

**1. ARC 100 METAL ROOF
RESTORATION SYSTEM SPECIFICATION**

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**1. ARC - 100
METAL ROOF RESTORATION SYSTEM SPECIFICATION**

1.1 GENERAL

A.1.1 Description

1.1.1 General - This specification includes installation of the ARC - 100 liquid applied SEBS roof coating system to inhibit rust and to waterproof and restore the performance of metal roofs. The process protects the metal, seals seams and fasteners, and extends the useful life of the roof. The system includes waterproofing all metal roof panels, flashing, penetrations, joints, valleys and ridges, and junctions related to the roof. Good roofing practices must be used at all times with these specifications.

1.1.2 Inclusions - Included in the system are labor, materials, equipment, accessories, and related services to complete the application in accordance with requirements established by ARC.

B.1.2 Quality Assurance

1.2.1 Manufacturer Qualification- ARC will furnish upon request certification that the materials meet the requirements as stated in the specification.

1.2.2 Contractor Qualifications - All work is to be performed by an approved certified ARC applicator.

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1.2.3 Deviations - No deviation from this specification will be allowed without prior written authorization by ARC.

1.2.4 Inspection - Upon completion, roof will be inspected by an ARC Technical Department representative to ensure compliance with specifications and details.

C.1.3 Submittals

The contractor must submit required data sheets application guidelines, details, and other required literature. For issuance of ARC - 100 System Warranty, submittal of Forms DW 1-10 Exhibit "A" and Exhibit "B" must be made out and sent to ARC.

D.1.4 Product Delivery Storage and Handling

The following apply to the delivery, storage, and handling of the ARC - 100 Roofing System.

1. The contractor should deliver all material in original, unopened packages and containers.
2. Containers will be labeled by the manufacturer with manufacturer name, product name, description and identification.
3. Materials should be stored in a dry area above 40°F and protected from moisture.
4. Any materials damaged in handling or storage must not be used.
5. A MSDS, (Material Safety Data Sheet, Exhibit1-2), should be available from the applicator for each product specified. MSDS and Product Data Specifications should be consulted for each product used prior to beginning of work.
6. When spot loading the roof, the weight of materials should not exceed the acceptable live load of the structure.

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E.1.5 Job Conditions

The following job conditions must be accounted for:

1. Mechanical equipment, vents, skylights, etc., should be in place prior to beginning the roof work.
2. Coatings should be protected from traffic and other abuse until they are completely installed and cured.
3. Surfaces of unrelated areas should be protected from coating and the possibility of overspray. Application of coating may require some masking or erection of wind screens to contain the coating.
4. Application of coating is approved only on clean, dry surfaces. In planning work, environment and weather-related conditions such as wind, rain, frost, dew, condensation and humidity should be considered.
5. Safety equipment such as safety belts and lead lines should be provided where roof conditions warrant their use. A wet surface or a surface that is not thoroughly cured can be very slippery. All work environments must comply with current OSHA.

F.1.6 Warranty

- 1.6.1 Manufacturing Defects** - ARC warrants that materials provided are free from defects in manufacturing. ARC will replace any material found to be defective prior to roof installation.
- 1.6.2 Limited Warranty** - ARC Limited Warranty is available through approved contractors. ARC should be consulted for details of the warranty program.
- 1.6.3 Previously Coated Roofs** - Consult ARC on previously coated metal roofs. (Asphalt Aluminum Coatings and low grade Acrylic Coatings requires ARC Consulting.)

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1.2 PRODUCTS

A.2.1 General

2.1.1 Supplier - All components of the coating system are to be supplied or approved by ARC. All materials are FOB Factory unless otherwise approved by ARC.

2.1.2 Applicability- The specifier and/or contractor shall be responsible for determining the applicability or suitability of all materials specified in the application.

B.2.2 Primer

ARC SEBS Rust Stop Primer is used to prime rusted areas.

C.2.3 SEBS Coating

1. The SEBS Elastomeric roofing membrane is a thermoplastic SEBS resin as manufactured by ARC and is designed to be applied in a minimum of two passes (coats).
2. SEBS Seaming Grade, SEBS Flashing Grade, SEBS Caulk Grade and SEBS Coating or Paint may be applied in cold weather. For more information consult ARC.

