BARTLETT REGIONAL HOSPITAL EMERGENCY DEPARTMENT VENTILATION UPGRADES VOLUME II OF II

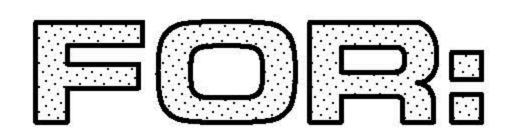
Contract No. BE22-037

File No. 2108



BARTLETT REGIONAL HOSPITAL EMERGENCY DEPARTMENT VENTILATION IMPROVEMENTS

CBJ CONTRACT NO. BE22-037



BARTLETT REGIONAL HOSPITAL JUNEAU, ALASKA

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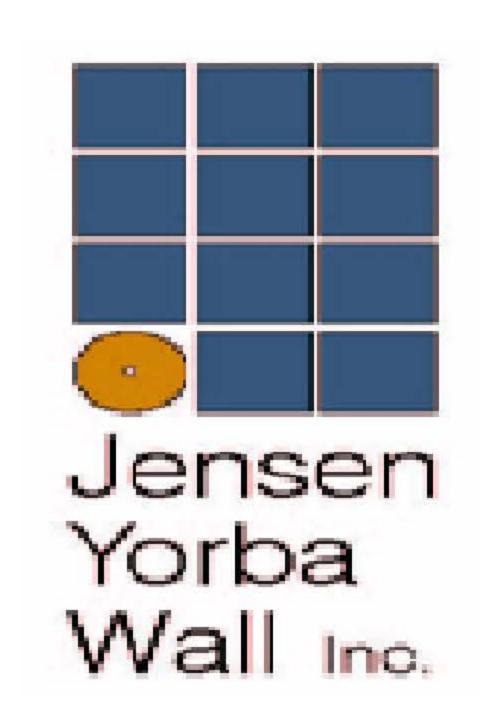
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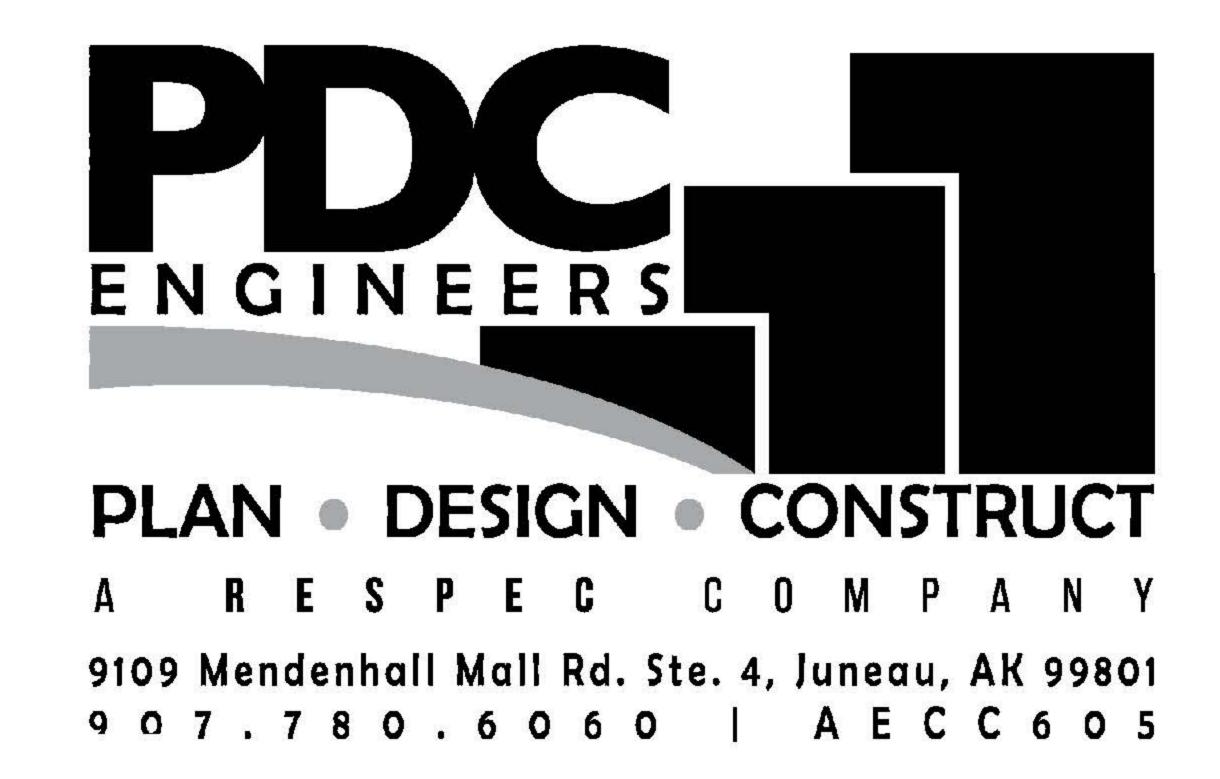
STRUCTURAL SHEET INDEX:

S001 SLAB RETROFIT DETAIL











526 Main Street Juneau, Alaska 99801 (907) 586-9788

ABBREVIATIONS SYMBOLS OWNER FURNISHED SANITARY NAPKIN RECEPTACLE ASBESTOS CONTAINING DETAIL REFERENCE DETAIL NUMBER ROOM NAME HD HDWD HM HORIZ HAZARDOUS DRUGS CONTRACTOR INSTALLED MATERIAL ACOUSTICAL CEILING PANEL SQ SS SQUARE STAINLESS STEEL SHEET NUMBER ROOM NAME ACP ADJ AFF AIB AL ARCH ASB OFOI EL ELEC ELEVATION HARDWOOD OWNER FURNISHED STA STC STD STL STOR STRUCT SUSP **ROOM NUMBER** ADJUSTABLE ELECTRICAL ELEVATOR HOLLOW METAL OWNER INSTALLED STATION OFD OFF OPNG OPP OSB ABOVE FINISH FLOOR ELEV EMER ENCL EPDM HORIZONTAL OVERFLOW DRAIN SOLIND TRANSMISSION CLASS AIR INFILTRATION BALUMINUM ARCHITECTURAL ELEVATOR EMERGENCY ENCLOSURE ETHYLENE PROPYLENE DIANE OFFICE STANDARD ELEVATION NUMBER DOOR NUMBER HEIGHT HOT WATER OPENING STEEL STORAGE EXISTING TO REMAIN SHEET NUMBER OPPOSITE (WHERE INDICATED) ASBESTOS MONOMER ORIENTED STRAND BOARD STRUCTURAL EXISTING RELITE/WINDOW EPS EXPANDED POLYSTYRENE INSIDE DIAMETER SUSPENDED BD BLDG BLKG BM BOT EQP EX EXT PLATE PLASTIC LAMINATE PLASTER PRE-CAST BOARD FOUIPMENT INSULATION SQUARE YARD WALL SECTION SECTION NUMBER BUILDING BLOCKING BEAM BOTTOM -SHEET NUMBER DOOR NUMBER AXXX JANITOR PC PF PR PWD TOP OF CURB TELEPHONE TC TEL TEMP T&G TOC TOD TPD TRD TRTD SCHEDULES / CODE NEW CONSTRUCTION FIRE ALARM → RELITE/WINDOW NUMBER PRE-FINISHED -GRID NUMBER FD FDN FEC FF FLOOR DRAIN LABORATORY TEMPORARY CAB CB CEM CG CLG COL CONC CONT CTR CARINET PI YWOOD COLUMN GRID LINE FOUNDATION LAMINATE TONGLE & GROOVE A CABINET CATCH BASIN CEMENT CORNER GUARD CEILING TOP OF CONCRETE TOP OF DECK TOILET PAPER DISPENSER LAVATORY FIRE EXTINGUISHER CABINET RISER FF FHC FIN FLASH FLR FOC FOF FOS FRP FIRE HOSE CABINET **ELEVATION NUMBER** DOOR TO REMOVE RELITE/WINDOW TO REMOVE RD REFR ROOF DRAIN TREAD PRESSURE TREATED FINISH FLASHING **EXISTING** INTERIOR ELEVATION. COLUMN MAXIMUM REFRIGERATOR MECH MEMB MFR MH MIN MISC REFR REINF REQ RESIL RH RL RM RO RUB TO REMOVE CONCRETE CONTINUOUS FLOOR FACE OF CONCRETE/CURB MECHANICAL REINFORCED TOW TYP TOP OF WALL MEMBRANE REQUIRED SHEET NUMBER WALL TO REMOVE FACE OF CONCRETE/CURB FACE OF FINISH FACE OF STUD (GLASS) FIBER REINFORCED MANUFACTURER RESILIENT ROBE HOOK RAIN LEADER MANUFACTURER MANHOLE MINIMUM MISCELLANEOUS UNF UON UR UNFINISHED UNLESS OTHERWISE NOTED DOUBLE DEPARTMENT PARTITION OR WALL TYPE DBL DEPT DF DET DIA DISP DN DR DS DWG DWG PARTITION OR WALL TYPE PLASTIC FIRE RETARDANT ROOM FR FT ROUGH OPENING MTD MTL MUL DRINKING FOUNTAIN MOUNTED DETAIL DIAMETER FOOT OR FEFT RUBBER VERT VERTICAL VEST VESTIBILIE DISPENSER DOWN DOOR DOWNSPOUT SELF ADHERING SHEET UNDERLAYMENT SEAT COVER DISPENSER VAPOR RETARDER VENT THROUGH ROOF SASU DOOR TYPE NUMBER NOT IN CONTRACT NUMBER DOOR TYPE (XX) GA GALV GB GAUGE WB WC GALVANIZED SFRM SPRAYED FIRE-RESISTIVE WEATHER BARRIER NTS DRAWING GRAB BAR NOT TO SCALE MATERIAL WATER CLOSET KEY NOTE NUMBER GLASS GYPSUM WALL BOARD GYPSUM DRAWER SHOWER WOOD WATERPROOF **KEY NOTE** OVERALL SHEATHING EACH EXHAUST FAN SIMILAR SANITARY NAPKIN DISPENSER WR WSCT REVISION NOTE NUMBER REV SYM

DOCUMENTS

CONSTRUCTION

21010JN

REVISIONS

DATA

- REINSTALL EXISTING ACP

CEILING SYSTEM AS REQ

5/8" TYPE "X" GWB, TYP

6" MTL STUDS

@ 16" O.C.

SEALANT EA SIDE

PATCH AS REQ TO MAINTAIN

2 1/2" MTL STUDS

@ 16" O.C.

INTEGRITY OF FIRE PROTECTION INSUL, WHERE OCCURS

PHASING

- 1. COORDINATE ALL WORK WITH ELECT AND MECH.
- 2. SEE ENLARGED PLANS A-401, A-402, A-403 AND A-601 FOR ADDITIONAL ICRA (INFECTION CONTROL RISK ASSESSMENT) REQUIREMENTS.

PHASE 1 DEMO - TRAUMA BAY 2, TEMP C3 ENCLOSURE. (TRAUMA BAY 1 OPEN) MECH DEMO - UTILIZE HEPA CART FOR MECH WORK AND WORK ABOVE CEILING. CORE DRILL FLOOR ABOVE FOR MECH WORK EXHAUST DUCTS.

PHASE 1 RENO - TRAUMA BAY 2, TEMP C3 ENCLOSURE. (TRAUMA BAY 1 OPEN) MECH DEMO - UTILIZE HEPA CART FOR MECH WORK AND WORK ABOVE CEILING. INSTALL RETURN AIR GRILLE. STUB RETURN GRILLE DUCT TOWARDS TRAUMA BAY 1. INSTALL EXHAUST AIR DUCT THROUGH FLOOR AND STUB TOWARDS TRAUMA BAY 1.

PHASE 2 DEMO WORK - TRAUMA BAY 1, TEMP C3 (TRAUMA BAY 2 OPEN) ARCH C1 WALL & C2 DOOR ERECTION - UTILIZE HEPA CART FOR WORK REMOVE EXISTING RETURN AIR GRILLE AND DUCT.

PHASE 2 RENO WORK - TRAUMA BAY 1, TEMP C1 & C2 ENCLOSURE. (TRAUMA BAY 2 OPEN) MECH AND ARCH RENO - UTILIZE HEPA CART FOR MECH WORK AND WORK ABOVE CEILING. INSTALL RELOCATED CEILING TILE. INSTALL REMAINING EXHAUST GRILLES AND EXHAUST DUCT TIE-IN.

INSTALL WALL FRAMING AND TELESCOPING DOORS. EXTEND SPRINKLER BRANCH LINE AS REQUIRED.

PHASE 2 DEMO WORK - TRAUMA BAY 1, TEMP C2 (TRAUMA BAY 2 OPEN) ARCH(C1)WALL &(C2)DOOR DEMOLITION - UTILIZE HEPA CART FOR WORK. REMOVE TEMP C1 & C2 ENCLOSURE

PARTITION NOTES

1. PARTITIONS TO BE PARTITION TYPE A, UON.

INSUL, WHERE OCCURS

BATT ACOUSTICAL

COVE BASE, TYP

MATCH EXISTING

INSUL, TYP

- 2. ALL INTERIOR STUDS TO 12' HIGH TO BE 20 GAGE MIN, 16 INCHES OC, UON. STUD PARTITIONS ABOVE 12' HIGH TO BE 18 GA MIN.
- 3. ALL PARTITIONS TO BE FULL HT FROM SLAB TO UNDERSIDE OF DECK ABOVE, UON.

TYP PARTITION

- 4. GWB SHALL BE 5/8", TYPE X UON.
- 5. INSTALL BLKG & BACKING PLATES AT CASEWORK, EQUIPMENT, ACCESSORIES, ETC.

SCHEDULES

FINISH	SCHEDULE											
ROOM		FLOOR	BASE		WAINSC	ОТ	WALLS				CEILING	NOTES
No.	Name			Ht.		Ht.	North	East	South	West		
1409A	ED TRAUMA BAY 1	EX SV	EX SVC				PT	PT	EX PT	PT	EX ACP	
1409B	ED TRAUMA BAY 2	EX SV	EX SVC				EX PT	EX PT	PT	PT	EX ACP	
2748	OB EQUIP STOR	EX SV	EX RUB	4"			EX PT	EX PT	EX PT	EX PT	EX ACP	
3133	MH LAUNDRY/LINEN	EX SV	EX SVC				EX PT	EX PT	EX PT	EX PT	EX GWB	

GENERAL NOTES:

PATCH EXISTING FINISHES WHERE MECH WORK OCCURS TO MATCH ADJACENT SURFACE, TYP

ABBREVIATIONS:

CPT CARPET EXISTING PAINT RUBBER BASE RUB SHEET VINYI SVC SHEET VINYL COVE

DOOR A	ND F	RELITE SCI	HED	ULE											
OPENING	ì		DOG	OR	FRA	ME	GLASS	SIGN	AGE	RATING	DETAILS			HW	REMARKS
No.	Type	Size	Mat	Fin	Mat	Fin		Туре	Text		Head	Jamb	Sill		
1409A-1	Α	10'-0"x7'-4"	AL	AL	AL	AL	TEMP			N/A	4/A-901	1/A-901	4/A-901		
1409A-2	Α	11'-4"x7'-4"	AL	AL	AL	AL	TEMP			N/A	4/A-901	1/A-901	4/A-901		

ABBREVIATIONS:

ACP CEILING SYSTEM.

COVE BASE TYP

MATCH EXISTING

SEALANT

PARTITION

GWB WHERE OCCURS, PT 5/8" TYPE "X" GWB, TYP

> PT PAINT HEIGHT HOLLOW CORE SC SOLID CORE HARDWARE WIDE HDWR

HOLLOW METAL

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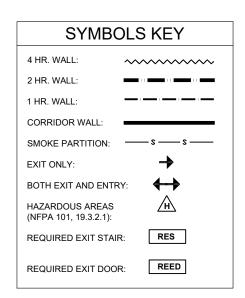




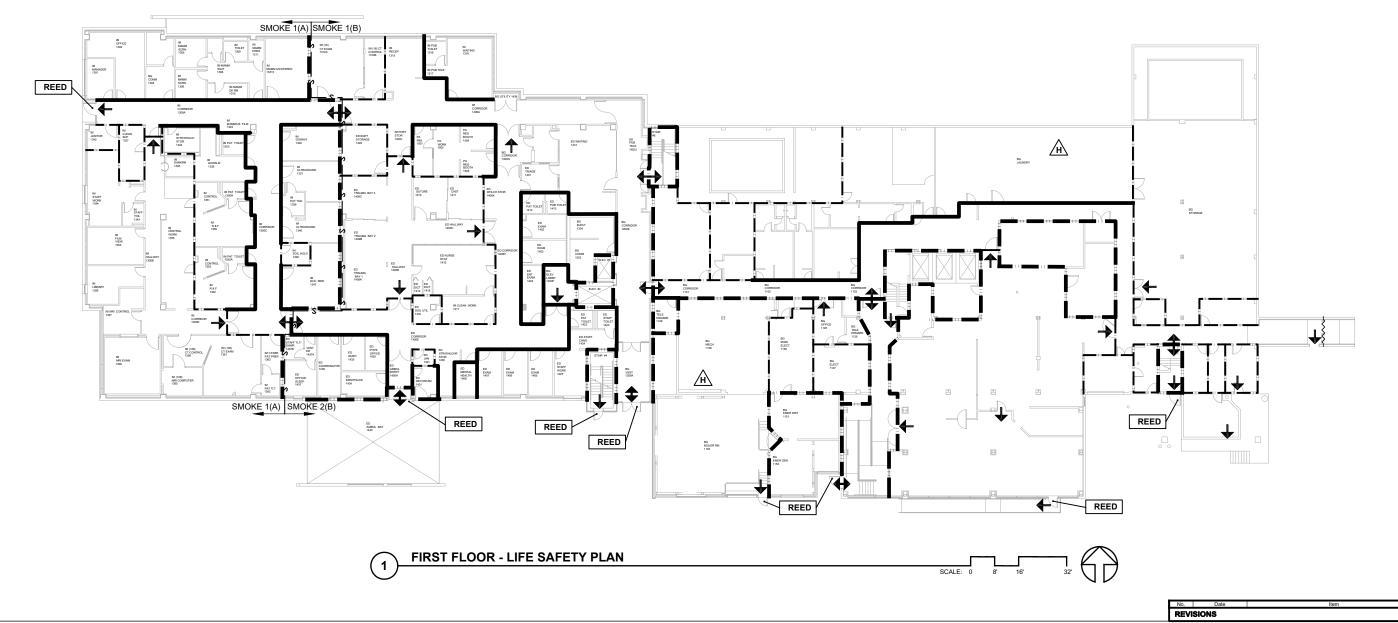
BARTLETT ED VENTILATION IMPROVEMENTS

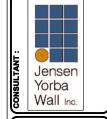
PARTITION SCHED/ ABBREVIATIONS SYMBOLS / GENERAL NOTES PHASING CONSTRUCTION DOCUMENTS

REVISIONS



	LEVE	L ONE C	ODE DAT	ГА		
BUILDING ZONE	OCCUPANCY	CONSTRUCTION TYPE	AREA SUBTOTALS(SF)	AREA TOTALS(SF)	OCC. LOAD SUBTOTALS	OCC. LOAD TOTALS
SMOKE COMPARTMENT 1(A) SMOKE COMPARTMENT 1(B) AMBULANCE BAY CENTRAL PLANT EXISTING (CXPETERIA)	I-2 I-2 *I-2 B B ***A-2	1B(SPRINKLED) 1B(SPRINKLED) 1B(SPRINKLED) 1B(SPRINKLED) 1B(SPRINKLED) 1B(SPRINKLED)		9381 12200 **1162 4253 17637 2063	**6	95 119 15 177 138
LEVEL ONE TOTALS * AMBULANCE BAY INCIDENTAL L ** AMBULANCE BAY AREA & OCCI *** CAFETERIA BUILT UNDER 1997	JPANT LOAD NOT	INCLUDED IN BUILD	DING TABULATIONS	45534		544







