



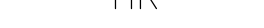


MECHANICAL LEGEND


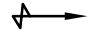
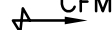



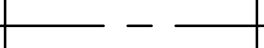
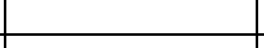
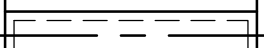
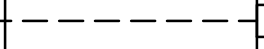

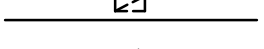
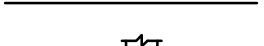




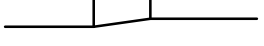






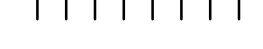

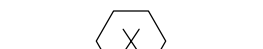
PIPING SYMBOLS

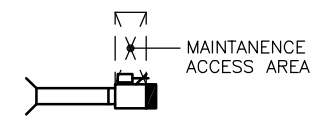
SYMBOL	DESCRIPTION
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
	CONDENSATE DRAIN
	HEATING WATER RETURN
	HEATING WATER SUPPLY

EQUIPMENT DESIGNATIONS

SYMBOL	DESCRIPTION
AHU-X	AIR HANDLING UNIT DESIGNATION
EF-X	EXHAUST FAN DESIGNATION
OAL-X	OUTSIDE AIR LOUVER DESIGNATION

DUCTWORK SYMBOLS

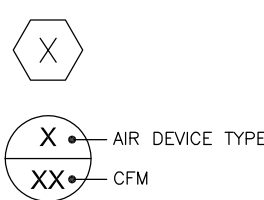
SYMBOL	DESCRIPTION
	THERMOSTAT
	AIR FLOW
	TRANSFER AIR FLOW (INDICATE CFM)
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	FIRE DAMPER
	VOLUME DAMPER
	SMOKE DAMPER
	SMOKE DETECTOR
	FLEXIBLE CONNECTION
	HORIZONTAL ACCESS DOOR
	VERTICAL ACCESS DOOR
	ELBOW WITH DOUBLE THICKNESS TURNING VANES
	RECTANGULAR BRANCH TAKE-OFF
	BELL MOUTH BRANCH TAKE-OFF
	ROUND BRANCH TAKE-OFF
	ROUND DUCT DROP OFF BOTTOM
	DUCT TRANSITION
	SQUARE TO ROUND TRANSITION
	DUCTWORK CHANGE IN ELEVATION (UP OR DOWN)
	SUPPLY/OUTSIDE AIR DUCT RISER
	RETURN AIR DUCT RISER
	EXHAUST/RELIEF AIR DUCT RISER
	ROUND DUCT RISER (SMALLER THAN 12")
	ROUND DUCT RISER (12" AND LARGER)
	FLEXIBLE DUCT











TERMINAL UNIT WITH REHEAT COIL

SUPPLY AIR VOLUME TERMINAL UNIT IDENTIFIER

AIR DEVICE IDENTIFIER



PIPING SYMBOLS

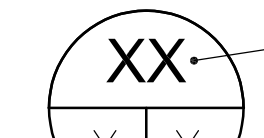

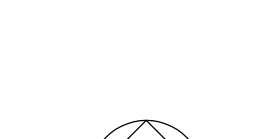



SYMBOL	DESCRIPTION
	PIPE DROP
	PIPE RISE
	PIPE CAP
	BRANCH TAKE OFF
	PIPE DROP TEE
	PIPE RISE TEE
	SHUTOFF VALVE
	TWO WAY CONTROL VALVE

GENERAL SYMBOLS

LINETYPE SYMBOLS

DESIGNATION	DESCRIPTION
	DEMOLITION WORK
	EXISTING WORK
	NEW WORK

REFERENCE SYMBOLS

DESIGNATION	DESCRIPTION
	FLOOR PLAN NUMBER PARTIAL FLOOR PLAN NUMBER ELEVATION = LETTER DETAIL = NUMBER
	SHEET NUMBER ON WHICH THE PARTIAL PLAN, ELEVATION OR DETAIL IS DRAWN
	SHEET NUMBER WHERE PARTIAL PLAN, ELEVATION OR DETAIL IS TAKEN FROM
	NORTH ARROW
	POINT OF CONNECTION TO EXISTING
	POINT OF DISCONNECTION

A	COMPRESSED AIR
AAV	AUTOMATIC AIR VENT
ACV	AUTOMATIC CONTROL VALVE
AD	ACCESS DOOR, AREA DRAIN
AF	ANTIFREEZE
AFF	ABOVE FINISHED FLOOR
AR	ARGON GAS
ATC	AUTOMATIC TEMPERATURE CONTROL

BAS	BUILDING AUTOMATION SYSTEM
BBD	BOILER BLOWDOWN
BCWR	BEARING COOLING WATER RETURN
BCWS	BEARING COOLING WATER SUPPLY
BDD	BACKDRAFT DAMPER
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BMS	BUILDING MANAGEMENT SYSTEM
BO	BLOW OFF
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR

°C	DEGREE(S) CELSIUS
CA	CONTROL AIR
CBD	CONTINUOUS BLOWDOWN
CC	CAMPUS CONDENSATE
CCMS	CENTRAL CONTROL AND MONITORING SYSTEM
CD	CONDENSATE DRAIN
CF	CHEMICAL FEED
CFM	CUBIC FEET PER MINUTE
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CO	CLEANOUT
CO2	CARBON DIOXIDE
CS	CLEAN STEAM
CW	COLD WATER, CITY WATER
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY

D	DEEP, DRAIN WATER
DB	DECIBEL, DRY BULB
DDC	DIRECT DIGITAL CONTROL
DHR	DISTRIBUTION HEATING WATER RETURN
DHS	DISTRIBUTION HEATING WATER SUPPLY
DIR	DEIONIZED WATER RETURN
DIS	DEIONIZED WATER SUPPLY
DL	DOOR LOUVER
DN	DOWN
DSP	DRY SPRINKLER PIPE
DTR	DUAL TEMPERATURE RETURN
DTS	DUAL TEMPERATURE SUPPLY
DW	DISTILLED WATER

EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EJ	EXPANSION JOINT
EMS	ENERGY MANAGEMENT SYSTEM
ESP	EXTERNAL STATIC PRESSURE
ETC	ETCETERA
EVAC	GAS EVACUATION
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING

°F	DEGREE(S) FAHRENHEIT
F	FIRE LINE
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER, FOUNDATION DRAIN
FDV	FIRE DEPARTMENT VALVE
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FIN/FT	FINS PER FEET
FIN/INCH	FINS PER INCH
FM	FLOWMETER
FMF	FLOWMETER FITTING
FOF	FUEL OIL FILL
FOO	FUEL OIL OVERFLOW
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY

GENERAL ABBREVIATIONS

NOTE: THIS IS A STANDARD ABBREVIATION LIST. SOME ABBREVIATIONS MAY NOT APPEAR ON THE ACCOMPANYING DRAWINGS.

FOT	FUEL OIL TRANSFER
FOV	FUEL OIL VENT
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FT	FOOT, FEET
FWR	FEED WATER RETURN
FWS	FEED WATER SUPPLY

G	NATURAL GAS
GHR	GLYCOL HEATING RETURN
GHS	GLYCOL HEATING SUPPLY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	AUTOMOTIVE LUBRICATION PIPING

H	HIGH
HB	HOSE BIBB
HED	HOSE END DRAIN VALVE
HP	HORSEPOWER
HPR	HIGH PRESSURE STEAM RETURN
HPS	HIGH PRESSURE STEAM SUPPLY
HR	HEATING WATER RETURN
HRR	HEAT RECOVERY RETURN
HRS	HEAT RECOVERY SUPPLY
HS	HEATING WATER SUPPLY
HT	HEIGHT
HTHR	HIGH TEMPERATURE HEATING WATER RETURN
HTHS	HIGH TEMPERATURE HEATING WATER SUPPLY
HW	HOT WATER
HWR	HOT WATER RECIRCULATION
HZ	HERTZ

IA	INSTRUMENT AIR
ICW	INDUSTRIAL COLD WATER
IHW	INDUSTRIAL HOT WATER
IHR	INDUSTRIAL HOT WATER RECIRCULATION
IN	INCH, INCHES
INV EL	INVERT ELEVATION

KW KILOWATTS

L	LONG, LENGTH
LA	LABORATORY AIR
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LBS/HR	POUNDS PER HOUR
LN	LIQUID NITROGEN
LP	LIQUID PROPANE
LPG	LIQUID PETROLEUM GAS
LPR	LOW PRESSURE STEAM RETURN
LPS	LOW PRESSURE STEAM SUPPLY
LV	LABORATORY VENT, LABORATORY VACUUM
LW	LABORATORY WASTE
LWT	LEAVING WATER TEMPERATURE

MA	MEDICAL AIR
MAV	MANUAL AIR VENT
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCC	MOTOR CONTROL CENTER
MO	MOTOR OIL PIPING
MOD	MOTOR OPERATED DAMPER
MPR	MEDIUM PRESSURE STEAM RETURN
MPS	MEDIUM PRESSURE STEAM SUPPLY
MV	MEDICAL VACUUM

N	NITROGEN
NA	NOT APPLICABLE
NC	NOISE CRITERIA, NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NORMALLY OPEN, NITROUS OXIDE
NPSH	NET POSITIVE SUCTION HEAD

O	OXYGEN
OA	OUTSIDE AIR
OD	OVERFLOW DRAIN

OED	OPEN ENDED DUCT
OS&Y	OUTSIDE STEM AND YOKE

P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
PA	PLANT AIR
PC	PUMPED CONDENSATE
PCR	PUMPED CONDENSATE RECIRCULATION
PCHR	PRIMARY CHILLED WATER RETURN
PCHS	PRIMARY CHILLED WATER SUPPLY
PCWR	PROCESS COOLING WATER RETURN
PCWS	PROCESS COOLING WATER SUPPLY
PD	PRESSURE DROP, PUMP DISCHARGE
PGR	PROCESS GLYCOL WATER RETURN
PGS	PROCESS GLYCOL WATER SUPPLY
PH	PHASE
PHR	PRIMARY HEATING RETURN
PHS	PRIMARY HEATING SUPPLY
PIV	POST INDICATING VALVE
PPH	POUNDS PER HOUR
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE

RA	RETURN AIR, RELIEF AIR
RD	REFRIGERANT DISCHARGE
RH	RELATIVE HUMIDITY
RHR	REHEAT WATER RETURN
RHS	REHEAT WATER SUPPLY
RL	REFRIGERANT LIQUID
ROR	REVERSE OSMOSIS WATER RETURN
ROS	REVERSE OSMOSIS WATER SUPPLY
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
RV	RELIEF VENT, REFRIGERANT VENT
RX	REMOVE EXISTING

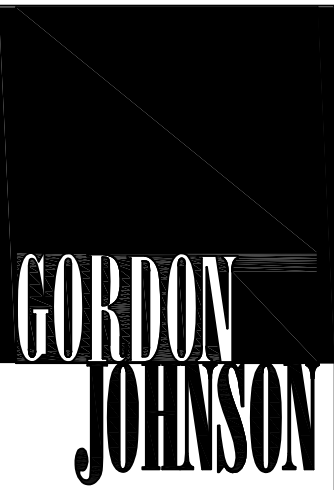
SA	SUPPLY AIR
SAN	SANITARY, SOIL, WASTE
SCHR	SECONDARY CHILLED WATER RETURN
SCHS	SECONDARY CHILLED WATER SUPPLY
SD	STORM DRAIN, SMOKE DETECTOR
SF	SQUARE FOOT
SHR	SECONDARY HEATING WATER RETURN
SHS	SECONDARY HEATING WATER SUPPLY
SL	SOUND LINING
SP	STATIC PRESSURE
SPR	SPRINKLER LINE
SS	STAINLESS STEEL
SQ FT	SQUARE FOOT
SW	SOFT WATER

ΔT	TEMPERATURE DIFFERENCE
TS	TAMPER SWITCH
TSP	TOTAL STATIC PRESSURE
TWR	TEMPERED WATER RETURN
TWS	TEMPERED WATER SUPPLY
TW	TREATED WATER
TYP	TYPICAL

UCD	UNDERCUT DOOR
UL	UNDERWRITERS LABORATORIES

V	VACUUM, VOLTS
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VPD	VACUUM PUMP DISCHARGE
VSD	VARIABLE SPEED DRIVE
VTR	VENT THROUGH ROOF

W	WATTS, WIDE
WB	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE
WH	WALL HYDRANT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH



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07/31/23

Fayetteville Regional Airport Airline Terminal Improvements – Part 3

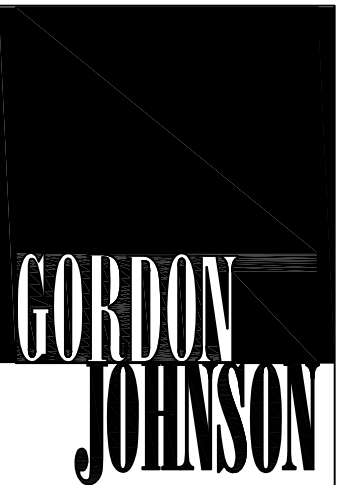
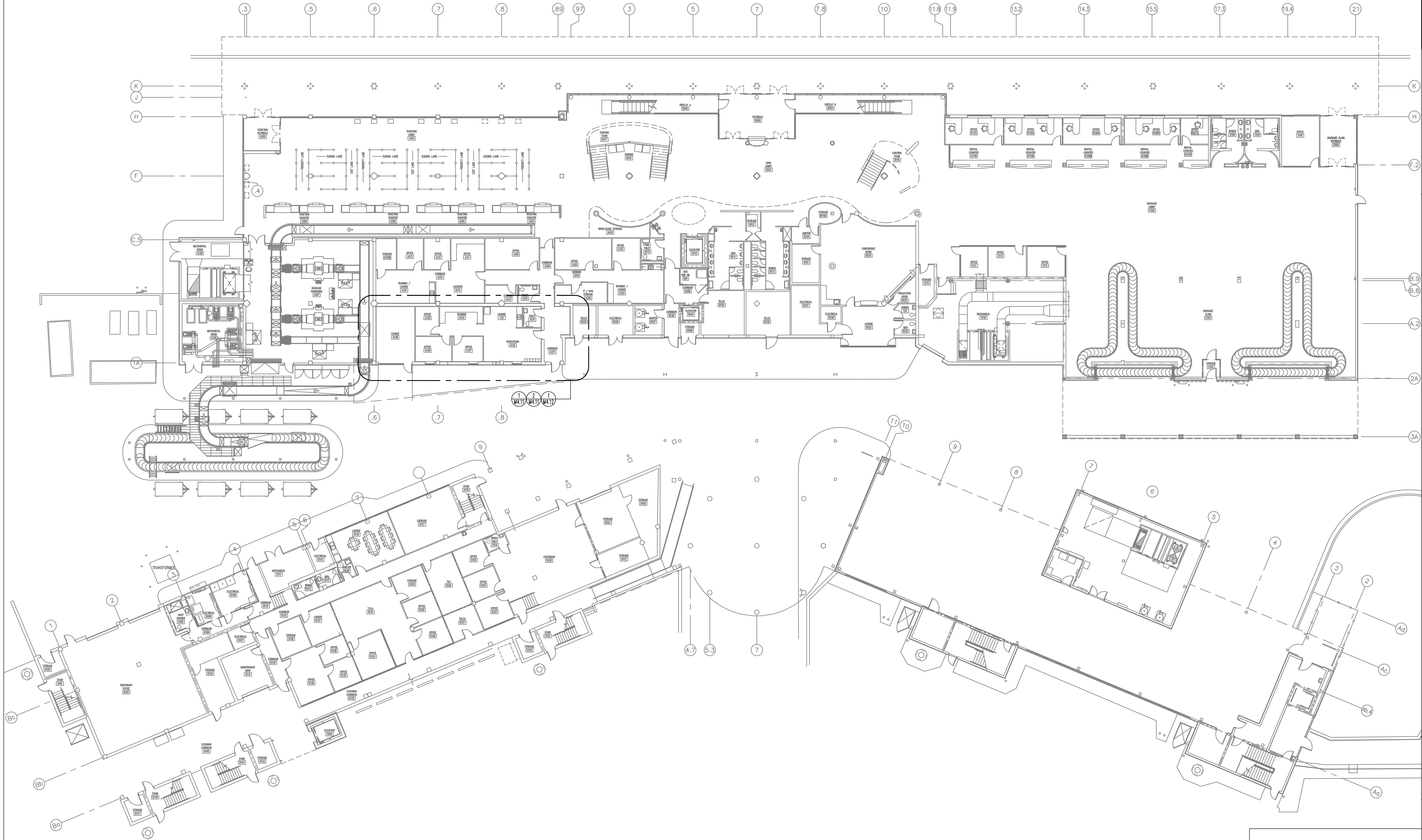
MECHANICAL LEGEND, SYMBOLS AND ABBREVIATIONS

400 Airport Road
Fayetteville, North Carolina 28306

DRAWN BY:	BMC
REVIEWED BY:	ALM
DATE:	7/31/2023
PROJECT NO.:	02230515.A0
NOTES:	

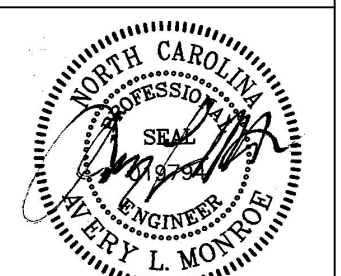
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SHEET NUMBER
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07/31/23

Fayetteville Regional Airport Airline Terminal Improvements – Part 3
FIRST FLOOR OVERALL PLAN
400 Airport Road
Fayetteville, North Carolina 28306

DRAWN BY: BMC
REVIEWED BY: ALM
DATE: 7/31/2023
PROJECT NO.: 02230515.A0
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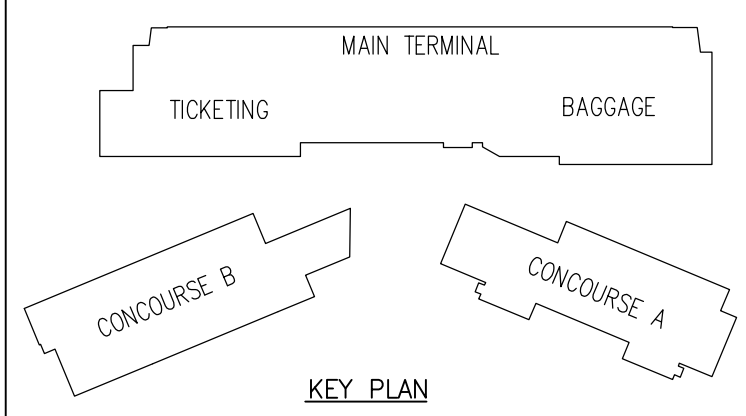
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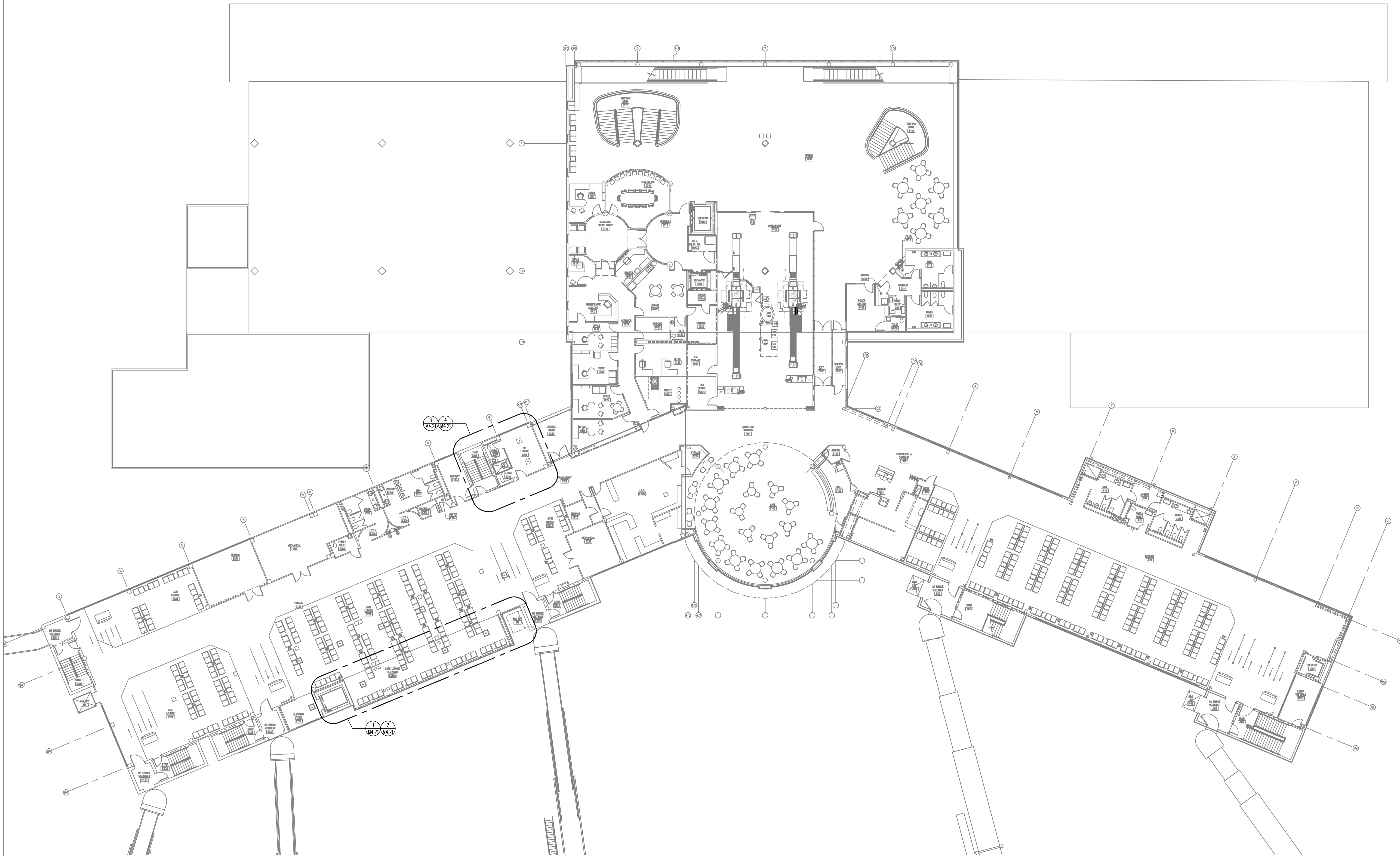
M1.10

