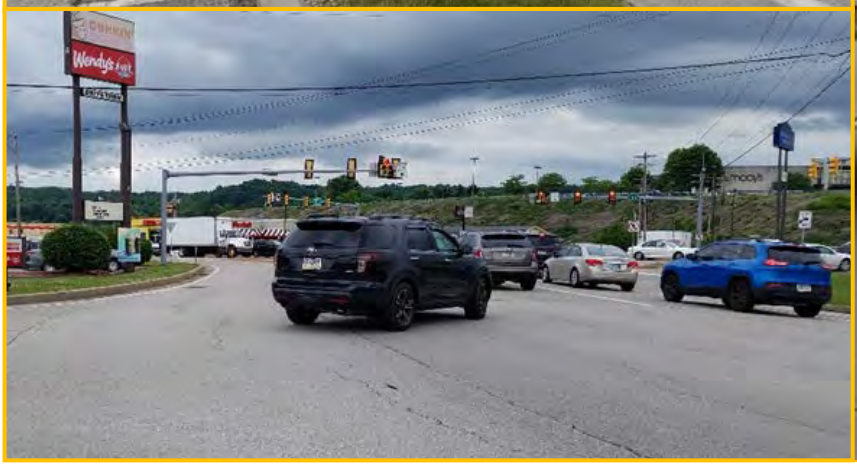
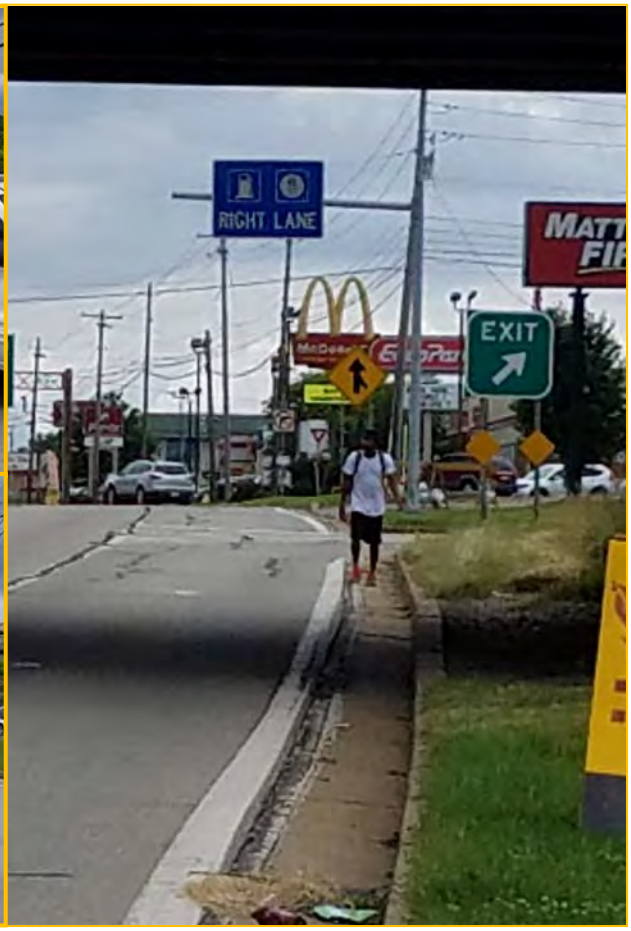
U.S. Route 30 Corridor Operations Planning Study





U.S. 30 from East Pittsburgh Street to Village Drive

Hempfield Township and Unity Township
Westmoreland County

SOUTHWESTERN PENNSYLVANIA COMMISSION SPC

January, 2019

Southwestern Pennsylvania Commission

2019

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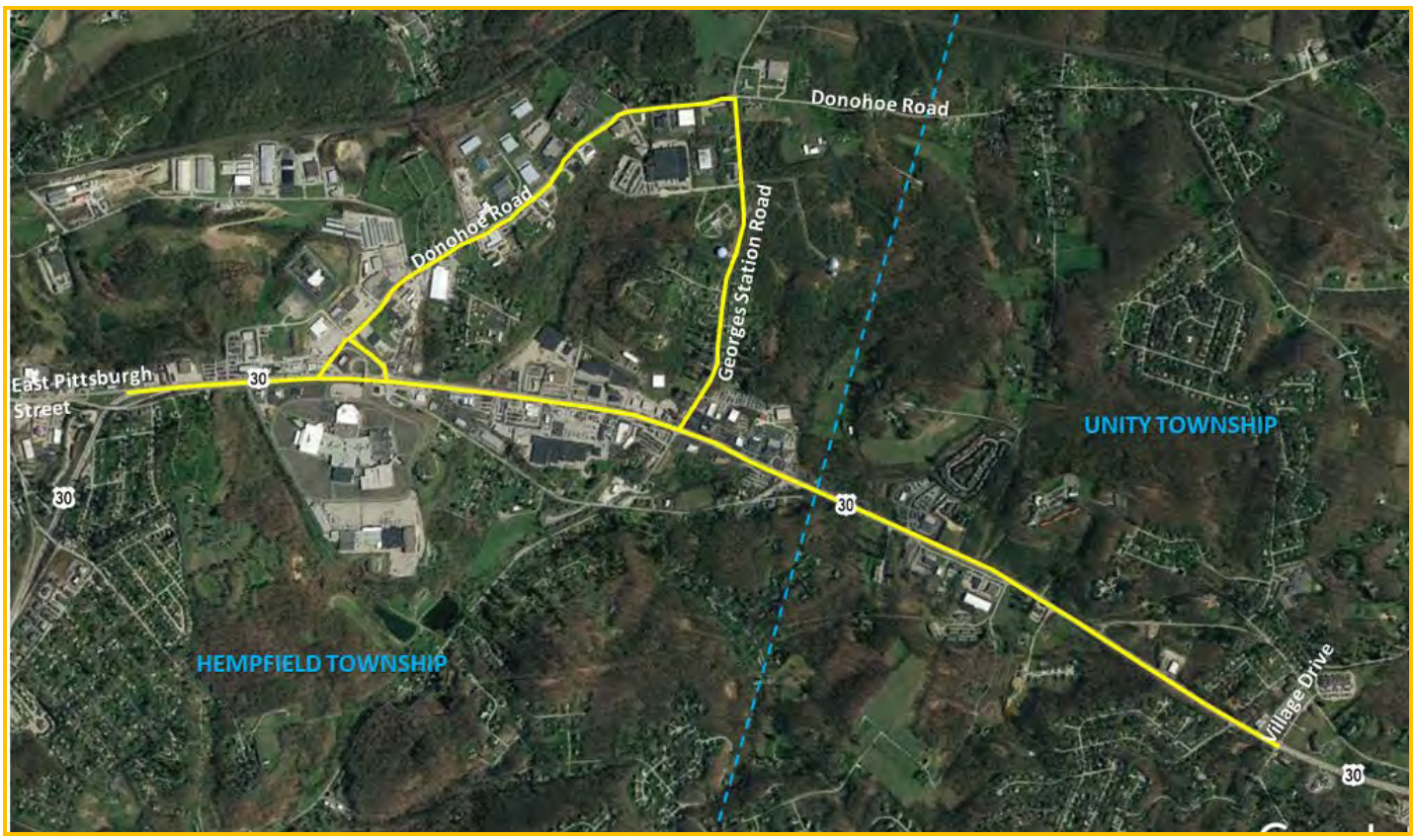
U.S. 30 Project Description and Study Team

Objective:

Review the United States (U.S.) Route 30/Donohoe Road corridor from East Pittsburgh Street in Hempfield Township to Village Drive in Unity Township to identify potential transportation operational and safety improvements. Portions of Donohoe Road and Georges Station Road within this area were also reviewed.



Core Study Team Members:

Ross Buchan, P.E. – Senior Project Engineer, WRA
Kevin Conahan, P.E., P.T.O.E. – Senior Traffic Engineer, Drive Engineering
Domenic D'Andrea, P.E., P.T.O.E. – Transportation Operations and Safety Manager, SPC
Keith Johnson, P.E. – Senior Project Manager, Gannett Fleming
Ken Opipery – Civil Engineer Intern, SPC
Steven Palmer, P.E. – Senior Engineer, Gannett Fleming
Joshua Spano – Transportation Planner, SPC

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This report was funded in part through grants from the Federal Highway Administration, U.S. Department of Transportation. The views and opinions of the authors expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

In accordance with PA Consolidated Statutes Title 75-Vehicles (Vehicle Code) Section 3754 and 23U.S.C. Section 409, this safety study is confidential and is only provided to official agencies with official duties/responsibilities in the project development.

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1. Introduction

As demonstrated through research, previous corridor studies, and past experience in the Regional Road Safety Audit (RSA) program, transportation operations and safety have a direct relationship with one another. Typically, when congestion is present and corridor operations begin to break down, safety is also impacted. Similarly, crashes and incidents along a corridor can result in increased delay and reduced travel time reliability for motorists, transit operators and freight carriers, impacting operations. Therefore, it is important that operations and safety be evaluated together, particularly on major regional corridors.

1.1 What is a Corridor Operations Planning Study?

In order to improve mobility, accessibility and safety in a comprehensive manner, the Southwestern Pennsylvania Commission (SPC) has developed a corridor study approach that focuses on both operations and safety. Corridor Operations Planning Studies are a hybrid between traditional traffic studies and the charrette-style RSA process, resulting in a more holistic look at both operations and safety and how they impact one another along a corridor. The improvements identified in these studies will be geared toward short-term (1-5 years) and long-term (5+ years) alternatives that can be incorporated into the Long Range Transportation Plan (LRTP), Transportation Improvement Program (TIP), and partner maintenance and development activities.

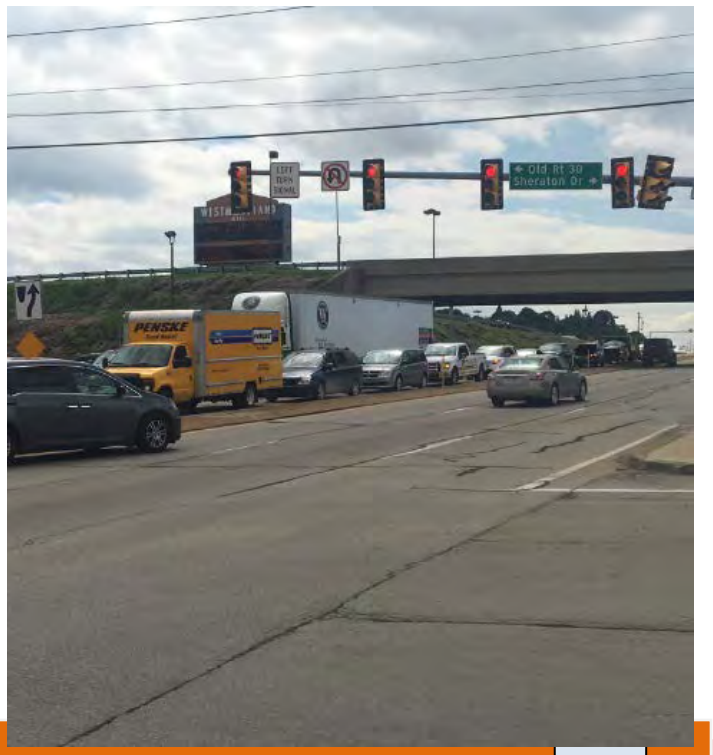
1.2 Project Selection

Candidates for these studies are derived from SPC's regional planning tools including the LRTP, the Regional Operations Plan (ROP), and the Congestion Management Process (CMP). As part of implementing the region's long range plan, SPC staff reviews study candidates and works with regional planning partners and PennDOT to set up these studies as resources allow.

1.3 Corridor Planning Study Process

The study process consists of three (3) major phases: pre-assessment, field assessment, and post-assessment. The pre-assessment phase consists of gathering preliminary data for the study team to review at least 1 week before the field assessment. The preliminary data report should include:

- LRTP Level 1 Candidate Forms Review (identifies potential projects that have already been suggested through public outreach and other planning efforts in the area)
- Maps of:
  - Aerial imagery of study corridor
  - Intelligent Transportation System (ITS) elements



  - Traffic signals
  - Rail crossings
  - Transit routes
  - Bike routes
  - Land uses (commercial, industrial, schools, hospitals, parks, etc.)
  - Proposed projects
  - Straight line diagrams
- Applicable traffic data
- Transportation/planning studies (traffic impact studies, comprehensive plans, etc.)
- Crash analysis/diagrams

After the pre-assessment is completed, the field assessment is conducted over approximately a 1-week period. The assessment includes a start-up meeting, key stakeholder interviews, operations and safety field review, operations and safety planning charrettes, and a preliminary presentation of the team's findings that documents key accessibility and mobility concerns with a list of potential solutions.

The study team focuses on the following areas when conducting the field review:

Table 1: Field Review Areas of Focus

Mobility Goal	Objective Areas
Mitigate Recurring Congestion	Bottlenecks
	Traffic Signals
	Travel Demand Management
	Access Management
	Parking Management
Maintain Mobility During Planned Events	Work Zones
	Special Events
	Traveler Information
Minimize the Impact of Unplanned Events	Traffic Detection and Surveillance
	Incident Management
	Road Weather Management
	Detour Routes
Provide an Efficient Multimodal Transportation System	Freight
	Transit
	Pedestrian and Bicycle
	Ridesharing/Carpools & Vanpools

The study team also focuses on safety measures that can improve regional safety performance metrics such as:

- Reducing the number and rate of traffic crashes
- Reducing the number and rate of transportation-related fatalities
- Reducing the number and rate of transportation-related serious injuries
- Reducing the number of non-motorized fatalities and non-motorized serious injuries

Lastly, during the post-assessment phase, a draft and final report are generated that include an implementation plan identifying a menu of potential projects, programs and initiatives, funding resources, and the lead agency that would be responsible for each potential strategy or improvement.

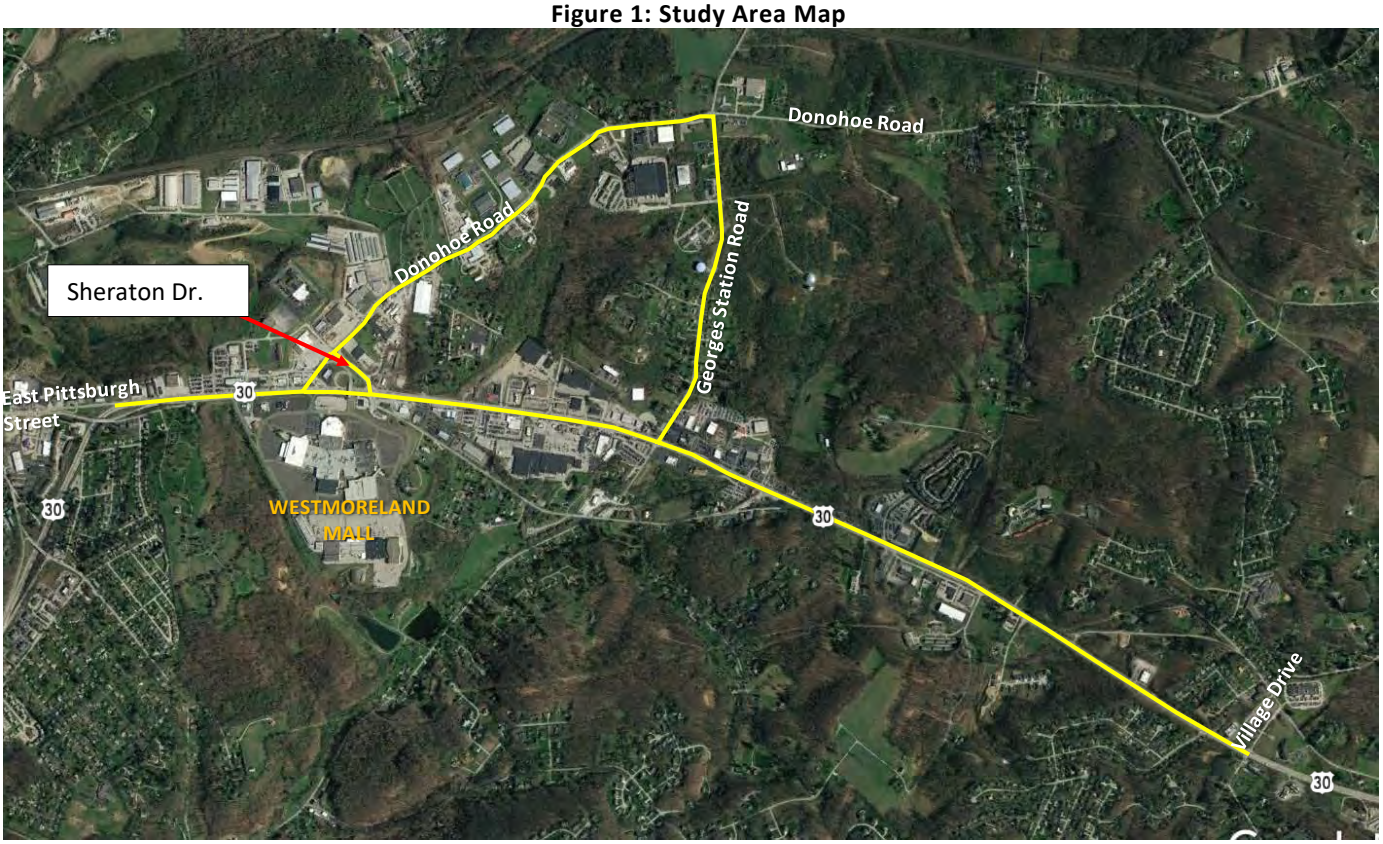
Upon receipt of the final report, roadway owners, at their discretion, can prepare a response documenting plans to address identified concerns and reasons for deferring other issues.

In addition to the elements noted above, traffic counts were conducted, and preliminary traffic analysis was completed at the request of the roadway owners to refine suggested improvements.

