UNIVERSITY OF LOUISVILLE
STUDENT RECREATION CENTER

2030 SOUTH 4th STREET
LOUISVILLE, KENTUCKY 40208

DRAWING INCLUDE ALL BP #4 ADDENDUM ITEMS
JULY 27, 2012

The Contractor is reminded that the inclusion of the addendum items in the drawings is for convenience purposes and the Contractor will still be responsible for all addendum items even if they were not included in the revised drawings.

BID PACKAGE, PHASE #4 - GENERAL CONTRACTOR
BEST VALUE
JANUARY, 2012

THE SCOPE OF BID PACKAGES, PHASES 1, 2, AND 3 (INCLUDING ADDENDA) ARE RELATED TO AND INCLUDE ASSIGNED SCOPE OF WORK THAT IS A COMPONENT OF BID PACKAGE #4. THESE DOCUMENTS HAVE BEEN ISSUED IN ADVANCE OF BID PACKAGE #4.

BID PACKAGE, PHASE (1) SITE PREPERATION (FLYNN BROS.)
BID PACKAGE, PHASE (2) SPECIAL INSTRUCTIONS (TBA)
BID PACKAGE, PHASE (3) STEEL FABRICATION AND ERECTION (TBA)
BID PACKAGE, PHASE (4) GENERAL CONTRACTOR BEST VALUE

Schedule of Drawings

STRUCTURAL

S0006 - GENERAL PROVISIONS
S0007 - GENERAL PROVISIONS CONT.
S0105 - OVERALL SLAB ON GRADE PLAN
S0106 - SLAB ON GRADE PLAN - AREA A
S0107 - SLAB ON GRADE PLAN - AREA B
S0108 - SLAB ON GRADE PLAN - AREA C
S0109 - SLAB ON GRADE PLAN - AREA D
S0110 - OVERALL FOUNDATION PLAN
S0111 - FOUNDATION PLAN - AREA A
S0112 - FOUNDATION PLAN - AREA B
S0113 - FOUNDATION PLAN - AREA C
S0114 - FOUNDATION PLAN - AREA D
S0115 - GEOTHERMAL MANIFOLD BUILDING FOUNDATION AND SLAB ON GRADE PLAN
S0120 - OVERALL MEZZANINE FLOOR FRAMING PLAN
S0121 - MEZZANINE FLOOR FRAMING PLAN - AREA A
S0122 - MEZZANINE FLOOR FRAMING PLAN - AREA B
S0123 - MEZZANINE FLOOR FRAMING PLAN - AREA C
S0124 - MEZZANINE FLOOR FRAMING PLAN - AREA D
S0130 - OVERALL LEVEL 02 FLOOR FRAMING PLAN
S0131 - LEVEL 02 FLOOR FRAMING PLAN- AREA A
S0132 - LEVEL 02 FLOOR FRAMING PLAN- AREA B
S0133 - LEVEL 02 FLOOR FRAMING PLAN- AREA C
S0134 - LEVEL 02 FLOOR FRAMING PLAN- AREA D
S0145 - RACQUETBALL COURT ROOF FRAMING PLAN
S0160 - SECTIONS AND DETAILS
S0161 - SECTIONS AND DETAILS
S0162 - SECTIONS AND DETAILS
S0164 - SECTIONS AND DETAILS
S0172 - SECTIONS AND DETAILS
S0173 - SECTIONS AND DETAILS
S0174 - SECTIONS AND DETAILS
S0175 - SECTIONS AND DETAILS
S0176 - SECTIONS AND DETAILS
S0180 - SECTIONS AND DETAILS
S0204 - TYPICAL DETAILS
S0205 - TYPICAL DETAILS
S0206 - TYPICAL DETAILS
S0207 - TYPICAL DETAILS
S0208 - TYPICAL DETAILS

Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507-1001
p 859.252.6664 f 859.253.2358
www.omniarchitects.com

CANNONDESIGN

CANNON DESIGN 1100 Clark Avenue, St. Louis, MO 63102 p314.241.6250	LEAD DESIGNERS
Rangaswamy & Associates, Inc. 304 W Liberty St, #420, Louisville, KY 40202 p502.589.2212	STRUCTURAL ENGINEERS
Carman 639 East Jefferson Street, Louisville, KY 40202 p502.742.6581	LANDSCAPE ARCHITECTS/ CIVIL ENGINEERS
Swope Design Group 2297 Lexington Road, Louisville, KY 40206 p502.583.933	WAYFINDING DESIGNER
CMTA Consulting Engineers 10411 Meeting Street, Prospect, KY 40059 p502.326.3085	MEP ENGINEERS
Paladin, Inc. 143 Walton Avenue, Lexington, KY 40508 p 859.252.3047	COMMISSIONING AGENT
DBA Accoustics, Inc. 3044 Bardstown Rd., Louisville, KY 40205 p502.212.9184	ACCOUSTICAL CONSULTANTS
Robert Pass + Associates 309 East Market Street, Suite 302, Louisville, KY 40202 p502.589.7632	COST CONSULTANTS

Set No. ____________________

University of Louisville - Student Recreation Center (Bid Package, Phase #4)
Louisville, Ky

Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507-1001
p 859.252.6664 f 859.253.2358
www.omniarchitects.com

CANNONDESIGN

UNIVERSITY OF LOUISVILLE

#	Revision Date
ADD. 2	March 2, 2012

Drawing Name: SITE/ STRUCTURAL COVER SHEET
U of L Project Number:
Project Number: Omni - 1105.00 Cannon - 03667.00
Date: JANUARY 2012
Drawn By: KTV Checked By: DLA

ADD. BP #4
STRUCTURAL

7/27/2012 3:46:35 PM

1.1 GENERAL

A. DESIGN DOCUMENT HIERARCHY:

1. THE GENERAL PROVISIONS OUTLINED HEREIN SHALL BE TREATED AS PART OF THE PROJECT SPECIFICATIONS & TAKE PRECEDENCE OVER OTHER DOCUMENTS RELATED TO THIS PROJECT, UNLESS SPECIFICALLY NOTED ELSEWHERE, AND SHALL BE STRICTLY OBSERVED DURING CONSTRUCTION AS WELL AS SHOP DRAWING PREPARATIONS.

2. CONTRACT DOCUMENTS TAKE PRECEDENCE OVER THE SHOP DRAWINGS UNDER ANY OF THE FOLLOWING CONDITIONS:

   a.) THE SHOP DRAWINGS ARE SUBMITTED IN "PIECE MEAL" BASIS, IN SEVERAL INSTALLMENTS, TO EXPEDITE CONSTRUCTION ON A "FAST TRACK" DELIVERY METHOD.

   b.) IF SHOP DRAWINGS ARE RELEASED WITH "NO EXCEPTIONS TAKEN" NOT CHECKED.

   c.) WHEN SHOP DRAWINGS HAVE MARKINGS AND DIRECTIONS TO COMPLY WITH CONTRACT DOCUMENTS.

B. CONSTRUCTION DEFICIENCIES:

1. REMEDIAL DESIGNS WILL BE NECESSARY TO CORRECT ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS DUE TO FIELD, FABRICATION AND/OR SUPPLY ERRORS, ALTERNATE DESIGNS, OR FIELD PROBLEMS AND SHALL BE PERFORMED BY A STRUCTURAL ENGINEER LICENSED IN KENTUCKY AND HAVING HIS/HER PRACTICE LOCATED IN KENTUCKY. THE STRUCTURAL ENGINEER SHALL HAVE PROFESSIONAL LIABILITY INSURANCE COVERAGE FOR ERRORS AND OMISSIONS TO A LIMIT OF $1,000,000.00. SUBMIT CERTIFICATE OF INSURANCE WITH ARCHITECT AS CERTIFICATE HOLDER ALONG WITH THE CALCULATIONS AND DETAILS FOR ARCHITECT'S RECORD. THE REQUIREMENTS OF GENERAL PROVISION SECTION 1.4, SUBMITTALS, APPLY AND THE SUBMITTAL SHALL INCLUDE SKETCHES THAT ILLUSTRATE THE LOCATIONS, EXTENTS AND DETAILS OF THE DEFICIENCY. RAI IS NOT REQUIRED TO OFFER REMEDIES BUT RESERVES THE RIGHT TO REVIEW, ACCEPT AND/OR REJECT THE PROPOSALS BEFORE THE WORK IS PUT IN HAND.

C. FIELD DIRECTIVES & RESPONSES TO "REQUESTS FOR INFORMATION":

THE STRUCTURAL ENGINEER RESERVES THE RIGHT TO ISSUE, AT VARIOUS STAGES OF CONSTRUCTION, DIRECTIVES AND SKETCHES TO FURTHER CLARIFY THE INTENT OF THE CONTRACT DOCUMENTS. IN ADDITION, THE STRUCTURAL ENGINEER MAY PROVIDE RESPONSES TO "REQUESTS FOR INFORMATION" INITIATED BY THE CONTRACTOR. IF THE CONTRACTOR FINDS THAT SUCH DIRECTIVES AND RESPONSES ARE CARDINAL CHANGES TO THE CONTRACT DOCUMENTS, HE/SHE MUST OBTAIN A CHANGE ORDER FROM THE ARCHITECT/ENGINEER, WITHIN FIFTEEN DAYS OF THE RECEIPT OF THE DIRECTIVE OR RESPONSE AND BEFORE PROCEEDING WITH THE WORK. CONTRACTOR SHALL NOT PROCEED WITH ANY PORTION OF THE CONSTRUCTION AFFECTED BY THE DIRECTIVE OR RESPONSE WITHOUT A CHANGE ORDER AND SUCH ACT SHALL BE DEEMED TO BE WITHIN THE SCOPE OF THE CONTRACT DOCUMENTS. NO CHANGE IN THE CONTRACT SUM WILL BE MADE WITHOUT AN APPROVED CHANGE ORDER AND NO CHANGE ORDER WILL BE ISSUED AFTER THE WORK IS IN PLACE.

D. APPLICABILITY:

THE GENERAL PROVISIONS CONTAINS HERE IN APPLICABLE TO ALL DRAWINGS STARTING WITH SHEETS "SXXXX TO SYYYY"

1.2 ADMINISTRATIVE

1. THE STRUCTURAL ENGINEER NEITHER SUPERVISES NOR CONTROLS THE CONSTRUCTION AND HAS NOT RETAINED THE RIGHTS TO SUPERVISE OR CONTROL THE WORK DESCRIBED IN THESE DOCUMENTS.

2. THE STRUCTURAL ENGINEER HAS NOT BEEN RETAINED TO & WILL NOT PARTICIPATE IN THE ON-GOING DAY TO DAY ACTIVITIES AT THE CONSTRUCTION SITE.

3. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR ON-SITE SAFETY AND WILL NOT BE RESPONSIBLE FOR SUPERVISING GENERAL OR SUB-CONTRACTORS.

4. THE STRUCTURAL ENGINEER HAS NEITHER ANY AUTHORITY TO ISSUE ORDERS NOR THE RIGHT TO STOP WORK AT ANY TIME.

5. THE SPECIAL INSPECTION REQUIREMENTS, AND THE EXECUTION OF THE REQUIREMENTS BY THE SPECIAL INSPECTION TEAM, DOES NOT IN ANY WAY, OR AT ANY TIME, RELIEVE THE GENERAL OR PRIME CONTRACTOR OF THE ULTIMATE RESPONSIBILITY FOR COMPLETION OF ALL STRUCTURAL ASPECTS OF WORK TO THE SATISFACTION OF THE SPECIAL-INSPECTOR-OF-RECORD.

1.3 DESIGN NOTES

1. CONCRETE: MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS (f'_c) –

   CAST IN PLACE CONCRETE (C.I.P.) = 4000 PSI (U.N.O.)
   SLAB ON GRADE CONCRETE (S.O.G):
   SEE NOTES 3.2.1 & 3.2.2.
      ACI 302 CLASSES 1 AND 2 = 3500 PSI
      ACI 302 CLASSES 4 AND 5 = 4000 PSI
      ACI 302 CLASS 6 = 4500 PSI
   CONCRETE TO RECEIVE BUSH-HAMMERED FINISH = 5000 PSI
   LEAN CONCRETE FILL = 3000 PSI

2. MASONRY NET AREA COMPRESSIVE STRENGTH OF UNREINFORCED MASONRY, f'm = 1500 PSI-SEE SECTION 4.1 FOR GROUT AND MORTAR REQUIREMENTS.

3. CONCRETE REINFORCING STEEL: ASTM A615, GRADE 60.

4. STRUCTURAL STEEL:
   ROLLED SHAPES AND PLATES:
   W – SHAPES: ASTM A-992
   ALL OTHER SHAPES: ASTM A-36
   ROLLED PIPES – ASTM-A500, GRADE B
   RECTANGULAR AND SQUARE TUBING – ASTM A-500, GRADE B

5. BOLTS: 3/4 INCH DIAMETER ASTM F1852 (A325TC), TYPE 1, TENSION CONTROL BOLTING SYSTEM, TWIST-OFF SPLINE TYPE, UNLESS NOTED OTHERWISE.

6. ANCHOR BOLTS:
   ASTM A307 OR ASTM A36, MINIMUM. SIZE AND LOCATION PER THE VENDOR'S CERTIFIED DRAWINGS. ADHESIVE SET ANCHOR BOLTS, WHEN DEEMED ACCEPTABLE BY THE ENGINEER, SHALL BE THE HILTI "HIT" SYSTEM USING THE RE 500 SD CARTRIDGE IN CONJUNCTION WITH THE HILTI "HAS-E" ANCHOR RODS OF THE SPECIFIED DIAMETER, LENGTH AND EMBEDMENT. MANUFACTURERS' INSTRUCTIONS AND RECOMMENDATIONS SHALL BE STRICTLY ADHERED TO.

7. CLOSED CELL NEOPRENE PADS: ASTM D1056 (S.A.E. SPEC SCE-42), DUROMETER OF 52 (+/-7), TENSILE STRENGTH 100 PSI, ELONGATION 150% MINIMUM, AS DISTRIBUTED BY LAMATEK, INC. OR APPROVED EQUIVALENT.

8. DESIGN LOADS (PSF):

	DEAD	SUPER-IMPOSED DEAD	LIVE
ROOFS (U.N.O.): MECHANICAL ROOF AREAS	26.0	60.0	20.0
: GYMNASIUM/MAC GYM/ FITNESS ROOF AREAS	46.0	–	20.0
: ALL OTHER ROOF AREAS	29.0	–	20.0
GYMNASIUM FLOORS	74.0	19.0	100.0
AEROBICS FLOORS	56.0	86.0	100.0
JOGGING TRACK FLOORS	56.0	20.0	100.0
MECHANICAL/STORAGE FLOORS	56.0	40.0	125.0
STORAGE DEPRESSED FLOORS	56.0	88.0	125.0
CORRIDOR FLOORS	56.0	40.0	100.0
RACQUETBALL COURT FLOORS	56.0	42.0	100.0

NOTE:
THE ABOVE TABULATED LOADS ARE THE BASIS FOR DESIGN AND INCLUDE ALLOWANCES FOR SUPERIMPOSED LOADS, WHERE NOT SPECIFICALLY LISTED. THE MAGNITUDE, LOCATION AND DESIGN REQUIREMENTS FOR SPECIFIC CONCENTRATED AND LOCALIZED SUPERIMPOSED LOADS, IN ADDITION TO THE BASIC ALLOWANCES, ARE REFERENCED IN THE PLANS.

SPECIAL DESIGN LOADS (PSF):
(LOAD CONDITIONS TO BE INCLUDED IN COMPONENT DESIGNS BY SPECIALTY ENGINEERS):

WIND PRESSURE	30
NET UPLIFT:	
ON ALL ROOF JOISTS AND ROOF TRUSSES	25
ON METAL DECK IN THE FIELD AREA	30
ON METAL DECK AT EAVES & CORNERS	INCREASE FIELD REQUIREMENT IN PROPORTION TO KBC PRESCRIBED INCREASES.
SNOW (NON-SIMULTANEOUS w/LL)	20

SOIL BEARING PRESSURES (PSF):

SPREAD FOOTINGS	1500
CONTINUOUS STRIP FOOTINGS	1500

PILE NOTES:
PILE TYPE = 16"ø AUGER CAST PILE
ALLOWABLE LOAD CAPACITY = 110 TONS
LENGTH OF PILES = 45'-0" (MIN.)

PARAMETERS USED IN THE DESIGN OF THE PRINCIPAL FORCE-RESISTING STRUCTURAL SYSTEM	
SNOW:	
GROUND SNOW LOAD (Pg) =	15 PSF
FLAT ROOF SNOW LOAD (Pf) =	16.5 PSF
SNOW EXPOSURE FACTOR (Ce) =	0.9
SNOW LOAD IMPORTANCE FACTOR (Is) =	1.1
THERMAL FACTOR (Ct) =	1.0
WIND:	
BASIC WIND SPEED =	90 MPH
WIND IMPORTANCE FACTOR (Iw) =	1.15
WIND EXPOSURE =	B
INTERNAL PRESSURE COEFFICIENT =	(±)0.18
DESIGN WIND PRESSURE FOR COMPONENTS AND CLADDING =	25.0 PSF
SEISMIC:	
SEISMIC IMPORTANCE FACTOR (Ie) =	1.25
OCCUPANCY CATEGORY =	III
MAPPED SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS (SS) =	0.248 (G)
MAPPED SPECTRAL RESPONSE ACCELERATION AT ONE SEC PERIOD (S1) =	0.103 (G)
SITE CLASSIFICATION BASED ON GEO-TECH REPORT =	D
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS (SDS) =	0.265 (G)
DESIGN SPECTRAL RESPONSE ACCELERATION AT ONE SEC PERIOD (SD1) =	0.164 (G)
SEISMIC DESIGN CATEGORY =	C
BASIC SEISMIC FORCE RESISTING SYSTEM =	MOMENT RESISTING FRAME SYSTEMS AND ORDINARY STEEL MOMENT FRAMES.
DESIGN BASE SHEAR =	414.43 KIPS
SEISMIC RESPONSE COEFF. (Cs) =	0.0429
RESPONSE MODIFICATION FACTOR (R) =	3.5
ANALYSIS PROCEDURE =	ELFP
ZIP CODE =	40208
LATITUDE =	38.219 N
LONGITUDE =	–85.761 W

SPECIAL INSPECTIONS ARE REQUIRED AS FOLLOWS (PER KBC):

KBC SECTION	REQUIRED YES	NO	DESCRIPTION OF INSPECTION OR TEST TO BE PERFORMED	COMPLY WITH REQUIREMENTS OF
1704.2	X		INSPECTION OF FABRICATORS:	ART. 1704.2.1
1704.2	X		A. STRUCTURAL STEEL FABRICATION SHOP	ART. 1704.2.1
1704.2	X		B. STEEL JOIST FABRICATION SHOP	ART. 1704.2.1
1704.2	X		C. METAL DECK ROLLING MILL	ART. 1704.2.1
1704.2		X	D. LIGHT GAGE STEEL TRUSS FABRICATION SHOP	ART. 1704.2.1
1704.2		X	E. LIGHT GAGE STEEL FRAMING FABRICATION SHOP	ART. 1704.2.1
1704.3	X		STEEL CONSTRUCTION	TABLE 1704.3
1704.4	X		CONCRETE CONSTRUCTION	TABLE 1704.4
1704.5		X	MASONRY CONSTRUCTION (NON ESSENTIAL FACILITIES)	TABLE 1704.5.2 (LEVEL 1)
1704.5	X		MASONRY CONSTRUCTION (ESSENTIAL FACILITIES)	TABLE 1704.5.3 (LEVEL 2)
1704.6		X	HIGH-LOAD DIAPHRAGMS AND SHEAR WALLS	ART. 1704.6.1
1704.7	X		SOILS/SITE PREPARATION	ART. 1704.7
1704.8	X		PILE FOUNDATIONS	ART. 1704.8
1704.9	X		PIER FOUNDATIONS	ART. 1704.9
1704.10	X		SPRAYED FIRE-RESISTANT MATERIALS	ART. 1704.10
1704.11	X		MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS	ART. 1704.11
1705	X		SEISMIC RESISTANCE	ART. 1705.3
1705	X		WIND RESISTANCE	ART. 1705.4
1707	X		SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE	ART. 1707
1707	X		A. SPECIAL INSPECTION FOR SEISMIC RESISTANCE	ART. 1707.1
1707	X		B. STRUCTURAL STEEL	ART. 1707.2
1707		X	D. COLD-FORMED STEEL FRAMING	ART. 1707.4
1707	X		E. PIER FOUNDATIONS	ART. 1707.5
1707		X	F. STORAGE RACKS & ACCESS FLOORS	ART. 1707.6
1707		X	G. ARCHITECTURAL COMPONENTS	ART. 1707.7
1707	X		H. MECHANICAL & ELECTRICAL COMPONENTS	ART. 1707.8
1707		X	I. DESIGNATED SEISMIC SYSTEM VERIFICATIONS	ART. 1707.9
1707		X	J. SEISMIC ISOLATION SYSTEM	ART. 1707.10
1708	X		STRUCTURAL TESTING FOR SEISMIC RESISTANCE	ART. 1708
1708	X		A. MASONRY CONSTRUCTION	ART. 1708.1
1708		X	A.1 EMPIRICALLY DESIGNED NON-ESSENTIAL FACILITY	ART. 1708.1.1
1708	X		A.2 EMPIRICALLY DESIGNED ESSENTIAL FACILITY	ART. 1708.1.2
1708		X	A.3 ENGINEERED MASONRY IN NON-ESSENTIAL FACILITY	ART. 1708.1.2
1708		X	A.4 ENGINEERED MASONRY IN ESSENTIAL FACILITY	ART. 1708.1.4
1708	X		B. TESTING FOR SEISMIC RESISTANCE	ART. 1708.2
1708	X		C. REINFORCING & PRESTRESSING STEEL	ART. 1708.3
1708	X		D. STRUCTURAL STEEL	ART. 1708.4
1708	X		E. MECHANICAL & ELECTRICAL EQUIPMENT	ART. 1708.5
1708		X	F. SEISMICALLY ISOLATED STRUCTURES	ART. 1708.6
1709		X	STRUCTURAL OBSERVATIONS	ART. 1709

NOTE:
INSPECTION OF FABRICATION SHOPS SHALL BE WAIVED BASED UPON THE FOLLOWING AFFILIATIONS:

STRUCTURAL STEEL – ACTIVE CERTIFICATION WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (A.I.S.C.)

STEEL JOIST – ACTIVE MEMBER COMPANY WITH THE STEEL JOIST INSTITUTE (S.J.I.)

METAL DECK – ACTIVE MEMBER COMPANY WITH THE STEEL DECK INSTITUTE (S.D.I.)

LIGHT GAGE STEEL FRAMING – FULL VOTING MEMBER WITH THE STEEL STUD MANUFACTURER'S ASSOCIATION (S.S.M.A.)

ALL COSTS ASSOCIATED WITH ANY NECESSARY FAB SHOP INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE FABRICATION SHOP AND PAID DIRECTLY TO THE PROJECT'S SPECIAL INSPECTION FIRM.

10. PROVISION FOR FUTURE EXPANSION: NONE

11. THIS BUILDING WAS DESIGNED IN ACCORDANCE WITH:

    "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY", ACI 318-08, ALTERNATE DESIGN METHOD.

    "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES", ACI 530-08/ASCE 5-08/TMS 402-08.

    "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC, 2005, ALLOWABLE STRESS DESIGN.

    "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", AISC, 2004.

    "STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS, K-SERIES", SJI, 2005.

    "SPECIFICATIONS AND COMMENTARY FOR STEEL ROOF DECK", STEEL DECK INSTITUTE, PUBLICATION No. 31.

    "SPECIFICATIONS AND COMMENTARIES FOR NON-COMPOSITE STEEL FORM DECK", STEEL DECK INSTITUTE, PUBLICATION No. 31.

    "DIAPHRAGM DESIGN MANUAL", STEEL DECK INSTITUTE (DDM03).

1.4 SUBMITTALS

1. ANY REFERENCE TO SHOP DRAWINGS IN THE CONTRACT DOCUMENTS MEANS SHOP & ERECTION DRAWINGS. SHOP DRAWINGS ARE TO BE PREPARED BY THE CONTRACTOR, FOR THE SOLE PURPOSE OF DEMONSTRATING HIS/HER DEPTH OF UNDERSTANDING OF THE PROJECT REQUIREMENTS, RESOLVING THE COMPLEXITIES TO BE ANTICIPATED DURING THE EXECUTION, PLANNING THE EXECUTION AND WORKING OUT THOSE SPECIFIC AND FINITE DETAILS REQUIRED TO CARRY OUT CONSTRUCTION. HENCE, BOTH SHOP AS WELL AS ERECTION DRAWINGS SHALL BE PREPARED BY THE MATERIAL SUPPLIER IN DETAIL. NEITHER DESIGN DRAWINGS NOR PARTS THEREOF SHALL BE USED AS SHOP DRAWINGS. SUBSTITUTION OF DESIGN DRAWINGS FOR SHOP & ERECTION DRAWINGS IS IN VIOLATION OF ONE OR MORE OF THE STATUTES AND IS FORBIDDEN HEREIN AND THE SUBMITTAL WILL BE REJECTED.