FIRE RATED WALL LEGEND
- - - - - 1 HOUR FIRE PARTITION
- - - - - 1 HOUR FIRE BARRIER

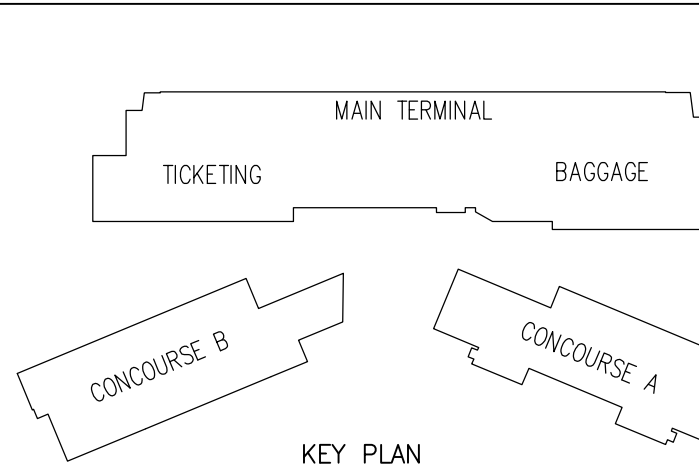


8' 4' 0' 8' 16'
SCALE: 1/16" = 1'-0"





FIRE RATED WALL LEGEND	
---	1 HOUR FIRE PARTITION
---	1 HOUR FIRE BARRIER



MAIN TERMINAL
TICKETING BAGGAGE

CONCOURSE B
CONCOURSE A

KEY PLAN



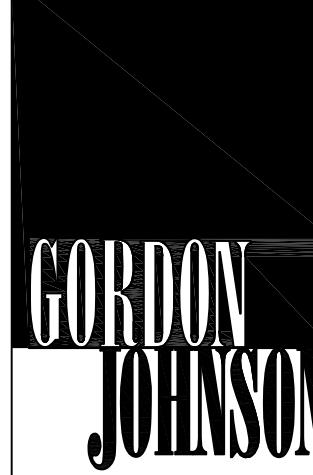
8' 4' 0' 8' 16'
SCALE: 1/16" = 1'-0"

DRAWN BY: BMC
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PROJECT NO.: 02230515.A0
NOTES:

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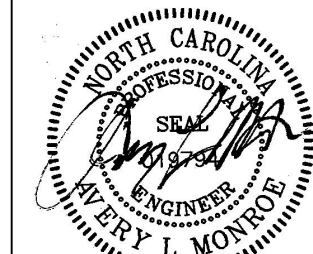
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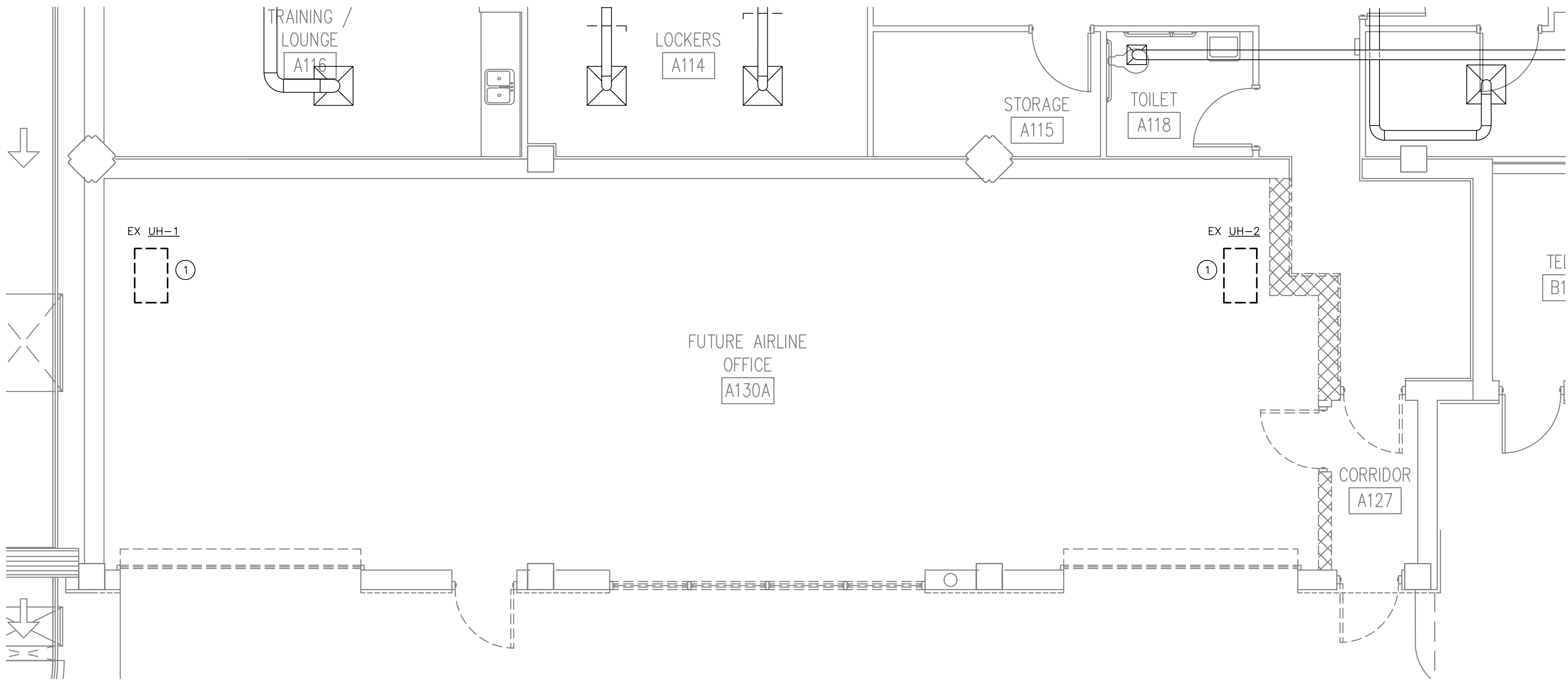
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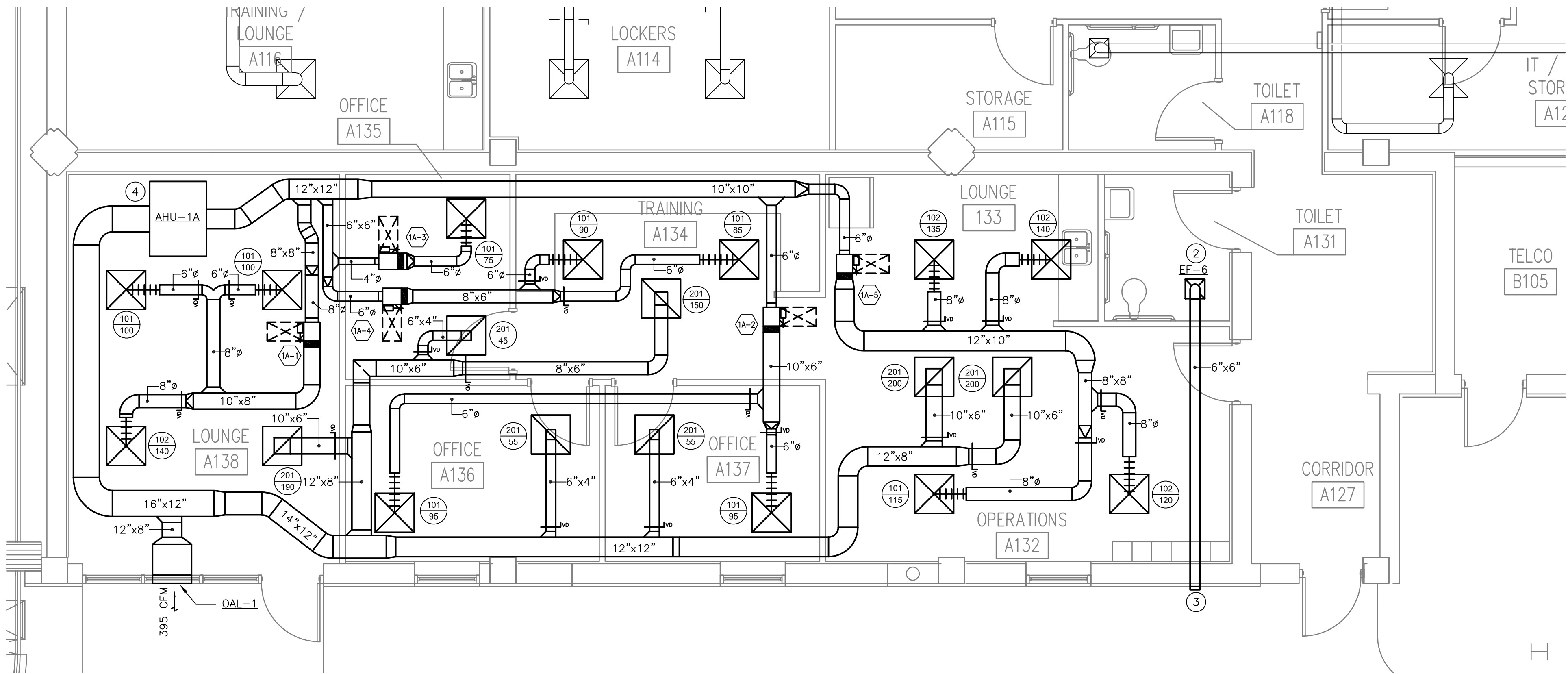


