



Virginia Avenue

SMART CORRIDOR

ITS GA Annual Meeting October 7, 2019



INTRODUCTIONS

Study Team



Kirsten Mote, AICP
Client Project Manager



Keli Kemp, AICP, PTP
Consultant Project Manager



Subconsultant





AGENDA

- Study Overview
- Final Recommendations
- Implementation Plan



STUDY OVERVIEW

STUDY OVERVIEW

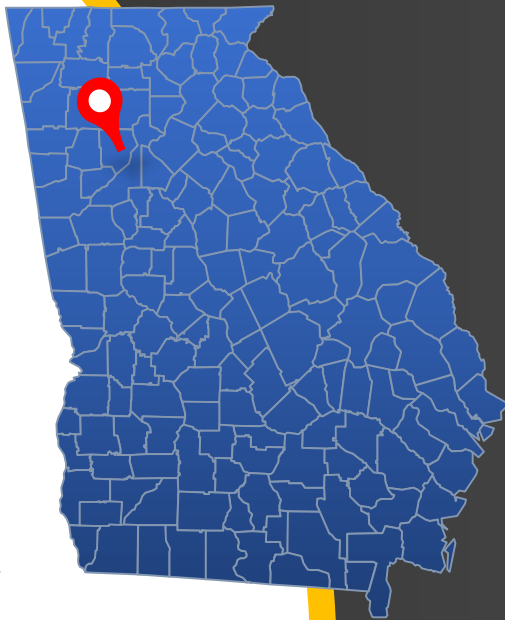
Study Funding



Livable Centers Initiative (LCI) Grant (80%)



Local Match (20%)

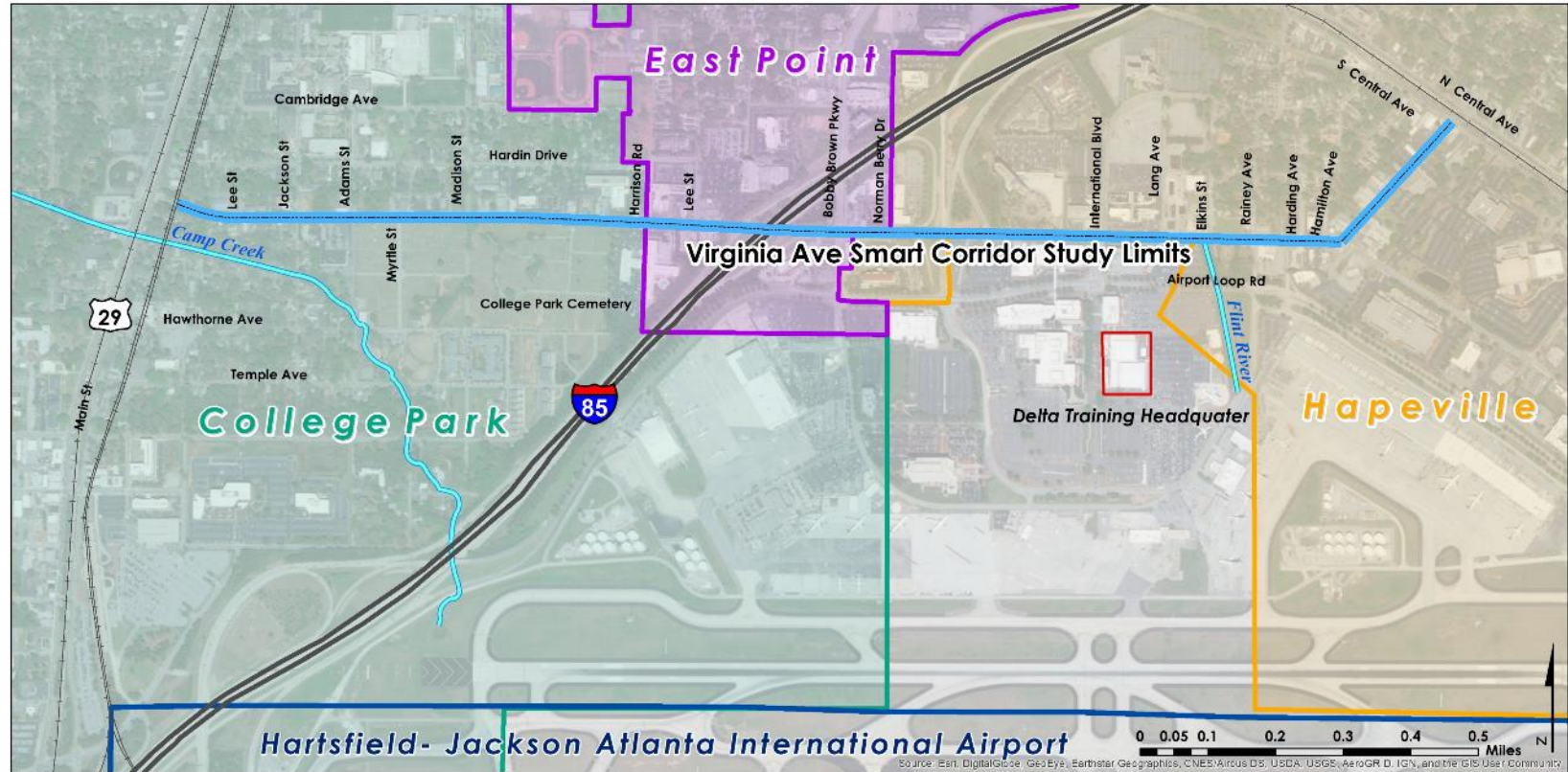


STUDY OVERVIEW

Virginia Ave. from Main St./US 29 to South Central Ave.