2. SHOP DRAWINGS SHALL BE EXPLICIT. SUFFICIENT INFORMATION AND DETAILS SHALL BE SHOWN TO ENSURE THAT FABRICATORS, INSTALLERS AND ERECTORS ARE NOT REQUIRED TO INTERPRET REQUIREMENTS. THE SHOP DRAWINGS SHALL FULLY REPRESENT WHAT IS TO BE INSTALLED IN THE PROJECT. LABOR SAVING WORDS SUCH AS "TYP", "VERIFY IN FIELD", "N-PLACES" SHOULD BE AVOIDED AND SUBMITTALS MAY BE RETURNED FOR EXPLICIT REPRESENTATIONS.

3. WHERE THE CONTRACTOR IS REQUIRED TO PROVIDE ENGINEERING DESIGN, THE SHOP DRAWINGS AND CALCULATIONS SUBMITTED ARE TO BE IN ACCORDANCE WITH THE FOLLOWING STAMPING AND SIGNING PROVISIONS. THE ITEMS SUBMITTED SHALL BE DESIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED AND THE SHOP DRAWINGS SHALL BE STAMPED BY THE ENGINEER IN CHARGE OF DESIGN. THE STAMPING AND SIGNING SHALL CONFORM TO THE FOLLOWING:

   DRAWINGS:

   A. EACH SHEET OF A SET SHALL BEAR THE STAMP, SIGNATURE AND THE DATE SIGNED. THE SIGNATURE SHALL BE ACROSS THE STAMP.

   B. THE SHEET 1 OR TITLE PAGE SHALL BE WET SIGNED IN A DIFFERENT COLORED INK THAN THE MEDIA AND CONTAIN THE DATES OF SIGNATURE AND EXPIRATION DATE OF REGISTRATION IN ADDITION TO THE REQUIREMENTS STATED IN ITEM A.

   CALCULATIONS:

   A. EACH SHEET OF A SET SHALL BEAR THE STAMP, SIGNATURE AND THE DATE SIGNED. THE SIGNATURE SHALL BE ACROSS THE STAMP.

   B. THE SHEET 1 OR TITLE PAGE SHALL BE WET SIGNED IN A DIFFERENT COLORED INK THAN THE MEDIA AND CONTAIN THE DATES OF SIGNATURE AND EXPIRATION DATE OF REGISTRATION IN ADDITION TO THE REQUIREMENTS STATED IN ITEM A.

   STAMPING WHOLE OR PORTIONS OF DESIGN DRAWINGS, & THEIR USE AS SHOP DRAWINGS, IS IN VIOLATION OF CODE OF PROFESSIONAL PRACTICE AND CONDUCT ADOPTED BY THE KENTUCKY STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS & LAND SURVEYORS &, AS PER KRS 322.180(4), THE REGISTRATION OF THE REGISTRANT MAY BE REVOKED OR SUSPENDED.

4. SUBMITTALS SHALL BE COMBINED TO INCLUDE ALL MATERIALS OR COMPONENTS NECESSARY TO COORDINATE & CONSTRUCT PARTICULAR ELEMENTS OF THE WORK. LARGE PROJECTS, HOWEVER, MAY BE SUBMITTED IN BUILDING AREA PHASES.

5. SHOP DRAWINGS FOR FABRICATION, BENDING & PLACEMENT OF CONCRETE OR MASONRY REINFORCEMENT SHALL COMPLY WITH LATEST EDITION OF ACI-315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES." SHOW BAR SCHEDULES, STIRRUP AND BAR SPACING, BAR LOCATION, INCLUDING ALL CMU DOWELS ON A PLAN SHEET, DIAGRAM OF BENT BARS, ARRANGEMENT OF BARS, CLEARANCES, BOLSTERS & OTHER ACCESSORIES, CONCRETE COVER AND CONTROL AND CONSTRUCTION JOINTS.

6. IF CUT SHEETS OR CATALOGUES ARE SUBMITTED FOR REVIEW, THE SPECIFIC PRODUCT DETAILS THAT WILL BE USED IN THIS PROJECT SHALL BE MARKED.

7. ALL SUBMITTALS SHALL HAVE BEEN FULLY REVIEWED & COORDINATED BY THE GENERAL CONTRACTOR BEFORE SUBMISSION TO THE STRUCTURAL ENGINEER FOR COMPLETE COMPLIANCE WITH THE REQUIREMENTS OF THE DESIGN DRAWINGS, GENERAL PROVISIONS & SPECIFICATIONS. FAILURE OF THE GENERAL CONTRACTOR TO COMPLY SHALL BE REASON FOR REJECTION OF THE SUBMITTAL. THE CONTRACTORS REVIEWS SHALL ALSO DETERMINE THAT THE SUBMITTALS ARE ACCEPTABLE IN TERMS OF THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE CONTRACTOR'S RESPONSIBILITIES. LABEL ALL SUBMITTALS WITH THE SPECIFICATION REFERENCE NUMBER UNDER WHICH THEY ARE TO BE REVIEWED AND PROVIDE SPACE FOR REVIEW STAMPS.

8. THE CONTRACTOR SHALL CALL ATTENTION TO ANY SHOP DRAWING SUBMITTAL, AND ANY SPECIFIC PART THEREOF, THAT VARIES FROM WHAT THE PROJECT DOCUMENTS CALL FOR. THE JUSTIFICATION FOR SUCH VARIANCES SHALL BE CLEARLY STATED, AS SHALL ANY RESULTING COST SAVINGS TO BE PASSED ON TO THE OWNER. THE ENGINEER'S COSTS IN REVIEWING THE ITEMS AT VARIANCE IN ANY SUCH SUBMITTAL WILL BE BILLED TO THE CONTRACTOR, AT THE ENGINEER'S DISCRETION.

9. RESUBMITTALS SHALL CLEARLY INDICATE THOSE SPECIFIC ITEMS THAT HAVE BEEN REVISED OR ADDED SINCE THE INITIAL REVIEW BY THE ENGINEER. FAILURE TO DO SO WILL BE REASON FOR REJECTION. THE ENGINEER'S COSTS IN REVIEWING SUBMITTALS OTHER THAN THE INITIAL SUBMITTAL, AND THE FIRST SUBSEQUENT RESUBMITTAL, WHEN CALLED FOR, WILL BE BILLED TO THE CONTRACTOR. THE GENERAL CONTRACTOR SHALL CLEARLY STATE THAT RESUBMITTALS COMPLY WITH THE DESIGN TEAM'S REVIEW COMMENTS.

10. ONE PAPER SEPIA AND TWO BLUE LINE COPIES OF EACH SHOP DRAWING SHALL BE SUBMITTED, UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS.

11. SUBMITTALS FOR CONCRETE & GROUT MIX DESIGNS SHALL INCLUDE REQUEST FOR, AND COMPLETION OF, SUBMITTAL FORM PRESCRIBED BY THE ENGINEER.

12. NON-COMPLIANCE WITH SUBMITTAL REQUIREMENTS WILL RESULT IN A DELAY IN THE RELEASE OF REVIEWED DOCUMENTS, FOR WHICH THE ENGINEER WILL NOT BE RESPONSIBLE.

13. SUBMITTAL PROCEDURES:
    A. GENERAL
    SUBMITTAL DATA IN ELECTRONIC FORMAT IS TO BE UTILIZED IN PLACE OF PAPER COPIES, WHEREVER POSSIBLE.

    B. ELECTRONIC SUBMITTALS
    SUBMIT DATA IN A DIGITAL FORMAT, EITHER AS AN E-MAIL ATTACHMENT OR PHYSICALLY DELIVERED ON FLOPPY OR CD RECORDING MEDIA. WHEREVER POSSIBLE, DRAWING FILES ARE TO BE IN A FORMAT THAT CAN BE OPENED BY AUTOCAD 2004; & TEXT FILES IN A FORMAT THAT CAN BE OPENED BY MICROSOFT EXCEL OR WORD. FILES THAT CAN ONLY BE OPENED BY ACROBAT 5.0 OR IMAGE VIEWERS ARE ACCEPTABLE BUT ARE NOT PREFFERED. RAI'S REVIEW COMMENTS, & STAMP WILL BE ADDED TO .DWG FILES, IN THEIR OWN LAYER AND IN A CLEARLY IDENTIFIABLE FONT SIZE AND COLOR. RAI'S REVIEW COMMENTS, & STAMP, WILL BE ADDED IN A CLEARLY IDENTIFIABLE FONT STYLE & COLOR TO NON- .DWG FILES, WHERE POSSIBLE, OR CREATED IN A SEPARATE MICROSOFT EXCEL OR WORD FILE. ALL REVIEWED SUBMITTALS WILL BE ELECTRONICALLY FORWARDED TO THE ARCHITECT FOR HIS/HER REVIEW AND SUBSEQUENT DISTRIBUTION. THE FORWARDED FILES WILL BE IN .PDF FORMAT AND ADDITIONALLY IN .DWG FORMAT, WHERE APPLICABLE.

    C. PAPER SUBMITTALS
    SUBMIT DATA IN DUPLICATE. ONE COPY WILL BE USED FOR RAI'S REVIEW PROCESS & PROJECT RECORDS. REVIEW COMMENTS WILL BE TRANSCRIBED, OR ATTACHED, TO THE REMAINING COPY BEFORE FORWARDING TO THE ARCHITECT FOR HIS/HER REVIEW AND SUBSEQUENT DISTRIBUTION; AND ONE COURTESY OCE OR XEROX PROCESS BLACK-LINE COPY OF THE FORWARDED DOCUMENTS WILL ALSO BE INCLUDED. RANGASWAMY & ASSOCIATES COMMENTS WILL BE IDENTIFIED.

14. RANGASWAMY AND ASSOCIATES, INC. HAS PREPARED A "SUBMITTAL STANDARDS" GUIDE WHICH CAN BE VIEWED, PRINTED AND/OR DOWNLOADED FROM THE FOLLOWING WEB PAGE: http://www.rangaswamy.com/submittalstandards.htm THE "SUBMITTAL STANDARDS" GUIDE IS NOT INTENDED TO BE EXHAUSTIVE FOR ALL SUBMITTALS AND ALL MATERIALS. THE "SUBMITTAL STANDARDS" GUIDE SHALL BE FOLLOWED FOR ALL APPLICABLE SHOP DRAWINGS AND SUBMITTALS.

1.5 TYPICAL DETAILS

1. TYPICAL DETAILS SHOWN IN THESE PLANS ARE PROVIDED TO ILLUSTRATE DESIGN PHILOSOPHIES AND MINIMUM REQUIREMENTS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCOMMODATING SPECIFIC FIELD CONDITIONS WHILE PROVIDING FOR THE INTENT OF THE TYPICAL DETAILS.

3. COORDINATION OF THE EXACT LOCATIONS, AND QUANTITIES, OF THE TYPICAL DETAIL CONDITIONS IN COMPARISON TO THE ACTUAL PROJECT CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR; AND PERFORMED AT NO ADDITIONAL COSTS TO THE OWNER OR THE OWNER'S AGENTS.

1.6 MISCELLANEOUS NOTES

1. LAYOUT DIMENSIONS SHOWN ON THE STRUCTURAL PLANS HAVE BEEN DERIVED FROM THE ARCHITECTS' PLANS AND INCLUDED FOR THE CONTRACTOR'S CONVENIENCE. THE CONTRACTOR IS RESPONSIBLE FOR CORRELATING AND VERIFYING THE LAYOUT DIMENSIONS ON THE STRUCTURAL PLANS WITH THE DETAILS AND DIMENSIONS SHOWN ON THE ARCHITECTURAL PLANS. IF ARCHITECTURAL DETAILS, FEATURES OR ROOM LAYOUTS ARE SHOWN IN THE STRUCTURAL PLANS THEY ARE TO BE CONSIDERED AS BEING INDICATED FOR CONCEPTUAL PURPOSES ONLY. DOCUMENT DISCREPANCIES, BETWEEN VARIOUS TRADES, SHALL BE BROUGHT TO THE ARCHITECT'S IMMEDIATE ATTENTION FOR FINAL RESOLUTION.

2. EACH CONTRACTOR SHALL VERIFY THE SIZE & LOCATION OF DUCT OPENINGS, GRILLES, LOUVERS, ETC. WITH THE MECHANICAL TRADES BEFORE PROCEEDING WITH THE WORK.

3. IF DIMENSIONS AND DETAILS ARE NOTED WITH AN ASTERISK (*) THEY ARE TO BE DETERMINED, BY THE CONTRACTOR, FROM THE EQUIPMENT MANUFACTURERS' CERTIFIED DRAWINGS, AND INSTALLATIONS SHALL BE BASED ON SUCH INFORMATION.

4. SEE THE SPECIFICATIONS FOR SHORING AND BRACING REQUIREMENTS. STABILITY OF EXISTING STRUCTURES DURING CONSTRUCTION IS THE CONTRACTOR'S RESPONSIBILITY. ENGAGE THE SERVICES OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF KENTUCKY TO PERFORM DESIGN OF TEMPORARY SUPPORTS AND PROCEDURES. SUCH ENGINEER SHALL CARRY PROFESSIONAL LIABILITY INSURANCE FOR $1,000,000.00 MIN. AND SUBMIT CERTIFICATE OF INSURANCE FOR REVIEW BY THE ARCHITECT. SUBMITTALS, NOT ACCOMPANIED WITH CERTIFICATE OF PROFESSIONAL LIABILITY INSURANCE, WILL BE RETURNED WITHOUT FURTHER REVIEW.

1.7 CABINET DESIGN AND ANCHORING

1. CABINET AND CASEWORK DESIGN AND IT'S ANCHORING TO STRUCTURAL ELEMENTS SUCH AS WALLS, BEAMS, JOISTS, COLUMNS, ETC. SHALL BE IN ACCORDANCE WITH SECTION 1613, "EARTHQUAKE LOADS" OF THE INTERNATIONAL BUILDING CODE, CURRENT EDITION. SEISMIC DESIGN PARAMETERS ARE FURNISHED UNDER GENERAL PROVISION NOTES SECTION 1.3 "DESIGN NOTES" SHOWN ON THE STRUCTURAL DRAWINGS.

2. THE STORAGE VERTICAL LIVE LOADS TO BE APPLIED TO THE HORIZONTAL FLAT SURFACES OF THE CABINETS OR CASEWORK SHALL BE 20 PSF IN ADDITION TO THE VERTICAL DEAD LOADS OF THE CABINETS. FOR SIMPLICITY, ALL VERTICAL LOADS CAN BE ASSUMED TO BE APPLIED AT ONE HALF THE HORIZONTAL DEPTH OF THE CABINET.

3. THE HORIZONTAL EARTHQUAKE LOADS SHALL BE OBTAINED BY MULTIPLYING THE TOTAL VERTICAL LOAD (DEAD + LIVE) BY THE SEISMIC RESPONSE COEFFICIENT (Cs) FURNISHED UNDER GENERAL PROVISION NOTES SECTION 1.3 "DESIGN NOTES" SHOWN ON THE STRUCTURAL DRAWINGS. FOR SIMPLICITY, THE HORIZONTAL EARTHQUAKE LOAD MAY BE APPLIED AT ONE HALF THE VERTICAL HEIGHT OF THE CABINET.

4. ANCHORS SHALL BE DESIGNED TO WITHSTAND THE RESOLVED COMPONENTS OF THE VERTICAL DEAD AND LIVE LOADS AS WELL AS HORIZONTAL SEISMIC LOADS ACTING SIMULTANEOUSLY ON THE ANCHOR.

5. ANCHOR DESIGN CALCULATIONS AND DETAILS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER LICENSED AND PRACTICING IN THE STATE OF KENTUCKY. THE STRUCTURAL ENGINEER SHALL HAVE PROFESSIONAL LIABILITY INSURANCE TO A LIMIT OF $1,000,000.00 PER OCCURRENCE AND SUBMIT CERTIFICATE OF INSURANCE FOR ARCHITECT'S REVIEW AND FILE.

2.1 FOUNDATION NOTES

1. SOILS RECOMMENDATIONS ARE GIVEN IN THE GEOTECHNICAL REPORT PREPARED BY AMEC EARTH & ENVIRONMENTAL INC AND DATED MAY 05, 2011.

2. PRIOR TO CONSTRUCTION OF ANY PERMANENT STRUCTURE, ALL TOPSOIL AND ORGANIC MATERIAL, OR FROZEN, WET, SOFT, LOOSE, OR UNDESIRABLE SOIL SHALL BE REMOVED.

3. ALL ENGINEERED FILL SUPPORTING FOOTINGS, FLOOR SLABS OR MECHANICAL EQUIPMENT SLABS SHALL BE COMPACTED TO AT LEAST 98 PERCENT STANDARD PROCTOR MAXIMUM DRY DENSITY. (MOISTURE CONTENT: OPTIMUM TO OPTIMUM + 3%). (ASTM D698).

4. FILL MATERIAL SHALL BE PLACED IN LOOSE LAYERS NOT TO EXCEED 8 INCHES & THEN MECHANICALLY COMPACTED TO AT LEAST THE SPECIFIED PERCENTAGE OF THE MAXIMUM DRY DENSITY. COMPACTION OF ANY FILL BY THE WATER FLOODING METHOD IS UNACCEPTABLE.

5. FOOTINGS SHALL BEAR ON FIRM UNDISTURBED MATERIAL OR ON ENGINEERED FILL MATERIAL DESCRIBED HEREIN AND AS IN THE GEOTECHNICAL EXPLORATION REPORT FOR THIS PROJECT. WHEN IN CONFLICT, GEOTECHNICAL EXPLORATION REPORT SHALL CONTROL. ANY UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE FOOTING EXCAVATIONS AND SPOT REINFORCED. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED BY AN INDEPENDENT TESTING LABORATORY BEFORE CONCRETE IS POURED. THE ADEQUACY OF THE SOIL SHALL BE DETERMINED BY PROBING, TAKING HAND AUGER SAMPLES OR BY USE OF A SOIL PENETROMETER.

6. SOILS EXPOSED IN THE BASES OF ALL SATISFACTORY FOUNDATION EXCAVATIONS SHALL BE PROTECTED AGAINST ANY DETRIMENTAL CHANGE IN CONDITION SUCH AS FROM DISTURBANCE, RAIN OR FREEZING. SURFACE RUNOFF SHALL NOT BE ALLOWED TO ENTER THE EXCAVATION.

7. FOUNDATION CONCRETE SHALL BE POURED THE SAME DAY EXCAVATIONS ARE OPENED. IF THIS IS IMPOSSIBLE, STEPS SHALL BE TAKEN TO ADEQUATELY PROTECT THE OPEN EXCAVATIONS.

8. THE UNDERSIDE OF ALL FOOTINGS SUBJECTED TO OUTSIDE WEATHER CONDITIONS SHALL BE LOCATED AT LEAST 2'-6" BELOW FINAL EXTERIOR GRADE AT ANY GIVEN POINT FOR FROST PROTECTION, UNLESS OTHERWISE INDICATED.

9. ADEQUATE DRAINAGE SHALL BE PROVIDED AT THE SITE TO MINIMIZE ANY INCREASE IN MOISTURE CONTENT OF THE FOUNDATION SOILS.

10. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTING FOOTING AND STRUCTURE ELEVATIONS AND LOCATIONS BEFORE COMMENCING EXCAVATION AND/OR UNDERPINNING AND BRACING OPERATIONS ADJACENT THERETO.

11. UNLESS ALTERNATE METHOD OF CONSTRUCTION IS EXPLICITLY PROVIDED IN THE PLANS, THE SIDES OF ALL FOOTINGS AND FOUNDATION SYSTEMS SHALL BE FORMED TO THE EXACT DIMENSIONS SHOWN ON THE PLANS. POURING CONCRETE IN TRENCHES, USING SIDES OF EARTH AS FORMS, WILL NOT BE PERMITTED UNLESS NOTED OTHERWISE. REMOVAL AND OFF-SITE DISPOSAL OF IMPROPERLY POURED CONCRETE WILL BE AT THE EXPENSE OF THE CONTRACTOR.

12. ALL REINFORCING BARS, INCLUDING ANCHOR BOLTS, SHALL EITHER BE SEPARATED BY A DISTANCE OF ONE INCH MINIMUM OR SECURELY WIRED TOGETHER. REINFORCING BARS SHALL BE SUPPORTED ON CHAIRS SPECIFICALLY DESIGNED FOR SUCH PURPOSE. SHOP DRAWINGS OR CUT SHEETS OF SUCH CHAIRS SHALL BE SUBMITTED WITH THE REINFORCING STEEL PLACEMENT SHOP DRAWINGS.

13. ALL REINFORCEMENT, INCLUDING DOWELS, SHALL BE TIED IN PLACE BEFORE PLACING CONCRETE. CONTRACTOR SHALL FURNISH ADDITIONAL REINFORCING BARS AS NECESSARY, WHETHER SHOWN IN PLANS OR NOT, TO TIE ALL REINFORCEMENTS IN PLACE AND TO FORM CAGES TO WITHSTAND FORCES DUE TO PLACING AND CONSOLIDATION. INSERTING DOWELS INTO THE PLASTIC CONCRETE IS FORBIDDEN AND THE ENTIRE FOOTING THUS PLACED WILL BE ORDERED TO BE REMOVED AND DISPOSED OF OFF SITE.

14. TOP TWELVE INCHES OF THE SUB-GRADE BELOW THE GRANULAR DRAINAGE MEDIA UNDER THE SLAB ON GRADE, IF DETERMINED ON-SITE TO BE HIGHLY PLASTIC, SHALL BE OVER EXCAVATED AND REPLACED WITH LOW PLASTIC SOILS HAVING LOW SWELL POTENTIAL SALVAGED WITHIN THE SITE OR IMPORTED FROM OFF SITE. ALTERNATELY, THE TOP TWELVE INCHES OF THE PLASTIC CLAY MAY BE STABILIZED, AT THE OPTION OF THE CONTRACTOR, WITH LIME ADMIXTURE. THE LIME STABILIZATION SHALL BE STRICTLY FOLLOWED AS OUTLINED HERE UNDER:

    A. SCARIFY THE UPPER 12" OF SOIL THAT WILL BE BELOW THE DRAINAGE MEDIA WITH A DISC OR TILLER EQUIPMENT.

    B. SPREAD QUICK OR HYDRATED LIME ON THE SCARIFIED AREA AT THE RATE OF 4% TO 6% BY WEIGHT OF THE DRY SOIL (4 TO 6 POUNDS PER SQUARE FOOT OF SUB-GRADE AREA).

    C. THOROUGHLY MIX AND PULVERIZE THE SOIL AND LIME IN PLACE WITH ROTARY TILLING OR DISC EQUIPMENT.

    D. CURE THE SOIL-LIME MIXTURE FOR A MINIMUM OF 48 HOURS.

    E. COMPACT THE SOIL-LIME MIXTURE TO 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698) WITH SUITABLE COMPACTOR.

    NOTE:
    GENERAL CONTRACTOR SHALL PROVIDE THE ABOVE MENTIONED TREATMENTS AS AN ALLOWANCE ITEM ALONG WITH THE BASE BID. PROVIDE UNIT PRICING PER SQUARE FOOT OF TREATMENT/CONSTRUCTION.

15. THE SUB-GRADE TO SUPPORT THE SLAB ON GRADE WITHIN THE BUILDING ENVELOPE SHALL BE PROOF-ROLLED TO DETERMINE THE DEGREE OF COMPACTNESS AND ASCERTAIN THAT PROPER SUB-GRADE MODULUS IS DEVELOPED FOR SUPPORTING THE SLAB. THIS TESTING SHALL BE IN ADDITION TO THE MOISTURE CONTENT AND DENSITY TESTS. THE SUB-GRADE MODULUS FOR FILL UNDER SLABS SUBJECTED TO WHEELED TRAFFIC SHALL BE 125 PCI (POUNDS PER CUBIC INCH) & ELSEWHERE SHALL BE A MINIMUM OF 100 PCI.

16. A THIN LAYER OF GRADED, GRANULAR, COMPACTIBLE MATERIAL SHALL BE USED, AT THE TOP OF DRAINAGE MEDIA (OR SUB-GRADE IF DRAINAGE MEDIA IS NOT SPECIFIED) WITHIN THE BUILDING ENVELOPE, AS FINE GRADING MATERIAL TO BETTER CONTROL THE THICKNESS OF THE CONCRETE AND TO MINIMIZE THE FRICTION BETWEEN THE BASE MATERIAL AND THE BOTTOM OF THE SLAB.

17. MINIMUM THICKNESS OF THE DRAINAGE MEDIA UNDER ALL SLABS WITHIN THE BUILDING ENVELOPE SHALL BE 4" UNLESS NOTED OTHERWISE. THE THICKNESS OF DRAINAGE MEDIA UNDER ALL SLABS SUBJECTED TO WHEELED TRAFFIC SHALL BE 8" AND THE THICKNESS UNDER THE SLABS SUPPORTING STORAGE RACKS SHALL BE 6". DRAINAGE MEDIA IS DEFINED WITHIN THE TYPICAL DETAILS.

