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

Mike Davis
Mark Seiler
Travis Miller

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%)

Agenda Item #3

Roadway Functional Classifications
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

Agenda Item #4
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

Increasing Cost

Three-Lane Roadway

Transportation System Management

Recommendations

Agenda Item #6
### 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>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Consideration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per-Lane Width Deficiency</td>
<td>1 foot +</td>
<td>1 foot +</td>
<td>4.5 feet +</td>
</tr>
<tr>
<td>Other Consideration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoulder Width Deficiency</td>
<td>2 feet +</td>
<td>2 feet +</td>
<td>N/A</td>
</tr>
<tr>
<td>Pavement Condition</td>
<td>Poor</td>
<td>Poor</td>
<td>N/A</td>
</tr>
<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?

Erin Peterson
Parsons Brinckerhoff
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202
(513)639-2146
petersone@pbworld.com