

FOUNDATION DETAIL

9/29/2017

GENERAL NOTES

The attached foundation details are approved for use in La Plata County where a professional design is not required or provided. These details are a minimum standard and are not a substitute for a professionally designed foundation system or as required in a high expansive soil area.

These foundation details are intended to be used for residential buildings and their accessory structures only, and are not intended for commercial buildings.

The basement wall details, shown in Standard 101, 102 & 103 are intended to be attached to a floor system at the top of the wall section. These basement wall designs are not intended to be used as free standing retaining walls. Where such conditions exist, a cantilevered retaining wall should be designed by a licensed design professional.

A foundation drain is required at the base of the basement wall. Section R405 of the International Residential Code reads as follows:

Foundation drains shall be provided around all concrete or masonry foundations that retain earth and enclose habitable or usable spaces located below grade. Drainage tiles, gravel or crushed stone drains perforated pipe or other approved systems or materials shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an approved drainage system. Gravel or crushed stone drains shall extend at least one foot beyond the outside edge of the footing and be covered with an approved filter membrane material. The top of open joints of drain tiles shall be protected with strips of building paper and the drainage tiles or perforated pipe shall be placed on a minimum of 2 inches of washed gravel or crushed rock at least one sieve size larger than the tile joint opening or perforation and covered with not less than 6 inches of the same material.

Damp proofing of foundation walls is required on the outside of all exterior walls. Section R406.1 of the IRC reads as follows:

Foundation damp proofing. Foundation walls that retain earth and enclose habitable or usable space located below grade shall be damp proofed from the top of the footing to the finished grade. Masonry walls shall have not less than 3/8 inch portland cement parge applied to the exterior of the wall. The parge shall be damp proofed with a bituminous coating, 3 pounds per square yard of acrylic modified cement: 1/8 inch coat of surface-bonded mortar complying with ASTM C 887 or any material permitted for waterproofing in Section R406.2. Concrete walls shall be damp proofed by applying any one of the above listed damp proofing materials or any one of the waterproofing materials listed in Section R406.2 to the exterior of the wall.

$\frac{3}{4}$ " GLUED AND NAILED FLR. SHTG.
OVER "I"-JOISTS @ 16" O.C.
OR "I"-BLOCKING @ 32" O.C.
(WHEN JOISTS ARE PARALLEL TO THE WALL)

PT 2X8 PLATE
W/ 5/8"x10" DIA A.B.
EMBEDDED 7" MIN.
24" O.C. &
WITHIN 8" OF ENDS
W/ 4-8d NAILS @ EACH JOIST

10d TN @ 6" O.C.

2-#5 CONT.

INTERIOR HEATED AREAS MUST
BE INSULATED TO COMPLY
WITH THE ENERGY CODE.

8" CONCRETE
STEM WALL

#5 HORIZ CONT @ 10" O.C.
OR #4 @ 10" O.C.

#5 VERT @ 15" O.C.
OR
#4 VERT. @ 10" O.C.

DAMP PROOFING

BOND BREAK

CONCRETE BASEMENT SLAB

#5 REBAR VERT. @ 15" O.C.
OR
#4 REBAR VERT @ 10" O.C.
ALT. HOOKS IN FOOTINGS

(2) #5 CONT.
OR
(3) #4 CONT.

FOUNDATION DRAIN

101

8'-0" CONC. STEMWALL
N.T.S.

Notes:

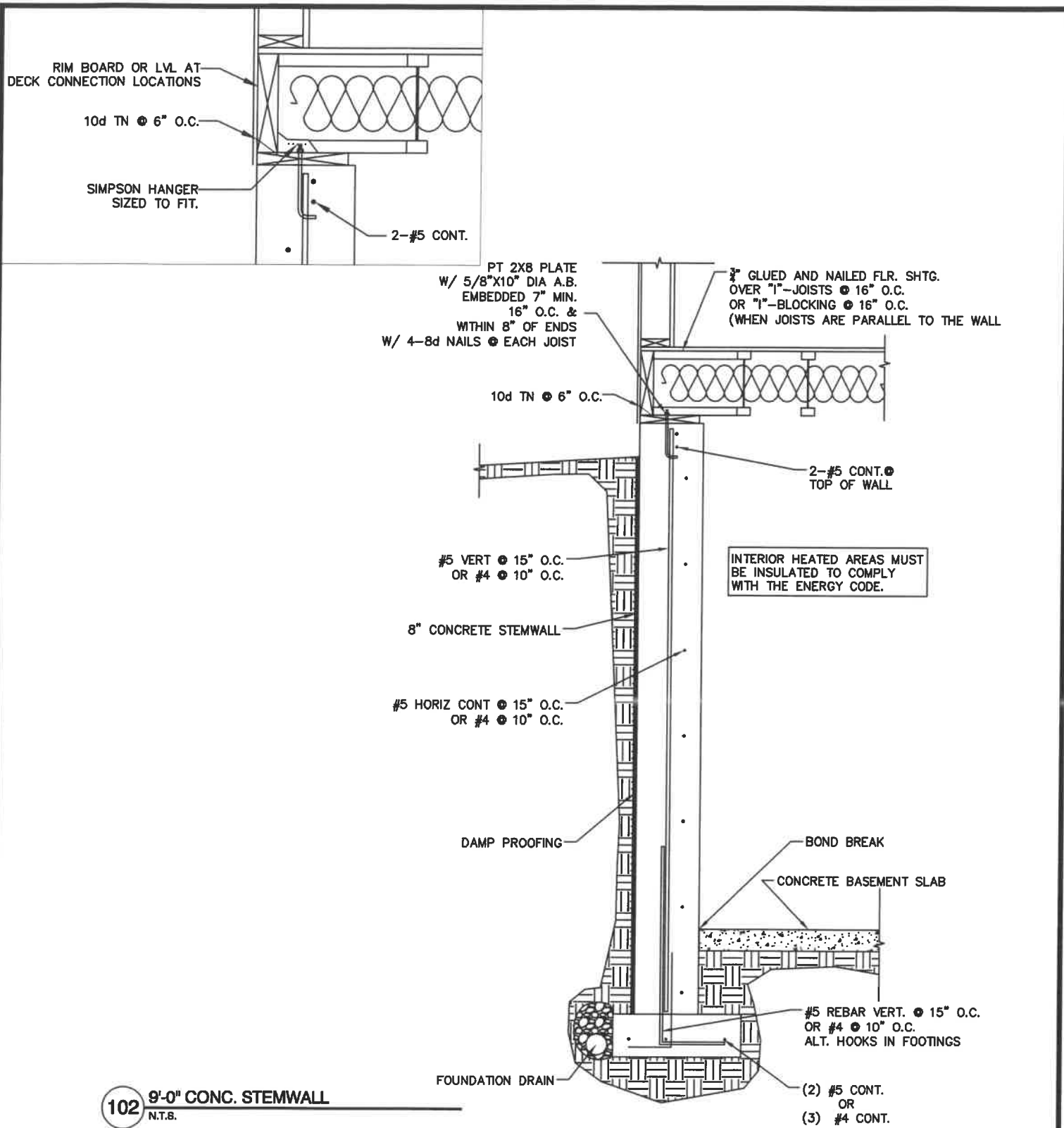
- CONC. STRENGTH = 3000 PSI @ 28 days
- REINFORCEMENT = GR 40 ($f_y=40,000$ psi) MIN.
- ALL CONC. SHALL BE CONSOLIDATED BY MECH. VIBRATION.
- MINIMUM REINFORCEMENT LAP LENGTH = 24"
- COMPACT ALL BACKFILL TO 95% OF ASTM D-698
- ALL FDNS SHALL BEAR ON DENSE UNDISTURBED NATIVE SOIL.
- REINFORCEMENT SHALL BE CONTINUOUS AROUND ALL CORNERS.

