



**Capital Projects & Purchasing Department
113 Mable T. Willis Blvd.
Walterboro, SC 29488
843.539.1968**

**RFP: CC-21
AIRPORT HANGAR AT LOWCOUNTRY REGIONAL AIRPORT**

RFP DUE: Monday, November 30, 2015 @ 11:00am

Addendum #1

This addendum is dated November 20, 2015

Project "C" Temporary Hanger

Lowcountry Regional Airport

537 Aviation Way, Walterboro, SC 39488

75'x100'x20' Pre-engineered Metal Building

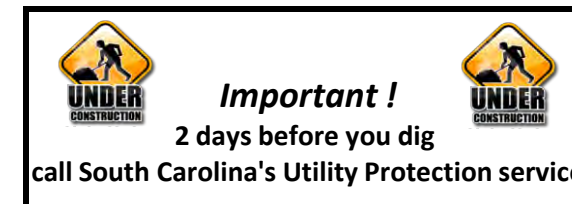
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Design Basis:

Building Code:	IBC-2012 & ASCE-07
Gravity Load:	Weight of Structure
Roof Live Load:	20 lbs. psf (tributary reduction allowed)
Ground Snow Load	5.0 lbs. psf
Frost Depth:	6" below finish grade
Collateral Load:	3 lbs.psf (HVAC, Lighting, etc.)
Seismic:	Use Group I, Importance Factor = 1.0
Wind Load:	Basic Wind Speed (3 second Gust) V=135 MPH Importance Factor = 1.0, Exposure C, Category II

Assumed minimum soil bearing capacity of 1500 lbs. psf



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Date Signed: 11/17/2015
For Bidding Only

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Engineer's Seal

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 23682
MAR. A. ABU-YASEIN

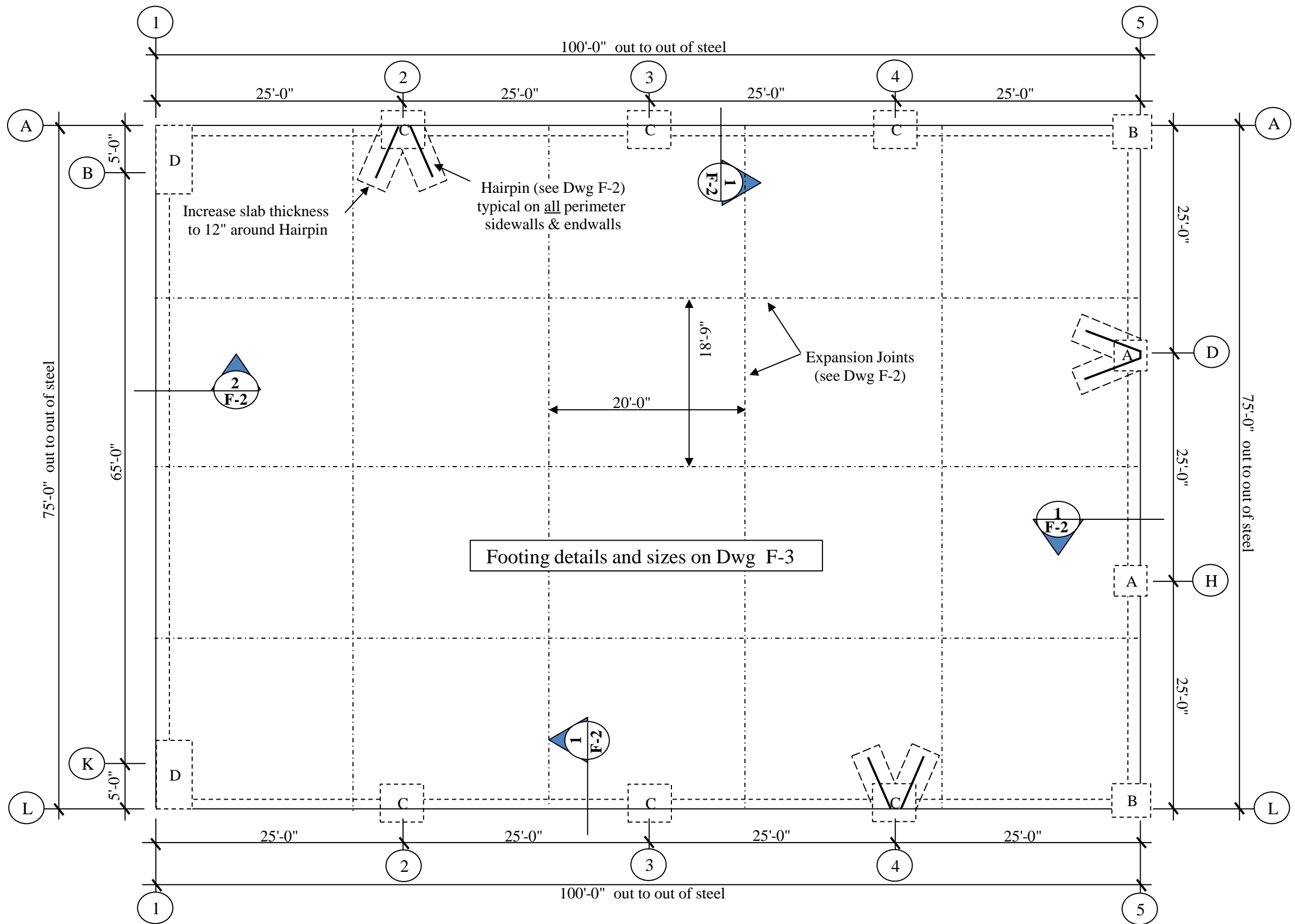
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Sheet No.
C-1



