

DIVISION 1 - GENERAL

- 1.1 The contractor shall be responsible for design and erection of all temporary bracing, form work, sheeting, shoring and underpinning necessary to perform the work.
- 1.2 The contractor shall be responsible for all construction means, methods, techniques, sequences, and procedures and for safety precautions and programs as they relate to the work on this project.
- 1.3 All construction material, workmanship and design shall conform to the 2003 International Building Code and other local codes prevailing during time of construction.
- 1.4 The contractor shall not scale drawings. If the General Contractor finds a conflict with the plans, then the General Contractor shall contact the engineer immediately.
- 1.5 The contractor shall refer to drawings of other trades and vendor drawings for embedded items and recesses not shown on the drawings.
- 1.6 The contractor shall verify all sizes and locations of all mechanical and electrical openings and equipment pads with the mechanical and electrical equipment details and shop drawings. It shall be the responsibility of the contractor to provide all openings and sleeves for the proper distribution of all utility lines throughout the building.

DIVISION 2 - FOUNDATION AND SITE PREPARATION

- 2.1 The surface of exposed subgrade shall be inspected by probing or testing to check for pockets of soft or unsuitable material. Excavate as required to remove unstable soil.
- 2.2 Proper site drainage shall be maintained in order to protect the site from excess surface moisture during construction. Protection of the site shall include the construction of temporary ditches, berms or other surface water diversion devices in order to divert surface water from and not across the site.
- 2.3 All footing excavations, site stripping, undercutting, and control fill operations shall be done under the supervision of an independent testing laboratory, under direction of registered professional engineer.
- 2.4 Contractor shall locate all footing steps in the field as required by finish grade.
- 2.5 Strip all topsoil from areas to be covered by structures or pavement. Fill for buildings or pavement shall controlled fill. Controlled fill shall be type SM or better, placed in 6" or better of maximum dry density as determined by 8" loose lifts and compacted to 95 standard proctor (ASTM D 698).
- 2.6 Center footings under wall and columns unless noted. All footings shall project at least 1'-0" into undisturbed natural soil or compacted controlled fill having a bearing capacity value at least equal to that specified below. Place bottoms of all exterior footings at least 2'-0" below finished grade. Earth cuts may be used as form for footing concrete. Drain all bearing strata adequately before placing foundation concrete. Do not place concrete on frozen soil.
- 2.7 Where footings are founded in controlled fill, a minimum of 2' of such fill shall exist between the bottom of the footing and original grade.
- 2.8 Foundations for this structure are spread footings bearing on either firm virgin soil or compacted structural fill with an assumed allowable bearing capacity of 2000 psf. ACS Design recommends the owner employ a geotechnical testing company to perform a subsurface investigation of the proposed site and prepare a written report stating allowable bearing pressures, settlement expected, foundation recommendations, subgrade preparation and any other pertinent information. A copy of this report should be submitted to our office to verify foundation design.

DIVISION 3 - CONCRETE

- 3.1 All reinforcing steel shall be billet steel ASTM A615, Grade 60. Ties stirrups shall be Grade 60.
- 3.2 All welded wire fabric shall be ASTM A185 lapped a minimum of one full wire space plus 6" when spliced.
- 3.3 Unless otherwise required, provide 3/4" chamfer on all concrete corners exposed to view.
- 3.4 Concrete protection for reinforcing steel and other general requirements for fabrication and placing of reinforcing steel shall be in accordance with the latest edition of the "American Concrete Institute Building Code" (ACI 318).
- 3.5 All exterior concrete exposed to weather shall be 4000 psi, air-entrained. All concrete for exterior foundation shall be 4000 psi. All other concrete shall be 3000 psi. All materials and processes to this end shall conform to ACI recommended practice for the design of concrete mixes. (ACI - 613 last revised).
- 3.6 Contractor shall place 1/2" expandable filler in joints of concrete slab on grade against vertical surfaces and dissimilar materials.
- 3.7 All reinforcing marked as continuous (cont.) On the plans and details shall be lapped 36 bar diameters at splices unless otherwise noted.
- 3.8 Concrete slab-on-grade shall be divided into sections by either construction joints and/or control joints as indicated on the foundation plan.

