Statement of Justification for Preliminary Plan No. 120200100
Public Safety Training Academy Property
May 2021

I. Introduction

The Elms at PSTA, LLC, an Elm Street Community entity ("Applicant"), seeks the approval of Preliminary Plan No. 120200100 ("Preliminary Plan" or "Application") for the Public Safety Training Academy ("PSTA") site in Rockville, Maryland. Located at 9710 Great Seneca Highway, the subject property contains approximately 45 acres and is situated southwest of the intersection of Key West Avenue and Great Seneca Highway ("Property" or "Site"). Currently owned by Montgomery County, the Property is subject to a sales and purchase contract with the Applicant. For approximately 40 years, the Property was the home of Montgomery County's PSTA, where police officers, fire fighters, and operators of large trucks received specialized training. In 2016, PSTA moved to a new location to accommodate the planned redevelopment of the Property that was envisioned by the *2010 approved and adopted Great Seneca Sciences Corridor Master Plan* ("GSSC Master Plan").

The 45-Acre Site (outlined in red)

The Property is bordered on the north by Key West Avenue, on the east by Great Seneca Highway, and on the south by a 6.25-acre parcel owned by Montgomery County that currently serves as the location of the County's Innovation Incubator and the National Center of Cybersecurity of Excellence. The Property is constrained by a large 36" gas transmission main, located between Key West Avenue and the Property. Several uses are located immediately adjacent to and west of the PSTA site. These uses include offices, retail (a pharmacy and fast food), the Wootton Crest townhome community, Academy Primary School and Child Development Center, and a Pepco substation.

Pursuant to the applicable provisions of Chapter 50 of the Montgomery County Code (the "Subdivision Regulations"), Applicant submits this Application for subdivision of the Property into 283 buildable lots and approximately 24 parcels for the redevelopment of the Property with approximately 630 dwelling units and approximately 1,740 square feet of ground floor retail space in one of the multi-family structures (the "Project"). The unit mix will include approximately 276 townhouses, 56 2-over-2 condominiums, and 298 multi-family apartment units. Thirty percent (30%) of the units, or 189 units, will be moderately priced dwelling units ("MPDUs"). The Project will respond to the growing gap between housing supply and demand in Montgomery County identified in the Montgomery County Housing Needs Assessment (the "Housing Needs Assessment").[1] (p. 48) In the Housing Needs Assessment, the Maryland-National Capital Park and Planning Commission ("MNCPPC") predicts a housing deficit, especially an affordable housing deficit, in Montgomery County between 2020 and 2040. In the next 20 years, the County needs to build housing units to accommodate approximately 63,000 new households that do not exist today. Currently, Montgomery County adds 2,600 new homes each year. This trend indicates that there will be a deficit of more than 11,000 homes in the County between 2020 and 2040. Further, the Housing Needs Assessment identifies that "[m]ore than half of the new housing needed to accommodate new households over the 2020 to 2040 period is projected to be multifamily rental housing." (p. 49) It also predicts an increase in lower income and fixed-income households – "9.3% of new households will be extremely low-income households, with incomes below 30% of AMI, and another 16.6% of households will have incomes between 30 and 50% of AMI." (pp. 50 – 51) The Project generally responds to the trends identified by the Housing Needs

[1] "Given the average annual production of 2,577 new units from 2015-2019, MoCo is likely producing less housing than what is suggested by the employment-driven housing demand forecasts."

Assessment. It will contribute 630 new units to the housing supply, including a substantial 298-unit multifamily component and 30% MPDUs.

II. History and Background of Great Seneca Science Corridor Master Plan and Zoning

A. GSSC Master Plan

In 2010, the Montgomery County Council approved the GSSC Master Plan and associated Sectional Map Amendment, classifying the Property in the CR-1.0, C-0.5, R-1.0, H-150 Zone. The GSSC Master Plan noted that this life sciences neighborhood looked and functioned like an office park where people traveled, often by car, to their office jobs, only to return home to a different neighborhood by car in the evenings. (p. 17). The GSSC Master Plan desired to dramatically change this area by envisioning a vibrant and dynamic life sciences neighborhood, where residents can not only work, but live. (p. 9) Since 2010, several commercial, residential, and retail projects have been approved in the GSSC Master Plan area and are in various stages of construction.

The GSSC Master Plan organizes development by geography and limits development using stages with specific triggers. This Property falls within the Life Sciences Center West District ("LSC West") of the GSSC Master Plan. LSC West encompasses approximately 75 acres. This 75-acre LSC district contains the Property (which is approximately 45 acres of the 75 acres). The remainder of the LSC district contains parcels to the south and west of the Property that serve as the location of existing office, retail, residential, and utility uses. (See Map 14, p. 37)

To ensure that development and infrastructure work cohesively, the GSSC Master Plan contains four stages with specific triggers to balance development with transportation and other infrastructure. Currently, the GSSC Master Plan is in Stage 2. However, Stage 1 remains open to residential development applications like the Project. Stage 1 provides development capacity for

400,000 square feet of commercial uses and 2,500 residential units. Much of the 400,000 square feet of commercial development capacity within Stage 1 has been exhausted, but significant capacity for residential development (over 2,100 units) in Stage 1 remains, ensuring that development capacity exists for this Project. Monitoring of the GSSC Master Plan, its districts, and the stage triggers occurs biennially and culminates in a progress report detailing infrastructure and development updates and the status of any other staging objectives. The most recent progress report reflecting the above numbers was issued in October 2019.

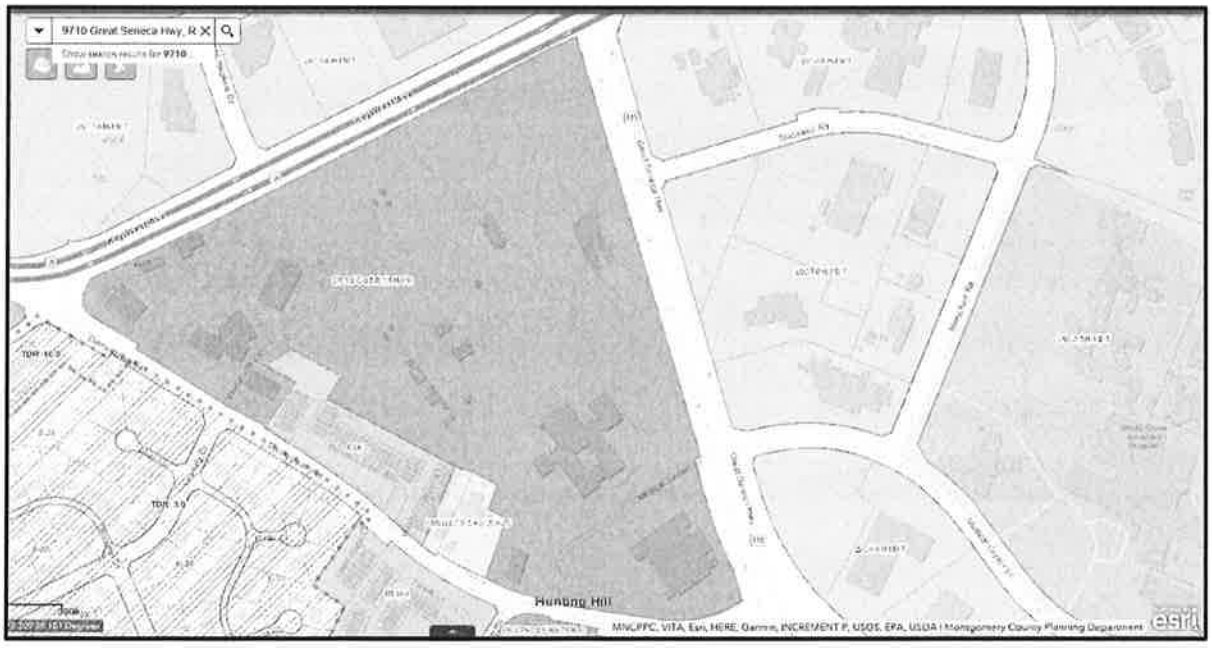
The construction of residential units adjacent to a variety of transit options to promote alternatives to car use and enhance access to future transit stations is an important element of the GSSC Master Plan. Currently, several bus routes that provide local and regional connections are located around the perimeter of the Property. Moreover, pedestrian and cycling paths exist along the perimeter roadways of the Property. In the future, the GSSC Master Plan envisions new public transportation options, including the Corridor Cities Transitway ("CCT"), a 14-mile bus rapid transit option, and the Life Sciences Center Loop Trail ("LSC Loop Trail"), a 3.5-mile pedestrian and cycling trail that provides important connections to other trails. To facilitate transportation around and outside the Property, the Preliminary Plan includes the dedication of right-of-way and partial construction of three Master Planned Roads and related infrastructure within LSC West: Medical Center Drive, Blackwell Road, and Travilah Road. More details about the roads are provided below.

Most of LSC West, including the Property, is zoned Commercial Residential with the following breakdown: CR-1.0, C-0.5, R-1.0, H-150. The CR zone permits a mix of uses to provide options and choices of housing, transportation, amenities, commercial services, and public

facilities within an area. Moreover, the zone allows for a variety of densities and heights. The CR zone is helpful in areas such as where the Property is located, as it:

- Identifies opportunities for redevelopment;
- Encourages different housing, transportation, services, and public amenity options;
- Allows for a mix of uses and heights to facilitate compatibility;
- Provides a mix of employment and housing opportunities;
- Provides for development under a lower density standard method (up to 0.5 FAR) while allowing for additional density by an optional method if certain criteria are met.

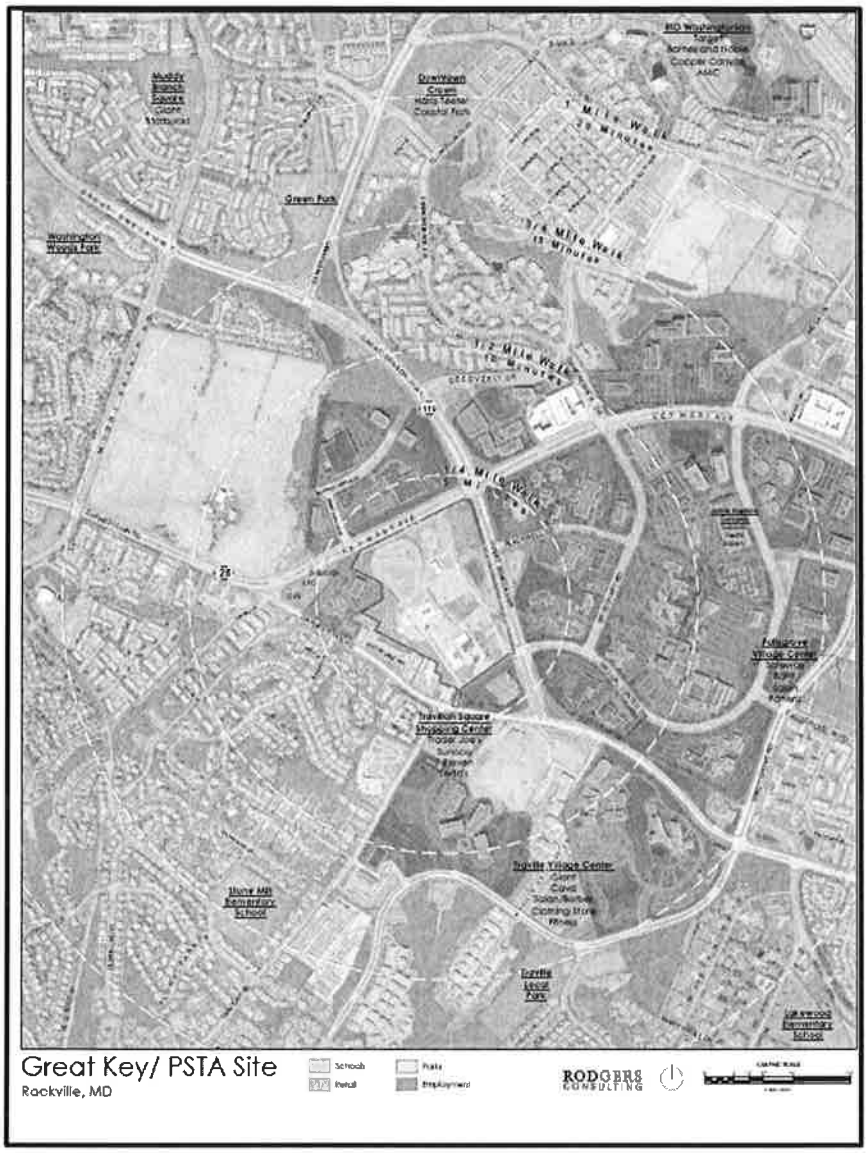
The property within LSC West which is not zoned CR is zoned RT-8 for townhomes (to accommodate the existing Wootton Crest townhome community) or Commercial Residential Neighborhood (CRN) (to accommodate the existing Pepco substation and the childcare/preschool use nearby).



LSC West – Zoning Map

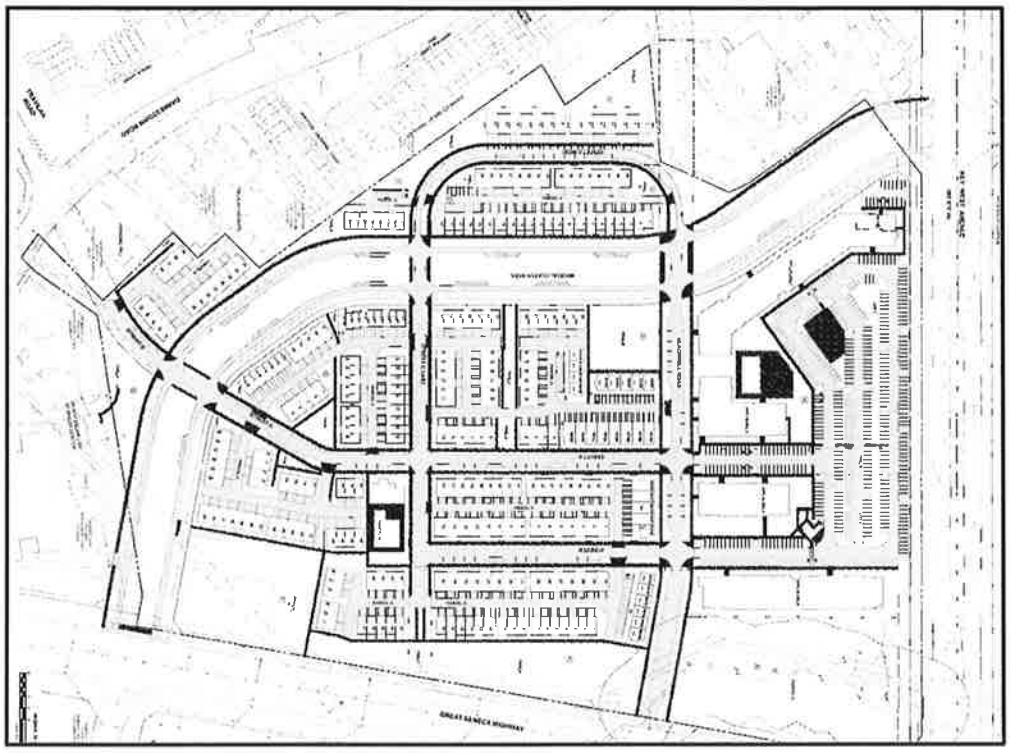
B. Concept Plan

In 2019, a Concept Plan for the Project was submitted by the previous applicant and contract purchaser and reviewed by MNCPPC and other government agencies. This Concept Plan contained commercial and residential components. Comments were provided to the previous applicant at DRC in May 2019. Also during this time, the previous applicant met with multiple retailers, including grocers, and received feedback that a commercial presence at this location was not viable. This is due to multiple factors, most notably several existing retail uses, including a Trader Joe's grocery store within one block of the site and the general market decline in demand for retail space. After an extensive evaluation of the commercial potential on the site, the previous applicant assigned their rights to purchase the Property to the Applicant. Existing retail uses (shown in pink) and commercial uses (shown in purple) within walking distance of the Property (approximately ¼ mile – 1 mile) are shown below.



Nearby Retail and Commercial Uses within Walking Distance from the Property

III. Proposed Project



Proposed Project

After careful evaluation of the GSSC Master Plan, zoning, comments received at DRC, and feedback from the market, the Applicant prepared the Application for the Project that addressed comments received at DRC and reduced the retail components of the Concept Plan while maintaining the residential emphasis that included single-family attached, 2-over-2s, and multi-family apartment units. The Project, as currently proposed, falls under the purview of the Standard Method of the CR zone and proposes a variety of unit types and sizes, including 30% MPDUs, a grid street pattern with on-street parking, provisions for alternative transportation options (including a site for the future CCT station), integration of green spaces, and community amenities such as a community green adjacent to the future CCT site, pools and community center, well-programmed privately owned public space, mews, tot lots and pedestrian and bicycle infrastructure. Some retail development is also integrated into one of the proposed multi-family

buildings. Specifically, the development includes 630 total residential units and approximately 1,740 square feet of retail, as follows:

- 332 for-sale homes
    - 56 2-over-2 condominiums
    - 24 16' townhomes
    - 207 20' townhomes
    - 45 24' townhomes
- 298 multi-family apartment units
- Approximately 1,740 square feet of retail co-located in the apartment building and at the intersection of Medical Center Drive and Key West Highway

As noted, for-sale residential units include single-family attached and 2-over-2 multi-family condominiums. The 298 rental units will be located in four elevator-served mid-rise buildings with surface parking. The proposed retail is co-located with the residential in the ground floor of the multi-family buildings. Thirty percent (30%) of all residential units will be MPDUs and include for-sale units and for-rent units.

A. Townhouses and 2-over-2s

As noted, the Project includes both traditional townhouses and 2-over-2 units. These units will be arranged in a regular pattern along the Project's street grid and open space parcels. The townhouses and 2-over-2 units will either front on streets or open space. Fronting these units on the street will frame the streets and contribute to the urban feel of the Project. Where townhouses do not front on streets, they will front on open space. The purpose of this configuration is to frame and activate the open space interspersed throughout the Project. Additionally, orienting select

sticks of townhouses in this manner will place eyes on the open spaces, making them safe and inviting for future residents.

Part of the western boundary of the Project is adjacent to Wooten Crest, a community comprised of three-story townhomes located on RT-8 zoned ground that were built around 2010. Along this western boundary of the Project, the Preliminary Plan calls for the construction of 3-4 story townhomes that are compatible in terms of height and massing with the adjacent Wooten Crest units. The distance from the Project's townhomes to these units are approximately 30' to greater than 100' away. Final heights for the townhomes adjacent to the western boundary will be confirmed at site plan and comply with 59.4.1.8.B, as necessary.

B. Multifamily Component

As previously noted, the multi-family component of the Project helps to respond to the Housing Needs Assessment's identified growing demand for affordable multifamily rental housing. In accordance with the GSSC Master Plan and in response to the trends identified in the Housing Needs Assessment, the multifamily component will include 298 units, 135 of which will be MPDUs. The multifamily component will include four 4-5-story buildings lining the internal Master Planned Roads of the Project with surface parking tucked behind the buildings. The proposed layout and design of the multifamily component strive to attain affordability and the density recommended in the GSSC Master Plan while managing site constraints. The key factors which drive the design of the multifamily component are construction costs, a large gas transmission main, elevation variations, the forest conservation area, and the GSSC Master Plan.

- *Construction Costs*: To deliver a project that is affordable across an array of incomes, the Applicant has designed the Project to reduce construction costs and, therefore, rents. In particular, the multifamily component of the Project will include "5A" construction and

surface parking. Surface parking reduces construction costs compared to multilevel structured parking because it does not require structural steel and concrete. 5A construction is efficient and structurally sound at a lower construction cost. The significant reduction in construction costs attributable to the provision of 5A construction and surface parking will promote rent affordability and allow for the provision of 30 percent MPDUs. Specifically, to promote rent affordability and MPDUs, we propose surface parking in the rear of the apartment buildings while promoting the interface of these buildings with Medical Center Drive and Blackwell Road, two master plan roadways in the community. This proposed rear surface parking for the apartments is located between the buildings and the Key West Avenue, a six-lane divided highway in this area. The rear parking will be copiously screened from Key West to dramatically minimize/eliminate the visual from Key West Avenue. Section 59.4.5.1.A.3, which states that the CR zone should, among other things, ***"encourage*** development that integrates a combination of housing types, mobility options, commercial services, and public facilities and amenities, where parking is prohibited between the building and the street." To that end, we do request approval from the Board for alternative compliance to Section 59.4.5.1.A.3 as we do adhere to section 59.6.2.9.b regarding surface lot parking standards, as follows:

i. the screening between the parking lot and Key West Avenue will be a minimum of 6 feet wide;

ii. The screening contain a hedge of shrubs a minimum of 3 feet high; and

iii. The screening will have a canopy tree planted every 30 feet on center, where available (please note that trees are not permitted in the gas transmission main easement area along Key West Avenue and will need to accommodate this provision.)

