

COLLIN COUNTY COURTHOUSE

2100 BLOOMDALE ROAD
MCKINNEY, TX 75070

CLEAN AGENT SYSTEM FOR DATA CENTER



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BID DOCUMENTS DRAWING SET

DECEMBER 8, 2015

GENERAL NOTES

- A. THESE PLANS AND SPECIFICATIONS ARE INTENDED AS PERFORMANCE SPECIFICATIONS TO GUIDE A LICENSED FIRE PROTECTION ENGINEER IN DETERMINING THE FIRE PROTECTION SCOPE OF WORK FOR THE PROJECT. A LICENSED FIRE PROTECTION ENGINEER SHALL DESIGN THE FIRE PROTECTION SYSTEMS, AND PROVIDE ALL SUPPORTING ENGINEERED CALCULATIONS, PLANS, AND SPECIFICATIONS (SIGNED AND SEALED).
- B. THESE PLANS AND SPECIFICATIONS ARE INTENDED AS PERFORMANCE SPECIFICATIONS TO GUIDE A LICENSED FIRE PROTECTION INSTALLER IN DETERMINING THE FIRE PROTECTION SCOPE OF WORK FOR THE PROJECT. A LICENSED FIRE PROTECTION INSTALLER SHALL PROVIDE (FURNISH, INSTALL, AND MAKE SYSTEMS OPERATIONAL) THE FIRE PROTECTION SYSTEMS, AND PROVIDE ALL SUPPORTING ENGINEERED CALCULATIONS, PLANS, AND SPECIFICATIONS (SIGNED AND SEALED).
- C. THE LICENSED INSTALLER SHALL PROVIDE PROOF OF COMPETENCY BY DEMONSTRATING THAT THE COMPANY HAS LICENSED EMPLOYEES WITH BOTH A FIRE PROTECTION ENGINEER LICENSE AND A NICET LEVEL IV CERTIFICATION IN SPECIAL HAZARD FIRE PROTECTION SYSTEMS. COMPANIES WHO DO NOT EMPLOY LICENSED FIRE PROTECTION ENGINEERS AND NICET LEVEL IV CERTIFIED SPECIAL HAZARD PERSONNEL SHALL BE REJECTED.
- D. ALL BIDDERS ARE REQUIRED TO ATTEND A MANDATORY SITE VISIT AT THE TIME OF THE PRE-BID MEETING.
- E. THE NEW CLEAN AGENT SYSTEM SHALL BE SEGREGATED INTO TWO (2) ZONES UTILIZING FOUR (4) CONTAINERS (CYLINDERS).
 ZONE 1: THE SERVER ROOM AND UNDER THE ACCESS FLOORING IN THE SERVER ROOM SHALL BE ONE (1) ZONE UTILIZING ONE (1) CONTAINER FOR EACH SPACE.
 ZONE 2: THE UPS ROOM SHALL BE ONE (1) ZONE UTILIZING TWO (2) CONTAINERS FOR THE SPACE.
- F. ALL ELECTRICAL SYSTEMS INSTALLATION, BOTH LOW AND HIGH VOLTAGE, SHALL BE INSTALLED IN EMT (ELECTRICAL METALLIC TUBING). COMPRESSION FITTINGS SHALL BE USED FOR THIS APPLICATION. ALL CONDUIT SHALL BE MOUNTED TO STRUCTURE. FLEXIBLE CONDUIT SHALL BE USED TO CONNECT THE STRUCTURE MOUNTED EMT JUNCTION BOXES TO THE ACUSTICAL CEILING MOUNTED SPOT SMOKE DETECTORS. CEILING MOUNTED SMOKE DETECTORS SHALL BE MOUNTED TO A JUNCTION BOX WITH A STEEL TRAPEZE ARRANGEMENT WHICH SUPPORTS EACH SMOKE DETECTOR TO THE CEILING GRID SYSTEM. SMOKE DETECTORS SUPPORTED BY THE CEILING TILES ALONE SHALL NOT BE ACCEPTABLE. CONDUIT INSTALLATION BELOW THE COMPUTER ACCESS FLOOR SYSTEM SHALL POSITIONED OFF THE CONCRETE FLOOR WITH ATTACHMENT TO STANDARD, NOT SHALLOW, UNISTRUIT FLEXIBLE CONDUIT SHALL BE USED TO CONNECT THE SUB FLOOR MOUNTED AREA SMOKE DETECTORS TO THE EMT CONDUIT SYSTEM. SMOKE DETECTORS SHALL BE POSITIONED FACE DOWN OR AT 90 DEGREES TO THE HORIZONTAL FLOOR. SUB FLOOR SMOKE DETECTORS SHALL BE MOUNTED HIGH AND CENTERED JUST BELOW EACH FLOOR TILE. THE DETECTOR SHALL BE MOUNTED TO ALLOW ROTATION FOR ACCESS, CLEANING AND TESTING.
- G. MECHANICAL SYSTEM INSTALLATION SHALL BE IN FULL CONFORMANCE WITH PROJECT SPECIFICATIONS. THIS SHALL INCLUDE THE CORRECT PIPE, FITTING AND HANGERS FOR THE SERVICE INTENDED. ALL PIPE SHALL BE BRACED TO PREVENT SIGNIFICANT MOVEMENT DURING CLEAN AGENT DISCHARGE. THE MAXIMUM NOZZLE DISCHARGE TIME IN THE SERVER AND UPS ROOM SHALL NOT EXCEED 20 POUNDS PER SECOND. SYSTEMS NOT COMPLYING WITH THESE CONSTRUCTION DOCUMENTS SHALL BE REJECTED BY HALFF ENGINEER. CONTRACTOR SHALL REMOVE NON-COMPLIANT WORK THEN PROVIDE NEW INSTALLATION THAT IS COMPLIANT.
- H. SYSTEMS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, AND CITY ORDINANCES OF MCKINNEY, TEXAS, INCLUDING:
 -INTERNATIONAL BUILDING CODES
 -NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, MOST CURRENT EDITION.
 -NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE, MOST CURRENT EDITION.
 -NFPA 75 STANDARD FOR FIRE PROTECTION FOR INFORMATION TECHNOLOGY EQUIPMENT, MOST CURRENT EDITION.
 THE CONTRACTOR IS FULLY RESPONSIBLE FOR PERFORMING THE WORK IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES UNDER THIS SECTION OF THE CONTRACT. IF THE CONTRACTOR DETERMINES THAT THE CONTRACT DOCUMENTS AND PLANS ARE NOT IN COMPLIANCE WITH THE APPLICABLE CODES, CONTRACTOR SHALL INFORM THE HALFF ENGINEER PRIOR TO CONSTRUCTION START FOR DIRECTION. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO MEET APPLICABLE CODES, AND REWORK SHALL BE AT CONTRACTOR'S EXPENSE.
- I. THE NUMBER, SIZE, LOCATION, CHARACTERISTICS, ETC. FOR ALL DEVICES AND COMPONENTS FOR ALL FIRE PROTECTION SYSTEMS SHALL BE DETERMINED BY THE FIRE PROTECTION ENGINEER. THE LOCATION OF CONTROL PANELS, CLEAN AGENT CONTAINERS, AIR SAMPLING DEVICES, ETC. SHOWN ON THE PLANS WERE APPROVED BY THE OWNER, AND ARE THEREFORE A PREFERRED LOCATION. UPON JUSTIFICATION AND APPROVAL BY OWNER AND HALFF ENGINEER, OTHER LOCATIONS WILL BE CONSIDERED. PROVIDE SUBMITTALS INCLUDING SHOP DRAWINGS, PRODUCT DATA, AND CALCULATIONS FOR APPROVAL.
- J. DEFINITION OF PROVIDE: MEANING TO FURNISH, INSTALL, AND MAKE FULLY OPERATIONAL, INCLUDING ROUTING AND CONNECTING ELECTRICAL POWER AND CONTROLS PROGRAMMING, START-UP AND TESTING.
- K. PROVIDE ALL SYSTEMS COMPLETE AND OPERATIONAL.
- L. PROVIDE CLEAN AGENT SYSTEMS.
- M. PROVIDE ASPIRATING SMOKE DETECTION SYSTEMS.
- N. PROVIDE SPOT SMOKE DETECTION SYSTEMS
- O. PROVIDE HORN STROBES.
- P. PROVIDE BEACONS FOR ALERT ON RELEASE OF CLEAN AGENT.
- Q. PROVIDE MODIFICATIONS TO EXISTING MANUAL EMERGENCY POWER OFF (EPO) SYSTEM.
- R. PROVIDE AN AUTOMATIC EMERGENCY POWER OFF (EPO) SYSTEM CONTROLLED THROUGH THE NEW CLEAN AGENT SYSTEM, BY MODIFYING EXISTING MANUAL EPO SYSTEM TO ALLOW AUTOMATIC INTERRUPTION OF POWER IN DATA CENTER.
- S. THE EXISTING FIRE PROTECTION SYSTEM SHALL ALWAYS REMAIN OPERATIONAL AND FULLY FUNCTIONAL. COMPONENTS OF THE EXISTING FIRE PROTECTION SYSTEM AFFECTED BY THIS CONSTRUCTION PROJECT SHALL ALWAYS REMAIN OPERATIONAL AND FULLY FUNCTIONAL UNTIL THE NEW CLEAN AGENT SYSTEM IS OPERATIONAL AND FULLY FUNCTIONAL. DISARMING, DISCONNECTION, OR DEMOLITION OF EXISTING COMPONENTS OF THE EXISTING FIRE PROTECTION SYSTEM SHALL OCCUR AFTER THE NEW CLEAN AGENT SYSTEM IS OPERATIONAL AND FULLY FUNCTIONAL. COORDINATE WITH BRAD HARRIS (COLLIN COUNTY) 972-547-5492.
- T. DO NOT INTERRUPT POWER TO TELECOMMUNICATIONS SYSTEMS OR 911 EMERGENCY TELEPHONE SYSTEM.
- U. THE OVERALL SCOPE OF WORK FOR THIS PROJECT IS INDICATED ON THE DRAWINGS BY THE DARKER LINE IMAGES. THE LIGHTER LINE IMAGES SERVE AS BACKGROUND INFORMATION ON THE DRAWINGS. THE CONTRACTOR SHALL MAKE CHANGES AS DEPICTED BY THE DEMOLITION AND NEW CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL MAINTAIN, REMOVE, AND/OR, MODIFY EXISTING ITEMS AND PROVIDE NEW ITEMS AS HIGHLIGHTED BY THE DARKER LINE IMAGES. THE GENERAL NOTES AND KEYED NOTES INDICATE TASKS TO BE PERFORMED BY THE CONTRACTOR.
- V. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND CERTIFICATES REQUIRED.
- W. THE HALFF ENGINEER HAS SELECTED EQUIPMENT AND MATERIAL AS A BASIS OF DESIGN FOR THIS PROJECT IN ORDER TO CONDUCT THE DESIGN INDICATED IN THE CONSTRUCTION DOCUMENTS. CONTRACTOR SUBSTITUTION FOR EQUIPMENT AND MATERIAL OTHER THAN BASIS OF DESIGN SELECTIONS REQUIRE APPROVAL BY HALFF ENGINEER. CONTRACTOR SHALL SUBMIT A SUBSTITUTION REQUEST WHICH MEETS THE CONDITIONS STATED IN SPECIFICATIONS 002600 AND 012500. CONTRACTOR SHALL PROVIDE WRITTEN EVIDENCE THAT CONDITIONS STATED IN SPECIFICATIONS ARE MET. CONTRACTOR SHALL BEAR ALL COSTS AS A RESULT OF A SUBSTITUTION FOR EQUIPMENT AND MATERIAL INCLUDING ANY REDESIGN REQUIRED TO ACCOMMODATE THE SUBSTITUTION.