18. PROVIDE POLYETHYLENE FILM OF NOT LESS THAN 15 MIL THICKNESS UNDER ALL SLABS WITHIN THE BUILDING ENVELOPE AS A VAPOR BARRIER. VAPOR BARRIER SHALL BE "STEGO WRAP VAPOR BARRIER" AS MANUFACTURED BY STEGO INDUSTRIES, LLC OR APPROVED EQUIVALENT, MEETING ASTM E 1745 CLASS A PERFORMANCE REQUIREMENTS; AND WITH A WVTR LESS THAN 0.004 PER ASTM F 1249. INSTALLATION, INCLUDING ACCESSORIES, SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

3.1 CONCRETE NOTES

1. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE SHALL BE AS NOTED IN THE DESIGN NOTES. UNLESS NOTED OTHERWISE, MINIMUM CEMENT PER CUBIC YARD OF CONCRETE SHALL BE 540 POUNDS FOR SLABS; 560 POUNDS FOR ALL OTHER C.I.P. CONCRETE. MAXIMUM SLUMP, AT POINT OF PLACEMENT, SHALL BE 5" (±1") FOR SLABS AND 4" (∓1") FOR ALL OTHER C.I.P. CONCRETE – UNLESS NOTED OTHERWISE, BEFORE THE ADDITION OF WATER REDUCING ADMIXTURES. FLYASH MAY CONSTITUTE NO MORE THAN 20% OF THE TOTAL CEMENTITIOUS MATERIAL. ALL SELECTED ADMIXTURES MUST BE COMPATIBLE WITH EACH OTHER; AND MAY NOT CONTAIN ANY CHLORIDE BASED COMPONENTS. MAXIMUM SLUMP OF CONCRETE TO RECEIVE A BUSH HAMMERED FINISH SHALL BE 1 1/2" PRIOR TO THE ADDITION OF ADMIXTURES AND FLUIDIFIERS.

2. ALL MATERIALS USED IN THE CONCRETE CONSTRUCTION SHALL BE NEW. REINFORCING STEELS SHALL BE CONTINUOUS BETWEEN SPLICES. LOCATION OF ALL SPLICES SHALL BE PER PLANS OR AS APPROVED BY THE ARCHITECT. RUSTED REINFORCING STEEL AND RECYCLED MATERIALS (EXCEPT CONCRETE FORMS AS ALLOWED IN THE SPECIFICATIONS) SHALL NOT BE USED IN THE CONSTRUCTION. ALL REJECTED MATERIALS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER OR HIS AGENTS.

3. REINFORCING STEEL PLACING DRAWINGS AND BAR LISTS SHALL CONFORM TO THE CURRENT EDITIONS OF THE AMERICAN CONCRETE INSTITUTE'S "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 315) AND "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" (ACI 315R); AND THESE PUBLICATIONS SHALL FORM PART OF THE CONTRACT DOCUMENTS. ALL BAR AND MESH SUPPORTS MUST BE CLEARLY DETAILED.

4. ALL REINFORCING STEEL DETAILS SHALL BE IN ACCORDANCE WITH THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY" (ACI 318, CURRENT EDITION).

5. CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL AS OUTLINED HEREIN AND SHALL BE INDICATED ON THE APPLICABLE REINFORCING STEEL SHOP DRAWINGS.

   UNLESS NOTED OTHERWISE:

   JOISTS AND STRUCTURAL SLABS:
      #11 BARS AND SMALLER — 3/4 IN.
      #14 AND #18 BARS — 1 1/2 IN.

   CLASS 1 THRU 6 SLABS ON GRADE OR METAL DECK:
   TOP — T/4 (2" MAX.): T = SLAB THICKNESS IN INCHES
   SLAB THICKENINGS — SAME AS BOTTOM COVER FOR FOUNDATIONS (3")

   BEAMS AND PIERS:
      STIRRUPS, SPIRALS, AND TIES — 1 1/2 IN.
      PRINCIPAL REINFORCEMENT — 2 IN.

   WALLS:
      #11 BARS AND SMALLER — 3/4 IN.
      #14 AND #18 BARS — 1 1/2 IN.

   FOUNDATIONS AND STRUCTURAL BASE SLABS:
   AT FORMED SURFACES & BOTTOMS BEARING ON CONCRETE WORK MAT. 2 IN
   AT UNFORMED SURFACES INCLUDING BOTTOMS IN CONTACT WITH SOILS. 3 IN.
   TOP OF FOOTINGS. 2 IN.
   OVER TOP OF PILES. 2 IN.

   EXPOSED SURFACES:

   NO REINFORCING IN AREAS EXPOSED TO EARTH, WEATHER, SEWAGE, WATER OR HIGH HUMIDITY SHALL HAVE COVER LESS THAN 2".

   ADDITIONAL COVER OF 3/4" SHALL BE PROVIDED WHERE REINFORCING STEEL IS PLACED ALONG SURFACES TO RECEIVE BUSH-HAMMERED FINISH.

   ALL REINFORCING STEEL, INCLUDING ANCHOR BOLTS AND EMBEDDED STUDS, SHALL BE SEPARATED BY A DISTANCE OF ONE INCH MINIMUM OR SECURELY WIRED TOGETHER.

6. CONCRETE FORMING CONTRACTOR IS RESPONSIBLE FOR APPLYING THE PROPER FORM LINERS AND/OR TEXTURING DEVICES. AT BUSH-HAMMERED ELEMENTS THE CONCRETE POURING SEQUENCE IS TO BE CONTINUOUS, WITHOUT THE FORMATION OF COLD JOINTS. SEE THE DRAWINGS AND/OR SPECIFICATIONS FOR WALL FINISH SCHEDULE.

7. HOOKS AND BENDS SHALL BE ACI STANDARD UNLESS OTHERWISE INDICATED.

8 REINFORCING STEEL IN FOOTINGS SHALL BE ASSEMBLED IN MAT GRILLES, EQUALLY SPACED AND SECURELY WIRED TOGETHER, BEFORE THE CONCRETE IS POURED.

9. PROVIDE SHEAR KEYS IN THE TOPS OF WALL FOOTINGS SUPPORTING CONCRETE OR MASONRY WALLS; AND IN THE TOPS OF COLUMN FOOTINGS AT CONCRETE OR MASONRY COLUMNS/PIERS/PILASTERS.

10. CENTER ALL FOOTINGS UNDER WALL, PIER OR COLUMN ABOVE UNLESS OTHERWISE INDICATED.

11. PROVIDE CORNER BARS AT ALL CONCRETE WALL CORNERS AND INTERSECTIONS. CORNER BARS SHALL BE LAP SPLICED WITH THE FACE HORIZONTAL BARS AND ARE TO MATCH THE FACE HORIZONTAL BARS IN SIZE, GRADE AND SPACING, UNLESS OTHERWISE SHOWN.

12. UNLESS OTHERWISE INDICATED, CONTINUOUS WALL FOOTINGS SHALL BE TWICE THE WIDTH OF THE WALL ABOVE AND THE FOOTING THICKNESS SHALL BE EQUAL TO THE WIDTH OF THE WALL ABOVE. THE MINIMUM FOOTING THICKNESS SHALL BE ONE FOOT. PROVIDE 3-#4 CONTINUOUS BOTTOM BARS, WITH #4 AT 24" O.C. TRANSVERSE BARS, UNLESS SHOWN OTHERWISE.

13. SPREAD BARS AROUND SMALL OPENINGS AND SLEEVES IN SLABS AND WALLS WHERE POSSIBLE AND WHERE BAR SPACING WILL NOT EXCEED 1.5 TIMES THE NORMAL SPACING. DISCONTINUE BARS AT LARGE OPENINGS WHERE NECESSARY AND PROVIDE AN AREA OF REINFORCEMENT EQUAL TO THE INTERRUPTED REINFORCEMENT, DISTRIBUTING ONE-HALF OF THIS REINFORCEMENT EACH SIDE OF THE OPENING. HOLES LARGER THAN 12 INCHES IN ANY DIRECTION SHALL HAVE 1-#5 x 5'-0" DIAGONAL BAR IN EACH FACE AT EACH CORNER, UNLESS NOTED OTHERWISE.

14. PLANS SHOW ONLY THE CRITICAL REINFORCEMENT IN WALLS FOR CLARITY. MINIMUM REINFORCEMENT IN WALLS, WHERE NOT SHOWN ON PLANS, SHALL BE AS FOLLOWS:

THICKNESS OF WALL	LAYERS	LOCATION	REINFORCEMENT
3.00" TO 8.00"	1	MIDDLE	#4 AT 12" E.W.
8.01" TO 16.00"	2	FACES	#4 AT 12" E.W.
16.01" TO 20.00"	2	FACES	#5 AT 12" E.W.

15. ALL REINFORCED CONCRETE BEAMS SHALL HAVE A MINIMUM #4 STIRRUPS AT 12" C/C FOR FULL LENGTH OF THE BEAM, UNLESS SPECIFIED OTHERWISE.

16. ALL REINFORCED CONCRETE PIERS SHALL HAVE MINIMUM #4 TIES AT 12" C/C FULL HEIGHT, UNLESS SPECIFIED OTHERWISE.

17. REINFORCEMENT IN WALLS SHALL BE CONTINUOUS. HORIZONTAL BAR LAP SPLICES SHALL BE STAGGERED.

18. ALL OPENINGS THROUGH WALLS, SLABS OR OTHER STRUCTURAL ELEMENTS NOT DETAILED ON THE STRUCTURAL DRAWINGS MUST BE LOCATED BY THE CONTRACTOR AND SHOWN ON THE APPLICABLE REINFORCING STEEL SHOP DRAWINGS. THE FINAL LOCATION OF ALL OPENINGS MUST BE REVIEWED BY THE CONTRACTOR BEFORE THE CONCRETE IS POURED.

19. PIER, COLUMN AND VERTICAL MASONRY REINFORCEMENT SHALL BE DOWELED TO THE FOOTING. PROVIDE DOWELS EQUAL IN SIZE, NUMBER AND GRADE TO THE VERTICAL REINFORCEMENT ABOVE, UNLESS OTHERWISE INDICATED. DOWELS SHALL BE ACI 90 DEGREE HOOKS AT THE BOTTOM LEVEL OF FOOTING, SLAB OR THICKENED SLAB REINFORCEMENT. DOWELS SHALL BE LAPPED WITH THE VERTICAL REINFORCEMENT ABOVE AND ARE TO HAVE FULL COMPRESSION LAP SPLICES, UNLESS NOTED OTHERWISE.

20. SEE THE ARCHITECTURAL DRAWINGS AND THE SPECIFICATIONS FOR THE LOCATIONS OF SPECIAL ANCHORS, CHAMFERS, AND OTHER DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

21. WELDING, INCLUDING TACK WELDING, OF REINFORCING STEEL IS PROHIBITED. WELDING OF REINFORCING STEEL WILL BE PERMITTED ONLY BY WRITTEN APPROVAL OF THE ARCHITECT.

22. NO REINFORCING STEEL SHALL BE FIELD BENT OR CUT WITHOUT THE APPROVAL OF THE ARCHITECT. FIELD CUT REINFORCING STEEL USING MECHANICAL METHODS SUCH AS REBAR SAW. TORCH CUTTING OF REINFORCING STEEL IS PROHIBITED.

23. ALL LAP SPLICES SHALL BE CLASS 'B' LAPS IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318 – CURRENT EDITION, UNLESS OTHERWISE NOTED. REINFORCING BAR LAP LENGTHS SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

    A. UNLESS NOTED OTHERWISE, 50 BAR DIAMETERS FOR BARS SIZES UP TO AND INCLUDING #6; 62 BAR DIAMETERS FOR BAR SIZES LARGER THAN #6.

    B. HORIZONTAL REBAR IN WALLS AND BARS IN TOP LAYERS OF BEAMS, SLABS, MATS AND FOOTINGS: – 64 BAR DIAMETERS FOR BAR SIZES UP TO AND INCLUDING #6; 80 BAR DIAMETERS FOR BAR SIZES LARGER THAN #6.

    AT THE CONTRACTOR'S DISCRETION, THE SHOP DRAWINGS MAY REFLECT THE MORE STRINGENT REQUIREMENTS, GIVEN IN "B" ABOVE, FOR ALL REBAR IN ORDER TO MINIMIZE POSSIBLE ERRORS ON THE SHOP DRAWINGS AND IN THE FIELD. LAP-SPLICE LOCATIONS INDICATED IN THE DRAWINGS ARE INTENDED TO INDICATE ACCEPTABLE LOCATIONS. THEY ARE NOT MANDATORY, UNLESS NOTED OTHERWISE. AT CONTRACTOR'S OPTION, CONTINUOUS BARS MAY BE INSTALLED INSTEAD.

24. PLANS SHOW THE ESSENTIAL REINFORCEMENT BASED UPON DESIGN. ADDITIONAL REINFORCEMENTS THAT ARE REQUIRED TO HOLD THE ESSENTIAL REINFORCEMENT IN ITS TRUE POSITION, WITHIN ALLOWABLE TOLERANCES, SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

25. ALL CONCRETE FLAT WORK, SUCH AS FLOOR SLABS, SHALL BE WET CURED FOR A MINIMUM OF SEVEN DAYS OR BY A CURING METHOD APPROVED BY THE PROJECT ARCHITECT.

26. STRIP FOOTING LONGITUDINAL BARS SHALL BE CONTINUOUS THROUGH SPREAD FOOTINGS. HORIZONTAL WALL REINFORCING STEEL SHALL BE CONTINUOUS THROUGH INTEGRAL PIERS AND COLUMNS. ALL ABUTTING CONCRETE SURFACES, SUCH AS FOOTING TO FOOTING OR WALL TO WALL, SHALL BE DOWELED TOGETHER AND HAVE SHEAR RESISTANCE KEYS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

27. PROVIDE AN AMOUNT OF REINFORCING STEEL FOR CONTINGENCIES, EQUAL TO THE FOLLOWING, TO BE FABRICATED AND PLACED AS DIRECTED BY THE ARCHITECT/ENGINEER:

#4	200	LINEAR FEET
#5	200	LINEAR FEET

    GENERAL CONTRACTOR SHALL MAINTAIN AN UP-TO-DATE CONTINGENCY LOG SHEET AND PROVIDE SUCH LOG SHEET TO THE ARCHITECT, AT THE ARCHITECT'S REQUESTS FOR SUCH. GENERAL CONTRACTOR SHALL ALSO ASSIGN A PER POUND UNIT PRICE VALUE FOR THE CONTINGENCY REINFORCING STEEL; AND ABIDE BY THIS PRICE FOR THE DURATION OF THE PROJECT.

    FULL CREDIT FOR UNUSED QUANTITIES SHALL BE GIVEN TO THE OWNER.

3.2 SLAB NOTES

1. SLABS ON GRADE OR METAL DECK SHALL BE IN ACCORDANCE WITH ACI 302.1R-04 MANUAL OF CONCRETE PRACTICE "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION". THE CONTRACTOR SHALL MAINTAIN A COPY OF THIS GUIDE AT THE FIELD OFFICE. FLOORS WITHIN THE BUILDING, AND SLABS AT LOADING DOCKS, SHALL BE PER THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE:

TABLE

ITEM	AREA OF BUILDING	ACI CLASS	MINIMUM THICKNESS (INCHES)	CONCRETE STRENGTH (PSI)	MAXIMUM SLUMP (INCHES)	FLATNESS (Ff)	LEVELNESS (Fl)
1	OFFICES & GENERAL AREAS NOT LISTED ELSEWHERE	2	4.000	3500.00	5.000	25.000	20.000
2	CLASSROOMS	1	4.000	3500.00	5.000	20.000	15.000
3	GYMNASIUMS, MULTI-PURPOSE AREAS & CAFETERIA	2	4.000	3500.00	5.000	25.000	20.000
4	CORRIDORS	2	4.000	3500.00	5.000	25.000	20.000
5	INSTITUTIONAL & COMMERCIAL AREAS	4	5.000	4000.00	5.000	35.000	25.000
6	DRIVEWAYS & GARAGE FLOORS	4	5.000	4000.00	5.000	35.000	25.000
7	EXTERIOR WALKS	1	4.000	3500.00	5.000	20.000	15.000

2. UNLESS NOTED OTHERWISE, ALL INTERIOR AND EXTERIOR SLABS ON GRADE SHALL BE REINFORCED WITH "FIBERMESH 650" AS MANUFACTURED BY PROPEX CONCRETE SYSTEMS, OR APPROVED EQUIVALENT, AT THE DOSAGE RATE OF THREE POUNDS PER CUBIC YARD OF CONCRETE. FIBERS SHALL COMPLY WITH ASTM C1116, TYPE 3 AND SHALL BE MANUFACTURED IN AN ISO 9001:2000 CERTIFIED FACILITY. THE FIBERS SHALL ONLY BE ADDED TO THE CONCRETE MIX AT THE BATCH PLANT.

3. UNLESS NOTED OTHERWISE, ALL INTERIOR SLABS OVER METAL DECKING SHALL BE REINFORCED WITH "NOVOMESH 850 BLEND" AS MANUFACTURED BY PROPEX CONCRETE SYSTEMS, OR APPROVED EQUIVALENT, AT THE DOSAGE RATE OF TWENTY-FOUR POUNDS PER CUBIC YARD OF CONCRETE. FIBERS SHALL COMPLY WITH ASTM C1116, TYPES 1 & 3 COMBINED AND ASTM A820, TYPE 1. THE FIBERS SHALL BE MANUFACTURED IN AN ISO 9001:2000 CERTIFIED FACILITY AND SHALL ONLY BE ADDED TO THE CONCRETE MIX AT THE BATCH PLANT.

4. UNLESS NOTED OTHERWISE, ALL ELEVATED CONCRETE SLABS OVER METAL DECK SHALL BE 6 1/4" THICK FROM BOTTOM OF DECK. CUT CONTROL JOINTS OVER AND ALONG BEAMS/WALLS THAT SUPPORT JOISTS AND/OR METAL DECKING.

5. UNLESS NOTED OTHERWISE, SLABS SUBJECTED TO WHEELED TRAFFIC SHALL BE 8" THICK AND REINFORCED WITH TWO LAYERS OF #4@12" O.C. (MINIMUM OF TWO LAYERS OF WWF 6 x 6-W4 x W4) EACH WAY AT TOP AND BOTTOM. THE TOP LAYER SHALL BE LOCATED 1 1/2" CLEAR FROM TOP OF THE SLAB AND THE BOTTOM LAYER SHALL BE LOCATED 2" CLEAR FROM THE BOTTOM. FIRMLY SECURE THE REINFORCEMENT IN PLACE USING SUITABLE CHAIRS AT FREQUENT INTERVAL SO THE MATS DO NOT SAG DURING PLACING OF CONCRETE.

6. UNLESS NOTED OTHERWISE, SLABS LOADED WITH STORAGE RACKS SHALL BE 6" THICK & REINFORCED WITH ONE LAYER OF #4@12 o.c. (MINIMUM OF ONE LAYER OF WWF 6 x 6 – W4 x W4) EACH WAY AT TOP. THE LAYER SHALL BE LOCATED 1 1/2" CLEAR FROM THE TOP OF THE SLAB. FIRMLY SECURE THE REINFORCEMENT IN PLACE USING SUITABLE CHAIRS AT FREQUENT INTERVAL SO THE MAT DOES NOT SAG DURING PLACING OF CONCRETE.

7. PROVIDE ADDITIONAL BAR REINFORCEMENT IN SLABS AT ALL RE-ENTRANT CORNERS, ACUTELY ANGLED SLAB BOUNDARIES AND PENETRATIONS, AS SHOWN IN THE TYPICAL DETAILS.

8. WHERE INTERIOR WALLS ARE LIGHTLY LOADED AND ARE NOT SHOWN OR INDICATED TO BEAR ON STRIP, SPREAD, GRADE BEAM OR OTHER FOUNDATION SYSTEM THEY SHALL BE SUPPORTED ON THICKENED AREAS OF SLAB. THE SLAB SHALL BE THICKENED TO 8" (MIN.) AND EXTEND AT LEAST 8" BEYOND THE FACE OF THE WALL. THE PLANS MAY INDICATE ONLY THIS MINIMUM REQUIREMENT BUT THE LIMITS OF THICKENED AREAS SHALL BE EXTENDED AS NECESSARY, BEYOND THE MINIMUM REQUIRED, TO FACILITATE EXCAVATION, LAYOUT AND COORDINATION WITH SLAB JOINT REQUIREMENTS. KEEP THICKENED AREAS RECTANGULAR IN LAYOUT. THE TRANSITION OF THE BOTTOM SURFACE OF THE SLAB, BETWEEN THICKENED AREAS AND NON-THICKENED AREAS, SHALL BE AT A SLOPE OF 1:10, OR MORE, WHEREVER POSSIBLE. THICKENED SLAB AREAS SHALL BE REINFORCED, IN THE BOTTOM, WITH #5@12" LONGITUDINALLY (3 BARS MIN.) AND #4@24" TRANSVERSE, CENTERED ON THE WALL ABOVE. SUB-BASES AND VAPOR RETARDING MEMBRANE SHALL EXTEND BELOW ALL THICKENED AREAS.

9. SLAB ON GRADE JOINTS:
   SLABS ON GRADE ARE TO BE 'FLOATING' AND SEPARATED FROM FOOTINGS, WALLS AND COLUMNS ETC., UNLESS NOTED OTHERWISE. PROVIDE ISOLATION JOINTS OF PRE-FORMED EXPANSION JOINT FILLER MATERIAL; OR BY TURNING UP THE VAPOR BARRIER IF SHOWN ON SPECIFIC DETAILS; AT PERIMETERS ADJACENT TO WALLS. PROVIDE JOINTS IN SLABS FOR THE CONTROL OF CRACKING AT 10'-0" O.C. (MAX.). SPACING MAY BE INCREASED TO 15'-0" O.C. IN LARGE SLAB AREAS INTERRUPTED BY THICKENED SLABS AND WITH SLUMP OF CONCRETE LESS THAN 4". CONSTRUCTION JOINTS MAY BE PLANNED TO BE COINCIDENT WITH CONTROL JOINT LOCATIONS. UNPLANNED DAY JOINTS MUST BE AT LEAST 5'-0" FROM PARALLEL CONTROL JOINTS. THE CONTRACTOR MUST CAREFULLY PRE-PLAN JOINT LAYOUT AND COORDINATE WITH THICKENED SLAB REQUIREMENTS. LONGITUDINAL JOINTS IN THICKENED AREAS ARE TO BE AVOIDED. CONTIGUOUS SLAB POUR AREAS ARE TO HAVE CONTINUOUS JOINTS WITHOUT OFFSETS OR STAGGERS. ALIGN JOINTS WITH REENTRANT CORNERS WHEREVER POSSIBLE. SLAB REBAR MUST BE DISCONTINUOUS WHEN CROSSING UNDER SLAB JOINTS; CUT REBARS PRIOR TO, OR AFTER, THE SLAB POUR, AT THE CONTRACTOR'S OPTION.

10. THE JOINTS OF THE SLABS SUBJECTED TO WHEELED TRAFFIC SHALL BE CAULKED AND SEALED WITH SEMI-RIGID EPOXY COMPOUND. SIKADUR 51 SL CONTROL JOINT SYSTEM AS MANUFACTURED BY SIKA CORPORATION OF LYNDHURST, N.J. OR OTHER EQUIVALENT PRODUCTS APPROVED BY THE ARCHITECT ARE ACCEPTABLE FOR USE.

11. CONSTRUCT THE SLAB AFTER THE BUILDING IS ENCLOSED AND THE ROOF IS WATERTIGHT. PROTECT THE SLAB TO RECEIVE COVERING FROM OTHER EXTERNAL WATER SOURCES INCLUDING BUT NOT LIMITED TO RAINWATER, RUNOFF FROM ADJACENT SLOPES, LANDSCAPING WATER, WATER FROM CURING, WET GRINDING, SAWING AND CLEANING. CONTRACTOR SHALL NOTE THAT THIS IS ONLY A RECOMMENDATION AND SHALL BE AWARE THAT ALTERING THIS RECOMMENDATION MAY INCREASE THE AMOUNT OF TIME REQUIRED FOR THE SLAB TO BE APPROVED FOR FLOOR COVERINGS.

3.3 SLABS TO RECEIVE MOISTURE-SENSITIVE FLOOR COVERINGS:

1. THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN INDEPENDENT TESTING LABORATORY TO MEASURE THE MOISTURE CONTENT OF THE SLAB, PH OF THE SURFACE TO RECEIVE FLOOR COVERING AND THE RATE OF MOISTURE EMISSION FROM THE SURFACE TO RECEIVE THE COVERING. THE CONTRACTOR SHALL REVIEW THE TEST RESULTS FROM THE LABORATORY AGAINST THE FLOOR COVERING AS WELL AS FLOOR ADHESIVE MANUFACTURER'S INSTRUCTIONS AND CARRYOUT THE INSTALLATION PROVIDED ALL REQUIREMENTS ARE MET. THE INDEPENDENT TESTING LABORATORY SHALL SEND COPIES OF THE REPORTS TO THE ARCHITECT AND THE ENGINEER FOR RECORD.

