GENERAL STRUCTURAL NOTES

GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE STRUCTURAL DIMENSIONS AND SECTIONS WITH ARCHITECTURAL DIMENSIONS AND SECTIONS AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION OR INSTALLATION OF ALL STRUCTURAL MEMBERS.
2. ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL LOADS THAT COULD OCCUR IN THE FINAL COMPLETED STRUCTURE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED TEMPORARY BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS.
3. SELECTION OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND OR PROCEDURES, AS WELL AS SAFETY PRECAUTIONS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY. AS SUCH ANY CONSTRUCTION ENGINEERING AND/OR DESIGN RESULTING FROM THESE SELECTIONS IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONAL INFORMATION NOT SHOWN.
5. DETAILS SHOWN IN ANY SECTION APPLY TO ALL SIMILAR SECTIONS AND CONDITIONS UNLESS NOTED OTHERWISE.
6. THE STRUCTURAL DRAWINGS SHALL BE USED IN COMBINATION WITH THE ARCHITECTURAL AND VENDOR DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS OR SPECIFICATIONS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT PRIOR TO PERFORMING WORK.
7. ALL STRUCTURAL ITEMS FOR THIS PROJECT HAVE BEEN DESIGNED IN ACCORDANCE WITH APPROPRIATE PROVISIONS OF EACH OF THE FOLLOWING:

   - THE FLORIDA BUILDING CODE, (EIGHTH EDITION) 2023.
   - ACI STANDARD 318-19 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
   - BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402-16).
   - AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" 360-16.
   - ASCE 7-22 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES".

POST-INSTALLED ANCHORS:

1. POST INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS.
2. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN ANCHORS.
3. CARE SHALL BE GIVEN TO AVOID DAMAGING EXISTING REBAR WHEN DRILLING HOLES. HOLES SHALL BE DRILLED AND CLEANED PER MANUFACTURER'S INSTRUCTIONS.

CONCRETE AND REINFORCING:

1. ALL CONCRETE SHALL CONFORM TO THE LATEST ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND THE PARAMETERS DEFINED BELOW:

USAGE	28-DAY COMP. STRENGTH (PSI)	CONCRETE TYPE	MAX WATER TO CEMENT RATIO	MAX SLUMP*
SLAB ON GRADE	3000	NORMAL WT.	0.52	4"-8"

