T&E COMMITTEE #2
February 24, 2021

M E M O R A N D U M

February 19, 2021

TO: Transportation and Environment (T&E) Committee

FROM: Glenn Orlin, Senior Analyst

SUBJECT: Facility planning review of Fenton Street Cycletrack project[1]

PURPOSE: To review the study and provide guidance to the Department of Transportation (DOT)

Participants
Dan Sheridan, Chief, Planning and Design Section, Division of Transportation Engineering, DOT
Corey Pitts, Planning Section Manager, Division of Transportation Engineering, DOT
Matt Johnson, Senior Planner, Division of Transportation Engineering, DOT
David Anspacher, Supervisor, Countywide Planning, Planning staff
Eli Glazier, Planner/Coordinator, Countywide Planning, Planning staff

DOT has completed the first (feasibility) phase of facility planning for a cycletrack along Fenton Street in the Silver Spring Central Business District that would run for 0.7 miles between Cameron Street and Gist Avenue. Its Fenton Street Bikeway Study (November 2020) can be found here: https://www.montgomerycountymd.gov/dot-dte/Resources/Files/Fentonvillage/Meetings/FentonBikewayStudy_Report_rsz.pdf. The Planning Board reviewed the study during its January 21, 2021 meeting. The objective of this worksession is for the Committee to provide feedback and guidance to DOT as it completes preliminary engineering. DOT's briefing presentation (with background slides) is on ©1-46, the Planning Board's letter is on ©47, and the Planning staff's report is on ©48-66. A history of this study is on ©67-68. A summary of the public engagement on this project, starting in 2017, is on ©69-70.

Alternatives studied. DOT studied seven alternatives. All alternatives provide for a two-way cycletrack on the west side of the roadway, separated from the general use lanes by a raised concrete barrier. It retains Fenton Street as a two-way street for motor vehicles, including the five bus routes that run along it. The seven alternatives described in DOT's report are:

- *Alternative A – Widening in Fenton Village; favors on-street parking.* This alternative favors on-street parking by combining all turning and thru movements into one shared lane within Fenton Village.

[1] Key words: #Fenton Street Cycletrack, bikeway

- *Alternative B – Widening in Fenton Village; impacts to parking in favor of motorists and bicyclists.* This alternative favors motorists and bicyclists by providing exclusive left-turn lanes for vehicles. This provides queuing space for left-turning vehicles and protection for bicyclists from collisions with left-turning vehicles.
- *Alternative C – Widening in Fenton Village; impacts to motorists in favor of bicyclists and parking.* This alternative provides a balanced approach by providing exclusive NB left-turns, which benefits bicyclist safety. It provides a shared SB travel lane, which benefits parking but impacts traffic.
- *Alternative D – No widening in Fenton Village; favors on-street parking.* This alternative favors on-street parking by combining all turning and thru movements into one shared lane within Fenton Village.
- *Alternative E – No widening in Fenton Village; impacts to parking in favor of motorists and bicyclists.* This alternative favors motorists and bicyclists by providing exclusive left-turn lanes for vehicles. This provides queuing space for left-turning vehicles and protection for bicyclists from collisions with left-turning vehicles.
- *Alternative F – Combination of widening and no widening in Fenton Village; impacts to motorists in favor of parking and bicyclists, no NB left-turns at Thayer Avenue.* This alternative is a variation of Alternative C.
- *Alternative G – Combination of widening and no widening in Fenton Village; impacts to motorists in favor of parking and bicyclists, no NB left-turns at Silver Spring Avenue.* This alternative also is a variation of Alternative C.

Planning staff 's summary comparison of the alternatives is shown below:

Alternative		**A**			**B**			**C**			**D**			**E**			**F**			**G**		
District		FV	E	NSS	FV	E	NSS	FV	E	NSS	FV	E	NSS	FV	E	NSS	FV	E	NSS	FV	E	NSS
Right-of-Way Impacts	Number of Impacted Parcels	14	0	0	14	0	0	14	0	0	4	0	0	4	0	0	9	0	0	9	0	0
	Driveways Impacted (during construction)	18	1*	0	18	1*	0	18	1*	0	8	1*	0	8	1*	0	12	1*	0	12	1*	0
	Café Zone Impacted	3	0	0	3	0	0	3	0	0	1	0	0	1	0	0	2	0	0	2	0	0
Potential Relocations	Storm Drains	17	5	0	17	0	0	17	5	0	15	5	0	15	5	0	17	5	0	17	5	0
	Utility Poles	11	0	0	11	2	1	11	0	0	7	0	0	7	0	0	7	0	0	7	0	0
	Fire Hydrants	2	2	1	2	5	0	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1
	Street Lights	44	5	0	44	4	3	44	5	0	23	5	0	23	5	0	34	5	0	34	5	0
Potential Environmental Impacts	Street Trees	33	4	3	33	4	3	33	4	3	9	4	3	9	4	3	20	4	3	20	4	3
Traffic Impacts	Level of Service D or Better at All Intersections	No			Yes			Yes			No			Yes			Yes			Yes		
	Average Travel Time (Change from Existing), minutes	7.5 (+3.4)			5 (+0.9)			4.8 (+0.7)			7.5 (+3.4)			4.8 (+0.7)			4.8 (+0.7)			4.7 (+0.6)		
	Reconstruct Traffic Signal	4	0	1	4	0	1	4	0	1	4	0	1	4	0	0	4	0	1	4	0	1
Parking Impacts	Change in On-Street Parking Spots	0	+3	0	-22	-5	-21	-18	+2	-10	-33	+3	0	-40	+2	-10	-21	-5	-11	-19	-5	-11
Cost		$13.6 million			$13.7 million			$13.7 million			$10.9 million			$10.9 million			$12.2 million			$12.2 million		

* Hotel drop-off area

FV - Fenton Village
E - Ellsworth District
NSS - North Silver Spring

Agency and individual comments. The Planning Board recommendations for the Fenton Street Cycletrack are:

- Advance Alternative E as the preferred alternative (also recommended by the Planning staff).
- Remove additional on-street parking from the project if doing so would allow the bikeway and street buffer to be widened to achieve the dimensions recommended in the Bicycle Master Plan.
- For future bikeway projects, treat preservation of on-street parking to be the lowest priority.
- Coordinate with Montgomery Planning staff to undertake a design process to better separate pedestrians, bicyclists, motor vehicles and light rail vehicles at the Fenton Street/Wayne Avenue intersection (also recommended by the Planning staff).

The Washington Area Bicyclist Association (WABA) and Alison Gillespie also recommend Alternative E. DOT's consultant recommends Alternative G, as does Karen Roper representing Fenton Village, Inc.

Council staff comments. In many respects, Alternative E is the superior option. As the Planning staff's report notes, it provides the most safety for bicyclists and pedestrians: it provides for an exclusive left-turn lane at intersections for motor vehicles, which means that bikers and pedestrians would have a protected signal phase at each intersection. While all alternatives increase travel time for cars and buses, the added delay is minimal: it would be 42 seconds (17%) longer for an end-to-end trip, but most motor vehicle trips are not end-to-end. It has the fewest right-of-way impacts, requiring the fewest relocations, the least impact on sidewalk space, the fewest street trees to remove, and the fewest streetlights to relocate. At $10.9 million, it also has the lowest construction cost.

Its drawback is the loss of on-street parking spaces, especially in Fenton Village, where 40 on-street spaces would be removed, spots that are also used as loading zones. There is a surfeit of parking nearby—primarily in Garage 3 between Silver Spring and Thayer Avenues—but even with incentive pricing (charging more for parking on-street than in the garage) this could affect those Fenton Street businesses that depend on customers being readily available to make a quick and convenient stop, to drop off or pick up laundry, grab a quick bite or coffee, or a stop of a similarly short duration.

Planning staff suggests that the parking issue could be mitigated somewhat by changing the meters to reduce the allowable parking duration from the current one or two hours, to as little as 15 minutes, thus encouraging more turnover in the on-street spaces that would remain. This would certainly have a positive effect, but only to the degree that patrons are parking longer than 15 minutes presently. The loading zone issue, however, would remain. The availability of a convenient on-street loading zone is critical for several shops on Fenton Street for which their only access is through the front door facing the street. Discussion with Parking Management Services staff confirm that the potential loss of loading zones is the primary concern of these businesses.

Alternative G also reduces the number of on-street parking spaces in Fenton Village, but by half as much: 19 spaces would be lost. It is also better for cars and buses—albeit marginally, in that it would increase end-to-end travel time by 6 fewer seconds than Alternative E. But its right-of-way impacts would be greater than Alternative E within Fenton Village, requiring the relocation of many more streetlights and the loss of twice as many street trees. Its cost would also be $1.3 million higher than Alternative E.

Council staff recommendations:

- **Proceed with Alternative E, but within Fenton Village retain sufficient loading zones to serve existing businesses, thus also retaining some more on-street spaces than currently planned under this alternative.**
- **Work with the State Highway Administration, the Maryland Transit Administration, and the Planning staff to identify means to better separate pedestrians, bicyclists, motor vehicles and light rail vehicles at the Fenton Street/Wayne Avenue intersection.**
- **Narrow the travel lanes where possible to widen the cycle-track lanes and the buffer between the cycletrack on the general use lanes on Fenton Street.**

Council staff does not concur with the two other recommendations added by the Planning Board. On-street parking is critical to the viability of many businesses and to the convenience of their customers. Either Alternative E or G compromises the number of on-street parking/loading zones to a significant degree; further reduction should not be contemplated. Furthermore, the preservation of on-street parking should not be the lowest priority for every bikeway project. In the case of Fenton Street, some loss of spaces can probably be tolerated, but this will not be the case for each bikeway project. Every project, whether bikeway, transit, or roadway, should be examined holistically, considering the needs of all users of street space and each project's particular context.

Currently the Fenton Street Cycletrack project is funded only for $4,860,000, with construction programmed to occur in FY23. Next year, by which time preliminary engineering is complete and a more reliable scope and cost estimate is available, the Council should be in a position to fund the full cost in the FY23-28 CIP.

Related projects underway. The Fenton Street Cycletrack project covers most, but not all, of the planned bikeway along Fenton Street:

- DOT has nearly completed preliminary engineering on a two-way, west-side cycletrack that would extend from Gist Avenue south across Burlington Avenue (MD 410) to King Street, where it will intersect with the Metropolitan Branch Trail. The project is fully funded; its cost is estimated at $1,762,000 and construction is anticipated in 2022.
- DOT has completed design of a two-way cycletrack between Cameron Street and Planning Place. The project is fully funded; its cost is estimated at $758,000 and construction is anticipated this summer.
- The site plan for the 8787 Georgia Avenue development includes a bikepath and sidewalk between Planning Place and Spring Street, dividing the east and west portions of the development. It also includes construction of a two-way cycletrack along the development's frontage on the south side of Spring Street.

24 February 2021

FENTON STREET BIKEWAY STUDY

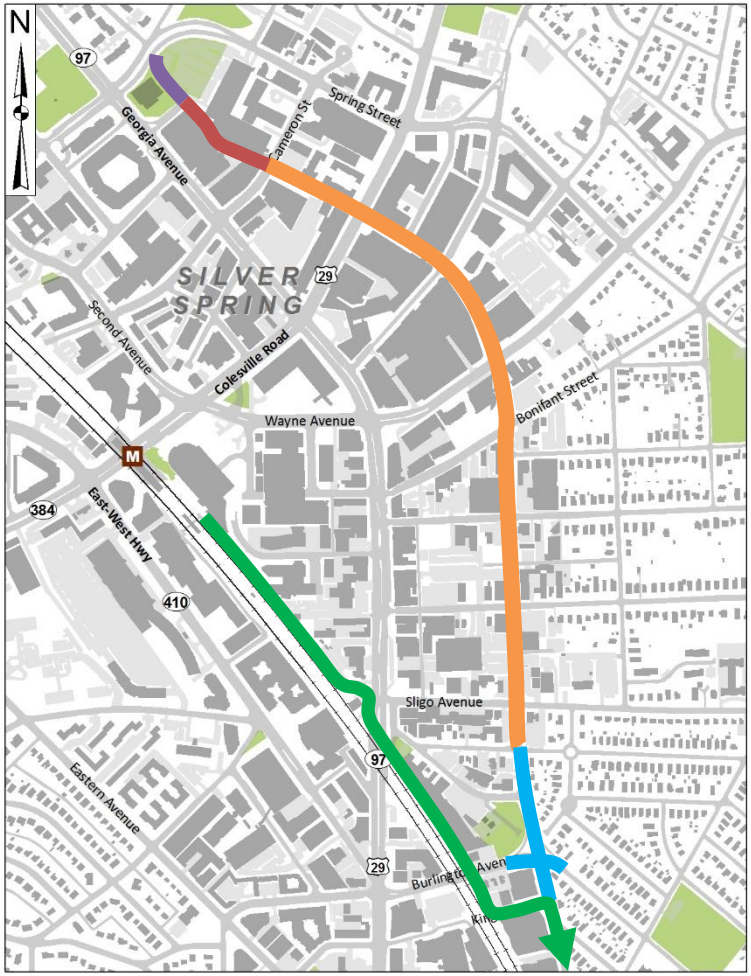
Matt Johnson, AICP (1)

Scope

- The project limits are Fenton Street between Cameron Street and Gist Avenue.
- 7 preliminary alternatives were created.
- Each alternative is analyzed regarding its impacts to traffic, parking, loading, sidewalks, transit, and cost.

Context

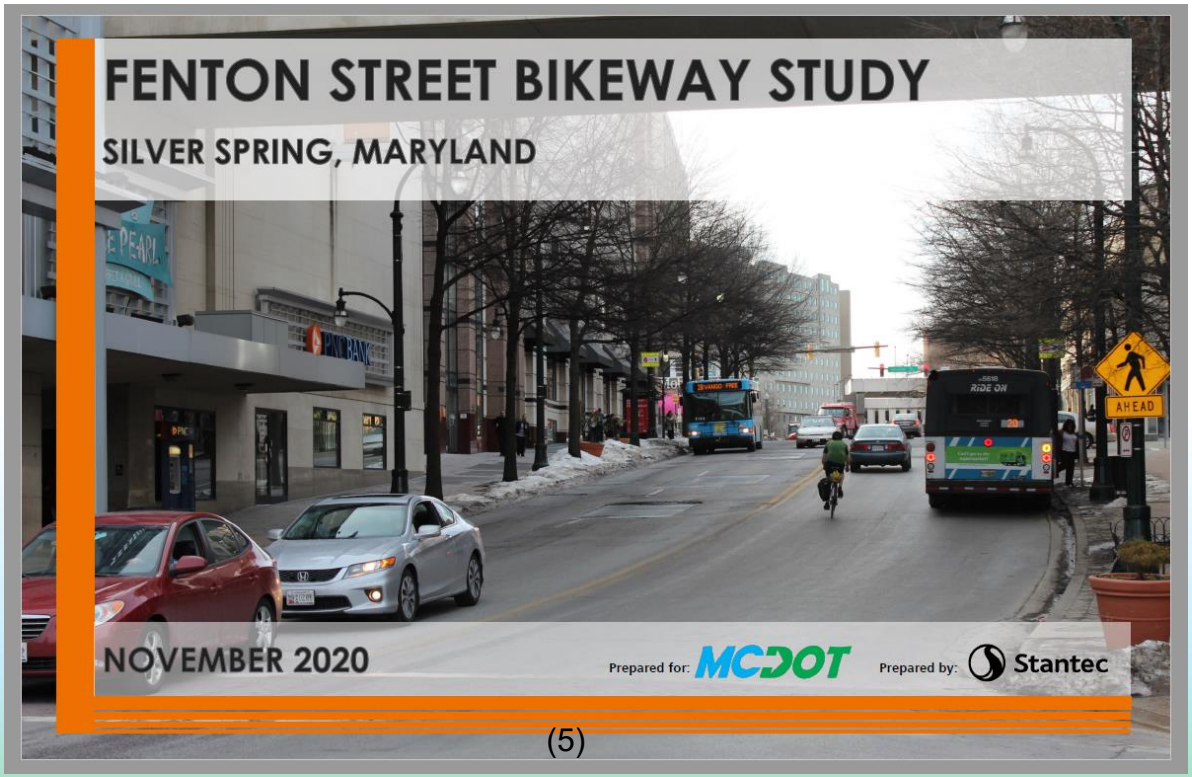
- The Fenton Street Bikeway is part of a larger set of projects creating a low-stress bike corridor from Union Station to Montgomery Hills.
  - Planning Dept. redevelopment
  - Cameron to Planning Place Bikeway
  - Fenton/MD 410 Intersection
  - Metropolitan Branch Trail



