MEMORANDUM

TO: County Council

FROM: Glenn Orlin, Deputy Council Administrator

SUBJECT: Addendum—US 29 BRT Mobility and Reliability Study

Attached are pertinent documents regarding the funding of this $425,000 study within the existing appropriation of the Facility Planning-Transportation project:

- January 29, 2018 letter from 17 Silver Spring civic leaders concerning the subject study ©1-4
- December 18, 2017 from six Councilmembers requesting DOT to find funds within its existing budget to begin the subject study ©5-6
- DOT’s latest update of the subject study’s scope of work ©7-14
January 29, 2018

The Honorable Hans Riemer  
President, Montgomery County Council  
100 Maryland Avenue  
Rockville, Maryland 20850

RE: County Council January 30, 2018 Agenda Items:  
(4) Public Hearing Amendments to the FY 17-22 Capital Improvements Program  
Reflecting the County Executive’s Savings Plan; and  
(5)Suspension of Rules / Action–Resolution to Approve FY18 Savings Plan; and

Request for Removal of Proposed Supplemental Request for Another Route 29 BRT Study for a Median Guideway; and

Request for Public Notice and Public Hearing for Council’s Supplemental Budget Request in Accordance With the Charter of Montgomery County.

Dear Council President Riemer and Members of the County Council:

As community leaders in numerous neighborhoods with more than 15,000 residents located along Route 29 in Silver Spring, we have been actively participating for the last three years in the Corridor Advisory Committee process for the proposed Route 29 Bus Rapid Transit (BRT) project. As you know, Corridor Advisory Committees (CACs) were established because BRT construction recommendations were not contained in area master and sector plans along the corridor. The purpose of the CACs is to provide communities with the opportunity to study and address community impacts in a comprehensive manner; provide input to all planning and design; fulfill the County Council requirements for transparency; and serve as a clearinghouse for sharing of timely and accurate information on the studies and plans in each corridor.1

We are extremely concerned that County Councilmembers are taking actions to undermine this process. After three years of diligent work with the Route 29 CAC, we were astonished to learn that you are ordering a supplemental budget request within a “Savings Plan” for a new Route 29 BRT Median Guideway Study, without holding a public hearing as promised and as required by Section 307 of the Charter of Montgomery County. Last year we wrote to you after a hearing was scheduled prematurely for construction and right-of-way acquisition funding for Route 29 BRT construction even though the master plan requires that no County

1 Purpose and Mission for the Corridor Advisory Committees, MCDOT, February 28, 2015.
funding be provided until the public engagement process has been fulfilled. Although you programmed the construction funding, we still have not been informed of the right of way requirements and the study is still in the planning phase of the project.

Delete Additional Budget Item “US29 Bus Rapid Transit Guideway and Operations”

We are requesting that the additional NEW handwritten budget item buried on page 228 “US29 Bus Rapid Transit Guideway and Operations” be deleted at this time for the following reasons:

• This additional item is not even mentioned in Dr. Orlin’s memorandum or in any other text in the packet for January 30. The public would have no way of knowing about this additional new project and expenditure being added to the County Executive’s FYI 8 “Savings Plan”. It is only found if one happens to review every page of the 245 page packet to see the item handwritten in on page 228 as “US 29 BRT Guideway and Operations” under Facility Planning No. 509337, which is separate and apart from No. P501318 Project Description Form which is the stand alone CIP category for all BRT facility planning items. This lack of transparency and absence of public notice and input conflicts with the purpose and mission of the project and fails to meet the Council’s requirements adopted in the Master Plan. 2

• Furthermore, Dr. Orlin’s memo states on page 192: “Given the ratcheting down of resources for the CIP, the pace of facility planning should also be reduced, so as not to create a backlog of projects”. Since there is a ratcheting down for the CIP and it is recommended that facility planning should be reduced, new items for a completely different BRT study should not be added at this time, especially since the CAC has been working on the County Executive’s proposal for two years and is in the detailed planning phase and construction is scheduled for this year. Moreover, the County is cutting $25 million for our schools as well as money for the limited stop service promised for Route 29. You will recall that WMATA had buses ready to implement this long delayed service when MCDOT insisted that they could provide the service for less money which they have now reneged on while providing ~20 million for a similar service on Rockville Pike this same fiscal year.