- *Gas Main Easement*: A 50-foot-wide easement protecting a 36-inch-wide gas main encroaches into the Property by approximately 25 feet along the Property's entire Key West

Avenue frontage. Neither structures nor trees may be located within the easement. Pavement and shrubs are permitted. Within the easement area, surface parking is proposed. Because trees are not permitted within the easement area, shrubs will be utilized within the easement to screen the surface parking from Key West Avenue, per 59.6.2.9. Additional trees will be provided outside the easement area within parking islands. These trees will not only provide additional screening but also reduce the heat island effect. Given the ample screening provided by trees and shrubs, the surface parking lot will not be easily visible from Key West Avenue, like other surface parking in the area.

Notably, internal to the Project, the surface parking area will be screened from the confronting townhouse and 2-over-2 components of the Project by the apartment buildings themselves. These buildings will provide a strong building edge along the two Master Planned Roads in the community and help to create the pedestrian-friendly environment desired within the neighborhood. Finally, this apartment design will create a cohesive urban design within the Project, reduce the visual impact of surface parking on the single-family community, and act as a buffer from the six lanes of traffic on Key West Avenue.

- *Elevation*: Elevation falls by 45 feet from the northwest corner of the multifamily parcel to the southeast corner of that parcel. To maintain 5A construction and, therefore, reduce construction costs, the multifamily component will be located within four buildings that break up and step down the grade.
- *Forest Conservation Area:* The Project will preserve the forest stand at the intersection of Great Seneca Highway and Key West Avenue within a forest conservation easement. The Applicant considers the forest conservation area an asset to the development. The Project seeks to emphasize this amenity by locating one of the proposed multifamily buildings

adjacent to it. This will promote appreciation of the forest area by affording views of the forested area to future residents of the Project.

- *GSSC Master Plan*: The GSSC Master Plan envisions the greatest density on the Property being located at the future CCT stop on the Property's Medical Center Drive frontage. In accordance with this recommendation, the proposed design locates the multifamily component of the Project near the future CCT stop. In this location, the Project also proposes a retail component and a central civic green, as envisioned by the GSSC Master Plan.

C. Retail

The Project will include 1,740 square feet of retail at the corner of Key West Avenue and Medical Center Drive on the ground floor of one of the multifamily buildings. This retail corner will serve to activate the intersection. A small surface parking lot will be provided in front of the retail. This visible parking is necessary to the success of the proposed retail given the auto-oriented nature for the area. Like the remainder of the surface parking, this parking will be screened from the road.

D. Access and Circulation

The Preliminary Plan shows the dedication of right-of-way for the Master Planned Roads as follows:

- Blackwell Road – 73' ROW
- Medical Center Drive – 150' ROW
- Travilah Road – 59' ROW

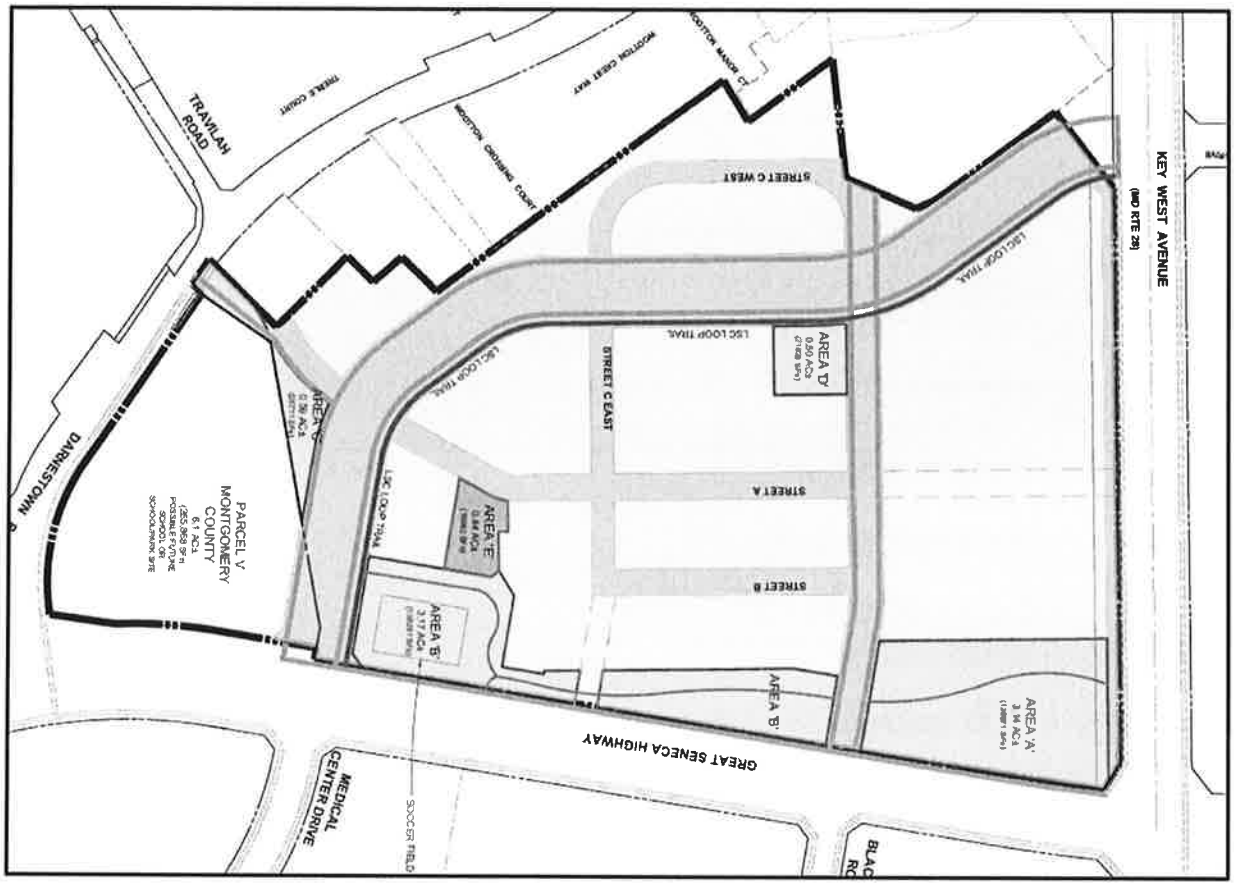
Blackwell Road, Medical Center Drive, and a segment of Travilah Road will be dedicated and constructed (as noted below) as part of the Preliminary Plan. The intersection of Blackwell Road and Medical Center Drive, somewhat central to the Project, is the densest area of the site and is the proposed location of the CCT station.

The Applicant intends to dedicate and construct all infrastructure in the 73' right-of-way of Blackwell Road, including bike lanes and pedestrian connections. Moreover, the Applicant plans to dedicate the full right-of-way for Medical Center Drive and construct two travel lanes through the limits of the Property. Within the Medical Center Drive right-of-way, the Applicant will also construct the pedestrian and cycling facilities as shown on the Preliminary Plan. As discussed in detail below, the results of the traffic study for the Project clearly show that two lanes of capacity for Medical Center Drive are more than sufficient to accommodate the density of this Project. Moreover, the future disposition and timing of the CCT in Medical Center Drive and associated infrastructure is not definitive. Accordingly, the Applicant anticipates that the balance of Medical Center Drive will be constructed in the future by others when the CCT is funded and constructed. Stormwater management facilities to treat the entire Medical Center Drive right-of-way will be constructed as part of the Project. Finally, some right-of-way for a future extension of Travilah Road through the Site will be provided from the terminus of Travilah Road (located on the Site) to Darnestown Road. A pedestrian connection, a 10' side path, within this right-of-way dedication to Travilah Road is also proposed in the Preliminary Plan. All other streets with unit frontage within the Preliminary Plan will be public streets. Design exceptions are introduced below and outlined in more detail in the Application. Most homes within the Project will be served by alleyways that are intended to be privately owned and maintained by the future homeowners' association.

While all streets in the Project are public, the Applicant requests that the Planning Board make the finding and approve the request private alleyways throughout the community, per Section 50.4.3.1.E.4.b. All alleys balance the myriad of needs and easements in the alley (including water, sewer, storm drain, dry utilities, landscaping, etc), and so flexibility not found in public streets is necessary. All alleys will be designed and built to County Standards, except for as noted below. It should be noted that all alleyways but two (Parcel A, Block E and Parcel A, Block C) comply with the County's right-of-way width of 20'. The paving width in these alleys is also 20'. The proposed right-of-way and pavement width for Parcel A, Block E is 18' and Parcel A, Block C is 17'. The right-of-way width of these two alleys was slightly reduced from the County's right-of-way standard of 20' to create better plan efficiency as the Project accommodates over 7 acres for the requisite 150' right-of-way for Medical Center Drive.

The Preliminary Plan creates the opportunity for three future street connections, Blackwell Road west into 9850 Key West Avenue, Parcel B to Key West Avenue, and Parcel F to Great Seneca Highway. Well-placed, visible signs will be installed at each of these three locations to notify residents and guests of possible future street connections. The HOA Declaration, recorded in land records, will note these connections, and required HOA disclosures that are signed the future residents will also note these future connections and the possible timing of construction. The extension of Blackwell Road (Yearling Drive) will also be graded for the future connection and paved to the property line with appropriate striping for the interim conditions.

E. Open Space and Amenity Areas



Open Space and Trail Connections

The Project will provide a series of interconnected open spaces and amenity areas as follows:

- Central Civic Green: The GSSC Master Plan recommends a central civic green on the Property close to the future CCT station. The Preliminary Plan shows the reservation of land for a CCT station located at the intersection of Medical Center Drive and Blackwell Road, central within the Property and near the densest area of the Preliminary Plan. A half-acre civic green is proposed at this location. Detailed design of the Civic Green will be completed at site plan.

- Park: The Project provides a 6.31-acre Privately Owned Public Space ("POPS") that will be open and accessible to the community and public. This POPS will include the rectangular field that satisfies the GSSC Master Plan and MNCPPC sizing guidelines. Specifically, according to the Parks and Recreation Guidelines, a regulation medium rectangular field should be 120 feet by 180 feet and set back 100 feet from the nearest adjacent building and 40 feet from the nearest curb. The proposed field will meet these dimensions and setbacks. Also included in the POPS will be the forested area at the intersection of Key West Avenue and Great Seneca Road. Applicant and MNCPPC Staff are holding a charette in April to determine the remainder of the programming for this POPS, considering input from several sources as programming suggestions Finally, the Applicant has brought in Land Design, a company with deep expertise and success in POPS and park design, to lead this process.
- Trails and Other Pedestrian Connections: Trails will provide integral pedestrian and bicycle connections within the project and to destinations external to the project. These trails include the LSC Loop Trail, Great Seneca Highway side path, Key West Avenue sidewalk, and pedestrian connections from these paths to project amenities including the POPS, pool, playgrounds, forest conservation area and more.
- Mews: The Project includes two mews which will be located within the townhouse community. These mews will serve as recreational amenities and pedestrian connections within the Project. They will also include a green lawn for socialization, as well as a play area with playground equipment for children.
- Clubhouse & Pool: The main community clubhouse for the Project and associated swimming pool will be prominently and centrally located within the community.

- Other: Additional recreational amenities will be interspersed throughout the Project as shown on the Preliminary Plan.

In addition to the above-described amenities, as shown on the plans, the Project includes a variety of trails and pedestrian connections, including a segment of the LSC Loop Trail recommended in the GSSC Master Plan. In designing these trails and connections, special attention has been paid to creating connections between the trails and bike paths and recreational amenities. For example, a pedestrian walkway is proposed from the LSC Loop Trail to the rectangular field in the POPS. This connection continues through the POPS space and connects to the pools and the Great Seneca Highway side path.

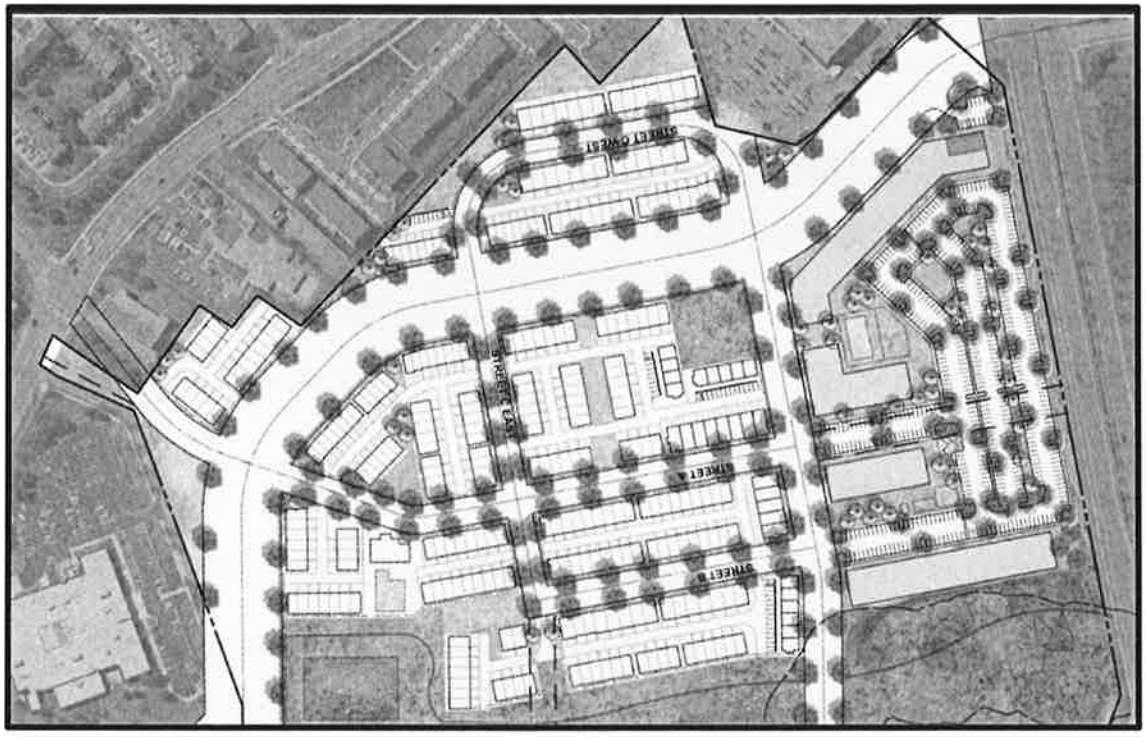
Further recreational amenities, outside those described above, are not required for the Project due to its proximity to existing recreational amenities. Several park and school sites are located within two miles of the Property:

Name	Approximate Distance
Green Park	0.5 miles
Stone Mill Elementary School	0.6 miles
Fallsgrove Local Park	1.1 miles
Glenora Park	1.3 miles
DuFief Local Park	1.5 miles
Malcolm King Park	1.5 miles
Big Pines/North Potomac Community Center	1.6 miles
Wootton's Mill	2 miles
Lakelands Park	2.5 miles

These locations contain a significant amount of facilities for active recreation, including fields, trails, courts, etc. Moreover, per MNCPPC's Recreation Facilities Calculator, there are 18 different types of recreational facilities within a one-half mile radius of the PSTA Property (in many cases, there are more than one of each park facility type listed below). These facilities are: Bleacher Seating, Bikeways, Full-size Basketball Court, Half-size Multiuse Court, Tennis Court, Large Diamond Field (Baseball), Small Diamond Field (Softball). Large Rectangular Field (Soccer, Football, Lacrosse, etc.), Community Garden, Gazebo, Preserved Historic Site (No Signage), Large Lawn, Picnic Area, Playground, Multi-age (Teen-friendly) Half-size Basketball Court, Picnic Table, Bench, and Woodland. These local nearby recreational facilities are interconnected with sidewalks, green spaces, and trails, and will provide an array of public and private recreational opportunities for the residents at PSTA. The supply of the on-site and off-site facilities will meet or exceed the demand for each age group in the community.

F. Forest Conservation

The Preliminary Plan will provide approximately 2.89 acres of forest conservation area at the intersection of Great Seneca Highway and Key West Avenue. Additional forest conservation along the border with the Wootton Crest townhome community will be provided as shown on the final approved Forest Conservation Plan. The remaining forest conservation requirement for the Preliminary Plan will be fulfilled by purchasing off-site forest conservation easements, as more fully discussed below.



PSTA Project Color Exhibit

G. Phasing and Validity Period

With regard to phasing and validity period for the Preliminary Plan for a multi-phase project, Section 50-4.2.G.2.b of the Subdivision Regulations requires that: (1) the Applicant propose a phasing schedule and the duration of the validity period for each phase; and (2) the Planning Board assign each phase a validity period considering the size, type, and location of the Project. The time allocated to any phase must be 36 months after the initiation date for that phase, and the cumulative validity period of all phases must be no longer than the adequate public facilities ("APF") validity period. As detailed below, the Applicant is requesting a 10-year APF validity period. With respect to phasing, the Applicant requests the following Preliminary Plan validity periods for each phase of the Project:

Phase 1: 36 months (3 years) for Preliminary Plan validity period

Phase 2: 72 months (6 years) for Preliminary Plan validity period

Phase 3: 108 months (9 years) for Preliminary Plan validity period

Phase 4: 120 months (10 years) for Preliminary Plan validity period

With respect to each of the above identified phases, Applicant anticipates the following number of lots to be recorded: Phase 1 – 2 lots; Phase 2 – 112 lots and 3 buildable parcels; Phase 3 – 69 lots and 1 buildable parcel; Phase 4 – 95 lots.

Pursuant to Subdivision Regulations Section 50-4.3.J.5.a.iv, the Applicant is requesting a ten-year APF validity period. A validity period longer than the five-year minimum under Subdivision Regulations Section 50-4.3.J.5.a.iv would not be adverse to the public interest and is necessary due to the size and complexity of the Project and anticipated absorption period for the sale of units. Specifically, the Project includes approximately 630 units and 1,740 square feet of commercial to be built with one of the apartment buildings. The Applicant anticipates that the construction of this large number of units on the Property will take many years, and an APF validity period of ten years is necessary and reasonable.

Under Subdivision Regulations Section 50-4.3.J.5.b, a phasing plan or development schedule is required where the Applicant requests a validity period longer than the five-year minimum. Accordingly, the Applicant proposes that the Project be developed in three phases as follows:

Phase 1: 60 Months (5 years)

Phase 2: 36 Months (3 years) from the end of Phase 1

Phase 3: 24 Months (2 years) from the end of Phase 2

With respect to each of the identified phases, the Applicant anticipates the following number of building permits: Phase 1 – 4 building permits, Phase 2 – 114 building permits, and Phase 3 – the remainder of building permits.

H. 50.4.2 Required Findings

To approve a preliminary plan, the Board must find that:

(1) *the layout of the subdivision, including size, width, shape, orientation and density of lots, and location and design of roads is appropriate for the subdivision given its location and the type of development or use contemplated and the applicable requirements of Chapter 59*;

As noted above, the Applicant seeks to subdivide the Property into 283 buildable lots and approximately 24 parcels for a development of 276 townhouses, 56 2-over-2s and 298 multi-family apartments, with 1,740 square feet of retail. The layout, width, size, and density of lots in the Preliminary Plan are appropriate given the requirements of the CR zone set forth in Chapter 59. Zoned Commercial Residential (CR-1.0, C-0.5, R-1.0, H-150), the Preliminary Plan utilizes the standard method of development and proposes 630 total units and approximately 1,740 square feet of retail uses. The proposed density of the Preliminary Plan is 0.49 FAR.[2] Units range in size and pricing alternatives to accommodate a variety of residents, from scholars attending nearby universities, to new families who want to live close to where they work, to retirees who would like to downsize. Blocks are configured in a grid pattern with all homes adjacent to tree-lined, sidewalk-served streets or open space. Mews with sidewalks are integrated throughout the Project. Public streets, complete with sidewalks and bike lanes, connect all elements of the Preliminary Plan: homes, recreational amenities, commercial uses, retail and transportation options. Pedestrian, bicycle, and vehicular connections to adjacent neighborhood uses, including the commercial uses within LSC West and nearby, are also provided in the Preliminary Plan. Some of these connections, such as the side path to Darnestown Road, will be built as part of the Project. Some connections, such as the Street C connection to Great Seneca Highway and the Street A

[2] Please see Preliminary Plan Data Table for FAR calculations.

connection to Darnestown Road and Key West Avenue, are provided for via parcels that can be used for the purposes of constructing these future streets, if warranted.

Although final lot sizes, setbacks and PUE dimensions will be determined for the Project at Site Plan, all fee-simple units are contained within lots that are appropriately sized for the corresponding residential units. Lot sizes for all townhomes within the Project are larger than the 800-square-foot lot area required in the CR zone. All setbacks for townhomes are also contemplated within the Preliminary Plan and comply with those outlined in the CR zone. Adequately sized PUEs are also contemplated and shown on the Preliminary Plan.

Additionally, the 2-over-2s within the Preliminary Plan are contained within lots that are sized appropriate for the unit type. Final parcel sizes may be modified at site plan. The setbacks and PUEs contemplated and shown on the Preliminary Plan also comply with the CR zone. Two-over-two lots contain only the 2-over-2 units and are located adjacent to other 2-over-2 units to ensure the creation of a single future condominium association that will serve all the condominiums in the Project.

