MMMPO Technical Committee on Pedestrian and Bicycle Data Collection

June 28, 2021 (Monday)

6:00 PM

Agenda

1. Review and select type 1 (seasonal factor) count locations

2. Identify potential technologies to explore for selected type 1 count

locations 3. Discussion: type 2 (temporary) count locations

Memorandum

Date: May 25, 2021

To: Pedestrian/Bicycle Data Collection Committee

From: MMMPO Staff

Subject: Pedestrian/Bicycle Traffic Count Location Types

This memo summarizes the discussion of the committee meeting on May 24, regarding selecting traffic count locations for pedestrians and bicyclists.

Two Types of locations

Type 1. Counts to develop seasonal factors. Those counts will be on the regional pedestrian/bicycle network identified in Pedestrian and Bicycle Regional Plan. Ideally, count locations will be at a pinch point, a location funnels pedestrian/bicycle traffic from/to adjacent areas.

The counts will be automatic and permanent, using camera, infrared detectors, or other appropriate sensors. Once reliable seasonal factors are developed, the Committee will consider relocating and removing certain counts, as well as replacing some of the counts with manual counts.

The Type 1 counts will cover the following location types:

- State road going through urban areas
- Neighborhood street near schools (with sidewalk)
- Rail Trail
- Bridges (with and without sidewalks)
- Feeder routes to campus buildings, from parking lot and/or high-density student residence areas.
- Feeder routes to Mountain Line services

Type 2. Counts to assess pedestrian demand or to provide data for pedestrian infrastructure improvement. Those counts will be at the locations where there is a pedestrian infrastructure deficiency- the demand gap, is identified as well as locations where data is needed to justify pedestrian infrastructure investments.

The counts will be conducted manually. The MPO will use seasonal factors to estimate annual pedestrian/bicycle daily traffic for those locations.

Next Step

Jing Zhang will create a location list and map based on the location type outlined for the Type 1 Counts and the input from the Committee. Each location will include features, such as location type, schools, vehicle volume/speed, pedestrian volume, transit access, ADA compliance, risk potentials, and etc.

The list and map will be available for the committee review one week before the June meeting.

Name	Description	Capture Extra Data (gender, age, helmet, direction)	Intersection Count	Screen-line Count	Accuracy	Labor Cost (hourly)	Equipment Cost	Installation Complexity	Data Verification	Long Term	Mobility	Note
Manual Counts	Person situated in the field performs the counting.	Yes	Yes	Yes	High, if well trained	High	Low	Low	No	No	Yes	Can be used as a baseline to identify errors and correction factors for automated counting devices.
Manual Video Counts	Video recorded onsite and reviewed and tallied at a later time	Yes	Yes	Yes	High, if well executed	Medium	Medium	Medium	Yes	Yes	Yes	Can be used as a baseline to identify errors and correction factors for automated counting devices.
Computer Visioning	Computer counts and classifies users through videos by model or algorithm	Possible	Yes	Yes	High, if well programmed	Low	Medium – High	High	Yes	Yes	Yes	Potentially tech support from WVU
Active Infrared	detectors sense and count pedestrians when an infrared beam is broken.	No	No	Yes	Medium	Low	Medium	Low - Medium	No	Yes	Yes	Mon Trail Conservancy is using it on trails
Passive Infrared	Detectors produce an image of heat that indicates the presence of a pedestrian or bicyclist.	No	Yes	Yes	Medium	Low	Low - Medium	Low - Medium	No	Yes	Yes	Most widely tested and available. May not suitable for campus. Errors in counting groups
Pneumatic Tubes	Tubes placed on the surface detecting crossing traffic which generates pressure on them.	No	Yes	Yes	Medium	Low	Low – Medium	Medium – High	No	Yes	Yes	Bicycle only
Piezometric Pads/Strips	Devices embedded within the walking surface to detect the pressure	No	Yes	Yes	Medium	Low	Medium - High	High	No	Yes	No	High installation cost unless installed with other construction projects. Low maintenance costs.
Crowdsourcing / On-Situ	Mobile applications record real-time, geotagged data points.	Yes	N/A	N/A	High	Low	N/A	N/A	N/A	Yes	N/A	Limited in sample size. Biased to specific users. Administrative complexity.

		State Rt through Urban Areas	NBHD Street	NBHD Street Near School	Urban Core	Pinch Point	Bridges	WVU Feeder	Trainsit Feeder (Bus, PRT)	Vehicle Volume	Vehicle Speed	Pedestrian Volume	
1	Beechurst-Campus	Yes			Yes			Yes		High	Medium	High	
2	Collins Ferry-Timberline Apt		Yes	Yes		Yes				Low	Low	Low	
3	Dorsey-Philip			Yes		Yes				Medium	Medium	Low	
4	Fairmont-DuPont	Yes	Yes			Yes			Yes	High	High	Low	
5	High-Walnut	Yes			Yes					Medium	Medium	High	
6	Laurel-Parkview		Yes							Low	Low	Low	
7	Patteson-University	Yes			Yes					Medium	High	Medium	
8	Pleasant St Bridge	Yes					Yes	Yes		High	Medium	High	
9	Price-Cornell		Yes	Yes						Low	Low	Medium	
10	Protzman near Mason		Yes			Yes		Yes		Medium	Low	Low	
11	S Walnut St Bridge		Yes				Yes			Medium	Medium	High	
12	University near 8th	Yes			Yes	Yes		Yes		Medium	Medium	Medium	
13	University-Boyers		Yes							Medium	Medium	Low	
14	University-Oakland		Yes		Yes			Yes	Yes	Medium	Medium	High	
15	Van Voorhis-Burroughs	Yes			Yes	Yes		Yes	Yes	High	Medium	Medium	
16	Walnut-Chestnut	Yes			Yes				Yes	Medium	Medium	High	
17	Westover Bridge	Yes			Yes	Yes	Yes			High	Medium	Medium	
18	Westover-Triangle	Yes	Yes		Yes				Yes	High	Medium	Medium	
19	Willey-Richwood	Yes	Yes		Yes	Yes		Yes		Medium	Medium	High	
20	WV 705-Pineview	Yes			Yes			Yes	Yes	Medium	High	Medium	