• Last year when a different conceptual proposal was made public in a Staff memo AFTER the public hearing on the current County Executive proposals, CAC

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2 Countywide Transit Corridors Functional Master Plan, Approved and Adopted by Montgomery County Council, December 2013
members expressed concern that they were not provided an opportunity to comment on this concept in the public hearing since it was not part of the public hearing packet. A median busway has been studied numerous times both for Route 29 as well as 3 other corridors recently. The concept was always rejected for reasons that have nothing to do with lane width. The CAC has done a tremendous amount of review, analysis and comment on numerous concepts so bringing back a concept that was not advanced for very valid reasons would also undermine the CAC process. In response, President Berliner stated that they would request a cost estimate and scope of work from MCDOT and it would be made public for a public hearing on a supplemental request. Now the Council wants to prevent that public hearing for reasons not explained and is not even providing the details of what is requested.

- Not only did the Council promise to provide the cost estimate, scope of work and public hearing, but public notice of at least one week and public hearing are required by Section 307 of the County Charter of Montgomery County for this request.

- Where is the written justification and explanation for why it is so urgent to add this completely new project at this time, in the middle of a “Savings Plan” in the middle of the Fiscal Year, without the required notice and hearing while other studies are still ongoing? If it were being proposed in the new CIP in FY19, which would be the appropriate time and place for adding a new BRT study, there is a hearing for that.

There is no justification or urgency to providing funds without sufficient public notice or public hearing for another additional study for the Route 29 BRT project. The current project is still in the planning and design phase and all BRT study items for all corridors including Route 29 are under one PDF P501318.

In summary, for the reasons outlined above, we respectfully request that:

1. The new budget item “US29 Bus Rapid Transit Guideway and Operations” be deleted at this time from the “Savings Plan”.

2. The County Council provide sufficient public notice and hearing for any new requests for the Route 29 BRT project including study scope changes, as well as for requests for additional funding as required by the Charter of Montgomery County.
Thank you for your consideration and attention to this issue. We look forward to your response and to working with you on this matter of public concern and importance.

Sincerely yours,
Alan Bowser, CAC Representative, Park Hills Civic Association
Carole Ann Barth, CAC Representative, Montgomery County Civic Federation
Sharon Canavan, President Northwood-Four Corners Civic Association
Laurence Dickter, Vice-President South Four Corners Citizens Association
Jay Elvove, President, North Hills of Sligo Civic Association
Roberta Faul-Zeitler, CAC Representative, Woodside Park Civic Association
Melissa Goemann, CAC Representative, Vice-President, Greater Four Corners Alliance
Jonathan Halpern, Transportation Chair, CAC, Sligo-Branview Community Association
Kevin Harris, CAC Representative, Northwood Four Corners Civic Association
Michael McDonough, President, Woodmoor-Pinecrest Citizens Association
Karen Michels, CAC Representative, South Four Corners Citizens Association
Mike Pfetsch, CAC Representative, Woodmoor-Pinecrest Citizens Association
Harriet Quinn, Vice-President, Transportation Chair, Woodmoor-Pinecrest Citizens Association
Michele Riley, CAC Representative, Silver Spring United Methodist Church
Victoria Scavo, President, Burnt Mills Citizens Association
Carolyn Stanek Lucy, President, South Four Corners Citizens Association
James Zepp, CAC Representative, Montgomery County Civic Federation

Cc:
The Honorable Isiah Leggett, Montgomery County Executive
Glenn Orlin, Montgomery County Council Deputy Administrator
Megan Davey Limarzi, Esquire, Clerk of the Council
Federal Transit Administration
December 18, 2017

Mr. Al Roshdieh
Director
Montgomery County Department of Transportation
101 Monroe Street, 10th Floor
Rockville, MD 20850

Dear Director Roshdieh,

Earlier this year, the County Council requested MCDOT submit a supplemental appropriation request in order to study the concept of median dedicated Bus Rapid Transit lanes on US 29 between New Hampshire Avenue and Sligo Creek Parkway. We understand MCDOT prepared such a study, but the County Executive branch has not advanced the associated appropriation request given our County’s current budget challenges.