DIVISION 6 - WOOD

- 6.1 Wood construction shall conform to the requirements of the American Institute of Timber Construction and the National Forest Products Association (National Design Specification for Wood Construction).
- 6.2 Wood trusses shall be designed by the manufacturer to support the live and dead loads shown on these drawings. Design shall comply with the National Forest Product Association.
- A. Material shall be No. 2 grade Southern Pine, Douglas Fir, Larch, kiln dried dressed and used at 19 % maximum moisture content or as required to satisfy stress requirements.
- B. Wood truss joints shall be designed and fabricated in accordance with the latest Truss Plate Institute publication. Each unit shall bear the trademark of the fabricator. Trusses shall have panel type connections with steel tooth plates assembled with press jigs.
- C. Roof truss design criteria :
- TOP CHORD - LIVE LOAD = LIVE AND SNOW
TOP CHORD - DEAD LOAD = CALC. FROM DWGS.
BOTTOM CHORD - LIVE LOAD = 0 PSF (20 PSF WHERE 42" BETWEEN TOP AND BOTTOM CHORDS)
BOTTOM CHORD - DEAD LOAD = 10 PSF

E. Hurricane clips and anchors shall be Simpson/Strong-tie.

F. Truss layout for general arrangement only. See approved truss shop drawings for final layout.

H. If roof truss system employs truss girders, the truss layout and girder reactions shall be provided to the engineer for framing and foundation analysis.

6.4 Wood treatment: pressure treat all sills and plates and any other wood in contact with masonry, concrete or ground, and as shown elsewhere on drawings. Pressure treatment shall comply with awpb standards c2 and lp-22.1

6.5 All headers in load-bearing walls shall be (2) 2 x 10 with two layers of 1/2" plywood unless otherwise noted.

6.6 Unless otherwise noted, all nailing shall conform to the "Fastening Schedule" table 2304.9.1 of 2003 International Building Code.

6.7 Exterior walls shall be nominal 2" x 4" @ 16" o.c., unless otherwise noted.

6.8 Framing to provide wall blocking for all shelving, equipment, grab bars, mop holders, fixtures, etc. for firm support. Coordinate with all contractor, owner and equipment supplier requirements prior to enclosing framing.

6.9 All structural lumber shall be a minimum No. 2 grade spruce/pine/fir (spf) and used at 19 % maximum moisture content or equal.

6.10 Exterior stud walls shall be continuously bridged at mid-height with wood blocking. Provide continuous double 2 x top plate, typical in all walls.

