GENERAL MECHANICAL SYMBOLS

REVISION NUMBER - SHOWN ON PLANS

POINT WHERE NEW CONNECTS TO EXISTING

NUMBER OF DETAIL ON SHEET
NUMBER OF SHEET WHERE DETAIL APPEARS

KEYNOTE

CONTINUATION SYMBOL

Room
ROOM NAME AND NUMBER
1

ITEM TO BE DEMOLISHED

AREA NOT IN CONTRACT

HVAC SYMBOLS

16"x8" — SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)

16"/8" — OVAL DUCT SIZE TAG (WIDTH / HEIGHT)

16"Ø — ROUND DUCT SIZE TAG (DIAMETER)

(E) — EXISTING DUCT TAG

DUCT BEING DEMOLISHED

S/A — SUPPLY AIR

S-O/A — SUPPLY AIR (100% OUTSIDE AIR)

O/A — OUTSIDE AIR

R/A — RETURN AIR

T/A — TRANSFER AIR

E/A — EXHAUST AIR

L/A — RELIEF AIR

GE/A — GREASE EXHAUST AIR

SE/A — SMOKE EXHAUST AIR

FLUE — EXHAUST GAS FLUE

C/A — COMBUSTION AIR

DROP — RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE

DROP — ROUND SUPPLY/OUTSIDE AIR DUCT RISE

DROP — RECTANGULAR RETURN/TRANSFER AIR DUCT RISE

DROP — ROUND RETURN/TRANSFER AIR DUCT RISE

DROP — RECTANGULAR EXHAUST/RELIEF AIR DUCT RISE

DROP — ROUND EXHAUST/RELIEF AIR DUCT RISE

SUPPLY OUTLET — RETURN/EXHAUST INLET

SECTORIZING BAFFLE OR BLANKOFF PANEL

S2 / 0 — TYPE (SEE SCHEDULE) / GRILLES, REGISTERS, AND DIFFUSERS TAG

CFM

LINEAR DIFFUSER

S7 / 0 — TYPE (SEE SCHEDULE) / LINEAR DIFFUSER TAG

CFM

MECHANICAL EQUIPMENT

? — MECHANICAL EQUIPMENT TAG

EXISTING MECHANICAL EQUIPMENT

? — EXISTING MECHANICAL EQUIPMENT TAG (TYPICAL FOR ALL EXISTING TAGS)

MECHANICAL EQUIPMENT FOR REFERENCE

? — MECHANICAL EQUIPMENT TAG (REFER TO OTHER DISCIPLINE FOR ADDITIONAL INFORMATION)

CO — CARBON DIOXIDE SENSOR

D — DUCT SMOKE DETECTOR

H — HUMIDITY SENSOR

E — E-STOP

T — TEMPERATURE SENSOR

FIRE DAMPER — F

SMOKE DAMPER — S

MOTORIZED DAMPER — M

MANUAL BALANCING DAMPER — B

BACKDRAFT DAMPER — D

COMBINATION FIRE/SMOKE DAMPER — C

PIPING SYMBOLS

2" — PIPE SIZE TAG (DIAMETER)

ABOVE GROUND PIPING

1/8" / 12" SLOPE — PIPE SLOPE TAG

BELOW GROUND PIPING

INVERT: -10' - 1" — PIPE INVERT ELEVATION TAG

(E) — EXISTING PIPE TAG

PIPING BEING DEMOLISHED

CD — CONDENSATE DRAINAGE

HWR — HEATING WATER RETURN

HWS — HEATING WATER SUPPLY

G — NATURAL GAS

PG — PROPANE GAS

REF-L — REFRIGERANT-LIQUID

REF-S — REFRIGERANT-SUCTION

REF-HG — REFRIGERANT-HOT GAS

PIPE DROP

PIPE RISE

PIPE TEE

CAP

4" 4" 2" 4" — PLUG / REDUCING 45 DEGREE TEE / 45 DEGREE TEE

DOMESTIC WATER METER

FLOW MEASURING AND BALANCING DEVICE

BALL VALVE

CHECK VALVE

THREE WAY VALVE

MOTORIZED CONTROL VALVE

THREE WAY MOTORIZED CONTROL VALVE

PRESSURE REDUCING VALVE

SOLENOID VALVE

BUTTERFLY VALVE

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	FP	FIRE PUMP
ACC	AIR COOLED CONDENSER	GI	GREASE INTERCEPTOR
ACCU	AIR COOLING CONDENSING UNIT	GRV	GRAVITY ROOF VENTILATOR
AFMS	AIR FLOW MEASURING STATION	H	HUMIDIFIER
AHU	AIR HANDLING UNIT	HWP	HEATING WATER PUMP
AS	AIR SEPARATOR	HX	HEAT EXCHANGER
B	BOILER	HPU	HEAT PUMP UNIT
CF	CABINET FAN	HRU	HEAT RECOVERY UNIT
CF	CHEMICAL FEEDER	ILC	INLINE CENTRIFUGAL
CFP	CHEMICAL FEEDER PUMP	PF	PROPELLER FAN
CH	CHILLER	PV	POWER VENTILATOR
CRU	CONDENSATE RETURN UNIT	PWF	POWER WALL FAN
CT	COOLING TOWER	RE	RETURN/EXHAUST FAN
CUH	CABINET UNIT HEATER	RTU	ROOFTOP UNIT
CWP	CONDENSER WATER PUMP	SA	SHOCK ABSORBER
CHWP	CHILLED WATER PUMP	SAT	SOUND ATTENUATOR
DAH	DUCTLESS AIR HANDLER	SEP	SEWAGE EJECTOR PUMP
DHP	DUCTLESS HEAT PUMP	SF	SUPPLY FAN
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EUH	ELECTRIC UNIT HEATER	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	US	UTILITY SET
ET	EXPANSION TANK	UV	UNIT VENTILATOR
EWH	ELECTRIC WATER HEATER	VAV	VARIABLE AIR VOLUME
FCU	FAN COIL UNIT	WH	WATER HEATER

ABBREVIATIONS

&	AND	ID	INDIRECT
Ø	ROUND	IN	INCH
A	AIR	INL	INLET
AB	ABOVE BASE	INSUL	INSULATION
ABV	ABOVE	INT	INTERIOR
AC	AIR CONDITIONING	INV	INVERT
ACOUS	ACOUSTICAL	INWG	INCHES WATER GAUGE
AD	AREA DRAIN	JST SPC	JOIST SPACE
ADD	ADDENDUM	JT	JOINT
ADDL	ADDITIONAL	LAB	LABORATORY
AFF	ABOVE FINISHED FLOOR	LB	POUND
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	LB/HR	POUNDS PER HOUR
AG	ABOVE GROUND	LAT	LEAVING AIR TEMPERATURE
ALT	ALTERNATE	LF	LINEAL FOOT
ALUM	ALUMINUM	LOC	LOCATION
AP	ACCESS PANEL	LP	LOW PRESSURE
APPROX	APPROXIMATE	LPG	LIQUEFIED PETROLEUM GAS
ARCH	ARCHITECT/ARCHITECTURAL	LR	LIQUID REFRIGERANT
AV	ACID RESISTANT VENT	LS	LAWN SPRINKLER
AW	ACID RESISTANT WASTE	L	LOUVER
AUTO	AUTOMATIC	LWT	LEAVING WATER TEMPERATURE
BFF	BELOW FINISHED FLOOR	M/A	MIXED AIR
BLDG	BUILDING	MAN	MANUAL
BLW	BELOW	MATL	MATERIAL
BM	BEAM	MAV	MANUAL AIR VENT
BO	BY OTHER	MAX	MAXIMUM
BOT	BOTTOM	MBD	MOTORIZED BYPASS DAMPER
BSMT	BASEMENT	MBH	ONE THOUSAND BTU PER HOUR
BTU	BRITISH THERMAL UNITS	MCF	ONE THOUSAND CUBIC FEET
BTUH	BRITISH THERMAL UNITS PER HOUR	MCW	MAKE-UP COLD WATER
BTWN	BETWEEN	MD	MOTORIZED DAMPER
CAP	CAPACITY	MECH	MECHANICAL
CB	CATCH BASIN	MFR	MANUFACTURER
CCW	COUNTER CLOCKWISE	MH	MANHOLE
CFCV	CONSTANT FLOW CONTROL VALVE	MIN	MINIMUM
CFM	CUBIC FEET PER MINUTE	MISC	MISCELLANEOUS
CHW	CIRCULATING HOT WATER	MTR	MOTOR
CI	CAST IRON	MU/A	MAKE-UP/AIR
CLG	CEILING	N	NECK
CLG	COOLING	NC	NOISE CRITERIA
CO	CLEAN OUT	NC	NORMALLY CLOSED
COL	COLUMN	NIC	NOT IN CONTRACT
COMB	COMBINATION	NO	NUMBER
CONC	CONCRETE	NO	NORMALLY OPEN
COND	CONDENSATE	NOM	NOMINAL
CONF	CONFERENCE	NTS	NOT TO SCALE
CONN	CONNECT	O	OXYGEN
CONST	CONSTRUCTION	O/A	OUTSIDE AIR
CONT	CONTINUE/CONTINUATION	OC	ON CENTER
CONTR	CONTRACT/CONTRACTOR	OF	OVERFLOW
COORD	COORDINATE	OPNG	OPENING
CTR	CENTER	ORD	OVERFLOW ROOF DRAIN
CUFT	CUBIC FEET	PD	PRESSURE DROP
CV	CHECK VALVE	PIV	POST INDICATOR VALVE
CW	COLD WATER	PLBG	PLUMBING
CW	CLOCKWISE	PR	PAIR
D	DEGREE	PREL	PRELIMINARY
DB	DRY BULB	PRESS	PRESSURE
DET	DETAIL	PRIM	PRIMARY
DIA	DIAMETER	PRV	PRESSURE REDUCING VALVE
DIAG	DIAGONAL	PSI	POUNDS PER SQUARE INCH
DISCH	DISCHARGE	PSIG	POUNDS PER SQUARE INCH GAUGE
DIV	DIVISION	PW	POTABLE WATER
DI	DEIONIZED WATER	PWR	POWER
DMPR	DAMPER	R	DUCT RISER
DN	DOWN	R/A	RETURN AIR
DWG	DRAWING	RCP	RADIANT CEILING PANEL
DW	DISTILLED WATER	RD	ROOF DRAIN
EA	EACH	REC	RECESSED
EAT	ENTERING AIR TEMPERATURE	RED	REDUCER
EL	ELBOW	REFR	REFRIGERATION
ELEC	ELECTRICAL	RH	RELATIVE HUMIDITY
ELEV	ELEVATION	REQD	REQUIRED
EP	EXPLOSION PROOF	REV	REVERSE
EQ	EQUAL	RL/A	RELIEF AIR
EQUIP	EQUIPMENT	RM	ROOM
EWC	ELECTRIC WATER COOLER	RPM	REVOLUTIONS PER MINUTE
EWT	ENTERING WATER TEMPERATURE	RW	RAIN WATER
E/A	EXHAUST AIR	SF	SQUARE FOOT
EAH	EXHAUST HOOD	S/A	SUPPLY AIR
EXIST	EXISTING	SAN	SANITARY
EXP	EXPANSION	SCHED	SCHEDULE
EXPJT	EXPANSION JOINT	SECT	SECTION
EXT	EXTERIOR	SF	SQUARE FOOT
F	DEGREES FAHRENHEIT	SD	SMOKE DAMPER
FCO	FLOOR CLEAN OUT	SHT	SHEET
FD	FLOOR DRAIN	SIM	SIMILAR
FD	FIRE DAMPER	SLV	SLEEVE
FDV	FIRE DEPARTMENT VALVE	SM	SURFACE MOUNT
FHC	FIRE HOSE CABINET	SP	STANDPIPE
FL	FLOOR	SP	STATIC PRESSURE
FLEX	FLEXIBLE	SPEC	SPECIFICATION
FLG	FLANGE	SPS	STATIC PRESSURE STATION
FO	FUEL OIL	SQ	SQUARE
FOV	FUEL OIL VENT	SR	SUCTION REFRIGERANT
FOR	FUEL OIL RETURN	SSD	SOIL SUBDRAIN
FOS	FUEL OIL SUPPLY	SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FRP	FIBERGLASS REINFORCED PIPE	STM	STEAM
FS	FULL SIZE	STRUCT	STRUCTURAL
FS	FLOOR SINK	SUCT	SUCTION
FT	FOOT/FEET	SUSP	SUSPENDED
FTG	FOOTING	T	THERMOSTAT
FTR	FIN TUBE RADIATION	TCP	TEMPERATURE CONTROL PANEL
FUT	FUTURE	TD	TEMPERATURE DROP
GA	GAGE/GAUGE	TDR	TRENCH DRAIN
GAL	GALLON	TEFC	TOTALLY ENCLOSED FAN COOLED
GALV	GALVANIZED	TEMP	TEMPERATURE
GC	GENERAL CONTRACTOR	TYP	TYPICAL
GEN	GENERATOR	UFD	UNDER FLOOR DUCT
GENL	GENERAL	UG	UNDERGROUND
GPH	GALLONS PER MINUTE	VAC	VACUUM
GR	GRADE	V	VENT
GW	GREASE WASTE	VAV	VARIABLE AIR VOLUME
HB	HOSE BIB	VEL	VELOCITY
HD	HEAD	VENT	VENTILATION
HORZ	HORIZONTAL	VERT	VERTICAL
HP	HORSE POWER	VOL	VOLUME
HP	HIGH PRESSURE	VTR	VENT THROUGH ROOF
HTG	HEATING	W	WASTE
HTR	HEATER	WB	WET BULB
HW	HOT WATER	WCO	WALL CLEAN OUT
HYD	HYDRANT	WH	WALL HYDRANT

ENERGY SUMMARY

ENERGY REQUIREMENTS:
THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE ENERGY CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENER...

CLIMATE ZONE:	3A
METHOD OF COMPLIANCE:	
X PRESCRIPTIVE ([2018 NCECC][ENERGY CODE])	
PERFORMANCE ([[2018 NCECC][ENERGY CODE]])	
PRESCRIPTIVE (ASHRAE 90.1)	
PERFORMANCE (ASHRAE 90.1)	
THERMAL ENVELOPE	
ROOF CEILING ASSEMBLY (EACH ASSEMBLY)	
DESCRIPTION OF ASSEMBLY:	INSIDE SURFACE RESISTANCE, METAL DECKING, SELF ADHERED AIR/VAPOR BARRIER, R-39 RIGID INSULATION, SINGLE PLY ROOFING, OUTSIDE...
U-VALUE OF TOTAL ASSEMBLY:	0.025 BTU/HR/SF/F
R-VALUE OF INSULATION:	R-39 (HR-SF-F)/B...
SKYLIGHTS IN EACH ASSEMBLY:	-
U-VALUE OF SKYLIGHT:	-
TOTAL SQ.FT OF SKYLIGHTS IN...	-
EXTERIOR WALLS (EACH ASSEMBLY)	
DESCRIPTION OF ASSEMBLY:	INSIDE SURFACE RESISTANCE, 1" LINER PANEL, 8" GIR, 4" INSULATED METAL PANEL, OUTSIDE SURFACE RESISTANCE
U-VALUE OF TOTAL ASSEMBLY:	0.03 BTU/HR/SF/F
R-VALUE OF INSULATION:	R-32 (HR-SF-F)/B...
OPENINGS (WINDOWS OR...	
U-VALUE OF TOTAL ASSEMBLY	0.45 BTU/HR/SF/F
SHADING COEFFICIENT:	0.29
PROJECTION FACTOR:	<0.5
DOOR R-VALUES:	R-3 (HR-SF-F)/B...
WALLS BELOW GRADE (EACH...	
DESCRIPTION OF ASSEMBLY:	12"CONCRETE SLAB
U-VALUE OF TOTAL ASSEMBLY:	0.5 BTU/HR/SF/F
R-VALUE OF INSULATION:	N/A
FLOORS OVER UNCONDITIONE...	
DESCRIPTION OF ASSEMBLY:	N/A
U-VALUE OF TOTAL ASSEMBLY:	N/A
R-VALUE OF INSULATION:	N/A
FLOORS SLAB ON GRADE	
DESCRIPTION OF ASSEMBLY:	4"CONCRETE SLAB
U-VALUE OF TOTAL ASSEMBLY:	0.9 BTU/HR/SF/F
R-VALUE OF INSULATION:	N/A
HORIZONTAL/VERTICAL...	N/A
SLAB HEATED:	N/A

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

CLIMATE ZONE	3A - WARM/HUMID
WINTER DRY BULB:	23 °F
SUMMER DRY BULB	93 °F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	70 °F
SUMMER DRY BULB	75 °F
RELATIVE HUMIDITY	60% RH*
	*DESIGN- NOT CONTROLLED
BUILDING HEATING LOAD:	27.9 ...
BUILDING COOLING LOAD:	123.8 MBH
MECHANICAL SPACING CONDITIONING...	
UNITARY	
DESCRIPTION OF UNIT:	SEE SCHEDULES
HEATING EFFICIENCY:	SEE SCHEDULES
COOLING EFFICIENCY:	SEE SCHEDULES
SIZE CATEGORY OF UNIT:	SEE SCHEDULES
BOILER	
SIZE CATEGORY, IF OVERSIZED...	...
CHILLER	
SIZE CATEGORY, IF OVERSIZED...	...
LIST EQUIPMENT EFFICIENCIES:	SEE SCHEDULES

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M MARKS
19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS
ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL ABBREVIATIONS, LEGEND, & SUMMARY

ISSUE BLOCK

Mark	Date	Description

PROJECT NO: 2025265.00
DATE: 08/19/2026
SCALE:
DRAWN BY: MEZ | PROJ MGR: DMH

M-001

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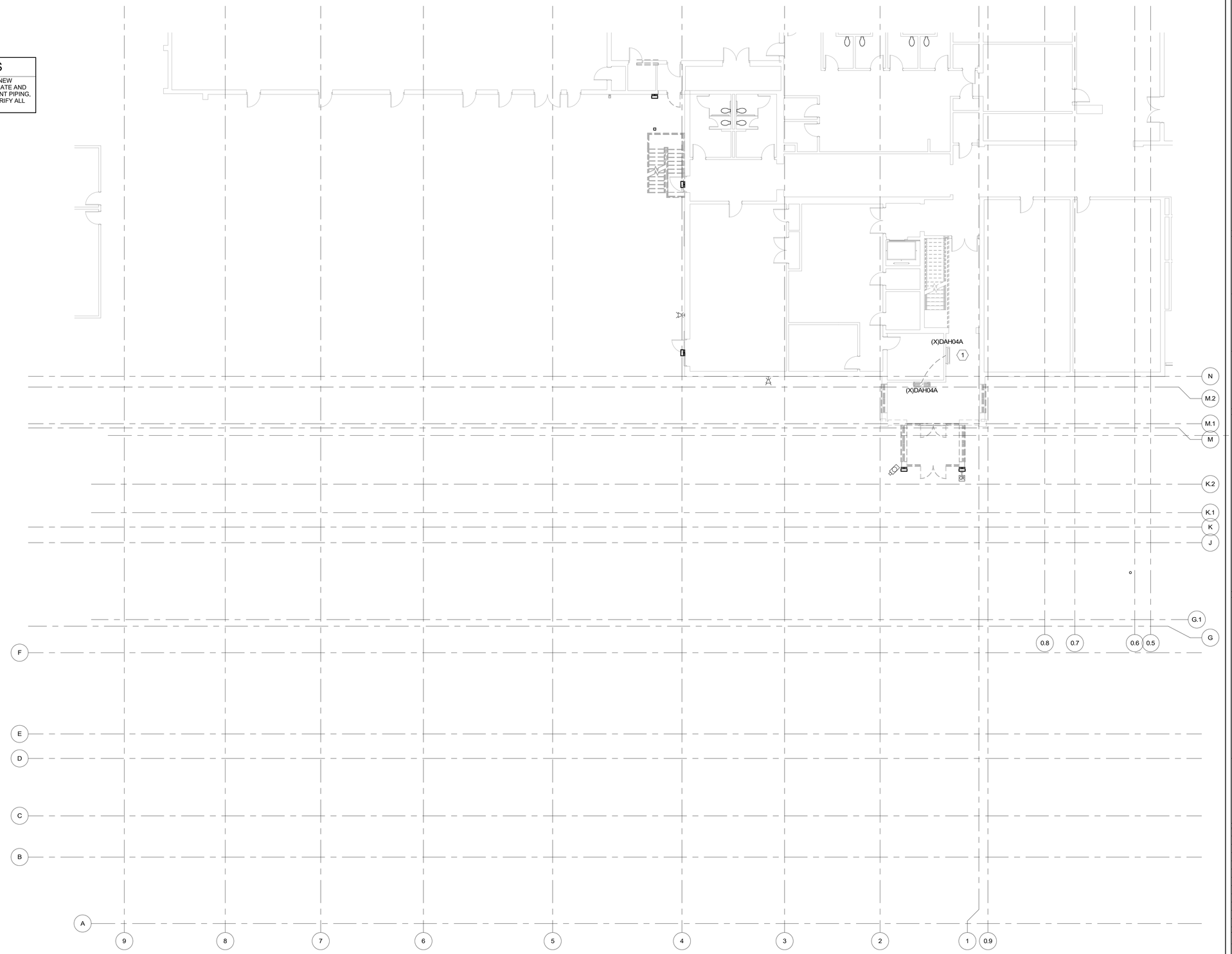
FIRE WALL LEGEND

1 HOUR-RATED BARRIER

DEMOLITION KEYED NOTES

1	RELOCATE EXISTING WALL-MOUNTED UNIT (DAH04A) TO NEW LOCATION SHOWN. CONTRACTOR SHALL FIELD-COORDINATE AND PROVIDE ALL NECESSARY EXTENSIONS FOR REFRIGERANT PIPING, CONDENSATE DRAIN LINES, POWER, AND CONTROLS. VERIFY ALL EXISTING CONDITIONS PRIOR TO DISCONNECTION.



