

100% ECO-FRIENDLY SUPERIOR TERRA PAVE PRODUCTS for PAVEMENT/TRANSPORTATION/SOLAR INDUSTRIES

TERRA PAVE PRODUCTS are the ECO-FRIENDLY, COST EFFECTIVE SOLUTIONS to
the CHALLENGES in these MARKETS



www.terrapavetech.com
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TERRA PAVE TEAM



David Pham BS Elec. E, MBA – CEO



Dr. Yetkin Yildirim, PhD Civil E, President/CTO

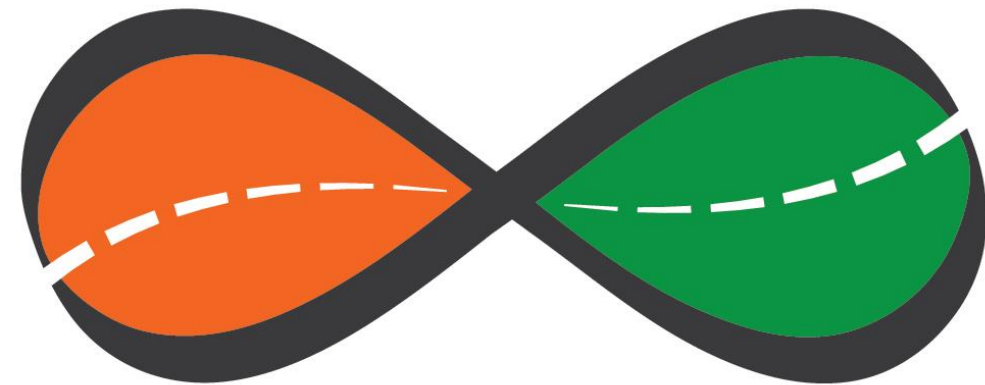
+ All the Engineers, Technicians, and Support Staff at



TERRA PAVE
INTERNATIONAL

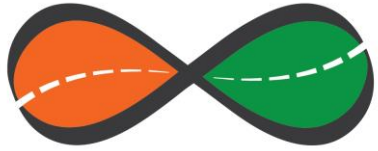


TERRA PAVE



COST-EFFECTIVE, 100% **ECO-FRIENDLY**,
Water-based polymer products for the Road
Pavement, Solar, and Roof Industries

TERRA PAVE



WHY TERRA PAVE ?

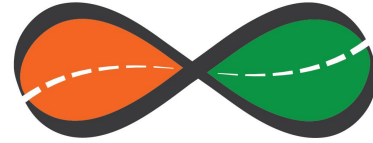
Current Asphalt roads/Cement pavements worldwide:

- a. INFERIOR
- b. LONG LEAD TIME TO COMPLETION
- c. NOT ECO-FRIENDLY

If the **CEMENT INDUSTRY** was a country = **3rd-largest emitter of CO2** in the world, after the U.S. and China. (<https://www.cbsnews.com/news/cement-industry-co2-emissions-climate-change-brimstone/>)

ASPHALT SURFACES emit particulate **air pollution** and other volatile compounds that are **hazardous to the environment and human health directly**. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10311649/>)

Patented
TERRA PAVE



THE UNIVERSITY OF
TEXAS
— AT AUSTIN —

Tests Completed as 100% eco-friendly
by



Sandia
National
Laboratories



U.S. DEPARTMENT OF
ENERGY

More details of ECO-FRIENDLY test results can be downloaded:
<https://www.terrapavetech.com/terrapave/sandia.pdf>



ESTATES INTERNATIONAL
Eco International





**FIX EXISTING ROADS
PAVEMENTS &
PARKING LOTS**



**BUILD NEW ROADS
PAVEMENTS &
PARKING LOTS,
DUST CONTROL**



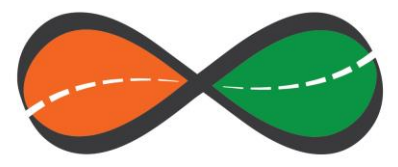
**COOLER >15 F/7 C,
LESS HEAT
ABSORPTION
ROAD PAVEMENTS &
PARKING LOTS to
MITIGATE URBAN
ISLAND HEATING**



**MAXIMIZE ALBEDO
PRODUCTION
BI-FACIAL SOLAR FARMS
CONTROL EROSION
DUST, VEGETATION**

TERRA PAVE PRODUCTS HAVE BEEN USED IN +40 COUNTRIES

TERRA PAVE

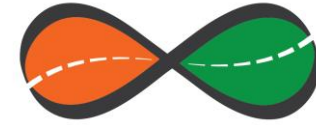




TERRA PAVE received the following Recognition and Awards:

- ✓ **2019:** Awarded top 10 products in the USA by the Department of Energy's National Renewable Energy Laboratory in Colorado Springs Colorado.
- ✓ **2021:** Awarded top 10 products in the world at the Web Summit in Lisbon, Portugal.
- ✓ **2023:** Received the #1 award in the Environmental and Agriculture category in the USA from the Cade Prize in Gainesville Florida.
- ✓ **2024:** Nominated for the BIO-Circular-Green Award by the U.S. Department of State at the Asia-Pacific Economic Cooperation in Bangkok, Thailand.

TERRA PAVE



AWARDS



USA STATE DEPARTMENT NOMINATION – APEC Bio-Circular-Green (BCG) Award – June 2024



NOMINATION JUNE 2024

U.S.A Department of State NOMINATION for the APEC Bio-Circular-Green (BCG) Award 2024



NOMINATED by the USA Department of State Asia Pacific Economic Cooperation (APEC) as a U.S.A NOMINATION for the APEC Bio-Circular-Green (BCG) Award 2024.

TERRA PAVE



**Asia-Pacific
Economic Cooperation**

USA CADE PRIZE – AWARD 1st place AG & ENVIRONMENTAL 2023



TOP 1 Eco-Friendly Product in USA 2023



**2023 Cade Prize for Innovation in
Agriculture and Environmental Sciences**

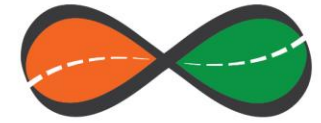
Terra Pave: Environmentally-friendly replacements for concrete and asphalt roads, pavements, parking lots, and other hard surfaces.

14th ANNUAL CADE PRIZE CELEBRATING CREATIVITY AND INNOVATION



AGRICULTURE &
ENVIRONMENTAL
2023 USA

TERRA PAVE



PRESENTED BY THE CADE MUSEUM
ON SEPTEMBER 28, 2023



WEBSUMMIT LISBON, PORTUGAL

November 2021 – TOP 10 WORLD WINNER



TOP 10 Eco-Friendly Products in the WORLD
November 2021

Web Summit Lisbon, Portugal



Carlos Manuel Félix Moedas – announces deal with Terra Pave International to save the city of Lisboa only 2 weeks 1 day on the job as the Mayor of Lisboa, Portugal.



