NOACA ITS Architecture Comprehensive Update
Stakeholder Workshop No. 1

September 25, 2018	September 26, 2018	September 27, 2018
8:30 AM – 11:30 AM	9:30 AM – 12:30 PM	8:30 AM – 11:30 AM
Brunswick Recreation Center	Willoughby Public Library	Independence Civic Center, Red Oak Room
3637 Center Road	30 Public Square	6363 Selig Drive
Brunswick, OH 44212	Willoughby, OH 44094	Independence, OH 44131

Workshop Summary

1. Welcome, Introductions and Workshop Purpose

Brian Blayney of NOACA provided a welcome and overview on the workshop purpose which is to gather transportation-related challenges and needs from regional stakeholders prior to updating the Regional Intelligent Transportation Systems (ITS) Architecture and Strategic Plan for NOACA.

A list of workshop attendees at all workshops is attached at the end of the workshop summary for reference.

2. Project Overview

Brian provided a project background and overview. The NOACA Regional ITS Architecture was last updated in 2010, and since that time additional ITS systems have been installed, new ITS technology has become available and ready for deployment, and there is also some emerging technology on the horizon as it relates to connected and autonomous vehicles.

Key project tasks and activities include the stakeholder workshops in the region, and the update of the architecture and ITS Strategic Plan to follow in the winter months before a second round of stakeholder workshops in April / May 2019. All project activities are expected to be completed by July 2019.

A Project Website - https://noaca-its.aecomonline.net/ - has been created to store all project materials and will be updated over time as the Regional ITS Architecture is updated.

Expected outcomes and benefits include an ability to identify opportunities and strategies to integrate ITS systems within the region, as well as the ability to support interoperability among ITS systems and jurisdictions.

3. Stakeholder Needs and Priorities

Ming Shiun Lee of AECOM reviewed the stakeholder needs surveys that were returned throughout the region. A total of 32 surveys had been received from all 5 counties in the region. A summary of the top challenges and needs identified in these surveys include the following:

- Provision of traveler information to the public (incidents, closures, alternate routes, etc.)
- Alternate routes – planning, implementation and information dissemination
- ITS funding for deployment, operations and maintenance
- Roadway congestion, including arterials/local roads
- Traveler safety and security
- Traffic incident management – detection, response, coordination, etc.
- Infrastructure maintenance

AECOM staff facilitated a group discussion with the survey results handout for all five counties that showed how respondents within each County rated the importance of the stakeholder needs presented in the survey. Key discussion points are summarized below under the respective need areas:

Information Management
- **Lorain / Medina Counties**
    - Group noted that they would like to see better information on incidents across agencies/systems/facilities. Turnpike staff noted that they would see value in a regional system. Closures on freeways / expressways have a significant impact on the local roads managed by cities and counties.
        - If local agencies can feed incident information to ODOT regarding closures / incidents, that would be valuable for the region.
        - Group noted that automatic notifications on major routes are provided, but there is not an automatic trigger to share incident information from locals to ODOT.
        - Group noted concerns that once traffic starts diverting during incidents, there is limited control over where traffic goes.
    - Transit agency staff receive ODOT blast email alerts (from Districts) regarding major incidents and closures, with alerts on construction coming several days ahead of time.
        - It was noted that ODOT sends out weekly construction updates via email for those who've opted in to receive the notices.
    - Traffic Management Center notifications
        - Law enforcement staff noted that shutting a highway down is a last resort to major incidents along highways.
        - It was noted the OHGO traveler information website / application can be used to identify a specific travel route, and then automated notifications can be sent to users about impacts to the specific travel route.
        - Group noted that most drivers are using Waze and Google to receive information on the most efficient travel routes.
    - Ohio Turnpike staff noted they incorporate construction / closure information from Waze as a community partner. Incident information from Waze is directly input into a Turnpike map, as well as the OHGO traveler information site.

- o Ohio Turnpike staff also noted that many Turnpike users are from out of state and do not know about the OHGO traveler information site.

