

GENERAL NOTES

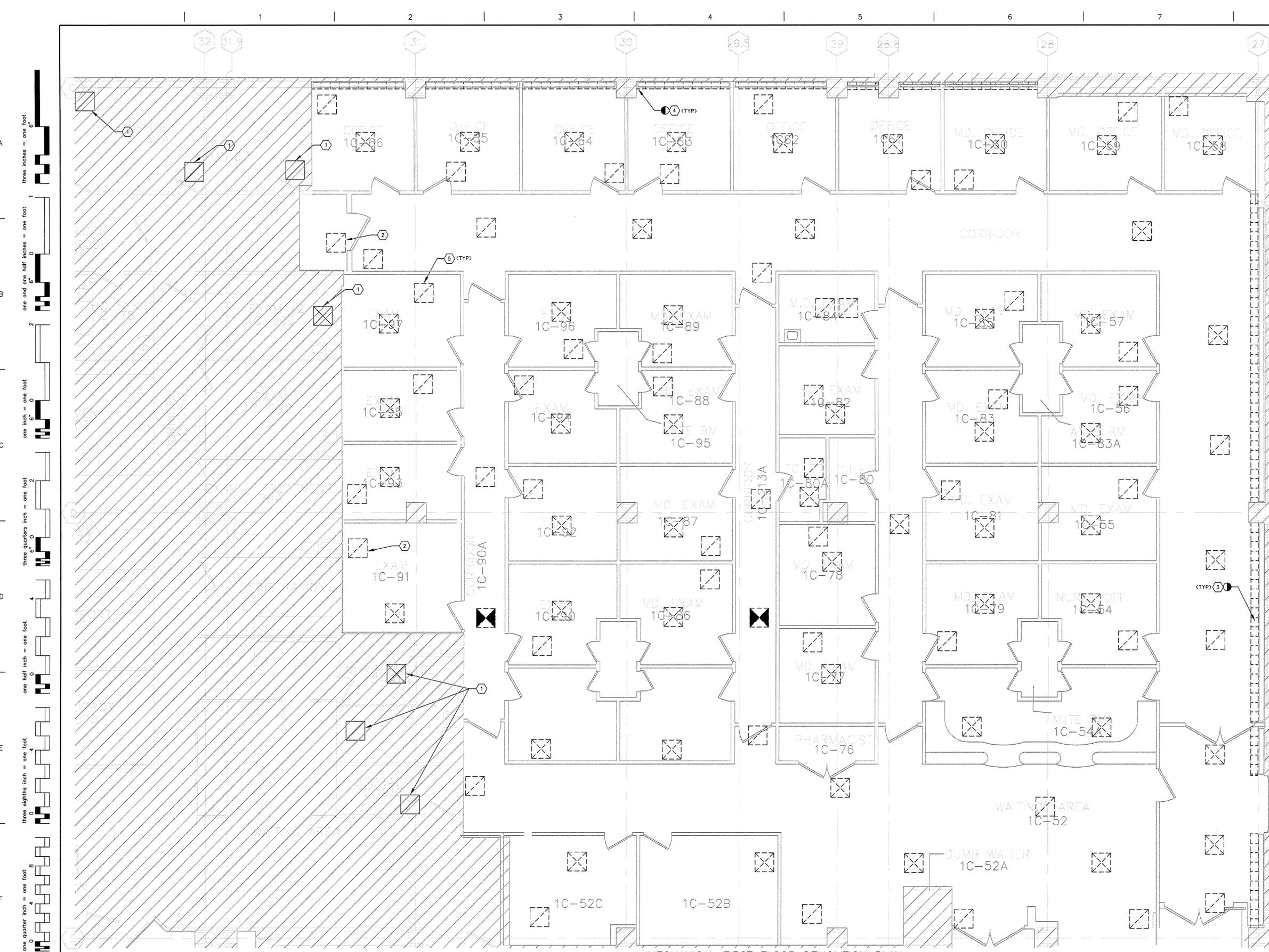
- ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE-MANNER. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY MEANS OF TEMPORARY PARTITIONS AND/OR TARPS TO KEEP DUST AND DIRT WITHIN THE CONSTRUCTION AREA.
- NO PIPING, EQUIPMENT, ETC. SHALL BE REMOVED, DISCONNECTED OR SHUT DOWN WITHOUT PRIOR REVIEW WITH THE OWNER AND/OR ENGINEER TO CONFIRM THAT AREAS TO REMAIN IN OPERATION WILL NOT BE AFFECTED. IF ANY AREAS NOT WITHIN THE SCOPE OF WORK ARE AFFECTED BY ANY SHUTDOWN, REMOVAL OR DISCONNECTION, SUFFICIENT ADVANCE NOTICE MUST BE GIVEN TO THE OWNER INDICATING WHICH AREAS WILL BE AFFECTED, WHEN THE PROPOSED SHUTDOWN WILL OCCUR, AND FOR HOW LONG A PERIOD OF TIME.
- ALL ITEMS REMOVED SHALL BECOME PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF AS PER THE OWNER'S INSTRUCTIONS, UNLESS INDICATED OTHERWISE. ALL ITEMS WHICH ARE NOT TO BE STORED ON SITE BY OWNERS SHALL BE REMOVED FROM THE BUILDING IMMEDIATELY.
- THIS CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK. WHERE DISCREPANCIES OCCUR BETWEEN THESE DOCUMENTS AND EXISTING CONDITIONS, THE DISCREPANCY SHALL BE REPORTED TO THE OWNER AND/OR ENGINEER FOR EXPEDITING AND RESOLUTION.
- ALL SHUT DOWNS OF EXISTING SYSTEMS SHALL BE SCHEDULED AND APPROVED BY THE OWNER PRIOR TO COMMENCING WITH WORK.
- CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT.
- USE OF THE OWNER'S ELEVATORS, LIFTING EQUIPMENT, AND BUILDING CORRIDORS FOR HANDLING OF THE OWNER AND REMOVED EQUIPMENT AND MATERIALS SHALL BE AT THE DIRECTION OF THE OWNER AND SHALL BE COORDINATED WITH HIS OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT AND ENVIRONMENTAL CONDITIONS.
- SUCCESSFULLY PRESSURE TEST ALL REROUTED PIPING SYSTEMS. TEST SHALL BE PERFORMED AT 1.5 X NORMAL SYSTEM OPERATING PRESSURES. REPAIR AND RETEST AS REQUIRED UNTIL SYSTEMS PROVE TIGHT.
- EXISTING MATERIALS THAT ARE REMOVED SHALL NOT BE REUSED IN NEW SYSTEMS, EXCEPT WHERE INDICATED AS BEING RE-USED.
- PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR PIPING. DO NOT LEAVE PIPING OPEN ENDED.
- WHERE USED, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
- CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER CONTRACTORS.
- CONTRACTOR TO COMPLETE A PERFORMANCE TEST ON THE AHU SERVING THIS SCOPE OF WORK AND ALL ASSOCIATED FANS BEFORE WORK IS UNDERWAY. TAKE FLOW (CFM) READINGS ON ALL AREAS SERVED BY THESE FANS. AFTER CONSTRUCTION, AS PART OF THE BALANCING FOR NEW WORK, BALANCING CONTRACTOR SHALL RE-BALANCE ALL AREAS SERVED BY THESE FANS TO ORIGINAL FLOW (CFM) QUANTITIES.
- IF CONTRACTOR ENCOUNTERS WHAT APPEARS TO BE A HAZARDOUS OR QUESTIONABLE MATERIAL, HE SHALL DISCONTINUE WORK IMMEDIATELY AND CONTACT THE OWNER'S REPRESENTATIVE.
- IF A DISCREPANCY ARISES BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, CONTACT THE ARCHITECT/ENGINEER FOR RESOLUTION BEFORE PROCEEDING.
- CONTRACTOR SHALL REVIEW EXISTING STRUCTURAL DRAWINGS AND CONDITIONS TO ENSURE EQUIPMENT PATHS AND FINAL INSTALLED LOCATIONS ARE SUITABLE. TAKE ANY AND ALL STEPS TO ENSURE PROTECTION OF STRUCTURE AND TO AVOID EXCESS LOADING OF STRUCTURE.
- PIPING SCHEMATIC / CONTROL DIAGRAMS ARE INDICATIVE ONLY.
- ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE, ENCLOSURE OR ABOVE THE SUSPENDED CEILING.
- THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED. DUCT SIZES ARE NET INSIDE DIMENSIONS.
- ACCESS PANELS IN HARD SUSPENDED CEILING OR WALLS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER ARCHITECTURAL SPECIFICATIONS.
- FOR TYPICAL WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
- DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.
- SEISMIC PROVISIONS NOT REQUIRED.
- ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
- PROVIDE VOLUME DAMPERS ON ALL BRANCH DUCTS FOR A COMPLETELY BALANCED SYSTEM. SEE DETAILS.

