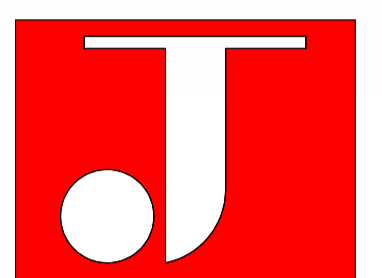


GENERAL NOTES

1. CONTRACTOR SHALL PROTECT ANY TREES AND RESTORE LAWN/LANDSCAPING & SIDEWALKS IN DESIGNATED LAY-DOWN AREA AT PROJECT COMPLETION.
2. LOADING DOCK IS AVAILABLE FOR USE AS NEEDED, BUT ACCESS MUST BE MAINTAINED AT ALL TIMES FOR ACTIVE SET DESIGN SHOP. USE FOR DELIVERIES SHALL BE COORDINATED WITH SET DESIGN SHOP & MSU PROJECT MANAGER.
3. MSU PROMENADE IS CONSTRUCTED OF 6" REINFORCED CONCRRETE AND IS DRIVEABLE FOR DELIVERIES. ALL DELIVERIES SHALL BE COORDINATED IN ADVANCE WITH MSU PROJECT MANAGER.
4. DESIGNATED OVERFLOW PARKING LOTS ARE AS FOLLOWS: LOTS 21, 22, 23N, 23S, 24, 26, 27, 28, 28S, 29, 45, 46, 47, 48, 49, 60, 61 & CAR PARC DIEM. PLEASE NOTE, ALL VEHICLES MUST BE REGISTERED WITH MSU PARKING SERVICES.

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10-23-2024 ADDENDUM 1

DATE ISSUED FOR

SEAL

DATE: _____

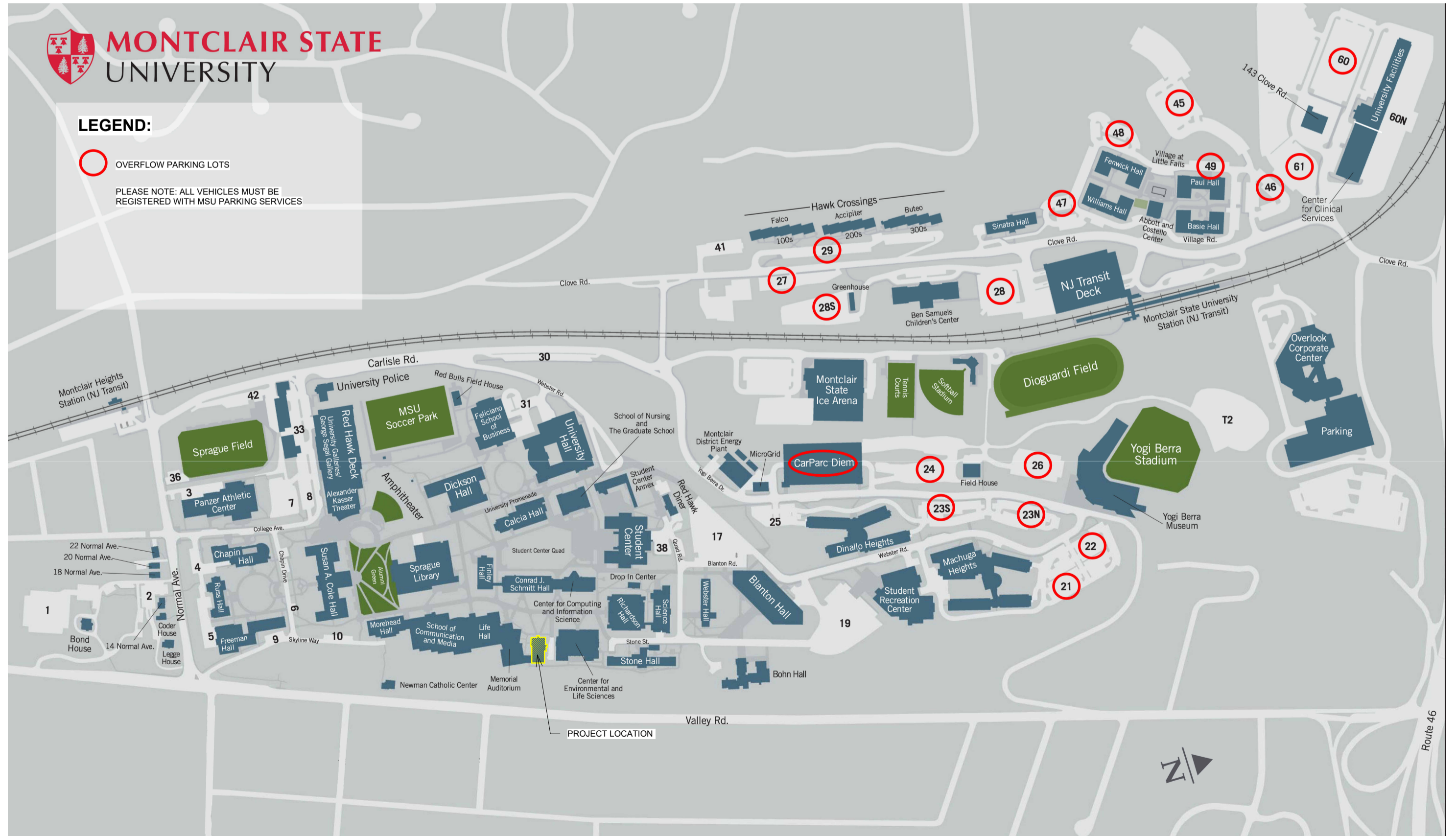
STATE OF NEW JERSEY REGISTERED ARCHITECT
 MARK SULLIVAN
 NJ 13746
 PROJECT NAME

VIRTUAL REALITY CLASSROOM & DEVELOPMENT LAB
 AT L. HOWARD FOX STUDIO THEATRE
 MONTCLAIR STATE UNIVERSITY
 MSU PROJECT #PR24C009
 DRAWING NAME