Virginia Ave Smart Corridor Study Limits



Legend

- Virginia Ave Smart Corridor Study Limits
- East Point
- Hapeville
- College Park
- Airport
- Railroads
- Water Body



STUDY OVERVIEW

What Are We Trying to Improve with Technology?



Safety



Mobility



Walkability

WHAT TYPES OF SOLUTIONS DID WE REVIEW?



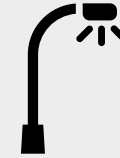
Signals



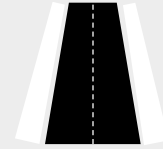
Bikes/
Pedestrians



Transit



Street
Lights



Pavement/
Sidewalks



Wayfinding



Parking



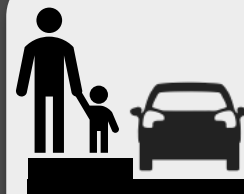
EV Charging



Video
Surveillance



Wi-Fi



Curbside



Apps



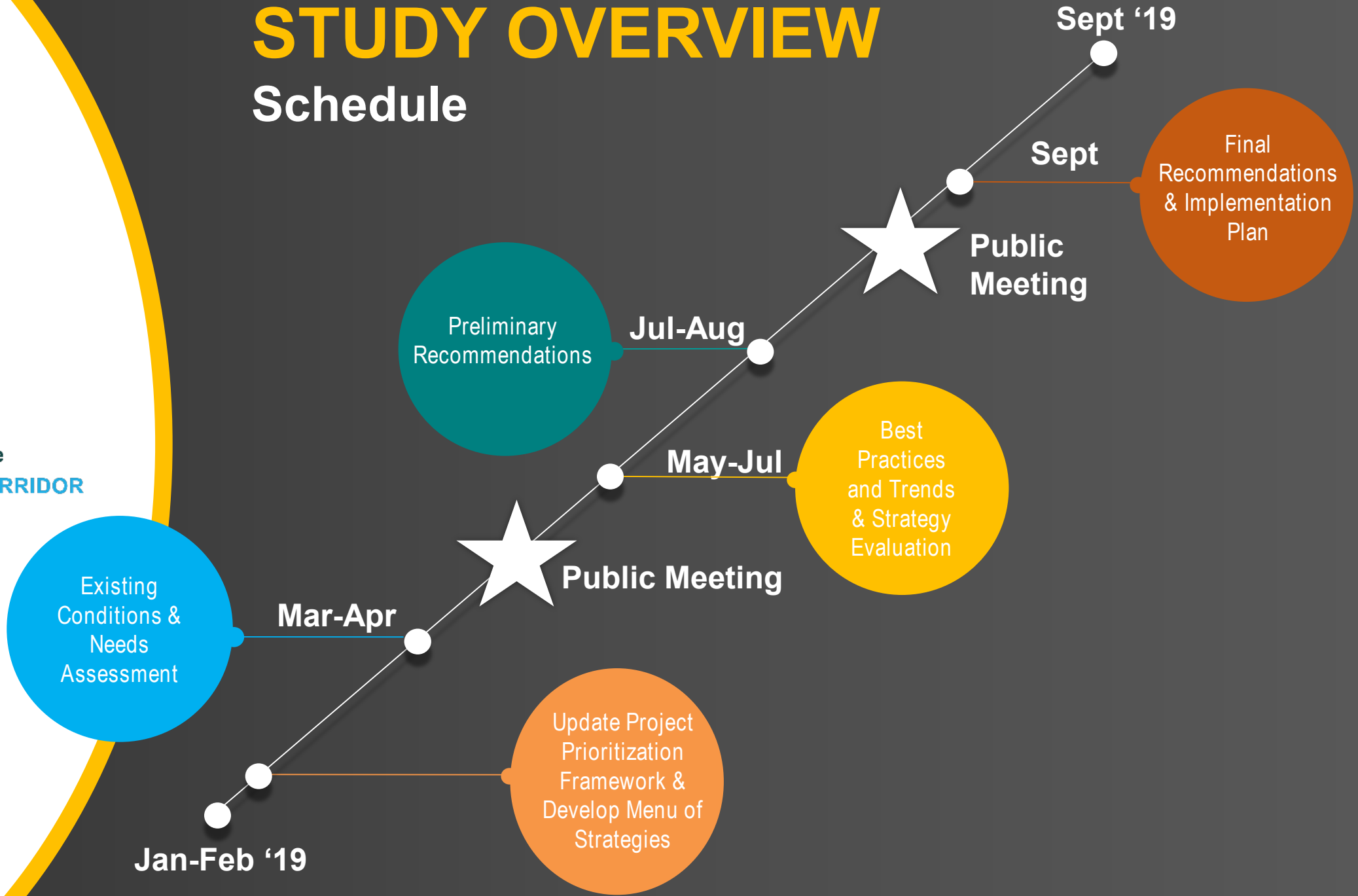
Data
Exchange





STUDY OVERVIEW

Schedule





FINAL RECOMMENDATIONS

FINAL RECS



Outside Scope of the Corridor

- 01 Real-time Transit Data
- 02 Mobility as a Service
- 03 Integrated System and Data Exchange
- 04 Extreme Weather Alert Systems

Eliminated from Further Consideration

- 01 Gunshot Detection Sensors
- 02 Solar Pavement
- 03 Countdown Pedestrian Signals
- 04 Detector-based Adaptive Signal Control Technologies
- 05 Roadside Sensors
- 06 Navigation Assistance for the Visually Impaired
- 07 Artificial Intelligence (AI) Conversation Agent

Included in Tier 3 to Revisit Later

- 01 Parking Availability/Availability App
- 02 Smart Parking Meter(s)
- 03 EV Charging Station(s)
- 04 Automated Parking System(s)
- 05 Curbside Occupancy Sensors
- 06 Smart Dots (Studs) in Street Centerlines

Recommended (Prioritized in Tier 1)

- 01 Transit Signal Priority
- 02 Emergency Vehicle Signal Pre-emption
- 03 Bike Signal Detection
- 04 Adaptive Signal Control Technology
- 05 In-Pavement Illuminated Crosswalks
- 06 Solar Bus Shelter(s)
- 07 RRFB/PHB with Automated Options for Activation
- 08 Transit - Pedestrian Warning System
- 09 Smart Streetlighting
- 10 Digital Wayfinding Kiosk(s)

Recommended (Prioritized in Tier 2)

- 11 Public Wi-Fi
- 12 Camera/License Plate Readers
- 13 Driverless Shuttle
- 14 Automated Traffic Monitoring/Object Detection
- 15 Solar Bench(es)



15 APPLICATIONS
INCLUDED IN FINAL
RECOMMENDATIONS

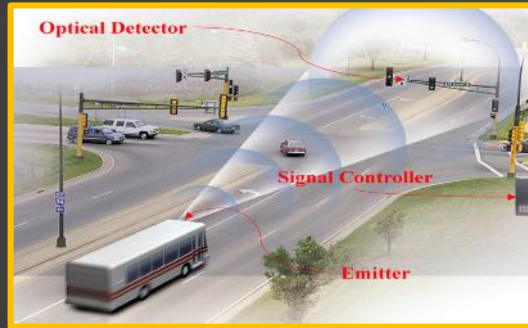


Tier 1

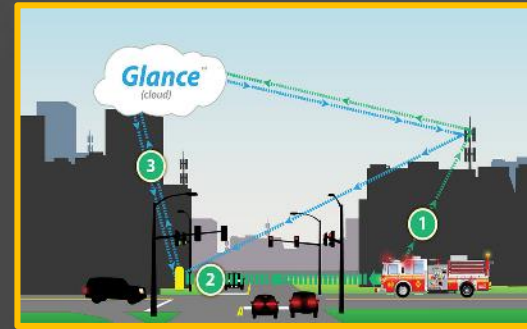
Projects

FINAL RECOMMENDATIONS

Tier 1 Projects



Transit Signal Priority



Emergency Vehicle
Signal Pre-emption



Bike Signal Detection



Adaptive Signal
Control Technology



In-Pavement Illuminated
Crosswalks



Solar Bus Shelters

FINAL RECOMMENDATIONS

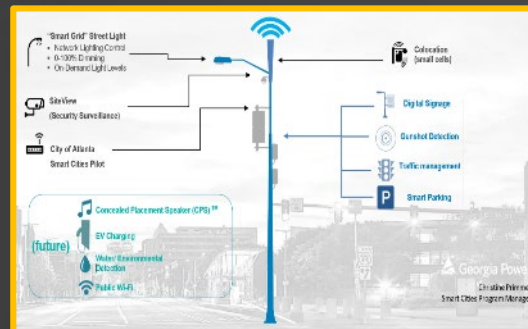
Tier 1 Projects



Rectangular Rapid Flashing Beacons for Mid-block Crossings



Transit-Pedestrian Warning System



Smart Streetlighting



Digital Wayfinding Kiosk(s)



