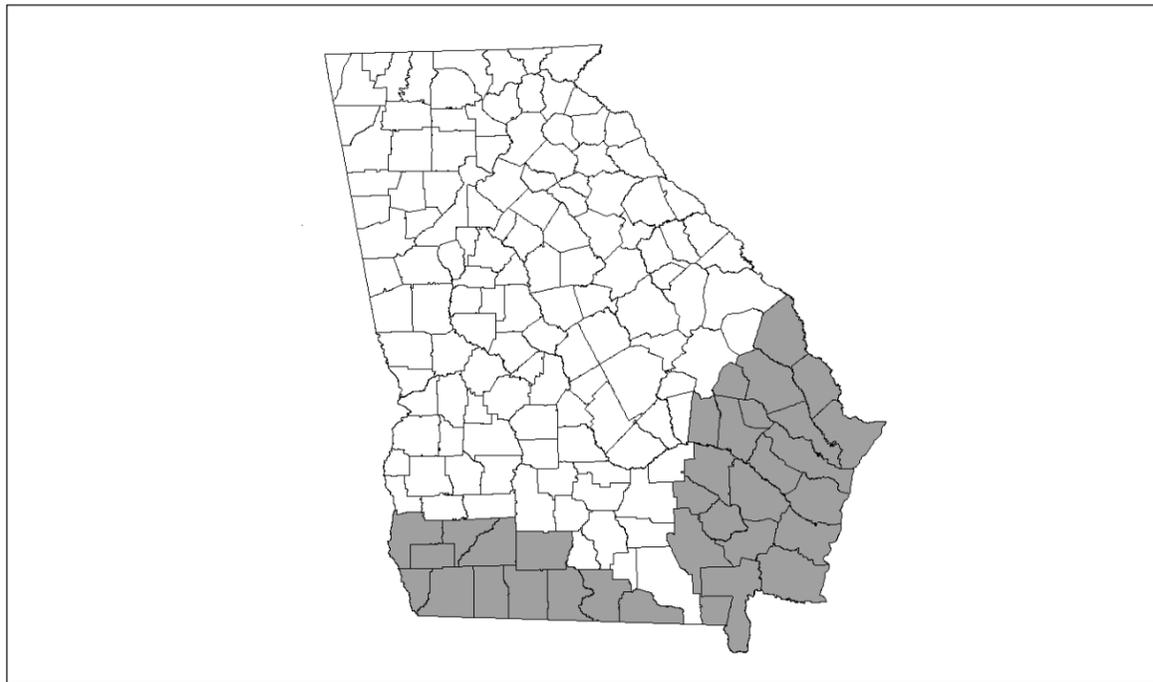


**UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE**

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

1. THE FOLLOWING DRAWINGS WERE PREPARED IN ACCORDANCE WITH PRACTICE CODE 313 - WASTE STORAGE FACILITY AND GEORGIA BUILDING CODE (INTERNATIONAL BUILDING CODE 2006).
2. DESIGN DATA REQUIRED BY IBC 2006:
 - A) ROOF LIVE LOAD - 19PSF.
 - B) BASIC WIND SPEED OF 90 MPH AND GROUND SNOW LOAD OF 10 PSF OR BASIC WIND SPEED OF 100 MPH AND NO SNOW LOAD.
 - C) IMPORTANCE FACTOR $I = 0.87$.
 - D) WIND EXPOSURE CATEGORY C.
 - E) INTERNAL PRESSURE COEFFICIENT = 0.55.
3. 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.
4. 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).
5. 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).
6. THIS DESIGN IS NOT INTENDED FOR CONSTRUCTION ON AN ISOLATED HILL, RIDGE, OR ESCARPMENT IN ANY REGION OF THE STATE.
7. ANY CHANGES TO THESE DRAWINGS MUST BE APPROVED BY AN ENGINEER WITH JOB APPROVAL LEVEL IV OR GREATER.
8. 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**

_____ **WASTE STORAGE FACILITY**
_____ **COUNTY, GEORGIA**

CERTIFICATION:

THE _____ 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

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

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

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

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

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

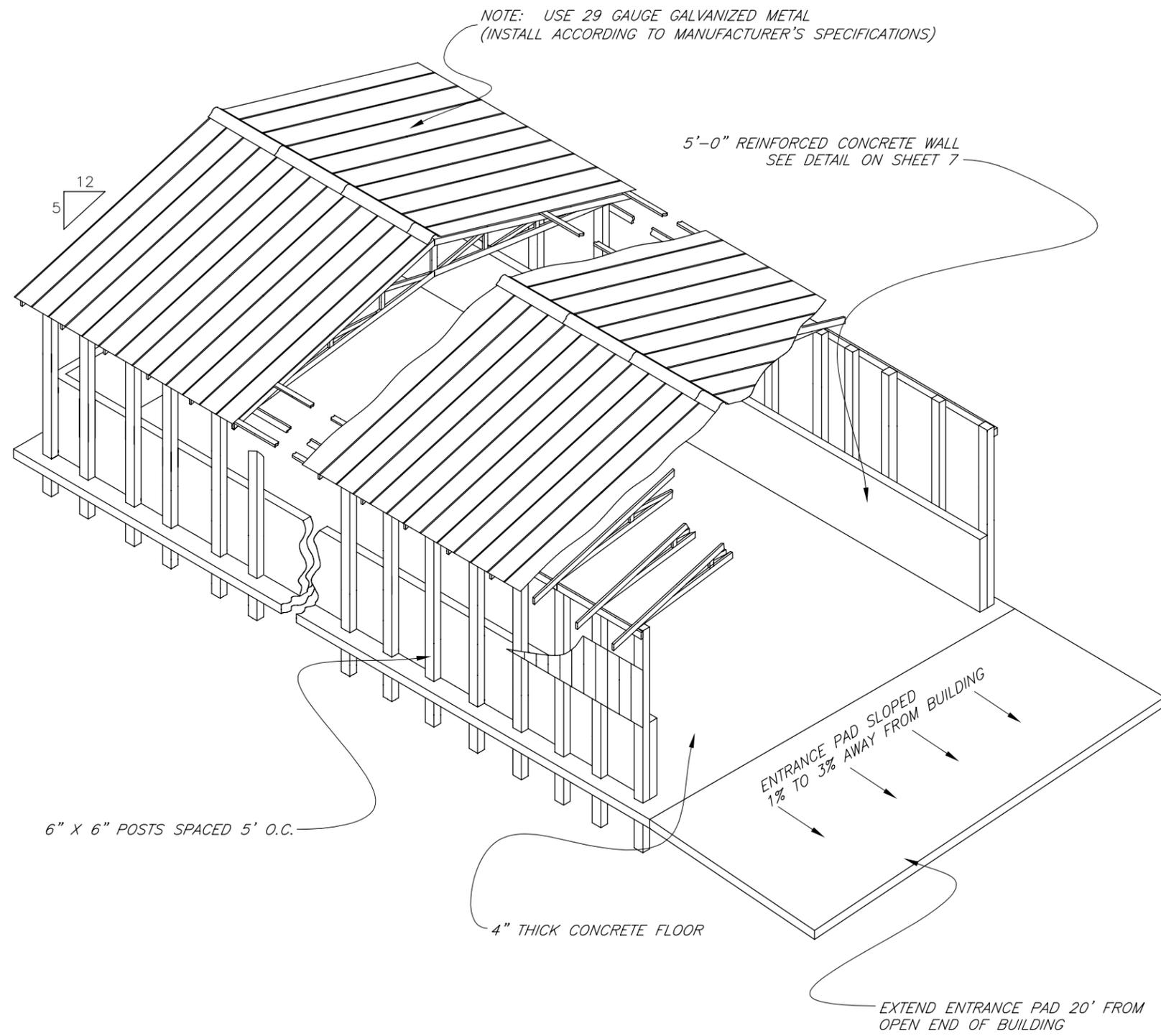
GEORGIA DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY
 (12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)
 County, GA



