EIFS Quality Assurance Program Inc.(EQI) Protocol Document

This EQI Protocol Document is an Executive Summary of the EIFS Quality Assurance Program (EQI)

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The EQI Protocol Document represents a summary and overview of the EIFS Quality Assurance Program. It is the intent of this document to familiarize interested audiences with a general understanding of the program's objectives and structure as well as with the various entities that are integrated into this comprehensive quality assurance process.

TABLE OF CONTENTS

1. EQI Background Summary

1.1 EIFS Council of Canada (ECC)

The ECC founded in 1987, is a national non-profit industry trade association which represents the entire 'EIFS value chain' in Canada. The ECC membership is comprised of EIFS manufacturers, distributors, component suppliers, contractors, building science/design consultants and financial services companies involved in the industry in Canada. The ECC serves as the 'official voice' of the EIFS industry and its mandate is to provide for the advancement and growth of the EIFS industry across the country.

The EIFS industry as well as manufacturer members specifically, have and will continue to invest in product and systems development. These investments have been made both on an individual company as well as ECC basis, and include;

- Design, development and introduction of the EIFS Quality Assurance Program (EQI).
- Development of Canadian Construction Materials Centre (CCMC) Technical Guide for EIFS.
- Development of National Standard Specifications for EIFS.
- Development of the ULC 716 family of Standards – Materials, Installation, Design.
- On-going technical bulletins to address a range of fundamental industry subjects.
- Development of EIFS Practice Guide
- Participation in the Moisture in Exterior Walls Study (MEWS) with National Research Council (NRC).
- Wall performance study conducted by Oak Ridge National Laboratories in the Natural Exposure Test (NET) Facility.
- Research and testing program on thermal performance of EIFS drainage cavity. (CCMC) (NRC)

1.2 Rationale for EQI

Over the past 40 years EIFS has become a popular choice for a wall cladding system. Over 370 million sq M (4 billion sq/ft) of EIFS have been installed in commercial, industrial and residential construction in North America over this time frame. An even greater volume has been installed in Europe which pre-dates the introduction of EIFS to North America.

EIFS are cost effective versus alternative claddings, lightweight and extremely versatile in terms of design freedom and environmental impact. EIFS inherently provides an effective continuous thermal layer at the outermost part of the building envelope and thereby offer the greatest thermal efficiency possible among cladding options.

In today's marketplace EIFS options include multiple elements of protection against moisture ingress, such as secondary water resistive barriers and drainage mechanisms to facilitate exit of incidental moisture that may breach the exterior plane of the wall.

The origin of EIFS dates back to post WWII Europe where thermal efficiency, speed of installation and a lightweight nature all represented attractive attributes in rebuilding a devastated cities.

In today's marketplace there appears to be a full circle return to designing and constructing structures with utmost respect for our environment as design professionals explore ways to provide carbon neutral architecture.

In keeping with the construction industry's renewed commitment to sustainable and durable design, the EIFS industry, through introduction of an EIFS Quality Assurance Program intends to re-affirm its position as a cladding option of choice based upon dedication to quality assurance from design through manufacturing of materials to assembly and in-place performance.

1.3 Proper interfacing is Fundamental

The development of the EIFS Quality Assurance Program Inc. (EQI) has been undertaken with the understanding that correct interface between cladding components such as EIFS and openings is fundamental to the program and its intended goals. As with all enclosure systems, the appropriate connection of air, vapour and moisture barriers incorporated within the EIFS assembly to sub-assemblies consistent with code requirements is critical to protect against moisture intrusion.

The EIFS contractor recognizes the importance of these interface details and will assume responsibility for the execution of the interface connections consistent with code, fundamental building science and good construction practices.

1.4 EQI – A Living Program

EQI is intended to be a living program. As the program is delivered across Canada, feedback from users shall be used to continually strengthen and enhance the program.

Changes to the program will be considered and implemented on a regular basis as an element of continuous improvement.

