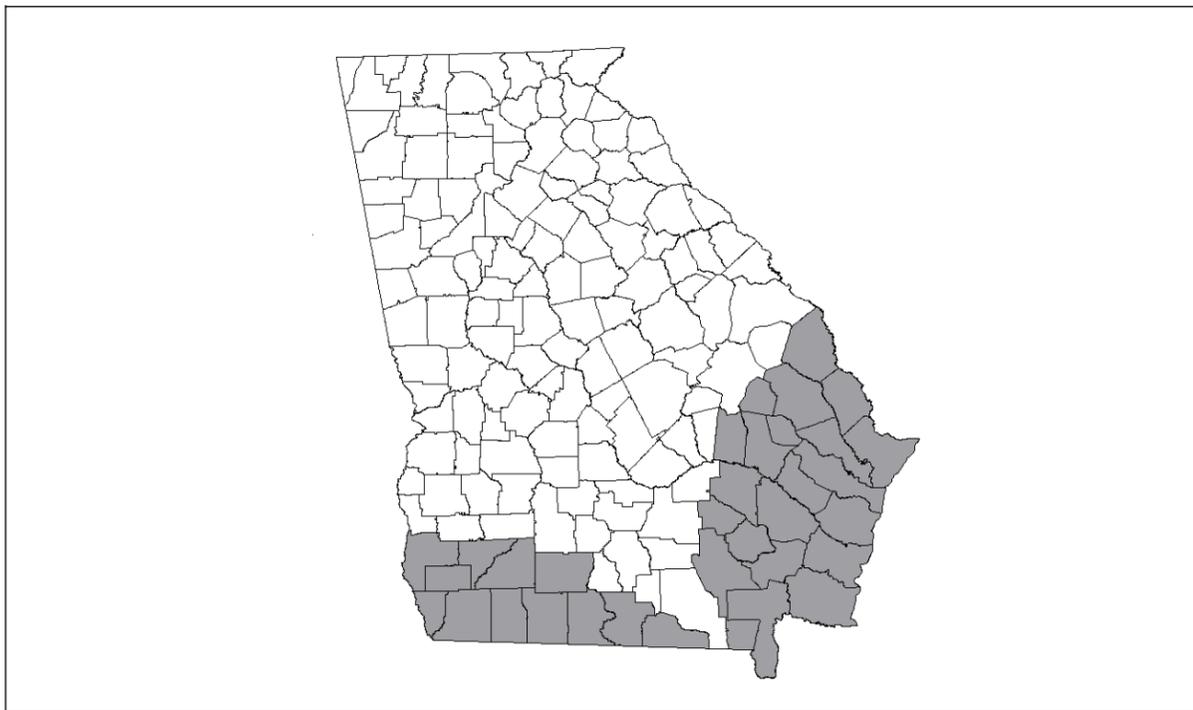


**UNITED STATES DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE**

**GEORGIA STANDARD DRAWINGS - DAIRY / SWINE SCRAPED WASTE STORAGE FACILITY CONSTRUCTED WITH 6" X 6" POSTS AND ENGINEERED TRUSSES SPACED 5' O.C.**

- THE FOLLOWING DRAWINGS WERE PREPARED IN ACCORDANCE WITH PRACTICE CODE 313 - WASTE STORAGE FACILITY AND GEORGIA BUILDING CODE (INTERNATIONAL BUILDING CODE 2006).
- DESIGN DATA REQUIRED BY IBC 2006:
  - ROOF LIVE LOAD - 19PSF.
  - BASIC WIND SPEED OF 90 MPH AND GROUND SNOW LOAD OF 10 PSF OR BASIC WIND SPEED OF 100 MPH AND NO SNOW LOAD.
  - IMPORTANCE FACTOR  $I = 0.87$ .
  - WIND EXPOSURE CATEGORY C.
  - INTERNAL PRESSURE COEFFICIENT = 0.55.
- ENGINEERED TRUSSES SHALL BE DESIGNED TO SUSTAIN THE ABOVE LISTED CONDITIONS. ONE COPY OF THESE DRAWINGS AND FORM GA-ENG-313E SHALL BE SUBMITTED TO THE TRUSS DESIGNER. THE TRUSS DESIGN DRAWING FROM THE TRUSS COMPANY MUST BE REVIEWED AND APPROVED BY NRCS.
- SIDESHED SHALL NOT BE ATTACHED TO THIS STRUCTURE IF 14-FOOT POST HEIGHT IS USED. IF 12-FOOT POST HEIGHT IS USED THEN A 16-FOOT SIDESHED MAY BE ATTACHED. SIDESHED SHALL MEET NRCS SPECIFICATIONS (SEE GA-ENG-317-C3.PDF).
- THIS DESIGN IS NOT INTENDED FOR USE IN EXTREME SOUTH AND EAST COUNTIES OF THE STATE THAT ARE SUBJECT TO HURRICANE WIND LOADS (SEE MAP BELOW).
- THIS DESIGN IS NOT INTENDED FOR CONSTRUCTION ON AN ISOLATED HILL, RIDGE, OR ESCARPMENT IN ANY REGION OF THE STATE.
- ANY CHANGES TO THESE DRAWINGS MUST BE APPROVED BY AN ENGINEER WITH JOB APPROVAL LEVEL IV OR GREATER.
- NO SIDESHEDS OR ADDITIONS SHOULD BE MADE TO STRUCTURE WITHOUT APPROVAL FROM NRCS. APPROVED DESIGNS FROM NRCS MAY BE USED OR DESIGNS APPROVED BY A GEORGIA REGISTERED PROFESSIONAL ENGINEER.



THIS DESIGN IS NOT INTENDED FOR USE IN COUNTIES SUBJECT TO HURRICANE WIND LOADS SHADED GRAY ABOVE.

**THE NATURAL RESOURCES CONSERVATION SERVICE  
HELPING PEOPLE HELP THE LAND**

**DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY  
COUNTY, GEORGIA**

PRE-CONSTRUCTION CERTIFICATION:

THE \_\_\_\_\_ DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY WILL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING DRAWINGS AND PRACTICE CODE 313. ALL CHANGES HAVE BEEN APPROVED BY AN ENGINEER WITH JOB APPROVAL AUTHORITY LEVEL IV OR GREATER. ALL ADDITIONS HAVE BEEN APPROVED BY NRCS.

OWNER	DATE	NRCS REPRESENTATIVE	DATE	ENGINEER (IF REQUIRED)	DATE
-------	------	---------------------	------	------------------------	------

AS-BUILT CERTIFICATION:

THIS PRACTICE HAS BEEN CONSTRUCTED IN ACCORDANCE TO THESE PLANS AND MEETS NRCS STANDARDS AND SPECIFICATIONS.

NRCS REPRESENTATIVE	DATE	ENGINEER (IF REQUIRED)	DATE
---------------------	------	------------------------	------

INDEX TO DRAWINGS:

- SHEET 1 - COVER SHEET
- SHEET 2 - ISOMETRIC VIEW  
GENERAL NOTES
- SHEET 3 - PLAN VIEW
- SHEET 4 - ELEVATION VIEW OF ENDWALL
- SHEET 5 - SIDE WALL DETAIL  
CONCRETE POST FOOTING DETAIL  
MECHANICAL POST ANCHOR CONCRETE FOOTING DETAIL
- SHEET 6 - TRUSS TO GIRDER CONNECTION DETAIL  
HURRICANE STRAP DETAIL  
MECHANICAL POST ANCHOR DETAIL  
WOOD TREATMENT TABLE
- SHEET 7 - REINFORCED CONCRETE WALL DETAILS  
STEEL REINFORCEMENT SCHEDULE
- SHEET 8 - ENDWALL VERTICAL BRACE DETAILS  
ENDWALL HORIZONTAL BRACE DETAILS
- SHEET 9 - TRUSS BRACING DETAILS

WASTE STORAGE FACILITY:

JOB CLASS: \_\_\_\_\_

REVISIONS			
DATE	APPROVED	TITLE	
09/05	H McFARLAND	STATE ENGINEER	
01/06	H McFARLAND	STATE ENGINEER	
07/07	H McFARLAND	STATE ENGINEER	
06/11	J HOLLOWAY	STATE ENGINEER	

Date \_\_\_\_\_ 07/07  
Designed \_\_\_\_\_ W. Brown  
Drawn \_\_\_\_\_ D. Drewry, S. Rogers  
H. McFarland  
Checked \_\_\_\_\_ J. Holloway  
Approved \_\_\_\_\_ H. McFarland  
07/07  
07/07  
07/07

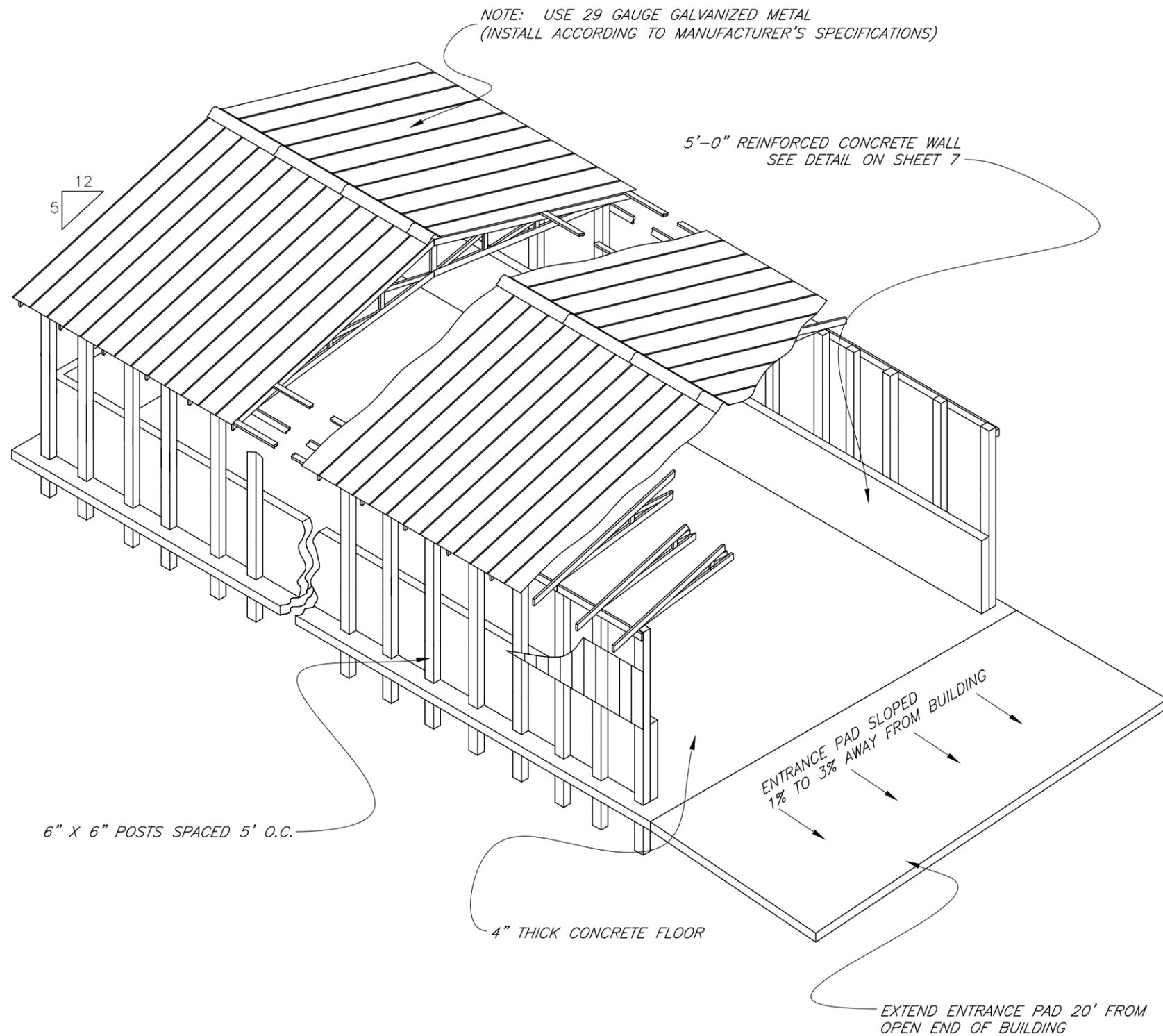
GEORGIA DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY  
(12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)  
County, GA



File No.  
ga-eng-313-ds1.pdf

Drawing No.  
Cover

06/17/2011 8:57 AM  
Sheet 1 of 9



**ISOMETRIC VIEW**  
Not to scale

**NOTES:**

1. ENCLOSE THREE SIDES AND GABLE ON OPEN END.
2. ENDWALL IS REQUIRED.
3. A 2'-0" OPENING WILL BE INSTALLED BETWEEN THE SIDING AND ROOF OVERHANG ON THE SIDEWALL (SEE SIDEWALL DETAIL ON SHEET 5).
4. LITTER SHALL BE STACKED NO HIGHER THAN 7' TO MINIMIZE FIRE HAZARD AND PREVENT CONCRETE WALL FAILURE.
5. ALL ENTRANCE AREAS SHALL BE STABILIZED USING PRACTICE STANDARD 561 - HEAVY USE AREA.
6. ALL POSTS SHALL BE SET IN CONCRETE WITH A CONCRETE OR GRAVEL FOOTING PAD (SEE CONCRETE POST FOOTING DETAIL ON SHEET 5).
7. THE BUILDING SITE SHALL BE CLEARED AND GRUBBED AS REQUIRED. PROPER DRAINAGE SHALL BE PROVIDED AROUND THE ENTIRE BUILDING SO THAT RUNOFF WATER DOES NOT ENTER OR POND NEAR BUILDING. DESIGN FOR ROOF RUNOFF IN ACCORDANCE WITH PRACTICE CODE 558 - ROOF RUNOFF MANAGEMENT OR STABILIZE SOIL AROUND BUILDING USING PRACTICE CODE 342 - CRITICAL AREA PLANTING.
8. CONCRETE FLOORS AND FOOTINGS SHALL BE PLACED ON FIRM SOIL. ALL LOOSE SOIL SHALL BE REMOVED. IF FILL MATERIAL IS USED, PLACE IN 9" THICK LAYERS AND COMPACT WITH SHEEPSFOOT ROLLER OR OTHER EQUIVALENT COMPACTION METHOD.
9. TRUSSES AND MANUFACTURED BEAMS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN GEORGIA AND SHALL BE INSTALLED AS DESIGNED. DESIGNS STAMPED BY A PROFESSIONAL ENGINEER SHALL BE PROVIDED TO NRCS FOR REVIEW.
10. ALL LUMBER, INCLUDING THE POSTS, IN CONTACT WITH ANIMAL WASTE OR CONCRETE SHALL BE PRESSURE TREATED (SEE WOOD TREATMENT TABLE ON SHEET 6).
11. ALL DIMENSION LUMBER EXCEPT TRUSS BRACING SHALL BE SOUTHERN PINE NO. 2 OR BETTER. SEE SHEET 9 FOR TRUSS BRACING REQUIREMENTS.
12. ALL NAILS, BOLTS, AND OTHER CONNECTORS SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER. NAILS SHALL HAVE SPIRALED OR RINGED (ANNULAR) SHANKS. ALL REFERENCES TO "GALVANIZED" IN THIS SET OF DRAWINGS REFERS TO THE ABOVE LISTED COATINGS.
13. POWER SUPPLY TO THE BUILDING IS RECOMMENDED FOR NIGHT OPERATIONS AND REPAIR WORK.
14. ALL DISTURBED AREAS SHALL BE VEGETATED USING PRACTICE CODE 342 - CRITICAL AREA PLANTING.
15. CALL BEFORE YOU DIG:  
1-800-282-7411 OR 770-623-4344.

