Detroit Diesel Corportation M1 Renovation

13400 Outer Dr. W, Detroit, MI 48239

Issued for Bids & Construction 10/30/2024 Project Number: 231609



fishbeck.com 800.456.3824

1515 Arboretum Drive, Grand Rapids, Michigan

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GENERAL ABBREVIATIONS ACM ALUMINUM COMPOSITE MATERIAL EF

AFF ABOVE FINISHED FLOOR AHU AIR HANDLING UNIT AL ALUMINUM ALT ALTERNATE BARRIER FREE BRG BEARING CJ CONTROL JOINT CL CENTERLINE CW CURTAINWALL CLG CEILING CMU CONCRETE MASONRY UNIT CO CLEANOUT CONC CONCRETE CONST CONSTRUCTION CONT CONTINUOUS DIA DIAMETER DN DOWN DS DOWNSPOUT

EXHAUST FAN ELEVATION EXPANSION JOINT EQUAL EWC ELECTRIC WATER COOLER FLOOR DRAIN FRT FIRE RETARDANT TREATED FOOT/FEET GA GUAGE/GAGE GALV GALVANIZED GC GENERAL CONTRACTOR HB HOSE BIBB HP HIGH POINT HORIZ HORIZONTAL HVAC HEATING VENTILATING AIR CONDITIONING INSIDE DIAMETER INVERT ELEVATION IMP INSULATED METAL PANEL

EQ

FD

FT

IF



LED LIGHT EMITTING DIODE LLH LONG LEG HORIZONTAL LLV LONG LEG VERTICAL MFR MANUFACTURER MO MASONRY OPENING N/A NOT APPLICABLE NC NOISE CRITERIA NIC NOT IN CONTRACT



PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH

ARCHITECTURAL

A001	GENERAL NOTES / BF DETAILS
A101	FIRST FLOOR PLAN
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4 5 0 4	

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PLUMBING

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H601	CONTROL
H602	CONTROL
H603	CONTROL
H701	SCHEDUL
H801	DETAILS

E001	LEGENL
E002	SCHEDU
E101	FIRST FI
E201	FIRST FI
E202	ROOF P
E301	LOW VO
E401	DEMOLI
E402	NEW PA





BUILDING CODE INFORMATION

		E DRAWINGS HAVE	BEEN PREPARED	IN ACCORDANC
	2015 MICHIGAN F	CODES.	NOTIFY THE ARCH	ITECT OF ANY C
	2021 MICHIGAN M 2021 MICHIGAN F 2023 NATIONAL E 2015 MICHIGAN E	MECHANICAL CODE PLUMBING CODE (AS ELECTRIC CODE (NE ENERGY CODE	(AS AMENDED) S AMENDED) EC)(AS AMENDED -	MICHIGAN AME
	INTERNATIONA ANSI / ASHRAE 2012 INTERNATIO	AL ENERGY CONSER : / IESNA STANDARE DNAL FIRE CODE	RVATION CODE - 20) - 2013, 90.1 (AS Al	015, SECTION 50 MENDED)
	BARRIER FREE R 2015 MICHIGAN E 2009 INTERNATIO	EQUIREMENTS BUILDING CODE - CH DNAL CODE COUNC	IAPTER 11 IL A117.1 - EXCEPT	SECTIONS 611
	<u>ITEM</u>			(IN
	SCOPE OF WO	<u>RK</u> ATION OF 15,819 SC		OFFICE SPACE.
	BOTH THE ELECT EXTENDED TO CC	S, RECONFIGURATION RICAL SERVICE, PLI IVER THE ENTIRE A	JN OF EGRESS PA JMBING AND HVA REA OF RENOVATI	C SYSTEMS. FIR
	CLASSIFICATIO	N OF RENOVATION	ON WORK	
	LEVEL 2 ALTERAT	TYPE		(MF
	BUILDING USE			
	NO CHANGE IN OC TYPE OF CONS	CCUPANCY		SE (IVIE
	CONSTRUCTION T II-B, FULLY S	rype Sprinkled		(ME
	BUILDING HEIG ALLOWABLE HEIG ACTUAL HEIGHT :	HT GHT : 3 STORIES 2 STORIES	75 FT 47 FT	(ME
	BUILDING AREA	A (SCOPE OF WO	<u>RK)</u>	
	CATEGORY OFFICE AREA	EXISTING 414,000 SQ.FT	NEW 0 SQ.FT	RENOVA1
	PLANT AREA OUT BUILDINGS	2,550,000 SQ.FT. 122,439 SQ.FT.	0 SQ.FT. 0 SQ.FT.	0 S
	ALL WORK IS REN BUILDING(S).	NOVATION OF EXIST	ING SPACES, NO N	IEW AREA HAS I
	FIRE RESISTAN	ICE RATINGS OF	STRUCTURAL E	LEMENTS
	ITEM STRUCTURAL FR/ BEARING WALLS	AME - EXT.	RATING 0 0	<u>UL N</u>
	BEARING WALLS NONBEARING WA NONBEARING WA	- INT. ILLS - EXT. ILLS - INT. ICTION	0 0 0	
	ROOF CONSTRUC SHAFT ENCLOSUI STAIR ENCLOSUF	CTION RES RES	0 1 1	 U41 U41
	OCCUPANT LO	<u>AD</u>		
	NO CHANGES WE	RE MADE TO THE C	CCUPANCY LOAD	S.
	FIRST FLOOR A CALCULATIONS F G201.	AREA (SCOPE OF OR TOTAL OCCUPA	<u>WORK)</u> NT LOAD ARE BAS	ED ON ROOM IN
	NORTH SUITE - 17 ASSEMBLY - UNC BUSINESS (9425	78 OCCUPANTS ONCENTRATED TAE	LES AND CHAIRS	(1235 SF) 15 NE ⁻ 100 GF
	<u>SOUTH SUITE - 64</u>			
	ASSEMBLY - UNCO BUSINESS (4518	ONCENTRATED TAE SF)	BLES AND CHAIRS ((267 SF) 15 NE ⁻ 100 GF
	BENCHMARKING BUSINESS (595 S	- <u>6 OCCUPANTS</u> SF)		GROSS SF PER
				TOTAL OCC
	EGRESS COMPON OCCUPANCY = 24	<u>ENTS (TABLE 1005.</u> 8	<u>1)</u>	
	STAIRWAYS 0.3" (N STAIRWAYS 0.2" (S MAIN FLOOR: 248 F	ION-SPRINKLERED) SPRINKLERED) PEOPLE x 0.15"/PER	OTHER COMPC OTHER COMPC SON = 37.2 INCHES	DNENTS 0.2" (NC DNENTS 0.15" (S S
	PROVIDED: 5 DOOI STAIRS: 248 PEOP PROVIDED: 1 STAII	RS @ 33 INCHES CL LE x 0.2"/PERSON = R @ 95 INCHES CLE	EAR = 165 INCHES 49.6 INCHES AR = 95 INCHES	
	PLUMBING FIXT	URE COUNT OF PLUMBING FAC	ILITIES, BASED ON	BUSINESS USE
	248 OCCUPANTS T MALE (REQUIRED) 124 OCCUP. = 4 W	OTAL - 124 EACH G	ENDER <u>MALE (PROVID</u> 2 W.C.	<u>DED)</u>
	124 OCCUP. = 3 LA	ED)	3 LAV. 2 URINALS <u>FEMALE (PRO'</u>	VIDED)
	124 OCCUP. = 4 W. 124 OCCUP. = 3 LA	.C. V.	4 W.C. 3 LAV.	
	0 UNISEX TOILETS 1 SERVICE SINK 4 DRINKING FOUN	<u>)</u> TAINS		
	PLUMBING FIXTUR FACTORY ARE PRO	E CALCULATION BA OVIDED IN THE FAC	SED ON AREA OF TORY.	Work. Plumbin
)				
	SEAL			
2				

MECHANICAL ERAL NOTES AND LEGEND T FLOOR HVAC SHEET METAL PLAN OND FLOOR HVAC SHEET METAL PLAN F HVAC SHEET METAL PLAN TROL DIAGRAMS TROL DIAGRAMS TROL DIAGRAMS EDULES

ELECTRICAL E001 LEGENDS AND GENERAL NOTES ULES LOOR LIGHTING PLAN LOOR POWER AND SYSTEM PLAN OWER AND SYSTEMS PLAN OLTAGE DETAILS AND NOTES LITION ONE LINE DIAGRAM ARTIAL ONE LINE DIAGRAM E501 PANELBOARD SCHEDULES AND DETAILS

EVATION TAG	ENLARGED DETAIL FRAI	
01)		A201
VATION / PHOTO TAG		
D1 D		
TRUE NORTH	4	
	ELEVATION TARGET	•
	SPOT ELEVATION	EL. 100'-0"
NORTH NORTH	NEW CONSTRUCTION -	000
Room name	EXISTING GRID	

SIGNAGE TAG	1
FINISH TAG	P-1
BULLETIN IDENTIFICATION	
ADDENDUM IDENTIFICATION	A1
SKETCH IDENTIFICATION	<u>s1</u>
BARRIER FREE LOCATION	G
KEY NOTE TAG	$\langle \rangle$
DEMOLITION NOTE TAG	$\langle 1 \rangle$

E WITH THE FOLLOWING ONFLICTS. AMENDED) NDMENTS PART 8 RULES) 1.1 & 707 CODE SECTION ICL. AMENDMENTS) MODIFICATIONS INCLUDE S MODIFICATIONS INCLUDE S MODIFICATIONS TO E PROTECTION IS	rfishbeck	Engineers Architects Scientists Constructors
AC - SEC. 302, TABLE 508.4) AC - SEC. 602) AC - TABLES : 504.3 & 504.4) FED TOTAL SQ.FT 414,000 SQ.FT. Q.FT 2,550,000 SQ.FT. Q.FT 122,439 SQ.FT. DTAL 3,086,439 SQ.FT. BEEN ADDED TO THE (TABLE 601) (TABLE 601) (TABLE 601) (SEC. 1023.2) (SEC. 1023.2) IFORMATION DRAWN ON (SET PER OCCUP. = 83 ROSS SF PER OCCUP. = 18 OCCUP. = 6 UPANTS= 248 N-SPRINKLERED) PRINKLERED) PRINKLERED) PRINKLERED)	Detroit Diesel Corporation 13400 Outer Dr W, Detroit, MI 48239	M1 Renovation
	10/30/2024 BIDS & CO Drawn By DNI Designer IEH Reviewer MTV Manager KN Hard copy is intr 30"x42" when plot indicated and grap not be accurate for PROJEC 2316 SHEET GG1	ended to be tted. Scale(s) hic quality may any other size. T NO. 509 NO. 01







		CODE LE	EGEND	
		(###) _N	OCCUPANT LOAD N = FLOOR AREA PER OCCI	JPANT
		(##)	OCCUPANT LOAD	
		→	ROOM EXITS	
		FE	FIRE EXTINGUISHER	
		FEC	FIRE EXTINGUISHER CABIN	ET; PROVIDE NEW CABINET WHERE SHOWN ON PLAN
		FHC	FIRE HOSE CABINET	
		SR	SMOKE RESISTIVE ROOM: F TO FLOOR SLAB / DECK AB	PROVIDE SELF-CLOSING DOOR WITH WALLS EXTENDING TOVE.
		P	PANIC DEVICE OR PUSH / P	ULL DOOR HARDWARE THAT REMAINS UNLOCKED
		1	STAIR SIGNAGE	
· 107' - 7"		EV	EVACUATION SIGN AT EACH DIRECTION TO ACCESSIBLE 2-WAY COMMUNICATION SY	HEXIT. SIGN TO INCLUDE AT EXITS WHICH ARE NOT ACCE EXITS. AT DOORS W/ NO ACCESSIBLE EXITS, PROVIDE D /STEM AT ELEVATOR OR NEAREST ACCESSIBLE EXIT (IFC
300'-0" EL:73' - 1"	EXIT ACCESS TRAVEL : 96' - 8" MAX. ALLOWABLE : 300'-0"	200	2-WAY COMMUNICATION TO REFER TO CODE NOTE 16 F	O APPROVED CONSTANTLY ATTENDED STATION PER MBC FOR MORE INFORMATION
			B-BUSINESS USE	
			NOT IN SCOPE	
			ASSEMBLY USE	
FEC		OCCUPA REQUIRE DOORS F TOTAL CI	NCY : ## ED : ##" PROVIDED : (##) X' - X" LEAR OPENING : ##"	NUMBER OF OCCUPANTS IN SPACE REQUIRED EGRESS WIDTH (0.15", 0.2", 0.3") NUMBER AND SIZE OF DOORS PROVIDED TOTAL CLEAR OPENING WIDTH PROVIDED
		EXITA	ACCESS TRAVEL: X' - X"	PATH OF TRAVEL DISTANCE FROM THE MOST REMOTE POINT TO AN EXIT (INCLUDES COMMON PATH OF TRAVEL)
		MAX	X. ALLOWABLE: XX'-X"	MAXIMUM ALLOWABLE DISTANCE PER CODE
	COMMON PATH OF TRAVEL:34' - 2" MAX_ALLOWABLE : 75'-0"	COMM	ON PATH OF TRAVEL:X'-X"	PATH OF TRAVEL DISTANCE TO REACH A POINT WHERE TWO SEPARATE PATHS TO EXITS ARE AVAILABLE.
		MA	X. ALLOWABLE : X'-X"	MAXIMUM ALLOWABLE DISTANCE PER CODE
				FIRE RATED WALL/ BARRIER

KEY PLAN



XTENDING TIGHT

E NOT ACCESSIBLE 6, PROVIDE DIRECTION TO 6LE EXIT (IFC 404) ON PER MBC 1007.8

0.3")





 \bigcirc NORTH



SHEET NO.

G201





NORTH

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



FIRST FLOOR DEMOLITION PLAN-SOUTH SCALE: 1/8" = 1'-0"

FIRST FLOOR DEMOLITION PLAN-NORTH



GENERAL DEMOLITION NOTES

1. GENER/ APPLY 1 SET.	AL DEMOLITION NOTES, KEYED DEMOLITION NOTES AND SPECIFICATIONS TO ARCHITECTURAL DEMOLITION PLANS INCLUDED WITHIN THIS DOCUMENT
2. THESE I WORK F	DEMOLITION NOTES AND PLANS DO NOT FULLY REPRESENT ALL DEMOLITION REQUIRED TO INSTALL NEW WORK IN ACCORDANCE WITH CONTRACT IENTS, BUT ARE INTENDED TO SERVE AS GENERAL DEMOLITION GUIDELINES
3. COORD SPECIFI	INATE AND PHASE DEMOLITION IN ACCORDANCE WITH PLANS AND ICATIONS IN ORDER TO MAINTAIN BUILDING SECURITY, WEATHER TIGHTNESS,
4. COORD	INTINUING OPERATIONS FOR OWNER.
INCLUD 5. ALL WO	ING STRUCTURAL, MECHANICAL, AND ELECTRICAL. PRK INDICATED WITH SOLID LINES IS EXISTING TO REMAIN, UNLESS OTHERWISE
NOTED. 6. WHERE	ITEMS ARE REMOVED, REFER TO NEW WORK DOCUMENTS FOR PATCH AND
REPAIR 7. ALL ITEI	REQUIREMENTS. MS NOT PART OF THE SCOPE OF DEMOLITION ARE TO BE PRESERVED AND
PROTEC 8. REMOV	CTED THROUGHOUT THE DURATION OF DEMOLITION AND CONSTRUCTION. E AND SALVAGE FIRE EXTINGUISHERS AND FIRE EXTINGUISHER CABINETS IN
AREA O 9. DEMOLI	F WORK AND RETURN TO OWNER. ISH FLOORING DOWN TO SOLID SUBSTRATE IN ENTIRE AREA OF WORK UNLESS
NOTED 10. ALL WA	OTHERWISE. REFER TO NEW WORK.
AREA O 11. COORD	F WORK.
ASPHAL ARE AP	T WITH ELECTRICAL AND MECHANICAL DRAWINGS. ALL LOCATIONS SHOWN PROXIMATE.
12. REMOV LEVEL 4	'E TEXTURED WALL COVERING ON ALL WALLS TO REMAIN AND PREP FOR A 4 WALL FINISH.
13. REMOV 14. OWNEF	'E WASTE RECEPTACLES AND RETURN TO OWNER FOR REUSE. R TO REMOVE ALL TILE AND ACM MASTIC.
DEM	OLITION SYMBOL LEGEND
	EXISTING WALLS TO REMAIN
	EXISTING WALLS TO BE REMOVED
	EXISTING DOOR TO REMAIN
In the second se	EXISTING DOOR TO BE REMOVED
	NOT IN SCOPE
(#)	DEMOLITION KEY NOTES
1	REMOVE AND RETURN REFRIGERATOR TO OWNER.
2	REMOVE MILLWORK COUNTERTOP AND SUPPORTS.
3	MASONRY INFILL TO BE REMOVED FROM EXISTING OPENING. SALVAGE BRICK TO BE REUSED FOR PATCHING.
4	REMOVE COLUMN SURROUND. TYPICAL.
5	REMOVE HANDRAIL.
6	UPPER RUN OF STAIRS AND LANDING TO REMAIN. LOWER RUN OF STAIRS TO BE REMOVED. REFER TO A601 FOR ADDITIONAL DEMO NOTES.
7	REMOVE MASONRY WALL ASSEMBLY FOR WALL OPENING.
8	REMOVE ALL PLUMBING FIXTURES, PARTITIONS, COUNTERTOPS, TOILET ACCESSORIES AND BACKING.
9	REMOVE STORAGE UNITS.
10	REMOVE CASEWORK THROUGHOUT.
	IN COORDINATION WITH MECHANICAL DRAWINGS.
12	SELECTIVELY REMOVE PORTION OF SLAB FOR LEVEL CHANGE.
	MASONRY COURSING. VERIFY LOCATION IN FIELD.
14	TEMPORARY 1-HOUR CONSTRUCTION BARRIER (UL419) TO STRUCTURAL DECK ABOVE. COORDINATE LOCATION WITH EXISTING CONSTRUCTION TO REMAIN. REMOVE CEILING AS REQUIRED FOR TEMPORARY CONSTRUCTION BARRIER AND REPLACE TO AS-IS CONDITION WHEN COMPLETE. WALL TO RECEIVE LEVEL 4 FINISH, PRIMED AND PAINTED, WITH THE CEILING TIED BACK TO IT.
15	PROVIDE TEMPORARY 45 MINUTE RATED 3'-0" DOOR WITH CLOSER AND FRAME IN CONSTRUCTION BARRIER. PROVIDE SIGNAGE "CONSTRUCTION PERSONEL ONLY"
16	BOLLARD TO BE REMOVED.
17	
20	REMOVE RAMP.
21	REMOVE FLOORING AND BASEBOARDS THROUGHOUT.
22	REMOVE WATER FOUNTAIN FOR TEMPORARY WALL INSTALLATION.
23	APPROXIMATE SAWCUT LOCATION REMOVE CONCRETE SLAB ON GRADE IN COORDINATION WITH ELECTRICAL DRAWINGS.
24	TEMPORARY 1-HOUR CONSTRUCTION BARRIER (UL419) TO STRUCTURAL DECK ABOVE TO ALLOW FOR CONTINUED ACCESS TO 2ND FLOOR VIA STAIR DURING CONSTRUCTION. COORDINATE LOCATION WITH EXISTING ABOVE CEILING CONSTRUCTION/UTILIES TO REMAIN. REMOVE CEILING AS REQUIRED FOR TEMPORARY CONSTRUCTION BARRIER AND REPLACE TO AS-IS CONDITION ON EXTERIOR SIDE. WALL TO RECEIVE LEVEL 4 FINISH, PRIMED AND PAINTED, WITH THE CEILING TIED BACK TO IT.
25	DOOR TO REMAIN DURING CONSTRUCTION WITH "CONSTRUCTION PERSONEL ONLY" SIGNAGE
26	TRENCH TO BE REMOVED. VERIFY LOCATION AND EXTENTS IN FIELD. OWNER WILL BE RESPONSIBLE FOR REMOVAL OF ASPHALT TILE OVER TRENCH.
27	FIRE EXTINGUISHER CABINET TO BE REMOVED. PATCH WALL TO MATCH ADJACENT CONSTRUCTION.
28	FIRE EXTINGUISHER TO BE REMOVED. PATCH WALL TO MATCH ADJACENT CONSTRUCTION.

FIRE EXTINGUISHER TO REMAIN.

KEY PLAN

28

23

(UL419) TO STRUCTURAL XISTING CONSTRUCTION TO EMPORARY -IS CONDITION WHEN PRIMED AND PAINTED, WITH





SHEET NO.

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D201









	$\langle \# \rangle$	DEMOLITION KEY NOTES
1		REMOVE LAY IN CEILING IN STAIRWELL.
2		GYPSUM BOARD SOFFIT AT STAIRWELL TO REMA
3		GYPSUM BOARD CEILING TO BE REMOVED
4		GYPSUM BOARD SOFFIT TO BE REMOVED
5		EXISTING CEILING IN STORAGE CLOSET TO REM
6		REMOVE AND REPLACE CEILING TO PROVIDE TE UNDERSIDE OF DECK DURING CONSTRUCTION.
7		REMOVE AND REPLACE CEILING AS REQUIRED F PLUMBING AND ARCHITECTURAL WORK
8		CEILING TO REMAIN



KEY PLAN











ROOF PLAN SYMBOL LEGEND

+1 1/2	INDICATES SLOPE OF STRUCTURAL STEEL (TYP.); REFER TO STRUCTURAL INDICATES HEIGHT OF TAPERED INSULATION ABOVE RIGID INSULATION
\leftarrow	TAPERED INSULATION
O _{RD}	ROOF DRAIN
O _{ORD}	OVERFLOW ROOF DRAIN
O _{VTR}	VENT THRU ROOF
	EXHAUST FAN
	ROOF TOP HVAC UNIT
	ROOF HATCH
	SKYLIGHT
	ROOF LADDER
□ SC	ROOF SCUPPER
	CONCRETE PAVER
	TRAFFIC PAD
	CONCRETE SPLASH BLOCK
(# >	KEY NOTES

1 REMOVE ROOF AS REQUIRED FOR NEW MECHANICAL UNIT, COORDINATE WITH MECHANICAL. DO NOT CUT EXISTING FRAMING OR BRACING.

KEY PLAN





NORTH























- 2. FIELD DETERMINE EXACT LOCATIONS AND REMOVE PORTIONS OF PIPING, FIXTURES, AND EQUIPMENT SHOWN BY CROSS-HATCHING. SCHEDULE SHUT-DOWNS WITH OWNER. CAP ALL OPEN D PIPE ENDS AT END OF WORK DAY. REFER TO OTHER DRAWINGS FOR COORDINATION OF EXTENT OF DEMOLITION WITH NEW WORK.
- 3. KEEP IN SERVICE IN THEIR PRESENT POSITION UTILITIES PASSING FROM ONE PHASE TO ANOTHER THAT ARE ACTIVELY SERVING OCCUPIED AREAS, OR REROUTE AND RECONNECT TO EXTENT NECESSARY TO INSTALL THE NEW WORK OF THE CURRENT CONSTRUCTION PHASE.
- 4. PATCH OPENINGS LEFT BY DEMOLITION IN ROOF, WALLS, AND FLOORS TO MATCH SURROUNDING SURFACES.
- 5. REPAIR TO ORIGINAL CONDITIONS ANY PIPE AND DUCT INSULATION DAMAGED DURING DEMOLITION.
- PROVIDE REMOVAL AND REINSTALLATION OF CEILINGS. REPLACE DAMAGED CEILING TILES AND GRID TO MATCH
- PENETRATIONS IN RATED WALLS IN AREAS OF DEMOLITION
- AS REQUIRED TO PERFORM THE WORK OF DEMOLITION.
- 9. REMOVE ALL POWER AND CONTROL WIRING AND DEVICES ASSOCIATED WITH EQUIPMENT BEING REMOVED.
- 10. ALL SUPPLY AND DRAINAGE PIPING SERVING THE FLOOR ABOVE TO REMAIN ACTIVE.



KEY PLAN

υ. 0 **Corporatio** roit, MI 48239 atio C \mathbf{O} Ð (1) S Ľ Die Ę Detroit 00 с Ň REVISIONS 10/30/2024 BIDS & CONSTRUCTION NORTH Drawn by SAF Designer JPS Reviewer WL Manager KN Hard copy is intended to be 30"x42" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size. PROJECT NO. 231609 SHEET NO. **D501**



NORTH





NORTH







PHOTO 3 NO SCALE

PHOTO 4 NO SCALE

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

1. PRIOR TO BID, VISIT THE SITE TO EXAMINE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK, AS WELL AS DEVICES INTENDED TO REMAIN. BECOME FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION OF DEVICES AND EQUIPMENT REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES.

NOTES

- 2. ITEMS SHOWN ON PLAN ARE TAKEN FROM LIMITED FIELD VISITS AND PARTIAL ANTIQUATED RENOVATION PLANS AND ARE INTENDED FOR GENERAL SCOPE INFORMATIONAL PURPOSES ONLY. NOT ALL ITEMS REQUIRED TO BE DEMOLISHED (OR REMAIN) ARE SHOWN. FIELD VISIT AND DEMOLISH ALL ITEMS REQUIRED TO ACCOMMODATE DESIGN INTENT.
- 3. DISPOSE OF ALL MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. SEE SPECIFICATIONS.
- 4. IN AREA OF RENOVATION, REMOVE ALL SYSTEMS COMPLETE TO ACCOMMODATE NEW BUILDING DESIGN. COORDINATE ALL WORK WITH ARCHITECTURAL TRADES TO ENSURE COMPLIANCE WITH DESIGN AND PHASING. NOT ALL ITEMS OR DEVICES ARE SHOWN. FIELD CONFIRM.
- 5. ITEMS SHOWN DARK AND DASHED ARE INTENDED TO BE REMOVED. ITEMS SHOWN LIGHT ARE INTENDED TO REMAIN.
- AS REQUIRED TO KEEP EXISTING EQUIPMENT IN SERVICE. 7. REMOVE ALL CONDUIT AND WIRE BACK TO NEAREST UPSTREAM DEVICE REMAINING IN SERVICE. WHERE DEMOLITION WORK AFFECTS ELECTRICAL SERVICE TO DOWNSTREAM DEVICES INTENDED TO REMAIN, EXTEND
- SERVICE. 8. EXPOSED CONDUIT, JUNCTION BOXES AND DEVICES INTENDED TO BE DEMOLISHED SHALL BE DISCONNECTED AND REMOVED. CONCEALED CONDUIT, JUNCTION BOXES AND DEVICES MAY BE ABANDONED IN PLACE. ALL WIRING SHALL BE COMPLETELY REMOVED BACK TO ITS SOURCE. PROVIDE BLANK COVERS FOR ANY BOXES ABANDONED IN PLACE THAT ARE TO REMAIN AS COORDINATED WITH ARCHITECTURAL TRADES. WHERE POSSIBLE AND APPLICABLE, CONTRACTOR MAY INSTALL NEW WIRING IN EXISTING CONDUIT. MARK ALL
- UNUSED CIRCUIT BREAKERS AS "SPARE". 9. PROVIDE FIRESTOPPING FOR ALL CONDUIT AND OTHER ELECTRICAL EQUIPMENT PENETRATIONS THROUGH FLOORS, WALLS AND CEILINGS TO MAINTAIN FIRE RATINGS. PROVIDE THERMAL SEAL IN ALL CONDUITS THAT TRAVERSE FROM A CONDITIONED SPACE TO AN UNCONDITIONED SPACE.
- 10. REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS. 11. COORDINATE REPAIR OF WALLS, FLOORS AND CEILINGS AFFECTED BY ELECTRICAL MODIFICATIONS WITH ARCHITECTURAL TRADES. PATCH AND REPAIR AS NECESSARY.
- 12. ALL SWITCH LOCATIONS NOT RE-USED THAT REMAIN SHALL BE BLANKED OFF TO MATCH ADJACENT AREA. COORDINATE WITH ARCHITECTURAL TRADES.
- 13. RECEPTACLES AND OTHER DEVICES IN WALLS INTENDED TO REMAIN SHALL REMAIN OPERATIONAL. PROVIDE ALL REVISIONS REQUIRED.
- 14. REFER TO PARTIAL ONE LINE DIAGRAM FOR POWER DISTRIBUTION MODIFICATION REVISIONS.
- 15. CONTRACTOR TO INCLUDED 40 ADDITIONAL MANHOURS TO DEMO MISC. ELECTRICAL ON THE PLANT SIDE WALL OF THE OFFICE RENOVATION. DIRECTED BY OWNER REP.
- 16. CONTRACTOR TO REMOVE AND SAVE ALL WI-FI ACCESS POINTS (AP) FOR REINSTALLATION. DEMO EXISTING NETWORK CABLES BACK TO SOURCE. REINSTALL AP'S WHERE INDICATED ON NEW WORK PLAN.

PHOTO 1 NO SCALE

PHOTO 2 NO SCALE

- -

6. PROVIDE TEMPORARY POWER, LIGHTING AND/OR CONTROLS

CONDUIT AND WIRE AS REQUIRED TO MAINTAIN ELECTRICAL

2 TRANSFORMER (T-M1-F/1-A) MOUNTED HIGH, TO REMAIN. 3 PANEL TO BE REMOVED AND REPLACED WITH NEW IN A

CABLING SERVING THIS SPACE. SEE PHOTOS 3 & 4 ON

FITTING, COVER PLATES, AND DUPLEX RECEPTACLES IN 9 DEMO THREE PANELS, XFMR, CONDUIT, WIRING AND ALL RELATED ELECTRICAL HARDWARE BACK TO BUS PLUG. SAVE PANELBOARD RP-M1-B0-NW AND TURN OVER TO

CONDUIT AND WIRE BACK TO NEAREST REMAINING

VERIFY EXACT LOCATION IN FIELD. RETAIN EXISTING CIRCUIT FOR AND CONNECT NEW PA SPEAKERS INTO THIS CIRCUIT. CONTRACTOR TO EXTEND NEW SPEAKER WIRING AS REQUIRED FOR A FULLY FUNCTIONAL PA

 \bigcirc

NORTH

0 **rporati** t, MI 48239 oit, 0 atio Ľ \mathbf{O} 0 ď S Υ \square U $\overline{}$ Σ **oit** 13400 -Ð REVISIONS 10/30/2024 BIDS & CONSTRUCTION Drawn By GAC Designer BJG Reviewer JAM Manager KN

Hard copy is intended to be 30"x42" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

> PROJECT NO. 231609 SHEET NO.