SITE LOGISTICS DIAGRAMS

DRAWN BY: JZA+D PROJECT NO.: 2232
 DATE: 12-22-2023 SCALE: 1/12" = 1'-0"
 SHEET NUMBER

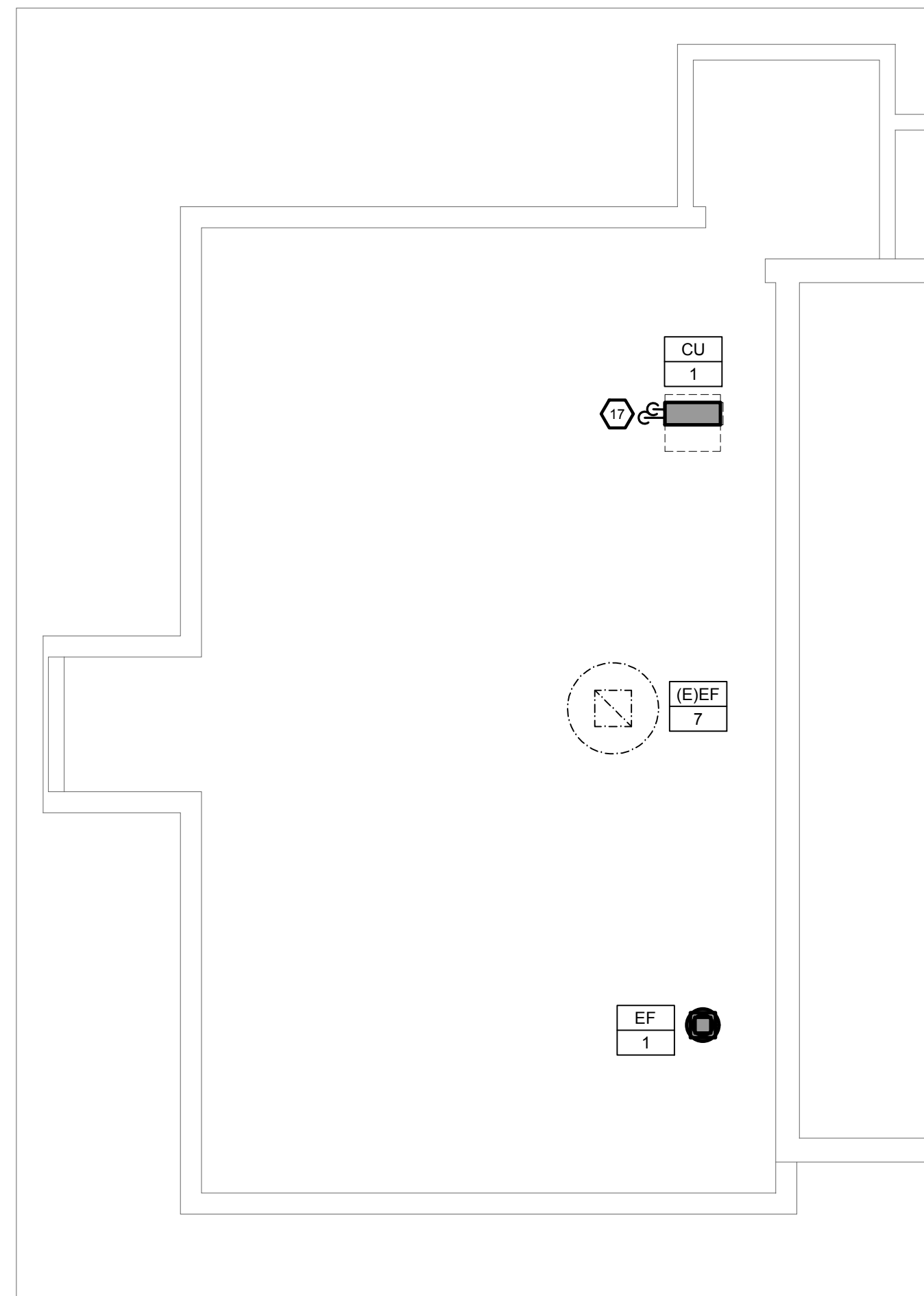
T3-1



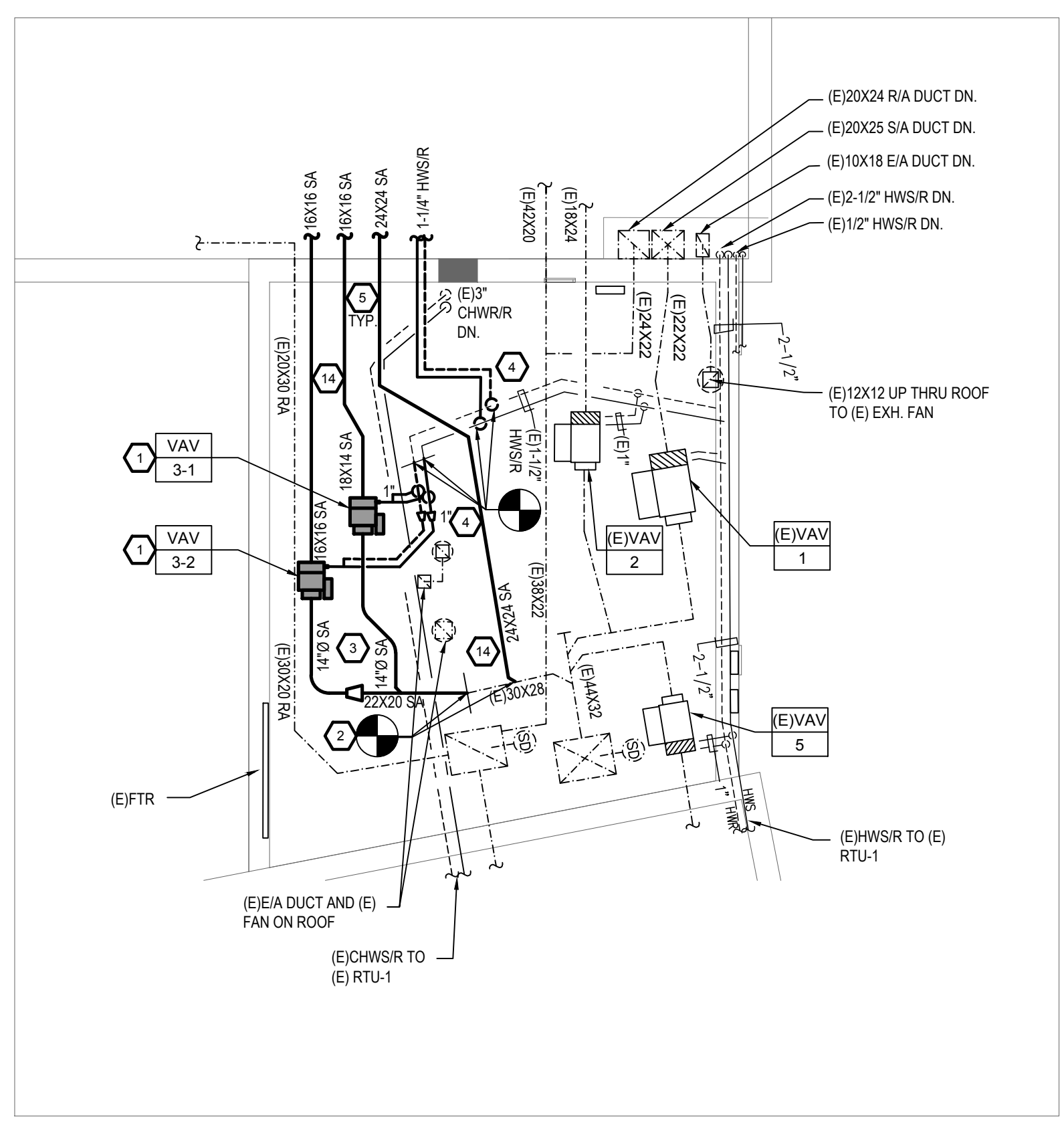
1 AVAILABLE PARKING
 NOT TO SCALE



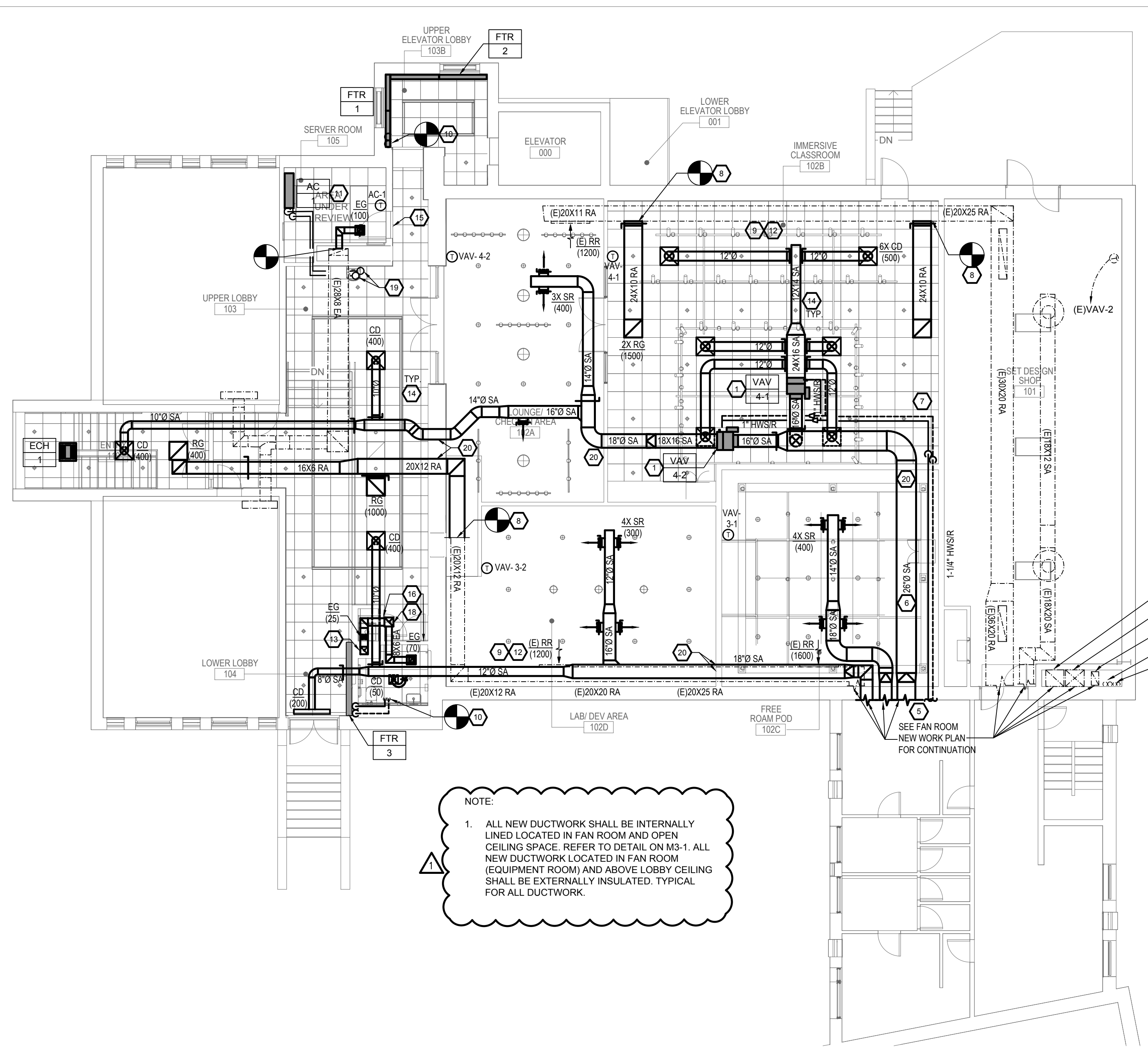
2 PROPOSED STAGING AREA
 NOT TO SCALE



1 PARTIAL ROOF NEW WORK PLAN - PLAN WEST
 SCALE: 1/8"=1'-0"
 0 4 8 16 FEET



2 FAN ROOM NEW WORK PLAN
 SCALE: 1/8"=1'-0"
 0 4 8 16 FEET



NOTE:
 1. ALL NEW DUCTWORK SHALL BE INTERNALLY LINED LOCATED IN FAN ROOM AND OPEN CEILING SPACE. REFER TO DETAIL ON M3-1. ALL NEW DUCTWORK LOCATED IN FAN ROOM (EQUIPMENT ROOM) AND ABOVE LOBBY CEILING SHALL BE EXTERNALLY INSULATED. TYPICAL FOR ALL DUCTWORK.