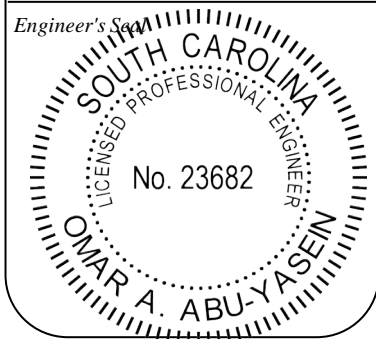
Footing details and sizes on Dwg F-3

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Sheet No.
F-1

CONCRETE WORK

1. ALL CONCRETE CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE FOLLOWING BUILDING CODES:

- A. ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
- B. ACI 315 - DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.
- C. ACI - BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- D. ANSI/ASTM A185 - WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT.
- E. ANSI/ASTM A497 - WELDED DEFORMED STEEL FABRIC FOR CONCRETE REINFORCEMENT.
- F. ASTM A615 - DEFORMED AND PLAIN BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT.
- G. CRSI - CONCRETE REINFORCEMENT STEEL INSTITUTE MANUAL OF PRACTICE.
- H. CRSI 63 - RECOMMENDED PRACTICE FOR PLACING REINFORCEMENT BARS.
- I. CRSI 65 - RECOMMENDED PRACTICE FOR PLACING BAR SUPPORTS, SPECIFICATION AND NOMENCLATURE.
- J. ACI 305 - HOT WEATHER CONCRETING.
- K. ACI 306 - COLD WEATHER CONCRETING.
- L. ACI 308 - STANDARD PRACTICE FOR CURING CONCRETE.
- M. ACI 347 - RECOMMENDED PRACTICE FOR CONCRETE FRAMEWORK.
- N. ACI C33 - CONCRETE AGGREGATES.
- O. ASTM C94 - READY-MIXED CONCRETE.
- P. ASTM C150 - PORTLAND CEMENT.
- Q. ASTM C260 - AIR ENTRAINING ADMIXTURES FOR CONCRETE.
- R. ASTM C494 - CHEMICAL ADMIXTURES FOR CONCRETE.
- S. ASTM C618 - FLY ASH AND RAW OR CALCINATED NATURAL POZZOLAN FOR USE AS A MINERAL ADMIXTURE IN PORTLAND CEMENT CONCRETE.

2. BEFORE PLACING CONCRETE, CLEAN REINFORCEMENT OF FOREIGN PARTICLES AND COATINGS.

3. PACE SUPPORT AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. DO NOT DEVIATE FROM ALIGNMENT OR REQUIRED POSITION.

4. DO NOT DISPLACE OR DAMAGE VAPOR BARRIER.

5. ACCOMMODATE PLACEMENT OF ALL FORMED OPENINGS OR CAST IN PLACE ITEMS.

6. STEEL REINFORCEMENT SHALL NOT BE STRAIGHTENED OR BENT IN A MANNER THAT WILL WEAKEN THE MATERIAL. NO HEATING OF BARS WILL BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.

7. NO CUTTING OR WELDING OF REINFORCING BARS WILL BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.

8. CHAIRS, INSERTS AND OTHER METAL DEVICES, WHERE EXPOSED AFTER REMOVAL OF FORMS SHALL HAVE EXPOSED SURFACES COATED WITH PLASTIC OR OTHERC APPROVED RUST RESISTANT COATING.

9. REINFORCING FOR SLABS ON GRADE SHALL BE SUPPORTED (NO PULLING-UP) OF WIRE MESH DURING CONCRETE PLACEMENT OF CONCRETE WILL BE PERMITTED.

10. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:

INSIDE BUILDINGS, SLABS AND WALLS	3/4"
CONTACT WITH EARTH, FORMEDWALLS AND COLUMNS	2"
WALLS, COLUMNS, SLABS AND FOOTINGS PLACED AGAINST EARTH	3"

11. GENERAL NOTES FOR CONCRETE TESTING: (IF REQUESTED BY THE ENGINEER)

- A. TESTS OF EACH PROPOSED MIX DESIGN ALONG WITH THE CEMENT AND AGGREGATES USED SHALL BE PERFORMED TO ENSURE CONFORMANCE WITH REQUIREMENTS STATED HEREIN.
- B. THREE CONCRETE TEST CYLINDERS WILL BE TAKEN FOR EVERY 75 OR LESS CU. YDS. OF EACH CLASS OF CONCRETE PLACED EACH DAY.
- C. ONE ADDITIONAL TEST CYLINDER WILL BE TAKEN DURING COLD WEATHER AND CURED ON SITE UNDER THE SAME CONDITIONS AS THE CONCRETE IT REPRESENTS.
- D. ONE SLUMP TEST AND ONE AIR ENTRAINMENT TEST SHALL BE TAKEN FOR EACH SET OF TEST CYLINDERS TAKEN.

12. GENERAL NOTES FOR CONCRETE MATERIALS:

- A. CEMENT: ASTM C150, TYPE I, TYPE II, TYPE III, TYPE IV, TYPE V, PORTLAND TYPE, OR ASTM C595, TYPE IP, PORTLAND POZZOLAN CEMENT SHALL NOT EXCEED 25% BY WEIGHT. DIFFERENT CEMENTS SHALL NOT BE USED INTERCHANGEABLY IN THE SAME ELEMENT OR PORTION OF WORK. NO INDUSTRIAL SLAG WILL BE ALLOWED TO BE USED IN ANY CONCRETE MIX DESIGN.
- B. FINE AGGREGATE, ASTM C33.
- C. COARSE AGGREGATE, ASTM C33, SIZE 57.
- D. WATER, ASTM C94, CLEAN AND NOT DETRIMENTAL TO CONCRETE.