Date	07/07
Designed	W. Brown
Drawn	D. Drewry, S. Rogers H. McFarland
Checked	J. Holloway
Approved	H. McFarland

GEORGIA DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY  
(12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)  
County, GA



File No.  
ga-eng-313-ds1.pdf

Drawing No.  
Isometric

REVISIONS		
DATE	APPROVED	TITLE
09/05	H. McFarland	State Engineer
01/06	H. McFarland	State Engineer
07/07	H. McFarland	State Engineer

Date 07/07  
 Designed W. Brown  
 Drawn D. Drewry, S. Rogers  
H. McFarland  
 Checked J. Holloway  
H. McFarland  
 Approved H. McFarland  
07/07  
07/07  
07/07  
07/07

GEORGIA DAIRY/SWINE SCRAPPED WASTE STORAGE FACILITY  
 (12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)  
 County, GA



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Drawing No. Plan

Sheet 3 of 9

29 GAUGE CORRUGATED GALVANIZED SHEET METAL SIDING OR EQUIVALENT (BOTH SIDES). TO IMPROVE AIR CIRCULATION, A 2' OPENING SHALL BE INSTALLED ON BOTH THE SIDEWALLS AND THE ENDWALL.

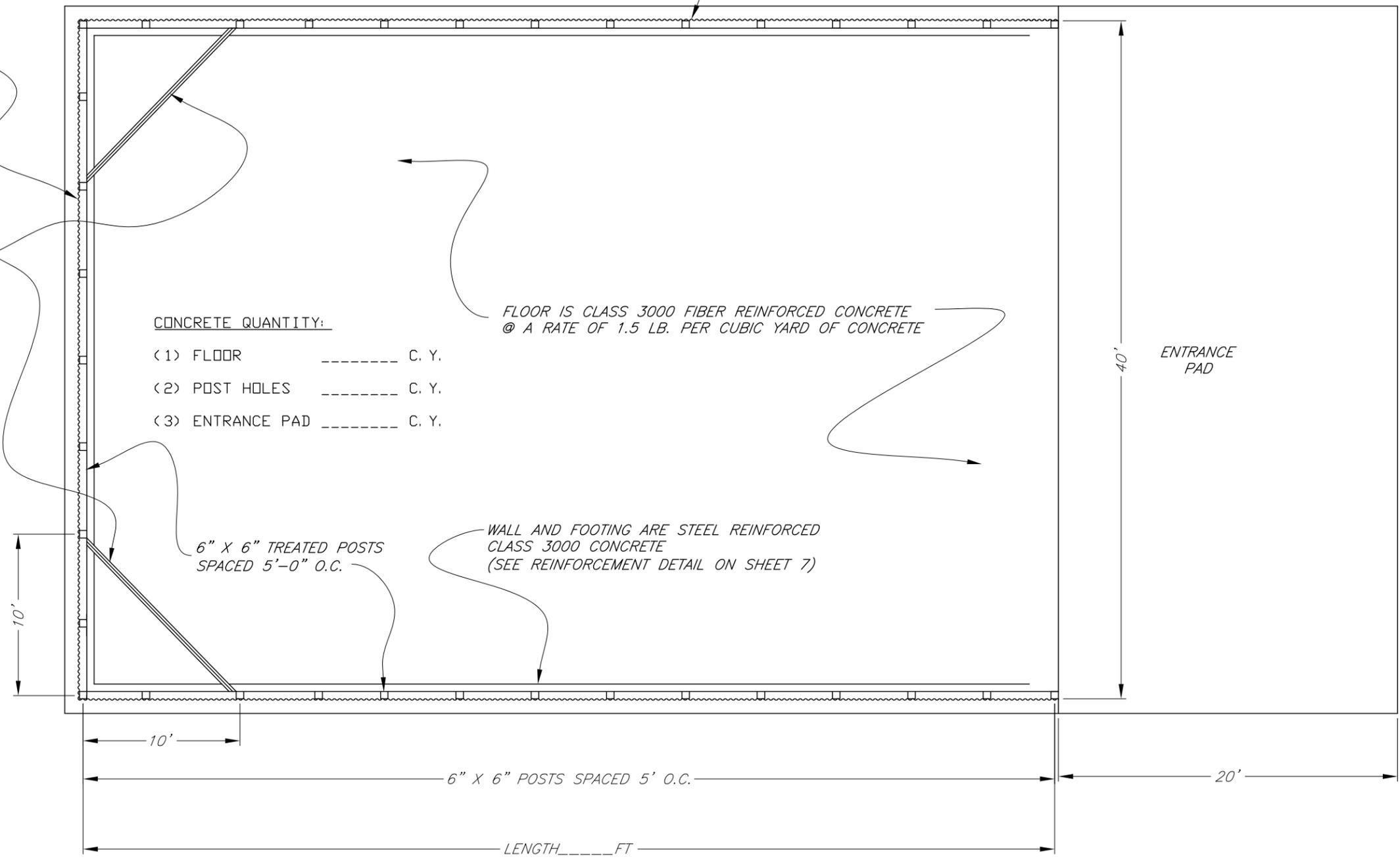
OPTIONAL END WALL  
 HORIZONTAL BRACES REQUIRED FOR ENDWALL SHALL CONSIST OF 2 - 2" X 4" MEMBERS NAILED TOGETHER AND ATTACHED TO GIRDER (SEE CONNECTION DETAIL ON SHEET 8)

CONCRETE QUANTITY:  
 (1) FLOOR \_\_\_\_\_ C. Y.  
 (2) POST HOLES \_\_\_\_\_ C. Y.  
 (3) ENTRANCE PAD \_\_\_\_\_ C. Y.

FLOOR IS CLASS 3000 FIBER REINFORCED CONCRETE @ A RATE OF 1.5 LB. PER CUBIC YARD OF CONCRETE

6" X 6" TREATED POSTS SPACED 5'-0" O.C.

WALL AND FOOTING ARE STEEL REINFORCED CLASS 3000 CONCRETE (SEE REINFORCEMENT DETAIL ON SHEET 7)

