

CONCRETE

ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE AND THE CONCRETE REINFORCING STEEL INSTITUTE. SEE ALSO SPECIFICATIONS

CONCRETE STRENGTHS AT 28 DAYS: 4500 PSI UNO, 4000 PSI FOR FOUNDATIONS.

CONCRETE SHALL BE NORMAL WEIGHT.

SLUMP SHALL BE 4" MAX. FOR FOOTINGS & SLABS, 5" MAX. FOR WALLS. DO NOT ADD WATER AT THE JOB SITE.

WATER/CEMENT RATIO SHALL BE 0.45 MAX FOR FOOTINGS, WALLS & SLABS, UNO.

CEMENT SHALL BE ASTM C150 PORTLAND CEMENT, TYPE I OR II.

USE BLANKETS AS REQUIRED FOR COLD WEATHER CONCRETING; DO NOT USE ACCELERATING ADMIXTURES.

AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS, PROVIDE BENT BARS OF EQUAL SIZE AND AT SAME SPACING AS TYPICAL REINFORCING AROUND CORNER AND/OR INTO ABUTTING WALL. BARS SHALL HAVE EMBEDMENT OF 18 DIAMETERS (12" MINIMUM) PAST INSIDE EDGE OF CORNER.

WHERE CONCRETE IS PLACED DIRECTLY ON GROUND, REINFORCING STEEL SHALL HAVE 3" OF CONCRETE COVER. AT ALL OTHER PLACES, CONCRETE COVER TO BE A MIN. OF 2" UNLESS NOTED OTHERWISE.

ALL FLOOR SLABS SHALL BE STEEL TROWEL FINISHED.

ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR ENTRAINED, 6% ± 1%

CURE CONCRETE FOR 7 DAYS

REINFORCING STEEL : ASTM A615 OR A616, GRADE 60. MINIMUM LAP LENGTH - SEE SCHEDULES ON THIS SHEET.

WHERE CUTTING HOLES IN EXISTING CONCRETE, DO NOT OVERCUT. DRILL AND/OR GRIND CONCRETE AT THE CORNERS OF THE HOLES, IN ORDER TO AVOID OVERCUTTING AT NEW OPENINGS IN HARDENED CONCRETE.

WHERE CUTTING HARDENED CONCRETE SURFACES WHICH WILL REMAIN EXPOSED, GRIND ALL EXPOSED REBAR DOWN MIN 1.5" BELOW THE CONCRETE SURFACE. DO NOT TORCH CUT. CLEAN, ROUGHEN, APPLY EPOXY BONDING AGENT, AND DRY-PACK PATCHING MORTAR SUITABLE FOR EXTERIOR/WET SERVICE. FOLLOW MANUFACTURERS' RECOMMENDATIONS.

CONCRETE ENCASUREMENT FOR UNDERSLAB CONDUITS SHALL BE 12" MINIMUM CLEAR BELOW BOTTOM OF SLAB.

CONTRACTOR SHALL SUBMIT A COMPLETE & DIMENSIONED MASONRY DOWEL LAYOUT PLAN WITH THE FOUNDATION REBAR SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT A COMPLETE & DIMENSIONED PLAN WITH THE FOUNDATION REBAR SHOP DRAWINGS.

REINFORCED CONCRETE FOOTINGS AND WALLS ARE 12" THICK, UNO. REINFORCED CONCRETE SLABS AND WALLS ARE REINFORCED WITH #5 @ 12" O.C. EW EF, UNO.

MINIMUM CONCRETE COVER FOR REINFORCEMENT

- SLABS AND JOISTS:

TOP AND BOTTOM BARS FOR DRY CONDITIONS	1 1/2"
FORMED CONCRETE SURFACES EXPOSED TO EARTH, WATER, OR WEATHER, AND OVER OR IN CONTACT WITH SEWAGE AND FOR BOTTOMS BEARING ON WORK MAT, OR SLABS SUPPORTING EARTH COVER:	2"
- BEAMS AND COLUMNS:

STIRRUPS, SPIRALS, AND TIES	2"
PRINCIPAL	2 1/2"
- WALLS:

	2"
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- FOOTINGS AND BASE SLABS:

AT FORMED SURFACES AND BOTTOMS BEARING ON CONCRETE WORK MAT	2"
AT UNFORMED SURFACES AND BOTTOMS BEARING ON WITH EARTH	3"
TOP OF FOOTINGS - SAME AS SLABS OVER TOP OF PILES	2"

STEEL

ALL STRUCTURAL STEEL FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES. SEE ALSO SPECIFICATIONS.

STRUCTURAL STEEL - W - ASTM A992; PLATES - ASTM A36; TUBE - ASTM A500, GRADE B Fy = 46 KSI; PIPE - ASTM A53, GRADE B Fy= 35 KSI.

ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325-N UNLESS NOTED OTHERWISE.

SPLICING OF STRUCTURAL STEEL IS PROHIBITED EXCEPT AS DETAILED.

ENDS OF ALL COLUMNS SHALL HAVE THE BEARING SURFACE PREPARED TO COMMON PLANE BY MILLING.

