

# TRAFFIC FLOW AND SAFETY IMPROVEMENT MASTER PLAN

**March 3, 2021**

# TRANSYSTEMSTEAM



## ▶ Brian Krul, PE, PTOE – TRANSPORTATION ENGINEER

- ▶ 24 years of transportation experience
- ▶ PM for various Multimodal Projects throughout the region

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## ▶ Todd Libengood, PSP – MULTIMODAL DESIGNER | ENGINEER

- ▶ 28 years of transportation and technical design experience
- ▶ PM and Designer for various trail and bicycle projects throughout the region

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## ▶ Sidney Kaikai, AICP – TRANSPORTATION PLANNER

- ▶ 42 years of transportation planning experience
- ▶ Former City of Pittsburgh Planner and seasoned expert in transportation planning

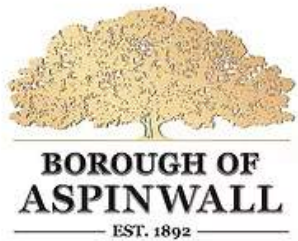
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# TRANSYSTEMS



- ▶ National Transportation Consultant Firm
- ▶ 800+ Professionals in 30 offices across the country
  - ▷ Local Pittsburgh Office
- ▶ Focus purely on TRANSPORTATION
  - ▷ Roads, Bridges, Traffic, Planning, Multimodal, Trails, Transit
- ▶ Ranked #85 (ENR 2020) for Top 500 Transportation Engineering Firms

# TRANSYSTEMS AGENCY EXPERIENCE



# ALLEGHENY COUNTY MULTIMODAL ASSESSMENT STUDY (2020)



- ▶ Comprehensive evaluation of 400+ miles of county roads to assess the availability of ROW for various multimodal improvements.
- ▶ Includes Bike Lanes, Protected Bike Lanes, Shared Used Path, Side Paths, Paved Shoulders, Sidewalks, Rapid Flashing Beacons, Enhanced Crosswalk Markings, Roundabouts, Curb Extensions, Bump Outs, SWM Design Initiatives / Green Infrastructure
- ▶ Assessed approximately 3.5 miles within North Fayette Township
- ▶ Associated Roads:
  - ▷ Steubenville Pike / Enlow Road (North Fayette Township)
  - ▷ Ridge Road (North Fayette, Robinson, and Collier Township)





# ALLEGHENY COUNTY MULTIMODAL ASSESSMENT STUDY (2020)

## ► Steubenville Pike / Enlow Road (North Fayette Township)

- ▷ Various bicycle improvements with bicycle signage



### ALLEGHENY COUNTY ROAD BICYCLE & PEDESTRIAN ASSESSMENT STUDY

#### MUNICIPAL MEETING MINUTES

IMPROVEMENT 2A – STEUBENVILLE PIKE – ENLOW ROAD  
IMPROVEMENT 2B – RIDGE ROAD

DATE/TIME:  
LOCATION:

TUESDAY MARCH 5, 2019 @ 1:30PM  
NORTH FAYETTE TOWNSHIP MUNICIPAL BUILDING

Ann Ogoreuc  
Jessica Mooney  
Meghan Sexton  
Daria Cravotta  
Sean Stark  
Laura Ludwig  
Frank Piccolino  
Kyle Thauvette

Allegheny County Economic Development  
Office of Allegheny County Executive – Special Projects  
Allegheny County Department of Public Works  
Office of Allegheny County Executive  
TranSystems  
Township of North Fayette  
Robinson Township  
Collier Township

The intent of this meeting and all municipal meetings was to introduce the municipalities to the various multi-modal improvements on County roads within their jurisdiction, as well as gathering feedback and other information on the above improvements to determine the level of municipal interest.

- Collier Township agreed with the proposed roundabout at Papoose Drive and Ridge Road as a traffic calming measure and to alleviate confusion at this intersection.
- Collier Township passed out pamphlets showing existing bike trails in Collier Township. These proposed improvements would assist in connecting to these existing bike trails.
- All three townships agreed with the improvements and showed interest in providing assistance, especially Collier Township offering monetary assistance to jump-start these multi-modal improvements.
- There was a discussion on whether the proposed traffic signal at Cliff Mine-Enlow and Cliff Mine Road intersection is within North Fayette municipal border or Findlay Township. **Update 3/6/2019** – North Fayette Police Chief stated that the proposed red light in question is actually in Findlay Township. Any future discussions regarding this particular project, a representative from Findlay Township will have to be invited.
- The County mentioned that they would hold a public forum / meeting prior to any improvements as well as present to council which North Fayette Township showed interest in presenting to their upcoming Board meetings.
- The proposed bike and pedestrian improvements touch very little of Robinson Township municipal boundaries.
- Robinson Township explained current on-going development in the area that would contribute to the uses of these proposed multi-modal improvements.