- X. CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL THE EQUIPMENT, FITTINGS AND COMPONENTS FOR FINAL APPROVAL BY THE HALFF ENGINEER BEFORE PURCHASING OR INSTALLING THEM.
- Y. THE CONSTRUCTION DOCUMENTS ARE DIAGRAMMATIC AND SCHEMATIC IN NATURE AND DO NOT SHOW EVERY DETAIL REQUIRED FOR CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS, DIMENSIONS, AND SPACE REQUIREMENTS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO THE HALFF ENGINEER.
- Z. REFER TO EQUIPMENT MANUFACTURER'S EQUIPMENT DRAWINGS FOR PHYSICAL DIMENSIONS OF EQUIPMENT. INSTALL EQUIPMENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS SUCH AS INSTALLATION, OPERATION AND MAINTENANCE MANUAL.
- AA. CONTRACTOR SHALL COORDINATE ALL INSTALLATION WORK WITH ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL DESIGN. ALL DUCTWORK SHALL BE MODIFIED AS NECESSARY AND REQUIRED TO FIT AROUND BUILDING STRUCTURES, ARCHITECTURAL BUILD-OUT AND ELECTRICAL CABLE TRAY INSTALLATIONS. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE WORK SCOPE OF OTHER TRADES AND PARTICIPATE IN COORDINATING ALL CONSTRUCTION EFFORTS. CONTRACTOR SHALL SUPPORT SUSPENDED EQUIPMENT, DUCTWORK, AND PIPING PER SMACNA STANDARDS.
- AB. CONTRACTOR SHALL KEEP A FULL SET OF CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES. THIS SET SHALL BE MARKED WITH CHANGES AND DEVIATIONS IN CONSTRUCTION ROUTING AND PLACEMENT OF EQUIPMENT. AT THE END OF THE PROJECT FURNISH A SET OF "ASBUILT" OR RECORD DRAWINGS SHOWING ALL WORK IN ACCORDANCE WITH THE ORIGINAL DESIGN AS MODIFIED. SUBMIT RECORDS TO OWNER AS FULL SIZE DRAWING SHEETS AND AS ELECTRONIC FILES. INCLUDE DIMENSIONAL INFORMATION NECESSARY TO DELINEATE THE LOCATIONS OF EQUIPMENT AND DEVICES.
- AC. ON ANY WORK SHOWN ON MECHANICAL DRAWINGS REQUIRING DEMOLITION OF BUILDING STRUCTURES AND FINISHES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE THE NECESSARY DEMOLITION. CONTRACTOR SHALL PATCH AND REPAIR ALL DEMOLITION WORK. PATCHING SHALL BE COMPLETED WITH THE SAME MATERIALS AS THE SURROUNDING AREAS, OR WITH ARCHITECT-APPROVED PATCHING MATERIALS. REPAIRS SHALL BE COMPLETED ACCORDING TO ARCHITECTURAL SPECIFICATIONS. ALL REFINISHING SHALL BE APPROVED BY THE ARCHITECT.
- AD. CONTRACTOR SHALL PROVIDE ALL CEILING DIFFUSERS AS SHOWN. CONNECT EACH DIFFUSER TO THE MAIN DISTRIBUTION DUCT WITH A FLEXIBLE DUCT SECTION MAXIMUM 6 FEET IN LENGTH. EACH BRANCH DUCT SHALL INCLUDE A BALANCING DAMPER INSTALLED AT THE TRUNK DUCT.
- AE. CONTRACTOR SHALL PROVIDE ALL DUCTWORK REQUIRED TO COMPLETE THE HVAC SYSTEM. DUCTWORK AND INSTALLATION OF DUCTWORK SHALL MEET SMACNA STANDARDS. DUCT SIZES ARE FREE AREA.
- AF. UNLESS SPECIFICALLY INDICATED, ALL DUCT TRANSITIONS SHALL BE SMOOTH AND GRADUAL WITH MAXIMUM DIVERGENT ANGLE OF 15 DEGREES.
- AG. PROVIDE TURNING VANES IN ALL SUPPLY AIR DUCTWORK ELBOWS.
- AH. CONTRACTOR SHALL COORDINATE THE FINAL LOCATIONS OF ALL CEILING DIFFUSERS WITH LIGHTING INSTALLATIONS AND ARCHITECTURAL REFLECTED CEILING PLANS. MOVE THE DIFFUSER LOCATIONS IF REQUIRED TO AVOID OBSTRUCTIONS FROM DUCTWORK AND LIGHT FIXTURES. COORDINATE RELOCATION WITH HALFF ENGINEER.
- AI. CONTRACTOR SHALL PROVIDE ACCESS DOORS IN DUCTS. LABEL ACCESS DOORS.
- AJ. CONTRACTOR IS RESPONSIBLE FOR OPENINGS REQUIRED FOR ROUTING AND INSTALLING NEW MECHANICAL, ELECTRICAL AND FIRE SCOPE OF WORK. ALL PENETRATIONS THROUGH WALLS, FLOORS, CEILINGS AND DECKS SHALL BE SEALED. ALL PENETRATIONS THROUGH FIRE-RATED WALLS AND DECKS SHALL BE FIRE STOPPED. ALL PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE WEATHERPROOF.
- AK. ALL OPENINGS CUT IN MASONRY AND PLASTER WALLS OR CONCRETE FLOORS SHALL BE CORE DRILLED SLEVED AND SEALED. CONTRACTOR SHALL CHECK BUILDING CONSTRUCTION BEFORE MAKING PENETRATIONS TO AVOID CUTTING THROUGH STRUCTURAL BEAMS AND REINFORCING. CONTRACTOR SHALL INFORM THE HALFF ENGINEER IF REINFORCING IS CUT OR DAMAGED WHILE MAKING OPENINGS. CONTRACTOR SHALL REINFORCE ALL OPENINGS AS REQUIRED BY DRAWINGS AND SPECIFICATIONS. PATCH AND SEAL OPENINGS WITH 6000 PSI CEMENT GROUT. INSTALL DECORATIVE TRIM (EQUIPMENT FLANGES, FRAMING OR ESCUTCHEONS) AROUND OPENINGS IN FINISHED AREAS. COORDINATE ALL CUTTING AND PATCHING WITH THE OTHER TRADES.
- AL. MOUNT ALL ROOM THERMOSTATS (SENSORS), HUMIDISTATS (SENSORS), AND CO2 SENSORS 48" ABOVE THE FINISHED FLOOR LEVEL. UNLESS NOTED OTHERWISE THERMOSTATS SHOWN SHALL BE IN CONTROL OF THE ZONE SYSTEM WHICH IS SUPPLYING AIR TO THE AREA WHERE THE THERMOSTAT IS LOCATED. CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF EACH THERMOSTAT WITH THE ROOM FINISHES AND USES. CONTRACTOR SHALL SUPPLY AND INSTALL ALL CONTROL VOLTAGE WIRING AND CONDUIT FOR SENSOR (DDC CONTROL) INSTALLATION.
- AM. ALL SUPPLY AIR, RETURN AIR, OUTSIDE AIR, AND EXHAUST DUCTWORK SHALL BE WRAPPED. NOT REQUIRED FOR RESTROOM/JANITOR EXHAUST AIR DUCTWORK.
- AN. PROVIDE 6" WIDE FLEXIBLE CONNECTOR TO CONNECT DUCTS TO HVAC EQUIPMENT.
- AO. ALL PIPING SHALL BE INSULATED AND JACKETED.
- AP. SIZE AND ROUTE REFRIGERANT PIPING FOR CONDENSING UNITS PER MANUFACTURERS RECOMMENDATIONS.
- AQ. PREPARE, PRIME AND PAINT PIPING, INSULATION JACKETS, MOUNTING BRACKETS, HANGER RODS, FASTENERS, CONCRETE HOUSEKEEPING AND EQUIPMENT PADS.
- AR. LABEL ALL EQUIPMENT, DISCONNECT SWITCHES, PIPING AND DUCTWORK.
- AS. ALL ELECTRIC MOTORS ONE HORSEPOWER AND LARGER SHALL BE PREMIUM EFFICIENCY MOTORS.
- AT. VERIFY THE LOCATION OF ALL WALLS, PARTITIONS, DOORS, CABINETS, AND CEILINGS FROM ACTUAL FIELD MEASUREMENTS.
- AU. ALL NEW CONTROL WIRE SHALL BE ROUTED IN CONDUIT. THIS INCLUDES THE CONTROL WIRE THAT PENETRATES THE ROOF.
- AV. DURING REFURBISHMENT AND/OR REPLACEMENT OF ROOF MOUNTED EQUIPMENT, ANY AND ALL LIGHTING PROTECTION RODS, WIRING AND SUPPORTS SHALL BE DISCONNECTED AS REQUIRED FOR REPAIR/REPLACEMENT OF EQUIPMENT. AFTER COMPLETION OF HVAC WORK, ALL LIGHTNING PROTECTION EQUIPMENT AND WIRING SHALL BE RE-INSTALLED.
- AW. CONTRACTOR SHALL TEST ALL NEW EQUIPMENT AND NEW PIPING FOR PROPER OPERATION AND SHALL MAKE ALL NECESSARY REPAIRS AS REQUIRED TO PROVIDE A COMPLETE WORKING SYSTEM.
- AX. MECHANICAL/TEMPERATURE CONTROL CONDUIT IS REQUIRED FOR VERTICAL RUNS IN WALLS AND WHERE EXPOSED. ALL CONDUIT REQUIRED, SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. REQUIRED CONDUCTORS AS FOLLOWS:
 1. ALL LINE VOLTAGE SUPPLY (CONSTANT) POWER WIRING SHALL BE PROVIDED AND INSTALLED, IN CONDUIT, BY THE CONTRACTOR.
 2. ALL LOW AND LINE VOLTAGE CONTROL (SWITCHED) WIRING SHALL BE PROVIDED AND INSTALLED, IN CONDUIT, BY THE CONTRACTOR. WIRING INSTALLATION AND TERMINATIONS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.
 3. N.E.C. ART 300-11(B): RACEWAYS SHALL NOT BE USED AS A MEANS OF SUPPORT FOR CABLES OR NON-ELECTRICAL EQUIPMENT.
- AY. AT THE END OF THE PROJECT, AREAS DISTURBED OR DAMAGED BY CONTRACTOR AT THE SITE AND IN AND AROUND BUILDINGS SHALL BE RESTORED TO ORIGINAL CONDITION. AREAS TO BE RESTORED INCLUDE, BUT ARE NOT LIMITED TO GROUNDS, PAVEMENT, FENCE, WALLS, FLOORS, CEILINGS, AND ROOFS.