- **Lake / Geauga Counties**
  - o Agencies noted that different communications systems used by agencies make a coordinated response to traffic incidents a challenge. Significant Interstate incidents are still a challenge via interface with ODOT. This can be in part due to jurisdictions operating on a different radio frequency from state agencies.
  - o Group noted that significant incidents can lead to secondary incidents as a result as arterials fill with traffic congestion. It was noted that there are some natural alternative routes, though ODOT is restricted from instructing the public towards specific detours.
  - o It was noted that ways to communicate with the general public are limited, outside of placing portable message boards along roadways, which can be a challenge during incidents.
  - o DriveOhio was noted as a resource for emerging technology in information management.

- **Cuyahoga County**
  - o Group noted it would be valuable to see data collection, especially in real-time, on roadway conditions in terms of camera images / travel times.
    - ODOT cameras can provide some real-time traffic conditions, would be good to see additional camera views on arterial roadways.
  - o Group noted it would be valuable to see coordination with auto manufacturers, potentially through DriveOhio.
    - A Smart Columbus Data Exchange project was cited with a goal of sharing data statewide on a single portal. Could be a model for other areas of the state, with a potentially commercialized (pay option) for roadway condition ratings
  - o ODOT staff noted that counties can get ODOT camera access with physical connection to server room. In some instances Counties are allowed to set presets for specific views.
  - o Group noted if local agencies install CCTV cameras, it would be valuable to have those cameras shared broadly with ODOT.
    - Sharing will need to happen utilizing software that ODOT already has or at least a single platform.
    - Regarding camera sharing options, the Capital Shield program was cited as an example (https://www.capitalshield.org/).

Traffic Management
- **Lorain / Medina Counties**
  - o Brunswick has a traffic signal interconnect in place on 303 as an adaptive signal system. The roadway still hits capacity at times, though it is a major improvement over what was in place previously. Staff noted this was an 80/20 project with ODOT that required significant local investment. Pearl Road also has interconnect but fewer features.
  - o A smart camera system at Center Ridge and Ranger Way was discussed as a model for addressing at isolated locations.

- System was demonstrated outside a high school that uses cameras to detect traffic presence. System changes signal timings based on traffic detection, with no traffic signal interconnects.
- Technology was expanded to 9 intersections, provided full coverage 24/7 of all intersections for local law enforcement with help of ODOT.
- GridSmart is the vendor. Systems were installed last year.
  o Avon & Brunswick have sound-based Emergency Vehicle Preemption (EVP). NOACA staff noted that there is a mix of sound-based, light-based (infra-red), and GPS-based EVP technology across the region. Some fire stations have nearby signal preemption hardwired into the doors leaving the fire stations.

- **Lake / Geauga Counties**
  o Group noted some communities are improving signal interconnections by regularly retiming signals, though there is limited interconnectivity across jurisdictions.
    - US 20 through Mentor is the major focus of that community.
  o ODOT staff noted that it is desired to re-time traffic signals every 3 to 5 years; but past practice has found that traffic signals are more likely re-timed every 5 to 10 years. These updates provide significant benefits to the region. Many signal coordination systems put in place using federal CMAQ funding, but they were not always maintained over time.
    - NOACA described the STOP (Signal Timing Optimization Program) targets congested corridors and support signal re-timings, etc. ODOT interested in coordination/support of the effort.
  o ODOT TOAST (Traffic Operations Assessment Systems Tool) tool being used to identify congestion points to help identify local projects.
  o ODOT has assigned TSMO (Transportation Systems Management and Operations) coordinators for each district that will be reaching out to local agencies over time.
  o Local emergency responders note that ODOT has been very responsive to past major transportation incidents.
  o Group discussed Emergency Vehicle Preemption (EVP) systems in Lake / Geauga Counties.
    - Infrared (Opticom) system works well and benefits from adoption across many jurisdictions. System may potentially be upgraded to GPS-based detection in future.
    - NOACA raised a question of whether the region should standardize on a type of technology, whether light-based on GPS-based, potentially as part of the ITS Strategic Plan.
    - Group noted a need for ITS need on I-90 & Rt. 44 & Concord near Tripoint Hospital.
  o Transit Signal Priority
    - Group noted this hasn't been discussed as a need as much as EVP systems, since Laketran transit typically already uses routes on corridors with signal optimization.
  o Group discussed the need for wrong way detection systems in the region
    - Some systems have been planned and will be installed soon.
    - ODOT staff have increased both the size and number of Wrong Way signs as a means of improving wrong way notices to drivers.

