STRUCTURAL NOTES

GENERAL NOTES

1. THE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2006 INTL BUILDING CODE. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH PROJECT SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING & SITE DRAWINGS. CONSULT THESE DRAWINGS FOR INFORMATION NOT SHOWN IN THE STRUCTURAL DRAWINGS.

2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE EXECUTING ANY WORK. ANY DISCREPENCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

3. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE ERECTION PROCEDURES AND SEQUENCE OF CONSTRUCTION TO INSURE SAFETY OF THE BUILDING AND IT'S COMPONENTS DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL COMPONENTS.

4. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION COMPLIES WITH OSHA REQUIREMENTS. CONTRACTOR SHALL INFORM ARCHITECT/ENGINEER IF ANY DETAILS OR CONDITIONS DO NOT MEET OSHA REQUIREMENTS FOR FABRICATION.

DESIGN LOADS

THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT LOCAL BUILDING CODE. THE FOLLOWING SUPERIMPOSED LOADS HAVE BEEN UTILIZED.

MAIN FLOOR LIVE LOADS = 100 psf (Assembly)
40 psf (All other areas)

ROOF LIVE LOAD = 20 psf

DEAD LOAD = 15 psf (Includes Collateral Loads)

SNOW LOADS:

Ground Snow Load: (Pg)	25 psf
Exposure Factor: (Ce)	1.0
Thermal Factor: (Ct)	1.0
Importance Factor: (I)	1.1
Flat Roof Snow Load: (Pf)	19.25 psf

WIND LOADS:

Base Wind Speed:	90 mph
Importance Factor:	1.15
Exposure Catagory:	C
Wind Pressure:	22.07 psf

SEISMIC LOADS:

Sa	17.5%g
S1	5.8%g
Seismic Importance Factor	1.25
Use Group	II
Design Category:	B
Site Class:	D
Seismic Resisting System:	Light frame walls w/shear panels
Sds	.165
Sd1	.08
Analysis Procedure:	Equivalent Lateral Force
Basic Structural System:	Building Frame

ALL BUILDING COMPONENTS AND CLADDING ELEMENTS ARE TO BE DESIGNED BY THE MANUFACTURERS ENGINEER FOR WIND LOADING BASED ON APPLICABLE BUILDING CODES.

BASIC MATERIALS STANDARDS

A.	CONCRETE:	fc = 3,000 psi Reg. Wt.
B.	REINFORCING STEEL:	ASTM A-615, Grade 60 and ASTM A-706 where welding of reinforcing is required
C.	WELDED WIRE FABRIC:	ASTM A-185
D.	WELDED WIRE FABRIC:	ASTM A-36 U.N.O. ASTM A-992/A-572-50 at all beams & columns not provided by M.B. Supplier.
E.	STRUCTURAL TUBING:	Fy = 46 KSI UNDER ASTM A-500, GRADE B
F.	STRUCTURAL PIPE:	ASTM A-500, Fy KSI = 46
G.	BOLTS:	ASTM A-325N
H.	WELD ELECTRODES:	E70
J.	STEEL DECK:	ASTM A-611 (33,000 psi min.)
K.	MASONRY:	ASTM C90-00, fm = 1500 psi min.) fc = 3,000 psi normal weight for any block
L.	ANCHOR RODS:	ASTM F1554 (Gr. 36) w/ASTM A-563 heavy hex nuts (U.N.O.)
M.	EXPANSION BOLTS:	HILTI "KWIK BOLT II" (or equal)
N.	EPOXY ANCHORS:	HILTI HVA ANCHORING SYSTEM (or equal)
P.	LIGHT GAUGE STRUCTURAL STEEL:	Fy = 33 ksi UNDER ASTM A-653

FOUNDATIONS

1. SOIL-BEARING CAPACITY AND PROPERTIES SHALL BE VERIFIED BY A REGISTERED GEOTECHNICAL SOILS ENGINEER AT THE TIME OF EXCAVATION. IF, AFTER EXCAVATION THE CONDITION OF THE SOIL INDICATES A SOIL BEARING CAPACITY OF LESS THAN 2500 psf THE ARCHITECT SHALL BE INFORMED IMMEDIATELY & THE FOOTINGS MAY BE REVISED IF NECESSARY. CONSULT GEOTECHNICAL ENGINEER FOR SPECIFIC SUBGRADE PREPARATION AND FOUNDATION RECOMMENDATIONS.

2. A REGISTERED SOILS ENGINEER SHALL VERIFY ALLOWABLE DESIGN SOIL BEARING CAPACITY, SUBGRADE, FILL, BACKFILL AND SOIL DESIGN PROPERTIES PRIOR TO CONSTRUCTION OF BUILDING FOUNDATION.