Study Overview

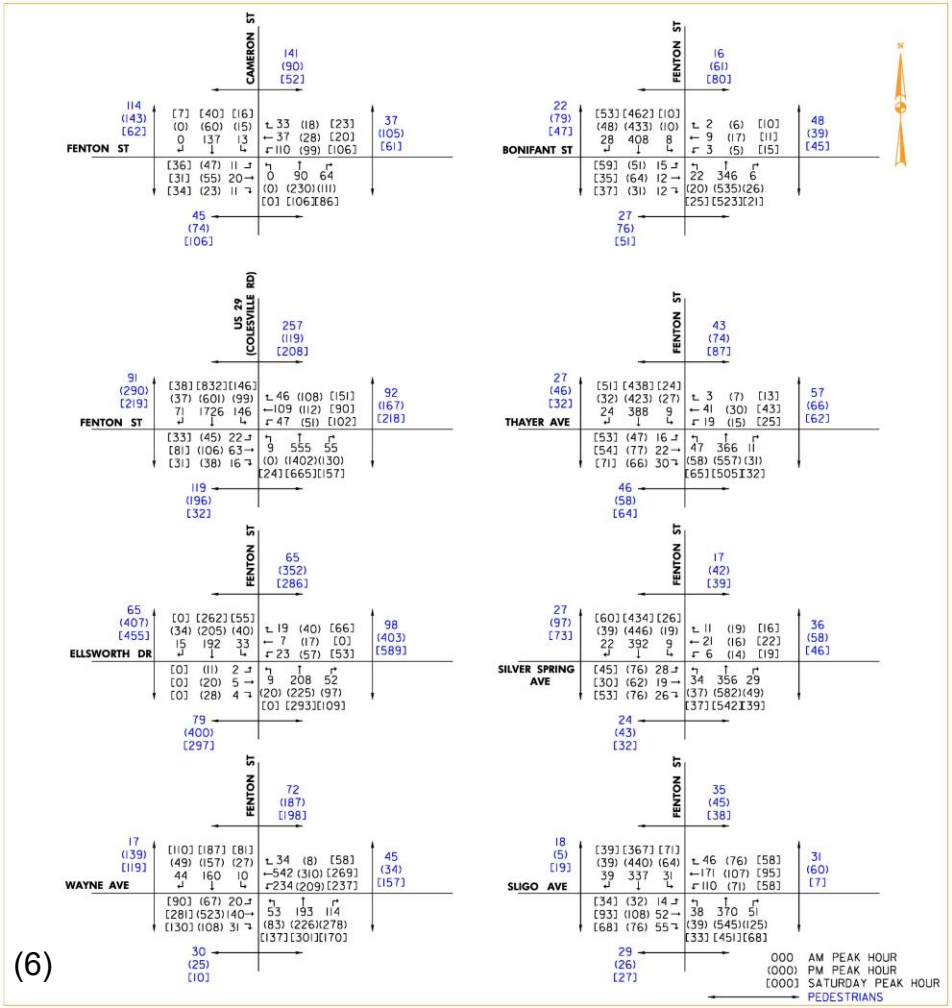
The Bikeway Study

- The bikeway study is available on the project webpage.
  - https://www.montgomerycountymd.gov/dot-dte/projects/fentonvillage/index.html



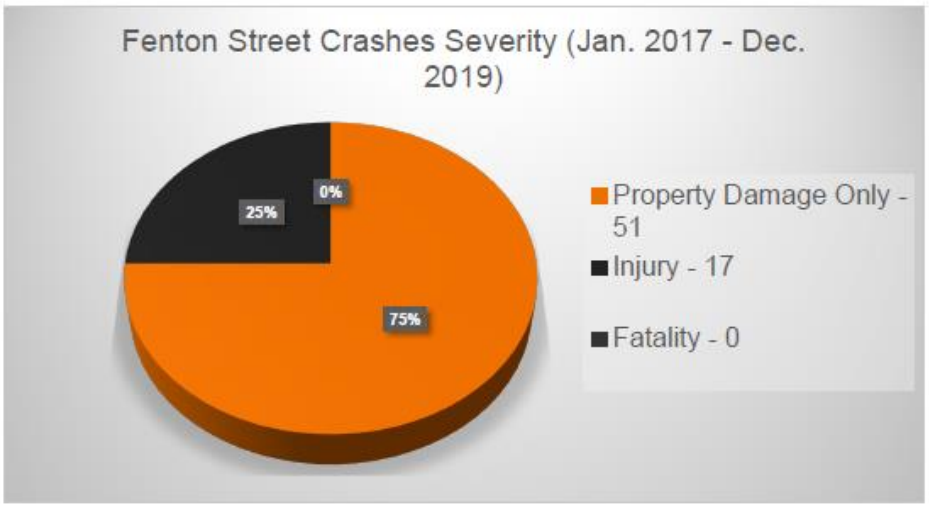
Traffic Volume

- Traffic volume data, including bicyclists and pedestrians, was collected in 2017 and 2020.
- Average Daily Traffic on Fenton Street is around 10,500.
- Bicycle volumes on Fenton Street are currently around 4-5 per hour.



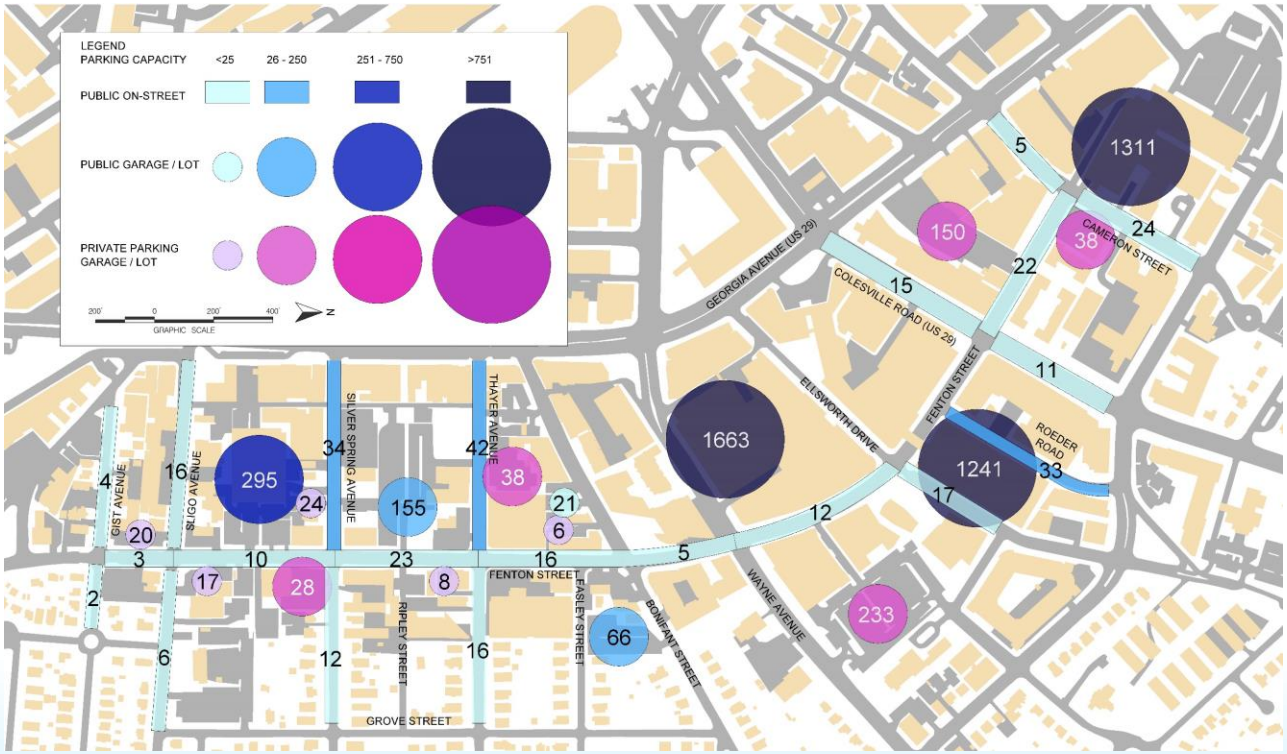
Crash Data

- Most crashes involve vehicles, but 10% involve pedestrians, and 3% bicyclists.
- 75% of crashes in the corridor did not result in injury.
- There were no fatalities during the observed period.



Parking

- There are currently **91** on-street parking spaces on Fenton Street.
- The east-west streets within one block have **207** on-street spaces.
- Public lots/ garages within one block have **4,741** spaces.



Loading

- Loading is a critical need in the corridor, for business deliveries, parcel services, food pickup services, paratransit, and ride-hailing apps.
- We spoke to 40 businesses in the corridor to understand their needs.
- Delivery needs range from large truck+trailer combinations to box trucks and even vans and cars.
- Loading is more typical in the morning, but can happen any time.
- We will continue to work to accommodate specific loading needs during the design process. (9)

Transit

- Fenton Street carries 4 Ride On bus lines and one Metrobus line.
- Several other bus lines cross Fenton Street.
- The Purple Line is planned to open in 2023/2024.
- Accommodating bus stops will be a critical effort during design.

Fenton Street Bikeway Alternatives

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Fenton Street Bikeway Study

Alternative Development

- The following **goals** and **considerations** contributed to balancing alternative development
  - Safe, continuous **bikeway**
  - Minimize impacts to **parking**
  - Minimize **economic impact** to businesses
  - Maximize **vehicular** & **pedestrian** movement
  - Improve **accessibility** to maximum practical extent
  - Minimize impacts to **street trees**
  - Accommodate **transit**, **loading**, and property **access**
  - Implement **stormwater management** where possible
  - Minimize **utility** impacts & **ROW acquisition**
  - Minimize **costs**

Common Features

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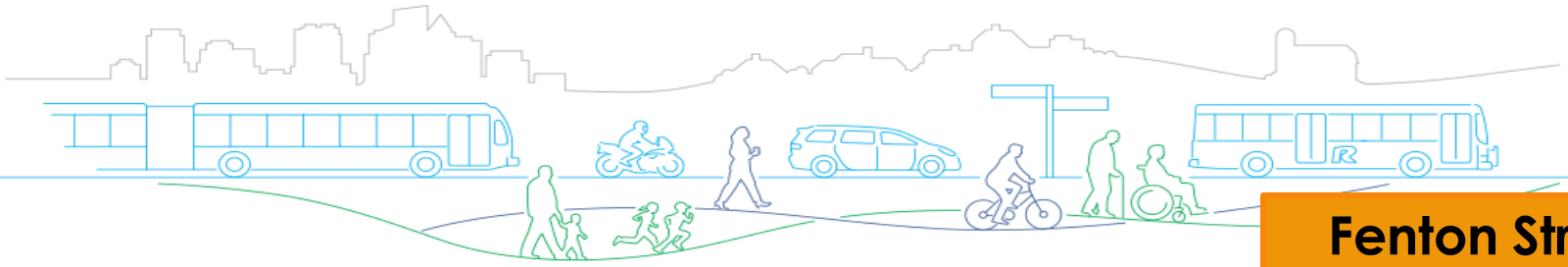
- There are some common features that are present in each alternative:
  - At least one travel lane in each direction for vehicles
  - On-street parking
  - On-street loading areas
  - 5’ or wider accessible sidewalks
  - Two-way west side bikeway
  - Raised bikeway barrier
  - Floating bus stops
  - Corner island treatments

Raised barrier, Spring @ Colesville

Floating bus stop, 2nd @ Colesville

Corner island, 2nd & Spring



Fenton Street Bikeway Study

Alternative Development

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- One key difference between the alternatives is **widening**.
- Of the 7 alternatives, 2 presume that the curbs will stay where they are now, except for the removal of bump-outs at intersections and limited widening.
- 3 of the alternatives look at moving the east side curb 2’ east to widen the street from 44’ to 46’.
- 2 of the alternatives move the curb in some locations, but hold the existing curb in other areas.

Fenton Street Bikeway Study

Alternatives Are Conceptual Only

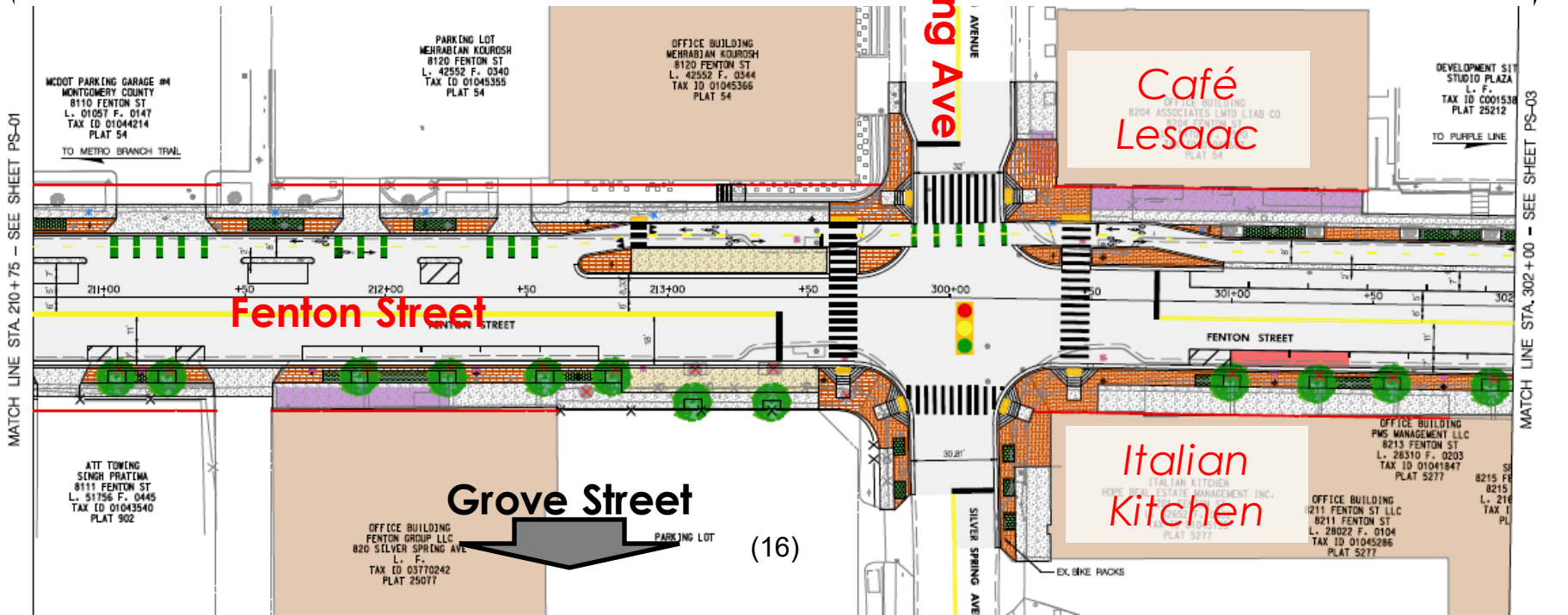
- The alternatives presented in the report are very conceptual, and show a basic layout.
- Elements may change based on information learned during design (such as the location of utilities).
- There are still many things to work out during the design process
  - Location, duration, and dimensions of loading zones
  - Bus stop location & design
  - Incorporation of accessible parking
  - Stormwater management
  - Traffic signals & turn restrictions

