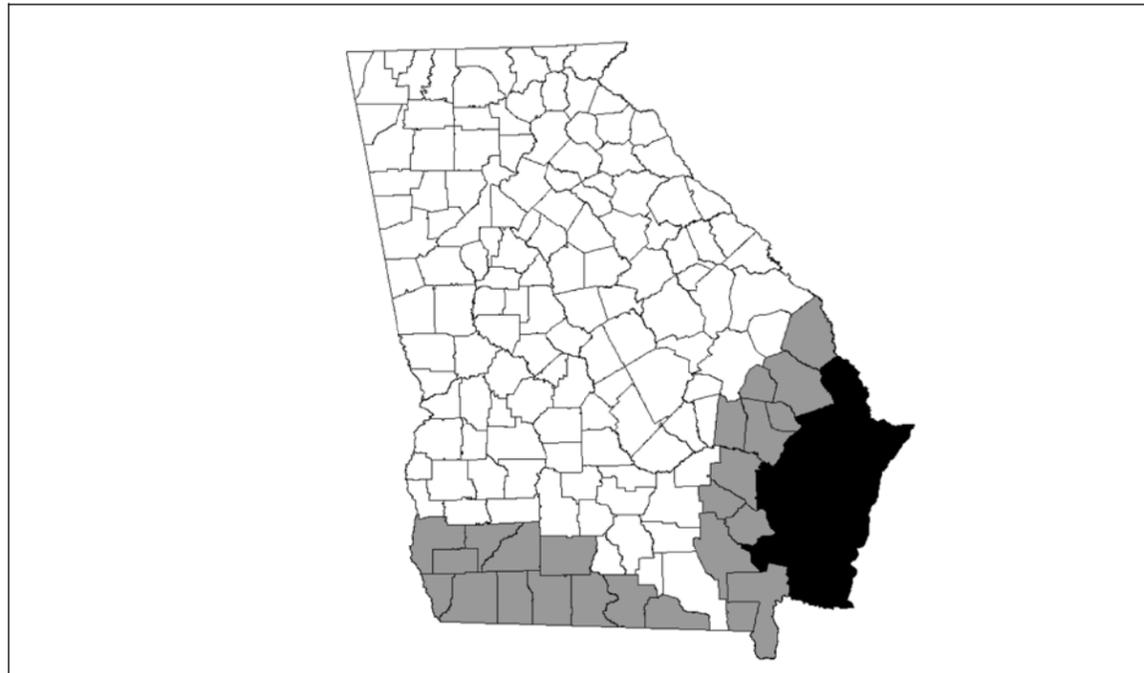


**UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE**

**GEORGIA STANDARD DRAWINGS FOR HURRICANE REGIONS - HEN LITTER STACK 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 - 19 PSF.
 - B) BASIC WIND SPEED OF 110 MPH AND NO SNOW LOAD.
 - C) IMPORTANCE FACTOR, I = 0.77.
 - D) WIND EXPOSURE CATEGORY C, PARTIALLY ENCLOSED STRUCTURE.
 - 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. A 16-FOOT SIDESHED COMPOSTING FACILITY MAY BE ATTACHED TO THIS STRUCTURE IF 12' POST HEIGHT IS USED (SEE GA-ENG-317-C3.PDF). SIDESHED SHALL MEET NRCS SPECIFICATIONS.
5. THIS DESIGN IS NOT INTENDED FOR USE IN EXTREME EAST COUNTIES OF THE STATE THAT ARE SUBJECT TO HURRICANE WIND LOADS OVER 110 MPH (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 INTENDED FOR USE IN COUNTIES SUBJECT TO HURRICANE WIND LOADS UP TO 110 MPH SHADED GRAY ABOVE. DO NOT USE THIS DESIGN FOR COUNTIES SHADED BLACK. COUNTIES SHADED BLACK ARE SUBJECT TO 120 MPH WIND LOADS.

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

_____ **HEN LITTER STACK FACILITY**
_____ **COUNTY, GEORGIA**

CERTIFICATION:

THE _____ HEN LITTER STACK 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
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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 DETAILS
FIBER REINFORCED CONTRACTION JOINT DETAIL
WOOD TREATMENT TABLE
- SHEET 7 - REINFORCED CONCRETE WALL DETAILS
STEEL REINFORCEMENT SCHEDULE
CONSTRUCTION JOINT DETAIL
- SHEET 8 - ENDWALL VERTICAL BRACE DETAILS
ENDWALL HORIZONTAL BRACE DETAILS
- SHEET 9 - TRUSS BRACING DETAILS

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

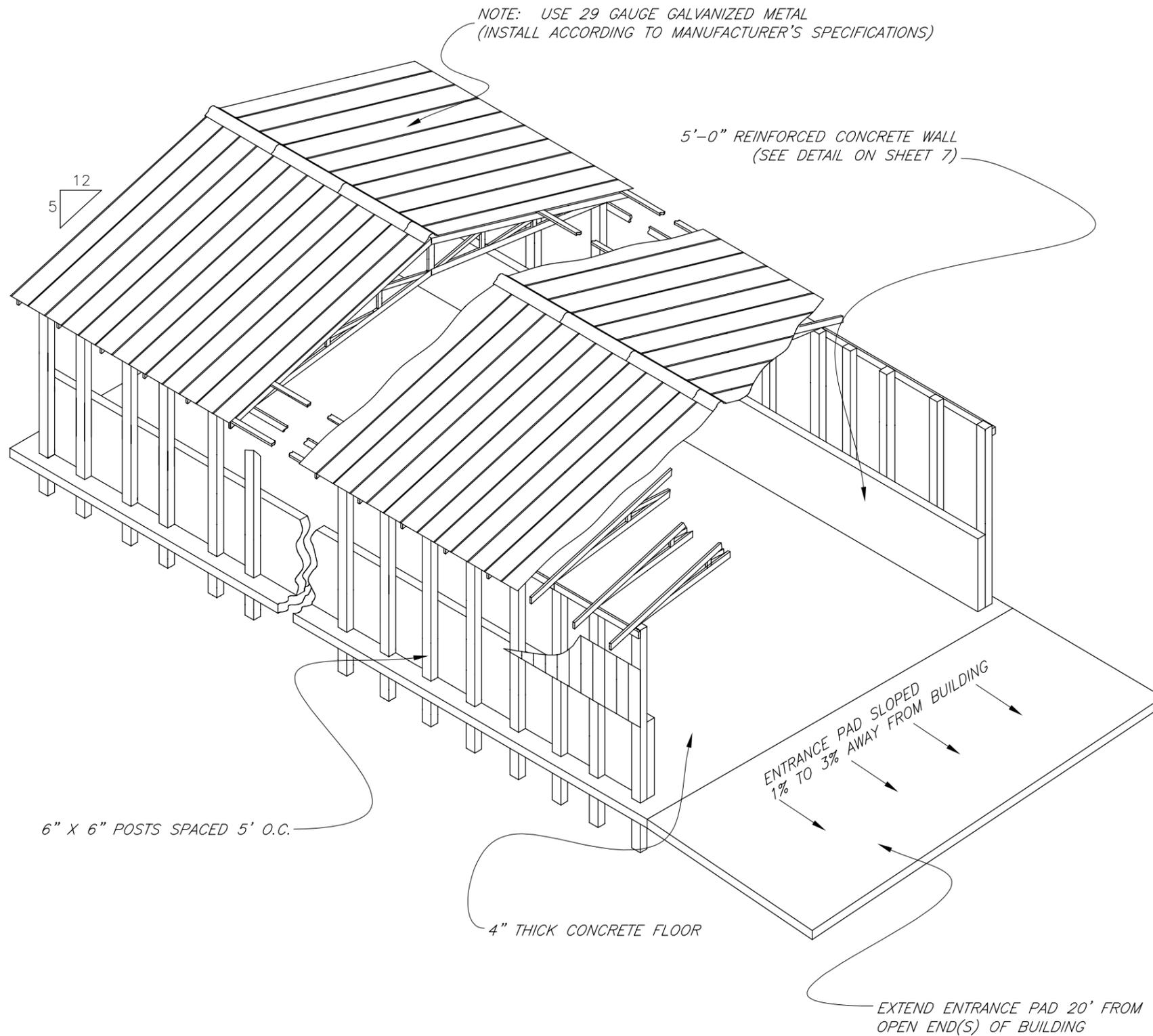
GEORGIA HEN LITTER STACK FACILITY
(FOR 110 MPH HURRICANE REGIONS)
County, GA



