



## MORPC ITS Architecture Update

Suggested Improvements to the  
MORPC Turbo Architecture

February 5, 2009

Submitted by:



HNTB

And



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## 1. Introduction

### 1.1. Background

On August 18, 2008, the Mid-Ohio Regional Planning Commission (MORPC) advertised a Request for Letters of Interest for interested firms to submit a letter of interest to provide professional services to assist with certain aspects related to updating the Regional ITS Architecture.

In response to this Request for Letters of Interest, a team of HNTB and Consensus Systems Technologies (ConSysTec) responded with a proposed Scope of Work on October 1, 2008. On October 29, 2008, HNTB received a Notice To Proceed.

Task 1 of the Scope of Work was to review the existing MORPC Turbo Architecture database and create a list of suggested changes or improvements to the database. The suggested changes were to be documented, sent to MORPC, and reviewed. This Technical Memorandum satisfies the documentation portion of Task 1.

Only the Stakeholder Inventory and the ITS Elements Inventory were analyzed and reviewed for Task 1. Other portions of the MORPC Turbo Architecture database, such as the Services, were analyzed and reviewed in other tasks.

### 1.2. Document Organization

This Technical Memorandum is organized in three sections.

- **Section 1: Introduction.** This section provides background information about and the purpose of this technical memorandum.
- **Section 2: Analysis.** This section provides an analysis of the existing Turbo Architecture database, summarizes the proposed changes and the reasons behind the suggested changes.
- **Section 3: Proposed Changes.** This section lists the changes made to the Turbo Architecture database.

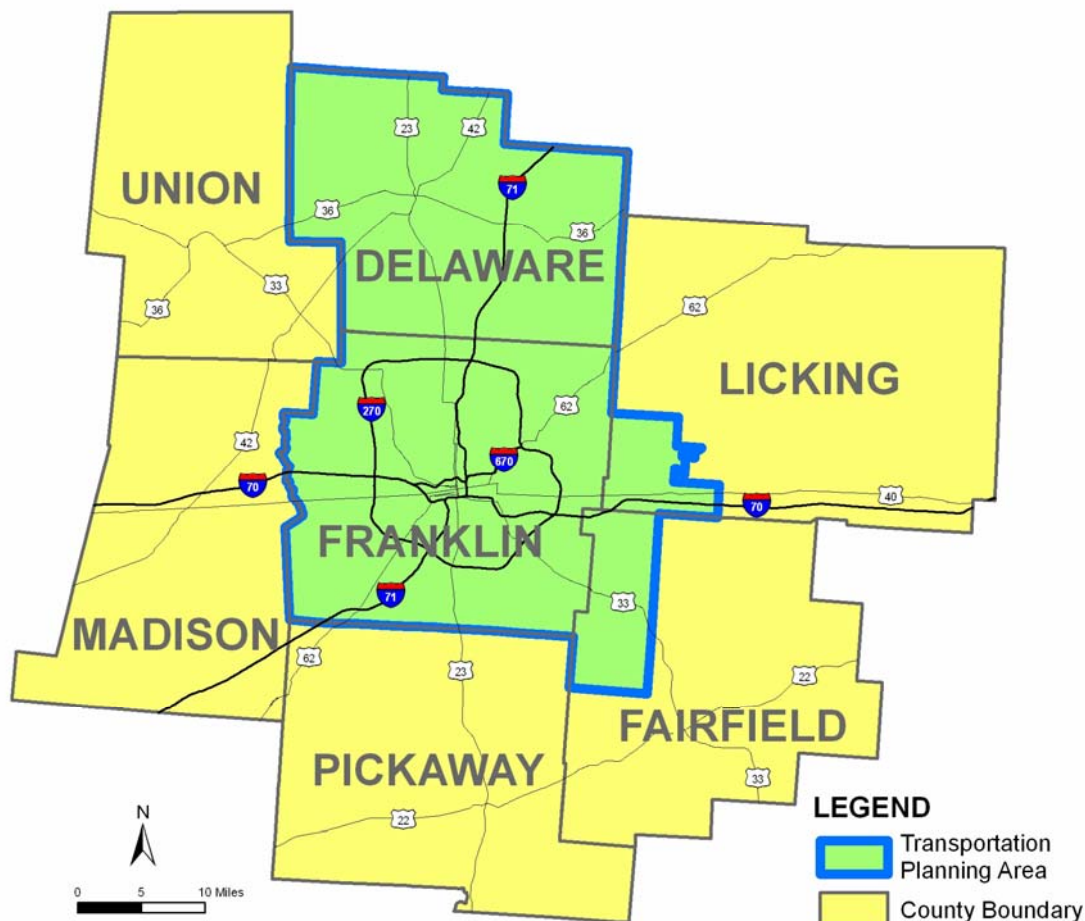
## 2. Analysis

A quick analysis of the MORPC Turbo Architecture database Version 10, dated February 26, 2008, yielded the following results:

- 160 Stakeholders
- 216 ITS Elements

The following lists the number of elements mapped to each subsystem:

- Archived Data Management Subsystem: 21
- Commercial Vehicle Administration: 1
- Emergency Management: 24
- Information Service Provider: 12



**Figure 1. MORPC Transportation Planning Area**

For local counties and municipalities, the stakeholder inventory lists each government department and agency as a separate stakeholder, such as a city police department, fire district, or engineer's office.

