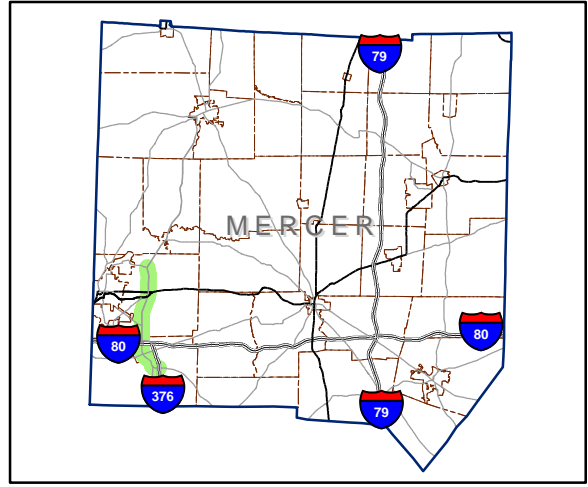
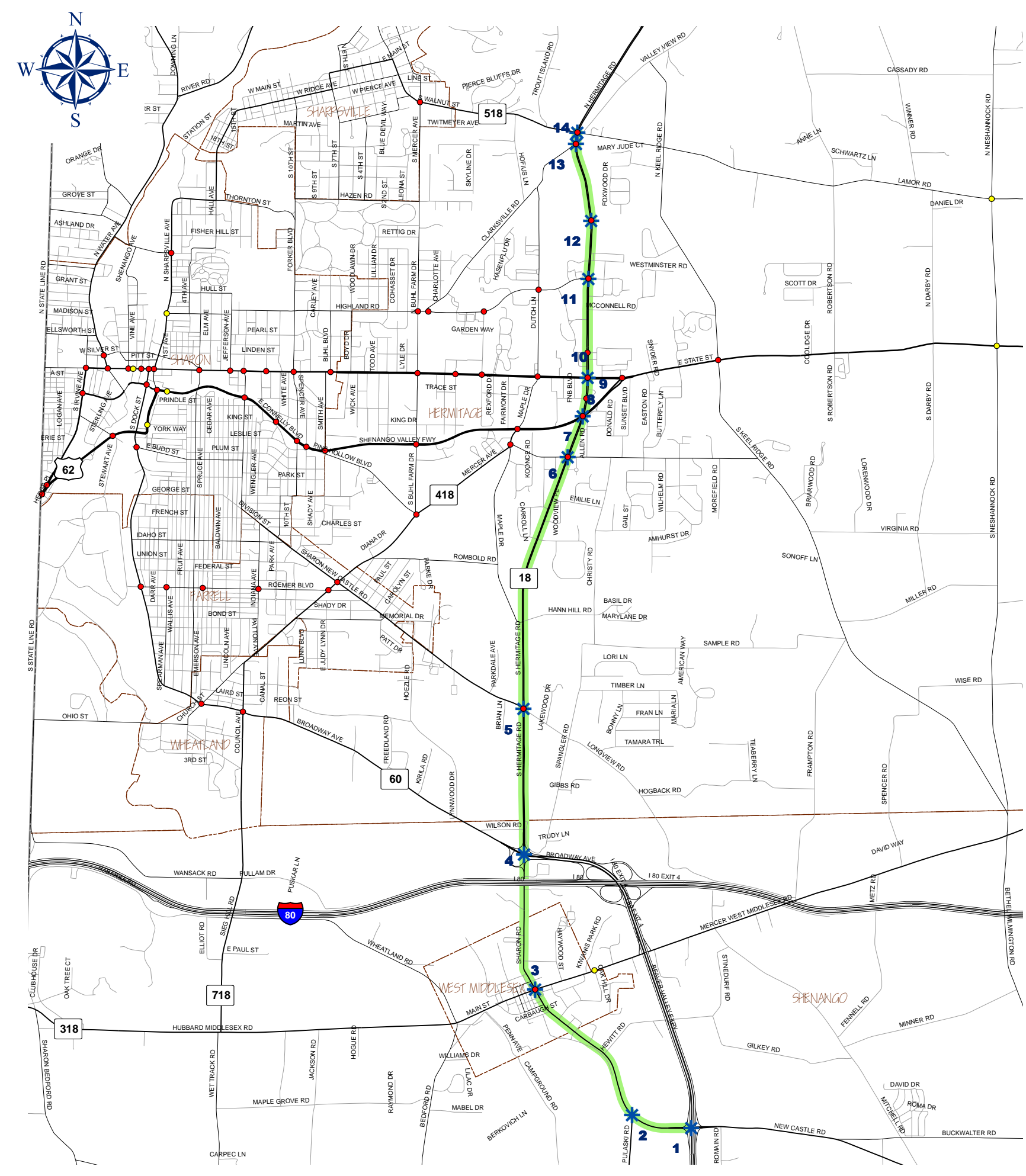


PERFORMANCE MONITORING DETAILS**CMP Corridor #203**

- Corridor / Node Map
- Field Reconnaissance Worksheet
- Travel Time Summary (Corridor Overview)
- Travel Time Summary (Average Data / Direction 1 at Peak)
- Travel Time Summary (Average Data / Direction 2 at Peak)



Detail 1 - County Location (N.T.S.)



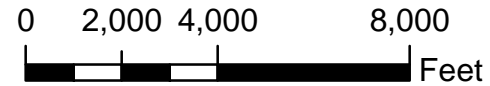
Detail 2 - US 62 & State Street Area (N.T.S.)

LEGEND

- Interstate
- US Route
- PA Route
- Other State Route
- Local Road
- Municipal Boundary
- Traffic Signal
- Traffic Beacon
- CMP Monitoring Corridor

Corridor Nodes, PA 18 @:

- * 14, PA 518, Lamor Rd (SR 3020)
- * 13, Dutch Ln (SR 3035)
- * 12, Wal-Mart Dr
- * 11, Highland Rd (SR 3014)
- * 10, Park Place MS, Mall
- * 9, E State St (SR 3008)
- * 8, Glimcher Blvd, Hermitage Square
- * 7, US 62, Shenango Valley Fwy
- * 6, Morefield Rd
- * 5, PA 518, Longview Rd
- * 4, PA 60, Beaver Valley Expy
- * 3, PA 318, Main St
- * 2, PA 551, Pulaski Rd
- * 1, I-376 / PA 60, Beaver Valley Expy



Mercer County CMP

PA 18 (Through Hermitage)

