Fastwall CI WaterMaster with Drain Mat Wall System
CSI Section 09 24 23

1 and 3 coat impact-resistant continuously insulated (CI) premium cement plaster stucco system incorporating enhanced water management.

INTRODUCTION

This specification has been assembled to enable the design professional to select or delete sections to suit the project requirements and is intended to be used in conjunction with LaHabra typical details, product data sheets, technical bulletins, etc. Throughout the specification, delete those which are not utilized.

DESIGN RESPONSIBILITY

It is the responsibility of both the specifier and the purchaser to determine if a product is suitable for its intended use. The designer selected by the purchaser shall be responsible for all decisions pertaining to design, detail, structural capability, attachment details, shop drawings and the like. The LaHabra brand of Sika Corporation US (herein referred to as "Sika") has prepared guidelines in the form of specifications, typical application details, and product bulletins to facilitate the design process only. Sika is not liable for any errors or omissions in design, detail, structural capability, attachment details, shop drawings or the like, whether based upon the information provided by Sika or otherwise, or for any changes which the purchasers, specifiers, designers or their appointed representatives may make to Sika published comments.

Designing and Detailing a LaHabra Fastwall CI WaterMaster with Drain Mat Wall System

General: The system shall be installed in strict accordance with current recommended published details and product specifications from the system's manufacturer.

A. Wind Load:

1. Maximum deflection not to exceed L/360 under design loads.
2. Design for wind load in conformance with local code requirements.

B. Substrate Systems:

1. Acceptable substrates are PermaBase® Cement Board and other cement-boards conforming with ASTM C1325 (Type A-exterior); poured concrete/unit masonry; ASTM C1177 type sheathings, including, Weather Defense™ Platinum sheathing, GreenGlass® sheathing, e²XP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, and DensGlass® exterior sheathing, DensElement (sheathing only); gypsum sheathing (ASTM C79/C1396); Exposure I or exterior plywood (Grade C/D or better); or Exposure I OSB, Huber Zip (sheathing only).
2. The substrate systems shall be engineered with regard to structural performance by others.
3. Refer to LaHabra's Stucco Wall Systems Lath and Trim Accessories technical bulletin for more detailed information regarding metal lath, woven wire, trim requirements, etc.

C. Moisture Control:

1. Prevent the accumulation of water behind the LaHabra Fastwall CI WaterMaster with Drain Mat wall system, either by condensation or leakage through the wall construction, in the design and detailing of the wall assembly.
   a. Provide flashing to direct water to the exterior where it is likely to penetrate components in the wall assembly, including, above window and door heads, beneath window and door sills, at roof/wall intersections, decks, abutments of lower walls with higher walls, above projecting features, and at the base of the wall and anywhere else required by local code.
   b. Air Leakage Prevention: Provide continuity of air barrier system at foundation, roof, windows, doors and other penetrations through the system with connecting and compatible air barrier components to minimize condensation and leakage caused by air movement.

c. Vapor Diffusion and Condensation: Perform a dew point analysis of the wall assembly to determine the potential for accumulation of moisture in the wall assembly as a result of water vapor diffusion and condensation. Adjust insulation thickness and/or other wall assembly components accordingly to minimize the risk of condensation. Avoid the use of vapor retarders on the interior side of the wall in warm, humid climates.

D. Color Selection: The use of dark colors over expanded polystyrene (EPS) trim shapes must be considered in relation to wall surface temperature as a function of local climate conditions. Select Finish Color with a light reflectance value (LRV) of 20% or higher. The use of dark colors (LRV less than 20%) is not recommended with EPS trim shapes as EPS has a sustained service temperature limitation of approximately 160°F (71°C).

E. Grade Condition: Stucco is not intended for use below grade or on surfaces subject to continuous or intermittent immersion in water or hydrostatic pressure. Ensure a minimum 6" (150 mm) clearance above grade or as required by code, a minimum 2" (50.8mm) clearance above finished grade (sidewalk/concrete flatwork).

F. Decorative Shapes, Projecting Architectural Features:

NOTE TO SPECIFIER: Installation of the LaHabra Fastwall CI WaterMaster with Drain Mat wall system with decorative shapes that incorporate EPS outside the slope guidelines referenced in this specification may still qualify for a standard warranty; however, increased maintenance and premature deterioration of the trim shapes shall be expected and any deleterious effects caused by the lack of slope will not be the responsibility of Sika. The design professional has the option to build per his/her project needs. The design professional must also consider geography, climate, building orientation, wall orientation and adjacent building components when designing with EPS trim shapes. The slope guidelines referenced below are provided to offer assistance to the owner and/or design professional. Final design of any building is the responsibility of the design professional.

Minimum slope for all projections shall be 1:2 (27º) with a maximum length of 12" (30.5 cm) [e.g. 6" in 12" (15 cm in 30.5cm)]. Increase slope for Northern climates to prevent accumulation of ice/snow on the surface.

NOTE TO SPECIFIER: LaHabra Fastwall CI WaterMaster with Drain Mat wall systems were designed and tested to be applied to vertical surfaces. As the slope of the wall system application decreases, the chance for premature deterioration of any wall system increases. Low sloping conditions are subject to more extreme heat. Low sloped areas are known to produce an increase in wall surface temperature which can lead to accelerated weathering of the low sloped surface.

G. System Joints:

1. Expansion joints in the system are required at building expansion joints, at prefabricated panel joints, floor lines of wood frame construction, where substrates change, at termination at dissimilar materials and where structural movement is anticipated. Detail specific locations in construction drawings.
2. Control joints are required at a minimum of every 144ft^2 (13m^2) of wall surface area and where specified by the design professional. The maximum uncontrolled length or width is 18 lineal feet (5.5 lineal meters) and a maximum uncontrolled length to width ratio of 2 ½: 1. Detail specific locations in construction drawings.

   NOTE TO SPECIFIER: It is the sole responsibility of the project design team, including the architect, engineer, etc., to ultimately determine specific expansion and control joint placement, width and design. Sealant joints are required at all penetrations through the LaHabra Fastwall CI WaterMaster with Drain Mat wall system (windows, doors, lighting fixtures, electrical outlets, hose bibs, dryer vents, etc.). Refer to LaHabra Fastwall CI WaterMaster with Drain Mat wall system typical details.

H. Decks: Wood decks must be properly flashed prior to system application. For proper application, refer to LaHabra Fastwall CI WaterMaster with Drain Mat wall system typical details. The system must be terminated a minimum of 1" (25mm) above wood decks.

I. Coordination with other trades:

1. Evaluate adjacent materials such as windows, doors, etc. for conformance to manufacturer's details. Adjacent trades shall provide scaled shop drawings for review.

2. Air seals at any joints/gaps between adjoining components (penetrations, etc.) are of primary importance to maintain continuity of an air barrier system and must be considered by the design professional in the overall wall assembly design. Air seals are needed between the primary air/water-resistive barrier and other wall components (penetrations, etc.) to maintain continuity of an air barrier system.
3. Provide protection of rough openings in accordance with LaHabra Finestop published product data sheet and details before installing windows, doors, and other penetrations through the wall.
4. Install copings and sealant immediately after installation of the LaHabra Fastwall CI WaterMaster with Drain Mat wall system and when LaHabra finishes are completely dry.

TECHNICAL INFORMATION
Consult Sika Facades' Technical Services Department for specific recommendations concerning all other applications. Consult the LaHabra website, usa.sika.com/lahabra, for additional information about products, systems and for updated literature.

PART 1 – GENERAL
1.01 SECTION INCLUDES
A. Refer to all project drawings and other sections of this specification to determine the type and extent of work therein affecting the work of this section, whether such work is specifically mentioned herein.
B. Fastwall CI WaterMaster with Drain Mat: Composite insulated stucco wall system consisting of Finestop air/water-resistive barrier, SIKAWALL Drainage Mat, approved rigid insulation, plaster base, SikaWall stucco base, LaHabra base coat(optional), SikaWall reinforcing mesh (optional), SikaWall primer (optional) and LaHabra finish coat.
C. LaHabra products are listed in this specification to establish a standard of quality. Any substitutions to this specification shall be submitted to and receive approval from the Architect at least 10 days before bidding. Proof of equality shall be borne by the submitter.
A. The system type shall be LaHabra Fastwall CI WaterMaster with Drain Mat wall system as manufactured by Sika Corporation US, Lyndhurst, NJ.