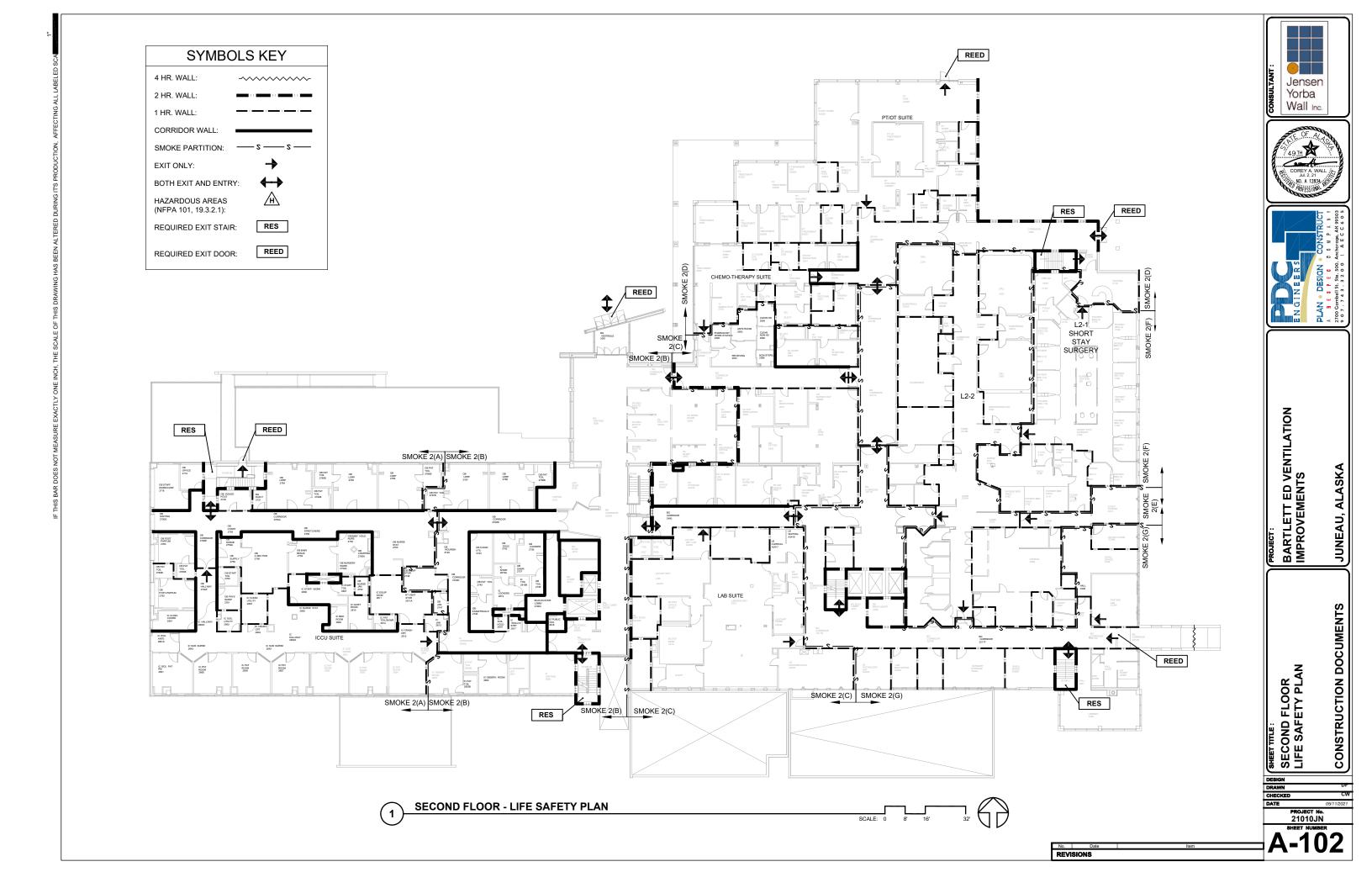


BARTLETT ED VENTILATION IMPROVEMENTS

CONSTRUCTION DOCUMENTS

SHEET TITLE:
FIRST FLOOR
LIFE SAFETY PLAN

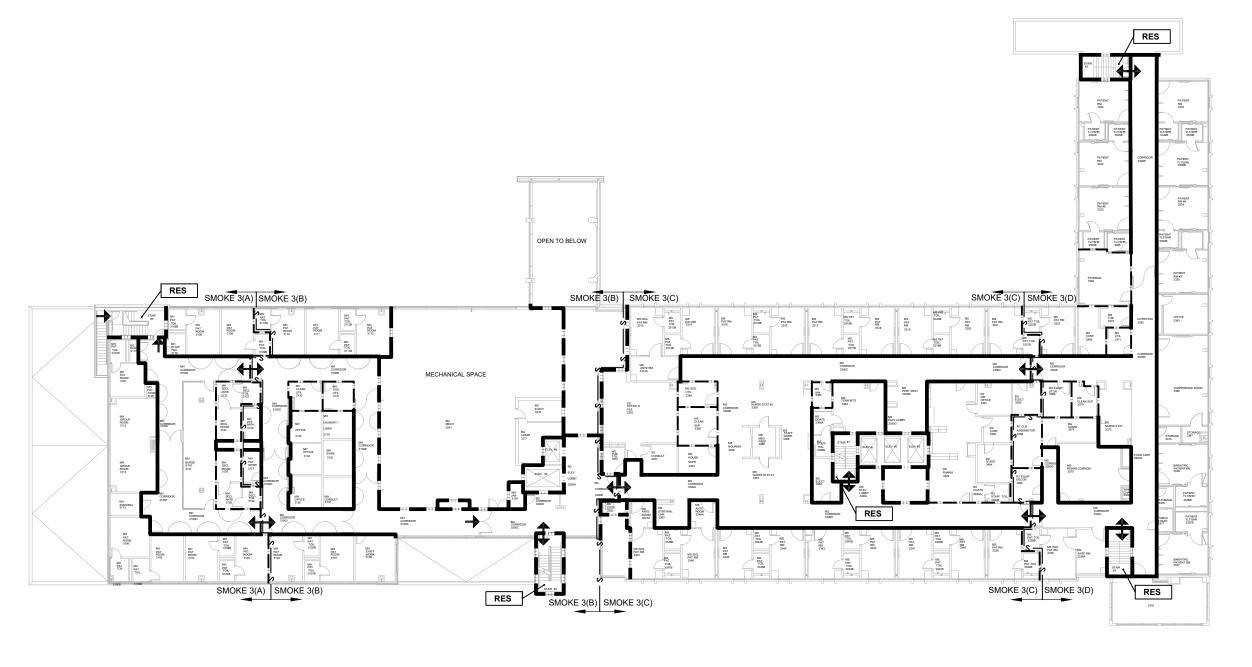
PROJECT No. 21010JN
SHEET NUMBER
A-101



L	EVEL	THREE	CODE [DATA		
BUILDING ZONE	OCCUPANCY	CONSTRUCTION TYPE	AREA SUBTOTALS(SF)	AREA TOTALS(SF)	OCC. LOAD SUBTOTALS	OCC. LOAD TOTALS
SMOKE COMPARTMENT 3(A) SMOKE COMPARTMENT 2(B)	I-2 I-2	1B(SPRINKLED) 1B(SPRINKLED)		4400		27
MECHANICAL AREA OTHER AREAS			3382 5610		12 23	
TOTAL-3(CB				8992		35
SMOKE COMPARTMENT 3(C)	I-2	1B(SPRINKLED)		12341		70
SMOKE COMPARTMENT 3(D)	I-2	1B(SPRINKLED)		9351		56
LEVEL THREE TOTALS				35084		188

SMC	OKE CC	MPA	RTN	1EN	Γ REFUGE AREA DATA
SMOKE	REFUGE AREA	REQUIRED	COMBINE	REFUGE A	AREAS OF ADJACENT
COMP	AVAILABLE(SF)	SMOKE CO	OMPARTME"	TNS	
		3A/3B	3B/3C	3C/3D	3D/3E
3(A)	*1000	660			
3(B)	*2353	660	1182		
3 (C)	7123		1182	1962	
3(D)	5732			1962	

^{*} CALCULATED AVAILABLE REFUGE AREA INCLUDES CORRIDOR AREAS ONLY FOR SMOKE COMPARTMENTS 3(A) & 3(B)



THIRD FLOOR - LIFE SAFETY PLAN

SCALE: 0 8' 16' 32'

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BARTLETT ED VENTILATION IMPROVEMENTS

CONSTRUCTION DOCUMENTS

JUNEAU, ALASKA

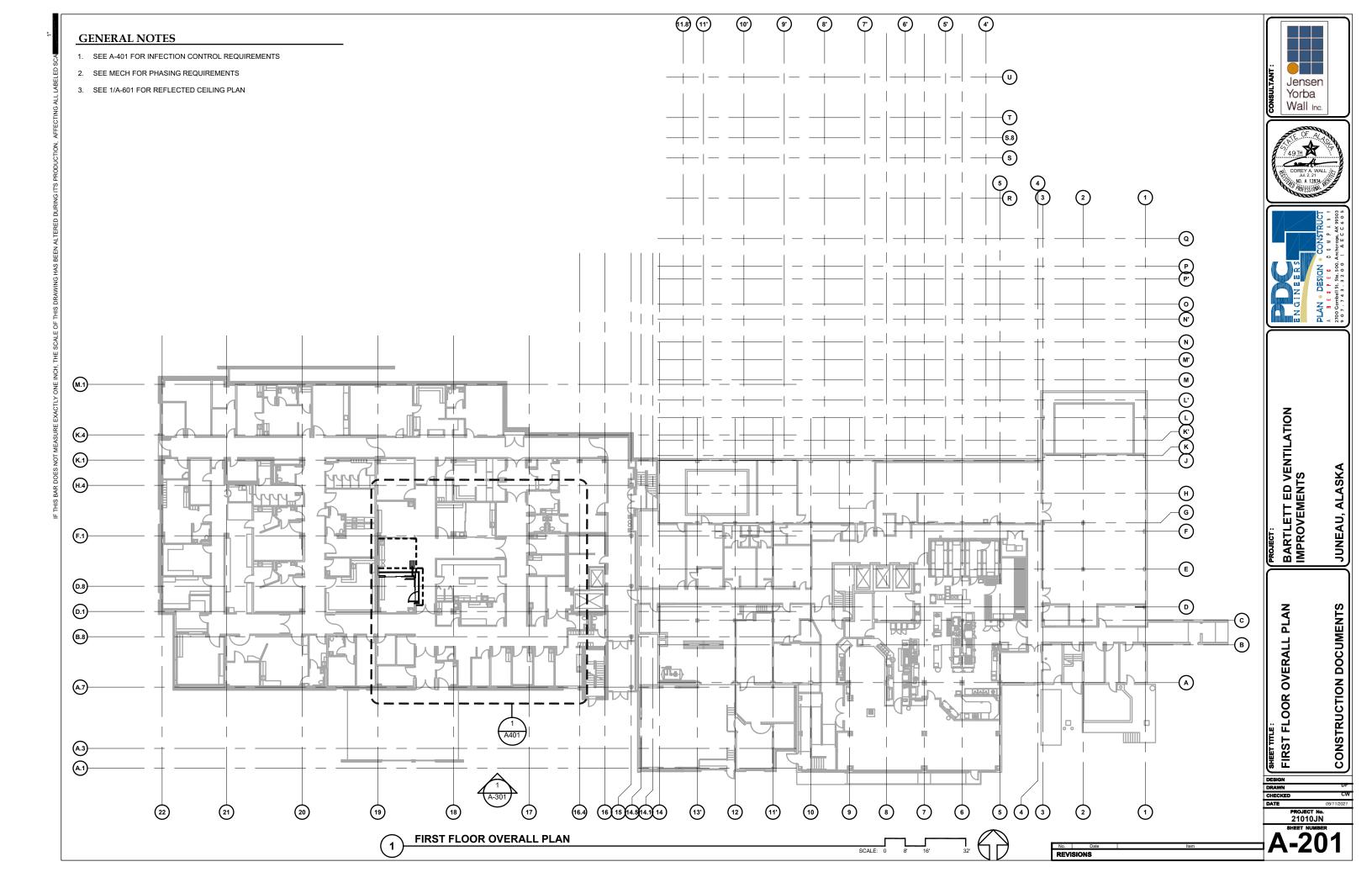
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THIRD FLOOR
LIFE SAFETY PLAN

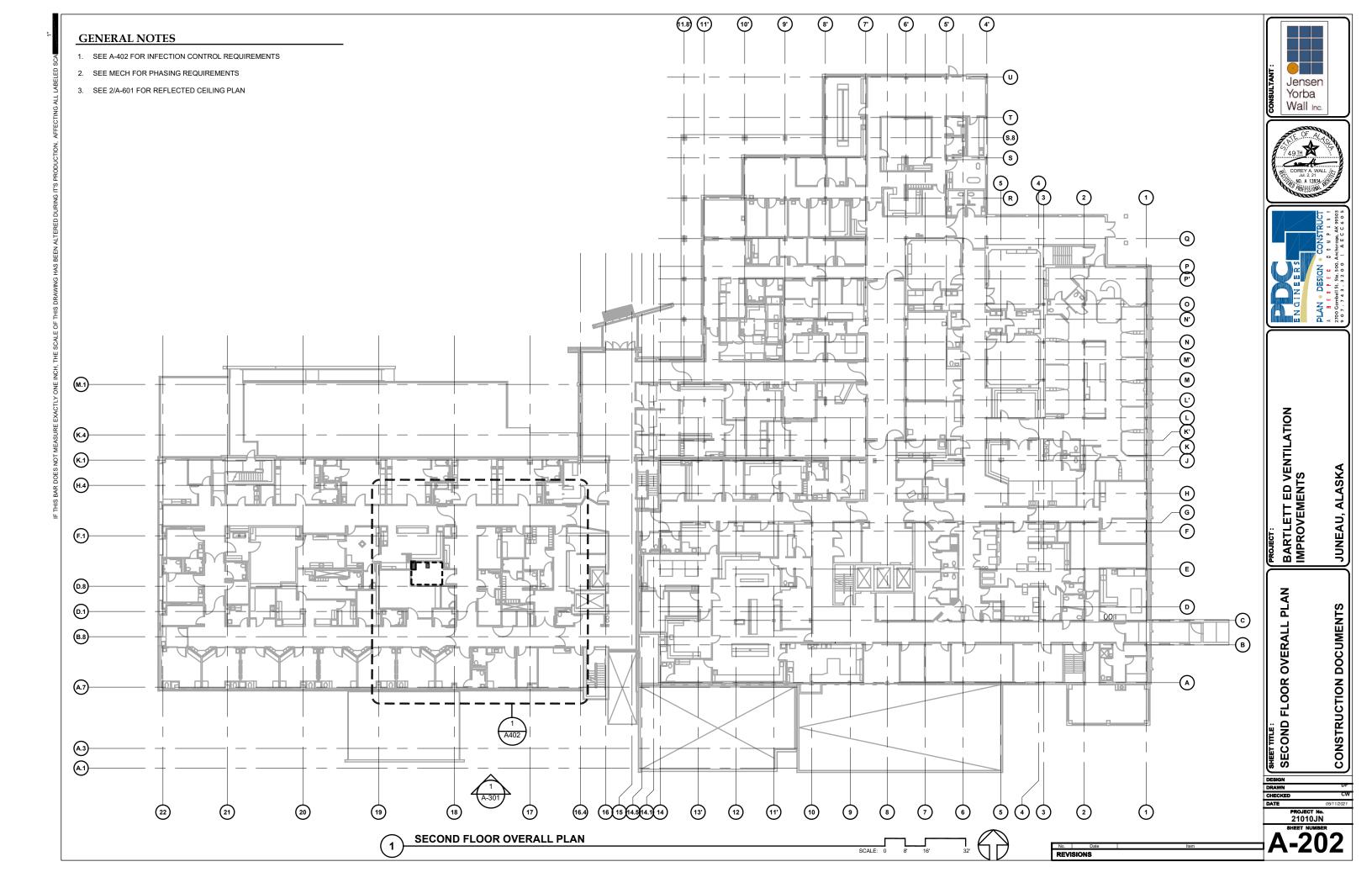
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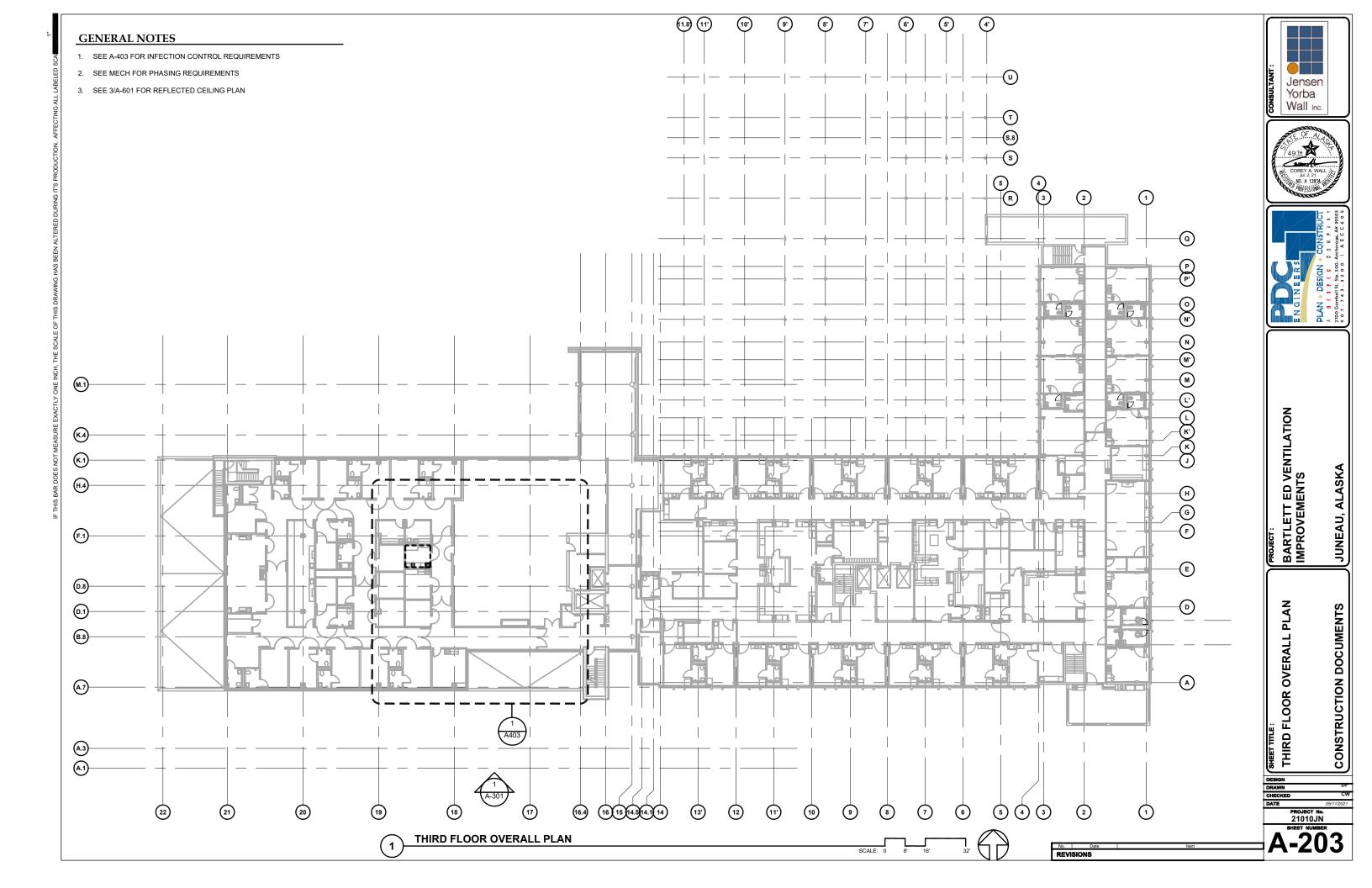
PROJECT NO. 21010JN
SHEET NUMBER
A-103

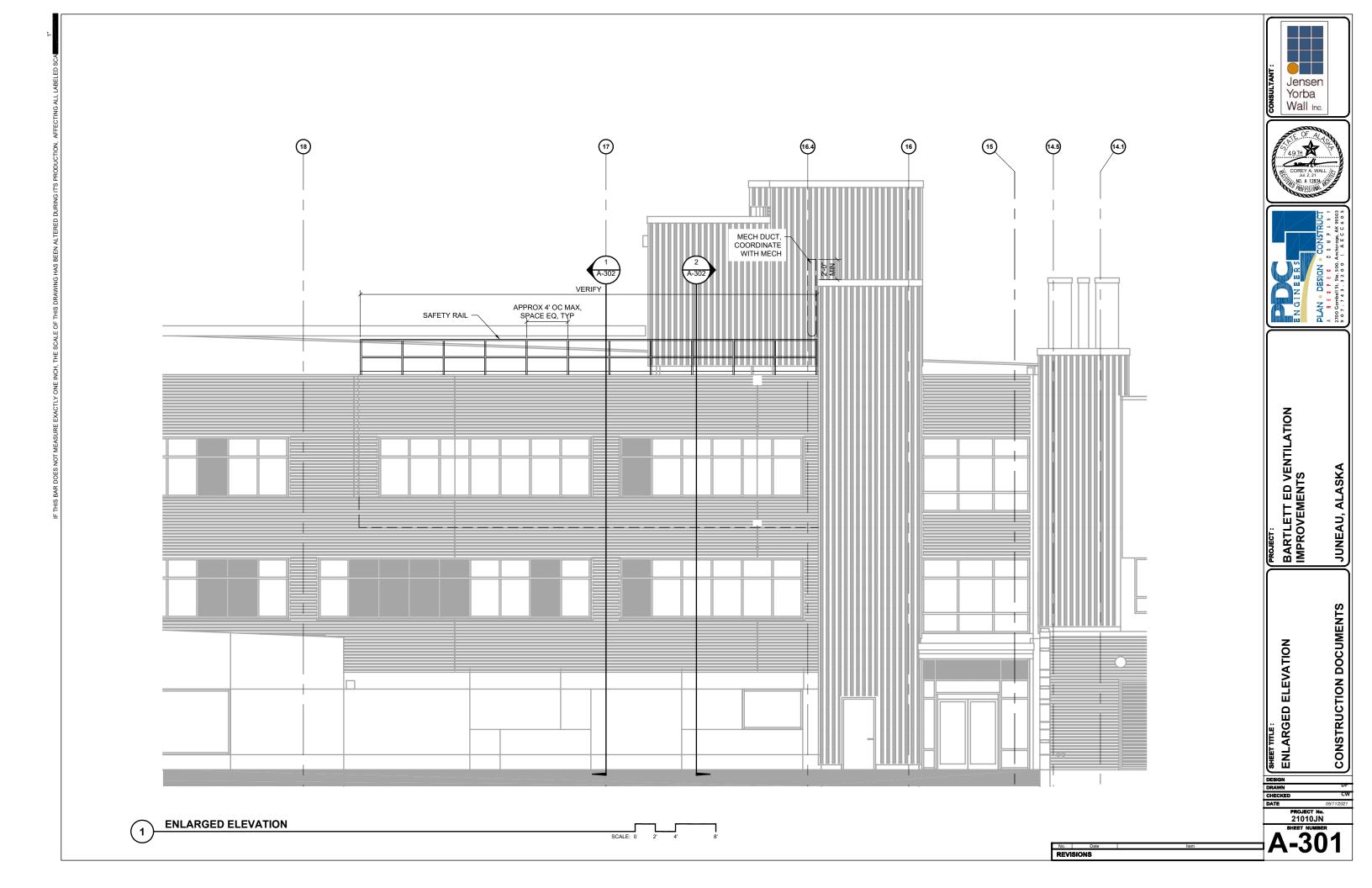
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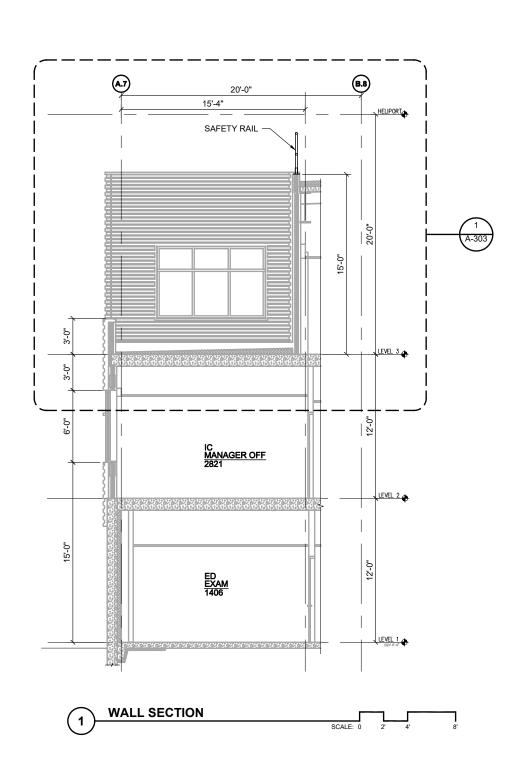
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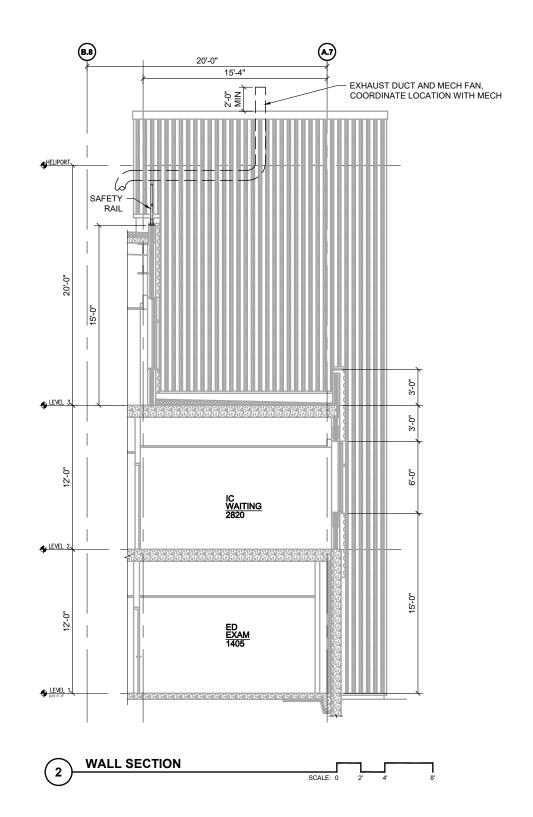












