Corridor Studies:
One Size Does Not Fit All

Presented by Kendra Schenk, PE, PTOE

BURGESS & NIPLE
Engineers ■ Architects ■ Planners
Presentation Overview

- Corridor Study Examples
- Differences between Corridor Studies
- Keys to Scoping Good Corridor Studies
Corridor Study Examples
“Corridor Studies”

- Urban corridors
  - Looking to “move more than cars”
  - Looking to enhance existing corridors
WV 622 Corridor Study

- Cross Lanes, WV (Goff Mountain Road/Big Tyler Road)
- Affordable and constructible short- to medium-term solutions to congestion and multimodal system deficiencies in the corridor
- March 2016
Third Street Corridor Study

- St. Albans, WV
- Improve multimodal access to the core of St. Albans
- March 2016
WV 14 Corridor Management Plan

- Parkersburg and Wood County, WV
- Land use and transportation strategies and policies to help better manage WV 14
- June 2016
Limestone Street Corridor Study

- Springfield, Ohio
- "Gateway" from I-70 into Springfield
- Study to improve traffic flow, access and safety for all modes, to enhance the community, and to provide more opportunities for economic development.
- January 2017
Derr Road and Home Road Conversion Feasibility Study

- Springfield, Ohio
- Explored feasibility of converting 4-lane roadway to 3-lane roadway with bike facilities
- CMAQ funding
- Draft Report January 2017
Corridor Review and Prioritization

- Beckley and Raleigh County, WV
- Define and quantify current problems and deficiencies in four key regional corridors, so that the corridors (or sections of the corridors) can be smartly prioritized for more detailed improvement studies in coming fiscal years
- Draft Report February 2017
Differences Between Studies
Study Process

Problem Statement (Purpose & Need)

Project Goals

Evaluation/Selection Criteria

Initial Screening

Evaluation of Refined Alternatives

Recommendation for Project

Build/No Build Decision

Alternatives Development

Alternatives Refinement

From a study done in 1999!

Northwest Indiana Corridor Study
Reasons for the Study

- Why is this particular study being conducted?
- Outgrowth of the Long Range Transportation Plan
- Recommendation from another study
- Being proactive before development occurs
- To spur economic development
- Determining where to focus future study efforts
- Citizen complaints
Recommendations from Study

▪ Safety improvements
▪ Capacity improvements
▪ Access management improvements
▪ Community enhancements
▪ Implementable policies
▪ Priorities for future studies
▪ Potential funding sources
Recommendations from the Study

- WV 622 Corridor Study, Third Street Corridor Study, and Limestone Street Corridor Study
  - Specific Capacity and Safety Improvements
  - “Shovel-Ready Projects” (Preliminary Engineering)
  - Medium-Term and Short-Term Improvements
  - Low-to-Medium Costs
Recommendations from the Study

- WV 14 Corridor Management Plan
  - Policies and Strategies
  - No Specific Geometric Improvements

Tier 1
Pursue Aggressively Immediately

Tier 2
Implement As Soon As Possible

Tier 3
Pursue With Ongoing Planning Processes

Strategies:
- Tier 1: Very effective and have the greatest chance of near-term implementation.
- Tier 2: Likely effective, but may take longer or be more difficult to implement.
- Tier 3: May take extensive time and effort to implement.
Recommendations from the Study

- Corridor Review and Prioritization
  - Locations and Priorities for Future Studies
  - No Specific Recommendations for Improvements
Recommendations from the Study

- Derr Road and Home Road Conversion Feasibility Study
  - Feasibility of a Road Diet
  - Preferred Bicycle Facility Alternative
  - Funding Strategies
Defined “Success”

- How would success be defined?
  - By the sponsoring agency
  - By key stakeholders
  - By residents
Defined “Success”

- **WV 622 Corridor Study Goals and Objectives**
  1. Reduce traffic delay
  2. Feasible and affordable solutions
  3. Reduce the number of crashes

- **Third Street Corridor Study Goals and Objectives**
  1. Feasible and affordable solutions
  2. Minimal disruption to CSX during construction
  3. Improved vertical and horizontal clearance
Defined “Success”

- WV 14 Corridor Management Plan
  - Stakeholder consensus
- Limestone Street Corridor Study
  - Feasible solutions that improve safety and transform the corridor into a premiere gateway into Springfield
- Derr Road and Home Road Conversion Feasibility Study
  - Providing a missing regional bicycle network connection without adversely affecting vehicular traffic
  - Improved safety for both vehicular and bicycle traffic
Level of Stakeholder and Public Involvement

- Which key stakeholders should be involved?
- How should they be involved?
- Should the public be engaged?
Level of Stakeholder and Public Involvement

- **Steering/Stakeholder Group**
  - Stakeholders that will have the greatest influence on the implementation of recommended improvements

- **Stakeholder Interviews**
  - Key stakeholders that could provide input on current issues and concerns and provide ideas for improvement

- **Advisory Group**
  - More diverse group of stakeholders representing land owners, developers, realtors, business owners and operators

- **Public Meetings**
  - Allow local residents to provide input on current problems and needs in the corridor and comment on potential improvements
# Level of Stakeholder Involvement