File No. ga-eng-313-hs3.pdf

Drawing No. Cover

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



ISOMETRIC VIEW
Not to scale

NOTES:

1. ENCLOSE TWO SIDES AND BOTH GABLE ENDS.
2. ENDWALL IS OPTIONAL.
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. CONCRETE WALLS MAY BE PLACED BETWEEN POSTS. IF THIS OPTION IS SELECTED, HORIZONTAL REINFORCEMENT SHALL RUN THROUGH THE POSTS.
8. THE BUILDING SITE SHALL BE CLEARED AND GRUBBED AS REQUIRED. PROPER DRAINAGE SHALL BE PROVIDED AROUND THE ENTIRE 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.
9. 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.
10. TRUSSES 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.
11. ALL LUMBER, INCLUDING THE POSTS, IN CONTACT WITH LITTER OR CONCRETE SHALL BE PRESSURE TREATED (SEE WOOD TREATMENT TABLE ON SHEET 4).
12. ALL DIMENSION LUMBER EXCEPT TRUSS BRACING SHALL BE SOUTHERN PINE NO. 2 OR BETTER. SEE SHEET 9 FOR TRUSS BRACING REQUIREMENTS.
13. 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.
14. POWER SUPPLY TO THE BUILDING IS RECOMMENDED FOR NIGHT OPERATIONS AND REPAIR WORK.
15. ALL DISTURBED AREAS SHALL BE VEGETATED USING PRACTICE CODE 342 - CRITICAL AREA PLANTING.
16. 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	

GEORGIA HEN LITTER STACK FACILITY
(FOR 110 MPH HURRICANE REGIONS)



File No.
ga-eng-313-hs3.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
07/07
07/07

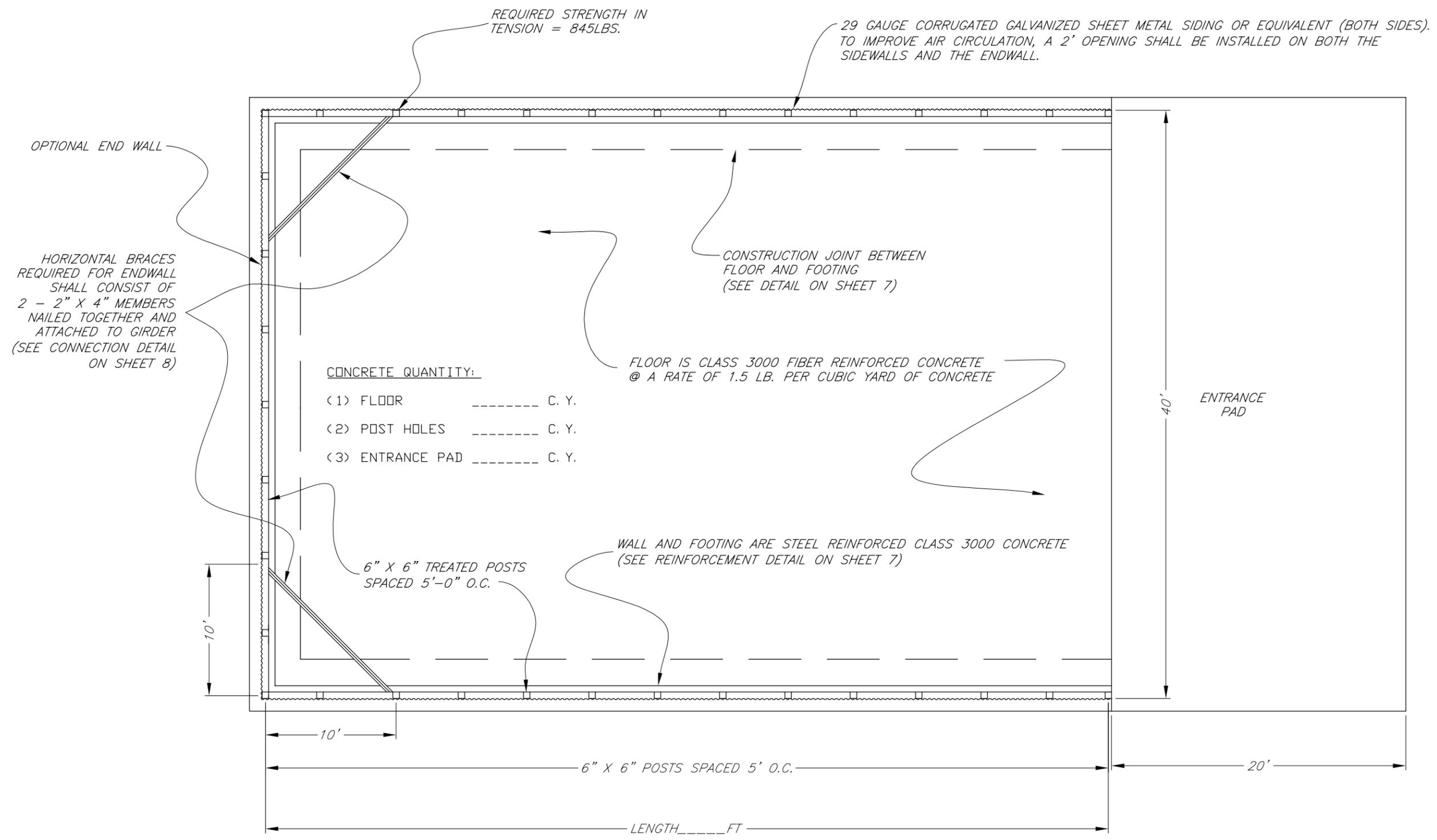
GEORGIA HEN LITTER STACK FACILITY
 (FOR 110 MPH HURRICANE REGIONS)
 County, GA



