



- CONCRETE & REINFORCING NOTES:**
- CONCRETE STRENGTH SHALL MEET THE FOLLOWING MINIMUM 28 DAY STRENGTH REQUIREMENTS (IRC R402.2):
 - 2,500 PSI FOR BASEMENT FLOOR SLABS ON UNDISTURBED GRADE.
 - 3,000 PSI FOR FOOTINGS, FOUNDATION WALLS, AND OTHER VERTICAL CONCRETE.
 - 3,500 PSI FOR GARPORT AND GARAGE FLOOR SLABS ON UNDISTURBED GRADE.
 - 3,500 PSI FOR STRUCTURAL FLOOR SLABS.
 - CONCRETE SHALL BE 6% AIR ENTRAINMENT FOR GARAGE SLABS AND FOR ALL LOCATIONS (FOOTINGS, WALLS, FLATWORK, ETC.) EXPOSED TO WEATHER.
 - CONCRETE SHALL HAVE A SLUMP OF 4" ± 1". THE SLUMP CAN BE INCREASED THROUGH THE USE OF APPROVED ADDITIVES (NOT WATER).
 - THE REINFORCING STEEL SHALL BE ASTM A615, GRADE 40 MINIMUM UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL BARS SHALL BE LAPPED A MINIMUM OF 48 BAR DIAMETERS AND/OR CORNER BARS SHALL BE PROVIDED AT ALL FOOTING AND WALL CORNERS, AND FOOTING STEPS.
 - MINIMUM CONCRETE COVER SHALL BE AS FOLLOWS (ACI 318):
 - EARTH FORMED - 3"
 - EXPOSED TO WEATHER - 1 1/2" FOR #5 BARS & SMALLER
 - NOT EXPOSED TO WEATHER - 3/4" FOR SLABS
 - NO WATER SHALL BE ADDED TO THE CONCRETE MIX AT THE SITE.
 - ADDITION OF CALCIUM CHLORIDE TO CONCRETE IS NOT PERMITTED.
 - NO ALUMINUM SHALL BE EMBEDDED IN CONCRETE.
 - CONCRETE PLACED IN COLD WEATHER SHALL COMPLY WITH ACI 306. CONCRETE PLACED IN HOT WEATHER SHALL COMPLY WITH ACI 305.

- FOUNDATION NOTES:**
- ALL FOUNDATIONS SHALL BEAR ON NATIVE, UNDISTURBED SOIL CAPABLE OF SUPPORTING 1,500 PSF UNLESS NOTED OTHERWISE. WITHOUT UNDUE SETTLEMENT OR HEAVING. THE CONTRACTOR SHALL RETAIN A QUALIFIED TESTING LAB (APPROVED BY THE OWNER) TO FIELD VERIFY THE ACTUAL SOIL BEARING CAPACITY.
 - ALL EXTERIOR FOOTINGS SHALL BEAR A MIN. OF 36" BELOW FINISHED GRADE.
 - IF THE EXISTING SITE TOPOGRAPHY OR SOIL CONDITIONS VARY FROM THE CONDITIONS SHOWN ON THE DRAWINGS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT/ENGINEER SO THAT A DESIGN THAT IS APPROPRIATE FOR THE SITE CAN BE GENERATED.
 - FOOTINGS SHALL BE POURED CONTINUOUS AT FOOTING STEPS (SOLID LUMPS).