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

Drawing No.
Isometric

Sheet 2 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
07/07
 Approved _____
 County, GA

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



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

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)

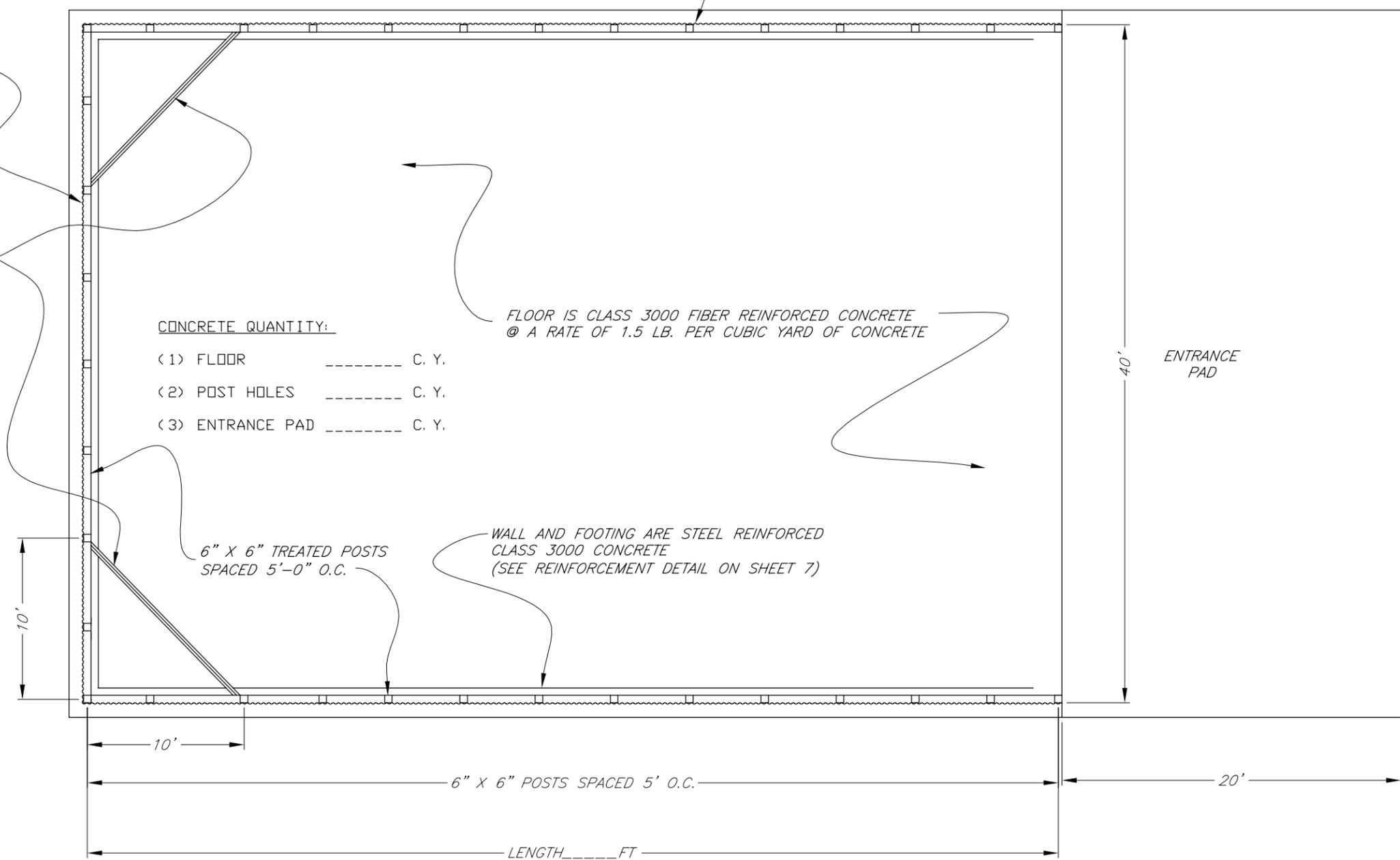
CONCRETE QUANTITY:

- < 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)