SUPERIOR QUALITY, FAST TO TRAFFIC ABLE, MINIMAL EQUIPMENT & GREEN



NO SPECIAL EQUIPMENT & NO HANDLING PROCEDURES REQUIRED

TERRA PAVE → ENVIRONMENTALLY SAFE

- ◆ NON-HAZARDOUS
- ◆ NON-CORROSIVE
- ◆ NON-PETROLEUM BASED
- ◆ NON-TOXIC
- ◆ WATERPROOF
- ◆ SUPERIOR TO TOXIC ASPHALT AND CLIMATE-WRECKING CEMENT
- ◆ NO MORE POTHOLES, CRACKS
- ◆ IMPROVED BRAKING DISTANCE
- ◆ FAST TO TRAFFIC ABLE
- ◆ LESS DOWNTIME
- ◆ MORE ENJOYABLE RIDE

More details of ECO-FRIENDLY test results can be downloaded: <https://www.terrapavetech.com/terrapave/sandia.pdf>

BATTLE TESTED – USA MILITARY ROADS - TERRA PAVE WHITE

**COMPETITOR
PRODUCT**

**COMPETITOR
PRODUCT**

**ABRAM TANKS
M1-A2 MAIN BATTLE TANKS**

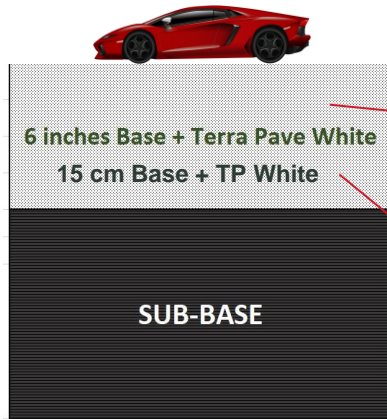


TERRA PAVE WHITE



TERRA PAVE WHITE

No-Asphalt **TERRA PAVE WHITE** Roads



SHOW VIDEO
<https://youtu.be/yYqVTOmPjgs>

SHOW VIDEO
<https://www.terrapavetech.com/videos/tpwexxon.mp4>
<https://vimeo.com/377598222>



Country of CHILE
South America
Terra Pave White Road Project
TPW: 0.5 gal/square yard
2.27 liters/square meter



EXXON-MOBIL
Texas
Terra Pave White Road Project
TPW: 0.5 gal/square yard
2.27 liters/square meter

TERRA PRIME (New road)



MUCH BETTER QUALITY

Better for the Environment
Road is much better
TERRA PAVE Road + Asphalt



Asphalt Layers

Terra Prime (waterproofing)

6 inches Base + Terra Pave White
15 cm Base + TP White

SUB-BASE



SHOW VIDEO
<https://youtu.be/i-Z5qdsI90>



Florence, Texas USA
TXDoT

TERRA FOG (road MAINTENANCE)



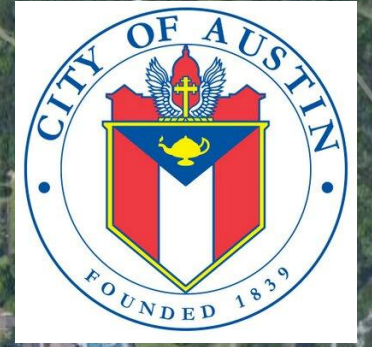
Before Application with Terra Fog™



After Application with Terra Fog™

Terra Fog is a high-quality, environment-friendly, and cost-effective solution for improving performance and extending service life in chip seals, and asphalt pavements.

City of Austin - Terra Fog™ (TF) Project Video – Road Maintenance (TF: 0.04 gal/square yard)



TERRA FOG - Fog Seal

- Non-toxic (no acrid smell)
- Applied with water truck (reduced labor for clean up)
- **Dry time is 20 min ~ 30 min**
- Pull-off strength of aggregate is substantially increased.
- Reduced rollover and Eliminated embedded rock loss.
- 0.04 gal/sqyd residual rate recommended

Calhoun County Texas
Terra Fog Application



SHOW VIDEO

PACKAGING-SHIPPING

TP products

55 gallon (208 liter) drums

275 gallon (1,040 liter) totes



Shipping category same as WATER



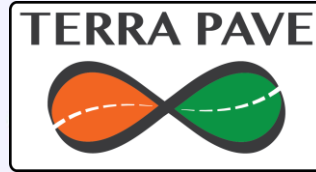


From: Abdelhamid AHMAT <noreply@jotform.com>

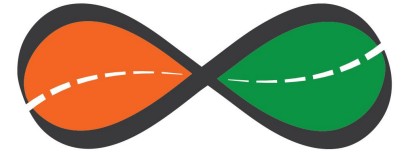
Sent: Tuesday, November 19, 2024 9:55 AM

To: nextlevelgroupinvestment@gmail.com

Subject: Re: Information Request Form - Abdelhamid AHMAT



TERRA PAVE



Information Request Form

Name: Abdelhamid AHMAT

Email: ahmatabelhamid@gmail.com

Phone Number: (00225) 0712377108

Requesting: Dear Sir/Madam,

I hope this message finds you well. My name is Abdelhamid A., and I am reaching out to connect with your sales and international business team. I previously worked on a rural road stabilization project in Morocco in 2021, covering more than 500 kilometers in the Casablanca region. For this project, we successfully used your Top Seal White and Top Seal Black products, which delivered excellent results.

Currently, I am based in Abidjan, Côte d'Ivoire, where I am planning to undertake a similar rural road project. I am very interested in applying the same solutions and would like to request detailed information on the pricing and technical specifications of these products.

Furthermore, I would appreciate discussing the possibility of establishing a long-term collaboration, including an agreement for product supply.

Please let me know if additional information is required from my side. I am available for further discussions at your convenience.

Thank you in advance for your attention, and I look forward to your response.

Best regards,

Abdelhamid A.

ECOLOGICAL ESTATES LLC. / EEI Holding

**P.O.Box 171214
Austin, Texas USA**



Thank You!

UTA-TERRA PAVE INTERNATIONAL, Inc.
Austin, Texas USA

Email: info@terrapavetech.com
Web: www.ecoestates.us www.terrapavetech.com

**TERRA PAVE
INTERNATIONAL**





ECOLOGICAL ESTATES LLC. / EEI Holding

P.O.Box 171214
Austin, Texas USA



UTA-TERRA PAVE INTERNATIONAL, Inc.