D.2.4 Other Related Materials from ARC.

Related materials available from ARC include:

- * ARC SEBS RUST STOP SB
- * ARC SEBS SEAMING GRADE SB
- * ARC Polyester Reinforcement Fabric 4".
- * ARC Polyester Reinforcement Fabric 20".
- * ARC Butyl-backed Polyester Tape
- * ARC SEBS Flashing Grade SB
- * ARC SEBS CLEAR SKYLIGHT SB
- * ARC SEBS STAIN BLOCKER SB
- * ARC SEBS White Coating (Paint) SB

Note: Refer to *Product data Specifications for additional information and detailed instructions on each product.*

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1.3 APPLICATION

A.3.1 Substrate Inspection

3.1.1 General- An acceptable substrate should be provided to receive the ARC -100 Metal Roof Restoration System prior to any roofing work. Surfaces should be dry, clean and free of any loose debris. All surface defects and structural repairs shall be made in accordance with the metal roof manufacturer's specifications prior to any roofing. An adhesion test for the coating to the metal may be required if the existing roof condition is questionable.

3.1.2 Fastener - The roof deck should be walked to detect loose or missing fasteners. These should be replaced with oversized screws and new neoprene washer.

3.1.3 Panel - Rusted through or excessively rusted panels should be replaced. Check "TRUE STANDING SEAM" for correct crimping. Re-crimp as needed or see D.3.4.7!

B.3.2 Cleaning

The metal should be cleaned of loose rust and contaminants that affect adhesion. A wire brush and/or pressure washer (3000 psi) should be used to clean the surface. Trisodium phosphate (TSP) should be used to clean where fats and oils are present on the metal.

Galvanized metal surfaces may require an acid etch to remove process oils which may interfere with proper adhesion of the coating. The acid solution must be thoroughly rinsed from the roof.

C.3.3 Priming

3.3.1 Coverage- Screw heads or areas containing rust should be primed with the ARC SEBS Rust Stop Primer at a rate of 300 sq. ft. per gallon. One coat should be sufficient for most surfaces. Sufficient drying time, normally 2 to 4 hour should be allowed before applying the SEBS Sealant.

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3.3.2 Recoating - If necessary, a second primer coat may be applied in 2 to 4 hours under normal conditions. Recoating should be completed within 24 hours of the initial application.

3.3.3 Thickness - Dry primer film thickness should be 2.0 mil nominal.

D.3.4 Flashing of Seams, Fasteners, and Penetrations

The following steps should be followed for flashing seams, fasteners, and penetrations.

1. After rust areas are primed, all vertical and horizontal seams should be taped with ARC Polyester reinforced 4" wide fabric. A liberal amount of SEBS coating should be applied over seams with a soft paint brush the width of the SEBS coating application should be equal on each side of the seam and at least 2 in. wider than the 4" tape. The tape should be firmly embedded into the wet SEBS coating and smoothed out with a soft brush to eliminate fish-mouths and wrinkles. Self-adhering ARC butyl-backed polyester tape or Liquidfiber may be used instead of the ARC polyester fabric to reduce labor costs. Prime seam with ARC Acrylic Primer prior to application of self adhering ARC butyl-backed polyester tape.
2. A top coat of SEBS Seaming Grade should be applied to the ARC Polyester reinforced 4" fabric or butyl-backed polyester tape at a rate of three gallon per 100 sq. ft. Check and correct air pockets and wrinkles if any by cutting and coating with SEBS sealant.
3. Fasteners should be coated with SEBS Flashing Grade SB applied at 30 wet mils over fastener heads extending 1 inch in all directions to encapsulate the fastener head. Self adhering butyl disc with use of special tool may be used with ARC SEBS Flashing Grade SB. First apply disc then SEBS sealant or use Liquidfiber.
4. Penetrations should be sealed using the ARC Polyester reinforced 4" fabric embedded in a wet base coat of SEBS coating according to the applicable ARC flashing details. See details for flashing requirements. Cover over 4" polyester with ARC SEBS Flashing Grade SB at 3 gallons per 100 sq. ft or Liquidfiber.
5. Skylights should have the edges sealed with ARC reinforced Polyester 4" fabric embedded in a wet base coat of SEBS sealant brushed in and free of wrinkles and top coated for complete adhesion. Coat over polyester with ARC SEBS Flashing Grade SB or SEBS Seaming Grade SB at 3 gallons per 100 sq. ft. Skylight screw heads should be coated using the same procedure described for fasteners on the roof panel.

