Corridor Studies – Big & Small

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US 30 Roadway Safety Audit

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- US 30 is a principal arterial extending from Philadelphia to Pittsburgh
  - In places it’s a four lane expressway
  - In other places it’s a two lane arterial with at-grade and signalized intersections
  - Current volumes on the section between PA 896 and PA 41 are around 18,000 AADT in this two lane section
  - As high as 20% trucks (Port of Wilmington to Harrisburg corridor)
  - Posted speeds: 35-45 mph
  - Signalized intersections each end and at Ronks, Belmont and PA 772
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- US 30 EIS (PA 896 to PA 41)
  - Resumed in 2000
  - Alternatives right sized and narrowed to:
    - Relocation (new alignment)
    - 5 lane widening of existing highway
    - TSM alternative
  - Because of funding constraints PennDOT ceased work in 2009
  - Federal dollars were paid back
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- US 30 Current Focus – Gap, safety improvements (HSIP), resurfacing, RSA
  - Gap Project (PA 772 to PA 41) – significant intersection improvements
    - $4.8 ML in SXF funding ($3.4 ML construction estimate)
    - 2012 let
  - Intersection Safety Improvements (HSIP funded)
    - PA 896 and Ronks Road intersections
    - On 2011 TIP for PE; construction in 2013
  - Stimulus resurfacing project just completed
  - US 30 bridge over Pequea Creek replacement – starts next year
  - RSA
  - Access Management?
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- FHWA Perspective on RSA’s
  - safety.fhwa.dot.gov/rsa
  - www.roadwaysafetyaudits.org/
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• Difference between RSA and a Traditional Safety Review – an RSA:
  ◦ Is performed by a team independent of the project
  ◦ Is performed by a multi-disciplinary team
  ◦ Considers all potential road users
  ◦ Accounts for road user capabilities and limitations
  ◦ A formal often written response report is an essential element
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- PennDOT District 8-0’s approach to RSA’s
  - One or so per year in MPO’s
  - Worst 25 locations – MPO helps select corridor/s
  - Open end contract with consultant
  - Day 1 (full day)
    - Watch introductory FHWA video
    - Review of crash data
    - Review of night time video of corridor
    - Field view (driving and walking)
    - Discuss safety issues in field
  - Day 2 (1-2 hours) – review findings
  - Audit team: 2 PennDOT traffic unit personnel, municipal road masters or engineers, local police, transportation planners, others (bias free)
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- Team members: PennDOT District, LCPC staff, township officials (East Lampeter/Paradise Twps.), consultants
- Crashes summarized and analyzed
- Field view held with above members to look at problems/possible solutions
- 310 reportable crashes over past 5 years
  - 244 injury crashes (160 minor)
  - 1 fatality
  - 44% rear-end; 25% angle; 18% fixed object
  - No specific correlation with environmental conditions (snow/rain/fog, etc.)
Findings/recommendations categorized by level of effort (LMH) & potential safety benefit (LMH)

- **Level of Effort (LMH)**
  - Low – local maintenance forces can make correction
    - Restriping; sign replacement; vegetation trimming/removal
  - Medium/High – design package & possibly outside contractor
    - Shoulder widening; signal warrant analysis; intersection reconfiguration

- **Potential Safety Benefit (LMH)**
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- Safety Successes (existing safety features)
  - Pavement and markings will be in excellent condition when resurfacing is complete
  - Breakaway sign posts are utilized throughout the corridor
  - Advance warning signs are provided for signalized and most unsignalized intersections throughout corridor.
  - Adequate lighting at the following intersections with PA 896, Ronks Road, Belmont Road, and PA 772
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- Safety Successes (existing safety features)
  - Center turn lane and adjacent left turn lanes are utilized throughout the corridor to facilitate turning movements
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- Short-Range Recommendations – examples
  - Install solar powered wig-wags on all advance intersection warning signs for signalized intersections (LH)
  - Retime signals on US 30 and install volume density loops to increase throughput and minimize queuing along corridor (LH)
  - Replace signal back plates at SR 772 intersection (LL)
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- Short-Range Recommendations – examples
  - Install guiderail and impact attenuators on parapet walls of Brackbill Road intersection (LH)
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- Mid-Range Recommendations – examples
  - Reevaluate PA 772 intersection to determine if additional capacity is necessary once the Houston Run development is constructed (MH)
  - Remove channelized right and widen the throat of the northbound approach of Vintage Road intersection (MM)
  - Replace loop detectors with video detection at Belmont Road intersection (MM)
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• Mid-Range Recommendations – examples
  ◦ Improve turn radii on all quadrants of US 30/Belmont Road intersection (HH)
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- Long-Range Recommendations – examples
  - Install a new inlet at the Kinzer Road and US 30 Intersection (MM)
  - Paradise Township is exploring the option of providing an alley behind the homes on the north side of US 30 (HH)
  - Consider conducting a signal warrant analysis at Singer Ave. Intersection (HH)
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- Long-Range Recommendations – examples
  - Realign Kinzer Road to intersect US 30 at 90 degrees and cul-de-sac existing skew to provide access to residents (HH)
Corridor Study Common Themes

◦ Funding – MPO Unified Planning Work Program special studies is good source – 20% local share
◦ Think big (vision)/think small (operations – signals/ITS/implementable projects)
◦ Integrate smart transportation principles like - money counts, safety always, plan for all modes, etc.
◦ Include land use component
◦ Public/stakeholder involvement – esp. PennDOT/municipalities/private sector/transit agency
◦ Scale the corridor study appropriately – each corridor/study is different
◦ Access management is probably an appropriate recommendation/consideration in all studies
Thank You

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