While listing each department and agency may be more complete, there is little additional benefit to a regional ITS architecture of being so thorough and it makes the maintenance of the stakeholder inventory difficult and unwieldy. The existing stakeholder inventory can be considered relatively large and repetitive; and even minor changes to a stakeholder name or definition may require an update to the Turbo Architecture database.

Thus, it is recommended that some of stakeholder inventory be consolidated as follows:

### **Single Municipalities or Counties**

Create a single stakeholder that would represent all departments for that municipality or county. For example, instead of having a single City A Police Department, City A Fire Department, and City A Public Works Department, there would be a single City A stakeholder that would represent all the departments for City A. This approach eliminates the need to update the Turbo Architecture database as departments are renamed or if functions are moved to different departments, while also decreasing the size of the stakeholder inventory.

For municipalities or counties who play a major role in the transportation services in the region, such as the City of Columbus, Franklin County, or the State of Ohio, each department or agency remain listed as a separate stakeholder because of their role at a regional level in providing transportation services. Thus, clarity in which government department is responsible for that function has utility in the regional ITS architecture.

### **Generic Stakeholders**

Add several generic stakeholders to the Stakeholder inventory. A region will have a stakeholder that does participate in the transportation services provided in a region, but has a small role. Or as a region grows, either in population or development, new stakeholders will appear that may not have existed at the time the MORPC Turbo Architecture database was last updated.

Thus, the creation of several generic stakeholders is recommended. Generic stakeholders might include Local Fire Departments, Local Maintenance and Construction Providers, Local Police Departments, and Private Traveler Information Providers. These generic stakeholders would include any other existing stakeholder not specifically called out in the Stakeholder Inventory and any other future stakeholder.

## **2.2. Elements**

The MORPC Regional ITS Architecture database currently contains 216 ITS elements. These ITS elements represents the various systems, devices and other ITS entities that perform a function related to transportation within the MORPC transportation planning area.

The name of each ITS element generally followed the convention of the type of system, followed by the "owner" of the ITS element, e.g., CCTV – ODOT. The "owner" generally describes the stakeholder that paid for the element, operates it, maintains it, or all of the above. By naming ITS

elements in this manner, it may make searching for all the systems owned by a stakeholder more time-consuming. When searching through a regional ITS architecture, users are generally more interested in seeing what elements are “owned” by a stakeholder than by type of system.

Some of the ITS elements represents a very specific ITS system or device, or is a subsystem of a “larger” ITS element. For example, Automated Passenger County – COTA, Automated Voice Announcer (AVA) – COTA, and Vehicle Component Monitoring – COTA are all systems within the Transit Fixed Route Vehicles – COTA ITS element.

ITS elements may also exist for every stakeholder that has that type of system or device. For example, there are 28 ITS elements that represent traffic signals owned by a municipality or other stakeholder. While correct, having 28 ITS elements just representing traffic signals becomes a little unwieldy to maintain.

Thus, it is recommended that some of ITS Element inventory be changed as follows:

### **Rename Elements**

Rename the elements so that the stakeholder “owner” is named first. For example, CCTV – ODOT would be renamed ODOT CCTV.

### **Generic Elements**

Create generic ITS elements that represent multiple instances of a system or device. For example, consolidate the smaller traffic signal systems and devices into a single generic traffic signal system called Local Traffic Signals. This single generic ITS element represents all the traffic signal devices in the region operated by local governments not specifically called out in the MORPC Regional ITS Architecture. Thus Local Traffic Signals would not include ODOT Traffic Signals nor City of Columbus Traffic Signals because of the larger roles both agencies play in the region. Nor would Local Traffic Signals include CAA Traffic Signals or OSU TPS Traffic Signals because neither are local governments (municipalities).

Using generic elements also has the additional benefit of consistency. Because Local Traffic Signals represents multiple local governments, each local government using the regional ITS architecture to design or procure their traffic signals may implement their traffic signals in the same way, possibly resulting in interoperability. For example, two different local governments looking to implement a vehicle pre-emption capability may both look at the regional ITS architecture, realize that the whole region should implement the vehicle pre-emption in the same manner, then work together to implement the capability similarly or simultaneously.