WELDING ELECTRODES AWS. ASTM E-70XX.

ALL WELDING SHALL BE DONE BY A QUALIFIED WELDER IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE.

ALUMINUM NOTES

- ALL STAIR AND GRATING SUPPORTS AND MATERIALS SPECIFIED AS ALUMINUM SHALL BE 6061-T6 ALUMINUM, EXCEPT BOLTS AND CONCRETE ANCHORS WHICH SHALL BE STAINLESS STEEL.
- ALL ALUMINUM CHANNELS AND I-BEAM SHAPES ARE ALUMINUM ASSOCIATION STANDARD SHAPES.
- ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL HAVE A 1/8" BITUMINOUS COATING.
- SEE PROCESS AND ARCHITECTURAL DRAWINGS FOR HANDRAIL, GRATING AND STAIR LOCATIONS.

ADHESIVE ANCHORS

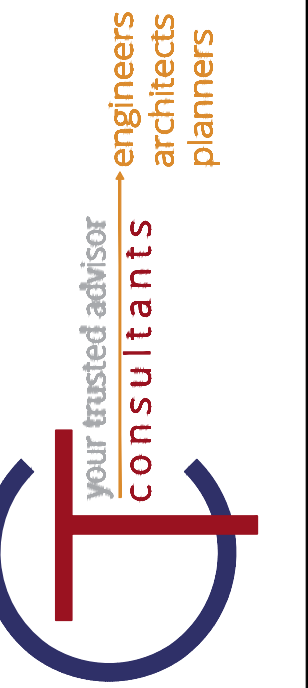
- ADHESIVE ANCHOR SYSTEMS SHALL BE HILTI HY-200, SIMPSON SET XP, OR APPROVED EQUAL. ANCHOR RODS FOR ADHESIVE ANCHORS SHALL HAVE 50 KSI MINIMUM SPECIFIED YIELD STRENGTH UNLESS OTHERWISE NOTED. SUBMITTAL OF ALL PROPOSED PRODUCTS, WITH TECHNICAL DATA AND CURRENT ICC-ES REPORTS, IS REQUIRED FOR REVIEW AND APPROVAL BY THE ENGINEER.
- ANCHOR RODS SHALL BE GALVANIZED FOR FASTENING GALVANIZED STEEL TO CONCRETE/MASONRY, AND STAINLESS STEEL FOR FASTENING ALUMINUM OR STAINLESS STEEL TO CONCRETE/MASONRY, UNLESS OTHERWISE NOTED.
- INSTALL PER MANUFACTURER'S RECOMMENDATIONS. HOLES SHALL BE DRILLED AND CLEANED IN STRICT ACCORDANCE WITH THE CURRENT MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS (MPII) MANUFACTURER'S FIELD REPRESENTATIVE SHALL PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED, PRIOR TO COMMENCEMENT OF THE WORK.
- INSTALLATION OF ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL CERTIFIED IN THE ACI/CRSI ADHESIVE ANCHOR INSTALLATION PROGRAM. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF THE INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND BE MADE AVAILABLE TO THE ENGINEER AS REQUESTED.
- COMPLY WITH OSHA 1926.1153.
- ADHESIVE ANCHORAGE INSTALLATION SHALL HAVE CONTINUOUS SPECIAL INSPECTION.

LIGHT GAUGE STEEL

FOR MIL THICKNESSES OF 18 MILS TO 43 MILS (INCLUSIVE) THE MINIMUM STEEL YIELD STRESS IS 33 KSI. THICKNESSES OF 54 MILS AND GREATER ARE TO HAVE A MINIMUM YIELD STRESS OF 50 KSI.

ALL WELDING OF LIGHT GAUGE STEEL TO BE PERFORMED BY A WELDER QUALIFIED TO WELD LIGHT GAUGE STEEL.

MINIMUM LAP SPLICE & ANCHORAGE DIMENSION TABLE FOR CAST IN PLACE CONCRETE REINFORCING				
F'c =	4000 or 4500 psi	PER ACI 318-14		s = 4" MIN
BAR SIZE	TOP BARS		OTHER BARS	
	LAP	ANCHORAGE	LAP	ANCHORAGE
#3	15	12	12	12
#4	20	15	15	12
#5	25	19	19	15
#6	29	23	23	18
#7	47	36	36	28
#8	61	47	47	36



ISSUED FOR:	CD	NO	REVISION	DATE
ISSUE DATE:	8/5/19	1	REBID	8/5/19
SCALE:	AS SHOWN			
DESIGNED BY:	AP			
DRAWN BY:	AP			
CHECKED BY:	PCP			

LAKELAND TRANSFER CENTER
LAKELAND COMMUNITY COLLEGE
7601 CLOCKTOWER DR., KIRTLAND, OH 44094

STRUCTURAL GENERAL NOTES
& SCHEDULES

PROJECT NO.	
18050002	
DISCIPLINE	
STRUCTURAL	
SHEET NAME	
S-02	
SHEET	OF
38	55