2. Study Area Overview

The study area for this project consists of U.S. 30 from East Pittsburgh Street to Village Drive, Sheraton Drive (S.R. 1073) from U.S. 30 to Donohoe Road (S.R. 1026), Donohoe Road from U.S. 30 to Georges Station Road (S.R. 1053), and Georges Station Road from Donohoe Road to U.S. 30 (**Figure 1**).

Figure 1: Study Area Map



U.S. 30 is a critical arterial that serves all modes of transportation connecting Greensburg to Latrobe and Pittsburgh. U.S. 30 also serves as a potential detour route for U.S. 22 to the north and I-76 to the south. U.S. 30 within the study area is a 4-6 lane, divided roadway with signals at all major intersections. At the western end of the study area, U.S. 30 transitions into a limited access facility which serves as a by-pass to Greensburg.

The upper portion of the road triangle shown in **Figure 1** is comprised of Sheraton Drive, Donohoe Road, and Georges Station Road. Each road is a two-lane facility that provides alternate routes between U.S. 119 and U.S. 30.

The study area is heavily developed with some exceptions along U.S. 30 to the east and some large parcels along Donohoe Road and Georges Station Road. U.S. 30 is primarily commercial with a multitude

of retail/service/automobile oriented businesses to the west. Westmoreland Mall and Westmoreland Crossing, a 1.2 million square foot retail center, is located within the study area. Along the eastern half of the corridor, it transitions to commercial and residential land use, with driveways to large suburban housing developments and neighborhoods. There are a number of parcels available for development including lots zoned for commercial, industrial, institutional, and residential use to the north and east of the study area along Donohoe Road and Georges Station Road.

2.1 Mode types

A variety of modes utilize the transportation network within the study area. The primary modes of transportation along the corridor include passenger and commercial vehicles; however, other modes such as transit, trains and pedestrians use the study area as well.

Traffic Volumes and Travel Times

Historical traffic volumes were obtained through PennDOT's Traffic Information repository. SPC staff also collected new traffic count data in early June, 2018. Turning movement counts were taken between 3:00 PM and 6:00 PM for a typical weekday at the following intersections:

- State Route 30 and Sheraton Drive/Old Route 30
- State Route 30 and Nature Park Road/Eastgate Shopping Center Drive
- State Route 30 and Georges Station Road/Slate Run Road
- State Route 30 and Lewis Road
- State Route 30 and Village Drive/Marguerite Road
- Donohoe Road and Roseytown Road; and
- Donohoe Road and Georges Station Road

24 hour Automatic Traffic Recorder counts were also taken at the following locations over two typical weekdays in early June, 2018:

- Pittsburgh Street on-ramp onto State Route 30 Eastbound
- Sheraton Drive and Donohoe Road
- On and off-ramps to Westmoreland Mall overpass
- State Route 30 and Old Route 30; and
- Donohoe Road and Georges Station Road

Average Daily Traffic (ADT) volumes along U.S. 30 range from 16,300 – 24,700 vehicles per day with trucks accounting for three (3) to four (4) percent of the overall traffic volume. The tables on the next page provide a summary of ADT, truck volumes and peak hour volumes (all vehicle types) for both westbound and eastbound (one-way) traffic along the study corridor. Traffic volumes are also provided for Sheraton Drive, Donohoe Road, and Georges Station Road.

Table 2: U.S. 30 Corridor Traffic Volumes

U.S. 30 Corridor Segment	ADT (veh/day)	Base Year	Truck Volume (veh/day)	Peak Hour (veh/hour)
U.S. 30 Split to Sheraton Drive Westbound	24,657	2017	1,001	2,466
U.S. 30 Split to Sheraton Drive Eastbound	23,606	2017	1,029	2,361
Sheraton Drive to Georges Station Road Westbound	16,926	2016	689	1,354
Sheraton Drive to Georges Station Road Eastbound	17,865	2016	772	1,429
Georges Station Road to Beatty County Road Westbound	16,329	2017	542	1,306
Georges Station Road to Beatty County Road Eastbound	16,483	2017	519	1,319
Measured Volumes				
Georges Station Road and Old Route 30 Westbound	17,672	2018	N/A	1,392
Georges Station Road and Old Route 30 Eastbound	16,929	2018	N/A	1,539

Source: PennDOT Traffic Information Repository https://www.dot7.state.pa.us/tire

Table 3: Sheraton Drive Traffic Volumes

Sheraton Drive (S.R. 1073)	ADT (veh/day)	Base Year	Truck Volume (veh/day)	Peak Hour (veh/hour)
PennDOT Historical Volumes				
U.S. 30 to Donohoe Road Northbound	7,900	2016	418	790
U.S. 30 to Donohoe Road Southbound	5,078	2016	84	508
Measured Volumes				
U.S. 30 to Donohoe Road Northbound	8,690	2018	N/A	695
U.S. 30 to Donohoe Road Southbound	N/A	N/A	N/A	N/A

Source: PennDOT Traffic Information Repository https://www.dot7.state.pa.us/tire

Table 4: Donohoe Road Traffic Volumes

Donohoe Road (S.R. 1026)	ADT (veh/day)	Base Year	Truck Volume (veh/day)	Peak Hour (veh/hour)
PennDOT Historical Volumes				
U.S. 30 to Sheraton Drive (Westbound Direction)	10,280	2015	514	1,131
Sheraton Drive to Georges Station Road	7,879	2015	394	867
Measured Volumes				
U.S. 30 to Sheraton Drive (Westbound Direction)	9,143	2018	N/A	870
Sheraton Drive to Georges Station Road	8,755	2018	N/A	771

Source: PennDOT Traffic Information Repository https://www.dot7.state.pa.us/tire

Table 5: Georges Station Road Traffic Volumes

Georges Station Road (S.R. 1053)	ADT (veh/day)	Base Year	Truck Volume (veh/day)	Peak Hour (veh/hour)
PennDOT Historical Volumes				
U.S. 30 to Donohoe Road	5,826	2014	233	641
Measured Volumes				
U.S. 30 to Donohoe Road	6,942	2018	N/A	634

Source: PennDOT Traffic Information Repository https://www.dot7.state.pa.us/tire

Per the SPC Congestion Management Process (CMP), SPC identifies and monitors congested corridors within the 10-county region to develop strategies to facilitate the movement of people and goods along those corridors. The U.S. 30 study corridor (Corridor Number 95) is one of SPC's CMP corridors. Since monitoring of the U.S. 30 corridor began in the spring of 1995, congestion along the corridor has gradually decreased. Per the most recent evaluation in the Fall of 2013, motorist travel times are approximately 12-13 minutes during the AM peak period and 15-17 minutes during PM peak periods, which is an improvement of 1-2 minutes from the 2009 data.

Table 6: U.S. 30 Congestion Management Travel Time and Delay Summary

Congestion Metric	Evaluation Year and Direction							
	Spring 1995		Fall 2002		Spring 2009		January 2013	
	WB	EB	WB	EB	WB	EB	WB	EB
AM Travel Time (min)	18.5	16.5	15.9	14.3	14.8	13.6	12.5	12.5
AM Delay/Vehicle (min)	4.1	2.1	3.6	2.1	2.2	0.9	0.3	0.7
PM Travel Time (min)	20.6	17.6	17.7	16.7	17.8	14.7	16.5	15.2
PM Delay/Vehicle (min)	6.0	3.2	5.4	4.5	4.4	1.8	2.9	1.7

Source: SPC

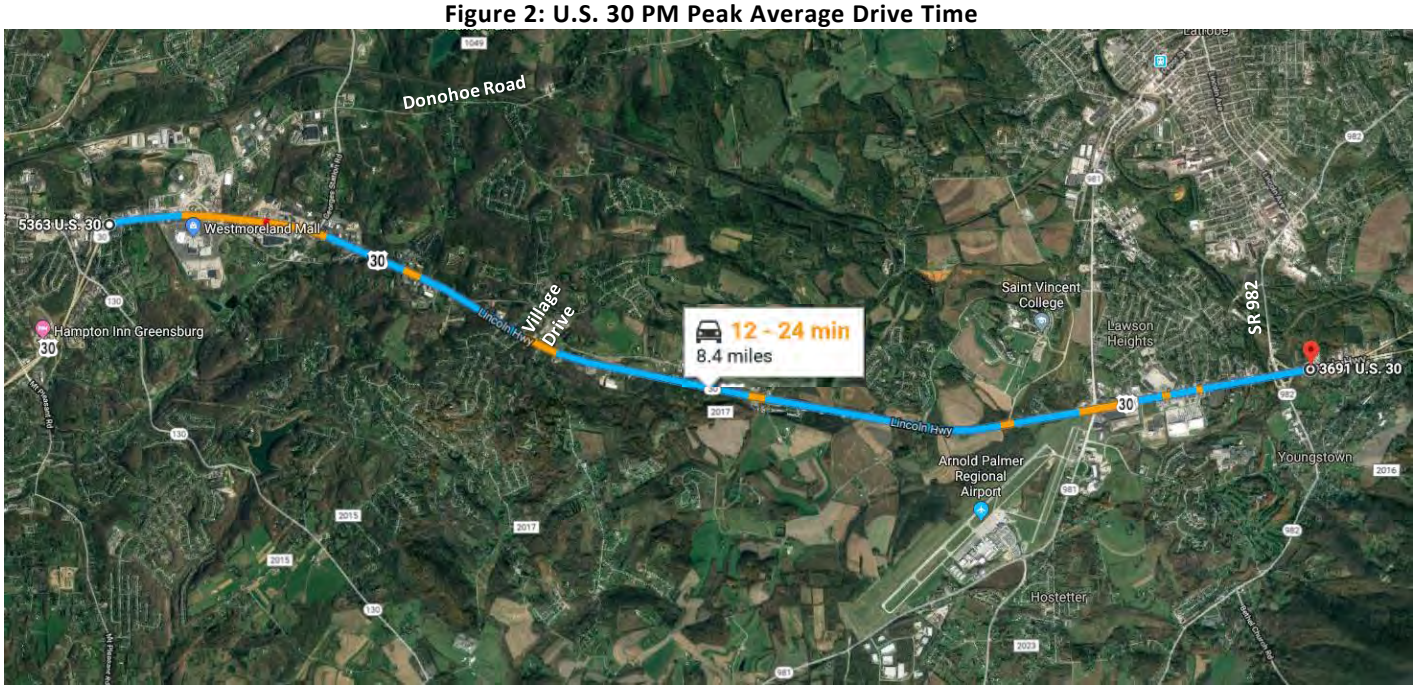
Since travel time data had not been collected since 2013, travel times were examined using Google Maps to verify current conditions. To accurately compare with the January 2013 data, AM and PM peak periods for mid-January 2018 were used in the examination (**Table 7**). Per Google maps travel time estimator, travel times appear to have degraded slightly since 2013.

Table 7: U.S. 30 Travel Time Comparison 2013-2018

Congestion Metric	Evaluation Year and Direction			
	WB		EB	
	2013 (SPC)	2018 (Google)	2013 (SPC)	2018 (Google)
AM Travel Time (min)	12-13	10-22	12-13	10-20
PM Travel Time (min)	16-17	12-26	15-16	12-24

Sources: SPC and Google Maps

Figure 2: U.S. 30 PM Peak Average Drive Time



Source: Google Maps

Transit

The Westmoreland Transit Authority serves the residents of Westmoreland County. Their fleet consists of 41 buses ranging from small 28 passenger buses to 45-foot deluxe road coaches. The Westmoreland Transit Authority currently operates 20 routes, four of which operate within the study area. The four routes include:

- Route 2F: Latrobe – Pittsburgh Flyer
- Route 9: Greensburg – Latrobe Shopper
- Route 9S: Greensburg – Latrobe Shopper
- Route 20F: East Flyer

All four routes use U.S. 30 and make stops at the Westmoreland Mall. Route 9 utilizes the transportation network within the study area the most with buses traveling on U.S. 30, Donohoe Road, and Georges Station Road. For more details regarding schedules, frequency, and stop locations for Routes 2F, 9, 9S, and 20F refer to https://www.westmorelandtransit.com/schedules/

In addition to the bus routes, the Westmoreland Transit Authority serves six (6) designated park and ride facilities, none of which are located within the study corridor. The locations of the park and ride facilities are:

- Arnold Palmer Airport
- Carpenter Lane
- Five Star Trail
- Holy Trinity Church of Christ
- Living Waters Church
- Mid Town Plaza

Bicycle & Pedestrian Infrastructure

No dedicated bicycle infrastructure (bike lanes, trails, etc.) is present within the study area. There are no PennDOT bike route designations within the study area.

Pedestrian infrastructure is very limited within the study area. There are no sidewalks except a very short section connecting the south and east legs of the U.S. 30 / Georges Station Road intersection. Some intersections include crosswalks, pushbuttons, pedestrian crossing signs, and pedestrian signals; however, NO PEDESTRIAN CROSSING signs were observed at a few intersections within the study area. Pedestrian signal heads and push buttons are no longer functional at some locations. Many crosswalks are faded and in need of restriping. The majority of pedestrian activity was observed along U.S. 30 and Donohoe Road near the Westmoreland Mall.

Rail

The Norfolk Southern Railway (NSR) provides both passenger and freight rail service within the study area (see **Figure 3**). The NSR is comprised of two tracks which connect Pittsburgh to Harrisburg and parallel U.S. 30 north of Donohoe Road within the study area. Grade separated crossings are provided at Georges Station Road, Crows Nest Road, and Roseytown Road. Georges Station Road is an overpass, while Crows Nest Road and Roseytown Road are tunnel underpasses. The tunnel at the Crows Nest Road is only one lane and has a vertical clearance restriction of eight feet which restricts larger vehicles and two-way traffic.

Figure 3: Study Area Active Grade Separated Rail Crossings

Freight rail is the primary user of the NSR, which is owned and operated by Norfolk Southern. The NSR is the most direct and shortest travel time connection between Western and Eastern Pennsylvania. The NSR connects the Pitcairn Multimodal Facility east of Pittsburgh with the Harrisburg and Rutherford Multimodal Facilities near Harrisburg.

Passenger rail service is provided via Amtrak with a station in downtown Greensburg. Currently, only one Amtrak train in each direction per day provides service (with stops) through Greensburg and Latrobe between Pittsburgh and Harrisburg. Slow travel speeds due to topography and high volume of rail freight restrict Amtrak service to one round trip per day.

2.2 Current Land Use & Potential Development

Land use is primarily commercial with pockets of residential present along the U.S. 30 corridor from East Pittsburgh Street to Village Drive. In Hempfield Township off of U.S. 30, the land use consists of mostly agricultural, residential, and industrial. In Unity Township off of U.S. 30, the land use is almost entirely residential. Both Hempfield Township and Unity Township have official zoning maps. A more detailed look at land use and potential developments by study corridor segments is provided in subsequent sections; the segments were defined based on roadway and land use characteristics.

U.S. 30 from East Pittsburgh Street to Georges Station Road

Land use within this section is primarily commercial with the Westmoreland Mall, big box retail, fast food restaurants, banks, car dealerships, and the Eastgate Shopping Center occupying the majority of the parcels. Almost all of the available parcels have been built out except for a large commercial tract between U.S. 30 and Roseytown Road. However, not all of the developed parcels are occupied, including parts of the Westmoreland Mall, (for example, Bon-Ton and Toys"R"Us). Currently a mini-casino is being considered for the vacant Bon-Ton store within the Westmoreland Mall. Depending on the size of the mini-casino, additional traffic may impact operations along the current road network within the study area during the PM peak or evening hours. If the mini-casino is approved, there is potential for complementary development (i.e. restaurants, hotels) to occur within the study area.

U.S. 30 from Georges Station Road to Village Drive

Land use within this section is a combination of commercial and suburban residential with several large neighborhoods having access to U.S. 30. Between Georges Station Road and Village Drive there are three parcels available for development that will most likely access U.S. 30. Two of the three parcels are designated commercial, while the other parcel is designated industrial. In addition to the U.S. 30 adjacent parcels, there is a large residential tract that is available for development which could potentially impact the intersection of U.S. 30 and Village Drive.

Sheraton Drive (S.R. 1073) from U.S. 30 to Donohoe Road

Sheraton Drive is a short connector between U.S. 30 and Donohoe Road. The land use for this stretch is entirely commercial in nature. Starting at U.S. 30, there are fast food restaurants, a health care facility, Verizon, and a PennDOT Maintenance building to the north. The south side is occupied by access ramps to the Westmoreland Mall overpass.