SECOND FLOOR ELECTRICAL DEMOLITION PLAN - NORTH

DISCONNECT AHU, RETURN FAN, PUMPS. DEMOLISH CONDUIT AND WIRING BACK TO

SOURCE ----

KEY PLAN

V 0 orporati atio C \mathbf{O} Ð S Ŷ Die Ę Detroit 8 , М REVISIONS 10/30/2024 BIDS & CONSTRUCTION Drawn By GAC NORTH Designer BJG Reviewer JAM Manager KN Hard copy is intended to be 30"x42" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size. PROJECT NO. 231609 SHEET NO. **D702**

GENERAL NOTES

- COORDINATE ALL WORK INDICATED PER THE PROJECT MANUAL AND DRAWINGS NOTE: THE MOST STRINGENT REQUIREMENT OR MORE COSTLY WORK SHALL GOVERN WHERE CONFLICTS OCCUR. 2. COORDINATE PHASING AND SEQUENCING OF THE WORK TO MAINTAIN BUILDING SECURITY AND WEATHER TIGHTNESS.
- 3. COORDINATE ALL CUT, PATCH, AND REPAIR WORK WITH ALL OTHER TRADES, INCLUDING MECHANICAL AND ELECTRICAL DRAWINGS. PATCHING OF FINISHES TO EXTEND TO NEAREST NATURAL BREAK OR SURFACE TERMINATION FOR A CLEAN, UNBLEMISHED APPEARANCE AT THE END OF CONSTRUCTION.
- 4. PROVIDE INTERIOR AND/OR EXTERIOR SHORING, BRACING, OR SUPPORT AS REQUIRED TO PREVENT MOVEMENT, SETTLEMENT, DAMAGE, OR COLLAPSE OF THE STRUCTURE WHERE WORK OCCURS.
- 5. VERIFY ALL DIMENSIONS INDICATED ON DRAWINGS PRIOR TO CONSTRUCTION; COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.
- 6. IF AREAS WITHIN THE BUILDING ARE TO REMAIN OCCUPIED, PROVIDE AND MAINTAIN CONSTRUCTION BARRIER BETWEEN CONSTRUCTION AND OCCUPIED AREA.
- 7. REFER TO REFLECTED CEILING PLANS FOR CEILING HEIGHTS. ALL CEILING ELEVATIONS ARE ABOVE FINISH FLOOR.
- ALL DIMENSIONS ON FLOOR PLANS ARE SHOWN TO FINISHED FACE OF WALL, UNLESS OTHERWISE NOTED. REFER TO ENLARGED FLOOR PLANS, SECTIONS, AND DETAILS FOR OTHER DIMENSIONS.
- REFER TO ROOM FINISH SCHEDULE, ELEVATIONS, REFLECTED CEILING PLAN AND FLOOR FINISH PLANS FOR FINISHES. 10. TOP OF SIDEWALK OUTSIDE OF EXIT DOORS TO BE HELD 1/4" BELOW
- FINISHED FLOOR. 11. SLOPE FLOORS TO FLOOR DRAINS. REFER TO ARCHITECTURAL AND
- STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION. 12. MECHANICAL AND ELECTRICAL FIXTURES ARE SHOWN FOR REFERENCE AND COORDINATION ONLY. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR TYPES, LOCATIONS AND QUANTITIES REQUIRED.
- 13. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR COMPLETE LISTING OF ALL PENETRATIONS, ROOF PENETRATIONS, AND ROOF TOP EQUIPMENT.
- 14. ALL BLOCKING / SHEATHING TO BE FIRE RETARDANT TREATED (FRT), EXCEPT NON-STRUCTURAL BLOCKING IN INTERIOR WALLS SUCH AS FOR HANDRAILS, MILLWORK, CABINETS, AND WINDOW AND DOOR FRAMES; OR AS OTHERWISE INDICATED.
- 15. ROOF SLOPE TO BE 1/4:12 SLOPE MINIMUM; INCLUDING RESULTANT SLOPE AT VALLEYS; VERIFY ROOF DECK CONDITION AND COORDINATE ROOF SYSTEM INSTALLATION REQUIREMENTS PRIOR TO COMMENCING ROOFING WORK.
- 16. COORDINATE INSTALLATION OF FLASHING TO PROVIDE CONTINUITY, END DAMS, AND TERMINATIONS THAT DIRECT MOISTURE OUT OF THE BUILDING; COORDINATE WITH BUILDING AIR / MOISTURE BARRIER SYSTEMS.

STANDARD DETAILS

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

FLOOR PLAN SYMBOL LEGEND NOT IN CONTRACT А INTERIOR WALL TYPE; REFER TO SHEET A201 101 DOOR NUMBER $\langle x \rangle$ WINDOW TAG TEMPORARY WALL METAL STUD WALL FIRE RATED WALL CMU WALL FACE BRICK EXISTING WALL EXISTING DOOR DOOR FLOOR DRAIN; REFER TO MECHANICAL □FD OFD STEEL LADDER, WALL MOUNTED ROOF HATCH ABOVE CONCRETE WALK; REFER TO CIVIL LOUVER; REFER TO MECHANICAL SPAN DIRECTION FOR 2" CONCRETE ON 1 1/2"x20 GA. GALVANIZED COMPOSITE DECKING WITH S1 TOTAL THICKNESS OF 3 1/2" WITH 6x6-W2.9xW2.9 $\overline{}$ WWF. FASTEN DECK TO SUPPORTING MEMBERS WITH #12 TEK SCREWS IN 36/4 PATTERN. INSTALL #10 TEK SCREW SIDELAP FASTENERS AT 36" BETWEEN SUPPORTS. **KEY NOTES** 1 MASONRY WALL INFILL. MATCH ADJACENT CONSTRUCTION AND FINISH. 2 APPROXIMATE CONCRETE SLAB ON GRADE INFILL WHERE SLAB OR TRENCH WAS REMOVED. SEE TYPICAL INFILL DETAIL ON A601. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS AND LOCATIONS OF UTILITIES AFTER FIELD VERIFICATION. 4 PRINTER; OWNER FURNISHED, CONTRACTOR INSTALLED. REFRIGERATOR; CONTRACTOR FURNISHED, CONTRACTOR INSTALLED. MANUFACTURER: TRUE REFRIGERATION MODEL: T-35-HC

- 6 NEW BOLLARD; REFER TO TYPICAL DETAIL.
- 7 EXISTING BOLLARD, PROVIDE SLEEVE TO MATCH NEW BOLLARDS.
- OF MONITOR AT 48' A.F.F. 46" TV, OWNER FURNISHED, OWNER INSTALLED. MOUNT WITH BOTTOM OF MONITOR AT 48" A.F.F.
- 10 8'-0"W x 4'-0"H WHITE BOARD. MOUNT WITH BOTTOM OF BOARD AT 32" A.F.F. CONTRACTOR FURNISHED, CONTRACTOR INSTALLED.
- 11 4'-0"W x 4'-0"H WHITE BOARD. MOUNT WITH BOTTOM OF BOARD AT 32" A.F.F. CONTRACTOR FURNISHED, CONTRACTOR INSTALLED.
- 12 PROVIDE BLOCKING IN WALL FOR BRANDING AS DIRECTED BY OWNER. REPLACE GYPSUM BOARD AND FINISH WALL TO L4 FINISH.
- 13 70" TV, OWNER FURNISHED, OWNER INSTALLED. MOUNT WITH BOTTOM OF MONITOR AT 52' A.F.F.
- 14 POST INDICATING VALVE, SEE FIRE PROTECTION DRAWINGS.
- 15 60" TV, OWNER FURNISHED, OWNER INSTALLED. MOUNT WITH BOTTOM OF MONITOR AT 48' A.F.F.
- 16 75" TV, OWNER FURNISHED, OWNER INSTALLED. MOUNT WITH BOTTOM OF MONITOR AT 48' A.F.F.
- 17 50" TV, OWNER FURNISHED, OWNER INSTALLED. MOUNT WITH BOTTOM OF MONITOR AT 48' A.F.F.

KEY PLAN

<u>~2'-0'</u>

A_TOILET ACCESSORY SCHEDULE										
TOILET ACCESSORY SCHEDULE										
TAG	DESCRIPTION	MANUFACTURER	MODEL	NOTES						
CH1	COAT HOOK	BRADLEY	9114	SATIN FINISH, 8" O.C. EQ. SPACING						
GB1	GRAB BAR VERTICAL	BRADLEY	8120-001180	18"						
GB2	GRAB BAR, HORIZONTAL	BRADLEY	8120-001360	36"						
GB3	GRAB BAR, HORIZONTAL	BRADLEY	8120-001420	42"						
M1	24" X 36" LIGHTED MIRROR	SEE ELECTRICAL								
ND1	SANITARY NAPKIN DISPOSAL	GRAINGER	1ECK9							
PD1	PAPER TOWEL DISPENSER			OWNER SUPPLIED, CONTRACTOR INSTALLED						
SD1	SOAP DISPENSER			OWNER SUPPLIED, CONTRACTOR INSTALLED						
TD1	TOILET PAPER DISPENSER			OWNER SUPPLIED, CONTRACTOR INSTALLED						

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

GENERAL NOTES

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- 2. COORDINATE PHASING AND SEQUENCING OF THE WORK TO MAINTAIN BUILDING SECURITY AND WEATHER TIGHTNESS. 3. COORDINATE ALL CUT, PATCH, AND REPAIR WORK WITH ALL OTHER TRADES, INCLUDING MECHANICAL AND ELECTRICAL DRAWINGS. PATCHING OF FINISHES TO EXTEND TO NEAREST NATURAL BREAK OR SURFACE
- TERMINATION FOR A CLEAN, UNBLEMISHED APPEARANCE AT THE END OF CONSTRUCTION. 4. PROVIDE INTERIOR AND/OR EXTERIOR SHORING, BRACING, OR SUPPORT AS
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- ELEVATIONS ARE ABOVE FINISH FLOOR. 8. ALL DIMENSIONS ON FLOOR PLANS ARE SHOWN TO FINISHED FACE OF WALL, UNLESS OTHERWISE NOTED. REFER TO ENLARGED FLOOR PLANS,
- SECTIONS, AND DETAILS FOR OTHER DIMENSIONS. 9. REFER TO ROOM FINISH SCHEDULE, ELEVATIONS, REFLECTED CEILING PLAN
- AND FLOOR FINISH PLANS FOR FINISHES. 10. TOP OF SIDEWALK OUTSIDE OF EXIT DOORS TO BE HELD 1/4" BELOW FINISHED FLOOR.
- 11. SLOPE FLOORS TO FLOOR DRAINS. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 12. MECHANICAL AND ELECTRICAL FIXTURES ARE SHOWN FOR REFERENCE AND COORDINATION ONLY. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR TYPES, LOCATIONS AND QUANTITIES REQUIRED.
- 13. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR COMPLETE LISTING OF ALL PENETRATIONS, ROOF PENETRATIONS, AND ROOF TOP EQUIPMENT.
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- 15. ROOF SLOPE TO BE 1/4:12 SLOPE MINIMUM; INCLUDING RESULTANT SLOPE AT VALLEYS; VERIFY ROOF DECK CONDITION AND COORDINATE ROOF SYSTEM INSTALLATION REQUIREMENTS PRIOR TO COMMENCING ROOFING WORK.
- 16. COORDINATE INSTALLATION OF FLASHING TO PROVIDE CONTINUITY, END DAMS, AND TERMINATIONS THAT DIRECT MOISTURE OUT OF THE BUILDING; COORDINATE WITH BUILDING AIR / MOISTURE BARRIER SYSTEMS.

FLOOR PLAN SYMBOL LEGEND

 <₩>	KEY NOTES
 1	REFRIGERATOR; CONTRACTOR FURNISHED, CONTR
2	HANDRAIL.
3	CONCRETE FILLED METAL PAN STAIR AND CENTER S DESIGNED BY STAIR MANUFACTURER.
4	PATCH WALLS, FLOORS AND ROOF TO MATCH EXIST WHERE EQUIPMENT, DUCTWORK AND PIPING HAVE

HSS2x2x1/8 VERTICAL BRACE.

KEY PLAN

RACTOR INSTALLED.

SUPPORTS TO BE TING CONSTRUCTION

BEEN REMOVED.

30"x42" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size. PROJECT NO.

> 231609 SHEET NO.

GENERAL FINISH NOTES

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0 Corporatic Detroit, MI 48239 ation 0 Ð (L) Dies Ŷ ž etroit REVISIONS 10/30/2024 BIDS & CONSTRUCTION Drawn By DNI Designer LG Reviewer KB Manager KN Hard copy is intended to be 30"x42" when plotted. Scale(s)

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NORTH

231609 SHEET NO.

A132

NORTH

GENERAL FURNITURE NOTES

1. FURNITURE SHOWN FOR REFERENCE ONLY. FOR DETAILED FURNITURE REQUIREMENTS REFER TO OWNER SUPPLIED FURNITURE DRAWINGS.

LEGEND

NOT IN SCOPE

KEY PLAN

NORTH

GENERAL REFLECTED CEILING PLAN NOTES

1. ALL CEILING ELEVATIONS ARE ABOVE FINISH FLOOR

- 2. ALL CEILING GRIDS ARE TO BE CENTERED ON ROOM / AREA U.N.O
- 3. ALL LAY-IN CEILING HEIGHTS ARE 8'-6" U.N.O.

(1) (A152) ALIGN SOFFIT WITH Ø BREAK n. --CONFERENCE RRIDOR **ROOM** 163 Q (9) 8'-6" IDF FLEX OFFICE 164

 \leftarrow F

RCP SYMBOL LEGEND

	2x4 LIGHT FIXTURE
	2x2 LIGHT FIXTURE
⊢−−−−	INDUSTRIAL OR STRIP LIGHT FIXTURE
X	SURFACE OR RECESSED LIGHT FIXTURE
\otimes	CEILING MOUNTED EXIT SIGN
S	CEILING MOUNTED SPEAKER
S	FIRE ALARM SMOKE DETECTOR
H	FIRE ALARM HEAT DETECTOR
	RETURN OR EXHAUST AIR GRILLE
	SUPPLY AIR DIFFUSER
	SLOT DIFFUSER
	ACCESS HATCH
	GYP. BOARD SOFFIT OR CEILING (P3)
C	CONTROL JOINT
	24x24 CEILING TILE AND GRID (ACP1)
	24x24 CEILING TILE AND GRID (ACP2)
	24x24 CEILING TILE AND GRID (MCT1)
\oplus	CEILING HEIGHT ELEVATION
	ACOUSTIC CEILING BAFFLE (ACB1)
	PENDANT LIGHT

KEY NOTES RCP

- 1 PAINT EXPOSED CEILING P3 UNLESS NOTED OTHERWISE
- 2 PAINT EXPOSED CEILING ABOVE METAL CEILING TILE P2.
- 3 REMOVE AND REPLACE CEILING AS REQUIRED FOR MECHANICAL AND PLUMBING WORK

 \bigcirc

1 ENLARGED FIRST FLOOR REFLECTED CEILING PLAN - NORTH - AREA A SCALE: 1/4" = 1'-0"

GENERAL REFLECTED CEILING PLAN NOTES

1. ALL CEILING ELEVATIONS ARE ABOVE FINISH FLOOR

- 2. ALL CEILING GRIDS ARE TO BE CENTERED ON ROOM / AREA U.N.O
- 3. ALL LAY-IN CEILING HEIGHTS ARE 8'-6" U.N.O.

1 ENLARGED FIRST FLOOR REFLECTED CEILING PLAN - SOUTH - AREA A SCALE: 1/4" = 1'-0"

GENERAL REFLECTED CEILING PLAN NOTES

1. ALL CEILING ELEVATIONS ARE ABOVE FINISH FLOOR

- 2. ALL CEILING GRIDS ARE TO BE CENTERED ON ROOM / AREA U.N.O
- 3. ALL LAY-IN CEILING HEIGHTS ARE 8'-6" U.N.O.

RCP SYMBOL LEGEND

	2x4 LIGHT FIXTURE
	2x2 LIGHT FIXTURE
├─── ┤	INDUSTRIAL OR STRIP LIGHT FIXTURE
X	SURFACE OR RECESSED LIGHT FIXTURE
\otimes	CEILING MOUNTED EXIT SIGN
S	CEILING MOUNTED SPEAKER
S	FIRE ALARM SMOKE DETECTOR
H	FIRE ALARM HEAT DETECTOR
	RETURN OR EXHAUST AIR GRILLE
	SUPPLY AIR DIFFUSER
	SLOT DIFFUSER
	ACCESS HATCH
	GYP. BOARD SOFFIT OR CEILING (P3)
S	CONTROL JOINT
	24x24 CEILING TILE AND GRID (ACP1)
	24x24 CEILING TILE AND GRID (ACP2)
	24x24 CEILING TILE AND GRID (MCT1)
\oplus	CEILING HEIGHT ELEVATION
	ACOUSTIC CEILING BAFFLE (ACB1)
	PENDANT LIGHT

KEY PLAN

NORTH

GENERAL ROOF PLAN NOTES

- ROOF SLOPE TO BE 1/4"/FT SLOPE MINIMUM; VERIFY ROOF DECK CONDITION AND COORDINATE ROOF SYSTEM INSTALLATION REQUIREMENTS PRIOR TO COMMENCING ROOFING WORK.
- 2. COORDINATE INSTALLATION OF FLASHING TO PROVIDE CONTINUITY, END DAMS, AND TERMINATIONS THAT DIRECT MOISTURE OUT OF THE BUILDING;
- COORDINATE WITH BUILDING AIR / MOISTURE BARRIER SYSTEMS. COORDINATE WITH THE OWNERS CONTRACTOR ROYAL ROOFING FOR ALL ROOF MODIFICAITONS.
- DESIGN AND CONSTRUCT CONNECTIONS OF ROOFTOP EQUIPMENT TO THE SUPPORTING STRUCTURE. WHERE ROOFTOP EQUIPMENT IS MOUNTED ON PRODUCTS SUCH AS CURBS, RAILS, OR SIMILAR SYSTEMS, DESIGN AND CONSTRUCT CONNECTIONS OF THE EQUIPMENT TO THE MOUNTING PRODUCTS AND OF THE MOUNTING PRODUCTS TO THE SUPPORTING STRUCTURE. DESIGN CONNECTIONS FOR APPLICABLE LOADS IN ACCORDANCE WITH THE BUILDING CODE AND ASCE 7, INCLUDING WIND AND SEISMIC LOADS. DESIGN SHALL BE PERFORMED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED IF SO REQUIRED BY THE AUTHORITY HAVING JURISDICTION. COORDINATE THE LOCATIONS OF SUPPORTING STRUCTURAL MEMBERS WITH THE EQUIPMENT

ROOF PLAN SYMBOL LEGEND

SUPPLIER.

1 1/2	INDICATES SLOPE OF STRUCTURAL STEEL (TYP.); REFER TO STRUCTURAL INDICATES HEIGHT OF TAPERED INSULATION ABOVE RIGID INSULATION
<u> </u>	TAPERED INSULATION
O _{RD}	ROOF DRAIN
0 _{ord}	OVERFLOW ROOF DRAIN
O _{VTR}	VENT THRU ROOF
EF	EXHAUST FAN
	ROOF TOP HVAC UNIT
	ROOF HATCH
\square	SKYLIGHT
	ROOF LADDER
□ □ SC	ROOF SCUPPER
	CONCRETE PAVER
	TRAFFIC PAD
	CONCRETE SPLASH BLOCK

- ♦ KEY NOTES
- PATCH ROOF TO MATCH EXISTING CONSTRUCTION EXISTING BEAMS AND BRACING TO REMAIN. DO NOT CUT EXISTING BRACING FOR DUCTWORK INSTALLATION
- 3 FRAMING FOR NEW ROOF UNITS, REFER TO MECHANICAL UNIT SUPPORT FRAME DETAIL, THIS SHEET. DO NOT CUT EXISTING BRACING FOR FRAMING INSTALLATION

MECHANICAL UNIT SUPPORT FRAME DETAIL SCALE: 1" = 1'-0"

NORTH

FINISH MATERIAL LEGEND												
MATERIAL	TAG	MANUFACTURER	STYLE	COLOR	SIZE	FINISH	INSTALLATION	NOTES				
FLOORS												
CARPET	CPT1	SHAW CONTRACT	SUSPEND 5T391	88555 PATH	9" x 36"		ASHLAR					
	CPT2	SHAW CONTRACT	ZEST 5T487	87500 GUSTO	24" x 24"		ASHLAR					
EPUXY FLOUR	EPT	HOOVER WELLS	REZ-STONE	OWNER								
LUXURY VINYL TILE	LVT1	SHAW CONTRACT	COMPOUND 5 MM, 4077V	77585 GRANITE	24" x 24"		ASHLAR					
POLISHED CONCRETE	PC1 PT1	 FRGON	 TR3ND CONCRETE	 GRFY	 24" x 24"		 RUNNING BOND	REFER TO SPEC				
GROUT	PT1	TEC	INCOLOR	934 DELOREAN GRAY	1/8" WIDE							
PORCELAIN TILE	PT2 PT2	ERGON	TR3ND CONCRETE	SAND	12" x 24"		RUNNING BOND					
PORCELAIN TILE	PT3	ERGON	TR3ND CONCRETE	BLACK	24" x 24"		RUNNING BOND					
RUBBER STAIR TREAD	RST1	TARKETT/JOHNSONITE	VIRTR-RD	TB1 PEPPERCORN								
RUBBER TILE	RI1	TARKETT/JOHNSONITE	RAISED ROUND	I B1 PEPPERCORN	24" x 24"							
WALK OFF CARPET	WOC1	MILLIKEN	OBEX, CUTX / GRAIN	DARK GREY	25CM x 1M		ASHLAR					
BASE												
EPOXY FLOOR	EP1	SEE EP1 ABOVE			6"							
FIBERGLASS REINFORCED	FRP1	MATCH FRP1 WALLS										
METAL BASE	MB1		EXTRUDED ALUMINUM BASE	POWDER COAT TO MATCH FRAME OF GLASS WALLS	4" H							
PORCELAIN TILE BASE	PTB1	ERGON	TR3ND CONCRETE	GREY	3" x 12"							
	PTB1	TEC		934 DELOREAN GRAY	1/8" WIDE							
RUBBER BASE	RB1	TARKETT/JOHNSONITE	MILLWORK WALL BASE,	63 BURNT UMBER	3 x 12 4" H							
			MONUMENT MW-63-S4									
WALLS												
CERAMIC WALL TILE	CWT1	ERGON	ABACUS	CORDA	3" x 8"	LUX	RUNNING BOND					
GROUT	CWT1	TEC		934 DELOREAN GRAY	1/8" WIDE		 RUNNING BOND					
GROUT	CWT2	TEC	INCOLOR	934 DELOREAN GRAY	1/8" WIDE							
CERAMIC WALL TILE	CWT3	ERGON	ABACUS		3" x 8"	LUX	RUNNING BOND					
GROUT CERAMIC WALL TILE	CW13 CWT4	DWYER MARBLE & TILE	MAND	GRIGIO MUSE	1/8" WIDE 12" x 18"		 STACK BOND - SEE					
GROUT	CWT4	TEC	ACCUCOLOR WITH GROUT	949 SII VERADO			ELEVATION					
	5551		BOOST									
FIBERGLASS REINFORCED PANEL	FRP1	MARLITE	STANDARD FRP	P100 WHITE	4' x 4'	PEBBLED						
PAINT	P1	SHERWIN WILLIAMS		SW 7646 FIRST STAR		SEE SPEC						
PAINT	P2	SHERWIN WILLIAMS		SW 6258 TRICORN BLACK		SEE SPEC						
PAINT	P4	SHERWIN WILLIAMS		SW 7674 PEPPERCORN		SEE SPEC						
PAINT	P5	SHERWIN WILLIAMS		SW 6244 NAVAL		SEE SPEC						
PAINT	P6	SHERWIN WILLIAMS		SW 9059 SILKEN PEACOCK		SEE SPEC						
WOOD WALL PANEL	WD1	FASHION ARCHITECTURAL DESIGNS/STACKED WOOD		FAD 2590 ANDOVER	14" x 47"							
CEILINGS ACOUSTIC CEII ING BAFFI F	ACB1	TURF	SLAB	04 LIGHT GRFY	2,25"W x 8.68"D							
ACOUSTIC CEILING PANEL	ACP1	USG	88139 MARS HIGH-NRC,0.9	WHITE	24" x 24"							
ACOUSTIC CEILING GRID	ACP1	LISG	NRC, FINELINE BEVEL	WHITE	9/16"							
METAL CEILING TILE	MCT1	USG	WIRE WORKS OPEN CELL	205 FLAT BLACK	24" x 24"							
METAL CEILING GRID	MCT1	LISG	CEILING PANEL, 1" x 1" CELLS	205 FLAT BLACK	9/16"							
PAINT	P3	SHERWIN WILLIAMS		SW 7007 CEILING BRIGHT WHITE		SEE SPEC						
	•				I							
CASEWORK PLASTIC LAMINATF	PI 1	WILSONART		7960K-18 STUDIO		LINEARITY						
				TEAK		WITH AEON						
PLASTIC LAMINATE	PL2	WILSONART		D91 SLATE GRAY		60 MATTE						
COUNTERTOPS			1									
QUARTZ	Q1	CAMBRIA			2CM	POLISHED						
	QZ		I		2011/1							
MISCELLANEOUS			1									
CORNER GUARD	CG1		L-SHAPE METAL CORNER GUARD	BLACK	1" WIDE	MATTE						
TILE ACCESSORY	TA1	SCHLUTER	RENO-U									
TILE ACCESSORY	TA2	SCHLUTER	FINEC	SATIN ANODIZED	9mm							
TOILET PARTITION	TP1	METPAR	POWDER COATED STEEL	PLATINUM 715			CEILING HUNG					
TRANSITION STRIP	TS1	TARKETT/JOHNSONITE	SLIM LINE TRANSITION STRIP	63 BURNT UMBER	1/4" TO SUBFLOOR							
WINDOW FILM	WF1	SOLYX MECHO	SXGF-0097 DEEP ETCH		 SEE DI ANI							
	VVI I		SHADE									

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

JAMB/HEAD STOREFRONT

DOOR SCHEDULE																
						DOOR				FRAME FRAME						
			PANEL	SIZE												
NO.	LOCATION	QTY	W	Н	Т	TYPE	MATERIAL	FINISH	GLASS	TYPE	MATERIAL	FINISH	HEAD	JAMB	LABEL	NOTES
IRST FI	LOOR															
101	ENTRY	1	3'-4"	7'-4"	1 3/4"	FG1	AL	ANOD	TEMP	S2	AL	ANOD	EX	EX		
101A	OPEN OFFICE	2	6'-2"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP	P2	AL	ANOD	H/A201	G/A201	20 MIN.	3
102	CONFERENCE ROOM	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
103	STAIR	2	6'-2"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP	P2	AL	ANOD	H/A201	G/A201	60 MIN.	4
103A	STORAGE	1	3'-0"	7'-0"	1 3/4"	F	WD	FF		S1	HM	P2	B/A201	A/A201	20 MIN.	
104		1	3'-0"	/'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
105		1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
106		1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD			AL	ANOD	J/A201	G/A201		1
107		1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD			AL	ANOD	J/A201	G/A201		1
108		1	3-0	7-0	1 3/4	FG1	AL				AL		J/A201	G/A201		1
151		1	3-0	7-0	1 3/4	FG1	AL				AL		J/A201	G/A201		1
152		1	2-10 1/2	7-0	1 3/4	FG1	AL				AL		J/A201	G/A201		1
153		1	3-0	7'-0	1 3/4	FG1					AL		J/A201	G/A201		1
154		1	3-0	7'-0	1 3/4	FG1					AL		J/A201	G/A201		1
155		1	3'-0"	7'-0"	1 3/4	FG1							J/A201	G/A201		1
150		1	3'-0"	7'-0"	1 3/4	FG1							J/A201	G/A201		1
158		1	3'-0"	7'-0"	1 3/4	FG1							J/A201	G/A201		1
150		1	3'-0"	7'-0"	1 3/4"	FG1							J/A201	G/A201		1
160		1	3'-0"	7'-0"	1 3/4	FG1							J/A201	G/A201		1
161		1	3'-0"	7'-0"	1.3/4"	FG1	AI		TEMP		AL		J/A201	G/A201		1
162		1	3'-0"	7'-0"	1 3/4"	FG1	AI		TEMP		AL		J/A201	G/A201		1
163		1	3'-0"	7'-0"	1 3/4"	FG1	AI	ANOD	TEMP		Al	ANOD	J/A201	G/A201 SIM		1
164		1	3'-0"	7'-0"	1 3/4"		WD	FF		S1	HM	P2	B/A201	A/A201		•
165	J.C.	1	3'-0"	7'-0"	1 3/4"	 F	WD	FF		S1	HM	P2	B/A201	A/A201		
167	MEN'S RESTROOM	1	3'-0"	7'-0"	1 3/4"	F	WD	FF		S1	НМ	P2	B/A201	A/A201		
168	WOMEN'S RESTROOM	1	3'-0"	7'-0"	1 3/4"	F	WD	FF		S1	НМ	P2	B/A201	A/A201		
169	WELLNESS	1	3'-0"	7'-0"	1 3/4"	F	WD	FF		S1	НМ	P2	B/A201	A/A201		
171	CONFERENCE ROOM	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201 SIM		1
172	CORRIDOR	1	3'-0"	7'-0"	1 3/4"	FG	AL	ANOD	TEMP	S1	AL	ANOD	H/A201	G/A201		1
174	CONFERENCE ROOM	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP	ST1	AL	ANOD	H/A201	G/A201		
175B	CORRIDOR	2	6'-0"	7'-0"	1 3/4"	G	AL	ANOD	TEMP	P2	AL	ANOD	H/A201 SIM	G/A201 SIM		
175C	CORRIDOR	2	6'-2"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP	P3	AL	ANOD	H/A201	G/A201		
200A	OPEN OFFICE	1	3'-0"	7'-4"	1 3/4"	FG1	AL	ANOD		S2	AL	ANOD	4/A501	5/A501		
200B	OPEN OFFICE	2	5'-8"	7'-0"	1 3/4"	F	WD	FF		P1	HM	P2	B/A201	A/A201		
202	CONFERENCE ROOM	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201 SIM		1
203	FLEX OFFICE	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
204	FOCUS ROOM	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
205	FLEX OFFICE	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
206	FOCUS ROOM	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
207	FLEX OFFICE	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
208	FOCUS ROOM	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
209	FLEX OFFICE	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
210	FOCUS ROOM	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
211	FOCUS ROOM	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201		1
212	IDF	1	3'-0"	7'-0"	1 3/4"	L	WD	FF		S1	HM	P2	B/A201	A/A201		
213		1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD	TEMP		AL	ANOD	J/A201	G/A201 SIM		1
214	AXLE PRODUCTION OFFICE	1	3'-0"	7'-0"	1 3/4"	FG1	AL	ANOD			AL	ANOD	J/A201	G/A201		1
215	AXLE PRODUCTION OFFICE	1	3'-0"	/'-0"	13/4"	F	HM	P2	IEMP	S2	HM	P2	F/A201	E/A201		, I

1. SEE SHEET A202 FOR ALUMINUM DOOR FRAMES INTERGAL TO ADJACENT WINDOWS. 2. ALTERNATE 1.

3. GLAZING LITE TO BE RATED D-20 PER MBC TABLE 716.5. 4. GLAZING LITE TO BE RATED D-H-T-W-60 PER MBC TABLE 716.5.

GENERAL DOOR NOTES

THE DOOR VENDER WILL PRE-DRILL ALL THE DOORS WITH THE REQUIRED LOCK HARDWARE MOUNTING AND ACCESS HOLES ACCORDING TO THE TEMPLATES PROVIDED BY THE SECURITY CONTRACTOR. 2. ALL SOLID DOORS WILL BE FITTED WITH A 3/8" CABLE RACEWAY BY THE DOOR VENDOR. THIS RACE WAY WILL RUN FROM THE HINGE SIDE OF THE DOOR TO THE LOCK MORTISE. MEASUREMENTS WILL BE PROVIDED BY SECURITY CONTRACTOR PRIOR TO ORDERING. 3. PROVIDE 6' OF CEILING CLEARANCE ABOVE THE DOORS WHEN OPENED. 4. ALL HM DOORS WILL BE FITTED WITH AN OPEN CABLE PATH BY THE DOOR VENDOR. THIS CABLE PATH WILL RUN FROM THE HINGE SIDE OF THE DOOR TO THE LOCK MORTISE. MEASUREMENTS WILL BE PROVIDED BY SECURITY

CONTRACTOR PRIOR TO ORDERING

5. 120AC POWER CIRCUIT ARE NOT REQUIRED.

