

Addendum 02 for RFB935800-01

Project Name: Lucas ICN CRAC Replacement
DAS RFB #: 935800-01
DAS Project #: 9358.00
Date: 6/18/24

Bids Due: June 26th, 2024, at 2:00 PM CST

Contents:

- Cover Page – Table of Contents, Clarifications & Questions (1 page)
- Updated Drawing Sheets, MD1, MD2, M2, ED1, E1, S1 (6 pages)
- Hazardous Materials Report from Atlas One, no new hazardous materials identified (updated report includes testing of the EPDM roof) (32 pages)

1. Clarifications:

- 1.1. **Bid date has changed to Wednesday, June 26th, 2024, at 2:00 PM,**
- 1.2. **Bid opening has changed to Thursday, June 26th, 2024, at 3:00 PM**

2. Questions:

- 2.1. Q. For Alternate #1, should the contractor assume the deduct is for equipment only (and the contractor will install owner-provided equipment) or is the deduct for equipment and installation for the temporary cooling?
 - A. Contractor to install owner provided equipment. Project electrician needed to make these portable units operational.
- 2.2. Q. Can the dock be completely closed for 2 weeks or does the contractor need to provide overhead protection?
 - A. We're not going to be able to close this dock down for two consecutive weeks. A day or two here and there for specific activities is ok.

This addendum is issued to modify, clarify, or amend the original Project Drawings and Specifications and is hereby made part of the Contract Documents. The Contractor shall be responsible for incorporating items in this Addendum to the Work. The following shall take precedence over anything to the contrary in the Drawings or Specifications.

3. Mechanical Drawings:

1. Drawing MD1 – Ground Floor Plan – HVAC - Demo:
 - a. ADD note about deduct alternate to abandon piping in vertical chase.
 - b. Refer to attached full size sheet MD1.
2. Drawing MD2 – Penthouse and Roof – HVAC - Demo:
 - a. ADD note about deduct alternate to abandon piping in vertical chase.
 - b. Refer to attached full size sheet MD2.
3. Drawing M2 – Mechanical Details and Schedules:
 - a. ADD note about owner provided /contractor installed equipment.
 - b. ADD note to Computer Room AC unit and CRAC Unit Condensing Unit schedules about owner provided/contractor installed equipment.
 - c. Refer to attached full size sheet M2.



Electrical Drawings:

1. Drawing ED1 – Electrical Plan
 - a. ADD removal and reinstallation of loading dock lighting.
 - b. Refer to attached full size sheet ED1.

2. Drawing E1 – Electrical Plan
 - a. ADD note for electrical contractor to provide power for temporary AC units.
 - b. Refer to attached full size sheet E1.

Structural Drawings:

1. Drawing S1 – Structural Notes & Roof Framing Plan
 - a. REVISE note MP3.
 - c. ADD note for removing and reinstalling existing netting to ROOF FRAMING PLAN.

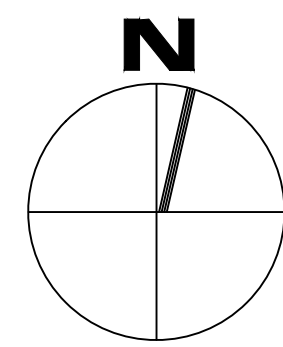
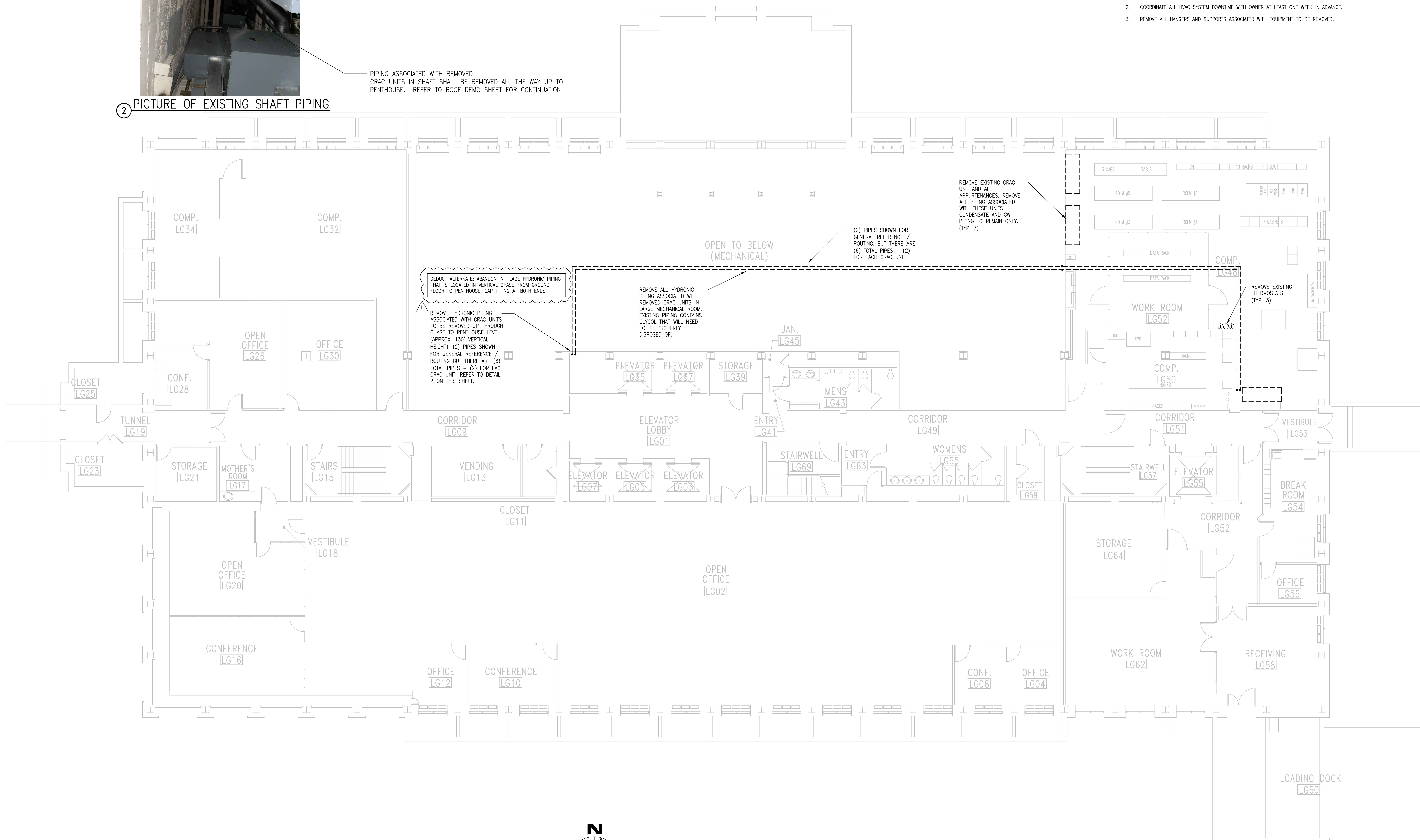
GENERAL NOTES

- REFER TO GENERAL NOTES ON M0.
- COORDINATE ALL HVAC SYSTEM DOWNTIME WITH OWNER AT LEAST ONE WEEK IN ADVANCE.
- REMOVE ALL HANGERS AND SUPPORTS ASSOCIATED WITH EQUIPMENT TO BE REMOVED.



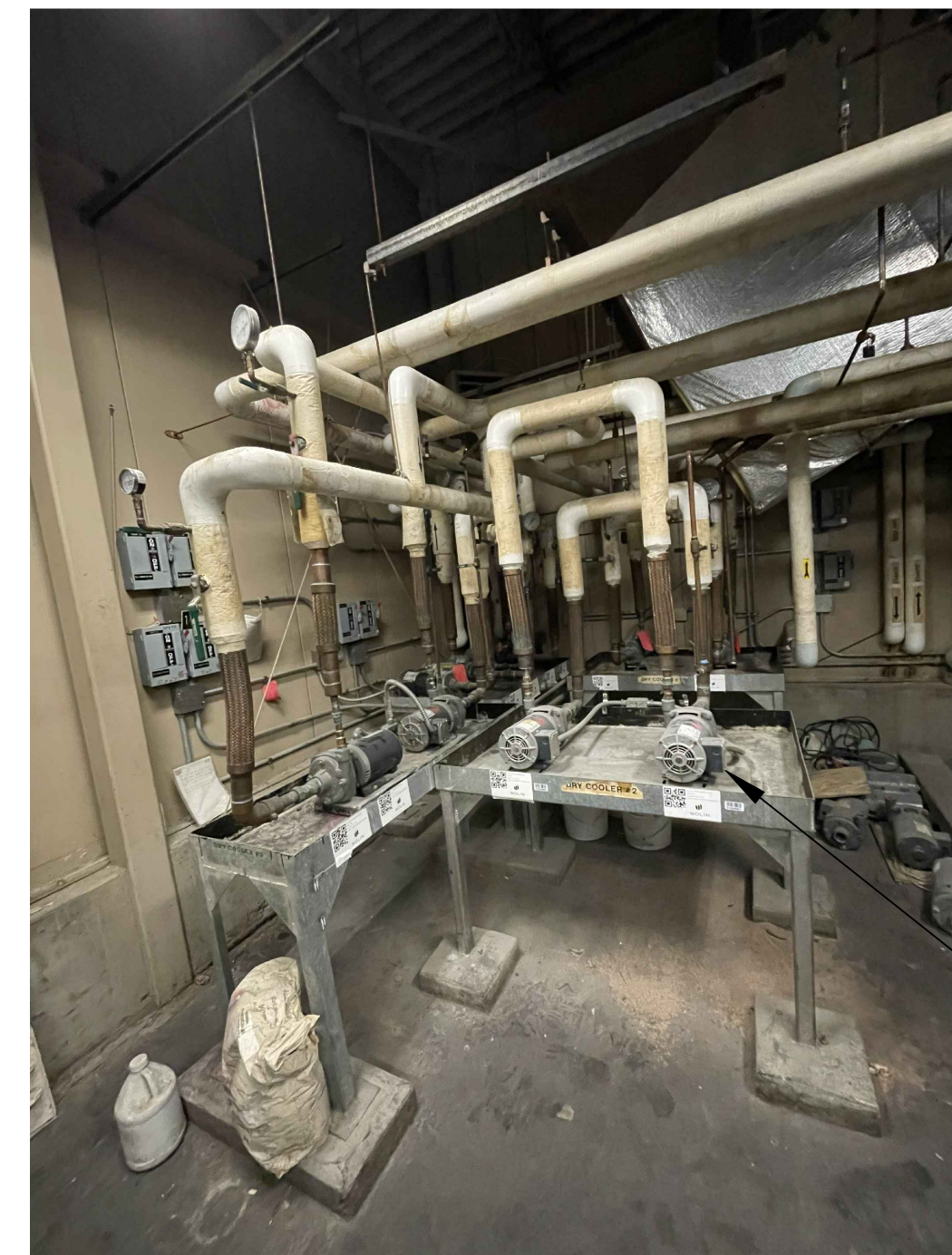
PIPING ASSOCIATED WITH REMOVED CRAC UNITS IN SHAFT SHALL BE REMOVED ALL THE WAY UP TO PENTHOUSE. REFER TO ROOF DEMO SHEET FOR CONTINUATION.

2 PICTURE OF EXISTING SHAFT PIPING



GROUND FLOOR PLAN - HVAC - DEMO

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



2 PICTURE OF EXISTING PUMPS AND PIPING

REMOVE ALL PIPING AND ACCESSORIES FOR DRYCOOLERS TO BE REMOVED.

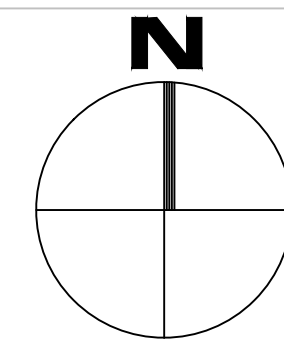
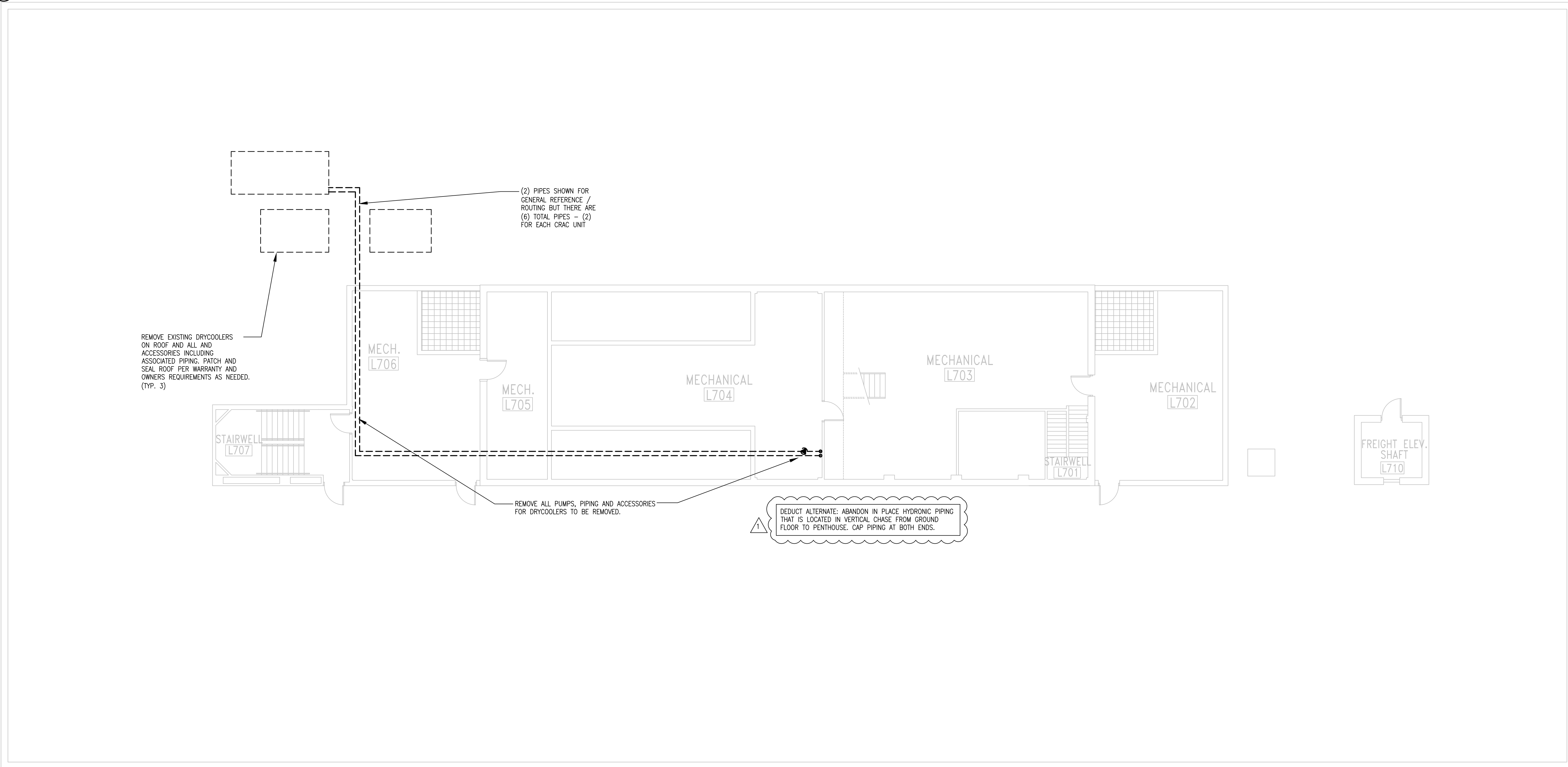


3 PICTURE OF EXISTING DRYCOOLERS

REMOVE ALL PIPING AND ACCESSORIES FOR DRYCOOLERS TO BE REMOVED.