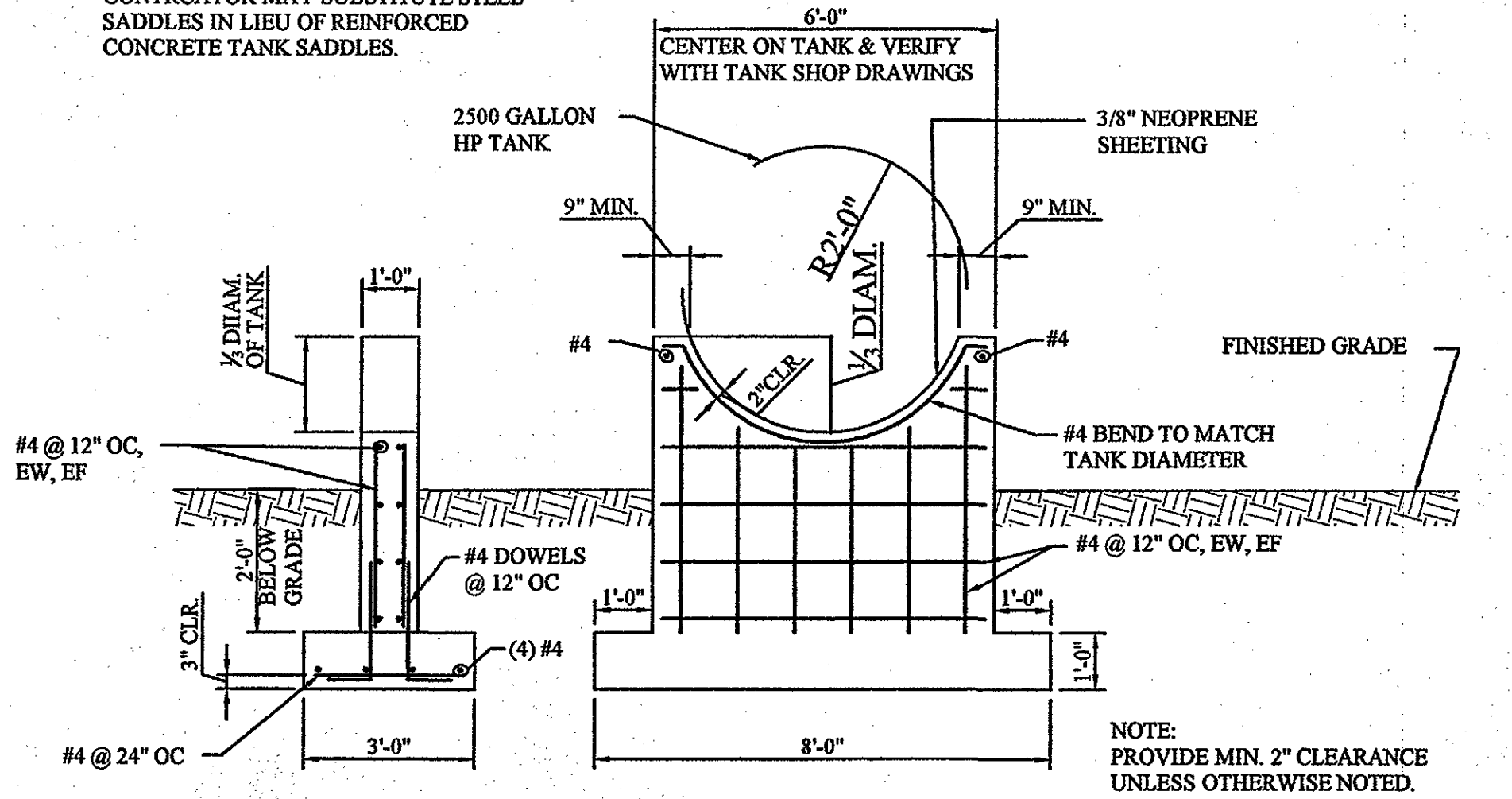
6.11 No cuts, holes or copes required for other trades shall be permitted in structural framing without prior review by the engineer.

6.12 Sheathing shall conform to APA specifications. End joints shall occur over supports or provide aluminum panel clips between sheets. Panels shall be staggered on half panel length from adjacent panels. Provide 1/8 inch space at panel ends.