2. QUALITY ASSURANCE PROGRAM Overview

The EIFS Council of Canada formed a not-for-profit corporation called the EIFS Quality Assurance Program Inc. (EQI). EQI owns the intellectual property rights and trademarks of the EIFS QAP and will be responsible for the overall operation of the program.

2.1 EQI Key Components

- **Research & Development** – R & D will be carried out on a continuing basis by EIFS manufacturers.

- **Standards & Specifications** – The Quality Assurance process recognizes both existing relevant standards and the development of new standards and specifications as required.

- **Manufacturer Evaluation, Accreditation & Licensing** – The manufacturer's products and systems are evaluated against established standard criteria and, when successful, the manufacturer is licensed to use the EQI logo in promotional materials.

- **Contractor Accreditation & Licensing** – The EIFS trade contractor is accredited based upon compliance with all administrative procedures and processes required by QAP and are licensed to use the EQI logo in promotional materials.

- **Mechanic Certification & Licensing** – EIFS mechanics (installers) undertake a certification process in accordance with ISO 17024 Conformity assessment – General guidelines for bodies operating certification of persons whereby their knowledge of EIFS installations is tested and confirmed against installation standards.

- **Documentation** – The contractor is required to document the installation process in order to confirm that the project requirements as they relate to installation have been met.

- **Site Audits** – Each project will have site audits conducted by EQI according to the frequency outlined in the program. Site audits shall be conducted in accordance with ISO 17020 General Criteria for the operations of individuals performing inspection.

- **Conflict Resolution** – Conflict resolution is an integral part of EQI and includes an appeal process as a fair and reasonable means of determining fair resolutions.

- **Data Base** – Results of site audits will be tracked.

- **Financial Instrument** – Manufacturers and contractors are both required to put in place a financial instrument as a mandatory element of program entry.

- **3rd Party Warranty** – The program is designed to eliminate installation problems. Even so, it includes a 3rd party warranty, which provides coverage when the manufacturer and/or contractor is/are unable or unwilling to correct defects.

- **Continuous Improvement** – EQI is a living program which will utilize feedback and input from its users for continual improvement of the program.

2.2 EQI Program Objectives

Experience has shown that quality assurance programs are only effective when they include and operate with all components working interactively together to properly manage risk. None of the components of a quality assurance program can be effective when implemented independently. Only when active as a coordinated system of checks and balances can the overall goal of the program be realized as a means of ensuring compliance with established guidelines and thereby achieving the program's objectives.

The objective of EQI is to provide the building owner with a cladding which performs as intended, giving long-term satisfaction and superior performance of the chosen EIFS, by;

a. Holding the designer, general contractor, EIFS trade contractor and mechanics, EIFS manufacturer and associated parties to a common program of quality control and continuous improvement in the manufacture, design and installation of EIFS.

b. Assisting designers to meet code and EQI requirements by providing comprehensive project specifications and design details.

c. Implementing mandatory safeguards at five key stages of the project development, notably; design, tender, award, pre-construction and execution.

2.3 Participants in EQI

All of the participants in the successful completion of an EIFS installation have specific responsibilities.

Installation starts with the design professional producing comprehensive and detailed EIFS project documents specific to the project.

The manufacturer's valid CCMC Evaluation Report ensures EIFS materials supplied will perform as intended.

The EIFS contractor procures the required materials as directed by the manufacturer, uses trained and certified labor as outlined by EQI and installs the EIFS in accordance with the ULC S716.2 standards and manufacturer's instructions.

2.3.1 EIFS Designer's Responsibilities.

Architects and professional design consultants are intended to be strategic partners in the EQI process.

The architect or professional design consultant will be encouraged to participate in the EQI by;

a. Attending educational sessions developed or sponsored by EQI.

b. Provide appropriate designs for the application of EIFS in agreement with the EIFS Practice Manual and ULC S716.3

c. Provide designs that are consistent with manufacturer guidelines while addressing the specific needs of the project.

d. Provide dedicated attention to the sequencing of EIFS materials & assembly to permit proper installation.