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BARTLETT ED VENTILATION IMPROVEMENTS

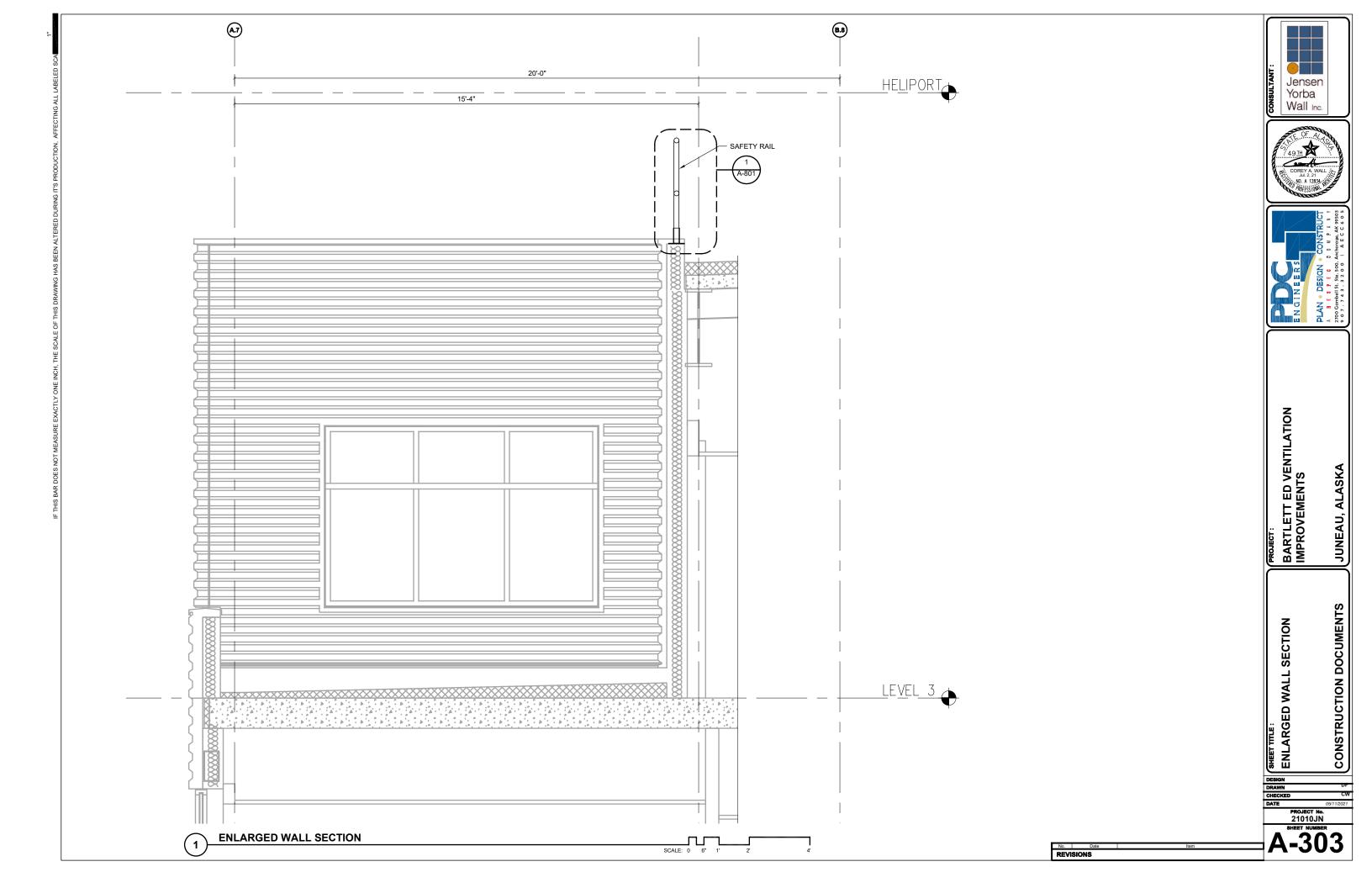
JUNEAU, ALASKA

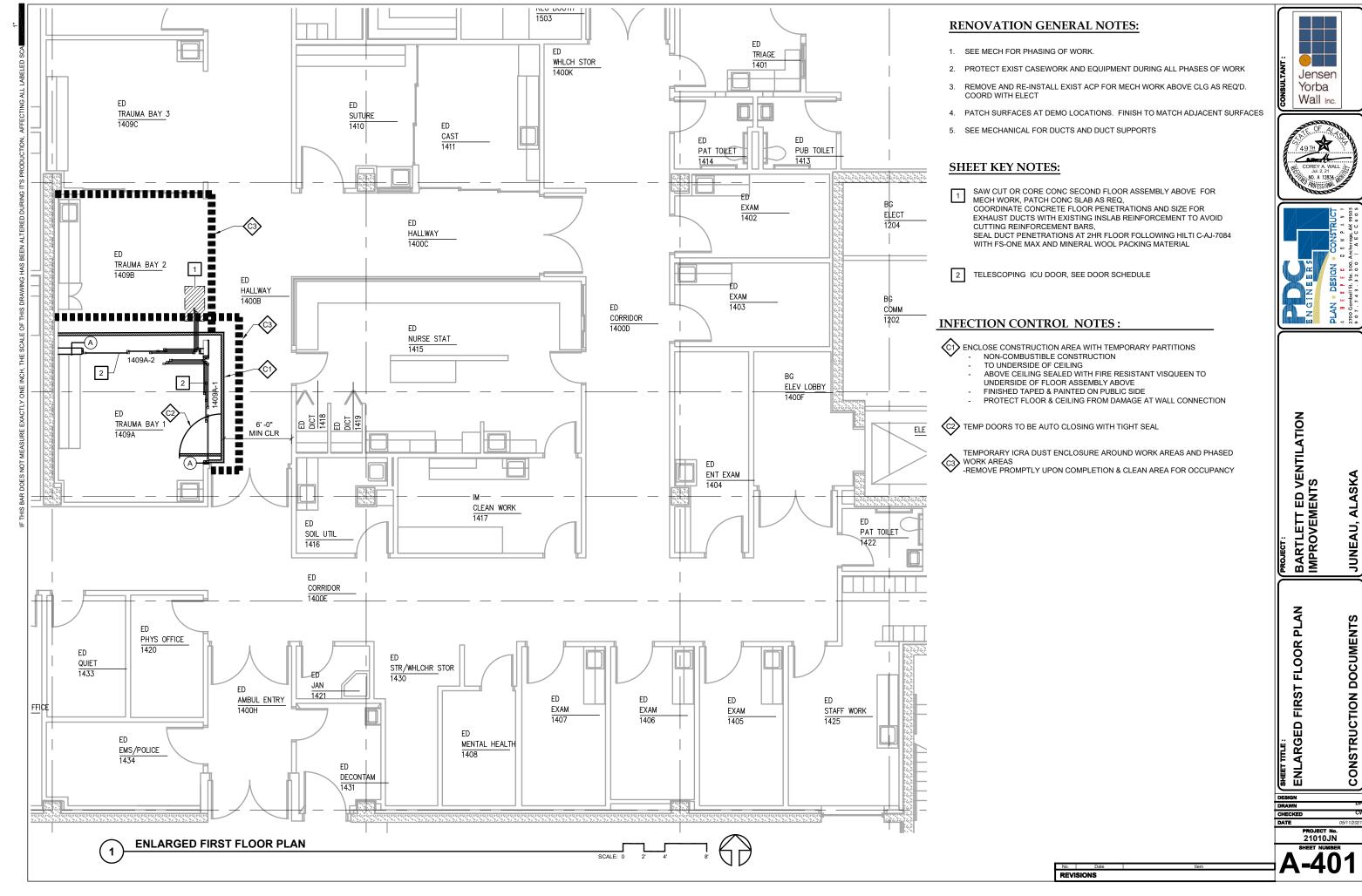
CONSTRUCTION DOCUMENTS

SHEET TILE:
WALL SECTIONS

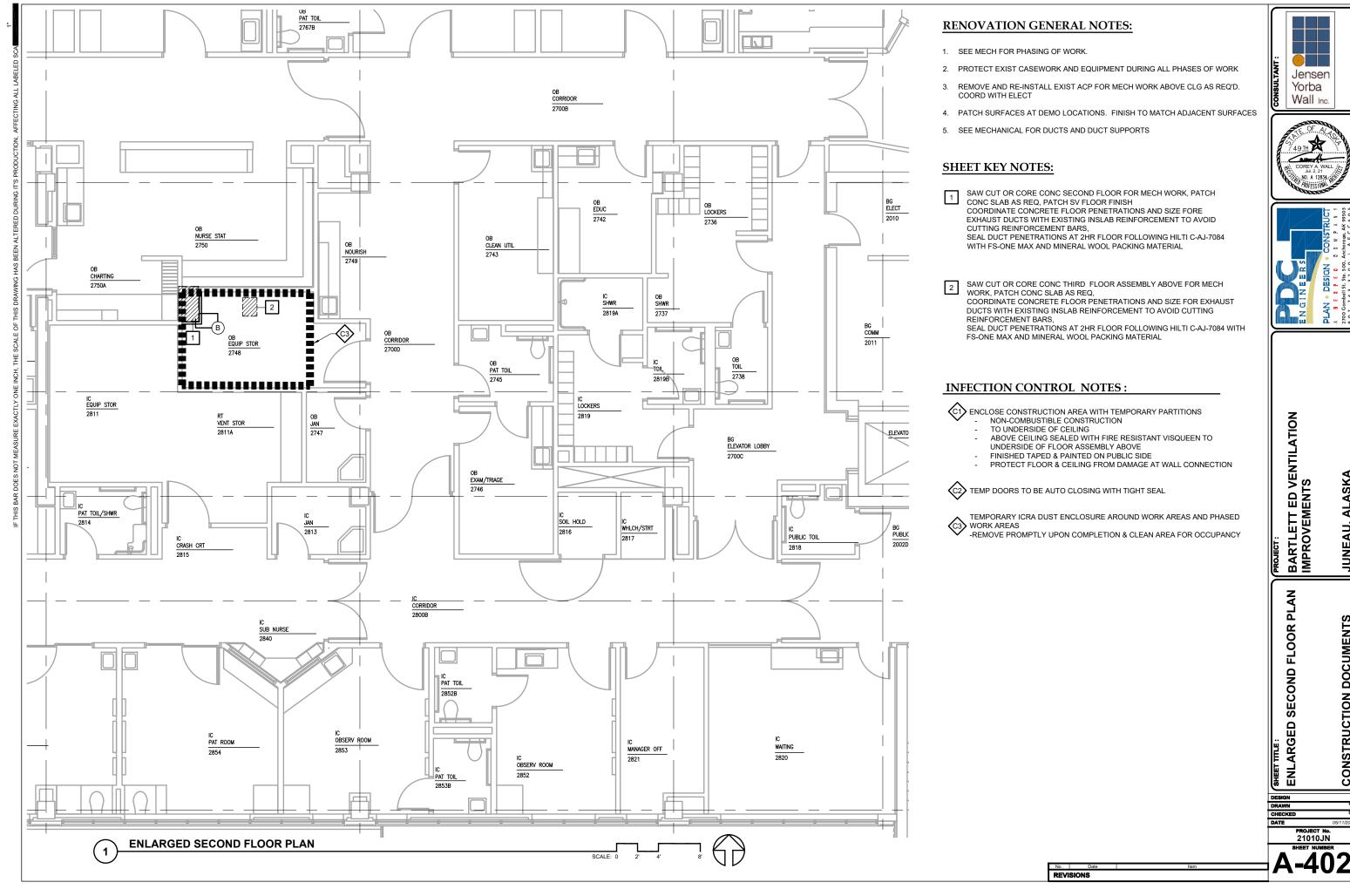
PROJECT No. 21010JN
SHEET NUMBER
A-302

No. Da





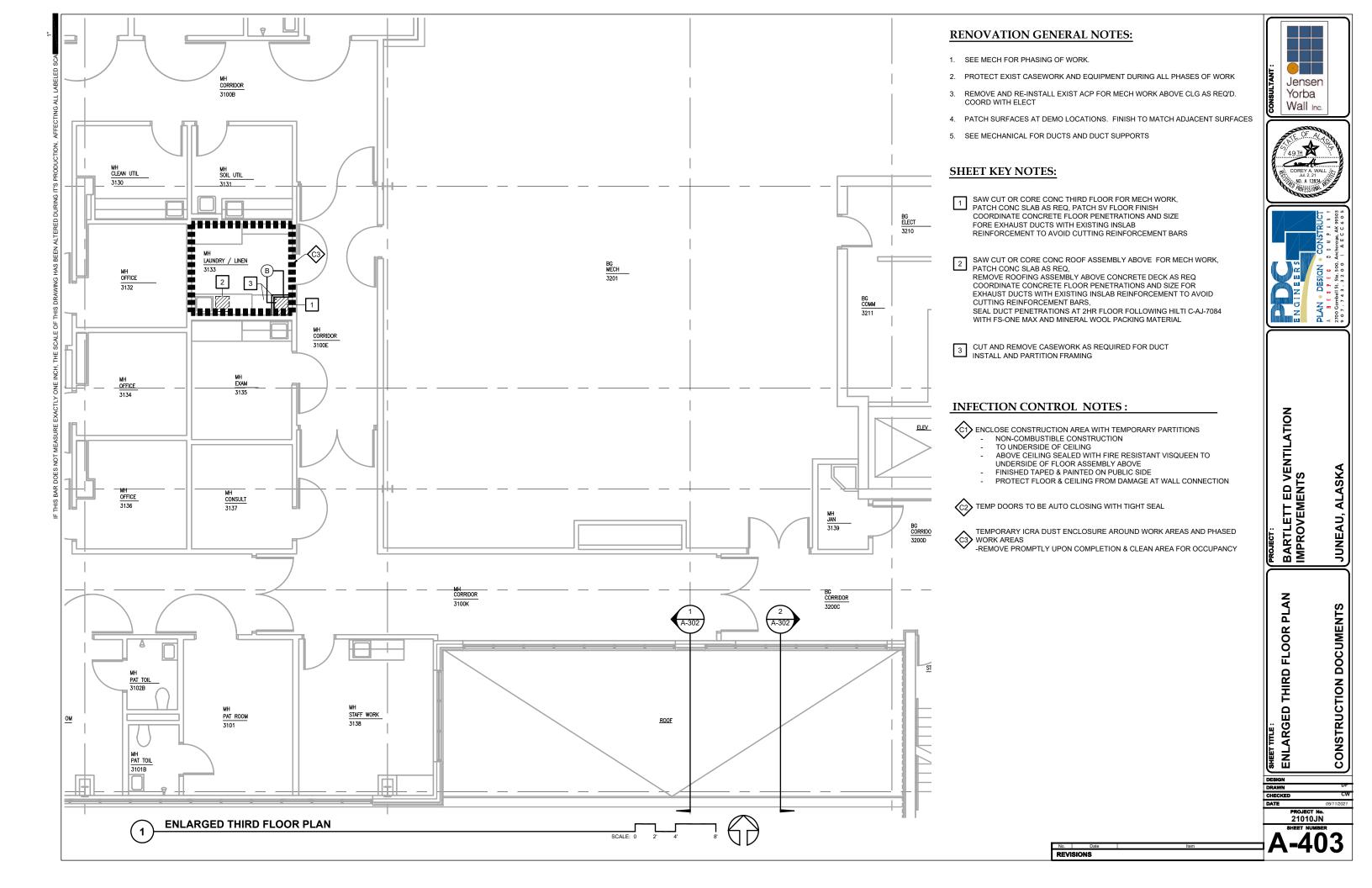


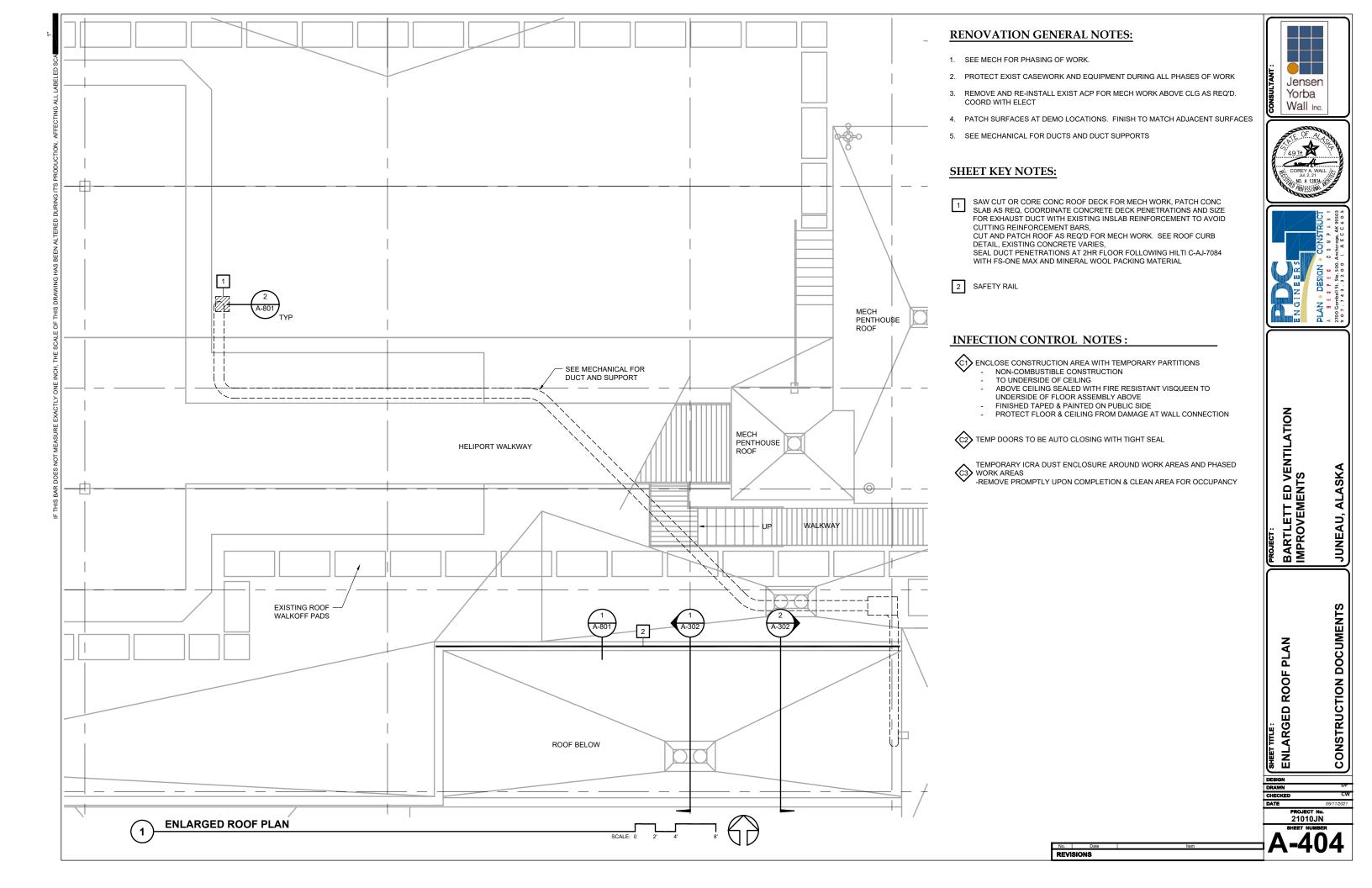


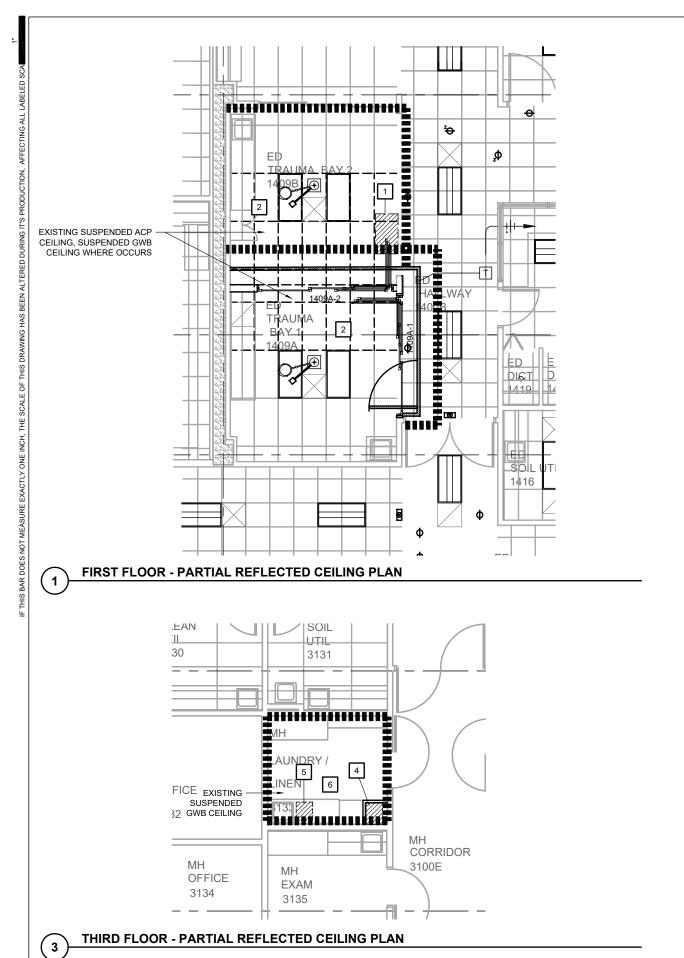


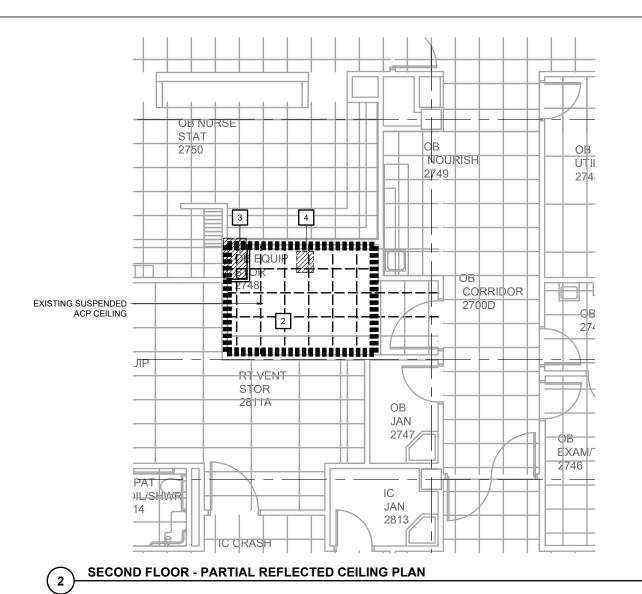


CONSTRUCTION DOCUMENTS







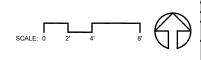


RCP GENERAL NOTES:

- 1. REMOVE AND REINSTALL CEILING MOUNTED EQUIPMENT AS REQ'D. COORD W/ ELECT
- 2. REMOVE AND RE-INSTALL EXIST ACP FOR MECH WORK ABOVE CLG AS REQ'D. COORD WITH ELECT
- 3. PATCH SURFACES AT DEMO LOCATIONS. FINISH TO MATCH ADJ SURFACE

SHEET KEY NOTES:

- SAW CUT OR CORE CONC SECOND FLOOR ASSEMBLY ABOVE FOR MECH WORK, REMOVE AND REINSTALL SUSPENDED ACP CEILING AS REQUIRED
- 2 REMOVE AND REINSTALL SUSPENDED ACP CEILING AS REQUIRED FOR MECH WORK
- 3 SAW CUT OR CORE CONCRETE SECOND FLOOR FOR MECH WORK
- 4 SAW CUT OR CORE CONCRETE THIRD FLOOR FOR MECH WORK
- 5 SAW CUT OR COR CONCRETE ROOF ASSEMBLY FOR MECH WORK, CUT ROOF ASSEMBLY AS REQ'D FOR MECH WORK. REMOVE AND REINSTALL GWB CEILING AS REQUIRED, PT CLG.
- 6 REMOVE AND REINSTALL SUSPENDED GWB CEILING AS REQUIRED, PT CLG.



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PROJECT:
BARTLETT ED VENTILATION
IMPROVEMENTS

IMPROVEMENT

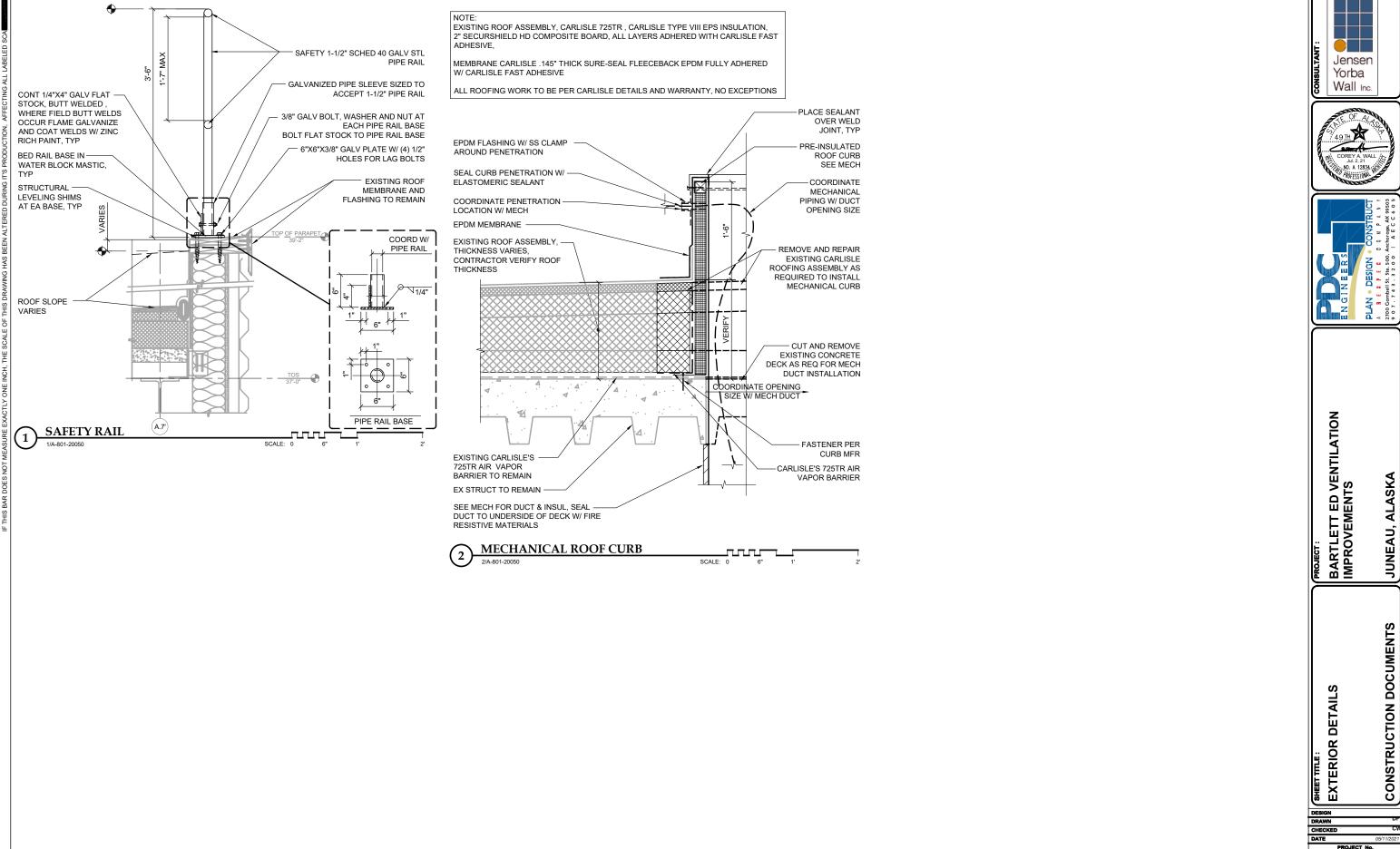
TION DOCUMENTS

CEILING PLA

RAWN
HECKED
ATE 05/1
PROJECT No. 21010JN

A-601

No. Date
REVISIONS





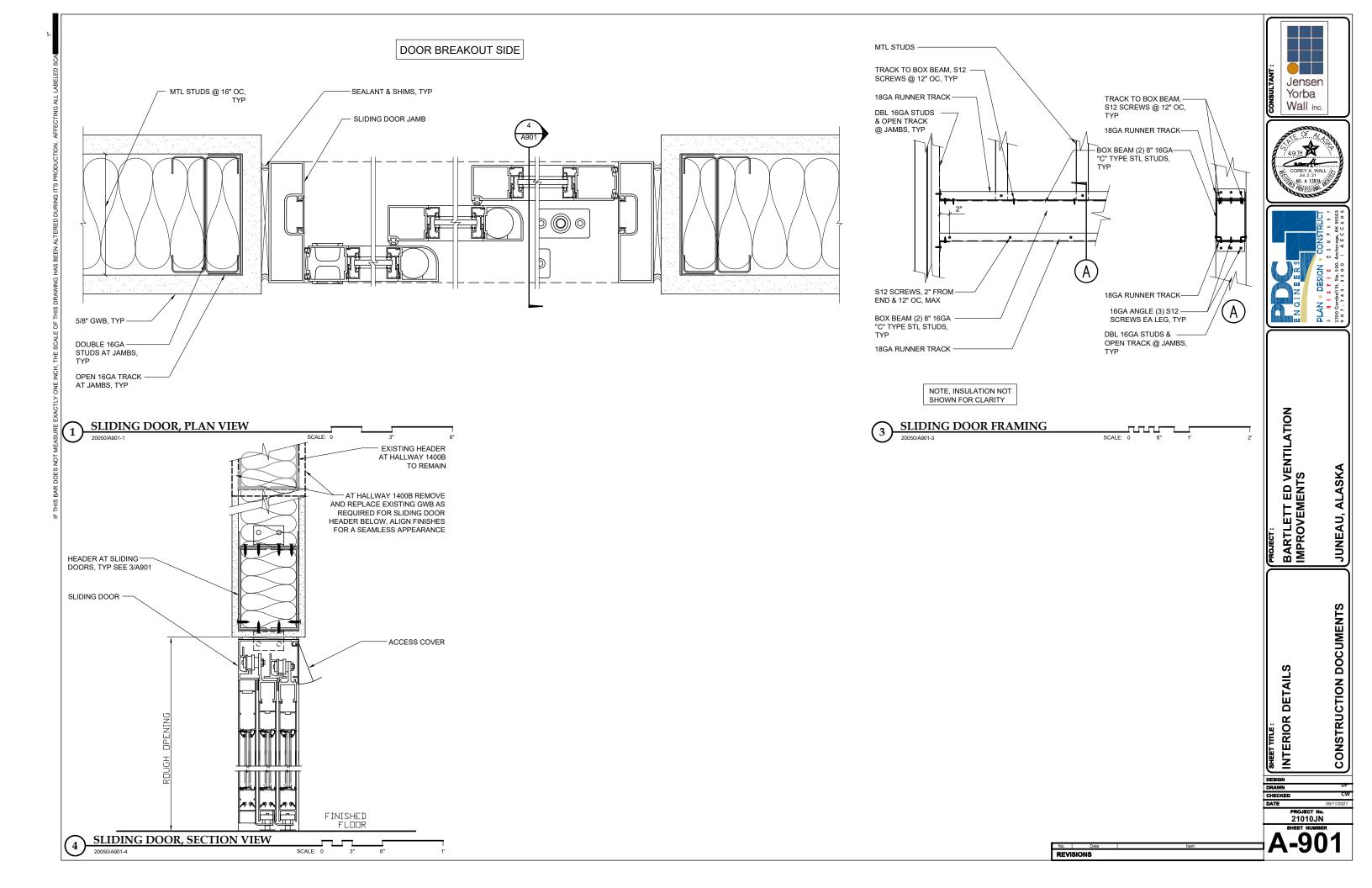


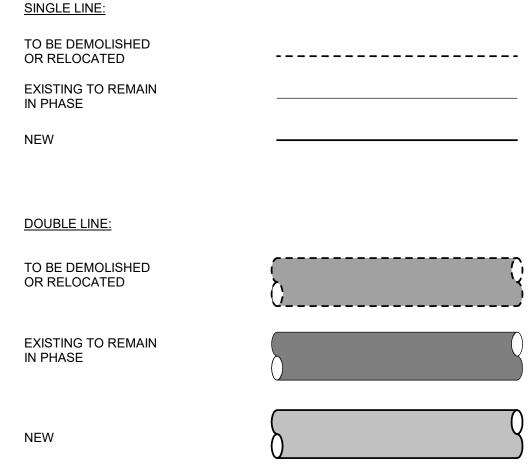
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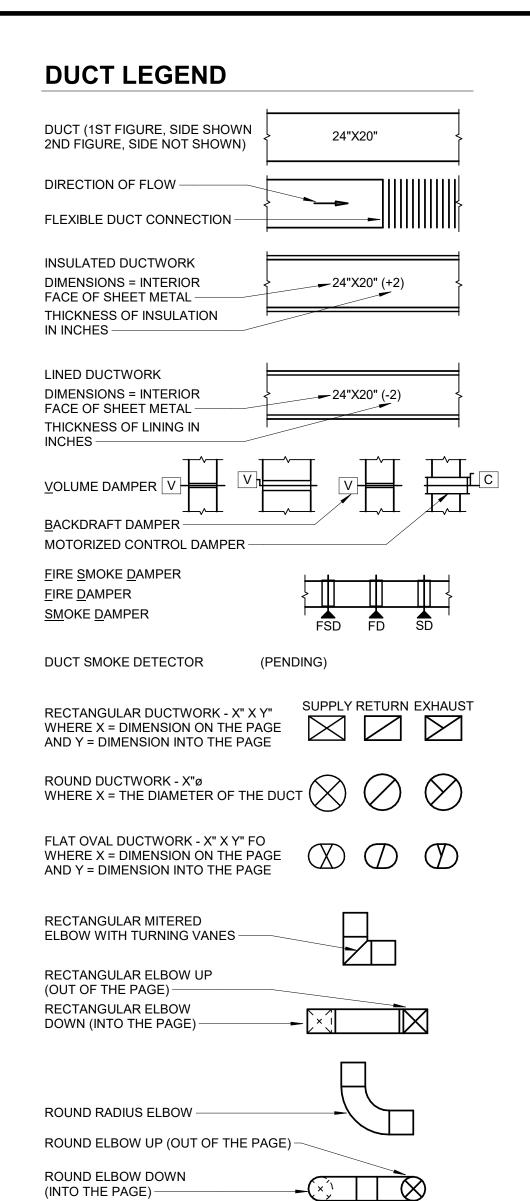
CONSTRUCTION

REVISIONS

PROJECT No. 21010JN







ABBREVIATIONS

ACFM AFF	ACTUAL CUBIC FEET PER MINUTE ABOVE FINISHED FLOOR	MAX MBH	MAXIMUM THOUSAND BTU's PER HOUR
AGT	AVERAGE GLYCOL TEMPERATURE	MIN	MINIMUM
AHAP	AS HIGH AS POSSIBLE	MISC	MISCELLANEOUS
AHU	AIR HANDLING UNIT	NC	NORMALLY CLOSED
	APPROXIMATE	NO NO	NORMALLY OPEN
	AIR SEPARATOR	NO.	NUMBER
AS AV			_
	AUTOMATIC VALVE	OA OC	OUTSIDE AIR
BTU	BRITISH THERMAL UNIT		ON CENTER
CA	COMPRESSED AIR	ORD	OVERFLOW ROOF DRAIN
CFM	CUBIC FEET PER MINUTE	ORL	OVERFLOW RAIN LEADER
CIRC	CIRCULATION	OSA	OUTSIDE AIR SUPPLY
CH	CHILLER	P	PUMP
CLNG	CEILING	PD	PRESSURE DROP
CO2	CARBON DIOXIDE	PH	PHASE
CONT	CONTINUATION, CONTINUED	PHC	PRE HEAT COIL
CP	CIRCULATING PUMP	PM	PRESSURE MONITOR
CR	CONDENSATE RETURN	POC	POINT OF CONNECTION