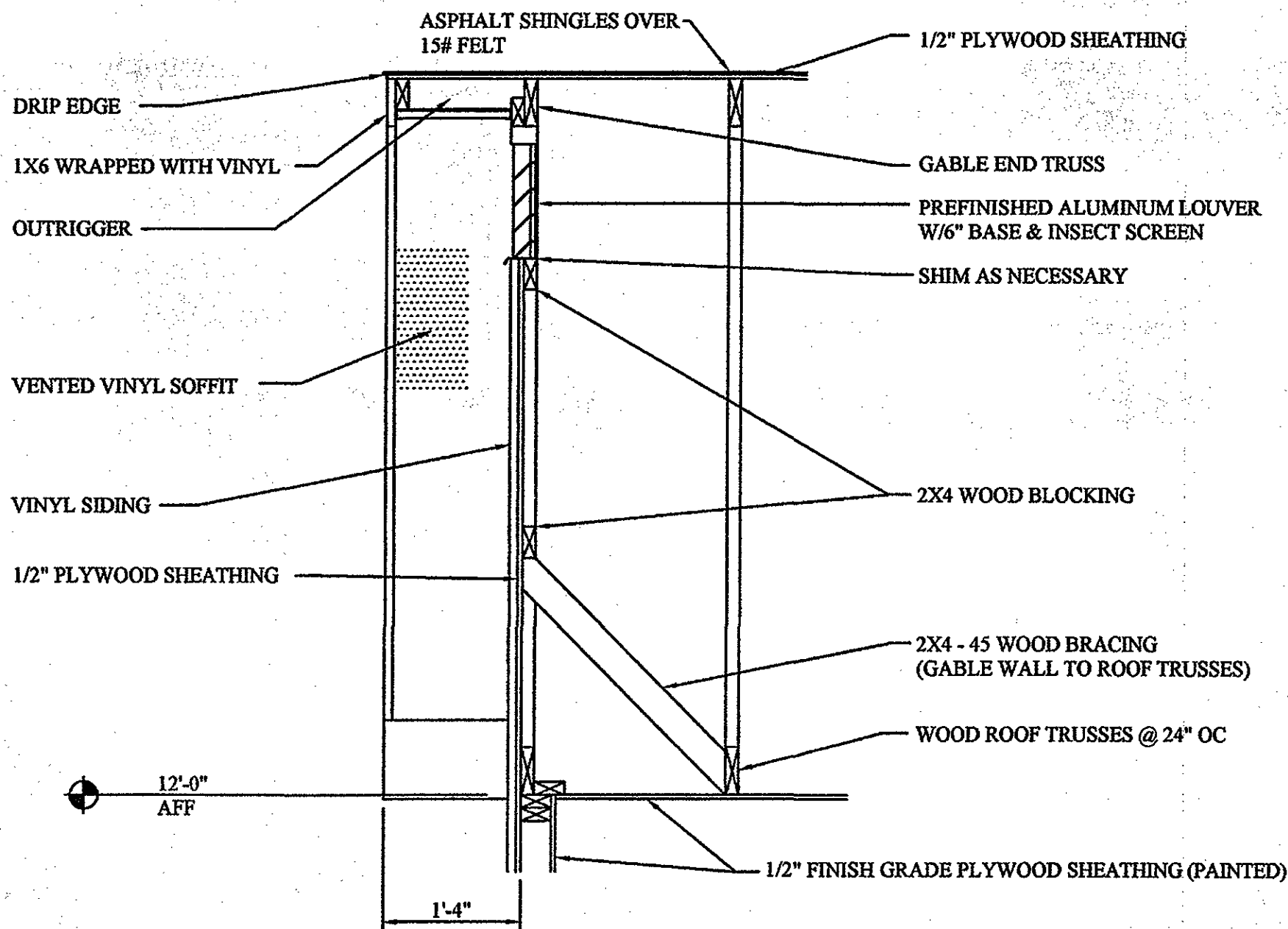
6.13 Roof sheathing shall be 1/2 inch "APA rated sheathing", 48/24 panel span rating, Exposure 1. All panels shall be nailed with 8d common nails at 6 inches on center at all ends and edges and at 12 inches on center at all intermediate supports.

6.14 Exterior wall sheathing shall be 1/2 inch "APA rated sheathing", 24/16 panel span rating, Exposure 1. All panels shall be nailed with 6d common nails at 6 inches on center unless otherwise noted at all ends and edges and at 12 inches on center at all intermediate supports. Include sill plate insulation, caulking of sills and plates.