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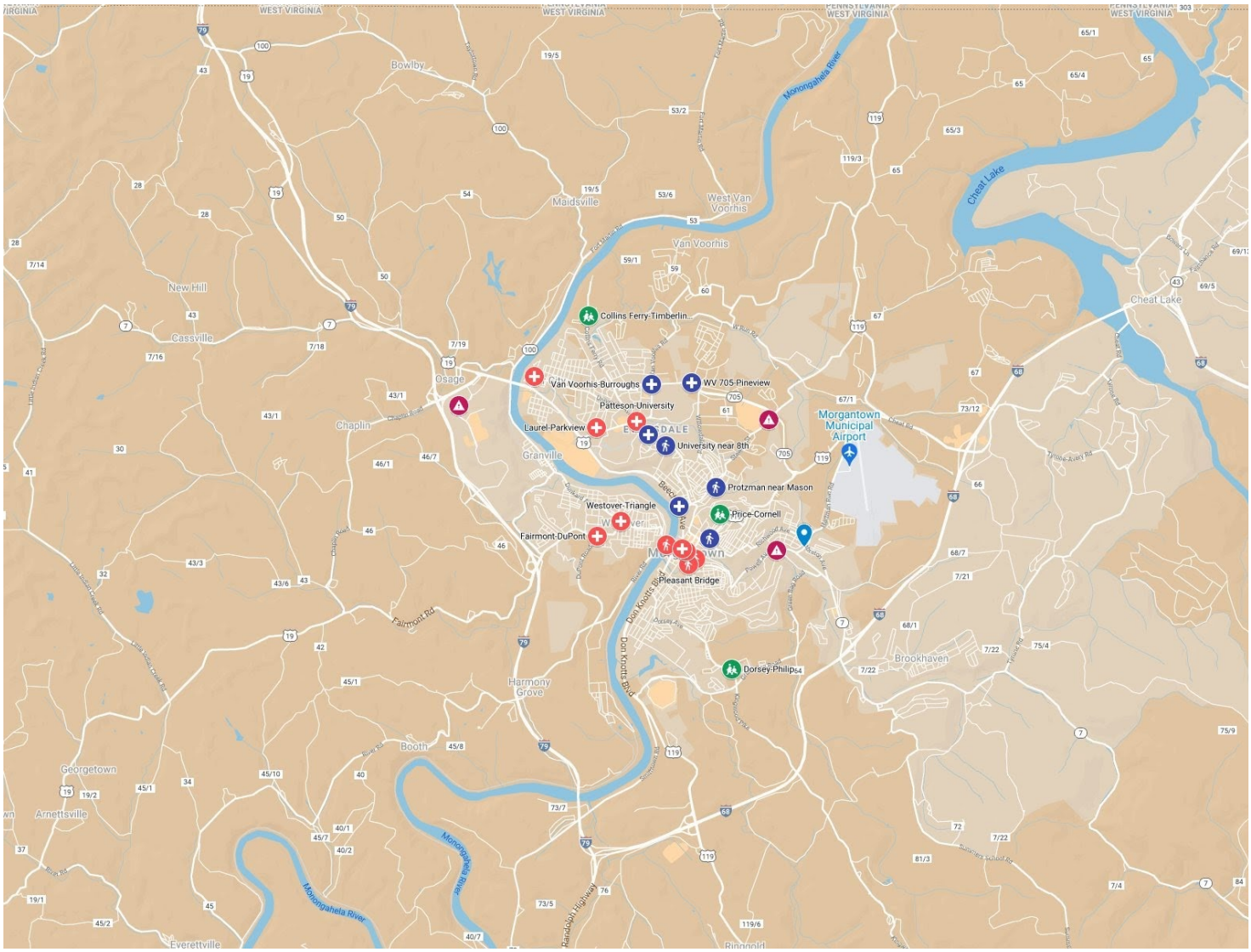
Monongahela River
Lazzelle Union Rd
Collins Ferry Rd
University Ave
Van Voorhis Rd
Chestnut Ridge Rd
Patteson Drive
Star City
SUNCREST
EVANSDALE
NORTH HILL
Granville
Popenoe Run
West Run
Headlee Spring
Hunter Spring
Willowdale Rd
Lashley St
Southview St
Valley View St
Somerset St
Fenwick Ave
Fairfield St
Lions Ave
Cypress St
Christy St
Elmer Prince Dr
Valley View Ave
Irwin St
Evansdale Dr
Parkview Dr
Krepps Ave
Lake St
Bellaire Dr
Maple Dr
Mon General Dr
Evans St
North St
Randolph Rd
Spring St
Richland Ave
Jones Ave
Fairfax Dr
Riverview Dr
Rawley Ave
Rawley Ln
Oakland St
Rec Center Dr
Birch St
Hoclar St
Leeway St
Canton Ave
Center Hill Ave
Saratoga Ave
Rand St
Wildwood St
Normandy St
Canfield St
N Main St
Bitonti St
Cain St
N Parkview Dr
Jacobs Dr
Mulberry St
Jr Ave
Civitan St
Kiwanis Ave
Rebecca St
Eastern Ave
Munsey Ave
Windsor Ave
Koontz Ave
Kenmore St
Rotary St
Elmhurst St
Baldwin St
Medical Center Dr
Village Dr
Valley Rd
Martin St
Meridan St
Aspen St
Dogwood Ave
Anderson Ave
Oakview Dr
Forest Dr
Villa View Dr
Wedgewood Dr
Madera Dr
Idaho Ln
Poplar Woods Dr
Kenwood Pl
Nueva Dr
Vista Pl
Villa Pl
Braewick Dr
Woodcrest Pl
Hunter Ln
Parry Ave
Charles St
Cherry Ln
Ellen Dr
Pineview Dr
J D Anders
Cottonwood St
Alpine St
Bergamont St
Northwest Dr
Tremont St
Quadrilla St
Station St
Stanley St
District Dr
Morgan Dr
Lakeview Dr
Hillview Dr
Western Ave
Woodland Dr
Eastern Ave
Lakeland Ave
Dogwood Ave
Somerset St
Fenwick St
Crawford Ave
Congress Ave
Herman Ave
Mansfield Ave
University Commons Dr
Lowers Ave
Monongahela River
's Run Road
54/2
54/2
54/2
100
100
100
19
19
19
55
61
67/1

