



Protecto  
Wrap®



***Waterproofing Systems***

**(800) 759-9727**

**Protecto Wrap Company**

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[www.protectowrap.com](http://www.protectowrap.com)



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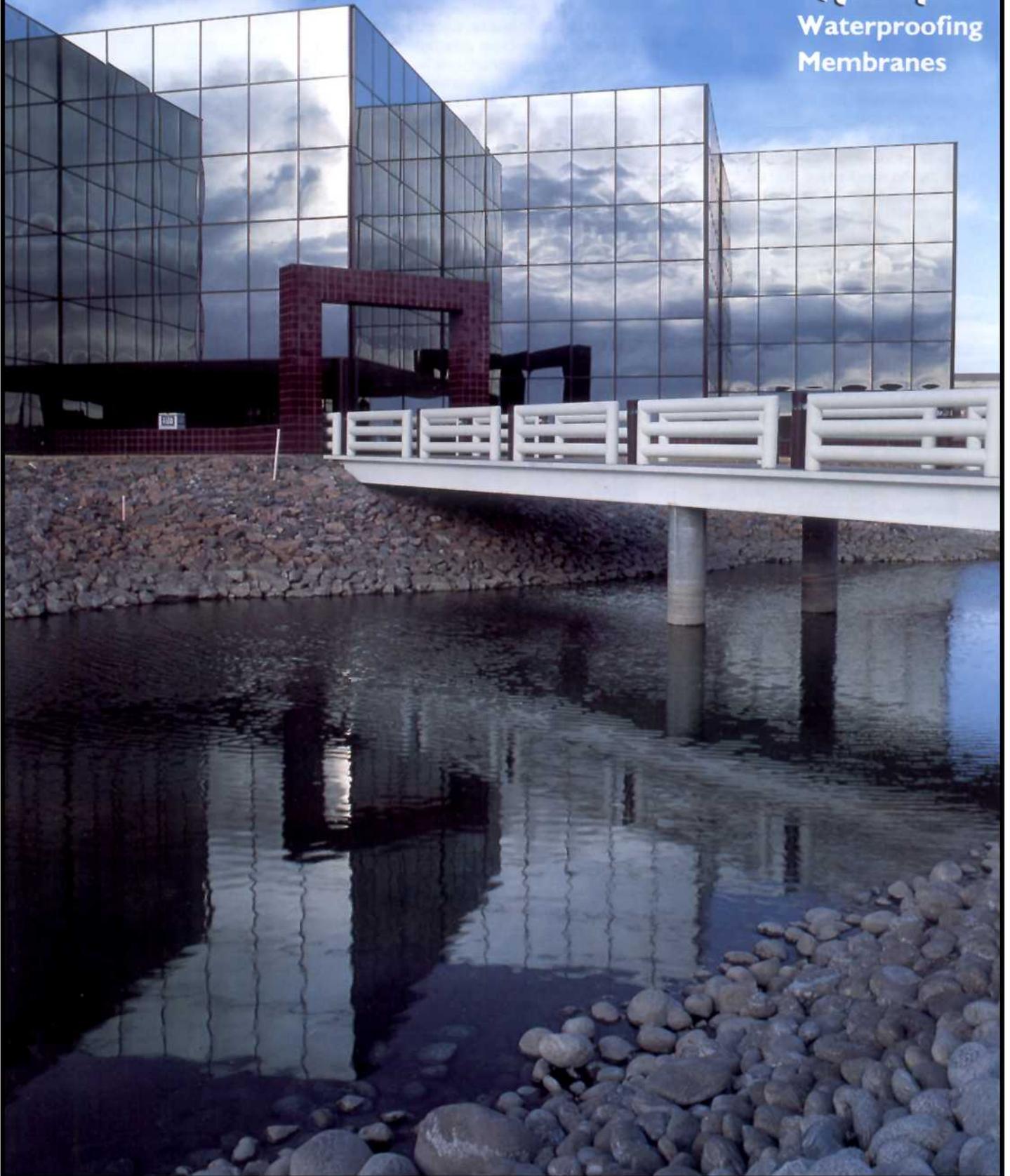
**Protecto  
Wrap**

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**Waterproofing Membranes**

# Protecto Wrap

Waterproofing  
Membranes



# Membrane Application

## Compatibility:

Jiffy Seal is compatible to asphalts and most urethanes. If there are any questions about product compatibilities, contact a Protecto Wrap representative before applying Jiffy Seal in such applications.

## Advantages:

1. Jiffy Seal installed is environmentally safe and meets NIOSH/OSHA manufacturers standards and regulations.
2. Jiffy Seal is reinforced, giving our system superior puncture resistance and strength over other sheet membranes.
3. Jiffy Seal membranes are inert, inorganic and will never rot, decay or be effected by bacteria/fungus.
4. When properly applied Jiffy Seal systems will protect and last the life of your structure.
5. Curing time delays are lowered.
6. Once installed Jiffy Seal can be covered or backfilled immediately after application.
7. Release film eliminates need for a paper backing and adds to the ease of membrane application.
8. Jiffy Seal products are totally cold applied over a wide temperature range.
9. Molecular bonding of seams forms Jiffy Seal into a monolithic membrane over or around the entire surface being waterproofed.
10. Protecto Wrap's high quality control guarantees a uniform thickness over the entire project.
11. Protecto Wrap Company backs Jiffy Seal systems with over 37 years of manufacturing experience.