13. ADMIXTURES

- A. AIR ENTRAINMENT, ASTM C260
- B. CHEMICAL ADMIXTURES, WHERE APPROVED BY THE ENGINEER SHALL CONFORM TO ASTM 494.
- C. NO CALCIUM CHLORIDE SHALL BE ADDED TO THE MIX WITHOUT PERMISSION FROM THE ENGINEER.

14. ACCESSORIES

- A. BONDING AGENTS, TWO COMPONENT EPOXY RESIN AS MFG. BY SILK CORP., SONNEBORN, OR EQUAL.
- B. VAPOR BARRIER, 6 MIL THICK CLEAR POLYETHENE FILM WITH A WATER PERMEABILITY OF 0.10 PERMS OR LESS IN ACCORDANCE WITH ASTM E-96 PROCEDURE "A" TYPE RECOMMENDED FOR BELOW GRADE APPLICATION WITH 6" MIMUMUM LAP JOINTS SEALED.
- C. JOINT FILLER, CLOSED CELL POLYVINYL CHLORIDE FOAM WITH A RECOVERY OF 95% IF NOT COMPRESSED MORE THAN 50% OF THE ORIGINAL THICKNESS.
- D. SEALANT, COLD APPLIED TWO-PART LIQUID NEOPRENE.

15. CONCRETE MIX:

A. MIX ALL CONCRETE IN ACCORDANCE WITH ASTM C94.

B. ALL CONCRETE, UNLESS OTHERWISE SPECIFIED, SHALL HAVE THE FOLLOWING CHARACTERISTICS.

1. ALL UNEXPOSED CONCRETE ,(FOUNDATIONS)

MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS	3000 PSI
MAXIMUM WATER TO CEMENT RATIO	0.45
MINUMUM CEMENT CONTENT	517 LBS./CY (5 1/2 SACKS)
MINIMUM/MAXIMUM SLUMP	2" TO 4"

2. ALL EXPOSED CONCRETE, (SLABS , WALLS ,COLUMNS ,ETC.)

MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS	3000 PSI
MAXIMUM WATER TO CEMENT RATIO	0.45
MINUMUM CEMENT CONTENT	517 LBS./CY (5 1/2 SACKS)
MINIMUM/MAXIMUM SLUMP	2" TO 4"

THE ENGINEER RESERVES THE RIGHT TO INCREASE THE MIX TO 564 LBS./CY (6 SACKS) 4000 PSI COMPRESSIVE STRENGTH.

C. USE OF AIR ENTRAINING AGENTS, SET RETARDING ADMIXTURES, ACCELERATION ADMIXTURES, OR ANY OTHER ADMIXTURE INCLUDING THE ADDTITION OF WATER AT THE JOBSITE SHALL NOT BE ADDED WITHOUT THE SPECIFIC APPROVAL BY THE ENGINEER.

16. CONCRETE FORMWORK:

- A. CONSTRUCT AND ERECT CONCRETE FORMWORK IN ACCORDANCE WITH ACI 301 AND ACI 347.
- B. ARRANGE FORMS TO ALLOW STRIPPING WITHOUT REMOVAL OF PRINCIPLE SHORES WHERE REQUIRED TO REMAIN IN PLACE.
- C. PROVIDE ADEQUATE BRACING TO ENSURE STABILITY OF FORMWORK LIKELY TO BE OVER STREESED BY CONSTRUCTION LOADS.
- D. CONSTRUCT FORMWORK TO MAINTAIN TOLERANCES IN ACCORDANCE WITH ACI 301.

17. FORM REMOVAL

- A. DO NOT REMOVE FORMS AND SHORING UNTIL CONCRETE HAS SUFFICIENT STRENGTH TO SUPPORT ITS OWN WEIGHT AND CONSRUCTION AND DESIGN LOADS THAT MAY BE IMPOSED UPON IT.

18. JOINTS

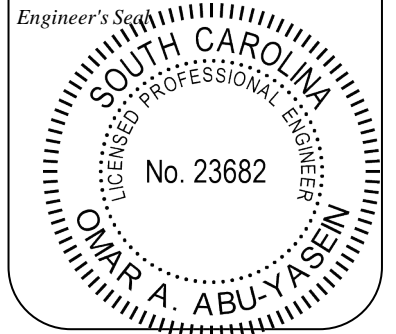
- A. PROVIDE CONTROL JOINTS IN SLABS ON GRADE AT A MAXIMUM SPACING OF 20'-0" O.C. UNLESS OTHERWISE SHOWN. CONTROL JOINTS MAY BE SAW CUT USING A 3/16" THICK BLADE, CUTTING 1/4 INTO THE DEPTH OF THE SLAB THICKNESS.