Tier 2

Projects

FINAL RECOMMENDATIONS

Tier 2 Projects



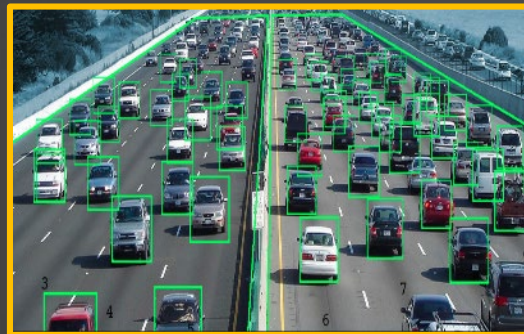
Public Wi-Fi



Cameras



Driverless Shuttle



Automated Traffic Monitoring/Object Detection

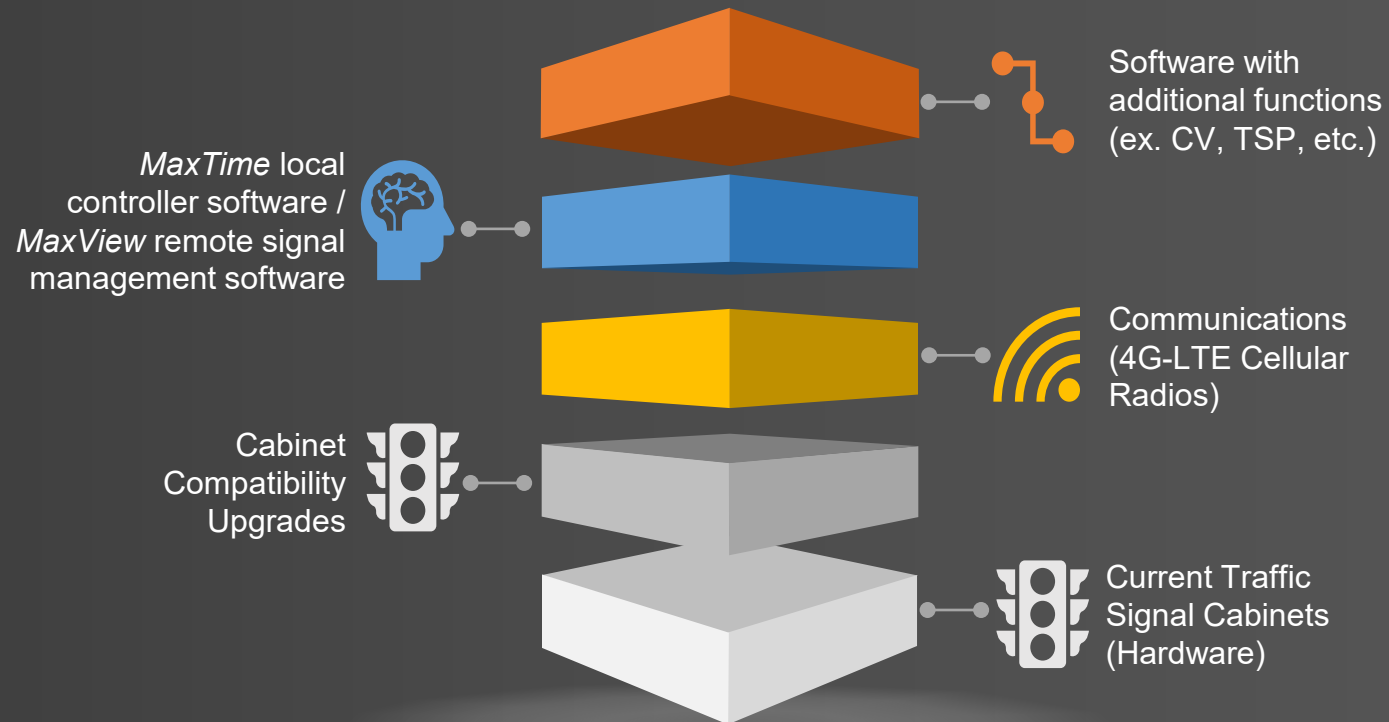


Solar USB Charging Bench(es)

EARLY WINS!