MECHANICAL INDEX SHEET

LINE DESIGNATIONS	ABBREVIATIONS	EQUIPMENT ABBREVIATIONS
<p><b>PIPING LINE SYMBOLS, ELEMENTS/VALVING</b></p> <p>EXISTING PIPING TO REMAIN</p> <p>EXISTING PIPING TO BE REMOVED</p> <p>NEW PIPING</p> <p>GATE VALVE</p> <p>GLOBE VALVE</p> <p>BUTTERFLY VALVE</p> <p>OR</p> <p>BALL VALVE</p> <p>OSKY GATE VALVE</p> <p>SWING CHECK VALVE</p> <p>TRIPLE DUTY VALVE</p> <p>GATE VALVE, ANGLE</p> <p>DIAPHRAGM VALVE</p> <p>AUTO FLOW CONTROL VALVE</p> <p>CIRCUIT SETTING BALANCING VALVE</p> <p>THREE WAY CONTROL VALVE</p> <p>TWO WAY CONTROL VALVE</p> <p>SOLENOID VALVE</p> <p>NEEDLE VALVE</p> <p>VALVE-QUICK CLOSING</p> <p>MANUAL AIR VENT</p> <p>AUTOMATIC AIR VENT (EXTEND DISCHARGE TO DRAIN)</p> <p>VALVE-SLOW OPENING</p> <p>VACUUM BREAKER</p> <p>DIRECTION OF FLOW</p> <p>DIRECTION OF PITCH-RISE OR DROP</p> <p>STRAINER</p> <p>STRAINER WITH BLOW OFF VALVE</p> <p>PIPE RISING UP</p> <p>PIPE DROPPING DOWN</p> <p>TEE OUTLET UP</p> <p>TEE OUTLET DOWN</p> <p>CONCENTRIC REDUCER</p> <p>ECCENTRIC REDUCER</p> <p>UNION - SCREWED OR FLANGED</p> <p>ANCHOR</p> <p>GUIDE</p> <p>EXPANSION JOINT</p> <p>THERMOMETER</p> <p>GAUGE WITH GAUGE COCK &amp; SYRIN (STEAM)</p> <p>AQUASTAT</p> <p>BASKET STRAINER</p> <p>EXPANSION LOOP (WH)</p> <p>FLEXIBLE CONNECTION</p>	<p><b>DUCTWORK</b></p> <p>DOUBLE LINE</p> <p>EXISTING DUCTWORK TO REMAIN</p> <p>EXISTING DUCTWORK TO BE REMOVED</p> <p>NEW DUCTWORK - DUCT SIZE INDICATED CLEAR DIMENSION INSIDE</p> <p>TRANSITION</p> <p>RADIUS ELBOW</p> <p>VANED ELBOW</p> <p>BRANCH DUCT TAKE-OFF</p> <p>RISE OR DROP DIRECTION OF AIR FLOW</p> <p>DIFFUSER</p> <p>CEILING RETURN/EXHAUST REGISTER (R) OR GRILLE (G)</p> <p>SUPPLY AIR GRILLE (G) OR SUPPLY AIR REGISTER (R)</p> <p>RETURN AND/OR EXHAUST AIR GRILLE (G) OR REGISTER (R)</p> <p>DUCTWORK UP</p> <p>DUCTWORK DOWN</p> <p>SINGLE LINE</p> <p>EXISTING DUCTWORK TO REMAIN</p> <p>EXISTING DUCTWORK TO BE REMOVED</p> <p>NEW DUCTWORK - DUCT SIZE INDICATED CLEAR DIMENSION INSIDE</p> <p>TRANSITION</p> <p>RADIUS ELBOW</p> <p>VANED ELBOW</p> <p>BRANCH DUCT TAKE-OFF</p> <p>RISE OR DROP DIRECTION OF AIR FLOW</p> <p>DIFFUSER</p> <p>CEILING RETURN/EXHAUST REGISTER (R) OR GRILLE (G)</p> <p>SUPPLY AIR GRILLE (G) OR SUPPLY AIR REGISTER (R)</p> <p>RETURN AND/OR EXHAUST AIR GRILLE (G) OR REGISTER (R)</p> <p>DUCTWORK UP</p> <p>DUCTWORK DOWN</p>	<p><b>REFERENCE SYMBOLS</b></p> <p>EQUIPMENT IDENTITY (SEE EQUIPMENT ABBREVIATION LIST AND SCHEDULES)</p> <p>EQUIPMENT NUMBER</p> <p>EQUIPMENT MODEL</p> <p>FINNED TUBE EQUIPMENT IDENTIFIER</p> <p>HEATING ELEMENT LENGTH</p> <p>EQUIPMENT MODEL</p> <p>INDICATES DETAIL LETTER (APPLIES ONLY WHERE INDICATED ON DRAWINGS)</p> <p>INDICATES DRAWING ON WHICH DETAIL APPEARS</p> <p>INDICATES SECTION NUMBER</p> <p>INDICATES ON WHICH DRAWING SECTION APPEARS</p> <p>INDICATES REVISION &amp; NUMBER</p> <p>CONNECT NEW TO EXISTING</p> <p>TERMINATION POINT OF DEMOLITION</p> <p>SHEET NOTE NUMBER (SN)</p> <p>TO/FROM DWG</p>
		<p><b>AIR FLOW DIAGRAM SYMBOLS</b></p> <p>IN-LINE FAN</p> <p>CENTRIFUGAL FAN</p> <p>DUAL DUCT MIXING BOX</p> <p>AIR FLOW MEASURING STATION</p> <p>VOLUME DAMPER</p> <p>AIR INTAKE/RELIEF LOUVER</p> <p>SUPPLY DIFFUSER</p> <p>RETURN/EXHAUST REGISTER/GRILLE</p>
		<p><b>PIPING DIAGRAM/P&amp;ID SYMBOLS</b></p> <p>FINNED TUBE RADIATION</p> <p><b>CONTROL SIGNALS</b></p> <p>CONTROL SIGNAL (INTERNAL TO PLC)</p> <p>ELECTRICAL SIGNAL</p>
		<p><b>MECHANICAL DRAWING INDEX</b></p> <p>MH001 MECHANICAL INDEX</p> <p>MD101 MECHANICAL FIRST FLOOR DEMOLITION PLAN</p> <p>MD102 MECHANICAL FIRST FLOOR INTERSTITIAL DEMOLITION PLAN</p> <p>MH101 MECHANICAL FIRST FLOOR PLAN</p> <p>MH102 MECHANICAL FIRST FLOOR INTERSTITIAL PLAN</p> <p>MH103 MECHANICAL GROUND FLOOR INTERSTITIAL PLAN</p> <p>MH501 MECHANICAL DETAILS-1</p> <p>MH502 MECHANICAL DETAILS-2</p> <p>MH601 MECHANICAL SCHEDULES</p> <p>MH611 MECHANICAL DIAGRAMS-1</p> <p>MH612 MECHANICAL DIAGRAMS-2</p>

three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 one quarter inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 one eighth inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot  
 one eighth inch = one foot

BID SUBMISSION	07/18/2013	CONSULTANTS:	ARCHITECT/ENGINEERS:	PROFESSIONAL SEALS:	Dr. John J. Sanders MD : Patient Care Center Director	Drawing Title	MECHANICAL INDEX	Project Title	JAMES J. PETERS VA MEDICAL CENTER BRONX NEW YORK RENOVATE PRIMARY CARE SUITE B	Project Number	526-13-106	Engineering Service
			ELLERBE BECKET		Abigail Rodriguez RN : Program Management Officer	Approved: Director, VAHHCSS		Location	BRONX NEW YORK	Drawing Number	MH001	
					Eather Hicken RN : Clinical Nurse Manager	Approved: Chief of Engineering : Michael Ong		Date	18 JULY 2013	Checked	NB	
					Richard Joseo : Safety and Occupational Health Manager			Drawn	SB		Dwg 17 of 47	



### DEMOLITION NOTES

1. COORDINATE ALL DEMOLITION WORK AND ANY NECESSARY SYSTEM SHUTDOWNS WITH GENERAL CONTRACTOR AND OWNER.
2. ALL EQUIPMENT AND DEVICES NOT INDICATED TO BE DEMOLISHED IN THE AREA NOT IN CONTRACT ARE EXISTING TO REMAIN.
3. ALL EQUIPMENT AND DEVICES NOT SHOWN IN THE AREA IN CONTRACT SHALL BE DEMOLISHED.
4. ALL OPENINGS CREATED AS A RESULT OF THE DEMOLITION WORK SHALL BE FILLED-IN TO MATCH EXISTING CONSTRUCTION BY MECHANICAL CONTRACTOR.
5. ALL WORK ON THIS DRAWING BY MECHANICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
6. PROVIDE TEMPORARY CAPS FOR DUCTWORK AND/OR PIPING AT DISCONNECT POINT TO PREVENT LEAKAGE FROM SYSTEM AND TO PROTECT DUCTWORK AND PIPING THAT IS EXISTING TO REMAIN.
7. EXISTING DUCT AND PIPE SIZES SHOWN ARE BASED ON AVAILABLE AS BUILT DRAWINGS. CONTRACTOR TO INDEPENDENTLY FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING.

### CODED NOTES

- ① REGISTER OR GRILL LOCATED OUTSIDE OF THE S.O.W. BRANCH DUCTWORK THAT SERVES THIS AIR TERMINAL SHALL REMAIN OPERATIONAL.
- ② THIS AIR TERMINAL IS SERVED BY BRANCH DUCTWORK WHICH ALSO SERVES AREAS OUTSIDE THE S.O.W. ISOLATE THIS AIR TERMINAL AND DEMOLISH, ALL DUCTWORK SERVING AREAS OUTSIDE THE S.O.W. SHALL REMAIN OPERATIONAL.
- ③ BASEBOARD STYLE FIN TUBE RADATOR TO BE DEMOLISHED. CUT & CAP EXISTING HWS/R PIPING AT THE SLAB PENDING NEW WORK AT INTERSTITIAL LEVEL BELOW.
- ④ CABINET STYLE FIN TUBE RADATOR TO BE DEMOLISHED. CUT & CAP EXISTING HWS/R PIPING.
- ⑤ ALL EXISTING AIR TERMINALS AND ASSOCIATED DUCTWORK UP TO INTERSTITIAL FLOOR SHALL BE DEMOLISHED WITHIN THE S.O.W.

### LEGEND

SHADED AREA REPRESENTS OUTSIDE OF SCOPE AREA.

SUITE B (SCOPE OF WORK AREA)  
SUITE D (FUTURE EXPANSION - NIC AREA)

PLAN NORTH

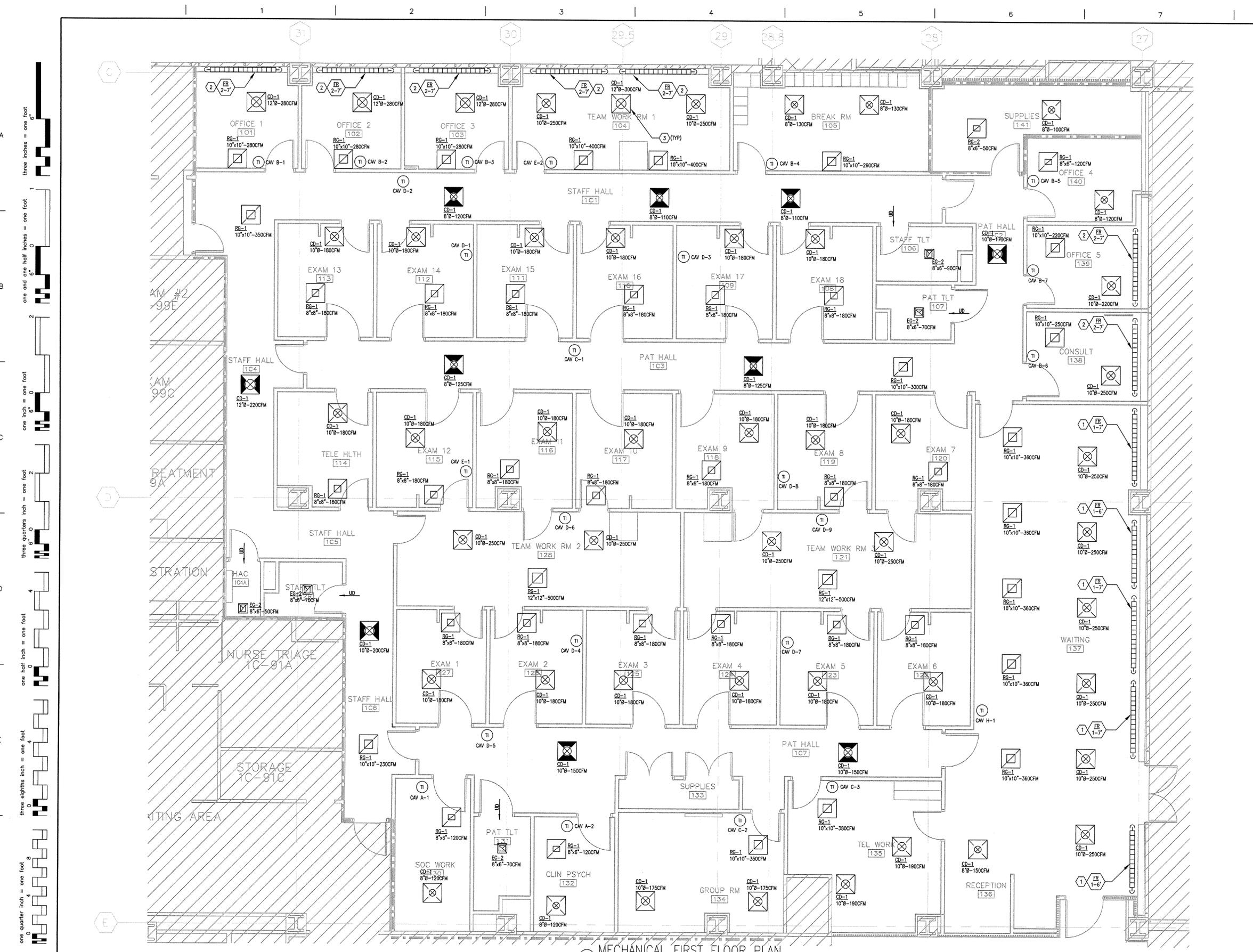
## FULLY SPRINKLERED

① MECHANICAL FIRST FLOOR DEMOLITION PLAN  
1/4"=1'-0"

three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot  
 one eighth inch = one foot

BID SUBMISSION 07/18/2013	<b>CONSULTANTS:</b>  	<b>ARCHITECT/ENGINEERS:</b> ELLERBE BECKET 	<b>PROFESSIONAL SEALS:</b> 	Dr. John J. Sanderason MD : Patient Care Center Director Abigail Rodriguez RN : Program Management Officer Esther Hicken RN : Clinical Nurse Manager Richard Joao : Safety and Occupational Health Manager	<b>Drawing Title:</b> MECHANICAL FIRST FLOOR DEMOLITION PLAN  Approved Director, VAHMCs Approved Chief of Engineering : Michael Ong	<b>Project Title:</b> JAMES J. PETERS VA MEDICAL CENTER BRONX NEW YORK RENOVATE PRIMARY CARE SUITE B BRONX NEW YORK	<b>Project Number:</b> 526-13-106 <b>Building Number:</b> 100 <b>Drawing Number:</b> MD101 Dwg. 18 of 47	<b>Engineering Service</b> 	
Revisions Date	Date				Date 18 JULY 2013	Checked NB	Drawn SB		





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GENERAL NOTES

1. ALL DUCTWORK DISTRIBUTION TO DIFFUSER NECK SHOWN ON MHI02 MECHANICAL INTERSTITIAL FIRST FLOOR PLAN.
2. SUPPLY AIR DUCTS BETWEEN AHU AND CAV TERMINAL UNITS SHALL BE HIGH PRESSURE CLASSIFICATION.
3. SUPPLY AIR DUCTS BETWEEN CAV TERMINAL UNITS AND DIFFUSERS SHALL BE LOW PRESSURE CLASSIFICATION.
4. ALL RETURN AIR DUCTWORK SHALL BE LOW PRESSURE CLASSIFICATION.
5. ALL GENERAL EXHAUST AIR DUCTWORK SHALL BE LOW PRESSURE CLASSIFICATION.
6. MAINTAIN ALL EXISTING CONDITIONS IN AREAS OUTSIDE THE S.O.W WHICH ARE EFFECTED BY THE WORK UNDER THIS CONTRACT.

CODED NOTES

- 1 BASEBOARD STYLE FIN TUBE RADIATOR. CONNECT TO EXISTING HWS/R PIPING ON INTERSTITIAL FLOOR BELOW, BALANCE TO NEW FLOW RATES. SEE SCHEDULE FOR ENCLOSURE TYPE.
- 2 CABINET STYLE FIN TUBE RADIATOR. CONNECT TO EXISTING HWS/R PIPING ON INTERSTITIAL FLOOR BELOW, BALANCE TO NEW FLOW RATES. SEE SCHEDULE FOR ENCLOSURE TYPE.
- 3 NEW AIR TERMINALS SERVED BY BRANCH DUCTWORK ON INTERSTITIAL LEVEL ABOVE.

LEGEND



MECHANICAL FIRST FLOOR PLAN  
 1/4"=1'-0"

FULLY SPRINKLERED

BID SUBMISSION	07/18/2013	CONSULTANTS:	ARCHITECT/ENGINEERS:	PROFESSIONAL SEALS:	Dr. John J. Sanderson MD : Patient Care Center Director	Drawing Title	Project Title	Project Number
			ELLERBE BECKETT		Abigail Rodriguez RN : Program Management Officer	MECHANICAL FIRST FLOOR PLAN	JAMES J. PETERS VA MEDICAL CENTER	526-13-106
			STV 100 Years		Eather Hicken RN : Clinical Nurse Manager	Approved Director: VAH/HCS	BRONX NEW YORK	Building Number
					Richard Joseo : Safety and Occupational Health Manager	Approved Chief of Engineering : Michael Ong	RENOVATE PRIMARY CARE SUITE B	100
Revisions:	Date						Location	Drawing Number
							BRONX NEW YORK	MH101
							Date	Dwg. 20 of 47
							18 JULY 2013	Checked NB
								Drawn SB



GENERAL NOTES

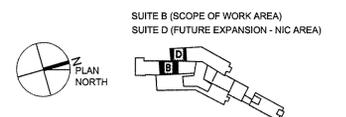
- SUPPLY AIR DUCTS BETWEEN AHU AND CAV TERMINAL UNITS SHALL BE HIGH PRESSURE CLASSIFICATION.
- SUPPLY AIR DUCTS BETWEEN CAV TERMINAL UNITS AND DIFFUSERS SHALL BE LOW PRESSURE CLASSIFICATION.
- ALL RETURN AIR DUCTWORK SHALL BE LOW PRESSURE CLASSIFICATION.
- ALL GENERAL EXHAUST AIR DUCTWORK SHALL BE LOW PRESSURE CLASSIFICATION.
- MAINTAIN ALL EXISTING CONDITIONS IN AREAS OUTSIDE THE S.O.W WHICH ARE EFFECTED BY THE WORK UNDER THIS CONTRACT.
- PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCTWORK.

CODED NOTES

- CONNECT TO EXISTING DUCTWORK. REBALANCE AH-9 SUPPLY FAN, ASSOCIATED RETURN FAN RAF-30 AND GENERAL EXHAUST FAN EF-10 TO ACCOMMODATE NEW AIRFLOWS AS SHOWN.
- DUAL DECK CAV TERMINAL UNIT, TYPICAL FOR EACH ZONE.
- DUCT DROPS DOWN THROUGH INTERSTITIAL FLOOR SLAB TO 1ST FLOOR CEILING PLENUM.
- TOILET EXHAUST DUCT SHOWN CONNECTING AT APPROXIMATE LOCATION OF EXISTING EXHAUST DUCT. CONTRACTOR TO VERIFY IN FIELD AND CONFIRM WITH ENGINEER PRIOR TO INSTALLATION.

LEGEND

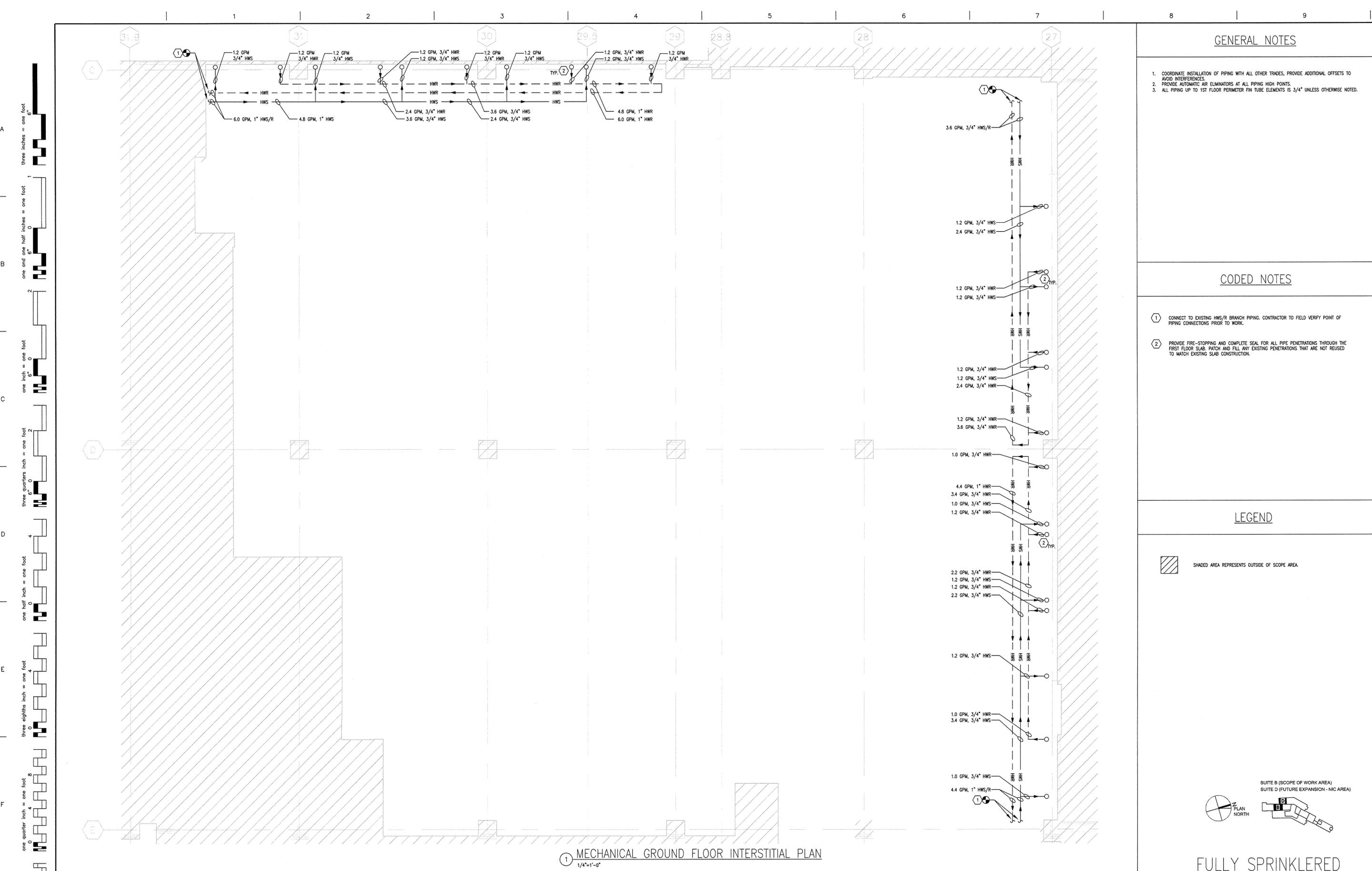
 SHADED AREA REPRESENTS OUTSIDE OF SCOPE AREA.



FULLY SPRINKLERED

MECHANICAL FIRST FLOOR INTERSTITIAL PLAN  
1/4"=1'-0"

<p>BD SUBMISSION</p> <p>07/18/2013</p>	<p>CONSULTANTS:</p> <p>ELLERBE BECKET</p> <p></p>	<p>ARCHITECT/ENGINEERS:</p> <p>ELLERBE BECKET</p> <p></p>	<p>PROFESSIONAL SEALS:</p> <p>Dr. John J. Sanders MD : Patient Care Center Director</p> <p>Abigail Rodriguez RN : Program Management Officer</p> <p>Eather Hicken RN : Clinical Nurse Manager</p> <p>Richard Joseo : Safety and Occupational Health Manager</p>	<p>Drawing Title</p> <p>MECHANICAL FIRST FLOOR INTERSTITIAL PLAN</p> <p>Approved Director, VAHHCs</p> <p>Approved Chief of Engineering : Michael Ong</p>	<p>Project Title</p> <p>JAMES J. PETERS VA MEDICAL CENTER BRONX NEW YORK RENOVATE PRIMARY CARE SUITE B</p> <p>Location</p> <p>BRONX NEW YORK</p> <p>Date</p> <p>18 JULY 2013</p>	<p>Project Number</p> <p>526-13-106</p> <p>Building Number</p> <p>100</p> <p>Drawing Number</p> <p>MH102</p> <p>Dwg. 21 of 47</p>	<p>Engineering Service</p> <p></p>
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**GENERAL NOTES**

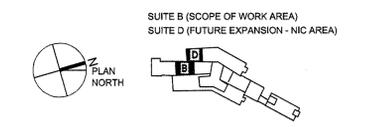
1. COORDINATE INSTALLATION OF PIPING WITH ALL OTHER TRADES, PROVIDE ADDITIONAL OFFSETS TO AVOID INTERFERENCES.
2. PROVIDE AUTOMATIC AIR ELIMINATORS AT ALL PIPING HIGH POINTS.
3. ALL PIPING UP TO 1ST FLOOR PERIMETER FIN TUBE ELEMENTS IS 3/4" UNLESS OTHERWISE NOTED.

**CODED NOTES**

- ① CONNECT TO EXISTING HWS/R BRANCH PIPING. CONTRACTOR TO FIELD VERIFY POINT OF PIPING CONNECTIONS PRIOR TO WORK.
- ② PROVIDE FIRE-STOPPING AND COMPLETE SEAL FOR ALL PIPE PENETRATIONS THROUGH THE FIRST FLOOR SLAB. PATCH AND FILL ANY EXISTING PENETRATIONS THAT ARE NOT REUSED TO MATCH EXISTING SLAB CONSTRUCTION.

**LEGEND**

SHADED AREA REPRESENTS OUTSIDE OF SCOPE AREA.



① MECHANICAL GROUND FLOOR INTERSTITIAL PLAN  
1/4"=1'-0"

**FULLY SPRINKLERED**

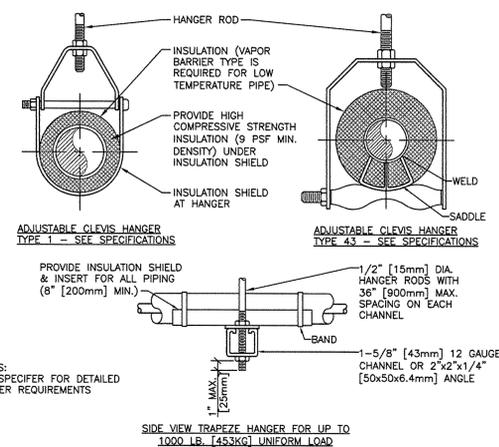
<b>BID SUBMISSION</b> 07/18/2013	<b>CONSULTANTS:</b> 	<b>ARCHITECT/ENGINEERS:</b> 	<b>PROFESSIONAL SEALS:</b> 	<b>Dr. John J. Sanderson MD : Patient Care Center Director</b> <b>Abigail Rodriguez RN : Program Management Officer</b> <b>Eather Hicklen RN : Clinical Nurse Manager</b> <b>Richard Joao : Safety and Occupational Health Manager</b>	<b>Drawing Title</b> <b>MECHANICAL GROUND FLOOR INTERSTITIAL PLAN</b> <b>Approved Director, VA-MHCS:</b> <b>Approved Chief of Engineering : Michael Ong</b>	<b>Project Title</b> <b>JAMES J. PETERS VA MEDICAL CENTER BRONX NEW YORK RENOVATE PRIMARY CARE SUITE B</b> <b>Location</b> <b>BRONX NEW YORK</b> <b>Date</b> <b>18 JULY 2013</b>	<b>Project Number</b> <b>526-13-106</b> <b>Building Number</b> <b>100</b> <b>Drawing Number</b> <b>MH103</b> <b>Dwg. 22 of 47</b>	<b>Engineering Service</b> 					
<b>Revisions</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">Date</th> <th style="width: 20%;">Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Date	Date											
Date	Date												

GENERAL NOTES

1. SEE MH001 FOR SYMBOLS, ABBREVIATIONS AND GENERAL NOTES.

CODED NOTES

- ① CONNECT TO EXISTING HWS/R PIPING ON FIRST FLOOR LOWER INTERSTITIAL LEVEL. SEE MH103 FOR FIRST FLOOR LOWER INTERSTITIAL LEVEL PIPING PLAN.
- ② LOCAL THERMOSTATIC CONTROL VALVE. PROVIDE ACCESS DOOR IN FIN TUBE RADIATOR ENCLOSURE FOR SERVICE AND REPLACEMENT.



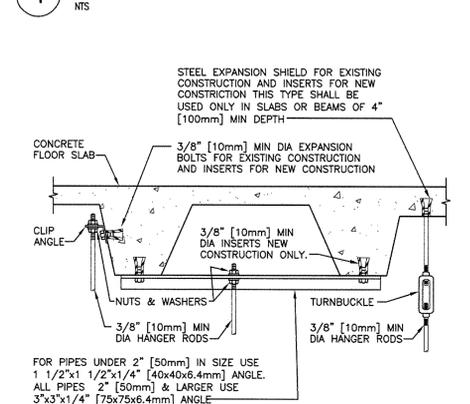
NOTES:  
SEE SPECIFIER FOR DETAILED HANGER REQUIREMENTS

SIDE VIEW TRAPEZE HANGER FOR UP TO 1000 LB. [453KG] UNIFORM LOAD

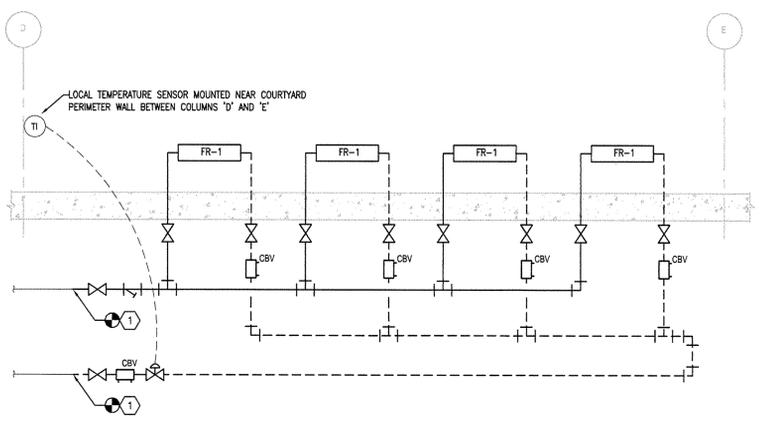
		MAXIMUM PIPE/TUBING SUPPORT SPACING																		
NOM. SIZE	IN.	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	
PIPE	FT.	[210]	[210]	[210]	[210]	[270]	[300]	[340]	[370]	[410]	[490]	[520]	[580]	[670]	[700]	[760]	[820]	[850]	[910]	[960]
TUBING	FT.	3	4	5	6	8	10	12	15	18	22	27	33	40	48	57	66	75	84	93
	MM	[150]	[200]	[240]	[240]	[270]	[300]	[370]	[370]	[400]	[490]	[520]	[580]	[670]	[700]	[760]	[820]	[850]	[910]	[960]

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

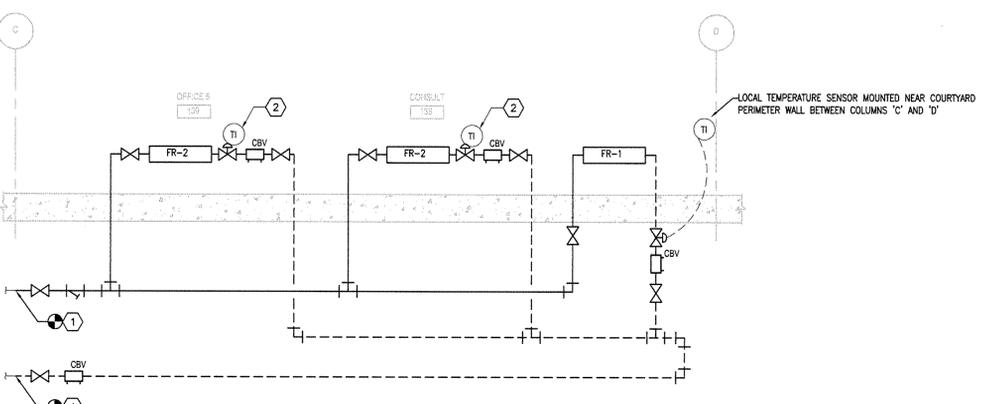
4 PIPE HANGERS



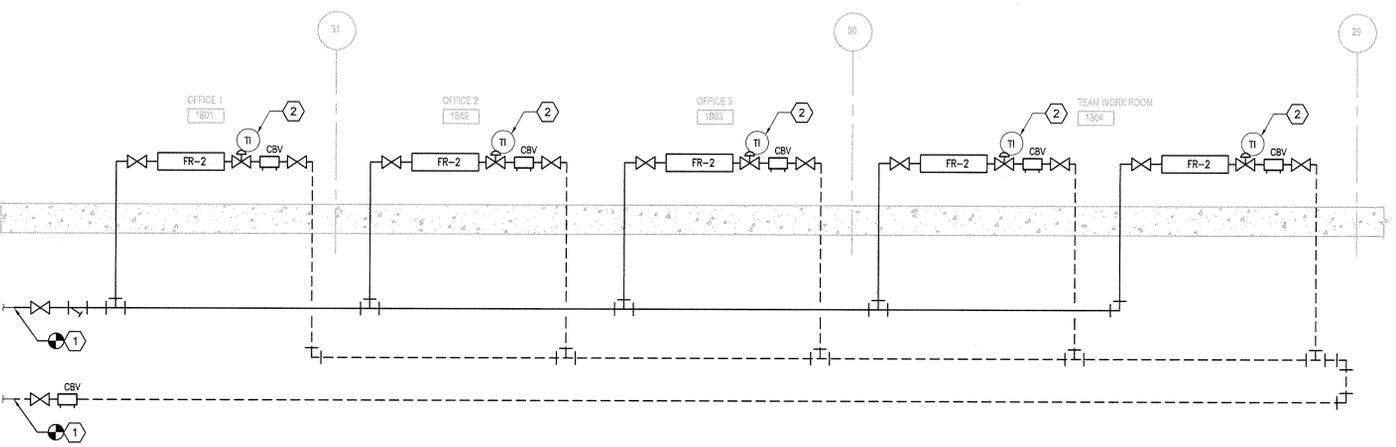
5 SECURING HANGER RODS IN CONCRETE



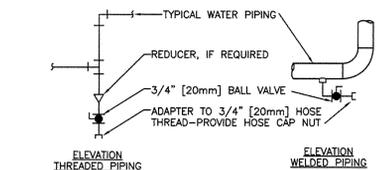
1 FIN TUBE RADIATOR PIPING DETAIL-COLUMN '27' BETWEEN 'D' AND 'E'



2 FIN TUBE RADIATOR PIPING DETAIL-COLUMN '27' BETWEEN 'C' AND 'D'

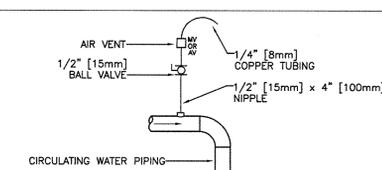


3 FIN TUBE RADIATOR PIPING DETAIL-COLUMN 'C' BETWEEN '32' AND '29'



TYPICAL HOT WATER PIPING DRAIN VALVE CONNECTIONS

NOTES:  
1. DRAIN ALL LOW POINTS AS INDICATED ABOVE.  
2. WHERE SCALE POCKETS ARE SHOWN ON PIPE RISER DIAGRAMS AND/OR PLANS LOCATE DRAIN AT BOTTOM OF SCALE POCKET.



TYPICAL MANUAL AIR VENT

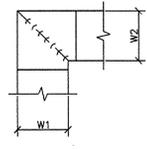
NOTES:  
1. VENT ALL HIGH POINTS INDICATED ABOVE.  
2. IF AUTOMATIC AIR VENTS ARE USED, PIPE DISCHARGE TO DRAIN.

6 DRAIN VALVE AND AIR VENT CONNECTIONS (HYDRONIC SYSTEMS)

three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot

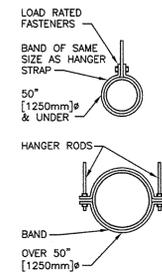
BID SUBMISSION	07/16/2019	CONSULTANTS:	ARCHITECT/ENGINEERS:	PROFESSIONAL SEALS:	Dr. John J. Sanderson MD : Patient Care Center Director	Drawing Title	Project Title	Project Number
			ELLERBE BECKET		Abigail Rodriguez RN : Program Management Officer	MECHANICAL DETAILS-1	JAMES J. PETERS VA MEDICAL CENTER BRONX NEW YORK RENOVATE PRIMARY CARE SUITE B	526-13-106
					Eather Hoken RN : Clinical Nurse Manager	Approved Director, VAHMCSS	Location	Building Number
					Richard Joao : Safety and Occupational Health Manager	Approved Chief of Engineering : Michael Ong	BRONX NEW YORK	100
Revisions	Date						Date	Drawing Number
							18 JULY 2019	MH501
							Checked	Drawn
							NB	SB
								Dwg. 23 of 47





- NOTE:**
1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
  2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
  3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" [50mm] RADIUS, 1 1/2" [40mm] MAXIMUM SPACE BETWEEN VANES AND A 3/4" [20mm] TRAILING EDGE.
  4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20" [500mm] VANES SHALL BE DOUBLE VANE TYPE.

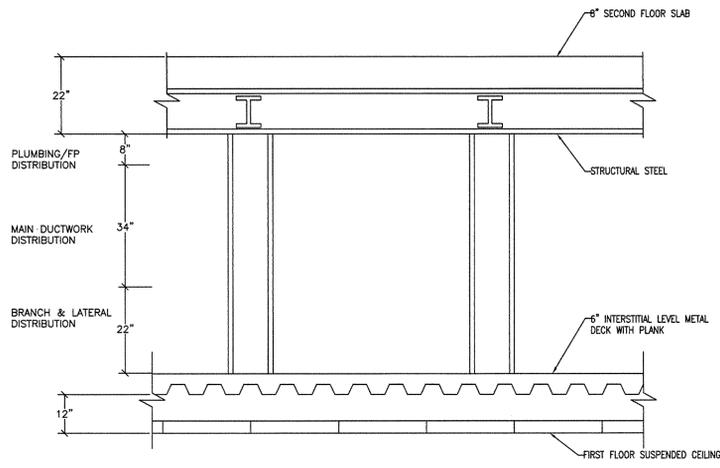
**1 DUCTWORK SQUARE VANE ELBOWS**  
NTS



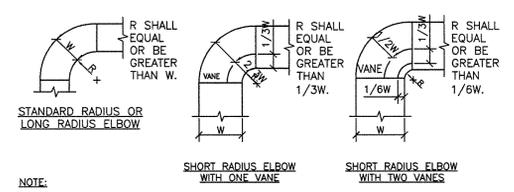
HANGER STRAPS OR RODS				
MAX. DUCT Ø IN. [mm]	QUANTITY/SIZE IN. [mm]	MAX. LOAD LBS. [kg]	MAX. SPACING IN. [mm]	
26 [650]	ONE 1 [25] x 22 GA STRAP	260 [119]	144 [3600]	
36 [900]	ONE 1 [25] x 18 GA STRAP	420 [190]	144 [3600]	
50 [1250]	ONE 1 [25] x 18 GA STRAP	700 [317]	144 [3600]	
60 [1500]	TWO 3/8 [10] RODS	1320 [598]	144 [3600]	
84 [2100]	TWO 1/2 [13] RODS	2500 [1133]	144 [3600]	

**NOTE:** TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

**2 ROUND DUCT HANGERS**  
NTS

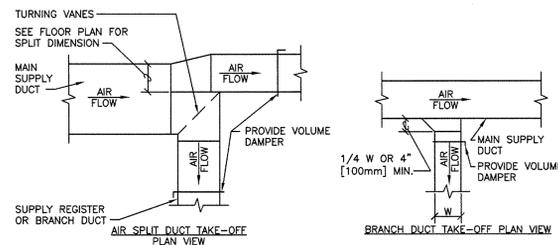


**3 FIRST FLOOR INTERSTITIAL DISTRIBUTION ZONES**  
NTS

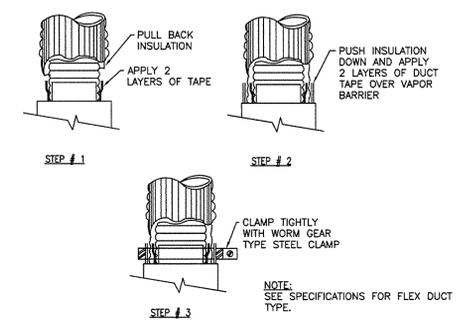


- NOTE:**
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
  2. ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

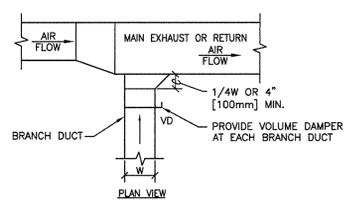
**4 DUCTWORK RADIUS ELBOWS**  
NTS



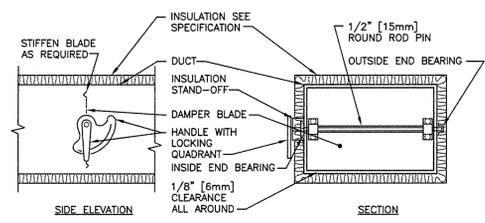
**5 SUPPLY DUCTWORK TAKE-OFFS**  
NTS



**6 FLEX DUCT TAPE AND CLAMP INSTALLATION DETAIL**  
NTS

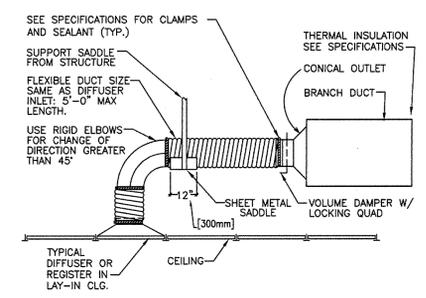


**7 EXHAUST OR RETURN BRANCH DUCTWORK**  
NTS

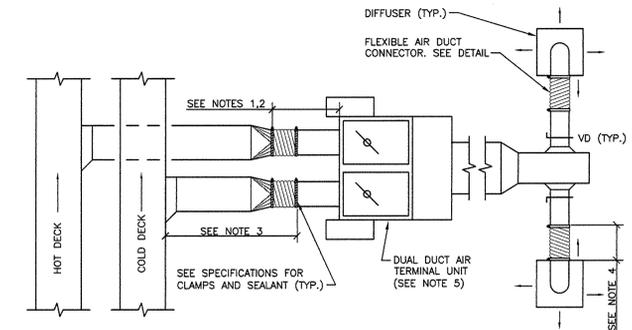


- NOTE:**
1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
  2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

**8 VOLUME DAMPER DETAIL**  
NTS



**9 FLEXIBLE AIR DUCT CONNECTOR**  
NTS



- NOTE:**
1. RIGID STRAIGHT TERMINAL UNIT INLET LENGTH SHALL BE A MINIMUM OF 3 TIMES THE DIAMETER OF INLET.
  2. A FLEXIBLE AIR DUCT CONNECTOR IS NOT MANDATORY FOR INLET TO THIS BOX, BUT ALLOWED TO ACCOMMODATE MINOR OFFSETS. MAXIMUM LENGTH 3'-0" [900mm].
  3. A BRANCH DUCT SERVING AN INDIVIDUAL BOX MAY BE THE SAME SIZE AS THE BOX INLET, PROVIDED THE EQUIVALENT LENGTH OF THE BRANCH DUCT, AS SHOWN, DOES NOT EXCEED 10 FEET (3 METERS). FOR LONGER LENGTHS, INCREASE THE DUCT SIZE AND PROVIDE A DUCT TRANSITION TO MAINTAIN THE DUCT STATIC PRESSURE DROP AT OR BELOW 0.2"/100' [1.64Pa/m].
  4. FLEXIBLE AIR DUCT CONNECTORS, WHEN USED FROM TERMINAL UNIT SUPPLY AIR DUCT TO DIFFUSER, SHALL NOT EXCEED 3'-0" [1500mm]. USE RIGID ELBOWS FOR CHANGE OF DIRECTION GREATER THAN 45°.
  5. COMPONENT ARRANGEMENT MAY VARY BY MANUFACTURER. PROVIDE BAFFLED MIXING SECTION AND INSULATION W/VAPOR BARRIER FOR CONNECTING DUCT SECTIONS.

**10 DUCT CONNECTIONS - CONSTANT VOLUME MIXING BOX**  
NTS

BID SUBMISSION	07/18/2013	CONSULTANTS:	ARCHITECT/ENGINEERS:	PROFESSIONAL SEALS:	Dr. John J. Sanderson MD : Patient Care Center Director	Drawing Title	Project Title	Project Number
			ELLERBE BECKET	STV 100 Years	Abigail Rodriguez RN : Program Management Officer	MECHANICAL DETAILS-2	JAMES J. PETERS VA MEDICAL CENTER	526-13-106
					Eather Hicken RN : Clinical Nurse Manager	Approved Director, VAHMCS	BRONX NEW YORK	Building Number
					Richard Joao : Safety and Occupational Health Manager	Approved Chief of Engineering : Michael Ong	RENOVATE PRIMARY CARE SUITE B	100
Revisions	Date						Location	Drawing Number
							BRONX NEW YORK	MH502
							Date	Checked
							18 JULY 2013	NB
								Drawn
								SB
								Dwg 24 of 47



AIR DEVICE SCHEDULE								BASIS OF DESIGN: TITUS	
MARK NO.	DESIGNATION	MODEL NUMBER	MODULE SIZE	P.D. IN W.G. (MAX)	MAX N.C. LEVEL	MATERIAL	FINISH	TYPE OF VOL. CONTROL REQUIRED	REMARKS
CD-1	CEILING DIFFUSER	TDC	24" X 24"	.05	20	STEEL	#26 WHITE	O.B.D	'A' DIMENSION = 18X18
RG/EG-1	RETURN/EXHAUST GRILLE	50F	24" X 24"	.05	20	STEEL	#26 WHITE	O.B.D	
RG/EG-2	RETURN/EXHAUST GRILLE	50F	12" X 12"	.05	20	STEEL	#26 WHITE	O.B.D	

- NOTES:
- SEE PLANS FOR THROW PATTERNS.
  - SEE PLANS FOR NEXX SIZES.
  - BORDER TYPES SHALL BE COMPATIBLE WITH CEILING TYPE FOR THE ROOM IN WHICH IT IS LOCATED. CONTRACTOR SHALL REVIEW ARCHITECTURAL REFLECTED CEILING PLANS FOR SPECIFIC CEILING TYPES IN EACH SPACE.
  - PROVIDE ALL REQUIRED HARDWARE TO SUIT THE INSTALLATION CEILING TYPE INCLUDING 1" PLASTER FRAME WHERE GYPSUM BOARD CEILINGS EXIST.
  - FINISHES AND BORDER TYPE SHALL BE REVIEWED BY THE ARCHITECT.

MIXING BOX SCHEDULES					BASIS OF DESIGN: TITUS
TAG	MODEL	MAX.-INLET DIAMETER	BOX SIZE WxHxD	CFM RANGE	REMARKS
A	DEDV-4	4	32 x 12 1/4 x 28 1/2	0 - 200	
B	DEDV-5	5	32 x 12 1/4 x 28 1/2	200 - 325	
C	DEDV-6	6	32 x 12 1/4 x 26 1/2	325 - 450	
D	DEDV-7	7	36 x 12 1/4 x 33 7/8	450 - 625	
E	DEDV-8	8	36 x 12 1/4 x 30 1/2	625 - 850	
F	DEDV-9	9	40 x 12 5/8 x 37 7/8	850 - 1000	
G	DEDV-10	10	40 x 12 5/8 x 34-1/2	1000 - 1350	
H	DEDV-12	12	44 x 15 1/8 x 38-1/2	1350 - 2000	

- NOTES:
- PROVIDE BAFLED MIXING SECTION.
  - CONTROLS PROVIDED UNDER SPECIFICATION SECTION 23 09 23, INSTALLED BY TERMINAL BOX MANUFACTURER.

FINNED TUBE RADIATION SCHEDULE											BASIS OF DESIGN: VULCAN DURAVANE				
MARK NO.	MODEL	CAPACITY (BTU/H/FT)	HEATING ELEMENT				FIN DATA				ENCLOSURE DATA			REMARKS	
			HEATING ELEMENT LENGTH (FT)	EWL (°F)	LWT (°F)	FLOW (GPM)	TUBE SIZE (IN)	HEIGHT (IN)	WIDTH (IN)	FINS/FT	QUANTITY OF ROWS	TYPE	HEIGHT (IN)		DEPTH (IN)
FR-1	VC3/4-435	870	SEE PLANS	180	180	SEE PLANS	3/4	4-1/4	3-5/8	50	1	JW44 10LI	10	4-9/16	NOTES 1,2,3
FR-2	VC3/4-435	870	SEE PLANS	180	180	SEE PLANS	3/4	4-1/4	3-5/8	50	1	ARSCO FT 50	36	4-9/16	NOTES 1,2,3,4,5,6

- NOTES:
- PROVIDE COPPER/ALUMINUM HEATING ELEMENT.
  - PROVIDE END CAPS, CORNERS AND WALL SLEEVES TO FULLY ENCLOSE HEATING ELEMENT AND GIVE A CONTINUOUS APPEARANCE.
  - ENCLOSURES SHALL BE REVIEWED BY THE ARCHITECT.
  - PROVIDE ACCESS PANEL FOR LOCAL THERMOSTATIC CONTROL VALVES.
  - FLOOR-MOUNT ENCLOSURE, EXTEND UP TO BOTTOM WINDOW SILL.
  - INSTALL HEATING ELEMENT SO THAT TOP OF FIN IS 8" BELOW TOP OF ENCLOSURE. (CENTER OF HEATING TUBE ~26" AFF)

three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot  
 one eighth inch = one foot

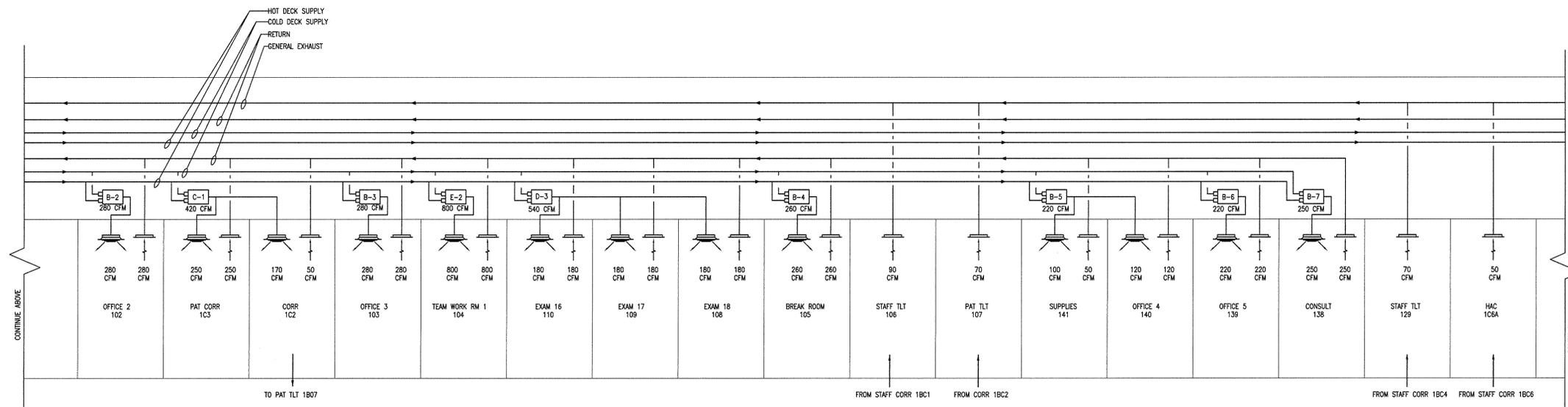
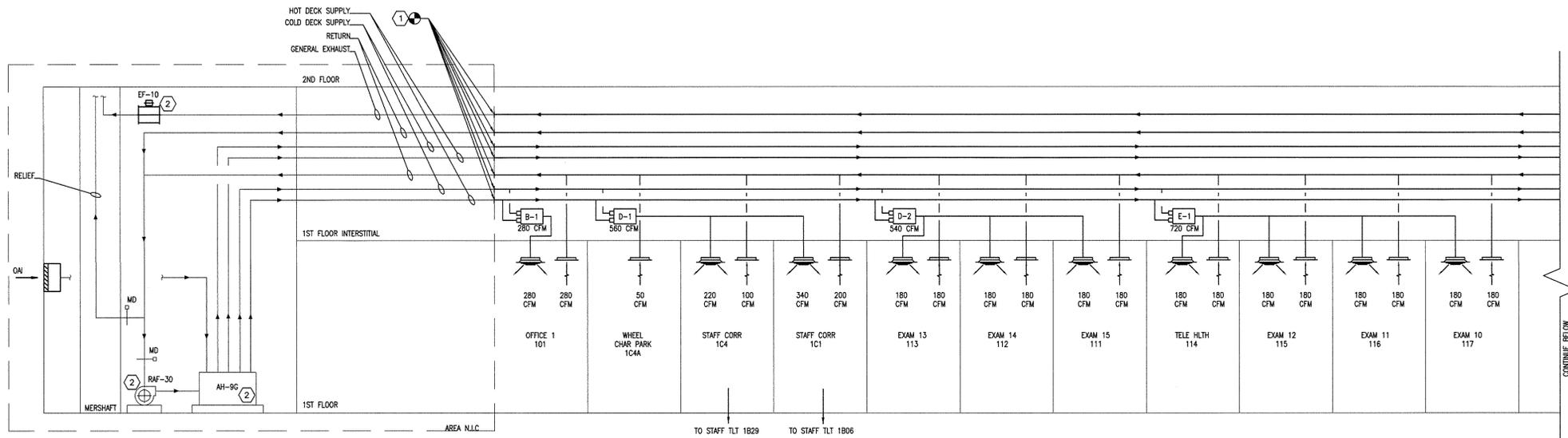
BID SUBMISSION	07/18/2018	CONSULTANTS:	ARCHITECT/ENGINEERS:	PROFESSIONAL SEALS:	Dr. John J. Sanderson MD : Patient Care Center Director	Drawing Title	MECHANICAL SCHEDULES	Project Title	JAMES J. PETERS VA MEDICAL CENTER BRONX NEW YORK RENOVATE PRIMARY CARE SUITE B	Project Number	526-13-106	Engineering Service Department of Veterans Affairs
			ELLERBE BECKETT		Abigail Rodriguez RN : Program Management Officer	Approved Director: VA/HHCS		Location	BRONX NEW YORK	Building Number	100	
					Eather Hicken RN : Clinical Nurse Manager	Approved Chief of Engineering : Michael Ong		Date	18 JULY 2018	Drawn	NB	
					Richard Joseo : Safety and Occupational Health Manager			Checked		Draw	SB	
Revisions	Date											

GENERAL NOTES

- EXISTING UNIT AH-9, ASSOCIATED RETURN FAN, AND GENERAL EXHAUST FAN EF-10 ARE OUTSIDE THE S.O.W. EXISTING EQUIPMENT IS ASSUMED TO HAVE SUFFICIENT CAPACITY AND PERFORMANCE TO SERVE NEW DESIGN REQUIREMENTS.
- EXISTING UNIT AH-9, ASSOCIATED RETURN FAN, AND GENERAL EXHAUST FAN EF-10 SERVE AREAS OUTSIDE THE S.O.W. THESE AREAS SHALL REMAIN OPERATIONAL DURING THIS CONTRACT. REBALANCE ALL EQUIPMENT TO SATISFY THE OCCUPIED AREAS DURING CONSTRUCTION.
- PROVIDE BALANCING REPORT BEFORE AND AFTER TO OWNER.

CODED NOTES

- ① CONNECT TO EXISTING DUCT MAINS ON THE INTERSTITIAL FLOOR LEVEL. REBALANCE ALL EXISTING EQUIPMENT TO NEW DESIGN REQUIREMENTS.
- ② EXISTING AH-9:  
23,700 CFM  
6,000 MIN. O.A.  
6.54 IN. WG. TOTAL STATIC PRESSURE  
90°F L.A.T. (HOT DECK)  
55°F L.A.T. (COLD DECK)
- EXISTING RAF-30:  
15,500 CFM  
1.5 IN. WG. STATIC PRESSURE
- EXISTING EF-10:  
3,200 CFM  
1.5 IN. WG. STATIC PRESSURE



① SCHEMATIC AIRFLOW DIAGRAM-1  
N.T.S.

<b>BID SUBMISSION</b> 07/18/2018  <b>Revisions</b> Date	<b>CONSULTANTS:</b>  DATE	<b>ARCHITECT/ENGINEERS:</b>  ELLERBE BECKET 	<b>PROFESSIONAL SEALS:</b> 	Dr. John J. Sanders MD : Patient Care Center Director Abigail Rodriguez RN : Program Management Officer Esther Hicken RN : Clinical Nurse Manager Richard Joao : Safety and Occupational Health Manager	Drawing Title MECHANICAL DIAGRAMS-1  Approved Director: VAHHCSS Approved Chief of Engineering : Michael Ong	Project Title JAMES J. PETERS VA MEDICAL CENTER BRONX NEW YORK RENOVATE PRIMARY CARE SUITE B  Location BRONX NEW YORK  Date 18 JULY 2018	Project Number 526-13-106 Building Number 100  Drawing Number MH611 Dwg. 26 of 47	Engineering Service  
				Checked: NB Drawn: SB	Date: 18 JULY 2018			