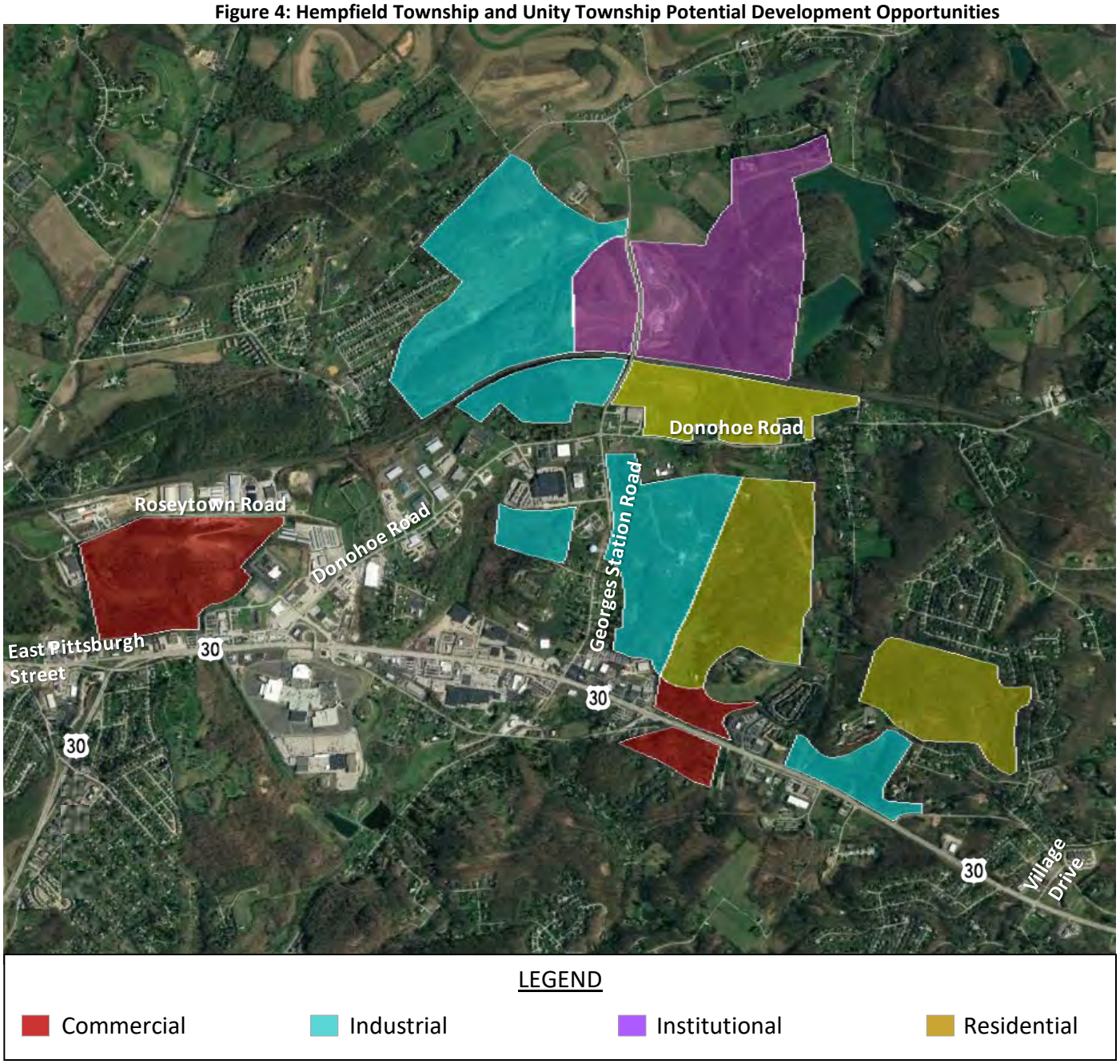
Donohoe Road (S.R. 1026) from U.S. 30 to Georges Station Road

Donohoe Road is primarily zoned commercial and industrial, however, there are also a few parcels zoned residential. The land use for the area between U.S. 30 and Roseytown Road is exclusively commercial. This section contains large parking lots for stores including Best Buy and Toys "R" Us. Almost all of the parcels within this section have been developed and are occupied. A small suburban residential area is accessed through Hugh Black Road. Between Crows Nest Road and Public Safety Road, the area is zoned entirely industrial and is almost completely built out excluding a few small parcels. From Public Safety Road to Georges Station Road, the north side is rural residential with single family homes and the south side is industrial. There are a few parcels available to the north of Donohoe Road near the intersection of Georges Station Road. To the north of the intersection of Georges Station Road, there are five parcels available for development. These parcels are zoned industrial, institutional and residential and have the potential to generate significant trips along Donohoe Road and Georges Station Road.

Georges Station Road (S.R. 1053) from U.S. 30 to Donohoe Road

Land use for Georges Station Road is commercial, suburban residential, and industrial. Near U.S. 30 it is exclusively commercial with a restaurant and bank on the west side and car dealerships on the east side. Traveling further north, suburban residential is provided on both sides with a large parcel available for industrial development behind residential parcels to the east. Nearing Donohoe Road, an industrial park with a small parcel available for industrial development is located on the west side.

Figure 4: Hempfield Township and Unity Township Potential Development Opportunities



2.3 Roadway Characteristics

U.S. 30 from East Pittsburgh Street to Village Drive

U.S. 30 is classified as a principal arterial, prioritizing through traffic to and from the Greensburg area and Pittsburgh. The corridor study area is 3.1 miles long and located within a valley where the eastern and western limits are on hilltops. U.S. 30 is separated by a raised or concrete barrier median to limit access the entire length of the study area. The speed limit is 40 mph from the East Pittsburgh Street split to Georges Station Road and 50 mph from Georges Station Road to Village Drive. Pedestrian access and connections are limited due to the absence of sidewalks. Roadway lighting is scarce and is only provided sporadically at major intersections. The corridor is primarily illuminated by adjacent business lighting.

Starting at the western study limit at the East Pittsburgh Street and U.S. 30 split, U.S. 30 consists of three lanes in both the eastbound and westbound directions; and then transitions to two lanes in each direction approaching Georges Station Road. Each travel lane is approximately 12 feet wide with shoulders that vary between 3-10 feet. Narrower shoulders (3-4 ft) are provided in the 6-lane cross section segment. Turn lanes are provided along U.S. 30 at all major driveways and intersections. Signals are provided at major driveways and intersections where motorists are permitted to cross or make left turns onto U.S. 30 from the side street. Signalized intersections within the corridor include: Sheraton Drive/Old Route 30, Nature Park Road, Georges Station Road, Lewis Road, and Village Drive. U-turns are permitted at all of the intersections except for Sheraton Drive/Old Route 30. In addition to traffic signals, there is a small grade-separated half-interchange for the Westmoreland Mall which serves westbound U.S. 30 between Sheraton Drive and Donohoe Road.

Access is limited along U.S. 30 with a raised or concrete barrier median; therefore, all unsignalized intersections and driveways are restricted to right-in/right-out and/or left-in movements. Only a few of these locations strictly prohibit U-turns. On-street parking is strictly prohibited along U.S. 30.

Sheraton Drive (S.R. 1073) from U.S. 30 to Donohoe Road

Sheraton Drive is classified as an urban collector and is approximately 750 feet long between U.S. 30 and Donohoe Road. The road is relatively flat and there is only one intersection between Donohoe Road and U.S. 30 which provides access to the PennDOT Maintenance Facility, medical offices, Dunkin' Donuts, and Wendy's. The speed limit is 35 mph and there are no street lights or sidewalks present.

Travel lanes are approximately 12-16 feet wide with 4-8 foot shoulders. The northbound and southbound lanes are separated by a concrete median near the U.S. 30 intersection. The northbound lane separates into two at the intersection with Donohoe Road creating a free-flow right turn movement and a stop-controlled left/through movement. Approaching U.S. 30, the southbound lane widens to provide dedicated left, through, and right turn lanes at the traffic signal.

Donohoe Road (S.R. 1026) from U.S. 30 to Georges Station Road

Donohoe Road is classified as an urban collector and is 1.3 miles in length from U.S. 30 to Georges Station Road. The road is a two-lane facility located along hilly terrain with multiple driveway access points on both sides of the road. The speed limit along Donohoe Road is 35 mph and there are no street lights or sidewalks present.

Travel lanes are approximately 11-12 feet wide with 3-4 foot shoulders. Donohoe Road is primarily free flow except for stop-controlled intersections at U.S. 30, the Westmoreland Mall Exit Ramp, and the ALL-WAY stop at Georges Station Road. A signalized intersection with left turn lanes along Donohoe Road is present at Roseytown Road.

Georges Station Road (S.R. 1053) from U.S. 30 to Donohoe Road

Georges Station Road is classified as an urban collector and is 0.9 miles in length connecting Donohoe Road to U.S. 30. The road is a two-lane facility located on a hill with multiple driveway access points, primarily on the west side of the road. A guide rail and steep drop-off exist on the east side approximately 700 feet north of U.S. 30. The speed limit is 35 mph and there are no street lights or sidewalks present.

Travel lanes are approximately 12 feet wide with 1-2 foot shoulders. Georges Station Road is primarily free flow except for the ALL-WAY stop at Donohoe Road and the traffic signal at U.S. 30. A number of closely spaced driveways are provided within 300 feet of the intersection with U.S. 30.

2.4 Safety History

PennDOT crash data were reviewed for U.S. 30, Donohoe Road, and Georges Station Road within the study area. Sheraton Drive was not included in the safety summary below due to its short length and the majority of crashes occurring at the intersections with Donohoe Road and U.S. 30. The crashes at the intersections of Donohoe Road/Sheraton Drive and U.S. 30/Sheraton Drive are captured within the appropriate section below. The crash data reviewed was a 5-year period from January 1, 2013 to December 31, 2017. Only reportable crashes were included in the data. Reportable crashes are those that result in an injury or fatality; or where a vehicle is required to be towed from the scene.

U.S. 30 From East Pittsburgh Street to Village Drive

PennDOT crash data indicates that there were 203 reportable crashes along this section of U.S. 30. The majority of crashes resulted in property damage only crashes (83), possible injury crashes (53), and minor injury crashes (36); however, there were 22 unknown severity crashes, 4 serious injury crashes, and 2 fatal crashes. Rear end (44%), angle (24%), fixed object (17%), and same direction sideswipe (5%) crashes were the predominant crash patterns in the corridor, which might be anticipated due to the high number of traffic signals, driveways, and traffic congestion. When examining the collision diagrams, the majority of crashes occurred at driveways or near intersections (see crash maps in Appendix A). Environmental factors did not appear to be a major contributing factor with the majority of crashes occurring during clear weather (89%) and on dry pavement (85%). Lighting may be a contributing factor to crashes with 47% of crashes occurring during dark conditions.

Donohoe Road (S.R. 1026) from U.S. 30 to Georges Station Road

PennDOT crash data indicates that there were 47 reportable crashes along this section of Donohoe Road. The majority of crashes resulted in property damage only crashes (28), possible injury crashes (10), and minor injury crashes (7). The collision types include angle (47%), rear end (23%), hit fixed object (19%), and head on (6%), which might be anticipated due to the high number of driveways and lack of left turn lanes along Donohoe Road. When examining the collision diagrams, the majority of crashes occurred at driveways or near intersections (see crash maps in Appendix A). Environmental factors did not appear to be major contributing factors with the majority of crashes occurring during clear weather (79%) and on dry pavement (74%). Lighting may be a contributing factor to crashes with 46% of crashes occurring during dark conditions.

Georges Station Road (S.R. 1053) from U.S. 30 to Donohoe Road

PennDOT crash data indicates that there were 77 reportable crashes along this section of Georges Station Road. The majority of crashes resulted in property damage only crashes (20), possible injury crashes (9), and minor injury crashes (4); however, there were 3 unknown severity crashes and 1 serious injury crash. The collision types include angle (62%), rear end (22%), hit fixed object (8%), and head on (5%), which might be anticipated due to the high volume intersections at Donohoe Road, U.S. 30, and Industrial Park Road. When examining the collision diagrams, the majority of crashes occurred at driveways or near intersections (see crash maps in Appendix A). Lighting and environmental factors did not appear to be major contributing factors with the majority of crashes occurring during clear weather (73%), on dry pavement (73%), and in daylight conditions (73%).

2.5 Corridor Long-term Vision

The Westmoreland County Comprehensive Plan was reviewed to help establish a shared long-term vision of the corridor. The following themes emerged as the long-term vision for the study area:

- Smarter traffic signals and Intelligent Transportation Systems (ITS),
- Encourage vehicular connection between compatible developments,
- Complete road improvements designed to reduce/manage congestion and promote safety on U.S. 30, and
- Encourage the addition of park and ride lots along major corridors.

All of the suggested strategies, improvements, and projects in this document support the long-term vision developed by Westmoreland County and the local municipalities.

3. Study Findings

A summary of the operations and safety field assessment, areas of concern and suggested improvements are documented in subsequent sections.

3.1 Stakeholder interviews

To better assess the study corridor, key person interviews were conducted to provide the study team access to local knowledge of the corridor. Information from these interviews was utilized to assist team members in determining focus areas for the field assessment, shaping a vision of the corridor, and identifying potential projects and improvements to improve safety and operations.
The following individuals were interviewed to better assess the study corridor:

- Daniel Carpenter – Westmoreland County
- Cory Craft – PennDOT District 12-0
- Joe Mindala – Westmoreland Mall
- Corporal Jason Urbani – Pennsylvania State Police
- Jason Winters – Hempfield Township
- Meghan A. Yuhouse – Westmoreland County Transit Authority

A summary of major themes emerging from the key person interviews is provided below. More detailed information from these interviews can be found in Appendix B.

- Speeding is a problem on the U.S. 30 and Pittsburgh Road split curve
    - Potential to add additional signing
    - Difficult to enforce due to lack of areas for police to stage
- Speeding is more of a concern in the morning due to the lower traffic volumes
    - Westbound traffic is the most problematic
    - Difficult to enforce because there are limited areas to sit and pull motorists over safely
- Westmoreland County indicated there are some pedestrians along U.S. 30 with very little accommodations
- Westmoreland Transit Route 9 Bus uses the corridor heavily
    - No designated stops along the route, customers can dictate where they are picked up and dropped off by flagging down buses
- DUIs are not too problematic, but U.S. 30 has higher DUI numbers due to higher traffic volumes
- Potential to cul-de-sac St. Clair Way at the U.S. 30/Pittsburgh Street Exit

- Merge from Pittsburgh Street onto U.S. 30 eastbound can be problematic due to the short weave area between the merge and the mall entrance
- McDonald's and Eat'n Park driveways on U.S. 30 are problematic with the high volume of right turning vehicles out of Donohoe Road
- Public does not like the stop sign on Sheraton Drive at Donohoe Road
- Public also has concerns with the stop sign on Donohoe Road at the Mall Exit Ramp
- State Police would like to see U.S. 30 eastbound left turn at Sheraton extended
    - Occasionally queues will extend into the through lanes
- Mall would like to see the northbound right turn at Old Route 30 to be extended towards the mall
    - Right turn only has capacity for 1-2 vehicles; the steep hill can also be problematic during the holidays
- There is not an official Park-n-Ride at mall, but some "hide and riders" do exist.
- Sheetz is going in between Georges Station Road and Old Route 30
    - Attendees mentioned extending the 3rd rightmost lane eastbound to the new Sheetz
- Roseytown Road at Donohoe Road may be over capacity
- Bovard Fire provides service on the other side of the railroad tracks and to the Westmoreland Mall but is restricted by the low vertical clearance of the tunnel on Crows Nest Road
    - Hempfield Township is looking to lower the road grade in the tunnel to slightly increase the vertical clearance of 8'
- Westbound Donohoe Road queues in the morning at Georges Station Road
- High speeds on westbound U.S. 30 at Lewis Road has been problematic with red light running
    - District is proposing to install a RED SIGNAL AHEAD sign on westbound U.S. 30
- Southbound drivers at Lewis Road are turning on red illegally even though there is a NO TURN ON RED sign posted
- Johnson Road and Hartman Road intersect right at U.S. 30, which is problematic
- Left turns into Frye Farm Road are problematic since the left turning vehicles have to travel up a grade with opposing traffic approaching downgrade at high speeds

3.2 Site Visit

The Corridor Operations Planning Study was conducted the week of June 19th, 2018. The study team examined corridor operations during the AM, MID, and PM peaks to observe traffic at its highest volumes. A nighttime examination was also conducted to observe operations and visibility during dark conditions. Specifically, the study team observed operations on Tuesday, June 19th from 1:00 to 5:30 PM and 9:45 to 11:30 PM; and Wednesday, June 20th from 7:00 to 8:30 AM and 1:00 to 3:30 PM. The remainder of the week was utilized to complete field work, review planning documents for local jurisdictions, conduct stakeholder interviews, and develop suggestions for roadway owners to consider.

3.3 Proposed Improvements

In order for the long-term vision to be successful, roadway owners must begin to conceptualize the future roadway layout and strategically plan development around what the corridor will be in the future. This step is essential for implementing smart transportation concepts and achieving the long-term vision in the corridor, and will allow the communities to grow without overburdening the transportation network.

Based on the review of the comprehensive plans, stakeholder interviews, field observations, and traffic conditions analysis, the study team identified several roadway and parcel connections, and developed future intersection improvements within the study area. Roadway owners should begin planning for the suggested roadway connections and intersection improvements by reserving right-of-way and creating/updating official maps. An official map allows a municipality to reserve available land for roads, trails, parks, open space, or public infrastructure. This should be performed in conjunction with comprehensive plan updates or shortly after the approval of the comprehensive plan.

Existing 2018 Traffic Conditions Analysis

For the purpose of this study, existing, future no-build, and future improvement build scenarios were analyzed to verify suggested capacity adding improvements at the following intersections:

- U.S. 30 and Sheraton Drive/Old Route 30
- U.S. 30 and Nature Park Road/Eastgate Plaza Driveway
- U.S. 30 and Georges Station Road/Slate Road
- U.S. 30 and Old Route 30
- U.S. 30 and Lewis Road
- U.S. 30 and Village Drive/Marguerite Road
- Donohoe Road and Sheraton Drive
- Donohoe Road and Roseytown Road
- Donohoe Road and Georges Station Road

To conduct this analysis, PM traffic count data was collected, summarized, and balanced to determine PM peak hour volumes for analysis. Existing conditions were evaluated using the balanced PM peak hour traffic volumes. The traffic analysis computer program Synchro was used to perform capacity analyses at each of the intersections noted above. Synchro is a macroscopic capacity analysis and signal optimization computer program. Results of the existing conditions Synchro analysis are provided in **Table 8**.

Table 8: Existing Intersection LOS and Average Delay

Intersection	Existing Traffic Control	Measure of Effectiveness	
		LOS	Delay (s)
U.S. 30 and Sheraton Drive/ Old Route 30		D	54.5
U.S. 30 and Nature Park Road/ Eastgate Plaza Driveway		D	42.9
U.S. 30 and Georges Station Road/Slate Road		D	48.5
U.S. 30 and Old Route 30		A	2.4
U.S. 30 and Lewis Road		C	29.4
U.S. 30 and Village Drive/Marguerite Road		D	52.7
Donohoe Road and Sheraton Drive		F	83.5
Donohoe Road and Roseytown Road		C	23.1
Donohoe Road and Georges Station Road		F	85.2

Detailed analysis for each of these locations can be found in Appendices C-F.

