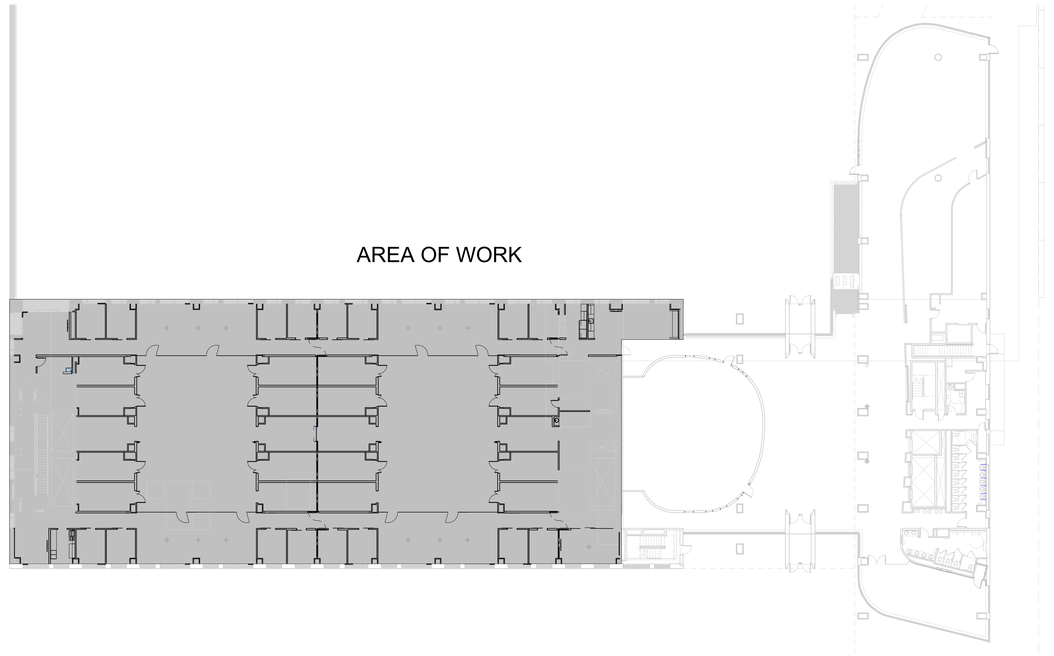

UNIVERSITY OF KENTUCKY

HEALTHY KENTUCKY RESEARCH BUILDING

760 PRESS AVENUE
LEXINGTON, KY 40506

VICINITY MAP

CONSTRUCT RESEARCH BUILDING

(FIT UP TWO WET LABS)

FINAL BID & PERMIT SET
AUGUST 25, 2020

CMTA | Affiliated Engineers | JACOBS Consultancy | HGA | CHAMPLIN ARCHITECTURE

8/25/2020 11:21:32 AM

DRAWING INDEX - LEVEL 1-NIH

Sheet Number	Sheet Name
GENERAL	
AG-000A	COVER SHEET
AG-001A	DRAWING INDEX
AG-003	CODE AND LIFE SAFETY
AG-021	ACCESSORY MOUNTING HEIGHTS
AG-070	TYPICAL INTERIOR PARTITION TYPES
ARCHITECTURAL	
AI-251B	FLOOR PLAN - LEVEL ONE AREA 'B' FIT OUT
AI-261B	PARTITION PLAN - LEVEL ONE AREA 'B'
AI-271B	ENLARGED FLOOR PLANS & ELEVATIONS
AI-351B	FLOOR FINISH PLAN - LEVEL ONE AREA 'B'
AI-451B	RCP - LEVEL ONE AREA 'B'
AI-628H	INTERIOR ELEVATIONS - WET LAB 151 & 152
AI-628I	INTERIOR ELEVATIONS LEVEL ONE AREA 'B'
AI-629E	INTERIOR ELEVATIONS LEVEL ONE AREA 'B'
AI-661A	DETAILS - CEILING
AI-670A	DETAILS - MISCELLANEOUS
AI-679	CASEWORK SECTIONS
AI-721A	DOOR AND ROOM FINISH SCHEDULE LEVEL ONE
AI-722	DOOR AND FRAME DETAILS
AI-724	FINISH LEGEND
AI-728A	INTERIOR SIGNAGE - LEVEL ONE AREA 'B'
LABORATORY	
QL-100	LAB EQUIPMENT COVER SHEET
QL-101	LAB EQUIPMENT COVER SHEET
QL-201	FLOOR PLAN LEVEL 01 OVERALL
QL-201B	FLOOR PLAN LEVEL 01 AREA "B"
QL-301	LABORATORY ELEVATIONS
QL-400	TABLE SYSTEMS AND CEILING SERVICE PANEL DETAILS
QL-401	LAB CASEWORK DETAILS
QL-402	LAB CASEWORK DETAILS
QL-403	LAB CASEWORK DETAILS
QL-404	FUME HOOD DETAILS
FIRE PROTECTION	
FP-150	FIRE PROTECTION LEGEND/SCHEDULES
FP-251	LEVEL 01 PHASE 2 FITOUT - FIRE PROTECTION
PLUMBING	
P-151	PLUMBING LEGEND
P-251B	LEVEL 01 PHASE 2 FITOUT AREA 'B' -PLUMBING PLAN
P-362	ENLARGED LAB PLAN - LAB NEIGHBORHOOD MODULE 151
P-363	ENLARGED LAB PLAN - LAB NEIGHBORHOOD MODULE 152
P-364	BASEMENT NIH FITOUT AREA B - PLUMBING PLAN
P-451	PLUMBING DETAILS
P-955	NIH LEVEL 1 LAB FIT-OUT RISER ISOMETRICS
P-956	NIH LEVEL 1 LAB FIT-OUT RISER ISOMETRICS
P-957	NIH LEVEL 1 LAB FIT-OUT RISER ISOMETRICS

DRAWING INDEX - LEVEL 1-NIH

Sheet Number	Sheet Name
MECHANICAL	
MF-050	MECHANICAL FIT OUT SYMBOLS AND ABBREVIATIONS
MF-151	MECHANICAL FIT OUT LEVEL ONE DEMOLITION PLAN
MF-251 II	MECHANICAL FIT OUT VENTILATION LEVEL ONE FLOOR PLAN AREA II
MF-251 III	MECHANICAL FIT OUT VENTILATION LEVEL ONE FLOOR PLAN AREA III
MF-251 IV	MECHANICAL FIT OUT VENTILATION LEVEL ONE FLOOR PLAN AREA IV
MF-351B	MECHANICAL FIT OUT PIPING LEVEL ONE FLOOR PLAN AREA B
MF-854	MECHANICAL DETAILS - DUCTWORK
MF-855	MECHANICAL DETAILS - DUCTWORK
MF-856	MECHANICAL DETAILS - PIPING
MF-958	MECHANICAL SCHEDULES
MF-959	MECHANICAL SCHEDULES
ELECTRICAL	
EF-050	ELECTRICAL PHASE 2 FO SYMBOLS AND ABBREVIATIONS
EF-051	ELECTRICAL PHASE 2 FO EQUIPMENT NAMING GUIDELINES
EF-251B	ELECTRICAL PHASE 2 FO POWER FLOOR PLAN - LEVEL 01 AREA B
EF-458	ELECTRICAL PHASE 2 LAB NEIGHBORHOOD 151 ENLARGED POWER PLAN
EF-459	ELECTRICAL PHASE 2 LAB NEIGHBORHOOD 152 ENLARGED PLAN
EF-552	ELECTRICAL PHASE 2 FO NORMAL POWER RISER
EF-553	ELECTRICAL PHASE 2 FO EMERGENCY AND CRITICAL RISER
EF-555	ELECTRICAL PHASE 2 FO GROUNDING RISER
EF-851	ELECTRICAL PHASE 2 FO DETAILS
EF-852	ELECTRICAL PHASE 2 FO DETAILS
EF-954	ELECTRICAL PHASE 2 FO PANEL SCHEDULES
EF-973	ELECTRICAL PHASE 2 FO NORMAL LAB PANEL SCHEDULES
EF-984	ELECTRICAL PHASE 2 FO CRITICAL LAB PANEL SCHEDULES
EL-051	LEVEL 01 PHASE 2 - LIGHTING DEMOLITION PLAN
EL-151B	LEVEL 01 PHASE 2 FITOUT - AREA 'B' - LIGHTING PLAN
EL-351	PHASE 2 LIGHTING SYMBOLS AND FIXTURE SCHEDULE
EL-452	PHASE 2 LIGHTING PANEL SCHEDULES
EL-551	PHASE 2 TYPICAL LIGHTING PLANS
EL-653	PHASE 2 NETWORK LIGHTING CONTROL RISER DIAGRAMS
EL-654	PHASE 2 NETWORK LIGHTING CONTROL RISER DIAGRAMS
ES-151B	LEVEL 01 PHASE 2 FITOUT AREA "B" - ESS
FIRE ALARM	
FAF-251B	FIRE ALARM PHASE 2 FO FLOOR PLAN - LEVEL 01 AREA B
FAF-950	FIRE ALARM PHASE 2 FO RISER
FAF-951	FIRE ALARM PHASE 2 FO MATRIX
TECHNOLOGY	
TF-050	TECHNOLOGY PHASE 3 FO SYMBOLS AND ABBREVIATIONS
TF-251B	TECHNOLOGY PHASE 3 FO PLAN LEVEL ONE AREA B
AUDIO VISUAL	
AVF-050	AUDIO VISUAL PHASE 3 FO SYMBOLS AND ABBREVIATIONS
AVF-251B	AUDIO VISUAL PHASE 3 FO PLAN LEVEL ONE AREA B
INSTRUMENTATION AND CONTROLS	
IC-050	CONTROL INSTRUMENTATION SYMBOLS & ABBREVIATIONS
IC-550	BAS SYSTEM ARCHITECTURE
IC-753	TERMINAL UNITS
IC-754	TERMINAL UNITS
IC-755	TERMINAL UNITS
IC-756	TERMINAL UNITS
IC-950	INSTRUMENTATION EQUIPMENT SCHEDULES
IC-951	POINTS LIST

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JACOBS Consultancy

AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
760 Press Avenue, Lexington, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By
Author

Checked By
Checker

Client Number
514

Project Number
5350

MICHAEL J. BATTCOMPTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

DRAWING TITLE

DRAWING INDEX

SHEET NO.
AG-001A

8/25/2020 3:12:12 PM

CODE SUMMARY - LEVEL ONE FIT OUT

PROJECT CODE SUMMARY - LEVEL 1 FIT-OUT

PROJECT NAME AND ADDRESS:
UNIVERSITY OF KENTUCKY - HEALTHY KENTUCKY RESEARCH BUILDING
760 PRESS AVENUE, LEXINGTON, KY 40506

PROJECT DESCRIPTION:
FIT UP OF TWO LAB NEIGBORHOODS FOR VASCULAR RESEARCH (N.I.H. GRANT)

GOVERNING CODES:
2018 KENTUCKY BUILDING CODE
2015 INTERNATIONAL MECHANICAL CODE
2012 INTERNATIONAL ENERGY CONSERVATION CODE
2015 INTERNATIONAL FIRE CODE (NEW CONSTRUCTION PROJECTS, ONLY WHEN SPECIFICALLY REFERENCED BY THE BODY OF KBC)
2012 NFPA 1 - FIRE PREVENTION CODE (AS DIRECTED BY 815 KAR 10:60 KENTUCKY STANDARDS OF SAFETY)
2012 NFPA 54 - NATIONAL FUEL GAS CODE
2015 NFPA 45 - STANDARD ON FIRE PROTECTION FOR LABORATORIES USING CHEMICALS
2017 NFPA 70 - NATIONAL ELECTRICAL CODE
2009 ICC/ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
KENTUCKY STATE PLUMBING LAW, REGULATIONS & CODE (815 KAR CHAPTER 20)
NIH DESIGN REQUIREMENTS MANUAL (DRM - REV1.4: 4/24/2019)

OCCUPANCY CLASSIFICATION (302.1):
NONSEPARATED MIXED USE (508.3)
LEVEL 1: LABORATORY NEIGHBORHOODS - B (BUSINESS)

LABORATORY CLASSIFICATION (NFPA-45)
CLASS B LABORATORY - MODERATE FIRE HAZARD

CONTRUCTION TYPE (602.1):
I-B

HIGH-RISE BUILDINGS:
BUILDING CLASSIFIED AS HIGH-RISE: CONTAINS A FLOOR MORE THAN 75 FT ABOVE LOWEST LEVEL (403)
FIRE SPRINKLER REQUIREMENTS - BUILDING TO BE FULLY SPRINKLED (403.3)
SPRAY APPLIED FIRE PROOFING MINIMUM BOND EQUALS 430 PSF (402.4)
SPRINKLER RISERS SHALL BE LOCATED IN INTERIOR EXIT STAIRWAYS (403.3.1.1)
2-HOUR FIRE BARRIER REQUIRED AT FIRE PUMP ROOM (403.3.3)
1-HOUR FIRE BARRIER REQUIRED AT FIRE COMMAND CENTER (403.6)
LOCKABLE NON-EXIT DISCHARGE STAIRWAY DOOR CONTROL REQUIRED VIA FIRE COMMAND CENTER (403.5.3)
STAIRWAY COMMUNICATION SYSTEM REQUIRED AT EVERY 5TH FLOOR OR GREATER (403.5.3.1)
SMOKEPROOF ENCLOSURES REQUIRED FOR EXIT STAIRWAYS SERVING FLOORS ABOVE 75 FT (403.5.4)
LUMINOUS EGRESS PATH MARKINGS REQUIRED (1024)

BUILDING AREA - LEVEL 1 FIT OUT
USE GROUP B 19,882 SF.

FIRE RESISTANCE REQUIREMENTS (TABLE 601):

PRIMARY STRUCTURAL FRAME	2 HOUR
BEARING WALLS	
EXTERIOR	2 HOUR
INTERIOR	2 HOUR
NONBEARING WALLS	
EXTERIOR	0 HOUR (TABLE 602)
INTERIOR	0 HOUR
FLOOR CONSTRUCTION	2 HOUR
ROOF CONSTRUCTION	1 HOUR
SHAFT ENCLOSURES	2 HOUR (713.4)
CORRIDORS	0 HOUR (TABLE 1018.1)

MAXIMUM EXIT ACCESS TRAVEL DISTANCE (TABLE 1016.2):

GROUP A, S-1	250 FT
GROUP B	300 FT

MAXIMUM COMMON PATH OF EGRESS TRAVEL (TABLE 1014.3):

GROUP B, S	100 FT
GROUP A	75 FT

DEAD END CORRIDORS (1018.4):

GROUP B, S	50 FT
GROUP A	20 FT

EXIT REQUIREMENTS:
EXIT SEPARATION 30 FT AND 1/4 MAX DIAGONAL DIMENSION (403.5.1)
MINIMUM EXIT WIDTH
STAIRS 0.2 INCHES PER OCCUPANT (1005.3.1)
OTHER COMPONENTS 0.15 INCHES PER OCCUPANT (1005.3.2)

* REFER TO LIFE SAFETY DRAWINGS FOR OCCUPANT LOAD, TRAVEL DISTANCE, EGRESS WIDTH AND CAPACITY CALCULATIONS AND TOTALS
* REFER TO STRUCTURAL GENERAL NOTES FOR DESIGN CATEGORY AND SEISMIC, SNOW, AND WIND IMPORTANCE FACTORS

ARCHITECTURAL ABBREVIATIONS

A

A/E	ARCHITECT/ENGINEER
ADD	ADDENDUM
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
ADJC	ADJACENT
AFF	ABOVE FINISH FLOOR
AL	ALUMINUM
ALT	ALTERNATE
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)

B

BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BO	BOTTOM OF
BOT	BOTTOM
BRKT	BRACKET
BTW	BETWEEN

C

CEN	CENT(ER) (TRAL)
CJ	CONTROL/CONSTRUCTION JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR(ANCE)
CNTR	COUNTER
COL	COLUMN
CONC	CONCRETE
CONN	CONNEC(TION)
CONST	CONSTRUCTION
CONT	CONTINU(E) (OUS) (ATION)

D

D	DEEP, DEPTH
DEMO	DEMO(LISH) (LITION)
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DR	DOOR
DWG(S)	DRAWING(S)

E

EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL)
EQ	EQUAL
EQUIP	EQUIPMENT
EXCL	EXCLUD(E) (ED) (ING)
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR

F

FAS	FASTEN(ED) (ER)
FSTR	FASTEN(ED) (ER)
FD	FLOOR DRAIN
FDN	FOUNDATION
FLR	FLOOR(ING)
FT	FOOT, FEET
FTG	FOOTING

G

GA	GAUGE
GC	GENERAL CONTRACTOR

H

H	HIGH, HEIGHT
HT	HEIGHT
HD	HEAD
HM	HOLLOW METAL
HO	HOLD OPEN
HORIZ	HORIZONTAL
HR	HANDRAIL(S)

I

ID	INSIDE DIAMETER/DIMENSION
IN	INCH(ES)
INCL	INCLU(DE) (DED) (DING) (SIVE)
INSUL	INSULAT(E) (ED)
INT	INTERIOR
INTR	INTERIOR

J

JST	JOIST
JT	JOINT

K

KS	KNEE SPACE

L

L	ANGLE (STRUC SHAPE)
L	LONG, LENGTH
LAV	LAVATORY
LF	LINEAL FOOT, FEET
LT	LIGHT
LTG	LIGHTING
LVL	LEVEL

M

MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL(LY)
MET	METAL
MTL	METAL
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MT(D)	MOUNT(ED)
MUL	MULLION

N

N/A	NOT APPLICABLE
NEC	NECESSARY
NIC	NOT IN CONTRACT
NO2	NITROUS OXIDE
NOM	NOMINAL
NTS	NOT TO SCALE

O

O	OXYGEN
O2	OXYGEN
OC	ON CENTER
OD	OUTSIDE DIAMETER/DIMENSION
OFOI	OWNER FURNISHED-OWNER INSTALLED
OFCI	OWNER FURNISHED-CONTRACTOR INSTALLED
OH	OVERHEAD
OH	OPPOSITE HAND
OPG	OPENING
OPP	OPPOSITE
OPT	OPTION(AL)

P

PAR	PARALLEL
PERIM	PERIMETER
PL	PLATE
PNL	PANEL
PR	PAIR
PTD	PAINTED
PTN	PARTITION
PTS	PNEUMATIC TUBE STATION

Q

QTY	QUANTITY

R

R	RADIUS, RADII
R	RISER
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFER(ENCE)
REINF	REINFORC(E) (ED) (ING) (EMENT)
REQD	REQUIRED
REV	REVIS(E) (ED) (ION)
RM	ROOM
RO	ROUGH OPENING

S

SECT	SECTION
SF	SQUARE FOOT/FEET
SHT	SHEET(ING)
SHTG	SHEATHING
SIM	SIMILAR
SKLT	SKYLIGHT(S)
SPEC(S)	SPECIFICATION(S)
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUC	STRUCTURE(AL)
SYM	SYMMETR(Y) (ICAL)

T

T	TREAD
T/D	TELEPHONE DATA OUTLET
TEL	TELEPHONE
TEMP	TEMPORARY
TO	TOP OF
TYP	TYPICAL

U

UC	UNDER CABINET
UNO	UNLESS NOTED OTHERWISE
UR	URINAL

V

VAC	VACUUM
VAR	VAR(Y) (IES) (IATION)
VEN	VENEER
VERT	VERTICAL

W

W	WIDE, WIDTH
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WSCT	WAINSCOT

X

XP(D)	EXPOSE(D)

SPECIAL SYMBOLS			
@	AT	⊥	PERPENDICULAR
℄	CENTERLINE	#	NUMBER
ø	DIAMETER	/	PER
L	ANGLE(STRUCT. SHAPE)	±	PLUS/MINUS

GENERAL NOTES

A. THESE GENERAL NOTES APPLY TO THE CONSTRUCTION DOCUMENTS AND SHALL GOVERN UNLESS NOTED OTHERWISE BY GENERAL NOTES OR KEYNOTES ON SPECIFIC SHEETS.

B. COORDINATE ALL PROJECT PHASING WITH OWNER OR AS SPECIFIED AND/OR SHOWN ON THE DRAWINGS.

C. PROVIDE A SAFE MEANS OF EGRESS THROUGH AND/OR AROUND THE BUILDING AND SITE PER APPLICABLE CODES AT ALL TIMES DURING THE CONSTRUCTION PROCESS. MINIMIZE DISRUPTION TO ADJACENT AREAS/FLOORS AS MUCH AS POSSIBLE.

D. MINIMIZE NOISE TO LEVEL ACCEPTABLE WITH THE OWNER. SCHEDULE TASKS CREATING EXCESSIVE NOISE OR NEAR SENSITIVE AREAS WITH THE OWNER.

E. PROVIDE DUST CONTROL BETWEEN CONSTRUCTION AREAS AND OCCUPIED AREAS AT ALL TIMES AS SPECIFIED.

F. NOTIFY ARCHITECT PROMPTLY IF INFORMATION SHOWN IN ONE CONSTRUCTION DOCUMENT CONFLICTS WITH INFORMATION SHOWN ON ANOTHER.

G. NOTIFY ARCHITECT PROMPTLY IF CONSTRUCTION DOCUMENTS ARE INCONSISTENT WITH THE CURRENT APPLICABLE CODES AND REGULATIONS.

H. NOTIFY ARCHITECT PROMPTLY IF ANY EXISTING CONDITIONS CONFLICT WITH THE CONSTRUCTION DOCUMENTS.

J. STRUCTURAL STEEL MEMBER PROFILES AS INDICATED ON ARCHITECTURAL DRAWINGS MAY VARY FROM ACTUAL PROFILES AND SIZES INDICATED ON THE STRUCTURAL DRAWINGS WHICH SHALL GOVERN.

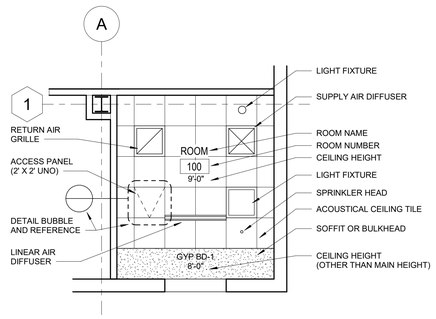
K. COORDINATE EXACT LOCATIONS OF LIGHT FIXTURES, SPEAKERS, SMOKE DETECTORS, EXIT LIGHTS, ACCESS PANELS, SPRINKLER HEADS, HVAC DUCTS, DIFFUSERS, REGISTERS, AND OTHER CEILING ITEMS WITH MECHANICAL, ELECTRICAL AND OTHER TRADES. NOTIFY ARCHITECT PROMPTLY IF ANY LOCATIONS CONFLICT WITH ARCHITECTURAL REFLECTED CEILING PLANS.

L. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR FLOOR, WALL AND CEILING OPENINGS. ALL OPENINGS SHALL BE CUT AND PATCHED AS REQUIRED BY EACH DISCIPLINE OR TRADE REQUIRING THE OPENING UNLESS NOTED OTHERWISE IN THE CONSTRUCTION DOCUMENTS. PATCHING IS TO BE IN CONFORMANCE WITH APPLICABLE CODES.

M. PROVIDE BLOCKING OR BACKER MATERIAL FOR ATTACHMENT AND MOUNTING OF WALL HUNG ITEMS OR EQUIPMENT. FOLLOW DRM 4.3.2.1 STRAPPING REQUIREMENTS FOR ALL PARTITIONS WITH CASEWORK AND DRM 4.3.1G FOR GENERAL BLOCKING REQUIREMENTS. ALL WOOD BLOCKING SHALL BE FIRE RETARDANT TREATED (FRT).

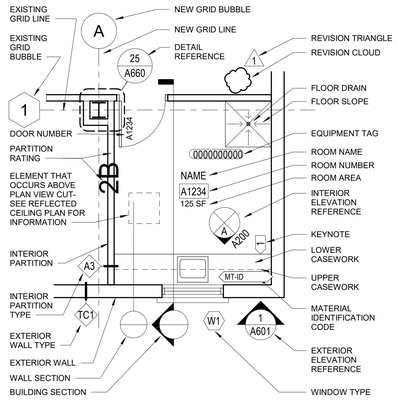
ARCHITECTURAL MATERIAL DESIGNATIONS

- ACOUSTIC TILE
- ASPHALT CONCRETE
- BLANKET INSULATION
- CARPET (LARGE SCALE)
- CERAMIC TILE
- CONCRETE
- CONCRETE MASONRY UNIT
- EARTH
- EXISTING CONSTRUCTION
- FACEBRICK
- GRANULAR MATERIAL
- GASKET (LARGE SCALE)
- METAL
- PLASTER OR GYPSUM BOARD
- QUARRY TILE
- RIGID INSULATION
- STONE - EXTERIOR
- SOLID WOOD FINISHED
- TERRAZZO
- WOOD BLOCKING - CONTINUOUS
- WOOD BLOCKING - INTERRUPTED
- WOOD SHEATHING
- MARBLE



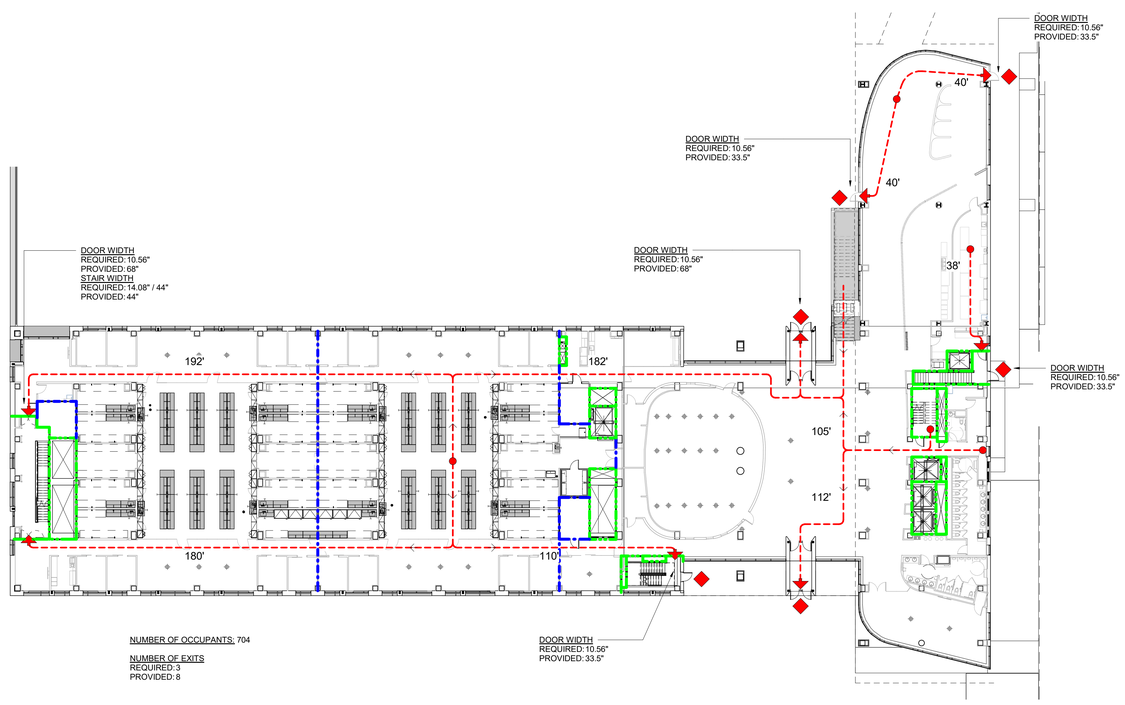
OTHER CEILING PLAN SYMBOL DESIGNATIONS			
○	RECESSED CAN DOWNLIGHT	TV	TV CONNECTION (SEE ELECTRICAL DRAWINGS)
◒	RECESSED CAN WALL WASHER	H	HORN (SEE ELECTRICAL DRAWINGS)
◯	PENDANT MOUNTED LIGHT FIXTURE		TRACK LIGHT FIXTURE (SEE ELECTRICAL DRAWINGS)
⊗	CEILING-MOUNTED EXIT LIGHT (SEE ELECTRICAL DRAWINGS		EQUIPMENT MOUNTING TRACKS
⊗	WALL-MOUNTED EXIT LIGHT (SEE ELECTRICAL DRAWINGS)	•	SPRINKLER HEAD
S	SMOKE DETECTOR (SEE ELECTRICAL DRAWINGS)	S	SPEAKER (SEE ELECTRICAL DRAWINGS)

CEILING PLAN SYMBOL DESIGNATIONS

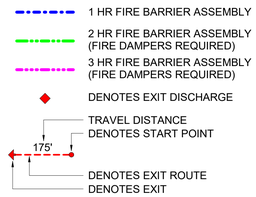


OTHER FLOOR PLAN SYMBOL DESIGNATIONS			
	EXISTING DOOR TO REMAIN		EXISTING DOOR TO DEMO
	EXISTING WALL TO REMAIN		EXISTING WALL TO DEMO

FLOOR PLAN SYMBOL DESIGNATIONS



LEVEL ONE LIFE SAFETY PLAN



LIFE SAFETY LEGEND

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Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

MICHAEL J. BATTOCLETTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY PROFESSIONAL ENGINEER

DRAWING TITLE
CODE AND LIFE SAFETY

SHEET NO.
AG-003

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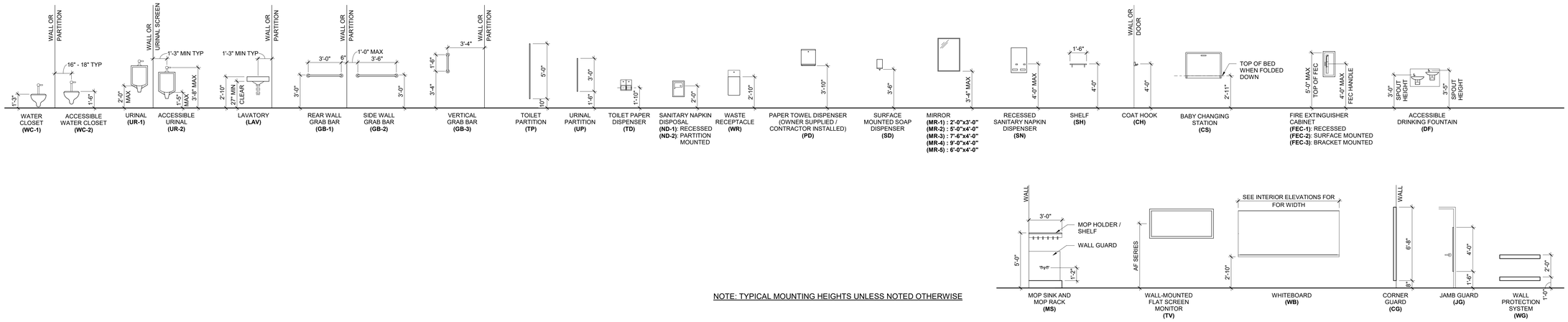
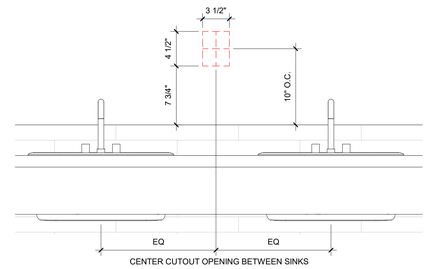
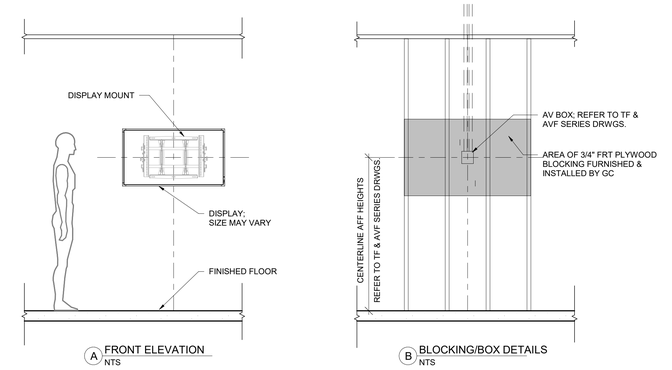


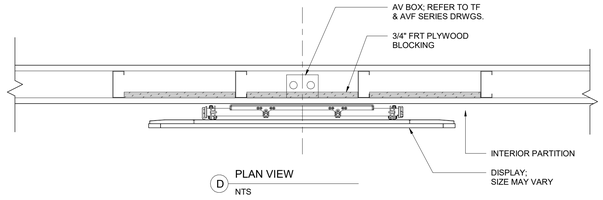
NOTE: TYPICAL MOUNTING HEIGHTS UNLESS NOTED OTHERWISE

ACCESSORY MOUNTING HEIGHTS



TYPICAL SOAP DISPENSOR MIRROR CUTOUT





WALL DISPLAY MOUNTING NOTES:
1.REVIEW MAXIMUM WEIGHT TO BE INSTALLED ON DISPLAY BRACKET/MOUNT.
2.THE WALL TO WHICH THE MOUNT & DISPLAY IS TO BE ANCHORED MUST BE CAPABLE OF SUPPORTING FIVE (5) TIMES THE TOTAL WEIGHT.
3.REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE CORRECT INSTALLATION PROCEDURES FOR THE MOUNT.

WARNING: IMPROPER INSTALLATION MAY RESULT IN SERIOUS PERSONAL INJURY!

FOLLOW MANUFACTURER'S INSTALLATION DIRECTIONS COMPLETELY. THE STRUCTURAL SYSTEM AND MOUNTING METHOD MUST BE CAPABLE OF SUPPORTING 5 TIMES THE COMBINED WEIGHT OF THE TOTAL INSTALLATION.

WALL MOUNTED DISPLAY

CHAMPLIN ARCHITECTURE
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CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
760 Press Avenue, Lexington, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/18
2	CD 100% REVIEW	10/15/18
3	ISSUE FOR BID & PERMIT	11/15/18
4	P2 - Addendum #1	01/16/19
5	DD ISSUANCE - NIH	02/05/20
6	CD ISSUANCE - NIH	04/14/20
7	BID & PERMIT - NIH	05/22/20

Drawn By: **Author**
Checked By: **Checker**
Client Number: 514
Project Number: 5350

MICHAEL J. BATTOCLETTE, P.E. REGISTERED No. 6855 COMMONWEALTH OF KENTUCKY MECHANICAL ENGINEER

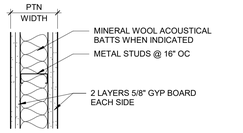
DRAWING TITLE
ACCESSORY MOUNTING HEIGHTS

SHEET NO.
AG-021

5/19/2020 11:49:09 AM

D INTERIOR PARTITION TYPE- D SERIES

AG-070 1 1/2" = 1'-0"

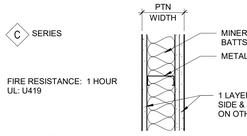


PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
D1	1 5/8"	4 1/8"	1	D4	4"	6 1/2"	
D2	2 1/2"	5"	2	D6	6"	8 1/2"	
D3	3 5/8"	6 1/8"					

NOTES:
1. --

C INTERIOR PARTITION TYPE- C SERIES

AG-070 1 1/2" = 1'-0"

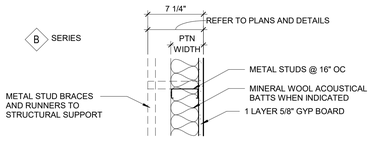


PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
C2	2 1/2"	4 3/8"		C6	6"	7 7/8"	
C3	3 5/8"	5 1/2"					
C4	4"	5 7/8"					

NOTES:
1. --

B INTERIOR PARTITION TYPE- B SERIES

AG-070 1 1/2" = 1'-0"

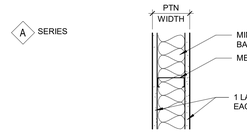


PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
B1	1 5/8"	2 1/4"	1	B4	4"	4 5/8"	2
B2	2 1/2"	3 1/8"	1	B6	6"	6 5/8"	2
B3	3 5/8"	4 1/4"	2				

NOTES:
1. PROVIDE BRACES TO BACK-UP AT 4'-0" ON CENTER MAXIMUM VERTICALLY
2. PROVIDE BRACES TO BACK-UP AT VERTICAL MIDPOINT OF STUD WHERE UNBRACED HEIGHT EXCEEDS 12'-0"

A INTERIOR PARTITION TYPE- A SERIES

AG-070 1 1/2" = 1'-0"



PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
A2	2 1/2"	3 3/4"		A6	6"	7 1/4"	
A3	3 5/8"	4 7/8"		A8	8"	9 1/4"	
A4	4"	5 1/4"					

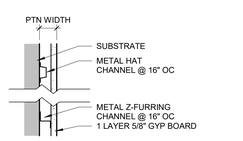
NOTES:
1. --

GENERAL NOTES - INTERIOR PARTITION

A. MINIMUM STC RATINGS INDICATED ARE BASED ON PARTITION TYPE WITH "a" MODIFIER ONLY
B. FILL EACH JOINT AND PENETRATION IN EACH PARTITION WITH INSULATION AND/OR ACOUSTICAL SEALANT TO ACHIEVE ACOUSTIC RATING (STC).
C. TYPICAL FLOOR PLAN DIMENSIONS FOR PARTITIONS ARE TO FINISH FACE OF GYPSUM BOARD OR MASONRY UNLESS NOTED OTHERWISE. MAINTAIN DIMENSION BETWEEN FACE OF FINISHES.
D. "CLEAR" OR "HOLD" DIMENSION DENOTES MINIMUM CLEARANCE REQUIRED BETWEEN PARTITION FINISHES.
E. TYPICAL GYPSUM BOARD PARTITION WIDTH IS BASED ON 5/8" GYPSUM BOARD UNLESS NOTED OTHERWISE.
F. PARTITION TYPES SHOW GENERAL REQUIREMENTS FOR PARTITIONS. REFER TO SPECIFICATIONS, PRODUCT TECHNICAL DATA AND REQUIREMENTS OF APPLICABLE TESTING AGENCIES FOR SPECIFICS OF PARTITION CONSTRUCTION REQUIREMENTS.
G. PARTITION REQUIREMENTS SHOWN ARE MINIMUM STANDARDS. WHERE ACTUAL CONDITIONS CAUSE PARTITION(S) TO EXCEED LIMITS PER MANUFACTURER'S RECOMMENDATIONS, REINFORCE PARTITION(S) AS REQUIRED.
H. PROVIDE FIRESTOPPING AT PENETRATIONS AND CONNECTIONS TO ADJACENT ASSEMBLIES IN FIRE-RATED PARTITIONS COMPLIANT WITH APPLICABLE TESTING AGENCY REQUIREMENTS.
I. PROVIDE BLOCKING OR BACKER MATERIAL FOR ATTACHMENT AND MOUNTING OF WALL HUNG ITEMS OR EQUIPMENT. FOLLOW DRM 4.3.2.1 STRAPPING REQUIREMENTS FOR ALL PARTITIONS WITH CASEWORK AND DRM 4.3.1G FOR GENERAL BLOCKING REQUIREMENTS.
J. FIRE AND/OR ACOUSTIC TEST REFERENCES CALLED OUT MAY VARY DEPENDING ON THE MANUFACTURER OF COMPONENTS ACTUALLY USED.
K. PROVIDE WATER RESISTANT GYPSUM BOARD AT AREAS REQUIRED BY CODE AND WHERE FINISH WILL BE CERAMIC TILE UNLESS NOTED OTHERWISE.
L. PROVIDE TILE BACKER BOARD AT SHOWER AREAS AND AT OTHER WET AREAS WHERE FINISH WILL BE CERAMIC TILE.
M. ENSURE FINISH SURFACES ARE FLUSH AND SEAMLESS WHERE PARTITIONS AND/OR FURRING ARE COPLANAR.
N. UNLESS NOTED, THE CONNECTION AT THE TOP OF THE PARTITION TO THE STRUCTURE ABOVE MUST ALLOW FOR 1" MINIMUM VERTICAL MOVEMENT, EITHER UP OR DOWN. AT FIRE RATED METAL STUD PARTITIONS, THE TOP CONNECTION MUST BE A FIRE STOP CONNECTION THAT ALLOWS 1" MINIMUM VERTICAL MOVEMENT, EITHER UP OR DOWN. HOLD GYPSUM WALL BOARD AND STEEL STUDS 1" FROM THE BOTTOM OF THE STRUCTURE ABOVE. DO NOT SCREW-ATTACH STEEL VERTICAL STUDS OR GYPSUM WALL BOARD TO THE TOP TRACK. INSTALL BRIDGING 12" MINIMUM FROM THE TOP OF THE STUDS.

H INTERIOR PARTITION TYPE- H SERIES

AG-070 1 1/2" = 1'-0"

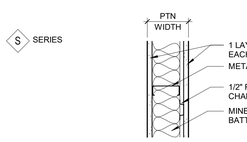


PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
H2	2 1/2"	4 3/8"					
H4	4"	5 5/8"					
H6	6"	7 5/8"					

NOTES:
1. --

G INTERIOR PARTITION TYPE- G SERIES

AG-070 1 1/2" = 1'-0"

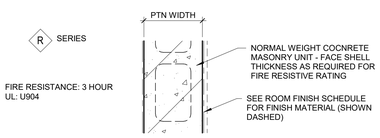


PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
G2	2 1/2"	3 1/8"					
G4	4"	4 5/8"					
G6	6"	6 5/8"					

NOTES:
1. --

F INTERIOR PARTITION TYPE- F SERIES

AG-070 1 1/2" = 1'-0"

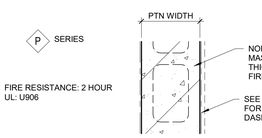


PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
F2	2 1/2"	3 3/4"					
F4	4"	5 1/4"					
F6	6"	7 1/4"					

NOTES:
1. --

E INTERIOR PARTITION TYPE- E SERIES

AG-070 1 1/2" = 1'-0"



PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
E1	1 5/8"	-		E4	4"	-	
E2	2 1/2"	-		E6	6"	-	
E3	3 5/8"	-					

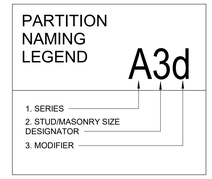
NOTES:
1. --

PARTITION NAMING LEGEND

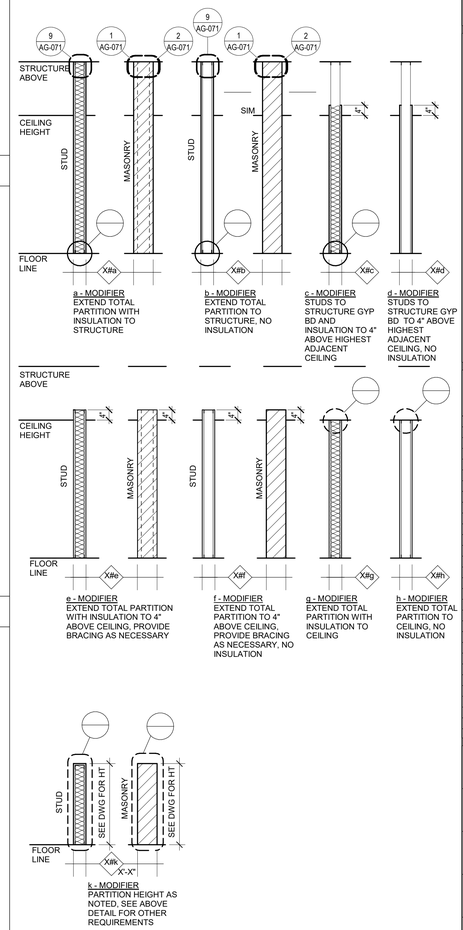
1. SERIES
THIS CHARACTER DENOTES THE ASSEMBLY SERIES TO WHICH THE WALL BELONGS.

2. METAL STUD/MASONRY UNIT SIZE DESIGNATOR
THIS CHARACTER DENOTES THE STUD OR FURRING WIDTH. FOR MASONRY, THIS CHARACTER INDICATES NOMINAL UNIT WIDTH.

3. MODIFIER
THIS CHARACTER DENOTES MODIFICATION(S) TO THE SERIES ASSEMBLY.

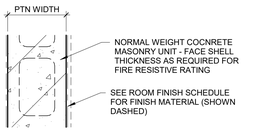


INTERIOR PARTITION MODIFER KEY



N INTERIOR PARTITION TYPE- N SERIES

AG-070 1 1/2" = 1'-0"

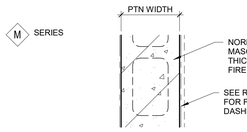


PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
N4	-	3 5/8"	1	N10	-	9 5/8"	1
N6	-	5 5/8"	1	N12	-	11 5/8"	1
N8	-	7 5/8"	1	N16	-	15 5/8"	1

NOTES:
1. FULLY GROUTED - FIRE RATING PER KBC TABLE 721.1(2).3

M INTERIOR PARTITION TYPE- M SERIES

AG-070 1 1/2" = 1'-0"

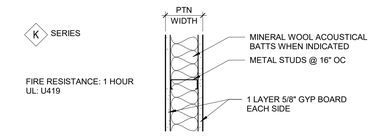


PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
M4	-	3 5/8"		M12	-	11 5/8"	
M6	-	5 5/8"		M16	-	15 5/8"	
M8	-	7 5/8"					

NOTES:
1. --

K INTERIOR PARTITION TYPE- K SERIES

AG-070 1 1/2" = 1'-0"

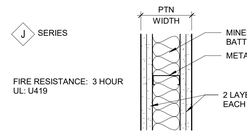


PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
K2	2 1/2"	3 3/4"		K6	6"	7 1/4"	
K3	3 5/8"	4 7/8"		K8	8"	9 1/4"	
K4	4"	5 1/4"					

NOTES:
1. --

J INTERIOR PARTITION TYPE- J SERIES

AG-070 1 1/2" = 1'-0"



PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
J1	1 5/8"	4 1/8"		J4	4"	6 1/2"	
J2	2 1/2"	5"		J6	6"	8 1/2"	
J3	3 5/8"	6 1/8"					

NOTES:
1. --

U INTERIOR PARTITION TYPE- U SERIES

AG-070 1 1/2" = 1'-0"

PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
U78	7/8"	1 1/2"	1	U2	2"	2 5/8"	2
U1	1"	1 5/8"	2	U3	3"	3 5/8"	2
U15	1 1/2"	2 1/8"	1 OR 2				

NOTES:
1. HAT CHANNELS
2. Z-FURRING CHANNELS

S INTERIOR PARTITION TYPE- S SERIES

AG-070 1 1/2" = 1'-0"

PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
S3	3 5/8"	5 3/8"					
S6	6"	7 3/4"					

NOTES:
1. --

R INTERIOR PARTITION TYPE- R SERIES

AG-070 1 1/2" = 1'-0"

PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
R8	-	7 5/8"		R16	-	15 5/8"	
R10	-	9 5/8"					
R12	-	11 5/8"					

NOTES:
1. --

P INTERIOR PARTITION TYPE- P SERIES

AG-070 1 1/2" = 1'-0"

PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES	PTN TYPE	STUD WIDTH	PTN WIDTH	NOTES
P6	-	5 5/8"		P12	-	11 5/8"	
P8	-	7 5/8"		P16	-	15 5/8"	
P10	-	9 5/8"					

NOTES:
1. --

INTERIOR PARTITION MODIFER KEY NOTES

j - REPLACE 5/8" GYP BD WITH 1/2" GYP BD
k - SAME AS (SELECT a - i ABOVE) BUT WITH STUDS OF ___ METAL THICKNESS
m - SAME AS (SELECT a - i ABOVE) BUT ___ STUD SPACING

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Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

MICHAEL J. BATTCOMBE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

DRAWING TITLE

TYPICAL INTERIOR PARTITION TYPES

SHEET NO.
AG-070

5/19/2020 11:49:31 AM

KEYNOTE - FIT OUT

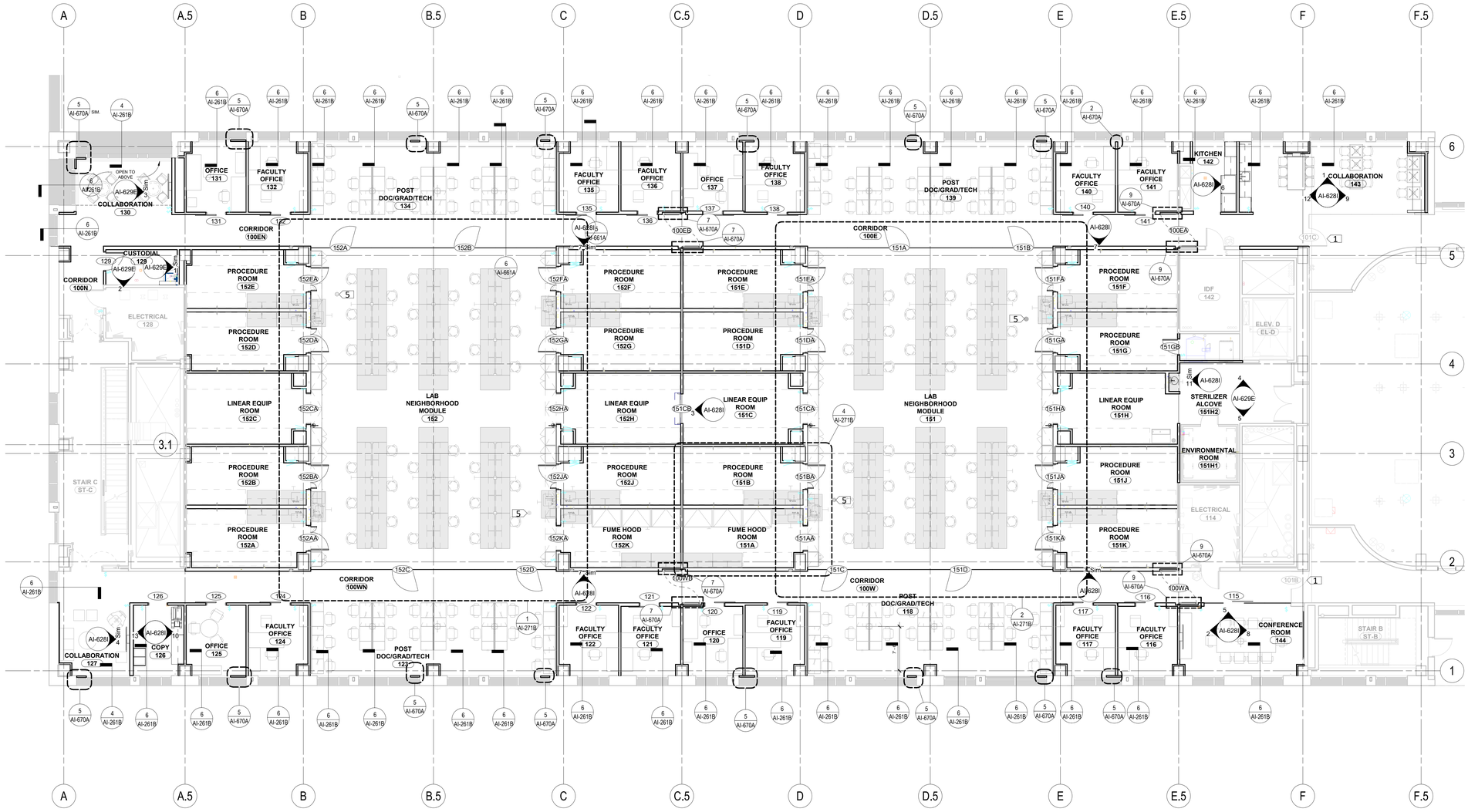
1	EXISTING DOOR WITH EXISTING DOOR HARDWARE
2	EXISTING DOOR TO REMAIN; CHANGE DOOR HARDWARE ONLY.
3	ORNAMENTAL GLASS GUARDRAIL
4	INSTALL OPAQUE FILM TO EXISTING GLASS (#SH2MAOW)
5	FLOOR DRAIN WITH SAFETY SHOWER AT CEILING ABOVE
6	FLOOR EXPANSION JOINT SYSTEM
7	POKE-THROUGH FLOOR BOX; CORE FLOOR SLAB - COORDINATE WITH FURNITURE SELECTION PRIOR TO CORING OF SLAB
7.1	CORE FLOOR SLAB FOR FUTURE POKE THRU FLOOR BOX ; REFER TO E-SERIES DRWGS. FOR FLOOR BOX & CONDUIT
9	NEW CARD READER INSTALLED AT EXISTING DOOR. REMOVE ALL EXISTING WALL DEVICES.
11	WAVE ACTIVATED DOOR ACTUATOR
15	EXIT PUSH BUTTON (REX)
15.1	REPLACE EXISTING EXIT PUSH BUTTON (REX); REFER TO DOOR SCHEDULE
20	DOOR ACTUATOR; REFER TO HARDWARE SET FOR TYPE
21	SCOPE OF WORK ONLY APPLIES TO FINISH SERIES SHEETS.
22	NO WORK IN THIS AREA
23	EXISTING DOOR HARDWARE CHANGES (PHASE 1 DOORS); REFER TO DOOR SCHEDULE
24	REMOVE EXISTING GLASS WALL AND DOOR SYSTEM AND INSTALL NEW 1HR RATED GLASS WALL AND DOOR SYSTEM SIMILAR TO LEVEL 4; REFER TO 4/AI-725.
25	REMOVE EXISTING DOOR; INSTALL 5 NEW DOUBLE TIER LOCKERS TO MATCH EXISTING.
26	REPLACE EXISTING HM DOOR AND FRAME.
26.1	REPLACE EXISTING DOOR AND DOOR HARDWARE; DOOR FRAME TO REMAIN IN PLACE. REFER TO DOOR SCHEDULE.
27	REMOVE EXISTING GLASS WALL AND DOOR SYSTEM; REPLACE WITH NEW GLASS WALL AND DOOR SYSTEM.
28	REMOVE EXISTING ALUM STOREFRONT DOORS; INSTALL NEW ALUM. STOREFRONT DOORS WITH NEW DOOR HARDWARE.
29	18" DEEP S.S. SHELVING; TWO ROWS
30	REMOVE EXISTING DOOR, DOOR FRAME TO REMAIN.
31	SS GUARD TO PROTECT SAFETY SHOWER HANDLE; TYPICAL FOR LEVELS 2, 3, 4 AND 5. REFER TO DETAIL 9/AI628F
32	REMOVE ALL EXISTING MEP DEVICES.
33	PREP DOOR SYSTEM FOR EXISTING CARD READER.
35	5/8" GYP BOARD WITH 5-1/2" ACOUSTIC BATTS; CONTINUE TO U/S OF STRUCTURE
36	NEW BIOMETRIC EYE SCANNER NEXT TO EXISTING CARD READER.
C3	GYPSUM COLUMN WRAP
C5	EXPOSED CONCRETE COLUMN
D1	REMOVE EXISTING DOOR AND CUT SECTION OF EXISTING WALL FOR NEW OPENING.

GENERAL NOTES - FIT-OUT PLANS

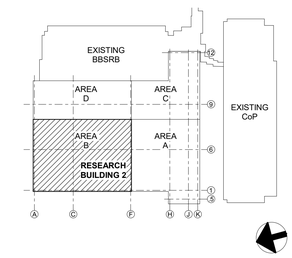
1. UNFORESEEN OR UNCLEAR CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
2. ANY CONFLICTS WITHIN THE DRAWINGS, BETWEEN DRAWINGS AND SPECIFICATIONS, OR BETWEEN DRAWINGS AND ACTUAL SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY. THE CONTRACTOR SHALL NOT PROCEED WITH WORK UNTIL WRITTEN CLARIFICATION FROM THE ARCHITECT IS RECEIVED.
3. DO NOT SCALE DRAWINGS. DIMENSIONS SHALL GOVERN. ALL PLAN DIMENSIONS ARE TAKEN TO FINISH FACE OF CONSTRUCTION.
4. SEE AG-060 FOR INTERIOR PARTITION TYPES. USE IMPACT RESISTANT GYPSUM BOARD FOR ALL GYPSUM BOARD WALL ASSEMBLIES IN VIVARIUM AREAS.
5. LAYOUT AND VERIFY ALL PARTITION LOCATIONS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT OF ANY DISCREPANCIES IN DIMENSIONS OR CLEARANCES.
6. WHERE FINISH IS CONTINUOUS AT PARTITION TYPE TRANSITIONS, ENSURE THAT FINISH SURFACE IS FLUSH AND SEAMLESS.
7. THE GENERAL CONTRACTOR IS TO PROVIDE BLOCKING IN ALL METAL STUD PARTITIONS FOR ALL WALL MOUNTED EQUIPMENT AND ACCESSORIES. THE LOCATIONS, MOUNTING HEIGHTS AND BLOCKING REQUIREMENTS SHOWN HERE ON ARE GIVEN FOR INFORMATIONAL PURPOSES ONLY AND IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THIS INFORMATION WITH SUB-CONTRACTORS, MANUFACTURERS, OR EQUIPMENT SUPPLIERS. SEE TYPICAL BLOCKING DETAILS IN METAL STUD WALLS INCLUDED IN THESE DOCUMENTS FOR BLOCKING AND ANCHORING REQUIREMENTS.
8. ALL CONCEALED WOOD SHALL BE FIRE RETARDANT TREATED.
9. MECHANICAL, ELECTRICAL, AND PLUMBING ELEMENTS IN FINISHED AREAS ARE TO BE CONCEALED WITHIN THE CONSTRUCTION UNLESS OTHERWISE NOTED.
10. THE GENERAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER DISCIPLINES TO DETERMINE THE SIZE AND LOCATION OF PENETRATIONS. SEAL CONSTRUCTION TIGHT TO ALL PENETRATIONS AND CAULK. ALL PENETRATIONS THROUGH FIRE RATED CONSTRUCTION MUST BE FIRE SAFED IN ACCORDANCE WITH THE SPECIFICATIONS.
11. PATCH ALL HOLES IN EXISTING SURFACES WHERE ELEMENTS HAVE BEEN REMOVED. PREPARE SURFACES FOR NEW FINISHES AS REQUIRED, OR PATCH TO MATCH ADJACENT SURFACE IF NO NEW FINISH IS SCHEDULED.
12. PROVIDE CONTROL JOINTS IN GYPSUM WALLBOARD INTERIOR PARTITIONS AT 30 FEET ON CENTER MAXIMUM. WHERE POSSIBLE, LOCATE AT CORNERS ABOVE OPENINGS. VERIFY LOCATIONS WITH ARCHITECT. SEE THE ASSOCIATED TYPICAL DETAILS INCLUDED IN THESE DOCUMENTS.
13. FURNISH AND INSTALL SEALANT AT ALL FIXTURES AND CHANGES IN MATERIAL, AND AS REQUIRED BY THE APPLICABLE HEALTH DEPARTMENT.
14. DOOR OPENINGS NOT LOCATED BY DIMENSIONS SHALL BE 4" FROM FACE OF ADJACENT WALL TO EDGE OF DOOR FRAME.
15. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL EQUIPMENT INSTALLATION, AND VERIFYING ALL REQUIRED ROUGH OPENINGS AND ROUGH-IN DIMENSIONS WITH THE EQUIPMENT MANUFACTURER, OWNER, AND ARCHITECT PRIOR TO CONSTRUCTION.
16. ALL MECHANICAL EQUIPMENT PADS TO BE 4" HIGH MINIMUM UNLESS NOTED OTHERWISE.
17. CHARACTER HEIGHT AND PROPORTION, FINISH AND CONTRAST, FRONT, BRAILLE, AND PICTOGRAM TYPES AS INDICATED IN THESE DOCUMENTS. ROOM IDENTIFICATION SIGNAGE SHALL BE MOUNTED AT 60" ABOVE THE FINISHED FLOOR TO THE SIGN CENTERLINE, AND SHALL BE MOUNTED TO THE WALL AT THE LATCH SIDE OF THE DOOR.

ROOM DATA

ROOM NUMBER	ROOM NAME	NASF	SPACE DESCRIPTION
100E	CORRIDOR	460 SF	
100EN	CORRIDOR	472 SF	
100N	CORRIDOR	83 SF	
100W	CORRIDOR	460 SF	
100WN	CORRIDOR	579 SF	
116	FACULTY OFFICE	117 SF	
117	FACULTY OFFICE	116 SF	
118	POST DOC/GRAD/TECH	509 SF	
119	FACULTY OFFICE	116 SF	
120	OFFICE	117 SF	FLEX OFFICE
121	FACULTY OFFICE	117 SF	
122	FACULTY OFFICE	116 SF	
123	POST DOC/GRAD/TECH	508 SF	
124	FACULTY OFFICE	116 SF	
125	OFFICE	118 SF	FLEX OFFICE
126	COPY	100 SF	
127	COLLABORATION	140 SF	
129	CUSTODIAL	72 SF	
130	COLLABORATION	322 SF	
131	OFFICE	118 SF	FLEX OFFICE
132	FACULTY OFFICE	116 SF	
134	POST DOC/GRAD/TECH	509 SF	
135	FACULTY OFFICE	116 SF	
136	FACULTY OFFICE	117 SF	
137	OFFICE	117 SF	FLEX OFFICE
138	FACULTY OFFICE	116 SF	
139	POST DOC/GRAD/TECH	508 SF	
140	FACULTY OFFICE	116 SF	
141	FACULTY OFFICE	118 SF	
142	KITCHEN	89 SF	
143	COLLABORATION	488 SF	
144	CONFERENCE ROOM	250 SF	
151	LAB NEIGHBORHOOD MODULE	2,258 SF	
151A	FUME HOOD ROOM	198 SF	
151B	PROCEDURE ROOM	190 SF	
151C	LINEAR EQUIP ROOM	231 SF	
151D	PROCEDURE ROOM	191 SF	
151E	PROCEDURE ROOM	192 SF	
151F	PROCEDURE ROOM	192 SF	
151G	PROCEDURE ROOM	191 SF	
151H	LINEAR EQUIP ROOM	225 SF	
151H1	ENVIRONMENTAL ROOM	99 SF	
151H2	STERILIZER ALCOVE	86 SF	
151J	PROCEDURE ROOM	190 SF	
151K	PROCEDURE ROOM	198 SF	
152	LAB NEIGHBORHOOD MODULE	2,258 SF	
152A	PROCEDURE ROOM	196 SF	
152B	PROCEDURE ROOM	188 SF	
152C	LINEAR EQUIP ROOM	230 SF	
152D	PROCEDURE ROOM	189 SF	
152E	PROCEDURE ROOM	189 SF	
152F	PROCEDURE ROOM	192 SF	
152G	PROCEDURE ROOM	191 SF	
152H	LINEAR EQUIP ROOM	231 SF	
152J	PROCEDURE ROOM	190 SF	
152K	FUME HOOD ROOM	198 SF	
TOTAL NET SF		16,110 SF	



1 FLOOR PLAN - LEVEL 01 FIT OUT - AREA 'B'
AI-251B 1/8" = 1'-0"



KEY PLAN
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CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/18
2	CD 100% REVIEW	10/15/18
3	ISSUE FOR BID & PERMIT	11/15/18
4	P2 - Addendum #1	01/16/19
5	SD ISSUANCE - NIH	12/16/19
6	DD ISSUANCE - NIH	02/05/20
7	CD ISSUANCE - NIH	04/14/20
8	BID & PERMIT - NIH	05/22/20

Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

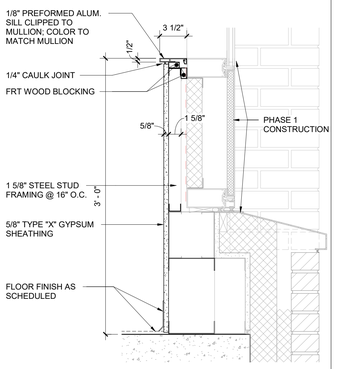
MICHAEL J. BATTCOTTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

DRAWING TITLE

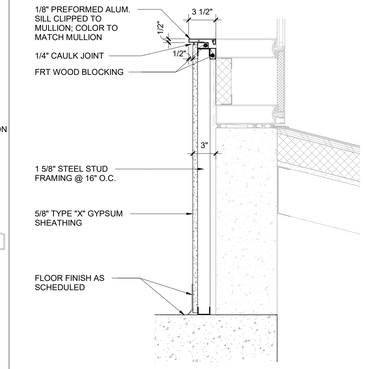
FLOOR PLAN - LEVEL ONE AREA 'B' FIT OUT

SHEET NO.
AI-251B

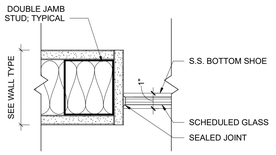
5/19/2020 3:23:44 PM



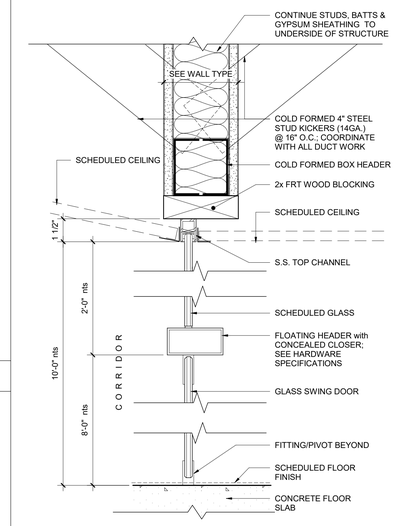
6 AI-261B **TYP CW SILL LEVEL 1**
1 1/2" = 1'-0"



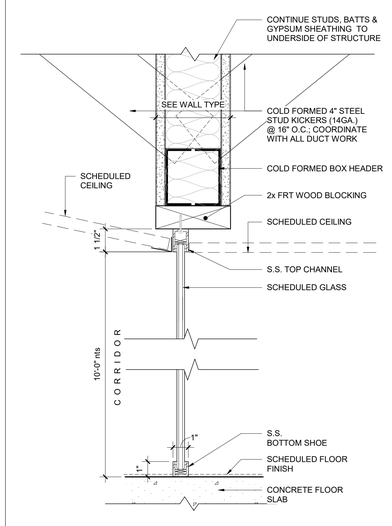
4 AI-261B **CW RECESSED SILL LEVEL 1**
1 1/2" = 1'-0"



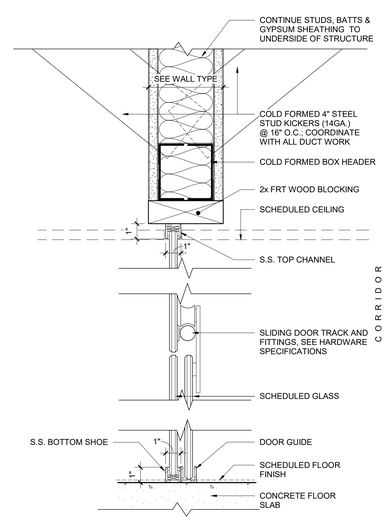
5 AI-261B **GW JAMB / TYPICAL**
3" = 1'-0"



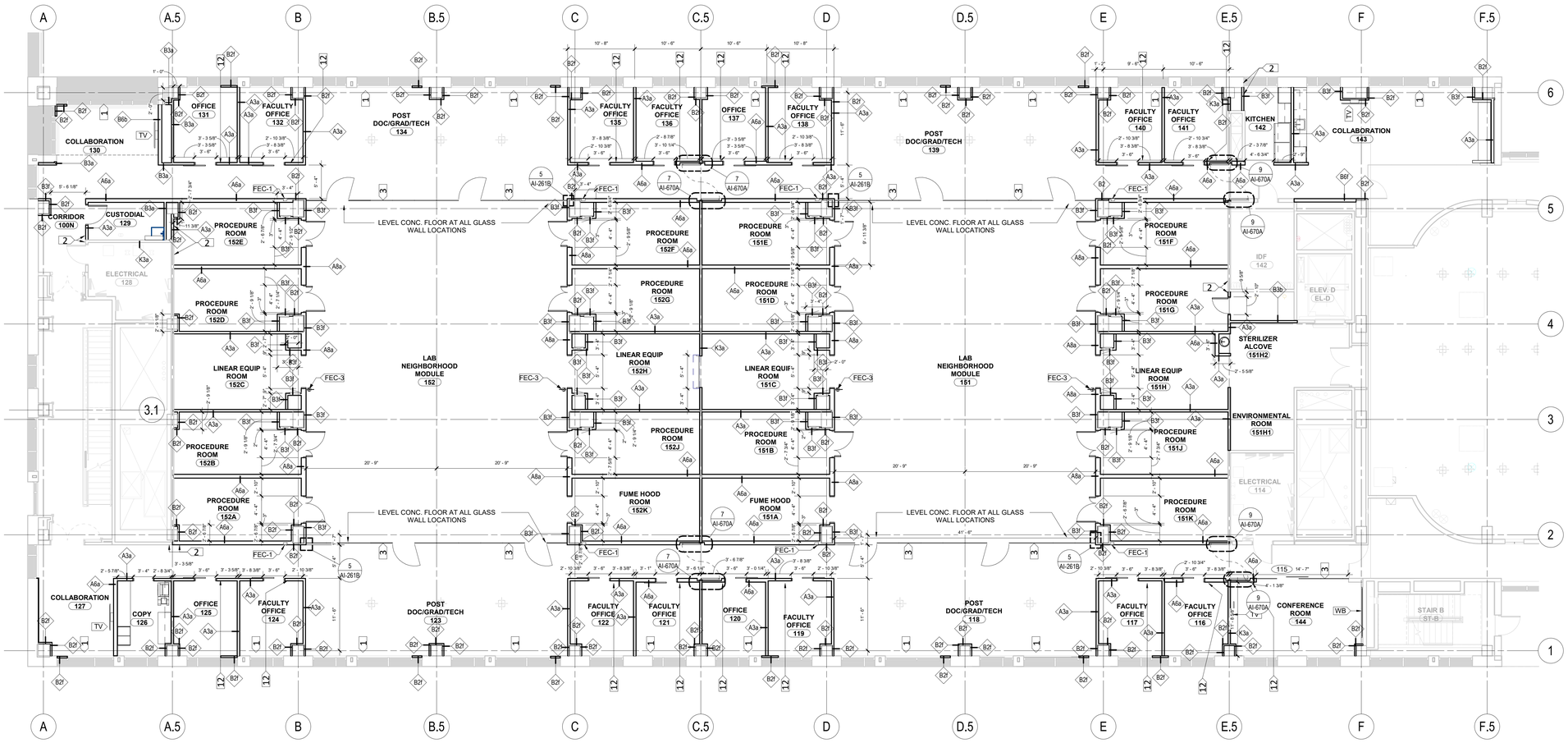
3 AI-261B **GW - HEAD & SILL - SWING GLASS DOOR**
3" = 1'-0"



2 AI-261B **GW - HEAD & SILL - INTERIOR GLASS WALL**
3" = 1'-0"



1 AI-261B **GW - HEAD & SILL - SLIDING GLASS DOOR**
3" = 1'-0"



8 AI-261B **FLOOR PLAN - LEVEL ONE PARTITION PLAN - AREA 'A'**
1/8" = 1'-0"

GENERAL NOTES - PARTITION PLANS

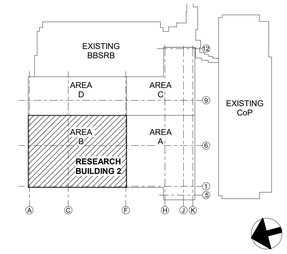
A. UNFORESEEN OR UNCLEAR CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. ANY CONFLICTS WITHIN THE DRAWINGS, BETWEEN DRAWINGS AND SPECIFICATIONS, OR BETWEEN DRAWINGS AND ACTUAL SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY. THE CONTRACTOR SHALL NOT PROCEED WITH WORK UNTIL WRITTEN CLARIFICATION FROM THE ARCHITECT IS RECEIVED.
C. DO NOT SCALE DRAWINGS. DIMENSIONS SHALL GOVERN. ALL PLAN DIMENSIONS ARE TAKEN TO FINISH FACE OF CONSTRUCTION.
D. SEE AG-070 FOR INTERIOR PARTITION TYPES. USE IMPACT RESISTANT GYPSUM BOARD FOR ALL GYPSUM BOARD WALL ASSEMBLIES IN VIVARIUM AND CAGE WASH AREAS.
E. LAYOUT AND VERIFY ALL PARTITION LOCATIONS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT OF ANY DISCREPANCIES IN DIMENSIONS OR CLEARANCES.
F. WHERE FINISH IS CONTINUOUS AT PARTITION TYPE TRANSITIONS, ENSURE THAT FINISH SURFACE IS FLUSH AND SEAMLESS.
G. THE GENERAL CONTRACTOR IS TO PROVIDE BLOCKING IN ALL METAL STUD PARTITIONS FOR ALL WALL MOUNTED EQUIPMENT AND ACCESSORIES. THE LOCATIONS, MOUNTING HEIGHTS AND BLOCKING REQUIREMENTS SHOWN HEREON ARE GIVEN FOR INFORMATIONAL PURPOSES ONLY AND IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THIS INFORMATION WITH SUB-CONTRACTORS, MANUFACTURERS, OR EQUIPMENT SUPPLIERS. SEE TYPICAL BLOCKING DETAILS IN METAL STUD WALLS INCLUDED IN THESE DOCUMENTS FOR BLOCKING AND ANCHORING REQUIREMENTS.
H. ALL CONCEALED WOOD SHALL BE FIRE RETARDANT TREATED.
I. MECHANICAL, ELECTRICAL, AND PLUMBING ELEMENTS IN FINISHED AREAS ARE TO BE CONCEALED WITHIN THE CONSTRUCTION UNLESS OTHERWISE NOTED.
J. THE GENERAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER DISCIPLINES TO DETERMINE THE SIZE AND LOCATION OF PENETRATIONS. SEAL CONSTRUCTION TIGHT TO ALL PENETRATIONS AND CAULK. ALL PENETRATIONS THROUGH FIRE RATED CONSTRUCTION MUST BE FIRE SAFED IN ACCORDANCE WITH THE SPECIFICATIONS.
K. PATCH ALL HOLES IN EXISTING SURFACES WHERE ELEMENTS HAVE BEEN REMOVED. PREPARE SURFACES FOR NEW FINISHES AS REQUIRED OR PATCH TO MATCH ADJACENT SURFACE IF NO NEW FINISH IS SCHEDULED.
L. PROVIDE CONTROL JOINTS IN GYPSUM WALLBOARD INTERIOR PARTITIONS AT 30 FEET ON CENTER MAXIMUM. WHERE POSSIBLE, LOCATE AT CORNERS ABOVE OPENINGS. VERIFY LOCATIONS WITH ARCHITECT. SEE THE ASSOCIATED TYPICAL DETAILS INCLUDED IN THESE DOCUMENTS.
M. FURNISH AND INSTALL SEALANT AT ALL FIXTURES AND CHANGES IN MATERIAL, AND AS REQUIRED BY THE APPLICABLE HEALTH DEPARTMENT.
N. DOOR OPENINGS NOT LOCATED BY DIMENSIONS SHALL BE 4" FROM FACE OF ADJACENT WALL TO EDGE OF DOOR FRAME.
O. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL EQUIPMENT INSTALLATION AND VERIFYING ALL REQUIRED ROUGH OPENINGS, AND ROUGH-IN DIMENSIONS WITH THE EQUIPMENT MANUFACTURER, OWNER AND ARCHITECT PRIOR TO CONSTRUCTION.

ACCESSORIES LEGEND

BCS	BABY CHANGING STATION
CG	CORNER GUARD; REFER TO AI-668
CR	CARD READER
DF-1	ACCESSIBLE DRINKING FOUNTAIN
FBS	FRP BACKSPLASH
FEC-1	RECESSED FIRE EXTINGUISHER CABINET
FEC-2	SURFACE MOUNTED FIRE EXTINGUISHER CABINET
FEC-3	BRACKET MOUNTED FIRE EXTINGUISHER
GB-1	REAR WALL GRAB BAR
GB-2	SIDE WALL GRAB BAR
GB-3	VERTICAL GRAB BAR
JG	JAMB GUARD; DETAIL 6/AI-668
LAV	LAVATORY
MR-1	2'-0" x 3'-0" MIRROR
MR-2	5'-0" x 4'-0" MIRROR
MR-3	7'-6" x 4'-0" MIRROR
MR-4	9'-0" x 4'-0" MIRROR
MR-5	6'-0" x 4'-0" MIRROR
MS	MOP SINK AND MOP RACK
ND-1	RECESSED SANITARY NAPKIN DISPOSAL
ND-2	PARTITION MOUNTED SANITARY NAPKIN DISPOSAL
PD	PAPER TOWEL DISPENSER (OWNER FURNISHED / CONTRACTOR INSTALLED)
PS	PROJECTOR SCREEN
RR	RECYCLING RECEPTACLE, OWNER PROVIDED
RS	DIGITAL ROOM SCHEDULING SCREEN
SD	SURFACE MOUNTED SOAP DISPENSER (OWNER FURNISHED / CONTRACTOR INSTALLED) W/ CUTOUT IN MIRROR. REFER TO AG-021 FOR CUTOUT DIMENSIONS.
SG	STORAGE ADJUSTABLE SHELVING
SH	SHELF
SR-3	60" x 36" SHOWER
TD	TOILET PAPER DISPENSER
TP	TOILET PARTITION
TV	WALL MOUNTED FLAT SCREEN MONITOR
UP	URINAL PARTITION
UR-1	URINAL
UR-2	ACCESSIBLE URINAL
WB	WHITE BOARD
WC-1	WATER CLOSET
WC-2	ACCESSIBLE WATER CLOSET
WG	WALL PROTECTION SYSTEM
WR	WASTE RECEPTACLE

KEYNOTE - PARTITION

1	ALL EXTERIOR WALLS TO RECIEVE 5/8" TYPE X GYP BOARD FULL HEIGHT
2	ALIGN WALLS
3	PARTITION TYPE A6 CONTINUES ABOVE ALL-GLASS WALL; REFER TO DETAILS
8	MODULAR EQUIPMENT WALL. REFER TO QL-SERIES DRWGS.
11	EXIT PUSH BUTTON (REX)
12	THERMOSTAT TO BE INSTALLED ON LATCH SIDE OF DOOR.
13	REMOVE AND REPAIR EXISTING CALL BOX SYSTEM.
14	5/8" TYPE X GYPBOARD W/ 5-1/2" ACOUSTIC BATTS; ALIGN GYPBOARD WITH AIR FLOOR GRILLE; FUR OUT WALL AS NEEDED.
15	FULL HEIGHT WALL PROTECTION BOARD
17	PROJECTOR CONTROLLER. SCREEN R/L SWITCH, CARD READER & MOTORIZED SHADES CONTROLLER. DEVICES FINISH COLOR IS WHITE EXCEPT CARD READER (BLACK). SEE DETAIN 4/AI-271 FOR DEVICE LAYOUT.
18	TWO ROWS OF 4' HIGH 3/4" FRT PLYWOOD SHEATHING RUNNING THE LENGTH OF THE WALL
19	48" WIDE CEILING MOUNTED 3-1/2" SOUND BATT INSULATION



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UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DRP #5 - ASI #33	02/21/17
2	SD ISSUANCE - NIH	12/16/19
3	DD ISSUANCE - NIH	02/05/20
4	CD ISSUANCE - NIH	04/14/20
5	BID & PERMIT - NIH	05/22/20

Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

RICHARD J. BATTCOTTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

DRAWING TITLE
PARTITION PLAN - LEVEL ONE AREA 'B'

SHEET NO.
AI-261B

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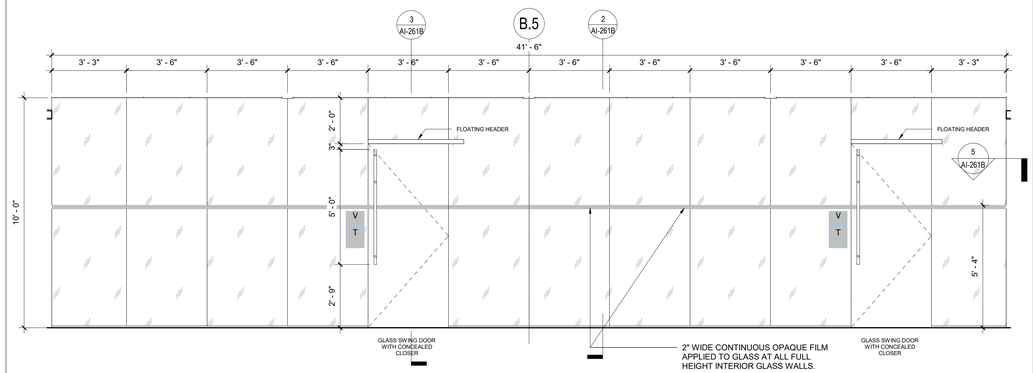
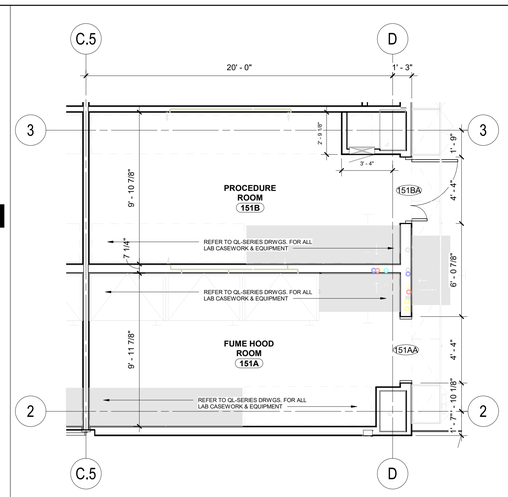
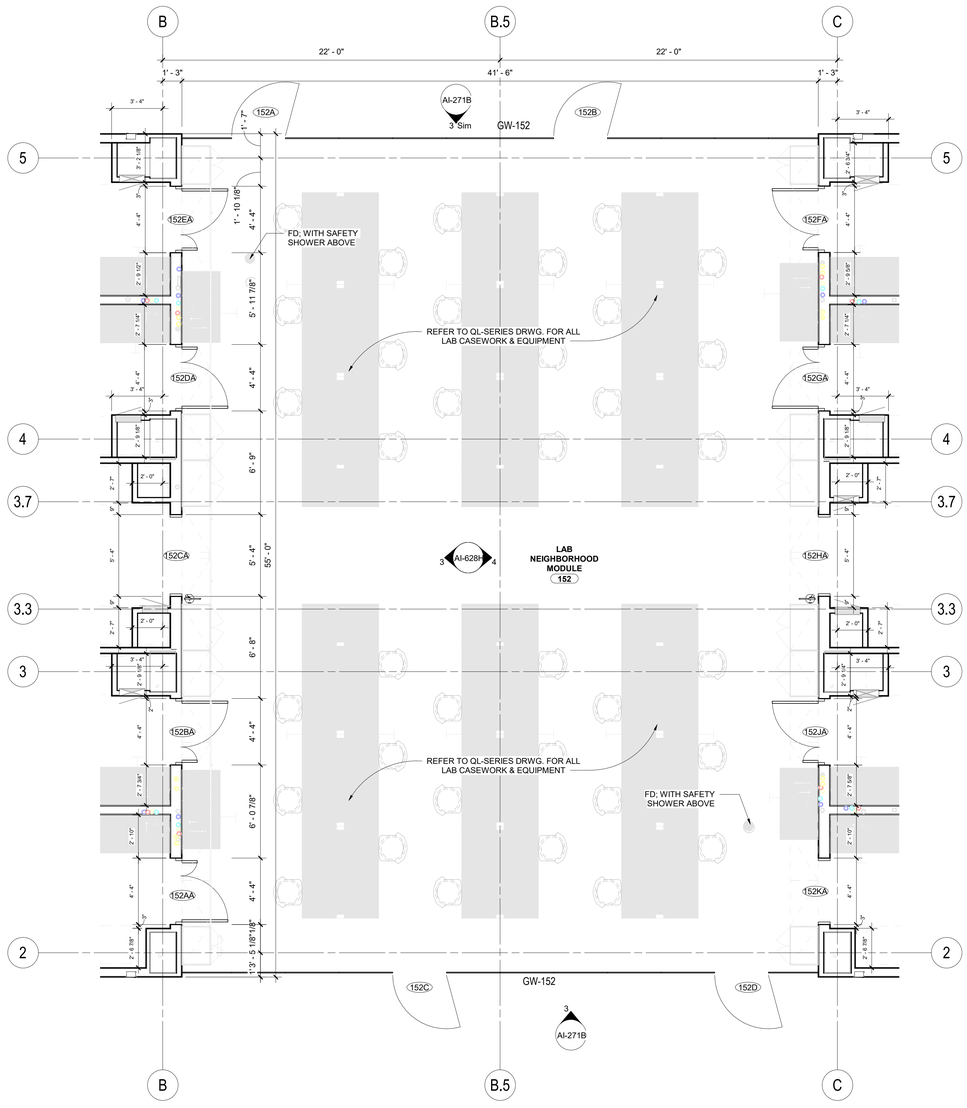


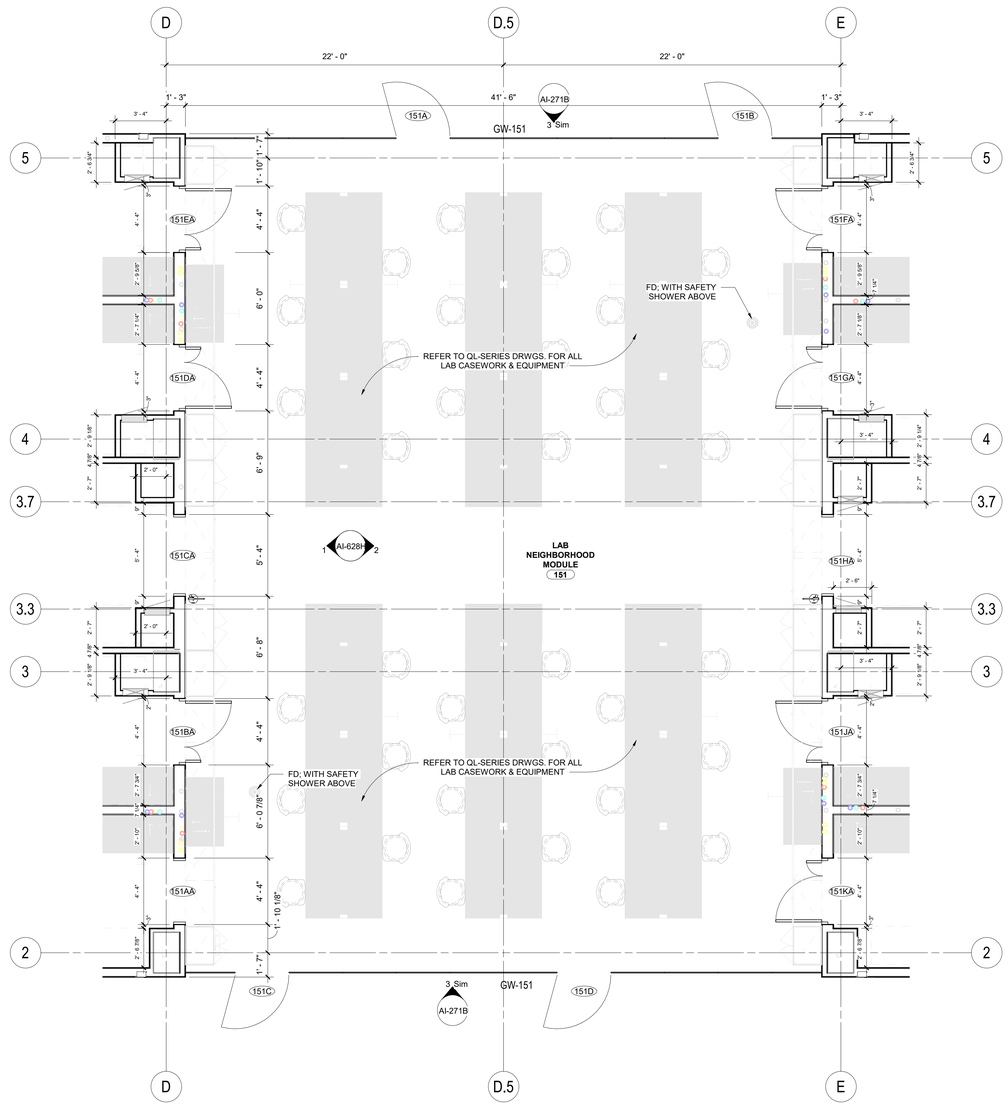
3 AI-271B **GW-152 - WETLAB GLASS WALL ELEVATION**
3/8" = 1'-0"



4 AI-271B **FLOOR PLAN - PROCEDURE ROOM & FUME HOOD ROOM**
1/4" = 1'-0"



1 AI-271B **ENLARGED PLAN - WET LAB 152**
1/4" = 1'-0"



2 AI-271B **ENLARGED PLAN - WET LAB 151**
1/4" = 1'-0"

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1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

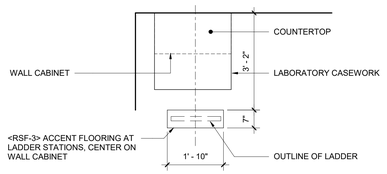
MICHAEL J. BATTISTELLE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

DRAWING TITLE

ENLARGED FLOOR PLANS & ELEVATIONS

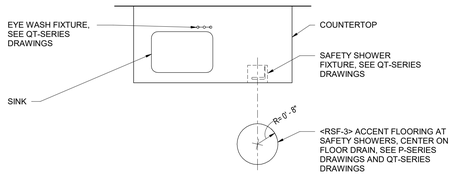
SHEET NO.
AI-271B

5/19/2020 11:50:33 AM



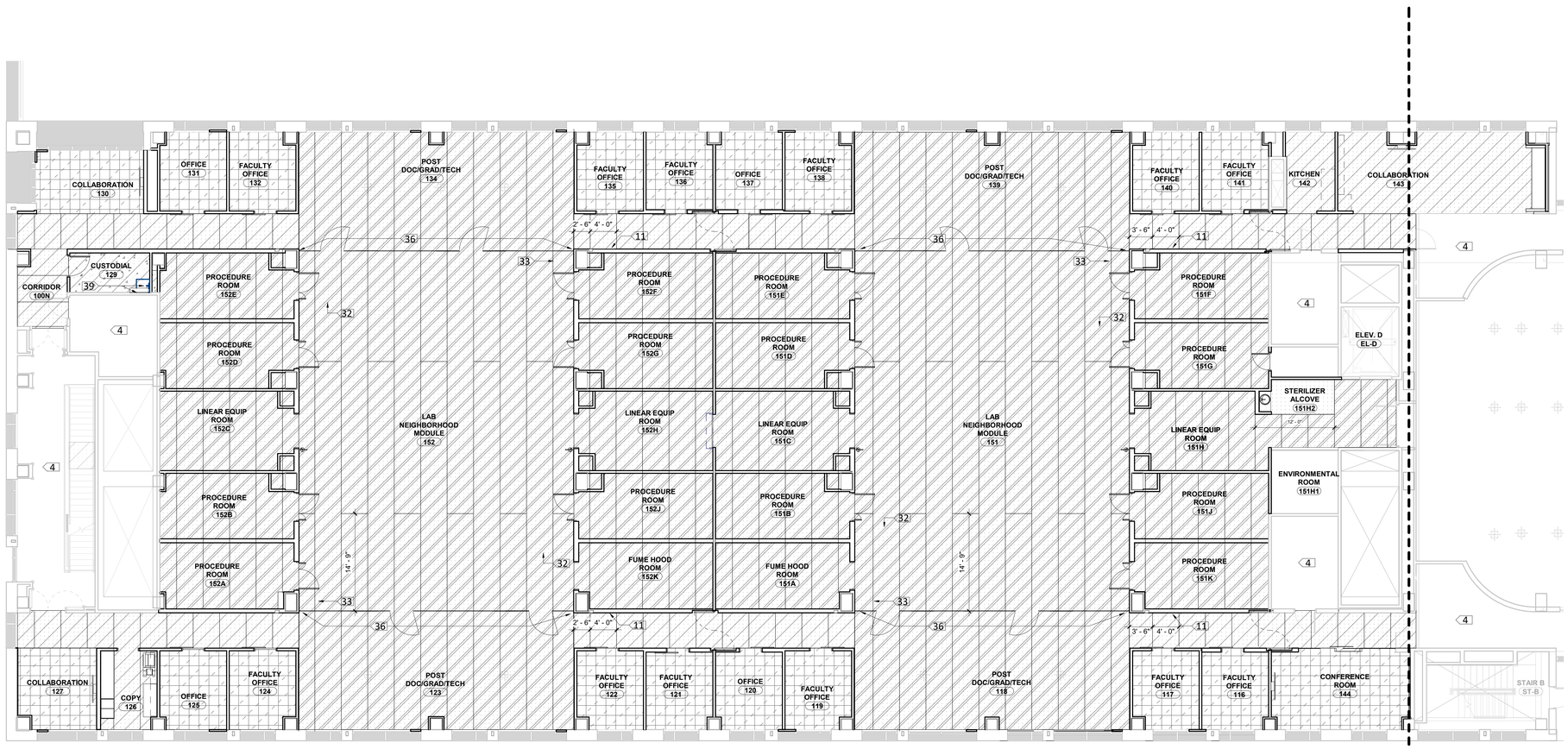
NOTE: ACCENT FLOORING TO BE INLAYED INTO SURROUNDING FLOORING FOR A RESULTING SMOOTH AND SEAMLESS FLOORING SURFACE

3 ACCENT FLOORING AT LADDER STATIONS
AI-351B 1/2" = 1'-0"



NOTE: ACCENT FLOORING TO BE INLAYED INTO SURROUNDING FLOORING FOR A RESULTING SMOOTH AND SEAMLESS FLOORING SURFACE

2 ACCENT FLOORING AT EYE WASH STATIONS
AI-351B 1/2" = 1'-0"



1 FLOOR FINISH PLAN - LEVEL ONE - AREA 'B'
AI-351B 1/8" = 1'-0"

GENERAL NOTES - FINISH PLANS

1. SEE FLOOR PLANS FOR WALL TYPES.
2. SEE ROOM FINISH SCHEDULE, INTERIOR ELEVATIONS, INTERIOR DETAILS, & CASEWORK DETAILS FOR ADDITIONAL INFORMATION.
3. REFER TO AI-723 FINISH LEGEND FOR MATERIAL DESIGNATIONS AND BASIS OF DESIGN PRODUCT INFORMATION.
4. PAINT HOLLOW METAL DOOR & FRAMES TO MATCH THE COLOR OF HOST WALL, UNO.
5. FLOOR TRANSITIONS AT DOOR OPENINGS SHALL BE CENTERED ON THE DOOR PANEL, UNO.
6. ALL MISCELLANEOUS PANELS, FIRE EXTINGUISHER CABINETS, EXPOSED DUCTING PARTS, CONDUIT, PIPES, LOUVERS, VENTILATION COVERS AND ANY EQUIPMENT FACTORY FINISHED, INCLUDING ASSOCIATED HARDWARE, SHALL BE PAINTED TO MATCH THE SURFACE ON WHICH IT OCCURS, UNO
7. ALL WALLS TO RECEIVE <PT-1>, UNO.
8. ALL WALLS TO RECEIVE <RB-1>, UNO. ACCENT WALLS TO RECEIVE ACCENT WALL BASE.
9. ALL COLLABORATION CASEWORK WALLS TO RECEIVE HIGH GLOSS FINISH WITHIN ALCOVE.
10. ALL SHELL SPACES SHALL BE LEFT UNFINISHED. FLOORS SHOULD BE PREPPED FOR FUTURE INSTALL.
11. <RSF-3> TO BE USED AS ACCENT FLOORING AT ALL EMERGENCY EYE WASH AND SAFETY SHOWER FIXTURES. SEE 12/AI-672.
12. <RSF-3> TO BE USED AS ACCENT FLOORING AT LADDER STATIONS IN WET LAB. SEE 15/AI-672.
13. CLEAR FLOOR AREAS AT LOWER LEVEL: REVIEW MARKINGS INDICATED ON PLAN WITH OWNER AFTER ALL FIXED EQUIPMENT HAS BEEN INSTALLED. FLOOR MARKING MATERIAL TO BE DETERMINED.
14. ELEVATOR CAB FLOORING (NOT SHOWN ON PLAN) TO BE <TZO-1>
15. ALL CTW CORNER TRANSITIONS TO RECEIVE <CTA-2>
16. REFER TO 11&14/AI-672 FOR <RES-1> COVE BASE DETAIL; TO BE USED AT ALL LOCATIONS RECEIVING <RES-1> FLOORING, UNO
17. STAIRS E TO RECEIVE INTEGRATED LUMINOUS STAIR TREAD FOR ALL LEVELS BASEMENT THROUGH LEVEL 4, UNO.; ALL LANDINGS IN STAIRS E TO RECEIVE RUBBER LUMINOUS NOSING
18. CONTRACTOR TO INCLUDE ALL PHOTOLUMINESCENT ITEMS PER CODE IN STAIRS E; REFER TO FINISH LEGEND AI-724 FOR ITEMS TO BE APPLIED

GENERAL NOTES - FINISH PLANS PHASE 2
1/8" = 1'-0"

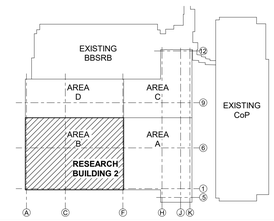
LEGEND - FINISH PLANS

- CPT-52
- CS-1
- CS-2
- CTF-1
- CTF-2
- CTF-3
- TZO-1
- RES-1
- RES-2
- RSF-1
- RSF-2
- RSF-3
- RSF-4
- VCT
- WM-1

FINISH PLAN LEGEND PHASE 2
12" = 1'-0"

KEYNOTE - FINISH PLAN

1	FLOOR FINISH TO EXTEND TO WINDOW MULLION; REFER TO DETAIL 5/AI-669
2	FLOOR FINISH TO EXTEND TO WINDOW MULLION; REFER TO DETAIL 4/AI-669
3	COLUMN FINISH PLASTER SKIM COAT W/ PAINTED FINISH
4	EXISTING PHASE 1 FINISH
5	REPAIR AND REPAINT EXISTING WALL WITH PHASE 1 SPECIFIED EPOXY PAINT SYSTEM
7	WOOD WALL
8	ACCENT PAINT PT-6 WITH BASE RB-1
10	CTW-2
11	TACK BOARD BD-4 - REFER TO TYPICAL ELEVATION SHEET AI-628I
13	FWC AT BACK WALL OF ALCOVE
14	FLOOR EXPANSION JOINT
15	MP-1 WALL FINISH
17	SSF-1 AT BACKSPLASH
19	DECORATIVE FILM-1; REFER TO FINISH LEGEND
25	CONTRACTOR TO INCLUDE ALL PHOTOLUMINESCENT ITEMS PER CODE IN STAIRS E; REFER TO FINISH LEGEND AI-724 FOR ALL ITEMS TO BE APPLIED
26	NO WORK IN THIS AREA
27	PROTECT EXISTING INSTALLED EQUIPMENT WHEN APPLYING VCT FLOOR FINISH
28	ACCENT PLAM
29	PT-1 W/ RB-1
30	PAINT DOOR AND DOOR FRAME, PT-6
31	PAINT DOOR FRAME, PT-6
32	RSF-3 ACCENT FLOOR AT FLOOR DRAIN; REFER TO 2/AI-351B
33	RSF-3 ACCENT FLOOR AT LADDER STATION; REFER TO 3/AI-351B
34	TRANSITION STRIP BETWEEN RSF AND SEALED CONCRETE FLOOR; REFER TO DETAIL 13/AI-627
35	STAIR RISERS TO BE PAINTED BLACK IN STAIRS A, B, C THROUGH ENTIRE HEIGHT OF STAIRWELL
36	2" WIDE CONTINUOUS FILM-3 APPLIED TO GLASS; SIGN ADJ. TO DOOR TO SAY "DOOR MUST REMAIN CLOSED"
37	FILM-2
38	REPAIR AND REPAINT WALLS
39	FRP BACK SPLASH
40	CTA-3
41	REFINISH PHASE 1 WALLS TO 9'-0" AFF WITH PT-4
42	TERRAZZO FLOORING



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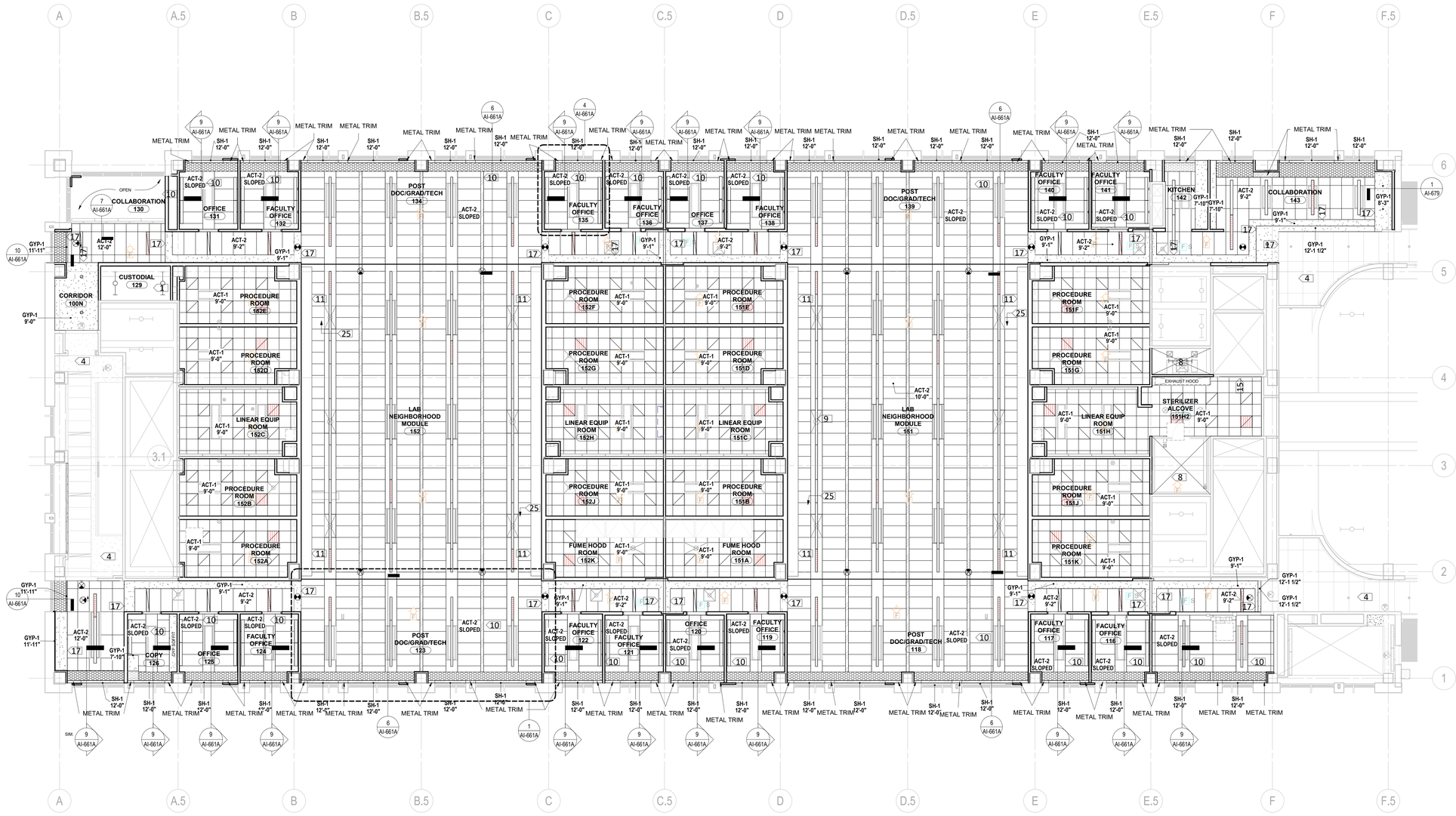
MICHAEL J. BATTOCLETTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

DRAWING TITLE

FLOOR FINISH PLAN - LEVEL ONE AREA 'B'

SHEET NO.
AI-351B

5/19/2020 11:58:12 AM



REFLECTED CEILING PLAN GENERAL NOTES

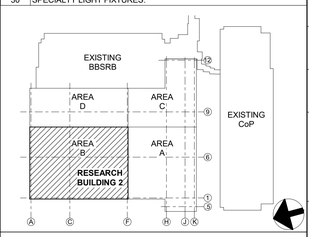
1. COORDINATE ARCHITECTURAL REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR DEVICES, TYPES, AND INSTALLATION. INFORM ARCHITECT OF ANY INCONSISTENCIES FOUND IN DRAWINGS OR SPECIFICATIONS.
2. HIGH SIDE OF SLOPED CEILINGS IS ADJACENT TO BUILDING EXTERIOR WALL. SEE KEYNOTES FOR HIGH AND LOW POINT DIMENSIONS AND/OR ANGLE OF CEILING.
3. CEILING TYPES AND HEIGHTS ARE INDICATED ON R.C.P. - INFORM ARCHITECT OF ANY MISSING CEILING TYPE AND HEIGHT DATA.
4. SOFFITS OVER CASEWORK SHALL BE 7'-2" U.N.O.
5. DEVICES (RECESSSED LIGHTS, EXIT SIGNS, ELECTRICAL AND MECHANICAL DEVICES, SPRINKLER HEADS, ETC) ARE TO BE CENTERED ON CEILING TILES U.N.O.
6. CONTRACTOR SHALL PROVIDE AND COORDINATE ACCESS PANELS FOR DEVICES REQUIRING ACCESS IN NON-ACCESSIBLE CEILINGS.
7. PATCH OR REPAIR EXISTING CONSTRUCTION TO REMAIN WHERE DAMAGED OR DISTURBED DURING NEW CONSTRUCTION.
8. PROVIDE WINDOW SHADE AT ALL EXTERIOR GLAZING UNLESS NOTED OTHERWISE
9. PROVIDE SMOKE CURTAINS AT ELEVATOR DOORS.
10. SEE TYPICAL CEILING HEIGHT TRANSITIONS 10 / AI-661
11. SEE TYPICAL CEILING EDGE CLOSURE 11 / AI-661 - DETAIL OCCURS AT BUILDING EXTERIOR WALLS WHERE SHOWN ON RCP
12. SEE TYPICAL OFFICE CEILING CONDITIONS 4 / AI-452B U.N.O.
13. VERIFY ALL RADIANT PANEL LENGTHS AND WIDTHS IN FIELD.

REFLECTED CEILING PLAN LEGEND

- GYP BD-1 GYPSUM BOARD CEILING, SOFFIT, OR BULKHEAD
- GYP BD-3 GYPSUM BOARD CEILING, SOFFIT, OR BULKHEAD - 5/8" GYPSUM BOARD ON FRAMED SYSTEM
- MP-1 METAL PANEL CEILING
- TBD - CEILING TO BE DECIDED
- STN-1 LIMESTONE SOFFIT
- 6" WIDE UTILITY STRIP WITH WHITE METAL CEILING PANEL INFILL
- 2X2 ACOUSTICAL CEILING PER SPECIFICATION. ACT-1 TYPICAL UNLESS NOTED OTHERWISE
- 2X4 ACCOUSTICAL CEILING PER SPECIFICATION. ACT-2 TYPICAL UNLESS NOTED OTHERWISE
- 2x4 LIGHT FIXTURE PER ELECTRICAL DRAWINGS
- 2x2 LIGHT FIXTURE PER ELECTRICAL DRAWINGS
- RECESSED DIMABLE INCANDESCENT OR FLUORESCENT DOWNLIGHT FIXTURE; REFER TO ELECTRICAL DRAWINGS
- DECORATIVE RECESSED DIMABLE DOWNLIGHT FIXTURE; REFER TO ELECTRICAL DRAWINGS
- SURFACE MOUNTED PENDANT LIGHT FIXTURE PER ELECTRICAL DRAWINGS
- WALL MOUNTED LIGHT SCONCE PER ELECTRICAL DRAWINGS, TYP. MOUNTING HEIGHT SHALL BE 6'-6" U.N.O.
- BATHROOM WALL MOUNTED LIGHT SCONCE PER ELECTRICAL DRAWINGS, TYP. MOUNTING HEIGHT SHALL BE X'-X" U.N.O.
- SPRINKLER HEAD - COORDINATE WITH FIRE SUPPRESSION DRAWINGS
- MECHANICAL SUPPLY AIR DEVICE, SIZE AS INDICATED ON DRAWINGS, REFER TO MECHANICAL DRAWINGS
- MECHANICAL 1x1 RETURN AIR DEVICE, COORDINATE WITH MECHANICAL DRAWINGS
- ACT-1 1'-0" — CEILING TAG. TOP LINE INDICATES CEILING TYPE. BOTTOM LINE INDICATES CEILING HEIGHT
- SD — SMOKE DETECTOR LED PLATE - REFER TO M.E.P. DRAWINGS
- EXIT SIGN - REFER TO ELECTRICAL DRAWINGS
- RADIANT PANEL - SEE MECHANICAL DRAWINGS
- SH-1 — MANUAL SHADE
- SH-1A — MOTORIZED SHADE

KEYNOTE - CEILINGS

1	NO CEILING IN THIS ROOM OR AREA
2	MODIFY ABOVE CEILING WALL AS NEEDED FOR NEW EQUIPMENT
3	UNISTRUT SYSTEM ABOVE CEILING TO SUPPORT MODULAR WALL
4	CEILING ISSUED IN PREVIOUS PACKAGE
5	REMOVE AND ADJUST EXISTING CEILING AS NEEDED FOR NEW EQUIPMENT
7	HOLD CEILING GRID 2" FROM WALL TO ALLOW FOR RETURN AIR, SEE MECHANICAL DRAWINGS
8	NO CEILING BEHIND MODULAR EQUIPMENT WALL, SEE EQUIPMENT DRAWINGS
9	CENTER LIGHT FIXTURES ABOVE GYP BD SOFFIT, TYPICAL
10	CEILING SLOPED THIS ROOM, HIGH POINT IS AT SIDE ADJACENT TO EXTERIOR WALL AT 12'-0" AFF
11	CEILING TRANSITION ABOVE CABINET; REFER TO DETAIL 8/AI.661A
15	SMOKE CURTAIN AT ELEVATOR DOOR
17	CEILING HEIGHT TRANSITION, CEILING TYPES AS INDICATED, REFER TO TYPICAL CEILING DETAILS
19	FUME HOOD, SEE QL-SERIES AND MF-SERIES DRAWINGS.
21	CEILING FINISH TO MATCH ADJACENT EXISTING. ADJUST EDGE OF GRID TO SEAMLESSLY TRANSITION USING FULL CEILING TILES (NO CUT CEILING TILES).
23	REFER TO DETAIL 8/AI-668 FOR FRAMING OF VIVARIUM CEILING
24	PROJECTOR EQUIPMENT. SEE DETAIL 3/AI-670
25	LOCATION OF SAFETY SHOWER BELOW CEILING
27	CEILING ACCESS PANEL. 24" x 24"
28	EXISTING CEILING TO ACCOMODATE NEW CASEWORK SOFFIT; COORDINATE LIGHTING IF RELOCATION IS REQUIRED
29	PROJECTOR SCREEN. SEE DETAIL 1/AI-670
30	SPECIALTY LIGHT FIXTURES.