2. IF SURFACE MOISTURE TESTS ARE SPECIFIED BY THE FCM, PERFORM TESTS AS PER ASTM F710, "STANDARD PRACTICE FOR PREPARING CONCRETE FLOORS TO RECEIVE RESILIENT FLOORING." CONDUCT BOTH CALCIUM CHLORIDE AND MAT TESTS. THE MAT TESTS SHALL BE CONDUCTED AS FOLLOWS:

   A. CONDUCT THREE TRIAL MAT TESTS THROUGHOUT THE AREA OF THE BUILDING TO RECEIVE COVERING, WITH ONE TEST NEAR THE MAXIMUM MOISTURE READING INDICATED BY TESTING.

   B. PLACE A 10'-0" x 10'-0" MAT USING THE SELECTED ADHESIVE AND FLOOR COVERING IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

   C. PERFORM A VISUAL AND PHYSICAL INSPECTION AFTER ONE WEEK TO ASSESS THE ACCEPTABILITY.

University of Louisville – Student Recreation Center (Phase #4 – Construction Set) Louisville, Ky

RANGASWAMY AND ASSOC., INC.
Suite 400, The Landmark Building
Louisville, Kentucky 40202.
phone: (502)589-2012
fax: (502)589-2040, www.rangaswamy.com

Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507-1001
p 859.252.6664 f 859.253.2358
www.omniarchitects.com

CANNONDESIGN

UNIVERSITY OF LOUISVILLE

Drawing Name:	GENERAL PROVISIONS
U of L Project Number:	
Project Number:	Omni – 1105.00 Cannon – 03667.00
Date:	April 16, 2012
Drawn By: PGK	**Checked By:** ANTHONY

#	Revision Date

S0006

3. IF SURFACE MOISTURE VAPOR EMISSION RATE (MVER) TESTS ARE SPECIFIED BY THE FCM, PERFORM TESTS AS PER ASTM F1869, "STANDARD TEST METHOD FOR MEASURING MOISTURE VAPOR EMISSION RATE OF CONCRETE SUBFLOOR USING ANHYDROUS CALCIUM CHLORIDE." OBSERVE THE FOLLOWING DURING TESTING:
   - A. REMOVE CURING COMPOUNDS OR FLOOR SEALERS BEFORE TESTING.
   - B. MAINTAIN THE SAME TEMPERATURE AND HUMIDITY CONDITIONS, AS THE FINAL FLOOR COVERING WILL BE EXPOSED TO, FOR 48 HOURS PRIOR TO AND DURING THE TEST.
   - C. MEASURE AT LOCATIONS UNIFORMLY DISTRIBUTED AROUND THE SLAB, WITH THREE TESTS FOR UP TO 1000 SFT AND AN ADDITIONAL TEST FOR EACH ADDITIONAL 1000 SFT OF FLOOR.
4. IF pH VALUE OF THE SURFACE IS REQUIRED BY THE FCM, PERFORM TESTS AS PER ASTM F710, "STANDARD PRACTICE FOR PREPARING CONCRETE FLOORS TO RECEIVE RESILIENT FLOORING." OBSERVE THE FOLLOWING DURING TESTING:
   - A. CONDUCT A pH TEST AT EVERY LOCATION AND AT EACH TIME A MOISTURE TEST IS PERFORMED.
   - B. PLACE SEVERAL DROPS OF DISTILLED WATER ON A CLEAN CONCRETE SURFACE, FORMING A PUDDLE OF ABOUT ONE INCH DIAMETER.
   - C. WAIT 60 (±5) SECONDS AFTER THE PUDDLE HAS FORMED.
   - D. DIP THE pH PAPER INTO THE WATER AND REMOVE IMMEDIATELY.
   - E. COMPARE THE PAPER COLOR TO THAT ON THE CHART TO DETERMINE THE pH READING.
   - F. REPORT THE pH READING WITH EACH MOISTURE TEST RESULT.
5. IF RELATIVE HUMIDITY OR DRYNESS IS REQUIRED BY THE FCM, PERFORM TESTS AS PER ASTM F2170, "STANDARD TEST METHOD FOR DETERMINING RELATIVE HUMIDITY IN CONCRETE FLOOR SLABS USING IN SITU PROBES." OBSERVE THE FOLLOWING DURING TESTING:
   - A. RAPID RH® RELATIVE HUMIDITY AND TEMPERATURE SENSOR KIT AS MANUFACTURED BY WAGNER ELECTRONICS (PHONE: 800-634-9961), OR APPROVED EQUAL.
   - B. QUANTIFICATION OF RH SHALL BE AT 40% THICKNESS OF FLOOR SLAB FROM THE SURFACE TO RECEIVE MOISTURE SENSITIVE FLOOR COVERING (MSFC). HOWEVER, IF THE FLOOR SLAB IS ELEVATED AND IS NOT PLACED OVER METAL DECK, THE RH SHALL BE MEASURED AT 20% THICKNESS OF THE FLOOR SLAB FROM THE SURFACE TO RECEIVE MSFC.
   - C. THE TEST SITE SHALL BE MAINTAINED AT THE SAME TEMPERATURE AND HUMIDITY CONDITIONS AS THOSE ANTICIPATED DURING NORMAL OCCUPANCY. THIS TEMPERATURE AND HUMIDITY SHALL BE MAINTAINED FOR 48 HOURS PRIOR TO AND DURING THE TEST PERIOD.
   - D. MINIMUM NUMBER OF TEST HOLES SHALL BE THREE FOR THE FIRST 1000 SFT OF FLOOR SPACE AND ONE PER EACH ADDITIONAL 1000 SFT.
   - E. DRILLING INTO THE SLAB, PREPARING THE TEST HOLES BEFORE INSERTING THE PROBES, ACCLIMATIZING THE TEST SITE, READING THE GAGES AND RECORDING SHALL BE PER TEST EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
   - F. RECORD ALL TEST RESULTS AS WELL AS PREPARE A CHECK LIST TO DEMONSTRATE THAT THE TEST PROCEDURE, ENVIRONMENT AND RESULTS ARE IN CONFORMANCE WITH ASTM F2170.
6. THE SURFACE FINISH TO RECEIVE COVERINGS SHALL BE EITHER BULL FLOAT/ STRAIGHTEDGE/LIGHT BROOM FINISH OR LIGHT POWER TROWEL FINISH WITH A LIGHT BROOM TEXTURE UNLESS NOTED OTHERWISE IN ARCHITECTURAL PLANS. CONSULT WITH THE ARCHITECT FOR ACCEPTABLE CONCRETE SURFACE FINISHES.
7. THE ULTIMATE STRENGTH OF CONCRETE SHALL BE 4000.00 PSI WITH WATER/CEMENT RATIO NOT TO EXCEED 0.40. THE RECOMMENDED MINIMUM DRYING TIME FOR THIS CONCRETE MIX SHALL BE NINETY DAYS. SILICA FUME MAY BE ADDED TO ACCELERATE THE DRYING TIME. APPROXIMATELY 10% SILICA FUME BY WEIGHT OF CEMENT MAY BE ADDED TO SHORTEN DRYING TIME BY 28 DAYS.
8. CONCRETE SHALL BE CURED BY A BLANKET OF PLASTIC SHEET LEFT IN-PLACE FOR A PERIOD OF THREE DAYS.

8 FLOOR COVERING ADHESIVES SHALL BE SUITABLE FOR APPLICATION ON A SURFACE WITH PH VALUE BETWEEN 9 AND 10.

9. CONCRETE SURFACE REPAIRS HAVE AN ADVERSE EFFECT ON FLOORING-ADHESIVE BOND. CONSULT WITH THE COVERING/ADHESIVE MANUFACTURER'S REPRESENTATIVE FOR ACCEPTABLE PATCHING METHODS AND SUBSEQUENT DRYING PERIOD BEFORE APPLYING ADHESIVE.

3.4 CONCRETE TESTING

1. GENERAL: UNLESS SPECIFICALLY NOTED OTHERWISE, QUALITY ASSURANCE OF CONCRETE IN PLACE SHALL COMPLY WITH THE PROVISIONS OF ACI 301, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE", CURRENT EDITION.
2. SLUMP: ASTM C143; ONE TEST AT POINT OF DISCHARGE FOR EACH POUR SESSION FOR EACH TYPE OF CONCRETE; ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY SEEMS TO HAVE CHANGED. THE TESTING TECHNICIAN SHALL MONITOR THE QUALITY OF CONCRETE SUPPLIED FOR THE ENTIRE POUR TO ASSURE THAT THE CONCRETE IN-PLACE REPRESENTS THE SPECIMENS CAST. OBTAIN THE DELIVERY TICKETS FOR EACH TRUCK AND SEND COPIES TO THE ARCHITECT ALONG WITH TEST REPORTS.
3. AIR CONTENT: ASTM C173 VOLUMETRIC METHOD FOR LIGHT WEIGHT CONCRETE; ASTM C231 PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE; ONE FOR EACH POUR SESSION FOR EACH TYPE OF AIR-ENTRAINED CONCRETE.
4. CONCRETE TEMPERATURE: TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEGREES F (4 DEGREES C) AND BELOW; AND WHEN 80 DEGREES F (27 DEGREES C) AND ABOVE; AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS ARE MADE.
5. COMPRESSION TEST SPECIMEN: ASTM C31; ONE SET OF (4) STANDARD CYLINDERS FOR EACH COMPRESSIVE STRENGTH TEST, UNLESS OTHERWISE DIRECTED. MOLD AND STORE CYLINDERS IN LABORATORY FOR LABORATORY CURED TEST SPECIMENS EXCEPT STORE IN FIELD IF FIELD-CURED TEST SPECIMENS ARE REQUIRED.
6. COMPRESSIVE STRENGTH TESTS: ASTM C39; ONE SET FOR EACH POUR SESSION EXCEEDING (5) CUBIC YARDS AND LESS THAN (25) CUBIC YARDS FOR EACH CLASS OF CONCRETE. MAKE ADDITIONAL SETS FOR EACH (50) CUBIC YARDS OVER AND ABOVE THE FIRST (25) CUBIC YARDS OF EACH CONCRETE CLASS PLACED IN ANY ONE SESSION; ONE SPECIMEN SHALL BE TESTED AT (7) DAYS, TWO SPECIMENS TESTED AT (28) DAYS, AND ONE SPECIMEN RETAINED IN RESERVE FOR LATER TESTING IF REQUIRED. TESTING SEQUENCE: (5) C.Y. TO (25) C.Y. = ONE SET; (26) C.Y. TO (75) C.Y. = TWO SETS; (76) C.Y. TO (125) C.Y. = THREE SETS; (126) C.Y. TO (175) C.Y. = FOUR SETS; ETC., ETC.

3.5 CHEMICAL ANCHORS AND DRILL-AND-DOWEL REBAR

(NOTE: CHEMICALLY ANCHORED HARDWARE AND DOWELS MAY NOT BE DETAILED IN THE PLANS BUT SHOULD THEIR USE BE DEEMED NECESSARY, & APPROVED BY THE ARCHITECT OR ENGINEER, THEY SHALL BE AS FOLLOWS:)

1. HILTI HIT RE 500 SD BY HILTI CORP., OR APP'D EQUIV., SHALL BE USED FOR DOWELS AND ANCHORS INTO CONCRETE AND SHALL BE INSTALLED IN ACCORDANCE WITH THE SELECTED PRODUCT MANUFACTURER'S RECOMMENDATIONS.
2. HILTI HIT HY 150 MAX BY HILTI CORP., OR APP'D EQUIV., SHALL BE USED FOR DOWELS AND ANCHORS INTO SOLID MASONRY WALLS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE SELECTED PRODUCT MANUFACTURER'S RECOMMENDATIONS.
3. HILTI HIT HY 20 BY HILTI CORP., OR APP'D EQUIV., SHALL BE USED FOR DOWELS AND ANCHORS INTO HOLLOW MASONRY WALLS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE SELECTED PRODUCT MANUFACTURER'S RECOMMENDATIONS.

4.1 CONCRETE MASONRY NOTES

1. ALL MASONRY MATERIALS, CONSTRUCTION AND SHOP DRAWINGS SHALL BE IN ACCORDANCE WITH "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-08/ASCE 6-08/TMS 602-08)." MASONRY CONTRACTOR SHALL PURCHASE AND MAINTAIN A COPY OF THIS SPECIFICATION AT THE FIELD OFFICE FOR REVIEW BY OTHERS. THIS SPECIFICATION SHALL GOVERN MASONRY THROUGHOUT THIS PROJECT.
2. ALL BLOCKS SHALL BE LIGHTWEIGHT, MOISTURE CONTROLLED (ASTM C90-TYPE 1), AND SHALL BE LAID IN RUNNING BOND, UNLESS NOTED OTHERWISE. NOTHING IN THE STRUCTURAL PLANS IS INTENDED TO DICTATE BOND PATTERNS. VERIFY BOND PATTERN REQUIREMENTS WITH THE ARCHITECT.
3. UNLESS NOTED OTHERWISE, PROVIDE GALVANIZED LADDER-TYPE JOINT REINFORCEMENT AT ALTERNATE COURSES, SIMILAR TO DUR-O-WAL LADUR, WITH NO. 9 GAGE SIDE RODS. IN COMPOSITE WALLS, THE JOINT REINFORCEMENT SHALL EXTEND THROUGHOUT THE ENTIRE WALL WIDTH, WITH THE CAVITY (COLLAR JOINT) BEING COMPLETELY FILLED WITH MORTAR OR GROUT.
4. FILL ALL CORES OF CONCRETE BLOCKS SOLID WITH 3000 psi CONCRETE OR GROUT WHERE PLACED PERMANENTLY BELOW GRADE AND/OR SLAB LEVEL.
5. FILL CORES OF CONCRETE BLOCKS SOLID WITH 3000 psi CONCRETE, OR USE SOLID BLOCKS, FOR A DISTANCE OF 16 INCHES BELOW ALL LINTEL AND/OR BEAM BEARINGS SUPPORTED BY UNIT MASONRY, UNLESS OTHERWISE INDICATED.
6. REINFORCING BARS IN MASONRY SHALL BE LAPPED IN ACCORDANCE WITH THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY". (ACI 318, CURRENT EDITION). BARS SHALL BE EITHER SEPARATED BY ONE BAR DIAMETER OR WIRED TOGETHER AND SHALL BE HELD IN POSITION USING DUR-O-WAL, OR APPROVED EQUIVALENT, GALVANIZED 9 GAGE BAR POSITIONERS. ALL CMU CORES AND BOND BEAMS CONTAINING REINFORCEMENT SHALL BE FILLED WITH 3000 psi SELF-CONSOLODATING CONCRETE GROUT. BAR LAPS SHALL COMPLY WITH THE FOLLOWING, UNLESS NOTED OTHERWISE ON THE DRAWINGS:-
   - A. VERTICAL BARS IN THE END-MOST CORES OF WALLS DESIGNATED ON THE PLANS AS 'SHEAR WALLS':
     57 BAR DIAMETERS FOR BAR SIZES UPTO AND INCLUDING #6.
     71 BAR DIAMETERS FOR BAR SIZES LARGER THAN #6.
   - B. ALL VERTICAL BARS, EXCEPT AS NOTED IN 'A', ABOVE.
     40 BAR DIAMETERS, WITH 24" MIN. LAP LENGTH.
   - C. HORIZONTAL BARS IN BOND-BEAMS:
     44 BAR DIAMETERS FOR BAR SIZES UPTO AND INCLUDING #6.
7. UNLESS SHOWN OTHERWISE, PROVIDE (2) #5 BARS IN ALL BOND BEAMS.
8. UNLESS NOTED OTHERWISE, MASONRY WYTHE TIES SHALL BE PLACED AT ALTERNATE COURSES (16" C/C) WITH HORIZONTAL SPACING NOT TO EXCEED 24" C/C.
9. THE LOCATIONS OF CRACK-CONTROL JOINTS DICTATED BY THE ESTHETICS OF THE BUILDING ARE SHOWN IN THE ARCHITECTURAL ELEVATIONS. CRACK-CONTROL JOINTS ARE ALSO TO BE PROVIDED, BY THE CONTRACTOR, TO SATISFY THE CRITERIA OUTLINED IN THE 'TYPICAL CMU CONTROL JOINT LOCATION AND REINFORCEMENT DETAILS' SHOWN IN STRUCTURAL DRAWINGS, AND AS OTHERWISE INDICATED IN THE PLANS. A COMPREHENSIVE LAYOUT OF ALL REQUIRED JOINT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND BE SUBMITTED TO THE ARCHITECT FOR REVIEW. SHOP DRAWINGS MUST INDICATE THE LOCATION OF THE MASONRY CRACK-CONTROL JOINTS, AND INCLUDE APPROPRIATE DETAILS FOR THE ACCURATE PLACEMENT OF ASSOCIATED DOWEL-BARS IN THE R.C. FOUNDATION SYSTEM. NO MASONRY CONSTRUCTION, INCLUDING THE PLACEMENT OF THE DOWEL-BARS, SHALL START PRIOR TO REVIEW AND RELEASE OF THE SHOP DRAWINGS BY THE ARCHITECT.
10. THE LOCATION OF CONTROL JOINTS IN VENEER MASONRY SHALL BE GENERALLY COINCIDENT WITH THE LOCATION OF CMU CONTROL JOINT, WHERE BACKED WITH CMU. IF VENEER IS BACKED WITH OTHER STRUCTURAL SYSTEMS, THE LOCATION OF CONTROL JOINTS SHALL BE BASED ON THE LAYOUT REQUIREMENTS INDICATED IN "TYPICAL CONTROL JOINT LOCATION AND REINFORCEMENT DETAILS". SUBMIT SHOP DRAWINGS, INDICATING THE LOCATION OF THE CONTROL JOINTS AND THEIR DETAILS, FOR REVIEW BY THE ARCHITECT. NO VENEER MASONRY CONSTRUCTION SHALL START PRIOR TO REVIEW AND RELEASE OF THE SHOP DRAWINGS BY THE ARCHITECT.
11. WYTHES OF CAVITY WALLS SHALL BE REINFORCED & TIED TOGETHER USING 3/16" DIAMETER LADDER-TYPE JOINT REINFORCEMENT WITH ADJUSTABLE WALL-TIE EYE SECTIONS SIMILAR TO LADUR-EYE AS MANUFACTURED BY DUR-O-WAL, INC. OR ARCHITECT APPROVED EQUIVALENT.
12. UNLESS NOTED OTHERWISE, CONCRETE UNIT MASONRY SHALL BE ANCHORED TO THE STEEL COLUMNS USING DUR-O-WAL, INC. D/A 2200 JOINT STABILIZING ANCHORS, OR APPROVED EQUIVALENT, AT 16" O.C.
13. PROVIDE ANCHORAGE AT WALL INTERSECTIONS & CORNERS AS FOLLOWS:
   - A. LOAD BEARING & EXTERIOR WALL OPTIONS:
     1. LAY EVERY OTHER COURSE IN AN OVERLAPPING BONDING PATTERN.
     2. PROVIDE RIGID STEEL ANCHORS AT MAXIMUM 48" SPACINGS. ANCHORS ARE TO BE 1/4" THICK x 1 1/2" WIDE x 2'-0" LONG WITH 2" LONG BENT ENDS AS PER DUR-O-WAL 301Z OR APPROVED EQUIVALENT.
     3. PROVIDE PRE-FABRICATED LADDER-TYPE "TEE" OR "CORNER" JOINT REINFORCING AT MAXIMUM 8" SPACINGS. "TEE" SHALL BE A MINIMUM OF 30" LONG IN BOTH DIRECTIONS AS PER DUR-O-WAL D/A 320 LADUR OR APPROVED EQUIVALENT.
   - B. INTERIOR NON-LOAD BEARING WALL OPTIONS:
     1. PROVIDE PRE-FABRICATED LADDER-TYPE "TEE" OR "CORNER" JOINT REINFORCING AT MAXIMUM 16" SPACINGS. "TEE" SHALL BE A MINIMUM OF 30" LONG IN BOTH DIRECTIONS AS PER DUR-O-WAL D/A 320 LADUR OR APPROVED EQUIVALENT.
     2. PROVIDE 16 GAUGE x 1/2" SQUARE GALVANIZED WIRE-MESH STRIPS AT MAXIMUM 16" SPACINGS. WIRE-MESH STRIPS SHALL BE MINIMUM 3" WIDE x MINIMUM 20" LONG AS PER DUR-O-WAL D/A WMT, OR APPROVED EQUIVALENT.
   - C. INTERSECTIONS OF NON-LOADBEARING TO LOADBEARING WALLS:
     1. PROVIDE 16 GAUGE x 1/2" SQUARE GALVANIZED WIRE-MESH STRIPS AT MAXIMUM 16" SPACINGS. WIRE-MESH STRIPS SHALL BE MINIMUM 3" WIDE x MINIMUM 20" LONG AS PER DUR-O-WAL D/A WMT, OR APPROVED EQUIVALENT.
14. ALL MASONRY ACCESSORIES, INCLUDING MASONRY JOINT REINFORCEMENT, SHALL BE HOT-DIP GALVANIZED.
15. CRITICAL VERTICAL REINFORCEMENT REQUIRED FOR UNIT MASONRY WALLS IS SHOWN ON PLANS WITHIN AN ELLIPSE OR RECTANGLE. REFER TO 'TYPICAL DETAILS' SHEETS FOR EXPLANATION AND FOR ADDITIONAL BAR REQUIREMENTS.
16. VENEER ANCHOR TO STEEL STUD FRAMING SHALL BE X-SEAL/BYNA-LOK ANCHOR AS MANUFACTURED BY HOHMANN & BARNARD OF HAUPPAUGE, N.Y. OR APPROVED EQUIVALENT. DOVETAIL ANCHOR TO CONCRETE WALL SHALL BE D/A 720QT, AS APPROPRIATE, MANUFACTURED BY DUR-O-WAL, INC. OF ARLINGTON HEIGHTS, IL OR APPROVED EQUIVALENT. VENEERS SHALL BE ANCHORED TO CONCRETE SURFACES IN A SIMILAR MANNER, AND ON SAME SPACINGS AS VENEER ANCHORAGE TO CMU.
17. THE MASONRY WALLS ARE DESIGNED TO BE STABLE ONLY AT FINAL SERVICE CONFIGURATION, WITH ALL STRUCTURAL ELEMENTS SUCH AS BEAMS, JOISTS, BRIDGING AND BRACINGS THAT ARE SHOWN IN PLANS, IN PLACE. PROPER BRACING FOR THE MASONRY WALLS, DURING CONSTRUCTION, SHALL BE PROVIDED BY THE CONTRACTOR & SUCH BRACINGS SHALL BE KEPT IN PLACE UNTIL ALL STRUCTURAL ELEMENTS ATTACHED TO THE WALL, AS DETAILED IN PLANS, ARE INSTALLED. BRACING SHALL COMPLY WITH TEK 3-4B OF THE NATIONAL CONCRETE MASONRY ASSOCIATION TITLED "BRACING CONCRETE MASONRY WALLS DURING CONSTRUCTION".
18. ALL MATERIALS USED IN THE MASONRY CONSTRUCTION SHALL BE NEW MATERIAL. REINFORCING STEELS SHALL BE CONTINUOUS BETWEEN SPLICES. LOCATION OF ALL SPLICES SHALL BE PER PLANS OR AS APPROVED BY THE ARCHITECT. RUSTED REINFORCING STEEL AND DAMAGED OR DISTORTED MATERIALS RECLAIMED FROM PREVIOUS INSTALLATION (EXCEPT FORMS AND SCAFFOLDS AS ALLOWED IN THE SPECIFICATIONS) SHALL NOT BE USED IN THE CONSTRUCTION. ALL REJECTED MATERIALS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER OR OWNER'S AGENTS.
19. WHERE STEEL BEAMS OR LINTELS ARE USED TO CARRY THE MASONRY OVER OPENINGS, PROVIDE CONTROL JOINTS ON ONE END OF THE BEAM OR LINTEL IF THE WIDTH OF OPENING IS LESS THAN 6'-0" AND ON BOTH SIDES FOR OPENINGS GREATER THAN 6'-0". CONTROL JOINTS SHALL BE LOCATED 8" FROM THE EDGE OF OPENING AND SHALL EXTEND FROM THE BEARING LEVEL OF THE BEAM OR LINTEL TO THE TOP OF THE MASONRY WALL.
20. ALL CONTROL JOINTS SHALL UTILIZE SPECIFICALLY MANUFACTURED CMU CONTROL-JOINT (SASH) BLOCKS AND INCLUDE CROSS-TYPE PRE-MOLDED PVC OR EXTRUDED RUBBER CONTROL-JOINT INSERTS FOR THE ENTIRE HEIGHT OF THE JOINT, TO RESTRAIN DIFFERENTIAL LATERAL MOVEMENT OF THE MASONRY AT THE JOINTS. ALL CONTROL-JOINTS SHALL BE RAKED CLEAN OF MORTAR, TO ALLOW FOR EXPANSION AND CONTRACTION, AND SHALL BE CAULKED ON BOTH SIDES OF THE MASONRY, WITH BACKER ROD. THE HORIZONTAL BED JOINT AT THE LEVEL OF THE BEARING OF LINTEL OR BEAM, DIRECTLY BELOW THE BEARING, SHALL BE BOND-BROKEN TO FACILITATE MOVEMENT, USING PLASTIC OR POLYETHYLENE SHEET OF MINIMUM 20 MIL. THICK.
21. SELF-CONSOLODATING CONCRETE CORE-FILL, GROUT AND MORTAR SHALL BE SAMPLED AND TESTED PER ASTM C-1019 AND THE RESULTS REPORTED TO THE ARCHITECT WITHIN THREE DAYS OF TESTING. ONE SET OF FOUR TEST SPECIMENS SHALL BE CAST, ON A TWICE WEEKLY BASIS, APPROXIMATELY THREE DAYS APART, TO REPRESENT EACH OF THE CONCRETE CORE-FILL, MORTAR AND GROUT MIXES. ONE SPECIMEN FROM EACH SET SHALL BE TESTED AT SEVEN DAYS, FOR EARLY DETERMINATION OF COMPRESSIVE STRENGTH, AND TWO SPECIMENS SHALL BE TESTED AT 28 DAYS OF AGE. THE REMAINING SPECIMEN SHALL BE RETAINED AS A SPARE AND MAY BE TESTED AT 56 DAYS IF ONE OF THE 28 DAY SPECIMENS FAILS TO MEET THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH. A MINIMUM OF THREE SPECIMENS, OF THE FOUR CAST, SHALL BE TESTED TO ASCERTAIN THE COMPRESSIVE STRENGTH OF THE MIXTURES, AND NO SAMPLES SHALL BE DISCARDED WITHOUT THE ARCHITECT'S APPROVAL. COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:

    MORTAR – 1275 psi (+/– 400psi)

    GROUT AND S-C CONCRETE, USED FOR FILLING CORES – 3000psi MIN.