COLLIN COUNTY COURTHOUSE
CLEAN AGENT SYSTEM FOR DATA CENTER
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BID DOCUMENTS DRAWING SET



Revision No.	Date	Description



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Sheet Title	GENERAL NOTES

0.01

Sheet Number

GENERAL LEGEND

DUCTWORK SYMBOLS	MISCELLANEOUS SYMBOLS	GENERAL ABBREVIATIONS	AIRFLOW DIAGRAM SYMBOLS																																																																																
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DUCT TRANSITION																																																																																			
DUCT TRANSITION (SQUARE OR RECTANGULAR TO ROUND)																																																																																			
RECTANGULAR DUCT, SIZE IN INCHES, FIRST DIMENSION IS SIDE SHOWN (NET CLEAR INSIDE DIMENSION)																																																																																			
ROUND DUCT, DIAMETER IN INCHES (NET CLEAR INSIDE DIMENSION)																																																																																			
AIR FLOW IN DIRECTION OF ARROW																																																																																			
45° BRANCH TAKE-OFFS																																																																																			
CONICAL LATERAL BRANCH TAKE-OFFS																																																																																			
CEILING SUPPLY DIFFUSERS																																																																																			
CEILING RETURN GRILLE/REGISTER																																																																																			
CEILING EXHAUST FAN (EF-)																																																																																			
CEILING EXHAUST GRILLE/REGISTER																																																																																			
SIDEWALL SUPPLY GRILLE/REGISTER																																																																																			
SIDEWALL RETURN/EXHAUST GRILLE/REGISTER																																																																																			
EXTRACTOR																																																																																			
DUCT TEE WITH SPLITTER DAMPER																																																																																			
<ul style="list-style-type: none"> SPOT SMOKE DETECTOR HORN STROBE (WHITE) FOR BUILDING FIRE ALARM CONTROL PANEL HORN STROBE (BLUE) FOR CLEAN AGENT SYSTEM REMOTE DISPLAY PANEL FOR CLEAN AGENT SYSTEM CONTROL PANEL FOR CLEAN AGENT SYSTEM ASPIRATING SMOKE DETECTOR EXIT SIGN WP/GFCI RECEPTACLE FIRE SPRINKLER HEAD BEACON (BLUE) FOR CLEAN CLEAN AGENT SYSTEM THERMOSTAT OR TEMPERATURE SENSOR (MOUNT 48" AFF) CLEAN AGENT CONTAINER (CYLINDER) 	<ul style="list-style-type: none"> MOTORIZED MOTOR STARTER FUSED DISCONNECT SWITCH DISCONNECT SWITCH COMBINATION MOTOR STARTER 120/208V PANELBOARD MANUAL MOTOR STARTING SWITCH LIGHT SWITCH CIRCUIT HOMERUN TO PANELBOARD DOOR EXIT WALL MOUNTED RED PUSHBUTTON TO OPEN DOOR EPO SWITCH ABORT BUTTON MANUAL DISCHARGE STATION MANUAL PULL STATION 480V PANELBOARD HARDWIRED INTERLOCK 																																																																																		
<ul style="list-style-type: none"> DIFFUSER, GRILLE OR REGISTER MARK A - 200 AIR FLOW (CFM) 12 X 6 RECTANGULAR FACE SIZE (WHERE APPLICABLE) DIRECTION OF SECTION IDENTIFYING NUMBER OR LETTER FOR SECTIONS. NUMBER OF REFERENCE DRAWING WHERE SECTION IS SHOWN. IDENTIFYING NUMBER OR LETTER FOR DETAILS. NUMBER OF REFERENCE DRAWING WHERE DETAIL IS SHOWN. ENLARGED DETAIL REFERENCE MATCHLINE LINE WITH HATCHING DESIGNATES DEMOLITION WORK 																																																																																			
		<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> AFF ABOVE FINISHED FLOOR CL CENTERLINE DB DRY BULB DDC DIRECT DIGITAL CONTROL DEG DEGREES DIA DIAMETER DN DOWN DX DIRECT EXPANSION EA EXHAUST AIR EAT ENTERING AIR TEMPERATURE EDB ENTERING DRYBULB TEMPERATURE ESP EXTERNAL STATIC PRESSURE EWB ENTERING WET BULB EWT ENTERING WATER TEMPERATURE EX EXISTING FLA FULL LOAD AMP FLEX FLEXIBLE HZ CYCLES PER SECOND (HERTZ) KW KILOWATT LAT LEAVING AIR TEMPERATURE LDB LEAVING DRYBULB TEMPERATURE LWT LEAVING WATER TEMPERATURE </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> MAX MAXIMUM MANUFACTURER MFR MINIMUM NC NORMALLY CLOSED NO NORMALLY OPEN OR NUMBER NOT TO SCALE OA OUTSIDE AIR OBD OPPOSED BLADE DAMPER PH PHASE RA RETURN AIR RH RELATIVE HUMIDITY RPM REVOLUTIONS PER MINUTE SA SUPPLY AIR SENSIBLE SD SMOKE DETECTOR SP STATIC PRESSURE TS TEMPERATURE SENSOR TSTAT THERMOSTAT TSP TOTAL STATIC PRESSURE UC UNDER GROUND UNLESS NOTED OTHERWISE UNO UNLESS NOTED OTHERWISE WB WET BULB WxHxL WIDTH BY HEIGHT BY LENGTH </td> </tr> </table>	<ul style="list-style-type: none"> AFF ABOVE FINISHED FLOOR CL CENTERLINE DB DRY BULB DDC DIRECT DIGITAL CONTROL DEG DEGREES DIA DIAMETER DN DOWN DX DIRECT EXPANSION EA EXHAUST AIR EAT ENTERING AIR TEMPERATURE EDB ENTERING DRYBULB TEMPERATURE ESP EXTERNAL STATIC PRESSURE EWB ENTERING WET BULB EWT ENTERING WATER TEMPERATURE EX EXISTING FLA FULL LOAD AMP FLEX FLEXIBLE HZ CYCLES PER SECOND (HERTZ) KW KILOWATT LAT LEAVING AIR TEMPERATURE LDB LEAVING DRYBULB TEMPERATURE LWT LEAVING WATER TEMPERATURE 	<ul style="list-style-type: none"> MAX MAXIMUM MANUFACTURER MFR MINIMUM NC NORMALLY CLOSED NO NORMALLY OPEN OR NUMBER NOT TO SCALE OA OUTSIDE AIR OBD OPPOSED BLADE DAMPER PH PHASE RA RETURN AIR RH RELATIVE HUMIDITY RPM REVOLUTIONS PER MINUTE SA SUPPLY AIR SENSIBLE SD SMOKE DETECTOR SP STATIC PRESSURE TS TEMPERATURE SENSOR TSTAT THERMOSTAT TSP TOTAL STATIC PRESSURE UC UNDER GROUND UNLESS NOTED OTHERWISE UNO UNLESS NOTED OTHERWISE WB WET BULB WxHxL WIDTH BY HEIGHT BY LENGTH 	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> FSD FIRE/SMOKE DAMPER PERFORATED FLOOR TILE FAN STARTER </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> MOTORIZED OPPOSED BLADE DAMPER MOTORIZED PARALLEL BLADE DAMPER </td> </tr> </table>	<ul style="list-style-type: none"> FSD FIRE/SMOKE DAMPER PERFORATED FLOOR TILE FAN STARTER 	<ul style="list-style-type: none"> MOTORIZED OPPOSED BLADE DAMPER MOTORIZED PARALLEL BLADE DAMPER 																																																																												
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		<h3 style="text-align: center;">EQUIPMENT ABBREVIATIONS</h3> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> AHU AIR HANDLING UNIT ACU AIR CONDENSING UNIT ACCU AIR COOLED CONDENSING UNIT AG ABOVE GROUND ASD ASPIRATING SMOKE DETECTOR (AIR SAMPLING DEVICE) ATU AIR TERMINAL UNIT BAS BUILDING AUTOMATION SYSTEM CAS CLEAN AGENT SYSTEM CRAC COMPUTER ROOM CONDITION UNIT EDH ELECTRIC DUCT HEATER EF EXHAUST FAN EH ELECTRIC HEATER EPO EMERGENCY POWER OFF </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> FACP FIRE ALARM CONTROL PANEL FCU FAN COIL UNIT FCCU FAN COIL CONDENSING UNIT FPB FAN POWER BOX FSB FIRE SMOKE DAMPER OAH OUTSIDE AIR HOOD L LOUVER PDU POWER DISTRIBUTION UNIT RPP REMOTE POWER PANEL RTU ROOF TOP UNIT SB SECURITY BAR SDB SINGLE DUCT BOX UPS UNINTERRUPTIBLE POWER SUPPLY VAV VARIABLE AIR VOLUME BOX VFD VARIABLE FREQUENCY DRIVE </td> </tr> </table>	<ul style="list-style-type: none"> AHU AIR HANDLING UNIT ACU AIR CONDENSING UNIT ACCU AIR COOLED CONDENSING UNIT AG ABOVE GROUND ASD ASPIRATING SMOKE DETECTOR (AIR SAMPLING DEVICE) ATU AIR TERMINAL UNIT BAS BUILDING AUTOMATION SYSTEM CAS CLEAN AGENT SYSTEM CRAC COMPUTER ROOM CONDITION UNIT EDH ELECTRIC DUCT HEATER EF EXHAUST FAN EH ELECTRIC HEATER EPO EMERGENCY POWER OFF 	<ul style="list-style-type: none"> FACP FIRE ALARM CONTROL PANEL FCU FAN COIL UNIT FCCU FAN COIL CONDENSING UNIT FPB FAN POWER BOX FSB FIRE SMOKE DAMPER OAH OUTSIDE AIR HOOD L LOUVER PDU POWER DISTRIBUTION UNIT RPP REMOTE POWER PANEL RTU ROOF TOP UNIT SB SECURITY BAR SDB SINGLE DUCT BOX UPS UNINTERRUPTIBLE POWER SUPPLY VAV VARIABLE AIR VOLUME BOX VFD VARIABLE FREQUENCY DRIVE 																																																																															
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COLLIN COUNTY COURTHOUSE
CLEAN AGENT SYSTEM FOR DATA CENTER
MCKINNEY, TX
BID DOCUMENTS DRAWING SET

HALFF
1201 NORTH BOWSER ROAD
 FORT WORTH, TEXAS 76101-2275
 TEL: (817) 341-3400
 FAX: (817) 346-6200
 TBPE FIRM #F-312

Revision No.	Date	Description

LARRY D. WRIGHT
 65264
 REGISTERED PROFESSIONAL ENGINEER
 12/8/15

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Project No.:	30953
Issued:	12 / 8 / 15
Drawn By:	CB
Checked By:	LW
Scale:	N/A
Sheet Title:	LEGENDS AND SYMBOLS
0.02	Sheet Number

File Name: I:\306005\30953\CADD\Sheets\W001 - GN - 30953.dwg
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 Plotted Date: 12/8/2015 11:24:23 AM



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Project No.:	30953
Issued:	12 / 8 / 15
Drawn By:	CB
Checked By:	LW
Scale:	N/A
Sheet Title	SCHEDULES
Sheet Number	0.03

PLAN MARK	SERVES	NOMINAL TONNAGE	AIR FLOW (CFM)	MECHANICAL NOTES
CRAC-1	SERVER ROOM	20	9,100	1,2
CRAC-2	UPS ROOM	10	6,050	1,2
CRAC-3	UPS ROOM	10	5,650	1,2
CRAC-4	SERVER ROOM	20	12,000	1,2
CRAC-5 (FUTURE)	SERVER ROOM	20	12,000	1,2
CRAC-6 (FUTURE)	SERVER ROOM	20	12,000	1,2
EF-NW 0-02	UPS ROOM	-	1,250	1
VAV-NW 0-04	SERVER ROOM	-	300	1

- NOTES:
- EXISTING HVAC EQUIPMENT SHALL REMAIN.
 - NEW CLEAN AGENT SYSTEM SHALL BE SIZED BASED ON ALL SIX (6) CRAC UNITS BEING IN SERVICE (I.E. BASE SIZING ON FUTURE LOAD).