2.3.2 EQI Licensed Manufacturer's Responsibilities.

The manufacturer shall comply with the specific requirements of the program. The manufacturer's compliance will be objectively and independently monitored by EQI.

The Manufacturer shall;

a. Obtain, maintain and provide proof of having a CCMC (Canadian Construction Materials Centre) evaluation report for their system or obtain, maintain and provide proof of having a listing agency confirm the system meets the requirements of the CAN/ULC S716.1

b. Provide installation instructions and details that comply with manufacturer's instructions and the EIFS Practice Manual.

c. Consistently uphold the principles of EQI.

d. Provide the building owner with a five year warranty on EIFS materials.

e. Participate in conflict resolution procedures and comply with directives from EQI and/or 3rd Party Warranty provider (**SUSTAINABLE ENVELOPE AND ENERGY PERFORMANCE INC.)**

f. Certify their Technical Sales Representatives in accordance with the EQI Certification Scheme specifically created for manufacturer sales personnel.

g. Have their marketing or technical documents registered with EQI to confirm compliance with EQI requirements.

h. Provide a financial instrument to EQI to be used in the event the manufacturer is unable or unwilling to address defects deemed to be the result of its product's failure.

2.3.3 EQI Licensed Contractor's Responsibilities.

The EIFS contractor shall comply with the specific requirements of the program and their compliance will be objectively and independently monitored by EQI.

The Contractor shall;

a. Meet the criteria set out in EQI for accreditation.

b. Based upon their ranking level within the Contractor Ranking Matrix, provide a financial instrument to the warranty provider (SEEP) in the pre-determined and appropriate amount.

c. Have at least one full time Level IV EQI licensed mechanic on each EQI project.

d. Maintain the correct ratio of non-certified to EQI certified mechanics on all EQI projects.

e. Install only a complete EIF system as declared by the EIFS manufacturer and using only manufacturer approved materials and components.

f. Adhere to the EIFS Practice Manual.

g. Provide a five year installation warranty.

h. Participate in conflict resolution procedures and comply with directives from EQI and/or 3rd Party Warranty provider.

i. Attend and participate in all pre-construction meetings.

j. Cooperate with EQI site auditors.

k. Supply and install the LA-WRB compatible with the EIFS as declared by the EIFS manufacturer and ensure the compatibility of all the components and materials that form the interface gap with the LA-WRB.

2.4 Warranties

The building owner shall benefit from three warranties provided on all EQI projects. These include;

i. A manufacturer's minimum five year warranty on all EIFS materials.

ii. A contractor's five year warranty on installations of EIFS.

iii. 3rd Party Warranty Assurance where the manufacturer and/or contractor are unable or unwilling to comply with EQI directives.

2.5 Site Audits

EQI will require timely, random site audits as an integral part of the program. Site audits will be conducted by an EQI certified auditor who reports directly and independently to EQI..

3. Benefits of Manufacturer Evaluation and Licensing, Contractor Accreditation and Licensing and Mechanic Certification and Licensing.

Increased awareness and monitoring of designs, materials and installation techniques will benefit all participants in the program, with the ultimate beneficiaries being building owners.

EQI sets out requirements for the designer, manufacturer, contractor and mechanic. By having the manufacturer evaluated, accredited and licensed by the program, the contractor accredited and licensed by the program and the mechanic certified and licensed by the program; along with the designer and general contractor, all parties work collaboratively together to produce an EIFS installation that performs as intended. This working relationship will result in continued performance and improvement of the industry.

4. Benefits of EQI for the Design Professional

The EQI program enables the professional designer to access information and industry practices from a generic perspective that can be used to create project specific details and specifications.
The industry, guided by the principles of EQI shall conform to the CAN/ULC S716 family of National Standards for EIFS, which are intended to be referenced in National and/or Provincial Building Codes.

A conflict resolution process shall address disputes in the course of a project in a timely and efficient manner.

EQI shall monitor all parties to ensure compliance with the program, standards and requirements. When required, EQI will issue compliance directives.

Random site audits are structured to ensure compliance to EQI.