    SAMPLING, MOLDING AND TESTING SHALL BE AT NO ADDITIONAL COST TO THE OWNER AND/OR THE OWNER'S AGENTS.
22. SHOP DRAWINGS SHALL BE VERY EXPLICIT, EACH BAR WITH ITS SIZE, SPACING, AND CLEARANCES SHOWN IN THREE BASIC ORTHOGONAL VIEWS. SHOP DRAWINGS WILL BE THE ONLY REFERENCE USED TO ERECT THE REINFORCING STEEL AND WILL BE THE ONLY DOCUMENT THAT WILL BE USED BY THE SPECIAL INSPECTOR OF RECORD TO VERIFY THE REINFORCEMENT IN THE FEILD. HENCE, THE STANDARD OF CARE TO BE EXERCISED IN PREPARING THE SHOP DRAWINGS SHALL BE VERY HIGH. EACH BAR SHALL BE NUMBERED, NOTED IN THE "BAR SCHEDULE", AND MUST BE SHOWN IN THE DRAWINGS IN ALL THREE VIEWS WITH BAR DESIGNATION. NON-EXPLICIT SHOP DRAWINGS THAT ARE NOT IN ACCORDANCE WITH ACI SP-66 WILL NOT BE REVIEWED AND WILL BE SENT BACK TO THE CONTRACTOR FOR RE-SUBMITTAL. REFER TO GENERAL PROVISION SECTION 1.4 FOR FURTHER INSTRUCTIONS FOR PREPARING THE SHOP DRAWINGS.
23. ALL MASONRY DOWELS FOR VERTICAL REINFORCING SHALL BE EPOXY SET FROM THE CONCRETE FOUNDATIONS, CONCRETE WALLS OR CONCRETE SLABS. ALL DOWELS FROM CONCRETE SLABS SHALL BE EMBEDDED THE SLAB THICKNESS MINUS ONE INCH. SEE THE TYPICAL DETAILS FOR EMBED DEPTHS & LAP LENGTHS WHEN DOWELING INTO FOOTINGS OR WALLS. THE MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIAL & LABOR COSTS ASSOCIATED WITH THE LAYOUT AND INSTALLATION OF THE EPOXY SET MASONRY DOWELS. REFER TO OTHER GENERAL PROVISION SECTIONS FOR ACCEPTABLE EPOXY, AND INSTALL DOWELS PER THE EPOXY MANUFACTURER'S RECOMMENDATIONS.

4.2 CMU LINTEL NOTES (U.N.O.)

1. CONCRETE BLOCK LINTEL SCHEDULE:
   8" MIN. BEARING EACH END

OPENING WIDTH	MIN. LINTEL UNIT	REINFORCEMENT
LESS THAN 3'-4"	WALL WIDTH x 8" DP	(2)#4
3'-4" BUT LESS THAN 5'-6"	WALL WIDTH x 8" DP WALL WIDTH x 16" DP	(2)#5 (2)#4
5'-6" BUT LESS THAN 7'-0"	WALL WIDTH x 16" DP (2) WALL WIDTH x 8" DP STACKED	(2)#5 (2)#5 IN EACH
7'-0" BUT LESS THAN 8'-6"	WALL WIDTH x 16" DP (2) WALL WIDTH x 8" DP STACKED	(2)#6 (2)#6 IN EACH

5.5 STEEL LINTELS NOTES (U.N.O)

1. STEEL LINTELS SCHEDULE:
   8" MIN. BEARING EACH END.
   L.L.V. – LONG LEG VERTICAL.

OPENING WIDTH	NUMBERS OF MEMBERS PER THICKNESS OF MSRY.	MIN. MEMBER SZ.
LESS THAN 3'-4"	1 PER 4" THICK	L3-1/2 x 3-1/2 x 3/8
3'-4" BUT LESS THAN 5'-6"	1 PER 4" THICK	L5 x 3-1/2 x 3/8 (L.L.V.)
5'-6" BUT LESS THAN 8'-6"	1 PER 4" THICK	L6 x 3-1/2 x 3/8 (L.L.V.)
8'-6" BUT LESS THAN 10'-6"	1 PER OPENING	W8 x 21 + 3/8" PLATE @ BOT. FLG. FOR 6" CMU W8 x 28 + 3/8" PLATE @ BOT. FLG. FOR 8" CMU W8 x 35 + 3/8" PLATE @ BOT. FLG. FOR 12" CMU

SEE THE TYPICAL DETAILS FOR STEEL LINTEL VARIATIONS, OPTIONS, BEARINGS, ETC.

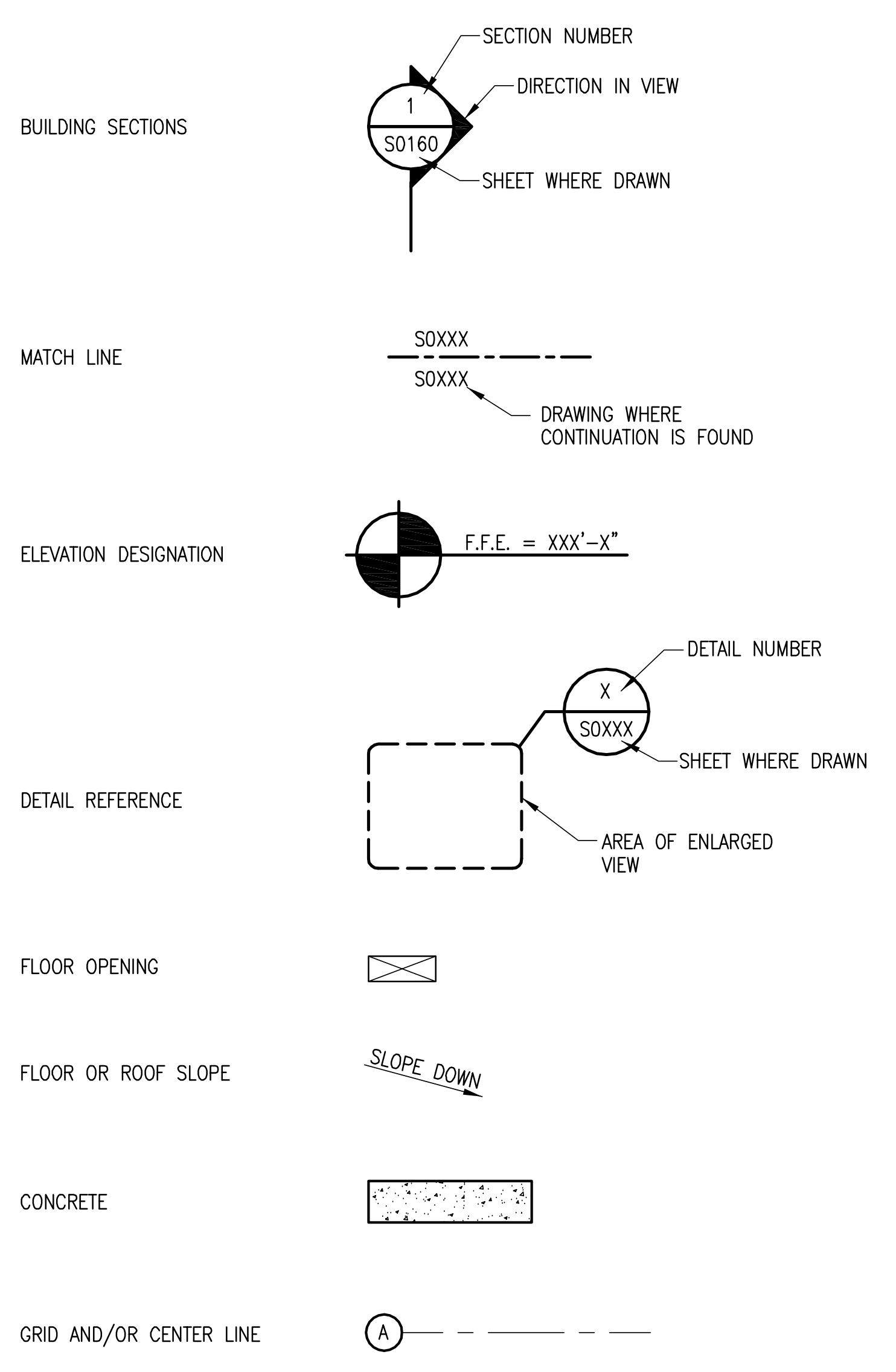
6.1 ABBREVIATIONS

ABBREVIATIONS

A.B.	–	ANCHOR BOLT	IN.	–	INCH/INCHES
ADD'L.	–	ADDITIONAL	INV.	–	INVERT
A.F.F.	–	ABOVE FINISHED FLOOR			
ALT.	–	ALTERNATE/ ALTERNATIVE	JNT.	–	JOINT
			JST.	–	JOIST
ALUM.	–	ALUMINUM	J.B.E	–	JOIST BEARING ELEVATION
APPROX.	–	APPROXIMATE			
ARCH.	–	ARCHITECT/ ARCHITECTURAL	L.L.V.	–	LONG LEG VERTICAL
			L.L.H.	–	LONG LEG HORIZONTAL
@	–	AT	LONGIT.	–	LONGITUDINAL
			L.P.	–	LOW POINT
B./BOTT./BOT.	–	BOTTOM	LYR.	–	LAYER/LAYERS
B.F.F.	–	BELOW FINISHED FLOOR			
BLDG.	–	BUILDING	MAX.	–	MAXIMUM
BM.	–	BEAM	MACH.	–	MACHINE/MACHINERY
B.O.	–	BOTTOM OF	M.C.	–	MECHANICAL CONTRACTOR
B.O.S.	–	BOTTOM OF STEEL	MCJ	–	MASONRY CONTROL JOINT
BRDG.	–	BRIDGING	MECH.	–	MECHANICAL
B.S.	–	BRICK SHELF	MFGR.	–	MANUFACTURER/ MANUFACTURING
BRG.	–	BEARING			
			MAT'L.	–	MATERIAL
C/C, c/c	–	CENTER TO CENTER (IN INCHES U.N.O.)	MID.	–	MIDDLE/ MID-POINT
			MIN.	–	MINIMUM
CANT.	–	CANTILEVER	MSRY.	–	MASONRY
C.I.P.	–	CAST IN PLACE	MTL.	–	METAL
C.J.	–	CONTROL JOINT			
℄	–	CENTER LINE	NEC.	–	NECESSARY
CLR. , CL.	–	CLEAR	N.F.	–	NEAR FACE
CMU	–	CONCRETE MASONRY UNIT	N.T.S.	–	NOT TO SCALE
COL.	–	COLUMN	O.D.	–	OUTSIDE DIAMETER
CONC.	–	CONCRETE	O.F.	–	OUTSIDE FACE
CONSTR.	–	CONSTRUCTION	OPNG.	–	OPENING
CONN.	–	CONNECTION	OPP.	–	OPPOSITE
CONT.	–	CONTINUOUS	OR EQ.	–	OR EQUAL/EQUIVALENT (SEE NOTE BELOW)
CORP.	–	CORPORATION			
CTR.	–	CENTER	o.c. OR O/C	–	ON CENTERS
DET.	–	DETAIL	PERIM.	–	PERIMETER
DIA. OR ø	–	DIAMETER	⅊	–	PLATE
DIM.	–	DIMENSION	PRO.	–	PROPOSED
DN.	–	DOWN	P.R.V.	–	PRESSURE RELIEF VALVE
DO.	–	DITTO	PT.	–	POINT
DP.	–	DEEP			
DWG.	–	DRAWING	R.C.	–	REINFORCED CONCRETE
DWL.	–	DOWEL	REINF.	–	REINFORCED/ REINFORCEMENT
EA.	–	EACH	REQ'D.	–	REQUIRED
EL., ELEV.	–	ELEVATION	REQ'T.	–	REQUIREMENT
E.F.	–	EACH FACE	SIM.	–	SIMILAR
E.J.	–	EXPANSION JOINT	SEC.	–	SECTION
ELEC.	–	ELECTRIC/ELECTRICAL	S.C.J.	–	SAWN CONTROL JOINT
EMB./EMBED.	–	EMBEDMENT			
EQ.	–	EQUAL/EQUIVALENT	S.J.I.	–	STEEL JOIST INSTITUTE
E.W.	–	EACH WAY	SP.	–	SPACE/SPACES
EXP.	–	EXPANSION	SPEC.	–	SPECIFY/SPECIFICATIONS
EXTG.	–	EXISTING	SQ. OR ⌷	–	SQUARE
			S.S.	–	STAINLESS STEEL
F.D.	–	FLOOR DRAIN	STAG.	–	STAGGER/STAGGERED
F.F.	–	FAR FACE	STIFF.	–	STIFFENER
FIN.	–	FINISH/FINISHED	STD.	–	STANDARD
FLG.	–	FLANGE	STIRR.	–	STIRRUP
FLR.	–	FLOOR	STL.	–	STEEL
FND.	–	FOUNDATION	STR.	–	STRAIGHT
FT.	–	FOOT/FEET			
FTG.	–	FOOTING	T.	–	TOP
F.F.E.	–	FINISHED FLOOR ELEVATION	TH., THK.	–	THICK/THICKNESS
			THRU	–	THROUGH
			T.O.	–	TOP OF
GA.	–	GAGE	T.O.S.	–	TOP OF STEEL
G.C.	–	GENERAL CONTRACTOR	TRANS.	–	TRANSVERSE
			TYP.	–	TYPICAL/TYPICALLY
GR.	–	GRADE/GROUND	T.O.F. / T/F	–	TOP OF FOOTING
GRTG.	–	GRATING	T/W	–	TOP OF WALL
H.	–	HORIZONTAL REINFORCING	U.N.O.	–	UNLESS NOTED OTHERWISE
HK.	–	HOOK	V., VERT.	–	VERTICAL
HORIZ.	–	HORIZONTAL	V.I.F.	–	VERIFY IN FIELD
H.P.	–	HIGH POINT	V.W.A.	–	VERIFY WITH ARCHITECT
HR.	–	HANDRAIL			
HT.	–	HIGH/HEIGHT	w/	–	WITH
			WD.	–	WIDE/WIDTH
I.D.	–	INSIDE DIAMETER	W.P.	–	WORK POINT
I.F.	–	INSIDE FACE	W.S.	–	WATERSTOP

NOTE: "OR EQUAL" MEANS EQUIVALENT IN THE OPINION OF THE ENGINEER.
"PROVIDE FOR" MEANS FURNISH AND INSTALL INCLUDING COORDINATION WITH MATERIAL AND EQUIPMENT SUPPLIERS' REQUIREMENTS.

7.1 SYMBOLS AND NOTATIONS



END OF GENERAL PROVISIONS

DISCLAIMER NOTE:

THIS SET OF CONSTRUCTION DRAWINGS HAS BEEN UPDATED TO INCLUDE ANY CHANGES ISSUED THROUGH ADDENDUM OR OTHER MEANS. EVERY EFFORT HAS BEEN TAKEN TO INCLUDE ALL CHANGES TO DATE. THE CONTRACTOR IS STILL RESPONSIBLE FOR PROVIDING ANY ITEMS THAT WERE SHOWN AS PART OF THE ORIGINAL BID SET THAT MAY HAVE BEEN OVERLOOKED AND NOT INCLUDED IN THIS SET.

University of Louisville – Student Recreation Center (Phase #4 – Construction Set) **Louisville, Ky**

RANGASWAMY AND ASSOC., INC.
Suite 420, The Landmark Building
Louisville, Kentucky 40202.
phone : (502)589-2212
Fax : (502)589-2240 : www.rangaswamy.com
consulting engineers

Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507-1001
p 859.252.6664 f 859.253.2358
www.omniarchitects.com

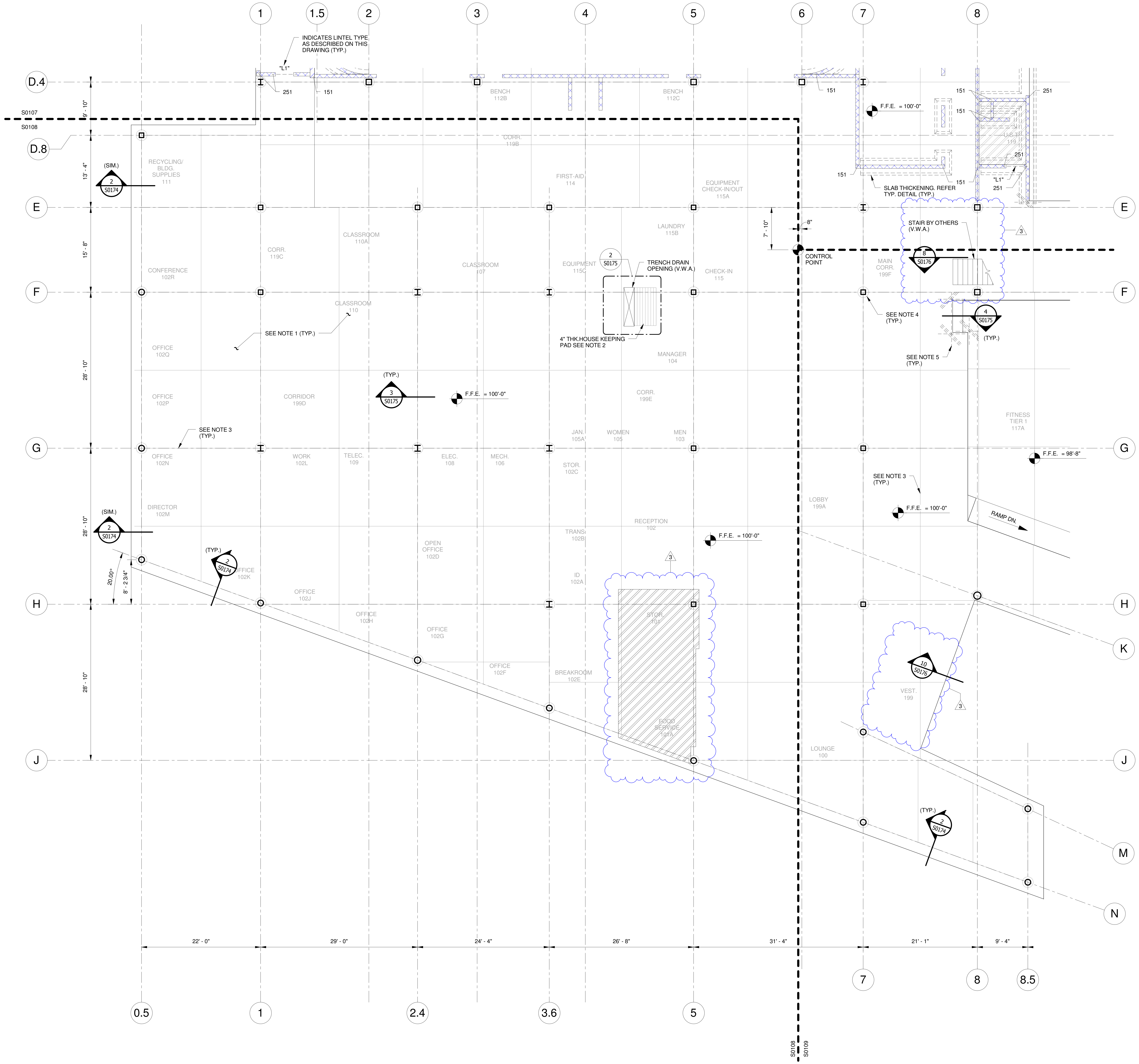
CANNONDESIGN

UNIVERSITY OF LOUISVILLE

#	Revision Date

Drawing Name: GENERAL PROVISIONS CONT'D
U of L Project Number:
Project Number: Omni – 1105.00 Cannon – 03667.00
Date: April 16, 2012
Drawn By: PGK **Checked By:** ANTHONY

S0007



SLAB ON GRADE PLAN - AREA-C

SCALE : 1/8" = 1'-0"

1
S0108

SLAB ON GRADE NOTES:

1. TYPICAL INTERIOR SLAB ON GRADE:
5" THICK SLAB w/W.W.F. 4x4 - W4xW4 OVER 15 MIL POLY VAPOR BARRIER OVER 4" GRAVEL BASE - PER TYPICAL DETAILS
2. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR HOUSEKEEPING AND/OR EQUIPMENT PADS, CURB SIZES AND LOCATIONS. SIZES AND LOCATIONS OF PAD SHALL BE VERIFIED WITH APPROVED MANUFACTURER'S EQUIPMENT SHOP DRAWING PRIOR TO CONSTRUCTION. 4
3. SLAB CONSTRUCTION AND/OR CRACK - CONTROL JOINTS LOCATIONS, INDICATED ON THE PLANS ARE CONCEPTUAL ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE FINAL LAYOUT & PLACEMENT OF THE REQUIRED SLAB JOINTS AS NOTED IN GENERAL PROVISIONS AND TYPICAL DETAILS. SUBMIT JOINT SCHEMATIC TO ARCHITECT FOR REVIEW PRIOR TO SLAB POURS.
4. ISOLATION JOINT IN SLAB ON GRADE AT COLUMNS PER TYPICAL DETAILS.
5. PROVIDE ADD'L. REINF. @ SLAB RE-ENTRANT CORNERS PER TYPICAL DETAILS.
6. PROVIDE SLAB REINF. BENEATH NON-LOAD BEARING CMU WALLS FOUNDED ON SLABS ON GRADE PER TYPICAL DETAILS.
7. CMU WALLS NOT SHOWN FOR CLARITY. REFER ARCHITECT FOR EXACT LOCATION AND WALL HEIGHT.
8. SLAB THICKENING BENEATH CMU WALLS NOT SHOWN FOR CLARITY. SEE TYPICAL DETAILS.
9. RECESS SLAB BENEATH REFRIGERATORS - VERIFY SLAB ELEVATION WITH ARCHITECT PER TYPICAL DETAILS.
10. ALL FLOOR DRAINS MAY NOT BE SHOWN. COORDINATE EXACT LOCATIONS AND QUANTITIES WITH THE PLUMBING DRAWING. PROVIDE POSITIVE SLOPES WARPS TO THE FLOOR SLAB IN ORDER TO PROVIDE REQUIRED DRAINAGE. COORDINATE FLOOR FINISHES WITH THE ARCHITECT.
11. REFER TO ARCHITECTURAL DRAWINGS AND MEP DRAWINGS FOR SLAB OPENINGS AND PENETRATIONS.
12. VERIFY ALL ELEVATOR DIMENSIONS, INCLUDING PIT DEPTH, AND COORDINATE ANY SLEEVES OR BLOCKOUTS WITH ELEVATOR MANUFACTURER. COORDINATE SUMP PIT LOCATION WITH ARCHITECTURAL DRAWINGS.
13. PROVIDE ADD'L . REINF. @ ACUTE CORNERS OF SLAB PER TYPICAL DETAILS.
14. SLAB REBARS SHALL NOT CROSS UNDER SAWN CONTROL JOINTS. CONTRACTOR SHALL EITHER PRE-PLAN REBAR POSITIONS PRIOR TO SLAB POUR; OR ASSURE THAT SAW CUT DEPTH WILL ALSO CUT THROUGH SLAB REBARS.
15. VERIFY AND COORDINATE THE SLAB ON GRADE SLOPES WITH ARCHITECTURAL DRAWINGS.
16. BRACE TOP OF INTERIOR CMU WALL TO STRUCTURE ABOVE. SEE TYPICAL DETAILS.

CMU WALL REINFORCEMENT NOTES, U.N.O.:

1. REFER TO TYP. DETAILS FOR REINFORCEMENT REQUIREMENTS.
2. CONTRACTOR IS RESPONSIBLE FOR DETERMINING FINAL WALL HEIGHTS COORDINATE FINAL WALL HEIGHT WITH THE ARCHITECT.

