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Please understand that you are responsible for the accuracy of all project specifications, including any Sky Acoustics Inc. guide specifications that you use.

SKY ACOUSTICS INC. SHALL NOT BE LIABLE FOR ANY DAMAGES ARISING OUT OF THE USE OF ANY OF ITS GUIDE SPECIFICATIONS.

### SECTION 098433

**Nexus High Impact Plus – Acoustical Wall Panel (Fabric Finish)**

**PART 1 – GENERAL**

* 1. **RELATED DOCUMENTS**

Drawings and general conditions of Contract, including General and Supplementary Conditions, and Division - 1 Specification sections that apply to work of this section.

**1.2 SUMMARY**

A. Section Includes: Wall Sound Absorption.

1. Related Work: The following items are **not** included in this Section and are specified under the designated Sections:

Section 092000 – PLASTER AND GYPSUM BOARD ASSEMBLIES for plaster and gypsum board walls

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Section 099000 - PAINT finish of wall surface behind and between panelling

Division 23 – HVAC prtoducts and services.

Division 26 - Lighting fixtures, and electrical services and connections.

Other acoustical products

C. Alternates

 1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than FIFTEEN (15) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and approved products will be set forth in Addenda. If substitute products that have not been approved by Addenda are included in a Bid, the specified products shall be provided without additional compensation.

 2. Submittals that do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); Acoustical performance; Fire performance; Panel design, size, composition, color, and finish.

## 1.3 REFERENCES

 A. ASTM International:

 1. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method

 2. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials

 3. ASTM E 1264 Classification for Acoustical Ceiling Products

 4. ASTM D6207 Standard Test Method for Dimensional Stability of Fabrics to Changes in Humidity and Temperature

B. United States Green Building Council (USGBC)

 1. LEED - Leadership in Energy and Environmental Design is a set of rating systems for the design, construction, operation, and maintenance of green buildings

C. United States International Building Code

 1. Section 803 Wall and Ceiling Finishes.

**1.4 QUALITY ASSURANCE**

A. Manufacturer:

1. Company manufacturing the specified product shall have adequate capacity required for the projects listed, and have successfully completed similar projects for a period of not less than three years.

B. Installer:

1. The installer shall be competent, experienced, and familiar with acoustic wall panel installation methods.

C. Reference Standards: Conform to all governing laws, building codes, and the following performance criteria:

1. Fire Performance Characteristics: Test(s) must be performed by an independent testing organization acceptable to authorities having jurisdiction. Tests shall be carried out per ASTM E 84 procedures and complying with US International Building Code Classification. Sky Acoustics Wall Panel components shall provide surface‑burning characteristics as shown below. (building code requirements may necessitate composite panel testing using identical materials and construction representative of a typical installation, using the specified finish(es) – Sky Acoustics has a considerable number of composite ASTM E84 panel tests on file).

ASTM E-84 Classification Class "A" or "1"

 Flame Spread: 25 or less

 Smoke Developed: 450 or less.

2. Acoustical Performance Characteristics: Tests must be performed by an independent testing organization acceptable to authorities having jurisdiction. Tests shall be carried out per ASTM C423 procedures – type F6 mounting per ASTM E795. Nexus High Impact Plus acoustic wall panels shall provide noise reduction coefficients as shown below, determined by testing fully assembled (composite) production material.

 **Frequency (Hz)**

**Panel Thickness Finish\* 125 250 500 1000 2000 4000 NRC SAA**

Nexus 1 1/8” (28mm) Fabric 0.14 0.41 0.90 1.11 1.09 1.04 0.90 0.89

High Impact Plus

\* Fabric must be acoustically transparent for panel to produce absorption shown

Note: If testing to the above standards is required for non-standard finishes on panels, a cost of testing allowance ***must*** be a part of the specification. Remember there are no guarantees with fire testing, and it may be necessary to test more than one proposed finish in order to meet the code requirements. Please contact an accredited fire or acoustic testing laboratory for information on cost of testing.

3. All fabric finishes specified for acoustic panels shall be tested in accordance with ASTM D6207 **-** *Standard Test Method for Dimensional Stability of Fabrics to Changes in Humidity and Temperature***.**

D. 1. Coordination of Work: Coordinate acoustical ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

**1.5 SUBMITTALS**

1. Product data: Technical data sheet for Nexus High Impact Plus acoustical wall panels, and mounting system(s).

2. Samples: Manufacturer’s standard 6-1/2” (165mm) x 9” (229mm) sample of acoustical panel specified in Part 2 to the Owner for approval. Acoustical panel sample shall be production material specified for final use.