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ARC butyl tape is an alternative to ARC Polyester 4" polyester fabric. Use Acrylic Primer as stated in #4 above. If skylights are weathered, a two coat application of SEBS clear may be applied.

6. True Standing Seams that are improperly crimped are to receive ARC Acrylic Primer at 1 gallon per 100 sq. ft.. Allow to dry 2 - 4 hours. Apply self adhering ARC butyl-backed polyester tape on the improper crimped seam. Apply SEBS Flashing Grade SB at 3 gallons per 100 sq. ft. (36 wet mils) over tape or use Liquidfiber. Allow to dry/cure 48 hrs.
7. Refer to special flashing situations (i.e, hot stacks) to ARC Technical Department

NOTE: *ARC does not require taping of vertical seams on a true standing seam metal roof. Consult ARC Technical Department if you have questions.*

E.3.5 SEBS Base Coat

3.5.1 Application Rate and Method - The base coat should be applied over the entire roof surface including seams, flashings, and penetrations at a rate of 1 ½ gallons per 100 sq. ft.. Application can be accomplished using a brush/roller, or by spraying.

3.5.2 Drying Time - Drying time under normal conditions is 6 to 12 hours. At least two hours of drying time should be allowed before rain. Drying time is a function of temperature and humidity, which must be factored into the application decision.

3.5.3 Thickness - Base coat thickness should be ten (10) to twelve (12) mils dry. Base coat available in gray but comes standard white.

F.3.6 SEBS Finish Coat

3.6.1 Wait Time - The finish coat should be applied using the same procedure and cautions used above after a minimum cure of the base coat of 48 hours. If more than 7 days occurs between base coat and finish coat, wash roof again. If any dirt has collected on roof then remove these dirt areas.

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3.6.2 Drying Time - Drying time of the finish coat will be longer than that of the base due to lowered surface temperature of the roof following application of the base. This should be factored into the application decision.

3.6.3 Application and Thickness - Finish coat thickness should be ten (10) to twelve (12) mils dry. Apply 1 ½ gallons per 100 sq. ft. of finish coat using brush, roller, or sprayer.

1.4 SYSTEM QUALITY CONTROL

A.4.1 Finished Membrane

4.1.1 Overall -The completed membrane should be uniform throughout with no holes, blisters, or thin spots.

4.1.2 Thickness - The minimum complete dry film thickness should be 20 to 24 dry mils over the roof surface with the fabric-reinforced seams at 65 to 85 dry mils. Additional coating will cause film thickness to increase. This will cause no adverse performance.

4.1.3 Flashings - Flashings should be free of voids, uniformly adhered to the penetration and properly terminated, using an approved termination detail. (See Details at the end of this section).

B.4.2 Inspection and Warranty

The following represent steps in the warranty process.

1. Prior to starting work, the contractor must submit form DW 1-10, Exhibit "B".
2. During the progression of work, contractor is to send in Form 1-4 and roof sketch.
3. A technical representative of ARC will inspect the roof for compliance.
4. The owner is to send in Exhibit "A" at start and Exhibit "D". Upon ARC acceptance of all paper work, warranty will be issued.