Monongahela River
Falling Run
Beechurst Ave
Dunkard Ave
Monongahela Ave
Western Ave
Pennsylvania Ave
Erie St
Alicia St
Rhode Island Ave
W Park Ave
Polling Ave
Ohio Ave
New York Ave
New Jersey St
Carolina Ave
Columbus St
Savannah St
Cleveland Ave
McKinley St
Millvan St
Highland St
Morrison Ave
East St
Lane St
West St
W Main St
W High St
Monongahela Ave
Holland Ave
Vincent Ave
Jefferson St
Tyler St
Jackson St
Linden St
Garfield Ave
Harrison St
Thornhill St
Nightshire Ave
Lockview Ave
W Jackson St
DuPont Road
Westridge Dr
Auburn Dr
River Rd
Pleasant St
Kirk St
High St
Spruce St
Forest Ave
University Ave
College Ave
Madison Ln
N High St
Prospect St
Spruce St
Richwood Ave
Pearl Ave
Allen Ave
Bandilla Ave
Union Ave
Clinton Ave
McKinley Ave
Dayton St
James St
Richwood Ave
Deckers Creek Ave
Hogback
Brockway Ave
Clark St
Cobun Ave
Kingwood St
GREENMONT
Arch St
Green St
Watts St
Winsley St
Dunbar St
Front St
Wilson Ave
Park St
Ash St
Edgewood St
Euclid Ave
Maple Ave
Linden St
Simpson St
Allison St
Prairie Ave
Don Knotts Blvd
Dorsey Ave
S High St
Wagner Rd
Waltman St
Lillian St
Lookout Rd
Tr 1
Tr 2
19/19
45
119
19
SOUTH PARK
Lincoln Ave
Logan Ave
Grant St
Park St
Gordon St
Franklin St
Wabash St
Buckhannon Ave
Huntington Ave
Courtney
Sherman Ave
Richmond St
Grandview Ave
Webster Ave
Charleston Ave
Sheldon Ave
Summers St
Ross St
Nassau Dr
Stonehurst Dr
Wayne St
Curtis Ave
HOPECREST
Lebanon St
Stanford St
King St
Elysian Ave
Madigan Ave
West Virginia Ave
Hite St
Southern Ave
Globe Ave
Astor Ave
Hayes St
Hess St
Callen Ave
Mississippi St
Ohio Ave
Madison Ave
FIRST WARD
Extal Pkwy
Pkwy Dr
M Tec Dr
Schoolbus Dr
Apollo Dr
Micrus Dr
Lacomb St
Birds Eye View Dr
City View Dr
North Metro Drive
Google My Maps


Collins Ferry-Timberlin...
Van Voorhis-Burroughs
WV 705-Pineview
Patteson-University
Laurel-Parkview
University near 8th
Protzman near Mason
Westover-Triangle
Price-Cornell
Fairmont-DuPont
Pleasant Bridge
Dorsey-Philips
Morgantown Municipal Airport
Monongahela River
Cheat Lake
Don Knotts Blvd
Fairmont Rd
Randolph Highway
Bowlby
Maidsville
West Van Voorhis
Van Voorhis
New Hill
Cassville
Osage
Chaplin
Granville
Harmony Grove
Booth
Georgetown
Arnettsville
Everettville
Brookhaven
Ringgold