We ask that MCDOT find funding in its existing budget to begin this study. While the County Executive’s BRT proposal for US 29 will provide much-needed high-quality transit service, it will feature dedicated bus lanes for less than 40% of the corridor, all of which will be north of the congested area between Sligo Creek Parkway and New Hampshire Avenue. In May, after it became clear that the State Highway Administration was open to the idea of shrinking travel lane widths to allow for median dedicated bus lanes, the Council made clear its view that we must study such a concept between White Oak and Silver Spring as the next phase of BRT on US 29.

The median dedicated BRT lanes proposed for further study between New Hampshire Avenue and Sligo Creek Parkway could help maximize ridership and travel time savings, creating a higher quality of service within the existing roadway while retaining six travel lanes throughout.

We will not know the full potential for this concept until we do the detailed study requested by the Council. We ask that MCDOT prioritize this study by looking for the funds to carry it out without a supplemental appropriation.

Thank you for your attention to this issue and we look forward to your response.
Sincerely,

Roger Berliner
Chairman, T&E Committee
District 1

Hans Riemer
Council President
At-Large

Marc Elrich
At-Large

Tom Hucker
District 5

George Leventhal
At-Large

Nancy Navarro
District 4

CC: Glenn Orlin, Deputy Council Administrator, Montgomery County Council
US 29 Mobility & Reliability Study – Scope of Work
Last Update: 1/30/2018

Tasks
I. Overview
II. Public Outreach
III. Summary of Previous Efforts
IV. Update Models
V. Identify Conceptual Improvements & Mobility Package (Past and New)
VI. Review “Emerson and Smoot” Concepts
VII. Develop Conceptual Geometric Designs
VIII. Cost Estimates & Travel Time Benefits

Project Overview
Generally the US 29 Mobility & Reliability Study. Our understanding of the scope of work is to advance a study and alternatives to:

- Examine conceptual roadway operational improvements that will benefit both general traffic and transit travel and have independent merit beyond the US 29 BRT Transit Project.
- Explore an alternative transit BRT guideway design concept

The study would include an evaluation of the median/ reversible lane BRT concept developed by US 29 citizen advisory committee members, Emerson and Smoot, along with assessing intersection and segment improvements with and without future managed lanes. The purpose of the study is to identify improvements or packages of improvements that can be implemented on US 29 to complement the investment in BRT and improve transit, HOV, or overall corridor travel time and reliability performance from Tech Road to the Silver Spring Transit Center.

The proposed scope includes

Public Outreach
1) **Meetings & Conference Calls** - Attend and participate in stakeholder meetings and conference calls.

- **Internal meetings**
  - MDOT SHA
  - MDOT MTA
  - Previous consultants

- **External meetings**
  - 2 public meetings – Open house with formal presentation.
    - At least one will be held at Blair High School.

**Newsletter mailing**

**Deliverables:** meeting minutes, project Purpose and Need Statement with goals and objectives, criteria for measures of effectiveness, public meeting displays, newsletter and scripts.

a) **Summarize Past Modeling Efforts, Data Sets, Results** – Obtain, review, and summarize traffic operations (Synchro, VISSIM) and travel forecasting (regional, Corridor and UMD Mesoscopic modeling) efforts in the corridor performed to date including efforts by MWCOG, MTA, SHA, MNCPPC, UMD, and consultants

b) **Transit Operational & Service Planning Efforts** – Summarize Transit Operational & Service Planning efforts in the corridor, signal operations including Transit Signal Priority and BRT/ local transit service planning/coordination efforts to date along with the current expected interim year transit service and signal operations plan.