Finally, all apartment infrastructure is located on a single discreet building lot appropriately sized to accommodate the buildings and associated infrastructure. These multifamily units also meet the required setbacks and sizes. The apartments are expressly designed to front and create a building edge along Medical Center Drive and Blackwell Road, two Master Planned Roads that are integral to this project.

The multifamily parcel will be appropriately sized and oriented for the Project. The buildings within the multifamily component of the Project are proposed to be oriented such that they front on the Project's internal streets – Blackwell Road and Medical Center Drive. Surface

parking for the multifamily component is tucked away from the neighborhood behind the buildings. The reasons for this orientation are threefold. First, the apartments will provide a strong building edge and thoughtfully interface with Blackwell Road and Medical Center Drive, contributing to the activation of these internal streets. Having apartment buildings fronting on Blackwell Road in particular is ideal given that it has a much lower speed limit than other major roads adjacent to the Site (most notably Key West Avenue) and provides critical elements to the Plan – street-lined parking, landscaping, shorter blocks, pedestrian and cycling routes within a 73' right-of-way. Second, a large gas main transmission line (36") and easement (50') runs underground in an easement between the apartments and Key West Avenue. This gas line and easement preclude any building construction or trees in this area but does allow for encroachment of pavement and shrubs. Finally, the construction of surface parking along Key West Avenue not only creatively uses the ground in this highly sensitive area (thereby increasing density), but also helps to facilitate more affordable rental rates for the apartments by reducing construction costs associated with steel and structural concrete construction.

Road design for streets interior to the site is appropriate given the density of the Property and the size, location, and purpose of the streets and related infrastructure. The design of internal streets combines the recommendations and requirements of several different sources: current Montgomery County Road Standards, various Master Plans, including the GSSC Master Plan, Bicycle Master Plan, Streets and Roads Master Plan, as well as the Complete Streets Guide draft. Master Planned Roads contain all required infrastructure. As detailed below, design exceptions have been submitted to ensure the roads are compatible with the Project's density and to provide a safe and efficient transportation network for cars, pedestrians, and cyclists. These design exceptions help to ensure road design also aligns with the Complete Streets Guide.

Two hundred sixty-two (262) of the for-sale units are served by alleys. The remainder of for-sale homes (14 of the 24' townhomes) are accessed by a front-loaded garage facing the street. Streets are wide enough to accommodate moving vehicles, parking, pedestrians, cyclists, underground utilities, some stormwater management and landscaping. All homes are fronted with public sidewalks that are interconnected throughout the Preliminary Plan. The LSC Loop Trail traverses the Project along Medical Center Drive. Block lengths are approximately 450' long or less. Sprinkled throughout the Preliminary Plan are mews lined with sidewalks and greenspace.

(2) *The Preliminary Plan substantially conforms to the Master Plan.*

As discussed above, the Property and Preliminary Plan fall within the LSC Life Sciences Center West District of the GSSC Master Plan and encompass approximately 60% of the property in LSC West (45 acres of a total of 75 acres). The GSSC Master Plan identifies key goals of LSC West to be creation of additional housing and mobility options within LSC West. The Project addresses these goals by proposing a mix of housing types for a variety of residents at an array of different incomes, creating and enhancing multiple transportation options and building critical connectivity within and beyond LSC West. The Preliminary Plan also provides for several public facilities, such as the CCT and the related station, the civic green, the POPS to be used for recreational purposes, the pools and clubhouse, and the LSC Loop Trail, as outlined in the GSSC Master Plan. The Preliminary Plan substantially conforms to other specific recommendations of the GSSC Master Plan as follows:

GSSC Master Plan Recommendation	**The Project**
Relocate the PSTA. (p.40)	The PSTA was relocated in 2016. The former PSTA buildings were demolished after relocation.

GSSC Master Plan Recommendation	The Project
Re-zone the site from R-90 TDR to CR. (p.40)	The site was re-zoned in 2010 to CR-1.0, C-0.5, R-1.0, H-150.
Residential buildings with most density and height should be adjacent to the proposed CCT station. (p.40)	The Preliminary Plan proposes the highest density, multi-family housing (the apartments and 2-over-2 condominiums) adjacent to the proposed CCT station at the intersection of Blackwell Road and Medical Center Drive.
Require a concept plan for LSC West to determine location and placement of highest densities and building height at transit, creation of a local street network, public open spaces and the LSC Loop Trail. (p.40)	A concept plan for the site was filed and reviewed in May 2019. The Preliminary Plan responds to the comments received by placing the CCT station in the central part of LSC West, including a civic green adjacent to the CCT station, providing a large green area for recreational purposes on the site, updating the transportation options, updating the street network, and including recommended pedestrian and bicycle connections for the LSC Loop Trail.
Locate highest density housing and retail uses and tallest buildings near the CCT station. (p.40)	The Preliminary Plan shows the highest density apartments and 2-over-2s with retail use near the CCT station.
Minimize impact to forest conservation area located at the intersection of Great Seneca Highway and Key West Avenue. (p.40)	The Project minimizes the impact to the forest conservation area and preserves the trees at the intersection of Great Seneca Highway and Key West Avenue.
Accommodate a new public elementary school and local park, if determined necessary, and central public open space near the CCT. (p.40)	A central civic space near the CCT station is provided, as well as a POPS, home to a regulation field at the intersection of Great Seneca Highway and Medical Center Drive (future amenities to be determined by the charette). Available information on school capacity and anticipated student generation from the Project show that an elementary school site is not required at this location. Although it appears likely that a future elementary school site may not be necessary, the adjacent 6.5-acre Parcel V owned by Montgomery County would be available if a site is later determined to be necessary, as outlined in a letter from Mr. David Dise to Ms. Gwen Wright dated January 20, 2021.

GSSC Master Plan Recommendation	The Project
Locate CCT station along Medical Center Drive in the center of LSC West. (p.41)	The Preliminary Plan locates the CCT station at the intersection of Medical Center Drive and Blackwell Road in the center portion of the site, near the highest densities and the large open green that serves the community.
Create interconnected street grid. (p.41)	The street network, comprised of public streets, is an interconnected grid pattern, with the possibility of future connections, if necessary and available. The grid pattern is reinforced via sidewalks in the mews and the paths along the perimeters of the site.
Ensure blocks are walkable blocks. (p.38)	Block lengths are walkable lengths. Mews have been added to improve pedestrian connectivity to the CCT station and throughout the site. Most homes are served by alleyways.
Include a large park with regulation size rectangular field. (p.38)	A 6.3-acre POPS recreational area, including a regulation size rectangular field and forested area, has been provided at the intersection of Great Seneca Highway and Medical Center Drive.
Build an urban park near CCT as a gathering space and focal point in the community. (p.38)	An urban park has been provided at the CCT station. Additional details to be determined at site plan.
Provide 30% of all units as MPDUs (required by county for disposition of PSTA).	30% of the units provided are MPDUs.
Provide connectivity to adjacent neighborhoods. (p.39)	Future connectivity to adjacent neighborhood has been provided by dedicating right-of-way for a future multi-modal connection (Blackwell Road extended) to Darnestown Road. In the interim and as part of the Project, a pedestrian and cyclist connection to Darnestown Road will be provided as shown in the Travilah Road right-of-way dedication proposed by the Project. Additional connections of Street A have been planned if the Pepco substation is moved. The Street C connection to Great Seneca Highway is also planned if that connection is deemed necessary in the GSSC Master Plan amendment.

GSSC Master Plan Recommendation	The Project
Build 15% of tract as public use space. (p.40)	A minimum 15% of the tract is open space. This includes the trails, sidewalks, stream valley buffer, the urban park adjacent to the future CCT station, the 6.31-acre POPS, and tot lots are integrated into the Site.
Integrate open space. (p.40)	Open space is integrated via a variety of pedestrian and bicycle connections via sidewalks, bike paths and trails.
Dedication of right-of-way to widen Key West Avenue. (p.41)	The additional right-of-way has been added to the Preliminary Plan as dedication.

GSSC Master Plan goals not met by the Project can be met with future redevelopment. It is anticipated that the remaining acreage within the LSC West district will be redeveloped in the future. Existing uses in LSC West include office, medical office, retail, and residential. To that end, current and future uses facilitate the LSC West vision of providing a mix of uses, as referenced in the GSSC Master Plan. Moreover, it is contemplated that other areas within LSC West (particularly the office/retail area and the Center of Cybersecurity on Parcel V) will be redeveloped in the future to provide additional opportunities, such as a potential elementary school, to further meet GSSC Master Plan goals.

The GSSC Master Plan contemplates the inclusion of a possible future public elementary school site on the Property. As noted, the Applicant finds that an elementary school is not necessary to serve the proposed development. If a future school site is necessary, then, as discussed during the Concept Plan DRC and memorialized in the January 20, 2021 memo, Parcel V should be considered as satisfying this potential future need should it be become necessary.

(3) *Public facilities will be adequate to support and service the area of the subdivision.*

Adequate public facilities exist to serve the Project. The Property is located in the Wootton school cluster, which has capacity at all school levels (Stone Mill, Cabin John, and Thomas S. Wootton) and at the cluster level to serve the future residents of the Project pursuant to the FY2021 Annual School Test. Pursuant to the 2016 Subdivision Staging Policy,[3] "[t]he Planning Board and staff must consider the programmed services to be adequate for facilities such as police stations, firehouses, and health clinics unless there is evidence that a local area problem will be generated." There is no evidence of a local area problem, and thus the Property will be adequately served by police and fire protection.[4] The Property is classified in the water category W-1 and sewer category S-1, and, therefore, adequate public water and sewer facilities exist to serve the Project.

The Traffic Impact Analysis dated April 2021 and performed by the Traffic Group indicates that roads and the transportation network in this area provide adequate public road and transportation facilities to serve the Project.

Medical Center Drive is planned to be a four-lane road with 150 feet of right-of-way. Applicant proposes to build two lanes along with the pedestrian and bike lanes for the ultimate four-lane section as more fully discussed below. The amount of development proposed by the Project does not generate sufficient traffic to require the construction of Medical Center Drive as a four-lane road. Two lanes are sufficient. Specifically, The Traffic Group indicates that the Project will generate just 1.8% of the total capacity provided by Medical Center Drive's four lanes

[3] Because this Application was filed prior to January 1, 2021 and includes at least 25% affordable units, per the transition clause contained in the County Council's Resolution Approving the 2021-2024 Growth and Infrastructure Policy (Resolution No. 19-655), the rules of the 2016-2020 Subdivision Staging Policy continue to apply.

[4] Several police stations exist in the area, and the nearest is located two miles away. Fire and rescue squads are also located nearby, with the closest being Station 32, located less than one mile away. Several medical clinics that collaborate with and serve Shady Grove Adventist Hospital are also located in close vicinity of the Project.

of traffic, and states that two lanes of Medical Center Drive will provide more than enough capacity to serve the Project. The courts have held that requirements such as the requirement to construct public road improvements like Medical Center Drive must have "an essential nexus and rough proportionality to the effects of the proposed new use of the specific property at issue" to be lawful. *Koontz v. St. Johns River Water Mgmt. Dist.*, 570 U.S. 595 (2013). As plain from the very limited impact the Project has on Medical Center Drive, as a four lane suburban divided arterial road, the requirement to construct all four lanes does not bear a sufficient nexus and rough proportionality to the demands created by the Project. Therefore, the requirement to construct all four lanes is unreasonable and may not be lawfully imposed. Such a monetary exaction is exactly what the Supreme Court said in *Koontz v. St. Johns River Water Mgmt. Dist.* raises the "...central concern of *Nollan* and *Dolan*: the risk that the government may use its substantial power and discretion in land-use permitting to pursue governmental ends that lack an essential nexus and rough proportionality to the effects of the proposed new use of the specific property at issue, thereby diminishing without justification the value of the property." *Id.* at 597. Given the foregoing, the Applicant proposes to dedicate the full width right-of-way of 150 feet comprising a dedication of 7.3 acres, 17% of the site, and build two lanes of the ultimate four-lane section, along with the pedestrian and bike lanes, of Medical Center Drive as part of the Project. The 150-foot right-of-way will not only allow the final two lanes to be constructed to serve the impact caused by the general public but also accommodate the CCT if built.

(4) *All Forest Conservation Law, Chapter 22A, Requirements are Met*

The Preliminary Forest Conservation Plan meets the requirements of Chapter 22. Specifically, the Preliminary Plan shows clearing approximately 5.93 acres and retaining approximately 2.89 acres on-site. Most of the on-site forest retention is located at the intersection

of Great Seneca Highway and Key West Avenue, which adheres to the vision outlined in the GSSC Master Plan. Small pockets of forest retention are proposed along the portions of the boundary between the Property and the existing Wootton Crest townhome community. An additional approximately 11.83 acres of afforestation and reforestation is required and will be provided by purchasing off-site forest conservation easement credits.

A Tree Variance Request has been submitted to request a variance from Section 22A-12(b)(3) of the Montgomery County Code. This section of the Code states that a variance is required to disturb "any tree with a diameter, measured at 4.5 feet above ground, of (i) 30 inches or more; or (ii) 75% or more of the diameter measured at 4.5 feet above ground of the current State champion tree of that species." Ten specimen trees exist on or within 100 feet of the boundary of this Site, as identified on the NRI/FSD. Six of these specimen trees need to be removed so that the Site can be redeveloped in accordance with the GSSC Master Plan. The removal of these trees (tree numbers 4, 6, 7, 10, 17 and 32) is necessary to accommodate GSSC Master Plan road right-of-way, building stormwater management, tie out grading, or due to the poor health of the tree. Removal of the trees enables the Applicant to build out this site as the residential community as envisioned by the GSSC Master Plan, allows Applicant to experience rights similar to other land owners, does not degrade water quality within this area, and does not provide any special privilege to the Applicant that would be denied to other applicants.

(5) *All stormwater management, water quality plan, and floodplain requirements of Chapter 19 are satisfied.*

The Project, which is classified as "redevelopment," was previously used as a training facility for police and fire officials and adheres to the SWM requirements of Chapter 19. Located in the Upper Muddy Branch sub-watershed and the Lower Potomac Direct Watershed, Class I-P,

the Property is not located in a special protection area. Currently, the Property contains existing training facilities that were used by the PSTA, including parking lots, paved roads, stormwater management facilities and pad sites which once housed buildings for the PSTA. Since existing imperviousness on the Property is greater than 40 percent, the Project qualifies as a redevelopment site per the County Code. To that end, alternative stormwater management practices will be employed by the Project to treat stormwater once environmentally sensitive design options (ESD) to the maximum extent practicable (MEP) has been exhausted. The provision of ESD measures on the site is constrained by several factors, including poor infiltration soils, shallow bedrock, right-of-way dedication requirements, and two existing large water lines and required buffers, all of which further limit the practicability of ESDs. Despite this, ESD and alternative stormwater management practices are proposed to treat impervious run-off from the Project, including micro-bio facilities, flow-splitters, corrugated metal pipe detention units, cartridge treatment facilities, etc.

(6) *any burial site of which the applicant has actual notice or constructive notice or that is included in the Montgomery County Cemetery Inventory and located within the subdivision boundary is approved under Subsection 50-4.3.M.*

The Applicant has no actual or constructive knowledge of any burial site on the Property, nor is a burial site included in the Montgomery County Cemetery Inventory located within the subdivision boundary.

(7) *any other applicable provision specific to the property and necessary for approval of the subdivision is satisfied.*

All applicable provisions specific to the Property and necessary for approval of the subdivision have been addressed and satisfied by the Application.

IV. Road Design Exception Request

All streets are proposed in conformance to the Complete Streets Guide. Design exception requests to modify public road design standards have been submitted by the Applicant to appropriate agencies for review and approval. These design exceptions are necessary to accommodate the current site density and fulfill the vision for the site as outlined by the GSSC Master Plan while providing the appropriate and safe transportation and stormwater management infrastructure within the right-of-way. See Appendix for detailed modification information.

V. Community Outreach

A pre-submission meeting for the Property was held on October 30, 2019 at Lakewood Elementary School in Rockville. The meeting was noticed via mail and posting of signs per guidelines outlined by MNCPPC. Please see submission for proof of noticing and meeting requirements.

VI. Conclusion

The Applicant respectfully requests the approval of the Preliminary Plan for the Property (formerly the PSTA), consisting of 630 units and approximately 1,740 square feet of retail on approximately 45 acres on the Property. The submitted plans and provided analysis show that the Project adheres to the GSSC Master Plan and complies with the Subdivision Regulations and zoning requirements for this Site. At build-out, the Project will create the vibrant residential community with amenities and mobility options as envisioned by the GSSC Master Plan.

THE ELMS AT PSTA, LLC

By: _____
Kathryn D. Kubit, Vice President
Elm Street Development

1355 Beverly Road, Suite 240
McLean, VA 22101

RODGERS CONSULTING | Knowledge Creativity Enduring Values

Mar 23, 2021

Mr. William Whelan
MCDOT, Office of Transportation Policy
101 Monroe Street, 10th Floor
Rockville, MD 20850

Re: *The Elms at PSTA Site*, Preliminary Plan 120200100
Rodgers Project No.: 0643T
Design Exception Request: Intersection spacing, Median Break, Right-of-Way section, Interim Condition Build-out

Dear Mr. Whelan:

On behalf of The Elms at PSTA, LLC C/O Elm Street Communities, please find below a design exception and waiver request for right-of-way modifications applied in the *The Elms at PSTA Site* (Project) plan. The requested Right-of-Way modifications are outlined on the following pages and conform to the design reflected on the Preliminary Plan currently submitted for review.

We appreciate your consideration of these requests and are available to meet should you wish to discuss further. Please also feel free to contact me at (240) 751-0278 or by email at NBlanc@rodgers.com if you have any questions or require additional information.

Thank you,
Rodgers Consulting, Inc.

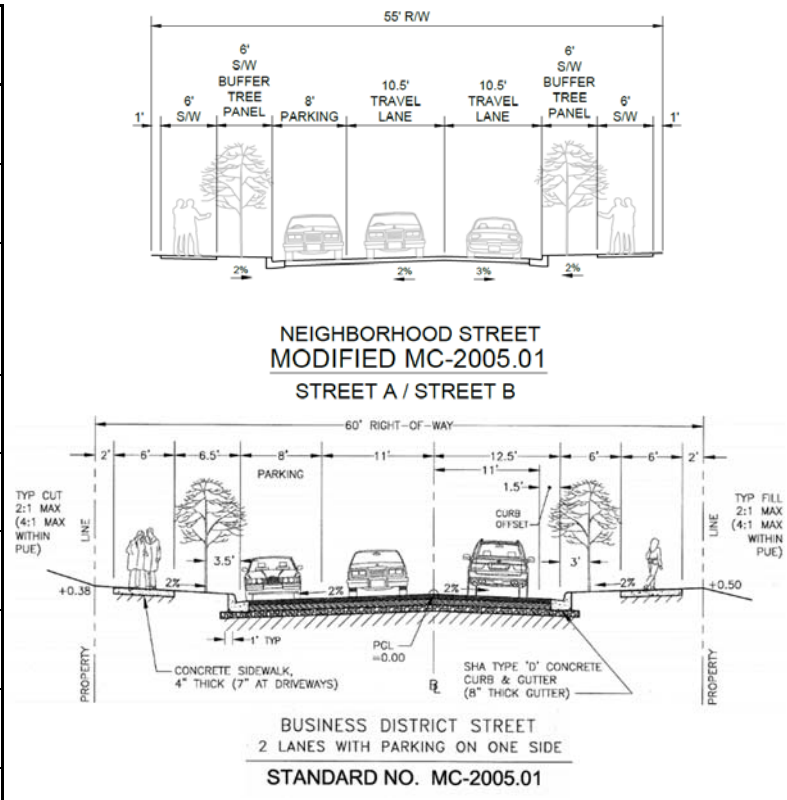
Neil Blanc, P.E.
Senior Engineer

Cc: Kate Kubit, Elm Street Communities
Randall Rentfro, PE, Rodgers Consulting

Street "A" (Station 0+36.50 – 10+03.09) & Street "B" (Station 0+36.50 – 5+20.50)

Along Streets "A" and "B", the applicant requests modification to the standard "Business District Street, 2 Lanes with Parking on One Side", Design Standard Number MC-2005.01. The applicant seeks the following specific modifications for the Proposed Street "A" and Street "B" roadway design:

Modification Item	Parameter	Standard	Modification
#1	Travel Lane Width	11'	10.5'
#2	Total Pavement Width	31.5'	29'
#3	Stormwater Management Features	None	Micro-bioretention planters; flow splitter structures.
#4	Tree Panel Width	6.5'	6'
#5	Curb Offset	1.5'	0'
#6	Total Right-of-Way Width	60'	55'
#7	Maintenance Strip Width	2'	1'
#8	Right Travel Lane Cross Slope	2%	3%
#9	Curb & Gutter	SHA Type 'D'	MC-100.01 Type 'A'



Justification:

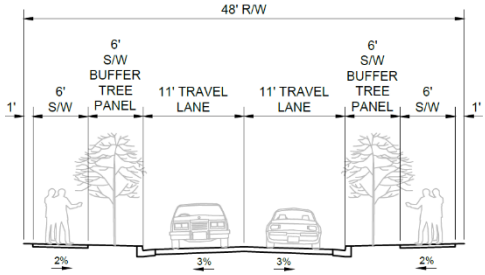
The proposed modifications for Streets "A" and "B" would benefit the public by creating a safe and compact user environment which is consistent with the urban recommendations of the GSSC Master Plan. The modifications will create a calmer experience for pedestrian, cyclists, and vehicular traffic as they traverse under the continuous, non-linear, tree canopy of street trees from not only the tree wells, but stormwater management features alike.