CU	COPPER	PSIG	POUNDS PER SQUARE INCH GAUGE
CV	CONSTANT VOLUME BOX	PSI	POUNDS PER SQUARE INCH
CW	COLD WATER	RA	RETURN AIR
CWR	CHILLED WATER RETURN	RCP	RADIANT CEILING PANEL
CWS	CHILLED WATER SUPPLY	RD	ROOF DRAIN
(D)	DEMOLISH	RECIRC	RECIRCULATION
DDC	DIRECT DIGITAL CONTROLS	RHC	REHEAT HEATING COIL
DIA	DIAMETER	RL	RAINLEADER
DHWC	DOMESTIC HOT WATER CIRC	RPBP	REDUCED PRESSURE ZONE
DN	DOWN		BACKFLOW PREVENTER
DX	DIRECT EXPANSION	RTU	ROOF TOP UNIT
(E)	EXISTING	RV	REFRIGERANT VAPOR
ÈÁ	EXHAUST AIR	RWL	RAIN WATER LEADER
ΞF	EXHAUST FAN	SA	SUPPLY AIR
ENT	ENTERING	SCH	SCHEDULE
ΕT	EXPANSION TANK	SQFT	SQUARE FEET
ESP	EXTERNAL STATIC PRESSURE	SF	SUPPLY FAN
EWT	ENTERING WATER TEMPERATURE	SH	STEAM HUMIDIFIER
-CO	FLOOR CLEANOUT	SP	SUMP PUMP
=D	FIRE DAMPER	SS	STAINLESS STEEL
-D	FLOOR DRAIN	TA	TRANSFER AIR
-T	FEET	TEMP	TEMPORARY
-SD	FIRE SMOKE DAMPER	TDH	TOTAL DEVELOPED HEAD
GAL	GALLONS	TP	TRAP PRIMER
GALV	GALVANIZED	TYP	TYPICAL
GPM	GALLONS PER MINUTE	UL	UNDERWRITER'S LABORATORY
HC	HEATING COIL	UON	UNLESS OTHERWISE NOTED
HP	HORSE POWER	VAV	VARIABLE AIR VOLUME
HRV	HEAT RECOVERY VENTILATOR	VTR	VENT THROUGH ROOF
HW	HOT WATER CIRCLII ATION	VR	VENT RISER
HWC	HOT WATER CIRCULATION	W	WASTE
HWR	HEATING WATER RETURN	W/	WITH
HWS	HEATING WATER SUPPLY	W.C.	WATER COLUMN
HX	HEAT EXCHANGER	WCO	WALL CLEANOUT
HZ	HERTZ	WH	WATER HEATER
D	INSIDE DIAMETER	WHA	WATER HAMMER ARRESTOR
N	INCHES	WPD	WATER PRESSURE DROP
LAV	LAVATORY	WRT	WITH RESPECT TO
LF	LINEAL FEET		
LF LVG LWT	LEAVING LEAVING WATER TEMPERATURE		

MEC	CHANICAL SHEET LIST
SHEET NUMBER	SHEET NAME
M-001	LEGENDS AND ABBREVIATIONS
M-002	MECHANICAL SPECIFICATIONS
M-101	FIRST FLOOR PLAN
M-102	SECOND FLOOR PLAN - VENTILATION
M-103	THIRD FLOOR PLAN - VENTILATION
M-104	ROOF PLAN
M-201	FIRST FLOOR TRAUMA BAY PHASING
M-501	MECHANICAL DETAILS

EXHAUST FAN SCHEDULE

FLAT OVAL GORED ELBOW

FLAT OVAL ELBOW UP (OUT OF THE PAGE)——

FLAT OVAL ELBOW DOWN (INTO THE PAGE) —

NOTES:													
			ESP (IN.					ELECT	RICAL		BASIS OF DES	SIGN	
MARK	SERVICE	CFM	WC)	TYPE	DRIVE	RPM	HP	V	HZ	PH	MANUFACTURER	MODEL	COMMENTS
EF-37	TRAUMA BAYS	400	0.75"	BACKWARD INCLINED	BELT	1417	1/4	460	60	3	GREENHECK	USF-10	SPRING ISOLATED ROOF INSTALLATION.PROVIDE OPTIONAL MARITIME RATED PAINT COATING. INTEGRAL FAN DRAIN. BELT DRIVE. UPBLAST OUTLET.

						MECHANICAL EQUIPMENT SCHEDULE
MARK	EQUIPMENT TYPE	MANUFACTURER	MODEL	V (AC)	POWER (VA)	COMMENTS
PM-1	ROOM PRESSURE MONITOR	TSI	RPM10	24	9	INSTALL MONITOR AT 60" AFF, INSTALL PRESSURE TRANSDUCERS ABOVE AND ACROSS RESPECTIVE DOORWAY. SETTINGS: MODE:ISOLATION; ALARM DELAY:2 MINUTES.

