

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY IBC 2015 EDITION AND SHALL CONFORM TO ALL OTHER APPLICABLE MUNICIPAL, STATE, AND FEDERAL REGULATIONS INCLUDING THE ILLINOIS ACCESSIBILITY CODE (2018) AND THE AMERICANS WITH DISABILITIES ACT.

A. GENERAL NOTES B. MISCELLANEOUS AND DEMOLITION NOTES

- 1. ALL CONTRACTORS ARE REQUIRED TO VISIT THE SITE AND BE KNOWLEDGEABLE REGARDING EXISTING CONDITIONS AND THEIR EFFECT ON THE PROPOSED WORK. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE PROJECT.
2. NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO THE INTERRUPTION OF ANY UTILITY.
3. PROTECT AND KEEP IN SERVICE ACTIVE UNDERGROUND UTILITIES, PIPES, OR CONDUITS, WHETHER INDICATED ON THE DRAWINGS OR NOT, UNLESS SPECIFICALLY CALLED FOR TO BE REMOVED, RELOCATED, OR DISCONNECTED AND ABANDONED.
4. CONTRACTORS AND SUBCONTRACTORS SHALL COORDINATE THEIR WORK WITH THAT OF OTHER TRADES.
5. NO WORK WILL BE PERMITTED TO BE INSTALLED WITHOUT RECEIPT AND SUBSEQUENT REVIEW OF FULL AND COMPLETE SUBMITTALS BY THE ARCHITECT/ENGINEER.
6. DO NOT SCALE DRAWINGS, DIMENSIONS INDICATED TAKE PRECEDENCE OVER SCALE.
7. VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD. WHERE DISCREPANCIES ARE FOUND BETWEEN DIMENSIONS OR ELEVATIONS SHOWN AND ACTUAL FIELD CONDITIONS, NOTIFY ARCHITECT/ENGINEER.
8. WHERE CONFLICTS MAY EXIST BETWEEN THE REQUIREMENTS OF PORTIONS OF THE CONTRACT DOCUMENTS, THE GREATER QUANTITY, HIGHER QUALITY OR MORE STRINGENT REQUIREMENT SHALL GOVERN. THEREFORE, BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT, IF IT RAISED NO QUESTIONS REGARDING SUCH CONFLICTS DURING THE BIDDING PROCESS, AND IN THE ABSENCE OF A CLARIFYING ADDENDUM ISSUED DURING THE BIDDING PROCESS, IT HAS VOLUNTEERED TO COMPLY WITH THE MORE EXPENSIVE REQUIREMENT AS PART OF ITS BASE BID AND IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION TO RESOLVE THE CONFLICT.
9. THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE PRODUCTS, SYSTEMS AND SERVICES. BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT THE DRAWINGS SET FORTH THE DESIGN INTENT AND, THEREFORE, MAY NOT EXPRESSLY DEPICT EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE. THE CONTRACTOR FURTHER AGREES THAT, AS PART OF ITS BID, IT MUST FURNISH AND INSTALL EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE AND, CONSEQUENTLY, THE CONTRACTOR IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION FOR ANY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE BECAUSE IT IS NOT EXPRESSLY DEPICTED HEREIN.

STANDARD ABBREVIATIONS

Table with 4 columns of abbreviations and their corresponding full names. Includes terms like AT ANCHOR BOLT, EWH ELECTRIC WATER HEATER, PTN PARTITION, etc.

THE MATERIALS, ABBREVIATIONS, AND DRAFTING SYMBOLS LEGEND ARE EACH AN ALL INCLUSIVE MASTER LIST USED BY THIS FIRM. THE INCLUSION OF THESE LEGENDS INTO THESE DOCUMENTS DOES NOT IMPLY THAT ALL THE SYMBOLS OR MATERIALS INCLUDED IN THESE LEGENDS ARE INCORPORATED INTO THIS PROJECT. ABBREVIATIONS MAY APPEAR WITH PERIODS OR OTHER PUNCTUATION SEPARATING CHARACTERS ON THE DRAWINGS; THE MEANING REMAINS THE SAME.

DRAFTING SYMBOLS AND MATERIALS LEGEND table with columns for symbol, detail number, drawing number, and material description. Includes symbols for concrete, brick masonry, stone masonry, steel, etc.

DRAFTING SYMBOLS AND MATERIALS LEGEND



PROJECT

TENNIS CENTER - AHU REPLACEMENT AND INTERIOR REMODELING 1300 FOREST GATE ROAD OAK BROOK, IL 60523

OWNER

OAK BROOK PARK DISTRICT 1450 FOREST GATE ROAD OAK BROOK, IL 60523

ARCHITECT/ENGINEER

KLUBER ARCHITECTS + ENGINEERS 10 S. SHUMWAY AVE. BATAVIA, ILLINOIS 60510 TEL (630) 406-1213 FAX (630) 406-9472 www.kluberinc.com

100% CONSTRUCTION DOCUMENTS

REQUIRED PLAN COVER SHEET INFORMATION FOR REVIEW UNDER 2018 INTERNATIONAL CODES.

GENERAL STATEMENT OF OVERALL PROJECT SCOPE AND INTENT: PROJECT CONSISTS OF ROOF TOP HVAC UNIT REPLACEMENT. NO CHANGES IN PLUMBING COUNTS OR OCCUPANCY LOADS ARE BEING MADE.

INDEX OF DRAWINGS

Table listing drawing numbers and titles: G100 COVER SHEET, A210 PARTIAL DEMOLITION FLOOR PLAN, A310 PARTIAL FLOOR PLAN, M200 ARCHITECTURAL AND MECHANICAL DEMOLITION ROOF PLAN, M310 MECHANICAL FIRST FLOOR PLAN, M320 MECHANICAL ROOF PLAN, M410 TEMPERATURE CONTROLS, M420 MECHANICAL DETAILS, E310 FIRST FLOOR ELECTRICAL PLAN, E600 ELECTRICAL ONE LINE RISER DIAGRAM

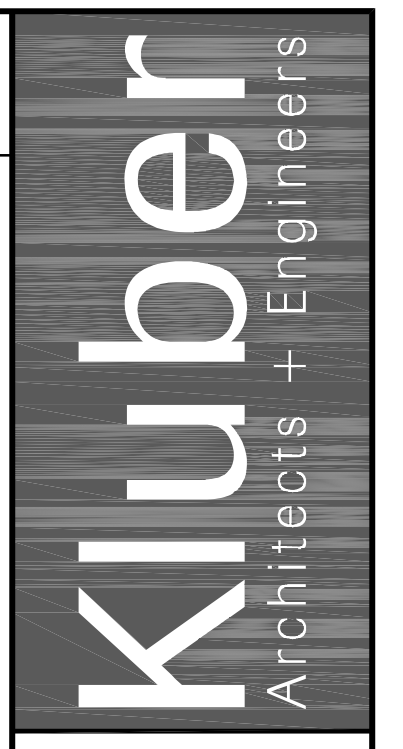
APPLICABLE CODES

2018 INTERNATIONAL BUILDING CODE 2018 INTERNATIONAL MECHANICAL CODE 2018 INTERNATIONAL PROPERTY MAINTENANCE CODE 2018 INTERNATIONAL EXISTING BUILDING CODE 2014 NATIONAL ELECTRICAL CODE LOCAL AMENDMENTS TO THE ABOVE CODES

SEALS & CERTIFICATES

Three professional seals for Architect (Clayton D. Halderman), Mechanical Engineer (Donald D. Ware, Jr.), and Electrical Engineer (Michael T. Kluber). Each seal includes the name, license number, and expiration date.

"G" SERIES, "A" SERIES "G" SERIES, "P" SERIES, "M" SERIES, "F" SERIES "G" SERIES, "E" SERIES



Kluber, Inc. Aurora, Illinois 60506 Tel: (630) 406-1213 Chicago, Illinois 60606 Tel: (773) 607-2070 www.kluberinc.com

OAK BROOK PARK DISTRICT - FAM. REC. CENTER POOL DECK & HVAC RENO. OAK BROOK PARK DISTRICT 1450 FOREST GATE ROAD OAK BROOK, ILLINOIS 60523

Table with columns for ISSUED, OUT TO BID, and REVIEW, with a grid for tracking drawing status.

JOB NO. 22-310-1444 DRAWN CDJ CHECKED CDH APPROVED CDH

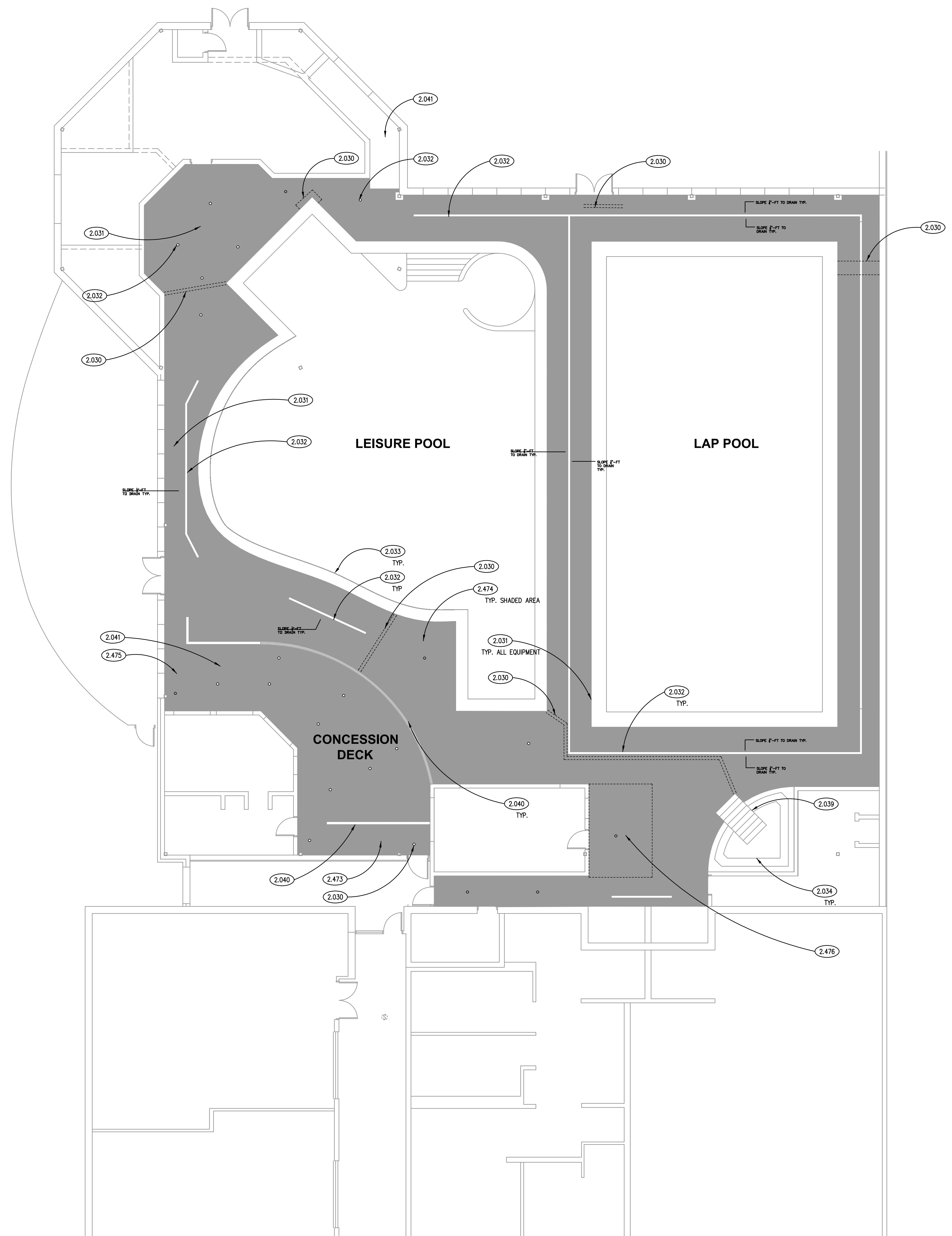
SHEET TITLE COVER SHEET

SHEET NUMBER G100

KEYNOTES

KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UN-KEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.

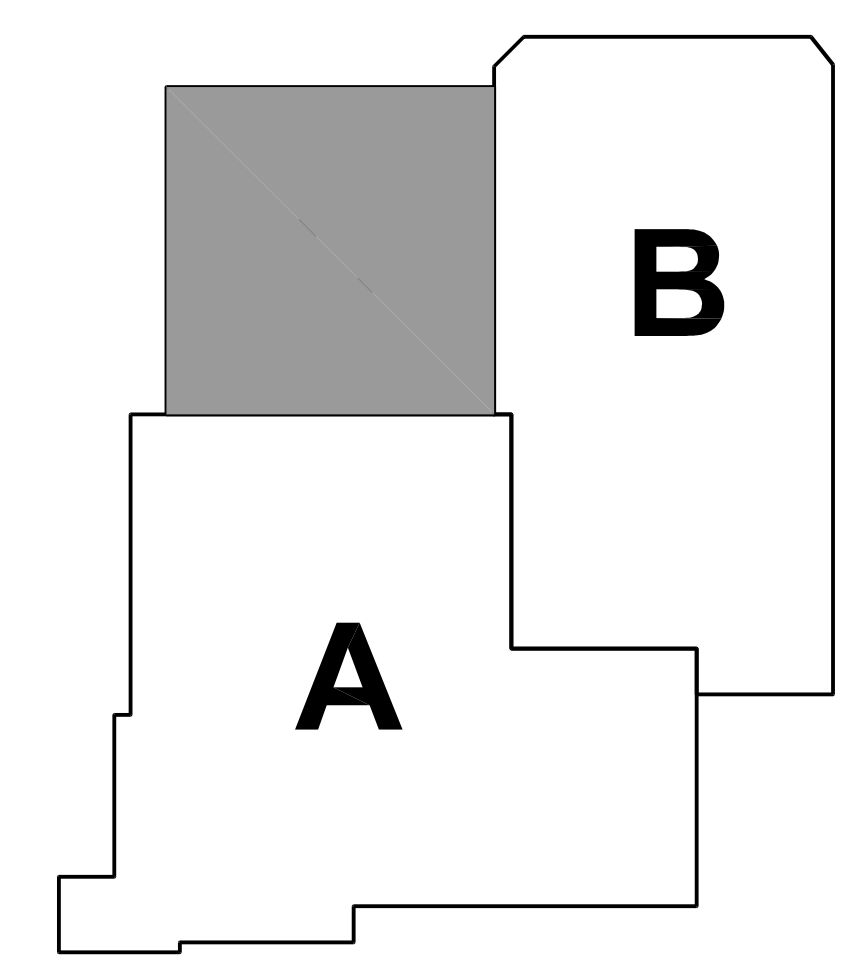
- 2.030 EXISTING CRACK IN CERAMIC TILE. AFTER REMOVAL OF TILE, INVESTIGATE EXTENT OF CONCRETE CRACKING. IF CONCRETE REQUIRES REPLACEMENT, REMOVE CONCRETE 6" EACH SIDE OF CRACK.
- 2.031 EXISTING DECK MOUNTED ITEMS TO REMAIN. NOT IN SCOPE OF WORK. PROTECT DURING CONSTRUCTION. ITEMS INCLUDE BUT NOT LIMITED TO: ADA LIFT, BENCHES, LADDER RAILS, POOL STAIRS AND HANDRAILS, SLIDES ETC.
- 2.032 EXISTING DECK DRAINS TO REMAIN. PROTECT DECK DRAINS DURING CONSTRUCTION. INSTALL FLOORING FLUSH WITH THE EXISTING DECK DRAINS.
- 2.033 EXISTING POOL EDGE DRAINS: NO WORK.
- 2.034 EXISTING SPA DEPTH MARKERS TO REMAIN. NO WORK.
- 2.039 EXISTING CERAMIC TILE SPA: NO WORK ON STEPS OR SEATING FOR SPA.
- 2.040 EXISTING CERAMIC TILE PLATFORM EDGE: NO WORK. VERTICAL SURFACES ON PLATFORM ARE NOT INCLUDED. PROTECT TILE TO REMAIN.
- 2.041 EXISTING CONCRETE RAMP TO REMAIN. NO WORK IN SLIDE APPROACH.
- 2.473 REMOVE EXISTING POOL DECK FINISH: CERAMIC TILE AND GROUT. ON RAMP AND LANDINGS. ONLY HORIZONTAL TILE.
- 2.474 REMOVE EXISTING POOL DECK FINISH: CERAMIC TILE AND GROUT. PREPARE FLOOR FOR NEW FINISH. TAKE NOTE OF WHERE ALL THE DEPTH SIGNS ARE POSTED FOR REINSTALLATION. VERTICAL SURFACES ARE TO REMAIN. EXCEPTION: STAIR AT CONCESSION DECK.
- 2.475 REMOVE EXISTING POOL DECK FINISH: CERAMIC TILE AND GROUT ON VERTICAL AND HORIZONTAL SURFACES OF STAIR. PREPARE FOR FLOOR FINISH: RAILINGS TO REMAIN.
- 2.476 REMOVE EXISTING POOL DECK FINISH: REMOVE RUBBER SHEET FLOORING. REMOVE CERAMIC TILE UNDER RUBBER FLOOR.



