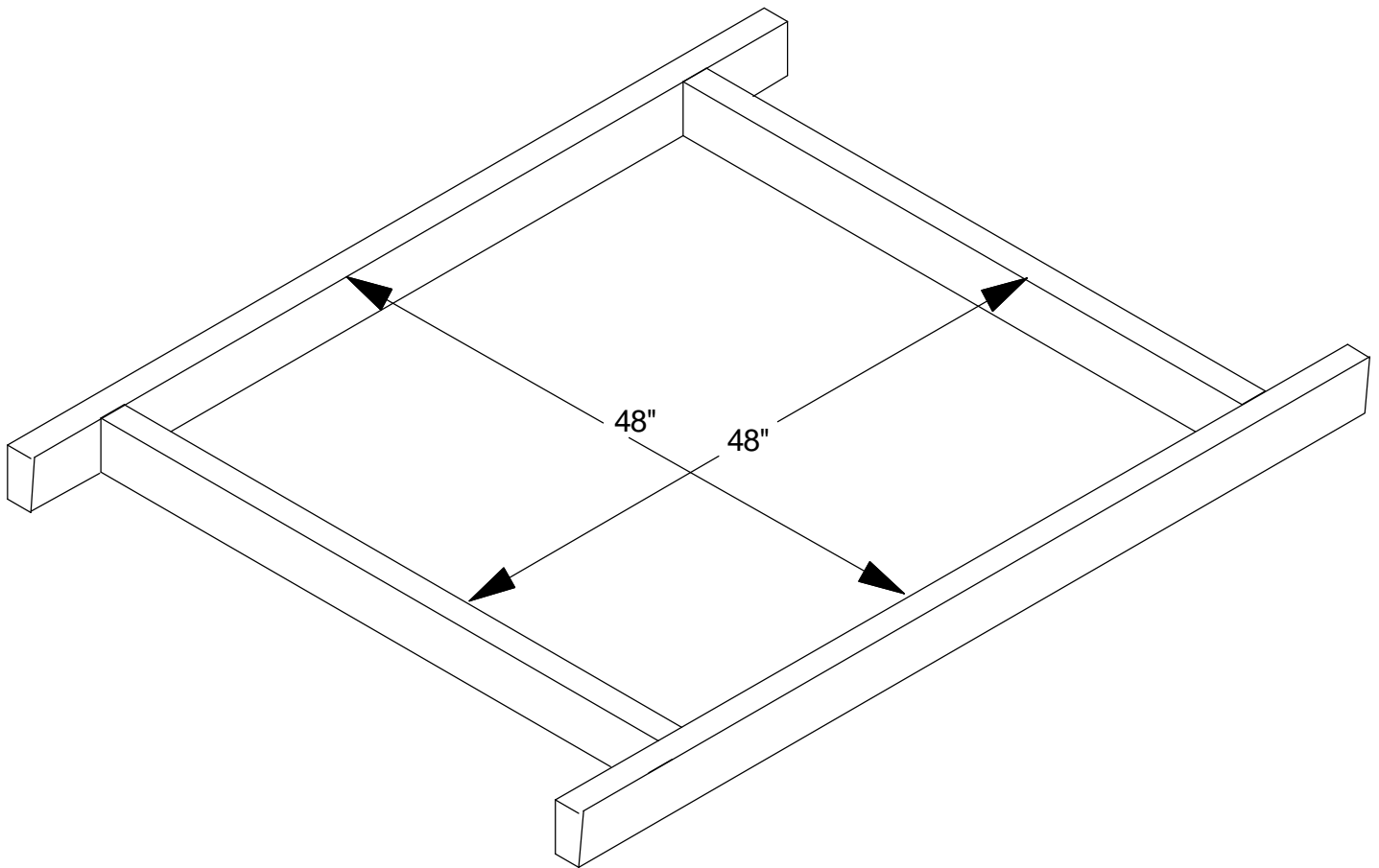
David Bower
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Stake 4'x 4' form onto a plastic sheet
or flat/smooth ground.