## **2.3. Other Changes**

In addition to the changes outlined above, several other changes are suggested to the Stakeholder Inventory and the ITS Element Inventory. Several stakeholders and elements were added to the inventory to support the transportation services defined in the customized market package diagrams created in Task 2. Also, the mapping of all ITS Elements to Subsystems and Terminators was checked and where the mapping appeared incorrect or was unnecessary, those mappings were changed.

### 3. Proposed Changes

After making the above proposed changes to the MORPC Turbo Architecture database, and after completing Task 2, Prepare Customized Market Package Diagrams, an analysis of the MORPC Turbo Architecture database, yielded the following results:

- 120 Stakeholders
- 123 ITS Elements

The following lists the number of elements mapped to each subsystem:

- Archived Data Management Subsystem: 9
- Commercial Vehicle Administration: 2
- Emergency Management: 19
- Information Service Provider: 13
- Maintenance and Construction Management: 6
- Parking Management: 3
- Remote Traveler Support: 4
- Roadway Subsystem: 22
- Security Monitoring Subsystem: 4
- Traffic Management: 9
- Transit Management: 6

#### 3.1. Stakeholder Changes

The following summarizes the changes made in the Stakeholder inventory.

Stakeholder	Proposed Change
AAA	No change.
Archived Data Users	Added stakeholder.
Ashley Fire Department	Deleted stakeholder.
Berkshire Township	Added stakeholder.
Berlin Township	Renamed stakeholder from Berlin Township Fire Department.
Blendon Township	Renamed stakeholder from Blendon Township Police Department.
Bloom Township	Renamed stakeholder from Bloom Township Fire Department.
Brown Township, Delaware County	Added stakeholder.
Brown Township, Franklin County	Added stakeholder.
BST and G Fire District	Deleted stakeholder.
Central Ohio Transit Authority (COTA)	No change.
City of Bexley	Renamed stakeholder from City of Bexley Fire Department.
City of Bexley Police Department	Deleted stakeholder.

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Stakeholder	Proposed Change
City of Bexley Service Department	Deleted stakeholder.
City of Columbus Department of Public Service	Renamed stakeholder from City of Columbus Service Department.
City of Columbus Fire Department	No change.
City of Columbus Police Department	No change.
City of Columbus Technology Department	Deleted stakeholder.
City of Delaware	Renamed stakeholder from City of Delaware Public Works Department.
City of Delaware Fire Department	Deleted stakeholder.
City of Delaware Police Department	Deleted stakeholder.
City of Dublin	Renamed stakeholder from City of Dublin Public Service Department.
City of Dublin Police Department	Deleted stakeholder.
City of Gahanna	Renamed stakeholder from City of Gahanna Public Service Department.
City of Gahanna Police Department	Deleted stakeholder.
City of Grandview Heights	Renamed stakeholder from City of Grandview Heights Service Department.
City of Grandview Heights Fire Department	Deleted stakeholder.
City of Grandview Heights Police Department	Deleted stakeholder.
City of Grove City	Renamed stakeholder from City of Grove City Public Service Department.
City of Grove City Police Department	Deleted stakeholder.
City of Hilliard	Renamed stakeholder from City of Hilliard Public Service Department.
City of Hilliard Police Department	Deleted stakeholder.
City of Pataskala	Renamed stakeholder from City of Pataskala Public Services Department.
City of Pataskala Police Department	Deleted stakeholder.
City of Pickerington	Renamed stakeholder from City of Pickerington Service Department.
City of Pickerington Police Department	Deleted stakeholder.
City of Powell	Renamed stakeholder from City of Powell Service Department.
City of Powell Police Department	Deleted stakeholder.
City of Reynoldsburg	Renamed stakeholder from City of Reynoldsburg Service Department.
City of Reynoldsburg Police Department	Deleted stakeholder.
City of Upper Arlington	Renamed stakeholder from City of Upper Arlington Service Department.
City of Upper Arlington Fire Department	Deleted stakeholder.
City of Upper Arlington Police Department	Deleted stakeholder.
City of Westerville	Renamed stakeholder from City of Westerville Engineering Department.
City of Westerville Fire Department	Deleted stakeholder.
City of Westerville Police Department	Deleted stakeholder.
City of Whitehall	Renamed stakeholder from City of Whitehall Service Department.
City of Whitehall Police Department	Deleted stakeholder.
City of Whitehall Fire Department	Deleted stakeholder.

<b>Stakeholder</b>	<b>Proposed Change</b>
City of Worthington	Renamed stakeholder from City of Worthington Public Service Department.
City of Worthington Fire Department	Deleted stakeholder.
City of Worthington Police Department	Deleted stakeholder.
Clinton Township	Renamed stakeholder from Clinton Township Fire Department.
Clinton Township Police Department	Deleted stakeholder.
Columbus Regional Airport Authority (CRAA)	No change.
Columbus Traffic Management Group	No change.
COMBAT Group	No change.
Concord Township	Renamed stakeholder from Concord Township Fire Department.
County Auditors	No change.
County EMAs	No change.
Delaware Area Transit Agency (DATA)	No change.
Delaware County	Renamed stakeholder from Delaware County Engineers Office.
Delaware County EMA	No change.
Delaware County Fire Departments	No change.
Delaware County Law Enforcement	No change.
Delaware County Sheriffs Office	No change.
Delaware Township	Added stakeholder.
Etna Township	Added stakeholder.
Fairfield County	Renamed stakeholder from Fairfield County Engineers Office.
Fairfield County EMA	Deleted stakeholder.
Fairfield County Fire Departments (T-Plan Area)	Deleted stakeholder.
Fairfield County Law Enforcement (T-Plan Area)	Deleted stakeholder.
Fairfield County Sheriffs Office	Deleted stakeholder.
Financial Institutions	Added stakeholder.
Franklin County	Renamed stakeholder from Franklin County Engineers Office (FCEO).
Franklin County Auditors Office	Deleted stakeholder.
Franklin County EMA	No change.
Franklin County Engineers Office (FCEO)	Deleted stakeholder.
Franklin County Fire Departments	Deleted stakeholder.
Franklin County Law Enforcement	Deleted stakeholder.
Franklin County Sheriffs Office	Deleted stakeholder.
Franklin Township	Renamed stakeholder from Franklin Township Fire Department.
Franklin Township Police Department	Deleted stakeholder.
Genoa Township	Renamed stakeholder from Genoa Township Fire Department.
Genoa Township Police Department	Deleted stakeholder.
Hamilton Township	Renamed stakeholder from Hamilton Township Fire Department.
Harlem Township	Renamed stakeholder from Harlem Township Fire Department.
Jackson Township	Renamed stakeholder from Jackson Township Fire Department.
Jefferson Township	Renamed stakeholder from Jefferson Township Fire Department.
Kingston Township	Added stakeholder.



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Stakeholder	Proposed Change
Liberty Township	Renamed stakeholder from Liberty Township Fire Department.
Licking County	Renamed stakeholder from Licking County Engineers Office.
Licking County Area Transportation Study (LCATS)	Added stakeholder.
Licking County EMA	Deleted stakeholder.
Licking County Fire Departments (T-Plan Area)	Deleted stakeholder.
Licking County Law Enforcement (T-Plan Area)	Deleted stakeholder.
Licking County Sheriffs Office	Deleted stakeholder.
Local Fire Departments	Renamed stakeholder from Fire Departments.
Local Maintenance and Construction Providers	Renamed stakeholder from Maintenance and Construction Stakeholders.
Local Police Departments	Renamed stakeholder from Police Departments.
Local Traffic Management Group	No change.
Madison County Fire Departments	Deleted stakeholder.
Madison Township	Renamed stakeholder from Madison Township Fire Department.
Madison Township Police Department	Deleted stakeholder.
Marlboro Township	Added stakeholder.
Mid-Ohio Regional Planning Commission (MORPC)	No change.
Mifflin Township	Renamed stakeholder from Mifflin Township Fire Department.
Mifflin Township Police Department	Deleted stakeholder.
Morrow County Fire Departments	Deleted stakeholder.
National Weather Service	No change.
Norwich Township	Renamed stakeholder from Norwich Township Fire Department.
ODOT Central Office Highway Operations	Merged into Ohio Department of Transportation (ODOT).
ODOT Central Office Information Technology	Merged into Ohio Department of Transportation (ODOT).
ODOT D6 Highway Management	Merged into Ohio Department of Transportation (ODOT).
ODOT D6 Planning	Merged into Ohio Department of Transportation (ODOT).
Ohio Department of Homeland Security	No change.
Ohio Department of Public Safety (ODPS)	No change.
Ohio Department of Transportation (ODOT)	No change.
Ohio Environmental Protection Agency (OEPA)	No change.
Ohio Rail Development Commission (ORDC)	No change.
Ohio State Highway Patrol	No change.
Ohio State University Engineering Department	Renamed stakeholder from OSU Engineering Department.
Ohio State University Police Division	No change.
Ohio State University Transportation and Parking Services (OSU-TPS)	No change.
Orange Township	Renamed stakeholder from Orange Township Fire Department.
Oxford Township	Added stakeholder.
Perry Township	Renamed stakeholder from Perry Township Police Department.
Pickaway Fire Departments	Deleted stakeholder.
Plain Township	Renamed stakeholder from Plain Township Fire Department.
Pleasant Township	Added stakeholder.

