

DEALING WITH ASPHALT ROADWAYS FOR FUTURE GROWTH

- Presenters:

- Mike May – Senior Project Manager
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- Jacob Fandrich, EIT – Staff Engineer



INTRODUCTION

- NDDOT 105,500 lbs current requirement
 - Looking at increasing to 120,000 lbs
- Little to no room height & width for future expansion
- **Why testing is important**
- Common roadway issues encountered
- Solutions and examples of projects we have had success with
- Construction costs associated with these types of projects
- **Any project needs maintenance**





ROADWAY ISSUES

- Raveling
- Transverse Cracking
- Longitudinal Cracking
- Rutting
- Fatigue Cracking (Alligator Cracking)
- Cross Slope Concerns
- Safety Concerns (Sloughs & Shoulders)
- Road Top Width Limitations



MILL & OVERLAY

- Pros
 - Fast Timeline
 - Cost Effective Option
 - Short Term Solution
- Cons
 - Short Term, Not For Longevity
 - Doesn't Address Potential Subgrade Issues
 - Limited Road Top Width For Future Growth
- Construction cost : \$ 530,000 Per Mile
 - Rough Estimate, does not include Engineering, Testing, and other fees
- 5-10 Year Fix



CEMENT TREATED BASE

- Pros
 - Addresses Subgrade Issues
 - Gaining Road Top Width (Future Overlays)
 - Possible Solution For Most Soil Conditions
 - Aids In The Reduction Of Cracking
- Cons
 - Traffic Control
 - Higher Cost
 - Susceptible To Supply Issues (Cement)
- Construction cost : \$935,000 Per Mile
 - Rough Estimate, does not include Engineering fees
 - 15-20 Year Fix (Minimum)



SLIVER WIDENING

- Pros
 - Increases Width for Future Expansion
 - Addresses In-slope Safety Concerns
- Cons
 - Doesn't Address Potential Subgrade Issues
 - Differential Settlements
 - Longitudinal Cracking On Shoulder Line
- Construction cost : \$ 980,000 Per Mile
 - Rough Estimate, does not include Engineering, Testing, and other fees
 - 10-15 Year Fix



RECONSTRUCTION

- Pros
 - Best Longevity
 - Ability To Correct Multiple Issues In One Project
 - Correct Any Subgrade Issues For Long Term
- Cons
 - Most Expensive
 - Multi Year Project
 - Detours (Long Term)
- Construction cost : \$1,350,000 Per Mile
 - Rough Estimate, does not include Engineering fees
 - 20-25 Year (Minimum)

QUESTIONS?

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