SECTION 07 56 00

MESH REINFORCED ELASTOMERIC COATING (MREC) ROOFING
04/16

PART 1 GENERAL

1.1 SUMMARY

Provide Mesh Reinforced Elastomeric Coating (MREC) roofing system complete as specified over the existing Modified Bituminous Roofing System. Apply MREC only after patching and repairing of the existing roof such as removing deteriorated, wet roof and insulation and existing areas of ponding/standing water have been accomplished and the roof has been accepted by the Government and MREC installer and manufacturer’s representative.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 7	(2010; Change 2010; Change 2011; Errata 2011; Change 2011) Minimum Design Loads for Buildings and Other Structures

ASTM INTERNATIONAL (ASTM)

ASTM B117	(2011) Standard Practice for Operating Slat Spray(Fog) Apparatus
ASTM C1289	(2012a) Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
ASTM C1371	(2010) Determination of Emittance of Materials at Near Room Temperature Using Portable Emissometers
ASTM C1549	(2009) Determination of Solar Reflectance at Near Ambient Temperature Using a Portable Solar Reflectometer
ASTM D412	(2013) Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension

ASTM D638	(2010) Standard Test Method for Tensile Properties of Plastics
ASTM D1117	(2001) Guide for Evaluating Nonwoven Fabric
ASTM D1653	(2013) Water Vapor Transmission of Organic Coating Films
ASTM D1777	(1996;2011) Thickness of Textile Materials
ASTM D3787	(2007) Bursting Strength of Textiles – Constant Rate of Traverse (CRT), Ball Burst Test
ASTM D5034	(2009; 2013) Breaking Strength and Elongation of Textile Fabrics
ASTM D6083	(2005e1) Standard Specification for Liquid Applied Acrylic Coating Used in Roofing
ASTM D7281	(2007) Standard Test Method for Determining Water Migration Resistance Through Roof Membranes
ASTM E96/E96M	(2005) Standard Test Method for Water Vapor Transmission of Materials
ASTM E108	(2011) Test Method for Fire Tests of Roof Coverings
ASTM G29	(2010) Standard Practice for Determining Algal Resistance of Plastic Films
ASTM G155	(2013) Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-metallic Materials

FM Global (FM)

FM 4470	(2012) Class 1 Roof Covers

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 9001	(2000; R2008; Corr 1 2009)Quality Management Systems – Requirements

ISO 14001 (2004) Environmental Management

NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)

Roofing and Waterproofing Manual

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014)Safety and Health Requirements Manual

1.3 SUBMITTALS

The use of a "G" following a submittal indicates that a Government approval action is required. Submit the following in accordance with Section 01 33 10 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Roof Plan; G

Detail Drawings; G

SD-03 Product Data

Manufacturer’s Warranty; G

Basecoat and Intermediate Coating; G

Finish Coat; G

Reinforcing Fabric; G

Cant Strips

Traffic Coating; G

SD-07 Certificates

Manufacturer Qualifications; G

Installer Qualifications; G

SD-08 Manufacturer’s Instructions

Manufacturer’s Written Instructions

SD-09 Manufacturer’s Field Reports

Field Tests; G

Inspection Reports; G

1.3 QUALITY ASSURANCE

1.3.1 Manufacturer Qualifications

Manufacturer must be ISO 9001 and ISO 14001 certified.

Manufacturer of the MREC system shall have a proven 20 year track record of successful installations using advanced elastomeric acrylic technology in the roofing industry.

Manufacturer’s written instructions for installation, including details, shall be provided.

1.3.2 Installer Qualifications

Installer shall be approved by the coating manufacturer, and shall have a minimum of five years experience in the application of acrylic elastomeric roof coatings.

Proof of this qualification shall be provided in written form from the manufacturer of the roofing system. A signed certificate from the Manufacturer shall be provided stating that the Contractor is an approved installer of the Manufacturer’s roofing system and that each member of the installation crew has been trained in the system’s proper installation and is certified by the Manufacturer’s Technical Representative. The certified installer names shall be included. Only certified installers shall be allowed on the project.

Contractor shall provide a list of five project references including contract name, owner POC, and telephone numbers.

An approved Applicator (as designated by the manufacturer) shall be on site during all applications of any manufacturer’s products.