07/31/23

Fayetteville Regional Airport Airline Terminal Improvements – Part 3
SECOND FLOOR OVERALL PLAN
400 Airport Road
Fayetteville, North Carolina 28306



AIRLINE OFFICE DEMOLITION PLAN - MECHANICAL
SCALE: 1/4" = 1'-0"



AIRLINE OFFICE NEW WORK PLAN - DUCTWORK
SCALE: 1/4" = 1'-0"

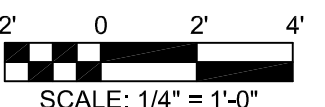
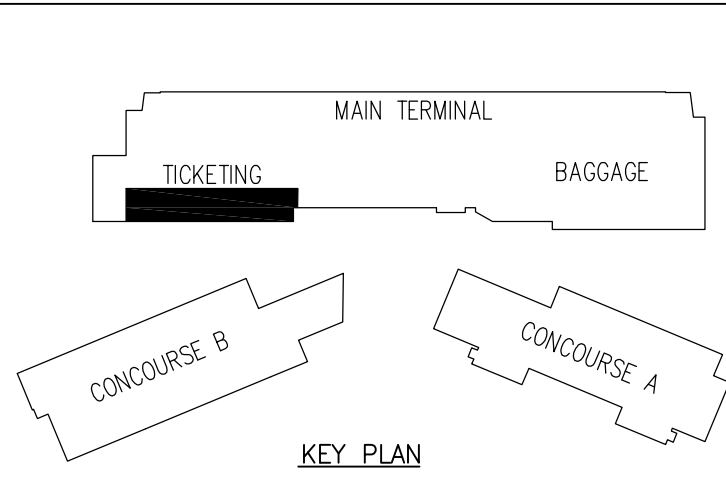
GENERAL NOTES:

- A. NOTIFY THE OWNER, IN WRITING, AT LEAST SEVEN (7) DAYS IN ADVANCE OF ALL REQUIRED SHUTDOWNS OF ELECTRICAL SERVICE, OR OTHER UTILITIES. UPON WRITTEN RECEIPT OF APPROVAL FROM OWNER, SHUTDOWNS SHALL BE ACCOMPLISHED AT NO ADDITIONAL CONTRACT COST. AT THE END OF EACH SHUT DOWN ALL SERVICES SHALL BE RESTORED.
- B. WHEN WORKING IN AND AROUND THE EXISTING BUILDING, EXTREME CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF THE EXISTING STRUCTURE, FIRE PROTECTION, PLUMBING, MECHANICAL AND ELECTRICAL SERVICES WHICH WILL REMAIN, REPAIR, REPLACE, OR RESTORE TO THE SATISFACTION OF THE OWNER ALL EXISTING WORK DAMAGED IN THE PERFORMANCE OF DEMOLITION AND/OR NEW YORK
- C. ALL EXISTING DUCTWORK, EQUIPMENT, PIPING, AND MATERIALS NOT REQUIRED FOR RE-USE OR RE-INSTALLATION (SHOWN OR OTHERWISE) SHALL BE REMOVED. ALL EXISTING MATERIALS AND EQUIPMENT WHICH ARE REMOVED AND ARE DESIRED BY THE OWNER, OR ARE INDICATED TO THE PREMISES BY THE CONTRACTOR WHERE DIRECTED BY THE ENGINEER, ALL OTHER MATERIALS AND EQUIPMENT WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR FROM THE PREMISES.
- D. EXISTING CONDITIONS, I.E., PRESENCE AND LOCATION OF DUCTWORK, DIFFUSERS, PIPING, EQUIPMENT, AND MATERIALS, INDICATED ARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETE OR CORRECT. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF ALL CONDUITS, EQUIPMENT, AND MATERIALS IN THE FIELD PRIOR TO STARTING ALL WORK.
- E. EXISTING EQUIPMENT SIZES NOTED ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND ARE NOT WARRANTED TO BE CORRECT. CONTRACTOR SHALL VERIFY ALL SIZES IN THE FIELD IF THEY EFFECT HIS WORK.
- F. WHEN EXISTING MECHANICAL WORK IS REMOVED, ALL DUCTWORK, PIPING OR BEHIND FINISHED WALLS AND CAPPED. SUCH POINTS SHALL BE FAR ENOUGH BEHIND FINISHED SURFACES TO ALLOW FOR THE INSTALLATION OF THE NORMAL THICKNESS OF FINISHED MATERIAL.
- G. EXISTING DUCTWORK & PIPING NO LONGER REQUIRED TO REMAIN IN SERVICE (SHOWN OR OTHERWISE) SHALL BE DISCONNECTED AND REMOVED BACK THE MAIN UNLESS OTHERWISE INDICATED OR NOTED ON THE PLANS. REMOVE EXISTING PIPE HANGERS, SUPPORTS, ETC..
- H. EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT, CONDUIT, WIRING, DEVICES, AND MATERIALS AFFECTED BY DEMOLITION OR NEW WORK INSTALLATION AND REQUIRED TO REMAIN IN SERVICE SHALL BE REINSTALLED OR SUPPORTED AS REQUIRED IN ACCORDANCE WITH NEW WORK SPECIFICATION. ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE ENGINEER AND AT NO ADDITIONAL CONTRACT COST.
- I. PATCH TO MATCH EXISTING ALL NEW AND EXISTING OPENING AND WALLS, CEILINGS, ROOF, AND FLOOR SURFACES DAMAGED OR CREATED BY DEMOLITION WORK. PATCHING WHERE POSSIBLE SHALL MATCH EXISTING ADJACENT SURFACES AS TO THICKNESS, TEXTURES, MATERIALS, AND COLOR. ALL PATCHING SHALL BE PERFORMED TO THE SATISFACTION OF THE ARCHITECT AND AT NO ADDITIONAL CONTRACT COST.
- J. IN GENERAL ALL EQUIPMENT AND MATERIALS SHOWN "LIGHT" IS EXISTING TO REMAIN. ALL EQUIPMENT AND MATERIALS SHOWN "HEAVY AND HATCHED" IS EXISTING AND SHALL BE DEMOLISHED.

DRAWING NOTES:

- ① REMOVE EXISTING ELECTRIC UNIT HEATER.
- ② PROVIDE NEW EXHAUST FAN, EF-6. FAN SHALL OPERATE THROUGH AN OCCUPANCY SENSOR. SEE SCHEDULE FOR ADDITIONAL INFORMATION.
- ③ TERMINATE EXHAUST DUCTWORK WITH A 45 DEGREE ELBOW DOWN OUTSIDE EXTERIOR WALL. PROVIDE BIRD SCREEN AT OPENING.
- ④ NEW AHU-1A SHALL BE INSTALLED ABOVE THE CEILING.

FIRE RATED WALL LEGEND	
---	1 HOUR FIRE PARTITION
---	1 HOUR FIRE BARRIER



DRAWN BY: BMC
REVIEWED BY: ALM
DATE: 7/31/2023
PROJECT NO.: 02230515.A0
NOTES: _____

REVISIONS

NO.	DESCRIPTION	DATE

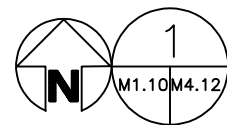
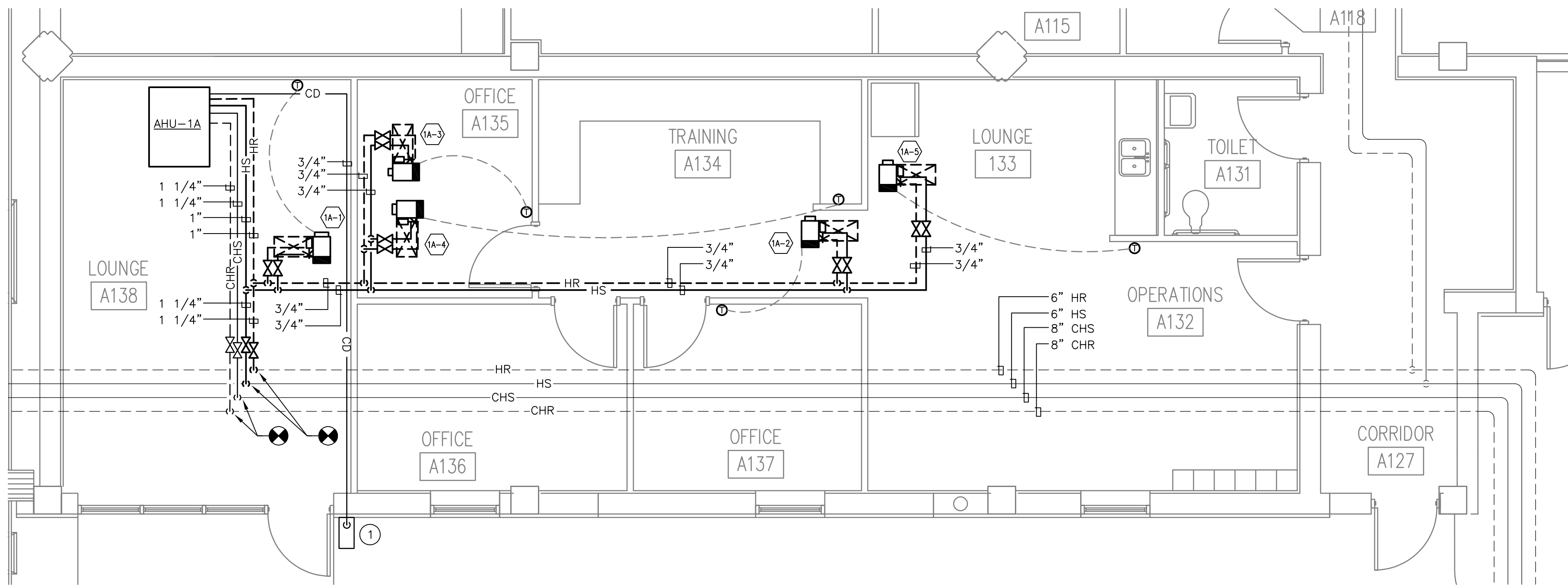
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M4.11