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<tr>
<th></th>
<th>WV 622 Corridor Study</th>
<th>Third Street Corridor Study</th>
<th>WV 14 Corridor Management Plan</th>
<th>Limestone Street Corridor Study</th>
<th>Corridor Review and Prioritization</th>
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<tbody>
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<td><strong>Steering/Stakeholder Group</strong></td>
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<td><strong>Stakeholder Interviews</strong></td>
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<td><strong>Advisory Group</strong></td>
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<td><strong>Public Meeting</strong></td>
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Timeframe for Improvements

- Near-term (within the next year)
- Short-term (within the next 5 years)
- Medium-term (5-10 year horizon)
- Long-term (more than 10 years)
Timeframe for Improvements

Short-Term
- Roadway Widening
- Modified Underpass
- Zoning Overlay
- Within R/W, Low Cost

Long-Term
- Bypass
- New Underpass
- County-wide Zoning
- Additional R/W, Building Takes

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Timeframe for Improvements
Funding Partners / Funding Solutions

- How will the improvements be funded?
Funding Partners / Funding Solutions

- Derr Road and Home Road CMAQ Funding
  - Emissions Reductions based on Mode Shift
  - Emissions Reductions/Increases based on Arterial Delay

<table>
<thead>
<tr>
<th></th>
<th>Home Road West of Derr Road</th>
<th>Home Road East of Derr Road</th>
<th>Derr Road</th>
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<tbody>
<tr>
<td>Total Emission</td>
<td>3.04 kg/year</td>
<td>0.94 kg/year</td>
<td>-3.23 kg/year</td>
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<td>Reductions</td>
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- Recommendations to provide +B/C ratio
  - Curb modifications (Multi Use Path) or improvements within existing curb (Bike Lane or Cycle Track)
Cost of Improvements

- What’s a realistically affordable solution?

- WV 622 Project
  - Cost: $10.5M + R/W & Utilities

- Total Fiscally Constrained Projects in LRTP
  - $284.7 M

- WV 622 Corridor Study Recommended Scenario
  - Cost: $10.5M + R/W & Utilities

- $433.4 M

- $87.4 M
Evaluation of Concepts

- Goals and Objectives
- Evaluation Criteria
- Weighting (Optional)
- Recommended Alternative
- Evaluation Matrix
## Evaluation of Concepts

<table>
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<th>Goal</th>
<th>Evaluation</th>
<th>Importance*</th>
<th>Evaluation Criteria</th>
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<td>Reduce traffic delay and improve productive/personal time</td>
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<td>Improve intersection levels of service (LOS) and traffic queues that do not create blockages and other problems. Given the highly traveled and urban location for the intersections in this area, users expect to experience some delay at these intersections. Therefore, LOS D or better for all approaches at all six study intersections is preferred.</td>
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<td>Provides preferred intersection levels of service (LOS) and has traffic queues that do not create blockages and other problems. Given the highly traveled and urban location for the intersections in this area, users expect to experience some delay at these intersections. Therefore, LOS D or better for all approaches at all six study intersections is preferred.</td>
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### Evaluation Criteria

- **Significantly improves operations along the corridor. Only a few intersections approaches with LOS E. Approaches on WV 622 are all LOS D or better.**
- **Pros:**
  - Provides preferred intersection levels of service (LOS) and has traffic queues that do not create blockages and other problems. Given the highly traveled and urban location for the intersections in this area, users expect to experience some delay at these intersections. Therefore, LOS D or better for all approaches at all six study intersections is preferred.
  - Provides a solution that meets identifiable needs, has a benefit that is in reasonable proportion to the cost, adverse environmental impacts, and adverse impacts to adjacent properties and stakeholders.
  - Anticipated to cost in the $8 Million range plus right-of-way costs. Improvements that have significant impacts to properties: Adding the southbound right turn lane at the WV 622/62 intersection appears to require a partial take of a building. The addition of the northbound lane on WV 622 does not appear to directly impact any structures, but does have impacts to some driveways, parking, and potentially business operations. Widening to add the sidewalk north/east of Kroger will have some minor right-of-way impacts and could require some short retaining walls.

### Notes

- Based on a Stakeholder Survey on the importance of each goal. The value represents the average score for that goal on a scale of 1 (not important) to 5 (highest importance).
Stakeholder Consensus

- What level of stakeholder consensus is required for a successful project?

- WV 14 Corridor Management Plan

- WV 622 Corridor Study
  - Third Street Corridor Study
  - Limestone Street Corridor Study

- Derr Road and Home Road Conversion Feasibility Study

- Corridor Review and Prioritization
Keys to Scoping Good Corridor Studies
Keys to Scoping Good Corridor Studies

- Understand *(and make sure your consultant understands)* the origin of this project
- Identify key stakeholders who need to be involved
- Determine how stakeholders will be involved
- Clearly define goals and measures of success
- Decide what is reasonably affordable for solutions
- Identify potential funding sources
- Determine level of stakeholder consensus required and identify any issues that may occur during the study process
Corridor Studies

- One size does not fit all
- The key to a good corridor study is in the scope
  - Well-defined process
  - Clear expectations
  - Attainable goals and objectives
Questions?

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