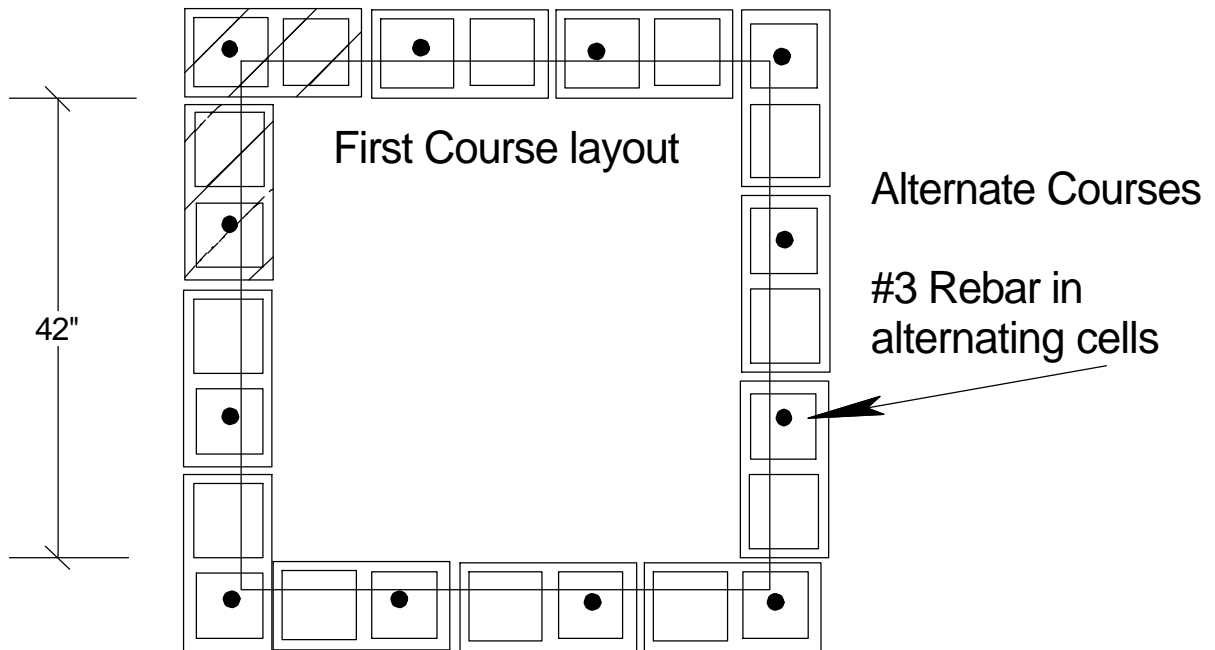
Soak inside of form w/ diesel fuel or
other release agent.

Pour concrete as per DETAILS 2 and 3

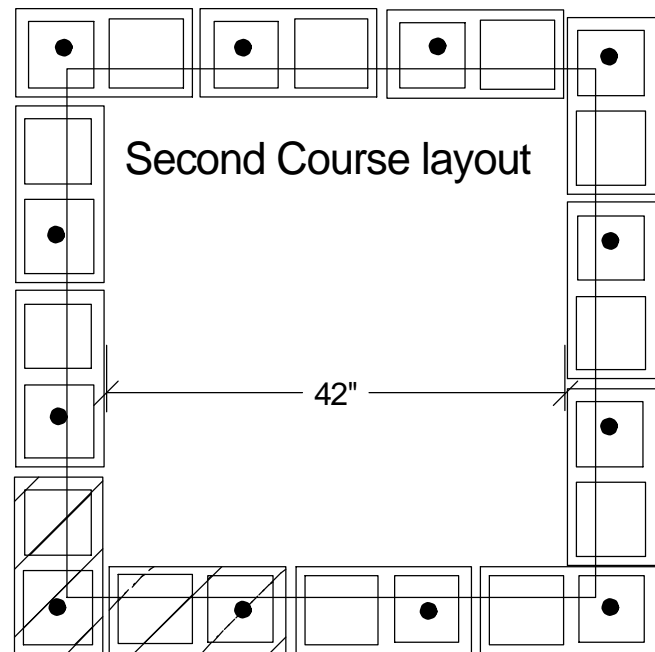
Allow concrete to cure 3 -5 days - keep wet.



