

GAS FIRED ROOFTOP UNIT SCHEDULE																					
UNIT TAG	AREA SERVED	NOMINAL TONS	FAN DATA			COOLING DATA			HEATING DATA			HEIGHT (LBS)	EPP (AIR) SEER	ELECTRIC				BASIS OF DESIGN MANUFACTURER/ MODEL#			
			SUPPLY AIR (CFM)	OUTSIDE AIR (CFM) MINIMUM	MAXIMUM	E.S.P. (IN H ₂ O)	RPM	H.P.	TOTAL (MBH)	SENSIBLE (MBH)	EAT T ₅₀ /T ₅₅			MBH IN/OUT	NUMBER OF STAGES	ARVE %	V		PH	HZ	MOP
RTU-1	RETAIL/SALES	4.0	1400	120	285	0.75	1136	1.7	41.96	34.24	11.8/65.3	12/54	1	82	806	15.6	208	3	60	30	48HCDA05.12A5
RTU-2	RETAIL/SALES	4.0	1400	120	285	0.75	1136	1.7	41.96	34.24	11.8/65.3	12/54	1	82	806	15.6	208	3	60	30	48HCDA05.12A5
RTU-3	BACK OF HOUSE	4.0	1400	-	120	0.75	1136	1.7	44.08	30.68	15.2/65.8	12/54	1	82	806	15.6	208	3	60	30	48HCDA05.12A5

- NOTES:
- UNLESS OTHERWISE NOTED ALL MODEL NUMBERS ARE BASED ON CARRIER PRODUCTS.
 - EXTERNAL STATIC PRESSURE INCLUDES LOSSES FOR DUCTWORK, AIR DEVICES AND FILTERS.
 - F56 SHALL PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT COMPATIBLE WITH EMS (EDGE) WITH 2-STAGE HEAT & COOL, MANUAL OVERRIDE, CAPABLE OF RETAINING TIME & SETTINGS DURING A 10-HOUR POWER OUTAGE. CONTRACTOR SHALL PROVIDE TEMPORARY THERMOSTAT FOR EQUIPMENT INSTALLATION/CALIBRATION AS NEEDED PRIOR TO F56 PROGRAMMABLE THERMOSTAT INSTALLATION.
 - PROVIDE DOWN-FLOW 14" ROOF CURB.
 - PROVIDE FACTORY INSTALLED INTEGRAL NON-FUSED WEATHERPROOF DISCONNECT.
 - PROVIDE FACTORY INSTALLED NON-POWERED WEATHER PROOF GFI CONVENIENCE OUTLET.
 - PROVIDE MANUFACTURER'S RECOMMENDED SUPPLY FAN MOTOR AND DRIVE BASED ON CHARACTERISTICS LISTED ABOVE FOR COMPLETE AND OPERABLE SYSTEM.
 - ALL UNITS SHALL BE CAPABLE OF ECONOMIZER OPERATION WITH DIFFERENTIAL ENTHALPY TYPE SENSOR FOR OPTIMIZED VENTILATION CONTROL.
 - ROOFTOP UNIT SHALL BE R-410A.
 - PROVIDE FIELD INSTALLED MODULATING OUTSIDE AIR DAMPER CONTROL FOR DCV AT RTU-1 AND RTU-2.
 - PROVIDE BAROMETRIC RELIEF DAMPER FOR ALL RTUs.
 - PROVIDE FACTORY/FIELD INSTALLED DRAIN PAN OVERFLOW SWITCH FOR SHUT DOWN OF UNIT WHEN DRAIN PAN BECOMES CLOGGED.
 - PROVIDE CORROSION RESISTANT BIRD SCREENS CAPABLE OF RESISTING PENETRATION BY A 1/2" DIAMETER PROBE.
 - PROVIDE NEB MERV-13 FILTERS PRIOR TO TESTING AND BALANCING.
 - PROVIDE COIL GUARD PROTECTION.