LEGENDS:

▨ = ENTRY WAY SLAB - 3" DEPRESSION
▨ = THICKSET FLOOR SLAB - 2" DEPRESSION
▥ = 4" HOUSE KEEPING PAD
▨ = SPORTS CLUB / GYM FLOOR SLAB - 2 1/2" DEPRESSION
▨ = LOAD BEARING CMU WALL
▩ = NON- LOAD BEARING CMU WALL

CMU LINTEL TYPES:

"L1" - 8" CMU: (1) 8" DEEP BOND BEAM w/(2) #5 CONTINUOUS.

"L2" - 8" CMU: (2) 8" DEEP, STACKED BOND BEAMS w/(2) #5 CONTINUOUS IN EACH.

"L3" - 8" CMU: (1) 8" DEEP BOND BEAM w/(2) #5 CONTINUOUS & L6x6x3/8 GALV. BRICK ANGLE

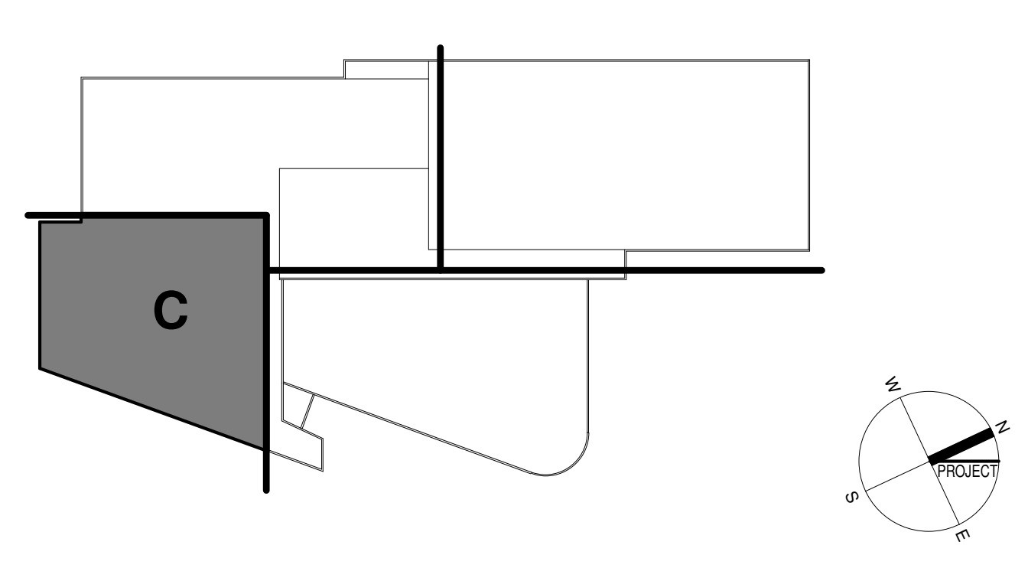
LEGEND:

= CLOUDED ITEMS WHERE CHANGED PER ADDENDUM
1 ← ADDENDUM NUMBER

DISCLAIMER NOTE:

THIS SET OF CONSTRUCTION DRAWINGS HAS BEEN UPDATED TO INCLUDE ANY CHANGES ISSUED THROUGH ADDENDUM OR OTHER MEANS. EVERY EFFORT HAS BEEN TAKEN TO INCLUDE ALL CHANGES TO DATE. THE CONTRACTOR IS STILL RESPONSIBLE FOR PROVIDING ANY ITEMS THAT WERE SHOWN AS PART OF THE ORIGINAL BID SET THAT MAY HAVE BEEN OVERLOOKED AND NOT INCLUDED IN THIS SET.

Keyplan



University of Louisville - Student Recreation Center (Phase #4 - Construction Set) Louisville, Ky

OMNI ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507-1001
p 859.252.6664 f 859.253.2358
www.omniarchitects.com

CANNONDESIGN

RANGASWAMY AND ASSOC., INC.
consulting engineers
Suite 420, The Landmark Building
Louisville, Kentucky 40202.
phone : (502)589-2212
Fax : (502)589-2240 : www.rangaswamy.com

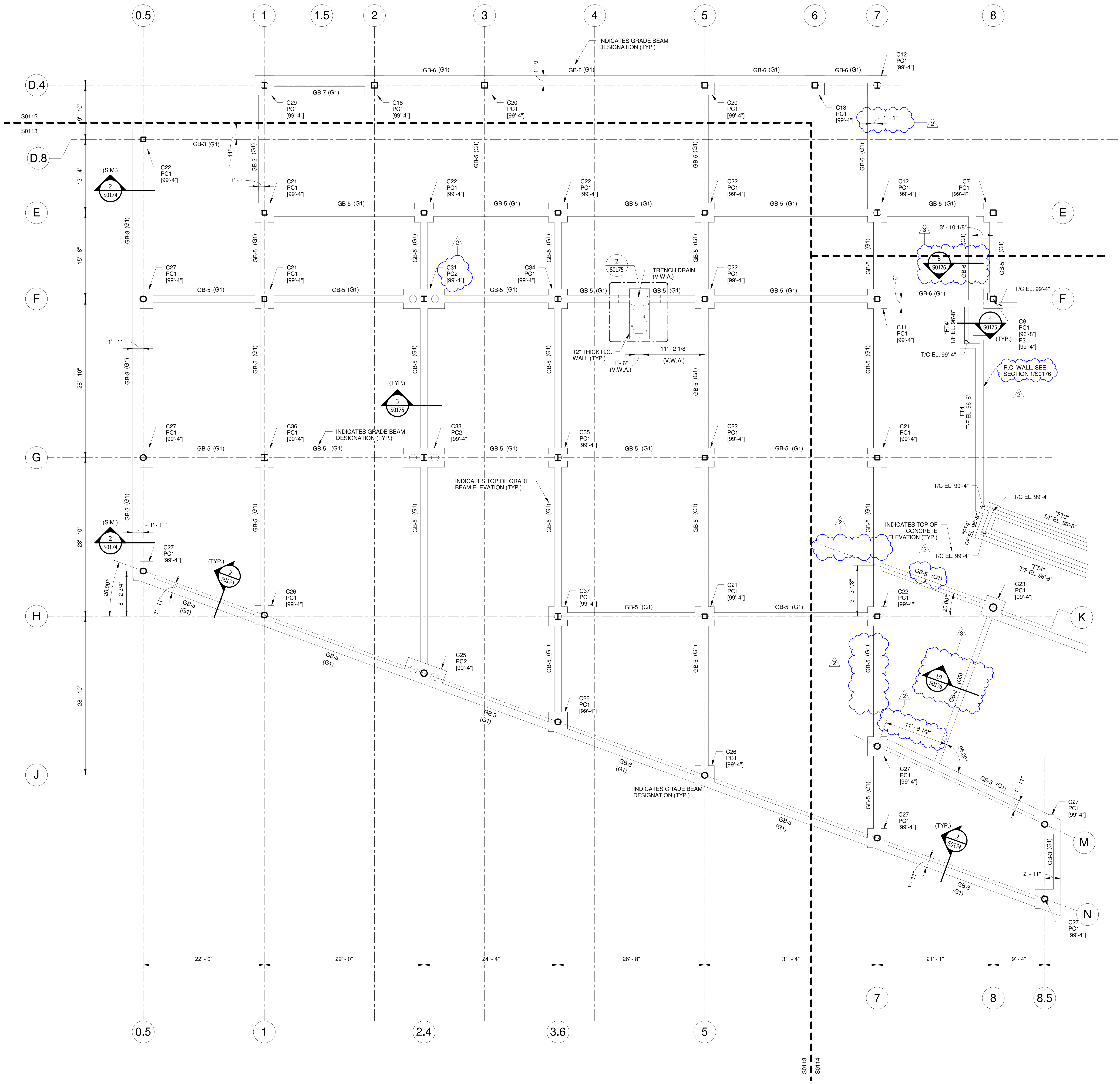
UNIVERSITY OF LOUISVILLE

Drawing Name:	SLAB ON GRADE PLAN - AREA-C
U of L Project Number:	
Project Number:	Omni - 1105.00 Cannon - 03667.00
Date:	April 16, 2012
Drawn By:	VPP Checked By: ANTHONY

#	Revision Date
3	Mar 05, 2012
4	Mar 12, 2012

S0108

16-04-2012 16:59:20



FOUNDATION PLAN - AREA-C

SCALE : 1/8" = 1'-0"

1
S0113

FOUNDATION PLAN NOTES:

1. FOOTING CALLOUT DENOTED THUS:

Cx	COLUMN DESIGNATION [SEE COLUMN SCHEDULE]
PCx	PILE CAP DESIGNATION [SEE PILE CAP SCHEDULE]
[XX'-X"]	TOP OF PILE CAP ELEVATION
Px	PIER DESIGNATION [SEE PIER SCHEDULE]
[XX'-X"]	TOP OF PIER ELEVATION

2. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR HOUSEKEEPING AND/OR EQUIPMENT PADS, CURB SIZES AND LOCATIONS. SIZES AND LOCATIONS OF PAD SHALL BE VERIFIED WITH APPROVED MANUFACTURER'S EQUIPMENT SHOP DRAWING PRIOR TO CONSTRUCTION.

3.FIELD LOCATE EXISTING UNDERGROUND UTILITIES, PIPES, ETC. PRIOR TO PLACEMENT OF FOUNDATIONS. NOTIFY ENGINEER OF INTERFRENCES WHICH MIGHT REQUIRE RELOCATION AND/OR MODIFICATION OF FOUNDATIONS.

4.REFER COLUMN SCHEDULE FOR BASE PLATE DETAILS.

5.VERIFY ALL ELEVATOR DIMENSIONS, INCLUDING PIT DEPTH, AND COORDINATE ANY SLEEVES OR BLOCKOUTS WITH ELEVATOR MANUFACTURER. COORDINATE SUMP PIT LOCATION WITH ARCHITECTURAL DRAWINGS.

6. THE GRADE BEAM REINFORCING NOT FULLY EXTEND THROUGHOUT THE ENTIRE PILE CAP.IT MUST BE EXTEND 24" INTO THE PILE CAP AND BE TERMINATED WITH A HOOK IF IT IS NOT CONTINUOUS.

7. FOR ANCHOR BOLT DETAIL, REFER TYPICAL DETAILS.

PILE AND PILE CAP SCHEDULE

PILE CAP DESIGNATION	NUMBER OF PILES	PILE CAP DIMENSIONS			PILE CAP REINFORCEMENT		TOP OF PILE CAP ELEVATION	PILE LAYOUT DETAIL	REMARKS
		LENGTH (FT.)	WIDTH (FT.)	DEPTH (IN.)	ACROSS LENGTH	ACROSS WIDTH			
PC1	1	3.5	3.5	35	(4) #8	(4) #8	SEE PLAN	1/S0173	-
PC2	2	7.5	3.5	49	(11) #8	(6) # 10	SEE PLAN	3/S0173	-
PC3	3	7.5	7.5	44	(11) #9	(11) #9	SEE PLAN	2/S0173	-
PC4	2	7.5	3.5	52	(11) #8	(6) # 10	SEE PLAN	3/S0173 (SIM.)	-

GRADE BEAM SCHEDULE

GRADE BEAM DESIGNATION	GRADE BEAM DIMENSIONS		REINFORCEMENT				STIRRUPS IN-SPAN		SIDE FACE REINF.			REMARKS
	WIDTH (IN.)	DEPTH (IN.)	TOP BARS		BOT. BARS		STIRRUPS	NO. OF LEGS	NO. OF. LAYERS	BAR QTY.	BAR SIZE	
			NUMBER	SIZE	NUMBER	SIZE						
GB-1	12	30	3	#6	3	#6	#4@12" O.C.	2	2	4	#5	-
GB-2	12	30	3	#7	3	#7	#4@12" O.C.	2	2	4	#5	-
GB-3	16	30	4	#6	4	#6	#4@12" O.C.	2	2	4	#5	-
GB-4	21	30	4	#6	4	#6	#4@12" O.C.	2	2	4	#5	-
GB-5	16	12	3	#6	3	#6	#4@12" O.C.	2	1	2	#5	-
GB-6	16	20	5	#6	5	#6	#4@12" O.C.	2	1	2	#5	-
GB-7	24	30	6	#6	6	#6	#4@12" O.C.	2	2	4	#5	-
GB-8	24	30	6	#6	6	#6	#4@12" O.C.	2	2	4	#5	-
GB-9	16	32	4	#6	4	#6	#4@12" O.C.	2	2	4	#5	-
GB-10	24	32	6	#6	6	#6	#4@12" O.C.	2	2	4	#5	-

PIER SCHEDULE

PIER DESIGNATION	PIER DIMENSIONS		PIER REINFORCEMENT		TOP OF PIER ELEVATION	SEE DETAIL
	LENGTH (IN.)	WIDTH (IN.)	VERTICAL BAR	TIES		
P1	25	25	(8) #6	(6) #4	SEE PLAN	3/S0205
P2	29	29	(8) #6	(6) #4	SEE PLAN	3/S0205
P3	25	25	(8) #6	(6) #4	SEE PLAN	3/S0205
P4	25	25	(12) #7	(6) #4	SEE PLAN	3/S0205

GRADE BEAM ELEVATIONS:

(G1) = INDICATES TOP OF GRADE BEAM ELEVATION 99'-4"
(G2) = INDICATES TOP OF GRADE BEAM ELEVATION 99'-0"
(G3) = INDICATES TOP OF GRADE BEAM ELEVATION 96'-8"
(G4) = INDICATES TOP OF GRADE BEAM ELEVATION 98'-0"
(G5) = INDICATES TOP OF GRADE BEAM ELEVATION 99'-1"
2

CONSTRUCTION NOTES:

#1 INCREASE FOOTING THICKNESSES AS NECESSARY IN THE FIELD TO POSITION BOTTOM ELEVATION ON APPROVED SUB-GRADE; AND AT LEAST 2'-6" BELOW FINISHED GRADE; UNLESS FOOTING IS BEARING UPON SOLID, NATURAL BEDROCK. SEE TYPICAL DETAIL.

#2 ALL COLUMNS ARE TO BE PARALLEL TO THE WALL, COORDINATE THE ORIENTATION OF THE COLUMN WITH THE ARCHITECT'S DRAWINGS - TYP., U.N.O.

#3 CONTINUOUS STRIP FOOTINGS AND STEM WALLS SHALL BE SEPARATED BY COLD JOINTS UPON ENCOUNTERING DIFFERENT SOIL BEARING CONDITIONS. SEE TYPICAL DETAIL.

#4 IN THE EVENT THAT FOUNDATION BEARING SOILS ARE ENCOUNTERED THAT DO NOT MEET OR EXCEED THE INTENDED SOIL BEARING CAPACITY, CONSULT THE ARCHITECT IMMEDIATELY FOR ACCEPTABLE REMEDIATION OPTIONS. DO NOT FILL UNDERCUT AREAS WITH GRAVEL FILL. NO MORE THAN 1 1/2" OF GRAVEL MAY BE PLACED BETWEEN NATURAL SOILS AND BOTTOM OF FOUNDATIONS.

STRIP FOOTING TYPE:

"FT1" - 3'-0" WIDE x 12" THICK w/(4) #5 LONGIT. & #5@9" o.c. TRANSV., TOP OF FOOTING ELEV. SEE PLAN.

"FT2" - 2'-2" WIDE x 12" THICK w/(3) #5 LONGIT. & #5@9" o.c. TRANSV., TOP OF FOOTING ELEV. SEE PLAN.

"FT3" - 2'-0" WIDE x 12" THICK w/(3) #5 LONGIT. & #5@9" o.c. TRANSV., TOP OF FOOTING ELEV. SEE PLAN.

"FT4" - 2'-4" WIDE x 12" THICK w/(3) #5 LONGIT. & #5@9" o.c. TRANSV., TOP OF FOOTING ELEV. SEE PLAN.

"FT5" - 4'-0" WIDE x 12" THICK w/(5) #5 LONGIT. & #5@9" o.c. TRANSV., TOP OF FOOTING ELEV. SEE PLAN.
2

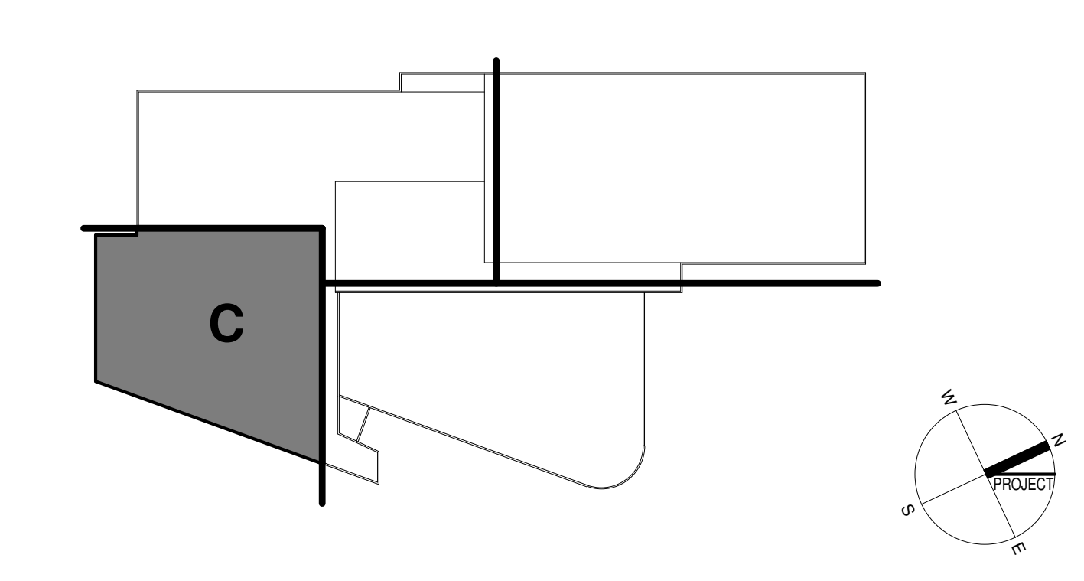
LEGEND:

☁	= CLOUDED ITEMS WHERE CHANGED PER ADDENDUM
△1	ADDENDUM NUMBER

DISCLAIMER NOTE:

THIS SET OF CONSTRUCTION DRAWINGS HAS BEEN UPDATED TO INCLUDE ANY CHANGES ISSUED THROUGH ADDENDUM OR OTHER MEANS. EVERY EFFORT HAS BEEN TAKEN TO INCLUDE ALL CHANGES TO DATE. THE CONTRACTOR IS STILL RESPONSIBLE FOR PROVIDING ANY ITEMS THAT WERE SHOWN AS PART OF THE ORIGINAL BID SET THAT MAY HAVE BEEN OVERLOOKED AND NOT INCLUDED IN THIS SET.

Keyplan



University of Louisville - Student Recreation Center (Phase #4 - Construction Set) Louisville, Ky

Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507-1001
p 859.252.6664 f 859.253.2358
www.omniarchitects.com

CANNONDESIGN

RANGASWAMY AND ASSOC., INC.
R&A consulting engineers
Suite 420, The Landmark Building
Louisville, Kentucky 40202.
phone : (502)589-2212
Fax : (502)589-2240 : www.rangaswamy.com

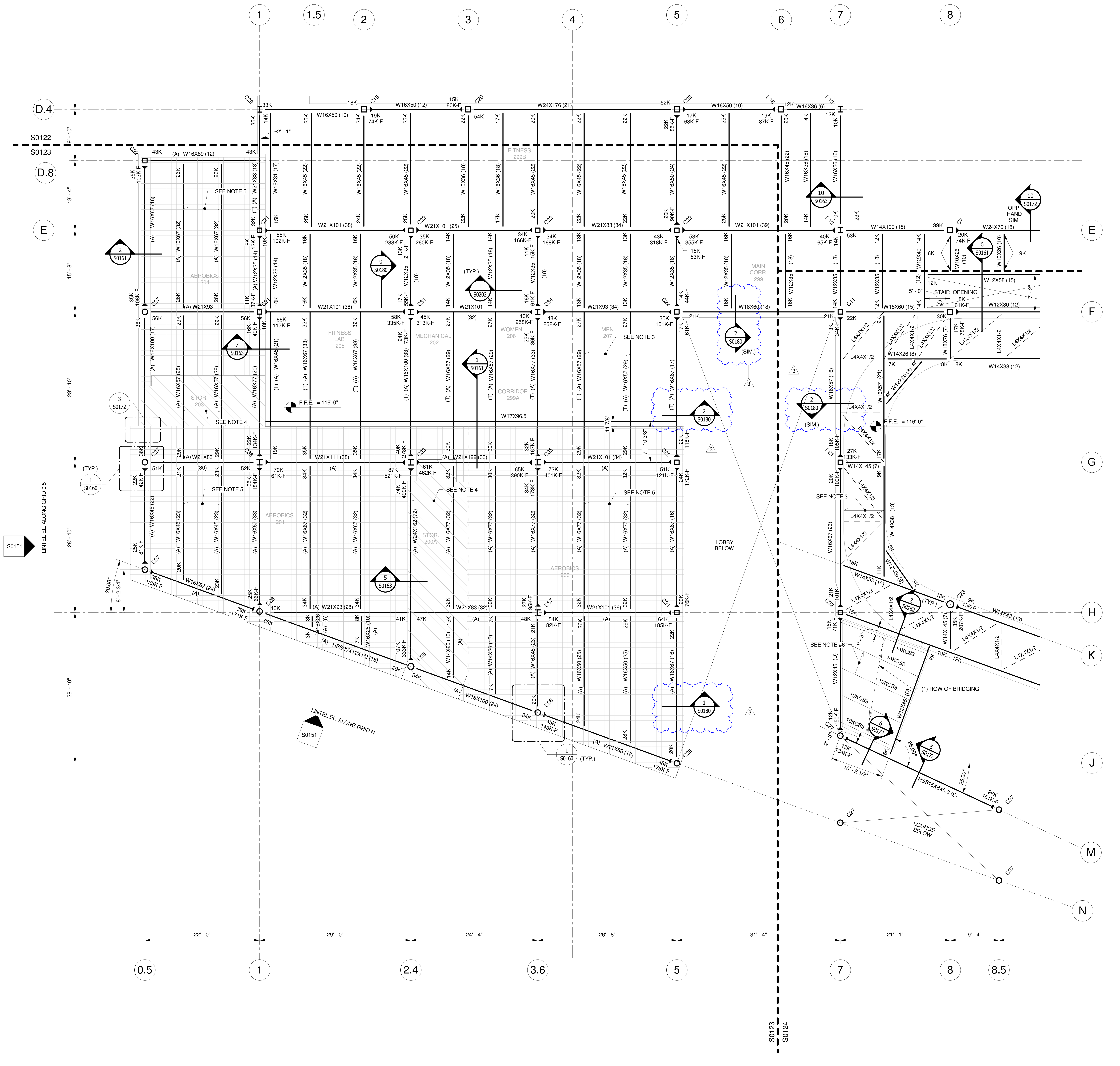
UNIVERSITY OF LOUISVILLE

#	Revision Date
2	Feb 27, 2012
3	Mar 05, 2012

Drawing Name: FOUNDATION PLAN - AREA-C
U of L Project Number:
Project Number: Omni - 1105.00 Cannon - 03667.00
Date: April 16, 2012
Drawn By: VPP Checked By: ANTHONY

S0113

16-04-2012 17:02:32



MEZZANINE FLOOR FRAMING PLAN- AREA-C

1
S0123

SCALE : 1/8" = 1'-0"

MEZZANINE FLOOR FRAMING NOTES:

1. ESTABLISHED ELEVATIONS:

F.F.E.	116'-0" UNO
TOP OF BEAM EL.	115'-5 3/4" UNO

ELEVATIONS ARE TO BE AS INDICATED ABOVE, UNLESS OTHERWISE NOTED +/- INCHES ABOVE/BELOW.

2. MAXIMUM SPACING BETWEEN FLOOR BEAMS, AND BETWEEN ALL OTHER FLOOR BEARING MEMBERS, SHALL NOT EXCEED 11'-0" C/C.

4

3. TYPICAL FLOOR SLAB (6 1/4" TOTAL DEPTH) : 3 1/4" LIGHT WEIGHT CONCRETE w/W.W.F. 6x6 - W2xW2 ON 3 VLI, 18 GAGE,GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT (TYP., U.N.O.)

4. FLOOR SLAB [6 1/4" TOTAL DEPTH] 3 1/4" MIN. LIGHT WEIGHT CONCRETE w/W.W.F. 6x6 - W2xW2 ON 3VLI 18 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT (TYP. U.N.O.) AND 4 3/4" TOPPING SLAB w/W.W.F. 4x4 - W3.5xW3.5 CONCRETE ABOVE INSULATION. SEE DETAIL (5/S0163).

5. FLOOR SLAB [6 1/4" TOTAL DEPTH] 3 1/4" MIN. LIGHT WEIGHT CONCRETE w/W.W.F. 6x6 - W2xW2 ON 3VLI, 18 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT (TYP. U.N.O.) AND SLAB [4" TOTAL DEPTH] 2 1/2" MIN. LIGHT WEIGHT CONCRETE w/W.W.F. 6x6 - W1.4xW1.4 ON 1.5C, 20 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT ABOVE ISO-LAT SYSTEM.SEE DETAIL (5/S0163).

6. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR HOUSEKEEPING AND/OR EQUIPMENT PADS, CURB SIZES AND LOCATIONS. SIZES AND LOCATIONS OF PAD SHALL BE VERIFIED WITH APPROVED MANUFACTURER'S EQUIPMENT SHOP DRAWING PRIOR TO CONSTRUCTION.

