

Purchasing Section
P.O. Box 3371
purchasing@hcsa.tampa.fl.us

PH: 813-247-8034
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David Gee, Sheriff
HILLSBOROUGH COUNTY SHERIFF'S OFFICE
TAMPA, FLORIDA 33601

DATE: February 14, 2017

SUBJECT: Amendment No. 2 to RFP No.1-17 Pinebrooke II Renovations.

MESSAGE: Please note and acknowledge the following changes or additions to be included in the referenced section(s) of RFP No.1-17:

Reference Table of Contents:

1. The staging area has been defined as shown in attached Exhibit C, dated January 11, 2016.
2. GC electrical requirements for Firing Range HVAC can be found in attached Exhibit D, RM-001 HVAC Electrical, dated February 6, 2017.

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SIGNATURE OF AFFIRMATION AND DECLARATION	32
Package Label	34
Vendor Packet (Application, W9, ACH)	Attached
Construction Documents: (Exhibits A, B, C and D)	
Exhibit A: Construction Drawings, Wilder Architecture, Inc.	Attached
Exhibit B: Construction Specifications, Wilder Architecture, Inc.	Attached
Exhibit C: A-10 Bldg 2 Staging Area	Attached
Exhibit D: RM-001 HVAC Electrical	Attached

3. Technical Specification (Part C)(1)(c) – Replace c. in its entirety as follows:
 - c. The Work will include the renovation of two separate and existing spaces within the existing building, where the interior demolition has been completed for both spaces. The new spaces will house an indoor Firing Range at the south end of building and a Workout Gym at the west end of the building, refer to accompanying Construction Drawings, Exhibit A, Wilder Architecture, Inc. dated: January 16, 2017 and Construction Specifications, Exhibit B, Wilder Architecture, Inc. dated: January 16, 2017, Exhibit C, A-10 Building 2 Staging Area, dated: January 11, 2016, Exhibit D, RM-001 HVAC Electrical, dated: February 6, 2017, (collectively referred to as Construction Documents) for the full Scope of Work.

4. Technical Specification (Part C)(2)(a) – Replace a. in its entirety as follows:
 - a. The Contractor shall furnish all necessary labor, materials, tools, equipment, supervision, and incidentals necessary to perform all Work as described herein. The Scope of Work shall include: exterior and interior build-out as per Construction Drawings, Exhibit A, Wilder Architecture, Inc. dated: January 16, 2017, Construction Specifications, Exhibit B, Wilder Architecture, Inc. dated: January 16, 2017, Exhibit C, A-10 Building 2 Staging Area, dated: January 11, 2016, and Exhibit D, RM-001 HVAC Electrical, dated: February 6, 2017.

5. Technical Specification (Part C)(2)(d) – Replace d. in its entirety as follows:
 - d. All Work shall be accomplished in accordance with the construction documents (Refer to Construction Drawings, Exhibit A, Wilder Architecture, Inc. dated: January 16, 2017, Construction Specifications, Exhibit B, Wilder Architecture, Inc. dated: January 16, 2017, Exhibit C, A-10 Building 2 Staging Area, dated: January 11, 2016, and Exhibit D, RM-001 HVAC Electrical, dated: February 6, 2017.) and the requirements furnished within all the RFP documents to include any Q & A Responses, Addenda and/or Amendments issued by HCSO. The Contractor shall provide all incidentals required for the construction to meet all Local, State, and Federal codes and ordinances.

Please note that this document hereby becomes a part of RFP No. 1-17 and without this document the Proposal is considered incomplete.

Sincerely,

- SIGNATURE ON FILE -

Christina R. Porter, CPA
Chief Financial Officer

ACKNOWLEDGEMENT OF AMENDMENT

We do hereby acknowledge the information and/or changes to the Exhibits and Technical Specifications as described in Amendment No. 2 to RFP No. 1-17

PLEASE PRINT - Company Name _____

By _____

Title _____

Date _____

Signature _____

(Signed Acknowledgement must be included with your RFP/Bid Package)