1.02 RELATED SECTIONS
A. Section 03 00 00 Concrete substrate
B. Section 04 00 00 Masonry substrate
C. Section 05 40 00 Cold-formed metal framing
D. Section 06 16 00 Wood sheathing
E. Section 06 11 00 Wood framing
F. Section 07 27 00 Air barriers
G. Section 07 62 00 Sheet Metal Flashing and Trim
H. Section 07 65 00 Flexible flashing
I. Section 07 90 00 Joint protection
J. Section 08 00 00 Openings
K. Section 09 22 00 Supports for plaster and gypsum board
L. Section 09 22 16 Non-structural metal framing
M. Section 09 29 00 Gypsum board
N. Section 09 22 36 Lath

1.03 REFERENCES
A. ASTM C150 Standard Specification for Portland Cement
B. ASTM C926 Standard Specification for Application of Portland Cement-Based Plaster
C. ASTM C1063 Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster
D. ASTM C847 Standard Specification for Metal Lath
E. ASTM C933 Standard Specification for Welded Wire Lath
F. ASTM C1032 Standard Specification for Woven Wire Plaster Base

G. ASTM C1764 Standard Test Methods for Non-Metallic Plaster Bases (Lath) used with Portland Cement Based Plaster in Vertical Applications
H. ASTM C1787 Standard Specification for Installation of Non-Metallic Plaster Bases (Lath) used with Portland Cement Based Plaster in Vertical Applications
I. ASTM C1788 Standard Specification for Installation of Non-Metallic Plaster Bases (Lath) used with Portland Cement Based Plaster in Vertical Applications
J. ASTM D226 Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
K. ASTM D1784 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (PVC) Compounds
L. ICC-ES AC11 Cementitious Exterior Wall Coatings
M. CCRR 0230 Intertek Code Compliance Research Report for STUCCOBASE™/ STUCCOBASE™ PREMIX
N. CCRR 0249 Intertek Code Compliance Research Report (PERMALATH 1000)
O. ESR-3463 ICC Evaluation Service, LLC, ES Report™ (NEOPOR® Rigid Insulation Board)
P. ESR-2986 ICC Evaluation Service, Inc., ES Report™ (FINESTOP RA/RS)

1.04 SUBMITTALS

A. Submit under provisions of Section [01 33 00]
B. Product Data: Provide data on LaHabra Fastwall CI WaterMaster with Drain Mat wall system materials, product characteristics, performance criteria, limitations and durability.
C. Code Compliance: Provide manufacturer's applicable code compliance report.
D. Samples: Submit [two] [x] [inch] [centimeter] size samples of LaHabra Fastwall CI WaterMaster with Drain Mat wall system illustrating LaHabra finish color and texture range.
E. Certificate: System manufacturer's approval of applicator.
F. Sealant: Sealant manufacturer's certificate of compliance with ASTM C920.
G. System manufacturer's current specifications, typical details, system design guide and related product literature which indicate preparation required, storage, installation techniques, jointing requirements and finishing techniques.

1.05 QUALITY ASSURANCE

A. Manufacturer: More than 10 years in the cement plaster stucco industry, with more than 1000 completed cement plaster stucco projects.
B. Applicator: Approved by Sika in performing work of this section.
C. Regulatory Requirements: Conform to applicable code requirements for cement plaster stucco.
D. Field Samples
   1. Provide under provisions of Section [01 43 36] [01 43 39].
   2. Construct one field sample panel for each color and texture, [x] [feet] [meters] in size of system materials illustrating method of attachment, LaHabra finish color and texture.
   3. Prepare each sample panel using the same tools and techniques to be used for the actual application.
   4. Locate sample panel where directed.
   5. Accepted sample panel [may] [may not] remain as part of the work.
   6. Field samples shall be comprised of all wall assembly components including substrate, Finestop air/water-resistive barrier, SikaWall Drainage Mat, approved rigid insulation, plaster base, SikaWall stucco base, LaHabra base coat (if specified), SikaWall reinforcing mesh (if specified), SikaWall primer (if specified), LaHabra finish coat and typical sealant/flashing conditions.
E. Testing
   1. General Air/Water-Resistive Barrier Minimum Performance:

TEST	METHOD	CRITERIA	RESULTS
Water-resistive barrier coatings used under EIFS	ASTM E2570		Meets all performance requirements
Air Leakage of Air Barrier Assemblies	ASTM E2357	0.2 l/(s.m2) @75 Pa (0.04 cfm/ft2 @ 1.57 psf)	0.0007 l/s.m^2 (0.0001 cfm/ft^2) @ 75 Pa (1.57 psf) positive / post conditioning 0.0014 l/s.m^2 (0.0003 cfm/ft^2) @ 75 Pa

			(1.57 psf) negative / post conditioning
Air Permeance of Building Materials	ASTM E2178	0.02 l/(s.m2) @75 Pa (0.004 cfm/ft2 @ 1.57 psf)	0.0049 l/s.m^2 @ 75 Pa (0.00098 cfm/ft^2 @ 1.57 psf)
Rate of Air Leakage	ASTM E283		0.0185 l/s·m^2 @ 75 Pa (0.0037 cfm/ft^2 @ 1.57 psf)
Water Vapor Transmission	ASTM E96	Report value	Finestop RA - 18 Perms (grains/Hr. in Hg. ft^2) @ 10 mils wet film thickness Finestop RS - 18 Perms (grains/Hr. in Hg. ft^2) @ 12 mils wet film thickness Finestop RA/RS - 14 Perms (grains/Hr. in Hg. ft^2) @ 20 mils wet film thickness Finestop VB - 0.09 Perms (grains/Hr. in Hg. ft^2) @ 26 mils wet film thickness
Pull-Off Strength of Coatings	ASTM D4541	Min. 110 kPa (15.9 psi) or substrate failure	Pass - Tested over exterior gypsum sheathing, ASTM C1177 glass-mat sheathing, cement board, OSB, plywood; PVC and galvanized flashing
Nail Sealability (without Sheathing Fabric)	ASTM D1970	No water penetration at galvanized roofing nail penetration under 127 mm (5") head of water after 3 days at 4° C (40° F)	Pass
Surface Burning	ASTM E84	Flame Spread < 25 Smoke Development < 450	Meets Class A: Flame spread =15 Smoke developed = 95

2. Air/Water-Resistive Barrier ICC-ES AC-212:

TEST	METHOD	CRITERIA	RESULTS
Sequential Testing: 1. Structural 2. Racking 3. Restrained Environmental Conditioning 4. Water Penetration	1. ASTM E 1233 Procedure A 2. ASTM E 72 3. ICC-ES AC-212 4. ASTM E 331	No cracking at joints or interface of flashing No water penetration after 15 min @ 137 Pa (2.86 psf)	Pass - Tested over OSB and gypsum sheathing No water penetration after 90 min @ 299 Pa (6.24 psf)
Sequential Testing: 1. UV Light Exposure 2. Accelerated Aging 3. Hydrostatic Pressure Test	1. ICC-ES AC-212 2. ICC-ES AC-212 3. AATCC 127-1985	No cracking or bond failure to substrate No water penetration after 21.7 in (550 mm) water for 5 hours	Pass
Freeze-Thaw	ASTM E 2485 (Method B)	No sign of deleterious effects after 10 cycles	Pass - Tested over exterior gypsum sheathing, ASTM C1177 glass-mat sheathing, cement board, OSB, plywood
Water Resistance	ASTM D2247	No deleterious effects after 14 day exposure	Pass - Tested over exterior gypsum sheathing, ASTM C1177 glass-mat sheathing, cement board, OSB, plywood
Tensile Bond	ASTM C 297	Minimum 103 kPa (15 psi)	Pass - Tested over exterior gypsum sheathing, ASTM C1177 glass-mat sheathing, cement board, OSB, plywood, CMU; PVC and galvanized flashing
Tensile Bond (after freeze-thaw)	ASTM C 297	Minimum 103 kPa (15 psi) avg; no failure after 10 cycles freeze-thaw	Pass