CMP Corridor / Node Map

Mercer County Regional Planning Commission
Planning for Livable Communities

Corridor #203

Revised 04/27/10



SECTION 1: ROUTE IDENTIFICATION

A	CMP Identification #:	#203
B	Route (General Area):	PA 18 (Through Hermitage)
C	Specific Limit 1 (South / West):	I-376 / PA 60 (Shenango Twp)
D	Specific Limit 2 (North / East):	PA 518 / Lamor Rd (SR 3020) (Hermitage)
E	Affected Municipalities:	Shenango, West Middlesex, Hermitage
F	Total Corridor Length (Miles):	7.4 Miles
G	Federal Functional Class:	Primarily "Principal Arterial"; some "Minor Arterial" on southern end of corridor
H	PennDOT Traffic Pattern Group:	Primarily TPG 3 (Urban - Other Principal Arterials); some TPG 5 and TPG 9 on southern end of corridor
I	Typical # of Travel Lanes:	2-Lane (1 NB + 1 SB) in Shenango and W Middlesex; 5-Lane (2 NB + 2 SB + turn lanes) in Hermitage
J	Typical Posted Speed Limit(s):	35-40 through commercial areas; 35 through W Middlesex; 45 south of W Middlesex

SECTION 2: SPECIAL USES OR CONSIDERATIONS

A	Transit	<input checked="" type="checkbox"/>	SVSS Northern, Southern, and Central Routes
B	Pedestrian / Bicycle	<input type="checkbox"/>	
C	Heavy Freight (Truck / Rail)	<input checked="" type="checkbox"/>	Primary north-south corridor w/ trucking access to surrounding areas
D	Emergency Detour	<input checked="" type="checkbox"/>	Posted Orange and Blue Detours for I-80; Posted Green Detour for PA 60
E	Tourism / Recreation / Special Events	<input checked="" type="checkbox"/>	Common roadside parking for freshwater spring location along PA 18 NB near PA 551
F	Community Concerns	<input type="checkbox"/>	
G	Growth Corridor	<input checked="" type="checkbox"/>	Several vacant parcels for sale between PA 60 and US 62
H	Other: Educational	<input checked="" type="checkbox"/>	Several schools / school zones in West Middlesex and Hermitage w/ direct access along PA 18
I	Other:	<input type="checkbox"/>	



SECTION 3: ISSUES OR CONCERNS (RECURRING CONGESTION)

A	Roadway Capacity	<input type="checkbox"/>	
B	Roadway Bottlenecks	<input type="checkbox"/>	
C	Signalized Intersection Operations	<input checked="" type="checkbox"/>	Potential signal delays, cycle failures for signalized left-turns, side-street delays, etc.
D	Unsignalized Intersection Operations	<input checked="" type="checkbox"/>	Potential side-street delays during peak periods
E	Access or Access Control	<input checked="" type="checkbox"/>	Potential thru-traffic delays due to turn friction to/from numerous commercial driveways
F	Existing or Future Development	<input checked="" type="checkbox"/>	Heavy commercial development through Hermitage
G	Other: Educational	<input checked="" type="checkbox"/>	School-related bus, pedestrian, and crossing-guard delays during peak periods
H	Other:	<input type="checkbox"/>	

SECTION 4: ISSUES OR CONCERNS (NON-RECURRING CONGESTION)

A	Crashes and Related Delays	<input type="checkbox"/>	
B	Incident Management	<input checked="" type="checkbox"/>	Detour traffic from I-80 (Orange / Blue Detours) or PA 60 (Green Detour)
C	Special Events	<input type="checkbox"/>	
D	Construction Activities	<input type="checkbox"/>	
E	Weather or Environmental Factors	<input type="checkbox"/>	
F	Other:	<input type="checkbox"/>	
G	Other:	<input type="checkbox"/>	

SECTION 5: ISSUES OR CONCERNS (SAFETY-RELATED OR ISOLATED "HOT-SPOTS")

A	Other:	<input type="checkbox"/>	
B	Other:	<input type="checkbox"/>	
C	Other:	<input type="checkbox"/>	



SECTION 6: SEGMENT INVENTORY

Segment Breakpoints			Segment Data					Multimodal Uses				Adjacent Land Uses						Land Use Context ¹	Transportation Context ²			
ID	Intersection / Location	Type of Control	Length (Mi)	Speed Limit (MPH)	# Lanes ↓	# Lanes ↑	Turn Lane(s)	Parking	Transit	% Sidewalk ↓	% Sidewalk ↑	Residential	Commercial	Industrial	Educational	Religious	Health / EMS			Government		
14	PA 518 / Lamor Rd (SR 3020)	Actuated																				
			0.1	40	2	2	☒	☐	☒	0%	0%	☐	☒	☐	☐	☐	☐	☐	☐	3	2	
13	Dutch Ln (SR 3035)	Actuated																				
			0.5	40	2	2	☒	☐	☒	0%	25%	☐	☒	☐	☐	☐	☐	☐	☐	3	2	
12	Wal-Mart Dr	Actuated																				
			0.4	40	2	2	☒	☐	☒	50%	50%	☐	☒	☐	☒	☐	☒	☒	☒	3	2	
11	Highland Rd (SR 3014)	Actuated																				
			0.5	35	2	2	☒	☐	☒	0%	100%	☐	☒	☐	☒	☒	☐	☐	☐	3	2	
10	Park Place MS / Mall	Actuated																				
			0.2	35	2	2	☒	☐	☒	25%	0%	☐	☒	☐	☐	☐	☐	☐	☐	3	2	
9	E State St (SR 3008)	Actuated																				
			0.1	35	2	2	☒	☐	☒	0%	0%	☐	☒	☐	☐	☐	☐	☐	☐	3	2	
8	Glimcher Blvd / Hermitage Square	Actuated																				

¹ Land Use Context: 1 (Rural Places), 2 (Suburban Neighborhood), 3 (Suburban Corridor), 4 (Suburban Center), 5 (Town / Village Neighborhood), 6 (Town Center), 7 (Urban Core)

² Transportation Context: 1 (Interstate), 2 (Regional Arterial), 3 (Community Arterial), 4 (Community Collector), 5 (Neighborhood Collector), 6 (Local Road / Street)



SECTION 6: SEGMENT INVENTORY (CONTINUED)