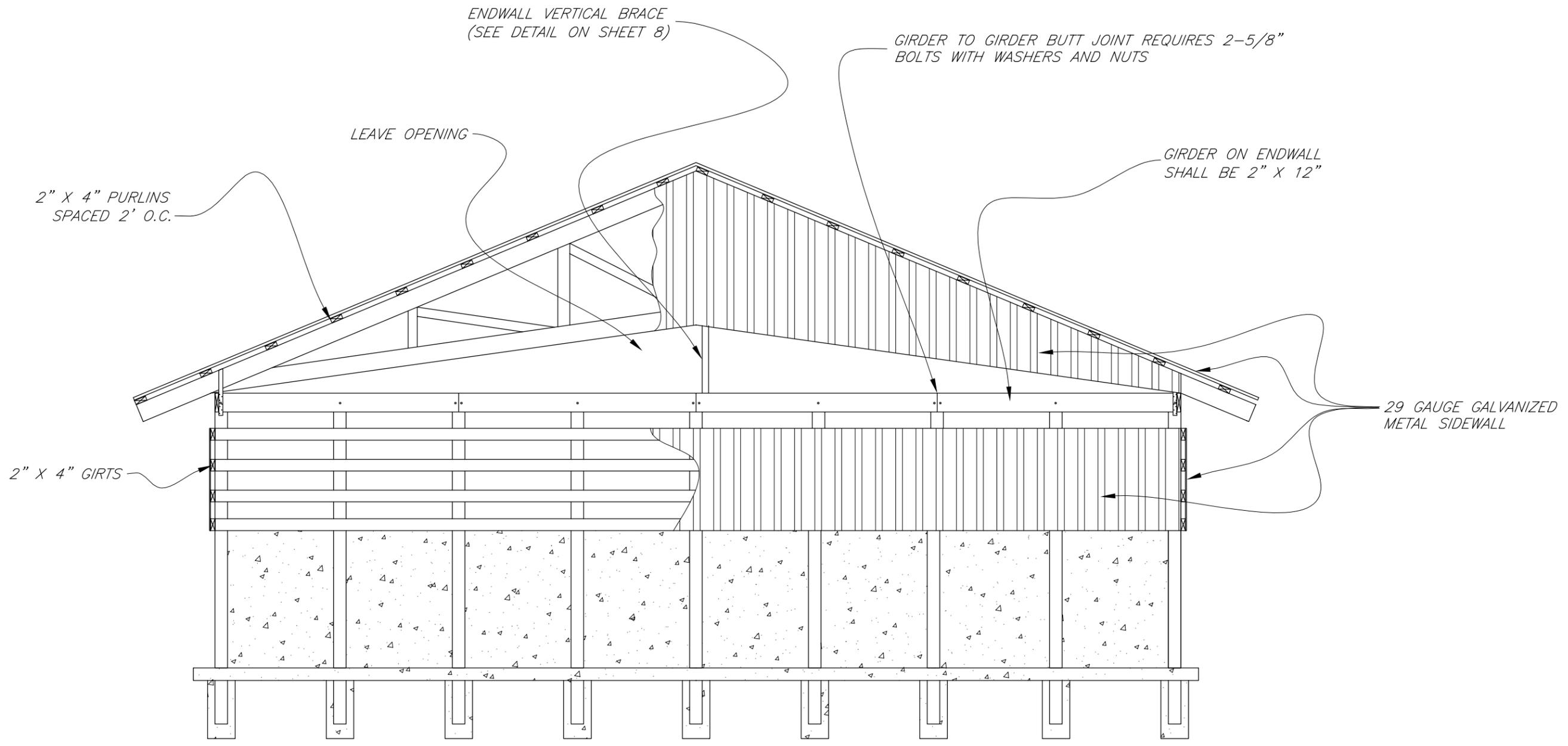


NOTES:

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 07/07

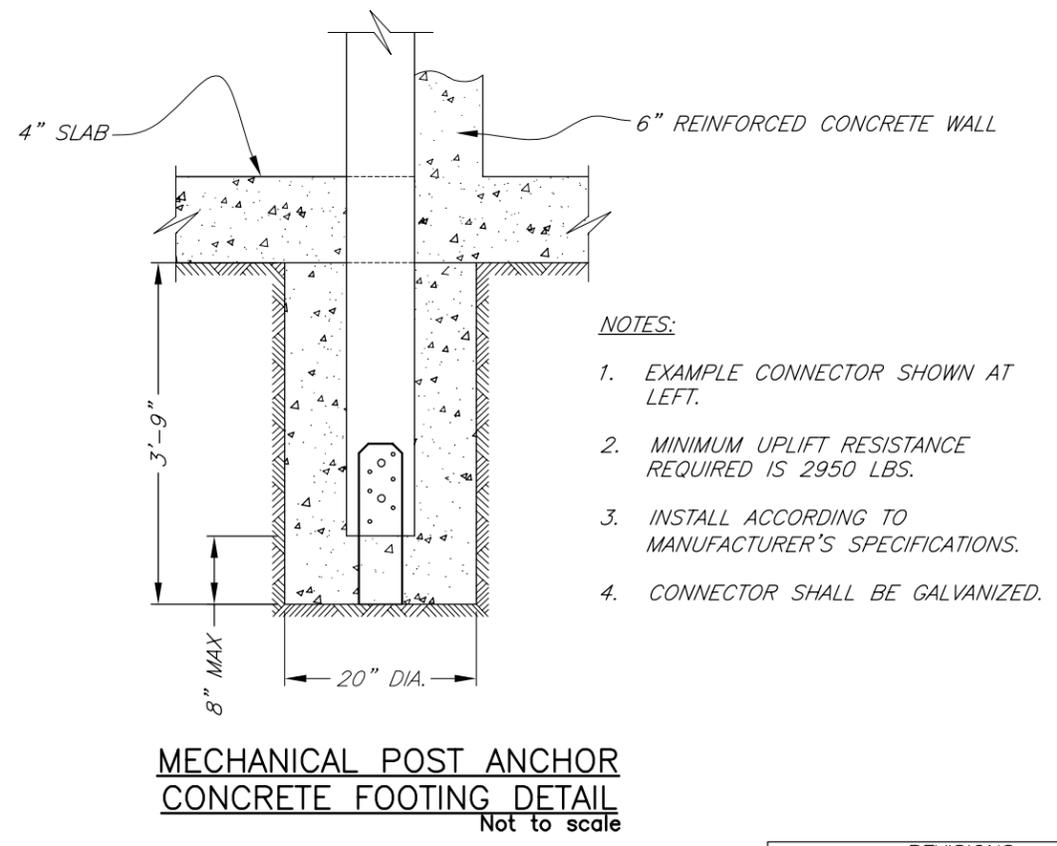
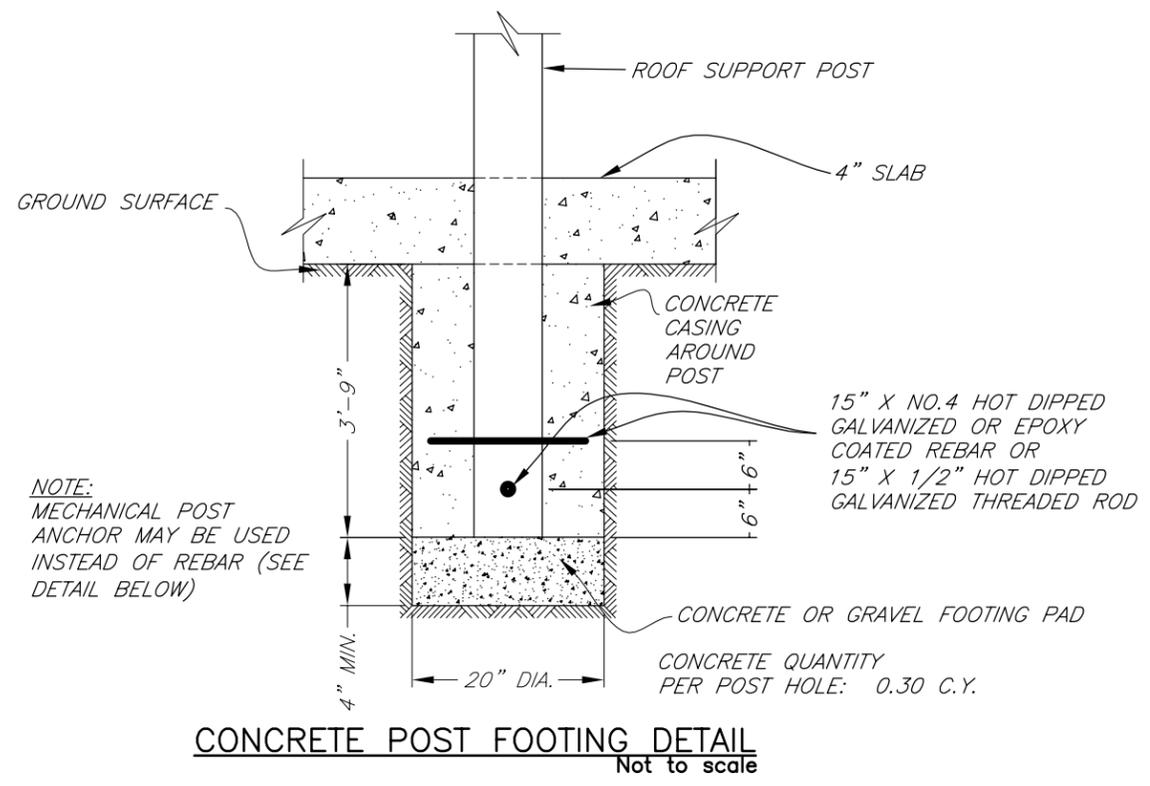
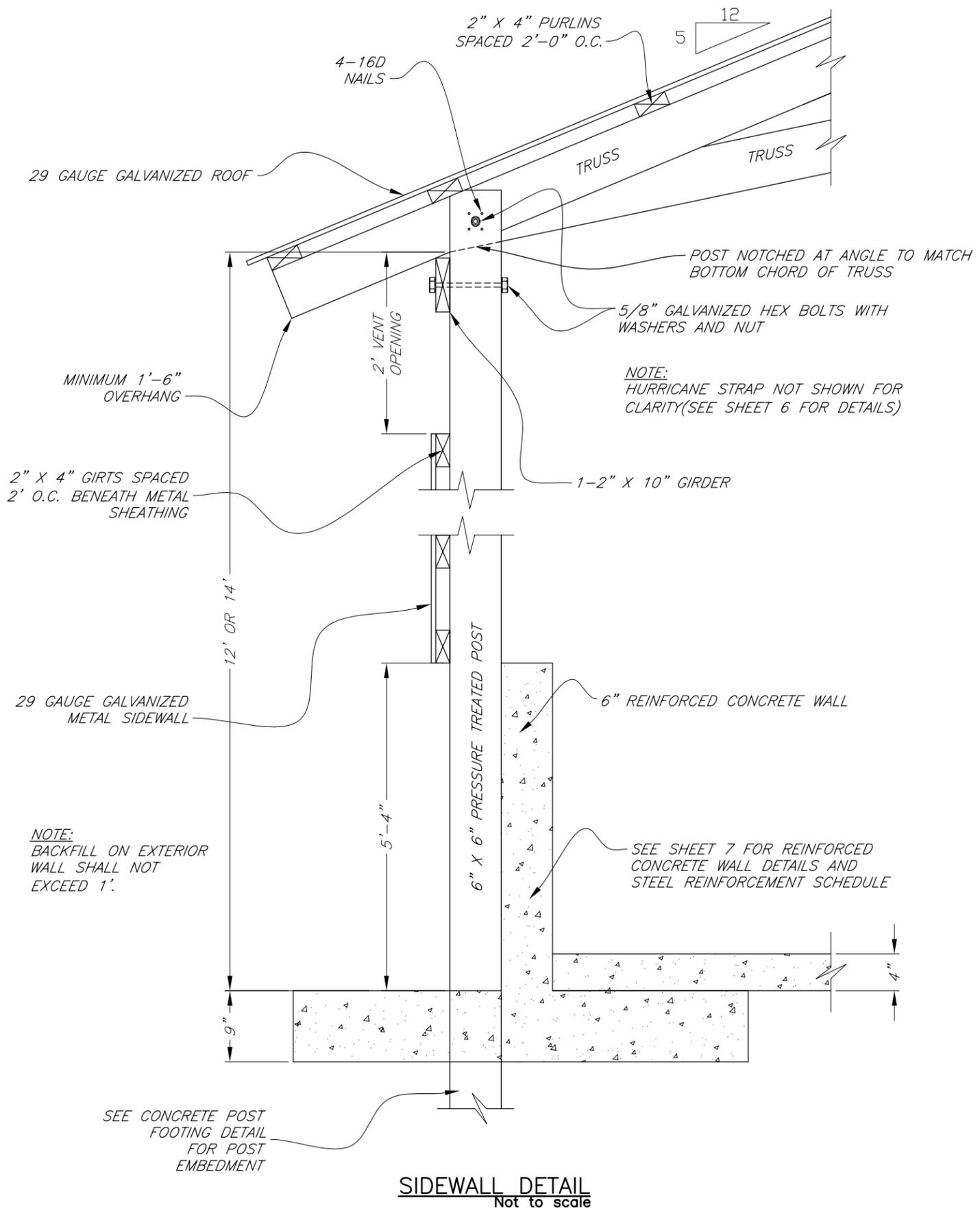
GEORGIA DAIRY/SWINE SCRAPPED WASTE
 STORAGE FACILITY
 (12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)
 County, GA



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

Drawing No.
 Endwall

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



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

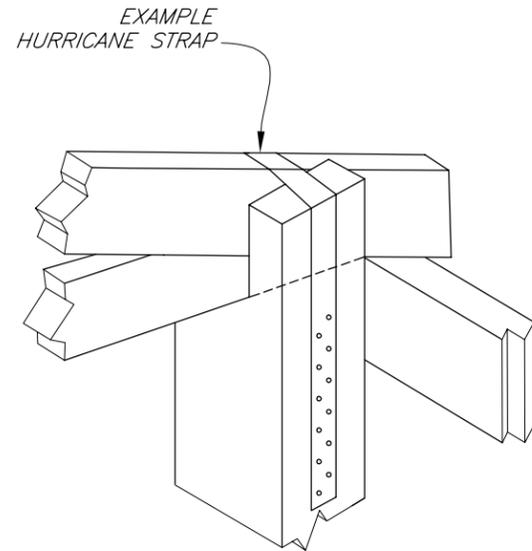
GEORGIA DAIRY/SWINE SCRAPED WASTE STORAGE FACILITY
 (12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)
 County, GA



