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**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**