Contractor shall be responsible to protect all substrates, insulation, recovery board and coating from pollutants that may act as a bond-breaker between the various applications of coating. These pollutants include (but are not limited to) foot traffic residue, metal shavings, tire tracks, markings caused by hoses and electrical cords, insulation adhesive, sealants, and cement based materials. All pollutants shall be removed prior to the application of any coatings.

1.3.3 Product Standards

The acrylic system shall be approved and listed by Factory Mutual for Class 1 Roof Constructions.

Container labels shall include the following information or be rejected at the jobsite: manufacturer’s name, product name, type and class of material, Factory Mutual logo, batch or lot number, mixing and application instructions, and precautions.

1.3.4 Codes and Standards

The Contractor shall be thoroughly familiar with all codes, regulations, and standards governing the specified work. Any contradiction between the manufacturer's requirements and these specifications shall be brought to the attention of the manufacturer and the Contracting Officer.

1.3.5 Deviations

There shall not be any deviations from these specifications unless the deviation is submitted in writing per the General Conditions. The request for the deviation shall have a letter from the roofing manufacturer technical department approving the details of the deviation.

1.3.6 Manufacturer's Technical Representative

An employee of the roofing material manufacturer shall be on site at least one day per week during the on-site roofing work. The technical representative shall provide a written inspection report during each site visit and submit the report to the Contracting Officer. The representative shall approve the application process at specific stages before the Contractor may continue including: Pre-bid inspection, start-up inspection, at the completion of the foundation coat and fabric components, and finish coat inspection.

1.4 DELIVERY, STORAGE, AND HANDLING

1.4.1 Delivery of Materials

Materials shall be delivered to the jobsite in manufacturer's original, sealed containers with labels legible and intact.

Delivered materials shall bear the following information:

Name of the manufacturer, contents and product code, net volume of contents, lot or batch number, VOC content, storage temperature limits, shelf life expiration date, mixing instructions and proportions of contents, and safety information and instructions

1.4.2 Storage of Materials

Materials shall be stored in an area specifically designated for that purpose, in accordance with manufacturer's recommendations, where temperatures shall not be less than 50 degrees F or higher than 100 degrees F.

1.4.3 Material Handling

Materials shall be handled, stored, and installed per the manufacturer's instructions and all applicable safety regulatory requirements.

Contaminated, damaged or unsealed materials, or materials not conforming to the specifications, shall be rejected. Rejected materials shall be immediately removed from the jobsite and replaced at no additional cost to the Government.

Materials that have been installed and damaged prior to issuance of the

warranty shall be rejected and removed from the jobsite. This includes materials not protected from foot traffic, materials that were unprotected and used as a staging platform or storage area, materials that have been polluted with dirt, debris, metal shavings and other roofing materials, and materials damaged by water intrusion.

1.5 PROJECT CONDITIONS

Install all materials in strict accordance with the manufacturer’s published safety requirements and weather precautions.

Do not apply materials over dirt, oil, grease, or other pollutants (this includes foot traffic or markings caused by hoses, electrical cords, flexible conduits on roof, or tires). All dirt or markings shall be removed prior to the installation of the various applications of coating used to produce the liquid applied roof system.

Do not apply elastomeric acrylic coating system components when the ambient temperature is below 40 degrees F or above 110 degrees F, if any surface moisture is present, when the dew point is within 5 degrees F of the surface temperature or when there is a possibility of temperatures falling below 32 degrees F within a 24 hour period.

Do not apply MREC system components if weather conditions will not permit complete cure before the rain, dew, fog or freezing temperatures occur.

Do not spray-apply if the wind velocity exceeds 10 mph.

Take all precautions necessary to protect unrelated surfaces from coating overspray or spillage.

Contractor is responsible for any adverse conditions, which may result from applying coatings while the weather is rising during the morning hours, which may result in moisture being pulled upwards from the deck, which can result in moisture being pulled upwards from the deck, causing the formation of vapor pockets.

1.6 WARRANTY

Provide roof system material and workmanship warranties meeting specified requirements. Provide revision or amendment to the standard membrane manufacturer warranty as required to comply with the specified requirements. Minimum manufacturer warranty shall have no dollar limit, cover full system water-tightness, and shall have a minimum duration of 25 years.