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

Drawing No. Sidewall

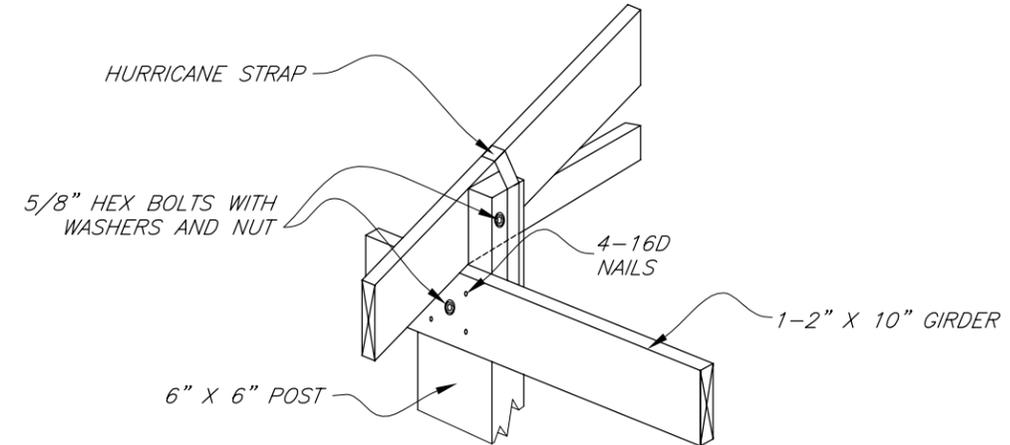
NOTE: ALL BOLTS, NUTS, WASHERS, STRAPS, AND NAILS ARE GALVANIZED,



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

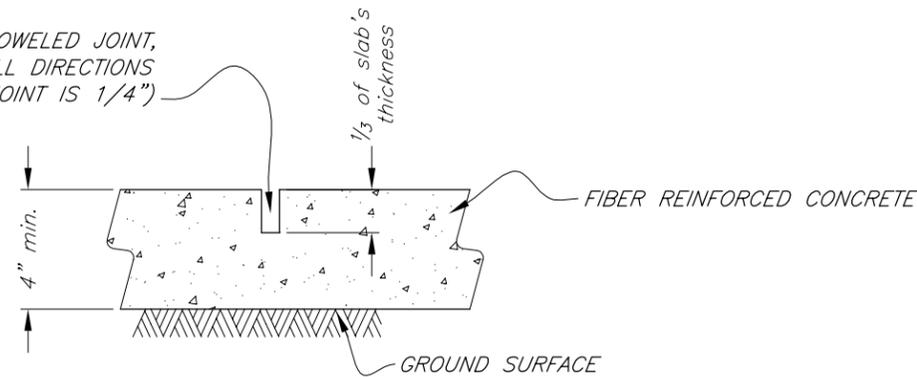


NOTES:

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

SAW-CUT OR TROWELED JOINT,
MAXIMUM OF 15' IN ALL DIRECTIONS
(MAX. WIDTH OF JOINT IS 1/4")



FIBER REINFORCED CONTRACTION JOINT DETAIL
Not to scale

MINIMUM RETENTION RATES IN PCF				
USE	CCA	ACQ-C/D	CBA-A	CA-B
GROUND CONTACT OR FRESHWATER	0.40	0.40	0.41	0.21
IMPORTANT STRUCTURAL MEMBERS (POSTS)	0.60	0.60	0.61	0.31

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

NOTES:

1. ALL WOODEN WALLS SHALL MEET THE GROUND CONTACT RATES.
2. ALL POSTS SHALL MEET THE IMPORTANT STRUCTURAL MEMBERS RATES.

WOOD TREATMENT TABLE

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

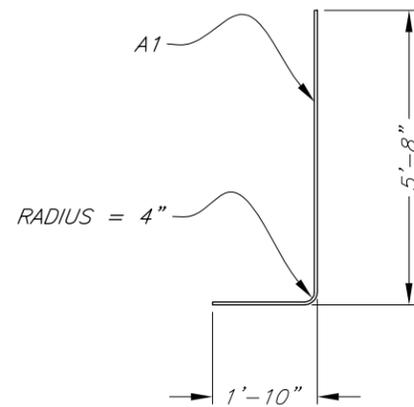
GEORGIA DAIRY/SWINE SCRAPPED WASTE STORAGE FACILITY
(12' OR 14' WALLS, 6"X6" POSTS SPACED 5' O.C.)
County, GA



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

Drawing No. Connections

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



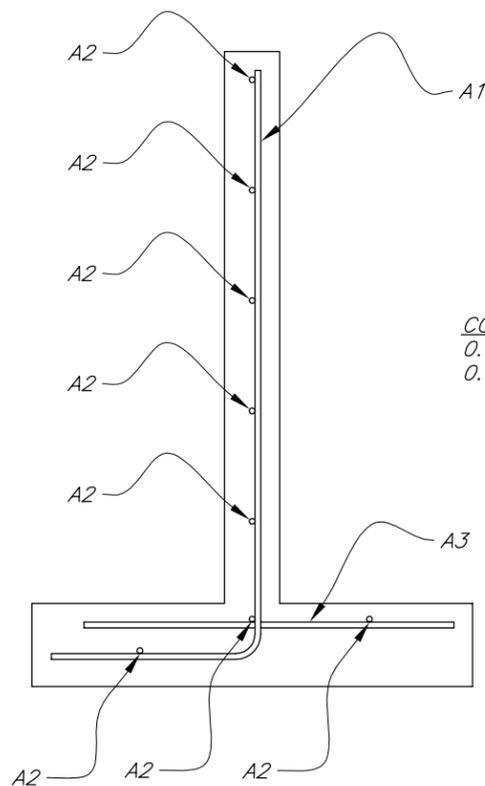
NOTES:

- 22.5" LAP SPLICES SHALL BE USED ON ALL STEEL BARS THAT REQUIRE MULTIPLE PIECES TO REINFORCE A REQUIRED LENGTH OF CONCRETE.
- ALL REBAR IS SPACED 12" O.C.