3 FIRST FLOOR HVAC NEW WORK PLAN
 SCALE: 1/8"=1'-0"
 0 4 8 16 FEET

KEYED NOTES

- 1 NEW STRUCTURE MOUNTED TERMINAL VAV BOX WITH HOT WATER COIL. INSTALL UNIT WITH CLEARANCE PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DETAIL SHEET AND WIRING DIAGRAM FOR MORE DETAIL.
- 2 CONNECT NEW SUPPLY AIR DUCT PER INDICATED SIZES AND CONNECT TO EXISTING RTU-1 SUPPLY DUCT LOCATED IN EXISTING FAN ROOM. PROVIDE TRANSITIONS AND DUCTWORK. PROVIDE MINIMUM OF 1-1/2" THICK DUCT WRAP FOR NEW DUCTWORK RUNNING IN FAN ROOM AND ABOVE CEILING. TYPICAL FOR ALL NEW SUPPLY DUCT.
- 3 PROVIDE INDICATED SIZED SPIRAL GALVANIZED DUCT COVERED WITH 1" DUCT WRAP AND CONNECT TO NEW VAV BOXES INLET. REFER TO DETAIL SHEET FOR MORE DETAIL.
- 4 CONTRACTOR TO FIELD VERIFY EXISTING HOT WATER SUPPLY AND RETURN PIPE. PROVIDE NEW HOT WATER SUPPLY AND RETURN PIPE TO VAV HOT WATER COILS AND CONNECT TO EXISTING HOT WATER SUPPLY AND RETURN AS INDICATED.
- 5 CONTRACTOR TO USE EXISTING DUCT OPENING THRU WALL. ADJUST EXISTING OPENING AS REQUIRED TO RUN DUCTWORK THRU FAN ROOM WALL. PROVIDE NEW OPENING AS REQUIRED. CONTRACTOR TO PROVIDE ACOUSTICAL SEALING OF DUCT PENETRATING WALLS. REFER TO DETAIL SHEET FOR MORE DETAIL. TYPICAL FOR ALL FULL HEIGHT WALL PENETRATION.
- 6 NEW 26"Ø SUPPLY DUCT FROM EXISTING RTU-1 SUPPLY DUCT CONNECTING TO NEW VAV BOX HOT WATER COIL LOCATED ABOVE IMMERSIVE CLASS ROOM CEILING.
- 7 NEW 1-1/4" INSULATED HOT WATER SUPPLY AND RETURN CONNECTING TO NEW VAV BOX HOT WATER COIL LOCATED ABOVE IMMERSIVE CLASS ROOM CEILING.
- 8 PROVIDE RETURN DUCT WORK AS INDICATED ON PLAN. CONNECT NEW DUCTWORK TO EXISTING DUCTWORK AIR TIGHT. MATCH NEW DUCTWORK TO EXISTING DUCTWORK FINISH. REFER TO ARCHITECT PLAN FOR DUCT, DIFFUSER AND GRILLE FINISH.
- 9 ALL EXISTING TO REMAIN DUCT, DIFFUSERS AND GRILLES TO BE CLEANED DUST FREE. RE-BALANCE DIFFUSERS/ GRILLES FOR INDICATED CFMS. PROVIDE NEW GRILLES IF EXISTING IN BAD CONDITION. TYPICAL FOR ALL EXISTING TO REMAIN DUCT, DIFFUSERS AND GRILLES.
- 10 3/4" HOT WATER SUPPLY AND RETURN TO NEW HOT WATER FIN-TUBE RADIATIONS.
- 11 WALL MOUNTED AC-1 INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE CONDENSATE PUMP AND PIPING.
- 12 EXISTING TO REMAIN.
- 13 10"x10" BATHROOM EXHAUST DUCT DOWN BELOW FIRST FLOOR SLAB. CONNECT NEW BATHROOM EXHAUST DUCT TO EXISTING BASEMENT BATHROOM EXHAUST DUCT.
- 14 PROVIDE MINIMUM OF 1-1/2" DUCT INSULATION FOR ALL DUCT RUNNING IN FAN ROOM AND DUCT WORK ABOVE CEILING SPACE. TYPICAL FOR ALL DUCT.
- 15 ARCHITECTURAL DOOR LOUVER WITH 0.4 SQ.FT NET FREE AREA. REFER TO ARCHITECT PLAN.
- 16 1" UNDERCUT DOOR FOR RESTROOM AND JANITOR CLOSET.
- 17 CU-1 REFRIGERANT PIPE RS & RL DOWN TO AC-1 IN SERVER ROOM. PROVIDE REFRIGERANT PIPE SIZE AND INSTALLATION PER MANUFACTURER'S RECOMMENDATION.
- 18 12"x12" EXHAUST DUCT UP TO EF-1 ON ROOF.
- 19 REFRIGERANT PIPE RS & RL UP TO CU-1 ON ROOF.
- 20 REFER TO STRUCTURAL PLAN FOR DUCT PENETRATION LOCATION. CONTRACTOR TO PROVIDE ACOUSTICAL SEALING OF DUCT PENETRATING WALLS. REFER TO DETAIL SHEET FOR MORE DETAIL. TYPICAL FOR ALL FULL HEIGHT WALL PENETRATION.

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09-19-2024	ISSUED FOR BID
03-29-2024	OWNER REVIEW
02-23-2024	85% CD EXCHANGE
02-09-2024	50% CD EXCHANGE
12-22-2023	100% DD
12-08-2023	50% DD EXCHANGE
DATE	ISSUED FOR
	SEAL

Vincent Forese, PE
 N.J. Professional Engineer No. 43940
 PROJECT NAME

VIRTUAL REALITY CLASSROOM & DEVELOPMENT LAB
 AT L. HOWARD FOX STUDIO THEATRE
 MONTCLAIR STATE UNIVERSITY

DRAWING NAME

MECHANICAL: NEW WORK PLANS

DRAWN BY: AP	PROJECT NO.: 2232
DATE: 02-06-2024	SCALE: AS NOTED
SHEET NUMBER	

M1-1

113740.MSU.VIRTUAL REALITY CLASSROOM & LAB - JZAD1-CADMECH13740.M1-1.DWG 10/22/2024 4:02 PM PRINTED BY: AP/ALP

VAV																		TERMINAL UNIT SCHEDULE																		BASIS OF DESIGN: NAILOR	
UNIT ID	MODEL NO.	TYPE	AIRFLOW			MINIMUM INLET S.P. (IN. W.G.)	UNIT SIZE / INLET CONN. SIZE (IN.)	HOT WATER COIL							ELECTRICAL	SUPPLIED BY	AREA SERVED																				
			MAXIMUM (CFM)	MINIMUM (CFM)	HEATING (CFM)			TOTAL (MBH)	ROWS / FPI	EDB (°F)	LAT (°F)	APD (IN. W.G.)	EWT (°F)	LWT (°F)				GPM	WPD (FT)	VOLT/PHASE																	
VAV3-1	SDR-WC-14	SINGLE DUCT	1600	800	900	1.0	14 / 14	42.77	2	55.0	104.3	0.22	180.0	140.0	2.5	2.0	120 / 1	(E) RTU-1	POD																		
VAV3-2	SDR-WC-14	SINGLE DUCT	1800	900	1000	1.0	14 / 14	50.03	2	55.0	106.2	0.26	180.0	140.0	2.5	2.0	120 / 1	(E) RTU-1	LAB																		
VAV4-1	SDR-WC-16	SINGLE DUCT	3000	1200	1500	1.0	16 / 16	64.7	2	55.0	104.7	0.45	180.0	140.0	3.0	2.0	120 / 1	(E) RTU-1	CLASSROOM																		
VAV4-2	SDR-WC-16	SINGLE DUCT	2000	1080	1400	1.0	16 / 16	59.77	2	55.0	106	0.23	180.0	140.0	3.0	2.0	120 / 1	(E) RTU-1	LOUNGE/ CORRIDOR																		

- NOTES:
- FURNISH WITH 22-GAUGE GALVANIZED CASING, HEAVY GAUGE OPPOSED BLADE VOLUME DAMPER WITH CELCON BEARINGS, MULTI-POINT CENTER AVERAGING AIRFLOW SENSOR WITH TAPS, INTEGRAL HW REHEAT COIL, BOTTOM ACCESS DOOR, AND DISCONNECT SWITCH.
 - FURNISH CONFIGURED FOR DDC CONTROLS. CONTROLS TO BE FIELD SUPPLIED FOR INTEGRATION INTO THE CAMPUS SIEMENS BAS. COORDINATE REQUIREMENTS WITH SIEMENS PRIOR TO FABRICATION OF TERMINAL UNITS.
 - PROVIDE NEW SPACE SENSOR LOCATED IN SAME LOCATION AS EXISTING SENSOR FROM VAV (TO BE REMOVED). INTEGRATE NEW SENSOR INTO BAS SYSTEM AND INTERLOCK WITH TERMINAL UNIT OPERATION.

EF - EXHAUST FAN												FAN SCHEDULE												BASIS OF DESIGN: GREENHECK		
FAN NO.	LOCATION	AREA OR SYSTEM SERVED	FAN TYPE	CFM	EXTERNAL STATIC PRESS (IN. WG)	NOMINAL WHEEL DIA. (IN)	MAX. OUTLET VELOCITY (FPM)	FAN RPM	FAN BHP	DRIVE	MOTOR DATA			EMERG. POWER (YES OR NO)	WEIGHT (LBS)	MODEL NO.	NOTES									
											HP	V/PH	MCA													
EF-1	ROOF	1ST / LOWER LEVEL BATHROOM	ROOF	600	0.8	-	667	1,435	0.15	DIRECT	1/4	115/1	4.8	NO	38	G-100-VG	1									

- NOTES:
- EF-1:
 - PROVIDE NEMA-1 DISCONNECT SWITCH.
 - PROVIDE SPRING BASE MOUNT.
 - PROVIDE BOLTED ACCESS DOOR.
 - UL/UL507 LISTED - ELECTRIC FAN.
 - PROVIDE MOTOR WITH THERMAL OVER LOADS.
 - SOLID STATE SPEED CONTROL.
 - MOTORIZED DAMPER, BIRD SCREEN.