GENERAL NOTES

- REFER TO GENERAL NOTES ON M0.
- COORDINATE ALL HVAC SYSTEM DOWNTIME WITH OWNER AT LEAST ONE WEEK IN ADVANCE.
- REMOVE ALL HANGERS AND SUPPORTS ASSOCIATED WITH EQUIPMENT TO BE REMOVED.



PENTHOUSE AND ROOF - HVAC - DEMO

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

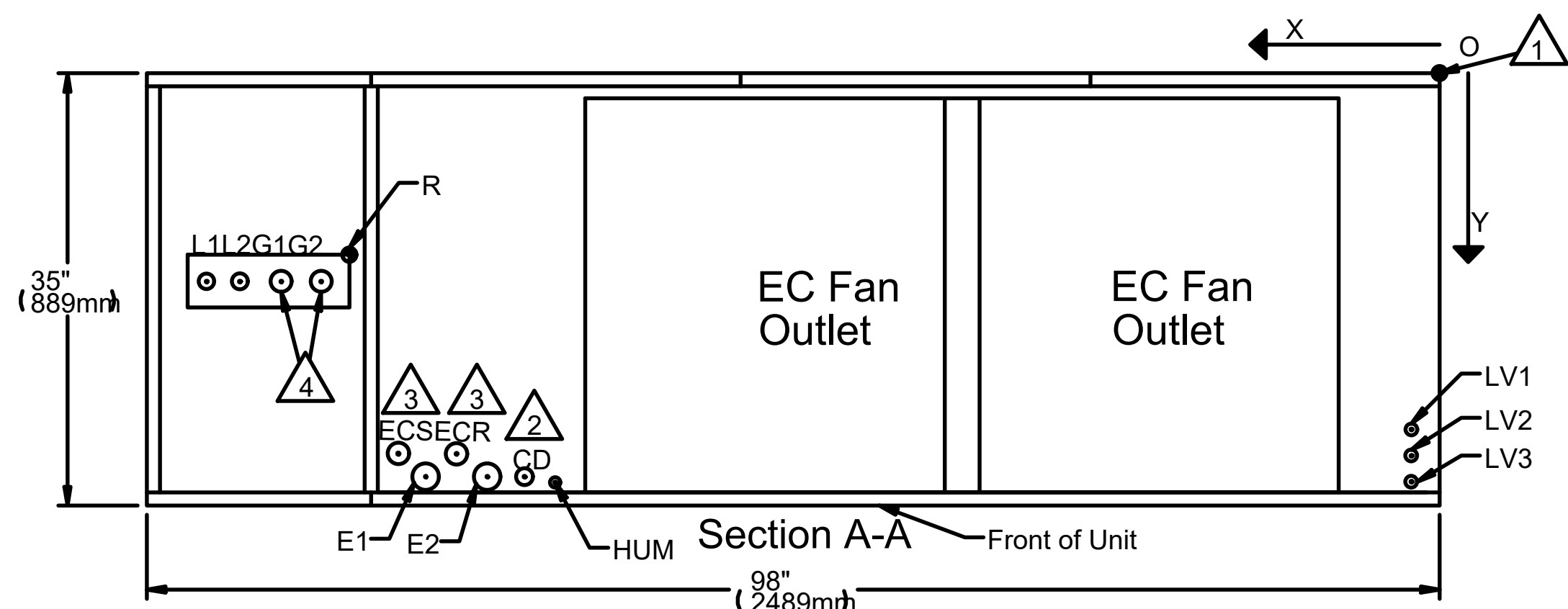
DAS PROJECT # 9358.00 LUCAS BUILDING ICN CRAC UNIT REPLACEMENT

LUCAS BUILDING
321 E 12th St
DES MOINES, IOWA 50319

Sheet Name:
PENTHOUSE AND ROOF
- HVAC - DEMO

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

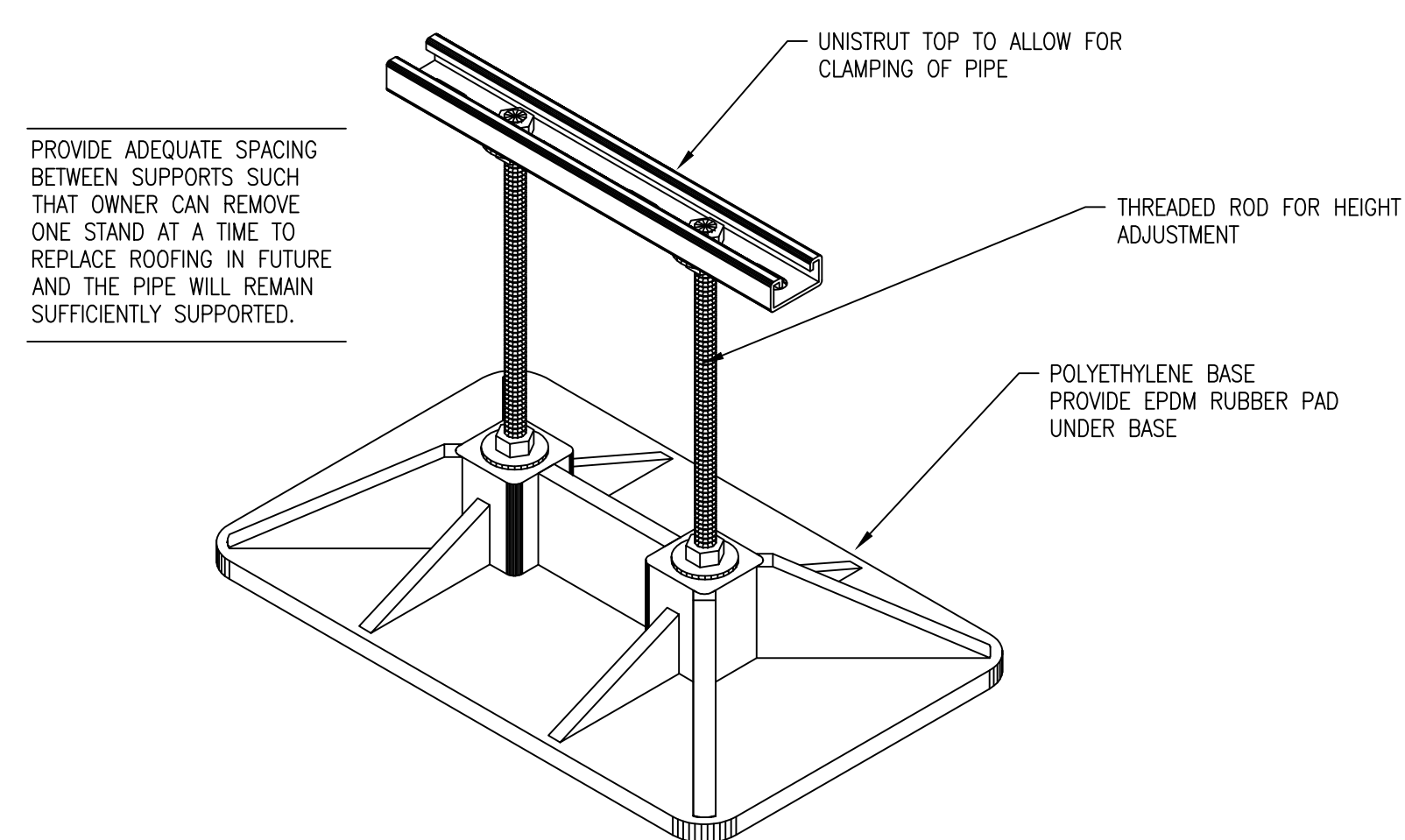
Sheet:
MD2



POINT	DESCRIPTION	X in. (mm)	Y in. (mm)	CONNECTION SIZE / OPENING
R	REFRIGERANT ACCESS	81-3/4 (2076)	14-3/4 (375)	12-3/16" (310mm) X 4" (102mm)
				53kW (15 TONS) 70 & 77kW (20 & 22 TONS)
L1	LIQUID LINE SYSTEM 1	94-11/16 (2405)	16-3/4 (425)	1/2" O.D. Cu 5/8" O.D. Cu
L2	LIQUID LINE SYSTEM 2	91-7/8 (2334)		
G1	HOT GAS DISCHARGE 1	88-3/4 (2254)	16-3/8 (416)	7/8" O.D. Cu 1-1/8" O.D. Cu
G2	HOT GAS DISCHARGE 2	85-9/16 (2173)		
CD	CONDENSATE DRAIN (infrared humidifier or no humidifier) W/ OPTIONAL PUMP	68-3/8 (1737)	31-3/8 (797)	3/4" NPT FEMALE 1/2" O.D. Cu
HUM	HUMIDIFIER SUPPLY LINE	76-1/2 (1943)	29 (737)	1/4" O.D. Cu
ECS	LIEBERT® ECON-O-COIL SUPPLY	78-5/8 (1997)	22-1/4 (565)	
ECR	LIEBERT® ECON-O-COIL RETURN	73-15/16 (1878)	26-9/16 (675)	2-1/8" O.D. Cu
E1	ELECTRICAL CONN. (HIGH VOLT)	78-1/2 (1994)	31-1/8 (791)	2-1/2"
E2	ELECTRICAL CONN. (HIGH VOLT)	75-3/8 (1915)		
LV1	ELECTRICAL CONN. (LOW VOLT)		29 (737)	
LV2	ELECTRICAL CONN. (LOW VOLT)	2 (51)	30-7/8 (784)	7/8"
LV3	ELECTRICAL CONN. (LOW VOLT)		32 (813)	

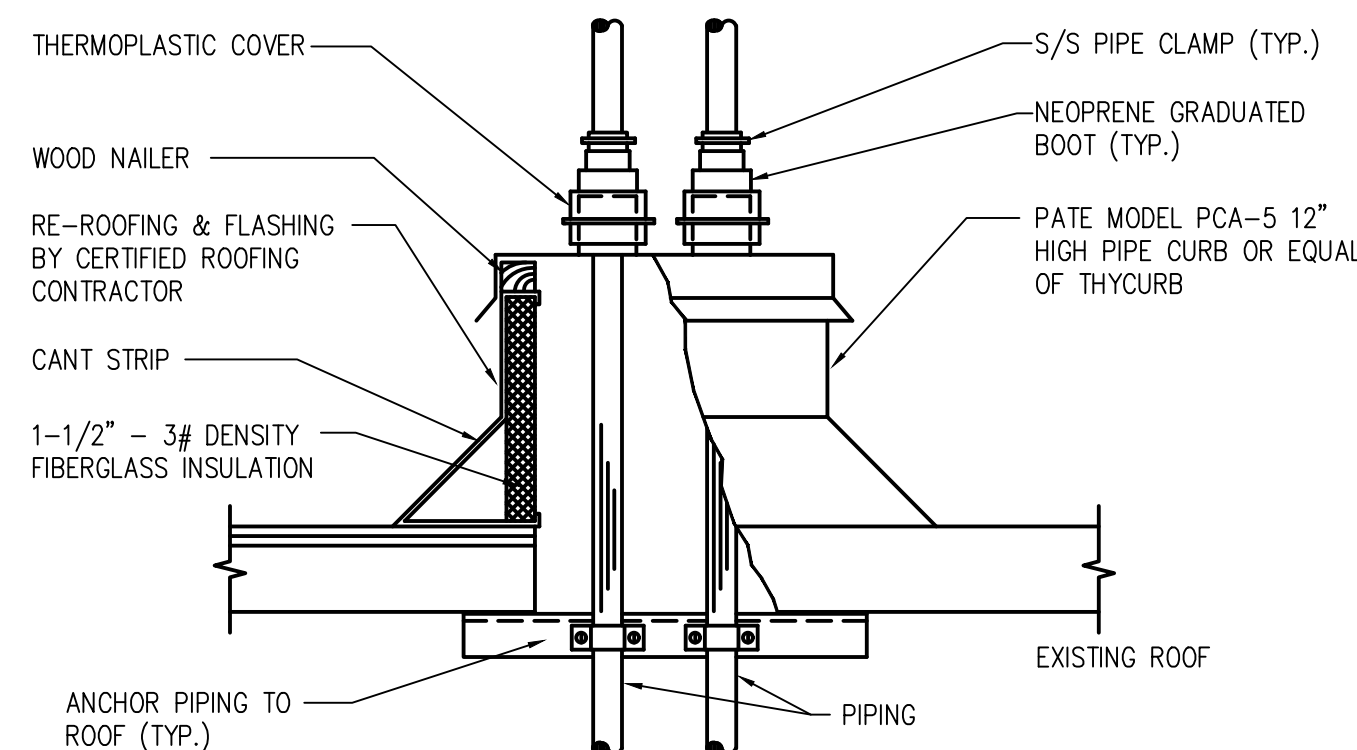
A INDOOR UNIT CONNECTION DETAILS

NOT TO SCALE



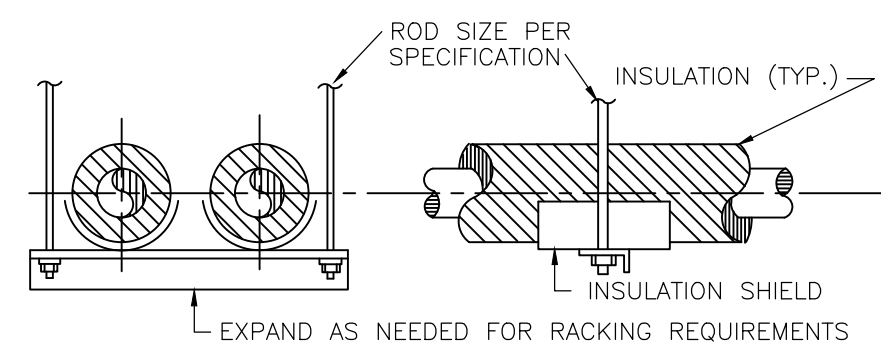
B PIPING ROOF SUPPORT

NOT TO SCALE



C PIPE SLEEVE THROUGH ROOF

NOT TO SCALE



D PIPE HANGER DETAIL

NOT TO SCALE

COMPUTER ROOM AC UNIT SCHEDULE

****OWNER PROVIDED / CONTRACTOR INSTALLED EQUIPMENT****

REFERENCE	CRAC-1	CRAC-2	CRAC-3
MANUFACTURER	LIEBERT	LIEBERT	LIEBERT
MODEL #	DS-070	DS-070	DS-070
TYPE	AIR COOLED	AIR COOLED	AIR COOLED
SERVES	COMP. ROOM LG48	COMP. ROOM LG48	COMP. ROOM LG48
CONFIGURATION	DOWNFLOW	DOWNFLOW	DOWNFLOW
WEIGHT (LBS)	1970	1970	1970
DIMENSIONS - L x W x D (INCHES)	98 x 35 x 76	98 x 35 x 76	98 x 35 x 76
NOMINAL TONS	20	20	20
AIRFLOW (CFM)	9600	9600	9600
EAT (DB/WB) °F	75 / 62	75 / 62	75 / 62
TOTAL COOLING CAPACITY	232	232	232
SENSIBLE COOLING CAPACITY	205	205	205
COMPRESSOR # / TYPE	2 / DIGITAL SCROLL	2 / DIGITAL SCROLL	2 / DIGITAL SCROLL
ELECTRIC REHEAT	15 KW (3 STAGES)	15 KW (3 STAGES)	15 KW (3 STAGES)
HUMIDIFIER (TYPE / LBS/HR)	INFRARED / 22	INFRARED / 22	INFRARED / 22
ELECTRICAL DATA			
VOLTAGE - PH	208/3	208/3	208/3
FLA	129.2	129.2	129.2
MOCP	175	175	175
NOTES	1 THROUGH 8	1 THROUGH 8	1 THROUGH 8

NOTES:

1. PROVIDE WITH HOT GAS REHEAT AND BYPASS.
2. PROVIDE WITH CONDENSATE PUMP. CONNECT TO EXISTING PIPING.
3. PROVIDE WITH SMOKE DETECTOR AND HIGH TEMPERATURE SENSOR.
4. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION AND DISCONNECT.
5. PROVIDE WITH MICROPROCESSOR CONTROLS AND GRAPHIC CONTROL PANEL.
6. INSTALL PER MFR'S RECOMMENDATIONS.
7. PROVIDE WITH 5 YEAR COMPRESSOR WARRANTY AND 1 Y EAR ENTIRE UNIT PARTS WARRANTY.
8. PROVIDE REMOTE MONITORING AND TEMPERATURE ADJUSTMENT CAPABILITIES. (SNMP, RADIUS PREFERRED).