- **Cuyahoga County**
  - Group emphasized a need to consider relationship between what is existing and what is available to consumers, such as Waze, Google.
  - The need for ramp meters to address congestion on freeways was discussed.
    - Some systems have been installed in Cincinnati and Columbus.
    - Systems could be determined as part of interchange modification studies.
    - NOACA has interest in ramp metering, though a deployment would have the most benefit on a corridor-wide approach.

Public Transportation
- **Lorain / Medina Counties**
  - Medina notes lack of funding to invest in transit technologies.
  - Medina County Transit is planning on installing on-bus cameras that could also serve as a GPS/AVL system within the coming year.
  - Medina County transit is also planning to upgrade vehicle-based radios for voice communications linking drivers and dispatch center within the coming year.
  - Medina County Sheriff noted their use of the Harris radio system, though this is significantly more expensive.

- **Lake / Geauga Counties**
  - Additional follow-up will be performed with Laketran to gather their input on key transit-related needs for Lake / Geauga Counties.

- **Cuyahoga County**
  - Automated maintenance system ranked highly as a need in the survey.
    - RTA utilizes Trapeze AVL/GPS System and is updating on-board equipment for vehicle diagnostic systems.
    - RTA primarily uses the AVL/GPS system to collect real-time vehicle internally, and then sends information out to public via transit app on real-time vehicle location
  - RTA noted that they not always seeing advanced notification of roadway incidents and that they rely frequently on driver observations of those incidents to alert other drivers about potential alternate routes.
    - RTA would like to receive real-time incident information available to dispatchers to be able to more proactively respond to incidents.
    - The Smart Columbus Data Exchange was cited as a potential model project that could serve to address this issue of sharing real-time incident information to multiple sources. System in Columbus is bringing data and information in from hundreds of sources. Though the system is limited to Columbus, it may be expanded to statewide and is planned to be linked back to central traffic management system.
  - Improving on-time performance was also cited as a high priority need during the workshop, and was likely underrepresented in Needs survey. Transit Signal Priority technology could address this need in the future.
    - Need to make sure signal timings on the corridor are coordinated, and project should be coordinated with local traffic operators.

- Additional agency coordination with emergency responders on the technology deployed at intersections (infrared, GPS) would also be beneficial.

Traveler Information
- **Lorain / Medina Counties**
  o Turnpike staff noted the use of social media accounts (i.e. Twitter) for disseminating traveler information.
  o Group discussed the Smart Belt Coalition coordination efforts with Pennsylvania and Michigan.
    - ODOT is currently working on a work zone reservation and traveler information system, and applied for a federal grant under the ATCMTD (Advanced Transportation and Congestion Management Technologies Deployment) Program. The Utah DOT has deployed a system serving as an example for the grant application.

- **Lake / Geauga Counties**
  o Group discussed traveler information challenges with respect to traffic incidents.
    - Variable Speed Limit signs installed along I-90 that are activated in in inclement weather conditions, ODOT intends to deploy more in that corridor over time.
    - Traffic Management Center adjusts speed limits based on weather conditions detected by CCTV, weather stations and by staff in the field.
    - Challenge with getting portable message boards in correct places due to congestion, which is why it would be good to see more fixed message boards in place.
    - ODOT is expanding more ITS into Geauga County, but only get three to five cameras. Group noted that with heavy snowfalls in parts of Geauga, it would be nice to see more camera detection in the County.
    - It was noted that since local communities have minor maintenance agreements with ODOT on other items there may be an opportunity to create a similar agreement with CCTV cameras. Purpose would be to ensure that video shared, collected, and disseminated among agencies, and maintained over time.

- **Cuyahoga County**
  o Group noted that government agencies don't have the resources to maintain web-based interfaces such as Waze and Google, but can provide data to those sources.
  o Regarding timely notifications of incidents and lane closures on freeways and arterials:
    - First responders noted they are looking at ways of tagging incidents with an officer on site, and providing direct feedback into Waze as an example.
    - ODOT noted they are developing a mobile application that would allow contractors to directly input what lanes are being closed and when during construction. This information could then be sent out through OHGO to travelers.
  o Group discussed need for improving response to flooding incidents on freeways and snow squalls on I-271.
    - Weather stations are deployed, but weather event detection does not automatically trigger messages on dynamic message signs.
    - Expansion of variable speed limit signage will be occurring on I-90.

- Group noted that legislation would be required to reduce speeds on other routes.
  - o Group discussed a need to know in real-time about incidents on major routes.
    - Example of a bomb detected under a bridge (I-90 and east 72nd) not being relayed to ODOT was provided as an example.
    - Group noted that there may be some difficulties in providing information on the east part of Cuyahoga County where there is a lack of ODOT presence and gaps in camera coverage.
  - o Group discussed how agencies interact with local media and social media.
    - Many local media news stations receive live feeds from CCTV cameras in the area.
    - First responders often use Twitter to send out notifications on incidents.
    - For arterials there is less of a process in place, which may be a gap. The Smart Columbus Data Exchange System may support better information on arterials.

Commercial Vehicle Operations and Freight Management

- **Lorain / Medina Counties**
  - o Group did not raise any specific Commercial Vehicle Operations needs for discussion.

- **Lake / Geauga Counties**
  - o Group discussed a need for providing better truck parking information to truckers so they do not park alongside a roadway or an exit ramp.
    - Law enforcement noted that state rest areas prohibit truck drivers from parking for longer than 2 hours at rest areas. Additional locations for longer term parking would be desirable to prevent State Patrol from moving trucks out of rest areas, or from alongside the roadway.
    - Old weigh station in area would potentially be a good parking site if it could be re-purposed for long-term truck parking.
    - ODOT is working in partnership with MAASTO (Mid America Association of State Transportation Officials) on a truck parking information management system to address this need in the region.

- **Cuyahoga County**
  - o Group discussed the need for improved intermodal freight management.
    - Port Authority staff noted they view interconnection of port facilities with major Interstates as critical, and are looking at ways to expand access to their facilities. Need to look at all industry along the waterfront, including steel mill, salt mine, etc.
    - Port Authority is also looking at maritime side and communication with vessels to eliminate need for tug support of incoming vessels.
    - Potential to improve navigation along the Cuyahoga River as well.
  - o Hopkins Int'l Airport staff noted they will be developing a Master Plan to improve airport operations.
    - Current growth is constrained by airport footprint, looking at a potential billion dollar rebuild of the airport. Will be looking at improving multimodal interaction that may affect roadway access, transit access. Will be potentially adding freight capacity as part of the master plan.

- It was noted that the ITS Strategic Plan update could reference the upcoming airport master plan and the role that ITS technology could play in managing traffic in and around the airport.
  o Hazardous waste tracking/routing was noted as a concern for smaller municipalities.
    - While there is good interaction and knowledge of hazardous materials along railroads, the same level of knowledge does not exist for highway travel.
    - Better knowledge about materials being transported through communities will improve emergency preparedness.
    - Currently engaged in a Commodity Flows study and the Cuyahoga County Emergency Management agency is involved in the effort.
    - The Smart Columbus Data Exchange might be a future resource to provide data on hazardous materials along highways.

Roadway Maintenance

- **Lorain / Medina Counties**
  o Group discussed the need for work zone management systems.
    - Agencies have discussed queue notification systems for larger work zones.
    - ODOT has implemented radio connected devices for variable speed limits in work zones.
  o Group briefly discussed existing / planned roadway maintenance technologies.
    - ODOT state routes have roadway sensors for de-icing when needed.
    - ODOT has an existing AVL system on snow plows.
    - Local agencies are looking at deploying an AVL/ GPS system for snow plows.
  o Turnpike staff described an existing Connected Vehicle project.
    - DSRC radios installed on 33 vehicles to provide speed, location, positioning, weather data. Challenges were noted as issues with proprietary systems and lack of consistency across DSRC radio vendors.