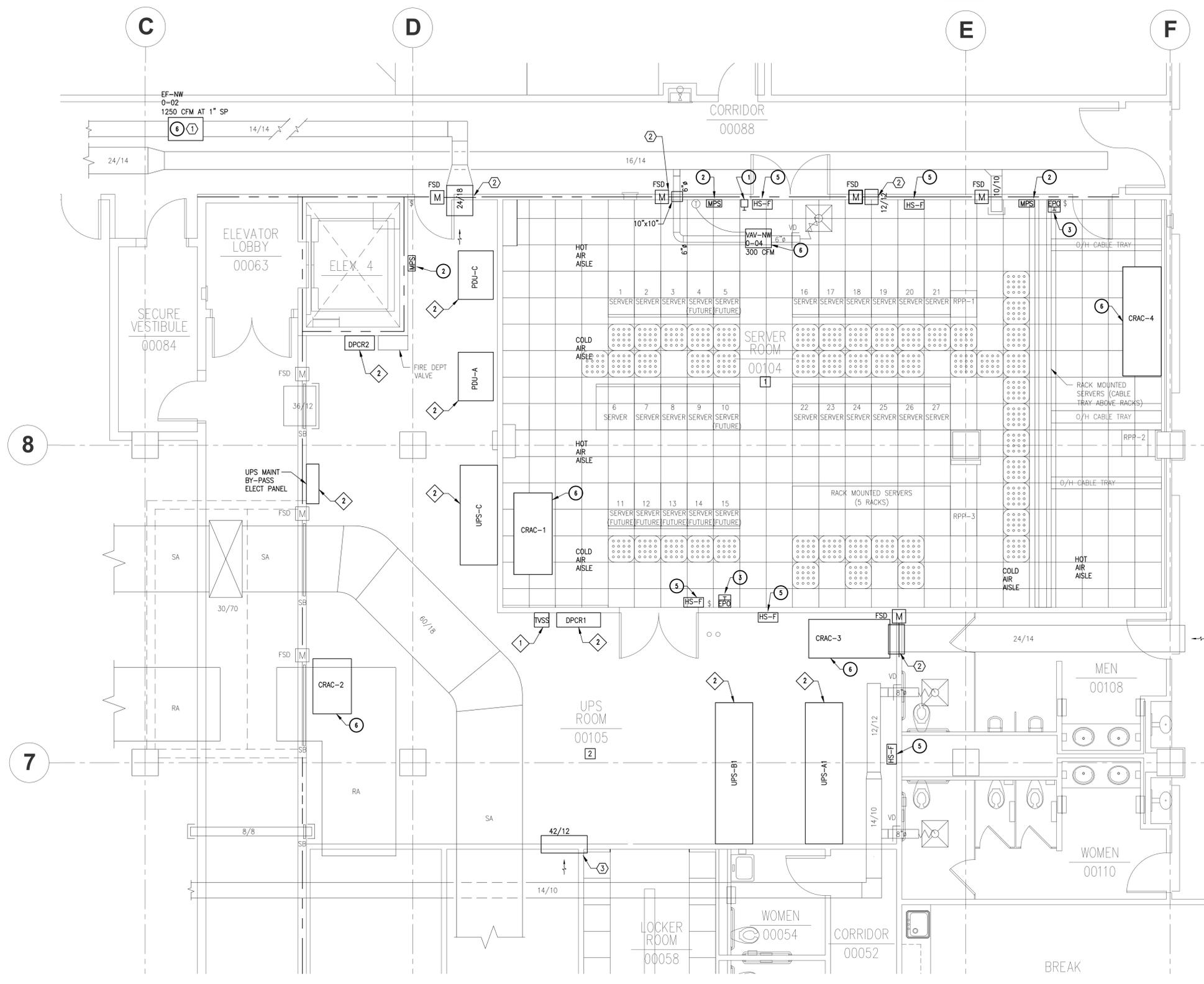
PLAN MARK	QUANTITY	NOM. SIZE (IN.)	BLADE CONTROL	CONSTRUCTION/MATERIAL	BLADE TYPE	LEAKAGE (CFM/SQ. FT.)	CLASS	SEALS	BASIS OF DESIGN	MECH NOTES
FSD-1	1	24 X 18	OPPOSED	MIN. 16 GA. GALVANIZED STEEL	TRIPLE V-GROOVE	8 @ 4.5 IN. W.G.	1	BLADE EDGE & JAMB	RUSKIN FSD37	ALL
FSD-2	1	10 X 10	OPPOSED	MIN. 16 GA. GALVANIZED STEEL	TRIPLE V-GROOVE	8 @ 4.5 IN. W.G.	1	BLADE EDGE & JAMB	RUSKIN FSD37	ALL
FSD-3	1	12 X 12	OPPOSED	MIN. 16 GA. GALVANIZED STEEL	TRIPLE V-GROOVE	8 @ 4.5 IN. W.G.	1	BLADE EDGE & JAMB	RUSKIN FSD37	ALL
FSD-4	1	24 X 14	OPPOSED	MIN. 16 GA. GALVANIZED STEEL	TRIPLE V-GROOVE	8 @ 4.5 IN. W.G.	1	BLADE EDGE & JAMB	RUSKIN FSD37	ALL
FSD-5	2	21 X 12	OPPOSED	MIN. 16 GA. GALVANIZED STEEL	TRIPLE V-GROOVE	8 @ 4.5 IN. W.G.	1	BLADE EDGE & JAMB	RUSKIN FSD37	ALL

- MECHANICAL NOTES:
- PROVIDE FACTORY-MOUNTED AND WIRED "CONTROLLED CLOSURE DEVICE" (HEAT-ACTUATED) ELECTRIC FUSE LINK (EFL) SET AT 165F.
 - 1-1/2 HOUR FIRE RATING
 - COMPLIANT WITH UL STANDARDS: UL555 (FIRE) & UL555S (SMOKE)
 - MAXIMUM OPERATING RATINGS: 2,000 FPM; 4" WG; 350F
 - JAMB SEAL STAINLESS STEEL, FLEXIBLE METAL COMPRESSION TYPE; BLADE SEAL SILICONE EDGE TYPE
 - PROVIDE DAMPER FACTORY-MOUNTED IN 20" LONG ONE-PIECE WELDED CONSTRUCTION 16 GA. GALVANIZED SHEET METAL SLEEVE.
 - PROVIDE-FACTORY-MOUNTED AND WIRED ACTUATOR. REFER TO ACTUATOR SCHEDULE.
 - PROVIDE SINGLE POINT POWER CONNECTION.
 - FOLLOW MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLATION OF FIRE/SMOKE DAMPERS.
 - PROVIDE FACTORY MOUNTING ANGLES AROUND FOUR (4) SIDES OF DAMPER SLEEVE, ON BOTH SIDES OF WALL.

PLAN MARK	SERVES	ACTUATOR DATA			ELECTRICAL DATA				INTERLOCKING WITH OTHER EQUIPMENT	BASIS OF DESIGN	MECH NOTES
		QUANTITY	TORQUE MIN. (IN-LB)	CONTROL	SPRING RETURN	WATTS	V	PH			
ACT-1	WALL DAMPER IN NORTH WALL UPS ROOM	1	70	2-POSITION (ON/OFF)	YES NC	19	120	1	MAINTAIN INTERLOCK W/ NEW CLEAN AGENT SYSTEM	BELIMO FSNF120	ALL
ACT-2	WALL DAMPER IN NORTH WALL SERVER ROOM	1	30	2-POSITION (ON/OFF)	YES NC	18	120	1	MAINTAIN INTERLOCK W/ NEW CLEAN AGENT SYSTEM	BELIMO FSLF120	ALL
ACT-3	WALL DAMPER IN NORTH WALL SERVER ROOM	1	30	2-POSITION (ON/OFF)	YES NC	18	120	1	MAINTAIN INTERLOCK W/ NEW CLEAN AGENT SYSTEM	BELIMO FSLF120	ALL
ACT-4	WALL DAMPER IN EAST WALL UPS ROOM	1	70	2-POSITION (ON/OFF)	YES NC	19	120	1	MAINTAIN INTERLOCK W/ NEW CLEAN AGENT SYSTEM	BELIMO FSNF120	ALL
ACT-5	WALL DAMPERS IN SOUTH WALL UPS ROOM	2	70	2-POSITION (ON/OFF)	YES NC	19	120	1	MAINTAIN INTERLOCK W/ NEW CLEAN AGENT SYSTEM	BELIMO FSNF120	ALL

- MECHANICAL NOTES:
- MAXIMUM OPERATING RATINGS: 2,000 FPM (FSLF) & 2,400 FPM (FSNF); 350F
 - PROVIDE ACTUATOR FACTORY-MOUNTED TO COMBINATION FIRE/SMOKE DAMPER LISTED IN DAMPER SCHEDULE.

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 Printed Date: 12/8/2015 11:24:38 AM



01 EXISTING DEMOLITION FLOOR PLAN
 SCALE: 1/4" = 1'
 NORTH

GENERAL NOTES:

- THIS PLAN SHOWS THE EXISTING LAYOUT FOR THE DATA CENTER, INCLUDING THE ACCESS FLOORING IN THE SERVER ROOM; AND DEMOLITION.

FIRE PROTECTION NOTES: (1)

- EXISTING DOOR RELEASE BUTTON TO REMAIN.
- EXISTING YELLOW MANUAL EMERGENCY PULL STATION FOR DRY-PIPE PRE-ACTION VALVE AND FIRE ALARM TO BE REMOVED INCLUDING WIRING & CONDUIT.
- EXISTING MANUAL EMERGENCY POWER OFF BUTTON UNDER CLEAR COVER TO REMAIN.
- EXISTING FACP MANUFACTURED BY EST TO REMAIN. REFER TO KEY PLAN FOR LOCATION OF THIS ROOM.
- EXISTING WALL MOUNT HORN STROBE (WHITE LIGHT) TO REMAIN.
- EXISTING EQUIPMENT SHALL REMAIN. CLEAN AGENT SYSTEM SHALL BE SIZED FOR EXISTING HVAC EQUIPMENT THAT REMAINS AND FUTURE HVAC EQUIPMENT SHOWN ON NEW CONSTRUCTION PLANS.

MECHANICAL NOTES: (2)

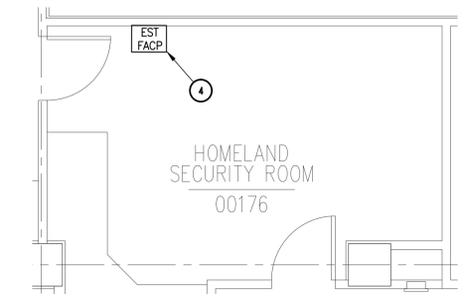
- EXISTING EXHAUST FAN LOCATED IN SALLY PORT (ROOM 00072) TO REMAIN. REFER TO KEY PLAN FOR LOCATION.
- EXISTING DAMPER, DAMPER ACTUATOR, AND SHEET METAL WALL SLEEVE TO BE REMOVED.
- EXISTING OPENING IN WALL. REFER TO NEW CONSTRUCTION PLAN FOR INSTALLATION OF DAMPER.