MARK	SIZE	GRADE	LENGTH	TYPE	QUANTITY REQUIRED*
A1	6	60	7'-4"	BENT	BLDG. LENGTH (FT) x 2 =
A2	6	60	CONTINUOUS	STRAIGHT	BLDG. LENGTH (FT) x 2+1 =
A3	6	60	3'-4"	STRAIGHT	BLDG. LENGTH (FT) x 2 =

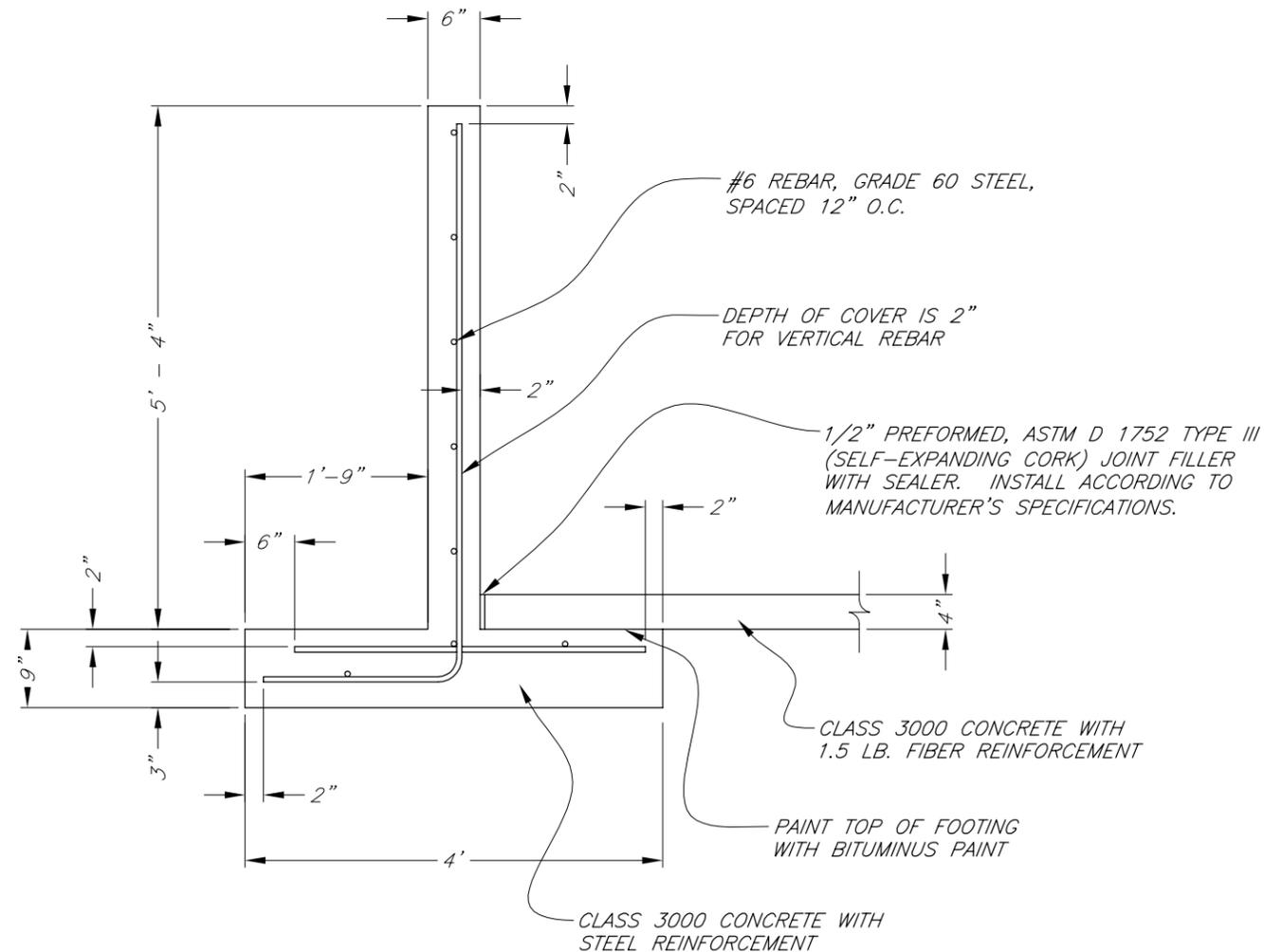
* INCLUDE 22.5" OVERLAP/SPLICES FOR ALL STEEL BARS NOT LONG ENOUGH TO COVER REQUIRED LENGTHS WITH A SINGLE BAR.

STEEL REINFORCEMENT SCHEDULE



CONCRETE QUANTITY:

0.10 CU. YD. PER LINEAR FOOT OF WALL
 0.11 CU. YD. PER LINEAR FOOT OF FOOTING



REINFORCED CONCRETE WALL
 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

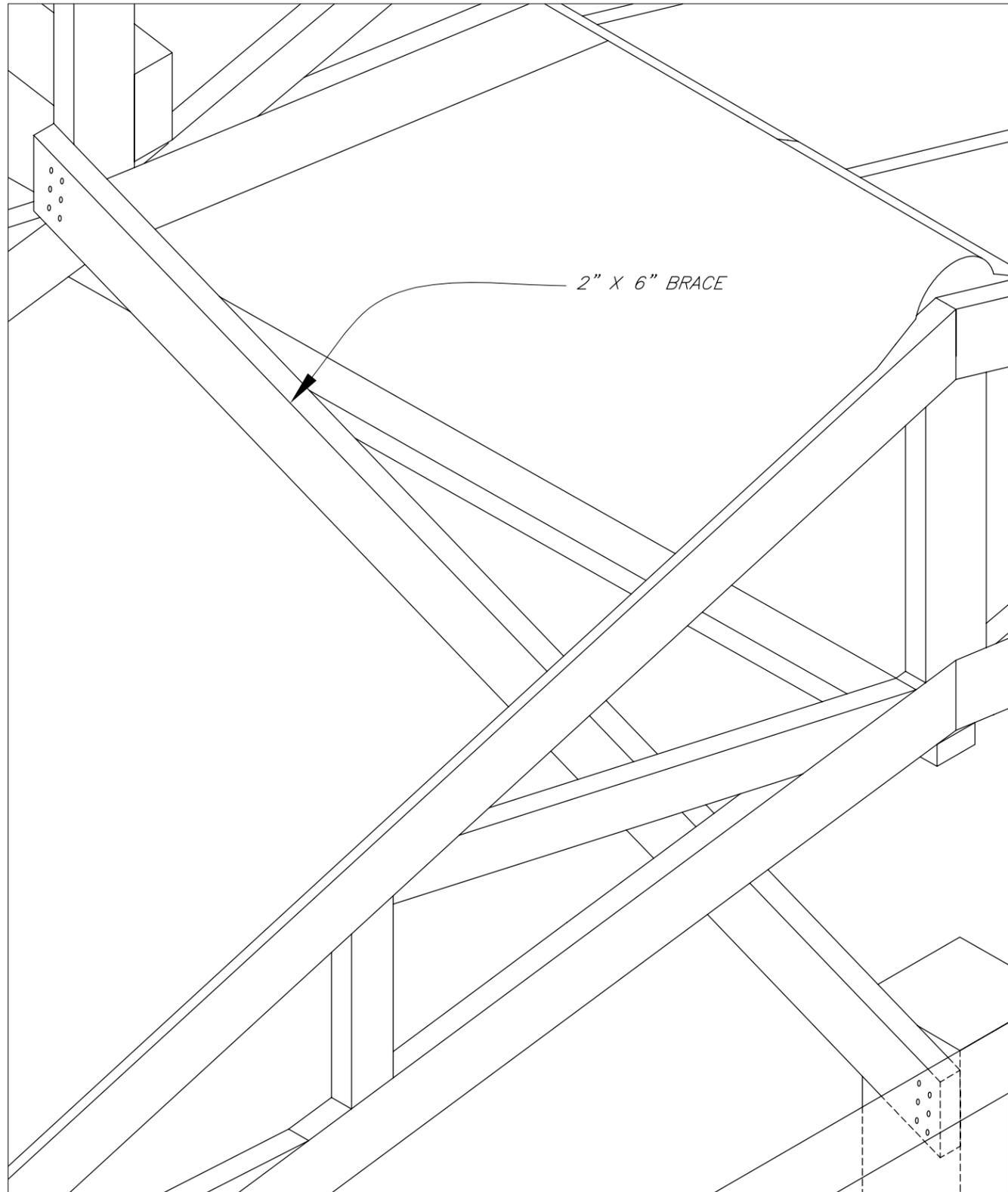
Designed	W. Brown	Date	07/07
Drawn	D. Drewry, S. Rogers, H. McFarland	Date	07/07
Checked	J. Holloway	Date	07/07
Approved			