LA PLATA COUNTY
BUILDING DEPARTMENT
FOUNDATION DETAILS

MINIMUM REQUIREMENTS
ONE & TWO STORY RESIDENTIAL

STANDARD #

101



Notes:

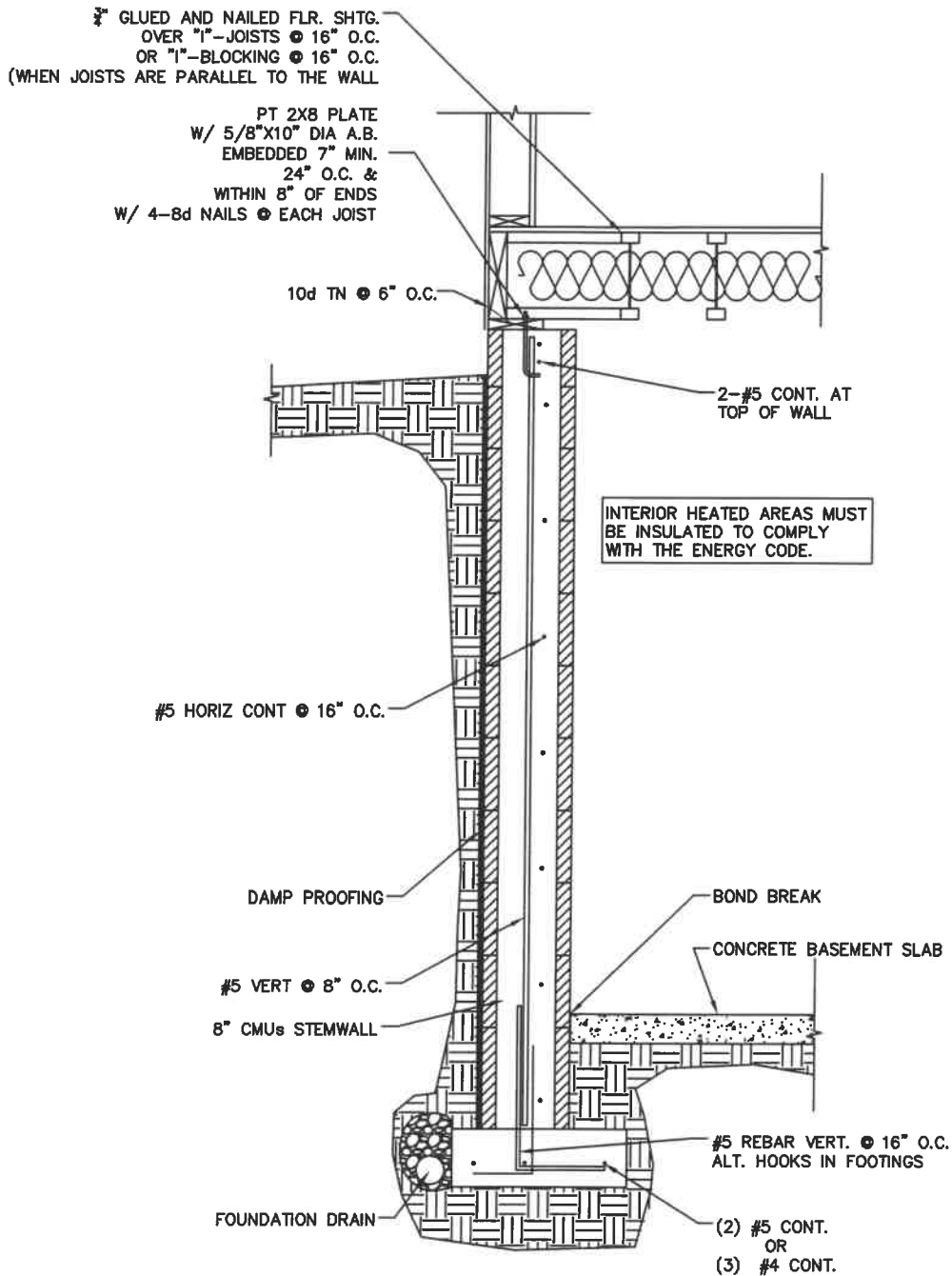
- CONC. STRENGTH = 3000 PSI @ 28 days
- REINFORCEMENT = GR 40 (fy=40,000 psi) MIN.
- ALL CONC. SHALL BE CONSOLIDATED BY MECH. VIBRATION.
- MINIMUM REINFORCEMENT LAP LENGTH = 24"
- COMPACT ALL BACKFILL TO 95% OF ASTM D-698
- ALL FDNS SHALL BEAR ON DENSE UNDISTURBED NATIVE SOIL.
- REINFORCEMENT SHALL BE CONTINUOUS AROUND ALL CORNERS.