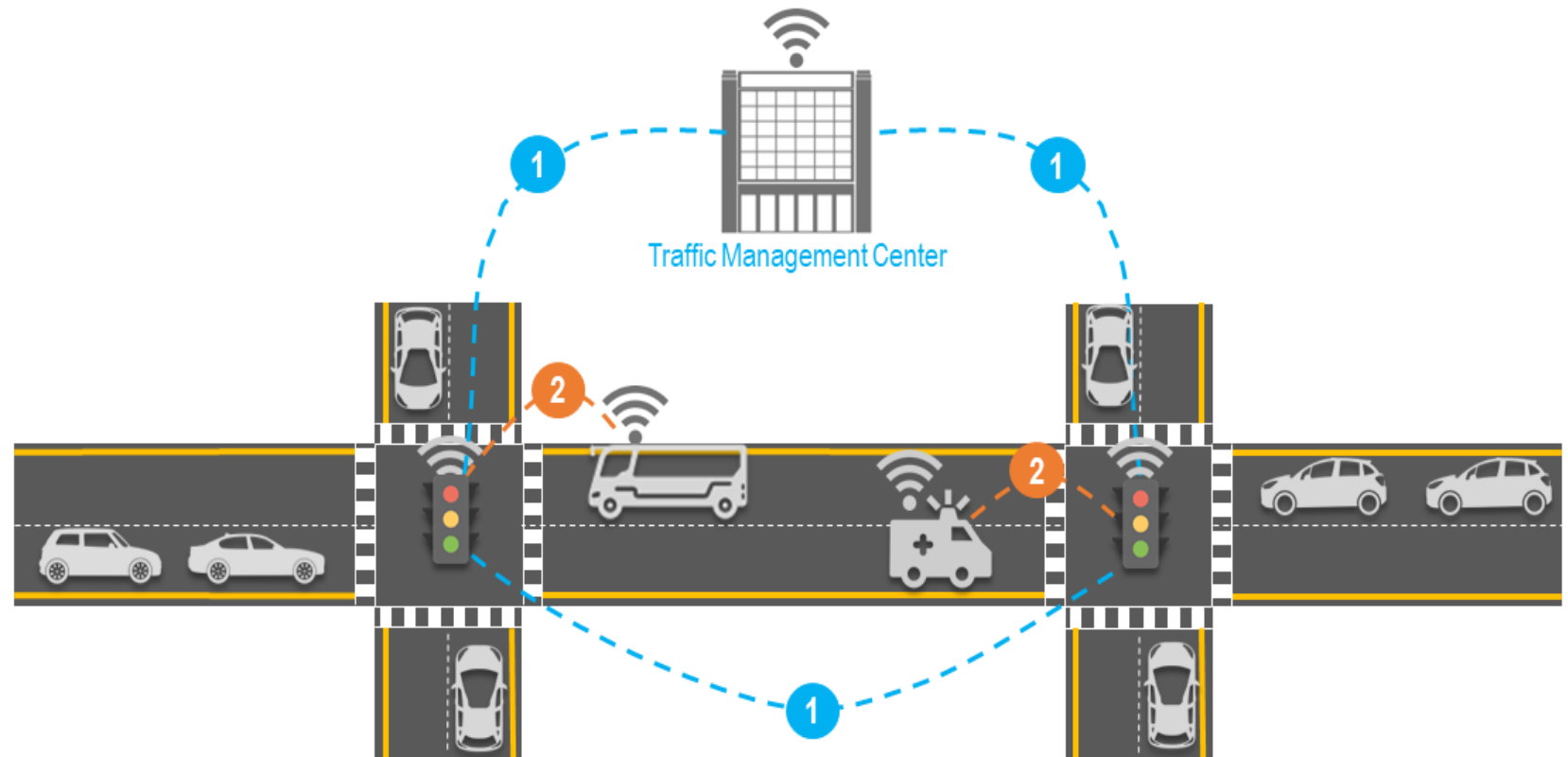
GDOT Upgrade of Signals to MaxTime & Installation of 4G LTE Cellular Radios - COMPLETE!

Building the Foundation for Future Signal Enhancements



PHASING PLAN - EARLY WIN UPDATE

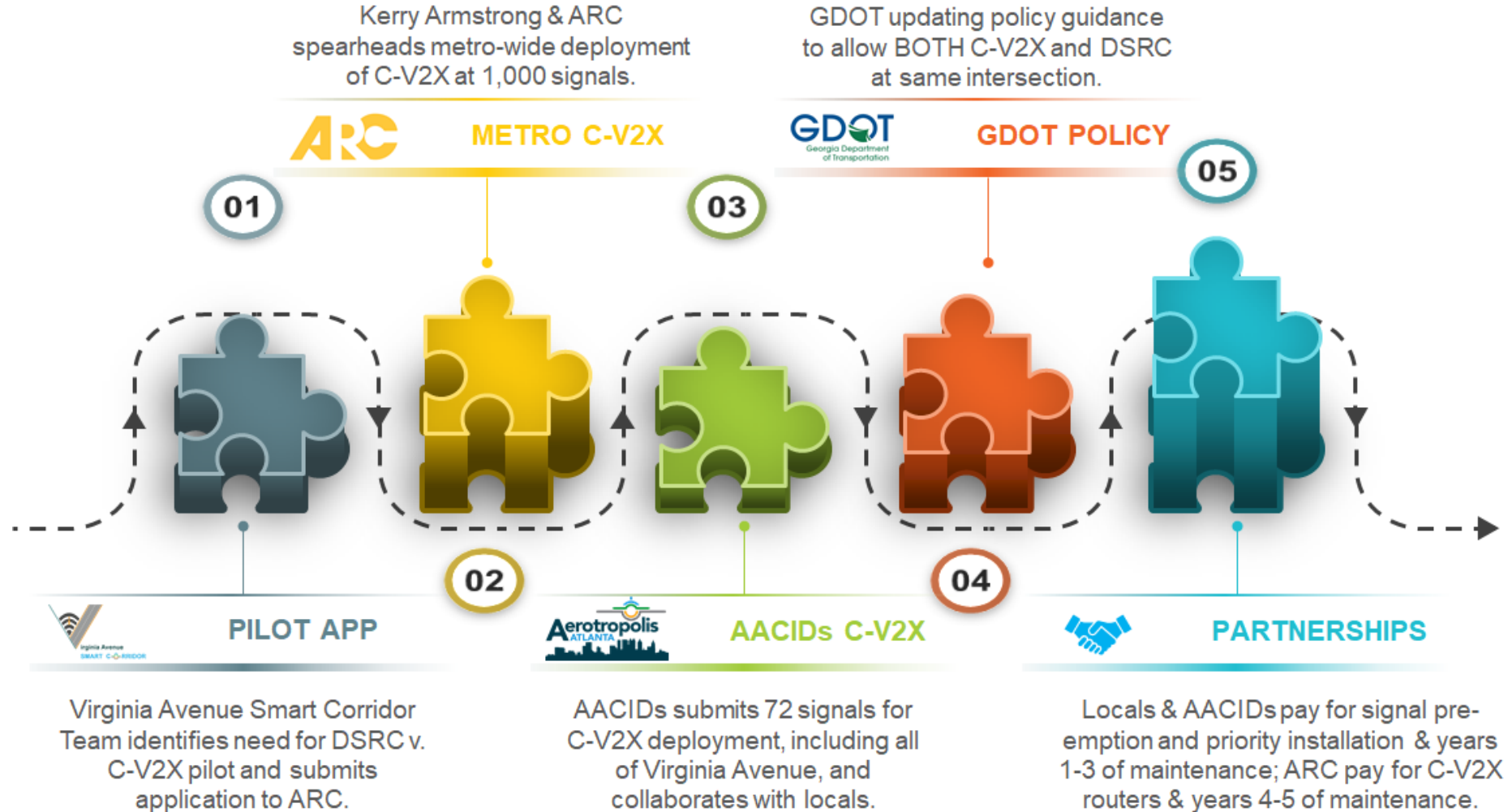
GDOT Upgrade of Signals to MaxTime & Installation of 4G LTE Cellular Radios



