DEARBORN COUNTY TRANSPORTATION ASSESSMENT

March 18, 2004

Agenda

1. Study Introduction
2. Socio-Economic Data
3. Roadway Functional Classifications
4. Roadway Assessment Data
5. Highway Capacity Analysis
6. Recommendations
7. Next Steps
Study Introduction

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Dearborn County

Dearborn County

• Rapidly growing area
  – Population trends indicate an increase of 60% by 2030
• OKI anticipates the region’s future growth will occur outside of I-275
• Rural roads now serving thriving communities
• Current roadway classification system is too generalized and fails to address our needs by not properly informing and guiding decision making
Dearborn County Transportation Assessment

The Study Includes:

- A complete digital GIS mapping inventory of the entire county
- Baseline Socio-Economic and Transportation Data
- The Functional Classification each County Roadway
- Engineering guidelines for new and existing roadways
- An Evaluation of Current Roadways
- A Prioritization of Future Projects

Study Goals

- Will identify an accurate roadway mileage count to ensure appropriate funding from INDOT.
- Will provide an accurate blueprint of the county roadway system to assist in understanding future needs.
- Will develop standardized roadway sections and guidelines.
Socio-Economic Data

Erin Peterson, PE
Parsons Brinckerhoff

2000 Population Density

- 2000 Population: 46,109
  - An increase of 18% from 1990
2000 Employment Density

- 2000 Employment: 23,083
  - Unemployment = 3.3%, below the national average (4.0%)

Roadway Functional Classifications

Agenda Item #3
Roadway Functional Classification

- Help to differentiate between types of roadways and their functions
- References
  - American Association of State and Highway and Transportation Officials (AASHTO) Policy on Geometric Highway Design
  - Indiana Department of Transportation (INDOT) Design Manual

Roadway Functional Classifications

- **Classification is a two-step process**
  1. Characteristics
     - Geometrics
     - Connectivity
     - Access Control
  2. Traffic Volumes
     - Continuing & Cumulative Process

- **Urban vs. Rural Classification**
Rural Arterial Roadways

- Provide linkage to cities or larger towns
- Provide interstate or inter-county service
  - State and US Routes
  - North Dearborn
  - State Line Road

Rural Collector Roadways

- Provide intracounty travel
- Provide service to smaller communities
- Provide connections to arterials
  - Arlington Road
  - Bonnell Road
  - Chesterville Road
  - Kaiser Road
  - Mount Pleasant Road
Rural Local Roadways

• Provides access to adjacent land and wider network
• Serves shorter trips
  – Texas Gas
  – Happy Hollow
  – Over half of the roadway miles in the county are classified as local roadways

Roadway Assessment Data
Roadway Data Gathered

- **Centerline Data**
  - Total Unincorporated Miles = 650 miles
- **Pavement Type**
- **Pavement Condition**
- **Geometric Characteristics**
  - Lane Width
  - Shoulder Width

Definitions of Pavement Conditions

- Quantified Pavement Conditions using examples provided by the County

  - GOOD
  - FAIR
  - POOR
Pavement Conditions – Paved Roadways

- 88% or 574 miles of County Roads are Paved
  - 67% or 382 miles = Good
  - 29% or 166 miles = Fair
  - 4% or 26 miles = Poor
  - 51% have pavement markings

Pavement Conditions – Unpaved Roadways

- 4% or 24 miles are Unpaved
  - 6% or 1 mile = Good
  - 42% or 10 miles = Fair
  - 52% or 13 miles = Poor
Pavement Conditions – Paved/Unpaved Roadways

- 8% or 52 miles are both Paved & Unpaved
  - 8% or 4 miles = Good
  - 34% or 18 miles = Fair
  - 58% or 30 miles = Poor

Pavement Geometrics

- Lane & Shoulder width deficiencies are determined by comparing with the example typical sections for each Functional Classification with the current conditions
  - 75% of the county roadways have a lane width deficiency
  - 92% of the county roadways have a shoulder width deficiency
Highway Capacity Analysis

• Compares the number of cars that want to travel on a roadway to the number of cars it can carry.
• Measures the mobility of the roadway
• Performed using Highway Capacity Manual, 2000
Capacity Alternatives

Four-Lane/Five Lane Roadway

Three-Lane Roadway

Transportation System Management

Increasing Cost

Agenda Item #6

Recommendations
Transportation System Management

- Distance between access points – determined by travel speed, Driveway Permit Manual, INDOT
  - 30 mph = 185 feet
  - 55 mph = 435 feet
  - Dearborn County current ordinance – 275 feet regardless of speed

- Adequate Sight Distance – currently addressing

- Spacing between intersections – at least one-half mile for Arterials

- Utilizing Shared Driveways or Frontage Roads – currently promoting

Roadway Recommendations

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Arterial Roadways</th>
<th>Collector Roadways</th>
<th>Local Roadways</th>
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</thead>
<tbody>
<tr>
<td>Primary Consideration</td>
<td>Per-Lane Width Deficiency</td>
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<tr>
<td>Other Consideration</td>
<td>Shoulder Width Deficiency</td>
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<tr>
<td>Pavement Type</td>
<td>Unpaved or Both</td>
<td>Unpaved or Both</td>
<td>Unpaved or Both</td>
</tr>
</tbody>
</table>
Arterial Roadways

• **North Dearborn Road**
  – Average lane width deficiency of 1.5 feet/lane
  – Lacks pavement markings
  – Poor Pavement conditions in some areas
  – Unpaved for a short segment

• **Jamison Road**
  – Average lane width deficiency of 1.5 feet/lane

• **State Line Road**

• **Old US Hwy 52/North State Street**

Collector Roadways

• **29 Collector Roadways are recommended for future improvements**

• **Most Severe Cases**
  – Chesterville Road
    • Average lane deficiency of 1.5 feet/lane
  – North County Line Road
    • Average lane deficiency of 3.5 feet/lane, some sections are unpaved and lack pavement markings
  – Collier Ridge Road
    • Average lane deficiency of 2 feet/lane
  – Arlington Road
    • Average lane deficiency of 1 foot/lane
  – Hueseman Road
    • Average lane deficiency of 1.5 feet/lane
Local Roadways

- 15 Roadways recommended for future improvements
- Most Severe Cases
  - Konradi Road
    - Average Lane width deficiency of 5 feet/lane, is unpaved and in poor condition
  - Hogan Creek
    - Average lane width deficiency of more than 5 feet/lane, is paved/unpaved and in poor condition
  - Martin Road
    - Average lane width deficiency of more than 5 feet/lane, is paved/unpaved and in poor condition

State and US Routes

- Listed for Continuity
- Future projects determined by the Indiana Department of Transportation
Traffic Counts

- **5 year cycle**
  - Arterials & Collectors counted every 5 years
  - Years 3-5 reserved for Local Roadway Counts

- Require traffic counts for each new access point

Next Steps

Agenda Item #7
Next Steps

• **Meet with INDOT**
  – Presentation of Study Findings
  – Begin process to obtain additional funding

• **GIS Data**
  – Make an necessary “hand” adjustments
  – Incorporate INDOT roadway naming specifics

Next Steps

• **Keep Report Current**
  – Update Roadway Classifications as needed
  – Establish a GIS update methodology
  – Update traffic count data
  – Update maintenance and improvement records
Questions?