

1.0 GENERAL

1.1 DESCRIPTION OF TYPES OF OPERATION AND MAINTENANCE DATA

- .1 The following documents are designated as Operation and Maintenance Data.
- .2 For systems designed by the Contractor, Contractor Designed System Data includes the following:
 - .1 System Design and Performance Criteria.
 - .2 System and Controls Descriptions.
 - .3 System and Controls Schematics.
 - .4 Operating Instructions.
 - .5 Equipment Data.
 - .6 Other data as required by the Minister.
- .3 Installation Instructions includes the manufacturer's printed instructions describing the recommended installation procedures, and photographs, video footage, and computer software.
- .4 Operating Instructions includes the manufacturer's printed instructions describing proper operation, and photographs, video footage, and computer software.
- .5 Equipment Identification includes the nameplate information for each piece of equipment, in a form, and with content acceptable to the Minister.
- .6 Maintenance Instructions includes the manufacturer's printed instructions describing the manufacturer's recommended maintenance and photographs, video footage, and computer software.
- .7 Spare Parts Lists includes parts lists and the manufacturer's recommended maintenance products and spare parts.
- .8 Suppliers and Contractors List includes a list of Contractor, Subcontractors, and Suppliers who supplied and installed equipment, systems, materials, or finishes, organized by the Division of Specifications and system, and company names, addresses, and telephone numbers.
- .9 Tag Directory includes a directory identifying tag number and equipment description and location.
- .10 Drawings List includes a list of Drawings.
- .11 Shop Drawings includes the final reviewed Shop Drawings.
- .12 Product Data includes the manufacturer's product data for equipment, systems, materials, and finishes, and photographs, video footage, and computer software.

- .13 Material Safety Data Sheets (MSDS) includes the MSDS for all relevant products.
- .14 Certifications includes the following:
 - .1 Copies of inspection reports prepared by authorities having jurisdiction.
 - .2 Certified copies of test reports prepared by independent testing agencies.
 - .3 Any other certificates required by the Contract Documents.
- .15 Warranties and Bonds include the Minister's copy of manufacturer's warranties, maintenance bonds, and service contracts.
- .16 Reports includes the following:
 - .1 Documentation certifying the performance of tests required by the Contract Documents and the results of those tests.
 - .2 Documentation of other material, equipment, or system related information required by the Contract Documents.

1.2 [OPERATION AND MAINTENANCE MANUAL BY THE CONTRACTOR]

- .1 Prepare the operation and maintenance manual as follows:
- .2 General organization of each volume:
 - .1 Title page including Project name, Contract name, and Tender number.
 - .2 Table of contents. Identify the volume number where the listed information is located.
 - .3 Sheets: 75g/m², white bond paper. In general, use 216 mm by 279 mm standard sheet size. Limit sheet size to a maximum of 279 mm by 415 mm, wherever possible.
 - .4 Divider tabs:
 - .1 Heavy-weight coloured paper, mylar laminated with tab number and title printed on tab as follows.
 - .2 Main divisions: white tabs, labelled with division name, 2 bank tab length.
 - .3 Sections of a main division: colour coded tabs, labelled with section name, 4 bank tab length.
 - .4 Subsections: same colour tabs as the section, printed label, 8 bank tab length.
 - .5 Co-ordinate tab colour codes and labelling format with the Minister.
- .5 Binders:

- .1 Commercial quality, fabric coated, hard covers attached to spine with metal piano hinges, three posts, designed to accommodate 216 mm by 279 mm standard sheets. Maximum 100 mm thick binders.
 - .2 Punch and, if required, fold sheets to allow use without having to remove the sheets from the binder.
 - .3 For drawings that are larger than 279 mm by 415 mm, insert drawings in heavy duty vinyl envelopes with reinforced binding holes, open on 1 side. Fold drawing to a maximum size of 216 mm by 279 mm. Do not punch holes in the drawings.
- .3 Contents organization:
- .1 Organize Operation and Maintenance Data for each system, controls, equipment, materials and finishes into the following main divisions
 - .1 Operation Division that includes the following sections and data, as applicable.
 - System Design and Performance Criteria.
 - System and Controls Descriptions.
 - System and Controls Schematics.
 - Operating Instructions.
 - Equipment Identification.
 - Samples.
 - .2 Maintenance Division that includes the following sections and data, as applicable.
 - Maintenance Instructions and Schedules.
 - Spare Parts List.
 - Suppliers and Contractors List.
 - Tag Directory.
 - MSDS.
 - .3 Contract Document Division that includes the following sections and data, as applicable.
 - Drawings List.
 - Shop Drawings.
 - Product Data.
 - Certifications.
 - Warranties and Bonds.
 - Maintenance Brochures.
 - Reports.

1.3 SUBMITTALS

- .1 Provide the following submittals.
- .2 4 copies of the following Operation and Maintenance Data prior to requesting the inspection for Substantial Performance:
 - .1 Contractor Designed System Data.
 - .2 Installation Instructions.
 - .3 Operating Instructions.
 - .4 Equipment Identification.
 - .5 Maintenance Instructions including schedules.
 - .6 Spare Parts Lists.
 - .7 Suppliers and Contractors Lists.
 - .8 Tag Directory.
 - .9 Drawings List.
 - .10 Shop Drawings.
 - .11 Product Data.
 - .12 MSDS.
 - .13 Certifications.
 - .14 Warranties and Bonds.
 - .15 Reports.
- .3 1 draft copy of the operation and maintenance manual prior to requesting inspection for Substantial Performance.
- .4 3 copies and 1 digital copy of the completed operation and maintenance manual prior to requesting inspection for Total Performance.

2.0 PRODUCTS – NOT USED

3.0 EXECUTION – NOT USED

END OF SECTION