Long Term Repair of Highway and Bridge Deck Defects using the Fibrecrete Pavement Preservation System

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Introduction

Bart Pharr
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Fibrecrete Technologies, LLC manufacturer of Fibrecrete
Flexible Concrete Repair

We are located in Mount Airy, NC and supply material and assistance to NC, SC, VA, WV, OH, IL, MO, TN, MS, AL, GA, LA, FL, TX, UT, NB, CO, CA, NY, NJ
Mayberry Connection
Product has been in use around the country since 2003

Has been used successfully in all temperature and climates in US
Where to Use?

- Concrete Spalls
- Spalled or Defective Longitudinal and Transverse Joints
- Potholes
- Deep cracks

DOT Currently uses
- HMA, Cold Mix
- Polymer Modified Concrete
- Epoxies and Polyurethanes
- Full Depth Concrete Repair or Slab Replacement
Advantages

- Minimal Ambient temperature concerns – as long as the crew can handle the temperature
- Quick Installation and Traffic Return – open to traffic within 45 minutes on average
- Designed to blend with surrounding surface
Advantages

- Does not cause adjacent spalling
- Cost effective to full depth concrete repairs
  - FDCR is Typically 10"
  - PDCR is typically 2" - 4"
  - Significant time requirement differences
- Long-term fix
  - 5 – 10 years
Bridge Decks

- Can be used on Bridge Decks and some approaches but NOT on Joints
- Typical repairs are down to rebar but never more than half the depth of the deck
- Bad area is determined by sounding the deck using hammers, chains, etc
Fibrecrete really is Flexible
Is This Your Pavement?
Concrete Spall Repair - Hot Applied Flexible Patch

1. Flexible
2. Open To Traffic in 1 Hour
3. Hard Wearing
4. Color Matches Existing Surface
5. Skid Resistant Surface
Lets talk MONEY

- These costs are in comparison to a Full Depth Slab repair costing $1500
- Slab Repair open to traffic in 1-5 days
- Hot Applied Flexible Patch Material installation cost $2.50 - $3.00 per lb
- Density - 135 lbs per cubic foot
- Typical crew can install 4500 lbs in a work day per machine or 42 cubic feet per day
MONEY

- Slab with 30 feet of wide cracks, a corner break with dimensions of 2’ X 1’ and is 6 inches deep
- Crack is 30’X1”(0.08’)X6”(0.5’) = 1.2 cft
- Corner break is 2’X1’x6”(0.5’) = 1.0 cft
- 2.2 cft X 135 lbs/cft X $3 = $891
- 40% cheaper - will last just as long
- Open to traffic at end of shift
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