## Estimating Information:

1. 30" Jiffy Seal: Use a 10% overlap and normal waste factor when calculating coverage of 30" Jiffy Seal 140/60.
2. 60" Jiffy Seal: Use a 7% overlap and normal waste factor when calculating coverage of 60" Jiffy Seal 140/60.
3. Jiffy Seal 500 Detail Tape: 1 lineal foot per 1 lineal foot of inside corner. Use a 4% end lap and normal waste factor. Drains must be estimated on a per drain basis.
4. Horizontal Primer No. 80:  
Coverage = 175 to 250 square feet per gallon (depending upon porosity of the substrate)  
Vertical Primer No. 100:  
Coverage = 150 to 200 square feet per gallon (depending upon the porosity of the substrate)  
Block Wall Vertical Primer No. 100:  
Coverage = 100 to 125 square feet per gallon (depending upon the porosity of the substrate)
5. No. 160H Mastic:  
Coverage = 200 lineal feet per gallon. Based on a 2" 60 mil. wet film troweled bead.

## Technical Service:

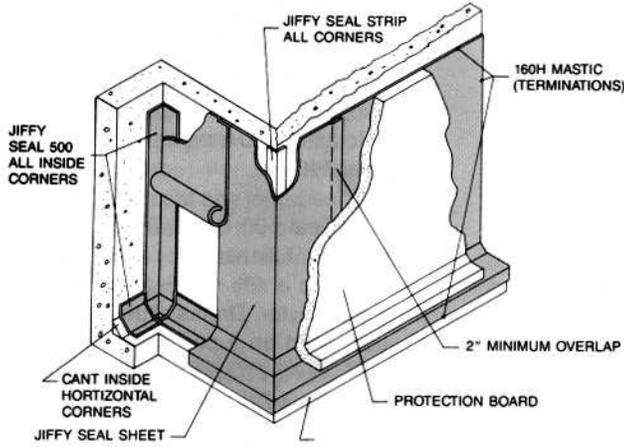
Complete technical assistance and information are available from any Protecto Wrap field representatives, distributors or contact:

**Protecto Wrap Company**  
2255 South Delaware Street  
Denver, Colorado 80223 U.S.A.  
(303) 777-3001  
(303) 777-9273 FAX

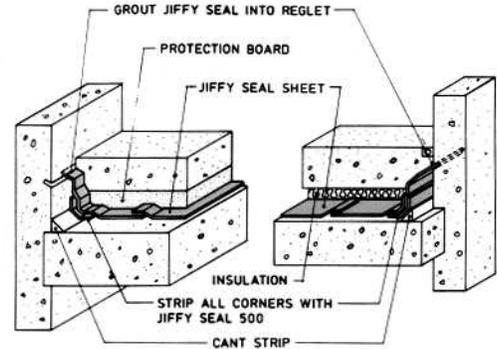
The information provided herein is based on our best knowledge, but Protecto Wrap Company does not warrant the results to be obtained, or intend anything herein as a recommendation for any use which would infringe any patent or copyright. All specifications are subject to change and all sales of Jiffy Seal Waterproofing Systems materials are subject to Protecto Wrap Company's conditions of sale, INCLUDING THOSE LIMITED WARRANTIES.

# Application Details

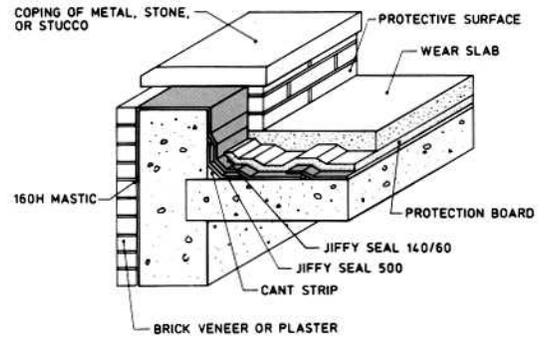
## Vertical Foundations



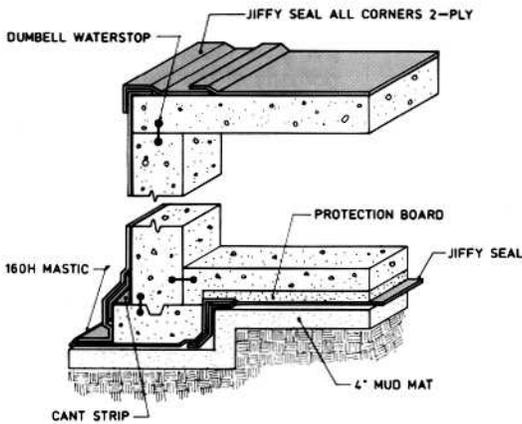
## Horizontal & Split Slab, Mechanical Rooms



