

MINIMUM* CONCRETE COVER FOR REINFORCING STEEL**

CAST AGAINST EARTH OR WEATHER	3"
EXPOSED TO WEATHER OR IN GROUND CONTACT	2"
SLABS, WALLS, JOISTS	1-1/2"
BEAMS, COLUMNS	1-1/2"

***WHERE GREATER COVER IS CALLED FOR ON THE DRAWINGS, GREATER COVER SHALL BE USED.

MIN. TENSION DEVELOPMENT LENGTH OF LAP SPICES OF UNCOATED BARS (INCHES) FOR f'c=4000 PSI (CRSI 2008)**

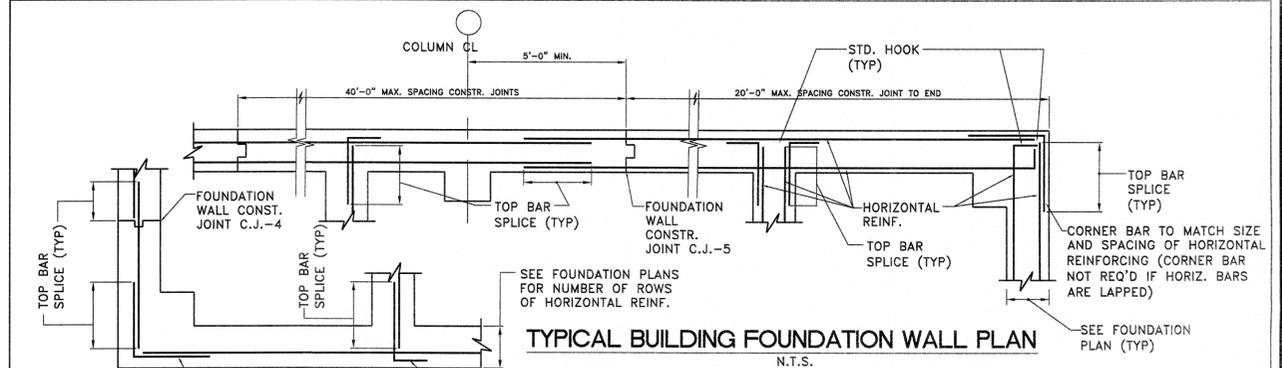
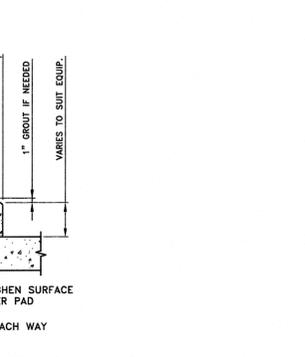
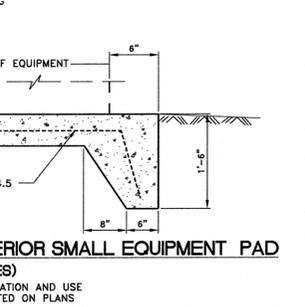
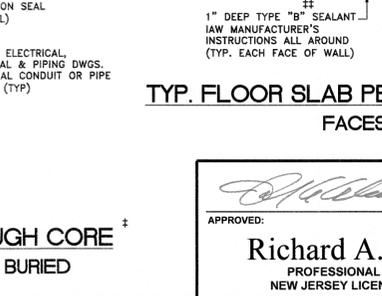
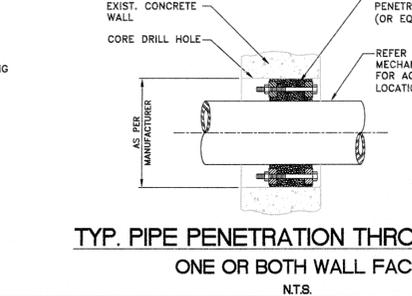
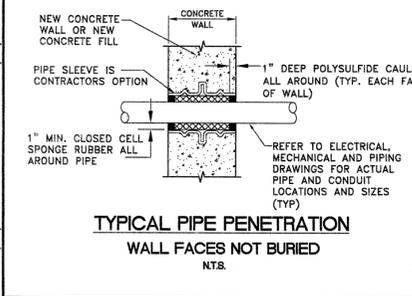
BAR SIZE	CLASS B (ACI 12.5.2)			
	TOP BAR*		ALL OTHERS	
#3	1	2	1	2
#4	24	36	22	32
#5	32	48	29	43
#6	40	60	36	54
#7	48	72	43	64
#8	56	84	50	75
#9	64	96	57	87
#10	72	108	64	99
#11	80	120	71	111

