1.0 General

1.1 WORK INCLUDED

This Section includes requirements for supply and installation of a spray applied rigid cellular polyurethane thermal insulation foam to provide a continuous air seal/integral thermal insulation assembly at designated wall locations.

2.0 Products

Furnish all necessary labor, materials and equipment to complete the application of spray applied insulated air barrier membrane as distributed by **Burnaby Sales Ltd.,** Edmonton, Alberta, telephone 780 – 998-2714 or pre-approved alternative. As shown on drawings or herein specified as follows:

2.1 SPRAY APPLIED POLYURETHANE FOAM

.1 Spray Applied Polyurethane Foam Insulation/Air Barrier system as distributed by Burnaby Sales Ltd., Edmonton, in accordance with CAN/ULC – S705.1-98 Standards for Thermal Insulation Spray Applied Rigid Polyurethane Foam, Medium Density, Material specification (supercedes CAN/CGSB-51.23-92) or pre-approved product. Barrier shall meet or exceed the following physical performance properties.

Property	Test Method	Requirement
Density	ASTM D1622	34 - 37 kg/m^3 min. (2.1 – 2.3 lb/cu.ft^3.)
Long Term Thermal Resistance (LTTR) Type 11 (i.e. highest LTTR R value classification)\	CAN/ULC S 770	1.04 RSI/25.4 mm R6
Open Cell Content (%)	ASTM D-2856	<1%
Compressive strength (10%)	ASTM D1621	195 kPa 28.3 psi.
Tensile Strength	ASTM D1623	355 kPa. 51.5 psi .
Dimensional stability 28 days	ASTM D2126 -20^0 C 80^0 C 70° C, 97% R.H.	(% Volume Change, sample without skin) -0.03% +2.9% +9.8%
Volumetric Water Absorption %	ASTM D-D2842	0.8%
Water Vapour Presence (core) 50 mm	ASTM E-96	37 ng/Pa.s.m² .65 Perms
Air Barrier Material, 25 – 30 mm	CCMC O7273	0.00004 L/s/m² @ 75 Pa
Flame Spread Classification FSC-1 (Tunnel)	CAN/ULC S 102	32
Flame Spread Classification FSC-2 (Corner)	CAN/ULC S127	200
Smoke Developed Index (SDI)	CAN/ULC S101-04	396 Passed
VOC Emissions from polyurethane foam	CAN/ULC S774	Conform 24 hrs.
Fungi Resistance, 28 days	ASTM C 1338	No Fungal Growth
Indoor Air Quality®	GREENGUARD	Certified
Children & Schools®	GREENGUARD	Certified
Conforms to the LEED program		
Color – Green		

3.0 Execution

3.1 VERIFICATION OF CONDITIONS

.1 Inspect areas to receive work of this Section and ensure conditions are suitable for application.

.2 Ensure that all mechanical or electrical work penetrating the spray applied air seal is complete.

.3 Ensure that appropriate back-up material has been installed to any large voids.

3.2 PROTECTION OF ADJACENT SURFACES/PRIVATE PROPERTY ITEMS

.1 Protect all adjacent finished surfaces from overspray.

3.3 SUBSTRATE PREPARATION

.1 Clean substrates of dirt, dust, grease, oil, loose material and other matter which may affect bond of spray applied materials.

.2 Prime substrates in accordance with urethane manufacturer's recommended instructions.

.3 Remove oil from galvanized sheet steel substrates and apply prime coating in accordance with manufacturer's instructions.

.4 Consider occupancy/occupants of building. As determined, close down air handling equipment while spraying and/or provide supplement ventilating equipment to remove odours.

.5 Provide MSDS data sheets to Owner prior to the start of any work.

3.4 SPRAY APPLIED POLYURETHANE FOAM APPLICATION

.1 Spray application of polyurethane foam shall be in accordance with CAN/ULC-S705.2 – 98.

.2 Apply material to thickness as indicated on the drawings not to exceed a tolerance of +/- 7 mm.

.3 Care shall be taken to achieve the best possible surface texture.

.4 Application shall not commence during inclement weather, when precipitation is imminent or when the surface of substrate is not free of dew, frost or water. When wind velocity exceeds 25 kph application shall not proceed without the use of an effective wind barrier.

3.5 Qualifications

.1 Perform all work of this Section using manufacturer's approved installer having minimum five (5) years certification by CUFCA (Canadian Urethane Foam Contractors Association). Applicator shall have a minimum of five (5) years documented experience installing spray applied Air Barrier Systems in accordance with CAN/ULC – S705. 2-98 Standards, on projects of similar scope in Canada.

3.6 MATERIAL STORAGE

.1 All materials shall be delivered to the job site in unopened new containers bearing the manufacturers original label. All materials will be stacked in a neat and orderly fashion by type and component.

3.6 CLEAN UP

.1 At conclusion of work, clean-up remnants and debris and remove same from job site.

- END OF SECTION -