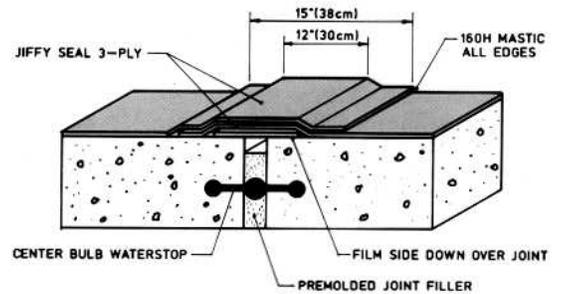
## Parapet & Balcony Rail Areas



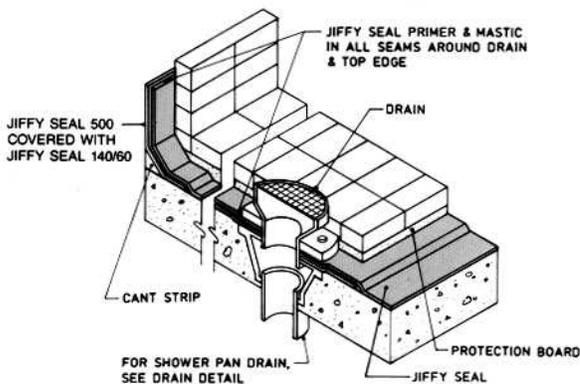
## Tunnel Envelopes, Vaults, Slabs on Grade