HILLSBOROUGH COUNTY
SHERIFF'S OFFICE

DAVID GEE, SHERIFF

2008 8th AVENUE
TAMPA, FLORIDA 33605
WWW.HCSO.TAMPA.FL.US

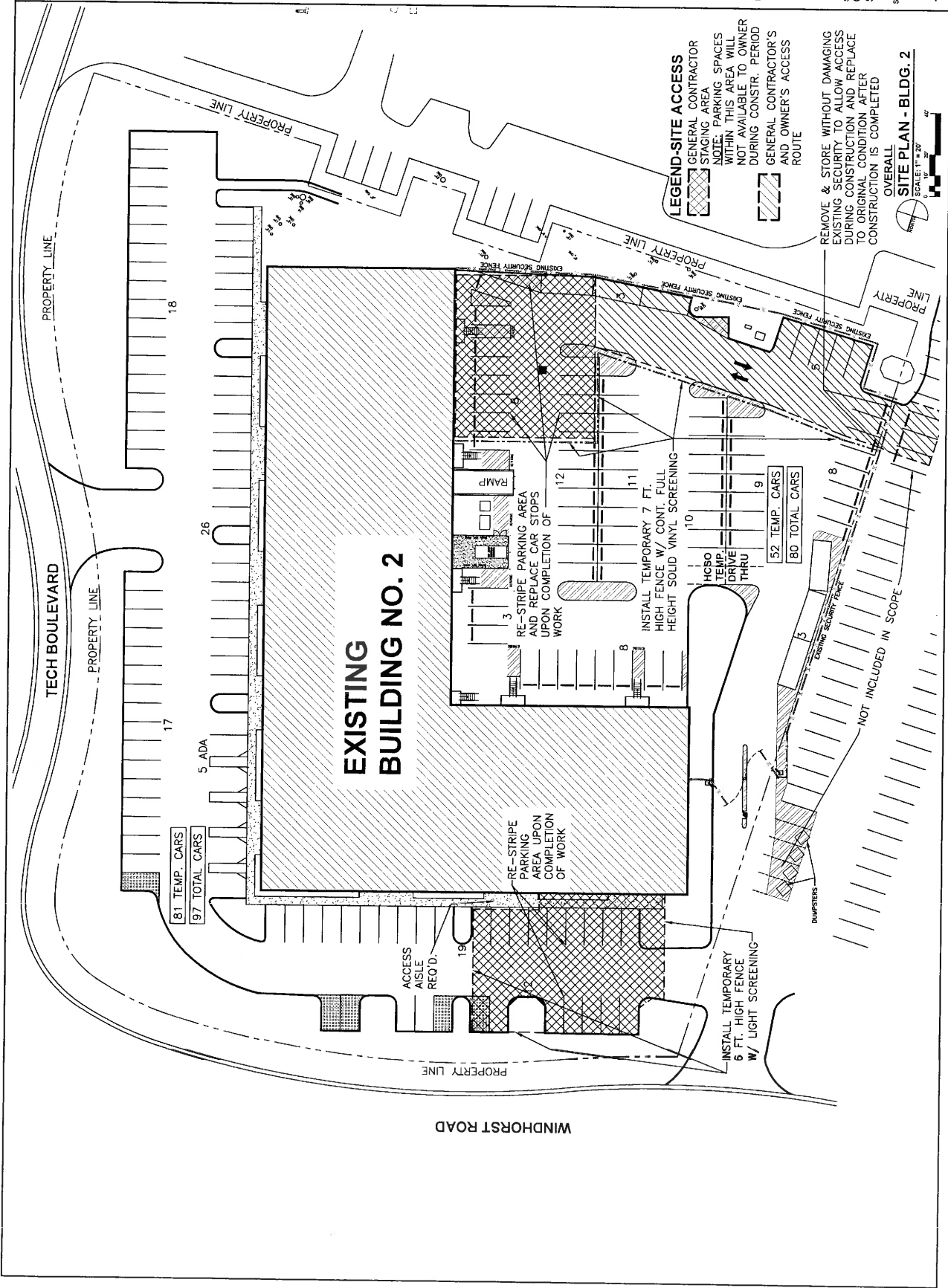
PROJECT:
RENOVATION TO:
**PINEBROOKE
BUSINESS
PARK
BUILDING NO. 2**

PROJECT PHASE:
**DESIGN
DEVELOPMENT**

PREPARED BY:
HILLSBOROUGH COUNTY SHERIFF'S OFFICE
**FACILITIES
MANAGEMENT
BUREAU**

DRAWN BY:
a.ceribone
ISSUE DATE:
01-11-2016
REVISIONS:

SHEET NAME:
OVERALL
SITE PLAN - BLDG. 2
SHEET NUMBER:
A-1.0





CAREY'S

SMALL ARMS RANGE VENTILATION

INDEX

- RM-001 RANGE MECHANICAL, GENERAL NOTES, ABBREVIATIONS & SYMBOLS
- RM-001 RANGE MECHANICAL FLOOR PLAN
- RM-001 RANGE MECHANICAL WALL PENETRATIONS AND EQUIPMENT PAID PLAN
- RM-001 RANGE MECHANICAL ELEVATION AND SECTION
- RM-001 RANGE MECHANICAL DETAILS
- RM-001 RANGE MECHANICAL SCHEDULES
- RM-001 RANGE MECHANICAL CONTROL NOTES, ABBREVIATIONS & SYMBOLS
- RM-001 RANGE MECHANICAL CONTROLS CONDUIT PLAN

SYMBOL LEGEND

XXXX	EQUIPMENT IDENTIFICATION TAG
□	EQUIPMENT PATCH
XXØ	ROUND DUCT
W#H	RECTANGULAR DUCT
W#H XXD	RECTANGULAR TO ROUND DUCT CONNECTION
Σ	SUPPLY AIR UP OR IN SECTION
∇	RETURN, EXHAUST, OR OUTSIDE AIR UP OR IN SECTION
⊗	SUPPLY AIR DOWN OR AWAY
⊙	RETURN, EXHAUST, OR OUTSIDE AIR DOWN OR AWAY
▬	MANUAL VOLUME DAMPER
→	AIR FLOW MARKER

ABBREVIATIONS

- FAU FILTRATION AIR HANDLING UNIT
- MAU MAKEUP AIR UNIT
- CPM CUBIC FEET PER MINUTE
- DDC DIRECT DIGITAL CONTROL
- DDP DIRECT DIGITAL DIFFUSER
- DDO DIRECT DIGITAL ORIFICE
- DDM DIRECT DIGITAL MOTOR
- DDR DIRECT DIGITAL RADIAL DIFFUSER
- DDA DIRECT DIGITAL ASSEMBLY
- WET BULB TEMPERATURE
- EA EXHAUST AIR
- SA SUPPLY AIR
- RA RETURN AIR
- OA OUTSIDE AIR
- ADJ ADJUSTABLE
- STAT STATIC PRESSURE
- INCHES WATER GAUGE
- HEPA HIGH EFFICIENCY PARTICULATE ARRESTOR FILTER
- SINGLE WIDTH SINGLE INLET
- REVOLUTIONS PER MINUTE
- HORSEPOWER
- VOLTS
- HERTZ
- PHASE
- TEMPERATURE DIFFERENTIAL
- BTU PER HOUR
- LBBS POUNDS
- ESP EXTERNAL STATIC PRESSURE
- NEMA NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION

RANGE MECHANICAL NOTES

- THESE GENERAL NOTES APPLY TO ALL BALLISTIC RANGE VENTILATION WORK. CAREY'S SHALL BE IMMEDIATELY NOTIFIED OF ANY DISCREPANCIES OR CHANGES TO THE RANGE LAYOUT.
- THE RANGE VENTILATION SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH) SUGGESTED DESIGN CRITERIA. THESE REQUIREMENTS HAVE BEEN BASED ON THE ASSUMPTIONS OF OCCUPATIONAL SAFETY AND HEALTH ASSOCIATION (IOSHA) ALLOWABLE LIMITS FOR LEAD EXPOSURE FOUND IN OSHA 29 CFR.
- DUCT SIZES SHOWN ARE FREE AREA SIZES. INSULATE ALL OUTSIDE DUCT WORK AND WINDTIGHT JACKETING DO NOT USE FOR RETURN DUCTWORK.
- ALL RANGE SUPPLY AND EXHAUST DUCT SHALL BE 2" WATER COLUMN PRESSURE RATED AND INSTALLED PER SMODMA STANDARDS.
- USE A FLANGED TYPE TRANSVERSE DUCT CONNECTOR OR DUCTIMATE TYPE CONNECTION ON ALL DUCTWORK.
- SEAL ALL DUCTS WITH UNIFIED OR EQUIVALENT SEALANT. SEAL ALL JOINTS AND PENETRATIONS. ALL DUCT SHALL MEET THE REQUIREMENTS OF SEAL CLASS A.
- FOLLOW SMODMA STANDARDS FOR DUCT CONSTRUCTION AND DUCT REINFORCEMENT DETAILS.
- INSTALLING SHEET METAL CONTRACTOR SHALL VERIFY FINAL SIZES AND LOCATION OF EQUIPMENT WITH FINAL MANUFACTURER SUBMITTALS OR IN FIELD PRIOR TO FABRICATION OF DUCTWORK.
- REFER TO RM-700 FOR GENERAL CONTROL NOTES AND SPECIFICATIONS.
- THE INDOOR FRINGE RANGE ENVELOPE SHALL BE AN AIR-TIGHT SEALED SPACE INCLUDING ALL DOORS AND WINDOWS BY THE GENERAL CONTRACTOR.
- ALL WALL PENETRATIONS BY OTHERS.
- ALL EQUIPMENT PAIDS BY OTHERS.

THESE GENERAL NOTES APPLY TO ALL BALLISTIC RANGE VENTILATION WORK. CAREY'S SHALL BE IMMEDIATELY NOTIFIED OF ANY DISCREPANCIES OR CHANGES TO THE RANGE LAYOUT.