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NORTH CAROLINA
REGISTERED
ENGINEERS
GORDON E. JOHNSON
07/31/23



AIRLINE OFFICE NEW WORK PLAN - HVAC PIPING

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

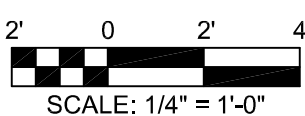
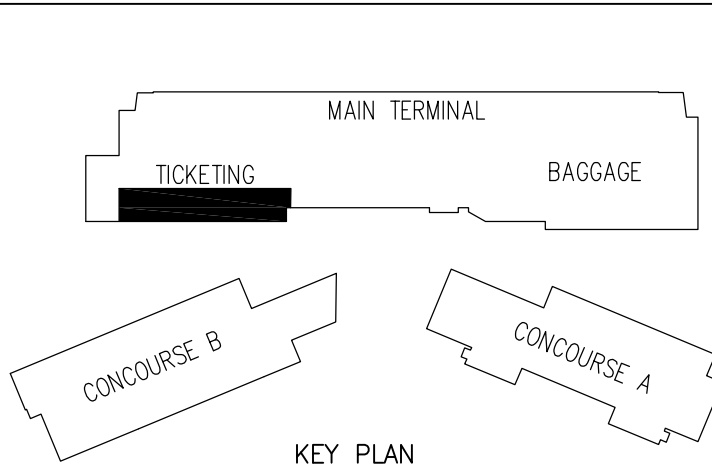
GENERAL NOTES:

- A. NOTIFY THE OWNER, IN WRITING, AT LEAST SEVEN (7) DAYS IN ADVANCE OF ALL REQUIRED SHUTDOWNS OF ELECTRICAL SERVICE, OR OTHER UTILITIES. UPON WRITTEN RECEIPT OF APPROVAL FROM OWNER, SHUTDOWNS SHALL BE ACCOMPLISHED AT NO ADDITIONAL CONTRACT COST. AT THE END OF EACH SHUT DOWN ALL SERVICES SHALL BE RESTORED.
- B. WHEN WORKING IN AND AROUND THE EXISTING BUILDING, EXTREME CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF THE EXISTING STRUCTURE, FIRE PROTECTION, PLUMBING, MECHANICAL AND ELECTRICAL SERVICES WHICH WILL REMAIN, REPAIR, REPLACE, OR RESTORE TO THE SATISFACTION OF THE OWNER ALL EXISTING WORK DAMAGED IN THE PERFORMANCE OF DEMOLITION AND/OR NEW WORK
- C. ALL EXISTING DUCTWORK, EQUIPMENT, PIPING, AND MATERIALS NOT REQUIRED FOR RE-USE OR RE-INSTALLATION (SHOWN OR OTHERWISE) SHALL BE REMOVED. ALL EXISTING MATERIALS AND EQUIPMENT WHICH ARE REMOVED AND ARE DESIRED BY THE OWNER, OR ARE INDICATED TO THE PREMISES BY THE CONTRACTOR WHERE DIRECTED BY THE ENGINEER, ALL OTHER MATERIALS AND EQUIPMENT WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR FROM THE PREMISES.
- D. EXISTING CONDITIONS, I.E., PRESENCE AND LOCATION OF DUCTWORK, DIFFUSERS, PIPING, EQUIPMENT, AND MATERIALS, INDICATED ARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETE OR CORRECT. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF ALL CONDUITS, EQUIPMENT, AND MATERIALS IN THE FIELD PRIOR TO STARTING ALL WORK.
- E. EXISTING EQUIPMENT SIZES NOTED ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND ARE NOT WARRANTED TO BE CORRECT. CONTRACTOR SHALL VERIFY ALL SIZES IN THE FIELD IF THEY EFFECT HIS WORK.
- F. WHEN EXISTING MECHANICAL WORK IS REMOVED, ALL DUCTWORK, PIPING AND MATERIALS SHALL BE REMOVED TO A POINT BELOW THE FINISHED FLOORS OR BEHIND FINISHED WALLS AND CAPPED. SUCH POINTS SHALL BE FAR ENOUGH BEHIND FINISHED SURFACES TO ALLOW FOR THE INSTALLATION OF THE NORMAL THICKNESS OF FINISHED MATERIAL.
- G. EXISTING DUCTWORK & PIPING NO LONGER REQUIRED TO REMAIN IN SERVICE (SHOWN OR OTHERWISE) SHALL BE DISCONNECTED AND REMOVED BACK THE MAIN UNLESS OTHERWISE INDICATED OR NOTED ON THE PLANS. REMOVE EXISTING PIPE HANGERS, SUPPORTS, ETC..
- H. EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT, CONDUIT, WIRING, DEVICES, AND MATERIALS AFFECTED BY DEMOLITION OR NEW WORK INSTALLATION AND REQUIRED TO REMAIN IN SERVICE SHALL BE REINSTALLED OR SUPPORTED AS REQUIRED IN ACCORDANCE WITH NEW WORK SPECIFICATION. ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE ENGINEER AND AT NO ADDITIONAL CONTRACT COST.
- I. PATCH TO MATCH EXISTING ALL NEW AND EXISTING OPENING AND WALLS, CEILINGS, ROOF, AND FLOOR SURFACES DAMAGED OR CREATED BY DEMOLITION WORK. PATCHING WHERE POSSIBLE SHALL MATCH EXISTING ADJACENT SURFACES AS TO THICKNESS, TEXTURES, MATERIALS, AND COLOR. ALL PATCHING SHALL BE PERFORMED TO THE SATISFACTION OF THE ARCHITECT AND AT NO ADDITIONAL CONTRACT COST.
- J. IN GENERAL ALL EQUIPMENT AND MATERIALS SHOWN "LIGHT" IS EXISTING TO REMAIN. ALL EQUIPMENT AND MATERIALS SHOWN "HEAVY AND HATCHED" IS EXISTING AND SHALL BE DEMOLISHED.

DRAWING NOTES:

- ① ROUTE 3/4" CONDENSATE DRAIN PIPING FOR AHU-1A TO THE EXTERIOR OF THE BUILDING. PROVIDE CONCRETE SPLASH BLOCK.

FIRE RATED WALL LEGEND	
---	1 HOUR FIRE PARTITION
- - -	1 HOUR FIRE BARRIER



DRAWN BY: BMC
REVIEWED BY: ALM
DATE: 7/31/2023
PROJECT NO.: 02230515.A0
NOTES: _____

REVISIONS	
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SHEET NUMBER

M4.12

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NORTH CAROLINA
REGISTERED
ENGINEER
MURRAY L. MONROE

07/31/23

Fayetteville Regional Airport Airline Terminal Improvements – Part 3

FIRST FLOOR MECHANICAL ENLARGED PLAN

Fayetteville Regional Airport Airline Terminal Improvements – Part 3

400 Airport Road
Fayetteville, North Carolina 28306

A. NOTIFY THE OWNER, IN WRITING, AT LEAST SEVEN (7) DAYS IN ADVANCE OF ALL REQUIRED SHUTDOWNS OF ELECTRICAL SERVICE, OR OTHER UTILITIES. UPON WRITTEN RECEIPT OF APPROVAL FROM OWNER, SHUTDOWNS SHALL BE ACCOMPLISHED AT NO ADDITIONAL CONTRACT COST. AT THE END OF EACH SHUT DOWN ALL SERVICES SHALL BE RESTORED.

B. WHEN WORKING IN AND AROUND THE EXISTING BUILDING, EXTREME CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF THE EXISTING STRUCTURE, FIRE PROTECTION, PLUMBING, MECHANICAL AND ELECTRICAL SERVICES WHICH WILL REMAIN. REPAIR, REPLACE, OR RESTORE TO THE SATISFACTION OF THE OWNER ALL EXISTING WORK DAMAGED IN THE PERFORMANCE OF DEMOLITION AND/OR NEW YORK

C. ALL EXISTING DUCTWORK, EQUIPMENT, PIPING, AND MATERIALS NOT REQUIRED FOR RE-USE OR RE-INSTALLATION (SHOWN OR OTHERWISE) SHALL BE REMOVED. ALL EXISTING MATERIALS AND EQUIPMENT WHICH ARE REMOVED AND OWNED BY THE OWNER OR ARE INHERENT TO THE PREMISES BY THE CONTRACTOR WHERE DIRECTED BY THE ENGINEER, ALL OTHER MATERIALS AND EQUIPMENT WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR FROM THE PREMISES.

E. EXISTING EQUIPMENT SIZES NOTED ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND ARE NOT WARRANTED TO BE CORRECT. CONTRACTOR SHALL VERIFY ALL SIZES IN THE FIELD IF THEY EFFECT HIS WORK.

F. WHEN EXISTING MECHANICAL WORK IS REMOVED, ALL DUCTWORK, PIPING AND MATERIALS SHALL BE REMOVED TO A POINT BELOW THE FINISHED FLOORS OR BEHIND FINISHED WALLS AND CAPPED. SUCH POINTS SHALL BE FAR ENOUGH BEHIND FINISHED SURFACES TO ALLOW FOR THE INSTALLATION OF THE NORMAL THICKNESS OF FINISHED MATERIAL.

G. EXISTING DUCTWORK & PIPING NO LONGER REQUIRED TO REMAIN IN SERVICE (SHOWN OR OTHERWISE) SHALL BE DISCONNECTED AND REMOVED BACK THE MAIN UNLESS OTHERWISE INDICATED OR NOTED ON THE PLANS. REMOVE EXISTING PIPE HANGERS, SUPPORTS, ETC..