3. Air/Water-Resistance Barrier ICC-ES AC 148:

TEST	METHOD	CRITERIA	RESULTS
Sequential Testing: 1. UV Light Exposure 2. Accelerated Aging 3. Hydrostatic Pressure Test	1. ICC-ES AC 148 2. ICC-ES AC 148 3. AATCC 127-1985	No cracking or bond failure to substrate No water penetration after 21.7 in (550 mm) water for 5 hours	Pass
Peel Adhesion	ASTM D 3330 Method F	After UV Exposure After Accelerated Aging After Elevated Temperature Exposure After Water Immersion	Pass - tested over ASTM C1177 glass-mat sheathing, OSB, plywood, PVC and uncoated aluminum

Nail Sealability after Thermal Cycling	ASTM D 1970 (Modified), AAMA 711	No water penetration at galvanized roofing nail penetration under 1.2" (31 mm) head of water after 24 hours at 40° F (4° C)	Pass
Tensile Strength after UV Exposure	ASTM D 5034, AAMA 711	Minimum 0.5 N/mm (2.9 lb./in)	Pass
Cold Temperature Pliability	ASTM D 1970, AAMA 711	No cracking after bending around a 1" (25 mm) mandrel after 2 hour exposure to 0° F (-18° C)	Pass
Resistance to Peeling	AAMA 711	No signs of distress or failure after 24 hours of exposure at room temperature, 122° F (50° C), 149° F (65° C), 176° F (80° C)	Pass
Drainage Efficiency	ASTM E2273	90% Minimum	Pass
Transverse Wind-load	ASTM E330	3 5/8" 16 GA steel studs 16" o.c., 1/2" gypsum sheathing, 1 layer ASTM D226 #15 felt, rigid insulation board, Lath, 1/2" stucco base	Average ultimate loads1: -10.8 kPa (-226 PSF) +11.8 kPa (+226 PSF)* *Positive failure could not be reached. All failures in framing
Transverse Wind-load	ASTM E330	2" x 4" wood studs 16" o.c., 7/16" OSB, 1 layer 60-minute grade D paper, rigid insulation board, Lath, 1/2" Stucco Base	Average ultimate loads1: -10.4 kPa (-218 PSF) +10.9 kPa (+228 PSF) All failures in framing
Surface Burning Characteristics	ASTM E84	Flame spread <25 Smoke developed < 450	Pass
Behavior of materials in a vertical tube furnace at 750° C	ASTM E136	Weight loss of the specimen cannot exceed 50%.	Pass
Freeze Thaw	ICC-ES AC11	No deleterious effects after 10 cycles	Pass

4. Fastwall CI WaterMaster with Drain Mat System and Component Performance:

TEST	METHOD	CRITERIA	RESULTS
Accelerated Weathering	ASTM G153	2000 Hours	No Deleterious Effect
Freeze-Thaw Resistance	ICC AC 11	10 Cycyles	Pass
Transverse Wind Load Resistance	ASTM E330	Meet Design Loads	Refer to ICC-ES ESR-2564
Fire Resistance Rated Assemblies	ASTM E 119	One Hour Fire No transmission of heat greater than 250°F above ambient; no passage of flame or hot gasses; no passage of water from hose stream test; for loadbearing walls – ability to withstand load under test conditions	Refer to ICC-ES ESR-2564
Drainage Efficiency	ICC AC 11	90 %	Refer to ICC-ES ESR-2564
Surface Burning	ASTM E 84	Report Value	<25 Flame Spread <450 Smoke Developed Includes PermaLath 1000, SikaWall Stucco Base, and LaHabra Finishes

5. NFPA 285 and NFPA 268 Compliant Assemblies:

WALL COMPONENTS	MATERIALS
Base wall system – Use either 1, 2 or 3	1. Concrete wall 2. Concrete Masonry wall 3. 1 layer – 1/2 inch thick, regular or 5/8 inch thick Type X Gypsum wallboard on interior, installed over steel studs: minimum 3-5/8 inch depth, minimum 20-gauge at a maximum of 16-inch o.c. with lateral bracing every 4- ft. vertically
Floorline Firestopping	4 lb./cu ft. mineral wool (e.g. Thermafiber) in each stud cavity at each floorline – attached with Z-clips or equivalent.
Cavity Insulation – Use either 1 or 2	1. None 2. Any noncombustible insulation (faced or unfaced)
Exterior sheathing – Use either 1 or 2	1. 1/2 inch thick, exterior type gypsum sheathing 2. 5/8 inch thick, exterior type gypsum sheathing
Air/water-resistive barrier applied to exterior sheathing	LaHabra Finestop & DRAINAGE MAT

Exterior insulation – Use either 1, 2, 3, 4 or 5	1. Expanded Polystyrene Foam (EPS) – C578 Type II & be Class A per ASTM E84– maximum thickness of 2.5-inches. 2. Expanded Polystyrene Foam (EPS) – C578 Type IX & be Class A per ASTM E84– maximum thickness of 1.8-inches. 3. BASF Neopor expanded polystyrene foam - C578 Type II & be Class A per ASTM E84– maximum thickness 2.4-inches. 4. Extruded Polystyrene Foam (XPS) – C578 Type X or Type IV & be Class A per ASTM E84 – maximum thickness – See Note 1 5. Polyisocyanurate Foam - C1289 compliant & be Class A per ASTM E84 – maximum thickness – see Note 1
Lath	1. PERMALATH 1000 glass fiber lath 2. Metal lath – either 2.5 lb/yd^2 or 3.4 lb/yd^2 3. Wire lath – either 1-1/2 inch, 20-gauge or 1-inch, 17-gauge
Stucco	SikaWall Stucco Base - minimum ½-inch thick
Finish Coat	LaHabra Finish

NOTE – The potential heat of the foam plastic insulation at the maximum installed thickness must not exceed 4999 Btu/ft^2 as determined in accordance with NFPA 259.

6. ASTM E119 1-hour Fire Resistant Compliant Assembly

WALL COMPONENTS	MATERIALS
Interior gypsum wall board	Any minimum 5/8” thick Type X gypsum wallboard complying with ASTM C1396
Steel Framing	Minimum 3 5/8” deep, minimum 20-gauge steel studs spaced a maximum of 24” on center
Wall cavity insulation - use either 1,2, or 3	1. None 2. Fiberglass batt insulation (faced or unfaced) 3. Mineral wool insulation (faced or unfaced)
Exterior sheathing	Any minimum 5/8” thick Type X exterior sheathing complying with ASTM C1396 and/or ASTM C1177
Air/water-resistive barrier applied to exterior sheathing	LaHabra Finestop & SikaWall Drainage Mat
Continuous Insulation	1. Expanded Polystyrene Foam (EPS) – C578 Type II & be Class A per ASTM E84 - maximum thickness of 2.5-inches 2. Expanded Polystyrene Foam (EPS) – C578 Type IX & be Class A per ASTM E84 - maximum thickness of 1.8-inches 3. Neopor expanded polystyrene foam - C578 Type II & be Class A per ASTM E84 -maximum thickness 2.4-inches 4. Extruded Polystyrene Foam (XPS) – C578 Type X or Type IV & be Class A per ASTM E84 – maximum thickness – See Note 1 5. Polyisocyanurate Foam - C1289 compliant & be Class A per ASTM E84 - maximum thickness 6. Maximum 3-inch thickness, unfaced noncombustible insulation (e.g. mineral wool).
Lath - use either 1,2, or 3	1. PERMALATH 1000 glass fiber lath 2. Metal lath – either 2.5 lb/yd^2 or 3.4 lb/yd^2 3. Wire lath – either 1-1/2 inch, 20-gauge or 1-inch, 17-gauge
Stucco	SikaWall Stucco Base - minimum 1/2 inch thick
Finish Coat	LaHabra Finish

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle products under provisions of Section [01 65 00] [01 66 00] [ ].
B. Deliver Sika materials in original unopened packages with manufacturer’s labels intact.
C. Protect Sika materials during transportation and installation to avoid physical damage.
D. Store Sika materials in a cool, dry place protected from freezing. Store at no less than 40°F/4°C (50°F/10°C Granite & Stone finish).
E. Store MaxFlash at a minimum of 40°F. In cold weather, keep containers at room temperature for at least 24 hours before using.
F. Store insulation boards flat and protected from direct sunlight and extreme heat.
G. Store Reinforcing Mesh, Sheathing Fabric and Flash Seal NP flexible flashing in a cool, dry place protected from exposure to moisture.

