



NTSB National Transportation Safety Board

*Office of Railroad, Pipeline and
Hazardous Materials Safety*

Storm Water Drainage

Dan Walsh, P.E.



Previous Track Washouts

- September 2006 – loss of ballast on north side of the CN grade crossing
- August 2007 – washout of the CN tracks west of the CN grade crossing

36 Inch Pipe under CN

- CN installed 36 inch pipe in 2007
- Based on “expected water flow”
- No design calculations performed to determine appropriate size of pipe
- Highway department sent inspectors to observe installation of pipe

CN Response to 2007 Washout

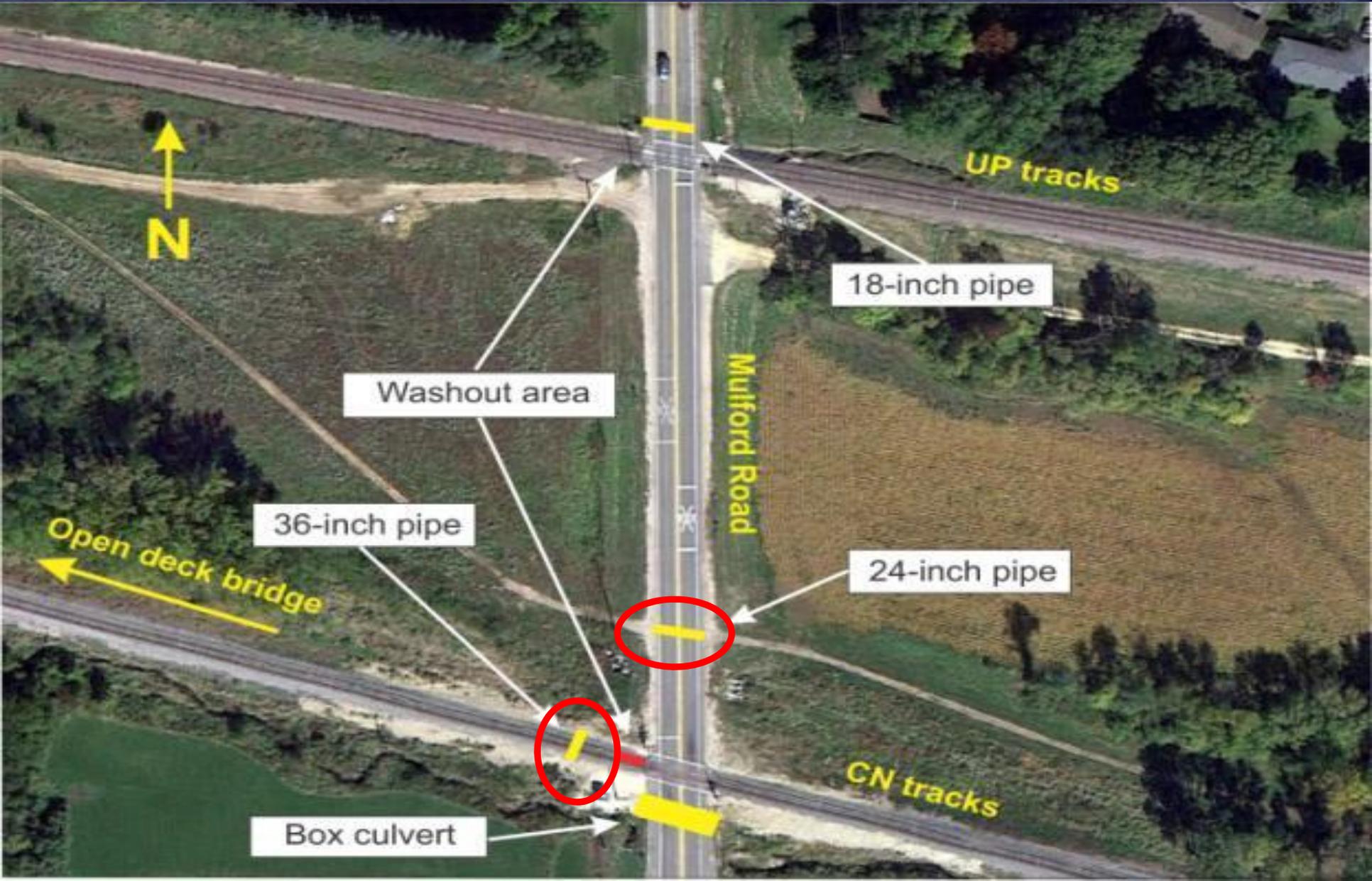
- No attempt to determine why the water had risen to unexpectedly high water level by either party
- No evaluation was conducted of existing drainage system in light of two water incidents in 2006 and 2007 by either party



County Response to 2007 Washout

- No action was taken because Mulford Road had not been directly affected
- CN and Winnebago County did not attempt to work together to identify reason for unexpectedly high water level

Location of Drainage Pipes





Summary – Storm Water Issues

- Storm water drainage system was inadequate
- Storm water issues can affect more than one entity
- Requires multiple entities working jointly in a collaborative effort to solve storm drainage problems

Harrison Park Subdivision

- Harrison Park Subdivision contained 2 detention ponds – privately maintained
- Located over one-half mile from accident location
- Larger pond (Pond #1) measured 400 feet by 255 feet at pond bottom



Breach in Detention Pond



Photograph taken after accident in June 2009



Pond Deterioration



Photograph taken in April 2008



City of Rockford Inspections

- Permit with Illinois EPA
- Inspected for sediment, floatables, and water
- Ponds not inspected for physical damage
- City of Rockford Inspections
 - 1977, 2004, and 2008

Post Accident Actions

- City of Rockford developed new inspection program for detention ponds
 - Must be rated “Good”, “Fair”, or “Poor”
 - Follow up required if rated less than “Good”
 - Homeowners Association to immediately contact the City when physical damage is discovered

Summary – Detention Ponds

- Regular inspections of detention ponds would help to ensure that the ponds function as designed
- Deterioration in Harrison Park Subdivision detention pond posed a downstream risk in the event of a heavy storm
- A more timely repair to the detention pond may have occurred



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