NA

From: NA
Sent: Monday, May 26, 2008 5:54 PM
To: members_of_the_staff
Subject: REVISED MASTER SPECIFICATIONS

Attachments: acmv rates.pdf; psi rates.pdf; ei maintenance.pdf; m&e maintenance.pdf; page numbering.pdf

Our Ref: OM-SC/017

The attached master specifications have been updated. The changes are highlighted in red.

1. Air Conditioning & Mechanical Ventilation Installation - Schedule 4 – Schedule of Rates



acmv rates.pdf (60 KB)

2. Plumbing & Sanitary Installation - Schedule 4 - Schedule of Rates



psi rates.pdf (53 KB)

3. M&E Services - Schedule 6 – Schedule of Servicing & Maintenance



ei intenance.pdf (50



m&e ntenance.pdf (304

4. M&E Services - Page Numbering



page ımbering.pdf (65 K

Regards
NA

Alpha
Consulting Engineers Pte Ltd

FEEDBACK REPORT FORM

Ref No: 107 - 200308

To: CCG From: SOH KAH YEA

Job No./Project: 6056 *(where applicable)*

Source of feedback: SOH KAH YEA

Scope of Feedback: * ~~Quality / Environmental / Administrative / Contractual / Technical /~~ Specification / ~~Others~~

Section A : Problem & Cause

SPECIFICATION PAGE NUMBERING REPEATED IN THE VARIOUS SERVICES SPECS FOR A COMBINED M&E TENDER CREATING DIFFICULTY TO REFER.

Section B : Mitigating Action Taken, if any

TO INCLUDE STANDARD PRE-FIX BEFORE PAGE NUMBER ACCORDING TO SERVICES, IE. A/3-1 (ACMV), E (EI), L (LED), F(FFAI), P (PSI), SP (SPFPI) ETC

Section C : Suggested Corrective Action

PROPOSE TO ADOPT FOR MASTER SPECS AS COMBINED M&E TENDERS ARE NOW FREQUENTLY CALLED

Section D : Approved Corrective Action

To adopt standard abbreviation/prefix in the QEMS.

Document Affected : ☑ Yes ☐ No Affected Document : MASTER SPECS, QEMS S4 5.4

Approved By : CCG Date : 20/3/08

Section E : Action

Action By : NA BSW

Targeted Completion : May 2008

Actual Completion : May 2008 Verified By : LY

* *Delete as appropriate*

Distribution: TLS | RT | LC ✓ | LPY | GSH | NA

AIR CONDITIONING & MECHANCIAL VENTILATION INSTALLATION

SECTION 1 - SCOPE OF WORK AND DESIGN INFORMATION

1.1 General Description

The proposed Air Conditioning and Mechanical Ventilation Systems are briefly described as follows:

The main air conditioning plant shall consist of centrifugal water chilling units operating in conjunction with cooling towers, condenser water pumps and chilled water pumps as shown in the Specification Drawings.

From the main A/C plant chilled water shall be reticulate to serve all air handling units and fan coils units throughout the entire installation.

The air conditioning plant, the air handling units and the fan coil units serving the following essential areas shall have back-up emergency power supply from the standby generator sets:

* Fire Command Centre
* MDF Room
* Board Room
* VIP Room
* Lift Motor Room in Basement
* Security Room
* Top Executives Room
* Supervisory Control Room

Mechanical ventilation is provided for the various car parks, plant rooms, staircases, switch rooms, toilets etc, as shown in the Schedule of technical requirements and the specification drawings.

Fans serving atrium spaces, basement car park areas, staircase pressurisation/ventilation systems, smoke-stop lobbies, lift machine rooms, fire-fighting pump room, MDF room and PABX room shall have back-up essential power supply.

Fans serving smoke extract system for atrium and similar areas or serving basement car park areas, which also serves as a smoke purging system shall be suitable for high temperature operation.

A computer based Digital Control System shall be provided under this Sub-Contract to monitor and control the various mechanical and electrical equipment and systems in the building/complex. The technical requirements of the Digital Control System are specified elsewhere in this Specification.