No. Date Item

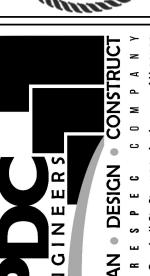
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ETT ED VENTILATION VEMENTS

07/0 PROJECT No. 21010JN

SHEET NUMBER

- **1.B.** CODE: ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2012 EDITIONS OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC), 2018 UNIFORM PLUMBING CODE (UPC) AND NATIONAL ELECTRICAL CODE (NEC) AS AMENDED BY THE CITY AND BOROUGH OF JUNEAU AND PER CUSTOMARY AND UNIVERSALLY APPROVED INDUSTRY PRACTICES.
- **1.C. DRAWINGS:** THE DRAWINGS ARE DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL OFFSETS OR EXACT LOCATIONS OF PIPING AND DUCTS UNLESS SPECIFICALLY DIMENSIONED. REVIEW THE DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT FURNISHED BY OTHER CRAFTS BUT INSTALLED IN ACCORDANCE WITH THIS SECTION. BRING QUESTIONABLE OR OBSCURE ITEMS, APPARENT CONFLICTS BETWEEN PLANS AND SPECIFICATIONS, GOVERNING CODES OR UTILITIES REGULATIONS. AND MANUFACTURER'S INSTALLATION DIRECTIONS TO THE IMMEDIATE ATTENTION OF THE OWNER'S REPRESENTATIVE. CODES, ORDINANCES, REGULATIONS, MANUFACTURER'S INSTRUCTIONS OR STANDARDS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS.
- 1.D. <u>COORDINATION:</u> COORDINATE WORK UNDER THIS DIVISION WITH WORK OF OTHER TRADES TO AVOID CONFLICTS, ERRORS, AND DELAYS. REVIEW THE DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT FURNISHED BY OTHER CRAFTS BUT INSTALLED IN ACCORDANCE WITH THIS SECTION.
- **1.E. EXISTING CONDITIONS:** FIELD VERIFY DIMENSIONS PRIOR TO ORDERING MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR EXTRA EXPENSES ARISING FROM FAILURE ON HIS PART TO COMPLETE THIS TASK.
- **1.F. EQUIPMENT SUBSTITUTIONS:** SCHEDULED BASIS OF DESIGN EQUIPMENT IS REPRESENTATIVE OF THE STANDARD OF QUALITY AND PERFORMANCE REQUIRED. WHERE INDICATED WITH "OR EQUAL", SUBSTITUTIONS WILL BE CONSIDERED IF THE CONTRACTOR DEMONSTRATES TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE THAT THE SUBSTITUTES ARE EQUAL OR BETTER QUALITY, INCLUDING CAPACITY, SIZE AND WEIGHT. WHEN A SUBSTITUTION IS APPROVED, PERFORM ADDITIONAL DESIGN AND PROVIDE EQUIPMENT AND MATERIAL TO PROVIDE A FULLY OPERATING SYSTEM MEETING THE INTENT OF THE ORIGINAL DESIGN AT NO ADDITIONAL COST TO THE OWNER. ALL ALTERNATE DESIGNS MUST BE REVIEWED AND APPROVED BEFORE PURCHASE OF EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE FOR ADDITIONAL COSTS TO OTHER DISCIPLINES RELATED TO THE SUBSTITUTION.
- 1.G. PRODUCTS: PROVIDE ALL PRODUCTS AND MATERIALS NEW AND UNUSED. OBTAIN OWNER'S APPROVAL OF ALL PRODUCTS AND MATERIALS PRIOR TO ORDERING OR INSTALLING ANY PART OF ANY SYSTEM.
- 1.H. SUBMITTALS: PROVIDE PRODUCT SUBMITTALS FOR MATERIAL AND EQUIPMENT SHOWN ON THE DRAWINGS. DESCRIBED IN THE SPECIFICATIONS, AND OTHERWISE REQUIRED FOR THE PROJECT. INCLUDE DIMENSIONS. WEIGHTS, CATALOG NUMBERS, WIRING DIAGRAMS, ROUGH-IN DIMENSIONS AND PERFORMANCE DATA FOR ALL MATERIAL AND EQUIPMENT. CLEARLY HIGHLIGHT ANY DEVIATIONS FROM THESE SPECIFICATIONS OR BASIS OF DESIGN. INDEX AND CLEARLY IDENTIFY ALL MATERIAL AND EQUIPMENT BY ITEM, NAME OR DESIGNATION USED ON THE DRAWINGS. SUBMITTAL REVIEW IS FOR GENERAL DESIGN AND ARRANGEMENT ONLY AND DOES NOT RELIEVE THE CONTRACTOR FROM ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE SUBMITTALS ARE NOT CHECKED FOR QUANTITY, DIMENSION, OR FOR PROPER OPERATION. PROVIDE SUBMITTALS ELECTRONICALLY IN PDF FORMAT, WITH SECTIONS CLEARLY LABELED AND BOOKMARKED.
- 1.I.TRAINING: PROVIDE MINIMUM 4 HOURS OF OWNER TRAINING ON OPERATION AND MAINTENANCE OF EQUIPMENT AND CONTROLS.

- 1.J. OPERATION AND MAINTENANCE MANUAL: PROVIDE THE OWNER WITH AN OPERATING AND MAINTENANCE MANUAL, TO INCLUDE MANUFACTURER'S SPECIFICATIONS, OPERATING AND MAINTENANCE INSTRUCTIONS, WARRANTY INFORMATION ON EACH PIECE OF EQUIPMENT, BALANCE REPORT, AS-BUILT CONSTRUCTION AND SHOP DRAWINGS. PROVIDE CONTACT INFORMATION ON NEAREST SOURCE FOR SPARE PARTS AND SERVICE FOR EACH PIECE OF EQUIPMENT. PROVIDE MANUAL BOTH IN HARD COPY AND IN ELECTRONIC PDF FORMAT.
- 1.K. **DEMOLISHING EXISTING ITEMS**: ALL DEMO WORK SHALL BE COORDINATED WITH OWNER SO THAT IT IS DONE IN AN APPROVED MANNER, AND SCHEDULED IN A WAY THAT DOES NOT ADVERSELY AFFECT THE OWNER'S OPERATIONS.
- 1.L. <u>ELECTRICAL WORK:</u> INCLUDES CONTROL WIRING FOR ELECTRICAL EQUIPMENT SPECIFIED HEREIN. WIRING FROM EQUIPMENT POWER INLET, OR FROM OUTLETS PROVIDED IN THE ELECTRICAL DIVISION. SUCH WIRING PROVIDED AS REQUIRED WHETHER SHOWN ON THE DRAWINGS OR NOT. WORK IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS AND APPLICABLE CODES AND THE NATIONAL ELECTRICAL CODE. CONDUCTORS TO BE COPPER ONLY. LOW VOLTAGE CONTROL WIRING IN ACCESSIBLE AREAS IN CONDUIT OR OTHERWISE PROTECTED. ALL CONDUIT AND WIRING IN FINISHED SPACES SHALL BE CONCEALED UNLESS APPROVED OTHERWISE BY THE OWNER. LOW VOLTAGE WIRING TO BE 18 AWG MINIMUM.

2. PRODUCTS:

2.A. <u>VENTILATION:</u>

- 2.A.1. DUCTS: MANUFACTURED IN ACCORDANCE WITH SMACNA STANDARDS.METAL GAUGES BASED ON 2" WC TABLE. PROVIDE TURNING VANES IN ALL RECTANGULAR ELBOWS. SEAL ALL JOINTS W/ WATER BASED MASTIC. DUCT TAPE IS NOT ACCEPTABLE. EXTERIOR DUCT SELANT SHALL BE SUITABLE FOR EXPOED EXTERIOR USE.
- 1. INTERIOR: 24GA GALVANIZED STEEL CONSTRUCTION. 2. EXTERIOR: 24GA 316 STAINLESS STEEL CONSTRUCTION.
- **2.A.2. DUCT INLETS AND OUTLETS:** BASIS OF DESIGN:
- 1. **RG-1**: TITUS PAR. 24"X24" LAY-IN FACE. 14" DIAMETER NECK. SEISMIC CLIPS. COLOR: WHITE. 2. **EG-1:** TITUS PAR. 24"X24" LAY-IN FACE. 12" DIAMETER

NECK. SEISMIC CLIPS. COLOR: WHITE.

CONNECTION TO BLOCK FROM THE SUN.

- 2.A.3. FLEXIBLE CONNECTIONS: PROVIDE WHERE SHOWN ON THE DRAWINGS TO ISOLATE DUCT SYSTEM FROM SOURCE OF VIBRATION OR NOISE. FABRICATE IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. UL LISTED FIRE RETARDANT NEOPRENE COATED WOVEN GLASS FIBER FABRIC CONFORMING TO NFPA 90A, 30OZ/SQ-YARD MINIMUM DENSITY. 3 INCHES WIDE FABRIC WIDTH CRIMPED INTO 3 INCH WIDE, 24 GAGE GALVANIZED STEEL METAL EDGING STRIP. PROVIDE INSULATING STRIP OVER FLEXIBLE
- 2.A.4. DUCT INSULATION: INCLUDES ALL EXHAUST DUCTS FIVE FEET FROM EXTERIOR WALL. DUCTS INSULATED WITH 1-1/2 INCH THICK GLASS-FIBER BLANKET HAVING A MINIMUM DENSITY OF 1 POUND PER CUBIC FOOT AND A MINIMUM THERMAL VALUE OF R-8, WITH THE ADDITION OF VAPOR BARRIER FACING ON OUTSIDE, APPLIED AT THE FACTORY. FACING TO CONSIST OF ALUMINUM FOIL LAMINATED TO A SHEET OF FLAME-RESISTANT 30 POUND PAPER WITH GLASS-FIBER REINFORCING MESH BETWEEN.

2.A.5. EF-37: SEE SCHEDULE ON M-001.

EF-37 OPTIONS: ROOF MOUNTING CURB GREENHECK MODEL GESI. MOTOR WEATHER HOOD. PAINT COATING: HI-PROZ DOUBLE COATING. UPBLAST OUTLET POSITION.

INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

- 2.A.6. <u>REPLACEMENT MATERIALS:</u> THE MANUFACTURER SHALL PROVIDE A (1) COMPLETE SPARE SET OF BELTS FOR FAN.
- **INSTALLATION:** INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN THE BEST PRACTICE OF THE CRAFT.
- **3.A.** <u>CLEANING:</u> THOROUGHLY CLEAN ANY DUCTWORK MODIFIED TO ACHIEVE PROPER TEST AND BALANCE. CLEAN EXISTING DUCTS AND DIFFUSERS THAT ARE REMOVED FOR REINSTALLATION. CLEANING SHOULD BE PERFORMED IN ACCORDANCE WITH HOSPITAL ICRA REQUIREMENTS.
- **3.B.** ACCESS: PROVIDE MAINTENANCE ACCESS TO ALL SERVICEABLE AND/OR OPERABLE EQUIPMENT.

3.C. TESTING, ADJUSTING, AND BALANCING (TAB):

SCOPE: BALANCE EF-37 SYSTEM, AHU-18 OSA FLOW RATES FROM 5,200CFM TO 5,600 CFM. REBALANCE AHU-18 PHC WATER FLOW RATES. VERIFY AHU-18 OSA FLOW BEFORE REBANCING. COORDINATE WITH CONTROLS CONTRACTOR AS NEEDED TO BALANCE SYSTEMS.

PERFORM TAB IN ACCORDANCE WITH NEBB STANDARDS. TAB OF MECHANICAL SYSTEMS SHALL OCCUR AT THE COMPLETION OF PROJECT WORK. SUBMIT BALANCING REPORT TO THE OWNER'S REPRESENTATIVE AT THE COMPLETION OF PROJECT AIRFLOW RATES FOR ROOMS SERVED BY EF-37 AND AHU-18 TO BE BALANCED WITHIN +/- 10% OF THOSE INDICATED ON DRAWINGS.

3.D. LONG CONTROLS INTEGRATION: ALL BAS CONTROLS INTEGRATION WILL BE WITH THE EXISTING LONG BAS SYSTEM ALREADY PRESENT AT THE HOSPITAL.





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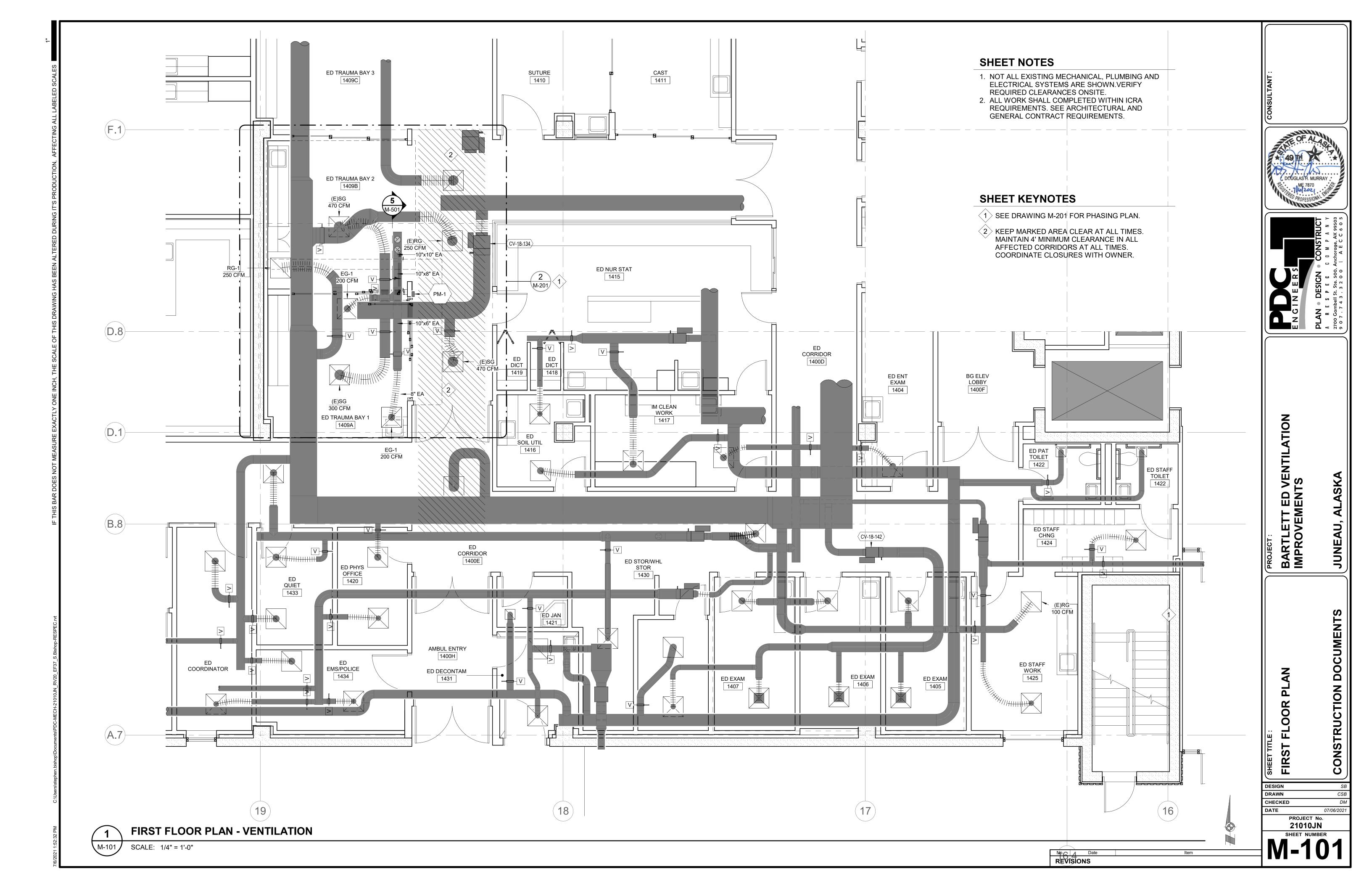
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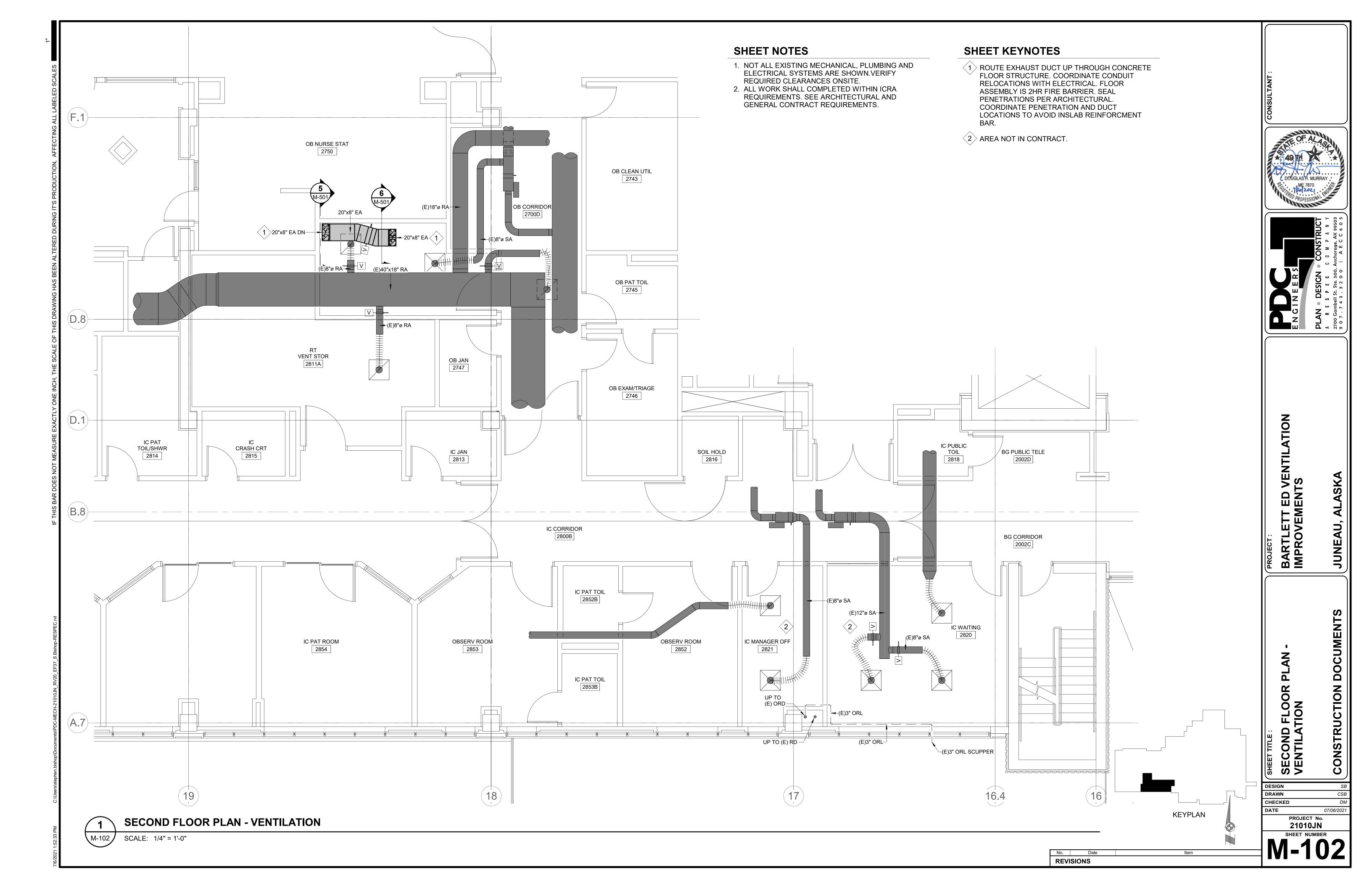
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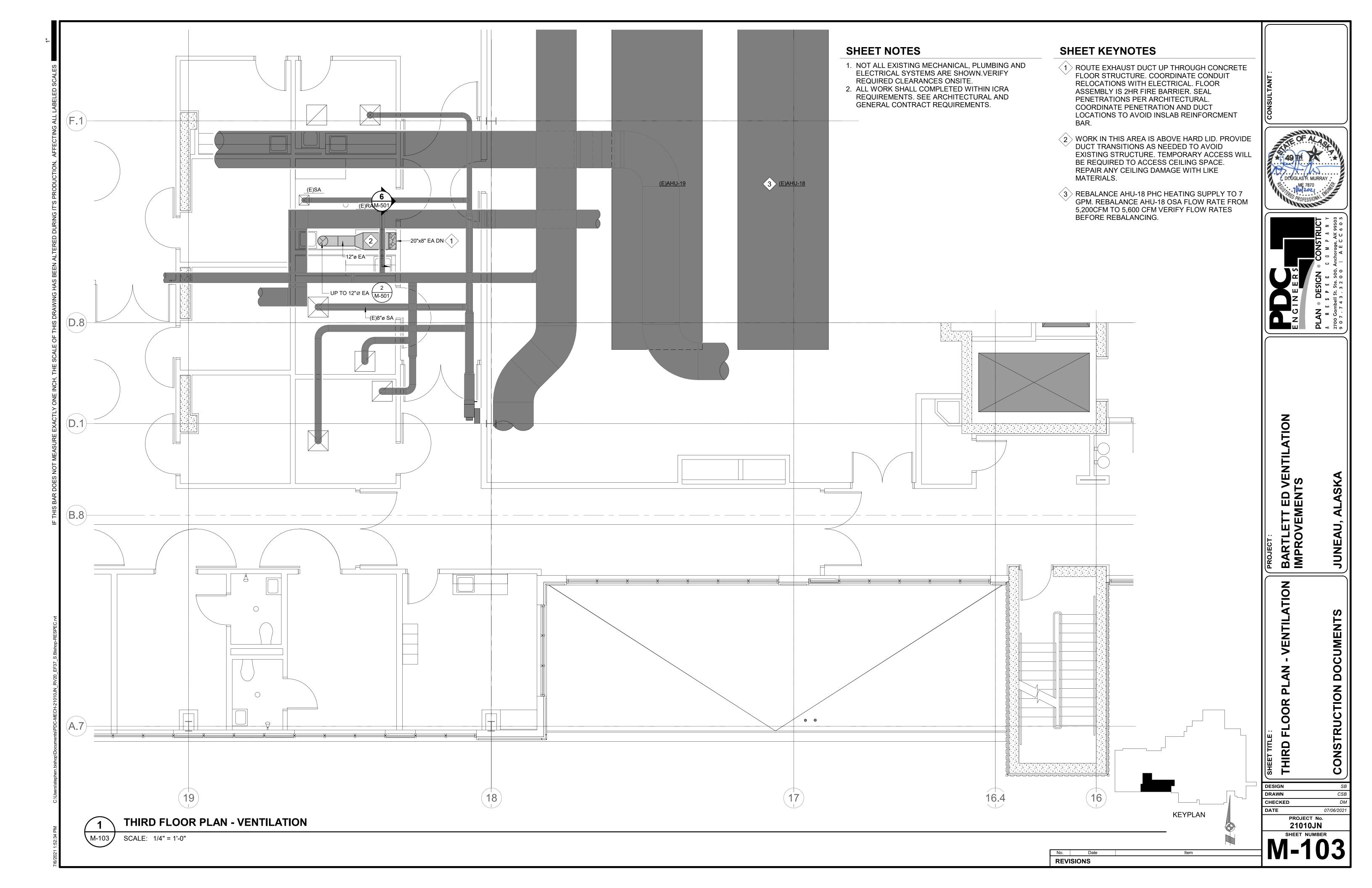
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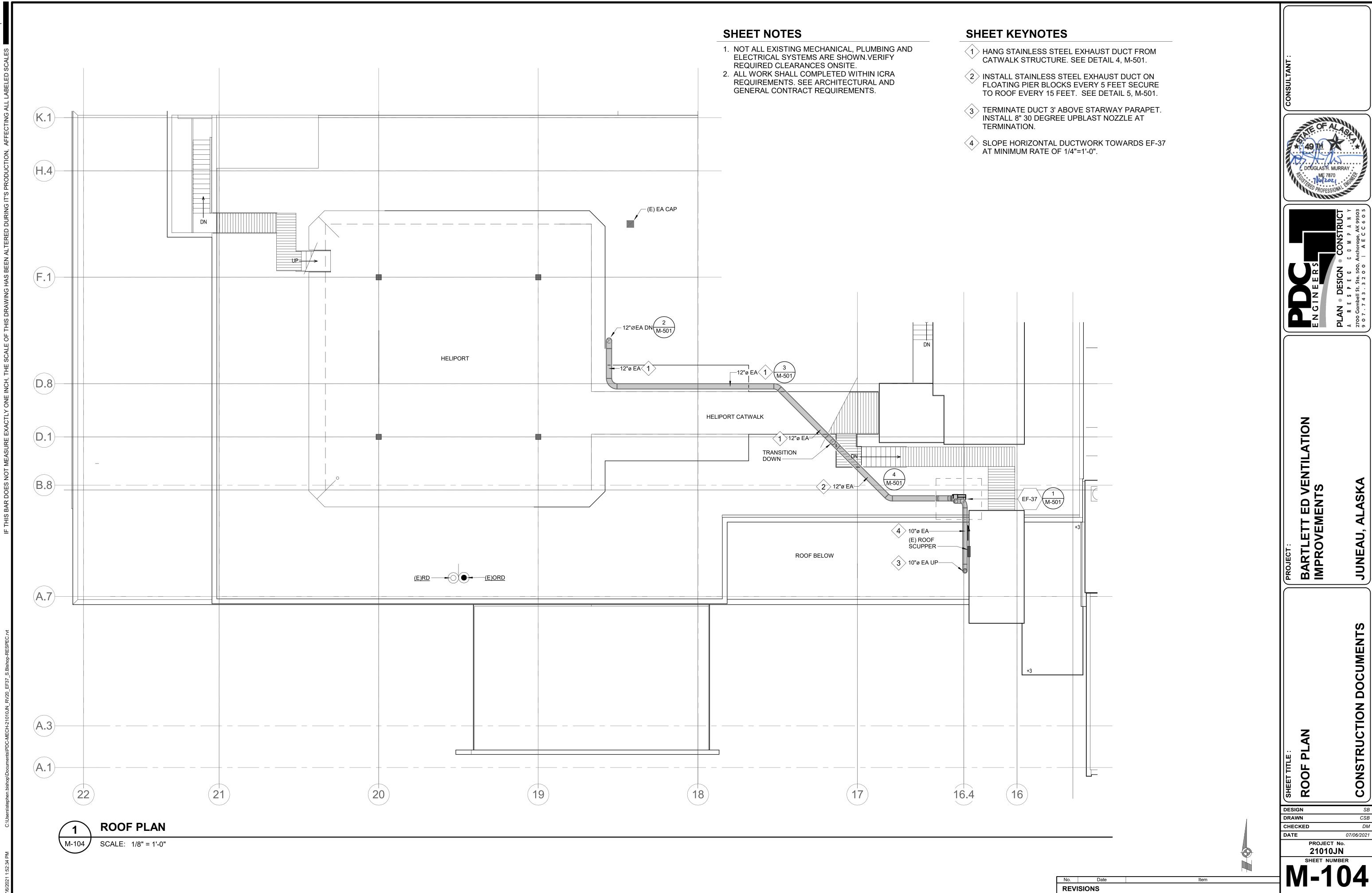
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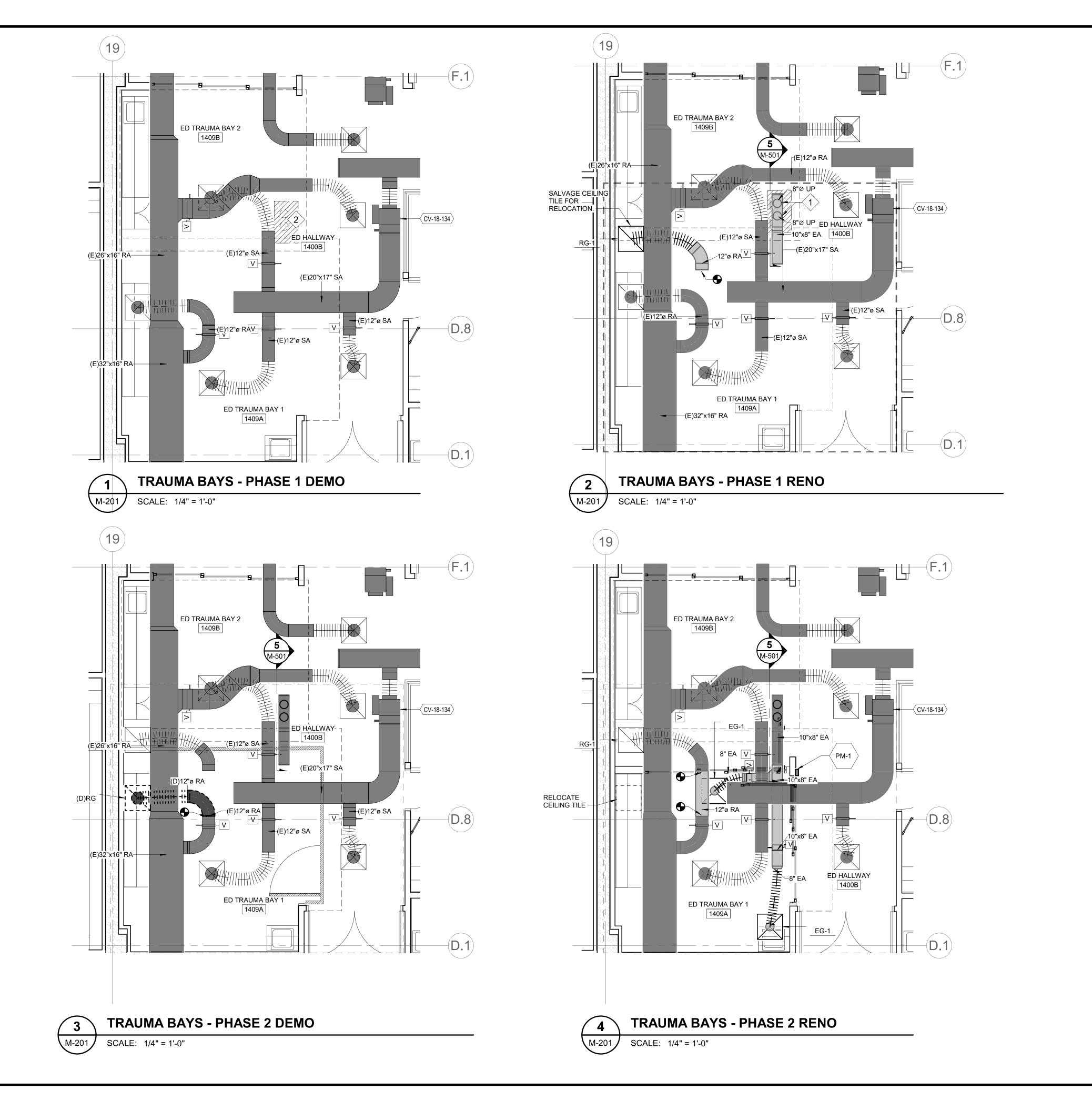
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SHEET NOTES