West Pickle Research Center
UT at Austin
Austin, Texas USA



Email: info@terrapavetech.com

Web: www.terrapavetech.com

Loose soil prepared for application of TSW



Application of Top-Seal White



Top-Seal White soaking into the soil into the base



Top-Seal White after 24 hours of curing – close up



First application of Top-Seal Black



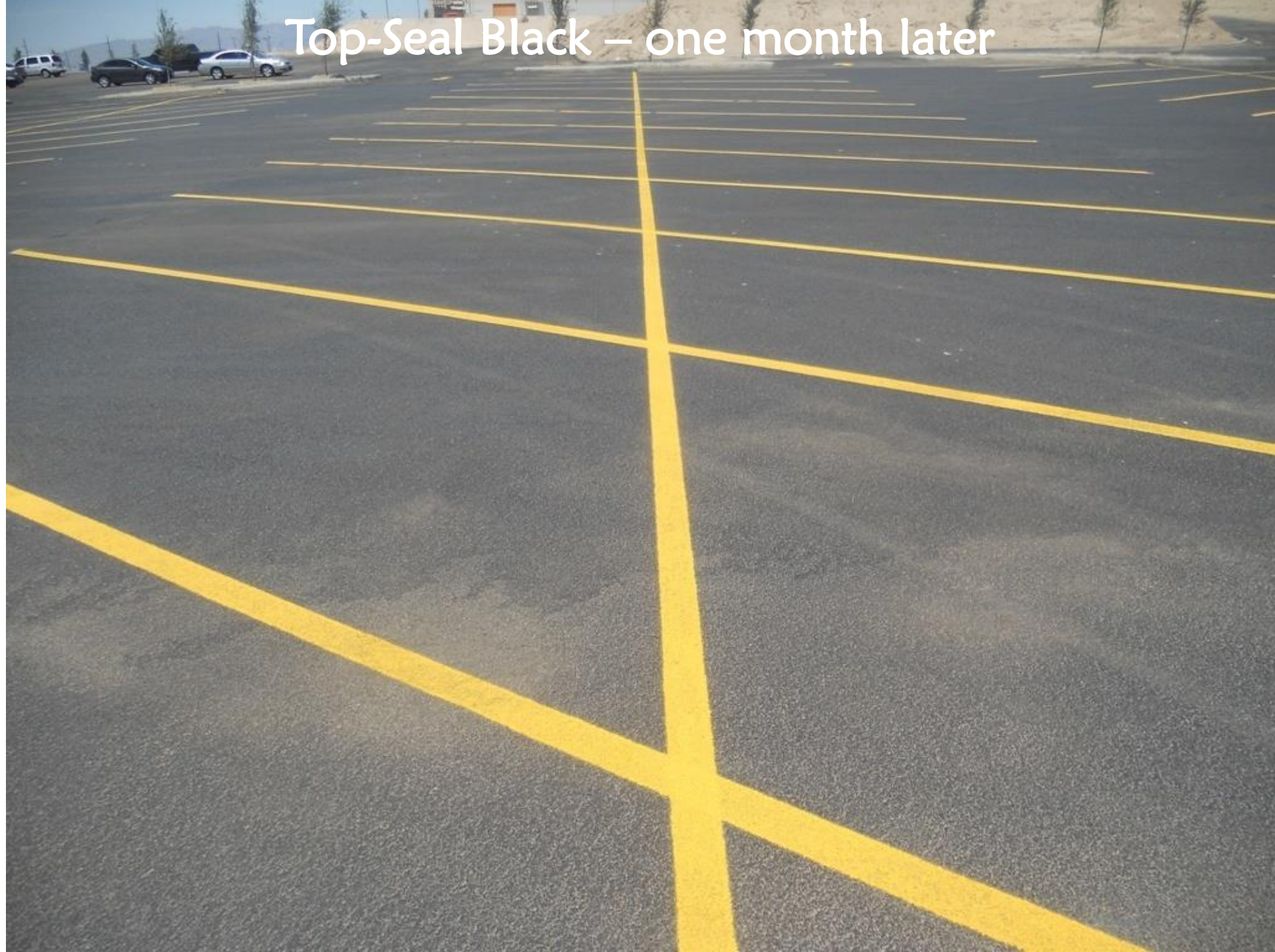


Final application of Top-Seal Black

Top-Seal Black – close up after 48 hours



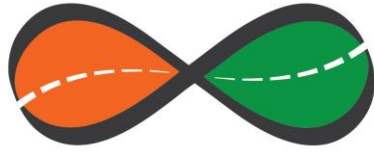
Top-Seal Black – one month later



Top-Seal Black – Two Years later



TERRA PAVE



Tests Completed as
100% ECO-FRIENDLY
By



U.S. DEPARTMENT OF
ENERGY



More details of ECO-FRIENDLY test results can be downloaded:
<https://www.terrapavetech.com/terrapave/sandia.pdf>

OFFICIAL USE ONLY

- Compounds that are highly toxic inhalation hazards were observed to outgas in high levels from AEP, while nearly no outgassing of these compounds was observed in the Terra Pave products. These compounds include benzenes, toluene, xylenes, and naphthalene.
- Terra Pave products exhibited nearly zero outgassing of petroleum hydrocarbons.
- Many Terra Pave products outgassed “other” compounds. The main components of which include alcohols (e.g., ethanol), acetaldehyde, acetic acid ethenyl ester, and ethyl acetate.

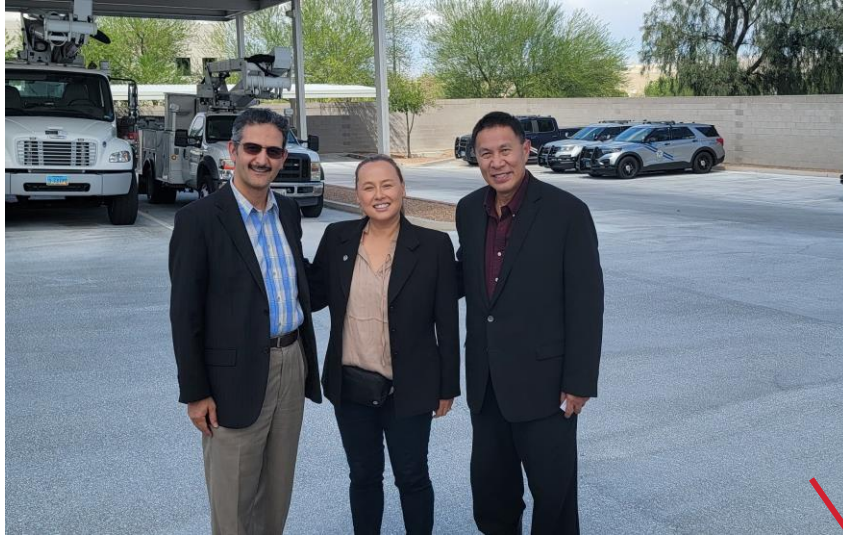
Table 3-1. Select organic constituents of concern and comparisons of their concentrations (ppm) in Asphalt Emulsion Product (AEP) and multiple Terra products.

| | AEP | TS White | TS White Albedo | TS Black | HRTS | Terra Roof | Terra Prime | Terra Fog |