Latrine Plate Form

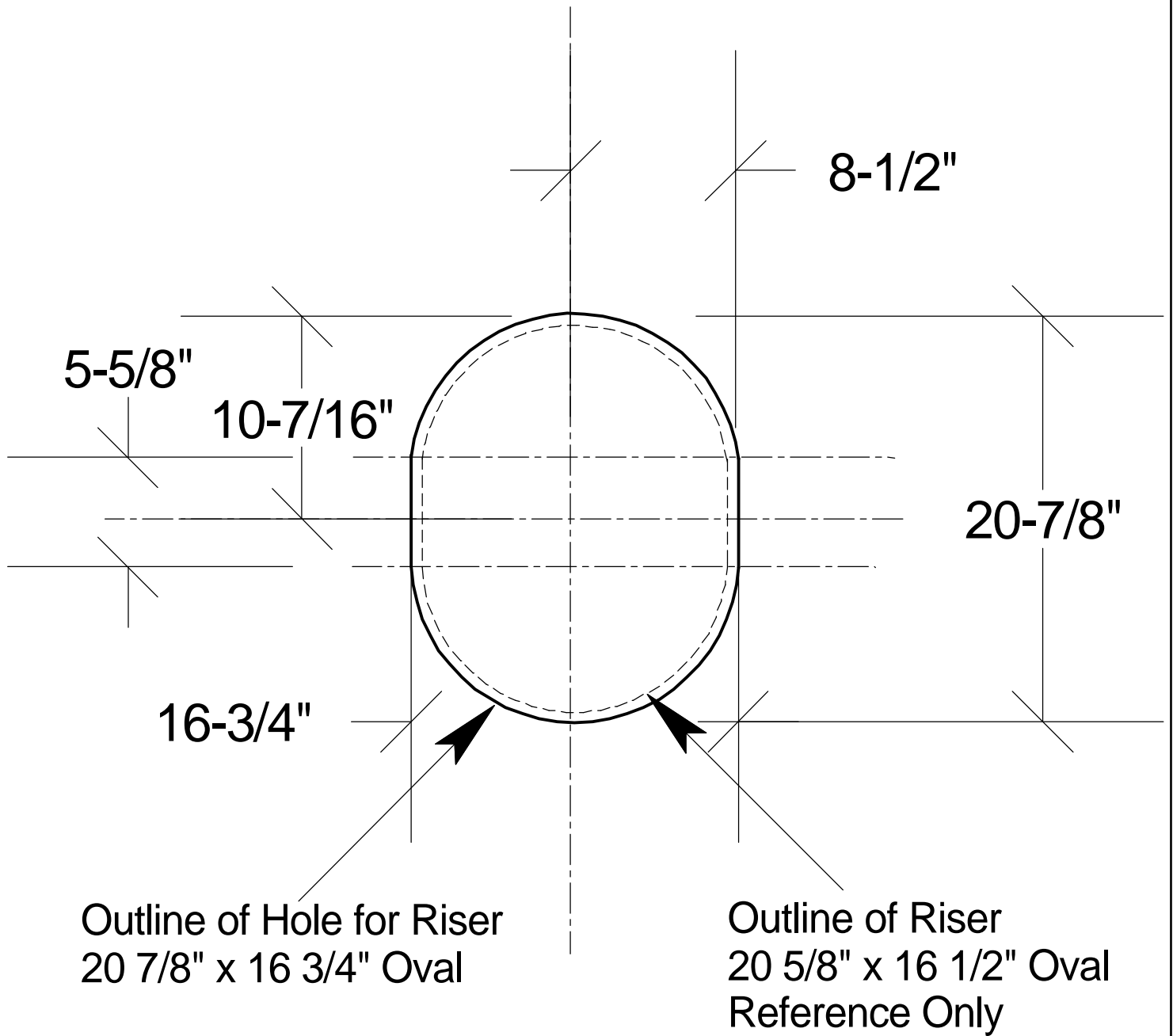


Blocks can be substituted
 Provide a hole size of 3'-6" sq.
 Depth is determined by soil types
 typically 6' 8' deep.