- CONCRETE CONSTRUCTION GENERAL NOTES:**
- ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS.
 - REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60. REINFORCING STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH ACI 315, LATEST EDITION. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND BE IN SHEETS NOT ROLLS. LAP A MINIMUM OF 12 INCHES AT SIDES AND ENDS. REINFORCING STEEL CONTRACTOR SHALL FURNISH ALL NECESSARY ACCESSORIES. REINFORCING CONTRACTOR SHALL SUBMIT SHOP DETAIL DRAWINGS OF ALL REINFORCING FOR APPROVAL PRIOR TO FABRICATION IN ACCORDANCE WITH THE SPECIFICATIONS.
 - ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318, ACI 301, AND IBC (CURRENT NEW JERSEY ADOPTED EDITIONS). CONCRETE SHALL BE CURED FOR A MINIMUM OF 7 DAYS.
 - ALL FOOTINGS AND FOUNDATIONS SHALL BEAR ON FIRM UNDISTURBED NATURAL SOIL OR CONTROLLED COMPACTED FILL WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 1500 PSF UNLESS NOTED OTHERWISE ON DRAWING. CONTRACTOR TO PROVIDE SOILS ENGINEER TEST REPORT VERIFYING THAT FOOTING SUBGRADE CAN OBTAIN THE REQUIRED BEARING CAPACITY PRIOR TO PLACING CONCRETE IN ACCORDANCE WITH THE SPECIFICATIONS.
 - ALL FILLS AND BACKFILL SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 (6") IN THICKNESS. THE BACKFILL SHALL BE THOROUGHLY COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTOR SHALL PLACE AND COMPACT LAYERS ON ALTERNATING SIDES OF WALL TO MINIMIZE LATERAL PRESSURE ON WALL.
 - SEE SPECIFICATIONS FOR FILL AND BACKFILL MATERIAL.
 - FOR MASONRY REINFORCEMENT AND LINTEL DETAILS, REFER TO MASONRY GENERAL NOTES SHEET AND WALL SECTIONS. FOR WALL AND FLOOR OPENINGS, MASONRY INSERTS, DOWELS AND EMBEDDED ANCHORS NOT SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DWGS.
 - FOR LOCATIONS, ARRANGEMENT, SIZE, DETAILS OF UTILITIES AND PROCESS PIPING WITHIN AND PENETRATING CONCRETE STRUCTURES REFER TO THE APPROPRIATE DISCIPLINE'S DRAWINGS. NO PIPING OR CONDUIT MAY PENETRATE FOOTINGS UNLESS SPECIFICALLY DETAILED ON THE CONCRETE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICTS WITH THE FOOTING ELEVATIONS AND PIPING OR CONDUIT PRIOR TO POURING THE FOUNDATIONS.
 - CONTRACTOR SHALL NOT SUBMIT REINFORCING DRAWINGS NOR PROCEED WITH EQUIPMENT OR PRE-ENGINEERED BUILDING FOUNDATIONS UNTIL AFTER EQUIPMENT OR PRE-ENGINEERED BUILDING SHOP DRAWINGS ARE REVIEWED AND APPROVED BY THE ENGINEER. EQUIPMENT OR PRE-ENGINEERED BUILDING ANCHOR BOLT NUMBER, SIZE AND LOCATIONS ARE TO BE INSTALLED PER MANUFACTURER'S APPROVED SHOP DRAWINGS.
 - CONCRETE STUD ANCHORS SHALL BE H4L STUD ANCHORS AS MANUFACTURED BY THE NELSON DIVISION OF TRW OR EQUIVALENT.
 - FOR AREAS REQUIRING FLOOR SLAB SEALER/HARDENER SEE ROOM FINISH SCHEDULE AND/OR SPECIFICATION.
 - ANY ALUMINUM IN CONTACT WITH DISSIMILAR MATERIALS (CONCRETE, STEEL OR MASONRY) SHALL HAVE THE CONTACT SURFACE COATED WITH A BITUMINOUS PAINT.
 - FOR MASONRY DOWELS NOT SHOWN ON SPECIFIC DRAWINGS SEE MASONRY AND STEEL GENERAL NOTES AND TYPICAL DETAILS.
 - DRILLED IN ADHESIVE ANCHORS SHALL BE HILTI STAINLESS STEEL HAS THREADED RODS WITH NUT AND WASHER INSTALLED WITH HILTI HIT HY 200 ADHESIVE ANCHORING SYSTEM OR EQUIVALENT, MINIMUM EMBEDMENT AS SHOWN ON DRAWINGS.
 - WHENEVER AN ELECTRICAL GROUNDING SYSTEM IS REQUIRED AND FOOTINGS CONTAIN REINFORCING BARS #4 OR LARGER, AND THE TOTAL PERIMETER OF THE FOOTING IS MORE THAN 20 FEET, THEN THE REINFORCING SHALL BE BONDED TOGETHER TO FORM PART OF THE ELECTRICAL GROUNDING SYSTEM IN ACCORDANCE WITH SECTION 250-50 OF THE 2002 NATIONAL ELECTRICAL CODE.
 - COLD WEATHER CONCRETING (AVERAGE DAILY TEMPERATURE BELOW 40 DEGREES FOR MORE THAN THREE CONSECUTIVE DAYS AND THE AIR TEMPERATURE IS NOT GREATER THAN 50 DEGREES FOR MORE THAN HALF OF ANY 24 HOUR PERIOD) SHALL BE DONE IN STRICT ACCORDANCE WITH ACI 306R-88 "COLD WEATHER CONCRETING".
 - HOT WEATHER CONCRETING SHALL BE DONE IN STRICT ACCORDANCE WITH ACI 305R-99 "HOT WEATHER CONCRETING".
 - UNFORMED CONCRETE SURFACES SCHEDULED TO RECEIVE A SECOND LIFT OF CONCRETE SHALL BE GIVEN A RAKE OR SCRATCHED FINISH.
 - SECTIONS OF FOUNDATION SLABS, WALLS, AND OTHER SLABS SHALL BE PLACED CONTINUOUSLY BETWEEN CONSTRUCTION JOINTS TO PRODUCE A MONOLITHIC UNIT. AT LEAST 48 HOURS SHALL ELAPSE BETWEEN CASTING OF ADJACENT UNITS TO ALLOW SHRINKAGE TO OCCUR PRIOR TO ADJACENT POUR. ALL CONSTRUCTION JOINTS SHALL BE COATED WITH A BONDING AGENT IMMEDIATELY PRIOR TO PLACING SECOND POUR.
 - PIPE PENETRATIONS THROUGH EXISTING WALL LESS THAN 6" IN DIAMETER, CUT HOLE 2" LARGER THAN O.D. PIPE. INSTALL PIPE GROUT SOLID BETWEEN PIPE AND WALL.
 - STEEL PARTIALLY OR FULLY ENCASED IN CONCRETE OR MASONRY SHALL BE FINISH COATED ON THE CONTACT AREAS WITH COAL TAR EPOXY IN ACCORDANCE WITH THE SPECIFICATION PRIOR TO ENCASING.