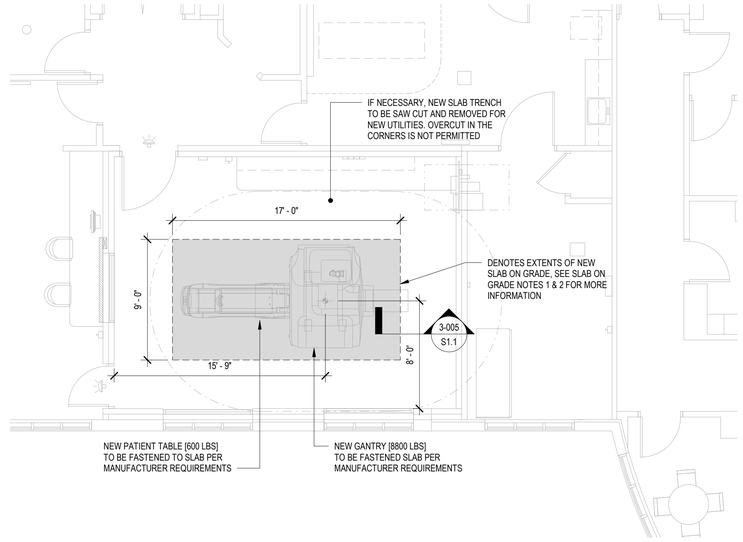
2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. ALL BARS SHALL BE SECURELY SUPPORTED AND WIRED IN PLACE. PRIOR TO POURING CONCRETE. ALL REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A-706.
3. ALL WELDED WIRE FABRIC (W.W.F.) SHALL CONFORM TO ASTM A-185. ONLY FLAT SHEETS SHALL BE USED.
4. PROVIDE TENSION SPLICE AT ALL BARS MARKED CONTINUOUS AT ALL ALL LAP POINTS AND CORNERS. ALL NON CONTINUOUS BAR ENDS SHALL BE DEVELOPED BY USE OF A STANDARD ACI 90° OR 180° HOOK OR BE EXTENDED A DISTANCE GREATER THAN OR EQUAL TO THE BAR'S DEVELOPMENT LENGTH (ld).
5. SEE TYPICAL DETAIL FOR CONCRETE COVER REQUIREMENTS OF REINFORCING BARS.
6. VERIFY ALL CONSTRUCTION JOINTS ARE THOROUGHLY CLEANED IMMEDIATELY PRIOR TO THE PLACEMENT OF ADJACENT CONCRETE. FOR CHAMFER OF EXPOSED CORNERS OF BEAMS AND/OR COLUMNS, SEE ARCHITECTURAL DRAWINGS.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE PLACEMENT OF ANY PIPE SLEEVES, BOX OUTS, OPENINGS, INSERTS, OR HANGERS REQUIRED BY OTHER TRADES PRIOR TO THE PLACEMENT OF ANY CONCRETE.
8. UNDER NO CIRCUMSTANCES SHALL CONCRETE BE PLACED IN CONTACT WITH ALUMINUM. CONCRETE SHALL NOT BE PUMPED THROUGH ALUMINUM PIPES, TRANSPORTED WITH ALUMINUM MIXING DRUMS, TRUCK MIXERS, WHEELBARROWS, CHUTES, CONVEYORS OR TREMIE PIPES. ALUMINUM CONCRETE FINISHING EQUIPMENT SHALL NOT BE USED ON THIS PROJECT.
9. SLUMPS OF OVER 4 INCHES WILL NOT BE PERMITTED UNLESS THE HRWR ADMIXTURE (SUPER PLASTICIZER) IS USED. MAXIMUM SLUMP IS THEN 8 INCHES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
10. PRODUCT INFORMATION OF ADMIXTURES SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER WITH THE CONCRETE MIX DESIGNS FOR APPROVAL. ADMIXTURES SHALL CONTAIN NO MORE CHLORIDE IONS THAN 0.30 PERCENT BY WEIGHT OF CEMENT.
11. A WATER REDUCING ADMIXTURE SHALL BE USED IN ALL MIX DESIGNS AND CONFORM TO THE ASTM C-494, TYPE A.
12. AN AIR-ENTRAINED ADMIXTURE SHALL BE USED IN ALL MIX DESIGNS FOR CONCRETE SUBJECT TO FREEZING AND THAWING.
13. FLY ASH - ASTMC618-12A, TYPE C OR TYPE F SHOULD BE USED BUT NOT TO EXCEED 20% CEMENTITIOUS CONTENT.
14. CONCRETE SLABS SHALL RECEIVE A CURING COMPOUND THAT CONFORMS TO ASTM C309 AND SHALL HAVE 30% SOLIDS MINIMUM. WATER/BLANKET CURING AS PER ACI RECOMMENDATION MAY BE USED AS ALTERNATE.

SHOP DRAWINGS:

1. REPRODUCTION OF STRUCTURAL DRAWINGS AS SHOP DRAWINGS IS NOT PERMITTED.
2. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE STRUCTURAL ELEMENTS AND CONNECTIONS SHOWN IN THE CONTRACT DOCUMENTS.
3. REVIEW OF SHOP DRAWINGS SHALL BE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS REGARDING ARRANGEMENT AND SIZES OF MEMBERS AND THE CONTRACTOR'S INTERPRETATION OF THE DESIGN LOADS AND CONTRACT DOCUMENT DETAILS.
4. REVIEW OF SUBMITTALS OR SHOP DRAWINGS BY THE ARCHITECT/STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK ALL SUBMITTALS AND SHOP DRAWINGS FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
5. CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.
6. ALL DIMENSIONAL COORDINATION SHALL BE DONE BY THE CONTRACTOR AND/OR HIS DETAILER.
7. ALL SHOP DRAWINGS SHALL BE SUBMITTED ELECTRONICALLY IN PDF FORMAT. DISTRIBUTED PER THE ARCHITECT'S INSTRUCTIONS.
8. SHOP DRAWINGS NOT COMPLYING WITH ALL THE ABOVE ITEMS SHALL BE RETURNED FOR CORRECTIONS WITHOUT PROCESSING.
9. CONTRACTOR SHALL HAVE SHOP DRAWINGS WHICH HAVE BEEN SATISFACTORILY REVIEWED BY THE ARCHITECT AND/OR ENGINEER AND CONFIRMED BY THE CONTRACTOR BEFORE PROCEEDING WITH ANY WORK.

