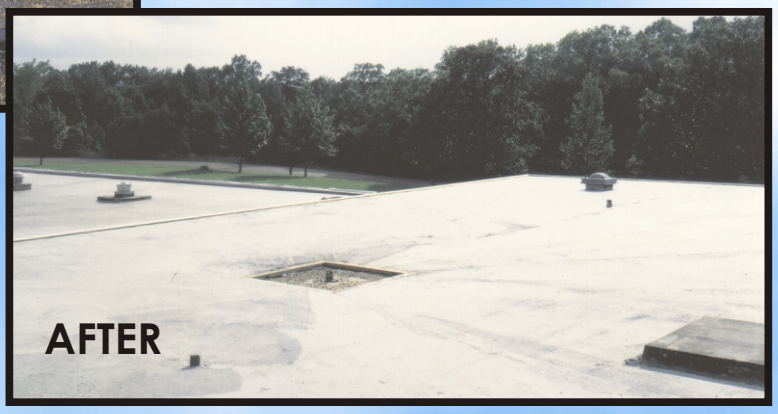
REROOFING WITH

ELASTIZELL

COMPOSITE INSULATING ROOF DECK SYSTEMS



QUALITY SOLUTIONS
FOR REROOFING
APPLICATIONS

www.Elastizell.com

Lightweight

Positive Drainage

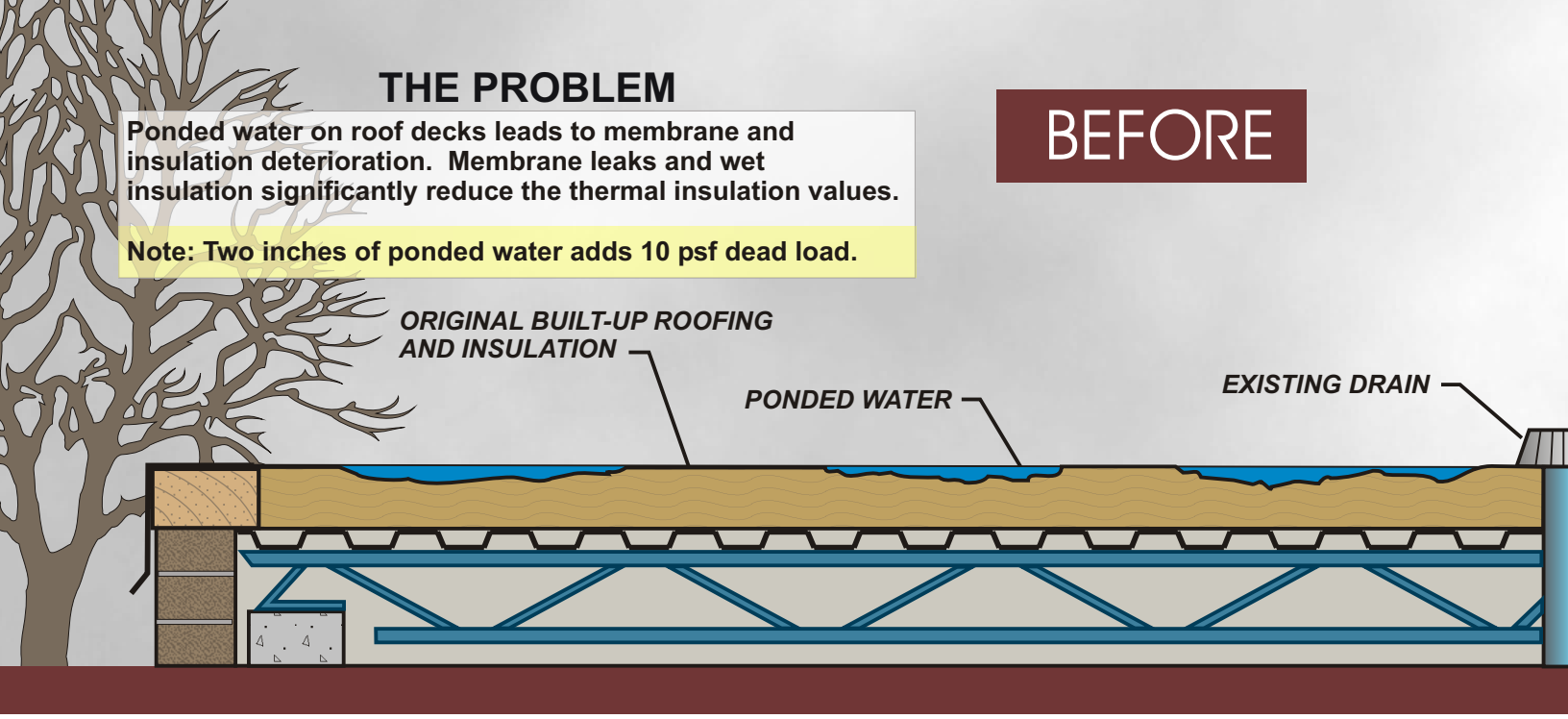
Increased Insulation

THE PROBLEM

Ponded water on roof decks leads to membrane and insulation deterioration. Membrane leaks and wet insulation significantly reduce the thermal insulation values.

Note: Two inches of ponded water adds 10 psf dead load.

BEFORE



THE ELASTIZELL ADVANTAGE

OUR BASIC PRODUCT

A common misconception is that all insulating concretes have high water content. Elastizell does not! Elastizell obtains its workability not from excessive water, but from discrete air cells.

Elastizell solves reroofing problems because of its many advantages. Its superiority over insulation board is evidenced by the fact that Elastizell Composite Insulating Roof Decks are an economical and permanent insulation solution for the building.

No Rip-off!

A major advantage of the Elastizell reroofing system is that it may be applied directly over the existing roofing to correct drainage. If portions of the existing insulation are wet or deteriorated, they should be replaced. If the old roof remains in place, the mess and expense of tear-off are avoided. The threat of damage to the building's interior is minimized.

Minimal Exposure Time:

Roofing membrane is applied soon after casting.

Slope-to-Drain:

Eliminates standing water which improves the life of the new membrane.

Strong, Permanent Roofing Base:

For built-up or single-ply roofing membranes.

Superior to Insulation Board Systems:

Insulation board systems usually require total tear-off in reroofing applications. This is because the board has lost its strength and insulation value. Total tear-off is risky since the building's interior is exposed. A great deal of debris must be hauled to landfills--a costly operation which is time consuming and ecologically unacceptable.

Lightweight:

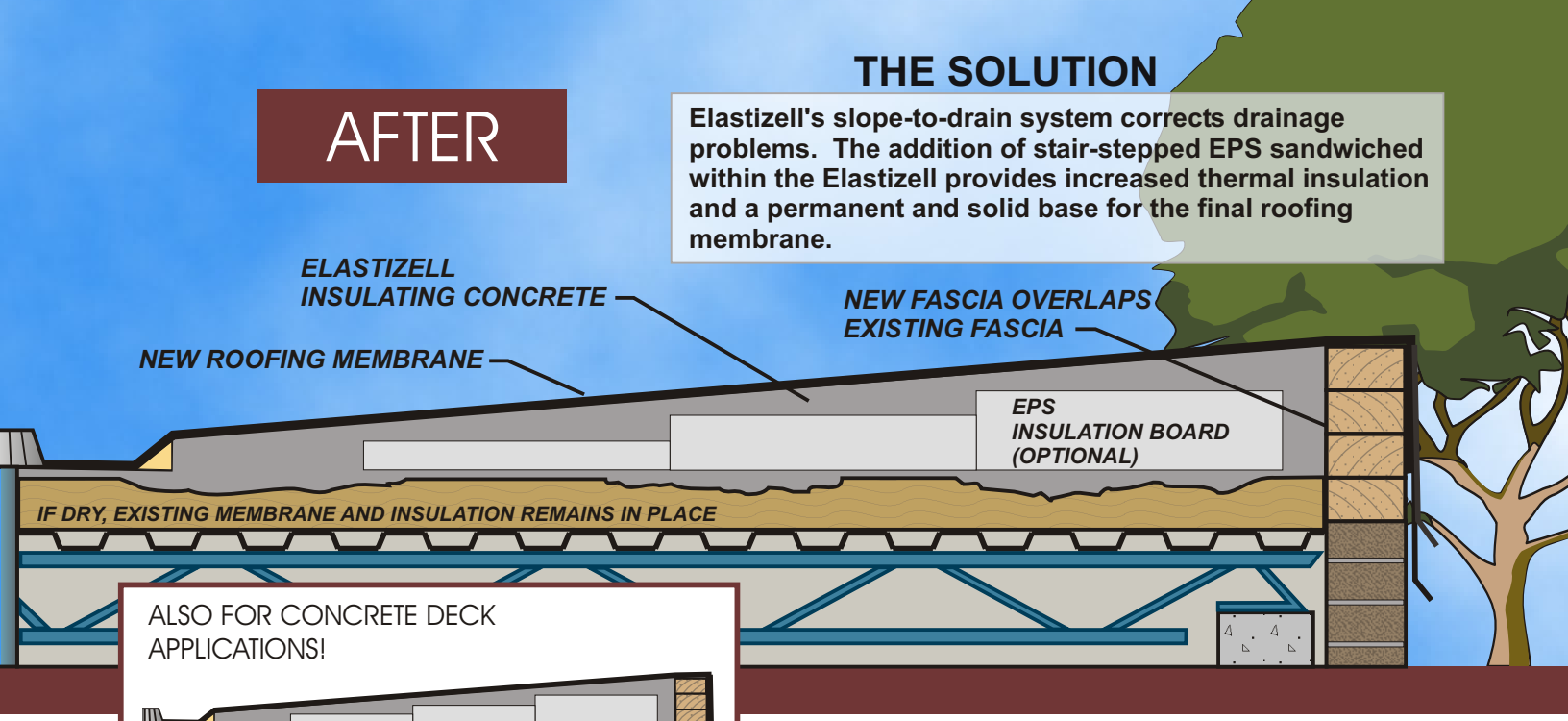
Two inches of Elastizell adds only 6 psf to the roof structure. Two inches of ponded water adds 10 psf dead load.

Maximum R-value With EPS Insulation Board:

The Elastizell reroofing system incorporates EPS insulation board in the design. R-Values and energy savings are significantly increased as compared to the old roofing system.

Savings:

Both time and money.



PROCEDURE

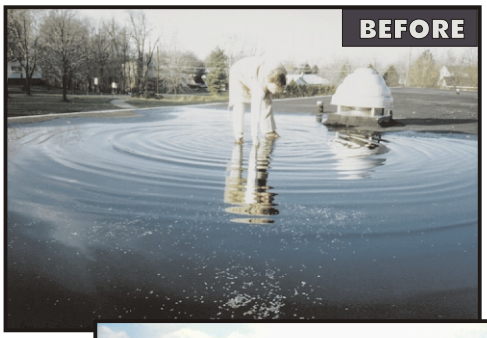
STEP-BY-STEP REROOFING PROCEDURE

1. **Check Existing Structure:**
   Analyze the existing structural system for load carrying capability.
2. **Remove Loose Gravel:**
   All loose gravel is removed from the roof deck.
3. **Prepare the Roof Deck:**
   Clear debris, raise the mechanical equipment, and lay out the positive drainage system.
4. **Cast the Roof Deck:**
   EPS insulation board is bonded to the deck as the Elastizell roof deck is cast, slope-to-drain.
5. **Apply New Membrane:**
   The roofing membrane is installed according to manufacturer's specifications.
6. **Perimeter Venting:**
   Perimeter venting is provided at the flashing/counter flashing detail, whenever possible.