**LA PLATA COUNTY
BUILDING DEPARTMENT
FOUNDATION DETAILS**

MINIMUM REQUIREMENTS
ONE & TWO STORY RESIDENTIAL

STANDARD #

102



103 8'-0" CONC. BLOCK STEMWALL
N.T.S.

Notes:

- CONC. STRENGTH = 3000 PSI @ 28 days
- REINFORCEMENT = GR 40 (fy=40,000 psi) MIN.
- ALL CONC. SHALL BE CONSOLIDATED BY MECH. VIBRATION.
- MAX. GROUT LIFT = 5'-4" PER LIFT.
- MINIMUM REINFORCEMENT LAP LENGTH = 24"
- COMPACT ALL BACKFILL TO 95% OF ASTM D-698
- ALL FDNS SHALL BEAR ON DENSE UNDISTURBED NATIVE SOIL.
- REINFORCEMENT SHALL BE CONTINUOUS AROUND ALL CORNERS.

**LA PLATA COUNTY
BUILDING DEPARTMENT
FOUNDATION DETAILS**

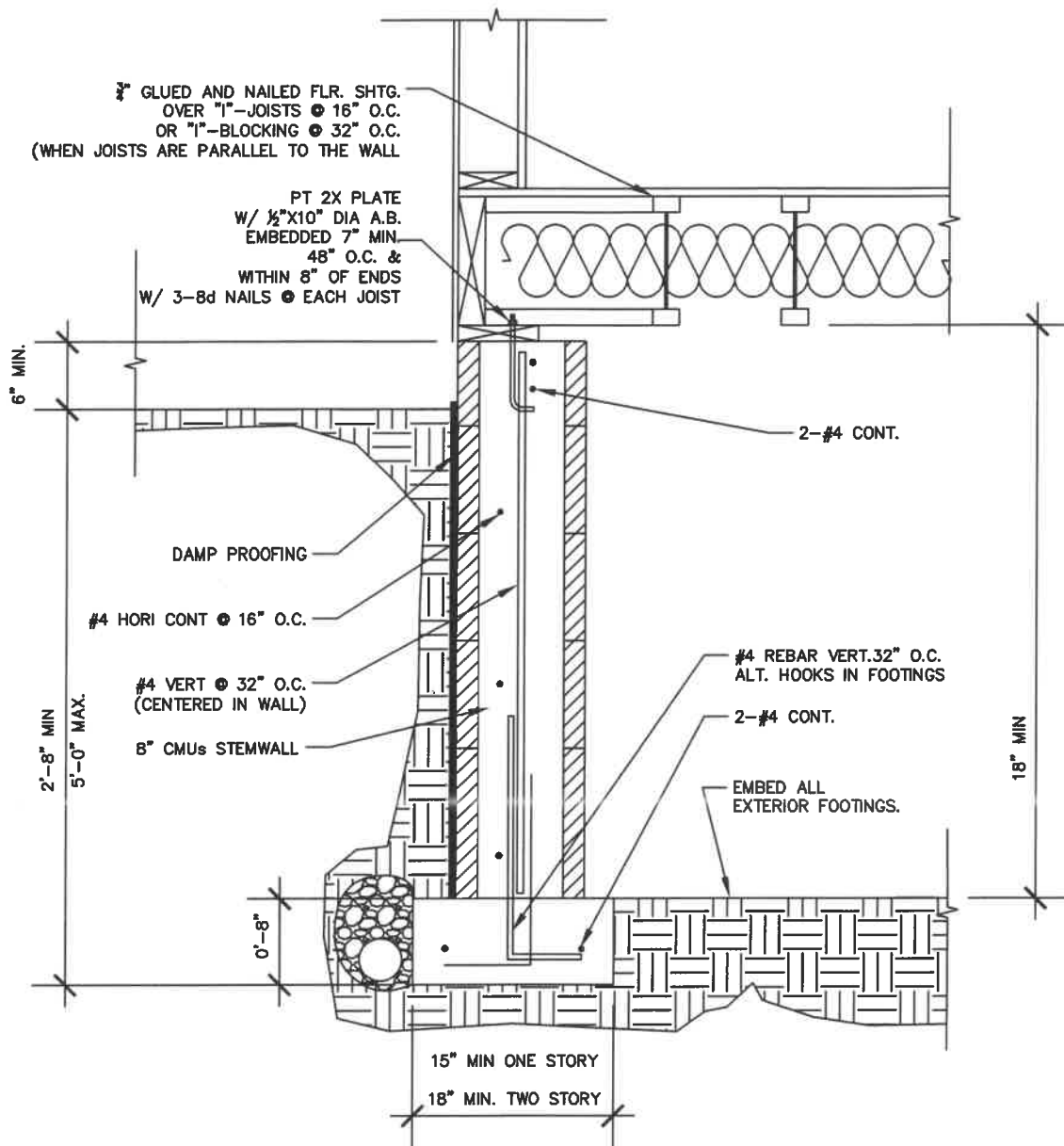
MINIMUM REQUIREMENTS
ONE & TWO STORY RESIDENTIAL