1. PATCH TO MATCH EXISTING ALL NEW AND EXISTING OPENING AND WALLS, CEILINGS, ROOF, AND FLOOR SURFACES DAMAGED OR CREATED BY DEMOLITION WORK. PATCHING WHERE POSSIBLE SHALL MATCH EXISTING ADJACENT SURFACES AS TO THICKNESS, TEXTURES, MATERIALS, AND COLOR. ALL PATCHING SHALL BE PERFORMED TO THE SATISFACTION OF THE ARCHITECT AND AT NO ADDITIONAL CONTRACT COST.

J. IN GENERAL ALL EQUIPMENT AND MATERIALS SHOWN "LIGHT" IS EXISTING TO REMAIN. ALL EQUIPMENT AND MATERIALS SHOWN "HEAVY AND HATCHED" IS EXISTING AND SHALL BE DEMOLISHED.

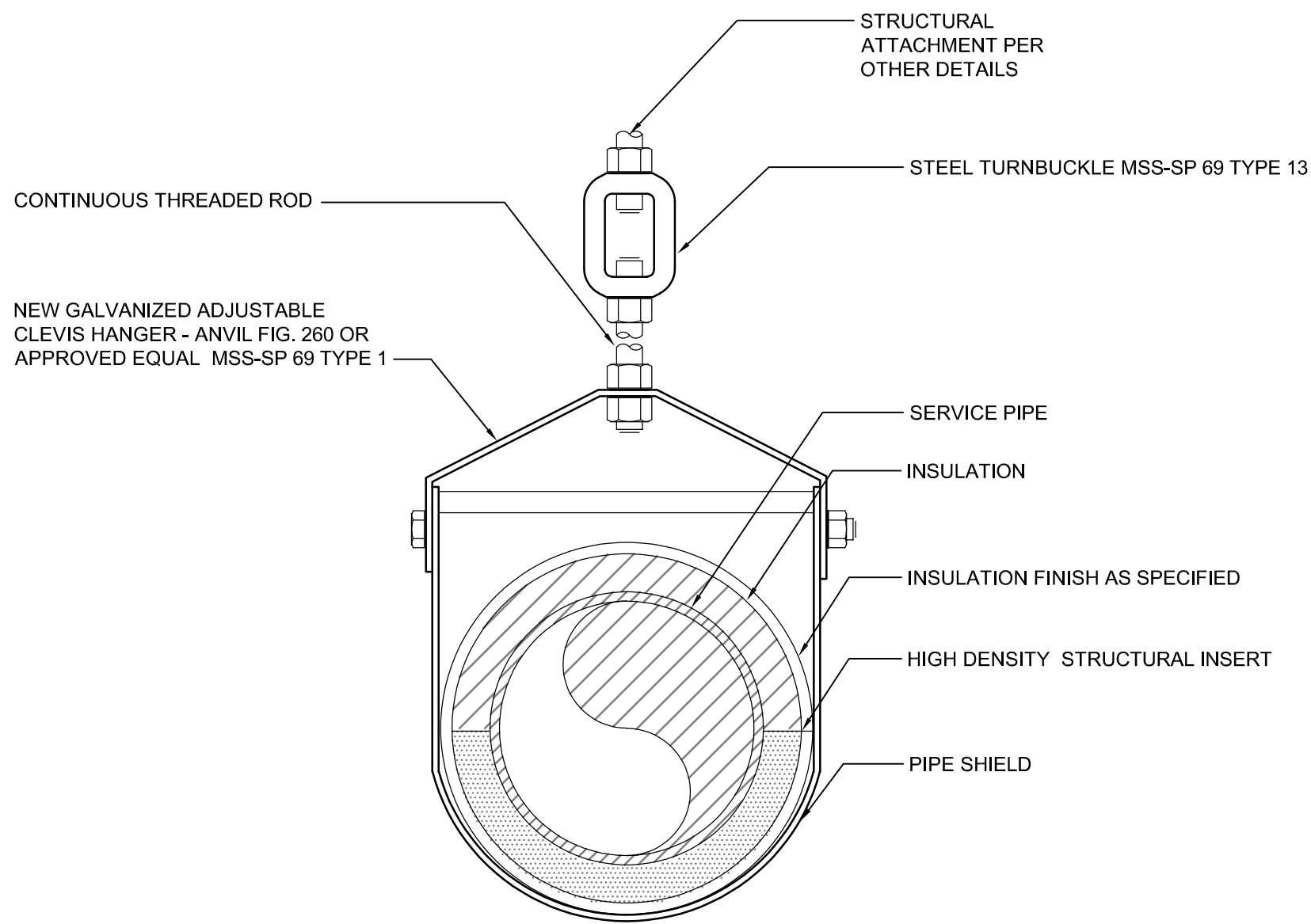


- (1) REMOVE CONTINUOUS LINEAR SLOT DIFFUSER. PATCH OPENING IN THE CEILING TO MATCH EXISTING
- (2) REMOVE CONTINUOUS SLOT DIFFUSER BACK TO THIS POINT. CAP OPEN END OF SUPPLY PLENUM ABOVE THE CEILING.
- (3) EXISTING CONTINUOUS SLOT DIFFUSER TO REMAIN.
- (4) DISCONNECT LINEAR SLOT DIFFUSER SUPPLY DUCTWORK FROM THE MAIN AND CAP.
- (5) CONNECT NEW SUPPLY DUCTWORK TO EXISTING MAIN.
- (6) REMOVE EXISTING FF-B5. MAINTAIN EXISTING 8"x8" DUCTWORK.
- (7) PROVIDE NEW EXHAUST FAN FF-B5. CONNECT NEW 8"Ø DUCTWORK TO THE EXISTING 8"x8" DUCTWORK. EXTEND DUCTWORK AS NEEDED TO MAKE FINAL CONNECTION. NEW FAN SHALL OPERATE THROUGH AN OCCUPANCY SENSOR. SEE SCHEDULE FOR ADDITIONAL INFORMATION.
- (8) EXISTING SUPPLY DIFFUSER TO REMAIN.
- (9) DISCONNECT EXISTING SUPPLY DIFFUSER AND RELOCATE TO ALIGN WITH THE NEW CEILING GRID IN TOILET E217.
- (10) RELOCATE EXISTING SUPPLY DIFFUSER TO ALIGN WITH THE NEW CEILING GRID IN TOILET E217. EXTEND FLEX DUCTWORK AS NEEDED. DO NOT EXCEED 5'-0" OF FLEX DUCTWORK. REBALANCE AIRFLOW BACK TO THE EXISTING VALUE SHOWN.
- (11) BLANK OFF NEW LINEAR SLOT DIFFUSER. PLENUM BOX IS NO REQUIRED.



FIRE RATED WALL LEGEND

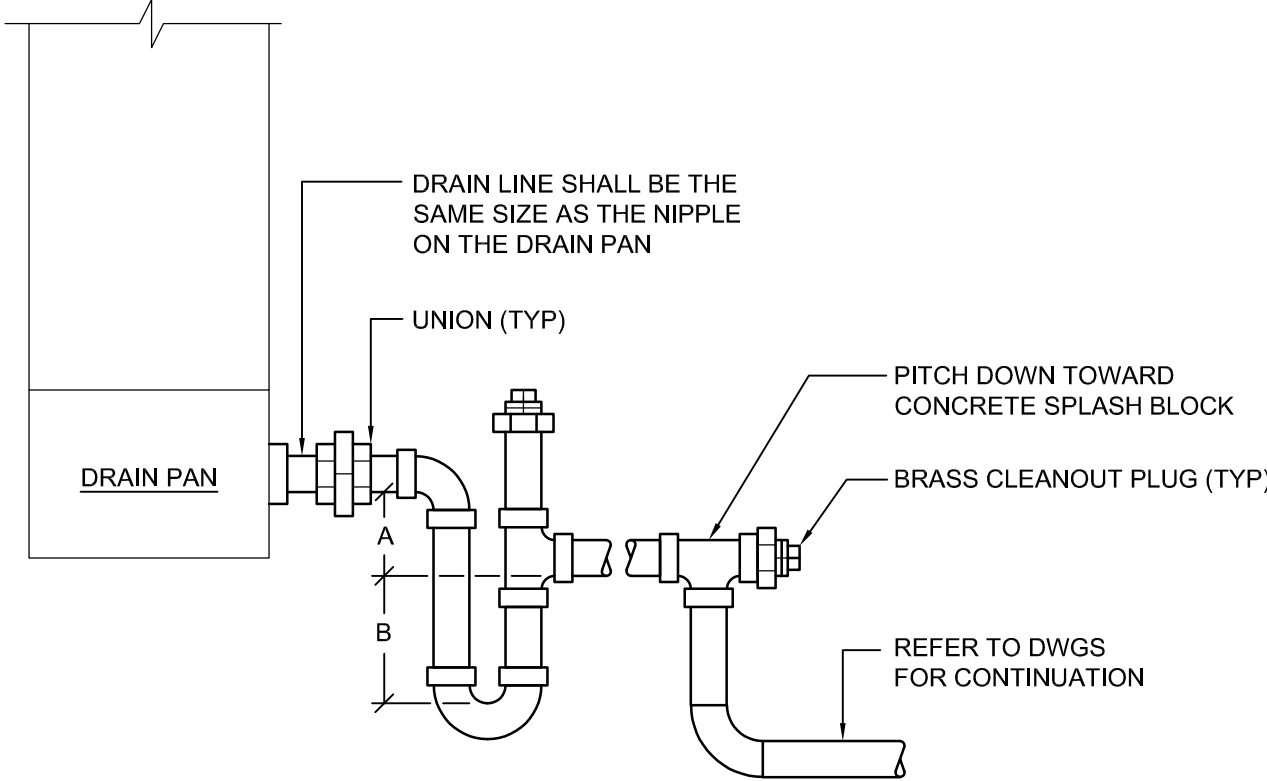
	1 HOUR FIRE PARTITION
	1 HOUR FIRE BARRIER



- NOTES:
- FOR NON INSULATED PIPES, OUTSIDE PIPE WALL SHALL REST DIRECTLY ON INNER WALL OF CLEVIS HANGER.