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

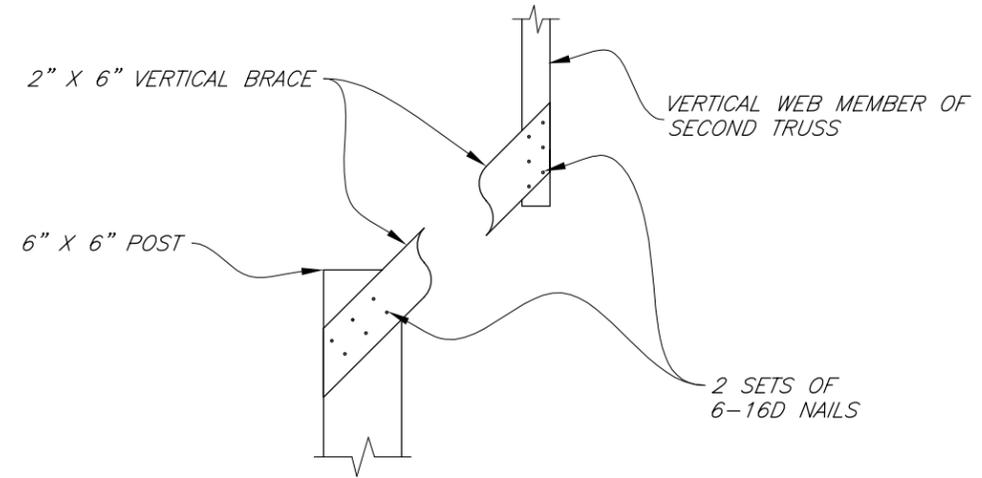


File No. ga-eng-313-ds1.pdf

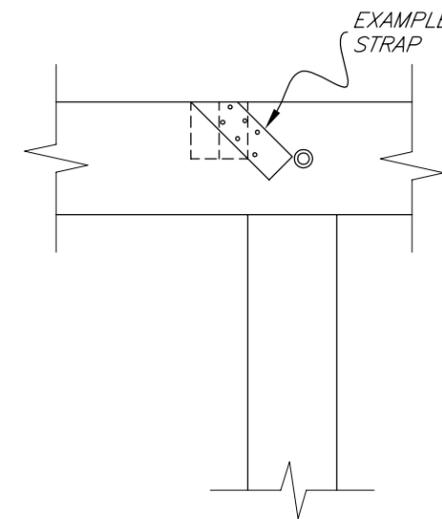
Drawing No. Endwall



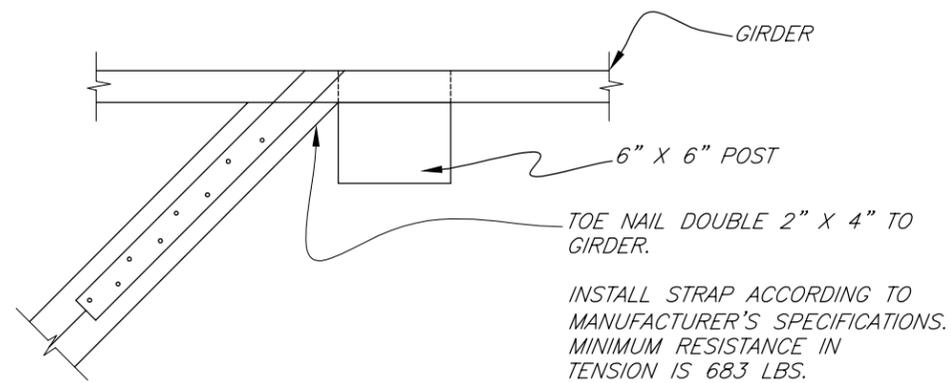
ENDWALL VERTICAL BRACE DETAILS (ISOMETRIC VIEW)
Not to Scale



ENDWALL VERTICAL BRACE DETAILS
Not to scale



HORIZONTAL ENDWALL BRACE DETAIL
Not to scale



HORIZONTAL ENDWALL BRACE DETAILS(TOP VIEW)
Not to scale

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

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



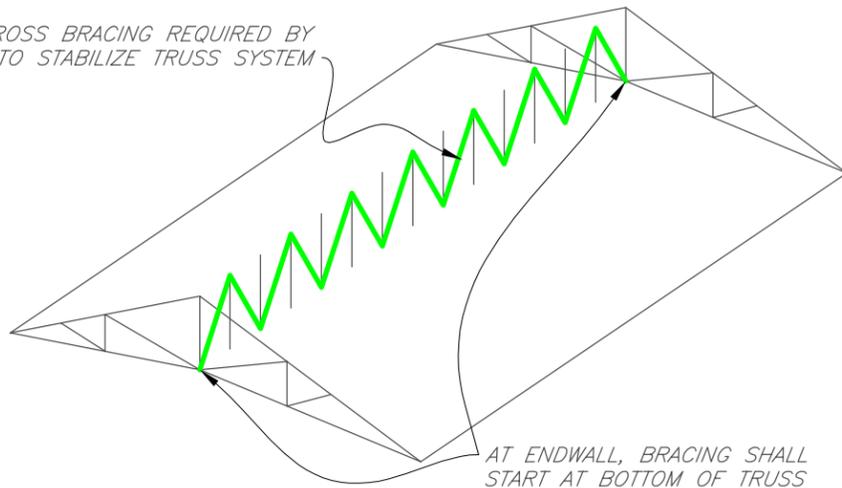
File No. ga-eng-313-ds1.pdf
 Drawing No. Endwall