DUCTLESS SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE															
ITEM #	AREA SERVED	FAN DATA				COOLING DATA				WEIGHT (LBS.)		MITSUBISHI MODEL #			
		C.F.M.	E.S.P.	MOCF	R.P.M.	ELEC. DATA	TYPE	TOTAL BTU/HR	SENS BTU/HR	WATTS	SEER	INDOOR UNIT	OUTDOOR UNIT	INDOOR UNIT	OUTDOOR UNIT
AC-1/ACCU-1	TELCO ROOM	380	-	30.0	-	208V/1Ø	R410A	12,000	12,000	1,000	20.8	24	92	PKA-A12HAT	FUT-A12NKAT

- NOTES:
- UNLESS OTHERWISE NOTED ALL MODEL NUMBERS ARE BASED ON MITSUBISHI ELECTRONICS.
 - PROVIDE ALL INTERCONNECTING REFRIGERANT PIPING AND ACCESSORIES REQUIRED FOR A COMPLETE AND PROPERLY OPERATING SYSTEM.
 - FIELD COORDINATE REQUIRED REFRIGERANT PIPE LENGTH AND MAXIMUM HEIGHT DIFFERENCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - PROVIDE ROOF CURB FOR ACCU.
 - AC-1 AND ACCU-1 SHALL HAVE A SINGLE-POINT ELECTRICAL CONNECTION.
 - PROVIDE WALL MOUNTED WIRELESS REMOTE PROGRAMMABLE THERMOSTAT AS INDICATED ON THE DRAWINGS.
 - PROVIDE ALL ACCESSORIES FOR LOW AMBIENT OPERATION BELOW 0°F, INCLUDING WIND BAFFLE.
 - PROVIDE INTEGRAL CONDENSATE PUMP.

VERIZON CONTRACTOR RESPONSIBILITY MATRIX					
SCOPE	MECHANICAL	SECURITY	ELECTRICAL	F56	PREREQUISITE TO EMS INSTALL
PROVIDE BUILDING PERMANENT POWER					
PROVIDE 120V FOR EMS POWER					
INSTALL EMS PANEL, LIGHTING CONTROL PANEL AND PHASELOSS.					
INSTALL AND TERMINATE LIGHTING SWITCH LEGS					
COMPLETE INSTALLATION OF ANY NEW HVAC EQUIPMENT					
FIELD VERIFY ALL EXISTING HVAC EQUIPMENT, INCLUDING ALL ACCESSORIES, FOR PROPER OPERATION					
PROVIDE CORRECT CONTROL WIRING TO THERMOSTAT, AND DCV CARBON DIOXIDE SENSOR					
PROVIDE/INSTALL CARBON DIOXIDE SENSOR DCV AND INSTALL TEMPORARY THERMOSTATS FOR HVAC STARTUP					
COMPLETE UNIT START-UP PROCEDURES OF ALL HVAC EQUIPMENT, INCLUDING ALL ACCESSORIES, FOR PROPER OPERATION					
PROVIDE EMS PANEL, LIGHTING CONTROL PANEL LV, AND PHASELOSS					
PROVIDE AND INSTALL SUPPLY AND RETURN AIR DUCT TEMPERATURE SENSORS WITH CONTROL WIRING					
PROVIDE AND INSTALL TELCO ROOM SENSOR					
PROVIDE AND INSTALL PHOTOCELL, AND INTERIOR CO2 WITH R/H SENSOR					
PROVIDE AND INSTALL ALL SECURITY COMPONENTS INCLUDING CRADLEPOINT 4G ROUTER AND SECURITY RELAY					
CONNECT WIRE FROM SECURITY RELAY TO EMS					
CONNECT AND TERMINATE WIRELESS THERMOSTATS, FAN STATUS CT, AND CO2 WITH R/H SENSORS					
CONNECT TO CRADLEPOINT ROUTER VIGATS					
CONNECT AND TERMINATE RELAYS TO CONTROL LIGHTING CONTROLS					
TEST FOR COMPLETE AND PROPER EMS SYSTEM OPERATION					

- NOTES:
- REFER TO ELECTRICAL PLAN, SHEET 93.02, FOR DIAGRAMS AND ADDITIONAL INFORMATION.
 - CONTRACTOR SHALL REQUEST COMPLETE SET OF ENERGY MANAGEMENT SYSTEM (EMS) DRAWINGS THROUGH VERIZON PROJECT MANAGER AND CONTACT EQUIPMENT MANUFACTURER'S ENGINEERING TEAM FOR TECHNICAL SUPPORT AS REQUIRED.