FG

(ALUMINUM) DOOR TYPES

FG1

EXISTING WALL ASSEMBLY -

SEALANT EACH SIDE,

EXISTING CMU —

CONTINUOUS.

RETURN WALL FINISH TO FRAME -

EA SIDE CONTINUOUS RETURN WALL FINISH TO FRAME -

DOOR; REFER TO SCHEDULE-

EXISTING WALL ASSEMBLY

JAMB C SCALE: 1 1/2" = 1'-0"

- 5/8" GYP BD. ON 7/8"

RESILIENT CHANELS

SIDE CONTINUOUS

— SEALANT EACH

G

SEE

DESIGNATION DESCRIPTIONS FLUSH FULL GLASS FG

GU

HALF GLASS GLAZING UNIT (REFER TO SCHEDULE FOR GLASS TYPE) LOUVERED NARROW LIGHT VISION LIGHT

- 3. EXTEND RATED PARTITIONS THROUGH THE INTERIOR FACE OF EXTERIOR WALL GYPSUM BOARD AND SEAL TO THE INSIDE FACE OF THE EXTERIOR BUILDING WALL SHEATHING.
- 4. INTERIOR METAL STUD PARTITIONS ARE DIMENSIONED FROM FACE OF GYPSUM BOARD OR TILE BACKER BOARD.
- 5. MAINTAIN THE FIRE-PROTECTION RATINGS FOR ALL OPENINGS IN RATED PARTITIONS.
- 6. WHERE THICKNESS VARIES BETWEEN TWO PARTITIONS IN AN UNINTERRUPTED CONTINUOUS WALL PLANE -OFFSET STUDS AND ALIGN FACE OF PARTITIONS.
- 7. METAL STUD FRAMING: MIN. 20 GAGE @ 16" O.C., U.N.O.
- 8. UL DESIGN NUMBERS REFER TO THE UNDERWRITERS LABORATORIES FIRE RESISTANCE DIRECTORY-LATEST EDITION. 9. FIRE RATED PARTITIONS SHALL HAVE FIRESTOP SEALANT AT THE HEAD,
- SILL, THROUGH PENETRATIONS, OPENINGS AND JUNCTURES WITH DISSIMILAR MATERIALS.
- 10. BEHIND WALL TILE PROVIDE 5/8" CEMENT BOARD IN LIEU OF GYP. BOARD. HOLD TOP OF CEMENT BOARD 1/2" BELOW TOP OF TILE.
- 11. PROVIDE BULLNOSE CMU AT ALL EXPOSED OUTSIDE CORNERS. 12. EXTEND ALL WALLS TIGHT TO DECK ABOVE UNLESS NOTED OR DETAILED OTHERWISE.
- 13. OFF-SET ALL RECESSED DEVICES BY MINIMUM OF ONE STUD CAVITY. DO NOT INSTALL BACK TO BACK OR WITHIN SAME STUD CAVITY.
- 14. PROVIDE BLOCKING IN WALL REQ'D TO SUPPORT BUILT-IN ITEMS, FIXTURES, MILLWORK, AND OTHER WALL SUPPORTED ITEMS.
- 15. REFER TO LIFE SAFETY PLANS FOR LOCATION AND DURATION OF RATED ASSEMBLIES.
- 16. PROVIDE ABUSE RESISTANT GYP. BOARD FROM FLOOR TO 8'-0" AFF IN LIEU OF TYPICAL GYP. BOARD ON WALLS WITHIN CORRIDORS, CLASSROOMS, LABS AND SEMINAR ROOMS.
- 17. CONSTRUCT ALL CORRIDOR WALLS TO RESIST THE PASSAGE OF SMOKE. I.E., TO BE SMOKE TIGHT.
- FIRE AND SMOKE RATED WALL IDENTIFICATION 1. ALL RATED FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL HAVE RED PAINTED STENCIL LETTERS (3" TALL MIN. WITH 3/8" WIDE STROKE) READING SPECIFIC RATING (I.E.: 1-HOUR FIRE BARRIER) APPLIED TO WALL AROUND INTERIOR PERIMETER OF THE ROOM, EACH SIDE OF WALL, AND LOCATED ABOVE ACCESSIBLE CEILINGS. STENCIL TO BE SPACED A MAX. OF 12'-0" APART, BUT NO LESS THAN TWICE PER WALL FOR WALLS LONGER THAN 8'-0" IN LENGTH. AT LEAST ONCE FOR WALLS LESS THAN 8'-0" LONG, AND NO MORE THAN 8'-0" FROM WALL BEGINNING AND END; EXCEPT WHERE TOP OF WALL EXPOSED TO VIEW.
- ACOUSTICAL WALL NOTES (WALLS INDICATED WITH "A" SUFFIX)
- 1. INSULATION IN STUD CAVITY TO COMPLETELY FILL THE CAVITY WITHOUT OVER COMPRESSION. 2. CUT THE GYPSUM BOARD WALL HEAD TO MATCH THE METAL DECK PROFILE AND FILL THE VOIDS WITH BATT INSULATION.
- 3. NON-RATED PARTITIONS TO HAVE ACOUSTICAL SEALANT AT THE HEAD, SILL, THROUGH PENETRATIONS, OPENINGS AND JUNCTURES WITH DISSIMILAR MATERIALS.

	1 1	\int	FLOOR/ ROOF DECK
MANUFACTURED DEFLECTION TRACK WITH VERTICAL SLOTS ATTACH STUDS TO DEFLECTION TRACK AS RECOMMENDED BY IRACK MANUFACTURER			SEALANT DO NOT FASTEN GYP BOARD TO TOP TRACK

1. MULTIPLE LAYERED GYP. BOARD PARTITIONS ARE DETAILED SIMILAR 2. PROVIDE UL LISTED HEAD OF WALL ASSEMBLY AT FIRE RATED WALLS. **DEFLECTION TRACK** SCALE: 3" = 1'-0"

CMU LINTEL FOR MECHANICAL OPENINGS SCALE: 1 1/2" = 1'-0"

	WALL ⁻	TYPES										
CONSTRUCTION	STRUCTUR CLG FLOOR	STRUCTURE CLG CLG CLG CLG CLG CLG CLG CLG		RE ACOUS SEALAN BOTTOM SIDES (1) LAYE GYP. BD MTL. ST 7/8" FUF CHANNE RESILIE ISOLATI BATT IN SEE CH	TICAL IT TOP AND A BOTH ER 5/8" D. EA. SIDE UDS RRING EL + NT ON CLIPS TICAL SULATION ART	STRUCTU CLG FLOOR	JRE CONTI BOARI STRUC ABOVE EXPOS 6 MTL. S SEE C 5/8" G ONE S ACOUS BATT I	NUE GYP D TO CTURE E AT SED WALLS STUDS HART YP. BD. IDE STICAL NSULATION	STRUCTU CLG FLOOR	JRE CONTIN BOARD STRUC ABOVE ENCLO INSULA SEE CH MTL. ST 5/8" GY ONE SII 2" CLOS FOAM INSULA	IUE GYP TO TURE TO SE TION ART TUDS P. BD. DE SED-CELL TION	
	A		A3A				В		С			
	T	YPE CHART	TOTAL		TYPE CHART	TOTAL		TYPE CHART	TOTAL		TYPE CHART	
	TAG	STUD SIZE	WIDTH	TAG	STUD SIZE	WIDTH	TAG	STUD SIZE	WIDTH	TAG	STUD SIZE	WIDTH
N	A3	3 5/8"	4 7/8"	A3A	3 5/8"	5 3/4"	B0	0	5/8"	C6	5 1/2"	6 1/8"
Ш	A8	8"	7 1/4"				B1	7/8"	1 1/2"			
Ш Ц							B3 B6	3 5/8 6"	4 1/4 6 5/8"			
							00	0	0 5/0			

- DOOR AND DOOR FRAME; SEE SCHEDULE — STUD ANCHOR

- BATT INSULATION PER WALL TYPE

- 5/8" GYPSUM BOARD ON 3 5/8" METAL STUDS — SEALANT EACH SIDE CONTINUOUS

A JAMB SCALE: 1 1/2" = 1'-0"

IUE GYP URE ION UDS . BD. ED-CELL ΓΙΟΝ

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10/30/2024 BIDS & CONSTRUCTION

PROJECT NO. 231609 SHEET NO.

A201

6'-8"

WINDOW TYPE C-12

3'-4"

SEE

SCHED

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

-

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

WINDOW TYPE C-11 SCALE: 1/4" = 1'-0"

6'-0"

2'-8" 2" SEE 2" SCHED.

-

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

_	,	10	'-11"		
2"	EQ. 2"	EQ. 2'	EQ. 2	" SEE SCHED.	2"
,2" 1'-2"		//	//	//	1'-2"
2" EQ.			//		
2" EQ.			//		CHED.
2" EQ.			//		SEE SO
2" EQ.			//		
* -					

2"	4	10'-1"			د ٥"
2 5	SCHED.	2" EQ. 2"	EQ. 2	EQ.	
2" 1'-2"		//	//	//	2"
			//	//	2"EQ
ED.		//	//	//	Z" EQ
SCH				//	EQ.
			//	//	2" 2"
٢					٢
_	WINDC	DW T	YPI	<u> </u>	17
5	SCALE: 1/4" = 1'-	-0"			

SCHE

	,	10'-6 1/2			<u>.</u>
2"	SEE 2' SCHED.	' EQ 2"	EQ 2"	EQ	2"
2" 2"					1:-2"
*				//	EQ
EE TED.				//	EQ
SCF SC			//	//	EQ
_			//	//	2"

WINDOW TYPE C-16

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

WINDOW TYPE C-3 SCALE: 1/4" = 1'-0"

WINDOW TYPE C-9 SCALE: 1/4" = 1'-0"

WINDOW TYPE C-15 SCALE: 1/4" = 1'-0"

11'-2	2"		
EQ 2	" EQ 2	<u>EQ</u>	-2"
			Ž.
//	//	//	1-2
//	//	//	<u>م</u> 2
/	/	/	ш —— ъ.к
//		//	– O C C
//		///	3 2"
			EQ 2"

WINDOW TYPE C-2

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

WINDOW TYPE C-8 SCALE: 1/4" = 1'-0"

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

WINDOW TYPE C-13

WINDOW TYPE C-7

12'-6"

4'-2"

WINDOW TYPE C-1

4'-2"

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

4'-2"

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

-

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

WINDOW TYPE C-20

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

WINDOW TYPE C-19

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

WINDOW SCHEDULE							
Mark	Height	Length	MATERIAL	FINISH	GLAZING TYPE		
		1		1	- I		
C-1	7'-0"	12'-6"	AL	BLACK	IGU-1		
C-2	8'-6"	11'-3"	AL	BLACK	TEMP		
C-3	8'-6"	10'-10"	AL	BLACK	TEMP		
C-4	8'-6"	7'-6"	AL	BLACK	TEMP		
C-6	8'-6"	11'-3"	AL	BLACK	TEMP		
C-7	8'-6"	6'-0"	AL	BLACK	TEMP		
C-8	8'-6"	6'-4 3/4"	AL	BLACK	TEMP		
C-9	8'-6"	10'-11"	AL	BLACK	TEMP		
C-10	8'-6"	10'-0"	AL	BLACK	TEMP		
C-11	8'-6"	8'-0"	AL	BLACK	TEMP		
C-12	8'-6"	6'-8"	AL	BLACK	TEMP		
C-13	8'-6"	13'-5"	AL	BLACK	TEMP		
C-14	8'-6"	6'-8"	AL	BLACK	TEMP		
C-15	8'-6"	11'-2"	AL	BLACK	TEMP		
C-16	8'-6"	10'-6 1/2"	AL	BLACK	TEMP		
C-17	8'-6"	10'-1"	AL	BLACK	TEMP		
C-18	8'-6"	12'-0"	AL	BLACK	TEMP		
C-19	8'-6"	10'-1"	AL	BLACK	TEMP		
C-20	4'-0"	6'-0"	AL	BLACK	TEMP		

NOTE: FIELD VERIFY ALL EXISTING WINDOW OPENING DIMENSIONS.

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231609 SHEET NO.

LINTEL IS DECAYED.

EAST ELEVATION -NORTH SUITE SCALE: 1/8" = 1'-0" (Α

NOTE: NEW CURTAINWALL TO BE LOCATED IN EXISTING OPENINGS USING EXISTING LINTELS UNLESS OTHERWISE NOTED. FIELD VERIFY ALL OPENING SIZES AND LOCATIONS. NOTIFY ARCHITECT OF ANY DISCREPENCIES OR IF THE

NOTE: NEW CURTAINWALL TO BE LOCATED IN EXISTING OPENINGS USING EXISTING LINTELS UNLESS OTHERWISE NOTED. FIELD VERIFY ALL OPENING SIZES AND LOCATIONS. NOTIFY ARCHITECT OF ANY DISCREPENCIES OR IF THE LINTEL IS DECAYED.

BAY	E	BAY		BAY
 	20'-0"	20'-0"	, 20'-0"	20'-0"

MATERIALS LEGEND

ELEVATION SYMBOL LEGEND

BRICK. PATCH WALL WHERE SUPPORTS WERE REMOVED.

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

100 OPEN OFFICE **INTERIOR ELEVATION** (D) SCALE: 1/4" = 1'-0"

∕−Q1

-PL2

-RB1

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

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

L

SD1

SD1

PD1

168 WOMEN'S RESTROOM

R INTERIOR ELEVATION SCALE: 1/4" = 1'-0"

1. REFER TO TOILET ACCESSORY SCHEDULE ON SHEET A115 FOR MORE INFORMATION ON TOILET ACCESSORIES.

GENERAL NOTES

CG1 —

___PENDANT -REFER TO ELEC

W INTERIOR ELEVATION SCALE: 1/4" = 1'-0"

175 CORRIDOR

1. REFER TO TOILET ACCESSORY SCHEDULE ON SHEET A115 FOR MORE INFORMATION ON TOILET ACCESSORIES.

9 BOLLARD DETAIL SCALE: 1 1/2" = 1'-0"

5 1/2" METAL STUD—

2 1/2" SPRAY FOAM INSULATION-

8 WINDOW/WALL JAMB SCALE: 1 1/2" = 1'-0"

- EXISTING 8" CMU

— 1 1/4" AIR CAVITY

5

TYPICAL SILL DETAIL SCALE: 1 1/2" = 1'-0"

- EXISTING FACE BRICK

SEALANT

EA SIDE CONTINUOUS

— 5 1/2" METAL STUD

- AIR CAVITY — EXISTING 8" CMU

-2 1/2" SPRAY FOAM INSULATION

- 5/8" GYPSUM BOARD

- EXISTING 8" CMU

— 5/8" GYPSUM BOARD

CEILING SOFIT AT WINDOW SCALE: 1 1/2" = 1'-0"

(4)1/2"Ø ADHESIVE – ANCHORS WITH 4" EMBEDMENT WITH 1 1/2" EDGE DISTANCE (TYP.) PL. 1/2"x9" x0'-9" LONG — COLUMN IS OFFSET ON BASEPLATE AS DIMENSIONED

1/4

1/4

1/4

- SLOT TUBE TO FIT

— 3/8" GUSSET PLATE (TYP.)

1/2

5 DETAIL SCALE: 1 1/2" = 1'-0"

AROUND PLATE (TYP.)

DEMOLITION NOTES:

- 1. THE ASSUMPTION OF HOW THE EXISTING STAIR IS CURRENTLY SUPPORTED IS A CONTINUOUS STAIR STRINGER FROM LEVEL 2 TO LEVEL 1 WITH THE CHANNELS AT THE LANDING SPANNING BETWEEN THE STRINGERS.
- 2. INTENT IS TO REMOVE PORTIONS OF THE EXISTING STRINGERS WHILE PROVIDING BEARING FOR THE UPPER PORTION OF THE STAIR STRINGERS ON THE EXISTING CMU WALL. TAKE CARE WHEN DEMOLISHING AND NOTIFY ENGINEER IF CONDITIONS ARE OTHER THAN ASSUMED.
- 3. CONSTRUCTION OF THE EXISTING CMU WALL IS UNKNOWN. DESIGN INTENT IS TO SUPPORT THE TOP OF THE EXISTING CMU WALL, WHICH WILL SUPPORT THE EXISTING UPPER STAIR, FROM THE NEW LANDING. TEMPORARILY SUPPORT EXISTING CMU WALL OR UPPER PORTION OF THE EXISTING STAIR UNTIL THE CONSTRUCTION OF THE NEW LANDING IS COMPLETED.

TYPICAL HANDRAIL DETAIL NO SCALE

U/S ROOF DECK 125'-10"

_ <u>FIRST FLOOR</u> 100'-0"

12"

24"

36"

24"

12"x48" CEILING TILE

12"x48" CEILING TILE

18" 6"

12"x12" CEILING TILE

24"x48" CEILING TILE

24"x24" CEILING TILE

- 1. ALL LOCATIONS INDICATED ARE TO BE MAINTAINED WITHIN PLUS OR MINUS 1/2", AND ALIGNED WITH ADJACENT HEADS FOR A UNIFORM, EVEN APPEARANCE OF COMPLETED INSTALLATION. POSITIONS INDICATED APPLY TO FULL SIZE SMOOTH SURFACE TILES, AS WELL AS FULL SIZE SUB-GRIDDED (SCORED OR GRAPHICALLY DIVIDED) SURFACE TILES. THE APPEARANCE OF THE FINISHED CEILING TILE FACE AS INSTALLED OVERRIDES THE ACTUAL PHYSICAL DIMENSIONS OF THE TILE FOR PLACEMENTS INDICATED HEREIN. VERIFY CEILING TILE TYPES FROM ARCHITECTURAL DOCUMENTS. EXISTING PIPING BEING TIED INTO IS ACTIVE FOR REUSE.
- 2. PENDANT SPRINKLER HEADS TO BE INSTALLED WITH DEFLECTORS AT SAME ELEVATION AS ADJACENT SPRINKLERS IN SAME AREA/ENCLOSURE, PLUS OR MINUS 1/4". RECESSED HEADS TO BE INSTALLED SO DEFLECTOR IS A MAXIMUM OF 1" BELOW THE ELEVATION OF THE CEILING PLANE. CONCEALED HEADS TO BE INSTALLED WITH COVERS FLUSH TO CEILING PLANE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 3. INSTALLATION OF ALL SPRINKLER HEADS TO BE COORDINATED WITH STRUCTURE AND WORK OF OTHER TRADES, VERIFIED IN ADVANCE BY THE FIRE PROTECTION CONTRACTOR.

SPRINKLER HEAD DETAIL NO SCALE

FIRE PROTECTION VALVE BOX INSTALLATION NO SCALE

FIRE PROTECTION DRAWING NOTES

- 1. PIPE SIZES INDICATED ARE ONLY MINIMUMS. CONTRACTOR IS RESPONSIBLE FOR SYSTEM DESIGN CALCULATIONS AND FINAL PIPE SIZES, AND FOR COMPLIANCE WITH ALL STATE AND LOCAL CODES. 2. REFER TO REFLECTED CEILING PLANS FOR SPRINKLER HEAD LOCATIONS. COORDINATE DIFFUSERS AND GRILLES WITH LIGHT
- FIXTURES. 3. REMOVE AND REPLACE CEILING GRID AND TILES AS REQUIRED TO ACCESS THE WORK. REPLACE DAMAGED GRID AND TILES TO MATCH
- EXISTING. 4. PROVIDE FIRESTOP IN NEW AND EXISTING HOLES AND PENETRATIONS
- IN RATED WALLS. 5. PIPE ROUTING AS INDICATED IS SCHEMATIC IN CONCEPT. COORDINATE FINAL ROUTING WITH OTHER TRADES BEFORE PROCEEDING. DUCTWORK AND STORM, SANITARY AND VENT PIPING LOCATION TAKE PRECEDENCE OVER FIRE PROTECTION PIPING.
- PROVIDE SPRINKLE AS REQUIRED BY NFPA ABOVE CEILING AREAS OF WOOD CONSTRUCTION, OTHER COMBUSTIBLES AREAS, AND WARDROBE LOCKERS. 7. PROVIDE A (WET) PIPE SPRINKLER SYSTEM TO COVER THE AREAS OF
- RENOVATION. DESIGN SPRINKLER SYSTEM FOR A LIGHT HAZARD OCCUPANCY AT A DENSITY OF 0.10 GPM/SQ FT OVER THE MOST DEMANDING 1500 SQ FT AS REQUIRED BY NFPA 13. SEE DENSITY COVERAGE LEGEND SHEET PF101.
- 8. CORE DRILL OPENINGS IN WALLS AND SLABS AS REQUIRED FOR NEW PIPING. COORDINATE LOCATION OF REINFORCING STEEL TO AVOID DAMAGE. PROVIDE ADEQUATE ACCESS TO VALVES AND SPRINKLER HEADS. COORDINATE REQUIREMENTS.
- 10. PROVIDE ALL WORK NECESSARY TO ENSURE THAT NO PIPING OR SPRINKLER HEADS WILL FREEZE. USE DRY PENDENT TYPE HEADS, WARM AIR VENTILATION PATHWAYS, OR OTHER APPROVED MEANS TO ACHIEVE A FREEZE-PROOF INSTALLATION.
- 11. MINIMIZE SYSTEM SERVICE INTERRUPTION AND COORDINATE WITH OWNER WHERE NEW CONNECTIONS TO EXISTING PIPE ARE INDICATED. TIE-IN METHODS TO INCLUDE HOT TAP AS REQUIRED.
- 12. VALVE INDICATIONS ARE GENERIC. REFER TO SPECIFICATION FOR ACCEPTABLE VALVE TYPES PER APPLICATION.
- 13. PRIOR TO MAKING CONNECTIONS TO EXISTING PIPING FOR REUSE, CONFIRM THAT EXISTING PIPING BEING TIED INTO IS ACTIVE FOR REUSE.
- 14. PAINT ALL FIRE PROTECTION PIPING AND VALVES RED IN COMPLIANCE WITH OWNERS SPECIFIC REQUIREMENTS, COORDINATE WITH OWNER.

KEY PLAN

NORTH

FIRE PROTECTION PLAN - SOUTH SCALE: 1/8" = 1'-0"

NORTH

LEGEND

PLUMBING PIPING NOTES

- 1. CLOSELY COORDINATE THE INSTALLATION OF ALL PIPING WITH NEW SHEET METAL, HVAC PIPING, ELECTRICAL, AND STRUCTURAL CONDITIONS, PROVIDE REQUIRED OFFSETS AND FITTINGS WHETHER INDICATED OR NOT. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES. THE LOCATION OF SANITARY. STORM. AND VENT LINES TAKE PRECEDENCE OVER HVAC AND FIRE PROTECTION
- 2. RELOCATE ALL EXISTING DUCT, PIPING AND CONDUIT HANGERS THAT ARE IN CONFLICT WITH NEW PIPING.
- 3. PIPING AND EQUIPMENT SHOWN LIGHTLY IS EXISTING TO REMAIN. 4. AT RENOVATED AREAS THE INDICTED ROUTING OF PIPING SYSTEMS IS INTENDED TO INDICATE REUSE OF AS MUCH OF THE EXISTING SYSTEMS AS POSSIBLE. THE ROUTE SHOWN AND INFORMATION GIVEN IS NOT INTENDED TO REPRESENT EXACTLY WHERE AND HOW TO INSTALL THESE SYSTEMS. IT HAS BEEN DETERMINED THAT ADEQUATE SPACE EXISTS BUT NO ATTEMPT HAS BEEN MADE TO INDICATE THE LOCATION AND IDENTIFY EVERY INTERFERENCE, NOR THE RESULTANT REQUIRED RESOLUTION OF INTERFERENCES. INCLUDE ADDITIONAL PIPE. MATERIAL, LABOR, AND LAYOUT TIME REQUIRED TO RESOLVE
- 5. PIPE ROUTING INDICATED IS SCHEMATIC IN CONCEPT. FIELD LOCATE EXACT TIE-IN-POINTS TO EXISTING PIPING. FINAL ROUTING SHALL BE COORDINATED WITH SHEET METAL, ELECTRICAL, AND STRUCTURAL SYSTEMS. PROVIDE ALL NECESSARY OFFSETS. COORDINATE TIME OF EXISTING PIPING REROUTING WITH OWNER TO MINIMIZE DOWNTIME.

INTERFERENCES AND THEIR REROUTING.

- 6. PROVIDE SHUTOFF VALVES ON ALL RUNOUT PIPING SERVING MULTIPLE FIXTURES.
- 7. REMOVE AND REPLACE CEILING GRID AND TILES AS REQUIRED TO ACCESS THE WORK. REPLACE DAMAGED GRID AND TILES TO MATCH EXISTING. 8. SLEEVE AND SEAL EXTERIOR WALL AND ROOF PENETRATIONS TO A
- WEATHER TIGHT CONDITION. SLEEVE AND SEAL INTERIOR FLOOR PENETRATIONS TO A WATERTIGHT CONDITION. 9. PROVIDE FIRESTOP IN NEW AND EXISTING HOLES AND PENETRATIONS
- IN RATED WALLS. 10. SAWCUT CONCRETE AS REQUIRED TO INSTALL NEW PIPING. FINISH
- 11. CORE DRILL OPENINGS IN WALLS AND SLABS AS REQUIRED FOR NEW PIPING. COORDINATE LOCATION OF REINFORCING STEEL TO AVOID
- DAMAGE. 12. MINIMIZE SYSTEM SERVICE INTERRUPTION AND COORDINATE WITH OWNER WHERE NEW CONNECTIONS TO EXISTING PIPE ARE INDICATED. TIE-IN METHODS TO INCLUDE HOT TAP AS REQUIRED.
- 13. NEW PIPING ROUTED OVER ELECTRICAL GEAR MUST MEET CLEARANCE REQUIREMENTS OF THE NEC.
- 14. VALVE INDICATIONS ARE GENERIC. REFER TO SPECIFICATION FOR ACCEPTABLE VALVE TYPES PER APPLICATION.
- 15. PRIOR TO MAKING CONNECTIONS TO EXISTING PIPING FOR REUSE, CONFIRM THAT EXISTING PIPING BEING TIED INTO IS ACTIVE FOR REUSE.
- 16. PAINT ALL GAS PIPING YELLOW IN COMPLIANCE WITH OWNERS SPECIFIC REQUIREMENTS, COORDINATE WITH OWNER.

PIPING, AND ELECTRICAL CONDUIT AND CABLE TRAY.

CONCRETE PATCH TO RECEIVE NEW SURFACE FINISH AS REQUIRED.

1. MAINTAIN EXISTING 2ND FLOOR PLUMBING FIXTURE OPERATION DURING CONSTRUCTION OF 1ST FLOOR

CONNECT TO EXISTING 4" CAPPED VALVE (FIELD VERIFY PIPE SIZE) 4" VALVE AND CAP

UP TO ROOF

→____EX. 6" G_+₁+₇

PIPE PRESSURE EXCEEDS 14" W.C.,

ROUTE VENT LINE UP THROUGH ROOF AWAY FROM ANY ROOFTOP EQUIPMENT WITH AIR INTAKE ______

14" W.C. _____EX. 6" G _____

1. MAINTAIN EXISTING 2ND FLOOR PLUMBING FIXTURE OPERATION DURING CONSTRUCTION OF 1ST FLOOR

ROOF PLUMBING PLAN - SOUTH

KEY PLAN

1 ENLARGED FIRST FLOOR SUPPLY PIPING - SOUTH SCALE: 1/4" = 1'-0"

NOTES

MAINTAIN EXISTING 2ND FLOOR PLUMBING FIXTURE OPERATION DURING CONSTRUCTION OF 1ST FLOOR WORK.