GENERAL NOTES

1. REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
2. EXISTING POOL DECK IS APPROXIMATELY 3500 SF.
3. ALL EXISTING POOL DECK SLOPES ARE TO REMAIN. DO NOT MODIFY SLOPES IN ANY WAY. THIS IS AN EXISTING IDPH-APPROVED FACILITY.
4. NO POOL COPING IS BEING REPLACED.
5. PROTECT ITEMS TO REMAIN FROM DAMAGE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETE.

KEY PLAN



DEMOLITION PLAN
SCALE: 1/8" = 1'-0" **1**

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OAK BROOK PARK DISTRICT
1450 FOREST GATE ROAD
OAK BROOK, ILLINOIS 60523

ISSUED	11/20/22	OUT TO BID / IDPH REVIEW
JOB NO.	22-310-1444	
DRAWN	CDJ	
CHECKED	CDH	
APPROVED	AN	
SHEET TITLE		
ALTERNATE #1 ARCHITECTURAL DEMOLITION PLAN		
SHEET NUMBER		

A210

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.

P:\1444 - Oak Brook Park District - Family Rec Pool HVAC & Deck\13 - Design\dwg\13-0210_1.dwg, 12/16/22 2:16:24 PM, CDJ

KEYNOTES

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- 2.030 EXISTING CRACK IN CERAMIC TILE. AFTER REMOVAL OF TILE, INVESTIGATE EXTENT OF CONCRETE CRACKING. IF CONCRETE REQUIRES REPLACEMENT, REMOVE CONCRETE 6" EACH SIDE OF CRACK.
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- 2.041 EXISTING CONCRETE RAMP TO REMAIN. NO WORK IN SLIDE APPROACH.
- 3.030 CAST-IN-PLACE CONCRETE: IN AREAS WHERE CONCRETE INVESTIGATION WARRANT REPLACEMENT, REPLACE 0'6" TO EACH SIDE OF CRACK. ONLY A SURFACE REPAIR. EXISTING DECK DRAINS AND DRAIN BODIES ARE TO REMAIN. PROTECT DURING INVESTIGATIONS. MATCH EXISTING ELEVATION AND SLOPE OF REMOVED CONCRETE.
- 9.613 RUBBER COPOLYMER TILE WET AREA SURFACE SYSTEM: SEE SPECIFICATIONS FOR MORE INFORMATION.
- 9.614 RUBBER COPOLYMER TILE WET AREA SURFACE SYSTEM: SAFETY MESSAGING. SEE DETAIL 2/A310.

Kluber

Architects + Engineers

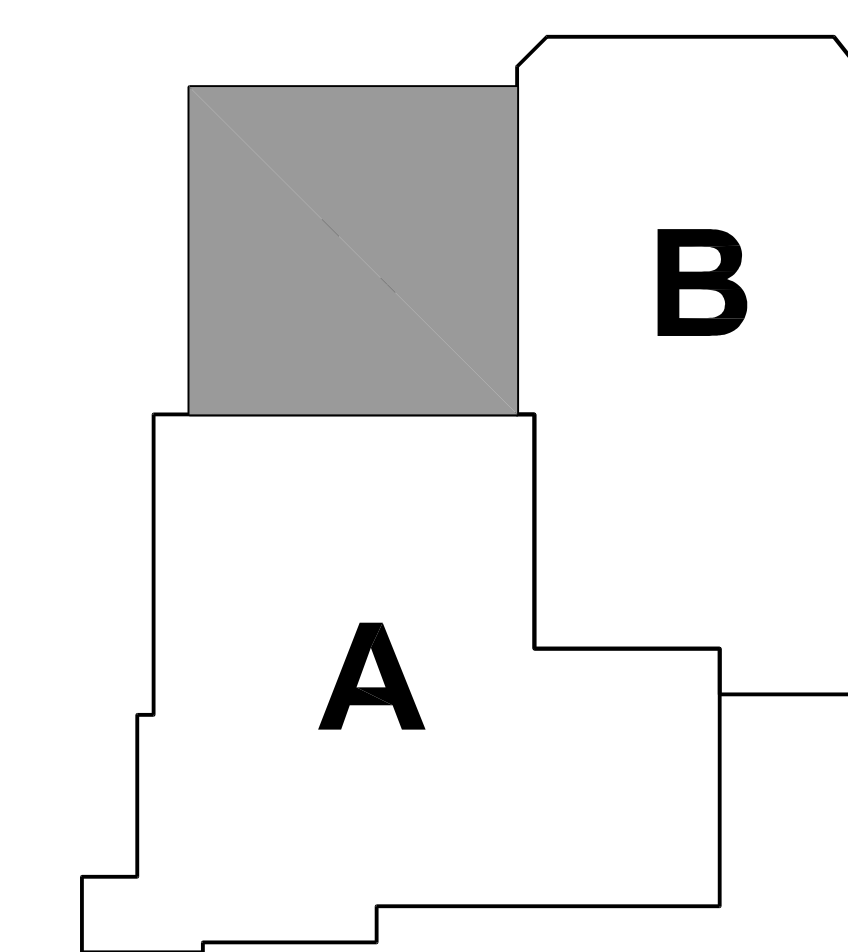
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GENERAL NOTES

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KEY PLAN



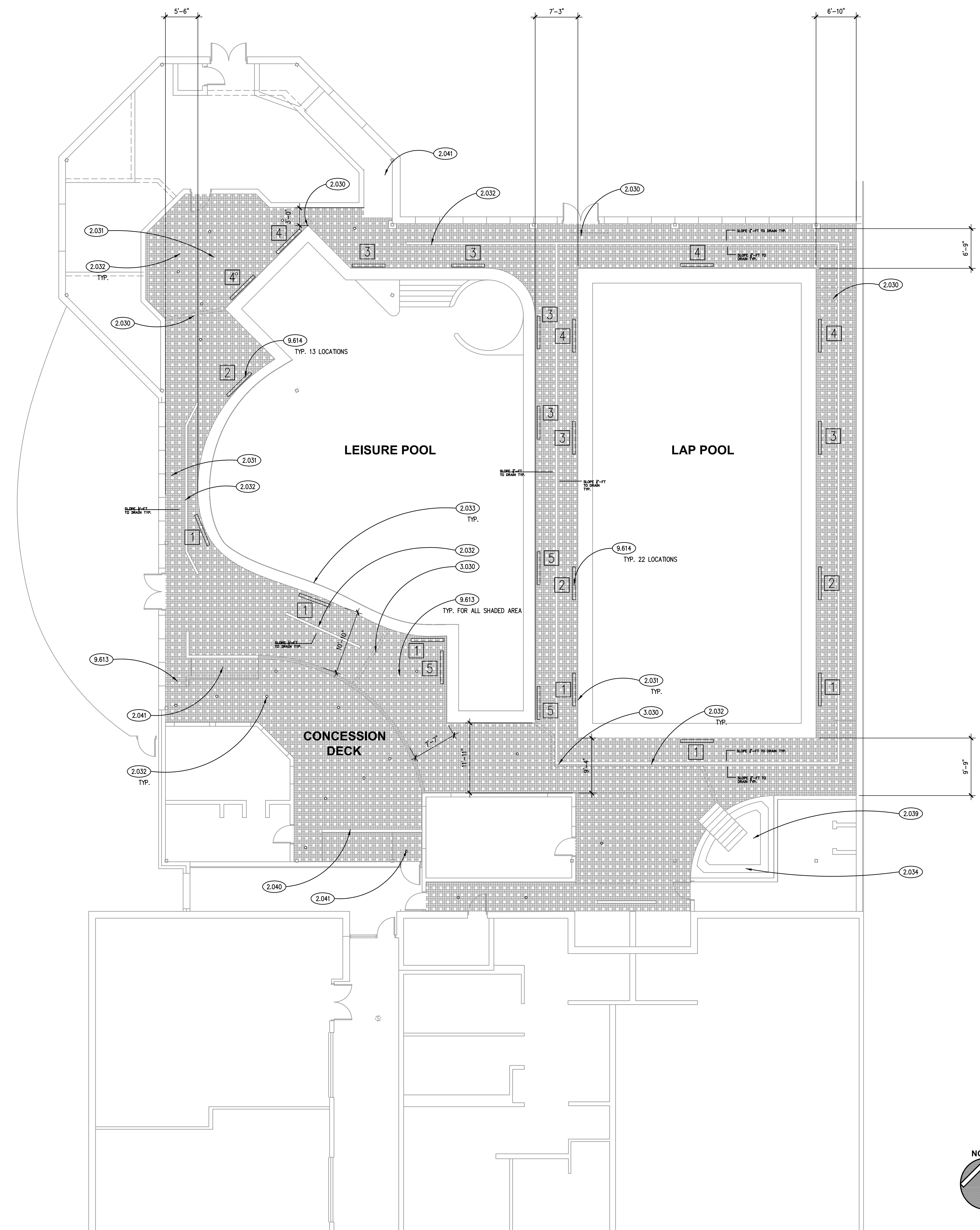
ISSUED	
11/2022	OUT TO BID/DEPTH REVIEW

JOB NO. 22-310-1444
DRAWN CDJ
CHECKED CDH
APPROVED AN

SHEET TITLE
ALTERNATE #1 OR #2
ARCHITECTURAL
FLOOR PLAN

SHEET NUMBER

A310



FLOOR PLAN

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

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.

- 1 0 FT 0 IN
- 2 1 FT 0 IN
- 3 3 FT 0 IN
- 4 3 FT 6 IN
- 5 4 FT 0 IN

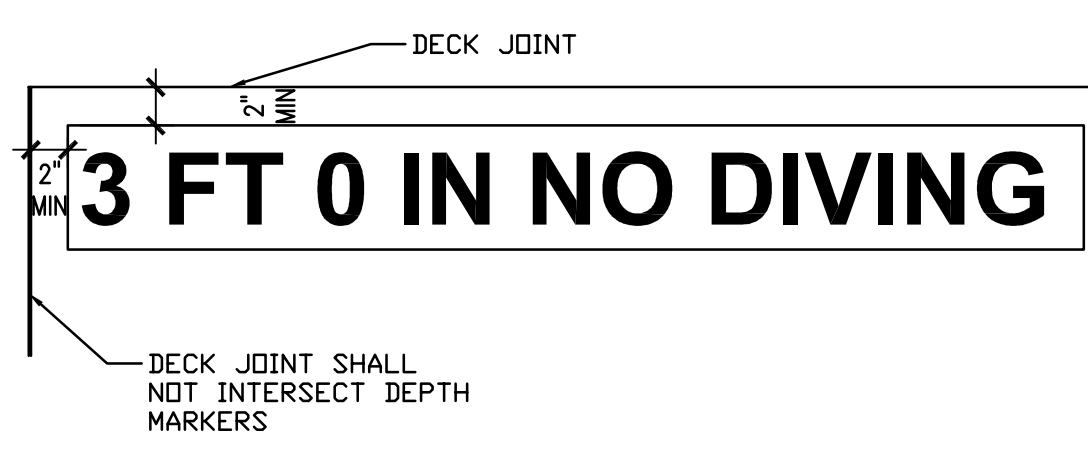
LEISURE POOL DEPTH MARKER KEY

SCALE: NTS 4

- 1 4 FT 0 IN
- 2 4 FT 6 IN
- 3 5 FT 0 IN
- 4 7 FT 0 IN

LAP POOL DEPTH MARKER KEY

SCALE: NTS 3



- DEPTH MARKER NOTES**
1. VERIFY WATER DEPTH AT EXISTING DEPTH MARKERS. PROVIDE DEPTH MARKERS THAT INDICATE ACTUAL DEPTH OF WATER.
 2. SPACE DEPTH MARKERS AT NOT MORE THAN 25'-0" INTERVALS MEASURED ALONG THE POOL PERIMETER; REFER TO FLOOR PLAN ON THIS SHEET FOR APPROXIMATE LOCATIONS.
 3. RECESS DEPTH MARKER TILES SO THAT FACE OF TILE IS FLUSH WITH FINISHED DECK SURFACE.
 4. PROVIDE NON-SLIP RUBBER DEPTH MARKER TILES WITH DARK-COLORED 6" HIGH NUMERALS; COLOR AS SELECTED BY OWNER.
 5. PROVIDE NON-SLIP RUBBER "NO DIVING MARKERS IN RED COLOR WITH 6" HIGH LETTERS.
 6. MARKER TILE FIELD COLOR: CONTRACTING LIGHT COLOR COMPLEMENTING COLOR OF POOL DECK TILES; COLOR AS SELECTED BY OWNER.

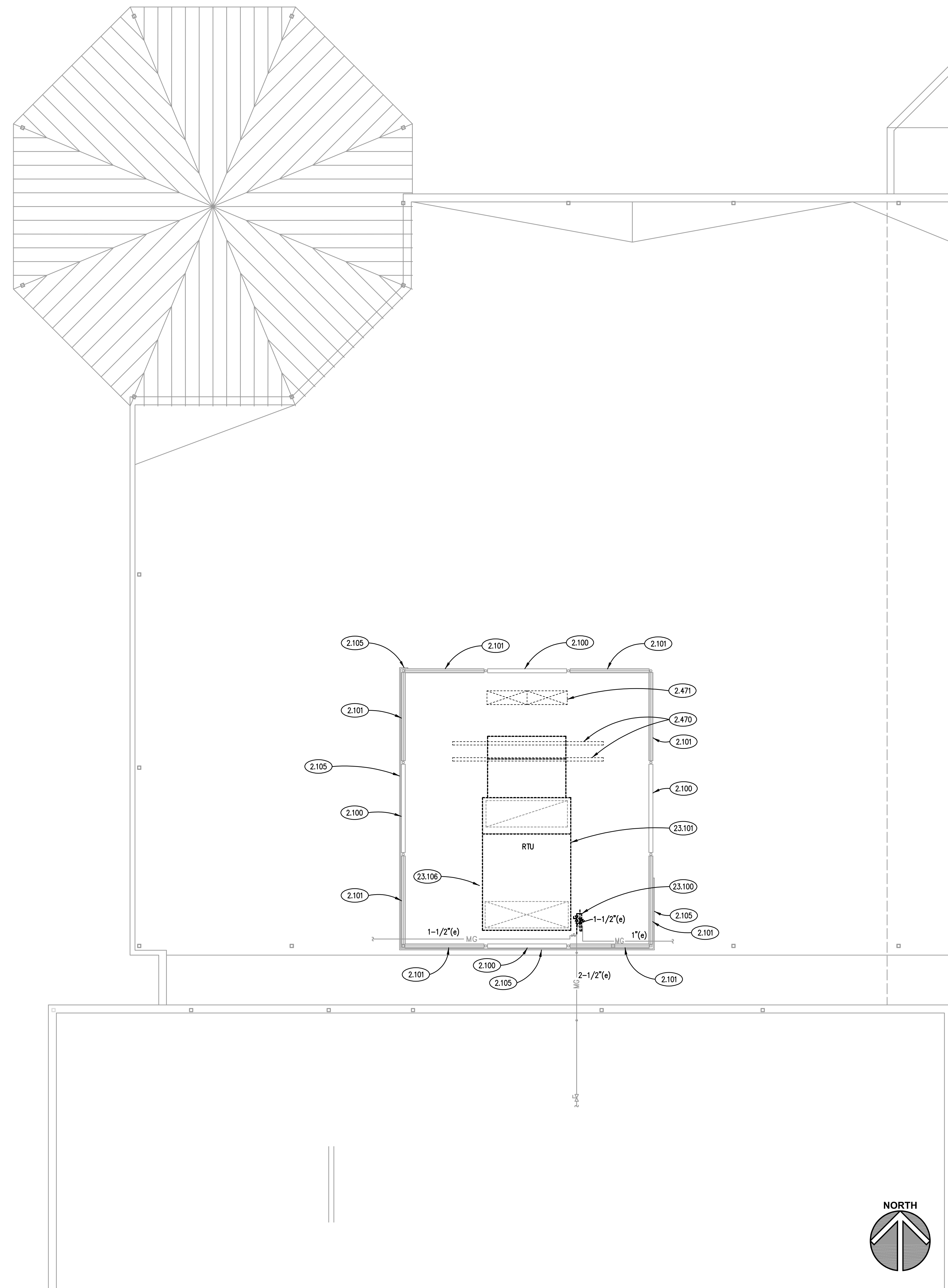
DEPTH MARKER - DECK

SCALE: NTS 2

KEYNOTES

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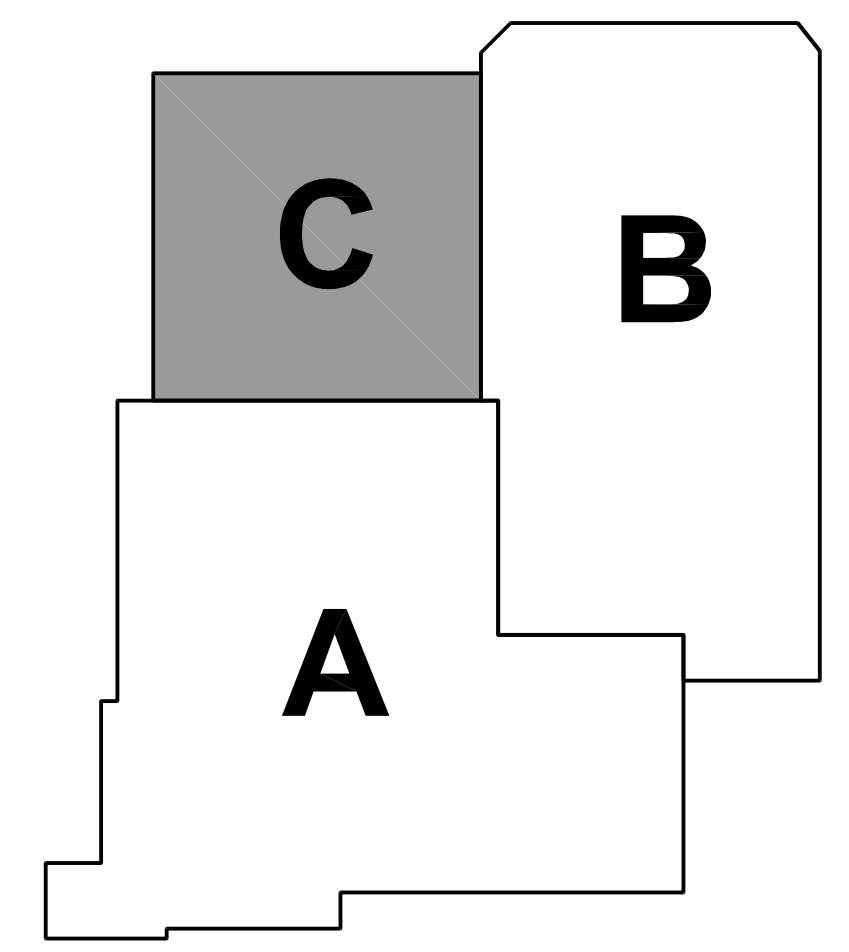
- 2.100 EXISTING ROOF SCREEN STRUCTURAL STEEL FRAMING, UNBRACED BAY.
- 2.101 EXISTING ROOF SCREEN STRUCTURAL STEEL FRAMING, CROSS-BRACED BAY.
- 2.105 EXISTING ROOF SCREEN PANEL; STUCCO-COATED RIGID 2" INSULATION.
- 2.470 REMOVE EXISTING EQUIPMENT RAIL.
- 2.471 REMOVE EXISTING CAPPED ROOF CURB AND EXISTING PLENUM BOX AND 3-SECTION GRILLE EXTENDING THROUGH ROOF DECK BENEATH CURB.
- 23.100 REMOVE GAS PIPE CONNECTION TO HVAC UNIT. REMOVE VALVES, PRESSURE REGULATORS AND PIPING AS REQUIRED TO RECONFIGURE GAS PIPING FOR NEW DEHUMIDIFICATION UNIT. EXISTING BRANCHES TO OTHER EQUIPMENT SHALL REMAIN IN SERVICE.
- 23.101 REMOVE HVAC UNIT AND CURB. PROTECT ROOF OPENING FROM OUTDOOR CONDITIONS.
- 23.106 REMOVE HVAC UNIT CONTROLS AND ABANDONED COMPONENTS.



MECHANICAL GENERAL NOTES

1. REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
2. ALL PIPING, DUCTWORK AND RACEWAYS ARE SHOWN DIAGRAMMATICALLY AND DO NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
3. EXISTING PIPING, DUCTWORK AND RACEWAYS INDICATED ON THESE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATIONS, QUANTITY AND SIZES.
4. ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
5. SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
6. DO NOT CUT THROUGH THE STRUCTURAL ELEMENTS WHEN INSTALLING OPENINGS REQUIRED FOR ALL DUCTWORK, PIPING, CONDUITS OR OTHER WORK. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEEMED NECESSARY TO REINSTATE THE CONTINUITY OF THE DISRUPTED ELEMENTS.
7. ALL ROOFTOP EQUIPMENT (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC.) AND THEIR CORRESPONDING CURBS TO BE ATTACHED TO THE STRUCTURAL FRAMING AS REQUIRED TO RESIST THE WIND AND SEISMIC FORCES IDENTIFIED ON SHEET S010. ANCHORAGE TO METAL DECKING IS NOT ACCEPTABLE. CONTRACTOR/MANUFACTURER TO CONSULT AN INDEPENDENT STRUCTURAL ENGINEER TO REVIEW, DESIGN AND DETAIL THE REQUIRED CONNECTIONS.
8. OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

KEY PLAN



ARCHITECTURAL AND MECHANICAL DEMOLITON ROOF PLAN ①
 SCALE: 1/8" = 1'-0"

REVISION	
11/2022	OUT TO BID / DPH REVIEW

JOB NO.	22-310-1444
DRAWN	DDW
CHECKED	DDW
APPROVED	DDW

SHEET TITLE
 ARCHITECTURAL AND MECHANICAL DEMOLITION ROOF PLAN

SHEET NUMBER

AM220

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.

KEYNOTES

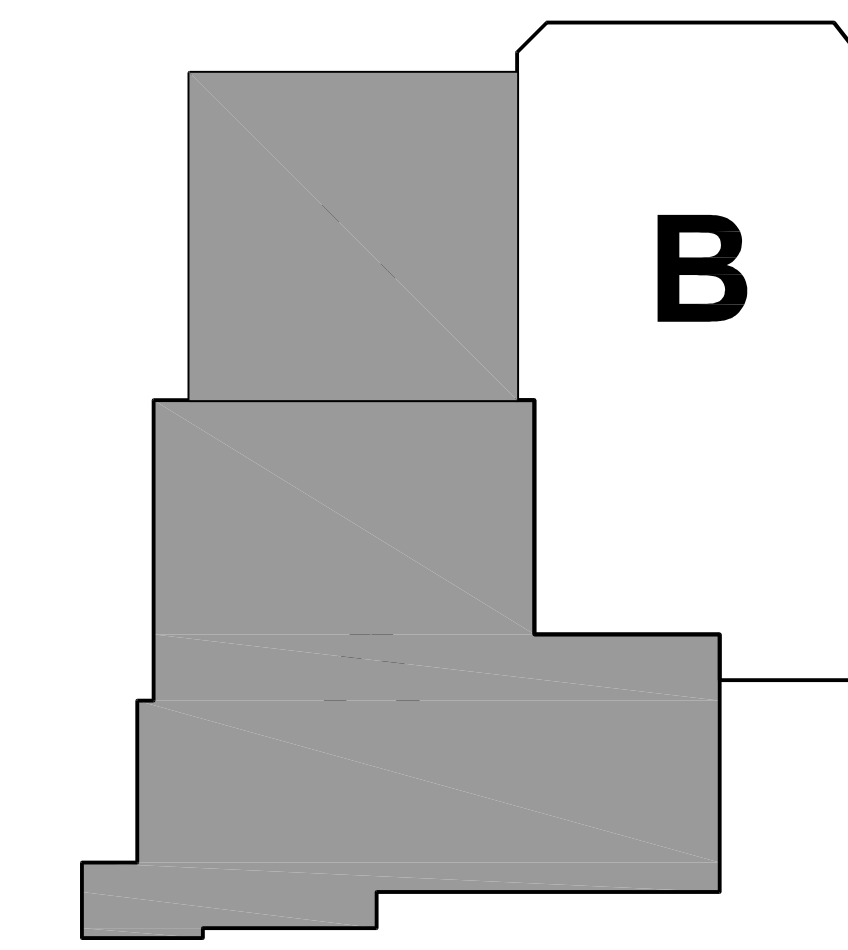
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- 23.102 REMOVE THERMOSTAT FOR HVAC UNIT BEING REPLACED.
- 23.103 REMOVE CHLORINE GAS DETECTOR AND ALL ASSOCIATED WIRING. PROVIDE STAINLESS STEEL COVER PLATE OVER WALL OPENING.
- 23.104 REMOVE LOUVER MOUNTED EXHAUST FAN. PROVIDE INSULATED ALUMINUM BLANK-OFF PANEL ACROSS LOUVER OPENING.
- 23.105 REMOVE ABANDONED EXHAUST DUCT AND GRILLE.
- 23.200 PROVIDE NEW TEMPERATURE AND HUMIDITY SENSOR ASSOCIATED WITH NEW DEHUMIDIFIER.
- 23.201 PROVIDE CONDENSATE DRAIN PIPE FROM ROOF TO EQUIPMENT ROOM AND DISCHARGE INTO HUB DRAIN.
- 23.202 PROVIDE NEW POOL DEHUMIDIFICATION UNIT.
- 23.206 PROVIDE UNIT REMOTE USER TERMINAL FIELD VERIFY EXACT LOCATION IN ROOM.

MECHANICAL GENERAL NOTES

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7. ALL ROOFTOP EQUIPMENT (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC.) AND THEIR CORRESPONDING CURBS TO BE ATTACHED TO THE STRUCTURAL FRAMING AS REQUIRED TO RESIST THE WIND AND SEISMIC FORCES IDENTIFIED ON SHEET S301. ANCHORAGE TO METAL DECKING IS NOT ACCEPTABLE. CONTRACTOR/MANUFACTURER TO CONSULT AN INDEPENDENT STRUCTURAL ENGINEER TO REVIEW, DESIGN AND DETAIL THE REQUIRED CONNECTIONS.
8. OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

KEY PLAN



ISSUED	
11/29/22	OUT TO BID/REVIEW

JOB NO.	22-310-1444
DRAWN	DDW
CHECKED	DDW
APPROVED	DDW

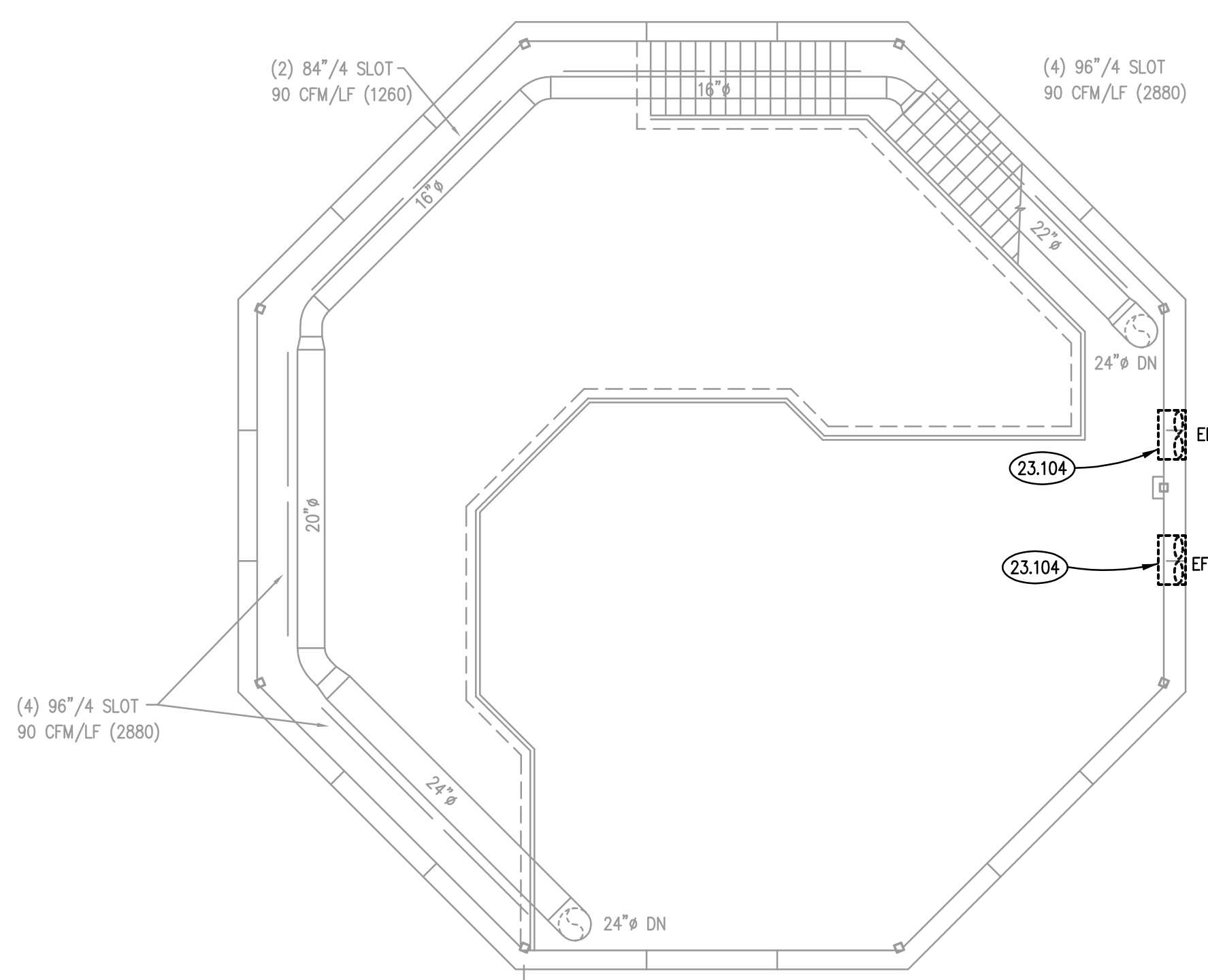
SHEET TITLE

MECHANICAL FIRST FLOOR PLAN

SHEET NUMBER

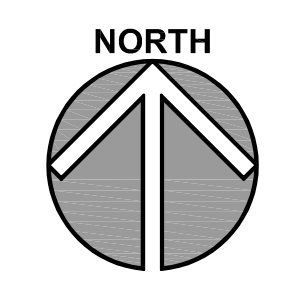
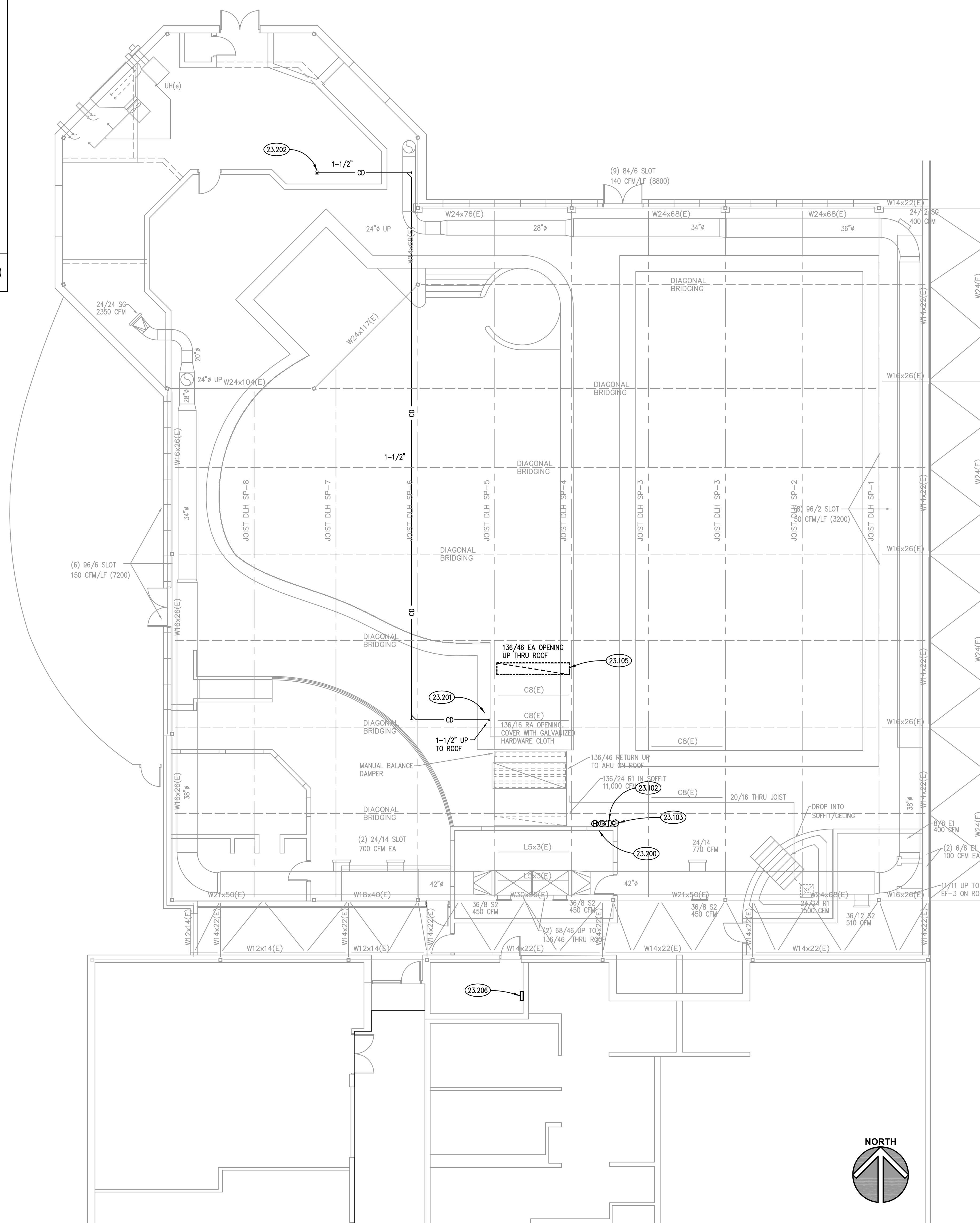
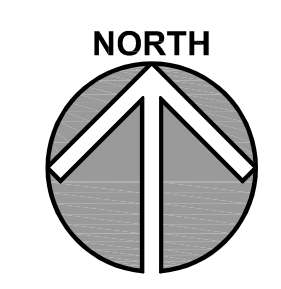
M310

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.



QUEING DECK FLOOR PLAN

SCALE: 1/8" = 1'-0" 2



FIRST FLOOR PLAN

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

OAK BROOK PARK DISTRICT - FAM. REC. CENTER POOL DECK & HVAC RENO.

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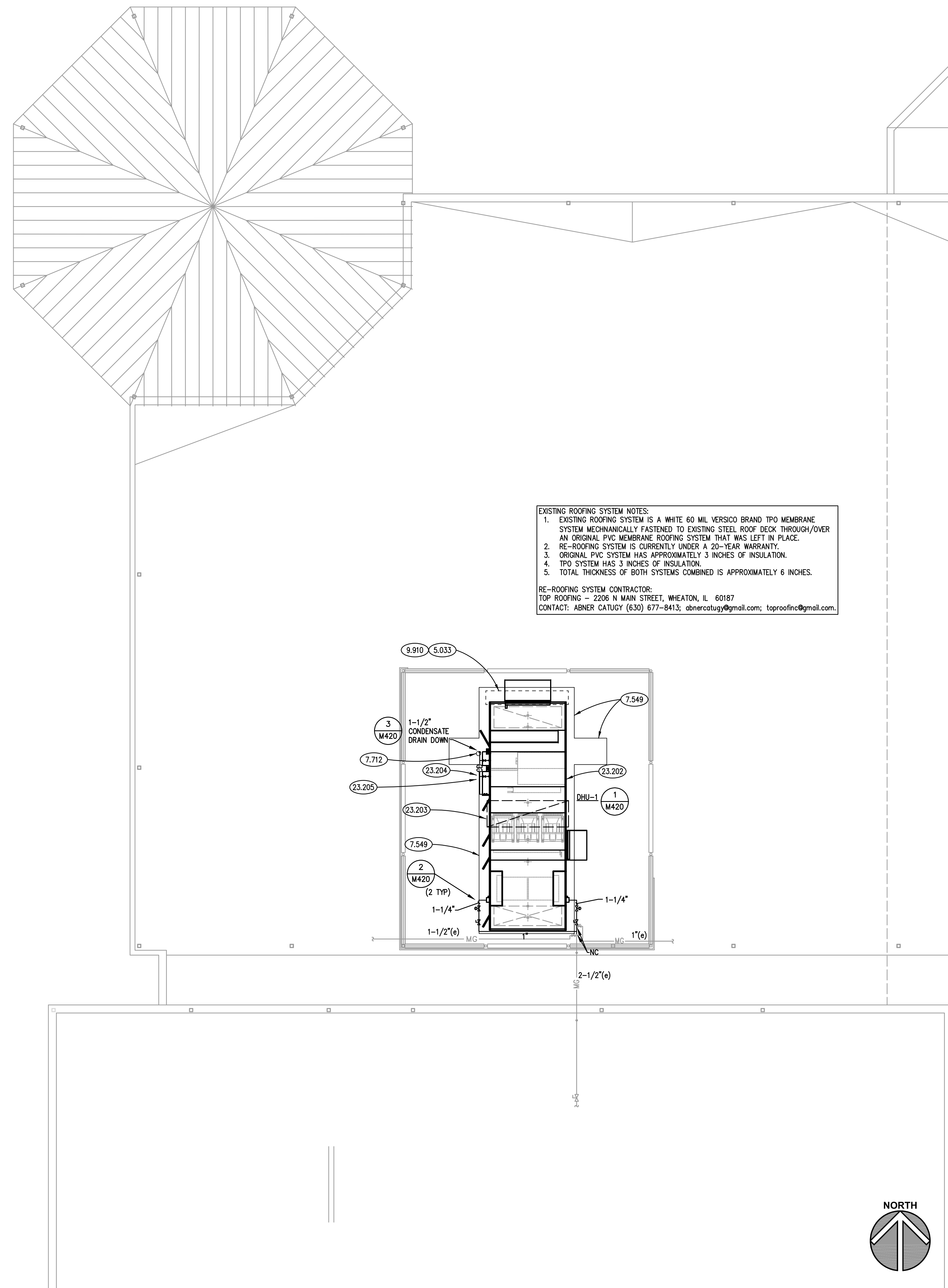
Kluber
 Architects + Engineers

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 1450 FOREST GATE ROAD
 OAK BROOK, ILLINOIS 60523

KEYNOTES

KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UN-KEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.

- 5.033 STEEL DECK: INFILL AREA OF REMOVED CAPPED ROOF CURB WITH 3" TYPE 'N' 16 GA. GALVANIZED STEEL DECK (ALL CHARACTERISTICS MATCHING EXISTING ROOF DECK); EXTEND ENDS OF DECK MIN. 2" OVER EXISTING JOISTS.
- 7.549 ROOFING ASSEMBLY: PATCH EXISTING ROOFING AROUND NEW MECHANICAL UNIT ROOF CURB AND WHERE EXISTING EQUIPMENT RAILS AND EXISTING CAPPED ROOF CURB ARE REMOVED; INFILL WITH ROOFING INSULATION OF THICKNESS TO MATCH THAT OF EXISTING ROOFING INSULATION; FLASH MECHANICAL UNIT ROOF CURB IN ACCORDANCE WITH ROOFING SYSTEM MANUFACTURER'S REQUIREMENTS AND IN ACCORDANCE WITH NRCA ROOFING MANUAL FOR MEMBRANE ROOFING SYSTEMS CONSTRUCTION DETAIL TP-13; FOR PURPOSES OF MAINTAINING EXISTING WARRANTY, SURFACE WITH MEMBRANE AND INSULATION MATCHING EXISTING AND UTILIZE ORIGINAL RE-ROOFING CONTRACTOR FOR PERFORMANCE OF WORK.
- 7.712 ROOF SPECIALTY: MULTIPLE-PORT ROOF PORTAL WITH RUBBER BOOT AND CLAMPING RINGS; PORTALS PLUS ALUMI-FLASH STANDARD BASE AND 4-PORT CAP WITH PORT SIZES APPROPRIATE TO SIZES OF PENETRATIONS; WWW.PORTALPLUS.COM; PROVIDE ADEQUATE SUPPORT AND ANCHORED TO ROOF FRAMING MEMBERS FOR PENETRATING PIPES AND CONDUITS; USING ROOF PORTAL AS A MEANS OF SUPPORTING PENETRATING ITEMS IS NOT PERMITTED; SUBMIT PRODUCT DATA AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR REVIEW.
- 9.910 HIGH-PERFORMANCE COATING: APPLY COATING MATCHING ORIGINAL COATING PRODUCT AND COLOR TO UNDERSIDE SURFACE OF NEW SECTION OF ROOF DECK; ENSURE COMPATIBILITY WITH GALVANIZING; SUBMIT PRODUCT DATA AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR REVIEW.
- 23.202 PROVIDE NEW POOL DEHUMIDIFICATION UNIT. UNIT SHALL BE PAINTED TO MATCH COLOR OF EXISTING EQUIPMENT SCREEN.
- 23.203 PROVIDE PLENUM CURB FOR NEW UNIT. SUPPLY AIR SHALL LINE UP WITH EXISTING ROOF OPENING. PLENUM SECTION SHALL CONNECT NEW UNIT RETURN AIR OPENING AND EXISTING ROOF RETURN OPENING. FIELD VERIFY EXACT DIMENSIONS. PLENUM CURB SHALL BE 24 INCHES TALL, DOUBLE WALL INSULATED WITH ALL AIRSTREAM MATERIAL MANUFACTURED FROM ALUMINUM.
- 23.204 PROVIDE TEMPERATURE CONTROLS INTERFACE BETWEEN UNIT NEW UNIT AND EXISTING BUILDING AUTOMATION SYSTEM. CONTACT OAK BROOK PARK DISTRICT TEMPERATURE CONTROLS CONTRACTOR, APPLIED CONTROLS, JOHN KOSTRZEWA, 630-709-5801 FOR THE WORK. ALL ABANDONED/UNUSED CONDUIT AND WIRING SHALL BE REMOVED.
- 23.205 PROVIDE P-TRAPS AND CONDENSATE PIPING FOR DRAIN PAN OUTLETS. PROVIDE HEAT TRACE, PENTAIR 5XL TRACE SYSTEM WITH AMC-F5 CONTROLLER WITH LINE SENSING OPERATION. PROVIDE MINIMUM 1-INCH ARMAFLEX INSULATION ON PIPES AND HEAT TRACE CABLE. PROVIDE PROTECTIVE COATING ON INSULATION FOR EXTERIOR APPLICATION.



EXISTING ROOFING SYSTEM NOTES:

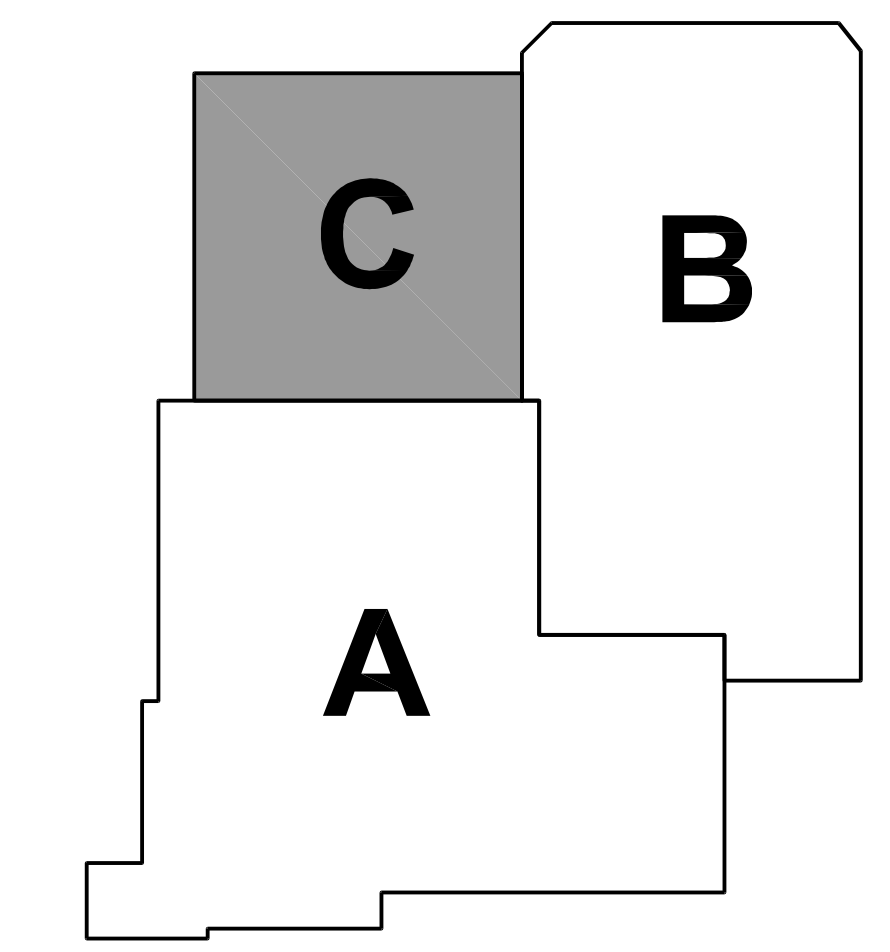
1. EXISTING ROOFING SYSTEM IS A WHITE 60 MIL VERSICO BRAND TPO MEMBRANE SYSTEM MECHANICALLY FASTENED TO EXISTING STEEL ROOF DECK THROUGH/OVER AN ORIGINAL PVC MEMBRANE ROOFING SYSTEM THAT WAS LEFT IN PLACE.
2. RE-ROOFING SYSTEM IS CURRENTLY UNDER A 20-YEAR WARRANTY.
3. ORIGINAL PVC SYSTEM HAS APPROXIMATELY 3 INCHES OF INSULATION.
4. TPO SYSTEM HAS 3 INCHES OF INSULATION.
5. TOTAL THICKNESS OF BOTH SYSTEMS COMBINED IS APPROXIMATELY 6 INCHES.

RE-ROOFING SYSTEM CONTRACTOR:
 TOP ROOFING - 2206 N MAIN STREET, WHEATON, IL 60187
 CONTACT: ABNER CATUGY (630) 677-8413; abnercatugy@gmail.com; toproofinc@gmail.com.

GENERAL NOTES

1. REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
2. ALL PIPING, DUCTWORK AND RACEWAYS ARE SHOWN DIAGRAMMATICALLY AND DO NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
3. EXISTING PIPING, DUCTWORK AND RACEWAYS INDICATED ON THESE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATIONS, QUANTITY AND SIZES.
4. ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
5. SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
6. DO NOT CUT THROUGH THE STRUCTURAL ELEMENTS WHEN INSTALLING OPENINGS REQUIRED FOR ALL DUCTWORK, PIPING, CONDUITS OR OTHER WORK. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEEMED NECESSARY TO RESTORE THE CONTINUITY OF THE DISRUPTED ELEMENTS.
7. ALL ROOFTOP EQUIPMENT (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC.) AND THEIR CORRESPONDING CURBS TO BE ATTACHED TO THE STRUCTURAL FRAMING AS REQUIRED TO RESIST THE WIND AND SEISMIC FORCES IDENTIFIED ON SHEET S010. ANCHORAGE TO METAL DECKING IS NOT ACCEPTABLE. CONTRACTOR/MANUFACTURER TO CONSULT AN INDEPENDENT STRUCTURAL ENGINEER TO REVIEW, DESIGN AND DETAIL THE REQUIRED CONNECTIONS.
8. OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

KEY PLAN



MECHANICAL ROOF PLAN
 SCALE: 1/8" = 1'-0" **1**

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 Architects + Engineers

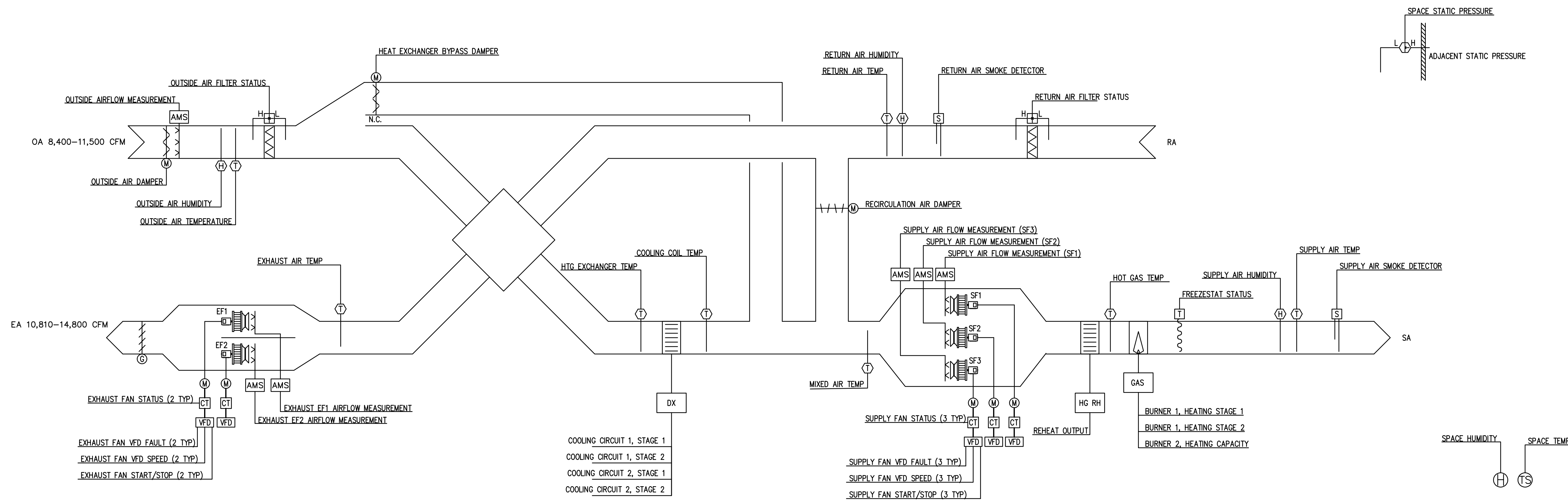
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OAK BROOK PARK DISTRICT - FAM. REC. CENTER POOL DECK & HVAC RENO.

OAK BROOK PARK DISTRICT
 1450 FOREST GATE ROAD
 OAK BROOK, ILLINOIS 60523

11/2022	OUT TO BID (DPM) REVIEW
11/2022	RESUB
JOB NO. 22-310-1444	
DRAWN	DDW
CHECKED	DDW
APPROVED	DDW
SHEET TITLE	
MECHANICAL ROOF PLAN	
SHEET NUMBER	
M320	

POOL DEHUMIDIFIER UNIT TEMPERATURE CONTROL SCHEMATIC



- NOTES:**
- COMPONENTS AND INTERCONNECTIONS SHOWN ARE SCHEMATIC ONLY.
 - CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPONENTS, SENSORS, RELAYS, ETC., TO ENSURE A COMPLETE OPERATING SYSTEM.

DEHUMIDIFIER	HARDWARE				SOFTWARE			
	AI	AO	DI	DO	SCHED	TREND	ALARM	GRAPH
MODE OF OPERATION								
SUPPLY FAN START/STOP (SF1, SF2, SF3)			X					
SUPPLY FAN STATUS (SF1, SF2, SF3)			X				X	X
SUPPLY FAN VFD FAULT (SF1, SF2, SF3)			X				X	X
SUPPLY FAN VFD SPEED (SF1, SF2, SF3)			X				X	X
EXHAUST FAN START/STOP (EF1, EF2)			X	X				
EXHAUST FAN STATUS (EF1, EF2)			X				X	X
EXHAUST FAN VFD FAULT (EF1, EF2)			X				X	X
EXHAUST FAN VFD SPEED (EF1, EF2)			X				X	X
SPACE STATIC PRESSURE	X						X	X
SPACE STATIC PRESSURE SETPOINT	X						X	X
SUPPLY AIR HUMIDITY	X						X	X
RETURN AIR TEMPERATURE	X						X	X
RETURN AIR HUMIDITY	X						X	X
OUTSIDE AIR TEMPERATURE	X						X	X
OUTSIDE AIR HUMIDITY	X						X	X
EXHAUST AIR TEMPERATURE	X						X	X
HEAT EXCHANGER TEMPERATURE	X						X	X
SPACE TEMPERATURE	X						X	X
SPACE HUMIDITY	X						X	X
MIXED AIR TEMPERATURE	X						X	X
PURGE STATUS	X	X			X		X	X
COOLING ENABLE			X				X	X
COOLING STAGE			X				X	X
COOLING COIL TEMPERATURE			X				X	X
HOT GAS REHEAT OUTPUT			X				X	X
HOT GAS AIR TEMPERATURE	X						X	X
HEATING ENABLE			X				X	X
HEATING STAGE			X				X	X
HEATING CAPACITY			X				X	X
OUTSIDE AIR FILTER STATUS			X				X	X
RETURN AIR FILTER STATUS			X				X	X
FREESTAT STATUS			X				X	X
SMOKE DETECTOR STATUS (SA, RA)			X				X	X
RECIRCULATION AIR DAMPER			X				X	X
OUTSIDE AIR DAMPER			X				X	X
HEAT EXCHANGER FACE/BYPASS DAMPER			X				X	X
OUTSIDE AIRFLOW MEASUREMENT	X						X	X
EXHAUST AIRFLOW MEASUREMENT	X						X	X
SUPPLY AIRFLOW MEASUREMENT	X						X	X
PHASE/VOLTAGE PROTECTION RELAY	X	X					X	X