|--------------|-------------|----------|-----------------|----------|------|------------|-------------|-----------|
| Benzenes | 7.43 | n.a. | n.a. | n.a. | 0.03 | n.a. | n.a. | n.a. |
| Toluene | 5.95 | n.a. | 0.01 | n.a. | n.a. | n.a. | n.a. | n.a. |
| Ethylbenzene | 1.60 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Xylenes | 4.55 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Fluorene | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Naphthalene | 0.44 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Phenanthrene | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Pyrene | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |

n.a. = no peak observed

Those compounds with concentrations significantly higher than other samples have been bolded and highlighted in red.

Department of Transportation Nevada - Terra Pave Cool Pavement™ (TPCP) (TPCP: 0.03 gal/square yard) = -18 degree F cooler



**COOL PAVEMENT
TEST**

PDF Download





Asphalt Surface
@ 127.2 degrees F

- * Urban Heat Island Mitigation
- * Makes the roads/pavements Cooler 18+ degree F or more
- * Energy Saving for the entire city
- * Improves Air Quality
- * Improves Health and Comfort for the entire city
- * Preserves existing Asphalt/Chip Seal
- * Seals current roads/pavements from Water Penetration to sub-soil
- * Extends the Life of the roads/pavements +6 years depending on the traffic
- * Improves Traction and Shorten Braking distance
- * When cured roads/pavements have a grayish-white color and 100% Eco-Friendly
- * Climate Change Mitigation



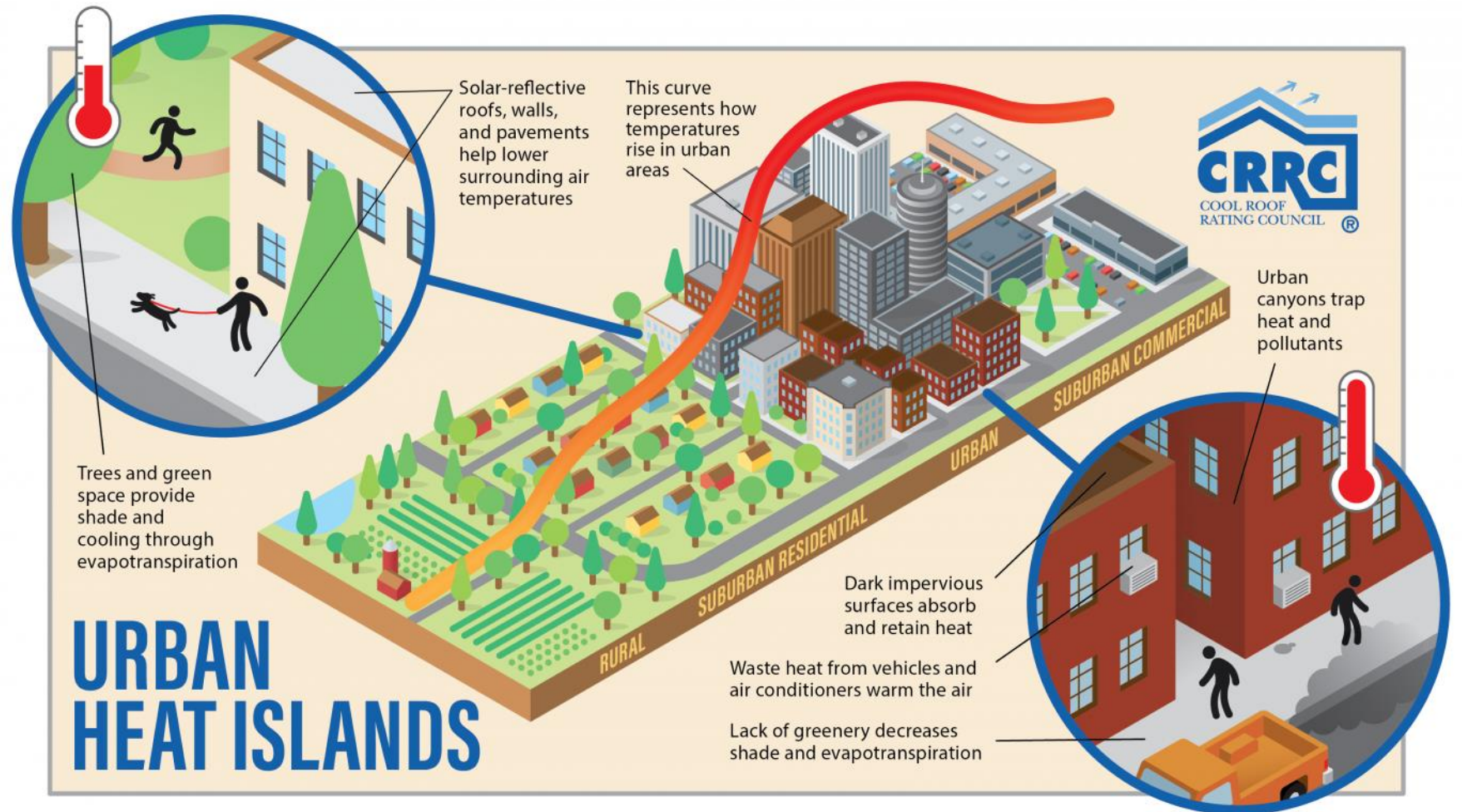
Terra Pave Cool
Pavement @ 109.2
degrees F

