

GUIDE SPECIFICATIONS

**SECTION 07-10-10
BLACK PEARL BLINDSIDE VERTICAL BP-2-BS-V
COLD RUBBERIZED ASPHALT WATERPROOFING
INSTALLATION ON SHEET PILINGS, PLYWOOD, LAGGING,
TIMBER SHORING AND OTHER BLINDSIDE APPLICATIONS**

PART 1 - GENERAL

1.01 RELATED SECTIONS

Section 02 41 19	Demolition
Section 04 01 00	Masonry Repair
Section 06 10 00	Carpentry
Section 07 60 00	Sheet Metal
Section 07 72 00	Accessories
Section 07 92 00	Caulking and Sealants

Edit to project
conditions

1.02 SUBMITTALS

- A. Submit Manufacturer's written approval or license of Applicator for installation of the herein specified roofing system.
- B. Submit Manufacturer's sample Warranty and Manufacturer's Intent to Warranty Certification for this project.
- C. Submit most recent copy of Manufacturer's literature applicable to products and specifications to be used, as specified herein, including applicable flashing details.
- D. Submit three sheet samples each, of ply sheet and flashing sheet, approximately 8 inches x 10 inches.
- E. Submit, certification from the primary Manufacturer, properly attested, stating that all materials being supplied comply with the specifications and requirements of the contract documents, including conformance to all federal, state and local building codes including United States Code, Section 41:10, Subsections a-d, popularly known as the "Buy American Act".

1.03 QUALITY ASSURANCE

- A. All the materials specified herein are cited as a minimum standard of quality and shall not preclude consideration of equal or superior materials. All suggested "equivalent materials" or other substitutions are to be submitted to the Architect for consideration a minimum of ten (10) days prior to bid date. Submittal shall include all evidence of compliance or superiority of material from the proposed substitute Manufacturer. If accepted by the Architect, an addendum will be issued to all bidders for their consideration of the proposed substitute Manufacturer. Determination of equivalency of all substitutions shall rest exclusively with the Architect and such decision shall be final.
- B. Contractor shall have a minimum of five (5) years documented experience in the application of similar waterproof systems. Lack of proficiency as shown by past work under other contracts which, in the sole judgment of the Owner, might hinder or prevent the prompt completion of additional work, if so awarded, or involvement in any legal actions which relate to past or present performances shall be sufficient cause to reject any bid offer.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to jobsite on pallets. Package labels shall indicate material name, production date and product code.
- B. Store materials in dry, protected areas in horizontal cartons as shipped. Control temperature of storage areas in accordance with Manufacturer's instructions. Protect moisture sensitive materials with breathable tarps on sides and top surfaces.

1.05 PROJECT CONDITIONS

- A. Follow local, state and federal regulations, safety standards and codes. When a conflict exists use the stricter requirements.
- B. Do not apply waterproofing materials if substrate is dirty, contaminated or when water is present on the surfaces to be waterproofed.
- C. Application can be made to 0°F, however workmanship standards tend to diminish below freezing temperatures and require extra supervision.

1.06 CODE COMPLIANCE

It shall be the Contractor's responsibility to ensure that the work on this project shall be in compliance with applicable safety code requirements, including obtaining any required permits prior to the start of the Work.

1.07 WARRANTY

Prior to project close out, the Contractor shall submit the Manufacturer's pre-approved Material Warranty.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

The Barrett Company is set forth as the referenced standard of quality. Other manufacturers of equal or better quality may request approval in conformance with specification requirements. Architect approved equals remain subject to all specification requirements.

2.02 WATERPROOFING MATERIALS

A. Waterproofing Membrane System:

Project Specification minimum standard of quality as set forth in Barrett Company Black Pearl BP·2·V·BS specification or approved equal as noted above, in strict compliance with the following minimum specifications.

Materials required per 100 sq. ft. of area:

Black Pearl Waterproofing Membrane (BP•WM)	2 plies
Black Pearl Primer and Adhesive (BP•PA)	2.75 to 3 gals. (approx.)