<b>Stakeholder</b>	<b>Proposed Change</b>
Porter Kingston Fire Department	Deleted stakeholder.
Porter Township	Added stakeholder.
Prairie Township	Renamed stakeholder from Prarie Township Fire Department.
Private Commercial Carriers	No change.
Private Rail Operations	No change.
Private Surface Transportation Service	No change.
Private Tow, Wreckers and Cleanup Service Providers	No change.
Private Traveler Information Providers	Added stakeholder.
Prospect Fire Department	Deleted stakeholder.
Public	No change.
Public Utilities Commission of Ohio (PUCO)	No change.
Radnor Township	Renamed stakeholder from Radnor Township Fire Department.
Red Cross	No change.
Regional Emergency Agencies	No change.
Regional Event Promoters	Added stakeholder.
Regional Hospital Organizations	No change.
Road Weather Information Service (RWIS)	No change.
School Districts	No change.
Scioto Township	Renamed stakeholder from Scioto Township Fire Department.
Sharon Township	Renamed stakeholder from Sharon Township Police Department.
The Columbus Regional Airport Authority (CRAA)	Merged stakeholder with Columbus Regional Airport Authority (CRAA).
Thompson Township	Added stakeholder.
Traffic.com	No change.
Trenton Township	Added stakeholder.
Tri Township Fire Department	Deleted stakeholder.
Troy Township	Added stakeholder.
Truro Township	Renamed stakeholder from Truro Township Fire Department.
TV and Radio Stations	No change.
Union County Fire Departments	Deleted stakeholder.
Village of Ashley	Added stakeholder.
Village of Brice	Renamed stakeholder from Village of Brice Police Department.
Village of Canal Winchester	Renamed stakeholder from Village of Canal Winchester Department of Public Works.
Village of Galena	Added stakeholder.
Village of Groveport	Renamed stakeholder from Village of Groveport Public Works Division.
Village of Groveport Police Department	Deleted stakeholder.
Village of Harrisburg	Added stakeholder.
Village of Lithopolis	Renamed stakeholder from Village of Lithopolis Police Department.
Village of Lockbourne	Added stakeholder.
Village of Marble Cliff	Renamed stakeholder from Village of Marble Cliff Public Services.

<b>Stakeholder</b>	<b>Proposed Change</b>
Village of Minerva Park	Renamed stakeholder from Village of Minerva Park Streets Committee.
Village of Minerva Park Fire Department	Deleted stakeholder.
Village of Minerva Park Police Department	Deleted stakeholder.
Village of New Albany	Renamed stakeholder from Village of New Albany Service Department.
Village of New Albany Police Department	Deleted stakeholder.
Village of Obetz	Renamed stakeholder from Village of Obetz Public Service Department.
Village of Obetz Police Department	Deleted stakeholder.
Village of Ostrander	Added stakeholder.
Village of Riverlea	Added stakeholder.
Village of Shawnee Hills	Renamed stakeholder from Village of Shawnee Hills Police Department.
Village of Sunbury	Renamed stakeholder from Village of Sunbury Police Department.
Village of Urbancrest	Added stakeholder.
Village of Valleyview	Added stakeholder.
Violet Township	Renamed stakeholder from Violet Township Road Department.
Violet Township Fire Department	Deleted stakeholder.
Waldo Fire Department	Deleted stakeholder.
Washington Township	Renamed stakeholder from Washington Township Fire Department.
West Licking Joint Fire District	Deleted stakeholder.

### **3.2. ITS Element Changes**

The following summarizes the changes made in the ITS Element inventory.

<b>ITS Element</b>	<b>Proposed Change</b>
311 Call Center - City of Columbus	Deleted element.
800Mhz Communication System - Franklin County	Deleted element.
911 Call Center - City of Columbus	Renamed City of Columbus 911 Call Center.
AAA Website	Deleted element.
Air Quality Database - OEPA	Renamed OEPA Air Quality Database.
Air Quality Monitors - OEPA	Renamed OEPA Air Quality Monitors.
Air Quality Website - MORPC	Renamed MORPC Air Quality Website.
Archived Data User Systems	Added element.
Automated Critical Asset Management System (ACAMS) - DHS	Deleted element.
Automated Passenger Counter - COTA	Renamed COTA Automated Passenger Counter.
Automated Voice Announcer (AVA) - COTA	Renamed COTA Automated Voice Announcer (AVA).
AVL - City of Columbus	Deleted element.
AVL - City of Gahanna	Deleted element.
AVL - FCEO	Deleted element.
AVL - OSU TPS	Deleted element.

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ITS Element	Proposed Change
AVL - PUCO	Deleted element.
AVL - Village of New Albany	Deleted element.
AVL - Violet Township Fire Department	Deleted element.
Buckeye Traffic Website - ODOT	Renamed Buckeye Traffic Website.
Bus Shelters - COTA	Renamed COTA Bus Shelters.
CCTV - City of Columbus	Renamed City of Columbus CCTV.
CCTV - CRAA	Deleted element.
CCTV - ODOT	Renamed ODOT CCTV.
CCTV - OSU TPS	Renamed OSU TPS CCTV.
CCTV on field - COTA	Renamed COTA CCTV.
Central Ohio Multi-Modal Traveler Information System	Corrected spelling.
Columbus Traffic Management Center	No change.
COMBAT System - Franklin County	Renamed Franklin County COMBAT System.
Commercial Vehicle Driver	No change.
Commercial Vehicle Information System - PUCO	Renamed PUCO Commercial Vehicle Information System.
Commercial Vehicle Registration System (CMV) - PUCO	Renamed PUCO Commercial Vehicle Registration System (CMV).
Communications Operations Center - CRAA	Renamed CRAA Communications Operations Center.
County Base Map	No change.
County Emergency Operations Centers (EOC) - County EMAs	Renamed County EMA Emergency Operations Centers (EOC).
County-wide Road Centerline Files - ODOT/County	Deleted element.
County-wide Warning Siren Systems	No change.
Crash Database - ODPS	Renamed ODPS Crash Database.
DATA Website	Added element.
Disaster Action Team - Red Cross	Deleted element.
Dispatch Facility - City of Gahanna	Deleted element.
Dispatch Facility - City of Hilliard	Deleted element.
Dispatch Facility - City of Pickerington	Deleted element.
Dispatch Facility - City of Reynoldsburg	Deleted element.
Dispatch Facility - CRAA	Renamed CRAA Dispatch Facility.
Dispatch Facility - FCEO	Deleted element.
Dispatch Facility - OSU TPS	Renamed OSU TPS Dispatch Facility.
Dispatch Facility - Violet Township Fire Department	Deleted element.
Dynamic Message Signs (DMS) - COTA	Renamed COTA Dynamic Message Signs (DMS).
Dynamic Message Signs (DMS) - ODOT	Renamed ODOT Dynamic Message Signs (DMS).
Dynamic Message Signs (DMS) - CRAA	Renamed CRAA Dynamic Message Signs (DMS).
Electronic Parking Payment System - CRAA	Renamed CRAA Electronic Parking Payment System.
Emergency Operation Center (EOC) - Franklin County EMA	Renamed Franklin County EMA Emergency Operation Center (EOC).
Emergency Shelter Providers	Deleted element.
Financial Institutions	Added element.
Fire/EMS Emergency Vehicles - City of Columbus	Renamed City of Columbus Fire/EMS Emergency Vehicles.

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ITS Element	Proposed Change
FIRST Patrol - ODOT	Renamed ODOT FIRST Patrol.
Freeway Management System - ODOT	Deleted element.
Freight Operations Center - CRAA	Renamed CRAA Freight Operations Center.
Freight Operations Centers	No change.
Freight Plane Operations	Deleted element.
Freight Planes	No change.
Freight Rail Operations	No change.
Freight Rail Vehicles	No change.
Freight Truck Operations	Deleted element.
Freight Truck Vehicle	No change.
Highway Advisory Radio (HAR) - CRAA	Renamed CRAA Highway Advisory Radio (HAR).
Highway Advisory Radio (HAR) - ODOT	Renamed ODOT Highway Advisory Radio (HAR).
Highway Rail Intersection Control - PUCO	Renamed PUCO Highway Rail Intersection Control.
Highway Watch - OSHP	Deleted element.
Information Kiosks - COTA	Renamed COTA Information Kiosks.
Local Fire/EMS Emergency Dispatch	No change.
Local Fire/EMS Emergency Vehicles	No change.
Local Maintenance and Construction Management	No change.
Local Maintenance and Construction Vehicles	No change.
Local Maintenance Dispatch	Deleted element.
Local Maintenance Garages	Added element.
Local Medical Centers	No change.
Local Other 911 Call Centers	Renamed Local 911 Call Centers.
Local Portable Dynamic Message Signs (DMS)	No change.
Local Public Safety Management and Dispatch	Renamed Local Police/Sheriffs Management and Dispatch.
Local Public Safety Vehicles	Renamed Local Police/Sheriffs Vehicles.
Local Storage Facilities	Added element.
Local Traffic Database	No change.
Local Traffic Detectors	No change.
Local Traffic Management	Renamed Local Traffic Management Centers.
Local Traffic Signals	No change.
Local Vehicle Speed Monitors	No change.
Maintenance and Construction Vehicles	Deleted element.
Media Channels	No change.
Mid-Ohio Regional Incident and Mutual Aid Network	Added element.
MORPC RideSolutions Website	No change.
National Oceanic and Atmospheric Administration (NOAA)	Deleted element.
National Weather Service	No change.
ODOT D5 Office	Renamed ODOT District Offices.
ODOT D6 Office	Deleted element.
ODOT Maintenance and Construction Vehicles	Added element.
ODOT Maintenance Garages	Added element.