DETAIL - CLEVIS HANGER

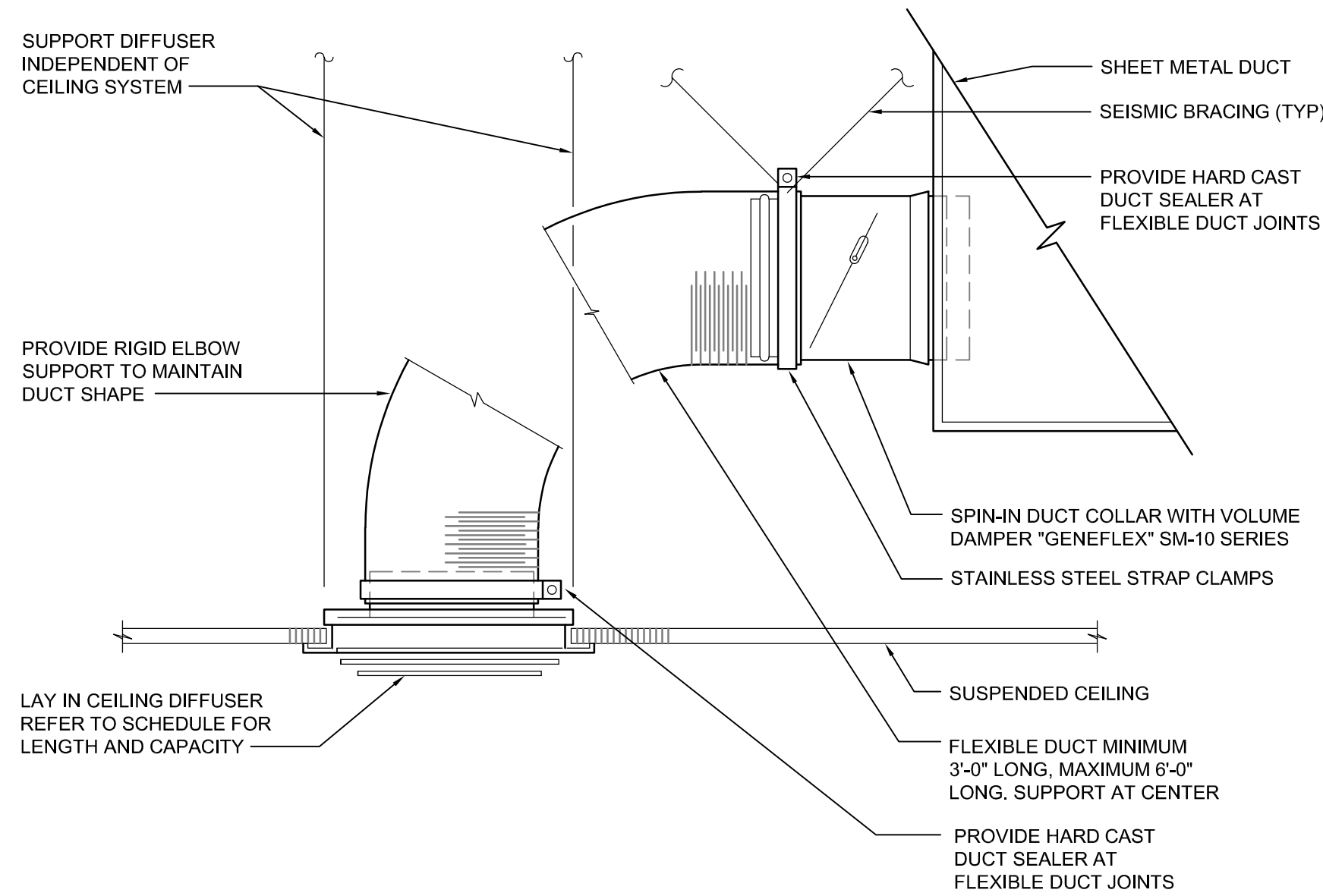
SCALE: NONE 4



- NOTE:
- FOR THE DRAW THRU FAN COIL UNIT:
- A = THE FCU SUPPLY FAN TOTAL STATIC PRESSURE (INCHES) PLUS TWO (2) INCHES.
- B = THE FCU SUPPLY FAN TOTAL STATIC PRESSURE (INCHES)

DETAIL - COIL CONDENSATE DEEP SEAL TRAP

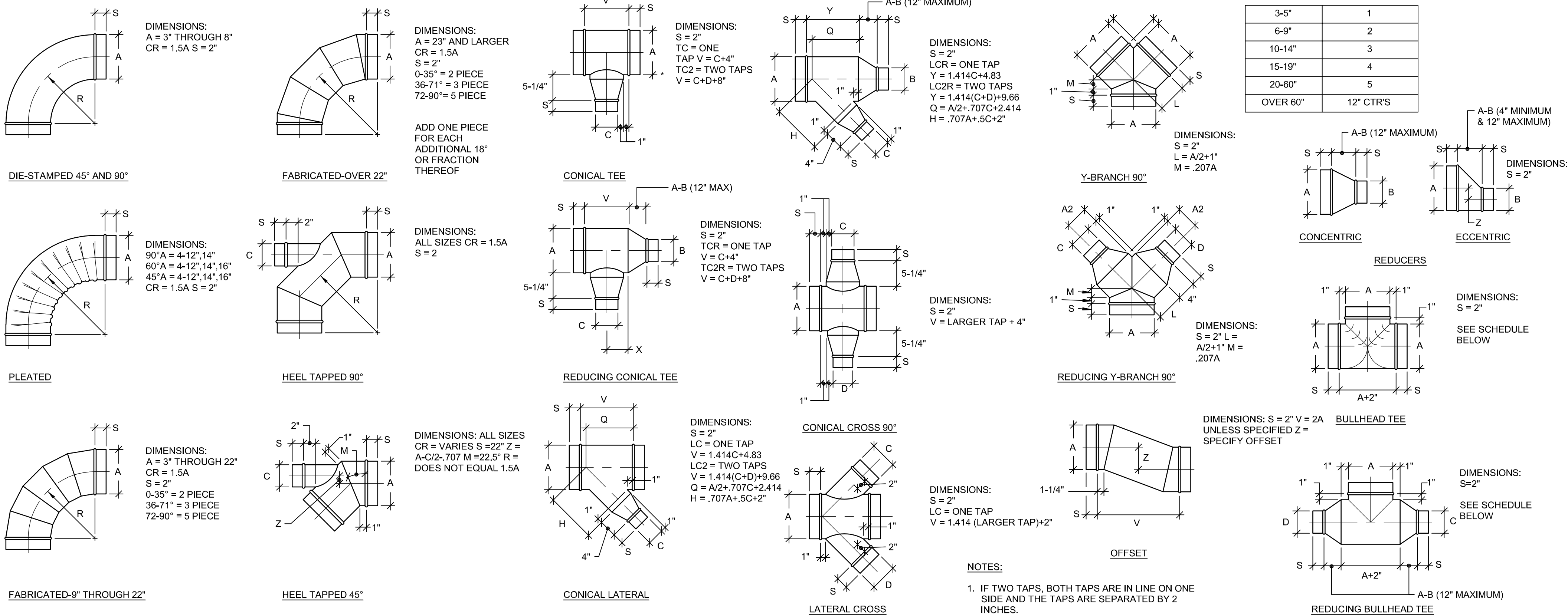
SCALE: NONE 6



- NOTES :
- DUCT INSULATION SHALL BE PROVIDED AS SPECIFIED.
 - PROVIDE ADDITIONAL ROUND, RIGID SHEET METAL DUCTWORK AS REQUIRED TO LIMIT FLEXIBLE DUCT LENGTH TO 6'-0" MAXIMUM.
 - MAXIMUM SAG 1/2" PER FOOT.
 - PROVIDE SEISMIC SWAY BRACING FOR ALL DUCTWORK AND HANGERS PER THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
 - CONTRACTOR SHALL VERIFY MAXIMUM LOADING ON DUCTWORK SUPPORT ASSEMBLIES.