3. Shop Drawings: Submit to Architect for stamp approval, a complete set of CAD generated shop drawings or standard details prepared by the manufacturer showing all necessary details and dimension requirements of acoustical panels. The shop drawings will subsequently be field verified and revised as required by the Architect.

**1.6 Delivery, Storage, and Handling**

1. Comply with acoustic panel manufacturers’ written instructions for minimum and maximum temperature and humidity requirements for shipment, storage, and handling.

1. Deliver materials and panels in unopened bundles and stored in a temperature controlled dry place with adequate air circulation.
2. On-site storage shall be such as to ensure all panels and associated materials are protected from damage.
3. Prior to installation, site must be free of wet and dusty trades and the climatic conditions stabilized to normal operational levels. Allow panels to stabilize on-site for 72 hours prior to installation.
4. Panels must be handled by persons wearing clean light-weight gloves. Persons installing hardware to substrate (clips, screws, anchors, etc.) must wear the clean light-weight gloves when handling the panels.

**PART 2 - PRODUCTS**

**2.1 Acoustical Wall Panels**

Furnish and deliver pre-fabricated acoustical panels as described in this section for installation in areas as shown on drawings requirements:

1. MANUFACTURER: Sky Acoustics Inc.
2. Nexus High Impact Plus Acoustical Wall Panel
3. Pre-fabricated Acoustical Panels mounted directly to a solid substrate as follows:
4. Panel Type: Square, Rectangle, Flat, other geometric shapes
5. Panel Size: … As indicated on architectural drawings
6. Panel Composition: 1” or 2” (25mm or 50mm) Medium Density 6-7 PCF (96 – 112 KCM) Fiberglass Core + 1/8” (3mm) High Density 16 – 20 PCF (256 – 320 KCM) Fiberglass layer laminated to the face + Fiber scrim facer + Fabric finish.
7. Approximate Weight: 0.82 PSF (4 KSM) - based on 4’x8’x1 1/8” (1.22m x 2.44m x 28mm) panel size.
8. Nominal Thickness: 1 1/8” and/or 2 1/8” (28mm and/or 53mm). Special thicknesses available.
9. Surface Finish: Specified fabric is stretch applied over the face of the panel, and edge turned with a minimum of 1” (25mm) on the back of the panel. Panel corners are tailor finished to give a clean appearance.
10. Edges: Resin Hardened
11. Wall Mounting System: Mechanical Z-Clips (recommended), Rotofast – Refer to Rotofast installation instructions for application (<http://www.rotofast.com/howWorks.htm>). Note: Rotofast not supplied by Sky Acoustics.
12. Installation shall be in accordance with local code requirements, manufacturers’ instructions, and as shown on Sky Acoustics approved shop drawings, or detail sheets. Installer shall provide for shimming and adjustments as required to maintain consistent alignment of joints, of finished panel faces, and to ensure unstressed clip locations.
13. Warranty: 2 years from date of panel receipt.

**PART 3 - EXECUTION**

**3.1 General**

1. Provide Sky Acoustics Inc. panels where indicated on drawings using mounting system specified.

2. Use levelling clips for all wall panels for panel support. Panel clips are to hold the panels in place to the substrate.

3. Level the substrate with shims where required for proper installation for panel clips to engage to wall brackets or z-track.

4. Installation labor for removal and replacement of product improperly installed and not installed to specified details shown on shop drawings and installation instructions, shall be the responsibility of the installing contractor.

5. Owner shall inspect product and installation on completion. The manufacturer shall provide repair or replacement of components not conforming to specified requirements herein.

**3.2 Additional Material**

1. Additional maintenance stock of fabric finish used in identical dye lot shall be provided to the Owner on completion of work. The amount equal to 2% of the total yardage required or enough material to cover one of the largest acoustical panels supplied.

**PART 4 - CONTACT**

**4.1** For all support, questions, or enquiries contact:

 **Sky Acoustics Inc, 55 Bradwick Drive, Concord. Ontario. L4K 1K5. Canada.**

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