3. FOUNDATION WAS DESIGNED FOR THE FOLLOWING DESIGN PROPERTIES:

ALLOWABLE BEARING PRESSURE: 2500 psf

CAST-IN-PLACE CONCRETE

1. EACH TYPE OF CONCRETE SHALL HAVE A MIX DESIGN SUBMITTED FOR APPROVAL. SUBMIT TESTED, STATISTICAL BACK-UP DATA PER ACI REQUIREMENTS FOR EACH MIX DESIGN. CONCRETE MIX DESIGN SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE.

2. CONCRETE SHALL HAVE THE FOLLOWING 28-DAY COMPRESSIVE STRENGTH:

a. NORMAL WEIGHT CONCRETE (145 LB/CF):

FOUNDATIONS 3,000 PSI
SLAB-ON-GRADE 3,000 PSI

3. CONCRETE SHALL BE PLACED, CURED & CONFORM TO ACI STANDARDS & SPECIFICATIONS.

4. CEMENT SHALL COMPLY WITH ASTM C150. AGGREGATES SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE AGGREGATE OR ASTM C330 FOR LIGHTWEIGHT AGGREGATE. CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNERS REPRESENTATIVE AND THE CONTRACTOR OF ANY NON-COMPLIANCE WITH THE ABOVE. ALL SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE 1-D AND SHALL HAVE A FUGITIVE DYE OR GARDSEAL MANUFACTURED BY LAMBERT CORPORATION. GARDSEAL IS FOR INTERIOR SLABS. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. ALL SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY. CALCIUM CHLORIDES SHALL NOT BE UTILIZED. OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.

5. CONTRACTOR SHALL SUBMIT A PLANS SHOWING LOCATION OF ALL CONSTRUCTION AND CONTROL JOINTS FOR APPROVAL PRIOR TO CONSTRUCTION. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED UNLESS SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS.

6. CONSTRUCTION AND/OR CONTROL JOINTS SHALL BE PROVIDED IN SLAB-ON-GRADE SO THAT THE MAXIMUM AREA OF SLAB BETWEEN JOINTS SHALL NOT EXCEED 400 SQUARE FEET, OR AS SHOWN ON PLANS. ASPECT OF RATION OF JOINTS SHALL NOT EXCEED 1.5.

7. REFER TO ARCHITECTURAL DETAILS FOR MOLDS, CHAMFERS, GROOVES, FINISHES, EMBEDDED ITEMS, ACCESSORIES, ETC.

8. CONTRACTOR SHALL COORDINATE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR PIPES/SLEEVES PENETRATING SLAB AND WALL. MINIMUM SLEEVE SPACING SHALL BE THREE DIAMETERS CENTER TO CENTER OF THE LARGER SLEEVE OR 6" CLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER. PRIOR TO CONSTRUCTING SLEEVE LOCATIONS AND SIZES SHALL BE APPROVED BY ENGINEER.

CONCRETE TESTING

1. AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST-IN-PLACE CONCRETE:

a. SLUMP PER ASTM C143, TO BE TAKEN WHEN EACH SET OF CYLINDERS IS PREPARED. SLUMP RANGE SHALL BE 4 TO 6 INCHES.

b. COMPRESSIVE STRENGTH PER ASTM C31 & ASTM C39. A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS PLACED IN ANY DAY, FOR EVERY 50 CUBIC YARDS OR EVERY 5,000 S.F. OF SURFACE AREA. BREAK (1) CYLINDER @ SEVEN DAY, TWO (2) CYLINDERS AT TWENTY-EIGHT DAYS, AND HOLD A CYLINDER IN RESERVE. RESERVE CYLINDER TO BE TESTED UNDER THE DIRECT OF THE ENGINEER IF REQUIRED.

c. AIR CONTENT PER ASTM C231 & C173, TO BE TAKEN EACH TIME A SET OF CYLINDERS IS PREPARED.

REINFORCEMENT - CONCRETE

1. REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 DEFORMED BARS.
2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND SHALL BE LAPPED A MINIMUM OF 8". PROVIDE W.W.F. IN SHEETS, NOT ROLLS.

3. DEFORM BAR ANCHORS (D.B.A.'s) SHALL CONFORM TO ASTM A496. D.B.A.'s SHALL BE AUTOMATICALLY MACHINE WELDED PER MANUFACTURERS RECOMMENDED PROCEDURES, EQUIPMENT, FLUX, ETC.