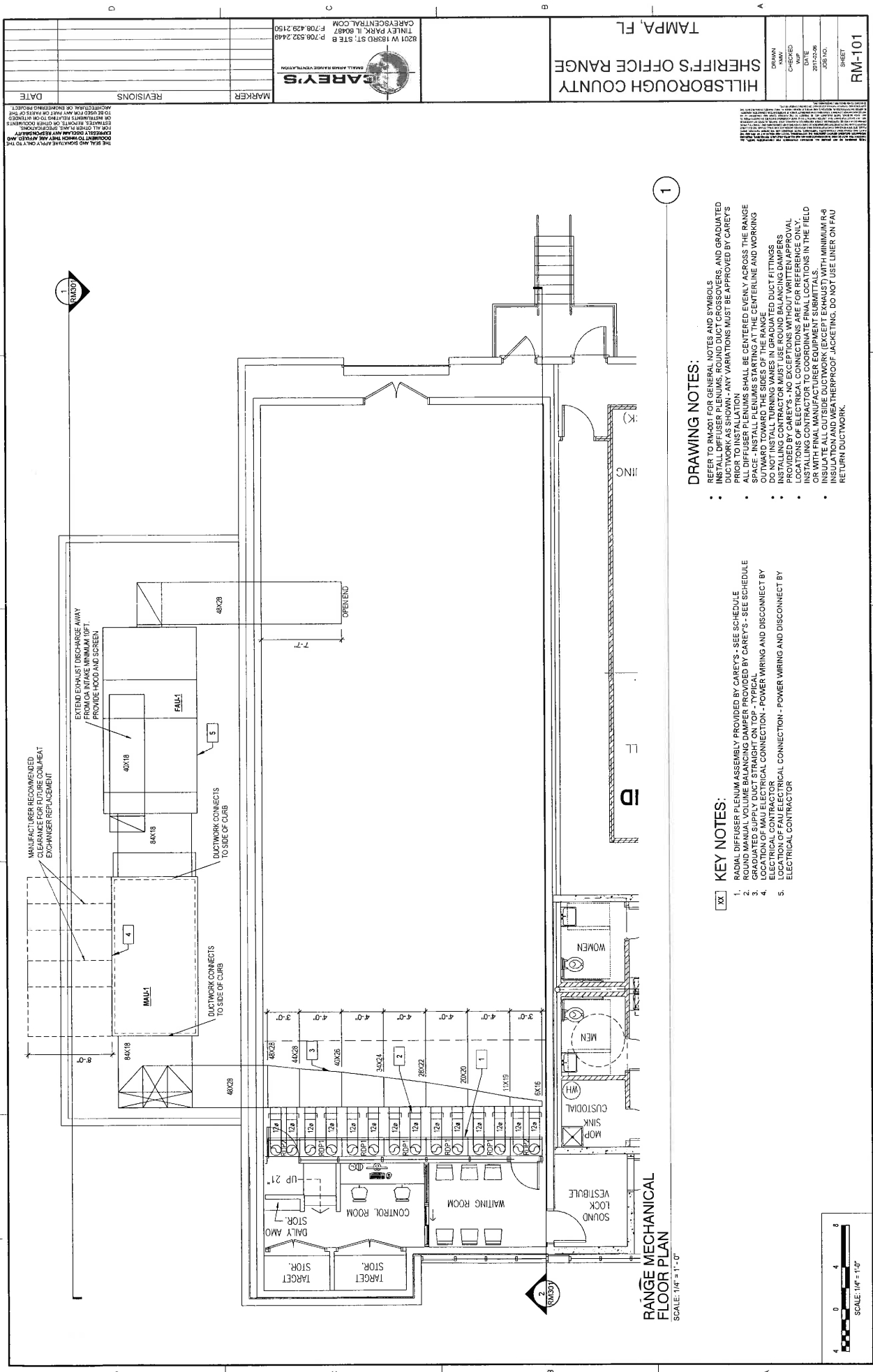
REVISIONS

DATE	REVISIONS

MARKER

HILLSBOROUGH COUNTY SHERIFF'S OFFICE RANGE TAMP A, FL

DATE	
CHECKED	
DATE	
JOB NO.	
SHEET	RM-001




RANGE MECHANICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES:

1. RADIAL DIFFUSER PLENUM ASSEMBLY PROVIDED BY CAREYS - SEE SCHEDULE
2. ROUND MANUAL VOLUME BALANCING DAMPER PROVIDED BY CAREYS - SEE SCHEDULE
3. GRADUATED SUPPLY DUCT STRAIGHT ON TOP - TYPICAL
4. LOCATION OF MAU ELECTRICAL CONNECTION - POWER WIRING AND DISCONNECT BY ELECTRICAL CONTRACTOR
5. LOCATION OF MAU ELECTRICAL CONNECTION - POWER WIRING AND DISCONNECT BY ELECTRICAL CONTRACTOR

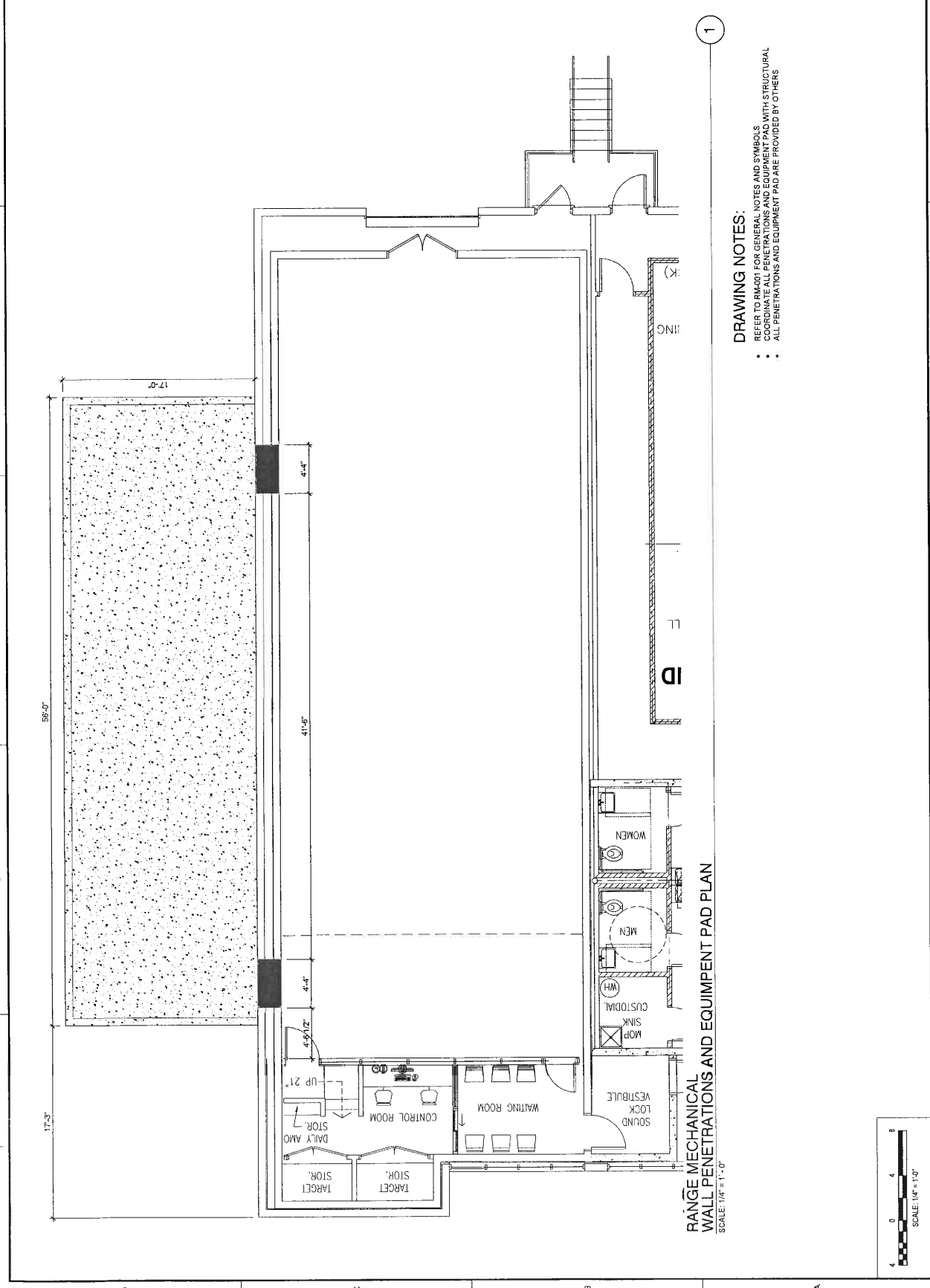
DRAWING NOTES:

- REFER TO RM-001 FOR GENERAL NOTES AND SYMBOLS
- INSTALL DIFFUSER PLENUMS, ROUND DUCT CROSSOVERS, AND GRADUATED DUCTWORK AS SHOWN - ANY VARIATIONS MUST BE APPROVED BY CAREYS
- ALL DIFFUSER PLENUMS SHALL BE CENTERED EVENLY ACROSS THE RANGE SPACE - INSTALL PLENUMS STARTING AT THE CENTERLINE AND WORKING OUTWARD TOWARD THE SIDES OF THE RANGE
- DO NOT INSTALL TURNING VANES IN GRADUATED DUCT FITTINGS
- PROVIDE ELECTRICAL CONNECTIONS TO MAU UNITS WITHOUT WRITTEN APPROVAL BY CAREYS - NO EXCEPTIONS
- INSTALLING CONTRACTOR TO COORDINATE FINAL LOCATIONS IN THE FIELD OR WITH FINAL MANUFACTURER EQUIPMENT SUPPLIER (EXCEPT EXHAUST) WITH MINIMUM R-4 INSULATION AND WEATHERPROOF JACKETING. DO NOT USE LINER ON FAU RETURN DUCTWORK.

 CAREYS <small>SMALL BUSINESS VENTILATION</small>	8201 W HERSH ST, STE B TINEY PARK, FL 34687 P: 706.432.2150 CAREYSCENTRAL.COM	HILLSBOROUGH COUNTY SHERIFFS OFFICE RANGE TAMPA, FL	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>DRAWN</td><td> </td></tr> <tr><td>CHECKED</td><td> </td></tr> <tr><td>DATE</td><td> </td></tr> <tr><td>JOB NO.</td><td> </td></tr> <tr><td>SHEET</td><td> </td></tr> </table>	DRAWN		CHECKED		DATE		JOB NO.		SHEET	
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THE SEAL AND SIGNATURE APPLY ONLY TO THE DESIGN AND SIGNATURE PART OF THIS DRAWING. THE SEAL AND SIGNATURE DO NOT APPLY TO ANY OTHER PART OF THIS DRAWING. THE SEAL AND SIGNATURE DO NOT APPLY TO ANY OTHER PART OF THIS DRAWING. THE SEAL AND SIGNATURE DO NOT APPLY TO ANY OTHER PART OF THIS DRAWING.

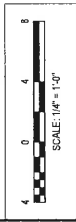
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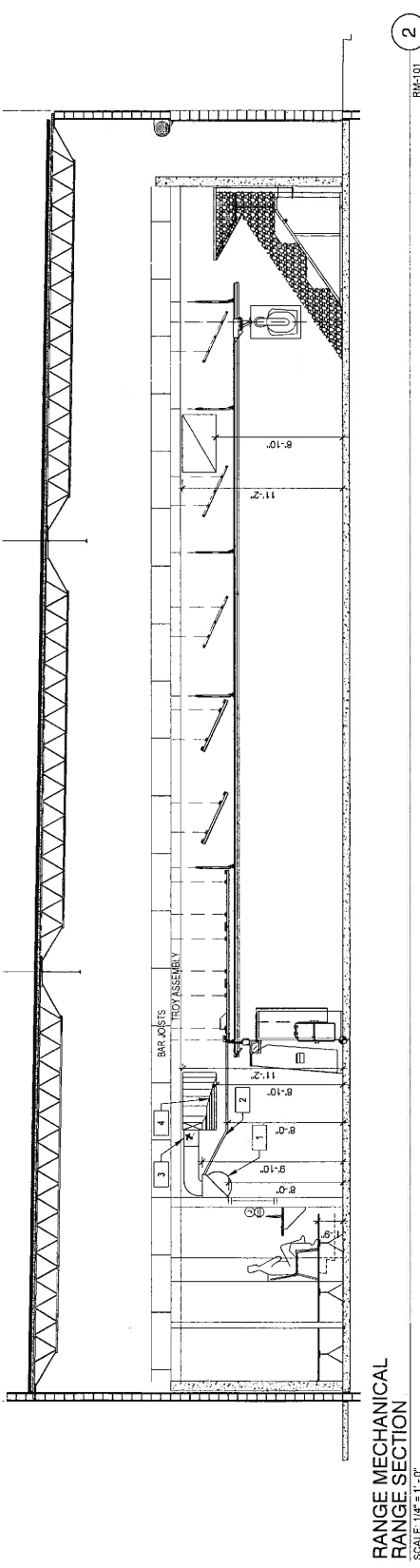
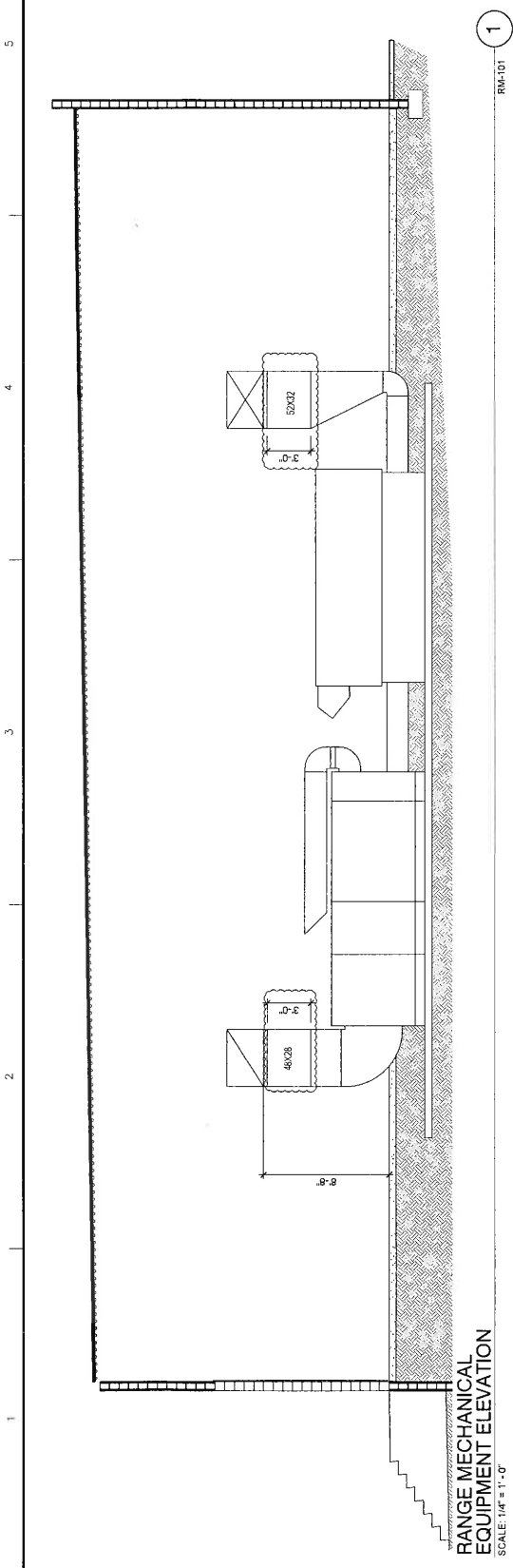
DRAWING NOTES:

- REFER TO RM4001 FOR GENERAL NOTES AND SYMBOLS
- COORDINATE ALL PENETRATIONS AND EQUIPMENT PAD WITH STRUCTURAL
- ALL PENETRATIONS AND EQUIPMENT PAD ARE PROVIDED BY OTHERS

RANGE MECHANICAL WALL PENETRATIONS AND EQUIPMENT PAD PLAN
 SCALE: 1/4" = 1'-0"

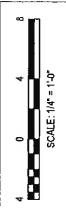


THIS DRAWING IS THE PROPERTY OF CAREY'S SMALL AREA RANGE VENTILATION. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CAREY'S SMALL AREA RANGE VENTILATION. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON. CAREY'S SMALL AREA RANGE VENTILATION SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON. CAREY'S SMALL AREA RANGE VENTILATION SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING.



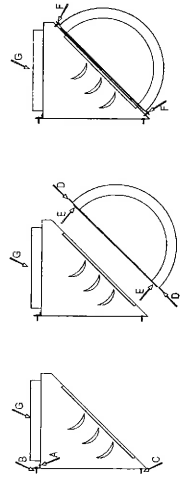
- KEY NOTES:**
1. RADIAL DIFFUSER PLENUM ASSEMBLY - INSTALL AS LOW AS POSSIBLE WHILE PERMITTING ACCESS AND VIEW INTO THE RANGE - TYPICALLY INSTALLED JUST ABOVE DOOR OR WINDOW FRAME - WHICHEVER IS HIGHER
 2. HOOD PLUM TO CONTINUOUS ANGLE FROM HEADER OF DIFFUSER PLENUM TO START OF BALLISTIC SAFETY CEILING - CEILING AND INSTALLATION BY GENERAL CONTRACTOR OR OTHER APPOINTED TRADE
 3. ROUND MANUAL VOLUME DAMPER
 4. GRADUATED SUPPLY DUCT

- DRAWING NOTES:**
- REFER TO RM-001 FOR GENERAL NOTES AND SYMBOLS
 - DRAWINGS ARE FOR REFERENCE TO RANGE VENTILATION SYSTEM ONLY. BALLISTIC EQUIPMENT HAS BEEN SHOWN FOR ILLUSTRATION PURPOSES. REFER TO BALLISTIC DRAWINGS FOR ACTUAL LAYOUTS.



THE SEAL AND DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE SEAL AND DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE SEAL AND DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

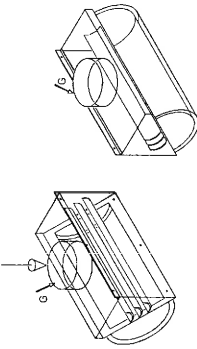
1 2 3 4 5



- A. USE 18GA SHOPANGLE 2.5H X .5W X LENGTH OF THE DIFFUSER.
- B. CONNECT 1/2" WIDE SECTION TO THE TOP OF THE DIFFUSER USING 10 X 3/4 TEE SCREWS.
- C. CONNECT TO THE WALL USING 18GA SHOPANGLE AND ADEQUATE SPACING TO THE WALL USING ADEQUATE SPACERS (ANCHORS 3.5" ABOVE THE BOTTOM OF THE DIFFUSER).
- D. DIFFUSER HAS AN EXTENDED CHANNEL WITH PRE-DRILLED HOLES.
- E. USE 1" WIDE GASKET AROUND PERIMETER OF THE DIFFUSER.
- F. USE 10 X 1 TEE SCREWS TO CONNECT DIFFUSER TO PLENUM.
- G. START COLLAR SUPPLIED BY SHEET METAL CONTRACTOR.

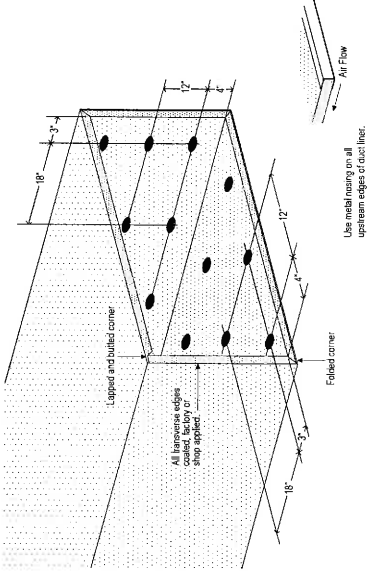
**RADIAL DIFFUSER PLENUM
 INSTALLATION INSTRUCTIONS**
 SCALE: NTS

2



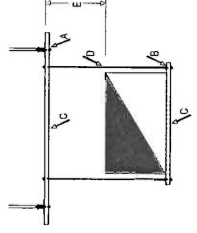
**RADIAL DIFFUSER PLENUM
 CONCEPTUAL DETAIL**
 SCALE: NTS

1



**INSULATION FASTENER SPACING
 DETAIL**
 SCALE: NTS

3



- A. USE TWO NUTS WITH APPROPRIATELY SIZED THICK SQUARE WASHERS TO CONNECT HANGING ROD TO THE BOTTOM OF BAR JOISTS.
 - B. TWO NUTS WITH 7 PASTER WASHERS.
 - C. USE 1/2" LANCELIT TO SUPPORT RECTANGULAR RANGE DUCTWORK.
 - D. USE 1" ROD FOR TRAPEZOIDAL RECTANGULAR RANGE DUCTWORK.
 - E. MINIMIZE DISTANCE FROM TOP OF DUCT TO BOTTOM OF BAR JOIST.
- ALL DUCT HANGING METHODS MUST BE SWACMA APPROVED AND ACCEPTED BY CAREY'S HEATING & AIR CONDITIONING, INC.