File No.
 ga-eng-313-hs3.pdf

Drawing No.
 Plan

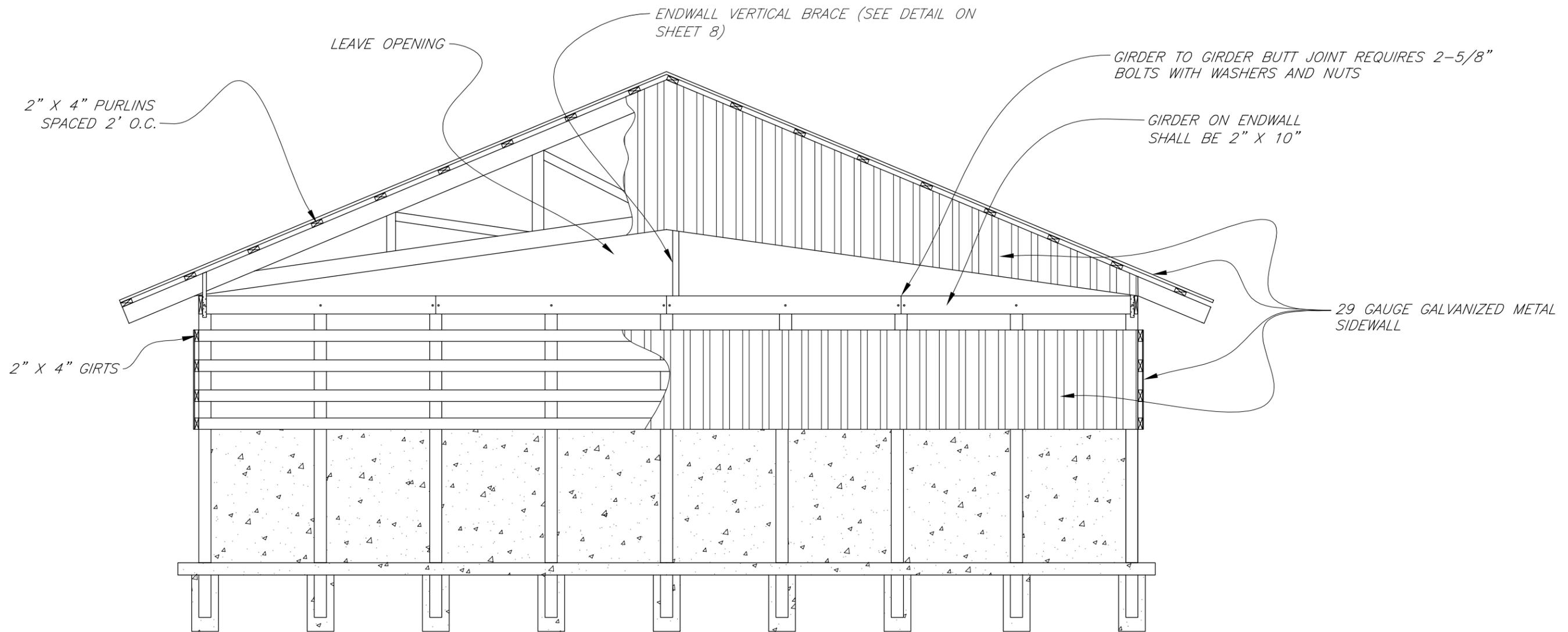
Sheet 3 of 9



- 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. AN ADDITIONAL HORIZONTAL FREEBOARD IS REQUIRED IF NO ENDWALL IS CONSTRUCTED.
 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 OPTIONAL ENDWALL
Not to scale