1. Black Pearl Reinforcing Membrane shall comply with requirements set forth in ASTM D-6769 in addition to the following minimum specifications. The Reinforcement Fabric shall be polyester fortified with fiberglass set in the machine direction.

<u>TEST</u>	<u>METHOD</u>	<u>TYPICAL TEST RESULTS</u>
Reinforcement Basis Weight	ASTM D-3776	140 gm/m ²
Sheet Thickness	ASTM D-1777	50 mils
Tensile Strength, lbf	ASTM D-4830	75 lbf/in.
Elongation, %	ASTM D-4830	26 MD, 28 XD
Tear Strength, lbf	ASTM D-4830	30 MD, 27 XD
Fatigue Life	ASTM D-8B	>10,000 cycles

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2. Elastomeric Primer•Adhesive: Black Pearl Primer•Adhesive (BP•PA) shall comply with the requirements set forth in ASTM D-6769 and the following minimum specifications:

<u>TEST</u>	<u>METHOD</u>	<u>TYPICAL TEST RESULT</u>
Softening Point of bitumen Component	ASTM D-36	160°F
Solids content	ASTM D-3236	55% min.
Penetration (dmm)	ASTM D-5	30 dmm
Elongation @ 77°F min	ASTM D-412	100%
Tensile & adhesive	ASTM D-1004 DIE C	>1,000 psi avg.
Ductility 77°F	ASTM D-113	40 cm
Low Temp Flexibility	ASTM D-3111	-10°F min.
Solubility	ASTM D-2024	99% min.

B. Related Materials:

1. Non-hardening Butyl Tape shall be “Black Pearl” extruded butyl tape or approved equal, 1/8 inch thick in widths as required for the application.
2. Protective Flashing Sheet for exposed conditions; **RAM** 306 granular surface SBS sheet shall comply with ASTM D-6164, Grade G, Type I, minimum specifications.
3. Pipe Flashings shall be 0.018 thick stainless steel installed in accordance with standard SMACNA and NRCA details or standard Black Pearl flashing details. All round openings must be sleeved.
4. Pipe flashing interior closure shall be “Link Seal” with sleeves fully grouted.
5. Flashing Mastic: **RAM** Mastic trowel grade SBS modified cold process cement shall comply with ASTM D-4586 Type I.
6. Nails and Mechanical Fasteners: As specified by the fastener Manufacturer for specific application and approved by membrane Manufacturer. Provide 2 ply staggered Black Pearl stripping plies covering any fasteners penetrating the waterproofing.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Condition of Surface: all projections shall be cut off and all depressions filled with epoxy concrete grout or other structural materials. All support-of-excavation (SOE) devices encountered must be detailed on the shop drawings for the manufacturer's approval and architectural review. All rakers, walers, tie-backs and other support devices shall be fully boxed out with stainless steel sheet metal.

Where lagging is installed behind soldier piles the lagging must be boarded out with plywood or expanded polystyrene board (EPS) or a combination of both. All pipes and conduits shall have "link-seal" modular seals between the sleeve and pipe.

Before commencing work, examine all areas and report in writing to Architect and manufacturer any conditions that will adversely affect successful installation. Do not begin work until the conditions have been addressed and corrected.

It is critical to maintain continuity of waterproofing to ensure the integrity of the waterproofing membrane will be maintained.