FOUNDATION NOTES:

1. FOUNDATIONS FOR THIS PROJECT HAVE BEEN DESIGNED ASSUMING THE SOIL IS SUITABLE TO SUPPORT 1500 PSF SPREAD FOOTINGS BASED ON PRESUMPTIVE LOAD-BEARING VALUES IN TABLE 1806.2 OF THE IBC. IT IS THE OWNER'S RESPONSIBILITY TO CONFIRM THIS ASSUMPTION BY CONTACTING A GEOTECHNICAL ENGINEER TO DO A SOIL EXPLORATION OR REVIEW PREVIOUS GEOTECHNICAL REPORTS OF THE SITE.
2. FILL AND SUBGRADE PREPARATION SHALL BE AS NEEDED TO OBTAIN THE SAFE BEARING PRESSURE INDICATED ON NOTE 1. ALL ORGANICS AND UNSUITABLE SOIL SHOULD BE REMOVED AND A MINIMUM OF 98% COMPACTION MUST BE OBTAIN UNLESS GEOTECHNICAL ENGINEER RECOMMENDATIONS ALLOW A LOWER PERCENT OF COMPACTION.
3. FOR FOUNDATIONS SIZE AND REINFORCING SEE PLAN.
4. APPLY SOIL TREATMENT BY A LICENSED APPLICATOR, PER FBC 1816.1 INCLUDING A CERTIFICATE OF COMPLIANCE WITH THE CODE REQUIRED STATEMENT "THE BUILDING HAS RECEIVED A COMPLETE TREATMENT. TREATMENT IS IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES"
5. AFTER WORK IS COMPLETED, REMOVE ALL LOOSE WOOD AND DEBRIS FROM THE SITE, INCLUDING WOOD FORMS, GRADE STAKES, ETC, AND ANY CELLULOSE CONTAINING MATERIALS. INCLUDING MATERIALS NOT VISIBLE. DO NOT STORE WOOD MATERIALS ON THE GROUND. EVEN NATURALLY DURABLE MATERIAL.
6. DO NOT BURY WOOD, VEGETATION, STUMPS, DEAD ROOTS, CARDBOARD, TRASH OR OTHER CELLULOSE CONTAINING MATERIAL WITHIN 15 FEET OF THIS OR ANY OTHER BUILDING OR FUTURE BUILDING.



P1 / S1.1 SLAB ON GRADE PLAN
SCALE: 3/16" = 1'-0"

SLAB ON GRADE PLAN NOTES:

1. VERIFY THE EXISTING SLAB ON GRADE THICKNESS. IF THE EXISTING SLAB ON GRADE IS LESS THAN 8" THICK, THE EXISTING SLAB ON GRADE SHALL BE SAW CUT AND REMOVED FOR THE PLACEMENT OF A NEW THICKER SLAB ON GRADE. PRIOR TO SAW CUTTING OF SLAB ON GRADE, PERFORM IMAGING OF THE EXISTING SLAB TO AVOID DAMAGING ANY EXISTING SUBSURFACE UTILITIES.
2. IF NECESSARY, NEW SLAB SHALL BE 8" THICK OVER VAPOR BARRIER ON COMPACTED SUB-BASE PER FOUNDATION NOTES ON THIS SHEET. REINFORCE THE NEW SLAB WITH #4 AT 12" O.C. EACH WAY TOP & BOTTOM. SUPPORT REINFORCEMENT WITH CHAIRS AND SAND PLATES. USE OF CONCRETE BRICK IS NOT PERMITTED.
3. PROVIDE VAPOR BARRIER WHICH CONFORMS TO ASTM E1745, CLASS A. THE MEMBRANE SHALL HAVE A WATER-VAPOR TRANSMISSION RATE NO GREATER THAN 0.008 GR. /FT 2/ / HR. WHEN TESTED IN ACCORDANCE WITH ASTM E96. THE VAPOR BARRIER SHALL BE PLACED OVER PREPARED BASE MATERIAL BELOW SLABS ON GRADE. THE VAPOR BARRIER SHOULD BE PLACED DIRECTLY BELOW THE SLAB ON GRADE AND LAPPED WITH EXISTING.
4. VAPOR BARRIER SHALL BE NO LESS THAN 15 MIL THICK. NO PENETRATION OF THE VAPOR BARRIER IS PERMITTED EXCEPT FOR REINFORCING STEEL AND PERMANENT UTILITIES
5. SAW CUT AND REMOVE PORTION OF EXISTING SLAB ON GRADE IF NEEDED FOR NEW UTILITIES. PRIOR TO SAW CUTTING OF SLAB ON GRADE, PERFORM IMAGING OF THE EXISTING SLAB TO AVOID DAMAGING ANY EXISTING SUBSURFACE UTILITIES. REFER TO DETAIL 3-006 ON THIS SHEET FOR SLAB POURBACK DETAIL.
6. TOP OF NEW SLAB ELEVATION SHALL MATCH THE EXISTING SLAB ELEVATION AND SHALL MEET OR EXCEED FLATNESS REQUIREMENTS SPECIFIED IN THE VENDOR DRAWINGS.
7. FOR PLAN DIMENSIONS NOT SHOWN, REFER TO ARCHITECTURAL OR VENDOR DRAWINGS.