Segment Breakpoints			Segment Data					Multimodal Uses				Adjacent Land Uses						Land Use Context ¹	Transportation Context ²	
ID	Intersection / Location	Type of Control	Length (Mi)	Speed Limit (MPH)	# Lanes ↓	# Lanes ↑	Turn Lane(s)	Parking	Transit	% Sidewalk ↓	% Sidewalk ↑	Residential	Commercial	Industrial	Educational	Religious	Health / EMS			Government
8	Glimcher Blvd / Hermitage Square	Actuated	0.1	35	2	2	☒	☐	☒	0%	0%	☐	☒	☐	☐	☐	☐	☐	3	2
7	US 62, Shenango Valley Fwy	Actuated	0.3	35	2	2	☒	☐	☒	0%	0%	☐	☒	☐	☐	☐	☐	☐	3	2
6	Morefield Rd	Actuated	1.7	40	2	2	☒	☐	☐	0%	25%	☒	☒	☐	☐	☒	☐	☐	3	2
5	PA 518, Longview Rd	Actuated	1	40	2	2	☒	☐	☐	0%	0%	☐	☒	☐	☐	☐	☐	☐	3	2
4	PA 60, Beaver Valley Expy	Free	0.9	35-40	1	1	☐	☐	☐	50%	50%	☒	☒	☒	☐	☐	☐	☐	3	3
3	PA 318, Main St	Semi-Act	1.1	35-45	1	1	☐	☐	☐	50%	50%	☒	☒	☒	☒	☒	☐	☐	3	3
2	PA 551, Pulaski Rd	SSSC																	3	3

¹ Land Use Context: 1 (Rural Places), 2 (Suburban Neighborhood), 3 (Suburban Corridor), 4 (Suburban Center), 5 (Town / Village Neighborhood), 6 (Town Center), 7 (Urban Core)

² Transportation Context: 1 (Interstate), 2 (Regional Arterial), 3 (Community Arterial), 4 (Community Collector), 5 (Neighborhood Collector), 6 (Local Road / Street)



SECTION 6: SEGMENT INVENTORY (CONTINUED)

Segment Breakpoints			Segment Data					Multimodal Uses				Adjacent Land Uses						Land Use Context ¹	Transportation Context ²		
ID	Intersection / Location	Type of Control	Length (Mi)	Speed Limit (MPH)	# Lanes ↓	# Lanes ↑	Turn Lane(s)	Parking	Transit	% Sidewalk ↓	% Sidewalk ↑	Residential	Commercial	Industrial	Educational	Religious	Health / EMS			Government	
2	PA 551, Pulaski Rd	SSSC																			
			0.4	45	1	1	☒	☐	☐	0%	0%	☒	☐	☐	☐	☐	☐	☐	☐	1	3
1	PA 60, Beaver Valley Expy	Free																			
							☐	☐	☐	--	--	☐	☐	☐	☐	☐	☐	☐	☐	--	--
		--																			
							☐	☐	☐	--	--	☐	☐	☐	☐	☐	☐	☐	☐	--	--
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		--																			

¹ Land Use Context: 1 (Rural Places), 2 (Suburban Neighborhood), 3 (Suburban Corridor), 4 (Suburban Center), 5 (Town / Village Neighborhood), 6 (Town Center), 7 (Urban Core)

² Transportation Context: 1 (Interstate), 2 (Regional Arterial), 3 (Community Arterial), 4 (Community Collector), 5 (Neighborhood Collector), 6 (Local Road / Street)



SECTION 6: SEGMENT INVENTORY (CONTINUED)

Segment Breakpoints			Segment Data					Multimodal Uses				Adjacent Land Uses						Land Use Context ¹	Transportation Context ²			
ID	Intersection / Location	Type of Control	Length (Mi)	Speed Limit (MPH)	# Lanes ←	# Lanes →	Turn Lane(s)	Parking	Transit	% Sidewalk ←	% Sidewalk →	Residential	Commercial	Industrial	Educational	Religious	Health / EMS			Government		
		--																				
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--	--	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--	--	
		--																				
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--	--	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--	--	
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							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--	--	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--	--	
		--																				
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--	--	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--	--	
		--																				

¹ Land Use Context: 1 (Rural Places), 2 (Suburban Neighborhood), 3 (Suburban Corridor), 4 (Suburban Center), 5 (Town / Village Neighborhood), 6 (Town Center), 7 (Urban Core)

² Transportation Context: 1 (Interstate), 2 (Regional Arterial), 3 (Community Arterial), 4 (Community Collector), 5 (Neighborhood Collector), 6 (Local Road / Street)



SECTION 7: ADDITIONAL FIELD OBSERVATIONS, COMMENTS, OR CONCERNS

Where applicable, reference notes by segment (1-2, 2-1, etc.):

- Free-flow speeds estimated to be 5-7 mph greater than posted speed limit; slightly higher through 5-lane section between Nodes #4 and #6.
- Moderately dense traffic during morning travel; estimated to be a 7:30-8:30 AM peak.
- Heaviest peak appeared to occur in early afternoon, maybe 3:30-4:30 PM, as opposed to a later typical 5:00-6:00 PM peak.
- Noticeable slow-downs in right (curbside) travel lane due to vehicles ahead decelerating to enter various driveways or side-streets; additional dedicated right-turn lanes may be beneficial.
- Stopped queues at traffic signals appeared to average 5-10 vehicles per lane during the AM peak.
- Possible excess green-time along many of the signalized side-streets during the AM peak hour.
- Observed potential delay at Node #3 (the W Middlesex traffic signal) with some heavier queues along the side-street; no turn lanes on any approach.
- Observed potential delay at Node #5 (PA 518 / Longview Rd) due to missing side-street turn lanes, permissive-only left-turns, etc.
- Observed potential delay at Nodes #13-14 (Dutch Ln to Lamor Rd) due to closely-spaced traffic signals.
- Several vacant parcels of land available between approximately Nodes #6 and #4.
- Corridor is primarily commercial through Hermitage, whereas the southern end through Shenango and W Middlesex is mixed use throughout.
- Freshwater spring located along PA 18 in vicinity of PA 551 attracts occasional parking / pedestrian traffic along the northbound side of the road.
- Sidewalk segments through W Middlesex (approximately Garfield St to Walnut St / Chestnut St) appear to be in relatively poor condition.



SECTION 7: ADDITIONAL FIELD OBSERVATIONS, COMMENTS, OR CONCERNS (CONTINUED)

Where applicable, reference notes by segment (1-2, 2-1, etc.):

Empty rectangular box for field observations, comments, or concerns.



SECTION 8: PHOTO LOG (CORRIDOR "TYPICAL" SEGMENTS, CRITICAL INTERSECTIONS, "HOT-SPOT" CONCERNS, ETC.)