7. ALL FLOOR DRAINS MAY NOT BE SHOWN. COORDINATE EXACT LOCATIONS AND QUANTITIES WITH THE PLUMBING DRAWING. PROVIDE POSITIVE SLOPES (WARPS) IN T.O. FLOOR SLAB IN ORDER TO PROVIDE REQUIRED DRAINAGE. COORDINATE FLOOR FINISHES WITH THE ARCHITECT.

8. ALL BEAMS HAVE 1 ROW OF STUDS (UNO).

NUMBER OF STUDS PER BEAM DENOTED THUS ( )

9. COLUMN CALLOUT DENOTED THUS:

Cxx ← COLUMN DESIGNATION [SEE COLUMN SCHEDULE]

10. PROVIDE #4@12" o.c TOP TRANSVERSE, OVER ALL BEAMS W/#4@12" o.c. LONGIT. (TYP.) SEE TYPICAL COMPOSITE SLAB REINF. DETAIL (10/S0208).

11. REFER TO ARCHITECTURAL DRAWINGS AND MEP DRAWINGS FOR SLAB OPENINGS AND PENETRATIONS.

12. REFER TO ARCHITECTURAL DRAWINGS FOR STAIR DIMENSION AND CONSTRUCTION, SLAB DEPRESSIONS AND ELEVATOR OPENINGS.

13. SEE STRUCTURAL LINTEL ELEVATION SHEETS FOR LINTEL BEAMS AND METAL PANEL FRAMING DETAILS.

14. PROVIDE 1/4" THICK BENT PLATE OR 1/4" THICK ANGLE FOR ALL DECK EDGE FRAMING, IF THE CANT. LENGTH IS LESS THAN OR EQUAL TO 1'-0". FOR COMPOSITE DECK EDGE DETAIL SEE 2/S0202.

15. PROVIDE ADD'L REINF. (2) #5 BENEATH NON-LOAD BEARING CMU WALLS FOUNDED ON FLOOR SLAB.

16. PROVIDE SLIP CONNECTION PER DETAIL 2/S0200 FOR BEAMS BEARING ON MASONRY.

17. COORDINATE WITH ARCH. FOR SLAB EDGE / BOUNDARY DETAILS.

ROOF FRAMING NOTES:

#1. □← : INDICATES JOIST BOTTOM CHORD EXTENSION. MAKE FINAL ATTACHMENT TO COLUMN ONLY WHEN ALL ROOF DEAD LOADS ARE IN PLACE. JOISTS LOCATED ON COLUMN LINES SHALL ALWAYS BE "KCS" SERIES JOISTS AND THE JOIST END MOMENT SHALL BE 75% OF THE JOIST M0MENT CAPACITY.

#2. MAXIMUM SPACING BETWEEN STEEL BAR JOISTS SHALL NOT EXCEED 5'-0" C/C, U.N.O.

#3. UNLESS NOTED OTHERWISE, ALL ROOF JOIST SEATS SHALL BE 4" DEEP.

#4. TERMINATE ALL S.J.I. BRIDGING LINES AS SHOWN ON DETAILS 5/S0200 (SIMILAR), 12/S0200 & 10/S0201.

#5. ALL JOISTS SHALL BEAR ON STEEL BEAMS OR STEEL PLATES THAT ARE SOLIDLY GROUTED INTO CMU. DO NOT BEAR JOISTS ON HOLLOW CMU BLOCKS, WOOD, ETC. UNLESS APPROVED BY THE ARCHITECT. WELD OR BOLT JOISTS TO BEARING STEEL PER THE JOIST SUPPLIER'S SHOP DRAWING DETAILS.

#6. TYPICAL ROOF DECK TYPE B, 1 1/2" DEEP 20 GAGE G-90 DECKING BY VULCRAFT OR APPROVED EQUIVALENT. (TYP. U.N.O.)

#7. FIELD MODIFICATIONS TO BAR JOISTS SHALL ONLY BE PERFORMED WITH THE PERMISSION OF THE JOIST SUPPLIER.

#8. ALL OPENINGS THROUGH THE ROOF THAT EXCEED 6" DIAMETER OR 30 SQUARE INCHES SHALL HAVE THE DECK SUPPORTED USING STEEL MEMBERS, JOIST HEADERS, ETC. - SEE DETAIL 7/S0201.

#9. WELD OR SCREW METAL DECK TO SUPPORTS PER THE DECKING SUPPLIER'S SHOP DRAWING DETAILS. DECKING SUPPLIER MUST GRANT PERMISSION FOR ANY CHANGES TO THE ATTACHMENT METHODS.

#10. ALL WATER PIPES OVER 3" IN DIAMETER SHALL BE HUNG FROM JOIST PANEL POINTS OR JOIST CHORDS SHALL BE REINFORCED PER TYPICAL DETAIL 4/S0200.

#11. MECHANICAL EQUIPMENT HANGING UNDER THE ROOF JOISTS SHALL BE SUPPORTED BY AT LEAST THREE JOISTS. SEE TYPICAL DETAILS FOR JOIST REINFORCEMENT REQUIREMENTS. STRUCTURAL IS NOT RESPONSIBLE FOR THE DESIGN OF THE ACTUAL MEMBERS USED TO DISTRIBUTE, SUPPORT AND ISOLATE THE ACTUAL EQUIPMENT AND IT'S LOADS.

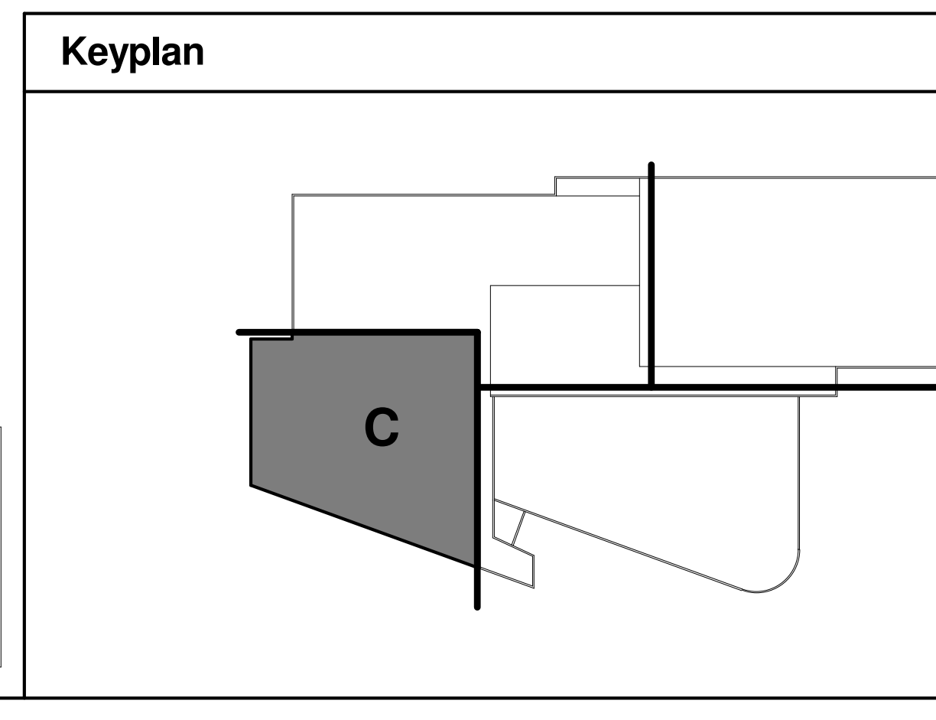
#12. MECHANICAL EQUIPMENT SITTING ON THE ROOF SHALL BE LOCATED SO THAT RELATIVE ROOF OPENINGS FOR THE EQUIPMENT DO NOT INTERFERE WITH JOISTS OR BRIDGING LINES. SEE DETAIL 7/S0201 FOR DECK SUPPORT AT ROOF OPENINGS.

#13. RD INDICATES ROOF DRAIN. ALL ROOF DRAINS MAY NOT BE SHOWN. COORDINATE EXACT LOCATIONS AND QUANTITIES WITH THE PLUMBING DRAWINGS. PROVIDE POSITIVE SLOPES/WARPS TO THE ROOF IN ORDER TO PROVIDE REQUIRED DRAINAGE. COORDINATE ROOF FINISHES WITH THE ARCHITECT.

LEGENDS:

= 12" REINFORCED CMU w/(2) #6 IN EACH CORE
= 12" REINFORCED CMU w/(2) #7 IN EACH CORE
= LOAD BEARING CMU WALL AND/OR EXTERIOR CMU WALL ABOVE
252 = ADDITIONAL VERTICAL CMU REINF. REQUIRED (SEE TYPICAL DETAIL)
= LOAD BEARING CMU WALL AND/OR EXTERIOR CMU WALL BELOW
— - - — = STANDARD S.J.I. BRIDGING
INDICATES MOMENT CONNECTION BY OTHERS.
INDICATES CANTILEVER MOMENT CONNECTION BY OTHERS.
REFER TYPICAL DETAIL 14/S0200 FOR BEAM AND COLUMN CONNECTION. (U.N.O.)
(A) = INDICATES TOP OF STEEL ELEVATION 114'-10"
(B) = INDICATES TOP OF STEEL ELEVATION 115'-3 7/8"
(C) = INDICATES TOP OF STEEL ELEVATION 137'-1 1/2"
(D) = INDICATES TOP OF STEEL ELEVATION 115'-1 3/4"
(E) = INDICATES TOP OF STEEL ELEVATION 113'-4 3/8"
(T) = INDICATES WT7X96.5 ABOVE BEAM, T.O.S. EL. 115'-5 3/4"
(H1) = INDICATES HSS3X3X1/4 ABOVE ROOF BEAM, T.O.S. EL. VARIES, SEE PLAN
(H2) = INDICATES HSS5X2 1/2X3/16 ABOVE FLOOR BEAM, T.O.S. EL. 137'-1 1/2"
(H3) = INDICATES HSS8X8X1/2 ABOVE ROOF BEAM, T.O.S. EL. VARIES, SEE PLAN
(H4) = INDICATES HSS10X10X1/2 ABOVE ROOF BEAM, T.O.S. EL. VARIES, SEE PLAN
▧ = AEROBICS STORAGE FLOOR SLAB - 7 3/4" DEPRESSION
▦ = AEROBICS FLOOR SLAB - 7 3/4" DEPRESSION
▩ = RACQUET BALL FLOOR SLAB - 1 7/8" DEPRESSION
▨ = GYM FLOOR SLAB - 2 1/2" DEPRESSION
= CLOUDED ITEMS WHERE CHANGED PER ADDENDUM
△1 ← ADDENDUM NUMBER

Keyplan



DISCLAIMER NOTE:

THIS SET OF CONSTRUCTION DRAWINGS HAS BEEN UPDATED TO INCLUDE ANY CHANGES ISSUED THROUGH ADDENDUM OR OTHER MEANS. EVERY EFFORT HAS BEEN TAKEN TO INCLUDE ALL CHANGES TO DATE. THE CONTRACTOR IS STILL RESPONSIBLE FOR PROVIDING ANY ITEMS THAT WERE SHOWN AS PART OF THE ORIGINAL BID SET THAT MAY HAVE BEEN OVERLOOKED AND NOT INCLUDED IN THIS SET.

University of Louisville - Student Recreation Center (Phase #4 - Construction Set) Louisville, Ky

Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507-1001
p 859.252.6664 f 859.253.2358
www.omniarchitects.com

CANNONDESIGN

RANGASWAMY AND ASSOC., INC.
Suite 420, The Landmark Building
Louisville, Kentucky 40202.
phone : (502)589-2212
Fax : (502)589-2240 : www.rangaswamy.com

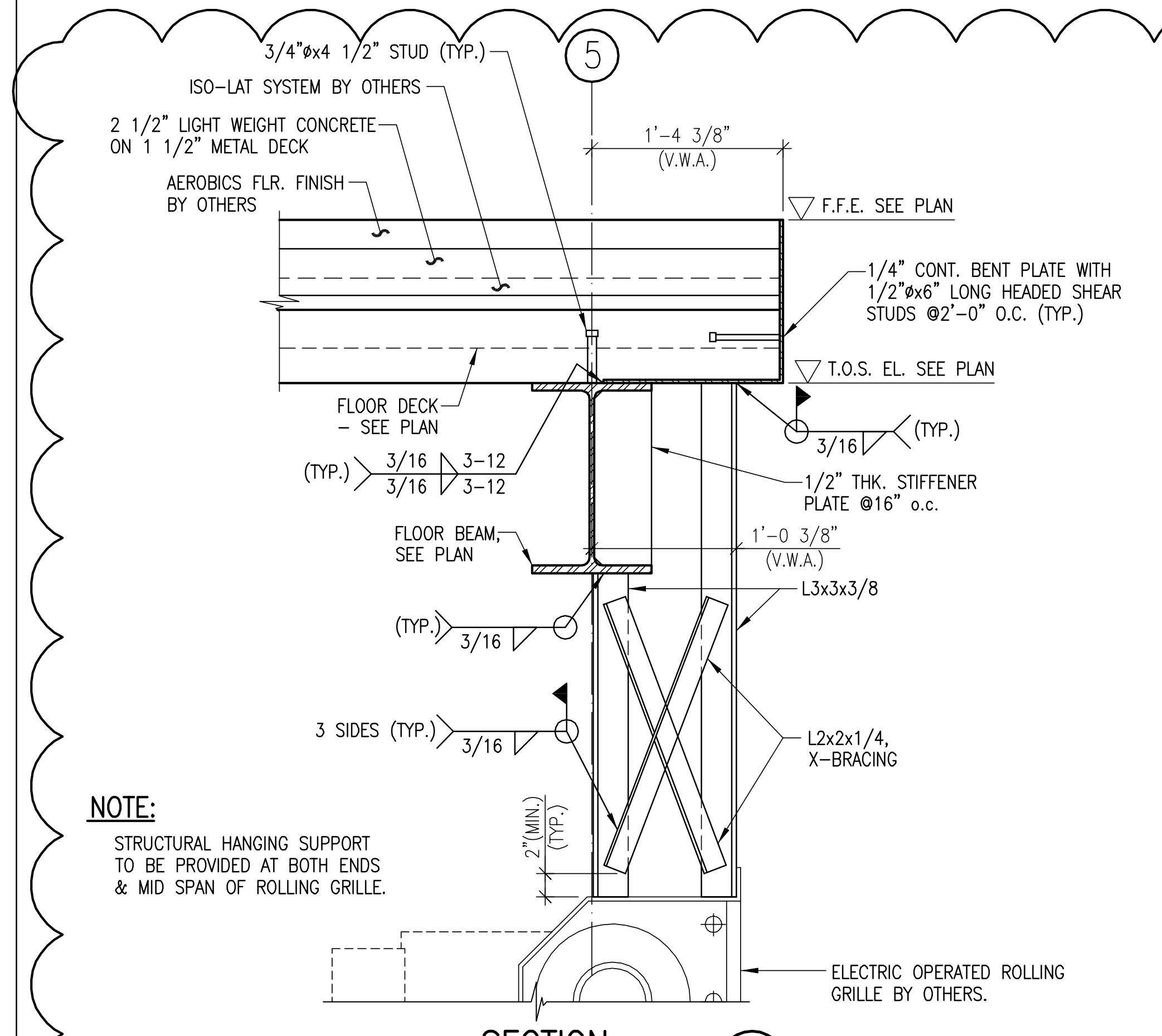
UNIVERSITY OF LOUISVILLE

#	Revision Date
3	Mar 05, 2012
4	Mar 12, 2012

Drawing Name:	MEZZANINE FLOOR FRAMING PLAN-AREA-C
U of L Project Number:	
Project Number:	Omni - 1105.00 Cannon - 03667.00
Date:	April 16, 2012
Drawn By: VPP	Checked By: ANTHONY

S0123

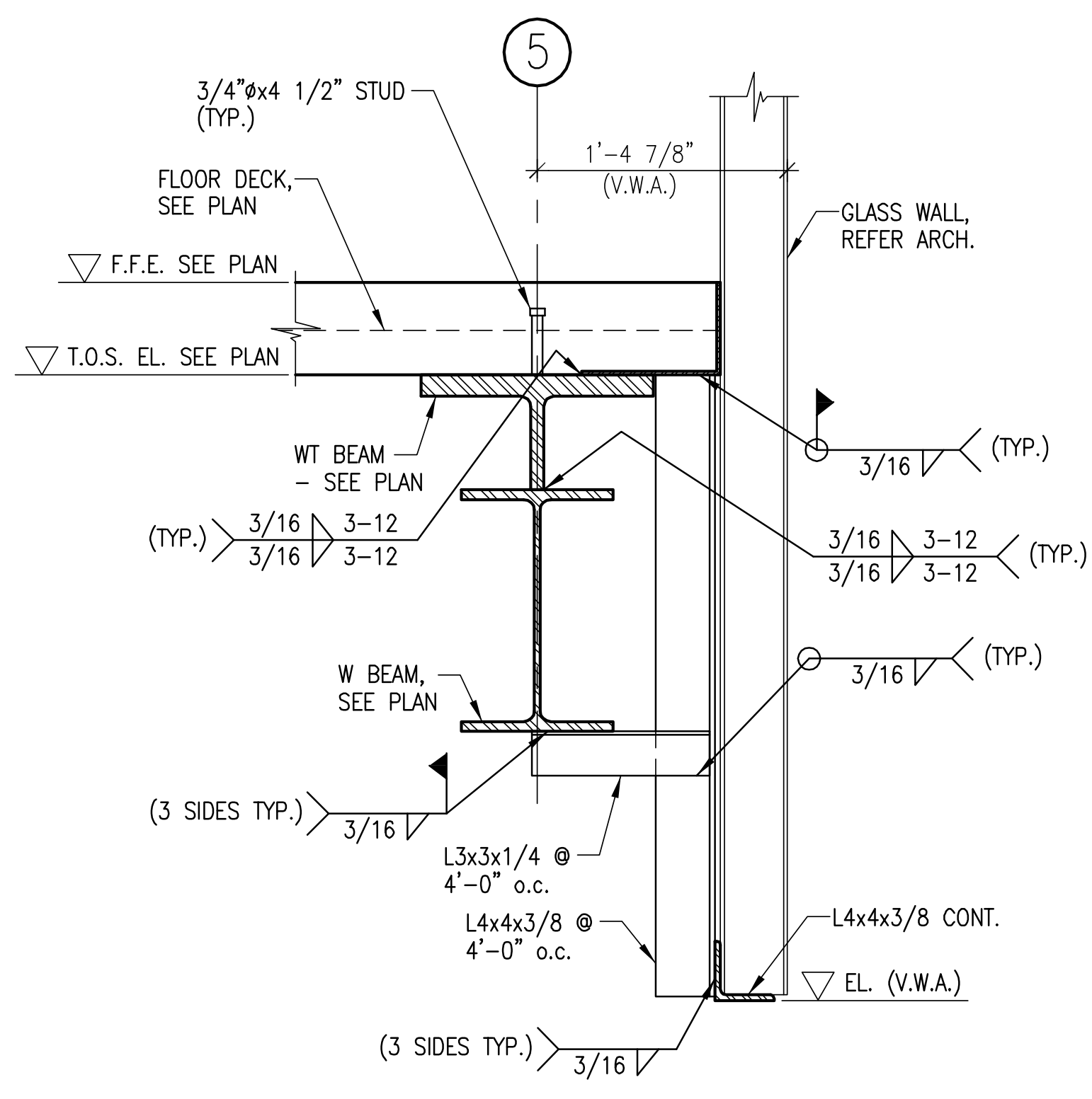
16-04-2012 17:04:27



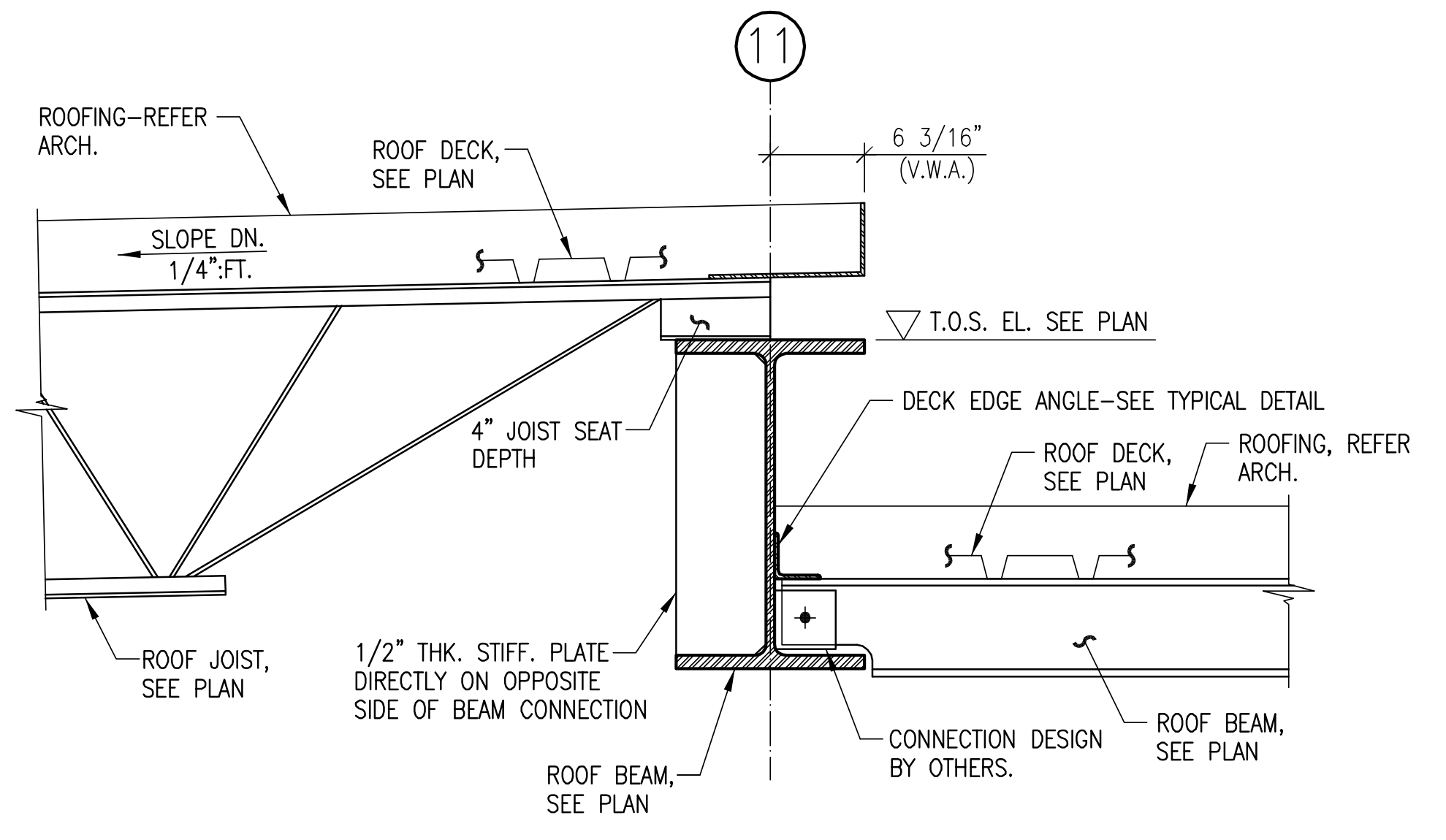
NOTE:

STRUCTURAL HANGING SUPPORT TO BE PROVIDED AT BOTH ENDS & MID SPAN OF ROLLING GRILLE.