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

NOTES:

1. CROSS BRACING (REQUIRED BY NRCS) SHALL BE INSTALLED BETWEEN ALL ADJACENT TRUSSES.
2. THIS BRACING SHALL BE ATTACHED TO THE VERTICAL WEB AT THE CENTER OF THE TRUSS.
3. 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



ISOMETRIC VIEW OF VERTICAL CROSS BRACING
Not to scale

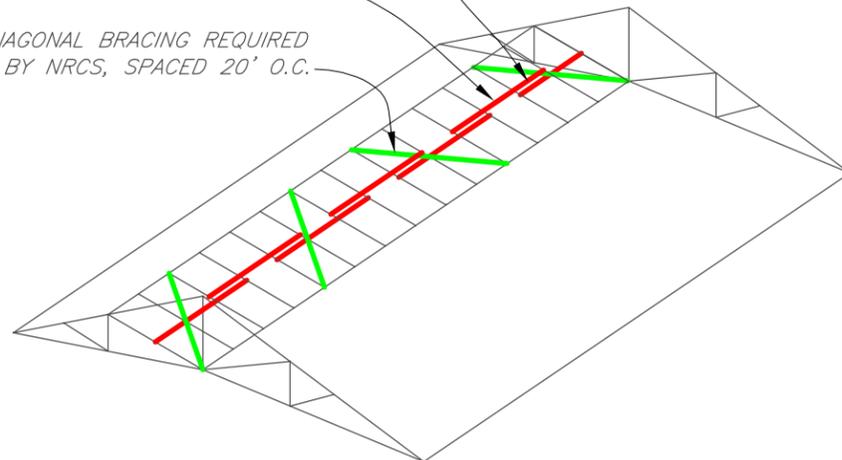
NOTES:

1. 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.
2. 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.
3. 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.

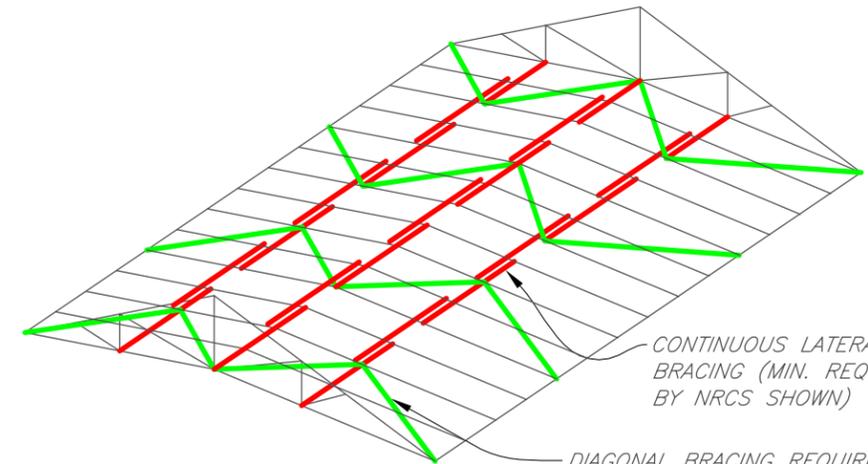


NOTE: WEB MEMBER BRACING IS SHOWN ONLY ON 1 SIDE FOR CLARITY. THIS IS AN EXAMPLE ONLY. THE TRUSS DESIGN DRAWING WILL HAVE THE ACTUAL WEB MEMBER BRACING REQUIRED.

ISOMETRIC VIEW OF WEB MEMBER BRACING
Not to scale

GENERAL NOTES:

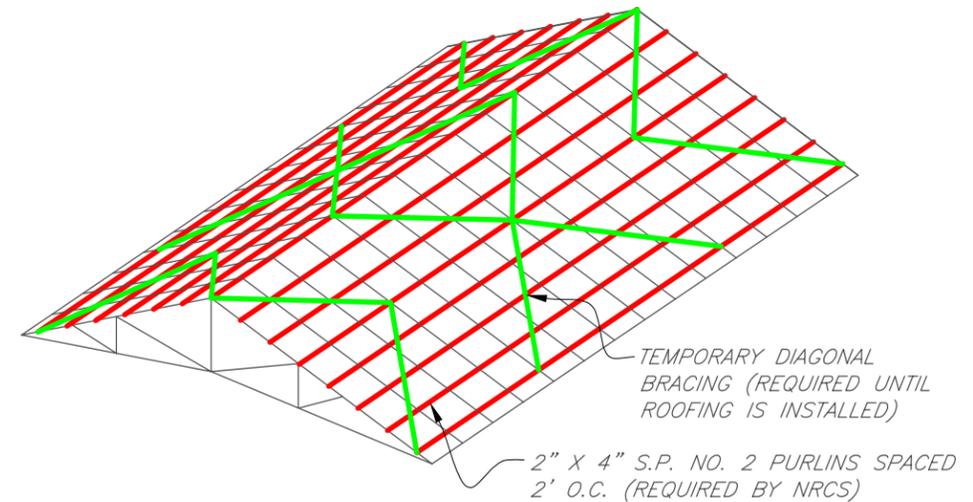
1. BRACING REQUIREMENTS SHOWN ON THIS PAGE ARE THE MINIMUM REQUIRED BY NRCS.
2. BRACING SHALL BE INSTALLED AS THE TRUSSES ARE ERECTED.
3. UNLESS SPECIFIED OTHERWISE, ALL BRACING SHALL CONSIST OF 2" X 4" STRESS-GRADED LUMBER CONNECTED WITH TWO 16D DEFORMED SHANK NAILS TO EACH TRUSS MEMBER THE BRACE CROSSES.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



NOTES:

1. 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.
2. 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



NOTES:

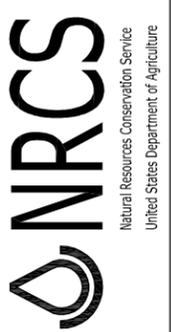
1. TOP CHORD BRACING SHALL CONSIST OF 2" X 4" PURLINS (SOUTHERN PINE #2 OR BETTER) SPACED 2' O.C. AS SHOWN ON SHEET 5.
2. TEMPORARY DIAGONAL BRACING SHALL ALSO BE REQUIRED IF ROOFING IS NOT INSTALLED IMMEDIATELY OVER THE PURLINS.

ISOMETRIC VIEW OF TOP CHORD BRACING
Not to scale

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	

GEORGIA DAIRY/SWINE SCRAPPED 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