



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive
Fairfax, VA 22030
(703) 383-VDOT (8368)

Charlie Kilpatrick, P.E.
COMMISSIONER

January 14, 2016

TO: Hong "Jenny Ha, NOVA-L&D

FR: Ed Azimi, NOVA-TP

RE: Route 1, Fraley Blvd. Widening
Project# 0001-212-249, UPC# 90339/Act. 616

We are forwarding you our respond report to your LD-104 request for traffic data, submitted to us on October 20, 2015. Currently, Route 1 divides into two exclusively directional roads, Fraley Blvd. 2-lane northbound and Main Street 2-lane southbound from Possum Point Road to Quantico Gateway Drive. For the Design year 2042, Fraley Blvd. is designed to be widened to a 6-lane two-way facility and Main Street will be re-configured to two-way, one-lane each direction.

The U.S. Route 1 is designated as a 6-lane (from 4-lane) facility by 2025 in the 2015 CLRP, FY2015-2020 TIP Air Quality Conformity Inputs. For the Design year 2042 forecasts, we utilized the MWCOG's Round 8.4 Cooperative Land Use forecasts; the 2015 CLRP traffic forecast models version 2.3.57 and 15-year historical growth rates. It's predicted that the Design year Build and No-build traffic volumes would be same due to the location of collected daily traffic, north of Route 619.

- Route 1 north of Route 619, Joplin Road/Fuller Road:
 - Existing ADT= 18,000, Two-way PHV= 1,620
 - Design Year Build & No-build= 29,000, DHV= 2,610
- Route 1 north of Tripoli Blvd:
 - Existing ADT= 31,000, Two-way PHV= 2,790
 - Design Year Build & No-build= 49,000, DHV= 4,410

Peak Hour Directional Distribution

- Route 1 north of Route 619, Joplin Road/Fuller Road:
 - AM: **NB**= 55%, **SB**= 45%
 - PM: **NB**= 52%, **SB**= 48%
 - Daily: **NB**= 60%, **SB**= 40%
- Route 1 north of Tripoli Blvd:
 - AM: **NB**= 60%, **SB**= 40%
 - PM: **NB**= 50%, **SB**= 50%
 - Daily: **NB**= 50%, **SB**= 50%

Truck Classification

The 2015 traffic counts were collected un-classified. Therefore, we're presenting data from our January 23, 2015, resultant.

- Class 4-5, Bus and 2-Axle/6-Tire: **AM**= 3%, **PM**= 2% & **Daily**= 2%
- Class 6-7, 3-Axle and more, Single-unit: **AM**= 1%, **PM**= 1% & **Daily**= 1%
- Class 8+, 3-Axle and more, Multi-unit: **AM**= 1%, **PM**= 1% & **Daily**= 1%

Turning Movements

The Existing and Design year turning movements are presented in Figures 1 and 2.

Bicycle & Peds

Excerpts from 2012 Town of Dumfries Comprehensive Plan:

[Instituting a "Complete Streets" policy ensures that transportation planners and engineers consistently design and operate the entire roadway with all users in mind including bicyclists, public transportation, and pedestrians of all ages and abilities, as well as motorists.]

[The town would have to commit to a budgeted amount of funds to achieve a certain number of sidewalk projects per year.]

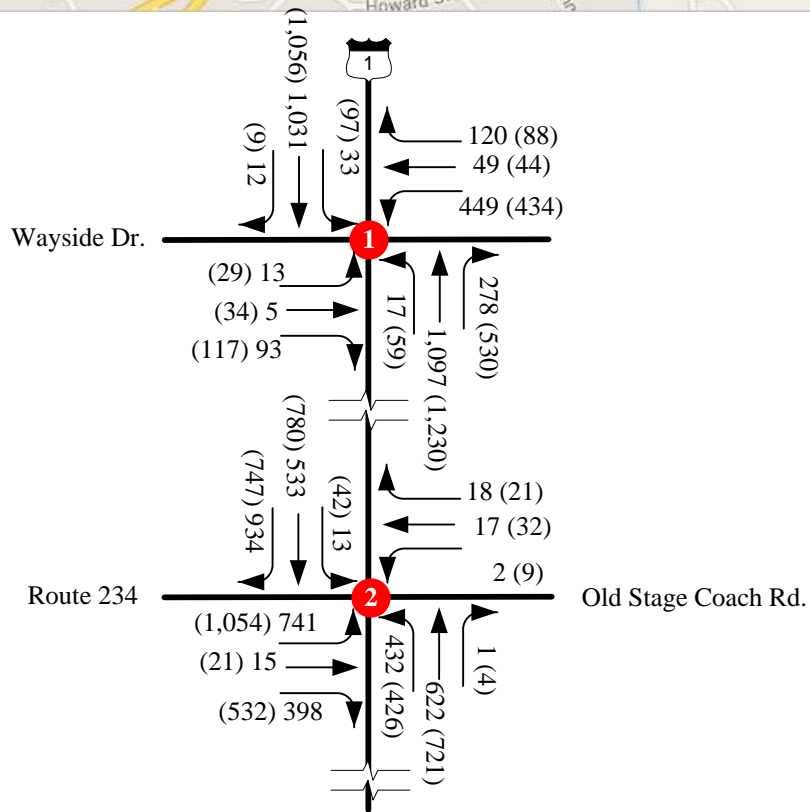
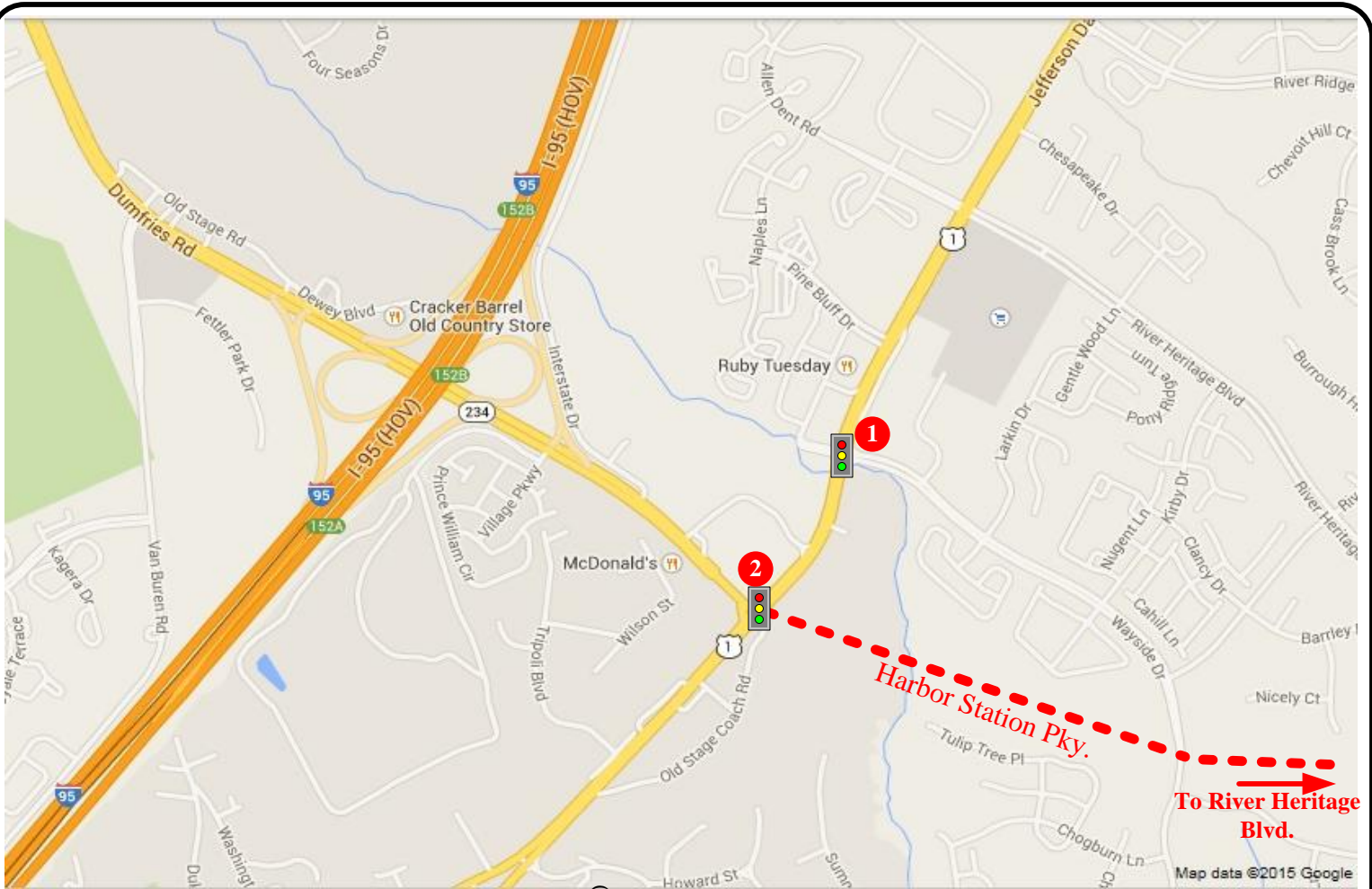
[Bicycle lanes are particularly desired as part of future improvements to Route 1, Main Street, Graham Park Road, 234, Possum Point Road, and Old Triangle Road.]

[The Town's focus is to develop a comprehensive bicycle system that provides for access between the off-road and on-road paths with smooth transitions. The planning and design of new transportation routes that include sidewalks, bike routes and lanes, and off-road trails in addition to the roadway are essential to the success of a multi-modal alternative transportation system. A primary challenge to achieving such an integrated system is recognizing the significant topographical changes and main arterial road barriers within the Town.]

For additional info, please advise. Thank you.

Attachments

Cc: Andrew Beacher, NOVA-TP



(PM) AM

Figure 1A – Existing 2015 Peak Hour Traffic Volume.

US Route 1 – Fraley Blvd. Widening, LD-104 UPC# 90339 Act. 616



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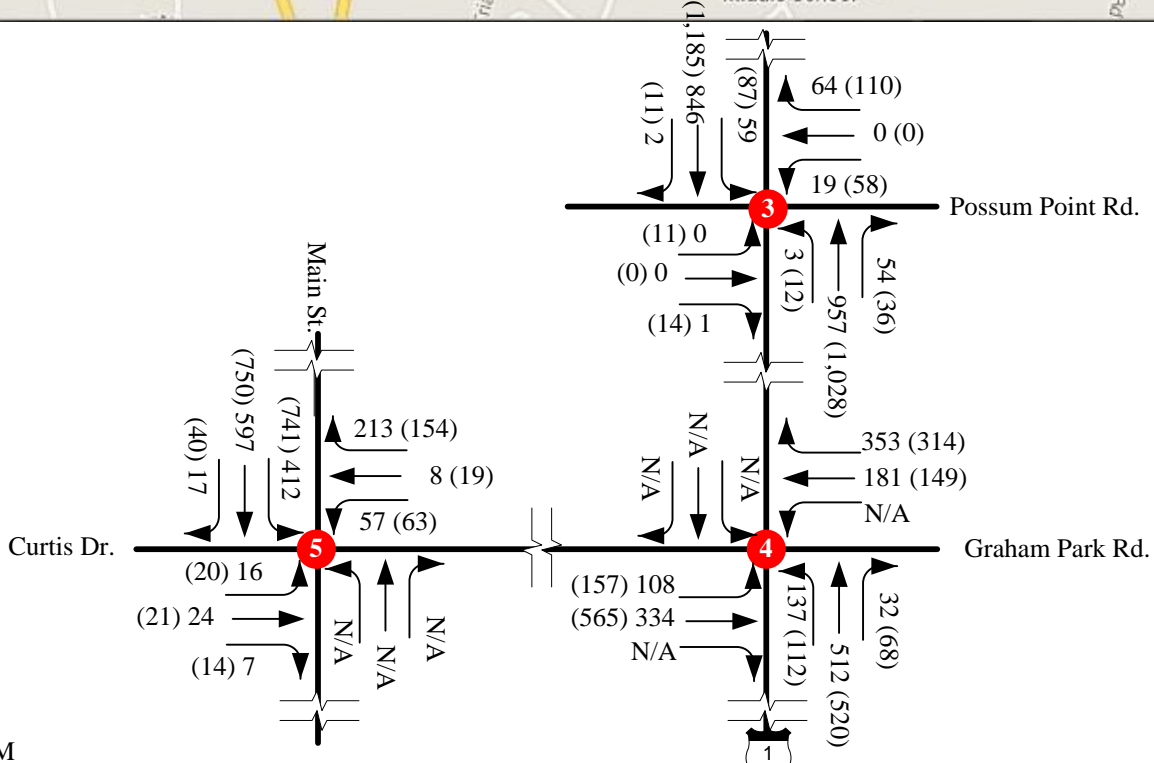
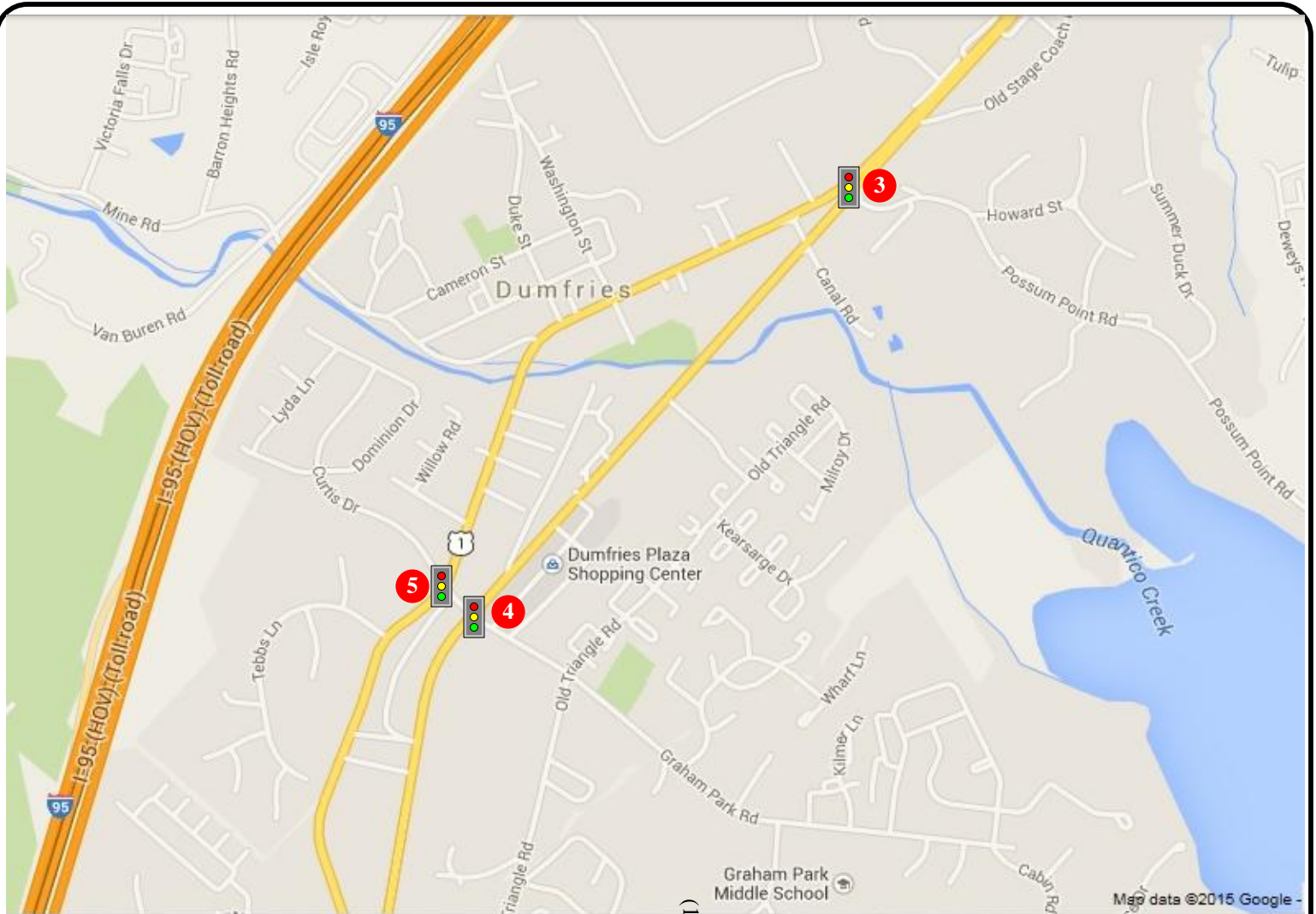


Figure 1B – Existing 2015 Peak Hour Traffic Volume.

US Route 1 – Fraley Blvd. Widening, LD-104 UPC# 90339 Act. 616



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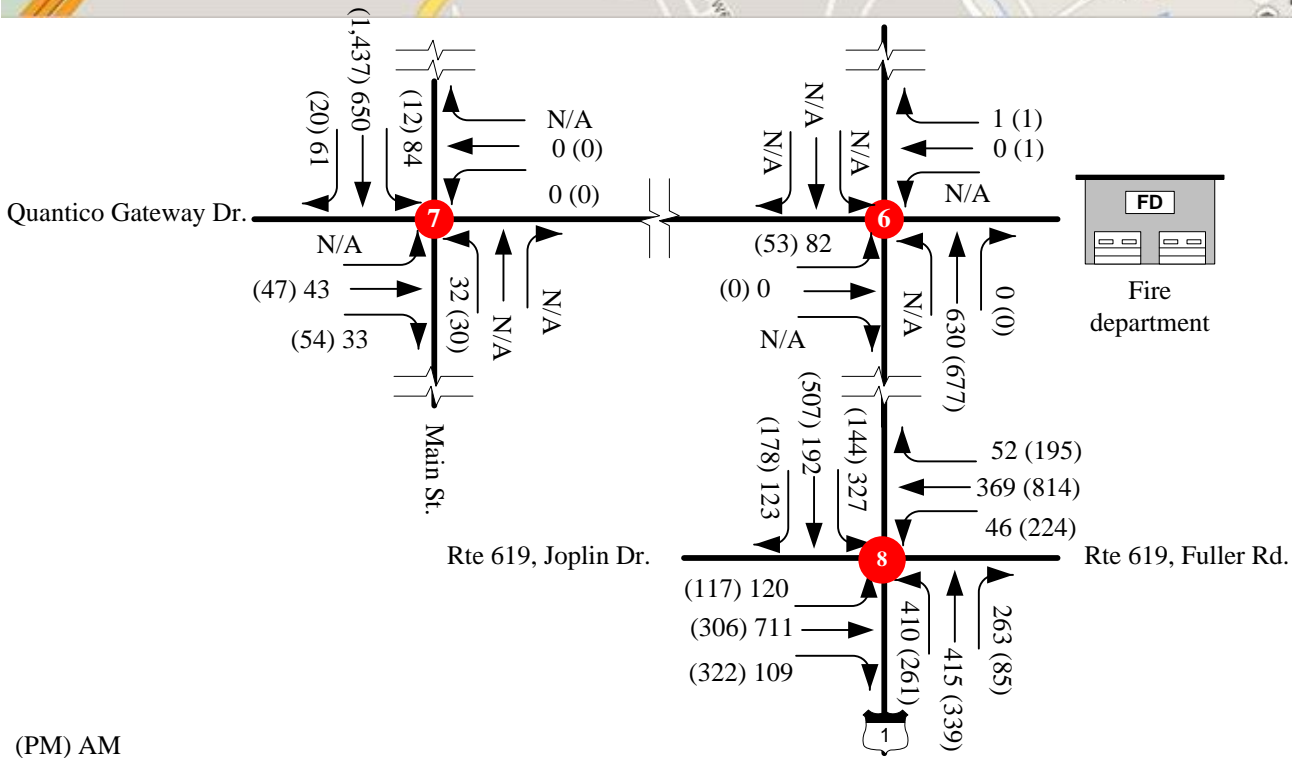
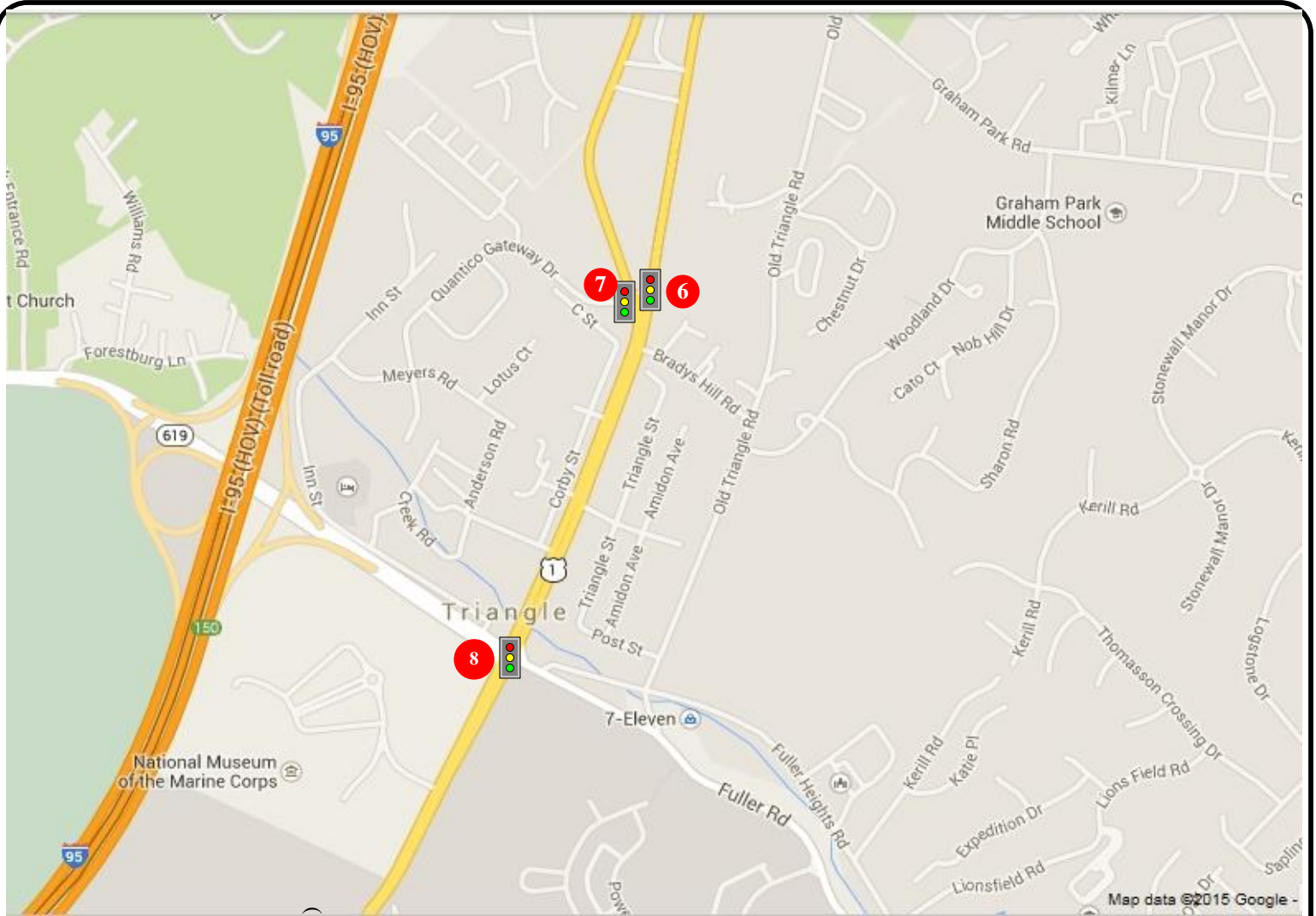
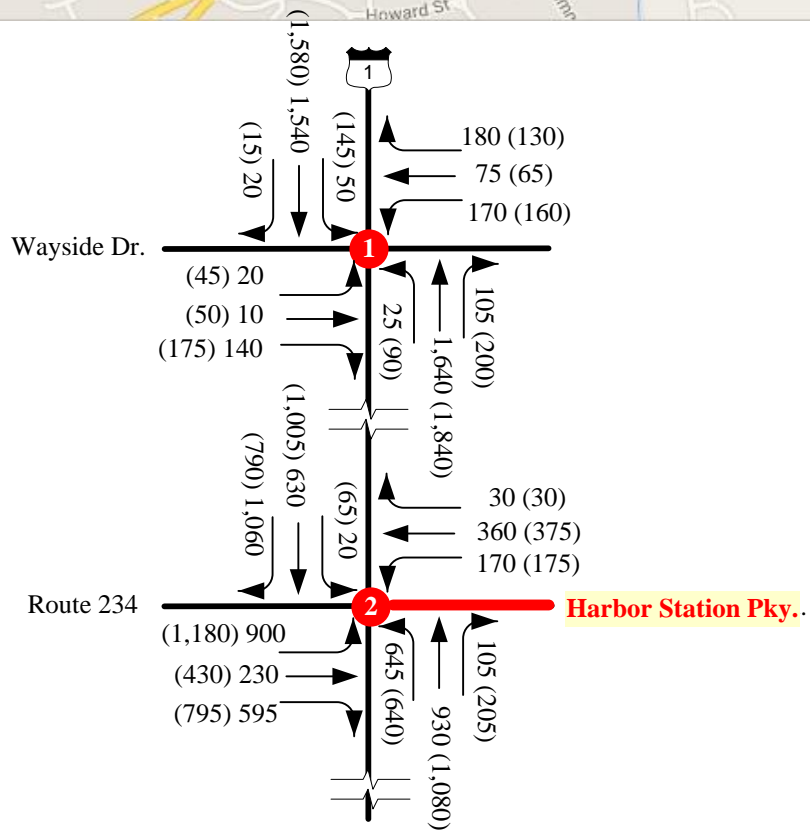
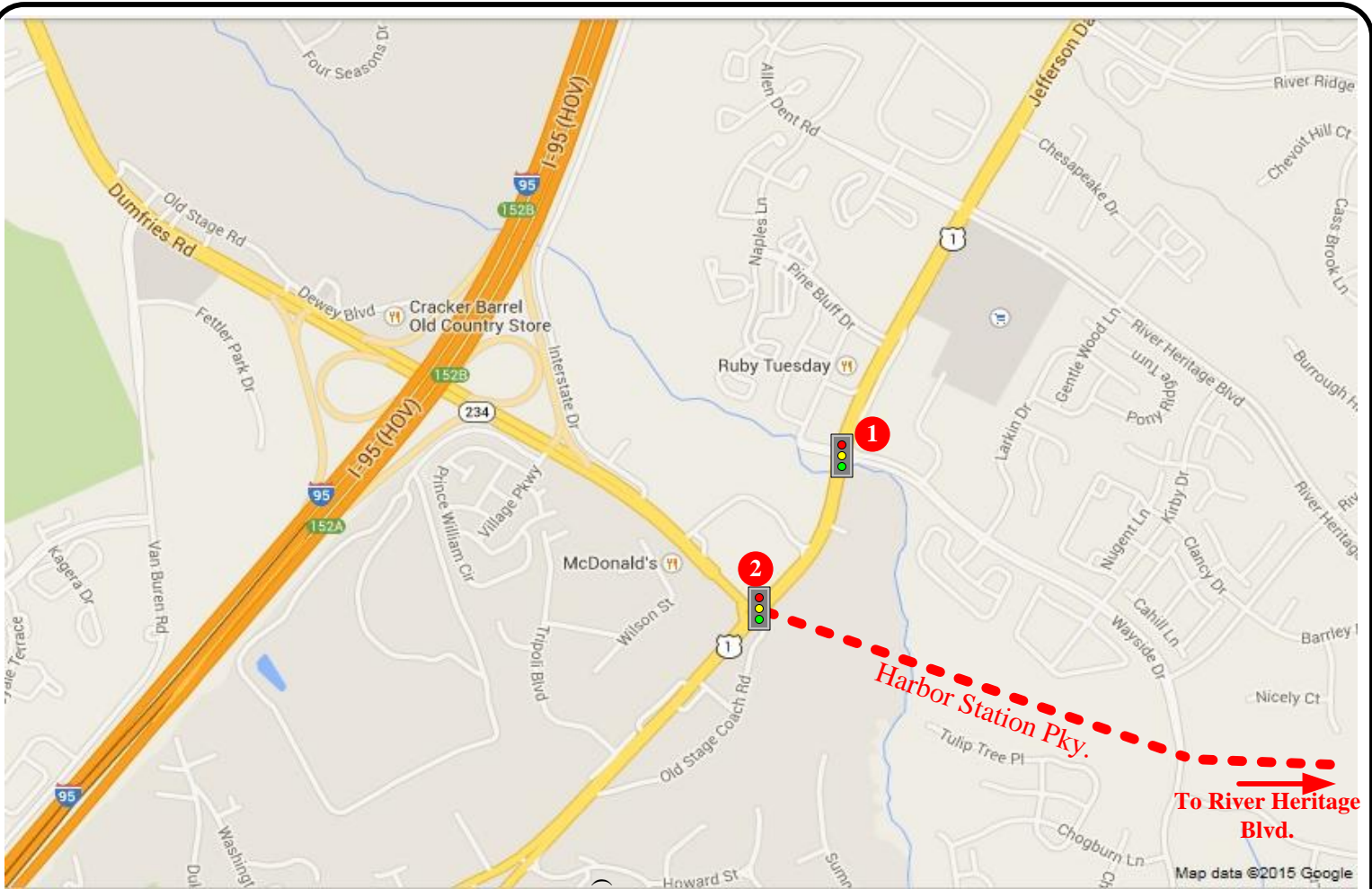


Figure 1C – Existing 2015 Peak Hour Traffic Volume.





(PM) AM

Figure 2A – Design Year 2042 Forecasted Peak Hour Traffic Volume.

US Route 1 – Fraley Blvd. Widening, LD-104 UPC# 90339 Act. 616



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NOVA-TP<EA>

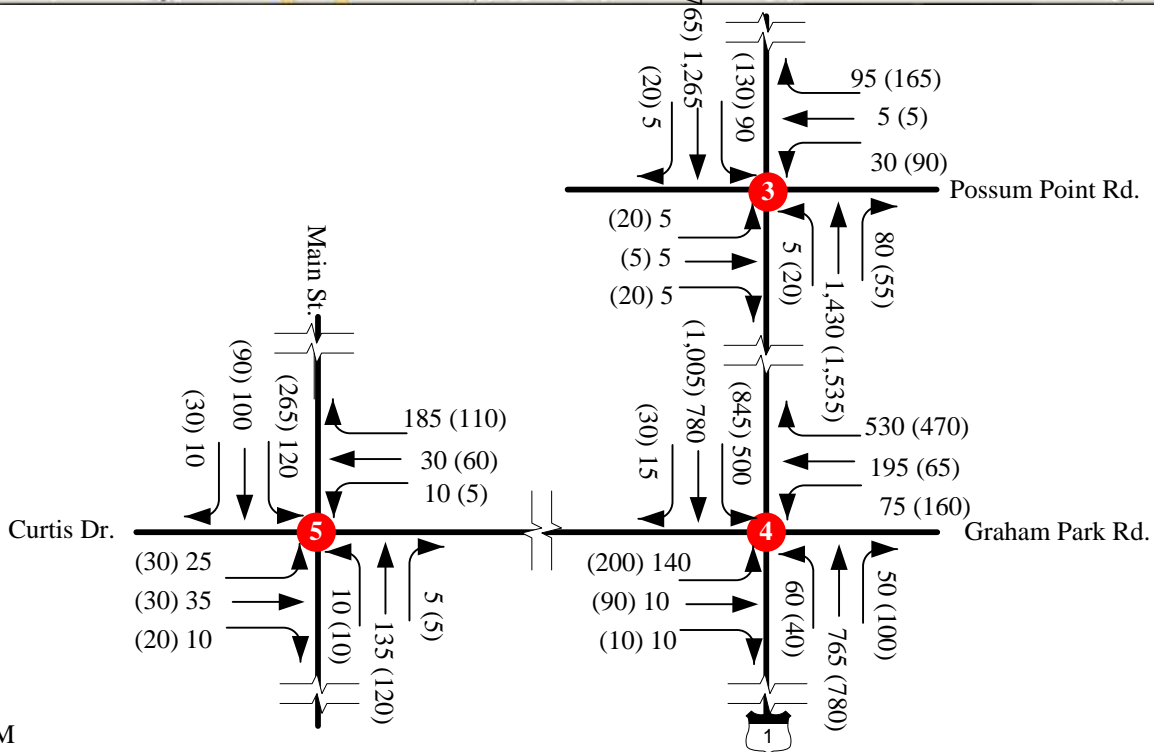
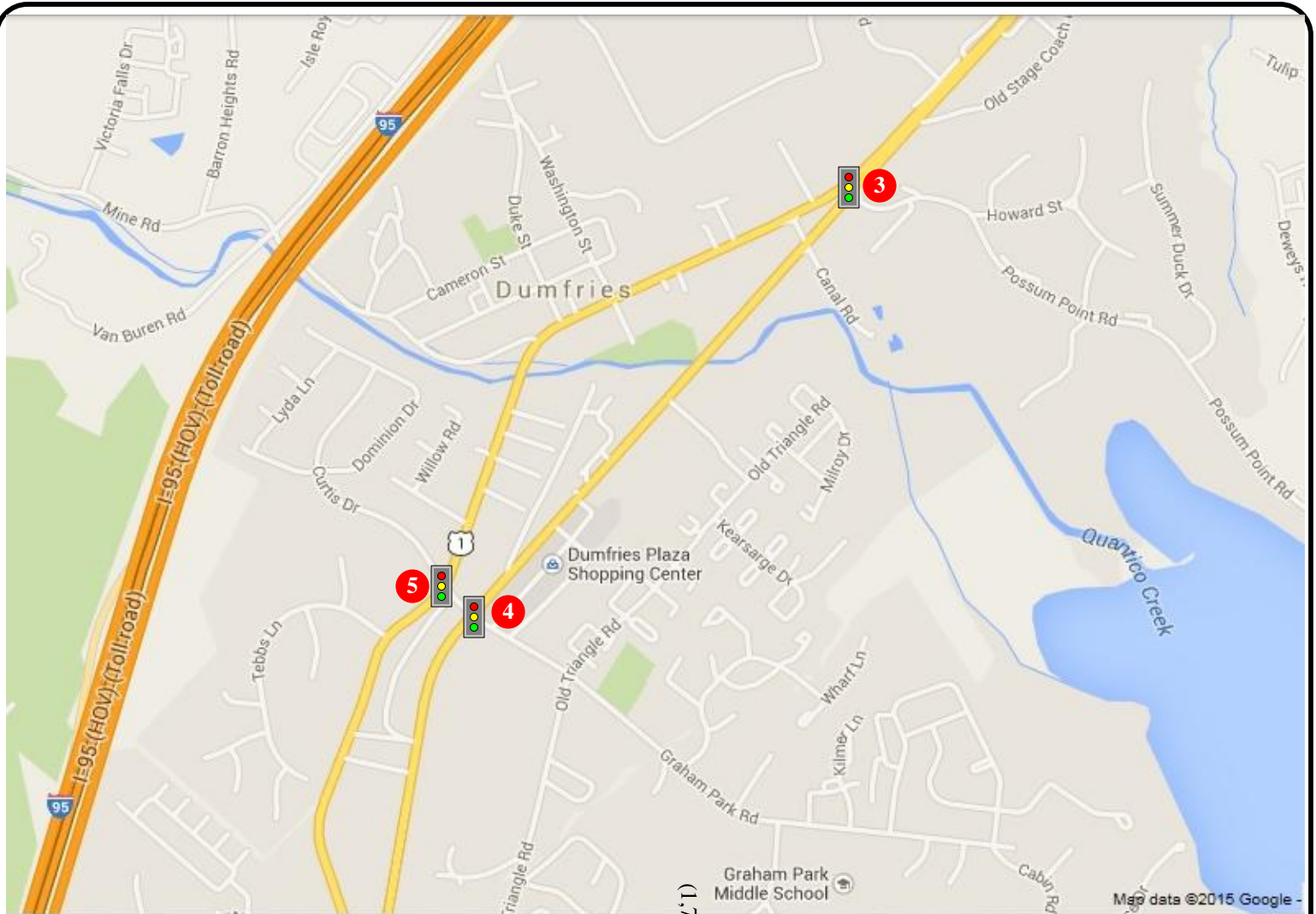


Figure 2B – Design Year 2042 Forecasted Peak Hour Traffic Volume.

US Route 1 – Fraley Blvd. Widening, LD-104 UPC# 90339 Act. 616



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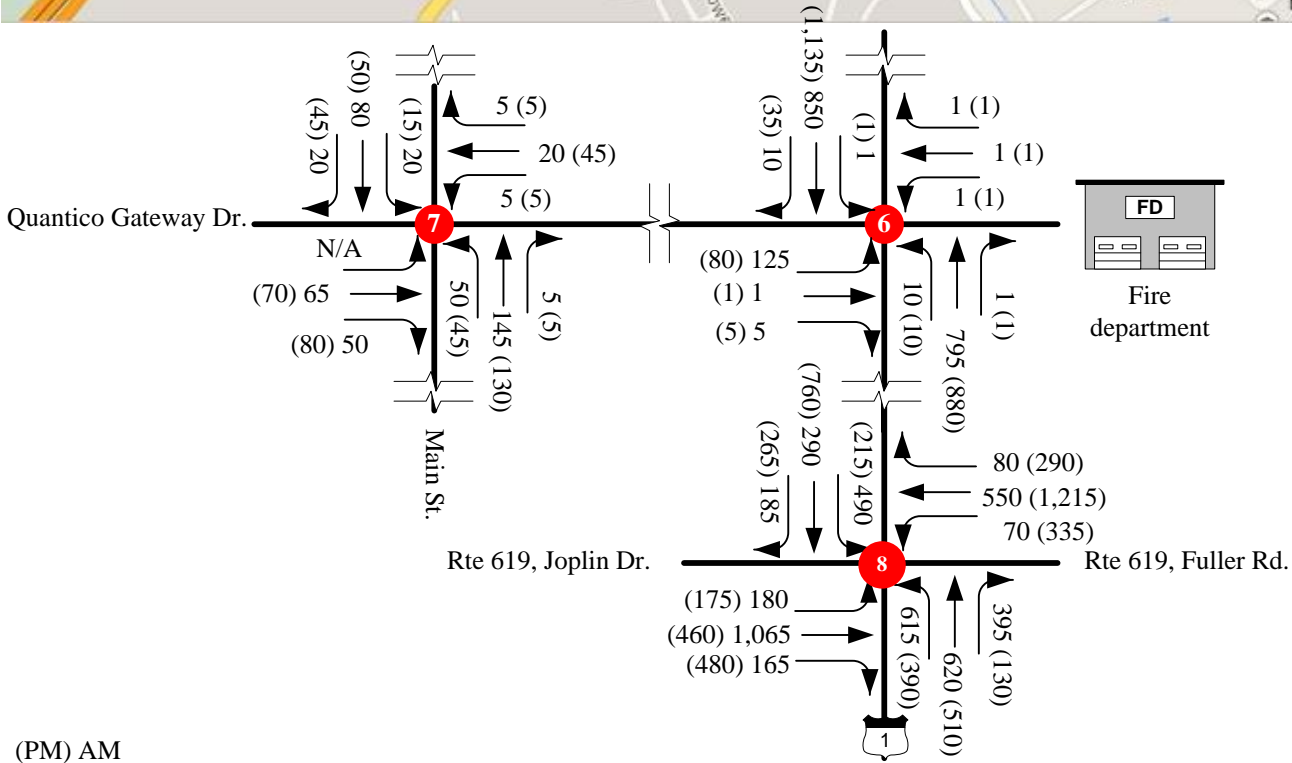
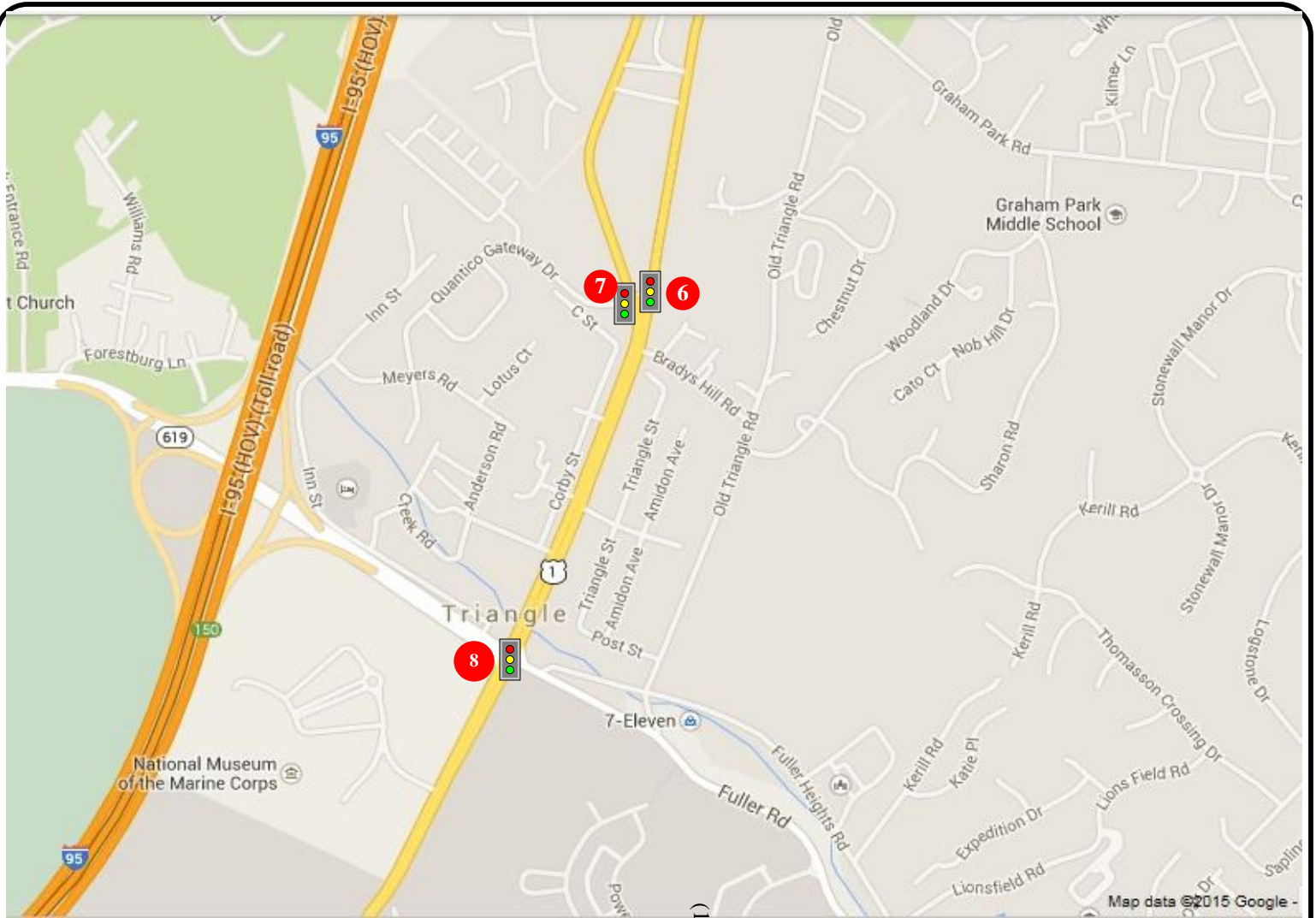


Figure 2C – Design Year 2042 Forecasted Peak Hour Traffic Volume.

US Route 1 – Fraley Blvd. Widening, LD-104 UPC# 90339 Act. 616



Jan. 14, 2016





Location and Design Request For Traffic Data

Tuesday, October 20, 2015

Tier 2 Project

To District Planning Manager State Transportation Planner
 From - Lead Design Engineer L&D PM Jenny Ha
 Subject: TRAFFIC DATA FOR : SCOPING REPORT [] DESIGN PURPOSES [x]

Date Data is needed : (Please allow 60 days from date of submission for receipt of Data)

UPC: 90339	District: Northern Virginia	Residency: MANASSAS	City: Dumfries
Route: 0001	State Project Number: 0001-212-249,		Road System: Primary
FHWA 534#: 2E103	Federal Number: STP-5A01(228)	Street Name: Fraley Blvd	
TERMINI:	From: 0.1 Mi S. of Brady's Hill Road	To: 0.2 Mi. N. of Dumfries Road (Route 234)	
PROJECT LENGTH: 2.1490			
DESCRIPTION: Route 1 Widening (Fraley Blvd) - PE Only			
Other : Project will widen Rte 1 northbound so both northbound and southbound traffic will be on the northbound alignment. (i.e. intersection improvements, etc.)			
Insure project is open to charges and provide charge code here : UPC90339 with 600 series activity code			
AD Date :	Design Year	2042	
Min. Design Speed 45	Operating Speed	40	
<small>(Note : Indicate units, i.e. mph, km/h)</small>			
Does this project have Federal Funds as of the time of this form submittal?			Yes [x] No []
Please furnish the following traffic data on the above captioned project as checked. If the project has Federal Funds, please also send the data to the Environmental Division (Air & Noise Section).			
A location map, sketch, or other information is attached.			
NOTE :			
Design Year is AD Date + 11 years for Rural Minor Collector and Urban Collector for restoration in kind or minor improvements; and for all Rural Local and all Urban Local functional classifications.			
Design Year is AD Date + 22 years for Rural Minor Collector and Urban Collector for new construction of major improvements or expansion of the facility; and all roads in the National Highway System (NHS), all Freeways, all Rural and Urban Arterial, and all Rural Major Collector functional classifications.			
[x] * Current (existing) ADT (For information purposes only and maintenance of traffic)			
[x] * Design Year ADT			

- * Design Hourly Volume
- * Directional Distribution Factor (Peak Hour)
- * %Trucks Daily and % Trucks Peak Hour in 3 categories: (Class 4-5) and (Class 6-7) and (Class 8-13).
Include 'Vehicle Classification Counts Summary Sheet' (if available).
- Plan Design Year Level of Service (A sketch of the proposed typical section is required from L&D if checked).
- Existing Peak Hour Traffic A.M. & P. M. Peak Hour Factor
- * Please provide Functional Classification (Project Manager should check that iPM is correct).

- ADT: Five Ten Fifteen Twenty years after completion of the project.
Completion Date :
- * Turning movements at all intersecting routes with a design year count of 3000 V.P.D. or over. (Provide peak hour and twenty-four hour movements for both present and design years)
- Do-nothing Design Year ADT (i.e. design year traffic on existing roadway assuming project is not built.)
- * If recommendations for bicycle and pedestrian accommodations for this area are included in any type of transportation plan, please provide the recommendations.
- * If the area has an approved Long-Range Plan, please provide its recommendation.

If additional information is needed, please contact: Jenny Ha Phone : 703-259-2907

* Indicates data needed for scoping. L&D is to request only those items needed on subsequent requests.

CC: Environmental Division (Air & Noise Section)	Residency Engineer/ Administrator
Project Designer	Regional Traffic Engineer
Project Manager	Other appropriate individuals

Note: Plans are available in FALCON and FALCON Web for viewing or printing. Users without viewing or printing capabilities may contact their District Location and Design Representative for prints.