1 AI-451B — **REFLECTED CEILING PLAN - LEVEL ONE - PHASE 2 - AREA 'B'**
1/8" = 1'-0"

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
760 Press Avenue, Lexington, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	SD ISSUANCE - NIH	12/16/19
2	DD ISSUANCE - NIH	02/05/20
3	CD ISSUANCE - NIH	04/14/20
4	BID & PERMIT - NIH	05/22/20

Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

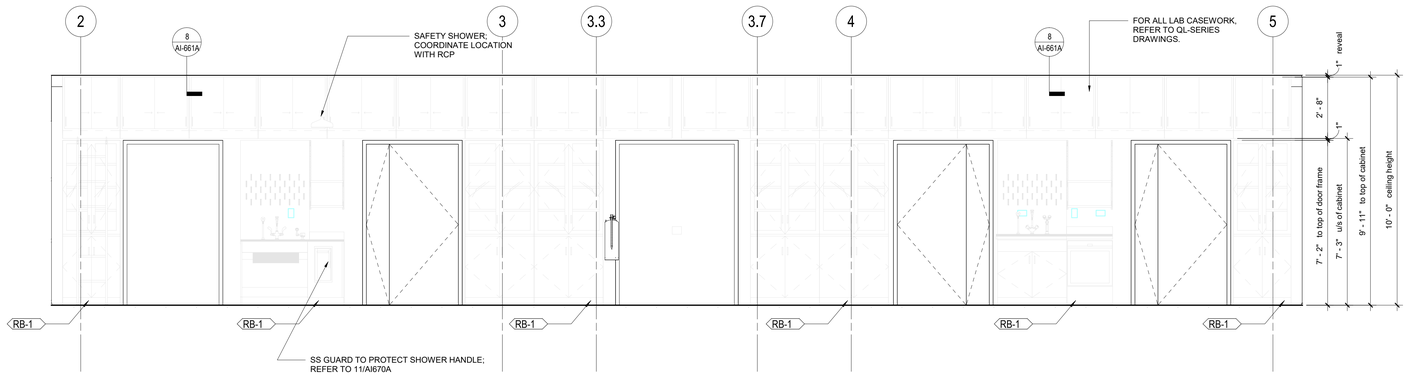
MICHAEL J. BATTCOTTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY

DRAWING TITLE

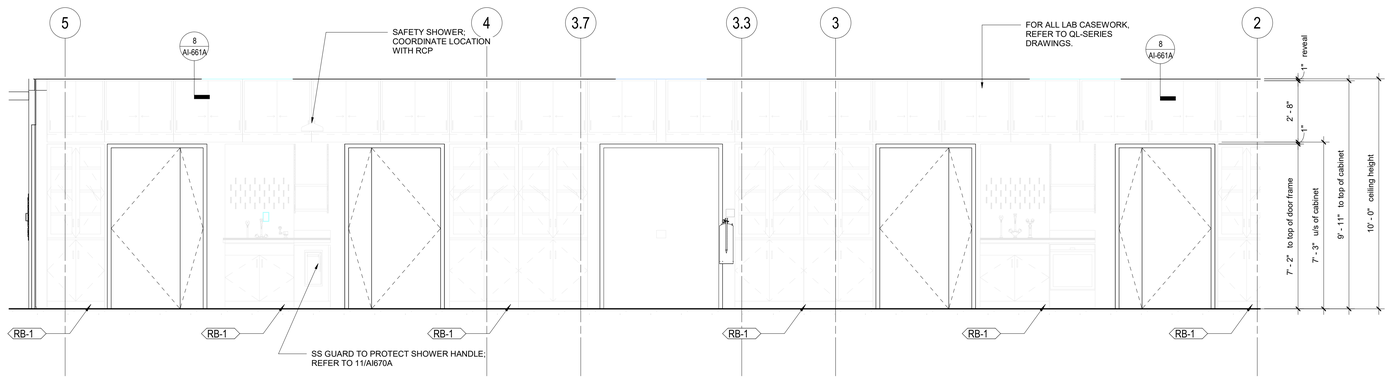
RCP - LEVEL ONE AREA 'B'

SHEET NO.
AI-451B

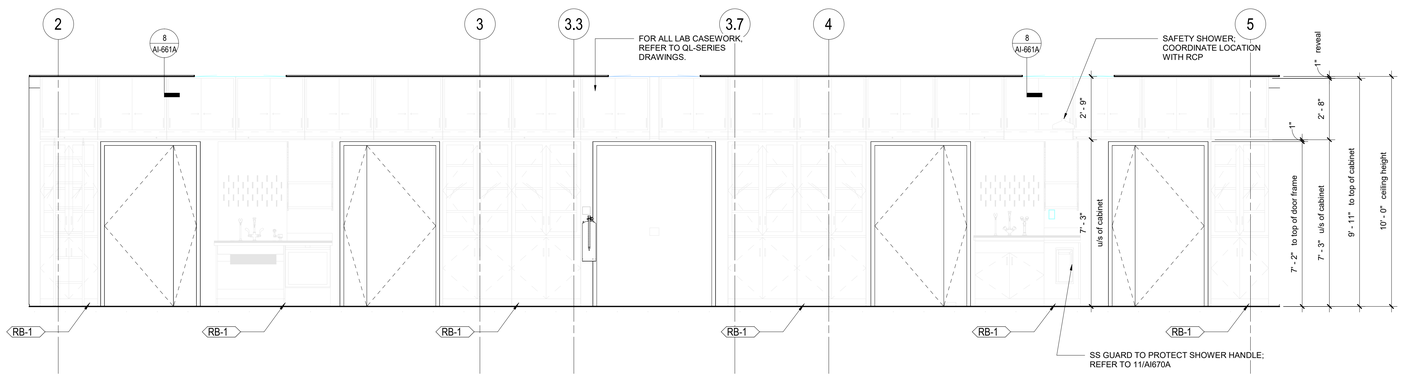
5/22/2020 8:56:44 AM



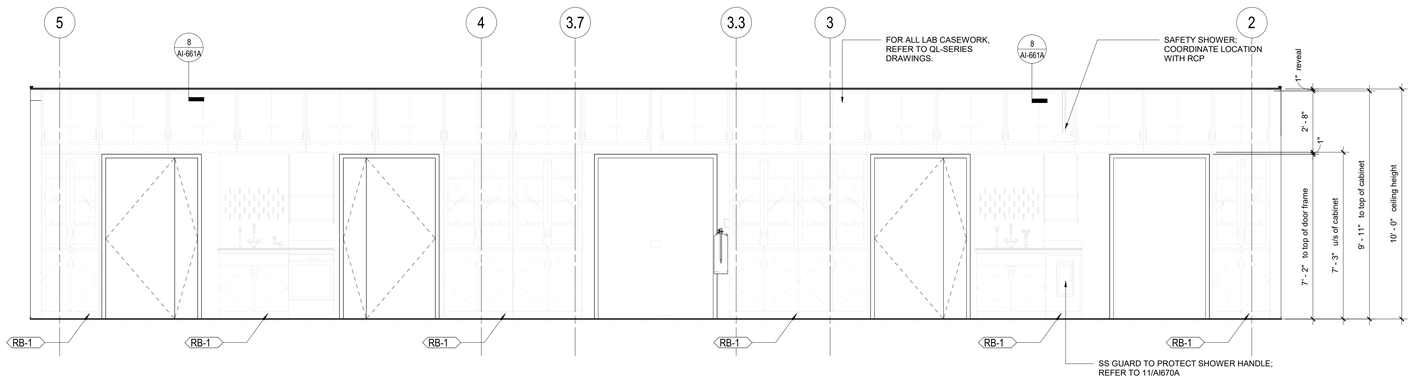
1 AI-628H **WET LAB 152 - NORTH ELEVATION**
3/8" = 1'-0"



2 AI-628H **WET LAB 152 - SOUTH ELEVATION**
3/8" = 1'-0"



3 AI-628H **WET LAB 151 - NORTH ELEVATION**
3/8" = 1'-0"



4 AI-628H **WET LAB 151 - SOUTH ELEVATION**
3/8" = 1'-0"

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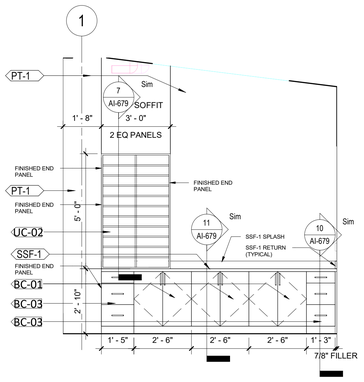
Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

MICHAEL J. BATTCOMBE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

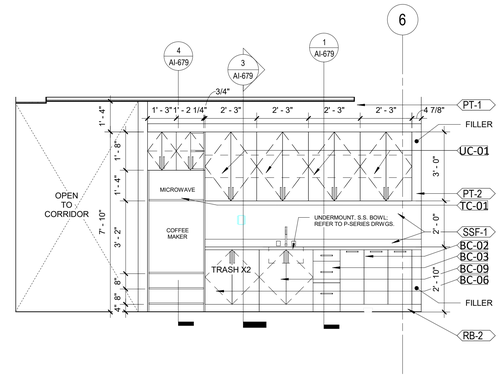
DRAWING TITLE
INTERIOR ELEVATIONS - WET LAB 151 & 152

SHEET NO.
AI-628H

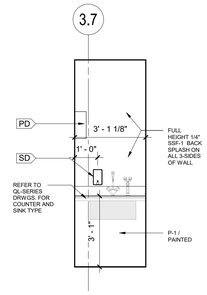
5/19/2020 11:51:31 AM



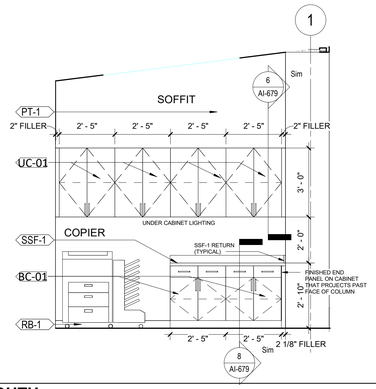
13 | AI-628I | **COPY ROOM NORTH.** | 3/8" = 1'-0"



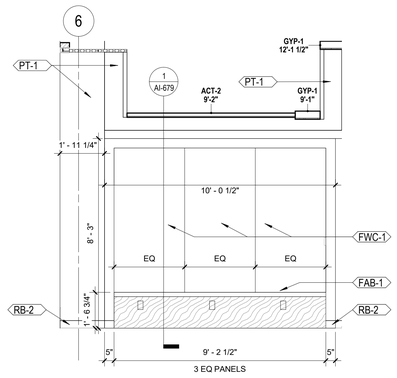
12 | AI-628I | **COLLABORATION 143 NORTH ELEVATION.** | 3/8" = 1'-0"



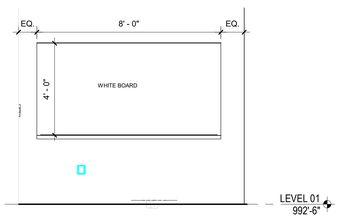
11 | AI-628I | **STERILIZER ALCOVE.** | 3/8" = 1'-0"



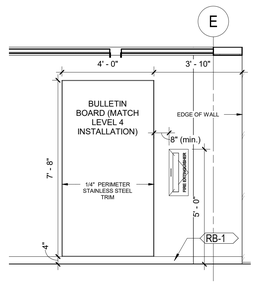
10 | AI-628I | **COPY ROOM SOUTH.** | 3/8" = 1'-0"



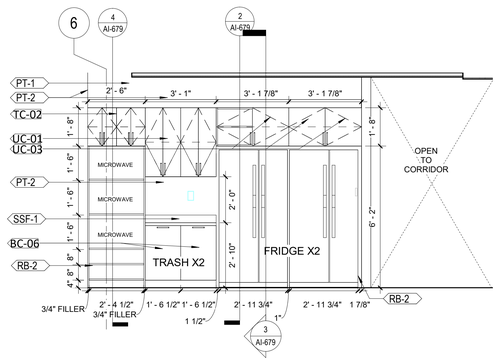
9 | AI-628I | **COLLABORATION 143 SOUTH ELEV.** | 3/8" = 1'-0"



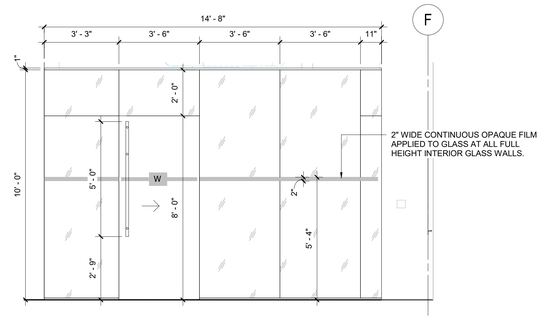
8 | AI-628I | **CONFERENCE 144 - SOUTH ELEVATION** | 3/8" = 1'-0"



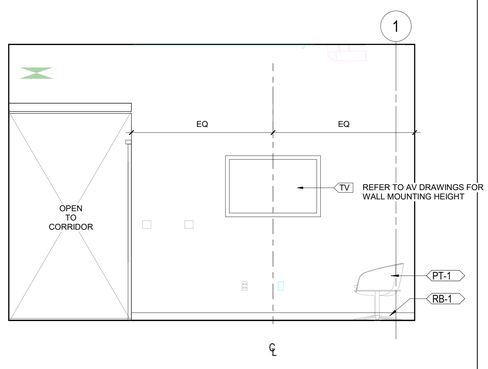
7 | AI-628I | **BULLETIN BOARD ELEVATION - TYPICAL** | 3/8" = 1'-0"



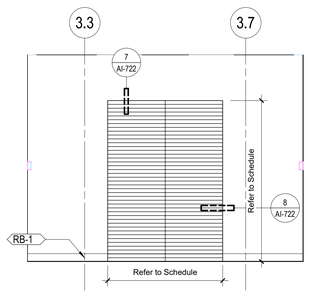
6 | AI-628I | **KITCHEN 142 SOUTH ELEVATION.** | 3/8" = 1'-0"



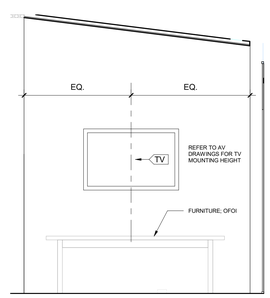
5 | AI-628I | **CONFERENCE 144 EAST ELEVATION.** | 3/8" = 1'-0"



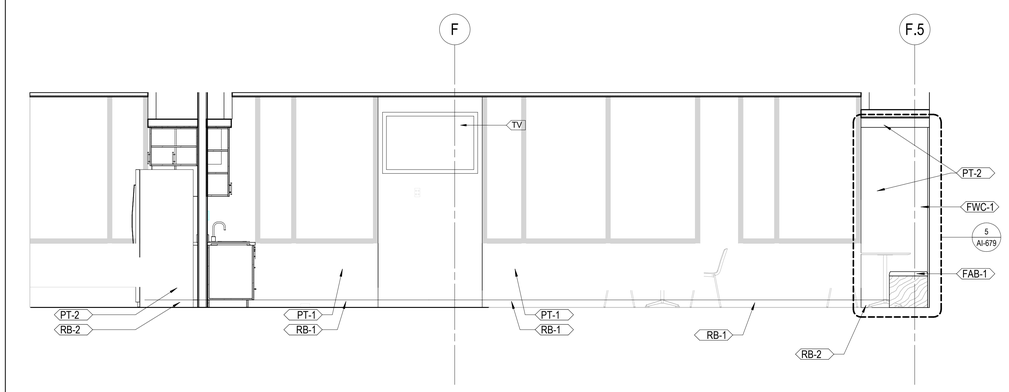
4 | AI-628I | **COLLABORATION 127 SOUTH ELEVATION.** | 3/8" = 1'-0"



3 | AI-628I | **OVERHEAD DOOR ROOM 151C.** | 3/8" = 1'-0"



2 | AI-628I | **CONFERENCE 144 NORTH ELEVATION.** | 3/8" = 1'-0"



1 | AI-628I | **COLLABORATION 143 EAST ELEV.** | 3/8" = 1'-0"

ACCESSORIES LEGEND.

BCS	BABY CHANGING STATION
CG	CORNER GUARD; REFER TO AI-668
CR	CARD READER
DF-1	ACCESSIBLE DRINKING FOUNTAIN
FBS	FRP BACKSPLASH
FEC-1	RECESSED FIRE EXTINGUISHER CABINET
FEC-2	SURFACE MOUNTED FIRE EXTINGUISHER CABINET
FEC-3	BRACKET MOUNTED FIRE EXTINGUISHER
GB-1	REAR WALL GRAB BAR
GB-2	SIDE WALL GRAB BAR
GB-3	VERTICAL GRAB BAR
JG	JAMB GUARD; DETAIL 6/AI-668
LAV	LAVATORY
MR-1	2'-0" x 3'-0" MIRROR
MR-2	5'-0" x 4'-0" MIRROR
MR-3	7'-6" x 4'-0" MIRROR
MR-4	9'-0" x 4'-0" MIRROR
MR-5	6'-0" x 4'-0" MIRROR
MS	MOP SINK AND MOP RACK
ND-1	RECESSED SANITARY NAPKIN DISPOSAL
ND-2	PARTITION MOUNTED SANITARY NAPKIN DISPOSAL
PD	PAPER TOWEL DISPENSER (OWNER FURNISHED / CONTRACTOR INSTALLED)
PS	PROJECTOR SCREEN
RR	RECYCLING RECEPTACLE, OWNER PROVIDED
RS	DIGITAL ROOM SCHEDULING SCREEN
SD	SURFACE MOUNTED SOAP DISPENSER (OWNER FURNISHED / CONTRACTOR INSTALLED) W/ CUTOUT IN MIRROR. REFER TO AG-021 FOR CUTOUT DIMENSIONS.
SG	STORAGE ADJUSTABLE SHELVING
SH	SHELF
SR-3	60" x 36" SHOWER
TD	TOILET PAPER DISPENSER
TP	TOILET PARTITION
TV	WALL MOUNTED FLAT SCREEN MONITOR
UP	URINAL PARTITION
UR-1	URINAL
UR-2	ACCESSIBLE URINAL
WB	WHITE BOARD
WC-1	WATER CLOSET
WC-2	ACCESSIBLE WATER CLOSET
WG	WALL PROTECTION SYSTEM
WR	WASTE RECEPTACLE

GENERAL NOTES - CASEWORK

A. ALL BASE CABINETS TO BE PLAM-1, U.N.O.
B. ALL UPPER CABINETS TO BE PLAM-1, U.N.O.
C. ALL TALL CABINETS TO BE PLAM-1, U.N.O.
D. ALL CASEWORK DIMENSIONS TO BE FIELD VERIFIED.

CABINET LEGEND

BC-01	BASE CABINET FULL HT DOOR
BC-02	BASE CABINET TYPICAL
BC-03	BASE CABINET 3 DRAWER
BC-04	BASE CABINET 4 DRAWER
BC-05	BASE CABINET OPEN
BC-06	BASE CABINET PULLOUT TRASH RECYCLE
BC-07	BASE COUNTERTOP WORKSURFACE
BC-08	ADA SINK WITH APRON
BC-09	BASE CABINET WITH SINK
UC-01	WALL CABINET TYPICAL
UC-02	WALL CABINET COPY SHELVES
UC-03	WALL CABINET 18" HIGH
UC-04	WALL CABINET MAILROOM SHELVES
TC-01	TALL CABINET 1 MICROWAVE
TC-02	TALL CABINET 3 MICROWAVES
TC-03	TALL CABINET 3 MICROWAVES
TC-04	TALL CABINET 1 MICROWAVE WITH CLOSURE PANEL
TC-05	TALL CABINET 3 MICROWAVES WITH CLOSURE PANEL

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4	BID & PERMIT - NIH	05/22/20

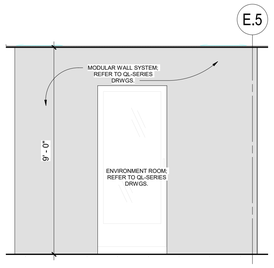
Drawn By: **Author**
Checked By: **Checker**
Client Number: 514
Project Number: 5350

RICHARD J. BATTCOCK REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

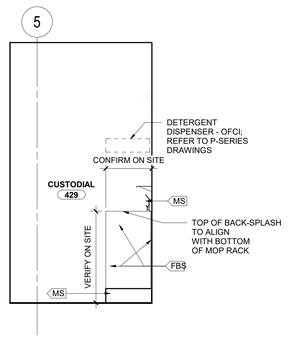
DRAWING TITLE
INTERIOR ELEVATIONS LEVEL ONE AREA 'B'

SHEET NO.
AI-628I

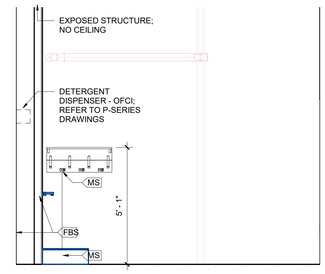
5/19/2020 11:52:20 AM



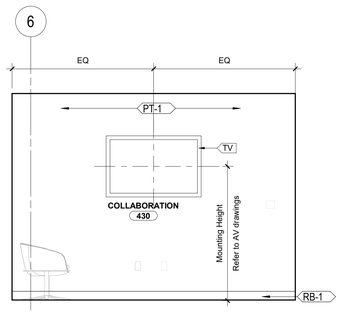
5 AI-629E | **STERILIZER ALCOVE 151H2 - WEST ELEVATION** | 3/8" = 1'-0"



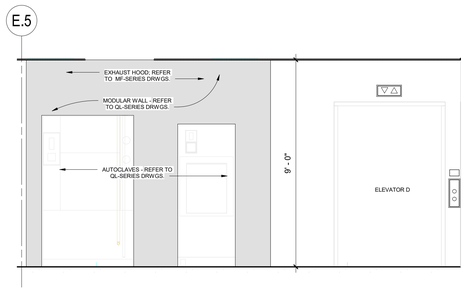
1 AI-629E | **CUSTODIAL 129 - SOUTH ELEVATION** | 3/8" = 1'-0"



2 AI-629E | **CUSTODIAL 129 - WEST ELEVATION** | 3/8" = 1'-0"



3 AI-629E | **COLLABORATION 130 SOUTH ELEVATION** | 3/8" = 1'-0"



4 AI-629E | **STERILIZER ALCOVE 151H2 - EAST ELEVATION** | 3/8" = 1'-0"

ACCESSORIES LEGEND

BCS	BABY CHANGING STATION
CG	CORNER GUARD; REFER TO AI-668
CR	CARD READER
DF-1	ACCESSIBLE DRINKING FOUNTAIN
FBS	FRP BACKSPLASH
FEC-1	RECESSED FIRE EXTINGUISHER CABINET
FEC-2	SURFACE MOUNTED FIRE EXTINGUISHER CABINET
FEC-3	BRACKET MOUNTED FIRE EXTINGUISHER
GB-1	REAR WALL GRAB BAR
GB-2	SIDE WALL GRAB BAR
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JG	JAMB GUARD; DETAIL 6/AI-668
LAV	LAVATORY
MR-1	2'-0" x 3'-0" MIRROR
MR-2	5'-0" x 4'-0" MIRROR
MR-3	7'-6" x 4'-0" MIRROR
MR-4	9'-0" x 4'-0" MIRROR
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ND-1	RECESSED SANITARY NAPKIN DISPOSAL
ND-2	PARTITION MOUNTED SANITARY NAPKIN DISPOSAL
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PS	PROJECTOR SCREEN
RR	RECYCLING RECEPTACLE, OWNER PROVIDED
RS	DIGITAL ROOM SCHEDULING SCREEN
SD	SURFACE MOUNTED SOAP DISPENSER (OWNER FURNISHED / CONTRACTOR INSTALLED) W/ CUTOUT IN MIRROR. REFER TO AG-021 FOR CUTOUT DIMENSIONS.
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UR-2	ACCESSIBLE URINAL
WB	WHITE BOARD
WC-1	WATER CLOSET
WC-2	ACCESSIBLE WATER CLOSET
WG	WALL PROTECTION SYSTEM
WR	WASTE RECEPTACLE

CABINET LEGEND

BC-01	BASE CABINET FULL HT DOOR
BC-02	BASE CABINET TYPICAL
BC-03	BASE CABINET 3 DRAWER
BC-04	BASE CABINET 4 DRAWER
BC-05	BASE CABINET OPEN
BC-06	BASE CABINET PULLOUT TRASH RECYCLE
BC-07	BASE COUNTERTOP WORKSURFACE
BC-08	ADA SINK WITH APRON
BC-09	BASE CABINET WITH SINK
UC-01	WALL CABINET TYPICAL
UC-02	WALL CABINET COPY SHELVES
UC-03	WALL CABINET 18" HIGH
UC-04	WALL CABINET MAILROOM SHELVES
TC-01	TALL CABINET 1 MICROWAVE
TC-02	TALL CABINET 3 MICROWAVES
TC-03	TALL CABINET 3 MICROWAVES
TC-04	TALL CABINET 1 MICROWAVE WITH CLOSURE PANEL
TC-05	TALL CABINET 3 MICROWAVES WITH CLOSURE PANEL

GENERAL NOTES - CASEWORK

A. ALL BASE CABINETS TO BE PLAM-1, U.N.O.
B. ALL UPPER CABINETS TO BE PLAM-1, U.N.O.
C. ALL TALL CABINETS TO BE PLAM-1, U.N.O.
D. ALL CASEWORK DIMENSIONS TO BE FIELD VERIFIED.

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CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

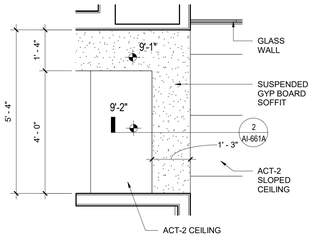
Drawn By: **Author**
Checked By: **Checker**
Client Number: 514
Project Number: 5350

MICHAEL J. BATTOCLETTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

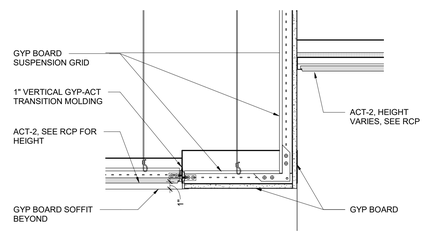
DRAWING TITLE
INTERIOR ELEVATIONS LEVEL ONE AREA 'B'

SHEET NO.
AI-629E

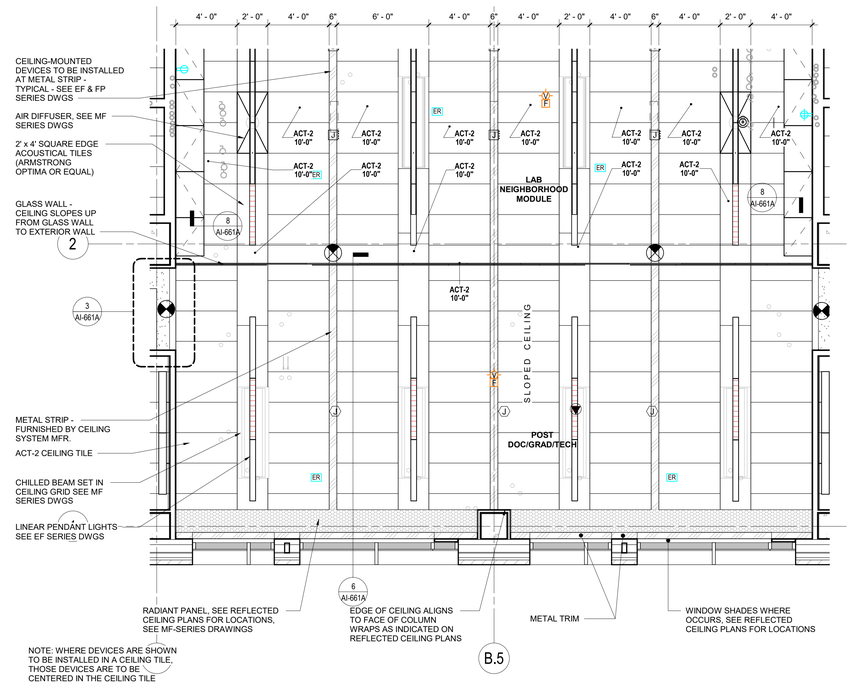
5/19/2020 11:52:48 AM



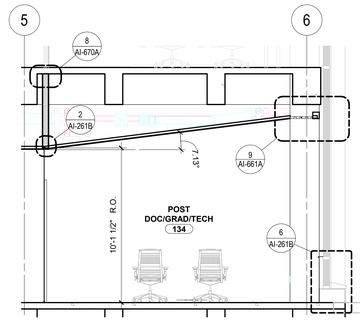
3 AI-661A — **TYPICAL DETAIL - HALLWAY AT LAB.** 1/2" = 1'-0"



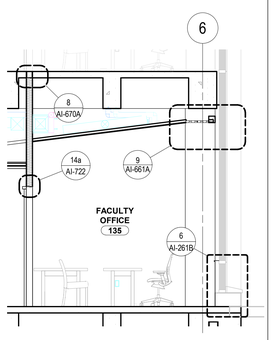
2 AI-661A — **SECTION DETAIL - GYP. SOFFIT** 1 1/2" = 1'-0"



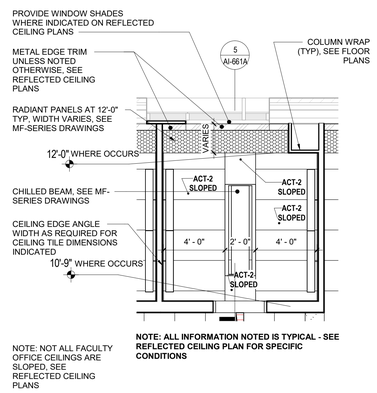
1 AI-661A — **RCP - TYPICAL POST/DOC/GRAD & LAB** 1/4" = 1'-0"



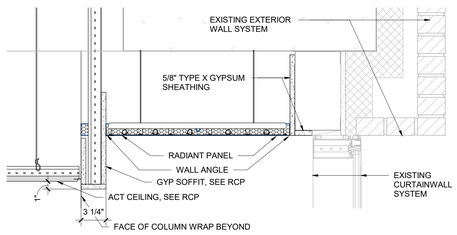
6 AI-661A — **SECTION - POST /DOC/GRAD** 1/4" = 1'-0"



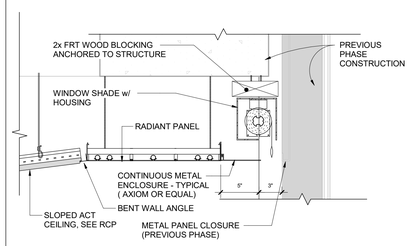
5 AI-661A — **SECTION - FACULTY OFFICE** 1/4" = 1'-0"



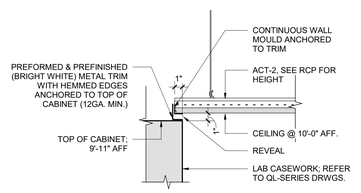
4 AI-661A — **RCP - TYPICAL FACULTY OFFICE** 1/4" = 1'-0"



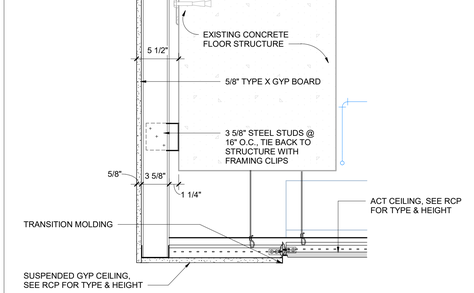
10 AI-661A — **DETAIL - CEILING TRANSITION** 1 1/2" = 1'-0"



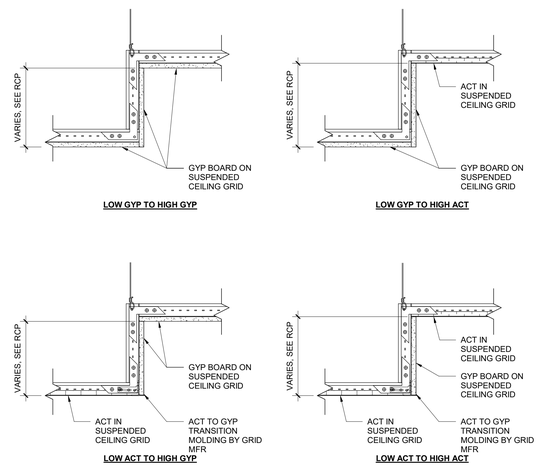
9 AI-661A — **DETAIL - RADIANT PANEL** 1 1/2" = 1'-0"



8 AI-661A — **CEILING AT WETLAB CASEWORK** 1 1/2" = 1'-0"



7 AI-661A — **DETAIL - RAILING** 1 1/2" = 1'-0"



11 AI-661A — **TYPICAL CEILING HEIGHT TRANSITIONS** 1 1/2" = 1'-0"

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1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

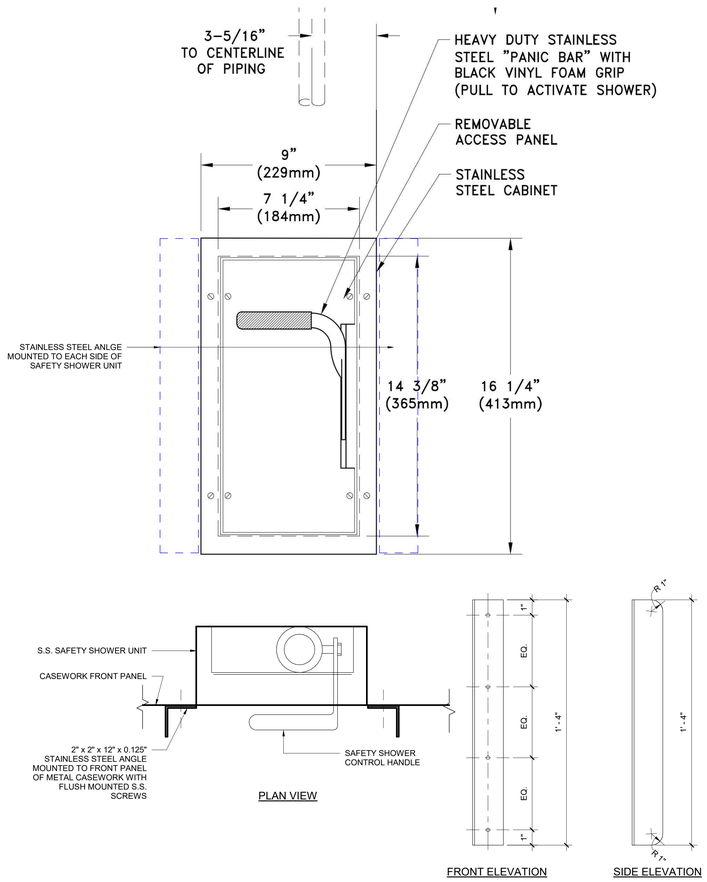
Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

MICHAEL J. BATTICCIOTTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

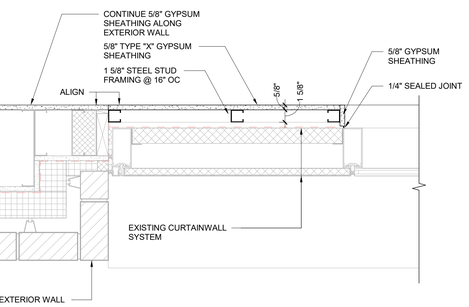
DRAWING TITLE
DETAILS - CEILING

SHEET NO.
AI-661A

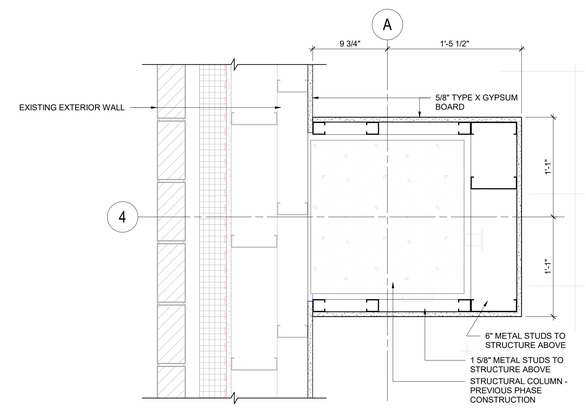
5/21/2020 1:38:03 PM



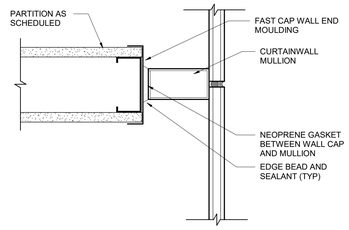
10 AI-670A **SAFETY SHOWER HANDLE / GUARD - LEVEL 1**
3" = 1'-0"



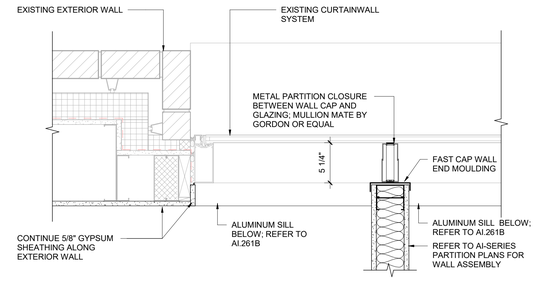
5 AI-670A **PLAN DETAIL**
1 1/2" = 1'-0"



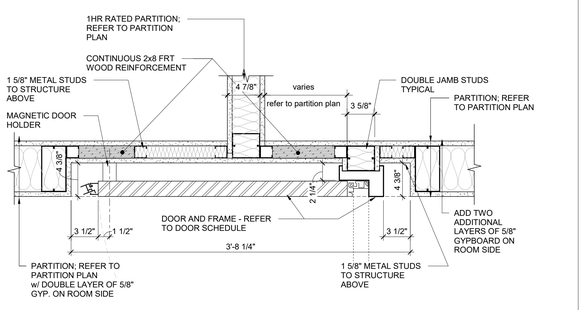
1 AI-670A **PLAN DETAIL**
1 1/2" = 1'-0"



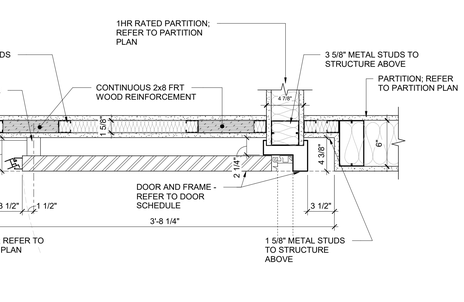
6 AI-670A **PLAN DETAIL - TYPICAL PARTITION AT MULLION**
3" = 1'-0"



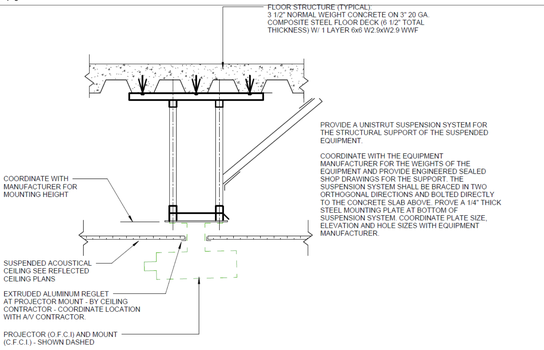
2 AI-670A **PLAN DETAIL**
1 1/2" = 1'-0"



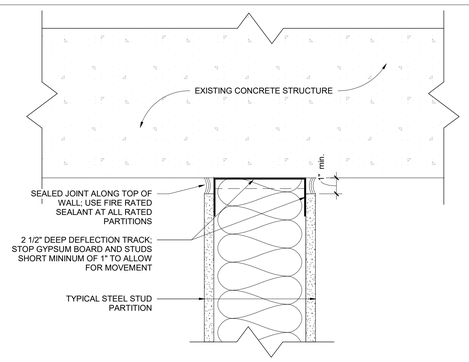
9 AI-670A **PLAN DETAIL**
1 1/2" = 1'-0"



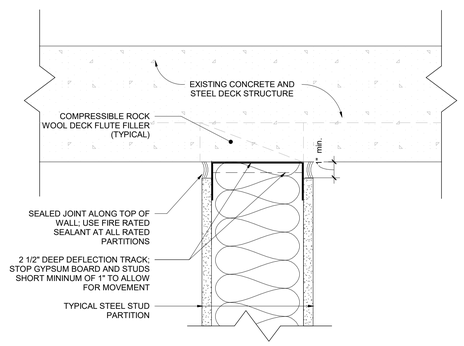
7 AI-670A **PLAN DETAIL**
1 1/2" = 1'-0"



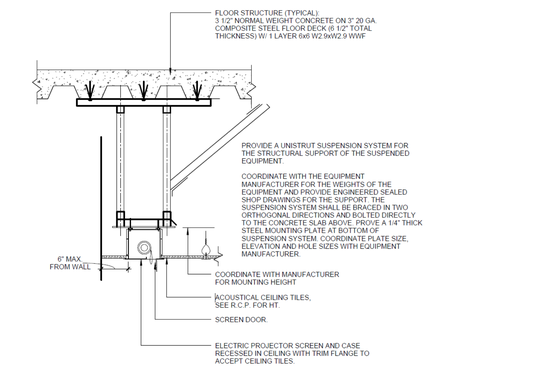
3 AI-670A **SECTION DETAIL - CEILING MOUNTED PROJECTOR**
1/2" = 1'-0"



8 AI-670A **TYP. STEEL STUD PARTITION - TOP OF WALL**
3" = 1'-0"



4 AI-670A **SECTION DETAIL - CEILING MOUNTED PROJECTION SCREEN**
1/2" = 1'-0"



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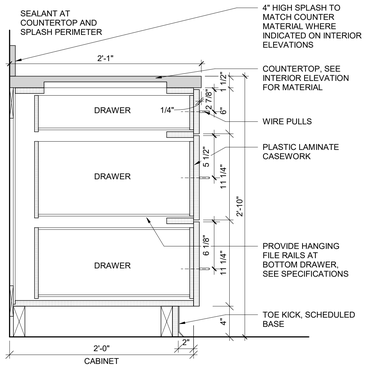
Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

MICHAEL J. BATTCOMBE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

DRAWING TITLE
DETAILS - MISCELLANEOUS

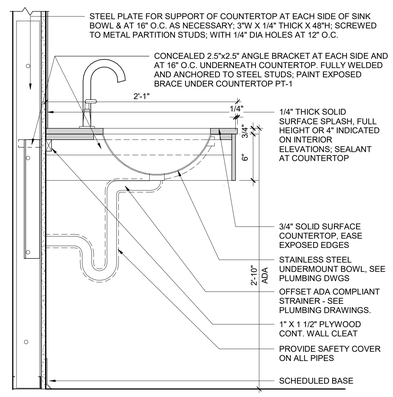
SHEET NO.
AI-670A

5/19/2020 11:53:46 AM



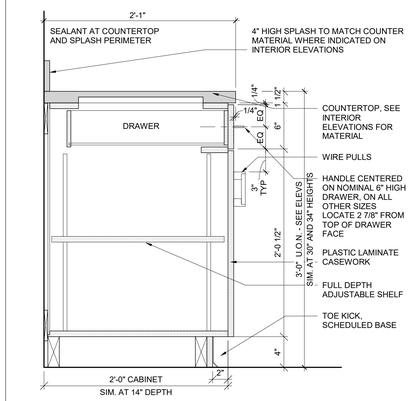
CASEWORK DETAIL - BASE CABINET 3-DRAWER

10 **BC-03**
AI-679 1 1/2" = 1'-0"



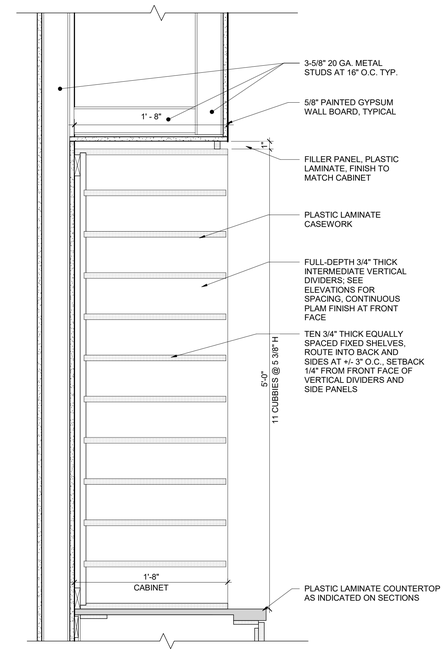
CASEWORK DETAIL - ADA SINK - PARALLEL APPROACH

9 **BC-08**
AI-679 1 1/2" = 1'-0"



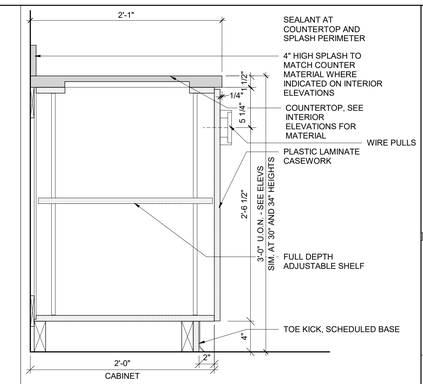
CASEWORK DETAIL - BASE CABINET TYPICAL

8 **BC-02**
AI-679 1 1/2" = 1'-0"



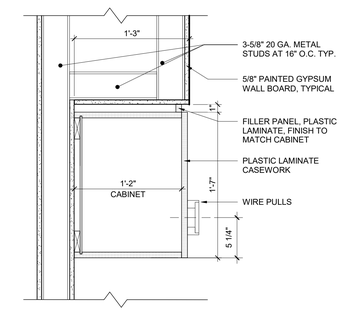
CASEWORK DETAIL - WALL CABINET COPY SHELVES

7 **UC-02**
AI-679 1 1/2" = 1'-0"



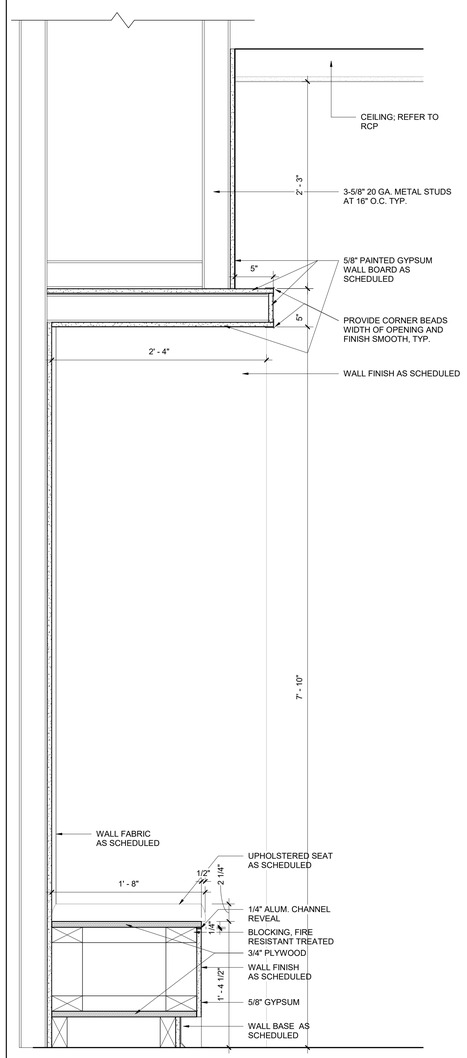
CASEWORK DETAIL - BASE CABINET FULL HT DOOR

11 **BC-01**
AI-679 1 1/2" = 1'-0"

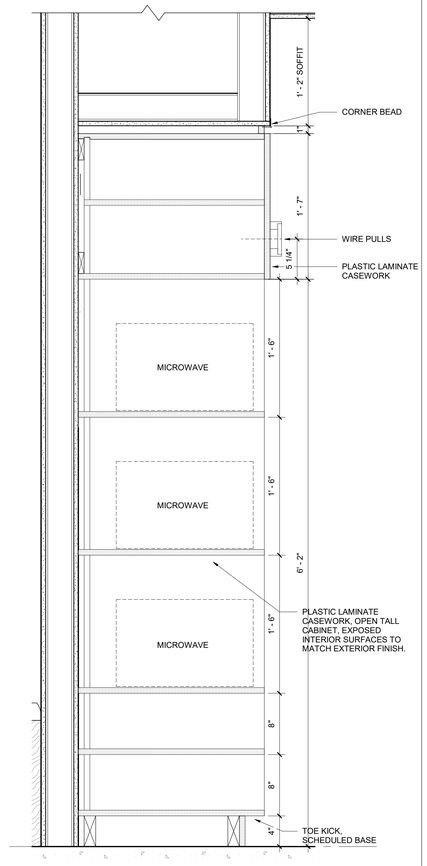


CASEWORK DETAIL - WALL CABINET 18" HIGH

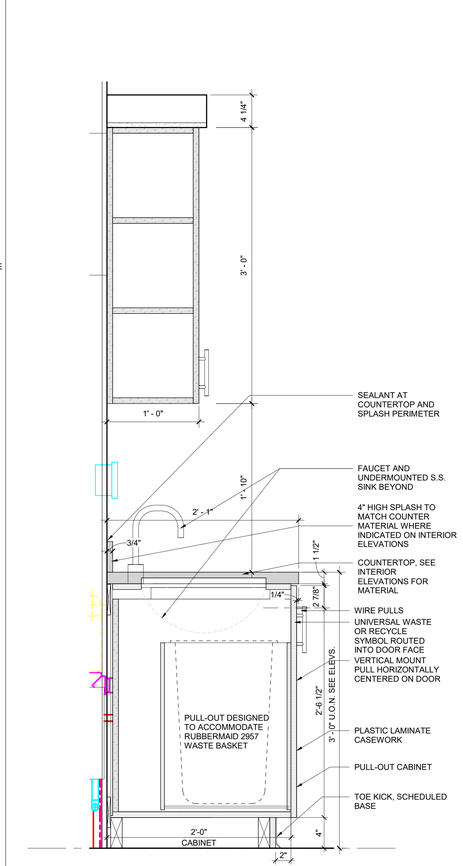
6 **UC-03**
AI-679 1 1/2" = 1'-0"



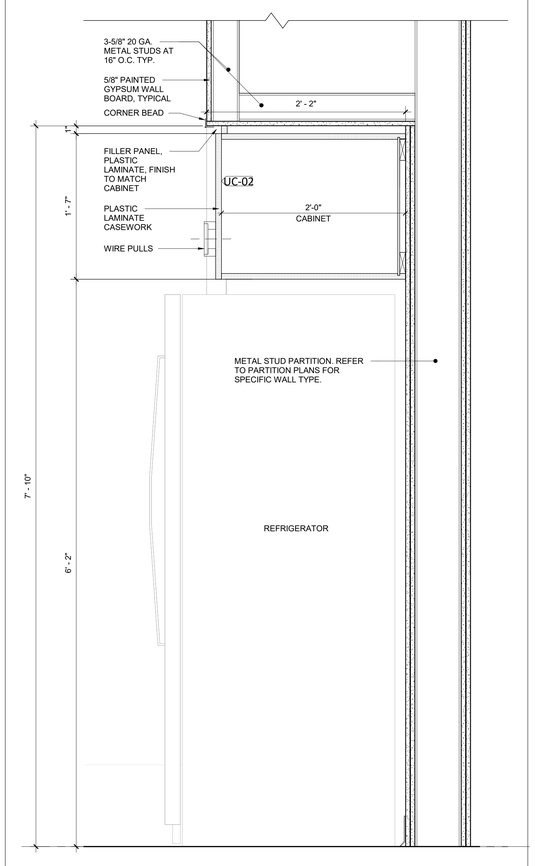
5 **SECTION - SEATING ALCOVE**
AI-679 1 1/2" = 1'-0"



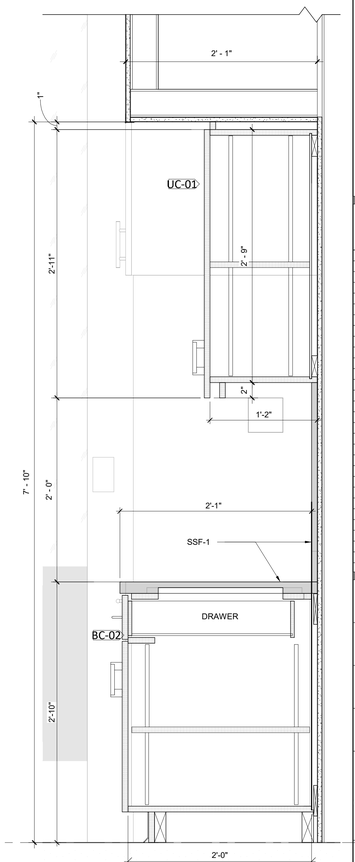
4 **DETAIL - TC**
AI-679 1 1/2" = 1'-0"



3 **DETAIL - UC-01 / BC-06**
AI-679 1 1/2" = 1'-0"



2 **REFRIGERATOR W/ UPPER CABINET**
AI-679 1 1/2" = 1'-0"



1 **DETAIL - CASEWORK ALCOVE**
AI-679 1 1/2" = 1'-0"

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UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DRP #5 - Addendum #1	12/22/16
2	DD ISSUANCE - NIH	02/05/20
3	CD ISSUANCE - NIH	04/14/20
4	BID & PERMIT - NIH	05/22/20

Drawn By: **Author**
Checked By: **Checker**
Client Number: 514
Project Number: 5350

MICHAEL J. BATTOCLETTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY

DRAWING TITLE

CASEWORK SECTIONS

SHEET NO.

AI-679

5/19/2020 11:54:06 AM

DOOR AND FRAME SCHEDULE - PHASE 2 / LEVEL 1

DOOR NUMBER	TO ROOM NUMBER	TO ROOM NAME	DOOR					FRAME			DETAILS		RATING	CARD READER	HARDWARE SET	REMARKS
			WIDTH	HEIGHT	TYPE	FINISH	GLAZING	TYPE	FINISH	GLAZING	HEAD	JAMB				
100EA	100E	CORRIDOR	6'-0 1/2"	9'-0"					PT		9 / AI-722	12 / AI-670	1 HR		29	3, 9
100EB	100EN	CORRIDOR	6'-0 1/2"	9'-0"					PT		9 / AI-722	12 / AI-670	1 HR		29	3, 9
100WA	100W	CORRIDOR	6'-0 1/2"	9'-0"					PT		9 / AI-722	12 / AI-670	1 HR		29	3, 9
100WB	100W	CORRIDOR	6'-0 1/2"	9'-0"					PT		9 / AI-722	12 / AI-670	1 HR		29	3, 9
115	144	CONFERENCE ROOM	3'-6"	8'-0"	GL-F	--	GL-3	--	--	--	1 / AI-261B	--	--		23	10
116	116	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
117	117	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
119	119	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
120	120	OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
121	121	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
122	122	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
124	124	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
125	125	OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
126	126	COPY	3'-0"	8'-0"	--	--	--	HM-003	PT	--	5 / AI-722	2 / AI-722	--			18
129	129	CUSTODIAL	3'-0"	7'-0"	HM-F	PT	--	HM-001	PT	--	4 / AI-722	1 / AI-722	--	❁	8.0	
131	131	OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
132	132	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
135	135	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
136	136	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
137	137	OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
138	138	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
140	140	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
141	141	FACULTY OFFICE	3'-6"	7'-8"	WD-N2	TF	GL-2	HM-003	PT	--	14a / AI-722	14b / AI-722	--		22	2
151A	151	LAB NEIGHBORHOOD MODULE	3'-6"	8'-0"	GL-F	--	GL-3	--	--	--	3 / AI-261B	--			23.1	11
151AA	151A	FUME HOOD ROOM	4'-0"	7'-0"	--	--	--	HM-003	PT	--	5 / AI-722	2 / AI-722	--			18
151B	151	LAB NEIGHBORHOOD MODULE	3'-6"	8'-0"	GL-F	--	GL-3	--	--	--	3 / AI-261B	--			23.1	11
151BA	151B	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
151C	151	LAB NEIGHBORHOOD MODULE	3'-6"	8'-0"	GL-F	--	GL-3	--	--	--	3 / AI-261B	--			23.1	11
151CA	151C	LINEAR EQUIP ROOM	5'-0"	7'-0"	--	--	--	HM-003	PT	--	5 / AI-722	2 / AI-722	--			18
151CB	152H	LINEAR EQUIP ROOM	5'-0"	7'-0"	OC	PT	GL-2	ST-001	PT	--	7 / AI-722	8 / AI-722	1 HR		1	15
151D	151	LAB NEIGHBORHOOD MODULE	3'-6"	8'-0"	GL-F	--	GL-3	--	--	--	3 / AI-261B	--			23.1	11
151DA	151D	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
151EA	151E	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
151FA	151F	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
151GA	151G	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
151GB	151G	PROCEDURE ROOM	2'-6"	7'-0"	HM-F	PT	--	HM-001	PT	--	4 / AI-722	1 / AI-722	--		15	
151HA	151H	LINEAR EQUIP ROOM	5'-0"	7'-0"	--	--	--	HM-003	PT	--	5 / AI-722	2 / AI-722	--			18
151JA	151J	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
151KA	151K	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
152A	152	LAB NEIGHBORHOOD MODULE	3'-6"	8'-0"	GL-F	--	GL-3	--	--	--	3 / AI-261B	--			23.1	11
152AA	152A	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
152B	152	LAB NEIGHBORHOOD MODULE	3'-6"	8'-0"	GL-F	--	GL-3	--	--	--	3 / AI-261B	--			23.1	11
152BA	152B	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
152C	152	LAB NEIGHBORHOOD MODULE	3'-6"	8'-0"	GL-F	--	GL-3	--	--	--	3 / AI-261B	--			23.1	11
152CA	152C	LINEAR EQUIP ROOM	5'-0"	7'-0"	--	--	--	HM-003	PT	--	5 / AI-722	2 / AI-722	--			18
152D	152	LAB NEIGHBORHOOD MODULE	3'-6"	8'-0"	GL-F	--	GL-3	--	--	--	3 / AI-261B	--			23.1	11
152DA	152D	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
152EA	152E	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
152FA	152F	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
152GA	152G	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
152HA	152H	LINEAR EQUIP ROOM	5'-0"	7'-0"	--	--	--	HM-003	PT	--	5 / AI-722	2 / AI-722	--			18
152JA	152J	PROCEDURE ROOM	4'-0"	7'-0"	WD-N	TF	GL-2	HM-002	PT	--	4 / AI-722	1 / AI-722		❁	10	
152KA	152K	FUME HOOD ROOM	4'-0"	7'-0"	--	--	--	HM-003	PT	--	5 / AI-722	1 / AI-722	--			18

ROOM FINISH SCHEDULE - PHASE 2 / LEVEL ONE

NUMBER	NAME	FLOOR	BASE	WALLS	CEILING	NOTES
116	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
117	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
118	POST DOC/GRAD/TECH	RSF-2	RB-1	PT-1	ACT-2	
119	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
120	OFFICE	CPT-52	RB-1	PT-1	ACT-2	FLEX OFFICE
121	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
122	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
123	POST DOC/GRAD/TECH	RSF-2	RB-1	PT-1	ACT-2	
124	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
125	OFFICE	CPT-52	RB-1	PT-1	ACT-2	FLEX OFFICE
126	COPY	RSF-1	RB-1	PT-1	ACT-2	
127	COLLABORATION	CPT-52	RB-1	PT-1	ACT-2	
128	ELECTRICAL	EXISTING	EXISTING	EXISTING	--	
129	CUSTODIAL	CS-1	RB-1	PT-1	NO CEILING	
130	COLLABORATION	CPT-52	RB-1	PT-1	ACT-2	
131	OFFICE	CPT-52	RB-1	PT-1	ACT-2	FLEX OFFICE
132	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
134	POST DOC/GRAD/TECH	RSF-2	RB-1	PT-1	ACT-2	
135	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
136	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
137	OFFICE	CPT-52	RB-1	PT-1	ACT-2	FLEX OFFICE
138	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
139	POST DOC/GRAD/TECH	RSF-2	RB-1	PT-1	ACT-2	
140	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
141	FACULTY OFFICE	CPT-52	RB-1	PT-1	ACT-2	
142	KITCHEN	RSF-1	RB-1	PT-1	ACT-2	
143	COLLABORATION	RSF-1	RB-1	PT-1	ACT-2	
144	CONFERENCE ROOM	CPT-52	RB-1	PT-1	ACT-1	
151	LAB NEIGHBORHOOD MODULE	RSF-2	RB-1	PT-1	ACT-2	
151A	FUME HOOD ROOM	RSF-2	RB-1	PT-1	ACT-1	
151B	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
151C	LINEAR EQUIP ROOM	RSF-2	RB-1	PT-1	ACT-1	
151D	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
151E	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
151F	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
151G	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
151H	LINEAR EQUIP ROOM	RSF-2	RB-1	PT-1	ACT-1	
151H1	ENVIRONMENTAL ROOM	NO FLOORING	NO BASE	NO FINISH	NO CEILING	
151H2	STERILIZER ALCOVE	RES-1	RB-1	PT-1	ACT-2	
151J	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
151K	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
152	LAB NEIGHBORHOOD MODULE	RSF-2	RB-1	PT-1	ACT-2	
152A	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
152B	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
152C	LINEAR EQUIP ROOM	RSF-2	RB-1	PT-1	ACT-1	
152D	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
152E	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
152F	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
152G	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
152H	LINEAR EQUIP ROOM	RSF-2	RB-1	PT-1	ACT-1	
152J	PROCEDURE ROOM	RSF-2	RB-1	PT-1	ACT-1	
152K	FUME HOOD ROOM	RSF-2	RB-1	PT-1	ACT-1	

GENERAL NOTES - DOOR SCHEDULE

A. REFER TO DRAWING AI-724 FINISH LEGEND FOR GLAZING TYPES
B. REFER TO DRAWING AI-724 FINISH LEGEND FOR DOOR AND FRAME FINISHES
C. REFER TO DRAWING AI-722 FOR DOOR AND FRAME ELEVATIONS
D. REFER TO SPECIFICATIONS 087105 & 102215 FOR DOOR HARDWARE SETS

DOOR SCHEDULE REMARKS LEGEND PHASE 2

1 EXISTING DOOR
2 WOOD SLIDING DOOR DIMENSIONS OVERLAP FRAMED OPENING, HM FRAME SIZE TO BE COORDINATED WITH DOOR HARDWARE
3 5'-4" CLEAR CORRIDOR DIMENSION
4 VERIFY DOOR DIMENSIONS BASED ON EXISTING ROUGH OPENING.
5 CARD READER BOTH SIDES OF DOOR
6 CARD READER BOTH SIDES OF DOOR, DELAYED EGRESS WITH LOCAL ALARM, BIOMETRIC EYE SCANNER
7 CARD READER BOTH SIDES OF DOOR, DELAYED EGRESS WITH LOCAL ALARM
8 PREPARE DOOR FOR FUTURE CARD READER
9 INTEGRATED TOTAL DOOR SYSTEM; DOORS TO BE ON HOLD OPENS - BOTH LEAFS HELD OPEN AT 90 DEGREES
10 GLASS SLIDING DOOR
11 GLASS SWING DOOR
12 PREPARE DOOR FOR FUTURE CARD READER AND FUTURE AUTOMATIC OPERATOR
13 ALL EXISTING DOOR OPENING DIMENSIONS TO BE FIELD VERIFIED.
14 PAINT DOOR FRAME TO MATCH ADJACENT WALL COLOR, PT-6
15 OVERHEAD COILING FIRE RATED DOOR.
16 FIRE RATED GLASS DOOR AND SIDE-LITE SYSTEM - TGP OR EQUAL.
17 UPDATE DOOR HARDWARE TO EXISTING PHASE 1 INSTALLED DOOR AND FRAME.
18 CASED OPENING
19 36" DIAMETER REVOLVING DOOR (DARK ROOM)

ABBREVIATIONS

AL	ALUMINUM
CA	CLEAR ANODIZED
F	FLUSH
FG	FULL GLASS
FPR	FLUOROPOLYMER FINISH
FRP	FIBERGLASS REINFORCED POLYESTER
GL	GLAZING
HM	HOLLOW METAL
MFR	MANUFACTURER STANDARD
MTL	METAL
N	NARROW LITE
OC	OVERHEAD COILING DOOR
OG	OVERHEAD COILING GRILLE
PT	PAINT
SS	STAINLESS STEEL
ST	STEEL
TF	TRANSPARENT FINISH
WD	WOOD

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THINK CREATE REALIZE

HGA

JACOBS Consultancy

AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
760 Press Avenue, Lexington, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

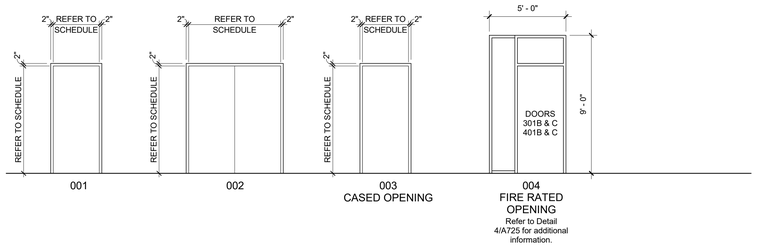
Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

MICHAEL J. BATTICOTTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

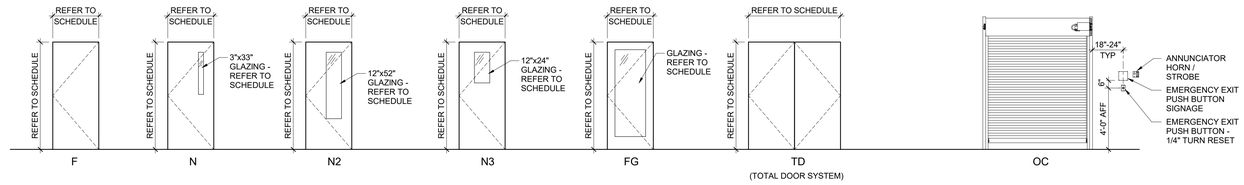
DRAWING TITLE
DOOR AND ROOM FINISH SCHEDULE LEVEL ONE

SHEET NO.
AI-721A

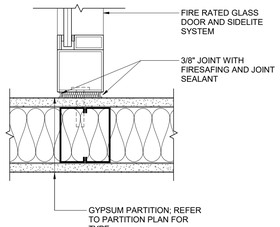
5/19/2020 11:54:34 AM



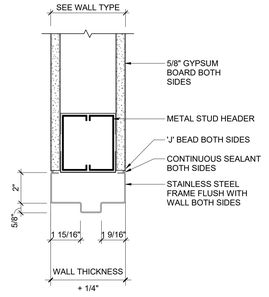
14 AI-722 **DOOR FRAME ELEVATIONS** 1/4" = 1'-0"



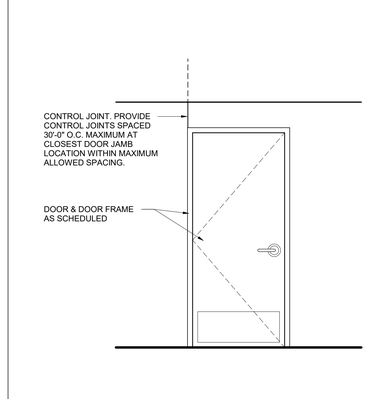
20 AI-722 **DOOR ELEVATIONS** 1/4" = 1'-0"



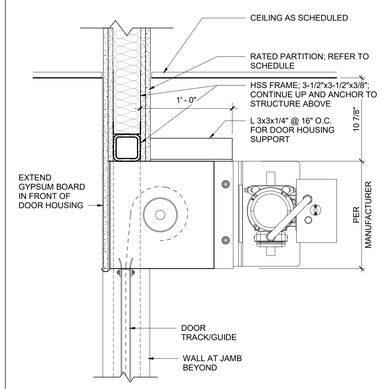
16 AI-722 **DOOR / SITELINE JAMB - FIRE RATED** 3" = 1'-0"



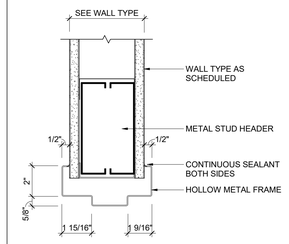
13 AI-722 **HEAD DETAIL - VIVARIUM** 3" = 1'-0"



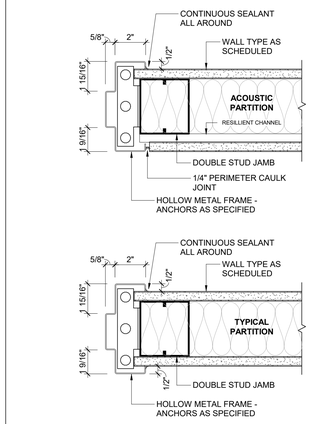
10 AI-722 **TYPICAL C.J. ALIGNED TO DOOR** 1/2" = 1'-0"



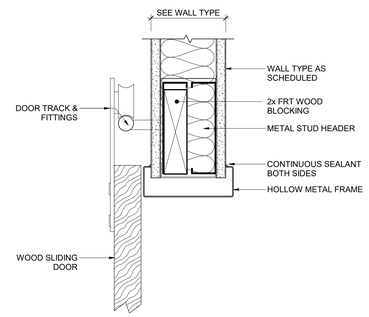
7 AI-722 **DOOR HEAD - O/H COILING; FIRE RATED** 1 1/2" = 1'-0"



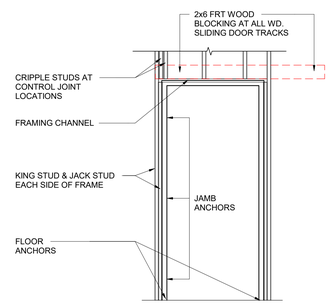
4 AI-722 **HEAD DETAIL** 3" = 1'-0"



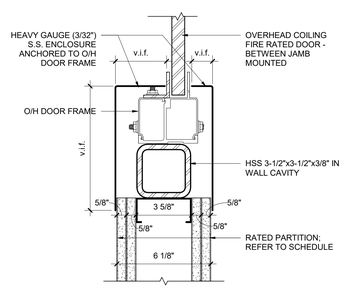
1 AI-722 **JAMB DETAIL** 3" = 1'-0"



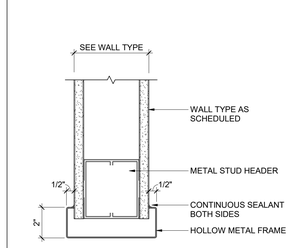
14a AI-722 **HEAD DETAIL - WOOD SL. DOOR** 3" = 1'-0"



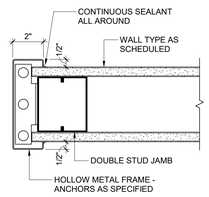
11 AI-722 **TYPICAL DOOR OPENING FRAMING** 1/2" = 1'-0"



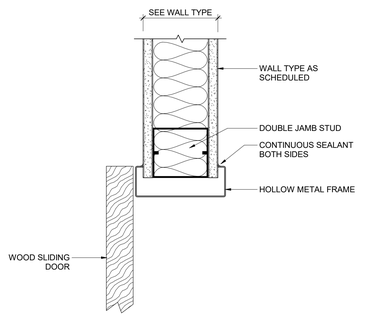
8 AI-722 **DOOR JAMB - O/H COILING** 3" = 1'-0"



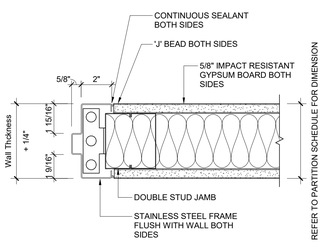
5 AI-722 **HEAD DETAIL - CASED OPENING** 3" = 1'-0"



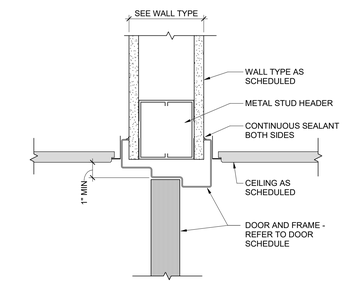
2 AI-722 **JAMB DETAIL - CASED OPENING** 3" = 1'-0"



14b AI-722 **HEAD DETAIL - WOOD SL. DOOR** 3" = 1'-0"



12 AI-722 **JAMB DETAIL - VIVARIUM** 3" = 1'-0"



9 AI-722 **HEAD DETAIL** 3" = 1'-0"

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AEI Affiliated Engineers

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760 Press Avenue, Lexington, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/18
2	CD 100% REVIEW	10/15/18
3	ISSUE FOR BID & PERMIT	11/15/18
4	P2 - ASI #002	05/06/19
5	DD ISSUANCE - NIH	02/05/20
6	CD ISSUANCE - NIH	04/14/20
7	BID & PERMIT - NIH	05/22/20

Drawn By **Author**
Checked By **Checker**
Client Number 514
Project Number 5350

MICHAEL J. BATTOCLETTE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

DRAWING TITLE

DOOR AND FRAME DETAILS

SHEET NO.

AI-722

8/25/2020 1:03:08 PM

FLOOR FINISHES

KEY	MATERIAL	SPECIFICATION	SALES & TESTING DATA
CPT-52	CARPET TILE 	INTERFACE SILVER LININGS COLOR: CUSTOM; 264276-008 SIZE: 25CM x 1M	Susan Margraf 513-200-4734 susan.margraf@interface.com
CS-1	SEALED CONCRETE 	V.O.C. COMPLIANT, WATER-BASED, NON-YELLOWING ACRYLIC SEALER	
CS-2	POLISHED CONCRETE 	TBD	
CTF-1	CERAMIC TILE 	ANATOLIA TILE AND STONE NOTION PORCELEIN TILE COLOR: CARBON 68-314 SIZE: TILE 6" X 24" AND 12" X 24" REFER TO SHEET 22/AI-672 FOR PATTERN DETAIL GROUT: TEC: 941 RAVEN	Marsha McCauley 513-759-9325 marsha.mccauley@daltile.com
CTF-2	CERAMIC TILE 	RBC TILE & STONE BACK BAY AV249 COLOR: 249 SIZE: TILE 6" X 24" RECTIFIED; RUNNING BOND - HORIZONTAL GROUT: LATICRETE; #22 MIDNIGHT BLACK	Elke Bangerter 763-559-5531 ebangerter@rbctile.com
CTF-3	CERAMIC TILE* 	SHADES BY CROSSVILLE SEMI-POLISH TILE COLOR: INK AV249 SIZE: TILE 12" X 24" REFER TO 1/AI-724 FOR PATTERN DETAIL GROUT: TEC: 941 RAVEN	www.crossvilleinc.com *MATCH CTF-1
CTF-4	CERAMIC TILE 	SHADES BY CROSSVILLE SEMI-POLISH TILE COLOR: INK AV249 SIZE: TILE 3" X 1" MOSAIC GROUT: TEC: 941 RAVEN SHOWER FLOOR ONLY	www.crossvilleinc.com
RES-1	RESINOUS FLOORING 	SIKAFLOOR MERFLEX WATERPROOFING BROADCAST SYSTEM COLOR: RAL 7042 TRAFFIC GRAY SEAMLESS COVE TRANSITION AT ALL WALLS AND FLOOR PENETRATIONS	Jim Hendley 513-638-0519 Sika Corporation
RES-2	RESINOUS FLOORING 	URETHANE CEMENT FLOORING SYSTEM COLORS: TBD BY ARCHITECT SEAMLESS COVE TRANSITION WHERE INSTALLED WITH PT-4 WALL FINISH	Jim Hendley 513-638-0519 Sika Corporation
RSF-1	RESILIENT SHEET FLOORING 	NORA SYSTEMS, INC NORAPLAN DEGREE COLOR: 6328 ST PAUL	Brandon Lyons 502-780-1356 brandon.lyons@nora.com
RSF-2	RESILIENT SHEET FLOORING 	NORA SYSTEMS, INC NORAPLAN DEGREE COLOR: 6329 DENVER	Brandon Lyons 502-780-1356 brandon.lyons@nora.com
RSF-3	RESILIENT SHEET FLOORING 	NORA SYSTEMS, INC NORAPLAN DEGREE COLOR: 6330 JUNEAU	Brandon Lyons 502-780-1356 brandon.lyons@nora.com
VCT	VINYL COMPOSITION TILE FLOORING 	ARMSTRONG MIGRATIONS BBT COLOR: PLATINUM GRAY T3501	
TZO-1 (ELEVATORS)	TERRAZZO ELEVATOR FLOORING 	T&M SUPPLY TEROXY RESIN SYSTEM 3/8" EPOXY TERRAZZO 100% DOMESTIC MARBLE AGGREGATE AGGREGATE SIZE: 0S, 1S, 2S INSTALL PER NTMA TECH BULLETIN #T-22	T&M Supply Terrazzo Division 847-947-7300

BASE FINISHES

KEY	MATERIAL	SPECIFICATION	SALES & TESTING DATA
RB-1	RUBBER BASE	MANNINGTON BURKE BASE 660 ROCKY	Ivan Stoler 718-526-7890 WWW.ALLSTATERUBBER.COM
RB-4	RUBBER BASE W/ LUMINOUS STRIP	TARKETT JOHNSONITE SAFE-T-FIRST PDCN-XX-4" x 120' COLOR: 40 BLACK	Scott Stertmeyer 440-708-5759 scott.stertmeyer@tarkett.com
RB-5	RUBBER BASE	MANNINGTON COLOR: 130 PAISLEY BURKE BASE	
RB-6	RUBBER BASE	MANNINGTON BURKE BASE COLOR: 505 TRUE BLUE	
RB-7	RUBBER BASE	MANNINGTON BURKE BASE COLOR: 283 EVERGREEN	
CTB	CERAMIC TILE BASE	RBC TILE TBD REFER TO 4/AI-469 FOR DETAIL	
WB-1	WOOD BASE MOULDING	4" x 3/4" PRE-PRIMED POPLAR REFER TO 19/AI-672 FOR DETAIL	

STAIR TREADS

KEY	MATERIAL	SPECIFICATION	SALES & TESTING DATA
STAIR-E	RUBBER	TARKETT JOHNSONITE SAFE-T-FIRST PVIRH-XX-RD COLOR: 40 BLACK	Scott Stertmeyer 440-708-5759 scott.stertmeyer@tarkett.com

WALL FINISHES

KEY	MATERIAL	SPECIFICATION	SALES & TESTING DATA
MP-1	1/8" ALUMINUM PLATE	1/8" ALUMINUM PLATE PANELS, FINISH TO MATCH EXTERIOR ALUMINUM PLATE PANELS	
PT-1	INTERIOR PAINT	BEHR COLOR: FROST 57U	Jeffrey Madigan 857-201-9402 JMADIGAN@BEHRBPAINT.COM
PT-4	EPOXY PAINT	SIKA CORPORATION DESCOGLAS RF / 307W COLOR TO BE SELECTED FROM MANUFACTURER STANDARD COLORS SEAMLESS COVE TRANSITION WHERE INSTALLED WITH RES-1 FLOORING	Jim Hendley Sika Corporation 513-638-0519
PT-5	INTERIOR PAINT	NOT USED	
PT-6	INTERIOR PAINT	BENJAMIN MOORE COLOR: TROUT GRAY 2124-20	Chris Drigans 751-410-0176 chris.drigans@benjaminmoore.com
PT-9	INTERIOR PAINT	TBD	
PT-10	INTERIOR PAINT	TBD	
PT-11	INTERIOR PAINT	TBD	
CTW-1	CERAMIC WALL TILE	TILE x DESIGN SELF EVOLVE COLOR: MATTE WHITE; SIZE: 2" X 16" GROUT: LATICRETE; #18 SAUTERNE	info@tilexdesign.com 763-551-5900
CTW-2	CERAMIC WALL TILE	RBC TILE & STONE BACK BAY AV249 COLOR: 249 SIZE: TILE 6" X 24" RECTIFIED; RUNNING BOND - VERTICAL GROUT: LATICRETE; #22 MIDNIGHT BLACK	Elke Bangerter 763-559-5531 ebangerter@rbctile.com
SSW-1	SOLID SURFACE WALL PANELING	SWAN SS-60-3 SWANSTONE BATH WALL KIT COLOR: WHITE (010)	Joe Grote 731-438-0535 jgrote@praxiscompanies.com
WD-1	WOOD WALL PANELING	DOOGE VENEERS QTD HICKORY CW QUARTER CUT	doogeveneers.com 616-698-6450

CEILINGS

KEY	MATERIAL	SPECIFICATION	SALES & TESTING DATA
GYP-1	5/8" GYPSUM BOARD	5/8" GYPSUM BOARD ON SUSPENSION SYSTEM	
GYP-6	5/8" GYPSUM BOARD	5/8" GYPSUM BOARD ON LGMF SUPPORT SYSTEM	
ACT-1	SUSPENDED ACOUSTICAL CEILING TILE NRC: 0.95	2x2 ARMSTRONG OPTIMA SQUARE TEGULAR ON 15/16" GRID, WHITE	VL Monty Gillespie 513-309-1495 vlgillespie@armstrongceilings.com
ACT-2	SUSPENDED ACOUSTICAL CEILING TILE NRC: 0.95	2x4 ARMSTRONG OPTIMA SQUARE TEGULAR ON 15/16" GRID, WHITE SOME ROOMS TO RECEIVE 6" x 48" METALWORKS UNPERFORATED PANELS, SEE REFLECTED CEILING PLANS FOR LOCATIONS	VL Monty Gillespie 513-309-1495 vlgillespie@armstrongceilings.com
ACT-4	SUSPENDED ACOUSTICAL CEILING TILE NRC: 0.95	2x4 ARMSTRONG OPTIMA SQUARE LAY-IN ON 15/16" GRID, WHITE ACT-4 TO BE USED IN AS ACCENT TILE IN ACT-2 CEILINGS. SEE REFLECTED CEILING PLANS.	VL Monty Gillespie 513-309-1495 vlgillespie@armstrongceilings.com
ACT-5	VIVARIUM CEILING SYSTEM	CEILING TILE: 2X2 POLYMER CORE 2 PANEL BY LSP CEILING GRID: LSP 'GRIDLOCK' CEILING SUSPENSION SYSTEM BY LSP PROVIDE HOLD DOWN CLIPS	Life Science Products, Inc. 1-800-638-9874 www.lspinc.com
MP-1	1/8" ALUMINUM PLATE	1/8" ALUMINUM PLATE PANELS, FINISH TO MATCH EXTERIOR ALUMINUM PLATE PANELS	
PT-4	EPOXY PAINT	SIKA CORPORATION DESCOGLAS RF / 307W COLOR TO BE SELECTED FROM MANUFACTURER STANDARD COLORS	Jim Hendley Sika Corporation 513-638-0519

GLAZING TYPES

KEY	MATERIAL	SPECIFICATION	SALES & TESTING DATA
GL-2	SAFETY GLAZING	1/4" TEMPERED GLAZING	
GL-3	SAFETY GLAZING	1/2" TEMPERED GLAZING	
GL-4	SAFETY GLAZING	1/4" RED LAMINATED GLAZING	
GL-5	SAFETY GLAZING	1/4" PRIVACY WITH RED LAMINATED GLAZING	
GL-7	SAFETY GLAZING	1/4" LAMINATED GLAZING	

CASEWORK FINISHES

KEY	MATERIAL	SPECIFICATION	SALES & TESTING DATA
PLAM-1	PLASTIC LAMINATE	WILSONART COLOR: 4880-38 CARBON MESH	Donna Arlapad 800-736-3524 donnaariapad@flagginc.com
PLAM-2	PLASTIC LAMINATE	ABET LAMINATI COLOR: 437 SEI	
PLAM-3	PLASTIC LAMINATE	PIONITE COLOR: SB040 BLUEBERRY HILL	
PLAM-4	PLASTIC LAMINATE	PIONITE COLOR: SB027-SD SUMMER VACATION	
PLAM-5	PLASTIC LAMINATE	ARBORITE COLOR: S-583-CA FERN	
SSF-1 & SSF-2	SOLID SURFACE COUNTERTOP	DUPONT CORIAN QUARTZ COLOR: CLOUD WHITE	www.dupont.com
SSF-3	SOLID SURFACE COUNTERTOP WITH INTEGRAL SINK	DUPONT CORIAN QUARTZ COLOR: BLACK QUASAR SINK - BOLD 690 GLACIER WHITE	www.dupont.com
SSF-4	SOLID SURFACE WINDOW SILL	DUPONT CORIAN SOLID SURFACE COLOR: DESIGNER WHITE	www.dupont.com

WALL PROTECTION

KEY	MATERIAL	SPECIFICATION	SALES & TESTING DATA
BPR-1	ALUMINUM RAIL WALL GUARD	ALUMINUM SANI-RAIL ASR-2	Frank McDonald frankmcdonald@chartermi.net
FBS	FRP BACK SPLASH	MARLITE STANDARD FRP FINISH: SMOOTH COLOR: S100G WHITE APPLY IN ALL CUSTODIAL ROOMS AT MOP SINK, INCLUDING PHASE 1 EXISTING SINKS: EXISTING MOP SINK QUANTITY: 8 (018, 071A, 188, 103A, 229, 283, 306, 329) NEW MOP SINK QUANTITY: 6 REFER TO ELEVATION 5/AI-628D	Frank McDonald frankmcdonald@chartermi.net
CG-1	STAINLESS STEEL CORNER GUARD	LIFE SCIENCE PRODUCTS, INC.	Frank McDonald frankmcdonald@chartermi.net
CG-2	RUBBER CORNER GUARD	TARKETT JOHNSONITE SAFE-T-FIRST PVBGN-XX-4" COLOR: 50 WHITE	Scott Stertmeyer 440-708-5759 scott.stertmeyer@tarkett.com

WINDOW TREATMENTS

KEY	MATERIAL	SPECIFICATION	SALES & TESTING DATA
SH-1 (MANUAL SHADE)	ROLLER SHADES	MECHO SHADE, MECHO/5 EXTENDED BRACKET WITH CLOSURE PANEL AT SHADE & ADJACENT AREAS WITHOUT SHADE SHADECLOTH: SOHO COLLECTION,1600 (3% OPEN) 1612 THOMPSON (CHARCOAL)	Jeannine Land 216-221-9755 jland@kma.biz
SH-1A (AUTOMATED SHADE)	ROLLER SHADES	MECHO SHADE ELECTRO/1 EXTENDED BRACKET WITH CLOSURE PANEL AT SHADE & ADJACENT AREAS WITHOUT SHADE SHADECLOTH: SOHO COLLECTION, 1600 (3% OPEN) 1612 THOMPSON (CHARCOAL)	Jeannine Land 216-221-9755 jland@kma.biz
CUR-1	BLACKOUT CURTAIN	BLACKOUT CURTAINS.COM BLACK/WHITE - ROBYN 70% POLYESTER / 30% COTTON WITH BLACKOUT TRACK AND HARDWARE	1.866.252.2568 blackoutcurtains.com

MISCELLANEOUS

KEY	MATERIAL	SPECIFICATION	SALES & TESTING DATA
SL-1 (DLAR SHOWERS)	SHOWER CURTAIN	COVOC CORPORATION HEAVY DUTY VINYL SHOWER CURTAIN W x H: 66" x 84" COLOR: SELECTED FROM MFR STANDARD COLORS STYLE: SOLID (NO MESH)	INFO@COVOC.COM (800) 725-3266
BD-1	WHITEBOARD	POLYVISION CORPORATION SERIES 110	John Crowther 770-833-1495 jcrowther@polyvision.com
BD-4	TACKBOARD	FORBO L910, 6MM THICKNESS, CUSTOM COLOR TO MATCH KENTUCKY BLUE PANTONE. INSTALL FLOOR TO CEILING IN 4' WIDTH WITH ALUMINUM EDGE TRIM, CLEAR ANODIZED AT THE LONG EDGES, NO VISIBLE SCREWS	Mike Bell Atlas Companies
FILM-1	DECORATIVE FILM	3M FASARA CIELO PROVIDE MOCKUP	1-866-499-8857
FILM-2	OPAQUE FILM	3M FASARA COLOR: OPAQUE WHITE PROVIDE MOCKUP	1-866-499-8857
FILM-3 (TO BE APPLIED TO ALL GLASS WALL AND DOOR SYSTEMS; REFER TO AI-725)	2" OPAQUE FILM BAND	3M FASARA COLOR: OPAQUE WHITE PROVIDE MOCKUP	1-866-499-8857
-	TOILET COMPARTMENTS	WILSONART 4879-38 STEEL MESH OVER PHENOLIC CORE	Leslie Reed 800-433-3222 humphrl@wilsonart.com
FAB-3	ALCOVE SEAT FABRIC	ARC|COM RODEO AC-69966 COLOR: CORNFLOWER #27	
FAB-4	ALCOVE SEAT FABRIC	DESIGNTEX SORANO 3403-505 COLOR: ALOE	
FWC-3	ALCOVE WALL FABRIC	DESIGNTEX WANNABE COLOR: BLUE JAY	
FWC-4	ALCOVE WALL FABRIC	DESIGNTEX WANNABE COLOR: SEAWEED	
CTA-1	TRANSITION	Schluter DILEX-EHK, satin anodized aluminum	
CTA-2	TRANSITION	Schluter QUADEC, satin anodized aluminum	
CTA-3	TRANSITION	Schluter RENO-RAMP-K, satin anodized aluminum REFER TO 18/AI-672 FOR DETAIL	
STAIR-E	RUBBER LUMINOUS NOSING	TARKETT JOHNSONITE SAFE-T-FIRST PVITSSNN-XX COLOR: 40 BLACK	Scott Stertmeyer 440-708-5759 scott.stertmeyer@tarkett.com
STAIR-E	RUBBER LUMINOUS HAND RAIL COVER	TARKETT JOHNSONITE SAFE-T-FIRST PHCN-XX COLOR: 40 BLACK	Scott Stertmeyer 440-708-5759 scott.stertmeyer@tarkett.com
STAIR-E	PLAIN AND WARNING LUMINOUS TAPE	TARKETT JOHNSONITE SAFE-T-FIRST PLAIN: P40708 WARNING: P44151	Scott Stertmeyer 440-708-5759 scott.stertmeyer@tarkett.com
STAIR-E	LUMINOUS SIGNAGE	TARKETT JOHNSONITE SAFE-T-FIRST EXIT RIGHT: P43667F EXIT LEFT: P42945F HANDLE BACKING STICKER: P60204	Scott Stertmeyer 440-708-5759 scott.stertmeyer@tarkett.com

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720 E Pete Rose Way, Suite 140
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THINK CREATE REALIZE

HGA

JACOBS Consultancy

AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
760 Press Avenue, Lexington, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/18
2	CD 100% REVIEW	10/15/18
3	ISSUE FOR BID & PERMIT	11/15/18
4	P2 - PCO #001	04/17/19
5	P2 - PCO #013	06/24/19
6	P2 ASI 006	10/11/19
7	P2 - PCO #032 R1	10/23/19
8	DD ISSUANCE - NIH	02/05/20
9	CD ISSUANCE - NIH	04/14/20
10	BID & PERMIT - NIH	05/22/20

Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

MICHAEL J. BATTCOMBE REGISTERED No. 6856 COMMONWEALTH OF KENTUCKY ARCHITECT

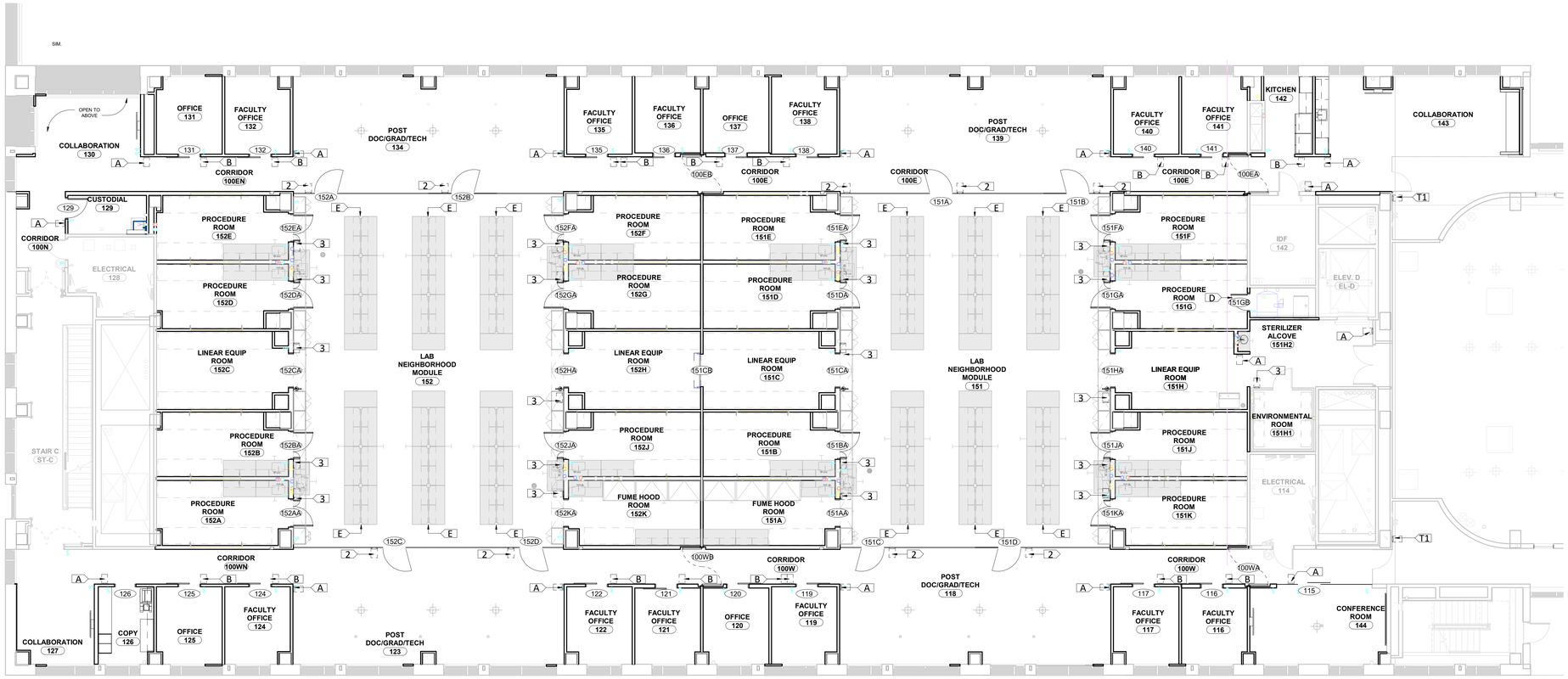
DRAWING TITLE

FINISH LEGEND

SHEET NO.

AI-724

5/19/2020 11:54:42 AM



1 **LEVEL ONE - SIGNAGE PLAN - AREA "B"**
AI-728A 1/8" = 1'-0"

SIGNAGE PLAN GENERAL NOTES

A. ALL EXISTING ROOM SIGNAGE IS TO BE REMOVED AND RETURNED TO THE OWNER.
B. SIGN TYPES DESIGNATIONS COORDINATE WITH SIGN TYPES AS IDENTIFIED IN THE UNIVERSITY OF KENTUCKY DESIGN AND CONSTRUCTION STANDARDS AVAILABLE ONLINE.
C. THE FONT TO BE COORDINATED WITH THE UNIVERSITY OF KENTUCKY SIGNAGE STANDARDS.
D. FONT HEIGHTS ARE TO BE AS SHOWN IN THE UNIVERSITY OF KENTUCKY SIGNAGE STANDARDS.
E. USE BRAILLE GRADE SPECIFIED IN THE UNIVERSITY OF KENTUCKY SIGNAGE STANDARDS.
F. DIRECTIONAL ARROWS, WHERE SHOWN, ARE TO CONFORM TO THE DIMENSIONS AND PROPORTIONS AS IDENTIFIED IN UNIVERSITY OF KENTUCKY SIGNAGE STANDARDS.
G. TYPICAL MOUNTING HEIGHT IS TO BE 61" TO TOP OF SIGN FOR ALL SIGNS U.N.O.
H. ROOM SIGNS ARE TO BE MOUNTED ON THE LATCH SIDE OF THE DOOR, U.N.O.
I. PROVIDE A BACK PLATE AT ALL LOCATIONS WHERE ROOM SIGNAGE MOUNTING LOCATION AT THE LATCH SIDE OF THE DOOR IS ON GLASS.
J. ROOM SIGNS SHOULD BE CENTER ALIGNED VERTICALLY WITH ROOM SCHEDULING DEVICES, U.N.O.
K. ROOM SIGNS SHOULD BE CENTER ALIGNED VERTICALLY WITH CARD READER DEVICES, U.N.O.
L. REFER TO SIGNAGE SERIES PLANS FOR LOCATIONS OF DIRECTORIES IN LOBBIES AND CORRIDORS.
M. ALL OPERATING ELEVATORS RECEIVE TYPE K AND Q SIGNS. REFER TO SIGNAGE SERIES PLANS FOR LOCATIONS WITHIN THE ELEVATOR OPENINGS.
N. COORDINATE REMOVAL OR RELOCATION OF PREVIOUS PHASE SIGNS AS NEEDED (I.E. DOOR TAGS TO PREVIOUS SHELL SPACE).
O. NEW SIGNAGE TO MATCH EXISTING SIGNAGE TYPES IN MATERIAL, FONT AND COLORS.
P. SUBMIT SIGNAGE SHOP DRAWINGS AND SIGNAGE SAMPLES FOR APPROVAL.

MATERIAL TYPE, FONT AND COLORS

FONT: AvenirNExtLTPro-Regular

TEXT COLOR: BLACK UNESS OTHERWISE NOTED

TYPE A ROOM SIGN - #902 CHEMETAL ON ¼" BLACK ACRYLIC, 1/8" X 3/8" ANODIZED BAR STOCK

TYPE B ROOM SIGN CUSTOM - 902 CHEMETAL ON ¼" BLACK ACRYLIC, 1/16" NONGLARE ACRYLIC WINDOW 1/8" X 3/8" ANODIZED BAR STOCK

TYPE C RESTROOM - #902 CHEMETAL ON ¼" BLACK ACRYLIC, 1/8" X 3/8" ANODIZED BAR STOCK

TYPE D DOOR TAGS – 1/16" ROWMARK #LM922-402 (BLACK/WHITE), FRONT ENGRAVED WHITE TEXT

TYPE E LAB BENCH TAGS - 1/16" ROWMARK #LM922-402 (BLACK/WHITE), FRONT ENGRAVED WHITE TEXT

TYPE J DIRECTIONAL - #902 CHEMETAL ON ¼" PVC (PAINTED BLACK), DIGITALLY PRINTED TEXT

TYPE K EVAC PLAN (INSERT TYPE WITH CUSTOM EVAC PLAN PRINTED ON MYLAR TYPE MATERIAL) - #902 CHEMTAL ON ¼" BLACK ACRYLIC, 1/8"X3/8" ANODIZED BAR STOCK, 1/16" NONGLARE ACRYLIC WINDOW WITH #902 CHEMETAL VENEERS, 1/8" BLACK ACRYLIC BACK PLATE

TYPE L FLAG MOUNT DOUBLE SIDED - #902 CHEMETAL ON 1/8" BLACK ACRYLIC, DIGITALLY PRINTED, 1/8" ACRYLIC CORE, CUSTOM BRACKET

TYPE Q IN CASE OF FIRE -#902 CHEMETAL ON ¼" BLACK ACRYLIC, 1/8" X 3/8" ANODIZED BAR STOCK

TYPE T LAB SIGN PLAQUE – 1/16" NONGLARE ACRYLIC WINDOW SCREEN PRINTED SILVER, 1/8" ACRYLIC BACK PLATE PAINTED SILVER

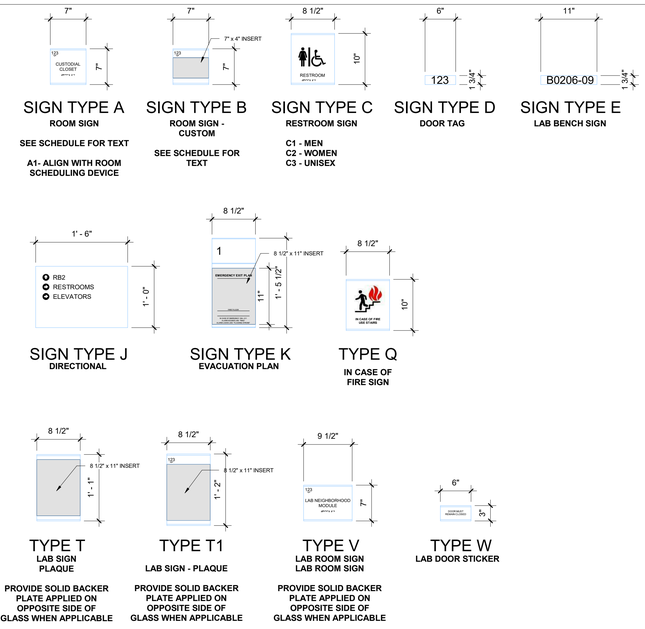
TYPE V LAB ROOM SIGN - #902 CHEMETAL ON ¼" BLACK ACRYLIC, 1/8" X 3/8" ANODIZED BAR STOCK

TYPE W LAB DOOR STICKER – WHITE OPAQUE VINYL WITH ADHESIVE TO ATTACH TO GLASS LAB DOORS

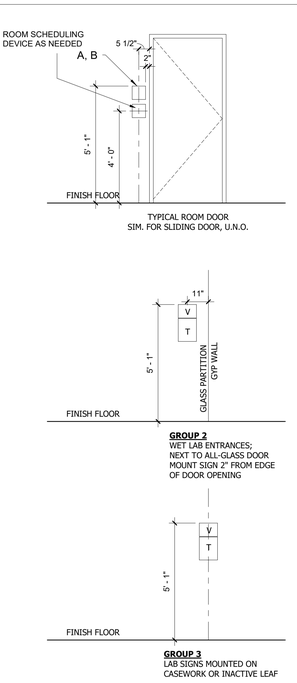
SIGNAGE SCHEDULE - NIH

Number	Name	SIGN TYPE	SIGN NAME	SIGN COMMENTS
116	FACULTY OFFICE	B	116	
117	FACULTY OFFICE	B	117	
118	POST DOC/GRAD/TECH	A	TBD	TYPE A SIGN AT BOTH ENDS OF ROOM
119	FACULTY OFFICE	B	119	
120	OFFICE	B	120	
121	FACULTY OFFICE	B	121	
122	FACULTY OFFICE	B	122	
123	POST DOC/GRAD/TECH	A	TBD	TYPE A SIGN AT BOTH ENDS OF ROOM
124	FACULTY OFFICE	B	124	
125	OFFICE	B	125	
126	COPY	A	COPY ROOM	
127	COLLABORATION	A	COLLABORATION	
129	CUSTODIAL	A	CUSTODIAL	
130	COLLABORATION	A	COLLABORATION	
131	OFFICE	B	131	
132	FACULTY OFFICE	B	132	
134	POST DOC/GRAD/TECH	A	TBD	
135	FACULTY OFFICE	B	135	
136	FACULTY OFFICE	B	136	
137	OFFICE	B	137	
138	FACULTY OFFICE	B	138	
139	POST DOC/GRAD/TECH	A	TBD	
140	FACULTY OFFICE	B	140	
141	FACULTY OFFICE	B	141	
142	KITCHEN	A	KITCHEN	
143	COLLABORATION	A	COLLABORATION	
144	CONFERENCE ROOM	A	CONFERENCE ROOM	
151	LAB NEIGHBORHOOD MODULE	GROUP 2	TBD	GROUP 2 SIGN AT DOORS / TYPE E SIGN AT BENCHES
151A	FUME HOOD ROOM	GROUP 3	TBD	
151B	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
151C	LINEAR EQUIP ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
151D	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
151E	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
151F	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
151G	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
151H	LINEAR EQUIP ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
151H1	ENVIRONMENTAL ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
151J	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
151K	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
152	LAB NEIGHBORHOOD MODULE	GROUP 2	TBD	GROUP 2 SIGN AT DOORS / TYPE E SIGN AT BENCHES
152A	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
152B	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
152C	LINEAR EQUIP ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
152D	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
152E	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
152F	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
152G	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
152H	LINEAR EQUIP ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
152J	PROCEDURE ROOM	GROUP 3	TBD	SIGNS MOUNTED TO DOOR
152K	FUME HOOD ROOM	GROUP 3	TBD	

SIGNAGE LEGEND



SIGNAGE MOUNTING & SIGN GROUP



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THINK CREATE REALIZE

HGA

JACOBS Consultancy

AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
760 Press Avenue, Lexington, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 5350

MICHAEL J. BATTOCLETTE, REGISTERED No. 6856, COMMONWEALTH OF KENTUCKY, ARCHITECT

DRAWING TITLE
INTERIOR SIGNAGE - LEVEL ONE AREA 'B'

SHEET NO.
AI-728A

5/19/2020 11:55:06 AM

GENERAL NOTES

1. GENERAL NOTES HEREIN SHALL BE APPLICABLE TO ALL LABORATORY CASEWORK AND FIXED EQUIPMENT DRAWINGS.
2. DRAWINGS INDICATE DESIGN INTENT AND GENERAL SCOPE OF WORK, REFER TO DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. HEREIN IS THE LEGENDS OF SYMBOLS AND ABBREVATIONS WHICH SHALL BE USED AS A DICTIONARY TO DEFINE ITEMS INDICATED ON DRAWINGS; NOT ALL SYMBOLS OR ABBREVIATIONS DEFINED ARE NECESSARILY USED.
4. CASEWORK NOMENCLATURE HEREIN DOES NOT REFER TO ANY SPECIFIC CASEWORK MANUFACTURER OR PRODUCT. (U.O.N.)
5. CASEWORK & FIXED EQUIPMENT MANUFACTURER SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS PRIOR TO FABRICATION.
6. COORDINATE WITH ARCHITECTURAL FLOOR PLANS FOR ROOM DIMENSIONS, CONSTRUCTION AND FINISHES.
7. ALL DIMENSIONS ARE NOMINAL. COORDINATE VARIATIONS BASED ON APPROVED MANUFACTURER. ANY CHANGES SUBJECT TO ARCHITECT'S AND/OR LABORATORY CONSULTANT'S APPROVAL.
8. MANUFACTURER MODEL NUMBER NOTED HEREIN SHALL BE FOR THE PURPOSE OF "BASIS OF DESIGN" AND SHALL NOT IMPLY SOLE SOURCE OF A SINGLE MANUFACTURER. REFER TO RESPECTIVE SPECIFICATIONS FOR ADDITIONAL ACCEPTABLE MANUFACTURERS.
9. REVIEW DRAWINGS OF OTHER DISCIPLINES AS PART OF THIS SCOPE FOR RELATED WORK REQUIRED AND COORDINATION FOR OPERATION AND CONNECTION TO ASSOCIATED SYSTEMS / ASSEMBLIES AND CODE AND STANDARD REQUIREMENTS.
10. WHERE DEVICES ARE INDICATED WITHIN CASEWORK, TO BE PROVIDED BY OTHERS, THE CASEWORK MANUFACTURER SHALL BE RESPONSIBLE FOR COORDINATING REQUIRED CUT OUTS FOR PROPER FIT.
11. ALL LABORATORY SERVICE FIXTURES LOCATED IN PLAN AND ELEVATION ARE FOR GRAPHIC PURPOSES ONLY; REFER TO SINK AND FIXTURE SCHEDULE FOR TYPE AND FINISH. FOR ADDITIONAL INFORMATION REFER TO SPEC. SECTION 12 53 53.
12. ELECTRICAL RECEPTACLES AND TELE/DATA OUTLETS ARE SHOWN ON LABORATORY CASEWORK/EQUIPMENT DRAWINGS FOR LOCATION AND COORDINATION WITH OTHERS ONLY. REFER TO DIVISION 26 & 27 DRAWINGS FOR ADDITIONAL INFORMATION. (IE. DENSITY, CIRCUITRY, ETC.)
13. COORDINATE "GROUPING" OF DEVICES PRIOR TO ROUGH-IN W/FURNITURE AND CASEWORK ARRANGEMENTS. REVIEW DIV.22 & 26 FOR OFF-SETTING OF PLUMBING AND ELECTRICAL OUTLET REQUIRMENTS.
14. ALL WALL CABINET AND ADJUSTABLE SHELVING SHALL BE ANCHORED IN ACCORDANCE WITH MOUNTING INTRUCTIONS TO IN-WALL BACKING/GROUNDS AS REQUIRED BY CASEWORK MANUFACTURER.
15. CABINETS 24" OR LESS AS SHOWN SHALL BE CONSTRUCTED W/SINGLE LEAF DOOR (TYP.).
16. WHERE CLOSURE PANEL IS REQUIRED ABOVE AND WALL CABINET DOES NOT ABUT TO ANY ADJACENT ALL CABINET, PROVIDE FRONT AND SIDE CLOSURE PANEL (U.O.N.)
17. MAXIMUM FILLER PANEL FOR CASEWORK SHALL BE 1".
18. VIVARIUM BASE CABINETS: ALL BASE CABINETS SHALL BE SEALED/CAULKED TO ADJACENT SURFACES (WALLS, CABINETS, ETC.). WHERE KNEE SPACES IS PROVIDED WITH ADJACENT CABINET, PROVIDE FILLER/CLOSURE PANEL(S) FROM REAR OF CABINET, SIDE AND BOTTOM TO ADJACENT WALL AVOIDING OPEN AREAS BEHIND CABINET. SEALANT TYPE SHALL BE IN ACCORDANCE W/ NIH GUIDELINE - SEALANT TABLE EXHIBIT X4-2-A 01 2012 (APPLIES TO VIVARIUM AND LABORATORY).
19. ALL FUME HOOD BASE CABINET CONSTRUCTION MATERIAL SHALL MATCH ADJACENT CASEWORK (U.O.N.).
20. ALL ADJUSTABLE SHELVES SHALL BE MIN 12" DEEP (U.O.N.)
21. PEGBOARD MATERIAL & COLOR SHALL MATCH ASSOCIATED COUNTERTOP (U.O.N.)
22. ALL LABORATORY BENCH COUNTER TOPS SHALL BE INSTALLED AT 37" A.F.F. (U.O.N.)
23. ALL COUNTERTOPS SHALL BE EPOXY RESIN (U.O.N.)
24. PRE-DRILL ALL COUNTERTOP AND BACKSPLASH HOLES (APPLIES TO DECK AND PANEL MOUNTED FIXTURES).
25. ALL SINK COUNTERTOPS TO BE DISHED MARINE EDGE (U.O.N.)
26. SERVICE CLEARANCE INSIDE AUTOCLAVE ALCOVE VERY LIMITED. VERIFY FIELD CONDITION AND COORDINATE INSTALLATION & PIPING WITH ARCHITECT & ENGINEERS. SERVICE ACCESS PANEL/DOOR TO BE PROVIDED FROM ADJACENT ROOM #415G & 551G

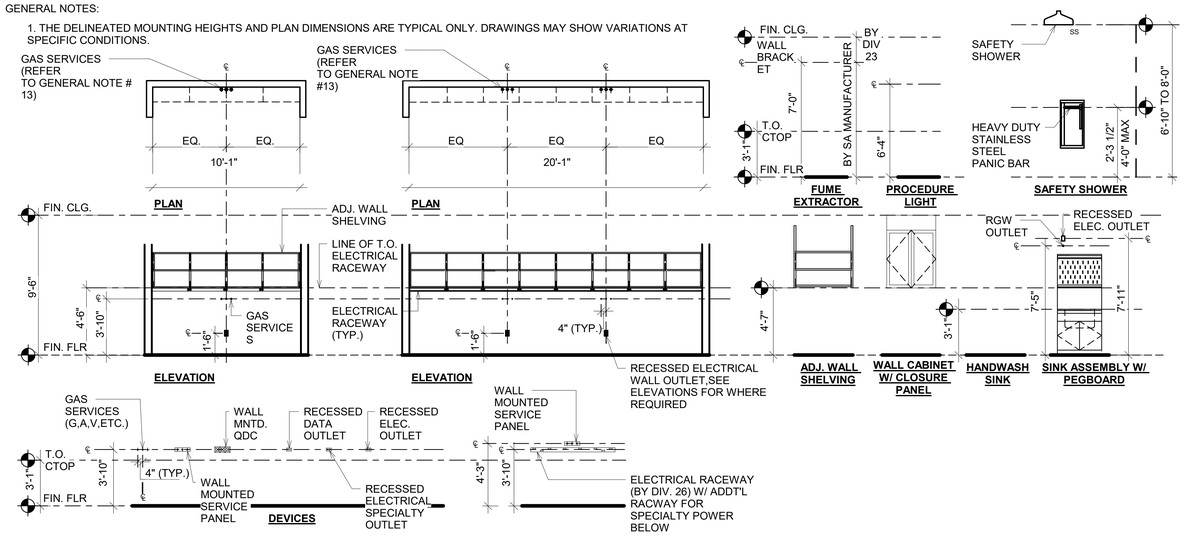
ABBREVIATIONS

A	AIR
ADD	ADDENDUM
ADD'L	ADDITIONAL
ADJ	ADJACENT, ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
APPROX	APPROXMATE
AP	ACCESS PANEL
AR	ARGON
ARCH	ARCHITECT(URAL)
AS	ADJUSTABLE SHELVING
BD	BEDDING DISPENSER
BDS	BEDDING DUMP STATION
BET	BETWEEN
BEV	BEVELLED
BF	BOTTLE FILLER
BL	BASE CABINET (LOW)
BLDG	BUILDING
BLKG	BLOCKING
BOT,BTM	BOTTOM
BOS	BOTTOM OF SHELF
CA	COMPRESSED AIR
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CHAM	CHAMFER
CHEM.	CHEMICAL BASE CABINET
CHW	CHILLED WATER
CIRC	CIRCUMFERENCE
CK	CAULK(ING)
C/L	CENTERLINE
CLG	CEILING
CO2	CARBON DIOXIDE
COL	COLUMN
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CRW	CAGE AND RACK WASHER
CTOP	COUNTERTOP
CLYD	CYLINDER / RESTRAINTS
CW	COLD WATER
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOSTRATION
DIA	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DTL,DET	DETAIL
DWG	DRAWING
DWR	DRAWER
E	ELECTRIC OUTLET
EA	EACH
ELEC	ELECTRIC
ELEV	ELEVATOR,ELEVATION
EM	EMERGENCY POWER
ENCL	ENCLOSE(URE)
EP	ELECTRICAL PANEL
EQ	EQUAL
EQUIP	EQUIPMENT
ESS	EMERGENCY SAFETY STATION
EXIST	EXISTING
EW	EYEWASH
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR
EXH	EXHAUST
EVAC	GAS EVACUATION
F	FILLER PANEL
FBO	FURNISHED BY OTHERS
FD	FLOOR DRAIN, FIRE DAMPER
FEC	FIRE EXTINGUISHER CABINET
FIN	FINISH
FIX	FIXTURE
FLAM	FLAMMABLE
FPM	FEET PER MINUTE
FS	FREE STANDING SHELVING
FSC	FLAMMABLE STORAGE CABINET(ET)
FT	FLAMMABLE TALL STORAGE
FUM	FUME HOOD
FURN	FURNISH , FURNISHED
G	GAS
GL	GLASS
GPM	GALLONS PER MINUTE
GWC	GLASSWARE CABINET
H	HUNG
HB	HOSE BIB
HDWR	HARDWARE
HL	HOOK LADDER
HND	HAND
HORIZ	HORIZONTAL
HR	HOSE REEL
HT	HEIGHT
HW	HOT WATER
ID	INSIDE DIAMETER
IN	INCHES
INCL	INCLUDE(D)
INT	INTERIOR
INTMED	INTERMEDIATE
JT	JOINT
KS	KNEE SPACE
L	LENGTH
LAM	LAMINATE
LC	LOCKABLE LEADER
LDR	LEFT HAND
LH	LINEAR
LIN	LIGHT
LT	MOVEABLE TABLE ASSEMBLY
MA	MATERIAL
MATL	MAXIMUM
MAX	MECHANICAL
MECH	MEDIUM
MED	MEMBRANE
MEMB	MANUFACTURER
MFR	MINIMUM
MIN	MISCELLANEOUS
MISC	MOVEABLE TABLE
MT	MOUNTED
MTD	METAL
MTL,MET	MODULAR WALL
MW	NITROGEN
N2	NOT IN CONTRACT
NIC	NUMBER
NO	NOMINAL
NOM	NOT TO SCALE
NTS	OXYGEN
02	ON CENTER(S)
OC	OWNER FURNISHED OWNER INSTALLED
OFOI	OWNER FURNISHED CONTRACTOR INSTALLED
OFCI	OPPOSITE HAND
OH	OPENING
OPN'G	OPPOSITE
OPP	PHENOLIC RESIN
P,PR	PARALLEL
PAR	PARTICLE
PART	PEGBOARD
PB	POINT EXHAUST
PE	PENETRATION
PEN	PERFORATE(D)
PERF	PR BASE CAB (HIGH)
PH_	PR BASE CAB (LOW)
PL_	PLASTE LAMINATE
PLAM	PLUMBING
PLBG	PLYWOOD
PLYWD	PNEUMATIC
PNEU	POLISHED
POL	PREFINISHED
PREFIN	PRIMARY
PRIM	PR SHELVING
PS	PAINTED
PTD	PURE WATER
PW	REVERSE (SIDE)
R	RADIOSTOPE
RAD	REFERENCE
RE:	RECEPTACLE
RECPT	REMOVE
REM	REQUIRED
REQ'D	REVISION(S)
REV	RIGHT HAND
RH	ROOM
RM	REAGENT GRADE WATER
RO	SPARE
S	SERVICE COLUMN
SC	SHARPS DISPOSAL
SD	SECTION, SECOND
SEC	SHEET
SHT	SIMILAR
SIM	SLIDER
SL	SEALANT
SNT	SPRAY HOSE
SP	SPECIFICATIONS
SPECS	SQUARE
SQ	STAINLESS STEEL MOVEABLE TABLE
SST	STAINLESS STEEL
ST.STL	STANDARD
,STD	STEEL
STL	STEAM
STM	STORAGE
STOR	STRUCTURAL
STRUCT	SUSPENDED
SUSP	SYMMETRICAL
SYM	TOP AND BOTTOM
T&B	THICK
THK	TOP OF
TO	STEEL TUBING
TS	TUNNEL WASHER
TW	TYPICAL
TYP	UNDERCOUNTER FREEZER
UCF	UNDERCOUNTER REFRIGERATOR
UCR	UNDERCOUNTER GLASSWARE WASHER
UCGW	UNFINISHED
UNFIN	UNLESS OTHERWISE NOTED
UON	VACUUM
V	VERTICAL
VERT	VACUUM PUMP CABINET
VPC	WITH
W/	WALL CABINET
WC	WOOD
WD	WORKSTATION
WK	WITHOUT
W/O	WEIGHT
WT	WIRE SHELVING
WS	WASTE STORAGE CABINET
WSC	

TYPICAL MOUNTING HEIGHTS / DIMENSIONAL PLAN LOCATIONS

GENERAL NOTES:

1. THE DELINEATED MOUNTING HEIGHTS AND PLAN DIMENSIONS ARE TYPICAL ONLY. DRAWINGS MAY SHOW VARIATIONS AT SPECIFIC CONDITIONS.