**DUCT SUPPORT
 DETAIL**
 SCALE: NTS

4

RADIAL DIFFUSER PLENUM SCHEDULE

TAG	SERVICE	LOCATION	DIFFUSER QUANTITY	DES. AIRFLOW (CFM)	DAMPER SIZE	BASES OF DESIGN	NOTES
RDP-1	FIRING RANGE SUPPLY AIR	FIRING RANGE	5	2,400	2'-12"	CAREY'S 48A8524-2-12	1-3
RDP-2	FIRING RANGE SUPPLY AIR	FIRING RANGE	2	2,400	2'-12"	CAREY'S 36A8524-2-12	1-3

- ROUND MANUAL VOLUME BALANCING DAMPERS ARE SHIPPED LOOSE FOR FIELD INSTALLATION.
- PREPARED G80 GALV STEEL EXTERIOR SUPPLY DUCTS AS POSSIBLE WHILE PERMITTING EASE OF ACCESS FOR INSTALLATION.
- INSTALLING CONTRACTOR TO SUPPLY START COLLARS

AIRFLOW SCHEDULE

SERVICE	RANGE	FAU RETURN (CFM)	EXHAUST (CFM)	FAU SUPPLY (CFM)	FAU BYPASS AIR (CFM)	MAU RETURN (CFM)	OUTSIDE AIR (CFM)	MAU SUPPLY (CFM)	RANGE SUPPLY (CFM)
SYSTEM 1	RANGE 1	17,820	5,670	12,150	9,000	5,350	4,950	9,400	16,200

FILTRATION AIR-HANDLING UNIT SCHEDULE

UNIT NO.	SERVICE	LOCATION	MOTOR/ELECTRICAL DATA										ESTIMATED WEIGHT (Lbs)	BASIS OF DESIGN	REMARKS				
			FAN TYPE	FAN RPM	T.S.P. IN WG	DRIVE	HP	BHP	VOLTS	PH	HZ	RPM				RETURN AIR (CFM)	EXHAUST AIR (CFM)	SUPPLY AIR (CFM)	
FAL-1	FIRING RANGE	GRADE	17,160	8.03	2,058	CENT.DWMD	BELT	40.0	30.20	208	3	60	1,750	17,160	5,670	12,150	5,754	DAIKIN QAH04GVBVM	1-12

- HIGH PRESSURE LOW LEAKAGE CONSTRUCTION
- PREPARED G80 GALV STEEL EXTERIOR
- INSULATED FOAM INSULATION
- WATER TIGHT
- CURB READY BASE
- PREMIUM EFFICIENCY MOTOR RATED FOR INVERTER DUTY
- THE AIR HANDLING UNIT IS SHIPPED IN MULTIPLE SECTIONS FOR FIELD ASSEMBLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- WEATHER HOODS FOR THE EXHAUST AIR OUTLET ARE SHIPPED LOOSE
- FACTORY INSTALLED DAMPER IN EXHAUST OPENING
- EXHAUST DAMPER ACTUATOR SHALL BE FURNISHED AND INSTALLED
- DISCONNECT BY ELECTRICAL CONTRACTOR
- DISCONNECT BY ELECTRICAL CONTRACTOR

FILTER SCHEDULE

LOCATION	CFM	FILTER I			FILTER II			FILTER III			TOTAL S.F. DROP IN WG	CLEAN IN WG	DIRTY IN WG	REMARKS	
		QUANTITY & SIZES (IN)	TYPE	EFFICIENCY	FACE AREA (SQFT)	DES. FACE VELOCITY (FPM)	TYPE	EFFICIENCY	FACE AREA (SQFT)	DES. FACE VELOCITY (FPM)					QUANTITY & SIZES (IN)
FAL-1	17,160	(12) 20X24X12	MINI-PLEAT	MERV-8	37.7	455	(12) 20X24X12	MERV-14	37.7	455	(8) 24X24X12	99.9% HEPA	MERV-17	40.0	1-3

- FILTERS ARE SHIPPED LOOSE FOR FIELD INSTALLATION.
- INSTALLING CONTRACTOR SHALL RECEIVE THE FILTERS AND PLACE INTO STORAGE UNTIL READY FOR INSTALLATION OF THE FILTERS.
- INSTALLING CONTRACTOR SHALL INSTALL THE FILTERS IN THE FILTER FRAMES WHEN DIRECTED TO BY THE RANGE START-UP TECHNICIAN JUST PRIOR TO THE RANGE CLOSE-OUT TESTING.

MAKE-UP AIR UNIT SCHEDULE

UNIT NO.	SERVICE	LOCATION	PERFORMANCE DATA						ELECTRICAL DATA						ESTIMATED WEIGHT (Lbs)	BASIS OF DESIGN	REMARKS		
			FAN TYPE	FAN RPM	TOTAL STATIC IN H2O	RPM	BHP	HP	VOLTS	PH	MROPD (A)	MCA (A)	MINIMUM AIR (CFM)	SUPPLY AIR (CFM)				RETURN AIR (CFM)	OUTSIDE AIR (CFM)
MAU-1	FIRING RANGE	GRADE	AF SWST	9,400	3.44	1,870	8.3	15.0	208	3	300	250.7	11,000	11,000	4,400	6,600	5,175	DAIKIN MFS03SF	1-15

- PREPARED GALV STEEL EXTERIOR
- DOUBLEWALL CONSTRUCTION
- INSULATED FOAM INSULATION
- WATER TIGHT
- FIELD INSTALLED BACKWASH WPDP CARD
- DX COIL WITH STAINLESS STEEL DRAIN PAN
- MODULATING ELECTRIC HEAT WITH SCR CONTROL
- DISCHARGE SUPPLY AIR TEMPERATURE CONTROL
- VIA MODULATING HOT GAS REHEAT
- FIELD POWERED 115V GFI POWER RECEPTACLE
- FIELD INSTALLED BALANCING DAMPERS
- ALL COILS ARE FIN AND TUBE TYPE. FIN OF ALUMINUM AND TUBE OF COPPER.
- 0 - 30% OUTSIDE AIR ECONOMIZER WITH MOTORIZED DAMPER
- MERV-8 OUTSIDE AIR FILTER RACK
- CUSTOM CURB WITH INTERNAL BYPASS AND EXHAUST DAMPERS
- DISCONNECT BY ELECTRICAL CONTRACTOR

MAKE-UP AIR COOLING/HEATING SCHEDULE

UNIT NO.	COOLING COIL SECTION						HOT GAS REHEAT COIL						ELECTRIC HEAT SECTION						COMPRESSOR SECTION		
	CAPACITY Btu/h	ENT. TEMP (F) D/B	LEA TEMP (F) W/B	AMB. TEMP (F) W/B	ENT. TEMP (F) D/B	LEA TEMP (F) W/B	ENT. TEMP (F) D/B	LEA TEMP (F) W/B	CAPACITY Btu/h	ENT. TEMP (F) D/B	LEA TEMP (F) W/B	ENT. TEMP (F) D/B	LEA TEMP (F) W/B	ENT. TEMP (F) D/B	LEA TEMP (F) W/B	CONTROL	CAPACITY STEPS	POWER (KW)	REFRIG TYPE		
MAU-1	377,425	79.2	67.8	55.6	54.9	92.4	55.6	66.0	245,808	45.0	69.1	72	SCR	5 STEPS	28.7	R410A					

DATE	REVISIONS	MARKER

DDC PANEL SCHEDULE

UNIT NO.	SERVICE	ENCLOSURE TYPE	REMARKS
DDC-1	FIRING RANGE	NEMA 1	1-2

- 120V 20A CIRCUIT AND DISCONNECT PROVIDED BY OTHERS
- INTERNET CABLE AND CONNECTION BY OTHERS

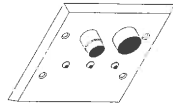
BY CONTROL CONTRACTOR

- FACTORY INSTALLED VARIABLE FREQUENCY DRIVE IN MOTOR SECTION
- DISCONNECT BY ELECTRICAL CONTRACTOR

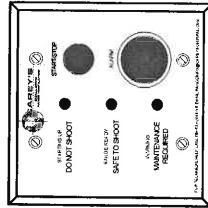


CONTROL NOTES AND SPECIFICATIONS:

- A. CAREY'S SHALL SUPPLY RANGE VENTILATION DIRECT DIGITAL CONTROL PANEL (DDC) AND SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.
- B. DDC PANEL IS TO BE MOUNTED AT A HEIGHT OF 5 FEET FROM THE FLOOR TO THE TOP OF THE PANEL WITH A MINIMUM CLEARANCE OF 6 INCHES ON EACH SIDE OF THE PANEL - BY ELECTRICAL CONTRACTOR.
- C. DEDICATED 20A BREAKER WITH LOCKING DECADE TO POWER THE RANGE CONTROL PANEL - ELECTRICAL CONTRACTOR.
- D. CAREY'S SHALL SUPPLY FILTER STATUS PANEL (FSP) AND SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.
- E. ALL CONTROL CONDUITS WITH PULL STRINGS SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- F. ALL CONTROL WIRE SHALL BE RUN IN CONDUIT BY CAREY'S.
- G. FINAL CONTROL WIRING CONNECTIONS TO CONTROL DEVICES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.
- H. ELECTRICAL DISCONNECTS ARE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- I. DSL LINE / NETWORK CONNECTION TO CONTROL PANEL FOR REMOTE COMMUNICATIONS TO BE SUPPLIED BY OWNER. OWNER LIT TO COORDINATE WITH CAREY'S TO PROVIDE STATIC IP ADDRESS FOR NETWORKING AND ESTABLISH COMMUNICATIONS PROTOCOL FOR REMOTE ACCESS.
- J. ALL CONTROL DEVICES WILL BE MAINTAINED BY CAREY'S FIELD TECHNICIAN UNLESS SPECIFICALLY STATED OTHERWISE.
- K. ELECTRICAL CONTRACTOR SHALL PROVIDE A DEEP TWO GANG 1800 BOX AND MOUNT THE CONTROL DEVICES AT THIS STATION AND COORDINATE FINAL LOCATION OF STATION WITH OWNER.



1 REMOTE START/STOP & ALARM STATION CONCEPTUAL DETAIL

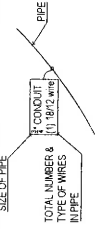


2 REMOTE START/STOP & ALARM STATION COVER

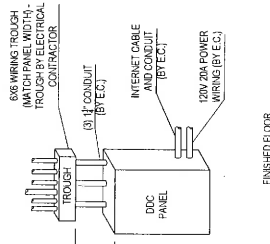
SYMBOL LEGEND

Ⓟ	PRESSURE SENSOR
Ⓝ	JUNCTION BOX
Ⓣ	TEMPERATURE SENSOR
Ⓜ	HUMIDITY SENSOR
Ⓣ	DISCHARGE SENSOR
Ⓟ	PRESETS MAT
Ⓝ	MAGNETIC DOOR SWITCH
Ⓝ	RANGE VENTILATION
Ⓝ	DIRECT DIGITAL CONTROL PANEL
Ⓝ	VARIABLE FREQUENCY DRIVE
Ⓝ	REMOTE START/STOP STATION
Ⓝ	FILTER STATUS PANEL
Ⓝ	DIRECT COULRED ACTUATOR

CONDUIT LABELING SCHEME

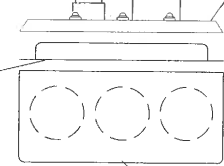


NOMENCLATURE



4 DDC PANEL INSTALLATION DETAIL

PLASTER RING PROVIDED BY ELECTRICAL CONTRACTOR



DEEP TWO GANG 1800 BOX PROVIDED BY ELECTRICAL CONTRACTOR

3 REMOTE START/STOP & ALARM STATION SIDE PROFILE

CONTROL SEQUENCE:

1. THE OPERATOR WILL PUSH THE SWITCH, THE "DO NOT SHOOT" START-UP IN PROGRESS" LIGHT SHALL GO ON.
2. MODIFIED OUTSIDE AIR DAMPER AND EXHAUST AIR DAMPERS SHALL RECEIVE A 0-10 VDC SIGNAL TO OPEN TO POSITION SET AT COMMISSIONING START-UP.
3. FAN AND MAU FANS SHALL START WITH THE CLOSURE OF THE END SWITCH OF THE JAMTS DAMPERS. FAU FAN SHALL START SLIGHTLY AHEAD OF MAU FAN (APPROXIMATELY 6 SECONDS).
4. FAN RUNNABLE FREQUENCY DRIVE (VFD) SHALL MODULATE TO MAINTAIN A 0.5% POSITIVE RANGE DIFFERENTIAL STATIC PRESSURE WHILE THE MAU FAN SLOWLY RAMP UP TO THE PRESET SUPPLY VPS SETTINGS DETERMINED DURING COMMISSIONING.
5. AFTER A TIME OF APPROXIMATELY 12 MINUTES WHEN THE SYSTEMS REACH STEADY STATE, THE "SAFE TO SHOOT/RANGE READY" LIGHT WILL TURN ON AND THE "DO NOT SHOOT" START-UP IN PROGRESS" LIGHT WILL TURN OFF.
6. THE FAU VFD WILL MODULATE THROUGHOUT THE OCCUPIED CYCLE TO MAINTAIN RANGE PRESSURE OF A NEGATIVE (0.05" WG) AS REFERENCED TO THE BASE BUILDING.
7. THE RANGE EXHAUST DOORS WILL BE MONITORED. IF THE RANGE DOOR IS OPEN FOR LONGER THAN 15 SECONDS (ADJ) LONGER THAN 3 MINUTES (ADJ), THE RANGE WILL ALARM AND SHUT DOWN DURING STEADY STATE. IF A RANGE DOOR IS OPEN FOR LONGER THAN 3 MINUTES (ADJ), (ADJ) MAU SHALL ENABLE HEATING AND MODULATE GAS HEAT TO MAINTAIN SUPPLY AIR TEMPERATURE OF 70 DEGREES F (ADJ).
8. IF OUTSIDE AIR IS LESS THAN 55 DEGREES F (ADJ) MAU SHALL ENABLE HEATING AND MODULATE GAS HEAT TO MAINTAIN SUPPLY AIR TEMPERATURE OF 70 DEGREES F (ADJ).
9. IF OUTSIDE AIR IS GREATER THAN 75 DEGREES F (ADJ) OR RANGE ENTERING AIR RELATIVE HUMIDITY RISES ABOVE 60% (ADJ) MAU SHALL ENABLE COOLING AND COMPRESSORS SHALL STAGE ON TO PROVIDE COOLING AND SHALL ACCUMULATE THE HOT GAS REFRESH COIL TO MAINTAIN RANGE ENTERING TEMPERATURE OF 72 DEGREES F (ADJ).
10. IF AT ANY TIME THE RANGE DIFFERENTIAL PRESSURE RISES ABOVE 0.10" WG FOR MORE THAN 2 MINUTES, THE RANGE WILL AUTOMATICALLY ALARM AND SHUT DOWN.
11. IF AT ANY TIME THE FILTER PRESSURE DIFFERENTIAL EXCEEDS PARAMETERS (DETERMINED DURING START-UP), THE RANGE WILL ALARM.
12. THE SYSTEMS SHALL MONITOR AND REACT TO A LOSS OF DUCT PRESSURE IN EACH OF THE SUPPLY AND EXHAUST DUCTS. IF PRESSURE IS LOST IN EITHER SUPPLY OR RETURN DUCTS THEN THE SYSTEM SHALL SHUT DOWN. (THIS WILL STOP POTENTIAL BUILDING DAMAGE IF ONLY ONE FAN WAS RUNNING).
13. THE RANGE SHALL BE SHUT OFF WITH THE PUSH-BUTTON SWITCH. SYSTEMS SHALL HAVE A 30 SECOND DELAY (ADJ) ON THE SHUT DOWN AND SHALL BE LOCKED OUT FOR A PERIOD OF 5 MINUTES WHERE THE SYSTEM CANNOT BE RESTARTED.
14. THE SYSTEM SHALL HAVE REMOTE COMMUNICATION.
15. THE DDC SYSTEM SHALL PROVIDE THE FOLLOWING MINIMUM DATA TRENDS:
 - 15a. DIFFERENTIAL STATIC PRESSURE
 - 15b. DISCHARGE TEMPERATURE
 - 15c. OUTSIDE TEMPERATURE
 - 15d. FILTER DIFFERENTIAL FOR PREHEAT FILTERS
 - 15e. FILTER DIFFERENTIAL FOR HEPA FILTER
 - 15f. SUPPLY STATIC PRESSURE
16. SYSTEM WILL REMAIN OFF DURING UNOCCUPIED CONDITIONS.
17. IT IS RECOMMENDED THAT THE RANGE VENTILATION SYSTEM BE RUN FOR 15 MINUTES AFTER USE OF RANGE BEFORE SHUTTING DOWN THE SYSTEM.