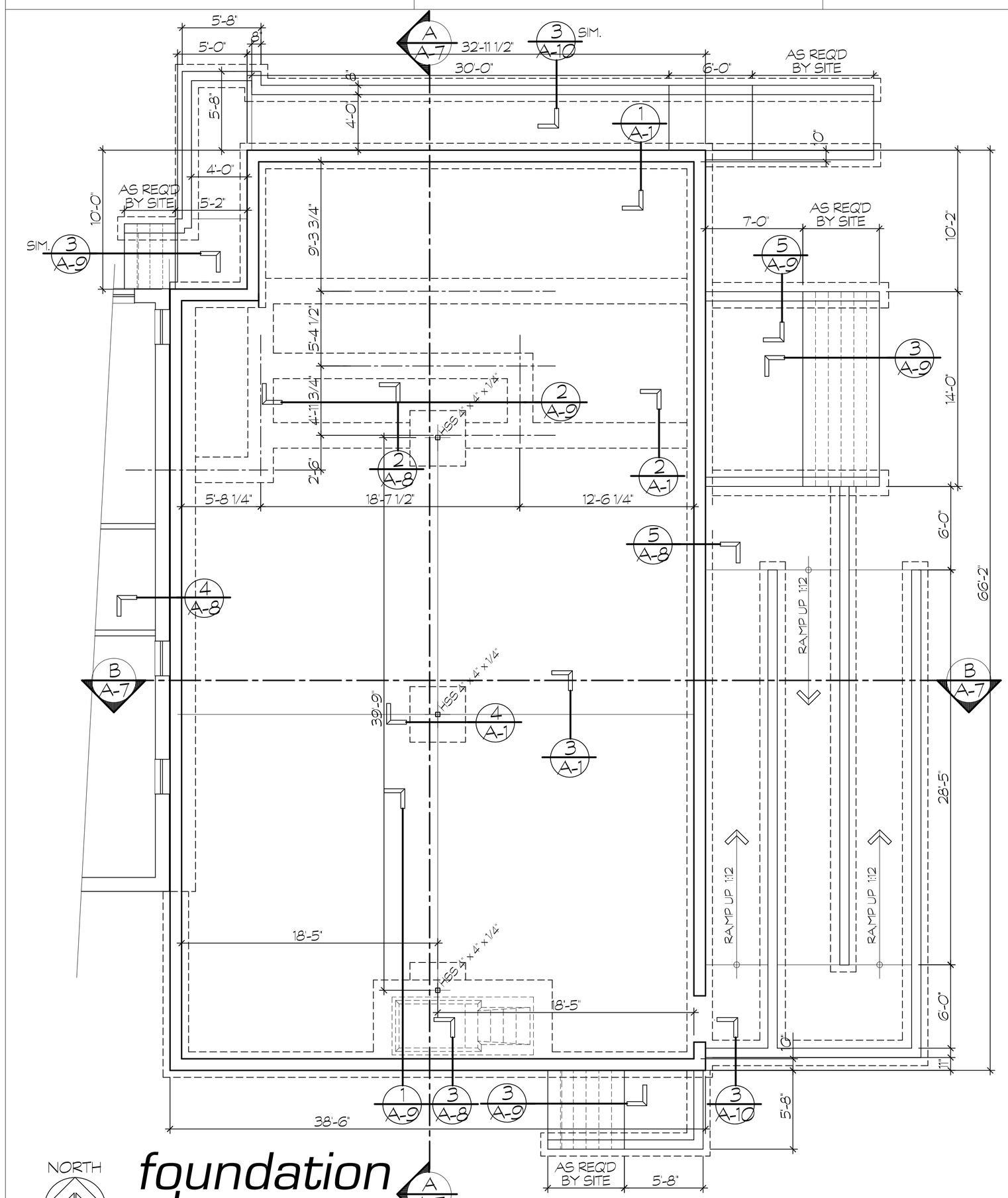
4. REINFORCEMENT SHALL BE FREE FROM OIL, SCALE, AND RUST. REINFORCEMENT SHALL BE PLACED IN ACCORDANCE W/THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS, U.N.O.

5. PROVIDE DOWELS FROM FOUNDATION, U.N.O. DOWELS SHALL MATCH SIZE AND SPACING AS VERTICAL VERTICAL REINFORCING.

6. ALL REINFORCEMENT AND EMBEDS SHALL BE SECURELY PLACED PRIOR TO PLACING CONCRETE.

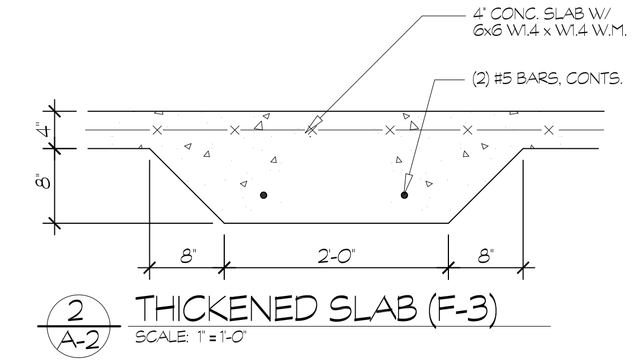
7. CONTINUOUS BARS LOCATED IN TURN DOWN SLABS, THICKENED SLABS, AND CONTINUOUS STRIP FOOTINGS SHALL HAVE 36 BAR DIAMETER LAP SPLICE. ALL OTHER CONTINUOUS BARS SHALL BE LAP SPLICED PER THE REINFORCING STEEL SPLICE REFERENCE TABLE. PROVIDE CORNER BARS AT CORNERS AND INTERSECTION. PROVIDE TWO (2) #4 BARS x 4'-0" AT ALL RE-ENTRANT CORNERS IN SLABS.