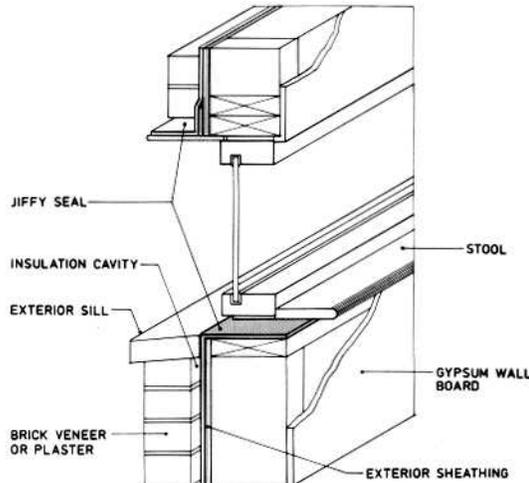
## Expansion Joint



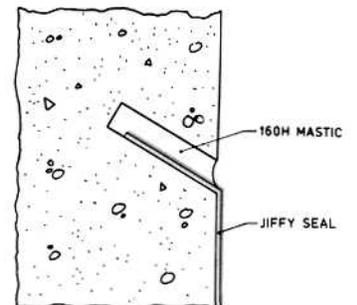
## Showerpan Countertop



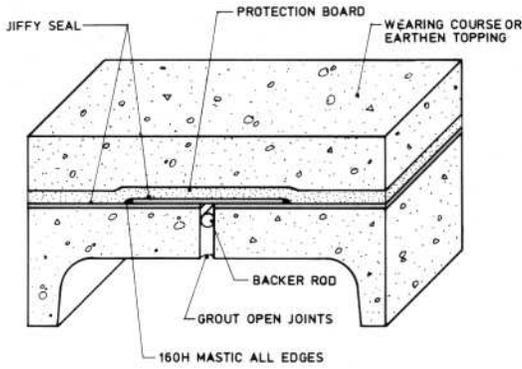
## Recessed Window Head & Sill



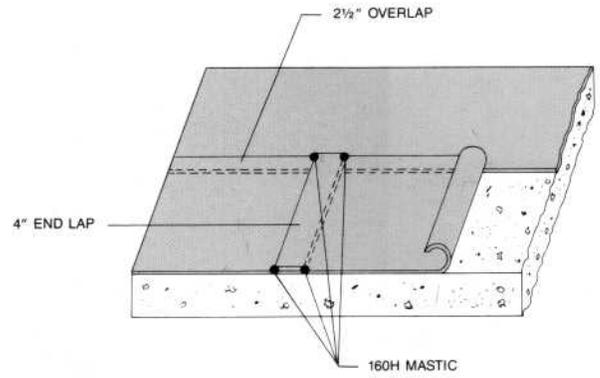
## Reglet



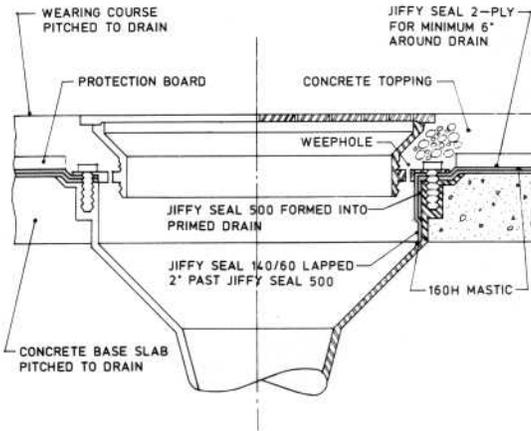
### Double "T" Beam



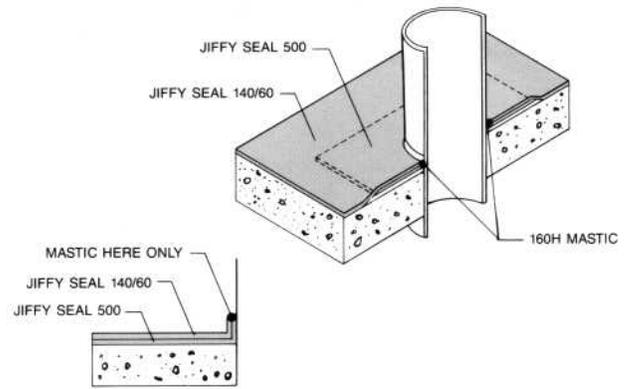
### End Lap/T-Joints



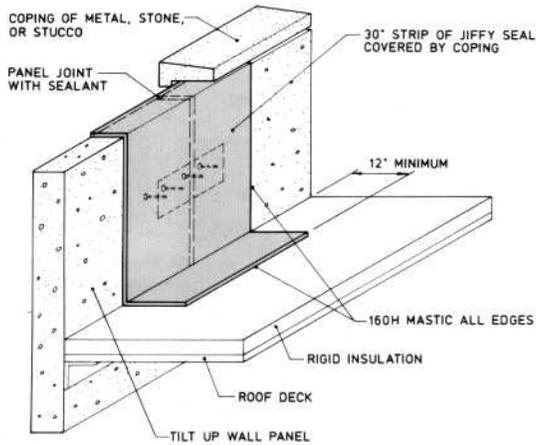
### Deck & Floor Drain



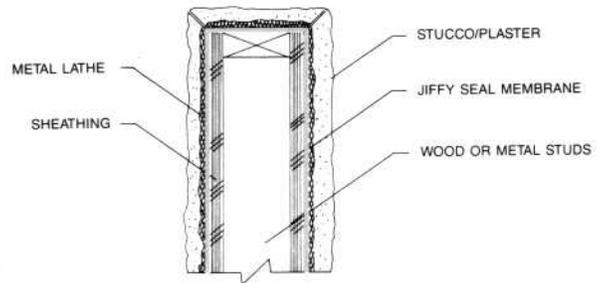
### Post & Protrusion



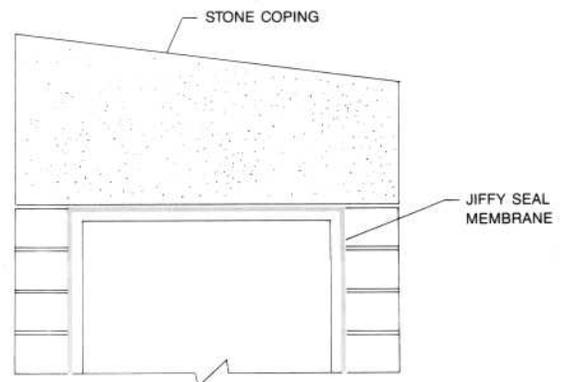
### Tilt Up Wall Joint



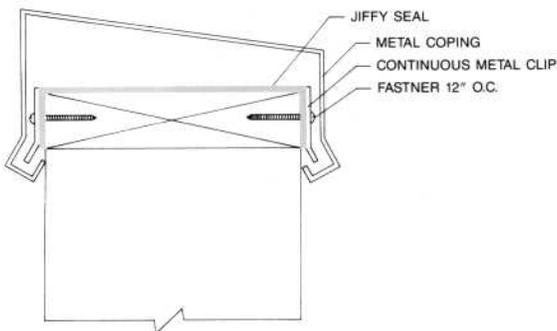
### Membrane Beneath Stucco/Plaster

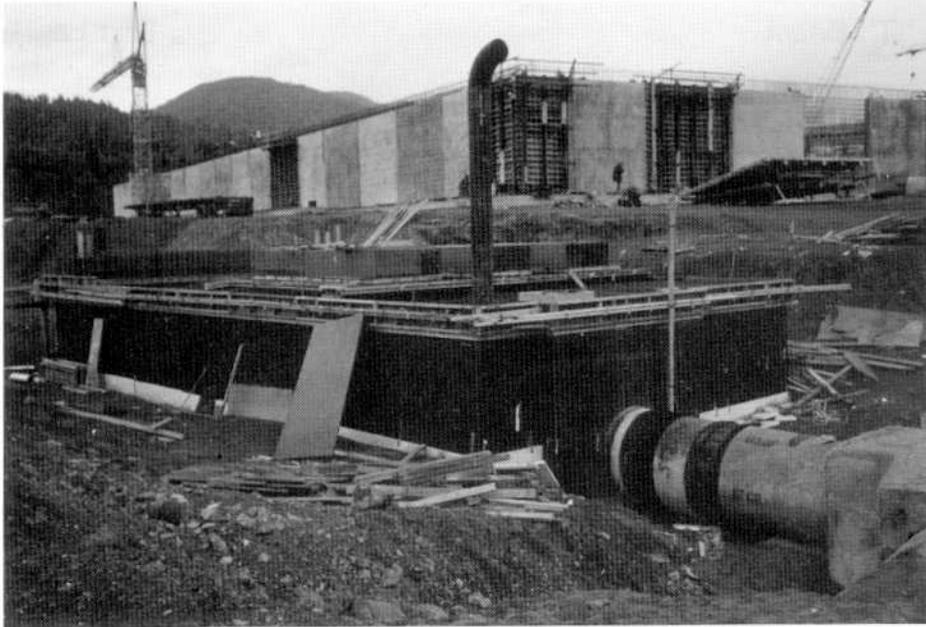


### Stone Coping



### Metal Coping





Eklutna water treatment facility, Eklutna, Alaska. 64,000 square feet, below grade waterproofing.