- COORDINATE ALL WORKSPACE CLOSURES WITH OWNER.
- 2. NO MORE THAN 1 TRAUMA BAY SHALL BE CLOSED FOR RENOVATION AT ANY TIME.
- 3. SEE M-101 FOR REQUIREMENTS OF MAINTAINING STAFF ACCESS AND FINAL TAB ADJUSTMENTS.

SHEET KEYNOTES

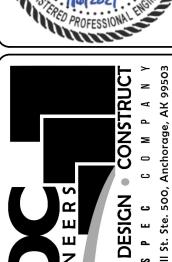
- 1 EXHAUST DUCT ROUTED UP THROUGH CONCRETE FLOOR STRUCTURE. COORDINATE CONDUIT RELOCATIONS WITH ELECTRICAL. FLOOR ASSEMBLY IS 2HR FIRE BARRIER. SEAL PENETRATIONS PER ARCHITECTURAL. COORDINATE PENETRATION AND DUCT LOCATIONS TO AVOID INSLAB REINFORCMENT BAR. SEE STRUCTURAL DETAILS.
- 2 SAWCUT CEILING STRUCTURE PER ARCHITECTURAL.

DOUGLAS H. MURRAY

ME 7870

ME 7870

PROFESSIONAL



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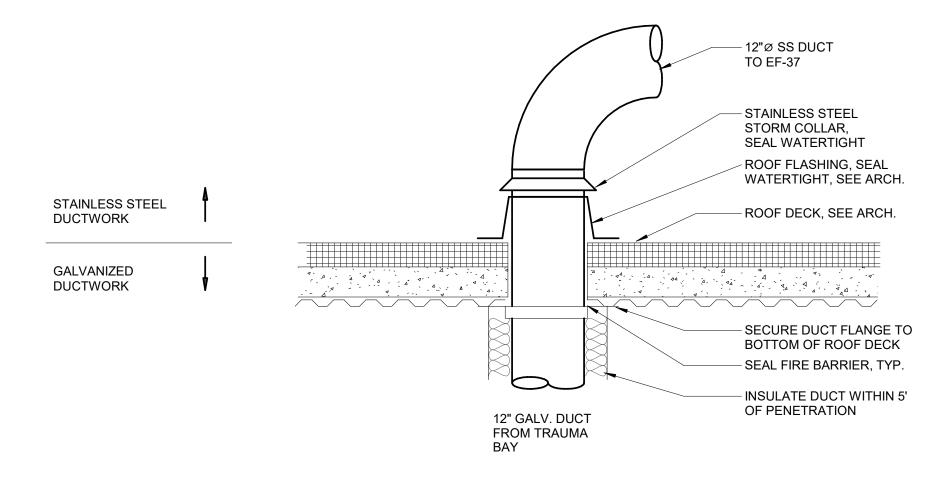
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PROJECT No.
21010JN

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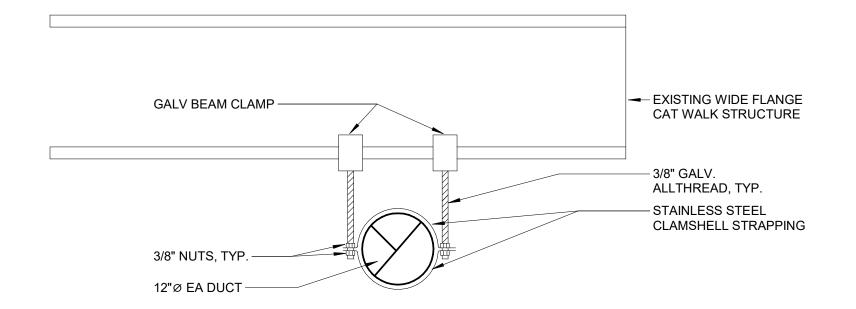
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EF-37 DETAIL

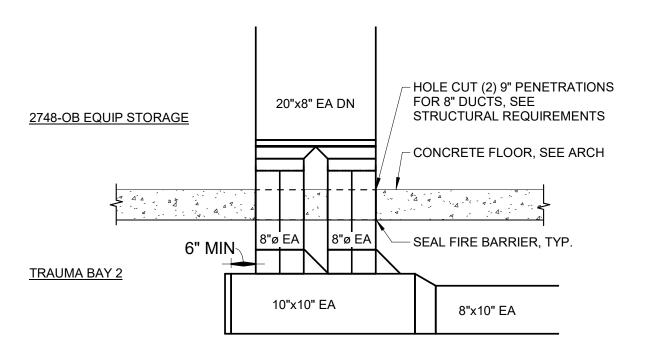
M-501

SCALE: NOT TO SCALE



EXHAUST DUCT HANGER DETAIL

SCALE: NOT TO SCALE



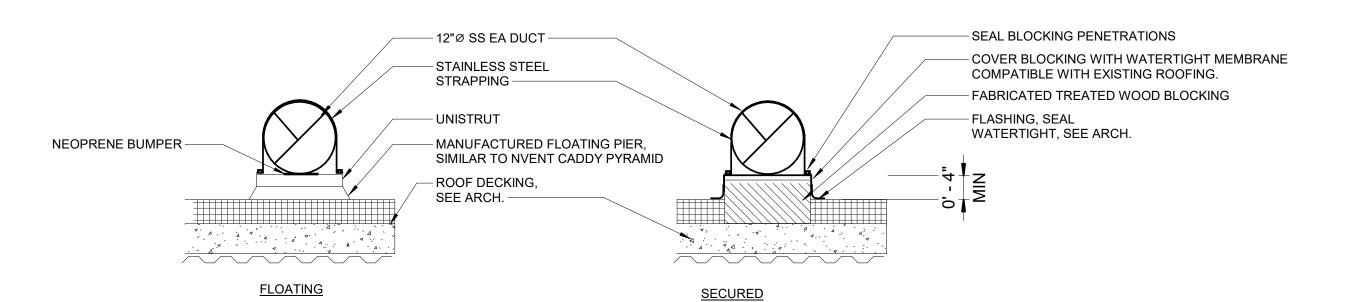
M-501 SCALE: 3/4" = 1'-0"

EF-37 SECOND FLOOR PENETRATION

EXHAUST DUCT ROOF PENETRATION DETAIL

M-501

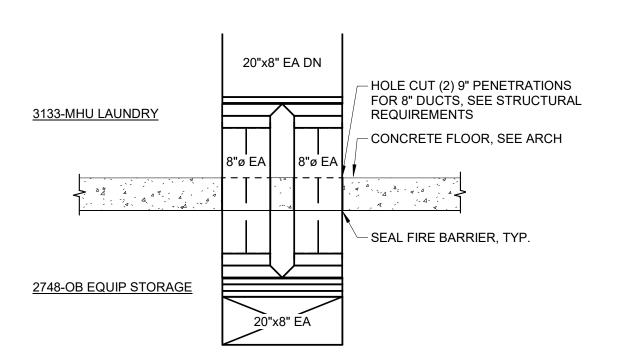
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M-501

EXHAUST DUCT PIER BLOCK DETAIL

SCALE: NOT TO SCALE



EF-37 THIRD FLOOR PENETRATION M-501 SCALE: 3/4" = 1'-0"

REVISIONS



ED VENTILATION ENTS

DESIGN DRAWN CHECKED 07/06/2021 PROJECT No. 21010JN

TRANSFORMER PANELBOARD

POWER:

Т

RECEPTACLE RACEWAY

 \Diamond EQUIPMENT CONNECTION **①** JUNCTION BOX

MOTOR CONNECTION Ó × MOTOR STARTER

 \boxtimes COMBINATION STARTER/DISCONNECT

DISCONNECT

LIGHTING:

SURFACE OR SUSPENDED LINEAR LUMINAIRE RECESSED TROFFER OR LINEAR LUMINAIRE

 \bigcirc RECESSED DOWNLIGHT LUMINAIRE \otimes CEILING MOUNTED EXIT LUMINAIRE

STRIP LUMINAIRE

LIGHTING CONTROLS:

OCCUPANCY SENSOR

FIRE ALARM:

CABINET

SMOKE DETECTOR CEILING SPEAKER

SECURITY DEVICES:

□□□ SECURITY CAMERA

NURSE CALL:

Φ NURSE CALL DOME LIGHT

CONDUIT & CONDUCTORS:

- HOME RUN - CONDUIT: 1/2" UON. - UNGROUNDED CONDUCTORS (#12 AWG) — NEUTRAL: #10 WITH DOT #12 OTHERWISE - GROUND CONDUCTOR CONDUCTORS NOT SHOWN WHERE ONLY #12 NEUTRAL AND UNGROUNDED CONDUCTOR ARE REQUIRED

	PANEL EQ43B1 (E)	SIZE			S/PHA			MAIN		OUNT
		225 AMF	'S		77V, 3	PH		MLO	BG MECH 3201 SU	RFACE
ck	DESCRIPTION	BREAKER AMP/			KVA			BREAKER AMP/	DESCRIPTION	C _K
N		POLÉ	CKT	ΑØ	ВØ	cø	CKT	POLÉ	DESCRIPTION	NO
1	SPARE (BAD CIRCUIT BREAKER)	100/3						100/3	AHU-18 SUPPLY AIR VED	2
3										4
5										6
7	MECH AHU-19	80/3						20/3	MECH CWP-4	8
9										10
1	l									12
13	MECH EXHAUST FAN EF-21	15/3						50/3	MECH WCU-4	14
15	j									16
17	,									18
19	MECH EXHAUST FAN EF-23	20/3						15/3	EXHAUST FAN EF-37	20
2	1									22
23	3									24
25	MECHA EXHAUST FAN EF-22	15/3						15/3	SPARE	26
2	,									28
29)									30
3	1 AHU-18 RETURN FAN	50/3						20/3	SPARE	32
33	3									34
35	5									36
37	AHU-19 RETURN FAN	20/3						20/3	SPARE	38
39)									40
4	1									42

NOTES:

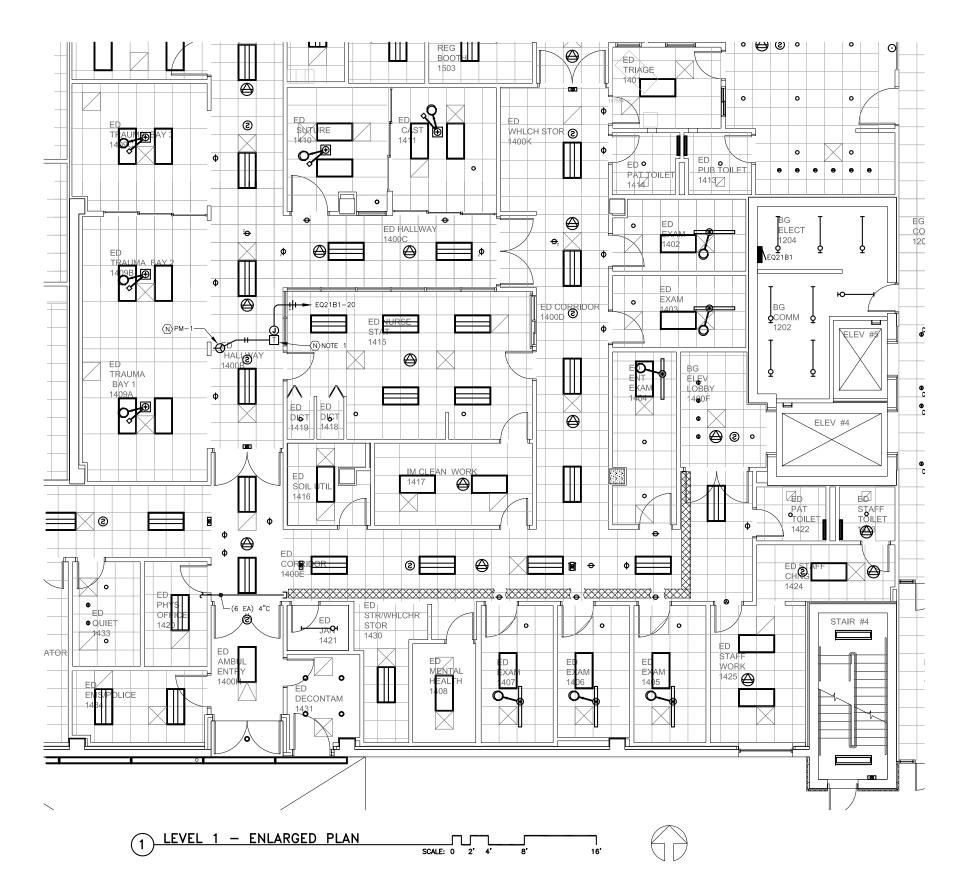
- 1. PANEL EQ43B1 IS FED WITH STANDBY POWER GENERATION (PRIORITY 3).
- 2. PANEL EQ43B1 MODEL: SQUARE D NF.