3.02 APPLICATION

A. Waterproofing Membrane:

1. Installation of Black Pearl Membrane Flashing is required at all flashing conditions including footings, box-outs, changes of plane, all joints and cracks and all penetrations such as pipes, rebar and conduits before proceeding with primary wall waterproofing. All flashings are installed in a 2 layer redundant configuration prior to the vertical field of the wall membrane being installed.
2. Start detailing installation with a full coating of BP Primer•Adhesive applied at the standard rate of 1.5 gallons per 100 square feet at flashing conditions and allow to dry to tacky condition. Install the first ply of BP Membrane a minimum of 6 inches beyond the corner or penetration in each direction. The succeeding flashing ply shall extend at least 4 inches beyond the underlying ply on one side and shall be adhered to the previous reinforcement layer with additional BP Primer•Adhesive applied at the same rate.
3. Follow the standard details of ASTM D-5898 and Barrett standard BP details unless otherwise required by the manufacturer or designer. All laps are to be inspected and completely sealed with BP Primer•Adhesive and all flashing reinforcement shall be rubbed or rolled into place with a squeegee or silicone roller.

4. Start the Black Pearl Primer•Adhesive application over the field of the walls after completing all detail work for contiguous work area. Begin installation of BP Waterproofing Membrane at the bottom of the walls unless otherwise approved by the manufacturer.
5. Apply Black Pearl Primer•Adhesive (BP•PA) at a rate of 1.5 gals. per 100 square feet and allow to dry to a tacky condition before installing the first layer of Black Pearl Membrane (BPM) vertically to the appropriate height, generally 5 to 6 feet high per lift. Apply only as much adhesive as can be covered with membrane before the adhesive loses its tack.
6. Lap all edge seams a minimum of 3 inches and stagger all end laps a minimum of 6 inches. Continue the membrane 4 inches out over any horizontal surfaces.
7. When installing the membrane rub the membrane into place with a stiff broom or a squeegee. Total contact with all substrates is required. No “bridging” or unadhered membrane is acceptable.
8. Before installing second sheet ensure the first sheet has sufficiently cured. Temperature and humidity will impact curing times. If movement of the sheet is apparent, wait until sheet is firmly set.
9. Start installation of the second ply with application of BP Primer•Adhesive at the rate of 1 to 1.25 gallons per 100 SF. Allow adhesive to reach tack set. Extend the sheet 4 inches beyond the bottom termination and seal the bottom edge with BP Primer•Adhesive. At the top of the sheet stop the sheet 3 inches below the underlying sheet. Offset the side laps from the first ply by half a sheet width and end laps by 6 inches. Proceed with each lift in same manner until reaching the top of the wall.
10. At the top of the membrane seal the sheet with a heavy top coat of BP Primer•Adhesive and seal all vertical laps with BP Primer•Adhesive.
11. Heat seal all terminations at top and bottom with a Liester Hot Air Gun. Coat the Final upper termination with a 12 inch width of Ram Mastic applied at approximately a 125 mil thickness.
12. If an electric field vector mapping (EFVM) survey is to be conducted, it shall occur at this time.

B. Protection:

The concrete wall should be poured within one week of Black Pearl blindside waterproofing work installation. When the concrete is poured it should be directed against the form boards, not against the waterproofing.

If the waterproofing is exposed for a longer period of time, coat the top course with a thin layer of BP Primer•Adhesive at the rate of 1 gal. per 100 SF. This top coating shall not exceed 30 days exposure.

3.03 FIELD QUALITY CONTROL

A. Material usage and adhesion shall be monitored by the Installer's Quality Control Representative every hour throughout the application process. Provide observation reports to Architect and manufacturer on a weekly basis accompanied with relevant photographs.

B. Correct deficiencies in waterproofing, if any, as prescribed by material Manufacturer, Quality Control Observer, or the Architect.

3.04 CLEANING

A. Remove equipment, trash, debris and any excess material from the jobsite.

B. Repair any damage and remove any stains caused by work of this Section.

3.05 PROTECTION

General Contractor and the Owner shall protect finished waterproofed areas from damage during subsequent construction and shall be monitored by the waterproofing contractor's Quality Control Representative to assure the waterproofing remains undamaged.

MAINTENANCE:

For Exposed Applications and Roof Systems Only

Semi-annual inspections and a systematic maintenance program are recommended to the Owner and Architect. Consult your Barrett Representative or Barrett Approved Applicator for further information

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