1.6.1 Roof Membrane Manufacturer Warranty

The warranty shall cover system materials and installation workmanship including flashing, insulation, and accessories necessary for a watertight roof system construction. Provide warranty directly to the Government and commence warranty effective date at the time of the Government’s acceptance of the roof work. The warranty must state that:

If within the warranty period the roof system, as installed for its intended use in the normal climatic and environmental conditions of the facility, becomes non-watertight, shows evidence of moisture intrusion within the assembly, blisters, splits, tears, delaminates, separates at the seams, or shows evidence of excessive weathering due to defective materials or installation workmanship, the repair or replacement of the defective and

damaged materials of the roof system assembly and correction of defective workmanship are the responsibility of the roof membrane manufacturer. All costs associated with the repair or replacement work are the responsibility of the roof membrane manufacturer.

When the manufacturer or his approved applicator fail to perform the repairs within 72 hours of notification, emergency temporary repairs that are performed by others will not void the warranty.

Damage to the roofing system caused by sustained winds determined by ASCE 7 or less is covered by the warranty.

Upon completion of the installation, and acceptance by the Contracting Officer, the manufacturer must supply the appropriate warranty to the Government.

The installer must submit the warranty to the membrane manufacturer from the date of acceptance, with a copy to the Contracting Officer.

1.6.2 Roofing System Installer Warranty

The roof system installer must warrant for a period of five years that the roof system, as installed, is free from defects in installation workmanship, to include the roof membrane, flashing, insulation, accessories, attachments, and sheet metal installation integral to a complete watertight roof system assembly. The warranty shall be written to the Government. The roof system installer is responsible for correction of defective workmanship and replacement of damaged or affected materials. The roof system installer is responsible for all costs associated with the repair or replacement work.

1.7 WIND UPLIFT RESISTANCE

The complete roof system assembly shall be rated and installed to resist wind loads calculated in accordance with ASCE 7 and validated by uplift resistance testing in accordance with Factory Mutual (FM) test procedures. Submit licensed engineer’s wind uplift calculations and substantiating data to validate non-rated roof system for approval by the Contracting Officer. Base wind uplift measurements on a design wind speed of 100 mph in accordance with ASCE 7 and/or other applicable building code requirements.

PART 2 PRODUCTS

2.1 MANUFACTURERS

ISO 9001 and ISO 14001 Manufacturer shall meet all of the requirements of this specification.

The MREC system shall be installed over modified Bitumen roofing. The MREC seamless system shall be a minimum of 60 mils thickness and meet the FM 4470.

2.2 COMPONENTS

2.2.1 Construction Grade Caulk

Single package polyurethane sealant, as approved by roofing coating

manufacturer for use in filling cracks, splits or voids, and for sealing reglet counter flashings.

2.2.2 Basecoat and Intermediate Coatings

Water-based, 100% pure acrylic polymer resin coating to provide a permanently flexible, weather-resistant base and intermediate. It shall be tested as part of a FM 4470 roof assembly.

2.2.3 Finish Coat

Ultraviolet light resistant blend of highly flexible, water-based, 100% pure acrylic polymer resin finish coating. It shall be tested as part of a FM 4470 roof assembly. Final exposed color shall be reflective white.

2.2.4 Roof System’s Material Properties

Minimal dry thickness of 60 mils with polyester fabric:

Property	Test	Result
Leakage Resistance	ASTM D7281	Passed 7-day submersion under water with pressure cycling
Tensile Strength (cured)	ASTM D412	Greater than 2200 psi
Elongation	ASTM D638 or ASTM D412	Greater than 300%; 50% with reinforcing fabric
Algae Resistance	ASTM G29	No growth supported
Weathering	ASTM G155	No effect after 3000 hours
Salt Spray Test	ASTM B117	No effect
Moisture Vapor	ASTM E96/E96M	3 Perms
Fire Rating	ASTM E108 and FM 4470	Class A
Fluid Applied Acrylic	ASTM D6083	Approved
Windstorm Pull Test	FM 4470	Class I-735 lightweight concrete
Hail (severe impact) Resistance	FM 4470	Passed over rigid foam
Foot Traffic Resistance	FM 4470	Passed
Susceptibility to Leakage	FM 4470	Passed 7-day test and pressure cycle test
Solids by Volume		Min 52 percent