c) **Update Existing Microsimulation (Synchro and VISSIM) Models** - Update and enhance the existing Synchro and VISSIM models from Tech Road to the Silver Spring Transit Center. Updates will include additional network detail off of US 29 (i.e. Stewart Lane/Lockwood Drive, Wayne Avenue/Ramsey Avenue and the Silver Spring Transit Center). Interchange of I-495 at MD 97, and Interchange of I-495 at MD 193), new peak hour volume sets, signal timings, and transit routes/schedules.

d) **Review and Update Regional MWCOG Model** – Review most recent MWCOG model documentation, inputs (2017, 2025, and 2040 networks, TAZ level land use, and other inputs), and base year validation. Update land use forecasts to be consistent with land use forecasts provided by the Maryland-National Capital Park and Planning Commission/Planning Department, confirm White Oak land use assumptions, and confirm zone and network detail. Revise network and zone detail within the US 29 Study Area as needed to support operational analyses and Run updated 2017, 2025, and 2040 MWCOG models. This will include an update to existing traffic counts if needed.

e) **Develop 2025 and 2040 Traffic Volumes** – Apply NCHRP 255/765 post-processing methods to the existing base year (2017) and 2025/2040 horizon year scenarios travel model output (e.g. ADTs) to produce updated intersection level traffic estimates for the proposed study intersections (peak hour turning and through movements, etc.).

f) **Develop Interim Year (2025) Synchro and VISSIM Models** – Develop Interim Year (2025) VISSIM model. Model will use 2025 Interim Year volumes and include BRT in mixed-traffic, BRT stations,
BRT characteristics, and Transit Signal Priority (TSP) and planned local/feeder transit revisions. It should be noted previous VISSIM models only included unconditional Transit Signal Priority, but these models will be enhanced to include Conditional TSP using VISSIM.

g) Develop Future (2040) No-Build Synchro and VISSIM Models – Update Interim Year VISSIM model to include 2040 traffic volumes. Model will include US 29 BRT in mixed-traffic only.

Deliverables:

- Summary matrix of previous studies/models/data sets
- Summary of interim year BRT, local transit service plans and signal operations
- Existing, 2025 Interim and 2040 Future traffic volumes
- Existing, 2025 Interim and 2040 Future Synchro and VISSIM models (US 29 BRT in mixed-traffic only) and measures of performance for each intersection and the overall corridor. The Synchro model will be used for intersection level of service, delay and volume-to-capacity ratio, the VISSIM model will be used for auto and bus travel times.

3) Review and Compare Emerson and Smoot Concept

a) Compare to MTA/SHA Alternative A and Alternative B Concepts – Review the concept developed by Sean Emerson and Sebastian Smoot and compare to MTA/SHA’s Alternative A and Alternative B including key attributes of each concept, challenges and limitations related to traffic operations, transit operations and right-of-way, utility and environmental impacts. The comparison will also include selective traffic operational analysis or ridership forecasting estimates.

b) Provide Recommendations on Improvements – Discuss opportunities and constraints with concepts (e.g. narrowing of lanes, reversible lane impact on service operations) and provide recommendations on improvements.

Deliverables:

- Summary memo and matrix of key attributes of the concept, challenges and limitations and elements merited for inclusion in the options for additional mobility improvements and selective traffic operational analysis or ridership forecasting estimates
- Cost Estimates and geometric designs will be developed (See cost estimate and concept development tasks)

4) Develop Options for Additional Mobility Improvements

a) Station Access and Pedestrian and Bicycle Improvements – Identify potential pedestrian and bicycle improvements (e.g. new bike and pedestrian infrastructure as well as prioritization treatments to existing non-motorized infrastructure at select intersections/segments) to provide a contiguous non-motorized network within the study area and enhanced station area walk/bike shed. The September 2017 Bicycle and Pedestrian Workshop Comments will be reviewed for
feasibility, as well as other relevant Master/ Sector Plan documents (e.g. White Oak, County Bikeway Master Plan). Any adverse impacts to existing pedestrian and bicycle facilities/accessibility due to other proposed roadway improvements will be noted and mitigation identified and developed if needed.

