Proposed Diverging Diamond Interchange

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Agenda

• Diverging Diamond Interchange (DDI)
• DDI Benefits
• Public Participation
• Existing Conditions
• Key Design Concepts
• Schedule
DDI definition

Diverging Diamond Interchange: a type of diamond interchange in which two directions of traffic on the non-freeway road cross to the opposite side on both sides of the bridge at the freeway.
DDI Benefits

Safety ~ Fewer conflict points

14 DDI

26 Conventional
DDI Benefits

Safety

• Better sight distance at turns

• Wrong way entry to ramps extremely difficult

• Shorter pedestrian crossings
DDI Benefits

Operational

- Two-phase signals reduce lost time at interchange
- Increased capacity
- Better storage between ramp terminals
- Left and right turns onto freeway may be free-flowing
- Reduce queue spillback potential
DDI Benefits

Cost Savings

- Minimal structure work
- Decreased construction time
SR 25 DDI History

- District Safety Review Team
- Funding
- City of Perrysburg Involvement
Existing Conditions
Structure (77.5’ f/f parapet)
Traffic

- Traffic backups onto mainline IR-475
- Traffic queues observed to back out of turn lanes
- Crashes ~ 60 per year (expected 42)
Interchange Options

• ODOT District 2 looking into interchange modification options late 2012
• Early planning level research they contacted Gilbert Chlewicki, PE (DDI)

○ = Signal light

Figure 3. Diverging Diamond Interchange.

2nd Urban Street Symposium (Anaheim, California) — July 25-30, 2003
SR 25 over I-475  Perrysburg, Ohio
DDI & Key Design Concepts
Through Movements at Crossover
Left Turns at Exit Ramp
Right Turns at Exit Ramp
Design Speed (25 ~ 35 mph)
Crossover angle

Typically 30 to 60 degrees
Crossover Tangent

Recommended tangent length before crossover

Recommended tangent length after crossover

≈ 100' total length

10'

15'-25'
Additional Features

Pedestrian and Bike Facilities
### Additional Features

**Pedestrian and Bike Facilities**

<table>
<thead>
<tr>
<th>A) Center Walkway, Single Structure</th>
<th>B) Center Walkway, Single Structure</th>
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<tr>
<td><strong>MO 13 - Springfield, MO</strong></td>
<td><strong>Botts Rd. – Branson, MO</strong></td>
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Additional Features

Landscaping

- Native flowering plants
- Spring flowers, green summer, fall color, winter berries
Schedule

Fall 2016
Embarkment / retaining wall / temp. pavement (no daytime lane closures)

Spring 2017
• SR25 one lane each direction
• Bridge closure for one weekend
• 4 to 5 week off ramp closures

September 17, 2017 DDI Full Operation

October 15, 2017 Final Completion
Questions

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