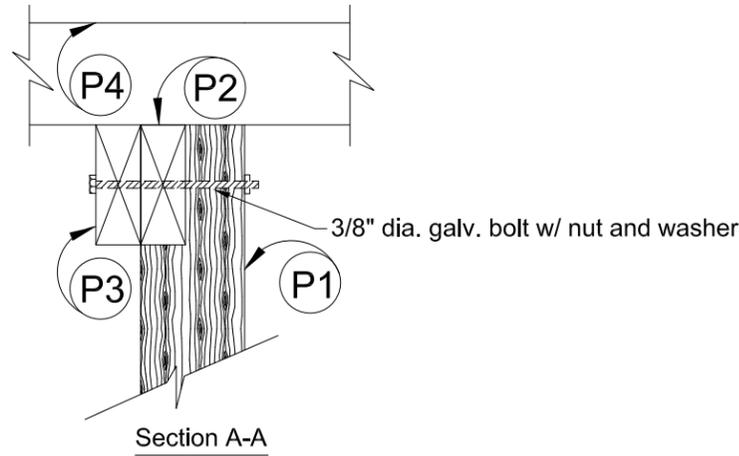


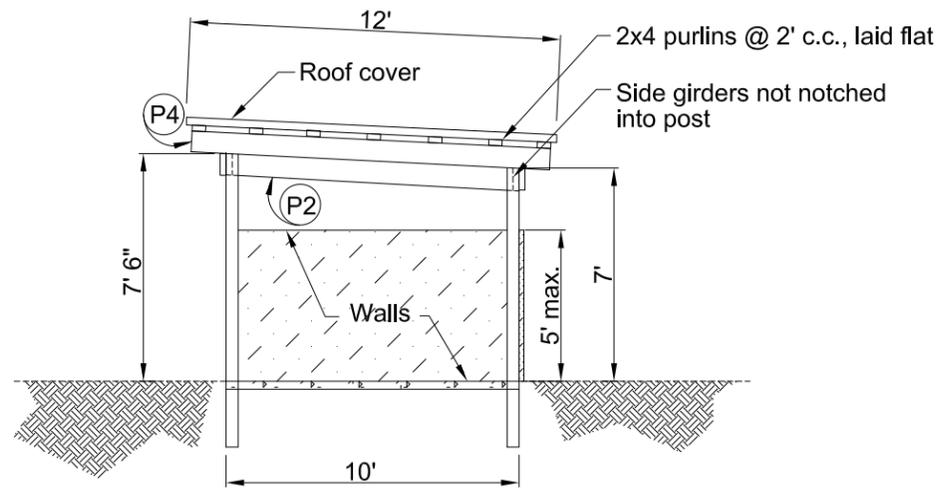
Detail 'A'



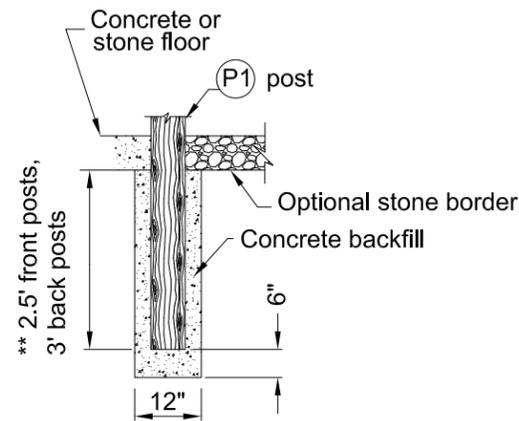
Section A-A
(Girder attachment - side view)