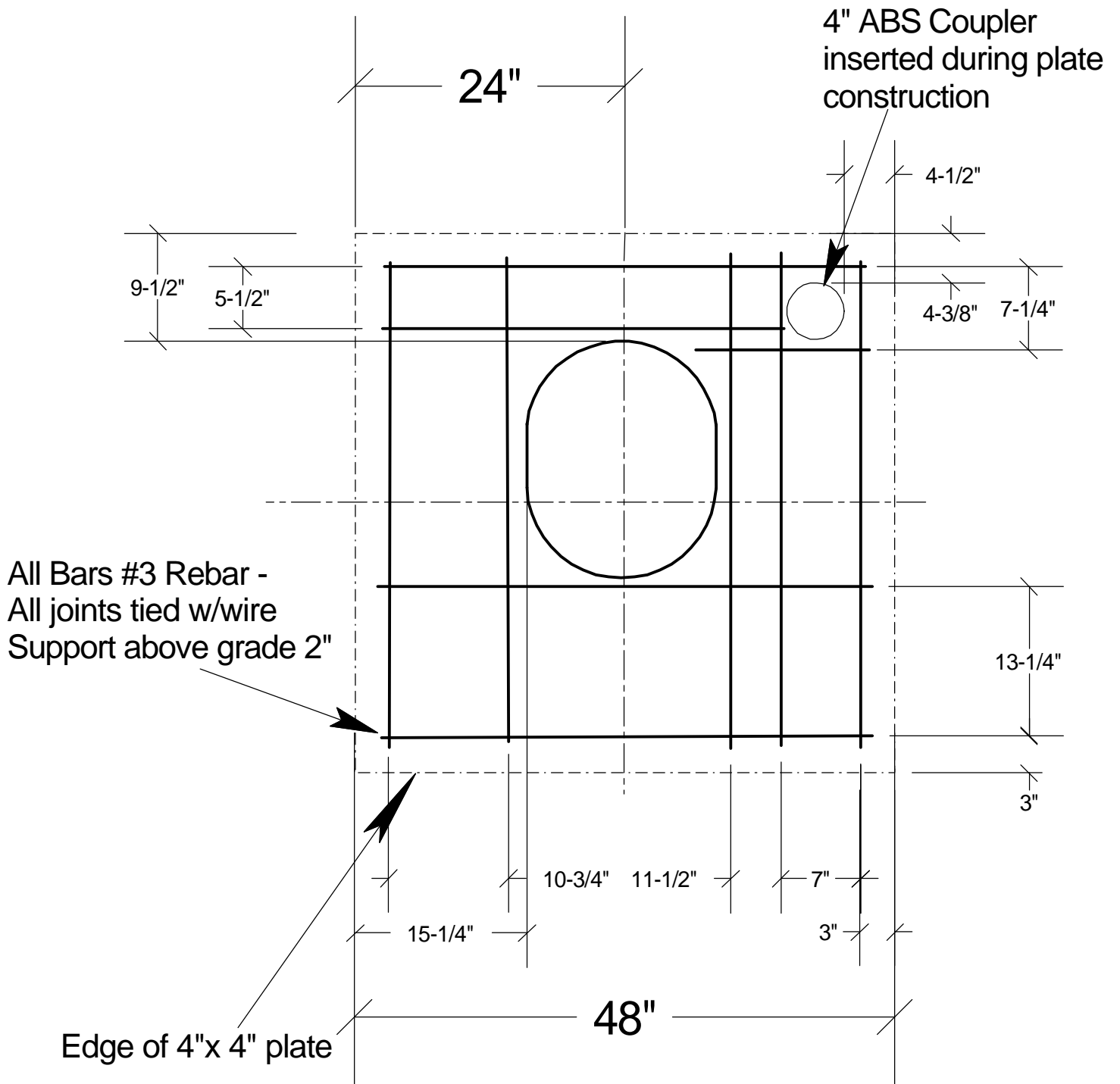


Concrete Block Layout

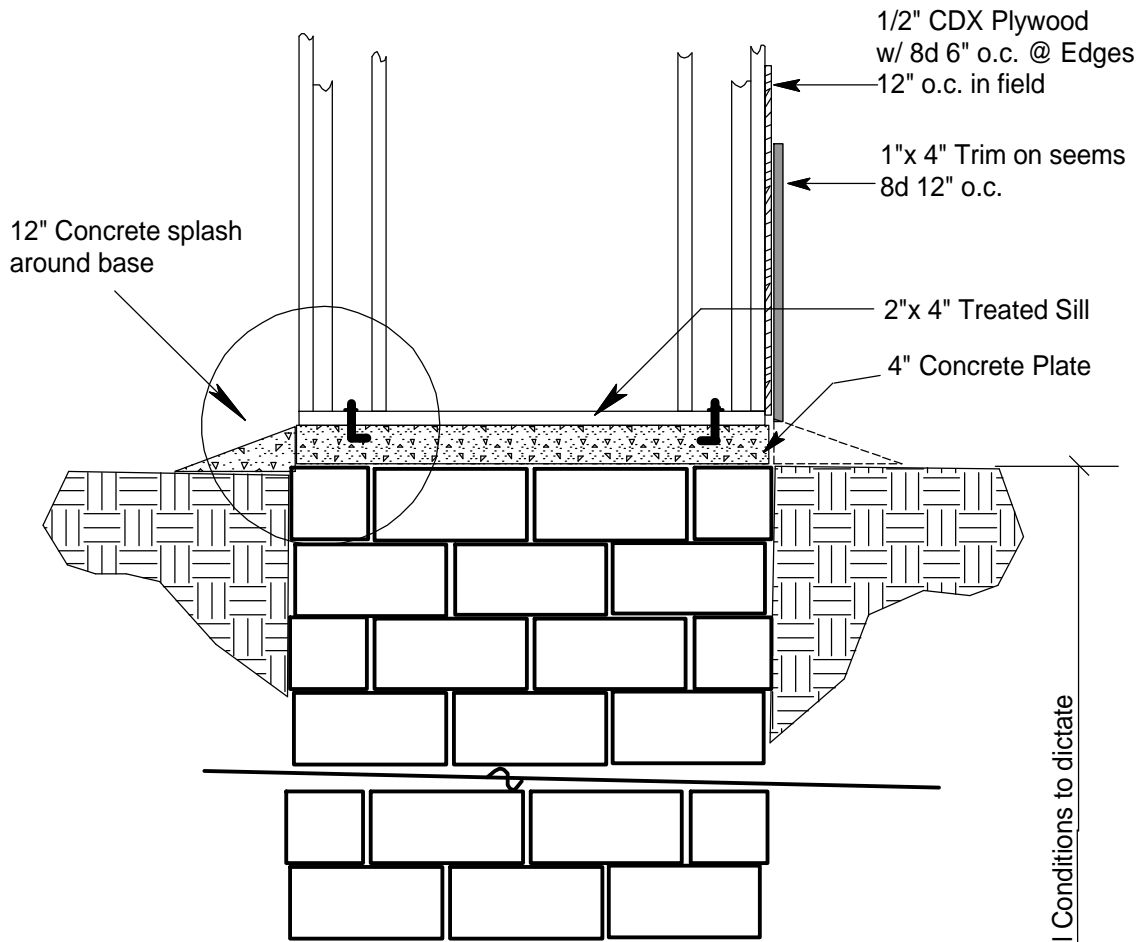
8" x 8" x 16" Block



Latrine Riser Hole Cut sheet



Latrine Concrete Plate Rebar Layout