Access Management

U.S. 30 is a principal arterial that provides direct access to the Cities of Greensburg and Pittsburgh. It is critical for U.S. 30 to operate at an acceptable level of service in order to maintain mobility within the region. It is recommended that Hempfield Township and Unity Township consider and adopt specific access management ordinances to manage existing and future U.S. 30 traffic.

Access Management – seeks to limit and consolidate access points along major roadways while supporting street systems, unified access, and circulation for current and future development.

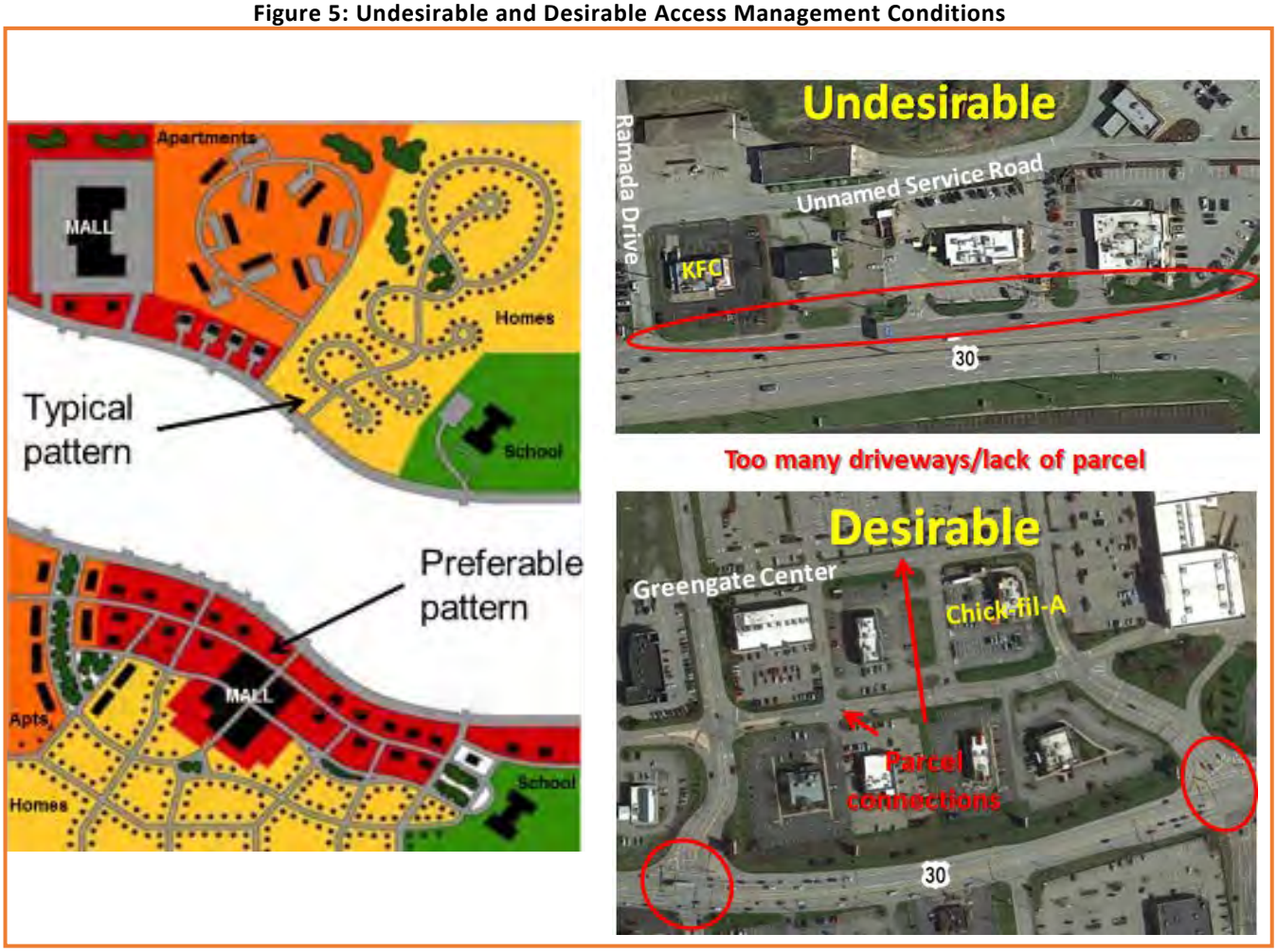
As mentioned previously, the majority of the development along the corridor has occurred in a piece-meal fashion where each business is provided direct access to U.S. 30 instead of shared-driveways or cross-access through adjacent parcels. When business driveways are not consolidated and local road access is not provided between adjacent parcels, all local business traffic must then utilize individual driveways from U.S. 30, creating additional vehicle trips and degrading the roadway level of service and safety. To improve mobility and safety while discouraging this type of development, access management principles should be applied along the corridor.

Typical access management approaches include:

- Limiting access
- Corner clearance
- Driveway channelization
- Outparcel access
- Driveway throat length
- Driveway spacing
- Signalized intersection spacing
- Frontage/Service roads
- Joint access
- Auxiliary lanes
- Turning lanes
- Overlay districts
- Official Map
- Bonuses / incentives

Figure 5 on the next page provides both examples of undesirable and desirable access management conditions along the corridor.

Figure 5: Undesirable and Desirable Access Management Conditions



In addition to the typical access management principles mentioned previously, the following specific suggestions and considerations should be examined for study area.

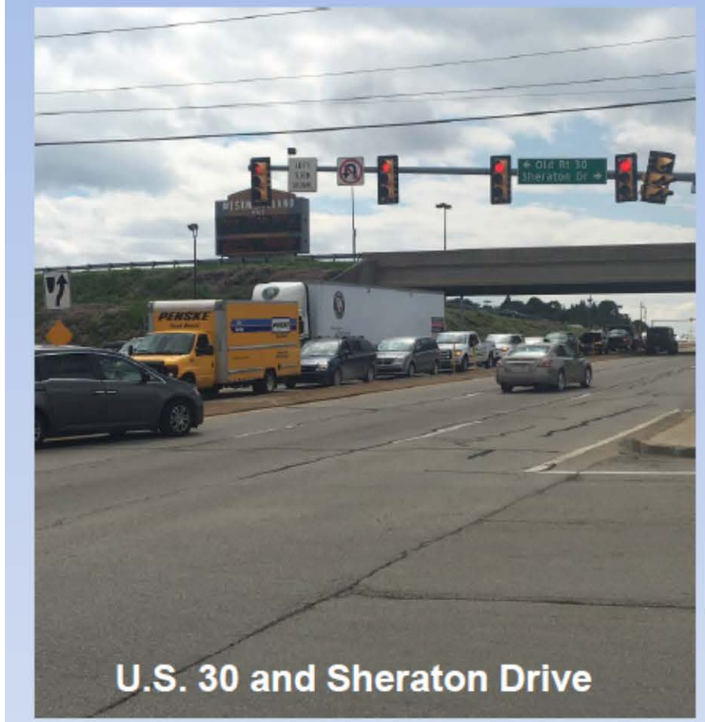
Table 9: Access Management Suggestions and Considerations

Suggestions:	Considerations:
Ensure comprehensive plan fully supports access management.	Access management overlay district with special access management ordinances.
Create an access management ordinance limiting driveways and encouraging parcel interconnections.	
Combine driveways and interconnect existing parcels.	PennDOT Model Access Management Ordinances for Municipalities.
Require Traffic Impact Studies (TIS) as part of any future development/redevelopment for projects accessing local roads. TIS should evaluate roadway capacity and signal interconnection.	

Corridor Wide Improvements

Figure 6: Corridor Wide Improvements – Left Turn Lane Storage

OBSERVATION: Some of the left turn lanes along U.S. 30 do not appear to have adequate storage.



Cross Street(s)	Direction	Existing	Future Needs	Suggested
Sheraton Drive/ Old Route 30	Eastbound	680’	900’	900’
	Westbound	200’	175’	No Change
Nature Park Road/ Eastgate Plaza Driveway	Eastbound	350’	325’	No Change
	Westbound	155’	400’	400’
Georges Station Road/ Slate Run Road	Eastbound	315’	275’	No Change
	Westbound	225’*	425’	425’
Lewis Road	Eastbound	350’	300’	No Change
Village Drive/ Marguerite Road	Eastbound	200’	275’	275’
	Westbound	180’	450’	450’

Note: *Storage length upon completion of Sheetz project.

SUGGESTION:
- Lengthen left turn storage bays to handle traffic in a 20-year design horizon.

CONSIDERATIONS:
- Dual left turn lanes for added capacity.
- Left turn positive offset and protected-permissive operation.

(Refer to Appendix C for a more detailed explanation concerning the left turn storage calculations.)

Figure 7: Corridor Wide Improvements – Traffic Signals

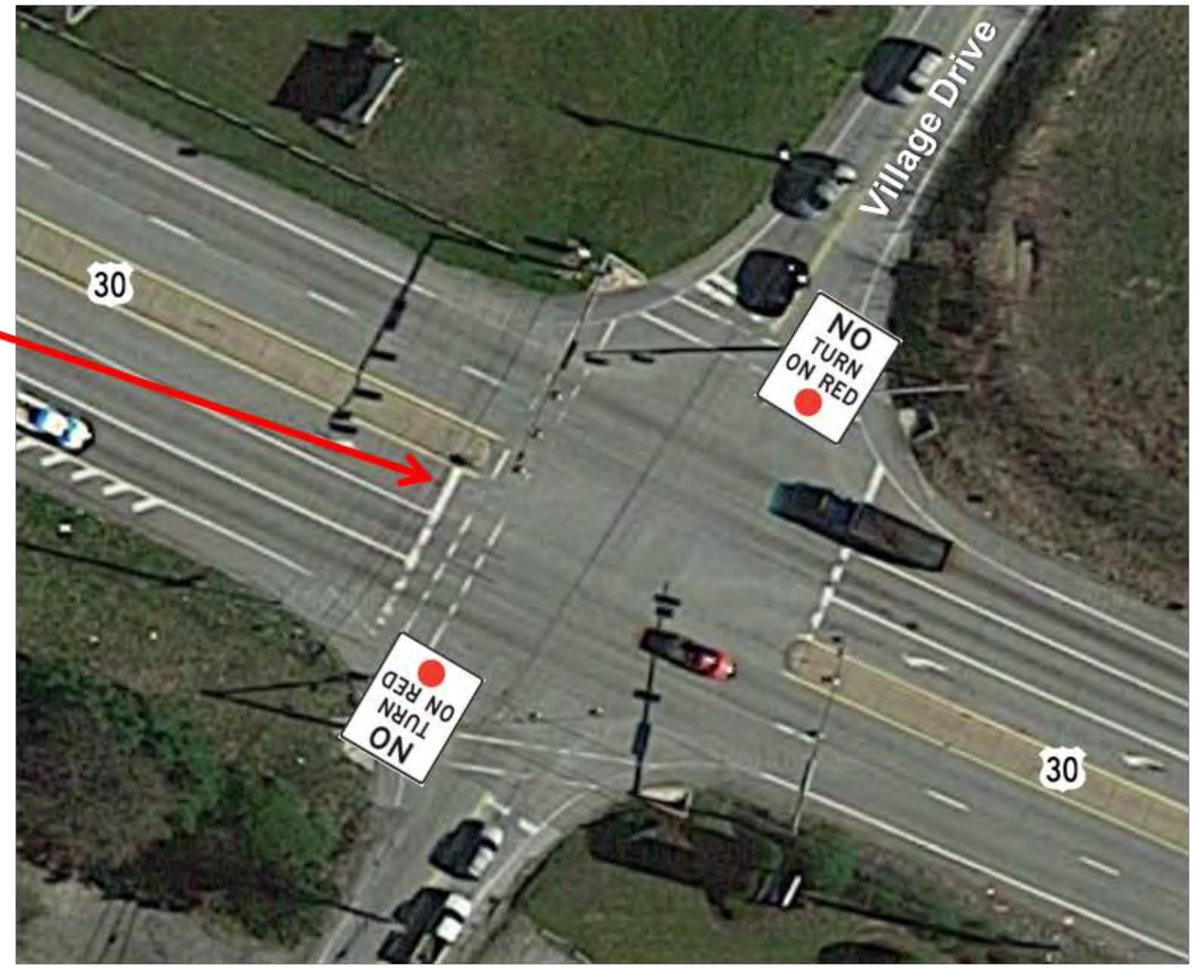
OBSERVATIONS: Some of the traffic signal equipment is in need of replacement. Overhead signal heads on side streets do not have backplates. In particular the traffic signal at Donohoe Road and Roseytown Road appears to be at the end of its life cycle. The traffic signal at U.S. 30 and Lewis Road appears to need a major upgrade.

SUGGESTIONS:

- Install backplates with yellow retroreflective tape on all traffic signals.
- Refresh pavement markings.
- Replace overhead signs due to lack of retroreflectivity as needed.
- Modernize traffic signal equipment at Donohoe and Roseytown Roads and U.S. 30 and Lewis Road.

Figure 8 : Corridor Wide Improvements – U-turns

OBSERVATION: Many drivers were observed making permitted U-turns along the corridor at signalized locations.

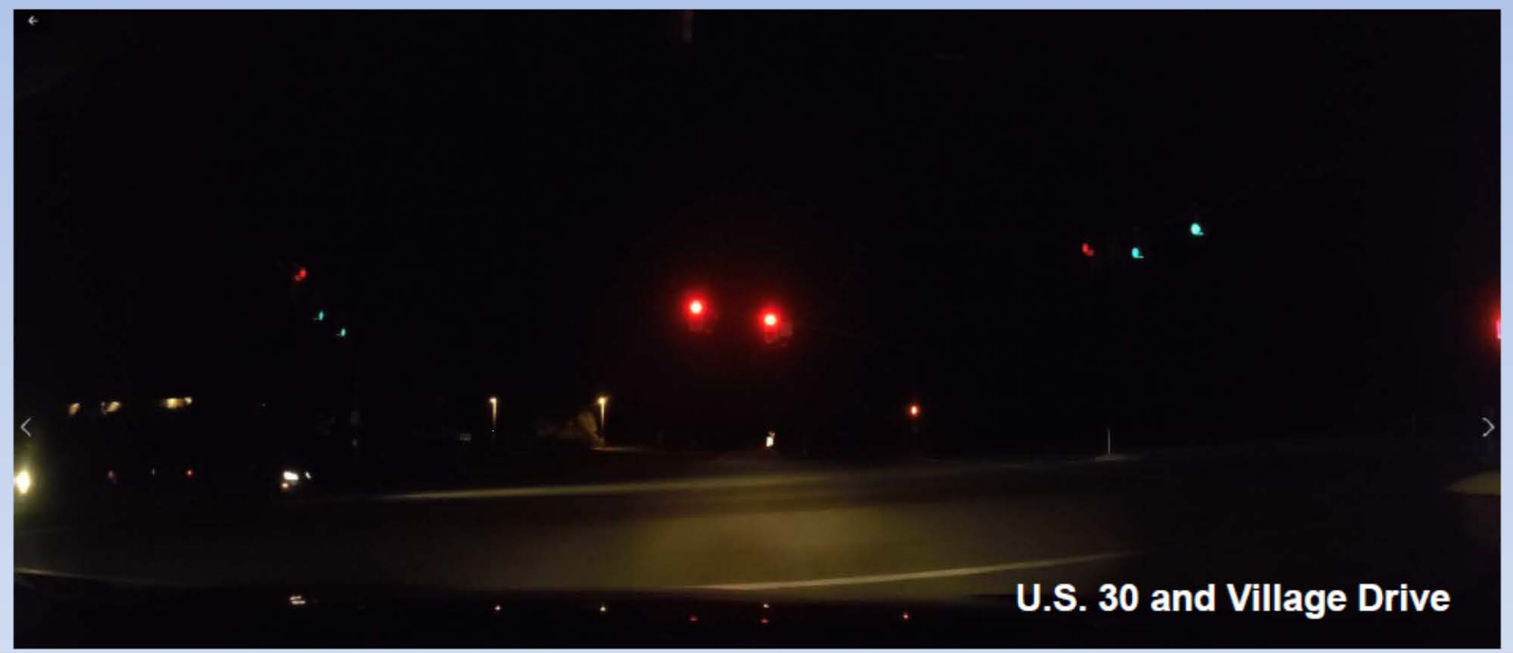


SUGGESTION:

- Wherever U-turns are permitted, consider no right turns on red restrictions for the side streets.

Figure 9 : Corridor Wide Improvements – Signs, Markings, Pedestrian Infrastructure, and Lighting

OBSERVATION: Signing, pedestrians, pavement markings, and pedestrian facilities, are difficult to see in dark conditions.

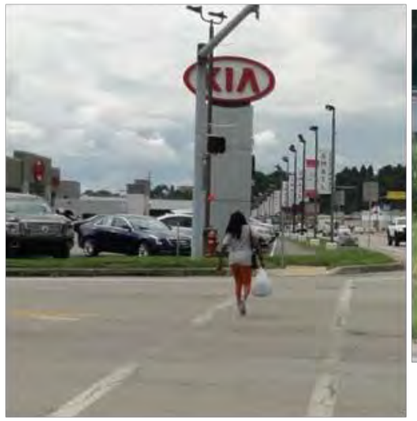


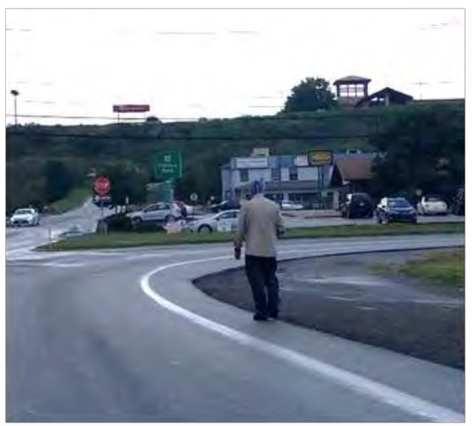
SUGGESTIONS:

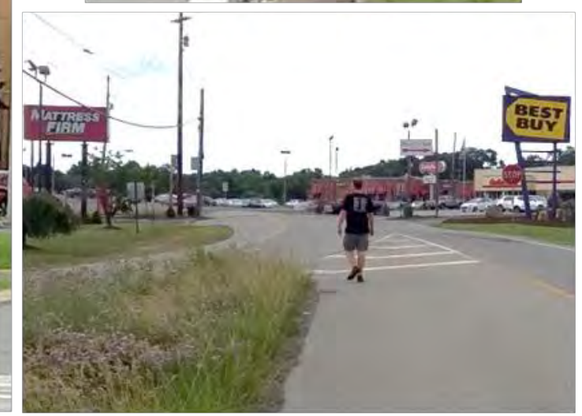
- Replace signs that do not meet the minimum retroreflectivity requirements.
- Restripe pavement markings, in particular, stop lines, crosswalks, and arrows/legends at intersections.
- Install bracket arms and luminaires at signalized intersections.
- Repair non-functioning luminaire on southwest corner of U.S. 30 and Nature Park.
- Retrofit HPS luminaires at U.S. 30 and Lewis Road with LED luminaries.