Bill of Materials

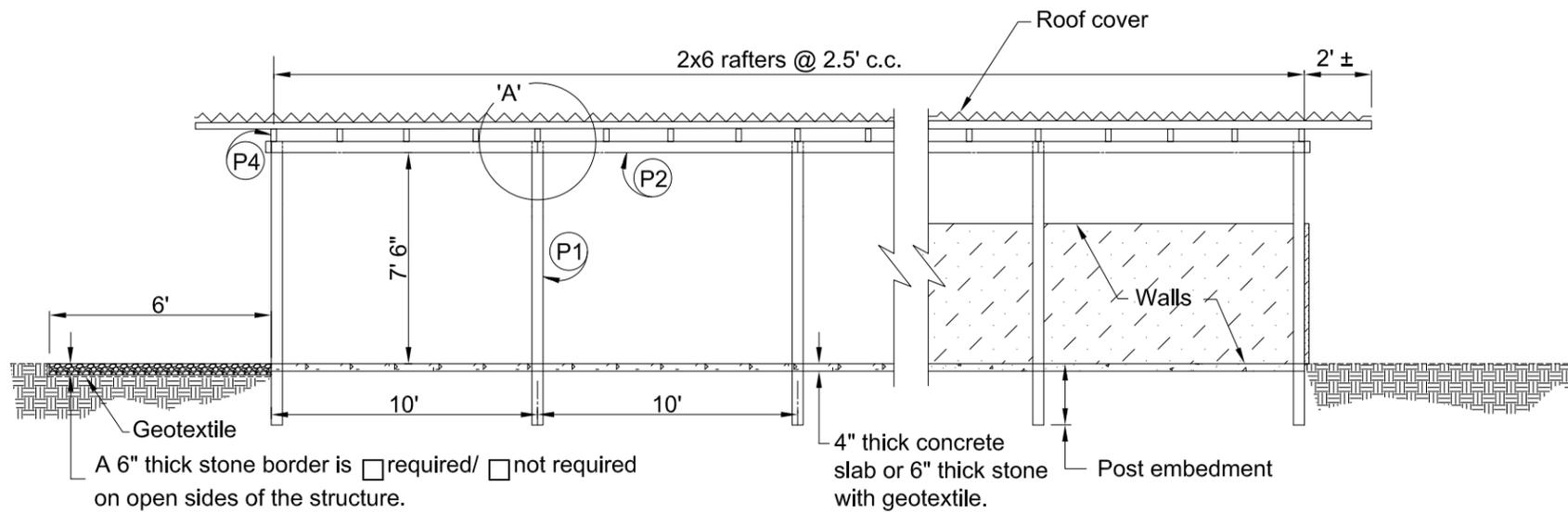
Component	10' x 20' Structure	10' x 30' Structure
P1: 4" x 6" x 10'	6 ea.	8 ea.
P2: 2" x 8" x 10'	6 ea.	8 ea.
P3: 2" x 8 x 18"	2 ea.	4 ea.
P4: 2" x 6" x 11'-10"	9 ea.	13 ea.
Purlins: 2" x 4" x 12'	14 ea.	14 ea.
Purlins: 2" x 4" x 10'	---	7 ea.
8" x 3/8" dia. bolts	2 ea.	4 ea.
6" x 3/8" dia. bolts	8 ea.	8 ea.
Roof covering (sq.ft.)	288	408
Wall siding (sq.ft.) Yes ___ No ___	200	250
Stone for border (cu.yd.) Yes ___ No ___	2.2	3.3
Geotextile for stone border (sq.yd.) Yes ___ No ___	20	29
Concrete for floor (cu.yd.)	2.5	3.7
Stone for floor (cu.yd.)	3.7	5.6
Geotextile for stone floor (sq.yd.)	27	42
Concrete for post holes (cu.yd.)	0.4	0.6



End Elevation
(Optional stone border not shown)



Posthole Detail



(Details this sheet are not to scale)

Front Elevation

- Notes
- All posts will be treated lumber, AWPA category UC4B or equivalent.
 - All post and lumber sizes are nominal.
 - Walls are optional. Only one of the longer sides (front or back) and the ends may be walled. Walls may not extend 80% of the vertical eave height.
 - All metal components and fasteners of the structure will be galvanized or stainless steel.
 - Anchor rafters to girders with hurricane clips at all attachment points.
 - Roof covering material shall be 29 ga. galvanized metal, corrugated fiberglass, plastic or other approved material. Non-metal materials shall have an opacity of at least 80%.
 - See NRCS Conservation Practice Standard No. 576 for general criteria for Livestock Shelter Structures.
 - See Alabama Construction Specification CS-561 (Heavy Use Area Protection) for stone, geotextile and concrete requirements. A 1" thick topping of finer-grained material may be utilized for hoof protection.
 - See Alabama Job Sheet No. AL576 (Livestock Shelter Structure) for recommendations of structure location and orientation, guides for overall dimension based on herd size, etc.
 - Quantities will need to be adjusted for structure dimensions other than the two sizes listed in the bill of materials above.
 - Wall materials may be treated 2" boards AWPA UC3B or better, metal on 2" girts, treated plywood on 2" girts or other approved material.
 - Premixed bagged concrete may be used as posthole backfill.
 - Posts may be wrapped in hardware cloth, woven wire mesh or other suitable material to deter chewing.
- ** Post embedment for structures in Baldwin and Mobile Counties shall be increased to 4 ft. and total post length increased accordingly.