1.07 PROJECT/SITE CONDITIONS

A. Do not apply Sika material in ambient temperatures below 40°F/4°C (50°F/10°C for Granite & Stone

Finish). Provide properly vented, supplementary heat during installation and drying period when temperatures less than 40°F/4°C (50°F/10°C for Granite & Stone Finish) prevail. Do not apply in ambient temperature above 100°F (38°C) or surface temperature above 120°F (49°C).

B. Do not apply materials to frozen surfaces.
C. Maintain ambient temperature at or above 40°F/4°C (50°F/10°C for Granite & Stone Finish) during and at least 24 hours after material installation and until dry.
D. Under average conditions [70 °F (21 °C), 50% Relative Humidity] finish will be dry within 24 hours. Drying time is dependent on humidity, air temperature, sun exposure, surface conditions and finish thickness. Lower temperature, higher humidity and application in shaded areas will extend drying time. Protect finish from rain or other precipitation and temperatures less than 40°F (4°C) for a minimum of 24 hours or until dry.

1.08 SEQUENCING AND SCHEDULING

A. Coordinate and schedule installation of LaHabra Fastwall CI WaterMaster with Drain Mat wall system with related work of other sections.
B. Coordinate and schedule installation of trim, flashing, and joint sealers to prevent water infiltration behind the system.

1.09 WARRANTY

A. Provide a Sika standard warranty for LaHabra Fastwall CI WaterMaster with Drain Mat wall system installations under provisions of Section [01 70 00]. Warranty term varies with system component's configuration.
B. Comply with Sika notification procedures to assure qualification for warranty. Sika allows 12 months from the date of completion to request a warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS

All components of the LaHabra Fastwall CI WaterMaster with Drain Mat wall system shall be manufactured by Sika Corporation US and obtained through an authorized distributor.

2.02 MATERIALS

NOTE TO SPECIFIER: Items in blue/underlined indicate a system option or choice of options. Throughout the specification, delete those which are not required or utilized. Contact Sika Facades' Technical Service Department for further assistance.

A. Air/Water-Resistive Barrier Components:

1. Air/Water-Resistive Barrier: ***(Required, Select One)***
   a. Finestop RA: A one-component fluid-applied vapor permeable air/water-resistive barrier.
   b. Finestop RS: A one-component fluid-applied vapor permeable air/water-resistive barrier for use with airless spray equipment.
   c. Finestop VB: A one-component fluid-applied vapor impermeable air/water-resistive barrier.
2. Rough Opening and Joint Treatment: **(Required, Select a or b)**
   a. SikaWall Sheathing Fabric: A spun-bonded non-woven reinforced polyester web for use with Finestop fluid applied air/weather-resistive barriers.
   b. SikaWall MaxFlash: A one-component elastomeric material for use as a flexible flashing membrane.
3. SikaWall Flash Seal NP Transitional Membrane / Expansion Joint Flashing: A 32-mil thick self-adhering and self-sealing composite membrane of polyester fabric and butyl adhesive. Compatible with Finestop liquid air/weather resistive barriers.

B. SikaWall Drainage Mat: Three-dimensional drainage core consisting of fused, entangled filaments.

C. Insulation Board: (Required, Select One)

1. Expanded polystyrene; ASTM C578, Type II.
   a. Flame spread less than 25, smoke developed less than 450 per ASTM E84, UL 723.
   b. Flexural: 35 psi, compressive: 15 psi, minimum thermal resistance 4.0/inch at 75°F (24°C) .
   c. Minimum density 1.35 lb./ft^3 (21.6 kg/m^3)

d. Minimum thickness as indicated on drawings minimum 3/4" (19 mm).
e. Air-dried (aged) six weeks, or equivalent, prior to installation.
f. Edges: square within 1/32" per ft. (0.8 mm per m).
g. Thickness: tolerance of +/- 1/16" (1.6 mm).
h. Maximum Size: 2' x 8' (61 cm x 2.44 m.
i. Length and width: tolerance of +/- 1/16" (1.6 mm).

2. NEOPOR® Rigid Insulation Board: thermal resistance values R5, R 7.5, R10 or custom thickness, meets ASTM C578 Type II
   a. Flame spread less than 25, smoke development less than 450 ASTM E84,
   b. Flexural: 35 psi, compressive: 15 psi, minimum thermal resistance 4.7/inch at 75°F (24°C)
   c. Minimum density 1.35 pcf (21.6 Kg/m3).
   d. Air-dried (aged) six weeks, or equivalent, prior to installation.
   e. Maximum size 2' x 8' (61 cm x 2.44 m).
   f. Edges square within 1/32"/ft. (.08mm/0.3m)
   g. Tolerance width 24" (+/-) 1/16" (61cm (+/-) 1.6mm) and length 96" (+/-) 1/8" (2.44m (+/-) 3mm).
3. Extruded polystyrene; ASTM C578, Type IV.
   a. Flame spread less than 25, smoke developed less than 450 per ASTM E84, UL 723.
   b. Flexural: 50 psi, compressive: 25 psi, minimum thermal resistance 5/inch at 75°F (24°C) .
   c. Minimum density 1.55 lb./ft^3 (25 kg/m^3)
   d. Minimum thickness as indicated on drawings minimum 19 mm (3/4").
   e. Air-dried (aged) six weeks, or equivalent, prior to installation.
   f. Edges: square within 1/32" per ft. (0.8 mm per m).
   g. Thickness: tolerance of +/- 1/16" (1.6 mm).
   h. Maximum Size: 2' x 8' (61 cm x 2.44 m.
   i. Length and width: tolerance of +/- 1/16" (1.6 mm).
4. Mineral Wool Insulation: ASTM C612, Type IV
   a. Minimum density 8 lbs./ft^3 (128 kg/m^3)
   b. Minimum thickness as indicated on drawings, minimum 1" (25 mm)
   c. Noncombustible per ASTM E136
   d. Flame spread less than 25, smoke developed less than 450 per ASTM E84, UL 723
   e. Compressive resistance: 439 psf (21 kPa) @ 10% compression
   f. Dimensional stability: linear shrinkage <0.5% at 1200°F (650°C)
   g. Thermal resistance 4.2/inch at 75°F (24°C)
   h. Size: 2' x 4' to 4' x 8' (61 cm x 1.22 m to 1.22m x 2.44 m) varies by thickness, as provided by manufacturer.
5. Polyisocyanurate insulation board: Atlas EnergyShield Pro, Atlas EnergyShieldPro2, Hunter Xci Class A, Hunter Xci CG.
   a. Nominal density 2 lbs. /ft^3 (32 kg/m^3).
   b. Minimum thickness as indicated on drawings 1" (25mm).
   c. Size: 4' x 8', 4' x 9' (1.22 m x 2.44 m, 1.22 m x 2.74 m), or other size as provided by insulation board manufacturer.
   d. Edges: Square within 3/16 (4 mm) (4' x 8'/1.22 m x 2.44 m).
   e. Thickness: tolerance of less than 1/16" (1.6 mm) (1" / 25 mm thick).
   f. Length: Tolerance of plus or minus 1/4" (6 mm) (4' x 8'/1.22 m x 2.44 m).
   g. Width: Tolerance of plus or minus 1/16" (1.6 mm) (4' x 8'/1.22 m x 2.44 m).