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TYPICAL CLEVIS HANGER NO SCALE

UNINSULATED PIPE ROOF PENETRATION DETAIL NO SCALE

GAS AND CONDENSATE PIPE SUPPORT DETAIL NO SCALE

DIRT LEG DETAIL NO SCALE

	FIXTURE PIPE SIZE SCHEDULE							
TAG	FIXTURE	COLD WATER SUPPLY	HOT WATER SUPPLY	MINIMUM SAN TRAP SIZE	MINIMUM SAN VENT SIZE			
		(inches)	(inches)	(inches)	(inches)			
EWC	ELECTRIC WATER COOLER	1/2		1 1/2	1 1/2			
LAV	LAVATORY	1/2	1/2	1 1/2	1 1/2			
UR	URINAL, FLUSH VALVE - 0.5 GPF	1"		2	2			
WC	WATER CLOSET, FLUSH VALVE - 1.6 GPF	1 1/4"		4	2			
SK	SINK	1/2	1/2	1 1/2 (UNO)	1 1/2			
SS	SERVICE SINK	3/4	3/4	3	2			

NEW EQUIPMENT NATURAL GAS LOAD SCHEDULE						
TAG NO.	DESCRIPTION	LOCATION	CFH	GAS SUPPLY PRESSURE		
RTU-M1N	NEW ROOFTOP UNIT	ROOF	405	6" - 10.5" W.C.		
RTU-M1S	NEW ROOFTOP UNIT	ROOF	270	6" - 10.5" W.C.		
RTU-2	NEW ROOFTOP UNIT	ROOF	540	6" - 10.5" W.C.		
TOTAL NEW CFH 1215						
NOTE:						

WATE	R HAMMER ARRESTER SCHEDULE (WHA)			
P.D.I. SIZE	WATER SUPPLY FIXTURE UNITS			
"A"	1 TO 11			
"B"	12 TO 32			
"C"	33 TO 60			
"D" 61 TO 113				
"E"	114 TO 154			
"F"	155 TO 330			
NOTES:				
 USE NEXT LARGER SIZE WATER HAMMER ARRESTER WHEN FLOW PRESSURE EXCEEDS 65 PSIG. 				
2. BASE	D ON: PLUMBING AND DRAINAGE TUTE STANDARD PDI-WH-201.			

	 KOHLER KINGS TOP SPUD, CHIN VALVE: SLOAN (GPF, VACUUM E KIT, INFRARED S SEAT: SOLID WH FASTENING SYS CARRIER: ANSI WASHERS; WAL 	TALL MOONTED, SENSOR FLOSTI VALVE. FON ULTRA (1.6 GPF) MODEL K-84325-SS, WALL HUNG SIPHON JET, WHITE VITREOUS CHINA WITH ELONGATED BOWL, 1 VA BOLD CAPS SFSM-1.6-TMO. CROWN MODEL 111 ESS-1.6-OR-HW, EXPOSED CHROME PLATED SENSOR OPERATED FLUSH VALVE, MECHANICAL OVER SREAKER, BAK-CHEK ANGLE STOP WITH VANDAL RESISTANT CAP, SEAT BUMPER, ADJUSTABLE TAILPIECE, ESCUTCHEO SENSOR WITH INDICATOR LIGHT. HITE PLASTIC, OPEN FRONT, EXTENDED BACK, BRASS BOLTS, STAINLESS STEEL SELF-SUSTAINING CHECK HINGE AND F STEM (NO SUBSTITUTE), WITHOUT COVER; BEMIS 1955SSCT. A112.6.1; ADJUSTABLE CAST IRON FRAME, LUGS FOR FLOOR AND WALL ATTACHMENT, THREADED FIXTURE STUDS WIT DE 300 SERIES.
WC-2	WATER CLOSET: W 1. SAME AS WC-1	/ALL MOUNTED, FLUSH VALVE, ADA COMPLIANT: EXCEPT MOUNT PER ADA REQUIREMENTS.
UR-1	URINAL: WALL MOU 1. KOHLER BARDO STEEL SUPPOR 2. VALVE: SLOAN I HARDWIRED, 0. SWEAT SOLDER 3. "CARRIER: ANS BEARING PLATE	JNTED, SENSOR FLUSH VALVE, MOUNT PER ADA REQUIREMENTS:)N K-4991-ET, WALL HUNG WHITE, VITREOUS CHINA, WASHOUT URINAL WITH SHIELDS, INTEGRAL TRAP, 3/4-INCH TOP S TING HANGER. ROYAL MODEL 186 SFSM-1.6TMO, EXPOSED CHROME PLATED SENSOR OPERATED FLUSH VALVE, MECHANICAL OVERRI 5 GPF, VACUUM BREAKER, BAK-CHEK ANGLE STOP WITH VANDAL RESISTANT CAP, SEAT BUMPER, ADJUSTABLE TAILPIE R KIT, BATTERY, INFRARED. I A112.6.1; CAST IRON AND STEEL FRAME WITH TUBULAR LEGS, LUGS FOR FLOOR AND WALL ATTACHMENT, CONCEALE E, AND STUDS; WADE 400 SERIES.
LAV-1	LAVATORY: UNDER 1. BOWL: AMERICA BOWL DIMENSIO 2. TRIM: DELTA 220 3. SUPPLIES: CHIC 4. DRAIN: 1 1/2-INC 5. TRAP: 1 1/2-INC 6. MIXING VALVE: 1	MOUNT ADA COMPLIANT: AN STANDARD OVALYN, WHITE VITREOUS CHINA UNDERMOUNT LAVATORY, RECTANGULAR BOWL WITH VERTICAL SIDE DNS, FRONT OVERFLOW, MOUNTING HARDWARE. C601, DECK MOUNTED POLISHED CHROME FINISH. XAGO FAUCETS 1017, 3/8-INCH KEY OPERATED ANGLE STOPS WITH ANNEALED RISERS OR FLEXIBLE STAINLESS STEEL CHROME PLATED TAILPIECE AND OPEN GRID STRAINER. H CHROME PLATED, 17 GAUGE BRASS P-TRAP. PROVIDE BELOW COUNTER POINT OF USE, ASSE 1070 MIXING VALVE TO PROVIDE TEMPERED WATER TO FAUCET.
SK-1	SINK: SINGLE COM 1. BOWL: "ELKAY" STAINLESS STE 2. TRIM: DELTA FA FLOW OUTLET, 3. SUPPLIES: CHIC 4. DRAIN: 1 1/2-INCI 5. TRAP: 1 1/2-INCI 6. MIXING VALVE: I 7. GARBAGE DISP PROTECTION, 3 STEEL GRIND C	PARTMENT UNDERMOUNT - ADA COMPLIANT: MODEL NO. ELUHAD191650, SINGLE COMPARTMENT, UNDERMOUNT, 19" x 16" x 4 7/8" DEEP BOWL DIMENSIONS, 18 GAUG EL, SOUND DEADENING UNDERCOATING, MOUNTING HARDWARE. UCET MODEL NO. 9113-DST CHROME PLATED BRASS BODY, SINGLE HOLE DECK MOUNTED, GOOSENECK SPOUT WITH G CERAMIC DISC CARTRIDGE, ADA COMPLIANT LEVER HANDLE WITH HOT AND COLD INDEXING. XAGO FAUCETS 1017, 3/8-INCH KEY OPERATED ANGLE STOPS WITH STAINLESS STEEL BRAIDED FLEXIBLE SUPPLY HOSE CHROME PLATED TAILPIECE WITH CHROME PLATED BRASS OPEN GRID STRAINER. H CHROME PLATED, 17 GAUGE BRASS P-TRAP WITH CLEANOUT PLUG. PROVIDE BELOW COUNTER POINT OF USE ASSE 1070 MIXING VALVE TO PROVIDE TEMPERED WATER TO HOT WATER SI OSER: IN-SINK-ERATOR ADVANCED SERIES "EVOLUTION", 3/4 HP, 120V, 1 PHASE, 9.5 AMP, AUTOMATIC RESET OVERLOA -STAGE GRINDING WITH "MULTIGRIND TECHNOLOGY", CONTINUOUS FEED, WALL SWITCH CONTROL, LIGHT GRAY FINISF HAMBER AND COMPONENTS, "QUIET COLLAR" SINK BAFFLE, "QUIET SOUNDSEAL TECHNOLOGY".
SK-2	SINK: SINGLE COM 1. BOWL: ELKAY "L GAUGE TYPE 30 2. TRIM: DELTA FA GPM FLOW OUT 3. SUPPLIES: CHIO 4. DRAIN: 1 1/2-INC 5. TRAP: 1 1/2-INC 6. MIXING VALVE: 1 FAUCET.	PARTMENT - UNDERMOUNT, ADA COMPLIANT: _USTERTONE" MODEL NO. ELUHAD 191650, SINGLE COMPARTMENT, UNDERMOUNT, 19" x 16" x 4 7/8" DEEP BOWL DIMENS !4 STAINLESS STEEL, SOUND DEADENING UNDERCOATING, MOUNTING HARDWARE. UCET MODEL NO. 9113-DST CHROME PLATED BRASS BODY, SINGLE HOLE DECK MOUNTED, GOOSENECK SPOUT WITH ("LET, CERAMIC DISC CARTRIDGE, ADA COMPLIANT LEVER HANDLE WITH HOT AND COLD INDEXING. "AGO FAUCETS 1017, 3/8-INCH KEY OPERATED ANGLE STOPS WITH ANNEALED RISERS OR FLEXIBLE STAINLESS STEEL I CHROME PLATED BRASS TAILPIECE WITH STAINLESS STEEL OPEN GRID STRAINER. H CHROME PLATED, 17 GAUGE BRASS P-TRAP. PROVIDE BELOW COUNTER POINT OF USE ASSE 1070 MIXING VALVE TO PROVIDE TEMPERED WATER TO HOT WATER SI
SS-1	SERVICE SINK: 1. BASED ON FIAT K-9146 3" BRASS 2. FAUCET: WALL BREAKER AND COVERING CAP 3. ACCESSORIES:	MOLDED STONE SERVICE BASIN MODEL MSB2424, CORNER BASIN, DEEP OVER ALL DIMENSIONS, ACID RESISTANT; KOH S REMOVABLE GRID STRAINER WITH POLISHED CHROME FINISH. MOUNTED SUPPLY WITH LEVER HANDLES WITH COLOR CODED INDEX BUTTONS, SPOUT WALL BRACE, RIGID SPOUT WI THREADED HOSE END SPOUT, STRAINERS, CERAMIC QUARTER-TURN CARTRIDGE, INTEGRAL CHECK AND SCREWDRIVI 'S, AND ADJUSTABLE THREADED WALL FLANGES; CHICAGO FAUCETS MODEL NO. 445-897SRCXKCP. KOHLER MODEL NO. K-8940 SINK RIM GUARD.
EWC-1	ELECTRIC WATER 1. FOUNTAIN: ARI STAINLESS STE FRONT AND SID OF 50 DEGREE FILLING STATIO SECOND SHUT- ABOVE BARRIEI 2. FILTER: PROVID IS NECESSARY. 3. TRAP: 1 1/4-INCI 4. HANGERS: PRO	COOLER WITH BOTTLE FILLER STATION AND FILTER: ADA COMPLIANT 1010; "ELKAY" MODEL NO. LZSTLG8WSSK, BARRIER-FREE, SURFACE MOUNTED 2-STATION ELECTRIC WATER COOLER W EL TOP AND BODY, ELEVATED ANTISQUIRT BUBBLER WITH FLEXI-GUARD STREAM GUARD AND AUTOMATIC STREAM RE "E PUSH BAR CONTROL, MOUNTING BRACKET, REFRIGERATED WITH INTEGRAL AIR COOLED CONDENSER, CAPACITY OF F WATER WITH INLET AT 80 DEGREE F AND ROOM TEMPERATURE OF 90 DEGREE F, 4.0 FLA COMPRESSOR, 120-1-60; BO N; ELKAY MODEL EZH20 BOTTLE FILLING STATION WITH ELECTRONIC SENSOR FOR TOUCHLESS ACTIVATION WITH AUTO OFF TIMER, BOTTLE FILLER SHALL PROVIDE 1.1 GPM CHILLED WATER WITH LAMINAR FLOW. INSTALL BOTTLE FILLING S' R FREE FOUNTAIN UNIT. DE WITH ELKAY "WATERSENTRY PLUS" 3000-GALLON CAPACITY FILTER WITH VISUAL MONITOR TO INDICATE WHEN REPL H CHROME PLATED, 17 GAUGE BRASS P-TRAP. DVIDE STRUCTURAL STEEL MEMBERS EMBEDDED IN WALL WITH MOUNTING BOLTS FOR SECURING WATER COOLER.
UB-1	UTILITY BOX: WATE 1. BASED ON IPS (WITH MOUNTING SUPPLY, 1/2-INC	
UB-2	UTILITY BOX: COFF 1. BASED ON IPS (WITH AUXILIAR)	
AAV-1	AIR ADMITTANCE V 1. BASED ON IPS (GRILL, ICC-ES C NSF STANDARD	'ALVE AND BOX: CORPORATION "STUDOR" MINI RECESSED BOX WITH REDI-VENT, PRODUCT NO. 20381, 1 1/2" THREADED CONNECTION, C COMPLIANT; 1 1/2" REDI-VENT VALVE WITH SCREENING ON INSIDE AND OUT, ABS VALVE WITH SILICONE MEMBRANE, ANS 14 COMPLIANT. LOCATE VALVE IN VENTED RECESSED BOX IN ACCESSIBLE AREA FOR PROPER VENTILATION AND INSP
TRAP SEALS	MANUFACTURER: IDENTIFICATION TS-1	J.R. SMITH, SURE SEAL. DESCRIPTION TRAP SEAL: IN LINE FLOOR DRAIN TRAP SEAL, ASSE A1072 APPROVED, MANUFACTURED BY "SURE SEAL" OR "J.R. SM ALL ELOOP DRAINS ELOOP SINKS AND HUR OUTLETS UNITED ADDED ADDED ADDITION (STATE STATE)
FLOOR DRAINS,	MANUFACTURER:	JOSAM, J.R.SMITH, WADE, ZURN.
FLOOR SINKS	IDENTIFICATION	DESCRIPTION
	FD-1 (CERAMIC TILE FLOORS)	FLOOR DRAIN: ZURN ZN415S, CAST IRON FLOOR DRAIN, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUST SEEPAGE SLOTS, "TYPE S" 6-INCH x 6-INCH SQUARE ADJUSTABLE NICKEL BRONZE STRAINER.
	FD-2 (GENERAL USE)	FLOOR DRAIN: ZURN ZN415, CAST IRON FLOOR DRAIN, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTA SEEPAGE SLOTS, "TYPE B" 6-INCH ROUND ADJUSTABLE NICKEL BRONZE STRAINER.
	FD-3 (EXISTING FLOOR DRAINS)	FLOOR DRAIN: PROVIDE ZURN "TYPE S" 6-INCH x 6-INCH SQUARE ADJUSTABLE NICKEL BRONZE STRAINER ON EXIST BODY.

2-INCH ROYAL
RIDE, BATTERY, 1.6 , SWEAT SOLDER
OST, "STATITE"
NUTS AND
JD, 0.125 GPF, E, PISTON TYPE,
E, ESCUTCHEON,
ARM SUTTORTS,
19-1/4" x 15-3/4"
E TYPE 304
кЕАСН, 1.8 GPM
MOTOR WITH STAINLESS
ONS, 18
REACH, 1.8 DSES.
= OF
_ ~.
.ER MODEL NO.
TH JLATOR,
ILE IATIC 20-
TION CEMENT
PVC RESIN BOX _D WATER
NO. MBS1200DB1,
IE-PIECE SNAP-ON ASSE 1051 AND
CHON.
H". PROVIDE AT STRUCTIONS.
BLE COLLAR WITH
LE COLLAR WITH
NG FLOOR DRAIN

LEGEND				
<u>PIPE/FITTIN</u>	G SYMBOI	<u>_S</u>	VALVE	SYMBOLS
	EXISTING PIPE			GENERIC VALVE (REFER TO SPEC F
HIXIII	EXISTING PIPE TO BE REMOVED)	—Iջ —	BALL VALVE
	NEW PIPE			GLOBE VALVE
o	ELBOW UP			BUTTERFLY VALVE
G	ELBOW DOWN		W	PLUG VALVE
<u> </u>	TEE UP		·	GAS COCK
	TEE DOWN			
II	UNION		¥	PRESSURE RELIEF
E	CAP		®	2-WAY VALVE
			<u> </u>	3-WAY VALVE
PIPING DES	IGNATION		-XVVX-	BACKFLOW PREVE
—CHWS —	PIPE CONTENTS SEE ABBREVIATIO	DNS		CIRCUIT SETTER

GENERAL DESIGNATION

 $\langle 1 \rangle$ ____

NOTE SYMBOL (REFER TO SHEET NOTES) NEW TO EXISTING CONNECTION

NERIC VALVE EFER TO SPEC FOR TYPE) L VALVE DBE VALVE TTERFLY VALVE G VALVE ING CHECK VALVE SSURE REDUCING VALVE ESSURE RELIEF VALVE AY VALVE AY VALVE CKFLOW PREVENTER RCUIT SETTER

CO HORIZONTAL CLEANOUT (LOCATED BELOW FLOOR AND ABOVE CEILING OF FLOOR BELOW)

MISC. PIPING SYMBOLS PUMP (LIQUID) PUMP (AIR) EXPANSION JOINT & PIPE GUIDE FLEX CONNECTION -T- STEAM TRAP PIPE GUIDE 4 MANUAL AIR VENT (MV) A AUTOMATIC AIR VENT (AV) \square VACUUM BREAKER (VB) CO O CLEANOUT LOCATED IN FLOOR CLEANOUT LOCATED IN WALL. PIPE COMING UP FROM BELOW.

F.I. FLOW INDICATOR -® PRESSURE GAGE PRESSURE TAP WITH NEEDLE VALVE HTD | THERMOMETER THERMOWELL LT WATER HAMMER ARRESTER WITH P.D.I. DESIGNATION <u>CONTROLS</u> THERMOSTAT S SENSOR CARBON MONOXIDE SENSOR COLOR CARBON DIOXIDE SENSOR NITROGEN DIOXIDE SENSOR FS FLOW SWITCH SD DUCT SMOKE DETECTOR

___ CONTROL WIRE

4444 -----F------_____ \boxtimes SB \mathbb{S}

EXISTING DUCT TO BE REMOVED NEW DUCT CAPPED DUCT SUPPLY AIR DUCT UP

EXISTING DUCT

SUPPLY AIR DUCT DOWN EXHAUST OR RETURN AIR DUCT UP

EXHAUST OR RETURN AIR DUCT DOWN ROUND DUCT UP

ROUND DUCT DOWN

FLAT OVAL DUCT DOWN FLAT OVAL DUCT UP

HVAC DUCTWORK SYMBOLS FLEXIBLE DUCT ┝╋╋╋╋╋╋ -----BALANCING DAMPER l-__i--MOTORIZED DAMPER M (rr TURNING VANES ____ SIDE WALL DIFFUSER/GRILLE XXX CFM SUPPLY AIR DIFFUSER WITH TAG NUMBER (SEE SCHEDULE) AND CFM. ARROWS INDICATE AIR FLOW DIRECTION. -----EXHAUST AIR OR RETURN AIR GRILLE WITH TAG NUMBER <u>E-X</u> OR <u>R-X</u> XXX CFM XXX CFM (SEE SCHEDULE) AND CFM 10"ø 24"x10" 24"/10"

ROUND DUCT SIZE RECTANGULAR DUCT SIZE FLAT OVAL DUCT SIZE

\bigotimes_{\wedge}	EXISTING FIRE DAMPER HORIZONTAL INSTALLATION
	EXISTING FIRE DAMPER VERTICAL INSTALLATION
	FIRE DAMPER HORIZONTAL INSTALLATION
	FIRE DAMPER VERTICAL INSTALLATION
→	FIRE/SMOKE DAMPER HORIZONTAL INSTALLATION
	FIRE/SMOKE DAMPER VERTICAL INSTALLATION
j	SMOKE DAMPER
$\boxtimes_{\mathbb{A}}$	SUPPLY AIR DIFFUSER WITH RADIATION DAMPER AND THERMAL BLANKET.
$\square_{\mathbb{A}}$	EXHAUST AIR OR RETURN AIR GRILLE WITH RADIATION DAMPER.
Μ	MOTOR

	GENERAL ABB	REV	ATIONS	PIPE C	ONTENTS ABBREVIATION
NFF NL NP BDD CL SDF AG CC SS CF AG CC SS CS SS CS SS CS SS CS SS CS SS CSS SS	ABOVE FINISHED FLOOR ACOUSTICAL INSULATION ACOUSTICAL LINING ACCESS PANEL BALANCING DAMPER BACKORAFT DAMPER CAST IRON CLINIC SINK DRINKING FOUNTAIN EXHAUST AIR EXHAUST AIR GRILLE ELECTRICAL CONTRACTOR EMERGENCY SHOWER EYEWASH ELECTRIC WATER COOLER FLEXIBLE CONNECTION FLOOR DRAIN FLOOR SINK GENERAL CONTRACTOR HOSE BIBB INVERT ELEVATION LOUVER LAVATORY	MC MDC OAA RFG RCD SASF SSC UR VAV VCC. H WS H	MECHANICAL CONTRACTOR MOTORIZED DAMPER NOT IN CONTRACT OUTSIDE AIR RETURN AIR RETURN AIR GRILLE RAIN-CONDUCTOR ROOF DRAIN SINK SUPPLY AIR SUPPLY FAN SHOWER SERVICE SINK TEMPERATURE CONTROL CONTRACTOR URINAL VARIABLE AIR VOLUME VIBRATION ISOLATOR VENT THRU ROOF WATER CLOSET WATER COLUMN WALL HYDRANT WASTE STACK YARD HYDRANT	AR AV AW BF CA CHWR COND CR CS CW DWS FORS FP G HPW HWR HWR HWR HWR LA LPS LX	ARGON GAS ACID VENT ACID VENT ACID WASTE BOILER FEED COMPRESSED AIR CHILLED WATER RETURN CHILLED WATER SUPPLY CONDENSATE CONDENSER WATER RETURN CONDENSER WATER RETURN CONDENSER WATER SUPPLY DOMESTIC COLD WATER DEIONIZED WATER SUPPLY FUEL OIL RETURN FUEL OIL RETURN FUEL OIL SUPPLY FIRE PROTECTION WATER SUPPLY GAS SUPPLY HIGH PRESSURE STEAM DOMESTIC HOT WATER RETURN HEATING WATER SUPPLY LABORATORY AIR LOW PRESSURE STEAM LABORATORY VACUUM
	1 ² DETA M101 DETA SHEE .OR SE	ER OF T IL/SECTION IL /	HE DN SECTION R THAT DETAIL S DRAWN ON	MPS N2 N2 NPW OSTM OXY PC PHWR PHWS PW ROR ROS SAN SCW SM SCW SM STM V V VAC WWR WWS	MEDIUM PRESSURE STEAM NITROGEN NITROUS OXIDE NON-POTABLE WATER OVERFLOW STORM SEWER OXYGEN PUMPED CONDENSATE PRIMARY HEATING WATER RETURN PRIMARY HEATING WATER SUPPLY POTABLE WATER REVERSE OSMOSIS WATER RETURN REVERSE OSMOSIS WATER SUPPLY SANITARY SOFT COLD WATER STEAM STORM SEWER SANITARY VENT VACUUM WELL WATER RETURN WELL WATER SUPPLY

5. PROGRAMMING WILL BE SUCH THAT SYST AND OUTDOOR AIR CONDITIONS.

- MODULATES TO CONTROL DUCT STATIC PRESSURE SETPOINT. B. HEAT EXCHANGER SHALL MODULATE TO CONTROL TO A DISCHARGE AIR TEMPERATURE SETPOINT
- SETPOINT AT THE START OF THE OCCUPIED PERIOD.
- 1. BEFORE THE START OF THE OCCUPIED TIME PERIOD, THE CONTROL SYSTEM SHALL MONITOR THE SPACES SERVED TO DETERMINE THE OPTIMUM START TIME FOR THE UNIT. THE SYSTEM START TIME SHALL BE VARIED TO BRING THE AREAS SERVED THROUGH THE TERMINAL UNITS TO

F. HEATING VALVE AT GAS-FIRED HEAT EXCHANGER TO MAINTAIN COOLING WATER COIL DAT AT 53°F.

1. THE SUPPLY AIR SYSTEM OPERATES TO DELIVER CONDITIONED SUPPLY AIR TO THE SPACE BOXES.

2. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL HARDWARE AND SOFTWARE NECESSARY

3. CONTROL LOOPS SHALL BE PROGRAMMED TO ACHIEVE STABLE OPERATION, WITHOUT VALVE OR

1. A SYSTEM START / STOP POINT SHALL BE PROVIDED FOR MANUAL START-UP AND SHUTDOWN OF

2. WITH THE SUPPLY FAN VFD HAND/OFF/AUTO SWITCH IN THE AUTO POSITION, THE SUPPLY FAN IS

3. AT SYSTEM STARTUP, PROVIDE NECESSARY TIME DELAYS AND RAMP-UP DURATIONS FOR ALL

4. WHEN SYSTEM IS DE-ENERGIZED, CONTROL DEVICES SHALL RESPOND AS FOLLOWS:

CONTROLLED DEVICES TO PROVIDE STABLE START-UP AND AVOID NUISANCE TRIPPING (I.E.

AUTOMATICALLY STARTED AND STOPPED BASED ON THE TIME OF DAY OCCUPANCY SCHEDULE AS

DISCHARGE AIR TEMPERATURE IS TO BE WITHIN SETPOINT RANGES DEFINED BELOW.

- 2. IF THE MAJORITY OF THE ZONES SERVED BY THE UNIT ARE BELOW SETPOINT, THE UNIT SHALL BE

- STARTED IN THE WARM-UP MODE.
- A. SUPPLY FAN IS ENERGIZED, EXHAUST FAN IS ENERGIZED, OA DAMPER REMAINS CLOSED, RETURN
- AIR DAMPER REMAINS OPEN, AND EXHAUST AIR DAMPER REMAINS CLOSED. SUPPLY FAN SPEED

- OF 85°F (ADJ.) C. PACKAGED DX SYSTEM OFF.
- D. EXHAUST FAN MODULATES TO TRACK SUPPLY FAN.
- 3. WHEN ALL OF THE ZONES REACH SETPOINT, THE OPTIMIZED START MODE IS COMPLETE AND UNIT ENTERS OCCUPIED MODE OF OPERATION.
- 4. PROGRAMMING WILL BE SUCH THAT SYSTEM LEARNS THE OPTIMUM START TIME BASED ON ZONE AND OUTDOOR AIR CONDITIONS.

OPTIMIZED START COOL-DOWN OPERATION

- 1. IF THE MAJORITY OF THE ZONES SERVED BY THE UNIT ARE ABOVE SETPOINT, THE UNIT SHALL BE STARTED IN THE COOL-DOWN MODE. IF EITHER IDF CLOSET IS NOT MEETING SETPOINT UNIT SHALL ENERGIZE INTO COOLING MODE.
- 2. IF OA TEMPERATURE IS GREATER THAN RETURN AIR TEMPERATURE:
- A. SUPPLY FAN IS ENERGIZED, OA DAMPER I RELIEF AIR DAMPER REMAINS CLOSED.
- B. SUPPLY FAN SPEED MODULATES TO CON[¬] C. HEAT EXCHANGER VALVE IS CLOSED.
- D. PACKAGED DX SYSTEM MODULATES TO M
- 3. IF OA TEMPERATURE IS LESS THAN RETUR
- A. SUPPLY FAN IS ENERGIZED. OA DAMPER I 55 F., RA DAMPER IS CLOSED, EXHAUST A
- B. SUPPLY FAN SPEED MODULATES TO CON

- C. HEAT

D. PACKA

4.	WHEN ALL OF THE ZONES REACH SETPOINT, THE OPTIMIZED START MODE IS COMPLETE AND U	JNIT
	ENTERS OCCUPIED MODE OF OPERATION.	

EXCHANGER VALVE IS CLOSED. (AGED DX SYSTEM IS OFF.	
N ALL OF THE ZONES REACH SETPOINT, THE OPTIMIZED START MODE IS COMPLETE AND UNIT	

π.	WHEN ALL OF THE ZONEO REACTOR TOTAL TOTAL WODE TO COME LETE AND ONT
	ENTERS OCCUTIED MODE OF OF ERATION.

EXHAUST AIR DAMPER	
TEM LEARNS THE OPTIMUM START TIME BASED ON ZONE	
INT, THE OPTIMIZED START MODE IS COMPLETE AND UNIT I.	т
	6. PACKAGED
IS MODULATES TO MAINTAIN DISCHARGE AIR SETPOINT C IR DAMPER MODULATES WITH OUTSIDE AIR DAMPER. TROL TO DUCT STATIC PRESSURE SETPOINT.	DF 5. HEATING V. SETPOINT (
RN AIR TEMPERATURE:	4. MODULATE
IAINTAIN 55 F. DAT FROM UNIT.	3. SUPPLY FA OPEN, AND
TROL TO DUCT STATIC PRESSURE SETPOINT.	(AS SENSE
REMAINS CLOSED, RA DAMPER REMAINS OPEN, AND	2. IF THE SPA

RTU-M1 AND RTU-M1S SEQUENCE OF OPERATION GENERAL

PROGRAMMED THROUGH THE BMS SYSTEM.

A. SUPPLY FAN SHALL DE-ENERGIZE. B. EXHAUST FAN SHALL DE-ENERGIZE

E. PACKAGED DX SYSTEM OFF.

C. OUTDOOR AIR DAMPER SHALL CLOSE.

D. RETURN AIR DAMPER SHALL OPEN.

G. ÈXHÁUST AIR DAMPER SHALL CLOSE.

OPTIMIZED START WARM-UP OPERATION

FREEZESTAT, HIGH / LOW STATIC PRESSURE SWITCH).

4. COORDINATE ALL POINTS WITH THE EQUIPMENT MANUFACTURER.

TO ACHIEVE OPERATIONAL INTENT.

DAMPER OVERSHOOT.

OPERATIONAL MODES

SYSTEM VIA BMS.

AHU START / STOP:

2. SUPPLY FAN SPEED SHALL BE MODULATED BY BMS TO MAINTAIN SUPPLY AIR STATIC PRESSURE SETPOINT. SP SETPOINT VALUE SHALL BE CONFIRMED BY THE AIR BALANCE CONTRACTOR

STARTED.

STATIC PRESSURE RESET

DURING SYSTEM BALANCING.

SAFETY (SEE SAFETY SHUTDOWN SEQUENCE).

CONDITIONS TO MEET THE REQUIRED SPACE AIRFLOWS.

UNTIL MOST OPEN BOX IS < 85% (ALLOW FOR DEADBAND)

OPERATING CONDITIONS OF AHU (INCLUDING DIRTY FILTER BANK).

SYSTEM SUPPLY AND RELIEF AIRFLOW 1. THE BMS MONITORS OUTDOOR, SUPPLY AND RETURN AIRFLOW VOLUME.

en e	• •
an ta' ing pangkan tang tang tang tang pangkan sa	*
GLOBAL OUTDOOR AIR TEMPERATURE AND HUMIDITY SENSORS	

AI)-FM

STATION BY AHU MFG.