Figure 10 : Corridor Wide Improvements – Pedestrian Accommodations

OBSERVATION: Pedestrians were observed walking along the corridor where pedestrian infrastructure is not present. A particular area of a concern was near the Westmoreland Mall.







SUGGESTIONS:

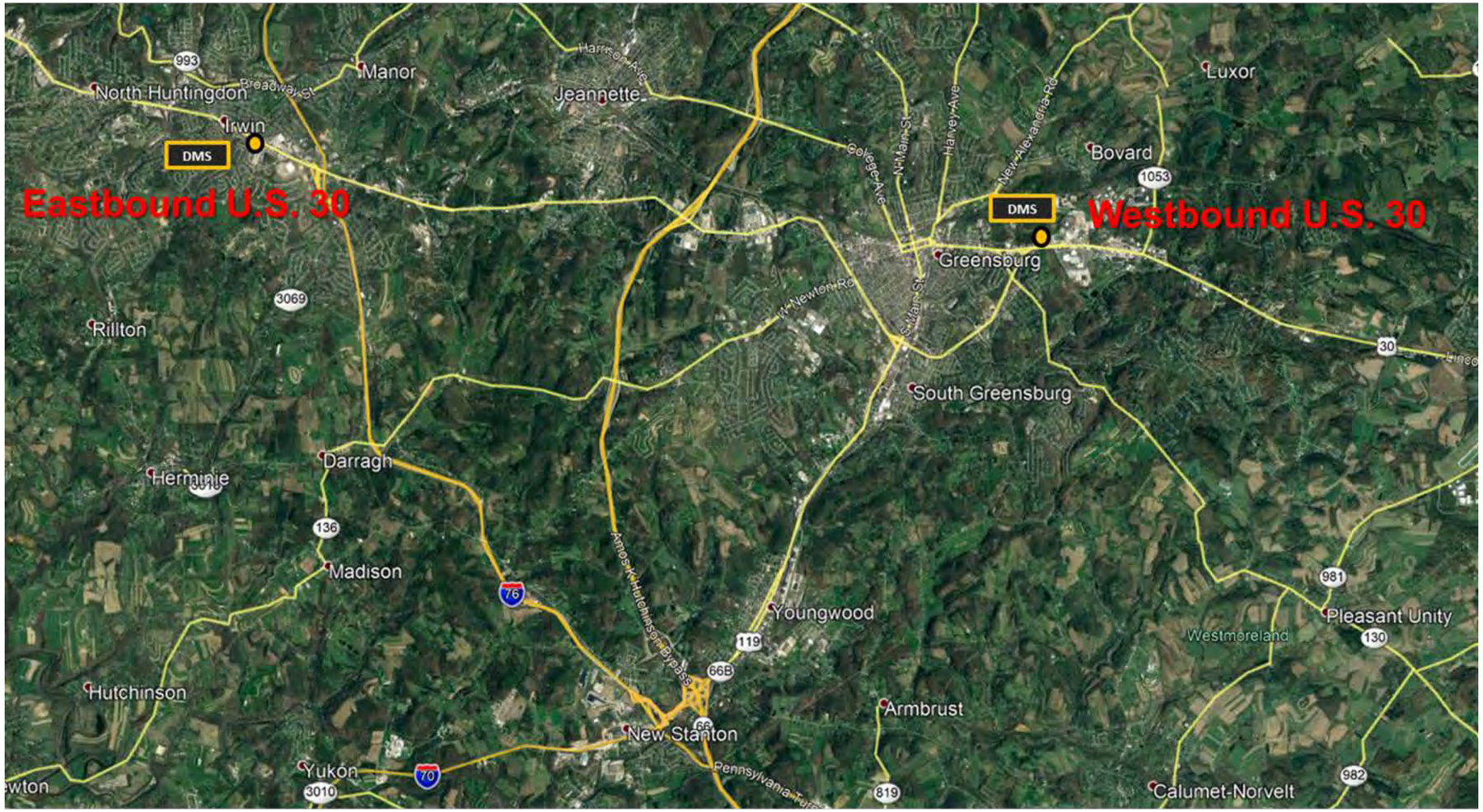
- Include pedestrian accommodations at intersections along the corridor (i.e. pushbuttons, LED pedestrian countdown signals, high visibility crosswalks, ADA ramps), especially at pedestrian generating developments.
- Install sidewalk along U.S. 30 near the Westmoreland Mall and convenience stores.

CONSIDERATIONS:

- Require sidewalks as part of new developments.
- Mall overpass pedestrian connection.

Figure 11 : Corridor Wide Improvements – DMS for Incident Management

OBSERVATION: Given the major roadways in the area such as I-76, Toll Road 66, S.R. 119 and U.S. 22, intelligent transportation elements such as Dynamic Message Signs (DMS) could be beneficial for traveler information services to help facilitate incident management.



SUGGESTION:

- Install DMS along U.S. 30 near the I-76 interchange in Irwin (eastbound) and at the western end of the study area near the Pittsburgh Street/U.S. 30 diverge point (westbound).

Location Specific Improvements

Figure 12 : Location Specific Improvements – U.S. 30 Curve Warning Signage

OBSERVATION: Vehicles are exceeding the posted speed limit along the curve of U.S. 30 at the Pittsburgh Street split, resulting in hit fixed object crashes through the curve.

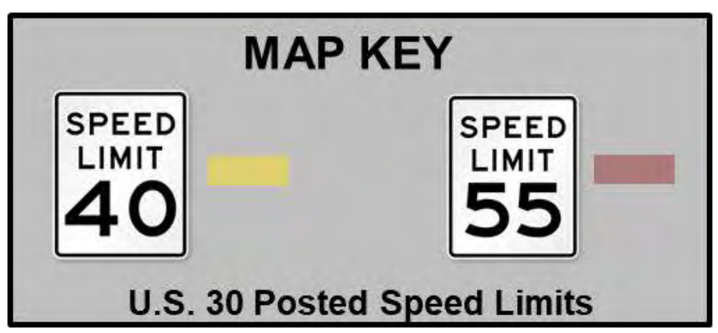
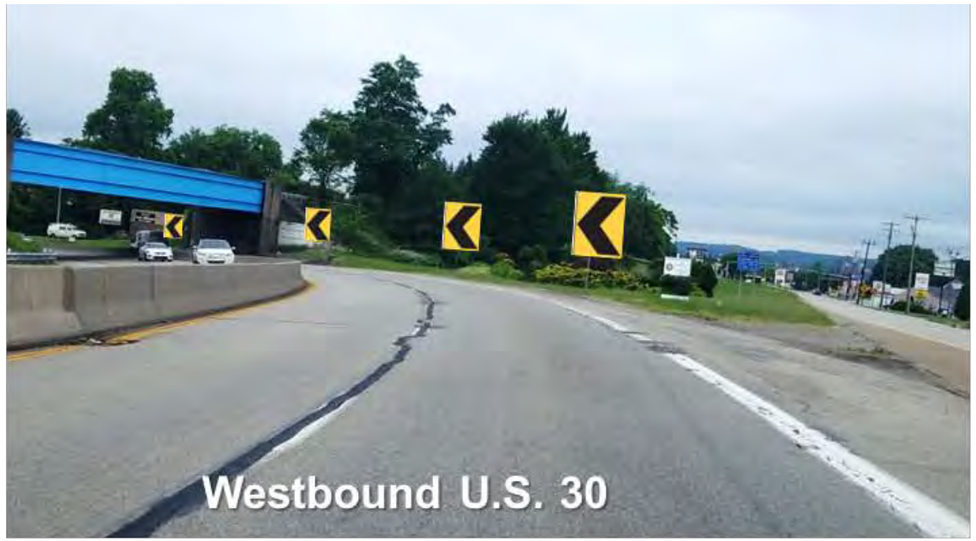
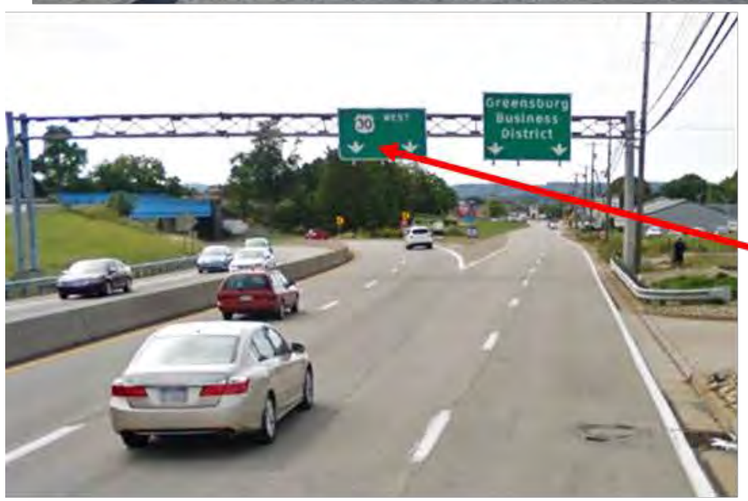


Figure 12 : Location Specific Improvements – U.S. 30 Curve Warning Signage (continued)





SUGGESTIONS:

- Install oversized chevrons through the entire curve for both eastbound and westbound directions of U.S. 30.
- Install oversized combination curve warning and advisory speed signs for both the eastbound and westbound directions of U.S. 30.

CONSIDERATIONS:

- Exit speed on overhead U.S. 30 West sign.
- Combination curve warning and advisory speed sign on Pittsburgh Street overpass traveling eastbound.

Figure 13 : Location Specific Improvements – St. Clair Way Access

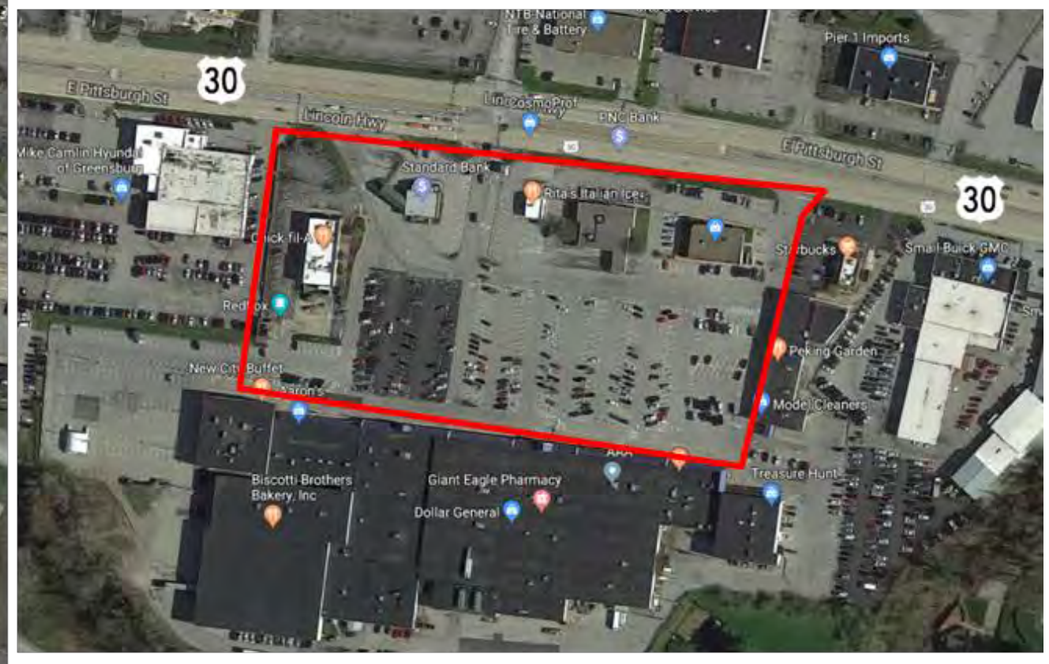
OBSERVATION: The St. Clair Way driveway onto U.S. 30 creates an undesirable conflict with Pittsburgh Street Ramp traffic and mall traffic.

SUGGESTION:

- Eliminate St. Clair Way access onto U.S. 30 and force all traffic to the Pittsburgh Street Ramp.

Figure 14 : Location Specific Improvements – Park and Ride Lots

OBSERVATIONS: Westmoreland Transit Authority has a number of bus routes (2F, 9, 9S, 20F) that service U.S. 30 with no designated park and ride facilities in the study area. Unofficial park and rides were observed near JCPenney's at the Westmoreland Mall and the Giant Eagle Plaza.



SUGGESTION:

- Investigate opportunities to establish a designated park and ride along the corridor.

CONSIDERATIONS:

- Underutilized developments with adequate parking.
- Transit oriented development opportunities.

Figure 15 : Location Specific Improvements – U.S. 30 and Donohoe Road Congestion

OBSERVATION: Traffic from Donohoe Road and the Westmoreland Mall Exit Ramp at westbound U.S. 30 routinely queues through the Sheraton/Ramada Drive intersection in the afternoon, gridlocking the intersection.

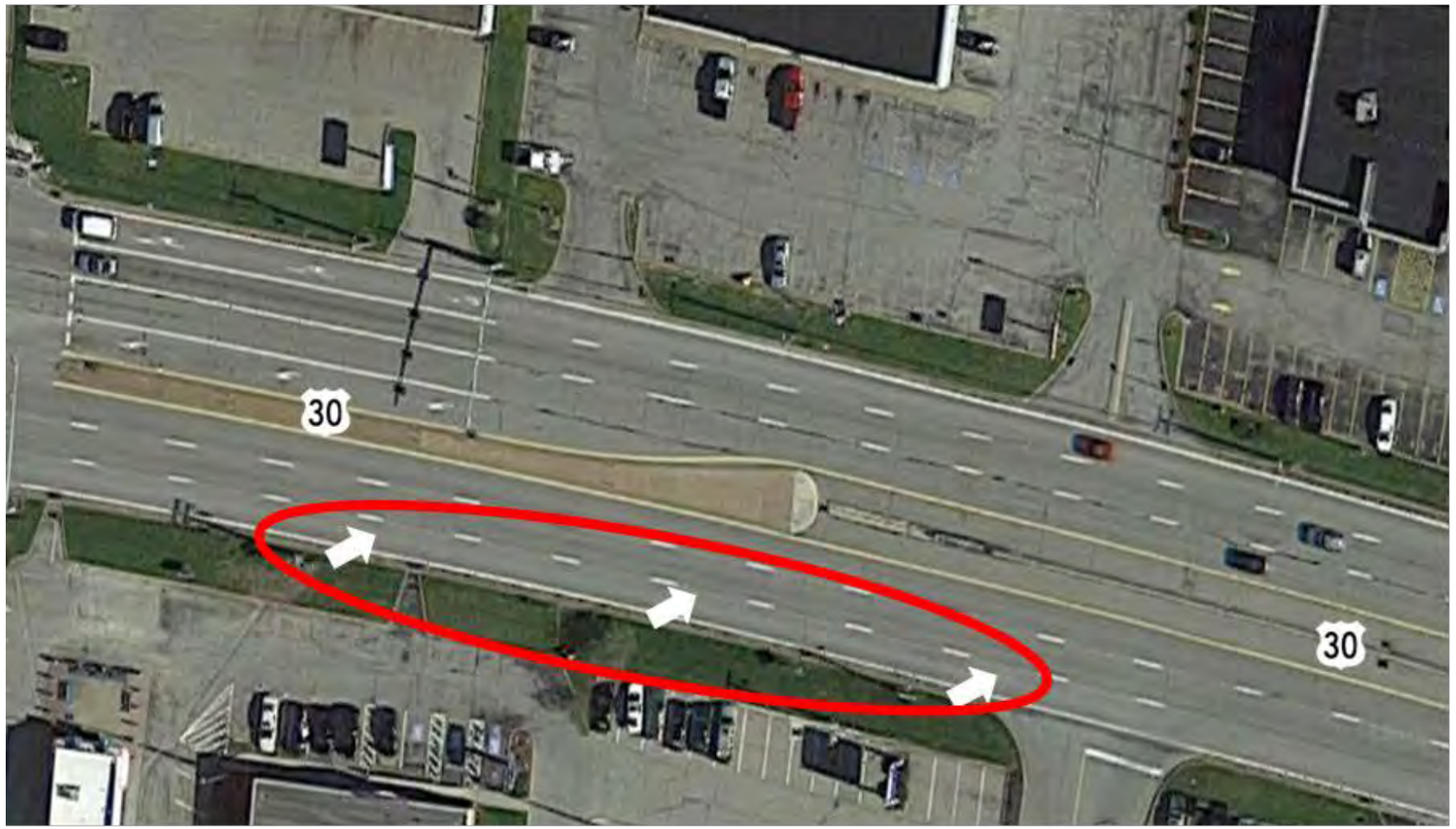
Figure 15 : Location Specific Improvements – U.S. 30 and Donohoe Road Congestion (continued)

SUGGESTIONS:

- Short-term: Crosshatch the rightmost lane of westbound U.S. 30 between Donohoe Road and the Mall Exit Ramp to create a free flow merge.
  - Install flexible delineator posts to reinforce the lane drop.
- Long-term: Install curbing in the rightmost lane of westbound U.S. 30 between Donohoe Road and Mall Exit Ramp to create a free flow merge.
- Long-term: Work with business owners to eliminate/consolidate accesses along U.S. 30 in conjunction with enhancements to Sheraton Drive.