AIR DEVICE SCHEDULE							
ITEM #	AREA SERVED	FUNCTION	C.F.M.	SLOTS/WIDTH	FACE SIZE	NECK SIZE	MODEL #
D-1	BACK OF HOUSE	SUPPLY	AS SHOWN	-	24"x24"	(NOTE 2)	OMNI (NOTE 6)
R-1	RETAIL SALES	SUPPLY	AS SHOWN	-	12"x6"	12"x6"	300RS (NOTE 3, 5)
R-2	RETAIL SALES	SUPPLY	AS SHOWN	-	14"x6"	14"x6"	300RS (NOTE 3, 5)
R-3	BACK OF HOUSE	SUPPLY	AS SHOWN	-	12"x12"	12"x12"	300RS (NOTE 3, 4, 6)
G-1	BACK OF HOUSE	RTN/TRN	AS SHOWN	-	24"x24"	18"x18"	PAR (NOTE 6)
G-2	BACK OF HOUSE	TRANSFER	AS SHOWN	-	12"x12"	12"x12"	350RL (NOTE 6)

- NOTES:
- UNLESS OTHERWISE NOTED ALL MODEL NUMBERS ARE BASED ON TITUS.
 - NECK SIZES SHALL BE AS FOLLOWS: 6"x120 CFM MAX, 8"x220 CFM MAX, 10"x400 CFM MAX, 12"x620 CFM MAX.
 - PROVIDE OPPOSED BLADE DAMPER FOR ALL DOUBLE DEFLECTION SUPPLY AIR REGISTERS.
 - PROVIDE RECTANGULAR TO ROUND TRANSITION AS NEEDED.
 - FINISH SHALL BE BAKED ENAMEL PAINTED TO MATCH SUB-STRUCTURE AND ASSOCIATED DUCTWORK. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
 - FINISH SHALL BE BAKED ENAMEL PAINTED TO MATCH CEILING COLOR.

FAN SCHEDULE										
UNIT TAG	AREA SERVED	CFM	ESP (IN H ₂ O)	RPM	ELECTRIC		CONTROL	MANUFACTURER/ MODEL #		
					V	PH		HZ	MOP	
EF-1	EXT. MENS TOILET	75	0.50	302	120	1	60	(80)	NOTES 1, 2, 3	GREENECK / SP-B110
EF-2	EXT. WOMEN'S TOILET	75	0.50	302	120	1	60	(80)	NOTES 1, 2, 3	GREENECK / SP-B110
EF-3	JANITOR'S CLOSET	75	0.50	302	120	1	60	(80)	NOTES 1, 2, 3	GREENECK / SP-B110

- NOTES:
- FANS SHALL BE COMPLETE W/BACKLIFT DAMPER.
 - FANS SHALL BE COMPLETE W/ SPEED CONTROLLER MOUNTED TO FAN FOR FINAL AIR BALANCING.
 - CONNECT TO EMS SYSTEM TO OPERATE DURING OCCUPIED HOURS. REFER TO ELECTRICAL DRAWINGS, SHEET 92.01, FOR ADDITIONAL INFORMATION.



Buildings Group
MRA ARCHITECTURAL SERVICES, INC.
 Architects, Planners, Urban Designers, Landscape Architects, Engineers and Surveyors
 1414 Key Highway, Suite M301
 Baltimore, Maryland 21239
 410-490-7201



Client:
Verizon
 Jared Yerg
 3700 Arc Corporate Drive
 Charlotte, North Carolina 28273

Verizon
Simpsonville
NextGen
 340 Harrison Bridge Road
 Simpsonville, SC 29680

© CONTENTS COPYRIGHT 2020
 TELERENT ENGINEERING, INC.

NO.	REVISION	DATE
FILE 20013J	DRAWN TAB	ISSUED 06/19/2020

SHEET TITLE
HVAC Schedules

SHEET NUMBER
72.02
 Bid/Permit Documents