	PANEL EQ21B1 🗈	SIZE		VOLTS	S/PHA:	SE		MAIN	LOCATION MOUNT	Γ
		100 AMF	PS	480Y/2	77V, 3	PH		MLO	BG ELECT 1204 SURFACE	
cĸ	DECORUBTION	BREAKER			KVA			BREAKER	DECODIFICAL	c _K
T NO	DESCRIPTION	AMP/ POLE	СКТ	AØ	ВØ	cø	СКТ	AMP/ POLE	DESCRIPTION	NO
1	MECH HEAT TRACE NEW ADDITION ROOF	20/2						20/1	EQUIP DRY SPRINKLER 1421 COMP.	2
3								20/1	MECH LEVEL 1 FIRE/SMOKE DAMPERS	4
5	MECH LEVEL 3 FIRE/SMOKE DAMPERS	20/1						20/1	MECH DDC PANEL ROOM 3201	6
7	MECH LEVEL 3 FIRE/SMOKE DAMPERS	20/1						20/1	MECH DDC PANEL ROOM 3201	8
9	MECH LEVEL 3 MECH ROOM DDC PANEL	20/1						20/1	MECH DDC PANEL ROOM 3201	10
11	ELEV SHAFT FA LOUVER	20/1						20/1	MECH LEVEL 1 FIRE/SMOKE DAMPERS	12
13	MECH LEVEL 3 REMODEL F/S DAMPERS	20/1						20/1	MECH LEVEL 1 FIRE/SMOKE DAMPERS	14
15	MECH LEVEL 3 REMODEL F/S DAMPERS	20/1						20/1	MECH LEVEL 2 FIRE/SMOKE DAMPERS	16
17	MECH HEAT TRACE FOOF	20/2						20/1	MECH LEVEL 2 FIRE/SMOKE DAMPERS	18
19								20/1	ROOMS 1405,1406,1407 PRESSURE MONITOR	20
21	ELEV PIT SUMP PUMP	20/1							SPACE	22
23	ELEV PIT GFI RECEPT AND LIGHTS	20/1								24
25	SPARE	20/1								26
27		20/1								28
29	V	20/1							V	30

MECHANICAL EQUIPMENT SCHEDULE														
DESIGNATION				LOAD				CIRCUITING			CONTROL			
ITEM	DESCRIPTION	LOCATION	НР	KW	AMPS	VOLTS	PHASE	RATING	CONDUCTORS	DISCONNECT		STARTER CONTRO	CONTROL	L REMARKS
										SWITCH	FUSE	SIZE		KEMAKKS
EF-37	EXHAUST FAN	ROOF	1/4			480	3	15/3	3 NO. 12, 1 NO. 12 GND	30A		NEMA 0		SEE MECHANICAL
PM-1	PRESSURE MONITOR					24	1							

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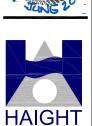
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NOTES:

- 1. PROVIDE A 120:12 VAC, 100VA TRANSFORMER TO PROVIDE 24VAC CIRCUITING TO THE NEW PRESSURE MONITOR.
- 2. THE CEILING PLAN WITH THE EXISTING LUMINAIRES AND DEVICES IS ILLUSTRATED. REMOVE AND REINSTALL CEILING OBJECTS AS NEEDED TO COORDINATE WITH VENTILATION DUCTWORK ADDITIONS AND MODIFICATIONS. SEE MECHANICAL.





CONSULTING ELECTRICAL ENGINEERS

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VENTILATION IMPROVEMENTS

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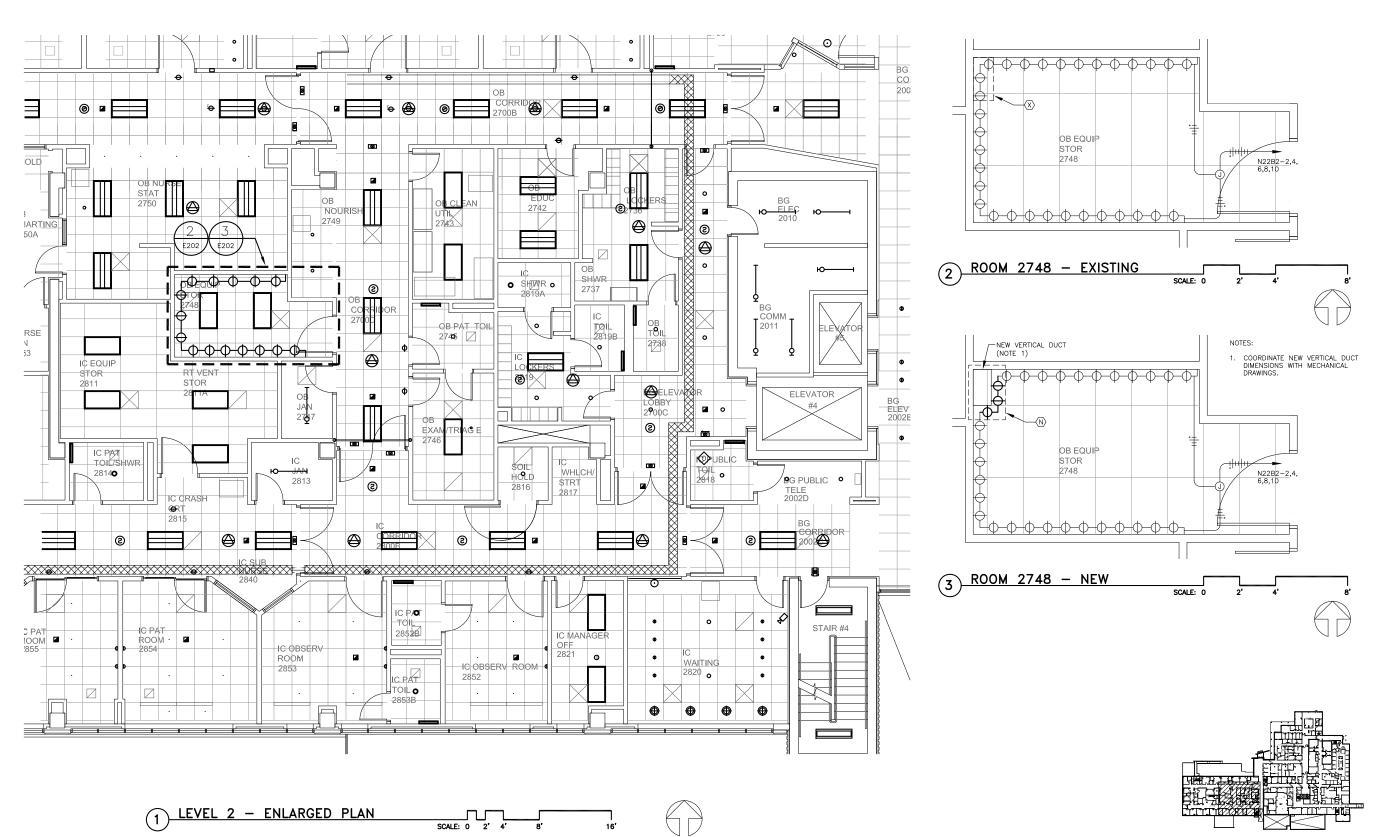
E201

SCALE: AS NOTED DATE: June 2021

KEY PLAN

NOTES:

REMOVE AND REPLACE SECTIONS OF EXISTING RECEPTACLE RACEWAY IN ROOM 2748 AS NECESSARY TO ALLOW FOR NEW MECHANICAL DUCTWORK.







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IMPROVEMENTS VENTILATION

ALASKA

JUNEAU,

PLAN ENLARGED

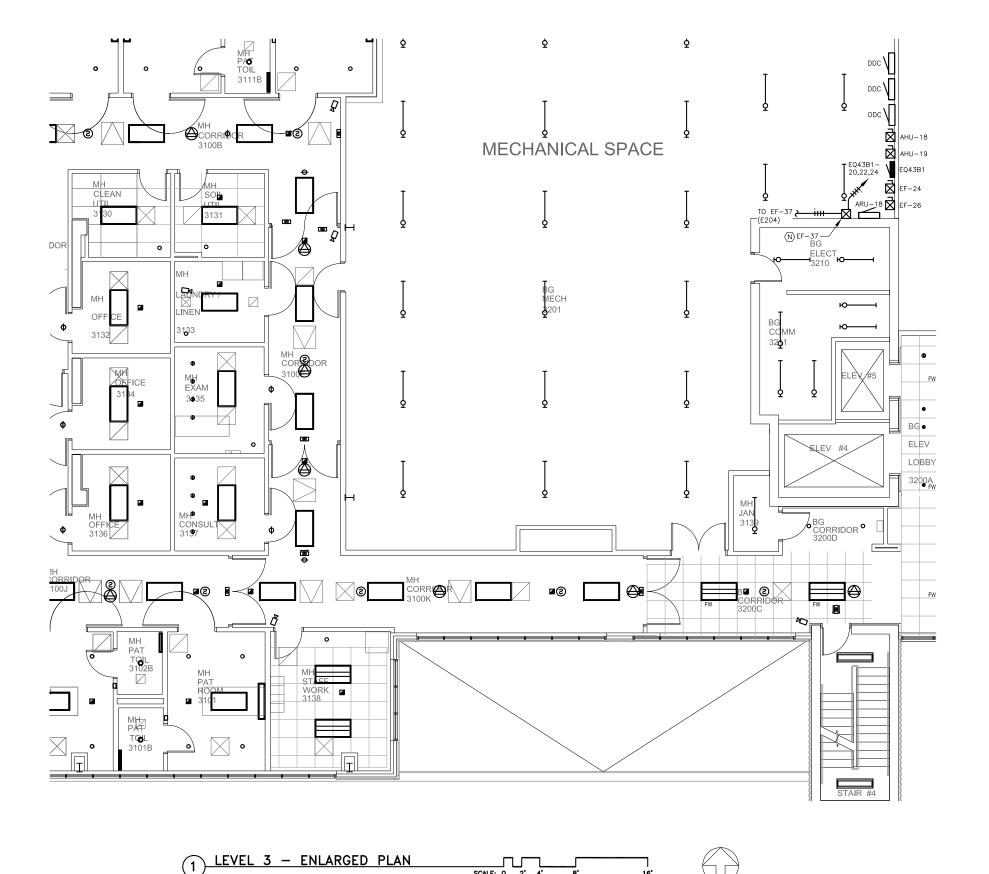
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E202

KEY PLAN

DATE: June 2021



SCALE: 0 2' 4'

NOTES:

THE CEILING PLAN WITH THE EXISTING LUMINAIRES AND DEVICES IS ILLUSTRATED. REMOVE AND REINSTALL CEILING OBJECTS AS NEEDED TO COORDINATE WITH VENTILATION DUCTWORK ADDITIONS AND MODIFICATIONS. SEE MECHANICAL.





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VENTILATION IMPROVEMENTS

ENLARGED PLAN

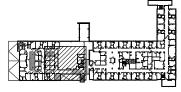
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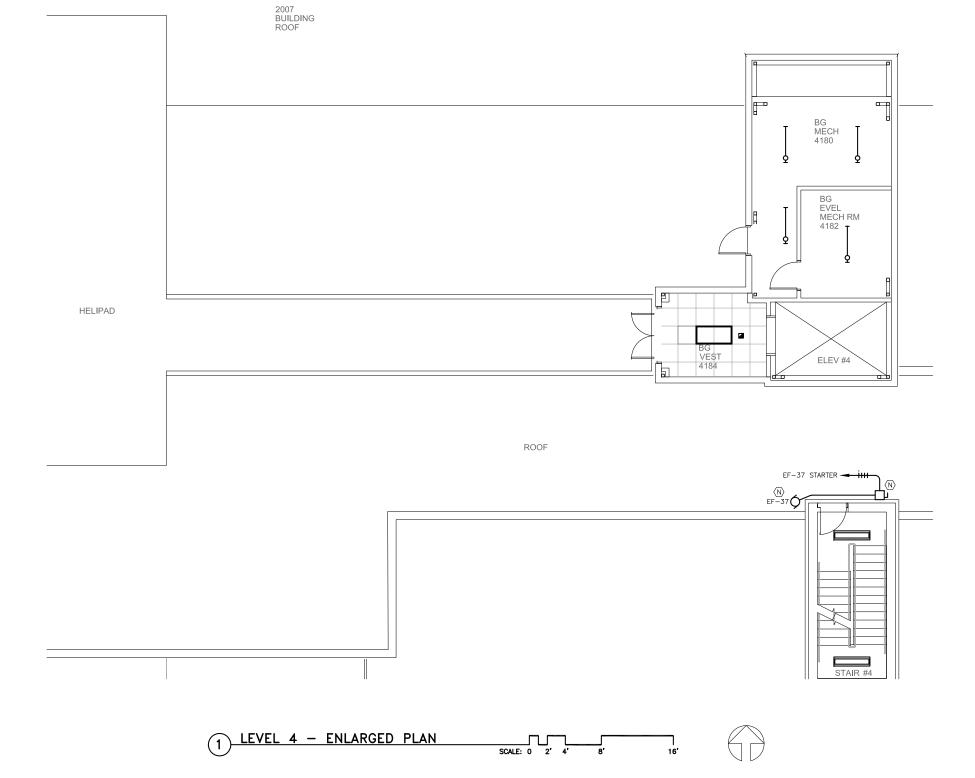
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E203









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ED VENTILATION IMPROVEMENTS

JUNEAU, ALASKA

- ENLARGED PLAN



E204

KEY PLAN

SPECIFICATION

GENERAL

- 1.1 DEFINITIONS
- A. EMT: ELECTRICAL METALLIC TUBING.
- B EMC: ELEXIBLE METAL CONDUIT
- C. LFNC: LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT.
- D. RSC: RIGID STEEL CONDUIT.
- 1.2 SUBMITTALS
- A. PRODUCT DATA:
- 1. CONDUCTORS AND CABLES.
- 2. CONDUITS, RACEWAYS, AND BOXES.
- DISCONNECTS.
- 4. MOTOR CONTROLLERS.
- B. FIELD TEST REPORTS: SUBMIT WRITTEN TEST REPORTS TO INCLUDE THE FOLLOWING:
- 1. TEST PROCEDURES USED
- 2. TEST RESULTS THAT COMPLY WITH REQUIREMENTS.
- 3. RESULTS OF FAILED TESTS AND CORRECTIVE ACTION TAKEN TO ACHIEVE TEST RESULTS THAT COMPLY WITH REQUIREMENTS.
- 1.3 QUALITY ASSURANCE
- A. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
- B. COMPLY WITH NFPA 70.
- 1.4 COORDINATION
- A. COORDINATE CHASES, SLOTS, INSERTS, SLEEVES, AND OPENINGS WITH GENERAL CONSTRUCTION WORK AND ARRANGE IN BUILDING STRUCTURE DURING PROGRESS OF CONSTRUCTION TO FACILITATE THE ELECTRICAL INSTALLATIONS THAT FOLLOW.
- B. WHERE ELECTRICAL IDENTIFICATION DEVICES ARE APPLIED TO FIELD—FINISHED SURFACES, COORDINATE INSTALLATION OF IDENTIFICATION DEVICES WITH COMPLETION OF FINISHED SURFACE.
- C. COORDINATE LAYOUT AND INSTALLATION OF RACEWAYS, BOXES, ENCLOSURES, CABINETS, AND SUSPENSION SYSTEM WITH OTHER CONSTRUCTION THAT PENETRATES CEILINGS OR IS SUPPORTED BY THEM, INCLUDING LIGHT FIXTURES, HVAC EQUIPMENT, FIRE—SUPPRESSION SYSTEM, AND PARTITION ASSEMBLIES.
- 1.5 FIELD QUALITY CONTROL
- A. INSPECT INSTALLED COMPONENTS FOR DAMAGE AND FAULTY WORK, INCLUDING THE FOLLOWING:
- 1. SUPPORTING DEVICES FOR ELECTRICAL COMPONENTS.
- 2. ELECTRICAL IDENTIFICATION
- 3. CUTTING AND PATCHING FOR ELECTRICAL CONSTRUCTION.
- 4. TOUCHUP PAINTING.
- 1.6 REFININSHING AND TOUCHUR PAINTIN
- A. REFINISH AND TOUCHUP PAINT.
- 1. CLEAN DAMAGED AND DISTURBED AREAS AND APPLY PRIMER, INTERMEDIATE, AND FINISH COATS TO SUIT THE DEGREE OF DAMAGE AT EACH LOCATION.
- 2. FOLLOW PAINT MANUFACTURER'S WRITTEN INSTRUCTIONS FOR SURFACE PREPARATION AND FOR TIMING AND APPLICATION OF SUCCESSIVE COATS.
- 3. REPAIR DAMAGE TO GALVANIZED FINISHES WITH ZINC-RICH PAINT RECOMMENDED BY MANUFACTURER.
- 4. REPAIR DAMAGE TO PAINT FINISHES WITH MATCHING TOUCHUP COATING RECOMMENDED BY MANUFACTURER.
- 1.7 CLEANING AND PROTECTION
- A. ON COMPLETION OF INSTALLATION, INCLUDING OUTLETS, FITTINGS, AND DEVICES, INSPECT EXPOSED FINISH. REMOVE BURRS, DIRT, PAINT SPOTS, AND CONSTRUCTION DEBRIS.
- B. PROTECT EQUIPMENT AND INSTALLATIONS AND MAINTAIN CONDITIONS TO ENSURE THAT COATINGS, FINISHES, AND CABINETS ARE WITHOUT DAMAGE OR DETERIORATION AT TIME OF SUBSTANTIAL COMPLETION.

BASIC MATERIALS AND METHODS

- 1.1 SUPPORTING DEVICES
- A. MATERIAL: COLD-FORMED STEEL, WITH CORROSION-RESISTANT COATING ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
- B. METAL ITEMS FOR USE OUTDOORS, IN DAMP LOCATIONS, OR IN CORROSIVE ENVIRONMENTS: HOT-DIP GALVANIZED STEEL, OR STAINLESS STEEL.
- C. SLOTTED-STEEL CHANNEL SUPPORTS: FLANGE EDGES TURNED TOWARD WEB, AND 9/16-INCH-DIAMETER SLOTTED HOLES AT A MAXIMUM OF 2 INCHES O.C., IN WEBS.
- 1. CHANNEL THICKNESS: SELECTED TO SUIT STRUCTURAL LOADING.
- 2. FITTINGS AND ACCESSORIES: PRODUCTS OF THE SAME MANUFACTURER AS CHANNEL SUPPORTS.
- D. RACEWAY SUPPORTS: MANUFACTURED CLEVIS HANGERS, RISER CLAMPS, STRAPS, THREADED C-CLAMPS WITH RETAINERS, CEILING TRAPEZE HANGERS, WALL BRACKETS, AND SPRING-STEEL OR CLICK-TYPE HANGERS.
- E. EXPANSION ANCHORS: CARBON-STEEL WEDGE OR SLEEVE TYPE.
- F. TOGGLE BOLTS: ALL-STEEL SPRINGHEAD TYPE
- G. POWDER-DRIVEN THREADED STUDS: HEAT-TREATED STEEL.
- H. ELECTRICAL EQUIPMENT INSTALLATION:
- 1. MATERIALS AND COMPONENTS: INSTALL LEVEL, PLUMB, AND PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, UNLESS OTHERWISE INDICATED.
- 2. EQUIPMENT: INSTALL TO FACILITATE SERVICE, MAINTENANCE, AND REPAIR OR REPLACEMENT OF COMPONENTS. CONNECT FOR EASE OF DISCONNECTING, WITH MINIMUM INTERFERENCE WITH OTHER INSTALLATIONS.
- 3. RIGHT OF WAY: GIVE TO RACEWAYS AND PIPING SYSTEMS INSTALLED AT A REQUIRED SLOPE.
- I. ELECTRICAL SUPPORTING DEVICE APPLICATION:
- 1. DAMP LOCATIONS AND OUTDOORS: HOT-DIP GALVANIZED MATERIALS, OR STAINLESS STEEL MATERIALS, U-CHANNEL SYSTEM COMPONENTS.
- 2. DRY LOCATIONS: STEEL MATERIALS.
- 3. SELECTION OF SUPPORTS: COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 4. STRENGTH OF SUPPORTS: ADEQUATE TO CARRY PRESENT AND FUTURE LOADS, TIME A SAFETY FACTOR OF AT LEAST FOUR; MINIMUM OF 200-LB DESIGN LOAD.
- I. SUPPORT INSTALLATION
- 1. INSTALL SUPPORT DEVICES TO SECURELY AND PERMANENTLY FASTEN AND SUPPORT ELECTRICAL COMPONENTS.
- 2. INSTALL INDIVIDUAL AND MULTIPLE RACEWAY HANGERS AND RISER CLAMPS TO SUPPORT RACEWAYS. PROVIDE U-BOLTS, CLAMPS, ATTACHMENTS, AND OTHER HARDWARE NECESSARY FOR HANGER ASSEMBLIES AND FOR SECURING HANGER RODS AND CONDUITS.
- 3. SIZE SUPPORTS FOR MULTIPLE RACEWAY INSTALLATIONS SO CAPACITY CAN BE INCREASED BY A 25 PERCENT MINIMUM IN THE FUTURE.
- 4. SUPPORT INDIVIDUAL HORIZONTAL RACEWAYS SEPARATE, MALLEABLE-IRON PIPE HANGERS OR CLAMPS.
- 5. INSTALL 14-INCH DIAMETER OR LARGER THREADED STEEL HANGER RODS, UNLESS OTHERWISE INDICATED.
- 6. ARRANGE SUPPORTS IN VERTICAL RUNS SO THE WEIGHT OF RACEWAYS AND ENCLOSED CONDUCTORS IS CARRIED ENTIRELY BY RACEWAY SUPPORTS, WITH NO WEIGHT LOAD ON RACEWAY TERMINALS.
- 7. INSTALL METAL CHANNEL RACKS FOR MOUNTING CONTROL ENCLOSURES, PULL AND JUNCTION BOXES, AND OTHER DEVICES, UNLESS COMPONENTS ARE MOUNTED DIRECTLY TO STRUCTURAL ELEMENTS OF ADEQUATE STRENGTH.
- 8. SECURELY FASTEN ELECTRICAL ITEMS AND THEIR SUPPORTS TO THE BUILDING STRUCTURE, UNLESS OTHERWISE INDICATED. PERFORM FASTENING ACCORDING TO THE FOLLOWING UNLESS OTHER FASTENING METHODS ARE INDICATED:
- a. WOOD: FASTEN WITH WOOD SCREWS OR SCREW-TYPE NAILS.
- $\hbox{b. MASONRY: TOGGLE BOLTS ON HOLLOW MASONRY UNITS AND EXPANSION BOLTS ON SOLID MASONRY UNITS.}\\$
- c. EXISTING CONCRETE: EXPANSION BOLTS.
- d. INSTEAD OF EXPANSION BOLTS, THREADED STUDS DRIVEN BY A POWDER CHARGE AND PROVIDED WITH LOCK WASHERS MAY BE USED IN EXISTING CONCRETE.