GLOBAL OUTDOOR AIR TEMPERATURE AND HUMIDITY SENSORS	
OUTSIDE AIR INTAKE	
	UTSIDE IRFLOW IONITOR

5. DUCT STATIC PRESSURE SETPOINT SHALL HAVE AN ADJUSTABLE HIGH LIMIT (DETERMINED BY TAB AS REQUIRED TO ACHIEVE DESIGN AIRFLOW) AND AN ADJUSTABLE LOW LIMIT (0.75-INCHES W.G. LESS THAN HIGH LIMIT). MIXED AIR DAMPER (ECONOMIZER) AND DISCHARGE AIR TEMPERATURE CONTROL 2. FREEZESTAT(S) SHALL ACTIVATE SAFETY CIRCUIT WHEN TEMPERATURE SENSED IS 35°F OR 1. OA DAMPER SHALL MODULATE AS REQUIRED TO MAINTAIN MINIMUM DESIGN OA FLOW WHEN BELOW. BMS SHALL MONITOR FREEZESTAT STATUS AND SIGNAL AN ALARM IF FREEZESTAT SYSTEM IS IN NORMAL OCCUPIED MODE. TRIPS. WHEN FREEZESTAT ALARM IS ACTIVATED, THE BMS SHALL MODULATE THE HEATING VALVE TO MAINTAIN COOLING COIL DAT AT 50°F (UNTIL FREEZESTAT IS MANUALLY RESET). 2. WHEN ONLY MINIMUM OUTSIDE AIRFLOW IS REQUIRED, OAD SHALL MODULATE TO MAINTAIN OUTSIDE AIRFLOW QUANTITY WHILE EXHAUST AIR DAMPER MODULATES. RETURN AIR DAMPER 2. STATIC PRESSURE LIMIT SWITCHES SHALL STOP THE SUPPLY AND RETURN FANS, RESPECTIVELY, TO PREVENT THE STATIC PRESSURE FROM EXCEEDING ITS HIGH AND LOW LIMIT MODULATES. SETPOINTS. THE BMS SHALL MONITOR THE PRESSURE SWITCHES AND SIGNAL AN ALARM WHEN 3. AS THE CALL FOR OUTSIDE AIRFLOW INCREASES DUE TO OA ENTHALPY CONDITIONS TO MAINTAIN TRIPPED. DAT, THE OAD MODULATES OPEN TO INCREASE OA FLOW ABOVE THE MINIMUM SETPOINT. 3. DUCT SMOKE DETECTORS SHALL ACTIVATE SAFETY CIRCUIT THROUGH FIRE ALARM SYSTEM EXHAUST AIR DAMPER MODULATES OPEN. RETURN AIR DAMPER MODULATES CLOSED. CONTROL MODULE WHEN PRODUCTS OF COMBUSTION ARE DETECTED. 4. WHEN THE OAD IS FULLY OPEN AND ADDITIONAL OA IS REQUIRED TO SATISFY THE DAT SETPOINT, OUTSIDE AIR DAMPER SHALL START TO MODULATE TO LOWER AIRFLOW. EXHAUST AIR DAMPER 4. BOTH PRE-FILTER AND FINAL FILTER STATUS SHALL BE MONITORED BY BMS THROUGH RESPECTIVE DIFFERENTIAL PRESSURE TRANSMITTERS. WHEN DP REACHES SETPOINT, THE

MODULATES AND RETURN DAMPER MODULATES.

3. WITH THE EXHAUST FAN VFD HAND/OFF/AUTO SWITCH IN THE AUTO POSITION, THE RETURN FAN

4. EXHAUST FAN SPEED SHALL BE MODULATED TO MAINTAIN RETURN AIRFLOW EQUAL TO

5. SUPPLY AND EXHAUST FAN STATIC PRESSURE LIMIT SWITCHES SHALL PROVIDE HARDWIRED

2. SUPPLY DUCT STATIC PRESSURE SETPOINT SHALL BE SET BASED ON TEST AND BALANCE

3. STATIC PRESSURE SETPOINT SHALL BE RESET TO MAINTAIN DISCHARGE AIRFLOW UNDER ALL

4. INCREASE STATIC PRESSURE AS MOST OPEN BOX IS > 95%, SHOULD NOT REDUCE PRESSURE

MEASURED SUPPLY AIRFLOW MINUS MEASURED EXHAUST OR CFM OFFSET.

IS PROGRAMMED TO RUN WITH THE SUPPLY FAN AND STARTS WHENEVER THE SUPPLY FAN IS

5. ONCE OUTSIDE AIR DAMPERS AND EXHAUST AIR DAMPERS ARE AT MINIMUM POSITION DAT SHALL BE MAINTAINED BY THE COOLING COIL VALVE FOR COOLING.

6. HEAT EXCHANGER OR PACKAGED DX SYSTEM SHALL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT AFTER FULL ECONOMIZER HAS BEEN UTILIZED.

7. FOR ALL DISCHARGE AIR TEMPERATURE CONTROL SEQUENCES, PROVIDE NECESSARY DEADBANDS AND TIME DELAYS TO PREVENT SIMULTANEOUS HEATING AND COOLING OPERATION. IF DISCHARGE AIR TEMPERATURE IS MORE THAN 3°F FROM SETPOINT, HEATING AND COOLING

SYSTEMS SHALL OPERATE AS NEEDED REGARDLESS OF DAMPER POSITION.

8. SUPPLY AIR RESET: WHILE THE FAN IS PROVEN ON, EVERY 2 MINUTES (ADJ) INCREASE THE SETPOINT BY 0.2F IF THERE IS A ZONE REQUEST. IF THERE IS A COOLING REQUEST, DECREASE

THE SETPOINT BY 0.3 F. A COOLING REQUEST IS GENERATED WHEN THE COOLING LOOP OF ANY ZONE SERVED BY THE SYSTEM IS GREATER THAN 99% UNTIL IT FALLS TO 90%. UNOCCUPIED (NIGHT) HEATING MODE

1. IN THE UNOCCUPIED MODE OF OPERATION, THE SUPPLY AIR AND EXHAUST FANS NORMALLY BE

ACE TEMPERATURE DROPS BELOW THE NIGHT SETBACK TEMPERATURE OF 60°F (ADJ.), ED BY THE ZONE SENSOR) THE UNIT SHALL BE CYCLED ON UNTIL THE ZONE IS 62°F. AN IS ENERGIZED, OUTDOOR AIR DAMPER REMAINS CLOSED, RETURN AIR DAMPER IS DEXHAUST AIR DAMPER REMAINS CLOSED.

SUPPLY FAN VFD TO MAINTAIN DUCT STATIC PRESSURE SETPOINT (AS IN OCCUPIED

VALVE AT GAS-FIRED HEAT EXCHANGER SHALL MODULATE TO CONTROL TO A DAT OF 85°F.

AO

DI

RETURN AIR

DP GAUGE

0-2" W.G. —

RETURN

D DX. SYSTEM SHALL REMAIN DE-ENERGIZED.

UPPLY FAN EC MOTORS

AO

ES

DI

AIR

OUTSIDE

DAMPER

OR VFD

 \bigcirc

HEAT

EXCHANGER

36"

* (MIN.) *

-0

RTU-M1N AND RTU-M1S SEQUENCE OF OPERATION

SAFETY

– WITH

CIRCUIT

MANUAL

RESET

- PACKAGED

SYSTEM

S.P.GAUGE

0-6" W.G.

- SAFETY SHUTDOWN AND MISCELLANEOUS MONITORING 1. HARD-WIRED SAFETY CIRCUIT ACTIVATION: A. UPON ACTIVATION OF DUCT SMOKE DETECTOR.
- INTERVALS UNTIL 50% RH IS MET. COOLING COIL LOW LIMIT AIR TEMPERATURE IS 50 F. 2. IF DISCHARGE AIR % RH GOES BELOW 45% RH (ADJ) COIL DISCHARGE AIR SETPOINT SHALL RESET UPWARDS AT 0.5 F DEGREES AT 30 MINUTE (ADJ) INTERVALS UNTIL 50% RH IS MET AND /OR DISCHARGE AIR TEMPERATURE REACHES 53 F (ADJUSTABLE).

5. THE FOLLOWING ALARMS SHALL BE SENT TO THE BMS. TIME DELAYS SHALL BE INCORPORATED

F. HIGH/LOW DISCHARGE/SUCTION DUCT STATIC PRESSURE (SUPPLY AND RELIEF FANS)

H. DISCHARGE AIR TEMPERATURE 5°F ABOVE OR BELOW SETPOINT

J. DUCT STATIC PRESSURE 0.25 IN WC ABOVE OR BELOW SETPOINT

- DEHUMIDIFICATION CYCLE: 1. WHEN OA TEMPERATURE IS 75 F (ADJ) AND ABOVE AND HUMIDITY SENSOR READS ABOVE 50% RH (ADJ). DX COOLING COIL TO LOWER DISCHARGE AIR AT 0.5 F DEGREE AT 30 MINUTE (ADJ)
- 6. GAS HEAT EXCHANGER VALVE IS CLOSED.

BMS SHALL ACTIVATE A DIRTY FILTER ALARM.

TO MINIMIZE NUISANCE ALARMS.

A. SUPPLY FAN VFD FAULT / FAILURE B. SUPPLY FAN STATUS ALARM C. EXHAUST FAN VRD FAULT / FAILURE

D. EXHAUST FAN STATUS ALARM

G. HIGH FILTER PRESSURE DROP

DAMPER PROOF (ALL DAMPERS

E. FREEZESTAT TRIP

- 5. PACKAGED DX SYSTEM SHALL MODULATE TO CONTROL TO A DISCHARGE AIR TEMPERATURE SETPOINT OF 55°F (ADJ.).
- 4. SUPPLY FAN VFD CONTROLS TO DUCT STATIC PRESSURE SETPOINT (AS IN OCCUPIED MODE).
- 3. SUPPLY AND EXHAUST FANS ARE ENERGIZED, OUTDOOR AIR DAMPER REMAINS CLOSED, RETURN AIR DAMPER REMAINS OPEN, AND EXHAUST AIR DAMPER REMAINS CLOSED.
- (AS SENSED BY THE ZONE SENSOR) THE UNIT SHALL BE CYCLED ON TO COOL THE SPACE UNTIL THE ZONE IS 78°F.
- UNOCCUPIED (NIGHT) COOLING MODE 1. IN ANY UNOCCUPIED MODE OF OPERATION, THE SUPPLY AIR FANS SHALL NORMALLY BE OFF. 2. IF THE SPACE TEMPERATURE RISES ABOVE THE NIGHT SETBACK TEMPERATURE OF 80°F (ADJ.),

	OUT	PUT	INF	νUT								
	DO	AO	DI	AI	CRITICAL ALARM	SYSTEM GRAPHICS	TREND	HARDWIRED SAFETY CIRCUIT	RUN TIME	ALARM LOW LIMIT	ALARM HIGH LIMIT	NO
GLOBAL												
OUTDOOR AIR TEMP		-		x		x	x					
OUTDOOR AIR HUMIDITY				x		x	x					
GAS FIRED HEAT EXCHANGER												
COIL VALVE		x			}	х	x					
COIL LEAVING AIR TEMPERATURE				x	x	x	x					
COOLING COIL			-									
COIL DISCHARGE AIR TEMP				×		x	x					
						x						
FANS (TYPICAL)								_				
SUPPLY FAN 1 S/S	X					x	_	X				
SUPPLY FAN 1 COMMAND		x			 	x	x					
SUPPLY FAN 1 STATUS			x		x	х		_	x			
SUPPLY FAN 1 VFD ALARM		ļ	x			x		_				
EXHAUST FAN 1 S/S	X					х		x				
EXHAUST FAN 1 COMMAND		x			 	x	x					
EXHAUST FAN 1 STATUS			x		x	x		_	x			
EXHAUST FAN 1 VFD ALARM			x		 	х						
		×				×				-5 IN WC		
SUPPLY FAN HIGH PRESSURE LIMIT SWITCH		x				X					+5 IN WC	
ECONOMIZER DAMPERS							2					
		x	1			 X	x					
			x			x		x				
		x			 	x	x					
RETURN AIR DAMPER STATUS			x .		 	x		x				
EXHAUST AIR DAMPER COMMAND		x				X	x				-	
EXHAUST AIR DAMPER STATUS			x	· · · ·	· · · · ·	x		x				1
MISCELLANEOUS POINTS			-				c					
SUPPLY DUCT STATIC PRESSURE			<u>.</u>	x		x	x			SETPOINT MINUS 0.3 IN WC	SETPOINT PLUS 0.3 IN WC	
AHU SUPPLY PRESSURE		1		x		X	x					
OUTSIDE AIR FLOW		<u> </u>	· ·	x		· X	x					
SUPPLY AIR FLOW				X		<u> </u>	X					
			· ·	X		. X	X					
FILTER 2 DIFFERENTIAL PRESSURE		X X				x					1 IN WC	
FREEZESTAT			x	· · ·	x	x		x		35°F		PROVIDE FREEZESTATS COIL CO
AHU DISCHARGE AIR TEMPERATURE				x	x	x	x			SETPOINT MINUS 5°F	SETPOINT PLUS 5°F	ALARM ONLY OPEF
RETURN AIR TEMPERATURE		1]	x	x	х	x]

DI

SPLS

SAFETY

CIRCUIT

S.P.GAUGE

0-6" W.G.

OCCUPANCY STATE	HEATING	COOLING
OCCUPIED	70	75
UNOCCUPIED STANDBY	66	77
UNOCCUPIED	60	80

RTU-METLAB SEQUENCE OF OPERATION GENERAL

- 1. THE SUPPLY AIR SYSTEM OPERATES TO DELIVER CONDITIONED SUPPLY AIR TO THE SPACES. DISCHARGE AIR TEMPERATURE IS TO BE WITHIN SETPOINT RANGES DEFINED BELOW. UNIT WILL BE VARIABLE VOLUME IN THE FUTURE.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL HARDWARE AND SOFTWARE NECESSARY TO ACHIEVE OPERATIONAL INTENT.
- 3. CONTROL LOOPS SHALL BE PROGRAMMED TO ACHIEVE STABLE OPERATION, WITHOUT VALVE OR
- DAMPER OVERSHOOT.
- 4. COORDINATE ALL POINTS WITH THE EQUIPMENT MANUFACTURER.

OPERATIONAL MODES AHU START / STOP:

- 1. A SYSTEM START / STOP POINT SHALL BE PROVIDED FOR MANUAL START-UP AND SHUTDOWN OF SYSTEM VIA BMS.
- 2. WITH THE SUPPLY FAN VFD HAND/OFF/AUTO SWITCH IN THE AUTO POSITION, THE SUPPLY FAN IS AUTOMATICALLY STARTED AND STOPPED BASED ON THE TIME OF DAY OCCUPANCY SCHEDULE AS
- PROGRAMMED THROUGH THE BMS SYSTEM. 3. AT SYSTEM STARTUP, PROVIDE NECESSARY TIME DELAYS AND RAMP-UP DURATIONS FOR ALL
- CONTROLLED DEVICES TO PROVIDE STABLE START-UP AND AVOID NUISANCE TRIPPING (I.E. FREEZESTAT, HIGH / LOW STATIC PRESSURE SWITCH).
- 4. WHEN SYSTEM IS DE-ENERGIZED, CONTROL DEVICES SHALL RESPOND AS FOLLOWS:
- A. SUPPLY FAN SHALL DE-ENERGIZE. B. EXHAUST FAN SHALL DE-ENERGIZE. C. OUTDOOR AIR DAMPER SHALL CLOSE.
- D. RETURN AIR DAMPER SHALL OPEN. E. PACKAGED DX SYSTEM OFF.
- F. HEATING VALVE AT GAS-FIRED HEAT EXCHANGER TO MAINTAIN COOLING WATER COIL DAT AT 53°F. (ADJ).
- G. EXHAUST AIR DAMPER SHALL CLOSE.
- OPTIMIZED START WARM-UP OPERATION
- 1. BEFORE THE START OF THE OCCUPIED TIME PERIOD, THE CONTROL SYSTEM SHALL MONITOR THE SPACES SERVED TO DETERMINE THE OPTIMUM START TIME FOR THE UNIT. THE SYSTEM START TIME SHALL BE VARIED TO BRING THE AREA SERVED SETPOINT AT THE START OF THE OCCUPIED PERIOD.
- 2. IF THE ZONES SERVED BY THE UNIT ARE BELOW SETPOINT, THE UNIT SHALL BE STARTED IN THE WARM-UP MODE.
- A. SUPPLY FAN IS ENERGIZED, EXHAUST FAN IS ENERGIZED, OA DAMPER REMAINS CLOSED, RETURN AIR DAMPER REMAINS OPEN, AND EXHAUST AIR DAMPER REMAINS CLOSED. SUPPLY FAN SPEED MODULATES TO CONTROL AIR VOLUME.
- B. HEAT EXCHANGER SHALL MODULATE TO CONTROL TO A DISCHARGE AIR TEMPERATURE SETPOINT OF 85°F (ADJ). C. PACKAGED DX SYSTEM OFF.
- D. EXHAUST FAN MODULATES TO TRACK SUPPLY FAN.
- 3. WHEN THE ZONE REACHS SETPOINT, THE OPTIMIZED START MODE IS COMPLETE AND UNIT ENTERS OCCUPIED MODE OF OPERATION.
- 4. PROGRAMMING WILL BE SUCH THAT SYSTEM LEARNS THE OPTIMUM START TIME BASED ON ZONE AND OUTDOOR AIR CONDITIONS.

OPTIMIZED START COOL-DOWN OPERATION

- 1. IF THE ZONE SERVED BY THE UNIT IS ABOVE SETPOINT, THE UNIT SHALL BE STARTED IN THE COOL-DOWN MODE.
- 2. IF OA TEMPERATURE IS GREATER THAN RETURN AIR TEMPERATURE:
- A. SUPPLY FAN IS ENERGIZED, OA DAMPER REMAINS CLOSED, RA DAMPER REMAINS OPEN, AND RELIEF AIR DAMPER REMAINS CLOSED.
- B. SUPPLY FAN SPEED MODULATES TO CONTROL TO AIR VOLUME. . HEAT EXCHANGER VALVE IS CLOSED.
- D. PACKAGED DX SYSTEM MODULATES TO MAINTAIN SPACE SETPOINT.
- 3. IF OA TEMPERATURE IS LESS THAN RETURN AIR TEMPERATURE:
- A. SUPPLY FAN IS ENERGIZED, OA DAMPER IS MODULATES TO MAINTAIN DISCHARGE AIR SETPOINT OF 55 F., RA DAMPER IS CLOSED, EXHAUST AIR DAMPER MODULATES WITH OUTSIDE AIR DAMPER.
- B. SUPPLY FAN SPEED MODULATES TO CONTROL TO AIR VOLUME. C. HEAT EXCHANGER VALVE IS CLOSED.
- D. PACKAGED DX SYSTEM IS OFF.
- 4. WHEN THE ZONES REACH SETPOINT, THE OPTIMIZED START MODE IS COMPLETE AND UNIT ENTERS OCCUPIED MODE OF OPERATION.
- 5. PROGRAMMING WILL BE SUCH THAT SYSTEM LEARNS THE OPTIMUM START TIME BASED ON ZONE AND OUTDOOR AIR CONDITIONS.

SYSTEM SUPPLY AND RELIEF AIRFLOW

1. THE BMS MONITORS OUTDOOR, SUPPLY AND RETURN AIRFLOW VOLUME.

2. SUPPLY FAN SPEED SHALL BE MODULATED BY BMS TO MAINTAIN SUPPLY AIR VOLUME VALUE SHALL BE CONFIRMED BY THE AIR BALANCE CONTRACTOR DURING SYSTEM BALANCING. 3. WITH THE EXHAUST FAN VFD HAND/OFF/AUTO SWITCH IN THE AUTO POSITION, THE RETURN FAN IS PROGRAMMED TO RUN WITH THE SUPPLY FAN AND STARTS WHENEVER THE SUPPLY FAN IS

4. EXHAUST FAN SPEED SHALL BE MODULATED TO MAINTAIN RETURN AIRFLOW EQUAL TO MEASURED SUPPLY AIRFLOW MINUS MEASURED EXHAUST OR CFM OFFSET. 5. SUPPLY AND EXHAUST FAN STATIC PRESSURE LIMIT SWITCHES SHALL PROVIDE HARDWIRED SAFETY (SEE SAFETY SHUTDOWN SEQUENCE).

STATIC PRESSURE RESET

SYSTEM IS IN NORMAL OCCUPIED MODE.

STARTED.

MODULATES.

OFF.

SETPOINT OF 85°F.

1. SUPPLY DUCT STATIC PRESSURE SETPOINT SHALL BE SET BASED ON TEST AND BALANCE CONDITIONS TO MEET THE REQUIRED SPACE AIRFLOWS.

2. STATIC PRESSURE SETPOINT SHALL BE RESET TO MAINTAIN DISCHARGE AIRFLOW UNDER ALL OPERATING CONDITIONS OF AHU (INCLUDING DIRTY FILTER BANK). 3. DUCT STATIC PRESSURE SETPOINT SHALL HAVE AN ADJUSTABLE HIGH LIMIT (DETERMINED BY

TAB AS REQUIRED TO ACHIEVE DESIGN AIRFLOW) AND AN ADJUSTABLE LOW LIMIT (0.75-INCHES W.G. LESS THAN HIGH LIMIT). MIXED AIR DAMPER (ECONOMIZER) AND DISCHARGE AIR TEMPERATURE CONTROL

1. OA DAMPER SHALL MODULATE AS REQUIRED TO MAINTAIN MINIMUM DESIGN OA FLOW WHEN

2. WHEN ONLY MINIMUM OUTSIDE AIRFLOW IS REQUIRED, OAD SHALL MODULATE TO MAINTAIN OUTSIDE AIRFLOW QUANTITY WHILE EXHAUST AIR DAMPER MODULATES. RETURN AIR DAMPER

3. AS THE CALL FOR OUTSIDE AIRFLOW INCREASES DUE TO OA ENTHALPY CONDITIONS TO MAINTAIN DAT, THE OAD MODULATES OPEN TO INCREASE OA FLOW ABOVE THE MINIMUM SETPOINT. EXHAUST AIR DAMPER MODULATES OPEN. RETURN AIR DAMPER MODULATES CLOSED. 4. WHEN THE OAD IS FULLY OPEN AND ADDITIONAL OA IS REQUIRED TO SATISFY THE DAT SETPOINT, OUTSIDE AIR DAMPER SHALL START TO MODULATE TO LOWER AIRFLOW. EXHAUST AIR DAMPER

MODULATES AND RETURN DAMPER MODULATES. 5. ONCE OUTSIDE AIR DAMPERS AND EXHAUST AIR DAMPERS ARE AT MINIMUM POSITION DAT SHALL BE MAINTAINED BY THE COOLING COIL VALVE FOR COOLING.

6. HEAT EXCHANGER OR PACKAGED DX SYSTEM SHALL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT AFTER FULL ECONOMIZER HAS BEEN UTILIZED.

7. FOR ALL DISCHARGE AIR TEMPERATURE CONTROL SEQUENCES, PROVIDE NECESSARY DEADBANDS AND TIME DELAYS TO PREVENT SIMULTANEOUS HEATING AND COOLING OPERATION. IF DISCHARGE AIR TEMPERATURE IS MORE THAN 3°F FROM SETPOINT, HEATING AND COOLING SYSTEMS SHALL OPERATE AS NEEDED REGARDLESS OF DAMPER POSITION.

8. SUPPLY AIR RESET: WHILE THE FAN IS PROVEN ON, EVERY 2 MINUTES (ADJ) INCREASE THE SETPOINT BY 0.2F IF THERE IS A ZONE REQUEST. IF THERE IS A COOLING REQUEST, DECREASE THE SETPOINT BY 0.3 F. A COOLING REQUEST IS GENERATED WHEN THE COOLING LOOP OF ZONE SERVED BY THE SYSTEM IS GREATER THAN 99% UNTIL IT FALLS TO 90%. UNOCCUPIED (NIGHT) HEATING MODE

1. IN THE UNOCCUPIED MODE OF OPERATION, THE SUPPLY AIR AND EXHAUST FANS NORMALLY BE

2. IF THE SPACE TEMPERATURE DROPS BELOW THE NIGHT SETBACK TEMPERATURE OF 60°F (ADJ.), (AS SENSED BY THE ZONE SENSOR) THE UNIT SHALL BE CYCLED ON UNTIL THE ZONE IS 62°F. 3. SUPPLY FAN IS ENERGIZED, OUTDOOR AIR DAMPER REMAINS CLOSED, RETURN AIR DAMPER IS OPEN, AND EXHAUST AIR DAMPER REMAINS CLOSED.

4. MODULATE SUPPLY FAN VFD TO MAINTAIN AIR VOLUME (AS IN OCCUPIED MODE). 5. HEATING VALVE AT GAS-FIRED HEAT EXCHANGER SHALL MODULATE TO CONTROL TO A DAT

DI

RETURN AIR

DP GAUGE

0-2" W.G. —

ES RETURN

 \square

Ъ

85%

NATURAL

GAS

8-**9**

AO

AO

OUTSIDE

DAMPER

AIR

6. PACKAGED DX. SYSTEM SHALL REMAIN DE-ENERGIZED.

UNOCCUPIED (NIGHT) COOLING MODE

SETPOINT OF 55°F (ADJ.).

DEHUMIDIFICATION CYCLE:

TRIPPED.

6. GAS HEAT EXCHANGER VALVE IS CLOSED.

- 1. IN ANY UNOCCUPIED MODE OF OPERATION, THE SUPPLY AIR FANS SHALL NORMALLY BE OFF. 2. IF THE SPACE TEMPERATURE RISES ABOVE THE NIGHT SETBACK TEMPERATURE OF 80°F (ADJ.).
- (AS SENSED BY THE ZONE SENSOR) THE UNIT SHALL BE CYCLED ON TO COOL THE SPACE UNTIL THE ZONE IS 78°F.

- 3. SUPPLY AND EXHAUST FANS ARE ENERGIZED, OUTDOOR AIR DAMPER REMAINS CLOSED,

- RETURN AIR DAMPER REMAINS OPEN, AND EXHAUST AIR DAMPER REMAINS CLOSED.

5. PACKAGED DX SYSTEM SHALL MODULATE TO CONTROL TO A DISCHARGE AIR TEMPERATURE

1. WHEN OA TEMPERATURE IS 75 F (ADJ) AND ABOVE AND HUMIDITY SENSOR READS ABOVE 50% RH (ADJ). DX COOLING COIL TO LOWER DISCHARGE AIR AT 0.5 F DEGREE AT 30 MINUTE (ADJ)

INTERVALS UNTIL 50% RH IS MET. COOLING COIL LOW LIMIT AIR TEMPERATURE IS 50 F.

2. IF DISCHARGE AIR % RH GOES BELOW 45% RH (ADJ) COIL DISCHARGE AIR SETPOINT SHALL

2. FREEZESTAT(S) SHALL ACTIVATE SAFETY CIRCUIT WHEN TEMPERATURE SENSED IS 35°F OR

BELOW. BMS SHALL MONITOR FREEZESTAT STATUS AND SIGNAL AN ALARM IF FREEZESTAT

TRIPS. WHEN FREEZESTAT ALARM IS ACTIVATED, THE BMS SHALL MODULATE THE HEATING

RESPECTIVELY, TO PREVENT THE STATIC PRESSURE FROM EXCEEDING ITS HIGH AND LOW LIMIT

SETPOINTS. THE BMS SHALL MONITOR THE PRESSURE SWITCHES AND SIGNAL AN ALARM WHEN

VALVE TO MAINTAIN COOLING COIL DAT AT 50°F (UNTIL FREEZESTAT IS MANUALLY RESET).

3. DUCT SMOKE DETECTORS SHALL ACTIVATE SAFETY CIRCUIT THROUGH FIRE ALARM SYSTEM

RESPECTIVE DIFFERENTIAL PRESSURE TRANSMITTERS. WHEN DP REACHES SETPOINT, THE

5. THE FOLLOWING ALARMS SHALL BE SENT TO THE BMS. TIME DELAYS SHALL BE INCORPORATED

SAFFTY

CIRCUIT

MANUAL

RESET

RTU-METLAB SEQUENCE OF OPERATION

— WITH

36"

⊀____(MIN.)____

– PACKAGED

S.P.GAUGE

0-6" W.G.

SPLS

SYSTEM

DX

DO

S.P.GAUGE

SAFFTY

CIRCUIT

0-6" W.G.

4. BOTH PRE-FILTER AND FINAL FILTER STATUS SHALL BE MONITORED BY BMS THROUGH

F. HIGH/LOW DISCHARGE/SUCTION DUCT STATIC PRESSURE (SUPPLY AND RELIEF FANS)

H. DISCHARGE AIR TEMPERATURE 5°F ABOVE OR BELOW SETPOINT

J. DUCT STATIC PRÈSSURE 0.25 IN WC ABOVE OR BELOW SETPOINT

2. STATIC PRESSURE LIMIT SWITCHES SHALL STOP THE SUPPLY AND RETURN FANS,

CONTROL MODULE WHEN PRODUCTS OF COMBUSTION ARE DETECTED.

/OR DISCHARGE AIR TEMPERATURE REACHES 53 F (ADJUSTABLE).

A. UPON ACTIVATION OF DUCT SMOKE DETECTOR.

SAFETY SHUTDOWN AND MISCELLANEOUS MONITORING

1. HARD-WIRED SAFETY CIRCUIT ACTIVATION:

BMS SHALL ACTIVATE A DIRTY FILTER ALARM.

TO MINIMIZE NUISANCE ALARMS.

A. SUPPLY FAN VFD FAULT / FAILURE

B. SUPPLY FAN STATUS ALARM C. EXHAUST FAN VRD FAULT / FAILURE

E. FREEZESTAT TRIP

D. EXHAUST FAN STATUS ALARM

G. HIGH FILTER PRESSURE DROP

I. DAMPER PROOF (ALL DAMPERS)

RESET UPWARDS AT 0.5 F DEGREES AT 30 MINUTE (ADJ) INTERVALS UNTIL 50% RH IS MET AND ...

- 4. SUPPLY FAN VFD CONTROLS TO SUPPLY AIR VOLUME (AS IN OCCUPIED MODE).