1 FIRST FLOOR PLAN - HVAC DEMO

SCALE: 3/32" = 1'-0"

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M. HAHN

19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS

ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL FIRST FLOOR DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description

PROJECT NO:	2025265.00
DATE:	08/19/2026
SCALE:	As indicated
DRAWN BY: MEZ	PROJ MGR: DMH

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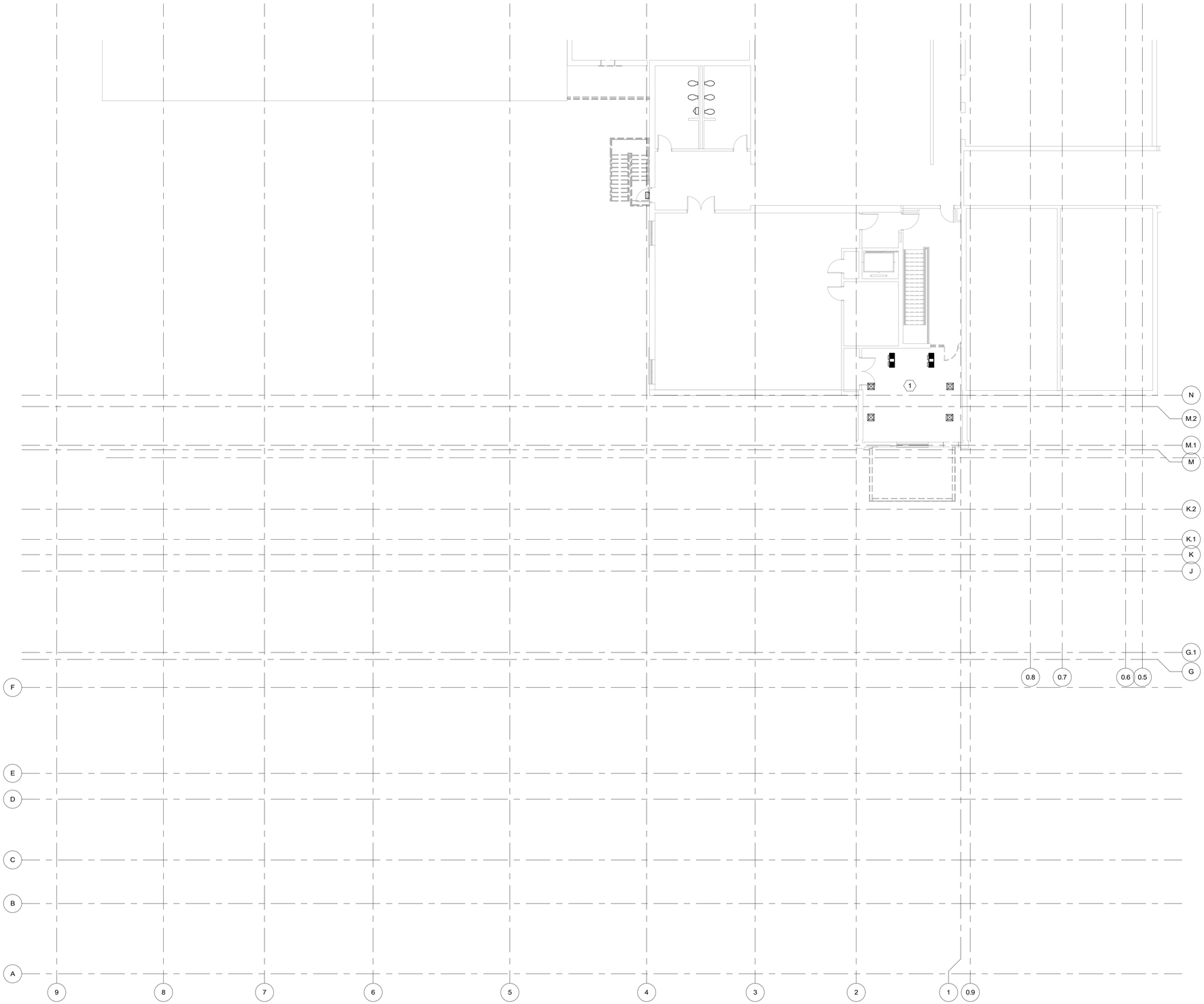
FIRE WALL LEGEND

1 HOUR-RATED BARRIER

DEMOLITION KEYED NOTES

1	EXISTING STUDIO CEILING TO REMAIN. CONTRACTOR SHALL FIELD-VERIFY CONDITION OF EXISTING HVAC SYSTEM COMPONENTS AND PROVIDE ALL NECESSARY PROTECTION FOR EQUIPMENT SCHEDULED TO BE REUSED. REPORT ANY DISCREPANCIES OR DAMAGED COMPONENTS TO THE ENGINEER PRIOR TO COMMENCING WORK. REFER TO NEW WORK PLANS.



1 MEZZANINE FLOOR PLAN - HVAC DEMO

SCALE: 3/32" = 1'-0"

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M. HAHN

19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS
ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL MEZZANINE FLOOR DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description

PROJECT NO:	2025265.00
DATE:	08/19/2026
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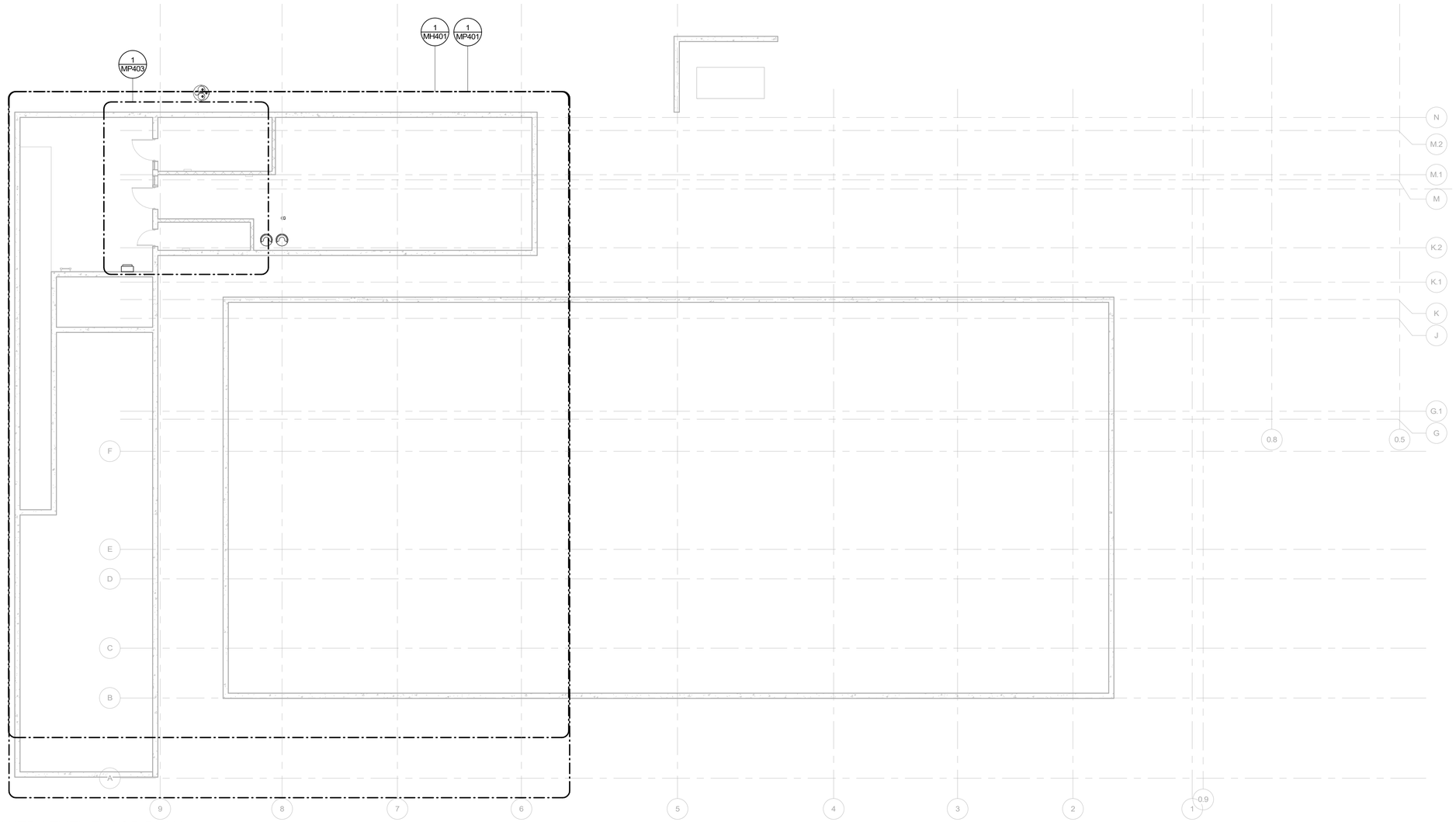
FIRE WALL LEGEND

1 HOUR-RATED BARRIER



1 LOWER LEVEL FLOOR PLAN - HVAC

SCALE: 3/32" = 1'-0"

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M. HAHN

19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS

ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL LOWER LEVEL FLOOR PLAN - HVAC

ISSUE BLOCK

Mark	Date	Description
A	04/15/2026	ISSUE FOR PRICING

PROJECT NO:	2025265.00
DATE:	08/19/2026
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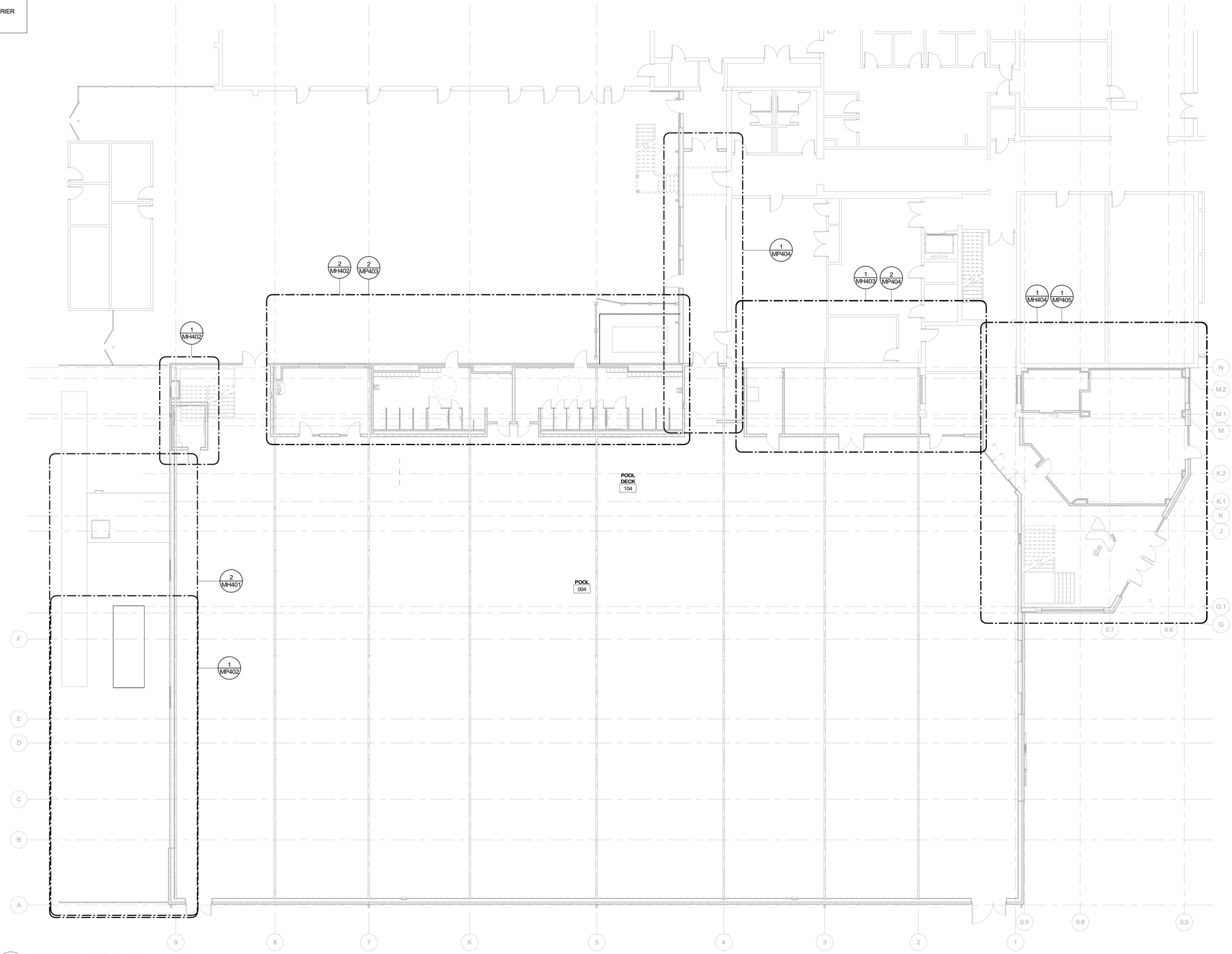
FIRE WALL LEGEND

1 HOUR-RATED BARRIER



1 FIRST FLOOR PLAN - HVAC

SCALE: 3/32" = 1'-0"

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23551 DAVID M. HAHN

19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS

ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL FIRST FLOOR PLAN - HVAC

ISSUE BLOCK

Mark	Date	Description

PROJECT NO:	2025265.00
DATE:	08/19/2026
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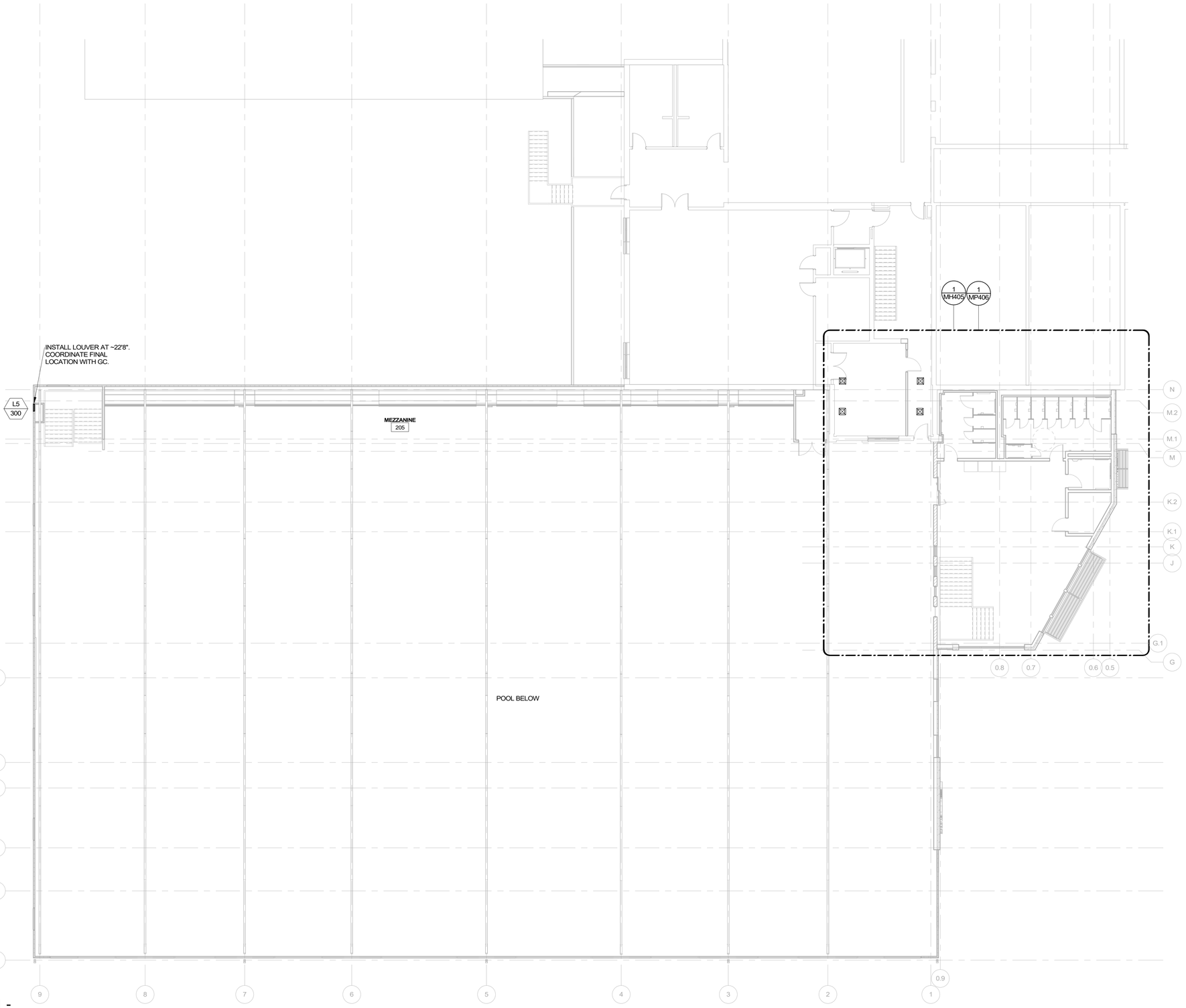
FIRE WALL LEGEND

1 HOUR-RATED BARRIER



1 MEZZANINE FLOOR PLAN - HVAC

SCALE: 3/32" = 1'-0"

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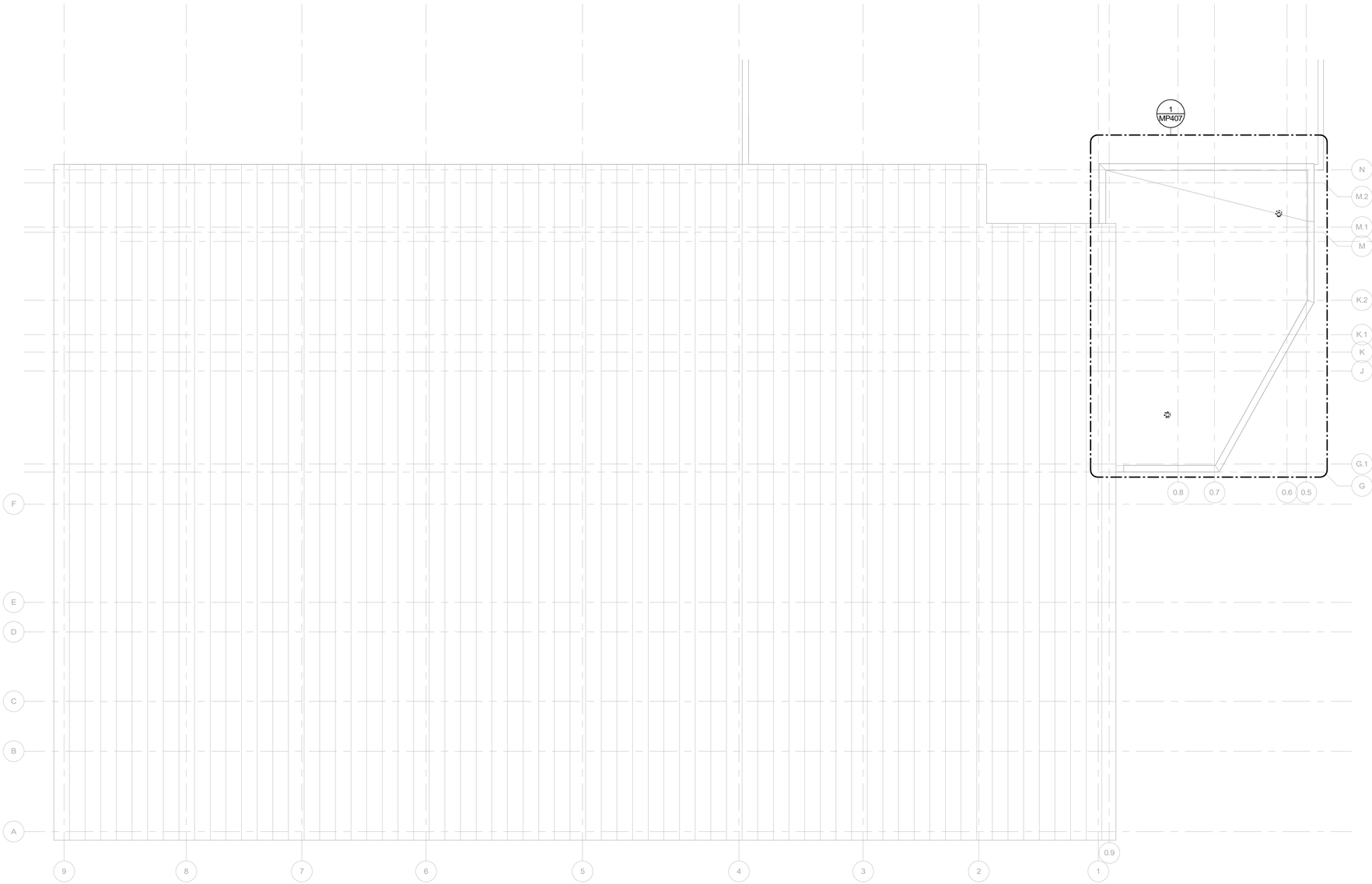