POINTS LIST

- POOL DEHUMIDIFIER UNIT (DHU-1):**
- DESIGN CONDITIONS**
- RECREATION/LEISURE POOL WATER TEMPERATURE - 85° F.
 - LAP/COMPETITION POOL WATER TEMPERATURE - 81° F.
 - THERAPY POOL WATER TEMPERATURE - 102° F.
 - NATATORIUM AIR DESIGN TEMPERATURE - 86° F.
- OPERATING STATES**
- OCCUPIED:**
- SUPPLY FAN ON, 100% BALANCED AIRFLOW.
 - EXHAUST FAN ON, CONTROL PER SEQUENCE.
 - ECONOMIZER ENABLED.
 - DEHUMIDIFICATION ENABLED.
 - HEATING ENABLED.
 - COOLING ENABLED.
 - ALL DAMPERS ENABLED.
- SUPPLY FAN CONTROL**
THE SUPPLY FAN VARIABLE SPEED FUNCTION SHALL BE USED TO MAINTAIN THE SUPPLY AIRFLOW SETPOINT.
- EXHAUST FAN CONTROL**
- THE EXHAUST FAN VARIABLE SPEED SHALL MODULATE TO MAINTAIN A NEGATIVE DIFFERENTIAL PRESSURE SETPOINT OF -0.04" W.C. (ADJUSTABLE) BETWEEN THE POOL SPACE AND AN ADJACENT SPACE.
 - THE EXHAUST FAN VARIABLE SPEED SHALL BE LIMITED BY AN OFFSET OF THE CURRENT OUTDOOR DAMPER POSITION.
- OPERATING MODES**
- HEATING**
- THE INDIRECT GAS FURNACE SHALL BE CONTROLLED TO MAINTAIN THE SUPPLY TEMPERATURE SETPOINT.
 - THE INDIRECT GAS FURNACE SHALL BE LOCKED OUT WHEN THE OUTSIDE AIR TEMPERATURE IS ABOVE 85° F.(ADJUSTABLE).
- COOLING**
- THE ECONOMIZER AND MECHANICAL COOLING ARE CONTROLLED TO MAINTAIN THE SUPPLY TEMPERATURE SETPOINT. THE ECONOMIZER, IF AVAILABLE, WILL BE USED AS THE FIRST STAGE OF COOLING.
 - ECONOMIZER MODE SHALL BE ACTIVE ONLY IF THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE.
 - COOLING MODE SHALL UTILIZE THE DIRECT EXPANSION COIL TO MAINTAIN THE UNIT SUPPLY TEMPERATURE SETPOINT.
 - COOLING LOCKOUT SHALL BE ENABLED WHEN THE OUTSIDE AIR IS LESS THAN 50° F (ADJUSTABLE).
- DEHUMIDIFICATION**
- STAGE 1
 - THE OUTSIDE AIR AND RECIRCULATION DAMPERS MODULATE TO MAINTAIN RETURN AIR DEW POINT SETPOINT OF 70.5° F (ADJUSTABLE).
 - WHEN THE OUTSIDE AIR DAMPER IS AT ITS MAXIMUM POSITION, THE RECIRCULATION AIR DAMPER SHALL BE AT ITS MINIMUM POSITION, AND THE EXHAUST FAN VARIABLE SPEED IS AT MAXIMUM EXHAUST (+/-) SPACE PRESSURE OFFSET DESCRIBED ABOVE).
 - STAGE 2
 - MAXIMUM OUTSIDE AIR SHALL BE MAINTAINED WHILE THE DIRECT EXPANSION COIL IS ENERGIZED FOR RETURN DEW POINT CONTROL (OUTSIDE AIR DAMPER IS AT ITS MAXIMUM POSITION AND THE RECIRCULATION AIR DAMPER IS IN ITS MINIMUM POSITION).
 - THE COOLING IS CONTROLLED TO MAINTAIN THE DIRECT EXPANSION COIL LEAVING AIR TEMPERATURE SETPOINT.
 - WHEN THE DIRECT EXPANSION COIL IS ACTIVATED FOR DEHUMIDIFICATION, THE UNIT CONTROLLER SHALL RESET THE DIRECT EXPANSION COIL LEAVING AIR TEMPERATURE SETPOINT UP AND DOWN BETWEEN THE VALUES BELOW IN ORDER TO MAINTAIN THE RETURN AIR DEW POINT SETPOINT.
 - DEHUMIDIFICATION COIL LEAVING MINIMUM SETPOINT 54.9° F (ADJUSTABLE).
 - DEHUMIDIFICATION COIL LEAVING MAXIMUM SETPOINT 70° F.
 - HOT GAS REHEAT SHALL BE CONTROLLED TO MAINTAIN THE SUPPLY TEMPERATURE SETPOINT BETWEEN THE COOLING MINIMUM AND HEATING MAXIMUM SUPPLY SETPOINTS.
- SUPPLY TEMPERATURE SETPOINT**
- THE UNIT CONTROLLER SHALL RESET THE SUPPLY TEMPERATURE SETPOINT UP AND DOWN BETWEEN THE VALUES LISTED BELOW, IN ORDER TO MAINTAIN THE RETURN AIR TEMPERATURE SETPOINT.
 - OCCUPIED RETURN TEMPERATURE SETPOINT HEATING MODE - 86° F (ADJUSTABLE).
 - SUPPLY HEATING MINIMUM SETPOINT - 70° F (ADJUSTABLE).
 - SUPPLY HEATING MAXIMUM SETPOINT - 110° F (ADJUSTABLE).
 - OCCUPIED RETURN TEMPERATURE SETPOINT COOLING MODE - 86° F (ADJUSTABLE).
 - SUPPLY COOLING MINIMUM SETPOINT - EQUAL TO THE CURRENT RETURN AIR DEW POINT + 2° F.
 - SUPPLY COOLING MAXIMUM SETPOINT - 84° F.
- PURGE MODE**
- PURGE MODE SHALL BE CONTROLLED THROUGH THE BAS INTERFACE OR REMOTE SWITCH.
 - PURGE MODE SHALL BE USED TO INJECT THE UNIT INTO MAXIMUM OUTSIDE AIR MODE FOR REMOVAL OF CHEMICAL OFF-GASSING DURING A "POOL-SHOCKING" PROCEDURE.
 - A DIGITAL INPUT OR MANUAL OVERRIDE ON THE REMOTE USER TERMINAL CAN BE USED TO ENERGIZE/DE-ENERGIZE THE PURGE MODE.
 - IN PURGE MODE THE OUTSIDE AND RECIRCULATION AIR DAMPERS SHALL MODULATE TO THEIR MAXIMUM OUTSIDE AIR POSITION.
 - STAGE 1 DEHUMIDIFICATION SHALL BE OVERRIDDEN.
 - STAGE 2 DEHUMIDIFICATION CONTROL PER SEQUENCE.
 - COOLING CONTROL PER SEQUENCE.
 - HEATING CONTROL PER SEQUENCE.
 - THE PURGE MODE SHALL HAVE AN ADJUSTABLE "PURGE TIME LIMIT" (ADJUSTABLE ON A USER TERMINAL, FACTORY SET AT 180 MINUTES).
- NON-SHUTDOWN SAFETIES**
- AIR TO AIR HEAT EXCHANGER DEFROST:**
THE OUTSIDE AIR HEAT EXCHANGER FACE & BYPASS DAMPERS SHALL MODULATE (BYPASSING OUTSIDE AIR AROUND THE HEAT EXCHANGER) TO MAINTAIN A LEAVING EXHAUST AIR TEMPERATURE ABOVE THE DEFROST SETPOINT OF 38° F (ADJUSTABLE).
- DIRTY FILTER SWITCHES:**
IF A FILTER DIFFERENTIAL PRESSURE SWITCH RISES ABOVE THE ADJUSTABLE SETPOINT OF THE SWITCH, THE DIFFERENTIAL PRESSURE SWITCH SHALL SIGNAL THE UNIT CONTROLLER TO ACTIVATE AND ALARM.
- UNIT SHUTDOWN SAFETIES**
- SUPPLY TEMPERATURE LOW LIMIT:**
IF THE UNIT SUPPLY TEMPERATURE DROPS BELOW 35° F (ADJUSTABLE), THE UNIT CONTROLLER SHALL SHUT DOWN THE UNIT AFTER AN ADJUSTABLE TIME DELAY. AN ALARM SHALL BE GENERATED AT THE BAS.
- SUPPLY TEMPERATURE HIGH LIMIT:**
IF THE UNIT SUPPLY TEMPERATURE RISES ABOVE 120° F (ADJUSTABLE), THE UNIT CONTROLLER SHALL SHUT DOWN THE UNIT AFTER AN ADJUSTABLE TIME DELAY. AN ALARM SHALL BE GENERATED AT THE BAS.
- PHASE/VOLTAGE MONITOR:**
A PHASE/VOLTAGE PROTECTION RELAY SHALL BE PROVIDED FOR THE UNIT. UPON SENSING A LOSS OF PHASE OR VOLTAGE, THE UNIT SHALL IMMEDIATELY SHUT DOWN. AN ALARM SHALL BE GENERATED AT THE BAS.
- SMOKE DETECTORS:**
UPON DETECTION OF SMOKE THE FANS SHALL BE DE-ENERGIZED, CLOSE OUTSIDE AIR DAMPER, AND SIGNAL ALARM LOCALLY AND AT FIRE ALARM PANEL.

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Architects + Engineers

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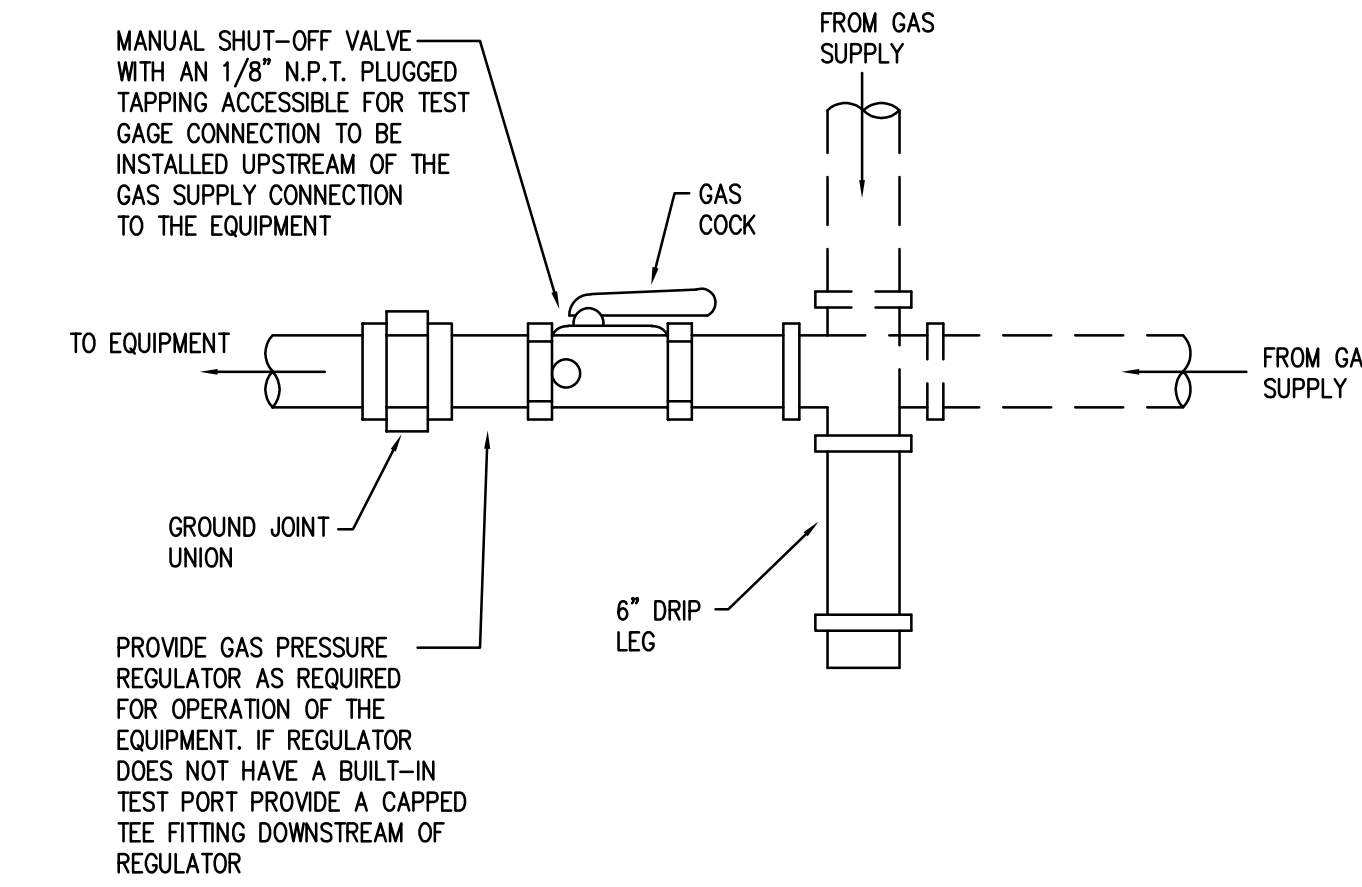
OAK BROOK PARK DISTRICT - FAM. REC. CENTER POOL DECK & HVAC RENO.

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OUT TO BID/REVIEW	
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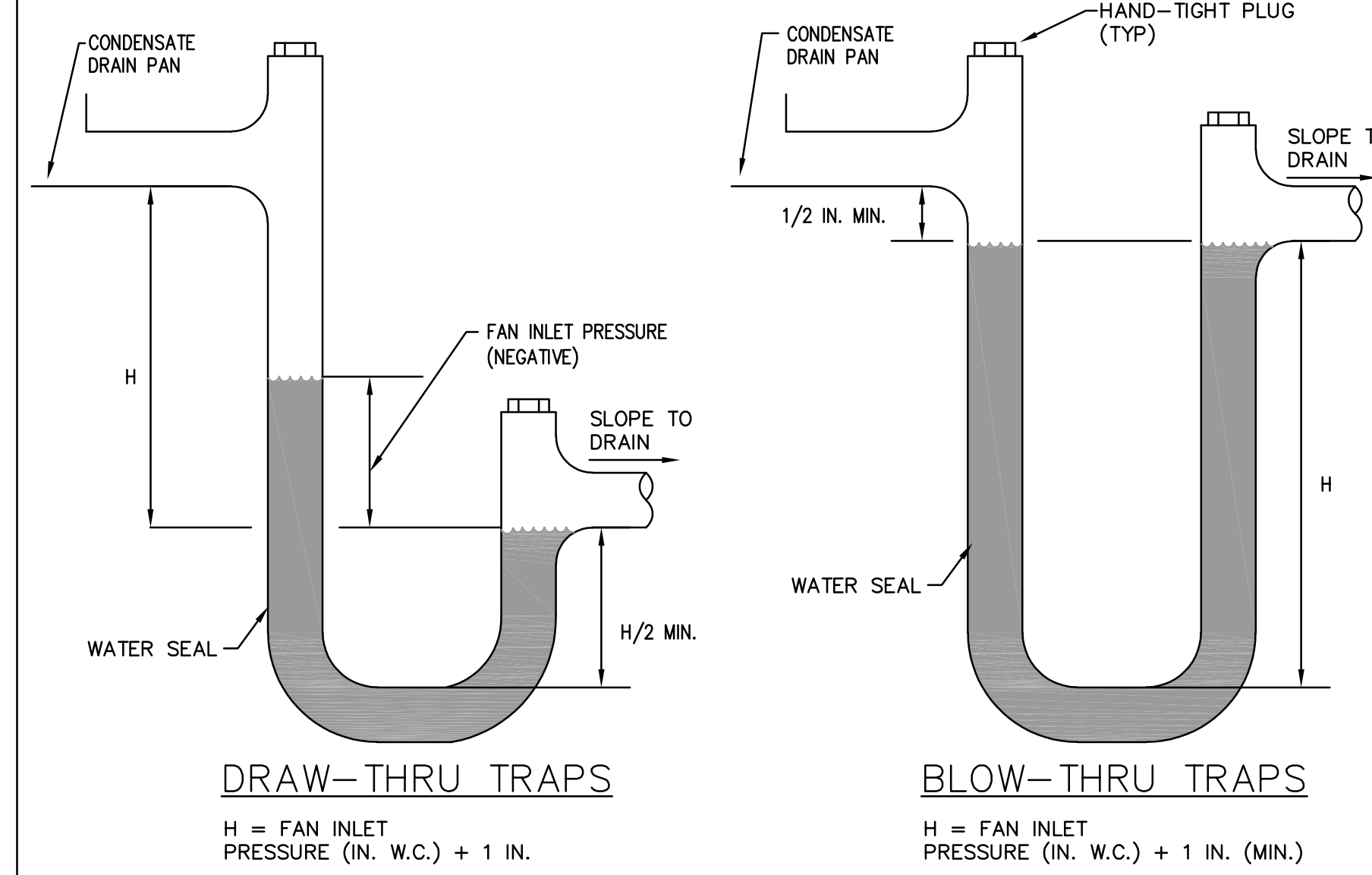
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SHEET TITLE
TEMPERATURE CONTROLS