12" Concrete splash around base

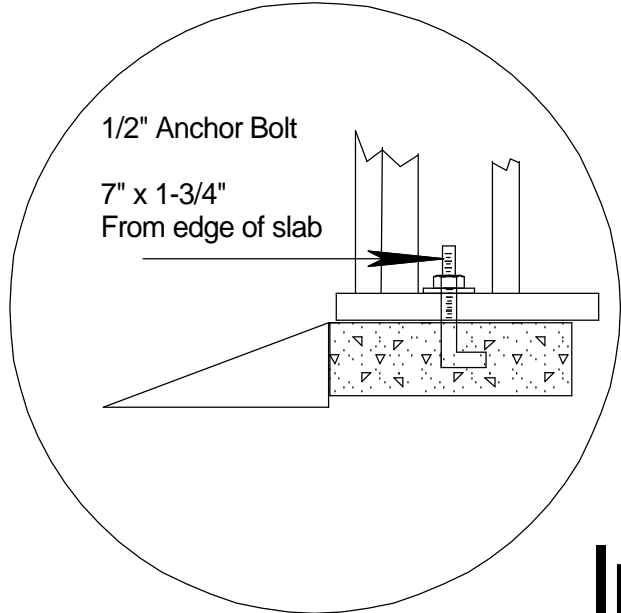
1/2" CDX Plywood
w/ 8d 6" o.c. @ Edges
12" o.c. in field

1"x 4" Trim on seams
8d 12" o.c.