Alternative Orientation

Georgia Avenue

Montgomery College

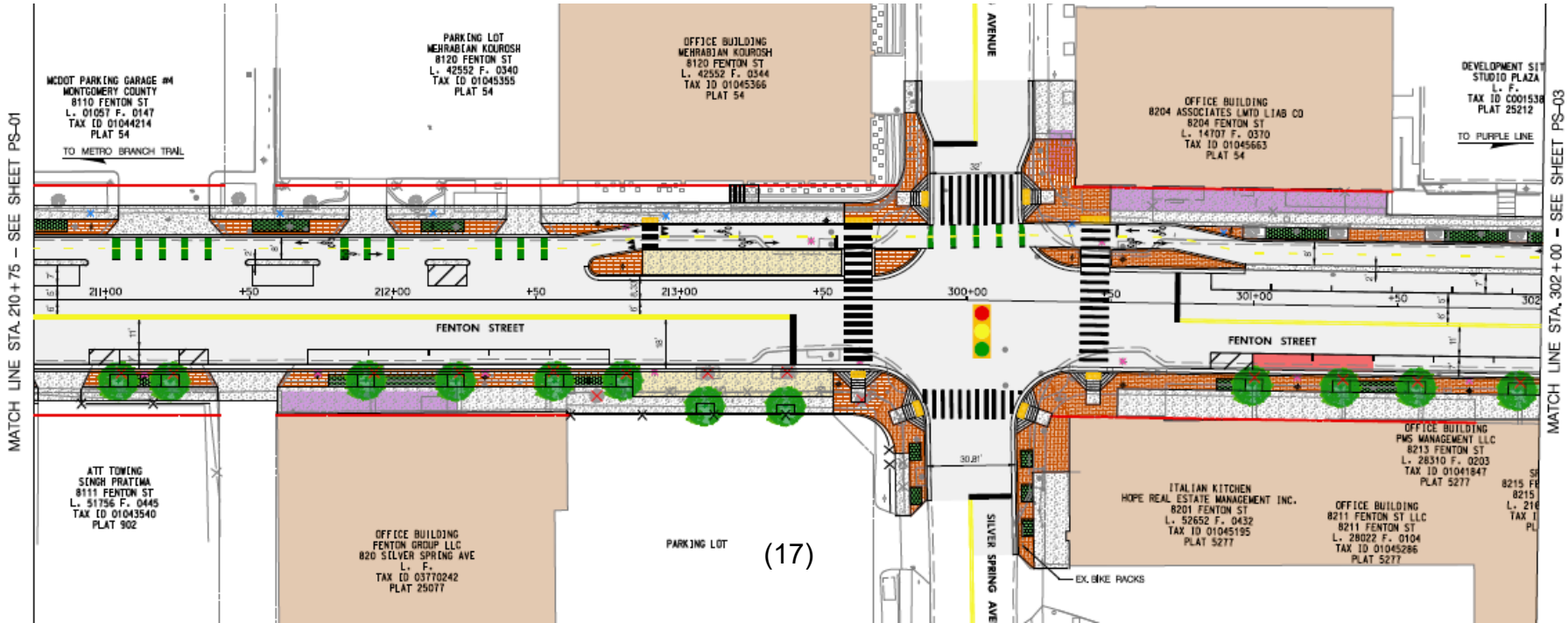
Downtown Silver Spring



(16)

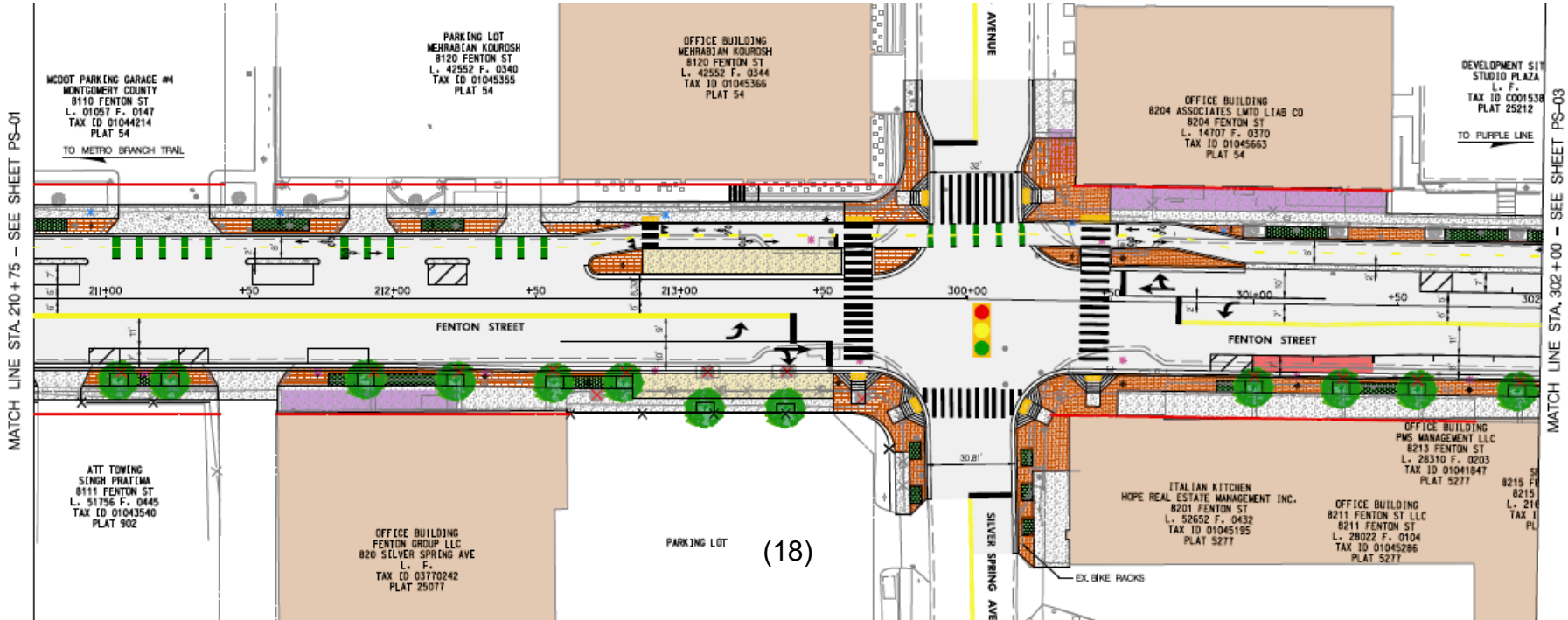
Alternative A

- Includes **widening** in Fenton Village
- Prioritizes **on-street parking**
- No left turn lanes, except NB at Colesville
- Left turns across the bikeway are <u>not</u> protected



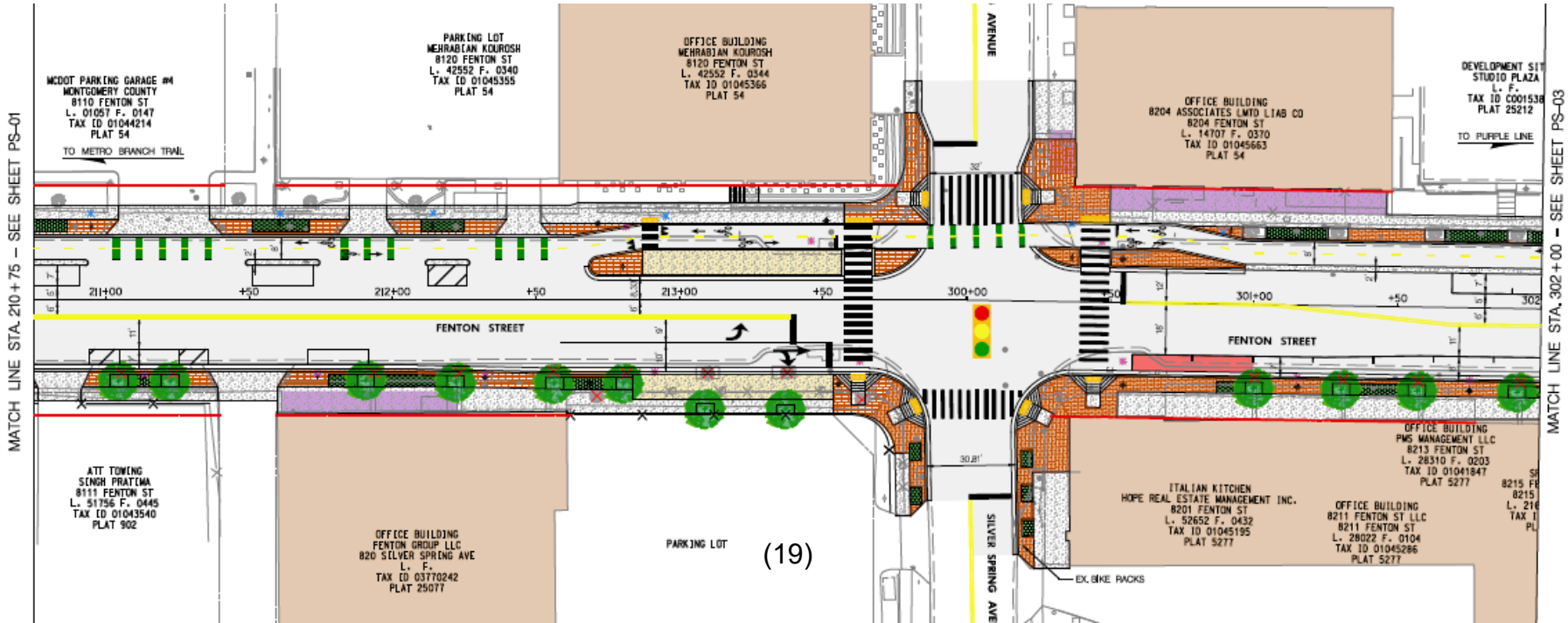
Alternative B

- Includes **widening** in Fenton Village
- Prioritizes NB **left-turn protection** and **motorist throughput**
- Left turn lanes for both NB and SB traffic



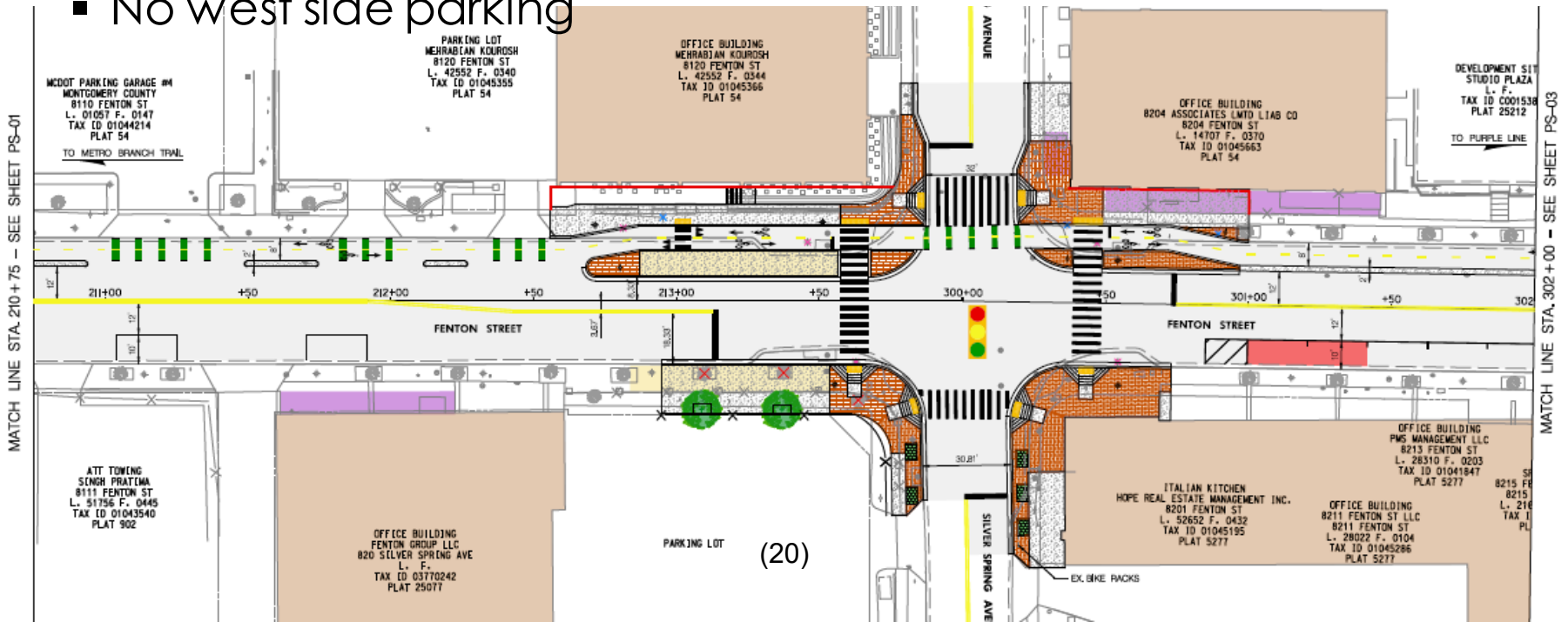
Alternative C

- Includes **widening** in Fenton Village
- Prioritizes NB **left-turn protection** and **motorist throughput**
- Left turn lanes for NB traffic
- Lack of SB left turn lane saves parking, but may cause delay



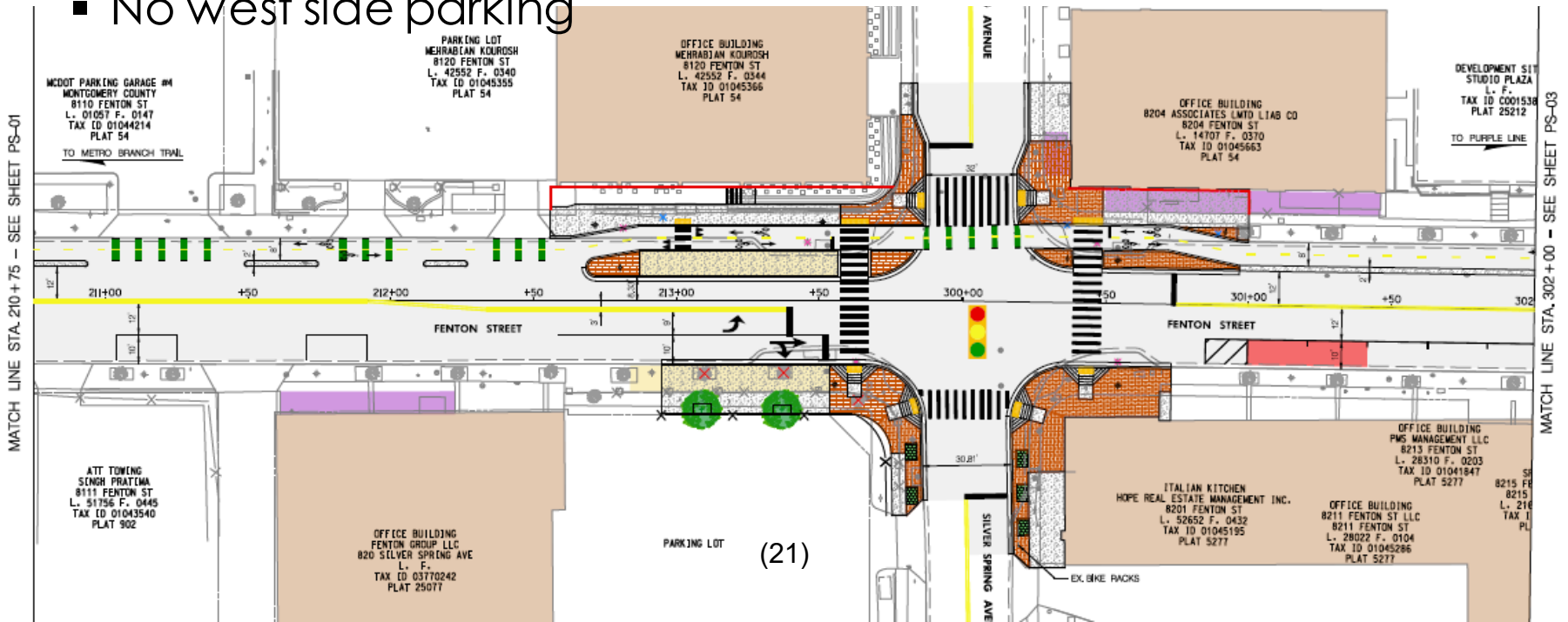
Alternative D

- **No** widening in Fenton Village
- Prioritizes **on-street parking**, but less than Alt A, without widening
- No left turn lanes, except NB at Colesville
- Left turns across the bikeway are <u>not</u> protected
- No west side parking