The project layout is made feasible only with these modifications, and without them there would be a loss of density and urban design advocated for in the Great Seneca Science Corridor (GSSC) Master Plan. The modifications are not anticipated to have any adverse impact to vehicular, bicycle, or pedestrian traffic. On the contrary, the modifications proposed to Street "A" and "B" as part of the Preliminary Plan will enhance pedestrian and bicyclist safety due to the narrow pavement widths. Narrower travel lanes induce a calming effect on drivers, encouraging them to drive slower. This increases the safety for pedestrians and cyclists in the streets. The stormwater management facilities provide immediate treatment for surface runoff in vehicular areas and creates a more verdant space in the right-of-way. These modifications meet the vision established the in the Montgomery County Complete Streets (MCCS) version 1.0 draft by maximizing safety through calming traffic patterns, sustainability through more stormwater management facilities, and vitality through create a space welcoming to pedestrians.

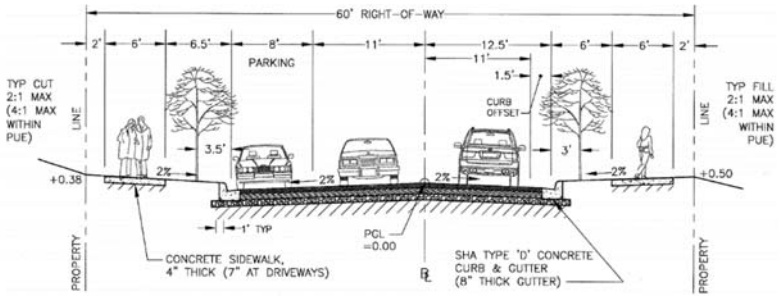
Street "C" East (Station 0+75.00 to 3+81.00, 4+36.00 to 5+81.22)

Along Street "C" East, east of the intersection with Medical Center Drive, the applicant requests modification to the standard "Business District Street, 2 Lanes with Parking on One Side", Standard Number MC-2005.01. The applicant seeks the following specific modifications for the Street "C" roadway design:

Modification Item	Parameter	Standard	Modification
#1	Parking Lane Width	8'	0'
#2	Total Pavement Width	31.5'	22'
#3	Stormwater Management Features	None	Flow splitter structures
#4	Tree Panel Width	6.5'	6'
#5	Curb Offset	1.5'	0'
#6	Total Right-of-Way Width	60'	48'
#7	Maintenance Strip Width	2'	1'
#8	Travel Lane Cross Slopes	2%	3%
#9	Curb & Gutter	SHA Type 'D'	MC-100.01 Type 'A'



NEIGHBORHOOD STREET
MODIFIED MC-2005.01
STREET C EAST



BUSINESS DISTRICT STREET
2 LANES WITH PARKING ON ONE SIDE
STANDARD NO. MC-2005.01

Justification:

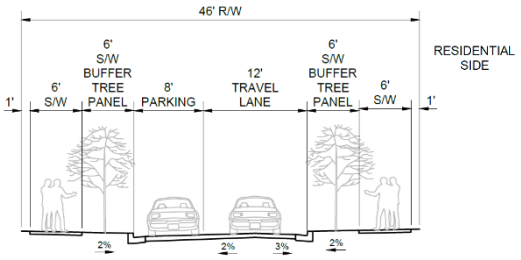
The proposed modifications for Street "C" East would benefit the public by creating a safe and more compact user environment consistent with the urban recommendations of the GSSC Master Plan. The modifications will not have any adverse impact to vehicular, bicycle, or pedestrian traffic and there is no anticipated adverse impact to any County maintenance operations. The street section has been modified to increase the urban feel for the site while allowing the built-to lines to be closer to the sidewalk to create a tighter urban setting consistent with the GSSC Master Plan. Though the section has been made more compact, the pedestrian sidewalk will be buffed on each side by the tree panels and the townhome front and side yards, creating a peaceful green space for people to traverse. These modifications furthermore meet the vision established the in the MCCS version 1.0 draft by ensuring safety, sustainability through championing verdant green space, and vitality through create a space welcoming to pedestrians.

The project layout is made feasible only with these modifications, and without them the proposed architecture, building footprints, and street grid would need a programmatic change. Denial of the modifications would result in an even further decrease in the master plan density to the site, as wider street sections will result in a decrease of units, and less of an urban design throughout the site.

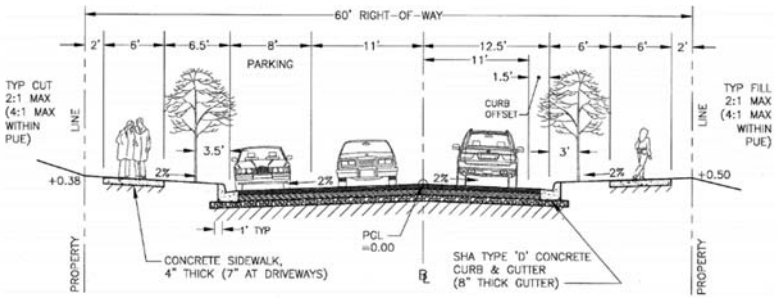
Street "C" West (Station 0+78.32 to 8+54.51)

Along Street "C" West, the applicant requests modification to the standard "Business District Street, 2 Lanes with Parking on One Side", Design Standard Number MC-2005.01. The applicant seeks the following specific modifications for the Proposed Street "C" roadway design:

Modification Item	Parameter	Standard	Modification
#1	Travel Lane Width	11'	12'
#2	Total Pavement Width	31.5'	20'
#3	Traffic Orientation	Two Way	One Way
#4	Tree Panel Width	6.5'	6'
#5	Curb Offset	1.5'	0'
#6	Total Right-of-Way Width	60'	46'
#7	Maintenance Strip Width	2'	1'
#8	Crown Location	Centerline of Road	Center of Travel lane
#9	Paving Cross Slope	2% (All)	3% (Right-side Travel Lane)
#10	Curb & Gutter	SHA Type 'D'	MC-100.01 Type 'A'



NEIGHBORHOOD STREET
MODIFIED MC-2005.01
STREET C WEST
(ONE WAY)
PRIVATE STREET



BUSINESS DISTRICT STREET
2 LANES WITH PARKING ON ONE SIDE
STANDARD NO. MC-2005.01

Justification:

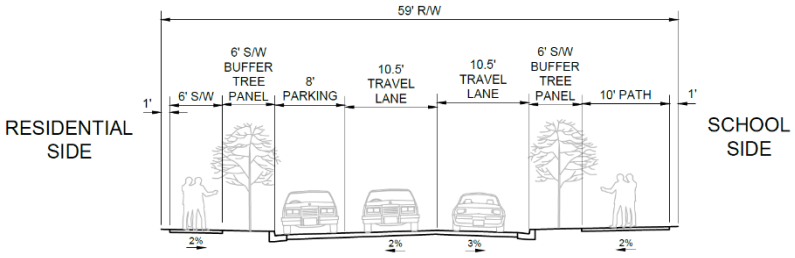
The proposed modifications for Street "C" West are tailored to meet the needs of a unique section of the site while still meeting the needs of the public by creating a safe user environment consistent with the urban recommendations of the GSSC Master Plan. The modifications will not have any adverse impact to vehicular, bicycle, or pedestrian traffic and there is no anticipated adverse impact to any County maintenance operations. The street section has been modified to allow traffic to flow in only one direction. One way traffic will lower the risk to pedestrians and cyclists. Though the section has been made more compact, the pedestrian sidewalk will be buffed on each side by the tree panels and the townhome front yards, creating a peaceful green space for people to traverse. These modifications furthermore meet the vision established the in the MCCS version 1.0 draft by ensuring safety, sustainability through championing verdant green space, and vitality through creating a space welcoming to pedestrians.

The project layout is made feasible only with these modifications, and without them the proposed architecture, building footprints, and street grid would need a programmatic change. Denial of the modifications would result in an even further decrease in the master plan density to the site.

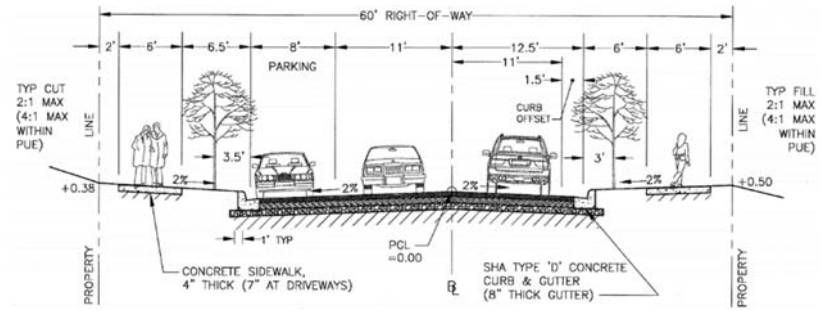
Proposed Street "D" Station 0+75.04 to 2+59.21

Along Street "D", past the intersection with Medical Center Drive, the applicant requests modification to the standard "Business District Street, 2 Lanes with Parking on One Side", Design Standard Number MC-2005.01. The applicant seeks the following specific modifications for the Street "D" roadway design:

Modification Item	Parameter	Standard	Modification
#1	Travel Lane Width	11'	10.5'
#2	Total Pavement Width	31.5'	29'
#3	Stormwater Management Features	None	Flow splitter structures
#4	Tree Panel Width	6.5'	6'
#5	Sidewalk (Right Side)	6' Sidewalk	10' Shared Use Path (Right Side)
#6	Curb Offset	1.5'	0'
#7	Total Right-of-Way Width	60'	59'
#8	Maintenance Strip Width	2'	1'
#9	Curb & Gutter	SHA Type 'D'	MC-100.01 Type 'A'



NEIGHBORHOOD STREET
MODIFIED MC-2005.01
STREET D



BUSINESS DISTRICT STREET
2 LANES WITH PARKING ON ONE SIDE
STANDARD NO. MC-2005.01

Justification:

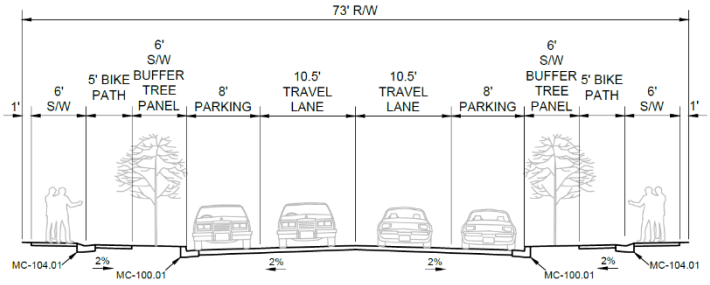
The proposed modifications for Street "D" would benefit the public by creating a safe and compact user environment consistent with the urban recommendations of the GSSC Master Plan. The modifications will not have any adverse impact to vehicular, bicycle, or pedestrian traffic and there is no anticipated adverse impact to any County maintenance operations. The street section has been modified to narrow the vehicle travel lanes and add a shared used path on the side of the road adjacent to the school. Though the section has been made more compact, the modifications proposed to Street "A" and "B" as part of the Preliminary Plan will enhance pedestrian and bicyclist safety due to narrower travel lanes inducing a calming effect on drivers. The shared used path creates a space for pedestrians and cyclists to utilize. These modifications furthermore meet the vision established the in the MCCS version 1.0 draft by ensuring safety, sustainability through championing verdant green space, and vitality through create a space welcoming to pedestrians and cyclists.

The project layout is made feasible only with these modifications, and without them the proposed architecture, building footprints, and street grid would need a programmatic change. Denial of the modifications would result in an even further decrease in the master plan density to the site, as wider street sections will result in a decrease of units, and less of an urban design throughout the site. Additionally, it would also fail to implement the recommendations of the Bicycle Master Plan.

Proposed Blackwell Road 0+75.00 to 9+74.82

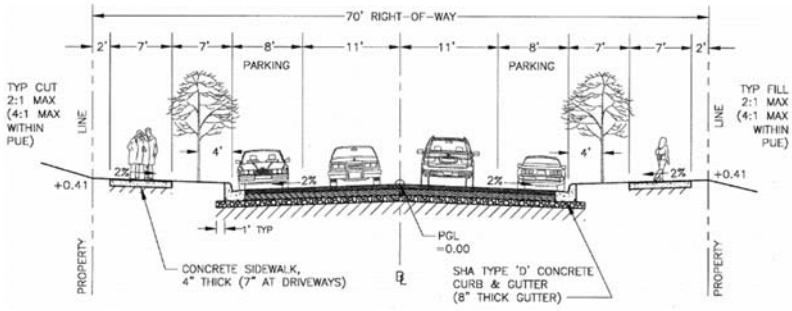
Along Blackwell Road, the applicant requests modification to the standard "Business District Street, 2 Lanes with Parking on Both Sides", Standard Number MC-2005.02. The applicant seeks the following specific modifications for the Proposed Blackwell roadway design:

Modification Item	Parameter	Standard	Modification
#1	Travel Lane	11'	10.5'
#2	Total Pavement Width	38'	37'
#3	Bike Path	None	5' Bike Path (Both Sides)
#4	Tree Panel Width	7'	6'
#5	Curb Offset	1.5'	0'
#6	Total Right-of-Way Width	70'	73'
#7	Maintenance Strip Width	2'	1'
#8	Sidewalk Width	7'	6'
#9	Mountable Concrete Curb Type F	None	Added (MC-104.01)
#10	Intersection Spacing	300'+	200'
#11	Curb & Gutter	SHA Type 'D'	MC-100.01 Type 'A'



NEIGHBORHOOD CONNECTOR

BLACKWELL ROAD EXTENDED



BUSINESS DISTRICT STREET
2 LANES WITH PARKING ON BOTH SIDES
STANDARD NO. MC-2005.02

Justification:

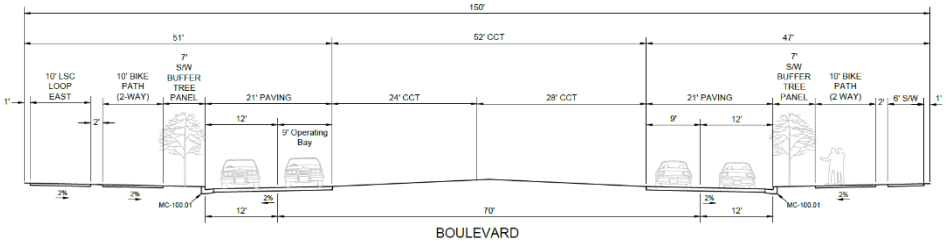
The proposed modifications for Blackwell Road would benefit the public by allowing the urban character of the GSSC Master Plan to be executed, creating an urban destination along the Blackwell Road corridor. The implementation of the Bicycle Master Plan via the bicycle paths will create a safe, multimodal transit friendly destination within the county. Given the land use of residential along the urban street frontage (the retail component is located adjacent to the Medical Center Drive entrance), the Secondary Residential road classification would more closely apply to Blackwell Road, so the proposed intersection spacing has been modified from 300' to 200'. There is no anticipated adverse impact to any County maintenance operations. The modifications are not anticipated to have any adverse impact to vehicular, bicycle, or pedestrian traffic.

Without the modifications described above, the project layout will not be feasible and will result in a further loss of density and urban design consistently defined in the GSSC Master Plan. The loss of density will be a result of wider streetscapes. The Built-to lines will be further removed from the streetscape and create an environment where pedestrians and bicyclist traffic are less safe due to the extraneous pavement allowing for more aggressive traffic patterns. The proposed architecture, building footprints, and street grid would need a programmatic change. Denial of the modifications would result in an even further decrease in the master plan density to the site, as wider street sections will result in a decrease of units, and less of an urban design throughout the site. Additionally, it would also fail to implement the recommendations of the Bicycle Master Plan.

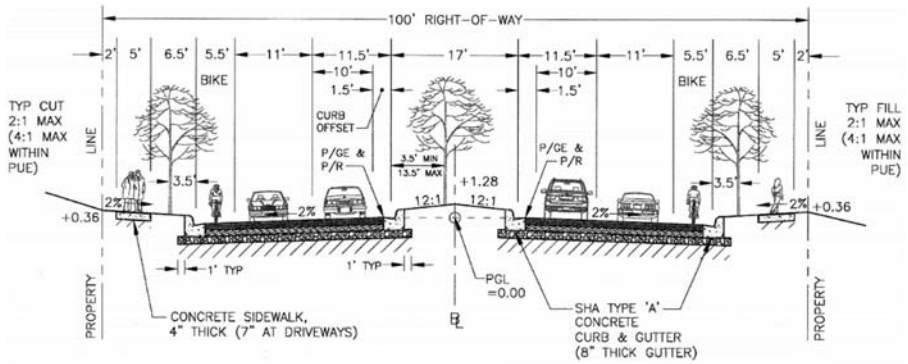
Medical Center Drive 1+24.53 to 22+85.06

Along Medical Center Drive, the applicant requests modification to the standard "Suburban Divided Arterial Road, 4 lanes with Bike Lanes", Standard Number MC-2004.10A. The standard recommended in the GSSC Master Plan, MC-2004.10, did not account for the CCT alignment, nor the recently approved Bicycle Master plan. The applicant seeks the following specific modifications for Medical Center Drive roadway design:

Modification Item	Parameter	Standard	Modification
#1	Inner Lane	10'	9'; Operating Bay
#2	Outer Lane	11'	12'
#3	Total Pavement Width	56'	42'
#4	Tree Panel Width	6.5'	7'
#5	Curb Offset	1.5'	0'
#6	Inner Curbs	SHA Type 'A'	Removed
#7	Outer Curbs	SHA Type 'A'	MC-100.01 Type 'A'
#8	Median Width	17'	52'
#9	Total Right-of-Way Width	100'	150'
#10	Maintenance Strip Width	2'	1'
#11	Pedestrian Paths	5' Sidewalk	10' LSC Loop; 10' Bike Path (Both sides); 6' Sidewalk



BOULEVARD
MEDICAL CENTER DRIVE



SUBURBAN DIVIDED ARTERIAL ROAD
4 LANES WITH BIKE LANES
STANDARD NO. MC-2004.10A

Justification:

The proposed modifications for Medical Center Drive would benefit the public by simultaneously implementing the goals of the Corridor Cities Transitway (CCT) program, the Bicycle Master Plan, and the GSSC Master Plan. The Montgomery County Department of Transportation Business District Street Standard Section MC-2004.10A does not account for the proposed CCT recommendations described in the GSSC Master Plan, and so heavy modifications have been proposed in order to do so. Medical Center Drive is recommended via the GSSC Master Plan as a divided arterial, MC-2004.10A. However, due to the limited expected traffic flow projected on Medical Center Drive, the complete build-out of the full width arterial would be excessive at this time. The CCT requires a 50' median width not accounted for in the standard section MC-2004.10A, so the section has been updated accordingly. Wider tree panels provide space for more complex landscaping along this central route. A variety of pedestrian paths have been added, included the multi-use Life Science Center (LSC) Loop recommended in the GSSC Master Plan, two 10' paths strictly for bikes, and a 6' sidewalk for conventional foot traffic. The modifications are not anticipated to have any adverse impact to vehicular, bicycle, or pedestrian traffic. Public transit will also be improved as the eventual implementation of the CCT will allow fewer cars to be on the road as more people take public transit. There is no anticipated adverse impact to any County maintenance operations.

Without the noted modifications, the proposed architecture, building footprints, and street grid would need a programmatic change. Additionally, it would also fail to implement the recommendations of the CCT program, the Bicycle Master Plan, and the GSSC Master Plan.

RODGERS CONSULTING | Knowledge Creativity Enduring Values

April 1, 2021

Marie LaBaw PhD, PE
Fire Department Access and Water Supply
Department of Permitting Services, Montgomery County
2425 Reedie Drive, 7th Floor
Wheaton, MD 20902

Project Name: PSTA Site

Preliminary Plan: #120200100

Statement of Performance Based Design

Rodgers File #: 0643T1

Dear Marie:

This document serves to outline the non-prescriptive design elements of the Fire Access Plan associated with the former Public Safety Training Academy (P.S.T.A.) Site development project. For your reference, the architecture for each unit type has been included with the Fire Access Plan submission.

Building Height

2-Over-2: The 2-Over-2 condominium product features four (4) levels of living space. All four (4) levels are above finished grade, and appropriate fire department access is provided to eliminate height restriction.

16' Townhome: The 16' townhome features four (4) levels of living space, with an exposed rear terrace and side hinged door on the top floor. In the front you will notice a fourth-floor dormer. This option will not be permitted for lots that are front height restricted. Fire department access is provided in the rear to serve front height restricted units with rear terraces.

20' Townhome: The 20' townhome product features a rear-loaded garage entry, with four (4) levels of living space. All four (4) levels will be exposed the rear. In the front, the highest-level dormer is to be no more than 27' from finished grade. The intent is for this product to satisfy front height restriction requirements. A modified version of this architecture will also be produced to meet full height restriction requirements.

24' Townhome: There are two 24' townhome products: rear-loaded and front-loaded. Both products feature three (3) levels of living space. On the front elevations, you will notice an option for a fourth-floor dormer; this will not be permitted on height restricted units. Additionally, rear-loaded units with a living space below finished grade will provide access via egress window wells.

Apartment Buildings: The multi-family apartment buildings will be four (4) stories with a basement. Only one FDC is required.

Per the *2019 Performance Based Design Guide*, multi-family buildings and townhomes with windowsills greater than 27' from grade will require protection by an automatic sprinkler system compliant with NFPA 13 and 13D, respectively. The Fire Access Plan shows one Fire Department Connection (FDC) per building, located no farther than 50' from the fire access route or operation bay. (Please not that FDCs will be coordinated at building permit and are shown on the Preliminary Fire Access Plan for graphical purposes only.)

Roadways and Operation Bays

Medical Center Drive and Street C West are both roadways with 12' wide one-way travel lanes. To support fire department vehicular access along these routes, 9' wide operation bays have been spaced as necessary. Per our discussion on 2/12/21, it is desired for these bays to provide a rectangular operation area that is 60' in length (minimum dimensions are 20' x 50'). This has been implemented to the full extent along Medical Center Drive with operation bays of dimensions 21' x 60'. It has also been implemented along Street C West in coordination with on-street parking; operation bays along Street C West measure 21' x 58'.

Due to the reduced travel lane width, minimum effective turning radii for these roadways was calculated using the equation:

$$Min.Radii = 25 + 20 - \frac{(Street\ 1 + Street\ 2)}{2}$$

where the variables *Street 1* and *Street 2* are the travel lane widths of the intersecting roadways. Bends in the fire department access route throughout the site have a minimum inside radius of 30' and outside radius of 50'.

Operation bays outside of a standard roadway are to be constructed in compliance with tertiary road loading standards. Final design will occur at site plan. All driveway entrances shown as fire access route are to be constructed to the MCFRS modified residential driveway detail on the Fire Access Plan.

Multi-Family Hydrant Spacing

The Fire Access plan identifies the Multi-family fire access loop through the internal parking lot. Per your e-mail on 2/26/2021, fire hydrant spacing is to be no farther than 500 feet apart measured as the truck travels along any FD access route. The northern portion of this loop that runs parallel to Key West has hydrants on either end that are spaced 530' apart. However, because there is no building frontage along this stretch, Rodgers requests the spacing and alignment be accepted.

Should you have any questions or require additional information, please feel free reach out.

Sincerely,

Rodgers Consulting, Inc.

Randall Rentfro, PE
Senior Team Engineer/Senior Associate

CC: Elm Street Development, Inc.
Doug Flanagan
Kate Kubit
Rodgers Consulting, Inc.

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STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 1000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | omputed E | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
-																		
1789	**1784**	0.35	0.35	0.84	0.30	0.30	5.00	7.07	2.10	0.105	15	CL. IV - RCP	0.013	1.00	4.71	0.35	6.46	1.71
*																		
1788	**1786**	0.20	0.20	0.84	0.17	0.17	5.00	7.07	1.20	0.034	15	CL. IV - RCP	0.013	1.00	4.03	0.41	6.46	0.98
1786	**1784**	0.24	0.44	0.84	0.20	0.37	5.41	6.95	2.58	0.158	15	CL. IV - RCP	0.013	1.00	4.98	0.33	6.46	2.10
*																		
1784	**1782**	0.00	0.79	0.90	0.00	0.67	5.75	6.85	4.58	0.499	15	CL. IV - RCP	0.013	1.00	5.72	0.29	6.46	3.73
1782	**1780**	0.19	0.98	0.84	0.16	0.82	6.04	6.77	5.58	0.741	15	CL. IV - RCP	0.013	1.00	5.94	0.28	6.46	4.54
1780	**1773**	0.00	0.98	0.90	0.00	0.82	5.00	7.07	5.82	0.306	18	CL. IV - RCP	0.013	1.00	6.11	0.27	10.50	3.30
*																		
1773	**CMP-1**	0.00	0.98	0.90	0.00	0.82	6.59	6.63	5.46	0.710	15	CL. IV - RCP	0.013	1.00	5.92	0.28	6.46	4.45
*																		
1773	**1753**	0.00	0.98	0.90	0.00	0.82	6.59	6.63	5.46	0.268	18	CL. IV - RCP	0.013	1.00	6.01	0.28	10.50	3.09
*																		
1759	**1758**	0.37	0.37	0.84	0.31	0.31	5.00	7.07	2.18	0.113	15	CL. IV - RCP	0.013	1.00	4.76	0.35	6.46	1.77
1758	**1757**	0.18	0.54	0.84	0.15	0.46	5.35	6.97	3.18	0.240	15	CL. IV - RCP	0.013	1.00	5.25	0.32	6.46	2.59
1757	**1756**	0.17	0.71	0.84	0.14	0.60	5.67	6.88	4.11	0.403	15	CL. IV - RCP	0.013	1.00	5.59	0.30	6.46	3.35
1756	**1755**	0.25	0.97	0.84	0.21	0.81	5.97	6.79	5.51	0.724	15	CL. IV - RCP	0.013	1.00	5.93	0.28	6.46	4.49
*																		
1755	**CMP-2**	0.00	0.97	0.90	0.00	0.81	6.25	6.72	5.45	0.708	15	CL. IV - RCP	0.013	1.00	5.91	0.28	6.46	4.44
*																		
1755	**1753**	0.00	0.97	0.90	0.00	0.81	6.25	6.72	5.45	0.708	15	CL. IV - RCP	0.013	1.00	5.92	0.28	6.46	4.44
*																		
1753	**1751**	0.00	1.95	0.90	0.00	1.64	5.00	7.07	11.56	0.530	21	CL. IV - RCP	0.013	1.00	7.21	0.23	15.85	4.81
*																		
1769	**1768**	0.33	0.33	0.84	0.28	0.28	5.00	7.07	1.97	0.092	15	CL. IV - RCP	0.013	1.00	4.63	0.36	6.46	1.60
1768	**1767**	0.11	0.44	0.84	0.09	0.37	5.36	6.97	2.57	0.157	15	CL. IV - RCP	0.013	1.00	4.97	0.34	6.46	2.09
1767	**1766**	0.11	0.54	0.84	0.09	0.46	5.70	6.87	3.14	0.235	15	CL. IV - RCP	0.013	1.00	5.24	0.32	6.46	2.56
1766	**1765**	0.35	0.89	0.84	0.29	0.75	6.01	6.78	5.08	0.615	15	CL. IV - RCP	0.013	1.00	5.84	0.29	6.46	4.14
*																		
1765	**CMP-3**	0.00	0.89	0.90	0.00	0.75	6.30	6.70	5.03	0.602	15	CL. IV - RCP	0.013	1.00	5.83	0.29	6.46	4.09
*																		
1765	**1764**	0.00	0.89	0.90	0.00	0.75	6.30	6.70	5.03	0.602	15	CL. IV - RCP	0.013	1.00	5.83	0.29	6.46	4.09
1764	**1762**	0.00	0.89	0.90	0.00	0.75	6.58	6.63	4.97	0.589	15	CL. IV - RCP	0.013	1.00	5.82	0.29	6.46	4.05
*																		
CMP-3	**1763**	0.00	0.89	0.90	0.00	0.75	6.58	6.63	4.97	0.589	15	CL. IV - RCP	0.013	1.00	5.82	0.29	6.46	4.05
1763	**1762**	0.00	0.89	0.90	0.00	0.75	6.87	6.55	4.91	0.575	15	CL. IV - RCP	0.013	1.00	5.81	0.29	6.46	4.00
*																		
1762	**1760**	0.00	1.79	0.90	0.00	1.50	7.16	6.48	9.72	0.374	21	CL. IV - RCP	0.013	1.00	6.94	0.24	15.85	4.04
1760	**1751**	0.00	1.79	0.90	0.00	1.50	7.40	6.42	9.63	0.368	21	CL. IV - RCP	0.013	1.00	6.92	0.24	15.85	4.01
*																		
CMP-1	**1771**	0.00	0.98	0.90	0.00	0.82	6.87	6.55	5.40	0.694	15	CL. IV - RCP	0.013	1.00	5.90	0.28	6.46	4.40
1771	**1751**	0.00	0.98	0.90	0.00	0.82	7.16	6.48	5.34	0.680	15	CL. IV - RCP	0.013	1.00	5.89	0.28	6.46	4.35
*																		
1751	**1731**	0.40	5.11	0.84	0.33	4.29	5.00	7.07	30.35	0.545	30	CL. IV - RCP	0.013	1.00	9.17	0.18	41.02	6.18
*																		

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 1000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | Computed B | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
-																		
CMP-2	**1750**	0.00	0.97	0.90	0.00	0.81	6.53	6.64	5.39	0.693	15	CL. IV - RCP	0.013	1.00	5.90	0.28	6.46	4.39
1750	**1731**	0.00	0.97	0.90	0.00	0.81	6.81	6.57	5.33	0.678	15	CL. IV - RCP	0.013	1.00	5.89	0.28	6.46	4.35
*																		
1745	**1743**	0.19	0.19	0.84	0.16	0.16	5.00	7.07	1.11	0.029	15	CL. IV - RCP	0.013	1.00	3.94	0.42	6.46	0.90
1743	**1741**	0.12	0.31	0.84	0.10	0.26	5.42	6.95	1.81	0.078	15	CL. IV - RCP	0.013	1.00	4.52	0.37	6.46	1.47
1741	**1739**	0.13	0.44	0.84	0.11	0.37	5.79	6.84	2.55	0.155	15	CL. IV - RCP	0.013	1.00	4.96	0.34	6.46	2.08
*																		
1739	**1737**	0.23	0.68	0.84	0.20	0.57	6.13	6.75	3.84	0.352	15	CL. IV - RCP	0.013	1.00	5.50	0.30	6.46	3.13
1737	**CMP-4**	0.00	0.68	0.90	0.00	0.57	6.43	6.67	3.80	0.344	15	CL. IV - RCP	0.013	1.00	5.49	0.30	6.46	3.09
*																		
1738	**1736**	0.47	0.47	0.84	0.39	0.39	5.00	7.07	2.79	0.186	15	CL. IV - RCP	0.013	1.00	5.08	0.33	6.46	2.28
*																		
1739	**1736**	0.23	0.68	0.84	0.20	0.57	6.13	6.75	3.84	0.352	15	CL. IV - RCP	0.013	1.00	5.50	0.30	6.46	3.13
*																		
1736	**1734**	0.00	1.15	0.90	0.00	0.96	6.43	6.67	6.43	0.373	18	CL. IV - RCP	0.013	1.00	6.26	0.27	10.50	3.64
1734	**1732**	0.00	1.15	0.90	0.00	0.96	6.70	6.60	6.36	0.365	18	CL. IV - RCP	0.013	1.00	6.24	0.27	10.50	3.60
1732	**1730**	0.08	1.23	0.84	0.07	1.03	6.96	6.53	6.73	0.408	18	CL. IV - RCP	0.013	1.00	6.32	0.26	10.50	3.81
*																		
CMP-4	**1733**	0.00	0.68	0.90	0.00	0.57	6.73	6.59	3.75	0.336	15	CL. IV - RCP	0.013	1.00	5.47	0.30	6.46	3.06
1733	**1731**	0.00	0.68	0.90	0.00	0.57	7.04	6.51	3.71	0.328	15	CL. IV - RCP	0.013	1.00	5.46	0.31	6.46	3.02
*																		
1731	**1730**	0.35	7.10	0.84	0.29	5.97	7.82	6.32	37.72	0.841	30	CL. IV - RCP	0.013	1.00	9.50	0.18	41.02	7.68
*																		
1730	**1715**	0.00	8.33	0.90	0.00	7.00	5.00	7.07	49.46	0.547	36	CL. IV - RCP	0.013	1.00	10.35	0.16	66.70	7.00
*																		
1729	**1727**	0.29	0.29	0.84	0.24	0.24	5.00	7.07	1.72	0.071	15	CL. IV - RCP	0.013	1.00	4.46	0.37	6.46	1.41
1727	**1726**	0.16	0.45	0.84	0.13	0.38	5.37	6.96	2.63	0.165	15	CL. IV - RCP	0.013	1.00	5.00	0.33	6.46	2.14
1726	**1725**	0.29	0.74	0.84	0.24	0.62	5.71	6.87	4.27	0.434	15	CL. IV - RCP	0.013	1.00	5.64	0.30	6.46	3.48
*																		
1725	**CMP-5**	0.00	0.74	0.90	0.00	0.62	6.00	6.78	4.22	0.424	15	CL. IV - RCP	0.013	1.00	5.62	0.30	6.46	3.44
*																		
1725	**1722**	0.00	0.74	0.90	0.00	0.62	6.00	6.78	4.22	0.424	15	CL. IV - RCP	0.013	1.00	5.62	0.30	6.46	3.44
1722	**1715**	0.00	0.74	0.90	0.00	0.62	6.30	6.70	4.17	0.414	15	CL. IV - RCP	0.013	1.00	5.61	0.30	6.46	3.40
*																		
1715	**1710**	0.00	9.07	0.90	0.00	7.62	5.00	7.07	53.86	0.649	36	CL. IV - RCP	0.013	1.00	10.52	0.16	66.70	7.62
*																		
CMP-5	**1713**	0.00	0.74	0.90	0.00	0.62	6.30	6.70	4.17	0.414	15	CL. IV - RCP	0.013	1.00	5.61	0.30	6.46	3.40
1713	**1710**	0.00	0.74	0.90	0.00	0.62	6.60	6.63	4.12	0.404	15	CL. IV - RCP	0.013	1.00	5.59	0.30	6.46	3.36
*																		
1710	**1705**	0.00	9.81	0.90	0.00	8.24	5.00	7.07	58.26	0.759	36	CL. IV - RCP	0.013	1.00	10.66	0.16	66.70	8.24
1705	**1554**	0.37	10.18	0.84	0.31	8.55	10.00	5.85	50.04	0.246	42	CL. IV - RCP	0.013	1.00	10.46	0.16	100.61	5.20
*																		
1675	**1670**	0.36	0.36	0.84	0.31	0.31	5.00	7.07	2.17	0.112	15	CL. IV - RCP	0.013	1.00	4.75	0.35	6.46	1.77
*																		
1672	**1670**	0.17	0.17	0.84	0.14	0.14	5.00	7.07	1.02	0.025	15	CL. IV - RCP	0.013	1.00	3.85	0.43	6.46	0.83

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 1000

Project: PSTA Jurisdiction: Montgomery Storm Event: 10-Year omputed E Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
*																		
1670	**1660**	0.19	0.72	0.84	0.16	0.61	5.43	6.94	4.22	0.424	15	CL. IV - RCP	0.013	1.00	5.62	0.30	6.46	3.44
*																		
1668	**1666**	0.27	0.27	0.84	0.23	0.23	5.00	7.07	1.62	0.063	15	CL. IV - RCP	0.013	1.00	4.39	0.38	6.46	1.32
1666	**1664**	0.28	0.55	0.84	0.23	0.46	5.38	6.96	3.23	0.248	15	CL. IV - RCP	0.013	1.00	5.27	0.32	6.46	2.63
1664	**1662**	0.00	0.55	0.90	0.00	0.46	5.70	6.87	3.18	0.242	15	CL. IV - RCP	0.013	1.00	5.26	0.32	6.46	2.59
1662	**1660**	0.00	0.55	0.90	0.00	0.46	5.00	7.07	3.28	0.256	15	CL. IV - RCP	0.013	1.00	5.29	0.31	6.46	2.67
*																		
1660	**1654**	0.00	1.27	0.90	0.00	1.07	5.00	7.07	7.57	0.516	18	CL. IV - RCP	0.013	1.00	6.48	0.26	10.50	4.28
*																		
1655	**1654**	0.20	0.20	0.84	0.17	0.17	5.00	7.07	1.19	0.034	15	CL. IV - RCP	0.013	1.00	4.02	0.41	6.46	0.97
*																		
1654	**1650**	0.00	1.48	0.90	0.00	1.24	6.58	6.63	8.21	0.608	18	CL. IV - RCP	0.013	1.00	6.59	0.25	10.50	4.65
*																		
1652	**1650**	0.33	0.33	0.84	0.28	0.28	5.00	7.07	1.95	0.090	15	CL. IV - RCP	0.013	1.00	4.62	0.36	6.46	1.59
*																		
1650	**1640**	0.11	1.91	0.84	0.09	1.60	5.00	7.07	11.35	0.510	21	CL. IV - RCP	0.013	1.00	7.18	0.23	15.85	4.72
*																		
1648	1646	0.35	0.35	0.84	0.29	0.29	5.00	7.07	2.08	0.103	15	CL. IV - RCP	0.013	1.00	4.70	0.35	6.46	1.70
1646	1644	0.06	0.41	0.84	0.05	0.34	5.35	6.97	2.40	0.137	15	CL. IV - RCP	0.013	1.00	4.88	0.34	6.46	1.96
1644	1642	0.06	0.47	0.84	0.05	0.39	5.70	6.87	2.70	0.173	15	CL. IV - RCP	0.013	1.00	5.04	0.33	6.46	2.20
1642	1641a	0.24	0.71	0.84	0.21	0.60	6.03	6.77	4.05	0.391	15	CL. IV - RCP	0.013	1.00	5.57	0.30	6.46	3.30
*																		
1641d	1641c	0.28	0.28	0.84	0.23	0.23	5.00	7.07	1.64	0.064	15	CL. IV - RCP	0.013	1.00	4.40	0.38	6.46	1.34
1641c	1641b	0.07	0.35	0.84	0.06	0.29	5.38	6.96	2.04	0.099	15	CL. IV - RCP	0.013	1.00	4.68	0.36	6.46	1.66
1641b	1641a	0.07	0.42	0.84	0.06	0.36	5.74	6.86	2.44	0.142	15	CL. IV - RCP	0.013	1.00	4.91	0.34	6.46	1.99
*																		
1641a	1640	0.26	1.39	0.84	0.22	1.17	6.33	6.70	7.84	0.554	18	CL. IV - RCP	0.013	1.00	6.53	0.26	10.50	4.44
*																		
1640	**1635**	0.00	3.30	0.90	0.00	2.78	7.07	6.50	18.05	0.633	24	CL. IV - RCP	0.013	1.00	8.01	0.21	22.62	5.75
*																		
1637	**1635**	0.11	0.11	0.84	0.10	0.10	5.00	7.07	0.68	0.011	15	CL. IV - RCP	0.013	1.00	3.42	0.49	6.46	0.55
*																		
1635	**1633a**	0.11	3.53	0.84	0.09	2.97	7.28	6.45	19.14	0.712	24	CL. IV - RCP	0.013	1.00	8.10	0.21	22.62	6.09
*																		
1633c	**1633b**	0.14	0.14	0.84	0.12	0.12	5.00	7.07	0.82	0.016	15	CL. IV - RCP	0.013	1.00	3.61	0.46	6.46	0.66
1633b	**1633a**	0.14	0.27	0.84	0.12	0.23	5.46	6.94	1.60	0.061	15	CL. IV - RCP	0.013	1.00	4.37	0.38	6.46	1.30
*																		
1633a	**1630**	0.00	3.80	0.90	0.00	3.20	7.48	6.40	20.47	0.814	24	CL. IV - RCP	0.013	1.00	8.17	0.20	22.62	6.51
*																		
1632	**1630**	0.11	0.11	0.84	0.09	0.09	5.00	7.07	0.63	0.010	15	CL. IV - RCP	0.013	1.00	3.35	0.50	6.46	0.52
*																		
1630	**1610**	0.11	4.02	0.84	0.09	3.38	10.00	5.85	19.75	0.231	30	CL. IV - RCP	0.013	1.00	8.29	0.20	41.02	4.02
*																		
1628	**1626**	0.43	0.43	0.84	0.36	0.36	5.00	7.07	2.57	0.157	15	CL. IV - RCP	0.013	1.00	4.97	0.34	6.46	2.09

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 1000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | Computed B | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
-																		
1626	**1620**	0.19	0.62	0.84	0.16	0.52	5.34	6.97	3.65	0.317	15	CL. IV - RCP	0.013	1.00	5.44	0.31	6.46	2.97
*																		
1627	**1625**	0.37	0.37	0.84	0.31	0.31	5.00	7.07	2.22	0.117	15	CL. IV - RCP	0.013	1.00	4.78	0.35	6.46	1.81
1625	**1623**	0.00	0.37	0.90	0.00	0.31	5.35	6.97	2.19	0.114	15	CL. IV - RCP	0.013	1.00	4.76	0.35	6.46	1.78
1623	**1621**	0.12	0.49	0.84	0.10	0.41	5.70	6.87	2.83	0.191	15	CL. IV - RCP	0.013	1.00	5.10	0.33	6.46	2.31
1621	**1620**	0.00	0.49	0.90	0.00	0.41	6.03	6.77	2.80	0.186	15	CL. IV - RCP	0.013	1.00	5.08	0.33	6.46	2.28
*																		
1620	**1617a**	0.00	1.11	0.90	0.00	0.94	6.35	6.69	6.26	0.353	18	CL. IV - RCP	0.013	1.00	6.22	0.27	10.50	3.54
*																		
1617c	**1617b**	0.22	0.22	0.84	0.18	0.18	5.00	7.07	1.28	0.039	15	CL. IV - RCP	0.013	1.00	4.11	0.41	6.46	1.04
1617b	**1617a**	0.18	0.39	0.84	0.15	0.33	5.41	6.95	2.31	0.127	15	CL. IV - RCP	0.013	1.00	4.83	0.34	6.46	1.88
*																		
1617a	**1612**	0.00	1.51	0.90	0.00	1.27	6.62	6.62	8.39	0.634	18	CL. IV - RCP	0.013	1.00	6.62	0.25	10.50	4.75
*																		
1616	**1614**	0.17	0.17	0.84	0.14	0.14	5.00	7.07	1.01	0.024	15	CL. IV - RCP	0.013	1.00	3.84	0.43	6.46	0.83
1614	**1612**	0.23	0.40	0.84	0.19	0.33	5.43	6.94	2.31	0.128	15	CL. IV - RCP	0.013	1.00	4.84	0.34	6.46	1.88
*																		
1612	**1610**	0.00	1.91	0.90	0.00	1.60	6.87	6.55	10.49	0.436	21	CL. IV - RCP	0.013	1.00	7.06	0.24	15.85	4.36
*																		
1610	**1605a**	0.00	5.93	0.90	0.00	4.98	10.20	5.81	28.93	0.495	30	CL. IV - RCP	0.013	1.00	9.07	0.18	41.02	5.89
*																		
1605b	**1605a**	0.09	0.09	0.84	0.07	0.07	5.00	7.07	0.52	0.006	15	CL. IV - RCP	0.013	1.00	3.16	0.53	6.46	0.42
*																		
1605a	**1600**	0.00	6.01	0.90	0.00	5.05	10.00	5.85	29.54	0.516	30	CL. IV - RCP	0.013	1.00	9.11	0.18	41.02	6.02
*																		
1607	**1606**	0.24	0.24	0.84	0.20	0.20	5.00	7.07	1.43	0.049	15	CL. IV - RCP	0.013	1.00	4.24	0.39	6.46	1.17
*																		
1604	**1602**	0.23	0.23	0.84	0.20	0.20	5.00	7.07	1.39	0.046	15	CL. IV - RCP	0.013	1.00	4.20	0.40	6.46	1.13
1602	**1600**	0.16	0.39	0.84	0.13	0.33	5.40	6.95	2.30	0.126	15	CL. IV - RCP	0.013	1.00	4.83	0.35	6.46	1.87
*																		
1600	**1595**	0.00	6.41	0.90	0.00	5.38	5.00	7.07	38.04	0.856	30	CL. IV - RCP	0.013	1.00	9.51	0.18	41.02	7.75
1595	**1580**	0.09	6.50	0.84	0.08	5.46	5.00	7.07	38.60	0.881	30	CL. IV - RCP	0.013	1.00	9.53	0.17	41.02	7.86
*																		
1585	**1580**	0.09	0.09	0.84	0.08	0.08	5.00	7.07	0.56	0.007	15	CL. IV - RCP	0.013	1.00	3.23	0.52	6.46	0.46
*																		
1580	**1571a**	0.00	6.59	0.90	0.00	5.54	10.00	5.85	32.41	0.235	36	CL. IV - RCP	0.013	1.00	9.39	0.18	66.70	4.58
*																		
1571b	**1571a**	0.21	0.21	0.84	0.17	0.17	5.00	7.07	1.22	0.035	15	CL. IV - RCP	0.013	1.00	4.05	0.41	6.46	0.99
*																		
1571a	**1570**	0.00	6.80	0.90	0.00	5.71	11.10	5.64	32.23	0.232	36	CL. IV - RCP	0.013	1.00	9.37	0.18	66.70	4.56
1570	**1555**	0.08	6.88	0.84	0.07	5.78	11.27	5.61	32.44	0.235	36	CL. IV - RCP	0.013	1.00	9.39	0.18	66.70	4.59
*																		
1566	**1564**	0.15	0.15	0.84	0.13	0.13	5.00	7.07	0.89	0.019	15	CL. IV - RCP	0.013	1.00	3.70	0.45	6.46	0.73
1564	**1562**	0.24	0.39	0.84	0.20	0.33	5.45	6.94	2.28	0.124	15	CL. IV - RCP	0.013	1.00	4.82	0.35	6.46	1.86
1562	**1561a**	0.00	0.39	0.90	0.00	0.33	5.80	6.84	2.25	0.121	15	CL. IV - RCP	0.013	1.00	4.80	0.35	6.46	1.83

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 1000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | Computed B | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
*																		
1561b	**1561a**	0.15	0.15	0.84	0.12	0.12	5.00	7.07	0.86	0.018	15	CL. IV - RCP	0.013	1.00	3.67	0.45	6.46	0.70
*																		
1561a	**1560**	0.00	0.54	0.90	0.00	0.45	6.14	6.74	3.04	0.221	15	CL. IV - RCP	0.013	1.00	5.20	0.32	6.46	2.48
*																		
1560	**1558a**	0.00	0.54	0.90	0.00	0.45	6.46	6.66	3.00	0.215	15	CL. IV - RCP	0.013	1.00	5.18	0.32	6.46	2.45
*																		
1558b	**1558a**	0.19	0.19	0.84	0.16	0.16	5.00	7.07	1.14	0.031	15	CL. IV - RCP	0.013	1.00	3.97	0.42	6.46	0.93
*																		
1558a	**1557a**	0.00	0.73	0.90	0.00	0.61	6.79	6.58	4.02	0.386	15	CL. IV - RCP	0.013	1.00	5.56	0.30	6.46	3.28
*																		
1557b	**1557a**	0.17	0.17	0.84	0.15	0.15	5.00	7.07	1.03	0.025	15	CL. IV - RCP	0.013	1.00	3.86	0.43	6.46	0.84
*																		
1557a	**1556**	0.00	0.90	0.90	0.00	0.76	7.09	6.50	4.93	0.578	15	CL. IV - RCP	0.013	1.00	5.81	0.29	6.46	4.01
*																		
1556	**CMP-6**	0.00	0.90	0.90	0.00	0.76	7.37	6.43	4.87	0.566	15	CL. IV - RCP	0.013	1.00	5.80	0.29	6.46	3.97
*																		
1556	**1555**	0.00	0.90	0.90	0.00	0.76	7.37	6.43	4.87	0.566	15	CL. IV - RCP	0.013	1.00	5.80	0.29	6.46	3.97
*																		
1555	**1554**	0.07	7.86	0.84	0.06	6.60	5.00	7.07	46.67	0.487	36	CL. IV - RCP	0.013	1.00	10.23	0.16	66.70	6.60
*																		
1888	**1886**	0.15	0.15	0.84	0.12	0.12	5.00	7.07	0.86	0.018	15	CL. IV - RCP	0.013	1.00	3.67	0.45	6.46	0.70
1886	**1882**	0.16	0.31	0.84	0.14	0.26	5.45	6.94	1.81	0.078	15	CL. IV - RCP	0.013	1.00	4.52	0.37	6.46	1.47
*																		
1884	**1882**	0.37	0.37	0.84	0.31	0.31	5.00	7.07	2.20	0.115	15	CL. IV - RCP	0.013	1.00	4.77	0.35	6.46	1.79
*																		
1882	**1880**	0.00	0.68	0.90	0.00	0.57	5.82	6.83	3.91	0.364	15	CL. IV - RCP	0.013	1.00	5.53	0.30	6.46	3.18
*																		
1880	**CMP-13**	0.00	0.68	0.90	0.00	0.57	6.12	6.75	3.86	0.355	15	CL. IV - RCP	0.013	1.00	5.51	0.30	6.46	3.15
*																		
1880	**1810**	0.00	0.68	0.90	0.00	0.57	6.12	6.75	3.86	0.355	15	CL. IV - RCP	0.013	1.00	5.51	0.30	6.46	3.15
*																		
1845	**1842**	0.30	0.30	0.84	0.25	0.25	5.00	7.07	1.80	0.077	15	CL. IV - RCP	0.013	1.00	4.52	0.37	6.46	1.46
1842	**1840**	0.29	0.59	0.84	0.25	0.50	5.37	6.96	3.48	0.288	15	CL. IV - RCP	0.013	1.00	5.37	0.31	6.46	2.83
*																		
1840	**CMP-14**	0.00	0.59	0.90	0.00	0.50	5.68	6.87	3.43	0.281	15	CL. IV - RCP	0.013	1.00	5.35	0.31	6.46	2.80
*																		
1840	**1830**	0.00	0.59	0.90	0.00	0.50	5.68	6.87	3.43	0.281	15	CL. IV - RCP	0.013	1.00	5.35	0.31	6.46	2.80
*																		
1837	**1835**	0.37	0.37	0.84	0.31	0.31	5.00	7.07	2.18	0.113	15	CL. IV - RCP	0.013	1.00	4.76	0.35	6.46	1.78
1835	**1830**	0.00	0.37	0.90	0.00	0.31	5.35	6.97	2.15	0.110	15	CL. IV - RCP	0.013	1.00	4.74	0.35	6.46	1.75
*																		
1832	**1830**	0.28	0.28	0.84	0.23	0.23	5.00	7.07	1.64	0.064	15	CL. IV - RCP	0.013	1.00	4.40	0.38	6.46	1.33
*																		
1830	**1820**	0.00	1.24	0.90	0.00	1.04	10.00	5.85	6.08	0.333	18	CL. IV - RCP	0.013	1.00	6.18	0.27	10.50	3.44

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 1000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | Computed B | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
*																		
CMP-14	**1822**	0.00	0.59	0.90	0.00	0.50	5.99	6.78	3.39	0.273	15	CL. IV - RCP	0.013	1.00	5.34	0.31	6.46	2.76
1822	**1820**	0.00	0.59	0.90	0.00	0.50	6.30	6.70	3.35	0.267	15	CL. IV - RCP	0.013	1.00	5.32	0.31	6.46	2.73
*																		
1820	**1810**	0.00	1.83	0.90	0.00	1.54	10.27	5.80	8.92	0.315	21	CL. IV - RCP	0.013	1.00	6.80	0.25	15.85	3.71
*																		
1810	**1800**	0.00	2.51	0.90	0.00	2.11	10.51	5.75	12.14	0.286	24	CL. IV - RCP	0.013	1.00	7.34	0.23	22.62	3.86
*																		
CMP-13	**1815**	0.00	0.68	0.90	0.00	0.57	6.43	6.67	3.81	0.347	15	CL. IV - RCP	0.013	1.00	5.50	0.30	6.46	3.11
1815	**1800**	0.00	0.68	0.90	0.00	0.57	6.73	6.59	3.77	0.339	15	CL. IV - RCP	0.013	1.00	5.48	0.30	6.46	3.07
*																		
1800	**1554**	0.00	3.19	0.90	0.00	2.68	10.00	5.85	15.69	0.479	24	CL. IV - RCP	0.013	1.00	7.79	0.21	22.62	4.99
*																		
1554	**1552**	0.00	21.23	0.90	0.00	17.84	11.61	5.55	98.98	0.472	48	CL. IV - RCP	0.013	1.00	12.35	0.13	143.64	7.88
*																		
1552	**1505**	0.37	21.61	0.84	0.31	18.15	11.75	5.53	100.28	0.485	48	CL. IV - RCP	0.013	1.00	12.39	0.13	143.64	7.98
*																		
1549	**1547**	0.16	0.16	0.84	0.14	0.14	5.00	7.07	0.97	0.022	15	CL. IV - RCP	0.013	1.00	3.79	0.44	6.46	0.79
1547	**1545**	0.27	0.43	0.84	0.22	0.36	5.44	6.94	2.50	0.149	15	CL. IV - RCP	0.013	1.00	4.94	0.34	6.46	2.04
1545	**1544**	0.34	0.76	0.84	0.28	0.64	10.00	5.85	3.76	0.336	15	CL. IV - RCP	0.013	1.00	5.48	0.30	6.46	3.06
1544	**1542**	0.32	1.09	0.84	0.27	0.91	10.30	5.79	5.30	0.668	15	CL. IV - RCP	0.013	1.00	5.89	0.28	6.46	4.32
1542	**1540**	0.00	1.09	0.90	0.00	0.91	10.59	5.74	5.25	0.656	15	CL. IV - RCP	0.013	1.00	5.88	0.28	6.46	4.28
*																		
1540	**1539**	0.00	1.09	0.90	0.00	0.91	10.87	5.68	5.20	0.644	15	CL. IV - RCP	0.013	1.00	5.87	0.28	6.46	4.24
1539	**CMP-7**	0.00	1.09	0.90	0.00	0.91	11.16	5.63	5.15	0.632	15	CL. IV - RCP	0.013	1.00	5.86	0.28	6.46	4.20
*																		
1540	**1531**	0.00	1.09	0.90	0.00	0.91	10.87	5.68	5.20	0.644	15	CL. IV - RCP	0.013	1.00	5.87	0.28	6.46	4.24
*																		
CMP-6	1536	0.00	0.90	0.90	0.00	0.76	7.66	6.36	4.82	0.554	15	CL. IV - RCP	0.013	1.00	5.78	0.29	6.46	3.93
1536	1535	0.00	0.90	0.90	0.00	0.76	7.95	6.29	4.77	0.542	15	CL. IV - RCP	0.013	1.00	5.77	0.29	6.46	3.89
*																		
1537	1535	0.08	0.08	0.84	0.07	0.07	5.00	7.07	0.47	0.005	15	CL. IV - RCP	0.013	1.00	3.08	0.54	6.46	0.39
*																		
1535	1533	0.00	0.98	0.90	0.00	0.82	8.24	6.23	5.14	0.629	15	CL. IV - RCP	0.013	1.00	5.85	0.28	6.46	4.19
1533	1531	0.00	0.98	0.90	0.00	0.82	8.52	6.17	5.09	0.616	15	CL. IV - RCP	0.013	1.00	5.84	0.29	6.46	4.14
*																		
1531	1530	0.00	2.07	0.90	0.00	1.74	11.16	5.63	9.80	0.380	21	CL. IV - RCP	0.013	1.00	6.95	0.24	15.85	4.07
1530	1510	0.25	2.32	0.84	0.21	1.95	11.40	5.59	10.90	0.471	21	CL. IV - RCP	0.013	1.00	7.12	0.23	15.85	4.53
*																		
1527	1526	0.14	0.14	0.84	0.12	0.12	5.00	7.07	0.86	0.018	15	CL. IV - RCP	0.013	1.00	3.66	0.46	6.46	0.70
1526	1524	0.00	0.14	0.90	0.00	0.12	5.46	6.94	0.84	0.017	15	CL. IV - RCP	0.013	1.00	3.64	0.46	6.46	0.69
*																		
1525	1524	0.08	0.08	0.84	0.06	0.06	5.00	7.07	0.46	0.005	15	CL. IV - RCP	0.013	1.00	3.05	0.55	6.46	0.37
*																		
1524	1523	0.27	0.49	0.84	0.22	0.41	5.91	6.81	2.78	0.185	15	CL. IV - RCP	0.013	1.00	5.08	0.33	6.46	2.27

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 1000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | Computed B | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
-																		
1523	1521a	0.33	0.81	0.84	0.27	0.68	6.24	6.72	4.59	0.502	15	CL. IV - RCP	0.013	1.00	5.73	0.29	6.46	3.74
*																		
1521c	1521b	0.15	0.15	0.84	0.13	0.13	5.00	7.07	0.91	0.020	15	CL. IV - RCP	0.013	1.00	3.73	0.45	6.46	0.74
1521b	1521a	0.15	0.31	0.84	0.13	0.26	5.45	6.94	1.79	0.076	15	CL. IV - RCP	0.013	1.00	4.51	0.37	6.46	1.46
*																		
1521a	1520	0.00	1.12	0.90	0.00	0.94	6.53	6.64	6.25	0.352	18	CL. IV - RCP	0.013	1.00	6.22	0.27	10.50	3.54
1520	1511	0.07	1.19	0.84	0.06	1.00	6.80	6.57	6.57	0.389	18	CL. IV - RCP	0.013	1.00	6.29	0.27	10.50	3.72
*																		
1519c	1519b	0.15	0.15	0.84	0.12	0.12	5.00	7.07	0.87	0.018	15	CL. IV - RCP	0.013	1.00	3.67	0.45	6.46	0.71
1519b	1519a	0.16	0.30	0.84	0.13	0.26	5.45	6.94	1.77	0.075	15	CL. IV - RCP	0.013	1.00	4.50	0.37	6.46	1.45
*																		
1519a	1518a	0.00	0.30	0.90	0.00	0.26	5.82	6.83	1.75	0.073	15	CL. IV - RCP	0.013	1.00	4.48	0.37	6.46	1.42
*																		
1518c	1518b	0.15	0.15	0.84	0.13	0.13	5.00	7.07	0.90	0.019	15	CL. IV - RCP	0.013	1.00	3.71	0.45	6.46	0.73
1518b	1518a	0.16	0.31	0.84	0.13	0.26	5.45	6.94	1.81	0.078	15	CL. IV - RCP	0.013	1.00	4.53	0.37	6.46	1.48
*																		
1518a	1517	0.00	0.62	0.90	0.00	0.52	6.20	6.73	3.48	0.289	15	CL. IV - RCP	0.013	1.00	5.37	0.31	6.46	2.84
1517	1516a	0.00	0.62	0.90	0.00	0.52	6.51	6.65	3.44	0.282	15	CL. IV - RCP	0.013	1.00	5.36	0.31	6.46	2.80
*																		
1516c	1516b	0.17	0.17	0.84	0.14	0.14	5.00	7.07	1.01	0.024	15	CL. IV - RCP	0.013	1.00	3.84	0.43	6.46	0.82
1516b	1516a	0.15	0.32	0.84	0.13	0.27	5.43	6.94	1.87	0.083	15	CL. IV - RCP	0.013	1.00	4.56	0.37	6.46	1.52
*																		
1516a	1515	0.00	0.94	0.90	0.00	0.79	6.82	6.57	5.16	0.635	15	CL. IV - RCP	0.013	1.00	5.86	0.28	6.46	4.21
1515	1514	0.00	0.94	0.90	0.00	0.79	10.00	5.85	4.60	0.504	15	CL. IV - RCP	0.013	1.00	5.73	0.29	6.46	3.75
1514	1513	0.10	1.03	0.84	0.08	0.87	10.29	5.79	5.02	0.601	15	CL. IV - RCP	0.013	1.00	5.83	0.29	6.46	4.09
*																		
1513	1512	0.00	1.03	0.90	0.00	0.87	10.58	5.74	4.98	0.590	15	CL. IV - RCP	0.013	1.00	5.82	0.29	6.46	4.05
1512	CMP-12	0.00	1.03	0.90	0.00	0.87	10.86	5.69	4.93	0.579	15	CL. IV - RCP	0.013	1.00	5.81	0.29	6.46	4.02
*																		
1513	1511	0.00	1.03	0.90	0.00	0.87	10.58	5.74	4.98	0.590	15	CL. IV - RCP	0.013	1.00	5.82	0.29	6.46	4.05
*																		
1511	1510	0.00	2.22	0.90	0.00	1.87	10.00	5.85	10.92	0.472	21	CL. IV - RCP	0.013	1.00	7.12	0.23	15.85	4.54
*																		
1510	1505	0.10	4.64	0.84	0.08	3.90	11.63	5.55	21.62	0.909	24	CL. IV - RCP	0.013	1.00	8.22	0.20	22.62	6.88
*																		
2550	2505	0.17	0.17	0.84	0.14	0.14	5.00	7.07	0.99	0.023	15	CL. IV - RCP	0.013	1.00	3.82	0.44	6.46	0.81
2505	1505	0.00	0.17	0.90	0.00	0.14	5.44	6.94	0.97	0.023	15	CL. IV - RCP	0.013	1.00	3.80	0.44	6.46	0.79
*																		
1505	1503	0.00	26.41	0.90	0.00	22.19	5.00	7.07	156.87	0.633	54	CL. IV - RCP	0.013	1.00	13.76	0.12	196.65	9.86
1503	1500	0.22	26.64	0.84	0.19	22.37	5.00	7.07	158.19	0.644	54	CL. IV - RCP	0.013	1.00	13.78	0.12	196.65	9.95
1500	1005	0.11	26.75	0.84	0.09	22.47	5.00	7.07	158.86	0.649	54	CL. IV - RCP	0.013	1.00	13.79	0.12	196.65	9.99
*																		
*																		
1296	1294	0.34	0.34	0.84	0.29	0.29	5.00	7.07	2.04	0.099	15	CL. IV - RCP	0.013	1.00	4.67	0.36	6.46	1.66
1294	1292	0.11	0.45	0.84	0.09	0.38	5.36	6.97	2.63	0.165	15	CL. IV - RCP	0.013	1.00	5.00	0.33	6.46	2.14