ELECTRICAL NOTES: (3)

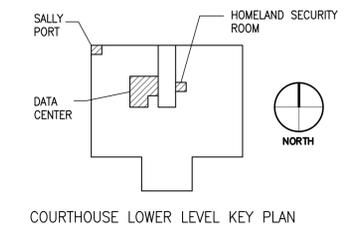
- EXISTING TVSS (LIEBERT SURGE SUPPRESSOR) TO REMAIN.
- EXISTING EQUIPMENT TO REMAIN. POWER SHALL BE INTERRUPTED TO EXISTING ELECTRICAL POWER EQUIPMENT UPON ACTIVATION OF EPO SYSTEM.

ARCHITECTURAL NOTES: (4)

- SERVER ROOM CEILING AND FLOOR HEIGHTS:
 9'-1" CEILING HEIGHT (TOP OF ACCESS FLOOR TO BOTTOM OF CEILING)
 2'-0" ACCESS FLOOR HEIGHT
 6'-3" FROM BOTTOM OF CONCRETE DECK TO BOTTOM OF CEILING
 4'-7/2" FROM BOTTOM OF CONCRETE JOIST TO BOTTOM OF CEILING
- UPS ROOM EXPOSED DECK HEIGHT:
 15'-5" FROM CONCRETE FLOOR TO BOTTOM OF CONCRETE DECK
 13'-9" FROM CONCRETE TO BOTTOM OF CONCRETE JOIST



02 EXISTING FLOOR PLAN
 SCALE: 1/4" = 1'
 NORTH

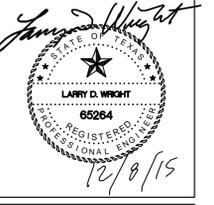


COURTHOUSE LOWER LEVEL KEY PLAN

COLLIN COUNTY COURTHOUSE
CLEAN AGENT SYSTEM FOR DATA CENTER
 MCKINNEY, TX
 BID DOCUMENTS DRAWING SET

HALFF
 1201 NORTH BOWSER ROAD
 FORT WORTH, TEXAS 76107-2275
 TEL: (817) 341-3400
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 TBPE FIRM #F-312

Revision No.	Date	Description

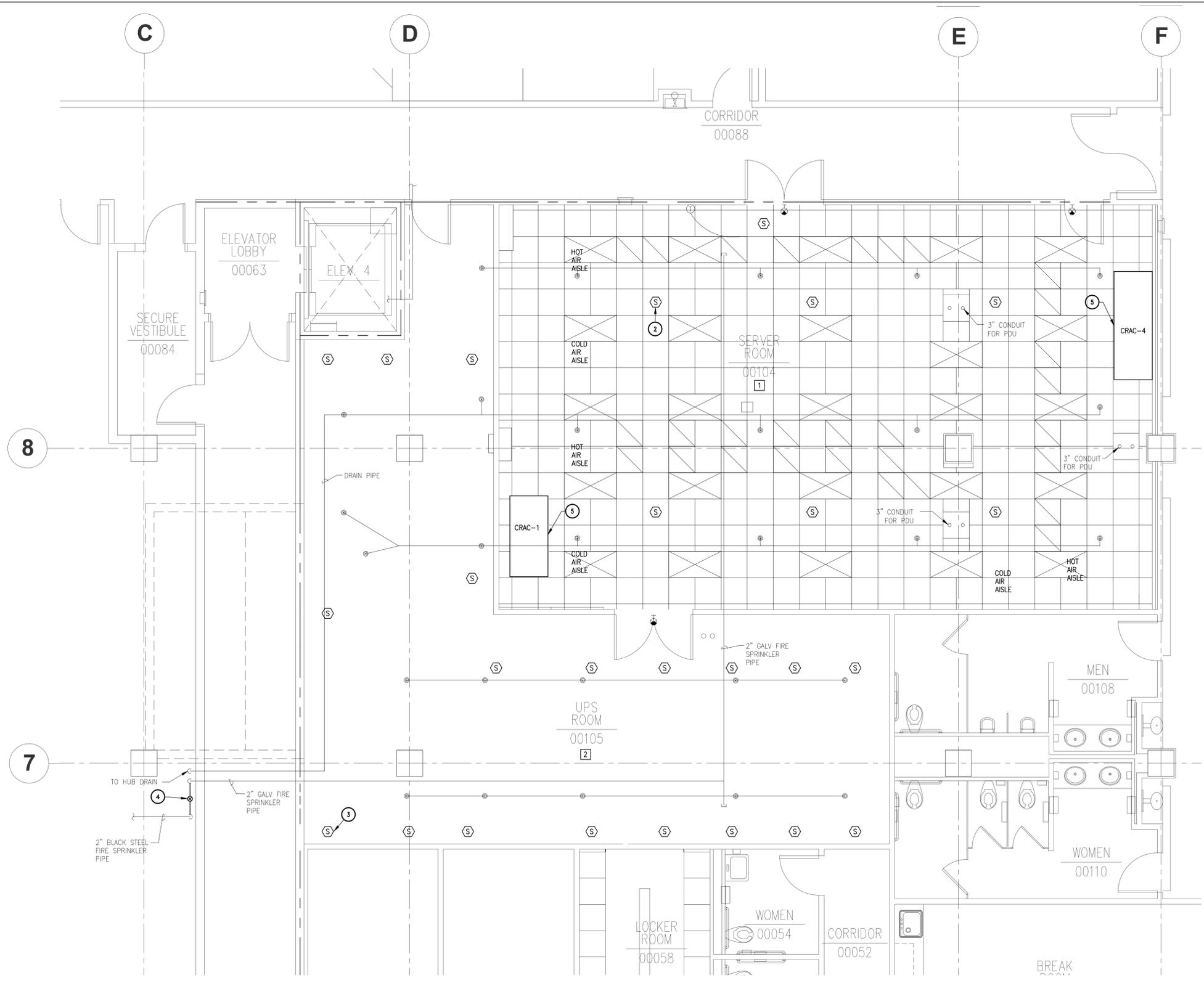


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Project No.:	30953
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Scale:	AS NOTED
Sheet Title:	DEMOLITION FLOOR PLAN

1.01
 Sheet Number

File Name: I:\306008\30953\CAD\Sheets\W101-30953-EXISTING RCP GRD.dwg
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01 EXISTING DEMOLITION RCP PLAN
 SCALE: 1/4" = 1'

GENERAL NOTES:

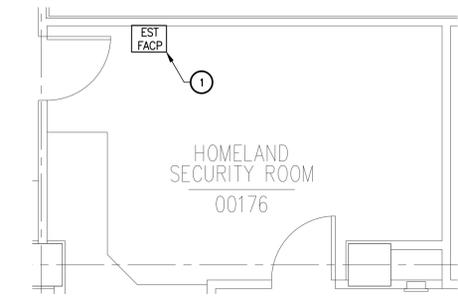
- A. THIS PLAN SHOWS THE EXISTING LAYOUT FOR THE DATA CENTER, INCLUDING THE REFLECTED CEILING PLAN (RCP) IN THE SERVER ROOM; AND DEMOLITION.

FIRE PROTECTION NOTES: (1)

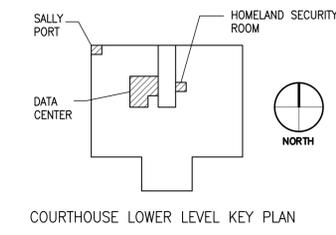
1. EXISTING FACP MANUFACTURED BY EST TO REMAIN. REFER TO KEY PLAN FOR LOCATION OF THIS ROOM.
2. EXISTING CEILING MOUNT SPOT SMOKE DETECTOR (TYPICAL IN SERVER ROOM) TO BE REMOVED INCLUDING WIRING & CONDUIT.
3. ALL EXISTING EXPOSED DECK MOUNT SPOT SMOKE DETECTOR (TYPICAL IN UPS ROOM) TO BE REMOVED INCLUDING WIRING AND CONDUIT.
4. EXISTING PRE-ACTION VALVE TO REMAIN: 2-1/2" WATER CONTROL VALVE (DOUBLE INTERLOCK TYPE D) MANUFACTURED BY RELIABLE. REFER TO NEW CONSTRUCTION PLAN FOR CONVERSION FROM ACTIVATION BY EXISTING FIRE ALARM CONTROL PANEL TO ACTIVATION BY CLEAN AGENT SYSTEM. PIPE TO REMAIN.
5. EXISTING EQUIPMENT SHALL REMAIN. CLEAN AGENT SYSTEM SHALL BE SIZED FOR EXISTING HVAC EQUIPMENT THAT REMAINS AND FUTURE HVAC EQUIPMENT SHOWN ON NEW CONSTRUCTION PLANS.

ARCHITECTURAL NOTES: (#)

1. SERVER ROOM CEILING AND FLOOR HEIGHTS:
 9'-1" CEILING HEIGHT (TOP OF ACCESS FLOOR TO BOTTOM OF CEILING)
 2'-0" ACCESS FLOOR HEIGHT
 6'-3" FROM BOTTOM OF CONCRETE DECK TO BOTTOM OF CEILING
 4'-7 1/2" FROM BOTTOM OF CONCRETE JOIST TO BOTTOM OF CEILING
2. UPS ROOM EXPOSED DECK HEIGHT:
 15'-5" FROM CONCRETE FLOOR TO BOTTOM OF CONCRETE DECK
 13'-9" FROM CONCRETE TO BOTTOM OF CONCRETE JOIST



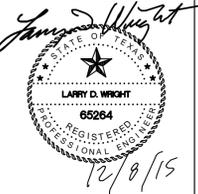
02 EXISTING FLOOR PLAN
 SCALE: 1/4" = 1'



