CAST-IN-PLACE CONCRETE: Classification II (f'c = 3400 psi)

AGGREGATE FOR GROUT: Meet the requirements of ASTM C404 or Specification Section 901 size 8 or 89.

CONCRETE MASONRY UNITS (CMU): Provide normal weight blocks.

DURING CONSTRUCTION, cover tops of walls, with waterproof sheeting at the end of each day's work, or when construction is

USE SOAP AND POTABLE WATER TO CLEAN WALLS. IF STAIN REMOVAL IS NECESSARY, USE A CLEANING METHOD INDICATED IN NCMA

JOINT REINFORCEMENT: Use W 1.7 (9mm) galvanized ladder reinforcing spaced at 16" vertically. PROVIDE SPECIAL ACCESSORIES FOR CORNERS, INTERSECTIONS, ETC. JOINT REINFORCING SHALL BE CONTINUOUS EXCEPT IT SHALL NOT PASS THROUGH VERTICAL MASONRY CONTROL JOINTS. LAP JOINT REINFORCING A MINIMUM OF 6". 

CONSTRUCT EXPANSION JOINTS IN THE FOUNDATION AT 90 FOOT MAXIMUM INTERVALS, AND DIRECTLY BELOW A WALL CONTROL JOINT.

Dowel Load Transfer Devices will be ASTM A 36 smooth round bars hot-dip galvanized in accordance with Specification Section 962. INSTALL DOWEL LOAD TRANSFER DEVICES IN ACCORDANCE WITH SPECIFICATION SECTION 230.

If spread footings, use a wall-back compactor of at least 600 lbs. in weight. Obtain a minimum density of 95% of the maximum dry density as determined by FM 1 T-180. Perform soil density tests at 100 foot intervals.

PROTECT WALLS DURING CONSTRUCTION FROM SOIL, GROUT OR MORTAR STAINS. CLEAN WALLS AS WORK PROGRESSES BY DRY BRUSHING TO REMOVE MORTAR FINISHS AND SMEARS BEFORE TOOLING JOINTS.

USE SOAP AND POTABLE WATER TO CLEAN WALLS. IF STAIN REMOVAL IS NECESSARY, USE A CLEANING METHOD INDICATED IN NCMA TEK 8-2A APPROPRIATE TO THE TYPE OF STAIN ON THE EXPOSED SURFACE.

DURING CONSTRUCTION, COVER TOPS OF WALLS, WITH WATERPROOF SHEETING AT THE END OF EACH DAY'S WORK, OR WHEN CONSTRUCTION IS NOT IN PROGRESS. EXTEND SHEETING A MINIMUM OF 2 FEET DOWN EACH SIDE AND SECURE IN PLACE.

COMPLY WITH HOT WEATHER REQUIREMENTS IN ACI 530.1.

14. STORAGE OF MATERIALS:

A. Store CMU's on elevated platforms in a dry location or under cover. Do not use cementitious materials that have become damp or exceeded the manufacturer's shelf life. Do not use cementitious materials in wet locations.

B. Store masonry accessories and reinforcing to prevent corrosion and accumulation of dirt and oil.

C. Bowing: 1/240 panel dimension

D. Warping: 1/8" per foot distance to nearest corner

E. Out of Square: 1/8" per 6 ft., but not more than 1/2" total along any side

F. Openings: +/- 1/8"  

G. Plane of side mold: +/- 1/8"  

H. Thickness: +/- 1/8"  

I. Overall Height & Width: +/- 1/8"  

J. Concrete Cover: 1" unless otherwise noted.

K. Grout for Auger Cast Piling: Minimum 28 day Strength = 5500 psi

L. Minimum Compressive Strength for Form Removal and Handling of Posts, Panels and Precast Spread Footings: 

i. 500 psi for horizontally cast post, panels and precast spread footings.  

ii. 2,000 psi for vertically cast panels or when tilt-up form tables are used for horizontally cast panels.

M. Reinforcing Steel: 

i. 2,500 psi for horizontally cast post, panels and precast spread footings.

ii. 2,000 psi for vertically cast panels or when tilt-up form tables are used for horizontally cast panels.

N. neoprene pads: 

i. Neoprene Pads for collar or Pedestal Bearing Points and between stacked panels 

ii. Adurometer hardness between Grade 50 and Grade 80 in accordance with Specification Section 932-2.
DRAINAGE HOLES TYPES A, B, C & D

* Hole Types A, B, C, & D refer to distance from bottom of panel/wall to center of the pipe.

NOTES:
1. Drainage holes may be formed with 4" NPS PVC pipe that may remain in place.
2. See Wall Control drawings for number, Type and location/spacing of drainage holes.
**PIVOTING JOINT DETAILS**

NOTE: Shop Drawings shall include specific pivoting point details of panel ends at locations where the deflection angle (2°) between panels exceeds 20°.

**ELEVATION STEP AT TOP OF WALL**

(Precast Panel Cap not Shown)

**ELEVATION STEP AT BOTTOM OF WALL**

Auger Cast Pile (Typ.)