19. MIMIMUM LAP SPLICES UNLESS OTHERWISE SHOWN

- A. VERTICAL BARS (INCLUDING DOWELS) - 30 DIAMETERS OF THE BAR.
- B. HORIZONTAL BARS IN WALLS - 45 DIAMETERS OF THE BAR
- C. PROVIDE CORNER BARS AT ALL WALL CORNERS TO MATCH HORIZONTAL REINFORCING , MINIMUM LAP 45 DIAMETERS OF THE BAR

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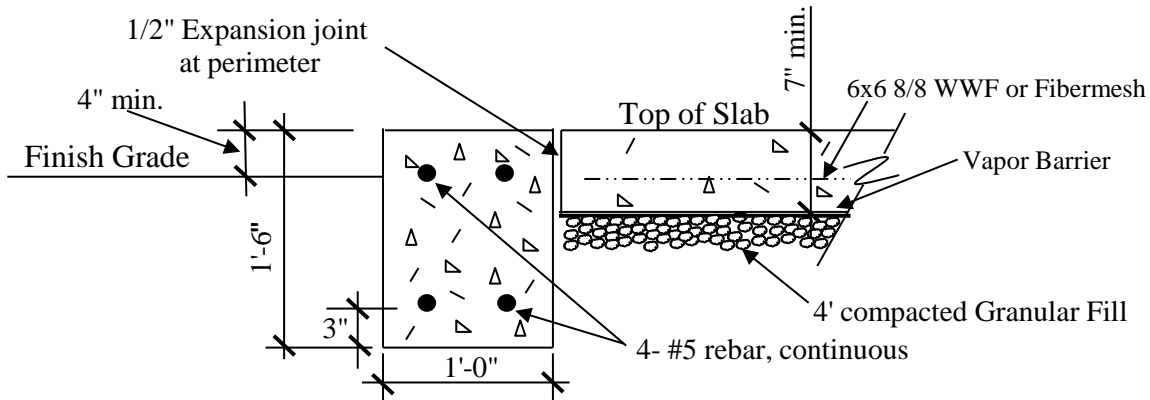
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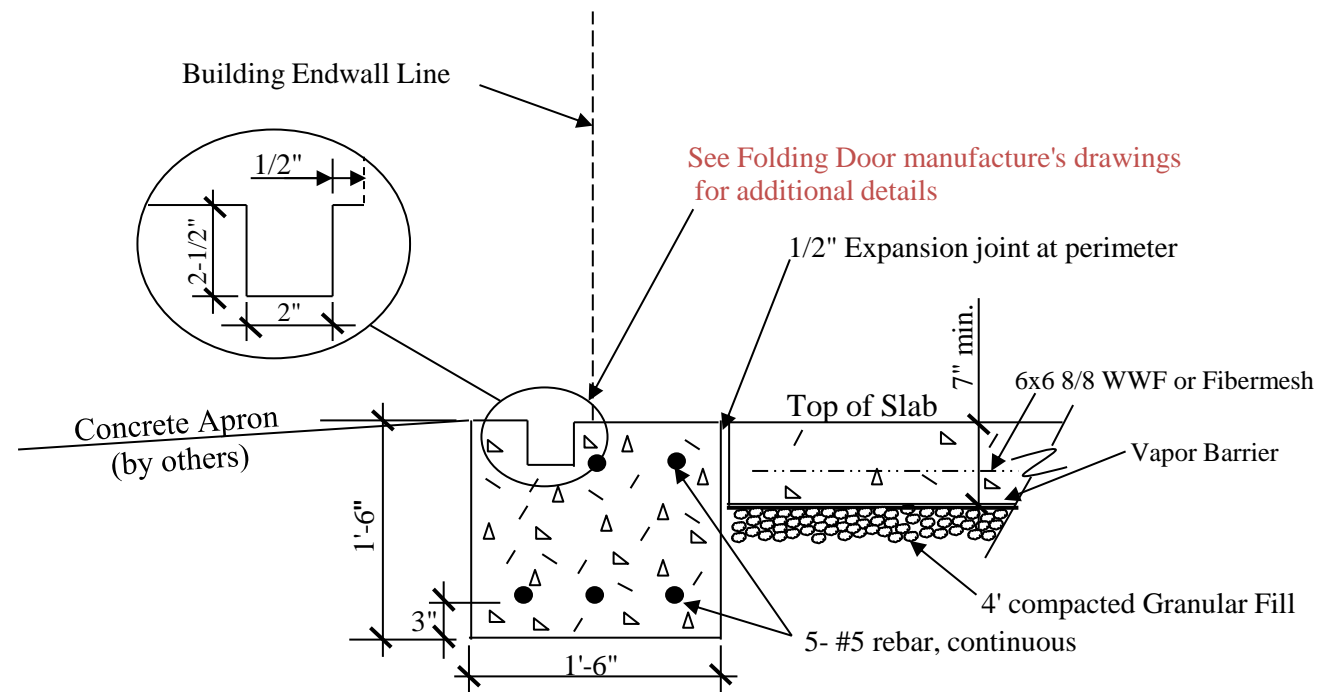
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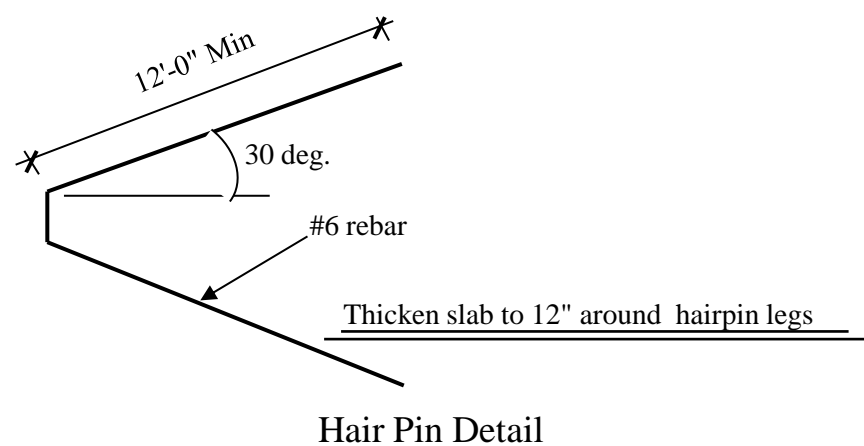
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SPEC-1**



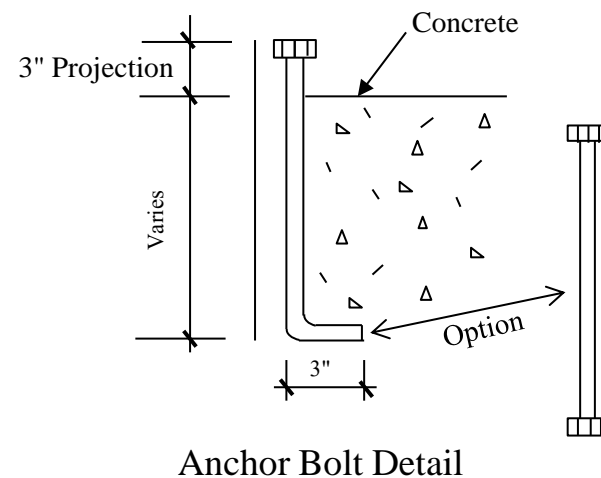
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F-2 Building Perimeter Turndown



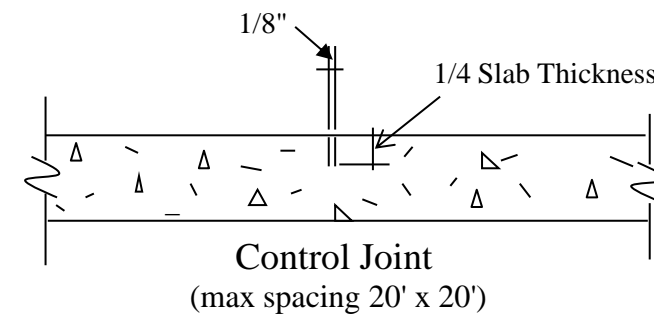
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F-2 Building Endwall Perimeter Turndown