**Lowered -18
degrees F**

Urban Heat Islands (UHI) – Causing Poverty, Death, Decrease Quality of Life

Extreme heat events – caused more fatalities than hurricanes, tornadoes, and floods combined.

UHI disproportionately affects low-income residents and communities much more than wealthier neighborhoods.



<https://climate.mit.edu/explainers/urban-heat-islands>

Maximize Energy Production for Bifacial Solar Farms



Bifacial Technology is not only about Module

Ground Covering Materials

#1 Variable, Changes

Fixed

Main Parameters to consider:

| | |
|----------------------|---------------------|
| Albedo | ↗ |
| Clearance/height | ↗ |
| Racking | No backside shading |
| Row spacing (GCR) | ↗ (↘) |
| Inverter DC/AC ratio | ↘ |

Racking/tracker



Inverter

Storage



System integration plays a key role in improving bifacial gain

Challenges for Bifacial Panels - ALBEDO



Solved to these Challenges with **TERRA PAVE** Products



A

Bifacial adoption is happening **much faster** than anticipated **Without** a lasting solution for **ALBEDO**



B

DEVELOPERs, EPCs, INVESTORs – MODELING ENERGY

Modeling energy production of bifacial systems is in very early stages, but likely on the **conservative** side



C

DEVELOPERs, EPCs – DESIGN, ENGINEERING

Project economics are overwhelmingly favorable, but **design** and **optimization** require new ways of thinking



D

DEVELOPERs, INVESTORs – PRODUCTION PERFORMANCE

Performance guarantees will be challenging, but **international standards** will be necessary to pave the way



**DEVELOPERS, EPCs, INVESTORS, MANUFACTURERS, LAND OWNERS,
UTILITIES, PEOPLE & LIVING SPECIES OF THE EARTH**

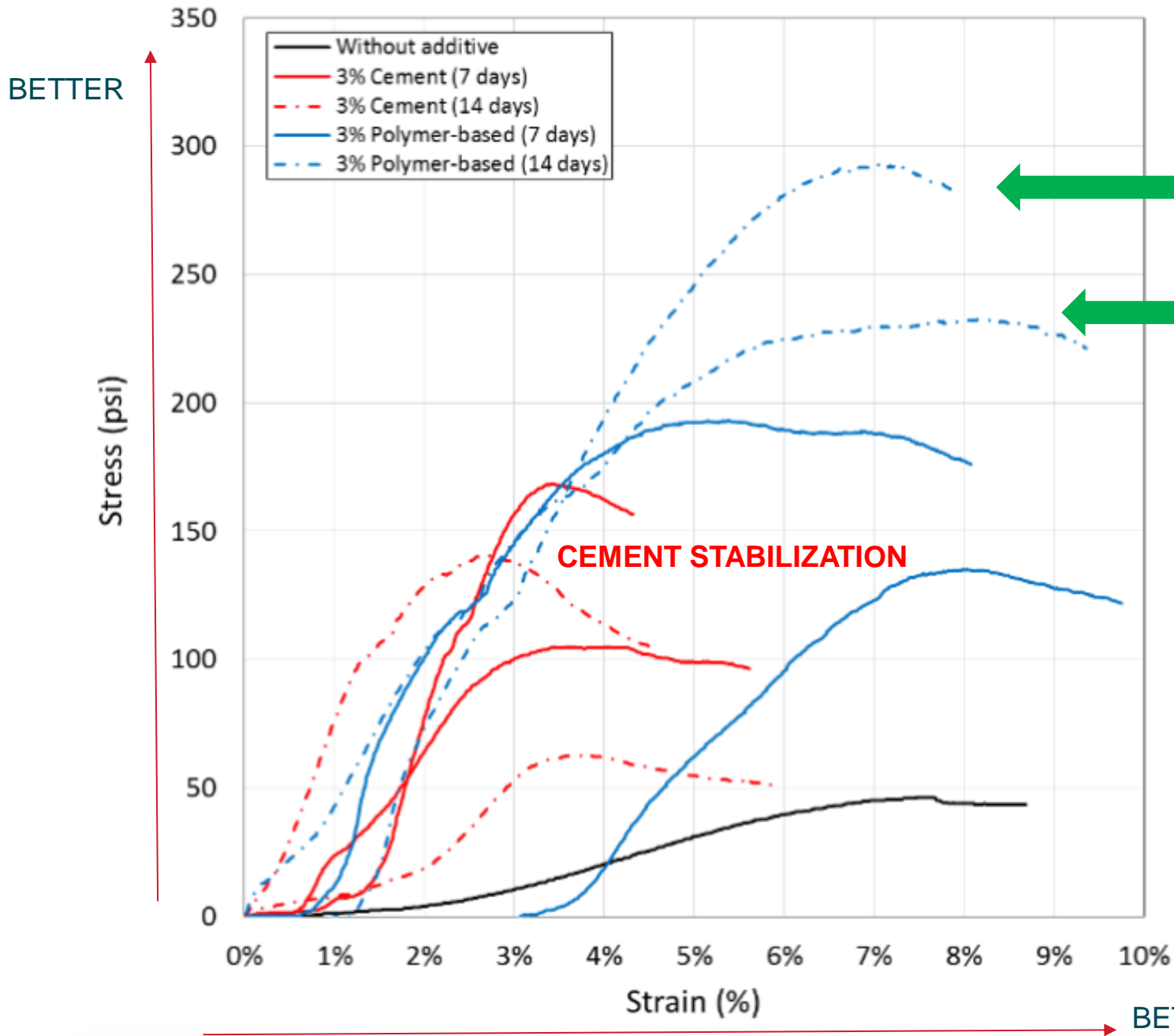
BENEFITS



Maximize Production of Bi-Facial/Mono-Facial Solar Farm 365 days

- Maximize ALBEDO 365 days
- Eliminate Weed/Vegetation Control
- Control Dust on Solar Panels
- Control Erosion of ground
- Last +20 years
- 100% Eco-Friendly