CRAC OUTDOOR CONDENSING UNIT SCHEDULE

****OWNER PROVIDED / CONTRACTOR INSTALLED EQUIPMENT****

SYSTEM REFERENCE	CU-1	CU-2	CU-3
MANUFACTURER	LIEBERT	LIEBERT	LIEBERT
MODEL TYPE	LEE-TEMP CONTROL	LEE-TEMP CONTROL	LEE-TEMP CONTROL
MODEL #	MCL110	MCL110	MCL110
TYPE	AIR COOLED	AIR COOLED	AIR COOLED
CONFIGURATION (REFRIGERANT CIRCUITS / FANS)	2 / 2	2 / 2	2 / 2
WEIGHT (LBS)	722	722	722
DIMENSIONS - H x W x L (INCHES)	44 x 56 x 124	44 x 56 x 124	44x 56 x 124
NOMINAL TONS	30	30	30
VOLTAGE - PHASE	208/3	208/3	208/3
FLA	11.4	11.4	11.4
MOCP	15	15	15
NOTES	1 THROUGH 7	1 THROUGH 7	1 THROUGH 7

NOTES:

1. INSTALL PER MFR RECOMMENDATIONS.
2. PROVIDE UNIT WITH SNOW AND HAIL GUARDS.
3. UNIT SIZED FOR -30F AND UP TO 100F AMBIENT CONDITIONS
4. LEE TEMP RECEIVER REQUIRES SEPARATE 120V CONNECTION BY E.C. (FLA - 1.4, MOCP - 15)
5. UNIT SHALL HAVE BASIN PAN HEATER TO PREVENT ICE IN DRAIN PAN.
6. PROVIDE WITH FACTORY DISCONNECT SWITCH.
7. PROVIDE COMPRESSOR TIME LAG CAPABILITIES TO AVOID HIGH HEAD PRESSURE.

2

OWNER PROVIDED / CONTRACTOR INSTALLED NOTE:
ALL CRAC UNITS AND ASSOCIATED CONDENSING UNITS WILL BE PURCHASED BY OWNER DIRECTLY. THE SUCCESSFUL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE DELIVERY OF THIS EQUIPMENT, PROVIDE STORAGE, PROVIDE INSURANCE AND PROVIDE INSTALLATION OF ALL COMPONENTS. EQUIPMENT SCHEDULES ARE SHOWN FOR REFERENCE AND COORDINATION ONLY.

GENERAL NOTES

- COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- INSTALL BUS TAPS ON PANEL SW BEFORE PANEL ET2. DOWNTIME SHALL BE AT SEPARATE TIMES. LIMIT DOWNTIME FOR PANEL SW TO A MAXIMUM OF 15 MINUTES. COORDINATE DOWNTIME OF PANEL ET2 WITH OWNER. COORDINATE DOWNTIME AND LENGTH A MINIMUM OF 2 WEEKS BEFORE INSTALLATION.
- IC TO PROVIDE ELECTRICAL WORK REQUIRED FOR TEMPORARY COOLING UNITS. COORDINATE TIMING, LOCATIONS, AND CONNECTION WITH OWNER AND CM.

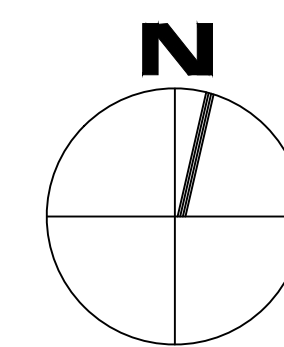
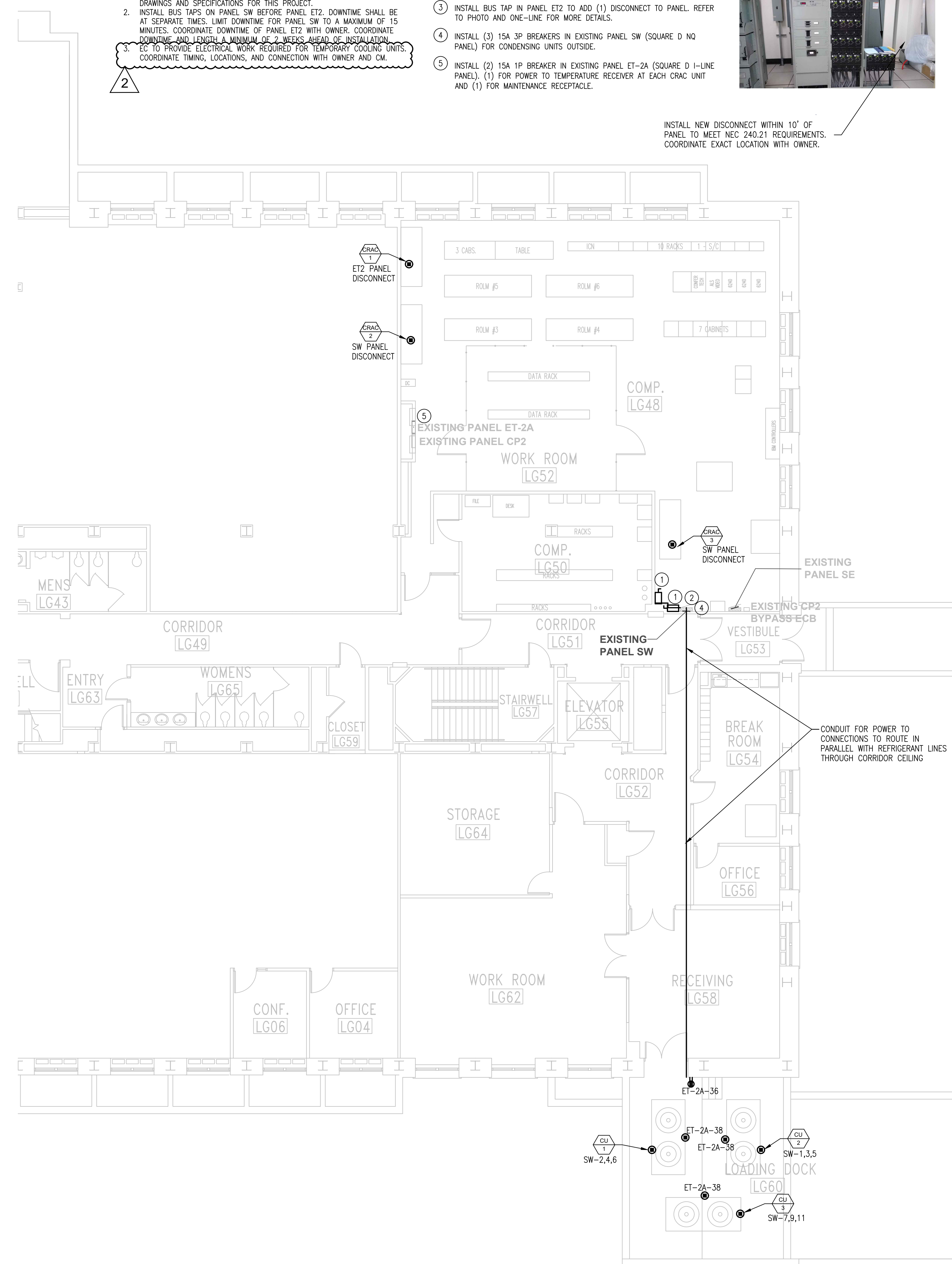
KEYED NOTES

- INSTALL 200A DISCONNECT WITH 175A FUSES TO MATCH MOCP RATING OF CRAC UNIT. INSTALL DISCONNECT IN ACCESSIBLE LOCATION AND COORDINATE LOCATION WITH OWNER.
- INSTALL BUS TAP IN PANEL SW TO ADD (2) DISCONNECTS TO PANEL. REFER TO PHOTO AND ONE-LINE FOR MORE DETAILS.
- INSTALL BUS TAP IN PANEL ET2 TO ADD (1) DISCONNECT TO PANEL. REFER TO PHOTO AND ONE-LINE FOR MORE DETAILS.
- INSTALL (3) 15A 3P BREAKERS IN EXISTING PANEL SW (SQUARE D NO PANEL) FOR CONDENSING UNITS OUTSIDE.
- INSTALL (2) 15A 1P BREAKER IN EXISTING PANEL ET-2A (SQUARE D I-LINE PANEL). (1) FOR POWER TO TEMPERATURE RECEIVER AT EACH CRAC UNIT AND (1) FOR MAINTENANCE RECEPTACLE.

INSTALL BUS TAPS AT PANEL.



INSTALL NEW DISCONNECT WITHIN 10' OF PANEL TO MEET NEC 240.21 REQUIREMENTS. COORDINATE EXACT LOCATION WITH OWNER.

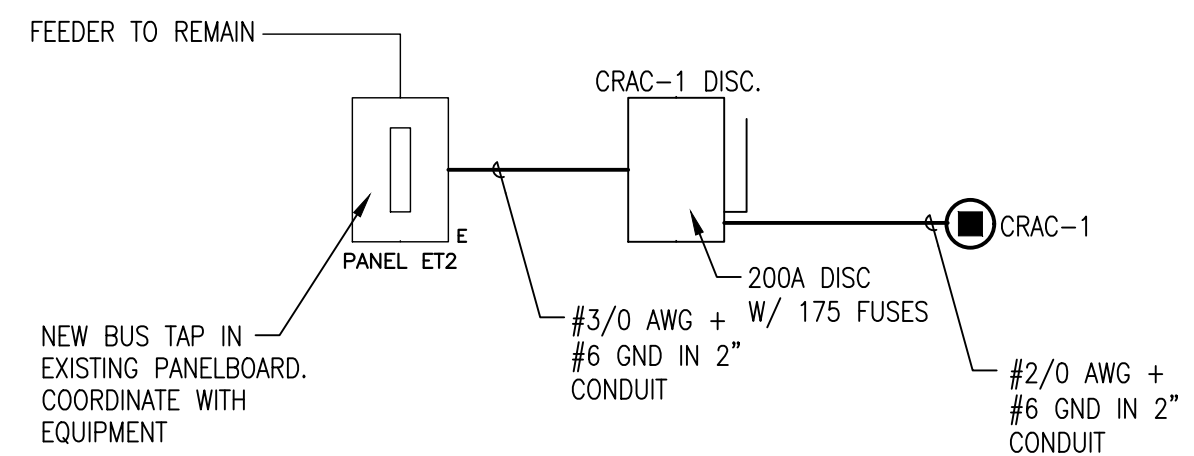
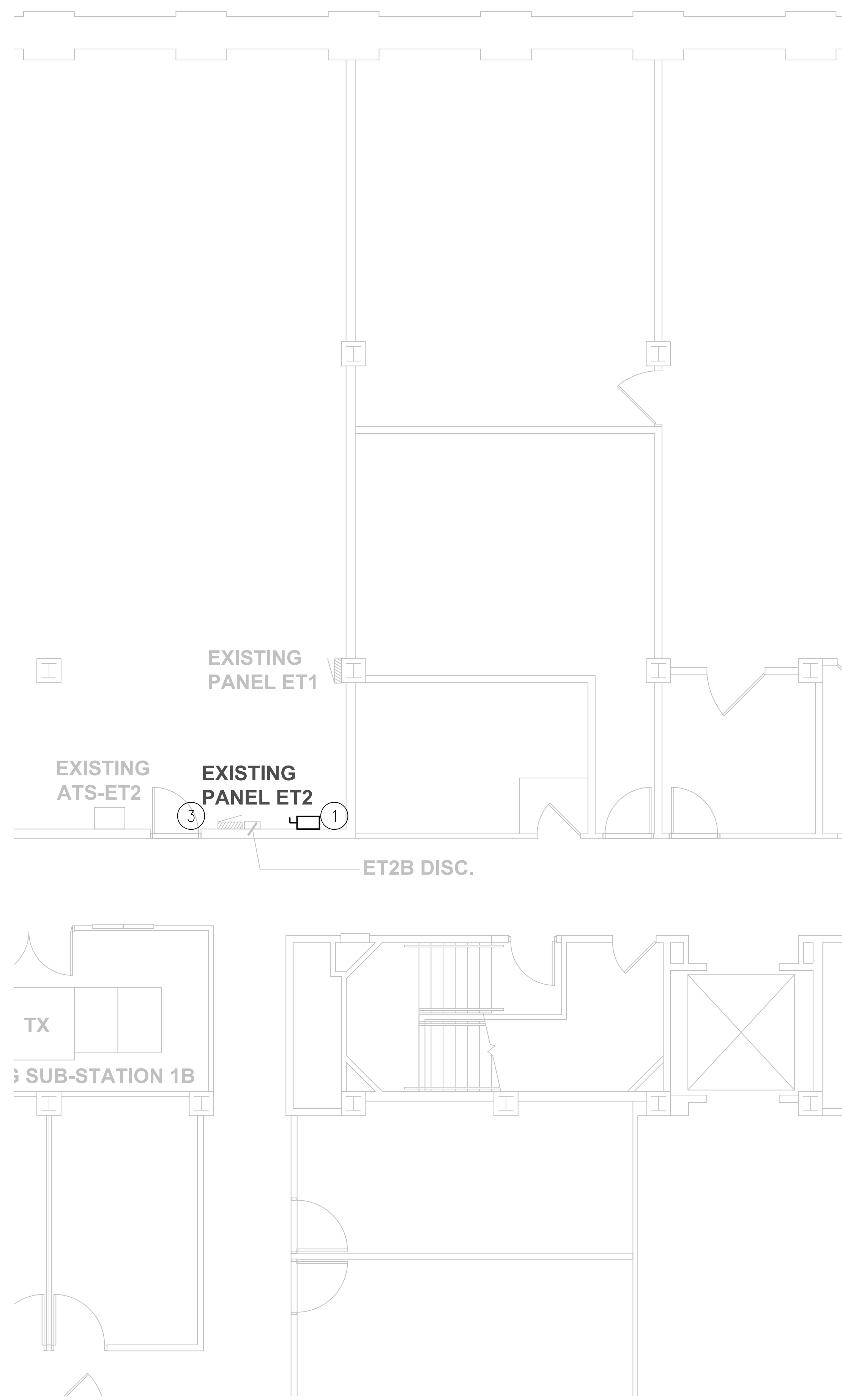