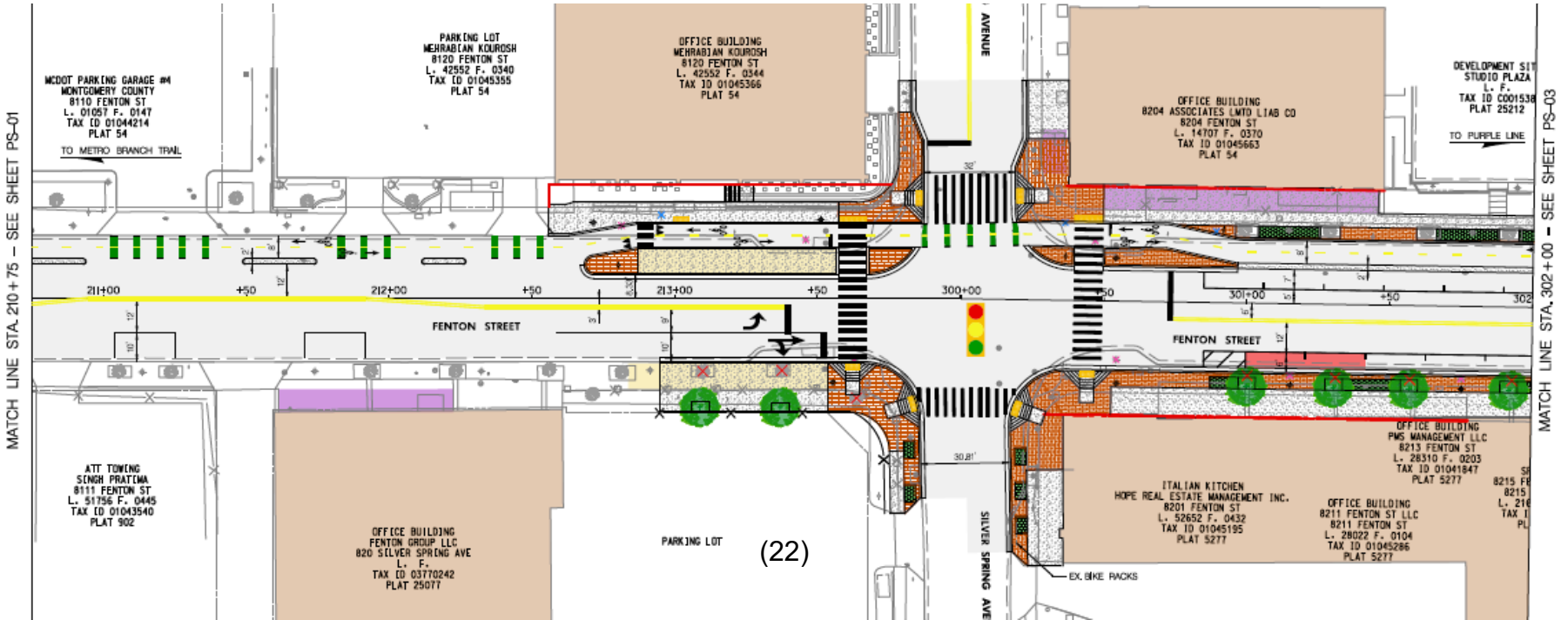
Alternative E

- **No** widening in Fenton Village
- Prioritizes NB **left-turn protection** and **motorist throughput**
- Left turn lanes for NB traffic
- Lack of SB left turn lane saves parking, but may cause delay
- No west side parking



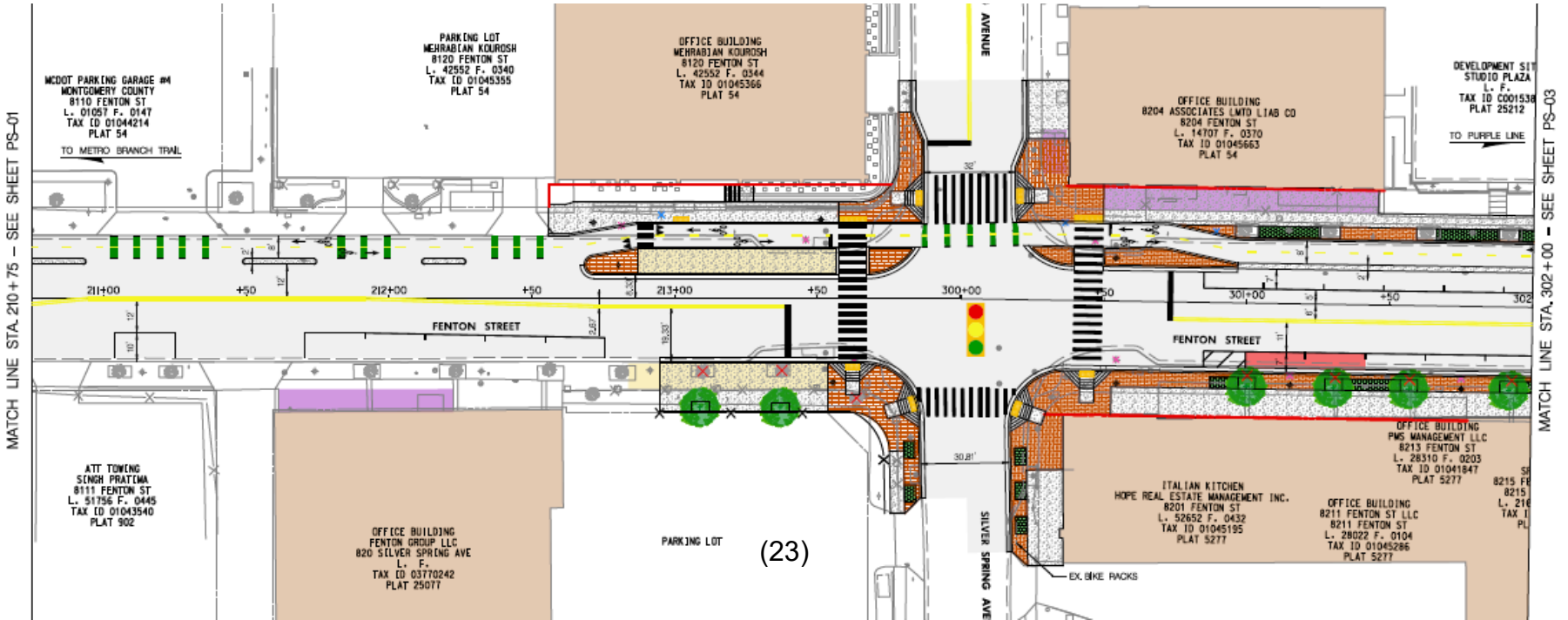
Alternative F

- **Some** widening in Fenton Village
- Prioritizes NB **left-turn protection** and **motorist throughput**
- Left turn lanes for NB traffic, **except ban at Thayer** to save parking
- Lack of SB left turn lane saves parking, but may cause delay



Alternative G

- **Some** widening in Fenton Village
- Prioritizes NB **left-turn protection** and **motorist throughput**
- Left turn lanes for NB traffic, **except ban at Silver Sp** to save parking
- Lack of SB left turn lane saves parking, but may cause delay



Fenton Street Bikeway Study

Safety Impacts

Alternative	Left Turn Protection?	
Existing	*N/A*	
Alt A	No	Less safe for cyclists
Alt B	Yes	Safer for cyclists
Alt C	Yes	Safer for cyclists
Alt D	No	Less safe for cyclists
Alt E	Yes	Safer for cyclists
Alt F	Yes	Safer for cyclists
Alt G	Yes	Safer for cyclists

Fenton Street Bikeway Study

Traffic Impacts

Alternative	Average End-to End Travel (min:sec)	Change (min:sec)	
Existing	*4:06*	-	
Alt A	7:30	+3:24	⇦ **Most impact to traffic congestion**
Alt B	5:00	+0:54	
Alt C	4:48	+0:42	
Alt D	7:30	+3:24	⇦ **Most impact to traffic congestion**
Alt E	4:48	+0:42	
Alt F	4:48	+0:42	
Alt G	4:42	+0:36	⇦ **Least impact to traffic congestion**

Fenton Street Bikeway Study

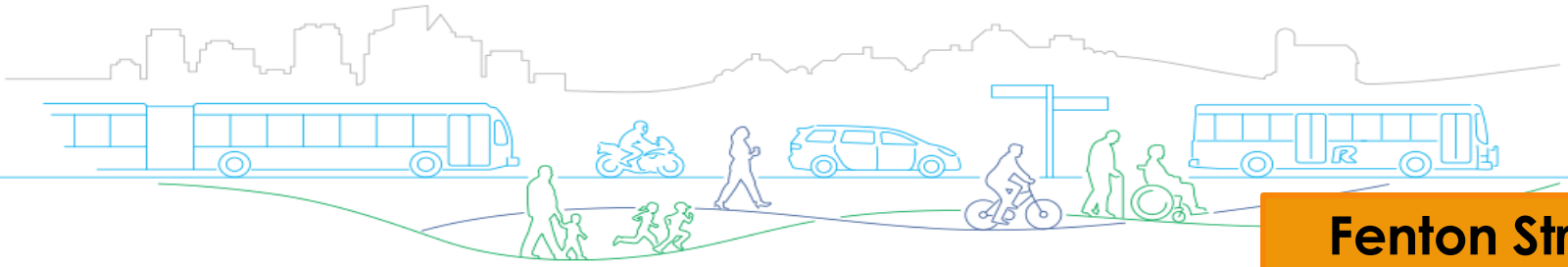
Parking Impacts

Alternative	Total On-Street Parking	Change
Existing	*91*	-
Alt A	94	+3
Alt B	43	-48
Alt C	65	-26
Alt D	61	-30
Alt E	43	-48
Alt F	54	-37
Alt G	56	-35

Least impact to parking

Most impact to parking

Most impact to parking



Fenton Street Bikeway Study

Estimated costs

Alternative	Cost Estimate
Existing	*N/A*
Alt A	$$$
Alt B	$$$
Alt C	$$$
Alt D	$
Alt E	$
Alt F	$$
Alt G	$$

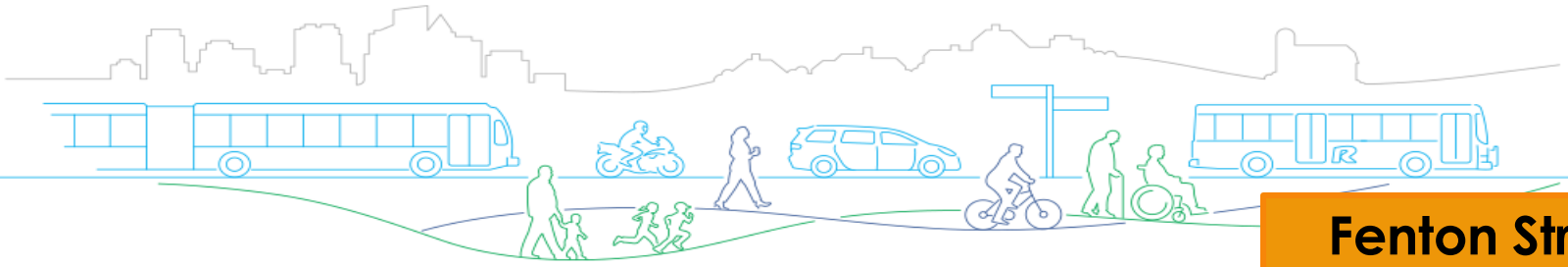
Most expensive

Most expensive

Cheapest

Cheapest

**At this stage of design, costs are very conceptual, and are conservative, meaning they assume the worst case scenario. At this stage of design, a 40% contingency is included in the estimate.*



Fenton Street Bikeway Study

Estimated costs

Alternative	Cost Estimate
Existing	*N/A*
Alt A	$10.3M - $13.6M
Alt B	$10.3M - $13.7M
Alt C	$10.3M - $13.7M
Alt D	$8.1M - $10.9M
Alt E	$8.1M - $10.9M
Alt F	$9.1M - $12.2M
Alt G	$9.1M - $12.2M

Most expensive

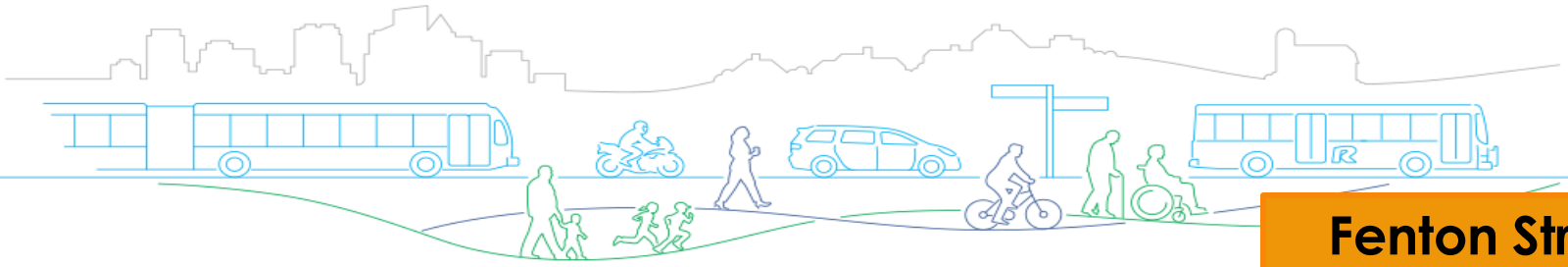
Most expensive

Cheapest

Cheapest

**At this stage of design, costs are very conceptual, and are conservative, meaning they assume the worst case scenario. At this stage of design, a 40% contingency is included in the estimate.*

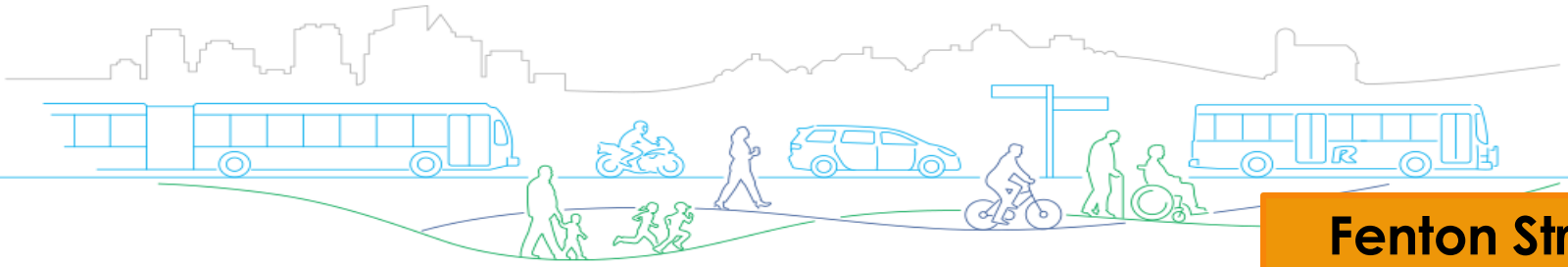
Public Engagement Summary



Fenton Street Bikeway Study

Public Comment Summary

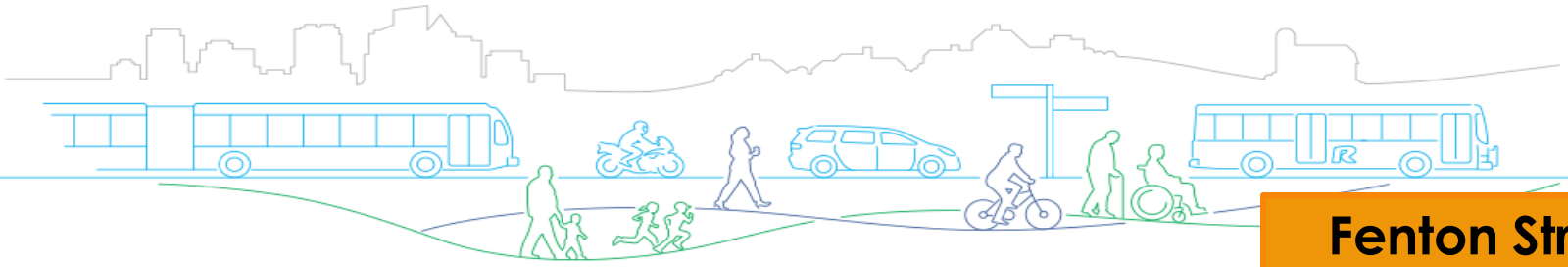
- Following the November 18, 2020 meeting, MCDOT received **56** written comments.
  - **51** comments were **supportive** of the project
  - **2** comments were **neutral**
  - **3** comments were **opposed**



Fenton Street Bikeway Study

Public Comment Summary

- Some comments spoke directly regarding a preferred alternative.
  - **No** comments favored **Alternative A**
  - **1** comment favored **Alternative B**
  - **No** comments favored **Alternative C**
  - **3** comments favored **Alternative D**
  - **33** comments favored **Alternative E**
  - **3** comments favored **Alternative F**
  - **7** comments favored **Alternative G**

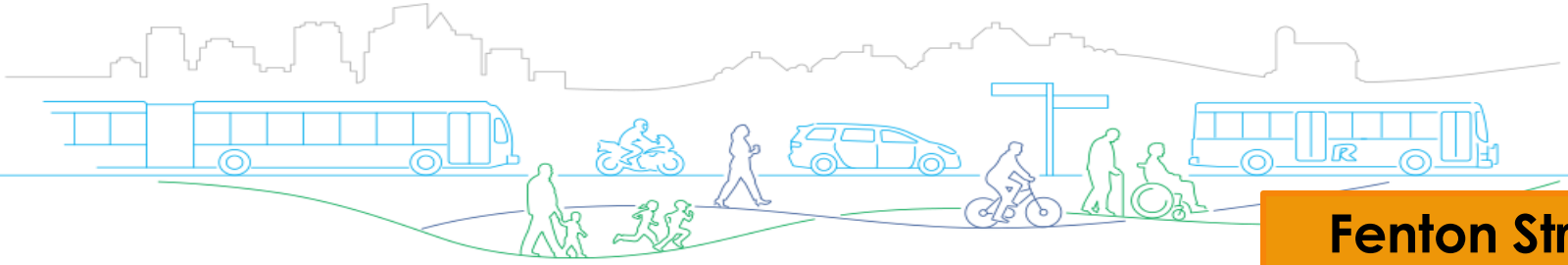


Fenton Street Bikeway Study

Public Comment Summary

- Top issues referenced in comments:
  - Support for a **wider bikeway** (17)
  - Do **not prioritize parking** (11)
  - **Oppose widening** the roadway section (9)
  - **Safety** should be top priority (8)

Next Steps



Fenton Street Bikeway Study

Next Steps

- Following this meeting, MCDOT will advance the preferred alternative into design.
- Design is expected to start in late winter 2021 and will likely take 18-24 months, including permitting.
- MCDOT will hold additional community meetings during the design process, including at 30% and 65% design.