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

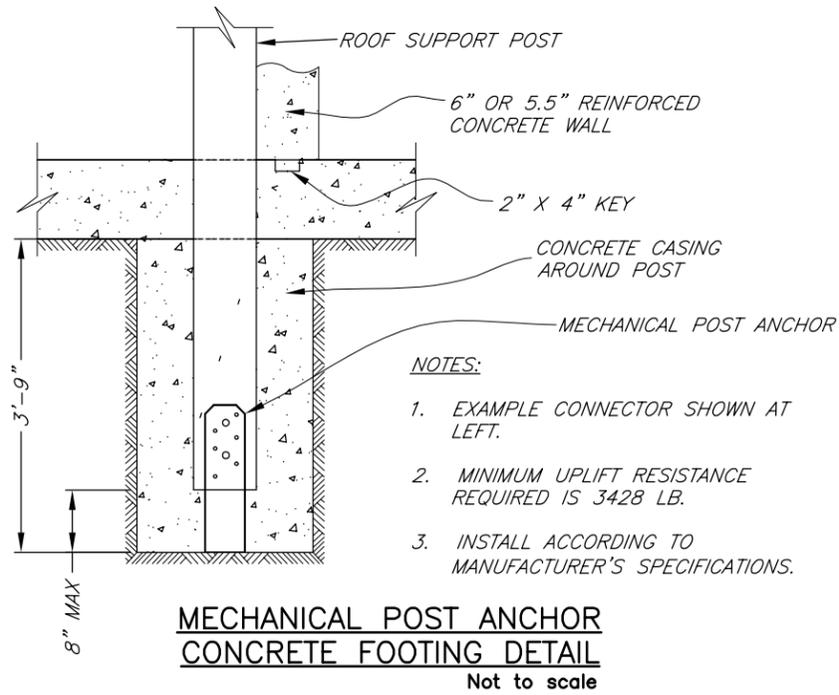
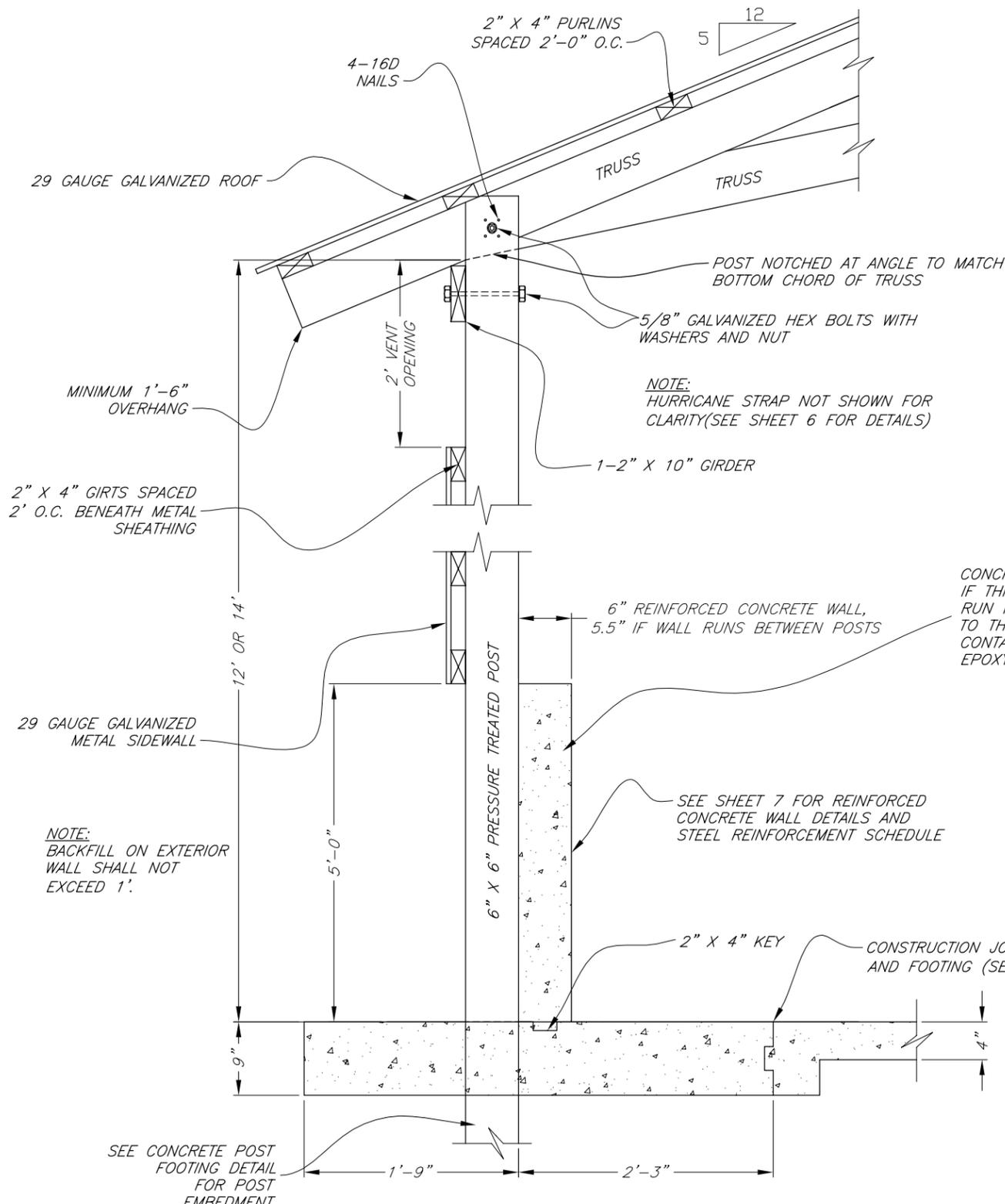
GEORGIA HEN LITTER STACK FACILITY
(FOR 110 MPH HURRICANE REGIONS)
County, GA



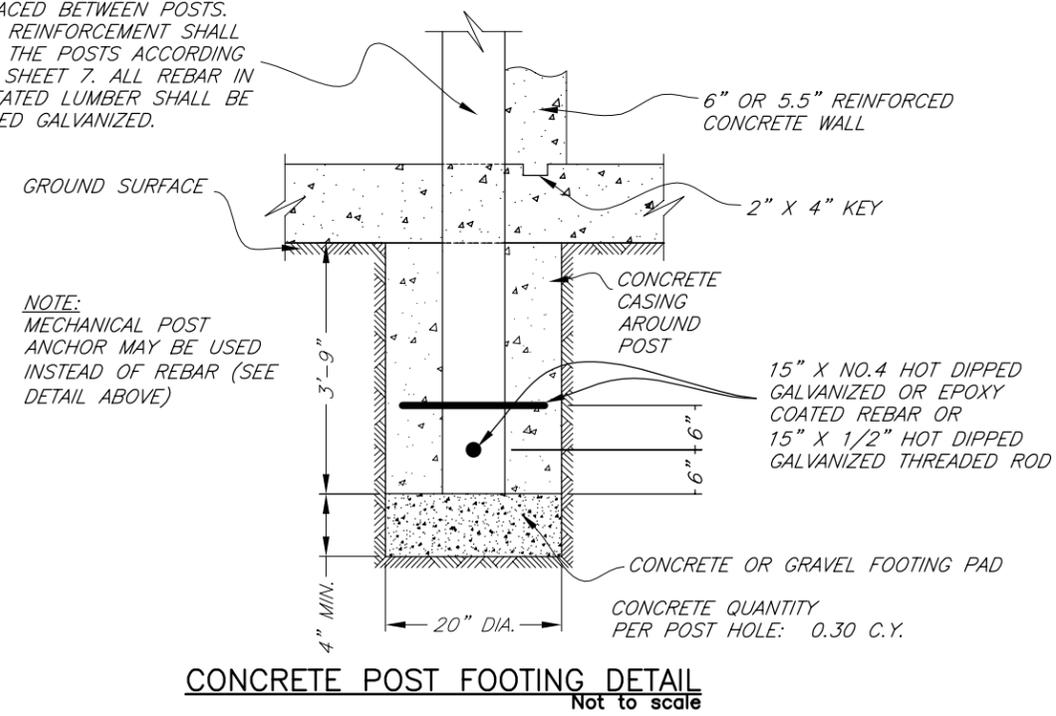
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Drawing No.
Endwall

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



CONCRETE WALLS MAY BE PLACED BETWEEN POSTS. IF THIS OPTION IS SELECTED, REINFORCEMENT SHALL RUN HORIZONTALLY THROUGH THE POSTS ACCORDING TO THE STEEL SCHEDULE ON SHEET 7. ALL REBAR IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE EPOXY COATED OR HOT-DIPPED GALVANIZED.