8. REINFORCING SHOP DRAWINGS SHALL INCLUDE SECTIONS AND ELEVATIONS (WRITTEN DESCRIPTION IS NOT ACCEPTABLE).

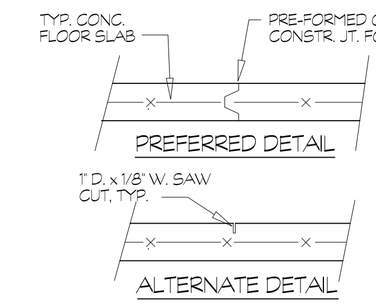


foundation plan

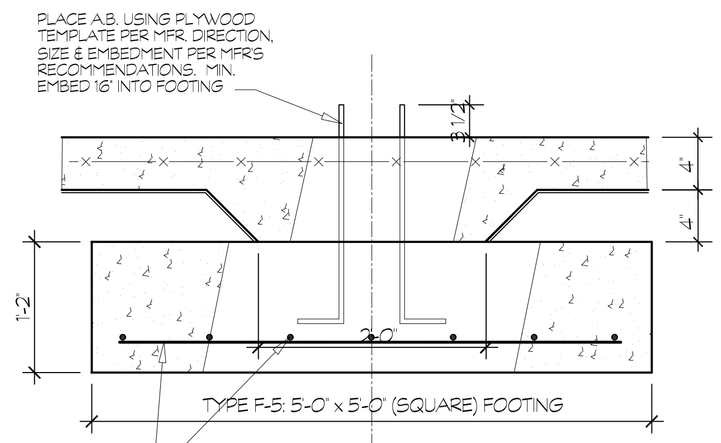
SCALE: 3/16" = 1'-0" 2,459 S.F.



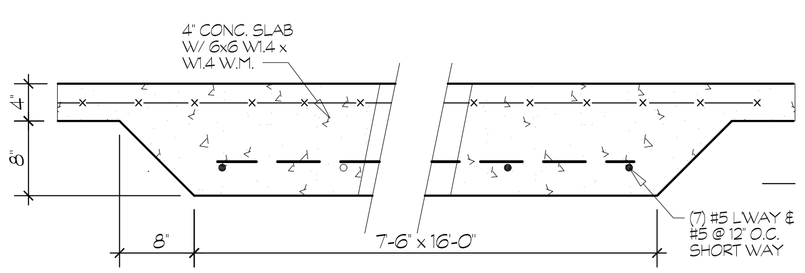
4 THICKENED SLAB (F-3) (2 / A-2)
SCALE: 1" = 1'-0"



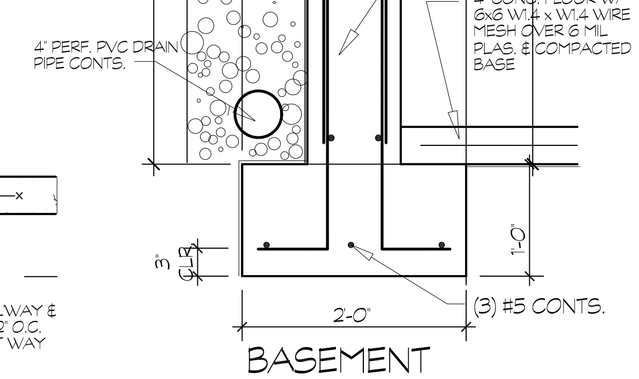
3 TYPICAL CONTROL JOINT (A-2)
SCALE: 1" = 1'-0"



4 INT. COL. FTG.(F-5) (A-2)
SCALE: 1" = 1'-0"



5 BAPTISMAL FTG. (A-2)
SCALE: 1" = 1'-0"



1 BASEMENT WALL SECTION (A-2)
SCALE: 1" = 1'-0"

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REVISIONS
1 2 3 4 5

DISTRICT OF COLUMBIA
RICK A. JACK
ARC 101331
REGISTERED
ARCHITECT
6/11/09

new facility for:
washington seventh day baptist church
CRITTENDEN @ 16TH, WASHINGTON, D.C.

project no.	2K70609
dwn by:	RICK
chk by:	RICK
date:	AUG. 18, 2008
scale:	AS SHOWN
sheet no:	A1