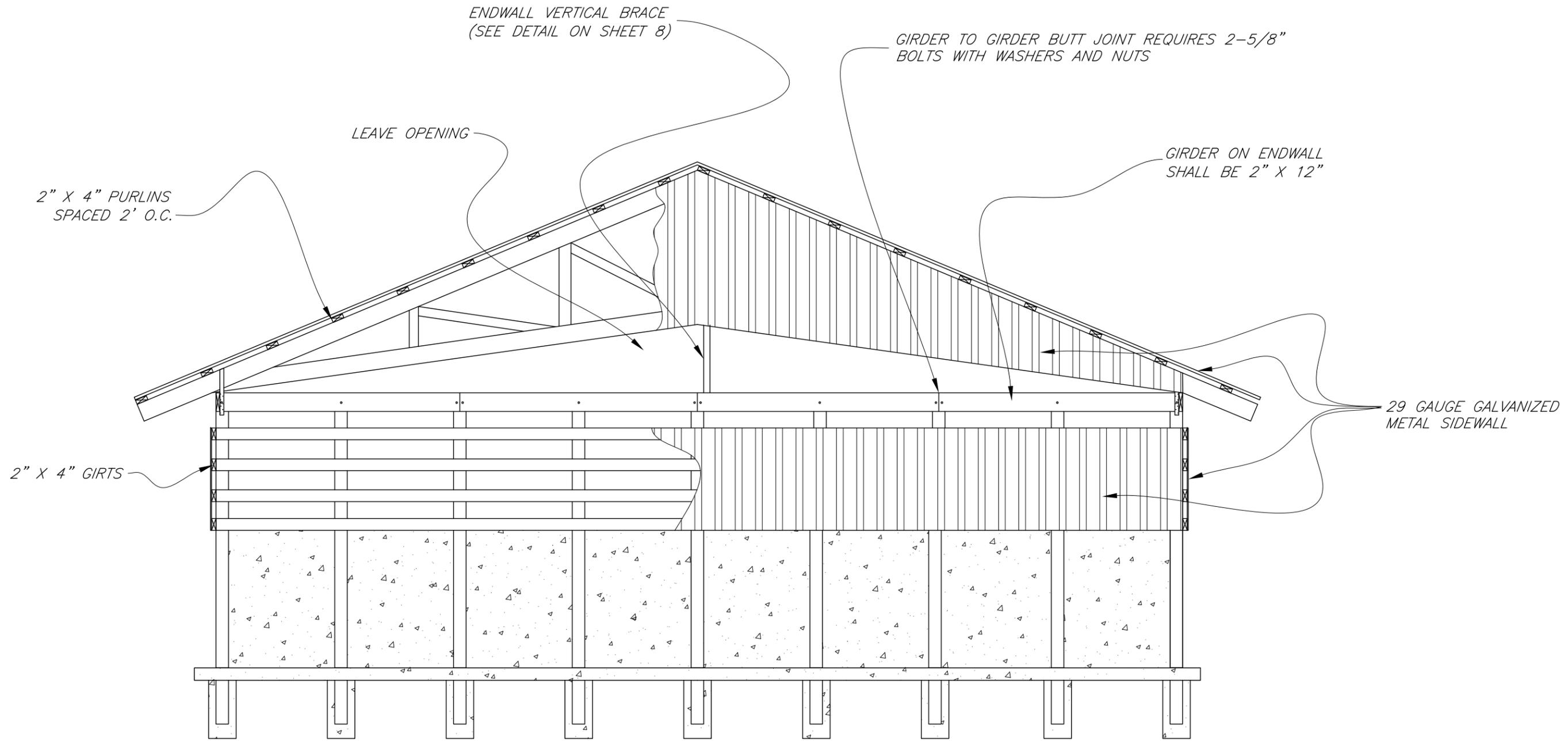


NOTES:

1. CONCRETE AND POST QUANTITIES WILL VARY WITH LENGTH OF FACILITY.
2. ALL POSTS WILL EXTEND INTO THE GROUND A MINIMUM OF 3'-9" AS SHOWN IN THE CONCRETE POST FOOTING DETAIL ON SHEET 5.
3. USE WASTE STORAGE FACILITY COMPUTATION WORKSHEET TO CALCULATE REQUIRED LENGTH.
4. FOR HORIZONTAL BRACE DETAILS SEE SHEET 8.

PLAN VIEW  
 Not to scale

REVISIONS		
DATE	APPROVED	TITLE
09/05	H. McFarland	State Engineer
01/06	H. McFarland	State Engineer
07/07	H. McFarland	State Engineer



**ELEVATION VIEW OF ENDWALL**  
Not to scale

Date 07/07  
 Designed W. Brown  
 Drawn D. Drewry, S. Rogers  
H. McFarland  
 Checked J. Holloway  
 Approved H. McFarland

GEORGIA DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY

(12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)

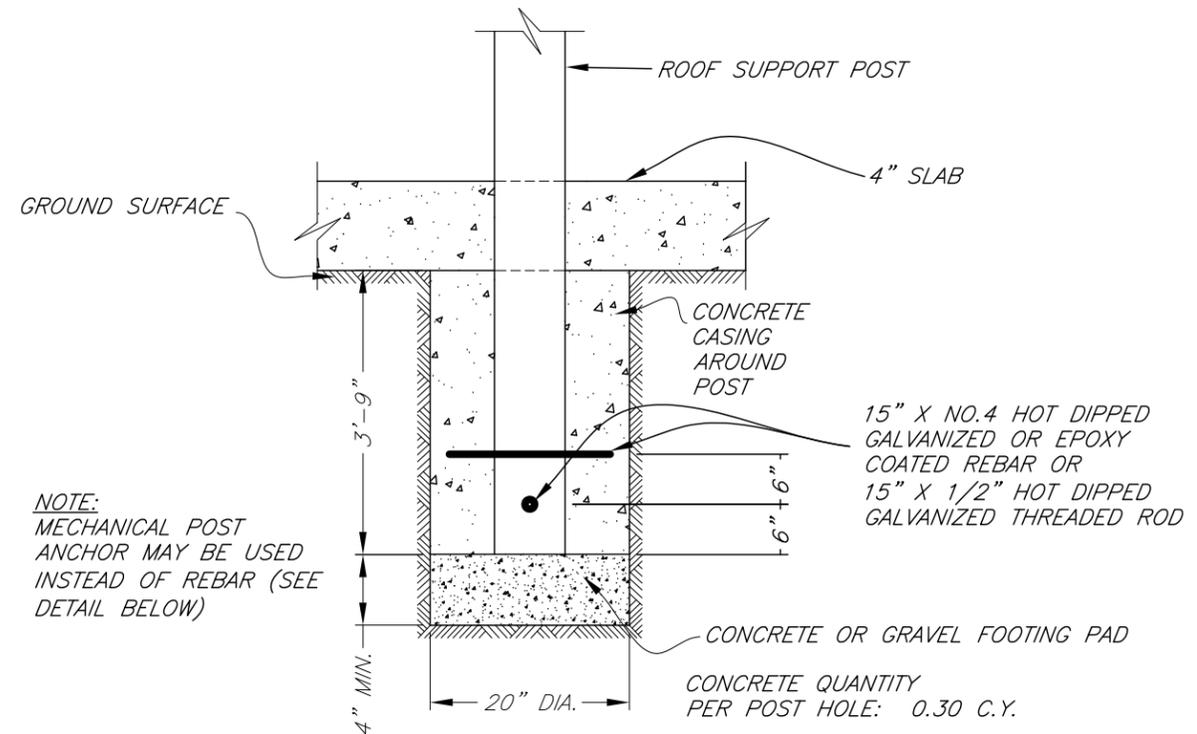
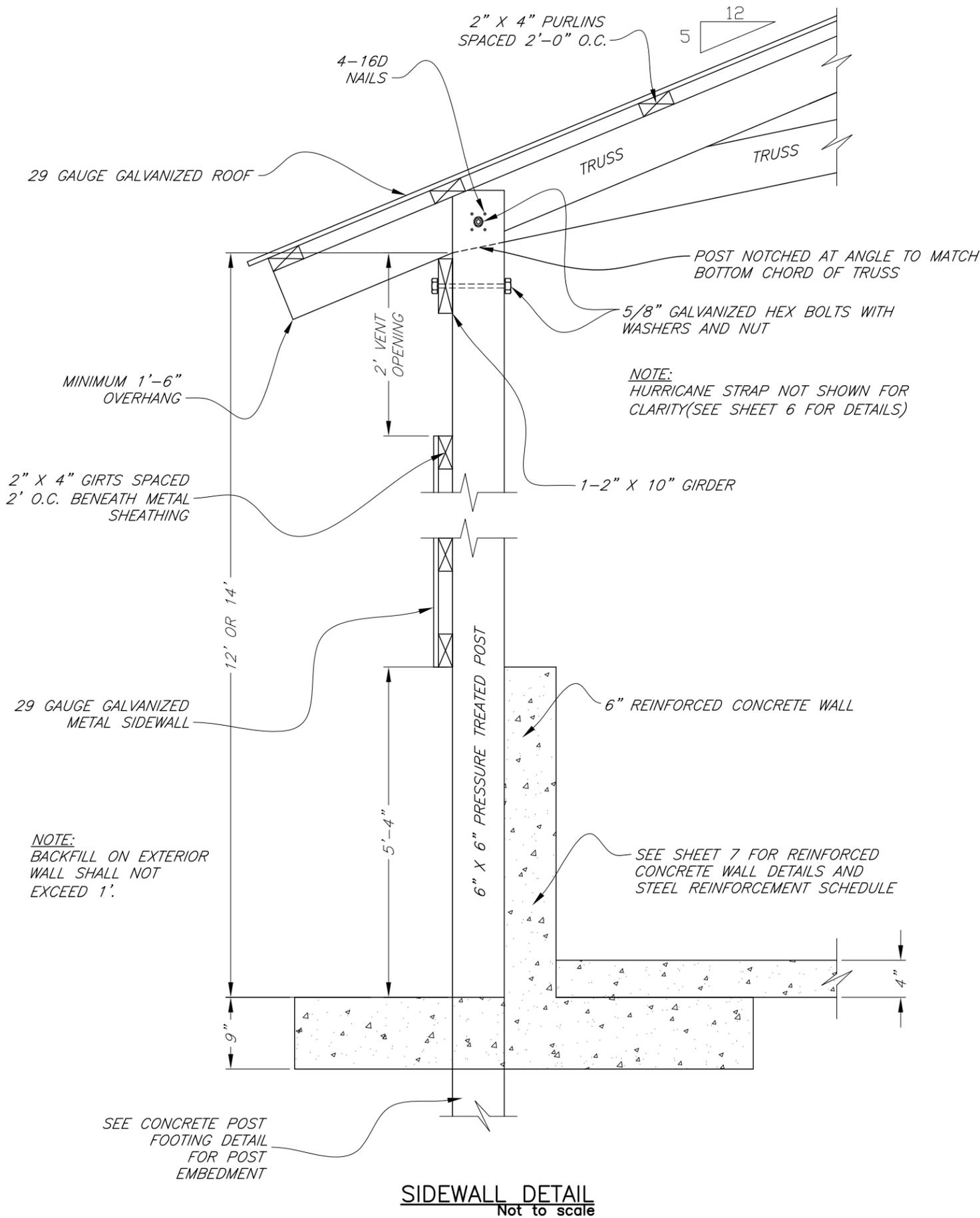
County, GA