- ✓ 1 STEP 1: Install Communications between Signals and between Signals and Traffic Management Center
- 2 STEP 2: Install Communications between Signals and Transit (Signal Priority) and Emergency Vehicles (Signal Pre-emption)

EARLY WINS!

C-V2X Cellular Radio Installation and Signal Priority / Pre-emption





IMPLEMENTATION PLAN

Funding, Phasing, Action Plan

IMPLEMENTATION PLAN

Approach to Funding Strategy



IMPLEMENTATION

PLAN

Universe of Funding Sources

Potential Smart Mobility Funding Sources

Federal Competitive Grants

BUILD (FHWA/FTA); Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) (FHWA); Accelerated Innovation Deployment (AID) Demonstration (FHWA); Automated Driving Systems (ADS) Grant (FHWA); Safety Research & Demonstration (SRD) (FTA); Integrated Mobility & Innovation (IMI) Demonstration (FTA); Senior Corps RSVP Grants (Corp. for National & Community Service).

GDOT Grants & Funds

Off-System Safety (OSS) Improvement Grant; Quick Response (QR) Funds; Local Maintenance & Improvement Grant (LMIG); Safe Routes to School (SRTS).

Atlanta Regional Commission

Livable Communities Initiative (LCI); Community Development Assistance Program (CDAP), Smart Communities Challenge.

FAST Act - Federal Aid

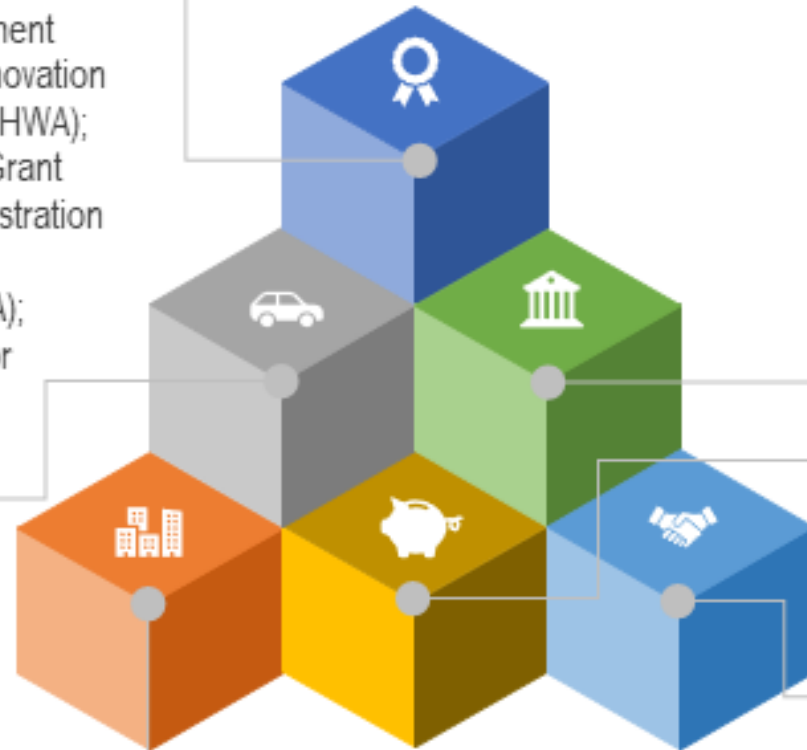
National Highway Performance Program (NHPP); Surface Transportation Block Grant (STBG); Highway Safety Improvement Program (HSIP); Congestion Mitigation & Air Quality (CMAQ) Improvement Program.