FIRST FLOOR PLAN - ELECTRICAL

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

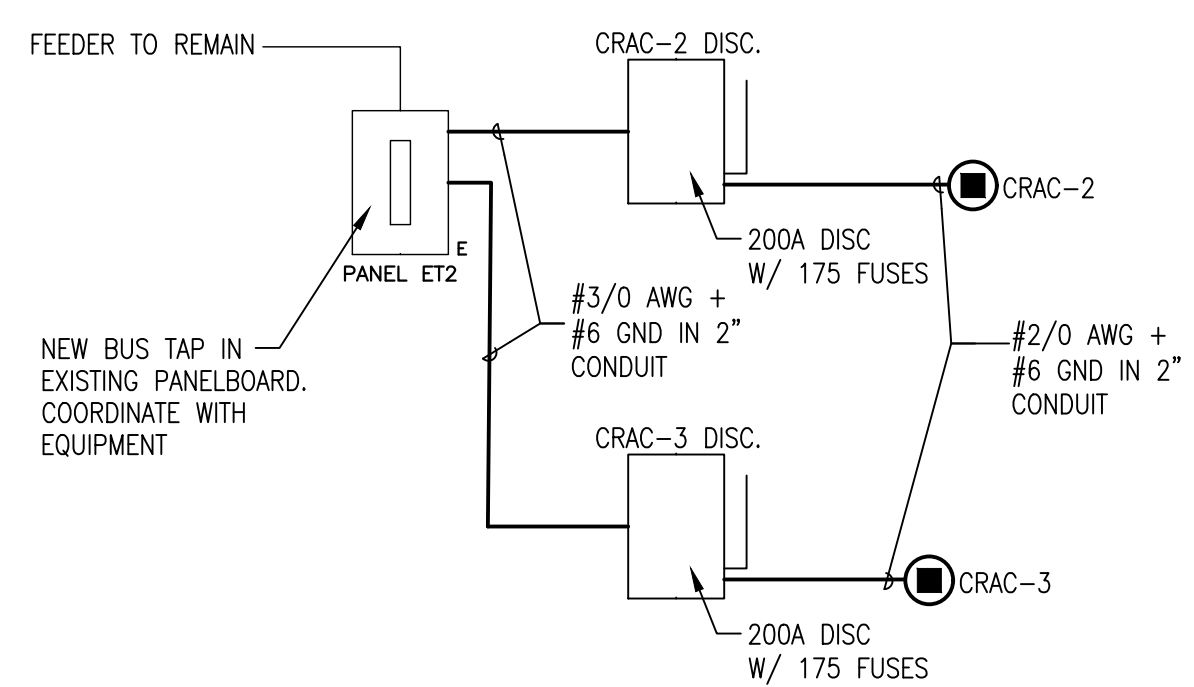


INSTALL NEW DISCONNECT WITHIN 10' OF PANEL TO MEET NEC 240.21 REQUIREMENTS. COORDINATE EXACT LOCATION WITH OWNER.



3 PANEL ET2 ONE-LINE DIAGRAM

SCALE: NOT TO SCALE



4 PANEL SW ONE-LINE DIAGRAM

SCALE: NOT TO SCALE

EQUIPMENT SCHEDULE

TAG	ELEC. CHARACTERISTICS			DISCONNECT			REMARKS
	VOLT/PHASE	M.C.A.	TYPE	SIZE (AMPS)	NEMA RATING	FUSE (AMPS)	
CRAC-1	208/3	130	FDS	200	1	175	
CRAC-2	208/3	130	FDS	200	1	175	
CRAC-3	208/3	130	FDS	200	1	175	
CU-1	208/3	11.4	INT	-	-	-	TEMPERATURE RECEIVER IN UNIT REQUIRES SEPARATE 120V CONNECTION.
CU-2	208/3	11.4	INT	-	-	-	TEMPERATURE RECEIVER IN UNIT REQUIRES SEPARATE 120V CONNECTION.
CU-3	208/3	11.4	INT	-	-	-	TEMPERATURE RECEIVER IN UNIT REQUIRES SEPARATE 120V CONNECTION.

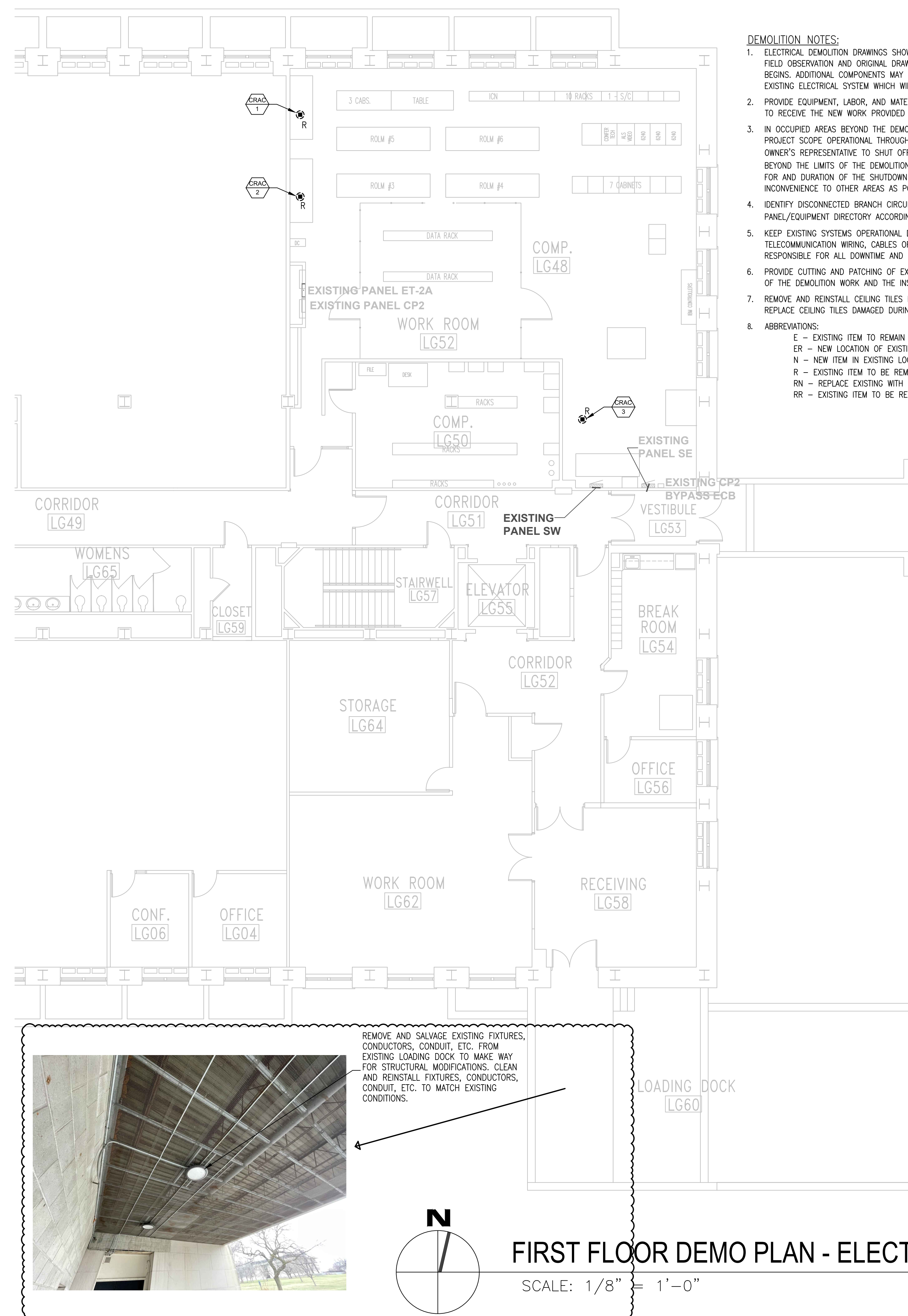
ABBREVIATIONS:

1	NEMA 1 ENCLOSURE	HOA	HAND-OFF-AUTO
3R	NEMA 3R ENCLOSURE	LCD	REMOTE LOCKED CIRCUIT BREAKER
4	NEMA 4 ENCLOSURE	MMS	MANUAL MOTOR STARTER
4X	NEMA 4X ENCLOSURE	NFD	NON-FUSED DISCONNECT SWITCH
ECB	ENCLOSED CIRCUIT BREAKER	SD	SUPPLY AIR DUCT DETECTOR
FDS	FUSED DISCONNECT SWITCH	SS	START/STOP PUSHBUTTON
NFD	NON-FUSED DISCONNECT SWITCH	ST	SHUNT TRIP
FS2	2-POLE TOGGLE SWITCH WITH PLU	INT	INTEGRAL WITH EQUIPMENT FROM FACTORY

Revisions	Date	No.
ADD-2	6.17.20	2

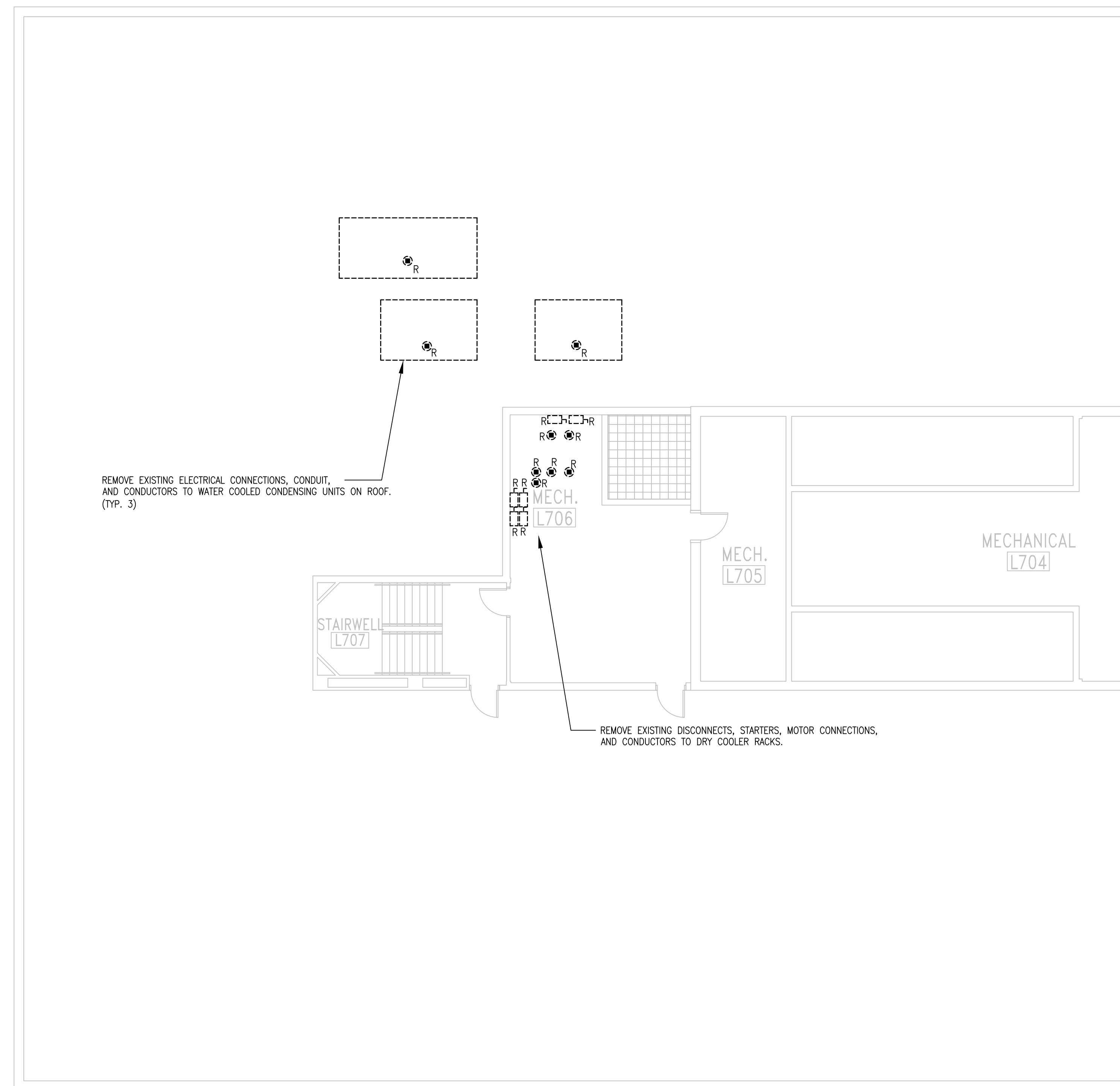
DEMOLITION NOTES:

- ELECTRICAL DEMOLITION DRAWINGS SHOWING EXISTING CONDITIONS HAVE BEEN PREPARED BASED ON FIELD OBSERVATION AND ORIGINAL DRAWINGS. FIELD VERIFY EXISTING CONDITIONS BEFORE WORK BEGINS. ADDITIONAL COMPONENTS MAY EXIST WHICH ARE NOT SHOWN. BECOME FAMILIAR WITH EXISTING ELECTRICAL SYSTEM WHICH WILL BE AFFECTED BY THE DEMOLITION WORK.
- PROVIDE EQUIPMENT, LABOR, AND MATERIALS TO REMOVE ELECTRICAL FACILITIES AND CLEAR THE AREA TO RECEIVE THE NEW WORK PROVIDED UNDER THIS CONTRACT.
- IN OCCUPIED AREAS BEYOND THE DEMOLITION SCOPE, KEEP EXISTING SYSTEMS NOT AFFECTED BY PROJECT SCOPE OPERATIONAL THROUGH THE DURATION OF THE PROJECT. OBTAIN PERMISSION FROM OWNER'S REPRESENTATIVE TO SHUT OFF SERVICES OR SYSTEMS WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE DEMOLITION AREA. INFORM OWNER'S REPRESENTATIVE OF THE REASON FOR AND DURATION OF THE SHUTDOWN AND ENSURE THAT THE SHUTDOWN IS MADE WITH AS LITTLE INCONVENIENCE TO OTHER AREAS AS POSSIBLE.
- IDENTIFY DISCONNECTED BRANCH CIRCUIT LOCATION OR ITEM SERVED BEFORE DISCONNECTION. UPDATE PANEL/EQUIPMENT DIRECTORY ACCORDINGLY.
- KEEP EXISTING SYSTEMS OPERATIONAL DURING ALL PHASES OF CONSTRUCTION. DO NOT CUT EXISTING TELECOMMUNICATION WIRING, CABLES OR CONDUIT. CONTRACTORS WHO CUT IN-SERVICE CABLES ARE RESPONSIBLE FOR ALL DOWNTIME AND COSTS TO REPAIR.
- PROVIDE CUTTING AND PATCHING OF EXISTING MATERIALS AS REQUIRED FOR THE PROPER COMPLETION OF THE DEMOLITION WORK AND THE INSTALLATION OF THE NEW WORK.
- REMOVE AND REINSTALL CEILING TILES REQUIRED FOR THE WORK BEING DONE UNDER THIS CONTRACT. REPLACE CEILING TILES DAMAGED DURING CONSTRUCTION TO MATCH EXISTING.
- ABBREVIATIONS:
E - EXISTING ITEM TO REMAIN
ER - NEW LOCATION OF EXISTING ITEM
N - NEW ITEM IN EXISTING LOCATION
R - EXISTING ITEM TO BE REMOVED, PATCH AND/OR COVER
RN - REPLACE EXISTING WITH NEW
RR - EXISTING ITEM TO BE REMOVED AND RELOCATED



FIRST FLOOR DEMO PLAN - ELECTRICAL

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



PENTHOUSE DEMO PLAN - ELECTRICAL

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

DESIGN CRITERIA

D1) Codes:
 International Building Code, 2015
 American Institute of Steel Construction
 Specification for Structural Steel Buildings 360-10
 American Society of Civil Engineers / Structural Engineering
 Institute ASCE/SEI 7-10

D2) Lateral loads:
 Wind: Ultimate design wind speed: 110 mph
 Nominal design wind speed: 85 mph
 Risk category: II
 Wind exposure: B
 Wall component wind pressure: 54 psf (Ultimate Load)

D3) Live loads:
 Snow load:
 Ground snow load: 30 psf
 Flat-roof snow load (minimum): P_f=24 psf
 Snow exposure factor: C_e=1.0
 Thermal factor: C_t=1.0
 Snow importance factor: I_s=1.10
 Snow drift load: ASCE/SEI 7-10
 Roof load (minimum): 20 psf

D4) Dead loads:
 Roof dead load: 20 psf

D5) Concrete strengths - Minimum 28 day f'c
 (145 pcf density unless noted otherwise)
 Typical-unless noted otherwise: 4000 psi

D6) Reinforcing steel shall be high strength new billet steel conforming to the following:
 Deformed bars: ASTM A615, Gr. 60 (unless otherwise noted)
 Welded wire reinforcing: ASTM A1064

D7) Structural steel:
 Wide Flanges: ASTM A992
 Rolled Channels and connection material: ASTM A36
 Pipe: ASTM A53, Gr. B
 Structural tubes: ASTM A500, Gr. C

SPECIAL INSPECTION REQUIREMENTS

SR1) The following types of work require special inspection based on section 1705 of the 2015 International Building Code. The owner will employ special inspectors who shall provide special inspections during:

a) Structural Steel.
 1. Fit-up of fillet welds.
 2. Welds cleaned.
 3. Size, length and location of welds.
 4. Welds meet visual acceptance criteria.
 5. Post-installed anchors into concrete.

GENERAL NOTES

G1) Establish and verify all openings and inserts for mechanical, electrical, and plumbing with appropriate trade contractors. Opening sizes and locations shown for ducts, pipes, inserts, etc., when shown are for general information only and shall be verified prior to forming.

G2) Field verify all existing dimensions, member sizes, and elevations shown on the drawings. All discrepancies shall be immediately brought to the attention of the design professional.

G3) Before submitting a proposal for this work, each bidder shall visit the premises and acquaint themselves fully with the existing conditions, temporary construction required, quantities and types of equipment, etc. The bid shall include all sums required to do the work within the existing conditions. Disruption of normal activities in the work area must be kept to a minimum.

G4) Shop drawings prepared by suppliers, subcontractors, etc. shall be reviewed and coordinated prior to submitting to the design professional. Each shop drawing submitted shall be stamped, initialed, and dated as being reviewed by the construction manager/general contractor.

G5) Shop drawings prepared by the subcontractors, suppliers, etc. shall be reviewed by the design professional for conformance with design concept only. Review by the design professional shall not begin without the prior coordination and review by the construction manager/general contractor. Work shall not begin without the review by the design professional.

G6) Details and notes on the structural drawings are intended to be typical for similar situations elsewhere. Verify all dimensions with the mechanical drawings. Do not scale drawings; use dimensions provided only.

G7) Options are for the contractor's convenience. The contractor shall be responsible for all changes necessary if they choose an option and shall coordinate all details. The cost of additional design work necessitated by selection of an option shall be borne by the contractor.

G8) The cost of additional design work due to errors or omissions in construction shall be borne by the contractor.

G9) Any engineering design provided by others and submitted for review or record shall bear the stamp and signature of a professional structural engineer licensed in the state of Iowa.

CONSTRUCTION PROCEDURES AND SAFETY REQUIREMENTS

P1) Comply with all applicable city, county, state, and federal laws, including the Occupational Safety and Health Act (OSHA) and regulations adopted pursuant thereto.

P2) The contract structural drawings and specifications represent the finished structure. Unless otherwise indicated, they do not indicate the means or methods of construction.

P3) Provide all measures necessary to protect the workers and other persons during construction. Provide all necessary measures to avoid excessive stresses and to hold the structural elements in place during construction. Such measures shall include, but not be limited to, bracing, shoring for construction equipment, shoring for earth banks forms, scaffolding, planking, safety nets, support and bracing for cranes and hoists, guying, etc.

P4) Engage properly qualified persons to determine where and how temporary precautionary measures shall be used. Observation visits to the site by structural engineer's field representatives shall not include the items noted above.

P5) Supervise and direct the work so as to maintain sole responsibility for all construction means, methods, techniques, sequences, and procedures. Retain the services of a professional structural engineer licensed in the state of Iowa to design and supervise any scaffolding for workmen, and all shoring of forms and elements of the construction.

P6) Any engineering design provided by others and submitted for review and/or record shall bear the stamp and signature of a professional structural engineer licensed in the state of Iowa.

STRUCTURAL STEEL

Submittals:
 1) Shop Drawings.

S1) Structural steel details, fabrication, and erection shall conform to the latest edition of the AISC 360 "Specification for Structural Steel Buildings" and AISC 303 "Code of Standard Practice for Steel Buildings and Bridges," unless otherwise shown or specified.

S2) All welding shall be done by AWS certified welders with experience and certification in the types of welding indicated. Certificates shall not have lapsed due to disuse for 6 months.

S3) All welds to be E70XX electrodes unless noted otherwise.

S4) Field connections shall be welded. Shop connections shall be welded unless otherwise indicated or approved. Welds indicated with a shop weld symbol may be made in the field with the approval of the structural engineer.

S5) Unless noted otherwise, all welds shall be continuous 3/16" throat. All full and/or partial penetration welds shall be fully detailed on the shop drawing.

S6) Shop paint structural steel with a standard primer, unless noted as galvanized. Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780.

S7) Cuts, holes, openings, etc., required in structural steel members for the work of other trades shall be shown on the shop drawings. Burning of holes and cuts in the field shall not be allowed, except by written authorization from the structural engineer.

S8) Furnish and install miscellaneous steel (curbs, hangers, expansion joint angles, struts, etc.) as called for or as necessary per mechanical/electrical drawings.

SCREEN WALL METAL PANELS

Submittals:
 1) Color Chart and Samples
 2) Shop Drawings

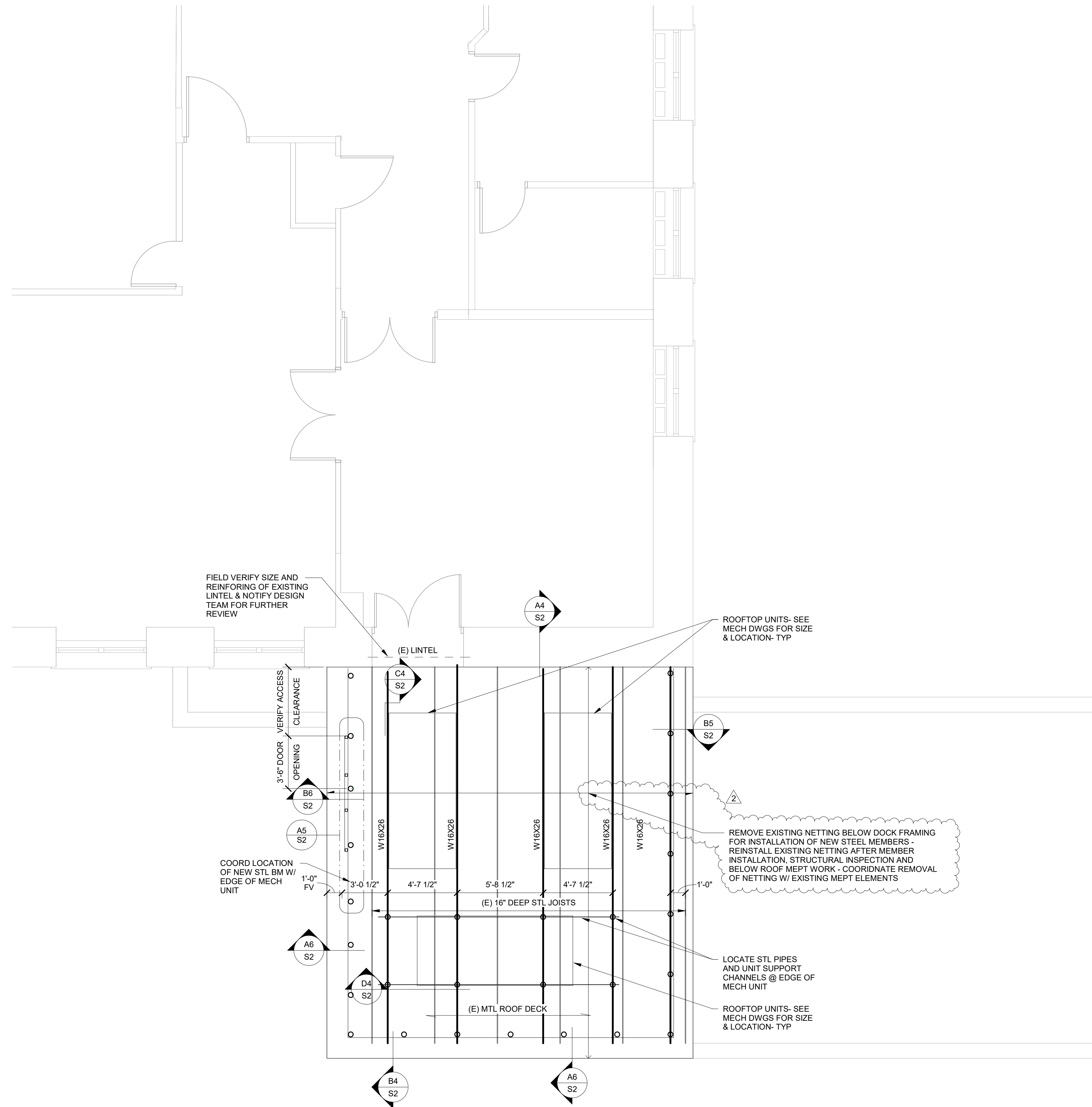
MP1) Basis of design for louver screen wall panels to be Industrial Louvers, Inc. model 250XPI. Substitutions shall be approved by the design professions and shall meet or exceed the following criteria.
 1. 34 PSF (Service Load) or 54 psf (Ultimate Load) component and cladding wind pressure.
 2. Design span (Single) of 4 feet.
 3. L/240 deflection under service wind loads.
 4. 2" Maximum depth

MP2) Panels shall span horizontally and shall be installed per manufacturer recommendations. Exposed screen fasteners shall match metal panel color.

MP3) Contractor to provide manufacturer standard deck color options to owner for selection and approval. Provide basis of design two-coat fluoropolymer level of finish.

KPFF ABBREVIATIONS

ADDED	ADDITIONAL	LT GA	LIGHT GAGE
ALT	ALTERNATE	LOC	LOCATION
ALUM	ALUMINUM	LDH	LONG DIM HORIZ
ANCH	ANCHOR	LDV	LONG DIM VERT
APPROX	APPROXIMATE	LLBB	LONG LEG BACK-TO-BACK
ARCH	ARCHITECTURAL	LLH	LONG LEG HORIZ
@	AT	LLV	LONG LEG VERT
BM	BEAM	LONGIT	LONGITUDINAL
BRG	BEARING	MFR	MANUFACTURER
BTWN	BETWEEN	MAS	MASONRY
BLKG	BLOCKING	MAT	MATERIAL
BD	BOARD	MAX	MAXIMUM
BOT	BOTTOM	MECH	MECHANICAL
BLDG	BUILDING	MTL	METAL
CIP	CAST-IN-PLACE	MIN	MINIMUM
CNTR	CENTER	MISC	MISCELLANEOUS
CL	CENTERLINE	NS	NEAR SIDE
CLR	CLEAR	NOM	NOMINAL
CFMF	COLD-FORMED METAL FRAMING	NIC	NOT IN CONTRACT
COL	COLUMN	NTS	NOT TO SCALE
COMP	COMPOSITE	# or NO	NUMBER
CONC	CONCRETE	OC	ON CENTER
CMU	CONCRETE MASONRY UNIT	OPNG	OPENING
CONN	CONNECTION	OPP	OPPOSITE
CONST	CONSTRUCTION	OD	OUTSIDE DIA.
CONT	CONTINUOUS	OF	OUTSIDE FACE
CONTR	CONTRACTOR	PARL	PARALLEL
CW	CURTAIN WALL	d	PENNY
DEFL	DEFLECTION	PERP	PERPENDICULAR
°	DEGREE	PL	PLATE
DTL	DETAIL	PLYWD	PLYWOOD
DIAG	DIAGONAL	# OR LB	POUND
ø	DIAMETER	PSI	POUNDS PER SQ. INCH
DIM	DIMENSION	PSF	POUNDS PER SQ. FT.
DBL	DOUBLE	PDF	POWER DRIVEN FASTENER
DWG	DRAWING	PREFAB	PREFABRICATED
EA	EACH	PRELIM	PRELIMINARY
EF	EACH FACE	RAD or R	RADIUS
ELECT	ELECTRICAL	RXN	REACTION
EL	ELEVATION	REINF	REINFORCING
ELEV	ELEVATOR	REQD	REQUIRED
EMBED	EMBEDMENT	RTN	RETURN
EOR	ENGINEER OF RECORD	REV	REVISION
EQ	EQUAL	SCHED	SCHEDULE
ERECT	ERECTION	SECT	SECTION
(E) or EXISTG	EXISTING	SHTG	SHEATHING
EXP	EXPANSION	SHT	SHEET
EXT	EXTERIOR	SLBB	SHORT LEG BACK-TO-BACK
FS	FAR SIDE	SSLT	SHORT SLOTTED HOLE
FV	FIELD VERIFY	SIM	SIMILAR
FIN	FINISH	SPA	SPACE
FLR	FLOOR	SPECS	SPECIFICATIONS
FT	FOOT	SQ	SQUARE
FTG	FOOTING	STD	STANDARD
FDN or FOUND	FOUNDATION	STL	STEEL
FRMG	FRAMING	STIFF	STIFFENER
GA	GAGE OR GAUGE	STRUCT	STRUCTURAL
GALV	GALVANIZED	TEMP	TEMPERATURE
GYP	GYPSPUM	THRU	THROUGH
GYP BD	GYPSPUM BOARD	T & G	TONGUE & GROVE
HD	HEADED	TRANS	TRANSVERSE
HT	HEIGHT	TYP	TYPICAL
HPC	HIGH-PERFORMANCE COATING	UNO	UNLESS NOTED OTHERWISE
HORIZ	HORIZONTAL	VER	VERIFY IN FILED
IN	INCH	VERT	VERTICAL
ID	INSIDE DIAMETER	WWR	WELDED WIRE REINF
IF	INSIDE FACE	W/	WITH
INSUL	INSULATION	WD	WOOD
INT	INTERIOR	WP	WORKING POINT
JT	JOINT	X-BRACING	CROSS BRACING
JST	JOIST	X-STRONG	EXTRA STRONG
KO	KNOCK OUT	XX-STRONG	DOUBLE EXTRA STRONG
LAM	LAMINATED		