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

GEORGIA HEN LITTER STACK FACILITY
 (FOR 110 MPH HURRICANE REGIONS)
 County, GA

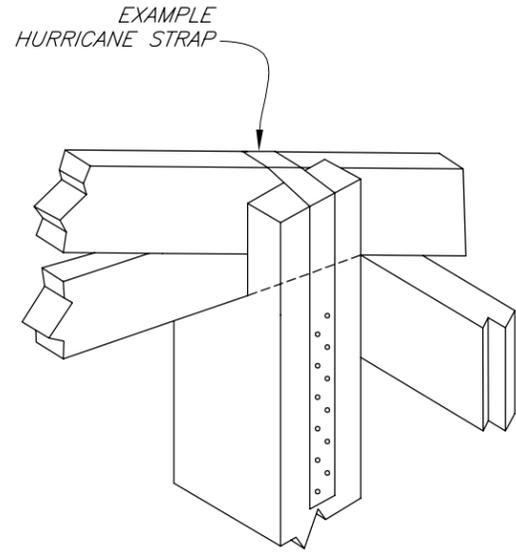


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Drawing No. Sidewall

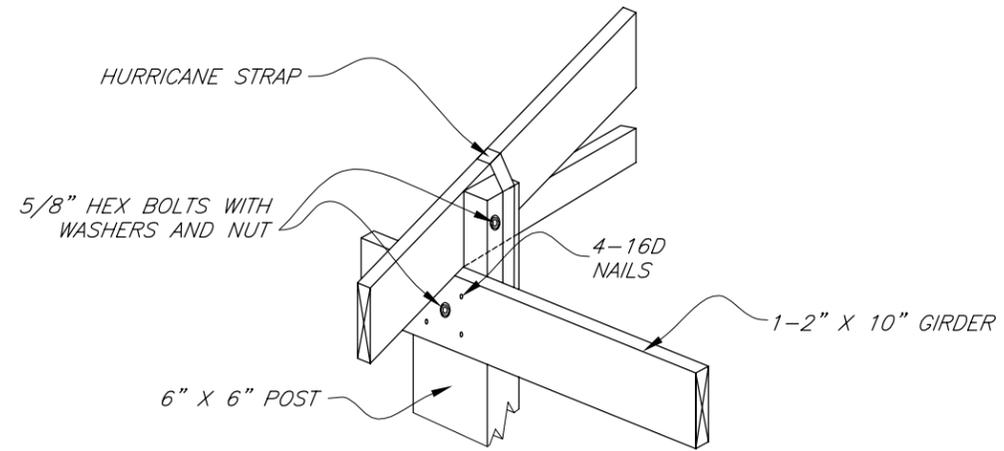
REVISIONS		
DATE	APPROVED	TITLE
09/05	H. McFarland	State Engineer
01/06	H. McFarland	State Engineer
07/07	H. McFarland	State Engineer

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



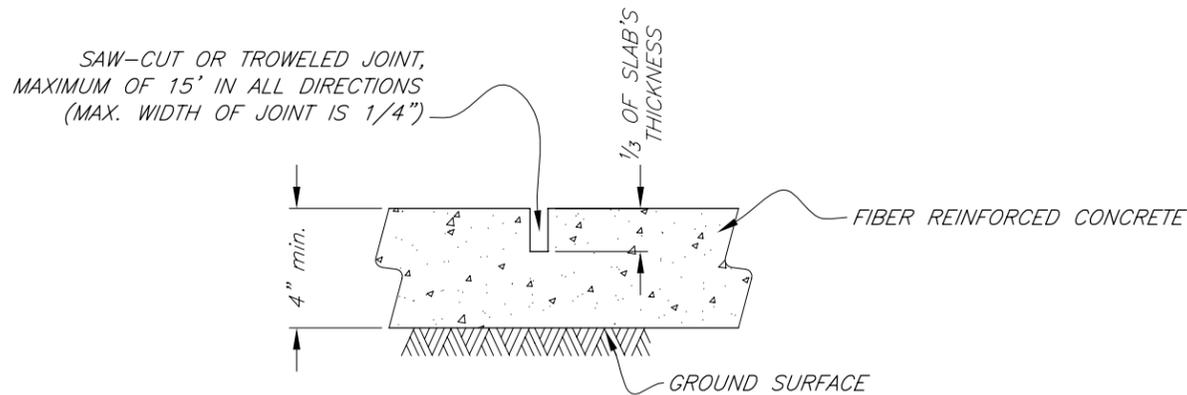
- NOTES:
1. USE HURRICANE STRAP AT POST TO TRUSS CONNECTION AS SHOWN AT LEFT.
 2. MANUFACTURER'S SPECIFICATIONS SHALL BE PROVIDED TO NRCS.
 3. MINIMUM UPLIFT RESISTANCE IS 785 LBS.
 4. STRAPS MUST BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

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 & 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

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	0.60	0.60	0.61	0.31

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

NOTE: ALL POSTS SHALL MEET THE IMPORTANT STRUCTURAL MEMBER RATES.

WOOD TREATMENT TABLE

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

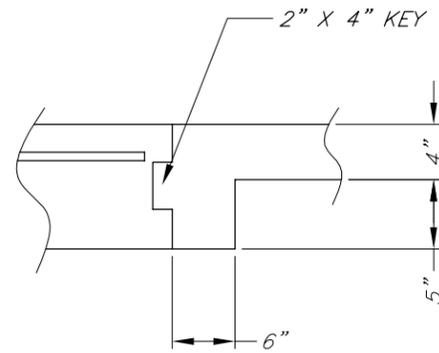
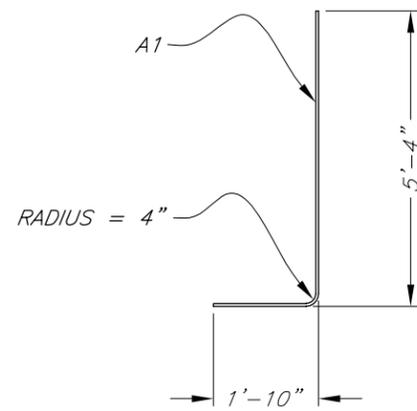
GEORGIA HEN LITTER STACK FACILITY
 (FOR 110 MPH HURRICANE REGIONS)
 County, GA



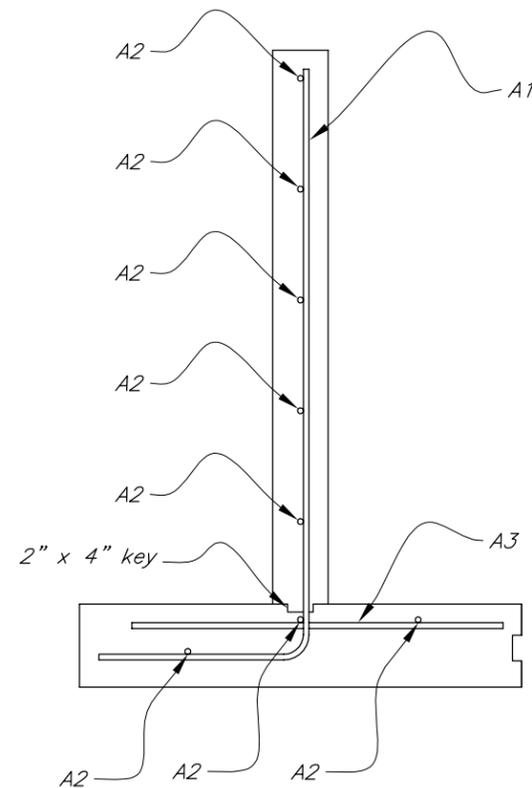
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Drawing No.
Connections

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



CONSTRUCTION JOINT
Not to scale



NOTES:

1. 19" LAP SPLICES SHALL BE USED ON ALL STEEL BARS THAT REQUIRE MULTIPLE PIECES TO REINFORCE A REQUIRED LENGTH OF CONCRETE.
2. ALL REBAR IS SPACED 12" O.C.
3. WALL THICKNESS SHALL BE 6". IF WALLS ARE CONSTRUCTED BETWEEN POSTS THEN WALL THICKNESS SHALL BE 5.5".
4. ALL REBAR IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE EPOXY COATED OR HOT-DIPPED GALVANIZED.