Discussion


N
97
Georgia Avenue
Cameron St
Spring Street
SILVER SPRING
29
Second Avenue
Colesville Road
Wayne Avenue
Bonifant Street
M
384
East-West Hwy
410
Sligo Avenue
97
Eastern Avenue
29
Burlington Avenue
King Street

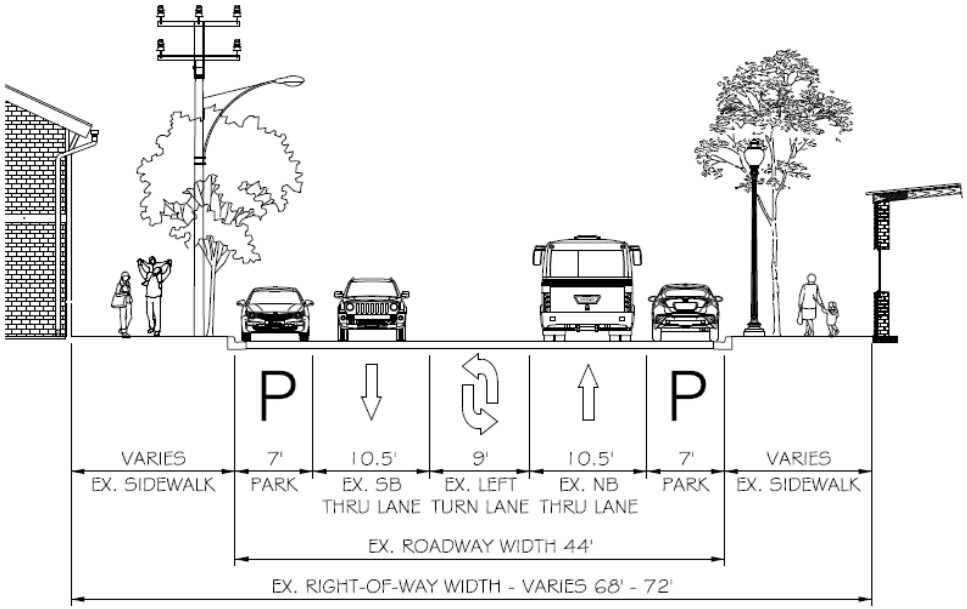
Additional Detail

Purpose & Need

1. Improve bicycle and pedestrian safety and comfort in the Fenton Street corridor
2. Improve bicycle connectivity within and beyond downtown Silver Spring
3. Provide balanced, multi-modal transportation options for all Fenton Street users.

Existing Conditions

- South of Roeder Road, Fenton Street is 44' wide curb-to-curb.
- North of Roeder, Fenton Street is 48' wide curb-to-curb.
- The Master Planned right-of-way is 80', but actual right-of-way varies from 64' to 80'.

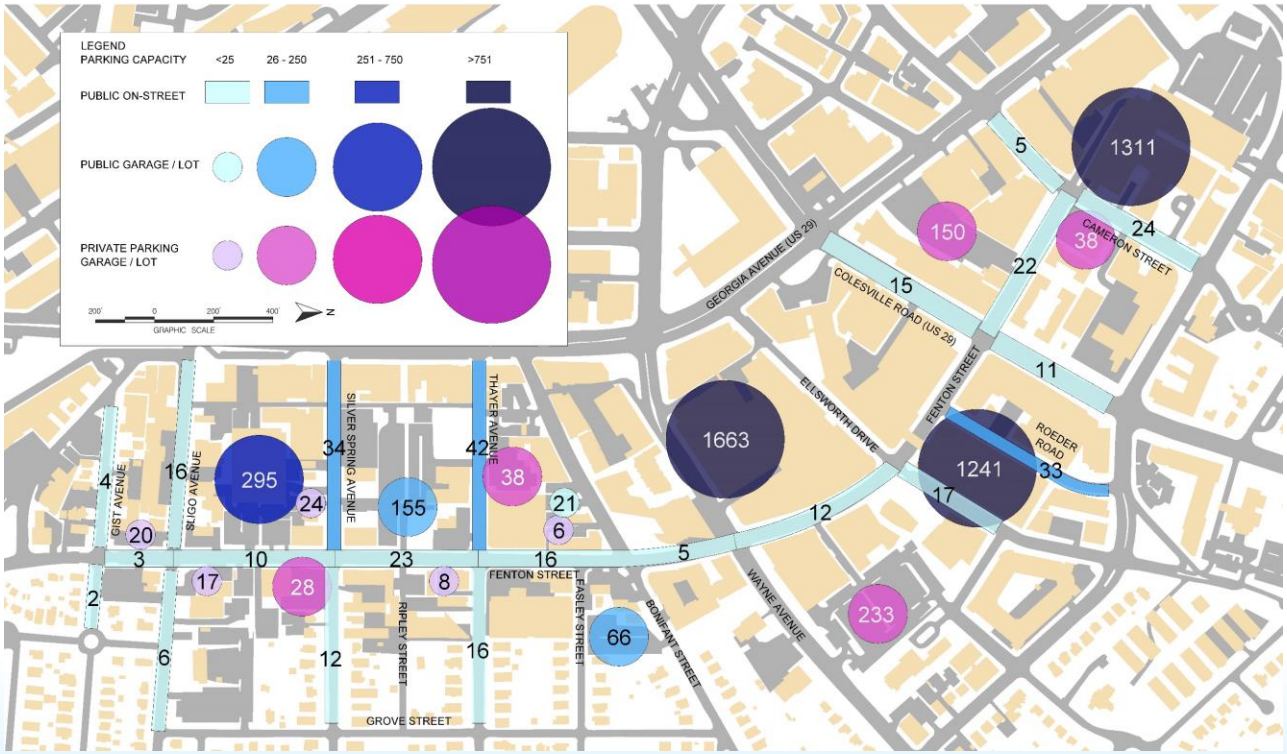


Intersections

- Within the study area, there are 8 signalized intersections.
  - MD 410 is outside the study area and is not included in that count.
- Two HAWK signals are planned by MCDOT under a separate project.

Parking

- On-street parking utilization on Fenton Street ranges from 59% to 95%.
- Garage and lot parking utilization ranges from 33% (Garage 3) to 88% (Lot 2).



In Fenton Village, average on-street utilization (Fenton & side streets) is between 73% and 79%.

In the Ellsworth District, average on-street utilization (Fenton & side streets) is between 66% and 83%.

In North Silver Spring, average on-street utilization (Fenton & side streets) is between 83% and 91%.

Loading

- Examples
  - Locksmith
  - Drycleaners
  - Fuel
  - Food
  - Doordash/Ubereats
- We know one-size-fits-all is not going to work here. We will need specific solutions for specific locations.

Fenton Street Bikeway Study

Consultant-Recommended Alt.

- **Alternative G** scores best when balancing the impacts and advantages.
  - Alt G is the least impactful for traffic congestion
  - Alt G is middle of the pack on saving parking
  - Alt G maximizes safety for cyclists and pedestrians
  - Alt G is middle of the pack on cost
  - Alt G is middle of the pack in street tree impacts
- The consultants have recommended the above alternative. However, the MCDOT recommendation will be based on the feedback we receive from this meeting & Council's T&E Committee.

Fenton Street Bikeway Study

Public Engagement History

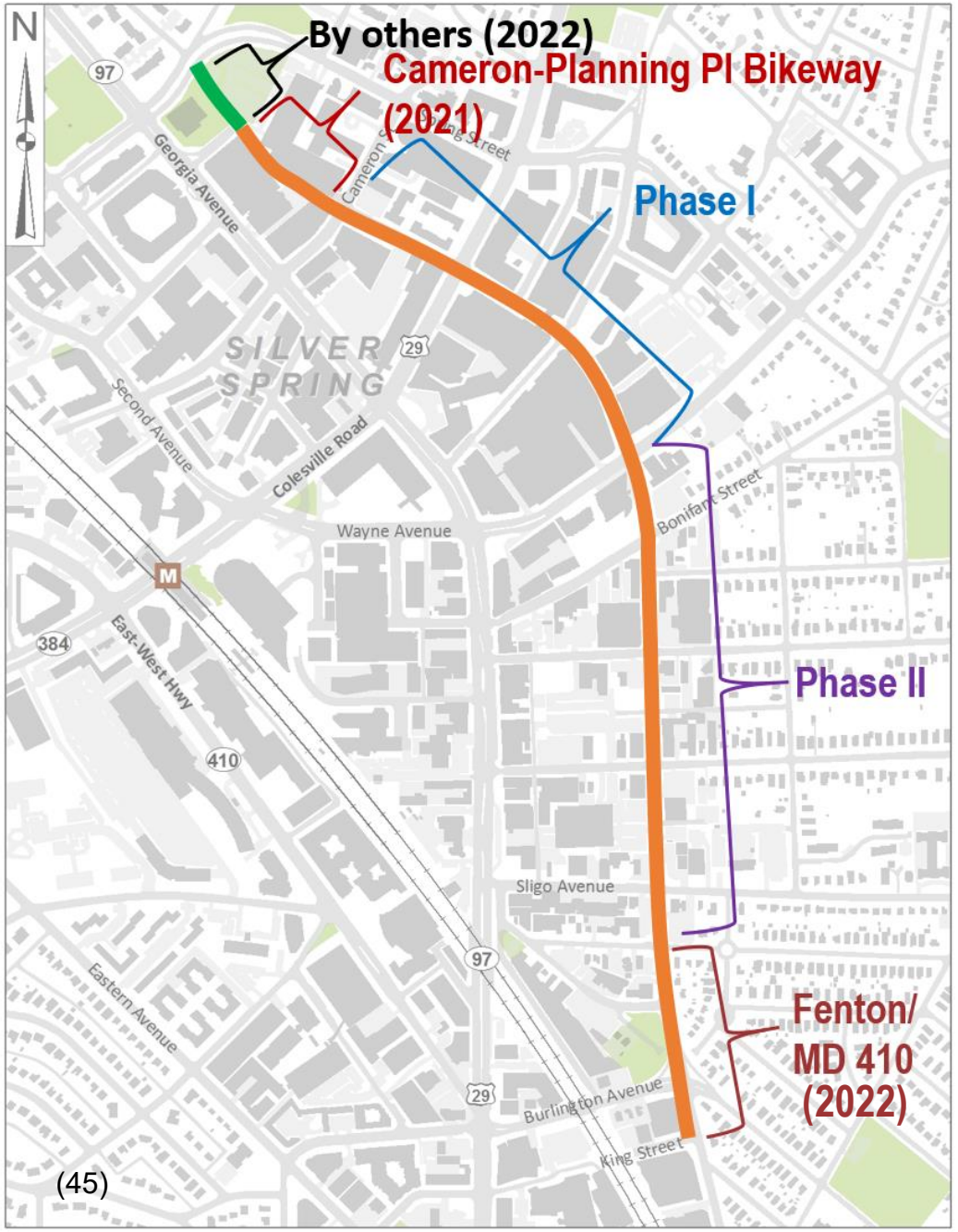
- Community meetings include:
  - June 27, 2016 – ESSCA meeting
  - September 20, 2016 – Fenton Village Businesses
  - November 20, 2017 – ESSCA meeting
  - April 20, 2018 – Silver Spring UDAC
  - **January 21, 2020 – Community Meeting** (relaunch)
  - February 3, 2020 – Business walk
  - October 29, 2020 – Business walk
  - **November 18, 2020 – Community Meeting** (study complete)

Context

- Existing and planned bikeways in downtown Silver Spring

Phasing

- The corridor is long and complex.
- It is likely that the project will be constructed in phases.
- We don't know exactly where the phases will be split at this time.
- The graphic at right shows one concept.



Fenton Street Bikeway Study

Table of Impacts

Impact	Safety	Traffic	Parking	Cost
Least Impact (Best)	B, C, E, F, G	G C, E, F	A	D, E
Moderate Impact		B	C, D F, G	F, G
Highest Impact (Worst)	A, D	A, D	B, E	A B, C

MONTGOMERY COUNTY PLANNING BOARD
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

January 25, 2021

Tom Hucker, Council
President, Montgomery County Council
Stella B. Werner Council Office Building
100 Maryland Avenue
Rockville, Maryland 20850

Re: Fenton Street Separated Bike Lane Alternatives

Dear Council President Hucker:

On January 21, 2021 the Montgomery County Planning Board reviewed the Fenton Street Separated Bike Lanes project and voted 5-0 to forward the following comments:

1) Advance Alternative E as the preferred alternative.
2) Remove additional on-street parking from the project if doing so would allow the bikeway and street buffer to be widened to achieve the dimensions recommended in the Bicycle Master Plan.
3) For future bikeway projects, preservation of on-street parking should be the lowest priority.
4) Coordinate with Montgomery Planning staff to undertake a design process to better separate pedestrians, bicyclists, motor vehicles and light rail vehicles at the Fenton Street/Wayne Avenue intersection.

Thank you for your attention to this matter. If you have any questions or comments concerning our review, please contact Eli Glazier at 301-495-4548.

Sincerely,

Casey Anderson
Chair

CA:EG:aj

cc: Matthew Johnson MCDOT
Corey Pitts, MCDOT
Daniel Sheridan, MCDOT
Christopher Conklin, MCDOT
Gwen Wright
Jason Sartori
Stephen Aldrich
David Anspacher
Eli Glazier
Elza Hisel-McCoy
Dr. Glenn Orlin

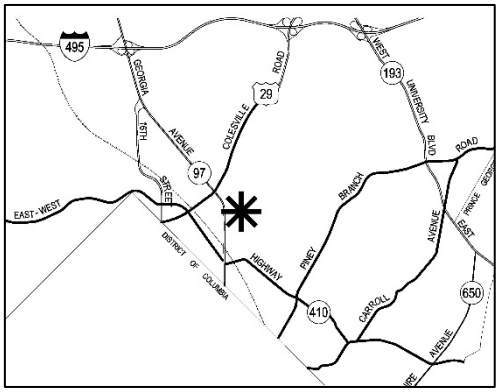
MCPB
Item No. 6
Date: 01-21-2020

Fenton Street Bikeway Study Alternatives Selection

EG Eli Glazier, Planner/Coordinator, eli.glazier@montgomeryplanning.org, 301-495-4548
DA David Anspacher, Supervisor, david.anspacher@montgomeryplanning.org, 301-495-2191
JS Jason Sartori, Chief, jason.sartori@montgomeryplanning.org, 301-495-2172

Completed: 01/13/2021

EXECUTIVE SUMMARY



The Fenton Street Bikeway is identified in the Bicycle Master Plan as one of the highest priority bikeways in Montgomery County. It would substantially improve the safety and comfort of the bicycle experience for people travelling to and through the Silver Spring Central Business District by providing a connection between the Metropolitan Branch Trail, the Silver Spring Library Purple Line station, the Silver Spring Green Trail, and the Spring Street Separated Bike Lanes. The Montgomery County Department of Transportation (MCDOT) has developed seven bikeway alternatives for the stretch of Fenton Street between Gist Avenue and Cameron Street. This agenda item provides the Planning Board the opportunity to recommend a preferred alternative to the County Council and transmit comments to MCDOT for further project refinement.