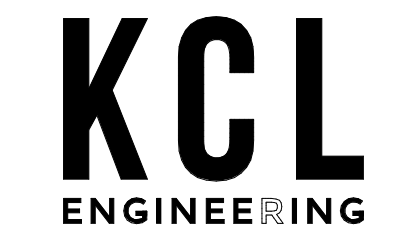
1 ROOF FRAMING PLAN
 1/4" = 1'-0"

- NOTES:
- VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION
 - ——— INDICATES DIRECTION OF EXISTING DECK SPAN
 - ALL ROOF OPENINGS TO RECEIVE ANGLE FRAME PER TYPICAL DETAILS. SOME ROOF OPENINGS MAY NOT BE SHOWN ON STRUCTURAL DRAWINGS. VERIFY SIZE & LOCATION OF ALL OPENINGS W/ MECH CONTRACTOR
 - FOR TYPICAL SCREEN WALL CORNERS & AT EXISTING BUILDING, SEE C6/ S2
 - CUT AND REPLACE EXISTING BRIDGING IN KIND FOLLOWING NEW STL BEAM ERECTION, SEE B5/ S2

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA

NATHAN T. KRESS (DATE)
 MY LICENSE RENEWAL DATE IS DECEMBER 31, 2025
 PAGES OR SHEETS COVERED BY THIS SEAL
 S1 AND S2

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KCL Project Number: 24012
 Date: Issue Date
 Drawn By: EJS
 Checked By: NTK

Revisions	Date	No.
ADD-2	6.17.20	2

DAS PROJECT # 9358.00 LUCAS BUILDING ION CRAC UNIT REPLACEMENT

LUCAS BUILDING
 321 E 12th St
 DES MOINES, IOWA 50319

Sheet Name:
STRUCTURAL NOTES & ROOF FRAMING PLAN

Scale:

Sheet:

S1

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HAZARDOUS BUILDING MATERIALS SURVEY REPORT

PREPARED FOR:

DCI Group
220 SE 6th Street, Suite 200
Des Moines, IA 50309

PROJECT LOCATION:

Lucas Building CRAC Unit Replacement Project #9358
321 E 12th Street
Des Moines, Iowa

Project Date: May 17 and June 10, 2024

Report Date: June 14, 2024

Atlas Project ID: 204BS07163

PREPARED BY:

Atlas Technical Consultants
4503 E 50th Street, Suite 800
Des Moines, IA 50317



June 14, 2024

Mr. Parkes Wilterdink
DCI Group
220 SE 6th Street, Suite 200
Des Moines, IA 50309

Re: Hazardous Building Materials Survey Report
Lucas Building CRAC Unit Replacement Project #9358
321 E 12th Street
Des Moines, Iowa
Atlas Project No.: 204BS07163

Atlas is pleased to submit the attached Hazardous Building Materials Survey Report for the above-referenced site. The survey was limited to surfaces and materials that would be impacted by planned restoration activities within rooms LG-51, 52, 58, the loading dock area, the penthouse, and the loading dock and upper level roofs. This report includes procedures, methodologies and analytical laboratory results.

Atlas appreciates the opportunity to perform these services for the DCI Group, and we look forward to working with you in the future. If you need any assistance with the implementation of the recommendations contained in this report, please feel free to give us a call at (402) 670-3842 and we will respond promptly to your needs.

Sincerely,

ATLAS TECHNICAL CONSULTANTS, LLC

A handwritten signature in cursive script that reads "Trevor Parks".

Trevor Parks
Iowa Inspector
(402) 697-9747

A handwritten signature in cursive script that reads "Steve Hudson".

Steve Hudson, MS, CIH
Senior Project Manager
(402) 670-3842

T A B L E O F C O N T E N T S

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HAZARDOUS BUILDING MATERIALS SURVEY REPORT

Lucas Building CRAC Unit Replacement Project #9358
321 E 12th Street
Des Moines, Iowa
Atlas Project No.: 204BS07163

1.0 SCOPE OF SERVICES

The purpose of this project was to perform a survey for hazardous building materials that may be impacted by planned renovation activities at the above-referenced property within rooms LG-51, 52, 58, the loading dock area, the penthouse, and the loading dock and upper level roofs.

Atlas provided a representative hazardous materials survey in accordance with the referenced agreement and as outlined below:

1. Review any existing hazardous building material survey reports relating to the site, if available.
2. Identify suspect asbestos-containing materials (ACM), surface coatings potentially containing lead paint, and hazardous building materials within the planned work areas.
3. Collect and analyze bulk samples of suspect asbestos containing materials and collect paint chip samples from representative surface coatings potentially containing lead-based or lead-containing paint.
4. Provide laboratory analysis of collected samples.
5. Provide a report of findings with copies and interpretation of analytical results and identifying the locations of asbestos-containing materials, lead paint, and hazardous building materials.

2.0 GENERAL SITE CONDITIONS

The survey was conducted at the Lucas Building located at the 321 E 12th Street, in Des Moines, Iowa. The survey area was limited to the areas to be disturbed by CRAC Unit Replacement Project activities.

3.0 ASBESTOS SURVEY

On May 17 and June 10, 2024, areas expected to be impacted by planned renovation activities were inspected for asbestos-containing building materials by inspector Eric Brown of Atlas. Mr. Brown has completed the requisite training for asbestos accreditation as inspector at a state approved training provider under TSCA Title II. Mr. Brown's State of Iowa Inspector number is #24-11418.



The planned renovation work areas were visually inspected for the presence of suspect asbestos-containing materials (ACM). Materials that were hidden, not accessible, or when sampled would damage the integrity of the structure, were not sampled as part of this survey. Materials visibly identified as non-asbestos (fibrous glass, foam rubber, wood, etc.) were not sampled. The asbestos survey consisted of three basic steps: **1)** a visual inspection of the proposed work areas; **2)** a determination of homogeneous areas with suspect surfacing, thermal system insulation, and miscellaneous materials; and **3)** sampling accessible, friable and non-friable, suspect materials.

3.1 Regulation Review

The U.S. EPA qualifies asbestos-containing materials (ACM) as materials with an asbestos content greater than 1%. The following definitions are taken from Section 61.141 of Subpart M, Part 61 of Title 40: Protection of Environment of the Code of Federal Regulations (CFR).

- “Category I non-friable asbestos-containing material (ACM)” is defined as asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy (PLM).
- “Category II non-friable ACM” is defined as any material, excluding Category I non-friable ACM, containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that, when dry, **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.
- “Friable asbestos material” is defined as any material containing more than 1% asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, PLM that when dry, **can** be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10% as determined by a method other than point counting by PLM, verify the asbestos content by point counting using PLM.

3.2 Homogeneous Areas

Prior to sampling, homogeneous areas were identified in order to facilitate a sampling strategy. A homogeneous sampling area can be described as one or more areas with suspect material similar in appearance and texture that have the same installation date and function. The actual number of samples collected from each



homogeneous sampling area may vary, dependent upon material type and the professional judgment of the inspector.

3.3 Sampling Strategy

The sampling strategy incorporated AHERA requirements, quantities of suspect material, and the inspector's judgment to aid in the identification of suspect asbestos-containing materials. If the analytical results indicated that all the samples collected per homogeneous area did not contain asbestos, then the homogeneous area (material) was considered non-asbestos-containing. However, if the analytical results of one or more of the samples collected per homogeneous area indicated that asbestos was present in quantities greater than one percent asbestos (as defined by EPA), all of the homogeneous area (material) was treated as an asbestos-containing material regardless of any other analytical results. Materials which were visually determined to be non-asbestos (i.e. fibrous glass, foam rubber, etc.) by the accredited inspector were not required to be sampled. Actual collection of a bulk asbestos sample involves physically removing approximately one square inch (1 in²) of material and placing it in an airtight sample container. Sample containers were marked with a unique identification number, which was documented in the field notes.

3.4 Suspect Asbestos-Containing Materials

The following table contains a list of the thirty-three (33) identified suspect asbestos containing materials sampled:



Table 1. Summary of Suspect Materials Sampled		
Sample No.	Homogenous Material	Location
LUC-1	CMU	Loading Dock
LUC-2	CMU Mortar	Loading Dock
LUC-3	Brick Mortar	Loading Dock
LUC-4	Brittle White Caulk	Loading Dock Doorway
LUC-5	Caulk Dark Gray	Loading Dock Doorway
LUC-6	Brick Mortar	LG-58
LUC-7	“Striped” Brick	LG-58
LUC-8	Plaster	LG-58
LUC-9	Drywall	LG-58
LUC-10	2’x2’ Ceiling Tile	LG-52 & 51
LUC-11	Ceiling Insulation	LG-52 & 51
LUC-12	Ceiling Insulation	LG-52 & 51
LUC-13	Ceiling Insulation	LG-52 & 51
LUC-14	Plaster	LG-52
LUC-15	Drywall Tape	LG-52
LUC-16	Drywall Mud	LG-52
LUC-17	Drywall Mud	LG-52
LUC-18	Plaster	LG-52
LUC-19	Drywall Mud	LG-52
LUC-20	Fireproof Caulk Red	LG-52
LUC-21	White Roof Caulking	Loading Dock Roof
LUC-22	Roofing Core Sample	Loading Dock Roof
CRAC-1	TSI	Roof, HVAC 2
CRAC-2	White Sealant on Pipe Fitting	Roof, HVAC 2
CRAC-3	Gray Caulk at Pipe Penetration	Roof, Penthouse Wall
CRAC-4	TSI – Pipe Fitting Insulation	Roof, HVAC 3
CRAC-5	TSI – Straight Pipe Insulation	Roof, HVAC 1
CRAC-6	Gray Caulk on Pipe Fitting	Roof, W Wall of L706
CRAC-7	Roof Tar	Roof, between HVAC 1 & 2
CRAC-8	Fire Rated Mortar	Room L706



CRAC-9	White Sealant on Pipe End	Room L706, Pipe #13
CRAC-10	TSI – Straight Pipe Insulation	Room L706, Pipe #13
CRAC-11	TSI – Duct Insulation	Room L706, Duct work

The following table is a summary of the suspect asbestos-containing materials that have been determined, through laboratory analysis, to contain asbestos:

Summary of Table 2. Asbestos Containing Materials (>1%)				
Sample No.	Homogenous Material	Location	Asbestos Content per Layer	Estimated Quantity
LUC-4	Brittle White Caulk	Loading Dock Doorway	9% Chrysotile	30 LF
<i>SF = Square Feet LF = Linear Feet ND= None Detected</i>				

3.5 Laboratory Analytical Results

Bulk samples were analyzed by EMSL Analytical, Inc. located at 200 Route 130 North, Cinnaminson, NJ. Polarized Light Microscope analysis, utilizing dispersion staining techniques (ref.: EPA Method 600/M4-82-020), was performed to determine the asbestos content of the bulk samples collected at the site. This laboratory is currently a proficient participant in the American Industrial Hygiene Association (AIHA) Bulk Asbestos Proficiency Analytical Testing Program; a quality assurance program for polarized light microscopy analysis. Any material that contains greater than one percent asbestos is considered an ACM and must be handled according to Occupational Safety and Health Administration (OSHA), EPA, and all applicable state and local regulations.

Laboratory test results are provided in Appendix A.

4.0 LEAD PAINT SURVEY

On May 17 and June 10, 2024, the Lucas Building was inspected for lead paint by Mr. Eric Brown of Atlas. The purpose of the survey was to identify locations and concentrations of lead in paints and coatings on interior building components that may be disturbed by CRAC Unit Replacement Project activities.



4.1 Inspection

The lead survey was performed in general accordance with the U.S. Housing and Urban Development Chapter 7 of the *Guidelines for the evaluation and Control of Lead-Based Paint Hazards in Housing* (1997 Revision). Survey criteria included the inspection and sampling of the representative painted surfaces on the interior of the building.

Regulatory limits from the Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA) establishes that lead-based paint (LBP) by definition is paint that contains more than 0.5% of lead in paint. OSHA's "Lead in Construction Standard" (29 CFR 1926.1101) addresses any concentration of lead in paint ("lead-containing paint").

Prior to demolition or renovation activities, all contractors involved should be notified regarding the presence of painted components under the guidelines of the OSHA Lead in Construction standard 29 CFR 1926.62. Care should be exercised in acknowledging that the OSHA 29 CFR 1926.62 has no LBP threshold definition and is concerned with exposures generated by LBP disturbances, which may include materials containing less than 0.5% lead by weight. The OSHA regulations are based strictly on airborne lead concentrations; therefore, the measured lead concentration of the paint and the method of paint disturbance will both factor into the potential airborne hazard.

OSHA requires the contractor to inform its employees of potential lead hazards, based upon the work being performed. The purpose of OSHA's Lead Construction Standard is to reduce the exposure to lead for all construction workers. It is for this reason that Atlas recommends contractors be informed of the presence of lead. OSHA's standard includes an 8-hour time weighted average (TWA) of 50 micrograms of lead per cubic meter of air (mg/m^3) and an action level (regardless of respirator use) of $30 \text{ mg}/\text{m}^3$.

Prior to disposal of debris that contains materials that have been found to contain lead, conduct a Toxicity Characteristic Leaching Procedures (TCLP) on representative solid wastes. This will determine if the debris requires a hazardous waste disposal site. A TCLP was not collected as part of this current inspection.