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1.5 PROTECTION AND CLEAN UP

A.5.1 Protection

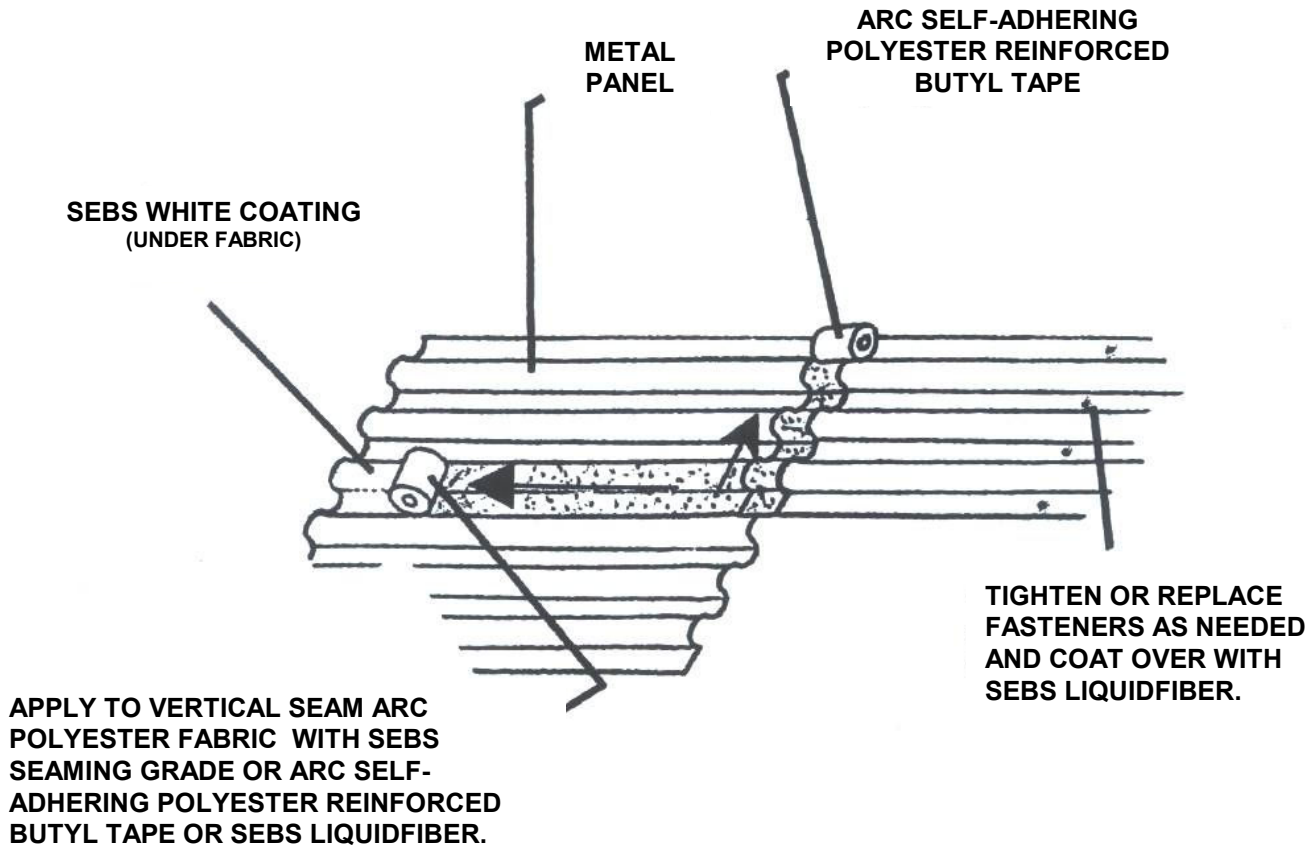
The roof system and all components must be protected from other trades at the job site. In the event of damage to the system, such damage must be repaired in accordance with ARC - 100 "DW 1-10" Warranty Exhibit "C" and Form 4.

B.5.2 Clean Up

Site clean up is the responsibility of the roofing contractor. All debris, containers, materials, equipment, and protection of material must be removed from the site and properly disposed. The condition of all work stations and staging areas must be acceptable to the owner before the job is considered complete.