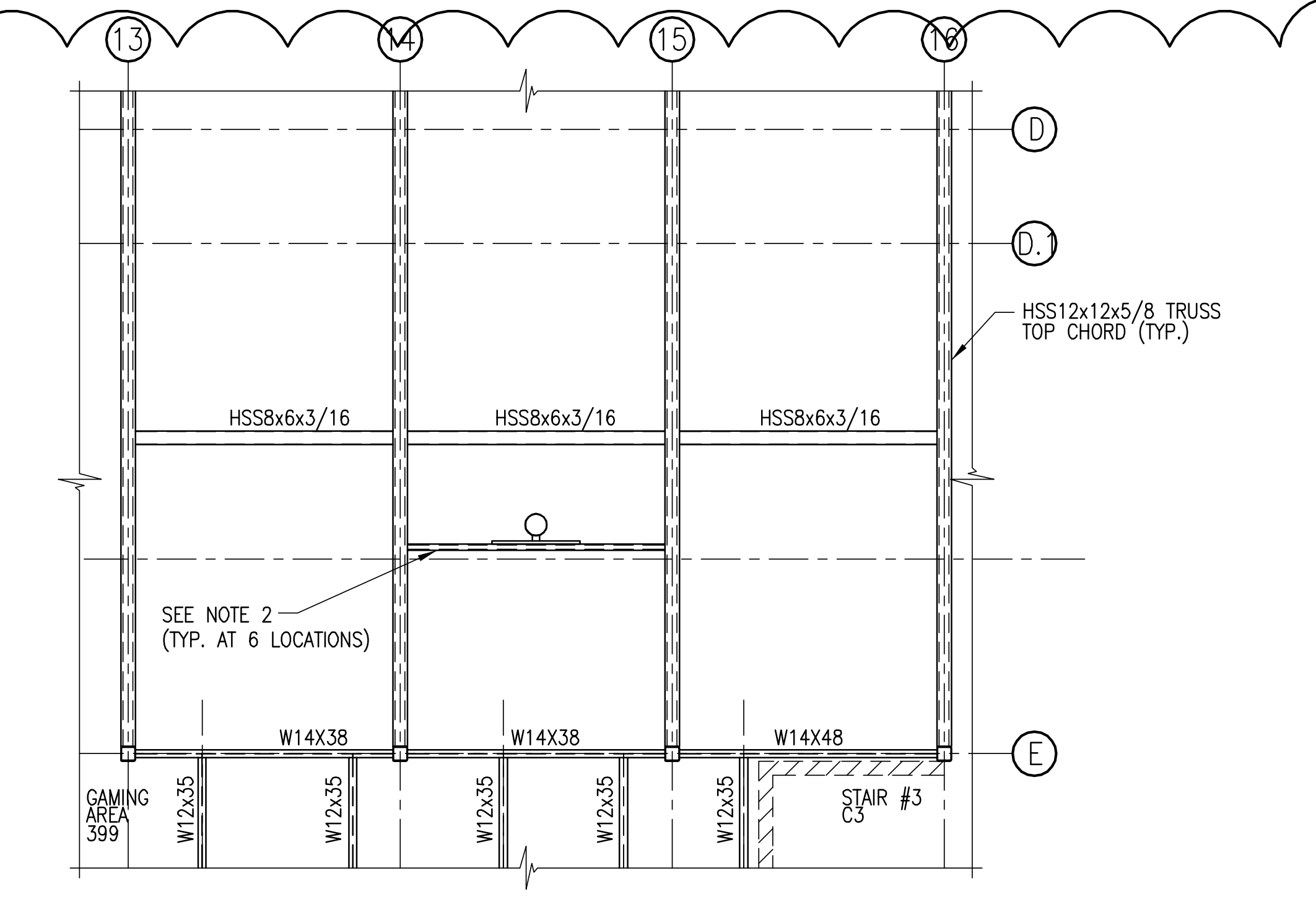
SECTION
SCALE: 1"=1'-0" (1/S0180)



SECTION
SCALE: 1"=1'-0" (2/S0180)



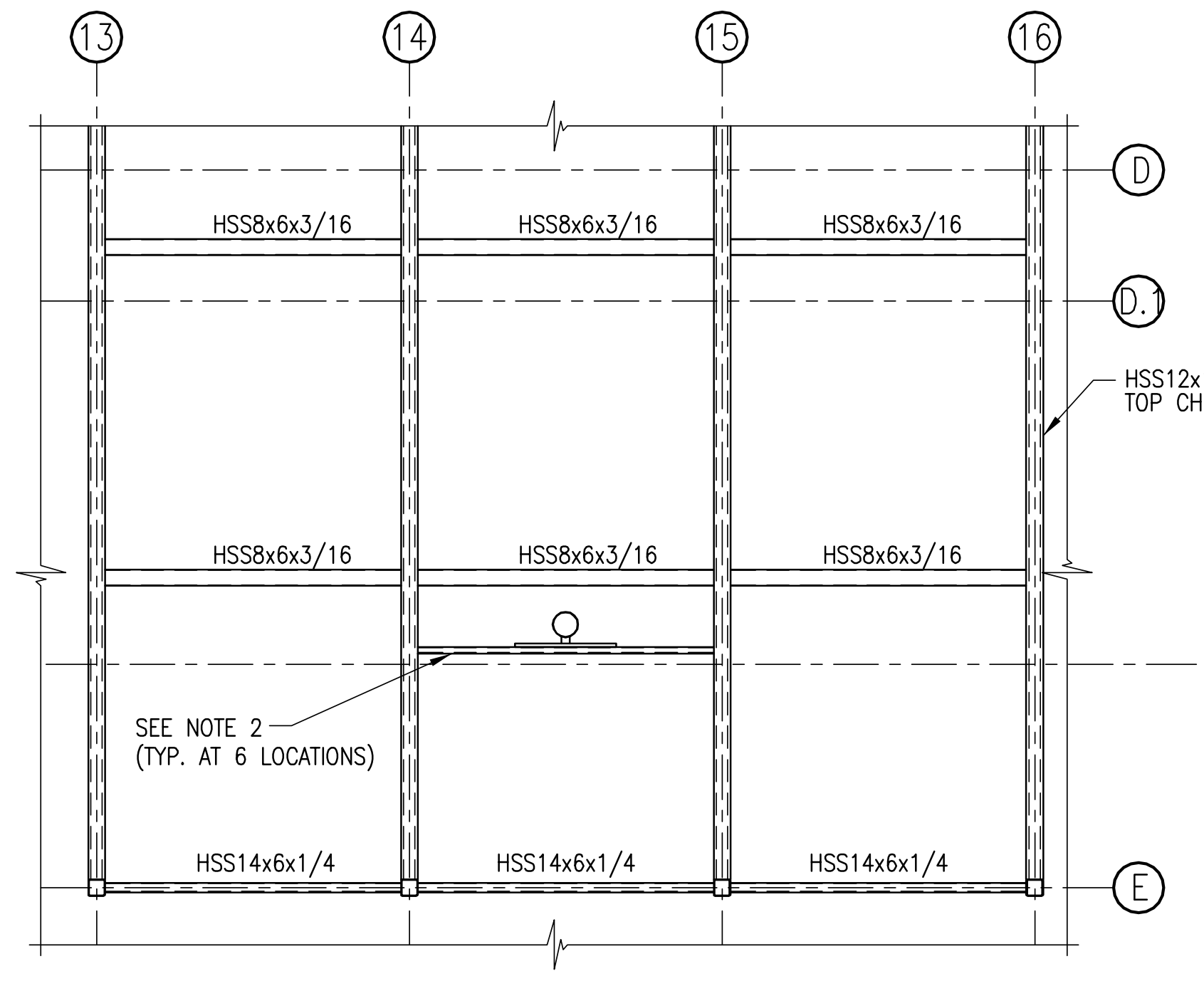
SECTION
SCALE: 1"=1'-0" (3/S0180)



NOTES:

1. OTHER FRAMING MEMBER SIZE, MOMENT, SHEAR ETC., SEE ELSEWHERE.
2. PROVIDE BASKETBALL GOAL SUPPORTING MEMBER AS HSS5x5x3/8 BETWEEN THE BOTTOM CHORD TRUSS MEMBER. DO ENTIRE BASKETBALL GOAL SUPPORT SYSTEMS WITH A SINGLE MEMBER SIZE. THIS MEMBER WILL BE CENTERED ON AND FRAME INTO THE SIDE OF THE HSS12x12x1/2 BOTTOM CHORDS OF TRUSSES. ALL FIELD WELDING OF THESE MEMBERS SHALL BE ALL AROUND; AND OF CONSISTENT, HIGH QUALITY WORKMANSHIP DUE TO THE EXPOSED NATURE OF THE FLOOR STRUCTURE. PLEASE COORDINATE WITH ARCHITECT FOR BASKETBALL GOAL SUPPORT SYSTEM LOCATION.

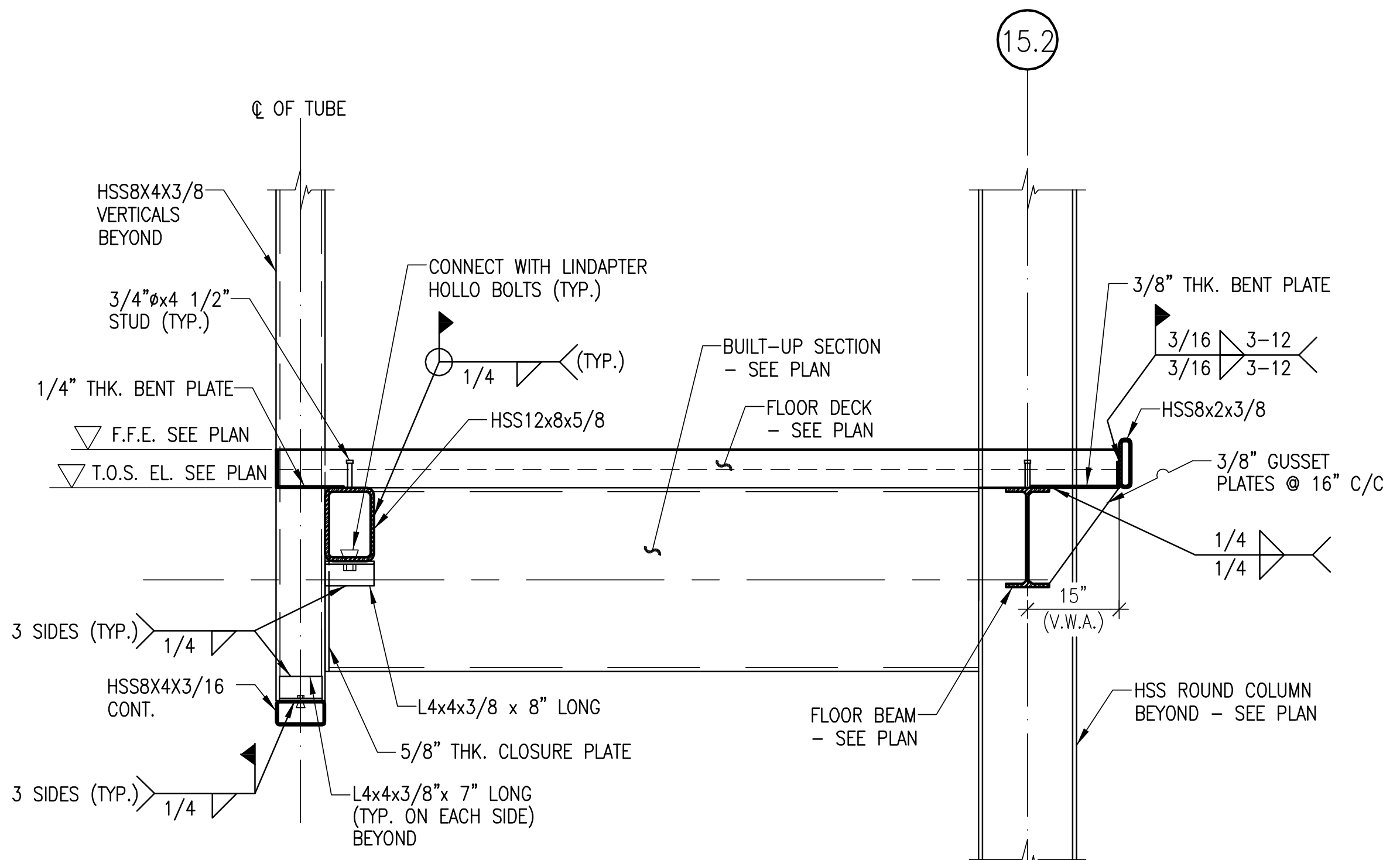
PARTIAL LEVEL 02 FLOOR FRAMING PLAN–AREA–A
NOT TO SCALE (4/S0180)



NOTES:

1. OTHER FRAMING MEMBER SIZE, MOMENT, SHEAR ETC., SEE ELSEWHERE.
2. PROVIDE BASKETBALL GOAL SUPPORTING MEMBER AS HSS5x5x3/8 BETWEEN THE BOTTOM CHORD TRUSS MEMBER. DO ENTIRE BASKETBALL GOAL SUPPORT SYSTEMS WITH A SINGLE MEMBER SIZE. THIS MEMBER WILL BE CENTERED ON AND FRAME INTO THE SIDE OF THE HSS12x12x5/16 BOTTOM CHORDS OF TRUSSES. ALL FIELD WELDING OF THESE MEMBERS SHALL BE ALL AROUND; AND OF CONSISTENT, HIGH QUALITY WORKMANSHIP DUE TO THE EXPOSED NATURE OF THE ROOF STRUCTURE. PLEASE COORDINATE WITH ARCHITECT FOR BASKETBALL GOAL SUPPORT SYSTEM LOCATION.

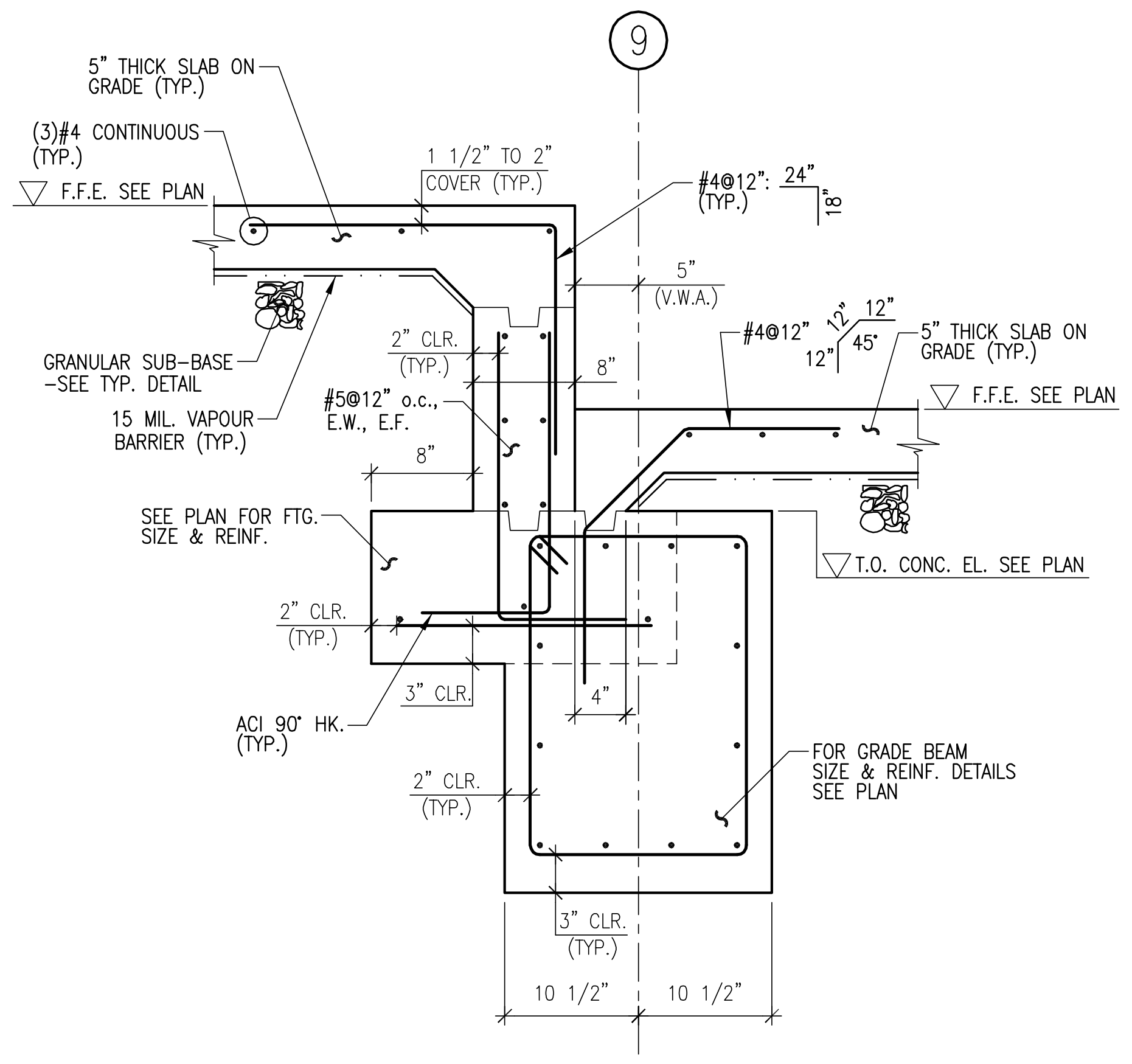
PARTIAL HIGH ROOF FRAMING PLAN
NOT TO SCALE (5/S0180)



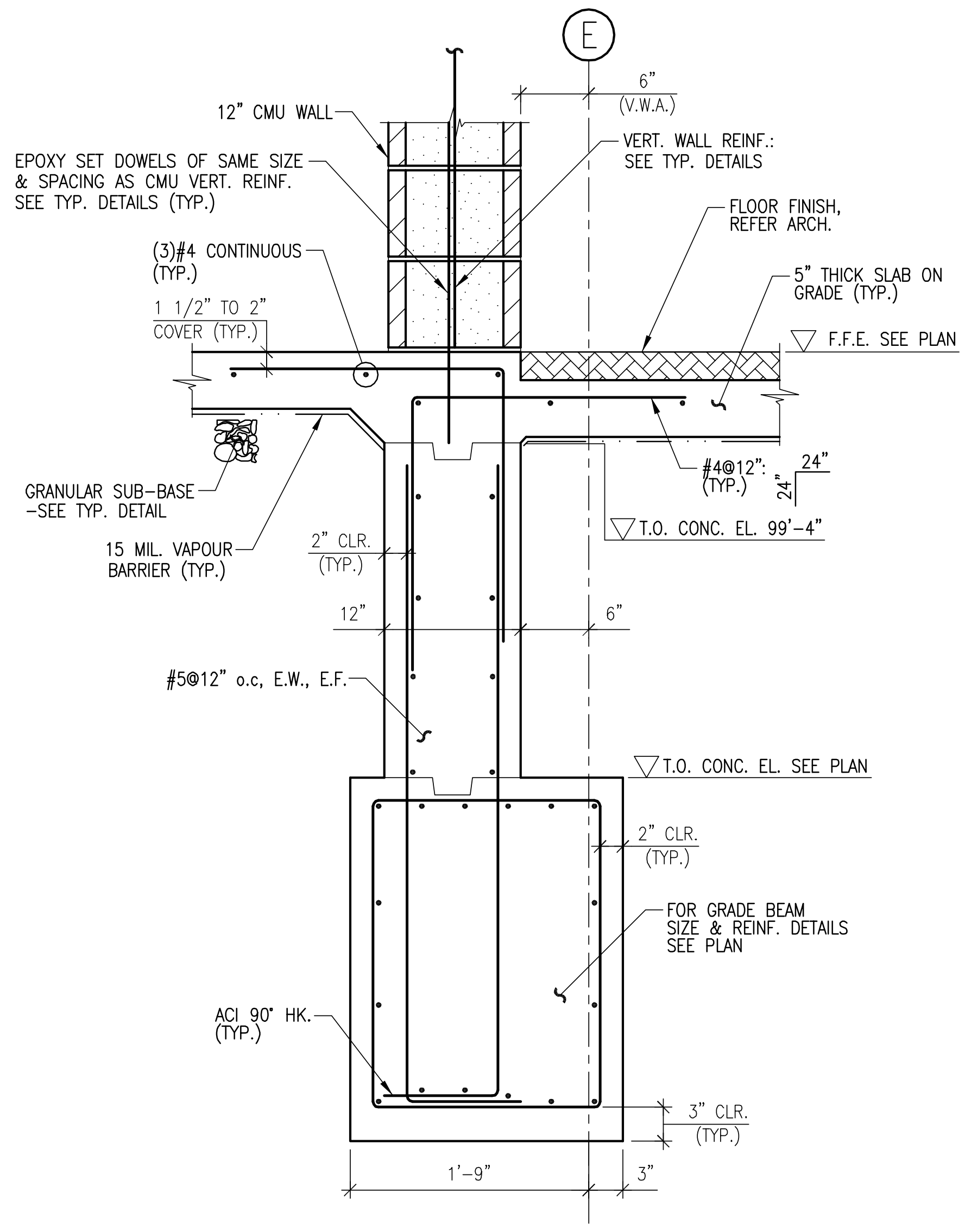
NOTE:

1. BEAM TO STRUCTURAL ROUND COLUMN CONNECTION DESIGN BY OTHERS.

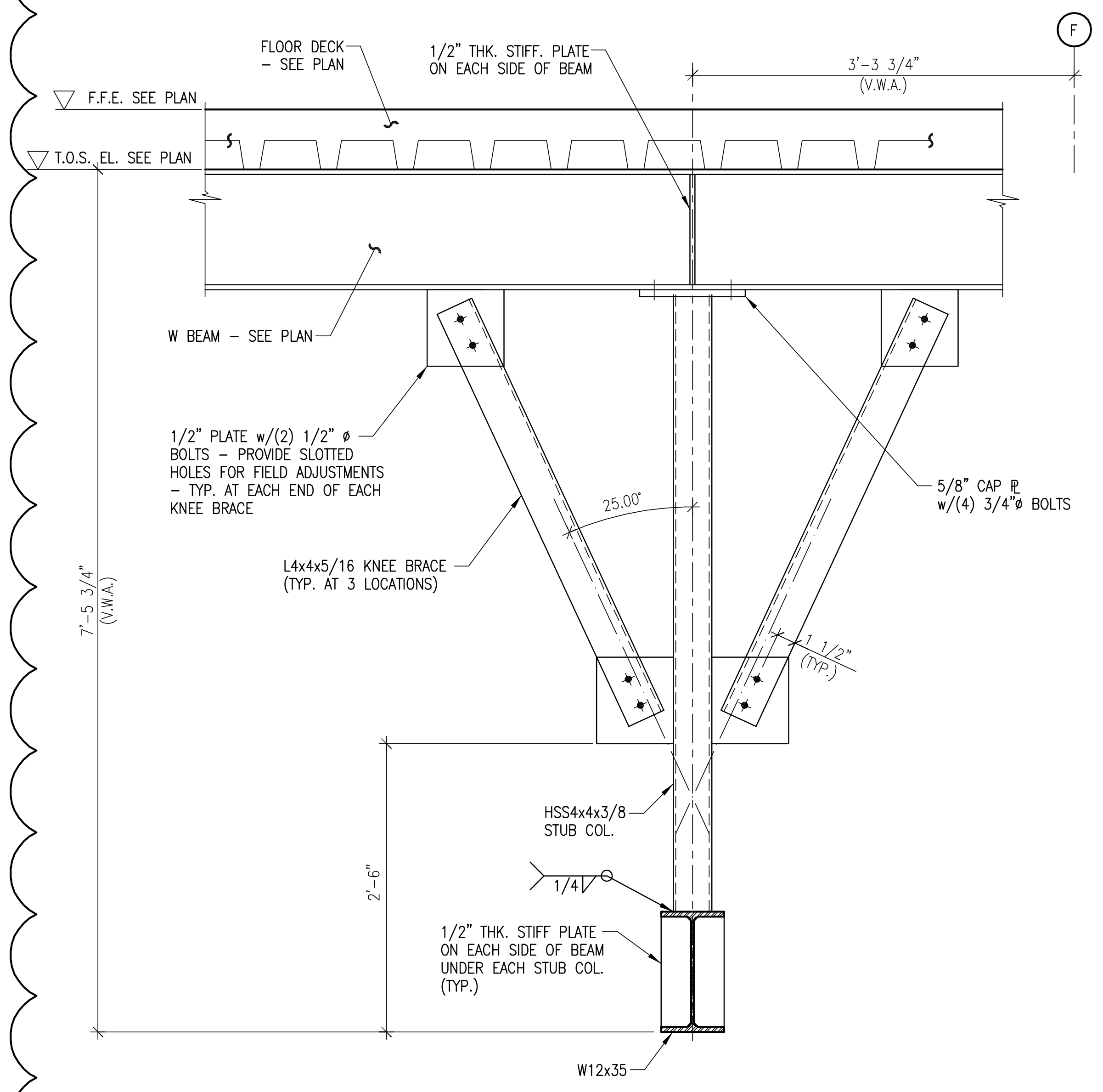
SECTION
SCALE: 1/2"=1'-0" (6/S0180)



SECTION
SCALE: 1"=1'-0" (7/S0180)



SECTION
SCALE: 1"=1'-0" (8/S0180)



MOVABLE PARTITION SUPPORT DETAIL
SCALE: 1"=1'-0" (9/S0180)

DISCLAIMER NOTE:

THIS SET OF CONSTRUCTION DRAWINGS HAS BEEN UPDATED TO INCLUDE ANY CHANGES ISSUED THROUGH ADDENDUM OR OTHER MEANS. EVERY EFFORT HAS BEEN TAKEN TO INCLUDE ALL CHANGES TO DATE. THE CONTRACTOR IS STILL RESPONSIBLE FOR PROVIDING ANY ITEMS THAT WERE SHOWN AS PART OF THE ORIGINAL BID SET THAT MAY HAVE BEEN OVERLOOKED AND NOT INCLUDED IN THIS SET.

University of Louisville – Student Recreation Center (Phase #4 – Construction Set) **Louisville, Ky**

RANGASWAMY AND ASSOC., INC.
Suite 420, The Landmark Building
Louisville, Kentucky 40202.
phone : (502)589-2212
Fax : (502)589-2240 : www.rangaswamy.com
consulting engineers

Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507-1001
p 859.252.6664 f 859.253.2358
www.omniarchitects.com
CANNONDESIGN

UNIVERSITY OF LOUISVILLE

#	Revision Date

Drawing Name: SECTIONS AND DETAILS
U of L Project Number:
Project Number: Omni – 1105.00 Cannon – 03667.00
Date: April 16, 2012
Drawn By: VPP Checked By: ANTHONY

S0180