1 ROOF PLAN - HVAC

SCALE: 3/32" = 1'-0"

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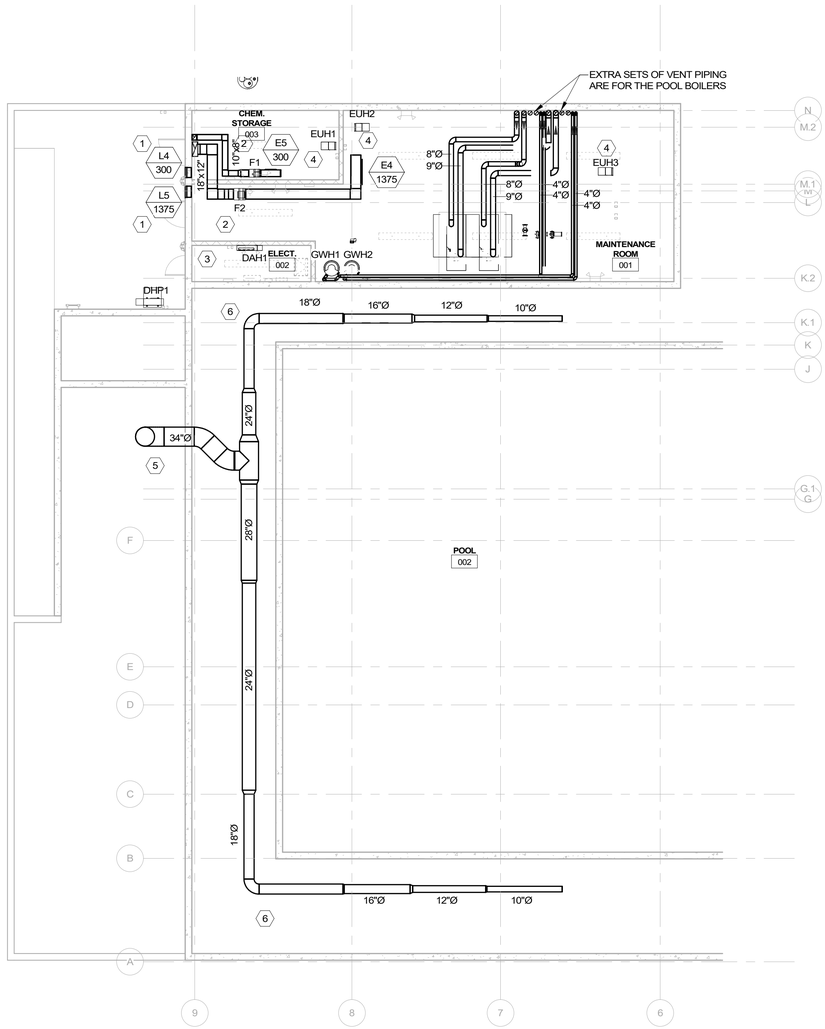
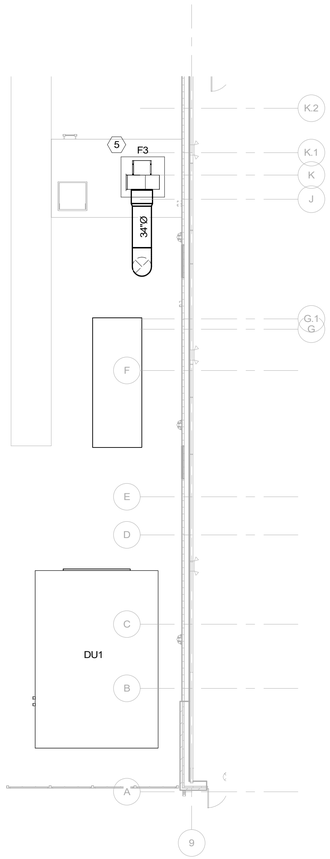


1 LOWER LEVEL FLOOR PLAN - HVAC - EVACUATOR DUCT

SCALE: 3/32" = 1'-0"



2 FIRST FLOOR PLAN - HVAC - MECHANICAL YARD

SCALE: 3/32" = 1'-0"

KEYNOTES

1	PROVIDE AND INSTALL OUTSIDE AIR INTAKE LOUVERS (L4 & L5) SERVING STORAGE ROOMS. PROVIDE BIRD/INSECT SCREEN AND FLASH AND SEAL PERIMETER WATERTIGHT AT EXTERIOR WALL. SIZE LOUVERS FOR SCHEDULED AIRFLOW AND INSTALL IN ACCORDANCE WITH IMC REQUIREMENTS AND MANUFACTURER INSTALLATION INSTRUCTIONS.COORDINATE MOUNTING HEIGHT WITH GC.
2	PROVIDE IN-LINE EXHAUST FANS MOUNTED TIGHT TO UNDERSIDE OF STRUCTURE ABOVE. ROUTE EXHAUST DUCT THROUGH DESIGNATED MECHANICAL CHASE AND DISCHARGE TO EXTERIOR AT LOCATIONS INDICATED.
3	PROVIDE SPLIT SYSTEM HEAT PUMP CONSISTING OF INDOOR UNIT SERVING ELECTRICAL CLOSET AND OUTDOOR CONDENSING UNIT AT EXTERIOR LOCATION. INSTALL EQUIPMENT WITH MANUFACTURER REQUIRED SERVICE CLEARANCES AND MAINTAIN REQUIRED NEC WORKING CLEARANCE AT ELECTRICAL EQUIPMENT.
4	PROVIDE SUSPENDED ELECTRIC UNIT HEATERS AT LOCATIONS SHOWN. MOUNT UNITS TIGHT TO UNDERSIDE OF STRUCTURE ABOVE USING MANUFACTURER APPROVED HANGERS OR SUPPORT BRACKETS. MAINTAIN ALL MANUFACTURER REQUIRED SERVICE AND COMBUSTIBLE CLEARANCES. CONNECT TO POWER AND CONTROLS AS INDICATED.
5	PROVIDE AND INSTALL EVACUATOR FAN AS INDICATED ON POOL SURGE TANK IN MECHANICAL YARD. MAINTAIN MANUFACTURER REQUIRED CLEARANCES, SERVICE SPACE, AND MINIMUM STRAIGHT DUCT LENGTH AT FAN DISCHARGE PRIOR TO ANY ELBOW. PROVIDE BELOW-GRADE DUCT ROUTING FROM POOL AREA TO FAN LOCATION. ALL BELOW-GRADE DUCTWORK SHALL BE WATER-TIGHT, CORROSION-RESISTANT, AND INSTALLED WITH REQUIRED SLOPE AND DRAINAGE. COORDINATE INVERTS, PENETRATIONS, AND ROUTING WITH SITE CONDITIONS. SEAL ALL WALL AND FLOOR PENETRATIONS WATER-TIGHT. FIELD VERIFY EXISTING UNDERGROUND CONDITIONS.
6	UNDERGROUND EVACUATOR DUCT SYSTEM HAS BEEN SIZED AND LAID OUT BASED ON POOL SYSTEM DESIGN CRITERIA. CONTRACTOR SHALL PROVIDE COMPLETE, COORDINATED SHOP DRAWING SUBMITTAL INCLUDING ALL DUCTWORK, FITTINGS, AND CONNECTIONS TO EVACUATOR PICKUP POINTS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION, COORDINATION, AND SYSTEM PERFORMANCE BASED ON DESIGN INTENT SHOWN.

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19-Aug-26

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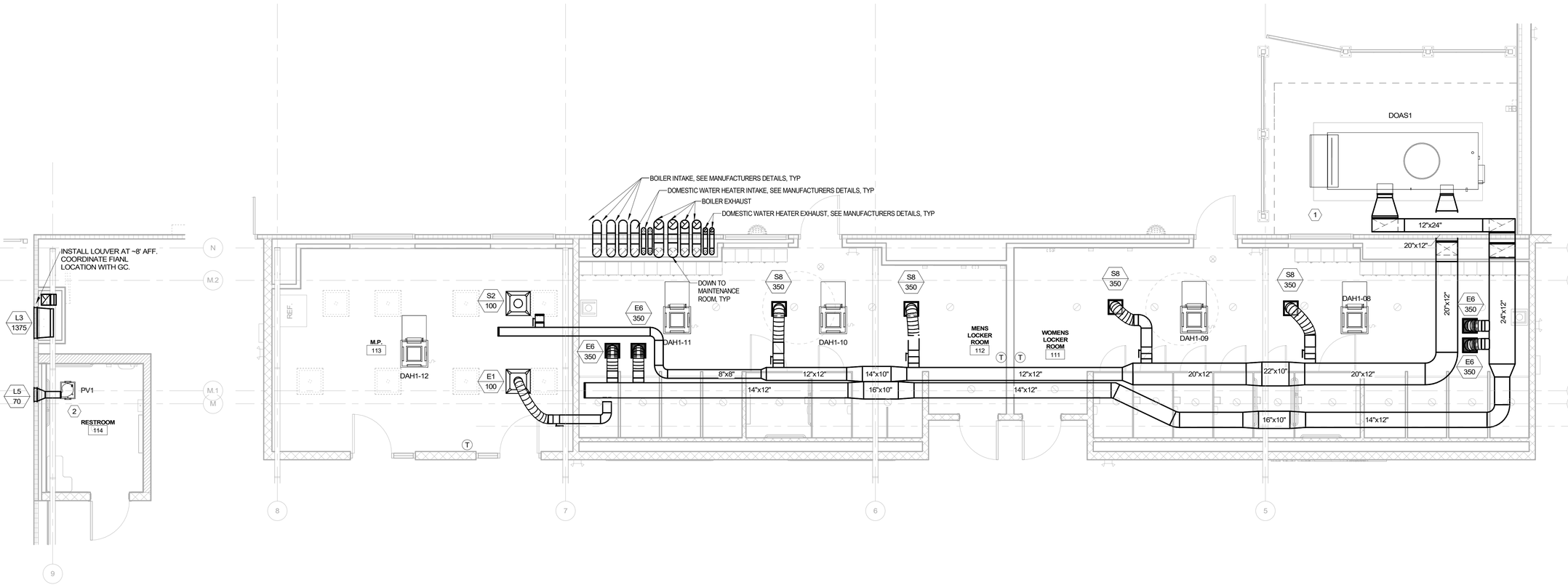

1 ENLARGED FIRST FLOOR PLAN - TOILET

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

2 ENLARGED FIRST FLOOR PLAN - RESTROOMS

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

KEYNOTES	
1	INSTALL DOAS-1 AT ON CONCRETE PAD. ROUTE SUPPLY AIR AND EXHAUST DUCTWORK THROUGH DESIGNATED MECHANICAL CHASE INTO THE BUILDING. SEAL ALL WALL PENETRATIONS AIRTIGHT AND WEATHER-TIGHT.
2	INSTALL CEILING-MOUNTED POWER VENTILATOR. ROUTE EXHAUST DUCTWORK TO EXTERIOR TERMINATION AS INDICATED. EXHAUST AIR SHALL DISCHARGE DIRECTLY TO THE OUTDOORS.

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19-Aug-26

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2710 MARKET STREET,
WILMINGTON, NC 28403

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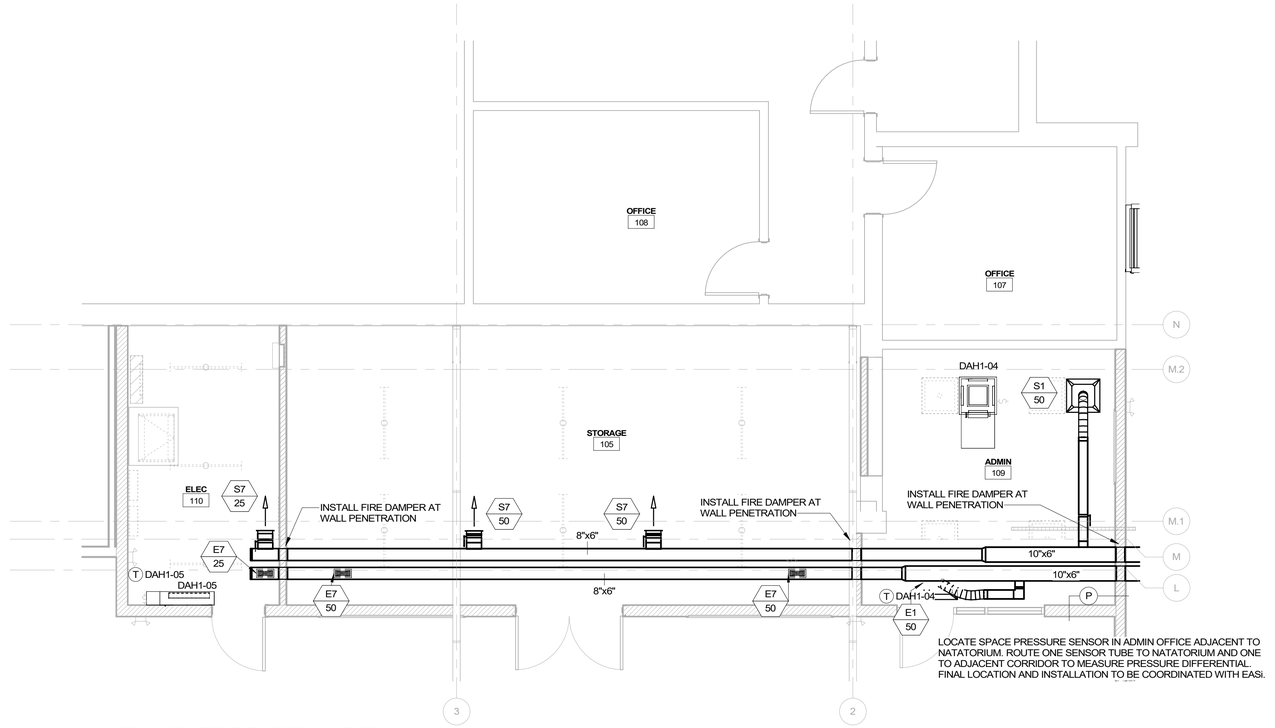

LOCATE SPACE PRESSURE SENSOR IN ADMIN OFFICE ADJACENT TO NATATORIUM. ROUTE ONE SENSOR TUBE TO NATATORIUM AND ONE TO ADJACENT CORRIDOR TO MEASURE PRESSURE DIFFERENTIAL. FINAL LOCATION AND INSTALLATION TO BE COORDINATED WITH EASI.

1 ENLARGED FIRST FLOOR PLAN - STORAGE

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

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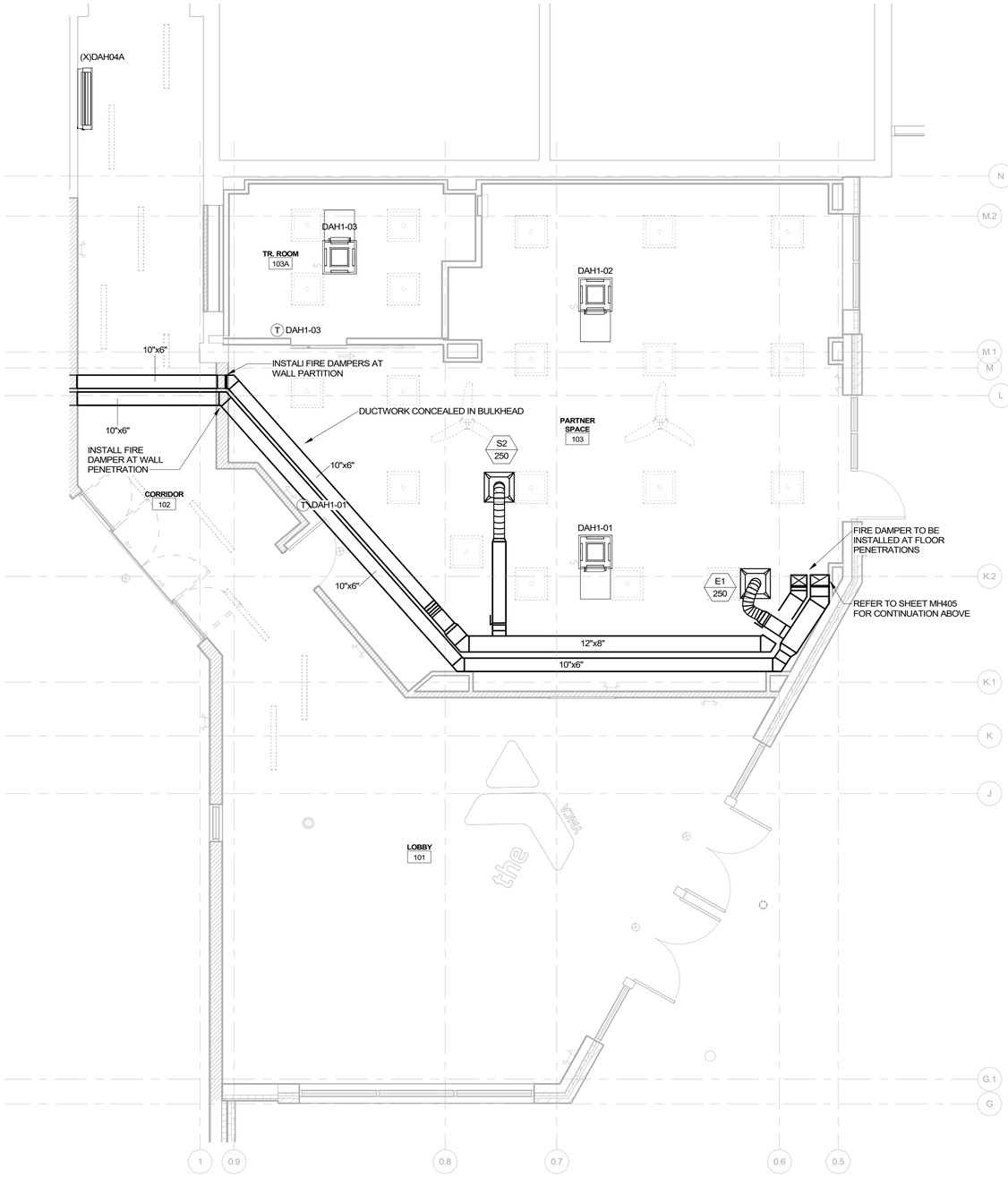

1 ENLARGED FIRST FLOOR PLAN - LOBBY

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

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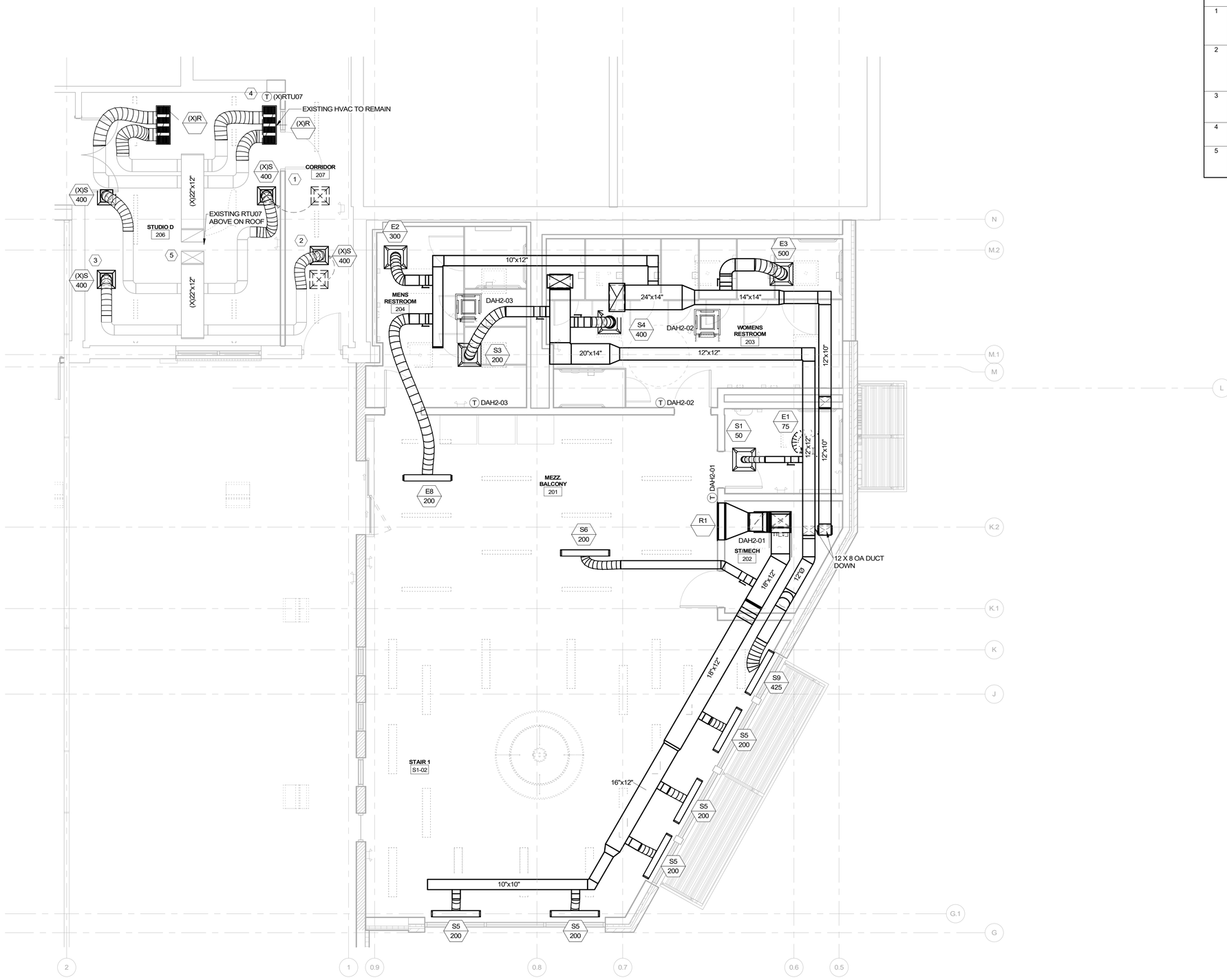