THE MINIMUM CLEAR COVER FOR REINFORCEMENT BARS SHALL BE ONE BAR DIAMETER OR THE VALUES TABULATED BELOW, WHICHEVER IS THE GREATER.	
FOUNDATIONS	3"
SLABS (LT.WT. CONC. OR STONE CONC.)	1"
TIED COLUMNS AND PIERS	2"
WALLS	
SURFACE EXPOSED TO EARTH	2"
SURFACE EXPOSED TO WEATHER	1 1/2"
OTHER SURFACES	1"
GIRDERS AND BEAMS (TO STIRRUPS)	1 1/2"
JOISTS	1 1/4"

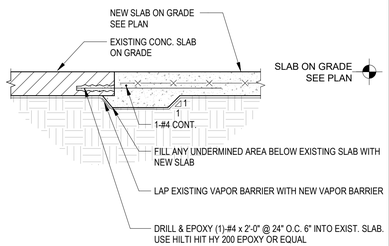
MINIMUM CONCRETE COVER FOR REINFORCEMENT — 3-001

TENSION LAP SPLICES

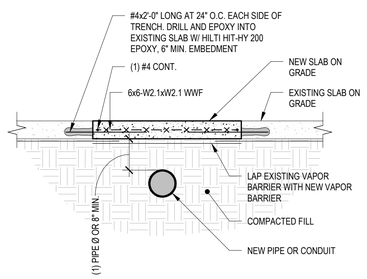
BAR SIZE	LAP CLASS	LAP LENGTH PER SPACING AND COVER CASE				COMPRESSION LAP SPLICES
		TOP BARS		OTHER BARS		
		CASE 1	CASE 2	CASE 1	CASE 2	
#3	A	22	32	17	25	12
	B	28	42	22	32	
#4	A	29	43	22	33	15
	B	37	56	29	43	
#5	A	36	54	28	41	19
	B	47	70	36	54	
#6	A	43	64	33	50	23
	B	56	84	43	64	
#7	A	63	94	48	72	26
	B	81	122	63	94	
#8	A	72	107	55	82	30
	B	93	139	72	107	

NOTES:
1. **TENSION LAP CLASS "B" IS TO BE USED UNLESS OTHERWISE SPECIFIED IN THESE CONTRACT DOCUMENTS.**
2. CASE 1
   - A. BEAMS AND COLUMNS:
     - a. CONCRETE COVER AT LEAST (1) BAR DIAMETER AND C-C BAR SPACING AT LEAST TO 2X BAR DIAMETER.
   - B. OTHER MEMBERS:
     - a. CONCRETE COVER AT LEAST (1) BAR DIAMETER AND C-C BAR SPACING AT LEAST 3X BAR DIAMETER.
3. CASE 2
   - A. BEAMS AND COLUMNS:
     - a. CONCRETE COVER LESS THAN (1) BAR DIAMETER OR C-C BAR SPACING LESS THAN 2X BAR DIAMETER.
   - B. OTHER MEMBERS:
     - a. CONCRETE COVER LESS THAN (1) BAR DIAMETER OR C-C BAR SPACING LESS THAN 3X BAR DIAMETER.

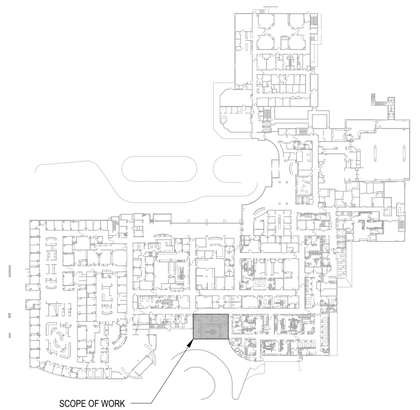
TENSION AND COMPRESSION LAP SPLICES (3000 PSI CONCRETE) — 3-002



NEW SLAB TO EXISTING SLAB — 3-005



TRENCH POUR BACK DETAIL — 3-006



KP / S1.1 KEY PLAN
SCALE: 1" = 100'-0"

TO THE BEST OF THE ARCHITECT'S OR ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH FBC SECTION 110.8.4.4 AND CHAPTER 633, FLORIDA STATUES.

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MRI EQUIPMENT REPLACEMENT AND TEMPORARY MOBILE UNIT

Safety Harbor, Florida

SHEET NUMBER
S1.1