

# Penn DOT District 4

## BRAMAN ROAD WASHOUT CALLS FOR 'BAFFLING' SOLUTION

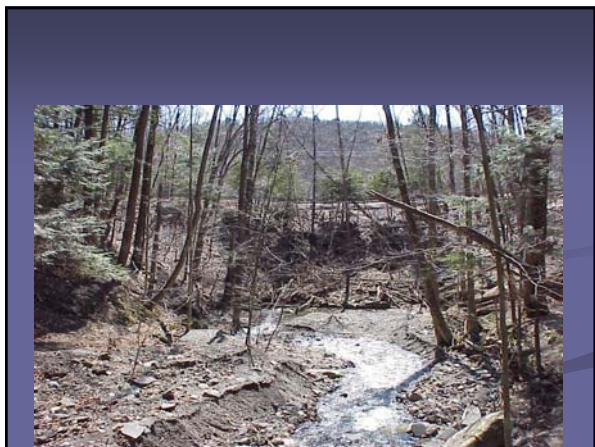
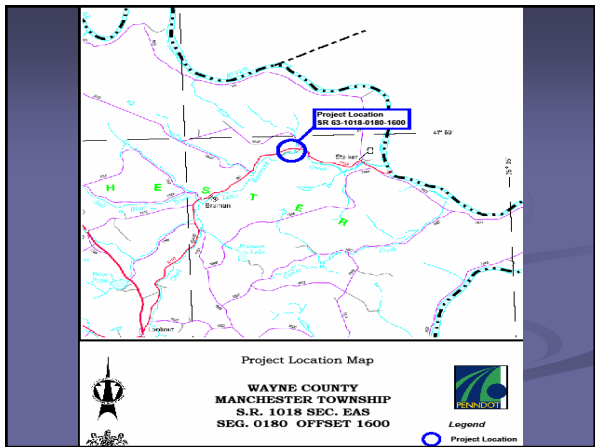
### Winners of the 2007 American Concrete Pipe Association Project Achievement Award

- ### Members of the Panel
- Representative Sandra Major – 111<sup>th</sup> District
  - Richard Cochrane – PennDOT 4<sup>th</sup> District
  - Martin Shamro – Minichi Construction
  - Tom Carney – Minichi Construction
  - Deborah Loomis – Oldcastle Precast Pipe
  - Patrick Kinsella – PA Concrete Pipe Assoc.

### District 4-0; Braman Road

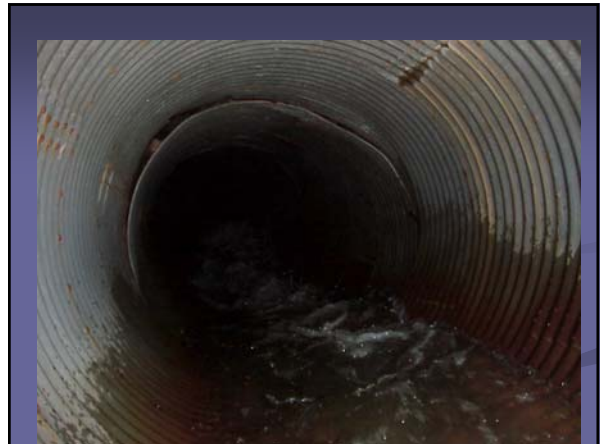
- Location, Location, Location
- District maintains over 3600 miles of roadways
- District maintains over 2000 bridges

Braman Road is in Manchester Township,  
Wayne County



### Original Installation

- Corrugated Metal Pipe
  - 36" Diameter
  - 150 feet



Water can't do much damage!?!





### Design Challenges

- Quick/Timely Repair
- Fill height up to 30 feet
- Pipe Diameter
- Discharge Velocity
- Pipe Slope