D. Decorative Shapes: (Optional) Expanded polystyrene; ASTM C578, Type I or II

E. Lath/Plaster Base: (Required, Select One)

NOTE TO SPECIFIER: Ensure selection of the appropriate lath based on specified thickness of the LaHabra Fastwall CI WaterMaster with Drain Mat wall system. Delete those products not utilized. Reference *LaHabra Lath & Trim Accessories System* support bulletin for additional information.

1. SIKAWALL PERMALATH 1000: An open weave, three-dimensional self-furring, nominal 1/4" thick glass fiber reinforcing lath is for use with a minimum thickness of 1/2" (12.7mm). Complies with ASTM C1764, C1787 and C1788.

2. Woven or Welded Wire Lath: A minimum No. 20 gauge, 1" (25.4 mm) galvanized woven wire fabric is for use with 3/8"-1/2" (9.5-12.7mm) thickness only. Other laths shall comply with ASTM C933 (welded) and ASTM C1032 (woven). The lath is self-furred or furred when applied over all substrates.
3. Expanded Metal Lath: The lath shall comply with ASTM C847. Furring and self-furring requirements shall be as set forth for wire lath. Minimum weight is 2.5 lbs./yd^2 (1.36 kg/m^2). Refer to ASTM C 1063 for additional information.

F. Fastening for Rigid Insulation Board and Lath/Plaster Base: (Required, Select One or More)

1. Masonry: Minimum 3/16" (4.7mm) diameter corrosion resistant masonry Wind-lock type MT fastener with Wind-lock ULP 302 washer, Lath Plates or equal with 3/4" (19 mm) minimum penetration into masonry.
2. Steel framing: Minimum 20 ga (33 mil): Minimum # 8 or greater corrosion resistant screw with Wind-lock ULP 302 washer, Lath Plate or equal with 5/8" (16 mm) minimum penetration into framing.
3. Wood framing: Minimum .120" (3mm) shank corrosion resistant nail .271" (6.9mm) head with Wind-lock ULP 302 washer, Lath Plate or equal with minimum 1-1/4" (31.8mm) penetration into framing or minimum # 8 corrosion resistant wood screw with Wind-lock ULP 302 washer, Lath Plate or equal with minimum 1" (25mm) penetration into framing.

G. Stucco Base Coat: (Required, Select One)

1. **Stucco Base Coat for 3/8-7/8" Stucco conforming to ICC-ES AC11 for 1-coat stucco:**
   a. SikaWall Stucco Base Concentrate: Factory-blended stucco mixture of Portland cement, reinforcing fibers, and proprietary ingredients. Mixed in the field with sand and water.
   b. SikaWall Stucco Base Sanded: Factory-blended stucco mixture of Portland cement, reinforcing fibers, sand, and proprietary ingredients. Mixed in the field with water.
   c. LaHabra Fastwall Stucco Base Concentrate: A factory-controlled high-quality blend of Portland cement, lime, fibers, and proprietary additives. Mixed in the field with sand and water.
   d. LaHabra Fastwall Stucco Base Sanded: A factory-controlled high-quality blend of Portland cement, lime, fibers, proprietary additives, and ASTM C144 sand. Factory-blended mix that requires only the addition of water.

OR

2. **Stucco Base Coat for 3/4-7/8" Stucco Only:**
   a. LaHabra Fiber-47 Concentrate: A factory-blended Portland cement, fibers, hydrated lime and proprietary ingredients, cement scratch and brown coat mixed in the field with sand, conforming to ASTM C926.
   b. LaHabra Fiber-47 Sanded: A factory blend of Portland cement, lime, fibers, proprietary additives and sand, scratch and brown coat, mixed in the field with water, conforming to ASTM C926.

H. Plaster Sand: (Required if SikaWall Stucco Base Concentrate, Fastwall Concentrate or Fiber-47 Concentrate is retained)

Must be clean and free from deleterious amounts of loam, clay, silt, soluble salts and organic matter. Sampling and testing must comply with ASTM C897. Plaster sand must be graded within the following limits:

Retained on U.S. Standard Sieve	Percent retained by weight ± 2 Percent	
	Minimum	Maximum
No. 4	-	0
No. 8	0	10
No. 16	10	40
No. 30	30	65
No. 50	70	90
No. 100	95	100

I. Water: Clean and potable without foreign matter.

J. Adhesive/Base Coat: (Required for Trim Shapes and Reinforcing Mesh)

1. LaHabra A/BC Base Coat: A 100% acrylic base coat, field-mixed with Portland cement. It has a creamy texture that is easily spread.
2. LaHabra A/BC 1-Step Base Coat: A dry-mix polymer adhesive and base coat containing Portland cement and requires only water for mixing.
3. SikaWall Stucco Surface Leveler: A polymer modified dry mix leveling and embedment coat for use with LaHabra stucco systems and other Portland cement-based stucco.

K. Portland cement (Required if A/BC Base Coat is Selected): Conform to ASTM C150, Type I, IL (ASTM C595), II, or I/II, grey or white; fresh and free of lumps.

L. SikaWall SRT Mesh: a woven fiber glass mesh with high mechanical strength and dimensional stability for improved crack resistance. Must be used with a LaHabra base coat or SikaWall Stucco Surface Leveler.

M. SikaWall Stucco Prime: A 100% acrylic-based primer that help alleviate shadowing and reduces chances of efflorescence with standard finishes; color [ ] to closely match the selected LaHabra finish color.

NOTE TO SPECIFIER: Stucco Prime is recommended for Natural Swirl finish texture. Although optional in other applications, LaHabra highly recommends the use of Stucco Prime prior to application of LaHabra finish over applications of LaHabra Fastwall CI WaterMaster with Drain Mat wall system "brown coat". The application of Stucco Prime will enhance color uniformity, ease of application, and will minimize the likelihood of stucco base coat read-through.

N. SikaWall Tinted Primer: A 100% acrylic-based primer that is required for SikaWall Granite & Stone finishes; color [ ] to closely match the selected finish color

O. LaHabra Finish Coat: ***(Required, Select One or More Finishes and Textures)***

1. PEBBLETEX Finish: 100% acrylic polymer finishes with advanced technology to improve long-term performance and dirt pick-up resistance; air cured, compatible with base coat; LaHabra finish color [ ] as selected; finish texture:
   a. NATURAL SWIRL: Has a medium "worm-holed" appearance which is achieved by the random aggregate sizes in the Finish. The "worm-holed" look can be circular, random, vertical or horizontal.
   b. LIMESTONE: Utilizes uniformly sized aggregates for a uniform, fine texture.
   c. FINETEX: Can achieve a wide variety of free-formed, textured appearances, including stipple and skip-trowel.
   d. MOJAVE: Provides a uniform, "pebble" appearance.
2. SikaWall Maxlastic Finish: 100% acrylic-based, textured elastomeric finish that provides excellent flexibility and breathability, air cured, compatible with base coat; LaHabra finish color [ ] as selected; finish texture:
   a. R1.5: A medium worm-holed" appearance which is achieved by the random aggregate sizes in the Finish. The "worm-holed" look can be circular, random, vertical or horizontal.
   b. F1.5: Utilizes uniformly sized aggregates for a uniform, fine texture.
   c. T0.5: Can achieve a wide variety of free-formed, textured appearances, including stipple and skip-trowel.
   d. M1.5: Provides a uniform, "pebble" appearance.
3. Pebbletex Tersus Finish: Modified acrylic based finish with water repellent properties, compatible with base coat; LaHabra finish color [ ] as selected; finish texture:
   a. NATURAL SWIRL: Has a medium "worm-holed" appearance which is achieved by the random aggregate sizes in the Finish. The "worm-holed" look can be circular, random, vertical or horizontal.
   b. LIMESTONE: Utilizes uniformly sized aggregates for a uniform, fine texture.
   c. FINETEX: Can achieve a wide variety of free-formed, textured appearances, including stipple and skip-trowel.
   d. MOJAVE: Provides a uniform, "pebble" appearance.
4. SikaWall Specialty Finishes: 100% acrylic polymer finishes that can be hand-troweled to simulate stone or create a time-honored, mottled tone-on-tone look that achieves a soft and weathered