Figure 16 : Location Specific Improvements – U.S. 30 Lane Drop near Nature Park Road

OBSERVATION: There is a lack of signage and pavement markings regarding the lane drop travelling eastbound on U.S. 30 at Nature Park Road.

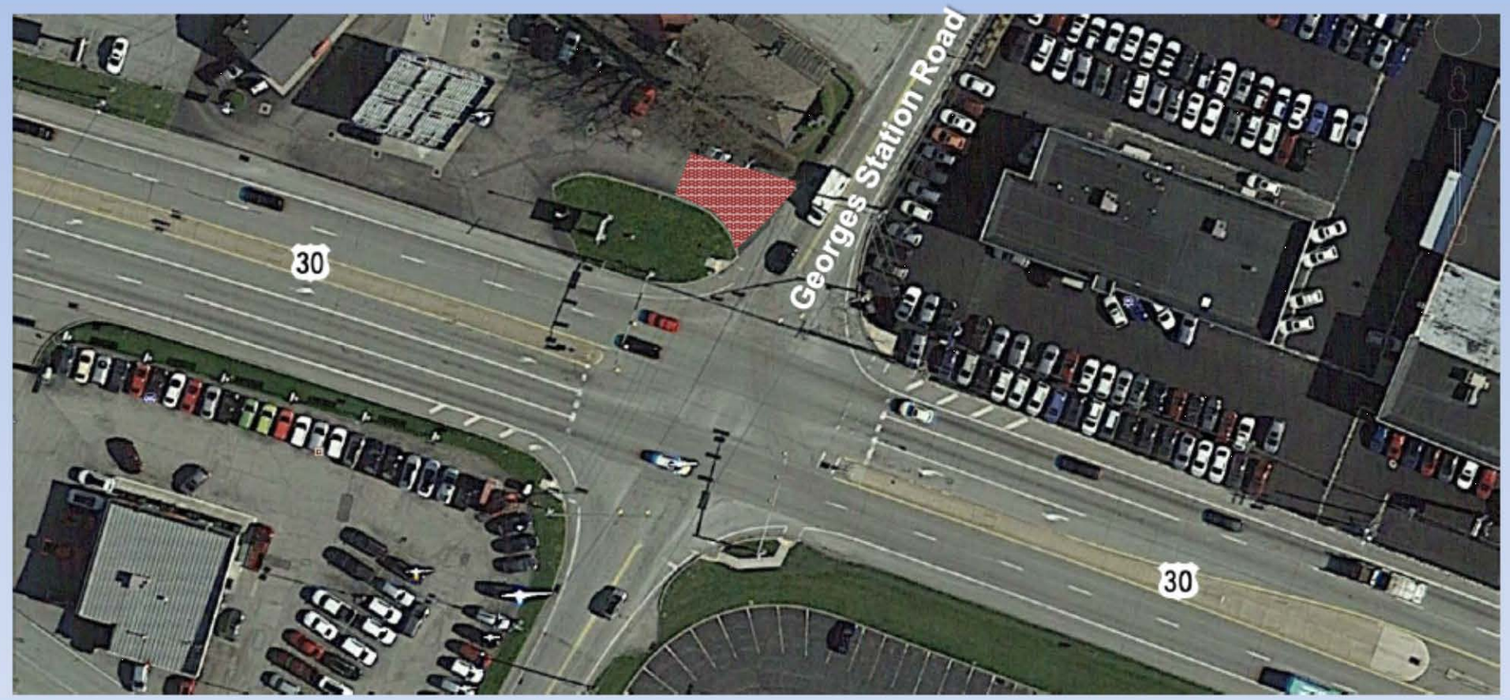


SUGGESTION:

- Add additional signage and supplemental pavement markings warning drivers of lane drop.

Figure 17 : Location Specific Improvements – U.S. 30 and Georges Station Road Congestion

OBSERVATIONS: Vehicular traffic at U.S. 30 and Georges Station Road (S.R. 1053)/Slate Run Road (S.R. 2013) will increase with the addition of Sheetz. Westbound U-turns are anticipated. Southbound queuing was observed during the PM Peak (approx. 750 feet).



SUGGESTIONS:

- Extend proposed 255 foot westbound left turn lane to 400 feet per left turn analysis.
- Install NO TURN ON RED condition for northbound approach due to conflict with westbound U-turns.
- Construct 275 foot southbound left turn lane on Georges Station Road per intersection analysis (See Figure 18).
- Close or restrict to one way inbound the redundant Sunoco access on Georges Station Road.

(Refer to Appendix C for more of a detailed explanation concerning the left turn storage calculations.)

Figure 18 - Location Specific Improvement

Figure 19 : Location Specific Improvements – U.S. 30 and Georges Station Road Pedestrians

Figure 19 : Location Specific Improvements – U.S. 30 and Georges Station Road Pedestrians (continued)

SUGGESTIONS:

- Install sidewalk on the southside of U.S. 30 for pedestrians.
- Analyze lower cycle length at traffic signal to encourage signal compliance by pedestrians.
- Add signage to discourage midblock crossings along U.S. 30 (median has low concrete barrier).
- Correct drainage issues of ADA ramps on the southeast quadrant.

Figure 20: Location Specific Improvements – U.S. 30 from Sheraton Drive to Georges Station Road Coordination

OBSERVATION: The traffic signals along U.S. 30 from Sheraton Drive to Georges Station Road/Slate Run Road appear to have excessive delays and queuing during peak hours.

SUGGESTION:

- Interconnect traffic signals via fiber optic cable or spread spectrum radio system. Only GPS units are present today. Evaluate coordinated signal timings.

CONSIDERATION:

- Evaluate the need for new coordinated signal timings, traffic responsive operation, or adaptive traffic signal control.

Figure 21: Location Specific Improvements – U.S. 30 and Old Route 30

OBSERVATIONS: There is wide open access at the Tobacco Outlet and RSVP Greensburg development. The drainage inlet at the intersection has collapsed. Additionally, there is land zoned as Suburban Residential and Regional Commercial that could be developed off of Old Route 30.

SUGGESTIONS:

- Provide additional curbing and driveway definition to the Tobacco Outlet and RSVP Greensburg development.
- Fix the drainage outlet.
- If additional development would occur on Old Route 30, investigate a full signalized intersection with U.S. 30.

Figure 22 : Location Specific Improvements – U.S. 30 at Oakley Park Plaza and Johnson Road

OBSERVATION: Hartman Road closely parallels U.S. 30 creating wide-open intersections with unnecessary turning movement conflicts at the Oakley Park Plaza Driveway and Johnson Road intersection.

Figure 22 : Location Specific Improvements – U.S. 30 at Oakley Park Plaza and Johnson Road (continued)

SUGGESTIONS:

- Construct a new Service Road behind the existing businesses along Hartman Road to accommodate future development.
- Convert existing Hartman Road into an Inter-parcel Connector for existing business parking lots.

Figure 23: Location Specific Improvements – U.S. 30 and Lewis Road Signal

OBSERVATIONS: Motorists are not obeying the NO TURN ON RED restriction from Lewis Road to U.S. 30. Westbound and southbound approaches have low vehicular visibility.

SUGGESTIONS:

- Install RED SIGNAL AHEAD sign for westbound approach due to high speed and down grade.
- Cut back embankment on northeast quadrant to increase sight distance for Lewis Road.
- Reinforce NO TURN ON RED condition through enforcement.
- Upgrade traffic signal equipment.
- Restripe pavement markings on Lewis Road.

Figure 24 : Location Specific Improvements – U.S. 30 and Lewis Road Pedestrians

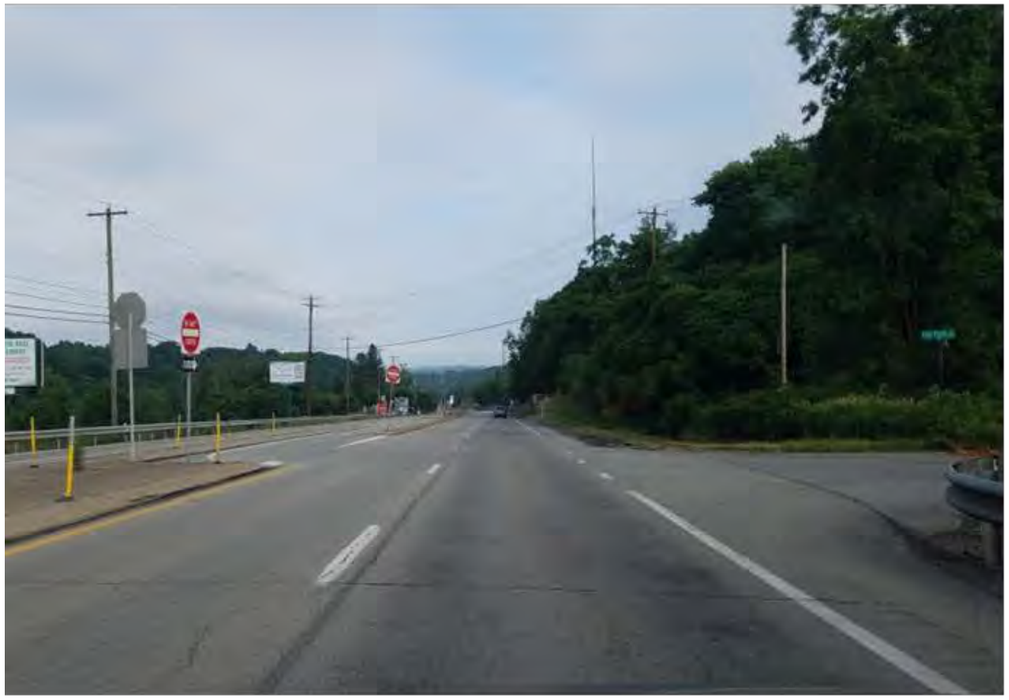
OBSERVATIONS: Pedestrian infrastructure is old and not ADA compliant. The pedestrian signal heads and push buttons are not functional.

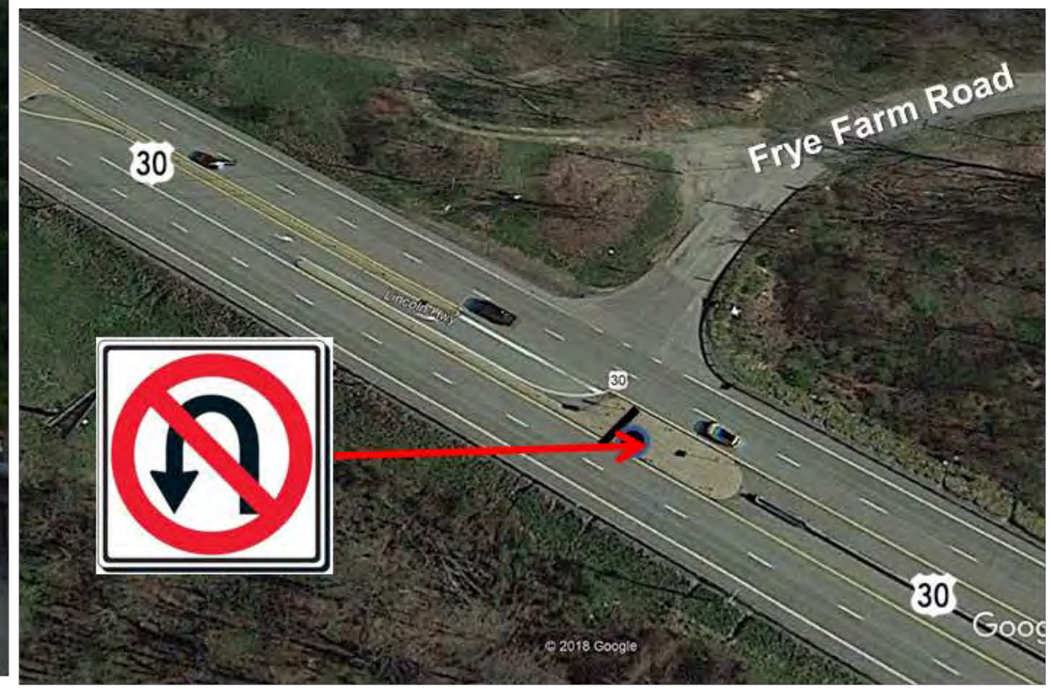
SUGGESTIONS:

- Install ADA-compliant pedestrian facilities (curb ramps, pedestals, etc.).
- Activate pedestrian signal heads and modernize with countdown indications.
- Replace push buttons with modern 2-inch buttons.
- Install crosswalk pavement markings.

Figure 25 : Location Specific Improvements – U.S. 30 and Frye Farm Road

OBSERVATIONS: U-turns are being made from U.S. 30 eastbound to U.S. 30 westbound at Frye Farm Road conflicting with southbound right turns. A left turn lane accommodates this movement. Westbound U.S. 30 vehicles are approaching at a high rate of speed.





SUGGESTION:

- Install NO U-TURN sign.

Figure 26 : Location Specific Improvements – U.S. 30 and Village Drive

OBSERVATIONS: NO TURN ON RED sign for drivers southbound on Village Drive is too small. Southeast corner of Village Drive and U.S. 30 intersection is not ADA compliant. Pushbuttons do not work.

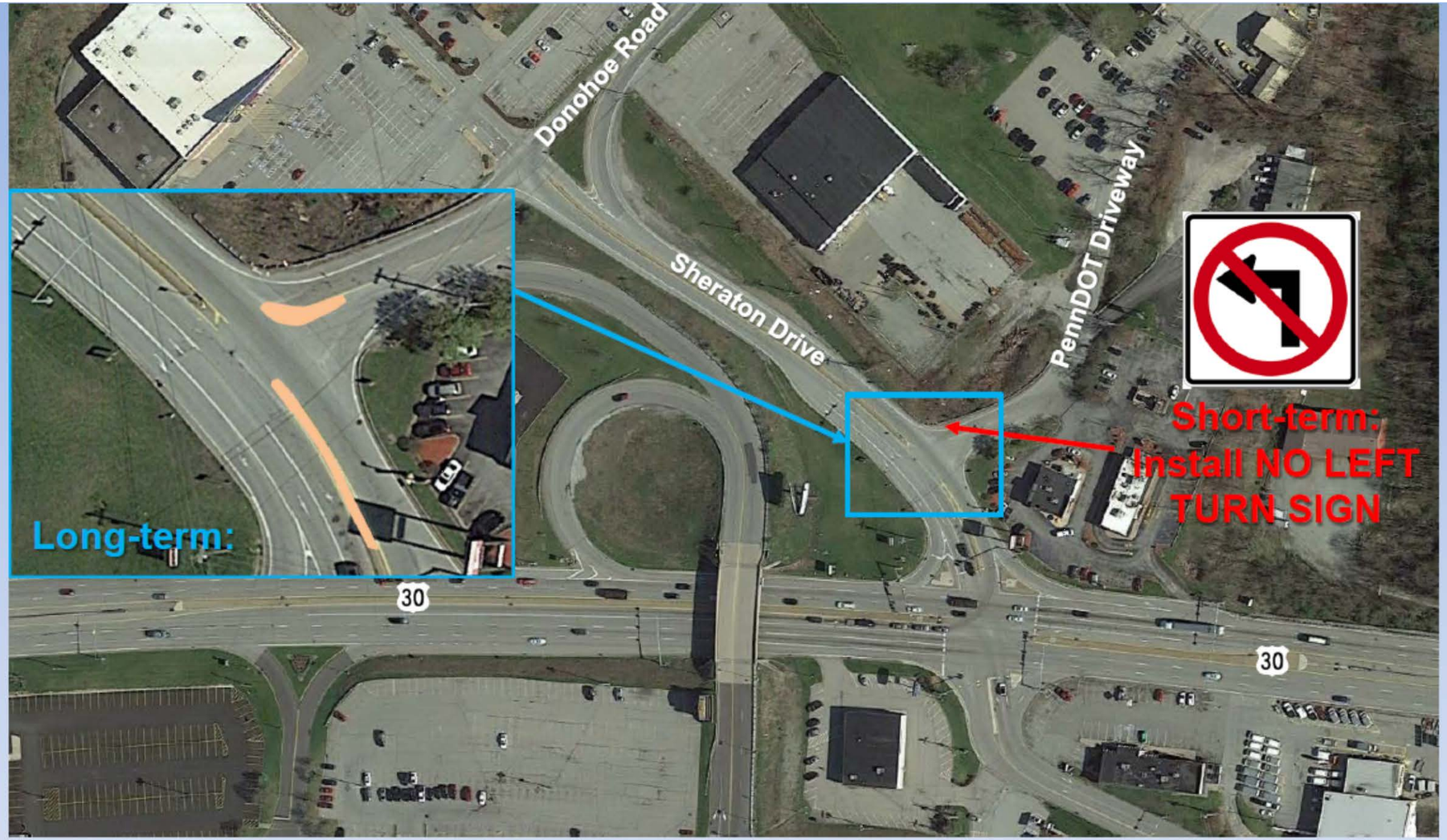
SUGGESTIONS:

- Replace current NO TURN ON RED sign with a new and larger sign.
- Replace broken pushbuttons.
- Upgrade intersection to meet ADA requirements.

Figure 27: Location Specific Improvements – Sheraton Drive and PennDOT Driveway

OBSERVATIONS: The left turns out of the PennDOT driveway are difficult to make due to the roadway geometry, vehicles blocking the intersection, and sight distance.