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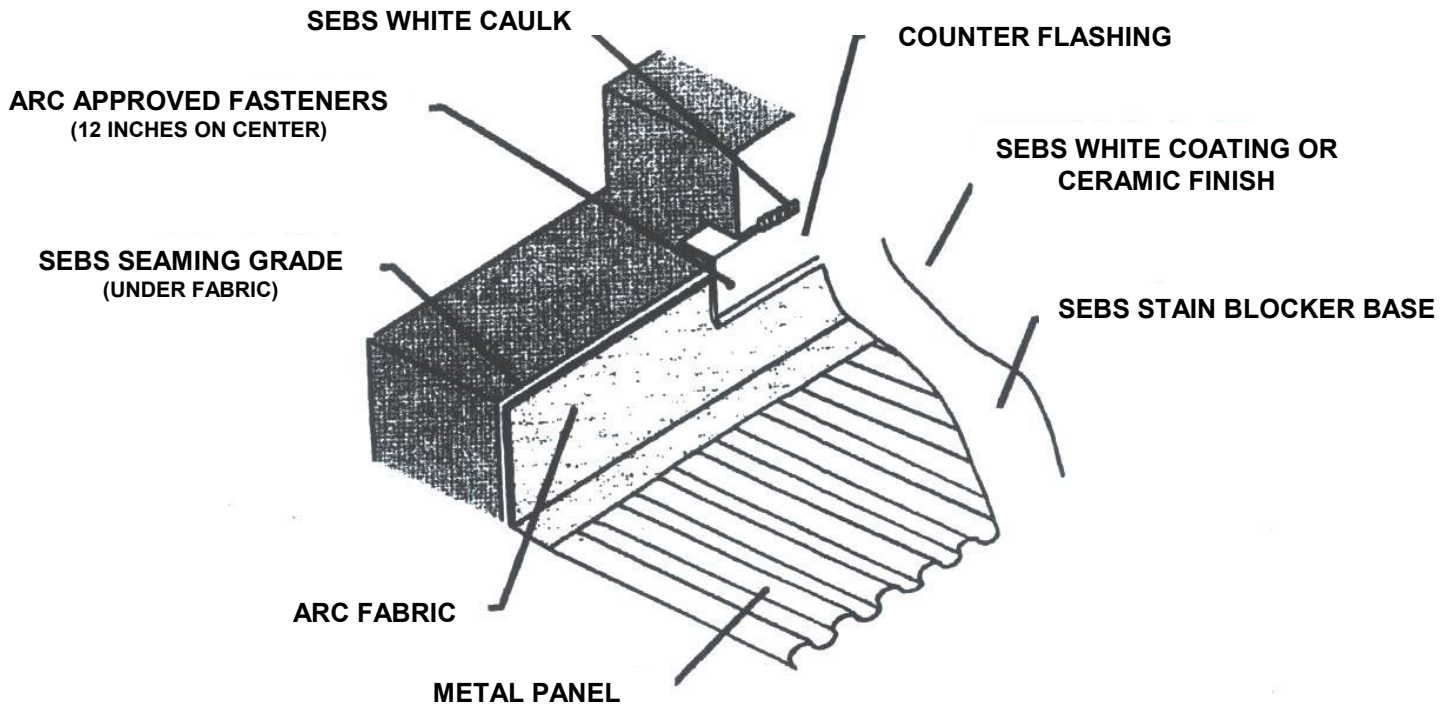
Seam Detail



NOTE:

1. Details to be used in conjunction with specification containing requirements for installation procedures and coverage rates.
2. After roof surface has been cleaned, rust primed, penetrations flashed, seams properly taped and fasteners dabbed, a coat of SEBS Seaming Grade must be applied to these areas.