Applicant: Montgomery County Department of Transportation

RECOMMENDATION

Transmit the following comments to the Montgomery County Council's Transportation and Environment Committee (T&E) Committee:

1. **Advance Alternative E as the preferred alternative.**
2. **Coordinate with Montgomery Planning staff to undertake a design process to better separate pedestrians, bicyclists, motor vehicles and light rail vehicles at the Fenton Street/Wayne Avenue intersection.**

SITE DESCRIPTION

Fenton Street is an arterial roadway with a master-planned right-of-way of 80 feet that runs in the north-south direction between Takoma Avenue and Cameron Street. It has an average daily traffic volume of 10,600. It has two through lanes for most of its length, except between Ellsworth Drive and Colesville Road where two additional lanes are present – one in each direction – and between Ellsworth Drive and Wayne Avenue where there is an additional southbound lane. In addition to the through lanes, there are parking lanes on both sides of the street, except in a few locations. Today, the existing curb-to-curb street width varies between 44 and 48 feet, and the existing right-of-way is between 64 and 80 feet. Through the study area, the posted speed limit is 25 miles per hour.

Figure 1: Fenton Street Bikeway Project Extents

The project limits (*Figure 1)* are between Gist Avenue at the south to Cameron Street at the north, a distance of 0.7 miles (red line). One separate project currently in design continues the proposed bikeway south through the Fenton Street/Philadelphia Avenue (MD 410) intersection to the current endpoint of the Metropolitan Branch Trail at King Street (blue line). Construction is imminent on the bikeway connecting Cameron Street north to Planning Place (green line). Redevelopment of the former Montgomery County Planning Department building will complete the Fenton Street connection to Spring Street (brown line).

In addition to the future connection to the Purple Line at Wayne Avenue, WMATA (F4) and RideOn (16, 17, 20, 28) both maintain bus service along the corridor. There are eight bus stops in the southbound direction and six in the northbound direction.

Of the 12 intersections along the corridor, eight are currently signalized. Two additional intersections (Roeder Road and the Whole Foods driveway) will soon have pedestrian hybrid beacons (HAWKs) installed as part of a separate project. The only intersections without signalization once the HAWKs are installed will be at Gist Avenue and at Easley Street.

The MCDOT team has broken up the corridor into three distinct areas for their alternative development. At the south, the Fenton Village District extends from Gist Avenue to Wayne Avenue. It is typified by small businesses with storefronts using their frontage for café seating, access, on-street parking and loading. In the middle of the corridor, the Ellsworth District between Wayne Avenue and Colesville Road is also commercial, but has less reliance on the street itself for parking and loading, handling the majority of

these activities on-site or in off-street garages. The North Silver Spring District between Colesville Road and Cameron Street has few Fenton Street-fronting businesses, but strong on-street parking usage.

As part of this project, the MCDOT team reviewed public parking garage and surface lot data and collected the same for on-street parking along Fenton Street and side streets. *Figure 2* shows the locations and quantities of on-street and off-street parking along the corridor.

Figure 2: Corridor Parking Supply

On-street parking utilization along the totality of the Fenton Street corridor ranged from a minimum of 59% to a high of 95% with an average utilization of 78%. In general, the North Silver Spring District has the highest average on-street parking utilization with the Ellsworth District and Fenton Village District following in descending order. On-street parking in the corridor is generally limited to one hour on non-Sundays, though some side streets in Fenton Village allow two-hour parking. Block-by-block average on-street parking utilization along Fenton Street can be seen in *Figure 3*. *Tables 1, 2, and 3* provide average motor vehicle utilization information for each district in the project area, including side streets and off-street parking resources. A complete accounting of parking in the corridor can be found beginning on page 23 of the Fenton Street Bikeway Study Report and also on pages 156-157.[1]

In addition to parking, deliveries and loading/unloading by truck are a specific concern in both the Ellsworth and Fenton Village districts. MCDOT staff has made observations and contacted business owners

[1] Fenton Street Bikeway Study Report. https://www.montgomerycountymd.gov/dot-dte/Resources/Files/Fentonvillage/Meetings/FentonBikewayStudy_Report_rsz.pdf

along the corridor to gauge their specific loading needs. Page 27 of the Fenton Street Bikeway Study Report details the block by block loading needs.[2]

Figure 3: Fenton Street On-Street Parking Average Utilization

[2] *Ibid*.

Table 1: Fenton Village Parking Summary

Type	Name/Location	No. of Spaces				Utilization	Notes
		Meter	Permit	Accessible	Bike		
On-Street	Fenton Street from Gist Ave to Wayne Ave	57			9	73% (avg)	1-hr Parking, 7 am – 6 pm ex. Sunday
	Side Streets (within 1 block)	102	29	1		79% (avg)	1- to 2-hr Parking 9 am – 6 pm ex. Sunday
Garages	#3 Thayer-Silver Spring 919 Silver Spring Ave	155		6	28	33%	
	#4 Fenton Village 8100 Fenton Street	295		18	0	61%	
Surface Lots	#29 Bonifant-Easley 809 Easley Street	66				86%	
	#38 Bonifant 920 Bonifant Street	21				98%	

Table 2: Ellsworth District Parking Summary

Type	Name/Location	No. of Spaces				Utilization	Notes
		Meter	Permit	Accessible	Bike		
On-Street	Fenton Street from Wayne Ave to Colesville Rd	12			20	83% (avg)	1-hr Parking 9 am – 6 pm ex. Sunday
	Side Street (within 1 block)	76				66% (avg)	
Garages	#60 Wayne 921 Wayne Ave	1,633		29	0	60%	
	#61 Town Square 786 Ellsworth Drive	1,241		24	4	59%	

Table 3: North Silver Spring District Parking Summary

Type	Name/Location	No. of Spaces				Utilization	Notes
		Meter	Permit	Accessible	Bike		
On-Street	Fenton Street from Colesville Rd to Cameron Street	22			0	91% (avg)	1-hr Parking 9 am – 6 pm ex. Sunday
	Side Street (within 1 block)	29				83% (avg)	
Garages	#2 Spring-Cameron 8700 Cameron Street	1,311		33	5	65%	
Surface Lots	#2 Planning Place	19		4		88%	

PROJECT DESCRIPTION

The Montgomery County Department of Transportation (MCDOT) is proposing to construct two-way separated bike lanes along the west side of a 0.7-mile section of Fenton Street between Gist Avenue and Cameron Street. This bikeway will connect communities to downtown Silver Spring, linking to the Metropolitan Branch Trail at the south end, the Silver Spring Library Purple Line Station, the Spring Street Separated Bike Lanes at the north end and all of the commercial destinations in between. While the completed Metropolitan Branch Trail/Capital Crescent Trail will provide a high-quality regional connection to downtown Silver Spring, the Fenton Street bikeway will provide local access to Silver Spring's civic, retail and commercial core. A brief history of this project can be found in *Attachment 1*.

MCDOT has developed seven alternatives that all provide improved bicycle connectivity along this corridor. All alternatives seek to minimize negative impacts to the community and to the corridor, but some impacts are inevitable. The different alternatives mix and match strategies to achieve a consistent bikeway section, varying the degree to which they remove on-street parking, increase through motor vehicle travel time, environmental/utility impacts and cost.

It is most helpful to understand the similarities between the alternatives before delving into the differences.

Similarities

- Fenton Street remains two-way for motor vehicle traffic.
- There is on-street parking along the corridor (in varying amounts).
- All seven alternatives include on-street loading zones, generally on each block.
- The two-way separated bike lanes are on the west side of the street in all alternatives.
- The bikeway is separated from the travel lane or parking lane by a raised concrete barrier.
- Protected corner island treatments are provided at as many intersections as possible.
- Curb extensions are generally removed along the corridor to provide space for the bikeway.

Additionally, *Attachment 2* identifies the design criteria all alternatives will strive to achieve for the different roadway elements. As design advances toward Mandatory Referral, there will be opportunities for the public, staff and the Planning Board to weigh in on specific streetscape dimensions including bikeway width and bikeway buffer width.

Differences

There are five differentiators that form the basis for staff's evaluation.

- **Safety** is ensuring that everyone moving through the Fenton Street corridor can do so without harm. This is achieved by separating different travel modes in space and/or time, reducing travel speeds, and improving visibility. Safety varies among the alternatives as they differ in their ability to separate through and left-turning vehicles due to tradeoffs between left-turn lanes and on-street parking.
- **Roadway Widening** is necessary in certain alternatives to fit in streetscape elements like on-street parking and left-turn lanes. Widening impacts utilities and street trees along the corridor. Some alternatives do not widen at all. Others selectively widen to provide additional space for on-street parking. Others widen the entire corridor by two feet.
- **On-street Parking** is considered an asset for businesses along the Fenton Street corridor, used by business patrons and those delivering to or picking up from storefronts in the area. On-street parking is reduced to varying degrees in some alternatives to accommodate left turn lanes.
- **Travel Time** through the corridor is the amount of time it takes to go from one end of the project area to the other. It varies across alternatives due to differences in presence of on-street parking and left-turn lanes.

- **Cost** is the amount of money required to construct the project. Generally, those alternatives that widen the roadway have higher costs than those that minimize changes to the roadway.

What follows is a brief description of each alternative and its associated tradeoffs. Concept plans for each alternative can be found in *Attachment 3*.

- **Alternative A** is designed to minimize the reduction of on-street parking along the corridor. It achieves this by eliminating the two-way left turn lane through Fenton Village and turn lanes at intersections throughout the corridor. The only turn lane along Fenton Street in this alternative is northbound Fenton Street at Colesville Road. This is detrimental to safety because you cannot eliminate conflicts between left turning vehicles, pedestrians, and bicyclists without dedicated turn lanes.

  Because the alternative includes roadway widening, on-street parking would generally be provided on both sides of Fenton Street. This alternative has the potential to increase the number of parking spaces in the corridor by 3 (from 91 existing to 94).

  However, traffic impacts are significant, with the end-to-end travel time at peak periods increasing by 3 minutes 24 seconds from 4 minutes 6 seconds today to 7 minutes 30 seconds under Alternative A.

  Alternative A would cost between $10.3 and $13.6 million. The alternative envisions widening Fenton Street by 2' throughout the corridor.

- **Alternative B** is designed to maximize traffic throughput. At intersections, Fenton Street generally has a northbound left turn lane and a southbound left turn lane. This reduces the instances where left-turning vehicles will block through traffic. In the mid-block areas, the two-way left turn lane is removed to permit parking to be retained. Dedicated left-turn lanes in both directions have a strong safety benefit by allowing the separation of northbound and southbound pedestrians and bicyclists from left-turning vehicles through appropriate signalization.

  Because the alternative includes roadway widening, on-street parking would generally be provided on both sides of Fenton Street. This alternative would remove slightly more than half the existing parking spaces on Fenton Street, reducing the 91 existing spaces by 48 to leave 43 spaces remaining. This alternative is tied with Alternative E for the largest impact to parking.

  Traffic impacts fall in the middle of the pack. The approximate increase in travel time under Alternative B is 54 seconds, increasing the existing end-to-end travel time from 4 minutes 6 seconds to 5 minutes.

Like Alternative A, this alternative envisions widening Fenton Street by 2' throughout the corridor, making it one of the most expensive options, tied with Alternative C, and only slightly more expensive than Alternative A, at a cost of between $10.3 and $13.7 million.

- **Alternative C** is focused on balancing traffic flow with preserving on-street parking by eliminating southbound left turn lanes generally. Fenton Street's northbound left turn lanes are generally retained at intersections, though the two-way left turn lane is removed. This alternative generally performs well from a safety perspective with its dedicated northbound left turn lanes.

  Because the alternative includes roadway widening, parking would generally be provided on both sides of Fenton Street. This alternative would remove just under a third of the parking spaces in the corridor, reducing the existing number of 91 spaces by 26, leaving 65 spaces.

  In terms of traffic impacts, it does slightly better than Alternative B, increasing end-to-end travel time at peak hours by 42 seconds, taking it from 4 minutes 6 seconds to 4 minutes 48 seconds.

  Like Alternative A and Alternative B, this alternative envisions widening Fenton Street by 2' throughout the corridor, making it one of the most expensive options, tied with Alternative B, and only slightly more expensive than Alternative A, at a cost of between $10.3 and $13.7 million.

- **Alternative D** assumes that Fenton Street will not be widened, other than at intersections, where the curb extensions will be removed. Alternative D is designed based on the goal of saving as many parking spaces as possible while still holding the curbs at their current locations. As a result, the two-way left turn lane in Fenton Village is removed, and no intersections have left turn lanes, except northbound Fenton Street at Colesville Road. This is detrimental to safety because with shared lanes you cannot eliminate conflicts between left turning vehicles, pedestrians, and bicyclists.

  Because this alternative does not include roadway widening, on-street parking would only be retained on the east side of Fenton Street. West side on-street parking would be removed. This alternative would remove approximately one-third of the parking spaces on Fenton Street, which is slightly more impactful than Alternative C. Alternative D would remove 30 of the 91 parking spaces in the corridor, leaving 61 remaining.

  Alternative D has a similar impact to traffic as Alternative A. These two alternatives have the highest end-to-end travel times. Alternative D is expected to nearly double end-to-end travel time in the corridor by increasing it by 3 minutes 24 seconds from 4 minutes 6 seconds to 7 minutes 30 seconds.

Because this alternative envisions only minimal roadway widening, it is one of the cheapest alternatives, tied with Alternative E for cheapest, at a cost of between $8.1 million and $10.9 million.

- **Alternative E** assumes that Fenton Street will not be widened, other than at intersections, where the curb extensions will be removed. Alternative E is designed based on the goal of minimizing additional congestion rather than saving on-street parking.

  Because this alternative does not include roadway widening, on-street parking would only be retained on the east side of Fenton Street. West side parking would be removed. This alternative would remove just over half of the parking spaces on Fenton Street, reducing the existing 91 parking spaces by 48 spaces to leave 43 spaces remaining. This alternative is tied with Alternative B for the largest impact to parking. Removed parking provides space for dedicated northbound left-turn lanes, though all southbound movements take place in a single lane. The safety impact is similar to Alternative C.

  Traffic impacts are minimal with this alternative. This alternative, along with Alternative C and Alternative F is tied for second place in terms of least impact to traffic. Alternative E increases end-to-end travel time by 42 seconds, from 4 minutes 6 seconds to 4 minutes 48 seconds.

  Because this alternative envisions only minimal roadway widening, it is one of the cheapest alternatives, tied with Alternative D for cheapest, at a cost of between $8.1 million and $10.9 million.
- **Alternative F** is a modified version of Alternative C. This alternative minimizes costs by reducing widening in places where there is less demand for on-street parking. It also seeks to maximize parking on the block between Silver Spring Avenue and Thayer Avenue, where there are a lot of small businesses. To maximize parking on this block while still providing a safe bicycle and pedestrian experience, this alternative prohibits northbound left turns at the Thayer Avenue intersection. This alternative generally performs well from a safety perspective with its dedicated northbound left turn lanes.

  Alternative F would remove slightly more than a third of the parking spaces on the corridor, reducing the existing 91 spaces by 37 and leaving 54 spaces to remain.

  Travel times would increase by 42 seconds, an increase identical to Alternative C and Alternative E. This would increase the end-to-end travel time from 4 minutes 6 seconds to 4 minutes 48 seconds.