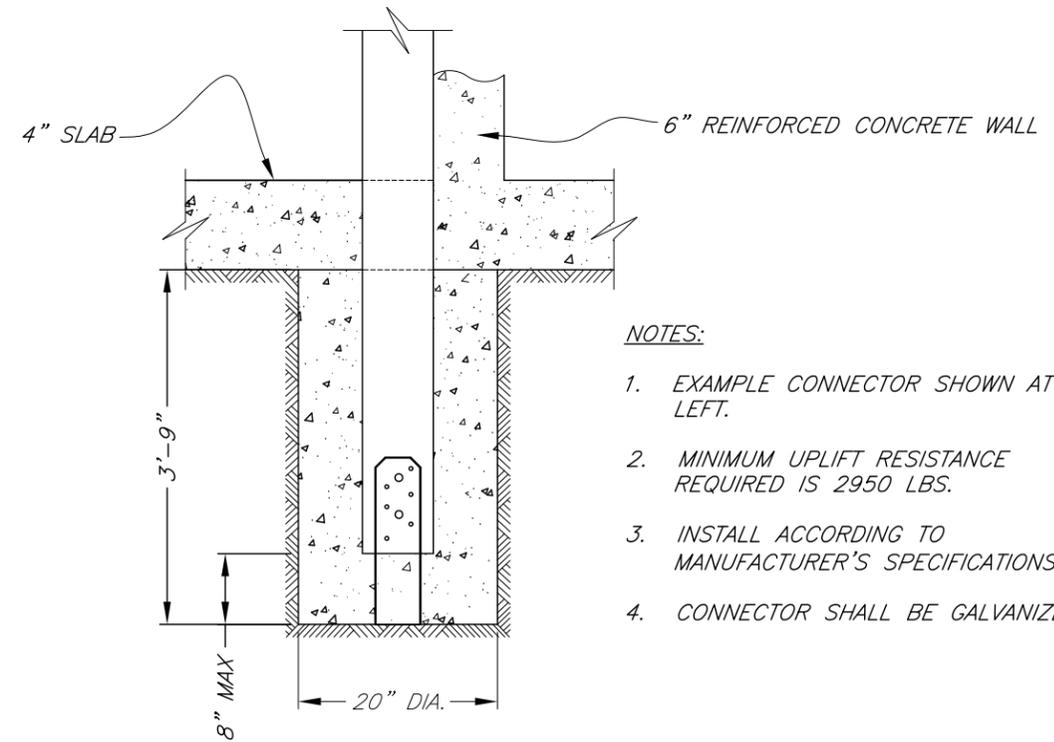
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Drawing No.  
Endwall

REVISIONS		
DATE	APPROVED	TITLE
09/05	H. McFarland	State Engineer
01/06	H. McFarland	State Engineer
07/07	H. McFarland	State Engineer



**CONCRETE POST FOOTING DETAIL**  
Not to scale



**MECHANICAL POST ANCHOR  
CONCRETE FOOTING DETAIL**  
Not to scale

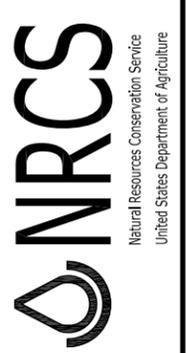
**NOTES:**

1. EXAMPLE CONNECTOR SHOWN AT LEFT.
2. MINIMUM UPLIFT RESISTANCE REQUIRED IS 2950 LBS.
3. INSTALL ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
4. CONNECTOR SHALL BE GALVANIZED.

REVISIONS		
DATE	APPROVED	TITLE
09/05	H. McFarland	State Engineer
01/06	H. McFarland	State Engineer
07/07	H. McFarland	State Engineer

Date	07/07
Designed	W. Brown
Drawn	D. Drewry, S. Rogers, H. McFarland
Checked	J. Holloway
Approved	H. McFarland

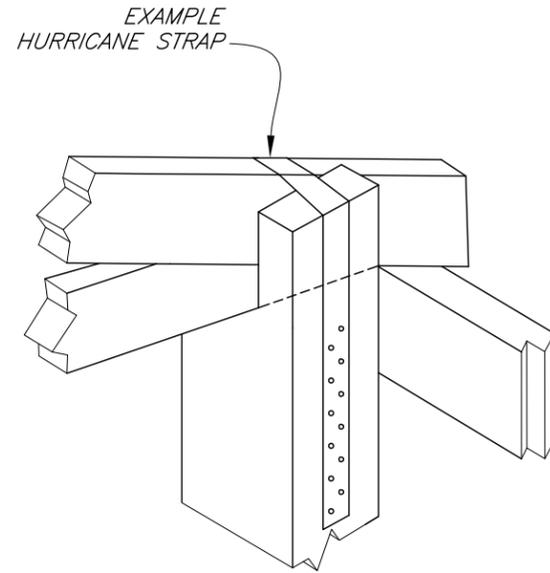
GEORGIA DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY  
 (12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)  
 County, GA



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Drawing No. Sidewall

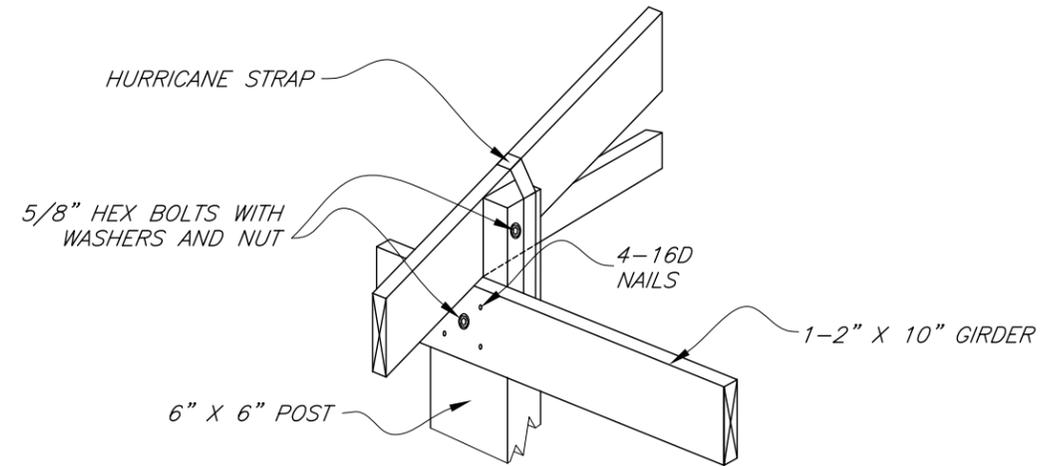
NOTE: ALL BOLTS, NUTS, WASHERS, STRAPS, AND NAILS ARE GALVANIZED,



NOTES:

1. USE HURRICANE STRAP AT POST TO TRUSS CONNECTION AS SHOWN AT LEFT.
2. MANUFACTURER'S SPECIFICATIONS SHALL BE PROVIDED TO NRCS.
3. MINIMUM UPLIFT RESISTANCE IS 1448 LBS.
4. STRAPS MUST BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

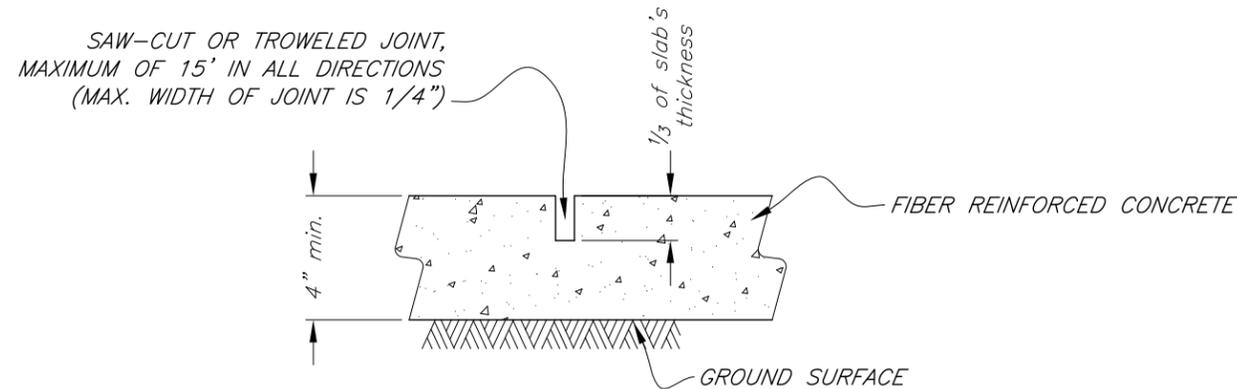
**HURRICANE STRAP**  
Not to scale



NOTES:

1. POST IS NOTCHED TO ACCOMMODATE TRUSS.
2. GIRDER TO GIRDER BUTT JOINTS REQUIRE 2-5/8" HEX BOLTS WITH WASHERS AND NUTS. (SEE ELEVATION VIEW OF ENDWALL ON SHEET 4 FOR AN EXAMPLE)

**TRUSS TO GIRDER CONNECTION**  
Not to scale



**FIBER REINFORCED CONTRACTION JOINT DETAIL**  
Not to scale

**WOOD TREATMENT TABLE**

MINIMUM RETENTION RATES IN PCF					
USE	CCA	ACQ-C/D	CBA-A	CA-B	MCA
GROUND CONTACT OR FRESH WATER	0.40	0.40	0.41	0.21	0.15
IMPORTANT STRUCTURAL MEMBERS	0.60	0.60	0.61	0.31	0.23

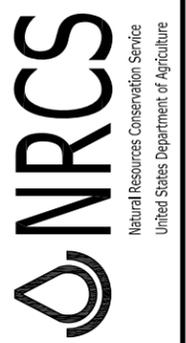
CCA - CHROMATED COPPER ARSENATE  
ACQ-C/D - ALKALINE COPPER QUATERNARY  
CBA-A & CA-B - COPPER AZOLE  
MCA - MICRONIZED COPPER AZOLE

NOTES:

1. ALL WOODEN WALLS, HALF POSTS, AND BIN FRONT WOOD SHALL MEET THE GROUND CONTACT RATES.
2. ALL SUPPORT POSTS SHALL MEET THE IMPORTANT STRUCTURAL MEMBER RATES.

Date	07/07
Designed	W. Brown
Drawn	D. Drewry, S. Rogers, H. McFarland
Checked	J. Holloway
Approved	H. McFarland

GEORGIA DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY  
(12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)  
County, GA

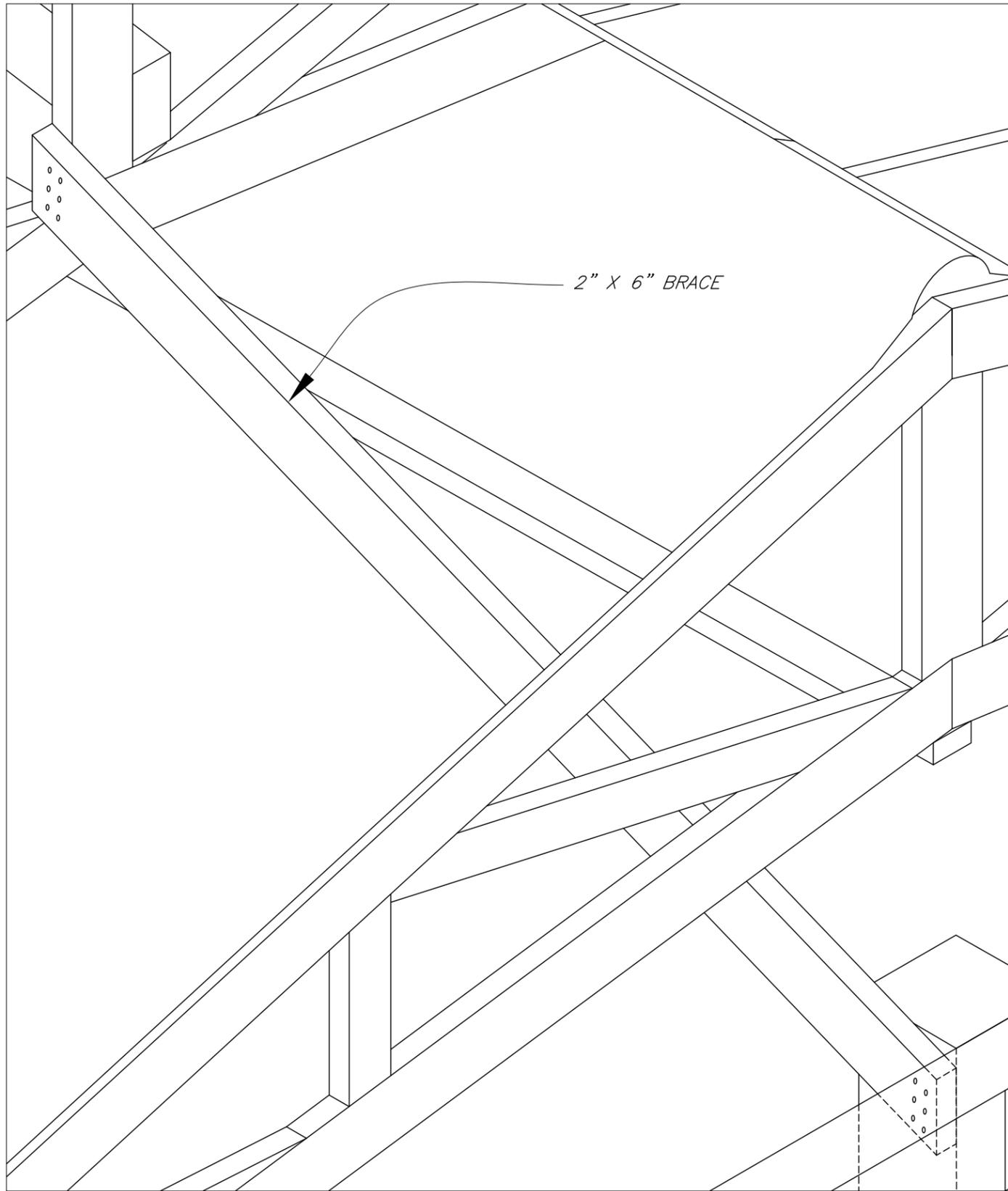


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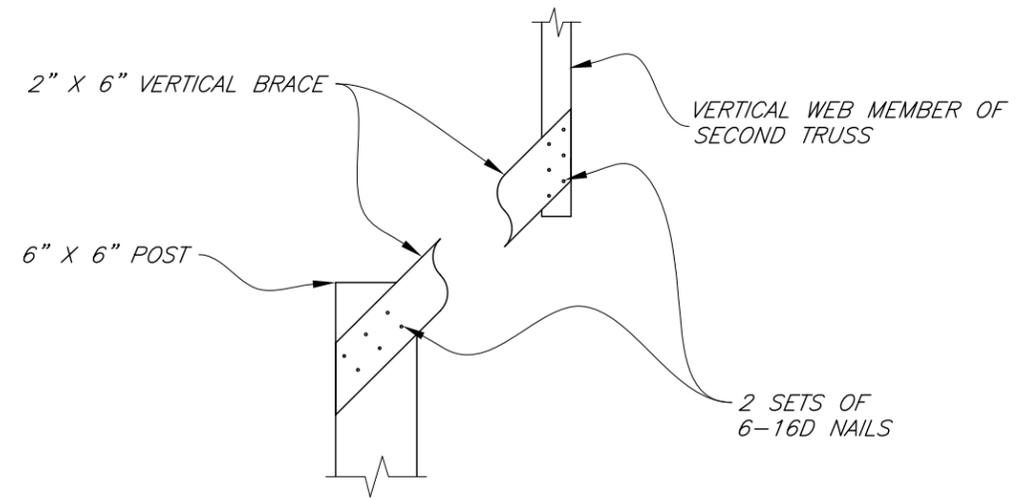
REVISIONS		
DATE	APPROVED	TITLE
09/05	H. McFarland	State Engineer
01/06	H. McFarland	State Engineer
07/07	H. McFarland	State Engineer
10/10	J. Holloway	State Engineer

Drawing No.  
Connections  
Sheet 6 of 9

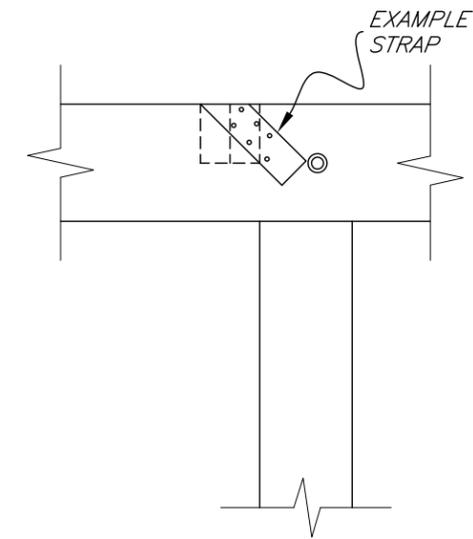




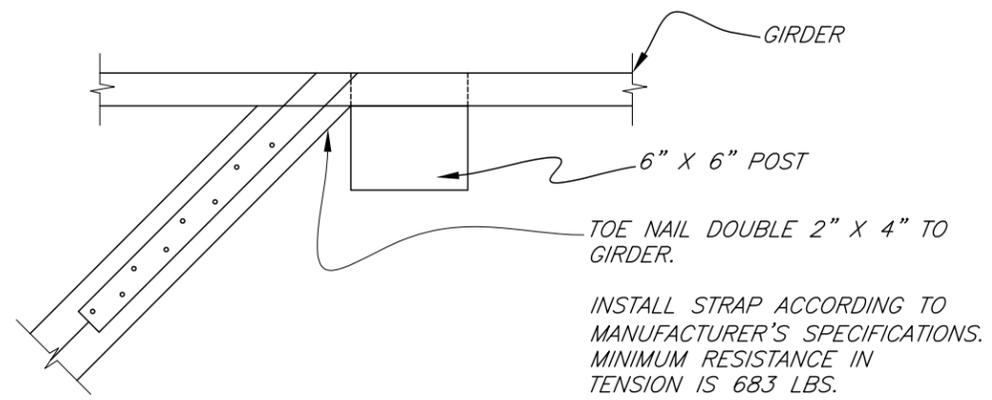
**ENDWALL VERTICAL BRACE DETAILS (ISOMETRIC VIEW)**  
Not to Scale



**ENDWALL VERTICAL BRACE DETAILS**  
Not to scale



**HORIZONTAL ENDWALL BRACE DETAIL**  
Not to scale

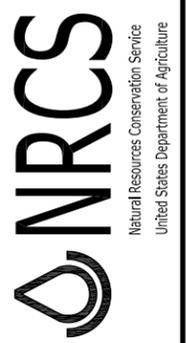


**HORIZONTAL ENDWALL BRACE DETAILS (TOP VIEW)**  
Not to scale

REVISIONS		
DATE	APPROVED	TITLE
09/05	H. McFarland	State Engineer
01/06	H. McFarland	State Engineer
07/07	H. McFarland	State Engineer

Date	07/07
Designed	W. Brown
Drawn	D. Drewry, S. Rogers, H. McFarland
Checked	J. Holloway
Approved	H. McFarland

GEORGIA DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY  
(12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)  
County, GA



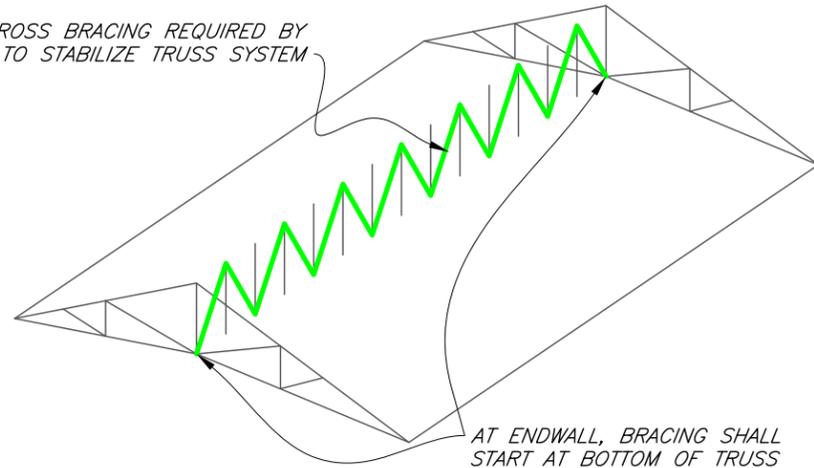
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Drawing No. Endwall

**NOTES:**

- CROSS BRACING (REQUIRED BY NRCS) SHALL BE INSTALLED BETWEEN ALL ADJACENT TRUSSES.
- THIS BRACING SHALL BE ATTACHED TO THE VERTICAL WEB AT THE CENTER OF THE TRUSS.
- IF THERE IS NO VERTICAL WEB AT THE CENTER OF THE TRUSS THEN BLOCKING SHALL BE ADDED AS NECESSARY TO INSTALL THE BRACE.

CROSS BRACING REQUIRED BY NRCS TO STABILIZE TRUSS SYSTEM



AT ENDWALL, BRACING SHALL START AT BOTTOM OF TRUSS

**ISOMETRIC VIEW OF VERTICAL CROSS BRACING**  
Not to scale

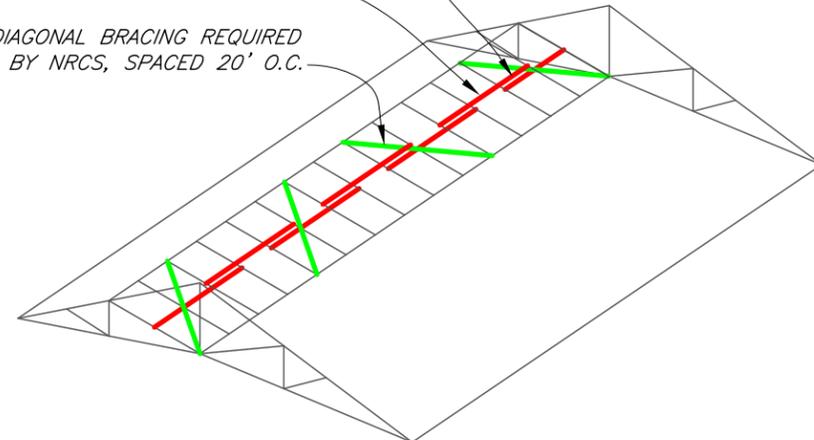
**NOTES:**

- WEB MEMBER BRACING SHALL BE SPECIFIED BY THE TRUSS DESIGNER ONLY. IF TRUSS DESIGN DRAWING DOES NOT SPECIFY WEB BRACING THEN THERE IS ALSO NO DIAGONAL BRACING REQUIRED.
- NORMALLY THIS WILL CONSIST OF CONTINUOUS LATERAL BRACES INSTALLED AT THE CENTER OF COMPRESSION WEB MEMBERS. IN SOME CASES THE BRACING MAY CONSIST OF "L" OR "T" SCAB BRACING.
- ALL CONTINUOUS LATERAL BRACES SHALL BE REINFORCED WITH DIAGONAL BRACING EVERY 20 FEET AS SHOWN. THIS IS AN NRCS REQUIREMENT AND WILL NOT BE SHOWN ON THE TRUSS DESIGN DRAWING.