patina over time.
   a. SIKAWALL ENCAUSTO VERONA: Utilizes uniformly sized aggregate to achieve a free-formed, flat texture. It can be used to achieve a mottled look and unlimited tone on tone designs by combining multiple colors.
   b. SIKAWALL METALLIC: Has a pearlescent appearance. It utilizes uniformly sized aggregates for a uniform fine texture.
   c. SikaWall Granite & Stone: Is a factory-mixed, reflective stone finish consisting of colored aggregate and large black mica flakes in a 100% acrylic transparent binder that provides a classic granite or marble-like textured finished appearance.
5. SikaWall Chroma Finish: 100% acrylic polymer-based finish with integrated high performance colorants for superior fade resistance, compatible with base coat; LaHabra Finish color [ ] as selected; finish texture:
   a. F1.0: Utilizes uniformly sized aggregates for a uniformly fine texture.
   b. M1.5: Provides a uniform “pebble” appearance.
   c. R1.5: Has a medium “worm-holed” appearance which is achieved by the random aggregate sizes in the Finish. The “worm-holed” look can be circular, random, vertical or horizontal.
6. LaHabra Perma-Flex Stucco Finish: A 100% acrylic-based textured finish for stucco only.
   a. Finish texture and color as selected by the project designer.

2.03 ACCESSORIES

Trim: Casing bead, corner bead, expansion joint and weep screed accessories shall meet the requirements of ASTM C1063. Accessories shall be vinyl, meeting ASTM D1784; galvanized, meeting ASTM A525 and ASTM A526; or zinc, meeting ASTM B69. Vinyl or zinc accessories are recommended where highly humid or salt-laden service conditions exist. Refer to LaHabra’s *Stucco Wall Systems Lath and Trim Accessories* technical bulletin for additional information.

1. C-I Weep Track by Clark Dietrich or AMICO: For returning insulated stucco into doors windows, etc.
2. Foundation weep screed: Beveled edge designed to terminate finish system and drain internal moisture.
3. Casing bead: Square edge style.
4. Corner bead: Small radius nose style.
5. Control joints: W-shaped accordion profile style.
6. Expansion joints: [Two-piece slip-joint design] or [pair of casing beads spaced for application of sealant bead].

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify project site conditions under provisions of Section [01 89 00][ ].

B. Walls:

1. Substrates:
   a. Acceptable substrates are: PermaBase® Cement Board and other cement-boards conforming with ASTM C1325 (Type A-exterior); poured concrete/unit masonry; ASTM C1177 type sheathings, including, Weather Defense™ Platinum sheathing, GreenGlass® sheathing, eXP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, and DensGlass® exterior sheathing. DensElement (sheathing only); gypsum sheathing (ASTM C79/C1396); Exposure I or exterior plywood (Grade C/D or better); or Exposure I OSB, Huber Zip Sheathing (sheathing only). Consult the Sika Facades’ Technical Services Department for all other applications.
   b. Sheathings must be securely fastened per applicable building code requirements and manufacturers recommendations.
   c. When applying Finestop Air/Water-Resistive Barriers to concrete/unit masonry, verify concrete/unit masonry is free of dust, dirt, grease, oils, laitance, efflorescence, biological residue, existing paint or coatings, curing compounds, form release agents, or any other contaminants which might affect the bond. Masonry walls should be properly cured to full load bearing capacity, laid true, and with joints tooled. Properly prepared concrete will have an open texture similar to fine grit sandpaper.

d. Examine surfaces to receive system and verify that substrate and adjacent materials are dry, clean, and sound. Verify substrate surface is flat, free of fins or planar irregularities greater than 1/4" in 10' (6 mm in 3 m).

2. Flashings:
   a. All flashings are by others and must be installed in accordance with specific manufacturer's requirements. Where appropriate, end-dams must be provided.
   b. Openings must be flashed prior to window/door, HVAC, etc. installation. Refer to LaHabra Finestop published product data sheet and details for further information.
   c. Windows and openings shall be flashed per design and building code requirements.
   d. Individual windows that are ganged to make multiple units require continuous head flashing and/or the joints between the units must be fully sealed.
3. Roof: Verify that all roof flashings have been installed in accordance with the guidelines set by the Asphalt Roofing Manufacturers Association (ARMA).
4. Kick-out Flashing: Kick-out flashing must be installed where required. The kick-out flashing must be leak-proof and angled (min 100˚) to allow for proper drainage and water diversion. Refer to LaHabra Fastwall CI WaterMaster with Drain Mat wall system typical details.

C. Do not proceed until all unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Protect all surrounding areas and surfaces from damage and staining during application of LaHabra Fastwall CI WaterMaster with Drain Mat wall system.

B. Protect finished work at end of each day to prevent water penetration.

3.03 MIXING

General: No additives are permitted unless specified in product mixing instructions. Close containers when not in use. Prepare in a container that is clean and free of foreign substances. Do not use a container which has contained or been cleaned with a petroleum-based product. Clean tools and equipment with water immediately after use. Dried material can only be removed mechanically.

NOTE TO SPECIFIER: Keep only the products in this section which were selected in Section 2.02. Delete those not to be utilized.

A. Air/Water-Resistive Barriers:

1. Finestop RA/RS/VB: Mix with a clean, rust-free paddle and drill until thoroughly blended. Do not add water.

B. Stucco Base Coat:

1. SIKAWALL STUCCO BASE CONCENTRATE: Use mixer which is clean and free of foreign substances. Add approximately 3 gal. (11.35 L) of clean potable water, one bag of STUCCO BASE CONCENTRATE and approximately 60 lbs. (27.2 kg) of plaster sand to mixer. Mix for 3-4 minutes at normal mixing speed while adding an additional 140-180 lbs. (64-82 kg) of plaster sand and 1-3 gallons (3.8-11.35L) of water for workability. Total amount of sand needed per bag of STUCCO BASE CONCENTRATE equals 200-240 lbs. (91-109 kg). Allow material to set for 2-4 minutes and then remix adding water if necessary to achieve desired consistency. Desired consistency varies with type of application (trowel or gun), substrate (paper-backed lath or block) and whether the stucco is applied to a wall or a ceiling.
   Note: Continuous mixing may cause excessive air entrainment.
2. SIKAWALL STUCCO BASE SANDED: Use mixer which is clean and free of foreign substances. Add 1.3 gallons (4.9 liters) of clean potable water to mixer. Slowly add one bag of STUCCO BASE SANDED, mix until mixture becomes homogeneous, then add additional 0.2 gallons (.75L) of water. Mix at low speed for a minimum of 3 minutes, until the mixture is smooth. Desired consistency varies with type of application (trowel or gun), substrate (paper-backed lath or block) and whether the stucco is applied to a wall or a ceiling. Note: Continuous mixing may cause excessive air entrainment.
   NOTE: Do not overmix; never mix more than five minutes. Mix each batch for the same amount of time. Mix batches of the same size, using the same amount of water, to ensure consistency.