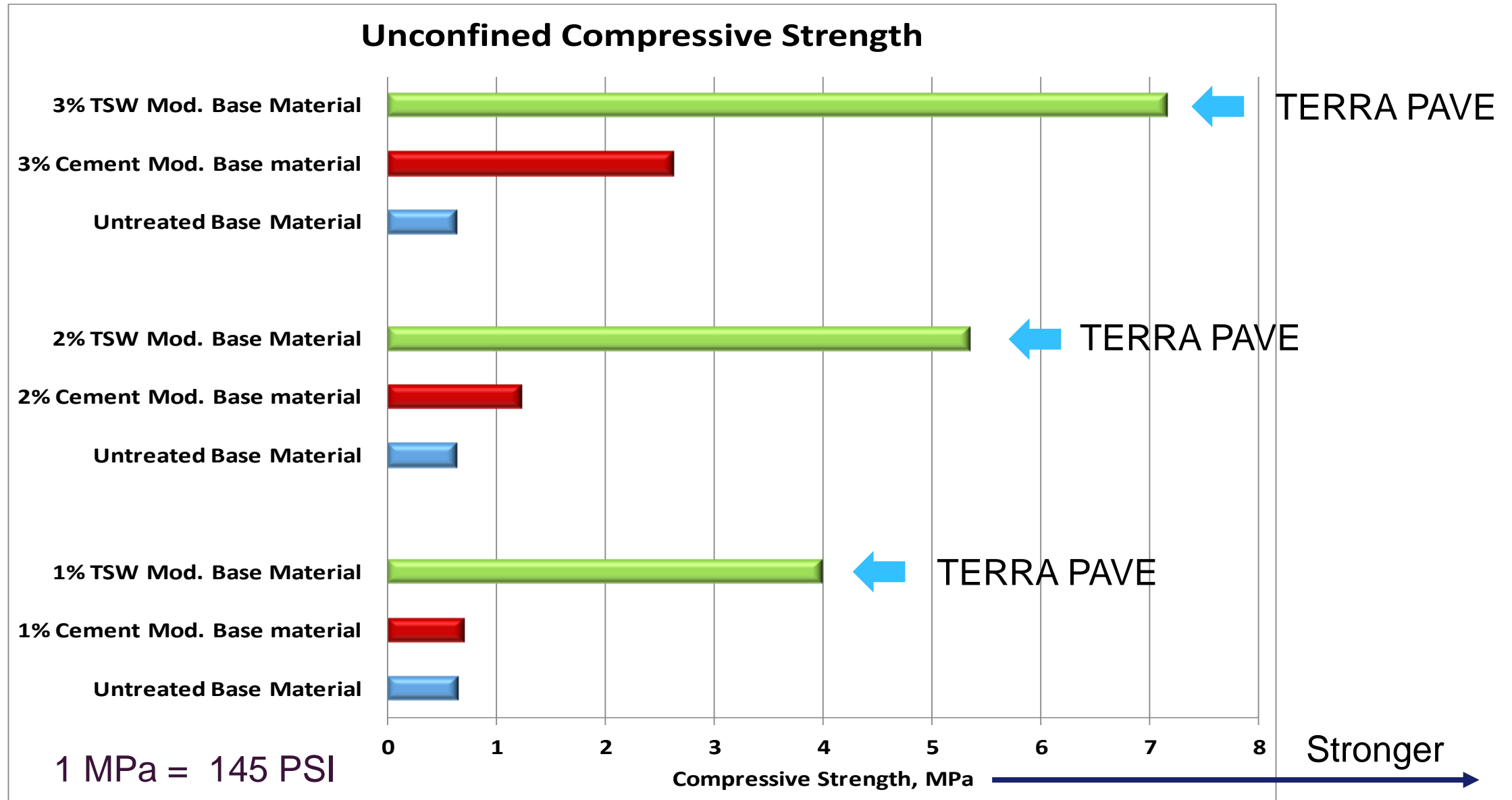




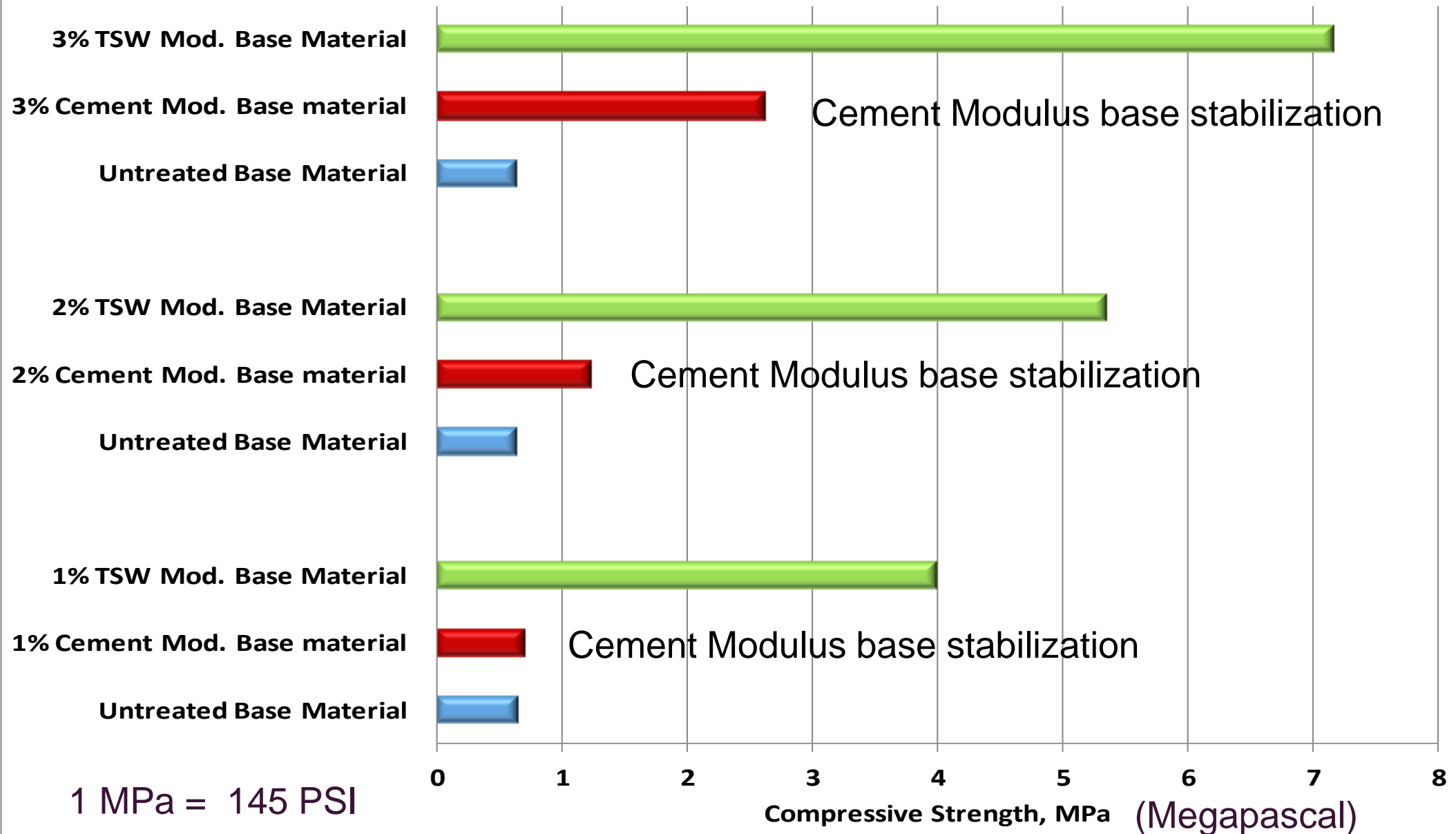
The life expectancy of roads will be significantly extended 2x-4x times, Vastly superior Road-Base stability, A tremendous increase in Strength and a significant reduction in Permeability.