1 ENLARGED MEZZANINE FLOOR PLAN - HVAC

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

KEYNOTES

1	RELOCATE EXISTING SUPPLY DIFFUSER FROM NEW CORRIDOR TO STUDIO D AS SHOWN. MODIFY EXISTING DUCTWORK AS REQUIRED TO MAINTAIN DESIGN AIRFLOW. PATCH AND REPAIR EXISTING GYPSUM CEILING AT ABANDONED DIFFUSER LOCATION TO MATCH ADJACENT FINISHES.
2	CONTRACTOR SHALL FIELD COORDINATE FINAL LOCATION OF REMAINING EXISTING CORRIDOR SUPPLY DIFFUSER WITH REFLECTED CEILING PLAN AND LIGHT FIXTURE LAYOUT. RELOCATE DIFFUSER AS REQUIRED TO PROVIDE A COORDINATED CEILING LAYOUT. MODIFY DUCTWORK AND PATCH/REPAIR GYPSUM CEILING AS REQUIRED TO MATCH EXISTING FINISHES.
3	EXISTING SUPPLY DIFFUSERS AND RETURN GRILLES: NO WORK UNLESS NOTED OTHERWISE. PROTECT DEVICES IN PLACE. MAINTAIN EXISTING AIRFLOWS. ALL DEVICES SHALL BE OPERATIONAL AFTER CONSTRUCTION IS COMPLETE.
4	EXISTING THERMOSTAT: NO WORK UNLESS NOTED OTHERWISE. PROTECT THERMOSTAT IN PLACE. VERIFY THERMOSTAT REMAINS FULLY FUNCTIONAL AFTER CONSTRUCTION IS COMPLETE.
5	VERIFY EXISTING AIRFLOWS ARE MAINTAINED FOLLOWING DUCTWORK MODIFICATIONS. ADJUST EXISTING BALANCING DAMPERS AND PERFORM TAB ONLY AS REQUIRED TO RESTORE ORIGINAL DESIGN AIRFLOWS.

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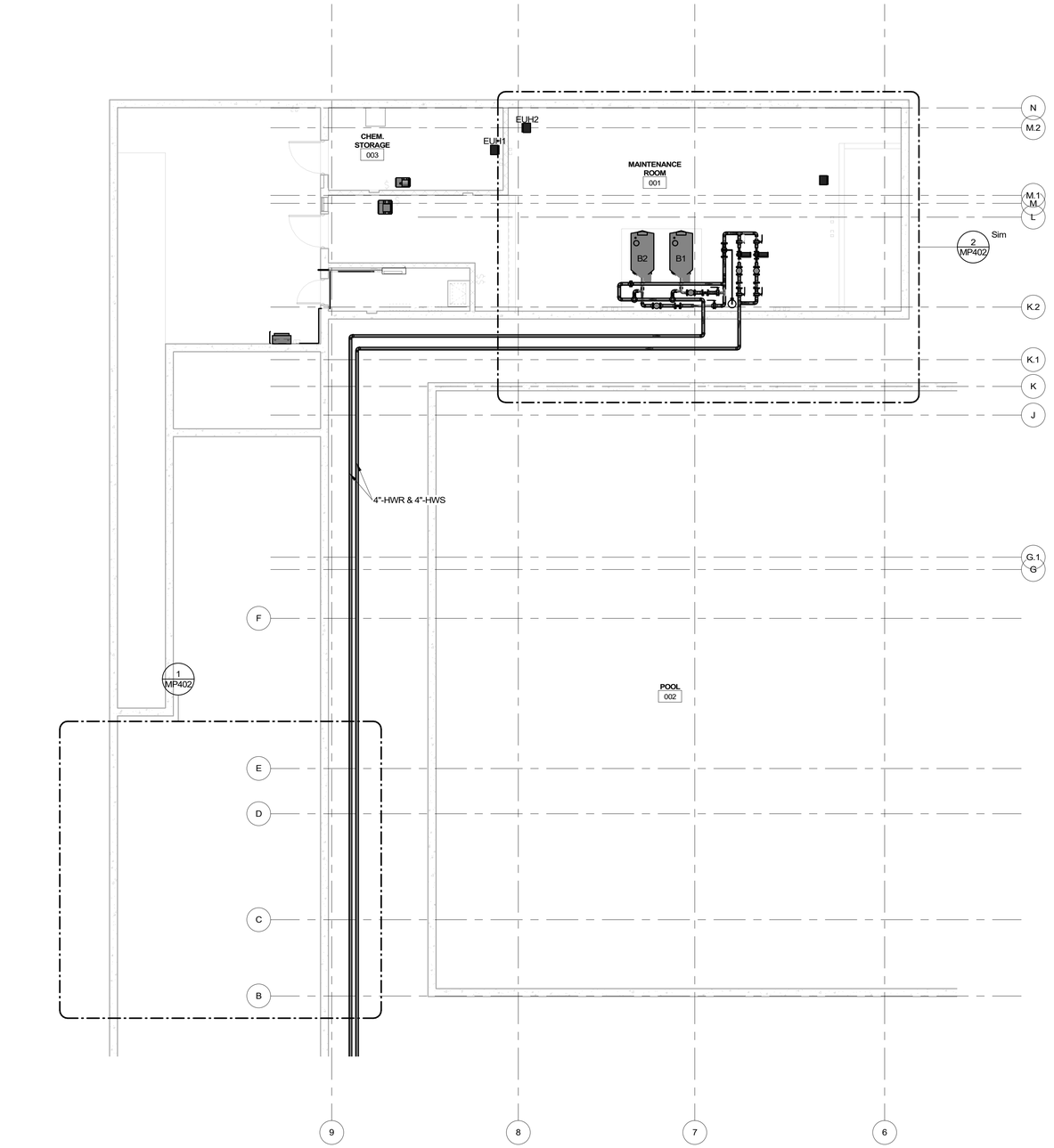

1 ENLARGED PLAN - HYDRONICS

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

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NORTH CAROLINA PROFESSIONAL SEAL 23551 ENGINEER DAVID M. HAHN

19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS
ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL ENLARGED PLAN - HYDRONICS

ISSUE BLOCK

Mark	Date	Description

PROJECT NO:	2025265.00
DATE:	08/19/2026
SCALE:	1/8" = 1'-0"
DRAWN BY: RWC	PROJ MGR: DMH

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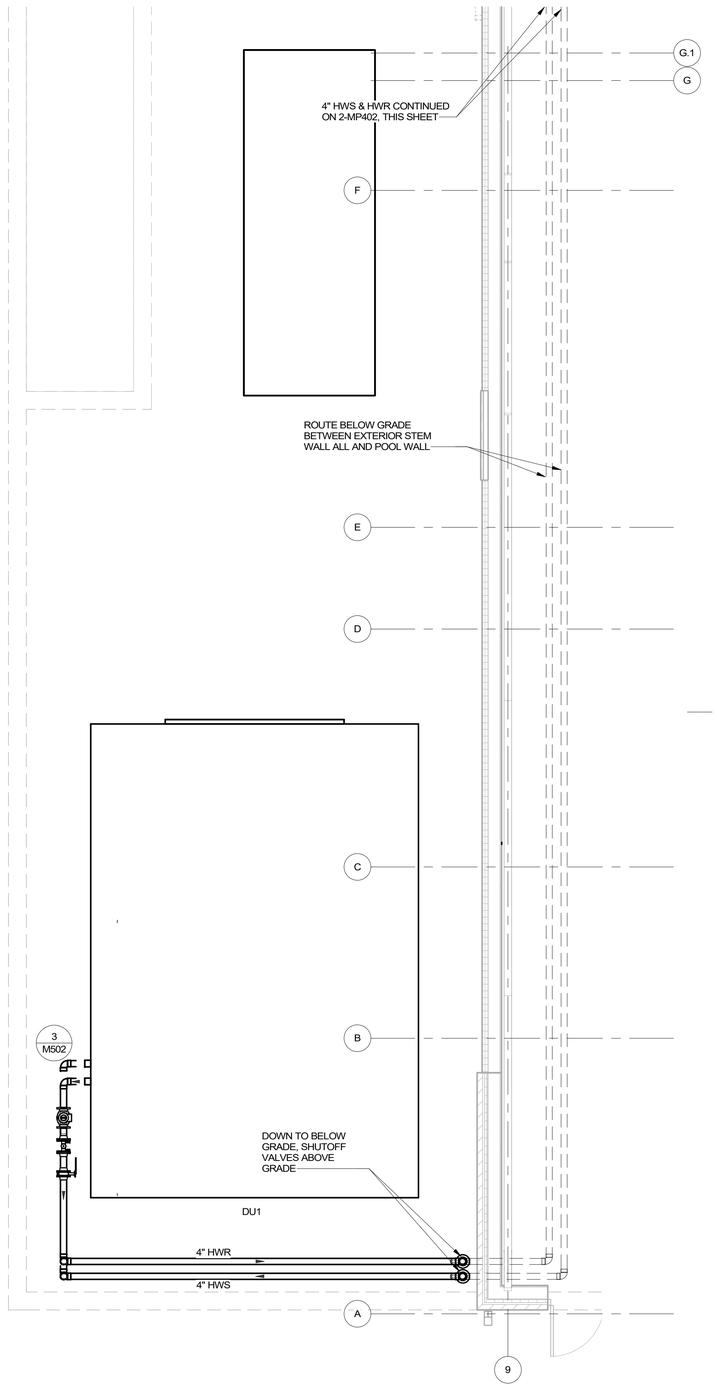
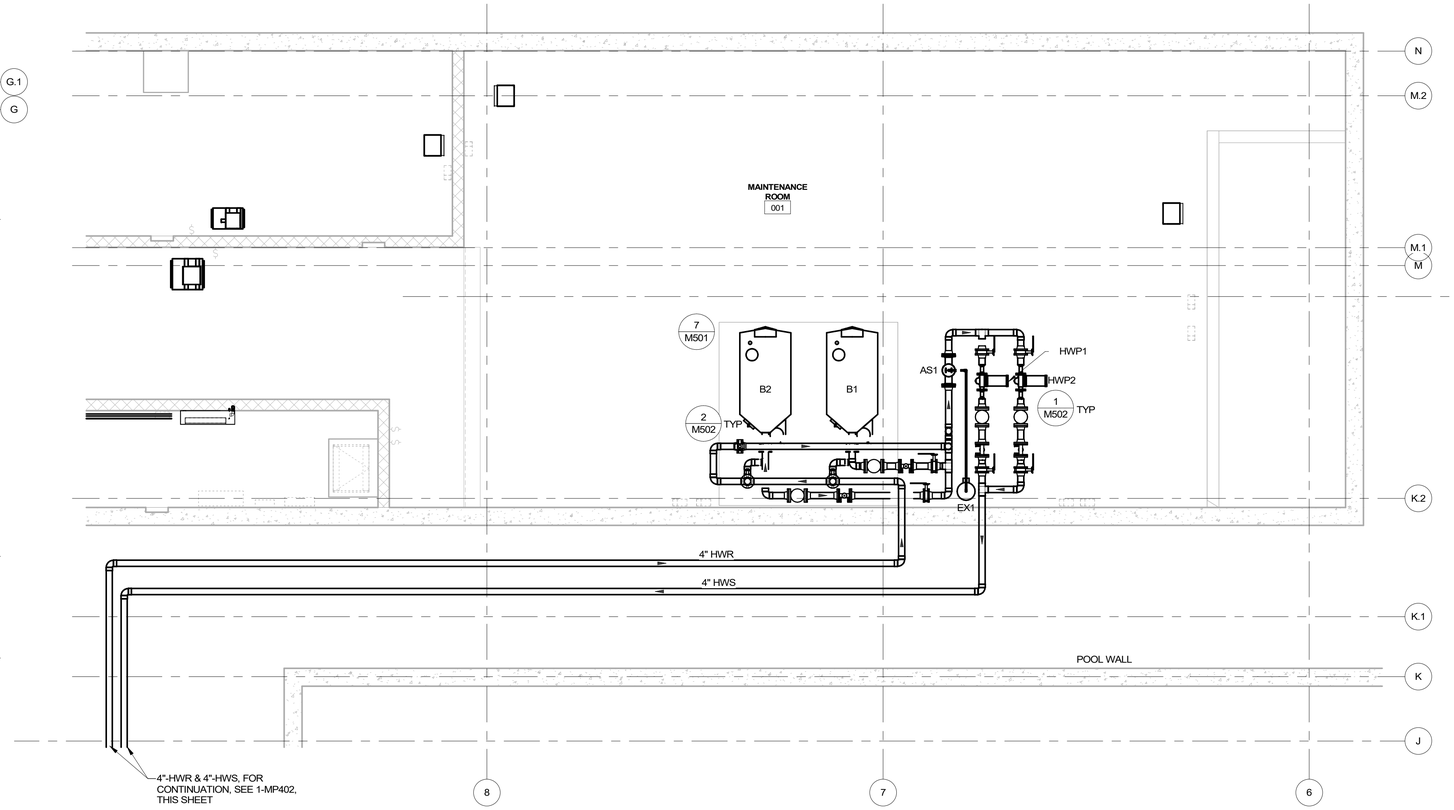


1 MECHANICAL YARD

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



2 MAINTENANCE ROOM

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

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M. HAHN

19-Aug-26

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ISSUED: 08/19/2026

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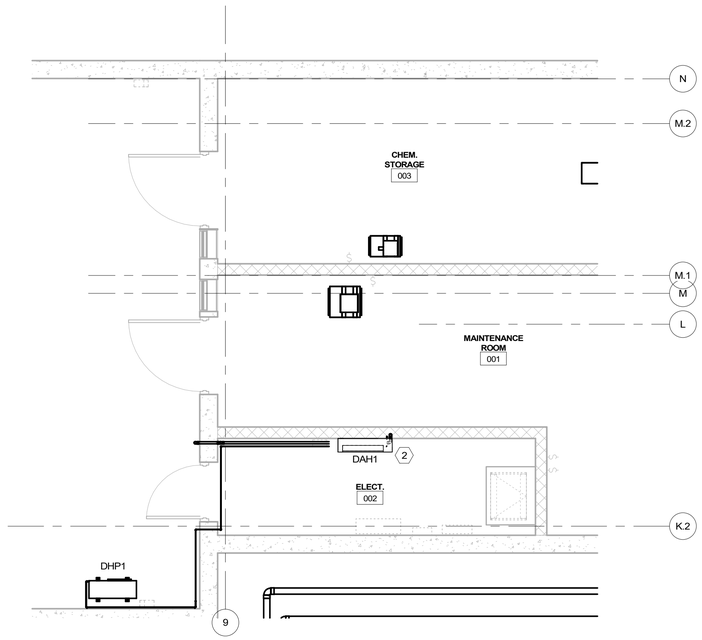
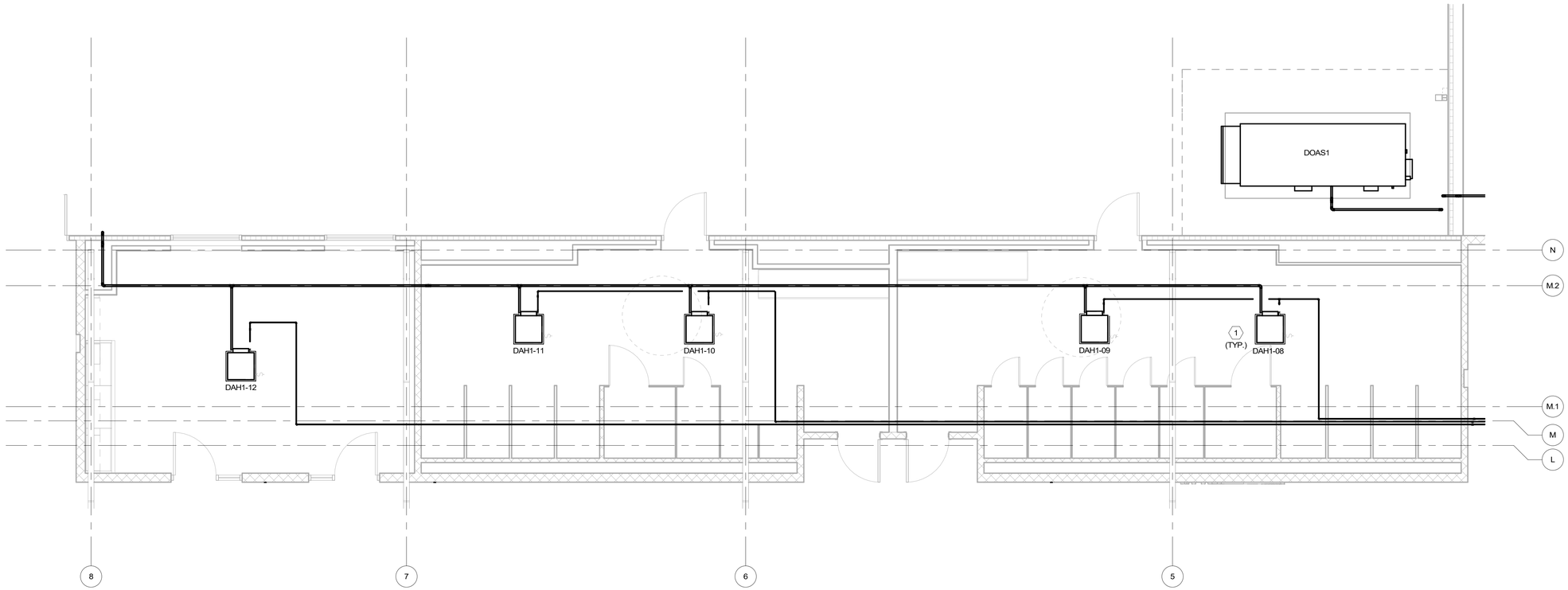


1 LOWER LEVEL FLOOR PLAN - STORAGE

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

KEYNOTES	
1	PROVIDE CEILING-MOUNTED CASSETTE INDOOR UNITS AT LOCATIONS SHOWN IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS. ROUTE REFRIGERANT PIPING, AND CONDENSATE DRAIN, ABOVE CEILING AS INDICATED. PROVIDE CEILING ACCESS PANEL ADJACENT TO EACH UNIT FOR SERVICE ACCESS. MAINTAIN MANUFACTURER REQUIRED CLEARANCES.
2	ROUTE REFRIGERANT PIPING AND CONDENSATE DRAIN FROM WALL-MOUNTED MINI-SPLIT UNIT ABOVE CEILING AND THROUGH WALL TO EXTERIOR. INSULATE AND SUPPORT REFRIGERANT PIPING PER MANUFACTURER REQUIREMENTS. SEAL WALL PENETRATIONS AIRTIGHT AND WEATHER-TIGHT.