Hair Pin Detail



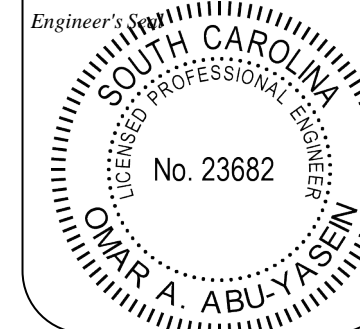
Anchor Bolt Detail



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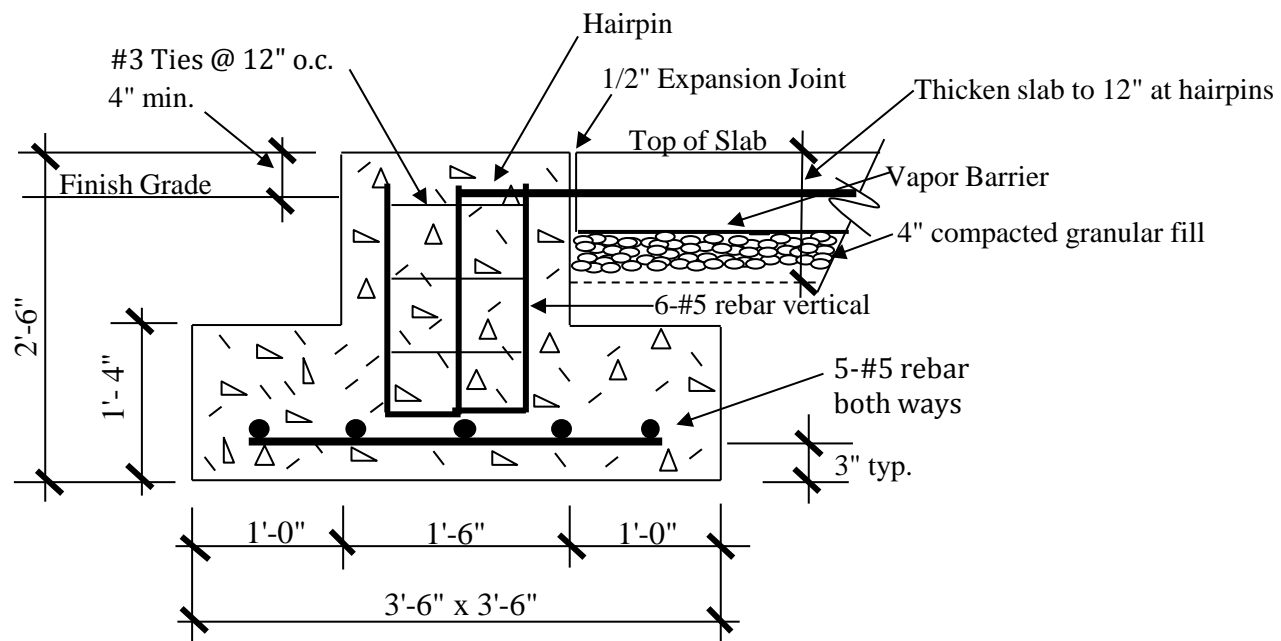
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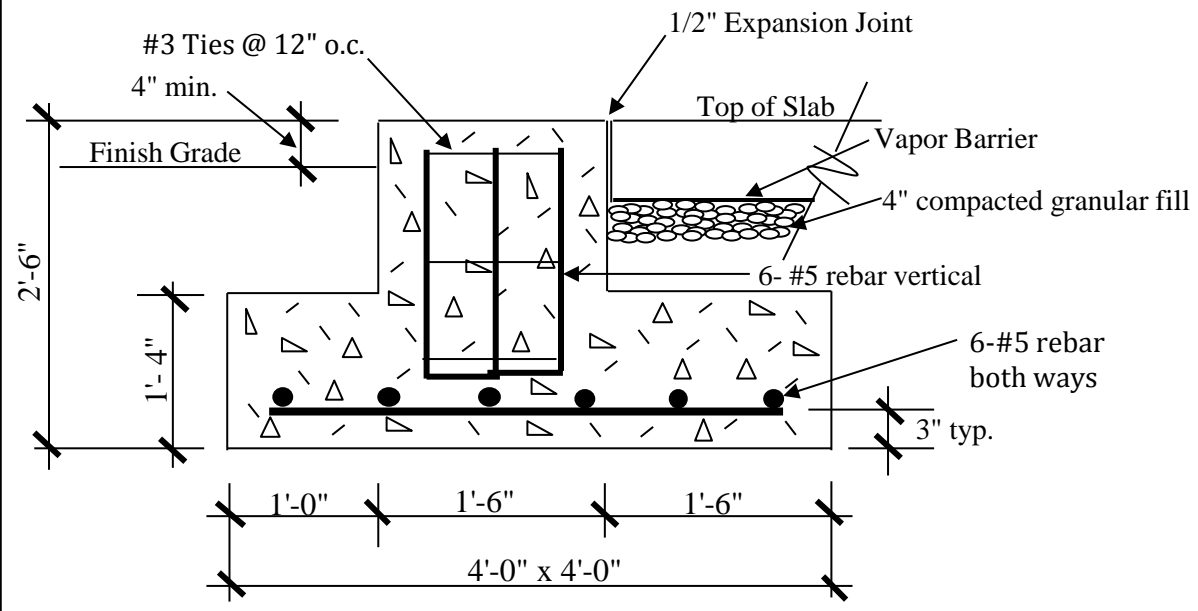