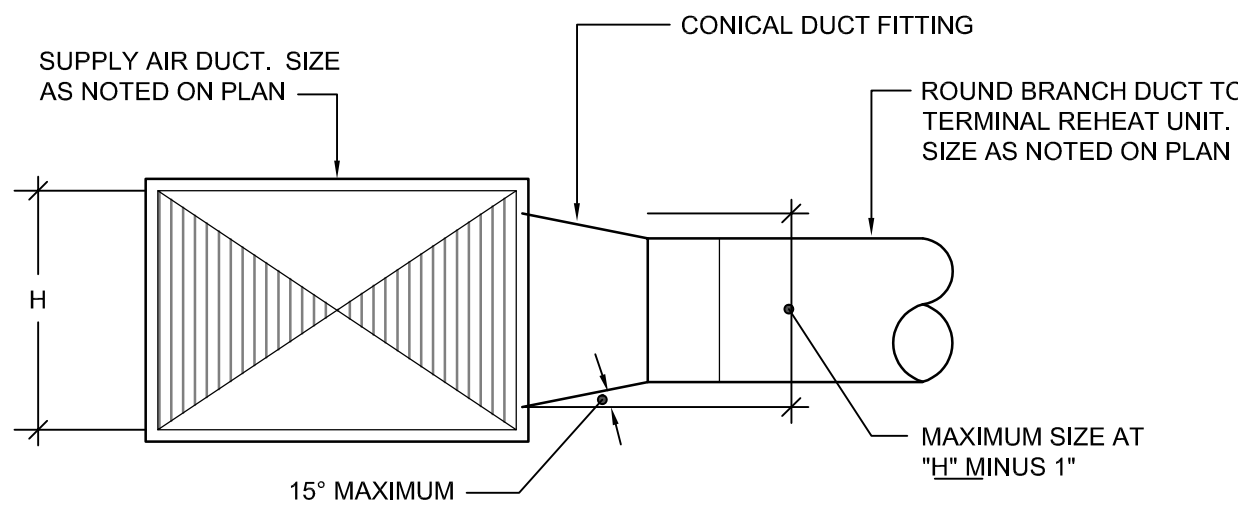
DETAIL - CEILING DIFFUSER BRANCH DUCT

SCALE: NONE 3



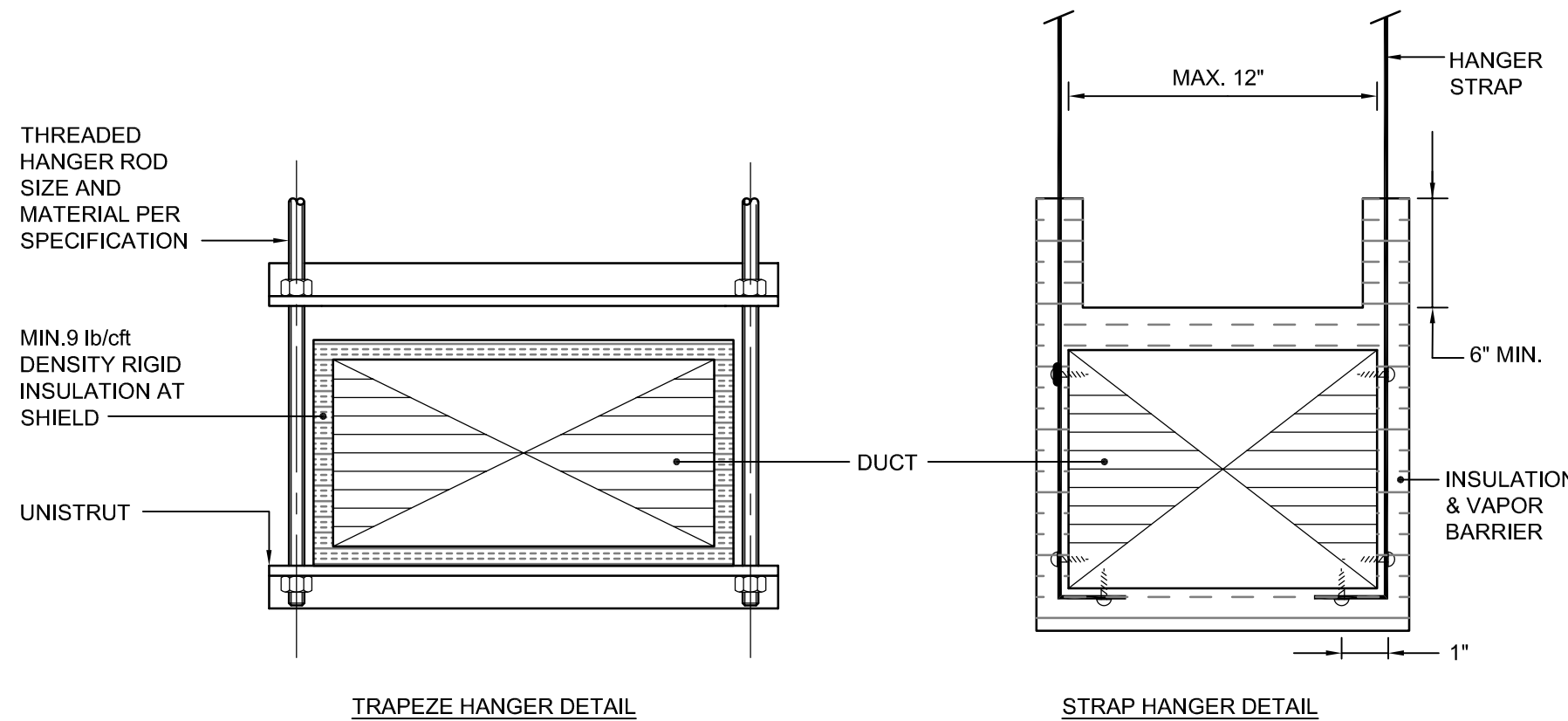
DETAIL - ROUND DUCT FITTINGS

SCALE: NONE 5



DETAIL - CONICAL DUCT FITTING

SCALE: NONE 1



- NOTES:
- TRAPEZE HANGERS SHALL BE PROVIDED FOR ALL DUCT WORK. TRAPEZE HANGERS CANNOT BE USED FOR BRANCH DUCT WORK 12" IN WIDTH AND SHORTER REFER TO STRAP HANGER DETAIL.
 - SUPPORTS SHALL BE SPACED AND SIZED AS PER SPECIFICATIONS.
 - RIGID INSULATION SHALL EXTEND MINIMUM OF 3" BEYOND STRUT ON BOTH SIDES. MAINTAIN VAPOR BARRIER ACROSS STRUT.

DETAIL - DUCT SUPPORT

SCALE: NONE 2

[illegible]

AIR HANDLING UNIT SCHEDULE																																
DESIGNATION	SERVICE	FAN SECTION					COOLING SECTION										HEATING SECTION								ELECTRICAL				APPROX WEIGHT (LBS)	REMARKS		
		CFM	MIN. OA CFM	ESP INCH H ₂ O	MOTOR NO.	HP	EAT °F		LAT °F		TOTAL MBH	SENS MBH	GPM @ 44°F 56°F EWT LWT	MAXIMUM H ₂ O PD FT H ₂ O	MIN TOTAL FACE AREA (SF)	MAXIMUM FACE VEL FPM	MIN ROWS	EAT °F	LAT °F	MBH @180°F EWT	GPM @30°F ΔT	MAXIMUM H ₂ O PD FT H ₂ O	MAXIMUM AIR PD IN H ₂ O	MIN TOTAL FACE AREA (SF)	MAXIMUM FACE VEL FPM	MIN ROWS	V/PH/Hz	FLA			MCA	MOCP
AHU-1A	AIRLINE OFFICES	1,290	395	1.20	1	1.5	81.6	67.14	52.77	51.69	57	39	10.0	8.0	—	490	4	40	60	28	1.85	2.0	0.1	—	490	1	480/3/60	2.5	3.13	15.0	221.9	1, 2, 3, 4, 5, 6

- NOTES:
1. PROVIDE FIELD MOUNTED VFD W/DISCONNECT & BYPASS W/BACNET INTERFACE.
 2. SEE SPECIFICATION 237313 FOR EQUIVALENT MANUFACTURERS.
 3. SUPPORT AHU FROM STRUCTURE ABOVE
 4. PROVIDE 2" PLEATED MERV 13 FILTER
 5. BASIS OF DESIGN: TRANE BCHE054
 6. PROVIDE OVERFLOW DRAIN PAN THAT DISABLES THE UNIT AND SENDS A SIGNAL TO THE BAS WHEN WATER IS DETECTED.

FAN SCHEDULE														
DESIGNATION	SERVICE	CFM	SP INCH H ₂ O	APPROX RPM	BHP	HP (MOTOR SIZE)	DRIVE	ELECTRICAL				APPROX WEIGHT (LBS)	BASIS OF DESIGN (GREENHECK)	REMARKS
								V/PH/Hz	FLA	MCA	MOP			
EF-6	TOILET A131	75	0.5	773	0.01	—	DIRECT	115/1/60	0.29	0.4	15	8	SP-LP0511-1	1, 3, 4
EF-B5	TOILET E217	150	0.5	825	0.07	—	DIRECT	115/1/60	0.46	0.6	15	23	CSP-A200	2, 3, 4

- NOTES:
1. PROVIDE UL LISTING, DISCONNECT SWITCH, HANGING SPRING ISOLATORS AND 45 DEGREE DISCHARGE WITH BIRD SCREEN AND BACKDRAFT DAMPER.
 2. PROVIDE UL LISTING, DISCONNECT SWITCH AND HANGING SPRING ISOLATORS.
 3. FAN SHALL BE OPERATED BY OCCUPANCY SENSOR.
 4. SEE SPECIFICATIONS FOR EQUIVALENT MANUFACTURERS.

AIR DEVICE SCHEDULE						
<div>No</div> <div>CFM</div>	SERVICE	CFM	SIZE	BLOW	BASIS OF DESIGN	REMARKS
101	SUPPLY	0-115	24"x24"	4-WAY	PRICE - SPD	6"ø NECK
102	SUPPLY	116-205	24"x24"	4-WAY	PRICE - SPD	8"ø NECK
121	SUPPLY	0-190	6"Wx4'-0"L	—	PRICE - SDS75	6" ø NECK, 3 SLOTS, 3/4" SLOT SPACING OPPOSED, TECH ZONE
201	RETURN	0-1600	24"x24"	—	PRICE - SMDA	24"x24" NECK

- NOTE:
1. LINEAR SLOT DIFFUSER SHOULD BE SUPPLIED WITH A PLENUM BOX.
 2. PROVIDE INSULATION FOR ALL DIFFUSERS AND GRILLES WITH PLENUM BOXES.
 3. PROVIDE VOLUME DAMPERS FOR ALL SUPPLY DIFFUSERS, RETURN, AND EXHAUST GRILLES.
 4. SEE SPECIFICATION 233713 FOR EQUIVALENT MANUFACTURERS.

VARIABLE AIR VOLUME TERMINAL REHEAT UNIT SCHEDULE																
DESIGNATION <div>No</div>	SERVICE	TYPE	COOLING CFM		HEATING CFM		INLET SIZE	OUTLET SIZE	MINIMUM INLET SP INCH WG	MAXIMUM NC VALUE @1.0 INCH WG INLET SP	HEATING COIL PERFORMANCE				BASIS OF DESIGN	REMARKS
			MAXIMUM	MINIMUM	MAXIMUM	MINIMUM					EAT °F	LAT °F	MBH @180°F EWT	GPM @30°F ΔT		
1A-1	LOUNGE A138	VAV	340	105	170	105	6"	10"x10"	1	30	53	100	8.26	0.8	NAILOR - D30RW	1, 2
1A-2	OFFICE A136 & A137	VAV	190	60	145	60	6"	10"x10"	1	30	53	100	7.05	0.7	NAILOR - D30RW	1, 2
1A-3	OFFICE A135	VAV	75	35	35	35	4"	10"x10"	1	30	53	100	1.70	0.2	NAILOR - D30RW	1, 2
1A-4	TRAINING A134	VAV	175	90	90	90	6"	10"x10"	1	30	53	100	4.37	0.4	NAILOR - D30RW	1, 2
1A-5	OPERATIONS A132 & LOUNGE 133	VAV	510	315	315	315	8"	12"x12"	1	30	53	100	15.31	1.5	NAILOR - D30RW	1, 2

- NOTE:
1. SEE SPECIFICATION 233600 FOR EQUIVALENT MANUFACTUERS.
 2. MOUNT TERMINAL UNITS NO MORE THAN 24" ABOVE CEILING.

OUTSIDE AIR LOUVER SCHEDULE							
DESIGNATION	SERVICE	TYPE	DIMENSIONS		GROSS AREA	FREE AREA	MAX VELOCITY (FT/MIN)
			LENGTH	HEIGHT			
OAL-1	AHU-1A	DRAINABLE COMBINATION MOROTRIZED LOUVER DAMPER	24"	12"	2 SF	0.79	500

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07/31/23

Fayetteville Regional Airport Airline Terminal Improvements – Part 3

MECHANICAL SCHEDULES

Fayetteville Regional Airport Airline Terminal Improvements – Part 3

400 Airport Road
Fayetteville, North Carolina 28306

DRAWN BY: BMC
REVIEWED BY: ALM
DATE: 7/31/2023
PROJECT NO.: 02230515.A0
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