HOT WATER FIN-TUBE RADIATION SCHEDULE													BASIS OF DESIGN: STERLING	
UNIT ID	MANUF.	MODEL NO.	SERVICE	ELEMENT DIMENSIONAL DATA					ELEMENT PERFORMANCE DATA					NOTES
				LENGTH	TUBE SIZE	FIN SIZE	FINS / FT.	ROWS	TOTAL BTUH/FT	EAT	EWT (°F)	LWT (°F)	GPM	
FTR - 1	STERLING	JVB VB - ARPM	ELEV. AREA	6'-0"	3/4"	4.25" X 3.625"	40	1	980	65°	180	160	1.0	1,2,3,4,5,6,7
FTR - 2	STERLING	JVB VB - ARPM	ELEV. AREA	8'-0"	3/4"	4.25" X 3.625"	40	1	980	65°	180	160	1.0	1,2,3,4,5,6,7
FTR - 3	STERLING	JVB VB - ARPM	ENTRY AREA	8'-0"	3/4"	4.25" X 3.625"	40	1	980	65°	180	160	1.0	1,3,4,5,6,7,8

- NOTES:
- FURNISH UNIT WITH FULL BACKPLATE SUPPORT, FULL BACKPLATE, ENCLOSURE, ELEMENT, BRACKETS, CRADLES, ETC. PROVIDE REQUIRED MOUNTING HARDWARE.
 - BASEBOARD ENCLOSURE SHALL BE "WALL TO WALL" AS INDICATED ON THE PLAN. THE CONTRACTOR SHALL FIELD MEASURE THE REQUIRED ENCLOSURE LENGTHS.
 - PROVIDE VALVE ACCESS COMPARTMENTS FOR ACCESS TO AIR, BALANCING, CONTROL, AND ISOLATION VALVES.
 - PROVIDE ALL REQUIRED CORNER PIECES, AND CAPS WALL SLEEVES, ETC REQUIRED FOR A COMPLETE INSTALLATION.
 - PERFORMANCE DATA LISTED IS BASED ON 190°F AVERAGE WATER TEMPERATURE. ELEMENT LENGTHS HAVE BEEN CALCULATED BASED ON ACTUAL AVERAGE WATER TEMPERATURES.
 - PROVIDE TWO-WAY, MOTORIZED CONTROL VALVE INTERLOCKED WITH WALL MOUNTED TEMPERATURE SENSOR, AUTOMATED LOGIC AND BUILDING AUTOMATION SYSTEM.
 - PROVIDE COLOR CHART. COLOR TO BE SELECTED BY ARCHITECT.
 - BASEBOARD ENCLOSURE SHALL BE 8'-0" FOR ENTRY AREA FIN-TUBE.

AIR CONDITIONING UNIT SCHEDULE																
TAG	LOCATION	TYPE	BASIC OF DESIGN MANUFACTURER	MODEL	AIRFLOW (CFM)	ESP (IN. WG)	REFRIGERANT TYPE	COOLING CAPACITY			HEATING CAPACITY		ELECTRICAL		WEIGHT (LBS)	REMARKS
								NOMINAL CAPACITY (MBH)	TOTAL CAPACITY (MBH)	EER/SEER	TOTAL CAPACITY (MBH)	POWER SUPPLY (V/PH/Hz)	MCA	MOCP		
AC-1	SERVER RM.	WALL	mitsubishi	PXA-AK36NL	705	N/A	R-454b	36	36	10.8/19.4	36	208/160	1.0	OUTDOOR	46	1, 2, 3, 4

- NOTES:
- PROVIDE WITH TOUCH MA CONTROLLER WITH BACNET INTERFACE. INTERLOCK WITH BUILDING MANAGEMENT SYSTEM BY ENT TOUCH.
 - COOLING PERFORMANCE BASED UPON 80°F DB / 67°F WB / 95°F AMBIENT.
 - CONTRACTOR SHALL CHOOSE SCHEDULED UNIT OR ENGINEERED APPROVED ALTERNATE OF EQUAL PERFORMANCE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY REQUIRED DESIGN CHANGES RESULTING FROM VARIATION IN UNIT SIZE, WEIGHT, AND/OR POWER REQUIREMENTS.
 - PROVIDE BLUE DIAMOND CONDENSATE PUMP WITH RESERVOIR AND SENSOR.

CONDENSING UNIT SCHEDULE														
TAG	LOCATION	TYPE	BASIC OF DESIGN MANUFACTURER	MODEL	REFRIGERANT TYPE	COOLING CAPACITY			HEATING CAPACITY		ELECTRICAL		WEIGHT (LBS)	REMARKS
						CAPACITY (MBH)	RATED CAPACITY (MBH)	SEER	TOTAL CAPACITY (MBH)	POWER SUPPLY (V/PH/Hz)	MCA	MOCP		
CU-1	ROOF	AIR COOLED	MITSUBISHI TRANE	PVYA-AK36NL	R-454b	36	36	19.4	36	208/160	34	55	251	1 TO 5

- NOTES:
- PROVIDE WITH SIMPLE MA CONTROLLER. PROVIDE PAC-SJ95MA-E M-NET CONVERTER. CONNECT TO CENTRAL CONTROLLER FOR CONNECTION WITH BUILDING MANAGEMENT SYSTEM BY ENT TOUCH.
 - COOLING PERFORMANCE BASED UPON 95°F DB AMBIENT.
 - CONTRACTOR SHALL CHOOSE SCHEDULED UNIT OR ENGINEERED APPROVED ALTERNATE OF EQUAL PERFORMANCE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY REQUIRED DESIGN CHANGES RESULTING FROM VARIATION IN UNIT SIZE, WEIGHT, AND/OR POWER REQUIREMENTS.
 - PROVIDE WITH WIND BAFFLES FOR LOW AMBIENT COOLING. (REFER TO WIND BAFFLE DOCUMENTATION FOR REQUIREMENTS.)
 - PROVIDE MOUNTING PAD SECURED TO ROOF. PROVIDE 12" HIGH STAND SECURED TO MOUNTING PAD.

CODE REQUIRED OUTSIDE AIR VENTILATION RATES (BASED ON 2021 NJ MECHANICAL CODE TABLE 403.3.1.1)																	
ZONE & AREA	OCCUPANCY CATEGORY	NET AREA FT2	AREA OUTDOOR AIR RATE	CODE REQ'D BASED ON SQ. FT.	ACT. OCC. LOAD	PEOPLE OUTDOOR AIR RATE CFM/PERSON	CODE REQ'D BASED ON PEOPLE CFM	TOTAL OA REQ'D BY CODE CFM (Vbz)	ZONE AIR DISTR. EFF. (EZ)	ZONE OA REQ'D BY CODE	OA PROVIDE D CFM	Vpz MAX SUPPLY (CFM)	PRIMARY OA AIR FRACTION (Zpz)	EXHAUST AIRFLOW RATE CFM/FT2	EXHAUST REQ'D BY CODE CFM	EXHAUST PROVIDED CFM	
Immersive Classroom	Education - Lecture Classroom	1,218	0.06	74	27	7.5	203	277	1	277	280	3,000	0.09	-	-	-	
Free room demo	Education - Multiuse assembly	615	0.06	37	10	7.5	75	112	1	112	115	1,600	0.07	-	-	-	
Lab / Dev Area	Education - Computer Lab	595	0.12	72	15	10	150	222	1	222	225	1,900	0.12	-	-	-	
Lounge/ Check-in	Education - Multiuse assembly	622	0.06	38	15	7.5	113	151	1	151	155	1,000	0.15	-	-	-	
Corridor	Education - Corridors	900	-	-	15	7.5	113	113	1	113	115	900	0.13	-	-	-	
Restroom/ Jen.C	Bathrooms/toilet	100	-	-	0	-	-	-	1	-	-	-	-	-	75	95	
TOTALS		4,050			82			874			890	8,400				95	

OUTDOOR AIR CALCULATIONS PER EQUATION 4-1:

SYMBOL	VALUE	DESCRIPTION
Ps	26	SYSTEM POPULATION
SPz	26	ZONE POPULATION
D	1.00	OCCUPANT DIVERSITY
Vou	0	UNCORRECTED OUTDOOR AIR INTAKE
Xs	0.104	AVERAGE OUTDOOR AIR FRACTION
Zp (max)	0.23	ZONE PRIMARY OUTDOOR AIR FRACTION (MAX)
Ev	0.874	SYSTEM VENTILATION EFFICIENCY
SVpz	8,400	ZONE PRIMARY AIRFLOW
Vot	874	CODE REQUIRED OUTDOOR AIRFLOW RATE, CFM
Vot	890	DESIGN OUTDOOR AIRFLOW RATE, CFM

ECH										ELECTRIC HEATER SCHEDULE								BASIS OF DESIGN: QMARK	
UNIT TYPE	LOCATION AND AREA SERVED	ELECTRICAL DATA			ENCLOSURE DATA					MODEL NO.	REMARKS								
		TOTAL WATTS	VOLTS PHASE	AMPS	TYPE	HEIGHT (IN.)	DEPTH (IN.)	LENGTH (IN.)											
ECH-1	ENTRY VESTIBULE	3000	208/1	14.4	CEILING	7.0	23.25	23.25	CDP-548-RE	1									