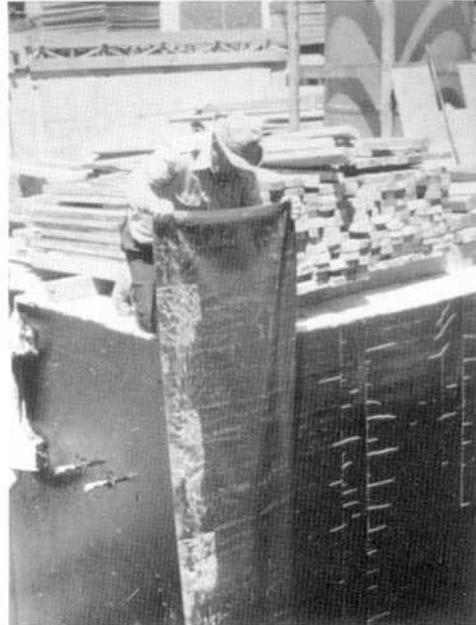
Sheets up to 60" in width available.



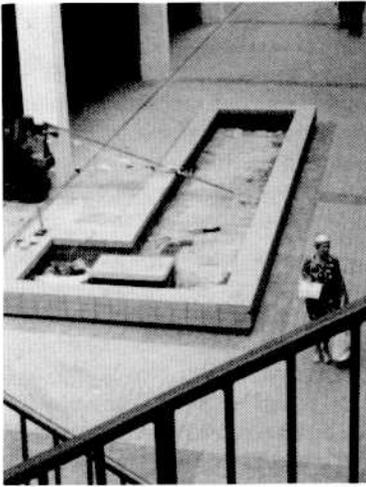
15' vertical application in 1 lift. Protecto Wrap technical assistance available upon request.



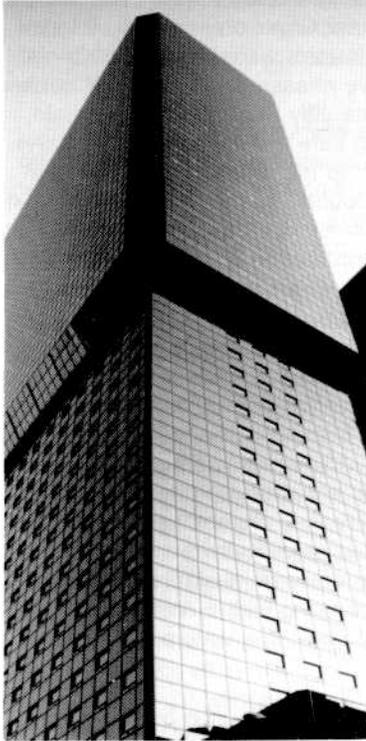
"Zip Strip" removal provides simple, clean overlap guide.



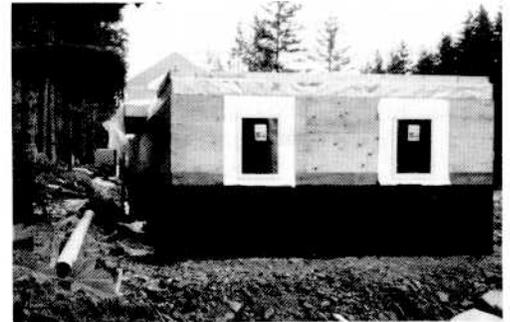
30" material easily applied on vertical surfaces.



Red Lion Inn, Costa Mesa, California Foundation and deck waterproofing



Denver downtown Marriott  
Foundation waterproofing



Indian Center, Kodiak Alaska  
Wood foundation waterproofing

Whatever your waterproofing needs may be, come to the experts at Protecto Wrap Company

For additional information on our waterproofing systems, please contact your local  
Protecto Wrap Company Representative in your area, or call Protecto Wrap Company at  
303-777-3001

# Membrane Application

## Vertical Applications:

### Typical uses:

- Foundations — concrete, wood and block
- Underground parking structures
- High water tables
- Building into hill sides
- Earth and berms against walls
- Around landscaping
- Earth sheltered houses
- Shoring — lagging  
(consult Protecto Wrap Company for details)
- Buried telephone, gas & electric vaults
- Conduits and manholes
- Water treatment plants

## Horizontal Applications:

Excellent adhesion to wood, concrete and steel.