  Because this alternative minimizes roadway widening where possible, it falls in the middle of the pack on cost, between $9.1 million and $12.2 million.

- **Alternative G** is a modified version of Alternative C. It is essentially the same as Alternative F except that parking is maximized on the block between Sligo Avenue and Silver Spring Avenue rather than the block between Silver Spring Avenue and Thayer Avenue. In this scenario,

northbound left turns from Fenton Street onto Silver Spring Avenue would be banned, instead of at Thayer Avenue in Alternative F. This alternative generally performs well from a safety perspective with its dedicated northbound left turn lanes.

This alternative impacts slightly fewer parking spaces than Alternative F, reducing the existing 91 spaces by 35 and leaving 56 spaces remaining.

Alternative G is the best of all alternatives for traffic flow. It increases end-to-end travel time in the corridor by only 36 seconds, from 4 minutes 6 seconds to 4 minutes 42 seconds.

Because this alternative minimizes roadway widening where possible, it falls in the middle of the pack on cost, between $9.1 million and $12.2 million.

Table 4 summarizes the cost estimates and trade-offs involved in the pursuit of the respective alternatives. A more detailed explanation of the cost estimates can be found beginning on page 86 of the Fenton Street Bikeway Study report.[3]

[3] *Ibid*.

Table 4: Alternative Trade-offs and Cost Estimates

Alternative		A			B			C			D			E			F			G		
District		FV	E	NSS	FV	E	NSS	FV	E	NSS	FV	E	NSS	FV	E	NSS	FV	E	NSS	FV	E	NSS
Right-of-Way Impacts	Number of Impacted Parcels	14	0	0	14	0	0	14	0	0	4	0	0	4	0	0	9	0	0	9	0	0
	Driveways Impacted (during construction)	18	1*	0	18	1*	0	18	1*	0	8	1*	0	8	1*	0	12	1*	0	12	1*	0
	Café Zone Impacted	3	0	0	3	0	0	3	0	0	1	0	0	1	0	0	2	0	0	2	0	0
Potential Relocations	Storm Drains	17	5	0	17	0	0	17	5	0	15	5	0	15	5	0	17	5	0	17	5	0
	Utility Poles	11	0	0	11	2	1	11	0	0	7	0	0	7	0	0	7	0	0	7	0	0
	Fire Hydrants	2	2	1	2	5	0	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1
	Street Lights	44	5	0	44	4	3	44	5	0	23	5	0	23	5	0	34	5	0	34	5	0
Potential Environmental Impacts	Street Trees	33	4	3	33	4	3	33	4	3	9	4	3	9	4	3	20	4	3	20	4	3
Traffic Impacts	Level of Service D or Better at All Intersections	No			Yes			Yes			No			Yes			Yes			Yes		
	Average Travel Time (Change from Existing), minutes	7.5 (+3.4)			5 (+0.9)			4.8 (+0.7)			7.5 (+3.4)			4.8 (+0.7)			4.8 (+0.7)			4.7 (+0.6)		
	Reconstruct Traffic Signal	4	0	1	4	0	1	4	0	1	4	0	1	4	0	0	4	0	1	4	0	1
Parking Impacts	Change in On-Street Parking Spots	0	+3	0	-22	-5	-21	-18	+2	-10	-33	+3	0	-40	+2	-10	-21	-5	-11	-19	-5	-11
Cost		$13.6 million			$13.7 million			$13.7 million			$10.9 million			$10.9 million			$12.2 million			$12.2 million		

* Hotel drop-off area

FV - Fenton Village
E - Ellsworth District
NSS - North Silver Spring

MASTER PLAN CONSISTENCY

All alternatives are in substantial conformance with the following master plan recommendations:

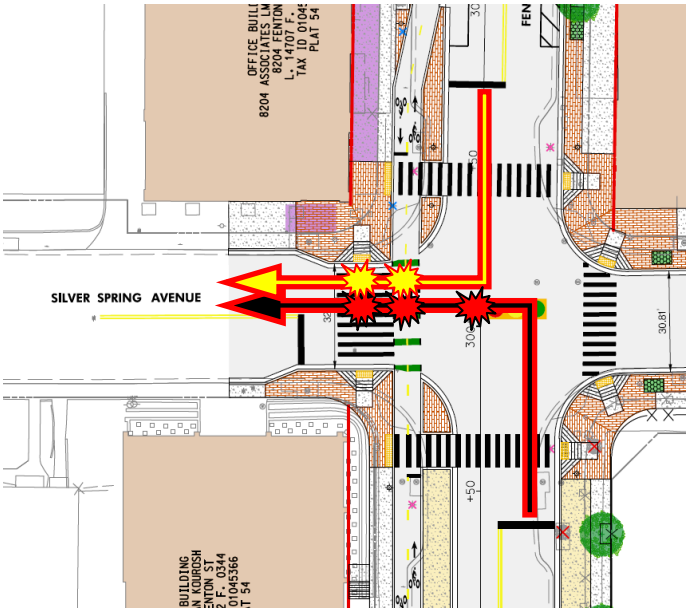
- The 2018 Bicycle Master Plan recommends separated bike lanes along this corridor. It assigns the entirety of this Fenton Street Bikeway project in its "highest priority" category. Additionally, the portion of the bikeway from Cameron Street to Ellsworth Drive is part of the Glenmont to Silver Spring Breezeway. The Breezeway design standard is for an 11-foot bikeway excluding the gutter pan with a five-foot minimum buffer from traffic.
- The 2018 Master Plan of Highways and Transitways classifies Fenton Street as an arterial with one travel lane in each direction and a 25 mph target speed.

As currently designed, all alternatives would be regarded as “interim” bikeways from a master plan perspective as the bikeway width and buffer width both do not meet the standards. With redevelopment along the roadway, the project can be upgraded to “permanent” status.

STAFF ANALYSIS

As each alternative provides a similar bikeway alignment and dimensions, staff’s recommendation for a preferred alternative is based on the alternative’s effect on safety, travel time, on-street parking, roadway widening, and estimated cost.

Figure 4: Fenton Street/Silver Spring Avenue Intersection



<u>Tradeoffs</u>

Safety

Safety along the Fenton Street corridor can be improved by reducing the number and severity of conflicts between road users. This includes reducing conflicts between motorists and between motorists and pedestrians and bicyclists.

Turning movements are the main opportunities for conflict because they are where people traveling in different directions at different speeds are most likely to cross paths.

Left turns are typically more dangerous than right turns for a few reasons. First, motorists tend to accelerate when turning left, and greater speeds are associated with greater crash severity. Second, left turns result in additional conflicts. For instance, in *Figure 4*, making a right turn from southbound Fenton Street onto westbound Silver Spring Avenue, a driver must cross a two-way separated bike lane and a crosswalk (yellow arrow). These represent two conflict points. A driver making a left turn onto westbound Silver Spring Avenue must address the same conflicts, but also cross a lane of oncoming motor vehicle traffic (red arrow).

Third, left-turning drivers often focus on finding a gap in oncoming traffic, but only look for pedestrians and bicyclists in the middle of executing the turn. Finally, oncoming traffic may block a left-turning driver’s view of crossing pedestrians and bicyclists, especially those crossing in the same direction as oncoming traffic.

Because left turns provide more opportunities for conflict, staff focused on how each alternative facilitated these turns as the crux of the safety analysis.

Staff proceeded with the understanding that improving the safety of left turns requires separating them from motor vehicle, pedestrian, and bicyclist through movements. This can be done either by prohibiting left turns outright or by using traffic signalization to provide time for left turns when through traffic

(pedestrians, bicyclists and motor vehicles) are stopped. The safety merits of each alternative then rest on the quality of this separation and how often it is present at intersections in the project area. Staff understands that all intersection approaches are not equal. At locations where there is strong left turn volume and also a strong parallel pedestrian movement, this left turn separation is more urgently needed than at locations where either the left turn volume or pedestrian volume are absent. The locations with the highest left turn volume are northbound at Wayne Avenue (Saturday Peak), northbound at Cameron Street (Weekday AM, Saturday Peak) and northbound at Colesville Road (Saturday Peak). Southbound at Wayne Avenue (Saturday Peak) has the highest southbound left turn volume on the corridor, but the volume is unremarkable when comparing to northbound locations. In general, northbound left turns are more prevalent than southbound left turns.

Left turns that take place while all other traffic movements are stopped are called "exclusive left turns." Exclusive left turns are typically only provided when a left turn lane is present. If dedicated left turn lanes exist, a specific traffic signal can be provided to show red, yellow, and green arrows indicating when turns from this lane can be made. The alternative to exclusive left turns is "permissive" left turns, where turning drivers wait for a gap in traffic.

Today, Fenton Street generally has left turn lanes at each intersection, but these left turns are generally "permissive" and don't have a dedicated signal phase.

On Fenton Street, left turns can be made in the northbound and southbound directions, but no design alternative would provide exclusive left turns in the southbound direction. As southbound left turning volumes are generally lower than northbound ones, the potential for conflicts from the southbound movement is lower than in the northbound direction. The northbound movement is also more important because it crosses the proposed bikeway. For these reasons, this analysis centers on northbound left turns.

Along the corridor within this project area, Fenton Street has two main intersections, with Wayne Avenue and with Colesville Road. Staff compared how each alternative handled northbound left turns at these two intersections individually and at all of the other intersections in the project area in total. *Figure 5* summarizes this information.

Figure 5: Northbound Exclusive Left Turns Provided

Alternative	Colesville Road	Wayne Avenue	Minor Streets
Existing	*0*	*1*	*0*
Alt A	1	0	0
Alt B	1	1	4
Alt C	1	1	4
Alt D	1	0	0
Alt E	1	1	4
Alt F	1	1	3*
Alt G	1	1	3*

* Includes an intersection where left turns are banned

All alternatives provide a northbound exclusive left turn at the Colesville Road intersection, though for Alternatives A and D, this is the only one they provide. All remaining alternatives (B, C, E, F, and G) provide a northbound exclusive left turn at Wayne Avenue. For the minor intersections with Fenton Street, Alternatives B, C and E provide a northbound exclusive left turn at four locations, while Alternatives F and G provide the same at two intersections and prohibits northbound left turns completely at a third (Thayer Avenue and Silver Spring Avenue respectively. The intersection that has a northbound exclusive left turn in Alternatives B, C, and E and does not in

Alternatives F and G is Cameron Street, the northern terminus of this project and the connection to the Cameron Street-Planning Place Bikeway.

Travel Time

Alternatives that prioritize on-street parking over dedicated left turn lanes result in larger increases in travel time than those that do not. Dedicated left turn lanes provide a place for left-turning vehicles to queue outside the flow of traffic, allowing through-moving vehicles to proceed.

Figure 6: Travel Time Differences

Alternative	Average End-to End Travel (min:sec)	Change (min:sec)	
Existing	*4:06*	-	
Alt A	7:30	+3:24	Most impact to traffic congestion
Alt B	5:00	+0:54	
Alt C	4:48	+0:42	
Alt D	7:30	+3:24	Most impact to traffic congestion
Alt E	4:48	+0:42	
Alt F	4:48	+0:42	
Alt G	4:42	+0:36	Least impact to traffic congestion

Private automobiles are not the only through-moving vehicles. Five bus routes travel along the Fenton Street corridor and any increase in travel time along Fenton Street also impacts bus riders.

All alternatives increase travel time, but Alternatives A and D are by far the worst. The other alternatives are within a few seconds of each other (*Figure 6*).

On-street Parking

On-street parking is considered an asset for businesses along the Fenton Street corridor used by business patrons and those delivering to or picking up from storefronts in the area. It is convenient to park in front of a business you intend to patronize. In general, those alternatives that preserve more on-street parking result in slower travel times through the corridor. Those alternatives that minimize road widening preserve fewer parking spaces. All alternatives maintain some amount of on-street parking. The net on-street parking change for each alternative can be seen in *Figure 7*.

Figure 7: On-Street Parking Differences

Alternative	Total On-Street Parking	Change	
Existing	*91*	-	
Alt A	94	+3	Least impact to parking
Alt B	43	-48	Most impact to parking
Alt C	65	-26	
Alt D	61	-30	
Alt E	43	-48	Most impact to parking
Alt F	54	-37	
Alt G	56	-35	

Alternative A increases the on-street parking supply in the corridor by three spaces. Alternative C reduces the on-street parking supply by 26 spaces, Alternative D by 30 spaces, Alternative G by 35 spaces, Alternative F by 37 spaces, and Alternatives B and E both by 48 spaces.

Roadway Widening

Widening Fenton Street is the one way the bikeway, left-turn lanes, existing travel lanes, and on-street parking can all be accommodated to a certain extent. In addition to the expense involved in moving curbs, there are additional environmental and utility impacts involved, namely the necessary relocation of streetlights, drainage infrastructure, and the removal of street trees. Alternatives A, B and C all generally move the western curb two feet. Alternatives F and G selectively move the western curb. Alternatives D and E only remove curb extensions that extend beyond the existing curb.

Figure 8: Roadway Widening Differences

Alternative	Roadway Widening?	
Existing	*N/A*	
Alt A	Yes, 2'	⇦ Most Widening
Alt B	Yes, 2'	⇦ Most Widening
Alt C	Yes, 2'	⇦ Most Widening
Alt D	Curb Extensions only	⇦ Least Widening
Alt E	Curb Extensions only	⇦ Least Widening
Alt F	Selective Widening	
Alt G	Selective Widening	

Estimated Cost

Each alternative takes a different approach to providing the same bikeway; this leads to different project costs. In general, the more the roadway is widened, the greater the cost of the alternative. The MCDOT team has developed very conservative cost estimates for each alternative that assume a worst-case scenario to account for unknowns that may arise in the design process and potential right-of-way acquisition costs. As the design process moves forward, these estimates will be refined.

Figure 9: Cost Estimate Differences

Alternative	Cost Estimate	
Existing	*N/A*	
Alt A	$10.3M - $13.6M	
Alt B	$10.3M - $13.7M	⇦ Most expensive
Alt C	$10.3M - $13.7M	⇦ Most expensive
Alt D	$8.1M - $10.9M	⇦ Cheapest
Alt E	$8.1M - $10.9M	⇦ Cheapest
Alt F	$9.1M - $12.2M	
Alt G	$9.1M - $12.2M	

<u>Analysis</u>

Staff's highest priority is the completion of a bikeway connection that is as safe as possible for pedestrians, bicyclists, and everyone using this corridor. This means selecting an alternative that allows for an exclusive left turn phase across the bikeway to reduce conflicts. Because this phasing is not possible in Alternatives A and D, they should be removed from consideration.

With this project then, the decision point comes down to whether limiting on-street parking loss is worth the increased costs of widening Fenton Street. Of the remaining alternatives, E is the only alternative that does not widen Fenton Street and would result in the net loss of 48 spaces. Widening the road by two feet along the corridor allows Alternative C to maintain 22 of those spaces for a net loss of 26. Alternatives F and G, by selectively widening, remove 37 and 35 net spaces, respectively. Those alternatives that save more on-street parking are generally more expensive than those that save less.

On-street parking is heavily used in this corridor, particularly in Fenton Village and the North Silver Spring District. Indeed, concern about on-street parking is one of the reasons this project has been delayed to this moment.

However, staff is not convinced that widening Fenton Street to save more on-street parking is worth the expense. *Table* 5 breaks down the cost of each additional parking space provided by those alternatives that widen Fenton Street.

Table 5: Cost per Parking Space by Remaining Road Widening Alternative

Alternative	**B**	**C**	**E**	**F**	**G**
Change in Number of Parking Spaces from Today	-48	-26	-48	-37	-35
Project Cost Estimate	$13,700,000	$13,700,000	$10,900,000	$12,200,000	$12,200,000
Parking Space Change from Alternative E	0	22	N/A	11	13
Cost Difference from Alternatives E	$2,800,000	$2,800,000	N/A	$1,300,000	$1,300,000
Additional Cost per Space	**N/A**	**$127,273**	**N/A**	**$118,182**	**$100,000**

In comparison to Alternative E, the remaining alternatives would have the following benefits and costs:

- Alternative B saves no on-street parking spaces for an additional cost of about $2.8 million.
- Alternative C saves 22 on-street parking spaces for an additional cost of **about $2.8 million or about $127,000 per space.**
- Alternative F saves 11 on-street parking spaces for an additional cost of **about $1.3 million or about $118,000 per space.**
- Alternative G saves 13 on-street parking spaces for an additional cost of **about $1.3 million or about $100,000 per space.**

This is a lot of money to spend on parking spaces with no significant improvement in bikeway safety, pedestrian safety, travel time savings, etc.