1.2 Chiller Brush Cleaning System

The Sub-Contractor shall supply and install a complete Automatic On-Load Brush Cleaning System for condenser water tubes of all the water chilling units. The system shall include a brushes and baskets set for each water tube and a 4-way automatic reversing valve for each condenser with pneumatic actuator, automatic timer, etc.

AIR CONDITIONING & MECHANICAL VENTILATION INSTALLATION

SCHEDULE 1 - SCHEDULE OF DRAWINGS

S1.1 Standard Specification Drawings/Details

1.	Typical Sleeve and Air-tight Penetration Seal for Pipe	SM(PI)-1
2.	Detail of Vapour Seal Barrier for Chilled Water Pipe & Chilled Water Pipe Support	SM(PI)-2
3.	Typical Isolated Pipe Hangers	SM(P1)-3
4.	Typical Detail of Pipe Hangers	SM(PI)-4
5.	Typical Pipe Guide for Bare & Insulated Pipes	SM(PI)-5
6.	Typical Pipe Support for Bare Pipes of 200mm diameter and below	SM(PI)-6
7.	Typical Pipe Support for Bare Pipes of size above 200mm diameter	SM(PI)-7
8.	Detail of Typical Pipe Support for Insulated Pipe of 150mm diameter and below	SM(PI)-8
9.	Detail of Typical Pipe Support for Insulated Pipe of size above 150mm diameter	SM(PI)-9
10.	Typical Isolated Anchors to Pipe Bends	SM(PI)-10
11.	Typical Horizontal Pipe Support	SM(PI)-11
12.	Typical Reinforced Concrete Inertia Block	SM(GEN)-1
13.	Typical Detail of Chilled Water Expansion Tank	SM(TAN)-1
14.	Mounting Details for Ventilation Fan	SM(FAN)-1
15.	Typical Detail of Elbow for Ductwork	SM(DU)-1
16.	Typical Detail of Main & Small Branch Take-off for Ductwork	SM(DU)-2
17.	Diffuser/Collar & Register/Collar Connection	SM(DU)-3
18.	Detail of Typical Wall Mounted Fire Damper	SM(DU)-4
19.	Detail of Typical Wall Mounted Fire Damper with Attenuator	SM(DU)-5
20.	Typical Sleeve and Air-tight Penetration Seal for Attenuator/Duct	SM(DU)-6
21.	Typical Linear Diffuser Plenum Box & Flexible Duct Installation Details	SM(DU)-7
22.	Typical Joints Details for Galvanised Steel Ductwork	SM(DU)-8

SECTION	DESCRIPTION	PAGE NO.
10	Balancing, Testing & Commissioning	A/10-1 - A/10-5
	10.1 General	
	10.2 Reliability Tests	
	10.3 Pipework	
	10.4 Pumps	
	10.5 Coils	
	10.6 Air Handling Units, Fans & Ductwork	
	10.7 VAV Boxes	
	10.8 Air Outlets	
	10.9 Control Equipment	
	10.10 Refrigeration Equipment	
	10.11 Electrical Commissioning Tests	
	10.12 Electrical Reliability Tests	
11	Servicing and Maintenance	A/11-1 to A/11-7
	11.1 General	
	11.2 Workmanship and Materials	
	11.3 Supervision	
	11.4 Scope of Work	
	11.5 Regular Servicing and Maintenance	
	11.6 Additional Servicing and Maintenance	
	11.7 Consumable Materials	

S C H E D U L E

SCHEDULE	DESCRIPTION	PAGE NO.
1	Schedule of Drawings	A/S1-1 to A/S1-2
2	Schedule of Technical Requirements	A/S2-1 to A/S2-14
3	Schedule of Prices	A/S3-1 to A/S3-4
4	Schedule of Rates	A/S4-1 to A/S4-15
5	Schedule of Daywork	A/S5-1
6	Schedule of Servicing & Maintenance	A/S6-1
7	Schedule of Technical Particulars	A/S7-1 to A/S7-9
8	Schedule of Deviations	A/S8-1
9	Schedule of Site Staff	A/S9-1 to A/S9-2
10	Schedule of Sub-let Works	A/S10-1
11	Schedule of Current Works	A/S11-1
12	Schedule of Previous Works	A/S12-1

* *The 'Page No' column should be adjusted for each project.*