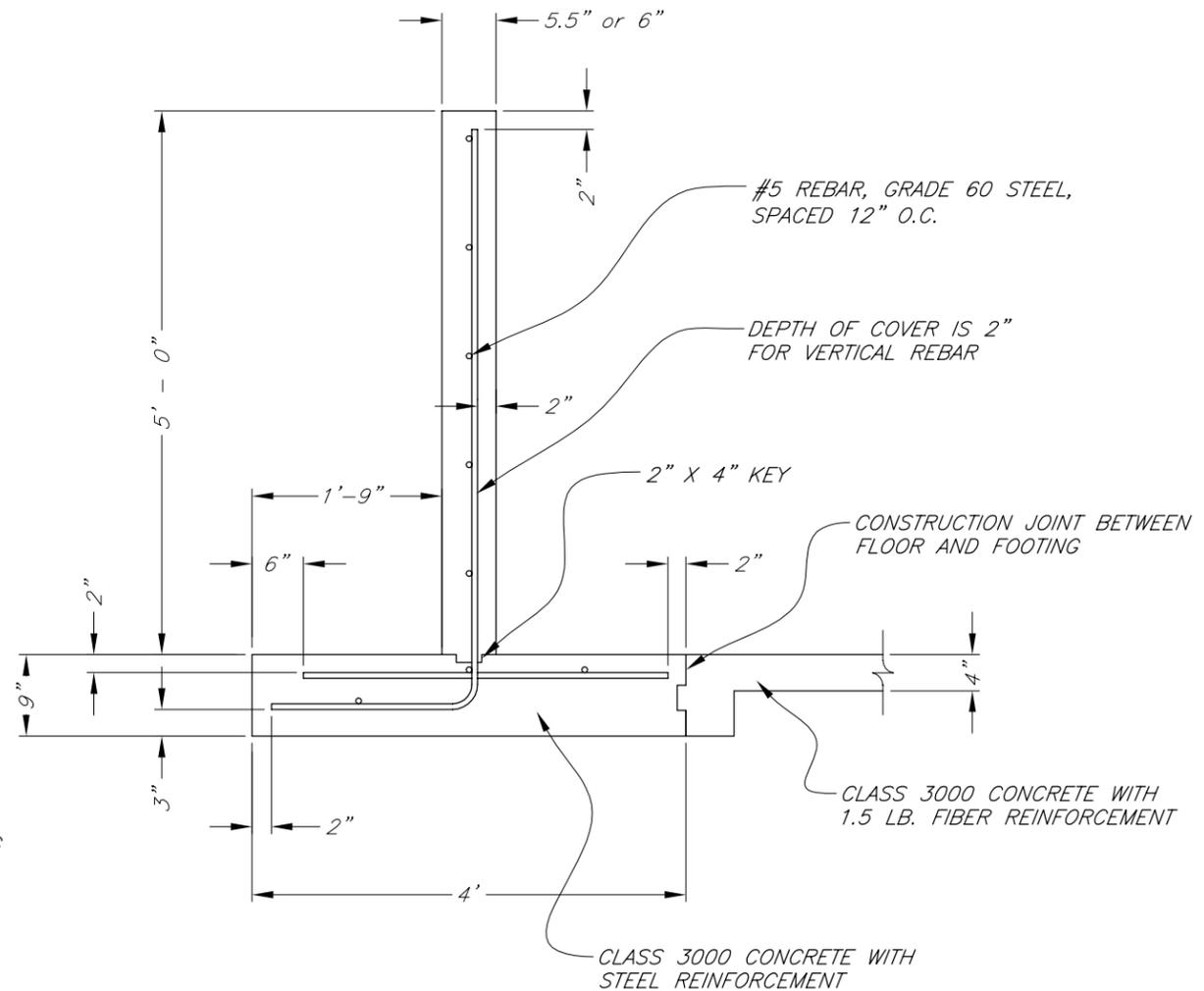
CONCRETE QUANTITY:
0.09 CU. YD. PER LINEAR FOOT OF WALL
0.11 CU. YD. PER LINEAR FOOT OF FOOTING

REINFORCED CONCRETE WALL
Not to scale

STEEL SCHEDULE

MARK	SIZE	GRADE	LENGTH	TYPE	QUANTITY REQUIRED*
A1	5	60	7'-0"	BENT	BLDG. LENGTH (FT) X 2 =
A2	5	60	**	STRAIGHT	N/A 16
A3	5	60	3'-4"	STRAIGHT	BLDG. LENGTH (FT) X 2 =

- * TABLE IS USED FOR CALCULATING SIDEWALL QUANTITIES ONLY. FOR ENDWALL ADD A1-40 EACH, A2-8 EACH (40 FOOT LENGTH), AND A3-40 EACH.
- * INCLUDE 19" OVERLAP/SPLICES FOR ALL STEEL BARS NOT LONG ENOUGH TO COVER REQUIRED LENGTHS WITH A SINGLE BAR.
- ** LENGTH OF A2 = LENGTH OF BUILDING



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

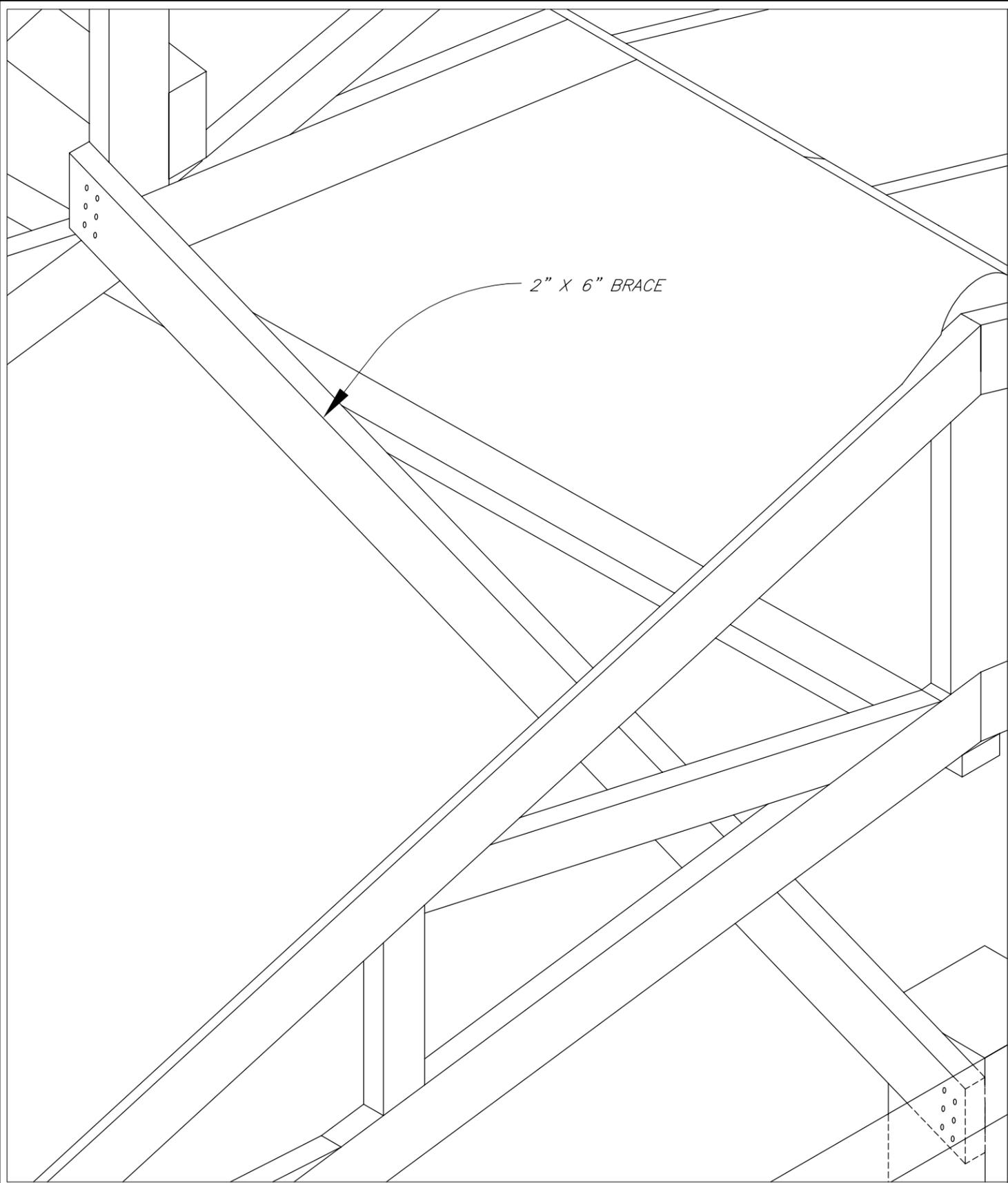
GEORGIA HEN LITTER STACK FACILITY
 (FOR 110 MPH HURRICANE REGIONS)
 County, GA



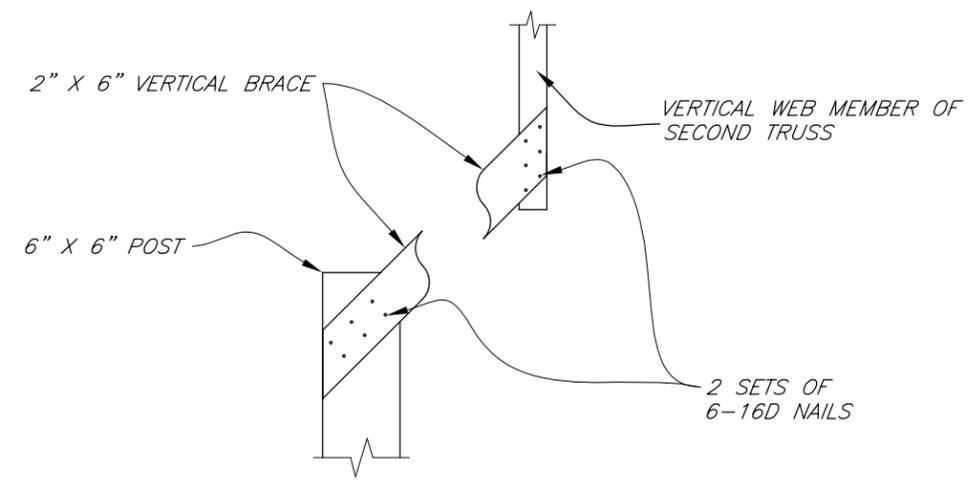
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Drawing No.
Concrete & Steel

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



2" X 6" BRACE



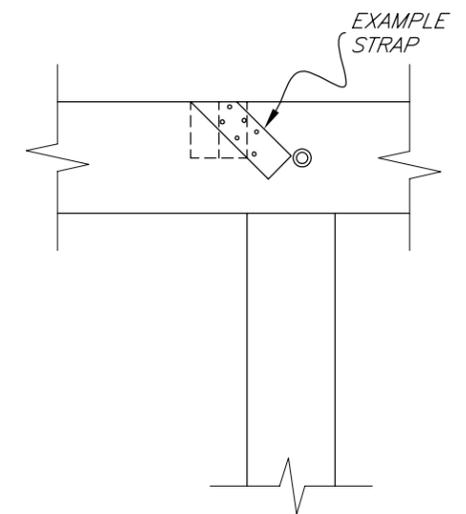
2" X 6" VERTICAL BRACE

VERTICAL WEB MEMBER OF SECOND TRUSS

6" X 6" POST

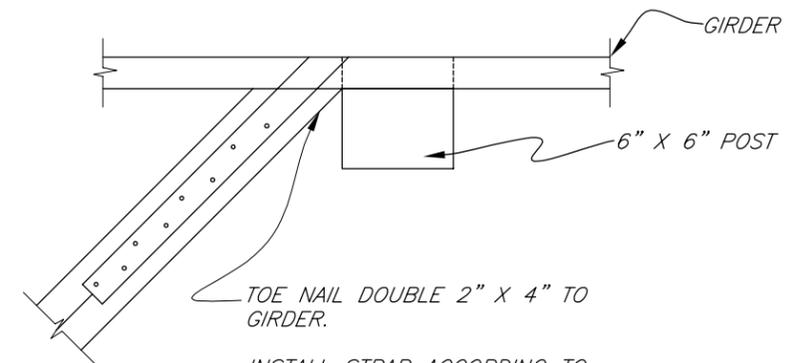
2 SETS OF 6-16D NAILS

ENDWALL VERTICAL BRACE DETAILS
Not to scale



EXAMPLE STRAP

HORIZONTAL ENDWALL BRACE DETAIL
Not to scale



GIRDER

6" X 6" POST

TOE NAIL DOUBLE 2" X 4" TO GIRDER.

INSTALL STRAP ACCORDING TO MANUFACTURER'S SPECIFICATIONS. MINIMUM RESISTANCE IN TENSION IS 683 LBS.