- 1.2 IDENTIFICATION
- A. IDENTIFICATION DEVICES: A SINGLE TYPE OF IDENTIFICATION PRODUCT FOR EACH APPLICATION CATEGORY. USE COLORS PRESCRIBED BY ANSI A13.1, NFPA 70, AND THESE SPECIFICATIONS.
- B. ENGRAVED-PLASTIC LABELS, SIGNS, AND INSTRUCTION PLATES: ENGRAVING STOCK, MELAMINE PLASTIC LAMINATE PUNCHED OR DRILLED FOR MECHANICAL FASTENERS 1/16-INCH MINIMUM THICKNESS FOR LARGER SIZES. ENGRAVED LEGEND IN WHITE LETTERS ON BLACK BACKGROUND. LABELS ON DISCONNECTS AND STARTERS SHALL BE WHITE LETTERS ON RED BACKGROUND.
- C. FASTENERS FOR NAMEPLATES AND SIGNS: SELF-TAPPING, STAINLESS-STEEL SCREWS OR NO. 10/32 STAINLESS-STEEL MACHINE SCREWS WITH NUTS AND FLAT AND LOCK WASHERS.
- D INSTALLATION
- 1. INSTALL AT LOCATIONS FOR MOST CONVENIENT VIEWING WITHOUT INTERFERENCE WITH OPERATION AND MAINTENANCE OF EQUIPMENT.
- 2. COORDINATE NAMES, ABBREVIATIONS, COLORS, AND OTHER DESIGNATIONS USED FOR ELECTRICAL IDENTIFICATION WITH CORRESPONDING DESIGNATIONS INDICATED IN THE CONTRACT DOCUMENTS OR REQUIRED BY CODES AND STANDARDS. USE CONSISTENT DESIGNATIONS THROUGHOUT PROJECT.
- 3. SELF-ADHESIVE IDENTIFICATION PRODUCTS: CLEAN SURFACES BEFORE APPLYING.
- 4. COLOR-CODE 208/120-V SYSTEM SECONDARY SERVICE, FEEDER, AND BRANCH-CIRCUIT CONDUCTORS THROUGHOUT THE SECONDARY ELECTRICAL SYSTEM AS FOLLOWS:
- a. PHASE A: BLACK
- b. PHASE B: RED
- c. PHASE C: BLUE
- 5. COLOR-CODE 480/277-V SYSTEM SECONDARY SERVICE, FEEDER, AND BRANCH-CIRCUIT CONDUCTORS THROUGHOUT THE SECONDARY ELECTRICAL SYSTEM AS FOLLOWS:
- a. PHASE A: BROWN
- b. PHASE B: ORANGE
- c. PHASE C: YELLOW
- E. PROVIDE UPDATED PANEL SCHEDULES IN PANELS WITH NEW LOADS. SCHEDULES SHALL BE COMPUTER TYPED.
- .3 FIRESTOPPING
- A. APPLY FIRESTOPPING TO CABLE AND RACEWAY PENETRATIONS OF FIRE-RATED FLOOR AND WALL ASSEMBLIES TO ACHIEVE FIRE-RESISTANCE RATING OF THE ASSEMBLY.
- 1.4 CUTTING AND PATCHING
- A. CUT, CHANNEL, CHASE, AND DRILL FLOORS, WALLS, PARTITIONS, CEILINGS, AND OTHER SURFACES REQUIRED TO PERMIT ELECTRICAL INSTALLATIONS. PERFORM CUTTING BY SKILLED MECHANICS OF TRADES INVOLVED.
- B. REPAIR AND REFINISH DISTURBED FINISH MATERIALS AND OTHER SURFACES TO MATCH ADJACENT UNDISTURBED SURFACES. INSTALL NEW FIREPROOFING WHERE EXISTING FIRESTOPPING HAS BEEN DISTURBED. REPAIR AND REFINISH MATERIALS AND OTHER SURFACES BY SKILLED MECHANICS OF TRADES INVOLVED.
- 1.5 TOUCHUP PAI
- A. FOR EQUIPMENT: EQUIPMENT MANUFACTURER'S PAINT SELECTED TO MATCH INSTALLED EQUIPMENT FINISH.
- B. GALVANIZED SURFACES: ZINC-RICH PAINT RECOMMENDED BY ITEM MANUFACTURER.

CROHNDING

- 1.1 GROUNDING CONDUCTORS
- A. MATERIAL: COPPER, ONLY
- B. EQUIPMENT GROUNDING CONDUCTORS: INSULATED WITH GREEN-COLORED INSULATION.
- C. COPPER BONDING CONDUCTORS: AS FOLLOWS:
- 1. BONDING CABLE: 28 KCMIL, 14 STRANDS OF NO. 17 AWG COPPER CONDUCTOR, $1\!\!/_4$ INCH IN DIAMETER.
- 2. BONDING CONDUCTOR: NO.4 OR NO.6 AWG, STRANDED COPPER CONDUCTOR
- 3. BONDING JUMPER: BARE COPPER TAPE, BRAIDED BARE COPPER CONDUCTORS, TERMINATED WITH COPPER FERRULES; 1-5/8 INCHES WIDE AND 1/6 INCH THICK.
 4. TINNED BONDING JUMPER: TINNED-COPPER TAPE, BRAIDED COPPER CONDUCTORS, TERMINATED WITH COPPER FERRULES; 1-5/8 INCH WIDE AND 1/16 INCH THICK.

A. COMPLY WITH IEEE 837 AND UL 467; LISTED FOR USE FOR SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND CONNECTED ITEMS.

- 2 CONNECTOR PRODUCTS
- B. BOLTED CONNECTORS: BOLTED-PRESSURE-TYPE CONNECTORS, OR COMPRESSION TYPE.
- A. IN RACEWAYS, USE INSULATED EQUIPMENT GROUNDING CONDUCTORS.
- B. EQUIPMENT GROUNDING CONDUCTOR TERMINATIONS: USE BOLTED PRESSURE CLAMPS.
- C. BOND INTERIOR METAL PIPING SYSTEMS AND METAL AIR DUCTS TO EQUIPMENT GROUNDING CONDUCTORS OF ASSOCIATED PUMPS, FANS, BLOWERS, ELECTRIC HEATERS, AND AIR CLEANERS. USE BRAIDED—TYPE BONDING STRAPS.

CONDUCTORS AND CABLES

- 1.1 CONDUCTOR AND CARLE MATERIA
- A. COPPER COMPLYING WITH NEMA WC 5 OR 7; STRANDED.
- B. INSULATION TYPES: TYPE THHN-THWN, AND XHHW COMPLYING WITH NEMA WC 5 OR 7.
- 1.2 CONDUCTOR AND INSULATION APPLICATIONS
- A. EXPOSED BRANCH CIRCUITS: TYPE THHN-THWN OR XHHW, SINGLE CONDUCTORS IN RACEWAY
- B. BRANCH CIRCUITS CONCEALED IN CEILINGS, WALLS, AND PARTITIONS: THHN-THWN OR XHHW, SINGLE CONDUCTORS IN RACEWAYS.
- C. COORDINATE CONDUCTOR INSULATION TEMPERATURE RATING AND AMPACITY RATING WITH THE TEMPERATURE AND AMPACITY RATING OF THEIR CIRCUIT PROTECTION DEVICES.
- D. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE—TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A AND UL 486B.

 E. MAKE SPLICES AND TAPS THAT ARE COMPATIBLE WITH CONDUCTOR MATERIAL AND THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN UNSPLICED CONDUCTORS.
- 1. USE OXIDE INHIBITOR IN EACH SPLICE AND TAP CONDUCTOR FOR ALL CONDUCTORS LOCATED IN MOIST OR CORROSIVE ENVIRONMENTS.





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RACEWAYS

- 1.1 CONDUIT AND TUBING
- A. RIGID STEEL CONDUIT: ANSI C80.1
- B. EMT AND FITTINGS: ANSI C80.3
- 1. FITTINGS: SET-SCREW OR COMPRESSION TYPE.
- C. FMC: ZINC—COATED STEEL
- D. LFNC: UL 1660, FEDERAL SPECIFICATION WW-C-5666, AND ANSI/NFPA 79. THE CONDUIT, INCLUDING FITTINGS SHALL REMAIN FLEXIBLE TO 0 DEGREES FAHRENHEIT, OR LOWER.
- E. FITTINGS: NEMA FB 1; COMPATIBLE WITH CONDUIT AND TUBING MATERIALS.
- 1.2 INSTALLATION
- A. OUTDOORS:
- 1. EXPOSED: RIGID STEEL.
- 3. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): LFNC.
- 4. BOXES AND ENCLOSURES: NEMA 250, TYPE 4.
- B. INDOORS:
- EXPOSED: EMT.
- CONCEALED: EMT.
- 3. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): FMC.
- 4. DAMP OR WET LOCATIONS: RIGID STEEL CONDUIT.
- 5. BOXES AND ENCLOSURES: NEMA 250, TYPE 1.
- C. MINIMUM RACEWAY SIZE: 1/2-INCH TRADE SIZE.
- D. RACEWAY FITTINGS: COMPATIBLE WITH RACEWAYS AND SUITABLE FOR USE AND LOCATION.
- 1. RIGID STEEL CONDUIT: USE THREADED RIGID STEEL CONDUIT FITTINGS, UNLESS OTHERWISE INDICATED.
- E. CONCEAL CONDUIT AND EMT WITHIN FINISHED AND INACCESSIBLE WALLS, CEILINGS, AND FLOORS, UNLESS OTHERWISE INDICATED.
- I. INSTALL CONCEALED RACEWAYS WITH A MINIMUM OF BENDS IN THE SHORTEST PRACTICAL DISTANCE, CONSIDERING TYPE OF BUILDING CONSTRUCTION AND OBSTRUCTIONS, UNLESS OTHERWISE INDICATED.
- F. INSTALL EXPOSED RACEWAYS, AND RACEWAYS WITHIN ACCESSIBLE SPACES, PARALLEL OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS AND FOLLOW SURFACE CONTOURS AS MUCH AS POSSIBLE.
- 1. RUN PARALLEL OR BANKED RACEWAYS TOGETHER ON COMMON SUPPORTS.
- 2. MAKE PARALLEL BENDS IN PARALLEL OR BANKED RUNS. USE FACTORY ELBOWS ONLY WHERE ELBOWS CAN BE INSTALLED PARALLEL; OTHERWISE, PROVIDE FIELD BENDS FOR PARALLEL RACEWAYS.
- G. JOIN RACEWAYS WITH FITTINGS DESIGNED AND APPROVED FOR THAT PURPOSE AND MAKE JOINTS TIGHT.
- 1. USE INSULATING BUSHINGS TO PROTECT CONDUCTORS.
- H. TIGHTEN SET SCREWS OF THREADLESS FITTINGS WITH SUITABLE TOOLS.
- TERMINATION
- 1. WHERE RACEWAYS ARE TERMINATED WITH LOCKNUTS AND BUSHINGS, ALIGN RACEWAYS TO ENTER SQUARELY AND INSTALL LOCKNUTS WITH DISHED PART AGAINST BOX. USE TWO LOCKNUTS, ONE INSIDE AND ONE OUTSIDE BOX.
- 2. WHERE RACEWAYS ARE TERMINATED WITH THREADED HUBS, SCREW RACEWAYS OR FITTINGS TIGHTLY INTO HUB SO END BEARS AGAINST WIRE PROTECTION SHOULDER. WHERE CHASE NIPPLES ARE USED, ALIGN RACEWAYS SO COUPLING IS SQUARE TO BOX; TIGHTEN CHASE NIPPLE SO NO THREADS ARE EXPOSED.
- J. FLEXIBLE CONNECTIONS: USE MAXIMUM OF 72 INCHES OF FLEXIBLE CONDUIT FOR EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT; AND FOR ALL MOTORS. INSTALL SEPARATE GROUND CONDUCTOR ACROSS FLEXIBLE CONNECTIONS.

BOXES, ENCLOSURES, AND CABINETS

- 1.1 SHEET METAL OUTLET AND DEVICE BOXES: NEMA OS 1.
- 1.2 CAST-METAL OUTLET AND DEVICE BOXES: NEMA FB 1, TYPE FD, WITH GASKETED COVER.
- 1.3 SMALL SHEET METAL PULL AND JUNCTION BOXES: NEMA OS 1.
- 1.4 CAST-METAL PULL AND JUNCTION BOXES: NEMA FB 1. CAST ALUMINUM WITH GASKETED COVER.
- 1.5 HINGED-COVER ENCLOSURES: NEMA 250, TYPE 1, WITH CONTINUOUS HINGE COVER AND FLUSH LATCH.
- A. METAL ENCLOSURES: STEEL, FINISHED INSIDE AND OUT WITH MANUFACTURER'S STANDARD ENAMEL.

DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

- A NONFUSIBLE SWITCHES
- 1. TYPE HD, HEAVY DUTY, THREE POLE, SINGLE THROW, 600-V AC, 1200 A AND SMALLER: UL 98 AND NEMA KS 1, HORSEPOWER RATED, LOCKABLE HANDLE WITH CAPABILITY TO ACCEPT THREE PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION.
- 2 ACCESSORIES
- a. EQUIPMENT GROUND KIT: INTERNALLY MOUNTED AND LABELED FOR COPPER GROUND CONDUCTORS.
- b. LUGS: MECHANICAL TYPE, SUITABLE FOR NUMBER, SIZE, AND CONDUCTOR MATERIAL.
- B. MOLDED-CASE CIRCUIT BREAKER (MCCB): COMPLY WITH UL 489, WITH INTERRUPTING CAPACITY TO MEET AVAILABLE FAULT CURRENTS:
- 1. THERMAL-MAGNETIC CIRCUIT BREAKERS: INVERSE TIME-CURRENT ELEMENT FOR LOW-LEVEL OVERLOADS, AND INSTANTANEOUS MAGNETIC TRIP ELEMENT FOR SHORT CIRCUITS.
- 2. FEATURES AND ACCESSORIES:
- a. STANDARD FRAME SIZES, TRIP RATINGS, AND NUMBER OF POLES.
- b. LUGS: MECHANICAL STYLE, SUITABLE FOR NUMBER, SIZE, TRIP RATINGS, AND CONDUCTOR MATERIAL.
- C. ENCLOSURES
- 1. ENCLOSED SWITCHES: NEMA 250 TYPE 4.
- 2. ENCLOSURE FINISH: THE ENCLOSURE SHALL BE A BRUSH FINISH ON TYPE 304 STAINLESS STEEL (NEMA 250 TYPE 4 STAINLESS STEEL).
- 3. CONDUIT ENTRY: NEMA 250 TYPES 4, 4X, AND 12 ENCLOSURES SHALL CONTAIN NO KNOCKOUTS.
- D. INSTALLATION
- 1. ADJUST MOVING PARTS AND OPERABLE COMPONENTS TO FUNCTION SMOOTHLY, AND LUBRICATE AS RECOMMENDED BY MANUFACTURER.

ENCLOSED FULL-VOLTAGE MAGNETIC MOTOR CONTROLLERS

- A. DESCRIPTION: ACROSS-THE-LINE START, ELECTRICALLY HELD, FOR NOMINAL SYSTEM VOLTAGE OF 600-V AC AND LESS.
- B. UL COMPLIANCE: FABRICATE AND LABEL MAGNETIC MOTOR CONTROLLERS TO COMPLY WITH UL 508 AND UL 60947-4-1.
- C. NEMA COMPLIANCE: FABRICATE MOTOR CONTROLLERS TO COMPLY WITH ICS 2.
- D. STANDARD: COMPLY WITH NEMA ICS 2, GENERAL PURPOSE, CLASS A.
- E. CONFIGURATION: NUNREVERSING
- F. ENCLOSURE: SURFACE MOUNTING.
- RED LED PILOT LIGHT.
- 2. H-O-A SWITCH.
- OVERLOAD RELAY RESET BUTTON.
- G. CONTACTOR COILS: PRESSURE-ENCAPSULATED TYPE
- 1. OPERATING VOLTAGE: MANUFACTURER'S STANDARD, UNLESS INDICATED
- H. CONTROL POWER:
- 1. FOR ON-BOARD CONTROL POWER, OBTAIN FROM INTEGRAL CONTROL POWER TRANSFORMER. THE CONTROL POWER TRANSFORMER SHALL HAVE CAPACITY TO OPERATE INTEGRAL DEVICES AND REMOTELY LOCATED PILOT, INDICATING, AND CONTROL DEVICES.
- DEVICES AND RE
- 1. SOLID-STATE OVERLOAD RELAY:
- a. SWITCH OR DIAL SELECTABLE FOR MOTOR-RUNNING OVERLOADS PROTECTION.
- b. SENSORS IN EACH PHASE.
- c. CLASS 10 TRIPPING CHARACTERISTIC SELECTED TO PROTECT MOTOR AGAINST VOLTAGE AND CURRENT UNBALANCE AND SINGLE PHASING.





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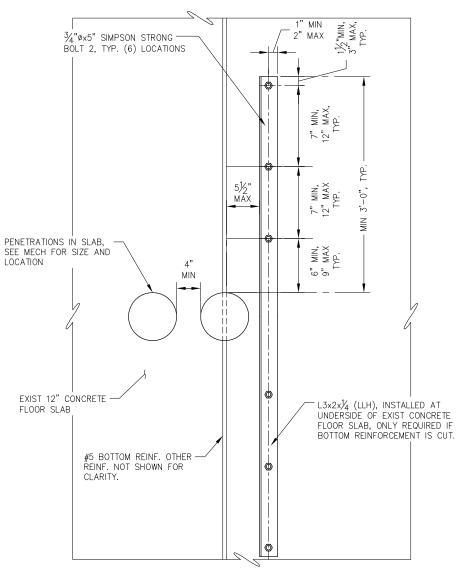
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: June 2021



RETROFIT DETAIL FOR LEVEL 2 AND LEVEL 3 FLOOR SLAB **AT ROOMS 1490B AND 2748**

SEQUENCE NOTES:

- 1. SCAN SLAB TO LOCATE BOTTOM REINFORCEMENT.
- 2. SHIFT PROPOSED OPENING LOCATIONS SO THAT BOTTOM REINFORCEMENT IS MIN 1" CLEAR FROM EDGE OF OPENING. IF THIS IS NOT POSSIBLE DUE TO LAYOUT OF BOTTOM REINFORCEMENT, L3x2 REINFORCEMENT SHALL BE INSTALLED PER DETAIL. ONE L3x2 REINFORCEMENT IS REQUIRED FOR EACH BOTTOM BAR THAT IS CUT.
- 3. IF BOTTOM REINFORCEMENT MUST BE CUT, SCAN SLAB FOR L3x2 ANCHORS. ONCE L3x2 REINFORCEMENT AND ANCHORS HAVE BEEN LAID OUT, CONTACT PND ENGINEERS FOR CONFIRMATION OF LAYOUT.
- 4. ONCE L3x2 REINFORCEMENT AND ANCHORS HAVE BEEN APPROVED BY PND ENGINEERS, L3x2 REINFORCEMENT MAY BE INSTALLED
- 5. AFTER L3x2 REINFORCEMENT HAS BEEN INSTALLED, OPENING MAY BE CUT IN SLAB.
- 6. AFTER OPENING HAS BEEN CUT INTO SLAB, CONCRETE SLAB AND REMOVED CONCRETE SHALL BE INSPECTED TO VERIFY ONLY INTENDED BOTTOM REINFORCEMENT HAS BEEN CUT. IF ADDITIONAL BOTTOM REINFORCEMENT WAS INADVERTENTLY CUT, ADDITIONAL L3x2 REINFORCEMENT WILL BE REQUIRED. CONTACT PND ENGINEERS FOR DIRECTION.

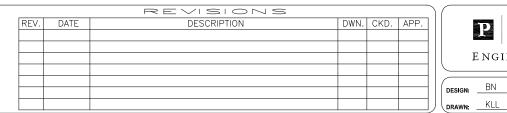
ADDITIONAL NOTES:

- A) TOP REINFORCEMENT MAY BE CUT WITHOUT ADDED REINFORCEMENT
- B) ANGLES SHALL CONFORM TO ASTM A36.

PAYMENT NOTES:

CONTRACTOR IS REQUIRED TO LOCATE EXISTING REINFORCING STEEL AND COORDINATE LOCATIONS OF SLAB PENETRATIONS WITH ENGINEER PRIOR TO CORE DRILLING/CUTTING. ANY CUTTING OF AND/OR DAMAGE TO EXISTING REINFORCING STEEL WILL REQUIRE IMPLEMENTATION OF THE STRUCTURAL SLAB RETROFIT DETAILS ON THIS SHEET.

- A. WHEN REINFORCING STEEL IS TO BE CUT AT THE DIRECTION OF THE ENGINEER DUE TO INADEQUATE BAR SPACING AND/OR LOCATION SPECIFIED BY THE ENGINNER. THEN ALL WORK FOR THE STRUCTURAL RETROFIT/S WILL BE PAID FOR, PER EACH, UNDER THE "STRUCTURAL RETROFIT" CONTINGENT SUM ITEM.
- B. WHEN RETROFIT DETAILS ARE REQUIRED DUE TO THE CONTRACTOR'S INABILITY TO ACCURATELY LOCATE EXISTING REINFORCING STEEL OR FOR CONTRACTOR'S CONVENIENCE, THEN ALL WORK FOR THE STRUCTURAL RETROFIT/S SHALL BE CONSIDERED INCIDENTAL TO OTHER WORK AND NO SEPARATE PAYMENT WILL BE MADE.





APPROVED: BN



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SLAB RETROFIT DETAIL

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