b) **Summarize Previous Roadway Improvement Recommendations** – Summarize previous intersection/roadway improvement concepts including short-mid and long term example improvements considered such as, but not limited to:

- **US 29 at I-495** – Summarize and provide additional detail of the choice exit lane, ramp widening and part-time I-495 shoulder use
- **US 29 at MD 193 (University Boulevard)** – summarize and provide additional detail on turn restrictions/ diversions
- **US 29 at MD 650** – summarize and provide additional detail of the structure / roadway widening
- **US 29 at Tech Road/ Industrial Road** – alternative intersection design such as jughandle, displaced lefts, continuous flow, spur/ satellite intersections
- **Managed Lane Options/Recommendations** – Review and summarize previous efforts for managed lanes on US 29 including HOV-2 and HOV-3 between MD 97 and Tech Road.

c) **Develop Interim Year (2025) Traffic Models with Recommended Improvement Package (Without Managed Lane)** – Model Interim Year (2025) in Synchro and identify up to ten (10) potential improvements at critical intersections/hot spots and develop mitigation strategies/concepts. Signing, marking, signalization and other physical intersection or mainline improvements will be considered including additional turn lanes, turn lane extensions, lane reassignment, turn restrictions, signal phasing/timing, and traffic control changes.

Develop VISSIM model for the recommended interim year mobility package and evaluate improvements in auto and bus travel time and reliability. It is anticipated that several iterations of packages will be tested (e.g. I-495/ US 29 improvements only, traffic control changes only).

d) **Develop Future (2040) “Mobility” Build Traffic Model (With Managed Lane)** – Model Future Year (2040) “Mobility” Build with Managed Lane in Synchro and identify up to ten (10) potential improvements at critical intersections/hot spots and develop mitigation strategies/concepts. **Previously recommended alternatives for the interim year managed lane option will be tested for year 2040 and new recommendations for new managed lane alternatives will be developed.** Signing, marking, signalization and other physical intersection or mainline improvements will be considered including additional turn lanes, turn lane extensions, lane reassignment, turn restrictions, signal phasing/timing, traffic control changes, and intersection approach mixing areas.

Develop VISSIM traffic simulation model for the recommended long-term managed lane (i.e. HOV2+) and evaluate improvements in auto and bus travel time and reliability. It is anticipated that several iterations of packages will be tested (e.g. HOV 2 vs. HOV 3, 10% mode shift).
c) **Develop Summary Matrix** – Develop a summary matrix comparing operational benefits (intersection level of service/delay/volume-to-capacity ratio), cost estimates, right-of-way impacts, etc. of each scenario.

f) **Agency Review:** Obtain input from County DOT and SHA on improvement options for each location.

**Deliverables:**

- Individual improvement menu package by location, mode and design year (interim, long-term) including traffic operations, costs, concept design, and ped./bike walkshed.

5) **Finalize Mobility Improvement Package**

This task will advance the mobility improvement menu to develop a specific package of improvements that can achieve the best corridor-level benefit and determine implementation
strategies (e.g. short-term, long-term, developer improvement, geographic focus such as northern section).

a) **Develop Schematic Concepts** – Develop schematic concepts (e.g. PowerPoint or ‘stick’ lane configurations) for up to ten (10) improvements for each of the Interim Year (2025) and Future Year (2040). The concepts will identify new pavement/geometry and potential right-of-way needs.

b) **Finalize Menu** - Revise improvements (analysis, concepts, costs) and develop a finalized mobility menu.

c) **Develop Improvement Packages** – identify effective combinations of improvements such as lowest cost, segmentation by corridor geography, short-term vs. long-term and with and without managed lanes.