STANDARD #

103



- CONC. STRENGTH = 3000 PSI @ 28 days
- REINFORCEMENT = GR 40 (fy=40,000 psi) MIN.
- ALL CONC. SHALL BE CONSOLIDATED BY MECH. VIBRATION.
- MINIMUM REINFORCEMENT LAP LENGTH = 24"
- CRAWLSPACE BACKFILL AND FLR. STRUCTURE SHALL BE COMPLETED BEFORE BACKFILLING EXTERIOR.
- COMPACT ALL BACKFILL TO 95% OF ASTM D-698
- ALL FDNS SHALL BEAR ON DENSE UNDISTURBED NATIVE SOIL.
- REINFORCEMENT SHALL BE CONTINUOUS AROUND ALL CORNERS.



105 CONC. BLOCK STEMWALL

N.T.S.

Notes:

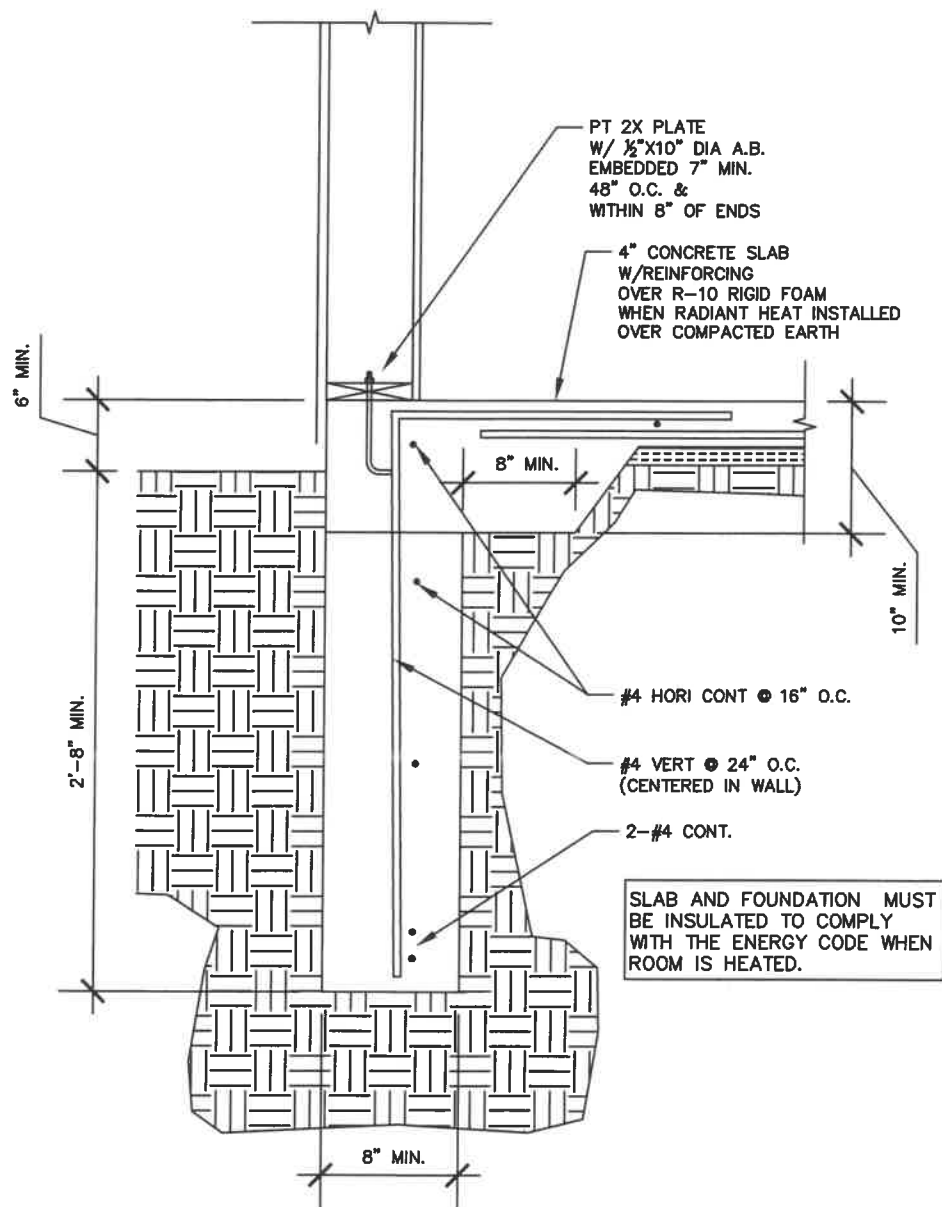
- CONC. STRENGTH = 3000 PSI @ 28 days
- REINFORCEMENT = GR 40 (fy=40,000 psi) MIN.
- ALL CONC. SHALL BE CONSOLIDATED BY MECH. VIBRATION.
- MINIMUM REINFORCEMENT LAP LENGTH = 24"
- CRAWLSPACE BACKFILL AND FLR. STRUCTURE SHALL BE COMPLETED BEFORE BACKFILLING EXTERIOR.
- COMPACT ALL BACKFILL TO 95% OF ASTM D-698
- ALL FDNS SHALL BEAR ON DENSE UNDISTURBED NATIVE SOIL.
- REINFORCEMENT SHALL BE CONTINUOUS AROUND ALL CORNERS.

**LA PLATA COUNTY
BUILDING DEPARTMENT
FOUNDATION DETAILS**

MINIMUM REQUIREMENTS
ONE & TWO STORY RESIDENTIAL

STANDARD #

105



106

MONOLITHIC CONC. STEMWALL
N.T.S.

Notes:

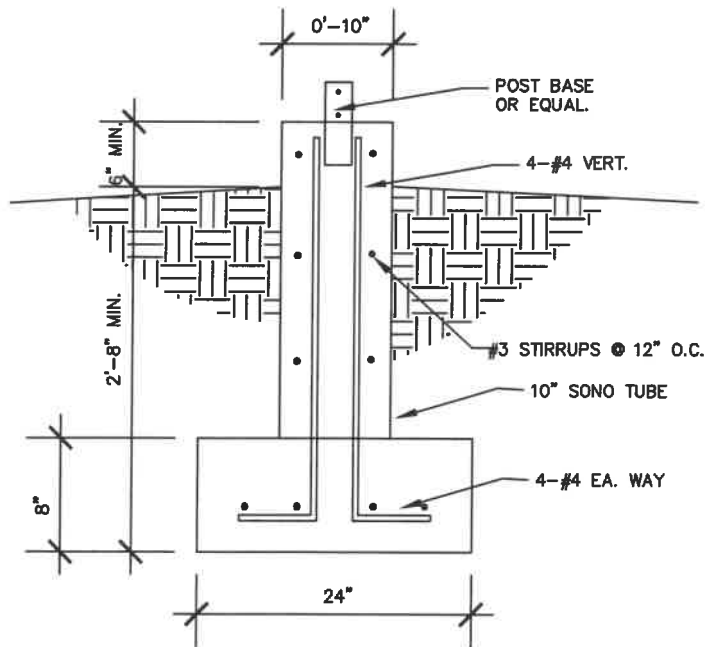
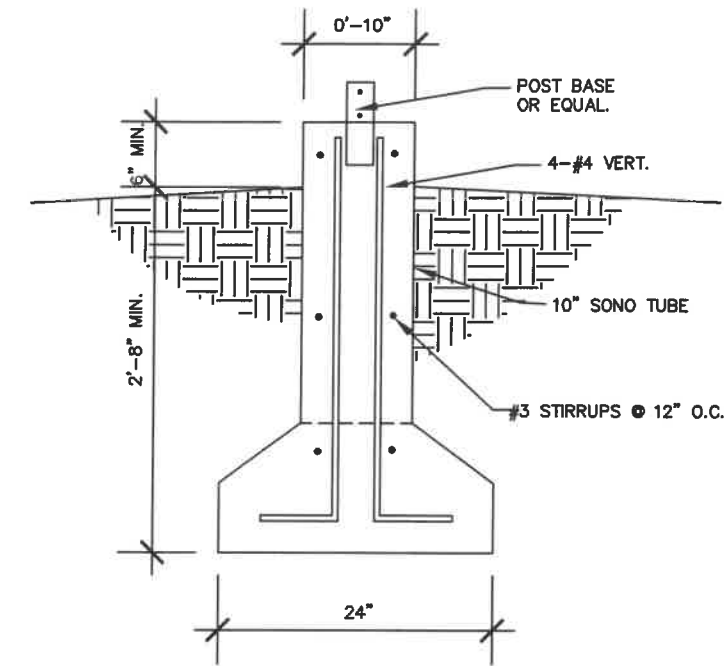
- CONC. STRENGTH = 3000 PSI @ 28 days
- REINFORCEMENT = GR 40 (fy=40,000 psi) MIN.
- ALL CONC. SHALL BE CONSOLIDATED BY MECH. VIBRATION.
- MINIMUM REINFORCEMENT LAP LENGTH = 24"
- COMPACT ALL BACKFILL TO 95% OF ASTM D-698
- ALL FDNS SHALL BEAR ON DENSE UNDISTURBED NATIVE SOIL.
- REINFORCEMENT SHALL BE CONTINUOUS AROUND ALL CORNERS.

**LA PLATA COUNTY
BUILDING DEPARTMENT
FOUNDATION DETAILS**

MINIMUM REQUIREMENTS
ONE & TWO STORY RESIDENTIAL

STANDARD #

106



107 **CONC. PIER FOOTING**
N.T.S.

Notes:

- CONC. STRENGTH = 3000 PSI @ 28 days
- REINFORCEMENT = GR 40 (fy=40,000 psi) MIN.
- ALL CONC. SHALL BE CONSOLIDATED BY MECH. VIBRATION.
- MINIMUM REINFORCEMENT LAP LENGTH = 24"
- COMPACT ALL BACKFILL TO 95% OF ASTM D-698
- ALL FDNS SHALL BEAR ON DENSE UNDISTURBED NATIVE SOIL.
- REINFORCEMENT SHALL BE CONTINUOUS AROUND ALL CORNERS.

**LA PLATA COUNTY
BUILDING DEPARTMENT
FOUNDATION DETAILS**

MINIMUM REQUIREMENTS
ONE & TWO STORY RESIDENTIAL

STANDARD #

107