3. LAHABRA FASTWALL STUCCO CONCENTRATE**:** Start with approximately 3 gallons (11.35L) of clean potable water. And approximately 60 lbs. (27 kg) of the sand. Add 1 bag of LaHabra Fastwall Stucco Base Concentrate. Add remaining sand along with additional water- approximately 1-3 gal (3.8-11.3 L) for workability. The total amount of sand equals 2 ½ - 3 cubic ft (200-240 lbs or 91-109 kg). Allow the material to slake then break set. If needed, add water for workability.
4. LAHABRA FASTWALL STUCCO SANDED: Use approximately 1.5 gallons (5.6 L) water per 80 lb. (36 kg) bag. First, add approximately 90% of the needed water in the mixer, then add the LaHabra Fastwall Stucco Base Sanded. When the mixture becomes homogeneous, add the remaining water. Mix at low speed for a minimum of 3 minutes, until the mixture is smooth. Do not overmix; never mix more than five minutes. Mix each batch for the same amount of time. Mix batches of the same size, using the same amount of water, to ensure consistency.
5. LAHABRA FIBER-47 CONCENTRATE: Mix 5.5-6.5 gal. (20.5-24.5L) of water and 3-4.5 ft3 (240-360 lbs. or 109-163 kg) of sand that conforms to ASTM C926 requirements to each bag of LaHabra Fiber-47 Concentrate at the time of use. Mix at low speed for a minimum of 3 minutes, until the mixture is smooth. Do not overmix; never mix more than 5 minutes. Mix each batch for the same amount of time.
6. LAHABRA FIBER-47 SANDED: Add to plaster mixer 11/2-2 gal. (5.6-7.6L) of water for each 80 lbs. (36 kg) bag of LaHabra Fiber-47 Sanded to be mixed in a batch. Mixing water shall be cool potable at a uniform temperature above 40°F/5°C. Maintain same water parameters for all batches. Add LaHabra Fiber-47 Sanded to the mixer. Mix at low speed for a minimum of 3 minutes, until the mixture is smooth. Do not overmix; never mix more than 5 minutes. For hand applications, stop mixer and allow mix to slake for 8 minutes. Briefly re-mix for approximately 2 minutes before using.

C. SIKAWALL STUCCO SURFACE LEVELER: Mix and prepare each bag in a 5-gallon (19-liter) pail. Fill the container with approximately 1.3 gallons (4.9 liters) of clean, potable water. Add a full bag of Stucco Surface Leveler to the pail in small increments, mixing after each addition. Mix with a low speed drill and a rust-free paddle at 400-500 rpm until thoroughly blended. Add an additional 0.3 gallons (1.1 liters) of water to adjust workability (for a maximum of 1.6 gallons (6 liters)). Let mixture stand for 5 – 10 minutes then remix for 1 minute.

D. LaHabra Base Coat:

1. A/BC Base Coat: Mix base coat with a clean, rust-free paddle and drill until thoroughly blended, before adding Portland cement. Mix one part (by weight) Portland cement with one part base coat. Add Portland cement in small increments, mixing until thoroughly blended after each additional increment. Clean, potable water may be added to adjust workability.
2. A/BC 1-Step Base Coat: Mix and prepare each bag in a 19-liter (5-gallon) pail. Fill the container with approximately 1.5 gallons (5.6-liters) of clean, potable water. Add A/BC 1-Step base coat in small increments, mixing after each additional increment. Mix A/BC 1-Step base coat and water with a clean, rust-free paddle and drill until thoroughly blended. Additional A/BC 1-Step base coat or water may be added to adjust workability.

E. SIKAWALL STUCCO PRIME and TINTED PRIMER: Mix the factory-prepared material with a clean, rust-free paddle and drill until thoroughly blended. A small amount of clean, potable water may be added to adjust workability. Do not overwater.

F. Finishes:

1. PEBBLETEX, MAXLASTIC, PEBBLETEX TERSUS, PERMA-FLEX, CHROMA, and ENCAUSTO VERONA Finish: Mix the factory-prepared material with a clean, rust-free paddle and drill until thoroughly blended. A small amount of clean, potable water may be added to adjust workability. Do not overwater, 10 oz maximum.
2. SIKAWALL GRANITE & STONE Finish: Gently mix the contents of the pail for 1 minute using a low RPM ½" drill equipped with a mixing paddle such as a Demand Twister or a Wind-lock B-MEW, B-M1 or B-M9.

3.04 APPLICATION

A. Accessories:

Attach Window/Door Drip Edge level and per manufacturer's instructions.

NOTE TO SPECIFIER: Keep only the products in this section which were selected in Section 2.02. Delete those not to be utilized.

B. Finestop Air/Water-Resistive Barrier:

1. All sheathing joints and windows/openings must be protected and the Finestop air/water-resistive barrier applied in accordance with LaHabra published product data sheet and details.
2. Substrate shall be dry, clean, sound, and free of releasing agents, paint, or other residue or coatings. Verify substrate is flat, free of fins or planar irregularities greater than 1/4" in 10' (6.4 mm in 3 m).
3. Unsatisfactory conditions shall be corrected before application of the Finestop air/water-resistive barriers.
4. Apply the Sheathing Fabric and Finestop air/water-resistive barrier in accordance with the Finestop air/water-resistive barrier product bulletin.
5. Apply the MaxFlash in accordance with MaxFlash product bulletin.
6. Installed materials shall be checked before continuing system application.
7. Ensure SikaWall Sheathing Fabric, Finestop air/water-resistive barrier or MaxFlash overlaps the top flange of the starter track.
8. Installed materials shall be checked before continuing system application.

C. SikaWall Drainage Mat:

1. Apply Drainage Mat horizontally or vertically over Finestop Air/Water-Resistive Barrier ensuring it is free of wrinkles.
2. Abut all vertical and horizontal edges and secure Drainage Mat to substrate with sufficient building staples or galvanized nails to remain in place prior to application of insulation board.

D. Insulation Board:

1. Vertical Surfaces: begin at base of wall with firm temporary support.
2. Apply horizontally in running bond pattern.
3. Precut insulation board to fit openings and projections and install as a single piece around corners of openings. Stagger vertical joints and corners. Stagger insulation board and sheathing joints.
4. Abut all joints and ensure an overall flush surface.
5. With appropriate fastening system, temporarily secure insulation board with minimum two fasteners per board.

E. Trim:

Refer to LaHabra *Stucco Wall Systems Lath and Trim Accessories* technical bulletin.
NOTE TO SPECIFIER: It is the sole responsibility of the project design team, including the architect, engineer, etc., to ultimately determine specific expansion and control joint placement, width and design.

F. Lath: Install in accordance with all local code requirements, applicable standards and application procedures

1. PermaLath 1000: Apply with minimum 3” (76mm) overlap at vertical and horizontal edges and overlap on flange of trim accessories. PermaLath 1000 can be applied horizontally or vertically and should be applied such that it is flat and free of ripples, wrinkles, etc. Fastener system type appropriate for application and substrate. Fastener spacing 6” o.c. (152 mm) vertically and 16” o.c. (406 mm) horizontally. Apply selected SikaWall stucco base product within 60 days of PermaLath 1000 application.
2. Woven/Welded Wire Lath:
   a. Wire or lath shall be applied with minimum 1” (25 mm) end laps and side laps.
   b. Furring crimps shall occur at maximum 6” (152 mm) intervals each way.
   c. Refer to ASTM C1063 for additional fastening information.
3. Expanded Metal Lath
   a. The metal lath shall be applied with minimum 1/2” (13 mm) side laps and 1” (25 mm) end laps.
   b. When end laps occur between supports, lace or wire ties the ends of the sheets with 0.0475” (1.2 mm) galvanized annealed steel wire.
   c. Refer to ASTM C1063 for additional fastening information.

   NOTE: Supplemental fasteners, in the framing or sheathing, can be used to secure lath prior to application of SIKAWALL STUCCO BASE.

G. Stucco Base Coat:

1. SIKWALL or FASTWALL STUCCO BASE CONCENTRATE or SANDED ONLY: 3/8”-1/2” thickness (9.5-12.7 mm) application.

a. Following surface preparation and installation of the lath and accessories apply selected SikaWall stucco base mixture to the approved substrate by hand troweling or machine spraying to a thickness of 3/8" to 1/2" (9.5-12.77 mm), completely embedding the lath.
b. Use rod and darby to level the applied base coat without exposing the lath.
c. After initial set begins and surface has sufficiently hardened, use sponge or hard rubber float as required to fill voids, holes or imperfections, leaving the surface ready to receive LaHabra finish.
d. Damp cure for at least 48 hours by lightly and evenly fogging the surface with water at least twice a day. Direct sunlight, hot temperatures, low humidity and windy conditions may make additional fogging necessary.
e. Allow stucco base to cure a minimum of 6 days prior to application of EPS board shapes, acrylic base coats, STUCCO PRIME, TINTED PRIMER or LaHabra finish application.