Property	Test	Result
Solids by Weight		Min 66 percent

2.2.5 Reinforcing Fabric

This material shall be non-woven 100 percent polyester, stitch bonded, and heat set fabric. The fabric shall bear the Factory Mutual label (FM) printed on the fabric surface. The fabric shall meet these following characteristics:

a. Weight: 3 oz/sq. yd.

b. Tensile Strength Warp 124 lbs per ASTM D5034.

c. Tensile Strength Fill 77 lbs.

d. Elongation at Break Warp 26 percent per ASTM D5034.

e. Elongation at Break Fill 64 percent.

f. Ball Burst 109 lbs per ASTM D3787.

g. Trapezoid Warp 17 lbs per ASTM D117.

h. Trapezoid Fill 20 lbs.

i. Thickness 0.018 inches per ASTM D1777.

2.2.6 Roof Penetrations

Protective cement/reinforced surface around vents, grease traps, and equipment. Protective coating shall bonding agent and polyester fabric.

2.2.7 Cant Strips

Cant strips shall be compatible with MREC system. Material can be EPS, polyisocyanurate, or wood.

2.2.8 Corrosion Resistant Primer

Single component, premium quality exterior acrylic latex primer, as

approved by the manufacturer; For corrosion protection flash rust resistance and enhanced adhesion over all metal surfaces.

2.2.9 Traffic Coating

Provide traffic resistant water-based coating where applicable.

Material Properties:

a. Density: 11.91 lb/gal

b. Volume Solids: 55.73 percent plus 2 percent.

c. Weight Solids: 70.14 percent plus 2 percent.

d. VOC (calculated): > 72 g/L

e. Elongation at 700F > 600 percent.

2.2.10 Biodegradable Cleaner

All cleaners shall be biodegradable and not harm the environment or water treatment systems. Cleaner shall remove dirt, pollutants, and other contamination build-up even when the product dries prior to rinsing. Cleaner shall meet EPA, USDA, FDA, and OSHA standards.

2.2.11 Flashing

Flashing compatible with the MREC shall be provided at all roof penetrations, vertical walls, caps, expansion joints, and roof edges. Existing flashing shall be replaced with equal material.

PART 3 EXECUTION

3.1 EXAMINATION

Do not begin installation until substrates have been properly prepared.
Verify substrate surfaces are durable, free of frozen matter, dampness, loose particles, cracks, pits, projections, or foreign matter detrimental to adhesion or application of waterproofing system.
Verify that substrate surfaces are smooth and not detrimental to full contact bond of waterproofing materials.
Verify items that penetrate surfaces to receive waterproofing are securely installed.
Verify that substrate areas are adequately supported and firmly fastened in place.
Verify that roof deck has a minimum slope of 0.25

inch/foot.

Verify that roof does not have ponding water areas.

Verify that all attached vertical walls are properly waterproofed.

3.2 PREPARATION

All surfaces shall be clean and dry, and free of any dirt, dust, gravel, oil, surface chemicals or other contaminants that may interfere with optimum adhesion. Take care not to inject water into the substrate during washing. Additional drying time may be necessary after the cleaning process. Consult the manufacturer's technical representative for additional recommendations on cleaning roof substrates.
All metal to be covered with insulation that has any sign of rust shall be wire brushed and then coated with Stable Rust primer (5.0 mils dry).
All metal to be directly encapsulated with the liquid applied roof system shall be coated with Stable Rust primer (5.0 mil).
Any damaged or structurally unsound metal, lumber, or concrete shall be repaired or replaced. This includes the existing flashing. Existing and replacement materials shall be compatible with the MREC system and approved by the manufacturer. Manufacturer's standard details shall be followed.
Surface primer as required by system manufacturer shall be applied on all surfaces to receive MREC.
Remove all paint and loose material from the vertical surfaces to a minimum height of 6 inches as directed by the system manufacturer.
Protect adjacent surfaces not designated to receive water proofing.
Repair the existing substrate so that it is acceptable to receive MREC.
The surfaces shall be acceptable to the manufacturer's technical representative.

