Lessons Learned from Alabama’s First DDI: I-10 at SR 181

Liz Johnson, PE, PTOE

February 10, 2021

Kimley-Horn
Lessons Learned

- Signals
- Striping
- Signage
Why DDI?
Why DDI?
SR 181 Corridor

- ~1.5 Miles
- 6 signalized intersections + DDI
- Coordinated Signal System
- Widening from Eastern Shore Boulevard to US 90
Lessons Learned: Signals

- Comm
  - Clock Drift
- One Cabinet/Controller
- Pre-Timed Operation
  - Detection
- Double and Triple Check Everything!
Comm and Clock Drift

- Fiber was removed from project during design for budget reasons
- Signal controller clocks had significant drift
- Cell modems to the rescue!
Cabinets and Controllers

One Versus Two?

• Benefits of One Cabinet/Controller
  • Cheaper!
  • “Dummy Proof”
  • Improved Free Operations

• Benefits of Two Cabinet/Controllers
  • Simpler design
  • “Easier” signal phasing
Pre-Timed Versus Actuated
Double and Triple Check!
Lessons Learned: Striping and Signage

• Stop Bars
• Lane Utilization
• Overhead Signs
• Temporary Message Boards
• Route Shields and Pavement Markings
Stop Bars
Stop Bars
Stop Bars
Lane Utilization
Lane Utilization
Lane Utilization
Lane Utilization
Lane Utilization
Lane Utilization
Overhead Signs
Pavement Markings
Message Boards

[Image of a sign that reads "LEFT LN I-10 W ONLY"]
Questions?

Liz Johnson, PE, PTOE
elizabeth.johnson@Kimley-horn.com