Fortunately, the additional expense is not necessary to address short-term or long-term parking needs:

1) Long-Term Parking: For longer trips, like a seated dinner or medical appointment, it is a parking management best practice for parking to occur off-street, with the on-street spaces prioritized for quick turnover visits. Fenton Street on-street parking is not the only parking available for people intending to patronize Fenton Street businesses. There are 207 on-street parking spaces within one block of the corridor and there are many off-street public parking facilities – both surface lots and structures – within a short walk of every part of Fenton Street. The MCDOT team's parking study indicated that there are more than enough off-street spaces available at

any given time to accommodate the potential loss of on-street parking. MCDOT parking policy is already geared toward this best practice, with on-street parking in Silver Spring priced at $2.00 per hour while off-street spaces are between $1.00 and $1.25 per hour.

2) Short-Term Parking: The greatest impact to local business from removing on-street parking is that quick trips can become more difficult. Those trips, such as a stop at the coffee shop or dry cleaners, are typically less than 10 minutes. This impact can be successfully neutralized through thoughtful parking management.

   Remaining on-street spaces on Fenton Street can be made more efficient, effectively creating multiple spaces from each one, by reducing the maximum time vehicles are allowed to park in each space. Currently, one can park for an hour at an on-street space along Fenton Street and up to two-hours on some side streets. This encourages the use of these spaces by people parking for longer durations, occupying business-adjacent spaces while people who may just need to park to quickly get a takeout food order have to park further away or circle several times to find a parking space. If the hour time limit were shortened to 15 minutes, for example, each space could potentially serve three more patrons in the same amount of time, effectively creating four spaces where one currently exists. Even if MCDOT does not increase enforcement of the shorter time intervals, turnover will increase. From the correspondence MCDOT has conducted with business owners, this short-term parking is what is really needed, particularly in Fenton Village. Adjusting the parking time limits would help address this need without moving curbs and without adding additional cost.

Furthermore, keeping curbs in place reduces utility and environmental impacts, lowering project cost while protecting the nascent tree canopy along the corridor and limiting the construction impacts with which this corridor has become too familiar over the past several years.

With this in mind, staff recommends advancing **Alternative E** as the Planning Board's preferred alternative. It provides a high level of safety and minimal travel time increase at a low cost and with few impacts to trees and utilities.

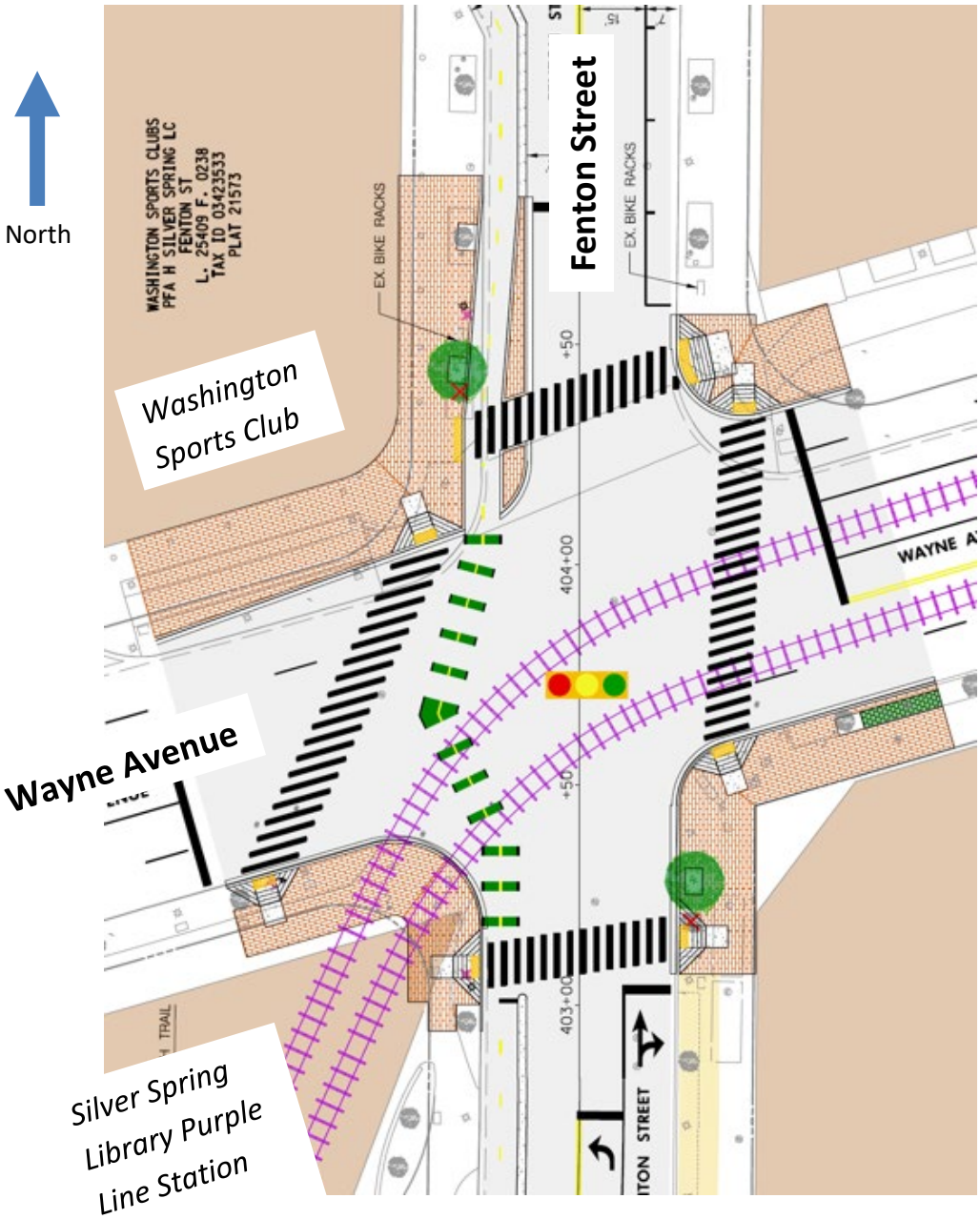
<u>Additional Considerations</u>

The Purple Line will help people from across the region access the Fenton Street corridor. The station at the Silver Spring Library is within a very short walk of Fenton Village and the Ellsworth District. *Figure 10* illustrates how the intersection is currently designed in all alternatives.

The orientation of the Purple Line tracks through the intersection make it very difficult for pedestrians and bicyclists to safely and directly cross the west leg of the intersection. The bike lane markings have an awkward bend in them to encourage bicyclists to cross the Purple Line tracks at as close to a 90-degree angle as possible. This reduces the likelihood of a bicyclist crashing by getting a wheel caught in the trackbed. These markings encourage the safest riding behavior, but they are not likely to be followed. Most bicyclists will continue straight across the intersection.

Similarly, the western curb ramps and crosswalk markings are shown in a configuration that pedestrians are not likely to comply with. Pedestrians are more likely to walk in the bikeway at this location or cross outside the crosswalk as the marked crossing is not along a likely path of travel for most people. Finally, pedestrian waiting space is very limited at the southwest corner of this intersection and pedestrians are likely to overflow into the bike lanes or onto the Purple Line tracks.

Figure 10: Fenton Street/Wayne Avenue Intersection



Staff will engage MCDOT in a design process to improve this important intersection and increase compliance with crossing markings on the western leg.

RECOMMENDATIONS

Staff recommends that the Planning Board transmit the following comments to the Montgomery County Council's Transportation and Environment Committee (T&E) Committee:

1. **Advance Alternative E as the preferred alternative.**
2. **Coordinate with Montgomery Planning staff to undertake a design process to better separate pedestrians, bicyclists, motor vehicles and light rail vehicles at the Fenton Street/Wayne Avenue intersection.**

PUBLIC OUTREACH

For several years, MCDOT has engaged very closely with the local residential and business community about this project. A summary of public engagement activities is available in *Attachment 4*.

NEXT STEPS

The Fenton Street Bikeway Study will go to the Council's T&E Committee in Spring 2021 in order to get recommendations about which alternative to move into design.

Following selection of an alternative, MCDOT estimates that the design and permitting process will take a minimum of 24 months. Currently, construction is not anticipated before 2023, however, MCDOT is looking at options for accelerating construction in certain segments.

ATTACHMENTS

Attachment 1: Fenton Street Bikeway Project History

Attachment 2: Street Section Design Criteria

Attachment 3: Plan View Alternatives

Attachment 4: Public Engagement Summary

Fenton Street Bikeway Study
Narrative History of Project

Prepared by Matt Johnson, MCDOT on 12/8/2020

In January 2016, the Montgomery County Council directed the Montgomery County Department of Transportation and the Maryland-National Capital Park and Planning Commission to work together to develop a draft bike network plan for the Silver Spring CBD. While the Commission was working to develop the Bicycle Master Plan, the Council felt that work in Silver Spring should move ahead at a quicker pace, and that planning should reflect the work MCDOT was already doing to construct parts of the bike network.

This draft concept was sent to the Council in February 2016. The approved concept included separated bike lanes on Spring Street/Cedar Street (constructed 2017), Cameron Street (constructed with conventional bike lanes in 2018-2020), Second Avenue/Wayne Avenue (constructed 2019), and Fenton Street.

Based on this draft plan, MCDOT prepared to begin a Study to look into the feasibility and impacts of a separated bikeway on Fenton Street in 2016. To this end, MCDOT held meetings with residents (June 2016) and businesses (September 2016) to gather feedback about what should be included in the study.

In August 2016, MCDOT started the process of getting a consultant on board to conduct the Study. Procurement was completed in the fall of 2016, and the Study officially started in December 2016.

In April 2017, the consulting team submitted the first conceptual layouts for potential separated bikeways in the corridor (these live on today as Alternatives D and E). Work on the report continued through much of 2017, however, by fall, MCDOT made the determination to stop work on the Study temporarily.

The pause in the Study was for two primary reasons:

1. The initial scope assumed that the street would not be widened, however the current width of 44' in Fenton Village is insufficient to accommodate a bikeway and parking on both sides of the street. A cross-section of 46' would permit parking on both sides of Fenton. Public sentiment favored retaining parking, so MCDOT sought to expand the scope to look at widening.
2. At the time, Montgomery County Parking Lot 3 had closed for redevelopment, but its replacement, Garage 3, had not yet opened. There was concern from within MCDOT and the public that we were not getting an accurate picture of the parking needs with Lot 3 closed and Garage 3 not yet open.

The study was put on hold until Garage 3 opened. The garage opened in early 2019 and MCDOT began the procurement process to expand the scope and get the engineering consultant on board. The study was officially restarted in late 2019.

A community meeting was held on January 21, 2020 to introduce the community to the revised Study and update them on the project. The meeting had approximately 110 attendees.

In November 2020, the consultants released their final draft of the Study, which examined impacts such as traffic congestion, parking needs and supply, loading zone needs, utility locations, and other factors. Along with the Study, the consultants developed 7 alternatives.

MCDOT hosted a community meeting on November 18, 2020 to present the findings of the Study, present the 7 alternatives, and get community feedback. The public comment period following this meeting was open until December 4, 2020. At the meeting, we received feedback from 23 attendees verbally. Following the meeting, we received 54 written comments. Both in-person and written comments were generally favorable of the project.

The Study will go to the Planning Board in January 2021 and to the Council's T&E Committee in Spring 2021 in order to get recommendations from those bodies about which alternative to move into design.

Following selection of an alternative, MCDOT estimates that the design and permitting process will take a minimum of 24 months. Currently, construction is not anticipated before 2023, however, MCDOT is looking at options for accelerating construction in certain segments.

Fenton Street Bikeway Study
Summary of Public Engagement

Prepared by Matt Johnson, MCDOT on 12/7/2020

The Fenton Street Bikeway Study was originally started in 2017. However, after initial concepts were partially developed, the Study was put on hold for two primary reasons:

1. The initial scope assumed that the street would not be widened, however the current width of 44' in Fenton Village is insufficient to accommodate a bikeway and parking on both sides of the street. A cross-section of 46' would permit parking on both sides of Fenton. Public sentiment favored retaining parking, so MCDOT sought to expand the scope to look at widening.
2. At the time, Montgomery County Parking Lot 3 had closed for redevelopment, but its replacement, Garage 3, had not yet opened. There was concern from within MCDOT and the public that we were not getting an accurate picture of the parking needs with Lot 3 closed and Garage 3 not yet open.

The study was put on hold until Garage 3 opened. The garage opened in early 2019 and MCDOT began the procurement process to expand the scope and get the engineering consultant on board. The study was officially restarted in late 2019.

The public engagement descriptions below will refer to the studies as "the 2017 study" and the "2020 study".

The 2017 Study

- On **June 27, 2016**, MCDOT attended an East Silver Spring Civic Association meeting at 814 Thayer Avenue. The meeting topic was to talk about the future of Fenton Street, including upcoming Pepco work and the possibility to start a study for a bikeway on Fenton. With the potential for the study to start soon, we wanted to hear what concerns the community had.
    - Attendance at the meeting was about 25 people.
    - Comments at the meeting were both in favor of and opposed to the bikeway.
    - Concerns voiced included:
        - Additional cut through traffic would be shifted to Grove Street
        - Spillover parking would take place in East Silver Spring
        - Truck loading for businesses would obstruct traffic or its lack would cause difficulty for businesses.
- On **September 20, 2016**, MCDOT attended a meeting facilitated by several ESSCA members to meet with business owners in the Fenton Village area. The meeting was held at the Addis Ababa Restaurant. The purpose of the meeting was to understand the needs of the businesses so we could incorporate their needs and concerns in the scope for the Study.
    - Attendance at the meeting was approximately 15 people, mostly business owners, but a few residents also attended.
    - Comments mainly focused on the loss of parking negatively impacting businesses. Concerns over loading were also voiced.
- On **November 20, 2017**, MCDOT staff attended an East Silver Spring Civic Association meeting at the B&O train station in Silver Spring to hear resident concerns and provide updates related to

Silver Spring projects, including the Fenton Street Bikeway Study, which was on hold at that point.

- On **April 20, 2018**, MCDOT attended the Silver Spring Urban District Advisory Committee meeting to provide an update. At this point, the Study was still on hold, though we anticipated restarting it later in the year.

The 2020 Study

The 2020 Study, the results of which the Board is being briefed upon in January 2021, was kicked off by MCDOT Staff in late 2019.

- On **January 21, 2020**, MCDOT hosted a Community Meeting at East Silver Spring Elementary School. The main purpose of the meeting was to introduce the revised study to the community and take feedback regarding which elements of the corridor should be included in the Study. The meeting also included a briefing on two related projects, the Fenton Street/MD 410 Intersection Redesign project and the Grove Street Neighborhood Greenway Pilot project.
    - Attendance at the meeting was approximately 110 people.
    - We received verbal comments from only 3 attendees at the meeting due to time constraints, however, staff did talk one-on-one with anyone who wished to ask questions or make comments.
    - Following the meeting, we received 97 written comments.
        - 77 were supportive of the project
        - 9 were neutral
        - 11 were opposed to the project
- On **November 18, 2020**, MCDOT hosted a Virtual Community Meeting via the Zoom platform due to the Covid-19 pandemic. At this meeting, MCDOT staff presented the results of the 2020 Study, including a discussion of the 7 alternatives developed by the Study. Public comment was also taken.
    - Attendance at the meeting was approximately 60 people.
    - At the meeting, we received verbal comments from 23 attendees.
    - Following the meeting, we received 54 written comments.
- On **February 3, 2020**, MCDOT staff met with business owners on Fenton Street. We conducted a corridor walk, and spoke with as many business owners as we could. Some walked with us and talked about needs, others we spoke to inside of or outside their shops. On this corridor walk, we spoke to 11 business owners and attempted contact at several more.
- On **July 27, 2020**, MCDOT and consultant staff met with the Manager and Assistant Manager at the Fenton Street Safeway to discuss their loading and parking needs and observe delivery activity.
- On **October 29, 2020**, MCDOT and consultant staff conducted a second corridor walk to talk to businesses. On this walk, we were able to speak to approximately 25 business owners.