CASEWORK SCHEDULE

ACID CABINET (AC)
AC__
- BASE CABINET MATERIAL (W) - WOOD (M) - METAL (PAINTED) (P) - PHENOLIC (S) - STAINLESS STEEL
- WIDTH OF BASE CABINET
- BASE CABINET ELEVATION TYPE (A) - SINGLE DOOR (B) - DOUBLE DOOR (C) - ADA SINGLE DOOR

3'-0" VARIES; 2'-8" 1'-0"

LEGEND ACB__ ACC12

FLAMMABLE STORAGE CABINET (FS)
FS__
- BASE CABINET MATERIAL (W) - WOOD (M) - METAL (PAINTED) (P) - PHENOLIC (S) - STAINLESS STEEL
- WIDTH OF BASE CABINET
- BASE CABINET ELEVATION TYPE (A) - SINGLE DOOR (B) - DOUBLE DOOR

2'-6" 1'-0"; 3'-0" VARIES

LEGEND FSA12 FSB__

BASE HIGH CABINETS FIXED (BH)
BH__
- BASE CABINET MATERIAL (W) - WOOD (M) - METAL (PAINTED) (MW) - METAL BODY WITH WOOD FRONT (P) - PHENOLIC (S) - STAINLESS STEEL
- WIDTH OF BASE CABINET
- CABINET TYPE
- INSTALLATION TYPE (BH) - BASE HIGH CABINET

3'-0" 2'-0"

LEGEND BHC24

SINK CABINET (SK)
SK__
- BASE CABINET MATERIAL (W) - WOOD (M) - METAL (PAINTED) (P) - PHENOLIC (S) - STAINLESS STEEL
- WIDTH OF BASE CABINET
- CABINET TYPE

3'-0" VARIES

LEGEND SKA__

MOBILE HIGH CABINETS ON CASTERS (MH)
M__
- BASE CABINET MATERIAL (W) - WOOD (M) - METAL (PAINTED) (MW) - METAL BODY WITH WOOD FRONT (P) - PHENOLIC (S) - STAINLESS STEEL
- WIDTH OF BASE CABINET
- CABINET TYPE
- INSTALLATION TYPE (H) - FIXED HEIGHT (A) - ADD - A - DRAWER

2'-10" VARIES; VARIES; VARIES; 2'-6"; 2'-6"; 2'-6"

LEGEND MAC__ MAF__ MHC__ MHF30 MHI30 MHK30

ADJUSTABLE SHELVING UNITS
AS__
- SHELF FINISH (W) - WOOD (M) - METAL (PAINTED) (P) - PHENOLIC (S) - STAINLESS STEEL
- WIDTH OF SHELF
- SHELF UNIT DEPTH (A) - 12" (B) - BOTTOM, MIDDLE AND TOP SHELF 12" (C) - BOTTOM SHELF 12", MIDDLE AND TOP SHELF 15" (D) - BOTTOM SHELF 12", MIDDLE SHELF 15", TOP SHELF 18".

3'-0" VARIES; 2'-6" VARIES

LEGEND ASA__ ASB__

WIRE SHELVING UNITS
WS__
- SHELF FINISH (C) - CHROME (S) - STAINLESS STEEL
- WIDTH OF SHELF
- SHELF TYPE

2'-9 5/8" VARIES

LEGEND WSA__

PEG BOARD
PB__
- BASE CABINET MATERIAL (E) - EPOXY (P) - PHENOLIC (S) - STAINLESS STEEL
- WIDTH OF PEG BOARD

VARIES VARIES

LEGEND PB__

WALL CASE CABINETS
WC__
- WALL CASE CABINET MATERIAL
- WIDTH OF WALL CASE
- WALL CASE CABINET DOOR TYPE

4'-0" VARIES; 2'-9" VARIES

LEGEND WC__ WCC__M

MOVEABLE TABLE (MT)
MT____
- MATERIAL TYPE (W) - WOOD (M) - METAL (S) - STAINLESS STEEL
- WIDTH OF TABLE
- TABLE HEIGHT -FIXED LOW (L) 31" HIGH (H) 37" -ADJUSTABLE (A) 37"

VARIES

LEGEND MT____

TABLE SYSTEM (TS)
TS__
- MATERIAL/CONSTRUCTION TYPE (W) - WOOD (M) - METAL (PAINTED) WIDTH OF TABLETEEL
- TABLE TYPES A - SINGLE SIDED W/ SHELVING B - DOUBLE SIDED W/ SHELVING C - WITHOUT SHELVING

VARIES

LEGEND TS___

TALL CASE (TC)
TC__
- MATERIAL TYPE (W) - WOOD (M) - METAL (PAINTED) (P) - PHENOLIC (S) - STAINLESS STEEL
- WIDTH OF TALL CASE
- TALL CASE DOOR TYPE (A) - FRAMED GLASS SLIDING DOOR (B) - FRAMED GLASS SWINGING DOOR (C) - TOP GLASS W/ BOTTOM SOLID WOOD DOOR (D) - SOLID WOOD SLIDING DOOR (E) - SOLID WOOD SWINGING DOOR (F) - OPEN SHELVES

7'-0" VARIES

LEGEND TCC__

WIRE SHELVING ADJUSTABLE FULL HEIGHT
WSAFH__
- SHELF FINISH (C) - CHROME (S) - STAINLESS STEEL
- WIDTH OF SHELF
- SHELF TYPE

0'-6" VARIES

LEGEND WSAFH__

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5	ISSUE FOR BID & PERMIT	11/15/18
6	P2 - Addendum #1	01/16/19
7	RECORD DRAWINGS	08/16/19
8	DD ISSUANCE - NIH	02/05/20
9	CD ISSUANCE - NIH	04/14/20
10	ISSUE FOR BID & PERMIT	05/01/20
11	BID & PERMIT – NIH	05/22/20

Drawn By	Author
Checked By	Checker
Client Number	514
Project Number	5350

DRAWING

LAB EQUIPMENT COVER SHEET

SHEET NO.

QL-100

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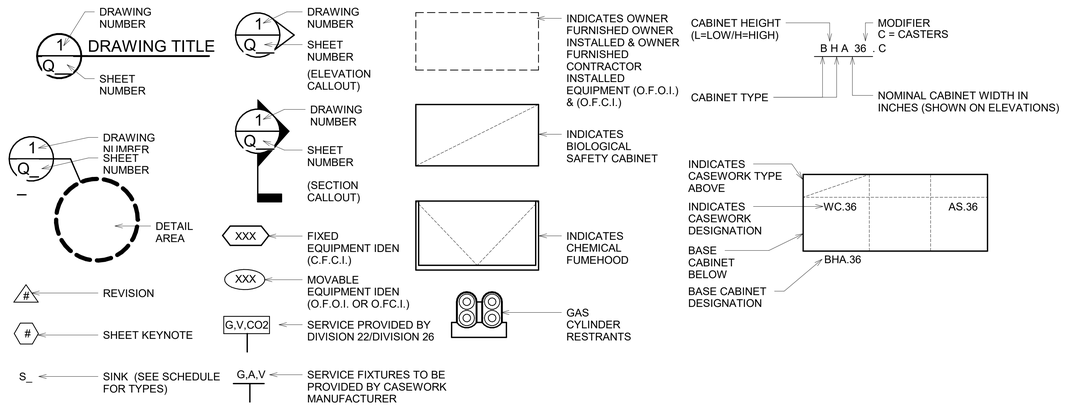
SYMBOL LEGEND



SINK SCHEDULE

SINK SCHEDULE

TAG	MATERIAL	SINK MOUNT	DIMENSIONS			SERVICES					FIXTURE MOUNT	REMARKS
			LENGTH	WIDTH	DEPTH	HW/CW	CW	RGW	EW	SP		
S1	EPOXY	UNDER MOUNT	24"	16"		X		X	X		DECK	
S2	EPOXY	UNDER MOUNT	21.5"	15.5"	12"	X			X		DECK	
S3	ST. STL.	INTEGRAL	18"	15"	12"		X				DECK	
S4	ST. STL.	INTEGRAL	12"	12"	8"	X			X		DECK	
S5	ST. STL.	INTEGRAL	24"	16"	12"	X			X		DECK	

FIXTURE SCHEDULE

FIXTURE SHCEDULE

DESIGNATION	DESCRIPTION	MODEL No.	MOUNT	FINISH	DISC COLOR	HANDLE COLOR	REMARKS
CW-1	FACUET	CT611-10VB55	DECK	SATIN CHROME	GREEN	GREY	10" SWING GOOSENECK; NYLON HANDLE; VACUUM BREAKER & AERATOR
EW-1	EYE WASH FIXTURE	CTEW1022BP	DECK	SATIN CHROME	N/A	GREY	EYE WASH/DRENCH HOSE WITH BACKFLOW PREVENTER
EW-2	EYE WASH FIXTURE	EW805	DECK	SATIN CHROME	N/A	GREY	EYE WASH, AUTOFLOW, 90 DEGREE SWIVEL, RIGHT HAND MOUNTING
HW/CW-1	MIXING FAUCET	CTA414-10VB55	DECK	SATIN CHROME	RED/GREEN	GREY	10" SWING GOOSENECK; NYLON HANDLES; VACUUM BREAKER & AERATOR
HW/CW-2	MIXING FAUCET	CT424-10VB	DECK	SATIN CHROME	RED/GREEN	GREY	10" SWING GOOSENECK; NYLON HANDLES; VACUUM BREAKER & AERATOR & WRIST BLADE HANDLES
RGW-1	PURE WATER FAUCET	CT7833-10	DECK	SATIN CHROME	WHITE	GREY	NYLON HANDLE; SERRATED HOSE END
RGW-2	PURE WATER FAUCET	CT7838SC-10	DECK	SATIN CHROME	WHITE	GREY	POLYPROPYENE-LINED, SELF CLOSING CONTROL, 10" SPREAD
SS	EMERGENCY SHOWER	ESBF672	PANEL	ST. STL			RECESSED EMERGENCY SHOWER, WALL MOUNTED SHOWER HEAD
V-1	NEEDLE VALVE	CT4880-225WSA	WALL	SATIN CHROME	YELLOW	GREY	STRAIGHT PATTERN NEEDLE VALVE WITH BRASS ESCUTCHEON AND MOUNTING SHANK
V-2	NEEDLE VALVE	CT4200-231WSA	DECK	SATIN CHROME	YELLOW	GREY	TURRET BASE WITH MOUNTING SINK
V-3	NEEDLE VALVE	CT740N-CR	FUME HOOD	POWDER COAT	YELLOW	GREY	STRAIGHT FRONT W/90 Deg ANGLE OUTLET FITTING W/SERRATED HOSE END & MOUNTING SHANK
V-4	NEEDLE VALVE	INV010-16-14BV-141EDI	LAB BENCH ASSEMBLY	SATIN CHROME	YELLOW	GREY	SPECIAL WYE FITTING W/TWO INSTRUMENTAL NEEDLE VALVES W/90 Deg. INLET ELBOW

EQUIPMENT SCHEDULE (C.F.C.I.)

EQUIPMENT SCHEDULE (C.F.C.I.)

TAG	DESCRIPTION	BASIS OF DESIGN	DIMENSIONS			REMARKS
			DEPTH	WIDTH	HEIGHT	
APT	ANIMAL PREP TABLE	TBJ MODEL 24-60	60"	24"	36"	
BD	BEDDING DISPENSER	BETTER BUILT D236 MODEL	96"	81.5"	60"	
BF	BOTTLE FILLER	BETTER BUILT				
BSC6-B2	BIOLOGICAL SAFETY CABINET	BAKER MODEL MCG601	33 5/8"	77 7/8"	86" - 94 1/2"	
BWS	BACKDRAFT WORKSTATION	TBJ MODEL 30-60 BD	34"	60"	36"	
CRW	CAGE AND RACK WASHER	BETTER BUILT R730 MODEL	97.5	92"	108"	
FEA	FUME EXTRACTOR ARM	MOVEX TERU4, 4"D EXTRACTOR ARM				EXHAUST: 105 CFM
FH60	FUME HOOD	KEWAUNEE	36 3/4"	60"	89 3/4"	
FH60-ADA	ADA FUME HOOD	KEWAUNEE	36"	60"	84"	
HAST	HOT AIR STERILIZER	PCS	100"	96"	114"	
ICE	ICE FLAKER	HOSHIZAKI F-1001M_J	22"	26"	27.5"	WATER COOLED
LST-1	LARGE STEAM STERILIZER	STERIS MODEL LSS92121	85"	37"	85"	
MW	MOULAR WALL	STERIS				
NT	NECROPSY TABLE	BETTER BUILT DDT3060 MODEL	60"	30"	57"	
OL	LED SURGICAL LIGHTING SYSTEM	STERIS TWO HARMONY vLED LIGHTHEADS				CENTER MOUNTED ON ONE 39-3/8" HORIZONTAL ARM, AND ONE 33-12" HORIZTONAL ARM.
PL	PROCEDURE LIGHT	STERIS EXAMINER 10				E: 1/60/115V
SC	SERVICE COLUMN	ALLIED	12"	14"	36" - 54"	CELING-MOUNTED SERVICE COLUMN - MANUAL RETRACTABLE
SSS	SURGICAL SCRUB SINK	STERIS	27 9/32"	32"	51.5"	
ST-1	STEAM STERILIZER	STERIS CENTRY PREVACUUM STERILIZER	45"	30"	74"	CHAMBER DIMENSIONS: 20" X 20" X 30"
ST-2	STEAM STERILIZER	STERIS CENTRY PREVACUUM STERILIZER	46"	47"	48"	CHAMBER DIMENSIONS: 26" X 26" X 39"
TW	TUNNEL WASHER	BETTER BUILT T236 MODEL	240"	64"	99"	
UCW	UNDER COUNTER GLASSWARE WASHER	STERIS RELIANCE 100LS	27"	24"	34"	208V, 16 AMP
VGC1	VENTED CYLINDER CABINETS	SPECTRA GASES PRODUCT NUMBER F4001	18"	18"	75 75"	ONE CYLINDER CABINET WITH A 6" Dia. DUCT.
WFH120	WALK-IN FUME HOOD	LABCONCO		10'		

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8	CD ISSUANCE - NIH	04/14/20
9	ISSUE FOR BID & PERMIT	05/01/20
10	BID & PERMIT – NIH	05/22/20

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Client Number 514
Project Number 5350

DRAWING

LAB EQUIPMENT COVER SHEET

SHEET NO.

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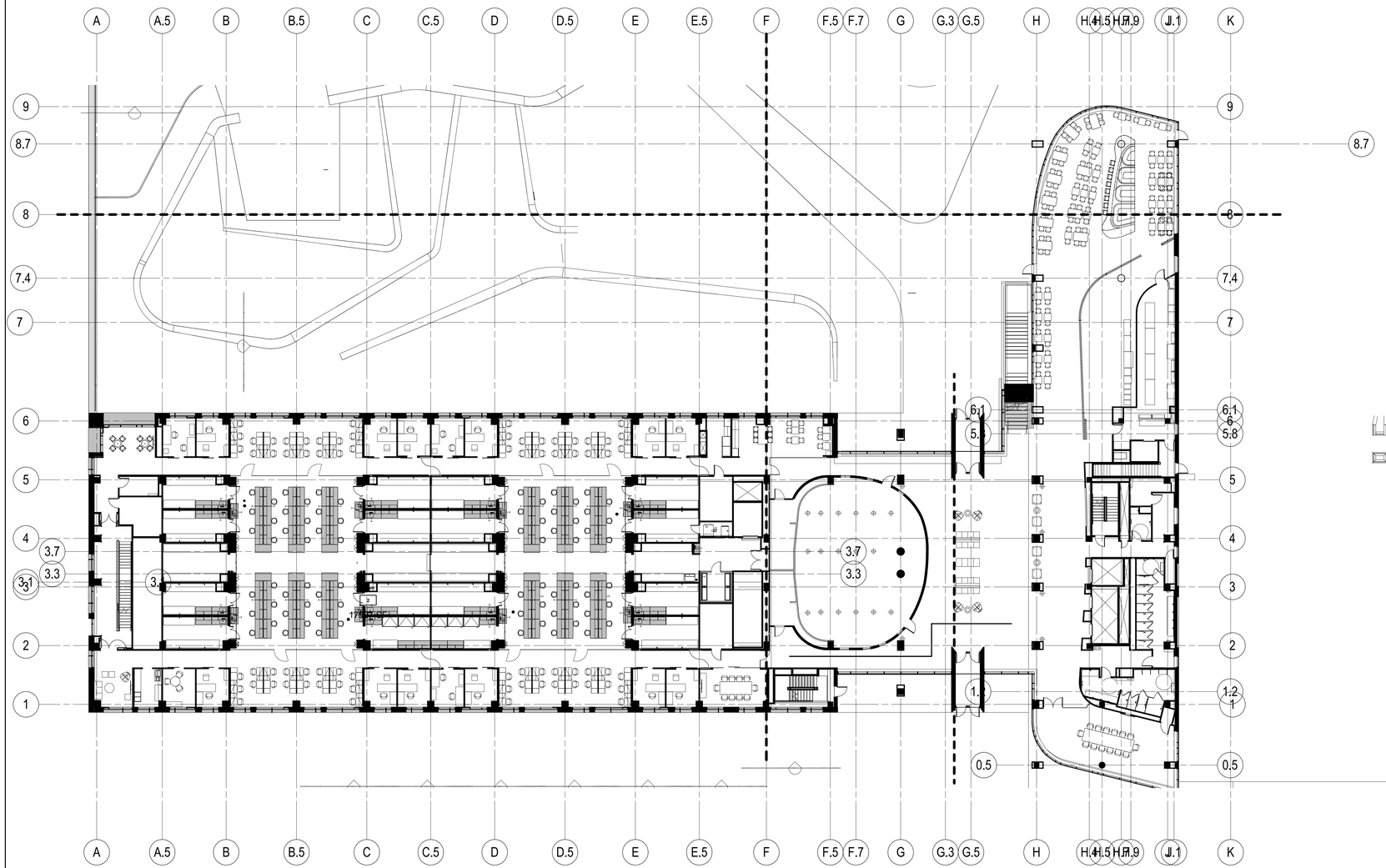

1 OVERALL PLAN - LEVEL 01
1/16" = 1'-0"

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ISSUANCES

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3	CD ISSUANCE - NIH	04/14/20
4	ISSUE FOR BID & PERMIT	05/01/20
5	BID & PERMIT – NIH	05/22/20

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Project Number	5350

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FLOOR PLAN LEVEL 01 OVERALL

SHEET NO.

QL-201

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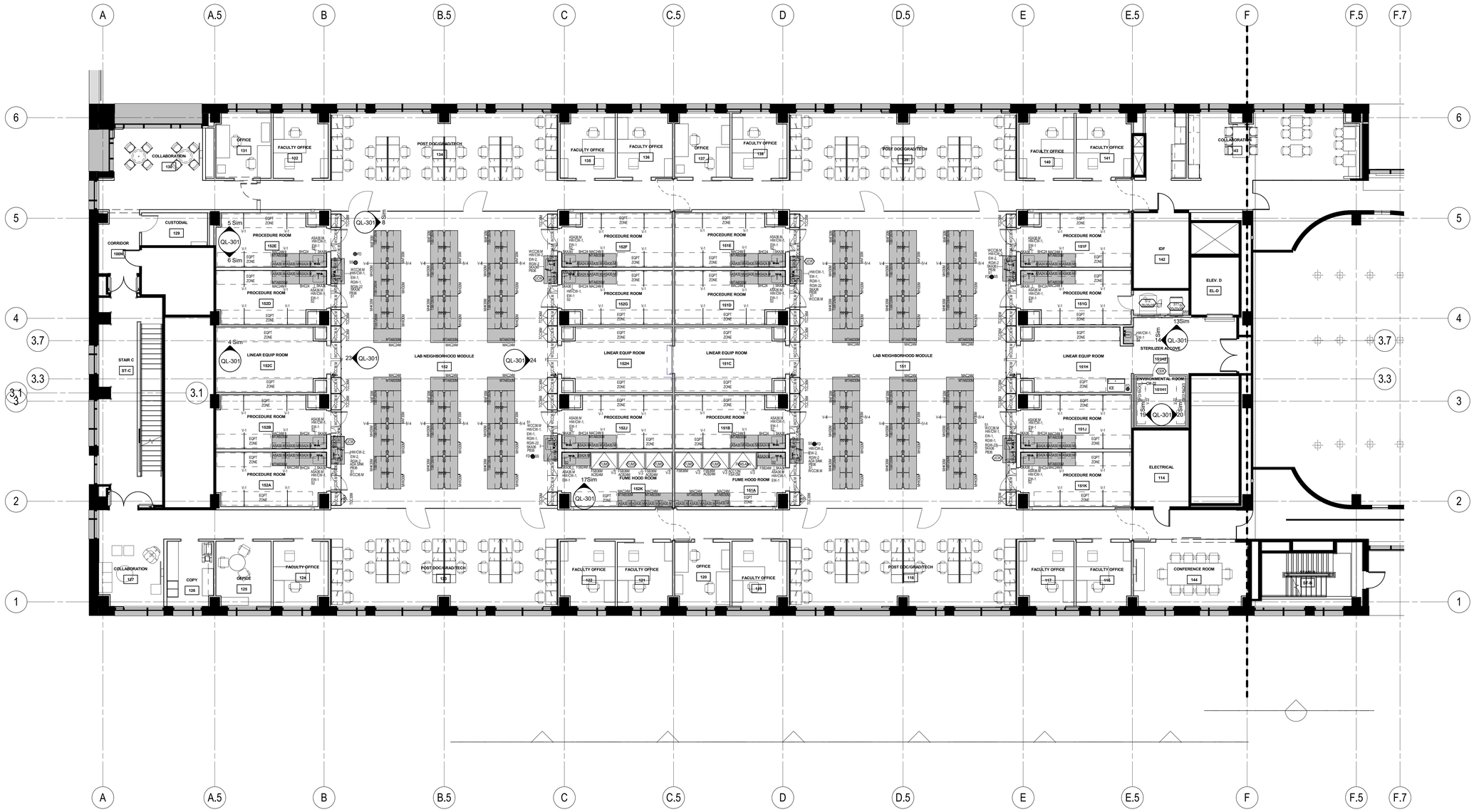

1 FLOOR PLAN - LEVEL 01 - AREA "B"
1/8" = 1'-0"

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5	BID & PERMIT – NIH	05/22/20

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Client Number 514	
Project Number 5350	

DRAWING

FLOOR PLAN LEVEL 01
AREA "B"

SHEET NO.

QL-201B

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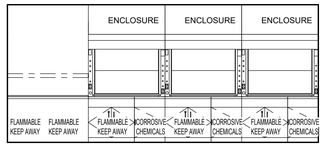
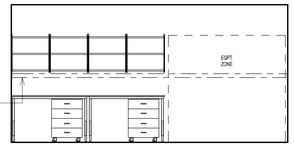
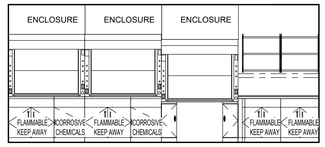


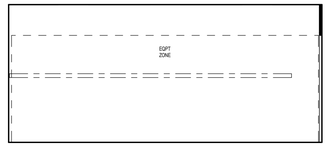
1 FUME HOOD
1/4" = 1'-0"



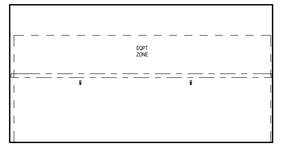
2 FUME HOOD
1/4" = 1'-0"



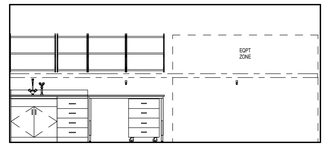
3 FUME HOOD
1/4" = 1'-0"



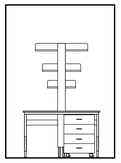
4 LINEAR EQUIPMENT
1/4" = 1'-0"



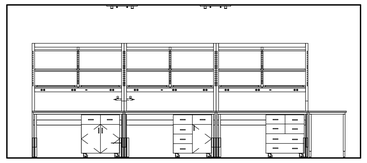
5 PROCEDURE ROOM
1/4" = 1'-0"



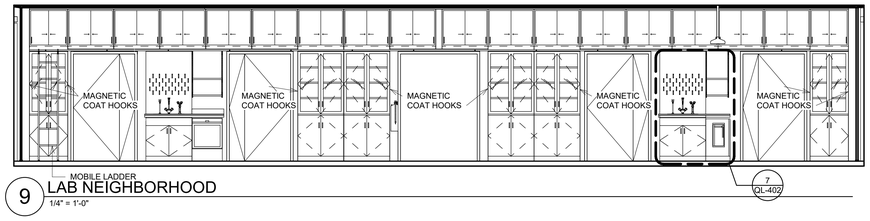
6 PROCEDURE ROOM
1/4" = 1'-0"



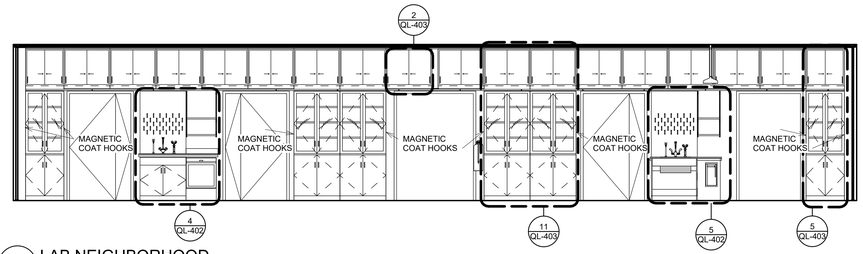
7 LAB NEIGHBORHOOD
1/4" = 1'-0"



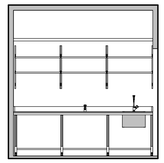
8 LAB NEIGHBORHOOD
1/4" = 1'-0"



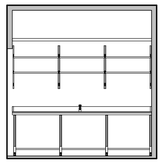
9 LAB NEIGHBORHOOD
1/4" = 1'-0"



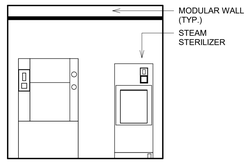
10 LAB NEIGHBORHOOD
1/4" = 1'-0"



11 ENVIRONMENTAL ROOM
1/4" = 1'-0"

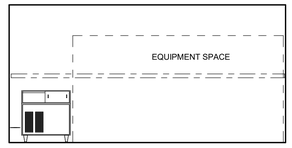


12 ENVIRONMENTAL ROOM
1/4" = 1'-0"

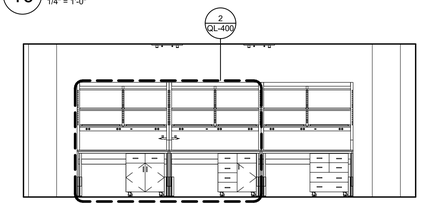


13 STERILIZER ALCOVE
1/4" = 1'-0"

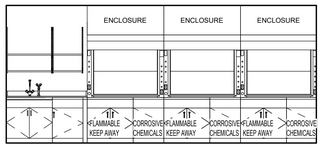
14 STERILIZER ALCOVE
1/4" = 1'-0"



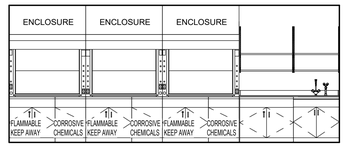
15 LINEAR EQUIPMENT
1/4" = 1'-0"



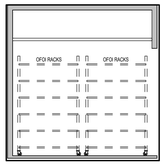
16 LAB NEIGHBORHOOD
1/4" = 1'-0"



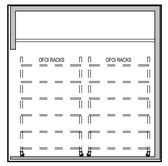
17 FUME HOOD 452K
1/4" = 1'-0"



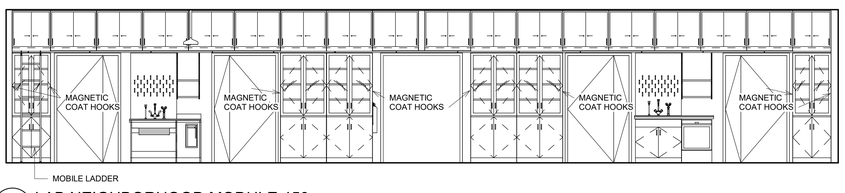
18 FUME HOOD 450A
1/4" = 1'-0"



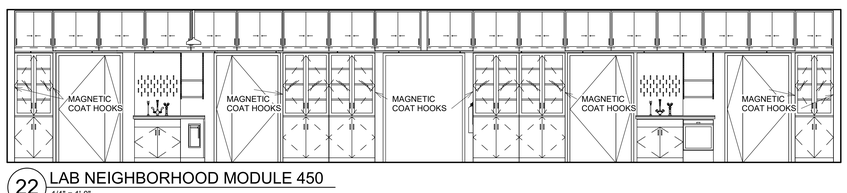
19 ENVIRONMENTAL ROOM 451H1
1/4" = 1'-0"



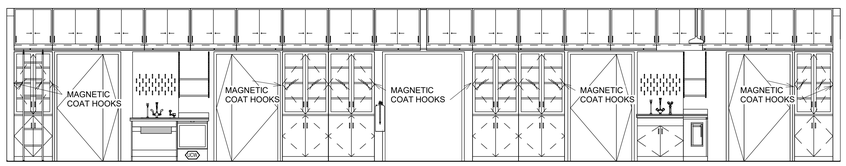
20 ENVIRONMENTAL ROOM 451H1
1/4" = 1'-0"



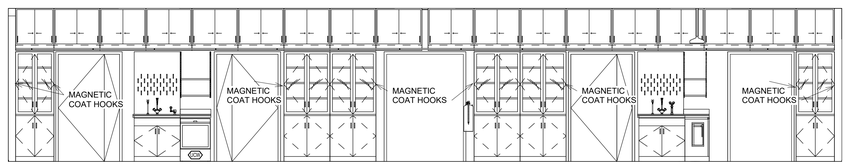
21 LAB NEIGHBORHOOD MODULE 450
1/4" = 1'-0"



22 LAB NEIGHBORHOOD MODULE 450
1/4" = 1'-0"



23 LAB NEIGHBORHOOD 152
1/4" = 1'-0"



24 LAB NEIGHBORHOOD 152
1/4" = 1'-0"

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CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

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No.	Description	Date
1	Design Release Package #5	12/06/16
2	PHASE 2 DD 100%	08/15/18
3	100% CD REVIEW	10/15/18
4	ISSUE FOR BID & PERMIT	11/15/18
5	P2 - Addendum #1	01/16/19
6	RECORD DRAWINGS	08/16/19
7	DD ISSUANCE - NIH	02/05/20
8	CD ISSUANCE - NIH	04/14/20
9	ISSUE FOR BID & PERMIT	05/01/20
10	BID & PERMIT – NIH	05/22/20

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Checked By Checker	
Client Number 514	
Project Number 5350	

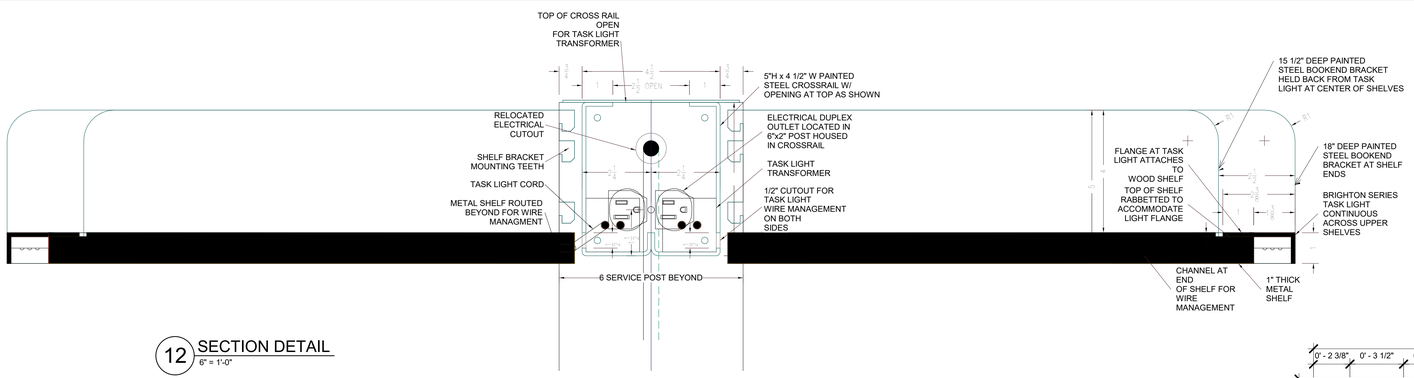
DRAWING

LABORATORY ELEVATIONS

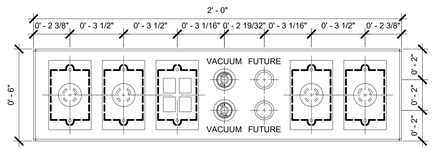
SHEET NO.

QL-301

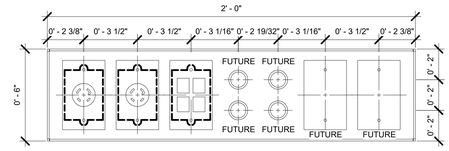
5/19/2020 2:44:27 PM



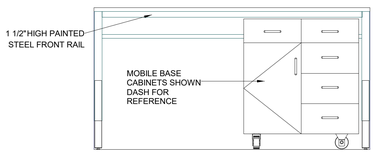
12 SECTION DETAIL
6" = 1'-0"



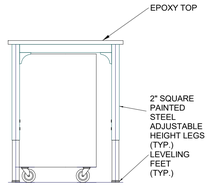
10 CEILING SERVICE PANEL CSP-1
3" = 1'-0"



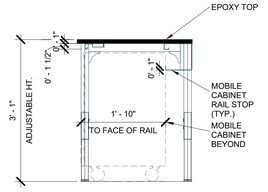
11 CEILING SERVICE PANEL CSP-2
3" = 1'-0"



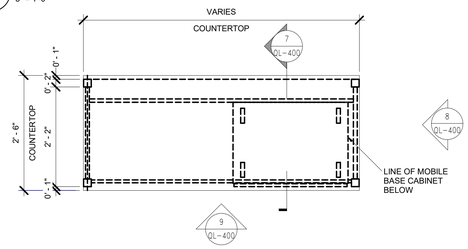
9 MOVEABLE TABLE (MT) FRONT ELEV.
3/4" = 1'-0"



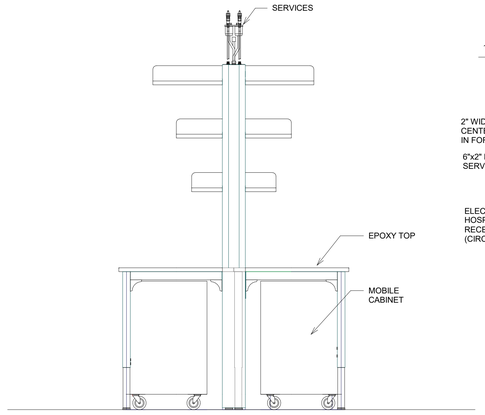
8 MOVEABLE TABLE (MT) SIDE ELEV.
3/4" = 1'-0"



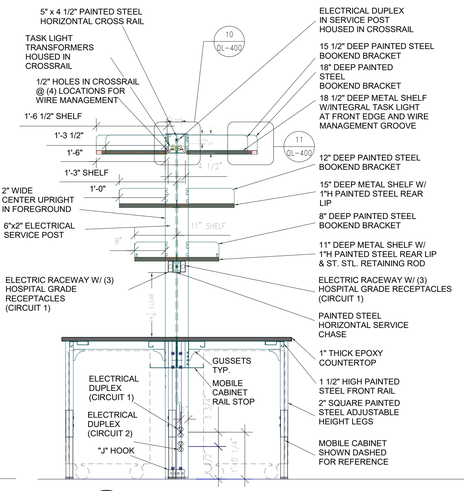
7 MOVEABLE TABLE (MT) SECTION
3/4" = 1'-0"



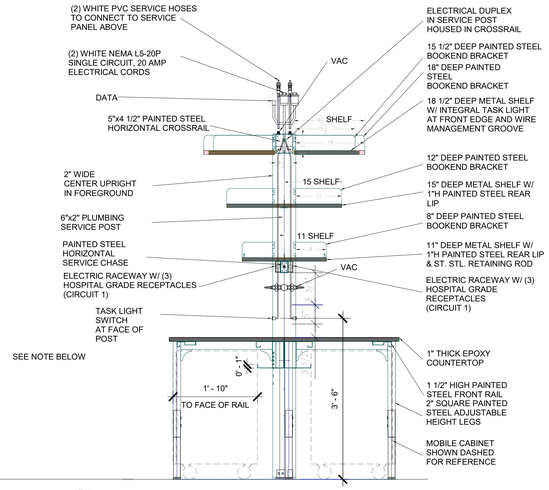
6 MOVEABLE TABLE (MT) PLAN
3/4" = 1'-0"



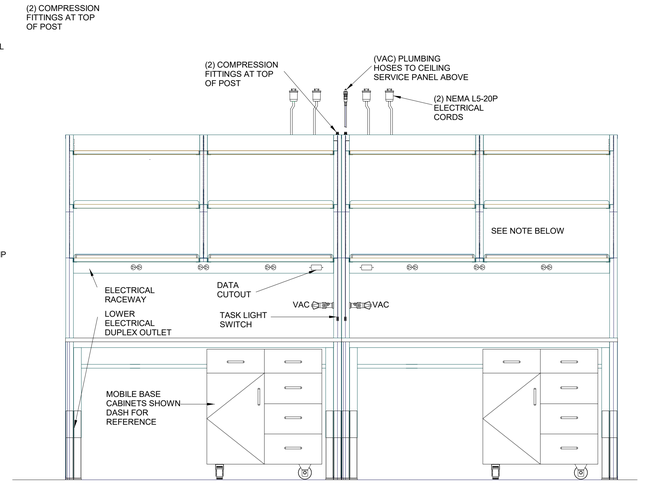
5 TABLE SYSTEM (TS) ELEV.
3/4" = 1'-0"



4 TABLE SYSTEM (TS)
3/4" = 1'-0"

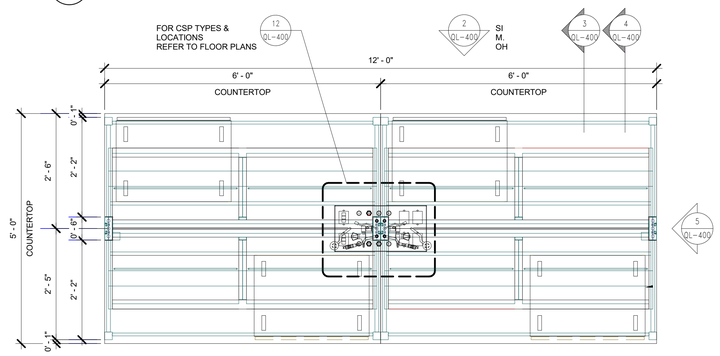


3 TABLE SYSTEM (TS) SECTION
3/4" = 1'-0"



2 TABLE SYSTEM (TS) FRONT ELEVATION
3/4" = 1'-0"

NOTE: FOR TABLES CONNECTED TO CSP-6, PROVIDE (1) 208V ELEC. OUTLET & CORD ON ONE SIDE OF THE TABLE.



1 TABLE SYSTEM (TS) PLAN
3/4" = 1'-0"

2
QL-400

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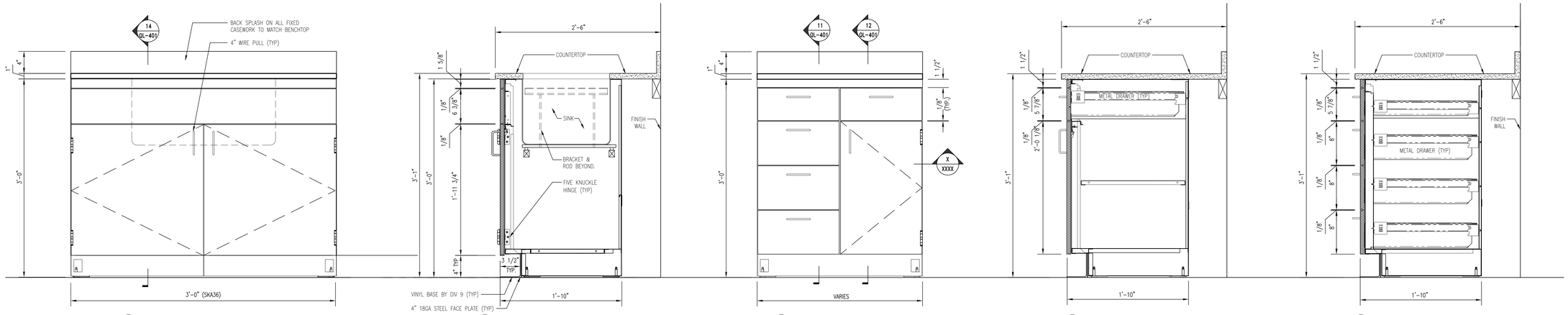
6	DD ISSUANCE - NIH	02/05/20
7	CD ISSUANCE - NIH	04/14/20
8	ISSUE FOR BID & PERMIT	05/01/20
9	BID & PERMIT – NIH	05/22/20

Drawn By Author
Checked By Checker
Client Number 514
Project Number 5350

DRAWING
TABLE SYSTEMS AND CEILING SERVICE PANEL DETAILS

SHEET NO.
QL-400

5/19/2020 2:45:09 PM



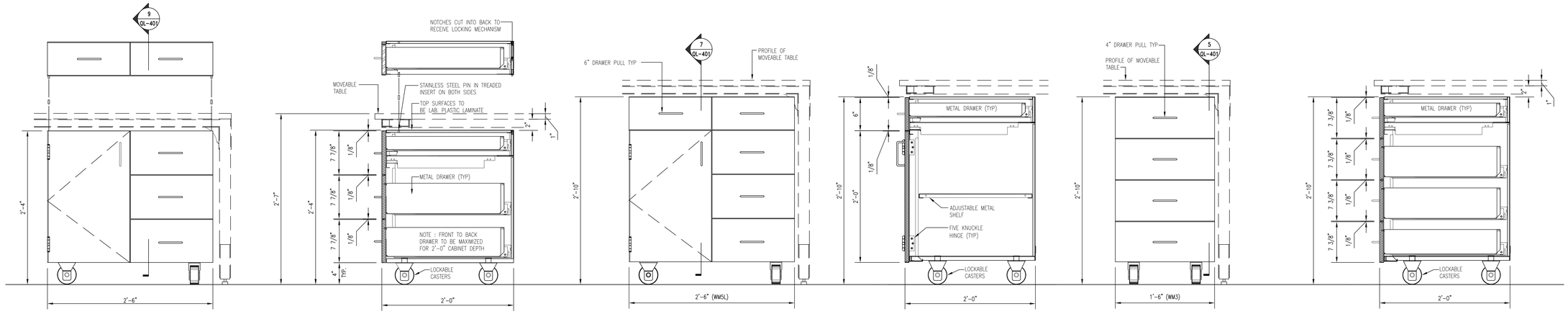
15 SINK CABINET ELEVATION (QL-401) 1-1/2" = 1'-0"

14 SINK CABINET DETAIL SECTION (QL-401) 1-1/2" = 1'-0"

13 BASE CABINET ELEVATION (QL-401) 1-1/2" = 1'-0"

12 BASE CABINET SECTION (QL-401) 1-1/2" = 1'-0"

11 BASE CABINET SECTION (QL-401) 1-1/2" = 1'-0"



10 MOVABLE BASE CABINET ELEVATION (QL-401) 1-1/2" = 1'-0"

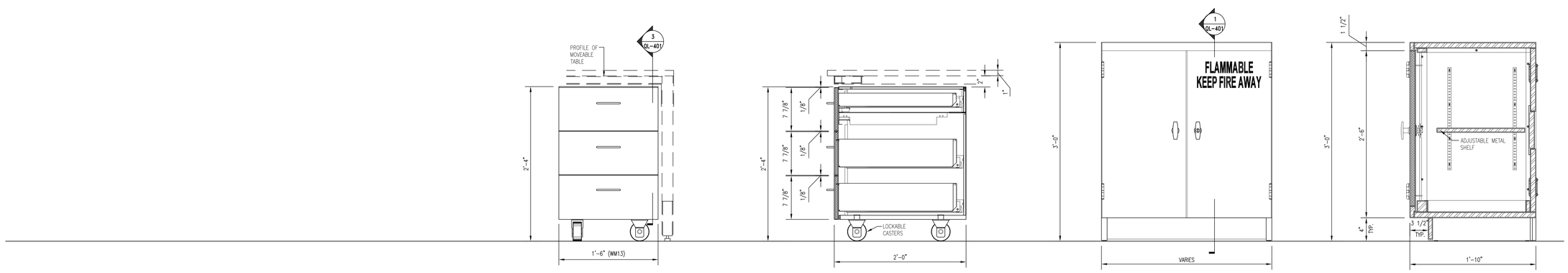
9 MOVABLE BASE CABINET SECTION (QL-401) 1-1/2" = 1'-0"

8 MOVABLE BASE CABINET ELEVATION (QL-401) 1-1/2" = 1'-0"

7 MOVABLE BASE CABINET SECTION (QL-401) 1-1/2" = 1'-0"

6 MOVABLE BASE CABINET ELEVATION (QL-401) 1-1/2" = 1'-0"

5 MOVABLE BASE CABINET SECTION (QL-401) 1-1/2" = 1'-0"



4 MOVABLE BASE CABINET ELEVATION (QL-401) 1-1/2" = 1'-0"

3 MOVABLE BASE CABINET SECTION (QL-401) 1-1/2" = 1'-0"

2 FLAMMABLE BASE CABINET ELEVATION (QL-401) 1-1/2" = 1'-0"

1 FLAMMABLE BASE CABINET SECTION (QL-401) 1-1/2" = 1'-0"

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7	CD ISSUANCE - NIH	04/14/20
8	ISSUE FOR BID & PERMIT	05/01/20
9	BID & PERMIT – NIH	05/22/20

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Client Number 514
Project Number 5350

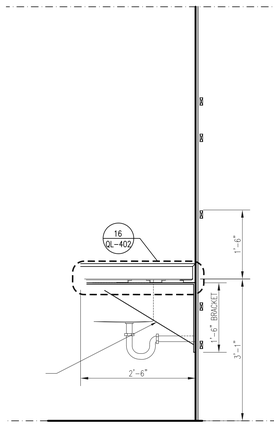
DRAWING

LAB CASEWORK DETAILS

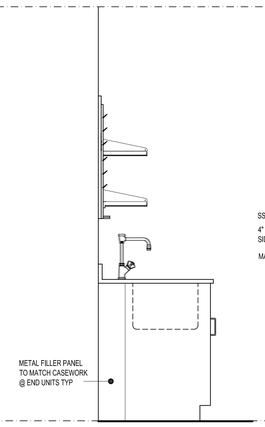
SHEET NO.

QL-401

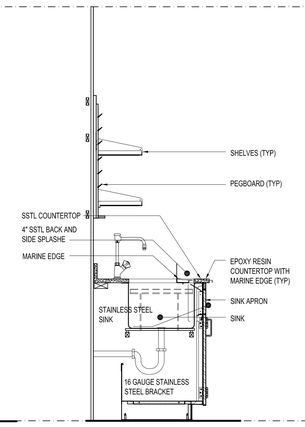
5/19/2020 2:45:53 PM



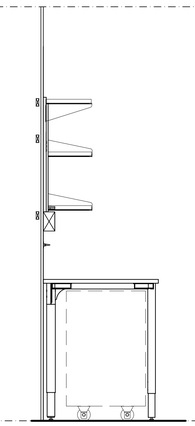
15 SINK UNIT SECTION
QL-403 3"=1'-0"



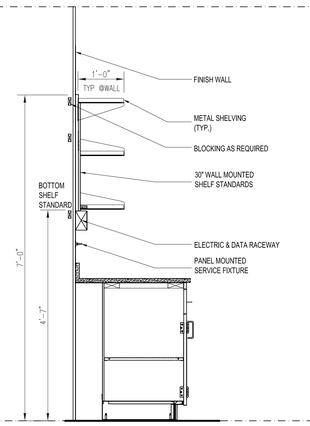
14 SINK UNIT ELEVATION
QL-403 3/4"=1'-0"



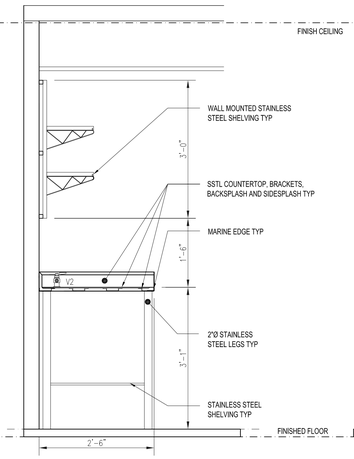
13 SINK UNIT SECTION
QL-403 3/4"=1'-0"



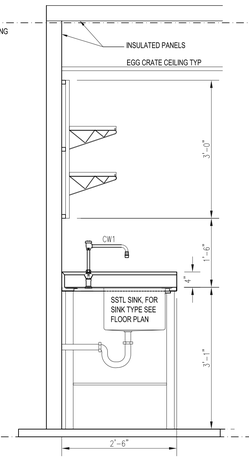
12 WALL MOUNTED SHELVING UNIT SECTION
QL-403 3/4"=1'-0" WITH MOVABLE TABLE UNDER



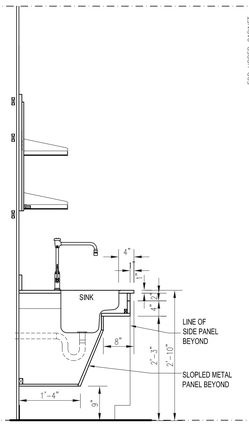
11 WALL MOUNTED SHELVING UNIT SECTION
QL-402 3/4"=1'-0" WITH BASE CABINET UNDER



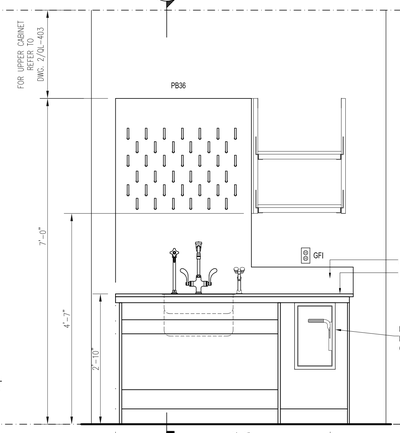
10 ENVIRONMENTAL ROOM SECTION
QL-402 3/4"=1'-0"



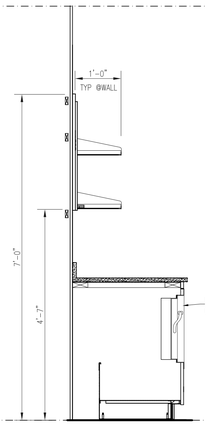
9 ENVIRONMENTAL ROOM SECTION
QL-402 3/4"=1'-0"



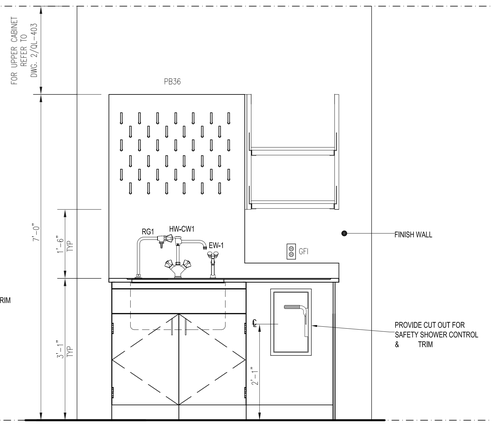
8 ADA SINK UNIT SECTION
QL-403 3/4"=1'-0"



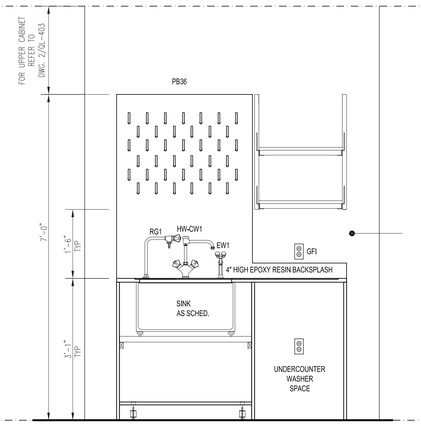
7 ADA SINK UNIT ELEVATION
QL-402 3/4"=1'-0" @ SAFETY SHOWER LOCATIONS



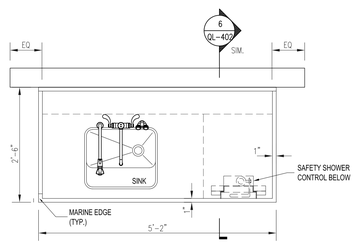
6 SINK UNIT SECTION
QL-402 3/4"=1'-0" @SS LOCATIONS



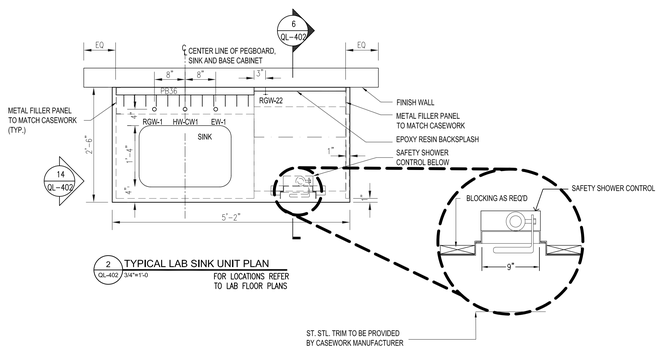
5 SINK UNIT SECTION/ELEVATION
QL-402 3/4"=1'-0" @ SAFETY SHOWER LOCATIONS



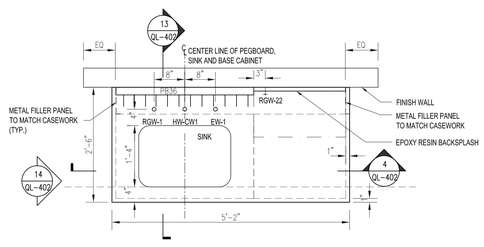
4 SINK UNIT SECTION/ELEVATION
QL-402 3/4"=1'-0" @ UNDERCOUNTER WASHER LOCATIONS



3 TYPICAL ADA LAB SINK UNIT PLAN
QL-402 3/4"=1'-0 FOR LOCATIONS REFER TO LAB FLOOR PLANS



2 TYPICAL LAB SINK UNIT PLAN
QL-402 3/4"=1'-0 FOR LOCATIONS REFER TO LAB FLOOR PLANS



1 TYPICAL LAB SINK UNIT PLAN
QL-402 3/4"=1'-0 FOR LOCATIONS REFER TO LAB FLOOR PLANS

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8	BID & PERMIT – NIH	05/22/20

Drawn By	Author
Checked By	Checker
Client Number	514
Project Number	5350

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LAB CASEWORK DETAILS

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QL-402

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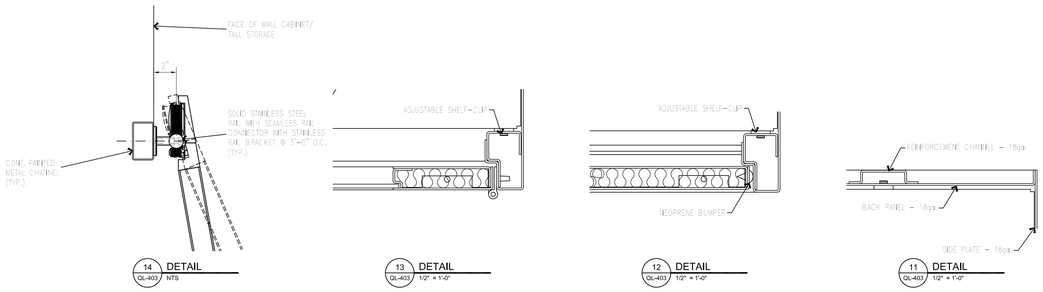
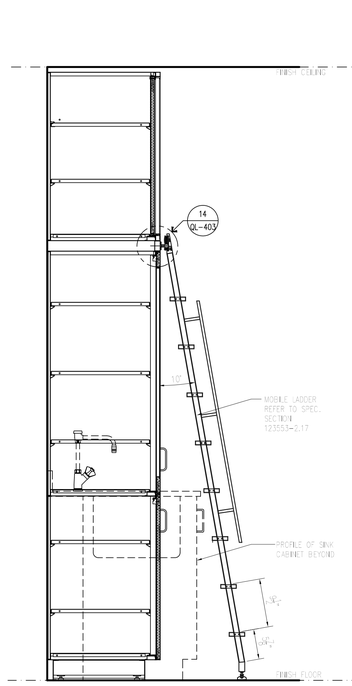


14 QL-403 DETAIL NTS

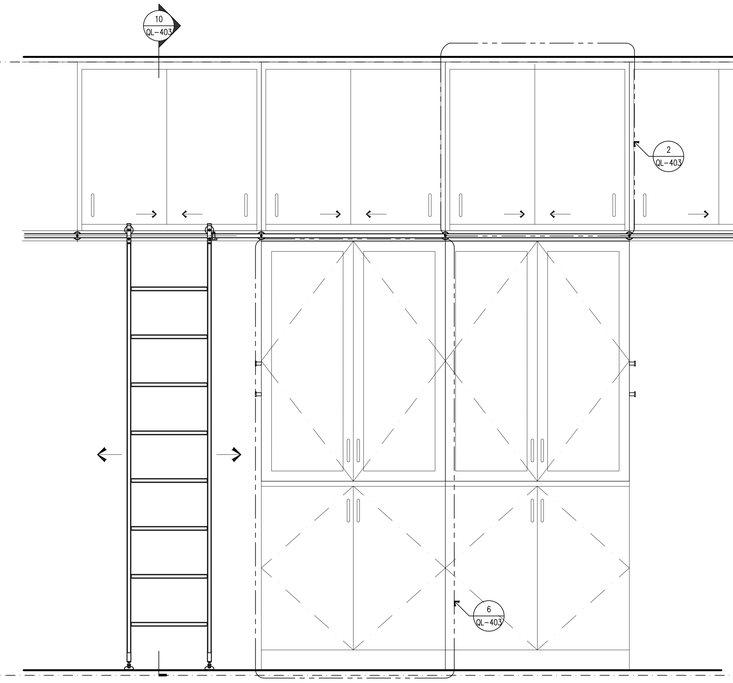
13 QL-403 DETAIL 1/2" = 1'-0"

12 QL-403 DETAIL 1/2" = 1'-0"

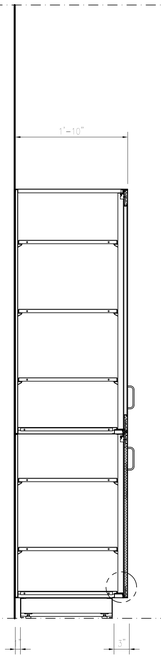
11 QL-403 DETAIL 1/2" = 1'-0"



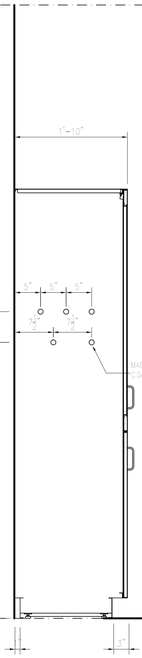
10 QL-403 MOBILE LADDER DETAIL 1" = 1'-0" SECTION



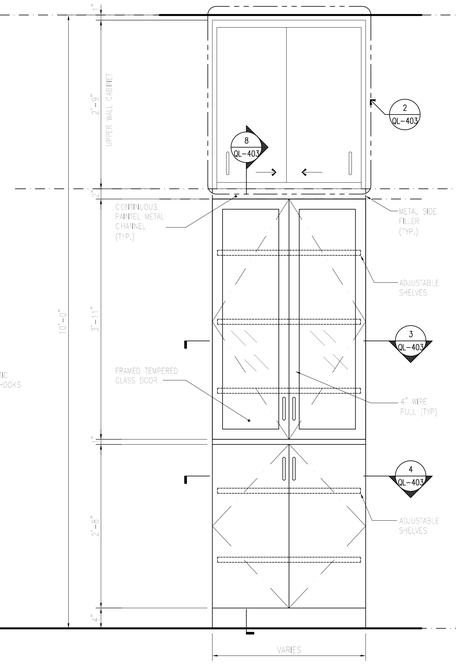
9 QL-403 MOBILE LADDER DETAIL 1" = 1'-0" ELEVATION



8 QL-403 TALL CABINET DETAIL 1" = 1'-0" SECTION



7 QL-403 TALL CABINET DETAIL 1" = 1'-0" SECTION



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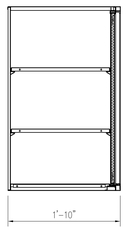
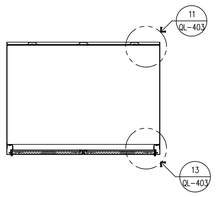
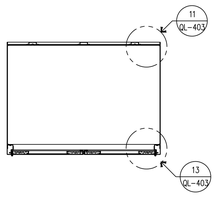


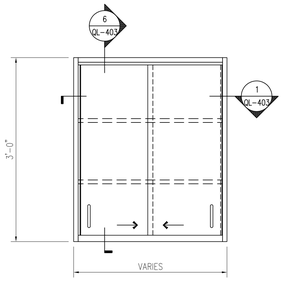
5 QL-403 UPPER WALL CABINET DETAIL 1" = 1'-0" SLIDING SOLID DOOR - SECTION



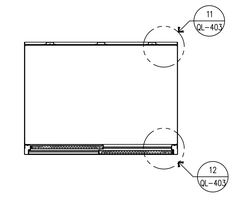
4 QL-403 TALL CABINET DETAIL 1" = 1'-0" SOLID DOOR- PLAN



3 QL-403 TALL CABINET DETAIL 1" = 1'-0" FRAMED GLASS DOOR- PLAN



2 QL-403 UPPER WALL CABINET DETAIL 1" = 1'-0" SLIDING SOLID DOOR - ELEVATION



1 QL-403 UPPER WALL CABINET DETAIL 1" = 1'-0" SLIDING SOLID DOOR - PLAN

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Checked By Checker	
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Project Number 5350	

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QL-403

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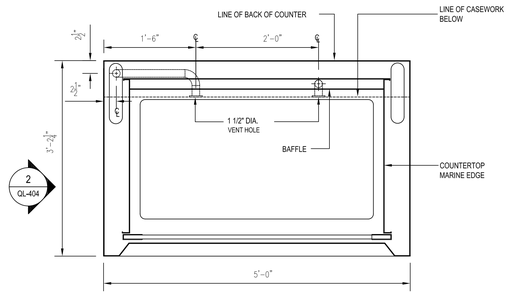
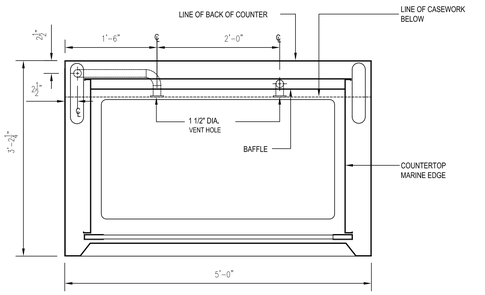
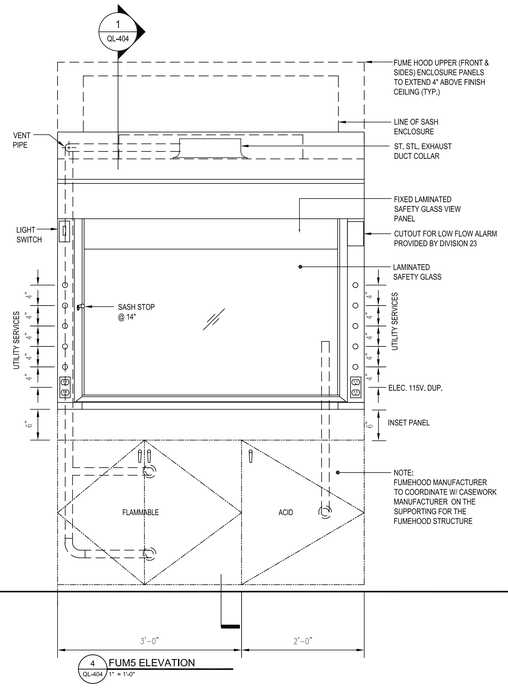


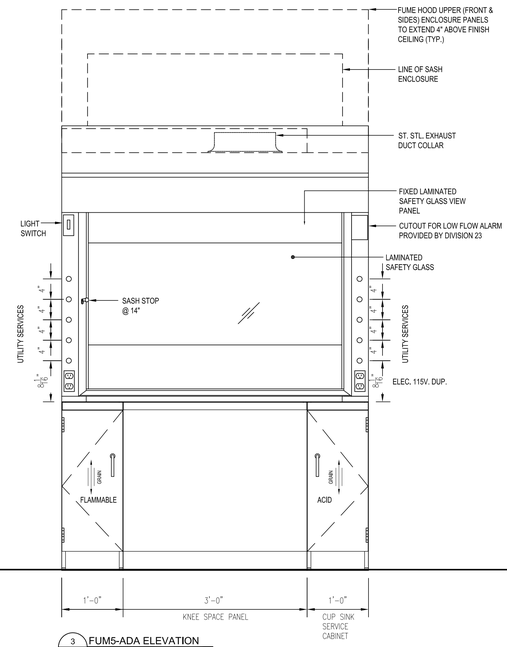


6 QL-404 FUM5 PLAN 1" = 1'-0"

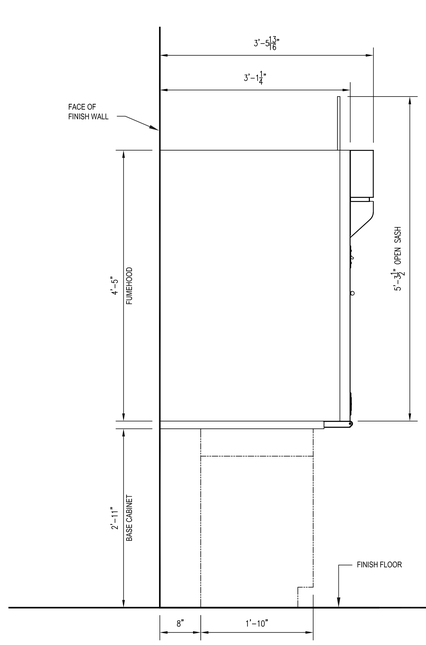


4 QL-404 FUM5 ELEVATION 1" = 1'-0"

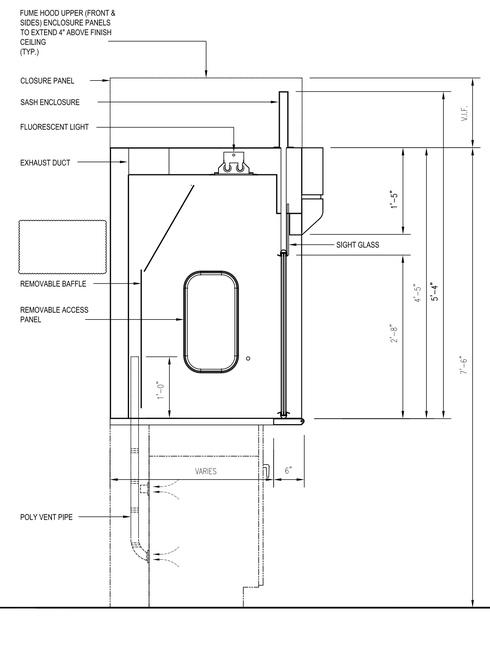
5 QL-404 FUM5-ADA PLAN 1" = 1'-0"



3 QL-404 FUM5-ADA ELEVATION 1" = 1'-0"



2 QL-404 FUME HOOD SIDE ELEVATION 1" = 1'-0"



1 QL-404 FUME HOOD SECTION 1" = 1'-0"

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Project Number 5350

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FUME HOOD DETAILS

SHEET NO.

QL-404

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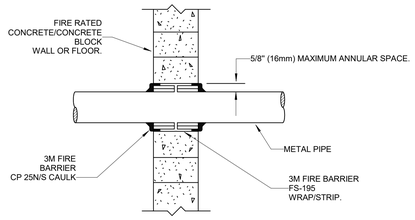


NOTES:

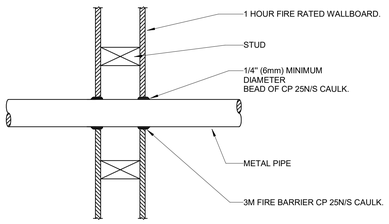
1. THE MAXIMUM ANNULAR SPACE AROUND THE METAL PIPE OR CONDUIT IS 5/8" (16mm). (IF THE ANNULAR SPACE EXCEEDS 5/8" PATCH THE WALL AND PENETRATE WALL AT ANOTHER LOCATION).
2. WRAP THE 3M MODEL# FS-195 WRAP/STRIP AROUND THE PIPE/CONDUIT, FOIL SIDE OUT, TO FILL THE SPACE BETWEEN THE PIPE/CONDUIT AND THE WALL OPENING. THE 3M MODEL# FS-195 WRAP/STRIP SHOULD BE TIGHTLY SECURED WITH ALUMINUM FOIL TAPE OR STEEL TIE WIRE AND PUSHED INTO THE OPENING UNTIL THE TOP EDGE OF THE WRAP IS FLUSH WITH THE WALL SURFACE. THE IDENTICAL INSTALLATION SHOULD BE INSTALLED ON THE OTHER SIDE OF THE WALL.
3. USE 3M MODEL# CP 25N/S(NO SAG) CAULK TO FILL THE AREA BETWEEN THE FS-195 WRAP/STRIP AND THE EDGES OF THE OPENING AND ANY VOIDS IN THE 3M MODEL# FS-195 WRAP/STRIP. A FILL OF CP 25 CAULK SHOULD COAT ALL EXPOSED EDGES OF THE FS-195 WRAP/STRIP AND COMPLETELY SEAL THE AREA BETWEEN THE FS-195 WRAP/STRIP, THE PIPE/CONDUIT AND THE WALL SURFACE.

PENETRATION FIRESTOP FOR METAL PIPE/CONDUIT THROUGH A CONCRETE WALL

NOT TO SCALE

FIRE STOPPING NOTES:

1. FIRE STOPPING IS CRITICAL AND MUST BE ACCOMPLISHED. ALL PIPES MUST BE FIRESTOPPED WHERE THEY PENETRATE FIRE RESISTIVE, FIRE RATED, AND SMOKE RESISTIVE WALLS OR FLOORS. ALL FLOORS CORRIDOR WALLS, STAIR WALLS, MECHANICAL ROOM WALLS, STORAGE ROOM WALLS AND OTHER HAZARDOUS ROOM WALLS ARE ONE HOUR RATED.
2. A FOUR-HOUR TRAINING SESSION SHALL BE CONDUCTED BY MANUFACTURER OF THE FIRESTOPPING MATERIAL. THIS SHALL BE DONE PRIOR TO THE INSTALLATION OF THE MATERIAL. CONTACT HOSPITAL ENGINEER AND CMTA TO ADVISE OF DATE AND TIME OF THIS MEETING.
3. ALL PENETRATIONS WILL BE REVIEWED BY THE HOSPITAL ENGINEER OR CMTA. PRIOR TO INSPECTION, ALL CEILING TILES BENEATH THE PENETRATIONS SHALL BE REMOVED BY THE CONTRACTOR.



NOTES:

1. FORCE THE 3M MODEL# CP 25N/S CAULK INTO THE ANNULAR SPACE TO THE MAXIMUM EXTENT POSSIBLE, FLUSH WITH THE EXTERIOR OF THE PENETRATION SURFACE.
2. FINISH CAULKING WITH A 1/4" (6mm) MINIMUM BEAD OF CP 25N/S CAULK APPLIED TO THE PERIMETER OF THE CONDUIT/PIPE AT ITS EGRESS FROM THE WALL.
3. THE MAXIMUM ANNULAR SPACE IS NOT TO EXCEED 3/16" (5mm). (IF IT DOES PATCH WALL AND PENETRATE WALL AT ANOTHER LOCATION).
4. INSTALL THE 3M FIRESTOP ON BOTH SIDES OF THE WALL.

PENETRATION FIRESTOP FOR METAL PIPE/CONDUIT THROUGH ONE HOUR WALL

NOT TO SCALE

FIRE PROTECTION DESIGN NOTES:

1. ALL AREAS SHALL BE 100% COVERED WITH A FIRE PROTECTION SYSTEM DESIGNED IN ACCORDANCE WITH NFPA 13. THE OUTLINED AREA SHALL BE PROTECTED WITH A WET TYPE SYSTEM UNLESS NOTED OTHERWISE.
2. THE SUCCESSFUL FIRE PROTECTION CONTRACTOR SHALL OBTAIN AND UTILIZE THE ARCHITECTURAL REFLECTED CEILING PLAN FOR LAYING OUT THE SPRINKLER HEADS. THE REFLECTED CEILING PLANS SHOWN ARE TO COORDINATE CEILING TYPES AND LOCATIONS. REFER TO THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR COORDINATION OF TRADES, STRUCTURE, EQUIPMENT AND CEILING DEVICE LOCATIONS. REFER TO SPECIFICATIONS COORDINATION DRAWINGS REQUIREMENTS.
3. ALL OUTLINED AREAS SHALL HAVE "SEMI-RECESSED" QUICK RESPONSE TYPE SPRINKLER HEADS (UNLESS OTHERWISE NOTED ON THE PLANS). HEADS SHALL BE FED FROM A RETURN BEND ARRANGEMENT.
4. UTILIZE UPRIGHT AND/OR WALL MOUNTED TYPE SPRINKLER HEADS IN AREAS WITHOUT CEILINGS.
5. ALL SPRINKLER HEADS TO BE CENTERED IN BOTH DIRECTIONS OF A 2' x 4' OR 2' x 2' CEILING TILE. REFER TO CEILING GRID DETAILS BELOW.
6. HVAC DUCTWORK MAINS SHALL BE INSTALLED PRIOR TO FIRE PROTECTION PIPING. PROVIDE DRAIN VALVES IN THE FIRE PROTECTION SYSTEM WHERE NECESSARY TO COMPLETELY DRAIN THE SYSTEM.
7. REFER TO THE SPECIFICATIONS FOR THE DIFFERENT SPRINKLER HEAD TYPES.
8. PROVIDE ALL REQUIRED DRAIN PIPING TO TEST FLOW SWITCHES. DISCHARGE DRAIN PIPING TO OUTDOORS OR A FLOOR DRAIN.
9. SIZE ALL FIRE PROTECTION PIPING IN ACCORDANCE WITH NFPA 13. PIPE SIZING SHALL BE ACCOMPLISHED USING HYDRAULIC CALCULATIONS.
10. SUBMIT HYDRAULIC CALCULATIONS AND SYSTEMS DESIGN FOR REVIEW TO: THE M/E ENGINEER.
11. THE SUCCESSFUL CONTRACTOR SHALL PERFORM A NEW FLOW TEST BEFORE STARTING ANY DESIGN WORK OR CALCULATIONS.
12. WHERE CEILINGS ARE INDICATED ALL SPRINKLER PIPING MUST BE INSTALLED ABOVE CEILINGS. SPRINKLER PIPING MUST BE COORDINATED WITH OTHER TRADES PIPING MUST BE OFFSET TO AVOID CONFLICTS WITH DUCTWORK, CONDUIT, ALL EQUIPMENT, ETC.
13. APPLICABLE CODES THAT SHALL PROVIDE TO DESIGN AND INSTALLATION OF THE FIRE PROTECTION SYSTEM ARE NFPA 13, 20, 25, 45 AND 101.
14. FLEXIBLE HOSE SPRINKLER HEADS ARE NOT ALLOWED.

FLOW DATA

STATIC PSI: 86

RESIDUAL PSI: 96

FLOW: 504 GPM

DURATION: CONTINUOUS

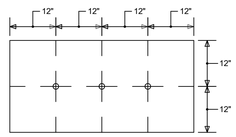
DATE & TIME: 09/11/2019

SOURCE OF WATER: CITY SUPPLY / NEW FIRE PUMP

SOURCE OF DATA: PUMP MANUFACTURER

HAZARD: LIGHT & ORDINARY

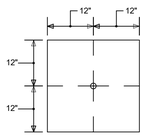
OCCUPANCY OF BUILDING: RESEARCH & HIGHER EDUCATION



SPRINKLER HEADS MAY BE INSTALLED IN 2x4 CEILING TILES IN ANY OF THE THREE LOCATIONS INDICATED ABOVE. NO EXCEPTIONS!

2x4 CEILING TILE DETAIL

SCALE: NONE



SPRINKLER HEADS TO BE INSTALLED IN CENTER OF 2x2 CEILING TILES.

2x2 CEILING TILE DETAIL

SCALE: NONE

FIRE PROTECTION LEGEND

"SEMI-RECESSED" SPRINKLER HEAD WITH REMOVABLE ESCUTCHEON PLATE	
UPRIGHT TYPE SPRINKLER HEAD	
SIDEWALL TYPE SPRINKLER HEAD	
FIRE PROTECTION PIPING	FP
DRY SYSTEM FIRE PROTECTION PIPING	FP - DRY
PREACTION FIRE PROTECTION PIPING	FP - PRE
FIRE VALVE CABINET	FVC
DOUBLE CHECK VALVE	
NEW O.S.&Y VALVE	
TAMPER SWITCH	TS
FLOW SWITCH	FS
PIPING RISE UP	
PIPING DOWN	
CONNECT TO EXISTING	

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5	CD ISSUANCE - NIH	04/14/20
6	BID & PERMIT - NIH	05/22/20

Drawn By RLB

Checked By CMR

Client Number

STATE OF KENTUCKY CHRISTOPHER M. REEVES 25045 LICENSED PROFESSIONAL ENGINEER

Project Number UKR15

DRAWING

FIRE PROTECTION LEGEND/SCHEDULES

SHEET NO.

FP-150

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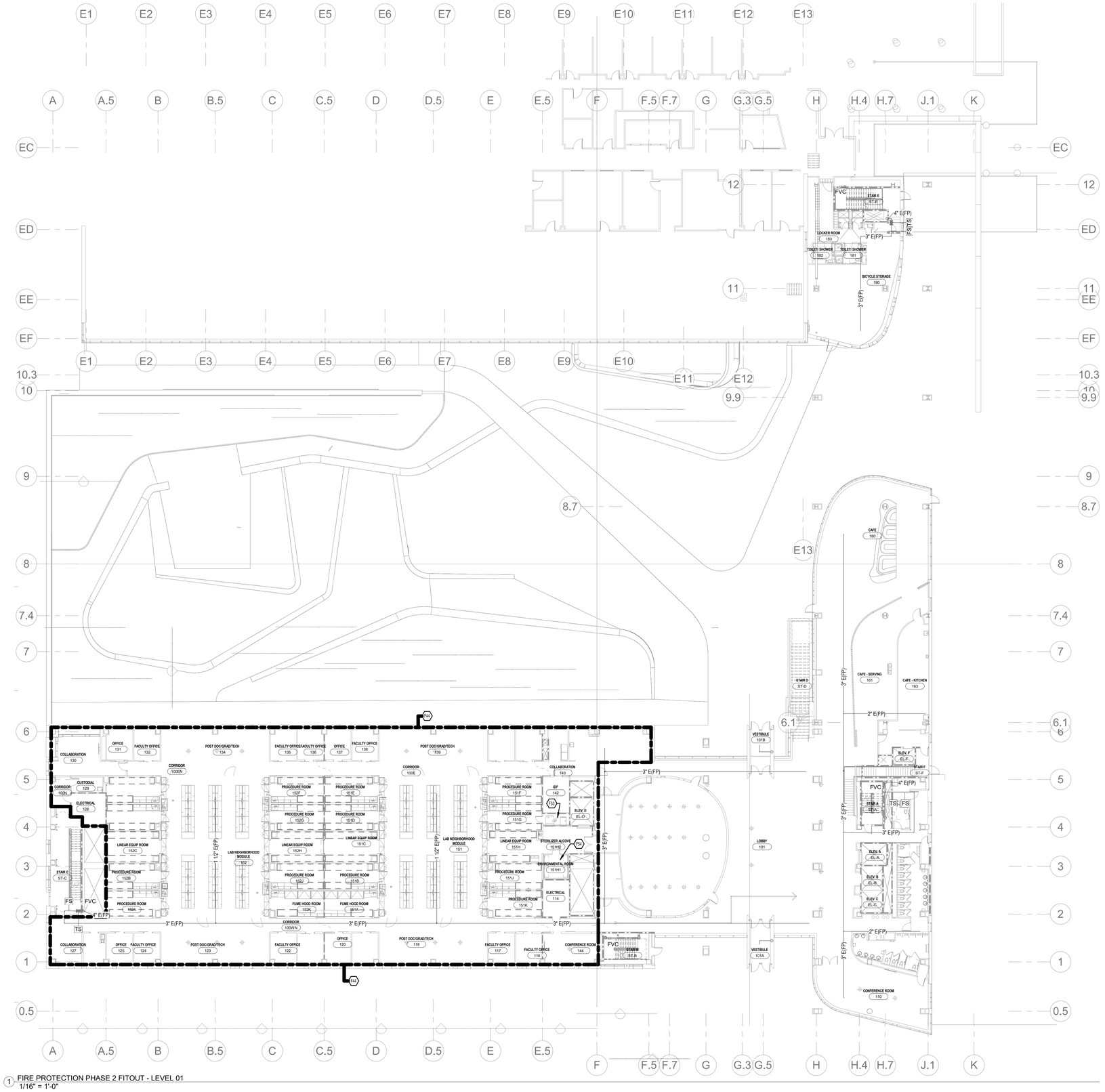

1 FIRE PROTECTION PHASE 2 FITOUT - LEVEL 01
1/16" = 1'-0"

FIRE PROTECTION TAGGED NOTES	
F4	STAND PIPE UP AND DOWN.
F44	EXISTING AREA IS CURRENTLY COVERED BY A 100% SPRINKLER SYSTEM. REMOVE EXISTING UP-RIGHT SPRINKLER HEADS, PROVIDE NEW EXTENDED COVERAGE CONCEALED SPRINKLER HEADS IN NEW CEILINGS. COORDINATE LOCATIONS WITH LIGHT FIXTURES AND CEILING MOUNTED MECHANICAL EQUIPMENT. REFER TO ARCITECTURAL REFLECTED CEILING PLANS OF NEW CEILING.
F53	PROVIDE HIGH TEMPERTURE SPRINKLER HEADS OVER TOP OF STERILIZERS.
F54	PROVIDE FREEZE PROOF SPRINKLER HEADS IN ENVIROMENTAL COLD ROOM.

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
LEXINGTON, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	Phase 2 DD 100%	08/15/18
2	100% CD REVIEW	10/15/18
3	ISSUE FOR BID & PERMIT	11/15/18
4	DD ISSUANCE - NIH	02/05/20
5	CD ISSUANCE - NIH	04/14/20
6	BID & PERMIT - NIH	05/22/20

Drawn By RLB
Checked By CMR
Client Number
Project Number UKR15

STATE OF KENTUCKY
CHRISTOPHER M. REEVES
25045
LICENSED PROFESSIONAL ENGINEER

DRAWING
LEVEL 01 PHASE 2 FITOUT - FIRE PROTECTION

SHEET NO.
FP-251

5/21/2020 10:37:57 AM

PLUMBING FIXTURE SCHEDULE - NIH

MARK	DESCRIPTION	CW	HW	WASTE	VENT
P-4A	SINGLE COMPARTMENT LAB SINK: SINGLE COMPARTMENT LAB SINK AND FAUCET BY CASEWORK SUPPLIER AND INSTALLED BY PLUMBING CONTRACTOR. PROVIDE 3/8" SUPPLIES WITH ANGLE STOPS, ACID WASTE DRAIN AND TAILPIECE AND ESCUTCHEONS. PROVIDE WITH ACID WASTE BOTTLE TRAP: TRAP SHALL BE EQUAL TO IPEX W511 UNIVERSAL TRAP WITH TRANSPARENT BASE.	1/2"	1/2"	2"	2"
P-6A	SINGLE COMPARTMENT SINK : SINGLE COMPARTMENT STAINLESS STEEL SINK, UNDERMOUNTED, 19"X21" O.D., 14"X18" I.D., 61/2" DEEP, 18 GAUGE, WITH 8" CENTERS. PROVIDE WITH 5" REACH SWING SPOUT GOOSENECK FAUCET WITH 4" WRIST BLADE CONTROL HANDLES, REAR CENTERED CRUMB CUP STRAINER DRAIN, 3/8" ANGLE SUPPLIES WITH STOPS, KENTUCKY CODE P-TRAP, TAILPIECE AND ESCUTCHEONS.	1/2	1/2"	2"	2"
P-9	MOP BASIN : 24"X36"X10" HIGH MOLDED STONE MOP SERVICE BASIN, IN WHITE DRIFT COLOR, 3" DRAIN, SERVICE FAUCET WITH THREADED HOSE CONNECTION SPOUT, HOSE AND HOSE BRACKET, AND VINYL BUMPERGUARD. THE DRAIN SHALL BE LOCATED 12" TO THE CENTER. PROVIDE INDEPENDENT CHECK VALVES IN THE HOT AND COLD WATER SUPPLIES.	3/4"	3/4"	3"	2"
P-10	VACUUM OUTLET: SUPPLIED BY LAB EQUIPMENT SUPPLIER, INSTALLATION AND CONNECTION TO VACUUM PIPING SYSTEM REQUIRED.			-	
P-10A	FUME HOOD VACUUM OUTLET: SUPPLIED BY LAB EQUIPMENT SUPPLIER, INSTALLATION AND CONNECTION TO VACUUM PIPING SYSTEM REQUIRED.			-	
P-11	REVERSE OSMOSIS FAUCET: SUPPLIED BY LAB EQUIPMENT SUPPLIER, INSTALLATION AND CONNECTION TO REVERSE OSMOSIS PIPING SYSTEM REQUIRED.	1"	1"	-	-
P-12	EMERGENCY SHOWER: SUPPLIED BY LAB EQUIPMENT SUPPLIER, INSTALLATION AND CONNECTION TO TEMPERED WATER PIPING SYSTEM REQUIRED.	1"	1"	-	-
P-15	WATER SUPPLY WALL BOX: IPS FR12M SERIES METAL ICE MAKER BOX, 5-1/4"X5-1/4" RECESSED FIRE RATED METAL VALVE BOX, WITH A SINGLE LEAD FREE QUARTER TURN VALVE WITH 1/2" SWEAT CONNECTION INLET AND 1/4" COMPRESSION OUTLET.	1/2	-	-	-
P-15A	WATER SUPPLY WALL BOX WITH VACUUM BREAKER: IPS FR12M SERIES METAL ICE MAKER BOX, 5-1/4"X5-1/4" RECESSED FIRE RATED METAL VALVE BOX, WITH A SINGLE LEAD FREE QUARTER TURN VALVE WITH 1/2" SWEAT CONNECTION INLET AND 1/4" COMPRESSION OUTLET. PROVIDE WITH WALL MOUNTED VACUUM BREAKER FITTING AND IN-LINE WATER FILTER AND MAKE FINAL CONNECTION TO ICE MAKER.	1/2	-	-	-
P-16	WASHER BOX: RECESSED 20 GAUGE METAL WASHER BOXY WITH 1/2" HW AND CW QUARTER TURN VALVES AND 2" DRAIN. PROVIDE WITH WATER HAMMER ARRESTORS IN SUPPLIE LINES.	1/2"	1/2"	2"	2"

GENERAL NOTES

- COORDINATE THE LOCATION OF DRAINS, GAS OUTLETS, ETC., WITH ALL CASEWORK EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC., PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES, VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
- WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.
- ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.
- COORDINATE ALL WORK WITH PROJECT PHASING REQUIREMENTS.
- PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
- IN ACCORDANCE WITH K.R.S. ALL PLUMBING WORK SHALL BE CONSTRUCTED IN COMPLIANCE WITH PLANS APPROVED BY AND BEARING THE APPROVAL STAMP OF THE KENTUCKY DIVISION OF PLUMBING AND, OR THE DIVISION OF WATER. THE CONTRACTOR SHALL NOT BEGIN WORK UNTIL HE HAS RECEIVED SUCH APPROVED PLANS.
- OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, COMMONWEALTH OF KENTUCKY, ETC.)
- THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY FEES OR OTHER COSTS THAT ANY UTILITY COMPANY MAY REQUIRE TO COMPLETE THEIR WORK. (GAS, SEWER, WATER, ETC.).
- CONTRACTOR SHALL BE AWARE OF UNSEEN PLUMBING WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN FIELD VERIFY THE USE OF THE ITEMS AND PLAN AN ALTERNATE ROUTE TO RUN THESE ITEMS. THEN CONTACT THE ENGINEERS TO REVIEW THE ROUTING.
- IF AREA OF CONSTRUCTION HAS A POST TENSION FLOOR SLAB CONTRACTOR SHALL USE ULTRA SOUND OR OTHER APPROVED METHODS TO SURVEY THE EXISTING FLOOR STRUCTURE BEFORE MAKING ANY AND ALL FLOOR PENETRATIONS.
- WHERE FIRE PROOFING IS SPRAYED ON EXISTING STRUCTURE ALL EXISTING CONDUITS, WATER, HYDRONIC, STEAM, CHILLED WATER, FIRE PROTECTION LINES, MED GAS, ETC. SHALL BE LOWERED TO BE BELOW FULL THICKNESS OF FIRE PROOFING WITH NO INTERFERENCE.
- ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.
- ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES.
- ALL PIPING IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.
- LOCATIONS OF PIPING AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.
- ALL OFFSETS IN PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.
- INSTALL ALL PIPING AND EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTION. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEERS PRIOR TO INSTALLATION FOR CLARIFICATION. PROVIDE RECOMMENDED ACCESS AND SERVICE CLEARANCES FOR ALL EQUIPMENT.
- SEAL AIRTIGHT AROUND ALL DUCTS AND PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF. PROVIDE FIRE STOPPING IN FIRE PARTITION.
- THE CONTRACTOR SHALL RELOCATE OR AVOID ANY EXISTING EQUIPMENT APPURTENANCES, ETC., THAT CONFLICT WITH NEW WORK.
- WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.
- DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
- VALVES OR ANY PLUMBING ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS. IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.
- ALL MANHOLES, VAULTS AND SIMILAR UNDERGROUND STRUCTURES SHALL HAVE THE TOP ELEVATION SET FLUSH WITH FINISHED GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
- WHEN RUNNING ANY TYPE OF PIPING BELOW A FOOTER, OR IN THE ZONE OF INFLUENCE THE PIPING SHALL BE BACKFILLED WITH CEMTITIOUS FLOWABLE FILL PER SPECIFICATIONS. WHEVER POSSIBLE, LOCATE PIPING OUTSIDE OF THE ZONE OF INFLUENCE. THE ZONE OF INFLUENCE IS THE AREA UNDER THE FOOTER WITHIN A 45 DEGREE ANGLE PROJECTING DOWN FROM THE BOTTOM EDGE OF THE FOOTER OF ALL SIDES OF THE FOOTER. ADDITIONALLY, GREASE TRAPS, MANHOES, VAULTS, AND OTHER UNDERGROUND STRUCTURES SHALL BE HELD AWAY FROM BUILDING WALLS FAR ENOUGH TO BE OUTSIDE OF THE ZONE OF INFLUENCE.
- ALL PLUMBING SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE KENTUCKY PLUMBING CODE 2017 EDITION.

SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS NECESSARILY USED ON THIS PROJECT.

V	VACUUM BREAKER
	PIPE ELBOW TURNING UP/TURNING DOWN
	CONNECT TO EXISTING (VERIFY EXACT LOCATION)
	BALANCING VALVE
	UNION
	PETE'S PLUG
	CHECK VALVE
	DOUBLE CHECK VALVE ASSEMBLY
	STRAINER
	O S & Y VALVE (GATE)
P	PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.)
	BALL VALVE
OR	SAFETY RELIEF VALVE
T	THERMOMETER
PS	PRESSURE SWITCH
TS	TAMPER SWITCH
FS	FLOW SWITCH
SAN	SANITARY WASTE PIPING
GW	SANITARY WASTE PIPING TO GREASE TRAP
FM	FORCED MAIN
VT	VENT PIPING
	DOMESTIC COLD WATER PIPING
	DOMESTIC SOFT HOT WATER SUPPLY
	DOMESTIC RECIRCULATING HOT WATER
RL	ROOF LEADER PIPING
ORL	OVERFLOW ROOF LEADER PIPING
SS	STORM SEWER PIPING
FP	FIRE PROTECTION PIPING
FPD	FIRE PROTECTION DRY PIPING
AWS	ANIMAL WATER SUPPLY PIPING
FW	FILTER DOMESTIC COLD WATER
ROS	REVERSE OSMOSIS WATER SUPPLY PIPING
ROR	REVERSE OSMOSES WATER RETURN PIPING
SCW	SOFT COLD WATER PIPING
HE	HELIUM GAS PIPING
HY	HYDROGEN GAS PIPING
N	NITROGEN GAS PIPING
CA	COMPRESSED AIR PIPING
VAC	VACUUM PIPING
VACEX	VACUUM EXHAUST PIPING
OX	OXYGEN PIPING
CO2	CARBON DIOXIDE PIPING
LW	LAB WASTE PIPING
LVT	LAB WASTE VENT PIPING
TPW	TEPID WATER PIPING
G	GAS PIPING
E(NAME)	EXISTING PIPING OR DUCTWORK (THIN LINE)
XXX-XX	MECHANICAL EQUIPMENT DESIGNATOR
	PIPING TEE (TURNED UP/DOWN)
CO	CLEANOUT IN CEILING SPACE
CO	FLOOR CLEANOUT
ECO	EXTERIOR CLEANOUT
FD-#	FLOOR DRAIN DESIGNATOR
RD-#	ROOF DRAIN DESIGNATOR
P-#	PLUMBING FIXTURE DESIGNATOR
T S	TEMPERATURE SENSOR

A	COMPRESSED AIR
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
AWS	ANIMAL WATER SUPPLY
C.I.	CAST IRON
CO2	CARBON DIOXIDE
CO2 VT	CARBON DIOXIDE MANIFOLD RELIEF VENT PIPE
DCW	DOMESTIC COLD WATER
DCW-M	METERED DOMESTIC COLD WATER FOR IRRIGATION SUPPLY
DHW	DOMESTIC HOT WATER
DN	DOWN
FHV	FIRE HOSE VALVE WITH CABINET
FPWH	FREEZE PROOF WALL HYDRANT
FM	FORCE MAIN
FW	FILTERED DOMESTIC COLD WATER
HB	HOSE BIBB
IAW	IN ACCORDANCE WITH
ID	INSIDE DIMENSION
IE	INVERT ELEVATION
MH	MANHOLE
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
O, OX	OXYGEN
OX	OXYGEN MANIFOLD RELIEF VENT PIPE
OD	OUTSIDE DIMENSION
OR	OPEN RECEPTACLE
ORL	OVERFLOW ROOF LEADER
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, OR GAS)
PSI	POUNDS PER SQUARE INCH
DHWR	DOMESTIC RECIRCULATING HOT WATER
RL	ROOF LEADER
SCW	SOFT DOMESTIC COLD WATER
SVB	SHUT-OFF ZONE VALVE BOX
SR	SANITARY RISER
TB	THRUST BLOCK
TE	TOP ELEVATION
TP	TRAP PRIMER
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V, VAC	VACUUM
VTR	VENT THRU ROOF
WH	WATER HEATER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED

NOTE:

ALL PLUMBING PIPING INSTALLED IN THIS PACKAGE SHALL BE SUPPORTED FROM THE STRUCTURAL SLAB AS DETAILED ON DRAWINGS AND AS CALLED OUT IN THE PLUMBING SPECIFICATIONS.

NOTE:

WORK IN CONFINED AREAS SHALL BE IN ACCORDANCE WITH THE OWNER'S SAFETY POLICY REQUIREMENTS.

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
LEXINGTON, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By RLB

Checked By KDM

Client Number

Project Number UKR15

STATE OF KENTUCKY · CHRISTOPHER M. REEVES · 25045 · LICENSED PROFESSIONAL ENGINEER

DRAWING

PLUMBING LEGEND

SHEET NO.

P-151

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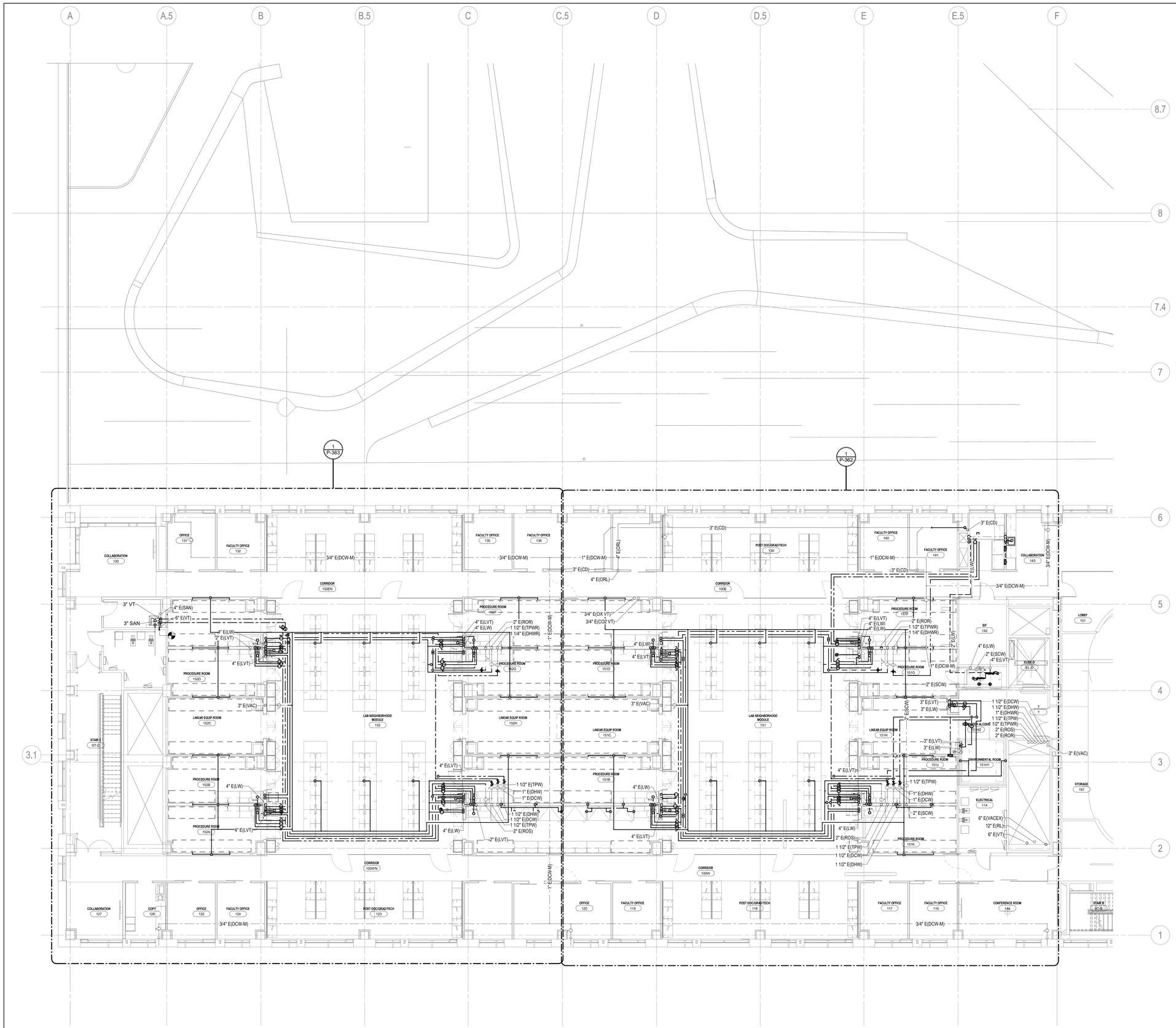
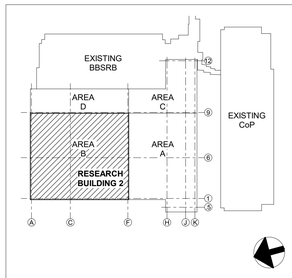


1 PLUMBING - LEVEL 01 AREA B -PHASE 2
1/8" = 1'-0"



KEY PLAN
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ISSUANCES

No.	Description	Date
1	P2 - Addendum #2	01/22/19
2	P2 - Addendum #5	02/28/19
3	DD ISSUANCE - NIH	02/05/20
4	CD ISSUANCE - NIH	04/14/20
5	BID & PERMIT - NIH	05/22/20

Drawn By RLB
Checked By CMR
Client Number
Project Number UKR15

STATE OF KENTUCKY
CHRISTOPHER M. REEVES
25045
LICENSED PROFESSIONAL ENGINEER

DRAWING
LEVEL 01 PHASE 2 FITOUT AREA 'B' -PLUMBING PLAN

SHEET NO.
P-251B

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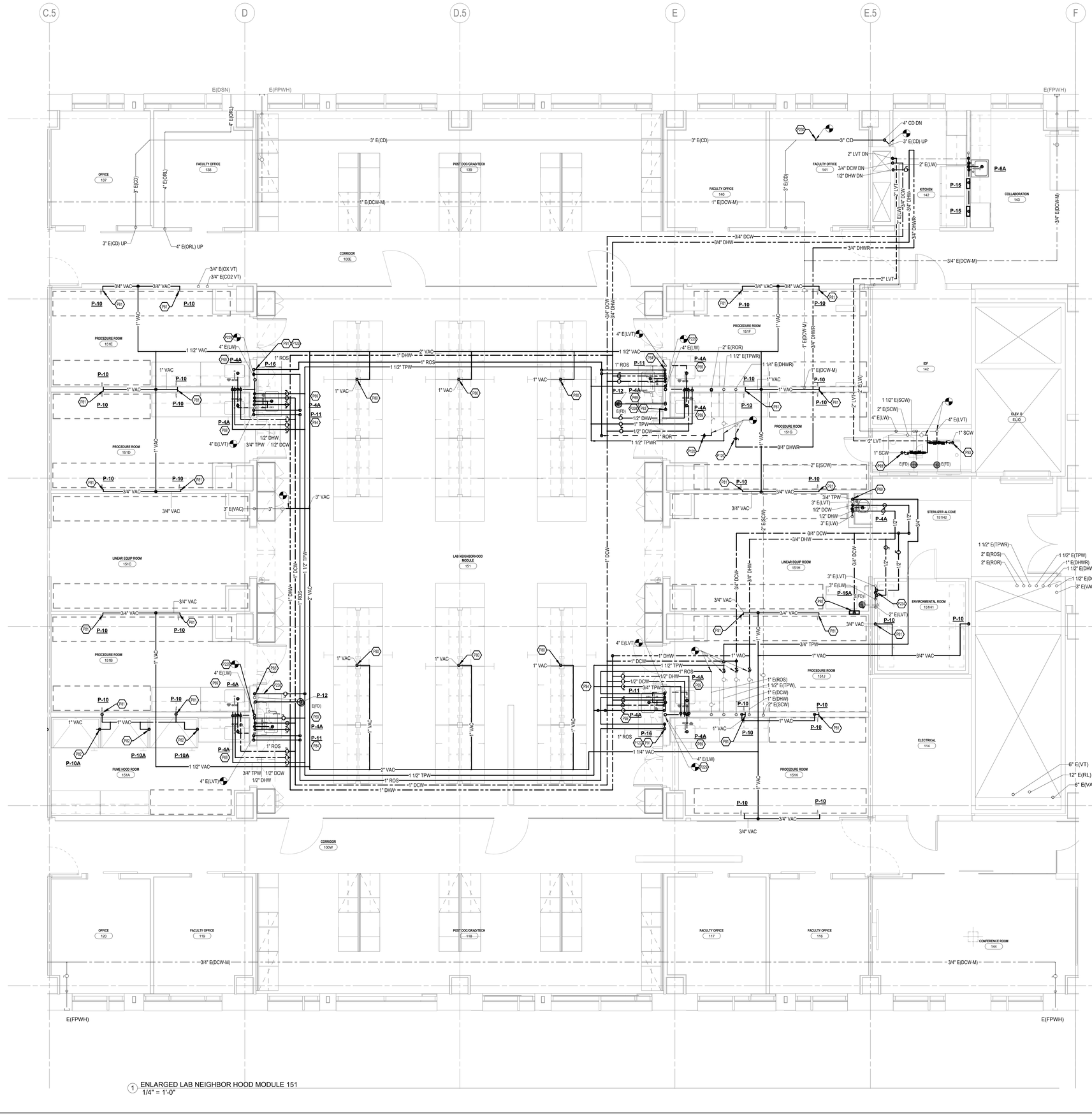

1 ENLARGED LAB NEIGHBOR HOOD MODULE 151
1/4" = 1'-0"

PLUMBING GENERAL NOTES

A. PROVIDE FIRESTOP PIPE SLEEVES AT NEW PIPE PENETRATIONS IN THE EXISTING FLOOR SLAB. REFER TO SPECIFICATIONS FOR FIRESTOP PIPE SLEEVE REQUIREMENTS.

B. REMOVE AND ADJUST EXISTING FLOOR DRAIN STRAINERS TO BE FLUSH WITH NEW FINISHED FLOOR SURFACE. REFER TO ARCHITECTURAL FLOOR PLAN FOR FINISHED FLOOR REQUIREMENTS.