Figure 27: Location Specific Improvements – Sheraton Drive and PennDOT Driveway (continued)



SUGGESTIONS:

- Short-term: Install NO LEFT TURN sign exiting the PennDOT Driveway at Sheraton Drive.
- Long-term: Extend median along Sheraton Drive and install concrete island on PennDOT Driveway allowing left turns into but not out of the PennDOT Driveway.

Figure 28: Location Specific Improvements – Donohoe Road and Sheraton Drive

OBSERVATIONS: Donohoe Road is one-way to the south at the intersection with Sheraton/Ramada Drive, causing confusion for traffic on Ramada Drive wishing to turn north on Donohoe Road. Traffic must traverse Citizens Bank/Toy 'Я Us parking lot to access northbound Donohoe Road. Donohoe Road is one-way south to access U.S. 30 westbound. The Donohoe Road approach is stop-controlled and the Mall Exit Ramp has free flow movement. Donohoe Road queues through the Sheraton/Ramada Drives intersection.

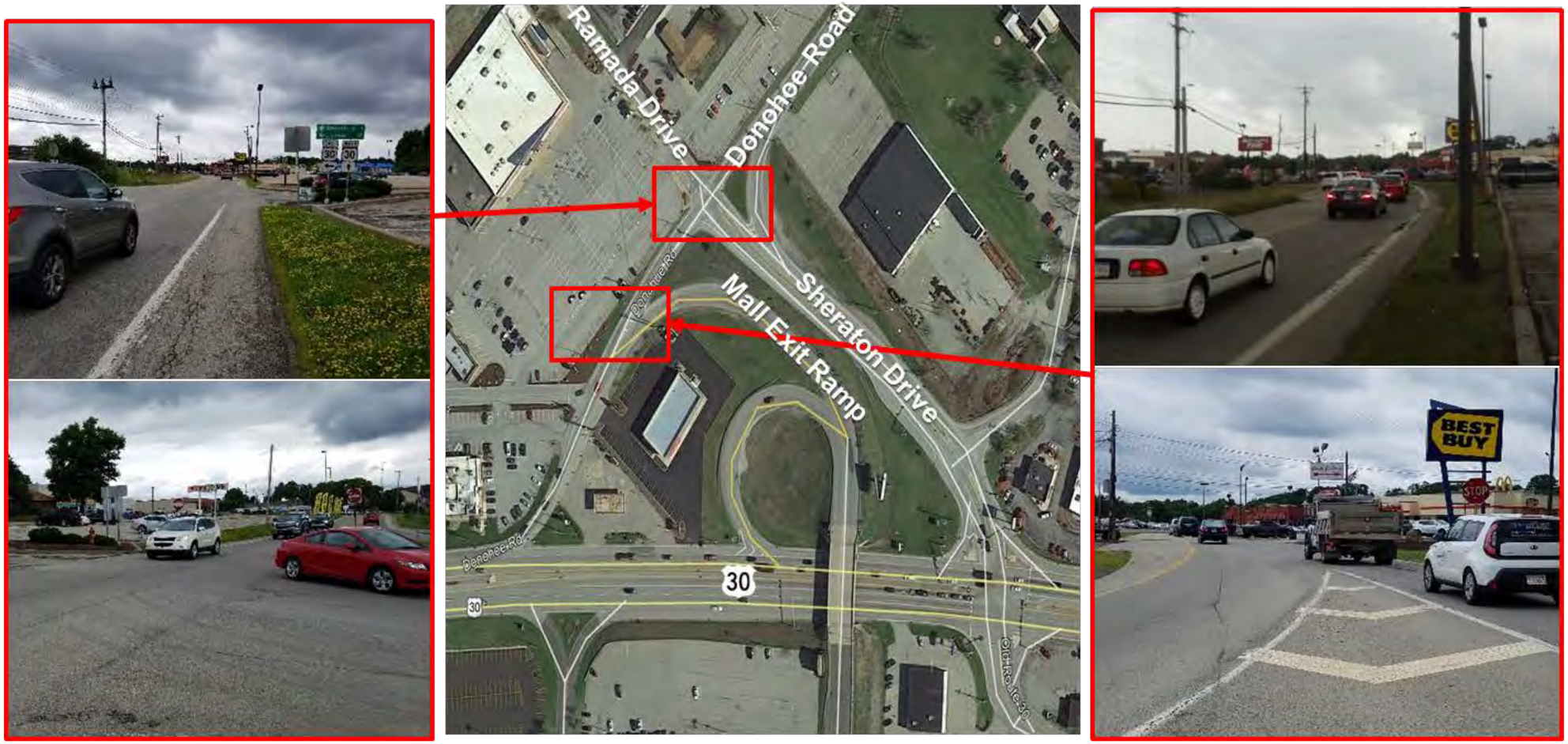
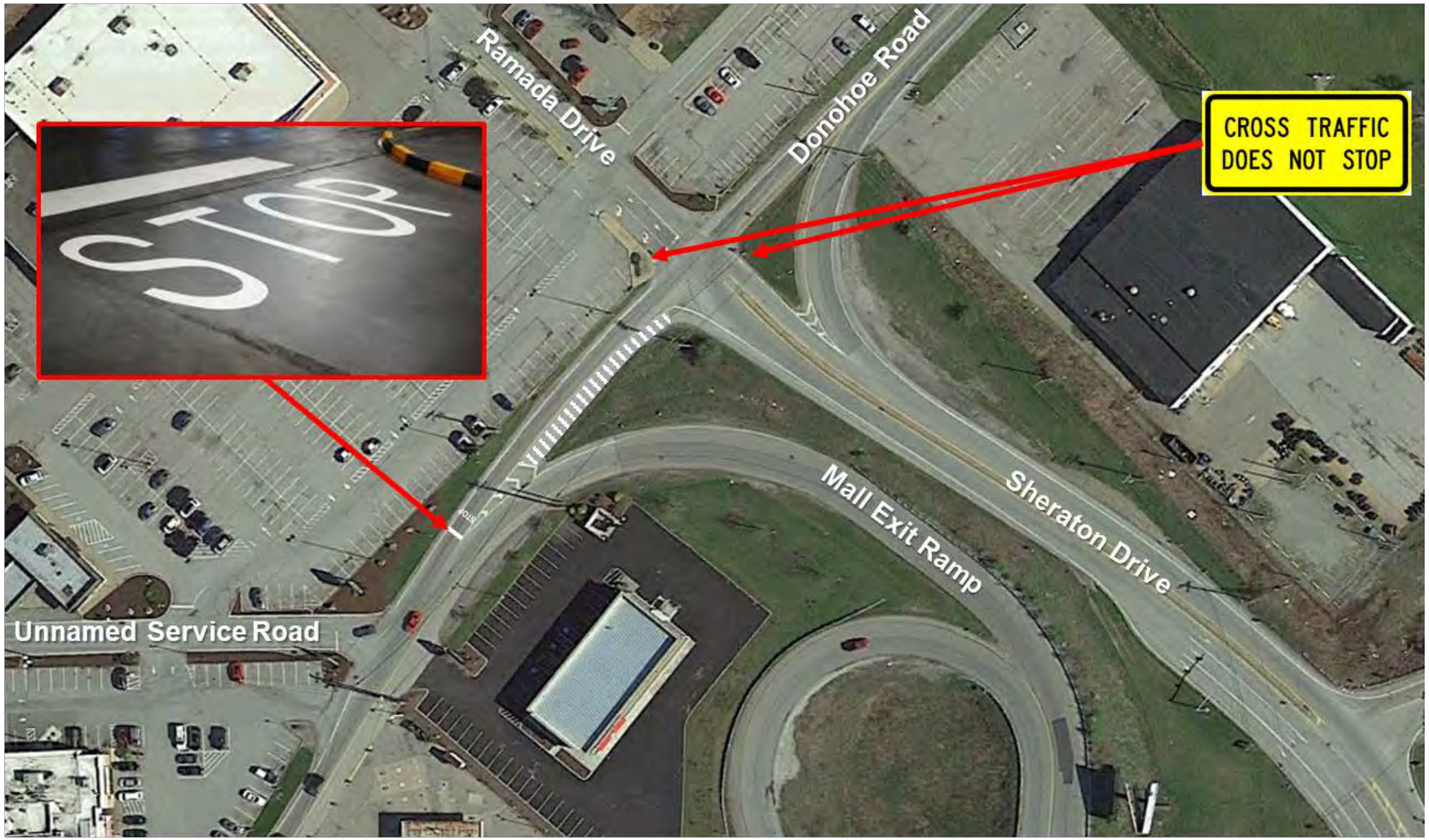


Figure 28: Location Specific Improvements-Donohoe Road and Sheraton Drive (continued)



SUGGESTIONS:

- Short Term/Immediate: Install CROSS TRAFFIC DOES NOT STOP signs on eastbound and westbound approaches of Sheraton/Ramada Drive.
  - Install stop bar on the southbound approach of Donohoe Road.
  - Install shoulder crosshatching along Donohoe Road between Sheraton Drive and the Mall Exit Ramp.

Figure 28: Location Specific Improvements – Donohoe Road and Sheraton Drive (continued)

SUGGESTIONS:

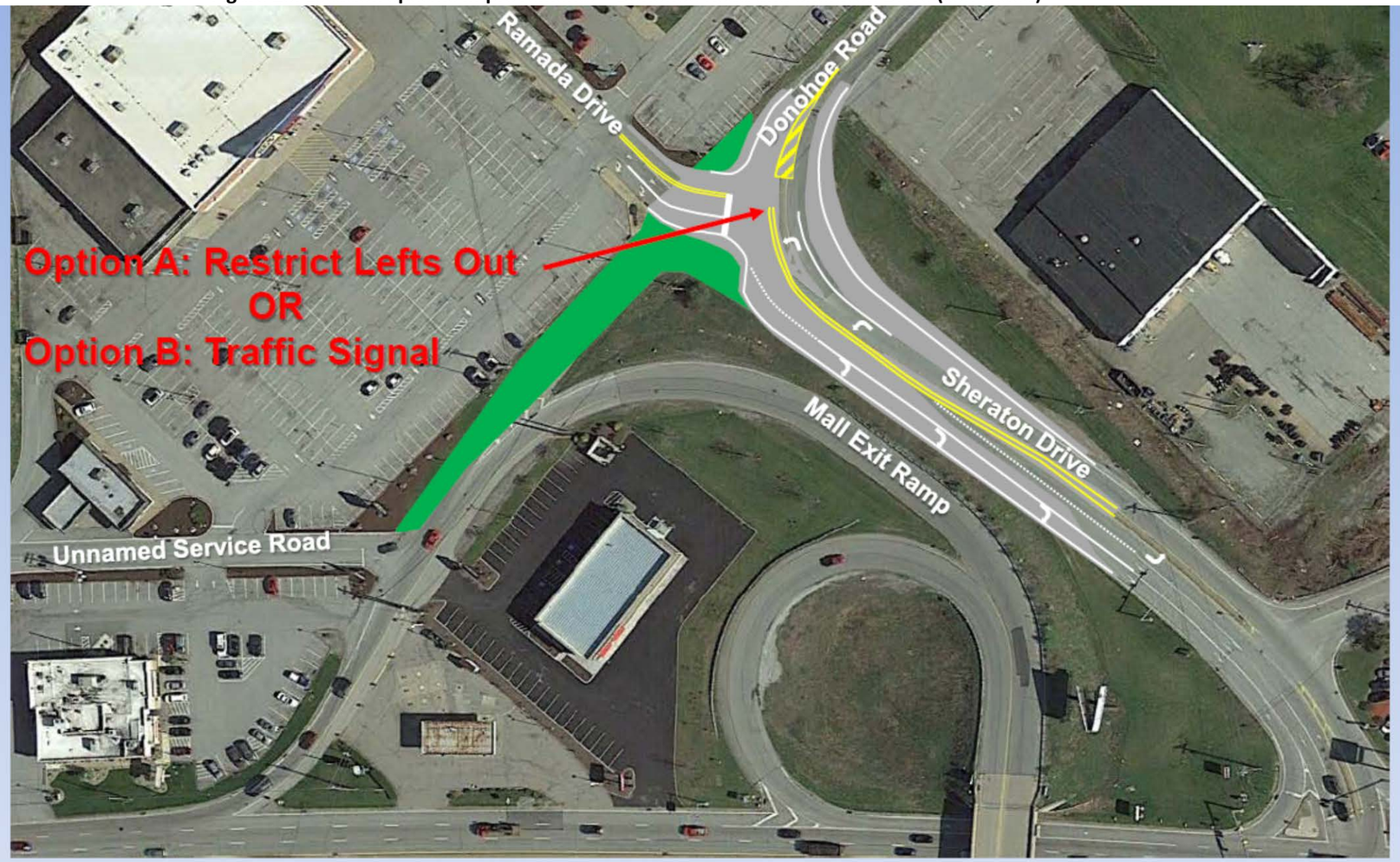
- Short-term: Eliminate Donohoe Road connection between Sheraton Drive and the Unnamed Service Road.
  - Extend the southbound Sheraton Drive right turn lane at U.S. 30 to Donohoe Road.

CONSIDERATION:

- Right-of-way.

(Refer to traffic analysis in the appendices for more details and southbound Sheraton Road right turn lane requirements.)

Figure 28: Location Specific Improvements – Donohoe Road and Sheraton Drive (continued)



SUGGESTIONS:

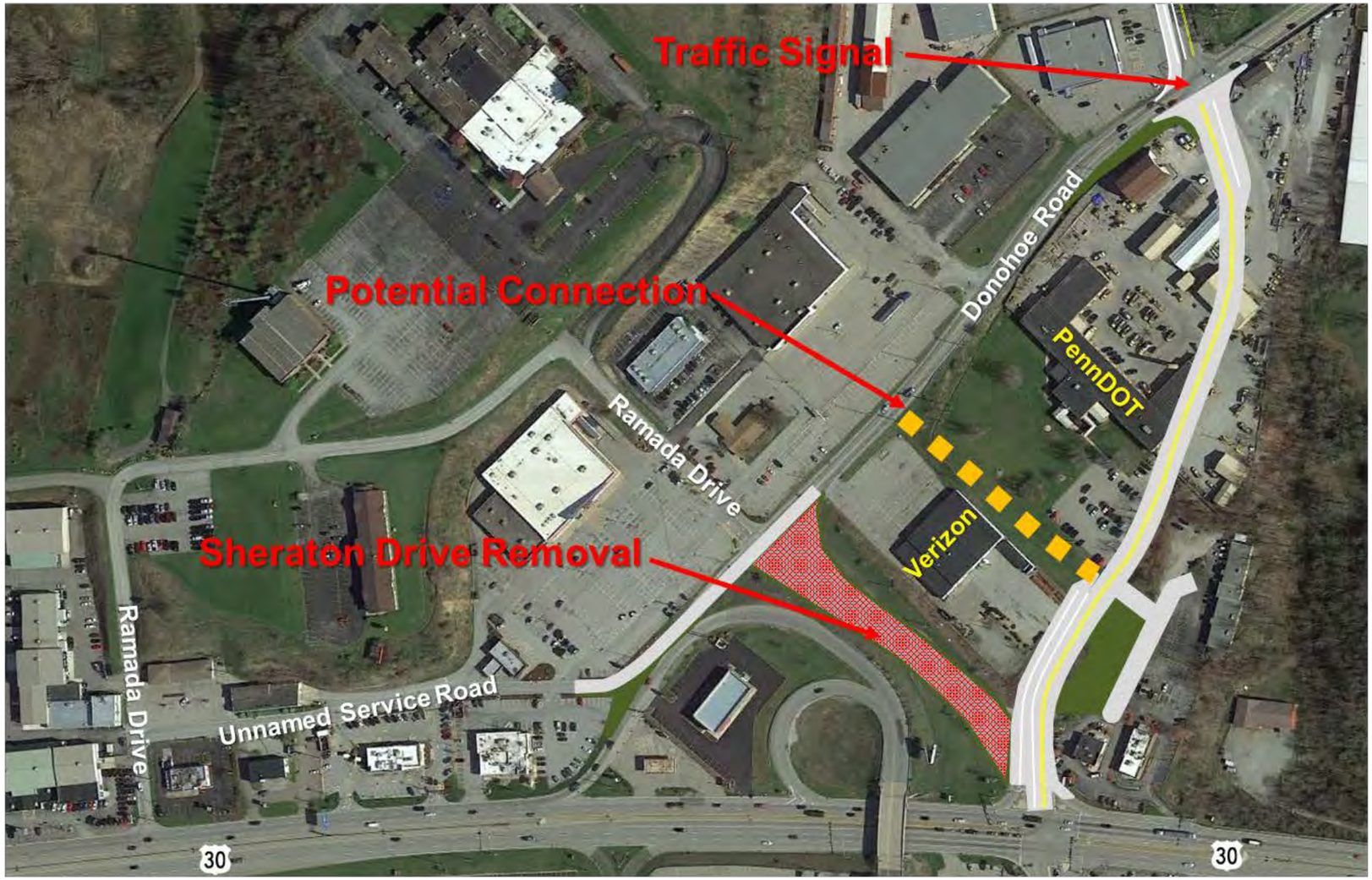
- Mid-term Option B: Eliminate Donohoe Road connection between Sheraton Drive and the Unnamed Service Road and realign Donohoe Road to connect into Sheraton Drive.
  - Provide a left turn into Ramada Drive from realigned Donohoe Road.
  - Extend the southbound Sheraton Drive right turn lane at U.S. 30 to Donohoe Road.
  - Continue to restrict lefts out of Ramada Drive (Option A) or install signal (Option B).

CONSIDERATIONS:

- Right-of-way.
- Westbound right turn lane on Donohoe Road at Roseytown Road prior to Future Design Year 2038.

(Refer to traffic analysis in the appendices for more details and all vetted alternatives at Donohoe Road and Ramada Drive.)

Figure 28: Location Specific Improvements – Donohoe Road and Sheraton Drive (continued)



SUGGESTIONS:

- Long-term: Realign Sheraton Drive through the existing PennDOT Maintenance Property to connect directly with Roseytown Road.
  - Connect the Unnamed Service Road to Donohoe Road.
  - Install northbound (Sheraton Drive) and southbound (Roseytown Road) right turn lanes at Donohoe Road.