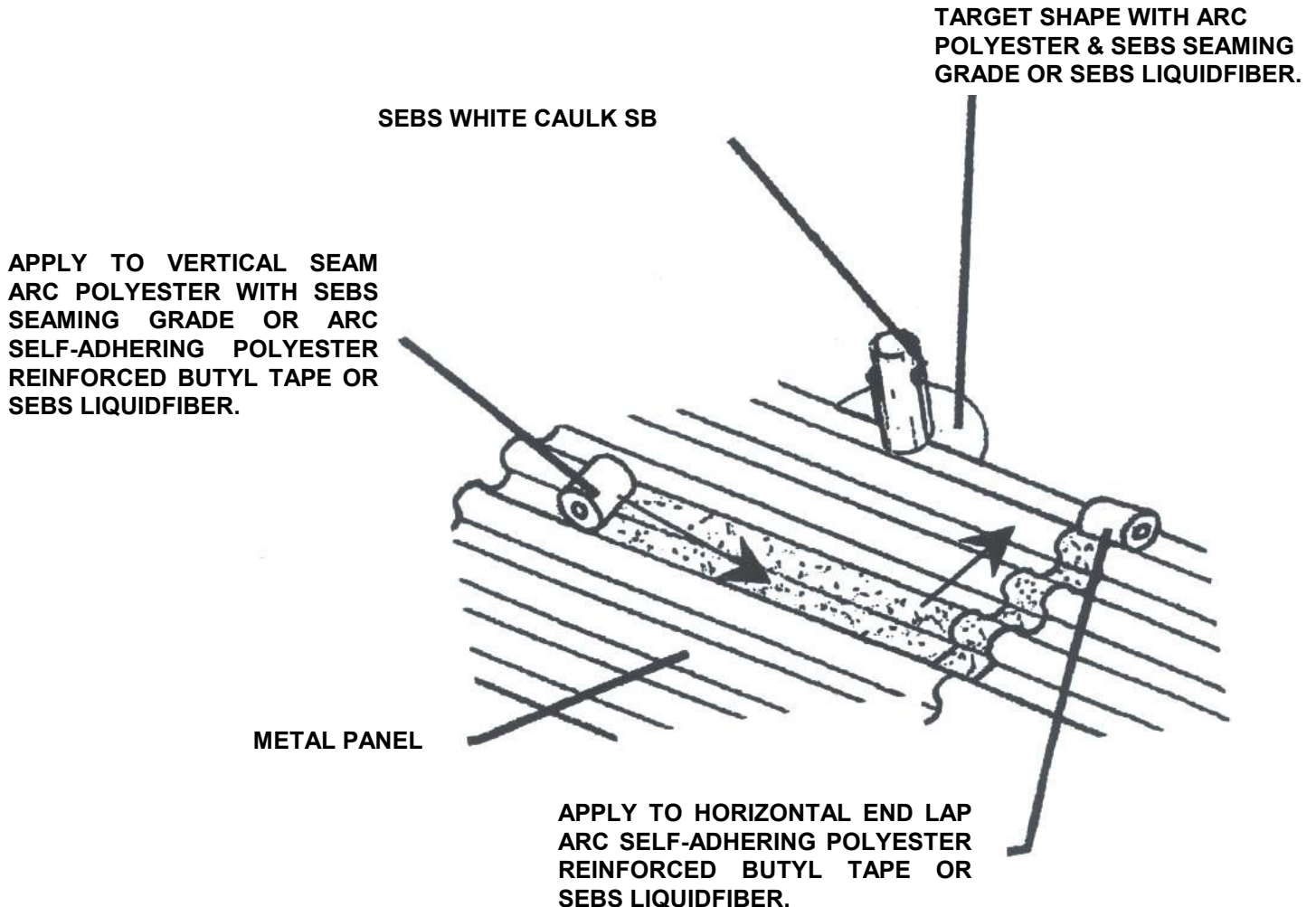
Wall Detail



NOTE:

1. Details to be used in conjunction with specification containing requirements for installation procedures and coverage rates.
2. After roof surface has been cleaned, rust primed, penetrations flashed, seams properly taped and fasteners dabbed, a base coat and finish coat of SEBS must be applied to the metal surface of a combined total of 3 gallons per 100 squares (22 to 26 mils dry).
3. If no counter flashing exists, consult ARC Tech Department for the appropriate termination.