2. LAHABRA FIBER-47, SIKAWALL or FASTWALL STUCCO BASE: 3/4"-7/8" thickness (19-22mm) application.
   a. Nominal plaster base coat thickness:
      i. First coat "scratch": 3/8" (9.5mm)
      ii. Second coat "brown": 3/8" (9.5mm)
   b. Apply selected SikaWall stucco base mixture to the approved substrate by hand troweling or machine spraying with sufficient force to develop full adhesion between the stucco base mixture and the substrate.
   c. Apply first coat to completely embed lath. Cross rake to provide key for second brown coat. Coat must be uniform in thickness. Ensure the first coat is properly "scratched" and sufficiently rigid to resist cracking prior to application and leveling of the second or "brown" coat.
   d. Dampen scratch coat, apply brown coat to provide the required total thickness. Trowel Stucco Base into trim to seat trim. The lath shall be fully embedded in the coating and shall be completely covered. Coat must be uniform in thickness. Rod off to desired thickness, leveled with screeds, to provide a true, flat plane. Follow this by wood floating or darbying the surface.
   e. After the surface has sufficiently hardened, use sponge or hard rubber float as required to fill voids, holes or imperfections, leaving the surface ready to receive LaHabra Finish.
   f. At subcontractor's option, the "double back" method of application, whereby the first and second coats are applied and cured as one system, may be used. If this system is used, the second coat (brown) should be applied as soon as the first coat is sufficiently rigid to resist cracking, the pressures of the second (brown) coat application and the leveling process.
   g. Damp cure for at least 48 hours by lightly and evenly fogging the surface with water at least twice a day. Direct sunlight, hot temperatures, low humidity and wind may make additional fogging necessary.
   h. Allow STUCCO BASE to cure a minimum of 6 days prior to application of EPS board shapes, acrylic base coat, SikaWall STUCCO SURFACE LEVELER, STUCCO PRIME, TINTED PRIMER or LaHabra finish application.

H. LaHabra Base Coat:

NOTE TO SPECIFIER: If specifying the use of reinforcing mesh, move on to the next step and delete H from this section of the specification.

1. Apply a skim coat of LaHabra base coat or Stucco Surface Leveler, approximately 1/16" (1.6mm) thick to properly cured "brown coat" of stucco base.
2. Allow to dry hard (normally 8 to 10 hours).

I. Base Coat / SikaWall SRT Mesh:

1. Base coat shall be applied to achieve reinforcing mesh embedment with no reinforcing mesh color visible. Apply mixed LaHabra base coat or Stucco Surface Leveler to entire surface of "brown coat" with a stainless-steel trowel to embed the reinforcing mesh.
2. Immediately place reinforcing mesh against wet base coat and embed the reinforcing mesh into the base coat by troweling from the center to the edges.
3. Ensure reinforcing mesh is continuous at corners, void of wrinkles and embedded in base coat so that no reinforcing mesh color is visible.
4. If required, apply a second layer of base coat to achieve total nominal base coat/reinforcing mesh thickness of 1/16" (1.6 mm).
5. Allow base coat with embedded reinforcing mesh to dry hard (normally 8 to 10 hours).

J. Decorative Shapes:

1. Apply mixed LaHabra base coat or Stucco Surface Leveler to entire surface of insulation board using a stainless-steel trowel with 1/2”x 1/2” (13mm x 13mm) notches spaced 1/2” (13mm) apart or 3/8”x 3/8” (10mm x 10mm) notches spaced 3/8” (10 mm) apart.
2. Immediately set shape into place and apply pressure over entire surface of board to ensure positive uniform contact and high initial grab. Do not allow base coat to dry prior to installing.
3. Abut all joints tightly and ensure overall flush level surface.
4. Check adhesion periodically by removing a shape prior to set. Properly installed shapes will be difficult to remove and LaHabra adhesive/base coat will be adhered to both the Stucco Base and the shape.
5. Fill 1/16” (1.6mm) and larger gaps between shapes with slivers of insulation board.
6. Allow application of shapes to dry (normally 8 to 10 hours) prior to application of base coat/reinforcing mesh.
7. Rasp flush any irregularities of the shapes greater than 1/16” (1.6 mm). Base coat/reinforcing mesh: base coat shall be applied to achieve reinforcing mesh embedment with no reinforcing mesh color visible.
8. For SikaWall SRT Mesh, apply LaHabra base coat or Stucco Surface Leveler to entire surface of insulation board with a stainless-steel trowel to embed the reinforcing mesh.
9. Immediately place reinforcing mesh against wet base coat and embed the reinforcing mesh into the base coat by troweling from the center to the edges.
10. Lap reinforcing mesh 2 1/2” (64 mm) minimum at edges and 3” (75 mm) minimum onto Stucco Surface Leveler or base coated stucco surface.
11. Ensure reinforcing mesh is continuous at corners, void of wrinkles and embedded in base coat so that no reinforcing mesh color is visible.
12. If required, apply a second layer of base coat to achieve total nominal base coat/reinforcing mesh thickness of 1/16” (1.6 mm).
13. Allow base coat with embedded reinforcing mesh to dry hard (normally 8 to 10 hours).

K. SIKAWALL STUCCO PRIME and TINTED PRIMER:

1. Apply primer to the base coat/reinforcing mesh with a sprayer, ⅜" (10 mm) nap roller, or good quality latex paint brush at a rate of approximately 150- 250 ft² per gallon (3.6–6.1m² per liter).
2. Primer shall be dry to the touch before proceeding to the LaHabra finish coat application.

L. LaHabra Finish Coat: PEBBLETEX, MAXLASTIC, PEBBLETEX TERSUS, PERMA-FLEX and CHROMA.

1. Apply finish directly to the base coat with a clean, stainless steel trowel.
2. Apply and level finish during the same operation to a minimum obtainable thickness consistent with uniform coverage. Maintain a wet edge on finish by applying and texturing continually over the wall surface.
3. Work finish to corners, joints or other natural breaks and do not allow material to set up within an uninterrupted wall area. Float finish to achieve final texture.

M. SikaWall Granite & Stone Finish:

1. Apply SikaWall Tinted Primer to the substrate in accordance with the current product bulletin. Primer shall be of the corresponding color for the selected finish color. Allow the primer to dry to the touch before proceeding with finish application.
2. Apply a tight coat of finish with a clean, stainless steel trowel. Maintain a wet edge on finish by applying and leveling continually over the wall surface.
3. Work finish to corners, joints or other natural breaks and do not allow material to set up within an uninterrupted wall area. Allow first coat to set until surface is completely dry prior to applying a second coat of finish.
4. Use a stainless-steel trowel and apply the second coat of finish. Achieve final texture using circular motions. Total thickness of finish may be between 1/16" (1.6 mm) and 1/8" (3.2 mm).

3.05 CLEANING

A. Clean work under provisions of Section [01 74 00] [ ].

B. Clean adjacent surfaces and remove excess material, droppings, and debris.

3.06 PROTECTION

A. Protect Stucco Base from rain, snow and frost for 48-72 hours following application.

B. Under average conditions [70 °F (21 °C), 50% Relative Humidity] finish will be dry within 24 hours. Drying time is dependent on humidity, air temperature, sun exposure, surface conditions and finish thickness. Lower temperature, higher humidity and application in shaded areas will extend drying time. Protect finish from rain or other precipitation and temperatures less than 40°F (4°C) for a minimum of 24 hours or until dry.

C. Protect installed construction under provisions of Section [01 76 00] [ ].

END OF SECTION

LaHabra Fastwall CI WaterMaster with Drain Mat Wall System

WARRANTY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates (“SIKA”), the user must always read and follow the warnings and instructions on the product’s most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com/lahabra or by calling SIKA Facades’ Technical Service Department at 1-800-589-1336. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product’s shelf life. User determines suitability of product for intended use and assumes all risks. User’s and/or buyer’s sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS. Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at https://usa.sika.com/.

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