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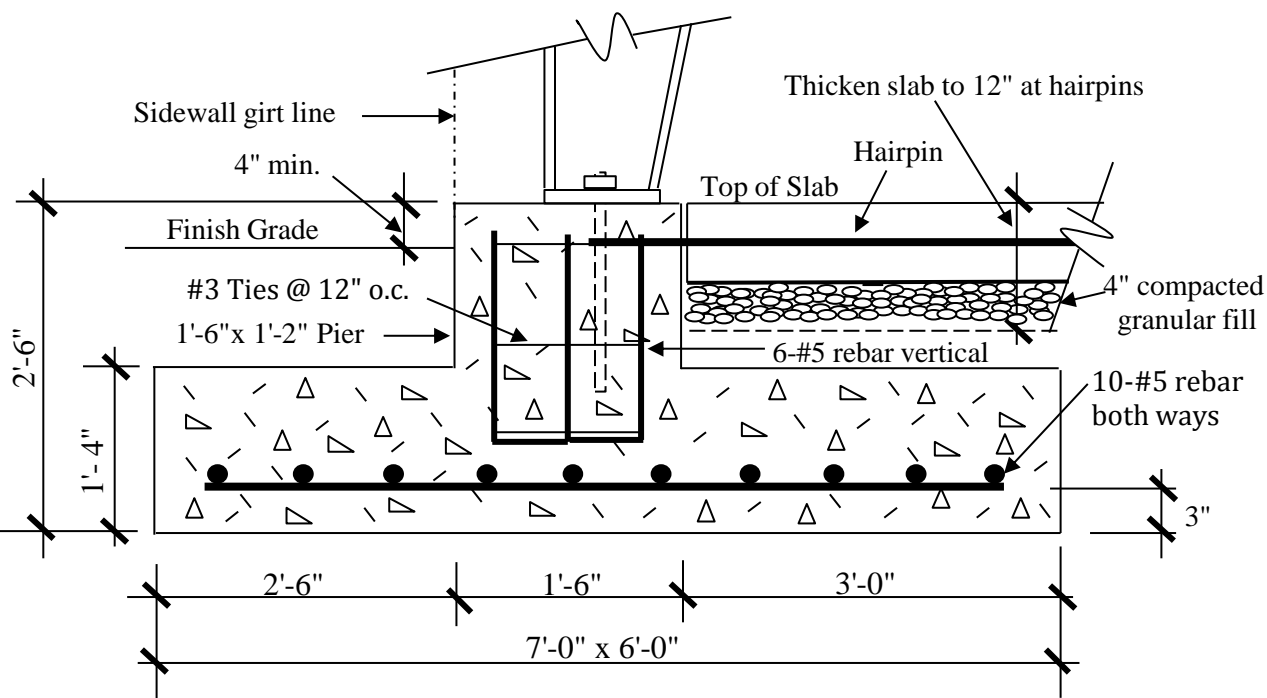
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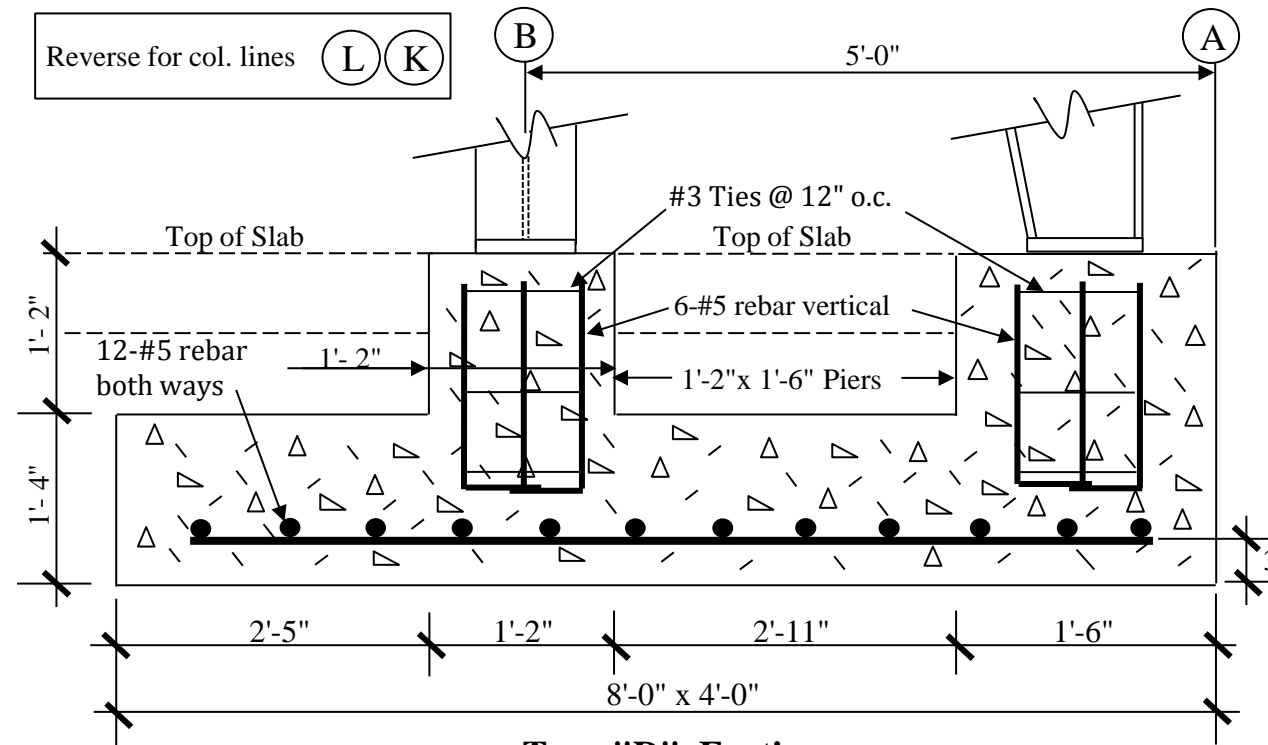
Type "A" Footing