3.3 INSTALLATION

3.3.1 Foundation and Intermediate Coat and Fabric Components

Consists of one coat of foundation coat applied to the substrate, one ply of the polyester fabric (sizes vary) laid into the wet foundation coat, and finally a second coat of foundation (intermediate) coat saturating the fabric from above. Care shall be given to ensure that adjacent runs of fabric are overlapped a minimum of 4 inches. Foundation and intermediate coats are applied over a smooth surface at a minimum rate of 2.5 gallons per 100 square feet of fabric (this application rate is over a smooth and non-porous substrate, coverage rate will vary depending on surface texture and porosity). Foundation coat shall only be applied with the use of approved roof brushes. Rolling and spraying of the foundation and intermediate coat is forbidden. The dry mil thickness of membrane produced with the foundation and intermediate coat and polyester fabric shall be a minimum thickness of 30 mils (dry).

3.3.2 Protection of Foundation Coat and Polyester Fabric Membrane

It is the Contractor's responsibility to protect the membrane produced by the foundation and intermediate coat and polyester fabric from damages. All membranes that are damaged shall be rejected and removed from the job site. Damages shall include, but not limited to, coatings being marked with pollutants that may act as a bond-breaker between the various

applications of coating. These pollutants include (but not limited to) foot traffic residue, metal shavings, tire tracks, markings caused by hoses and electrical cords, insulation adhesive, sealants, and cementitious materials. All pollutants shall be removed prior to the application of any coatings. Walking on the coating while the coating and fabric is wet is forbidden. Walking on the membrane with shoes that are not covered with protective shoes coverings (example: painter's booties) is forbidden. Using the membrane as a staging platform without laying plywood on the surface to protect the membrane is forbidden. Allowing pools of water to sit on the coating during the first seven days (pools of water must be brushed off each morning).

3.3.3 Encapsulation of Roof Perimeter

Using 12-inch fabric and the foundation components (described above), waterproof entire roof perimeter. Continue waterproofing up vertical surfaces and onto deck a minimum of 6 inches in each direction.

3.3.4 Encapsulation of the Roof Penetrations

Using 12 inch fabric and the foundation components seal items projecting through waterproofing material to make them watertight. Extend waterproof penetrations a minimum of 6 inches.

3.3.5 Encapsulation of Roof Field

Using 40 inch fabric and the foundation components (as described above) seal the entire roof field. Overlap adjacent runs of fabric 4 inches minimum.

3.3.6 Encapsulation of Walls and Curbs

Using 40 inch or 20 inch fabric and the foundation components (as described above) seal all identified wall areas and all curbs (vertical and horizontal surfaces). Overlap adjacent runs of fabric 4 inches minimum.

3.4 INSTALLATION OF FINISH COAT

3.4.1 Finish Coat Component

Apply 3 coats of Finish Coating at a combined total rate 4 gallon per 100 square feet over entire roof area. Minimum milage requirements are 11.5 mils and 6.1 mils dry per coat. Allow to dry between coats. Total finish coat dry thickness should be a minimum of 33 mils. Apply each coat perpendicular to the previous coat.

3.4.2 Protection of Finish Coat

It is the Contractor's responsibility to protect the finish coat from damages. All finish coat that is damaged shall be rejected and removed from the job site. Damages shall include (but not limited to) coatings being marked with pollutants that may act as a bond-breaker between the various applications of coating. These pollutants include (but not

limited to) foot traffic residue, metal shavings, tire tracks, markings caused by hoses and electrical cords, insulation adhesive, sealants, and cementitious materials. All pollutants shall be removed prior to the application of any coatings. Furthermore, walking on the coating while the coating is wet is forbidden. Walking on the coating with shoes that are not covered with protective coverings (example: painter's booties) is forbidden. Using the coating or the coating membrane system as a staging platform without laying plywood on the surface to protect the membrane is forbidden. Allowing pools of water to sit on the coating during the first seven days (pools of water must be brushed off each morning).

3.5 ROOF SYSTEM MIL THICKNESS

Roof System shall be installed to a minimum 60 mil total cured thickness.

Dry mil thickness test: The coating manufacturer's representative, Contracting Officer and Contractor shall make a final inspection to determine the dry film thickness of the liquid-applied acrylic membrane and to verify that the system meets the manufacturer's requirements for warranty. The Contractor shall notify all interested parties in advance of scheduled inspection. The Government shall require three dry mil sample cuts of 2-inch by 1-inch and the Government shall select the three areas where the samples shall be removed. Contractor shall immediately repair the sample areas with the complete Liquid Applied Roof System using a 6-inch by 6-inch polyester fabric. The samples shall be cut in half and the Government shall be given half of each sample. The samples shall be measured with a micrometer to determine that the mil thickness of the roof system shall be a minimum of 55 mils. If the mil thickness is not correct, the Contractor shall apply additional finish coating.