SHEET NUMBER
M410

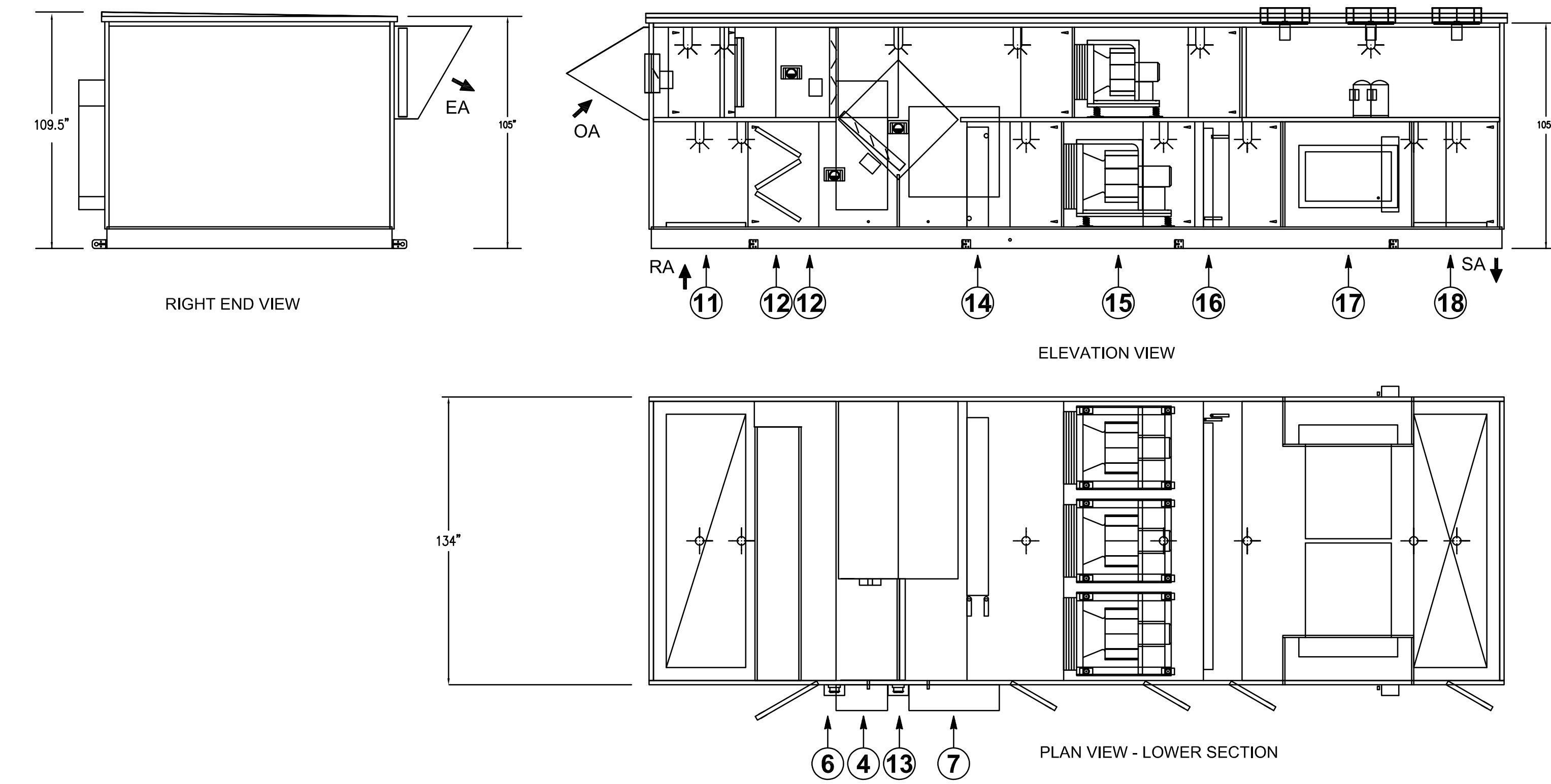


GAS CONNECTION TO EQUIPMENT DETAIL
SCALE: NTS



CONDENSATE TRAP DETAILS
SCALE: NTS

- COMPONENTS**
- 1 - OUTSIDE AIR INLET HOOD W/DAMPER
 - 2 - 2" MERV 8 FILTERS
 - 3 - MAGNEHELIC GAUGE
 - 4 - ELECTRICAL ENCLOSURE
 - 5 - PLATE HEAT EXCHANGER (1.00" MPT DRAIN)
 - 6 - MAGNEHELIC GAUGE
 - 7 - VFD ENCLOSURE
 - 8 - EXHAUST FAN (TYP OF 2)
 - 9 - EXHAUST AIR OUTLET HOOD W/DAMPER
 - 10 - AIR-COOLED REFRIGERATION
 - 11 - RETURN AIR INLET (37.00" x 118.00")
 - 12 - 2" ALUMINUM FILTERS
 - 13 - MAGNEHELIC GAUGE
 - 14 - DX COIL (1.25" MPT DRAIN)
 - 15 - SUPPLY FAN (TYP OF 3)
 - 16 - HOT GAS REHEAT
 - 17 - INDIRECT FIRED FURNACE (TYP OF 2)
 - 18 - SUPPLY AIR OUTLET (34.00" x 118.00")



DHU CONFIGURATION DETAILS
SCALE: NTS

DEHUMIDIFIER UNIT SCHEDULE

MARK	AIR FLOW CONDITIONS						QUANTITY	TYPE	SUPPLY FAN			EXHAUST FAN						
	SUPPLY AIR (CFM)	SUPPLY AIR ESP (IN WC)	RETURN AIR (CFM)	RETURN AIR ESP (IN WC)	EXHAUST AIR (CFM)	EXHAUST AIR ESP (IN WC)			SUPPLY AIR (CFM)	TOTAL STATIC PRESS (IN WC)	HP	RPM	EXHAUST AIR (CFM)	TOTAL STATIC PRESS (IN WC)	HP	RPM		
DHU-1	33,000	2.5	21,500	1.5	14,800	1.5	3	PLENUM	11,000 EA	4.94	15 EA	1879	2	PLENUM	7,400 EA	3.16	7.5 EA	1694

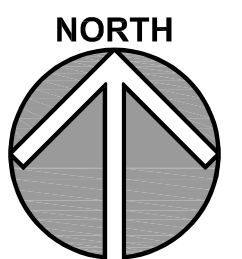
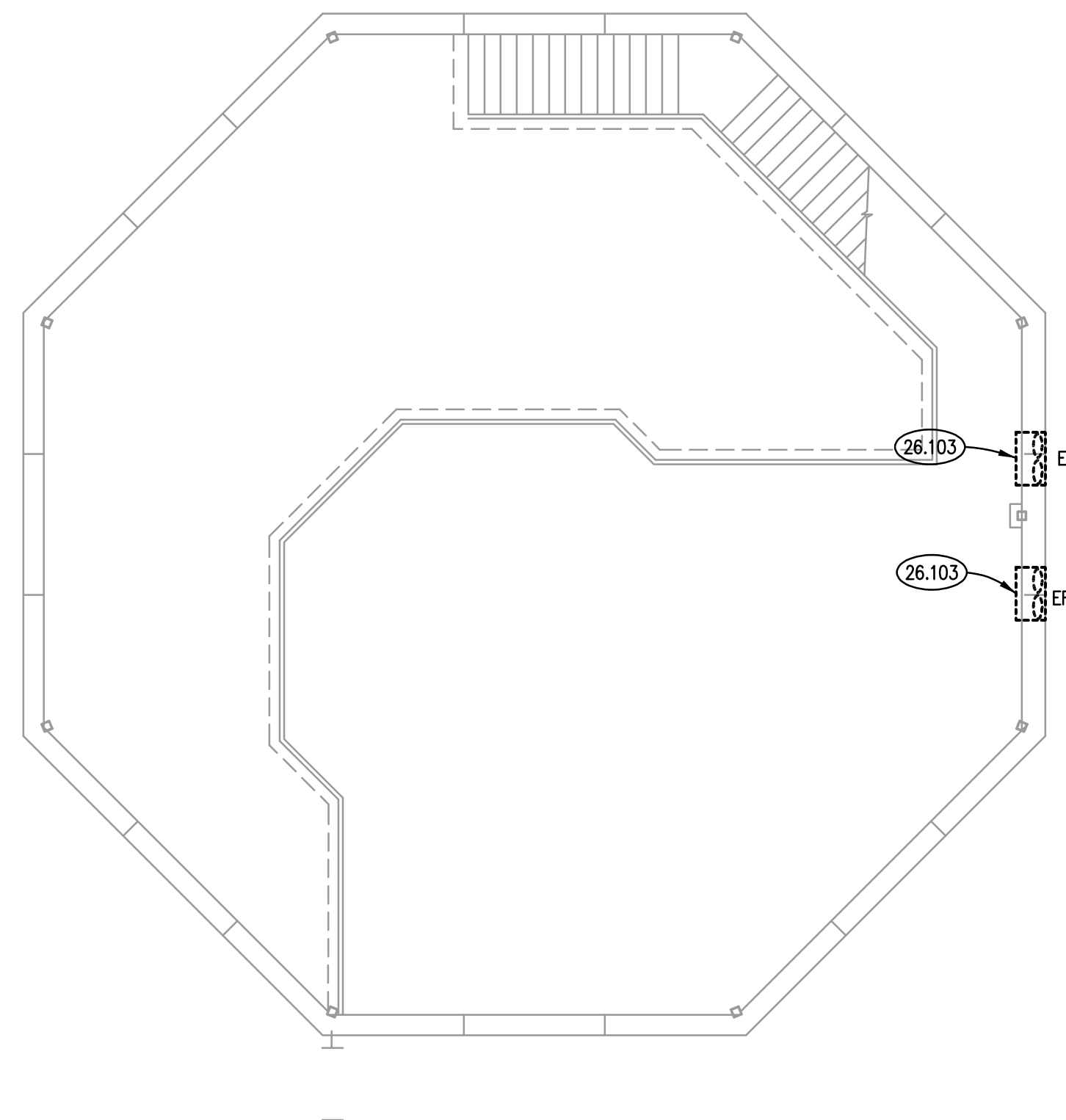
TYPE	QUANTITY	MODEL	AIR - AIR HEAT EXCHANGER						MIXED AIR CONDITIONS							
			SUMMER EAT (db / wb °F)	SUMMER RA (db / rh %)	SUMMER LAT (db / wb °F)	WINTER OA (db / wb °F)	WINTER RA (db / rh %)	WINTER LAT (db / wb °F)	FROST CONTROL	RETURN AIR (CFM)	RA TEMP (db / wb °F)	DX INTO XGR AIR (CFM)	DX INTO XGR (db / wb °F)	MIXED AIR (CFM)	MA TEMP (db / wb °F)	
FIXED PLATE	1	H-1-40C-2100	87.2 / 77.4	86.0 / 60	85.5 / 77.2	-8.0 / -9.0	86.0 / 48.1	56.6 / 37.1	BYPASS	SUMMER	21,500	86.0 / 74.9	11,500	54.9 / 54.8	33,300	74.1 / 68.6
									WINTER	24,600	86.0 / 70.9	8,400	56.6 / 37.1	33,300	77.9 / 64.1	

DX COIL				AIR COOLED CONDENSER				HEATING									
AIR FLOW (CFM)	ENT AIR TEMP (db / wb °F)	LVG AIR TEMP (db / wb °F)	SENS CAP (MBH)	TOTAL CAP (MBH)	OAT TEMP (db °F)	CAPACITY (TONS)	NO. COMPRESSOR	CIRCUITS	TYPE	AIR FLOW (CFM)	ENT AIR TEMP (db °F)	LVT AIR TEMP (db °F)	TOTAL GAS INPUT (MBH)	TOTAL GAS OUTPUT (MBH)	NO. BURNERS	TURNDOWN	GAS PRESS (IN WC)
11,500	86.5 / 77.2	54.9 / 54.8	401.3	916.8	95	19.1 - 76.4	4	2	FIXED SPEED	33,300	72.3	99.2	2 @ 600	2 @ 480	2	10 : 1	6" - 14"

HOT GAS REHEAT			ELECTRICAL				MODEL		
AIR FLOW (CFM)	ENT AIR TEMP (db / wb °F)	LVG AIR TEMP (db / wb °F)	CAPACITY (MBH)	COIL (CIRCUIT ROWS/FPI)	VPHHZ	FLA			
33,000	76.1 / 69.5	84.7 / 72.0	307	2 / 1 / 12	460/3/60	197	233.5	250	NDHU-OU-PL-33000-AC-HG-IF-460

NOTES

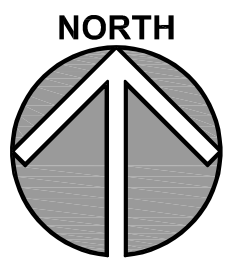
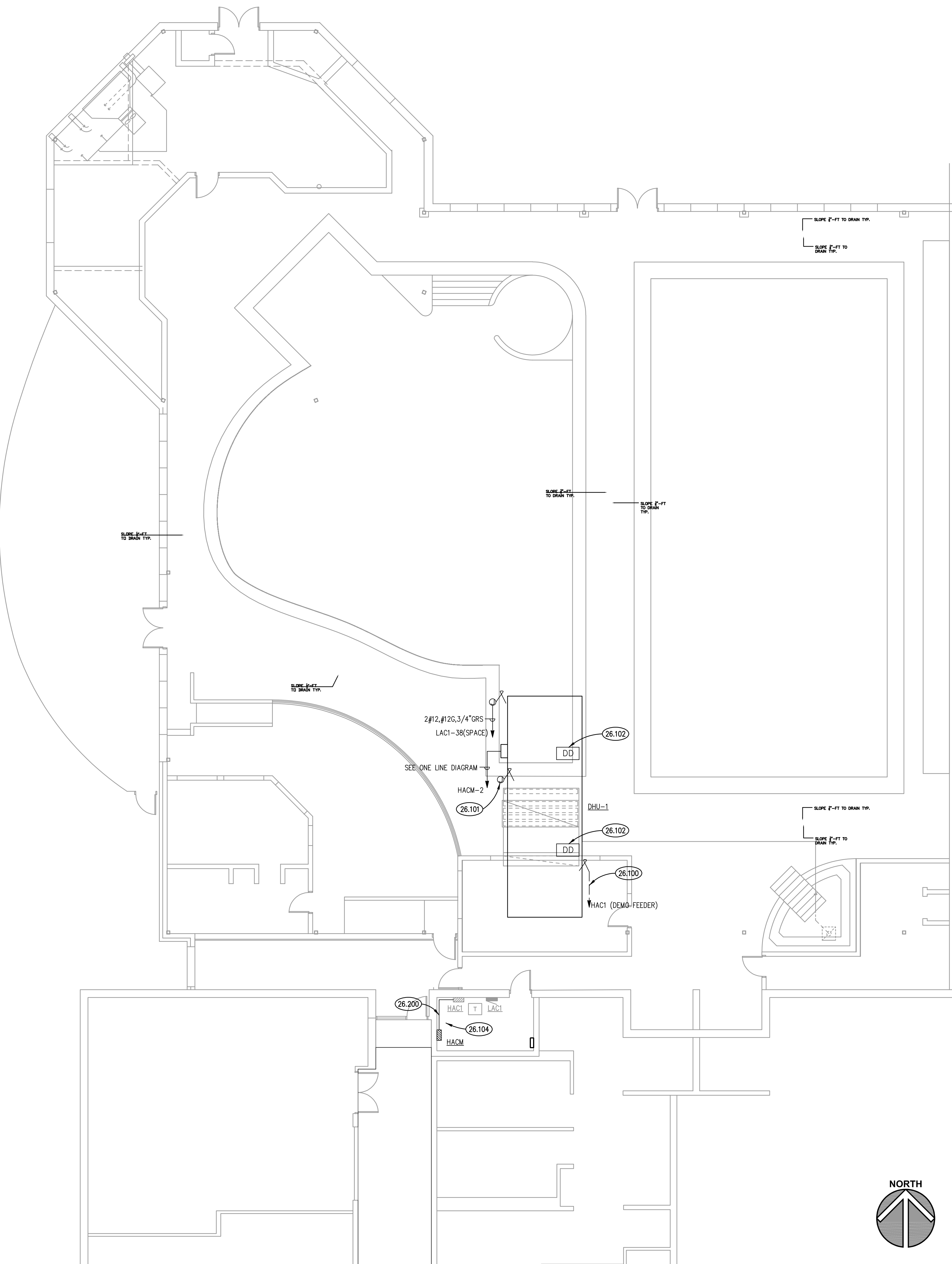
1. MODEL BASED ON INNOVENT.
2. DIRECT DRIVE FANS WITH ONE VFD/FAN BANK.
3. HEAT EXCHANGER INCLUDES ONE 2-STAGE GAS CONTROL VALVE AND ONE 5:1 MODULATING GAS CONTROL VALVE.