More details of PSI Strength, Stress & Strain % test results can be downloaded: <https://www.terrapavetech.com/terrapave/tswstrength01.pdf>
<https://www.terrapavetech.com/terrapave/tpwtests.pdf>
<https://www.terrapavetech.com/terrapave/tswcement.pdf>

3X STRONGER THAN CEMENT STABILIZATION



Unconfined Compressive Strength



Indirect Tensile Test

3% TSW Mod. Base Material



3% Cement Mod. Base material



Untreated Base Material



2% TSW Mod. Base Material



2% Cement Mod. Base material



Untreated Base Material



1% TSW Mod. Base Material



1% Cement Mod. Base material



Untreated Base Material



0 0.1 0.2 0.3 0.4 0.5 0.6

Tensile Strength, MPa (Megapascal)

1 MPa = 145 PSI

WATERPROOF = NO POTHOLES/CRACKS

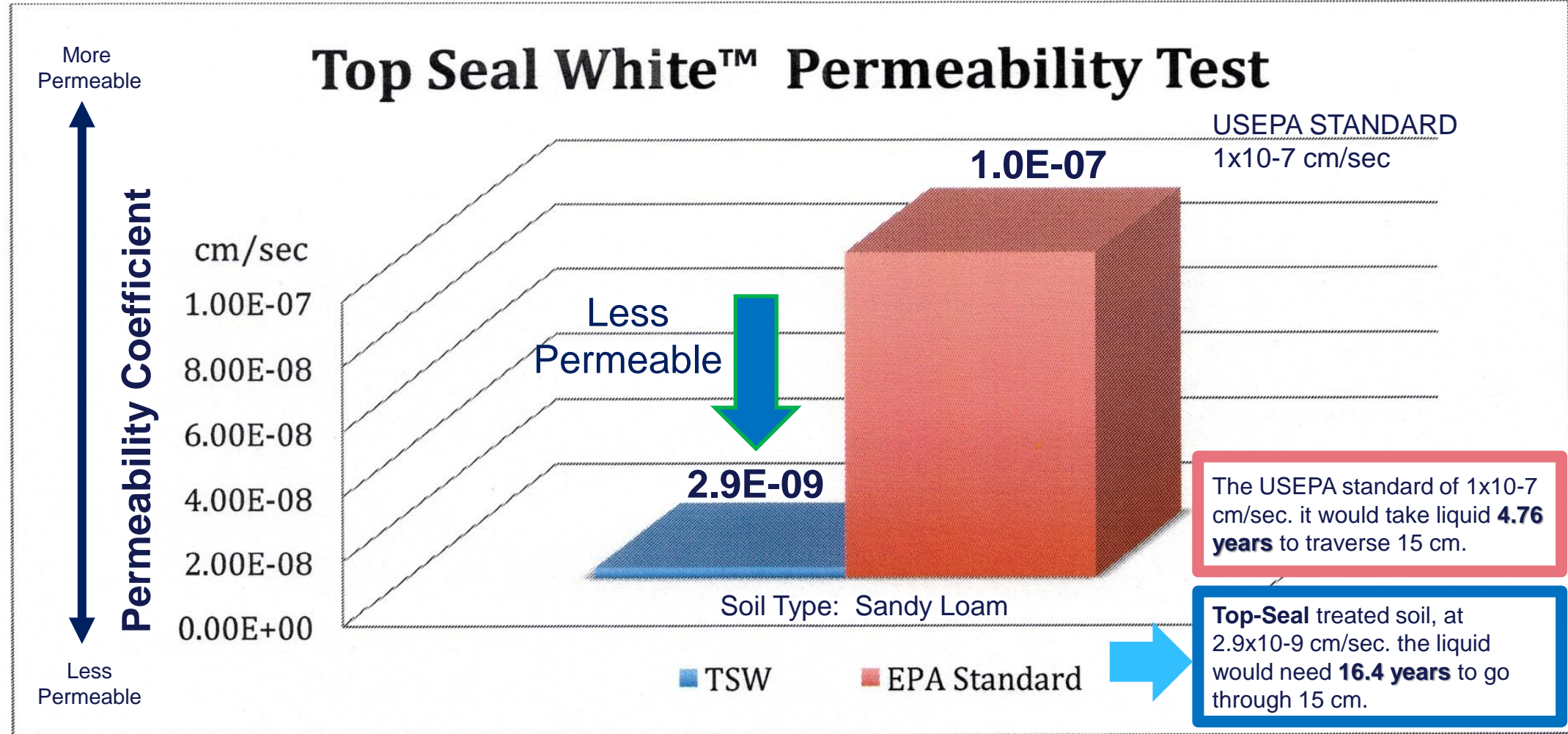
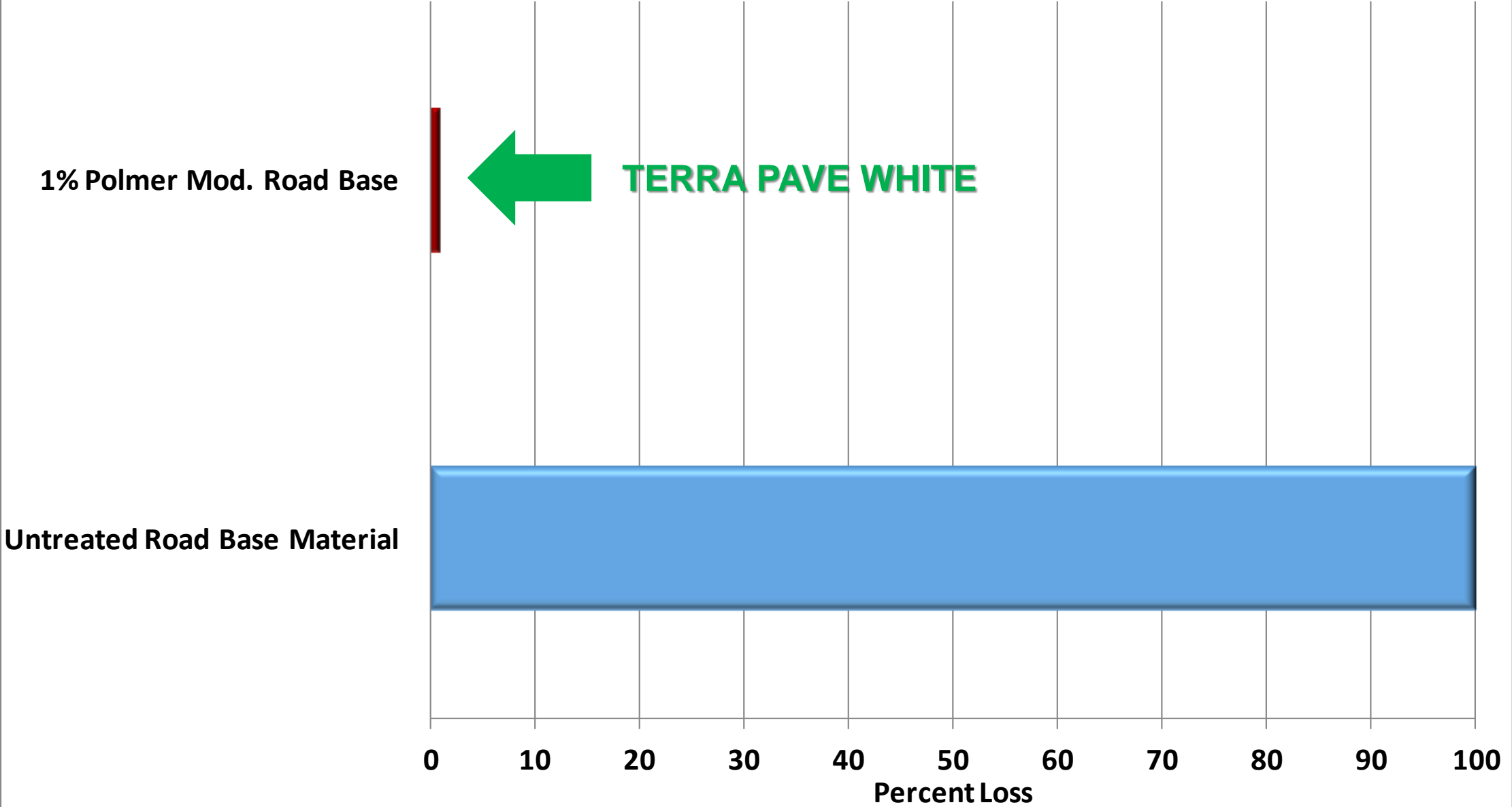
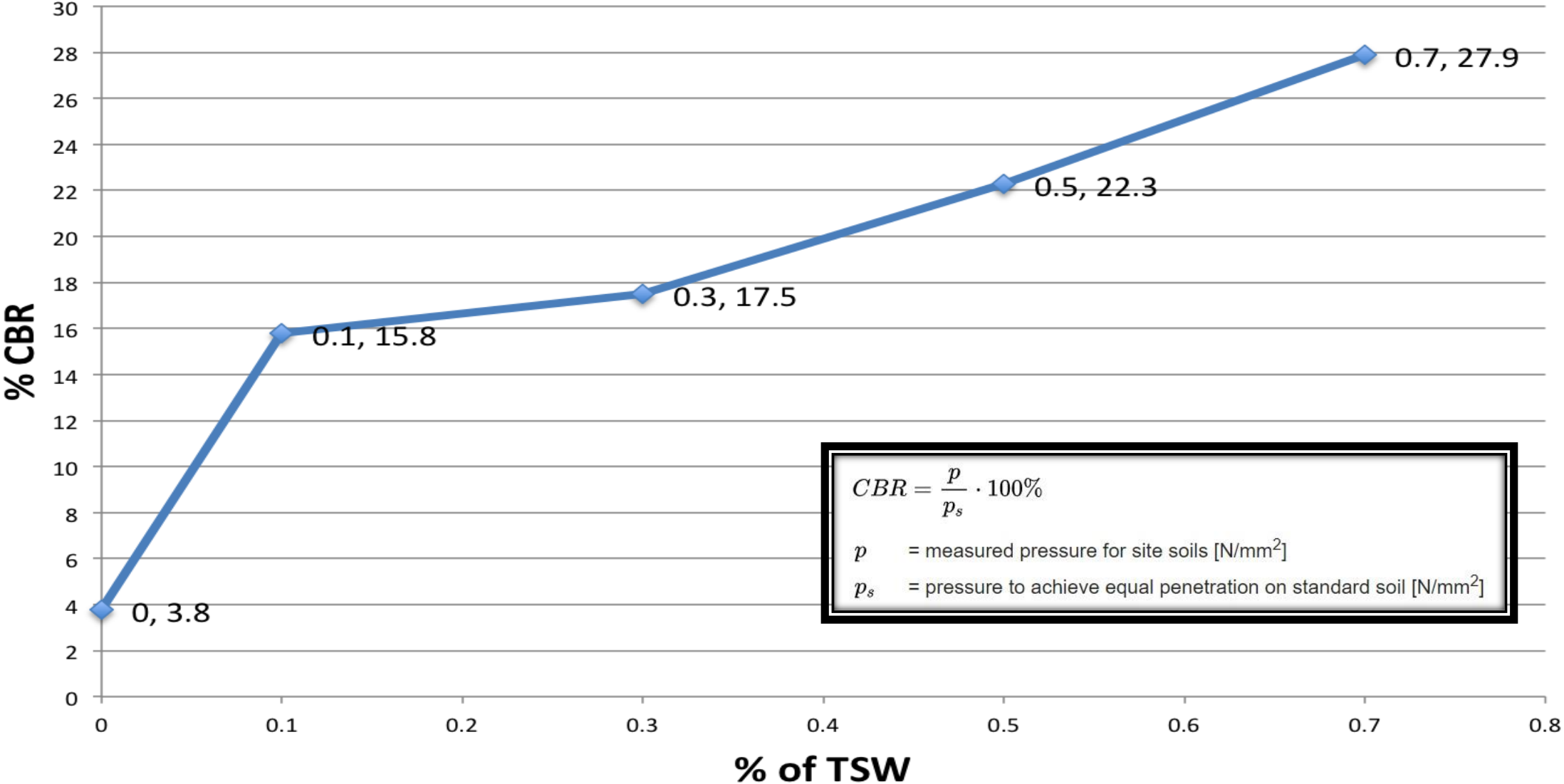


