AO 2020-83: Microtrenching in the Traveled Way

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What is Microtrenching?

- Method of installing conduit and fiber in road surface
- Narrow trench, 2” – 4” wide, 12” – 24” deep
- Conduit installed, trench backfilled and sealed (reinstatement)
- Lower installation costs
- Vs. traditional method behind curb/sidewalk, or in easements
What is Microtrenching?
MOA Position on Microtrenching

- We recognize the benefits
- Continuing discussions with Alaska Communications
- Agreed to broader testing/implementation (6/29 email)
- Written agreement, financial protections
- Concerned about long-term adverse impacts to roads
- Concerned about increased maintenance cost/effort
- Goal is to ensure interests of MOA and taxpayers protected
- Avoid costs to MOA and taxpayers
- Currently reviewing draft Agreement
Why do we care?
Microtrenching in Anchorage

- Cinnabar Loop, 2012
  - Different provider and installer
- Alaska Communications Parking Lot, 2019
  - Demonstration project
- Bering Street, 2019
  - MOA-approved pilot project
  - Public ROW, MOA parking area
- McKenzie Drive, 2019
  - MOA-approved pilot project
Cinnabar Loop

- Significant failures as of 2019
  - Cracking
  - Settling
  - Eroded reinstatement material
Cinnabar Loop now...
Alaska Communications Parking Lot Demonstration

- Significant undercutting of asphalt surface and curb/gutter during trenching
- Undercutting can lead to settling and failure of surface
Bering Street

Failure after 1 winter
McKenzie Drive

Installation issues
- Off-tracking and damage to sidewalk
- Pavement and gutter damage during trenching
- Sidewalk crossing joints

Performance issues
- Epoxy sealant
McKenzie Drive – Installation
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McKenzie Drive – Installation
McKenzie Drive – Performance
• Alberta study
  • 2012/2013 field work
  • 2017 study date
  • Study appears to be focused on fiber performance vs. road integrity
  • Significant vertical movement (3-4”) of installed conduit during the study period
  • Different installation method and reinstatement material
  • Perhaps best available independent study

• Alaska Department of Transportation
  • Alaska Code requires 48” bury depth in road prism
• Eagan, MN experience
  • Represented as similar climate, success story
  • Conduit installed in asphalt surfacing vs. buried below
  • Eagan approved specific reinstatement material; installer changed without approval
  • Substitute epoxy reinstatement failed, allowing water infiltration
  • Provider/installer assured that rotomilling of street would not affect conduit
  • Eagan rotomilling project displaced reinstatement material and damaged conduit and fiber
  • *Telecom provider decided to remove conduit/fiber from street and install behind sidewalk using conventional methods, 36” – 48” bury depth*
Concerns

• Maintenance concerns
  • Repaving, mill and pave
  • Curb repair/replacement – industry concerns
• Long-term viability, potential damage to streets
• Cost to repair/replace road surface if failure
• Minimize cuts in asphalt surfaces – good construction practice
Concerns

• Telecom becomes dominant utility
• Issues with future work on deeper, subordinate utilities
  • Water
  • Sewer
  • Gas
  • Storm drain
  • Electric
Proposed Ordinance

• Not sure we understand intent
• If mandate for microtrenching, we have concerns based on info provided today
• If it does not preclude traditional solutions at MOA discretion, we support continuing to explore microtrenching
Discussion?