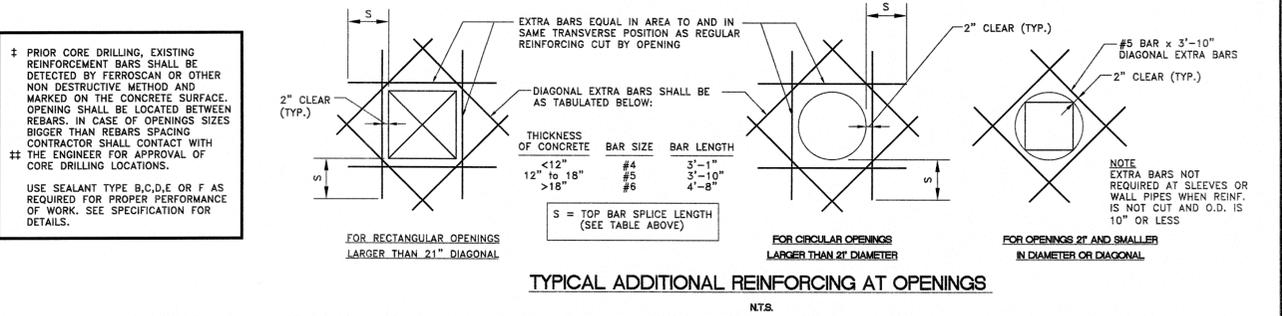
TYPICAL CONSTRUCTION JOINTS
N.T.S.

NOTES:
A. REFER TO PLANS, DETAILS AND SECTIONS FOR REINFORCEMENT SIZE AND SPACING AND SLAB OR WALL THICKNESS.
B. CONSTRUCTION JOINTS ARE ALSO USED AS CONTRACTION JOINTS TO ALLOW SHRINKAGE TO OCCUR PRIOR TO THE ADJACENT POUR - SEE NOTE 19

CONSTRUCTION JOINT SCHEDULE							
d(in)	a(in)	b(in)	c(in)	d(in)	a(in)	b(in)	c(in)
6	2 1/4	1 1/2	2 1/4	13	5	4	4
8	3	2	3	14	5	4	5
10	3	4	3	15	6	4	5
11	4	4	3	16	6	4	6
12	4	4	4	18	7	4	7



- TYPICAL BUILDING FOUNDATION WALL PLAN**
N.T.S.
- NOTES:
1. PEDESTAL REINFORCING AND VERTICAL WALL REINFORCING ARE NOT SHOWN FOR CLARITY. PEDESTALS OCCUR WHERE INDICATED ON THE BUILDING FOUNDATION PLANS.
2. FOUNDATION WALL CONSTRUCTION JOINTS (WHERE NOT SHOWN ON FOUNDATION PLANS) SHALL BE NOT LESS THAN 5'-0" FROM ANY COLUMN CENTER LINE OR BUILDING CORNER AND AT MAXIMUM SPACING INTERVALS ALONG ANY FOUNDATION OF 40'-0".
3. HORIZONTAL GRADE BEAM REINFORCING SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. HORIZONTAL GRADE BEAM REINFORCING SHALL BE CONTINUOUS THROUGH ALL PEDESTALS.



APPROVED: Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDC 24GA27988800 200 HIGH STREET 2 MARKET STREET MOUNT HOLLY, N.J. PATERSON, N.J.	GRIT CHAMBER UPGRADE CONCRETE GENERAL NOTES AND DETAILS SCALE: AS NOTED	CLIENT: WOODBIDGE TOWNSHIP PROJECT LOCATION: WOODBIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: APRIL 2017 DESIGNED BY: PG DRAWN BY: PG CHECKED BY: DEPT. HEAD:	SHEET S01 FILE NO.:
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