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

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

GEORGIA HEN LITTER STACK FACILITY
(FOR 110 MPH HURRICANE REGIONS)
County, GA



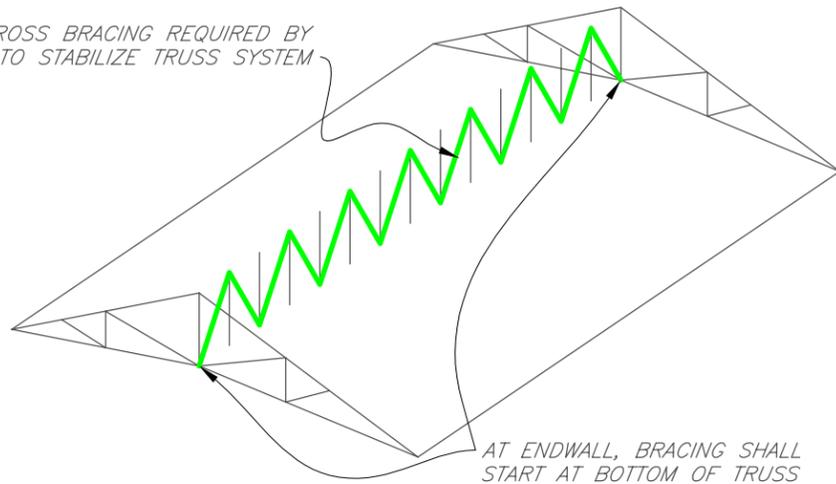
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Drawing No. Endwall Bracing

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

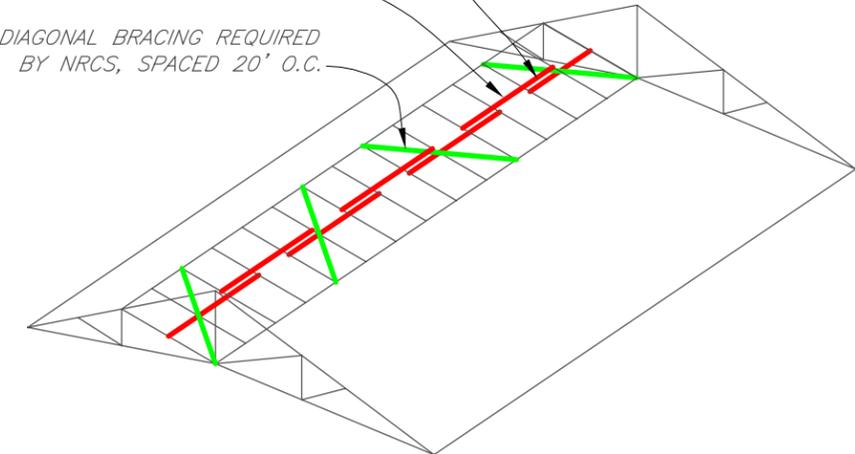
NOTES:

- 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.

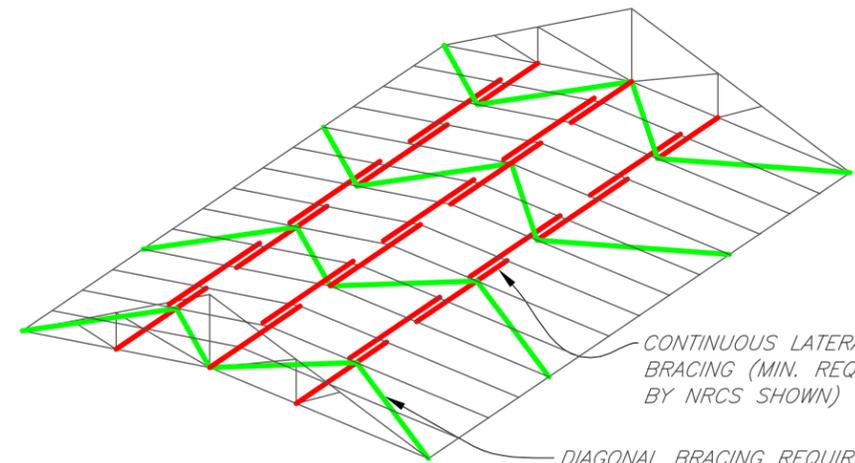


NOTE: WEB MEMBER BRACING IS SHOWN ONLY ON 1 SIDE FOR CLARITY. THIS IS AN EXAMPLE ONLY. THE TRUSS DESIGN DRAWING WILL HAVE THE ACTUAL WEB MEMBER BRACING REQUIRED.

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.



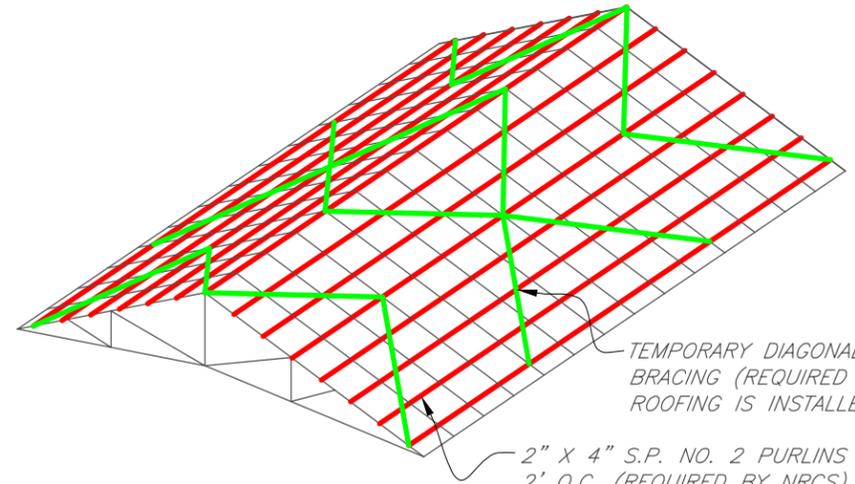
CONTINUOUS LATERAL BRACING (MIN. REQUIRED BY NRCS SHOWN)

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:

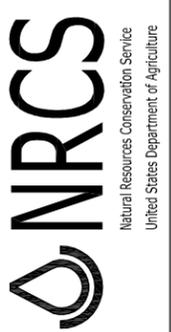
- TOP CHORD BRACING SHALL CONSIST OF 2" X 4" PURLINS (SOUTHERN PINE #2 OR BETTER) SPACED 2' O.C. AS SHOWN ON SHEET 5.
- TEMPORARY DIAGONAL BRACING SHALL ALSO BE REQUIRED IF ROOFING IS NOT INSTALLED IMMEDIATELY OVER THE PURLINS.

ISOMETRIC VIEW OF TOP CHORD BRACING
Not to scale

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 HEN LITTER STACK FACILITY
(FOR 110 MPH HURRICANE REGIONS)
County, GA



File No. ga-eng-313-hs3.pdf

Drawing No. Bracing

11/19/2007 1:45 PM
Sheet 9 of 9