TAGGED NOTES	
P69	PROVIDE 3/4" TEPID WATER FINAL CONNECTION TO EYEWASH. EYEWASH FURNISHED BY LAB CASEWORK SUPPLIER AND INSTALLED BY PLUMBING CONTRACTOR; REFER TO LAB EQUIPMENT PLANS.
P80	PROVIDE VACUUM PIPE FINAL CONNECTION TO SERVICE CEILING PANEL. REFER TO LAB EQUIPMENT DRAWINGS.
P81	PROVIDE VACUUM PIPE FINAL CONNECTION TO WALL MOUNTED VACUUM NEEDLE VALVE. NEEDLE VALVE OUTLETS FURNISHED BY LAB EQUIPMENT SUPPLIER AND INSTALLED BY THE PLUMBING CONTRACTOR; REFER TO LAB EQUIPMENT PLANS
P82	PROVIDE VACUUM PIPE FINAL CONNECTION TO FUME HOOD VACUUM OUTLET. REFER TO LAB EQUIPMENT DRAWINGS.
P83	PROVIDE 1" TEPID WATER FINAL PIPE CONNECTION TO SAFETY SHOWER. SAFETY SHOWER FURNISHED BY LAB EQUIPMENT SUPPLIER AND INSTALLED BY PLUMBING CONTRACTOR; REFER TO LAB EQUIPMENT PLANS.
P84	PROVIDE RO WATER SUPPLY FINAL CONNECTION TO RO WATER FAUCET. FAUCET FURNISHED BY LAB EQUIPMENT SUPPLIER AND INSTALLED BY PLUMBING CONTRACTOR; REFER TO LAB EQUIPMENT PLANS. REFER TO RO FAUCET DETAIL ON SHEET P-451.
P91	PROVIDE RO WATER AND HOT AND COLD WATER FINAL CONNECTION TO UNDERCOUNTER GLASS WASHER. CONNECT WASHER DRAIN TO WASHER WALL BOX. REFER TO LAB EQUIPMENT PLANS.
P92	PROVIDE FINAL WATER CONNECT TO ICE MAKER AND PIPE ICE MAKER DRAIN TO FLOOR DRAIN.
P93	PROVIDE 1" COLD WATER FINAL CONNECTION TO STERILIZER WITH 1" WATT'S 909LF REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY. PIPE DISCHARGE PIPE FROM BACKFLOW PREVENTER FULL SIZE TO FLOOR DRAIN. PROVIDE 1-1/2" DRAIN PIPE FROM STERILIZER TO FLOOR DRAIN. INSTALLL BACKFLOW PREVENTER NEATLY ALONG BACK WALL TO MAINTAIN OWNER REQUIRE CLEARANCE BETWEEN THE STERILIZER UNITS.
P120	PROVIDE BALANCING VALVE; TYPICAL. VALVE SHALL BE SET TO MATCH EXISTING FLOW PREVIOUSLY FIT-OUT FLOORS.
P123	PROVIDE ROS CONNECT FOR FUTURE POLISHER. PROVIDE 1" PIPE STUB-OUT THROUGH WALL WITH BALL VALVE AND PIPE ESCUTCHEON AND CAP AT 7'-6" AFF, CENTERED ABOVE WALL SHELVES; REFER TO "QL" DRAWINGS ELEVATIONS.
P229	REMOVE THE EXISTING LAB WASTE TEE FITTINGS FROM THE EXISTING MAIN LAB WASTE STACK AND PROVIDE NEW TEE FITTINGS AT A LOWER ELEVATION TO CONNECT NEW WASTE PIPING.
P230	REMOVE THE EXISTING 4" CONDENSATE PIPE DOWN AND REROUTE PIPE AS SHOWN.
P234	PROVIDE WASTE AND WATER PIPE ROUGH-INS CAPPED INSIDE WALL FOR FUTURE SINK CONNECTION.
P238	PROVIDE PIPE TEE IN TEPID WATER SUPPLY TO EMERGENCY SHOWER FOR CONNECTION OF FLOW SWITCH. FLOW SWITH PROVIDED BY CONTROLS CONTRACTOR.

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STATE OF KENTUCKY
CHRISTOPHER M. REEVES
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LICENSED PROFESSIONAL ENGINEER

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Project Number UKR15

DRAWING
ENLARGED LAB PLAN - LAB NEIGHBORHOOD MODULE 151

SHEET NO.
P-362

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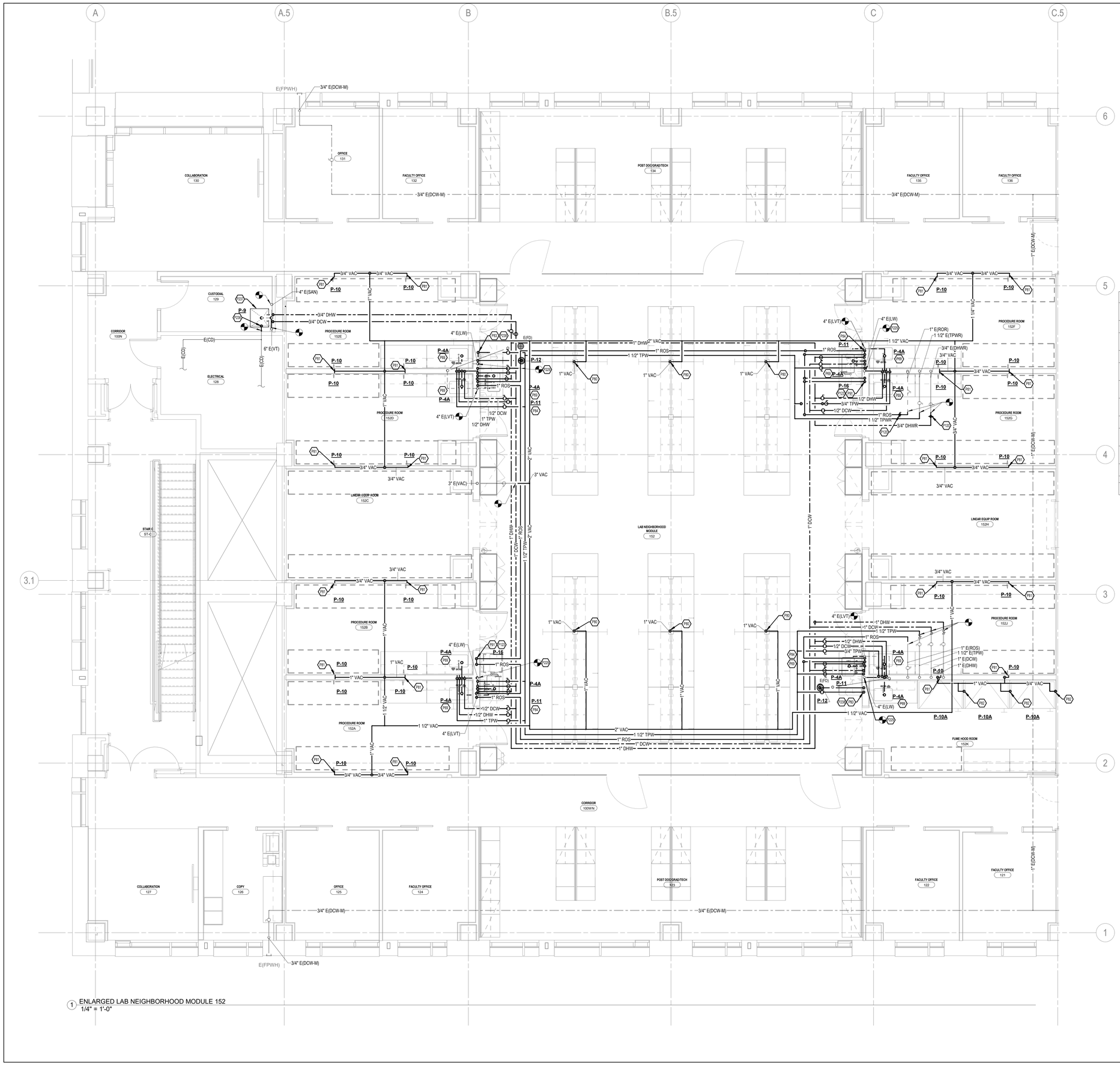
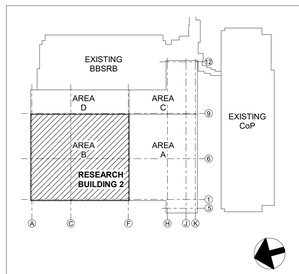


1 ENLARGED LAB NEIGHBORHOOD MODULE 152
1/4" = 1'-0"

TAGGED NOTES	
P69	PROVIDE 3/4" TEPID WATER FINAL CONNECTION TO EYEWASH. EYEWASH FURNISHED BY LAB CASEWORK SUPPLIER AND INSTALLED BY PLUMBING CONTRACTOR; REFER TO LAB EQUIPMENT PLANS.
P80	PROVIDE VACUUM PIPE FINAL CONNECTION TO SERVICE CEILING PANEL. REFER TO LAB EQUIPMENT DRAWINGS.
P81	PROVIDE VACUUM PIPE FINAL CONNECTION TO WALL MOUNTED VACUUM NEEDLE VALVE. NEEDLE VALVE OUTLETS FURNISHED BY LAB EQUIPMENT SUPPLIER AND INSTALLED BY THE PLUMBING CONTRACTOR; REFER TO LAB EQUIPMENT PLANS
P82	PROVIDE VACUUM PIPE FINAL CONNECTION TO FUME HOOD VACUUM OUTLET. REFER TO LAB EQUIPMENT DRAWINGS.
P83	PROVIDE 1" TEPID WATER FINAL PIPE CONNECTION TO SAFETY SHOWER. SAFETY SHOWER FURNISHED BY LAB EQUIPMENT SUPPLIER AND INSTALLED BY PLUMBING CONTRACTOR; REFER TO LAB EQUIPMENT PLANS.
P84	PROVIDE RO WATER SUPPLY FINAL CONNECTION TO RO WATER FAUCET. FAUCET FURNISHED BY LAB EQUIPMENT SUPPLIER AND INSTALLED BY PLUMBING CONTRACTOR; REFER TO LAB EQUIPMENT PLANS. REFER TO RO FAUCET DETAIL ON SHEET P-451.
P91	PROVIDE RO WATER AND HOT AND COLD WATER FINAL CONNECTION TO UNDERCOUNTER GLASS WASHER. CONNECT WASHER DRAIN TO WASHER WALL BOX. REFER TO LAB EQUIPMENT PLANS.
P120	PROVIDE BALANCING VALVE; TYPICAL. VALVE SHALL BE SET TO MATCH EXISTING FLOW PREVIOUSLY FIT-OUT FLOORS.
P123	PROVIDE ROS CONNECT FOR FUTURE POLISHER. PROVIDE 1" PIPE STUB-OUT THROUGH WALL WITH BALL VALVE AND PIPE ESCUTCHEON AND CAP AT 7'-6" AFF, CENTERED ABOVE WALL SHELVES; REFER TO "QL" DRAWINGS ELEVATIONS.
P229	REMOVE THE EXISTING LAB WASTE TEE FITTINGS FROM THE EXISTING MAIN LAB WASTE STACK AND PROVIDE NEW TEE FITTINGS AT A LOWER ELEVATION TO CONNECT NEW WASTE PIPING.
P236	REMOVE THE EXISTING CONDENSATE OVERHEAD CONDENSATE PIPING AND REROUTE CONDENSATE PIPE DOWN TO NEW MOP BASIN.
P237	REFER TO MOP BASIN DETAIL ON SHEET P-451.
P238	PROVIDE PIPE TEE IN TEPID WATER SUPPLY TO EMERGENCY SHOWER FOR CONNECTION OF FLOW SWITCH. FLOW SWITH PROVIDED BY CONTROLS CONTRACTOR.



KEY PLAN
NTS

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LEXINGTON, KY

CONSTRUCT RESEARCH BUILDING
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ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

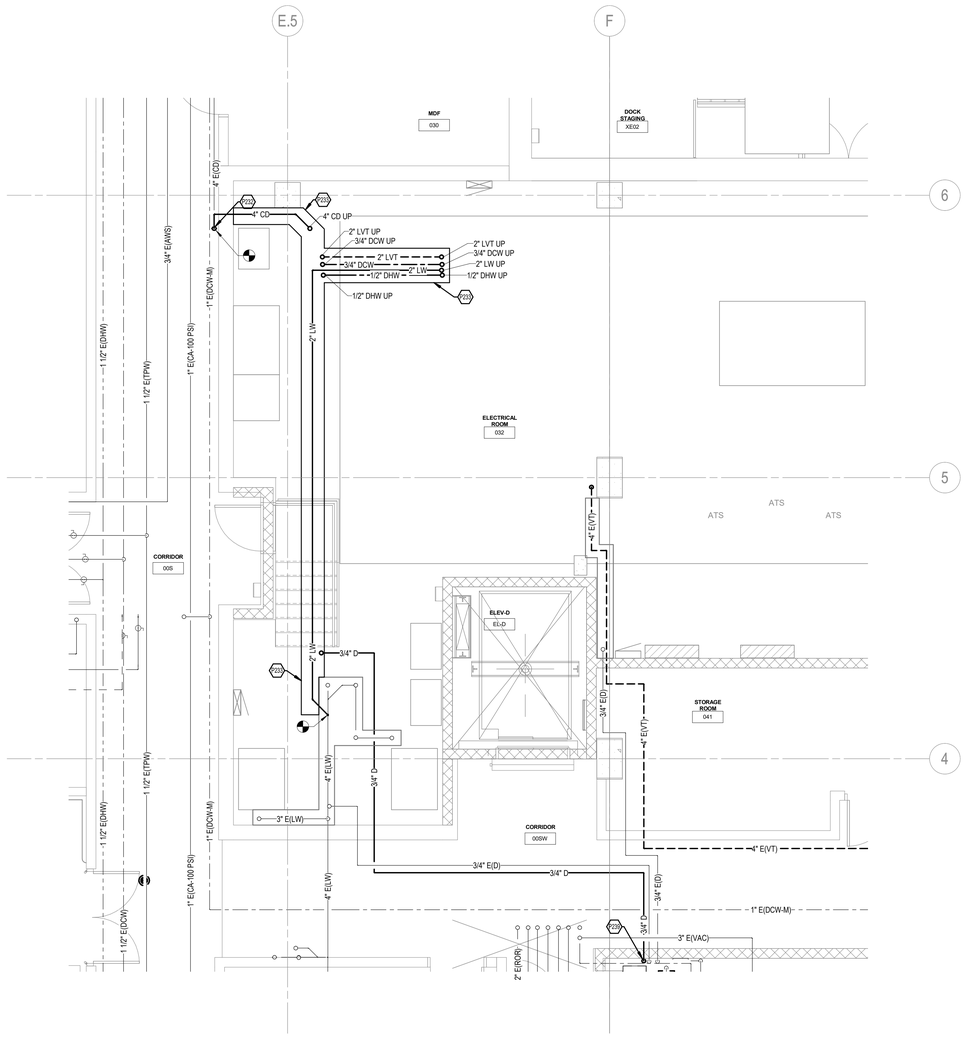
Drawn By: RLB
Checked By: CMR
Client Number:
Project Number: UKR15

STATE OF KENTUCKY — CHRISTOPHER M. REEVES 25045 — LICENSED PROFESSIONAL ENGINEER

DRAWING
ENLARGED LAB PLAN - LAB NEIGHBORHOOD MODULE 152

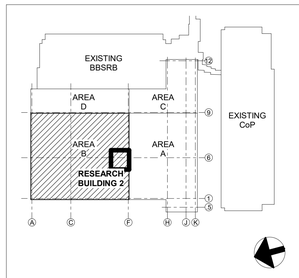
SHEET NO.
P-363

5/21/2020 12:39:24 PM



1 BASEMENT NIH FITOUT PARTIAL AREA B - PLUMBING PLAN
1/4" = 1'-0"

TAGGED NOTES	
P232	REMOVE THE EXISTING 4" CONDENSATE PIPE UP AND REROUTE PIPE AS SHOWN.
P233	PROVIDE DRAIN PAN BELOW NEW PLUMBING PIPING. PROVIDE 3/4" DRAIN PIPE FROM DRAIN PAN AND DISCHARGE TO FLOOR DRAIN IN MECHANICAL ROOM.
P239	EXTEND DRAIN PIPE DOWN TO EXISTING FLOOR DRAIN AND PROVIDE INDIRECT DISCHARGE.



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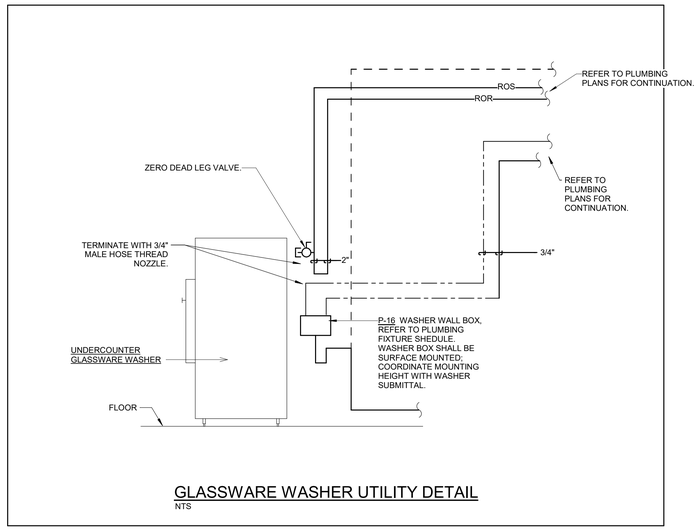
CHRISTOPHER M. REEVES
25045
LICENSED PROFESSIONAL ENGINEER

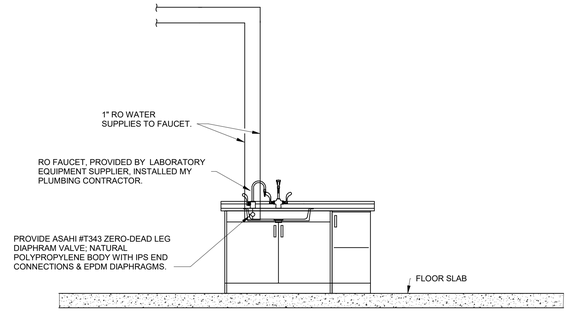
DRAWING
BASEMENT NIH FITOUT AREA B - PLUMBING PLAN

SHEET NO.
P-364

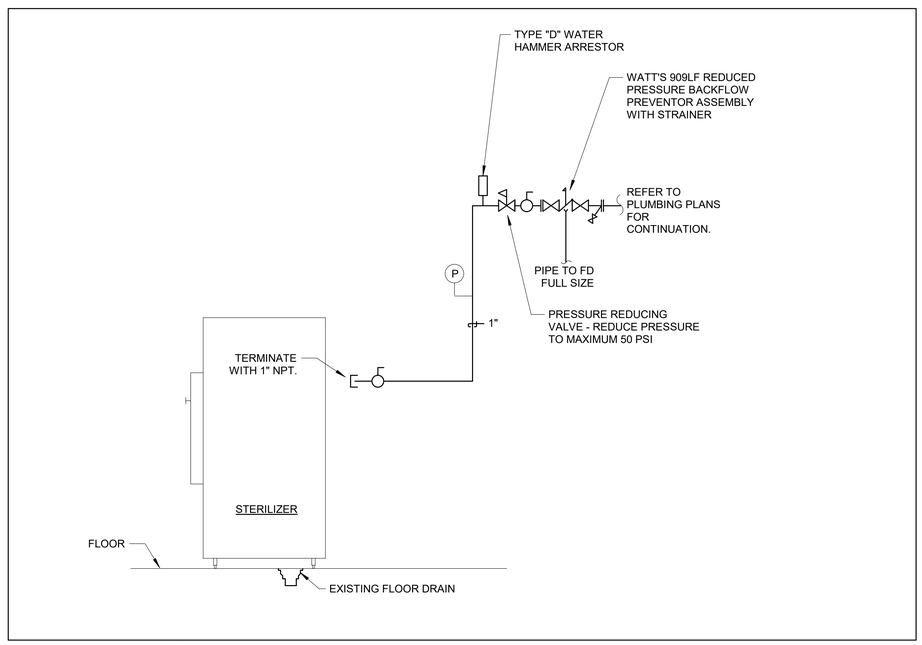
5/21/2020 1:03:42 PM



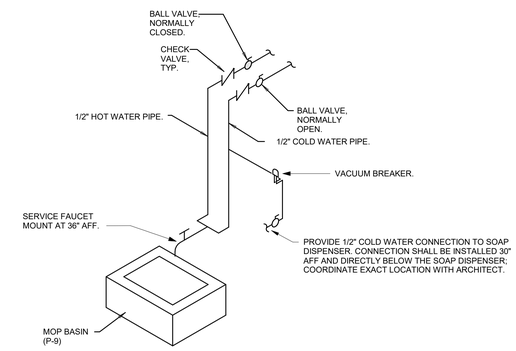
5 GLASSWARE WASHER UTILITY DETAIL
NOT TO SCALE



2 TYPICAL RO FAUCET WATER SUPPLY CONNECTION DETAIL
NOT TO SCALE



4 TYPICAL STERILIZER UTILITY DETAIL
NOT TO SCALE



1 MOP BASIN DETAIL
1/4" = 1'-0"

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CHRISTOPHER M. REEVES
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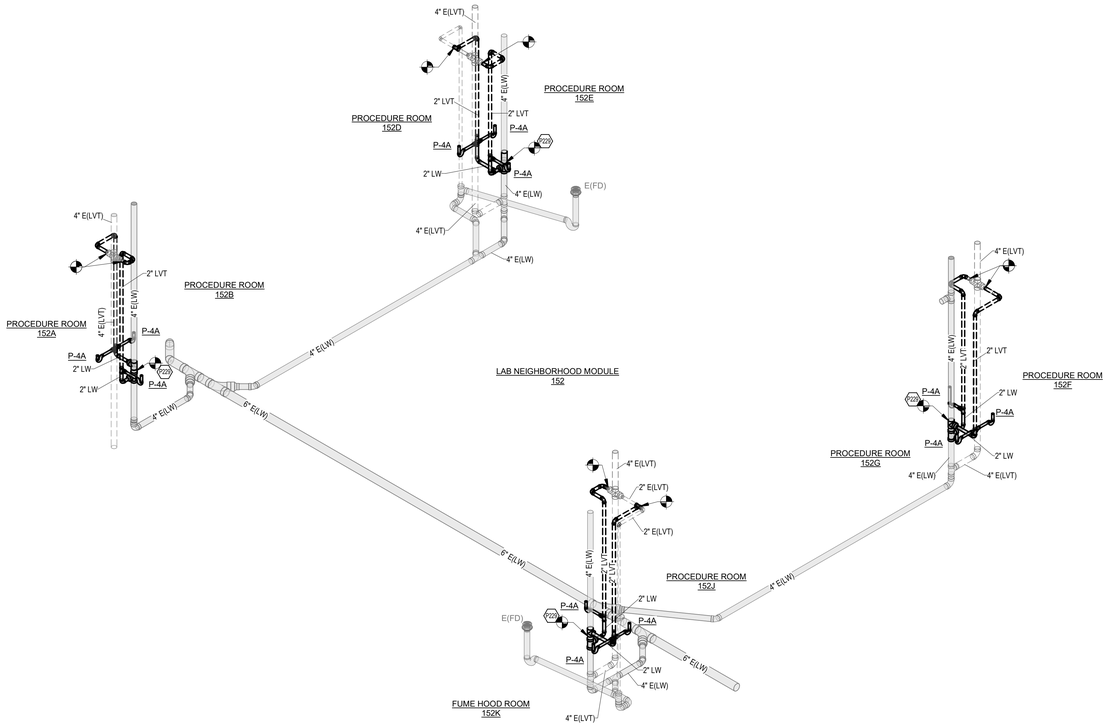
LICENSED PROFESSIONAL ENGINEER

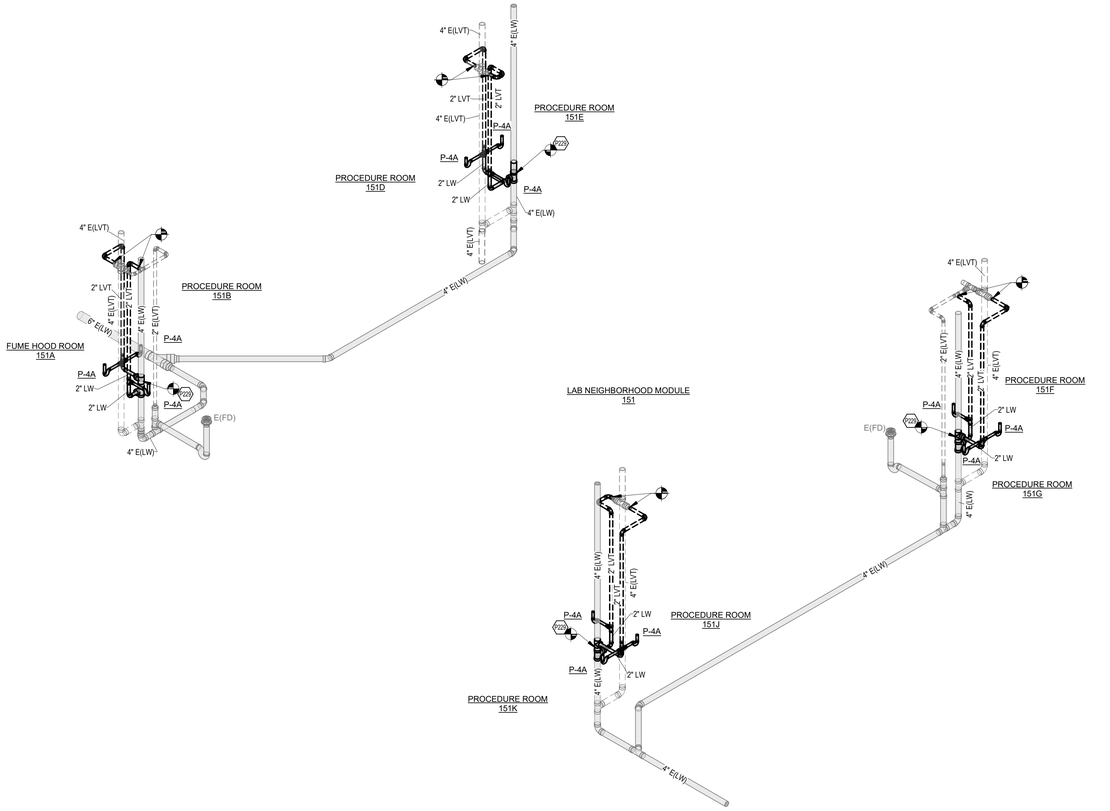
DRAWING
PLUMBING DETAILS

SHEET NO.
P-451

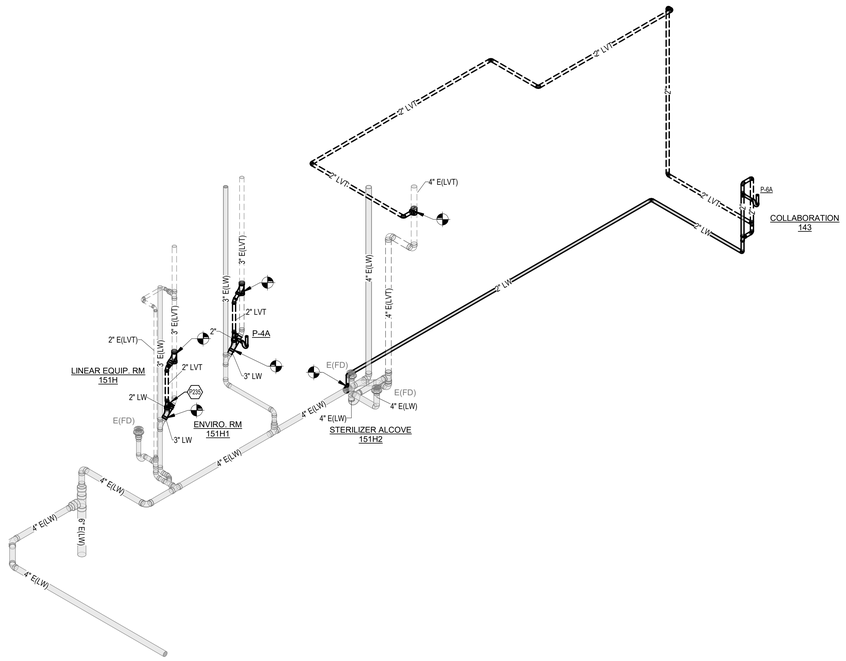
5/21/2020 12:39:36 PM



1 LAB ISOMETRICS RISER A - FIT-OUT - NIH LEVEL 1



2 LAB ISOMETRICS RISER B - FIT-OUT - NIH LEVEL 1



3 LAB ISOMETRICS RISER C - FIT-OUT - NIH LEVEL 1

TAGGED NOTES	
P229	REMOVE THE EXISTING LAB WASTE TEE FITTINGS FROM THE EXISTING MAIN LAB WASTE STACK AND PROVIDE NEW TEE FITTINGS AT A LOWER ELEVATION TO CONNECT NEW WASTE PIPING.
P235	PROVIDE WASTE PIPE ROUGH-IN, IN WALL FOR FUTURE SINK CONNECTION.

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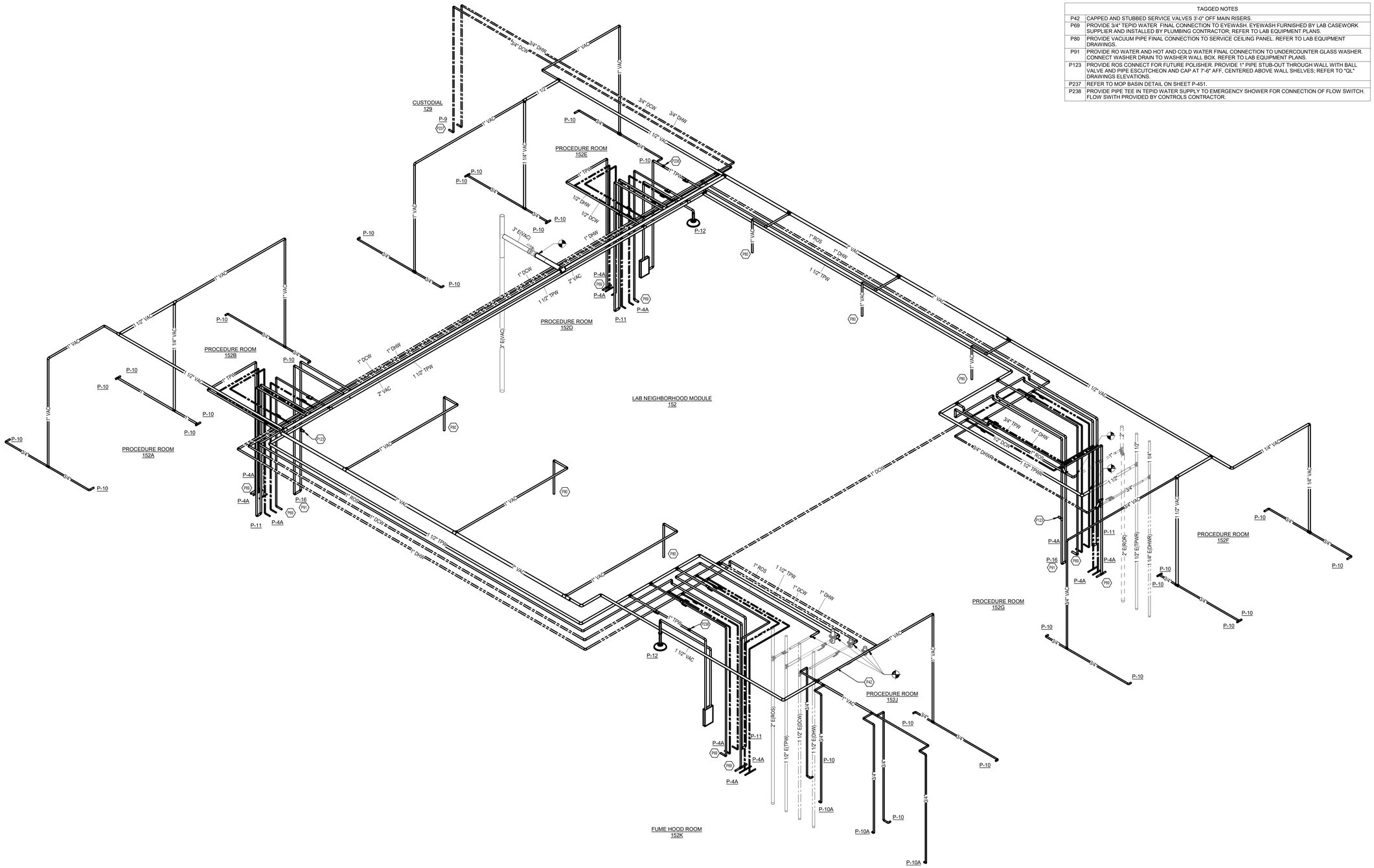
DRAWING
NIH LEVEL 1 LAB FIT-OUT RISER ISOMETRICS

SHEET NO.
P-955

5/21/2020 12:39:57 PM

TAGGED NOTES	
P42	CAPPED AND STUBBED SERVICE VALVES 3'-0" OFF MAIN RISERS.
P69	PROVIDE 3/4" TEPID WATER FINAL CONNECTION TO EYEWASH. EYEWASH FURNISHED BY LAB CASEWORK SUPPLIER AND INSTALLED BY PLUMBING CONTRACTOR. REFER TO LAB EQUIPMENT PLANS.
P80	PROVIDE VACUUM PIPE FINAL CONNECTION TO SERVICE CEILING PANEL. REFER TO LAB EQUIPMENT DRAWINGS.
P91	PROVIDE RO WATER AND HOT AND COLD WATER FINAL CONNECTION TO UNDERCOUNTER GLASS WASHER. CONNECT WASHER DRAIN TO WASHER WALL BOX. REFER TO LAB EQUIPMENT PLANS.
P123	PROVIDE ROS CONNECT FOR FUTURE POLISHER. PROVIDE 1" PIPE STUB-OUT THROUGH WALL WITH BALL VALVE AND PIPE ESCUTCHEON AND CAP AT 7'-6" AFF, CENTERED ABOVE WALL SHELVES; REFER TO "QL" DRAWINGS ELEVATIONS.
P237	REFER TO MOP BASIN DETAIL ON SHEET P-451.
P238	PROVIDE PIPE TEE IN TEPID WATER SUPPLY TO EMERGENCY SHOWER FOR CONNECTION OF FLOW SWITCH. FLOW SWITH PROVIDED BY CONTROLS CONTRACTOR.



2 LAB WATER & VACUUM RISER A - FIT-OUT - NIH LEVEL 1

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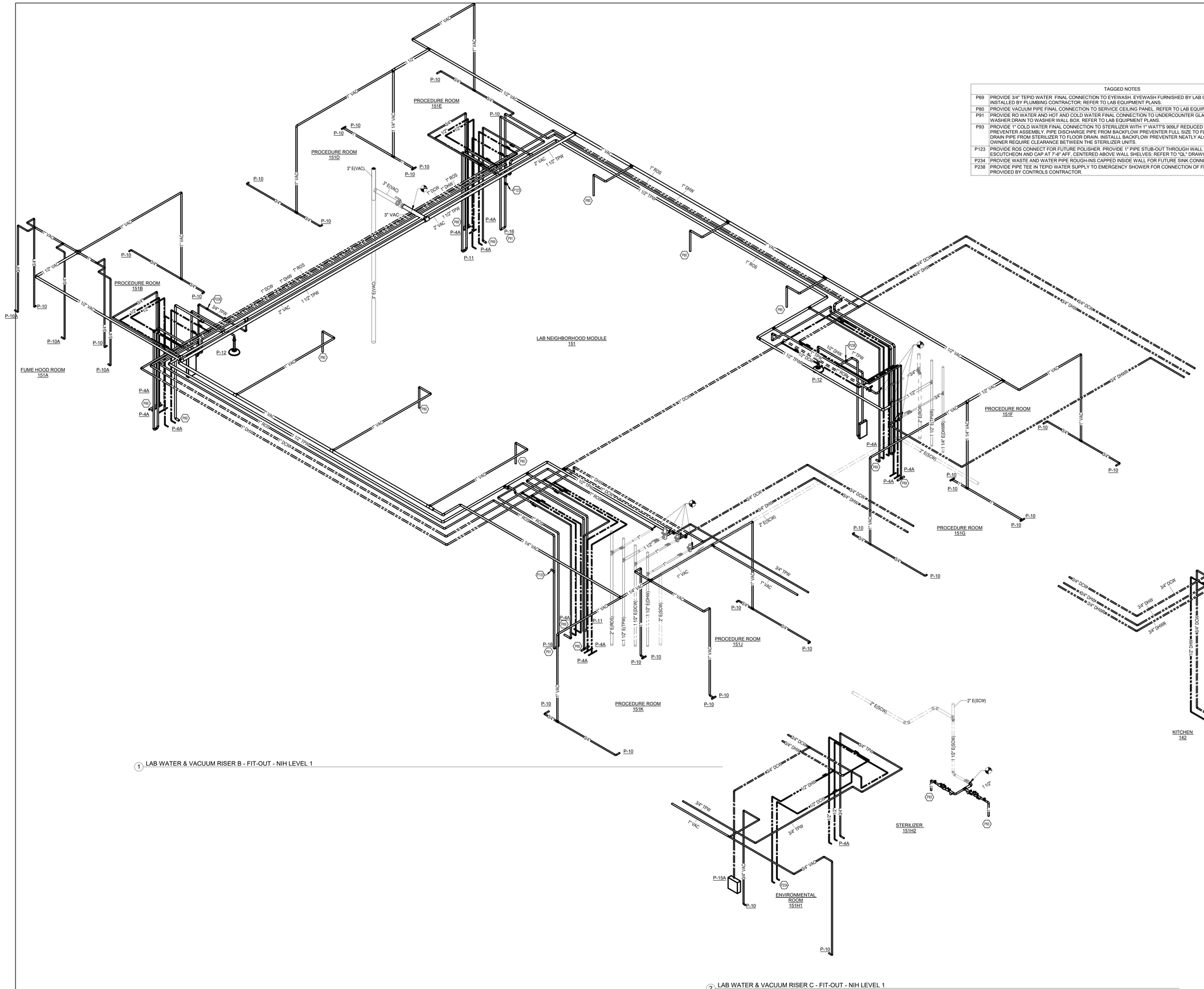
STATE OF KENTUCKY · CHRISTOPHER M. REEVES · 25045 · LICENSED PROFESSIONAL ENGINEER

DRAWING
NIH LEVEL 1 LAB FIT-OUT RISER ISOMETRICS

SHEET NO.
P-956

5/21/2020 12:40:00 PM

TAGGED NOTES	
P69	PROVIDE 3/4" TEPID WATER FINAL CONNECTION TO EYEWASH. EYEWASH FURNISHED BY LAB CASEWORK SUPPLIER AND INSTALLED BY PLUMBING CONTRACTOR; REFER TO LAB EQUIPMENT PLANS.
P80	PROVIDE VACUUM PIPE FINAL CONNECTION TO SERVICE CEILING PANEL. REFER TO LAB EQUIPMENT DRAWINGS.
P91	PROVIDE RO WATER AND HOT AND COLD WATER FINAL CONNECTION TO UNDERCOUNTER GLASS WASHER. CONNECT WASHER DRAIN TO WASHER WALL BOX. REFER TO LAB EQUIPMENT PLANS.
P93	PROVIDE 1" COLD WATER FINAL CONNECTION TO STERILIZER WITH 1" WATT'S 909LF REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY. PIPE DISCHARGE PIPE FROM BACKFLOW PREVENTER FULL SIZE TO FLOOR DRAIN. PROVIDE 1-1/2" DRAIN PIPE FROM STERILIZER TO FLOOR DRAIN. INSTALLL BACKFLOW PREVENTER NEATLY ALONG BACK WALL TO MAINTAIN OWNER REQUIRE CLEARANCE BETWEEN THE STERILIZER UNITS.
P123	PROVIDE ROS CONNECT FOR FUTURE POLISHER. PROVIDE 1" PIPE STUB-OUT THROUGH WALL WITH BALL VALVE AND PIPE ESCUTCHEON AND CAP AT 7'-6" AFF, CENTERED ABOVE WALL SHELVES; REFER TO "QL" DRAWINGS ELEVATIONS.
P234	PROVIDE WASTE AND WATER PIPE ROUGH-INS CAPPED INSIDE WALL FOR FUTURE SINK CONNECTION.
P238	PROVIDE PIPE TEE IN TEPID WATER SUPPLY TO EMERGENCY SHOWER FOR CONNECTION OF FLOW SWITCH. FLOW SWITH PROVIDED BY CONTROLS CONTRACTOR.



1 LAB WATER & VACUUM RISER B - FIT-OUT - NIH LEVEL 1

2 LAB WATER & VACUUM RISER C - FIT-OUT - NIH LEVEL 1

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UK Project Number 2538.0

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Drawn By
RLB
Checked By
CMR
Client Number
Project Number
UKR15

CHRISTOPHER M. REEVES
25045

DRAWING
NIH LEVEL 1 LAB
FIT-OUT RISER
ISOMETRICS

SHEET NO.
P-957

5/21/2020 12:40:03 PM

MECHANICAL SYMBOLS AND ABBREVIATIONS

NOTE: SYMBOLS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.

FIELD MOUNTED CONTROLS

- T — THERMOSTAT OR TEMPERATURE SENSOR
- H — HUMIDISTAT OR HUMIDITY SENSOR
- T N — NIGHT CYCLE CONTROL THERMOSTAT
- T A — ASPIRATING THERMOSTAT
- T B — THERMOSTAT WITH INSULATING BASE
- PT — PRESSURE TRANSMITTER
- PDT — PRESSURE DIFFERENTIAL TRANSMITTER
- F SD — DUCT SMOKE DETECTOR
- P — PRESSURE SENSOR
- A CO — CARBON MONOXIDE SENSOR
- A CO2 — CARBON DIOXIDE SENSOR
- A O2 — OXYGEN SENSOR
- A VOC — VOC SENSOR
- A R — REFRIGERANT SENSOR
- W/PH — WALL MONTED ROOM PRESSURE MONITOR

COMMON INSTRUMENTATION DEVICES

- TI — TEMPERATURE INDICATOR (THERMOMETER) WITH THERMOWELL
- TI — TEMPERATURE INDICATOR (THERMOMETER) WITHOUT WELL (DIRECT INSERTION)
- TW — THERMOWELL
- TE — TEMPERATURE ELEMENT (DIRECT INSERTION)
- TS — STRAP ON PIPE TEMPERATURE INSTRUMENT (AQUASTAT)
- TT
- TE — TEMPERATURE ELEMENT WITH WITH TRANSMITTER AND THERMOWELL
- PI — PRESSURE INDICATOR (PRESSURE GAUGE) WITH GAUGE VALVE
- GAUGE CONNECTION WITH GAUGE VALVE
- PDT — PRESSURE DIFFERENTIAL TRANSMITTER
- FE — FLOW ELEMENT (FLOW SENSOR)
- FT
- FE — FLOW ELEMENT WITH TRANSMITTER (FLOW METER)
- FI — FLOW INDICATOR/FLOW METER
- FS — FLOW SWITCH

GENERAL

ADJ	-	ADJUSTABLE
AFF	-	ABOVE FINISHED FLOOR
AL	-	ALUMINUM
ALT	-	ALTERNATE
AP	-	ACCESS PANEL
BOD	-	BOTTOM OF DUCT
BOP	-	BOTTOM OF PIPE
BTU	-	BRITISH THERMAL UNIT
BTUH	-	BRITISH THERMAL UNITS PER HOUR
CA	-	COMBUSTION AIR
CAV	-	CONSTANT AIR VOLUME
CFCI	-	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFM	-	CUBIC FEET PER MINUTE
CL	-	CENTERLINE
CLG	-	CEILING
COND	-	CONDENSATE/CONDENSER
COP	-	CENTER OF PIPE
CS	-	CARBON STEEL
CU	-	COPPER
DB	-	DRY BULB
DDC	-	DIRECT DIGITAL CONTROL
DX	-	DIRECT EXPANSION
EA	-	EXHAUST AIR
EAT	-	ENTERING AIR TEMPERATURE
EC	-	ELECTRICAL CONTRACTOR
EDR	-	EQUIVALENT DIRECT RADIATION
EL	-	ELEVATION
ESP	-	EXTERNAL STATIC PRESSURE
ETR	-	EXISTING TO REMAIN
EWT	-	ENTERING WATER TEMPERATURE
EXH	-	EXHAUST
FA	-	FRESH AIR INTAKE/ FIELD ADJUSTABLE
FAT	-	FINAL AIR TEMPERATURE
FC	-	FAIL CLOSED
FE	-	FUME HOOD EXHAUST
FLA	-	FULL LOAD AMPS
FLR	-	FLOOR
FO	-	FAIL OPEN
FPI	-	FINS PER INCH
FPM	-	FEET PER MINUTE
FPS	-	FEET PER SECOND
GA	-	GAUGE
GC	-	GENERAL CONTRACTOR
GE	-	GENERAL EXHAUST
GPM	-	GALLONS PER MINUTE
GS	-	GALVANIZED STEEL
HP	-	HORSE POWER/HIGH POINT
IA	-	INSTRUMENT AIR
IE	-	INVERT ELEVATION
KO	-	KNOCK-OUT
LAT	-	LEAVING AIR TEMPERATURE
LWT	-	LEAVING WATER TEMPERATURE
MBH	-	THOUSANDS OF BTU PER HOUR
MC	-	MECHANICAL CONTRACTOR
MEP	-	MECHANICAL, ELECTRICAL AND PIPING
MER	-	MECHANICAL EQUIPMENT ROOM
NA	-	NOT APPLICABLE
NC	-	NORMALLY CLOSED
NIC	-	NOT IN CONTRACT
NO	-	NORMALLY OPEN
NPS	-	NOMINAL PIPE SIZE
NPT	-	NATIONAL PIPE THREAD
NTS	-	NOT TO SCALE
OA	-	OUTSIDE AIR
OC	-	ON CENTER
OED	-	OPEN END DUCT
OFCI	-	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	-	OWNER FURNISHED, OWNER INSTALLED
OV	-	OUTLET VELOCITY
PA	-	PLANT AIR
PC	-	PLUMBING CONTRACTOR
PCF	-	POUNDS PER CUBIC FOOT
PD	-	PRESSURE DROP
PH	-	PHASE
PP	-	POLYPROPYLENE
PSF	-	POUNDS PER SQUARE FOOT
PSI	-	POUNDS PER SQUARE INCH
PSIA	-	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	-	POUNDS PER SQUARE INCH GAUGE
RA	-	RETURN AIR
RPM	-	REVOLUTIONS PER MINUTE
SA	-	SUPPLY AIR
SCH	-	SCHEDULE
SOG	-	SLAB ON GRADE
SP	-	STATIC PRESSURE
SS	-	STAINLESS STEEL
TA	-	TRANSFER AIR
TBR	-	TO BE REMOVED
TOB	-	TOP OF BEAM
TOD	-	TOP OF DUCT/TOP OF DECK
TOJ	-	TOP OF JOIST
TOP	-	TOP OF PIPE
TOS	-	TOP OF SLAB
TSP	-	TOTAL STATIC PRESSURE
V	-	VOLTS
VAV	-	VARIABLE AIR VOLUME
VP	-	VELOCITY PRESSURE
VTR	-	VENT THRU ROOF
WB	-	WET BULB
WC	-	WATER COLUMN
WG	-	WATER GAUGE
X	-	EXISTING

EQUIPMENT

AC	-	AIR CONDITIONING UNIT/ AIR COMPRESSOR
ACB	-	ACTIVE CHILLED BEAM
ACC	-	AIR COOLED CONDENSER
ACCU	-	AIR COOLED CONDENSING UNIT
ACU	-	AIR CONDITIONING UNIT
AHU	-	AIR HANDLING UNIT
AMD	-	AIR MIXING DEVICE
AS	-	AIR SEPARATOR
AT	-	AIR TERMINAL DEVICE
B	-	BOILER
BBS	-	BOILER BLOWDOWN SEPARATOR
BFS	-	BOILER FEEDWATER SYSTEM
BH	-	BOOSTER HUMIDIFIER
C	-	CONVECTOR
CC	-	COOLING COIL
CH	-	CHILLER
CP	-	CONDENSATE PUMP/ CONTROL PANEL
CT	-	COOLING TOWER
CUH	-	CABINET UNIT HEATER
CV	-	CONVERTOR
D	-	DAMPER
DC	-	DUST COLLECTOR
DH	-	DEHUMIDIFIER
EF	-	EXHAUST FAN
EH	-	EXHAUST HOOD/ ELECTRIC HEATER
EJ	-	EXPANSION JOINT
ET	-	EXPANSION TANK
EV	-	EXHAUST VALVE
F	-	FILTER
FCU	-	FAN COIL UNIT
FD	-	FLOOR DRAIN
FOP	-	FUEL OIL PUMP
FOT	-	FUEL OIL TANK
FR	-	FIN TUBE RADIATION
FT	-	FLASH TANK
FU	-	FURNACE
H	-	HUMIDIFIER
HC	-	HEATING COIL
HP	-	HEAT PUMP
HRC	-	HEAT RECOVERY COIL
HR	-	HOSE REEL
HRD	-	HEAT RECLAIM DEVICE
HT	-	HEAT TRACE
HX	-	HEAT EXCHANGER
IH	-	INTAKE HOOD
MCC	-	MOTOR CONTROL CENTER
P	-	PUMP
RAH	-	ROOFTOP AIR HANDLING UNIT
RC	-	REHEAT COIL
RCP	-	RADIANT CEILING PANEL
REF	-	ROOF EXHAUST FAN
RF	-	RETURN FAN
RH	-	RELIEF HOOD
SAD	-	SOUND ATTENUATING DEVICE
SD	-	SUCTION DIFFUSER
SF	-	SUPPLY FAN
ST	-	STORAGE TANK/STEAM TRAP
T	-	TANK
TXV	-	THERMAL EXPANSION VALVE
UH	-	UNIT HEATER
UST	-	UNDERGROUND STORAGE TANK
UV	-	UNIT VENTILATOR
V	-	VALVE
VEV	-	EXHAUST AIR VALVE
VFD	-	VARIABLE FREQUENCY DRIVE
VSV	-	SUPPLY AIR VALVE
WCC	-	WATER COOLED CONDENSER
WF	-	WATER FILTER

DUCTWORK SPECIALTIES

- DUCT REHEAT COIL
- ACCESS DOOR
- BUTTERFLY TYPE VALVE WITH CONTROLLER LOCATED ON SIDE OF VALVE
- OR — BUTTERFLY TYPE VALVE WITH CONTROLLER ANGLED DOWN SEE DETAIL
- VENTURI VALVE WITH CONTROLLER LOCATED ON SIDE OF VALVE
- OR — VENTURI VALVE WITH CONTROLLER ANGLED DOWN SEE DETAIL
- FLEXIBLE DUCT
- DUCT FLEXIBLE CONNECTION
- 32 — POINT OF CHANGE IN DUCT CONSTRUCTION BY PRESSURE CLASS
- VAV SUPPLY AIR VALVE
- AM — AIR FLOW MEASURING STATION

MISCELLANEOUS

- POINT OF NEW CONNECTION TO EXISTING
- VIBRATION ISOLATOR

SPECIAL DESIGNATION

- P 1 — EQUIPMENT (PUMP INDICATED)
- 2 — SPECIALTY ITEMS (I.E. GAUGE FILTER, ETC.)
- REFER M-1 — PLAN CONTINUATION REFERENCE
- 1 M-1 — SECTION DESIGNATION (TOP DESIGNATES SECTION NUMBER, BOTTOM DESIGNATES ON WHICH SHEET SECTION APPEARS)
- MATCHLINE DESIGNATION
- CONNECT TO EXISTING
- POINT OF DISCONNECT
- 2 M-1 — DETAIL REFERENCE (TOP=DETAIL NO., BOTTOM=DRAWING NO. SHOWN ON)
- A/15B-6 OR A 15B-6 — DETAIL REFERENCE (TOP= DETAIL NO., BOTTOM=SHEET NO. IN DETAIL MANUAL)
- 1 — REVISION REFERENCE
- 1 — GENERAL OR SPECIAL NOTES REFERENCE
- 102 — ROOM NUMBER DESIGNATION
- 1001 — CONSTRUCTION BULLETIN REVISION NUMBER

VALVES

- BUTTERFLY VALVE
- GATE VALVE
- GLOBE VALVE
- BALL VALVE
- SHUTOFF VALVE (BUTTERFLY VALVE FOR 2 1/2" AND LARGER, BALL VALVE FOR 2" AND SMALLER)
- GAUGE VALVE
- PLUG VALVE
- BALANCING VALVE
- THERMAL EXPANSION VALVE
- SPRING CHECK VALVE
- SWING CHECK VALVE
- DIAPHRAGM VALVE
- S — 2-WAY SOLENOID CONTROL VALVE (VALVE BODY AS SPECIFIED)
- M — 2-WAY MOTOR CONTROL VALVE (VALVE BODY AS SPECIFIED)
- XX — 2-WAY CONTROL VALVE (VALVE BODY AS SPECIFIED)
- 3-WAY MIXING VALVE WITH ARROW INDICATING FAIL POSITION
- 3-WAY DIVERTING VALVE WITH ARROW INDICATING FAIL POSITION
- TRIPLE DUTY VALVE
- GAS SHUTOFF VALVE
- ANGLE VALVE
- DRAIN VALVE
- DRAIN VALVE WITH CAP
- LOCKSHIELD VALVE
- PRESSURE REDUCING VALVE-PRV (DOWNSTREAM SETPOINT)
- AIR-LOADED PRESSURE REDUCING VALVE-PRV (DOWNSTREAM SETPOINT)
- PRESSURE REDUCING VALVE-PRV (UPSTREAM SETPOINT)
- GAS REGULATOR
- REDUCED PRESSURE BACKFLOW PREVENTER (RPBP)
- OR — BFP
- PRESSURE RELIEF VALVE (RV) OR SAFETY VALVE (SV)
- VACUUM RELIEF/VACUUM BREAKER
- RUPTURE DISK PRESSURE RELIEF
- RUPTURE DISK VACUUM RELIEF
- FLOAT OPERATED VALVE
- QUICK OPENING VALVE

(XX) = DEFINES FAIL POSITION OR NORMAL POSITION
(FC) = FAIL CLOSED (CONTROL VALVE OR DAMPER)
(FO) = FAIL OPEN (CONTROL VALVE OR DAMPER)
(NC) = NORMALLY CLOSED (CONTROL VALVE OR DAMPER)
(NO) = NORMALLY OPEN (CONTROL VALVE OR DAMPER)

DAMPERS

- MANUAL BALANCING DAMPER
- CONTROL DAMPER
- BD — BACKDRAFT DAMPER
- FA — 3 HOUR RATED FIRE DAMPER
- F — 1 1/2 HOUR RATED FIRE DAMPER
- BT — OR — BUBBLE TIGHT DAMPER
- S — SMOKE DAMPER
- FS — COMBINATION FIRE/SMOKE DAMPER
- OPPOSED BLADE DAMPER
- PARALLEL BLADE DAMPER
- GENERAL

(XX) = DEFINES FAIL POSITION OR NORMAL POSITION
(FC) = FAIL CLOSED (CONTROL VALVE OR DAMPER)
(FO) = FAIL OPEN (CONTROL VALVE OR DAMPER)
(NC) = NORMALLY CLOSED (CONTROL VALVE OR DAMPER)
(NO) = NORMALLY OPEN (CONTROL VALVE OR DAMPER)

ACTUATORS

- MANUAL
- GENERAL
- MODULATING
- MODULATING WITH PILOT POSITIONER
- S — SOLENOID
- M — ELECTRIC MOTOR DRIVEN
- TWO POSITION SPRING RETURN
- DOUBLE ACTING TWO POSITION
- FUSIBLE LINK

DUCTWORK AT DIFFUSERS AND GRILLES

SINGLE LINE-HARD OR FLEXIBLE CONNECTION — DOUBLE LINE-HARD OR FLEXIBLE CONNECTION

- SUPPLY DIFFUSER OR GRILLE (HORIZONTAL MOUNT)
- ROUND DIFFUSER
- RETURN REGISTER OR GRILLE (HORIZONTAL MOUNT)
- EXHAUST REGISTER OR GRILLE (HORIZONTAL MOUNT)
- EXHAUST OR RETURN REGISTER OR GRILLE (VERTICAL MOUNT)
- SUPPLY REGISTER OR GRILLE (VERTICAL MOUNT)

DIFFUSER NOTATION

DUCT SIZE IN INCHES
(NET INSIDE DIMENSIONS)
(ROUND SHOWN)
ø INDICATES ROUND.
-<> or ##/## INDICATES OVAL,
FIRST FIGURE: SIDE SHOWN
SECOND FIGURE: SIDE NOT SHOWN

SUPPLY AIR DUCT

DIFFUSER AIR PATTERN
1 ARROW: 1 WAY
2 ARROWS: 2 WAY
3 ARROWS: 3 WAY
4 ARROWS: 4 WAY
NO ARROWS: 4 WAY

10ø SA — CD-1 450 — CEILING DIFFUSER (CD) IDENTIFICATION — AIR QUANTITY (CFM)

GRILLE, REGISTER NOTATION

EXHAUST AIR DUCT,
RETURN AIR DUCT (RA)

DUCT SIZE IN INCHES
(NET INSIDE DIMENSIONS)
FIRST FIGURE: SIDE SHOWN
SECOND FIGURE: SIDE NOT SHOWN

12x6 EA — G-1 250

- RETURN OR EXHAUST GRILLE (G) SUPPLY GRILLE (SG)
- LINEAR DIFFUSER (LD)
- LINEAR RET/EXH GRILLE (LG)
- TRANSFER GRILLE (TG)
- AIR QUANTITY (CFM)

DUCTWORK

SINGLE — DOUBLE

- RECTANGULAR/ROUND BRANCH TAKE-OFF OR ROUND/ROUND BRANCH TAKE-OFF
- W, R=1.5W — RADIUS ELBOW
- SQUARE ELBOW
- 45° LATERAL BRANCH
- R=1.5W, W — RADIUS TEE
- SQUARE TEE (FOR LOW PRESSURE SA DIVERGING ONLY)
- BULLHEAD TEE (FOR LOW PRESSURE SA DUCTWORK ONLY)
- 15° MAX. FOR DIVERGING, 25° MAX FOR CONVERGING TRANSITION - ECCENTRIC
- 15° MAX. FOR DIVERGING, 25° MAX FOR CONVERGING TRANSITION - CONCENTRIC
- EXISTING DUCT TO REMAIN
- EXISTING DUCT TO BE REMOVED
- LINE CONTINUATION BREAK (RECTANGULAR, ROUND)
- SUPPLY AIR (SA) OR OUTDOOR AIR (OA) DUCT (SOLID LINES TYPICAL FOR SUPPLY AIR AND OUTDOOR AIR UP, HIDDEN LINE DOWN)
- RETURN AIR (RA), RELIEF AIR, OR TRANSFER AIR (TA) DUCT (SOLID LINES TYPICAL FOR RETURN, RELIEF, OR TRANSFER AIR UP, HIDDEN LINE DOWN)
- EXHAUST AIR (EA) DUCT (SOLID LINES TYPICAL FOR EXHAUST AIR UP, HIDDEN LINE DOWN)
- DUCT RISE/DROP W/90° ELBOWS (SUPPLY RECTANGULAR DUCT SHOWN)
- D — DUCT RISE (R)/DROP(D) W/45° ELBOWS (RECTANGULAR DUCTS)
- DUCT RISE/DROP W/90° ELBOWS (ROUND DUCTS)
- DUCT RISE/DROP W/90° ELBOWS (OVAL DUCTS)
- D — DUCT RISE(R)/DROP(D) W/45° ELBOWS (ROUND OR OVAL DUCTS)

PIPING SYSTEM LABELS

BF	BOILER FEED	IA(XX)	INSTRUMENT AIR
BBD	BOILER BLOW DOWN	JWR	JACKET WATER RETURN
CA(XX)	COMPRESSED AIR	JWS	JACKET WATER SUPPLY
CCC	CONDENSATE COOLING COIL	LP	LIQUIFIED PETROLEUM GAS
CHS	CHILLED WATER SUPPLY	LOR	LUBRICATION OIL RETURN
CHR	CHILLED WATER RETURN	LOS	LUBRICATION OIL SUPPLY
CPD	CONDENSATE PUMP DISCHARGE	LPS	LOW PRESSURE STEAM
D	DRAIN	LPC	LOW PRESSURE CONDENSATE
DCW	DOMESTIC COLD WATER	MTCHR	MEDIUM TEMPERATURE CHILLED WATER RETURN
EERR	EXHAUST ENERGY RECOVERY RETURN	MTCHS	MEDIUM TEMPERATURE CHILLED WATER SUPPLY
EERS	EXHAUST ENERGY RECOVERY SUPPLY	NG	NATURAL GAS
FS	FUEL SUPPLY	NPCW	NON-POTABLE COLD WATER
FR	FUEL RETURN	PHWR	PREHEAT WATER RETURN
FOF	FUEL OIL FILL	PHWS	PREHEAT WATER SUPPLY
FOG	FUEL OIL GAUGE	SERR	SUPPLY ENERGY RECOVERY RETURN
FOR	FUEL OIL RETURN	SERS	SUPPLY ENERGY RECOVERY SUPPLY
FOS	FUEL OIL SUPPLY	RL	REFRIGERANT LIQUID
FOV	FUEL OIL VENT	ROS	REVERSE OSMOSIS SUPPLY
G	LOW PRESSURE GAS	RS	REFRIGERANT SUCTION
GWR	GLYCOL WATER RETURN	RHG	REFRIGERANT HOT GAS
GWS	GLYCOL WATER SUPPLY	RHWR	REHEAT HOT WATER RETURN
HPC	HIGH PRESSURE CONDENSATE	RHWS	REHEAT HOT WATER SUPPLY
HPG(XX)	HIGH PRESSURE GAS	TWR	TOWER WATER RETURN
HPS(XX)	HIGH PRESSURE STEAM	TWS	TOWER WATER SUPPLY
HWR	HEATING HOT WATER RETURN	V	VENT
HWS	HEATING HOT WATER SUPPLY		

(XX) = SYSTEM PRESSURE IN PSIG

PIPING SPECIALTIES

- GENERAL PIPELINE STRAINER WITHOUT DRAIN
- GENERAL PIPELINE STRAINER WITH DRAIN
- STEAM & CONDENSATE PIPELINE STRAINER
- WATER SYSTEM PIPELINE STRAINER
- SUCTION DIFFUSER
- DUPLEX STRAINER
- BASKET STRAINER
- FLANGE
- UNION
- 2" AND SMALLER, CAP OR PLUG; 2-1/2" AND LARGER, BLIND FLANGE
- INVERTED BUCKET TRAP
- FLOAT AND THERMOSTATIC TRAP
- THERMOSTATIC TRAP
- EXPANSION JOINT
- PIPE FLEXIBLE CONNECTION
- BALL JOINT
- FILTER/REGULATOR
- THERMOMETER
- PRESSURE GAUGE (WITH GAUGE VALVE)
- FLOW SENSOR
- FLOW SWITCH
- AV — OR — AUTOMATIC AIR VENT
- MANUAL AIR VENT
- THERMOSTATIC AIR VENT
- TEST PLUG (PRESSURE/TEMP.)
- ECCENTRIC REDUCER
- DIRECTION OF PITCH (DOWN)
- DIRECTION OF FLOW
- PIPE GUIDE
- PIPE SLEEVE
- ANCHOR

PIPING

SINGLE — DOUBLE

- ELBOW DOWN
- ELBOW UP
- BOTTOM CONNECTION (45° OR 90°)
- TOP CONNECTION (45° OR 90°)
- D — 45° PIPE RISE(R) /DROP(D)
- N/A — TEE (REFER TO SPECIFICATION FOR SIDE, TOP OR BOTTOM TEE)
- EXISTING PIPING TO REMAIN
- EXISTING PIPING TO BE REMOVED
- LINE CONTINUATION BREAK
- OR — ECCENTRIC REDUCER
- CONCENTRIC REDUCER

UNIT CONVERSIONS

PIPING CONVERSION

PIPE SIZES ARE NOTED IN MILLIMETERS.

PIPE SIZES ARE INDUSTRY STANDARD CARBON STEEL PIPE, STAINLESS STEEL PIPE, PLASTIC PIPE, AND COPPER TUBE DESIGNATED BY THEIR NOMINAL MILLIMETER DIAMETER EQUIVALENTS AS SHOWN BELOW.

Inch(es)	mm	Inch(es)	mm	Inch(es)	mm
1/2	15	3 1/2	90	16	400
3/4	20	4	100	18	450
1	25	5	125	20	500
1 1/4	32	6	150	22	550
1 1/2	40	8	200	24	600
2	50	10	250	30	750
2 1/2	65	12	300	36	900
3	75	14	350		

DUCTWORK CONVERSION

ALL DUCT DIMENSIONS ARE NOTED IN MILLIMETERS.

DUCT DIMENSION IN INCHES WILL CORRESPOND TO MILLIMETERS NOMINALLY AS SHOWN BELOW.

Inch(es)	mm	Inch(es)	mm	Inch(es)	mm
4	100	54	1350	104	2600
6	150	56	1400	106	2650
8	200	58	1450	108	2700
10	250	60	1500	110	2750
12	300	62	1550	112	2800
14	350	64	1600	114	2850
16	400	66	1650	116	2900
18	450	68	1700	118	2950
20	500	70	1750	120	3000
22	550	72	1800	122	3050
24	600	74	1850	124	3100
26	650	76	1900	126	3150
28	700	78	1950	128	3200
30	750	80	2000	130	3250
32	800	82	2050	132	3300
34	850	84	2100	134	3350
36	900	86	2150	136	3400
38	950	88	2200	138	3450
40	1000	90	2250	140	3500
42	1050	92	2300	142	3550
44	1100	94	2350	144	3600
46	1150	96	2400	146	3650
48	1200	98	2450	148	3700
50	1250	100	2500	150	3750
52	1300	102	2550	152	3800

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/2018
2	100% CD REVIEW	10/15/18
3	ISSUED FOR BID & PERMIT	11/15/18
4	DD ISSUANCE - NIH	02/05/20
5	CD ISSUANCE - NIH	04/14/20
6	BID & PERMIT - NIH	05/22/20

Drawn By: PP
Checked By: SF
Client Number: 514
Project Number: 15576

STATE OF KENTUCKY — SCOTT FOSTER — 31421 — LICENSED PROFESSIONAL ENGINEER

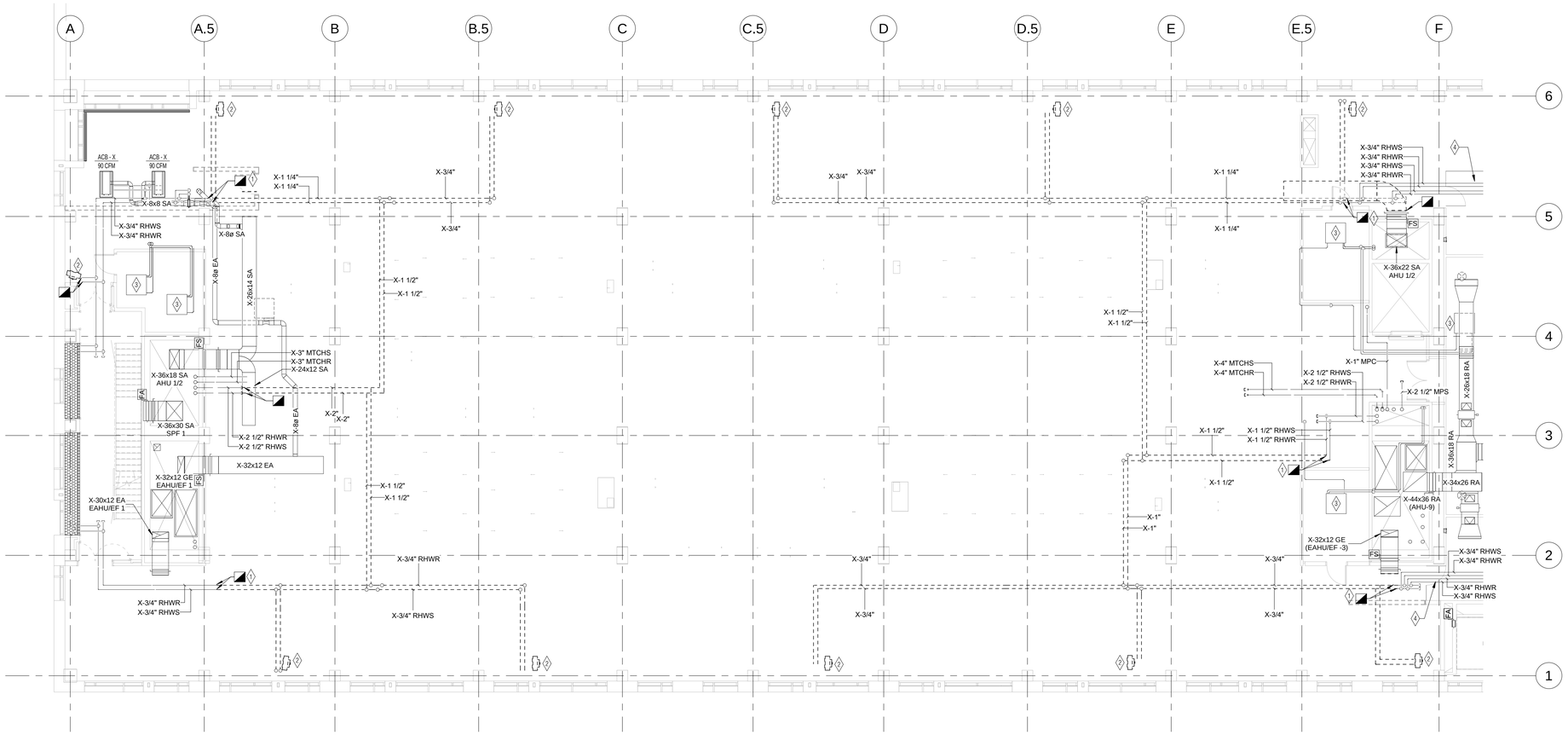
DRAWING

MECHANICAL FIT OUT SYMBOLS AND ABBREVIATIONS

SHEET NO.

MF-050

5/21/2020 1:10:45 PM



0 4' 8' 16'

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

1 MF-151 **MECHANICAL FIT OUT LEVEL ONE DEMOLITION PLAN**

1/8" = 1'-0"

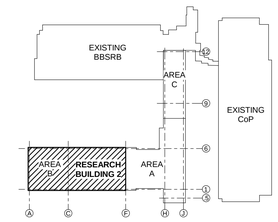
KEYED NOTES

1 DEMOLISH HOT WATER PIPING BACK TO POINT INDICATED. REMOVE ALL ASSOCIATED HANGERS, SUPPORTS AND ALL ASSOCIATED APPURTENANCES. MAKE EXISTING TO REMAIN PIPE AT LIMIT OF REMOVAL READY FOR NEW CONNECTION UNDER NEW WORK SCOPE.

2 DEMOLISH HOT WATER UNIT HEATER. UNIT HEATERS SHALL BE CLEANED AND KEPT IN GOOD WORKING ORDER FOR TURN-OVER TO OWNER.

3 EXISTING TO REMAIN VARIABLE REFRIGERANT FLOW (VRF) COOLING UNIT AND ALL ASSOCIATED PIPING AND APPURTENANCES.

4 EXISTING REHEAT WATER PIPING TO EXISTING FIN TUBE. COORDINATE SHUT-DOWN OF SYSTEM WITH OWNER PRIOR TO DEMOLITION AND INSTALATION OF REHEAT WATER PIPING MAINS.



KEY PLAN

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(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By TFM

Checked By DMS

Client Number 514

Project Number 15576

STATE OF KENTUCKY · SCOTT FOSTER · 31202 · LICENSED PROFESSIONAL ENGINEER

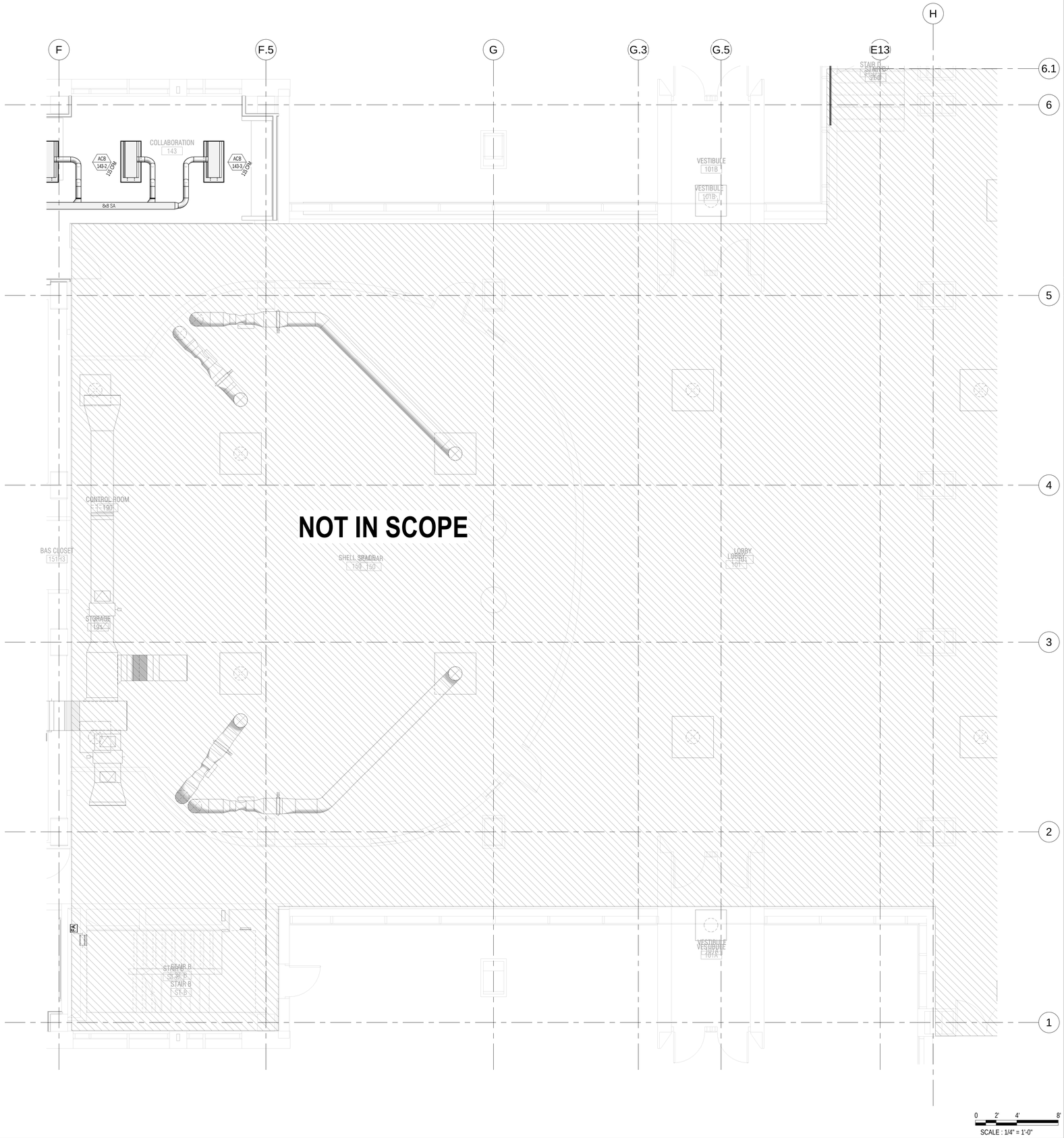
DRAWING

MECHANICAL FIT OUT LEVEL ONE DEMOLITION PLAN

SHEET NO.

MF-151

5/21/2020 1:10:55 PM



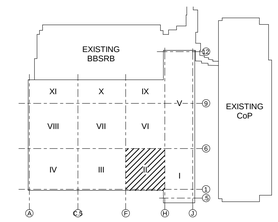
0 2' 4' 8'

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

1 MF-251 II **MECHANICAL FIT OUT VENTILATION LEVEL ONE FLOOR PLAN AREA II**
1/4" = 1'-0"

GENERAL NOTES

1. PROVIDE BALANCING DAMPER AT EACH DIFFUSER, GRILLE, AND BRANCH TAKEOFF IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK. LOCATE BALANCING DAMPER AS CLOSE TO BRANCH TAKEOFF AS POSSIBLE.
2. DUCT SIZE TO DIFFUSERS, REGISTERS, AND GRILLES SHALL BE SAME AS NECK SIZE UNLESS OTHERWISE NOTED.
3. DUCT SIZE TO AIR TERMINAL DEVICES SHALL BE SAME AS AIR TERMINAL INLET UNLESS OTHERWISE NOTED.
4. LOCATION OF CEILING MOUNTED DIFFUSERS, REGISTERS AND GRILLES SHALL BE AS SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS (RCP). MAKE ADJUSTMENTS TO DUCT LAYOUT AS NECESSARY TO COORDINATE WITH RCP.
5. MAINTAIN WORKING CLEARANCE ON CONTROLLER SIDE OF EACH AIR TERMINAL UNLESS OTHERWISE SHOWN. COORDINATE PIPING AND OTHER TRADES TO MAINTAIN ACCESS TO CONTROLLER.
6. FLEXIBLE DUCT MAY NOT BE SHOWN. FLEXIBLE DUCT MAY BE USED FOR CONNECTIONS TO SUPPLY DIFFUSERS ABOVE ACCESSIBLE CEILINGS PER SECTION 23 3114. FLEXIBLE DUCT SHALL NOT EXCEED SIX FEET. FLEXIBLE DUCT SHALL NOT BE USED FOR EXHAUST SYSTEMS. REFER TO SECTION 23 3114 FOR ADDITIONAL REQUIREMENTS.
7. CRITICAL DAMPER LOCATIONS ARE SHOWN TO ENSURE PROPER LOCATION AND ACCESS. PROVIDE DAMPERS PER GENERAL NOTE 1 WHETHER SHOWN OR NOT.
8. PROVIDE 12" MINIMUM STRAIGHT LENGTH OF DUCT BETWEEN SUPPLY AIR TERMINAL AND REHEAT COIL FOR ACCESS PANEL.
9. ALL NON-FIRE/SMOKE DAMPERED EXHAUST DUCTS SHALL BE COATED WITH CONQUEST-FIRESPRAY FROM THE POINT THEY ENTER THE RATED SHAFT TO THE UNDERSIDE OF THE ROOF SLAB.
10. REFER TO AIR TERMINAL DEVICE SCHEDULES FOR SOUND ATTENUATING DEVICE REQUIREMENTS.
11. PROVIDE COMBINATION FIRE SMOKE DAMPER AT ALL DUCT PENETRATIONS TO SHAFTS.
12. REFER TO SPECIFICATIONS FOR COMPLETE PROJECT SCOPE.
13. REFER TO DETAILS ON SHEETS MF850-MF853.
14. REFER TO SCHEDULES ON SHEETS MF958-MF959.



KEY PLAN

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(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	CD ISSUANCE - NIH	04/14/20
2	BID & PERMIT - NIH	05/22/20

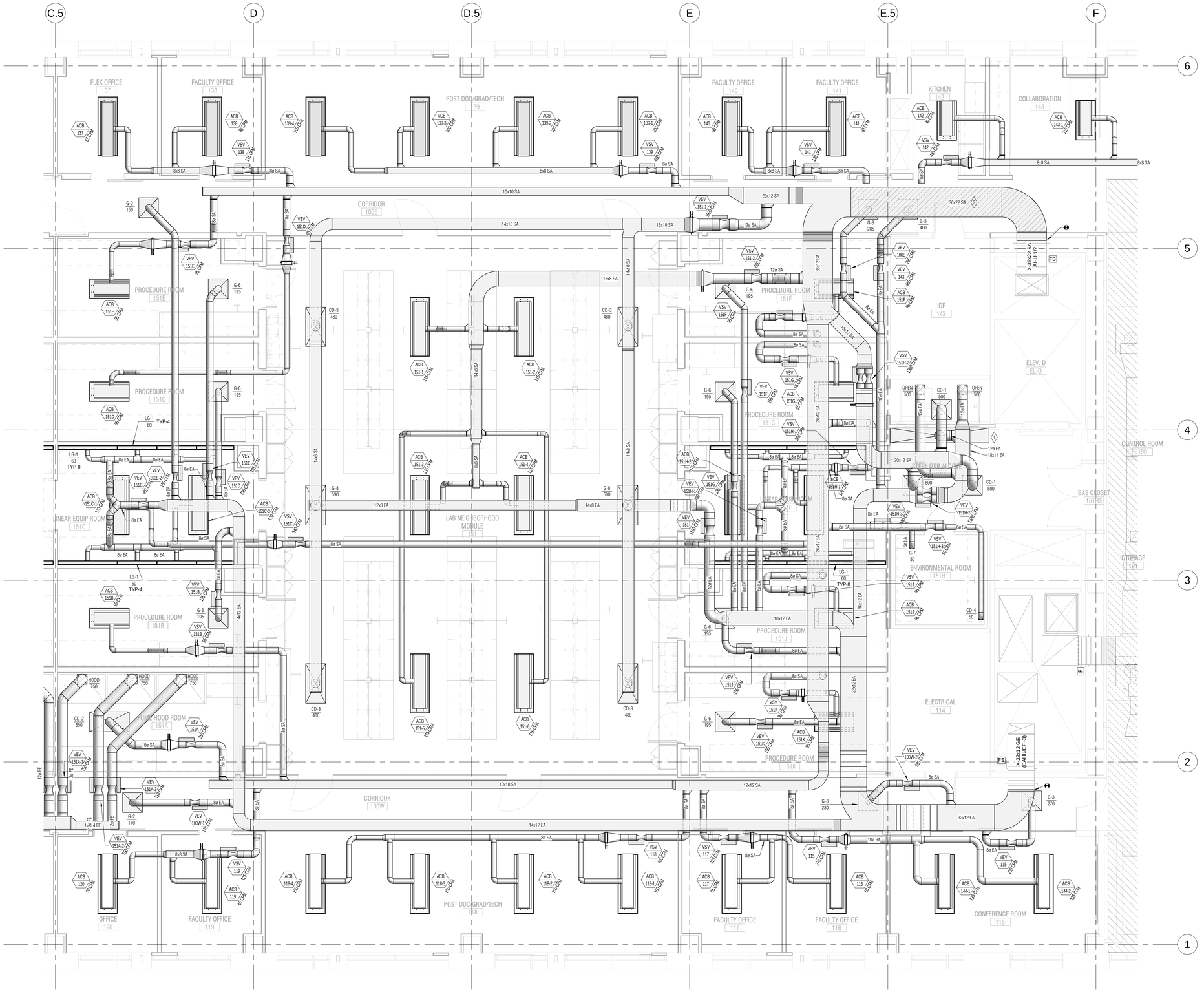
Drawn By TFM
Checked By DMS
Client Number 514
Project Number 15576

STATE OF KENTUCKY · SCOTT FOSTER · 31327 · LICENSED PROFESSIONAL ENGINEER

DRAWING
MECHANICAL FIT OUT VENTILATION LEVEL ONE FLOOR PLAN AREA II

SHEET NO.
MF-251 II

5/21/2020 1:11:09 PM



GENERAL NOTES

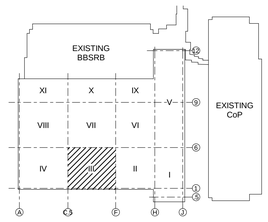
1. PROVIDE BALANCING DAMPER AT EACH DIFFUSER, GRILLE, AND BRANCH TAKEOFF IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK. LOCATE BALANCING DAMPER AS CLOSE TO BRANCH TAKEOFF AS POSSIBLE.
2. DUCT SIZE TO DIFFUSERS, REGISTERS, AND GRILLES SHALL BE SAME AS NECK SIZE UNLESS OTHERWISE NOTED.
3. DUCT SIZE TO AIR TERMINAL DEVICES SHALL BE SAME AS AIR TERMINAL INLET UNLESS OTHERWISE NOTED.
4. LOCATION OF CEILING MOUNTED DIFFUSERS, REGISTERS AND GRILLES SHALL BE AS SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS (RCP). MAKE ADJUSTMENTS TO DUCT LAYOUT AS NECESSARY TO COORDINATE WITH RCP.
5. MAINTAIN WORKING CLEARANCE ON CONTROLLER SIDE OF EACH AIR TERMINAL UNLESS OTHERWISE SHOWN. COORDINATE PIPING AND OTHER TRADES TO MAINTAIN ACCESS TO CONTROLLER.
6. FLEXIBLE DUCT MAY NOT BE SHOWN. FLEXIBLE DUCT MAY BE USED FOR CONNECTIONS TO SUPPLY DIFFUSERS ABOVE ACCESSIBLE CEILINGS PER SECTION 23 3114. FLEXIBLE DUCT SHALL NOT EXCEED SIX FEET. FLEXIBLE DUCT SHALL NOT BE USED FOR EXHAUST SYSTEMS. REFER TO SECTION 23 3114 FOR ADDITIONAL REQUIREMENTS.
7. CRITICAL DAMPER LOCATIONS ARE SHOWN TO ENSURE PROPER LOCATION AND ACCESS. PROVIDE DAMPERS PER GENERAL NOTE 1 WHETHER SHOWN OR NOT.
8. PROVIDE 12" MINIMUM STRAIGHT LENGTH OF DUCT BETWEEN SUPPLY AIR TERMINAL AND REHEAT COIL FOR ACCESS PANEL.
9. ALL NON-FIRE/SMOKE DAMPERED EXHAUST DUCTS SHALL BE COATED WITH CONQUEST-FIRESPRAY FROM THE POINT THEY ENTER THE RATED SHAFT TO THE UNDERSIDE OF THE ROOF SLAB.
10. REFER TO AIR TERMINAL DEVICE SCHEDULES FOR SOUND ATTENUATING DEVICE REQUIREMENTS.
11. PROVIDE COMBINATION FIRE SMOKE DAMPER AT ALL DUCT PENETRATIONS TO SHAFTS.
12. REFER TO SPECIFICATIONS FOR COMPLETE PROJECT SCOPE.
13. REFER TO DETAILS ON SHEETS MF850-MF853.
14. REFER TO SCHEDULES ON SHEETS MF958-MF959.

KEYED NOTES

1 CANOPY HOOD 500 CFM. COORDINATE MODULAR LOUVER WALL WITH ARCHITECT. REFER TO DETAIL 7/MF-855.

2 PROVIDE DUCT LAGGING WRAP (MASS LOADED VINYL OVER 2" THICK BATT INSULATION) TO THE HATCHED DUCT.

KEY PLAN



1 MECHANICAL FIT OUT VENTILATION LEVEL ONE FLOOR PLAN AREA III
MF-251 III 1/4" = 1'-0"

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UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By: TFM
Checked By: DMS
Client Number: 514
Project Number: 15576

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DRAWING
MECHANICAL FIT OUT VENTILATION LEVEL ONE FLOOR PLAN AREA III

SHEET NO.
MF-251 III

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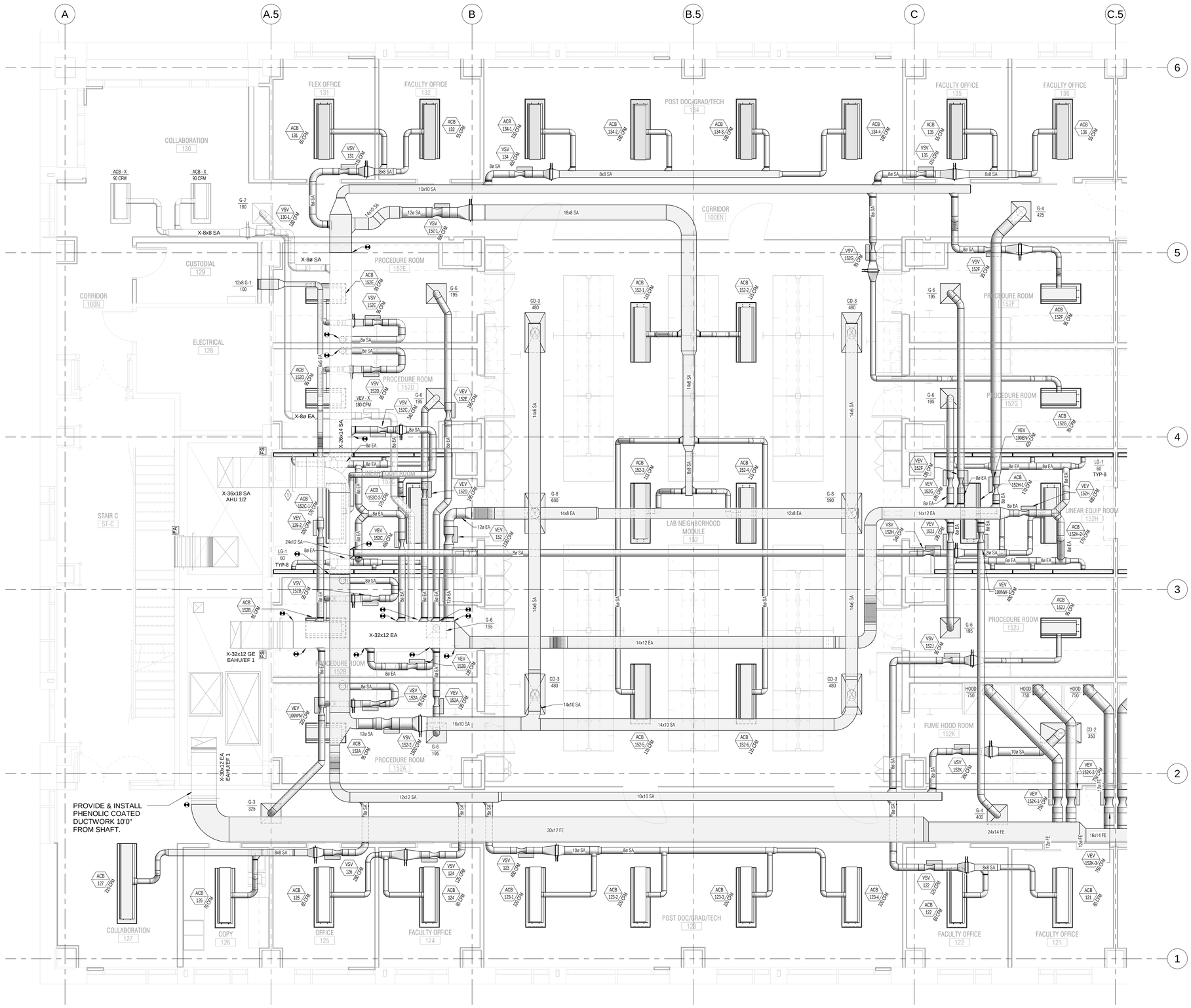

0 2' 4' 8'

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

1 MECHANICAL FIT OUT VENTILATION LEVEL ONE FLOOR PLAN AREA IV

MF-251 IV 1/4" = 1'-0"

GENERAL NOTES

1. PROVIDE BALANCING DAMPER AT EACH DIFFUSER, GRILLE, AND BRANCH TAKEOFF IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK. LOCATE BALANCING DAMPER AS CLOSE TO BRANCH TAKEOFF AS POSSIBLE.
2. DUCT SIZE TO DIFFUSERS, REGISTERS, AND GRILLES SHALL BE SAME AS NECK SIZE UNLESS OTHERWISE NOTED.
3. DUCT SIZE TO AIR TERMINAL DEVICES SHALL BE SAME AS AIR TERMINAL INLET UNLESS OTHERWISE NOTED.
4. LOCATION OF CEILING MOUNTED DIFFUSERS, REGISTERS AND GRILLES SHALL BE AS SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS (RCP). MAKE ADJUSTMENTS TO DUCT LAYOUT AS NECESSARY TO COORDINATE WITH RCP.
5. MAINTAIN WORKING CLEARANCE ON CONTROLLER SIDE OF EACH AIR TERMINAL UNLESS OTHERWISE SHOWN. COORDINATE PIPING AND OTHER TRADES TO MAINTAIN ACCESS TO CONTROLLER.
6. FLEXIBLE DUCT MAY NOT BE SHOWN. FLEXIBLE DUCT MAY BE USED FOR CONNECTIONS TO SUPPLY DIFFUSERS ABOVE ACCESSIBLE CEILINGS PER SECTION 23 3114. FLEXIBLE DUCT SHALL NOT EXCEED SIX FEET. FLEXIBLE DUCT SHALL NOT BE USED FOR EXHAUST SYSTEMS. REFER TO SECTION 23 3114 FOR ADDITIONAL REQUIREMENTS.
7. CRITICAL DAMPER LOCATIONS ARE SHOWN TO ENSURE PROPER LOCATION AND ACCESS. PROVIDE DAMPERS PER GENERAL NOTE 1 WHETHER SHOWN OR NOT.
8. PROVIDE 12" MINIMUM STRAIGHT LENGTH OF DUCT BETWEEN SUPPLY AIR TERMINAL AND REHEAT COIL FOR ACCESS PANEL.
9. ALL NON-FIRE/SMOKE DAMPERED EXHAUST DUCTS SHALL BE COATED WITH CONQUEST-FIRESPRAY FROM THE POINT THEY ENTER THE RATED SHAFT TO THE UNDERSIDE OF THE ROOF SLAB.
10. REFER TO AIR TERMINAL DEVICE SCHEDULES FOR SOUND ATTENUATING DEVICE REQUIREMENTS.
11. PROVIDE COMBINATION FIRE SMOKE DAMPER AT ALL DUCT PENETRATIONS TO SHAFTS.
12. REFER TO SPECIFICATIONS FOR COMPLETE PROJECT SCOPE.
13. REFER TO DETAILS ON SHEETS MF850-MF853.
14. REFER TO SCHEDULES ON SHEETS MF958-MF959.

KEYED NOTES

1 RELOCATE EXISTING COMBINATION FIRE/SMOKE DAMPER ACTUATOR INSIDE THE DUCT TO INSURE ACCESSABILITY.

KEY PLAN

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By TFM
Checked By DMS
Client Number 514
Project Number 15576

STATE OF KENTUCKY SCOTT FOSTER 31324 LICENSED PROFESSIONAL ENGINEER

DRAWING
MECHANICAL FIT OUT VENTILATION LEVEL ONE FLOOR PLAN AREA IV

SHEET NO.
MF-251 IV

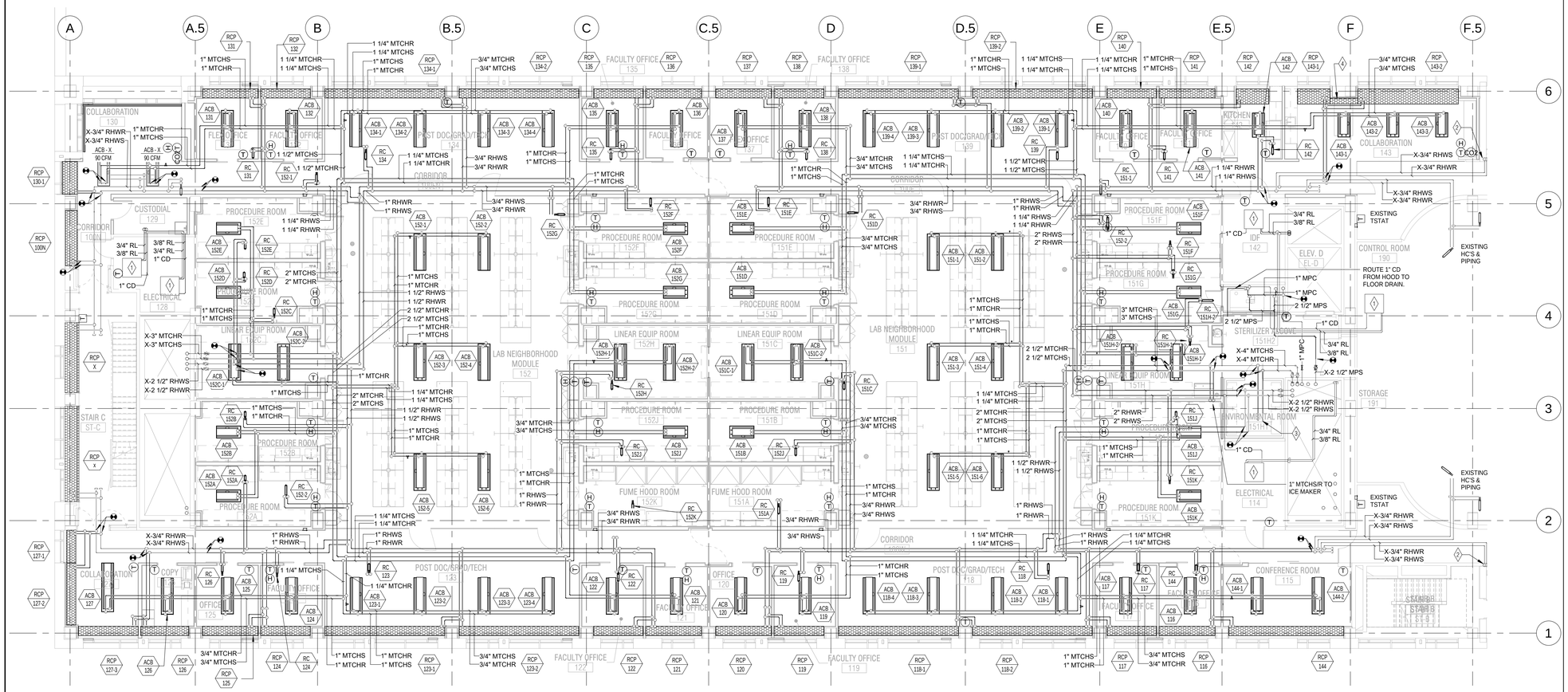
5/21/2020 1:11:50 PM

GENERAL NOTES

1. BRANCH PIPING TO TERMINAL UNITS SHALL BE 3/4" UNLESS OTHERWISE NOTED.
2. ALL PIPE PENETRATIONS THROUGH 1-HOUR RATED PARTITIONS SHALL BE FIRESTOPPED PER UL DETAILS TO ACHIEVE A 1-HOUR RATING.
3. DRAIN PIPING SHALL BE SLOPED DOWN IN THE DIRECTION OF FLOW AT 1/8" PER 1'-0".
4. COORDINATE EXACT LOCATION OF WALL MOUNTED THERMOSTATS, HUMIDISTATS AND CARBON DIOXIDE SENSORS WITH ARCHITECURAL PLANS AND ELEVATIONS. MINIMUM MOUNTING HEIGHT TO BE 48" AFF.
5. CONTROL VALVE LOCATIONS ARE ONLY SHOWN FOR CONTROL ZONES SERVING MULTIPLE CHILLED BEAMS. ALL OTHER CHILLED BEAMS SHALL OPERATE INDEPENDENTLY AND BE PROVIDED WITH MODULATING CONTROL VALVES ON A ONE-TO-ONE BASIS.
6. REFER TO SPECIFICATIONS FOR COMPLETE PROJECT SCOPE.
7. REFER TO DETAILS ON SHEETS MF850-MF853.
8. REFER TO SCHEDULES ON SHEETS MF958-MF959.

KEYED NOTES

1. EXISTING TO REMAIN VARIABLE REFRIGERANT FLOW (VRF) COOLING UNIT AND ALL ASSOCIATED PIPING AND APPURTENANCES.
2. EXISTING REHEAT WATER PIPING TO EXISTING FIN TUBE. COORDINATE SHUT-DOWN OF SYSTEM WITH OWNER PRIOR TO DEMOLITION AND INSTALATION OF REHEAT WATER PIPING MAINS.
3. 1" MTCHS/R TO DEHUMIDIFICATION UNIT.
4. 'NON-ACTIVE' PANEL - COORDINATE LOCATION AND SIZE WITH ARCHITECTURAL DRAWINGS.



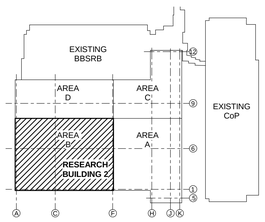
0 4' 8' 16'

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

1 MECHANICAL PIPING LEVEL ONE FLOOR PLAN AREA B

MF-351B 1/8" = 1'-0"

KEY PLAN



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Project Number 15576

STATE OF KENTUCKY SCOTT TOSTAR 31102 LICENSED PROFESSIONAL ENGINEER

DRAWING

MECHANICAL FIT OUT PIPING LEVEL ONE FLOOR PLAN AREA B

SHEET NO.

MF-351B

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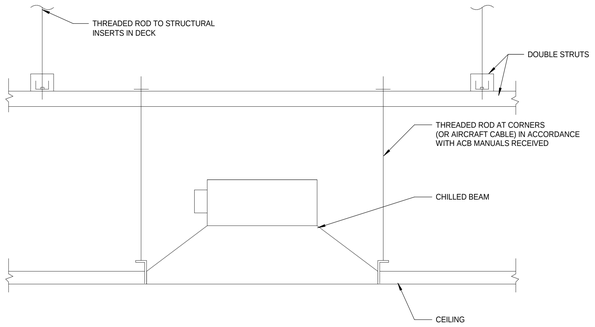


7 CHILLED BEAM SUPPORT

MF-854 NONE

DUCT DIMENSION	TRANSVERSE JOINT/REINFORCEMENT SPACING 42 3/4" (4'-0")	MIN. DUCT GAUGE	DUCT MATERIAL
20" DN	T-24 (M) W/J	24 GA.	REFER TO SPECIFICATION SECTIN 23 31 14
21"-36"	T-24 (M) W/J	22 GA.	
37"-42"	T-24 (M) W/J	20 GA.	
43"-54"	T-24 (M) W/J	18 GA.	

M = MODIFIED; AS SHOWN BELOW (RIGHT).

NOTES:

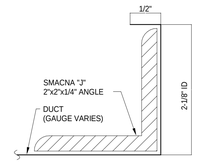
(1) USE TRANSVERSE REINFORCEMENTS (SHOWN RIGHT) TO ENCAPSULATE THE MODIFIED T-24 FLANGE THAT IS FORMED FROM 48" WIDE SHEET METAL ROLL OR FLAT SHEET STOCK. USE "J" REINFORCEMENTS BACK TO BACK ON ADJACENT SIDES WITH FULLY LAPPED 3/8" BOLTED CORNERS, SEAL CORNER OF DUCT WITH CHEMICAL RESISTANT SEALANT. BOLT (1/4"@8" INTERVALS) OR SCREW (#12@8" INTERVALS) "J" REINFORCEMENTS AROUND ENTIRE PERIPHERY OF EACH TRANSVERSE JOINT.

(2) NO INTERMEDIATE REINFORCEMENT IS REQUIRED.

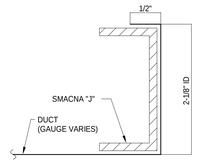
(3) NO SCREWS THROUGH DUCT, UNLESS SEALED AS SPECIFIED.

(4) USE TRAPEZE SUPPORT HANGERS FOR RECTANGULAR FUME HOOD DUCTWORK.

(5) USE BUTYL GASKET AROUND OUTSIDE HALF OF FLANGE FACE. AFTER FLANGES OF SECTIONS ARE MATED TOGETHER, FILL INSIDE GAP BETWEEN FLANGES WITH DUCT SEALANT



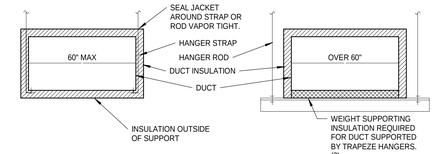
MODIFIED SMACNA T-24 FLANGE
W/"J" ANGLE REINFORCEMENT



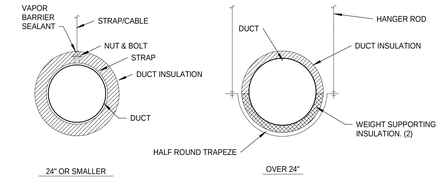
MODIFIED SMACNA T-24 FLANGE
W/"J" FORMED C/Z REINFORCEMENT
2"(OD)X1/8"X1/8" (10 GA.)

4 FUME HOOD EXHAUST DUCT (RECTANGULAR)

MF-854 NONE



RECTANGULAR OR OVAL DUCT



ROUND DUCT

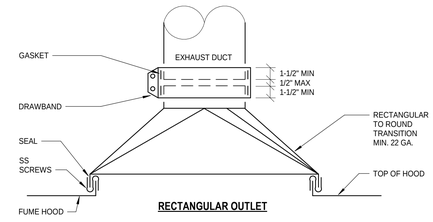
NOTES:

(1) INSULATION AND JACKET MUST RUN CONTINUOUSLY BETWEEN DUCT AND DUCT SUPPORTS, EXCEPT ROUND DUCTS 24" OR SMALLER.

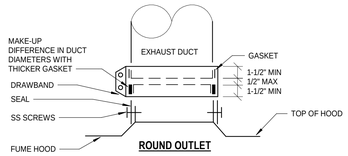
(2) WEIGHT SUPPORTING INSULATION TO BE HAMFAB INSERTS OR FOAMGLAS INSULATION (TYPE-G). HAMFAB INSERT FOR ROUND DUCTS SHALL BE MULTIPLE INSERTS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATION. REFER TO SPECIFICATION SECTION 23 07 00 FOR WEIGHT SUPPORTING INSULATION REQUIREMENTS.

1 INSULATED DUCT SUPPORTS (FLEX GLASS FIBER INSUL TYPE-F)

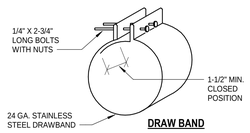
MF-854 NONE



RECTANGULAR OUTLET



ROUND OUTLET



DRAW BAND

5 FUME HOOD OUTLET CONNECTION (REMOVABLE)

MF-854 1/2" = 1'-0"

NOTES:

(1) PULL FLEXIBLE DUCT'S INNER LINER OVER DIFFUSER COLLAR AND SECURE WITH DRAW BAND.

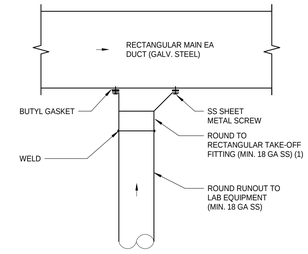
(2) SECURE FLEXIBLE DUCT INSULATION AND OUTER JACKET WITH DRAW BAND.

(3) REFER TO SECTION 23 3114 FOR DIFFUSER INSULATION REQUIREMENT.

(4) MAINTAIN MIN. 1.5 RADIUS ELBOW. ELBOW SUPPORT DEVICE SIMILAR TO FLEXFLOW ELBOW SUPPORT BY THERMAFLEX TO BE USED TO ASSURE RADIUS ELBOW.

2 FLEXIBLE DUCT CONNECTION TO DIFFUSER

MF-854 NONE

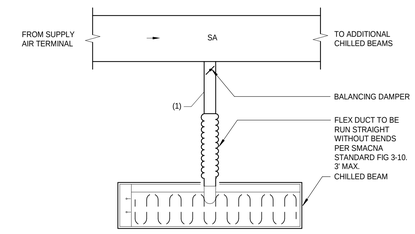


NOTES:

(1) USE CONICAL TAKE-OFF FITTING IF MAIN DUCT IS ROUND.

6 BRANCH DUCT TAKE-OFF FITTING FOR FH EA DUCT

MF-854 NONE



NOTES:

(1) UNLESS OTHERWISE SHOWN ON PLANS, RUNOUT SHALL BE SAME SIZE AS CHILLED BEAM INLET SIZE.

3 CHILLED BEAM DUCT CONNECTION

MF-854 NONE

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Drawn By TFM

Checked By DMS

Client Number 514

Project Number 15576

STATE OF KENTUCKY SCOTT FOSTER 31324 LICENSED PROFESSIONAL ENGINEER

DRAWING

MECHANICAL DETAILS - DUCTWORK

SHEET NO.

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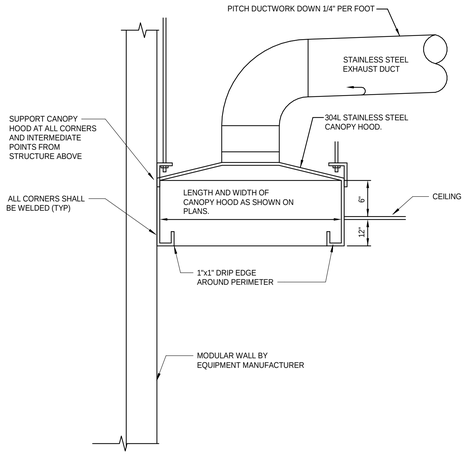
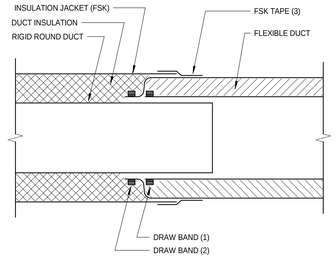
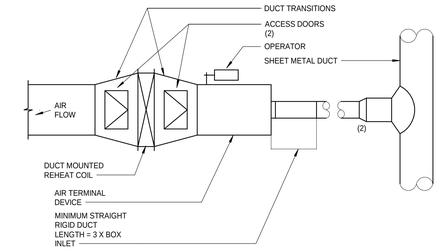


7 MF-855 **LAB STERILIZERS AND GLASSHWASH CANOPY HOOD**
12" = 1'-0"



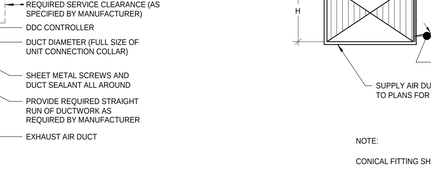
NOTES:
(1) PULL FLEXIBLE DUCT INNER LINER OVER RIGID DUCT WITH MINIMUM 4" OVERLAP AND SECURE LINER WITH SS DRAW BAND.
(2) SECURE FLEXIBLE DUCT INSULATION AND OUTER JACKET WITH METAL OR PLASTIC DRAW BAND.
(3) PULL RIGID DUCT INSULATION AND BUTT JOINT TO TERMINATION OF FLEXIBLE DUCT. APPLY 3" WIDE TAPE SIMILAR TO FSK TAPE TO CREATE VAPOR BARRIER SEAM. TAPE SHALL BE COMPATIBLE WITH FLEXIBLE DUCT INSULATION JACKET AND RIGID DUCT INSULATION JACKET.

4 MF-855 **FLEXIBLE DUCT CONNECTION TO INSUL RIGID ROUND DUCT**
1/2" = 1'-0"



NOTES:
(1) REFER TO SECTION 23 3314 FOR ACCESS DOOR.
(2) UNLESS OTHERWISE SHOWN, INCREASE INLET DUCT SIZE BY 2 INCHES IN DIAMETER IF RUNOUT IS LONGER THAN 8 FT.

1 MF-855 **AIR TERMINAL DEVICE**
NONE



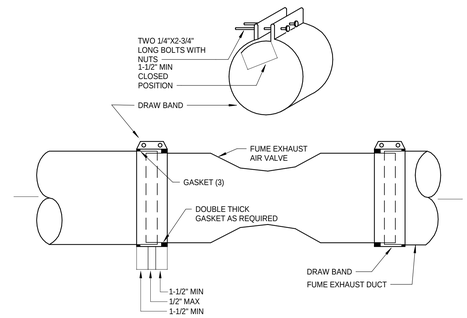
NOTES:
(1) INSULATION AND JACKET MUST RUN CONTINUOUSLY BETWEEN DUCT AND DUCT SUPPORTS.
(2) REFER TO SPECIFICATION SECTION 20 0700 FOR WEIGHT-SUPPORTING INSULATION REQUIREMENTS.
(3) THIS DETAIL SHALL APPLY FOR DUCTS 60" AND SMALLER IF TRAPEZE HANGERS ARE USED.