	OU [.]	TPUT	IN	PUT		Т		1	1	1	1	T
					CRITICAL ALARM	SYSTEM GRAPHICS	IREND	HARDWIRED SAFETY CIRCUIT	RUN TIME	ALARM LOW	ALARM	
	DO	AO	DI								HIGH LIMIT	NOTES
									-			
				X		X	X					
				X		X	X		0			
				1								
		X				X	X		1.			
				X	×	X	X					
				1					22 25		-	
				X		×	X	-				
						×	-					
				-								
	X					X		X				
		X		1		X	X					
			X		X	X	-		X			
SUPPLY FAN 1 VFD ALARM			X	1		X				1		
EXHAUST FAN 1 S/S	X					X		X		-		
		X	····			X	X	-				
EXHAUST FAN 1 STATUS			X		X	X		-	X			
EXHAUST FAN 1 VFD ALARM			X			X		-				······
				1					0	5 10 10 0		
SUPPLY FAN LOW PRESSURE LIMIT SWITCH		X				X	_			-5 IN WC		
SUPPLY FAN HIGH PRESSURE LIMIT SWITCH		X				X					+5 IN WC	
			-									
			•	1		-						
		X				X	X					
			X			X		X				
		X				X	X					
			X			X	- -	x				
EXHAUST AIR DAMPER COMMAND		X				X	X					
			. X			×		X				
MISCELLANEOUS POINTS												
						·				SETPOINT	SETPOINT	
SUPPLY DUCT STATIC PRESSURE						^	^			MINUS 0.3 IN WC	PLUS 0.3 IN WC	
				X		X	X					
				X		X	X				-	
						x	X					
		x .				x	^				1 IN WC	
FILTER 2 DIFFERENTIAL PRESSURE		x				X					1 IN WC	
· · · · · · · · · · · · · · · · · · ·		· ·		1	· ·				1.			PROVIDE MULTIP
FREEZESTAT			×		X	X		x		35°F		FREEZESTATS AS NEED
				x	x	x	x			SETPOINT	SETPOINT	ALARM ONLY WHEN U
								5		MINUS 5°F	PLUS 5°F	OPERATING.
		<u></u>	<u>.</u>	<u> </u>	^	<u>i</u> ×	X					

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																<u>NOTES</u> 1. CEILI 2. UNIT	NG MOUNT SIZE 5	-								
																	REGIS	TER, GI	RILLE	AND D	IFFUSER S	CHEDULE	<u> </u>			<u> </u>
											ID TAG E-2 E-3 R-1 R-2 R-5 R-6 R-7 S-3 S-4 S-5 S-8 S-4 S-5 S-8 S-10 S-12	MANUFACTUR TITUS TITUS TITUS TITUS TITUS TITUS TITUS TITUS TITUS TITUS TITUS TITUS TITUS	ER MO 23 50 50 50 CT- CT- 23 0M 0M 0M 0M	DEL MAX (RL 28/ F 60/ F 130 F 210 580 200 580 300 RL 28/ INI 12/ INI 12/ INI 18/ INI 19/ INI 40/ INI 28/	NEC 0 1 0 11 00 12 00 24 00 24 00 24 00 24 00 24 00 24 00 24 00 24 00 1 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	K SIZE (IN) 12x8 2x12 2x24 4x24 4x24 4x36 12x8 6" 6" 8" 10"	FACE SIZ (IN) 12x8 12x12 12x24 24x24 24x24 24x24 24x24 24x24 24x24 24x24 24x24 24x24 24x24	E MAX AI (IN WC 0.10 0.10 0.10 0.10 0.10 0.01 0.01 0.0	PD MAX 22 22 22 22 22 22 22 22 22 33 33	K NC TI 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 TV 0 TV 0 0 0 TV 0 0	IROW PATTERN VO-WAY CORNEI THREE-WAY FOUR-WAY VO-WAY CORNEI FOUR-WAY TWO-WAY	ALUM ALUM ALUM STEEL ALUM ALUM ALUM ALUM ALUM R STEEL STEEL STEEL R STEEL STEEL STEEL STEEL	- FINISH WHITE WHITE WHITE WHITE WHITE WHITE WHITE WHITE WHITE WHITE WHITE WHITE	MOUNTINGSURFACE MOUNTSURFACE MOUNTLAYINLAYINWALL MOUNTEDWALL MOUNTEDSURFACE MOUNTLAYIN	DAMPER (Y/N)YesYesNo	B(
								· · · · · · · · · · · · · · · · · · ·			S-13 S-16 S-17 S-18 T-1 S-18 S-18 S-11 S-11	TITUS TITUS TITUS TITUS TITUS	ON 272 DL ON 23	INI 28 FL 300 SV 500 INI 10 RL 200	0 1 0 1 0 2 0 1	10" 0x6 8x6 6" 2x8	24x24 10x6 18x6 12x12 12x8	0.15 0.15 0.15 0.15 0.15 0.10	3 3 3 2 2	0 TV 0 0 0 0 0 0	VO-WAY CORNEI	R STEEL ALUM ALUM STEEL ALUM	WHITE WHITE WHITE WHITE WHITE	LAYIN SURFACE MOUNT SURFACE MOUNT SURFACE MOUNT SURFACE MOUNT	No No Yes Yes No	
								• • • •		· · · · · · · · · · · · · · · · · · ·							- - - - -		۲۰۰۰ ۱۹۹۰ - ۲۰۰۰ ۱۹۹۰ - ۲۰۰۰ ۱۹۹۰ - ۲۰۰۰ ۱۹۹۰ - ۲۰۰۰		···					**** **** <u>***</u>
ID TAG AREA SERVI RTU-M1N FIRST FLOOR M1 NO RTU-M1S FIRST FLOOR M1 SO	ED MANU PRTH END PUTH END	JFACTURER AAON AAON	MODEL RNA-025-C-A-3 RNA-018-C-A-3	SUPPLY CFM 3 9000 3 6500	OUTDOOR A MAX MII CFM CF 1400 0 900 0	IR ENTERIN M (F DB) 77.6 77.4	IG AIR L (F WB) (F 64.5 5 64.3 5	COOLING LEAVING AIR F DB) (F WB) 54.1 53.2 53.2 52.7	MIN NSIBLE LAT MBH (M 227.9 6 168.5 4	TENT E IBH) 65 7.6	NTERING A (F DB) 57.6 58.9	NR LEAVING (F DB) 91.1 89.8	AIR AIR 405 270	.E N MBH COUTPUT 328.1 218.7	MOTOR HP 15 7.5	S MOTOR MAX BHP 10.91 5.76	RPM 1787 1472	N TSP (IN WC) 4.38 3.73	ESP (IN WC) 1.8 2	MOTOR HP 10 5	EXHA MOTOR MAX BHP RPM 8.36 1898 4.18 1479	JST FAN TSP (IN WC) 1.45 1.53	ESP (IN WC) 1.2 1.3	ELECTRICAL VOLTS PHASE TOTA 460 3 85 460 3 52	L TOTAL WI MCA (1 91 3 55 2	RTU MAX EIGH LBS) 3203 2929
NOTES 1. BASED ON AAON, FAN MOTO 2. MERV 8/MERV 14 FILTER, SF 3. PROVIDE WITH 24" HIGH RO 4. SINGLE POINT POWER CON 5. R-454B. 6. PROVIDE WITH MODULIATING	OR SIZED TO ACCOM BASED ON MAX 1.5 OF CURB WITH PLE NECTION, NON-FUS	MODATE AN S" APD ACROS NUM SUPPLY ED DISCONNI	ADDITIONAL 0.5 SS FILTER BANK AND RETURN T ECT POWER SW	5" SP. C THYCURB MC VITCH. FACTO	DDEL R3PBNANC	79.8 0132724. V CONVENIENC		55.9 54.9	233.4	/ 3 · · · · · · · · · · · · · · · · · · ·	47.0	87.3	540	432	15	12.92				 		1.45	<u> </u>	400 3 87	92	201
			·····							· · · · · · · · · · · · · · · · · · ·	······															
									*******					AN SCHE	EDULE			** ····			MAX	ELE	CTRICAL	MOTOR CONTR	OLLER	
		ID 1 EF- EF-	TAG LOC 164 CEILIN 212 CEILIN -M1 R	CATION IG OF 167 IG OF 214 .OOF	SERVICE IDF 164 IDF 214 TOILET ROOMS	MANUFAC COC COC S COC	CTURER DK DK DK	MODEL GNVF-500 GNVF-500 ACRUD-150RH17D	FAN T INLII INLII (VF) CEN	TYPE	CFM (IN 200 0 200 0 800 0	TSP ESP (IN WC) 0.00 0.75 0.00 0.75 0.00 1.00	MATERIA	L DIA (IN) 0" 0" 0"	TYPE	CLASS S S X	DRIVE TYPE DIRECT DIRECT DIRECT	SOUND SONES 4 9.9	DBA 49 49 58	MOTOR HP 0.167 0.334	MOTOR BHP F 51 1 51 1 0.281 1	AN PM VOLTAC 600 115 600 115 470 115	GE PHASE 1 1 1	MOTOR DISCONN STARTER SWITC X X X	ECT H VFD	
		NOT 1. E 2. 2 3. F	r <u>es</u> Ecm motor. 24" High Roof (Provide with N	CURB. MOTORIZED	CONTROL DAMP	ER.	·	· · ·									<u>FAN</u> UB I - II D -	<u>I TYPE</u> - UP BLAST ILINE DOMED	U - U S - SIDE C- CE	TILITY WALL EILING	<u>WHEEL TYPE</u> A - AXIAL C - CENTRIFUG/ P - PROPELL	DRIVE TYPE D - DIRECT AL B - BELT ER VF - V,	ARIABLE FRE	QUENCY	MOTOR CON E - SEE ELEC S - BY EQUIF	ITRC CTRI MEN
			···					- - - - - - - - - - - - -		· · · · · · · · · · · · · · · · · · ·	······						- - - - -				····					

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ID TAG		SERVICE		MODEL	FAN TYPF
EF-164	CEILING OF 167	IDF 164	COOK	GNVF-500	INLINE
EF-212	CEILING OF 214	IDF 214	COOK	GNVF-500	INLINE
EF-M1	ROOF	TOILET ROOMS	СООК	ACRUD-150RH17D (VF)	CENT
<u>NOTES</u> 1. ECM MC 2. 24" HIGH 3. PROVID	DTOR. 1 ROOF CURB. E WITH MOTORIZED	CONTROL DAMPER			1. 1
	········				

		UNI	T AND CAI	BINET HEA	ATER SC	HEDULE			
ID TAG	LOCATION	MANUFACTURER	MODEL	CFM	MBH	ELEMENT KW	VOLTS	PHASE	AMI (FL
CUH-M1-29	29	REZNOR-EMC	HG12	250	17.1	5	460	3	6.0
CUH-M1-101	101	REZNOR-EMC	HG12	250	17.1	5	460	3	6.0
							·		

	VAV TERMINAL UNIT SCHEDULE															
								ELECTRIC HEATING COIL								
TAG	MANUFACTURER	MODEL	INLET	MAX CFM	MIN CFM COOLING	APD (IN)	MIN CFM	EAT (F DB)	LAT	MBH	VOLTS	PHASE	ĸw			
TU-100A	TITUS	DESV	8"	700	90	0.4	350	55	82	10.2	460	3	3			
TU-100B	TITUS	DESV	10"	1100	145	0.4	550	55	95	20.5	460	3	7			
TU-101	TITUS	DESV	8"	400	90	0.4	200	55	95	6.8	460	3	2.5			
TU-103	TITUS	DESV	6"	200	60	0.4	105	55	85	3.4	120	1	1			
TU-104	TITUS	DESV	6"	150	45	0.4	105	55	85	3.4	120	1	1			
TU-105	TITUS	DESV	6"	150	45	0.4	105	55	85	3.4	120	1	1			
TU-106	TITUS	DESV	6"	250	55	0.4	125	55	80	3.4	120	1	1			
TU-151	TITUS	DESV	8"	400	90	0.4	200	55	92	8	480	3	2.5			
TU-152	TITUS	DESV	6"	200	45	0.4	105	55	85	3.4	120	1	1			
TU-153	TITUS	DESV	6"	250	55	0.4	125	55	80	3.4	120	1	1			
TU-155	TITUS	DESV	6"	250	55	0.4	125	55	80	3.4	120	1	1			
TU-157	TITUS	DESV	6"	250	55	0.4	125	55	80	3.4	120	1	1			
TU-159	TITUS	DESV	6"	250	55	0.4	125	55	80	3.4	120	1	1			
TU-161	TITUS	DESV	6"	250	55	0.4	125	55	80	3.4	120	1	1			
TU-162	TITUS	DESV	6"	150	45	0.4	105	55	85	3.4	120	1	1			
TU-163	TITUS	DESV	8"	400	100	0.4	200	55	86	6.8	120	1	2			
TU-164	TITUS	DESV	6"	200	45	0.4										
TU-166	TITUS	DESV	8"	600	123	0.4	300	55	90	10.2	460	3	3.5			
TU-167	TITUS	DESV	6"	200	45	0.4	105	55	85	3.4	120	1	1			
TU-169	TITUS	DESV	6"	105	45	0.4	105	55	85	3.4	120	1	1			
TU-171	TITUS	DESV	6"	300	70	0.4	150	55	87	5.1	120	1	1.5			
TU-173A	TITUS	DESV	10"	800	145	0.4	400	55	95	11.9	460	3	5.5			
TU-173B	TITUS	DESV	10"	1000	145	0.4	500	55	84	14.9	460	3	4.5			
TU-173C	TITUS	DESV	10"	800	145	0.4	400	55	83	11.9	460	3	3.5			
TU-174	TITUS	DESV	10"	800	250	0.4	400	55	83	11.9	460	3	3.5			
10-175	TITUS	DESV	8"	400	90	0.4	200	55	86	6.8	120	1	2			
10-200A	TITUS	DESV	10"	900	145	0.4	450	55	95	15.5	460	3.	6			
TU-200B	TITUS	DESV	10"	1000	145	0.4	500	55	83	15.3	460	3	4.5			
TU-200C	TITUS	DESV	10"	900	145	0.4	450	55	95	15.5	460	3	6			
TU-202	TITUS	DESV	6" C"	350	95	0.4	1/5	55	82	5.1	120	1	1.5			
TU-203	TITUS	DESV	6" C"	250	55	0.4	125	55	08	3.4	120		1			
TU-205	TITUS	DESV	6"	250	55	0.4	125	55	08	3.4	120		1			
TU-207		DESV	0	250	55	0.4	125	55	80	3.4	120		- 1			
TU-209		DESV	6"	250	55	0.4	120	55	00	3.4	120		··· I			
TU-211	TITUS		0 6"	200	40	0.4	105	55	00	10.2	120	U .	I			
TIL 212	TITUS		0 6"	200	40 50	0.4	150	55		5 1	120	1	1.5			
TIL21/1A			6"	300	JU 15	0.4	150	55	87	5.1	120	1	1.5			
TIL 215	TITUS		10"	800	1/5	0.4	400	55	8/	12.5	120	<u>ן</u> ז	1.0			
10-213	1103		10	000	140	0.4	400	55	04	12.5	+00	J J				
<u>NOTES</u> 1. PROVID 2. FIBER FI	E SOUND ATTENUAT REE INSULATION.	ORS AT TH	E DISCHA	RGE OF THE	UNIT.								····· · · · · · · · · · · · · · · · ·			

SYMBOL	DESCRIPTION
S	SINGLE POLE MANUAL LIGHTING SWITCH
S ₂	TWO POLE MANUAL LIGHTING SWITCH
S ₃	THREE-WAY MANUAL LIGHTING SWITCH
S 4	FOUR-WAY MANUAL LIGHTING SWITCH
SD	MANUAL DIMMER LIGHTING SWITCH
SP	SINGLE POLE MANUAL LIGHTING SWITCH WITH PILOT LI
S⊤	MANUAL TIMER LIGHTING SWITCH
SF	SINGLE POLE MANUAL FUSED SWITCH
SM	SINGLE POLE MANUAL MOTOR STARTER
Smp	SINGLE POLE MANUAL MOTOR STARTER WITH PILOT LIC
SLV	LOW VOLTAGE SWITCH
Soc	OCCUPANCY SENSOR WALL SWITCH
03	CEILING MOUNTED OCCUPANCY SENSOR
HOS	WALL MOUNTED OCCUPANCY SENSOR
P	POWER PACK FOR OCCUPANCY SENSOR
RP	RELAY PACK FOR OCCUPANCY SENSOR
PS	CLG MTD DAYLIGHT HARVESTING PHOTO SENSOR
\ominus	SIMPLEX RECEPTACLE
C	DUPLEX RECEPTACLE
•	DUPLEX RECEPTACLE (ABOVE COUNTER)
#	DOUBLE DUPLEX RECEPTACLE
+	DOUBLE DUPLEX RECEPTACLE (ABOVE COUNTER)
ŧ	SPECIAL RECEPTACLE (AS NOTED)
Ψc	CEILING MOUNTED SIMPLEX RECEPTACLE
₽c	CEILING MOUNTED DUPLEX RECEPTACLE
- ⊕− ^C	CEILING MOUNTED DOUBLE DUPLEX RECEPTACLE
€c	CEILING MOUNTED SPECIAL RECEPTACLE
۲	POWER AND DATA POKE-THRU FLOOR DEVICE
FB	POWER AND DATA FLOOR BOX
	VIDEO MONITOR POWER AND DATA WALL BOX
	CONTACTOR
() ()	CEILING MOUNTED JUNCTION BOX
КŪ	
آ	FLOOR MOUNTED JUNCTION BOX
PC	PHOTOCELL
РВ	PUSHBUTTON
тс	TIME CLOCK
XL	LOW VOLTAGE TRANSFORMER
Ē	THERMOSTAT
н	HUMIDISTAT
	SPECIAL CONNECTION (AS NOTED)
	PANELBOARD (480Y/277V) OR (480V)
	PANELBOARD (208Y/120V) OR (120/240V)
6	SINGLE PHASE MOTOR CONNECTION
۵	THREE PHASE MOTOR CONNECTION
	NON FUSIBLE DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH (Z=No. POLES; X=SWITCH SIZE; Y=FUSE SIZE; MOUNT AT 5' 0" AFE, UNO.)
\boxtimes_{x}	MOTOR STARTER N=STARTER SIZE; X=STARTER TYPE, (RV: REDUCED VOLTAGE; BLANK: FULL VOLTAGE);
∑,×	MOUNT AT 5'-0" AFF, UNO COMBINATION MOTOR STARTER / DISCONNECT SWITCH N=STARTER SIZE; X=STARTER TYPE, (B)/ DEDUCED VOLTAGE: BLANK: EULL VOLTAGE);
	MOUNT AT 5'-0" AFF, UNO
\oplus	GROUND ROD
	CONDUIT UNDER FLOOR
	CONDUIT ABOVE FLOOR
X 📖	SURFACE OR RECESSED LUMINAIRE
\mathbf{O}	SURFACE OR RECESSED DIRECTIONAL LUMINAIRE
Ю	WALL MOUNTED LUMINAIRE
$\mathbf{\nabla}$	TRACK MOUNTED LUMINAIRE
	EMERGENCY LUMINAIRE
	NIGHT LIGHT LUMINAIRE
\mathbf{X}	EMERGENCY NIGHT LIGHT LUMINAIRE
	BATTERY POWERED EMERGENCY LIGHTING UNIT

CEILING MOUNTED EXIT SIGN

WALL MOUNTED EXIT SIGN

SITE LUMINAIRE AND POLE

НX

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ELECTRICAL SYMBOL LEGEND

<u>SYMBOL</u>	DESCRIPTION
FACP	MAIN FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM REMOTE ANNUNCIATOR PANEL
	NOTIFICATION APPLIANCE CONTROL PANEL
F	MANUAL PULL STATION
Θ	HEAT DETECTOR; CEILING MOUNTED
Ĥ	HEAT DETECTOR; WALL MOUNTED
Ś	SMOKE DETECTOR; CEILING MOUNTED
ট্রি	SMOKE DETECTO; WALL MOUNTED
(S) EL	ELEVATOR SMOKE DETECTOR
\bigcirc	DUCT-TYPE SMOKE DETECTOR
®∂ H	BEAM-TYPE SMOKE DETECTOR; WALL MOUNTED
RT	REMOTE TEST STATION; CEILING MOUNTED
RTH	REMOTE TEST STATION; WALL MOUNTED
\bigcirc	CARBON MONOXIDE DETECTOR; CEILING MOUNTED
्रि	CARBON MONOXIDE DETECTOR; WALL MOUNTED
Â	AUDIO DEVICE, CEILING MOUNTED
\square	AUDIO DEVICE; WALL MOUNTED
\bigcirc	VISUAL DEVICE; CEILING MOUNTED
L	VISUAL DEVICE; WALL MOUNTED
AV	COMBINATION AUDIO/VISUAL DEVICE; CEILING MOUNTED
\square	COMBINATION AUDIO/VISUAL DEVICE; WALL MOUNTED
SD	SMOKE DAMPER
FS	FIRE PROTECTION SPRINKLER FLOW SWITCH
TS	FIRE PROTECTION SPRINKLER TAMPER SWITCH
PV	FIRE PROTECTION POST INDICATOR VALVE
CF	FIRE PROTECTION CO2 SYSTEM FLOW SWITCH
P	FIRE FIGHTER'S PHONE OUTLET
₿	FIRE ALARM BELL
\bigotimes	MAGNETIC DOOR HOLDER
٢	FIRE ALARM INTERLOCK / CONTROL CONNECTION

FIRE ALARM SYMBOL LEGEND

SYSTEMS SYMBOL LEGEND

<u>SYMBOL</u>	DESCRIPTION
∇	VOICE / DATA OUTLET
$ abla^{W}$	OUTLET FOR WALL MOUNTED TELEPHONE
\bigcirc	DATA OUTLET; CEILING MOUNTED
	WIRELESS ACCESS POINT OUTLET; CEILING MOUNTED
нM	MICROPHONE OUTLET; WALL MOUNTED
\mathbb{M}	MICROPHONE OUTLET; CEILING MOUNTED
PD	POWER / DATA POLE
FB	POWER / DATA FLOOR BOX
S	SPEAKER OUTLET; CEILING MOUNTED
нS	SPEAKER OUTLET; WALL MOUNTED
TV	VIDEO MONITOR OUTLET; WALL MOUNTED
нŒ	CLOCK OUTLET; WALL MOUNTED
Ю	INTERCOM OUTLET; WALL MOUNTED
Ю	VOLUME CONTROL OUTLET; WALL MOUNTED
	CABLE TRAY
0	VERTICAL CONDUIT SLEEVE; THROUGH FLOOR
	HORIZONTAL CONDUIT SLEEVE; IN ACCESSIBLE CEILING SPACE

SECURITY SYMBOL LEGEND

<u>SYMBOL</u>	DESCRIPTION
©	CAMERA OUTLET; CEILING OR PENDANT MOUNTED
Ю	CAMERA OUTLET; WALL MOUNTED
KP	KEYPAD CONTROLLER OUTLET
CR	PROXIMITY CARD READER OUTLET
PB	PANIC BUTTON OUTLET
MD	MOTION DETECTOR OUTLET
GB	GLASS BREAK SENSOR OUTLET
\diamond	SECURITY SIREN OUTLET
PA	DOOR PROP ALARM OUTLET
MC	DOOR MAGNETIC CONTACTS
	ELECTRIC DOOR STRIKE
	ELECTRIC DOOR LATCH
EH	ELECTRIC POWER TRANSFER HINGE
RE	REQUEST-TO-EXIT DEVICE OUTLET

AHJ	AUTHORITY HAVING JURISDICTION	LTFMC	LIQUID-TIGHT FLEXIBLE METAL CONDUIT
AIC	AMPERE-INTERRUPTING CURRENT	LTG	LIGHTING
AL	ALUMINUM	LV	LOW VOLTAGE
ATM	AUTOMATIC TELLER MACHINE	М	METER
ATS	AUTOMATIC TRANSFER SWITCH	MANUF	MANUFACTURER
BMS	BUILDING MANAGEMENT SYSTEM	MCA	MINIMUM CIRCUIT AMPACITY
BRKR	BREAKER	МСВ	MAIN CIRCUIT BREAKER
С	CONDUIT OR CELSIUS	MCC	MOTOR CONTROL CENTER
СВ	CIRCUIT BREAKER	MCP	MOTOR CIRCUIT PROTECTOR
CATV	CABLE TELEVISION	MH	MANHOLE
CIP	CAST-IN-PLACE	MLO	MAIN LUGS ONLY
CJ	CONTROL JOINT	МТ	MOUNT
СКТ	CIRCUIT	MTD	MOUNTED
CLG	CEILING	MV	MEDIUM VOLTAGE
СМ	CONSTRUCTION MANAGER	N, NEUT	NEUTRAL
CMU	CONCRETE MASONRY UNIT	NC	NORMALLY CLOSED
COAX	COAXIAL	NEC	NATIONAL ELECTRICAL CODE
CONC	CONCRETE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS
СР	CONTROL PANEL		ASSOCIATION
СТ	CURRENT TRANSFORMER	NL	NIGHT LIGHT
CU	COPPER	NO	NORMALLY OPEN
Сх	COMMISSIONING	NOM	NOMINAL
CxA	COMMISSIONING AGENT	NTS	NOT TO SCALE
DB	DECIBEI	OD	OUTSIDE DIAMETER
		ОН	OVERHEAD
	DEMOLISH	OHD	OVERHEAD DOOR
		OL	OVERLOAD
DEMO		PA	PUBLIC ADDRESS
DF		PB	PULL BOX OR PUSHBUTTON
DISC	DISCONNECT	PFC	POWER FACTOR CORRECTION
DPDT	DOUBLE POLE DOUBLE THROW	РН	PHASE
DPST	DOUBLE POLE SINGLE THROW	PNI	PANEL OR PANELBOARD
EC	ELECTRICAL CONTRACTOR	PT	
EJ	EXPANSION JOINT		
ELEC	ELECTRICAL		
ELEV	ELEVATOR OR ELEVATION	PWR	
EM	EMERGENCY	RCP	
EMT	ELECTRICAL METALLIC TUBING	REBAR	REINFORCING BAR
ENCL	ENCLOSURE	RECEPT	RECEPTACLE
ETR	EXISTING TO REMAIN	RM	ROOM
FWC	ELECTRIC WATER COOLER	RNMC	RIGID NON-METALLIC CONDUIT
EWH	ELECTRIC WATER HEATER	ROW	RIGHT-OF-WAY
		RMC	RIGID METAL CONDUIT
		SEC	SECONDARY
		SPD	SURGE PROTECTIVE DEVICE
FA		SPDT	SINGLE POLE DOUBLE THROW
FAAP	FIRE ALARM ANNUNCIATOR PANEL	SPECS	SPECIFICATIONS
FACP	FIRE ALARM CONTROL PANEL	SPST	SINGLE POLE SINGLE THROW
FF&E	FIXTURES, FURNISHINGS & EQUIPMENT	SQ	SQUARE
FIXT	FIXTURE	59	
FLA	FULL LOAD AMPERES	8V	
FM	FACTORY MUTUAL	3V	
FMC	FLEXIBLE METAL CONDUIT	SWBD	SWITCHBOARD
FO	FIBER OPTIC	SWGR	SWITCHGEAR
FRT	FIRE RETARDANT	TCC	TEMPERATURE CONTROL CONTRACTOR
GC	GENERAL CONTRACTOR	TCP	TEMPERATURE CONTROL PANEL
GEN	GENERATOR	TRANS	TRANSFORMER
GECI	GROUND FAULT CIRCUIT INTERRUPTER	TS	TIME SWITCH
GEL		TYP	TYPICAL
	GROUND	UL	UNDERWRITERS LABORATORIES
		UNO	UNLESS NOTED OTHERWISE
G I P BD		UPS	UNINTERRUPTIBLE POWER SUPPLY
нн		1	1