- NOTES:
- COLOR SELECTED BY ARCHITECT
 - PROVIDE RIB RELAY AND CONTRACTOR TO CONTROL THE LINE VOLTAGE TO THE HEATERS VIA ENT TOUCH

SCHEDULE OF GRILLES, REGISTERS AND DIFFUSERS				BASIS OF DESIGN: TITUS
SYMBOL / DESIGNATION	NOMINAL FACE SIZE	MODEL NO.	REMARKS	
EG	12"X12"	350 RL	1,2,3,4,6	
RG	24"X24"	350 RL	1,2,3,4,6	
SR	18"X8"	S300 FS	1,2,3,4,5,6	
LSD	48"X4"	ML39 / MPI39	1 SLOT. 1" SLOT SPACE 8" INLET. 1,2,3,6	
CD	24"X24"	OMNI-AA	1,2,3,4,6	

- NOTES:
- MAXIMUM NOISE CRITERION RATING <NC 25 IN GENERAL AREAS.
 - PROVIDE WITH BAKED ENAMEL FINISH. COLOR TO BE SELECTED BY ARCHITECT.
 - MOUNTING FRAME SHALL BE COORDINATED WITH CEILING AND/OR WALL CONSTRUCTION TYPE. COORDINATE WITH THE ARCHITECTURAL DRAWINGS.
 - PROVIDE OPPOSED BLADE VOLUME DAMPER.
 - PROVIDE VOLUME EXTRACTOR.
 - PROVIDE SIZE UNLESS OTHERWISE INDICATED.

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 N.J. Professional Engineer No. 43940
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 AT L. HOWARD FOX STUDIO THEATRE
 MONTCLAIR STATE UNIVERSITY

DRAWING NAME
MECHANICAL: SCHEDULES

DRAWN BY: AP	PROJECT NO.: 2232
DATE: 02-06-2024	SCALE: AS NOTED
SHEET NUMBER	

M2-1

I:\13740\MSU VIRTUAL REALITY CLASSROOM & LAB - JZAD01-CADMECH\13740\02-1.DWG 10/22/2024 4:02 PM PRINTED BY: AP/PEL

DEMOLITION NOTES:

- NOTES AND GRAPHIC REPRESENTATIONS SHALL NOT LIMIT THE EXTENT OF DEMOLITION REQUIRED. CONTRACTOR SHALL VISIT THE SITE, CAREFULLY EXAMINE EXISTING CONDITIONS AND SHALL PERFORM ALL DEMOLITION REQUIRED TO ACHIEVE THE FINAL DESIGN INTENT AS REQUIRED BY THE CONTRACT DOCUMENTS. EXTENT OF ALL DEMOLITION WORK SHALL BE COORDINATED WITH THE ARCHITECT AND CONSTRUCTION MANAGER.
- EQUIPMENT AND WIRING TO BE REMOVED SHALL BE DE-ENERGIZED PRIOR TO ANY DEMOLITION WORK.
- UNLESS OTHERWISE NOTED, DISCONNECT AND REMOVE ALL FIXTURE RECEPTACLES, OUTLETS AND OTHER ELECTRICAL DEVICES ALONG WITH ASSOCIATED WIRING, CONDUIT RACEWAYS, BOXES AND SUPPORTS IN AREA OF WORK. EXISTING ELECTRICAL DEVICES SHALL INCLUDE, BUT NOT LIMITED TO, TEL/DATA OUTLETS, LIGHTING SWITCHES, RECEPTACLES, ETC.
- WHERE SPECIFIC DEVICES ARE INDICATED:
 'EX' - DENOTES EXISTING TO REMAIN.
 'ER' - DENOTES EXISTING TO BE REMOVED.
 'RR' - EXISTING TO BE REMOVED AND RELOCATED.
 'R' - RELOCATED EXISTING.
- UNLESS OTHERWISE INDICATED, EXISTING SERVICES, SYSTEMS AND WIRING SERVING EXISTING AREAS OUTSIDE OF DEMOLITION AREA SHALL REMAIN OR BE RELOCATED AS REQUIRED TO MAINTAIN OPERATION OF EXISTING SYSTEMS AND AVOID CONFLICT WITH NEW CONSTRUCTION.
- IN PROCESS OF REMOVING WIRING DEVICES, LIGHTING FIXTURES AND OTHER ELECTRICAL EQUIPMENT AND MATERIALS, THIS CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO PREVENT DAMAGE TO THE ARCHITECTURAL SURFACES AND MATERIALS WHICH ARE TO REMAIN, INCLUDING WALLS, FLOORS, CEILINGS, WINDOWS, DOORS, MOLDINGS, STRUCTURAL MEMBERS, ETC. THE COST TO REPAIR OR ANY MATERIAL DEMAND BY THE ARCHITECT TO HAVE BEEN UNLUDLY DAMAGED BY THIS CONTRACTOR DURING DEMOLITION OR CONSTRUCTION SHALL BE PAID BY THIS CONTRACTOR AT THIS ADDITIONAL COST TO THE OWNER.
- FEEDERS AND BRANCH CIRCUITS TO BE REMOVED - WIRING, CONDUIT AND SUPPORTS SHALL BE REMOVED TO THE PANEL OF ORIGIN.
- PROVIDE TEMPORARY SUPPORTS FOR ALL DEVICES, EQUIPMENT, AND CABLING THAT ARE TO REMAIN. COORDINATE ALL WORK WITH BUILDING OPERATING PERSONNEL AND BUILDING'S FIRE ALARM, SECURITY AND TELECOM CONTRACTORS.
- ALL WORK SHALL BE PROPERLY IDENTIFIED AFTER DEMOLITION.
- PROVIDE BLANK PLATES AT ALL OPEN BOXES WHERE DEVICES ARE REMOVED AND SURFACE IS NOT SCHEDULED TO BE PATCHED AND RE-FINISHED.
- COORDINATE WITH ARCHITECT AND CONSTRUCTION MANAGER WHICH FIXTURES, DEVICES AND EQUIPMENT, IF ANY, ARE TO BE REMOVED, KEPT INTACT AND RETURNED TO THE OWNER. IN GENERAL, ALL DEVICES, WIRING, RACEWAYS, BOXES, SUPPORTS AND OTHER EQUIPMENT WHICH ARE TO BE REMOVED FROM SITE SHALL BE PROPERLY DISPOSED OF.
- WHERE PORTIONS OF AN EXISTING BRANCH CIRCUIT ARE REMOVED, WIRING TO REMAIN DEVICES ON THE CIRCUIT SHALL BE RECONNECTED OR MODIFIED IN AN APPROVED MANNER AS REQUIRED TO MAINTAIN CONTINUITY OF THE AFFECTED BRANCH CIRCUIT AND OPERATION OF THE REMAINING DEVICES.
- EQUIPMENT INDICATED TO BE REMOVED SHALL BE TAKEN FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS. EQUIPMENT REQUIRED TO BE TURNED OVER TO THE OWNER SHALL BE PLACED IN A MUTUALLY ACCEPTABLE LOCATION.

GENERAL NOTES:

- REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL ELECTRICAL REQUIREMENTS AND LIGHTING FIXTURE SCHEDULE.
- CONTRACTOR SHALL VISIT THE JOB SITE, REVIEW THE ARCHITECTURAL DRAWINGS AND BE RESPONSIBLE FOR REVIEWING A FULL SET OF BID DOCUMENTS TO MAKE HIMSELF AWARE OF THE TOTAL JOB BEFORE SUBMITTING HIS PRICE.
- VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND INCLUDE IN BID THE PRICE OF ALL WORK REQUIRED TO ACCOMMODATE THE EXISTING INSTALLATION.
- ALL WORK SHALL BE INSTALLED CONCEALED, UNLESS OTHERWISE NOTED. BRANCH WIRING SHALL BE CONCEALED IN WALLS AND ABOVE HUNG CEILING, U.O.N.
- CONTRACTOR SHALL FIELD VERIFY DIMENSIONS OF FINISHED CONSTRUCTION PRIOR TO FABRICATION AND INSTALLATION OF FIXTURES AND EQUIPMENT.
- CONTRACTOR SHALL SUBMIT SAMPLES OF RECEPTACLES AND PLATES TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
- CIRCUIT NUMBERS INDICATED ON POWER AND LIGHTING PLANS ARE FOR IDENTIFICATION PURPOSES ONLY. CONTRACTOR SHALL VERIFY THE EXACT CIRCUIT NUMBER IN THE FIELD WHEN BRANCH CIRCUITS ARE INDICATED TO BE CONNECTED TO EXISTING PANELBOARDS.
- LIGHTING FIXTURES IN ACCESSIBLE CEILINGS SHALL BE FURNISHED WITH FLEXIBLE CONDUIT CONNECTIONS TO SEPARATELY MOUNTED JUNCTION BOXES. ONE (1) JUNCTION BOX SHALL SERVE A MAXIMUM OF FOUR (4) FIXTURES. MAXIMUM LENGTH OF FLEXIBLE CONNECTION SHALL BE 6'-0".
- WIRING IN AIR PLENUM HUNG CEILINGS INSTALLED WITHOUT CONDUIT OR EMT SHALL BE PLENUM RATED.
- DETERMINE THE EXACT LOCATION OF EQUIPMENT TO BE INSTALLED BY OTHER TRADES BEFORE STARTING CONDUIT WORK.
- CONTRACTOR SHALL PROVIDE AND CONNECT ALL RACEWAYS AND WIRING FROM EQUIPMENT AND DEVICES TO THEIR SOURCE OF POWER. PROVIDE ALL REQUIRED CONDUITS, WIRING AND JUNCTION BOXES TO ENERGIZE EQUIPMENT AS INDICATED.
- CONTRACTOR SHALL RELOCATE AND/OR MODIFY EXISTING ELECTRICAL WORK AS SHOWN AND AS REQUIRED TO SUIT THE NEW WORK.
- AFTER HIS WORK IS COMPLETED, CONTRACTOR SHALL TEST THE ELECTRICAL DISTRIBUTION SYSTEM FOR SHORT CIRCUITS, LOOSE WIRING, ETC., TO THE SATISFACTION OF THE OWNER. ALL COSTS FOR THIS TEST SHALL BE BORNE BY THE CONTRACTOR.
- FOR WIRING IN METAL PARTITIONS WHERE EMT IS IMPRACTICAL, FLEXIBLE STEEL CONDUIT GALVANIZED, MINIMUM 3/4", SHALL BE USED.
- FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL ELECTRICAL OUTLETS, SWITCHES AND LIGHTING FIXTURES SEE ARCHITECTURAL FLOOR AND REFLECTED CEILING PLANS, DETAILS AND ELEVATIONS.
- CONTRACTOR SHALL COORDINATE ON SITE AND WITH THE ARCHITECT THE EXACT LOCATION OF ALL FLOOR MOUNTED DEVICES REQUIRING CORE DRILLING PRIOR TO THE START OF ANY SUCH WORK.
- MOUNTING HEIGHTS OF EQUIPMENT AND DEVICES SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS. WHERE MOUNTING HEIGHTS ARE NOT GIVEN ON THE ARCHITECTURAL DRAWINGS, UTILIZE THE FOLLOWING MOUNTING HEIGHTS UNLESS OTHERWISE NOTED (ALL DIMENSIONS TO CENTERLINE OF BOX):
 - A. RECEPTACLES (WALL MOUNTED) - 18" A.F.F.
 - B. TELEPHONE/DATA OUTLETS - SAME AS RECEPTACLES
 - C. LIGHTING SWITCHES AND CONTROLS - 48" A.F.F. TO TOP OF HANDLE
 - D. MANUAL FIRE ALARM STATIONS - 48" A.F.F. TO TOP
 - E. FIRE ALARM HORN AND STROBE UNITS - 80" A.F.F. OR 6" BELOW THE CEILING
 - F. CARD READERS - 48" A.F.F. TO TOP
 - G. PANELBOARDS AND CABINETS - 78" TO TOP OF ENCLOSURE.
- MINIMUM RACEWAY SIZE SHALL BE 3/4" AND SHALL BE RUN PARALLEL TO BUILDING STRUCTURAL LINES. RACEWAYS SHALL NOT BE RUN HORIZONTALLY BELOW 8'-0" IN PARTITIONS. ALL EMPT RACEWAYS SHALL BE FURNISHED WITH A 200 LB. TEST NYLON DRAG LINE.
- WHERE EQUIPMENT, LIGHTING FIXTURES AND WIRING DEVICES ARE SHOWN WITH CIRCUIT NUMBERS ONLY, THE MINIMUM BRANCH CIRCUITING REQUIREMENTS SHALL BE AS FOLLOWS, U.O.N.:
 - A. LIGHTING FIXTURES - 2#12, #12 GRD-3/2"C.
 - B. RECEPTACLES - 2#12, #12 GRD-3/2"C.
 - C. HOMERUNS TO PANELBOARDS SHALL CONTAIN NO MORE THAN (3) CIRCUITS. PROVIDE DEDICATED NEUTRAL FOR ALL LIGHTING AND OFFICE POWER CIRCUITS. NEUTRAL CONDUCTOR FOR MULTI-POLE CIRCUITS FEEDING FURNITURE SYSTEMS SHALL BE SIZED ONE TRADE SIZE LARGER THAN PHASE CONDUCTORS. MINIMUM #10 AWG (EXAMPLE: 3#12, #10N, #12GRD-3/2"C) AND UTILIZE MULTI-POLE CIRCUIT BREAKERS TO DISCONNECT ALL PHASE CONDUCTORS.
 - D. WHERE LIGHTING SWITCH INDICATIONS ARE NOT SHOWN, SWITCHES SHALL BE CONNECTED TO CONTROL ALL SWITCHED FIXTURES WITHIN THE CORRESPONDING SPACE.
- WIRE SIZES SHALL BE INCREASED TO COMPENSATE FOR VOLTAGE DROP AS FOLLOWS:
 - A. 120V CIRCUITS LONGER THAN 50' SHALL UTILIZE MIN. #10 AWG.
 - B. 120V CIRCUITS LONGER THAN 110' SHALL UTILIZE MIN. #8 AWG.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHT AND POWER TO INSURE THE SAFETY OF PERSONNEL AND POWER REQUIREMENTS OF THE VARIOUS TRADES. PROVIDE TEMPORARY LIGHT AND POWER FOR GENERAL BUILDING ACCESS.
- BARRIER FREE REQUIREMENTS OF NJAC 5:23-7.2 APPLY TO THIS INSTALLATION.

NOTE:
 MONTCLAIR STATE UNIVERSITY FIRE ALARM VENDOR -
 AUTOMATIC SUPPRESSION & ALARM
 CONTACT: BRIAN ZIEMBA 201-825-8855

POWER	
	CONDUIT RUN CONCEALED IN HUNG CEILING SPACE AND WALLS.
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	DISTRIBUTION PANEL
	FLUSH TYPE PANELBOARD
	SURFACE TYPE PANELBOARD
	FUSED DISCONNECT SWITCH WITH EQUIPMENT CONNECTION. HORSEPOWER RATING AS REQUIRED BY MOTOR LOAD. SWITCH RATING SAME AS, OR NEXT STANDARD SIZE HIGHER THAN UPSTREAM CIRCUIT PROTECTIVE DEVICE AND FUSE RATING SAME AS UPSTREAM CIRCUIT PROTECTIVE DEVICE U.O.N. 'WP' INDICATES WEATHERPROOF ENCLOSURE, OTHERWISE ENCLOSURE IS NEMA-1.
	UNFUSED DISCONNECT SWITCH WITH EQUIPMENT CONNECTION. HORSEPOWER RATING AS REQUIRED BY MOTOR LOAD. RATING SAME AS, OR NEXT STANDARD SIZE HIGHER THAN UPSTREAM CIRCUIT PROTECTIVE DEVICE U.O.N. 'WP' INDICATES WEATHERPROOF ENCLOSURE, OTHERWISE ENCLOSURE IS NEMA-1.
	VARIABLE FREQUENCY DRIVE WITH INTEGRAL FUSED DISCONNECT SWITCH WITH EQUIPMENT CONNECTION. HORSEPOWER RATING AS REQUIRED BY MOTOR LOAD. RATING SAME OR HIGHER THAN UPSTREAM CIRCUIT PROTECTIVE DEVICE U.O.N. 'WP' INDICATES WEATHERPROOF ENCLOSURE, OTHERWISE ENCLOSURE IS NEMA-1.
WIRING DEVICES	
	DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W, GROUNDED NEMA CONFIG. 5-20R
	DUPLEX GFI TYPE RECEPTACLE, 20A, 125V, 2P, 3W, GROUNDED NEMA CONFIG. 5-20R
	DUPLEX RECEPTACLE 20A, 125V, 2P, 3W, GROUNDED NEMA CONFIG. 5-20R (DEDICATED CIRCUIT)
	DOUBLE DUPLEX RECEPTACLE IN 2 GANG BOX, 20A, 125V, 2P, 3W GROUNDED NEMA CONFIG. 5-20R
	FLOOR, CEILING MOUNTED RECEPTACLE, 20A, 125V, 2P, 3W, GROUNDED NEMA CONFIG. 5-20R
	SPECIAL PURPOSE SINGLE RECEPTACLE. TYPE, NEMA RATING AS SHOWN ON PLANS. NUMERAL INDICATES CIRCUIT NUMBER.
	CEILING MOUNTED JUNCTION / SPLICE BOX WITH EQUIPMENT CONNECTION, SIZE AS REQUIRED
	FLOOR MOUNTED JUNCTION / SPLICE BOX WITH EQUIPMENT CONNECTION, SIZE AS REQUIRED
	WALL MOUNTED JUNCTION/SPLICE BOX WITH EQUIPMENT CONNECTION, SIZE AS REQUIRED
	JUNCTION/SPLICE BOX WITH CONNECTION TO EACH FIRE/SMOKE DAMPER (FSD)
	POWER / TEL / DATA SURFACE MOUNTED DIVIDED METAL RACEWAY SPECIFICATION: WIREMOLD SERIES AS NOTED ON PLANS LOCATION, COLOR AND FINISH BY ARCHITECT.
	MANUAL MOTOR STARTER SWITCH
TELECOMMUNICATIONS SYSTEM	
	WALL MOUNTED COMBINATION TELEPHONE/DATA OUTLET IN DOUBLE GANG BOX WITH SINGLE GANG REDUCER PLATE AND 1" EMPTY CONDUIT WITH DRAG WIRE STUBBED 6" ABOVE ACCESSIBLE SECURE HUNG CEILING AND TERMINATED WITH BUSHING. REFER TO IT DRAWINGS FOR EXACT REQUIREMENTS.
	WALL MOUNTED DATA OUTLET BOX WITH 1" EMPTY CONDUIT WITH DRAG WIRE STUBBED 6" ABOVE ACCESSIBLE SECURE HUNG CEILING AND TERMINATED WITH BUSHING. REFER TO IT DRAWINGS FOR EXACT REQUIREMENTS.
	WALL MOUNTED TELEPHONE OUTLET BOX WITH 1" EMPTY CONDUIT WITH DRAG WIRE STUBBED 6" ABOVE ACCESSIBLE SECURE HUNG CEILING AND TERMINATED WITH BUSHING. HEIGHT BY ARCHITECT. REFER TO IT DRAWINGS FOR EXACT REQUIREMENTS.
	WALL MOUNTED SM FIBER OUTLET BOX WITH 1" EMPTY CONDUIT STUB-UP TO NEAREST ACCESSIBLE CEILING. REFER TO IT DRAWINGS FOR EXACT REQUIREMENTS.
	FLUSH CEILING MOUNTED OUTLET. PROVIDE 5" SQUARE BOX WITH SINGLE GANG REDUCER PLATE AND 1" TO THE TELECOM TERMINATED WITH BUSHING AND DRAG LINE. U.O.N. REFER TO IT DRAWINGS FOR EXACT REQUIREMENTS.
	WIRELESS ACCESS POINT LOCATION. PROVIDE 1" C TO THE NEAREST TELECOM CONSOLIDATION POINT AT CEILING AND TERMINATE WITH BUSHING AND DRAG LINE. U.O.N. REFER TO IT DRAWINGS FOR EXACT REQUIREMENTS.
	MULTI-GANG FLUSH MOUNTED CAST FLOOR BOX PROVIDE COMBINATION TYPE OF RECEPTACLES AND/OR TELECOMMUNICATIONS OUTLETS AS INDICATED BY SYMBOLS. PROVIDE 3/4" FOR POWER, RUN WIRES IN-SLAB FROM FLUSH FLOOR MOUNTED DEVICES TO NEAREST WALL OR FURRED OUT COLUMN AND STUBBED 6" ABOVE ACCESSIBLE HUNG CEILING AND TERMINATED WITH BUSHING. REFER TO IT DRAWING FOR EXACT REQUIREMENT FOR DATA. SPECIFICATION: WIREMOLD #EFB4S
	TELECOMMUNICATIONS GROUND BAR - 1/4" x 4" x 1", HOLE CENTERS MATCH NEMA DOUBLE LUG CONFIGURATION. PROVIDE INSULATORS, LOCKWASHERS AND WALL MOUNTING BRACKET.