**PERIMETER WALLS**

TYPICAL ELEVATION

(Front Face Shown, Textured Finish not Shown for Clarity)

**SECTION D-D**

**SECTION E-E**

**TYPICAL PLAN**

* Nominal embedment (not including tolerances)
TYPICAL PANEL ELEVATION

* In lieu of utilizing the standard pick up points below, panels may be cast vertically or cast horizontally then lifted upright using lift-cables prior to lifting from form. In this case, pick points must be placed in the top of panels only and transported maintaining the vertical orientation. If these criteria are met, the vertical steel may be reduced to #4 Bars @ 1'-3" (As=0.16 in.²/ft.)

DETAIL "B" - TOP-INSTALLED
(Typ. Both Ends)

DETAIL "B" - SIDE-INSTALLED
(Typ. Both Ends)
TYPICAL POST SECTION
(H Section)

SECTION I-I
(Precast Collar)

SECTION H-H
(H Section - Above Collar)

LOW CLEARANCE OPTION

TABLE 1

<table>
<thead>
<tr>
<th>Wind Speed (MPH)</th>
<th>Pile Length</th>
<th>Bars P1</th>
<th>Bars P1 thru P6</th>
<th>Bars S1</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>11'-6&quot;</td>
<td>#3</td>
<td>#3</td>
<td>#4</td>
</tr>
<tr>
<td>130</td>
<td>13'-6&quot;</td>
<td>#6</td>
<td>#3</td>
<td>#4</td>
</tr>
<tr>
<td>150</td>
<td>15'-6&quot;</td>
<td>#7</td>
<td>#3</td>
<td>#4</td>
</tr>
</tbody>
</table>

NOTES:
1. See Shop Drawing for Post Lengths.

BAR BENDING DETAILS

BAR P1
Bar Length = 2'-3½"

BAR P2
Bar Length = 8'-6"

All bar dimensions in bending diagrams are out-to-out.
All bars not shown in the bending diagrams are straight.
PERIMETER WALLS

2016 DESIGN STANDARDS

LAST REVISION: 01/01/14

DESCRIPTION:

REV ISIO N
NO. SHEET 5250

INDEX NO. 7 of 10

STANDARD POST PLACEMENT IN AUGER CAST PILE
(Standard Post Shown, 45° and 90° Corner Posts Similar)

LOW CLEARANCE OPTION

TYPICAL POST

SECTION H-H
(Reinforcing not Shown for Clarity)

SECTION I-I
(Typical Post Option)

SECTION I-I
(Low Clearance Option)

SECTION J-J
(Typical Post Option)

SECTION J-J
(Low Clearance Option)

PRECAST OPTION - POST PLACEMENT & PILE REINFORCING STEEL DETAILS

Notes:
1. For Reinforcing Steel Sizes and Pile Lengths, see Table 1, Sheet 6.
2. For Corner Posts, see Sheet 8.
3. For Typical Post Section Dimensions, see Sheet 6.

ALL BAR DIMENSIONS IN BENDING DIAGRAMS ARE OUT-TO-OUT.
ALL BARS NOT SHOWN IN THE BENDING DIAGRAMS ARE STRAIGHT.
NOTE:
1. For Reinforcing Steel Sizes, and Foundation Dimensions, see Table 1 Sheet 6.
2. For location of Section H-H and I-I, see Sheet 6.
3. The Bearing area beneath Neoprene Pads is formed by top of Auger Cast Pile Grout.

SPECIAL POSTS FOR 90° CORNERS

BAR P3
(90° Corner)
Bar Length = 3'-3".

BAR P6
(90° Corner)
Bar Length = 4'-2".

SPECIAL POSTS FOR 45° CORNERS

BAR P4
(45° Corner)
Bar Length = 3'-3".

BAR P5
(45° Corner)
Bar Length = 4'-6".

All bar dimensions in bending diagrams are out-to-out.
All bars not shown in the bending diagrams are straight.

PRECAST OPTION - SPECIAL CORNER POSTS

PERIMETER WALLS
Notes:
1. End vertical reinforcing bars 1½" from top of bond beam blocks and horizontal bars 1½" from edge of control joint.
2. Do not continue horizontal #4 bond beam reinforcing through control joint.
3. Use stainless steel joint stabilizing anchors spaced at 16" vertically at all control joints. Install per manufacturer's instructions.
4. Seal Control Joints with backer rod and Type "A" silicone sealant (top and both sides).
5. See Sheet 10 for Bar placement details.
6. For Pilaster Cap Details, see Sheet 2.

Table 2

<table>
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<tr>
<th>Wind Speed Category</th>
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<th>Foundations</th>
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<tbody>
<tr>
<td></td>
<td>Bars F1 &amp; F2</td>
<td>T-Footing Width (W)</td>
</tr>
<tr>
<td>150</td>
<td>#5 2-3</td>
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MASONRY OPTION

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Notes:
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5. See Sheet 10 for Bar placement details.
6. For Pilaster Cap Details, see Sheet 2.
1. For location of Sections K-K and L-L see Sheet 9.
2. Provide and install ⅜” Preformed Expansion Joints with 1” Ø Dowel Load Transfer Devices at 90’ Max. as shown. See Sections L-L for placement details.
3. For reinforcing sizes and spacings, see Table 2, Sheet 9.
4. Pairs F1, V1 are required in the wall cells on both sides of pilasters, plus a pair in each pilaster cell. Space wall reinforcing per Table 2, Sheet 9.

Notes: