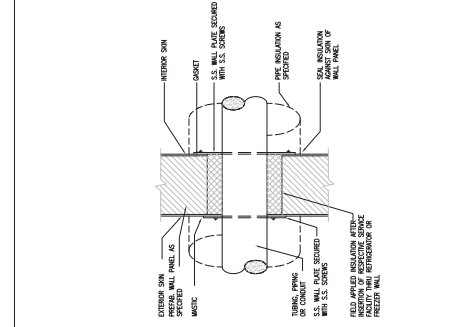




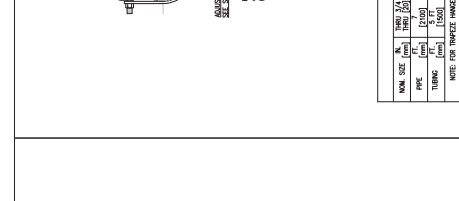
1. NEW TAPS SHOWN INTO EXISTING CHILLED WATER AND HOT WATER SUPPLY AND RETURN HEADERS ARE SHOWN DIAGONALLY.
2. EXACT LOCATION OF EXISTING TAPS INTO THE CHILLED WATER AND HOT WATER SUPPLY AND RETURN HEADERS TO BE DETERMINED IN FIELD BY CONTRACTOR.
3. REUSE EXISTING TAPS WHEREVER POSSIBLE AS ADDING A NEW TAP WILL BEAM EMPTYING THE EXISTING TAP. TAPS TO BE REMOVED TO BE ADDED TO A BUILDING VALE. ALSO, ALL EXISTING HORIZONTAL WATER SUPPLY & RETURN RUNS ARE CARBON STEEL THREADED PIPE WITH INSULATION.
4. ALL EXISTING TAPS SHALL BE CAPPED AFTER THE BALL VALVE FOR FUTURE USE.
5. ALL NEW TAPS TO HAVE A BALL VALVE LOCATED AFTER THE TAP FOR ISOLATION PURPOSES.
6. EXTEND PIPE HEADERS FOR NEW (FOU) FAN COIL UNITS (E) AND EXISTING AIR TERMINAL UNITS AS SHOWN ON DRAWING WITH A HANGMAN SYMBOL WITH (P) TEI-PIN POINT DESIGNATION.
7. SEE DETAIL SHEET 228/600 FOR RADANT PANELS AND (FOU) FAN COIL UNITS DETAILS.
8. REUSE EXISTING TEMPERATURE CONTROL VALVE ASSSEMBLIES WHEREVER APPLICABLE TO THE CONTROL VALVE. EXISTING CONTROL VALVES ARE PNEUMATIC OPERATED AND THE VA. WANTS ELECTRONICALLY OPERATED VALVES.
9. USE DIELECTRIC UNITS WHEN CHANGING PIPE TYPE FROM CARBON STEEL TO COPPER.
10. REUSE EXISTING PIPE HANGERS WHERE APPLICABLE.

DEDUCT  
ALTERNATE #1  
REFER TO Q-102

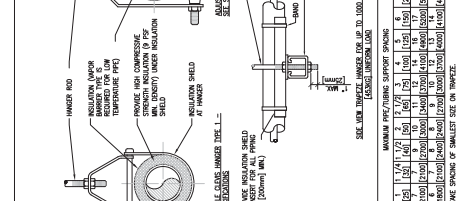
ISSUED FOR BID - NOT FOR CONSTRUCTION



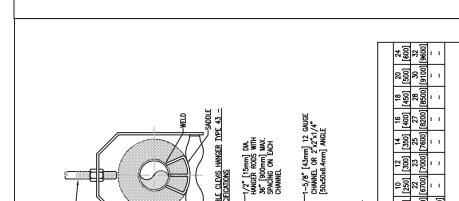
④ FAN COIL UNIT (FCU) DRAIN TRAP DETAIL  
N/A



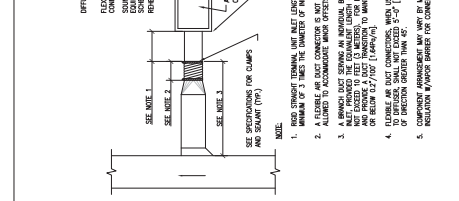
⑤ FAN COIL UNIT - HORIZONTAL CONCEALED  
N/A



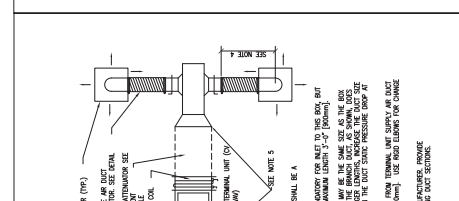
⑥ DUCT CONNECTIONS - AIR TERMINAL UNITS  
N/A