ELECTRICAL SYMBOLS LIST	
MISC.	
	CARD READER - PROVIDE EMPTY BACKBOX AND 1" CONDUIT UP THRU WALL TO NEAREST ACCESSIBLE CEILING.
	ELECTRIC STRIKE - PROVIDE EMPTY BACKBOX AND 1" CONDUIT UP THRU WALL TO NEAREST ACCESSIBLE CEILING.
	MAGNETIC LOCK
	INFRARED DOOR RELEASE SENSOR - PROVIDE EMPTY BACKBOX AND 1" CONDUIT UP THRU WALL TO NEAREST ACCESSIBLE CEILING.
	SECURITY KEY PAD - PROVIDE EMPTY BACKBOX AND 1" CONDUIT UP THRU WALL TO NEAREST ACCESSIBLE CEILING.
	CEILING MOUNTED SPEAKER
	WALL / CEILING MOUNTED AUDIOVISUAL 5" SQUARE JUNCTION BOX WITH SINGLE GANG REDUCER PLATE. PROVIDE 1-1/2" CONDUIT WITH DRAG WIRE TO JUNCTION BOX BEHIND AV CREDENZA.
	WALL FLUSH MOUNTED AUDIOVISUAL 12"x12"x4" NEMA 1 JUNCTION BOX

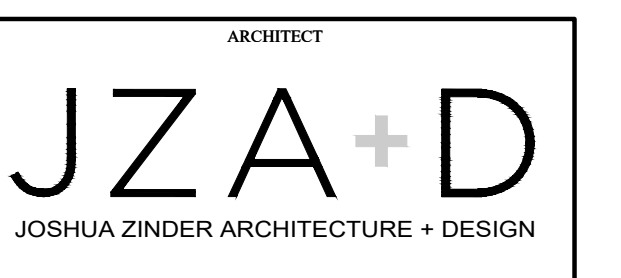
LIGHTING	
	OUTLET BOX AND LIGHTING FIXTURE: 'A' - DENOTES FIXTURE TYPE '2' - DENOTES CIRCUIT NUMBER '3' - DENOTES SWITCH CONTROL 'NL' - DENOTES UNSWITCHED NIGHT LIGHT 'EM' - EMERGENCY FIXTURE WITH INTEGRAL OR REMOTE EMERGENCY BATTERY PACK
	CEILING, WALL EXIT LIGHT WITH INTEGRAL BATTERY PACK - DIRECTIONAL ARROWS AS INDICATED - SHADED AREA DENOTES FACE(S) UPON WHICH 'EXIT' APPEARS
	SELF CONTAINED EMERGENCY LIGHTING BATTERY PACK WITH SEALED BEAM HEADS
	CONTROL SWITCH: 'a' = DENOTES SWITCH CONTROL '3' = DENOTES 3-WAY SWITCH 'D' = DENOTES DIMMER SWITCH 'K' = DENOTES KEY OPERATED SWITCH
	COMBINATION WALL MOUNTED VACANCY AND MANUAL SWITCH
	ETC ECHO E-VAC CEILING MOUNTED VACANCY SENSOR WITH APPROPRIATE SWITCH PACK. THREE (3) SENSORS PER SWITCH PACK. 'a' = DENOTES SWITCH DESIGNATION
	LIGHTING CONTROL SYSTEM 0-10V, RELAY CONTROLLER, ETC ECHO #EDLD-G2 (FOR DUAL ZONE) AND ETC ECHO ELD-G2 (FOR SINGLE ZONE). PROVIDE ALL LOW VOLTAGE WIRING, CONNECTIONS AND PROGRAMMING FOR CONTROL DEVICES WITHIN LIGHTING CONTROL ZONE INDICATED. 'a' = DENOTES CONTROL ZONE (SINGLE ZONE) 'a,b' = DENOTES CONTROL ZONE (DUAL ZONE) 'D' = DENOTES PHASE-ADAPTIVE DIMMER CONTROLLER (ETC ECHO #ELVD-G2)
	ETC ECHO ERMCT-G2 4-ZONE ROOM CONTROLLER 0-10V DIMMING OUTPUT WITH TIMECLOCK. PROVIDE ALL LOW VOLTAGE WIRING, CONNECTIONS AND PROGRAMMING FOR CONTROL DEVICES WITHIN LIGHTING CONTROL ZONE.
	ETC ECHO E1004 INSPIRE STATION FOUR BUTTON. WIRE AS PER MANUFACTURERS INSTRUCTIONS. 'a' = DENOTES SWITCH DESIGNATION

FIRE ALARM	
	MANUAL PULL STATION
	WALL MOUNTED VISUAL FIRE ALARM STROBE. COVERPLATE SHALL BE WHITE WITH RED LETTERS. MAXIMUM 80 INCHES ABOVE FINISHED FLOOR OR 6 INCHES BELOW CEILING WHICHEVER IS LOWER.
	COMBINATION WALL MOUNTED AUDIOVISUAL FIRE ALARM DEVICE. COVERPLATE SHALL BE WHITE WITH RED LETTERS. MAXIMUM 80 INCHES ABOVE FINISHED FLOOR OR 6 INCHES BELOW CEILING WHICHEVER IS LOWER.
	CEILING MOUNTED AREA SMOKE DETECTOR

LEGEND	
	EXISTING TO REMOVE
	NEW ELECTRICAL WORK / DEVICES
	EXISTING TO REMAIN

ELECTRICAL DRAWING LIST:	
E0-1	GENERAL NOTES, SYMBOL LIST & ABBREVIATIONS
E0-2	SPECIFICATIONS
ED-1-1	DEMOLITION PLANS
E-1-1	POWER PLANS
E-1-2	POWER PLAN - LOADING DOCK
E-2-1	LIGHTING PLAN
E-3-1	DIAGRAMS & SCHEDULES