### Typical uses:

- Split Slabs — plazas
- Parking Decks — under asphalt or concrete
- Balconies — indoor-outdoor carpeting, astroturf
- Beneath wooden decks
- Under Pavers and Tiles
- Hardwood floors as a vapor barrier
- Roof Patch — built up roofs
- Parapets — copings
- Beneath stucco — recessed windows and exterior balcony railings
- Shower pans — under mortar with tile set
- Tilt-ups — covering joints
- Reflective cracking — highways
- Bridge decks — beneath asphalt
- Doorsills
- Temporary roofs

## Membrane Application Surface Preparation:

All surfaces shall have a smooth steel troweled finish or better and shall be clean, free of sharp protrusions, loose aggregate, dust, voids or spalled areas. Broom finish shall not be used. Repair all areas as needed before applying Protecto Wrap primer.

Remove all forms as soon as possible so as to prevent moisture entrapment. Uneven form lines must be ground flush to the wall. All tie holes must be filled.

Concrete surfaces shall have a minimum cure time of 7 days and shall be clean and dry. Allow concrete to dry

completely following precipitation. On horizontal surfaces a mat moisture test should be completed before application. Do not apply Jiffy Seal over frozen substrates.

**Use form release agents which will not transfer to the concrete or block walls. Concrete curing compounds must be a resin-base containing no oil, wax or pigment.** If Jiffy Seal membranes are to be applied to a concrete or wood surface where other curing compounds or wood treatment are to be used, please contact Protecto Wrap Company for recommendations.

If additives have been placed in the concrete that could slow the dissipation of moisture, contact Protecto Wrap Company before installation of Jiffy Seal.

Masonry walls shall not have struck joints. Make sure all masonry joints on block and brick walls are struck flush in order to provide a smooth surface. On rough or porous surfaces, use a well adhered mortar coat to provide a smooth surface.

All exposed metal surfaces are to be **clean and free of all paint, oil, coatings, rust or any other contaminants.** Wire brush and solvent wipe all metal to insure a clean surface.

## Corners:

Use of cant strips or fillets and Jiffy Seal 500 are recommended for all inside horizontal corners. Wood or fiber cant strips are not recommended. After application of primer and Jiffy Seal 500, terminate membrane a minimum of 3" beyond the detail tape.

All outside corners shall be double covered to a minimum of (6) six inches on each side of the axis of the corners. This can be accomplished by applying a 12" wide strip of membrane, then covering with a full width sheet, or by overlapping the full width a minimum of 6" from the axis on both sides of the corner. Cant strips of epoxy mortar, latex modified cement mortar or urethane sealants should be used on all inside horizontal corners. Do not use 160H Mastic as a fillet. Outside corners should be as smooth as possible by rounding or chamfering and free of sharp protrusions. All terminations and overlaps within 12" of corners shall receive a troweled layer of 160H mastic.

For inside corners at the vertical to horizontal transitions, apply a troweled bead of 160H mastic to the overlap. Mastic should be troweled 3" up and 3" out from the transition on the seam. 60 mil wet film maximum thickness.

## Protrusions and Drains:

Areas around pipe, conduit or any protrusions through the membrane should be taped with a 6" piece of Jiffy Seal 500. Jiffy Seal 500 should be forced and formed to fit tightly to the protrusion and the deck. At the drain opening apply a light coat of primer and allow to fully cure. Cover drain at least 6" past all perimeters with Jiffy Seal 500. Remove release film make an X cut and form the Jiffy Seal 500 into the drain, making sure the membrane has 100% contact to the primed metal drain surface. Double ply with a full sheet of Jiffy Seal 140/60 over the Jiffy Seal 500, cut and form around or into the protrusion or drain. This should be followed with a troweled bead of 160H mastic. Special care should be taken in placing a troweled bead of 160H mastic at any drain, conduit or protrusion where cutting or forming of the membrane is required. 160H mastic and Protecto Wrap primers are specially formulated for use with Jiffy Seal membranes and substitutes are specifically not recommended. A good drainage design at or near the footings along with a drainage mat will assist in having a waterproof system.

## Expansion Joints and Cracks:

Joints less than 1/4" with movement less than 25% use a 12" strip of Jiffy Seal 140/60 to cover the opening. All joints 1/4" and larger or having movement 25% + must be treated as a standard expansion joint. For expansion joints follow a sealant manufacturers recommendation for design and use of appropriate sealing materials in the joint. Place a 12" strip of Jiffy Seal 140/60 face down over the expansion area leaving the release film in place so as to create a slip plane over the joint. Cover the entire deck with standard width Jiffy Seal 140/60 applying the material from the low point of the slope to the high point in a shingling effect. Remove release film and place protection board immediately after application of the membrane.

## Priming:

The surface shall be cleaned by brooming, vacuuming or high pressure clean dry air so that all dust, loose concrete, etc. is removed. Thinning of the primer is not recommended. The opened containers, when not in use should have the lids replaced so as to lessen the evaporation of the solvents. Apply primer to all surfaces by roller or brush, using 150-250 square feet per gallon depending on the porosity of the surface. **Primed surface shall be free of runs, puddles or excessive primer as this could cause blistering.** Brush or roll out all primer puddles or drips immediately. Priming is important; be certain the entire surface to be waterproofed is primed.

Prime only as much surface as can be covered with the membrane in half a working day. Primed surface should be protected from dust. Do not apply membrane until primer is tacky but not wet.