GENERAL ELECTRICAL ABBREVIATIONS

KW

LED

LS

LT

KWHR

KILOWATT

KILOWATT-HOUR

AMPERES

ALTERNATING CURRENT

ABOVE FINISHED FLOOR

ACOUSTICAL CEILING PANEL

AMERICANS WITH DISABILITIES ACT

A, AMP

AC

ACP

ADA

AFF

FLOOR PLAN SYMBOL LEGEND

NOT IN CONTRACT

LIGHT-EMITTING DIODE LIGHT SWITCH OR LIMIT SWITCH LIGHT OR LEVEL TRANSDUCER

ECTRICAL CODE LECTRICAL MANUFACTURERS

RE CONTROL CONTRACTOR RE CONTROL PANEL

VOLTS-ALTERNATING CURRENT VOLTS-DIRECT CURRENT VARIABLE FREQUENCY DRIVE

VOLTS

WATTS

VOLT-AMPERE

WATER HEATER

WEATHERPROOF

V

VA

VAC

VDC

VFD

W

WH

WP

HAND-OFF-AUTO

HORSE POWER

HIGH VOLTAGE

JUNCTION BOX

KNOCKOUT

INSIDE DIAMETER

KILOVOLT AMPERE

HOA

HP

ΗV

JB

KO

KVA

GENERAL NOTES

- 1. SYMBOLS AND GENERAL DESCRIPTIONS IN SYMBOL LEGENDS ARE INDICATED FOR GENERAL REFERENCE ONLY. NOT ALL SYMBOLS ARE USED ON THIS PROJECT. SEE SCHEDULES, SPECIFICATIONS, AND PLANS FOR ADDITIONAL INFORMATION INCLUDING MOUNTING HEIGHTS.
- 2. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND REPRESENT ELECTRICAL DESIGN INTENT. PROVIDE ALL WORK AND MATERIALS REQUIRED FOR COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEMS THAT FULLY MEET ELECTRICAL DESIGN INTENT. ELECTRICAL WORK TO BE CONFORM TO LATEST EDITION OF NEC AS ADOPTED BY AUTHORITY HAVING JURISDICTION. SEE SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS AND ITEMS THAT MAY BE REQUIRED ABOVE AND BEYOND MINIMUM REQUIREMENTS THAT ARE OUTLINED IN NATIONAL ELECTRICAL CODE (NEC).
- 3. THOROUGHLY AND CAREFULLY REVIEW ALL DRAWINGS, SPECIFICATIONS, AND WORK SCOPES IN CONTRACT DOCUMENTS PRIOR TO BIDS AND CONSTRUCTION. WHERE THERE ARE CONFLICTS AMONG DRAWINGS, SPECIFICATIONS, AND WORK SCOPES, MORE STRINGENT OR GREATER QUANTITY REQUIREMENTS APPLY. 4. ALL ELECTRICAL EQUIPMENT TO BE UL LISTED.
- 5. SEE INDIVIDUAL SPECIFICATION SECTIONS FOR SPECIFIC REQUIREMENTS RELATED TO TESTING, MANUFACTURER STARTUP, TRAINING, ETC. ALL APPLICABLE TESTING AND MANUFACTURER STARTUP REPORTS TO BE SUBMITTED AND APPROVED PRIOR TO DEVELOPMENT OF ELECTRICAL PUNCH LISTS.
- 6. ALL CONDUCTORS, INCLUDING GROUNDED CONDUCTORS (NEUTRALS), TO BE LABELED AT ALL ENDS AND JOINTS WITH CORRESPONDING PANELBOARD NAME AND CIRCUIT NUMBER, OR OTHERWISE IDENTIFIED TO CORRESPOND WITH ASSOCIATED EQUIPMENT MANUFACTURER'S IDENTIFICATION SYSTEM. 7. AT A MINIMUM, PROVIDE 1#12, 1#12N, 1#12G FOR 20A BRANCH CIRCUITING, UNO. MINIMUM CONDUIT SIZE IS 3/4", UNO. NO MORE THAN NINE CURRENT CARRYING CONDUCTORS ALLOWED IN A RACEWAY, UNO. EQUIPMENT GROUNDING CONDUCTORS TO BE SIZED IN ACCORDANCE WITH NEC AND MAY BE SHARED. ALL GROUNDED CONDUCTORS (NEUTRALS)
- TO BE TREATED AS CURRENT CARRYING CONDUCTORS. 8. PROVIDE A DEDICATED GROUNDED CONDUCTOR (NEUTRAL) FOR EACH BRANCH CIRCUIT. SHARED NEUTRALS ARE NOT ALLOWED.
- 9. INSTALL GREEN, INSULATED, COPPER EQUIPMENT GROUNDING CONDUCTORS IN RACEWAYS INCLUDING FLEXIBLE METAL CONDUITS AND NON-METALLIC RACEWAYS. GREEN, INSULATED, COPPER EQUIPMENT GROUNDING CONDUCTORS TO BE INSTALLED WITH ALL FEEDERS AND BRANCH CIRCUITS. 10. PROVIDE FIRESTOPPING FOR ALL CONDUIT AND OTHER ELECTRICAL EQUIPMENT PENETRATIONS THROUGH FLOORS, WALLS, AND CEILINGS TO MAINTAIN FIRE RATINGS. [SEE
- ARCHITECTURAL FOR FIRE RATINGS OF FLOORS, WALLS, AND CEILINGS.] 11. LIMIT VOLTAGE DROP IN CONDUCTORS TO 2% FOR FEEDERS AND 3% FOR BRANCH CIRCUITS ASSUMING FULL LOAD CONDITIONS. VOLTAGE DROP NOT TO EXCEED 5% FROM ELECTRICAL SERVICE TO FURTHEST ELECTRICAL DEVICE.
- 12. CALCULATE AND APPLY APPROPRIATE NEC DERATING FACTOR FOR CONDUCTORS INSTALLED IN ROOF MOUNTED CONDUITS.
- 13. PROVIDE THERMAL SEALS IN ALL CONDUITS THAT RUN FROM CONDITIONED SPACES TO UNCONDITIONED SPACES. 14. ALL WIRING FOR INTERIOR LED LUMINAIRES THAT ARE REQUIRED TO BE DIMMED TO INCLUDE (2) #18 AWG WIRES FROM EACH LUMINAIRE TO ASSOCIATED LIGHTING CONTROLLER FOR 0-10V LIGHTING CONTROL. ALL CONTROL WIRES TO BE LABELED. 15. SEE ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS FOR LOCATIONS OF CEILING AND WALL MOUNTED DEVICES.
- 16. ALL LUMINAIRES TO BE SUPPORTED FROM BUILDING STRUCTURE.
- 17. ALL JUNCTION BOXES SERVING BRANCH CIRCUIT WIRING TO BE LABELED TO IDENTIFY CIRCUIT(S) ROUTED THROUGH EACH RESPECTIVE JUNCTION BOX BY UTILIZING BRADY LABELS. 18. WHERE PLENUMS ARE UTILIZED FOR HVAC AIR DISTRIBUTION, PROVIDE PLENUM RATED CABLES AND CONDUCTORS IN PLENUMS. SEE MECHANICAL FOR LOCATIONS OF HVAC PLENUMS.
- 19. ELECTRICAL EQUIPMENT INSTALLED ABOVE CEILINGS TO BE INSTALLED IN READILY ACCESSIBLE LOCATIONS, SUCH AS, BUT NOT LIMITED TO, ABOVE DOORWAYS TO ROOMS. COORDINATE LOCATIONS WITH OTHER TRADES TO AVOID CONFLICTS WITH OTHER EQUIPMENT AND NEED FOR EXCESSIVELY LONG LADDER REQUIREMENTS TO ACCESS EQUIPMENT AND DIFFICULT AND AWKWARD CLIMBING AND/OR UNNECESSARY BENDING DURING SERVICING OF EQUIPMENT.
- 20. CONDUCTORS INSTALLED IN WIREWAYS THAT CONTAIN MORE THAN 30 CURRENT CARRYING CONDUCTORS TO BE DERATED IN ACCORDANCE WITH NEC. 21. DO NOT USE LOAD CENTERS, PANELBOARDS, SWITCHBOARDS, MOTOR CONTROL CENTERS, AND OTHER POWER DISTRIBUTION EQUIPMENT AS RACEWAYS.
- 22. SEE SPECIFICATION SECTION 26 05 34, RACEWAYS FOR ELECTRICAL SYSTEMS, FOR PROJECT SPECIFIC RACEWAY INSTALLATION REQUIREMENTS.
- 23. SEE SPECIFICATION SECTION 26 05 53, IDENTIFICATION FOR ELECTRICAL SYSTEMS, FOR PROJECT SPECIFIC IDENTIFICATION REQUIREMENTS.
- 24. NEMA 4X EQUIPMENT, WHERE IDENTIFIED, TO BE [304 STAINLESS STEEL][316 STAINLESS STEEL][FIBERGLASS] UNLESS NOTED OTHERWISE. 25. EXISTING ELECTRICAL ITEMS INDICATED IN DRAWINGS ARE BASED ON OWNER'S LIMITED RECORD DRAWINGS AND ENGINEER'S LIMITED FIELD OBSERVATIONS. VISIT SITE TO UNDERSTAND COMPLETELY CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION OF DEVICES AND EQUIPMENT REQUIRED TO FACILITATE DEMOLITION WORK OF OTHER TRADES AT NO ADDITIONAL COST TO OWNER.
- 26. DRAWINGS DO NOT INDICATE ALL ELECTRICAL EQUIPMENT AND DEVICES INTENDED TO BE REMOVED OR MODIFIED. DRAWINGS INDICATE MAJOR ELECTRICAL EQUIPMENT, FIXTURES, AND DEVICES THAT ARE REQUIRED TO BE REMOVED OR MODIFIED. REMOVE, OR RELOCATE ELECTRICAL EQUIPMENT, FIXTURES, AND DEVICES AS NECESSARY FOR A COMPLETE AND PROFESSIONAL INSTALLATION. SEE LIGHTING, POWER, SYSTEMS, ARCHITECTURAL, PLUMBING, [PROCESS], AND MECHANICAL PLANS FOR ADDITIONAL REQUIREMENTS.
- 27. UNLESS NOTED OTHERWISE, DISPOSE OF ALL REMOVED MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. DISPOSAL OF MATERIALS TO COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS INCLUDING TCLP TESTING.

GENERAL DEMOLITION NOTES

- 1. EXISTING ELECTRICAL ITEMS INDICATED IN DRAWINGS ARE BASED ON OWNER'S LIMITED RECORD DRAWINGS AND ENGINEER'S LIMITED FIELD OBSERVATIONS. VISIT SITE TO UNDERSTAND COMPLETELY CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION OF DEVICES AND EQUIPMENT REQUIRED TO FACILITATE DEMOLITION WORK OF OTHER TRADES AT NO ADDITIONAL COST TO OWNER.
- 2. DRAWINGS DO NOT INDICATE ALL ELECTRICAL EQUIPMENT AND DEVICES INTENDED TO BE REMOVED OR MODIFIED. DRAWINGS INDICATE MAJOR ELECTRICAL EQUIPMENT, FIXTURES, AND DEVICES THAT ARE REQUIRED TO BE REMOVED OR MODIFIED. REMOVE, OR RELOCATE ELECTRICAL EQUIPMENT, FIXTURES, AND DEVICES AS NECESSARY FOR A COMPLETE AND PROFESSIONAL INSTALLATION. SEE LIGHTING, POWER, SYSTEMS, ARCHITECTURAL, PLUMBING, PROCESS, AND MECHANICAL PLANS FOR ADDITIONAL REQUIREMENTS.
- 3. ALL ELECTRICAL DEMOLITION WORK MAY NOT NECESSARILY BE INDICATED ON ELECTRICAL DRAWINGS. REVIEW DEMOLITION DRAWINGS OF OTHER TRADES (ARCHITECTURAL, PROCESS, AND MECHANICAL) FOR EQUIPMENT TO BE DEMOLISHED. 4. FIELD VERIFY EXISTING CONDITIONS TO DETERMINE EXTENT OF WORK AND INCLUDE ALL COSTS ASSOCIATED WITH DEMOLITION IN BASE BID.
- 5. COORDINATE DEMOLITION WORK WITH OTHER TRADES (ARCHITECTURAL, PROCESS, AND MECHANICAL). DISCONNECT AND REMOVE ALL CONDUIT, CONDUCTORS, AND DEVICES ASSOCIATED WITH EQUIPMENT BEING DEMOLISHED. EXPOSED CONDUIT, JUNCTION BOXES, AND DEVICES TO BE DISCONNECTED AND REMOVED. CONCEALED CONDUIT, JUNCTION BOXES, AND DEVICES MAY BE ABANDONED IN PLACE. ALL CONDUCTORS TO BE COMPLETELY REMOVED BACK TO SOURCE OR LAST ACTIVE DEVICE. PROVIDE BLANK COVERS FOR ANY BOXES ABANDONED IN PLACE.
- 6. COORDINATE AND SEQUENCE DEMOLITION WORK SUCH THAT PLANT REMAINS IN CONTINUOUS OPERATION THROUGHOUT CONSTRUCTION. PLAN ALL INTERRUPTIONS TO ELECTRICAL SERVICE WITH OWNER A MINIMUM OF 72 HOURS IN ADVANCE.
- 7. PROVIDE TEMPORARY POWER, LIGHTING, AND CONTROLS AS REQUIRED TO KEEP EXISTING EQUIPMENT TO REMAIN IN SERVICE. 8. FOR ELECTRICAL EQUIPMENT TO BE REUSED, FIELD VERIFY EQUIPMENT CONFIGURATION AND ADVISE ENGINEER IF CIRCUITING REQUIREMENTS ARE DIFFERENT FROM THAT
- INDICATED ON PLANS. RECIRCUIT EQUIPMENT AS REQUIRED TO FACILITATE REUSE.
- 9. ELECTRICAL EQUIPMENT NOT SPECIFICALLY IDENTIFIED TO BE DISCONNECTED AND REMOVED IS TO MAINTAINED. 10. CROSSHATCHING IDENTIFIES DEVICES/EQUIPMENT TO BE DISCONNECTED AND REMOVED. DEMOLISH ASSOCIATED CONDUIT AND CONDUCTORS BACK TO SOURCE OR LAST ACTIVE
- DEVICE, UNLESS NOTED OTHERWISE.
- 11. SEE SUGGESTED SEQUENCE OF CONSTRUCTION ON DRAWINGS FOR SEQUENCING OF DEMOLITION AND INSTALLATION. COORDINATE SEQUENCING WITH OTHER TRADES. SEQUENCING IS ONLY A SUGGESTION, ADJUST SEQUENCE AS REQUIERED FOR FIELD CONDITIONS WHILE MAINTAINING REQUIRED OWNER OPERATIONS.

ELECTRICAL SHEET LIST

<u>SHEET</u>	SHEET NAME
D701	FIRST FLOOR ELECTRICAL DEMOLITION PLAN
D702	SECOND FLOOR ELECTRICAL DEMOLITION PL
E001	LEGENDS AND GENERAL NOTES
E002	SCHEDULES
E101	FIRST FLOOR LIGHTING PLAN
E201	FIRST FLOOR POWER AND SYSTEM PLAN
E202	ROOF POWER AND SYSTEMS PLAN
E301	LOW VOLTAGE DETAILS AND NOTES
E401	DEMOLITION ONE LINE DIAGRAM
E402	NEW PARTIAL ONE LINE DIAGRAM
E501	PANELBOARD SCHEDULES AND DETAILS

WIRING DEVICES - RECEPTACLE SCHEDULE								
YMBOL	DESCRIPTION	MANUFACTURER	CATALOG NO.	REMARKS				
≠	DUPLEX RECEPTACLE	HUBBELL	HBL5362	MOUNT 18" AFF, UNO				
•	DUPLEX RECEPTACLE (ABOVE COUNTER)	HUBBELL	HBL5362	MOUNT HORIZONTALLY ABOVE COUNTER; 2-INCHES ABOVE BACKSPLASH, UNO				
È CL	GFCI DUPLEX RECEPTACLE	HUBBELL	GF5362SG	MOUNT 18" AFF, UNO				
GFI	GFCI DUPLEX RECEPTACLE (ABOVE COUNTER)	HUBBELL	GF5362SG	MOUNT HORIZONTALLY ABOVE COUNTER; 2-INCHES ABOVE BACKSPLASH, UNO				
) ₩Р	WEATHERPROOF, GFCI DUPLEX RECEPTACLE WITH WEATHERPROOF WHILE-IN-USE, EXTRA DUTY COVER	HUBBELL	GF5362SG, WP26EH	MOUNT 18" AFF, UNO				
₩	DOUBLE DUPLEX RECEPTACLE	HUBBELL	(2) HBL5362	MOUNT AT 18" AFF, UNO				
± ≥	4-GANG RECESSED WALL BOX FOR VIDEO MONITOR POWER AND DATA (2) DROPS. (2) DUPLEX RECEPTACLE	ARLINGTON	TVB613	MOUNT AT 60" AFF, UNO; PROVIDE (2) HUBBELL #HBL5362 DUPLEX RECEPTACLES				

	FIRE ALARM DEVICES SCHEDULE							
MBOL	DESCRIPTION	MANUFACTURER	CATALOG NO.	REMARKS				
]	MANUAL PULL STATION	(SEE SPECIFICATIONS)	(SEE SPECIFICATIONS)	MOUNT AT 46-INCHES TO CENTER OF BOX, UNO. PROVIDE BACKBOX AS RECOMMENDED BY FIRE ALARM SYSTEM MANUFACTURER.				
	DUCT TYPE SMOKE DETECTOR	(SEE SPECIFICATIONS)	(SEE SPECIFICATIONS)	PROVIDED BY DIVISION 28. EXACT PLACEMENT TO BE DETERMINED BY DIVISION 23.				
	FIRE PROTECTION FLOW SWITCH	(SEE SPECIFICATIONS)	(SEE SPECIFICATIONS)	PROVIDED BY DIVISION 21. WIRED BY DIVISION 26/28. PROVIDE 4" SQUARE BOX WITH 3/4" FMC TO DEVICE.				
	FIRE PROTECTION TAMPER SWITCH	(SEE SPECIFICATIONS)	(SEE SPECIFICATIONS)	PROVIDED BY DIVISION 21. WIRED BY DIVISION 26/28. PROVIDE 4" SQUARE BOX WITH 3/4" FMC TO DEVICE.				
]	VISUAL STROBE SIGNAL, WALL MOUNTED	(SEE SPECIFICATIONS)	(SEE SPECIFICATIONS)	MOUNT AT 80-INCHES AFF TO BOTTOM OF BOX, UNO. PROVIDE BACKBOX AS RECOMMENDED BY FIRE ALARM SYSTEM MANUFACTURER.				
7] H	COMBINATION AUDIO HORN / VISUAL STROBE SIGNAL, WALL MOUNTED	(SEE SPECIFICATIONS)	(SEE SPECIFICATIONS)	MOUNT AT 80-INCHES AFF TO BOTTOM OF BOX, UNO. PROVIDE BACKBOX AS RECOMMENDED BY FIRE ALARM SYSTEM MANUFACTURER.				
/s	COMBINATION AUDIO SPEAKER / VISUAL STROBE SIGNAL, WALL MOUNTED	(SEE SPECIFICATIONS)	(SEE SPECIFICATIONS)	MOUNT AT 80-INCHES AFF TO BOTTOM OF BOX, UNO. PROVIDE BACKBOX AS RECOMMENDED BY FIRE ALARM SYSTEM MANUFACTURER.				
Ø	CEILING MOUNTED COMBINATION AUDIO / VISUAL DEVICE	(SEE SPECIFICATIONS)	(SEE SPECIFICATIONS)	PROVIDE BACKBOX AS RECOMMENDED BY FIRE ALARM SYSTEM MANUFACTURER.				
) P	PENDANT MOUNTED COMBINATION AUDIO / VISUAL DEVICE	(SEE SPECIFICATIONS)	(SEE SPECIFICATIONS)	PROVIDE BACKBOX AS RECOMMENDED BY FIRE ALARM SYSTEM MANUFACTURER.				

		/ICES - MANUAI	LIGHTING S	WITCH SCHEDULE
YMBOL	DESCRIPTION	MANUFACTURER	CATALOG NO.	REMARKS
S os	20A, 120-277V, OCCUPANCY SENSOR / MANUAL WALL SWITCH	ACUITY	WSX-SA-WH	MOUNT AT 46" AFF, UNO.
S os	20A, 120-277V, OCCUPANCY SENSOR / MANUAL WALL SWITCH	ACUITY	WSX-SA-WH	MOUNT AT 46" AFF, UNO.

	WIRING DE	WIRING DEVICES - MANUAL POWER SWITCH SCHEDULE										
YMBOL	DESCRIPTION	MANUFACTURER	CATALOG NO.	REMARKS								
S™	<varies></varies>	SQUARE D	<varies></varies>	<varies></varies>								

								LIGHTING	G CONTROL FU	NCTIONAL IN	TENT SCHEDULE									
									AUT	OMATIC ON OFF (CONTROL DESCRIPTION						DAYLI	GHT HARVEST	ING (0-50-100)	i
								SENS	OR TYPE DESCRIP	TION										i
PLAN TAG	G AREA	METHOD OF LIGHTING CONTROL	DIMMING	LOW VOLTAGE SWITCH WITH RELAY SYSTEM	LINE VOLTAGE SWITCH	CEILING DAYLIGHT SENSOR	CEILING OCCUPANCY SENSOR	WALL OCCUPANCY SENSOR	WALL SWITCH (LOW VOLTAGE)	LOW VOLTAGE WALL SWITCH WITH DIMMER CONTROL	WALL MOUNTED LIGHT SWITCH / DIMMER CONTROL WITH INTEGRAL OCCUPAN	WALL MOUNTED LINE VOLTAGE SWITCH WITH INTEGRAL VACANCY SENSOR	INTEGRAL PHOTO-CELI	CONTACT FOR VAV CONTROLS	LIGHTING AUTOMATIC ON TO PRESET PERCENT LEVEL	FULL OFF AFTER PRE-DETERMINED TIME INDICATED	SIDE LIGHT	TOP LIGHT	ILLUMINATION LEVEL GOAL	
1	OPEN OFFICE	MANUAL ON - AUTO OFF	YES				X			Х				YES	100%	15 MINUTES				
2	COMMON AREAS (INCLUDING CORRIDORS AND STAIRS)	AUTOMATIC ON - AUTOMATIC OFF. REMOTE SWITCH FOR SAFETY	YES	х										YES	100%	15 MINUTES	N/A	N/A		
3	MISC. ELECT. RMS / MECH	MANUAL ON - MANUAL OFF	NO		х									NO	100%	N/A	N/A	N/A		
4	STORAGE, AND OTHER	MANUAL ON - AUTOMATIC OFF	NO	x			x							NO	100%	15 MINUTES	N/A	N/A		
5	COMMON USE TOILET ROOMS	MANUAL ON - AUTOMATIC OFF	NO				X		Х					NO	100%	15 MINUTES	N/A	N/A		í
6	PRIVATE OFFICE	MANUAL ON - AUTOMATIC OFF	YES				X			X				YES	100%	15 MINUTES	N/A	N/A		i
7	EXTERIOR OF BUILDING	AUTOMATIC ON - AUTOMATIC OFF	NO										Х	NO	100%	15 MINUTES	N/A	N/A		í
8	CONFERENCE ROOMS WITH TROFFERS AND DOWNLIGHTS	MANUAL ON - AUTOMATIC OFF	YES				x		x	x				YES	100%	15 MINUTES	N/A	N/A		SEP FO
NOTES:																				í
1	INCLUDE ALL RELAYS, SENSORS,	DIMMER MODULES, RELAYS, ETC AS F	REQUIRED TO	ACCOMPLISH TH	E CONTROL INT	ENT INDICATED) ON PLANS AND SC	L CHEDULES. NOTE T	HAT EMERGENCY	LIGHTING SHALL	AUTOMATICALLY ILLLUM	INATE UPON LOSS OF F	POWER.							
2	LIGHTING SHALL BE CONTROLLE	D WITH RELAYS VIA LIGHTING CONTR	OL PANEL. PRO	OGRAM ON AND	OFF AS COORD	INATED WITH E	BUILDING MANAGE	EMENT TEAM. LIGH	HTS SHALL DIM TO	30% WHEN NO C	OCCUPANCY IS DETECTED.	IN OFF HOURS, LIGHT	SHALL TURN C	OMPLETELY OFF.	HOWEVER, IN EITH	IER CASE, LIGHT SH	ALL TURN ()N TO 100% F	OR 15 MINUTES WI	HEN C
3	GENERAL: EMERGENCY LIGHTIN	G SHALL BE ACHIEVED THROUGH EME	RGENCY BATT	FERY UNITS.																

A4

EBL

K1

R2F

XA

XE

			LUMIN	AIRE SCHED	ULE						
						L	UMINAIRE	DATA			
к	DESCRIPTION	MANUFACTURER	CATALOG NO.	OR EQUAL BY	VOLTAGE	LOAD	LUMENS	ССТ	CRI	DIMMING	REMA
	LINEAR FLUORESCENT, 96" AIRCRAFT CABLE MOUNTING, DIRECT INDIRECT LUMINAIRE, OPEN END CAP.	FINELITE	HO-4-P-ID-RO-XX-S-H-840-W SOTG-OPN-96LG-120-SC-FC -10%-FA100-OE-SW		120 V	41 VA	5,108 lm	4000 K	80	YES	PROVIDE FIXTURE AS POSSIBLE. PRO DRAWINGS WITH 1 DATA SUBMITTAL.
	LINEAR FLUORESCENT, 96" AIRCRAFT CABLE MOUNTING, GRID CEILING, DIRECT INDIRECT LUMINAIRE, OPEN END CAP.	FINELITE	HO-4-P-ID-RO-XX-S-H-840-W SOTG-OPN-96LG-120-SC-FC -10%-FA100-C2T-OE-SW		120 V	41 VA	5,108 lm	4000 K	80	YES	PROVIDE FIXTURE AS POSSIBLE. PRO DRAWINGS WITH T DATA SUBMITTAL.
	4-INCH APERTURE, RECESSED LED DOWN LIGHT, GALVANIZED STEEL HOUSING, SEMI-SPECULAR FINISH, MEDIUM OPTICS DISTRIBUTION, 0-10V DIMMING, MULTI-VOLTAGE DRIVER	GOTHAM	EVO4-40/20-AR-LSS-MD-120 -GZ10		120 V	32 VA	2,000 lm	4000 K	80	YES	
	4' LED LENSED STRIP, NARROW DISTRIBUTION, AIRCRAFT CABLE HANGER AND Y HANGER PAIR. MOUNT AT 9'0"AFF UNO.	ACUITY	CLX-LED-L48-3000LM-SEF-R DL-ND-MVOLT-GZ10-40K-80 CRI-WH		120 V	42 VA	3,293 lm	4000 K	80	YES	-
J	LED EMERGENCY LIGHTING UNIT, DAMP LOCATION LISTED, WITH SELF DIAGNOSTICS	LITHONIA	AFF-OEL-DWHGXD-UVOLT- LTP-SDRT-WT		120 V	5 VA	202 lm		80		-
	ENVX-2X2-HRGC-4000LM-80CRI-35K-MI N10-EZT-MVOLT	LITHONIA	ENVX-2X2-HRGC-4000LM-80 CRI-35K-MIN10-EZT-MVOLT		120 V	36 VA	4,000 lm	4000 K	80	YES	
	2'x2', 4000 LUMEN, RECESSED LED FLAT PANEL, 4000K	LITHONIA	EPANL-2X2-4000LM-80CRI-4 0K-MIN10-EZT-MVOLT		120 V	32 VA	4,000 lm	4000 K	80	YES	
	6-INCH APERTURE, RECESSED LED DOWN LIGHT, GALVANIZED STEEL HOUSING, SEMI-SPECULAR FINISH, MEDIUM OPTICS DISTRIBUTION, 0-10V DIMMING, MULTI-VOLTAGE DRIVER	GOTHAM	EVO6-40/20-AR-LSS-MD-120 -GZ10		120 V	32 VA	2,000 lm	4000 K	80	YES	
	4-INCH APERTURE, RECESSED LED DOWN LIGHT, GALVANIZED STEEL HOUSING, WHITE REFLECTOR, WHITE PAINTED FLANGE, MEDIUM OPTICS DISTRIBUTION, 0-10V DIMMING, MULTI-VOLTAGE DRIVER	GOTHAM	EVO4-40/20-WH-MD-120-GZ 10		120 V	32 VA	2,000 lm	4000 K	80	YES	
	5" DIAMETER CYLINDER, 9.9" HEIGHT. CABLE FEED.	FOCAL POINT	FLCY4-RD-WHR-2000L-940K -1C-UNV-DSC-L11-C72-DNT- VWFL-CD		120 V	24 VA	2,000 lm	4000 K	80	YES	
	FABRIC SHADE WITH LED LIGHT, BLACK METAL FRAME, BLACK CANOPY. SHADE COLOR: "JEANS"	BUZZISHADE LARGE	461		120 V	19 VA	1,500 lm	3000 K	80	YES	
	22" DECORATIVE DRUM SUSPENDED LED, AIRCRAFT CABLE, BLACK FINISH.	FOCAL POINT	FSDL-22-CX-3000L-40K-1C- UNV-TC-L11-C48-MB		120 V	39 VA	3,000 lm	4000 K	80	YES	MOUNT FIXTURE A UNLESS NOTED O
	WALL MOUNTED, EXTERIOR, LED LUMINAIRE WITH PHOTOCELL	LITHONIA	WPX1 LED P2 40K MVOLT PE DDBXD		120 V	24 VA	2,900 lm	4000 K	70		MOUNT FIXTURE A
	ILLUMINATED MIRROR. NOMINAL 26.5W x 31.5H x 1.8"D. LOCATE REMOTE DRIVER IN ADJACENT ACCESSIBLE CEILING SPACE.	ITC	69455.ELS.3226.30K.3P120		120 V	37 VA	2,736 lm	3000 K	80		
	RECESSED LED LIGHTING FIXTURE WITH FLUSH LENS.	AXIS LIGHTING	SKFLED-22-3800-80-40-FL-W -120-DP-1-TB9		120 V	33 VA	3,800 lm	4000 K	80	YES	
	RECESSED LED LIGHTING FIXTURE WITH 2" DROP LENS.	AXIS LIGHTING	SKFLED-22-3800-80-40-2SF- W-120-DP-1-TB9		120 V	38 VA	3,800 lm	4000 K	80	YES	
	RECESSED LED LIGHTING FIXTURE WITH 2" DROP LENS. FLANGED TRIM FOR DRYWALL INSTALLATION.	AXIS LIGHTING	SKFLED-22-3800-80-40-2SF- W-120-DP-1-DF		120 V	38 VA	3,800 lm	4000 K	80	YES	
	RECESSED LED LIGHTING FIXTURE WITH 4" DROP LENS.	AXIS LIGHTING	SKFLED-22-3800-80-40-4SF- W-120-DP-1-TB9		120 V	38 VA	3,800 lm	4000 K	80	YES	
	LINEAR WASH LED PENDANT MOUNTED, DIRECT INDIRECT LUMINAIRE	PEERLESS	OPMW-LLP-XFT-MSL4-40K-5 10LMP-DARK-ZT-120-SCT-F 2/48"-CO41-SCN		120 V	64 VA	2,040 lm	4000 K	80	YES	
	SINGLE FACE LED EXIT SIGN, BACK MOUNTED	LITHONIA	LQM-S-W-3-R-120/277-ELN- SD		120 V	6 VA					CHEVRONS AS INE PLANS
	SINGLE FACE LED EXIT SIGN, PENDANT	LITHONIA	LQM-S-W-3-R-120/277-ELN- SD		120 V	6 VA					CHEVRONS AS INE PLANS

	WIRIN	IG DEVICES - FL	OOR OUTLE	TS SCHEDULE
SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG NO.	REMARKS
FB	FLOOR BOX	FSR	FSR-17770	PROVIDE FSR-17770, FL-200-4 WITH 17993 SF4
FB IS	10" BY 12" BY 6" DEEP FLOOR BOX FOR POWER, DATA AND A/V WITH 2 DATA DROPS	FSR · ·	FL-500-6-B BACK BOX AND FL-500P-SLP-C COVER	PROVIDE (2) HUBBELL #HBL8362ISA, 20 AMP I PROTECTIVE DEVICE RECEPTACLES; REFERI FLOOR BOX DETAIL, 8/E501. PROVIDE OWNEF 6 SPARE COVERS

WIF	RING DEVICES - OCCUPANC	Y SENSOR AND	LOW VOLTA	GE LTG CONTROL DEVICE SCH
SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG NO.	REMARKS
S os	20A, 120-277V, OCCUPANCY SENSOR / MANUAL WALL SWITCH	ACUITY	WSX-SA-WH	MOUNT AT 46" AFF, UNO.
63	DUAL TECHNOLOGY OCCUPANCY SENSOR - CEILING MOUNTED	SENSOR SWITCH	nCMPDT10	
P	OCCUPANCY SENSOR POWER PACK			
S LA	LOW VOLTAGE LIGHTING CONTROLLER - ON/OFF	ACUITY	nPODM-WH	MOUNT AT 46" AFF, UNO.
S lb	LOW VOLTAGE LIGHTING CONTROLLER - ON/OFF, RAISE/LOWER	ACUITY	nPODM-DX-WH	MOUNT AT 46" AFF, UNO
SIC	LOW VOLTAGE LIGHTING CONTROLLER - TWO CHANNELS, ON/OFF, RAISE/LOWER	ACUITY	nPODM-2P-DX-WH	MOUNT AT 46" AFF, UNO

NORTH

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NORTH

REMOVE

FIBER NOTES:

2,3,4 (BELOW).

HUB.