Type "B" Footing



Type "C" Footing



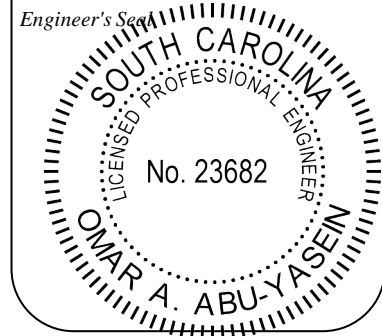
Type "D" Footing

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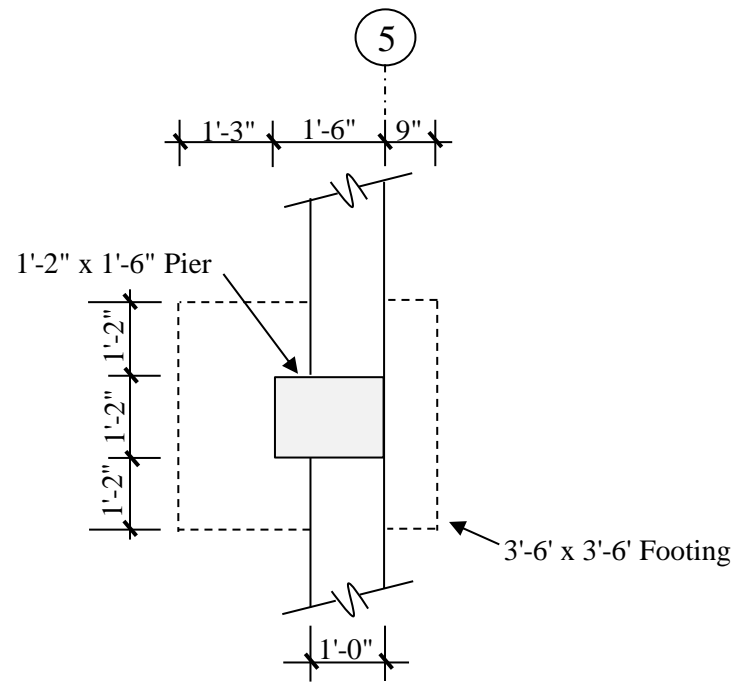
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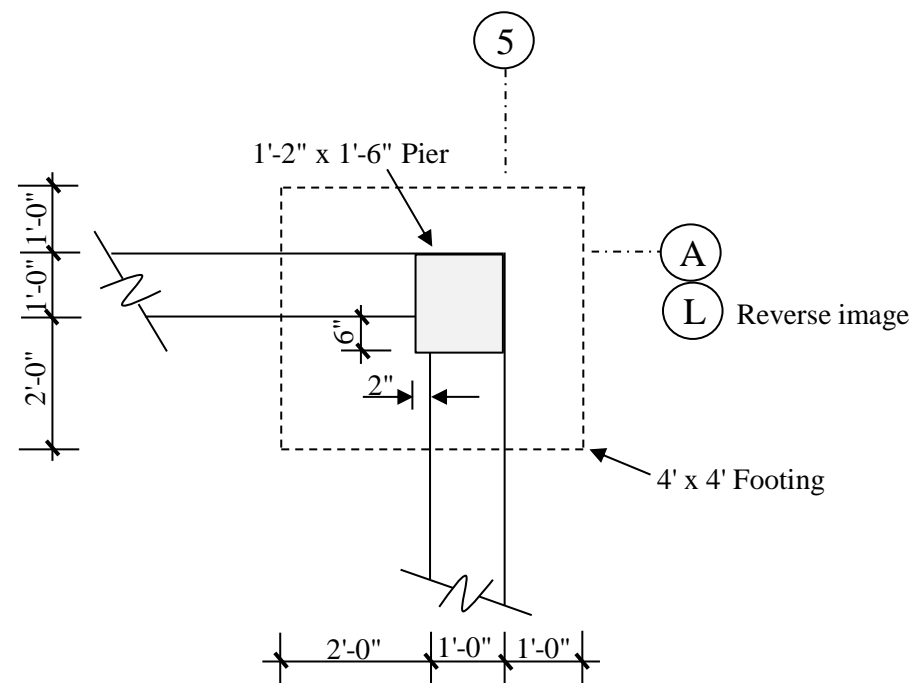
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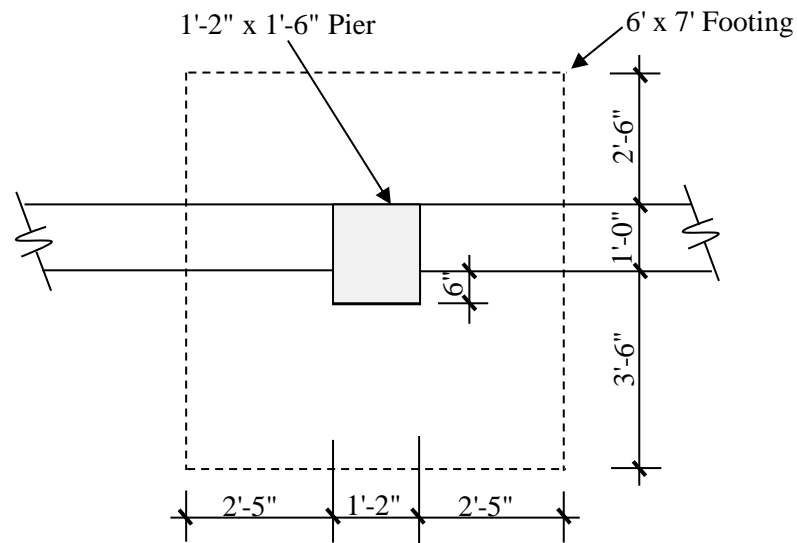
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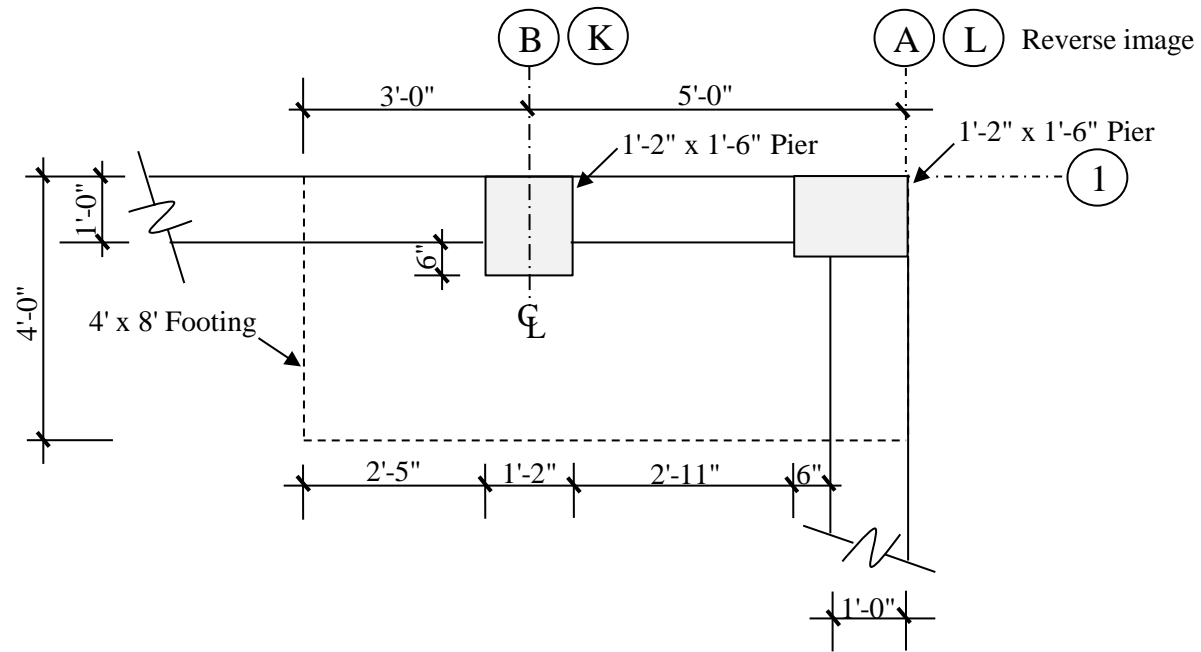
Top View Footings "A"



Top View Footings "B"



Top View Footings "C"



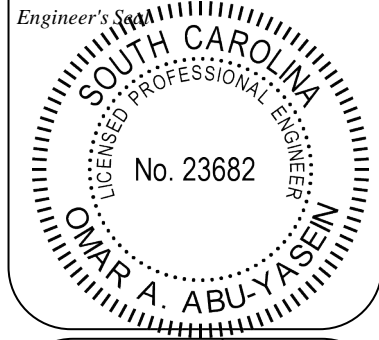
Top View Footings "D"

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