Test the primer by the "Rule of Thumb" method. Press thumb firmly on the primed surface and twist. If primer feels pliable but does not adhere to thumb, the primed surface is ready for the membrane. Primed areas not covered within 8 hours must be reprimed. If an area must be reprimed do not remove existing primer, but be certain area is clean and dry. Surface must be free from dust, dirt and moisture. Reprime and again allow primed area to become tacky but not wet prior to applying the membrane. For all vertical applications over 8' in height with surface temperatures between 20 degrees F. and 40 degrees F., a second coat of primer should be applied to the top ten inches (10") of the surface to be covered. The membrane can be applied when the second coat of primer is tacky, but not wet. The top 10" of the membrane must be firmly rolled along with all overlaps.

## Vertical Application:

After application of No. 100 primer, run a strip of Jiffy Seal 500 along the footing joint. Jiffy Seal 500 is unreinforced and may be formed well into the footing corner reaching 3" to 6" up the vertical wall and 3" to 6" onto the footing, conforming to any irregularities in the surface. Remove release film from the Jiffy Seal 500 and apply Jiffy Seal 140/60 from the top edge of the wall downward so that the tack side is to the

primed surface. This can be accomplished by pulling the Jiffy Seal off of the roll to the desired height on the wall or to the height that is going to be readily backfilled. Set the top edge of the sheet firmly onto the primed surface. Roll or squeegee downward in the center of the material working outward to the edges. Note: Jiffy Seal must be rolled or squeegeed over the entire membrane surface to gain maximum surface contact to the primed wall. Special emphasis should be placed on the top 10" edge of the membrane and on all overlaps of the membrane. Bring Jiffy Seal 140/60 down the wall and onto the footing. Terminate the membrane over and past the edge of the footing a minimum of 3". As application proceeds, remove the "Zip Strip" from the preceding sheet of Jiffy Seal. Move the roll over and align the overlap. Again pull membrane off the roll to the desired height and set top edge of the material followed by the rolling or squeegeeing step. Roll each sheet thoroughly with particular emphasis on the overlap area. Remove release film the same day of application from the entire membrane and apply protection board.

160H mastic shall be applied at the top edge of the applied membrane extending at least (1) one inch onto the wall and (1) one inch on the membrane. Make sure release film is removed prior to application of 160H Mastic. This is also required when the membrane extends down off the vertical portion of the wall and onto the footing or at any other termination of the membrane. At the end of the working day, or when application is interrupted by change in construction scheduling, all edges of the membrane at terminations should have a trowled bead of 160H mastic applied.

## Drainage Boards and Footing Drains:

Waterstops, footing drains and most drainage boards are compatible and may be used in conjunction with Jiffy Seal waterproofing membranes. Consult Protecto Wrap Company for compatible drainage systems.

## Block Walls:

For block wall waterproofing use a heavy coat of 100 primer and allow primer to fully cure. Apply a second

coat of primer to the top ten (10) inches of the block wall. When the second coat of primer is tacky but not wet apply Jiffy Seal 140/60. Roll firmly to gain maximum surface contact. Special emphasis should be placed on pressure rolling the top 10" of the membrane along with all seams. Remove release film immediately after application of membrane on all block wall construction. Place protection course and backfill immediately after installation of Jiffy Seal. If membrane is not going to be backfilled immediately after application, mechanical fasteners should be attached to the top of the membrane and covered with a light coat of 160H mastic.

## Horizontal Application:

After priming the deck with 80 horizontal primer, apply Jiffy Seal membrane from the low point to the high point across the fall lines so that the laps shed water on horizontal surfaces. Lay the membrane tack side down on the primed surface, smoothing as you apply with broom or roller to avoid wrinkles, entrapped air, fishmouths and to obtain maximum contact with the primed surface. Slightly pull the membrane tight and broom or squeegee the material as it comes into contact with the substrate. Loose laying the membrane is not recommended.

Prior to placing succeeding sheets or rolls, the "Zip Strip" should be removed exposing the overlap seam. Apply each succeeding sheet in the same manner, overlapping the side laps a minimum of 2 inches. Lap onto release film of succeeding roll immediately strip film from under seam and roll overlap firmly. Pressure rolling the overlaps is essential to the development of a complete and permanent monolithic system. If the membrane is to be exposed for any prolonged amount of time, broadcast a light coat of mortar dust, talc or place protection board over the membrane the same day of application to reduce the natural outgassing vapor effect of the deck. Note: Outgassing may be intensified in decks that have been recently subjected to rain, high humidity or other forms of moisture. Consult Protecto Wrap Company for recommendations if these conditions exist. At the end of each working day, or when application is interrupted by change in construction scheduling or adverse weather, all edges of the membrane at terminations should have a

# Membrane Application

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troweled bead of 160H mastic applied. All T-joints-end laps and detail cuts should receive a troweled bead of 160H mastic the same day of application. Use a troweled bead of 160H mastic on all end laps the same day of application prior to the broadcast of mortar or talc. (See end lap detail).

When covering the membrane with asphaltic concrete mix, maximum aggregate size for Jiffy Seal 140/60 should not exceed 3/8" and for Jiffy Seal 400 not exceeding 1/2". Asphaltic application temperature should range between 275 degrees to 300 degrees F. maximum.