OVERLAP ALL CONTINUOUS BRACE SPLICES BETWEEN TWO TRUSSES

CONTINUOUS LATERAL BRACE REQUIRED BY TRUSS DESIGNER

DIAGONAL BRACING REQUIRED BY NRCS, SPACED 20' O.C.

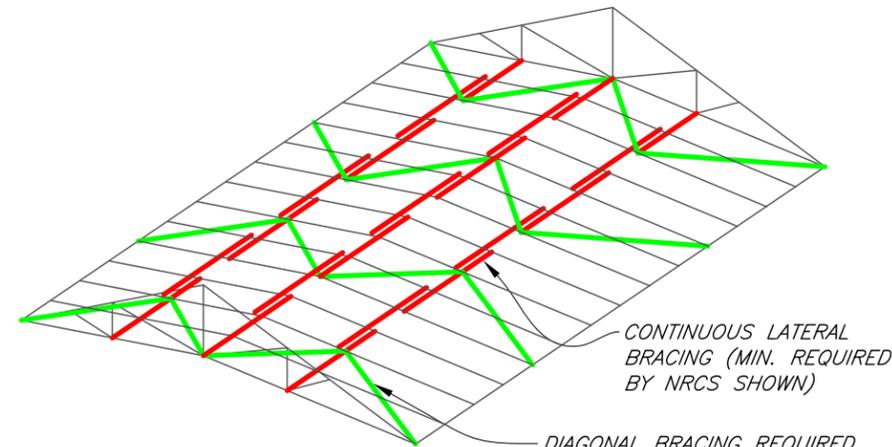


NOTE: WEB MEMBER BRACING IS SHOWN ONLY ON 1 SIDE FOR CLARITY. THIS IS AN EXAMPLE ONLY. THE TRUSS DESIGN DRAWING WILL HAVE THE ACTUAL WEB MEMBER BRACING REQUIRED.

**ISOMETRIC VIEW OF WEB MEMBER BRACING**  
Not to scale

**GENERAL NOTES:**

- BRACING REQUIREMENTS SHOWN ON THIS PAGE ARE THE MINIMUM REQUIRED BY NRCS.
- BRACING SHALL BE INSTALLED AS THE TRUSSES ARE ERECTED.
- UNLESS SPECIFIED OTHERWISE, ALL BRACING SHALL CONSIST OF 2" X 4" STRESS-GRADED LUMBER CONNECTED WITH TWO 16D DEFORMED SHANK NAILS TO EACH TRUSS MEMBER THE BRACE CROSSES.
- EXCEPT FOR TOP CHORD BRACING, ALL CONTINUOUS AND DIAGONAL BRACING SPLICES SHALL OVERLAP BETWEEN TWO TRUSSES (SEE WEB MEMBER BRACING DETAIL BELOW).
- ADDITIONAL TEMPORARY BRACING REQUIRED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE.
- CONTACT YOUR AREA ENGINEER IF YOU HAVE ANY QUESTIONS REGARDING TRUSS BRACING.



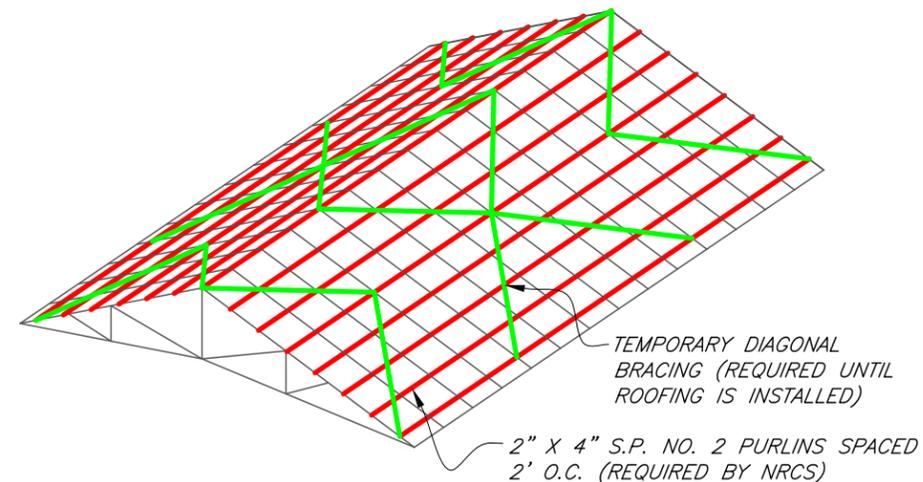
CONTINUOUS LATERAL BRACING (MIN. REQUIRED BY NRCS SHOWN)

DIAGONAL BRACING REQUIRED BY NRCS, SPACED 20' O.C.

**NOTES:**

- BOTTOM CHORD BRACING IS NORMALLY SPECIFIED BY THE TRUSS DESIGNER ON THE TRUSS DESIGN DRAWING. THE TRUSS DESIGN GOVERNS PLACEMENT UNLESS DESIGN REQUIRES LESS THAN THE MINIMUM BOTTOM CHORD BRACING REQUIRED BY NRCS OF THREE EQUALLY SPACED CONTINUOUS LATERAL BRACES.
- LATERAL BRACING SHALL BE REINFORCED WITH DIAGONAL BRACING EVERY 20 FEET AS SHOWN. THIS IS AN NRCS REQUIREMENT AND WILL NOT BE SHOWN ON THE TRUSS DESIGN DRAWING.

**ISOMETRIC VIEW OF BOTTOM CHORD BRACING**  
Not to scale



TEMPORARY DIAGONAL BRACING (REQUIRED UNTIL ROOFING IS INSTALLED)

2" X 4" S.P. NO. 2 PURLINS SPACED 2' O.C. (REQUIRED BY NRCS)

**NOTES:**

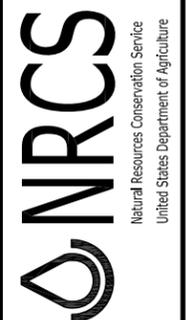
- TOP CHORD BRACING SHALL CONSIST OF 2" X 4" PURLINS (SOUTHERN PINE #2 OR BETTER) SPACED 2' O.C. AS SHOWN ON SHEET 5.
- TEMPORARY DIAGONAL BRACING SHALL ALSO BE REQUIRED IF ROOFING IS NOT INSTALLED IMMEDIATELY OVER THE PURLINS.

**ISOMETRIC VIEW OF TOP CHORD BRACING**  
Not to scale

Date	07/07
Designed	W. Brown
Drawn	D. Drewry, S. Rogers, H. McFarland
Checked	J. Holloway
Approved	H. McFarland

GEORGIA DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY

(12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)  
County, GA



File No.  
ga-eng-313-ds1.pdf

Drawing No.  
Bracing

REVISIONS		
DATE	APPROVED	TITLE
09/05	H. McFarland	State Engineer
01/06	H. McFarland	State Engineer
07/07	H. McFarland	State Engineer