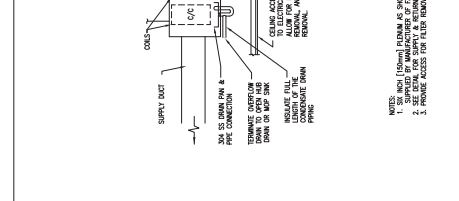
⑦ PIPE HANGERS  
N/A



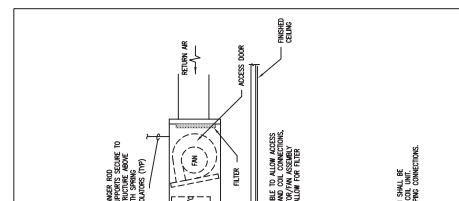
⑧ TUBING, PIPING, AND CONDUITS PASSING THROUGH PRE-FAB INSULATED WALL PANELS  
N/A



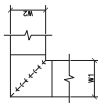
⑨ ACCESS PANELS - SPIRAL DUCTWORK  
N/A



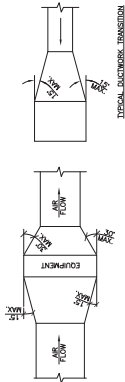
⑩ RECTANGULAR VOLUME DAMPERS  
N/A



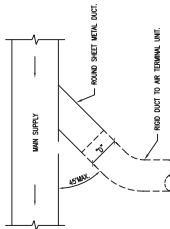
⑪ TYPICAL HYDRONIC HEATING AND COOLING PANEL - PIPING CONNECTIONS  
N/A



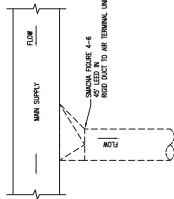
- NOTE:**
1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMCOW.
  2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
  3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" [50mm] RADIUS, 1/2" [10mm] MINIMUM SPACE BETWEEN VANES AND A 3/4" [20mm] TRAILING EDGE. WHEN W1 EQUALS W2, DOUBLE VANE TYPE. WHEN W1 IS GREATER THAN 20" [500mm] VANES SHALL BE DOUBLE VANE TYPE.



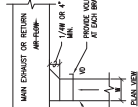
**NOTE:** UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.



PLAN VIEW



PLAN VIEW



PLAN VIEW

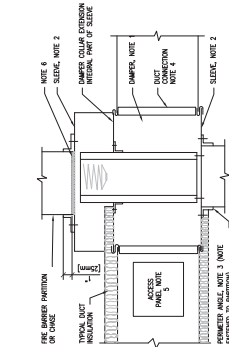
**9 DUCTWORK - MITERED ELBOWS**  
NT8

**8 DUCTWORK - REDUCTIONS + TRANSITIONS**

7 SUPPLY DUCT TAKEOFF - AIR TERMINAL UNIT

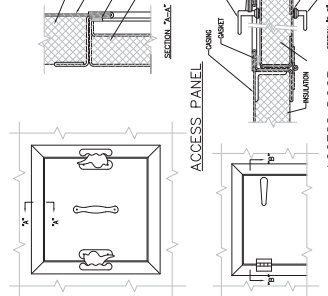
6 ALTERNATE SUPPLY DUCT TAKEOFF - AIR TERMINAL UNITS  
NT8.

5 EXHAUST OR RETURN BRANCH DUCTWORK  
NT8.



**WRITE-**

- [illegible]



NOTES

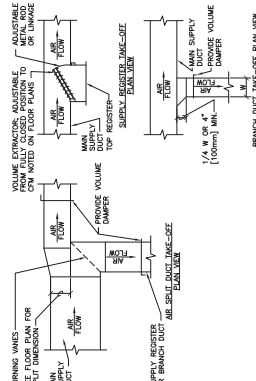
1. LATCHES SHALL BE OF THE WEDGE TYPE TO CLOSE DOORS TIGHTLY.
2. HINGES ON THE ACCESS DOORS SHALL HAVE NON-CORROSIVE FINIS.

**4** **FIRE DAMPERS** **NTB.**

**3 ACCESS PANEL AND DOOR DETAIL**

2 <sup>NTA</sup> DUCTWORK - RADIUS ELBOWS

1 DUCTWORK - TAKEOFF DETAILS  
NTS.



DESIGNER'S NOTES:

1. THE SUPPLY REGISTER TAKE-OFF MAY BE USED FOR UP TO 25% OF THE MAIN DUCT CFM. THE BRANCH DUCT TAKE-OFF MAY BE USED FOR UP TO 15% OF THE MAIN DUCT CFM ANYTIME AND UP TO 40% WHEN THE MAIN DUCT VELOCITY IS 1000 FPM [5.1 M/S] OR LESS. THE AIR SPLIT DUCT TAKE-OFF SHALL BE USED IN ALL OTHER CASES AND MAY BE USED AT ANYTIME.
2. SHOW ALL VOLUME NUMBERS ON FLOOR PLANS.