## Wood Decks:

Use exterior grade plywood on all decks having need of waterproofing protection. Decking should be fastened with ring shank nails. The surface shall be clean, free of sharp protrusions, splintering and warping. Wood must be flush. Butt joints need to be tight. Do not cover open grooves between decking.

A 3/4" cant strip is required at the wall base prior to the application of Jiffy Seal 500 detail tape. If design does not allow for a cant, consult Protecto Wrap Company for detail recommendations.

For all decks, prime entire deck with 80 Primer and apply Jiffy Seal 140/60 in a shingle fashion from the low point to the high point. Apply membrane a minimum of 4" up the vertical wall and caulk termination with 160H mastic.

If flashing edge is exposed cover with Protecto Wrap Fast Flash, Copper Flash or use standard Counter Flash to protect membrane from prolonged sunlight exposure.

## Tile and Pavers:

Jiffy Seal 140/60 is ideal for use as waterproofing under tile, pavers, shower pans and counter tops. Apply Jiffy Seal membrane according to the manufacturers recommendations for horizontal application. Remove release film and apply a troweled layer of mortar to the top of the membrane being careful not to damage the membrane with the trowel. Do not use a V-notched trowel. Follow with the tile set.

## Repairs:

Make careful inspection of the applied membrane before covering to make sure the membrane is free of large blisters, fishmouths or any damaged area and repair as needed. If membrane is damaged and requires repairing, clean area and lightly prime with primer at least 6" beyond the area damaged. Cut Jiffy Seal membrane patch so as to cover the area reprimed and press on the patch and roll firmly. A troweled bead of 160H mastic shall be applied on all edges of the patch and in conjunction with any repair. The patch must cover the damaged area at least 6" on all sides.

## Flood Testing:

Mastic must cure at least 24 hours prior to flood testing and 48 hours prior to flood testing on all planter boxes. Perform flood test with a minimum of 2" and a maximum of 4" of water for 24 hours.

Drains should be plugged and barriers placed to contain the water. All leaks shall be repaired prior to covering

the membrane. Reflood test membrane once repaired.

*WARRANTY CAN NOT BE ENFORCED WITHOUT DOCUMENTATION OF LEAK FREE FLOOD TESTING SUBMITTED TO PROTECTO WRAP COMPANY WITHIN 30 DAYS AFTER TESTING. THE APPLICATOR AND GENERAL CONTRACTOR MUST SIGN THE SUCCESSFUL FLOOD TESTING DOCUMENT.*

## Protection of Membrane:

Jiffy Seal waterproofing systems are not designed for long term exposure to sunlight and shall be protected by a suitable weather resistant system.

In order to prevent damage to the membrane, protection board should be applied and backfilling done as soon as possible. After removing the separator sheet place the protection board on membrane. For vertical application, place protection board the same day of application. Protect non-traffic horizontal surface areas with 90 lb. felt. Moderate to heavy traffic areas should be protected with 1/8" asphalt hardboard.

Vertical walls should be protected with rigid polystyrene foam or asphalt hardboard.

Protection board must be suitable to withstand backfill or topping course. If other trades are allowed on or near membrane, the Contractor should make them aware of the waterproofing. They should take care in working around the installation of membrane and report any consequential damages to the Contractor for repair.



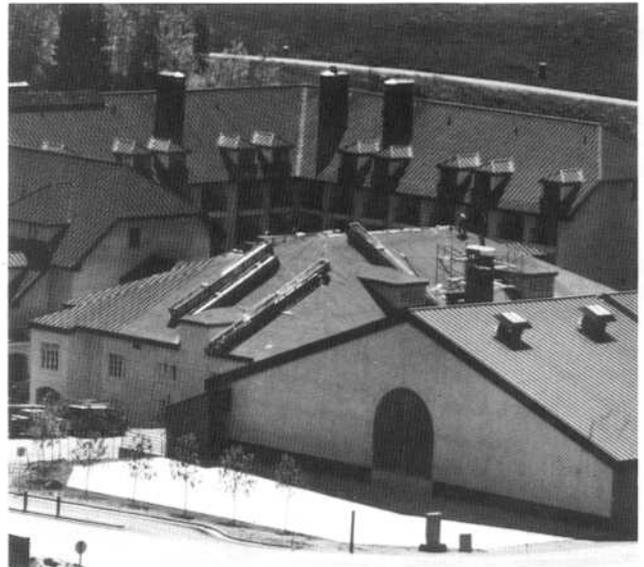
Carnation office building project. 46,200 square foot foundation waterproofing, Pasadena, California. Eberhard Roofing, approved installer. Note: Protection board can adhere to membrane without adhesives.



Cold weather application at 20°F. 45,000 square feet on the Carnegie Mellon University, Pittsburgh, PA.



Full roof underlayment, Breckenridge, Colorado.



The Weston and Cascade Village, Vail, Colorado. Membrane beneath metal roof.



Approximately 500,000 sq. ft. of waterproofing membrane installed on the Piscataqua River N.H./Maine bridge.