8 MF-855 **INSULATED DUCT SUPPORTS (RIGID GLASS FIBER INSUL. TYPE-R)**
1/2" = 1'-0"

TYPICAL ESCUTCHEON

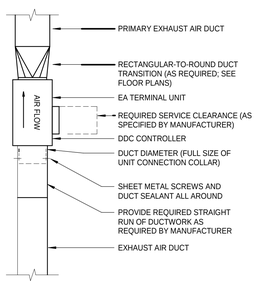
NOTES:
(1) THIS DETAIL APPLIES FOR NON-INSULATED DUCTS THRU WALL WHERE FIRE DAMPER IS NOT REQUIRED.
(2) WHERE WALL IS FIRE RATED, COMBINATION OF SEALANT AND BACKING MATERIAL SHALL MEET THIS RATING. REFER TO SPECIFICATION SECTION 20 0573 FOR FIRE STOPPING SYSTEM MANUFACTURERS.

5 MF-855 **DUCT PENETRATION THRU INTERIOR WALL (NON-INSULATED DUCTS)**
1/2" = 1'-0"

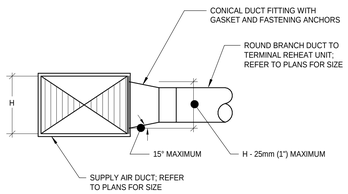


NOTES:
(1) DRAW BANDS SHALL BE:
-FURNISHED BY THE VALVE MANUFACTURER AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
-FABRICATED FROM THE SAME MATERIAL AS DUCT SYSTEM.
-INSTALLED TO PROVIDE TIGHT CHEMICAL SEAL AROUND ENTIRE PERIMETER OF DUCT AND AT DEVICE, WITH DRAW BAND FLANGES IN PARALLEL POSITION AFTER BEING FULLY DRAWN TOGETHER.
(2) DRAW BAND GAUGE TO BE MIN. 24 GAUGE.
(3) GASKET TO BE UL 94 NEOPRENE THE SAME WIDTH AS DRAWBAND. PROVIDE PTFE ADHESIVE TAPE UNDER GASKET.
(4) SUPPORT DUCTWORK ON EACH SIDE OF VALVE WITH HANGER WITHIN 12" OF DRAWBAND.

2 MF-855 **VENTURI AIR VALVE CONNECTION**
NONE

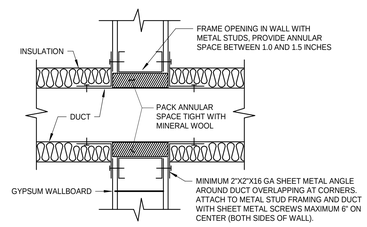


10 MF-855 **EXHAUST AIR TERMINAL UNIT DETAIL**
12" = 1'-0"



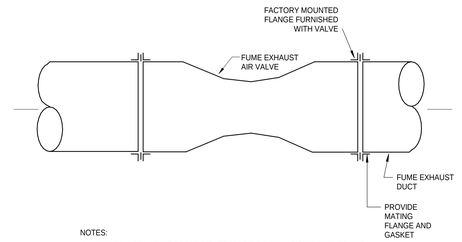
NOTE:
CONICAL FITTING SHALL BE SEALED PER SPECIFICATIONS.

9 MF-855 **CONICAL DUCT FITTING**
12" = 1'-0"



NOTE: THIS DETAIL IS A MINIMUM REQUIREMENT. CONTRACTOR SHALL VERIFY THAT LOCAL AUTHORITIES HAVING JURISDICTION ACCEPT THIS CONSTRUCTION, OR MAKE THE REQUIRED REVISIONS WHERE REQUIREMENTS ARE MORE STRINGENT.

6 MF-855 **DUCT PENETRATION THROUGH STUD WALL**
12" = 1'-0"



NOTES:
(1) INSTALL ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
(2) SEALANT AND GASKET TO BE CHEMICAL RESISTANT MATERIAL. REFER TO SPECIFICATION SECTION 23 3114.
(3) FOR RECTANGULAR DUCTS, USE DUCTMATE CONNECTOR SYSTEM OR OTHER APPROVED SYSTEM WITH NEOPRENE GASKET AND BOLT AT EACH CORNER.

3 MF-855 **VENTURI AIR VALVE CONNECTION (FLANGE CONNECTION)**
NONE

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Checked By: DMS
Client Number: 514
Project Number: 15576

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DRAWING
MECHANICAL DETAILS - DUCTWORK

SHEET NO.
MF-855

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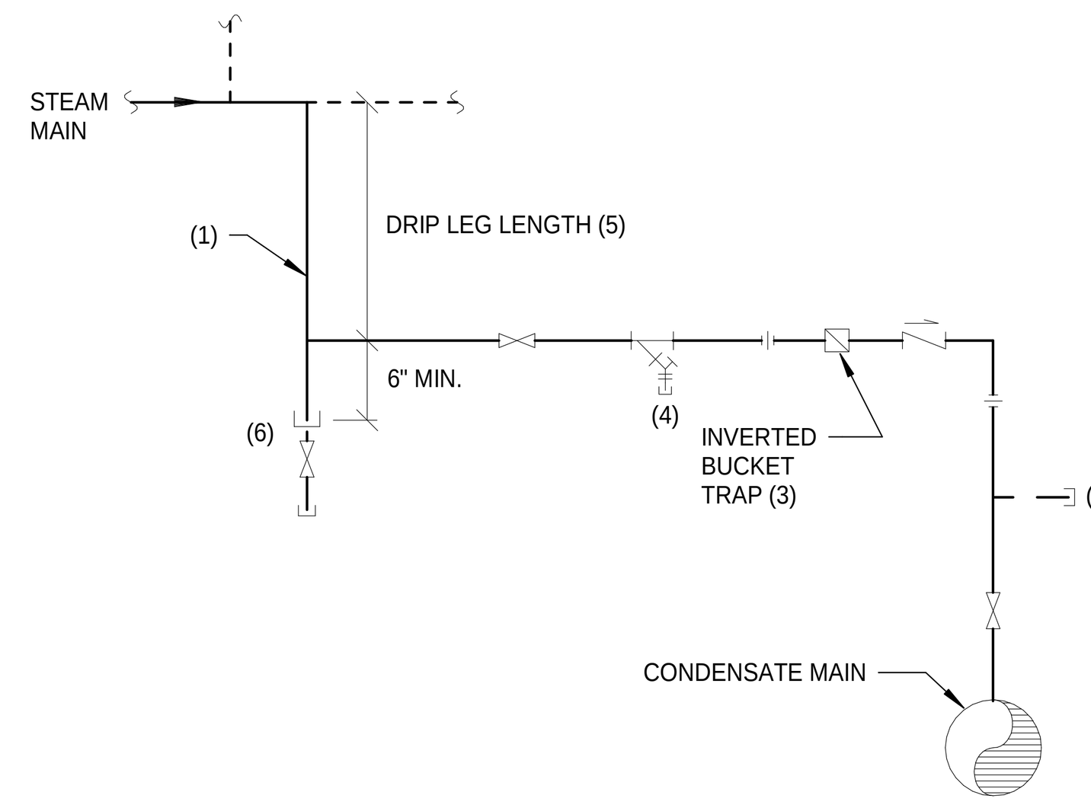
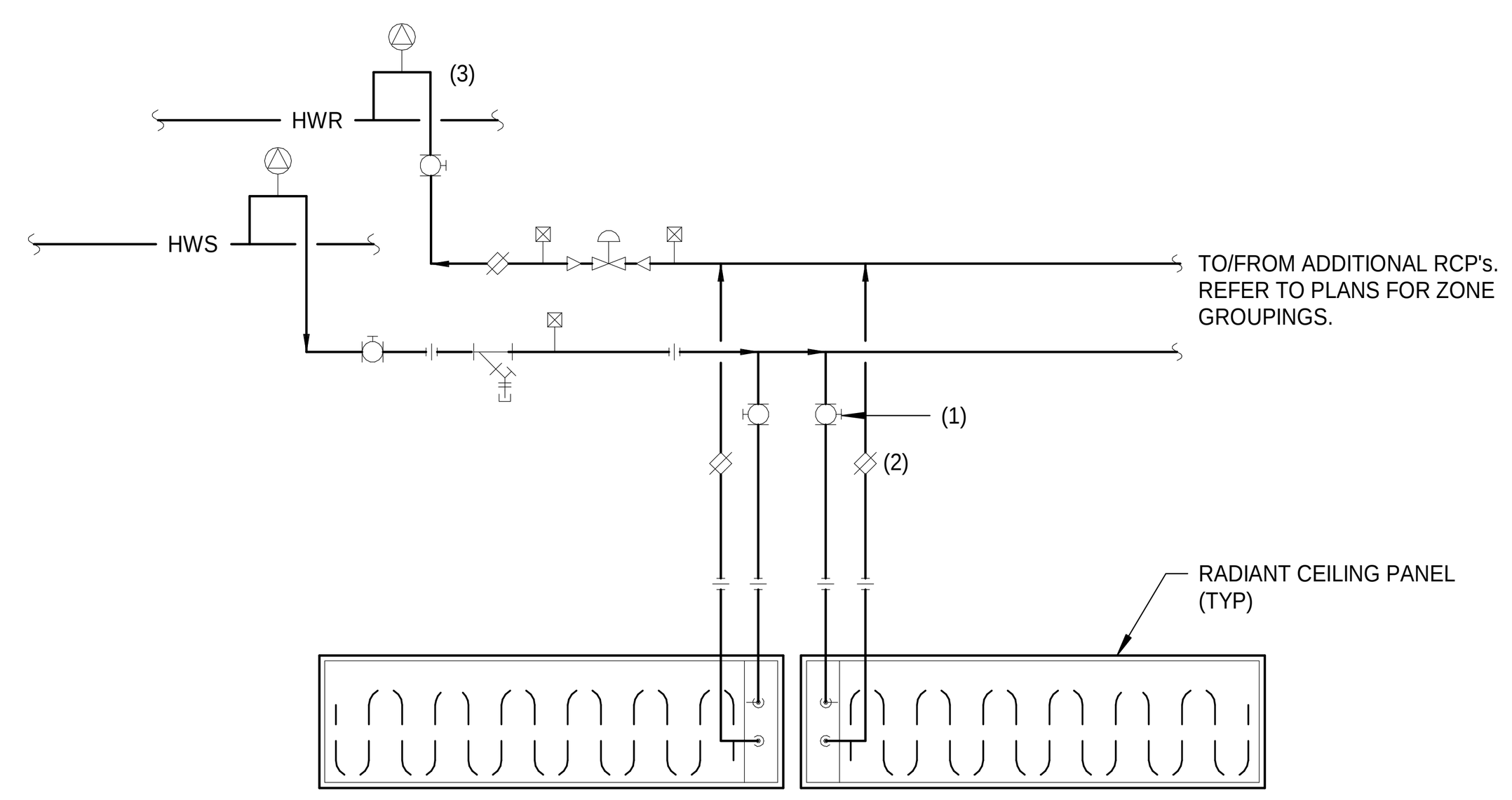


NOTES:

(1) DRIP LEG TO BE SAME AS MAIN THRU 4". ABOVE 4", DRIP LEG TO BE AT LEAST 1/2 MAIN SIZE BUT NOT LESS THAN 4".
(2) TEST VALVE WITH 6" NIPPLE AND CAP. TEST VALVE TO BE LINE SIZE, BUT NOT LARGER THAN 1". LOCATE TEST VALVE AT SIDE OF PIPE.
(3) DRIP TRAPS - 3/4" FOR MAIN PIPE SIZE THROUGH 8" AND 1" FOR MAIN PIPE 10" AND LARGER, UNLESS OTHERWISE NOTED.
(4) DRAIN VALVE FOR WARM-UP AND BLOW DOWN.
(5) DRIP LEG LENGTH TO BE AT LEAST 1-1/2 TIMES DIAMETER OF MAIN, BUT NEVER LESS THAN 10".
(6) CAP, DRILL AND TAP FOR 1" BALL VALVE WITH HOSE THREADED ADAPTER AND CAP.

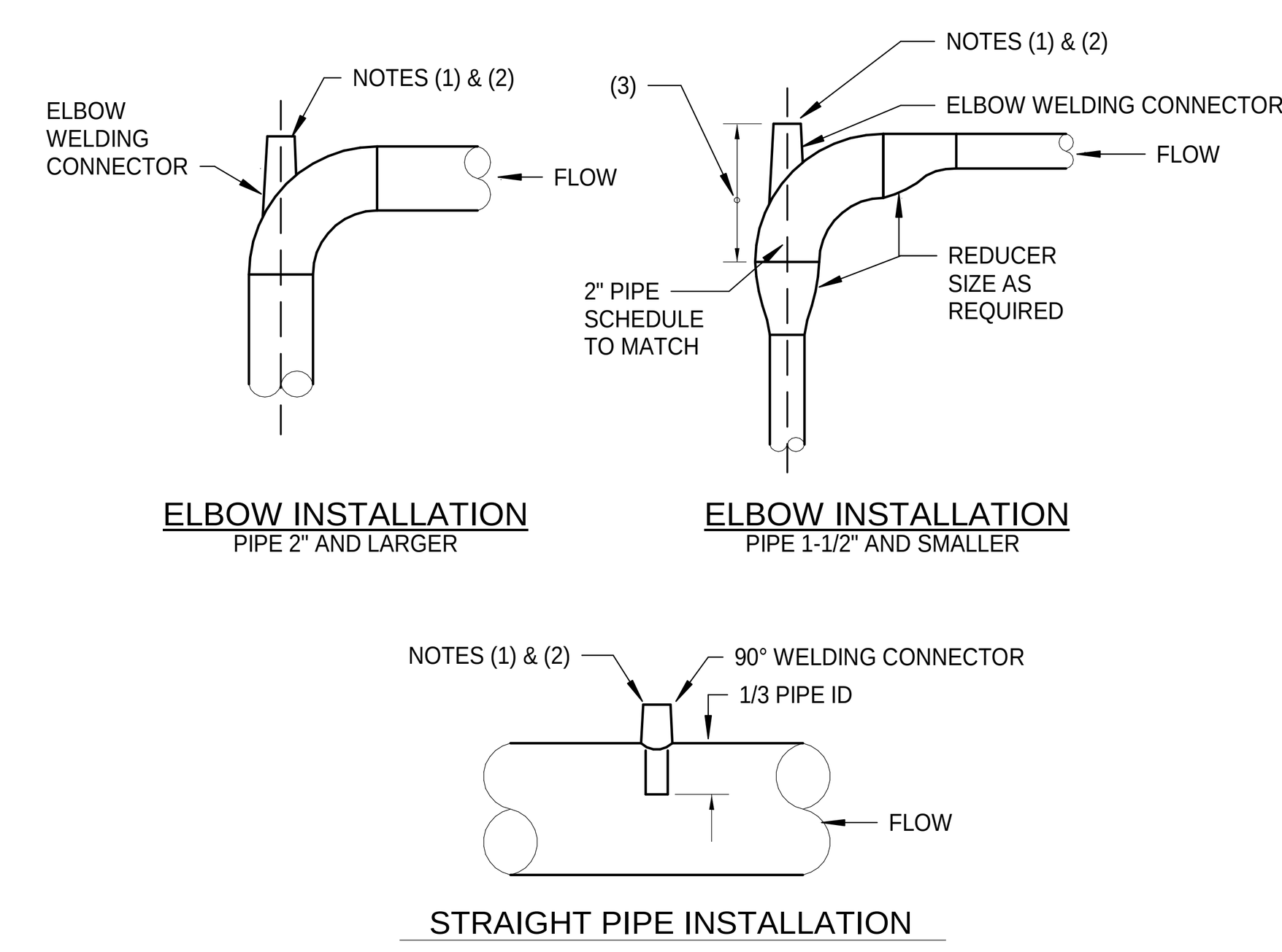
10 STEAM MAIN DRIP, END OF MAIN DRIP OR RISER DRIP
MF-856 NONE



NOTES:

(1) REFER TO SPECIFICATION SECTION 23 2118 FOR BALANCING VALVE SIZING AND STRAIGHT INLET AND OUTLET PIPING REQUIREMENTS.
(2) USE TOP OR TOP 45° CONNECTION.

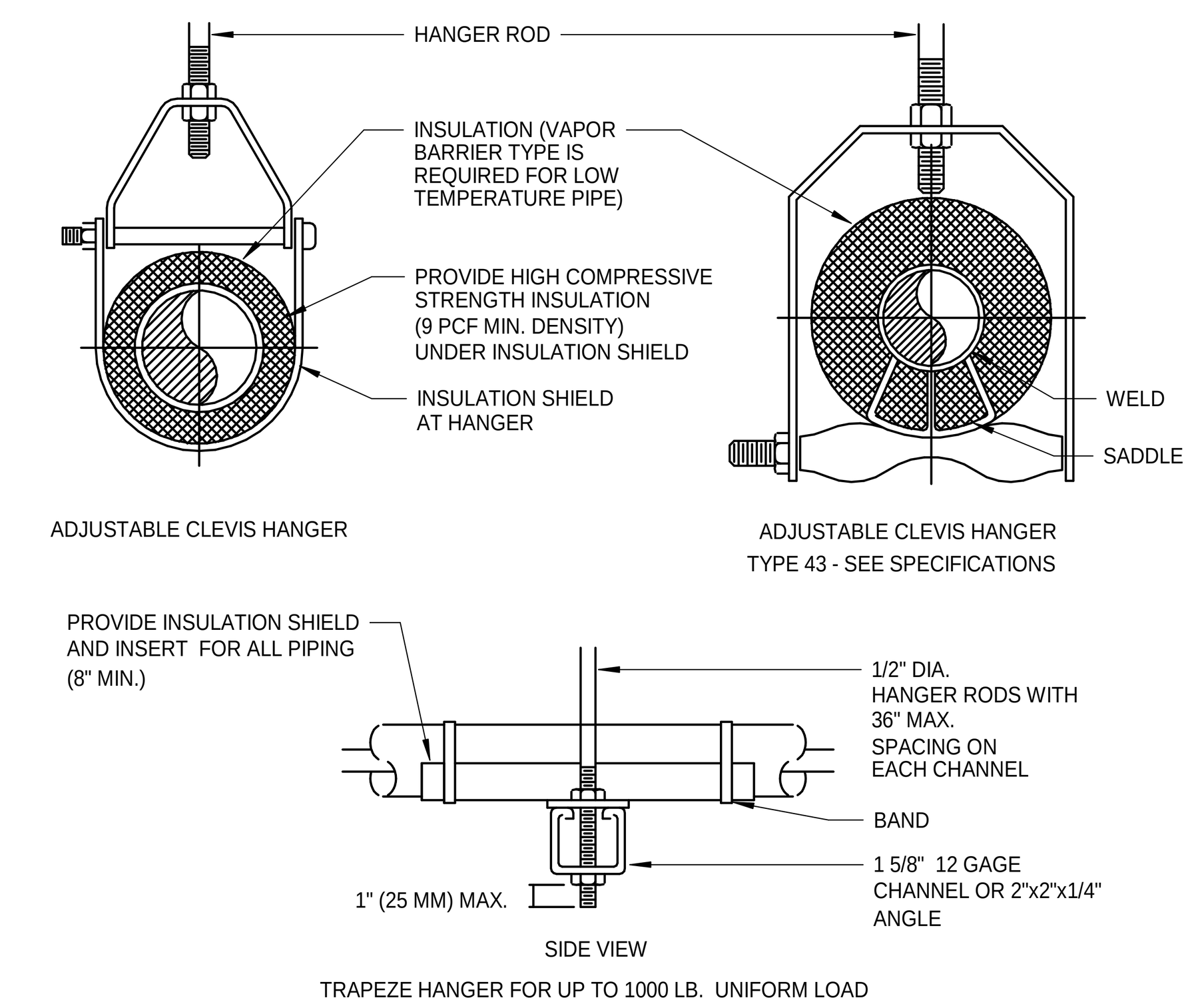
7 RADIANT CEILING PANEL PIPING (HEATING ONLY)
MF-856 1/2" = 1'-0"



NOTES:

(1) USE THREADED CONNECTOR FOR THREADED WELLS. USE SOCKET OR BUTT WELD CONNECTOR AND FLANGE FOR FLANGED WELLS.
(2) FOR DIRECT INSERTION TEMPERATURE INSTRUMENTS, PROVIDE 1/2" WELD-O-LET.
(3) UN-REDUCED RUN MUST EXCEED THERMOWELL LENGTH PLUS 2 INCHES

4 TEMPERATURE INSTRUMENTS (WELDED PIPE)
MF-856 1/2" = 1'-0"

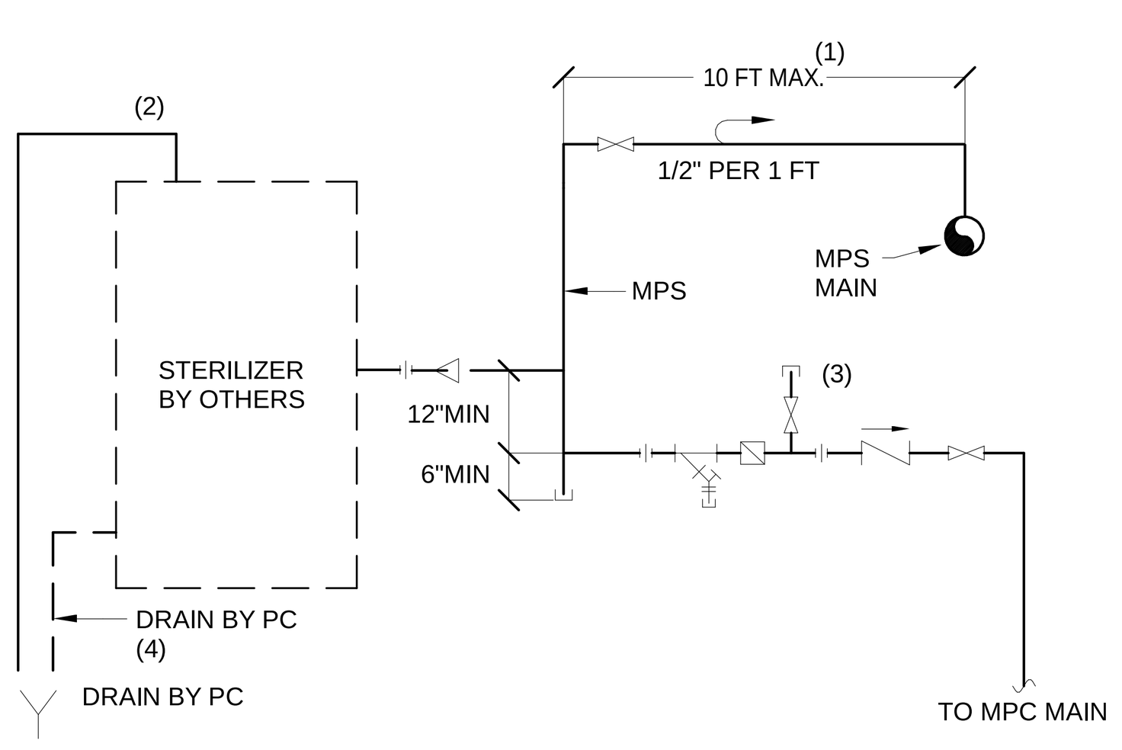


TRAPEZE HANGER FOR UP TO 1000 LB. UNIFORM LOAD

MAXIMUM PIPE/TUBING SUPPORT SPACING										
NOM. SIZE IN.	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
PIPE FT.	7	7	7	8	8	8	8	8	8	8
TUBING FT.	5	6	7	8	8	8	8	8	8	8

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

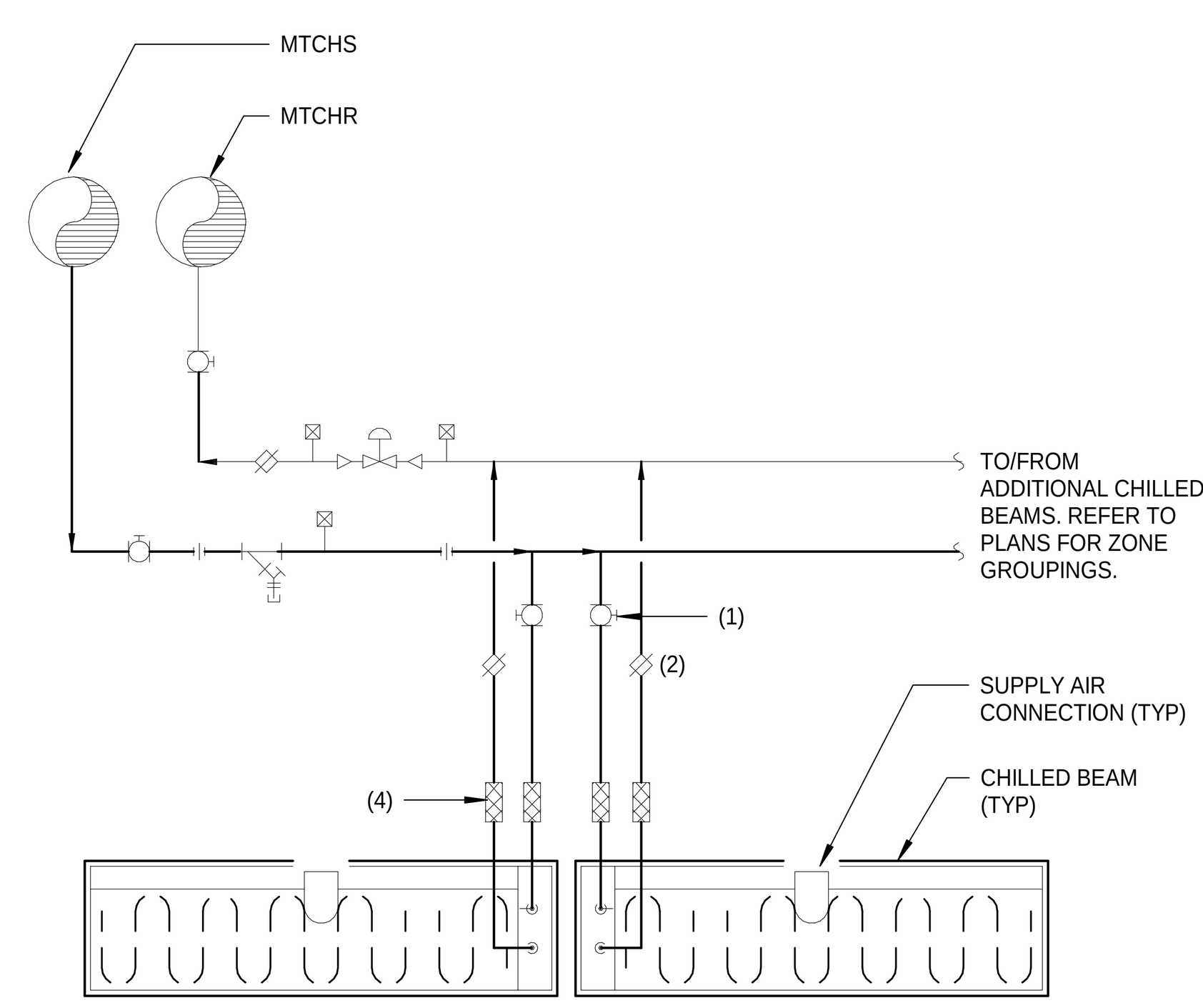
1 TYPICAL PIPE HANGER DETAIL
MF-856 12" = 1'-0"



NOTES:

(1) IF PIPE LENGTH EXCEEDS 10 FT, PROVIDE DRIP LEG AND TRAP AHEAD OF SHUT-OFF VALVE. (REFER TO END OF MAIN DRIP DETAIL).
(2) SAFEFTY VALVES ARE FURNISHED WITH STERILIZER, ONE VALVE FOR CHAMBER AND ONE VALVE FOR JACKET. PIPE EACH SAFETY VALVE TO FLOOR DRAIN. PIPE TO BE SAME SIZE AS SAFETY VALVE OUTLET SIZE.
(3) TEST VALVE WITH 6" NIPPLE AND CAP. TEST VALVE TO BE LINE SIZE, BUT NOT LARGER THAN 1". LOCATE TEST VALVE AT SIDE OF PIPE.
(4) PROVIDE AFTER COOLER PER DETAIL IF REQUIRED. COORDINATE REQUIREMENT FOR AFTER COOLER WITH PURCHASED UNIT MANUFACTURER OPTIONS.

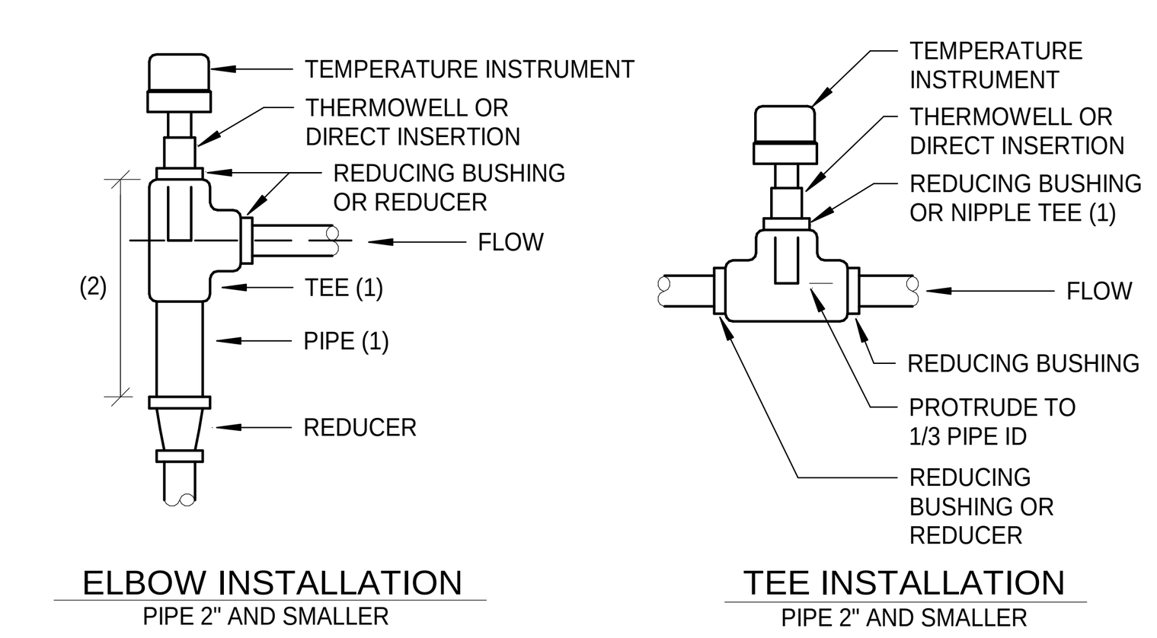
11 STERILIZER STEAM PIPING DETAIL
MF-856 NONE



NOTES:

(1) UP TO TWO ADJACENT CHILLED BEAMS MAY BE SERVED BY SINGLE (COMMON) ISOLATION VALVE.
(2) UP TO TWO ADJACENT CHILLED BEAMS MAY BE SERVED BY SINGLE (COMMON) BALANCING VALVE IF UPSTREAM PIPING IS SYMMETRICAL.
(3) USE BALL VALVE IF CONTROL VALVE IS PRESSURE INDEPENDENT TYPE (PICV).
(4) FLEXIBLE PIPE CONNECTORS. REFER TO SPECIFICATIONS.

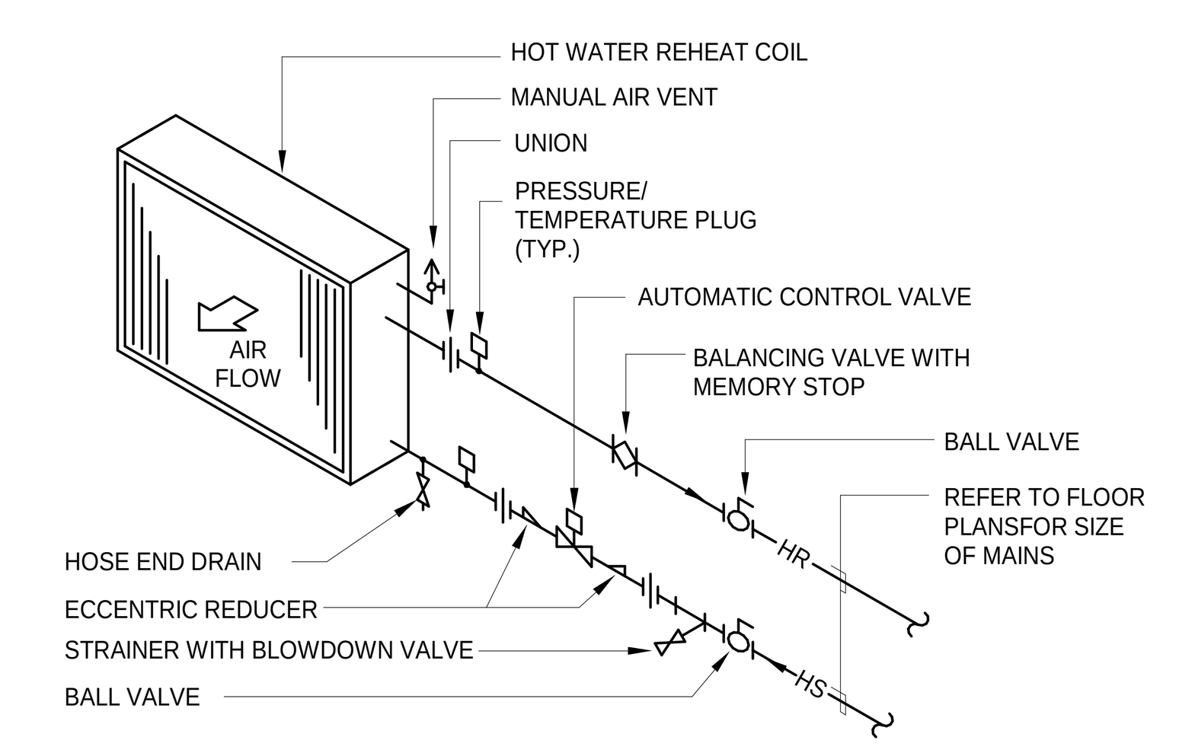
8 CHILLED BEAM PIPING
MF-856 NONE



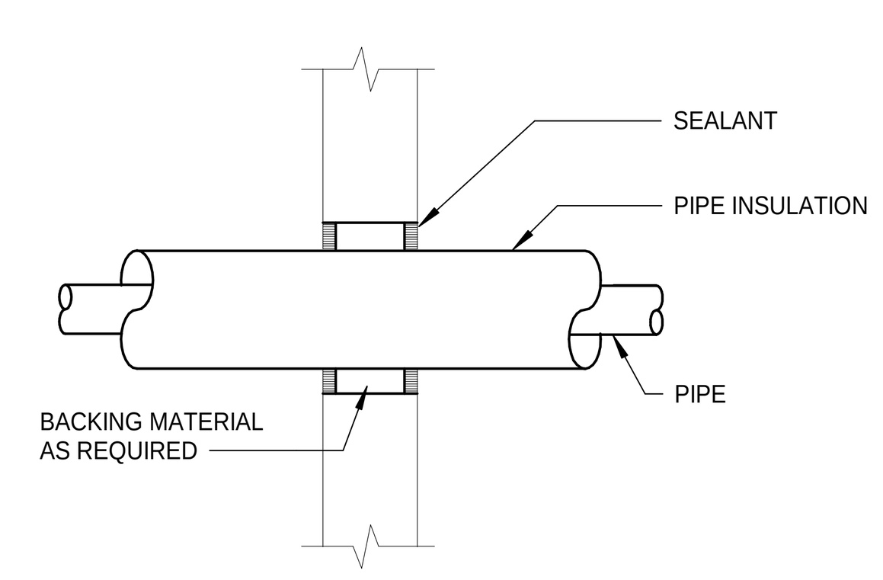
NOTES:

(1) USE TEE APPROPRIATELY SIZED TO MAINTAIN NET AREA NOT LESS THAN CROSS SECTIONAL AREA OF CONNECTED PIPE.
(2) UN-REDUCED RUN SHALL EXCEED THERMOWELL OR DIRECT INSERTION LENGTH PLUS 2 INCHES.

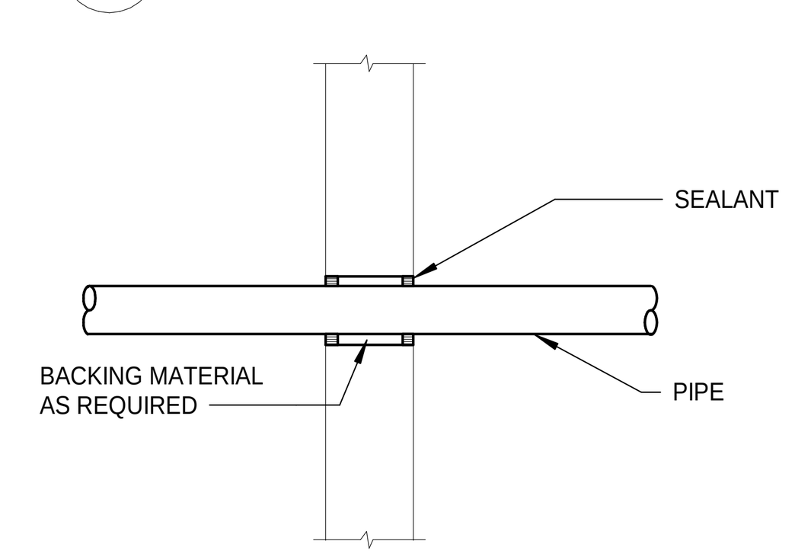
5 TEMPERATURE INSTRUMENTS (THREADED PIPE)
MF-856 1/2" = 1'-0"



2 HW REHEAT COIL PIPING (2-WAY VALVE)
MF-856 12" = 1'-0"



A WITH PIPE INSULATION

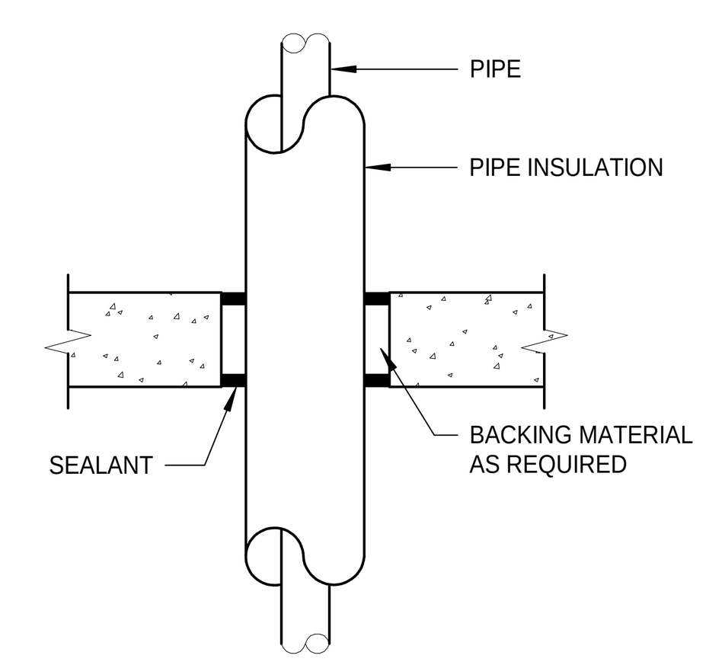


B WITHOUT PIPE INSULATION

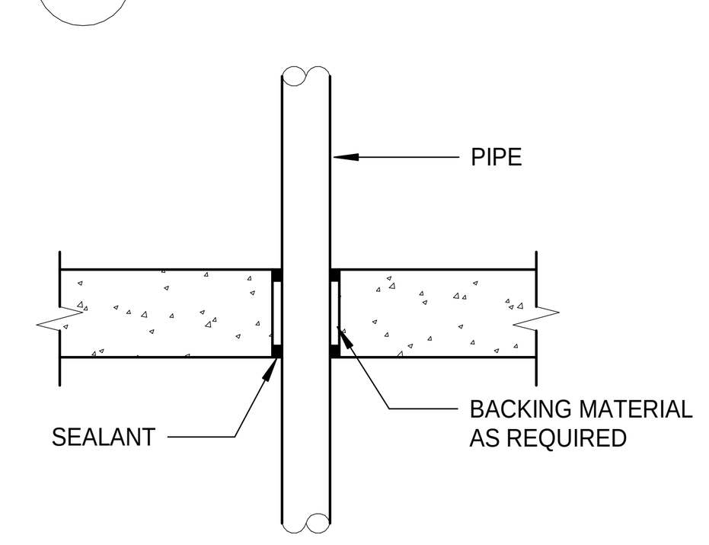
NOTES:

(1) WHERE WALL IS FIRE RATED, APPLY FIRE STOPPING SYSTEM (COMBINATION OF SEALANT, BACKING MATERIAL AND INSULATION) MEETING THIS RATING. REFER TO SPECIFICATION SECTION 20 0573 FOR FIRE STOPPING SYSTEM.

9 PIPE THRU INTERIOR WALL
MF-856 1/2" = 1'-0"



A WITH PIPE INSULATION

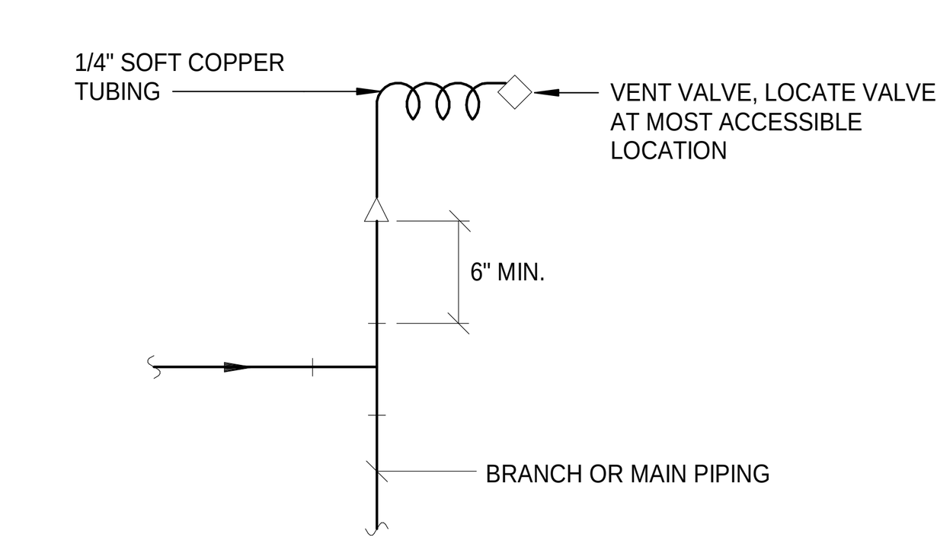


B WITHOUT PIPE INSULATION

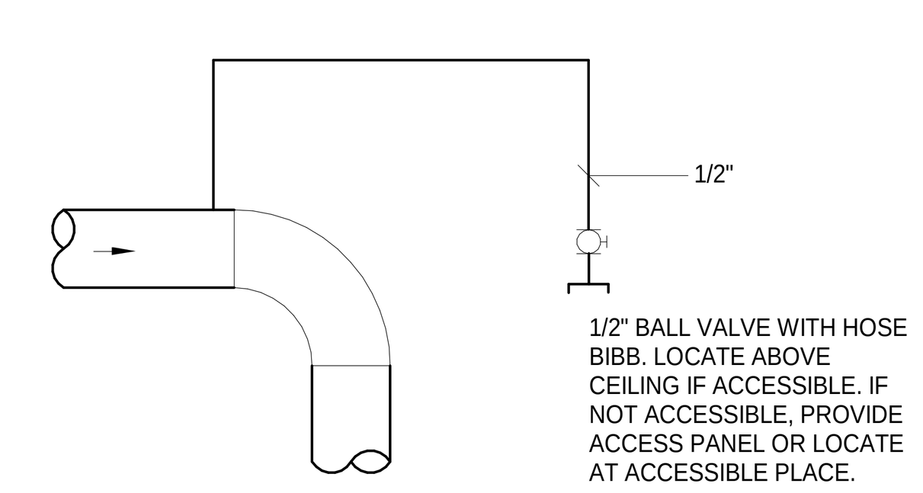
NOTES:

(1) WHERE FLOOR IS FIRE RATED, APPLY FIRE STOPPING SYSTEM MEETING THIS RATING. REFER TO SPECIFICATION SECTION 20 0573 FOR FIRE STOPPING SYSTEM.

6 PIPE THRU FLOOR
MF-856 1/2" = 1'-0"



A COILS AND SUBCIRCUITS



B MAIN PIPES

3 AIR VENT PIPING
MF-856 NONE

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AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	CD ISSUANCE - NIH	04/14/20
2	BID & PERMIT - NIH	05/22/20

Drawn By: TFM
Checked By: DMS
Client Number: 514
Project Number: 15576

STATE OF KENTUCKY — SCOTT FOSTER — 31327 — LICENSED PROFESSIONAL ENGINEER

DRAWING
MECHANICAL DETAILS - PIPING

SHEET NO.
MF-856

5/19/2020 2:30:59 PM

AIR VALVE DEVICES LEVEL ONE

TAG	LEVEL	AIR TERMINAL USAGE	FAN SYSTEM	TYPE	CONTROL SEQUENCE	UNIT INLET SIZE (IN)	AIR FLOW OFFSET (CFM)	MAX. OCC. (CFM)	MIN. OCC. (CFM)	MIN. INLET SP ("WG)	MAX. SOUND 3RD BAND @1" PD	HEATING COIL									REMARKS
												REHEAT AIR FLOW (CFM)	CAP. (MBH)	FLOW (GPM)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	AIR PD (IN WG)	FLUID TYPE	
VSV 115	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	0	270	65	1.1	30	270	6124	0.6	51	72	180	160	0.25	WATER	
VEV 115	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	B	8	0	270	65	1.1	30										
VSV 118	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	120	400	155	1.1	30	400	9072	0.9	51	72	180	160	0.25	WATER	
VEV 100W-2	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	B	8	-120	280	35	1.1	30										
VSV 117	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	40	125	60	1.1	30	125	2835	0.5	51	72	180	160	0.25	WATER	
VSV 119	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	40	125	55	1.1	30	125	2835	0.5	51	72	180	160	0.25	WATER	
VEV 100W-1	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	B	8	-80	170	35	1.1	30										
VSV 122	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	35	120	50	1.1	30	120	2722	0.5	51	72	180	160	0.25	WATER	
VSV 123	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	85	400	105	1.1	30	400	9072	0.9	51	72	180	160	0.25	WATER	
VEV 100NW-1	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	B	8	-120	400	35	1.1	30										
VSV 124	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	35	125	50	1.1	30	125	2835	0.5	51	72	180	160	0.25	WATER	
VSV 126	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	45	280	65	1.1	30	280	6350	0.6	51	72	180	160	0.25	WATER	
VEV 100WN	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	B	8	-80	325	35	1.1	30										
VSV 131	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	35	115	50	1.1	30	115	2608	0.5	51	72	180	160	0.25	WATER	
VSV 134	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	90	400	110	1.1	30	400	9072	0.9	51	72	180	160	0.25	WATER	
VSV 135	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	35	110	50	1.1	30	110	2495	0.5	51	72	180	160	0.25	WATER	
VEV 100EN	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	B	8	-125	425	35	1.1	30										
VSV 138	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	40	115	55	1.1	30	115	2608	0.5	51	72	180	160	0.25	WATER	
VSV 141	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	45	120	65	1.1	30	120	2722	0.5	51	72	180	160	0.25	WATER	
VEV 100E-2	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	B	8	-85	150	35	1.1	30										
VSV 139	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	115	400	150	1.1	30	400	9072	0.9	51	72	180	160	0.25	WATER	
VEV 100E	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	B	8	-115	285	35	1.1	30										
VSV 142	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	0	460	120	1.1	30	460	10433	1.0	51	72	180	160	0.25	WATER	
VEV 143	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	B	8	0	460	120	1.1	30										
VSV 151-1	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	H	14	0	1920	1200	1.1	30	1920	43546	4.4	51	72	180	160	0.25	WATER	
VSV 151-2	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	H	12	0	690	690	1.1	30	690	15649	1.6	51	72	180	160	0.25	WATER	
VSV 151A	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	H	8	0	350	350	1.1	30	350	7938	0.8	51	72	180	160	0.25	WATER	
VEV 151	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	H	12	0	1190	110	1.1	30										
VEV 151A-1	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	H	12	0	750	150	1.1	30										
VEV 151A-2	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	H	12	0	750	150	1.1	30										
VEV 151A-3	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	H	12	0	750	150	1.1	30										
VSV 151B	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 151B	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	K	8	0	195	195	1.1	30										
VSV 151C	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	J	8	0	340	40	1.1	30	340	7711	0.8	51	72	180	160	0.25	WATER	
VEV 151C	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	J	8	0	480	190	1.1	30										
VSV 151D	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 151D	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	K	8	0	195	195	1.1	30										
VSV 151E	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 151E	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	K	8	0	195	195	1.1	30										
VSV 151F	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 151F	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	K	8	0	195	195	1.1	30										
VSV 151G	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 151G	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	K	8	0	195	195	1.1	30										
VSV 151H-1	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	J	8	0	340	40	1.1	30	340	7711	0.8	51	72	180	160	0.25	WATER	
VEV 151H-1	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	J	8	0	480	190	1.1	30										
VSV 151H-3	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	A	8	0	50	0	0	30										NO REHEAT COIL
VEV 151H-3	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	W	8	0	50	50	1.1	30										
VSV 151H-2	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	L	20	0	1500	1500	1.1	30	1500	34178	3.4	51	72	180	160	0.25	WATER	
VEV 151H-2	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	L	20	-50	1500	1500	1.1	30										
VSV 151J	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 151J	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	K	8	0	195	195	1.1	30										
VSV 151K	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 151K	LEVEL 01	EXHAUST	EAHU/EF 3	VENTURI	K	8	0	195	195	1.1	30										
VSV 152-1	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	H	12	0	690	400	1.1	30	690	15649	1.6	51	72	180	160	0.25	WATER	
VSV 152-2	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	H	14	0	1920	1920	1.1	30	1920	43546	4.4	51	72	180	160	0.25	WATER	
VSV 152K	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	H	8	0	350	350	1.1	30	350	7938	0.8	51	72	180	160	0.25	WATER	
VEV 152	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	H	12	0	1190	110	1.1	30										
VEV 152K-1	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	H	12	0	750	150	1.1	30										
VEV 152K-2	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	H	12	0	750	150	1.1	30										
VEV 152K-3	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	H	12	0	750	150	1.1	30										
VSV 152A	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 152A	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	K	8	0	195	195	1.1	30										
VSV 152B	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 152B	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	K	8	0	195	195	1.1	30										
VSV 152C	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	J	8	0	340	40	1.1	30	340	7711	0.8	51	72	180	160	0.25	WATER	
VEV 152C	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	J	8	0	480	190	1.1	30										
VSV 152D	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 129-2	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	X	8	0	100	195	1.1	30										
VEV 152D	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	K	8	0	195	195	1.1	30										
VSV 152E	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 152E	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	K	8	0	195	195	1.1	30										
VSV 152F	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 152F	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	K	8	0	195	195	1.1	30										
VSV 152G	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 152G	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	K	8	0	195	195	1.1	30										
VSV 152H	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	J	8	0	340	40	1.1	30	340	7711	0.8	51	72	180	160	0.25	WATER	
VEV 152H	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	J	8	0	480	190	1.1	30										
VSV 152J	LEVEL 01	SUPPLY	AHU 1/2	VENTURI	K	8	0	95	95	1.1	30	95	2155	0.5	51	72	180	160	0.25	WATER	
VEV 152J	LEVEL 01	EXHAUST	EAHU/EF 1	VENTURI	K	8	0	195	195	1.1	30										

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By TFM

Checked By DMS

Client Number 514

Project Number 15576

STATE OF KENTUCKY SCOTT FOSTER 31327 LICENSED PROFESSIONAL ENGINEER

DRAWING

MECHANICAL SCHEDULES

SHEET NO.

MF-958

5/21/2020 1:12:17 PM

ACTIVE CHILLED BEAMS - TWO PIPE - LEVEL ONE

ACB ##-#	ROOM NO.	NAME	DIMENSTIONS UNIT LENGTH (IN)	UNIT WIDTH (IN)	THROW	PRIMARY AIR TYPE	INLET DIA. (IN)	AIR FLOW (CFM)	EAT (°F)	MAX AIR PD ("WG)	COOLING PRIMARY AIR SENSIBLE CAP. (BTU/H)	SECONDARY AIR SENSIBLE CAP. (BTU/H)	COIL NET SENSIBLE CAP. (BTU/H)	TOTAL CAPACITY (BTU/H)	EWT (°F)	LWT (°F)	FLOW (GPM)	CONTROLS	MAX dBA	REMARKS
116	116	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	60	52	0.60	1336	3980	5316	5646	57	62	1.6		30	BASED ON DADANCO'S ACB40
117	117	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	65	52	0.60	1447	3951	5399	5757	57	62	1.6		30	BASED ON DADANCO'S ACB40
118-1	118	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
118-2	118	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
118-3	118	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
118-4	118	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
119	119	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	65	52	0.60	1447	3951	5399	5757	57	62	1.6		30	BASED ON DADANCO'S ACB40
120	120	FLEX OFFICE	72	24	TWO-WAY	TWO-PIPE	6	60	52	0.60	1336	3980	5316	5646	57	62	1.6		30	BASED ON DADANCO'S ACB40
121	121	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	60	52	0.60	1336	3980	5316	5646	57	62	1.6		30	BASED ON DADANCO'S ACB40
122	122	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	60	52	0.60	1336	3980	5316	5646	57	62	1.6		30	BASED ON DADANCO'S ACB40
123-1	123	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
123-2	123	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
123-3	123	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
123-4	123	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
124	124	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	60	52	0.60	1336	3980	5316	5646	57	62	1.6		30	BASED ON DADANCO'S ACB40
125	125	FLEX OFFICE	72	24	TWO-WAY	TWO-PIPE	6	65	52	0.60	1447	3951	5399	5757	57	62	1.6		30	BASED ON DADANCO'S ACB40
126	126	COPY	72	24	TWO-WAY	TWO-PIPE	6	70	52	0.60	1559	4176	5735	6120	57	63	1.4		30	BASED ON DADANCO'S ACB40
127	127	COLLABORATION	96	24	TWO-WAY	TWO-PIPE	8	210	52	0.60	2338	5059	4975	10892	57	64	1.4		30	BASED ON DADANCO'S ACB40
131	131	FLEX OFFICE	72	24	TWO-WAY	TWO-PIPE	6	60	52	0.60	1336	3750	5052	5278	57	63	1.3		30	BASED ON DADANCO'S ACB40
132	132	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	55	52	0.60	1336	3750	5052	5278	57	62	1.6		30	BASED ON DADANCO'S ACB40
134-1	134	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
134-2	134	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
134-3	134	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
134-4	134	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4653	6879	7430	57	64	1.4		30	BASED ON DADANCO'S ACB40
135	135	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	55	52	0.60	1225	3750	4975	5278	57	62	1.6		30	BASED ON DADANCO'S ACB40
136	136	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	55	52	0.60	1225	3750	4975	5278	57	62	1.6		30	BASED ON DADANCO'S ACB40
137	137	FLEX OFFICE	72	24	TWO-WAY	TWO-PIPE	6	55	52	0.60	1225	3750	4975	5278	57	62	1.6		30	BASED ON DADANCO'S ACB40
138	138	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	60	52	0.60	1336	3692	5028	5359	57	62	1.4		30	BASED ON DADANCO'S ACB40
139-1	139	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4649	6875	7426	57	63	1.6		30	BASED ON DADANCO'S ACB40
139-2	139	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4649	6875	7426	57	63	1.6		30	BASED ON DADANCO'S ACB40
139-3	139	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4649	6875	7426	57	63	1.6		30	BASED ON DADANCO'S ACB40
139-4	139	POST DOC/GRAD/TECH	72	24	TWO-WAY	TWO-PIPE	6	100	52	0.60	2777	4649	6875	7426	57	63	1.6		30	BASED ON DADANCO'S ACB40
140	140	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	60	52	0.60	1336	3692	5028	5359	57	62	1.4		30	BASED ON DADANCO'S ACB40
141	141	FACULTY OFFICE	72	24	TWO-WAY	TWO-PIPE	6	60	52	0.60	1336	3628	4964	5295	57	62	1.4		30	BASED ON DADANCO'S ACB40
142	142	KITCHEN	48	24	TWO-WAY	TWO-PIPE	6	40	52	0.60	2561	4755	7316	7949	57	66	0.5		30	BASED ON DADANCO'S ACB40
143-1	143	COLLABORATION	48	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	4755	7316	7949	57	66	1.1		30	BASED ON DADANCO'S ACB40
143-2	143	COLLABORATION	48	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	4755	7316	7949	57	66	1.1		30	BASED ON DADANCO'S ACB40
143-3	143	COLLABORATION	48	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	4755	7316	7949	57	66	1.1		30	BASED ON DADANCO'S ACB40
144-1	115	CONFERENCE ROOM	72	24	TWO-WAY	TWO-PIPE	8	135	52	0.60	3006	3313	6319	7063	57	67	0.6		30	BASED ON DADANCO'S ACB40
144-2	115	CONFERENCE ROOM	72	24	TWO-WAY	TWO-PIPE	8	135	52	0.60	3006	3313	6319	7063	57	67	0.6		30	BASED ON DADANCO'S ACB40
151-1	151	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
151-2	151	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
151-3	151	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
151-4	151	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
151-5	151	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
151-6	151	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
151B	151B	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
151C-1	151C	LINEAR EQUIP ROOM	72	24	TWO-WAY	TWO-PIPE	6	170	52	0.60	3785	5271	9057	9993	57	64	1.3		30	BASED ON DADANCO'S ACB40
151C-2	151C	LINEAR EQUIP ROOM	72	24	TWO-WAY	TWO-PIPE	6	170	52	0.60	3785	5271	9057	9993	57	64	1.3		30	BASED ON DADANCO'S ACB40
151D	151D	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
151E	151E	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
151F	151F	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
151G	151G	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
151H-1	151H	LINEAR EQUIP ROOM	72	24	TWO-WAY	TWO-PIPE	6	170	52	0.60	3785	5271	9057	9993	57	64	1.3		30	BASED ON DADANCO'S ACB40
151H-2	151H	LINEAR EQUIP ROOM	72	24	TWO-WAY	TWO-PIPE	6	170	52	0.60	3785	5271	9057	9993	57	64	1.3		30	BASED ON DADANCO'S ACB40
151J	151J	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
151K	151K	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
152-1	152	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
152-2	152	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
152-3	152	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
152-4	152	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
152-5	152	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
152-6	152	LAB NEIGHBORHOOD MODULE	72	24	TWO-WAY	TWO-PIPE	6	115	52	0.60	2561	5223	7783	8417	57	64	1.6		30	BASED ON DADANCO'S ACB40
152A	152A	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
152B	152B	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
152C-1	152C	LINEAR EQUIP ROOM	72	24	TWO-WAY	TWO-PIPE	6	170	52	0.60	3785	5271	9057	9993	57	64	1.3		30	BASED ON DADANCO'S ACB40
152C-2	152C	LINEAR EQUIP ROOM	72	24	TWO-WAY	TWO-PIPE	6	170	52	0.60	3785	5271	9057	9993	57	64	1.3		30	BASED ON DADANCO'S ACB40
152D	152D	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
152E	152E	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
152F	152F	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
152G	152G	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40
152H-1	152H	LINEAR EQUIP ROOM	72	24	TWO-WAY	TWO-PIPE	6	170	52	0.60	3785	5271	9057	9993	57	64	1.3		30	BASED ON DADANCO'S ACB40
152H-2	152H	LINEAR EQUIP ROOM	72	24	TWO-WAY	TWO-PIPE	6	170	52	0.60	3785	5271	9057	9993	57	64	1.3		30	BASED ON DADANCO'S ACB40
152J	152J	PROCEDURE ROOM	48	24	TWO-WAY	TWO-PIPE	6	95	52	0.60	2115	3493	5608	6131	57	61	1.6		30	BASED ON DADANCO'S ACB40

RADIANT CEILING PANEL (HEATING ONLY) - LEVEL ONE

RCP	LEVEL	PANEL DIMENSIONS WIDTH (IN)	PANEL DIMENSIONS LENGTH (FT)	RADIANT PANEL CAPACITY NO. OF TUBES	TOTAL HEATING CAPACITY (BTU/H)	CAPACITY PER LF (BTU/FT)	GPM	ENTERING WATER TEMP	LEAVING WATER TEMP	AVERAGE WATER TEMP	Description
100N	LEVEL 01	23	9' - 0 1/2"	4	2,843	315	0.28	180 °F	160 °F	170 °F	1 THRU 4
116	LEVEL 01	18	9' - 1 1/2"	4	2,874	315	0.29	180 °F	160 °F	170 °F	1 THRU 4
117	LEVEL 01	18	8' - 1 1/2"	4	2,559	315	0.26	180 °F	160 °F	170 °F	1 THRU 4
118-1	LEVEL 01	18	19' - 7"	4	6,169	315	0.62	180 °F	160 °F	170 °F	1 THRU 4
118-2	LEVEL 01	18	19' - 6 1/2"	4	6,156	315	0.62	180 °F	160 °F	170 °F	1 THRU 4
119	LEVEL 01	18	8' - 1 1/2"	4	2,559	315	0.26	180 °F	160 °F	170 °F	1 THRU 4
120	LEVEL 01	18	9' - 1 1/2"	4	2,874	315	0.29	180 °F	160 °F	170 °F	1 THRU 4
121	LEVEL 01	18	9' - 1"	4	2,865	315	0.29	180 °F	160 °F	170 °F	1 THRU 4
122	LEVEL 01	18	8' - 1 1/2"	4	2,559	315	0.26	180 °F	160 °F	170 °F	1 THRU 4
123-1	LEVEL 01	18	19' - 7"	4	6,169	315	0.62	180 °F	160 °F	170 °F	1 THRU 4
123-2	LEVEL 01	18	19' - 7"	4	6,169	315	0.62	180 °F	160 °F	170 °F	1 THRU 4
124	LEVEL 01	18	8' - 1"	4	2,550	315	0.25	180 °F	160 °F	170 °F	1 THRU 4
125	LEVEL 01	18	9' - 1 1/2"	4	2,874	315	0.29	180 °F	160 °F	170 °F	1 THRU 4
126	LEVEL 01	18	7' - 10 1/2"	4	2,479	315	0.25	180 °F	160 °F	170 °F	1 THRU 4
127-1	LEVEL 01	18	5' - 4"	4	1,680	315	0.17	180 °F	160 °F	170 °F	1 THRU 4
127-2	LEVEL 01	18	10' - 2"	4	3,203	315	0.32	180 °F	160 °F	170 °F	1 THRU 4
127-3	LEVEL 01	18	9' - 9 1/2"	4	3,083	315	0.31	180 °F	160 °F	170 °F	1 THRU 4
130-1	LEVEL 01	30	5' - 4"	8	2,901	544	0.29	180 °F	160 °F	170 °F	1 THRU 4
131	LEVEL 01	18	9' - 1"	4	2,861	315	0.29	180 °F	160 °F	170 °F	1 THRU 4
132	LEVEL 01	18	8' - 1"	4	2,550	315	0.25	180 °F	160 °F	170 °F	1 THRU 4
134-1	LEVEL 01	18	19' - 7"	4	6,169	315	0.62	180 °F	160 °F	170 °F	1 THRU 4
134-2	LEVEL 01	18	19' - 7"	4	6,169	315	0.62	180 °F	160 °F	170 °F	1 THRU 4
135	LEVEL 01	18	8' - 1"	4	2,550	315	0.25	180 °F	160 °F	170 °F	1 THRU 4
136	LEVEL 01	18	9' - 1"	4	2,865	315	0.29	180 °F	160 °F	170 °F	1 THRU 4
137	LEVEL 01	18	9' - 1 1/2"	4	2,874	315	0.29	180 °F	160 °F	170 °F	1 THRU 4
138	LEVEL 01	18	8' - 1 1/2"	4	2,559	315	0.26	180 °F	160 °F	170 °F	1 THRU 4
139-1	LEVEL 01	18	19' - 7"	4	6,169	315	0.62	180 °F	160 °F	170 °F	1 THRU 4
139-2	LEVEL 01	18	19' - 7"	4	6,169	315	0.62	180 °F	160 °F	170 °F	1 THRU 4
140	LEVEL 01	18	8' - 1 1/2"	4	2,559	315	0.26	180 °F	160 °F	170 °F	1 THRU 4
141	LEVEL 01	18	9' - 1 1/2"	4	2,874	315	0.29	180 °F	160 °F	170 °F	1 THRU 4
142	LEVEL 01	30	5' - 4"	8	2,901	544	0.29	180 °F	160 °F	170 °F	1 THRU 4
143-1	LEVEL 01	30	5' - 4"	8	2,901	544	0.29	180 °F	160 °F	170 °F	1 THRU 4
143-2	LEVEL 01	30	16' - 5"	8	8,926	544	0.89	180 °F	160 °F	170 °F	1 THRU 4
144	LEVEL 01	18	18' - 10"	4	5,933	315	0.59	180 °F	160 °F	170 °F	1 THRU 4

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

MARK	SERVICE	CFM RANGE	NECK SIZE (IN)	FACE SIZE (IN)	FACE TYPE	PATTERN	FINISH	MATERIAL	MOUNTING SURFACE	REMARKS
CD-1	SUPPLY	385-550	12"Ø	24x24	PERF.	(3)	(2)	STEEL	SURFACE/LAY-IN	PRICE MODEL PDS
CD-2	SUPPLY	245-350	10"Ø	24x48	LAMINAR FLOW.	N/A	N/A	STAINLESS STEEL	SURFACE/LAY-IN	PRICE MODEL LFD
CD-3	SUPPLY	355-500	12"Ø	24x48	LAMINAR FLOW.	N/A	N/A	STAINLESS STEEL	SURFACE/LAY-IN	PRICE MODEL LFD
CD-4	SUPPLY	0-100	6"Ø	12x12	PERF.	(3)	(2)	STEEL	GYPSUM BOARD	PRICE MODEL PDS
G-1	EXAUST OR RETURN	100	12x8	12x8	LOUVER	DOUBLE DEFLECTION	(2)	STEEL	SIDEWALL	PRICE 520D
G-2	RA/EA/TA	101-250	8"Ø	24x24	PERF.	N/A	(2)	STEEL/AL	SURFACE/LAY-IN	PRICE MODEL PDDR
G-3	RA/EA/TA	251-350	10"Ø	24x24	PERF.	N/A	(2)	STEEL/AL	SURFACE/LAY-IN	PRICE MODEL PDDR
G-4	RA/EA/TA	351-450	12"Ø	24x24	PERF.	N/A	(2)	STEEL/AL	SURFACE/LAY-IN	PRICE MODEL PDDR
G-5	RA/EA/TA	451-600	14"Ø	24x24	PERF.	N/A	(2)	STEEL/AL	SURFACE/LAY-IN	PRICE MODEL PDDR
G-6	EXAUST OR RETURN	101-250	8"Ø	24x24	PERF.	N/A	(2)	AL	(1)	PRICE MODEL APDDR
G-7	EXAUST OR RETURN	50	6"Ø	12x12	PERF.	N/A	(2)	AL	(1)	PRICE MODEL PDDR
G-8	EXAUST OR RETURN	451-600	12"Ø	24x48	PERF.	N/A	(2)	AL	(1)	PRICE MODEL APDDR
LG-1	EXAUST OR RETURN	60	5"Ø	48L	1-SLOT	(3)	WHITE	AL	(3)	PRICE MODEL AS210

NOTES:
(1) REFER TO REFLECTED CEILING PLANS.
(2) REFER TO SPECIFICATIONS.
(3) REFER TO PLANS.

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AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By TFM
Checked By DMS
Client Number 514
Project Number 15576

STATE OF KENTUCKY · SCOTT FOSTER · 31321 · LICENSED PROFESSIONAL ENGINEER

DRAWING

MECHANICAL SCHEDULES

SHEET NO.

MF-959

5/21/2020 1:12:18 PM

	HARDWARE																		
	OUTPUT (0)						INPUT (T,D,V,C)												
SYSTEM:	DIGITAL			ANALOG			DIGITAL						ANALOG						
TERMINAL UNITS	Control Relay	Solenoid	Contactor	Pneumatic Transducer	4-20 MA Module	Electrical Transducer	Pressure Switch	Flow Switch	Temperature Switch	Switch Closure/Opening	Auxiliary Contact	Current Switch	Temperature	Relative Humidity	PSIG, PSIA, PSID	Position	Flow	KW	PPM
These points are typical and not listed under each sequence.																			
See IC-753 through IC-757 series drawings.																			
ALL SUPPLY AIR VALVES																			
Supply Air Valve Position																X			
Supply Air Flow																	X		
ALL EXHAUST AIR VALVES																			
Exhaust Air Valve Position																			
Exhaust Air Flow																			
ALL SUPPLY AIR TERMINALS																			
Supply Air Damper Command					X														
Supply Air Damper Position																X			
Supply Air Flow																	X		
ALL RETURN/EXHAUST AIR TERMINALS																			
Return/Exhaust Air Damper Command					X														
Return/Exhaust Air Damper Position																X			
Return/Exhaust Air Flow																	X		
ALL COOLING ONLY CHILLED BEAMS																			
Chilled Beam Valve Command					X														
Space Humidity														X					
FIN TUBE RADIATION/RADIANT HEATING PANEL/ REHEAT COIL																			
Heating Valve Command					X														
SENSORS PER SEQUENCE IF INDICATED ON DRAWINGS																			
Discharge Air Temperature													X						
Space Temperature													X						
Space Humidity														X					
Space Return Air Temperature													X						
Space Return Air Humidity														X					
Space Temperature Setpoint													X						
Space Humidity Setpoint														X					
Emergency Purge Ventilation pushbutton											X								
Calculated Dew Point																			
Aircuity Alarm Input												X							
Occupancy												X							
Space CO2																			X
Room Differential Pressure															X				

	SOFTWARE																																	
	ALARMS								SET POINTS					EMCS FUNCTIONS																				
	DIGITAL						ANALOG																											
TERMINAL UNITS	Equipment Fault	Equipment Status	Equipment HOA	Maintenance	Open/Closed	Critical	High Limit	Low Limit	Setpoint Value	Alarm Deadband Setpoint	Units	Alarm Level	NOTES:	Run Time	Totalization	Scheduled Start/Stop	Optimum Start/Stop	Duty Cycle	Demand Limiting	Day/Night Setback	Trend	Economizer	Temperature Control	Enthalpy	Reheat Coil Reset	Steam Boiler Optimization	Hot Water Boiler Optimization	Hot Water OA Reset	Chiller Optimization	Chilled Water Reset	Condenser Water Reset	Chiller Demand Limit	VAV Control	Intergrated Communication
These points are typical and not listed under each sequence.																																		
See IC-753 through IC-757 series drawings.																																		
ALL SUPPLY AIR VALVES																																		
Supply Air Valve Position											% Open										X													
Supply Air Flow							X	X			CFM				X						X													
ALL EXHAUST AIR VALVES																																		
Exhaust Air Valve Position											% Open										X													
Exhaust Air Flow											CFM				X						X													
ALL SUPPLY AIR TERMINALS																																		
Supply Air Damper Command											% Open										X													
Supply Air Damper Position					X						% Open										X													
Supply Air Flow							X	X			CFM				X						X													
ALL RETURN/EXHAUST AIR TERMINALS																																		
Return/Exhaust Air Damper Command											% Open										X													
Return/Exhaust Air Damper Position					X						% Open										X													
Return/Exhaust Air Flow							X	X			CFM				X						X													
ALL COOLING ONLY CHILLED BEAMS																																		
Chilled Beam Valve Command											% Open										X													
Space Humidity							X	X			% RH										X													
FIN TUBE RADIATION/RADIANT HEATING PANEL/ REHEAT COIL																																		
Heating Valve Command											% Open										X													
SENSORS PER SEQUENCE IF INDICATED ON DRAWINGS																																		
Discharge Air Temperature							X	X			°F										X													
Space Temperature							X	X			°F										X													
Space Humidity							X	X			% RH										X													
Space Return Air Temperature							X	X			°F										X													
Space Return Air Humidity							X	X			% RH										X													
Space Temperature Setpoint											°F																							
Space Humidity Setpoint											% RH																							
Emergency Purge Ventilation pushbutton											Normal/Occ			X							X													
Calculated Dew Point							X	X			°F				X						X													
Aircuity Alarm Input											Normal/Alarm										X													
Occupancy											Unocc/Occ			X							X													
Space CO2							X				ppm										X													
Room Differential Pressure							X	X			psi										X													

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	ISSUE FOR BID & PERMIT	05/22/20

Drawn By: EJ
Checked By: DS
Client Number: 514
Project Number: 5350

STATE OF KENTUCKY
SCOTT
LICENSED
PROFESSIONAL ENGINEER

DRAWING TITLE
INSTRUMENTATION EQUIPMENT SCHEDULES

SHEET NO.
IC-951

02/05/2020 10:00:00 AM

ELECTRICAL SYMBOLS AND ABBREVIATIONS

NOTES:
1. SYMBOLS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.
2. EXISTING TO REMAIN IS SHOWN WITH DASHED LIGHT LINES.
3. NEW WORK IS SHOWN WITH SOLID HEAVY LINES.

EQUIPMENT AND WIRING

- MOTOR
- TRANSFORMER - ONE LINE DIAGRAM
- ISOLATION TRANSFORMER - ONE LINE DIAGRAM
- GROUND CONNECTION
- T — TRANSFORMER
- PANELBOARD - NORMAL SURFACE MOUNTED
- PANELBOARD - NORMAL FLUSH MOUNTED
- PANELBOARD - EMERGENCY/LIFE SAFETY SURFACE MOUNTED
- PANELBOARD - EMERGENCY/LIFE SAFETY FLUSH MOUNTED
- PANELBOARD - CRITICAL SURFACE MOUNTED
- PANELBOARD - CRITICAL FLUSH MOUNTED
- LOW VOLTAGE LIGHTING CONTROL PANEL - SURFACE MOUNTED
- LOW VOLTAGE LIGHTING CONTROL PANEL - FLUSH MOUNTED
- NTS — DISTRIBUTION PANELBOARD
- C/T — CABLE TAP BOX
- BUSWAY PLUG-IN UNIT
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- REVERSE POWER RELAY
- NON FUSED DISCONNECT SWITCH
- F — FUSED DISCONNECT SWITCH
- B — BREAKER DISCONNECT SWITCH
- MAGNETIC MOTOR STARTER
- COMBINATION MOTOR STARTER
- $M — MANUAL STARTER W/OVERLOAD PROTECTION
- J — SURFACE JUNCTION BOX
- J — SURFACE JUNCTION BOX - WALL
- J — FLUSH JUNCTION BOX - CEILING
- J — FLUSH JUNCTION BOX - WALL
- J — FLUSH JUNCTION BOX - FLOOR
- DOWN CONDUCTOR
- STUB
- TEST WELL
- CP — CONTROL PANEL
- TAP BOX
- AUTOMATIC TRANSFER SWITCH
- V / VS — VOLTMETER & SELECTOR SWITCH
- A / AS — AMMETER, SELECTOR SWITCH, & CT'S
- GEN — REMOTE GENERATOR ANNUNCIATOR
- GROUND CONNECTION - PLUG-IN
- T — LINE VOLTAGE THERMOSTAT
- KWH — REVENUE METER, kWh/D
- KWH — METER WITH CURRENT TRANSFORMER
- MOLDED CASE CIRCUIT BREAKER
- LOW VOLTAGE DRAW-OUT AIR CIRCUIT BREAKER

CIRCUIT BREAKER TRIP UNIT FEATURES

- L LONG TIME DELAY
- S SHORT TIME DELAY
- I INSTANTANEOUS
- G GROUND FAULT
- A ARC FLASH REDUCTION

- SWITCH - ONE LINE DIAGRAM
- GROUNDED "Y" SYSTEM
- H — ELECTRIC HEATER
- R — RELAY - TYPE AS NOTED
- TR — TIMING RELAY
- AIR TERMINAL
- PUSH BUTTON
- K — KIRK KEY INTERLOCK
- PM — PHYSIOLOGICAL MONITOR OUTLET
- FUSE
- PANEL DIVISION ARROW
- PANEL DIVISION LINE
- WIRING CONCEALED IN FLOOR
- WIRING IN CEILING/WALLS
- HOMERUN
  - PNL. A1 INDICATES PANEL AND CIRCUIT
  - INDICATES NUMBER OF CONDUCTORS
  - INDICATES NEUTRAL CONDUCTOR
  - INDICATES GROUND CONDUCTOR

A-1,3,5 - PANEL AND CIRCUITS; PANEL A, CIRCUITS 1,3,5

- GROUNDING ROD
- GROUNDING BUS

RECEPTACLES

- DUPLEX RECEPTACLE MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- EMERGENCY DUPLEX RECEPTACLE MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- SINGLE RECEPTACLE MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- DOUBLE DUPLEX RECEPTACLE MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- EMERGENCY DOUBLE DUPLEX RECEPTACLE MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- DUPLEX RECEPTACLE - ABOVE CASEWORK OR 2" ABOVE COUNTERTOP BACKSPLASH MOUNTING LOCATION: WALL MOUNTING HEIGHT: FIELD VERIFY
- EMERGENCY DUPLEX RECEPTACLE - ABOVE CASEWORK OR 2" ABOVE COUNTERTOP BACKSPLASH MOUNTING LOCATION: WALL MOUNTING HEIGHT: FIELD VERIFY
- POWER OUTLET MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- POWER OUTLET, EMERGENCY CIRCUIT MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- FIXED EQUIPMENT CONNECTION - WALL MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- FIXED EQUIPMENT CONNECTION - WALL EMERGENCY CIRCUIT MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- LOCKING RECEPTACLE MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- SWITCH/ RECEPTACLE MOUNTING LOCATION: WALL MOUNTING HEIGHT: 3'-6"
- DUPLEX RECEPTACLE LOCATED IN SURFACE MOUNTED RACEWAY
- EMERGENCY DUPLEX RECEPTACLE LOCATED IN SURFACE MOUNTED RACEWAY
- POWER OUTLET IN SURFACE MOUNTED RACEWAY VOLTAGE AND AMPERAGE AS INDICATED
- EMERGENCY POWER OUTLET IN SURFACE MOUNTED RACEWAY VOLTAGE AND AMPERAGE AS INDICATED
- a — DUPLEX RECEPTACLE, UPPER HALF SWITCHED, LOWER HALF HOT MOUNTING LOCATION: WALL MOUNTING HEIGHT: 1'-6"
- DOUBLE DUPLEX RECEPTACLE - ABOVE CASEWORK OR 2" ABOVE COUNTERTOP BACKSPLASH MOUNTING LOCATION: WALL MOUNTING HEIGHT: FIELD VERIFY
- EMERGENCY DOUBLE DUPLEX RECEPTACLE - ABOVE CASEWORK OR 2" ABOVE COUNTERTOP BACKSPLASH MOUNTING LOCATION: WALL MOUNTING HEIGHT: FIELD VERIFY
- DUPLEX RECEPTACLE - CEILING MOUNTED MOUNTING LOCATION: CEILING
- EMERGENCY DUPLEX RECEPTACLE - CEILING MOUNTED MOUNTING LOCATION: CEILING
- DOUBLE DUPLEX RECEPTACLE - CEILING MOUNTED MOUNTING LOCATION: CEILING
- EMERGENCY DOUBLE DUPLEX RECEPTACLE - CEILING MOUNTED MOUNTING LOCATION: CEILING
- DUPLEX RECEPTACLE - FLOOR MOUNTED MOUNTING LOCATION: FLOOR
- FIXED EQUIPMENT CONNECTION MOUNTING LOCATION: COORDINATE W/ EQUIPMENT
- C — CLOCK RECEPTACLE MOUNTING LOCATION: WALL MOUNTING HEIGHT: 8'-0"
- J — OUTLETS INSTALLED IN SURFACE MOUNTED RACEWAY (OR)
- J, A — SURFACE MOUNTED RACEWAY
  - A = 6" OUTLET SPACING
  - B = 9" OUTLET SPACING
  - C = 12" OUTLET SPACING
  - D = 18" OUTLET SPACING
  - E = 30" OUTLET SPACING

NOTE:
1. RECEPTACLES WITH 'A' ARE TO BE WIRED TO LIGHTING SYSTEM FOR AUTOMATIC CONTROL VIA THE LIGHTING CONTROL SYSTEM.
2. RECEPTACLES DENOTED 'GFCI' ARE TO HAVE GROUND FAULT CIRCUIT INTERUPTER.
3. RECEPTACLES DENOTED 'WP' ARE TO HAVE WEATHERPROOF ENCLOSURE.
4. RECEPTACLES DENOTED 'USB' ARE TO INCLUDE USB CHARGING PORTS IN ADDITION TO 5-20R OUTLETS.

FIRE

- F — FIRE ALARM PULL STATION MOUNTING LOCATION: WALL MOUNTING HEIGHT: 4'-0"
- F B — FIRE ALARM BELL MOUNTING LOCATION: WALL MOUNTING HEIGHT: SEE NOTE 1
- F B — FIRE ALARM COMBINATION BELL/STROBE MOUNTING LOCATION: WALL MOUNTING HEIGHT: SEE NOTE 1
- F H — FIRE ALARM HORN MOUNTING LOCATION: WALL MOUNTING HEIGHT: SEE NOTE 1
- F H — FIRE ALARM COMBINATION HORN/STROBE MOUNTING LOCATION: WALL MOUNTING HEIGHT: SEE NOTE 1
- F C — FIRE ALARM CHIME MOUNTING LOCATION: WALL MOUNTING HEIGHT: SEE NOTE 1
- F C — FIRE ALARM COMBINATION CHIME/STROBE MOUNTING LOCATION: WALL MOUNTING HEIGHT: SEE NOTE 1
- F — FIRE ALARM STROBE ONLY MOUNTING LOCATION: WALL MOUNTING HEIGHT: SEE NOTE 1
- F S — FIRE ALARM SMOKE DETECTOR MOUNTING LOCATION: CEILING
- S D — FIRE ALARM DUCT SMOKE DETECTOR MOUNTING LOCATION: DUCT
- F AR — ADDRESSABLE RELAY MODULE MOUNTING LOCATION: VARIES
- F PS — FIRE ALARM PRESSURE SWITCH MOUNTING LOCATION: FIELD VERIFY
- F H — FIRE ALARM HEAT DETECTOR MOUNTING LOCATION: CEILING
- F D — FIRE ALARM DOOR HOLDER MOUNTING LOCATION: WALL MOUNTING HEIGHT: FIELD VERIFY
- F DS — FIRE ALARM DOOR HOLDER WITH SMOKE DETECTOR MOUNTING LOCATION: WALL MOUNTING HEIGHT: FIELD VERIFY
- F WF — FIRE ALARM WATERFLOW SWITCH MOUNTING LOCATION: SPRINKLER PIPE MOUNTING HEIGHT: FIELD VERIFY
- F TS — FIRE ALARM TAMPER SWITCH MOUNTING LOCATION: SPRINKLER PIPE MOUNTING HEIGHT: FIELD VERIFY
- F PS — FIRE ALARM PRESSURE SWITCH MOUNTING LOCATION: SPRINKLER PIPE MOUNTING HEIGHT: FIELD VERIFY
- F CP — FIRE ALARM CONTROL PANEL MOUNTING LOCATION: WALL MOUNTING HEIGHT: AS NOTED
- F AP — FIRE ALARM ANNUNCIATOR PANEL MOUNTING LOCATION: WALL MOUNTING HEIGHT: AS NOTED
- F RI — REMOTE INDICATOR TEST SWITCH FOR AHU'S MOUNTING LOCATION: WALL MOUNTING HEIGHT: AS NOTED
- F V — FIRE ALARM COMBINATION VOICE/STROBE MOUNTING LOCATION: WALL MOUNTING HEIGHT: SEE NOTE 1
- FIRE FIGHTER TELEPHONE JACK MOUNTING LOCATION: WALL

NOTES:
1. 80" AFF TO BOTTOM OF FACEPLATE OR 6" FROM TOP OF FACEPLATE TO CEILING, WHICH EVER IS LOWER

ELECTRICAL ABBREVIATIONS

Abbreviation		Meaning
A	-	AMPERES
AC	-	ABOVE CEILING/ALTERNATING CURRENT
ADO	-	AUTOMATIC DOOR OPENER
AF	-	AMPERE FRAME
AFF	-	ABOVE FINISHED FLOOR
AIC	-	AMP INTERRUPTING CAPACITY
ALT	-	ALTERNATE
ARCH	-	ARCHITECTURAL
ASC	-	ABOVE SUSPENDED CEILING
AT	-	AMPERE TRIP
ATS	-	AUTOMATIC TRANSFER SWITCH
AUTO	-	AUTOMATIC
BATS	-	BYPASS AUTOMATIC TRANSFER SWITCH
BC	-	BARE COPPER
BFC	-	BELOW FINISH CEILING
BFL	-	BELOW FLOOR LEVEL
BLDG	-	BUILDING
BPIP	-	BOILER PLANT INSTRUMENTATION PANEL
BRKR	-	BREAKER
C	-	CONDUIT
CB	-	CIRCUIT BREAKER
CCTV	-	CLOSED CIRCUIT TELEVISION
CCT	-	CIRCUIT
CCT BKR	-	CIRCUIT BREAKER
CFCI	-	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CLG	-	CEILING
CO	-	CONDUIT ONLY
CONTR	-	CONTRACTOR
CORR	-	CORRIDOR
CR	-	CONTROL RELAY
CT	-	CURRENT TRANSFORMER
DB	-	DIRECT BURIAL
DC	-	DIRECT CURRENT
DED	-	DEDICATED
DET	-	DETAIL
DIA	-	DIAMETER
DISC	-	DISCONNECT
DN	-	DOWN
DP	-	DISTRIBUTION PANEL
DS	-	DISCONNECT SWITCH
EC	-	EMPTY CONDUIT/ELECTRICAL CONTRACTOR
ECL	-	EMERGENCY CRITICAL LIGHTING
ECP	-	EMERGENCY CRITICAL POWER
EDB	-	ELECTRIC DUCT BANK
EG	-	EQUIPMENT GROUND
EGS	-	ENGINE GENERATOR SET
EJ	-	EXPANSION JOINT
ELEC	-	ELECTRIC/ELECTRICAL
ELL	-	EMERGENCY LIFE SAFETY LIGHTING
ELP	-	EMERGENCY LIFE SAFETY POWER
EMER	-	EMERGENCY
EMI	-	ELECTROMAGNETIC INTERFERENCE
EMT	-	ELECTRICAL METALLIC TUBING
EQUIP	-	EQUIPMENT
ESM	-	ELECTRIC STRIP MOLD
ETR	-	EXISTING TO REMAIN
EWC	-	ELECTRIC WATER COOLER
F/FC	-	FLUSH WITH FINISHED CEILING
F/FF	-	FLUSH WITH FINISHED FLOOR
F/FW	-	FLUSH WITH FINISHED WALL
FA	-	FIRE ALARM
FACP	-	FIRE ALARM CONTROL PANEL
FCU	-	FAN COIL UNIT
FDR	-	FEEDER
FDS	-	FUSED DISCONNECT SWITCH
FI	-	FILM ILLUMINATOR
FIXT	-	FIXTURE
FL	-	AT FLOOR LINE
FLA	-	FULL LOAD AMPERES
FLEX	-	FLEXIBLE
FLR	-	FLOOR
FLUOR	-	FLUORESCENT
FPM	-	FLAT PANEL MONITOR
FS	-	FLOW SWITCH
FSS	-	FUSED SAFETY SWITCH
FSCP	-	FLAME SAFEGUARD CONTROL PANEL
FVNR	-	FULL VOLTAGE NON-REVERSING
GC	-	GENERAL CONTRACTOR
GFCI	-	GROUND FAULT CIRCUIT INTERRUPTER
GFP	-	GROUND FAULT PROTECTION
GND	-	GROUND
GEN	-	GENERATOR
GFI	-	GROUND FAULT INTERRUPTER
GTB	-	GROUND TERMINAL BOX
HH	-	HANDHOLE
HOA	-	HAND OFF AUTOMATIC
HP	-	HORSE POWER
HT	-	HEIGHT/HEAT TRACE
HV	-	HIGH VOLTAGE
IMC	-	INTERMEDIATE METAL CONDUIT
INCAND	-	INCANDESCENT
JB	-	JUNCTION BOX
KNAF	-	SYNTHETIC OIL, FAN COOLED
KO	-	KNOCK-OUT
KV	-	KILOVOLT
KVA	-	KILOVOLT-AMPERES
KW	-	KILOWATTS
KWH	-	KILOWATT HOURS
LAN	-	LOCAL AREA NETWORK
LGT	-	LIGHT
LTCP	-	LOCAL TEMPERATURE CONTROL PANEL
LTG	-	LIGHTING
LTS	-	LIGHTS
LV	-	LOW VOLTAGE
MATV	-	MASTER ANTENNA TELEVISION
MC	-	MECHANICAL CONTRACTOR
MCB	-	MAIN CIRCUIT BREAKER
MCC	-	MOTOR CONTROL CENTER
MCP	-	MOTOR CIRCUIT PROTECTOR
MDP	-	MAIN DISTRIBUTION PANEL
MER	-	MECHANICAL EQUIPMENT ROOM
MLO	-	MAIN LUGS ONLY
MH	-	MANHOLE
MPTB	-	MUSIC & PAGE TERMINAL BOX
MTD	-	MOUNTED
MTG	-	MOUNTING
MTG HGT	-	MOUNTING HEIGHT
MTR	-	MOTOR/METER
NA	-	NOT APPLICABLE
NC	-	NEW CONNECTION/NORMALLY CLOSED
NEC	-	NATIONAL ELECTRICAL CODE
NFD	-	NON-FUSED DISCONNECT
NFSS	-	NON-FUSED SAFETY SWITCH
NIC	-	NOT IN CONTRACT
NO	-	NORMALLY OPEN
NTS	-	NOT TO SCALE
OC	-	ON CENTER
OFCI	-	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	-	OWNER FURNISHED OWNER INSTALLED
P	-	POLE
PA	-	PUBLIC ADDRESS
PB	-	PULL BOX/PUSHBUTTON
PBPU	-	PREFABRICATED BEDSIDE PATIENT POWER UNIT
PC	-	PLUMBING CONTRACTOR/PHOTOCELL
PDU	-	POWER DISTRIBUTION UNIT
PF	-	POWER FACTOR
PH	-	PHASE
PLBG	-	PLUMBING
PNL	-	PANEL
POD	-	POWER OPERATED DAMPER
PT	-	POTENTIAL TRANSFORMER
PTRV	-	POWER TYPE ROOF VENTILATOR
PWR	-	POWER
REC	-	RECESSED
RECEP	-	RECEPTACLE
REL	-	RELOCATE
REQD	-	REQUIRED
RGIP	-	REMOTE GROUND INDICATOR PANEL
RMC	-	RIGID METAL CONDUIT
RVAT	-	REDUCED VOLTAGE AUTO TRANSFORMER
SHT	-	SHEET
SIG	-	SIGNAL
SIM	-	SIMILAR
SPEC	-	SPECIFICATION
SPD	-	SURGE PROTECTION DEVICE
SS	-	SAFETY SWITCH
STA	-	STATION
STR	-	STARTER
SW	-	SWITCH
SWBD	-	SWITCHBOARD
SWGR	-	SWITCHGEAR
TEL	-	TELEPHONE
TFA	-	TO FLOOR ABOVE
TFB	-	TO FLOOR BELOW
TS	-	TAMPER SWITCH/TIME SWITCH
TV	-	TELEVISION
TVTC	-	TELEVISION TERMINAL CABINET
TYP	-	TYPICAL
UC	-	UNDER COUNTER
UG	-	UNDERGROUND
UH	-	UNIT HEATER
UNO	-	UNLESS NOTED OTHERWISE
USB	-	UNIVERSAL SERIAL BUS
UPS	-	UNINTERRUPTED POWER SUPPLY
V	-	VOLTAGE
VFD	-	VARIABLE FREQUENCY DRIVE
VP	-	VAPOR PROOF
W	-	WIRE
W/	-	WITH
WP	-	WEATHERPROOF
WS	-	WALL SURFACE
WT	-	WATER TIGHT
X	-	EXISTING
XFMR	-	TRANSFORMER
XP	-	EXPLOSION PROOF

SHEET SYMBOLS

- # — NOTE DESIGNATION
- 1 / X0.0 — DETAIL REFERENCE TOP DESIGNATES DETAIL NUMBER BOTTOM DESIGNATES ON WHICH SHEET DETAIL APPEARS
- REFER / X0.0 — PLAN CONTINUATION DESIGNATION
- 1 / X0.0 — SECTION REFERENCE TOP DESIGNATES SECTION NUMBER BOTTOM DESIGNATES ON WHICH SHEET SECTION APPEARS
- LINE CONTINUE BREAK
- ELEVATION DESIGNATION
- # — REVISION NUMBER DESIGNATION
- NEW WORK CONNECTION TO EXISTING WORK DESIGNATION
- EQ / # — EQUIPMENT DESIGNATION TOP DESIGNATES EQUIPMENT ABBREVIATION BOTTOM DESIGNATES EQUIPMENT NUMBER

UNIT CONVERSIONS

CONDUIT CONVERSION

1/2"	= 16mm	2-1/2"	= 63mm
3/4"	= 21mm	3"	= 78mm
1"	= 27mm	3-1/2"	= 91mm
1-1/4"	= 35mm	4"	= 103mm
1-1/2"	= 41mm	5"	= 129mm
2"	= 53mm	6"	= 155mm

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/2018
2	100% CD REVIEW	10/15/18
3	ISSUED FOR BID & PERMIT	11/15/18
4	RECORD DRAWING	08/16/19
5	DD ISSUANCE - NIH	02/05/20
6	CD ISSUANCE - NIH	04/14/20
7	BID & PERMIT - NIH	05/22/20

Drawn By: EM
Checked By: JS
Client Number: 514
Project Number: 15576

STATE OF KENTUCKY ANDREW SCHANTZ 30663 LICENSED PROFESSIONAL ENGINEER 4/24/2020

DRAWING
ELECTRICAL PHASE 2 FO SYMBOLS AND ABBREVIATIONS

SHEET NO.
EF-050

5/21/2020 11:03:25 AM

EQUIPMENT NAMING AND IDENTIFICATION

NOTES:

1. THIS SECTION REPRESENTS HOW EQUIPMENT IS TO BE LABELED ONCE IT IS PHYSICALLY INSTALLED AS PART OF THE CONSTRUCTION PROCESS.
2. ELECTRICAL EQUIPMENT IDENTIFICATION TAGS AND LABELING USED ON THESE DRAWINGS DO NOT CORRESPOND DIRECTLY TO THE LABELEING OF SUCH EQUIPMENT ONCE IT IS INSTALLED. EQUIPMENT HAS BEEN LABELED ON THESE DRAWINGS PER THE AEI ELECTRICAL IDENTIFICATION REQUIREMENTS FOR THE EASE OF REFERENCE. ONCE ELECTRICAL EQUIPMENT HAS BEEN INSTALLED IT'S LABELING SHALL ADHERE SPECIFICALLY TO THE UNIVERSITY OF KENTUCKY ELECTRICAL IDENTIFICATION REQUIREMENTS AS INDICATED BELOW.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PHYSICALLY LABELING ELECTRICAL EQUIPMENT AS IDENTIFIED IN THE UNIVERSITY OF KENTUCKY ELECTRICAL IDENTIFICATION REQUIREMENTS PER THE DIVISION 26 SPECIFICATIONS.
4. ELECTRICAL CONTRACTOR SHALL VERIFY ALL FINAL LABELING OF ALL ELECTRICAL EQUIPMENT WITH THE UNIVERSITY OF KENTUCKTY PRIOR TO INSTALLATION.

260553S01 - ELECTRICAL IDENTIFICATION
GUIDELINES FOR NAMING POWER DISTRIBUTION SYSTEM COMPONENTS

THE PURPOSE OF THIS STANDARD IS TO ESTABLISH CONSISTENCY IN THE NAMING OF COMPONENTS IN THE ELECTRICAL DISTRIBUTION SYSTEM AND MECHANICAL SYSTEMS. IT IS INTENDED TO PROVIDE EASY IDENTIFICATION OF A COMPONENT'S LOCATION, POWER SUPPLY, AND LOAD INFORMATION FROM THE EQUIPMENT LABEL SOLELY AND TO MAKE IT EASY TO TRACE EQUIPMENT POWER SOURCES AND LOADS FOR MAINTENANCE PURPOSES. THE FOLLOWING GUIDELINES SHOULD APPLY IN ALMOST ALL CASES FOR ALL ELECTRIC POWERED EQUIPMENT AND ELECTRICAL GEAR. FOR THOSE ITEMS WHICH CANNOT BE PRODUCED FROM THESE GUIDELINES, THEN FURTHER GUIDANCE SHOULD BE OBTAINED FROM THE APPROPRIATE ELECTRICAL SYSTEMS SUPERVISOR.
ANY LABEL THAT BELONGS TO EQUIPMENT WITHIN THE EMERGENCY POWER SUBSYSTEM SHALL BE RED WITH WHITE LETTERING. ALL OTHER LABELS SHALL BE BLACK WITH WHITE LETTERING. ADDITIONALLY, ALL LABELS WILL HAVE AT LEAST TWO LINES--ONE DESIGNATING THE COMPONENT NAME AND THE OTHER DESIGNATING THE COMPONENT'S POWER SOURCE. IN THE CASE OF A COMPONENT WITH MULTIPLE FEEDS, THERE SHALL BE SEPARATE LINE FOR EACH POWER SOURCE COMPONENT NAME.

FORMAT:
THE COMPONENTS WILL BE LABELED USING THE FOLLOWING FORMAT:

ID: ROOM NO./EQUIPMENT NAME-SPECIFIC DEVICE NUMBER
FED FROM: ROOM NO./EQUIPMENT NAME-SPECIFIC DEVICE NUMBER

EACH FIELD HAS A SPECIFIED NUMBER OF CHARACTERS AND IS DEFINED AS FOLLOWS:
ROOM (UP TO 5 CAPITALIZED CHARACTERS) => THE ROOM IN WHICH THE COMPONENT IS LOCATED; IF COMPONENT IS IN A CORRIDOR USE "CORR".
EQUIPMENT NAME (UP TO 8 CAPITALIZED CHARACTERS) => THE NAME OF THE PARTICULAR TYPE OF EQUIPMENT FROM THE PPDMC EQUIPMENT NAMING CONVENTION LIST SHOWN BELOW.
SPECIFIC NUMBER (UP TO 3 CHARACTERS) => THE NUMBER OF THAT PARTICULAR DEVICE FROM THE DRAWING OR THE NEXT SEQUENTIAL NUMBER IN THAT EQUIPMENT TYPE.

EQUIPMENT DESCRIPTION / EQUIPMENT NAME

AIR CONDITIONING UNITS / ACU-X
AIR HANDLER UNITS / AHU-X
BACKFLOW PREVENTOR / BFP-X
CHILLED WATER PUMP / CHW/PMP-X
CHILLERS / CHL-X
COMPACTOR / CPT-X
CONDENSATE PUMP / CND/PMP-X
CONTROL AIR COMPRESSOR / CA/CMP-X
CONVEYOR / CNV-X
CRITICAL BRANCH AUTOMATIC TRANSFER SWITCH / C/ATS-X
CRITICAL BRANCH DISTRIBUTION PANEL / C/DP-X
CRITICAL BRANCH MOTOR CONTROL CTR / C/MCC-X
CRITICAL BRANCH PANEL / C/P-X
CRITICAL BRANCH SWITCHBOARD / C/SWBD-X
CRITICAL BRANCH SWITCHGEAR / C/SWGR-X
CRITICAL BRANCH TRANSFORMER / C/T-X
DOMESTIC COLD WATER PUMP / DCW/PMP-X
DOMESTIC HOT WATER PUMP / DHW/PMP-X
DUMB WAITERS / DUM-X
ELEVATORS / ELEV-X
EMERGENCY AUTOMATIC TRANSFER SWITCH / E/ATS-X
EMERGENCY DISTRIBUTION PANEL / E/DP-X
EMERGENCY GENERATOR / EG-X
EMERGENCY MOTOR CONTROL CTR / E/MCC-X
EMERGENCY PANEL / E/P-X
EMERGENCY SWITCHBOARD / E/SWBD-X
EMERGENCY SWITCHGEAR / E/SWGR-X
EMERGENCY TRANSFORMER / E/T-X
EXHAUST FANS / EXF-X
FAN COIL UNIT / FCU-X
FIRE PUMP / SPR/PMP-X
HEAT EXCHANGER / HTX-X
HOT WATER HEATER / HWH-X
LABORATORY AIR COMPRESSOR / LA/CMP-X
LABORATORY VACUUM PUMP / LV/PMP-X
LIFE SAFETY AUTOMATIC TRANSFER SWITCH / LS/ATS-X
LIFE SAFETY DISTRIBUTION PANEL / LS/DP-X
LIFE SAFETY PANEL / LS/P-X
LIFE SAFETY SWITCHBOARD / LS/SWBD-X
LIFE SAFETY SWITCHGEAR / LS/SWGR-X
LIFE SAFETY TRANSFORMER / LS/T-X
MEDICAL AIR COMPRESSOR / AIR/CMP-X
MEDICAL VACUUM PUMP / VAC/PMP-X
NORMAL POWER AUTOMATIC TRANSFER SWITCH / N/ATS-X
NORMAL POWER DISTRIBUTION PANEL / N/DP-X
NORMAL POWER MOTOR CONTROL CTR / N/MCC-X
NORMAL POWER PANEL / N/P-X
NORMAL POWER SWITCHBOARD / N/SWBD-X
NORMAL POWER SWITCHGEAR / N/SWGR-X
NORMAL POWER TRANSFORMER / N/T-X
REHEAT PUMP / RHT/PMP-X
TUBE SYSTEM TRANSFER STATION / TUBE/STN-X
VARIABLE SPEED DRIVE / VSD-X

EXAMPLES:
A TYPICAL NORMAL POWER DISTRIBUTION PANEL ON THE SECOND FLOOR OF THE MAIN HOSPITAL IN ROOM H-201 MIGHT BE LABELED H201/N/DP-1.
A MOTOR CONTROL CENTER IN THE PENTHOUSE OF THE COMBS BUILDING MIGHT BE LABELED 401/N/MCC-1.
A CHILLED WATER PUMP IN H-46 MIGHT BE LABELED AS H46/CHW/PMP-1 FOR THE LOAD DESIGNATION AND H46/N/P-3 FOR THE SOURCE DESIGNATION.

NOTE: THE COMPONENT IDENTIFICATION NUMBER, OR SEQUENCE NUMBER, IS JUST A SIMPLE NUMBERING OF SIMILAR EQUIPMENT ON THE SAME FLOOR NUMBERED FROM LEFT TO RIGHT AS SEEN ON THE ELECTRICAL DISTRIBUTION RISER DIAGRAM PROVIDED BY THE ARCHITECTS. THEREFORE, IT IS IMPORTANT TO NOTE THE BUILDING AND FLOOR WHEN REFERRING TO A COMPONENT TO DETERMINE ITS LOCATION. IF THE COMPONENTS TO BE LABELED ARE EXISTING EQUIPMENT OR NEW EQUIPMENT IN AN EXISTING BUILDING, THE COMPONENT SEQUENCE NUMBER SHOULD BE OBTAINED FROM THE APPROPRIATE ELECTRICAL SYSTEMS SUPERVISOR. IF THE EQUIPMENT IS BEING INSTALLED AS PART OF A NEW BUILDING CONSTRUCTION PROJECT, THEN THE CONTRACTOR MAY DETERMINE THE SEQUENCE NUMBERS.

AEI ELECTRICAL IDENTIFICATION REQUIREMENTS

NOTES: THIS DIAGRAM REPRESENTS HOW EQUIPMENT IS LABELED ON THE DIVISION 26 ELECTRICAL DRAWINGS AND SPECIFICATIONS.

* KEYPLAN RISER DESIGNATION ONLY APPLIES TO EQUIPMENT LOCATED IN OR BEING SERVED DIRECTLY FROM AN ELECTRICAL ROOM/CLOSET LOCATED IN ONE OF THE BUILDING AREAS AS IDENTIFIED BY THE KEY PLANS FOUND ON EACH SHEET.

01NLPA2

LEVEL
B - BASEMENT FLOOR
1 - FIRST FLOOR
2 - SECOND FLOOR
3 - THIRD FLOOR
4 - FOURTH FLOOR
5 - FIFTH FLOOR
6 - SIXTH FLOOR
P - PENTHOUSE

APPLICATION
N - NORMAL
LS - LIFE SAFETY (EM)
C - CRITICAL (EM)
E - EQUIPMENT (EM)
U - UNINTERRUPTIBLE (UPS-EM)
L - LAB (NON-CRITICAL)
K - KITCHEN
V - VIVARIUM

VOLTAGE
H - 480V, 480Y/277V
L - 240V, 208Y/120V
15 - 12,470 V
5 - 4160 V

PANEL #
1
2
3
4
... ETC

KEY PLAN RISER
A
B
C
D
... ETC

EQUIPMENT
U - UNIT SUBSTATION
S - SWITCHBOARD
D - DISTRIBUTION PANEL
P - BRANCH CIRCUIT PANELBOARD
A - AUTOMATIC TRANSFER SWITCH
T - TRANSFORMER
G - SWITCHGEAR
B - BUSWAY
R - RISER

1 / EF-051 **ELECTRICAL PHASE 2 FO EQUIPMENT NAMING GUIDELINES**
12" = 1'-0"

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UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/2018
2	100% CD REVIEW	10/15/18
3	ISSUED FOR BID & PERMIT	11/15/18
4	RECORD DRAWING	08/16/19
5	DD ISSUANCE - NIH	02/05/20
6	CD ISSUANCE - NIH	04/14/20
7	BID & PERMIT - NIH	05/22/20

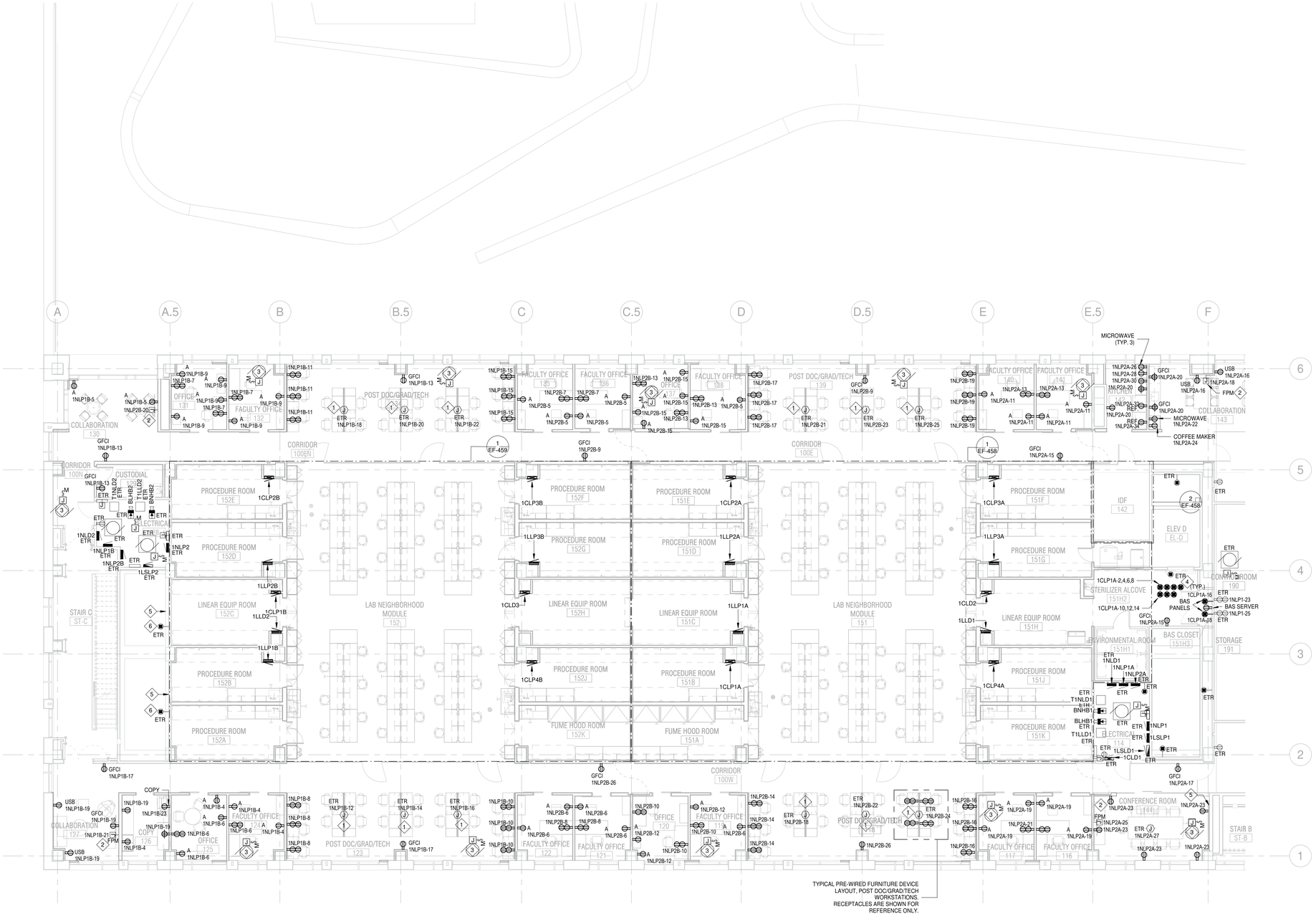
Drawn By EM
Checked By JS
Client Number 514
Project Number 15576

STATE OF KENTUCKY
ANDREW SCHANTZ
30663
LICENSED
PROFESSIONAL ENGINEER
4/24/2020

DRAWING
ELECTRICAL PHASE 2 FO EQUIPMENT NAMING GUIDELINES

SHEET NO.
EF-051

5/21/2020 11:03:28 AM



TYPICAL PRE-WIRED FURNITURE DEVICE LAYOUT, POST DOC/GRAD/TECH WORKSTATIONS. RECEPTACLES ARE SHOWN FOR REFERENCE ONLY.

1 **PHASE 2 FO POWER PLAN - LEVEL 01 - Area B**
EF-251B 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO 'TF' SERIES OF DRAWINGS FOR DATA LOCATIONS AND CONDUIT REQUIREMENTS.
2. REFER TO 'AVF' SERIES OF DRAWINGS FOR AV DEVICE LOCATIONS AND CONDUIT REQUIREMENTS.
3. REFER TO ARCHITECTURAL ELEVATIONS FOR DEVICE MOUNTING HEIGHTS.
4. COORDINATE EXACT FLOORBOX LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.
5. RECEPTACLES DENOTED WITH 'A' ARE TO BE WIRED TO LIGHTING CONTROL SYSTEM FOR AUTOMATIC CONTROL VIA THE LIGHTING CONTROL SYSTEM.
6. PROVIDE HOSPITAL GRADE RECEPTACLES WITHIN WET LABS.
7. PROVIDE 3.5" CONCRETE HOUSEKEEPING PAD FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT.

KEYED NOTES X

1 UTILIZE EXISTING POKE-THRU FOR POWER AND DATA TO PRE-WIRED FURNITURE SYSTEM. PROVIDE FLEX CONDUIT FOR POWER BETWEEN POKE-THU AND ENTRY OF FURNITURE SYSTEM. COORDINATE POWER FEEDS WITH FURNITURE MANUFACTURER. REFER TO TECHNOLOGY DRAWINGS FOR ADDITIONAL INFORMATION.