4.2 Lead Paint Testing

A total of three (3) surface coatings were tested to determine the concentration of lead. The sampling generally involved the collection of the paint on the surface down to the substrate over an area of approximately 2 to 3 square inches. A summary of the tested paints is provided in the table below. In order for a surface coating to be considered a lead-based paint, the paint must contain lead in concentrations greater than 0.5% by weight. A detectable concentration of lead in



the surface coating below 0.5% by weight is considered a lead-containing paint. The full copy of the lead analytical results is included in Appendix B.

Table 3. Lead Paint Results					
Assigned Sample No.	Paint Color	Substrate	Surface	Sample Location	Analytical Results (% wt)
LUC-1	White	Metal	Doorframe	Loading Dock	1.5%
LUC-2	Black	Metal	Door	Loading Dock	<0.008%
LUC-3	Gray	Drywall	Wall	LG-52	<0.008%

- Lead-Based Paint was identified in the metal doorframe of the loading dock.

This evaluation report can help the Owner develop a plan for renovating the building by having concentrations of lead in the paint identified. It is our understanding that the information in this report will be provided to the contractors so that appropriate precautions can be made to minimize worker exposure to lead. If surface coatings with lead containing paint are handled improperly, exposure could occur to workers and future occupants of the facility.

5.0 HAZARDOUS MATERIALS ASSESSMENT

Atlas completed a visual inspection of rooms / areas throughout the intended work areas to identify hazardous wastes or universal wastes that may be impacted by planned renovation activities. The survey included a visual inspection of: light fixtures and other equipment for the presence of Polychlorinated Biphenyls (PCBs); light bulbs, thermostats, switches, and other equipment for the presence of mercury; refrigerants, batteries, and devices with potential radioactive materials.

TABLE 4. HAZARDOUS BUILDING MATERIALS		
Category	Material	Estimated Quantity
Poly-Chlorinated Biphenyl (PCBs)	Transformers	N/A
	Transistors	N/A
	Light Ballasts	N/A
Mercury	Thermostats	N/A



TABLE 4. HAZARDOUS BUILDING MATERIALS		
Category	Material	Estimated Quantity
	Switches/Relays	N/A
	Fluorescent Light Tubes	N/A
	High Intensity Discharge lights	N/A
	Thermometers/ Manometers	N/A
Batteries	Smoke Detectors	N/A
	Emergency Lighting Systems	N/A
	Exit Signs	N/A
	Flashing Fire Alarms	N/A
Chlorofluorocarbons (CFCs) or Hydro Chlorofluorocarbons (HCFCs)	Refrigerators/Freezers/Chillers	CRAC Units
Low Level Radioactive Sources (LLR)	Smoke/Fire Alarms	N/A

Hazardous materials or universal wastes identified in Table 4 shall be removed as part of the renovation contractor’s scope of work and disposed of according to US EPA Toxic Substances Control Act (TSCA) and the State of Iowa regulations.

6.0 CONCLUSIONS

The following conclusions are summarized as follows:

- Asbestos was identified in the sample of White Brittle Caulk on the Loading Dock Doorway.
- Lead-Based Paint was identified in the metal doorframe of the loading dock.
- No hazardous building materials were identified that would be disturbed as part of planned CRAC Unit Replacement Project activities, with the exception of the coolant system in the CRAC Units themselves.

7.0 ASSUMPTIONS AND LIMITATIONS

The results, findings, conclusions, and recommendations expressed in this report are based solely on conditions noted during the May 17 and June 10, 2024, Atlas hazardous building materials survey of the Lucas Building located at the 321 East



12th Street in Des Moines, Iowa.

Atlas did not perform destructive sampling -- it was not within Atlas's scope of work to remove surface materials to investigate portions of the structure or materials that may lay beneath the surface -- thus, any materials that could not be visually identified on the surface were not inspected and would not be noted in this report. Atlas's selection of sample locations and frequency of sampling was based on the inspector's assumption that like materials in the same area are homogeneous in content.

The report is designed to aid the building owner, architect, construction manager, general contractor, and potential abatement contractor in locating hazardous building materials. Under no circumstances is the report to be utilized as a bidding document or as a project specification document since it does not have all the components required to serve as a Project Design document or an Abatement Work plan.

Our professional services have been performed, our findings obtained, and our conclusions and recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This statement is in lieu of other statements either expressed or implied. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

This report is intended for the sole use of the Iowa DAS and the DCI Group. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user.

APPENDIX A
ASBESTOS TEST RESULTS



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 042410200

Customer ID: ATC55

Customer PO:

Project ID:

Attention: Steve Hudson
Atlas Technical
11117 Mockingbird Drive
Omaha, NE 68137

Phone: (402) 697-9747

Fax: (402) 597-8532

Received Date: 05/20/2024 11:15 AM

Analysis Date: 05/20/2024 - 05/21/2024

Collected Date:

Project: Lucas Crac / 204BS07163

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
Luc-1 <i>042410200-0001</i>	Loading Dock North Window - CMU	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-2 <i>042410200-0002</i>	Loading Dock North Window - CMU Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-3 <i>042410200-0003</i>	Loading Dock North Window - CMU Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-4 <i>042410200-0004</i>	Loading Dock Doorway - Caulk Brittle White	Brown/White Fibrous Homogeneous		91% Non-fibrous (Other)	9% Chrysotile
Luc-5 <i>042410200-0005</i>	Loading Dock Doorway Beside Vent - Caulk Dark Grey	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-6 <i>042410200-0006</i>	LG-58 - Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-7-Brick <i>042410200-0007</i>	LG-58 Ceiling - Stripped Brick	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-7-Texture <i>042410200-0007A</i>	LG-58 Ceiling - Texture <i>Inseparable paint / coating layer included in analysis</i>	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-8 <i>042410200-0008</i>	LG-58 Ceiling - Plaster	Tan Fibrous Homogeneous		25% Vermiculite 75% Non-fibrous (Other)	None Detected
Luc-9 <i>042410200-0009</i>	LG-58 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose 3% Glass	82% Non-fibrous (Other)	None Detected
Luc-10 <i>042410200-0010</i>	LG-52 - 2x2' Ceiling Tile	Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (Other)	None Detected
Luc-11 <i>042410200-0011</i>	LG-52 and LG-51 - Ceiling Insulation	Gray Fibrous Homogeneous	70% Min. Wool	30% Non-fibrous (Other)	None Detected
Luc-12 <i>042410200-0012</i>	LG-52 and LG-51 - Ceiling Insulation	Gray Fibrous Homogeneous	70% Min. Wool	30% Non-fibrous (Other)	None Detected
Luc-13 <i>042410200-0013</i>	LG-52 and LG-51 - Ceiling Insulation	Gray Fibrous Homogeneous	90% Min. Wool	10% Non-fibrous (Other)	None Detected
Luc-14-Plaster <i>042410200-0014</i>	LG-52 - Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-14-Skim Coat <i>042410200-0014A</i>	LG-52 - Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/21/2024 08:08:56



EMSL Analytical, Inc.

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EMSL Order: 042410200
Customer ID: ATC55
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
Luc-18-Plaster <small>042410200-0015</small>	LG-52 - Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-18-Skim Coat <small>042410200-0015A</small>	LG-52 - Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-15 <small>042410200-0016</small>	LG-52 - Drywall Tape	Tan Non-Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
Luc-16 <small>042410200-0017</small>	LG-52 - Drywall Mud	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-17 <small>042410200-0018</small>	LG-52 - Drywall Mud	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-19 <small>042410200-0019</small>	LG-52 - Drywall Mud	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-20 <small>042410200-0020</small>	LG-52 - Red Fre Proof Caulk	Red Fibrous Homogeneous	10% Synthetic 5% Glass	85% Non-fibrous (Other)	None Detected
Luc-21-Caulk <small>042410200-0021</small>	Loading Dock Roof - White Roof Caulking	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-21-Caulk 2 <small>042410200-0021A</small>	Loading Dock Roof - Roof Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-22-Roofing <small>042410200-0022</small>	Loading Dock Roof - Laminate Roofing	White Fibrous Homogeneous	60% Glass	40% Non-fibrous (Other)	None Detected
Luc-22-Tar Paper <small>042410200-0022A</small>	Loading Dock Roof - Laminate Roofing	Black Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (Other)	None Detected
Luc-22-Tar <small>042410200-0022B</small>	Loading Dock Roof - Laminate Roofing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-22-Felt <small>042410200-0022C</small>	Loading Dock Roof - Laminate Roofing	Brown Fibrous Homogeneous	80% Cellulose 15% Glass	5% Non-fibrous (Other)	None Detected
Luc-22-Insulation <small>042410200-0022D</small>	Loading Dock Roof - Laminate Roofing	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Luc-22-Gypsum <small>042410200-0022E</small>	Loading Dock Roof - Laminate Roofing	White Fibrous Homogeneous	4% Cellulose 6% Glass	90% Non-fibrous (Other)	None Detected



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 042411734

Customer ID: ATC55

Customer PO:

Project ID:

Attention: Steve Hudson, MS, CIH, CIEC

Atlas Technical

11117 Mockingbird Drive

Omaha, NE 68137

Phone: (402) 697-9747

Fax: (402) 597-8532

Received Date: 06/11/2024 12:10 PM

Analysis Date: 06/11/2024

Collected Date: 06/10/2024

Project: Lucas Building / Crac / 204BS07163

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
Crac-1-TSI <small>042411734-0001</small>	Pipe From HVAC 2 - Building Penthouse - TSI	Tan/White Fibrous Homogeneous	65% Min. Wool	35% Non-fibrous (Other)	None Detected
Crac-1-Backing <small>042411734-0001A</small>	Pipe From HVAC 2 - Building Penthouse - Backing <i>Result includes a small amount of inseparable attached material</i>	Tan Fibrous Heterogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
Crac-2-Sealant <small>042411734-0002</small>	HVAC 2 - White Sealant on Pipe	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Crac-2-Insulation <small>042411734-0002A</small>	HVAC 2 - Insulation	Yellow Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
Crac-3-Caulk <small>042411734-0003</small>	Exterior Penthouse W. Wall - Gray Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Crac-3-Fire Stop <small>042411734-0003A</small>	Exterior Penthouse W. Wall - Fire Stop	Red/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Crac-4 <small>042411734-0004</small>	HVAC 3 - TSI	White Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
Crac-5 <small>042411734-0005</small>	HVAC 1 - TSI <i>Result includes a small amount of inseparable attached material</i>	Black/Yellow Fibrous Heterogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
Crac-6 <small>042411734-0006</small>	Exterior W. Wall of Room L706 - Gray Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Crac-7 <small>042411734-0007</small>	Between HVAC's #1 and #2 - Roof Tar	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Crac-8-Mortar <small>042411734-0008</small>	Room L706 In Bag on Floor - Fire Rated Mortar	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Crac-8-Skim Coat <small>042411734-0008A</small>	Room L706 In Bag on Floor - Skim Coat	Pink Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
Crac-9 <small>042411734-0009</small>	Pipe #13 - White Sealant on Pipe	White Fibrous Homogeneous	30% Wollastonite	70% Non-fibrous (Other)	None Detected
Crac-10 <small>042411734-0010</small>	Pipe #13 - TSI	Yellow Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
Crac-11 <small>042411734-0011</small>	Ductwork - TSI	Yellow Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected

Initial report from: 06/12/2024 08:08:17



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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

042410200

Customer Information	Customer ID:	Billing ID:
	Company Name: Atlas Technical	Company Name: Atlas Technical
	Contact Name: Steve Hudson	Billing Contact: Steve Hudson
	Street Address: 11117 Mockingbird Drive	Street Address: 11117 Mockingbird Drive
	City, State, Zip: Omaha NE 68137 Country: US	City, State, Zip: Omaha NE Country: US
	Phone: 402-697-9747	Phone: 402-697-9747
Email(s) for Report: steve.hudson@oneatlas.com	Email(s) for Invoice:	

Project Information

Project Name/No: LUCAS CRAC 204B507163 Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: IA State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Sampled By Name: ERIC BROWN Sampled By Signature: Eric Brown Date Sampled: No. of Samples in Shipment: 22

Turn-Around-Time (TAT)

3 Hour 6 Hour 24 Hour 32 Hour 48 Hour 72 Hour 96 Hour 1 Week 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

Test Selection

PLM - Bulk (reporting limit)

PLM EPA 600/R-93/116 (<1%)
 PLM EPA NOB (<1%)
 POINT COUNT
 400 (<0.25%) 1,000 (<0.1%)
 POINT COUNT w/ GRAVIMETRIC
 400 (<0.25%) 1,000 (<0.1%)
 NIOSH 9002 (<1%)
 NYS 198.1 (Friable - NY)
 NYS 198.6 NOB (Non-Friable - NY)
 NYS 198.8 (Vermiculite SM-V)

TEM - Bulk

TEM EPA NOB
 NYS NOB 198.4 (Non-Friable - NY)
 TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Tests (please specify)

Positive Stop - Clearly Identified Homogeneous Areas (HA)

Sample Number	HA Number	Sample Location	Material Description
		SEE ATTACHED	

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 EMSL
 CINNAMINSON, NJ
 2024 MAY 20 A 11:13

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment:	Sample Condition Upon Receipt:
Relinquished by: <u>Eric Brown</u> Date/Time: <u>5/17/2024 17:20</u>	Received by: <u>[Signature]</u> EFX Date/Time: <u>5/20/24 11:54</u>
Relinquished by:	Received by:

Controlled Document - Asbestos Bulk R7 9/14/2021 AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

22
AD



Asbestos Bulk Building Materials - Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North

EMSL Order Number / Lab Use Only

042411734

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

Customer Information	Customer ID:	Billing ID:
	Company Name: Atlas Technical	Company Name: Atlas Technical
	Contact Name: Steve Hudson	Billing Contact: Steve Hudson
	Street Address: 11117 Mockingbird Drive	Street Address: 11117 Mockingbird Drive
	City, State, Zip: Omaha NE 68137 Country: US	City, State, Zip: Omaha NE Country: US
Phone: 402-697-9747	Phone: 402-697-9747	
Email(s) for Report: steve.hudson@oneatlas.com	Email(s) for Invoice:	

Project Information

Project Name/No: LUCAS CRAC 2048507163 Purchase Order:

EMSL LIMS Project ID: (if applicable, EMSL will provide) US State where samples collected: IA State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Sampled By Name: ERIC BROWN Sampled By Signature: Eric Brown Date Sampled: 6/10/24 No. of Samples in Shipment: 11

Turn-Around-Time (TAT)

3 Hour 6 Hour 24 Hour 32 Hour 48 Hour 72 Hour 96 Hour 1 Week 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

Test Selection

PLM - Bulk (reporting limit)

PLM EPA 600/R-93/116 (<1%)
 PLM EPA NOB (<1%)
 POINT COUNT
 POINT COUNT w/ GRAVIMETRIC
 NIOSH 9002 (<1%)
 NYS 198.1 (Friable - NY)
 NYS 198.6 NOB (Non-Friable - NY)
 NYS 198.8 (Vermiculite SM-V)

TEM - Bulk

TEM EPA NOB
 NYS NOB 198.4 (Non-Friable - NY)
 TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Tests (please specify)

Positive Stop - Clearly Identified Homogeneous Areas (HA)

