I-270 EXISTING CONDITIONS
I-270 INNOVATIVE CONGESTION MANAGEMENT VISION

- Solutions to move the most traffic the furthest and the fastest
- Safely while minimizing operations and maintenance costs while being adaptable for the future
- No predetermined solutions or requirements
- $100 M Fixed Budget
I-270 INNOVATIVE CONGESTION MANAGEMENT SOLICITATION

- Competitive Procurement to find highly qualified team who can deliver solutions to best solve problems within budget

- Progressive Design-Build Contract
  - Phase One - Design Services
  - Phase Two - Construction Services
CONCEPT PROGRAM OF SOLUTIONS

- Two-pronged approach
- Roadway Improvements
- Innovative Technologies and Techniques
ROADWAY IMPROVEMENTS

**Southbound**

- SB 1: Extend acceleration and deceleration lanes at MD 80
- SB 2: Extend acceleration lane at MD 109
- SB 5A: Reconfigure exit lanes to I-370
- SB 6: Create auxiliary lane in local lanes south of Shady Grove Road
- SB 7: Create auxiliary lane in local lanes between MD 28 and MD 189
- SB 8: Reconfigure local lanes between MD 189 and Montrose Road
- SB 10: Maintain three lanes from I-270 and drop right lane on I-495 at I-270/I-495 merge
- SB 12: Create additional travel lane between Montrose Road and Democracy Boulevard
ROADWAY IMPROVEMENTS

**Northbound**

- NB 1: Create additional travel lane between Democracy Boulevard and Montrose Road
- NB 2: Create auxiliary lane in local lanes between MD 189 and MD 28
- NB 3: Close loop ramp from NB Shady Grove Road to NB I-270; Close slip ramp to express lanes north of Shady Grove Road
- NB 4: Create auxiliary lane between MD 124 and Watkins Mill Road and between Watkins Mill Road and WB Middlebrook Road
- NB 5: Extend third lane to Comus Road bridge
- NB 7: Extend deceleration lane at MD 118
I-270 Southbound
MD 28 to MD 189

Before

After

MD 28 to MD 189 Bottleneck to be Eliminated

14 Bottlenecks Broken
I-270 SOUTHBOUND
MONTROSE ROAD TO
DEMOCRACY BOULEVARD

BEFORE

North of Montrose rd. to Democracy Blvd. Bottleneck to be Eliminated

AFTER

14 BOTTLENECKS BROKEN
INNOVATIVE TECHNOLOGIES AND TECHNIQUES

REAL-TIME TRAFFIC COMMUNICATION SIGNS

AUTOMATED SMART TRAFFIC FLOW MANAGEMENT

CAMERAS & SENSORS
monitor traffic volumes & communicate with dynamic traffic management to optimize flow

EVERY MILE

REAL-TIME COMMUNICATION TO DRIVERS
with dynamic message signs & optimized traffic management

INTELLIGENT SIGNAL SYSTEMS
optimize traffic flow onto I-270

30+ INTELLIGENT SIGNALS
INTELLIGENT TRAFFIC SIGNALS – HOW DO THEY WORK?

- Intelligent Traffic Signals will break up platoons of vehicles on I-270 by controlling rate at which vehicles enter I-270.

- Vehicle Discharge Rates are **ADAPTIVE** based on real time I-270 traffic flow and ramp demands.

- Vehicles would be discharged at a rate to **OPTIMIZE** I-270 traffic flow.

- Results in **travel time reductions** even with queue on the ramp and results in **reduced collisions**.
AUTOMATED SMART TRAFFIC SYSTEM

I-270 – INNOVATION DRIVING MD FROM SLOW TO GO!

FORMER SHOULDER BECOMES NEW HOV LANE, CURRENT HOV LANE BECOMES EXPRESS LANE
SYSTEM COMPONENTS

SMART ADAPTABLE I-270

1. Automated Smart Traffic System
2. Bottlenecks Broken
3. Real-time Traffic Communication Signs
4. Intelligent Signals

There are 84 total components.
I-270 WITH PROGRAM OF IMPROVEMENTS
## Where Do You Get On?

<table>
<thead>
<tr>
<th>Location</th>
<th>Total Commute Time Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between I-70 and Father Hurley Blvd.</td>
<td>Up To 30 Minutes</td>
</tr>
<tr>
<td>Between MD 118 (Germantown Rd.) and MD 117 (Diamond Ave.)</td>
<td>Up To 18 Minutes</td>
</tr>
<tr>
<td>Between I-370 and Montrose Rd.</td>
<td>Up To 9 Minutes</td>
</tr>
</tbody>
</table>
WHERE DO WE GO FROM HERE?

MOVING FORWARD

2017

DYNAMIC INTELLIGENT TRAFFIC SYSTEM

Design

Install

Intelligent Signals
Real-Time Communication Signs

2018

2019

INFRASTRUCTURE SYSTEM

Design

Install

Lane Reconfiguration at I-495
Add Lanes Miles

OPTIMIZED SYSTEM