SRTA

Georgia Transportation Infrastructure Bank (GTIB) Loan/Grant.

Local

Cities of College Park, East Point, and Hapeville; AWCID; TSPLOST; Hotel-Motel Excise Tax; PATH Foundation; Private Partnerships (ex. Delta, Technology Vendors, Georgia Power).



IMPLEMENTATION PLAN

Packaging of Projects



Package 1A:
Upgrade Signals with 4G LTE Routers and Install MaxTime/MaxView Software at All 10 Traffic Signals



Package 1B:
Digital Wayfinding Kiosks (near hotels)



Package 1C:
CV1k+ Initiative – Install DSRC/CV2X Routers, Transit Signal Priority, and Emergency Vehicle Signal Pre-emption at All 10 Traffic Signals



Package 1D:
GTIB Grant Application – Pilot 1-2 In-Pavement LED Illuminated Crosswalks (near hotels), 1-2 RRFP with Automated Options (near Woodward Academy), 1-2 Bike Signal Detection, Solar USB Charging Benches, Transit Pedestrian Warning System

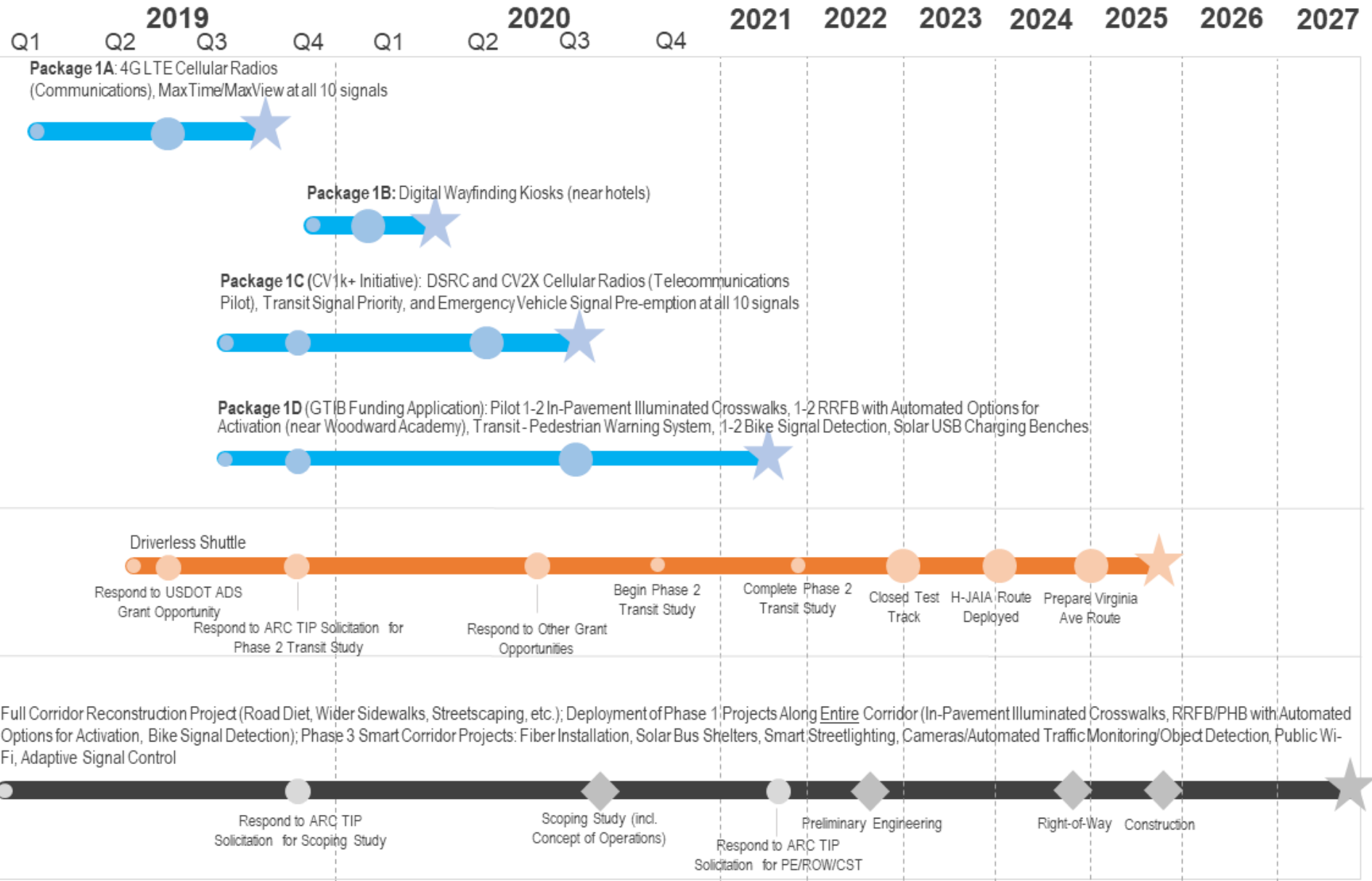


Projects by Phase

1 Phase 1 Projects

2 Phase 2 Projects

3 Full Corridor Reconstruction Project, Phase 1 Along Entire Corridor, Phase 3 Projects













- Begin Partner/MOA Coordination & Funding Discussions
- Apply for Funding
- Begin Deployment
- ★ Complete Deployment/Construction
- ◆ New Phase of Full Reconstruction Project