d) **Review and Update University of Maryland (UMD) Mesoscopic Model** – Review past modeling DTA and mesoscopic model efforts by UMD and prepare assessment of steps and effort to transfer/update based upon most recent information/data (transfer/install, update inputs using most recent data sources, validate to base year conditions, input/code future scenarios, summarize results). Upon approval of work plan by MC DOT Task Manager, update DTA/mesoscopic subarea models for US 29 corridor and carryout scenario analyses to capture managed lanes and ensure the recommended mobility packages can accommodate regional influences such as latent demand, peak hour spreading/consolidation, route diversions to/from the US 29 corridor, etc.

e) **Finalize Mobility Package Recommendation and Phasing** – Determine the final mobility package for 2025 and 2040 based on the VISSIM and mesoscopic modeling.

**Deliverable**

- Mobility package for 2025 and 2040 including location, improvement type, mode, overall expected operational improvements (e.g. travel time, person-throughput and reliability), and concept plan (interim, long-term)

6) **Public Involvement**

- US 29 Mobility Workshop #1 – Intro Concepts
  - North workshop
  - South workshop
- US 29 Mobility Workshop #2 – Present Findings
  - North workshop
  - South workshop

7) **Technical Report** – Prepare a technical report summarizing previous studies, updated modeling and data, additional improvement development and analysis, and recommendations including mobility package options.
Cost Estimation and Geometric Alternatives

This task will consist of evaluating and preparing various concept level roadway improvements plans and construction cost estimates associated with the US 29 Corridor Mobility & Reliability Study and the median/ reversible lane BRT concept developed by Emerson and Smoot. The study will evaluate various alternatives to improve both general traffic and transit travel time and reliability within the US 29 corridor from Tech Road to the Silver Spring Transit Center. The concept plans will include intersection and segment improvements with and without future managed lanes. The purpose of the study is to consider improvements or packages of improvements that can be implemented along US 29 to complement the investment in BRT and improve transit, HOV, or overall corridor performance.

For purposes of this proposal, we have assumed the following types of improvements or similar could be evaluated:

- Widening for hard running shoulder/through lane between Tech Road and MD 650
- Hard Running Shoulder on I-495 Outer Loop between US 29 and Georgia Avenue and associated ramp work
- Lockwood Drive BRT Signal/Station at Hillwood Drive (Closes vehicle access to Hillwood Drive and move pedestrian crossing from Burnt Mills Shopping Center signal)
- Closure of 5th Leg of Sligo Creek Parkway/St Andrews Way at US 29
- Addition of a westbound right turn lane along Tech Road to northbound US 29
- Widening and road closure associated with the Lockwood Drive BRT Station
- Side street widening approximately 250’ along both eastbound and westbound legs of Sligo Creek Parkway at US 29
- Geometric improvements developed by Emerson and Smoot (To be completed by T3)

Cost Estimation & Geometry: TASK 1 - Data Collection

Perform site visits to each of the improvement locations along the US 29 from Silver Spring Transit Center (MP 0.67) to Tech Road (MP 6.38) a total of 5.71 miles. Base plans will be assembled from GIS data and tape and wheel survey, as-built plans, utility record plans, right of way plats, adjacent subdivision plats and any other available and pertinent information.

Cost Estimation & Geometry: TASK 2 – Develop Geometric Alternatives

Develop concept roadway geometric improvement plans to support the analyzed improvements. These plans will also include concept drainage and structural needs associated with the improvements.

A conflict/summary of impacts assessment will be developed for each location that will identify potential impacts to utilities, environmental features, right of way and cultural resources. A concept level cost estimate will be developed for each location, based on recent unit bid prices.
Each alternate will be shown on a plan view and conceptual typical sections developed. However, due to limited survey data, vertical analysis (profiles and cross sections) will not be developed as part of this analysis.

Provide concept level plan view, a conflict/summary of impacts and construction cost estimate for the improvements outlined in the Emerson and Smoot analysis.

**Schedule**—approximate 12 month completion schedule for this study