- **Lake / Geauga Counties**
  o Need for temporary work zone safety for travelers and workers was discussed.
    - Issue noted with drivers not paying attention to work zone barrels given their frequent presence in some areas. Agencies are working to reduce unnecessary signage / restrictions.
    - Presence of law enforcement in work zones does help with overall safety.
    - Flashing lights to identify an "active work zone" with workers present may also help. A Pennsylvania example was cited as a potential system. ODOT standards could potentially be expanded to include this, but legislation may be required.
    - It was noted that variable speed limit signs in work zones with flashing beacons have worked really well in the past.
  o The need for improved pavement markings was also discussed.
    - New markings have included reflectivity during rainfall to improve visibility for motorists and for vehicles with sensors to improve detection of potential lane departure.
    - Potential of including striping product which includes black edging to support contrast was also discussed.

        – Potential in future for QR coding within striping or on signage. Recent product from 3M was raised as an example. Interstates done twice a year, others once a year.

- **Cuyahoga County**
  o Group noted that collecting roadway surface data from vehicles would be very helpful in estimating roadway conditions in real-time.

Incident and Emergency Management

- **Lorain / Medina Counties**
  o Need for improved alternative routes during incidents was discussed.
    – Ohio Turnpike has a playbook for alternate routes.
    – Turnpike has discussed implementing colored route signage (i.e. follow red route, blue route, etc…) in western part of state to improve routing of vehicles during events.
    – Pennsylvania and Europe provide models of colored alternate route signage.

- **Lake / Geauga Counties**
  o Group noted that ODOT has a playbook that defines alternate routes but may be out-of-date.
    – Lack of good alternative routes may limit adding number of alternate routes.
    – Current alternate route notification is limited to use of DMS messaging (i.e. "Use Alternate Routes") and the OHGO traveler information site.
    – Challenge exists in developing alternate routes when Interstate closures happen
  o Need for pre-identifying Alternative Routes across region was noted as a high priority.
    – Bridge height restrictions for trucks and restrooms for stuck travelers should be considerations in alternate route planning.
    – State of Iowa has recently developed an alternate route playbook based on incidents that happen between interchanges to route travelers in the most efficient manner.
  o TSMO was noted as an opportunity to develop these corridor-wide approaches, but will need additional thought and engagement with stakeholders.
- **Cuyahoga County**
  o Local emergency responders coordinate with ODOT, which typically works well, but there is a need to improve ability to communicate road closures when first responders are on the road responding to an incident.
    – Advance warning could provide safety for emergency responders and also help reduce speeds for travelers approaching emergency response sites.
    – Cuyahoga Fire Departments coordinate and work closely on sharing radio and other communications tools, which could be a potential example for other counties.

Transportation Security

- **Lorain / Medina Counties**
  o Medina Transit noted that they rely upon local law enforcement for responses to transportation security incidents.

- **Lake / Geauga Counties**

- o Largest standout need may be for communications and interoperability in case of traffic disruption.
  - – Virtual EOC (Emergency Operations Center) operation was raised a potential solution. Could be tied to the NE Ohio Regional Fusion Center to support region-wide response.

- **Cuyahoga County**
  - o No specific needs related to Transportation Security were discussed.

Additional Subjects of Discussion at All Workshops
- NOACA raised the concept of a Regional Traffic Management Center (TMC) for the Cleveland region to address multiple Need Areas discussed at workshops.
  - o Fiber cable linking central office to ITS field devices would be a critical consideration for the region. Could start as a small effort and expand over time to include more of the region.
  - o Subject of Regional TMC relates to the recent focus on TSMO (Transportation Systems Management and Operations). Each ODOT District will have a TSMO coordinator that could participate in similar efforts.
  - o Statewide TMC in Columbus was cited as the current TMC that provides coverage for the Cleveland region.
- NOACA also discussed potentially updating a regional policy related to the technology used for Emergency Vehicle Preemption (EVP) and Transit Signal Priority (TSP). Purpose of the update would be to encourage agencies to standardize around a type of technology that would improve emergency response across counties within the region, as well as interoperability between agencies and with transit agencies.