2 ENLARGED FIRST FLOOR PLAN - RESTROOMS PIPING

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

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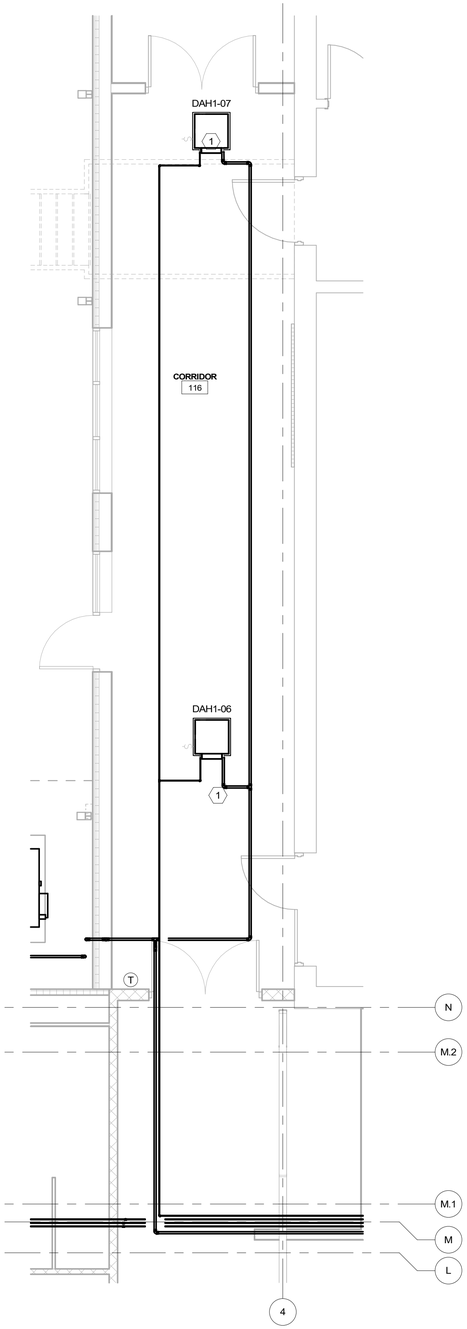
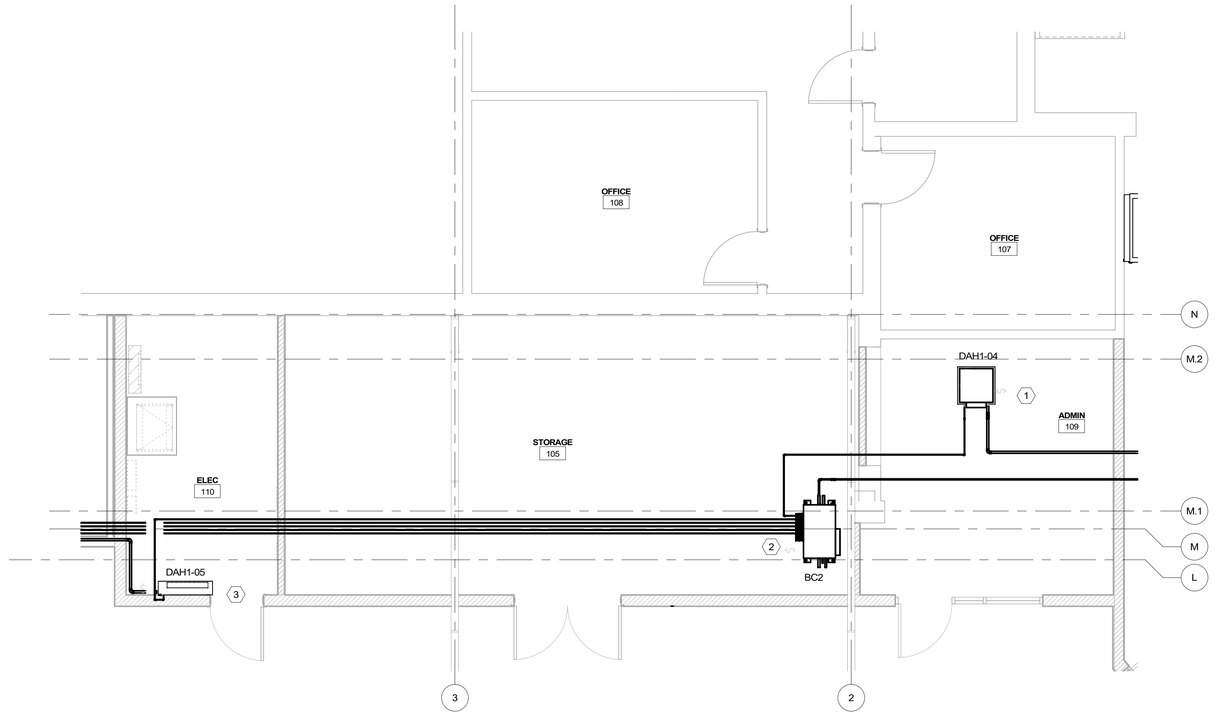


1 ENLARGED FIRST FLOOR PLAN - CORRIDOR PIPING

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



2 ENLARGED FIRST FLOOR PLAN - STORAGE PIPING

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

KEYNOTES

1	PROVIDE CEILING-MOUNTED CASSETTE INDOOR UNITS AT LOCATIONS SHOWN. ROUTE REFRIGERANT PIPING AND CONDENSATE DRAIN ABOVE CEILING AS INDICATED. MAINTAIN MANUFACTURER REQUIRED SERVICE CLEARANCES.
2	PROVIDE VRF BRANCH CONTROLLER AT LOCATION SHOWN. MOUNT UNIT IN ACCORDANCE WITH MANUFACTURER INSTALLATION REQUIREMENTS AND MAINTAIN REQUIRED SERVICE CLEARANCES. ROUTE REFRIGERANT PIPING AND CONTROL WIRING AS INDICATED. INSTALLATION SHALL COMPLY WITH MANUFACTURER REQUIREMENTS AND APPLICABLE A2L REFRIGERANT SAFETY STANDARDS, INCLUDING REQUIRED LEAK DETECTION, MITIGATION, AND CONTROL COMPONENTS.
3	PROVIDE WALL-MOUNTED INDOOR UNIT AT LOCATION SHOWN. MOUNT UNIT ON WALL IN ACCORDANCE WITH MANUFACTURER INSTALLATION REQUIREMENTS. ROUTE REFRIGERANT PIPING AND CONDENSATE DRAIN AS INDICATED. MAINTAIN MANUFACTURER REQUIRED SERVICE CLEARANCES.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M. HAHN

19-Aug-26

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2710 MARKET STREET,
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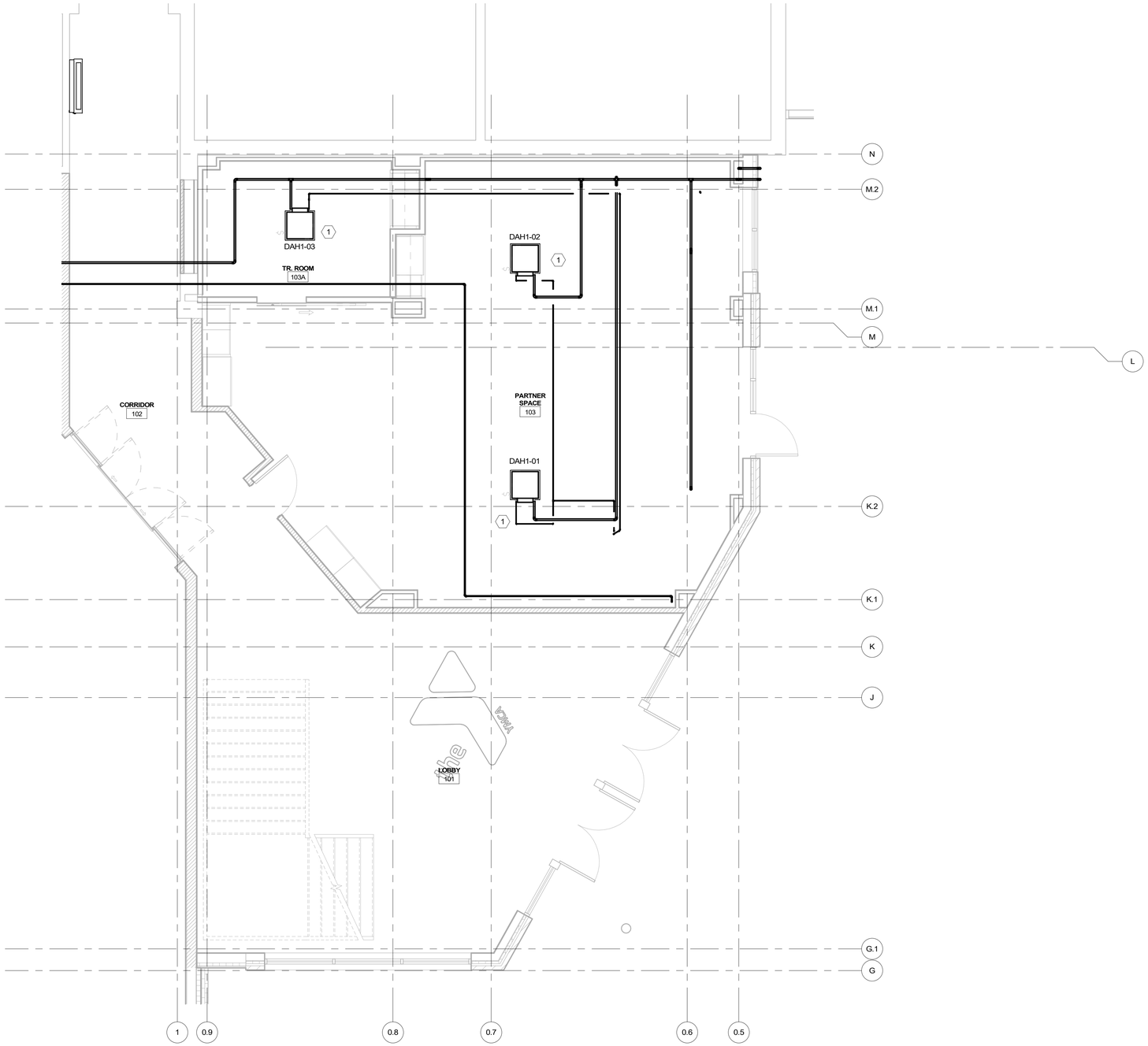
KEYNOTES	
1	PROVIDE CEILING-MOUNTED CASSETTE INDOOR UNITS AT LOCATIONS SHOWN. ROUTE REFRIGERANT PIPING AND CONDENSATE DRAIN ABOVE CEILING AS INDICATED. MAINTAIN MANUFACTURER REQUIRED SERVICE CLEARANCES.



1 ENLARGED FIRST FLOOR PLAN - LOBBY PIPING

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

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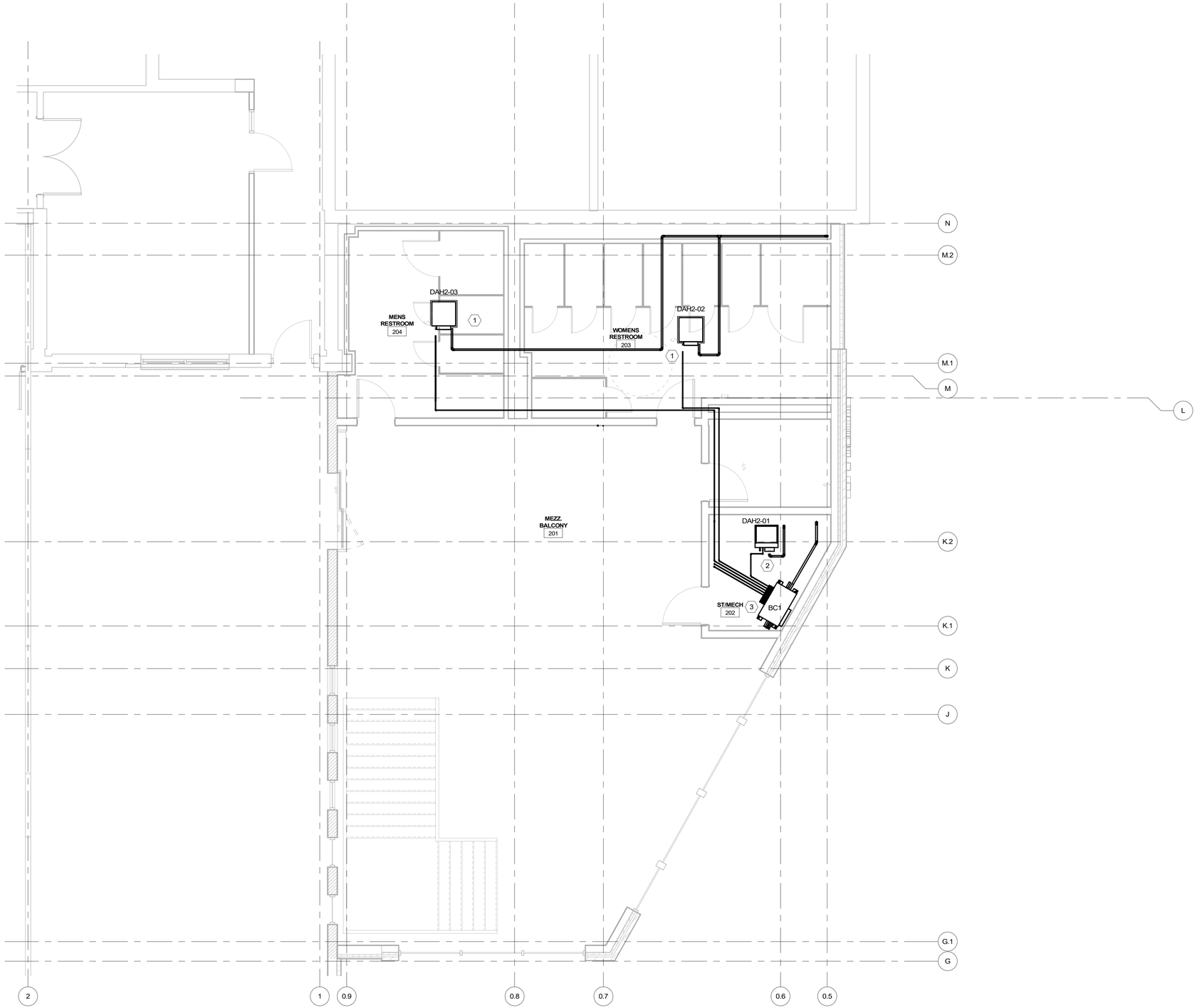

1 ENLARGED MEZZANINE FLOOR PLAN - PIPING

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

KEYNOTES

1	PROVIDE CEILING-MOUNTED CASSETTE INDOOR UNITS AT LOCATIONS SHOWN. ROUTE REFRIGERANT PIPING AND CONDENSATE DRAIN ABOVE CEILING AS INDICATED. MAINTAIN MANUFACTURER REQUIRED SERVICE CLEARANCES.
2	PROVIDE VERTICAL MULTI-POSITION INDOOR UNIT AT LOCATION SHOWN. INSTALL UNIT IN VERTICAL CONFIGURATION IN ACCORDANCE WITH MANUFACTURER INSTALLATION REQUIREMENTS. ROUTE SUPPLY AND RETURN DUCTWORK, REFRIGERANT PIPING AND CONDENSATE DRAIN AS INDICATED. MAINTAIN MANUFACTURER REQUIRED SERVICE CLEARANCES.
3	PROVIDE VRF BRANCH CONTROLLER AT LOCATION SHOWN. MOUNT UNIT IN ACCORDANCE WITH MANUFACTURER INSTALLATION REQUIREMENTS AND MAINTAIN REQUIRED SERVICE CLEARANCES. ROUTE REFRIGERANT PIPING AS INDICATED. INSTALLATION SHALL COMPLY WITH MANUFACTURER REQUIREMENTS AND APPLICABLE A2L REFRIGERANT SAFETY STANDARDS, INCLUDING REQUIRED LEAK DETECTION, MITIGATION, AND CONTROL COMPONENTS.

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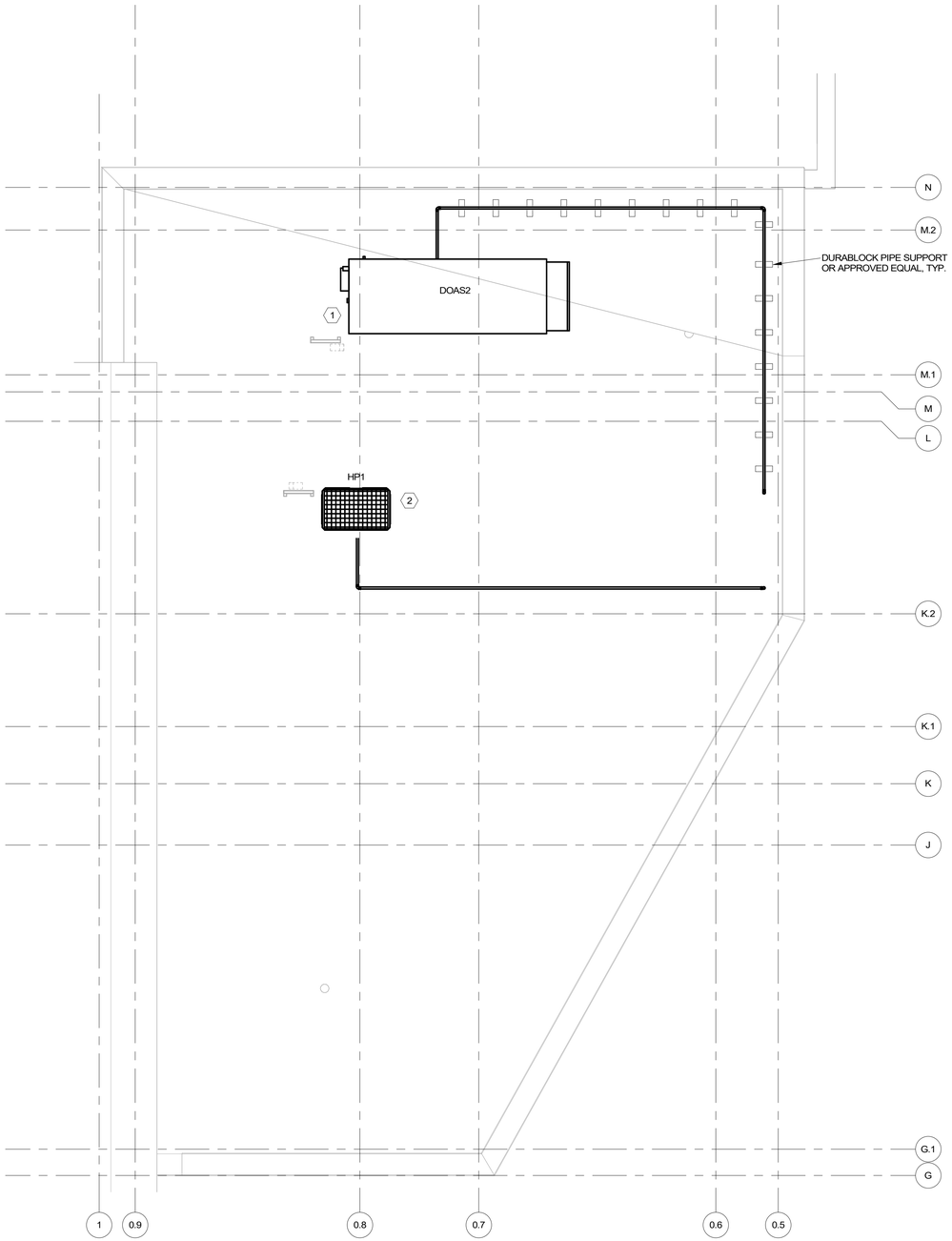
KEYNOTES	
1	PROVIDE DOAS UNIT AT ROOF LOCATION SHOWN. MOUNT UNIT ON ROOF CURB IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS. REFER TO ROOF CURB MOUNTING DETAIL. ROUTE SUPPLY AND EXHAUST DUCTWORK THROUGH ROOF/FLOOR BELOW AS INDICATED. ROUTE CONDENSATE DRAIN TO NEAREST ROOF DRAIN. FLASH AND SEAL ALL ROOF PENETRATIONS WEATHER-TIGHT AND COORDINATE INSTALLATION WITH ROOFING CONTRACTOR. MAINTAIN MANUFACTURER REQUIRED SERVICE CLEARANCES.
2	PROVIDE HEAT PUMP OUTDOOR UNIT AT ROOF LOCATION SHOWN. MOUNT UNIT ON ROOF CURB IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS, REFER TO ROOF MOUNTING DETAIL. ROUTE REFRIGERANT PIPING, CONTROL WIRING, AND CONDENSATE AS INDICATED. FLASH AND SEAL ALL ROOF PENETRATIONS WEATHER-TIGHT AND COORDINATE INSTALLATION WITH ROOFING CONTRACTOR. MAINTAIN MANUFACTURER REQUIRED SERVICE CLEARANCES.