2 PROVIDE A WALL MOUNTED AV BOX WITH (4) NEMA 5-20 RECEPTACLES. REFER TO AV DRAWINGS FOR AV BOX SPECIFICATIONS. REFER TO TECHNOLOGY AND AV DRAWINGS FOR ADDITIONAL REQUIREMENTS. COORDINATE MOUNTING HEIGHT AND EXACT FLAT PANEL MONITOR LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.

3 UNIT HEATER TO BE DEMOLISHED.

4 EXACT LOCATION OF BAS PANELS TO BE DETERMINED BY CONTROLS CONTRACTOR.

5 2HR FIRE RATED WALL. UTILIZE FIRE RATED PUTTY PADS ON THE BACK OF APPLICABLE BOXES.

6 EXISTING TO REMAIN POWER CONNECTION FOR SMOKE DAMPERS LOCATED ON A 2HR FIRE RATED WALL. APPLY FIRE RATED PUTTY TO THE BACK OF EACH BOX AS NECESSARY. REFER TO C&S ISSUANCE FOR ADDITIONAL INFORMATION.

KEY PLAN

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ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/2018
2	100% CD REVIEW	10/15/18
3	ISSUED FOR BID & PERMIT	11/15/18
4	PCO #007	06/07/19
5	DD ISSUANCE - NIH	02/05/20
6	CD ISSUANCE - NIH	04/14/20
7	BID & PERMIT - NIH	05/22/20

Drawn By EM

Checked By JS

Client Number 514

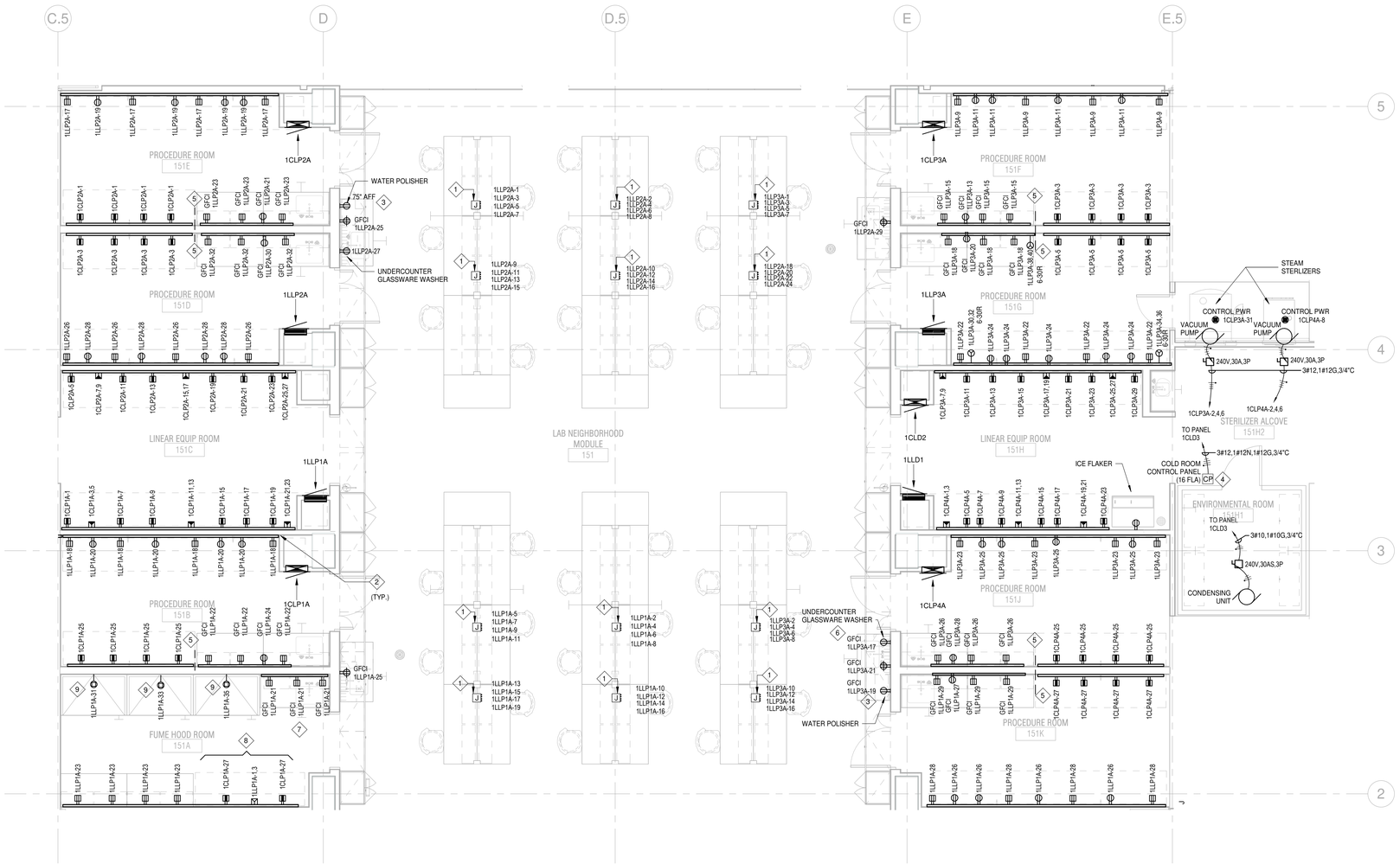
Project Number 15576

ANDREW SCHANTZ
30663
4/24/2020

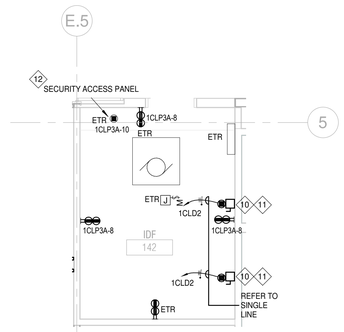
DRAWING
ELECTRICAL PHASE 2 FO POWER FLOOR PLAN - LEVEL 01 AREA B

SHEET NO.
EF-251B

5/21/2020 11:03:42 AM



1 EF-458 **LEVEL 01 - LAB NEIGHBORHOOD 151 ENLARGED POWER PLAN1**
1/4" = 1'-0"



2 EF-458 **LEVEL 01 - IDF 142 ENLARGED POWER PLAN1**
1/4" = 1'-0"

GENERAL NOTES

1. REFER TO 'QL' SERIES OF DRAWINGS FOR LAB EQUIPMENT SCHEDULES, LAB FURNITURE ELEVATIONS, AND DETAILS.
2. REFER TO 'IT' SERIES OF DRAWINGS FOR DATA LOCATIONS AND CONDUIT REQUIREMENTS.
3. REFER TO 'TF' SERIES OF DRAWINGS FOR DATA LOCATIONS AND CONDUIT REQUIREMENTS.
4. REFER TO 'AVF' SERIES OF DRAWINGS FOR AV DEVICE LOCATIONS AND CONDUIT REQUIREMENTS.
5. REFER TO ARCHITECTURAL ('AI') AND LAB ('QL') ELEVATIONS FOR DEVICE MOUNTING HEIGHTS.

KEYED NOTES

1 CEILING SERVICE PANEL WITH (4) NEMA L5-20R RECEPTACLES. PROVIDE A DEDICATED 120V, 1PH CIRCUIT FOR EACH L5-20R RECEPTACLE AS INDICATED ON PLAN. CEILING SERVICE PANEL TO BE PROVIDED WITH KNOCKOUT FOR FUTURE 208V RECEPTACLE. ROUTE SPARE 3/4"C FROM PANELBOARD SERVING 120V CIRCUITS TO CEILING SERVICE PANEL FOR FUTURE USE. LABEL CONDUIT AT BOTH ENDS AND PROVIDE PULL STRING. EACH LAB TABLE SYSTEM TO BE PRE-WIRED AND PROVIDED WITH (2) L5-20P PLUG & CORD TO TERMINATE ON CEILING SERVICE PANEL. REFER TO 'QL' SERIES OF DRAWINGS FOR ADDITIONAL INFORMATION.

2 PROVIDE DUAL CHANNEL, SURFACE MOUNTED METAL RACEWAY (WIREMOLD G4000 SERIES OR APPROVED EQUAL) WITH ELECTRICAL OUTLETS IN UPPER CHANNEL. LOWER CHANNEL RESERVED FOR DATA CABLE. REFER TO TECHNOLOGY DRAWINGS FOR DATA REQUIREMENTS.

3 COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT.

4 PROVIDE SINGLE POINT OF CONNECTION TO COLD ROOM CONTROL CONSOLE. COLD ROOM ELECTRICAL LOADS (LIGHTING, RECEPTACLES, AND EQUIPMENT) TO BE POWERED VIA COLD ROOM CONTROL CONSOLE. DISCONNECT INTEGRAL TO CONTROL CONSOLE BY MANUFACTURER.

5 PROVIDE SEPARATE RACEWAYS FOR NORMAL POWER ('LLP') BRANCH CIRCUITS AND CRITICAL STANDBY POWER ('CLP') BRANCH CIRCUITS.

6 PROVIDE A GFCI CIRCUIT BREAKER FOR STANDARD RECEPTACLE BEHIND GLASSWARE WASHER.

7 BOND METAL SURFACES IN FUME HOOD ROOM VIA #4 INSULATED COPPER WIRE FOR STATIC GROUNDING. ROUTE GROUND CONDUCTOR IN 3/4"C FROM FUME HOOD ROOM TO NORTH ELECTRICAL ROOM AND CONNECT TO LABORATORY GROUND BAR (LGB).

8 PROVIDE SINGLE CHANNEL, SURFACE MOUNTED RACEWAY (WIREMOLD G3000 SERIES OR APPROVED EQUAL) FOR CRITICAL POWER ('CLP') BRANCH CIRCUIT IN ORDER TO KEEP SEPARATE FROM NORMAL POWER BRANCH CIRCUITS.

9 SINGLE POINT CONNECTION FOR PREWIRED RECEPTACLES, LIGHTS, AND SWITCH MOUNTED TO FUME HOOD. REFER TO FUME HOOD DETAILS ON DRAWING QL-404.

10 COORDINATE DISCONNECT LOCATION WITH UK IT PRIOR TO INSTALLATION.

11 PROVIDE DUAL CONNECTION TO OWNER FURNISHED RACK MOUNTED UPS VIA ENCLOSED CIRCUIT BREAKER DISCONNECT. REFER TO DRAWING EF-553 FOR DISCONNECT AND WIRE SIZING.

12 INSTALLED DURING PHASE 1, RE-FEED FROM CRITICAL POWER AS PART OF PHASE 2.

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ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

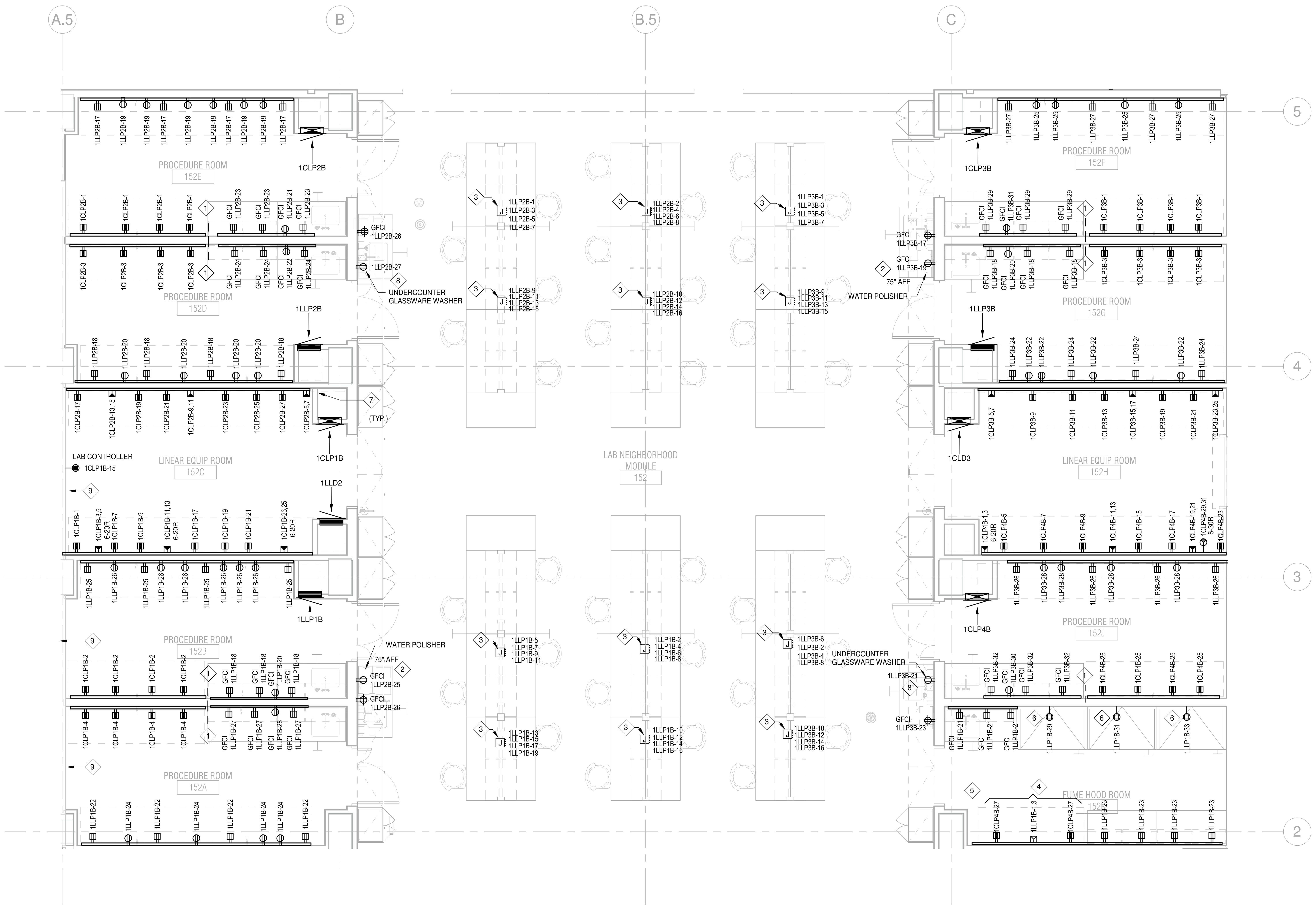
Drawn By	EM
Checked By	JS
Client Number	514
Project Number	15576

STATE OF KENTUCKY — ANDREW SCOTT — 30083 — LICENSED PROFESSIONAL ENGINEER — 4/24/2020

DRAWING
ELECTRICAL PHASE 2 LAB NEIGHBORHOOD 151 ENLARGED POWER PLAN

SHEET NO.
EF-458

5/21/2020 11:03:57 AM



1 EF-459 **LEVEL 01 - LAB NEIGHBORHOOD 152 ENLARGED POWER PLAN1**
1/4" = 1'-0"

GENERAL NOTES

1. REFER TO 'QL' SERIES OF DRAWINGS FOR LAB EQUIPMENT SCHEDULES, LAB FURNITURE ELEVATIONS, AND DETAILS.
2. REFER TO 'TF' SERIES OF DRAWINGS FOR DATA LOCATIONS AND CONDUIT REQUIREMENTS.
3. REFER TO 'TF' SERIES OF DRAWINGS FOR DATA LOCATIONS AND CONDUIT REQUIREMENTS.
4. REFER TO 'AVF' SERIES OF DRAWINGS FOR AV DEVICE LOCATIONS AND CONDUIT REQUIREMENTS.
5. REFER TO ARCHITECTURAL ('AI') AND LAB ('QL') ELEVATIONS FOR DEVICE MOUNTING HEIGHTS.

KEYED NOTES

1 PROVIDE SEPARATE RACEWAYS FOR NORMAL POWER ('LLP') BRANCH CIRCUITS AND CRITICAL STANDBY POWER ('CLP') BRANCH CIRCUITS.

2 COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT.

3 CEILING SERVICE PANEL WITH (4) NEMA L5-20R RECEPTACLES. PROVIDE A DEDICATED 120V, 1PH CIRCUIT FOR EACH L5-20R RECEPTACLE AS INDICATED ON PLAN. CEILING SERVICE PANEL TO BE PROVIDED WITH KNOCKOUT FOR FUTURE 208V RECEPTACLE. ROUTE SPARE 3/4"C FROM PANELBOARD SERVING 120V CIRCUITS TO CEILING SERVICE PANEL FOR FUTURE USE. LABEL CONDUIT AT BOTH ENDS AND PROVIDE PULL STRING. EACH LAB TABLE SYSTEM TO BE PRE-WIRED AND PROVIDED WITH (2) L5-20P PLUG & CORD TO TERMINATE ON CEILING SERVICE PANEL. REFER TO 'QL' SERIES OF DRAWINGS FOR ADDITIONAL INFORMATION.

4 PROVIDE SINGLE CHANNEL, SURFACE MOUNTED RACEWAY (WIREMOLD G3000 SERIES OR APPROVED EQUAL) FOR CRITICAL POWER ('CLP') BRANCH CIRCUIT IN ORDER TO KEEP SEPARATE FROM NORMAL POWER BRANCH CIRCUITS.

5 BOND METAL SURFACES IN FUME HOOD ROOM VIA #4 INSULATED COPPER WIRE FOR STATIC GROUNDING. ROUTE GROUND CONDUCTOR IN 3/4"C FROM FUME HOOD ROOM TO NORTH ELECTRICAL ROOM AND CONNECT TO LABORATORY GROUND BAR (LGB).

6 SINGLE POINT CONNECTION FOR PREWIRED RECEPTACLES, LIGHTS, AND SWITCH MOUNTED TO FUME HOOD. REFER TO FUME HOOD DETAILS ON DRAWING QL-404.

7 PROVIDE DUAL CHANNEL, SURFACE MOUNTED METAL RACEWAY (WIREMOLD G4000 SERIES OR APPROVED EQUAL) WITH ELECTRICAL OUTLETS IN UPPER CHANNEL. LOWER CHANNEL RESERVED FOR DATA CABLE. REFER TO TECHNOLOGY DRAWINGS FOR DATA REQUIREMENTS.

8 PROVIDE A GFCI CIRCUIT BREAKER FOR STANDARD RECEPTACLE BEHIND GLASSWARE WASHER.

9 2HR FIRE RATED WALL. UTILIZE FIRE RATED PUTTY PADS ON THE BACK OF APPLICABLE BOXES.

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ISSUANCES

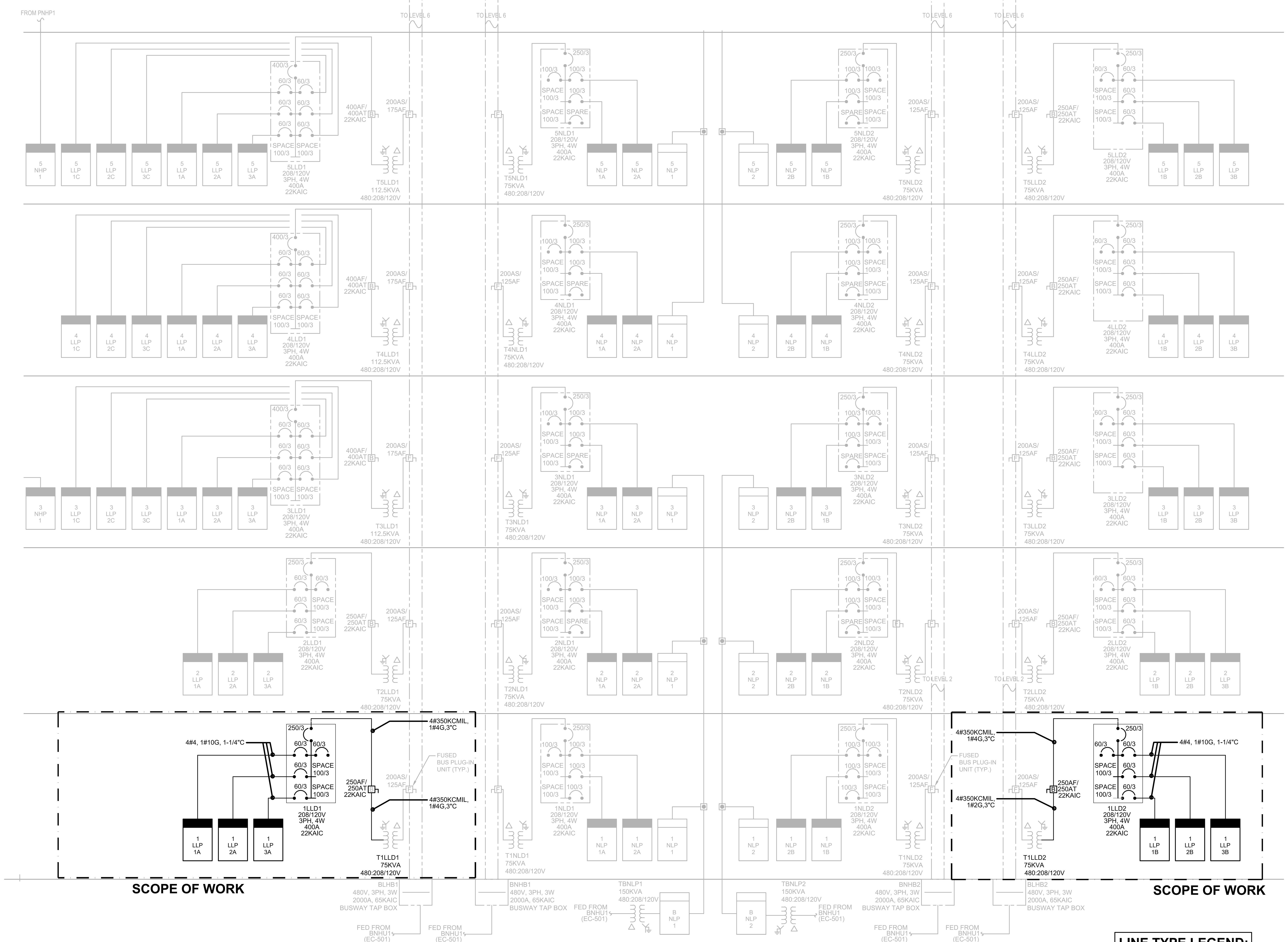
No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By EM
Checked By JS
Client Number 514
Project Number 15576

DRAWING
ELECTRICAL PHASE 2 LAB NEIGHBORHOOD 152 ENLARGED PLAN

SHEET NO.
EF-459

5/21/2020 11:16:37 AM



LINE TYPE LEGEND:

EXISTING:

NEW:

FUTURE:

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ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/18
2	100% CD REVIEW	10/15/18
3	ISSUED FOR BID & PERMIT	11/15/18
4	ASI-004	06/03/19
5	DD ISSUANCE - NIH	02/05/2020
6	CD ISSUANCE - NIH	04/14/2020
7	BID & PERMIT - NIH	05/22/2020

Drawn By EM

Checked By JS

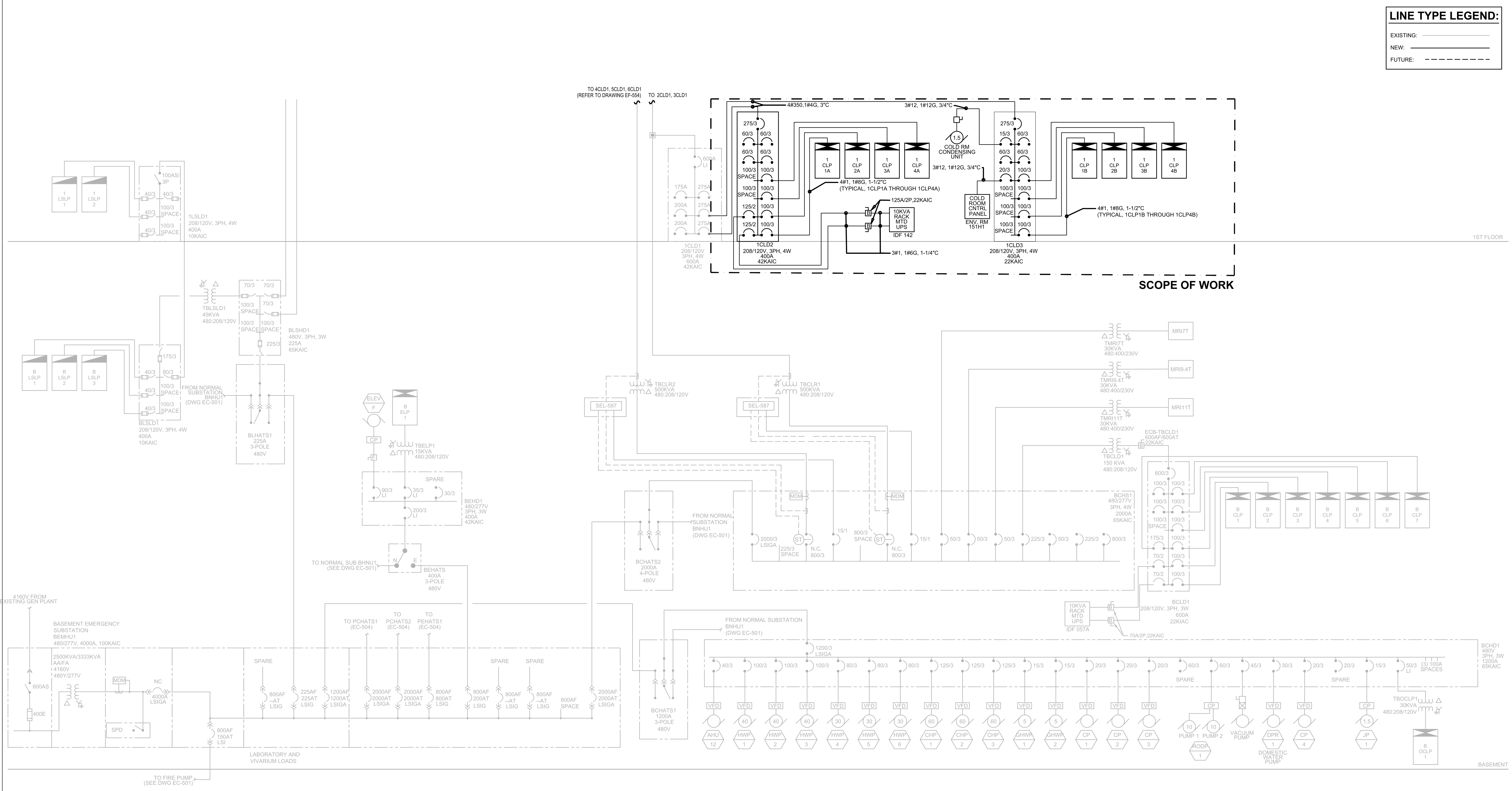
Client Number 514

Project Number 5350

DRAWING TITLE
ELECTRICAL PHASE 3 FO NORMAL POWER RISER

SHEET NO.
EF-552

02/05/2020 10:00:00 AM



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ISSUANCES

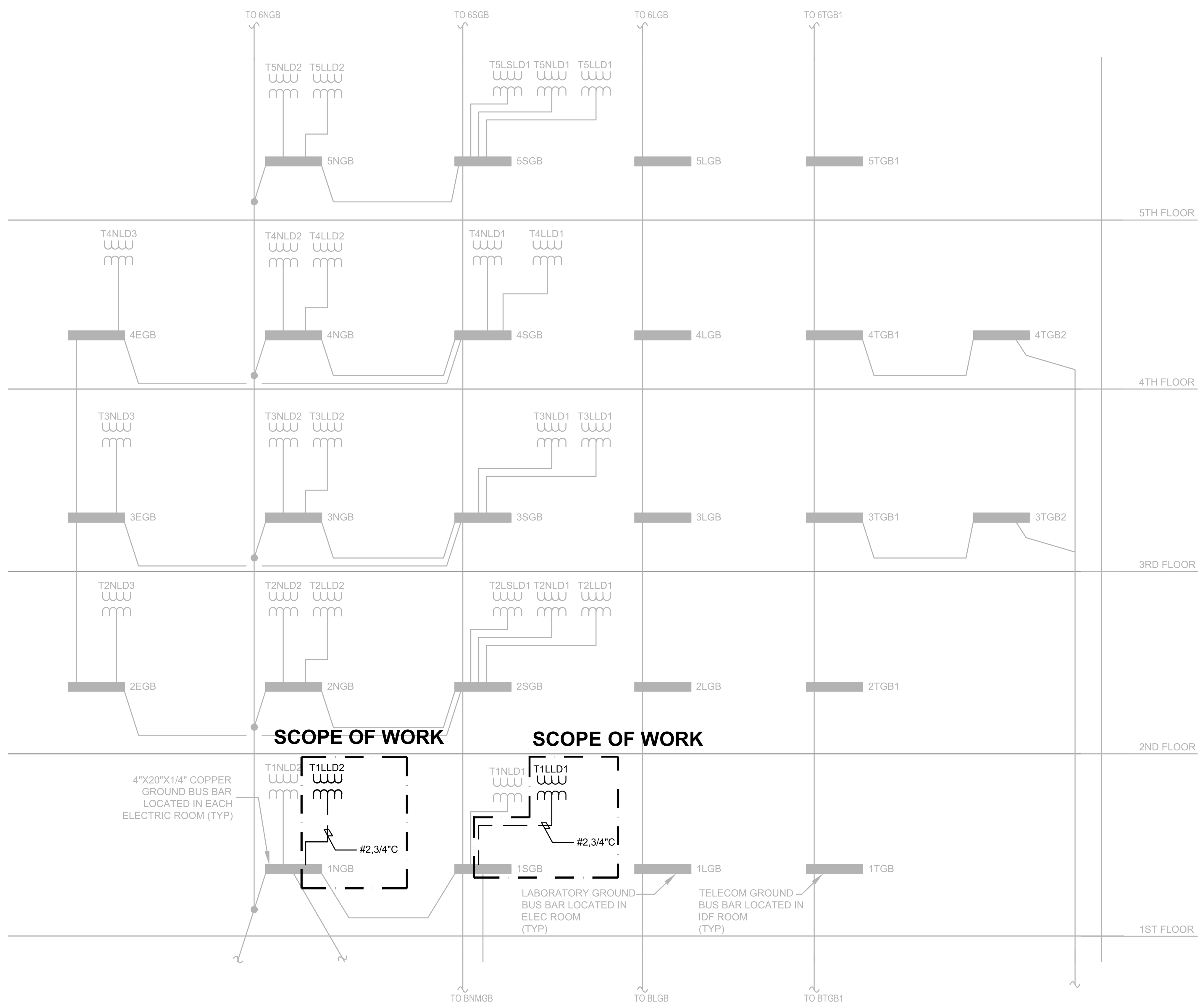
No.	Description	Date
1	PHASE 2 DD 100%	08/15/18
2	100% CD REVIEW	10/15/18
3	ISSUED FOR BID & PERMIT	11/15/18
4	P2 - Addendum #2	01/22/19
5	DD ISSUANCE - NIH	02/05/2020
6	CD ISSUANCE - NIH	04/14/2020
7	BID & PERMIT - NIH	05/22/2020

Drawn By: EM
Checked By: JS
Client Number: 514
Project Number: 5350

DRAWING TITLE
ELECTRICAL PHASE 3 FO EMERGENCY AND CRITICAL RISER

SHEET NO.
EF-553

02/05/2020 10:00:00 AM



LINE TYPE LEGEND:
EXISTING:
NEW:
FUTURE:

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ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/2018
2	100% CD REVIEW	10/15/18
3	ISSUE FOR BID & PERMIT	11/15/18
4	DD ISSUANCE - NIH	02/05/2020
5	CD ISSUANCE - NIH	04/14/2020
7	BID & PERMIT - NIH	05/22/2020

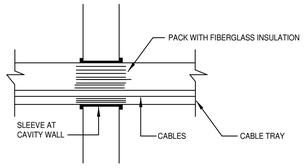
Drawn By EM
Checked By JS
Client Number 514
Project Number 5350

STATE OF KENTUCKY ... LICENSED PROFESSIONAL ENGINEER
4/24/2020

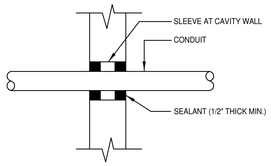
DRAWING TITLE
ELECTRICAL PHASE 2
FO GROUNDING RISER

SHEET NO.
EF-555

02/05/2020 10:00:00 AM

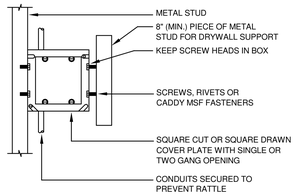


CABLE TRAY

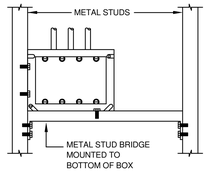


CONDUIT

7 EF-851 ELECTRICAL FIRE SEAL DETAIL
N.T.S.

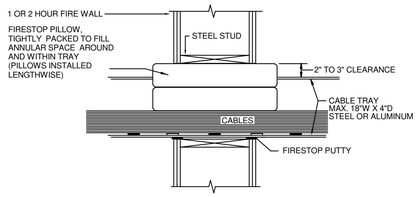


TWO GANG BOX MOUNTING

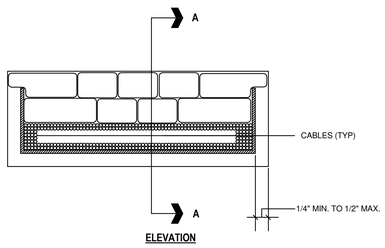


MULTIPLE GANG BOX MOUNTING

4 EF-851 METAL STUD WALL BOX INSTALLATION
N.T.S.



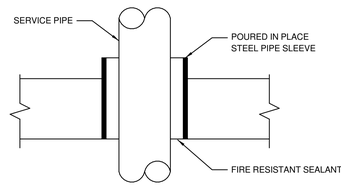
SECTION A-A



ELEVATION

NOTES:
INSTALL PUTTY AS REQUIRED TO FILL OBVIOUS OPENINGS BETWEEN CABLES OR BETWEEN TRAY AND PERIPHERY OF OPENING. INSTALL ON BOTH SIDES OF WALL.

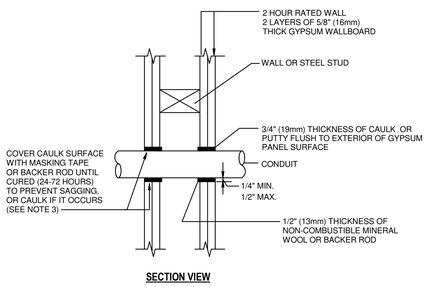
5 EF-851 METAL CABLE TRAY PENETRATION OF 1 OR 2 HOUR FIRE RATED GYPSUM WALLBOARD WALL
N.T.S.



NOTES:

(1) AT CORED HOLES INSTALL SLEEVE SMALLER THAN HOLE. FILL SPACE BETWEEN HOLE AND SLEEVE WITH HYDRAULIC CEMENT.

8 EF-851 PENETRATION THROUGH FIRE RATED FLOOR
N.T.S.



SECTION VIEW

NOTES:

(1) INSTALL FIRESTOP ON BOTH SIDES OF WALL.

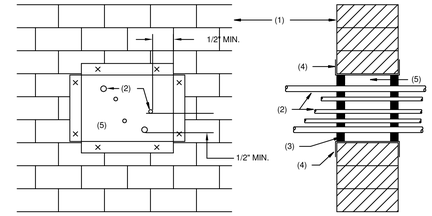
(2) RECOMMENDATIONS BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) TIME TEMPERATURE FIRE ENCLOSURE CURVE.

(3) OPTIONS FOR MASKING TAPE TO PREVENT SAGGING:

A. INSTALL ADDITIONAL DAMMING MATERIAL INSIDE WALL AND OVER PRODUCT TO HOLD WITHIN OPENING.

B. REMOVE PRODUCT FROM CONTAINER AND ALLOW TO AIR CURE IN SMALL BATCHES FOR 12 HOURS, THEN HAND FORM INTO OPENING.

6 EF-851 SINGLE CONDUIT PENETRATION OF 2 HOUR FIRE RATE GYPSUM WALLBOARD WALL
N.T.S.



NOTES:

(1) WALL

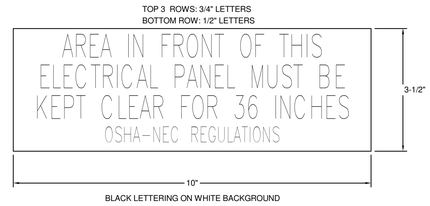
(2) CABLE/CONDUIT. FOR MULTIPLE CABLE/CONDUITS PROVIDE 1/2" MINIMUM SEPARATION USING THERMO-FIBER INSULATION

(3) FIRE RESISTANT FOAM SEALANT

(4) FIELD FABRICATED GALVANIZED SHEET METAL COLLAR (FOR CABLE TRAY PROVIDE MINIMUM 10" W x 5" H OPENING)

(5) DAMMING METHOD - PER FOAM MANUFACTURER'S RECOMMENDATIONS

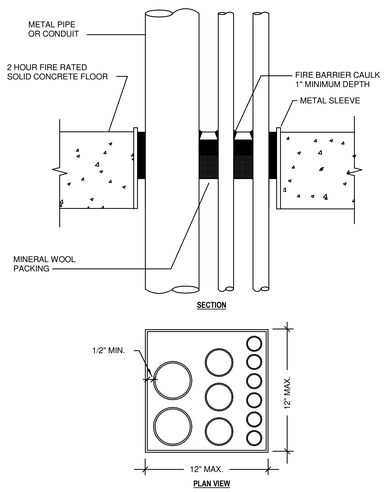
1 EF-851 PENETRATION OF 2 HOUR FIRE RATED OR SMOKE PARTITION
N.T.S.



BLACK LETTERING ON WHITE BACKGROUND

NOTES:
(1) SUBSTITUTE "42 INCHES" FOR 480V OR 480/277V PANELS.

2 EF-851 OSHA/NEC PLACARD
N.T.S.



3 EF-851 MULTIPLE CONDUIT PENETRATIONS OF 2 HOUR FIRE RATED CONCRETE FLOOR
N.T.S.

CHAMPLIN ARCHITECTURE
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CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/2018
2	100% CD REVIEW	10/15/18
3	ISSUED FOR BID & PERMIT	11/15/18
4	RECORD DRAWING	08/16/19
5	DD ISSUANCE - NIH	02/05/20
6	CD ISSUANCE - NIH	04/14/20
7	BID & PERMIT - NIH	05/22/20

Drawn By EM
Checked By JS
Client Number 514
Project Number 15576

STATE OF KENTUCKY ANDREW SCOTT LICENSED PROFESSIONAL ENGINEER 32653 4/24/2020

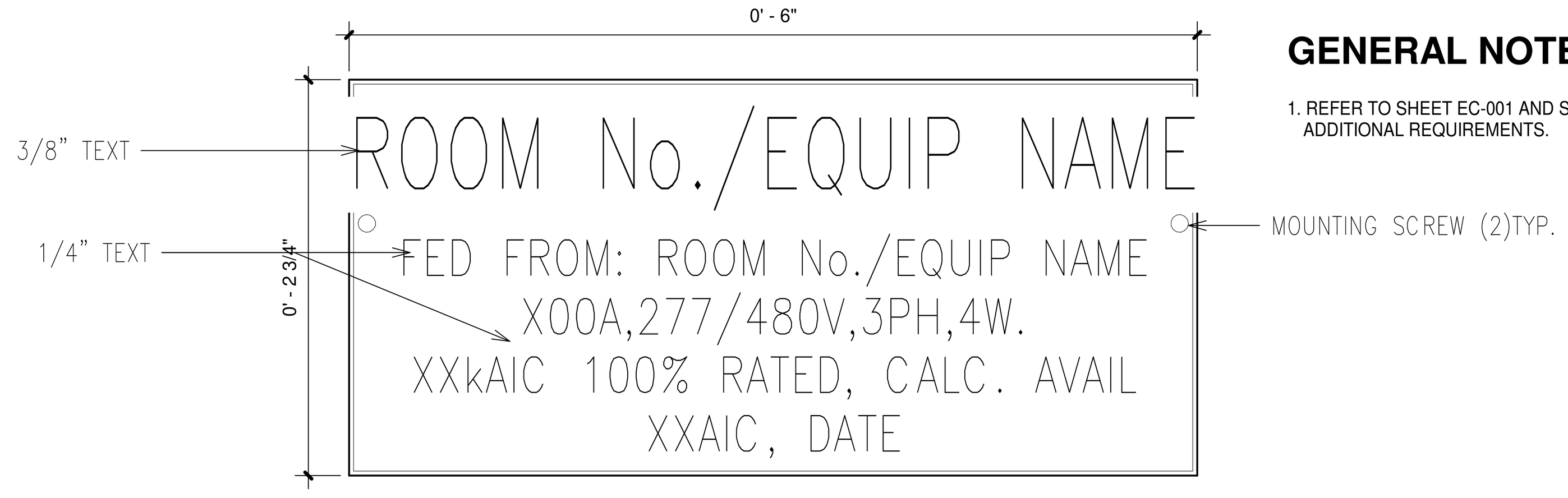
DRAWING
ELECTRICAL PHASE 2 FO DETAILS

SHEET NO.
EF-851

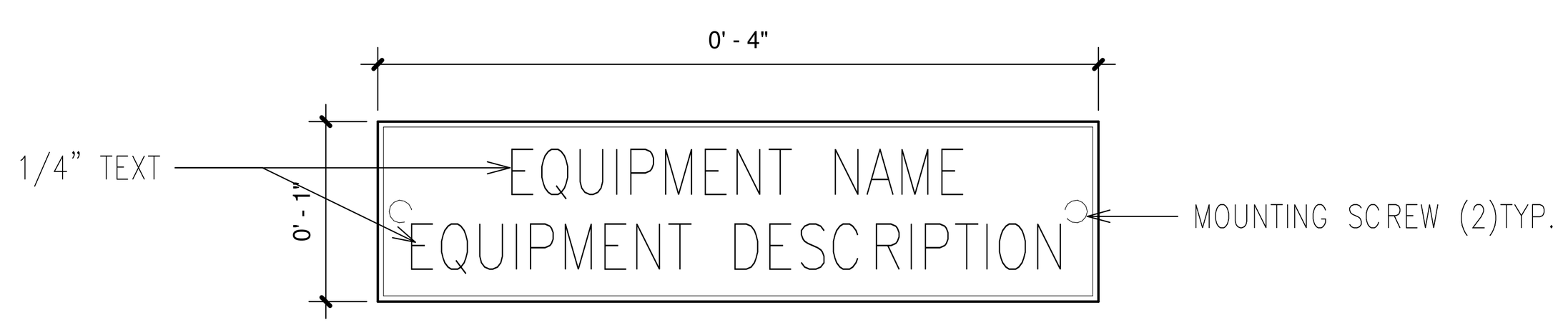
5/22/2020 12:18:58 PM

GENERAL NOTES

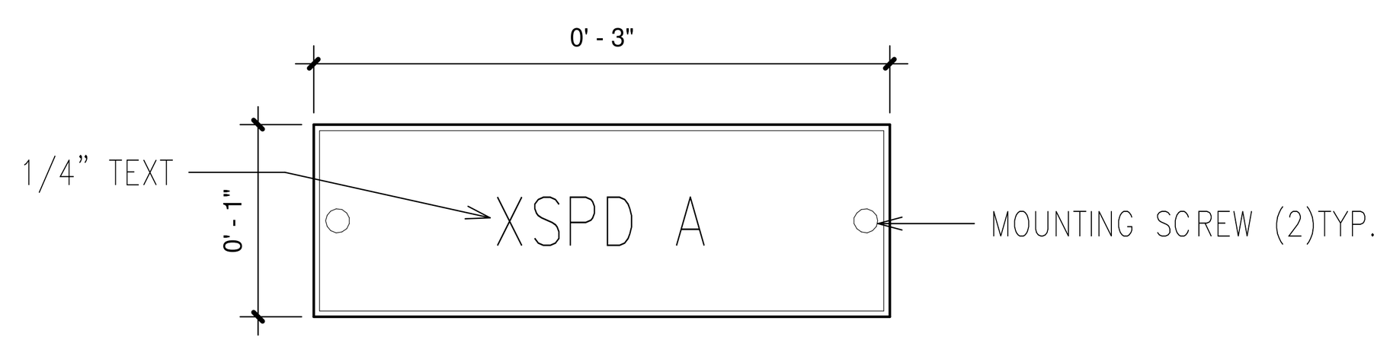
1. REFER TO SHEET EC-001 AND SPECIFICATION SECTION 260553 FOR ADDITIONAL REQUIREMENTS.



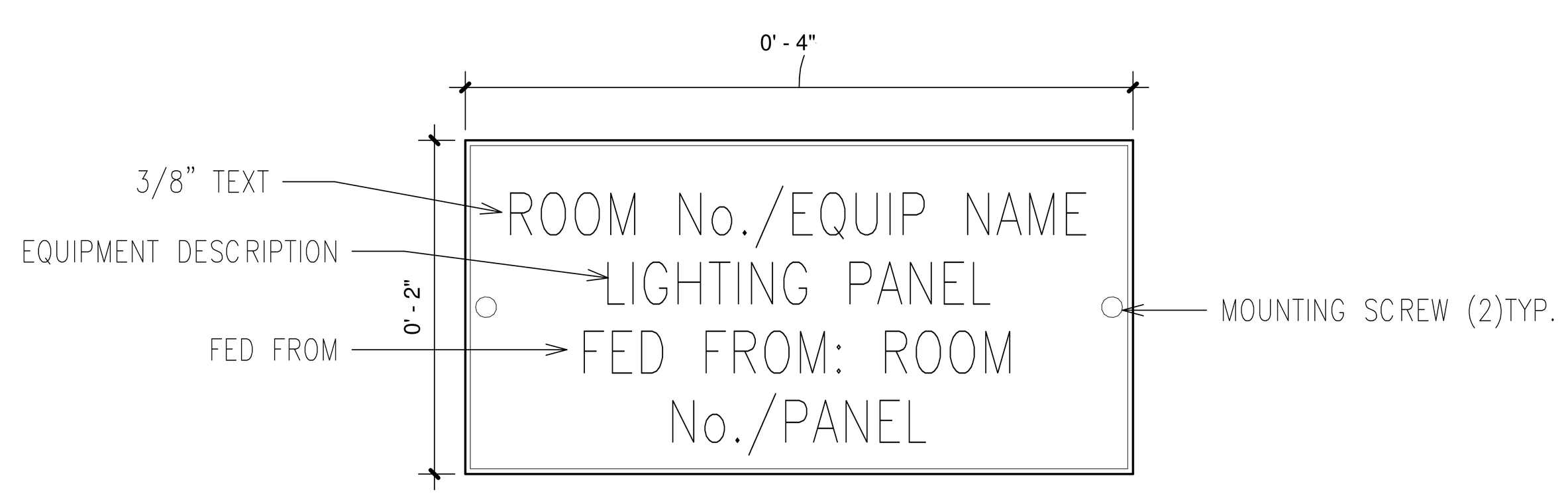
6 | EF-852 — **TYPICAL SWITCHBOARD NAMEPLATE** — 12" = 1'-0"



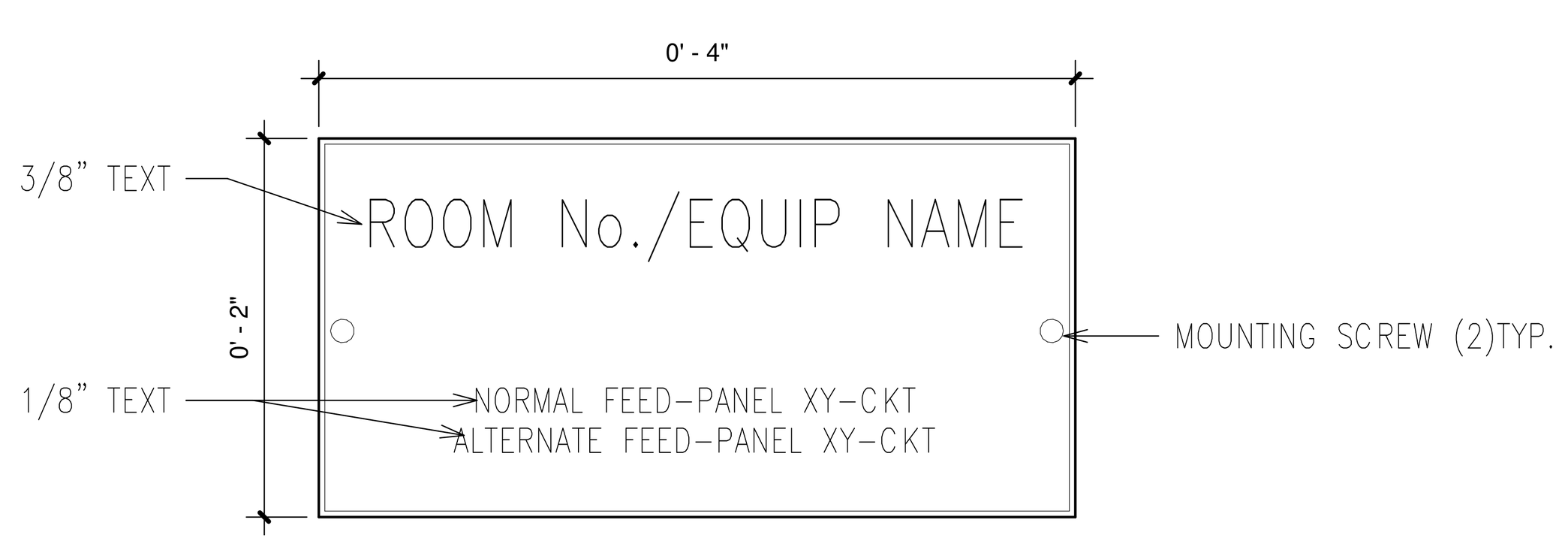
7 | EF-852 — **TYPICAL LARGE BREAKER NAMEPLATE** — 12" = 1'-0"



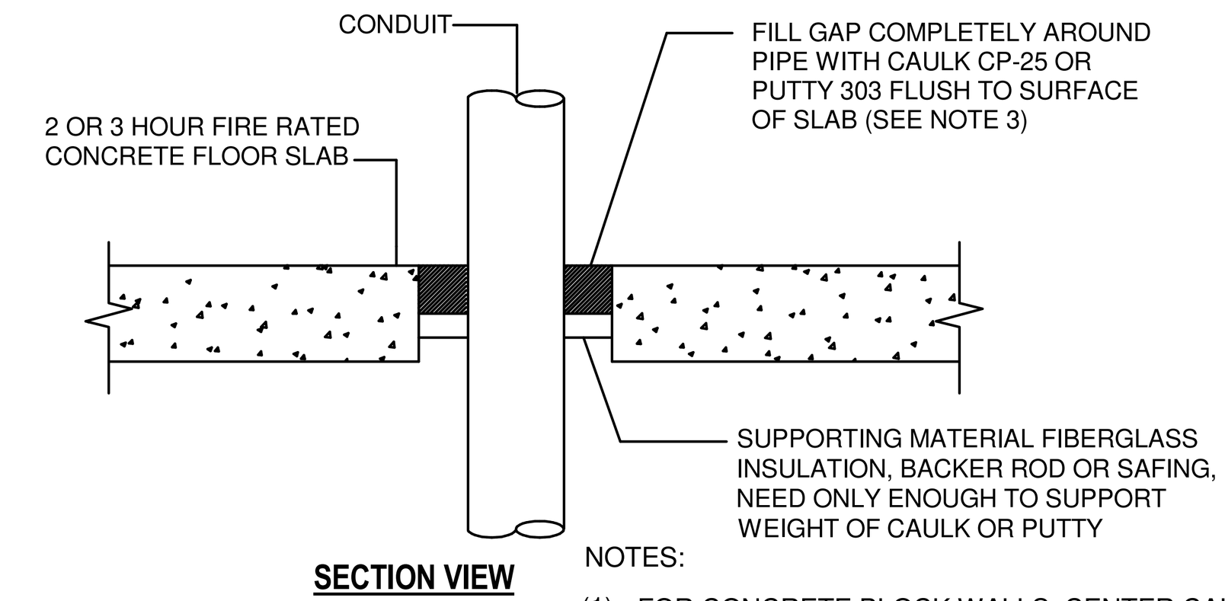
8 | EF-852 — **TYPICAL SMALL BREAKER NAMEPLATE** — 12" = 1'-0"

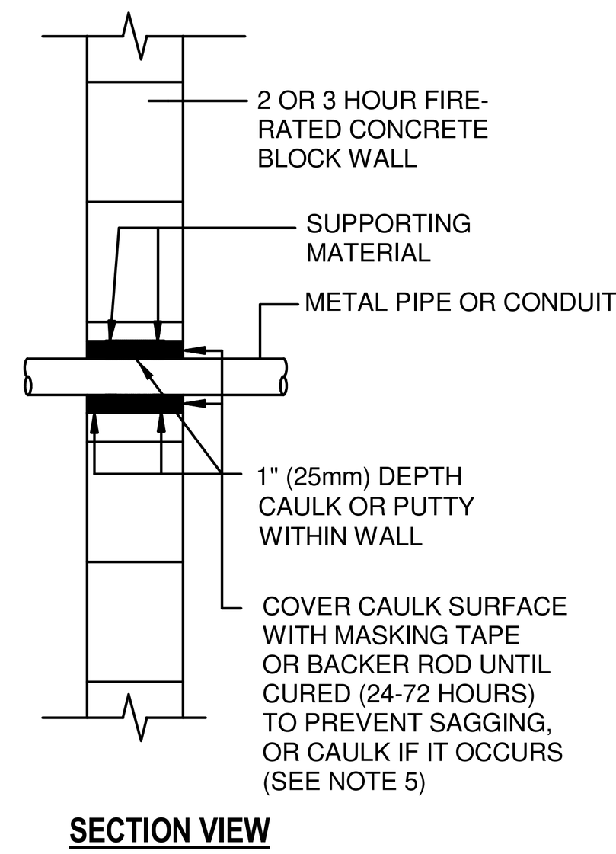


9 | EF-852 — **TYPICAL EQUIPMENT NAMEPLATE** — 12" = 1'-0"



10 | EF-852 — **TYPICAL EQUIPMENT NAMEPLATE WITH MULTIPLE POWER SOURCES** — 12" = 1'-0"





NOTES:

(1) FOR CONCRETE BLOCK WALLS, CENTER CAULK OR PUTTY WITHIN WALL WITH DAMMING ON BOTH SIDES.

(2) RECOMMENDATIONS BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) FIRE TEST AND UL CLASSIFICATION FIRESTOP SYSTEMS 49, 33 AND 91.

(3) WET INSTALLED DEPTH OF CAULK OR PUTTY DEPENDS ON TYPE AND SIZE OF PIPE:

WET DEPTH	PIPE SIZE	FIRE RATING
1/2" (13mm)	MAX 8" (200mm)	2 HOURS
1" (25mm)	MAX 6" (150mm)	3 HOURS

(4) UP TO 40% SHRINKAGE OF CAULK OR PUTTY IS ACCEPTABLE AFTER WET DEPTH INSTALLATION.

(5) OPTIONS TO MASKING TAPE TO PREVENT SAGGING:

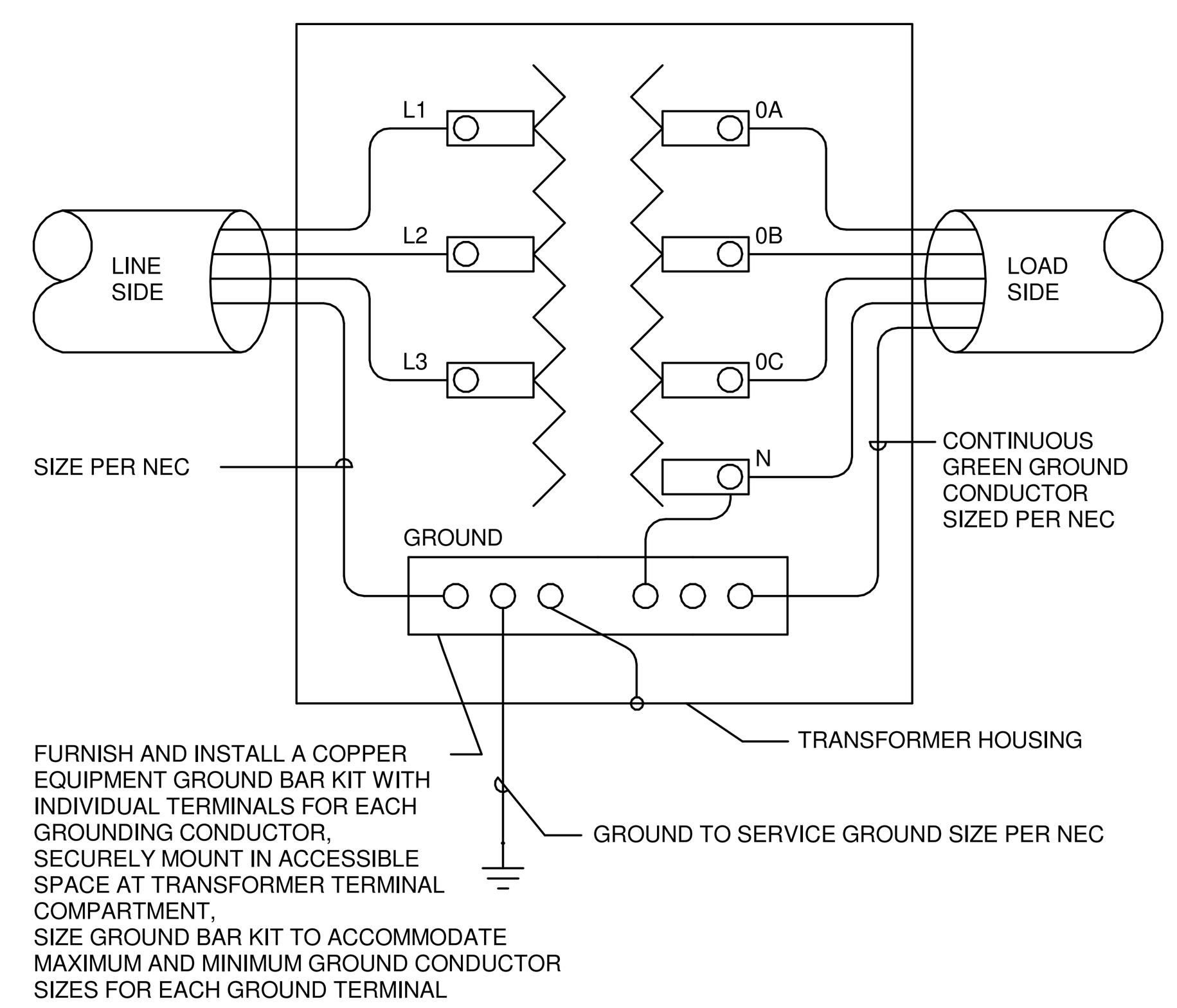
A. INSTALL ADDITIONAL DAMMING MATERIAL OVER PRODUCT TO HOLD WITHIN OPENING.

B. REMOVE PRODUCT FROM CONTAINER AND ALLOW TO AIR CURE IN SMALL BATCHES FOR 12 HOURS. THEN HAND FORM INTO OPENING.

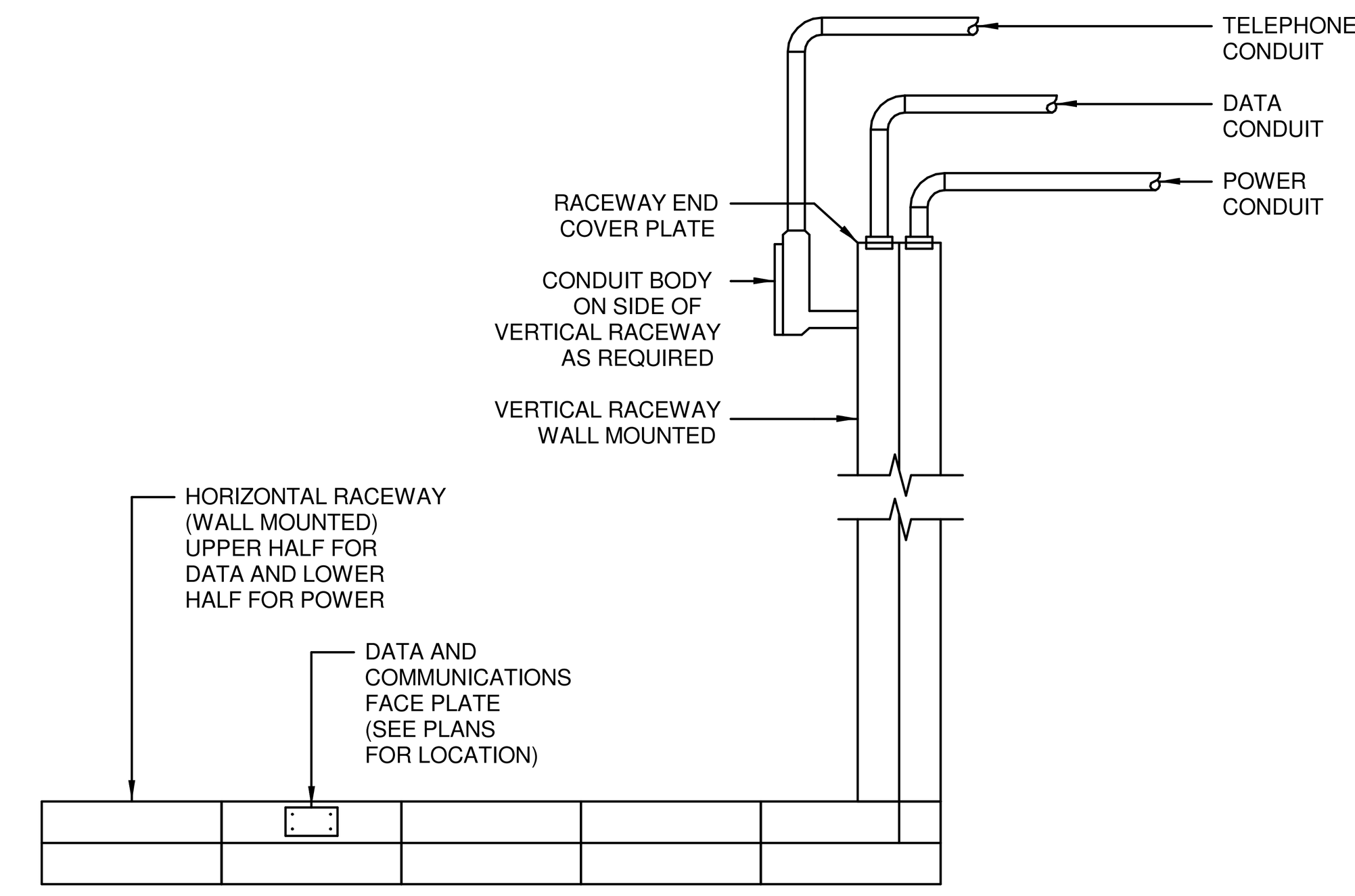
(6) WHEN ANNULAR SPACE EXCEEDS 3/4" (19mm), A 28 AWG METAL COVER PLATE MUST BE MECHANICALLY SECURED ATOP THE FIRE BARRIER APPLICATION, OR TIGHTLY PACK A NON-COMBUSTIBLE DAMMING MATERIAL ATOP INSTALLED CAULK OR PUTTY. COVER PLATE NOT REQUIRED FOR 2 HOUR RATING UP TO 1 7/8" (48mm) ANNULAR SPACE.

4 | EF-852 — **SINGLE CONDUIT PENETRATION OF 2 OR 3 HOUR FIRE RATED GYPSUM WALLBOARD WALL** — N.T.S.

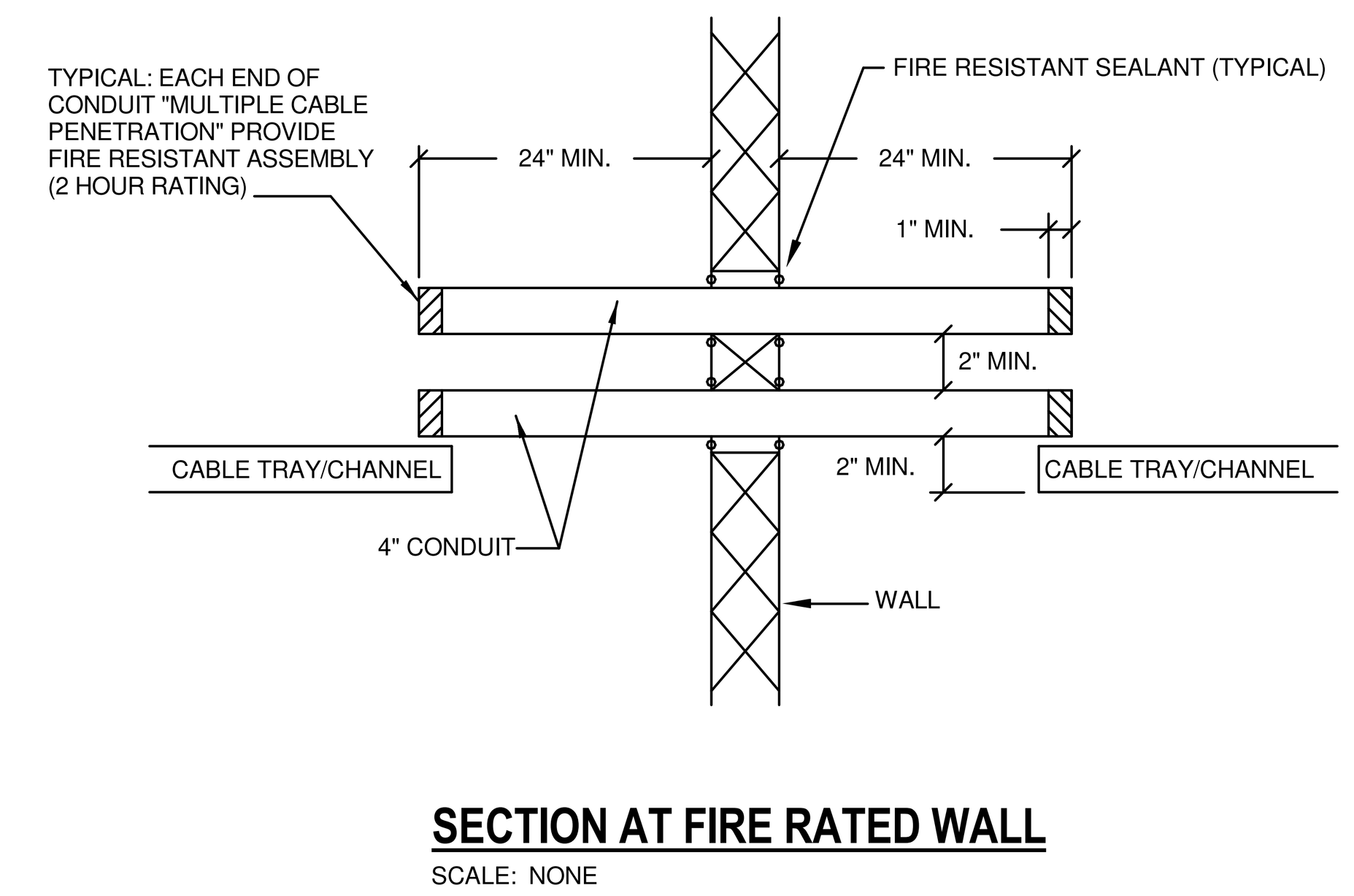
NOTES:
TYPICAL DRY TYPE TRANSFORMER 480V DELTA PRIMARY 208Y/120V SECONDARY - SEE SPECIFICATIONS.



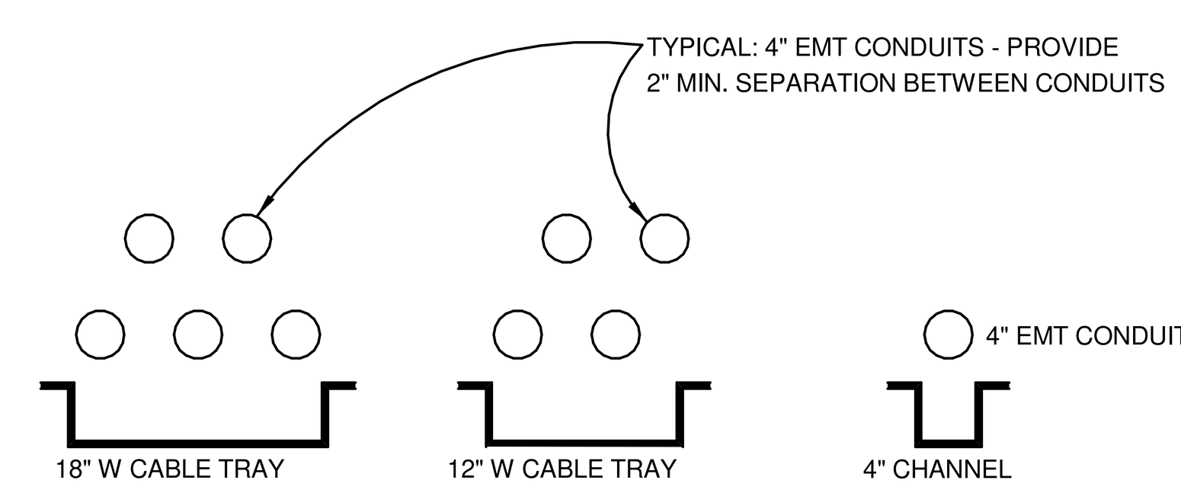
5 | EF-852 — **TYPICAL TRANSFORMER GROUNDING** — N.T.S.



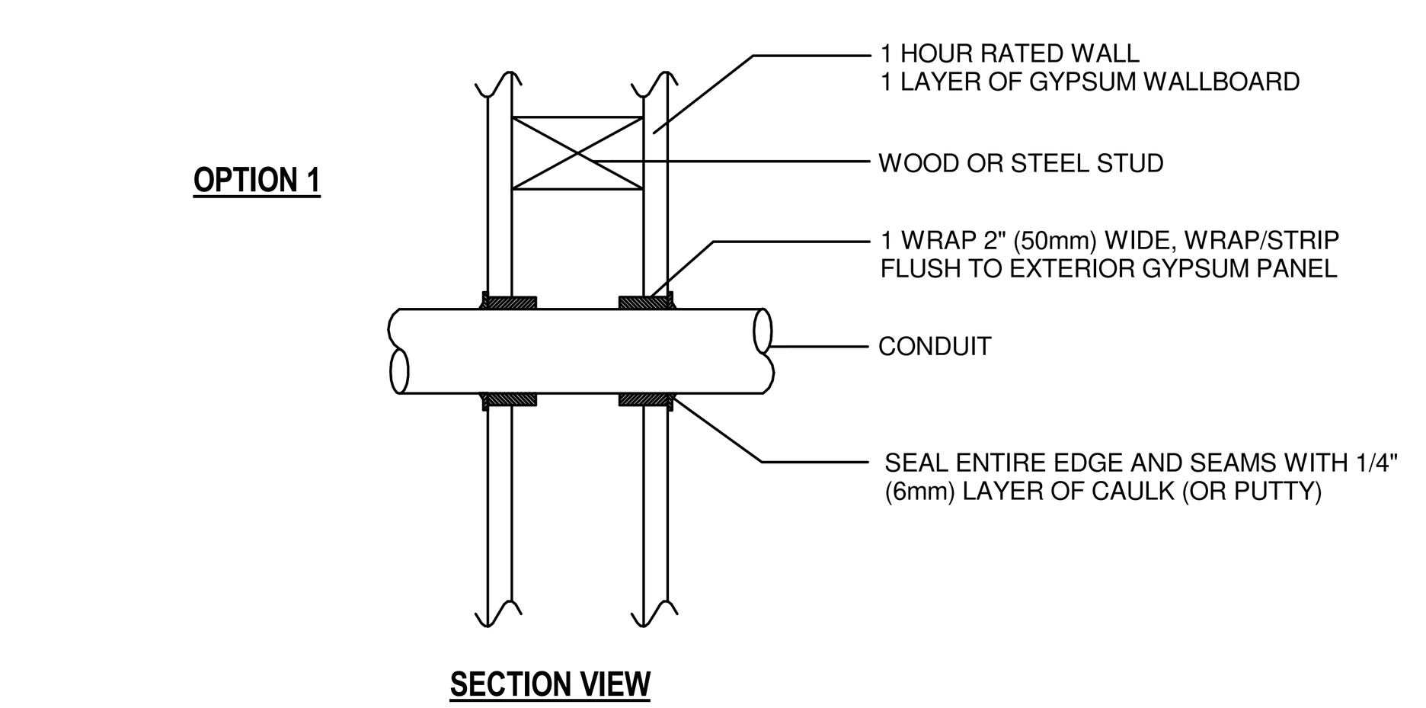
3 | EF-852 — **RACEWAY FEED THROUGH VERTICAL RACEWAY** — N.T.S.

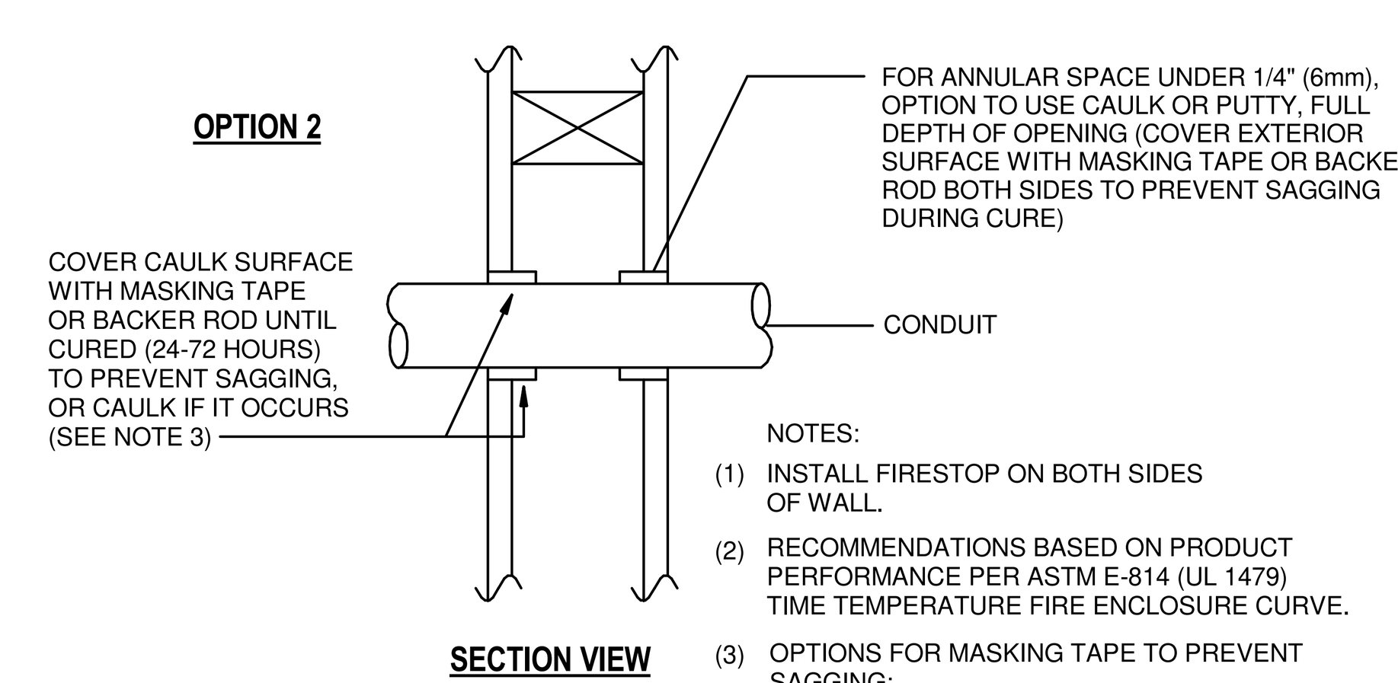


SECTION AT FIRE RATED WALL
SCALE: NONE



2 | EF-852 — **CABLE TRAY PENETRATION OF FIRE RATED WALL** — N.T.S.





NOTES:

(1) INSTALL FIRESTOP ON BOTH SIDES OF WALL.

(2) RECOMMENDATIONS BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) TIME TEMPERATURE FIRE ENCLOSURE CURVE.

(3) OPTIONS FOR MASKING TAPE TO PREVENT SAGGING:

A. INSTALL ADDITIONAL DAMMING MATERIAL INSIDE WALL AND OVER PRODUCT TO HOLD WITHIN OPENING.

B. REMOVE PRODUCT FROM CONTAINER AND ALLOW TO AIR CURE IN SMALL BATCHES FOR 12 HOURS, THEN HAND FORM INTO OPENING.

1 | EF-852 — **SINGLE CONDUIT PENETRATION OF 1 HOUR FIRE RATED GYPSUM WALLBOARD WALL** — N.T.S.

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/2018
2	100% CD REVIEW	10/15/18
3	ISSUED FOR BID & PERMIT	11/15/18
4	RECORD DRAWING	08/16/19
5	DD ISSUANCE - NIH	02/05/20
6	CD ISSUANCE - NIH	04/14/20
7	BID & PERMIT - NIH	05/22/20

Drawn By: EM
Checked By: JS
Client Number: 514
Project Number: 15576

DRAWING
ELECTRICAL PHASE 2 FO DETAILS

SHEET NO.
EF-852

5/21/2020 11:04:23 AM

(EXISTING) PANELBOARD SCHEDULE

PANEL DESIGNATION 1NLP2A | **LOCATION** ELECTRICAL 114 | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **3 PHASE** **4 WIRE** | **FED FROM** 1NLD1
MAIN TYPE MLO | **BUS RATING** 225 A | **FAULT CURRENT RATING** 10K AIC
MAIN RATING 225 A | **MOUNTING** SURFACE | **FAULT...** 5.8 K AIC

REMARKS

DESCRIPTION	BRKR AMP, POLES	CKT NO	LEFT SIDE, KVA A	B	C	RIGHT SIDE, KVA A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
(EXISTING) VRF	20 A / 2	1	0.07			0.07			2	2 / 20 A	(EXISTING) VRF
		3		0.07			0.07		4		
(EXISTING) VRF	20 A / 2	5			0.07			0.00	6	1 / 20 A	SPARE
		7	0.07			0.07			8	2 / 20 A	(EXISTING) VRF
BAS PANEL LEVEL 01	20 A / 1	9		0.50			0.07		10		
OFFICE SWITCHED REC...	20 A / 1	11			0.72			0.07	12	2 / 20 A	(EXISTING) VRF
OFFICE WORKSTATIONS	20 A / 1	13	0.72			0.07			14		
GENERAL RECEPTACLES	20 A / 1	15		0.36			0.36		16	1 / 20 A	REC COLLABORATION 143
GENERAL RECEPTACLE	20 A / 1	17			0.18			0.18	18	1 / 20 A	FPM COLLABORATION 143
OFFICE SWITCHED REC...	20 A / 1	19	0.72			0.72			20	1 / 20 A	REC BREAK AREA
OFFICE WORKSTATIONS	20 A / 1	21		0.72			0.18		22	1 / 20 A	MICROWAVE COLLAB. 143
REC CONFERENCE 144	20 A / 1	23			0.90			0.18	24	1 / 20 A	COFFEE MAKER COLLAB.
REC CONFERENCE 144	20 A / 1	25	0.18			0.18			26	1 / 20 A	MICROWAVE KITCHEN 142
FLOOR BOX...	20 A / 1	27		0.50			0.18		28	1 / 20 A	MICROWAVE KITCHEN 142
SPARE	20 A / 1	29			0.00			0.18	30	1 / 20 A	MICROWAVE KITCHEN 142
SPACE	-- / --	31	0.00			0.18			32	1 / 20 A	REF KITCHEN 142
SPACE	-- / --	33		0.00			0.18		34	1 / 20 A	REF KITCHEN 142
SPACE	-- / --	35			0.00			0.00	36	-- / --	SPACE
SPACE	-- / --	37	0.00			0.00			38	-- / --	SPACE
SPACE	-- / --	39		0.00			0.00		40	-- / --	SPACE
SPACE	-- / --	41			0.00			0.00	42	-- / --	SPACE

PHASE SUBTOTALS (KVA): 3.06 | 3.20 | 2.48
PHASE SUBTOTAL (AMPS): 26 | 27 | 21
MAX CONNECTED PHASE 27 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR	0.00	125% LARGEST 100% OTHER	0.00
RECEPTACLE	6.66	100% FIRST 10KVA 50% OTHER	6.66
TOTALS	8.74		8.74

NOTES
1. NOT USED.
2. PANEL IS PROTECTED BY 100A UPSTREAM OCPD.

(EXISTING) PANELBOARD SCHEDULE

PANEL DESIGNATION 1NLP1B | **LOCATION** ELECTRICAL 128 | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **3 PHASE** **4 WIRE** | **FED FROM** 1NLD2
MAIN TYPE MLO | **BUS RATING** 225 A | **FAULT CURRENT RATING** 10K AIC
MAIN RATING 225 A | **MOUNTING** SURFACE | **FAULT...** 5.7 K AIC

REMARKS

DESCRIPTION	BRKR AMP, POLES	CKT NO	LEFT SIDE, KVA A	B	C	RIGHT SIDE, KVA A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
(EXISTING) REC RM 128	20 A / 1	1	0.18			0.50			2	1 / 20 A	(EXISTING) NAC RM 128
(EXISTING) PLAZA...	20 A / 1	3		0.36			0.72		4	1 / 20 A	OFFICE SWITCHED REC
REC COLLABORATION 130	20 A / 1	5			0.36			1.08	6	1 / 20 A	WORKSTATION
OFFICE WORKSTATION	20 A / 1	7	1.08			1.08			8	1 / 20 A	WORKSTATION
OFFICE SWITCHED REC	20 A / 1	9		1.08			1.08		10	1 / 20 A	WORKSTATION
WORKSTATION	20 A / 1	11			1.08			0.50	12	1 / 20 A	FLOOR BOX...
GENERAL RECEPTACLE	20 A / 1	13	0.54			0.50			14	1 / 20 A	FLOOR BOX...
WORKSTATION	20 A / 1	15		1.08			0.50		16	1 / 20 A	FLOOR BOX...
RECEPTACLE CORRIDO...	20 A / 1	17			0.36			0.50	18	1 / 20 A	FLOOR BOX...
REC COLLABORATION 127	20 A / 1	19	0.90			0.50			20	1 / 20 A	FLOOR BOX...
FPM COLLABORATION 127	20 A / 1	21		0.18			0.50		22	1 / 20 A	FLOOR BOX...
RECEPTACLE COPY 126	20 A / 1	23			0.18			0.00	24	1 / 20 A	SPARE
SPARE	20 A / 1	25	0.00			0.00			26	1 / 20 A	SPARE
SPARE	20 A / 1	27		0.00			0.00		28	1 / 20 A	SPARE
SPARE	20 A / 1	29			0.00			0.00	30	1 / 20 A	SPARE
SPARE	20 A / 1	31	0.00			0.00			32	1 / 20 A	SPARE
SPARE	20 A / 1	33		0.00			0.00		34	1 / 20 A	SPARE
SPARE	20 A / 1	35			0.00			0.00	36	1 / 20 A	SPARE
SPARE	20 A / 1	37	0.00			0.00			38	1 / 20 A	SPARE
SPARE	20 A / 1	39		0.00			0.00		40	1 / 20 A	SPARE
SPARE	20 A / 1	41			0.00			0.00	42	1 / 20 A	SPARE

PHASE SUBTOTALS (KVA): 5.28 | 5.50 | 4.06
PHASE SUBTOTAL (AMPS): 46 | 47 | 34
MAX CONNECTED PHASE 47 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	11.16	100% FIRST 10KVA 50% OTHER	10.58
TOTALS	14.84		14.26

NOTES
1. PANEL IS PROTECTED BY 100A UPSTREAM OCPD.

(EXISTING) PANELBOARD SCHEDULE

PANEL DESIGNATION 1NLP2B | **LOCATION** ELECTRICAL 128 | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **3 PHASE** **4 WIRE** | **FED FROM** 1NLD2
MAIN TYPE MLO | **BUS RATING** 225 A | **FAULT CURRENT RATING** 10K AIC
MAIN RATING 225 A | **MOUNTING** SURFACE | **FAULT...** 5.7 K AIC

REMARKS

DESCRIPTION	BRKR AMP, POLES	CKT NO	LEFT SIDE, KVA A	B	C	RIGHT SIDE, KVA A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
(EXISTING) VRF	20 A / 2	1	0.07			0.07			2	2 / 20 A	(EXISTING) VRF
		3		0.07			0.07		4		
OFFICE SWITCHED REC	20 A / 1	5			0.90			0.90	6	1 / 20 A	OFFICE SWITCHED REC
OFFICE WORKSTATIONS	20 A / 1	7	0.72			0.72			8	1 / 20 A	WORKSTATIONS
CORRIDOR RECEPT.	20 A / 1	9		0.36			1.08		10	1 / 20 A	WORKSTATIONS
(EXISTING)...	20 A / 1	11			0.50			0.54	12	1 / 20 A	OFFICE SWITCHED REC
OFFICE WORKSTATIONS	20 A / 1	13	1.08			1.08			14	1 / 20 A	WORKSTATIONS
OFFICE SWITCHED REC	20 A / 1	15		0.90			1.08		16	1 / 20 A	WORKSTATIONS
WORKSTATIONS	20 A / 1	17			1.08			0.50	18	1 / 20 A	FLOOR BOX...
WORKSTATIONS	20 A / 1	19	1.08			0.18			20	1 / 20 A	POWER...
FLOOR BOX...	20 A / 1	21		0.50			0.50		22	1 / 20 A	FLOOR BOX...
FLOOR BOX...	20 A / 1	23			0.50			0.50	24	1 / 20 A	FLOOR BOX...
FLOOR BOX...	20 A / 1	25	0.50			0.36			26	1 / 20 A	RECEPTACLE CORRIDO...
SPARE	20 A / 1	27		0.00			0.00		28	1 / 20 A	SPARE
SPARE	20 A / 1	29			0.00			0.00	30	1 / 20 A	SPARE
SPACE	-- / --	31	0.00			0.00			32	-- / --	SPACE
SPACE	-- / --	33		0.00			0.00		34	-- / --	SPACE
SPACE	-- / --	35			0.00			0.00	36	-- / --	SPACE
SPACE	-- / --	37	0.00			0.00			38	-- / --	SPACE
SPACE	-- / --	39		0.00			0.00		40	-- / --	SPACE
SPACE	-- / --	41			0.00			0.00	42	-- / --	SPACE

PHASE SUBTOTALS (KVA): 5.86 | 4.56 | 5.42
PHASE SUBTOTAL (AMPS): 50 | 38 | 46
MAX CONNECTED PHASE 50 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	12.38	100% FIRST 10KVA 50% OTHER	11.19
TOTALS	15.85		14.66

NOTES
1. NOT USED.
2. PANEL IS PROTECTED BY 100A UPSTREAM OCPD.

1NLP2A	1NLP1B	1NLP2B
-	-	-
-	-	-

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JACOBS Consultancy

AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	CD ISSUANCE - NIH	04/14/20
2	BID & PERMIT - NIH	05/22/20

Drawn By: Author
Checked By: Checker
Client Number: 514
Project Number: 15576

STATE OF KENTUCKY ANDREW SCOTT 32083 LICENSED PROFESSIONAL ENGINEER 4/24/2020

DRAWING
ELECTRICAL PHASE 2 FO PANEL SCHEDULES

SHEET NO.
EF-954

5/21/2020 11:04:26 AM

PANELBOARD SCHEDULE

PANEL DESIGNATION 1LLP1A | **LOCATION** LINEAR EQUIP ROOM 151C | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **3 PHASE** **4 WIRE** | **FED FROM** 1LLD1
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 60 A | **MOUNTING** Recessed | **FAULT...** 5.3 K AIC

REMARKS

LEFT SIDE, KVA			RIGHT SIDE, KVA										
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
RECEPTACLE FUME HOOD ROOM 151A	20 A 2	1	0.09			0.50			2	1 20 A	CSP L5-20R COL D.5/3
		3		0.09			0.50		4	1 20 A	CSP L5-20R COL D.5/3
CSP L5-20R COL D/3	20 A 1	5			0.50			0.00	6	1 20 A	CSP L5-20R COL D.5/3
CSP L5-20R COL D/3	20 A 1	7	0.50			0.00			8	1 20 A	CSP L5-20R COL D.5/3
CSP L5-20R COL D/3	20 A 1	9		0.00			0.50		10	1 20 A	CSP L5-20R COL D.5/2
CSP L5-20R COL D/3	20 A 1	11			0.00			0.50	12	1 20 A	CSP L5-20R COL D.5/2
CSP L5-20R COL D/2	20 A 1	13	0.50			0.00			14	1 20 A	CSP L5-20R COL D.5/2
CSP L5-20R COL D/2	20 A 1	15		0.50			0.00		16	1 20 A	CSP L5-20R COL D.5/2
CSP L5-20R COL D/2	20 A 1	17			0.00			0.72	18	1 20 A	PROC RM 151B WM REC
CSP L5-20R COL D/2	20 A 1	19	0.00			0.72			20	1 20 A	PROC RM 151B REC
PROC RM 151A WM REC	20 A 1	21		0.54			0.54		22	1 20 A	PROC RM 151B WM REC
PROC RM 151A WM REC	20 A 1	23			0.72			0.18	24	1 20 A	PROC RM 151K REC
GFCI ABOVE CNTR 151...	20 A 1	25	0.18			0.72			26	1 20 A	PROC RM 151K REC
PROC RM 151K REC	20 A 1	27		0.18			0.72		28	1 20 A	PROC RM 151K WM REC
PROC RM 151K WM REC	20 A 1	29			0.54			0.00	30	1 20 A	SPARE
FUME HOOD ROOM 151A	20 A 1	31	0.41			0.00			32	1 20 A	SPARE
FUME HOOD ROOM 151A	20 A 1	33		0.41			0.00		34	1 20 A	SPARE
POWER FUME HOOD...	20 A 1	35			0.41			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 3.62 | 3.98 | 3.57
PHASE SUBTOTAL (AMPS): 30 | 33 | 30
MAX CONNECTED PHASE 33 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	5.94	100% FIRST 10KVA 50% OTHER	5.94
TOTALS	11.17		11.17

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1LLP2A | **LOCATION** PROCEDURE ROOM 151D | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **3 PHASE** **4 WIRE** | **FED FROM** 1LLD1
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 60 A | **MOUNTING** Recessed | **FAULT...** 3.4 K AIC

REMARKS

LEFT SIDE, KVA						RIGHT SIDE, KVA					
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
CSP L5-20R COL D/5	20 A 1	1	0.50			0.50			2	1 20 A	CSP L5-20R COL D.5/5
CSP L5-20R COL D/5	20 A 1	3		0.50			0.50		4	1 20 A	CSP L5-20R COL D.5/5
CSP L5-20R COL D/5	20 A 1	5			0.00			0.00	6	1 20 A	CSP L5-20R COL D.5/5
CSP L5-20R COL D/5	20 A 1	7	0.00			0.00			8	1 20 A	CSP L5-20R COL D.5/5
CSP L5-20R COL D/4	20 A 1	9		0.50			0.50		10	1 20 A	CSP L5-20R COL D.5/4
CSP L5-20R COL D/4	20 A 1	11			0.50			0.50	12	1 20 A	CSP L5-20R COL D.5/4
CSP L5-20R COL D/4	20 A 1	13	0.00			0.00			14	1 20 A	CSP L5-20R COL D.5/4
CSP L5-20R COL D/4	20 A 1	15		0.00			0.00		16	1 20 A	CSP L5-20R COL D.5/4
PROC RM 151E WM REC	20 A 1	17			0.72			0.50	18	1 20 A	CSP L5-20R COL E/4
PROC RM 151E REC	20 A 1	19	0.72			0.50			20	1 20 A	CSP L5-20R COL E/4
PROC RM 151E UC REC	20 A 1	21		0.18			0.00		22	1 20 A	CSP L5-20R COL E/4
PROC RM 151E WM REC	20 A 1	23			0.54			0.00	24	1 20 A	CSP L5-20R COL E/4
GFCI REC ABOVE CNTR	20 A 1	25	0.18			0.72			26	1 20 A	PROC RM 151D WM REC
UCGW	20 A 1	27		0.18			0.72		28	1 20 A	PROC RM 151D REC
GFCI ABOVE CNTR 351...	20 A 1	29			0.18			0.18	30	1 20 A	PROC RM 151D UC REC
SPARE	20 A 1	31	0.00			0.54			32	1 20 A	PROC RM 151D WM REC
SPARE	20 A 1	33		0.00			0.18		34	1 20 A	WATER POLISHER
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 3.66 | 3.26 | 3.12
PHASE SUBTOTAL (AMPS): 31 | 27 | 26
MAX CONNECTED PHASE 31 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	5.04	100% FIRST 10KVA 50% OTHER	5.04
TOTALS	10.04		10.04

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1LLP3A | **LOCATION** PROCEDURE ROOM 151G | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **3 PHASE** **4 WIRE** | **FED FROM** 1LLD1
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 60 A | **MOUNTING** Recessed | **FAULT...** 3.4 K AIC

REMARKS

LEFT SIDE, KVA						RIGHT SIDE, KVA					
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
CSP L5-20R COL E/5	20 A 1	1	0.50			0.50			2	1 20 A	CSP L5-20R COL E/3
CSP L5-20R COL E/5	20 A 1	3		0.50			0.50		4	1 20 A	CSP L5-20R COL E/3
CSP L5-20R COL E/5	20 A 1	5			0.00			0.00	6	1 20 A	CSP L5-20R COL E/3
CSP L5-20R COL E/5	20 A 1	7	0.00			0.00			8	1 20 A	CSP L5-20R COL E/3
PROC ROOM 151F WM...	20 A 1	9		0.72			0.50		10	1 20 A	CSP L5-20R COL E/2
PROC ROOM 151F REC	20 A 1	11			0.72			0.50	12	1 20 A	CSP L5-20R COL E/2
PROC ROOM 151F REC	20 A 1	13	0.18			0.00			14	1 20 A	CSP L5-20R COL E/2
PROC ROOM 151F WM...	20 A 1	15		0.54			0.00		16	1 20 A	CSP L5-20R COL E/2
UCGW	20 A 1	17			0.18			0.54	18	1 20 A	PROC ROOM 151G WM...
WATER POLISHER	20 A 1	19	0.18			0.18			20	1 20 A	PROC ROOM 151G REC
GFCI ABOVE CNTR 151...	20 A 1	21		0.18			0.72		22	1 20 A	PROC ROOM 151G WM...
PROC ROOM 151J WM...	20 A 1	23			0.72			0.90	24	1 20 A	PROC ROOM 151G REC
PROC ROOM 151J REC	20 A 1	25	0.72			0.54			26	1 20 A	PROC ROOM 151J WM...
SPARE	20 A 1	27		0.00			0.18		28	1 20 A	PROC ROOM 151J REC
SPARE	20 A 1	29			0.00			1.25	30	2 20 A	RECEPTACLE PROCEDURE ROOM 151G
SPARE	20 A 1	31	0.00			1.25			32		
SPARE	20 A 1	33		0.00			1.25		34	2 20 A	RECEPTACLE PROCEDURE ROOM 151G
SPARE	20 A 1	35			0.00			1.25	36		
SPARE	20 A 1	37	0.00			1.25			38	2 20 A	RECEPTACLE PROCEDURE ROOM 151G
SPARE	20 A 1	39		0.00			1.25		40		
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 5.30 | 6.34 | 6.06
PHASE SUBTOTAL (AMPS): 44 | 54 | 51
MAX CONNECTED PHASE 54 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	14.69	100% FIRST 10KVA 50% OTHER	12.34
TOTALS	17.69		15.34

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1LLP1B | **LOCATION** PROCEDURE ROOM 152B | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **3 PHASE** **4 WIRE** | **FED FROM** 1LLD2
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 60 A | **MOUNTING** Recessed | **FAULT...** 5.2 K AIC

REMARKS

LEFT SIDE, KVA						RIGHT SIDE, KVA					
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
FUME HOOD 152K 208V, 1PH REC	20 A 2	1	1.25			0.50			2	1 20 A	CSP L5-20R COL D.5/3
		3		1.25			0.50		4	1 20 A	CSP L5-20R COL D.5/3
CSP L5-20R COL D/3	20 A 1	5			0.50			0.00	6	1 20 A	CSP L5-20R COL D.5/3
CSP L5-20R COL D/3	20 A 1	7	0.50			0.00			8	1 20 A	CSP L5-20R COL D.5/3
CSP L5-20R COL D/3	20 A 1	9		0.00			0.00		10	1 20 A	CSP L5-20R COL D.5/3
CSP L5-20R COL D/3	20 A 1	11			0.00			0.54	12	1 20 A	CSP L5-20R COL D.5/3
CSP L5-20R COL D/3	20 A 1	13	0.50			0.00			14	1 20 A	CSP L5-20R COL D.5/3
CSP L5-20R COL D/3	20 A 1	15		0.50			0.00		16	1 20 A	CSP L5-20R COL D.5/3
CSP L5-20R COL D/3	20 A 1	17			0.00			0.54	18	1 20 A	PROC RM 152B WM REC
CSP L5-20R COL D/3	20 A 1	19	0.00			0.18			20	1 20 A	PROC RM 152B REC
FUME HOOD ROOM 152K	20 A 1	21		0.54			0.72		22	1 20 A	PROC RM 152A WM REC
FUME HOOD ROOM 152K	20 A 1	23			0.72			0.72	24	1 20 A	PROC RM 152A REC
PROC RM 152B WM REC	20 A 1	25	0.72			1.08			26	1 20 A	PROC RM 152B REC
PROC RM 152A WM REC	20 A 1	27		0.54			0.18		28	1 20 A	PROC RM 152A REC
FUME HOOD ROOM 152K	20 A 1	29			0.00			0.00	30	1 20 A	SPARE
FUME HOOD ROOM 152K	20 A 1	31	0.00			0.00			32	1 20 A	SPARE
FUME HOOD ROOM 152K	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 4.73 | 4.73 | 2.98
PHASE SUBTOTAL (AMPS): 42 | 42 | 25
MAX CONNECTED PHASE 42 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	8.44	100% FIRST 10KVA 50% OTHER	8.44
TOTALS	12.44		12.44

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1LLP2B | **LOCATION** PROCEDURE ROOM 152D | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **3 PHASE** **4 WIRE** | **FED FROM** 1LLD2
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 60 A | **MOUNTING** Recessed | **FAULT...** 3.4 K AIC

REMARKS

LEFT SIDE, KVA						RIGHT SIDE, KVA					
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
CSP L5-20R COL B/5	20 A 1	1	0.50			0.50			2	1 20 A	CSP L5-20R COL B.5/5
CSP L5-20R COL B/5	20 A 1	3		0.50			0.50		4	1 20 A	CSP L5-20R COL B.5/5
CSP L5-20R COL B/5	20 A 1	5			0.00			0.00	6	1 20 A	CSP L5-20R COL B.5/5
CSP L5-20R COL B/5	20 A 1	7	0.00			0.00			8	1 20 A	CSP L5-20R COL B.5/5
CSP L5-20R COL B/4	20 A 1	9		0.50			0.50		10	1 20 A	CSP L5-20R COL B.5/4
CSP L5-20R COL B/4	20 A 1	11			0.50			0.50	12	1 20 A	CSP L5-20R COL B.5/4
CSP L5-20R COL B/4	20 A 1	13	0.00			0.00			14	1 20 A	CSP L5-20R COL B.5/4
CSP L5-20R COL B/4	20 A 1	15		0.00			0.00		16	1 20 A	CSP L5-20R COL B.5/4
PROC RM 152E WM REC	20 A 1	17			0.72			0.72	18	1 20 A	PROC RM 152D WM REC
PROC RM 152E REC	20 A 1	19	1.08			0.72			20	1 20 A	PROC RM 152D REC
PROC RM 152E WM REC	20 A 1	21		0.18			0.18		22	1 20 A	PROC RM 152D REC
WATER POLISHER	20 A 1	23			0.54			0.54	24	1 20 A	PROC RM 152D WM REC
UCGW	20 A 1	25	0.18			0.36			26	1 20 A	RECEPTACLE LAB...
SPARE	20 A 1	27		0.18			0.00		28	1 20 A	SPARE
SPARE	20 A 1	29			0.00			0.00	30	1 20 A	SPARE
SPARE	20 A 1	31	0.00			0.00			32	1 20 A	SPARE
SPARE	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 3.34 | 2.54 | 3.52
PHASE SUBTOTAL (AMPS): 29 | 21 | 30
MAX CONNECTED PHASE 30 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	5.40	100% FIRST 10KVA 50% OTHER	5.40
TOTALS	9.40		9.40

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1LLP3B | **LOCATION** PROCEDURE ROOM 152G | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **3 PHASE** **4 WIRE** | **FED FROM** 1LLD2
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 60 A | **MOUNTING** Recessed | **FAULT...** 3.4 K AIC

REMARKS

LEFT SIDE, KVA						RIGHT SIDE, KVA					
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
CSP L5-20R COL C/5	20 A 1	1	0.50			0.50			2	1 20 A	CSP L5-20R COL C/3
CSP L5-20R COL C/5	20 A 1	3		0.50			0.50		4	1 20 A	CSP L5-20R COL C/3
CSP L5-20R COL C/5	20 A 1	5			0.00			0.00	6	1 20 A	CSP L5-20R COL C/3
CSP L5-20R COL C/5	20 A 1	7	0.00			0.00			8	1 20 A	CSP L5-20R COL C/3
CSP L5-20R COL C/4	20 A 1	9		0.50			0.50		10	1 20 A	CSP L5-20R COL C/2
CSP L5-20R COL C/4	20 A 1	11			0.50			0.50	12	1 20 A	CSP L5-20R COL C/2
CSP L5-20R COL C/4	20 A 1	13	0.00			0.00			14	1 20 A	CSP L5-20R COL C/2
CSP L5-20R COL C/4	20 A 1	15		0.00			0.00		16	1 20 A	CSP L5-20R COL C/2
REC.LAB MODULE 152	20 A 1	17			0.18			0.54	18	1 20 A	PROC RM 152G REC
REC.LAB MODULE 152	20 A 1	19	0.18			0.18			20	1 20 A	PROC RM 152G REC
REC.LAB MODULE 152	20 A 1	21		0.18			0.72		22	1 20 A	PROC RM 152G REC
REC.LAB MODULE 152	20 A 1	23			0.18			0.72	24	1 20 A	PROC RM 152G REC
PROC RM 152F REC	20 A 1	25	0.72			0.72			26	1 20 A	PROC RM 152J REC
PROC RM 152F REC	20 A 1	27		0.72			0.72		28	1 20 A	PROC RM 152J REC
PROC RM 152F REC	20 A 1	29			0.54			0.18	30	1 20 A	PROC RM 152J REC
PROC RM 152F REC	20 A 1	31	0.18			0.54			32	1 20 A	PROC RM 152J REC
SPARE	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 3.52 | 4.34 | 3.34
PHASE SUBTOTAL (AMPS): 30 | 36 | 28
MAX CONNECTED PHASE 36 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	7.20	100% FIRST 10KVA 50% OTHER	7.20
TOTALS	11.20		11.20

NOTES

1LLP1A	1LLP2A	1LLP3A
1LLP1B	1LLP2B	1LLP3B
-	-	-

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HGA

JACOBS Consultancy

AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By EM
Checked By JS
Client Number 514
Project Number 15576

STATE OF KENTUCKY ANDREW SCHMITT 32663 LICENSED PROFESSIONAL ENGINEER 4/24/2020

DRAWING
ELECTRICAL PHASE 2 FO NORMAL LAB PANEL SCHEDULES

SHEET NO.
EF-973

5/21/2020 11:04:31 AM

PANELBOARD SCHEDULE

PANEL DESIGNATION 1CLP1A | **LOCATION** PROCEDURE ROOM 151B | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **PHASE** 3 | **WIRE** 4 | **FED FROM** 1CLD2
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 100 A | **MOUNTING** Recessed | **FAULT...** 6.1 K AIC

REMARKS

LEFT SIDE, KVA				RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
REC LER 151C	20 A 1	1	1.00			0.50			2	1 20 A	BAS PANEL FLOOR 1
RECEPTACLE LINEAR EQUIP ROOM 151C	20 A 2	3		0.09			0.50		4	1 20 A	BAS PANEL FLOOR 1
		5			0.09			0.50	6	1 20 A	BAS PANEL FLOOR 1
REC LER 151C	20 A 1	7	1.00			0.50			8	1 20 A	BAS PANEL FLOOR 1
REC LER 151C	20 A 1	9		1.00			0.50		10	1 20 A	BAS PANEL FLOOR 1
RECEPTACLE LINEAR EQUIP ROOM 151C	20 A 2	11			0.09			0.50	12	1 20 A	BAS PANEL FLOOR 1
		13	0.09			0.50			14	1 20 A	BAS PANEL FLOOR 1
REC LER 151C	20 A 1	15		1.00			0.00		16	1 20 A	POWER BAS CLOSET...
REC LER 151C	20 A 1	17			1.00			0.00	18	1 20 A	POWER BAS CLOSET...
REC LER 151C	20 A 1	19	1.00			0.00			20	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 151C	20 A 2	21		0.09			0.00		22	1 20 A	SPARE
		23			0.09			0.00	24	1 20 A	SPARE
REC. PROC ROOM 151B	20 A 1	25	0.72			0.00			26	1 20 A	SPARE
REC. PROC ROOM 151A	20 A 1	27		0.36			0.00		28	1 20 A	SPARE
SPARE	20 A 1	29			0.00			0.00	30	1 20 A	SPARE
SPARE	20 A 1	31	0.00			0.00			32	1 20 A	SPARE
SPARE	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 5.31 | 3.54 | 2.27
PHASE SUBTOTAL (AMPS): 46 | 31 | 19
MAX CONNECTED PHASE 46 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	11.12	100% FIRST 10KVA 50% OTHER	10.56
TOTALS	11.12		10.56

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1CLP2A | **LOCATION** PROCEDURE ROOM 151E | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **PHASE** 3 | **WIRE** 4 | **FED FROM** 1CLD2
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 100 A | **MOUNTING** Recessed | **FAULT...** 6.1 K AIC

REMARKS

LEFT SIDE, KVA				RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
REC.PROC RM 151E	20 A 1	1	0.72			0.00			2	1 20 A	SPARE
REC.PROC RM 151D	20 A 1	3		0.72			0.00		4	1 20 A	SPARE
REC LER 151C	20 A 1	5			1.00			0.00	6	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 151C	20 A 2	7	0.09			0.00			8	1 20 A	SPARE
		9		0.09			0.00		10	1 20 A	SPARE
REC LER 151C	20 A 1	11			1.00			0.00	12	1 20 A	SPARE
REC LER 151C	20 A 1	13	1.00			0.00			14	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 151C	20 A 2	15		0.09			0.00		16	1 20 A	SPARE
		17			0.09			0.00	18	1 20 A	SPARE
REC LER 151C	20 A 1	19	1.00			0.00			20	1 20 A	SPARE
REC LER 151C	20 A 1	21		1.00			0.00		22	1 20 A	SPARE
REC LER 151C	20 A 1	23			1.00			0.00	24	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 151C	20 A 2	25	0.09			0.00			26	1 20 A	SPARE
		27		0.09			0.00		28	1 20 A	SPARE
SPARE	20 A 1	29			0.00			0.00	30	1 20 A	SPARE
SPARE	20 A 1	31	0.00			0.00			32	1 20 A	SPARE
SPARE	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 2.90 | 1.99 | 3.09
PHASE SUBTOTAL (AMPS): 25 | 17 | 27
MAX CONNECTED PHASE 27 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	7.98	100% FIRST 10KVA 50% OTHER	7.98
TOTALS	7.98		7.98

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1CLP3A | **LOCATION** PROCEDURE ROOM 151F | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **PHASE** 3 | **WIRE** 4 | **FED FROM** 1CLD2
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 100 A | **MOUNTING** Recessed | **FAULT...** 6.1 K AIC

REMARKS

LEFT SIDE, KVA				RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
RECEPTACLE IDF 142	20 A 1	1	0.36			1.11			2	20 A 3	POWER STERILIZER ALCOVE 151H2
REC.PROCEDURE RM...	20 A 1	3		0.72			1.11		4		
REC.PROCEDURE RM...	20 A 1	5			0.72			1.11	6		
REC.LINEAR EQUIP RM 151H	20 A 2	7	1.25			1.08			8	1 20 A	RECEPTACLE IDF 142
		9		1.25			1.00		10	1 20 A	SEC ACCESS PANEL
REC.LINEAR EQUIP RM...	20 A 1	11			0.18			0.00	12	1 20 A	SPARE
REC.LINEAR EQUIP RM...	20 A 1	13	0.18			0.00			14	1 20 A	SPARE
REC.LINEAR EQUIP RM...	20 A 1	15		0.18			0.00		16	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 151H	20 A 2	17			1.25			0.00	18	1 20 A	SPARE
		19	1.25			0.00			20	1 20 A	SPARE
REC.LINEAR EQUIP RM...	20 A 1	21		0.18			0.00		22	1 20 A	SPARE
REC.LINEAR EQUIP RM...	20 A 1	23			0.18			0.00	24	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 151H	20 A 2	25	1.25			0.00			26	1 20 A	SPARE
		27		1.25			0.00		28	1 20 A	SPARE
REC.LINEAR EQUIP RM...	20 A 1	29			0.18			0.00	30	1 20 A	SPARE
CONTROL POWER	20 A 1	31	0.50			0.00			32	1 20 A	SPARE
SPARE	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 6.97 | 5.69 | 3.62
PHASE SUBTOTAL (AMPS): 61 | 50 | 30
MAX CONNECTED PHASE 61 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	12.95	100% FIRST 10KVA 50% OTHER	11.47
TOTALS	16.28		14.80

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1CLP4A | **LOCATION** PROCEDURE ROOM 151J | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **PHASE** 3 | **WIRE** 4 | **FED FROM** 1CLD2
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 100 A | **MOUNTING** Recessed | **FAULT...** 6.1 AIC

REMARKS

LEFT SIDE, KVA				RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
RECEPTACLE LINEAR EQUIP ROOM 151H	20 A 2	1	1.25			1.11			2	20 A	POWER STER, ALCOVE 151H2
		3		1.25			1.11		4	3	
REC LER 151H	20 A 1	5			0.18			1.11	6		
REC LER 151H	20 A 1	7	0.18			0.50			8	1 20 A	RECEPTACLE
REC LER 151H	20 A 1	9		0.18			0.00		10	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 151H	20 A 2	11			1.25			0.00	12	1 20 A	SPARE
		13	1.25			0.00			14	1 20 A	SPARE
REC LER 151H	20 A 1	15		0.18			0.00		16	1 20 A	SPARE
REC LER 151H	20 A 1	17			0.18			0.00	18	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 151H	20 A 2	19	1.25			0.00			20	1 20 A	SPARE
		21		1.25			0.00		22	1 20 A	SPARE
REC LER 151H	20 A 1	23			0.18			0.00	24	1 20 A	SPARE
REC.PROCE RM 151J	20 A 1	25	0.72			0.00			26	1 20 A	SPARE
REC.PROCE RM 151K	20 A 1	27		0.72			0.00		28	1 20 A	SPARE
SPARE	20 A 1	29			0.00			0.00	30	1 20 A	SPARE
SPARE	20 A 1	31	0.00			0.00			32	1 20 A	SPARE
SPARE	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 6.25 | 4.69 | 2.90
PHASE SUBTOTAL (AMPS): 54 | 41 | 24
MAX CONNECTED PHASE 54 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	10.51	100% FIRST 10KVA 50% OTHER	10.25
TOTALS	13.84		13.58

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1CLP1B | **LOCATION** LINEAR EQUIP ROOM 152C | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **PHASE** 3 | **WIRE** 4 | **FED FROM** 1CLD3
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 100 A | **MOUNTING** Recessed | **FAULT...** 4.1 AIC

REMARKS

LEFT SIDE, KVA				RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
LER 152C REC	20 A 1	1	0.18			0.72			2	1 20 A	LER 152B REC
RECEPTACLE LINEAR EQUIP ROOM 152C	20 A 2	3		1.25			0.72		4	1 20 A	LER 152B REC
		5			1.25			0.00	6	1 20 A	SPARE
LER 152C REC	20 A 1	7	0.18			0.00			8	1 20 A	SPARE
LER 152C REC	20 A 1	9		0.18			0.00		10	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 152C	20 A 2	11			1.25			0.00	12	1 20 A	SPARE
		13	1.25			0.00			14	1 20 A	SPARE
POWER LER 152C	20 A 1	15		1.00			0.00		16	1 20 A	SPARE
LER 152C REC	20 A 1	17			0.18			0.00	18	1 20 A	SPARE
LER 152C REC	20 A 1	19	0.18			0.00			20	1 20 A	SPARE
LER 152C REC	20 A 1	21		0.18			0.00		22	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 152C	20 A 2	23			1.25			0.00	24	1 20 A	SPARE
		25	1.25			0.00			26	1 20 A	SPARE
SPARE	20 A 1	27		0.00			0.00		28	1 20 A	SPARE
SPARE	20 A 1	29			0.00			0.00	30	1 20 A	SPARE
SPARE	20 A 1	31	0.00			0.00			32	1 20 A	SPARE
SPARE	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 3.76 | 3.33 | 3.92
PHASE SUBTOTAL (AMPS): 32 | 28 | 33
MAX CONNECTED PHASE 33 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	10.01	100% FIRST 10KVA 50% OTHER	10.00
TOTALS	11.01		11.00

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1CLP2B | **LOCATION** PROCEDURE ROOM 152E | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **PHASE** 3 | **WIRE** 4 | **FED FROM** 1CLD3
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22k AIC
MAIN RATING 100 A | **MOUNTING** Recessed | **FAULT...** 4.1 AIC

REMARKS

LEFT SIDE, KVA				RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
REC PROCEDURE ROO...	20 A 1	1	0.72			0.00			2	1 20 A	SPARE
REC PROCEDURE ROO...	20 A 1	3		0.72			0.00		4	1 20 A	SPARE
LER 152C 208V/1PH REC	20 A 2	5			1.25			0.00	6	1 20 A	SPARE
		7	1.25			0.00			8	1 20 A	SPARE
LER 152C 208V/1PH REC	20 A 2	9		1.25			0.00		10	1 20 A	SPARE
		11			1.25			0.00	12	1 20 A	SPARE
LER 152C 208V/1PH REC	20 A 2	13	1.25			0.00			14	1 20 A	SPARE
		15		1.25			0.00		16	1 20 A	SPARE
LER 152C REC	20 A 1	17			0.18			0.00	18	1 20 A	SPARE
LER 152C REC	20 A 1	19	0.18			0.00			20	1 20 A	SPARE
LER 152C REC	20 A 1	21		0.18			0.00		22	1 20 A	SPARE
LER 152C REC	20 A 1	23			0.18			0.00	24	1 20 A	SPARE
LER 152C REC	20 A 1	25	0.18			0.00			26	1 20 A	SPARE
LER 152C REC	20 A 1	27		0.18			0.00		28	1 20 A	SPARE
SPARE	20 A 1	29			0.00			0.00	30	1 20 A	SPARE
SPARE	20 A 1	31	0.00			0.00			32	1 20 A	SPARE
SPARE	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 3.58 | 3.58 | 2.86
PHASE SUBTOTAL (AMPS): 31 | 31 | 24
MAX CONNECTED PHASE 31 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	10.01	100% FIRST 10KVA 50% OTHER	10.00
TOTALS	10.01		10.00

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1CLP3B | **LOCATION** PROCEDURE ROOM 152F | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **PHASE** 3 | **WIRE** 4 | **FED FROM** 1CLD3
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 100 A | **MOUNTING** Recessed | **FAULT...** 4.1 K AIC

REMARKS

LEFT SIDE, KVA				RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
REC PROCEDURE ROO...	20 A 1	1	0.72			0.00			2	1 20 A	SPARE
REC PROCEDURE ROO...	20 A 1	3		0.72			0.00		4	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 152H	20 A 2	5			1.25			0.00	6	1 20 A	SPARE
		7	1.25			0.00			8	1 20 A	SPARE
LER 152H REC	20 A 1	9		0.18			0.00		10	1 20 A	SPARE
LER 152H REC	20 A 1	11			0.18			0.00	12	1 20 A	SPARE
LER 152H REC	20 A 1	13	0.18			0.00			14	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 152H	20 A 2	15		1.25			0.00		16	1 20 A	SPARE
		17			1.25			0.00	18	1 20 A	SPARE
LER 152H REC	20 A 1	19	0.18			0.00			20	1 20 A	SPARE
LER 152H REC	20 A 1	21		0.18			0.00		22	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 152H	20 A 2	23			1.25			0.00	24	1 20 A	SPARE
		25	1.25			0.00			26	1 20 A	SPARE
SPARE	20 A 1	27		0.00			0.00		28	1 20 A	SPARE
SPARE	20 A 1	29			0.00			0.00	30	1 20 A	SPARE
SPARE	20 A 1	31	0.00			0.00			32	1 20 A	SPARE
SPARE	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 3.58 | 2.33 | 3.92
PHASE SUBTOTAL (AMPS): 31 | 19 | 34
MAX CONNECTED PHASE 34 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	9.83	100% FIRST 10KVA 50% OTHER	9.83
TOTALS	9.83		9.83

NOTES

PANELBOARD SCHEDULE

PANEL DESIGNATION 1CLP4B | **LOCATION** PROCEDURE ROOM 152J | **FLOOR** LEVEL 01
VOLTAGE 120/208 Wye | **PHASE** 3 | **WIRE** 4 | **FED FROM** 1CLD3
MAIN TYPE MCB | **BUS RATING** 100 A | **FAULT CURRENT RATING** 22 K AIC
MAIN RATING 100 A | **MOUNTING** Recessed | **FAULT...** 4.1 AIC

REMARKS

LEFT SIDE, KVA				RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
RECEPTACLE LINEAR EQUIP ROOM 152H	20 A 2	1	1.25			0.00			2	1 20 A	SPARE
		3		1.25			0.00		4	1 20 A	SPARE
LER 152H REC	20 A 1	5			0.18			0.00	6	1 20 A	SPARE
LER 152H REC	20 A 1	7	0.18			0.00			8	1 20 A	SPARE
LER 152H REC	20 A 1	9		0.18			0.00		10	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 152H	20 A 2	11			1.25			0.00	12	1 20 A	SPARE
		13	1.25			0.00			14	1 20 A	SPARE
LER 152H REC	20 A 1	15		0.18			0.00		16	1 20 A	SPARE
LER 152H REC	20 A 1	17			0.18			0.00	18	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 152H	20 A 2	19	1.25			0.00			20	1 20 A	SPARE
		21		1.25			0.00		22	1 20 A	SPARE
LER 152H REC	20 A 1	23			0.18			0.00	24	1 20 A	SPARE
RECEPTACLE...	20 A 1	25	0.72			0.00			26	1 20 A	SPARE
FUME HOOD ROOM 152K	20 A 1	27		0.36			0.00		28	1 20 A	SPARE
RECEPTACLE LINEAR EQUIP ROOM 152H	20 A 2	29			1.87			0.00	30	1 20 A	SPARE
		31	1.87			0.00			32	1 20 A	SPARE
SPARE	20 A 1	33		0.00			0.00		34	1 20 A	SPARE
SPARE	20 A 1	35			0.00			0.00	36	1 20 A	SPARE
SPARE	20 A 1	37	0.00			0.00			38	1 20 A	SPARE
SPARE	20 A 1	39		0.00			0.00		40	1 20 A	SPARE
SPARE	20 A 1	41			0.00			0.00	42	1 20 A	SPARE

PHASE SUBTOTALS (KVA): 6.52 | 3.22 | 3.66
PHASE SUBTOTAL (AMPS): 55 | 27 | 31
MAX CONNECTED PHASE 55 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING		125%	
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE	13.39	100% FIRST 10KVA 50% OTHER	11.70
TOTALS	13.39		11.70

NOTES

1CLP1A	1CLP2A	1CLP3A
1CLP4A	1CLP1B	1CLP2B
1CLP3B	1CLP4B	-

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AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By: EM
Checked By: JS
Client Number: 514
Project Number: 15576

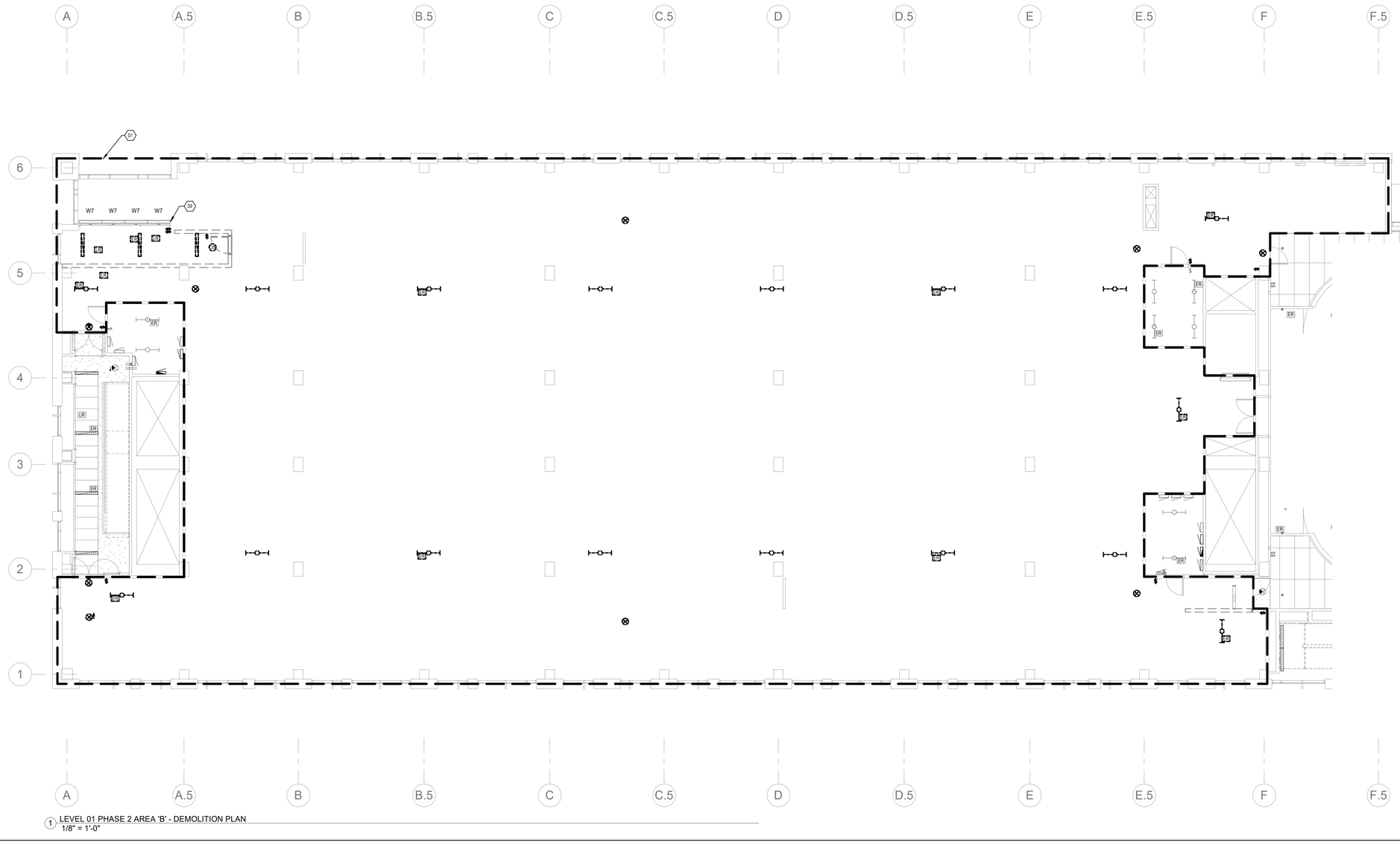
STATE OF KENTUCKY ... LICENSED PROFESSIONAL ENGINEER
4/24/2020

DRAWING
ELECTRICAL PHASE 2 FO CRITICAL LAB PANEL SCHEDULES

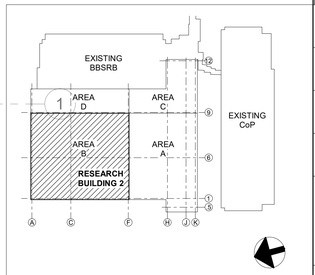
SHEET NO.
EF-984

5/21/2020 11:04:35 AM

TAGGED NOTES	
D1	DEMOLISH LIGHT FIXTURES AND LIGHTING CONTROLS WITHIN THIS BOUNDARY. REMOVE CONDUIT AND CONDUCTORS BACK TO PANEL OR NEAREST JUNCTION BOX IF CIRCUIT MUST TO REMAIN TO SERVE DOWNSTREAM DEVICES. LABEL BREAKERS AS SPARE AS REQUIRED.
D9	SALVAGE 'W7' FIXTURES PRIOR TO START OF CONSTRUCTION, STORE AND PROTECT. REINSTALL IN SAME LOCATION.