COLLIN COUNTY COURTHOUSE
CLEAN AGENT SYSTEM FOR DATA CENTER
 MCKINNEY, TX
 BID DOCUMENTS DRAWING SET



Revision No.	Date	Description

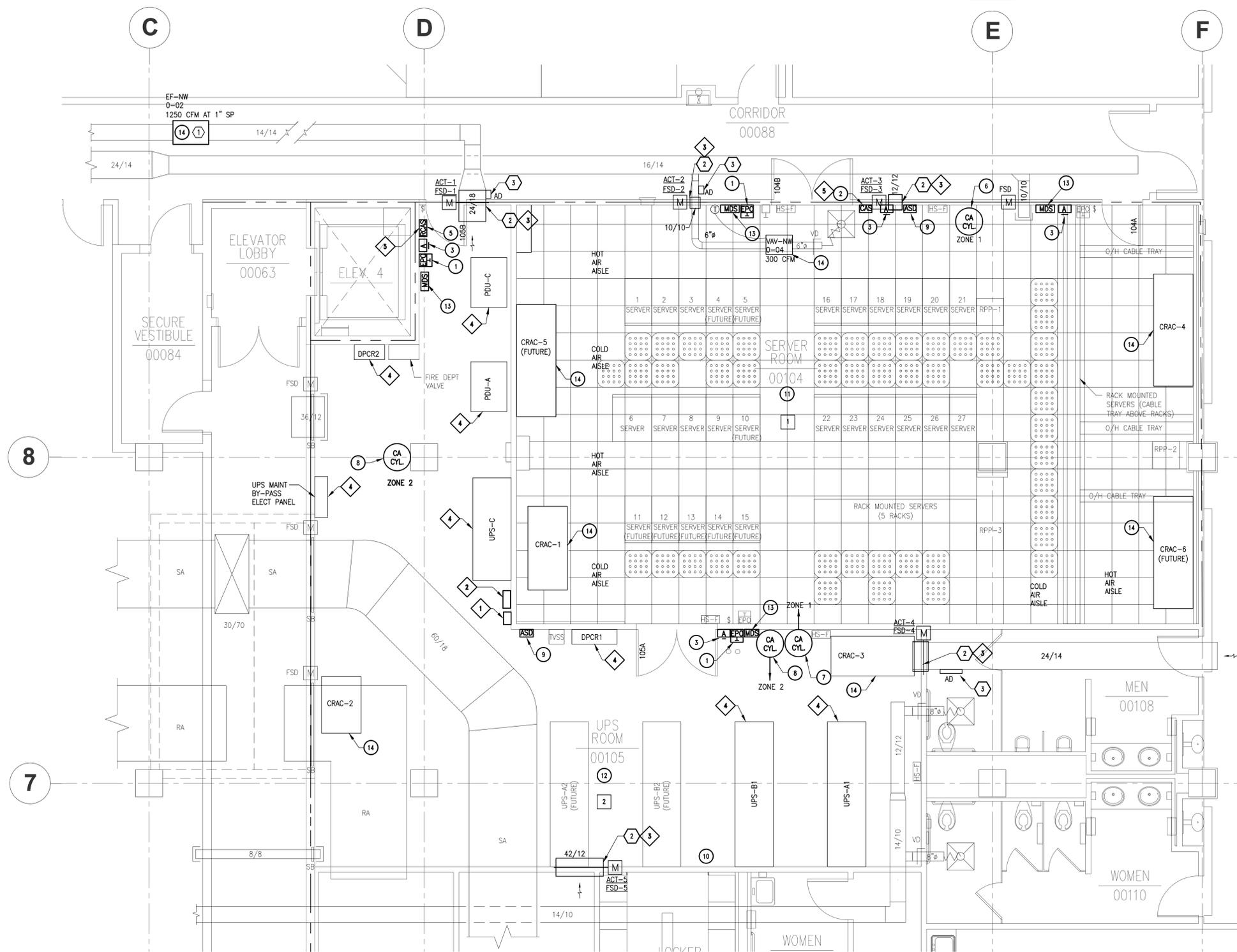


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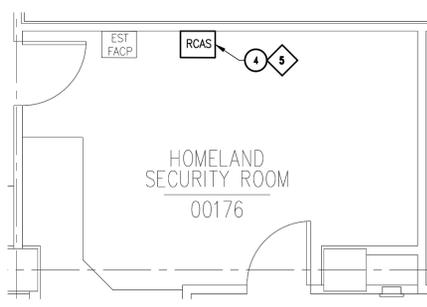
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Drawn By:	CB
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Sheet Title:	DEMOLITION RCP PLAN

1.02
 Sheet Number

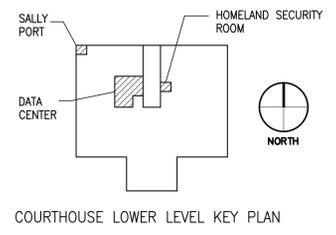
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01 NEW FLOOR PLAN
 SCALE: 1/4" = 1'
 NORTH



02 NEW FLOOR PLAN
 SCALE: 1/4" = 1'
 NORTH



GENERAL NOTES:

- A. THIS PLAN SHOWS THE DATA CENTER LAYOUT, INCLUDING THE ACCESS FLOORING IN THE SERVER ROOM, AND PLACEMENT OF CERTAIN, BUT NOT ALL, NEW EQUIPMENT FOR FIRE PROTECTION.
 - B. WALL TYPE DESIGNATIONS:
 EXISTING 2HR FIRE BARRIER - - - - -
 - C. FIRE SEAL ALL PENETRATIONS AND JOINTS ABOVE CEILING AND BELOW ACCESS FLOORING IN SERVER ROOM 104.
 - D. FIRE SEAL ALL PENETRATIONS AND JOINTS IN THE FOLLOWING ROOMS: SERVER ROOM 104 AND UPS ROOM 105.
 - E. ALL DOORS IN ROOMS 104 AND 105 TO RECEIVE PRESSURE SENSITIVE SEALS, WEATHER STRIPPING SEALS, AUTO DOOR BUTTONS, AND THRESHOLDS TO PROVIDE COMPLETE SEAL AT BOTTOM OF DOOR AND REDUNDANT SEALS AT THE HEAD AND JAMBS. REFER TO DOOR HARDWARE NOTES THIS SHEET.
 - F. **DOOR HARDWARE NOTES:**
 1. MANUFACTURERS LISTED ARE BASIS OF DESIGN PRODUCTS. COMPARABLE PRODUCTS MAY BE PROVIDED SUBJECT TO COMPLIANCE WITH REQUIREMENTS.
 2. GASKETING AIR INFILTRATIONS TESTED IN ACCORDANCE WITH ASTM E-283-04. AIR INFILTRATIONS 0.09 CFM/FT OF CRACK.
- DOOR 104A:**
1. PROVIDE THRESHOLD-PENKMO 154 SS.
 2. PROVIDE DOOR BOTTOM-PENKMO 4301 CRL (MOUNTED ON CORRIDOR SIDE.)
 3. PROVIDE ADJUSTABLE JAMB WEATHERSTRIPPING-PENKMO 379CR.
 4. PROVIDE ADHESIVE BACKED FIRE/SMOKE GASKETING-PENKMO S88D.
- DOOR 104B:**
1. PROVIDE THRESHOLD-PENKMO 154 SS.
 2. PROVIDE DOOR BOTTOM-PENKMO 4301 CRL (MOUNTED ON SERVER SIDE.)
 3. PROVIDE ADJUSTABLE JAMB WEATHERSTRIPPING-PENKMO 379CR.
- DOOR 105A:**
1. PROVIDE THRESHOLD-PENKMO 154 SS.
 2. PROVIDE DOOR BOTTOM-PENKMO 4301 CRL (MOUNTED ON SERVER SIDE.)
 3. PROVIDE ADJUSTABLE JAMB WEATHERSTRIPPING-PENKMO 379CR.
 4. PROVIDE ADHESIVE BACKED FIRE/SMOKE GASKETING-PENKMO S88D.
 5. PROVIDE CLOSER (EA. LEAF)-MATCH EXISTING DOOR CLOSERS OF DOOR 104A.
 6. PROVIDE COORDINATOR-ROCKWOOD 2672.
 7. PROVIDE ASRAGAL-PENKMO 29324CNB.
 8. REMOVE EXISTING DOOR SWEEP.
- DOOR 105B:**
1. PROVIDE THRESHOLD-PENKMO 154 SS.
 2. PROVIDE DOOR BOTTOM-PENKMO 4301 CRL (MOUNTED ON CORRIDOR SIDE.)
 3. PROVIDE ADJUSTABLE JAMB WEATHERSTRIPPING-PENKMO 379CR.

FIRE PROTECTION NOTES: (1)

1. PROVIDE MANUAL EMERGENCY POWER OFF BUTTON UNDER CLEAR COVER. EPO PUSH BUTTON IN SERVER ROOM TO SIGNAL EXISTING EPO SYSTEM. EPO PUSH BUTTONS IN UPS ROOM TO SIGNAL NEW EPO SYSTEM. REFER TO ELECTRICAL RISER SHEET 3.01.
2. PROVIDE CLEAN AGENT CONTROL PANEL. REFER TO ELECTRICAL FOR POWER AND CONTROL WIRING.
3. PROVIDE CLEAN AGENT ABORT BUTTON.
4. PROVIDE REMOTE CLEAN AGENT DISPLAY PANEL IN HOMELAND SECURITY OFFICE. REFER TO KEY PLAN FOR LOCATION OF THIS ROOM. REFER TO ELECTRICAL FOR POWER AND CONTROL WIRING.
5. PROVIDE REMOTE CLEAN AGENT DISPLAY PANEL IN UPS ROOM. REFER TO ELECTRICAL FOR POWER AND CONTROL WIRING.
6. PROVIDE CLEAN AGENT CONTAINER (CYLINDER) TO SERVE UNDER FLOOR. (ZONE 1)
7. PROVIDE CLEAN AGENT CONTAINER (CYLINDER) TO SERVE ABOVE FLOOR. (ZONE 1)
8. PROVIDE CLEAN AGENT CONTAINER (CYLINDER) TO SERVE UPS ROOM. (ZONE 2)
9. PROVIDE ASPIRATING SMOKE DETECTION SYSTEM AND POWER SUPPLY (VERY EARLY WARNING ASPIRATING SMOKE DETECTION SYSTEM).
10. PROVIDE WALL MOUNTED HORN STROBES (BLUE LIGHT) HIGH ON WALL IN UPS ROOM FOR CLEAN AGENT SYSTEM.
11. PROVIDE UNDER FLOOR SPOT SMOKE DETECTORS IN SERVER ROOM.
12. PROVIDE DECK MOUNT SPOT SMOKE DETECTORS IN UPS ROOM. PROVIDE SPOT SMOKE DETECTOR OVER EACH ELECTRICAL PANELBOARD.
13. PROVIDE NEW MANUAL DISCHARGE STATION FOR DRY-PIPE PRE-ACTION VALVE. CLEAN AGENT SYSTEM AND FIRE ALARM. REFER TO ELECTRICAL FOR POWER AND CONTROL WIRING.
14. CLEAN AGENT SYSTEM SHALL BE SIZED FOR EXISTING HVAC EQUIPMENT THAT REMAINS AND FUTURE HVAC EQUIPMENT SHOWN ON THIS PLAN.

MECHANICAL NOTES: (M)

1. EXISTING EXHAUST FAN LOCATED IN SALLY PORT (ROOM 00072) TO REMAIN. REFER TO KEY PLAN FOR LOCATION.
2. PROVIDE NEW DAMPER, DAMPER ACTUATOR, AND SHEET METAL WALL SLEEVE. INSTALL DAMPER PER UL LISTING AND MANUFACTURER'S WRITTEN INSTRUCTIONS. REFER TO ARCHITECTURAL FOR FIRE-STOPPING. REFER TO ELECTRICAL FOR POWER AND CONTROL WIRING.
3. PROVIDE ACCESS DOOR. LABEL ACCESS DOOR.

ELECTRICAL NOTES: (E)

1. PROVIDE NEW AUXILIARY RELAY CONTROL CABINET HOUSING ALL REQUIRED LOW VOLTAGE CONTROL RELAYS, KEY OPERATED NORMAL/OFF SWITCHES, LED'S, ETC. AS REQUIRED FOR CLEAN AGENT SYSTEM CONTROL/CONNECTIONS TO THE UPS SYSTEMS.
2. PROVIDE NEW EPO RELAY BOX. OBTAIN 120V CIRCUIT FROM PANEL 'LBE' VIA EXISTING SPARE 20A, 1P, BREAKER. REF ELECTRICAL RISER DIAGRAM SHEET 3.01.
3. OBTAIN 120V CIRCUIT FOR DAMPERS FROM PANEL 'LBE' VIA NEW SHUNT TRIP, 20 AMP, 1 POLE, 10KAIC CIRCUIT BREAKER.
4. POWER SHALL BE INTERRUPTED TO EXISTING ELECTRICAL/POWER EQUIPMENT UPON ACTIVATION OF EPO SYSTEM.
5. OBTAIN 120V CIRCUIT FROM PANEL "LBE" VIA EXISTING SPARE 20A, 1P, BREAKER.