2"x 4" Treated Sill

4" Concrete Plate

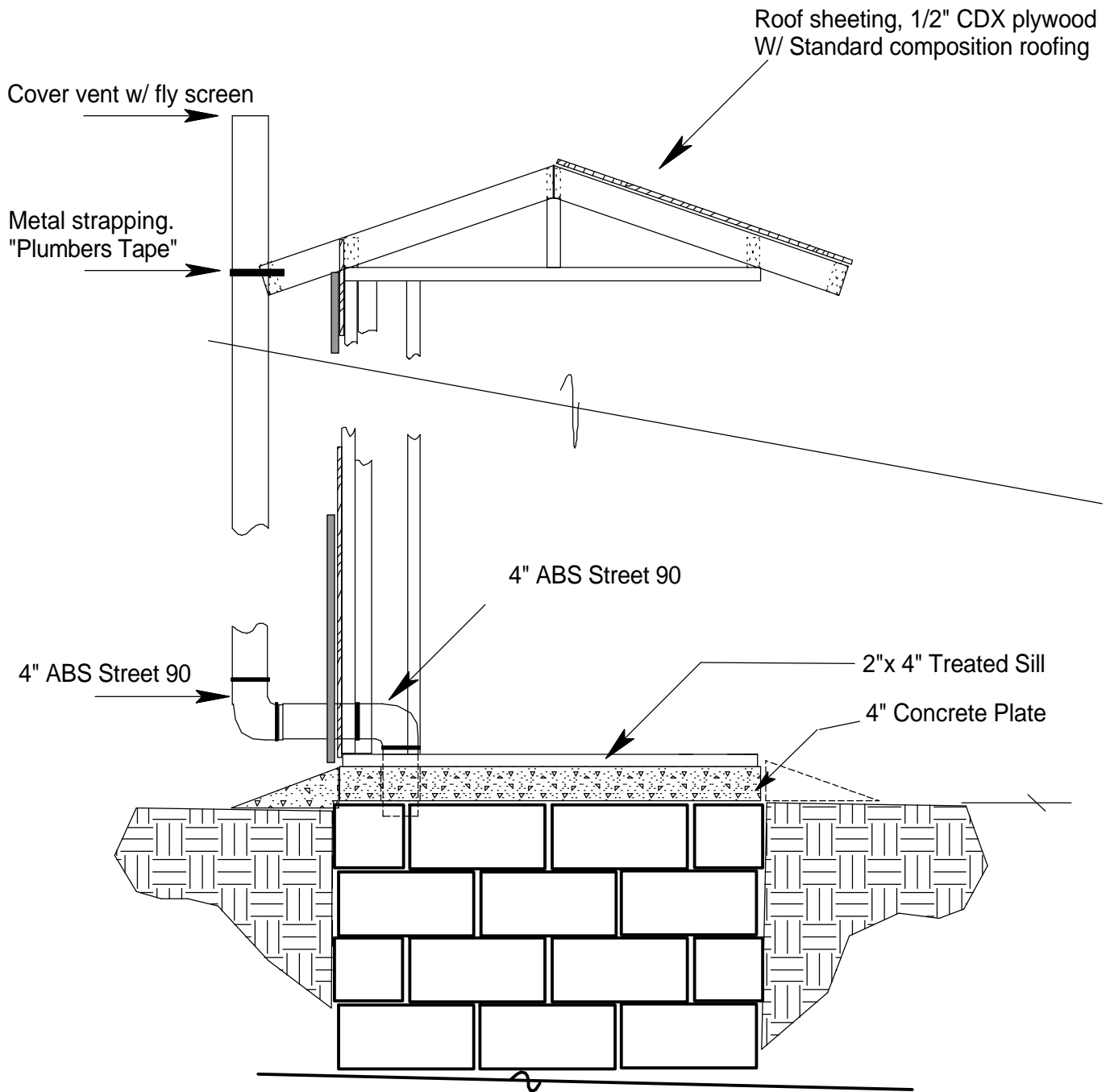
6' to 8' Deep - Soil Conditions to dictate



1/2" Anchor Bolt

7" x 1-3/4"
From edge of slab

In-Ground Section



Vent and In-Ground Section