# ALLEGHENY COUNTY MULTIMODAL ASSESSMENT STUDY (2020)

## ► Ridge Road (North Fayette, Robinson, and Collier Township)

### ▷ Bicycle improvements accompanied with bicycle signage



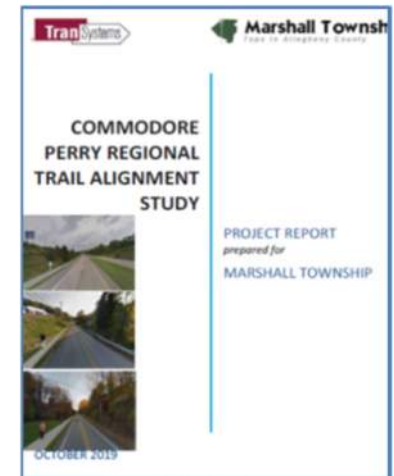
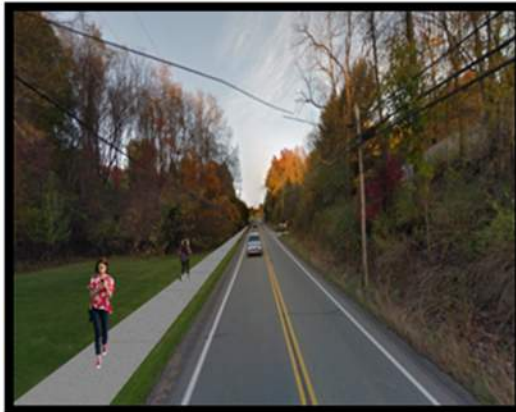
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## COMMODORE PERRY REGIONAL TRAIL – MARSHALL TOWNSHIP (2020)



- ▶ Planning, Design, Estimates and Prioritization of five (5) separate trail sections in Marshall Township
- ▶ Plans, specifications, construction cost estimates, implementation and alternatives
- ▶ Includes separate bike paths, shared use facilities, trails, sidewalks, shoulder widening and enhancements, advanced signage, pavement markings, ADA facilities, floating trail system over wetlands
- ▶ Sections include Warrendale Bayne Road, Shenot Road, Route 910, Wexford Run Road, and Thorn Hill Road

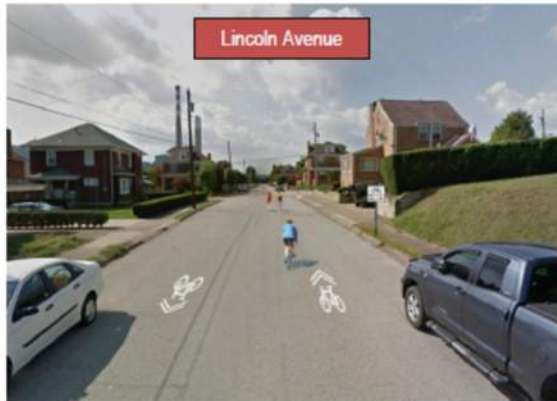




## THREE RIVERS HERITAGE TRAIL – SPRINGDALE (2020) & BRACKENRIDGE (2021)



- ▶ Planning and Design of the Three Rivers Heritage Trail Sections – includes trail section alternatives, implementation, programming and grant funding support
- ▶ Brackenridge followed PennDOT guidelines with a 10-foot trail section, ADA ramp improvements, fencing, signage, utility relocation and tree trimming
- ▶ Springdale included widened sidewalk, on-street facilities, right-of-way, pavement markings, signage, crosswalks