1 ENLARGED ROOF PLAN - PIPING
SCALE: 1/4" = 1'-0"

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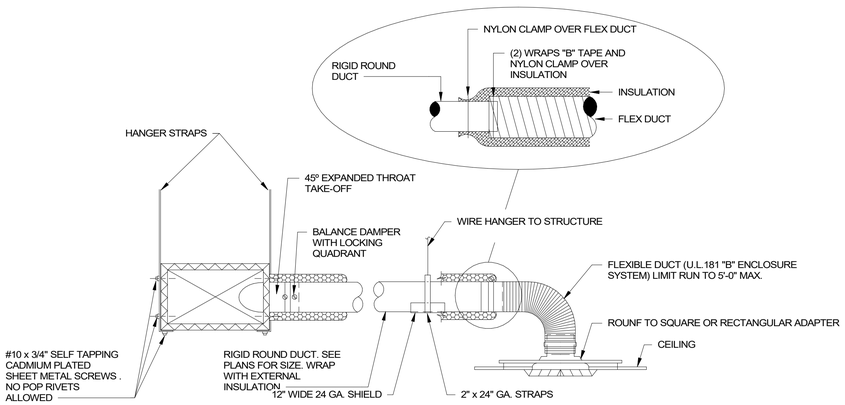
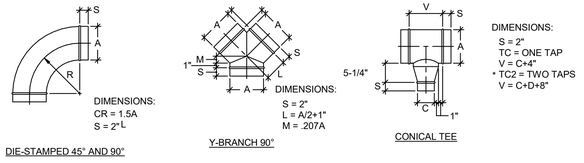
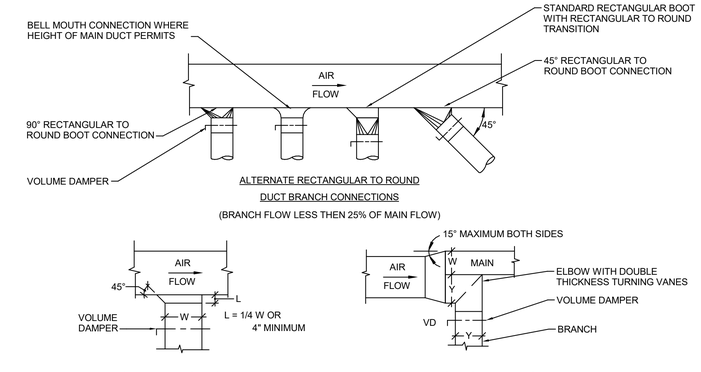


1 TYPICAL DIFFUSER CONNECTION DETAIL
NO SCALE



2 ROUND DUCT FITTINGS DETAIL
NO SCALE



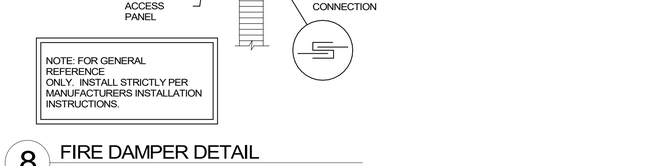
3 RECTANGLE-ROUND DUCT FITTINGS DETAIL
NO SCALE



NOTES:

1. 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.
2. SUPPORTS SHALL BE SPACED AND SIZED AS PER SPECIFICATIONS.
3. RIGID INSULATION SHALL EXTEND MINIMUM OF 3" BEYOND STRUT ON BOTH SIDES. MAINTAIN VAPOR BARRIER ACROSS STRUT.

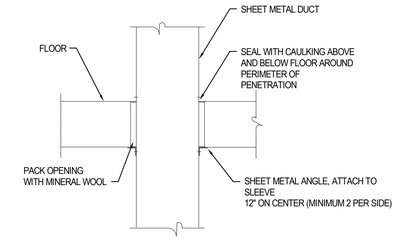
4 DUCT SUPPORT DETAIL
NO SCALE



NOTES:

1. LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.
2. HEIGHT MUST BE EQUAL TO UNIT MAXIMUM TOTAL STATIC PRESSURE PLUS 1/2".
3. HEIGHT MUST BE EQUAL TO UNIT MAXIMUM NEGATIVE STATIC PRESSURE PLUS 1".
4. HEIGHT MUST BE 1/2 OF HEIGHT INSTALLED IN NOTE 3.
5. PIPE TO NEAREST DRAIN.
6. TRAP MUST NOT BLOCK ACCESS TO EQUIPMENT
7. PROVIDE UNIONS AT INLET AND OUTLET OF TRAP.

5 TYPICAL CONDENSATE DRAIN DETAIL
NO SCALE

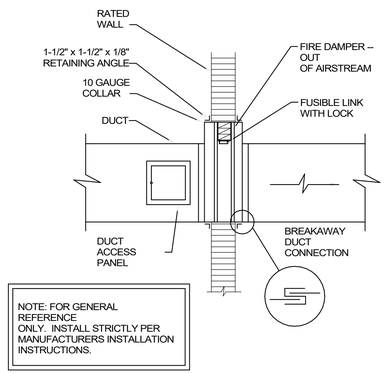


NOTE: EXTERNALLY WRAPPED DUCT INSTALLED SIMILARLY. BLANKET INSULATION SHALL BE INSTALLED OVER ANGLES AND SEALED TO FLOOR BARRIER.

6 TYPICAL DUCT THROUGH NON-RATED WALL
NO SCALE

NOTE:
1. MESH SHALL BE FURNISHED IN SHEETS.
2. ALL PAD EDGES SHALL BE CHAMFERED.
3. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3,000 PSI AT 28 DAYS
4. ONLY ANCHOR EQUIPMENT WITH MANUFACTURER SUPPLIED ANCHOR MOUNTS

7 EQUIPMENT HOUSEKEEPING PAD DETAIL
NO SCALE



8 FIRE DAMPER DETAIL
NO SCALE

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M. HAHN

19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS
ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL DETAILS

ISSUE BLOCK

Mark	Date	Description

PROJECT NO: 2025265.00
DATE: 08/19/2026
SCALE: NOT TO SCALE
DRAWN BY: MEZ | PROJ MGR: DMH

M501

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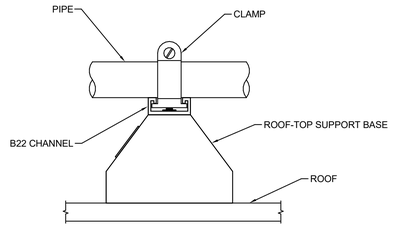
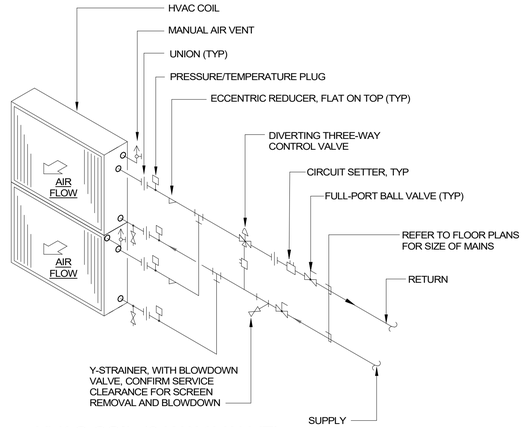
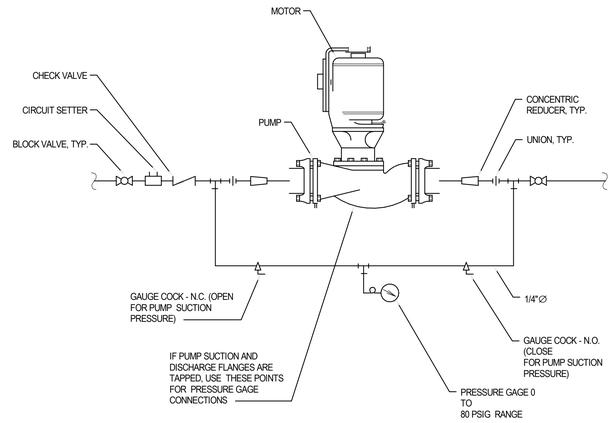


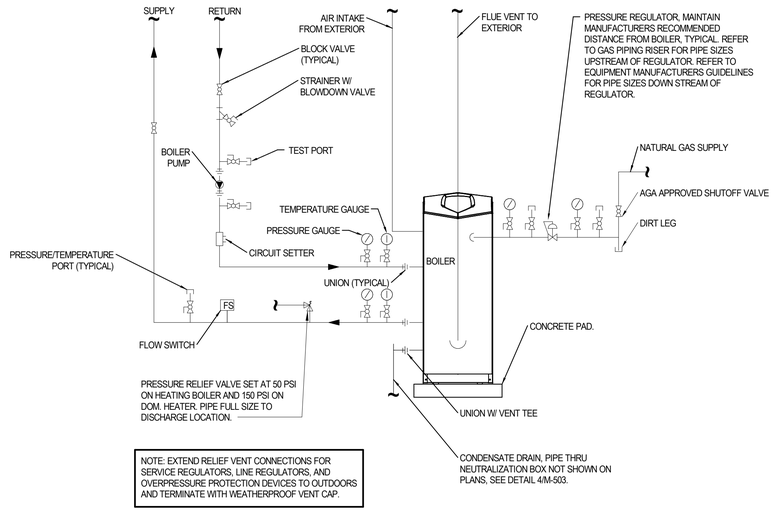
4 TYPICAL ROOF-TOP PIPE SUPPORT DETAIL
NO SCALE



3 HVAC COIL (3-WAY VALVE) DETAIL
NO SCALE



1 INLINE SYSTEM PUMP DETAIL
NO SCALE



NOTE: EXTEND RELIEF VENT CONNECTIONS FOR SERVICE REGULATORS, LINE REGULATORS, AND OVERPRESSURE PROTECTION DEVICES TO OUTDOORS AND TERMINATE WITH WEATHERPROOF VENT CAP.

2 GAS-FIRED, FLOOR-MOUNTED HOT WATER BOILER DETAIL
NO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M. HAHN

19-Aug-26

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NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS
ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL DETAILS

ISSUE BLOCK

Mark	Date	Description

PROJECT NO: 2025265.00
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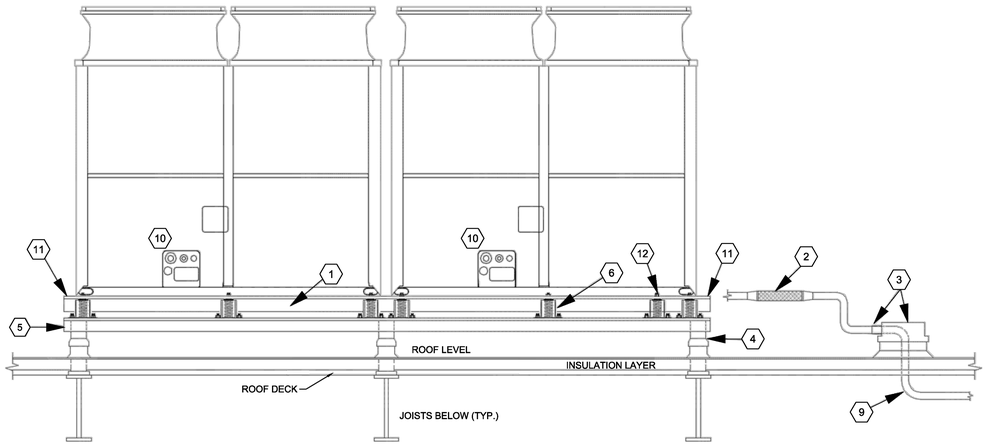
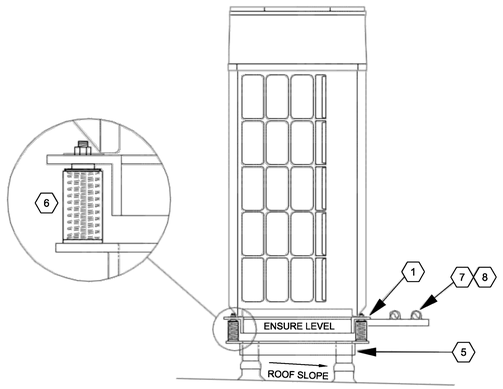
CODED NOTES

1. PROVIDE STRUCTURAL INTERSTITIAL ANGLE IRON MOUNTING MEMBER OR SIMILAR ATTACHED DIRECTLY TO BOTTOM OF UNIT MOUNTING FLANGE AND PROVIDE CROSS BRACING FOR RIGIDITY. ENSURE IT CARRIES FULL MOUNTING FOOT WIDTH ON UNIT. FINAL SPECIFICATION OF MEMBER BY STRUCTURAL ENGINEER OF RECORD.
2. PROVIDE BRAIDED COPPER FLEXIBLE CONNECTOR, R410A RATED, 650PSI MAX WORKING PRESSURE, PACKLESS INDUSTRIES OR EQUAL ON ALL MAIN PIPING DOWNSTREAM OF TWINNING KTS/CONVERGING FITTINGS PRIOR TO PENETRATION THROUGH ROOF.
3. PIPE ROOF CURB, FLASHED AND SEALED WATER TIGHT, PROVIDE FLEXIBLE WATER TIGHT COLLAR TO ALLOW FOR MOVEMENT WHERE PIPE ENTERS CURB. DO NOT ENTER PIPE CURB FROM VERTICAL DIRECTION.
4. TYPICAL BASE SUPPORT POSTS, SECURELY ANCHORED TO BUILDING STRUCTURE BELOW, QUANTITY, SIZE, AND CARRYING CAPACITY DETERMINED BY STRUCTURAL ENGINEER OF RECORD.
5. STRUCTURAL ANGLE IRON BASE MOUNTING FRAME WITH CROSS MEMBERS FOR RIGIDITY - FINAL SIZING BY STRUCTURAL ENGINEER OF RECORD.
6. VIBRATION SPRING SLR TYPE ISOLATORS (MASON INDUSTRIES OR EQUIV.) WITH RUBBER BASE PADS, SECURELY FASTENED TO STRUCTURAL BASE AND TO VRF UNIT INTERSTITIAL SUPPORT STEEL SPRING ISOLATOR TO PROVIDE MINIMUM 1" DEFLECTION OR 10 TIMES THE STATIC DEFLECTION OF THE ROOF DECK FROM EQUIPMENT WEIGHT - DETERMINED BY STRUCTURAL ENGINEER OF RECORD. AT A MINIMUM, PROVIDE SPRING ISOLATORS AT EACH EQUIPMENT BASE MOUNTING HOLE LOCATION.
7. IF REQUIRED, ONLY SUPPORT LATERAL RPE EMANATING FROM VRF UNIT CONNECTIONS BY CROSS MEMBER SUPPORT THAT IS ATTACHED DIRECTLY TO VRF UNIT MOUNTING ANGLE IRON FRAME ABOVE SPRING ISOLATORS. DO NOT ATTACH ANY PIPING TO LOWER FIXED SUPPORT BASE.
8. USE NEOPRENE ISOLATION COLLARS ON PIPE CLAMS WHEN FASTENING RANG TO SUPPORT.
9. USE LONG RADIUS SWEEPING COPPER ACR TUBE PIPE BENDS WHERE PIPE ENTERS BUILDING AT FIRST ELBOW INTO CEILING SPACE TO MINIMIZE REFRIGERANT FLOW NOISE AND VIBRATION.
10. ALL ELECTRICAL CONNECTIONS TO UNITS TO BE VIA FLEXIBLE CONDUIT, PROVIDE SUFFICIENT SLACK TO ALLOW FOR UNIT MOVEMENT ON SPRING ISOLATORS.
11. ENSURE CROSS MEMBERS OF INTERSTITIAL FRAME AND BOTTOM SUPPORT FRAME ARE NOT DIRECTLY BELOW ENDS OF MODULES IN ALL LOCATIONS AND DO NOT BLOCK DRAINAGE WEEP HOLES IN BOTTOM OF UNIT CASING, FAILURE TO DO THIS MAY RESULT IN ICE DAMMING/BUILDUP BENEATH UNIT AND SUBSEQUENT BUILDUP OF ICE IN BOTTOM OF UNIT CASING BELOW COIL AND POTENTIAL DAMAGE TO BOTTOM OF COIL.
12. WHEN SELECTING SPRING ISOLATORS ALWAYS CONSIDER WEIGHT DISTRIBUTION BY REFERENCING EQUIPMENT WEIGHT AND CENTER OF GRAVITY. NEAR RIGHT ENDS OF UNITS (VIEWED FROM FRONT PANEL) SPRING WEIGHT CAPACITY MAY BE LARGER. IF HIGHER SPRING WEIGHT CAPACITY IS REQUIRED VS OTHER SPRING LOCATIONS, CONS DER AN ADDITIONAL SPRING OF EQUAL "K" VALUE (IBS/IN) NEAR RIGHT END OF LAST MODULE. IN GENERAL IT IS RECOMMENDED TO SELECT ALL MOUNTING SPRINGS OF EQUIVALENT "K' VALUE (IBS/IN).



FRONT VIEW

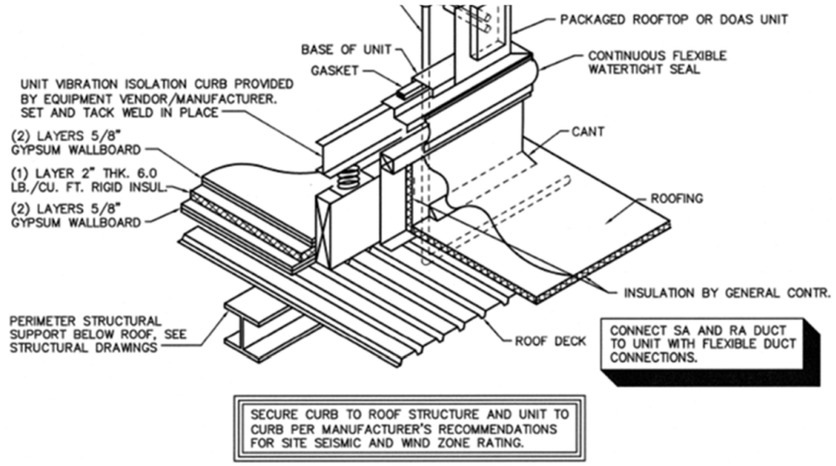


SIDE VIEW

DISCLAIMER:

THIS DRAWING IS SCHEMATIC IN NATURE AND INTENDED TO PROVIDE GUIDANCE FOR INSTALLING VRF OUTDOOR UNIT EQUIPMENT ON LIGHT BUILT-UP CORRUGATED METAL DECK ROOFING SYSTEMS, BUT THE CONSIDERATIONS ALSO APPLY TO OTHER ROOFING TYPES. FINAL DESIGN AND SELECTION OF SUPPORT AND VIBRATION ISOLATION EQUIPMENT SHOULD BE DETERMINED BY THE DESIGN ENGINEER OF RECORD AND/OR STRUCTURAL ENGINEER OF RECORD.

1 VRF Curb Detail
NO SCALE



2 DOAS Curb Detail
NO SCALE

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
SEAL 23551
ENGINEER DAVID M. HAHN
19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS
ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL DETAILS

ISSUE BLOCK

Mark	Date	Description

PROJECT NO:	2025265.00
DATE:	08/19/2026
SCALE:	12" = 1'-0"
DRAWN BY: RWC	PROJ MGR: DMH

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PUMP SCHEDULE

DRAWING CODE	BASIS OF DESIGN...	BASIS OF DESIGN MODEL	ALTERNATE APPROVED...	PUMP TYPE	SERVICE	FLUID	CAPACITY (GPM)	EFFICIENCY	TOTAL DYNAMIC HEAD (FT)	MAX OPERATING TEMPERATURE...	INLET AND OUTLET SIZE...	CONNECTION TYPE	IMPELLER SIZE (IN.)	MOTOR					NOTES	ACCESSORIES
														ENCLOSURE		SPEED (RPM)	(HP)	ELECTRICAL (V/PH/HZ)		
														TYPE	MATERIALS					
HWP1	B&G	e90-2AAC	TACO, ARMSTRONG	IN-LINE CENTRIFUGAL	HEATING SUPPLY	GLYCOL MIXTURE	160.00	60.60	55.0	180	2	FLANGED	3.75	ODP	CAST IRON	3,600	5	460/3/60	1	A-B
HWP2	B&G	e90-2AAC	TACO, ARMSTRONG	IN-LINE CENTRIFUGAL	HEATING SUPPLY	GLYCOL MIXTURE	160.00	60.60	55.0	180	2	FLANGED	3.75	ODP	CAST IRON	3,600	5	460/3/60	1	A-B

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2
3
4
5

ACCESSORIES:
A PREMIUM EFFICIENT MOTOR.
B BUNA/CARBON-CERAMIC SEAL.
C
D

.....

CONDENSING BOILER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTU...	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	BURNER	HEATING MEDIUM	DESIGN WATER PRESSURE RATING (PSIG)	AGA INPUT (MBH)		AGA OUTPUT...	MINIMUM EFFICIENCY REQUIREMENT...	CONNECTIONS					ELECTRICAL				WEIGHT (LBS.)	NOTES	ACCESSORIES
							MINIMUM	MAXIMUM	MAXIMUM		GAS (IN.)	INLET GAS PRESSURE (IN...	WATER (IN.)	INTAKE (IN.)	VENT (IN.)	POWER SUPPLY...	MCA (A)	MOCP (A)			
B1	LOCHINVAR	FBN2501	RIELLO, AERCO	NATURAL...	HOT...	160	125	2,500	2,400	96	2"	7-14	4"	8"	9"	208/3/60	4.5	15	3,600	1-4	A-C
B2	LOCHINVAR	FBN2501	RIELLO, AERCO	NATURAL...	HOT...	160	125	2,500	2,400	96	2"	7-14	4"	8"	9"	208/3/60	4.5	15	3,600	1-4	A-C

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 REFER TO PLANS FOR VENTING ARRANGEMENT.
3 ROUTE CONDENSATE THROUGH CONDENSATE NEUTRALIZATION KIT. REFER TO PLANS FOR LOCATION AND ARRANGEMENT.
4 MOUNT BOILER ON 6" HIGH CONCRETE HOUSE KEEPING PAD. PROVIDE SINGLE PAD FOR MULTIPLE BOILERS WHERE INDICATED ON PLANS.