[illegible]

Figure 1 consists of 12 diagrams illustrating the construction of a complex waveform. Each diagram is a horizontal line with a series of rectangular pulses. The diagrams are numbered 1 through 12 from left to right. Below each diagram is a label describing the construction step. The labels are: 1. Three inches = one foot; 2. one inch = one foot; 3. one half inch = one foot; 4. one quarter inch = one foot; 5. one eighth inch = one foot; 6. one sixteenth inch = one foot; 7. one thirty-second inch = one foot; 8. one sixty-fourth inch = one foot; 9. one one-hundred and twenty-eighth inch = one foot; 10. one two-hundred and fifty-sixth inch = one foot; 11. one five-hundred and twelfth inch = one foot; 12. one one-thousand and twenty-fourth inch = one foot.

			ISSUED FOR BID	4/4/2016
			BID CD SUBMISSION	9/8/2016
			DESIGN DEVELOPMENT SUBMISSION	V01/2016
			SCH-EMATIC DESIGN SUBMISSION	10/1/2016
			Packaging	Date

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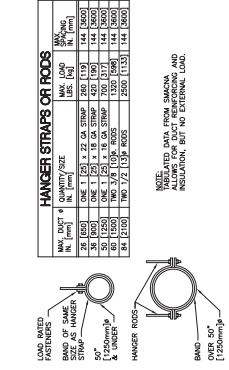
BANCROFT ARCHITECTS + ENGINEERS

700 UNIVERSITY ST., SUITE 203  
BOSTON, MA 02116-1607  
TEL: 617-552-2827 FAX: 617-552-2830

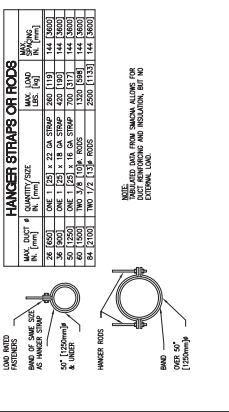
Drawing Title <b>MECHANICAL DETAILS</b>	Approved Project Director  <b>WAPNICS PLANNING AND ENGINEERING</b>
--	--

Project No.	Project Name	Project Number	Office of Construction and Facilities Management
4/4/2004	Edwards & Hines, Jr. VA Hospital Renovation Building 228 4th Floor, Mental Health	228	
John HARRIS, L.	Design Number	M-502	
4/4/2004	Drawn	1W	

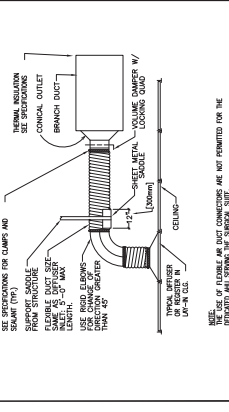
**8** PIPE HANGERS  
N.T.B.



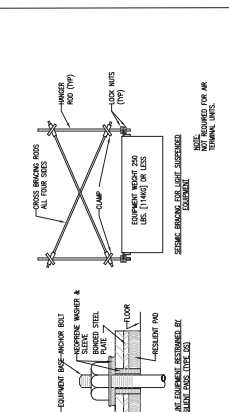
7 ROUND DUCT HANGERS  
NT&



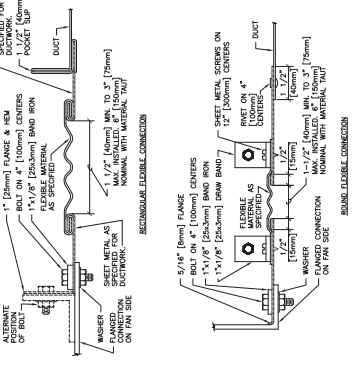
6 <sup>NT8</sup> FLEXIBLE AIR DUCT CONNECTOR



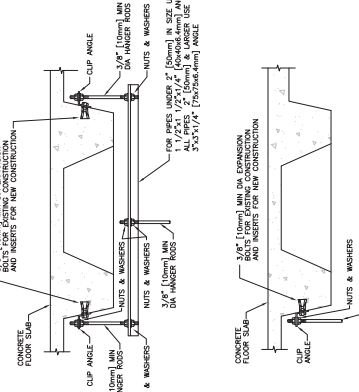
5 SEISMIC BRACING FOR EQUIPMENT



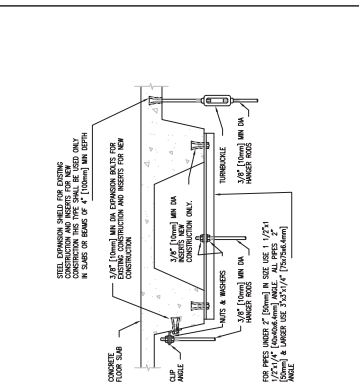
#### 4 DUCTWORK - FLEXIBLE CONNECTIONS



### ③ SECURING HANGER RODS IN CONCRETE



② **SECURING HANGER RODS IN CONCRETE**  
N.T.B.



① LINEAR SLOT DIFFUSER  
NT8.