# EASTSIDE HIGHWAY PEDESTRIAN STUDY - CITY OF ERIE / ERIE COUNTY (2021)



THE CITY OF ERIE

JOSEPH V. SCHEMBER, MAYOR



- ▶ Multimodal study to assess various recommendations and improvements in Erie eastside neighborhood
- ▶ Study funded by Erie County and City of Erie (Multimodal Grant) – investigated several alternatives, prioritization and implementation plan
- ▶ Improvements includes shared use paths, road diets, complete streets, bikeways, sidewalk improvements, lane and shoulder widening, pedestrian flashers, rapid flashing beacons, ADA facilities, enhanced crosswalks, raised crosswalks, traffic calming
- ▶ Study area consisted of Eastside Highway, 12<sup>th</sup> Street, Broad Street, Buffalo Road and various local and collector roadways



Figure 2.3: McKinley Avenue Rendering (Northbound)

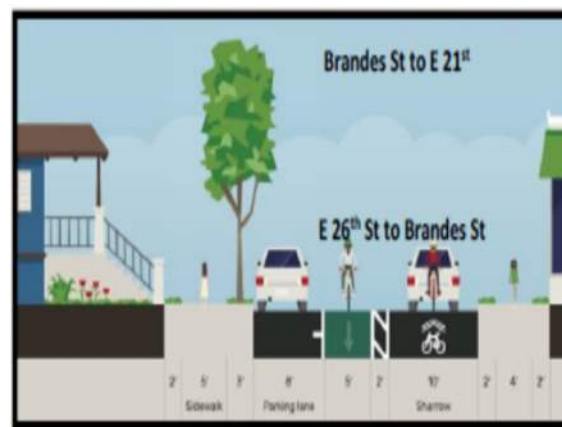


Figure 1.2 Raised Crosswalk Locations

## VARIOUS PROJECTS FOR MOON TWP AND MOON TRANS AUTHORITY (2017-2020)

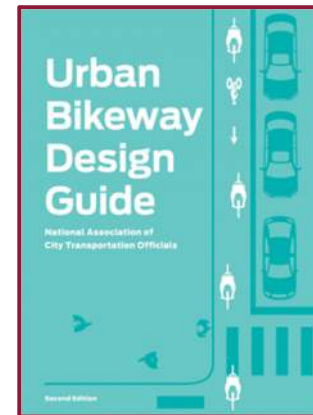
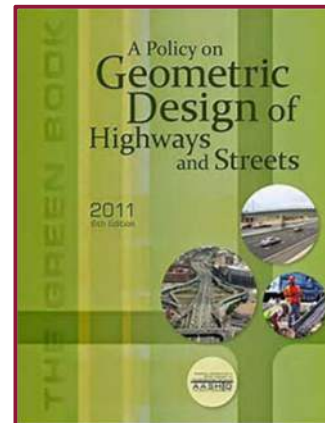
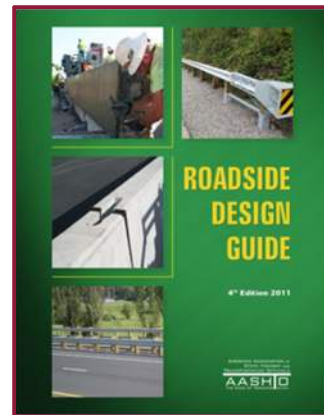
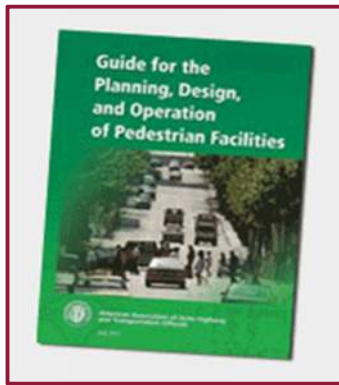


- ▶ Stevenson Mill Road Connector (Port Authority Drive & Stevenson Mill Road)
- ▶ Rouser Road Connector (Port Vue Road & Rouser Road)
- ▶ University Boulevard and Business Route 376 Intersection (Displaced Left Turn Intersection)
- ▶ Market Place Boulevard Master Plan and Traffic Study (reviewing roads in Robinson and North Fayette)





# DESIGN CRITERIA







## BOROUGH OF ASPINWALL FREEPORT ROAD SAFETY STUDY

### ➤ SIDEWALKS

- MULTIPLE OBSTRUCTIONS
- SUBSTANDARD SIDEWALK WIDTHS
- INADEQUATE ADA FACILITIES & ACCOMMODATIONS
- DISREPAIR & DISTRESSES
- LACK OF SIGHT DISTANCE FOR CROSSING STREETS