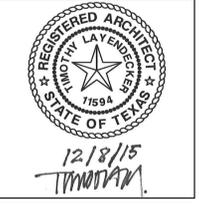
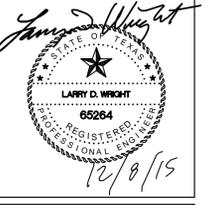
ARCHITECTURAL NOTES: (A)

1. SERVER ROOM CEILING AND FLOOR HEIGHTS:
 9'-1" CEILING HEIGHT (TOP OF ACCESS FLOOR TO BOTTOM OF CEILING)
 2'-0" ACCESS FLOOR HEIGHT
 6'-3" FROM BOTTOM OF CONCRETE DECK TO BOTTOM OF CEILING
 4'-7 1/2" FROM BOTTOM OF CONCRETE JOIST TO BOTTOM OF CEILING
2. UPS ROOM DECK HEIGHT:
 15'-5" FROM CONCRETE FLOOR TO BOTTOM OF CONCRETE DESK
 13'-9" FROM CONCRETE TO BOTTOM OF CONCRETE JOIST

COLLIN COUNTY COURTHOUSE
CLEAN AGENT SYSTEM FOR DATA CENTER
 MCKINNEY, TX
 BID DOCUMENTS DRAWING SET

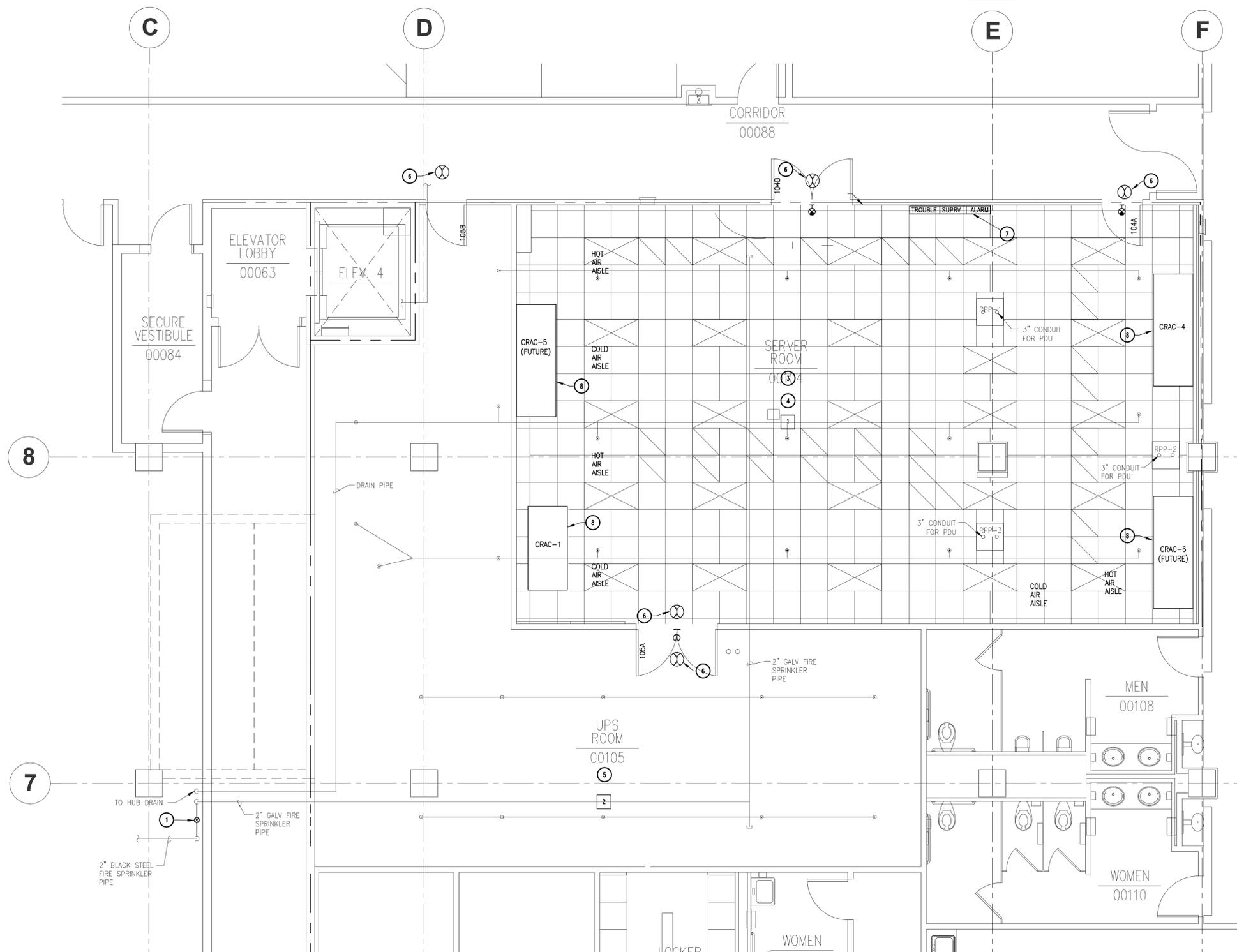


Revision No.	Date	Description

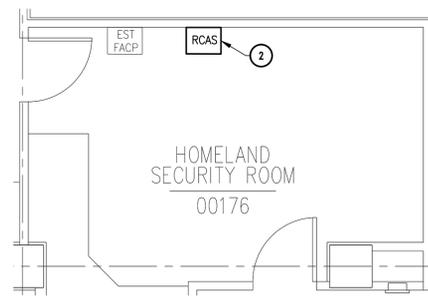


Project No.:	30953
Issued:	12 / 8 / 15
Drawn By:	CB
Checked By:	LW
Scale:	AS NOTED
Sheet Title	NEW FLOOR PLAN
2.01	Sheet Number

File Name: I:\306000\30953\CAD\Sheets\2021-30953 NEW RCP GRID.dwg
 Current Tab: (Layout), 2.02, User: JHT2887
 Printed Date: 12/8/2015 11:25:16 AM



01 NEW RCP PLAN
 SCALE: 1/4" = 1'
 NORTH



02 NEW RCP PLAN
 SCALE: 1/4" = 1'
 NORTH

GENERAL NOTES:

- A. THIS PLAN SHOWS THE DATA CENTER LAYOUT, INCLUDING THE REFLECTED CEILING PLAN (RCP) IN THE SERVER ROOM, AND PLACEMENT OF CERTAIN, BUT NOT ALL, NEW EQUIPMENT FOR FIRE PROTECTION.
 - B. WALL TYPE DESIGNATIONS:
 EXISTING 2HR FIRE BARRIER - - - - -
 - C. FIRE SEAL ALL PENETRATIONS AND JOINTS IN THE FOLLOWING ROOMS: SERVER ROOM 104 AND UPS ROOM 105.
 - D. FIRE SEAL ALL PENETRATIONS AND JOINTS ABOVE CEILING AND BELOW ACCESS FLOORING IN SERVER ROOM 104.
 - E. ALL DOORS IN ROOMS 104 AND 105 TO RECEIVE PRESSURE SENSITIVE SEALS, WEATHER STRIPPING SEALS, AUTO DOOR BUTTONS, AND THRESHOLDS TO PROVIDE COMPLETE SEAL AT BOTTOM OF DOOR AND REDUNDANT SEALS AT THE HEAD AND JAMBS. REFER TO DOOR HARDWARE NOTES THIS SHEET.
 - F. **DOOR HARDWARE NOTES:**
 1. MANUFACTURING LISTED ARE BASIS OF DESIGN PRODUCTS. COMPARABLE PRODUCTS MAY BE PROVIDED SUBJECT TO COMPLIANCE WITH REQUIREMENTS.
 2. GASKETING AIR INFILTRATIONS TESTED IN ACCORDANCE WITH ASTM E-283-04. AIR INFILTRATIONS .09 CFM/FT OF CRACK.
- DOOR 104A:**
1. PROVIDE THRESHOLD-PENKO 154 SS.
 2. PROVIDE DOOR BOTTOM-PENKO 4301 CRL (MOUNTED ON CORRIDOR SIDE.)
 3. PROVIDE ADJUSTABLE JAMB WEATHERSTRIPPING-PENKO 379CR.
 4. PROVIDE ADHESIVE BACKED FIRE/SMOKE GASKETING-PENKO S88D.
- DOOR 104B:**
1. PROVIDE THRESHOLD-PENKO 154 SS.
 2. PROVIDE DOOR BOTTOM-PENKO 4301 CRL (MOUNTED ON SERVER SIDE.)
 3. PROVIDE ADJUSTABLE JAMB WEATHERSTRIPPING-PENKO 379CR.
- DOOR 105A:**
1. PROVIDE THRESHOLD-PENKO 154 SS.
 2. PROVIDE DOOR BOTTOM-PENKO 4301 CRL (MOUNTED ON SERVER SIDE.)
 3. PROVIDE ADJUSTABLE JAMB WEATHERSTRIPPING-PENKO 379CR.
 4. PROVIDE ADHESIVE BACKED FIRE/SMOKE GASKETING-PENKO S88D.
 5. PROVIDE CLOSER (EA. LEAF)-MATCH EXISTING DOOR CLOSERS OF DOOR 104A.
 6. PROVIDE COORDINATOR-ROCKWOOD 2672.
 7. PROVIDE ASRAGAL-PENKO 29324CNB.
 8. REMOVE EXISTING DOOR SWEEP.
- DOOR 105B:**
1. PROVIDE THRESHOLD-PENKO 154 SS.
 2. PROVIDE DOOR BOTTOM-PENKO 4301 CRL (MOUNTED ON CORRIDOR SIDE.)
 3. PROVIDE ADJUSTABLE JAMB WEATHERSTRIPPING-PENKO 379CR.