4. **Introduction to Intelligent Transportation Systems (ITS)**

Ming provided an overview of Intelligent Transportation Systems (ITS) as the application of electronics, communications and information processing to improve the safety and efficiency of the surface transportation system. ITS can include a broad range of technologies that impact the following:

- Traffic Management
- Public Transportation
- Maintenance and Construction
- Commercial Vehicle Operations
- Public Safety
- Parking Management
- Vehicle Safety
- Traveler Information
- Data Management
- Support
- Sustainable Travel
- Weather

Ming noted that a "What's ITS" one page handout was also provided to the group as a resource for communicating the various types of technologies that are used within these areas of transportation.

5. **Introduction to ITS Architecture**

Ming provided an overview of how ITS Architectures are used by agencies and the need for keeping ITS Architectures updated over time.
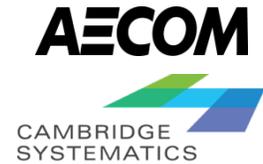
Ming noted that the development of an ITS Architecture can provide a framework for planning, defining, and integrating ITS technologies in the region. It can also serve as a road map for system development, as well as intra-agency, multi-agency & cross jurisdictional communication, coordination and resource sharing.

Furthermore, transportation systems are becoming complex as technology evolves over time, and the need for integration of the technologies is increasing. Additional value in updating the Regional ITS Architecture comes from the ability for those technologies to qualify for federal funding to support ITS planning and deployment.

6. NOACA Region ITS Vision and Goals

Brian presented on the NOACA Regional ITS Vision which is to: "Develop a roadmap to encourage efficient technology deployment to better utilize the region's infrastructure, enhance communication among regional stakeholders, and position the region for emerging technology."

Brian also presented on various objectives of the Regional ITS Architecture update aligned with the five NOACA Regional Strategic Plan Goals:
1. Strengthen Regional Cohesion
2. Preserve Existing Infrastructure
3. Build Sustainable System
4. Support Economic Development
5. Enhance Quality of Life

7. ITS Projects and Agency Capabilities

Sam Van Hecke of Cambridge Systematics presented a handout to the group on ITS projects that were developed and included within the 2010 version of the NOACA Regional ITS Architecture. Purpose of the handout is to encourage stakeholder agencies to review how ITS projects have been attributed to their respective agencies, and to provide a status update to NOACA on whether they should still be included as planned ITS projects within the Regional ITS Architecture.

Sam also asked stakeholders about key resources that the NOACA should consider when updating the Regional ITS Strategic Plan. Responses provided from stakeholders referred to current plans underway by various agencies. For example, the Cleveland Hopkins International Airport will begin developing a Master Plan that will define a vision for how the airport can be renovated over the coming years to meet current and future needs of travelers and transportation stakeholders in the region.

Dan Nelson of AECOM presented the ITS Capabilities Survey that was provided to stakeholders as a handout at the workshops. Purpose of the survey is to gather a comprehensive listing of existing and planned ITS technologies utilized by stakeholder agencies. Results could identify potential gaps in ITS technologies, as well as guide the development of the ITS Strategic Plan in terms of understanding what is planned within the next five years, as well as what projects are longer term projects.
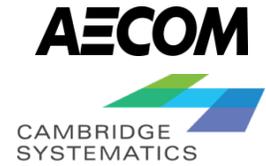
8. Summary and Next Steps

Ming closed the workshops with a summary of next steps to be taken by the project team. These include the following:

- Summarize Agency Capability Survey Results
- Follow Up on Stakeholder Needs and Projects
- Update the ITS Architecture
- Develop ITS Projects, Breaking Down into 0-5 Years and 6+ Years
- Draft ITS Architecture and ITS Strategic Plan for Stakeholder Review: April 2019
- Second Round of Stakeholder Workshops: May 2019

NOACA ITS Architecture Comprehensive Update Project

Stakeholder Workshop #1

Lorain / Medina County

DATE: Tuesday, September 25, 2018 ; 8:30am to 11:30am

LOCATION: Brunswick Recreation Center, 3637 Center Road, Brunswick, OH 44212

ATTENDEE SIGN-IN SHEET

NAME	AFFILIATION	PHONE	EMAIL
Ming-Shiun Lee	AECOM	612-376-2048	ming.shiun.lee@aecom.com
Sam Van Hecke	Cambridge Systematics	312-665-0208	SVANHECKE@camsys.com
Dale Schiavoni	Aecom	216-317-4826	Dale.Schiavoni@Aecom.com
Julie Cichello	ODOT D-3	419-207-7168	julie.cichello@dot.ohio.gov
Matt Jones	Chagrin Valley Engineering City of Brunswick	216 570 2689	jones@cvelimited.com
David Corrado	MEDINA County FIBER	216 830 7059	DCORRADO@FIBERCOUNTY.com
John Schneider	City of Elyria	(440)326-1444	jschneider@cityofelyria.org
Carlos Smith	Ohio State Patrol	440 365 0346	CMSMITH@DPS.OHIO.GOV
Mike Salamony	MCPT	330-764-8162	msalamony@medina co.org
Richard Bosley	City of Avon	440-934-1216	rbosley@avonpd.com
Larry Fischbach	City of Avon	440-934-7946	lfischbach@avonpd.com
Daniel Ashdown	Lorain County Sheriff	440-329-3767	dashdown@lorraincountysheriff.com

NOACA ITS Architecture Comprehensive Update Project

Stakeholder Workshop #1
Lorain / Medina County

DATE: Tuesday, September 25, 2018 ; 8:30am to 11:30am

LOCATION: Brunswick Recreation Center, 3637 Center Road, Brunswick, OH 44212

NAME	AFFILIATION	PHONE	EMAIL
Mike Woodring	AECOM	(216) 523-6510	mike.woodring@aecom.com
Jeff Armbruster	SSD North Ridgeville	440 353 0812	JARMBRuster@N.Ridgeville.ORG
Tony Yacobucci	OTIC	440-971-7002	tony.yacobucci@ohioturnpike.org
Travis Bonnett	OTIC	440-971-2016	travs.bonnett@ohioturnpike.org
David Arbogast	Medina Twp PD	330-721-1395	darbogast@_MTPD.Net
Dan Nelson	AECOM	612-376-7061	dan.nelson@aecom.com
Brian Blayney	NOACA	216-241-2414 x302	bblayney@mpo.noaca.com
Treea Seneca	FHWA-Ohio	(614) 280-6893	treea.seneca@dot.gov

NOACA ITS Architecture Comprehensive Update Project

Stakeholder Workshop #1

Lake / Geauga County

DATE: Wednesday, September 26, 2018 ; 9:00am to 12 noon

LOCATION: Willoughby Public Library, 30 Public Square, Willoughby, OH 44094

ATTENDEE SIGN-IN SHEET

NAME	AFFILIATION	PHONE	EMAIL
Dave Swiger	City of Mentor	440 974-5743	swiger2@cityofmentor.com
Allen Pennington	" "	440 974-5786	pennington@cityofmentor.com
Patrick Shaw	US DHS / Infrastructure Protection	216 410 3718	patrick.shaw@hq.dhs.gov
Paul Hornyak	City of Chardon	440-286-235	Phornyak@Chardon.cc
Larry Roberts	OSHP	440-285-9436	LRoberts @ DPS. OHIO. GOV
Robert Searles	Mentor Fire Dept	440 974-5765	Searles @ cityofmentor.com
Patrick Sweeney	Shaker Hts. Fire chief	216-491-1304	Patrick.Sweeney@Shakeronline.com
Mike Gillespie	City of Willoughby	440 376 2219	Mgillsple @ willoughbyOhio.com
Michael Crowe	ODOT-D12	216-584-2116	michael.crowe@dot.ohio.gov
Keith Hamilton	ODOT-D12	216-584-2127	keith.hamilton@dot.ohio.gov
Tony Toth	ODOT D-12	216-584-2220	Anthony.Toth @dot.ohio.gov
Dan Nelson	AECOM	612-376-2061	dan.nelson@aecom.com