### ➤ INTERSECTIONS

- LACK OF PEDESTRIAN SIGNALS
- SIGHT DISTANCE ISSUES
- LACK OF VISIBLE CROSSWALKS
- PEDESTRIAN/BICYCLE AND VEHICLE CONFLICTS
- INTERSECTION DELAYS
- BUS STOP LOCATIONS | SHELTERS

### ➤ CORRIDOR

- INADEQUATE LIGHTING
- INADEQUATE DRAINAGE FEATURES
- HIGH TRAVEL SPEEDS
- PARKING SIGHT DISTANCE
- LACK OF BICYCLE ACCOMMODATIONS
- TOO MANY ACCESS POINTS ALONG CORRIDOR

## DEFICIENCIES

## SIDEWALKS

- INADEQUATE ADA FACILITIES
- DISREPAIR
- MULTIPLE OBSTRUCTIONS
- SUBSTANDARD WIDTHS

## INTERSECTIONS

- LACK OF VISIBLE CROSSWALKS
- SIGHT DISTANCE ISSUES
- PEDESTRIAN / VEHICLE CONFLICTS
- BUS STOP LOCATIONS / SHELTERS

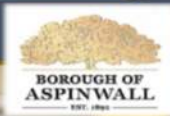
## CORRIDOR

- SUBSTANDARD INLETS
- PARKING SIGHT DISTANCE
- TOO MANY ACCESS POINTS
- INADEQUATE LIGHTING



# FREEPORT ROAD—SAFETY STUDY

## SAFETY DEFICIENCIES



A safety study of the PennDOT owned Freeport Road (SR 1001) from Western Avenue to Delafield Road was conducted in spring of 2019 with consideration of the PennDOT proposed Route 28 ramp improvements and the Aspinwall Borough proposed Brilliant Avenue Intersection improvement. This safety study provides Aspinwall Borough with areas found to be deficient compared to current design standards and guidelines regarding the safety of pedestrians, bicycles, parking, transit, and ADA users along Freeport Road.





## BOROUGH OF ASPINWALL FREEPORT ROAD SAFETY STUDY

### ➤ PROJECT #1 – BICYCLE TRAIL

- BICYCLE TRAIL / PATHWAY THROUGH BOROUGH ROADWAYS
- PROVIDES CONNECTIVITY FROM DELAFIELD AVENUE (FUTURE ALLEGHENY COUNTY PROJECT) TO FUTURE THREE RIVERS HERITAGE TRAIL ACCESS
- SHARED LANE MARKINGS | SIGNAGE | PATHWAYS
- INCLUDES SAFE CROSSING MEASURES AT FREEPORT ROAD
- SHORT-TERM IMPROVEMENT
- COSTS \$50-100K

### PROJECT #2 – INTERSECTION SAFETY | UPGRADES

- NEW TRAFFIC SIGNALS | RETIMING
- NEW STREET LIGHTS
- PAINTED | LIGHTED CROSSWALKS
- PARKING RE-STRIPING
- ADVISORY SIGNS | RESTRICTED TURNING MOVEMENT SIGNS
- RAPID FLASHING BEACONS
- BUS STOP CONSOLIDATION
- SHORT-MEDIUM TERM IMPROVEMENTS
- COSTS \$100-250K PER INTERSECTION

### ➤ PROJECT #3 – CORRIDOR RECONSTRUCTION | REHAB

- ROADWAY REHAB | REPLACEMENT
- NEW DRAINAGE FEATURES | UPGRADES
- INSTALLATION OF TRAFFIC CALMING DEVICES
- NEW SIDEWALKS & CURBING
- NEW ADA FACILITIES | UPGRADES
- ACCESS IMPROVEMENTS | RELOCATIONS
- NEW STREET LIGHTS | SIGNALS | HARDWARE
- MEDIUM-LONG TERM IMPROVEMENTS
- COSTS \$1-2M

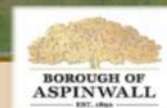
## MITIGATION PROJECTS





## FREEPORT ROAD—SAFETY STUDY

### MITIGATIONS TO ADDRESS SAFETY DEFICIENCIES



- ▶ **BIKE-WAY THROUGH BOROUGH** Roadways to connect future bike pathway from Delafield Avenue to the Three Rivers Heritage Trail [Short Term]
- ▶ **SIGNAL & LIGHTING** Replace existing street lighting | new signals | retiming | painted/lighted crosswalks | ADA ramps | restrict turning movements [Short/Medium Term]
- ▶ **CORRIDOR RECONSTRUCTION** Traffic calming devices | drainage updates | rehab / resurface | new sidewalks/access revisions | new ADA ramps | streetscaping elements [Medium/Long Term]