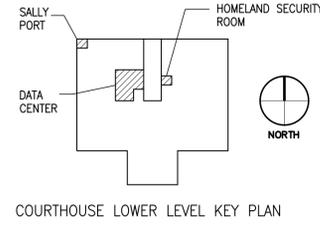
FIRE PROTECTION NOTES: (1)

1. EXISTING PRE-ACTION VALVE:
 2-1/2" WATER CONTROL VALVE (DOUBLE INTERLOCK TYPE D) MANUFACTURED BY RELIABLE. MODIFY THE CONTROLS FOR THE EXISTING DRY-PIPE FIRE SPRINKLER SYSTEM SERVING THE DATA CENTER SUCH THAT THE NEW CLEAN AGENT SYSTEM CONTROLS AND MONITORS THE DRY-PIPE SYSTEM. THE EXISTING EST FIRE ALARM PANEL WILL NO LONGER CONTROL OR MONITOR THE DRY-PIPE SYSTEM. PIPE TO REMAIN.
2. PROVIDE REMOTE CLEAN AGENT DISPLAY PANEL IN HOMELAND SECURITY OFFICE. REFER TO KEY PLAN FOR LOCATION OF THIS ROOM. REFER TO ELECTRICAL FOR POWER AND CONTROL WIRING.
3. PROVIDE CEILING MOUNTED HORN STROBES (BLUE LIGHT) IN SERVER ROOM FOR CLEAN AGENT SYSTEM.
4. PROVIDE CEILING MOUNT SPOT SMOKE DETECTORS IN SERVER ROOM. PROVIDE SPOT SMOKE DETECTOR OVER EACH ELECTRICAL PANELBOARD.
5. PROVIDE DECK MOUNT SPOT SMOKE DETECTORS IN UPS ROOM. PROVIDE SPOT SMOKE DETECTOR OVER EACH ELECTRICAL PANELBOARD.
6. PROVIDE BEACON (BLUE LIGHT) THAT ACTUATES UPON RELEASE OF CLEAN AGENT.
7. PROVIDE THREE(3) MONITORING MODULES FOR "TROUBLE, SUPERVISORY, AND ALARM" NOTIFICATION. LOCATE MODULES ABOVE CEILING OVER CAS PANEL. CONNECT MODULES TO CAS PANEL. MODULES SHALL SIGNAL EXISTING FACP.
8. CLEAN AGENT SYSTEM SHALL BE SIZED FOR EXISTING HVAC EQUIPMENT THAT REMAINS AND FUTURE HVAC EQUIPMENT SHOWN ON THIS PLAN.

ARCHITECTURAL NOTES: (1)

1. SERVER ROOM CEILING AND FLOOR HEIGHTS:
 9'-1" CEILING HEIGHT (TOP OF ACCESS FLOOR TO BOTTOM OF CEILING)
 2'-0" ACCESS FLOOR HEIGHT
 6'-3" FROM BOTTOM OF CONCRETE DECK TO BOTTOM OF CEILING
 4'-7/8" FROM BOTTOM OF CONCRETE JOIST TO BOTTOM OF CEILING
2. UPS ROOM DECK HEIGHT:
 15'-5" FROM CONCRETE FLOOR TO BOTTOM OF CONCRETE DESK
 13'-9" FROM CONCRETE TO BOTTOM OF CONCRETE JOIST

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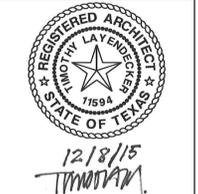
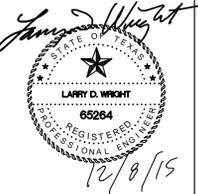


COURTHOUSE LOWER LEVEL KEY PLAN

COLLIN COUNTY COURTHOUSE
CLEAN AGENT SYSTEM FOR DATA CENTER
 MCKINNEY, TX
BID DOCUMENTS DRAWING SET



Revision No.	Date	Description



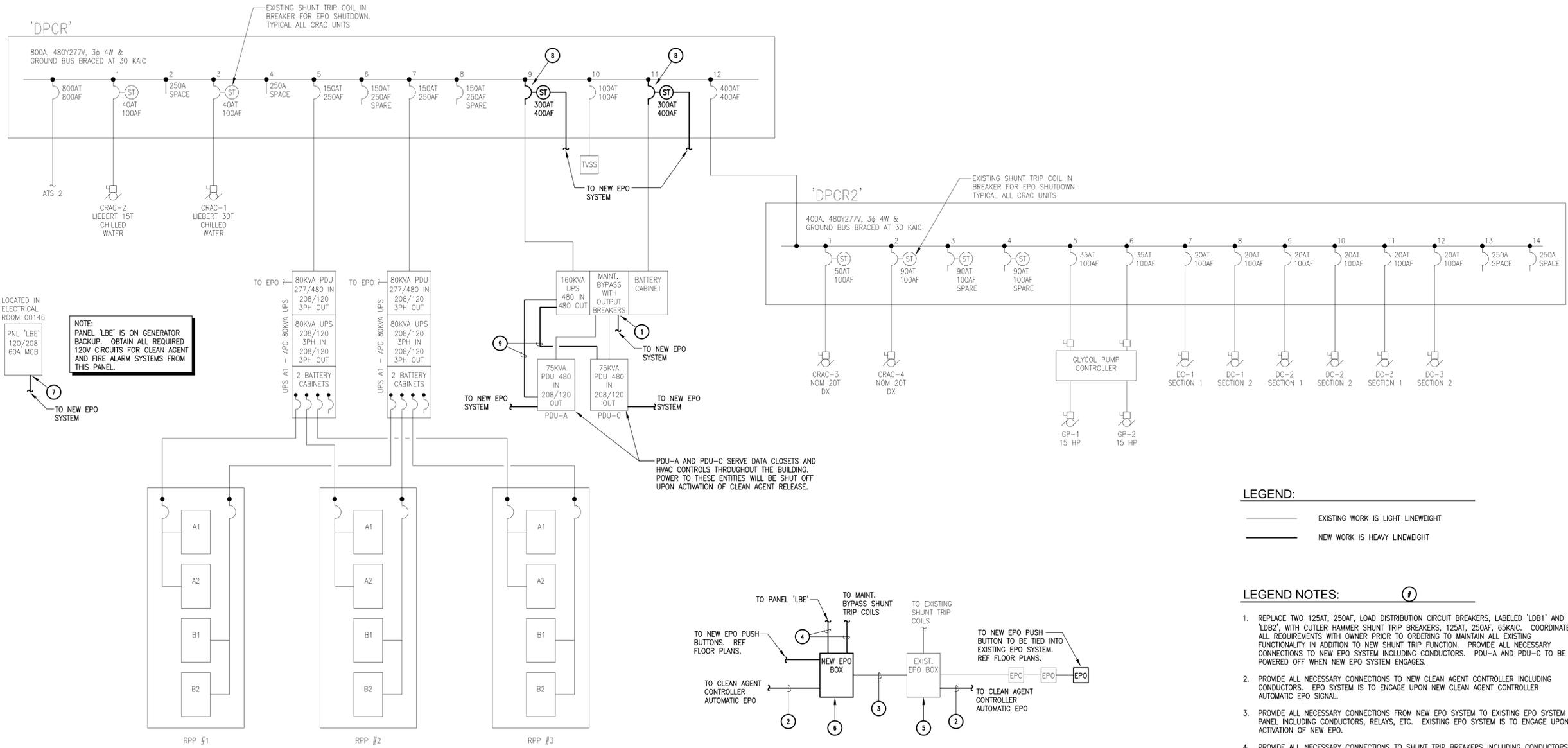
Project No.:	30953
Issued:	12 / 8 / 15
Drawn By:	CB
Checked By:	LW
Scale:	AS NOTED
Sheet Title	NEW RCP PLAN
Sheet Number	2.02

Revision No.	Date	Description



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Project No.:	30953
Issued:	12 / 8 / 15
Drawn By:	NH
Checked By:	PA
Scale:	AS NOTED
Sheet Title:	ELECTRICAL RISER
Sheet Number:	3.01



LEGEND:
 ——— EXISTING WORK IS LIGHT LINEWEIGHT
 ——— NEW WORK IS HEAVY LINEWEIGHT

- LEGEND NOTES:**
- REPLACE TWO 125AT, 250AF, LOAD DISTRIBUTION CIRCUIT BREAKERS, LABELED 'LDB1' AND 'LDB2', WITH CUTLER HAMMER SHUNT TRIP BREAKERS, 125AT, 250AF, 65KAIC. COORDINATE ALL REQUIREMENTS WITH OWNER PRIOR TO ORDERING TO MAINTAIN ALL EXISTING FUNCTIONALITY IN ADDITION TO NEW SHUNT TRIP FUNCTION. PROVIDE ALL NECESSARY CONNECTIONS TO NEW EPO SYSTEM INCLUDING CONDUCTORS. PDU-A AND PDU-C TO BE POWERED OFF WHEN NEW EPO SYSTEM ENGAGES.
 - PROVIDE ALL NECESSARY CONNECTIONS TO NEW CLEAN AGENT CONTROLLER INCLUDING CONDUCTORS. EPO SYSTEM IS TO ENGAGE UPON NEW CLEAN AGENT CONTROLLER AUTOMATIC EPO SIGNAL.
 - PROVIDE ALL NECESSARY CONNECTIONS FROM NEW EPO SYSTEM TO EXISTING EPO SYSTEM PANEL INCLUDING CONDUCTORS, RELAYS, ETC. EXISTING EPO SYSTEM IS TO ENGAGE UPON ACTIVATION OF NEW EPO.
 - PROVIDE ALL NECESSARY CONNECTIONS TO SHUNT TRIP BREAKERS INCLUDING CONDUCTORS.
 - EXISTING EPO SYSTEM SHALL REMAIN AND RETAIN ALL EXISTING FUNCTIONALITY. PROVIDE ALL CONNECTIONS NECESSARY FOR EXISTING EPO SYSTEM TO ENGAGE UPON THE FOLLOWING:
 - NEW EPO SYSTEM ENGAGING
 - NEW CLEAN AGENT CONTROLLER AUTOMATIC EPO SIGNAL
 - EPO BOX FOR EPO SYSTEM EQUAL TO FIKE EMERGENCY POWER SHUTDOWN MANAGEMENT SYSTEM MODEL 20-1399. COORDINATE ALL REQUIREMENTS AND OPTIONS WITH OWNER. PROVIDE ALL INPUT CONNECTIONS TO POWER PANEL, EPO BUTTON, CLEAN AGENT CONTROL PANEL, BUILDING FIRE ALARM SYSTEM, MAINTENANCE OVERRIDE BEACON, AND OUTSIDE MONITORING AS REQUIRED. PROVIDE ALL OUTPUT CONNECTIONS TO SHUNT TRIP BREAKERS NOTED. REFER TO MANUFACTURER WIRING DIAGRAMS AND SPECIFICATIONS. REFERENCE SPECIFICATIONS. NEW EPO SYSTEM IS TO ENGAGE UPON NEW CLEAN AGENT CONTROLLER AUTOMATIC EPO SIGNAL.
 - PROVIDE 20A, 10KAIC, SHUNT TRIP BREAKERS IN EXISTING PANEL 'LBE' FOR CIRCUITS FEEDING NEW DAMPERS IN EPO ZONES. CONNECT SHUNT TRIP TO NEW AUTOMATIC EPO SYSTEM.
 - PROVIDE 300AT, 400AF, 36KAIC, SHUNT TRIP BREAKER, TYPE GE SPECTRA RMS, HI-BREAK. CONNECT SHUNT TRIP TO NEW AUTOMATIC EPO SYSTEM.
 - PROVIDE ALL REQUIRED CONNECTIONS TO EPO BOARD ON PDU CABINET AND EPO BOARD ON UPS CABINET. COORDINATE WITH MANUFACTURER'S (APC) REP FOR ALL REQUIREMENTS.

01 RISER DIAGRAM
NO SCALE

NEW EPO SYSTEM IS FOR THE UPS SYSTEM FEEDING EQUIPMENT OUTSIDE OF THE SERVER ROOM AND UPS ROOM

NOTE: PANEL 'LBE' IS ON GENERATOR BACKUP. OBTAIN ALL REQUIRED 120V CIRCUITS FOR CLEAN AGENT AND FIRE ALARM SYSTEMS FROM THIS PANEL.

LOCATED IN ELECTRICAL ROOM 00146