NOACA ITS Architecture Comprehensive Update Project

Stakeholder Workshop #1
Lake / Geauga County

DATE: Wednesday, September 26, 2018 ; 9:00am to 12 noon

LOCATION: Willoughby Public Library, 30 Public Square, Willoughby, OH 44094

NAME	AFFILIATION	PHONE	EMAIL
Andrew Haynes Geauga County Engin	Aecom	440 499 0414	AHAYTE@O.GEAUGA-OH.US
Dale Schiavoni	Aecom	216-317-4826	Dale.Schiavoni@Aecom.com
Brian Blayney	NOACA	216-241.2444x302	bblayney@mpo.noaca.com
Ming-shiun Lee	AECOM	612-376-2048	ming.shiun.lee@aecom.com

NOACA ITS Architecture Comprehensive Update Project

Stakeholder Workshop #1
Cuyahoga County

DATE: Thursday, September 27, 2018 ; 8:30am to 11:30am

LOCATION: Independence Civic Center, Red Oak Room, 6363 Selig Drive, Independence, OH 44131

ATTENDEE SIGN-IN SHEET

NAME	AFFILIATION	PHONE	EMAIL
Julie Schultz	GCRTA	216-356-3814	jschultz@gcrta.org
Lawrence Hall	NOACA	216.241.2414	lhallengo.noaca.org
Lisa Rafferty	Cuy.Co.CECOMS	440.703.3568	Lrafferty@Cuyahogacounty.us
Mark Christie	Cuyahoga County Emergency Management	216.443.5683	mchristie@cuyahogacounty.us
Nicholas LaBode	Port of Cleveland	216 377 1342	NICHOLAS.LABODE@PORTOFCLEVELAND.com
Bob Horvath	Cleveland Emergency Management	216-664-6692	rhorvath@city.cleveland.oh.us
Jay Hodge	Case Western Reserve University PD	216 368-6171	jhh80@case.edu
Nick Hegemier	DriveOhio	614-387-4099	Nick.Hegemier@DRIVE.ohio.gov
Nick Finootti	City of Euclid	216 701 0943	NFinotti@city of Euclid.com
Bill Wichert	Cleveland Airport System	216 265 2711	WWichert@Clevelandairport.com
Frank Demes	CWRU	216-368-0996	fxd67@case.edu
CRAIG NAUMAN	CITY OF WESTLAKE	440-617-4145	CNAUMAN@CITYofWESTLAKE.ORG

NOACA ITS Architecture Comprehensive Update Project
Stakeholder Workshop #1
Cuyahoga County

DATE: Thursday, September 27, 2018 ; 8:30am to 11:30am

LOCATION: Independence Civic Center, Red Oak Room, 6363 Selig Drive, Independence, OH 44131

NAME	AFFILIATION	PHONE	EMAIL
Don Ramm	City of Independence	(216) 952-3956	ramrado@independenceohio.org
Jim Wheeler	Independence FD	216-524-4001	wheeler30@independenceohio.org
Murphy Costello	City of Rocky River	440-331-2100	safetyservice@rrcity.com
Lisa Camp	Case Western Reserve Univ.	216-368-5567	LAC100@CASE.EDU
Ryan Gillespie	GPD Group (BOACMreg)	330-572-2210	rgillespie@gpdgroup.com
Dennis O'Neil	ODOT D-12	216-584-2204	dennis.oneil@dot.ohio.gov
Naureen Dar	FHWA	614-280-6896	naureen.dar@dot.gov
Dale Schiavoni	AECOM	216-317-4826	Dale.Schiavoni@AECOM.com
Angie Marinucci	AECOM	216-523-2140	angela.marinucci@aecom.com
Ferzan Ahmed	AECOM	740 8154759	Ferzan.Ahmed@Aecom.com
Tony Toth	ODOT-12	216-584-2020	Anthony.Toth@dot.ohio.gov
Brian Blayney	NOACA	216-241-2414×302	bblayney@mpo.noaca.org
Peter Voorhees	AECOM	248-703-1510	peter.voorhees@aecom.com
Ming-Shiun Lee	AECOM	612-376-2048	ming.shiun.lee@aecom.com