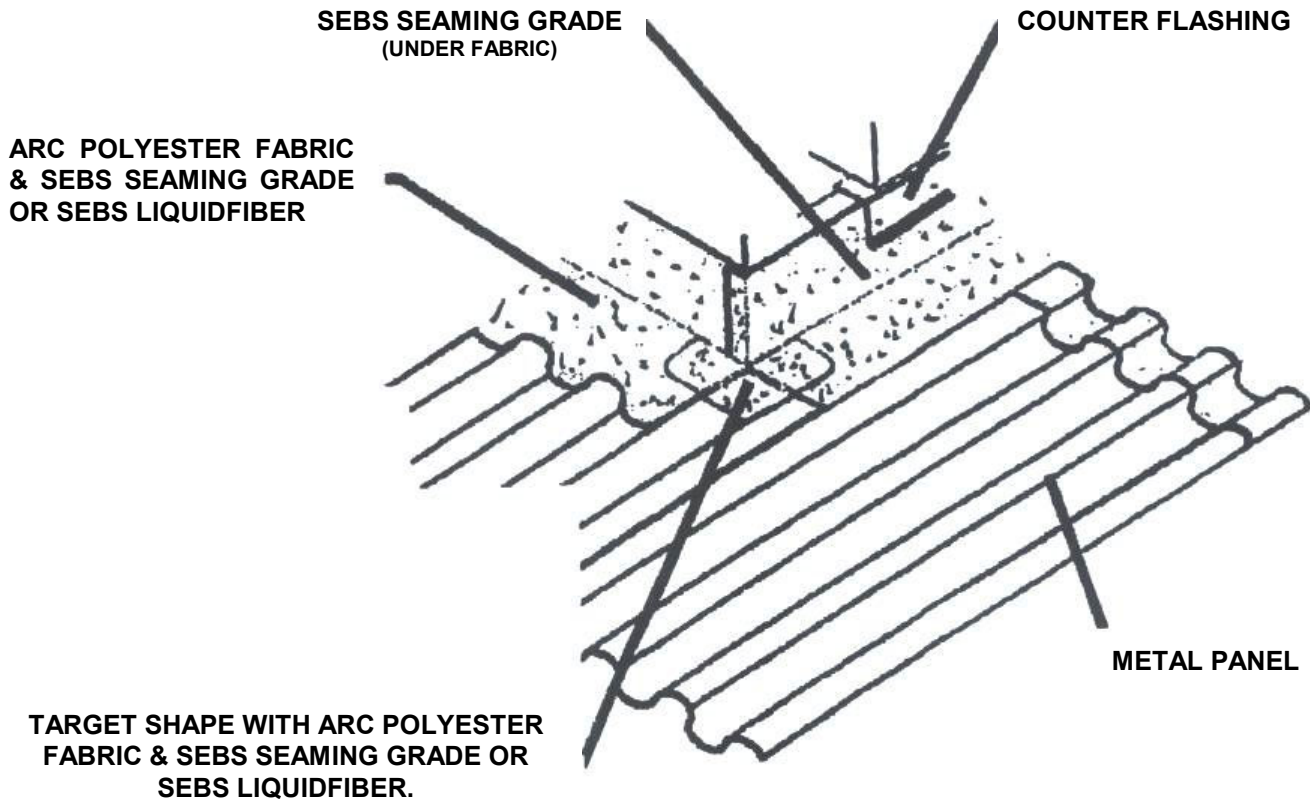
Pipe Detail



NOTE:

1. Details to be used in conjunction with specification containing requirements for installation procedures and coverage rates.
2. After roof surface has been cleaned, rust primed, penetrations flashed, seams properly taped and fasteners dabbed, a base coat and finish coat of SEBS must be applied to the metal surface of a combined total of 3 gallons per 100 squares (22 to 26 mils dry).