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ITS Element	Proposed Change
ODOT Rest Areas/Truck Stops/Service Plaza Kiosks	Deleted element.
ODOT RWIS	No change.
ODOT Storage Facilities	Added element.
Ohio QuickClear Concept	Deleted element.
On Board Electronic Manifest (Paratransit) - COTA	Renamed COTA On Board Electronic Manifest (Paratransit).
On Demand Transit Vehicles - DATA	Renamed DATA On Demand Transit Vehicles.
On-Board Transit Fare Collector - COTA	Deleted element.
On-Vehicle Signal Preemption - City of Columbus Fire Department	Deleted element.
On-Vehicle Signal Preemption - Mifflin Township Fire Department	Deleted element.
On-Vehicle Signal Preemption - Violet Township Fire Department	Deleted element.
OSU CABS Buses	Added element.
Other Local Maintenance and Construction Management	Added element.
Other Local Traffic Management Centers	Added element.
Other ODOT Maintenance Garages	Added element.
Other ODOT Traffic Operations	Deleted element.
Overheight Vehicle Detectors - ODOT	Renamed ODOT Overheight Vehicle Detectors.
Paratransit Vehicles - COTA	Renamed COTA Paratransit Vehicles.
Park and Ride Facility - COTA	Renamed COTA Park and Ride Facility.
Pavement Sensors - ODOT	Renamed ODOT Pavement Sensors.
Paving the Way Website - City of Columbus	Renamed City of Columbus Paving the Way Website.
Police Vehicles	Deleted element.
Portable Dynamic Message Signs (DMS) - City of Hilliard	Deleted element.
Portable Dynamic Message Signs (DMS) - City of Upper Arlington	Deleted element.
Portable Dynamic Message Signs (DMS) - OSU TPS	Deleted element.
Private Ambulance Provider Dispatch	No change.
Private Ambulance Provider Vehicles	No change.
Private Rail Wayside Equipment	Added element.
Private Surface Transportation Service	Deleted element.
Private Tow/Wrecker Vehicles	No change.
Private Tow/Wreckers Dispatch	No change.
Private Traveler Information Systems	Added element.
Public Safety Vehicles - City of Columbus	Renamed City of Columbus Police Vehicles.
Radio Room - Franklin County Sheriff	Deleted element.
Ramp Meters - ODOT	Renamed ODOT Ramp Meters.
Regional Event Promoters	Added element.
Regional Online Dataport - MORPC	Renamed MORPC Regional Online Dataport.
RideSolutions Website - MORPC	Deleted element.
Roadway Signal Preemption - City of Columbus	Deleted element.
Roadway Signal Preemption - City of Gahanna	Deleted element.

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ITS Element	Proposed Change
Roadway Signal Preemption - City of Pickerington	Deleted element.
Roadway Signal Preemption - City of Upper Arlington	Deleted element.
Roadway Signal Preemption - CRAA	Deleted element.
Roadway Signal Preemption - Fairfield County Engineers	Deleted element.
Roadway Signal Preemption - Village of Canal Winchester	Deleted element.
Roadway Signal Preemption - Violet Township	Deleted element.
School Buses	No change.
School District Dispatch	No change.
Shuttle Buses - CRAA	Renamed CRAA Shuttle Buses.
SMART Card - COTA	Renamed COTA SMART Card.
State Communication Center - OSHP	Renamed OSHP State Communication Center.
State Highway Patrol Vehicles	Renamed OSHP State Highway Patrol Vehicles.
State Radio Room - OSHP	Renamed OSHP State Radio Room.
TENS - Franklin County EMA	Renamed Franklin County EMA TENS.
TERT - City of Columbus	Renamed City of Columbus TERT.
Ticket Vending Machines - COTA	Renamed COTA Ticket Vending Machines.
Traffic Count Database - MORPC	Renamed MORPC Traffic Count Database.
Traffic Database - City of Gahanna	Deleted element.
Traffic Database - City of Pickerington	Deleted element.
Traffic Database - FCEO	Deleted element.
Traffic Database - ODOT	No change.
Traffic Database - OSU TPS	Deleted element.
Traffic Detectors - City of Columbus	Renamed City of Columbus Traffic Detectors.
Traffic Detectors - City of Gahanna	Deleted element.
Traffic Detectors - City of Hilliard	Deleted element.
Traffic Detectors - City of Pickerington	Deleted element.
Traffic Detectors - City of Reynoldsburg	Deleted element.
Traffic Detectors - City of Upper Arlington	Deleted element.
Traffic Detectors - FCEO	Deleted element.
Traffic Detectors - ODOT	Renamed ODOT Traffic Detectors.
Traffic Detectors - OSU TPS	Renamed OSU Traffic Detectors.
Traffic Detectors - Village of Canal Winchester	Deleted element.
Traffic Detectors - Village of New Albany	Deleted element.
Traffic Management - City of Columbus	Deleted element.
Traffic Research - OSU	Renamed OSU Traffic Research.
Traffic Signal - City of Columbus	Renamed City of Columbus Traffic Signals.
Traffic Signal - CRAA	Renamed CRAA Traffic Signal.
Traffic Signal - ODOT	Renamed ODOT Traffic Signals.
Traffic Signal System - City of Bexley	Deleted element.
Traffic Signal System - City of Delaware	Deleted element.
Traffic Signal System - City of Dublin	Deleted element.
Traffic Signal System - City of Gahanna	Deleted element.