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 1000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | Computed B | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
-																		
1292	1290	0.10	0.54	0.84	0.08	0.46	5.69	6.87	3.14	0.236	15	CL. IV - RCP	0.013	1.00	5.24	0.32	6.46	2.56
1290	1280	0.00	0.54	0.90	0.00	0.46	6.01	6.78	3.10	0.229	15	CL. IV - RCP	0.013	1.00	5.22	0.32	6.46	2.53
*																		
1289	1288	0.43	0.43	0.84	0.36	0.36	5.00	7.07	2.56	0.156	15	CL. IV - RCP	0.013	1.00	4.97	0.34	6.46	2.08
1288	1286	0.08	0.51	0.84	0.07	0.43	5.34	6.97	3.01	0.216	15	CL. IV - RCP	0.013	1.00	5.18	0.32	6.46	2.45
1286	1284	0.09	0.60	0.84	0.07	0.50	5.66	6.88	3.47	0.287	15	CL. IV - RCP	0.013	1.00	5.37	0.31	6.46	2.83
1284	1282	0.38	0.98	0.84	0.32	0.83	5.97	6.79	5.61	0.750	15	CL. IV - RCP	0.013	1.00	5.94	0.28	6.46	4.57
*																		
1282	CMP-8	0.00	0.98	0.90	0.00	0.83	6.25	6.72	5.55	0.734	15	CL. IV - RCP	0.013	1.00	5.93	0.28	6.46	4.52
*																		
1282	1280	0.00	0.98	0.90	0.00	0.83	6.25	6.72	5.55	0.734	15	CL. IV - RCP	0.013	1.00	5.93	0.28	6.46	4.52
*																		
1280	1272	0.00	1.53	0.90	0.00	1.28	6.53	6.64	8.53	0.141	24	CL. IV - RCP	0.013	1.00	6.71	0.25	22.62	2.71
*																		
1278	1276	0.11	0.11	0.84	0.09	0.09	5.00	7.07	0.64	0.010	15	CL. IV - RCP	0.013	1.00	3.36	0.50	6.46	0.52
1274	1272	0.47	0.47	0.84	0.40	0.40	5.00	7.07	2.79	0.186	15	CL. IV - RCP	0.013	1.00	5.08	0.33	6.46	2.28
*																		
1272	1270	0.00	2.00	0.90	0.00	1.68	6.78	6.58	11.05	0.483	21	CL. IV - RCP	0.013	1.00	7.14	0.23	15.85	4.59
1270	1260	0.00	2.00	0.90	0.00	1.68	5.00	7.07	11.87	0.558	21	CL. IV - RCP	0.013	1.00	7.24	0.23	15.85	4.94
*																		
CMP-8	1262	0.00	0.98	0.90	0.00	0.83	6.53	6.64	5.49	0.718	15	CL. IV - RCP	0.013	1.00	5.92	0.28	6.46	4.47
1262	1260	0.00	0.98	0.90	0.00	0.83	6.81	6.57	5.43	0.702	15	CL. IV - RCP	0.013	1.00	5.91	0.28	6.46	4.42
*																		
1260	1256	0.00	2.98	0.90	0.00	2.51	7.24	6.46	16.19	0.510	24	CL. IV - RCP	0.013	1.00	7.84	0.21	22.62	5.15
1256	1254	0.18	3.16	0.84	0.15	2.66	7.45	6.41	17.02	0.563	24	CL. IV - RCP	0.013	1.00	7.93	0.21	22.62	5.42
1254	1252	0.05	3.21	0.84	0.04	2.70	10.00	5.85	15.78	0.484	24	CL. IV - RCP	0.013	1.00	7.80	0.21	22.62	5.02
1252	1250	0.06	3.27	0.84	0.05	2.74	10.21	5.81	15.95	0.494	24	CL. IV - RCP	0.013	1.00	7.82	0.21	22.62	5.08
1250	1235	0.24	3.50	0.84	0.20	2.94	10.43	5.77	16.98	0.560	24	CL. IV - RCP	0.013	1.00	7.92	0.21	22.62	5.40
*																		
1246	1244	0.15	0.15	0.84	0.13	0.13	5.00	7.07	0.90	0.019	15	CL. IV - RCP	0.013	1.00	3.71	0.45	6.46	0.73
1244	1242	0.07	0.22	0.84	0.06	0.19	5.45	6.94	1.30	0.040	15	CL. IV - RCP	0.013	1.00	4.12	0.40	6.46	1.06
1242	1240	0.05	0.28	0.84	0.05	0.23	5.85	6.82	1.58	0.060	15	CL. IV - RCP	0.013	1.00	4.36	0.38	6.46	1.29
1240	1235	0.04	0.32	0.84	0.04	0.27	6.24	6.72	1.81	0.078	15	CL. IV - RCP	0.013	1.00	4.53	0.37	6.46	1.48
*																		
1235	1230	0.18	4.01	0.84	0.15	3.37	10.64	5.73	19.29	0.723	24	CL. IV - RCP	0.013	1.00	8.11	0.21	22.62	6.14
1230	1075	0.00	4.01	0.90	0.00	3.37	10.84	5.69	19.15	0.713	24	CL. IV - RCP	0.013	1.00	8.10	0.21	22.62	6.10
*																		
1152	1150	0.18	0.18	0.84	0.15	0.15	5.00	7.07	1.06	0.027	15	CL. IV - RCP	0.013	1.00	3.89	0.43	6.46	0.87
1150	1130	0.16	0.34	0.84	0.14	0.29	5.43	6.95	2.01	0.096	15	CL. IV - RCP	0.013	1.00	4.65	0.36	6.46	1.64
*																		
1140	1130	0.19	0.19	0.84	0.16	0.16	5.00	7.07	1.15	0.032	15	CL. IV - RCP	0.013	1.00	3.98	0.42	6.46	0.94
*																		
1135	1132	0.15	0.15	0.84	0.12	0.12	5.00	7.07	0.88	0.018	15	CL. IV - RCP	0.013	1.00	3.69	0.45	6.46	0.72
1132	1130	0.19	0.34	0.84	0.16	0.28	5.45	6.94	1.96	0.092	15	CL. IV - RCP	0.013	1.00	4.63	0.36	6.46	1.60

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 1000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year omputed E | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
-																		
*																		
1130	1125	0.00	0.87	0.90	0.00	0.73	5.81	6.83	5.02	0.601	15	CL. IV - RCP	0.013	1.00	5.83	0.29	6.46	4.09
1125	1120	0.09	0.97	0.84	0.08	0.81	6.10	6.75	5.48	0.716	15	CL. IV - RCP	0.013	1.00	5.92	0.28	6.46	4.47
1120	1115	0.00	0.97	0.90	0.00	0.81	5.00	7.07	5.74	0.784	15	CL. IV - RCP	0.013	1.00	5.96	0.28	6.46	4.67
*																		
1115	1109	0.00	0.97	0.90	0.00	0.81	6.66	6.61	5.36	0.685	15	CL. IV - RCP	0.013	1.00	5.90	0.28	6.46	4.37
1109	CMP-9	0.00	0.97	0.90	0.00	0.81	6.94	6.54	5.30	0.670	15	CL. IV - RCP	0.013	1.00	5.89	0.28	6.46	4.32
*																		
1115	1110	0.00	0.97	0.90	0.00	0.81	5.00	7.07	5.74	0.784	15	CL. IV - RCP	0.013	1.00	5.96	0.28	6.46	4.67
*																		
1112	1110	0.45	0.45	0.84	0.38	0.38	5.00	7.07	2.68	0.171	15	CL. IV - RCP	0.013	1.00	5.03	0.33	6.46	2.19
*																		
1110	1100	0.00	1.42	0.90	0.00	1.19	6.94	6.54	7.78	0.546	18	CL. IV - RCP	0.013	1.00	6.52	0.26	10.50	4.40
*																		
CMP-9	1105	0.00	0.97	0.90	0.00	0.81	7.22	6.47	5.25	0.656	15	CL. IV - RCP	0.013	1.00	5.87	0.28	6.46	4.28
1105	1100	0.00	0.97	0.90	0.00	0.81	7.51	6.40	5.19	0.642	15	CL. IV - RCP	0.013	1.00	5.86	0.28	6.46	4.23
*																		
1104	1100	0.43	0.43	0.84	0.36	0.36	5.00	7.07	2.57	0.157	15	CL. IV - RCP	0.013	1.00	4.97	0.34	6.46	2.09
*																		
1100	1075	0.00	2.82	0.90	0.00	2.36	7.79	6.33	14.97	0.436	24	CL. IV - RCP	0.013	1.00	7.71	0.22	22.62	4.77
*																		
1075	1070	0.00	6.82	0.90	0.00	5.73	11.05	5.65	32.39	0.620	30	CL. IV - RCP	0.013	1.00	9.28	0.18	41.02	6.60
1070	1060	0.00	6.82	0.90	0.00	5.73	10.00	5.85	33.53	0.251	36	CL. IV - RCP	0.013	1.00	9.47	0.18	66.70	4.74
*																		
1066	1064	0.41	0.41	0.84	0.34	0.34	5.00	7.07	2.44	0.142	15	CL. IV - RCP	0.013	1.00	4.91	0.34	6.46	1.99
1064	1062	0.00	0.41	0.90	0.00	0.34	5.34	6.97	2.40	0.138	15	CL. IV - RCP	0.013	1.00	4.89	0.34	6.46	1.96
*																		
1062	CMP-10	0.00	0.41	0.90	0.00	0.34	5.68	6.87	2.37	0.134	15	CL. IV - RCP	0.013	1.00	4.87	0.34	6.46	1.93
*																		
1062	1061	0.00	0.41	0.90	0.00	0.34	5.68	6.87	2.37	0.134	15	CL. IV - RCP	0.013	1.00	4.87	0.34	6.46	1.93
1061	1060	0.00	0.41	0.90	0.00	0.34	6.02	6.77	2.34	0.130	15	CL. IV - RCP	0.013	1.00	4.85	0.34	6.46	1.90
*																		
1060	1050	0.00	7.23	0.90	0.00	6.08	5.00	7.07	42.96	0.413	36	CL. IV - RCP	0.013	1.00	10.05	0.17	66.70	6.08
*																		
CMP-10	1056	0.00	0.41	0.90	0.00	0.34	6.02	6.77	2.34	0.130	15	CL. IV - RCP	0.013	1.00	4.85	0.34	6.46	1.90
1056	1052	0.00	0.41	0.90	0.00	0.34	6.37	6.68	2.31	0.127	15	CL. IV - RCP	0.013	1.00	4.83	0.34	6.46	1.88
1052	1050	0.31	0.72	0.84	0.26	0.61	6.71	6.59	3.99	0.380	15	CL. IV - RCP	0.013	1.00	5.55	0.30	6.46	3.25
*																		
1050	1035	0.00	7.95	0.90	0.00	6.68	5.00	7.07	47.24	0.499	36	CL. IV - RCP	0.013	1.00	10.26	0.16	66.70	6.68
*																		
1046	1044	0.26	0.26	0.84	0.22	0.22	5.00	7.07	1.53	0.056	15	CL. IV - RCP	0.013	1.00	4.32	0.39	6.46	1.25
1044	1042	0.24	0.50	0.84	0.20	0.42	5.39	6.96	2.91	0.202	15	CL. IV - RCP	0.013	1.00	5.14	0.32	6.46	2.37
1042	1040	0.00	0.50	0.90	0.00	0.42	5.71	6.86	2.87	0.196	15	CL. IV - RCP	0.013	1.00	5.12	0.33	6.46	2.34
1040	1038	0.00	0.50	0.90	0.00	0.42	6.04	6.77	2.83	0.191	15	CL. IV - RCP	0.013	1.00	5.10	0.33	6.46	2.31

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 1000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | omputed E | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
*																		
1038	CMP-11	0.00	0.50	0.90	0.00	0.42	6.36	6.69	2.79	0.186	15	CL. IV - RCP	0.013	1.00	5.08	0.33	6.46	2.28
*																		
1038	1037	0.00	0.50	0.90	0.00	0.42	6.36	6.69	2.79	0.186	15	CL. IV - RCP	0.013	1.00	5.08	0.33	6.46	2.28
*																		
1043	1039	0.37	0.37	0.84	0.31	0.31	5.00	7.07	2.18	0.113	15	CL. IV - RCP	0.013	1.00	4.76	0.35	6.46	1.78
*																		
1037	1035	0.11	0.61	0.84	0.09	0.51	6.69	6.60	3.38	0.272	15	CL. IV - RCP	0.013	1.00	5.33	0.31	6.46	2.75
*																		
1035	1032	0.00	8.56	0.90	0.00	7.19	5.00	7.07	50.85	0.578	36	CL. IV - RCP	0.013	1.00	10.41	0.16	66.70	7.19
*																		
CMP-11	1036	0.00	0.50	0.90	0.00	0.42	6.69	6.60	2.76	0.181	15	CL. IV - RCP	0.013	1.00	5.07	0.33	6.46	2.25
1036	1035b	0.00	0.50	0.90	0.00	0.42	7.02	6.52	2.72	0.177	15	CL. IV - RCP	0.013	1.00	5.05	0.33	6.46	2.22
1035b	1034	0.00	0.50	0.90	0.00	0.42	7.35	6.44	2.69	0.172	15	CL. IV - RCP	0.013	1.00	5.03	0.33	6.46	2.19
1034	1032	0.34	0.84	0.84	0.29	0.70	7.68	6.36	4.47	0.477	15	CL. IV - RCP	0.013	1.00	5.69	0.29	6.46	3.64
*																		
1032	1030	0.00	9.40	0.90	0.00	7.90	5.00	7.07	55.83	0.697	36	CL. IV - RCP	0.013	1.00	10.59	0.16	66.70	7.90
1030	1015	0.00	9.40	0.90	0.00	7.90	5.00	7.07	55.83	0.697	36	CL. IV - RCP	0.013	1.00	10.59	0.16	66.70	7.90
*																		
1017	1015	0.44	0.44	0.84	0.37	0.37	5.00	7.07	2.61	0.163	15	CL. IV - RCP	0.013	1.00	4.99	0.33	6.46	2.13
*																		
CMP-12	1023	0.00	1.03	0.90	0.00	0.87	11.15	5.63	4.88	0.568	15	CL. IV - RCP	0.013	1.00	5.80	0.29	6.46	3.98
1023	1020	0.00	1.03	0.90	0.00	0.87	11.44	5.58	4.84	0.558	15	CL. IV - RCP	0.013	1.00	5.79	0.29	6.46	3.94
*																		
CMP-7	1021	0.00	1.09	0.90	0.00	0.91	11.44	5.58	5.10	0.621	15	CL. IV - RCP	0.013	1.00	5.85	0.28	6.46	4.16
1021	1020	0.00	1.09	0.90	0.00	0.91	11.72	5.53	5.06	0.609	15	CL. IV - RCP	0.013	1.00	5.84	0.29	6.46	4.12
*																		
1020	1015	0.00	2.12	0.90	0.00	1.78	12.01	5.48	9.76	0.858	18	CL. IV - RCP	0.013	1.00	6.77	0.25	10.50	5.52
*																		
1015	1013	0.00	11.96	0.90	0.00	10.05	5.00	7.07	71.03	0.496	42	CL. IV - RCP	0.013	1.00	11.36	0.15	100.61	7.38
*																		
1018	1016	0.10	0.10	0.84	0.08	0.08	5.00	7.07	0.57	0.008	15	CL. IV - RCP	0.013	1.00	3.25	0.51	6.46	0.46
1016	1013	0.21	0.30	0.84	0.17	0.25	5.51	6.92	1.75	0.073	15	CL. IV - RCP	0.013	1.00	4.48	0.37	6.46	1.43
*																		
1013	1010	0.00	12.26	0.90	0.00	10.30	5.00	7.07	72.82	0.521	42	CL. IV - RCP	0.013	1.00	11.42	0.15	100.61	7.57
1010	1005	0.14	12.40	0.84	0.11	10.41	5.00	7.07	73.63	0.533	42	CL. IV - RCP	0.013	1.00	11.44	0.15	100.61	7.65
*																		
*																		
1005	1002	0.08	39.23	0.84	0.07	32.95	5.00	7.07	232.95	0.796	60	CL. IV - RCP	0.013	1.00	15.03	0.11	260.44	11.86
1002	1000	0.00	39.23	0.90	0.00	32.95	5.00	7.07	232.95	0.796	60	CL. IV - RCP	0.013	1.00	15.03	0.11	260.44	11.86

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 2000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | Computed By: 0 | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Invert Elevations Upper End	Invert Elevations Lower End	Actual Slope %	Pipe Length Ft	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
2116	2114	0.31	0.31	0.84	0.26	0.26	5.00	7.07	1.85	0.081	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	4.55	0.37	6.46	1.51
2114	2112	0.17	0.48	0.84	0.14	0.41	5.37	6.96	2.83	0.191	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.10	0.33	6.46	2.31
2112	2110	0.15	0.64	0.84	0.13	0.53	5.69	6.87	3.67	0.321	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.44	0.31	6.46	2.99
2110	2105	0.24	0.88	0.84	0.21	0.74	6.00	6.78	5.01	0.599	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.83	0.29	6.46	4.09
*																					
2105	2104	0.00	0.88	0.90	0.00	0.74	6.29	6.71	4.96	0.586	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.82	0.29	6.46	4.04
2104	CMP-15	0.00	0.88	0.90	0.00	0.74	6.57	6.63	4.90	0.573	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.80	0.29	6.46	4.00
*																					
2105	2100	0.00	0.88	0.90	0.00	0.74	6.29	6.71	4.96	0.586	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.82	0.29	6.46	4.04
*																					
CMP-15	2102	0.00	0.88	0.90	0.00	0.74	6.86	6.56	4.85	0.560	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.79	0.29	6.46	3.95
2102	2100	0.00	0.88	0.90	0.00	0.74	7.15	6.48	4.80	0.548	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.78	0.29	6.46	3.91
*																					
2100	2090	0.00	1.76	0.90	0.00	1.48	7.44	6.42	9.49	0.811	18	CL. IV - RCP	0.013	100.00	99.00	1.00	100	8.55	0.20	10.50	5.37
*																					
2096	2094	0.46	0.46	0.84	0.38	0.38	5.00	7.07	2.71	0.176	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.04	0.33	6.46	2.21
2094	2092	0.00	0.46	0.90	0.00	0.38	5.33	6.97	2.68	0.171	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.03	0.33	6.46	2.18
2092	2090	0.31	0.77	0.84	0.26	0.65	5.66	6.88	4.44	0.470	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.69	0.29	6.46	3.62
*																					
2090	2075	0.00	2.53	0.90	0.00	2.12	7.63	6.37	13.53	0.725	21	CL. IV - RCP	0.013	100.00	99.00	1.00	100	8.40	0.20	15.85	5.63
*																					
2085	2082	0.35	0.35	0.84	0.30	0.30	5.00	7.07	2.10	0.105	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	4.71	0.35	6.46	1.71
2082	2080	0.24	0.59	0.84	0.20	0.50	5.35	6.97	3.48	0.289	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.37	0.31	6.46	2.84
*																					
2080	2079	0.00	0.59	0.90	0.00	0.50	5.66	6.88	3.44	0.282	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.36	0.31	6.46	2.80
2079	CMP-16	0.00	0.59	0.90	0.00	0.50	5.98	6.79	3.39	0.274	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.34	0.31	6.46	2.76
*																					
2080	2075	0.00	0.59	0.90	0.00	0.50	5.66	6.88	3.44	0.282	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.36	0.31	6.46	2.80
*																					
2075	2070	0.00	3.12	0.90	0.00	2.62	7.83	6.32	16.59	0.535	24	CL. IV - RCP	0.013	100.00	99.00	1.00	100	7.90	0.21	22.62	5.28
*																					
2078	2076	0.38	0.38	0.84	0.32	0.32	5.00	7.07	2.24	0.120	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	4.80	0.35	6.46	1.83
2076	2072	0.38	0.75	0.84	0.32	0.63	5.35	6.97	4.42	0.465	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.68	0.29	6.46	3.60
*																					
CMP-16	2074	0.00	0.59	0.90	0.00	0.50	6.29	6.71	3.35	0.268	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.32	0.31	6.46	2.73
2074	2072	0.00	0.59	0.90	0.00	0.50	6.60	6.62	3.31	0.261	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.31	0.31	6.46	2.70
*																					
2072	2070	0.00	1.35	0.90	0.00	1.13	6.91	6.54	7.41	0.496	18	CL. IV - RCP	0.013	100.00	99.00	1.00	100	6.46	0.26	10.50	4.20
*																					
2070	2050	0.00	4.47	0.90	0.00	3.76	5.00	7.07	26.57	0.417	30	CL. IV - RCP	0.013	100.00	99.00	1.00	100	8.91	0.19	41.02	5.41
*																					
2069	2065	0.14	0.14	0.84	0.12	0.12	5.00	7.07	0.83	0.017	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	3.63	0.46	6.46	0.68
*																					
2067	2065	0.22	0.22	0.84	0.18	0.18	5.00	7.07	1.28	0.039	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	4.11	0.41	6.46	1.04
*																					
2065	2060	0.31	0.67	0.84	0.26	0.56	5.46	6.94	3.90	0.362	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.52	0.30	6.46	3.17
*																					
2064	2060	0.13	0.13	0.84	0.11	0.11	5.00	7.07	0.75	0.013	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	3.52	0.47	6.46	0.61
*																					
2060	2055	0.12	0.91	0.84	0.10	0.77	5.76	6.85	5.25	0.657	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	6.84	0.24	6.46	4.28
*																					
2055	CMP-17	0.00	0.91	0.90	0.00	0.77	6.00	6.78	5.20	0.643	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.87	0.28	6.46	4.23