 - ANY FILL THAT IS INSTALLED UNDER THE BASEMENT OR GARAGE FLOOR SLABS SHALL BE PROPERLY COMPACTED TO PREVENT SETTLEMENT OF THE FILL MATERIAL. PROPER COMPACTING IS WHERE THE SOIL IS PLACED IN 6" LIFTS AND EACH LIFT IS COMPACTED PRIOR TO INSTALLING MORE SOIL. THIS COMPACTED FILL SHALL THEN BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER. AT THE CONTRACTOR'S OPTION, A PROPERLY DESIGNED STRUCTURAL SLAB MAY BE INSTALLED OVER ANY FILL THAT HAS NOT BEEN PROPERLY COMPACTED. ALL EXTERIOR SLABS INSTALLED ADJACENT TO THE FOUNDATION SHALL BE DOWELED INTO THE FOUNDATION WITH #4 BARS AT 12" ON CENTER (GRADE 60 STEEL) DRILLED IN 6" MINIMUM AND EPOXIED.
 - CONTROL JOINTS IN THE FLOOR SLABS SHALL BE INSTALLED AS TO MINIMIZE THE AMOUNT OF RANDOM CRACKING (12" INTERVALS MAXIMUM). THESE JOINTS SHALL BE SAWCUT 1-1/4" DEEP WITHIN 8 HOURS OF POURING THE SLAB OR MAY BE TOoled INTO THE SLAB WHEN POURED. SAWCUTS SHALL BE IN APPROXIMATE SQUARE PATTERN WITH MAXIMUM ASPECT RATIO OF 1-1/2 TO 1.
 - THE BUILDER SHALL BE RESPONSIBLE FOR TAKING THE APPROPRIATE STEPS TO MINIMIZE THE EFFECTS OF EXPANSIVE SOIL ON THE FOUNDATION, SLABS, AND WOOD FRAMED PORTIONS OF THE HOUSE. THIS INCLUDES ISOLATING THE FLOOR SLAB AT ALL COLUMNS, INTERIOR BEARING WALLS, AND AT THE FOUNDATION WALLS WITH TWO LAYERS OF 15# FELT. PARTITION WALLS IN THE BASEMENT SHALL NOT BE CONSTRUCTED TIGHT AGAINST THE FRAMING ABOVE.
 - INSTALL CONTINUOUS DRAIN TILE (4" DIAMETER MINIMUM) AROUND THE PERIMETER OF THE ENTIRE LOWER LEVEL. TILE WITH FILTER FABRIC AND COVER WITH CLEAN ROCK. INSTALL VERTICAL DRAINS TO PERIMETER DRAIN TILE AT ALL WINDOW WELLS. THE DRAIN TILE SHALL BE CONNECTED TO A 40 GALLON (MINIMUM) SUMP PIT WITH SUFFICIENT DEPTH FOR PROPER SLUMP PUMP OPERATION. OR SHALL BE DRAINED BY GRAVITY TO DAYLIGHT AT LEAST 10' FROM THE FOUNDATION. FOUNDATION DRAINAGE SHALL ALSO BE IN ACCORDANCE WITH IRC SECTION R406.1.
 - CONCRETE BASEMENT SLABS SHALL BE A MIN. OF 4" THICK OVER A MIN. OF 4" OF 12" TO 3/4" CLEAN, GRADED ROCK, U.N.O. OR IF SITE CONDITIONS REQUIRE OTHERWISE. MIN REINFORCING SHALL BE #4'S AT 24" OC OR EQUIVALENT.
 - PROVIDE A MIN. 6 MIL POLYETHYLENE MOISTURE BARRIER OVER GRAVEL BASE UNDER BASEMENT FLOOR SLABS (NOT REQUIRED FOR GARAGE SLABS) PER SECTION R405.2.2. LAP JOINTS A MIN. OF 6".
 - ALL FOOTING AND SLAB REINFORCEMENT SHALL BE BLOCKED OFF SUBGRADE WITH CHAIRS OR CONCRETE BRICKS.