QUEING DECK FLOOR PLAN
SCALE: 1/8" = 1'-0" **2**

ELECTRICAL SYMBOLS LIST

SYMBOL		DESCRIPTION
ONE LINE	PLAN	
DD	[Symbol]	DUCT DETECTOR
	[Symbol]	JUNCTION BOX
	[Symbol]	CONDUIT HOMERUN TO PANEL/SWITCHBOARD.
[Symbol]	[Symbol]	480 VOLT SWITCHBOARD
[Symbol]	[Symbol]	DRY TYPE TRANSFORMER
[Symbol]	[Symbol]	208 VOLT PANELBOARD S=SWITCHING CONTROL, P=PILOT LIGHT, K=KEYED SW., LV=LOW VOLTAGE
[Symbol]	[Symbol]	FLEXIBLE CONNECTION
[Symbol]	[Symbol]	3=3 WAY DIMMER
[Symbol]	[Symbol]	CIRCUIT BREAKER
[Symbol]	[Symbol]	KEYNOTE IDENTIFICATION



FIRST FLOOR ELECTRICAL PLAN
SCALE: 1/8" = 1'-0" **1**

KEYNOTES

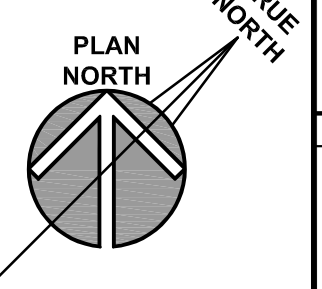
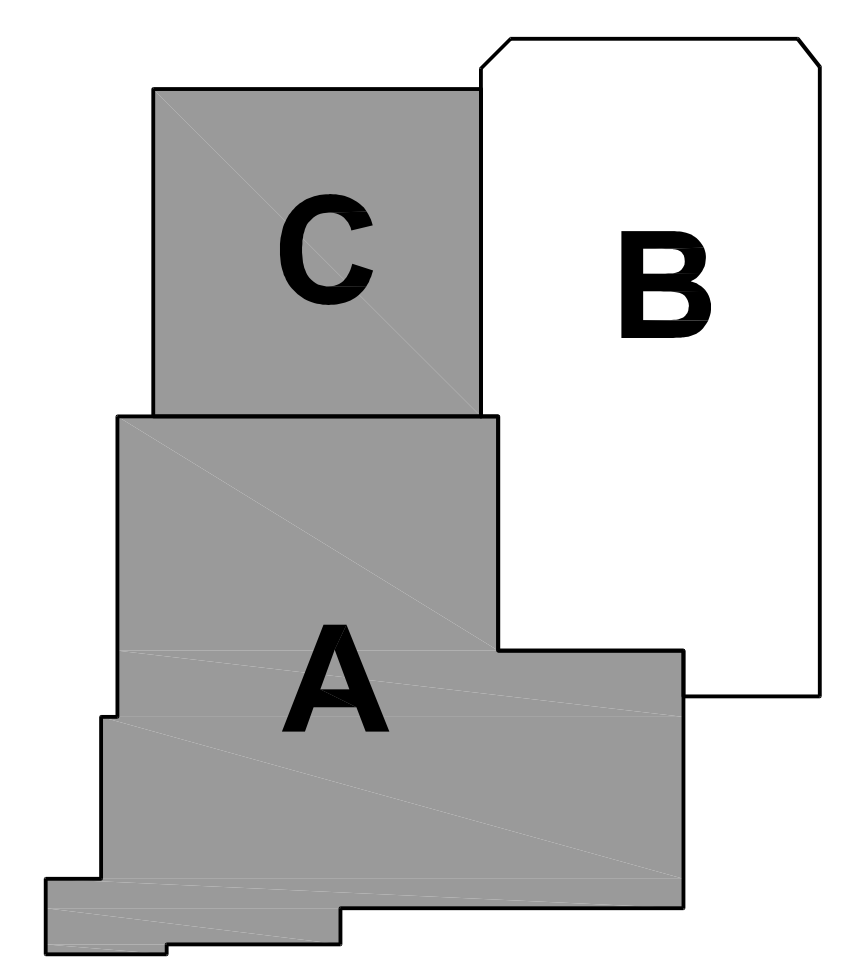
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- 26.100 DEMOLISH ELECTRICAL FEEDER TO MECHANICAL EQUIPMENT INDICATED TO BE REMOVED.
- 26.101 PROTECT EXISTING 120 VOLT BRANCH CIRCUITS ROUTED NEAR MECHANICAL EQUIPMENT. DO NOT DEMOLISH OR DAMAGE.
- 26.102 REMOVE DUCT DETECTORS AND PROTECT SLC AND FSCF WIRING. PROVIDE NEW DUCT DETECTORS (SUPPLY AND RETURN) AND FAN SHUT DOWN RELAY.
- 26.103 DEMOLISH BRANCH CIRCUIT TO EXHAUST FAN.
- 26.104 MODIFY EXISTING FEEDER AT SWITCHBOARD HAC1 TO TERMINATE AT NEW SWITCHBOARD HACM. DISASSEMBLE AND RECONSTRUCT CONDUIT/CONDUCTORS. AT CONTRACTORS OPTION: PROVIDE PULL BOX, CONDUIT BODY OR 90 DEGREE BEND. SEE ONE LINE DIAGRAM.
- 26.200 PROVIDE NEW FEEDER TO EXISTING SWITCHBOARD HAC1. SEE ONE LINE DIAGRAM.

MECHANICAL GENERAL NOTES

- REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
- ALL PIPING, DUCTWORK AND RACEWAYS ARE SHOWN DIAGRAMMATICALLY AND DO NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
- EXISTING PIPING, DUCTWORK AND RACEWAYS INDICATED ON THESE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATIONS, QUANTITY AND SIZES.
- ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
- SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
- DO NOT CUT THROUGH THE STRUCTURAL ELEMENTS WHEN INSTALLING OPENINGS REQUIRED FOR ALL DUCTWORK, PIPING, CONDUITS OR OTHER WORK. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEEMED NECESSARY TO REINSTATE THE CONTINUITY OF THE DISRUPTED ELEMENTS.
- ALL ROOFTOP EQUIPMENT (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC.) AND THEIR CORRESPONDING CURBS TO BE ATTACHED TO THE STRUCTURAL FRAMING AS REQUIRED TO RESIST THE WIND AND SEISMIC FORCES IDENTIFIED ON SHEET S010. ANCHORAGE TO METAL DECKING IS NOT ACCEPTABLE. CONTRACTOR/MANUFACTURER TO CONSULT AN INDEPENDENT STRUCTURAL ENGINEER TO REVIEW, DESIGN AND DETAIL THE REQUIRED CONNECTIONS.
- OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

KEY PLAN



Kluber, Inc.
Aurora, Illinois 60506
Tel. 630.406.1213
Chicago, Illinois 60606
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OAK BROOK PARK DISTRICT - FAM. REC. CENTER POOL DECK & HVAC RENO.
OAK BROOK PARK DISTRICT
1450 FOREST GATE ROAD
OAK BROOK, ILLINOIS 60523

11/2022	OUT TO BID (DPH) REVIEW
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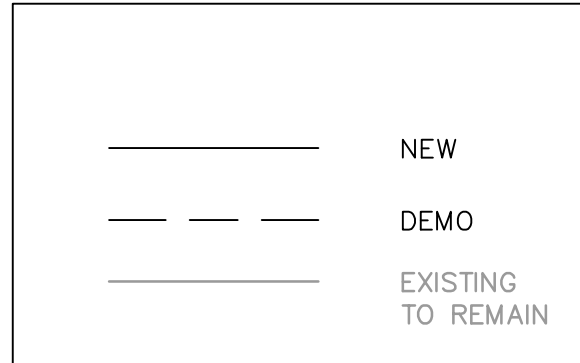
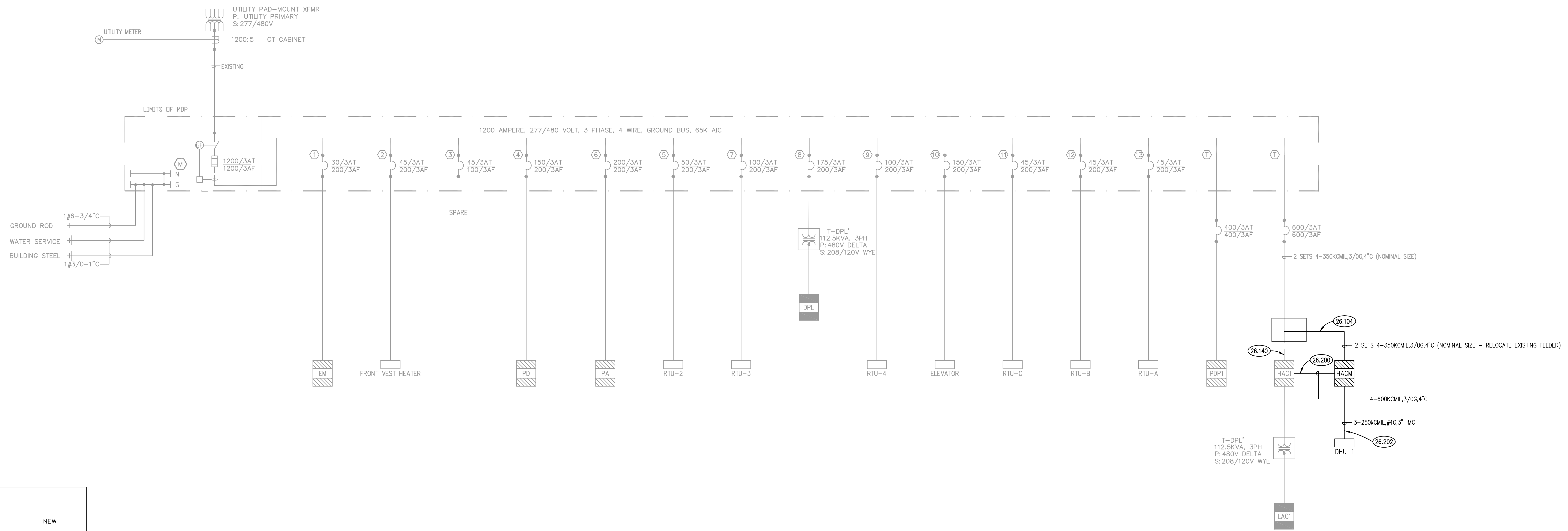
JOB NO.	22-310-1444
DRAWN	MTK
CHECKED	MTK
APPROVED	MTK

SHEET TITLE
**FIRST FLOOR PLAN
ELECTRICAL PLAN**

SHEET NUMBER

E310

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.



ONE LINE RISER DIAGRAM ①
N.T.S.

KEYNOTES

KEYNOTES ARE NOT ALWAYS REPEATED ACROSS ALL DRAWINGS ON THIS SHEET. AN UN-KEYNOTED ITEM ON THIS SHEET IS THE SAME AS A KEYNOTED ITEM ON THIS SHEET HAVING THE SAME GRAPHIC APPEARANCE.

26.104 MODIFY EXISTING FEEDER AT SWITCHBOARD HAC1 TO TERMINATE AT NEW SWITCHBOARD HACM. DISASSEMBLE AND RECONSTRUCT CONDUIT/CONDUCTORS. AT CONTRACTORS OPTION: PROVIDE PULL BOX, CONDUIT BODY OR 90 DEGREE BEND. SEE ONE LINE DIAGRAM.

26.200 PROVIDE NEW FEEDER TO EXISTING SWITCHBOARD HAC1. SEE ONE LINE DIAGRAM.

26.202 PROVIDE NEW FEEDER TO MECHANICAL UNIT DHU-1. REFER TO SHOP DRAWINGS FOR EXACT LOCATION.

HACM							
600 AMPERE, 277/480 VOLT, 3 PHASE, 4 WIRE, WYE, CIRCUIT BREAKER STYLE SWITCHBOARD, NEMA1 ENCLOSURE, MAIN LUG ONLY							
CKT	TRIP	DESCRIPTION	FRAME	A	B	C	TOTAL
1	400/3	PANEL HAC1	400/3	84583	84583	84583	253749
2	250/3	HVAC: DHU-1	400/3	61078	61078	61078	183234
3	-	SPACE		0	0	0	0
4	-	SPACE		0	0	0	0
NEW CONNECTED VA:				145661	145661	145661	436983
NEW CONNECTED AMPS:				526	526	526	1213
NEW DEMAND VA:							436983
NEW DEMAND AMPS:							526

PANEL SCHEDULE ②
N.T.S.

ISSUED	
OUT TO BID/REVIEW	
11/20/22	

JOB NO.	22-310-1444
DRAWN	ATR
CHECKED	MTK
APPROVED	MTK

SHEET TITLE

ELECTRICAL ONE LINE RISER DIAGRAM

SHEET NUMBER

E600