Photo # / Description:
SB approach to #14 (PA 518 / Lamor Rd)



Photo # / Description:
Segment 13-12 (SB) near Wal-Mart



Photo # / Description:
Segment 11-10 (SB) near schools



Photo # / Description:
SB approach to #9 (E State St)



Photo # / Description:
Segment 6-5 (SB) wide five-lane section



Photo # / Description:
SB approach to #5 (PA 518 / Longview Rd)





SECTION 8: PHOTO LOG (CONTINUED)

Photo # / Description:

SB approach to #4 (Ramp to PA 60 NB)



Photo # / Description:

SB approach to #4 (Ramp to PA 60 SB / I-80)



Photo # / Description:

Segment 4-3 (SB) entering West Middlesex



Photo # / Description:

SB approach to #3 (PA 318, Main St)



Photo # / Description:

Segment 3-2 (SB) approaching PA 551



Photo # / Description:

SB approach to #1 (PA 60 Interchange)





CONGESTION MANAGEMENT PROCESSES
Travel Time Summary (Corridor Overview)

Corridor: #203 / PA 18 (Through Hermitage)
Direction: Both
Scenario: Fall / Winter 2009

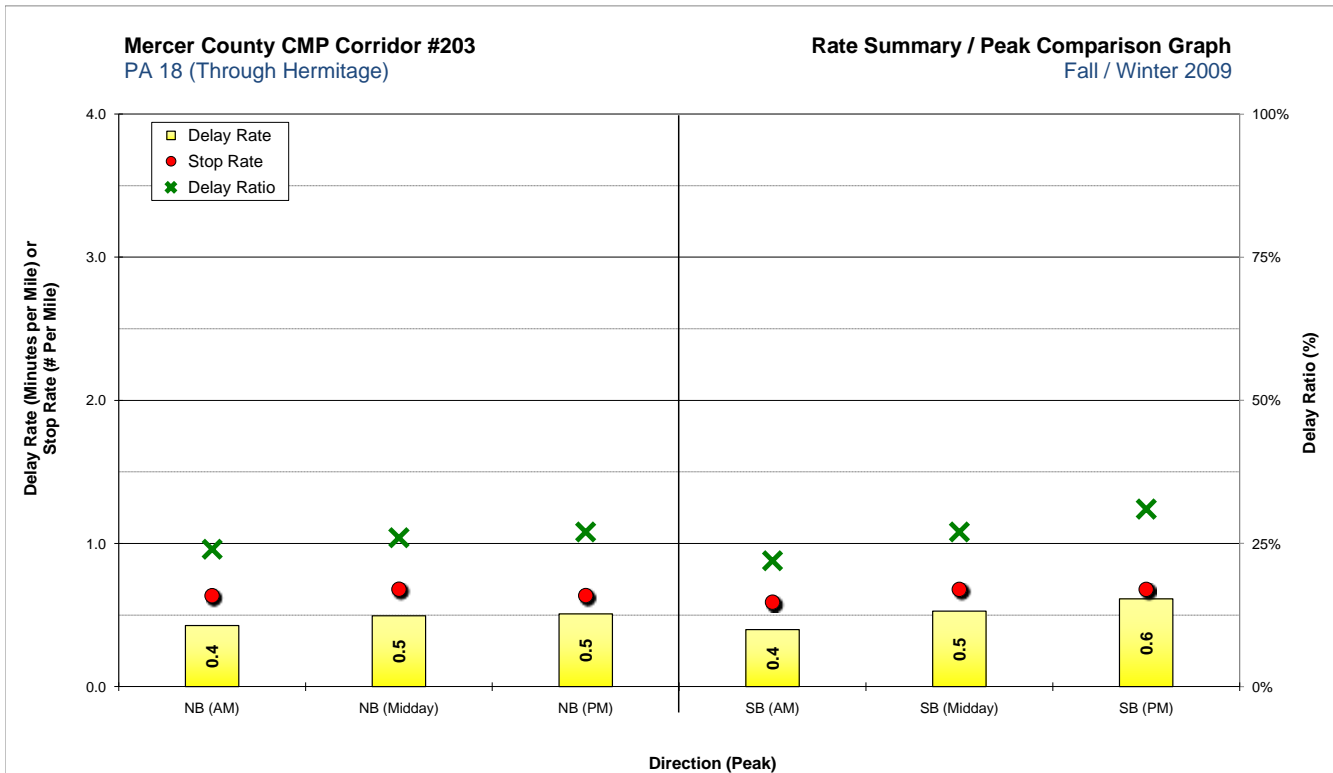
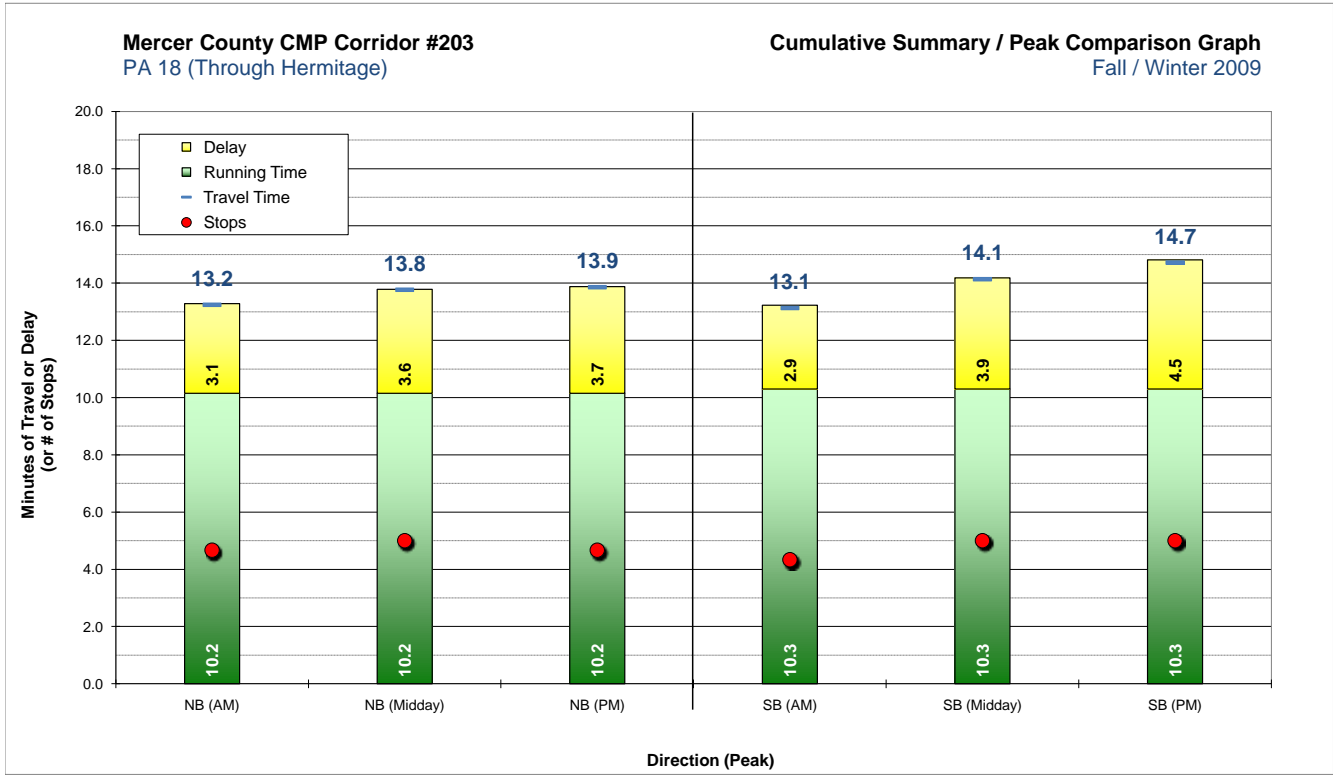
Corridor Summary by Peak / by Direction:

Corridor Description				Travel Time & Delay					Speed & Stops		
Roadway	Direction	Length	Running Time	Travel Time	Delay	Delay Rate	Delay Ratio	Total Delay	Avg Speed	Stops	Stop Rate
	(Peak)	(Miles)	(Min)	(Min)	(Min)	(Min / Mile)	(%)	(veh-hr)	(mph)	(#)	(# / Mile)
PA 18	NB (AM)	7.3	10.2	13.2	3.1	0.4	24%	32	33	4.7	0.6
	NB (Midday)	7.3	10.2	13.8	3.6	0.5	26%	26	32	5.0	0.7
	NB (PM)	7.3	10.2	13.9	3.7	0.5	27%	36	32	4.7	0.6
PA 18	SB (AM)	7.4	10.3	13.1	2.9	0.4	22%	27	34	4.3	0.6
	SB (Midday)	7.4	10.3	14.1	3.9	0.5	27%	45	31	5.0	0.7
	SB (PM)	7.4	10.3	14.7	4.5	0.6	31%	55	30	5.0	0.7

Bi-Directional Segment Summary for "Typical" Peak Period:

"Typical" Peak Period = Weekday PM Peak
 Segment ADT Estimates = 4,100 to 21,200 (veh / day; bi-directional total)
 Segment Peak Hour Volume Estimates = 450 to 1,900 (veh / hr; bi-directional total)

Segment Description				Travel Time & Delay					Speed & Stops		
GIS Segment ID	Limit 1	Limit 2	Length	Travel Time	Delay	Delay Rate	Delay Ratio	Total Delay	Avg Speed	Posted Speed	Stops
			(Min)	(Min)	(Min)	(Min / Mile)	(%)	(veh-hr)	(mph)	(mph)	(#)
203,001,002	I-376	PA 551	0.43	0.6	0.1	0.2	11%	0	44	45	0.0
203,002,003	PA 551	PA 318	1.10	1.8	0.5	0.4	26%	2	38	35	0.3
203,003,004	PA 318	PA 60	0.92	2.2	0.8	0.9	38%	7	26	35	1.0
203,004,005	PA 60	Longview	0.97	1.5	0.1	0.1	5%	2	39	35	0.3
203,005,006	Longview	Morefield	1.74	2.5	0.2	0.1	8%	3	42	40	0.3
203,006,007	Morefield	US 62	0.29	1.1	0.7	2.3	63%	12	20	35	0.7
203,007,008	US 62	Glimcher	0.13	0.6	0.4	3.3	69%	10	18	35	0.5
203,008,009	Glimcher	State	0.14	0.6	0.4	3.1	68%	8	14	35	0.7
203,009,010	State	Mall	0.17	1.4	1.2	6.8	82%	20	8	35	1.0
203,010,011	Mall	Highland	0.50	1.2	0.4	0.8	36%	12	28	35	0.7
203,011,012	Highland	Wal-Mart	0.39	0.9	0.4	0.9	41%	4	30	35	0.5
203,012,013	Wal-Mart	Dutch	0.53	1.0	0.3	0.6	32%	6	34	40	0.3
203,013,014	Dutch	Lamor	0.08	0.7	0.6	7.0	83%	7	11	40	0.7
Corridor Summary	I-376	Lamor	7.4	14.7	4.5	0.6	31%	92	30	45	5.0





CONGESTION MANAGEMENT PROCESSES

Travel Time Summary (Average Data)

Corridor: #203 / PA 18 (Through Hermitage)

Direction NB

Scenario: Weekday PM Peak, Fall / Winter 2009

Notes / Definitions / Abbreviations

- * Units vary as indicated in tables below
- * Summary Table 1 indicates feet, seconds
- * Summary Table 2 indicates miles, minutes

- * BLUE = Input Data via manual direct entry
- * RED = Input Data via formula or worksheet reference updates
- * BLACK = Data automatically calculated

- NID = Node ID Number
- Dir = Direction of Travel
- TT_{avg} = Average Field-measured Travel Time (from Previous Node)
- CTT_{avg} = Average Field-measured Travel Time (Cumulative)
- TL = Travel Length (feet)
- CTL = Travel Length (Cumulative)
- Delay = Travel Delay (from Previous Node) = TT - RT_{DS}
- CD = Travel Delay (Cumulative)
- DPM = Equivalent Travel Delay Rate per Mile (from Previous Node)
- CDPM = Equivalent Travel Delay Rate per Mile (Cumulative)
- RT_{PLS} = "No Stop" Running Time @ Posted Speed (from Previous Node)
- CRT_{PLS} = "No Stop" Running Time @ Posted Speed (Cumulative)
- RT_{DS} = "No Stop" Running Time @ Design Speed (from Previous Node)
- CRT_{DS} = "No Stop" Running Time @ Design Speed (Cumulative)
- AS = Actual Average Speed (from Previous Node)
- CAS = Actual Average Speed (Cumulative)
- DS = Design Speed (or assumed Free-Flow Speed)
- PLS = Posted Speed Limit
- Stops = Number of Stops below 5 mph (from Previous Node)
- Cstops = Number of Stops below 5 mph (Cumulative)

Summary Table: Average Travel Time Data / Calculations (feet, seconds, mph)

Intersection / Link Data			Travel Time (sec)		Travel Length (feet)		Travel Delay (sec)		Delay Rate (sec / mile)		Running Time (sec @ DS)		Running Time (sec @ PLS)		Travel Speeds (mph)		Speed Limits (mph)		Stops (# of)	
Node	NID	Dir	TT _{avg}	CTT _{avg}	TL	CTL	Delay	CD	DPM	CDPM	RT _{DS}	CRT _{DS}	RT _{PLS}	CRT _{PLS}	AS	CAS	DS	PLS	Stops	CStops
I-376 (#1)	1	NB	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0
to PA 551 (Pulaski Rd) (#2)	2	NB	32	32	2,237	2,237	1	1	2	2	31	31	34	34	48	48	50	45	0	0
to PA 318 (Main St) (#3)	3	NB	107	139	5,776	8,012	28	29	26	19	79	110	88	121	38	40	50	45	0	0
to PA 60 (Beaver Valley Expy) (#4)	4	NB	93	232	4,850	12,863	10	39	11	16	83	193	94	216	36	38	40	35	0	1
to PA 518 (Longview Rd) (#5)	5	NB	91	323	5,106	17,969	4	44	4	13	87	280	99	315	39	38	40	35	0	1
to Morefield Rd (#6)	6	NB	150	474	9,138	27,107	12	55	7	11	139	419	156	471	42	39	45	40	0	1
to US 62 (Shenango Valley Fwy) (#7)	7	NB	63	537	1,520	28,627	40	95	139	18	23	442	26	497	20	36	45	40	1	2
to Glimcher Blvd (#8)	8	NB	36	573	666	29,292	25	120	196	22	11	453	13	510	18	35	40	35	0	2
to E State St (SR 3008) (#9)	9	NB	38	611	735	30,028	26	146	187	26	12	465	14	524	14	34	40	35	1	3
to Park Place MS / Mall (#10)	10	NB	20	630	882	30,910	4	150	26	26	15	480	17	542	31	34	40	35	0	3
to Highland Rd (SR 3014) (#11)	11	NB	64	695	2,602	33,512	20	170	41	27	45	525	51	592	29	33	40	35	1	4
to Wal-Mart Dr (#12)	12	NB	36	731	2,057	35,569	1	172	3	25	35	569	40	632	39	33	40	35	0	4
to Dutch Ln (SR 3035) (#13)	13	NB	58	789	2,742	38,311	17	188	32	26	42	602	47	679	34	33	45	40	0	4
to PA 518 / Lamor Rd (SR 3020) (#14)	14	NB	42	832	442	38,753	35	224	422	30	7	609	8	687	11	32	45	40	1	5
Corridor Average			832		38,753		224		30		609		687		31.9		Varies		4.7	

Summary Table: Average Travel Time Data / Calculations (miles, minutes, mph)

Intersection / Link Data			Travel Time (min)		Travel Length (mile)		Travel Delay (min)		Delay Rate (min / mile)		Running Time (min @ DS)		Running Time (min @ PLS)		Travel Speeds (mph)		Speed Limits (mph)		Stops (# of)	
Node	NID	Dir	TT _{avg}	CTT _{avg}	TL	CTL	Delay	CD	DPM	CDPM	RT	CRT	RT _{PLS}	CRT _{PLS}	AS	CAS	DS	PLS	Stops	CStops
I-376 (#1)	1	NB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0	0
to PA 551 (Pulaski Rd) (#2)	2	NB	0.5	0.5	0.4	0.4	0.0	0.0	0.0	0.0	0.5	0.5	0.6	0.6	48	48	50	45	0	0
to PA 318 (Main St) (#3)	3	NB	1.8	2.3	1.1	1.5	0.5	0.5	0.4	0.3	1.3	1.8	1.5	2.0	38	40	50	45	0	0
to PA 60 (Beaver Valley Expy) (#4)	4	NB	1.6	3.9	0.9	2.4	0.2	0.7	0.2	0.3	1.4	3.2	1.6	3.6	36	38	40	35	0	1
to PA 518 (Longview Rd) (#5)	5	NB	1.5	5.4	1.0	3.4	0.1	0.7	0.1	0.2	1.5	4.7	1.7	5.3	39	38	40	35	0	1
to Morefield Rd (#6)	6	NB	2.5	7.9	1.7	5.1	0.2	0.9	0.1	0.2	2.3	7.0	2.6	7.9	42	39	45	40	0	1
to US 62 (Shenango Valley Fwy) (#7)	7	NB	1.1	8.9	0.3	5.4	0.7	1.6	2.3	0.3	0.4	7.4	0.4	8.3	20	36	45	40	1	2
to Glimcher Blvd (#8)	8	NB	0.6	9.5	0.1	5.5	0.4	2.0	3.3	0.4	0.2	7.6	0.2	8.5	18	35	40	35	0	2
to E State St (SR 3008) (#9)	9	NB	0.6	10.2	0.1	5.7	0.4	2.4	3.1	0.4	0.2	7.8	0.2	8.7	14	34	40	35	1	3
to Park Place MS / Mall (#10)	10	NB	0.3	10.5	0.2	5.9	0.1	2.5	0.4	0.4	0.3	8.0	0.3	9.0	31	34	40	35	0	3
to Highland Rd (SR 3014) (#11)	11	NB	1.1	11.6	0.5	6.3	0.3	2.8	0.7	0.4	0.8	8.8	0.8	9.9	29	33	40	35	1	4
to Wal-Mart Dr (#12)	12	NB	0.6	12.2	0.4	6.7	0.0	2.9	0.1	0.4	0.6	9.3	0.7	10.5	39	33	40	35	0	4
to Dutch Ln (SR 3035) (#13)	13	NB	1.0	13.2	0.5	7.3	0.3	3.1	0.5	0.4	0.7	10.0	0.8	11.3	34	33	45	40	0	4
to PA 518 / Lamor Rd (SR 3020) (#14)	14	NB	0.7	13.9	0.1	7.3	0.6	3.7	7.0	0.5	0.1	10.2	0.1	11.4	11	32	45	40	1	5
Corridor Average			13.9		7.3		3.7		0.5		10.2		11.4		31.9		Varies		4.7	

0.6 (stops/mi)