1 LEVEL 01 PHASE 2 AREA 'B' - DEMOLITION PLAN
1/8" = 1'-0"



KEY PLAN
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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
LEXINGTON, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By	CJC
Checked By	CJC
Client Number	
Project Number	UKR15

STATE OF KENTUCKY
ALAN R. KELLUM
20186
LICENSED PROFESSIONAL ENGINEER

DRAWING
LEVEL 01 PHASE 2 - LIGHTING DEMOLITION PLAN

SHEET NO.
EL-051

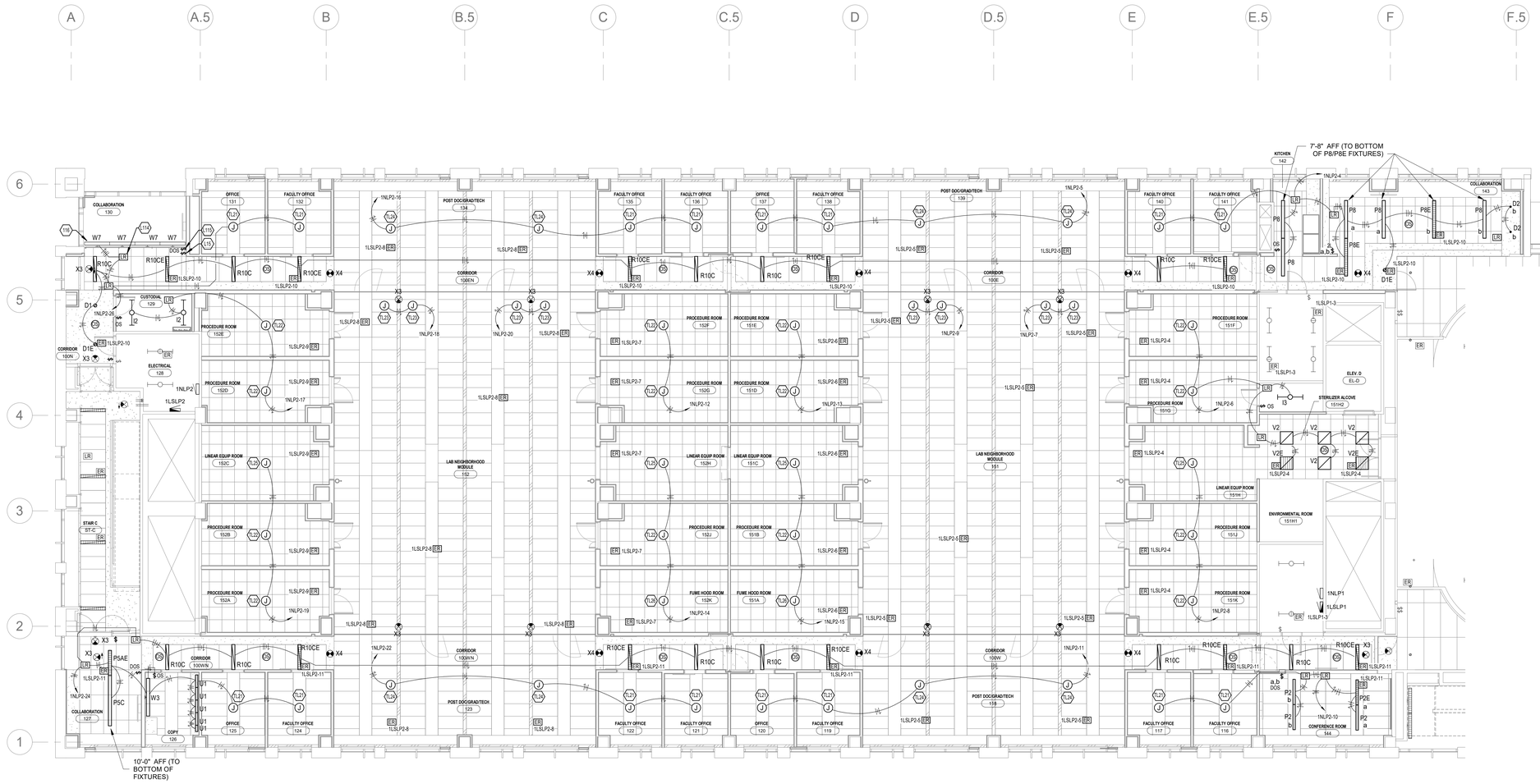
5/22/2020 11:21:29 AM

GENERAL LIGHTING NOTES

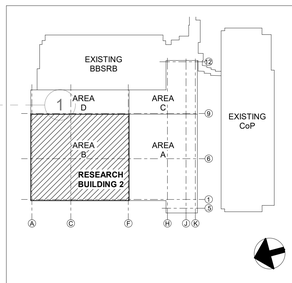
A	FIXTURES TAGGED AS "N/L" (NIGHT-LIGHT) ARE TO BE UNSWITCHED AND REMAIN ILLUMINATED CONTINUOUSLY.
B	EXIT SIGNS ARE TO BE CIRCUITED USING NEAREST UNSWITCHED EMERGENCY CIRCUIT SERVING THE SPACE FIXTURE IS MOUNTED IN. CIRCUITS TO BE #12 WIRE, #12 GROUND IN 3/4" CONDUIT.
C	CONTRACTOR SHALL FOLLOW CIRCUIT LAYOUT WITH THREE (3) BRANCH CIRCUITS MAXIMUM PER HOMERUN.
D	IN SPACES WITH DIMMING CONTROL OR DAYLIGHT HARVESTING: CONTRACTOR IS TO RUN TWO DIMMING CONTROL WIRES TO DRIVER OF EACH FIXTURE TO BE DIMMED.
E	ALL EMERGENCY FIXTURES THAT ARE TO BE DIMMED SHALL BE SERVED BY A ELCR-Z10 OR EQUIVALENT EMERGENCY RELAY TO RETURN FIXTURES TO FULL OUTPUT ON LOSS OF UTILITY POWER.
F	A CIRCUIT NUMBER ACCOMPANYING A LIGHT FIXTURE OR RELAY INDICATES THE EMERGENCY CIRCUIT TO WHICH THE FIXTURE IS CONNECTED.
G	EXTEND AN UNSWITCHED NORMAL SENSING CONDUCTOR TO ALL FIXTURES INDICATED TO BE EMERGENCY.
H	COORDINATE ALL FIXTURE MOUNTING OPTIONS WITH CEILING SHOP DRAWINGS.
I	COORDINATE STRIP LIGHTS WITH EQUIPMENT LOCATIONS TO PROVIDE EVEN ILLUMINATION AROUND AREAS REQUIRING ACCESS.
K	IN BASEMENT CORRIDORS WITH NO CEILING PROVIDE UNISTRUT FRAMING TO MOUNT LIGHTING BELOW DUCTWORK WHERE CONFLICT EXISTS. MAINTAIN LIGHTS CENTERED IN CORRIDOR.
L	ALL VIVARIUM DEVICE PLATES AND COVERS TO BE STAINLESS STEEL. THIS INCLUDES RESEARCH LAB, PROCEDURE ROOM, ISOLATION CUBICLE, ISOLATION PREP, AND VIVARIUM CORRIDORS.

TAGGED NOTES

116	
L15	PROVIDE DUAL-GANG ROUGH-IN FOR SHADE CONTROL OVERRIDE SWITCH. EXTEND 1" CONDUIT TO SHADE CONTROLLER AND PROVIDE PULL STRING. COORDINATE LOCATION OF SHADE CONTROLLER.
L114	INTERCEPT WIRING OF EXISTING W7 AND P2 FIXTURES AND PROVIDE NEW LIGHTING RELAY. P2 FIXTURES LOCATED ON SECOND FLOOR.
L115	PROVIDE DIMMING OCCUPANCY SENSOR SWITCH FOR CONTROL OF EXISTING W7 AND P2 FIXTURES. P2 FIXTURES LOCATED ON SECOND FLOOR. PROVIDE PROGRAMMING TO ACHIEVE CONTROL SPECIFIED IN SEQUENCE OF OPERATION.
TL21	REFER TO TYPICAL SMALL OFFICE LIGHTING PLAN ON EL-550.
TL22	REFER TO TYPICAL PROCEDURE ROOM LIGHTING PLAN ON EL-550.
TL23	REFER TO TYPICAL LAB NEIGHBORHOOD MODULE LIGHTING PLAN ON EL-550
TL24	REFER TO TYPICAL POST DOC/GRAD/TECH LIGHTING PLAN ON EL-550
TL25	REFER TO TYPICAL LINEAR EQUIP ROOM LIGHTING PLAN ON EL-550
TL26	REFER TO TYPICAL FUME HOOD ROOM LIGHTING PLAN ON EL-550



1 LEVEL 01 PHASE 2 FITOUT - AREA 'B' - LIGHTING PLAN
1/8" = 1'-0"



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Drawn By CJC
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Client Number
Project Number UKR15

STATE OF KENTUCKY · ALAN R. KELLUM · 20166 · LICENSED PROFESSIONAL ENGINEER

DRAWING
LEVEL 01 PHASE 2 FITOUT - AREA 'B' - LIGHTING PLAN

SHEET NO.
EL-151B

5/21/2020 4:07:46 PM

LIGHTING CONTROL SEQUENCE OF OPERATIONS:

AFTER FINAL COMPLETION OF PROJECT: LIGHTING CONTROLS CONTRACTOR SHALL MAKE FOLLOW-UP VISIT TO SITE FOR ADJUSTMENT OF LIGHTING CONTROL SETTINGS AND DIMMING LEVELS TO MEET OWNER REQUIREMENTS. EXACT ADJUSTMENTS TO BE MADE SHALL BE COORDINATED WITH ENGINEER PRIOR TO ADJUSTMENT.

A. PUBLIC CORRIDORS, VESTIBULES, LOBBIES, AND CONTIGUOUS OPEN GATHERING SPACES:
   1. LIGHTING IS TO BE CONTROLLED BY TIME-OF-DAY FUNCTION DIRECTLY FROM NETWORKED CENTRAL LIGHTING CONTROL PANELS. CONTROL PANELS ARE TO COMMUNICATE DIRECTLY WITH THE MEDICAL CENTER DDC SYSTEM. FIXTURES SHALL BE DIMMED AND HAVE DAYLIGHT HARVESTING CONTROL INITIATED FROM LOCAL CEILING-MOUNT SENSORS WHERE SHOWN ON PLANS.
B. CONTROLLED ACCESS CORRIDORS:
   1. LIGHTING IS TO BE CONTROLLED BY CEILING MOUNTED OCCUPANCY SENSORS AND LOCAL OVERRIDE SWITCHES LOCATED AT THE END OF EACH CORRIDOR. FIXTURES SHALL BE DIMMED AND HAVE DAYLIGHT HARVESTING CONTROL INITIATED FROM LOCAL CEILING-MOUNT SENSORS WHERE SHOWN ON PLANS. FIXTURES SHALL TURN OFF 15 MINUTES AFTER OCCUPANTS ARE NO LONGER SENSED.
C. PRIVATE OFFICES:
   1. LIGHTING IS TO BE ON-OFF SWITCHED AND DIMMED VIA WALL-BOX VACANCY SENSOR WITH MANUAL OVERRIDE. SENSORS SHALL TURN LIGHTING OFF 30 MINUTES AFTER OCCUPANTS ARE NO LONGER SENSED. LIGHTING NOT CONNECTED TO THE CENTRAL LIGHTING CONTROL SYSTEM. RECEPTACLE LOADS SHALL BE SWITCHED VIA TIME OF DAY SCHEDULES THROUGH THE NETWORKED CENTRAL LIGHTING CONTROL SYSTEM. SCHEDULES TO BE PROVIDED BY OWNER.
D. LABORATORIES:
   1. LIGHTING IS SWITCHED AND DIMMED VIA MULTI-ZONE CONTROL STATION(S). CEILING MOUNTED VACANCY SENSORS SHALL TURN LIGHTING OFF 30 MINUTES AFTER OCCUPANTS ARE NO LONGER SENSED. NOT CONNECTED TO THE CENTRAL LIGHTING CONTROL SYSTEM.
E. SMALL CONFERENCE AND COLLABORATION ROOMS:
   1. LIGHTING IS TO BE SWITCHED AND DIMMED VIA A LOCAL CONTROL STATION. IF LIGHTING IS NOT SWITCHED OFF A CEILING MOUNTED VACANCY SENSOR SHALL TURN LIGHTING OFF 30 MINUTES AFTER OCCUPANCY IS NO LONGER SENSED. THE CONTROL STATION AND OCCUPANCY SENSOR(S) AS SHOWN ON PLANS. NOT CONNECTED TO THE CENTRAL LIGHTING CONTROL SYSTEM.
F. POST DOC/GRAD TECH:
   1. LIGHTING IS TO BE CONTROLLED BY MULTI-ZONE LOW VOLTAGE CONTROL STATIONS AND CEILING MOUNTED OCCUPANCY SENSORS NETWORKED TO DIMMING POWER PACKS. FIXTURES SHALL BE DIMMED AND HAVE DAYLIGHT HARVESTING CONTROL INITIATED FROM LOCAL FIXTURE MOUNTED PHOTOSENSORS. FIXTURES SHALL TURN OFF 30 MINUTES AFTER OCCUPANTS ARE NO LONGER SENSED. NOT CONNECTED TO THE CENTRAL LIGHTING CONTROL SYSTEM.
G. LINEAR EQUIPMENT ROOM:
   1. LIGHTING IS TO BE SWITCHED AND DIMMED BY LOW VOLTAGE CONTROL STATIONS AND CEILING MOUNTED VACANCY SENSORS. FIXTURES SHALL TURN OFF 15 MINUTES AFTER OCCUPANTS ARE NO LONGER SENSED. NOT CONNECTED TO THE CENTRAL LIGHTING CONTROL SYSTEM.
H. PROCEDURE ROOM:
   1. LIGHTING IS TO BE SWITCHED AND DIMMED BY LOW VOLTAGE CONTROL STATIONS. NOT CONNECTED TO THE CENTRAL LIGHTING CONTROL SYSTEM.
I. FUME HOOD ROOM:
   1. LIGHTING IS TO BE SWITCHED AND DIMMED BY LOW VOLTAGE CONTROL STATIONS AND CEILING MOUNTED VACANCY SENSORS. FIXTURES SHALL TURN OFF 15 MINUTES AFTER OCCUPANTS ARE NO LONGER SENSED. NOT CONNECTED TO THE CENTRAL LIGHTING CONTROL SYSTEM.
J. MISCELLANEOUS SPACES:
   1. LIGHTING IS TO BE CONTROLLED BY LOW VOLTAGE CONTROL STATIONS AND CEILING MOUNTED VACANCY SENSORS. FIXTURES SHALL TURN OFF 15 MINUTES AFTER OCCUPANTS ARE NO LONGER SENSED. THE SPACE IS NOT CONNECTED TO THE CENTRAL LIGHTING CONTROL SYSTEM.

LIGHT FIXTURE SCHEDULE - PHASE 2 NIH

GENERAL NOTES (APPLICABLE TO ALL):
A. ALL FLUORESCENT LAMPS SUPPLIED SHALL CONTAIN LESS THAN 35 PICOGRAMS OF MERCURY PER LUMEN-HOUR TO COMPLY WITH LEED REQUIREMENTS.
B. THE ELECTRICAL CONTRACTOR SHALL PULL TWO ADDITONAL CONDUCTORS IN A SEPARATE RACEWAY WHERE 0-10 VOLT DIMMING IS REQUIRED.
C. POINT-BY-POINT CALCULATIONS FOR THE LABS, RESEARCH ROOMS, PROCEDURE ROOMS, CONFERENCE ROOMS AND OFFICES ARE REQUIRED. MANUFACTURERS WISHING TO BID THIS PROJECT MUST SUBMIT ORIGINAL FIXTURE BROCHURES, AND ELECTRONIC FILE (VISUAL OR AGI32) POINT-BY-POINT CALCULATIONS, TEN (10) DAYS PRIOR TO BID FOR WRITTEN APPROVAL.
D. FIXTURES MOUNTED IN CONTINUOUS RUNS SHALL HAVE A SEEMLESS/CONTINUOUS LENS FOR THE ENTIRE LENGTH OF THE FIXTURE.
E. CONTRACTOR SHALL COORDINATE SUSPENSION CABLE LENGTHS IN AREAS WITH SLOPED CEILINGS AND FIELD ADJUST SUCH THAT BOTTOM OF FIXTURE IS PARALLEL TO FLOOR.
F. CABLE SUSPENSION LOCATIONS FOR LAB NEIGHBORHOOD MODULE AND POST DOC GRAD TECH PENDANTS ARE INDICATED ON DRAWINGS. INTENT IS TO COORDINATE WITH CEILING MOUNT DEVICES DIRECTLY ABOVE PENDANTS. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO ORDERING TO FINALIZE FIXTURE LENGTHS.
G. FINISHES TO BE SELECTED BY ARCHITECT.
H. ALL FIXTURES SHALL HAVE A MINIMUM 5 YEAR WARRANTY FROM MANUFACTURER AND BE FURNISHED WITH WARRANTY CERTIFICATES.

1. REMOTE EMERGENCY 20 AMP BYPASS RELAY SHALL HAVE INTEGRAL TEST SWITCH AND GREEN LED, RED LED INDICATING EMERGENCY POWER, A YELLOW LED INDICATING UTILITY POWER, WARNING LABEL ADHERED TO BALLAST CHANNEL, CONTACTS TO PROVIDE FULL ON FROM 0-10 VOLT DIMMED LIGHTING LOADS AND UL 924 LISTING. UNIT SHALL BE SUPPLIED TO BE INSTALLED IN A 4-11/16" JUNCTION BOX. THIS UNIT WILL BE PROVIDED WITH A WHITE ARCHITECTURAL GRADE FACEPLATE FOR A CLEAN APPEARANCE WHEN RECESSED IN CEILING. CENTER IN CEILING TILE. EMERGENCY LIGHTS ON THE SAME SWITCHED-LEG MAY BE INSTALLED ON A SINGLE BYPASS RELAY.
2. FIXTURE TO BE CIRCUITED TO NEAREST UNSWITCHED EMERGENCY LIGHTING CIRCUIT.
3. FIXTURE TO REQUIRE CAULKING BETWEEN HOUSING AND CEILING. REFER TO MANUFACTURER REQUIREMENTS AND INSTRUCTIONS. CEILING CUTOUT SIZE TO BE CAREFULLY COORDINATION TO ENSURE MAXIMUM SEAL BETWEEN HOUSING AND CEILING.

TYPE	DESCRIPTION	BASIS OF DESIGN	EQUALS	LAMPS	LUMENS	BALLAST/ DRIVER	VOLTAGE	MAXIMUM WATTAGE	MOUNTING	REMARKS
D1	6" ROUND LED DOWNLIGHT WITH SELF-FLANGED MATTE DIFFUSE FINISHING TRIM, POLYCARBONATE LENS INTEGRAL TO LIGHT ENGINE, LED COLOR MIXING CHAMBER, 45° CUT-OFF TO SOURCE, 1000 LUMEN OUTPUT, 11.8 INPUT WATTS, 16-GAUGE GALVANIZED STEEL MOUNTING BARS, 4" VERTICAL ADJUSTMENT, GALVANIZED STEEL JUNCTION BOX WITH HINGED ACCESS COVERS AND SPRING LATCH, SOLID STATE 4000K LIGHT ENGINE, 100-10% SOLID STATE 0-10 VOLT DIMMING DRIVER, 60,000 HOUR LED LIFE AT 70% LUMEN OUTPUT, UL LISTING FOR DAMP LOCATIONS, AND 3-YEAR LIMITED WARRANTY.	GOTHAM EVO-40/10-6AR-MWD-LSS-MVOLT-EZ10	PORTFOLIO LD6B SERIES APPROVED EQUAL	4000K LED	1055	0-10V DIM TO 10%	120 V	12 W	CEIL.	-
D1E	SAME AS PARENT FIXTURE TYPE EXCEPT TO BE CIRCUITED THROUGH A REMOTE EMERGENCY 20 AMP BYPASS RELAY. REFER TO REMARKS FOR MORE INFORMATION.	-	-	-	-	-	120 V	37 W	-	1
D2	4" ROUND LED DOWNLIGHT WITH SELF-FLANGED MATTE DIFFUSE FINISHING TRIM, POLYCARBONATE LENS INTEGRAL TO LIGHT ENGINE, LED COLOR MIXING CHAMBER, 45° CUT-OFF TO SOURCE, 750 LUMEN OUTPUT, 10.3 INPUT WATTS, 16-GAUGE GALVANIZED STEEL MOUNTING BARS, 4" VERTICAL ADJUSTMENT, GALVANIZED STEEL JUNCTION BOX WITH HINGED ACCESS COVERS AND SPRING LATCH, SOLID STATE 4000K LIGHT ENGINE, 100-10% SOLID STATE 0-10 VOLT DIMMING DRIVER, 60,000 HOUR LED LIFE AT 70% LUMEN OUTPUT, UL LISTING FOR DAMP LOCATIONS, AND 3-YEAR LIMITED WARRANTY.	GOTHAM EVO-40/07-4AR-MWD-LSS-MVOLT-EZ10	PORTFOLIO LD6B SERIES APPROVED EQUAL	4000K LED	886	0-10V DIM TO 10%	120 V	10 W	CEIL.	-
I3	CHAIN HUNG LED STRIP LIGHT WITH 20 GAUGE STEEL HOUSING, HIGH GLOSS BAKED WHITE ENAMEL FINISH, REPLACEABLE MEDIUM DIFFUSE ACRYLIC LENS, HIGH OUTPUT LEDS ON TWO LAYER CIRCUIT BOARD, ELECTRONIC LED DRIVER, 7000 DELIVERED LUMENS, 80 CRI, 85% OUTPUT AT 44,000 HOURS, CSA LISTED FOR DAMP LOCATIONS, AND FIVE YEAR LIMITED WAARRANTY.	LITHONIA ZL1N-L48-7000LM-FST-MVOLT-40K-80CRI-WH	METALUX SNLED SERIES APPROVED EQUAL	4000K LED	6849	LED DRIVER	120 V	67 W	CHAIN HUNG	-
P1	PENDANT MOUNTED LED WITH EXTRUDED ALUMINUM HOUSING, SCULPTED DIE-CAST ALUMINUM END CAPS MECHANICALLY ATTACHED WITH NO EXPOSED FASTENERS, 4000K 80CRI WITHIN 2.5 MACADAM ELLIPSES LED ARRAY, CAPABLE OF 600 DELIVERED LUMENS PER FOOT INDIRECT, 800 DELIVERED LUMENS PER FOOT DIRECT, INJECTION MOLDED BATWING DISTRIBUTION INDIRECT, HIGH PERFORMANCE FLM OPTIC DOWN, REMOTE MOUNTED DIM TO 1% 0-10 VOLT DIMMABLE DRIVER, L90 RATED LIFE OF 60,000 HOURS, UL LISTING, AND FIVE YEAR LIMITED WARRANTY. PROGRAM DRIVER OUTPUT TO ACHIEVE LUMEN OUTPUT LISTED IN LUMEN COLUMN.	PEERLESS OPM4-###-#-#-80CRI-40K-I600LMF-800LMF-#-ZT-120-SCT-F2-24F-C041-SEP	-	4000K LED	740 / FT	0-10V DIM TO 1%	120 V	28 W	PENDANT 8'-0" AFF	-
P1E	SAME AS PARENT FIXTURE TYPE EXCEPT TO BE CIRCUITED THROUGH A REMOTE EMERGENCY 20 AMP BYPASS RELAY. REFER TO REMARKS FOR MORE INFORMATION.	-	-	-	-	-	120 V	28 W	-	1
P2	PENDANT MOUNTED LED WITH EXTRUDED ALUMINUM HOUSING, SCULPTED DIE-CAST ALUMINUM END CAPS MECHANICALLY ATTACHED WITH NO EXPOSED FASTENERS, 4000K 80CRI WITHIN 2.5 MACADAM ELLIPSES LED ARRAY, CAPABLE OF 600 DELIVERED LUMENS PER FOOT INDIRECT, 500 DELIVERED LUMENS PER FOOT DIRECT, INJECTION MOLDED BATWING DISTRIBUTION INDIRECT, HIGH PERFORMANCE FLM OPTIC DOWN, REMOTE MOUNTED DIM TO 1% 0-10 VOLT DIMMABLE DRIVER, L90 RATED LIFE OF 60,000 HOURS, UL LISTING, AND FIVE YEAR LIMITED WARRANTY.	PEERLESS OPM4-###-#-#-80CRI-40K-I600LMF-500LMF-#-ZT-120-SCT-F2-24F-C041-SEP	-	4000K LED	1231 / FT	0-10V DIM TO 1%	120 V	47 W	PENDANT 8'-0" AFF	-
P2E	SAME AS PARENT FIXTURE TYPE EXCEPT TO BE CIRCUITED THROUGH A REMOTE EMERGENCY 20 AMP BYPASS RELAY. REFER TO REMARKS FOR MORE INFORMATION.	-	-	-	-	-	120 V	47 W	-	1
P5AE	SAME AS PARENT FIXTURE TYPE EXCEPT TO BE CIRCUITED THROUGH A REMOTE EMERGENCY 20 AMP BYPASS RELAY. REFER TO REMARKS FOR MORE INFORMATION.	-	-	-	-	-	120 V	36 W	-	1
P5C	SAME AS 'P5A' EXCEPT 8 FOOT LENGTH.	-	-	-	-	-	120 V	72 W	-	-
P8	PENDANT MOUNTED 6'-0" DIRECT/INDIRECT LED WITH EXTRUDED ALUMINUM RAILS, DIE-CAST ALUMINUM END-CAPS, 0.125" THICK EXTRUDED ACRYLIC LENS, 1000 DELIVERED LUMENS PER FOOT FROM 4000K LED ARRAY, WHITE SATIN ACRYLIC CANOPIES, LOW VOLTAGE POWER DELIVERED VIA DJUSTABLE AIRCRAFT SUSPENSION/POWER CABLE, 0-10 VOLT DIMMING DRIVERS REMOTE MOUNTED IN METAL ENCLOSURE(S) ABOVE CEILING, UL AND CUL LISTED SUITABLE FOR DRY OR DAMP LOCATIONS, POLYESTER POWDER COAT APPLIED OVER A 5-STAGE PRE–TREATMENT, RATED LIFE OF L90 AT 100,000 HOURS, AND FIVE YEAR LIMITED WARRANTY. LENGTH AND CONFIGURATION AS SHOWN ON DRAWINGS.	FOCAL POINT FNRS-FL60-1000LF-40K-1C-UNV-LD1-G-CLV24-WH-6'	LUMIUM MG3 EQUAL PHILIPS EQUAL	4000K LED	1000 LUMENS/FOOT	0-10V DIM TO 1%	120 V	54 W	PENDANT 8'-0" AFF	-
P8E	SAME AS PARENT FIXTURE TYPE EXCEPT TO BE PROVIDED WITH A REMOTE EMERGENCY 20 AMP BYPASS RELAY. REFER TO REMARKS FOR MORE INFORMATION.	-	-	-	-	-	120 V	54 W	-	1
R10C	RECESSED 6" APERTURE LED WITH EXTRUDED ALUMINUM HOUSING, EXTRUDED ALUMINUM TRIM, FORMED STEEL REFLECTOR, 90% TRANSMISSIVE TEXTURED POLYCARBONATE LENS, 0-10 VOLT DIM TO BLACK 120 VOLT DRIVER, 4000K LED LIGHT ENGINE PRODUCING 625 DELIVERED LUMENS PER FOOT, 7.5 INPUT WATTS PER FOOT, L90 RATED LIFE OF 61,000 HOURS, LIGHTING FACTS LABEL, UL LISTED FOR DRY LOCATIONS, AND FIVE YEAR LIMITED WARRANTY. LENGTH AND CONFIGURATION AS SHOWN ON DRAWINGS AND FIELD VERIFIED.	FOCAL POINT FSM6L-FL-625LF-40K-1C-UNV-LD1-##-WH-#	LUMENWERX VIA 5 SERIES PHILIPS EQUAL	4000K LED	625 LUMENS/FOOT	0-10V DIM TO 10%	120 V	31 W	CEIL.	-
R10CE	SAME AS PARENT FIXTURE TYPE EXCEPT TO BE CIRCUITED THROUGH A REMOTE EMERGENCY 20 AMP BYPASS RELAY. REFER TO REMARKS FOR MORE INFORMATION.	-	-	-	-	-	120 V	31 W	-	1
R14	RECESSED 2X2 VIVARIUM LED WITH HOLE FREE ONE PIECE 20-GAUGE ALUMINUM HOUSING, ONE-PIECE OVERLAPPING STYLE 18-GAUGE ALUMINUM DOOR FRAME HINGED TO HOUSING UTILIZING TWO STAINLESS STEEL CABLES, CAPTIVE STAINLESS STEEL FASTENERS, NSF LISTED CLOSED CELL MICROCELLULAR EXTRUDED KLEANLOCK SEALPRO GASKET UTILIZING VULCANIZED CORNERS TO MAKE A ONE-PIECE OIL AND SOLVENT RESISTANT GASKET SYSTEM, HIGH REFLECTANCE WHITE POLYESTER POWDER COAT FINISH OVER FORMED METAL REFLECTOR, .135" THICK VIRGIN ACRYLIC OUTER LENS, INVERTED P12 PRISMATIC SEALED TO DOOR FRAME, THREE (3) REGULAR OUTPUT 4000 LUMEN 4000K CCT LED ARRAYS, 90 CRI MAINTAINED TO 3.5 SDMC, GLOSS WHITE HIGH REFLECTANCE 1000 HR. SALT SPRAY POLYESTER POWDER COAT FINISH, SUITABLE FOR GRID OR FLANGED INSTALLATION, ETL LISTED FOR WET LOCATIONS, DUST/WATER RESISTANCE RATED IP-66, CERTIFIED ISO-14644-1 CLASSES 3 TO 9 FED. STD. 209E CLASS 1-100,000, AND RATED FOR 1700 PSI HOSEDOWN. THE FIXTURE ACCOMMODATES MOST 1" AND 1.5" T-BAR GRID AS WELL AS HARD CEILING APPLICATIONS. PROGRAM DRIVER OUTPUT TO ACHIEVE LUMEN OUTPUT LISTED IN LUMEN COLUMN. THE FIXTURE SHALL BE PROVIDED WITH A 0-10 VOLT DIMMABLE DRIVER.	KURTZON KL F 5 2X2 3/LEDR 40K UNV	NEWSTAR LIGHTING SCG SERIES PARAMOUNT EQUAL	4000K LED	2890	0-10V DIM TO 1%	120 V	27 W	CEIL.	-
R14A	RECESSED 2X2 VIVARIUM LED WITH HOLE FREE ONE PIECE 20-GAUGE ALUMINUM HOUSING, ONE-PIECE OVERLAPPING STYLE 18-GAUGE ALUMINUM DOOR FRAME HINGED TO HOUSING UTILIZING TWO STAINLESS STEEL CABLES, CAPTIVE STAINLESS STEEL FASTENERS, NSF LISTED CLOSED CELL MICROCELLULAR EXTRUDED KLEANLOCK SEALPRO GASKET UTILIZING VULCANIZED CORNERS TO MAKE A ONE-PIECE OIL AND SOLVENT RESISTANT GASKET SYSTEM, HIGH REFLECTANCE WHITE POLYESTER POWDER COAT FINISH OVER FORMED METAL REFLECTOR, .135" THICK VIRGIN ACRYLIC OUTER LENS, INVERTED P12 PRISMATIC SEALED TO DOOR FRAME, THREE (3) REGULAR OUTPUT 4000 LUMEN 4000K CCT LED ARRAYS, 90 CRI MAINTAINED TO 3.5 SDMC, GLOSS WHITE HIGH REFLECTANCE 1000 HR. SALT SPRAY POLYESTER POWDER COAT FINISH, SUITABLE FOR GRID OR FLANGED INSTALLATION, ETL LISTED FOR WET LOCATIONS, DUST/WATER RESISTANCE RATED IP-66, CERTIFIED ISO-14644-1 CLASSES 3 TO 9 FED. STD. 209E CLASS 1-100,000, AND RATED FOR 1700 PSI HOSEDOWN. THE FIXTURE ACCOMMODATES MOST 1" AND 1.5" T-BAR GRID AS WELL AS HARD CEILING APPLICATIONS. PROGRAM DRIVER OUTPUT TO ACHIEVE LUMEN OUTPUT LISTED IN LUMEN COLUMN. THE FIXTURE SHALL BE PROVIDED WITH A 0-10 VOLT DIMMABLE DRIVER.	KURTZON KL F 5 2X2 3/LEDR 40K UNV	NEWSTAR LIGHTING SCG SERIES PARAMOUNT EQUAL	4000K LED	3250	0-10V DIM TO 1%	120 V	52 W	CEIL.	-
R14AE	SAME AS PARENT FIXTURE TYPE EXCEPT TO BE CIRCUITED THROUGH A REMOTE EMERGENCY 20 AMP BYPASS RELAY. REFER TO REMARKS FOR MORE INFORMATION.	-	-	-	-	-	120 V	27 W	-	1,3
R14E	SAME AS PARENT FIXTURE TYPE EXCEPT TO BE CIRCUITED THROUGH A REMOTE EMERGENCY 20 AMP BYPASS RELAY. REFER TO REMARKS FOR MORE INFORMATION.	-	-	-	-	-	120 V	52 W	-	1,3
R15	RECESSED 2X2 VIVARIUM LED WITH HOLE FREE ONE PIECE 20-GAUGE ALUMINUM HOUSING, ONE-PIECE OVERLAPPING STYLE 18-GAUGE ALUMINUM DOOR FRAME HINGED TO HOUSING UTILIZING TWO STAINLESS STEEL CABLES, CAPTIVE STAINLESS STEEL FASTENERS, NSF LISTED CLOSED CELL MICROCELLULAR EXTRUDED KLEANLOCK SEALPRO GASKET UTILIZING VULCANIZED CORNERS TO MAKE A ONE-PIECE OIL AND SOLVENT RESISTANT GASKET SYSTEM, HIGH REFLECTANCE WHITE POLYESTER POWDER COAT FINISH OVER FORMED METAL REFLECTOR, .135" THICK VIRGIN ACRYLIC OUTER LENS, INVERTED P12 PRISMATIC SEALED TO DOOR FRAME, THREE (3) HIGH OUTPUT 4000 LUMEN 4000K CCT LED ARRAYS, 90 CRI MAINTAINED TO 3.5 SDMC, GLOSS WHITE HIGH REFLECTANCE 1000 HR. SALT SPRAY POLYESTER POWDER COAT FINISH, SUITABLE FOR GRID OR FLANGED INSTALLATION, ETL LISTED FOR WET LOCATIONS, DUST/WATER RESISTANCE RATED IP-66, CERTIFIED ISO-14644-1 CLASSES 3 TO 9 FED. STD. 209E CLASS 1-100,000, AND RATED FOR 1700 PSI HOSEDOWN. THE FIXTURE ACCOMMODATES MOST 1" AND 1.5" T-BAR GRID AS WELL AS HARD CEILING APPLICATIONS. THE FIXTURE SHALL BE PROVIDED WITH A 0-10 VOLT DIMMABLE DRIVER AND LIMITED 5 YEAR WARRANTY. THE ELECTRICAL CONTRACTOR TO COORDINATE WITH THE CEILING MANUFACTURER BEFORE ORDERING. PROGRAM DRIVER OUTPUT TO ACHIEVE LUMEN OUTPUT LISTED IN LUMEN COLUMN.	KURTZON KL F 5 2X2 3/LEDH 40K UNV PXL	NEWSTAR LIGHTING SCG SERIES PARAMOUNT EQUAL	4000K LED	3500	0-10V DIM TO 1%	120 V	28 W	CEIL.	-
R15E	SAME AS PARENT FIXTURE TYPE EXCEPT TO BE CIRCUITED THROUGH A REMOTE EMERGENCY 20 AMP BYPASS RELAY. REFER TO REMARKS FOR MORE INFORMATION.	-	-	-	-	-	120 V	28 W	-	1
U1	SURFACE MOUNTED LED UNDERCABINET LIGHT WITH ALUMINUM HOUSING, WIDE BEAM ANGLE, SMOOTH CONTINUOUS ILLUMINATION WITH NO PIXELATION, PLUG IN CONNECTORS, 440 LUMENS PER FOOT, L70 OF 50,000 HOURS, UL LISITNG, AND FIVE YEAR LIMITED WARRANTY. POWER SUPPLIES TO BE MOUNTED ABOVE CEILING OR NEATLY UNDER CABINET SO AS NOT TO BE VISIBLE.	SELF ELECTRONICS ARROW-##-40K-110-S SERIES	HALO: HU10 SERIES	4000K LED	VARIES	-	120 V	10 W	UNDERCABINET/SURFACE	-
V2	2 X 4 LED HIGH EFFICIENCY GRID TROFFER WITH 2-3/8" DEEP GALVANIZED STEEL HOUSING, INTEGRAL T-BAR CLIPS, COLD ROLLED STEEL REFLECTOR, POLYESTER POWDER COAT AFTER FABRICATION, IMPACT RESISTANT MODIFIED ACRYLIC PRISMATIC REFRACTOR, INTEGRAL MULTI-VOLT 0-10V 1-100% DIMMABLE DRIVER, 4000 KELVIN LED ARRAY PRODUCING 4880 DELIVERED LUMENS,133 LUMENS PER WATT, L90 RATED LIFE OF 60,000 HOURS, DLC QUALIFIED, AND FIVE YEAR LIMITED FIXTURE WARRANTY.	LITHONIA 2BLT2-48LHE-ADSM-MVOLT-EZ1-LP840	METALUX 22FR SERIES COLUMBIA EQUAL	4000K LED	4816	0-10V DIM TO 1%	120 V	37 W	CEIL.	-
V2E	SAME AS PARENT FIXTURE TYPE EXCEPT TO BE PROVIDED WITH A REMOTE EMERGENCY 20 AMP BYPASS RELAY. REFER TO REMARKS FOR MORE INFORMATION.	-	-	-	-	-	120 V	71 W	-	1
V3	1 X 2 LED HIGH EFFICIENCY GRID TROFFER WITH 2-3/8" DEEP GALVANIZED STEEL HOUSING, INTEGRAL T-BAR CLIPS, COLD ROLLED STEEL REFLECTOR, POLYESTER POWDER COAT AFTER FABRICATION, IMPACT RESISTANT MODIFIED ACRYLIC PRISMATIC REFRACTOR, INTEGRAL MULTI-VOLT 0-10V 1-100% DIMMABLE DRIVER, 4000 KELVIN LED ARRAY PRODUCING 2097 DELIVERED LUMENS,117 LUMENS PER WATT, L90 RATED LIFE OF 60,000 HOURS, DLC QUALIFIED, AND FIVE YEAR LIMITED FIXTURE WARRANTY.	LITHONIA BLT2-20L-ADSM-MVOLT-EZ1-LP840	METALUX EQUAL APPROVED EQUAL	4000K LED	2097	0-10V DIM TO 1%	120 V	53 W	CEIL.	
W3	WALL MOUNTED LINEAR DIRECT/INDIRECT LED WITH EXTRUDED ALUMINUM SIDE RAILS, FORMED COLD ROLLED STEEL BACK CHANNEL, HEAVY GAUGE END CAPS, ASYMMETRIC DISTRIBUTION 4000K, LED ARRAY CAPABLE OF 450 LUMEN PER FOOT UPLIGHT, ASYMMETRIC DISTRIBUTION 4000K 586 LUMEN PER FOOT LED ARRAY FOR DOWNLIGHT, CONSTANT CURRENT ELECTRONIC DRIVER WITH 0-10V DIMMING INPUT, EXTRUDED FROSTED ACRYLIC OR SATIN WHITE ACRYLIC SNAP-IN LENS DOWN, FIELD REPLACEABLE MODULE IS REPLACEABLE L90 ≥ 100,000 HOURS, ETL LISTED, POWDER COAT TEXTURED FINISH, AND FIVE YEAR LIMITED WARRANTY. PROGRAM DRIVER OUTPUT TO ACHIEVE LUMEN OUTPUT LISTED IN LUMEN COLUMN.	NULITE RW4B 05L40D/4.5LU 1C##C A FRF WH ASYM	-	4000K LED	2500	0-10V DIM TO 1%	120 V	16 W	9'-0" AFF	-
X3	ARCHITECTURAL EDGE-LIT SINGLE FACE LED EXIT SIGN WITH INJECTION-MOLDED PANEL, WHITE BACKGROUND, SURFACE MOUNTED CAST ALUMINUM HOUSING, PLUG-IN POWER CONNECTORS, THREE (3) YEAR UNCONDITIONAL WARRANTY, LED LAMP ASSEMBLY, SOLID-STATE ELECTRONICS. PANEL LETTERS SHALL BE MOLDED AND TEXTURED 6" HIGH WITH 3/4" STROKE.	ISOLITES ELT-AC-G-1W	SURELITES EEX SERIES PHILIPS EQUAL	LED - GREEN LETTERING	-	LED	120 V	2 W	CLG OR WALL	2
X4	ARCHITECTURAL EDGE-LIT DUAL FACE LED EXIT SIGN WITH INJECTION-MOLDED PANEL, WHITE BACKGROUND, SURFACE MOUNTED CAST ALUMINUM HOUSING, PLUG-IN POWER CONNECTORS, THREE (3) YEAR UNCONDITIONAL WARRANTY, LED LAMP ASSEMBLY, SOLID-STATE ELECTRONICS. PANEL LETTERS SHALL BE MOLDED AND TEXTURED 6" HIGH WITH 3/4" STROKE.	ISOLITES ELT-AC-G-2W	SURELIGHTS: CX SERIES	LED - GREEN LETTERING	-	LED	120 V	2 W	CLG OR WALL	2

DESCRIPTION	MOUNTING HEIGHT (TOP OF BOX)	DRAWING SYMBOL
ABBREVIATIONS		
UNLESS OTHERWISE NOTED		UON
OWNER FURNISHED CONTRACTOR INSTALLED		OFCI
OWNER FURNISHED OWNER INSTALLED		OFOI
CONTRACTOR FURNISHED CONTRACTOR INSTALLED		CFCI
CONTRACTOR FURNISHED OWNER INSTALLED		CFOI
SWITCHES		
LIGHT SWITCH:GENERAL PURPOSE	4'-0"	$
MULTI-BUTTON SWITCH WITH ON/OFF AND RAISER/LOWER OF ZONES INDICATED. # INDICATES NUMBER OF ZONES TO BE CONTROLLED.	4'-0"	$#L
NIGHT LIGHT SWITCH WITH CONSTANTLY ILLUMINATED HANDLE	4'-0"	$N
SURGICAL LIGHT INTENSITY CONTROL	4'-0"	$SL
DIMMER SWITCH	4'-0"	$D
THREE-WAY SWITCH	4'-0"	$3
FOUR-WAY SWITCH	4'-0"	$4
KEYED SWITCH	4'-0"	$K
OCCUPANCY OR VACANCY SENSOR SWITCH	4'-0"	$OS, $VS
LIGHT SWITCH FOR UNDER-CABINET LIGHTS	4'-0"	$U
ILLUMINATED HANDLE LIGHT SWITCH (ILLUMINATED WHEN LOAD IS OFF)	4'-0"	$IL
LOW VOLTAGE MOMENTARY SWITCH	4'-0"	$LV
PILOT LIGHT SWITCH (ILLUMINATED WHEN LOAD IS ON)	4'-0"	$PL
NLIGHT GRAPHIC WALLPOD	4'-0"	$G
MOMENTARY CONTACT SWITCH	4'-0"	$MC
HAND-OFF-AUTO 3-POSTION SWITCH	4'-0"	$HOA
TIMER SWITCH	4'-0"	$T
OCCUPANCY OR VACANCY SENSOR, CEILING MOUNT	CLG	(OS), (VS)
PHOTO-CELL AS NOTED	AS NOTED	(PC)
EMERGENCY AUTOMATIC TRANSFER SWITCH FOR LIGHTING CONTROLS (REFER TO DETAIL)		ER
LIGHTING		
REFER TO LUMINAIRE SCHEDULE FOR EXACT FIXTURE SPECIFICATIONS, MOUNTING HEIGHTS, ETC.		
SURFACE OR SUSPENDED CEILING FIXTURE (SLASH INDICATES RECESSED)		⊕, ○, ▭, □
POLE MOUNTED AREA LIGHT		
EMERGENCY BATTERY WALL-PACK		
WALL MOUNT FIXTURE		⊕, ○
FLOODLIGHT		◁
EXIT LIGHT (CEILING, END, WALL MOUNT)		⊗, ⊗, ⊗
STRIP FIXTURE		⊢○⊣
CROSS-HATCHING INDICATES LIGHT IS POWERED FROM THE EMERGENCY-CRITICAL BRANCH		▨
PARALLEL-HATCHING INDICATES LIGHT IS POWERED FROM THE EMERGENCY-LIFE SAFETY BRANCH		▥
LIGHTING PULL BOX. REFER TO DETAILS.		□ LPB
MISCELLANEOUS		
CONDUIT CONCEALED IN WALLS OR IN CEILING SPACE: ARROW(S) INDICATE(S) HOME RUN & # OF CIRCUITS: HASHMARKS INDICATE # OF CONDUCTORS. DASHED LINE INDICATES CONDUIT BELOW FLOOR.		GROUND NEUTRAL PHASE
TAGGED NOTE		⬡
REVISION TAG		△
WIREGUARD - PROVIDE MANUFACTURER'S SPECIFIC GUARD FOR DEVICE NOTED		WG
WEATHERPROOF - NEMA-3R, WET LOCATION LISTED. PROVIDE COVERS, RATINGS, ETC, AS SUITABLE FOR OUTDOORS.		WP
EXPLOSION PROOF - PROVIDE WIRING METHODS, ENCLOSURES, RATINGS, ETC. AS SUITABLE FOR HAZARDOUS LOCATION.		XP
INDICATES EMERGENCY POWER		E,EM
INDICATES LIGHT FIXTURE WITH 24 HOUR OPERATION		N/L
CONDUIT UP		○
CONDUIT DOWN		●
LIGHTING CONTROL CABLE (TYPE PER MANUFACTURER)		— - — - —
0-10V DIMMING CONDUCTORS		—··—··—

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
LEXINGTON, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By CJC

Checked By CJC

ALAN R. KELLUM 20186

Client Number

Project Number UKR15

DRAWING

PHASE 2 LIGHTING SYMBOLS AND FIXTURE SCHEDULE

SHEET NO.

EL-351

5/21/2020 4:07:47 PM

(EXISTING) PANELBOARD SCHEDULE

PANEL DESIGNATION 1NLP1 | **LOCATION** ELECTRICAL-1 114-1 | **FLOOR** MEP-LEVEL 01
VOLTAGE 120/208 Wye | 3 **PHASE** 4 **WIRE** | **FED FROM** *
MAIN TYPE * | **BUS RATING** * | **FAULT CURRENT RATING** * AIC
MAIN RATING * | **MOUNTING** * | **FAULT...** * AIC

REMARKS

LEFT SIDE, KVA						RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
STAIR A	20 A	1	1	0.83			0.38			2	1	20 A	RM 114 & 142
RM 101, 101D, 101C, 103,	20 A	1	3		0.47			1.40		4	1	20 A	LOBBY 101
CAFE 160	20 A	1	5			1.38			0.85	6	1	20 A	CONFERENCE RM 110
RM 163, 162, 103, 103A	20 A	1	7	0.37			0.31			8	1	20 A	CAFE SERVING 161
LOBBY 101	20 A	1	9		0.59			0.24		10	1	20 A	SHELL SPACE 150
OF 10 EXTERIOR	20 A	1	11			0.67			0.00	12	1	20 A	EXISTING SPARE
SPACE	--	--	13	0.00			0.00			14	--	--	SPACE
SPACE	--	--	15		0.00			0.00		16	--	--	SPACE
SPACE	--	--	17			0.00			0.00	18	--	--	SPACE
SPACE	--	--	19	0.00			0.00			20	--	--	SPACE
SPACE	--	--	21		0.00			0.00		22	--	--	SPACE
EXISTING SPARE	20 A	1	23			0.00			0.00	24	--	--	SPACE
EXISTING SPARE	20 A	1	25	0.00			0.00			26	--	--	SPACE
EXISTING SPARE	20 A	1	27		0.00			0.00		28	--	--	SPACE
EXISTING SPARE	20 A	1	29			0.00			0.00	30	--	--	SPACE
EXISTING SPARE	20 A	1	31	0.00			0.00			32	--	--	SPACE
EXISTING SPARE	20 A	1	33		0.00			0.00		34	--	--	SPACE
EXISTING SPARE	20 A	1	35			0.00			0.00	36	--	--	SPACE
EXISTING SPARE	20 A	1	37	0.00			0.00			38	--	--	SPACE
EXISTING SPARE	20 A	1	39		0.00			0.00		40	--	--	SPACE
EXISTING	20 A	1	41			0.00			0.00	42	--	--	SPACE

PHASE SUBTOTALS (KVA):	1.58	2.71	2.58
PHASE SUBTOTAL (AMPS):	13	24	23

MAX CONNECTED PHASE 24 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING	6.37	125%	7.96
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE		100% FIRST 10KVA 50% OTHER	
TOTALS	6.87		8.58

NOTES
* REFER TO ELECTRICAL FO PANEL SCHEDULES SHEETS (EF-900 SERIES SHEETS) AND ELECTRICAL RISER DIAGRAMS FOR MORE INFORMATION.

(EXISTING) PANELBOARD SCHEDULE

PANEL DESIGNATION 1NLP2 | **LOCATION** ELECTRICAL 128 | **FLOOR** MEP-LEVEL 01
VOLTAGE 120/208 Wye | 3 **PHASE** 4 **WIRE** | **FED FROM** *
MAIN TYPE * | **BUS RATING** * | **FAULT CURRENT RATING** * AIC
MAIN RATING * | **MOUNTING** * | **FAULT...** * AIC

REMARKS

LEFT SIDE, KVA						RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
RM 128	20 A	1	1	0.11			0.14			2	1	20 A	SHELL SPACE 100
STAIR C	20 A	1	3		0.53			0.91		4	1	20 A	RMS 140-143
RMS 137-139	20 A	1	5			1.04			1.08	6	1	20 A	RMS 151F, 151G, 151H2
LAB NEIGHBORHOOD 151	20 A	1	7	1.52			1.21			8	1	20 A	RMS 151H-K
LAB NEIGHBORHOOD 151	20 A	1	9		1.52			0.62		10	1	20 A	RMS 116-117, 144
RMS 118-120	20 A	1	11			1.04			0.73	12	1	20 A	RMS 152F-G
RMS 151D-E	20 A	1	13	0.73			1.12			14	1	20 A	RMS 152H-K
RMS 151A-C	20 A	1	15		1.12			1.04		16	1	20 A	RMS 134-136
RMS 129, 152D-E	20 A	1	17			0.81			1.52	18	1	20 A	LAB NEIGHBORHOOD 152
RMS 152A-C	20 A	1	19	1.21			1.52			20	1	20 A	LAB NEIGHBORHOOD 152
EXISTING SPARE	--	--	21		0.00			1.04		22	1	20 A	RMS 121-123
EXISTING SPARE	20 A	1	23			0.00			1.10	24	1	20 A	RMS 100W, 100WN,...
EXISTING SPARE	20 A	1	25	0.00			0.98			26	1	20 A	RMS 131-132, 100N, 100EN
EXISTING SPARE	20 A	1	27		0.00			0.00		28	--	--	SPACE
EXISTING SPARE	20 A	1	29			0.00			0.00	30	--	--	SPACE
EXISTING SPARE	20 A	1	31	0.00			0.00			32	--	--	SPACE
EXISTING SPARE	20 A	1	33		0.00			0.00		34	--	--	SPACE
EXISTING SPARE	20 A	1	35			0.00			0.00	36	--	--	SPACE
EXISTING SPARE	20 A	1	37	0.00			0.00			38	--	--	SPACE
EXISTING SPARE	20 A	1	39		0.00			0.00		40	--	--	SPACE
EXISTING SPARE	20 A	1	41			0.00			0.00	42	--	--	SPACE

PHASE SUBTOTALS (KVA):	8.53	6.76	7.31
PHASE SUBTOTAL (AMPS):	72	56	62

MAX CONNECTED PHASE 72 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING	22.60	125%	28.25
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE		100% FIRST 10KVA 50% OTHER	
TOTALS	22.60		28.25

NOTES
* REFER TO ELECTRICAL FO PANEL SCHEDULES SHEETS (EF-900 SERIES SHEETS) AND ELECTRICAL RISER DIAGRAMS FOR MORE INFORMATION.

NOTE:
HATCH PATTERN INDICATES EXISTING CIRCUIT TO REMAIN. CIRCUITS WITHOUT HATCH ARE NEW IN THIS PHASE. PROVIDE NEW BREAKER TO SERVE CIRCUIT. (TYPICAL)

(EXISTING) PANELBOARD SCHEDULE

PANEL DESIGNATION 1LSLP1 | **LOCATION** ELECTRICAL-1 114-1 | **FLOOR** MEP-LEVEL 01
VOLTAGE 120/208 Wye | 3 **PHASE** 4 **WIRE** | **FED FROM** *
MAIN TYPE * | **BUS RATING** * | **FAULT CURRENT RATING** * AIC
MAIN RATING * | **MOUNTING** * | **FAULT...** * AIC

REMARKS

LEFT SIDE, KVA						RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
ELECTRICAL 128	20 A	1	1	0.03			0.59			2	1	20 A	STAIR A
114, 142	20 A	1	3		0.32			0.28		4	1	20 A	101D, 105, 110, 160
101C, 102, 103, 160	20 A	1	5			0.39			0.51	6	1	20 A	160, 163
LOBBY 101	20 A	1	7	0.18			0.40			8	1	20 A	CAFE SERVING 161
CONFERENCE RM 110	20 A	1	9		0.09			0.00		10	--	--	SPACE
SPACE	--	--	11			0.00			0.00	12	--	--	SPACE
SPACE	--	--	13	0.00			0.00			14	--	--	SPACE
EXISTING SPARE	20 A	1	15		0.00			0.00		16	--	--	SPACE
EXISTING SPARE	20 A	1	17			0.00			0.00	18	--	--	SPACE
EXISTING SPARE	20 A	1	19	0.00			0.00			20	--	--	SPACE
EXISTING SPARE	20 A	1	21		0.00			0.00		22	--	--	SPACE
EXISTING SPARE	20 A	1	23			0.00			0.00	24	--	--	SPACE
EXISTING SPARE	20 A	1	25	0.00			0.00			26	--	--	SPACE
EXISTING	20 A	1	27		0.00			0.00		28	--	--	SPACE
EXISTING	20 A	1	29			0.00			0.00	30	1	20 A	EXISTING

PHASE SUBTOTALS (KVA):	1.21	0.69	0.87
PHASE SUBTOTAL (AMPS):	10	6	8

MAX CONNECTED PHASE 10 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING	2.17	125%	2.71
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE		100% FIRST 10KVA 50% OTHER	
TOTALS	2.77		3.46

NOTES
* REFER TO ELECTRICAL FO PANEL SCHEDULES SHEETS (EF-900 SERIES SHEETS) AND ELECTRICAL RISER DIAGRAMS FOR MORE INFORMATION.

(EXISTING) PANELBOARD SCHEDULE

PANEL DESIGNATION 1LSLP2 | **LOCATION** ELECTRICAL 128 | **FLOOR** MEP-LEVEL 01
VOLTAGE 120/208 Wye | 3 **PHASE** 4 **WIRE** | **FED FROM** *
MAIN TYPE * | **BUS RATING** * | **FAULT CURRENT RATING** * AIC
MAIN RATING * | **MOUNTING** * | **FAULT...** * AIC

REMARKS

LEFT SIDE, KVA						RIGHT SIDE, KVA							
DESCRIPTION	BRKR AMP, POLES	CKT NO	A	B	C	A	B	C	CKT NO	BRKR AMP, POLES	DESCRIPTION
STAIR C	20 A	1	1	0.53			0.07			2	1	20 A	LTNG-ELEC 128
STAIR C	20 A	1	3		0.54			0.38		4	1	20 A	RMS 151F-K
RMS 118, 139, 151	20 A	1	5			0.56			0.34	6	1	20 A	RMS 151A-E
RMS 152F-K	20 A	1	7	0.34			0.54			8	1	20 A	RMS 123, 134, 152
RMS 152A-E	20 A	1	9		0.34			0.34		10	1	20 A	RMS 100E, 100N
RMS 100WN, 100W, 127...	20 A	1	11			0.24			0.00	12	--	--	SPACE
SPACE	--	--	13	0.00			0.00			14	--	--	SPACE
EXISTING SPARE	20 A	1	15		0.00			0.00		16	--	--	SPACE
EXISTING SPARE	20 A	1	17			0.00			0.00	18	--	--	SPACE
EXISTING SPARE	20 A	1	19	0.00			0.00			20	--	--	SPACE
EXISTING SPARE	20 A	1	21		0.00			0.00		22	--	--	SPACE
EXISTING SPARE	20 A	1	23			0.00			0.00	24	--	--	SPACE
EXISTING SPARE	20 A	1	25	0.00			0.00			26	--	--	SPACE
EXISTING SPARE	20 A	1	27		0.00			0.00		28	--	--	SPACE
EXISTING SPARE	20 A	1	29			0.00			0.00	30	--	--	SPACE

PHASE SUBTOTALS (KVA):	1.47	1.59	1.14
PHASE SUBTOTAL (AMPS):	13	14	9

MAX CONNECTED PHASE 14 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DESIGN FACTOR	DESIGN (KVA)
APPLIANCE		100%	
LIGHTING	3.67	125%	4.59
MOTOR		125% LARGEST 100% OTHER	
RECEPTACLE		100% FIRST 10KVA 50% OTHER	
TOTALS	4.20		5.25

NOTES
* REFER TO ELECTRICAL FO PANEL SCHEDULES SHEETS (EF-900 SERIES SHEETS) AND ELECTRICAL RISER DIAGRAMS FOR MORE INFORMATION.

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY
LEXINGTON, KY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By CJC
Checked By CJC
Client Number
Project Number UKR15

STATE OF KENTUCKY · ALAN R KELLUM · 20166 · LICENSED PROFESSIONAL ENGINEER

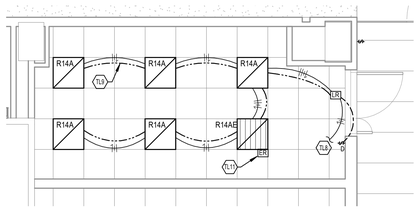
DRAWING
PHASE 2 LIGHTING PANEL SCHEDULES

SHEET NO.
EL-452

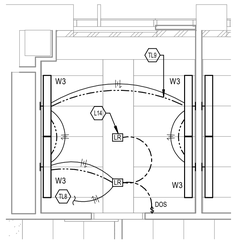
SCHEDULE MATRIX

1NLP1	1NLP2	
1LSLP1	1LSLP2	

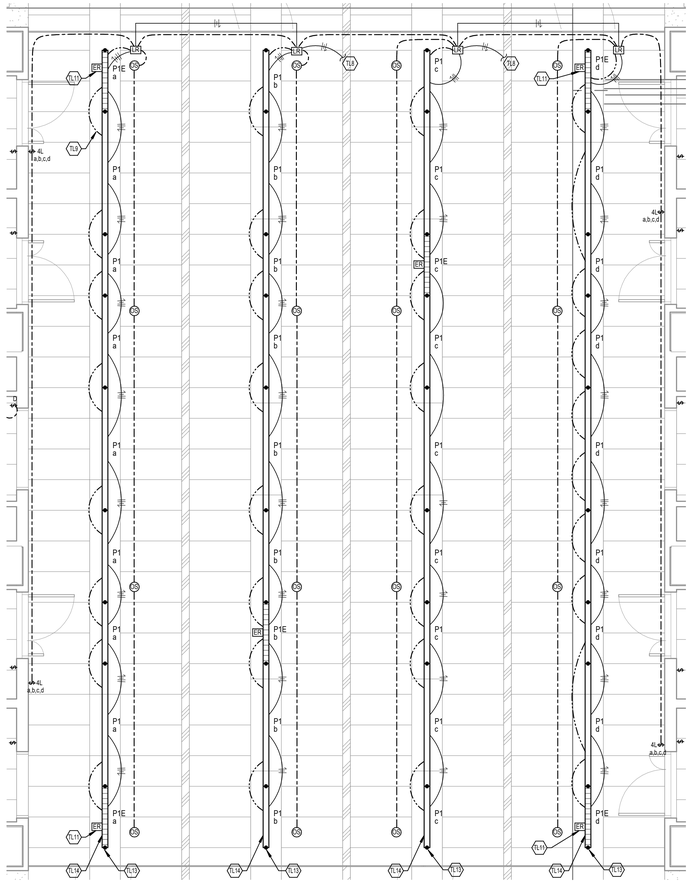
5/21/2020 4:07:47 PM



2 LEVEL 01 PHASE 2 - TYPICAL LAB PROCEDURE ROOM LIGHTING PLAN - NIH
1/4" = 1'-0"



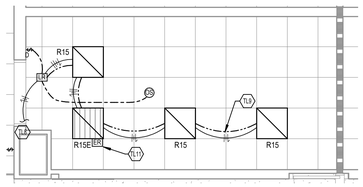
1 LEVEL 01 PHASE 2 - TYPICAL SMALL OFFICE LIGHTING PLAN - NIH
1/4" = 1'-0"



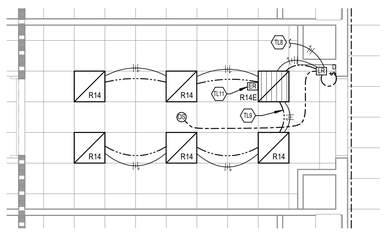
3 LEVEL 01 PHASE 2 - TYPICAL LAB NEIGHBORHOOD MODULE LIGHTING PLAN - NIH
1/4" = 1'-0"

GENERAL NOTES:
A. ALL VIVARIUM LIGHTING DEVICE PLATES AND COVERS TO BE MANUFACTURER PAINTED WHITE STAINLESS STEEL. THIS INCLUDES RESEARCH LAB, PROCEDURE ROOM, ISOLATION CUBICLE, ISOLATION PREP, AND VIVARIUM CORRIDORS, PHENOTYPING, CARCASS REFRIGERATION, NECROSCOPY, AND ICE STORAGE.

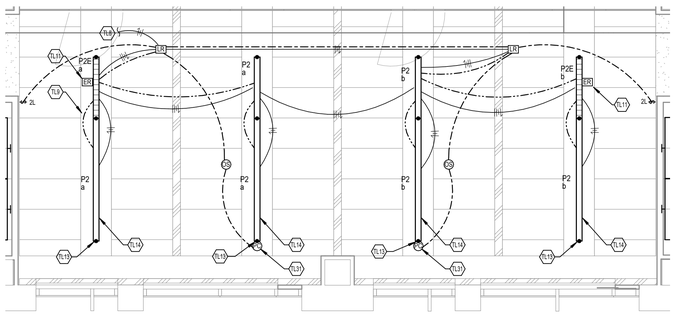
TAGGED NOTES	
L14	PROVIDE ADDITIONAL LIGHTING RELAY(S) FOR PLUG LOAD CONTROL. REFER TO POWER SHEETS FOR QUANTITY AND CIRCUIT TO BE CONTROLLED. INTEGRATE INTO LIGHTING CONTROL SYSTEM TO PROVIDE SCHEDULED SHUTOFF OF CIRCUIT.
TL8	CIRCUIT AS INDICATED ON LIGHTING PLANS.
TL9	PROVIDE 0-10V DIMMING WIRE TO ALL FIXTURE DRIVERS INDICATED TO BE DIMMABLE. ROUTE IN CONDUIT TO FIXTURES. (TYPICAL)
TL11	REFER TO LIGHTING PLANS FOR CIRCUITING OF EMERGENCY CIRCUITS. (TYPICAL)
TL13	PENDANT SUSPENSION CABLE LOCATIONS SHOWN ARE DIAGRAMMATIC. CONTRACTOR RESPONSIBLE FOR COORDINATING FIXTURE LENGTHS SUCH THAT SUSPENSION CABLES DO NOT CONFLICT WITH HVAC AND PLUMBING. SUBMIT COORDINATION DRAWINGS FOR LAB NEIGHBORHOOD MODULES WITH LIGHTING SHOP DRAWINGS TO SHOW COORDINATION BETWEEN ALL CEILING MOUNT DEVICES. (TYPICAL)
TL14	CENTER PENDANTS IN GYP STRIP. CAREFULLY COORDINATE LENGTHS OF PENDANTS SUCH THAT SUSPENSION CABLES DO NOT CONFLICT WITH HVAC GRILLES AND CHILLED BEAMS. REFER TO MECHANICAL SHEETS. (TYPICAL)
TL31	PROVIDE DAYLIGHT SENSOR INTEGRAL TO FIXTURE. SENSOR SHALL PROVIDE AUTOMATIC DIMMING CONTROL OF COMPLETE ZONE OF LIGHTING.



4 LEVEL 01 PHASE 2 - TYPICAL FUME HOOD ROOM LIGHTING PLAN - NIH
1/4" = 1'-0"



5 LEVEL 01 PHASE 2 - TYPICAL LINEAR EQUIP ROOM LIGHTING PLAN - NIH
1/4" = 1'-0"



6 LEVEL 01 PHASE 2 - TYPICAL POST DOC/GRAD TECH LIGHTING PLAN - NIH
1/4" = 1'-0"

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(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By CJC
Checked By CJC
Client Number

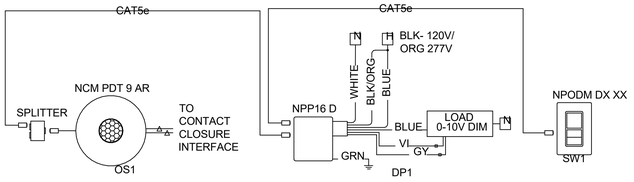
STATE OF KENTUCKY ALAN R. KELLUM 20186 LICENSED PROFESSIONAL ENGINEER

Project Number UKR15

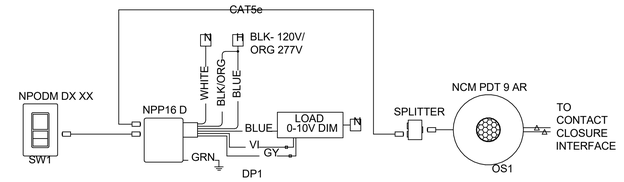
DRAWING
PHASE 2 TYPICAL LIGHTING PLANS

SHEET NO.
EL-551

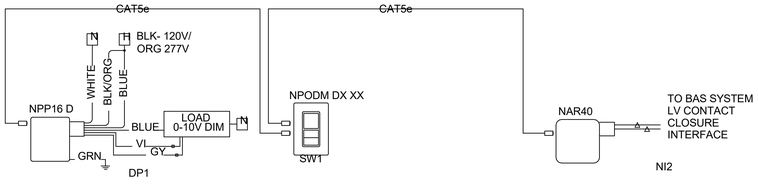
5/21/2020 4:08:12 PM



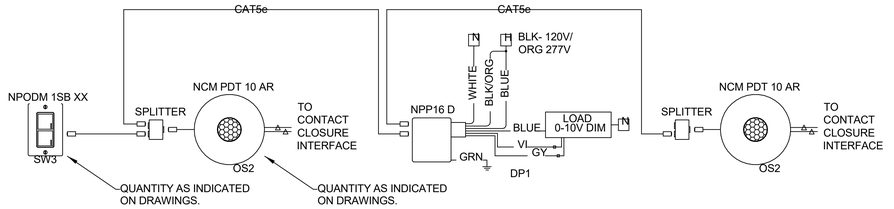
1 FUME HOOD ROOM - TYPICAL
NOT TO SCALE



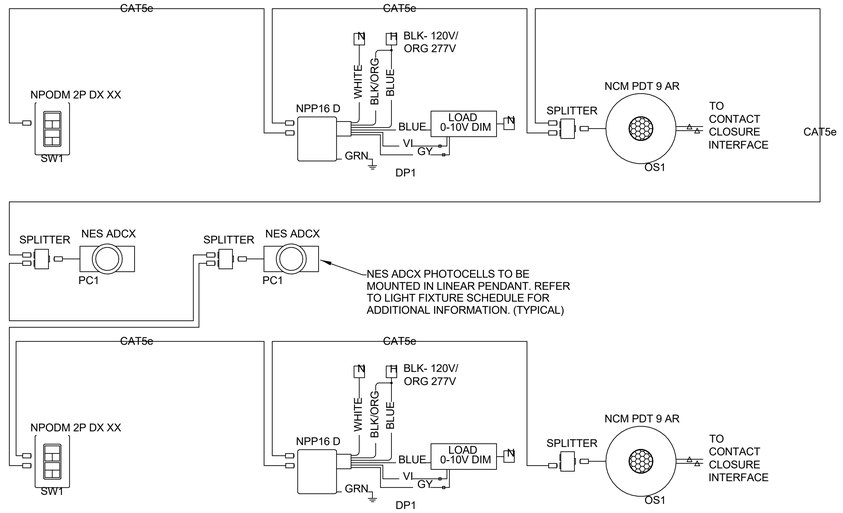
2 LINEAR EQUIPMENT ROOM - TYPICAL
NOT TO SCALE



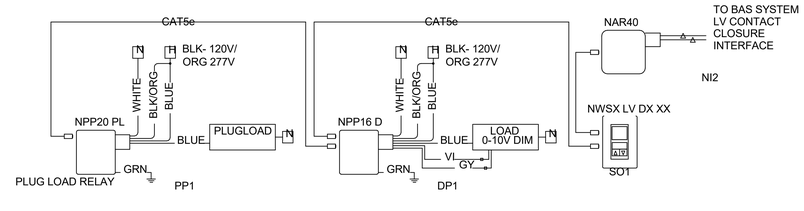
3 LAB PROCEDURE ROOM - TYPICAL
NOT TO SCALE



4 CORRIDOR - TYPICAL
NOT TO SCALE



5 POST DOC/GRAD TECH - TYPICAL
NOT TO SCALE



6 SMALL OFFICE -TYPICAL
NOT TO SCALE

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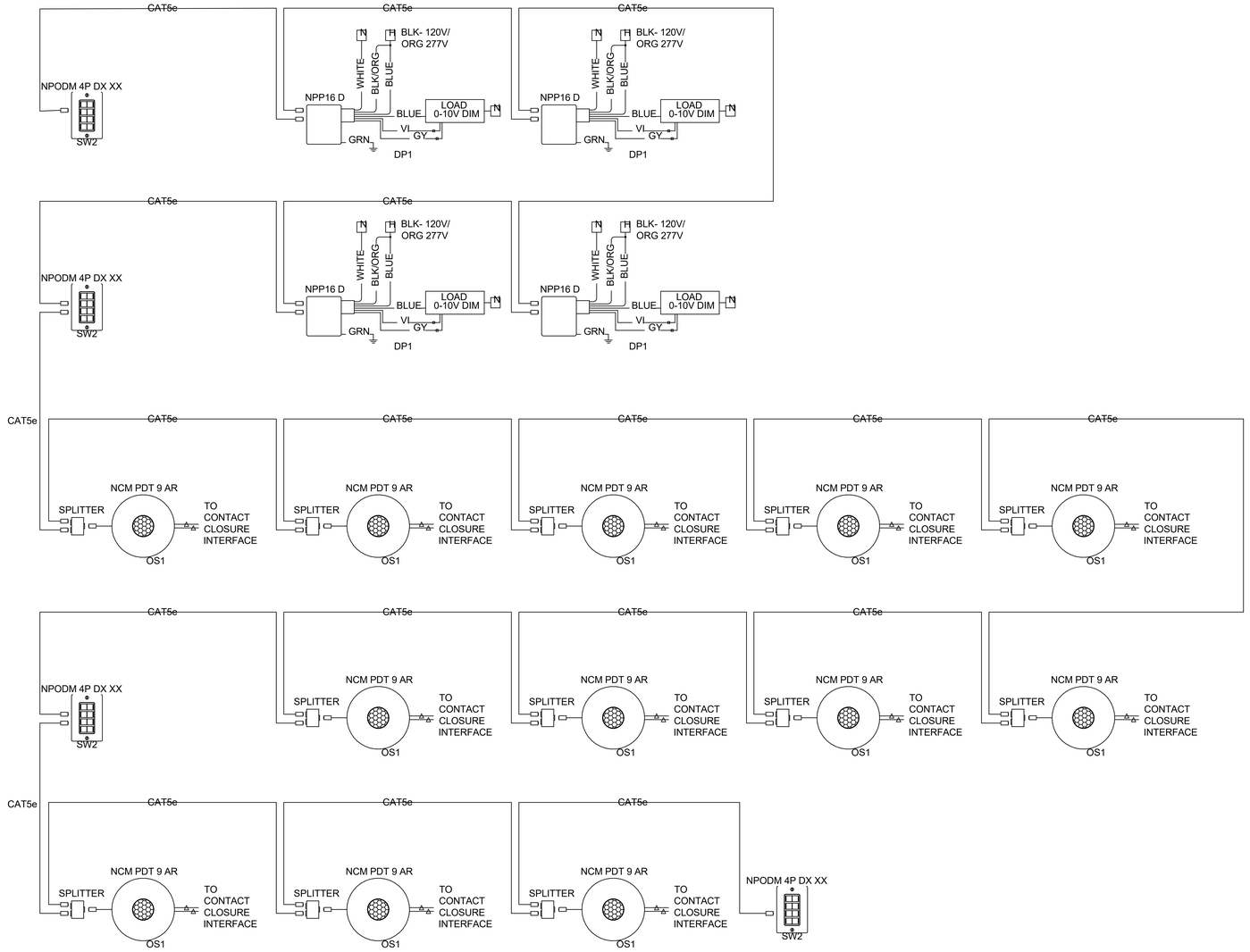
DRAWING
PHASE 2 NETWORK LIGHTING CONTROL RISER DIAGRAMS

SHEET NO.
EL-653

5/21/2020 4:08:15 PM



1 NEIGHBORHOOD LIGHTING MODULE - TYPICAL
NOT TO SCALE

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ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By CJC
Checked By CJC
Client Number

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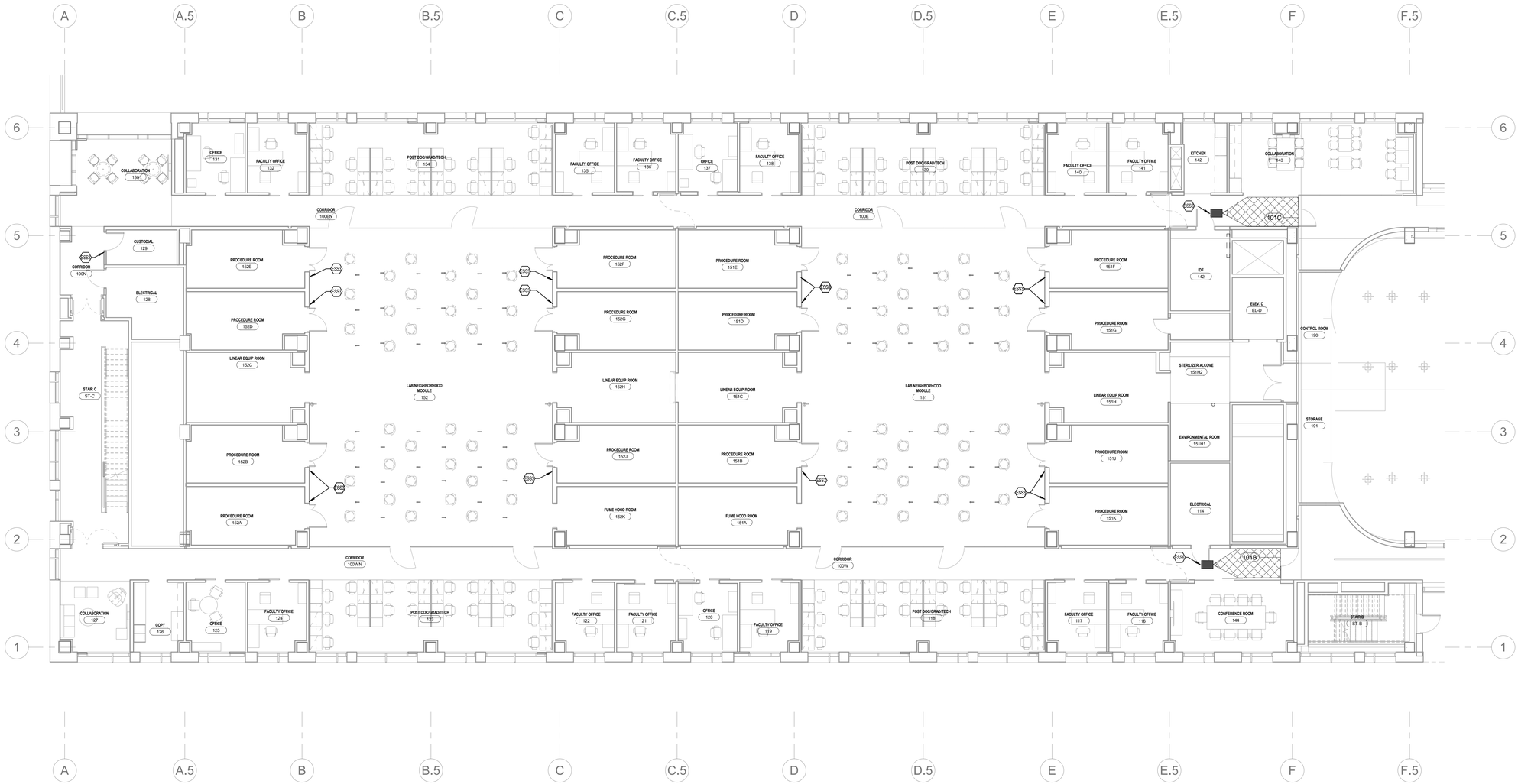
Project Number UKR15

DRAWING
PHASE 2 NETWORK LIGHTING CONTROL RISER DIAGRAMS

SHEET NO.
EL-654

5/21/2020 4:08:17 PM

TAGGED NOTES	
ESS3	INSTALL ACCESS CONTROL AT THIS LOCATION. INCLUDE CARD READER, ELECTRIFIED HARDWARE WITH REX AND DOOR POSITON SWITCH.
ESS6	INSTALL CEILING MOUNTED VIDEO CAMERA AT THIS LOCATION. CAMERA VIEW TO MATCH DRAWING. COORDINATE VIEW WITH OWNER BEFORE INSTALLATION AND AGAIN WHEN INSTALLED.



1 ESS - LEVEL 01 PHASE 2 FITOUT - AREA "B"
1/8" = 1'-0"

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ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By MT
Checked By WW
Client Number
Project Number UKR15

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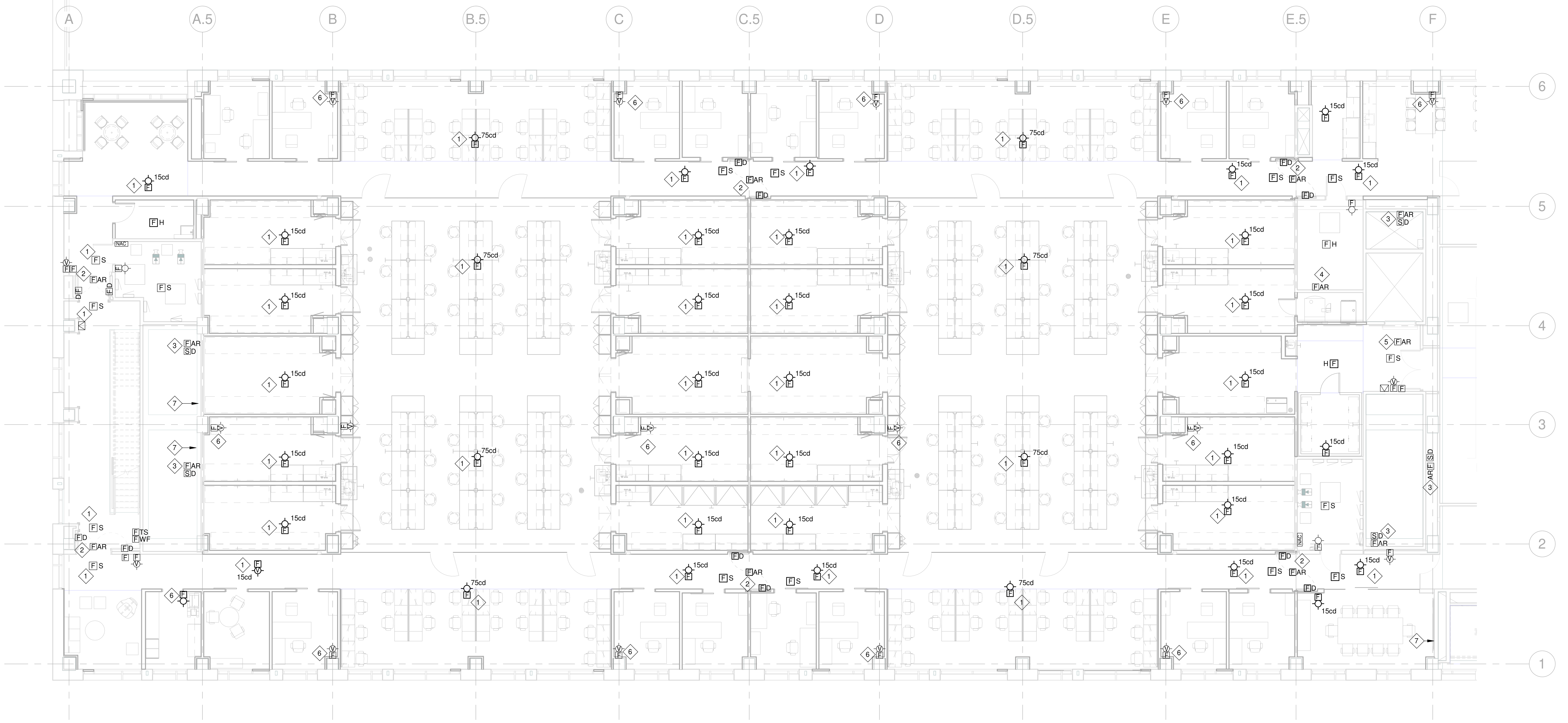
DRAWING
LEVEL 01 PHASE 2 FITOUT AREA "B" - ESS

SHEET NO.
ES-151B

5/19/2020 4:21:20 PM



1 PHASE 3 FO FIRE ALARM PLAN - LEVEL 01 - Area B
FAF-251B 1/8" = 1'-0"

GENERAL NOTES

1. FIRE ALARM DRAWINGS ARE TO CONVEY DESIGN INTENT OF HOW THE BUILDING IS TO BE OPERATED. VARIATIONS IN MANUFACTURER'S SYSTEM COMPONENTS, LAYOUTS, AND PROGRAMMING REQUIRE THE MANUFACTURER TO DESIGN A SYSTEM SPECIFICALLY FOR THIS FACILITY BASED ON ITS SYSTEM'S PERFORMANCE.
2. ALL NECESSARY RELAYS MAY NOT BE SHOWN ON THIS PLAN; PROVIDE RELAYS WHERE REQUIRED FOR PROPER OPERATION OF THE SYSTEM.
3. FIRE ALARM VENDOR MUST PROVIDE A REMOTE INDICATOR DEVICE WITH FOR EACH HEAT AND/OR SMOKE DETECTOR THAT IS NOT VISIBLE FROM THE FLOOR, AND FOR EACH DUCT SMOKE DETECTOR DEVICE. REMOTE INDICATOR DEVICES ARE TO BE MOUNTED AT 46" AFF AS CLOSE TO DETECTOR AS POSSIBLE. VERIFY FINAL LOCATION WITH ARTHITECT PRIOR TO INSTALLATION.
4. PROVIDE FIRE ALARM CONNECTIONS TO FIRE/SMOKE DAMPERS AT LOCATIONS SHOWN ON THE MECHANICAL DRAWINGS AND AS SPECIFIED.
5. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF SUPPLY AND RETURN DUCTWORK REQUIRING DUCT SMOKE DETECTOR INSTALLATIONS.
6. ALL ALARM SEQUENCES FOR FIRE ALARM SYSTEM MUST BE COORDINATED AND VERIFIED WITH OWNER.
7. ALL FIRE WIRING MUST BE INSTALLED IN CONDUIT. PROVIDE EXPANSION FITTINGS TO ACCOMMODATE EXPANSION AND CONTRACTION WHERE CONDUITS CROSS BUILDING EXPANSION JOINTS.
8. SMOKE DETECTORS SHOWN ON PLAN ARE SPOT TYPE DETECTORS, UNLESS OTHERWISE NOTED.

KEYED NOTES

1 CEILING MOUNTED DEVICE.
2 PROVIDE ADDRESSABLE RELAY MODULE FOR DOOR HOLD OPEN.
3 PROVIDE ADDRESSABLE RELAY MODULE FOR EXISTING SMOKE DAMPER. REFER TO CORE & SHELL VENTILATION DRAWINGS FOR EXACT LOCATION.
4 PROVIDE ADDRESSABLE RELAY FOR SECURITY ACCESS PANELS.
5 PROVIDE ADDRESSABLE RELAY FOR ELEVATOR SMOKE CONTROL CURTAINS.
6 FIRE ALARM STROBE TO BE DEMOLISHED.
7 2HR FIRE RATED WALL. UTILIZE FIRE RATED PUTTY PADS ON THE BACK OF APPLICABLE BOXES.

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UK Project Number 2538.0

ISSUANCES

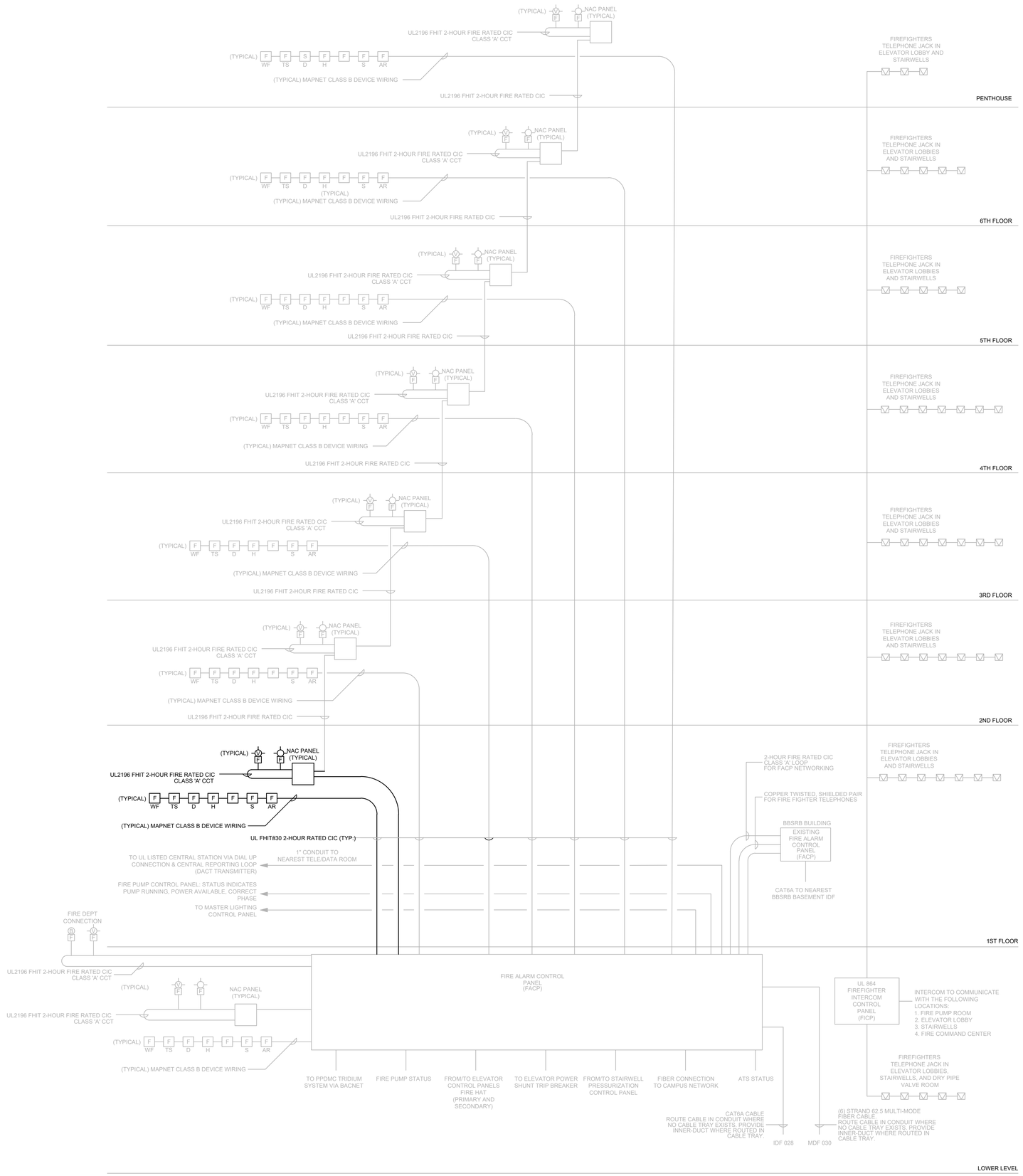
No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By
EM
Checked By
JS
Client Number
514
Project Number
15576

DRAWING
FIRE ALARM PHASE 2 FO FLOOR PLAN - LEVEL 01 AREA B

SHEET NO.
FAF-251B

5/21/2020 11:04:40 AM



GENERAL FIRE ALARM RISER NOTES

1. THE FIRE ALARM RISER DIAGRAM IS INTENDED TO CONVEY THE TYPES OF FIRE ALARM CONNECTIONS AND SPECIFICALLY DOES NOT INDICATE QUANTITIES, NUMBER OF CIRCUITS REQUIRED OR DISTANCES.
2. THE COMPLETE FIRE ALARM SYSTEM SHALL MEET ALL APPLICABLE CODES, FIRE MARSHALL REQUIREMENTS, AND MANUFACTURER'S RECOMMENDATIONS.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WIRE SIZES, TYPES AND REQUIREMENTS WITH FIRE ALARM SYSTEM VENDOR PRIOR TO BID.
4. ALL 120V WIRING REQUIRED FOR OPERATION OF THE SYSTEM AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR FROM THE LIFE SAFETY DISTRIBUTION SYSTEM.
5. ALL NECESSARY RELAYS MAY NOT BE SHOWN ON THIS PLAN, BUT WHERE REQUIRED FOR PROPER OPERATION OF THE SYSTEM, THEY SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
6. PROVIDE 25% SPARE BATTERY CAPACITY IN FIRE ALARM CONTROL PANEL.
7. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT.
8. IN ADDITION TO WORK SHOWN ON E AND FA-SERIES DRAWINGS, MAKE CONNECTIONS TO FIRE/SMOKE DAMPERS, DUCT SMOKE DETECTORS, AND CONTROL RELAYS AT LOCATIONS SHOWN ON THE M-SERIES DRAWINGS AND AS SPECIFIED. PROVIDE ONE ADDRESSABLE RELAY PER FIRE/SMOKE DAMPER INDICATED. EACH RELAY SHALL CONTROL ONLY ONE DAMPER. ELECTRICAL CONTRACTOR SHALL PROVIDE 120V CIRCUIT AS SHOWN ON DRAWINGS.
9. PROVIDE NOTIFICATION APPLIANCE EXTENDER PANELS AS REQUIRED.
10. HEAT DETECTORS ARE TO BE RATED 135 DEGREES F.
11. WHERE SHOWN ADJACENT, HEAT DETECTORS AND SMOKE DETECTORS ARE TO BE MOUNTED NO FURTHER THAN 6" FROM EACH OTHER AND 24" FROM THE SPRINKLER HEAD COVERING THAT SPACE.
12. PROVIDE LIGHTNING ARRESTORS FOR ALL EXTERIOR MOUNTED FIRE ALARM DEVICES.
13. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING THE REQUIRED INTERFACE TO ALLOW THE NEW FIRE ALARM SYSTEM TO COMMUNICATE WITH EXISTING BBSRB SIMPLEX FIRE ALARM SYSTEM. ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO PROVIDE THE WORK REQUIRED TO PROGRAM THE EXISTING SIMPLEX FIRE ALARM SYSTEM TO PROVIDE ANNUNCIATION AT THE NEW FIRE ALARM SYSTEM AND FOR REPORTING TO THE CAMPUS CENTRAL STATION.
14. FIRE ALARM VENDOR SHALL PROVIDE A REMOTE INDICATOR DEVICE WITH EACH DUCT SMOKE DETECTOR DEVICE AND FOR EACH HEAT AND SMOKE DETECTOR THAT IS NOT VISIBLE FROM THE FLOOR. REMOTE INDICATOR DEVICES SHALL BE MOUNTED AT 46" AFF AS CLOSE TO DETECTOR AS POSSIBLE. VERIFY FINAL LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
15. ALL ALARM SEQUENCES FOR FIRE ALARM SYSTEM SHALL BE COORDINATED AND VERIFIED WITH OWNER.
16. ALL CIRCUITS NECESSARY FOR THE OPERATION OF THE NOTIFICATION APPLIANCES SHALL BE PROTECTED UNTIL THEY ENTER THE EVACUATION SIGNALING ZONE THAT THEY SERVE. PROVIDE 2-HOUR CONCRETE ENCASEMENT FOR NOTIFICATION CIRCUIT WIRING WHERE A 2-HOUR ENCLOSURE IS NOT AVAILABLE FOR CIRCUIT PROTECTION. COORDINATE ALL 2-HOUR CONCRETE ENCASEMENT WITH STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
17. FIRE ALARM DEVICES INSTALLED UNDER THIS SCOPE OF WORK SHALL REPORT VIA BACNET TO THE OWNER TRIDIUM SYSTEM. ALL REQUIRED PROGRAMMING AND ADDITIONAL EQUIPMENT NEEDED TO PERFORM THESE TASKS SHALL BE INCLUDED UNDER THIS SCOPE OF WORK.
18. FIRE ALARM CONTRACTOR SHALL COORDINATE AND PROVIDE CAT6A AND FIBER OPTIC CONNECTIONS ASSOCIATED WITH FIRE ALARM SYSTEM.

LINE TYPE LEGEND:

EXISTING: _____

NEW: _____

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ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/2018
2	100% CD REVIEW	10/15/18
3	ISSUE FOR BID & PERMIT	11/15/18
4	DD ISSUANCE - NIH	02/05/2020
5	CD ISSUANCE - NIH	04/14/2020
7	BID & PERMIT - NIH	05/22/2020

Drawn By	EM
Checked By	JS
Client Number	514
Project Number	5350

STATE OF KENTUCKY · ANDREW SCOTT · 32093 · LICENSED PROFESSIONAL ENGINEER · 4/24/2020

DRAWING TITLE
FIRE ALARM PHASE 2 FO RISER

SHEET NO.
FAF-950

02/05/2020 10:00:00 AM

		Control Unit Annunciation							Notification							Required for Fire Safety Control											
		System Outputs																									
System Inputs	Number Identifier	Actuate Common Alarm Signal Indicator	Actuate Audible Alarm Signal	Actuate Common Supervisory Signal	Actuate Audible Supervisory Signal	Actuate Common Trouble Signal Indicator	Actuate Audible Trouble Signal	Actuate Appropriate Location Indicator	Actuate All Audible Evacuation Signals	Actuate All Visible Evacuation Signals	Outdoor Audible and/or Visual Device	Display/Print Change of Status	Transmit Alarm Signal to Supervising Station	Transmit Supervisory Signal to Supervising Station	Transmit Trouble Signal to Supervising Station	Release Magnetically Held Smoke Doors	Unlock Security Doors	Release Elevator Hiostway Vents	Elevator Shunt Trip	Recall Elevators To Primary Recall Floor	Recall Elevators to Alternate Recall Floor	Elevator Fire Hat Flash	Fan Shutdown	Damper Shutdown	Remotely Display Status	Initiate Stairwell Pressuization for Associated Stairwell	Number Identifier
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	X	Y	Z	
Manual Pull Station	1	X	X					X	X	X		X	X			X	X								X		1
	2																										2
Smoke Detector General	3	X	X					X	X	X		X	X			X	X								X		3
Smoke Detector at Door Hold Opens	4	X	X					X	X	X		X	X			X	X								X		4
Smoke Detector Elev. Lobby Primary Floor	5	X	X					X	X	X		X	X			X	X				X						5
Smoke Detector Elev. Lobby All other Floors	6	X	X					X	X	X		X	X			X	X			X							6
Smoke Detector in Elev. Machine Room	7	X	X					X	X	X		X	X			X	X					X					7
Smoke Detector in Hoistway	8	X	X					X	X	X		X	X			X	X					X					8
Smoke Detector Outside Stairwell (High rise Only)	9	X	X					X	X	X		X	X			X	X								X	X	9
Smoke Detection in Shell Space	10	X	X					X	X	X		X	X			X	X								X		10
	11																										11
Heat Detector General	12	X	X					X	X	X		X	X			X	X								X		12
Heat Detector in Elev. Machine Room	11	X	X					X	X	X		X	X			X	X		X								13
Heat Detector in Hoistway	14	X	X					X	X	X		X	X			X	X		X								14
	15																										15
Duct Mounted Smoke Detectors At Fire/Smoke Dampers	16	X	X					X	X	X		X	X											X	X		16
AHU/RF Duct Mounted Smoke Detector	17	X	X					X	X	X		X	X										X		X		17
	18																										18
Post Indicator Valve Switch	27			X	X			X				X		X											X		27
Sprinkler Main Waterflow	28	X	X					X	X	X	X	X	X			X	X								X		28
Sprinkler Tamper Switch	30			X	X			X				X		X											X		30
	31																										31
Fire Alarm AC Power Failure	32					X	X					X			X	X		X							X		32
Fire Alarm Low Battery	33					X	X					X			X										X		33
Open Circuit	34					X	X					X			X										X		34
Ground Fault	35					X	X					X			X										X		35
	36																										36
Fire Pump Running (Not test mode)	37	X	X					X				X				X	X								X		37
Fire pump Power Phase Reversal	38			X				X				X		X											X		38
Fire Pump Alternate Source	39			X				X				X		X											X		39
Fire pump Power Failure	40			X				X				X		X											X		40
Elevator Shunt Trip Monitor	41			X	X							X		X													41

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CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/2018
2	100% CD REVIEW	10/15/18
3	ISSUED FOR BID & PERMIT	11/15/18
4	DD ISSUANCE - NIH	02/05/20
5	CD ISSUANCE - NIH	04/14/20
6	BID & PERMIT - NIH	05/22/20

Drawn By EM

Checked By JS

Client Number 514

Project Number 15576

STATE OF KENTUCKY
ANDREW SCHANTZ
30863
LICENSED
PROFESSIONAL ENGINEER
4/24/2020

DRAWING

FIRE ALARM PHASE 2
FO MATRIX

SHEET NO.
FAF-951

5/21/2020 11:04:43 AM

TECHNOLOGY SYMBOLS AND ABBREVIATIONS

NOTE: SYMBOLS AND ABBREVIATIONS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.
ALL MEASUREMENTS FROM AFF ARE TO THE CENTER OF OUTLET.

