
Washroom Buildings Recapitalization
Buildings 32, 34 & 38
Newman Sound Campground
Terra Nova National Park, NL
Proj. No.: R.079272.001
Section 23 34 24 – Domestic Fans

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PART 1 **GENERAL**

1.1 **SUMMARY**

- .1 Section Includes:
 - .1 Fans, window ventilators, exterior, wall and ceiling mounted discharge fans for domestic use.

1.2 **RELATED SECTIONS**

- .1 Section 01 33 00 – Submittal Procedures
- .2 Section 01 35 28 – Health and Safety Requirements.
- .3 Section 01 74 21 – Construction/Demolition Waste Management and Disposal.
- .4 Section 01 78 00 – Closeout Submittals

1.3 **REFERENCES**

- .1 Codes and standards referenced in this section refer to the latest edition thereof.
- .2 Air Conditioning and Mechanical Contractors Association (AMCA)
 - .1 AMCA 201, Fans and Systems.
 - .2 AMCA 300, Reverberant Room Method for Sound Testing of Fans.
 - .3 AMCA 301, Methods for Calculating Fan Sound Ratings from Laboratory Test Data.
 - .4 AMCA 302, Application of Sone Ratings for Non-Ducted Air Moving Devices.
 - .5 AMCA 303, Application of Sound Power Level Ratings for Fans.
- .3 American National Standards Institute (ANSI)/American Society of Mechanical Engineers (ASME)
 - .1 ANSI/AMCA 210, Laboratory Methods of Testing Fans for Aerodynamic Performance Rating.
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).

1.4 **SYSTEM DESCRIPTION**

- .1 Performance Requirements:

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- .1 Catalogued or published ratings for manufactured items: obtained from tests carried out by manufacturer or those ordered by manufacturer from independent testing agency signifying adherence to codes and standards in force.

1.5 SUBMITTALS

- .1 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 33 00 - Submittal Procedures. Include product characteristics, performance criteria, and limitations.
 - .1 Submit two copies of Workplace Hazardous Materials Information System (WHMIS) Material Safety Data Sheets (MSDS) in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop Drawings:
 - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures
 - .2 Indicate following: dimensions, performance, sound rating, and installation procedure.
- .3 Quality assurance submittals: submit following in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
 - .2 Instructions: submit manufacturer's installation instructions.
- .4 Closeout Submittals
 - .1 Provide maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals

1.6 QUALITY ASSURANCE

- .1 Health and Safety Requirements: do construction occupational health and safety in accordance with Section 01 35 28 - Health and Safety Requirements.

1.7 MAINTENANCE

- .1 Extra Materials:
 - .1 Provide maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.
 - .2 Furnish list of individual manufacturer's recommended spare parts for equipment, include:

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- .1 Bearings and seals.
- .2 Belts
- .3 Addresses of suppliers.
- .4 List of specialized tools necessary for adjusting, repairing or replacing.

1.8 DELIVERY, STORAGE, AND HANDLING

- .1 Packing, shipping, handling and unloading:
 - .1 Deliver, store and handle in accordance with Section 01 61 00 - Common Product Requirements.
 - .2 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Waste Management and Disposal:
 - .1 Construction/Demolition Waste Management and Disposal: separate waste materials for reuse and recycling in accordance with Division 01.

PART 2 PRODUCTS

2.1 FANS GENERAL

- .1 Standard of rating:
 - .1 AMCA 201 for fan application.
 - .2 AMCA 302 for application of some loudness ratings for non-ducted air moving devices.
 - .3 AMCA 303 for application of sound power ratings for ducted air moving devices.
 - .4 Performance: to ANSI/AMCA 210 and ANSI/ASHRAE 51.
- .2 Pwl sound ratings to comply with AMCA 301, tested to AMCA 300
- .3 Maximum loudness: 5 sones.

2.2 WALL AND CEILING DISCHARGE FANS

- .1 Centrifugal direct drive, with plug-in type electric motor suitable for ceiling or wall installation, zinc coated rectangular metal housing.
- .2 Sizes and capacity: see schedule.
- .3 Toggle switch or timer operated complete with integral electrical outlet box with plug-in type receptacle.
- .4 Top or side 80 mm x 250 mm rectangular duct outlet with integral backdraft damper.

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- .5 Roof jack or wall cap complete with spring loaded backdraft damper with neoprene gasket.
 - .6 White polymeric or silver anodized aluminum grille.

PART 3 **EXECUTION**

3.1 **MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

3.2 **INSTALLATION**

- .1 Install in accordance with manufacturer's recommendations.

3.3 **ANCHOR BOLTS AND TEMPLATES**

- .1 Supply for installation by other divisions.

3.4 **CLEANING**

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

3.5 **COMMISSIONING**

- .1 Commission in accordance with Division 01.

END OF SECTION