100-DAY ACTION PLAN

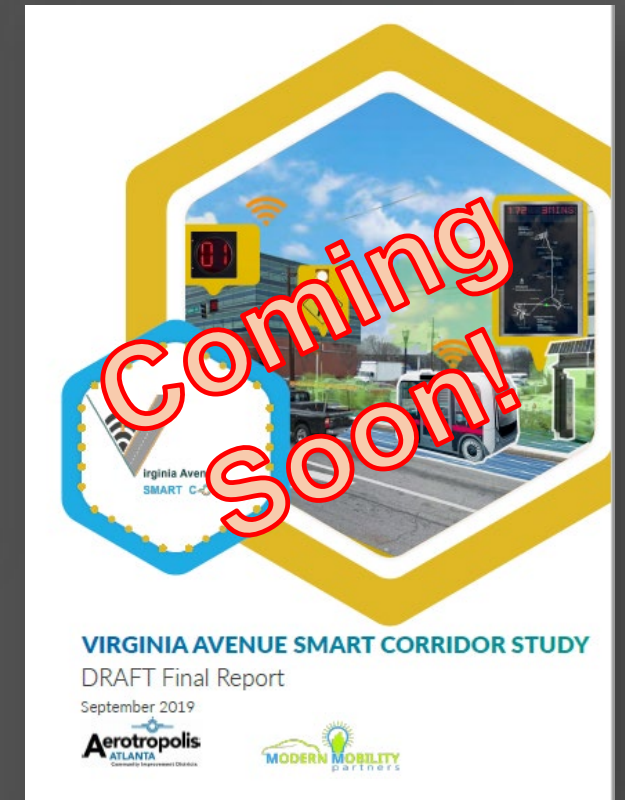


100-Day Action Plan

-  **Upgrade 10 Traffic Signals with Telecommunications and Synchronize.**
Install 4G LTE routers and MaxTime/MaxView software and re-time signals.
-  **Host MaxTime/MaxView Training for Cities.**
Host training for Cities of College Park, East Point, and Hapeville (scheduled for 10/1/19 – 10/3/19).
-  **Apply for Funding for Overall Corridor Scoping Study and Telecommunications Pilot Study.**
Respond to ARC TIP Solicitation (applications due 10/11/19) to fund Scoping Study, including Concept of Operations, and Telecommunications Pilot Study (performance measures study; not equipment)..
-  **Apply for Funding for Phase 1D Projects.**
Respond to Georgia Transportation Infrastructure Bank (GTIB) Grant/Loan Program (applications due 10/15/19) to fund implementation of in-pavement LED illuminated crosswalks, rectangular rapid flashing beacons, transit pedestrian warning systems, bike signal detection, and solar USB charging benches.
-  **Coordinate with Partners on Phase 1C Projects as part of CV1k+ Initiative.**
Coordinate funding commitments, roles, and responsibilities and GDOT permits for 2020 deployment of Dedicated Short-Range Communications and cellular routers, transit signal priority, and emergency vehicle signal pre-emption.
-  **Call/Meet with GDOT D7 to Discuss Permitting Process for Phase 1D Projects.**
GDOT permits are required for the following projects within Phase 1D: In-pavement LED illuminated crosswalks, rectangular rapid flashing beacons, bike signal detection, solar USB charging benches.
-  **Call/Meet with GDOT Operations to Discuss Process for Utilizing Contract Catalog for Eligible Phase 1D Projects.**
The following projects within Phase 1D are included in GDOT's contract catalog: rectangular rapid flashing beacons and bike signal detection.
-  **Call/Meet with GDOT D7 State Aid Coordinator to Discuss OSS Funding.**
Locals are required to contact District Aid Coordinator by the end of the year (12/31/19) in order to potentially access OSS funds for current fiscal year (by 6/30/20). May be needed to supplement GTIB funding or as a back-up plan.
-  **Meet with Vendor(s) and City of Hapeville for Phase 1B Project (Digital Wayfinding Kiosks).**
Determine timeline for implementation, including any City permitting requirements (none required by GDOT), roles and responsibilities.
-  **Determine Interoperability of On-Board Units.**
Meet with vendor(s) for CV1k+ Initiative to determine if on-board unit for transit signal priority can also be used for transit pedestrian warning systems.

Available Online

<https://aerocids.com/projects/the-smart-corridor/>



QUESTIONS?





CONTACT INFORMATION

Kirsten Mote, AICP

Client Project Manager
Aerotropolis Atlanta CIDs
kmote@aerocids.com

Keli Kemp, AICP, PTP

Consultant Project Manager
Modern Mobility Partners
kkemp@modernmobilitypartners.com