Sample Number	HA Number	Sample Location	Material Description
		SEE OTHER SHEET	

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment:	Sample Condition Upon Receipt:
Relinquished by: <u>Eric Brown</u> Date/Time: <u>6/10/24 17:00</u>	Received by: <u>[Signature]</u> Date/Time: <u>6/11/24 12:00 P</u>

Controlled Document - Asbestos Bulk R7 9/14/2021 AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

11 VE

ATLAS

ASBESTOS BULK SAMPLE SHEET

Project #: 204 B507163 Address: LUCAS BLDG

Date: 5/17/24

Sample #	Material Description	Photo #	Location of Material	Quantity	Friable or Non	Condition		
LUC-1	CMU		B	1st	2nd	3rd	lf Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor
			Loading dock North Window					
	Interior / Exterior	HATCHING					Notes:	
LUC-2	CMU Mortar		B	1st	2nd	3rd	lf Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor
			Loading dock North Window					
LUC-3	Interior / Exterior	HATCHING					Notes:	
LUC-4	Caulk Brittle white		B	1st	2nd	3rd	30 lf Non	<input type="checkbox"/> Good <input checked="" type="checkbox"/> <10% Damage <input type="checkbox"/> Poor
			Loading dock doorway					
	Interior / Exterior	HATCHING					Notes:	
LUC-5	Caulk dark grey		B	1st	2nd	3rd	15 lf Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor
			Loading dock doorway beside Vent					
	Interior / Exterior	HATCHING					Notes:	
LUC-6	Brick Mortar		B	1st	2nd	3rd	lf Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor
			LG-58					
	Interior / Exterior	HATCHING					Notes:	
LUC-7	Striped Brick		B	1st	2nd	3rd	lf Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor
			LG-58 Ceiling					
	Interior / Exterior	HATCHING					Notes:	
LUC-8	Plaster		B	1st	2nd	3rd	lf Non	<input type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor
			LG-58 Ceiling					
	Interior / Exterior	HATCHING					Notes:	
LUC-9	drywall		B	1st	2nd	3rd	lf Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor
			LG-58					
	Interior / Exterior	HATCHING					Notes:	

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 2024

ATLAS

ASBESTOS BULK SAMPLE SHEET

Project #: 204BS07163

Address: LUCAS BLDG

Date: 5/17/24

Sample #	Material Description	Photo #	Location of Material				Quantity	Friable or Non	Condition	
			B	1st	2nd	3rd				
LUC-10	2x2 St Ceiling tile	HATCHING	B	1st	2nd	3rd	500 sf	Friable	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor	
			LG-52							Notes:
LUC-11	Ceiling Insulation	HATCHING	B	1st	2nd	3rd	sf	Friable	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor	
LUC-12			LG-52 +							Notes:
LUC-13			LG-51							
LUC-14	Plaster	HATCHING	B	1st	2nd	3rd	sf	Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor	
LUC-18			LG-52							Notes:
LUC-15	drywall tape	HATCHING	B	1st	2nd	3rd	sf	Friable	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor	
			LG-52							Notes:
LUC-16	drywall mud	HATCHING	B	1st	2nd	3rd	sf	Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor	
LUC-17			LG-52							Notes:
LUC-19			LG-52							
LUC-20	Red Fire Proof Caulk	HATCHING	B	1st	2nd	3rd	sf	Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor	
			LG-52							Notes:
LUC-21	White roof Caulking	HATCHING	B	1st	2nd	3rd	sf	Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor	
			Loading Dock Roof							Notes:
LUC-22	Laminate Roofing	HATCHING	B	1st	2nd	3rd	sf	Non	<input checked="" type="checkbox"/> Good <input type="checkbox"/> <10% Damage <input type="checkbox"/> Poor	
			Loading Dock Roof							Notes:

ASBESTOS BULK SAMPLE FORM



11117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747
Fax (402) 597-8532

Project Information

Client:	Project Description: <i>CRAC</i>	Project Manager: <i>SH</i> Inspector: <i>EB</i>
Date: <i>6/10/24</i>	Site Location: <i>LUCAS BUILDING</i>	ATLAS PROJECT NUMBER: <i>2040507163</i>

Sample #	Material Description	Floor	Sample Location	Quantity
CRAC-1	<i>TSI</i>	<i>R</i>	<i>PIPE FROM HVAC 2 - BUILDING PENTHOUSE</i>	
CRAC-2	<i>WHITE SEALANT ON PIPE</i>	<i>R</i>	<i>EXTERNAL HVAC 2 PENTHOUSE WEST WALL</i>	
CRAC-3	<i>GRAY CAULK</i>	<i>R</i>	<i>EXTERNAL PENTHOUSE W. WALL</i>	
CRAC-4	<i>TSI</i>	<i>R</i>	<i>HVAC 3</i>	
CRAC-5	<i>TSI</i>	<i>R</i>	<i>HVAC 1</i>	
CRAC-6	<i>GRAY CAULK</i>	<i>R</i>	<i>EXTERNAL W. WALL OF ROOM L706</i>	
CRAC-7	<i>ROOF TAR</i>	<i>R</i>	<i>BETWEEN HVAC'S #1 & #2</i>	
CRAC-8	<i>FIRE RATED MORTAR</i>	<i>R</i>	<i>ROOM L706 IN BAG ON FLOOR</i>	
CRAC-9	<i>WHITE SEALANT ON PIPE</i>	<i>R</i>	<i>PIPE #13</i>	
CRAC-10	<i>TSI</i>	<i>R</i>	<i>PIPE #13</i>	
CRAC-11	<i>TSI</i>	<i>R</i>	<i>DUCT WORK</i>	

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APPENDIX B
LEAD PAINT TEST RESULTS

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012417617
LIMS Reference ID: AC17617
EMSL Customer ID: ATC55

Attention: Steve Hudson
 Atlas Technical [ATC55]
 11117 Mockingbird Drive
 Omaha, NE 68137
 (402) 697-9747
 steve.hudson@oneatlas.com

Project Name: Lucas Crac 204B507163

Customer PO: 204B507163
EMSL Sales Rep: Anthony DeRosa
Received: 05/20/2024 09:00
Reported: 05/23/2024 17:37

Analytical Results

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: LUC-1/White / Metal / Loading Dock Door Frame							Date Sampled: 05/17/24		
Matrix: Chips							LIMS Reference ID: AC17617-01		
Lead	1.5 % wt	0.078 % wt	0.2568	05/21/24 LP	SW-846 3050B	05/22/24 PMx	SW846-7000B	D	10
Sample Comments:									
Client Sample ID: LUC-2/Black / Metal / Loading Dock Door							Date Sampled: 05/17/24		
Matrix: Chips							LIMS Reference ID: AC17617-02		
Lead	<0.008 % wt	0.008 % wt	0.2536	05/21/24 LP	SW-846 3050B	05/22/24 PMx	SW846-7000B		1
Sample Comments:									
Client Sample ID: LUC-3/Grey / Drywall / LG-52							Date Sampled: 05/17/24		
Matrix: Chips							LIMS Reference ID: AC17617-03		
Lead	<0.008 % wt	0.008 % wt	0.2995	05/21/24 LP	SW-846 3050B	05/22/24 PMx	SW846-7000B		1
Sample Comments:									

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012417617
LIMS Reference ID: AC17617
EMSL Customer ID: ATC55

Attention: Steve Hudson
 Atlas Technical [ATC55]
 11117 Mockingbird Drive
 Omaha, NE 68137
 (402) 697-9747
 steve.hudson@oneatlas.com

Project Name: Lucas Crac 204B507163

Customer PO: 204B507163
EMSL Sales Rep: Anthony DeRosa
Received: 05/20/2024 09:00
Reported: 05/23/2024 17:37

Certified Analyses included in this Report

Analyte	Certifications
SW846-7000B in Chips	
Lead	AIHA LAP

List of Certifications

Code	Description	Number	Expires
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
NYSDOH	New York State Department of Health	10872	04/01/2025
California ELAP	California Water Boards	1877	06/30/2024
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024

Please see the specific Field of Testing (FOT) on www.emsl.com for a complete listing of parameters for which EMSL is certified.

Notes and Definitions

Item	Definition
D	Analyte was reported from a dilution run.
Pb3	The QC sample duplicate RPD result for Lead was outside of the method control limits.
Pb7	The RLVS recovery for Lead was outside of the method control limits.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit For paint chips, the RL is 0.008% by wt. (equiv. to 80 mg/kg, or ppm) based upon a minimum sample weight of 0.25 grams. For soils, the RL is 40 mg/kg (ppm) based upon a minimum sample weight of 0.5 grams. For dust wipes, the RL is 10 µg/wipe; reporting units of µg/sq. ft. are not validated by the lab based upon data provided by non-lab personnel.
Wet	Sample is not dry weight corrected.

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012417617
LIMS Reference ID: AC17617
EMSL Customer ID: ATC55

Attention: Steve Hudson
Atlas Technical [ATC55]
11117 Mockingbird Drive
Omaha, NE 68137
(402) 697-9747
steve.hudson@oneatlas.com

Project Name: Lucas Crac 204B507163

Customer PO: 204B507163
EMSL Sales Rep: Anthony DeRosa
Received: 05/20/2024 09:00
Reported: 05/23/2024 17:37

Owen McKenna Laboratory Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. QC sample results are within quality control criteria and met method specifications unless otherwise noted.

Analysis following EMSL SOP for the Determination of Environmental Lead by FLAA. The laboratory has a reporting limit of 0.008% by wt., based upon a minimum sample weight of 0.25g submitted to the lab, and is not responsible for any result or reporting limit provided in mg/cm² since it is dependent upon an area value provided by non-lab personnel. A "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty and definitions of modifications are available upon request. Results in this report are not blank corrected unless specified.



Lead Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

AC17617

PHONE: (800) 220-3675

EMAIL: CinnaminsonLeadLab@emsl.com

Customer Information	Customer ID:	Billing ID:
	Company Name: Atlas Technical	Company Name: Atlas Technical
	Contact Name: Steve Hudson	Billing Contact: Steve Hudson
	Street Address: 11117 Mockingbird Drive	Street Address: 11117 Mockingbird Drive
	City, State, Zip: Omaha, NE, 68137 Country: USA	City, State, Zip: Omaha, NE, 68137 Country: USA
	Phone: 402-697-9747	Phone: 402-697-9747
Email(s) for Report: steve.hudson@oneatlas.com	Email(s) for Invoice:	

Project Information			
Project Name/No: LUCAS CRAC 204B507163	US State where samples collected:	State of Connecticut (CT) must select project location:	Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)	<input type="checkbox"/> Commercial (Taxable)	<input type="checkbox"/> Residential (Non-Taxable)	
Sampled By Name: ERIC BROWN	Sampled By Signature: <i>Eric Brown</i>	No. of Samples in Shipment: 3	

Turn-Around-Time (TAT)

3 Hour
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

MATRIX	METHOD	INSTRUMENT	REPORTING LIMIT	SELECTION
CHIPS <input checked="" type="checkbox"/> % by wt. <input type="checkbox"/> ppm (mg/kg) <input type="checkbox"/> mg/cm ² <small>*Reporting Limit based on a minimum 0.25g sample weight. **Not appropriate for Ceramic Tiles - XRF is recommended</small>	SW 846-7000B	Flame Atomic Absorption	0.008% (80ppm)	<input checked="" type="checkbox"/>
	SW 846-6010D*	ICP-OES	0.0004% (4ppm)	<input type="checkbox"/>
AIR	NIOSH 7082	Flame Atomic Absorption	4µg/filter	<input type="checkbox"/>
	NIOSH 7303M	ICP-OES	1.0µg/filter	<input type="checkbox"/>
	NIOSH 7303M	ICP-MS	0.05µg/filter	<input type="checkbox"/>
WIPE <input type="checkbox"/> ASTM <input type="checkbox"/> NON-ASTM <small>*If no box is checked, non-ASTM Wipe is assumed</small>	SW 846-7000B	Flame Atomic Absorption	10µg/wipe	<input type="checkbox"/>
	SW 846-6010D*	ICP-OES	1.0µg/wipe	<input type="checkbox"/>
TCLP	SW 846-1311 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW 846-1311 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
SPLP	SW 846-1312 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW 846-1312 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
TTLC	22 CCR App. II, 7000B	Flame Atomic Absorption	40mg/kg (ppm)	<input type="checkbox"/>
	22 CCR App. II, SW 846-6010D*	ICP-OES	2mg/kg (ppm)	<input type="checkbox"/>
STLC	22 CCR App. II, 7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	22 CCR App. II, SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
Soil	SW 846-7000B	Flame Atomic Absorption	40mg/kg (ppm)	<input type="checkbox"/>
	SW 846-6010D*	ICP-OES	2mg/kg (ppm)	<input type="checkbox"/>
	SM 3111B / SW 846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
Wastewater	EPA 200.7	ICP-OES	0.020 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.5	ICP-OES	0.003 mg/L (ppm)	<input type="checkbox"/>
Drinking Water	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	<input type="checkbox"/>
	40 CFR Part 50	ICP-OES	12 µg/filter	<input type="checkbox"/>
TSP/SPM Filter				<input type="checkbox"/>
Other:				<input type="checkbox"/>

Sample Number	Sample Location	Volume / Area	Date / Time Sampled
SEE ATTACHED			

Method of Shipment:	Sample Condition Upon Receipt:		
Relinquished by: <i>Eric Brown</i>	Date/Time: <i>5/17/2024 17:00</i>	Received by: <i>Shumeta Efx</i>	Date/Time: <i>5/20/24 0900</i>
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-25 Lead R18 04/04/2024

*6010C Available Upon Request

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

AC17617

PAINT CHIP SAMPLE LOG SHEET



11117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747

Project Information

Client:	Project Description: <i>LUCAS CRAC</i>	Project Manager: SH Inspector: EB
Date: May 17 2024	Site Location: Lucas Building, Des Moines	ATLAS PROJECT NUMBER: 204BS07163

Sample #	Paint Color	Substrate	Sample Location	Quantity
<i>LUC-1</i>	<i>White</i>	<i>Metal</i>	<i>Loading dock door Srame</i>	
<i>LUC-2</i>	<i>black</i>	<i>Metal</i>	<i>Loading dock door</i>	
<i>LUC-3</i>	<i>grey</i>	<i>drywall</i>	<i>LG-52</i>	

APPENDIX C
STAFF ACCREDITATIONS

ERIC BROWN


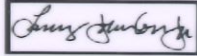
DOB: 05-07-1970

Issued: 02-27-2024



This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	24-11418	02-09-2025

 
Asbestos **Larry Johnson, Jr.**
Labor Commissioner

APPENDIX D

PHOTO LOG

Photo Log

Lucas CRAC ■ Des Moines, IA

Date Taken: May 17 and June 10, 2024 ■ Atlas Project No. 204BS07163



Photo #1 View of the Lucas Building.



Photo #2 View of the loading dock on Lucas Building



Photo #3 View of Brittle Asbestos Containing Caulk above Loading Dock Doors.



Photo #4 Another Photo of the Asbestos Containing Caulk above Loading Dock Doors.



Photo #5 View of Off-white LBP on Loading Dock Doorframe.



Photo #6 View of HVAC units to be removed.