ACCESSORIES:
A CONDENSATE NEUTRALIZATION KIT
B CONCENTRIC VENT KIT
C GAS REGULATOR

EXPANSION TANK SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED...	SERVICE	WORKING PRESSURE...	VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	TYPE	CONFIGURATION	DIM.... (IN.)	WEIGHT DRY (LBS)	WEIGHT FULL (LBS)	NOTES	ACCESSORIES
ET1	B&G	B35	WESSELS, TACO	HEATING HOT WATER				BLADDER	VERTICAL				1	

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 WEIGHT LISTED IS DRY WEIGHT.
3 ASME BOILER AND PRESSURE VESSEL CODE: SECTION VIII, DIVISION 1.
4 FACTORY PRECHARGE 12 PSIG

ACCESSORIES:
A FULL ACCEPTANCE EXPANSION TANK
B
C

BUFFER TANK SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	SERVICE	WORKING PRESSURE...	VOLUME (GAL)	CONFIGURATION	DIM. H/D (IN)	PIPE CONNECTION			WEIGHT		NOTES	ACCESSORIES
									NUMBER...	TYPE	SIZE...	TYPE	(LBS)		
BT1	B&G	BT	TACO, ARMSTRONG	HEATING HOT WATER			VERTICAL			....		....		1	

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 ASME BOILER AND PRESSURE VESSEL CODE: SECTION VIII, DIVISION 1.

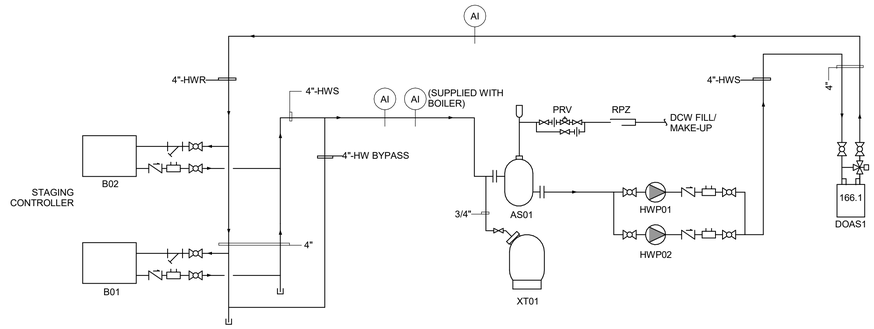
ACCESSORIES:
A FACTORY INSTALLED INSULATION
B VERTICAL INTERNAL BAFFLE WITH CONNECTIONS ON THE SIDES OF THE TANK.
C MANWAY

AIR/DIRT SEPARATOR SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED...	TYPE	FLOW (GPM)	WATER CONNECTIONS		WEIGHT (LBS)	NOTES	ACCESSORIES
						SIZE (IN)	STYLE			
AS1	B&G	4F	WESSELS, TACO	COALESCING, LOW VELOCITY			....		1	

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 ASME CERTIFIED, CONSTRUCTED AND STAMPED FOR 125 PSI WORKING PRESSURE @ 200°F.
3 WEIGHT LISTED IS FILLED WEIGHT.
4

ACCESSORIES:
A AUTOMATIC AIR VENT
B FLUSH VALVE
C NON-REMOVABLE COALECING MEDIUM
D
E



1 HYDRONIC HOT WATER FLOW DIAGRAM
NO SCALE

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19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS
ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL SCHEDULES AND HOT WATER FLOW DIAGRAM

ISSUE BLOCK

Mark	Date	Description

PROJECT NO: 2025265.00
DATE: 08/19/2026
SCALE: NO SCALE
DRAWN BY: MEZ | PROJ MGR: DMH

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VARIABLE REFRIGERANT FLOW OUTDOOR UNIT SCHEDULE

DRAWING CODE	INDOOR UNIT(S)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	COOLING		HEATING		MIN EER	MIN COP	ELECTRICAL			REFRIGERANT			WEIGHT (LBS)	NOTES	ACCESSORIES
					TOTAL (MBH)	OAT (°F)	TOTAL (MBH)	OAT (°F)			VOLTAGE (V/PH/HZ)	MCA (A)	MOCP (A)	TYPE	CAPACITY - ODU (LBS)	CAPACITY - SYSTEM(EST) (LBS)			
HP1	DAH1-01, DAH1-02, DAH1-03, DAH2-01, DAH2-02, DAH3-03, DAH1-04, DAH1-05, DAH1-06, DAH1-07, DAH1-08, DAH1-09, DAH1-10, DAH1-11, DAH1-12	MITSUBISHI	TURYE1924AMM0AN	DAIKIN, LG	192.0	23~125	192.0	-22~59	10.8	3.5	460/3/60	31.0	50	R-32	13.0	86.0	745	1 THRU 11	A,B,C

NOTES:
1 REFER TO SPECIFICATION 23 81 28.00 22 VARIABLE REFRIGERANT FLOW (VRF) AIR CONDITIONING AND HEAT PUMP EQUIPMENT FOR FURTHER INFORMATION.
2 MAXIMUM COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
3 MAXIMUM HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
4 EFFICIENCY VALUES FOR EER, IEER, COP ARE BASED ON AHRI 1230 TEST METHOD FOR MIXTURE OF DUCTED & NON-DUCTED INDOOR UNITS.
5 PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
6 PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
7 REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
8 EFFICIENCY VALUES FOR EER, IEER, COP ARE BASED ON AHRI 1230 TEST METHOD FOR MIXTURE OF DUCTED & NON-DUCTED INDOOR UNITS.
9 REFRIGERANT CONCENTRATION (MREL) CALCULATIONS ARE BASED ON BASIS-OF-DESIGN VRF EQUIPMENT; CONTRACTOR SHALL PROVIDE REVISED CALCULATIONS FOR ANY EQUIPMENT SUBSTITUTIONS.
10 PROVIDE MANUFACTURER-REQUIRED A2L SAFETY AND MITIGATION COMPONENTS, INCLUDING REFRIGERANT LEAK DETECTION SENSORS, ALARMS, CONTROLS, AND ISOLATION/SHUTOFF VALVES AS REQUIRED FOR CODE COMPLIANCE.
11 REFER TO DETAIL FOR VIBRATION ISOLATION MOUNTING GUIDELINES.

ACCESSORIES:
A PROVIDE CORROSION COATED CONDENSER COILS FOR SEACOAST PROTECTION
B PROVIDE A PHASE MONITOR (ICM450A OR APPROVED EQUAL) IN A NEMA 3R ENCLOSURE ON THE OUTDOOR UNIT. FIELD INSTALLED BY M.C.
C PROVIDE EQUIPMENT-SPECIFIC ROOF RAILS. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS BEFORE ORDERING. RAILS SHALL BE WIND-RATED, INCLUDING RESTRAINTS AND FASTENERS, AND SUPPLIED WITH ENGINEER CERTIFICATION.

VARIABLE REFRIGERANT FLOW AIR HANDLER SCHEDULE

DRAWING CODE	BC CONTROLLER	OUTDOOR UNIT	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	INDOOR UNIT CONFIGURATION	MAXIMUM COOLING CAPACITY (MBH)	MAXIMUM HEATING CAPACITY (MBH)	SUPPLY AIRFLOW (MIN CFM TO MAX...	ELECTRICAL			REFRIG TYPE	WEIGHT (LBS)	NOTES	ACCESSORIES
										VOLTAGE (V/PH/HZ)	MCA (A)	MOCP (A)				
DAH1-01	BC01	HP01	MITSUBISHI	TPLFYP008FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	8.0	9.0	230-315	208/1/60	0.3	15	R-32	29	1 THRU 12	A,B
DAH1-02	BC01	HP01	MITSUBISHI	TPLFYP008FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	8.0	9.0	230-315	208/1/60	0.3	15	R-32	29	1 THRU 12	A,B
DAH1-03	BC01	HP01	MITSUBISHI	TPLFYP005FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	5.0	5.6	230-280	208/1/60	0.2	15	R-32	29	1 THRU 12	A,B
DAH2-01	BC01	HP01	MITSUBISHI	TPVFYP048AM1M0A	DAIKIN, LG	MULTI-POSITION AIR HANDLER	48.0	54.0	1400-980	208/1/60	5.6	15	R-32	172	1 THRU 12	A,B
DAH2-02	BC01	HP01	MITSUBISHI	TPLFYP008FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	8.0	9.0	230-315	208/1/60	0.3	15	R-32	29	1 THRU 12	A,B
DAH2-03	BC01	HP01	MITSUBISHI	TPLFYP005FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	5.0	5.6	230-280	208/1/60	0.2	15	R-32	29	1 THRU 12	A,B
DAH1-04	BC02	HP01	MITSUBISHI	TPLFYP008FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	8.0	9.0	230-315	208/1/60	0.3	15	R-32	29	1 THRU 12	A,B
DAH1-05	BC02	HP01	MITSUBISHI	TPKFYP012LM1M0A	DAIKIN, LG	WALL MOUNTED	12.0	13.5	152-297	208/1/60	0.4	15	R-32	24	1 THRU 12	A,B
DAH1-06	BC02	HP01	MITSUBISHI	TPLFYP005FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	5.0	5.6	230-280	208/1/60	0.2	15	R-32	29	1 THRU 12	A,B
DAH1-07	BC02	HP01	MITSUBISHI	TPLFYP005FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	5.0	5.6	230-280	208/1/60	0.2	15	R-32	29	1 THRU 12	A,B
DAH1-08	BC02	HP01	MITSUBISHI	TPLFYP012FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	12.0	13.5	245-335	208/1/60	0.3	15	R-32	31	1 THRU 12	A,B
DAH1-09	BC02	HP01	MITSUBISHI	TPLFYP012FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	12.0	13.5	245-335	208/1/60	0.3	15	R-32	31	1 THRU 12	A,B
DAH1-10	BC02	HP01	MITSUBISHI	TPLFYP012FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	12.0	13.5	245-335	208/1/60	0.3	15	R-32	31	1 THRU 12	A,B
DAH1-11	BC02	HP01	MITSUBISHI	TPLFYP012FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	12.0	13.5	245-335	208/1/60	0.3	15	R-32	31	1 THRU 12	A,B
DAH1-12	BC02	HP01	MITSUBISHI	TPLFYP008FM1M0A	DAIKIN, LG	CEILING CASSETTE - 4 WAY	8.0	9.0	230-315	208/1/60	0.3	15	R-32	29	1 THRU 12	A,B

NOTES:
1 REFER TO SPECIFICATION 23 81 28.00 22 VARIABLE REFRIGERANT FLOW (VRF) AIR CONDITIONING AND HEAT PUMP EQUIPMENT FOR FURTHER INFORMATION.
2 MAXIMUM COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
3 MAXIMUM HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
4 PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
5 PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
6 REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
7 FACTORY STARTUP BY THE MANUFACTURER.
8 PROVIDE OWNER TRAINING ONCE COMMISSIONING IS COMPLETE.
9 INSTALL PLASTIC COVERS ON ALL EXPOSED REFRIGERANT PIPING AND ENSURE THEY MATCH THE SURROUNDING SURFACES OR WALLS FOR A CLEAN, PROFESSIONAL APPEARANCE.
10 REFRIGERANT CONCENTRATION (MREL) CALCULATIONS ARE BASED ON BASIS-OF-DESIGN VRF EQUIPMENT; CONTRACTOR SHALL PROVIDE REVISED CALCULATIONS FOR ANY EQUIPMENT SUBSTITUTIONS.
11 PROVIDE MANUFACTURER-REQUIRED A2L SAFETY AND MITIGATION COMPONENTS, INCLUDING REFRIGERANT LEAK DETECTION SENSORS, ALARMS, CONTROLS, AND ISOLATION/SHUTOFF VALVES AS REQUIRED FOR CODE...
12 INSTALL SYSTEM TOUCH SCREEN CONTROLLER AT LOCATION SHOWN ON PLANS. CONFIRM FINAL LOCATION WITH OWNER.

ACCESSORIES:
A IF CONSTRUCTION DOES NOT ALLOW FOR GRAVITY DRAINAGE OF CONDENSATE, PROVIDE CONDENSATE PUMP.
B PROVIDE ENGINEER APPROVED MINI CONDENSATE PUMP IF GRAVITRY DRAIN CANNOT BE ACEHIVED.

VARIABLE REFRIGERANT FLOW BRANCH CIRCUIT CONTROLLER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	POWER INPUT (RATED) COOLING (KW)	POWER INPUT (RATED) HEATING (KW)	ELECTRICAL			REFRIG. TYPE	WEIGHT (LBS)	NOTES	ACCESSORIES
						VOLTAGE (V/PH/HZ)	MCA (A)	MOCP (A)				
BC1	MITSUBISHI	CMB-M108NU-MA-SV	DAIKIN, LG	0.02	0.02	208/1/60	0.13	15	R-32	139	1,2,3	A,B
BC2	MITSUBISHI	CMB-M108NU-MB-SV	DAIKIN, LG	0.08	0.08	208/1/60	0.08	15	R-32	120	1,2,3	A,B

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 PROVIDE GRAVITY DRAIN CONDENSATE PIPING.
3 INCLUDE DIAMONDBACK BALL VALVES BV-SERIES, 700PSIG WORKING PRESSURE, FULL PORT, 410A RATED.

ACCESSORIES:
A SUCTION AND LIQUID LINES SERVICE ISOLATION VALVES FOR ALL PORTS.
B PROVIDE ENGINEER APPROVED MINI CONDENSATE PUMP IF GRAVITY DRAIN CANNOT BE ACEHIVED.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M. HIGHT

19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS

ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL SCHEDULES

ISSUE BLOCK

Mark	Date	Description

PROJECT NO: 2025265.00
DATE: 08/19/2026
SCALE:
DRAWN BY: MEZ | PROJ MGR: DMH

M602

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EVACUATOR FAN SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	FAN TYPE	BLADE TYPE	AIRFLOW (CFM)	ESP (IN. WG.)	DRIVE TYPE	HOUSING MATERIAL	HOUSING COATING	WHEEL MATERIAL	WHEEL COATING	BRAKE HORSEPOWER (HP)	FAN SPEED (RPM)	MOTOR						VIBRATION ISOLATORS		WEIGHT (LBS)	NOTES	ACCESSORIES
															ENCLOSURE TYPE	STATIC EFFICIENCY (%)	SIZE (HP)	SPEED (RPM)	ELECTRICAL V/PH/HZ	ELECTRICAL FLA (A)	TYPE	STATIC DEFLECTION (IN.)			
F3	LOREN COOK	330 CPA	GREENHECK, CARNES	CENTRIFUGAL	BACKWARD INCLINED FLAT	12,400	2.00	DIRECT	ALUMINUM	EPOXY	ALUMINUM	EPOXY	5.77	814	TEFC	68	7-1/2	860	460/3/60	11.0	SPRING	1	1,098	1,2	A THRU J

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 CONTROLLED VIA ON/OFF SWITCH. REFER TO ELECTRICAL PLANS.

ACCESSORIES:
A SHAFT GROUNDING KIT
B COMBINATION DISCONNECT/VFD IN NEMA-4X ENCLOSURE, SEE SPECIFICATION SECTION 262923
C AUTO DISCHARGE SHUTTER (HVY-DUTY)-330(ALUM-HD)
D PHENOLIC EPOXY W/UV-(LIGHT GRAY)
E ALL ALUMINUM CONSTRUCTION
F ALUMINUM DRAIN
G ISOLATION BASE
H SPRING ISOLATORS
I ALUMINUM FLANGED INLET WITH ALUMINUM COMPANION FLANGE
J WEATHER COVER

CENTRIFUGAL FAN SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	FAN TYPE	AIRFLOW (CFM)	ESP (IN. WG.)	DRIVE TYPE	WHEEL MATERIAL	WHEEL COATING	BRAKE HORSEPOWER (HP)	FAN SPEED (RPM)	MOTOR						VIBRATION ISOLATORS		WEIGHT (LBS)	NOTES	ACCESSORIES
												ENCLOSURE TYPE	STATIC EFFICIENCY (%)	SIZE (HP)	SPEED (RPM)	ELECTRICAL V/PH/HZ	ELECTRICAL FLA (A)	TYPE	STATIC DEFLECTION (IN.)			
F1	LOREN COOK	70SQN-B	GREENHECK, CARNES	SQUARE IN-LINE CENTRIFUGAL	300	0.50	BELT	ALUMINUM	EPOXY	.174	2,057	TEFC	15	1/4	1,725	120/1/60	5.8	SPRING	1	62	1,2	A,B,C,D,E,F
F2	LOREN COOK	135SQN17D	GREENHECK, CARNES	SQUARE IN-LINE CENTRIFUGAL	1,375	0.50	DIRECT	ALUMINUM	EPOXY	.250	1,251	TEFC	43	1/2	1,725	208/1/60	5.4	SPRING	1	118	1,2	A,B,C,D,E,F

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 CONTROLLED VIA ON/OFF SWITCH. REFER TO ELECTRICAL PLANS.

ACCESSORIES:
A BACKDRAFT DAMPER
B FAN MOUNTED SPEED CONTROL
C SPRING ISOLATOR
D ALL ALUMINUM CONSTRUCTION
E PHENOLIC EPOXY COATING
F CURRENT SENSING RELAY

POWER VENTILATOR SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	FAN TYPE	FAN WHEEL	SERVICE	DRIVE TYPE	DAMPER	MOTOR ENCLOSURE	CAPACITIES				ELECTRICAL				SONES	WEIGHT (LBS.)	NOTES	ACCESSORIES
										AIRFLOW (CFM)	ESP (IN. WG.)	FAN RPM	MOTOR RPM	MOTOR TYPE	MOTOR SIZE (W)	V/PH/HZ	FLA (A)				
PV1	LOREN COOK	GC-148	GREENHECK, PENNBARRY	CEILING-MOUNTED VENTILATORS	ALUMINUM HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	OPEN DRIPPROOF	70	0.50	902	902	PSC	36	120/1/60	0.4	2.0	17	1,2,3,4	A,B

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 CONTROLLED VIA OCCUPANCY SENSOR. REFER TO ELECTRICAL PLANS.
3 REFER TO CONTROL DIAGRAMS
4 UNIT TO RUN ON OCCUPIED SCHEDULE. REFER TO CONTROL SEQUENCE FOR ADDITIONAL INFORMATION.

ACCESSORIES:
A GRAVITY DAMPER
B UNIT MOUNTED SPEED CONTROLLER

MINI-SPLIT SYSTEM SCHEDULE

DRAWING CODE (IDU / ODU)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL (IDU / ODU)	ALTERNATE APPROVED MANUFACTURERS	INDOOR UNIT CONFIGURATION	SYSTEM TYPE	ARI COOLING 80/67/95		MIN SEER	INDOOR UNIT				OUTDOOR UNIT				REFRIGERANT PIPING			NOTES	ACCESSORIES
						TOTAL (MBH)	MIN (MBH)		FAN SA MIN-MAX (CFM)	ELECTRICAL VOLTAGE (V/PH/HZ)	ELECTRICAL MCA (A)	WEIGHT (LBS)	ELECTRICAL VOLTAGE (V/PH/HZ)	ELECTRICAL MCA (A)	ELECTRICAL MOCP (A)	WEIGHT (LBS)	TYPE	MAXIMUM LENGTH (FT.)	MAXIMUM HEIGHT DIFFERENTIAL (FT.)		
DAH1 / DHP1	MITSUBISHI	MSY-GX12NL/MUY-GX12NL	DAIKIN, LG	WALL MOUNTED	AIR CONDITIONER	12.0	1.3	25.6	151-448	208/1/60	1.0	23	208/1/60	12.0	15	77	R-454B	65	40	1,2,3,4	A,B

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND CONDUCTOR FROM OUTDOOR UNIT TO INDOOR UNIT.
3 MOUNT INDOOR UNIT AT MAXIMUM ALLOWED HEIGHT WHILE MAINTAINING MANUFACTURERS RECOMMENDED CLEARANCES.
4 INSTALL BASE FOUNDATION BOLTS FOR HIGH WIND PROTECTION.