RESIDENTIAL BASEMENT WALL NOTES:

- HORIZONTAL REINFORCING FOR CONC FOUND WALLS SHALL BE #4'S AT 24" OC.
- VERTICAL REBAR SPACING FOR CONCRETE FOUNDATION WALLS SHALL BE PER THE TABLE BELOW:

| WALL THICK | 60 KSI REINFORCING | | 40KSI REINFORCING | |
|------------|--------------------|------------|-------------------|------------|
| | 8" | 10" | 8" | 10" |
| 6" OR LESS | #4 @ 36"oc | #4 @ 36"oc | #4 @ 36"oc | #4 @ 36"oc |
| 7" | #4 @ 32"oc | #4 @ 36"oc | #4 @ 21"oc | #4 @ 36"oc |
| 8" | #4 @ 24"oc | #4 @ 36"oc | #4 @ 16"oc | #4 @ 36"oc |
| 9" | #4 @ 16"oc | #4 @ 20"oc | #4 @ 12"oc | #4 @ 16"oc |
| 10" | #4 @ 12"oc | #4 @ 18"oc | #4 @ 8"oc | #4 @ 12"oc |

- MINIMUM REQUIREMENT FOR VERTICAL REBAR IN PLAIN CONCRETE WALLS IS #4 BARS @ 36" O.C. (ACI 302).
 - VERTICAL BARS SHALL BE CONTINUED TO WITHIN 4" OF THE TOP OF THE WALL.
 - REBAR SHALL BE POSITIONED AT THE TENSION FACE OF THE WALL (2" FROM THE INSIDE FACE).
 - REINFORCEMENT SHALL LAP A MINIMUM OF 24" AT ENDS, SPLICES, AND AROUND CORNERS.
 - DESIGN BY A PROFESSIONAL ENGINEER IS REQUIRED FOR WALLS OVER 10' IN HEIGHT.
- BARS SHALL LAP A MINIMUM OF 48 BAR DIAMETERS AT ENDS, SPLICES AND AROUND CORNERS. UNLESS OTHERWISE NOTED ON THESE DRAWINGS.
 - CONTINUOUS WALL FOOTINGS SHALL BE A MINIMUM OF 16" WIDE AND 8" DEEP WITH (2) #4 BARS CONTINUOUS FOR 8" THICK WALLS, U.N.O. CONTINUOUS WALL FOOTINGS SHALL BE A MINIMUM OF 24" WIDE AND 12" DEEP WITH (2) #4 BARS CONTINUOUS FOR 12" THICK WALLS.
 - INSTALL 1/2" x 1-1/2" LONG ANCHOR BOLTS (7" EMBEDMENT) AT 3'-0" O.C. AND WITHIN 12" OF THE END OF EACH SILL MEMBER. MINIMUM SILL PLATE TO BE 2X6 PRESSURE TREATED.
 - THE TOPS OF ALL BASEMENT (LOWER LEVEL) FOUNDATION WALLS SHALL BE CONNECTED TO THE FLOOR JOISTS. NAIL EACH FLOOR JOIST END WALL BLOCKING TO THE WOOD SILL PLATE PER THE IRC NAILING SCHEDULE. WHERE FLOOR JOISTS RUN PARALLEL TO THE FOUNDATION WALLS, PROVIDE BLOCKING IN THE FIRST THREE JOIST SPACES AT 2'-0" O.C. OVER THE ENTIRE LENGTH OF THE FLOOR JOISTS.
 - WALLS SHALL BE FULL HEIGHT FROM FOOTING TO FLOOR FRAMING. NO WOOD FRAMED CRIPPLE WALLS EXCEPT AS SPECIFICALLY NOTED ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
 - STRAIGHT WALLS MORE THAN 5 FEET TALL AND MORE THAN 16 FEET LONG SHALL BE PROVIDED WITH EXTERIOR BRACED RETURN WALLS. REF TYP DEADMAN DETAIL.
 - FOUNDATION WALLS SHALL BE DESIGNED FOR AN EQUIVALENT FLUID PRESSURE (EPF) 60 PSF.
 - PROVIDE STEEL SHIMS IN BEAM POCKETS TO LEVEL BEAMS. BEAM POCKETS SHALL BE GROUTED SOLID WITH 4,000 PSI NON-SHRINK GROUT AFTER BEAMS ARE LOADED WITH FRAMING MEMBERS.
 - REINFORCE AROUND BEAM POCKETS BY BENDING TOP CONTINUOUS HORIZONTAL BAR BELOW BEAM POCKET OR INSTALL SEPARATE BENT BAR LAPPED AND TIED MINIMUM 24" EACH SIDE.
 - PROVIDE TWO #4 x 4'-0" LONG DIAGONAL BARS AT THE CORNERS OF ALL OPENINGS IN CONCRETE WALLS AND AT FOOTING STEPS. ALSO PROVIDE 2 ADDITIONAL #4 ON ALL SIDES OF WALL OPENINGS. BARS SHALL BE 2'-0" LONGER THAN OPEN VERTICAL OR HORIZONTAL DIMENSION.
 - FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE DAMP PROOFED FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE WITH A BITUMINOUS COATING IN ACCORDANCE WITH SECTION R406.1. INSULATION SHALL BE INSTALLED FOR ALL BASEMENT WALLS AS REQUIRED PER SECTION N102.1.
 - ALL SITE RETAINING WALLS GREATER THAN 4'-0" IN HEIGHT SHALL REQUIRE A DESIGN BY A PROFESSIONAL ENGINEER.
 - A CONCRETE ENCASED GROUNDING ELECTRODE CONNECTION SHALL BE PROVIDED TO THE ELECTRICAL SERVICE PER SECTION E360.1.

FOOTING SCHEDULE

| MARK | SIZE L x W x THK | REINFORCING (NO) SIZE LOCATION | TOF EL | COLUMN |
|------|-----------------------|--------------------------------|----------------------|--------------------------|
| F1 | 2'-0" x 2'-0" x 1'-0" | (4) #4 EW BOTTOM | 8" BELOW TOP OF SLAB | 3" STD STEEL PIPE COLUMN |
| F2 | 2'-6" x 2'-6" x 1'-0" | (4) #4 EW BOTTOM | 8" BELOW TOP OF SLAB | 3" STD STEEL PIPE COLUMN |
| F3 | 3'-0" x 3'-0" x 1'-0" | (6) #4 EW BOTTOM | 8" BELOW TOP OF SLAB | 3" STD STEEL PIPE COLUMN |
| F4 | 4'-0" x 4'-0" x 1'-4" | (8) #4 EW BOTTOM | 8" BELOW TOP OF SLAB | 3" STD STEEL PIPE COLUMN |

1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



N&S JOB NUMBER: 2023-1903
©2024 Norton & Schmidt Consulting Engineers



PROJECT INFORMATION
THE LEXINGTON II
2354 SW Rivertrail Road
Lee's Summit, Missouri 64064
McFarland Dalton Builders L.L.C.

ISSUES & REVISIONS

| # | DATE | DESCRIPTION |
|---|-----------|---------------|
| 1 | 7/26/2024 | City Comments |

DRAWN BY: MLR
CHECKED BY: BSS
ISSUED FOR:

SHEET TITLE
FOUNDATION PLAN

SHEET NUMBER
S100