CONSIDERATIONS:

- Redevelopment of PennDOT Maintenance and Verizon properties.
- Inter-parcel connections.
- Potential Westmoreland Mall overpass connection.

(Refer to traffic analysis in the appendices for more details and all vetted alternatives at Donohoe Road and Roseytown Road.)

Figure 29: Location Specific Improvements – Donohoe Road and Roseytown Road

OBSERVATIONS: Traffic signal at the intersection of Donohoe Road and Roseytown Road/PennDOT Maintenance is near the end of its life cycle. Signage is no longer retroreflective. PennDOT gate is actuating the side street phase. Guiderail is damaged.

SUGGESTIONS:

- Modernize traffic signal equipment, replace all signs, and refresh all pavement markings.
- Cut back obstructions on northeast quadrant for better visibility of Roseytown Road approach.
- Reconfigure detection for PennDOT driveway to avoid false calls.
- Replace guiderail.

Figure 30: Location Specific Improvements – Crows Nest Road Railroad Underpass

OBSERVATION: Tunnel on Crows Nest Road only has a vertical clearance of 8 feet and width for one vehicle which impacts emergency response time of Bovard Fire.

SUGGESTIONS:

- Short-term: Consider one-lane two-way traffic signal system to avoid collisions.
  - Install emergency vehicle preemption.
- Long-term: Improve vertical clearance of tunnel.

Figure 31: Location Specific Improvements – Public Safety Road Sight Distance

OBSERVATION: Sight distance is limited due to roadway geometry, signage, and vegetation when exiting Public Safety Road.

SUGGESTIONS:

- Trim vegetation near Stanko Products.
- Relocate Stanko Products sign.

Figure 32: Location Specific Improvements – Donohoe Road and Georges Station Road

OBSERVATION: Significant queuing was observed during peak periods at Donohoe Road and Georges Station Road due to the ALL WAY STOP.

SUGGESTIONS:
- Option 1: Install single-lane roundabout with truck apron (See Figure 33).
- Option 2: Install fully-actuated traffic signal.

CONSIDERATIONS:
- Right-of-way.
- Utilities.
- Operations and maintenance costs.

(Refer to traffic analysis in the appendices for more details and comparison of intersection Option 1 and 2 Level of Service.)

Figure 33 - Location Specific Improvements

FILENAME: S:\DIV-2\100209\Project\057621 SPC 13-02a OnCall (2013)\T020 - SPC ID 73 ROP Support 2018\Project Working\CADD Exhibits\73 ROP Design
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Future 2038 Traffic Conditions Analysis with improvements

To determine the design year (2038) peak hour, existing traffic volumes were grown using a linear growth rate of 0.5 percent in addition to predicted traffic generated with ongoing development projects to project traffic to the year 2038. The suggested improvements that impact capacity analyses at the study intersections were assumed to be in place under the Future Build with Improvements Scenario. **Table 10**, shown below, compares levels of service and average delay between the 2018 Existing Condition and the 2038 Future Build scenario.

Table 10: Future Intersection LOS and Average Delay

Intersection	Existing		Future No-Build		Future Build with Improvements		
	LOS	Delay (s)	LOS	Delay (s)	Improvement (Figure Number)	LOS	Delay (s)
U.S. 30 and Sheraton Drive/Old Route 30	D	54.5	E	58.6	Extended EB left turn lane (6); extended SB right turn lane; and optimized timings/phasing (28)	D	46.4
					Extended EB left turn lane (6) and relocated Sheraton Dr (28)	D	46.4
U.S. 30 and Nature Park Road/Eastgate Plaza Driveway	D	42.9	D	42.9	Extended WB left turn lane (6) and optimized timings (7)	C	31.9
U.S. 30 and Georges Station Road/Slate Road	D	48.5	E	55.7	Extended WB left turn lane (6) and construct SB left turn lane (19)	D	42.3
U.S. 30 and Old Route 30	A	2.4	A	3.3	No capacity improvement (21)	A	3.3
U.S. 30 and Lewis Road	C	29.4	C	29.4	Optimized timings (7)	B	18.5
U.S. 30 and Village Drive/Marguerite Road	D	52.7	D*	49.9*	Extended EB and WB left turn lanes and construct SB left turn per Speedway Development/ optimized timings	D	38.5
Donohoe Road and Sheraton Drive	F	83.5	F	190.0	Existing geometry with additional signs (28)	F	190.0
					Realigned intersection with stop control and restricted left out of Ramada Drive (28)	C	23.9
					Realigned intersection with signal (28)	B	14.3
					Relocated Sheraton Dr (28)	N/A	N/A
Donohoe Road and Roseytown Road	C	23.1	C	29.3	No relocation of Sheraton Dr and existing lane configuration (29)	C	29.3
					Redesignate SB approach (L-SR) and NB right turn lane with relocated Sheraton Dr (29)	C	31.3
Donohoe Road and Georges Station Road	F	85.2	F	124.0	Roundabout (33)	C	16.3
					Signal (33)	C	20.6

* Accounts for proposed southbound left turn lane to be installed per Speedway development project

Detailed analysis for each of these locations can be found in Appendices C-F.

On October 10, 2018, SPC staff met with PennDOT District 12 staff to provide a preliminary findings presentation and review the draft report. Additional information and analyses requested at this meeting is provided as part of Appendix F.

4. Potential Funding Sources

In order to move forward with the suggested improvements in this document, funding needs to be secured by roadway owners. A number of funding mechanisms are available for roadway owners ranging from federal and state funds to private dollars. Below is a list of some potential funding mechanisms.

- State and federal transportation funds through programs affiliated with the Southwestern Pennsylvania Commission's Transportation Improvement Program (TIP), including Transportation Alternatives Set-Aside Program, Highway Safety Improvement Program (HSIP), SPC Regional Traffic Signal Program, Livability through Smart Transportation Program, and the Congestion Mitigation Air Quality Program (CMAQ) funding;
- State grant funding programs such as Green Light Go (Traffic Signal Improvements) and Automated Red Light Enforcement (Highway Safety and/or Mobility Projects);
- PA Infrastructure Bank;
- Partnering with private industry and developers;
- Transportation Impact Fees - Fees can be assessed to new development in proportion to its impact. Joint municipal impact fee programs were enabled by PA Act 68 (2000);
- PennDOT Multimodal Fund; and
- Other Local Funds

5. Next Steps for Roadway Owners

Upon receipt and review of the final report, the roadway owner(s) have the option to prepare a formal response. A formal response could document plans to address identified issues and reasons to defer other issues. Roadway owners should work together to incorporate the suggestions in this document into future projects and planning documents at the Municipal, County and Regional levels. Roadway owners are encouraged to collaborate with one another to develop coordinated, comprehensive projects and plans to improve the operations and safety along the corridor.

Roadway owners should collaborate to create larger, comprehensive projects instead of several smaller, individual ones. A corridor committee could be created with all roadway owners as participants to identify comprehensive projects to move forward with programming, design and funding. It is recommended that the corridor wide short-term improvements identified in the study be evaluated by the roadway owners to determine which improvements can be addressed through local municipality maintenance and operation funds. More involved, long-term improvements should be pursued through SPC's project development process in which local funds can be leveraged with additional state and federal funds to address the improvement requirements.

With the current financial climate, competition for available transportation funding continues to increase along with the scrutiny of each proposed project. Decision-makers may be more likely to select a collaborative, comprehensive project that's going to improve mobility and safety within a region instead of an isolated community.

Tables 11-12 provide a list of proposed improvements and the respective roadway owners responsible for each improvement.

Table 11: Short- and Mid-term Improvements (1-5 years)

Suggested Improvement	Responsible Party
Require Traffic Impact Study (TIS) as part of any future development/redevelopment for projects accessing local roads corridor wide. • TIS should evaluate roadway capacity and signal interconnection corridor wide.	HT, UT
Create an access management ordinance and consider parcel interconnections within the study area.	HT, UT
Create an official map for future roadways as development continues within the study area.	HT, UT
Install backplates with yellow retroreflective tape on all traffic signals corridor wide.	HT, UT, DOT
Replace overhead signs due to lack of retroreflectivity as needed corridor wide.	HT, UT, DOT
Modernize traffic signal equipment at Donohoe and Roseytown Roads and U.S. 30 and Lewis Road.	HT, UT, DOT
Wherever U-turns are permitted, consider no right turns on red restrictions for the side streets corridor wide.	HT, UT, DOT
Replace signs that do not meet the minimum retroreflectivity requirements corridor wide.	HT, UT, DOT
Restripe pavements marking, in particular, stop lines, crosswalks, and arrows/legend at intersections corridor wide.	HT, UT, DOT
Install bracket arms and luminaires at signalized intersections corridor wide.	HT, UT, DOT
Repair non-functioning luminaire on southwest corner at U.S. 30 and Nature Park Road.	HT, DOT
Retrofit HPS luminaires at U.S. 30 and Lewis Road with LED luminaries.	UT
Include pedestrian accommodations at intersections along the corridor (i.e. pushbuttons, LED pedestrian countdown signals, high visibility crosswalks, ADA ramps) especially at pedestrian generating developments.	HT, UT, DOT
Require sidewalks as part of new developments corridor wide.	HT, UT
Install oversized chevrons through the entire curve for both eastbound and westbound directions of U.S. 30 at the East Pittsburgh Street split.	DOT
Install oversized combination curve warning and advisory speed signs for both the eastbound and westbound directions of U.S. 30 at the East Pittsburgh Street split.	DOT
Add an advisory exit speed on the overhead U.S. 30 West sign at the East Pittsburgh Street split.	DOT
Consider installing a combination curve warning and advisory speed sign on the Pittsburgh Street overpass traveling eastbound.	DOT
Eliminate St. Clair Way access onto U.S. 30 and force all traffic onto the Pittsburgh Street Ramp.	HT, DOT
Investigate opportunities to establish a designated park-and-ride along the corridor. • Underutilized developments with adequate parking along the corridor. • Transit oriented development opportunities along the corridor.	HT, DOT, WTA
Crosshatch the rightmost lane of westbound U.S. 30 between Donohoe Road and the mall Exit Ramp to create a free flow merge and install flexible delineator posts to reinforce the lane drop.	DOT
Install NO LEFT TURN sign exiting the PennDOT Driveway at Sheraton Drive.	HT, DOT

Key: (DOT)-PennDOT; (HT)-Hempfield Township; (UT)-Unity Township; (WTA)-Westmoreland Transit Authority

Suggested Improvement	Responsible Party
Add additional signage and supplemental pavement markings warning drivers of lane drop on eastbound U.S. 30 at Nature Park Road.	DOT
Extend proposed 225-foot westbound left turn lane to 400 feet per left turn analysis at U.S. 30 and Georges Station Road/Slate Run Road intersection.	DOT
Install NO TURN ON RED condition for northbound Slate Run Road approach due to conflict with westbound U.S. 30 U-turns.	HT, DOT
Construct 275-foot southbound left turn lane on Georges Station Road per intersection analysis (See Figure 18).	HT, DOT
Close or restrict to one way inbound the redundant Sunoco access on Georges Station Road.	HT, DOT
Analyze lower cycle length at traffic signal to encourage signal compliance by pedestrians at intersection of U.S. 30 and Georges Station Road/Slate Run Road.	HT, DOT
Add signage to discourage midblock crossings along U.S. 30 (median has a low concrete barrier).	HT, DOT
Correct drainage issues of ADA ramps on the southeast quadrant of Slate Run Road and U.S. 30.	HT, DOT
Interconnect traffic signals via fiber optic cable or spread spectrum radio (GPS today) along U.S. 30 from Sheraton Drive to Georges Station Road/Slate Run Road.	HT, DOT
Consider retiming, traffic responsive operation or adaptive signal control to improve progression and real-time operations along U.S. 30 from Sheraton Drive to Georges Station Road/Slate Run Road.	HT, DOT
Provide additional curbing and driveway definition to the Tobacco Outlet and RSVP Greensburg development.	HT, DOT
Fix the drainage outlet at on Old Route 30 and parking lot for Tobacco Outlet and RSVP Greensburg development.	HT, DOT
Install RED SIGNAL AHEAD sign for westbound approach to Lewis Road from U.S. 30 due to high speed and down grade.	UT, DOT
Cut back embankment on northeast quadrant to increase sight distance for Lewis Road.	UT, DOT
Reinforce NO TURN ON RED condition through enforcement at the intersection of Lewis Road and U.S. 30.	UT, DOT
Upgrade traffic signal equipment at intersection of Lewis Road and U.S. 30.	UT, DOT
Restripe pavement markings on Lewis Road.	UT, DOT
Install ADA-compliant pedestrian facilities (curb ramps, pedestals, etc.) at Lewis Road and U.S. 30.	UT, DOT
Activate pedestrian signal head and modernize with countdown indications at Lewis Road and U.S. 30.	UT, DOT
Replace pushbuttons with modern 2-inch buttons at Lewis Road and U.S. 30.	UT, DOT
Install crosswalk pavement markings at intersection of Lewis Road and U.S. 30.	UT, DOT
Install NO U-TURN sign on eastbound U.S. 30 at Frye Farm Road.	UT, DOT
Replace current NO TURN ON RED sign with new and larger sign on southbound Village Drive.	UT, DOT
Replace broken pushbuttons at Village Drive and U.S. 30.	UT, DOT
Upgrade intersection to meet ADA requirements at Village Drive and U.S. 30.	UT, DOT

Key: (DOT)-PennDOT; (HT)-Hempfield Township; (UT)-Unity Township; (WTA)-Westmoreland Transit Authority

Suggested Improvement	Responsible Party
Modernize traffic signal equipment, replace all signs and refresh all pavement markings at the intersection of Donohoe Road and Roseytown Road/PennDOT Maintenance entrance.	HT, DOT
Cut back obstructions on northeast quadrant for better visibility of Roseytown Road approach at Donohoe Road.	HT, DOT
Reconfigure detection for PennDOT driveway to avoid false calls at Roseytown Road and Donohoe Road intersection.	HT, DOT
Replace guiderail at intersection of Roseytown Road and Donohoe Road.	HT, DOT
Install CROSS TRAFFIC DOES NOT STOP signs on eastbound and westbound approaches of the Sheraton Drive/Ramada Drive and Donohoe Road intersection. • Install stop bar on the southbound approach of Donohoe Road at the Westmoreland Mall Exit Ramp. • Install shoulder crosshatching along Donohoe Road between Sheraton Drive and the Westmoreland Mall Exit Ramp.	HT, DOT
Eliminate Donohoe Road connection between Sheraton Drive and the Unnamed Service Road. • Extend the southbound Sheraton Drive right turn lane at U.S. 30 to Donohoe Road.	HT, DOT
Eliminate Donohoe Road Connection between Sheraton Drive and the Unnamed Service Road and realign Donohoe Road to connect into Sheraton Drive. • Provide a left turn lane into Ramada Drive from realigned Donohoe Road/Sheraton. • Extend the southbound Sheraton Drive right turn lane at U.S. 30 to Donohoe Road. • Continue to restrict lefts out of Ramada Drive (Option A) or install traffic signal (Option B) at Ramada Drive and Sheraton Drive/Donohoe Road intersection.	HT, DOT
Consider installing one-lane two-way traffic signal system to avoid collisions at the tunnel on Crows Nest Road.	HT, DOT
Install emergency vehicle preemption on Crows Nest Road at the tunnel.	HT, DOT
Trim vegetation near Stanko Products at intersection of Public Safety Road and Donohoe Road.	HT

Key: (DOT)-PennDOT; (HT)-Hempfield Township; (UT)-Unity Township; (WTA)-Westmoreland Transit Authority

Table 12: Long-term Improvements (5+ years)

Suggested Improvement	Responsible Party
Combine driveways and interconnect existing parcels within the study area.	HT, UT, DOT
Lengthen left turn storage bays to handle traffic in a 20-year design horizon corridor wide along U.S. 30 per Figure 6. • Consider dual left turn lanes for added capacity corridor wide. • Consider left turn positive offset and protected-permissive operation.	HT, UT, DOT
Install sidewalk along U.S. 30 near the Westmoreland Mall and convenience stores.	HT, UT, DOT
Install DMS along U.S. 30 near the I-76 interchange in Irwin (eastbound) and at the western end of the study area near the Pittsburgh Street/U.S. 30 diverge point (westbound).	DOT
Install curbing in the rightmost lane of westbound U.S. 30 between Donohoe Road and Mall Exit Ramp to create a free flow merge. • Work with business owners to eliminate/consolidate accesses along U.S. 30 in conjunction with enhancements to Sheraton Drive.	HT, DOT
Extend median along Sheraton Drive and install concrete island on PennDOT Driveway allowing left turns into but not out of the PennDOT Driveway.	HT, DOT
Install sidewalk on the south side of U.S. 30 for pedestrians between Georges Station Road and Old Route 30.	HT, DOT
If additional development occurs on Old Route 30, investigate a full signalized intersection with U.S. 30 and Old Route 30.	HT, DOT
Construct a new Service Road behind the existing businesses along Hartman Road to accommodate future development. • Convert existing Hartman Road into an Inter-parcel Connector for existing business parking lots.	UT
Realign Sheraton Drive through the existing PennDOT Maintenance Property to connect directly with Roseytown Road. • Install northbound (Sheraton Drive) and southbound (Roseytown Road) right turn lanes at Donohoe Road if the long-term alternative is constructed. • Connect the Unnamed Service Road to Donohoe Road.	HT, DOT
Consider a connector road from Public Safety Road to Industrial Park Road.	HT
Relocate Stanko Products sign along Donohoe Road.	Stanko Products
Install single-lane roundabout with truck apron at intersection of Donohoe Road and Georges Station Road (see Figure 33)	HT, DOT

Key: (DOT)-PennDOT; (HT)-Hempfield Township; (UT)-Unity Township; (WTA)-Westmoreland Transit Authority