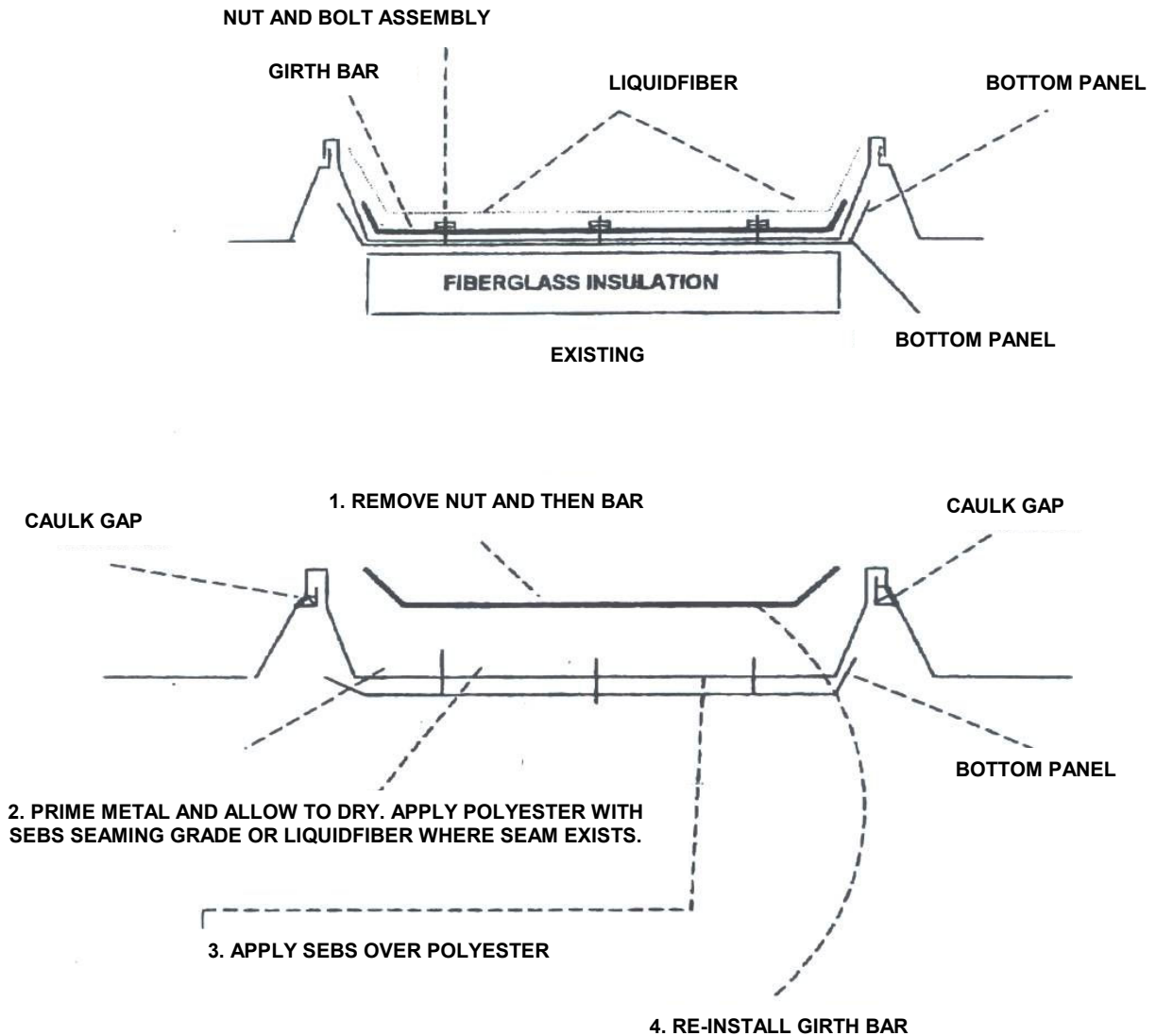
Curb Detail



NOTE:

1. Details to be used in conjunction with specification containing requirements for installation procedures and coverage rates.
2. After roof surface has been cleaned, rust primed, penetrations flashed, seams properly taped and fasteners dabbed, a base coat and finish coat of SEBS must be applied to the metal surface of a combined total of 3 gallons per 100 squares (22 to 26 mils dry).
3. If no counter flashing exists, consult ARC Tech Department for the appropriate termination.

Girth Bar Detail



**PROPOSED FLASHING
FOR SAMS CLUB #8214**

NOTE:

1. Details to be used in conjunction with specification containing requirements for installation procedures and coverage rates.
2. After roof surface has been cleaned, rust primed, penetrations flashed, seams properly taped and fasteners dabbed, a base coat and finish coat of SEBS must be applied to the metal surface of a combined total of 3 gallons per 100 squares (22 to 26 mils dry).

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