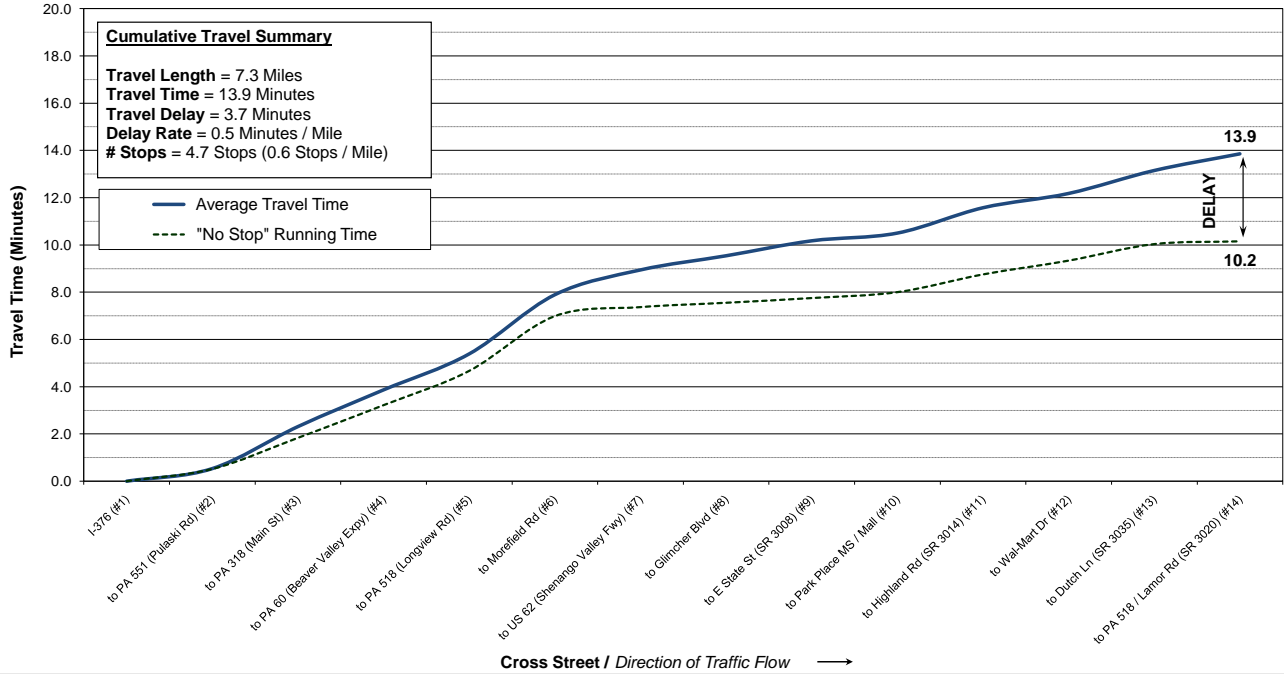


CONGESTION MANAGEMENT PROCESSES
Travel Time Summary (Average Data)

Corridor: #203 / PA 18 (Through Hermitage)
Direction: NB
Scenario: Weekday PM Peak, Fall / Winter 2009

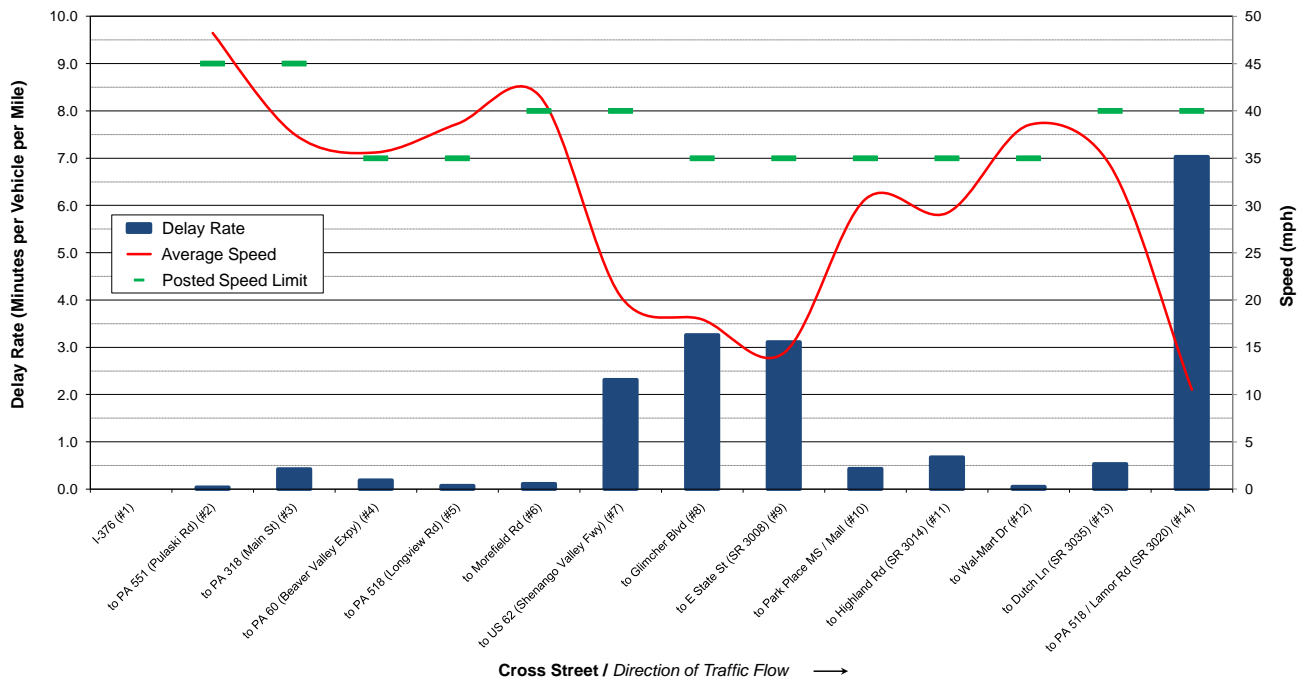
Mercer County CMP Corridor #203
PA 18 (Through Hermitage)

Cumulative Travel Time Graph
Fall / Winter 2009 - Weekday PM Peak (NB)



Mercer County CMP Corridor #203
PA 18 (Through Hermitage)

Segment Speed & Delay Graph
Fall / Winter 2009 - Weekday PM Peak (NB)





CONGESTION MANAGEMENT PROCESSES

Travel Time Summary (Average Data)

Corridor: #203 / PA 18 (Through Hermitage)

Direction SB

Scenario: Weekday PM Peak, Fall / Winter 2009

Notes / Definitions / Abbreviations

- * Units vary as indicated in tables below
- * Summary Table 1 indicates feet, seconds
- * Summary Table 2 indicates miles, minutes

- * BLUE = Input Data via manual direct entry
- * RED = Input Data via formula or worksheet reference updates
- * BLACK = Data automatically calculated

- NID = Node ID Number
- Dir = Direction of Travel
- TT_{avg} = Average Field-measured Travel Time (from Previous Node)
- CTT_{avg} = Average Field-measured Travel Time (Cumulative)
- TL = Travel Length (feet)
- CTL = Travel Length (Cumulative)
- Delay = Travel Delay (from Previous Node) = TT - RT_{DS}
- CD = Travel Delay (Cumulative)
- DPM = Equivalent Travel Delay Rate per Mile (from Previous Node)
- CDPM = Equivalent Travel Delay Rate per Mile (Cumulative)
- RT_{PLS} = "No Stop" Running Time @ Posted Speed (from Previous Node)
- CRT_{PLS} = "No Stop" Running Time @ Posted Speed (Cumulative)
- RT_{DS} = "No Stop" Running Time @ Design Speed (from Previous Node)
- CRT_{DS} = "No Stop" Running Time @ Design Speed (Cumulative)
- AS = Actual Average Speed (from Previous Node)
- CAS = Actual Average Speed (Cumulative)
- DS = Design Speed (or assumed Free-Flow Speed)
- PLS = Posted Speed Limit
- Stops = Number of Stops below 5 mph (from Previous Node)
- Cstops = Number of Stops below 5 mph (Cumulative)

Summary Table: Average Travel Time Data / Calculations (feet, seconds, mph)

Intersection / Link Data			Travel Time (sec)		Travel Length (feet)		Travel Delay (sec)		Delay Rate (sec / mile)		Running Time (sec @ DS)		Running Time (sec @ PLS)		Travel Speeds (mph)		Speed Limits (mph)		Stops (# of)	
Node	NID	Dir	TT _{avg}	CTT _{avg}	TL	CTL	Delay	CD	DPM	CDPM	RT _{DS}	CRT _{DS}	RT _{PLS}	CRT _{PLS}	AS	CAS	DS	PLS	Stops	CStops
PA 518 / Lamor Rd (SR 3020) (#14)	14	SB	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0
to Dutch Ln (SR 3035) (#13)	13	SB	26	26	441	441	19	19	228	228	7	7	8	8	23	23	45	40	0	0
to Wal-Mart Dr (#12)	12	SB	61	87	2,774	3,215	20	39	37	63	42	49	47	55	34	28	45	40	0	1
to Highland Rd (SR 3014) (#11)	11	SB	52	139	2,054	5,269	21	60	55	60	31	80	35	90	30	27	45	40	1	1
to Park Place MS / Mall (#10)	10	SB	70	208	2,619	7,888	25	85	50	57	45	125	51	141	28	26	40	35	1	2
to E State St (SR 3008) (#9)	9	SB	85	293	898	8,786	70	154	410	93	15	140	17	158	8	21	40	35	1	3
to Glimcher Blvd (#8)	8	SB	27	320	730	9,516	15	169	105	94	12	152	14	173	24	20	40	35	0	3
to US 62 (Shenango Valley Fwy) (#7)	7	SB	34	354	649	10,165	23	192	185	99	11	163	13	185	22	20	40	35	1	3
to Morefield Rd (#6)	6	SB	42	396	1,515	11,680	17	208	58	94	26	189	30	215	27	20	40	35	1	4
to PA 518 (Longview Rd) (#5)	5	SB	144	541	9,167	20,847	5	214	3	54	139	328	156	371	44	26	45	40	0	4
to PA 60 (Beaver Valley Expy) (#4)	4	SB	81	621	5,102	25,948	3	217	3	44	77	405	87	458	44	29	45	40	0	4
to PA 318 (Main St) (#3)	3	SB	133	754	4,879	30,827	50	267	54	46	83	488	95	553	26	28	40	35	1	5
to PA 551 (Pulaski Rd) (#2)	2	SB	94	848	5,784	36,611	-5	262	-5	38	99	587	113	666	42	30	40	35	0	5
to I-376 / PA 60 (Beaver Valley Expy) (#1)	1	SB	35	883	2,255	38,866	4	266	9	36	31	618	34	700	44	30	50	45	0	5
Corridor Average			883		38,866		266		36		618		700		30.1		Varies		5.0	

Summary Table: Average Travel Time Data / Calculations (miles, minutes, mph)

Intersection / Link Data			Travel Time (min)		Travel Length (mile)		Travel Delay (min)		Delay Rate (min / mile)		Running Time (min @ DS)		Running Time (min @ PLS)		Travel Speeds (mph)		Speed Limits (mph)		Stops (# of)	
Node	NID	Dir	TT _{avg}	CTT _{avg}	TL	CTL	Delay	CD	DPM	CDPM	RT	CRT	RT _{PLS}	CRT _{PLS}	AS	CAS	DS	PLS	Stops	CStops
PA 518 / Lamor Rd (SR 3020) (#14)	14	SB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0	0
to Dutch Ln (SR 3035) (#13)	13	SB	0.4	0.4	0.1	0.1	0.3	0.3	3.8	3.8	0.1	0.1	0.1	0.1	23	23	45	40	0	0
to Wal-Mart Dr (#12)	12	SB	1.0	1.4	0.5	0.6	0.3	0.6	0.6	1.1	0.7	0.8	0.8	0.9	34	28	45	40	0	1
to Highland Rd (SR 3014) (#11)	11	SB	0.9	2.3	0.4	1.0	0.4	1.0	0.9	1.0	0.5	1.3	0.6	1.5	30	27	45	40	1	1
to Park Place MS / Mall (#10)	10	SB	1.2	3.5	0.5	1.5	0.4	1.4	0.8	0.9	0.8	2.1	0.9	2.3	28	26	40	35	1	2
to E State St (SR 3008) (#9)	9	SB	1.4	4.9	0.2	1.7	1.2	2.6	6.8	1.5	0.3	2.3	0.3	2.6	8	21	40	35	1	3
to Glimcher Blvd (#8)	8	SB	0.5	5.3	0.1	1.8	0.2	2.8	1.7	1.6	0.2	2.5	0.2	2.9	24	20	40	35	0	3
to US 62 (Shenango Valley Fwy) (#7)	7	SB	0.6	5.9	0.1	1.9	0.4	3.2	3.1	1.7	0.2	2.7	0.2	3.1	22	20	40	35	1	3
to Morefield Rd (#6)	6	SB	0.7	6.6	0.3	2.2	0.3	3.5	1.0	1.6	0.4	3.2	0.5	3.6	27	20	40	35	1	4
to PA 518 (Longview Rd) (#5)	5	SB	2.4	9.0	1.7	3.9	0.1	3.6	0.1	0.9	2.3	5.5	2.6	6.2	44	26	45	40	0	4
to PA 60 (Beaver Valley Expy) (#4)	4	SB	1.3	10.4	1.0	4.9	0.1	3.6	0.1	0.7	1.3	6.8	1.4	7.6	44	29	45	40	0	4
to PA 318 (Main St) (#3)	3	SB	2.2	12.6	0.9	5.8	0.8	4.4	0.9	0.8	1.4	8.1	1.6	9.2	26	28	40	35	1	5
to PA 551 (Pulaski Rd) (#2)	2	SB	1.6	14.1	1.1	6.9	0.0	4.4	0.0	0.6	1.7	9.8	1.9	11.1	42	30	40	35	0	5
to I-376 / PA 60 (Beaver Valley Expy) (#1)	1	SB	0.6	14.7	0.4	7.4	0.1	4.5	0.2	0.6	0.5	10.3	0.6	11.7	44	30	50	45	0	5
Corridor Average			14.7		7.4		4.5		0.6		10.3		11.7		30.1		Varies		5.0	

0.7 (stops/mi)



CONGESTION MANAGEMENT PROCESSES
Travel Time Summary (Average Data)

Corridor: #203 / PA 18 (Through Hermitage)
Direction: SB
Scenario: Weekday PM Peak, Fall / Winter 2009