REVISIONS

NO.	DATE	DESCRIPTION

MARKER

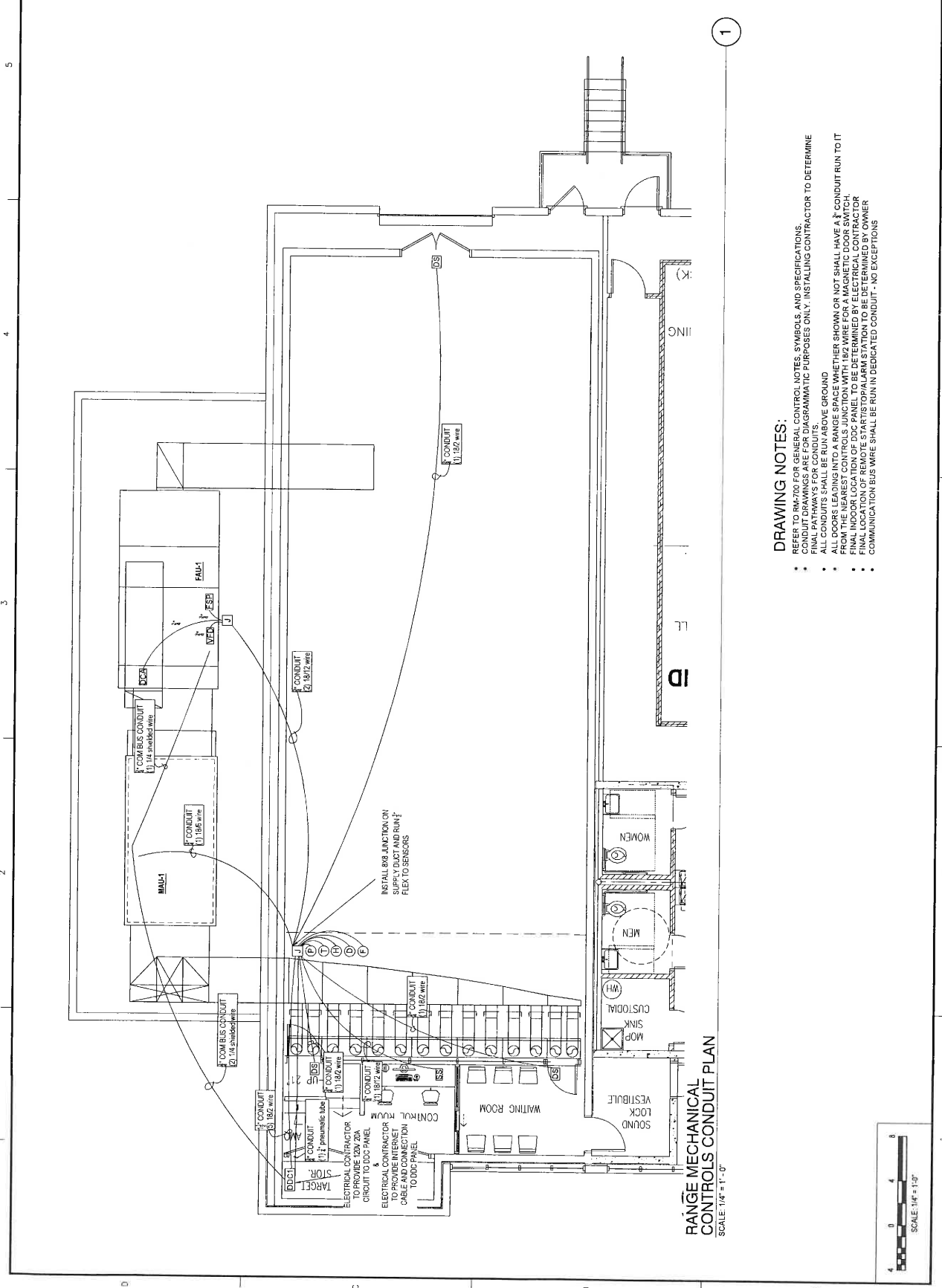
CAREY'S

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F: 708.429.2150
CARECENTRAL.COM

HILLSBOROUGH COUNTY
SHERIFF'S OFFICE RANGE
TAMPA, FL

CREATED	DATE
CHECKED	DATE
DATE	2017-02-09
JOB NO.	
SHEET	RM-700

THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED TO THE ENGINEER. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF INFORMATION PROVIDED BY THE USER. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF INFORMATION PROVIDED BY THE USER. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF INFORMATION PROVIDED BY THE USER.



- DRAWING NOTES:**
- REFER TO BIDDING FOR SPECIAL NOTES, SYMBOLS AND SPECIFICATIONS.
 - CONDUIT DRAWINGS ARE FOR DIAGRAMMATIC PURPOSES ONLY. INSTALLING CONTRACTOR TO DETERMINE FINAL PATHWAYS FOR CONDUITS.
 - ALL CONDUITS SHALL BE RUN ABOVE GROUND.
 - ALL DOORS LEADING INTO A RANGE SPACE SHALL HAVE A 3" CONDUIT RUN TO IT FROM THE RANGE SPACE TO THE DOOR WITH 1/2" WIRE FOR A MAGNETIC DOOR SWITCH.
 - FINAL INDOOR LOCATION OF EDC PANELS SHALL BE DETERMINED BY OWNER.
 - FINAL LOCATION OF REMOTE START/STOP ALARM STATION TO BE DETERMINED BY OWNER.
 - COMMUNICATION BUS WIRE SHALL BE RUN IN DEDICATED CONDUIT - NO EXCEPTIONS.

**RANGE MECHANICAL
 CONTROLS CONDUIT PLAN**
 SCALE: 1/4" = 1'-0"