Revisions		
Date	Approved	Title

Date _____

Designed _____

Drawn _____

Checked _____

Approved _____

PERMANENT LIVESTOCK SHELTER STRUCTURE
FOR SMALL RUMINANTS

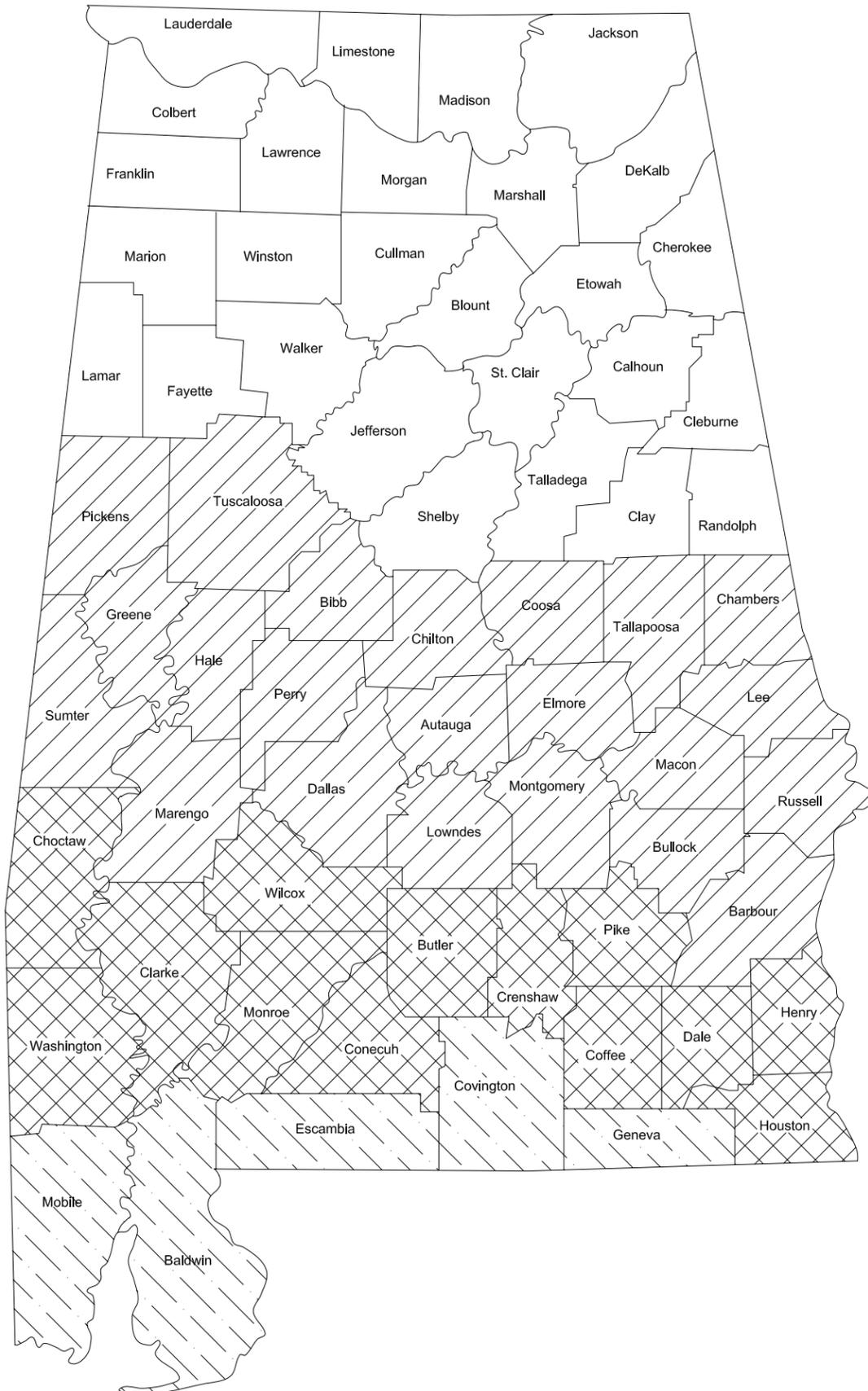
LANDOWNER _____ COUNTY, ALABAMA



Drawing No. AL-ENG-54B

Sheet 1 of 2

ALABAMA



Design Wind Speed

- 120 mph
- 110 mph
- 100 mph
- 90 mph

POST/GIRDER SELECTION TABLE				
Wind Speed (mph)	Post Size	Min. Embedment (ft.)	Post Length (ft.)	Girder Size
Partially Closed Structure				
90 - 100	4 x 6	3	10	2 x 8
110	6 x 6	3.5	12	2 x 8
120	6 x 6	3.5	12	2 x 10
Open Structure				
90 - 110	4 x 6	2	10	2 x 6
120	4 x 6	2	10	2 x 8

Notes:

1. A partially closed structure is one with partial walls on no more than three sides. Only one of the longer sides (front or back) may be walled. Walls may not exceed 80% of the vertical eave height.
2. An open structure is one with no walls.
3. All posts and lumber sizes are nominal.
4. Where standard post lengths exceed the lengths necessary to provide the specified eave height plus embedment depth, the posts will be cut off at the specified height or the extra length shall be utilized in increased embedment depth.

Date _____
 Designed *Engr. name* _____
 Drawn _____
 Checked _____
 Approved _____

PERMANENT LIVESTOCK SHELTER STRUCTURE
 FOR SMALL RUMINANTS
 Landowner _____
 County, Alabama _____



Revisions		
Date	Approved	Title

File No. _____
 Drawing No. **AL-ENG-54B**
 Sheet 2 of 2