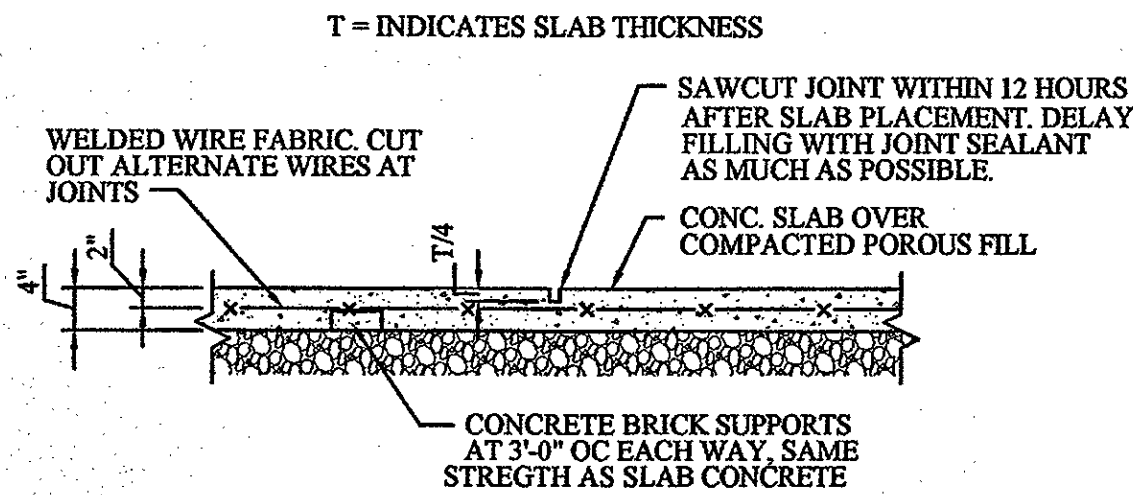
NOTE:
CONTRACTOR MAY SUBSTITUTE STEEL
SADDLES IN LIEU OF REINFORCED
CONCRETE TANK SADDLES.