3.6 INSTALLATION OF PROTECTIVE CEMENT SURFACE

Install protective Cement Surface Systems at areas applicable, or where grease and oil may occur. These areas are most common around vents. Also install protective Cement Surface Systems to correct areas of ponding water. Apply painter's tape to the surface of the roof system around all kitchen vents and grease trap areas when applicable. The tape shall be set a minimum of three feet from the curbs supporting the vents. Remove all pollutants from the surface of the roof system. Protect the roof surface while mixing the cement slurry. Mix the three gallons of Portland cement, one gallon of water and one gallon of acrylic bonding agent. Mix the slurry and apply the slurry to roof surface and immediately brush in the polyester fabric. Once the fabric is brushed into the slurry, immediately apply a second application of the slurry. Wait three to six hours and apply a third application of cement slurry. Remove painter's tape.

3.7 INSTALLATION OF PROTECTIVE TRAFFIC COAT

Provide protective Traffic Coat at areas where daily foot traffic occurs and at the top and bottom of all access ladders, hatches, and stairs.
Apply painter's tape to the surface of the roof system to designate walkways. The tape shall be set a minimum of three feet apart so as to produce a three-foot wide footpath. Remove all pollutants from the surface of the roof system. Protect the roof surface while mixing the Traffic Coat. Mix the Traffic Coat with an electric drill for a minimum of three minutes. Apply one coat of Traffic Coat at a rate of 1 gallon

per 100 square feet. Wait three to six hours and apply a second application of Traffic Coat. Remove painter's tape.

3.8 CLEAN-UP

Maintain work and work areas in a clean, safe condition at all times during coating installation. Remove excess materials, trash and debris from the jobsite daily. At the completion of the project, clean area of any spills and containers, and clean up all roofing debris, leaving jobsite in a clean and orderly condition. As a condition of the project's completion and acceptance, deliver to the Government a copy of the full executed, specified warranty from the coating manufacturer, following individual warranty guidelines.

3.9 PROTECTION

Protect installed products until completion of project. Touch-up, repair or replace damaged products before Substantial Completion.

3.10 FIELD QUALITY CONTROL

Perform field tests in the presence of the Manufacturer’s Technical Representative and Contracting Officer. Notify the Contracting Officer one day before performing tests.

3.10.1 Construction Monitoring

During progress of the roof work, Contractor must make visual inspections as necessary to ensure compliance with specified parameters. Additionally, verify the following:

a. Materials comply with the specified requirements.

b. Materials are not installed in adverse weather conditions.

All materials are properly stored, handled and protected from moisture or other damages.

c. Equipment is in working order. Metering devices are accurate.

d. Substrates are in acceptable condition, in compliance with specification, prior to application of subsequent materials.

3.10.2 Manufacturer’s Inspection

Manufacturer's technical representative must visit the site a minimum of once every 5 working days during the installation for purposes of reviewing materials installation practices and adequacy of work in place. Inspections must occur during the first 20 squares of membrane installation, at mid-point of the installation, and at substantial

completion, at a minimum. Additional inspections must not exceed one for each 100 squares of total roof area with the exception that follow-up inspections of previously noted deficiencies or application errors must be performed as requested by the Contracting Officer. After each inspection, submit a report, signed by the manufacturer's technical representative to the Contracting Officer within 3 working days. Note in the report overall quality of work, deficiencies and any other concerns, and recommended corrective action.

3.11 INFORMATION RECORD

Furnish a permanent card for facility Records and a card laminated in plastic and framed for interior display at roof access point, and a photoengraved 0.039 inch thick aluminum card for exterior display. Card must be 8 1/2 by 11 inch minimum. Information card must identify facility name and number; location; contract number; approximate roof area; detailed roof system description, including deck type, membrane, number of plies, method of application, manufacturer, insulation and cover board system and thickness; presence of tapered insulation for primary drainage, presence of vapor retarder; date of completion; installing contractor identification and contact information; membrane manufacturer warranty expiration, warranty reference number, and contact information. The card must be a minimum size of 8 1/2 by 11 inch. Install card at roof top or access location as directed by the Contracting Officer and provide a paper copy to the Contracting Officer.

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