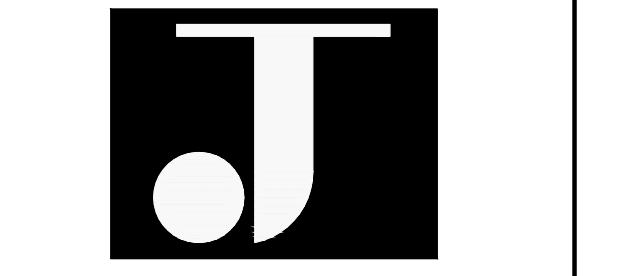
ABBREVIATIONS	
+	SPECIAL HEIGHT - REFER TO ARCHITECTURAL DRAWINGS
A	AMPERE(S)
AC	ABOVE COUNTER / ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERES INTERRUPTING CURRENT
ATC	AUTOMATIC TEMPERATURE CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
BAS, BMS	BUILDING AUTOMATION SYSTEM, BUILDING MANAGEMENT SYSTEM
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CL	CENTERLINE
CATV	CABLE TELEVISION
CCTV	CLOSED CIRCUIT TV
CLG	CEILING
CH	COUNTER HEIGHT
CHT(S)	CIRCUIT(S)
CU	COPPER
D	DIMMER SWITCH
DIA	DIAMETER
DP	DISTRIBUTION PANELBOARD
DW	DISHWASHER
DWG	DRAWING
EC	EMPTY CONDUIT
E/EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ER	EXISTING TO BE REMOVED
EX	EXISTING TO REMAIN
EWG	ELECTRICAL WATER COOLER
F	FUSE/DEGREE'S FAHRENHEIT
FA	FIRE ALARM
FL	FLOOR
GEQ	GROUNDING ELECTRODE CONDUCTOR
G/GRD/GND	GROUND
GFI	GROUND FAULT INTERRUPTER
HC	HUNG CEILING
HD	HAND DRYER
HP	HORSE POWER
HZ	HERTZ
ICCB	INSULATED CASE CIRCUIT BREAKER
IG	ISOLATED GROUND
J/UB	JUNCTION BOX
IMC	INTERMEDIATE METALLIC CONDUIT
KAIC	KILO AMPS INTERRUPTING CURRENT
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
LP	LIGHTING PANELBOARD
LTG	LIGHTING
LV	LOW VOLTAGE
LVRC	LOW-VOLTAGE RELAY CONTROL
MCB	MAIN CIRCUIT BREAKER
MCCB	MOLDED CASE CIRCUIT BREAKER
MER	MECHANICAL EQUIPMENT ROOM
MH	MANHOLE
MLO	MAIN LUGS ONLY
MSB	MAIN SWITCHBOARD
MSSB	MAIN SERVICE SWITCHBOARD
MTD	MOUNTED
MV	MEDIUM VOLTAGE
MVA	MEGA VOLT-AMPERES
MW	MEGA WATTS
N	NEUTRAL
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT (UNSWITCHED)
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
P	POLE(S)
PB	PULL BOX
PH	PHASE
PNL	PANEL
PP	POWER PANEL
R	RELOCATED
RC	REMOTE CONTROL
RP	RECEPTACLE PANELBOARD
RR	EXISTING TO BE REMOVED AND RELOCATED
SS	SERVICE SWITCH
STB	SHORTING TERMINAL BLOCK
STD	STANDARD
SW	SWITCH
SWBD	SWITCHBOARD
T/XFMR	TRANSFORMER
TEL	TELEPHONE
TELCOM	TELECOMMUNICATIONS
TYP	TYPICAL
TV	TELEVISION
UNF/SW	UNFUSED SWITCH
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VA	VOLT-AMPERES
W	WIRE, WATTS
WP	WEATHERPROOF



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10-23-2024	ADDENDUM 1
09-19-2024	ISSUED FOR BID
03-29-2024	OWNER REVIEW
02-23-2024	85% CD EXCHANGE
02-09-2024	50% CD EXCHANGE
12-22-2023	100% DD
12-08-2023	50% DD EXCHANGE
DATE	ISSUED FOR
	SEAL

Vincent Forese, PE
 N.J. Professional Engineer No. 43940
 PROJECT NAME

VIRTUAL REALITY CLASSROOM & DEVELOPMENT LAB
 AT L. HOWARD FOX STUDIO THEATRE
 MONTCLAIR STATE UNIVERSITY

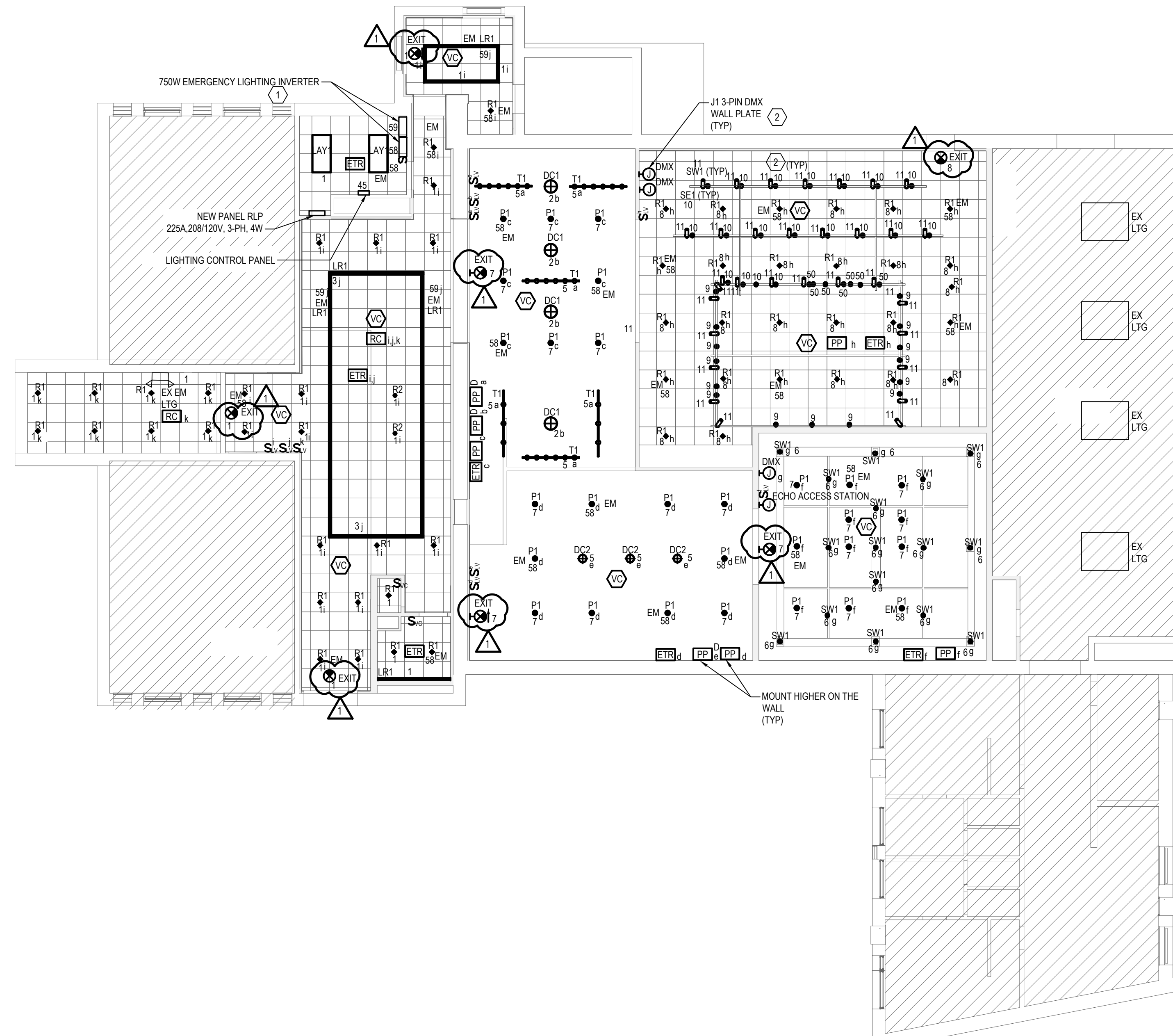
DRAWING NAME

ELECTRICAL: GENERAL NOTES, SYMBOL LIST & ABBREVIATIONS

DRAWN BY: SC	PROJECT NO.: 23232
DATE: 02-06-2024	SCALE: AS NOTED
SHEET NUMBER	

E0-1

113740-MSU VIRTUAL REALITY CLASSROOM & LAB - JZADJ-CAD/ELECT/E0-1-DWG - 10/22/2024 2:32 PM PRINTED BY: SCHAUHARD



1 UPPER LEVEL LIGHTING PLAN- NEW WORK
 SCALE: 1/8"=1'-0"
 0 4 8 16 FEET

GENERAL NOTES

- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES AND LIGHTING CONTROL DEVICES.
- BASIS OF DESIGN FOR LIGHTING CONTROLS IS ECHO BY ETC, INC. ALL LIGHTING CONTROLS SHOWN SHALL BE INTEGRATED INTO THE SYSTEM. COORDINATE ALL REQUIRED PROGRAMMING WITH OWNER REQUIREMENTS.
- ALL LIGHTING WITHIN THIS AREA SHALL BE WIRED TO NEW PANEL RLP U.O.N.
- ALL FIXTURES LABELED 'EM' SHALL BE WIRED TO EMERGENCY LIGHTING INVERTERS VIA EMERGENCY TRANSFER RELAY. FIXTURES SHALL BE NORMALLY CONTROLLED BY LOCAL LIGHTING CONTROLS AND SWITCH TO FULL BRIGHTNESS IN THE EVENT OF A POWER OUTAGE.

KEY NOTES

- PROVIDE TWO IOTA IIS 750 LED 750W EMERGENCY WALL MOUNTED LIGHTING INVERTER TO SERVE EMERGENCY LIGHTING LABELED 'EM'. PROVIDE ALL REQUIRED SUPPORTS AND ACCESSORIES FOR MOUNTING. PROVIDE ALL WIRING AS REQUIRED FOR CONTROL OF FIXTURES BY LIGHTING MANAGEMENT SYSTEM.
- LIGHTING FIXTURES 'SW1' AND 'SE1' SHALL BE CONTROLLED BY 3-PIN DMX WALL PLATE AND ECHO DMX CONTROLLER.

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12-22-2023	100% DD
12-08-2023	50% DD EXCHANGE

DATE ISSUED FOR SEAL
 Vincent Farese, PE
 N.J. Professional Engineer No. 43940
 PROJECT NAME

VIRTUAL REALITY CLASSROOM & DEVELOPMENT LAB
 AT L. HOWARD FOX STUDIO THEATRE
 MONTCLAIR STATE UNIVERSITY

DRAWING NAME
ELECTRICAL: LIGHTING PLAN

DRAWN BY: SC PROJECT NO.: 22322
 DATE: 02-06-2024 SCALE: AS NOTED

SHEET NUMBER
E2-1

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