REROOFING ANALYSIS

An approved applicator will:

- Examine your existing roof
- Evaluate the reroofing work required
- Calculate additional insulating value (R-value)
- Provide a cost estimate



BUILT-UP ROOFING

The roofing base sheet is attached with an approved base sheet fastener to the Elastizell Roof Deck in a pattern recommended by the roofing manufacturer. Fastener pullout values increase with the age of the roof deck. Typical nail withdrawl is 40 pounds.

SINGLE-PLY ROOFING

Modified bitumens may be torched or mopped to a nailed base sheet. For single-ply roofing applications, consult the roofing membrane manufacturer for specific recommendations.

ELASTIZELL ADVANTAGES OVER INSULATION BOARD

Customized Slope-to-Drain

The primary purpose of a roof system is to protect the interior of a building from the outside environment. Proper slope-to-drain eliminates ponding which is the cause of membrane aging leading to roof leaks. Tapered insulation is only effective on simple drainage patterns with few penetrations.

The Elastizell Composite System provides positive drainage in new construction and reroofing applications. The insulation system is cast with a positive slope.

Few roof decks have regular drainage patterns or built-in slopes for positive drainage. Elastizell achieves positive drainage by combining a stair-stepped, EPS insulation board with custom sloping of the Elastizell. Standard rigid board cannot do this and tapered board systems are costly and inefficient.

Fasteners

Mechanically attached insulation board systems have extensive and confusing fastening requirements. Elastizell Roof Decks have simple fastener patterns.

Integral System

The Elastizell Composite System encapsulates EPS board within the system for resistance to uplift, fire and seismic forces. EPS board is bonded to the deck in new construction or to the existing roof membrane in reroofing applications. Elastizell bonds the EPS to the deck and completely fills depressions and deck flutes which are not filled with insulation board systems. Deck penetrations do not weaken the system and stress-causing joints directly under the roofing membrane are eliminated.

Heat Sink

Elastizell and EPS board provide a heat sink beneath the roofing membrane that moderates temperature changes which cause thermal shock twice daily - heat from the sun and cooling at nighttime or by rain.

Insulation board next to and under the roofing membrane cannot absorb this heat, resulting in greater thermal shock eventually causing fatigue and splits in the membrane.

Low Cost

An Elastizell Composite System is less costly than rigid insulation board. EPS insulation is bonded to the substrate. Once the Elastizell Roof Deck is cast, installation of the membrane is continuous and fast.

Permanent Insulation

An Elastizell Roof Deck is permanent insulation which performs better than rigid insulation. Rigid insulation board acts like a sponge, soaking up moisture and reducing its insulation value. Once a roof leaks over rigid board, the wet insulation must be replaced. With an Elastizell Roof Deck, only the membrane is replaced.

Elastizell Roof Decks fill the flutes of metal deck systems so that air infiltration is eliminated. Elastizell Roof Decks have neither the joint problems nor the thermal drift characteristics associated with rigid board insulation.

Re-Roofability

No roof system lasts forever. When a membrane fails over insulation board, the entire system must be torn off and replaced exposing the building's interior. Rigid insulation board is damaged by water. An Elastizell Composite System is not damaged by water. Encapsulated EPS board is completely protected with an Elastizell Composite System - only the roofing membrane need be replaced.

Wind Uplift

Elastizell Roof Decks perform as an air retarder providing excellent wind uplift performance. Elastizell bonds the EPS board to the structural deck, filling depressions and deck flutes and preventing air infiltration.

Elastizell Composite Systems have wind uplift ratting approvals with Factory Mutual (FM), Miami-Dade County, Florida and Underwriters Laboratories (UL).

Contact the Elastizell Corporation of America or its website for specific details.

Fire Rated

Elastizell Roof Decks have many UL fire ratings. Elastizell is non-combustible, does not require fireproofing of the underside of the steel deck or the addition of a separate thermal barrier necessary with rigid board systems. Since the flutes are filled, this fire channel is eliminated.

Low Weight

System weights as low as 7 psf.

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