Figure 1: TSW vs. US EPA Standards

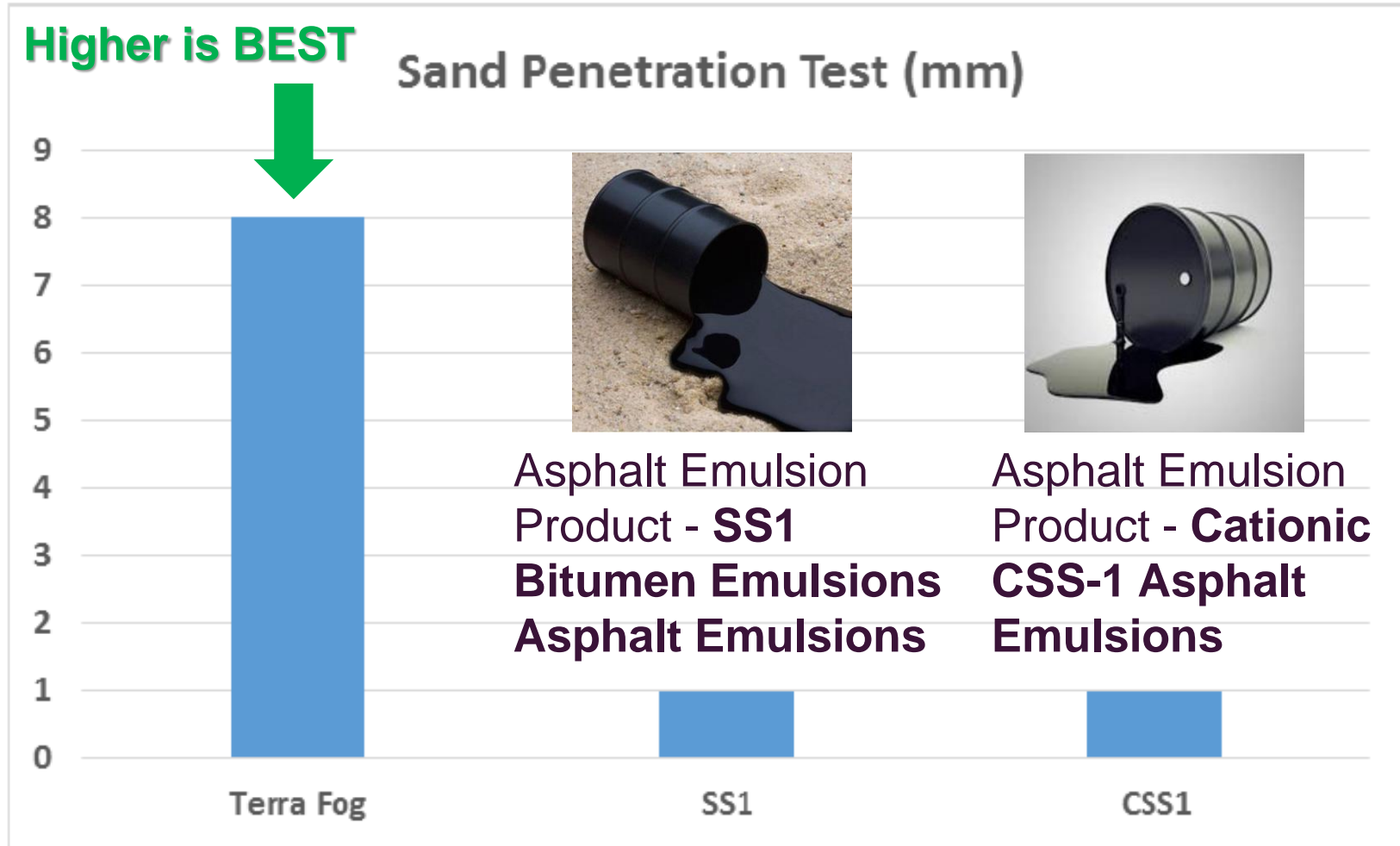
Erosion Resistance Test



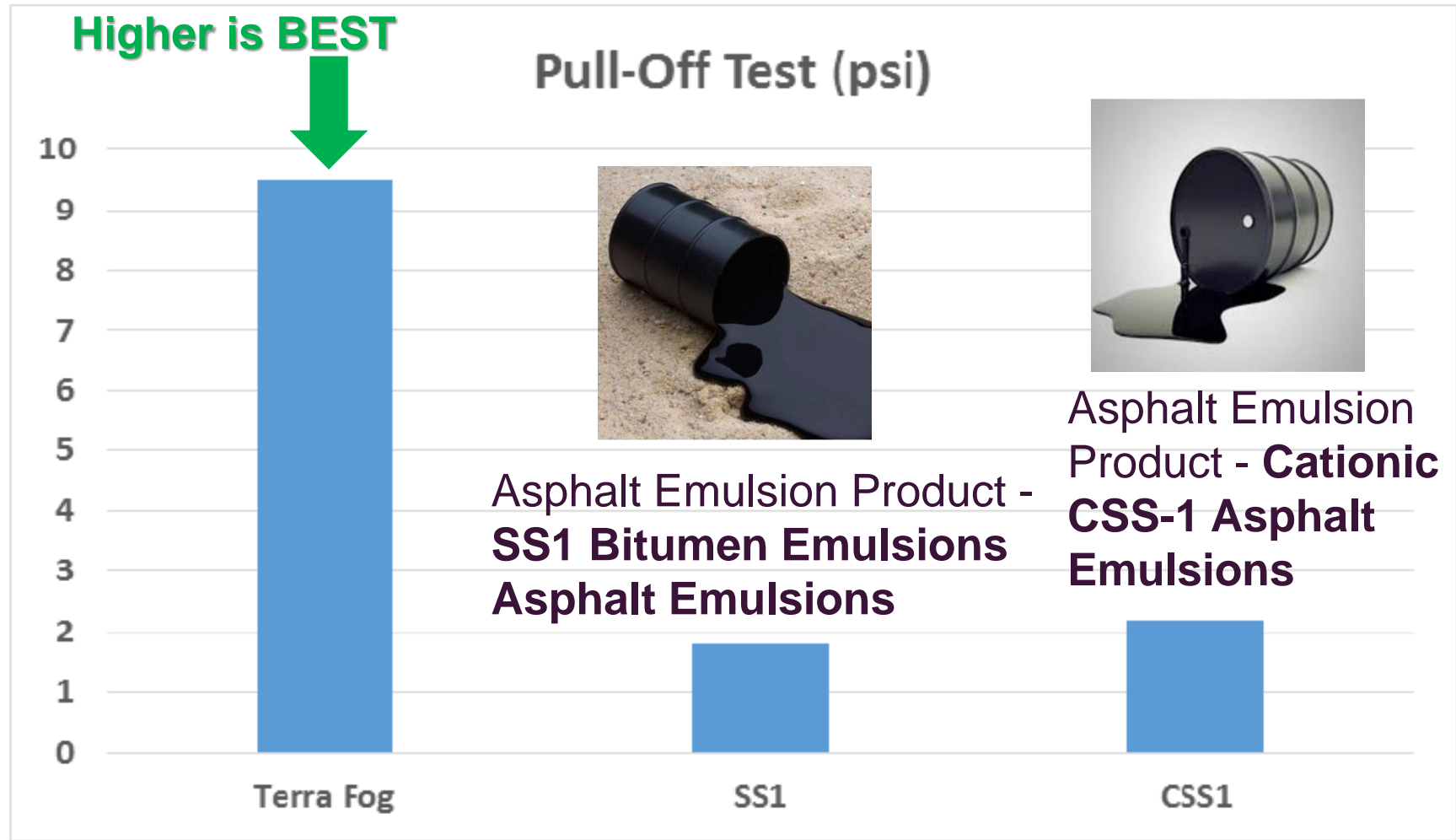
CBR Chart (California Bearing Rate)



PAVEMENT PRESERVATION



PAVEMENT PRESERVATION



Terra Pave White + Terra Prime (New road)

FM 55 RECONSTRUCTION EXISTING ROADWAY PROJECT PROPOSAL

PROJECT ID: 1451-3-17
 HIGHWAY: FM - 55
 COUNTY: NAVARRO
 DISTRICT: DALLAS
 BID DAY: February 3, 2023



4.2 miles

| BID CODE | DESCRIPTION | UNIT | QUANTITY |
|----------|-----------------------------------------|------|----------|
| 30776013 | SP MIXES SP-C SAC-B PG64-22 | TON | 7,777 |
| 03166419 | ASPH (AC-15P, AC-20-5TR OR AC-20XP) | GAL | 9,898 |
| 03166029 | ASPH (RC-250) | GAL | 6,599 |
| 03166024 | ASPH (CRS-2P) | GAL | 26,239 |
| 03146021 | EMULS ASPH (PRIME)(MS-2 OR SS-1) | GAL | 14,140 |
| 02756001 | CEMENT | TON | 379 |
| 02756004 | CEMENT TREAT (MX EXST MTL & NW BS) (6") | SY | 75,747 |
| 02516096 | REWORK BS MTL (TY C)(4")(ORD COMP) | SY | 63,203 |
| 02516065 | REWORK BS MTL (TY B) (4") (ORD COMP) | SY | 2,444 |

Using Terra Pave White in aggregate will provide an eco-friendly replacement for CEMENT Stabilization. Additional bonus are: 1) 6" Terra Pave White is 3x stronger and 4x tensile strength of CEMENT Stabilization without rebar 2) Spray on aggregate can compact without the need for special equipment and handling. This product was approved by TXDOT. See Exxon/Mobil project below for example of using Terra Pave White instead of CEMENT Stabilization.

| | | |
|----------|------------------------------------------------------|-----|
| 02756001 | Terra Pave White at 0.5 gal/SY for 22 ft x 4.2 miles | GAL |
| 02756004 | | |

Using Terra Prime as a replacement MS-2 or SS-1 provides a superior waterproof layer superior strength

| | | |
|----------|------------------------------------------------------|-----|
| 03146021 | Terra Prime at 0.04 gal/SY for for 22 ft x 4.2 miles | GAL |
|----------|------------------------------------------------------|-----|

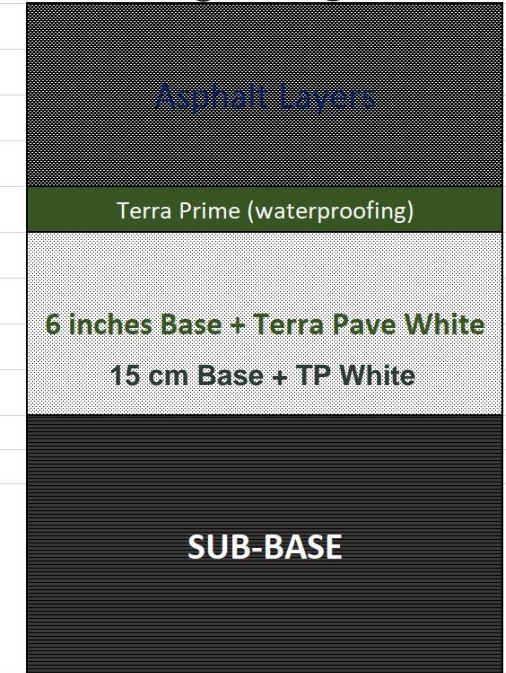
NOT GOOD

Very bad for the environment
 Road is not very good
 Traditional Road + Asphalt



MUCH BETTER QUALITY

Better for the Environment
 Road is much better
 TERRA PAVE Road + Asphalt



Superior Quality, Waterproof
 Strong Base Layer, Fast to
 Traffic Able, Lower Cost, More
 Eco-Friendly