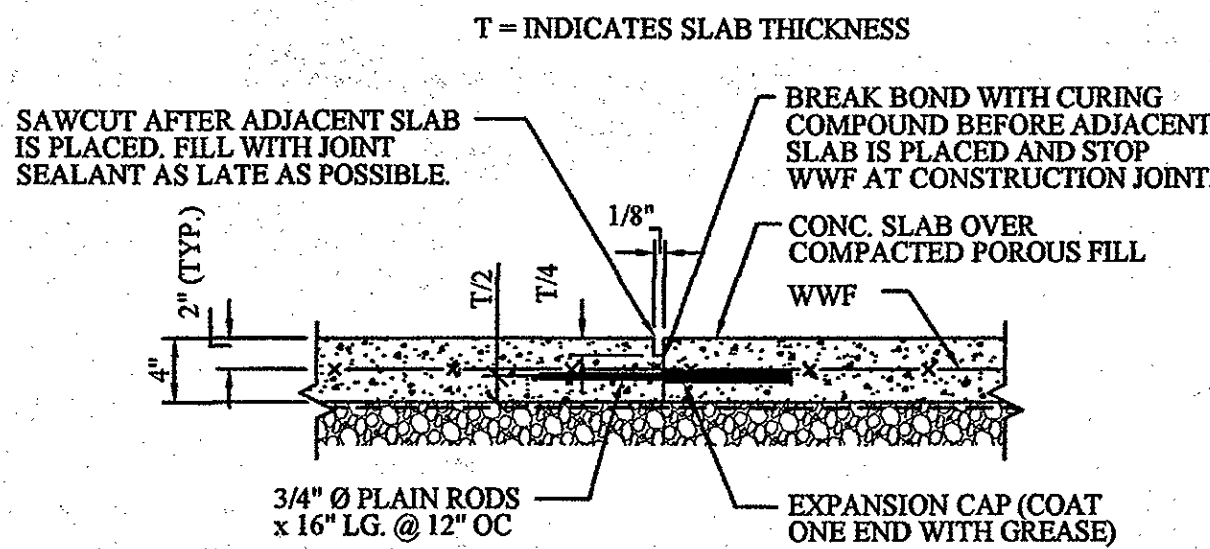
HP TANK CRADLE SECTION
SCALE: 3/8\"/>



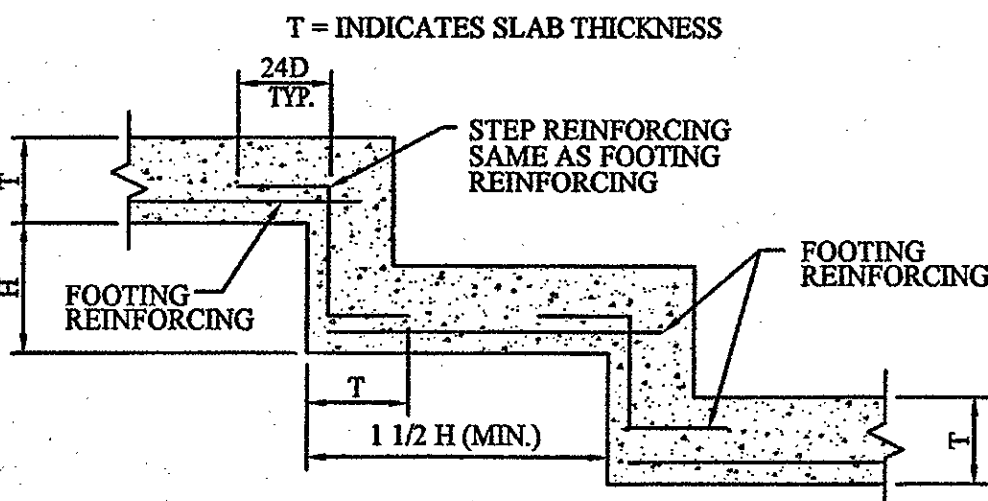
GABLE END WALL SECTION
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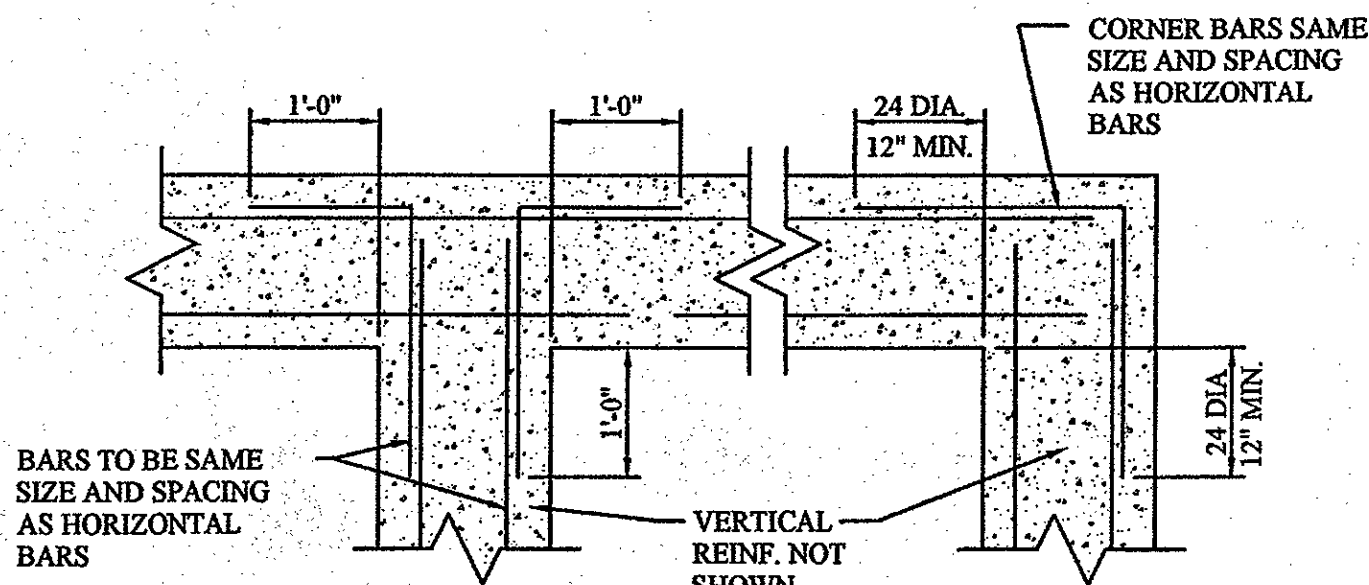
TYPICAL CONTROL JOINT
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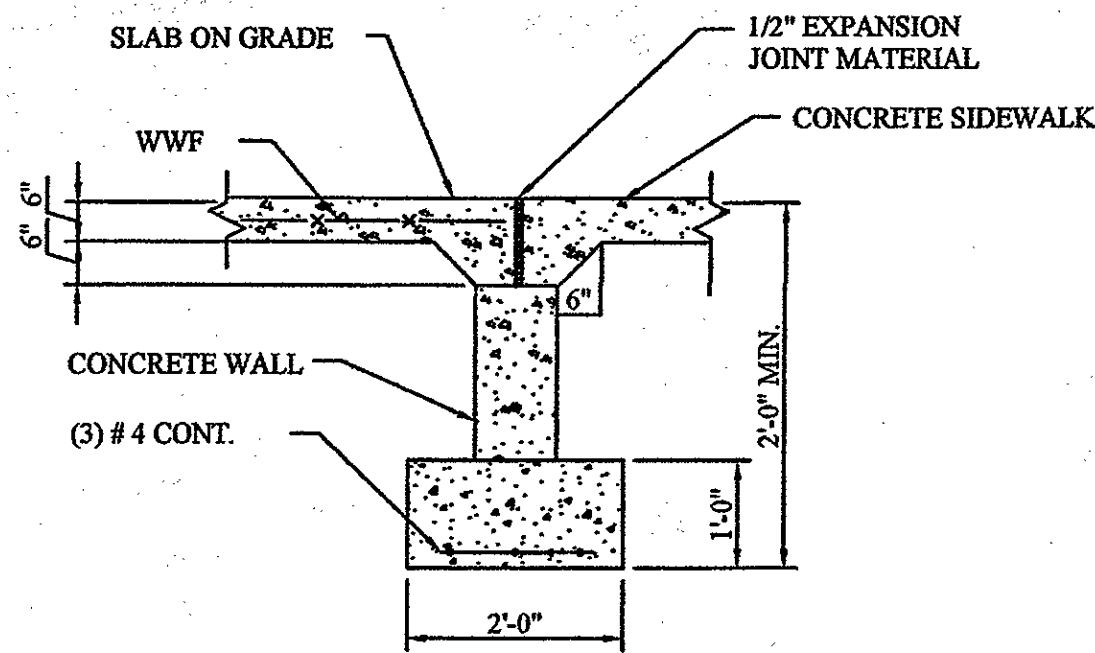
TYPICAL CONSTRUCTION JOINT
NO SCALE



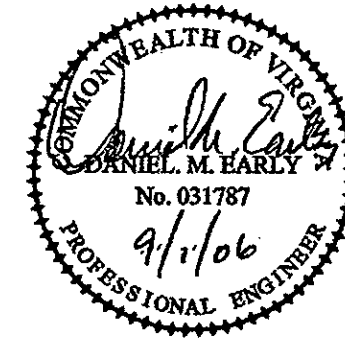
TYPICAL FOOTING STEP
NO SCALE



TYPICAL REINF. @ INTERSECTION OF CONCRETE WALLS & FOOTINGS
NO SCALE



TYP. SECTION @ OPENINGS
NO SCALE



**ACS
DESIGN**

ENGINEERING • SURVEYING
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The Coves at Smith Mountain Lake
Optima Properties-Smith Mountain Lake, LLC
Franklin County, Virginia

DRAWN BY: AH
DESIGNED BY: DME
CHECKED BY: DME
DATE: 01 MAY 2006
JOB NUMBER: 05271

REVISIONS:	
No. 1	8/23/06
No. 2	5/11/07
No. 3	FINAL FOR CONSTRUCTION
No. 4	

SHEET NO.:
C4.3

HP BUILDING
SPECIFICATIONS &
MISC. DETAILS