ACCESSORIES:
A SEACOAST COATING PROTECTION ON OUTDOOR UNIT.
B WIRED WALL-MOUNTED REMOTE CONTROLLER

LOUVER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	FRAME	DESCRIPTION	MATERIAL	LOUVER DEPTH (IN.)	SIZE (W x H) (IN.)	SERVICE	AIRFLOW (CFM)	PERFORMANCE RATINGS			NOTES	ACCESSORIES
												FREE AREA (SF)	S.P. LOSS (IN. H20)	WATER PENETRATION (OZ./SF)		
L1	RUSKIN	HZ700	GREENHECK, POTTORFF	FIXED	STANDARD	HORIZONTAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	7	12X12	EXHAUST	70	0.22	0.02	-	1,2,3	A,B
L2	RUSKIN	HZ700	GREENHECK, POTTORFF	FIXED	STANDARD	HORIZONTAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	7	18X18	EXHAUST	300	0.87	0.03	-	1,2	A,B
L3	RUSKIN	HZ700	GREENHECK, POTTORFF	FIXED	STANDARD	HORIZONTAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	7	28X28	EXHAUST	1,375	2.52	0.08	-	1,2	A,B
L4	RUSKIN	HZ700	GREENHECK, POTTORFF	FIXED	STANDARD	HORIZONTAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	7	18X18	INTAKE	300	0.87	0.03	803.00	1,2	A,B
L5	RUSKIN	HZ700	GREENHECK, POTTORFF	FIXED	STANDARD	HORIZONTAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	7	16X48	INTAKE	1,375	2.41	0.10	803.00	1,2	A,B

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLOR AND GLOSS.
3 INTERLOCK WITH ASSOCIATED POWER VENTILATOR.

ACCESSORIES:
A INSECT SCREENING (MATERIAL TO MATCH LOUVER MATERIAL)
B AMCA 550 LISTED (WATER PENETRATION)

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	SERVICE	NECK SIZE (IN.)	BRANCH CONN. SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	PRICE	ASPD	GREENHECK, TITUS	SQUARE PLAQUE DIFFUSER	SUPPLY	6%%C		24 X 24	ALUMINUM	WHITE	T-BAR	1,2,3	A
S2	PRICE	ASPD	GREENHECK, TITUS	SQUARE PLAQUE DIFFUSER	SUPPLY	8%%C		24 X 24	ALUMINUM	WHITE	T-BAR	1,2,3	A
S3	PRICE	ASPD	GREENHECK, TITUS	SQUARE PLAQUE DIFFUSER	SUPPLY	10%%C		24 X 24	ALUMINUM	WHITE	T-BAR	1,2,3	A
S4	PRICE	ASPD	GREENHECK, TITUS	SQUARE PLAQUE DIFFUSER	SUPPLY	12%%C		24 X 24	ALUMINUM	WHITE	T-BAR	1,2,3	A
S5	PRICE	CFP - JS	GREENHECK, TITUS	48" - 2 SLOT JS WITH ENGINEERED PLENUM	SUPPLY	8%%C		-	ALUMINUM	WHITE	CEILING SURFACE	1,2,3	B
S6	PRICE	SDS100	GREENHECK, TITUS	48" - LINEAR 1" SLOT DIFFUSER, 3-SLOTS	SUPPLY	8%%C		-	ALUMINUM	WHITE	CEILING SURFACE	1,2,3	A
S7	PRICE	620	GREENHECK, TITUS	FIXED FACE GRILLE	SUPPLY	10 X 4		12 X 6	ALUMINUM	WHITE	DUCT SURFACE	1,2,3	A
S8	PRICE	620	GREENHECK, TITUS	FIXED FACE GRILLE	SUPPLY	12 X 12	10%%C	14 X 14	ALUMINUM	WHITE	CEILING SURFACE	1,2,3	C,D
T1	PRICE	SDR100	GREENHECK, TITUS	LINEAR 1" SLOT, 3-SLOTS	TRANSFER	10%%C		-	ALUMINUM	WHITE	CEILING SURFACE	1,2,3	A
T2	PRICE	630	GREENHECK, TITUS	FIXED FACE GRILLE	TRANSFER	22 X 22	10%%C	24 X 24	ALUMINUM	WHITE	T-BAR	1,2,3	A
R1	PRICE	630	GREENHECK, TITUS	FIXED FACE GRILLE	RETURN	36 X 18		38 X 20	ALUMINUM	WHITE	WALL SURFACE	1,2,3	-
E1	PRICE	ASPD	GREENHECK, TITUS	SQUARE PLAQUE DIFFUSER	EXHAUST	8%%C		24 X 24	ALUMINUM	WHITE	T-BAR	1,2,3	A
E2	PRICE	ASPD	GREENHECK, TITUS	SQUARE PLAQUE DIFFUSER	EXHAUST	10%%C		24 X 24	ALUMINUM	WHITE	T-BAR	1,2,3	A
E3	PRICE	ASPD	GREENHECK, TITUS	SQUARE PLAQUE DIFFUSER	EXHAUST	12%%C		24 X 24	ALUMINUM	WHITE	T-BAR	1,2,3	A
E4	PRICE	630	GREENHECK, TITUS	FIXED FACE GRILLE	EXHAUST	44 X 16		46 X 18	ALUMINUM	WHITE	DUCT SURFACE	1,2,3	A
E5	PRICE	630	GREENHECK, TITUS	FIXED FACE GRILLE	EXHAUST	18 X 10		20 X 12	ALUMINUM	WHITE	DUCT SURFACE	1,2,3	A
E6	PRICE	630	GREENHECK, TITUS	FIXED FACE GRILLE	EXHAUST	12 X 12	10%%C	14 X 14	ALUMINUM	WHITE	CEILING SURFACE	1,2,3	C,D
E7	PRICE	630	GREENHECK, TITUS	FIXED FACE GRILLE	EXHAUST	10 X 4		12 X 6	ALUMINUM	WHITE	DUCT SURFACE	1,2,3	A

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.
3 PAINT ALL VISIBLE DUCTWORK THROUGH GRILLES AND REGISTERS FLAT BLACK.

ACCESSORIES:
A VOLUME DAMPER
B VCR8EC - ROUND NECK CABLE-OPERATED DAMPER
C VCS3AL - OPPOSED BLADE DAMPER
D SQUARE TO ROUND NECK ADAPTOR.

ELECTRIC HEATER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	DESCRIPTION			ELECTRIC COIL	SUPPLY AIR	ELECTRICAL		WEIGHT (LBS)	MOUNTING HEIGHT (FT)	NOTES	ACCESSORIES
				TYPE	FAN	DISCHARGE	CAPACITY (KW)	AIRFLOW (CFM)	POWER (V/PH/HZ)	FLA (A)				
EUH1	MARKEL	F3F5505T-304	QMARK, INDEECO	UNIT HEATER	PROPELLER	WASHDOWN	5.0	400	208/3/60	13.9	58	8	1	A,B,C
EUH2	MARKEL	F3F5510T-304	QMARK, INDEECO	UNIT HEATER	PROPELLER	WASHDOWN	10.0	700	208/3/60	27.7	64	8	1	A,B,C
EUH3	MARKEL	F3F5510T-304	QMARK, INDEECO	UNIT HEATER	PROPELLER	WASHDOWN	10.0	700	208/3/60	27.7	64	8	1	A,B,C

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.

ACCESSORIES:
A FACTORY INSTALLED THERMOSTAT
B FACTORY INSTALLED DISCONNECT
C WALL MOUNT BRACKET

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M. HAHN

19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS
ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL SCHEDULES

ISSUE BLOCK

Mark	Date	Description

PROJECT NO: 2025265.00
DATE: 08/19/2026
SCALE:
DRAWN BY: MEZ | PROJ MGR: DMH

M603

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DEDICATED OUTSIDE AIR UNIT SCHEDULE

DRAWING CODE	DESIGN BASIS MANUFACTURER	MODEL	ALTERNATE APPROVED MFR	SYSTEM TYPE	SA/OA FAN					RA/EA FAN					NATURAL GAS HEATING			ELECTRICAL				REFRIG. TYPE	UNIT WEIGHT (LBS)	CURB WEIGHT (LBS)	NOTES	ACCESSORIES
					SA (CFM)	OA (CFM)	ESP (IN H2O)	FAN QTY	MOTOR (BHP)	RA (CFM)	EA (CFM)	ESP (IN H2O)	FAN QTY	MOTOR (BHP)	GAS INPUT (MBH)	GAS OUTPUT (MBH)	STAGES	VOLTAGE (V/PH/HZ)	MCA (A)	MOCP (A)	WEIGHT (LBS)						
DOAS1	TRANE	OABD108A4	PREMISYS,...	ELECTRIC/ GAS HEAT	1,500	1,500	1.50	1	.89	1,350	1,511	0.75	1	.54	50.0	40.0	MODULATING	460/3/60	24.1	35	2,120	R-454B	2120	-	1,2,4,5,6	A THRU W
DOAS2	TRANE	OABD108A4	PREMISYS,...	ELECTRIC/ GAS HEAT	1,500	1,500	1.50	1	.89	1,350	1,511	0.75	1	.54	50.0	40.0	MODULATING	460/3/60	24.1	35	2,120	R-454B	2120	134	1,3,4,5,6	A THRU W

NOTES:
1. REFER TO SPECIFICATION SECTION 237433 - DEDICATED OUTDOOR AIR UNITS FOR FURTHER INFORMATION.
2. VERTICAL DISCHARGE / VERTICAL RETURN.
3. HORIZTONTAL DISCHARGE / HORIZONTAL RETURN.
4. EFFICIENCY RATED IN ACCORDANCE WITH ANSI/AHRI STANDARD 910/920.
5. DX COOLING COIL LEAVING AIR CONDITIONS SHALL MEET PERFORMANCE REQUIREMENTS AT MAX/MIN AIRFLOW, AND ALL FOUR PART-LOAD CONDITIONS SPECIFIED BY AHRI 920-2020. THE UNIT MUST BE TESTED AND CERTIFIED IN ACCORDANCE WITH AHRI 920-2020 STANDARDS.
6. UNIT TO OPERATE VIA SCHEDULE. CONTRACTOR TO CONFIRM SCHEDULE WITH BUILDING OWNER.

ACCESSORIE...
- A SINGLE POINT ELECTRICAL CONNECTION PREFFERED. IF NOT USED, CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ELECTRICAL CONTRACTOR AND ANY COST INCREASE.
- B MODULATING HOT GAS REHEAT
- C CONVENIENCE OUTLET
- D CONDENSER COIL HAIL GUARDS
- E PHASE AND VOLTAGE MONITOR
- F HINGED ACCESS PANELS
- G PROVIDE EQUIPMENT-SPECIFIC ROOF CURB. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS BEFORE ORDERING. CURB SHALL BE WIND-RATED, INCLUDING RESTRAINTS AND FASTENERS, AND SUPPLIED WITH ENGINEER CERTIFICATION.
- H FILTERS: ALUMINUM MESH FILTERS AND GALVANIZED MESH BIRD SCREEN INSTALLED ON INTAKE. ONE ROW OF 2" MERV 8 PLEATED MEDIA FILTERS PRIOR TO EVAPPRATOR COIL. 6" FILTER RACK UPSTREAM OF EVAPORATOR.
- I INSULATED FLOOR AND DRAIN PAN
- J STAINLESS STEEL DRAIN PAN
- K OA DAMPER WITH 2-POSITION ACTUATOR RATED FOR CLASS 1A LEAKAGE
- L 2" INSULATED DOUBLE-WALL CONSTRUCTION WITH GALVANIZED PANELS. CASING SHALL HAVE A MINIMUM R-VALUE OF 13. EXTERIOR CASING TO BE TESTED 672 HOURS IN A SALT SPRAY TEST IN COMPLIANCE WITH ASTM B117.
- M PROVIDE COASTAL CORROSION PACKAGE, INCLUDE STAINLESS STEEL INTERIOR CABINET CASING, STAINLESS STEEL COIL CASING, AND STAINLESS STEEL DAMPER.
- N ALL COILS (CONDENSER, EVAPORATOR, AND HG REHEAT) TO BE COATED FOR EXPOSURE TO ASTM B117 10,000+ HOURS FOR SALT SPRAY RESISTANCE TEST WITH NO DEGRADATION.
- O AIR COOLED CONDENSER WITH VARIABLE SPEED HEAD PRESSURE
- P VARIABLE SPEED SUPPLY, EXHAUST, AND CONDENSER FANS
- Q SUPPLY AND EXHAUST FAN AIRFLOW MONITOR
- R VARIABLE CAPACITY COMPRESSOR SYSTEM
- S LOW NOISE CONDENSER FANS AND COMPRESSOR SOUND WRAPS
- T DISCHARGE AIR TEMPERATURE CONTROLS WITH TOUCHSCREEN DISPLAY PANEL
- U FACTORY STARTUP AND 1-YEAR PARTS AND LABOR WARRANTY BY THE EQUIPMENT MANUFACTURER
- V 5-YEAR PARTS WARRANTY ON ALL COMPRESSORS. 25-YEAR PARTS WARRANTY ON HEAT EXCHANGER.
- W PROVIDE UNIT WITH ENERGY RECOVERY WHEEL WITH ALUMINUM CONSTRUCTION, 3A MOLECULAR SIEVE DESICCANT, AND VFD FOR CAPACITY AND FROST CONTROL.

DEDICATED OUTSIDE AIR UNIT SCHEDULE (PART 2 OF 2)

DRAWING CODE	DESIGN BASIS MANUFACTURER	MODEL	ERV HX - SUMMER - HOT DAY			DX COOLING - SUMMER - HOT DAY					ERV HX - SUMMER - HUMID DAY			DX COOLING - SUMMER - HUMID DAY					HG REHEAT		ERV HX WINTER			NOTES	ACCESSORI...
			SA EAT (°F/°Fwb)	RA EAT (°F/°Fwb)	SA LAT (°F/°Fwb)	SA LAT (°F/°Fwb)	NET TOT CAP (MBH)	NET SENS CAP (MBH)	EFFICIENCY		SA EAT (°F/°Fwb)	RA EAT (°F/°Fwb)	SA LAT (°F/°Fwb)	SA LAT (°F/°Fwb)	NET TOT CAP (MBH)	NET SENS CAP (MBH)	EFFICIENCY		SA LAT (°F)	CAP (MBH)	SA EAT (°F/°Fwb)	RA EAT (°F/°Fwb)	SA LAT (°F/°Fwb)		
DOAS1	TRANE	OABD108A4	95.0/80.0	75.0/62.5	81.1/70.5	47.1 /47.1	99.9	52.4	EER	16.1	83.6/77.9	75.0/62.5	79.6/60.4	77.6/69.8	98.9	47.9	EER	14.9	78.3	50.8	26.0/24.0	70.0/60.0	55.9/48.4	1	A
DOAS2	TRANE	OABD108A4	95.0/80.0	75.0/62.5	81.1/70.5	47.1 /47.1	99.9	52.4	EER	16.1	83.6/77.9	75.0/62.5	79.6/60.4	77.6/69.8	98.9	47.9	EER	14.9	78.3	50.8	26.0/24.0	70.0/60.0	55.9/48.4	1	A

NOTES: 1 REFER TO PART 1 OF 2 FOR NOTES.
ACCESSORIES: A REFER TO PART 1 OF 2 FOR ACCESORIES.

DEDICATED OUTDOOR AIR UNIT DETAILED PERFORMANCE DATA SCHEDULE

DRAWING CODE	DESIGN BASIS MFR	MODEL	AMBIENT	SUPPLY FAN		ERV SUMMER SUPPLY		DX COOLING COIL							HOT GAS REHEAT COIL			
			EAT CONDENSER (DB °F)	SUPPLY AIR (CFM)	DESIGN OA AIR (CFM)	EAT (db/wb °F)	LAT (db/wb °F)	TOT CAP. (MBH)	SENS CAP. (MBH)	EAT (db/wb °F)	LAT (db/wb °F)	DEW POINT (dp °F)	MRC (lbs H20/hr.)	MRE (lb/kWh)	EAT (DB °F)	LAT (DB °F)	DEW POIN...	CAP. (MBH)
DOAS1	TRANE	OA	83.6	1500	1500	83.6/77.9	77.6/69.9	153.6	50.0	77.6/69.9	46.9/46.2	45.8	86.30	9.49	46.9	74.6	45.8	47.1
			70			70/68	73.5/65.4	91.9	41.5	73.5/65.4	48/46.9	46.1	51.80	8.05	48.0	71.1	46.1	39.4
			66			66/64	72.3/63.7	72.0	40.0	72.3/63.7	47.7/46.7	45.9	39.20	6.50	47.7	70.9	45.9	39.6
			63			63/61	63/61	60.1	26.0	63/61	47/46.2	45.8	31.40	5.58	47.0	71.3	45.8	41.6
			59			59/57	59/57	42.6	19.7	59/57	46.9/46.2	45.7	21.00	4.52	46.9	71.4	45.7	41.8

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23551 ENGINEER DAVID M. HIMM

19-Aug-26

PROJECT TITLE

NIR FAMILY YMCA - 50M POOL

2710 MARKET STREET,
WILMINGTON, NC 28403

ISSUED
FOR PERMITS

ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL SCHEDULES

ISSUE BLOCK

Mark	Date	Description

PROJECT NO: 2025265.00
DATE: 08/19/2026
SCALE:
DRAWN BY: MEZ | PROJ MGR: DMH

M604

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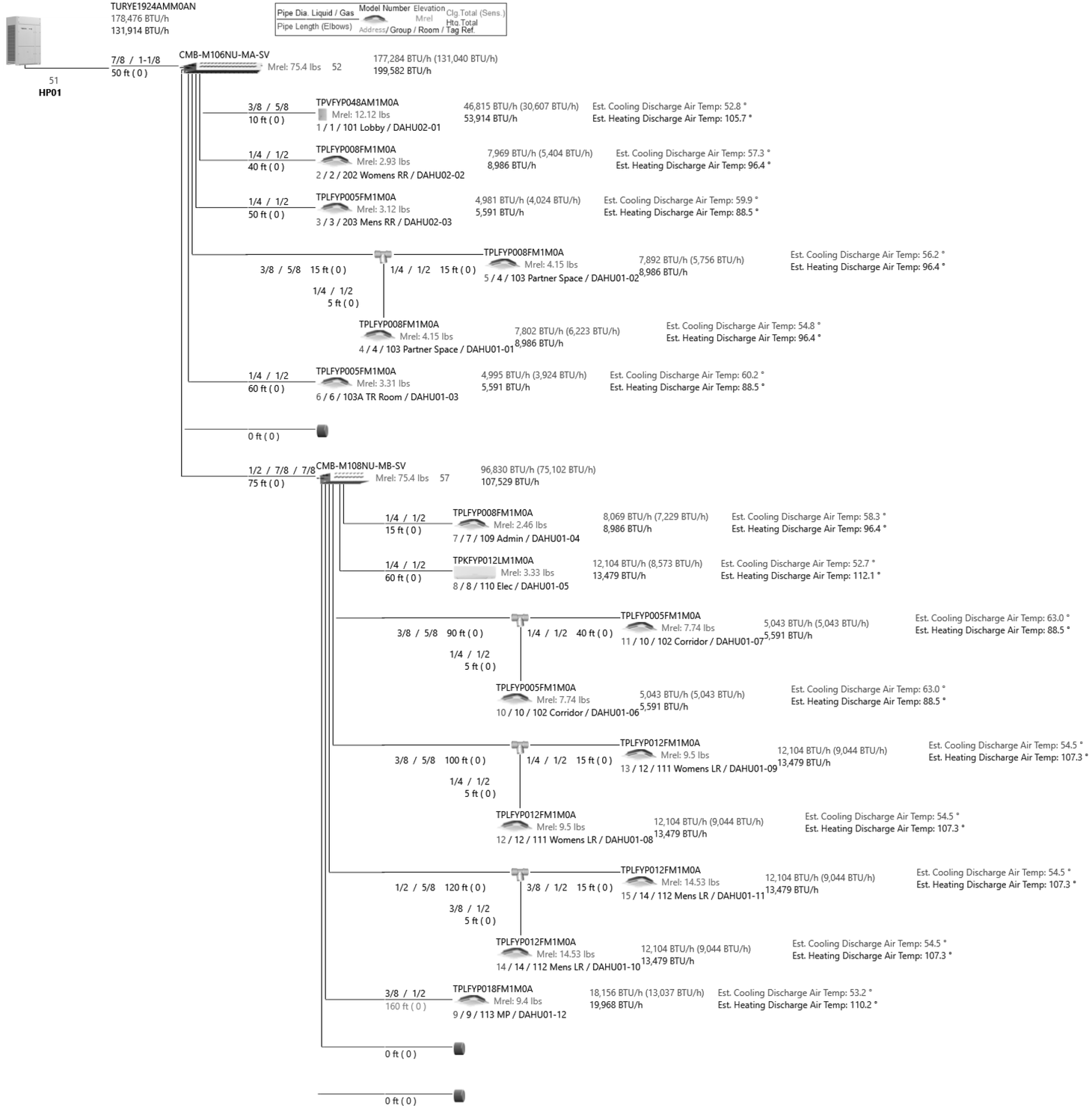

1 VRF PIPING DIAGRAM
NO SCALE

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19-Aug-26

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WILMINGTON, NC 28403

ISSUED
FOR PERMITS
ISSUED: 08/19/2026

SHEET TITLE

MECHANICAL VRF PIPING DIAGRAM

ISSUE BLOCK

Mark	Date	Description

PROJECT NO:	2025265.00
DATE:	08/19/2026
SCALE:	12" = 1'-0"
DRAWN BY: MEZ	PROJ MGR: DMH

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