1. DISCONNECT FIBERS/CABLES FROM TWO EXISTING IDF CABINETS (WALL MTD MM1-B, FLOOR MTD MM1-A) WHERE NOTED ON PLAN. COIL UP AND SAVE FIBER CABLES TO BE REINSTALLED IN NEW LOCATION. RESERVE IDF CABINETS AND ALL RELATED PATCH PANELS AND NETWORK SWITCHES FOR REINSTALLATION WHERE INDICATED ON NEW WORK PLAN. PROTECT FIBER CABLE AS NECESSARY FROM DAMAGE DURING CONSTRUCTION. REFER TO NOTES

 <u>PHONE ROOM</u> REMOVE 24 FIBERS (TWO CABLES) FROM SLOTS C&D. INSTALL ONE (1) NEW CORNING LANSCAPE CONNECTOR HOUSING CCH-OU1 AND TWO (2) CORNING LANSCAPE CCH PIGTAILED SPLICE CASSETTES IN HOUSING. LABEL CONNECTOR HOUSING #4. RESPLICE 24 FIBERS WITH LC-LC CONNECTORS INTO NEW SPLICE CASSETTES (12 EACH).

 IDF MM1-A ROOM 164 IN IDF CABINET REMOVE OLD FIBER LIU HOUSING, REMOVE FIBERS FROM HOUSING/CASSETTE. PROVIDE AND INSTALL ONE (1) NEW CORNING, LANSCAPE CONNECTOR HOUSING CCH-OU1 AND ONE (1) CORNING LANSCAPE CCH PIGTAILED SPLICE CASSETTE IN HOUSING. RESPLICE 12 FIBERS (ONE CABLE) WITH LC-LC CONNECTORS INTO NEW SPLICE CASSETTE. INSTALL OWNER PROVIDE PATCH PANELS. CONTRACTOR TO PROVIDE AND INSTALL COMMSCOPE

20A DUPLEX RECEPTACLE, DEDICATED CIRCUIT NEXT TO

PARTIAL DEMOLITION ONE LINE DIAGRAM

NEW PARTIAL ONE LINE DIAGRAM

480V-3Ø-3W 800A

3P60

3P100

3P100

	ONE LINE FE	EDER	RLEGEND
TAG	DESCRIPTION - (3)COND+G	TAG	DESCRIPTION - (4)COND+(
(1)	3#12,#12G,1/2"C	(1N)	4#12,#12G,3/4"C
2	3#10,#10G,3/4"C	(2N)	4#10,#10G,3/4"C
3	3#8,#10G,3/4"C	(3N)	4#8,#10G,3/4"C
4	3#6,#10G,1"C	(4N)	4#6,#10G,1"C
5	3#4,#8G,1 1/4"C	(5N)	4#4,#8G,1 1/4"C
6	3#3,#8G,1 1/4"C	<u>6N</u>	4#3,#8G,1 1/2"C
$\overline{7}$	3#2,#6G,1 1/2"C	(7N)	4#2,#8G,1 1/2"C
8	3#1,#6G,2"C	(8N)	4#1,#6G,2"C
9	3-1/0,#6G,2"C	(9N)	4-1/0,#6G,2"C
(10)	3-2/0,#6G,2"C	(10N)	4-2/0,#6G,2"C
(11)	3-3/0,#6G,2 1/2"C	(11N)	4-3/0,#6G,2 1/2"C
(12)	3-4/0,#4G,2 1/2"C	(12N)	4-4/0,#6G,2 1/2"C
(13)	3-250kcmil,#4G,3"C	(13N)	4-250kcmil,#4G,3"C
(14)	3-300kcmil,#4G,3"C	(14N)	4-300kcmil,#4G,3"C
(15)	3-350kcmil,#4G,3"C	(15N)	4-350kcmil,#4G,4"C
(16)	3-500kcmil,#3G,4"C	(16N)	4-400kcmil,#4G,4"C
(17)	(2)3-250kcmil,#2G,3"C	(17N)	4-500kcmil,#3G,4"C
18	(2)3-350kcmil,#1G,3"C	(18N)	4-600kcmil,#3G,4"C
(19)	(2)3-400kcmil,1/0G,4"C	(19N)	(2)4-300kcmil,#2G,3"C
20	(2)3-500kcmil,1/0G,4"C	(20N)	(2)4-400kcmil,#1G,4"C
21	(3)3-400kcmil,2/0G,4"C	(21N)	(2)4-500kcmil,1/0G,4"C
22	(4)3-350kcmil,3/0G,4"C	(22N)	(2)4-600kcmil,1/0G,4"C
23	(4)3-500kcmil,4/0G,4"C	(23N)	(3)4-500kcmil,2/0G,4"C
24	(5)3-400kcmil,4/0G,4"C	(24N)	(4)4-400kcmil,3/0G,4"C
25	(6)3-400kcmil,250kcmil G,4"C	(25N)	(4)4-600kcmil,4/0G,4"C
26	(7)3-500kcmil,350kcmil G,4"C	(26N)	(6)4-350kcmil,4/0G,4"C
27	(8)3-500kcmil,400kcmil G,4"C	(27N)	(6)4-500kcmil,250kcmil G,4"C
		(28N)	(7)4-600kcmil,350kcmil G,4"C
		(29N)	(8)4-600kcmil,400kcmil G,4"C

1.	UNLESS OTHERWISE NOTED, ALL PANELS, TRANSFORM
	ETC. SHOWN ON THIS PLAN ARE EXISTING TO REMAIN.
	THAT THE DADTIAL DICED, DOED NOT DEDDECENT THE

- SHOWN ON THIS PLAN ARE EXISTING TO REMAIN. NOTE THAT THIS PARTIAL RISER DOES NOT REPRESENT THE ENTIRE BUILDING INFRASTRUCTURE.
 ALL DISTRIBUTION EQUIPMENT SHALL BE SQUARE D NO EXCEPTIONS.
 120V TERMINAL UNITS SHALL BE SERVED FROM THE OFFICE SPACE PANELBOARDS (TOTAL OF 25.5 KVA)
 480V TERMINAL UNITS SHALL BE SERVED FROM THE NEW 480V PANELBOARD (54 KVA)

- (4)COND+G .3"C 4"C ,4"C kcmil G,4"C kcmil G,4"C

MERS, N. NOTE

Corporation Detroit, MI 48239 atior Renov: \Box Diesel \geq \square ž lte 0 etroit 00 Ś REVISIONS 10/30/2024 BIDS & CONSTRUCTION Drawn By GAC Designer BJG Reviewer JAM Manager KN Hard copy is intended to be 30"x42" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size. PROJECT NO. 231609 SHEET NO. E402 ©Copyright 2022 All Rights Reserved

	PA	NEL ID		PANEL DESCRIPTION											
R	RP-	M1-B2						NEW P	ANELBOA	١RC)				
_		Location:	OPEN OFFICE 10	00			Vo	Itage: 208/120 V	Vye	A	.I.C. R	ating: 22K			
1		Supply From:	T-M1-B2				P	hase: 3			Mains	Туре: мсв			
		Mounting:	FLUSH				V	Vires: 4			R	ating: 200 A			
		Enclosure:	NEMA 1		1	No	<u>). of P</u>	Poles: 84			Bu	ssing: COPPER			
	Rev.					A		В	С					Rev.	
СКТ	No.	Circuit Des	scription	Trip	Poles	504.244.4400.2				Poles	Trip		escription	No.	СКТ
1		Lighting OPEN OFF	-ICE 100	20 A	1	584 VA / 1130 V	VA	706 \/A / 622 \/A		1	20 A		-FICE 100		2
5		Lighting FLEX OFF	CE 104	20 A	1			790 VA / 023 VA	824 VA / 1648 VA	1	20 A	Lighting OPFICE	FICE 173		6
7		Lighting OPEN OFF	ICE 173	20 A	1	429 VA / 360 V	VA I			1	20 A	TV MONITORS C	ONF ROOM 102		8
9		RECEPT CONFERI	ENCE ROOM 102	20 A	1			900 VA / 1440 VA	N I I I I I I I I I I I I I I I I I I I	1	20 A	RECEPT ENTRY	101		10
11		RECEPT FLEX OF	FICE 104	20 A	1				900 VA / 900 VA	1	20 A	RECEPT FLEX O	FFICE 105		12
13		RECEPT FLEX OF	FICE 106	20 A	1	900 VA / 1440 V	VA			1	20 A	RECEPT FOCUS	ROOM 107		14
15		RECEPT FLEX OF	FICE 153	20 A	1			720 VA / 1440 VA		1	20 A	RECEPT FOCUS	ROOM 154		16
1/			FICE 155	20 A	1				900 VA / 900 VA	1	20 A	RECEPT FLEX OF			18
21		RECEPT FLEX OF	FICE 162	20 A	1	900 VA / 1080 V	VA	900 VA / 1080 VA		1	20 A	WORKSTATIONS	OPEN OFF. 100		20
23		RECEPT FOCUS R	ROOM 152	20 A	1				720 VA / 1440 VA	1	20 A	RECEPT FOCUS	ROOM 158		24
25		RECEPT OFFICE 1	51	20 A	1	900 VA / 900 V	VA			1	20 A	RECEPT FLEX O	FFICE 161		26
27		Equip. OPEN OFFI	CE 100	20 A	1			720 VA / 0 VA		1	20 A	WORKSTATIONS	OPEN OFF. 100		28
29		WORKSTATIONS (OPEN OFF. 100	20 A	1				0 VA / 1440 VA	1	20 A	WORKSTATIONS	OPEN OFF. 100		30
31		WORKSTATIONS (OPEN OFF. 100	20 A		1440 VA / 1440	VA	4440.244.4440.24	•	1	20 A	WORKSTATIONS	OPEN OFF. 173		32
33		WORKSTATIONS	OPEN OFF. 173	20 A	1			1440 VA / 1440 VA		1	20 A	WORKSTATIONS	OPEN OFF. 173		34
37		WORKSTATIONS (OPEN OFF. 173	20 A		1440 VA / 1440	VA			1	20 A	WORKSTATIONS	OPEN OFF. 173		38
39		WORKSTATIONS (OPEN OFF. 173	20 A	1		·	1440 VA / 1440 VA	4	1	20 A	WORKSTATIONS	OPEN OFF. 173		40
41		WORKSTATIONS (OPEN OFF. 173	20 A	1				1440 VA / 1440 VA	1	20 A	WORKSTATIONS	OPEN OFF. 173		42
43		WORKSTATIONS (OPEN OFF. 173	20 A	1	1440 VA / 900 V	VA			1	20 A	PRINTER OPEN	OFFICE 173		44
45		EXTERIOR RECEP	PT	20 A	1			180 VA / 180 VA	0.1/1./0.1/1	1	20 A	EXTERIOR RECE	PTACLES		46
4/		Spare		20 A	1				0 VA / 0 VA	1	20 A	Spare			48
49 51		Spare		20 A	1	0 0 0 0 0 0	_	0.VA/0.VA		1	20 A	Spare			50
53		Spare		20 A	1			0 0 0 0 0	0 VA / 0 VA	1	20 A	Spare			54
55		Spare		20 A	1	0 VA / 0 VA				1	20 A	Spare			56
57		Spare		20 A	1			0 VA / 0 VA		1	20 A	Spare			58
59		Spare		20 A	1				0 VA / 0 VA	1	20 A	Spare			60
61		Spare		20 A	1	0 VA / 0 VA	_	0.1/0.1/0.1/0		1	20 A	Spare			62
65		Spare		20 A	1			0 VA / 0 VA	0 VA / 0 VA	1	20 A	Spare			66
67		Spare		20 A	1	0 VA / 0 VA	-			1	20 A	Spare			68
69		Spare		20 A	1			0 VA / 0 VA		1	20 A	Spare			70
71		Prepared Space			1				0 VA / 0 VA	1		Prepared Space			72
73		Prepared Space			1	0 VA / 0 VA				1		Prepared Space			74
75		Prepared Space			1			0 VA / 0 VA		1		Prepared Space			76
70		Prepared Space			1				0 VA / 0 VA	1		Prepared Space			/ð 80
81		Prepared Space			1	0 VA/0 VA		0 VA / 0 VA		1		Prepared Space			82
83		Prepared Space			1				0 VA / 0 VA	1		Prepared Space			84
				Total	Load:	16723 VA		14739 VA	15432 VA		•				
				Total /	Amps:	140 A		123 A	129 A						
Lood Clossification					0					-		D	Totols	-	
Load Classification						Den					Panel	IOTAIS			
Lighting					6034 VA		125.00%	7543 VA		Total	Connected Load:	46894 VA			
RECEPT			1	7640 VA		78.34%	13820 VA	Т	otal Es	timated Demand:	44583 VA				
Equip.					1	3140 VA		100.00%	13140 VA		otal Cor	nnected Current.:	130 A		
										Total Est. Demand Current: 124 A					
Notes:				I		ŀ									

	P	ANEL ID			P	ANEL DESCRIP	TION		
Ρ	DP	P-M1-H1			NEW	PANELI	BOAR	D	
		Location:		V	oltage: 480 D	elta	C. Rating: 65K		
		Mounting:	SUPEACE		Wires: 2		IVI Maii		
		Enclosure:	NEMA 1		Wiles. 5		Iviai	Bussing: COPE	EB
скт	Rev. No.		Circuit Description		# of Poles	Trip Rating	Load	Remarks	
1		PP-M1-H2			3	125 A	64500 VA		
2		EXISTING T-M1-F/1-A			3	125 A	75859 VA		
3		T-M1-L1			3	125 A	17730 VA		
4		T-M1-B2			3	125 A	46894 VA		
5		RTU-M1			3	150 A	103923 VA		
6		RTU-M2			3	110 A	76487 VA		
7		T-M1-H1			3	125 A	57955 VA		
8		Spare			1	30 A	0 VA		
9		Spare			1	30 A	0 VA		
10		Spare			1	60 A	0 VA		
11		Spare			1	60 A	0 VA		
12		Spare			1	100 A	0 VA		
13		Spare			1	100 A	0 VA		
14									
15									
16									
17									
18									
19									
20									
					PHASE A	PHASE B	PHASE C	Т	OTAL AMPS
					151 kVA	147 kVA	146 kVA		533 A
Load	Class	ification	Connected Lo	ad Dei	mand Factor	NEC Calc. Loa	ad	Panel	Totals
Equip.			360889 VA		100.00%	360889 VA			
Heating			2500 VA		125.00%	3125 VA	Tota	al Connected Load:	443 kVA
Motor			530 VA		125.00%	663 VA	To	tal NEC Calc. Load:	428 kVA
Other			18725 VA		100.00%	18725 VA	Total	Connected Current:	533 A
RECEP	T		48740 VA		60.26%	29370 VA	Total	NEC Calc. Current:	514 A
Lighting			11964 VA		125.00%	14955 VA			
Notes									

	PA	ANEL ID					PANE	L DESCRIPTION							
R	P-	M1-H1			NEW PANELBOARD										
		Location:									ating: 20K				
		Supply From:				· · · · · · · · · · · · · · · · · · ·	Phase: 3	/e	~	Mains					
		Mounting:	FLUSH				Wires: 4		Rating: 200 A						
		Enclosure:	NEMA 1			No. o	f Poles: 84			Bu	ssing: COPPER				
	_					_	_	_					_		
СКТ	Rev.	Circuit De	scription	Trin	Poles	A	В	С	Poles	Trin	Circuit De	scription	Rev.	скт	
1	110.	L -SPEAKER POW	FR	20 A	1	50 VA / 422 VA			1	20 A	Lighting CORRIDO	R 175	110.	2	
3		► SINK DISPOSAL	SK-1 RM 166	20 A	1		1140 VA / 530 VA		1	20 A	EF-164			4	
5		RECEPT BREAK A	REA 166	20 A	1			360 VA / 558 VA	1	20 A	Lighting CONFERE	NCE ROOM 163		6	
7		REFRIG. BREAK A	REA 166	20 A	1	840 VA / 699 VA			1	20 A	Lighting CONFERE	NCE ROOM 202		8	
9		EXTERIOR RECEP	TACLES	20 A	1		180 VA / 390 VA		1	20 A	Lighting OPEN OFF	FICE 200		10	
11		EXTERIOR RECEP	TACLES	20 A	1			180 VA / 1000 VA	1	15 A	TU-167			12	
13		RECEPT OPEN OF	FICE 200	20 A	1	1080 VA / 1200 VA			1	20 A	MICRO. BREAK AF	REA 166		14	
15		Lighting MEN'S RE	STROOM 167	20 A	1		1040 VA / 1600 VA		1	20 A	RECEPT IDF 164			16	
17		WORKSTATIONS (OPEN OFF. 200	20 A	1			1080 VA / 896 VA	1	20 A	Lighting OFFICE 21	3		18	
19		MICRO. BREAK AP	REA 166	20 A	1	1200 VA / 1697 VA				20 A	Lighting OPEN OFF	ICE 200		20	
21		1U-1/1		25 A	1		2000 VA / 360 VA	0000 \/A / 000 \/A		20 A	IV MONITORS CO			22	
23		10-1/2 RECERT LO 405		25 A	1	260.1/4 / 540.1/4		2000 VA / 360 VA		20 A		DEA 160		24	
25		RECEPTIONED		20 A	1	300 VA / 540 VA	540 \/A / 600 \/A			20 A				26	
21			ENCE ROOM 202	20 A	1		340 VA / 600 VA	540 \/A / 600 \/A		20 A				20 20	
29				20 A	1	234 \/A / 720 \/A		540 VA / 600 VA	1	20 A	RECEPT CORR 17	2 175		30	
33		RECEPT FOCUS R	COM 208	20 A	1	234 VA7120 VA	720 VA / 720 VA		1	20 A	RECEPT CONFER	ENCE ROOM 171		34	
35		WORKSTATIONS	OPEN OFF. 200	20 A	1		120 010 120 010	720 VA / 720 VA	1	20 A	RECEPT CONFER	ENCE ROOM 202		36	
37		RECEPT CONFER	ENCE ROOM 163	20 A	1	720 VA / 900 VA			1	20 A	RECEPT MEN'S RE	ESTROOM 167		38	
39		RECEPT OPEN OF	FICE 173	20 A	1		900 VA / 900 VA		1	20 A	RECEPT FLEX OF	FICE 207		40	
41		RECEPT OPEN OF	FICE 200	20 A	1			900 VA / 900 VA	1	20 A	RECEPT FLEX OF	FICE 209		42	
43		RECEPT FLEX OF	FICE 205	20 A	1	900 VA / 900 VA			1	20 A	PRINTER OPEN O	FFICE 200		44	
45		REC & MONITORS	CONF RM 171	20 A	1		900 VA / 1000 VA		1	15 A	TU-203			46	
47		RECEPT FLEX OF	FICE 203	20 A	1			900 VA / 1000 VA	1	15 A	TU-205			48	
49		TU-169		15 A	1	1000 VA / 1440 VA			1	20 A	WORKSTATIONS (OPEN OFF. 200		50	
51		WORKSTATIONS	OPEN OFF. 200	20 A	1		1440 VA / 1440 VA		1	20 A	WORKSTATIONS (OPEN OFF. 200		52	
53		WORKSTATIONS (OPEN OFF. 200	20 A	1			1440 VA / 1440 VA	1	20 A	WORKSTATIONS (OPEN OFF. 200		54	
55		WORKSTATIONS (JPEN OFF. 200	20 A	1	1440 VA / 180 VA	000.1/4 / 0.1/4		1	20 A	EXTERIOR RECEP	'I		56	
5/		CARD ACCESS PA	INEL IDF 164	20 A	1		800 VA / 0 VA		1	20 A	Spare			50	
61		Spare		20 A	1			0 VA / 0 VA	1	20 A	Spare			62	
63		Spare		20 A	1		0.VA/0.VA		1	20 A	Spare			64	
65		Spare		20 A	1			0 VA / 0 VA	1	20 A	Spare			66	
67		Spare		20 A	1	0 VA / 0 VA			1	20 A	Spare			68	
69		WORKSTATIONS	OPEN OFF. 200	20 A	1		1440 VA / 1440 VA		1	20 A	RECEPT FOCUS R	ROOM 210		70	
71		WORKSTATIONS	OPEN OFF. 200	20 A	1			1440 VA / 1440 VA	1	20 A	WORKSTATIONS	OPEN OFF. 200		72	
73		WORKSTATIONS	OPEN OFF. 200	20 A	1	1440 VA / 1440 VA			1	20 A	RECEPT FOCUS R	ROOM 204		74	
75		Prepared Space			1		0 VA / 0 VA		1		Prepared Space			76	
77		Prepared Space			1			0 VA / 0 VA	1		Prepared Space			78	
79		Prepared Space			1	0 VA / 0 VA			1		Prepared Space			80	
81		Prepared Space					0 VA / 0 VA				Prepared Space			82	
83		Prepared Space		 Tetel		10400 \/A	200801/4	U VA / U VA			Prepared Space			84	
				Total	LUau:	19402 VA 163 A	20000 VA 169 ∆	10474 VA 154 Δ	J						
					anha.	100 A									
Load	Clas	sification			Conn		emand Factor	Estimated Demand			Panel T	otals			
Motor						530 VA	125.00%	663 VA	1						
Other					-	7205 VA	100.00%	7205 VA		Total	Connected Load: 5	57955 VA			
Lighting	9				į	5930 VA	125.00%	7413 VA		otal Es	timated Demand: 5	52280 VA			
RECE	PT				2	24580 VA	70.34%	17290 VA		otal Co	nnected Current.: 1	161 A			
Equip.					1	9710 VA	100.00%	19710 VA	To	tal Est.	Demand Current: 1	145 A			
Notes	: • P				EIOC	K-ON BREAKER			1						
					00										

PANEL ID			PANEL DESCRIPTION									
PP-M1-H2			NEW PANELBOARD									
		Location:			Vo	oltage: 480 D	elta	-	A.I.	C. Rating: 42K		
		Supply From:	PDP-M1-H1		F	hase: 3			Mains Type: MLO			
		Mounting:	SURFACE			Wires: 3			Mains Rating: 125 A			
		Enclosure:	NEMA 1							Bussing: COPF	PER	
	Rov											
СКТ	No.		Circuit Descr	iption		# of Poles	Trip Rating	L	oad	Remarks		
1		TU-101		-		3	15 A	25	00 VA			
2		TU-100B				3	15 A	70	00 VA			
3		TU-100A				3	15 A	30	00 VA			
4		TU-173A				3	15 A	55	00 VA			
5		TU-166				3	15 A	35	00 VA			
6		TU-173C				3	15 A	35	00 VA			
7		TU-173B				3	15 A	35	00 VA			
8		TU-174				3	15 A	35	00 VA			
9		TU-202				3	15 A	20	00 VA			
10		TU-200A				3	15 A	60	00 VA			
11		TU-200B				3	15 A	45	00 VA			
12		TU-200C				3	15 A	60	00 VA			
13		TU-215				3	15 A	40	00 VA			
14		CUH-M1-101				3	15 A	50	00 VA			
15		CUH-M1-29				3	15 A	50	00 VA			
16		Spare				1	20 A	() VA			
17		Spare				1	20 A	() VA			
18		Prepared Space				1						
19		Prepared Space				1						
20		Prepared Space				1						
						PHASE A	PHASE B	PH	ASE C	T	OTAL AMPS	
	_					22 kVA	22 kVA	22	2 kVA		78 A	
Load Classification				Connected Load	Dem	and Factor	NEC Calc. Load			Panel	Totals	
Equip.				62000 VA		100.00%	62000 VA					
Heating				2500 VA		125.00%	3125 VA		Tota	al Connected Load:	65 kVA	
									Tot	al NEC Calc. Load:	65 kVA	
									Total Connected Current:		78 A	
									Total NEC Calc. Current:		78 A	
Notes	:											

PANEL ID						PA	NEL DESCRIPTION							
RP-M1-D1				NEW PANELBOARD										
Location: OPEN OFFICE 173 Supply From: T-M1-F/1-A Mounting: FLUSH Enclosure: NEMA 1				Voltage: 208/120 Wye Phase: 3 Wires: 4 No. of Poles: 42					A.I.C. Rating: 22K Mains Type: MCB Rating: 200 A Bussing: COPPER					
скт	Rev. No.	Circuit De	scription	Trip	Poles	А	В	С	Poles	Trip	Circuit D	escription	Rev. No.	ск
1		TU-103	1	15 A	1	1000 VA / 1000	VA		1	15 A	TU-105			2
3		TU-104	1	15 A	1		1000 VA / 1000 V	/A	1	15 A	TU-106			4
5		TU-151	3	30 A	1			2500 VA / 1500 VA	1	20 A	TU-150			6
7		TU-153	1	15 A	1	1000 VA / 1000	VA		1	15 A	TU-155			8
9		TU-157	1	15 A	1		1000 VA / 1000 V	/A	1	15 A	TU-159		<u> </u>	10
11		TU-161	1	15 A	1			1000 VA / 1000 VA	1	15 A	TU-162		_	12
13		TU-163	2	25 A	1	2000 VA / 0 V	A		1	15 A	TU-165		_	14
15		Spare	2	20 A	1		0 VA / 0 VA		1	20 A	Spare		_	16
17		Spare	2	20 A	1			0 VA / 0 VA	1	20 A	Spare		_	18
19		Spare	2	20 A	1	0 VA / 0 VA	0.1/1./0.1/1		1	20 A	Spare		——	20
21		Spare	2	20 A	1		0 VA / 0 VA	0.244 / 0.244	1	20 A	Spare		_	22
23		Spare	2	20 A	1			0 VA / 0 VA	1	20 A	Spare		——	24
25		Spare	2	20 A	1	0 VA / 0 VA	0.1/1./0.1/1		1	20 A	Spare		_	26
27		Spare	2	20 A	1		0 VA / 0 VA	0.)(0.)(0.)(0.)		20 A	Spare		<u> </u>	28
29		Spare	2	20 A	1	0.1/0.1/0.1/0		0 VA / 0 VA	1	20 A	Spare		<u> </u>	30
31		Prepared Space			1	0 VA / 0 VA	0)/0/0)/0				Prepared Space		<u> </u>	32
33		Prepared Space			1		0 VA / 0 VA	0.)(0.)(0.)(0.)			Prepared Space		<u> </u>	34
35		Prepared Space			1	0.1/0.1/0.1/0		0 VA / 0 VA	1		Prepared Space		<u> </u>	36
37		Prepared Space			1	0 VA / 0 VA	0)/0//0)/0				Prepared Space		<u> </u>	38
39		Prepared Space			1		0 VA / 0 VA	0.)(0.)(0.)(0.)			Prepared Space		<u> </u>	40
41		Prepared Space	l			C000 \ (A	4000.1/4	0 VA / 0 VA	1		Prepared Space			42
			ו To	otal	Amps:	53 A	33 A	53 A	J					
Load Classification		Connected Load		ected Load	Demand Factor	Estimated Demand	Pa		Panel	Totals				
Equip.	Equip.			1	6000 VA	100.00%	16000 VA							
										Total	Connected Load:	16000 VA		
									1	Total Es	timated Demand:	16000 VA		
							Total Connected Current.: 4			44 A				
							To	tal Est.	Demand Current:	44 A				
Notes	s:													

PANEL ID					PANEL DESCRIPTION										
F	RP-	M1-L1		NEW PANELBOARD											
Location: IDF 212					Voltage: 208/120 Wye A.I.C. Rating: 22K										
							Phase: 3			Mains	Туре: мсв				
		Mounting:	SURFACE				Wires: 4			F	Rating: 200 A				
Enclosure: NEMA 1					No.	ssing: COPPER									
			:												
CKT	Rev.	Circuit De	scription	Trin	Polos	A	В	C	Poles	Trin	Circuit D	escription	Rev.	CKT	
1	110.		213	20 A	1	900 VA / 720 V/	Δ		1	20 A		EFICE 214	110.	2	
3		RECEPT OPEN OF	FICE 214	20 A	1	000 111120 11	540 VA / 1600 VA	Δ	1	20 A	RECEPT IDF 212			-	
5		RECEPT IDE 212		20 A	1		040 1/1/ 1000 1/	180 VA / 530 VA	1	20 A	FF-212			6	
7			KING 214	20 A	1	1440 VA / 180 V	/Α		1	20 A	TV MONITORS OPEN OFFICE 214			8	
9		Other BENCHMAR	KING 214	20 A	1		1440 VA / 180 VA	Δ	1	20 A				10	
11		RECEPT OPEN OF	FICE 214	20 A	1			1440 VA / 180 VA	1	20 A				12	
13		PRINTER OPEN O	FFICE 214	20 A	1	900 VA / 500 V	A		1	20 A				14	
15		MICRO BENCHMR	KING	20 A	1		1000 VA / 0 VA		1	20 A	Spare			16	
17	Spare 20 4		20 A	1			0 VA / 0 VA	1	20 A	Spare			18		
19	Spare 20		20 A	1	0 VA / 0 VA			1	20 A	Spare			20		
21	21 Spare 20		20 A	1	•, •	0 VA / 0 VA		1	20 A	Spare			22		
23	23 Spare 20		20 A	1		•	0 VA / 0 VA	1	20 A	Spare			24		
25	25 Spare 20		20 A	1	0 VA / 0 VA		,	1	20 A	Spare			26		
27		Spare 20 A		20 A	1		0 VA / 0 VA		1	20 A	Spare			28	
29		TU-207 15 A		15 A	1		•	1000 VA / 1000 VA	1	15 A	↓ TU-209			30	
31		TU-211 15		15 A	1	1000 VA / 1500 V	VA I		1	25 A	TU-213			32	
33	TU-214A 20		20 A	1		1500 VA / 0 VA		1	20 A	Spare			34		
35	5 Prepared Space			1			0 VA / 0 VA	1		Prepared Space			36		
37	37 Prepared Space			1	0 VA / 0 VA			1		Prepared Space			38		
39	Prepared Space			1		0 VA / 0 VA		1		Prepared Space			40		
41		Prepared Space	repared Space		1			0 VA / 0 VA	1		Prepared Space			42	
				Total	Load:	7140 VA	6260 VA	4330 VA							
To		Total	Amps:	62 A	55 A	36 A	8								
					•										
Load Classification			Connected Load			Demand Factor Estimated Demand			:	Panel	Totals		1 .		
Other			1440 VA		1440 VA	100.00%	1440 VA								
RECEPT			6520 VA		6520 VA	100.00%	6520 VA	Total Connected Load:		17730 VA					
Equip.			9770 VA		100.00%	9770 VA	Total Estimated Demand:		17730 VA						
								Т	otal Co	nnected Current.:	49 A				
							To	tal Est. Demand Current: 49 A		49 A					
Notes	6:														
I															