INFORMATION TECHNOLOGY

- W — WALL TELEPHONE OUTLETS
  MOUNTING LOCATION: FLUSH WALL
  MOUNTING HEIGHT: 4'-0" AFF UON
  CONFIGURATION: REFER TO CHART BELOW
- X — WORKSTATION OUTLETS
  CONFIGURATION: X=REFER TO CHART BELOW
  MOUNTING LOCATION: FLUSH WALL
  MOUNTING HEIGHT: 1'-6" AFF
- X — WORKSTATION OUTLETS
  CONFIGURATION: X=REFER TO CHART BELOW
  MOUNTING LOCATION: CASEWORK OR ABOVE BACKSPLASH
  MOUNTING HEIGHT: FIELD VERIFY
- X — WORKSTATION OUTLETS - CEILING MOUNTED
  CONFIGURATION: X=REFER TO CHART BELOW
  MOUNTING LOCATION: ABOVE CEILING/STRUCTURE
  MOUNTING HEIGHT: FIELD VERIFY
- X — WORKSTATION OUTLETS
  CONFIGURATION: X=REFER TO CHART BELOW
  MOUNTING LOCATION: RACEWAY
  MOUNTING HEIGHT: MATCH ELECTRICAL
- X — WORKSTATION OUTLETS - FLOOR BOX/POKE-THRU
  CONFIGURATION: X=REFER TO CHART BELOW
  MOUNTING LOCATION: FLUSH FLOOR
  MOUNTING HEIGHT: F/FF
- IC — INTERCOM OUTLETS - WALL MOUNTED
  CONFIGURATION: REFER TO CHART BELOW
  MOUNTING LOCATION: FLUSH WALL
  MOUNTING HEIGHT: FIELD VERIFY
- E — EMERGENCY TELEPHONE/CAMERA EXTERIOR COLUMN/STANCHION
  CONFIGURATION: 2 CAT 6 PE JACKETED & 1 RG-6 CCTV PE JACKETED
  MOUNTING LOCATION: EXTERIOR COLUMN
  MOUNTING HEIGHT: AS SPECIFIED
- X — EXISTING TO REMAIN WALL OUTLET
- X — EXISTING TO ABOVE COUNTER OUTLET
- X — EXISTING TO REMAIN CEILING MOUNTED WORKSTATION OUTLET
- X — EXISTING TO RACEWAY OUTLET
- X — EXISTING TO REMAIN - FLOOR BOX/POKE-THRU/FOOR OUTLET

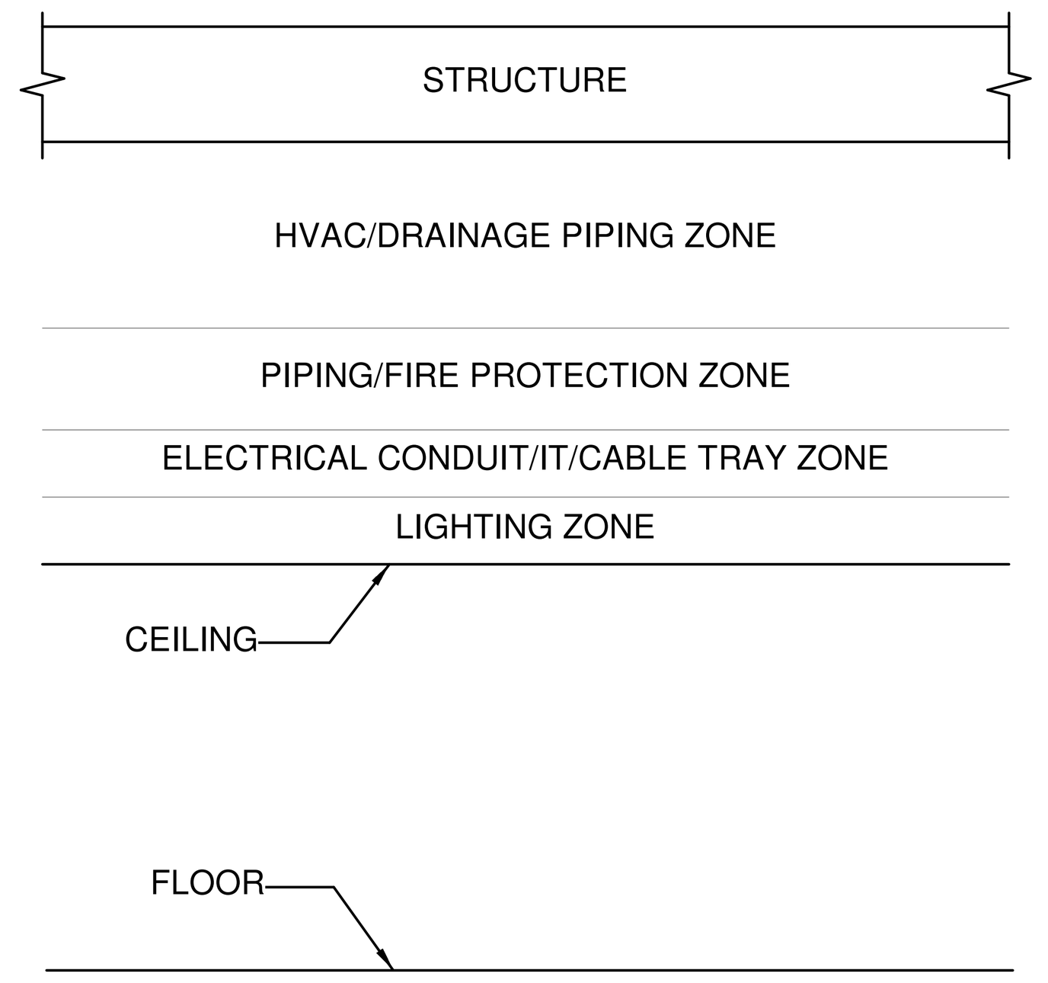
- CONVENIENCE POWER RECEPTACLE PROVIDED BY DIVISION 26 (ELEVATION VIEW)
- WALL PHONE OUTLET (ELEVATION VIEW)
- 2 RACK UNIT 48 PORT PATCH PANEL (ELEVATION VIEW)
  CABLE TYPE
  IDF: CAT. 6A, UON
- 2 RACK UNIT HORIZONTAL CABLE MANAGER (ELEVATION VIEW)
- RACK MOUNTED FIBER OPTIC PATCH PANEL
- S S S S S S — 12-STRAND SINGLE MODE FIBER OPTIC CONNECTOR PANEL. REFER TO DETAIL SHEETS AND SPECS FOR CONNECTOR TYPE.
- M M M M M M — 12-STRAND MULTIMODE FIBER OPTIC CONNECTOR PANEL. REFER TO DETAIL SHEETS AND SPECS FOR CONNECTOR TYPE.
- CROSS CONNECT POINT (NEW)
- TGB — TELECOMMUNICATIONS GROUNDING BUSBAR PROVIDED BY DIVISION 26 (PLAN VIEW)
- TELECOMMUNICATIONS GROUNDING BUSBAR PROVIDED BY DIVISION 26 (ELEVATION VIEW)

- TYPICAL CABLE TRAY WIDTH AS NOTED (END VIEW)
- TYPICAL STACKED CABLE TRAY (INDICATES ABOVE CABLE TRAY)
  (TOP VIEW)
  (SIDE VIEW)

- NEW
- FUTURE
- EXISTING
- CONDUIT STUB-UP MOUNTING LOCATION: FLOOR
- CONDUIT STUB MOUNTING LOCATION: WALL

TYPICAL ABOVE CEILING TRADE ZONES

NOTE: TRADE CONTRACTOR SHALL ROUTE SERVICES THROUGH THEIR RESPECTIVE ZONES AND COORDINATE ALL PATHWAYS WITH OTHER TRADES. PHASE INSTALLATION AS NECESSARY TO ALLOW OTHER TRADES TO INSTALL SERVICES AS INDICATED ON PLANS.



- REFER / SHT # — GENERAL REFERENCE DESIGNATES SHEET NUMBER
- DET # / SHT # — DETAIL REFERENCE TOP DESIGNATES DETAIL NUMBER BOTTOM DESIGNATES SHEET NUMBER
- # / SHT # — SECTION REFERENCE TOP DESIGNATES SECTION NUMBER BOTTOM DESIGNATES SHEET NUMBER
- ELEVATION SYMBOL
- NEW CONNECTION TO EXISTING
- NAME # — EQUIPMENT NAME AND NUMBER
- # — LAB EQUIPMENT NUMBER
- # — PLAN NOTE NUMBER
- # — REVISION NUMBER
- # — CONSTRUCTION BULLETIN NUMBER

CONFIGURATION TYPE (X)	DESCRIPTION	# OF DATA JACKS	# OF COAX JACKS	# OF FIBER JACKS	DATA CABLE TYPE	CABLE COLOR	FACEPLATE	ICON COLOR	DEFAULT MOUNTING HEIGHT (REFER TO ARCHITECTURAL ELEVATIONS)	CONDUIT	CABLE SOURCE
W	WALL TELEPHONE	1			CAT. 6A F/UTP	GREEN	SS 1-PORT	GREEN	48" AFF	(1) 1"	IDF ROOM
1		1			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	18" AFF	(1) 1"	IDF ROOM
2		2			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	18" AFF	(1) 1"	IDF ROOM
3		3			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	18" AFF	(1) 1"	IDF ROOM
4		4			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	18" AFF	(2) 1"	IDF ROOM
AVC	AV CAMERA	1			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	FLUSH CEILING	(1) 1"	IDF ROOM
IC	INTERCOM	1			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	48" AFF	(1) 1"	IDF ROOM
TV	TELEVISION	2	1		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	84" AFF (UNO)	(1) 1"	IDF ROOM
SC	SECURITY CAMERA	1			CAT. 6A F/UTP	GREEN	1-GANG	GRAY	ABOVE CEILING	(1) 1"	IDF ROOM
AC	ACCESS CONTROLLER	1			CAT. 6A F/UTP	GREEN	1-GANG	GRAY	ABOVE CEILING ADJACENT TO DOOR CONTROLLER	(1) 1"	IDF ROOM
TC	TIME CLOCK	1			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	48" AFF	(1) 1"	IDF ROOM
P	PROJECTOR	1			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	FLUSH CEILING	(1) 1"	IDF ROOM
C	COMMUNICATIONS ACCESS POINT	2			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	ABOVE CEILING	(1) 1"	IDF ROOM
GW	BAS GATEWAY	2			CAT. 6A F/UTP	GREEN	1-GANG	BLUE	ABOVE CEILING	(1) 1"	IDF ROOM
ELEV	ELEVATOR PHONE & MONITOR	3			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	36" AFF	(1) 1"	IDF ROOM
EM	EMERGENCY PHONE	1			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	36" AFF	(1) 1"	IDF ROOM
ATS	AUTOMATIC TRANSFER SWITCH	2			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	36" AFF	(1) 1"	IDF ROOM
PT	PNEUMATIC TUBE	1			CAT. 6A F/UTP	GREEN	1-GANG	BLACK	SEE DRAWINGS	(1) 1"	IDF ROOM
S	OVERHEAD PAGING SPEAKER	1			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	ABOVE CEILING	(1) 1"	IDF ROOM
AVTV	AV TV	2	1		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	AS NOTED ON AV DRAWINGS	MIN (2) 1.25" OR AS NOTED ON AV DRAWINGS	IDF ROOM OR AS NOTED ON AV DRAWINGS
B	WIRELESS ACCESS POINT, BOLLARD	1			CAT. 6A F/UTP	GREEN	NA	GREEN	EXTERIOR BOLLARD	(1) 1"	IDF ROOM

NOTES:

1. MOUNTING HEIGHTS ARE AS LISTED, UNLESS OTHERWISE NOTED ON DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT ELEVATIONS.
2. PROVIDE BLANK MODULES OR INSERTS AS REQUIRED TO FILL EMPTY FACEPLATE PORTS.
3. ALL CONDUIT, CABLE TRAY, SURFACE RACEWAY, FLOOR BOXES, AND BACK BOXES PROVIDED BY ELECTRICAL CONTRACTOR.
4. ALL COMMUNICATIONS FACEPLATES, JACKS, CABLE, TERMINATION HARDWARE, AND HORIZONTAL CABLE MANAGEMENT BY COMMUNICATIONS CONTRACTOR.
5. FOR FLOOR-MOUNTED OUTLETS, TERMINATE CABLES AT IDF ON SAME LEVEL AS OUTLET.
6. COORDINATE BAS GATEWAY OUTLET LOCATIONS WITH BAS CONTRACTOR PRIOR TO BEGINNING WORK.
7. IP OVERHEAD PAGING SPEAKERS ARE OFOI, IF APPLICABLE.
8. ALL FLOOR BOXES SERVING DATA LOCATIONS SHALL BE SERVED BY MINIMUM TWO (2) 1" CONDUITS. CONDUITS SHALL BE SIZED LARGER WHERE REQUIRED.
9. ALL FLOOR BOXES SERVING COMBINED AV AND DATA LOCATIONS SHALL BE SERVED BY MINIMUM THREE (3) 1.25" CONDUITS. CONDUITS SHALL BE SIZED LARGER WHERE REQUIRED.
10. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT PLACEMENT AND HEIGHTS FOR ALL TV/WALL MONITOR LOCATIONS. REFER TO CHART ON AVF-000 FOR ADDITIONAL RACEWAY REQUIREMENTS.

ABBREVIATIONS

10GBASE-T	10 GIGABIT ETHERNET OVER TWISTED PAIR COPPER
10/100BaseTX	ETHERNET/FAST ETHERNET
1000BaseSX	GIGABIT ETHERNET (SHORT WAVELENGTH)
1000BaseLX	GIGABIT ETHERNET (LONG WAVELENGTH)
AC	ABOVE CEILING/ALTERNATING CURRENT
ACT	ACOUSTICAL CEILING TILE
ADO	AUTOMATIC DOOR OPENER
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ARCH	ARCHITECTURAL
ASC	ABOVE SUSPENDED CEILING
AUTO	AUTOMATIC
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BCS	BUILDING CONTROL SYSTEM
BEF	(BUILDING) ENTRANCE FACILITY
BFC	BELOW FINISH CEILING
BFL	BELOW FLOOR LEVEL
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
BRKR	BREAKER
C	CONDUIT
CATV	COMMUNITY ACCESS TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
CCT	CIRCUIT
CCT BKR	CIRCUIT BREAKER
CLG	CEILING
CONTR	CONTRACTOR
CORR	CORRIDOR
CP	CONSOLIDATION POINT
CT	CABLE TRAY
DB	DIRECT BURIAL
DC	DIRECT CURRENT
DED	DEDICATED
DET	DETAIL
DIA	DIAMETER
DN	DOWN
DS	DISCONNECT SWITCH
EC	EMPTY CONDUIT/ELECTRICAL CONTRACTOR
EDB	ELECTRIC DUCT BANK
EG	EQUIPMENT GROUND
EGS	ENGINE GENERATOR SET
EIDF	EQUIPMENT INTERMEDIATE DISTRIBUTION FRAME
EJ	EXPANSION JOINT
ELEC	ELECTRIC/ELECTRICAL
EMER	EMERGENCY
EMI	ELECTROMAGNETIC INTERFERENCE
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
ER	EQUIPMENT ROOM
ETR	EXISTING TO REMAIN
F/FC	FLUSH WITH FINISHED CEILING
F/FF	FLUSH WITH FINISHED FLOOR
F/FW	FLUSH WITH FINISHED WALL
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FL	AT FLOOR LINE
FLEX	FLEXIBLE
FLR	FLOOR
FLUOR	FLUORESCENT
FS	FLOW SWITCH
FSS	FUSED SAFETY SWITCH
FSCP	FLAME SAFEGUARD CONTROL PANEL
FVNR	FULL VOLTAGE NON-REVERSING
GBIC	GIGABIT INTERFACE CONVERTER
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GEN	GENERATOR
GRC	GALVANIZED RIGID CONDUIT
HH	HANDHOLE
HT	HEIGHT/HEAT TRACE
HV	HIGH VOLTAGE
IDF	INTERMEDIATE DISTRIBUTION FRAME
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KO	KNOCK-OUT
KV	KILOVOLT
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
KWH	KILOWATT HOURS
LAN	LOCAL AREA NETWORK
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION
MC	MECHANICAL CONTRACTOR
MDF	MAIN DISTRIBUTION FRAME
MER	MECHANICAL EQUIPMENT ROOM
MH	MANHOLE
MM	MULTIMODE
MP	MUSIC & PAGE
MTD	MOUNTED
MTG	MOUNTING
MTG HGT	MOUNTING HEIGHT
NA	NOT APPLICABLE
NC	NURSE CALL
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
PM	PHYSIOLOGICAL MONITORING
PB	PULL BOX/PUSHBUTTON
PBX	PRIVATE BRANCH EXCHANGE
PC	PLUMBING CONTRACTOR/PHOTOCELL/PERSONAL COMPUTER
PDU	POWER DISTRIBUTION UNIT
PF	POWER FACTOR
PH	PHASE
PLBG	PLUMBING
PNL	PANEL
PWR	POWER
REC	RECESSED
RECEP	RECEPTACLE
REL	RELOCATE
REQD	REQUIRED
RFID	RADIO FREQUENCY IDENTIFICATION
RU	RACK UNIT
SHT	SHEET
SIG	SIGNAL
SIM	SIMILAR
SM	SINGLEMODE
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STA	STATION
SW	SWITCH
TB	TERMINAL BOX
TEL	TELEPHONE
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TO	TELECOMMUNICATIONS OUTLET
TR	TELECOMMUNICATIONS ROOM
TS	TAMPER SWITCH/TIME SWITCH
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UC	UNDER COUNTER
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTAGE
W	WIRE
WAO	WORK AREA OUTLET
W/	WITH
WP	WEATHERPROOF
WS	WALL SURFACE
WT	WATER TIGHT
X-XFMR	EXISTING TRANSFORMER
XP	EXPLOSION PROOF

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HGA

JACOBS Consultancy

AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

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Drawn By JV
Checked By KO
Client Number 514
Project Number 15576

STATE OF KENTUCKY ANDREW SCHMIDT 30653 LICENSED PROFESSIONAL ENGINEER

DRAWING
TECHNOLOGY PHASE 3 FO SYMBOLS AND ABBREVIATIONS

SHEET NO.
TF-050

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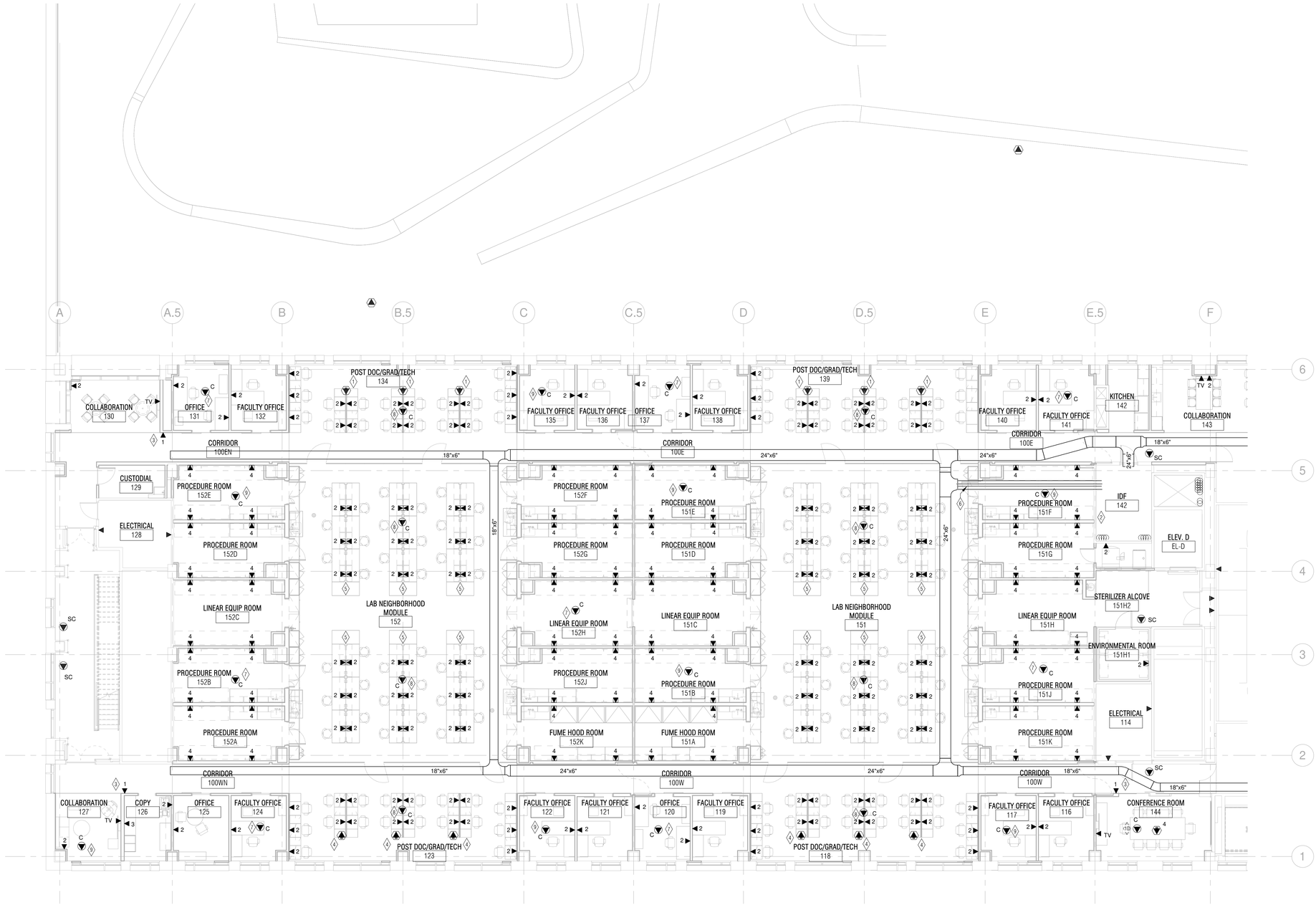


1 TF-251B **PHASE 3 TECHNOLOGY FO PLAN LEVEL ONE AREA B**
1/8" = 1'-0"

GENERAL NOTES

1. ALL WORK AND MATERIAL SHALL COMPLY WITH UNIVERSITY OF KENTUCKY COMMUNICATIONS AND NETWORK SYSTEMS (CNS) TELECOMMUNICATION STANDARDS (LATEST VERSION).
2. CABLES ON THIS SHEET SHALL TERMINATE IN THE DESIGNATED IDF AS LISTED ON THE SHEET OR IN THE KEYNOTES.
3. CABLE TRAY, CONDUIT RACEWAYS, CONDUIT BACKBOXES, FLOOR AND WALL SLEEVES SHALL BE PROVIDED BY THE DIVISION 26 CONTRACTOR. CONDUIT RACEWAY SHALL BE PROVIDED FROM BACKBOX TO NEAREST ACCESSIBLE CABLE TRAY. THE EXCEPTION TO THIS RULE WILL BE THAT THE DIVISION 27 CONTRACTOR SHALL PROVIDE ALL CABLE TRAY WITHIN THE BDF, MDF, EIDF, AND ALL IDFS.
4. COORDINATE WITH ARCHITECTURAL ELEVATION DRAWINGS FOR EXACT OUTLET LOCATIONS AND HEIGHTS. ALL OUTLET LOCATIONS AND WALLBOX PLACEMENT SHALL BE LOCATED PER ARCHITECTURAL DRAWINGS.
5. PLYWOOD ON WALLS IN THE BDF, MDF, IDFS, AND EIDF SHALL BE IN COMPLIANCE WITH CNS STANDARDS. THE FIRE RATING STAMP ON PLYWOOD SHEETS SHALL NOT BE PAINTED OVER OR COVERED IN ANY MANNER. THE FIRE RATING STAMP SHALL FACE OUT AND BE READILY VISIBLE.
6. COORDINATE INSTALLATION OF REQUIRED CABLE LOCATIONS WITH SECURITY, AV SYSTEMS, LIGHTING CONTROL, EQUIPMENT MONITORING, ETC. WITH SYSTEM VENDORS AND INTEGRATORS. REFER TO SYSTEMS VENDORS CONTRACT AND PROJECT DOCUMENTS FOR ADDITIONAL INFORMATION.
7. CABLE TRAY AND SUPPORTING INFRASTRUCTURE SHOWN IN HALF-TONE PROVIDED DURING PREVIOUS PHASE AND IS EXISTING TO REMAIN.

KEYED NOTES

1 UTILIZE EXISTING POKE-THRU FLOOR BOX FOR NEW DATA CABLING TO FURNITURE SYSTEM. PROVIDE FLEX CONDUIT SIZED ACCORDING TO UNIVERSITY OF KENTUCKY IT STANDARDS. COORDINATE ROUTING THROUGH WITH FURNITURE FEED SYSTEM WITH ARCHITECTURAL DRAWINGS AND FURNITURE MANUFACTURER DOCUMENTS PRIOR TO INSTALLATION.

2 EQUIPMENT ROOM INFRASTRUCTURE INCLUDING CABLE RUNWAY, RACKS, AND VERTICAL WIRE MANAGEMENT WITHING EXISTING IDF WAS PROVIDED IN PREVIOUS PHASE. CONTRACTOR SHALL PROVIDE NEW MODULAR PATCH PANELS AND HORIZONTAL WIRE MANAGEMENT AS NECESSARY TO ACCOMODATE NEW WORK FOR THIS PHASE. COORDINATE PLACEMENT OR PATCH PANELS WITH CNS PRIOR TO FINAL TERMINATIONS.

3 PROVIDE DATA LOCATION AT 48" HEIGHT FOR FUTURE SCHEDULING DISPLAY DEVICE.

4 EC TO PROVIDE NEW POKE-THRU FLOOR BOX FOR DATA FEED TO FURNITURE SYSTEM. PROVIDE FLEX CONDUIT SIZED ACCORDING TO UNIVERSITY OF KENTUCKY IT STANDARDS. COORDINATE INTERFACE WITH FURNITURE FEED SYSTEM WITH ARCHITECTURAL DRAWINGS AND FURNITURE MANUFACTURER PRIOR TO INSTALLATION.

5 TERMINATE DATA CABLES FROM IDF AT 4-PORT MODULAR WIRING PANELS IN CEILING. CONTRACTRO SHALL LEAVE A MINIMUM OF 5' SERVICE LOOP COILED NEATLY IN THE CEILING. PRE WIRED FURNITURE FEED SYSTEM SHALL INTERFACE WITH 4-PORT DATA PANELS IN CEILING. CONTRATOR SHALL PROVIDE AND INSTALL SPIRAL WRAP FOR DATA CABLE ROUTING FROM CEILING MODULAR PANEL INTERFACE TO DESK WORKSTATION. COORDINATE WITH ELECTRICAL DRAWINGS FOR MORE INFORMATION. COORDINATE WITH PRE WIRED FURNITURE SYSTEM MANUFACTURER PRIOR TO INSTALLATION.

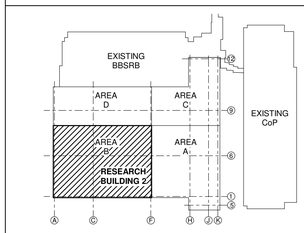
6 CONTRACTOR SHALL PROVIDE AND INSTALL (4) 4" EMT CONDUIT RACEWAYS FROM THE CABLE TRAY IN THE CORRIDOR OF LAB NEIGHBORHOOD MODULE 451 TO THE CABLE RUNWAY IN IDF 442. TERMINATE CONDUIT ENDS WITH BUSHINGS PER UK IT STANDARDS. FIRESTOP ALL WALL PENETRATIONS PER PROJECT SPECIFICATIONS.

7 WIRELESS ACCESS POINT TO BE CISCO MODEL 3802I 2.4+5.

8 WIRELESS ACCESS POINT TO BE CISCO MODEL 3802I MICRO.

9 WIRELESS ACCESS POINT TO BE CISCO MODEL 3802I MACRO.

10 WIRELESS ACCESS POINT TO BE CISCO MODEL 3802I 5+5 MICRO.



KEY PLAN

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STATE OF KENTUCKY ANDREW SCHMITT 32663 LICENSED PROFESSIONAL ENGINEER 4/24/2020

DRAWING

TECHNOLOGY PHASE 3 FO PLAN LEVEL ONE AREA B

SHEET NO.

TF-251B

5/20/2020 10:04:51 PM

AUDIO VISUAL SYMBOLS AND ABBREVIATIONS

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CONFIGURATION: X=REFER TO CHART BELOW
MOUNTING LOCATION: REFER TO CHART BELOW
MOUNTING HEIGHT: REFER TO CHART BELOW

IC — INTERCOM OUTLETS - WALL MOUNTED
CONFIGURATION: REFER TO CHART BELOW
MOUNTING LOCATION: FLUSH WALL
MOUNTING HEIGHT: FIELD VERIFY

CONVENIENCE POWER RECEPTACLE PROVIDED BY DIVISION 26 (ELEVATION VIEW)

TGB — CROSS CONNECT POINT (NEW)

NEW

FUTURE

EXISTING

CONDUIT STUB-UP MOUNTING LOCATION: FLOOR

CONDUIT STUB MOUNTING LOCATION: WALL

REFER / SHT # — GENERAL REFERENCE DESIGNATES SHEET NUMBER

DET # / SHT # — DETAIL REFERENCE
TOP DESIGNATES DETAIL NUMBER
BOTTOM DESIGNATES SHEET NUMBER

/ SHT # — SECTION REFERENCE
TOP DESIGNATES SECTION NUMBER
BOTTOM DESIGNATES SHEET NUMBER

ELEVATION SYMBOL

NEW CONNECTION TO EXISTING

NAME / # — EQUIPMENT NAME AND NUMBER

— LAB EQUIPMENT NUMBER

— PLAN NOTE NUMBER

— REVISION NUMBER

— CONSTRUCTION BULLETIN NUMBER

TYPICAL ABOVE CEILING TRADE ZONES

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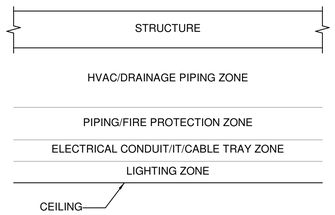

CONFIGURATION TYPE (X)	DESCRIPTION	# OF DATA JACKS	# OF COAX JACKS	# OF FIBER JACKS	DATA CABLE TYPE	CABLE COLOR	FACEPLATE	ICON COLOR	DEFAULT MOUNTING HEIGHT (REFER TO ARCHITECTURAL ELEVATIONS)	CONDUIT	CABLE SOURCE
AVC	AV CAMERA	1			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	FLUSH CEILING	(1) 1"	IDF ROOM
AVTV	AV TV	2	1		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	AS NOTED ON AV DRAWINGS	MIN (2) 1.25" OR AS NOTED ON AV DRAWINGS	IDF ROOM OR AS NOTED ON AV DRAWINGS
IC	INTERCOM	1			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	48" AFF	(1) 1"	IDF ROOM
-	-	1			CAT. 6A F/UTP	GREEN	1-GANG	GREEN	FLUSH CEILING	(1) 1"	IDF ROOM
-	-										
-	-										

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2. PROVIDE BLANK MODULES OR INSERTS AS REQUIRED TO FILL EMPTY FACEPLATE PORTS.
3. ALL CONDUIT, CABLE TRAY, SURFACE RACEWAY, FLOOR BOXES, AND BACK BOXES PROVIDED BY ELECTRICAL CONTRACTOR.
4. ALL COMMUNICATIONS FACEPLATES, JACKS, CABLE, TERMINATION HARDWARE, AND HORIZONTAL CABLE MANAGEMENT BY COMMUNICATIONS CONTRACTOR.
5. FOR FLOOR-MOUNTED OUTLETS, TERMINATE CABLES AT IDF ON SAME LEVEL AS OUTLET.
6. IP OVERHEAD PAGING SPEAKERS ARE OFOI, IF APPLICABLE.
7. ALL FLOOR BOXES SERVING DATA LOCATIONS SHALL BE SERVED BY MINIMUM TWO (2) 1" CONDUITS. CONDUITS SHALL BE SIZED LARGER WHERE REQUIRED.
8. ALL FLOOR BOXES SERVING AV LOCATIONS SHALL BE SERVED BY MINIMUM TWO (2) 1.25" CONDUITS. CONDUITS SHALL BE SIZED LARGER WHERE REQUIRED.

AUDIO VISUAL - FLAT PANEL DISPLAY SCHEDULE PHASE 2 FO

OUTLET ID	Level	Comments
101	LEVEL 01	
102	LEVEL 01	
103	LEVEL 01	
104	LEVEL 01	
105	LEVEL 01	
404	LEVEL 04	
405	LEVEL 04	
407	LEVEL 04	
408	LEVEL 04	
409	LEVEL 04	
411	LEVEL 04	
501	LEVEL 05	
502	LEVEL 05	
503	LEVEL 05	
504	LEVEL 05	
505	LEVEL 05	
506	LEVEL 05	

CABLING SCHEDULE

A	(1) Pre-terminated HDMI cord
B	(2) CAT-6 cables for HDMI over Cat6
C	Low voltage control cables for automated motorized screen control
D	No cabling, conduit infrastructure only

CONDUIT SIZE SCHEDULE

1	1" EMT
2	1-1/4" EMT
3	1-1/2" EMT
4	2" EMT

AUDIO VISUAL - PROJECTOR SCREEN SCHEDULE PHASE 2 FO

Mark	Level	Length	Comments
13	LEVEL 01	12' - 0"	
41	LEVEL 04	6' - 0"	

AUDIO VISUAL SYMBOL LIST

X# — CABLING-CONDUIT CALL OUT. LETTER FOR CABLING. NUMBER FOR CONDUIT SIZE. SEE CABLING AND CONDUIT SIZE TABLES ON THIS SHEET.

AV — MULTI-SERVICE FLOOR BOX. POWER, DATA, AV

TV — FLAT PANEL CONNECTION WALL BOX. PROVIDE FULL SINGLE GANG FACE PLATE FOR DATA AND AV CONNECTION

AV — AV CONNECTION WALL BOX. PROVIDE FULL SINGLE GANG FACE PLATE FOR DATA AND AV CONNECTION, CONNECTION TO SUPPORT TV CONNECTIVITY TO AV OUTLET. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.

PRJCTR — CEILING MOUNTED PROJECTOR

AV-F — AV FLOOR JUNCTION BOX

AV FOUR POST RACK

CEILING MOUNTED MOTORIZED PROJECTOR SCREEN

CEILING MOUNTED AV CAMERA

CHAMPLIN ARCHITECTURE
720 E Pete Rose Way, Suite 140
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THINK CREATE REALIZE

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JACOBS Consultancy

AEI Affiliated Engineers

CMTA

HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	100% CD REVIEW	10/15/18
2	ISSUED FOR BID & PERMIT	11/15/18
3	DD ISSUANCE - NIH	02/05/20
4	CD ISSUANCE - NIH	04/14/20
5	BID & PERMIT - NIH	05/22/20

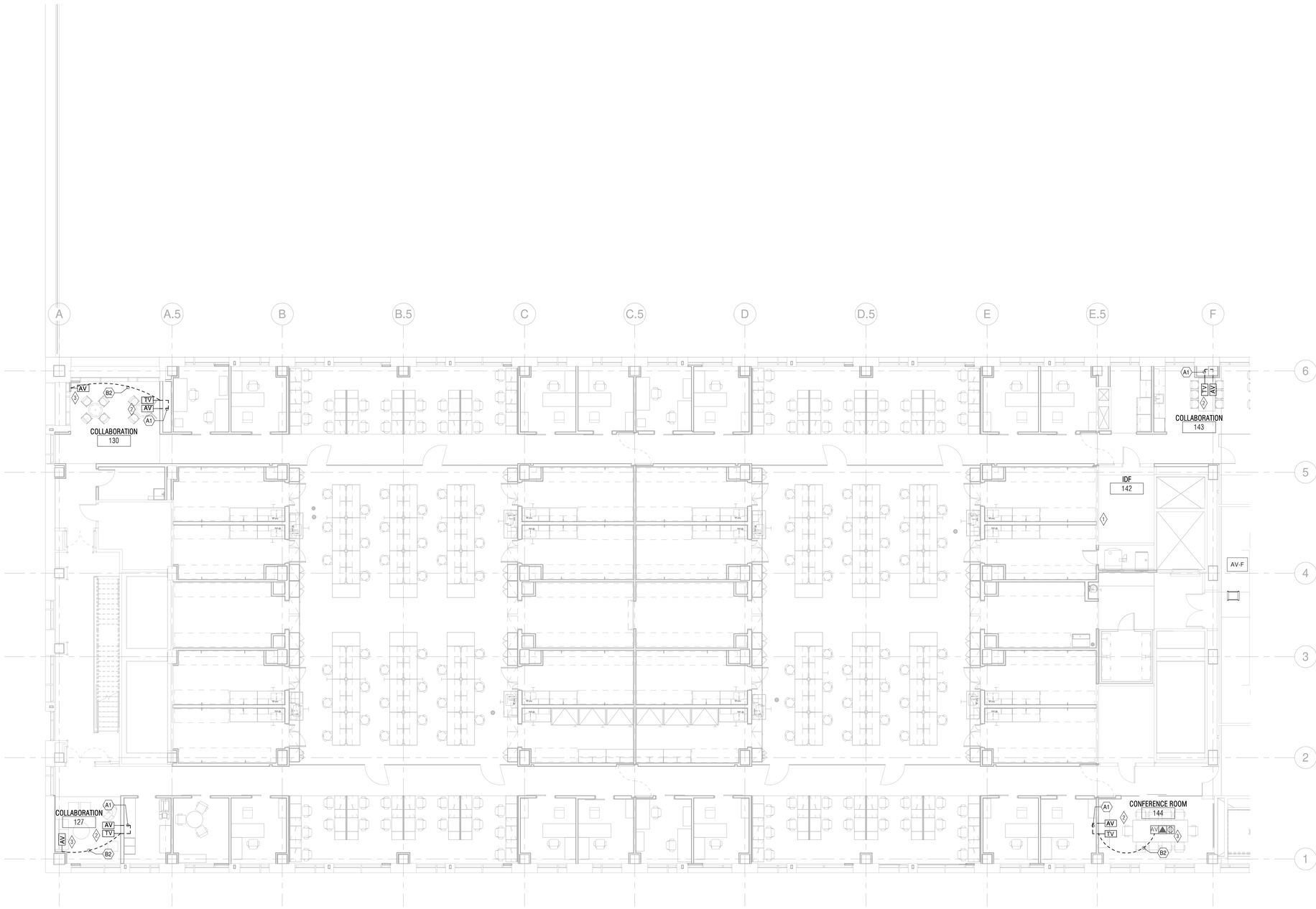
Drawn By: KO
Checked By: KO
Client Number: 514
Project Number: 15576

STATE OF KENTUCKY — ANDREW SCHMITT — 30083 — LICENSED PROFESSIONAL ENGINEER — 4/24/2020

DRAWING: AUDIO VISUAL PHASE 3 FO SYMBOLS AND ABBREVIATIONS

SHEET NO. AVF-050

5/20/2020 10:03:58 PM



GENERAL NOTES

1. ALL WORK AND MATERIAL SHALL COMPLY WITH UNIVERSITY OF KENTUCKY COMMUNICATIONS AND NETWORK SYSTEMS (CNS) TELECOMMUNICATION STANDARDS (LATEST VERSION).
2. CABLE TRAY, CONDUIT RACEWAYS, CONDUIT BACKBOXES, FLOOR AND WALL SLEEVES SHALL BE PROVIDED BY THE DIVISION 26 CONTRACTOR. CONDUIT RACEWAY SHALL BE PROVIDED FROM BACKBOX TO NEAREST ACCESSIBLE CABLE TRAY. THE EXCEPTION TO THIS RULE WILL BE THAT THE DIVISION 27 CONTRACTOR SHALL PROVIDE ALL CABLE TRAY WITHIN THE BDF, MDF, EIDF, AND ALL IDFS.
3. COORDINATE WITH ARCHITECTURAL ELEVATION DRAWINGS FOR EXACT OUTLET LOCATIONS AND HEIGHTS. ALL OUTLET LOCATIONS AND WALLBOX PLACEMENT SHALL BE LOCATED PER ARCHITECTURAL DRAWINGS.
4. COORDINATE INSTALLATION OF REQUIRED CABLE LOCATIONS WITH EQUIPMENT AND SYSTEM VENDORS. REFER TO SYSTEM VENDOR CONTRACT AND PROJECT DOCUMENTS FOR ADDITIONAL INFORMATION.
5. CABLE TRAY AND SUPPORTING INFRASTRUCTURE SHOWN IN HALF-TONE PROVIDED DURING PREVIOUS PHASE AND IS EXISTING TO REMAIN.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF EXISTING INSFRASTRUCTURE SHOWN ON DRAWINGS THAT IS REQUIRED TO SUPPORT SCOPE OF NEW WORK FOR THIS PHASE.

KEYED NOTES

1 EQUIPMENT ROOM INFRASTRUCTURE INCLUDING CABLE RUNWAY, RACKS, AND VERTICAL WIRE MANAGEMENT WITHING EXISTING IDF WAS PROVIDED IN PREVIOUS PHASE. CONTRACTOR SHALL PROVIDE NEW MODULAR PATCH PANELS AND HORIZONTAL WIRE MANAGEMENT AS NECESSARY TO ACCOMODATE NEW WORK FOR THIS PHASE. COORDINATE PLACEMENT OR PATCH PANELS WITH CNS PRIOR TO FINAL TERMINATIONS.

2 EC TO PROVIDE WALL MOUNTED AV BOX. COORDINATE LOCATION OF TV DATA OUTLET WITH ARCHITECTURAL DRAWINGS.

3 DATA CABLES PROVIDED UNDER TECHNOLOGY SCOPE. REFER TO TF-SERIES DRAWINGS FOR DATA CABLE REQUIREMENTS.

1 AVF-251B **PHASE 3 AUDIO VISUAL FO PLAN LEVEL ONE AREA B**
1/8" = 1'-0"

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HEALTHY KENTUCKY RESEARCH BUILDING

UNIVERSITY OF KENTUCKY

CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	DD ISSUANCE - NIH	02/05/20
2	CD ISSUANCE - NIH	04/14/20
3	BID & PERMIT - NIH	05/22/20

Drawn By KO	STATE OF KENTUCKY ANDREW SCHMITT 32093 LICENSED PROFESSIONAL ENGINEER 4/24/2020
Checked By KO	
Client Number 514	
Project Number 15576	

DRAWING
AUDIO VISUAL PHASE 3 FO PLAN LEVEL ONE AREA B

SHEET NO.
AVF-251B

5/20/2020 10:04:20 PM

PROCESS AND INSTRUMENTATION DIAGRAM SYMBOLS

- BUTTERFLY VALVE MANUAL
- BUTTERFLY CONTROL VALVE
- BUTTERFLY DAMPER
- GLOBE VALVE
- BALL VALVE
- SHUTOFF VALVE (BUTTERFLY VALVE FOR 2 1/2" AND LARGER, BALL VALVE FOR 2" AND SMALLER)
- GAUGE VALVE
- PLUG VALVE
- BALANCING VALVE
- SPRING CHECK VALVE
- SWING CHECK VALVE
- 2-WAY CONTROL VALVE
- 3-WAY MIXING VALVE
- 2-WAY SOLENOID VALVE
- 3-WAY SOLENOID VALVE ARROW INDICATING FAIL POSITION
- TRIPLE DUTY VALVE
- DRAIN VALVE
- DRAIN VALVE WITH CAP
- LOCKSHIELD VALVE
- FLOAT OPERATED VALVE
- QUICK OPENING VALVE
- GAS SHUTOFF VALVE
- DIAPHRAGM VALVE
- THERMAL EXPANSION VALVE
- REDUCED PRESSURE BACKFLOW PREVENTER (RPBP)
- PRESSURE RELIEF (RV) OR SAFETY VALVE (PSV)
- ANGLE VALVE
- STOP AND CHECK VALVE
- RUPTURE DISK PRESSURE RELIEF
- RUPTURE DISK VACUUM RELIEF
- FUSIBLE LINK VALVE
- PRESSURE REDUCING VALVE (PRV)
- NEEDLE VALVE
- ROTARY VALVE
- SAMPLE VALVE
- PRESSURE INDEPENDANT CONTROL VALVE

- GENERAL PIPELINE STRAINER WITHOUT DRAIN
- GENERAL PIPELINE STRAINER WITH DRAIN
- STEAM & CONDENSATE PIPELINE STRAINER
- WATER SYSTEM PIPELINE STRAINER
- SUCTION DIFFUSER
- DUPLEX STRAINER
- BASKET STRAINER
- FLANGE
- UNION
- INVERTED BUCKET TRAP
- FLOAT AND THERMOSTATIC TRAP
- THERMOSTATIC TRAP
- EXPANSION JOINT
- FLEXIBLE CONNECTION
- SHOCK SUPPRESSER
- HEAT TRACE TERMINATION POINT
- HEAT TRACE POWER CONNECTION POINT
- FILTER/REGULATOR
- FILTER
- 2" AND SMALLER, CAP OR PLUG 2 1/2" AND UP, BLIND FLANGE
- THERMOMETER
- PRESSURE GAUGE (WITH GAUGE VALVE)
- FLOW SENSOR
- FLOW SWITCH
- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- TEST PLUG (PRESSURE/TEMP.)
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- DIRECTION OF PITCH (DOWN)
- DIRECTION OF FLOW
- FLOW DIRECTION (OR)

- CARTRIDGE FILTER
- ELECTRIC HEATED CARTRIDGE FILTER
- RESTRICTION ORIFICE
- SANITARY TRICLAMP CONNECTION
- FLEXIBLE HOSE
- SPRAY BALL
- DRAIN
- DIAPHRAGM SEAL
- THERMOWELL
- PIG TAIL SIPHON
- VORTEX BREAKER
- DIRECTION OF FLOW
- MAGNETIC FLOW METER
- VENTURI TUBE FLOW METER
- FLOW NOZZLE
- ROTOMETER
- ANNUBAR FLOW METER
- CORIOLIS FLOW METER
- VORTEX FLOW METER
- TURBINE
- POSITIVE DISPLACEMENT
- SONIC
- SQUARE ROOT
- TARGET
- THERMAL DISPERSION
- FLUME
- WEIR

(XX) DEFINES FAIL POSITION OR NORMAL POSITION.
FC = FAIL CLOSED
FO = FAIL OPEN
FLP = FAIL LAST POSITION
NC = NORMALLY CLOSED
NO = NORMALLY OPEN

- PLATE & FRAME HEAT EXCHANGER
- SHELL & TUBE HEAT EXCHANGER
- QUICK CONNECT
- FAN
- AGITATOR
- SEPARATOR
- FLEXIBLE HOSE
- PUMP-VERTICAL
- PUMP-HORIZONTAL
- TANK - DRYER
- WATER SOFTENER
- CYLINDER
- EXPANSION TANK
- AIR SEPARATOR
- INLINE PUMP

DAMPERS

- OPPOSED BLADE TYPE
- PARALLEL BLADE TYPE
- AIR FLOW MEASURING DAMPER

ACTUATORS

- MANUAL
- ON/OFF GENERAL
- ON/OFF SPRING OPPOSED
- ON/OFF DOUBLE ACTING
- MODULATING W/O POSITIONER
- MODULATING WITH POSITIONER
- SOLENOID
- ELECTRIC MOTOR DRIVEN

INSTRUMENT LINE SYMBOLS

- CONNECTION TO PROCESS OR INSTRUMENT SUPPLY
- PNEUMATIC SIGNAL
- CAPILLARY TUBE
- HYDRAULIC SIGNAL
- ELECTRIC SIGNAL OR SOFTWARE LINK (SERIAL OR DATA)
- ELECTROMAGNETIC OR SONIC SIGNAL INCLUDE RADIO WAVES, LIGHT, NUCLEAR RADIATION, HEAT
- HARDWARE LINK
- PACKAGED EQUIPMENT LINE
- MAIN AIR SUPPLY
- XXXXX INDICATES COMMUNICATION FORMAT
- ETHERNET CABLE
- MSTP CABLE

PIPING SYSTEM LABELS

BBD	BOTTOM BLOWDOWN
BF	BOILER FEEDWATER
BSWR	BASIN SWEEPER WATER RETURN
BSWS	BASIN SWEEPER WATER SUPPLY
CCC	COOLING COIL CONDENSATE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CLPC	CLEAN LOW PRESSURE CONDENSATE
CLPS	CLEAN LOW PRESSURE STEAM
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
GWR	GLYCOL WATER RETURN
GWS	GLYCOL WATER SUPPLY
HGWR	HOT GLYCOL WATER RETURN
HGWS	HOT GLYCOL WATER SUPPLY
HPC	HIGH PRESSURE CONDENSATE
HPS(XX)	HIGH PRESSURE STEAM (PSIG)
HRO	HUMIDIFICATION RO WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
MTCHWR	MEDIUM TEMP CHILLED WATER RETURN
MTCHWS	MEDIUM TEMP CHILLED WATER SUPPLY
NPCW	NONPOTABLE COLD WATER
PHWR	PERIMETER HOT WATER RETURN
PHWS	PERIMETER HOT WATER SUPPLY
RW	REUSE WATER
RWR	RECLAIM WATER RETURN
RWS	RECLAIM WATER SUPPLY
SBD	SURFACE BLOWDOWN
TRW	TRANSFER WATER

- POSITIVE DISPLACEMENT PUMP
- AIR MIXING DEVICE
- SOUND ATTENUATING DEVICE
- ACTIVE CHILLED BEAM

GENERAL SHEET SYMBOLS

- PLAN NOTE REFERENCE SYMBOL (NOTE X.)
- REVISION SYMBOL REFERENCE NUMBER (A)
- CHANGE BULLETIN SYMBOL REFERENCE NUMBER (XXXX)
- ELEVATION SYMBOL ELEVATION DESIGNATION
- CONNECTION SYMBOL NEW TO EXISTING
- BILL OF MATERIAL SYMBOL "X" = ITEM NUMBER (X)
- PLAN CONTINUATION SYMBOL; BOTTOM = SHEET REFERENCE FOR CONTINUATION (REFER XX)
- DETAIL REFERENCE SYMBOL: TOP = DETAIL NUMBER BOTTOM = SHEET REFERENCE ON WHICH DETAIL APPEARS (X / XX)
- SECTION SYMBOL: TOP = SECTION NUMBER BOTTOM = SHEET REFERENCE ON WHICH SECTION APPEARS (X / XX)
- EQUIPMENT TAG

GENERAL INSTRUMENT OR FUNCTION SYMBOLS

FIELD MOUNTED / PANEL MOUNT ACCESSIBLE

- DISCRETE INSTRUMENTS (ie: SENSORS, CONTROLLERS, RECORDERS ETC.)
- INDICATING LIGHTS, ALARMS, HORNS
- XXXX / YYYY — XXXX = PROCESS MEDIA; REFER TO DRAWING YYYY FOR CONTINUATION OF PROCESS
- LOOP IDENTIFIER (REFER TO ABBREVIATION MATRIX) — LOOP TAG NUMBER (XXX 999)
- XXX = CLARIFIER (USED FOR ANALYZERS TO IDENTIFY TYPE EXAMPLE: i.e. pH, CONDUIT, ODP, ETC...)
- INTERLOCK (I)

AI XXX	DDC ANALOG INPUT	AI XXX	PLC ANALOG INPUT
AO XXX	DDC ANALOG OUTPUT	AO XXX	PLC ANALOG OUTPUT
DI XXX	DDC DISCRETE INPUT	DI XXX	PLC DISCRETE INPUT
DO XXX	DDC DISCRETE OUTPUT	DO XXX	PLC DISCRETE OUTPUT
FI XXX	DDC FREQUENCY INPUT	FI XXX	PLC FREQUENCY INPUT

AIR TERMINAL UNIT SYMBOLS

- BUTTERFLY VALVE W/ REHEAT
- VENTURI VALVE W/REHEAT
- BUTTERFLY VALVE
- VENTURI VALVE
- CONSTANT VOLUME VENTURI VALVE

INSTRUMENTATION SYMBOLS

CONTROLLERS						READOUT DEVICES		SWITCHES and ALARM DEVICES			TRANSMITTERS			SOLENOIDS, RELAYS, & COMPUTING DEVICES	PRIMARY ELEMENT	TEST POINT	WELL or PROBE	VIEWING DEVICE GLASS	SAFETY DEVICE	FINAL CONTROL ELEMENT
FIRST LETTERS	INITIATING OR MEASURED VARIABLE	RECORDING	INDICATING	BLIND	SELF-ACTUATED CONTROL VALVES	SELF-ACTUATED CONTROL DAMPERS	RECORDING	INDICATING	HIGH	LOW	COMB.	RECORDING	INDICATING	BLIND							
A	ANALYSIS	ARC	AIC	AC	ACV	ACD	AR	AI	ASH	ASL	ASHL	ART	AIT	AT	AY	AE	AP	AW	AG		AV
B	BURNER/COMBUSTION	BRC	BIC	BC	BCV	BCD	BR	BI	BSH	BSL	BSHL	BRT	BIT	BT	BY	BE	BP	BW	BG		BZ
C	CONDUCTIVITY	CRC	CIC	CC	CCV	CCD	CR	CI	CSH	CSL	CSHL	CRT	CIT	CT	CY	CE	CP	CW	CG		CV
CR	CONTROL RELAY														CR						
D	DENSITY/VISCOSITY	DRC	DIC	DC	DCV	DCD	DR	DI	DSH	DSL	DSHL	DRT	DIT	DT	DY	DE	DP	DW	DG		DV
E	VOLTAGE	ERC	EIC	EC	ECV	ECD	ER	EI	ESH	ESL	ESHL	ERT	EIT	ET	EY	EE	EP	EW	EG		EZ
F	FLOW RATE	FRC	FIC	FC	FCV	FCD	FR	FI	FSH	FSL	FSHL	FRT	FIT	FT	FY	FE	FP	FW	FG		FV
FQ	FLOW QUANTITY	FQRC	FQIC	FQC	FQCV	FQCD	FQR	FQI	FQSH	FQSL	FQSHL	FQRT	FQIT	FQT	FQY	FQE	FQP	FQW	FQG		FQV
FF	FLOW RATIO	FFRC	FFIC	FFC	FFCV	FFCD	FFR	FFI	FFSH	FFSL	FFSHL	FFRT	FFIT	FFT	FFY	FFE	FFP	FFW	FFG		
H	HAND	HRC	HIC	HC	HCV	HCD	HR	HI	HSH	HSL	HSHL	HRT	HIT	HT	HY	HE	HP	HW	HG		HZ
I	CURRENT	IRC	IIC	IC	ICV	ICD	IR	II	ISH	ISL	ISHL	IRT	IIT	IT	IY	IE	IP	IW	IG		IZ
J	POWER	JRC	JIC	JC	JCV	JCD	JR	JI	JSH	JSL	JSHL	JRT	JIT	JT	JY	JE	JP	JW	JG		JV
K	TIME	KRC	KIC	KC	KCV	KCD	KR	KI	KSH	KSL	KSHL	KRT	KIT	KT	KY	KE	KP	KW	KG		KV
L	LEVEL	LRC	LIC	LC	LCV	LCD	LR	LI	LSH	LSL	LSHL	LRT	LIT	LT	LY	LE	LP	LW	LG		LV
M	MOISTURE	MRC	MIC	MC	MCV	MCD	MR	MI	MSH	MSL	MSHL	MRT	MIT	MT	MY	ME	MP	MW	MG		MV
N	FREQUENCY	NRC	NIC	NC	NCV	NCD	NR	NI	NSH	NSL	NSHL	NRT	NIT	NT	NY	NE	NP	NW	NG		
P	PRESS./VACUUM	PRC	PIC	PC	PCV	PCD	PR	PI	PSH	PSL	PSHL	PRT	PIT	PT	PY	PE	PP	PW	PG	PSV/PSE	PV
PD	PRESS./DIFF.	PDRC	PDIC	PDC	PDCV	PDCD	PDR	PDI	PDSH	PDSL	PDSHL	PDRT	PDIT	PDT	PDY	PDE	PDP	PDW	PDG		PDV
Q	QUANTITY	QRC	QIC	QC	QCV	QCD	QR	QI	QSH	QSL	QSHL	QRT	QIT	QT	QY	QE	QP	QW	QG		QZ
R	RADIATION	RRC	RIC	RC	RCV	RCD	RR	RI	RSH	RSL	RSHL	RRT	RIT	RT	RY	RE	RP	RW	RG		RZ
S	SPEED	SRC	SIC	SC	SCV	SCD	SR	SI	SSH	SSL	SSHL	SRT	SIT	ST	SY	SE	SP	SW	SG		SV
T	TEMPERATURE	TRC	TIC	TC	TCV	TCD	TR	TI	TSH	TSL	TSHL	TRT	TIT	TT	TY	TE	TP	TW	TG	TSE	TV
TD	TEMPERATURE/DIFF.	TDRC	TDIC	TDC	TDCV	TDCD	TDR	TDI	TDSH	TDSL	TDSHL	TDRT	TDIT	TDT	TDY	TDE	TDP	TDW	TDG		TDV
U	MULTIVARIABLE	URC	UIC	UC	UCV	UCD	UR	UI	USH	USL	USHL	URT	UIT	UT	UY	UE	UP	UW	UG		UV
V	VIBRATION/MACHINERY ANALYSIS	VRC	VIC	VC	VCV	VCD	VR	VI	VSH	VSL	VSHL	VRT	VIT	VT	VY	VE	VP	VW	VG		VZ
W	WEIGHT/FORCE	WRC	WIC	WC	WCV	WCD	WR	WI	WSH	WSL	WSHL	WRT	WIT	WT	WY	WE	WP	WW	WG		WZ
X	ON/OFF	XRC	XIC	XC	XCV	XCD	XR	XI	XSH	XSL	XSHL	XRT	XIT	XT	XY	XE	XP	XW	XG		XV
Y	EVENT STATE/PRESENCE	YRC	YIC	YC	YCV	YCD	YR	YI	YSH	YSL	YSHL	YRT	YIT	YT	YY	YE	YP	YW	YG		YZ
Z	POS./DIMEN.	ZRC	ZIC	ZC	ZCV	ZCD	ZR	ZI	ZSH	ZSL	ZSHL	ZRT	ZIT	ZT	ZY	ZE	ZP	ZW	ZG		ZV

NOTE: THIS TABLE IS NOT ALL INCLUSIVE

*A, ALARM. THE ANNUNCIATING DEVICE, MAY BE USED IN THE SAME FASHION AS S, SWITCH, THE ACTUATING DEVICE.

† THE LETTERS H AND L MAY BE OMITTED IN THE UNDEFINED CASE

OTHER POSSIBLE COMBINATIONS

TJR	(SCANNING RECORDER)	FO	(RESTRICTION ORIFICE)	PFR	(RATIO)	HMS	(HAND MOMENTARY SWITCH)
LLH	(PILOT LIGHT)	FRK,HIK	(CONTROL STATIONS)	KQI	(RUNNING TIME INDICATOR)	XY	(PILOT SOLENOID VALVE)
XC	(MOTOR STARTER)	FX	(ACCESSORIES)	WKIC	(RATE-OF-WEIGHT LOSS CONTROLLER)	XS	(MOTOR AUXILIARY)
PRV	(PRESSURE REGULATING VALVE)			ZSC	(POSITION SWITCH CLOSED)		
				ZSO	(POSITION SWITCH OPEN)		

HVAC EQUIPMENT ABBREVIATIONS

AC	- AIR CONDITIONING UNIT/ AIR COMPRESSOR	FF	- FINAL FILTER	OA	- OUTSIDE AIR
ACC	- AIR COOLED CONDENSER	FHC	- FIRE HOSE CABINET	OF	- OVERFLOW WATER
ACCU	- AIR COOLED CONDENSING UNIT	FLP	- FAIL LAST POSITION	OFCI	- OWNER FURNISHED CONTRACTOR INSTALLED
AF	- AFTER FILTER	FO	- FAIL OPEN	OFOI	- OWNER FURNISHED OWNER INSTALLED
AHU	- AIR HANDLING UNIT	FOF	- FUEL OIL FILL		
AMD	- AIR MIXING DEVICE	FOR	- FUEL OIL RETURN	P	- PUMP
AS	- AIR SEPARATOR	FOS	- FUEL OIL SUPPLY	PA	- PLANT AIR
AT	- AIR TERMINAL DEVICE	FOV	- FUEL OIL VENT	PC	- PUMPED CONDENSATE
		FR	- FIN TUBE RADIATION	PF	- PRE-FILTER
B	- BOILER	FT	- FLASH TANK	PHWR	- PERIMETER HOT WATER RETURN
BAS	- BUILDING AUTOMATION SYSTEM	FW	- FEEDWATER	PHWS	- PERIMETER HOT WATER SUPPLY
BBD	- BOTTOM BLOWDOWN			PNL	- PANEL
BBS	- BOILER BLOWDOWN SEPARATOR	GE	- GENERAL EXHAUST	PP	- PETROLEUM SOLVENT
BF	- BOILER FEEDWATER	GWP	- GLYCOL WATER PUMP	PS	- POWER PANEL
BFS	- BOILER FEEDWATER SYSTEM	GWR	- GLYCOL WATER RETURN	PVDF	- POLYVINYLIDENE FLUORIDE
BH	- BOOSTER HUMIDIFIER	GWS	- GLYCOL WATER SUPPLY	PW	- PROCESS WASTE
BMS	- BUILDING MANAGEMENT SYSTEM				
BSWR	- BASIN SWEEPER WATER RETURN	H	- HUMIDIFIER	RAF	- RETURN AIR FAN
BSWS	- BASIN SWEEPER WATER SUPPLY	HC	- HEATING COIL	RAH	- ROOFTOP AIR HANDLING UNIT
		HOA	- HAND OFF AUTO	RC	- REHEAT COIL
C	- CONVECTOR	HGWR	- HOT GLYCOL WATER RETURN	RCP	- RADIANT CEILING PANEL
CA	- COMPRESSED AIR/COMBUSTION AIR	HGWS	- HOT GLYCOL WATER SUPPLY	RD	- ROOF DRAIN
CB	- CHILLED BEAM	HP	- HEAT PUMP/HORSEPOWER	RH	- RELIEF HOOD
CC	- COOLING COIL	HPC	- HIGH PRESSURE CONDENSATE	RHWS	- REHEAT HOT WATER SUPPLY
CCC	- COOLING COIL CONDENSATE	HPG	- HIGH PRESSURE NATURAL GAS	RHWR	- REHEAT HOT WATER RETURN
CAV	- CONSTANT AIR VALVE	HPR	- HIGH PRESSURE CONDENSATE RETURN	RHG	- REFRIGERANT HOT GAS
CCW	- CLEAR WATER WASTE	HPS(XX)	- HIGH PRESSURE STEAM (PRESSURE IN PSIG)	RL	- REFRIGERANT LIQUID
CEV	- CONSTANT EXHAUST VALVE	HRC	- HEAT RECOVERY COIL	RO	- REVERSE OSMOSIS WATER
CFCI	- CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	HRD	- HEAT RECLAIM DEVICE	ROH	- REVERSE OSMOSIS WATER (HIGH ZONE)
		HRO	- HUMIDIFICATION RO WATER	RS	- REFRIGERANT SUCTION
CH	- CHILLER	HROH	- HUMIDIFICATION RO WATER (HIGH ZONE)	RSF	- ROOF SUPPLY FAN
CHP	- CHILLED WATER PUMP	HRU	- HEAT RECOVERY UNIT	RWR	- RECLAIM WATER RETURN
CHWR	- CHILLED WATER RETURN	HRW	- HEAT RECOVERY WHEEL	RWS	- RECLAIM WATER SUPPLY
CHWS	- CHILLED WATER SUPPLY	HT	- HEAT TRACE	RW	- REUSE WATER
CLPC	- CLEAN LOW PRESSURE CONDENSATE	HTR	- HEATER		
CLPS	- CLEAN LOW PRESSURE STEAM	HVU	- HEATING VENTILATING UNIT	S	- SILENCER/STORM
CP	- CONDENSATE PUMP/ CONTROL PUMP	HWP	- HOT WATER PUMP	SA	- SUPPLY AIR
		HWR	- HOT WATER RETURN	SAD	- SOUND ATTENUATING DEVICE
CPD	- CONDENSATE PUMP DISCHARGE	HWS	- HOT WATER SUPPLY	SAN	- SANITARY
CSW	- COLD SOFT WATER	HEX	- HEAT EXCHANGER	SBD	- SURFACE BLOWDOWN
CT	- COOLING TOWER			SD	- SUCTION DIFFUSER
CUH	- CABINET UNIT HEATER	IA	- INSTRUMENT AIR	SF	- SUPPLY FAN
CV	- CONVERTER	IC	- INTERCOOLER	SPR	- SPRINKLER
CVV	- CONSTANT VOLUME VALVE	IH	- INTAKE HOOD	S/S	- START/STOP
CW	- CITY WATER/CONDENSER WATER	IW	- INDIRECT WASTE	SS	- STORM SEWER/STAINLESS STEEL
CWP	- CONDENSER WATER PUMP			ST	- STORAGE TANK/STEAM TRAP
CWR	- CONDENSER WATER RETURN	JWR	- JACKET WATER RETURN	SV	- STEAM VENT
CWS	- CONDENSER WATER SUPPLY	JWS	- JACKET WATER SUPPLY		
CWW	- CLEAR WATER WASTE			T	- TANK
CWV	- CLEAR WATER VENT	LN2	- LIQUID NITROGEN	TCP	- TEMPERATURE CONTROL PANEL
		LP	- LOW PRESSURE	TCV	- TEMPERATURE CONTROL VALVE
D	- DAMPER/DRAIN	LPC	- LOW PRESSURE CONDENSATE	TRW	- TRANSFER WATER
DA	- DEAERATOR	LPS	- LOW PRESSURE STEAM	TWR	- TOWER WATER RETURN
DCW	- DOMESTIC COLD WATER	LTACS	- LOW TEMP AIRFLOW CONTROL SYSTEM	TWS	- TOWER WATER SUPPLY
DH	- DEHUMIDIFIER	LV	- LAB VENT	TXV	- THERMAL EXPANSION VALVE
DHW	- DOMESTIC HOT WATER	LW	- LAB WASTE		
DP	- DISTRIBUTION PANEL			UH	- UNIT HEATER
DT	- DAY TANK	M	- MOTOR	UST	- UNDERGROUND STORAGE TANK
		MCC	- MOTOR CONTROL CENTER	UV	- UNIT VENTILATOR
EA	- EXHAUST AIR	MCV	- MOISTURE CONTROL VALVE		
EAV	- EXHAUST AIR VALVE	MPR	- MEDIUM PRESSURE CONDENSATE RETURN	V	- VALVE/VOLTS/VENT
EH	- EXHAUST HOOD/ ELECTRIC HEATER	MPS	- MEDIUM PRESSURE STEAM	VA	- VENTILATION AIR
		MS	- MOTOR STARTER	VAC	- VACUUM
EJ	- EXPANSION JOINT	MTCHWR	- MEDIUM TEMP CHILLED WATER RETURN	VAV	- VARIABLE AIR VALVE
ERR	- ENERGY RECOVERY RETURN	MTCHWS	- MEDIUM TEMP CHILLED WATER SUPPLY	VEV	- VARIABLE EXHAUST VALVE
ERS	- ENERGY RECOVERY SUPPLY			VFD	- VARIABLE FREQUENCY DRIVE
ET	- EXPANSION TANK	N2	- N2 COMMUNICATIONS BUS	VR	- VAPOR RECOVERY
EWC	- ELECTRIC WATER COOLER	NA	- NOT APPLICABLE	VTR	- VENT THRU ROOF
EX	- EXHAUST FAN	NC	- NORMALLY CLOSED		
		NG	- NATURAL GAS	WCC	- WATER COOLED CONDENSATE
F	- FILTER	NO	- NORMALLY OPEN	WE	- WET EXHAUST
FC	- FAIL CLOSE	NPCW	- NON-POTABLE COLD WATER	WF	- WATER FILTER
FCU	- FAN COIL UNIT	NPHW	- NON-POTABLE HOT WATER		
FCV	- FLOW CONTROL VALVE	NPSW	- NON-POTABLE SOFT WATER	X-(XXXX)	- EXISTING (SYSTEM)
FD	- FIRE DAMPER	NPW	- NON-POTABLE WATER		
FE	- FUME EXHAUST				
FEV	- FUME EXHAUST VALVE				

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CONSTRUCT RESEARCH BUILDING
(FIT-UP TWO WET LABS)

UK Project Number 2538.0

ISSUANCES

No.	Description	Date
1	PHASE 2 DD 100%	08/15/18
2	PHASE 2 CD REVIEW	10/15/18
3	ISSUE FOR BID & PERMIT	11/15/18
4	DD ISSUANCE - NIH	02/05/20
5	CD ISSUANCE - NIH	04/14/20
6	ISSUE FOR BID & PERMIT	05/22/20

Drawn By: EJ

Checked By: DS

Client Number: 514

Project Number: 5350

STATE OF KENTUCKY — SCOTT FOSTER — 31357 — LICENSED PROFESSIONAL ENGINEER

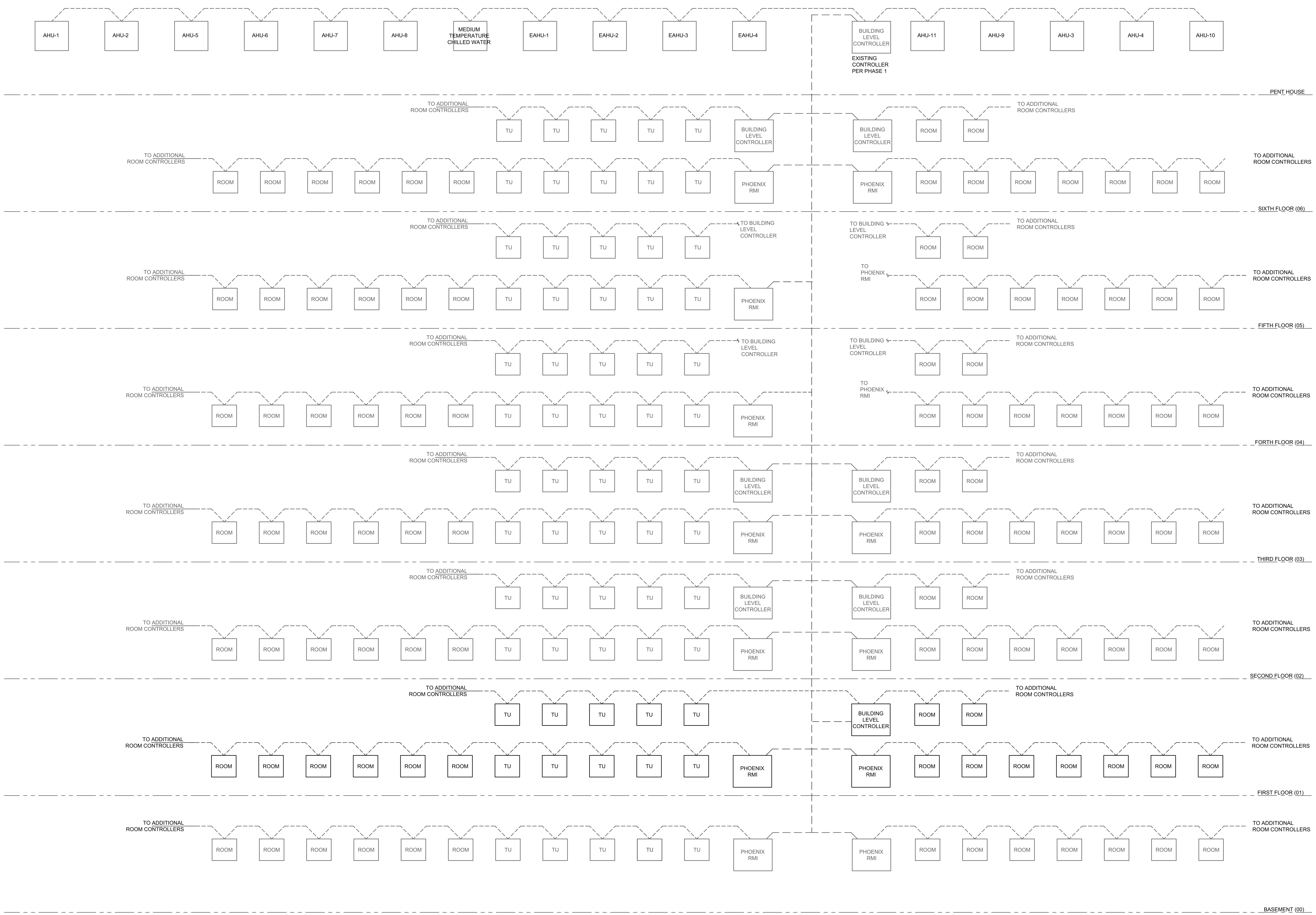
DRAWING TITLE
CONTROL INSTRUMENTATION SYMBOLS & ABBREVIATIONS

SHEET NO.
IC-050

02/05/2020 10:00:00 AM

GENERAL NOTES:

1. THE INTENT OF THIS DIAGRAM IS TO PROVIDE A BASIS FOR THE BAS, NOT THE ACTUAL LAYOUT OF THE FINAL DESIGN. BAS CONTRACTOR SHALL PROVIDE ADDITIONAL CONTROLLERS AS NECESSARY TO FULFILL REQUIREMENTS AND SEQUENCES LISTED IN 23-0901, 23-0923, AND 23-0993.



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UK Project Number 2538.0

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6	ISSUE FOR BID & PERMIT	05/22/20

Drawn By EJ

Checked By DS

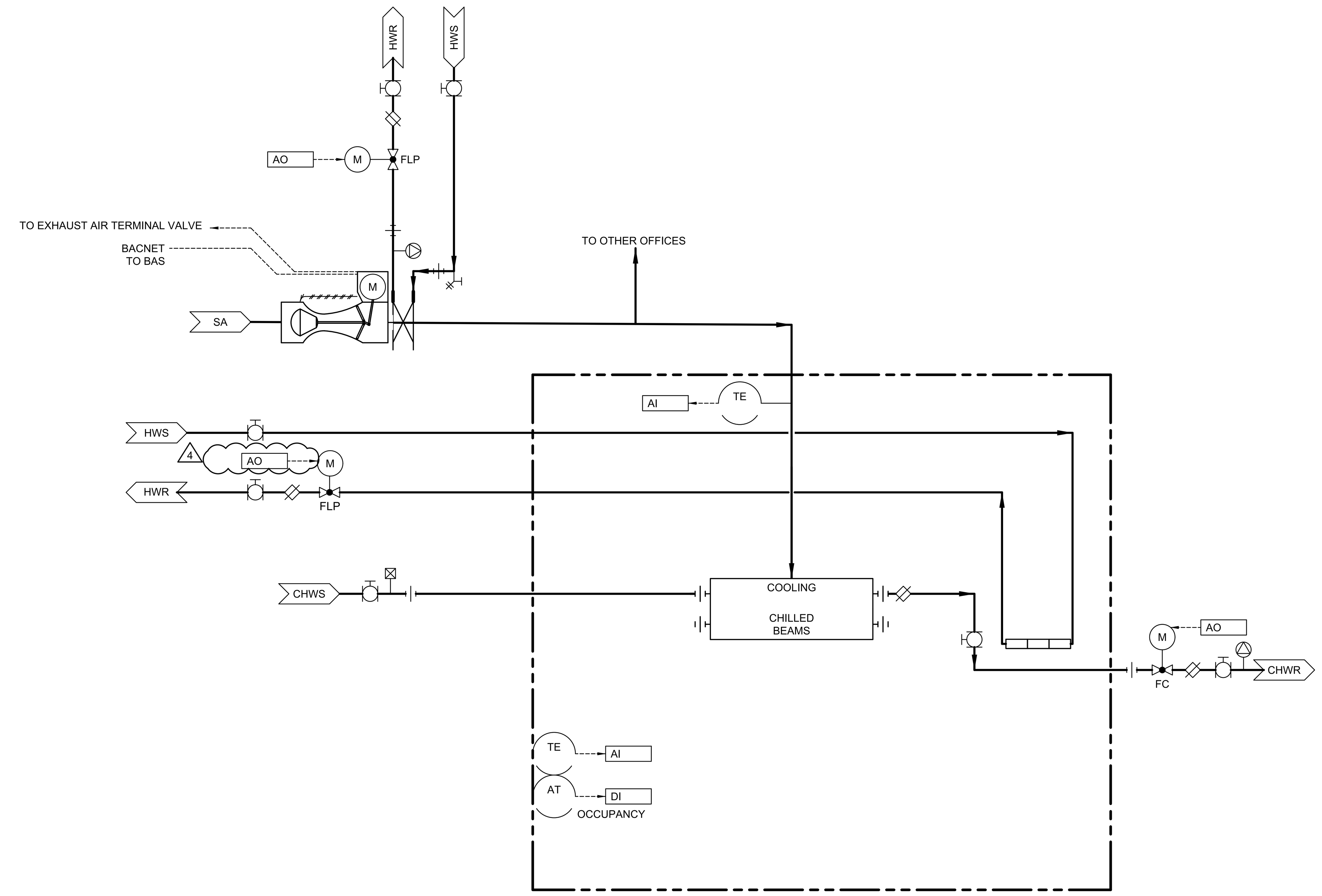
Client Number 514

Project Number 5350

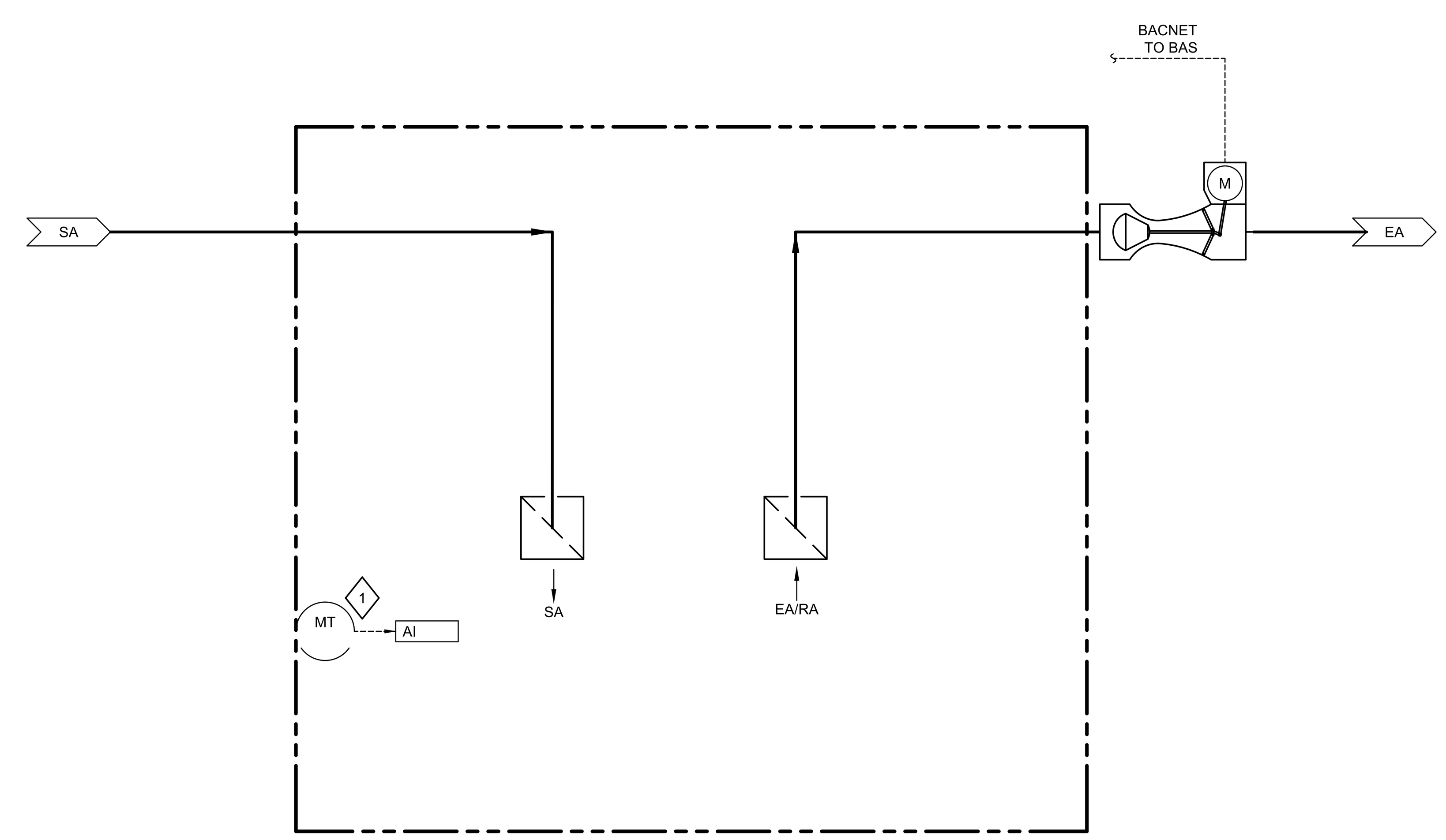
DRAWING TITLE
BAS SYSTEM ARCHITECTURE

SHEET NO.
IC-550

02/05/2020 10:00:00 AM



1 **SEQUENCE A: OFFICE WITH EXTERIOR EXPOSURE**
SCALE: NONE



2 **SEQUENCE B: HALLWAYS ASSOCIATED WITH OFFICES**
SCALE: NONE

GENERAL NOTES:

1. THE CONTROL/FLOW DIAGRAM IS ONLY INTENDED TO PROVIDE CONTROL AND INSTRUMENTATION RELATED INFORMATION. REFER TO MECHANICAL DETAILS FOR VALVING, DAMPERING AND ASSOCIATED SPECIALTIES' INSTALLATION REQUIREMENTS.
2. CONTROL/FLOW DIAGRAM INCLUDES GENERAL ARRANGEMENT OF SYSTEM COMPONENTS. REFER TO FLOOR PLANS AND EQUIPMENT SCHEDULES FOR COMPONENT QUANTITIES.

SHEET KEYNOTES

1. SENSOR WHERE INDICATED ON MECHANICAL DRAWINGS.

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UK Project Number 2538.0

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1	PHASE 2 DD 100%	08/15/18
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3	ISSUE FOR BID & PERMIT	11/15/18
4	P2 - ADDENDUM #5	02/28/19
5	DD ISSUANCE - NIH	02/05/20
6	CD ISSUANCE - NIH	04/14/20
7	ISSUE FOR BID & PERMIT	05/22/20

Drawn By EJ

Checked By DS

Client Number 514

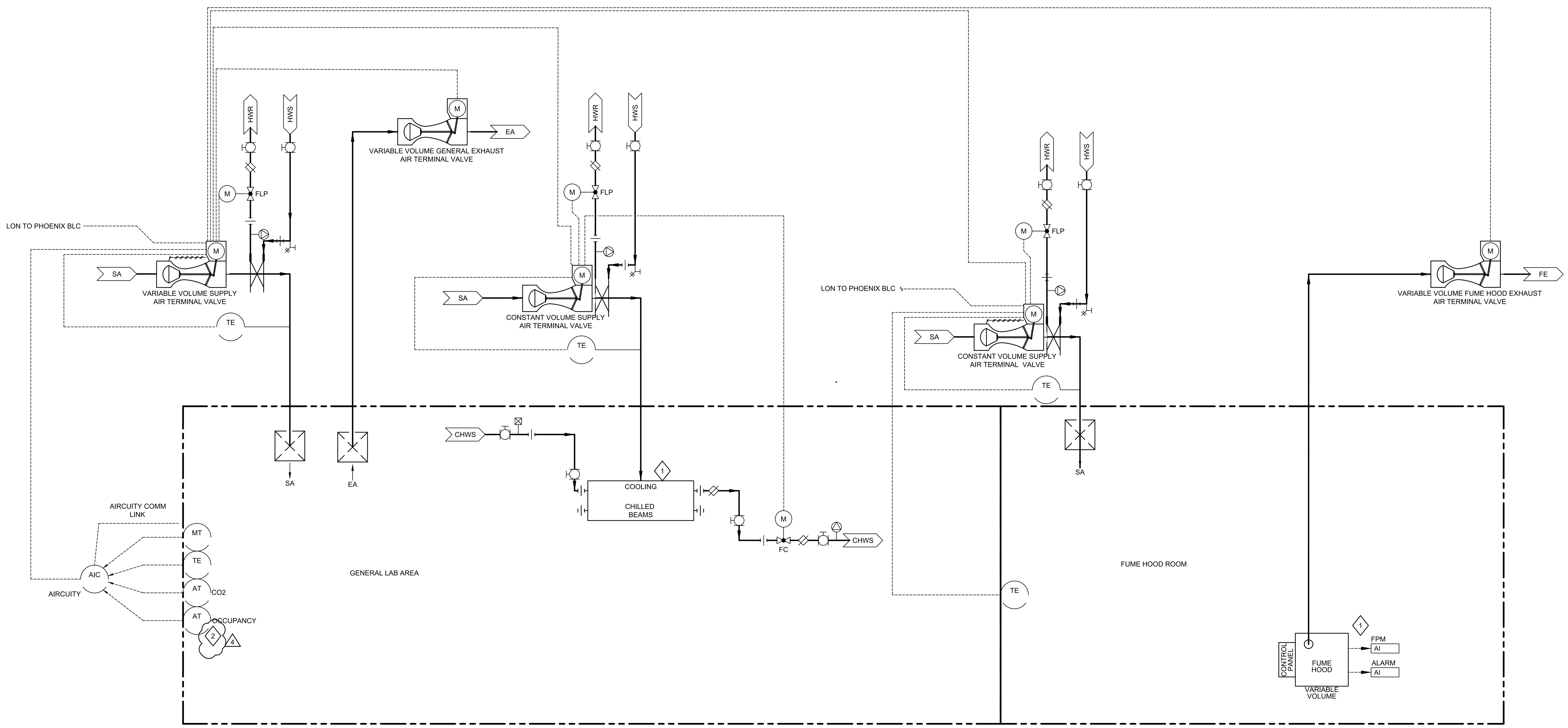
Project Number 5350

STATE OF KENTUCKY SCOTT ... LICENSED PROFESSIONAL ENGINEER

DRAWING TITLE
TERMINAL UNITS

SHEET NO.
IC-753

02/05/2020 10:00:00 AM



1 SEQUENCE H - MAIN LABROTARY AREA & FUME HOOD ROOM

SCALE: NONE

GENERAL NOTES:

1. THE CONTROL/FLOW DIAGRAM IS ONLY INTENDED TO PROVIDE CONTROL AND INSTRUMENTATION RELATED INFORMATION. REFER TO MECHANICAL DETAILS FOR VALVING, DAMPERING AND ASSOCIATED SPECIALTIES' INSTALLATION REQUIREMENTS.
2. CONTROL/FLOW DIAGRAM INCLUDES GENERAL ARRANGEMENT OF SYSTEM COMPONENTS. REFER TO FLOOR PLANS AND EQUIPMENT SCHEDULES FOR COMPONENT QUANTITIES.

SHEET KEYNOTES

1. MULTIPLE UNITS PER ZONE.
2. OCCUPANCY SENSOR PROVIDED BY CONTROL CONTRACTOR.

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UK Project Number 2538.0

ISSUANCES

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1	PHASE 2 DD 100%	08/15/18
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5	DD ISSUANCE - NIH	02/05/20
6	CD ISSUANCE - NIH	04/14/20
7	ISSUE FOR BID & PERMIT	05/22/20

Drawn By EJ

Checked By DS

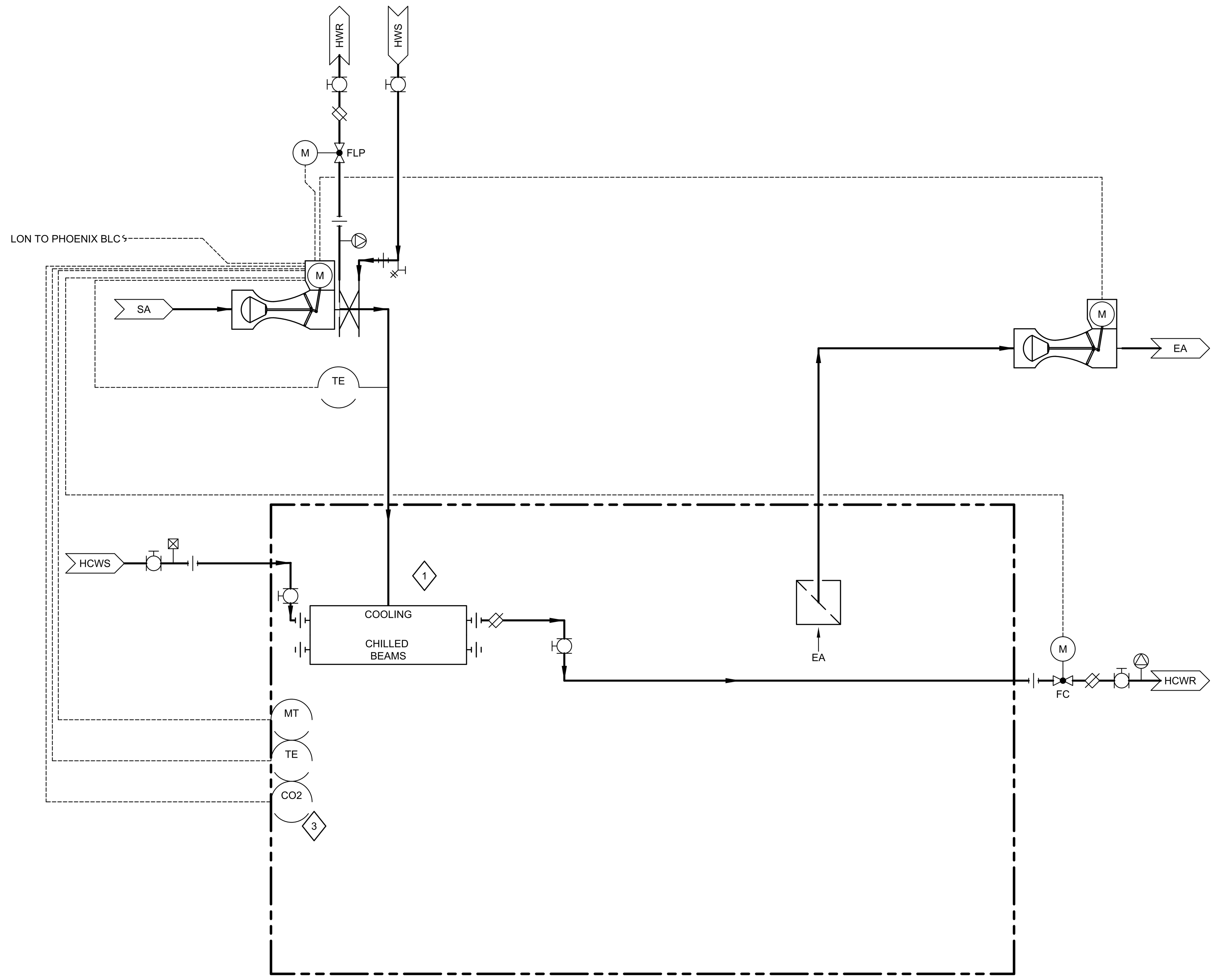
Client Number 514

Project Number 5350

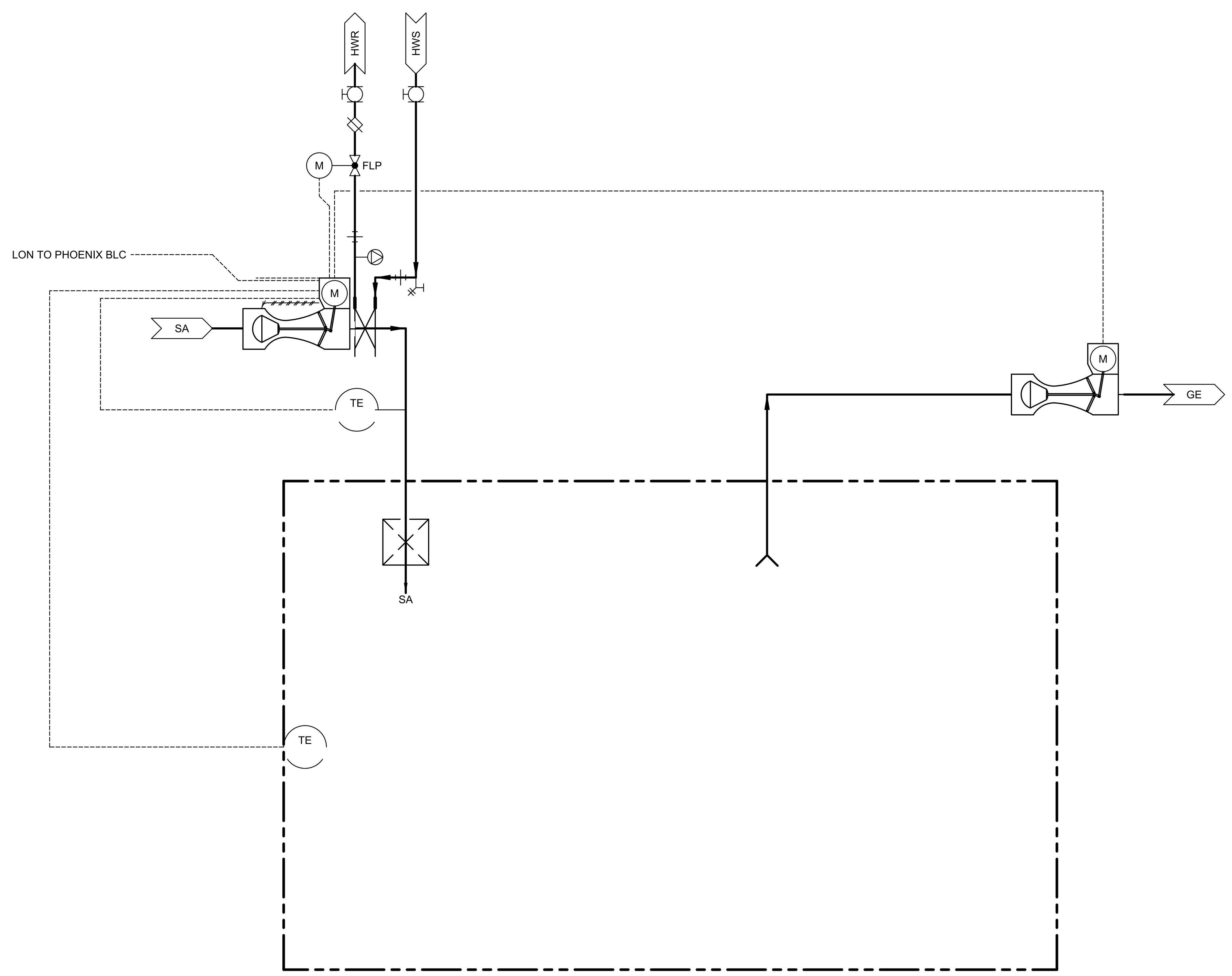
DRAWING TITLE
TERMINAL UNITS

SHEET NO.
IC-754

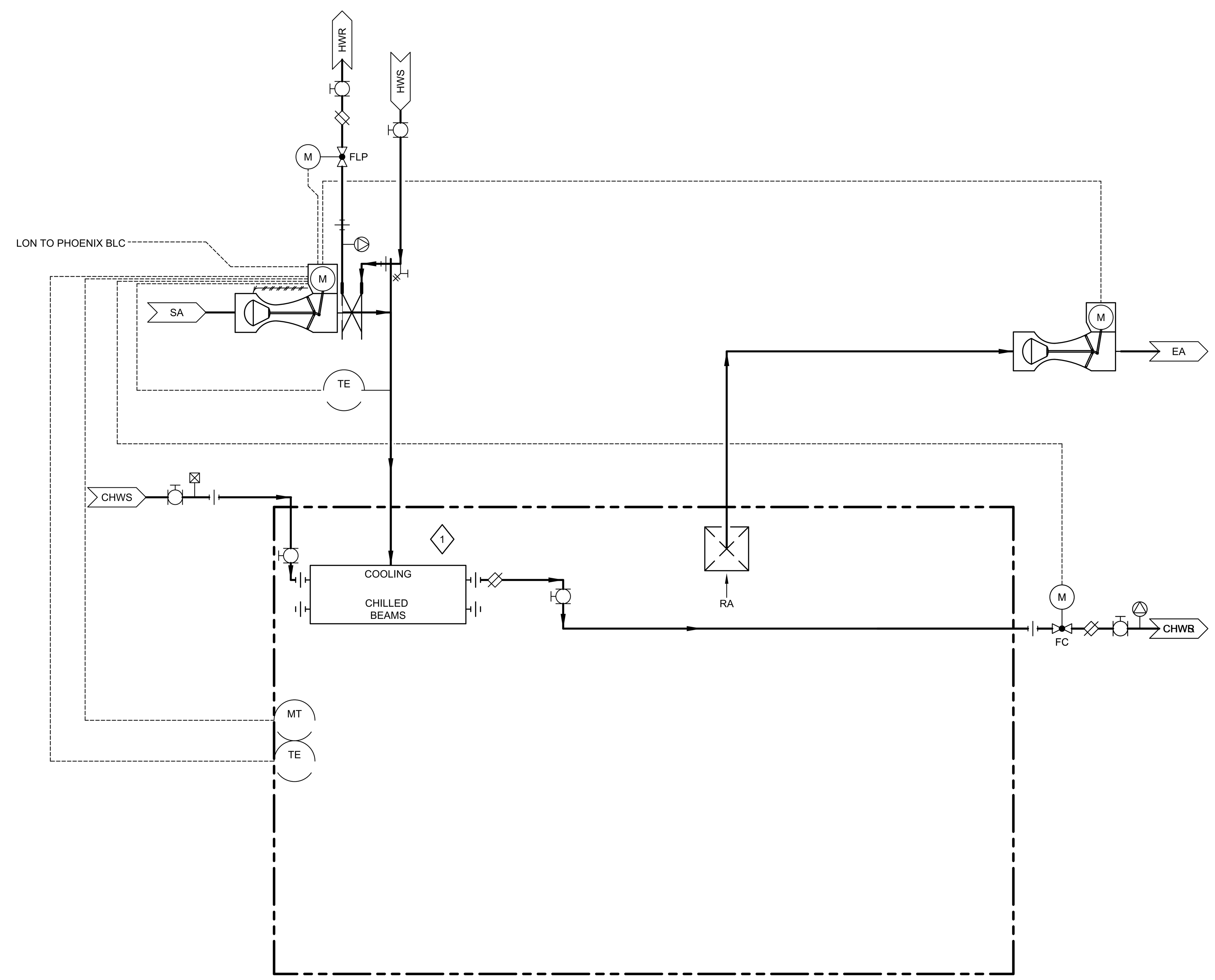
02/05/2020 10:00:00 AM



2 **SEQUENCE K: "WET LAB" PROCEDURE ROOM**
SCALE: NONE



3 **SEQUENCE L: STERILIZER ROOM**
SCALE: NONE



1 **SEQUENCE J: LINEAR EQUIPMENT ROOM**
SCALE: NONE

GENERAL NOTES:

1. THE CONTROL/FLOW DIAGRAM IS ONLY INTENDED TO PROVIDE CONTROL AND INSTRUMENTATION RELATED INFORMATION. REFER TO MECHANICAL DETAILS FOR VALVING, DAMPERING AND ASSOCIATED SPECIALTIES' INSTALLATION REQUIREMENTS.
2. CONTROL/FLOW DIAGRAM INCLUDES GENERAL ARRANGEMENT OF SYSTEM COMPONENTS. REFER TO FLOOR PLANS AND EQUIPMENT SCHEDULES FOR COMPONENT QUANTITIES.

SHEET KEYNOTES

1. MULTIPLE UNITS PER ZONE.
2. UNIT WHERE SHOWN ON PLANS.
3. SENSOR WHERE SHOWN ON PLANS.

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4	DD ISSUANCE - NIH	02/05/20
5	CD ISSUANCE - NIH	04/14/20
6	ISSUE FOR BID & PERMIT	05/22/20

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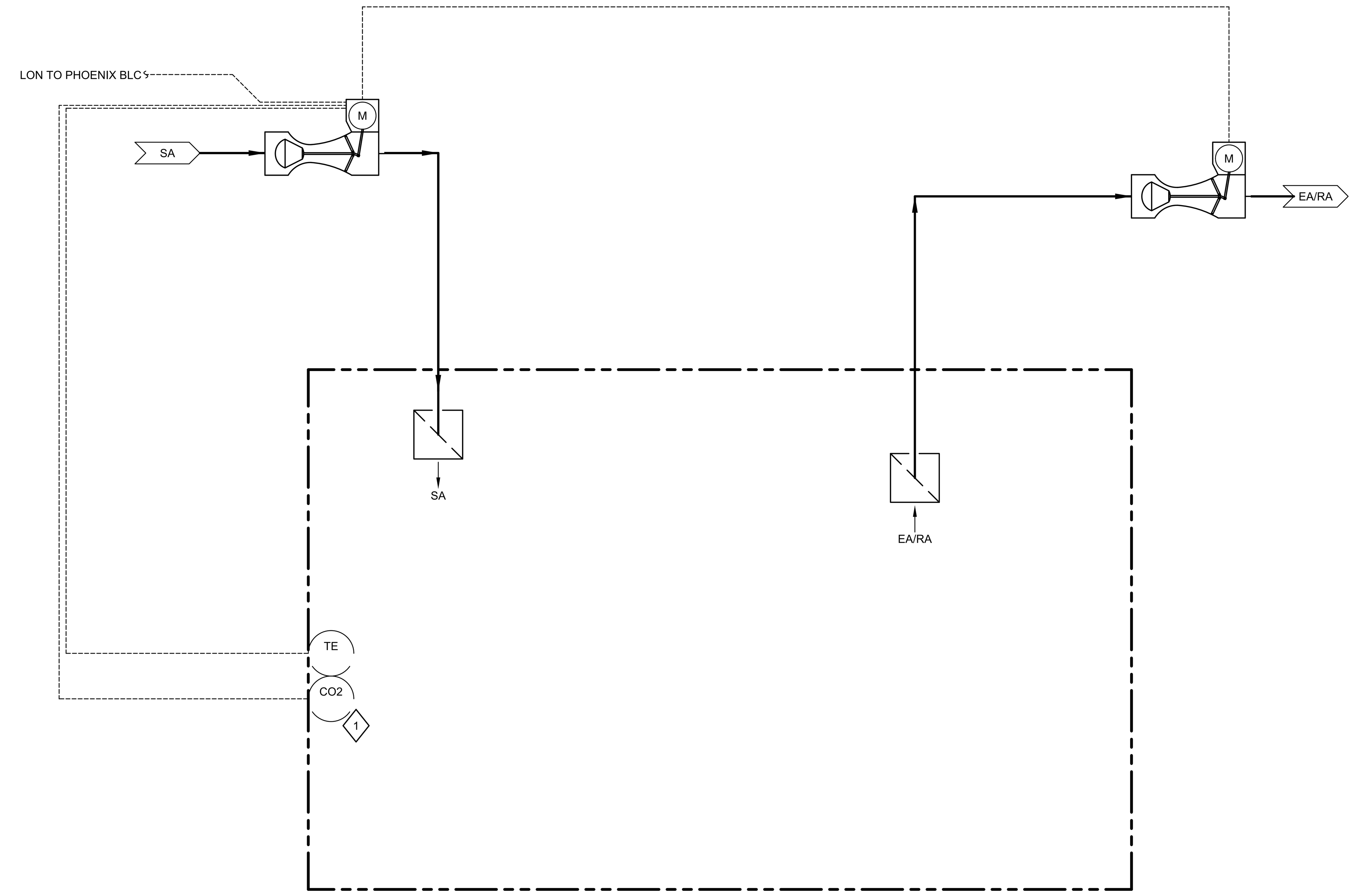
Client Number 514
Project Number 5350

STATE OF KENTUCKY SCOTT ... LICENSED PROFESSIONAL ENGINEER

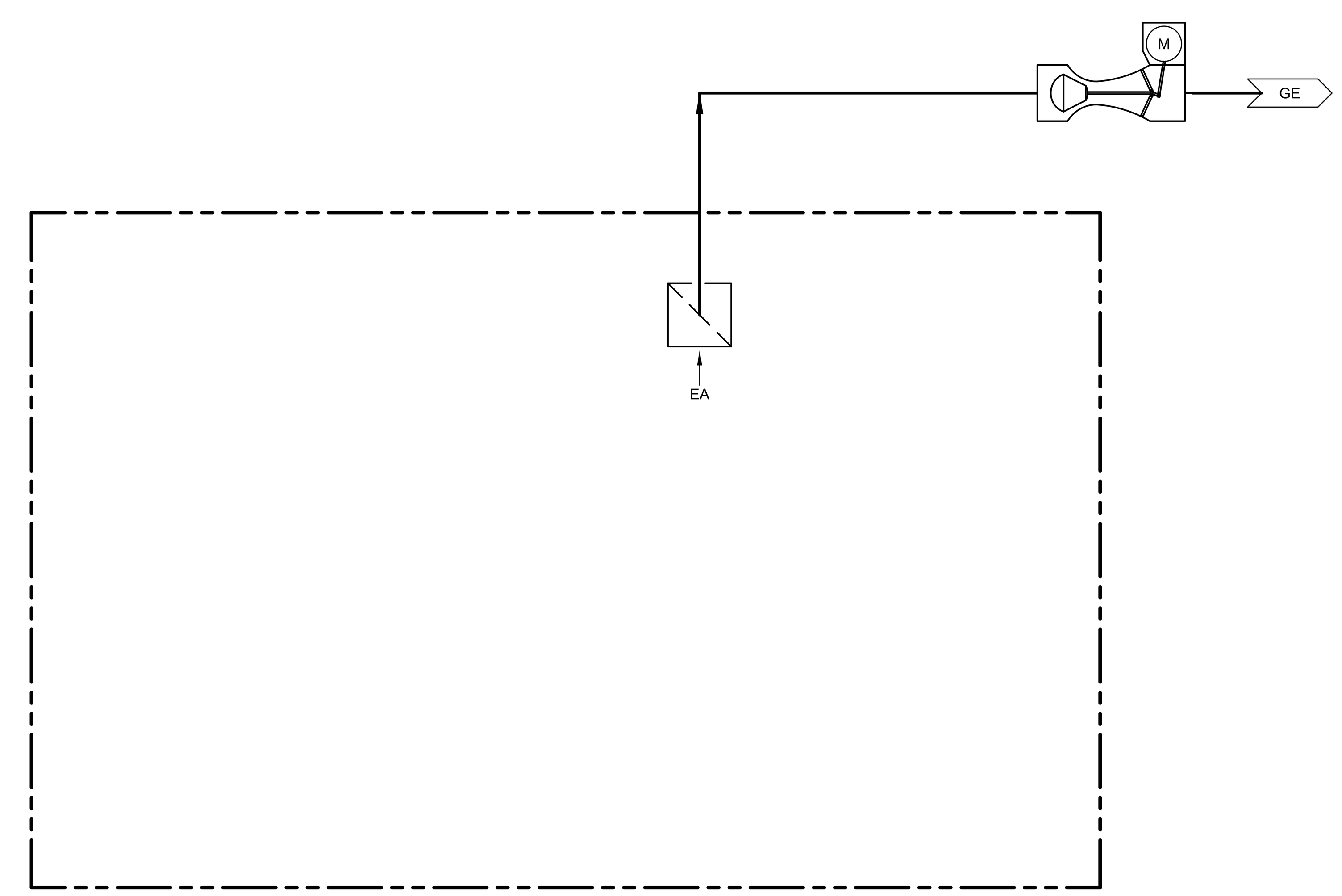
DRAWING TITLE
TERMINAL UNITS

SHEET NO.
IC-755

02/05/2020 10:00:00 AM



1 SEQUENCE W: ENVIRONMENTAL ROOM
SCALE: NONE



2 SEQUENCE X: CONSTANT VOLUME EXHAUST
SCALE: NONE

GENERAL NOTES:

1. THE CONTROL/FLOW DIAGRAM IS ONLY INTENDED TO PROVIDE CONTROL AND INSTRUMENTATION RELATED INFORMATION. REFER TO MECHANICAL DETAILS FOR VALVING, DAMPERING AND ASSOCIATED SPECIALTIES' INSTALLATION REQUIREMENTS.
2. CONTROL/FLOW DIAGRAM INCLUDES GENERAL ARRANGEMENT OF SYSTEM COMPONENTS. REFER TO FLOOR PLANS AND EQUIPMENT SCHEDULES FOR COMPONENT QUANTITIES.

SHEET KEYNOTES

1. SENSOR WHERE SHOWN ON PLANS.

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ISSUANCES

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1	PHASE 2 DD 100%	08/15/18
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3	ISSUE FOR BID & PERMIT	11/15/18
4	DD ISSUANCE - NIH	02/05/20
5	CD ISSUANCE - NIH	04/14/20
6	ISSUE FOR BID & PERMIT	05/22/20

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Project Number 5350

STATE OF KENTUCKY SCOTT ... LICENSED PROFESSIONAL ENGINEER

DRAWING TITLE
TERMINAL UNITS

SHEET NO.
IC-756

02/05/2020 10:00:00 AM

CONTROL VALVES

	UNIT TYPE	SYSTEM	TYPE	# -WAYS	CONTROL	PIPE LINE SIZE (IN)	SPECIFIC GRAVITY	DESIGN DP (PSID)	FLOW RATE (GPM)/ (LBS/HR)	SHUTOFF DIFFERENTIAL PRESSURE (PSID)	VALVE CV CALCULATED	ACTUATOR TYPE	ACTUATOR FAIL POSITION	ACTUATOR PRESSURE OR VOLT	REMARKS
TERMINAL UNITS															
	RADINAT	HW	CHARACTERIZED BALL	2-WAY	MODULATING	1/2 to 21/2	1.00	4	0.2 - 29.9	60	0.1 - 14.99	ELECTRIC	FAIL LAST	24	
	FINTUBE	HW	CHARACTERIZED BALL	2-WAY	MODULATING	1/2 to 21/2	1.00	4	0.2 - 29.9	60	0.1 - 14.99	ELECTRIC	FAIL LAST	24	
	REHEAT	HW	CHARACTERIZED BALL	2-WAY	MODULATING	1/2 to 21/2	1.00	4	0.2 - 29.9	60	0.1 - 14.99	ELECTRIC	FAIL LAST	24	
	CHILLED BEAM	CHW	CHARACTERIZED BALL	2-WAY	MODULATING	1/2 to 21/2	1.00	4	0.2 - 29.9	60	0.1 - 14.99	ELECTRIC	FAIL CLOSED	24	

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2	PHASE 2 CD REVIEW	10/15/18
3	ISSUE FOR BID & PERMIT	11/15/18
4	P2 - ADDENDUM #5	02/28/19
5	P2 - ADDENDUM #8	03/27/19
6	P2 - PCO-048	11/26/19
7	DD ISSUANCE - NIH	02/05/20
8	CD ISSUANCE - NIH	04/14/20
9	ISSUE FOR BID & PERMIT	05/22/20

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Project Number 5350

STATE OF KENTUCKY SCOTT ... LICENSED PROFESSIONAL ENGINEER

DRAWING TITLE
INSTRUMENTATION EQUIPMENT SCHEDULES

SHEET NO.
IC-950

02/05/2020 10:00:00 AM