# MASTER PLAN

## PHASE 1A – YEAR 2021 DESIGN [CONSTRUCTION START 2022]

- ▶ Bike Path / Route through Aspinwall
  - ▷ Delafield Ave – Aspinwall Riverfront Park – Aspinwall Recreational Area
  - ▷ Utilize 2<sup>nd</sup> Street, Brilliant Ave
  - ▷ Include Signage, Pavement Markings, Crossings, Flashers
  - ▷ Investigate Current Parking to Ensure No Impacts

# MASTER PLAN



# MASTER PLAN

## PHASE 1A – YEAR 2021 DESIGN [CONSTRUCTION START 2022]

- ▶ General Traffic Flow Study throughout the Borough
  - ▷ Review Traffic Flow at Major Intersection
  - ▷ Review Parking and Access
  - ▷ Utilize Streetlight Data
  - ▷ Investigate Pedestrian, Bicycle, Transit, and ADA Movements

# MASTER PLAN

## PHASE IB – YEAR 2021 DESIGN[START 2022]

- ▶ UPMC St. Margaret Exit onto Delafield
  - ▷ Review Traffic Flow and Ingress / Egress
  - ▷ Include Wayfinding Signage and Pavement Marking
  - ▷ Coordinate with St. Margaret and Route 28 Project
  
- ▶ Farmers Market, Labriola's Italian Market, Dry Cleaner's Access
  - ▷ Review Traffic Flow and Ingress / Egress | Access Management
  - ▷ Coordination with PennDOT
  - ▷ Safety and Pedestrian Improvements





# MASTER PLAN

## PHASE 2 – YEAR 2022 DESIGN [CONSTRUCTION 2022-2023]

- ▶ Eastern Avenue Intersection and Commercial Avenue
  - ▷ Traffic Flow Changes and Safety Improvements
  - ▷ Turning Restrictions, Signal Improvements
  
- ▶ Re-Configure Layout of Aspinwall Borough Parking Lot
  - ▷ One Access for Entrance / Exit
  - ▷ Improve adjacent Traffic Flow
  - ▷ Safety Improvements for Pedestrian and Bicycles (Safe Crossings)

# MASTER PLAN

## PHASE 3 – YEAR 2023 DESIGN [CONSTRUCTION 2023-2024]

- ▶ Brilliant Avenue Intersection Improvement
  - ▷ New Traffic Signals
  - ▷ New Traffic Flow Direction
  - ▷ Safety Improvements – Signage, Pavement Markings, Crossings
  - ▷ Bicycle, Pedestrian, Transit, ADA Improvements

# QUESTIONS & COMMENTS

PROVIDING TRANSPORTATION OPTIONS THAT  
STRENGTHEN COMMUNITIES

## MULTIMODAL PLANNING AND DESIGN



A balanced transportation system includes a mixture of facilities for all users. Regardless of size or location, every community can benefit from transportation options across modes.

WE DELIVER THE ENTIRE TRANSPORTATION EXPERIENCE



Airports & Air Centers



Energy & Communications



Federal Government



Freight Facilities



Manufacturers & Distributors



Ports & Harbors



State & Metropolitan



Transit & Passenger Rail



Trucking & Logistics



### Pedestrian/Bicycle Plans



### Safe Routes to School



### CONTACT US

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## MULTIMODAL PLANNING AND DESIGN SERVICES

TranSystems understands that modern transportation involves more than just cars, trucks and rail. It is a diverse network built to accommodate a wide variety of people and needs. We work with clients to ensure balanced transportation solutions by providing services that include:

- Multimodal Planning and Design
- Multimodal Pathway Lighting
- Transportation Impact and Safety Studies
- Bicycle and Pedestrian Assessments
- Comprehensive Transportation Plans
- Sidewalk and ADA Ramp Designs

Our design experience includes the following:

- Microstation, AutoCAD Civil 3D, and Revit programs
- Cost Estimates
- Specifications

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