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ITS Element	Proposed Change
Traffic Signal System - City of Grandview Heights	Deleted element.
Traffic Signal System - City of Grove City	Deleted element.
Traffic Signal System - City of Hilliard	Deleted element.
Traffic Signal System - City of Pataskala	Deleted element.
Traffic Signal System - City of Pickerington	Deleted element.
Traffic Signal System - City of Powell	Deleted element.
Traffic Signal System - City of Reynoldsburg	Deleted element.
Traffic Signal System - City of Upper Arlington	Deleted element.
Traffic Signal System - City of Westerville	Deleted element.
Traffic Signal System - City of Whitehall	Deleted element.
Traffic Signal System - City of Worthington	Deleted element.
Traffic Signal System - Delaware County Engineers	Deleted element.
Traffic Signal System - Fairfield County Engineers	Deleted element.
Traffic Signal System - FCEO	Deleted element.
Traffic Signal System - Licking County Engineers	Deleted element.
Traffic Signal System - OSU TPS	Renamed OSU TPS Traffic Signals.
Traffic Signal System - Village of Canal Winchester	Deleted element.
Traffic Signal System - Village of Groveport	Deleted element.
Traffic Signal System - Village of New Albany	Deleted element.
Traffic Signal System - Village of Obetz	Deleted element.
Traffic Signal System - Violet Township	Deleted element.
Traffic.com Website	Deleted element.
Transit Control Center - COTA	Renamed COTA Transit Control Center.
Transit Database - COTA	Renamed COTA Transit Database.
Transit Dispatch Facility - DATA	Renamed DATA Transit Dispatch Facility.
Transit Fixed Route Vehicles - COTA	Renamed COTA Transit Fixed Route Vehicles.
Transit Fixed Route Vehicles - DATA	Renamed DATA Transit Fixed Route Vehicles.
Transit Radio Room - COTA	Renamed COTA Transit Radio Room.
Transit Signal Priority System - FCEO	Deleted element.
Transit Signal Priority System- City of Columbus	Deleted element.
Transit User	Deleted element.
Transportation Modeling - MORPC	Renamed MORPC Transportation Modeling.
Transportation Modeling Website - ODOT	Renamed ODOT Transportation Modeling Website.
Traveler	No change.
Traveler Information Device	Added element.
Traveler Transit Facility - COTA	Deleted element.
Trip Planner Website - COTA	Renamed COTA Trip Planner Website.
Vehicle	Added element.
Vehicle Component Monitoring - COTA	Renamed COTA Vehicle Component Monitoring.
Vehicle Detectors - CRAA	Deleted element.
Vehicle Maintenance Scheduling Software - City of Gahanna	Deleted element.
Vehicle Maintenance Scheduling Software - City of Hilliard	Deleted element.



<b>ITS Element</b>	<b>Proposed Change</b>
Vehicle Maintenance Scheduling Software - City of Reynoldsburg	Deleted element.
Vehicle Maintenance Scheduling Software - City of Upper Arlington	Deleted element.
Vehicle Maintenance Scheduling Software - DATA	Deleted element.
Vehicle Maintenance Scheduling Software - FCEO	Deleted element.
Vehicle Maintenance Scheduling Software - OSU TPS	Deleted element.
Vehicle Maintenance Scheduling Software - Village of Canal Winchester	Deleted element.
Vehicle Maintenance Scheduling Software - Village of New Albany	Deleted element.
Vehicle Maintenance Scheduling Software - Violet Township	Deleted element.
Vehicle Speed Monitors - CRAA	Deleted element.
Vehicle Speed Monitors - OSU TPS	Deleted element.
Vehicle Speed Monitors - Village of Canal Winchester	Deleted element.
Warning Siren System - Delaware County EMA	Deleted element.
Warning Siren System - Fairfield County EMA	Deleted element.
Warning Siren System - Franklin County EMA	Deleted element.
Warning Siren System - Licking County EMA	Deleted element.