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 2000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | Computed By: 0 | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Invert Elevations Upper End	Invert Elevations Lower End	Actual Slope %	Pipe Length Ft	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
*																					
2055	2050	0.00	0.91	0.90	0.00	0.77	6.00	6.78	5.20	0.643	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.87	0.28	6.46	4.23
*																					
2050	2040	0.00	5.39	0.90	0.00	4.52	8.23	6.23	28.19	0.470	30	CL. IV - RCP	0.013	100.00	99.00	1.00	100	9.04	0.18	41.02	5.74
*																					
CMP-17	2045	0.00	0.91	0.90	0.00	0.77	6.29	6.71	5.14	0.629	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.86	0.28	6.46	4.19
2045	2040	0.00	0.91	0.90	0.00	0.77	6.57	6.63	5.08	0.616	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.85	0.28	6.46	4.14
*																					
2040	2038	0.00	6.30	0.90	0.00	5.29	8.41	6.19	32.75	0.634	30	CL. IV - RCP	0.013	100.00	99.00	1.00	100	9.32	0.18	41.02	6.67
2038	2030	0.00	6.30	0.90	0.00	5.29	8.59	6.15	32.54	0.626	30	CL. IV - RCP	0.013	100.00	99.00	1.00	100	9.31	0.18	41.02	6.63
*																					
2039	2037	0.38	0.38	0.84	0.32	0.32	5.00	7.07	2.23	0.119	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	4.79	0.35	6.46	1.82
2037	2035	0.33	0.71	0.84	0.28	0.60	5.35	6.97	4.15	0.411	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.60	0.30	6.46	3.38
*																					
2035	CMP-18	0.00	0.71	0.90	0.00	0.60	5.65	6.88	4.10	0.401	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.59	0.30	6.46	3.34
*																					
2035	2030	0.00	0.71	0.90	0.00	0.60	5.65	6.88	4.10	0.401	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.59	0.30	6.46	3.34
*																					
2030	2005	0.00	7.01	0.90	0.00	5.89	8.77	6.11	35.97	0.765	30	CL. IV - RCP	0.013	100.00	99.00	1.00	100	9.47	0.18	41.02	7.33
*																					
2505	CMP-19	0.00	0.00	0.90	0.00	0.00	10.00	5.85	0.00	0.000	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	0.00	#DIV/0!	6.46	0.00
CMP-19	2025	0.00	0.00	0.90	0.00	0.00	5.00	7.07	0.00	0.000	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	0.00	#DIV/0!	6.46	0.00
2025	2020	0.00	0.00	0.90	0.00	0.00	5.00	7.07	0.00	0.000	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	0.00	#DIV/0!	6.46	0.00
2020	2019	0.00	0.00	0.90	0.00	0.00	5.00	7.07	0.00	0.000	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	0.00	#DIV/0!	6.46	0.00
2019	2018	0.21	0.21	0.84	0.17	0.17	5.00	7.07	1.23	0.036	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	4.06	0.41	6.46	1.00
2018	2016	0.00	0.21	0.90	0.00	0.17	5.00	7.07	1.23	0.036	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	4.06	0.41	6.46	1.00
*																					
2017	2016	0.09	0.09	0.84	0.07	0.07	5.00	7.07	0.52	0.006	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	3.16	0.53	6.46	0.42
*																					
2016	2014	0.00	0.29	0.90	0.00	0.25	5.00	7.07	1.75	0.073	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	4.48	0.37	6.46	1.43
*																					
2015	2014	0.11	0.11	0.84	0.09	0.09	5.00	7.07	0.63	0.009	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	3.35	0.50	6.46	0.51
*																					
2014	2010	0.00	0.40	0.90	0.00	0.34	5.00	7.07	2.38	0.135	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	4.87	0.34	6.46	1.94
*																					
CMP-18	2013	0.00	0.71	0.90	0.00	0.60	5.94	6.80	4.05	0.391	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.57	0.30	6.46	3.30
2013	2011	0.00	0.71	0.90	0.00	0.60	6.24	6.72	4.00	0.382	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.56	0.30	6.46	3.26
2011	2010	0.10	0.81	0.84	0.09	0.68	6.54	6.64	4.53	0.488	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	5.71	0.29	6.46	3.69
*																					
2010	2005	0.00	1.21	0.90	0.00	1.02	5.00	7.07	7.20	0.467	18	CL. IV - RCP	0.013	100.00	99.00	1.00	100	6.42	0.26	10.50	4.07
*																					
2007	2005	0.12	0.12	0.84	0.10	0.10	5.00	7.07	0.72	0.012	15	CL. IV - RCP	0.013	100.00	99.00	1.00	100	3.47	0.48	6.46	0.58
*																					
2005	2002	0.00	8.34	0.90	0.00	7.01	5.00	7.07	49.53	0.548	36	CL. IV - RCP	0.013	100.00	99.00	1.00	100	10.36	0.16	66.70	7.01
2002	2000	0.27	8.61	0.84	0.22	7.23	5.00	7.07	51.11	0.584	36	CL. IV - RCP	0.013	100.00	99.00	1.00	100	10.42	0.16	66.70	7.23

STORM DRAIN DESIGN COMPUTATIONS - OUTFALL 3000

Project: PSTA | Jurisdiction: Montgomery | Storm Event: 10-Year | Computed B | Date: 1/13/2020

From Structure	To Structure	Drainage Area Inc. Ac	Drainage Area Cum. Ac	C Factor	C x A Inc.	C x A Cum.	Tc Min.	Rain Fall In / Hr	Runoff Q cfs	Min. Slope %	Pipe Size In.	Pipe Material	Mannings n	Actual Slope %	Actual Velocity ft / s	Flow Time Min.	Full Flow Q cfs	Friction Velocity fps
-																		
1226	1224	0.10	0.10	0.84	0.08	0.08	5.00	7.07	0.60	0.008	15	CL. IV - RCP	0.013	1.00	3.29	0.51	6.46	0.49
1224	1222	0.06	0.16	0.84	0.05	0.13	5.51	6.92	0.91	0.020	15	CL. IV - RCP	0.013	1.00	3.73	0.45	6.46	0.74
1222	1220	0.06	0.21	0.84	0.05	0.18	5.95	6.79	1.22	0.035	15	CL. IV - RCP	0.013	1.00	4.05	0.41	6.46	0.99
1220	1205	0.28	0.49	0.84	0.23	0.41	6.37	6.69	2.75	0.180	15	CL. IV - RCP	0.013	1.00	5.06	0.33	6.46	2.24
*																		
1218	1216	0.14	0.14	0.84	0.12	0.12	5.00	7.07	0.85	0.017	15	CL. IV - RCP	0.013	1.00	3.65	0.46	6.46	0.69
1216	1215	0.03	0.17	0.84	0.03	0.15	5.46	6.94	1.02	0.025	15	CL. IV - RCP	0.013	1.00	3.84	0.43	6.46	0.83
1215	1214	0.03	0.21	0.84	0.03	0.17	5.89	6.81	1.18	0.033	15	CL. IV - RCP	0.013	1.00	4.01	0.42	6.46	0.96
1214	1212	0.08	0.29	0.84	0.07	0.24	6.31	6.70	1.63	0.063	15	CL. IV - RCP	0.013	1.00	4.39	0.38	6.46	1.33
1210	1205	0.42	0.42	0.84	0.35	0.35	5.00	7.07	2.50	0.149	15	CL. IV - RCP	0.013	1.00	4.94	0.34	6.46	2.03
*																		
1205	1200	0.00	0.91	0.90	0.00	0.76	6.69	6.60	5.05	0.607	15	CL. IV - RCP	0.013	1.00	5.84	0.29	6.46	4.11
1200	EX 3000	0.00	0.91	0.90	0.00	0.76	6.98	6.53	4.99	0.594	15	CL. IV - RCP	0.013	1.00	5.82	0.29	6.46	4.07

From: Tallerico, Laura M.
To: MCP-Chair
Cc: Sears, Barbara A.; Kate Kubit; Graham, Tamika
Subject: PSTA Site: Preliminary Plan No. 120200100 - Item 7 on Planning Board Agenda of July 22, 2021 - Request of Applicant to Include Materials into the Record (Email 3/5)
Date: Tuesday, July 20, 2021 4:47:31 PM
Attachments: image001.png
image002.png
image005.png
image006.png
image007.png
image004.png
32-MPDUCOUNTS-120200100.pdf
32-STAFFREPLY-120200100.pdf
Comment Response Ltr_Rigby.pdf
17-SIGHT-120200100.pdf
SIGNAL_PSTA_Exhibits_20210712.pdf

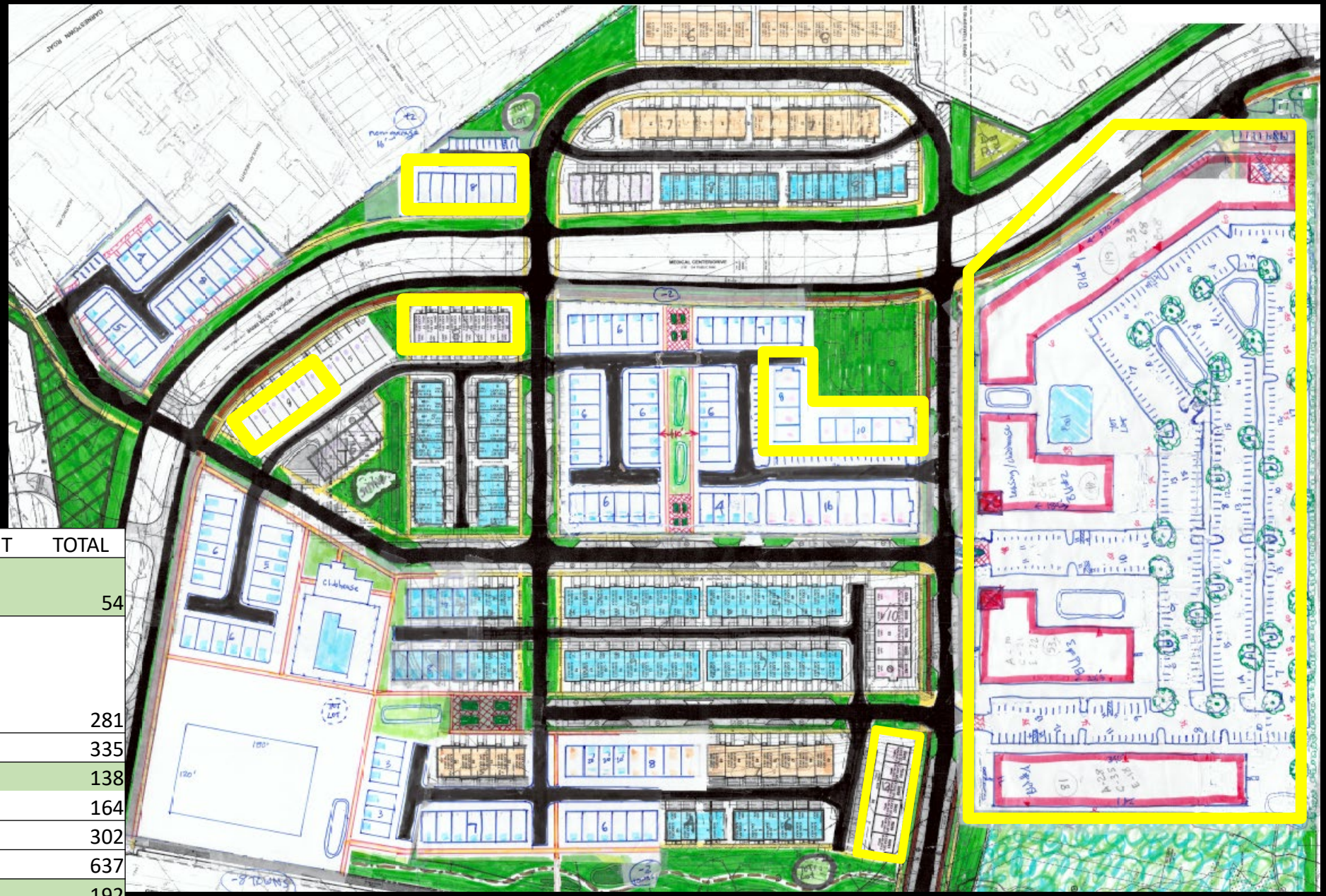
This is the third of five emails transmitting those documents the Applicant wishes to submit into the record for Preliminary Plan No. 120200100 - Item 7 on Planning Board Agenda of July 22, 2021.

Laura M. Tallerico

11 N. Washington Street | Suite 700 | Rockville, MD 20850-4229
D: +1 301.517.4833 | O: +1 301.762.1600 | F: +1 301.517.4833

MILES & STOCKBRIDGE

bio | vCard | ltallerico@milesstockbridge.com



	UNIT TYPE	COUNT	TOTAL
FOR SALE	2 over 2 MPDU	30	
	16' TH MPDU	24	54
	2 over 2 Market	26	
	16' TH - Market	18	
	20 TH - Market	192	
	24' TH - Market	45	281
FOR SALE TOTAL			335
FOR RENT	Apartment MPDU		138
	Apartment Market		164
FOR RENT TOTAL			302
PSTA - UNIT TOTAL			637
PSTA - MPDU TOTAL			192

From:	Kate Kubit
To:	Gary Unterberg; Randall Rentfro
Subject:	FW: PSTA - MPDU Counts and Locations
Date:	Monday, March 22, 2021 11:16:47 AM
Attachments:	DHCA Update 09.03.2020.pptx

From: Kate Kubit
Sent: Thursday, September 3, 2020 10:58 AM
To: Schwartz, Lisa <Lisa.Schwartz@montgomerycountymd.gov>
Subject: RE: PSTA - MPDU Counts and Locations

Hi Lisa,

Thanks for the update and the confirmation.

Please see attached and let me know if this works. If not, I can tweak some more.

Once you hear back from Ronnie, would you let me know if there are any additional updates/comments?

Thanks again,
Kate

From: Schwartz, Lisa <Lisa.Schwartz@montgomerycountymd.gov>
Sent: Wednesday, September 2, 2020 1:20 PM
To: Kate Kubit <kkubit@elmstreetdev.com>
Subject: FW: PSTA - MPDU Counts and Locations

Hi Kate,

I've discussed this with Stephanie and it looks good, but I'm going to send it to Ronnie Warner as a courtesy and get her okay. (DGS has agreed to follow DHCA's lead on this).

Can you redraw the two sticks of MPDU two-over-twos that are closer to the road so they are more to scale and evenly sized?

Thanks,

Lisa

Lisa S. Schwartz
Manager, Affordable Housing Programs Section
Montgomery County DHCA
1401 Rockville Pike, 4th Floor

Rockville, MD 20852
Work: 240-777-3786
Fax: 240-777-3691
lisa.schwartz@montgomerycountymd.gov
www.montgomerycountymd.gov/mpdu

From: Kate Kubit <kkubit@elmstreetdev.com>
Sent: Tuesday, August 25, 2020 11:00 AM
To: Schwartz, Lisa <Lisa.Schwartz@montgomerycountymd.gov>
Subject: FW: PSTA - MPDU Counts and Locations

[EXTERNAL EMAIL]

Good Morning Lisa,

I wanted to check in to see if you needed any additional information about the PSTA site and proposed MPDU layout/mix? If not, is our proposal OK as shown or do you have any comments?

Thank you,
Kate

From: Kate Kubit
Sent: Monday, August 10, 2020 3:46 PM
To: Schwartz, Lisa <Lisa.Schwartz@montgomerycountymd.gov>
Subject: PSTA - MPDU Counts and Locations

Hi Lisa,

Thanks for the discussion today. Attached, please find the updated MPDU counts and locations (outlined in yellow) per our conversation. We have 30% of the total units identified as MPDUs.

To confirm, there are 24-16' TH MPDUs (three sticks of eight MPDU townhomes). Per our conversation, one MPDU stick is shown on the west side of project. The other two sticks are shown on the east side.

There are 30 2-over-2 MPDUs. One 2-over-2 stick is at the entrance of Blackwell Road and Great Seneca Parkway (east side of the project). The other two 2-over-2 sticks are on the central green. All 2-over-2s (market and MPDU) will be in one condo regime.

The remainder of the MPDUs (138) will be scatted throughout the apartments.

I think that this addresses the concerns that we discussed today. If I've missed something, or if you have questions or comments, please let me know.

Thank you,
Kate

Kathryn L. Kubit
Vice President, Elm Street Development
1355 Beverly Road, Suite 240
McLean, Virginia 22101
703-734-9730 (main)
703-734-5220 (direct)

Take 10 minutes to be counted now – visit: https://2020census.gov/

For COVID-19 Information and resources, visit: www.montgomerycountymd.gov/COVID19

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May 14, 2021

Ms. Tamika Graham
Lead Reviewer
Montgomery County Planning Department
2425 Reedie Drive
Wheaton, MD 20902

Project Name: PSTA
Preliminary Plan #120200100
April 22, 2021 Staff Comments

Rodgers File #: 0643T

Dear Ms. Graham,

Thank you for your review of the PSTA Preliminary Plan. Please see the attached comment response spreadsheet for point-by-point responses to the above-referenced Staff comments.

If you need any additional information, please feel free to contact me at 240.912.2146 or ccason@rodgers.com.

Sincerely,

Rodgers Consulting, Inc.

Courtney H. Cason
Planner

CC Kathryn L. Kubit, Vice President, The Elms at PSTA, LLC
Barbara A. Sears, Miles & Stockbridge PC
Rodgers Consulting, Inc

A SERVICE DISABLED
VETERAN-OWNED
SMALL BUSINESS

CORPORATE OFFICE
Baltimore, MD
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410.931.6600
fax: 410.931.6601
1.800.583.8411

DELMARVA OFFICE
443.290.4060

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April 15, 2021

Ms. Erica Rigby
Acting District Engineer
MDOT SHA, District 3
9300 Kenilworth Avenue
Greenbelt, MD 20770

Attn: Mr. Kwesi Woodroffe

RE: PSTA Site
MDOT SHA Tracking No. 20APMO011XX
Our Job No.: 2019-0201

Dear Ms. Rigby:

This letter has been prepared to provide responses to your letter dated May 7, 2020, in reference to the review of the Traffic Impact Analysis for the PSTA Site dated January 9, 2020. This letter accompanies the revised report with the changes that have been made in response to the comments discussed below.

Access Management Division (AMD) Comments (Prepared by Crystal Hughes):

Comment No. 1 – There is an existing access permit 19-AP-MO-043-XX for the MD 119 and Decoverly Drive Improvements project. The improvements are a result of an agreement between Alexandria Real Estate Equities, Johns Hopkins University, and Adventist Healthcare. This project includes widening of the left travel lane on the westbound side of MD 119. The proposed widening will carry the three, 12-foot wide westbound thru lanes from the MD 119 and MD 28 intersection (mile point: 0.00) to the northbound Sam Eig Hwy Ramp (mile point: 0.51). When resubmitting, please consider using the described lane configuration to revise the MD 119 and Decoverly Lane intersection analysis.

Response No. 1 – The revised Traffic Impact Analysis has taken the addition of the third westbound travel lane into consideration.

MDOT SHA Regional & Intermodal Planning Division (RIPD) Comments (Prepared by Darren Bean):

Comment No. 2 – Please note the State's fiscally constrained FY 2020–2025 Consolidated Transportation Program (CTP) includes projects under construction and/or development and evaluation. The CTP includes no projects affecting MDOT SHA facilities analyzed in this TIS.

Response No. 2 – So noted.

Comment No. 3 – Please note the State's fiscally unconstrained Highway Needs Inventory (HNI), the State's long-range plan, includes projects that are critical to Maryland's transportation needs. The HNI includes an urban divided reconstruct (including interchanges) along MD 119 (Great Seneca Highway) reconstructing four lanes to a four-lane divided closed section from MD 28 to Middlebrook affecting MDOT SHA facilities analyzed in this TIS. If and when such improvements proceed, they may affect right-of-way.

Response No. 3 – So noted.

Comment No. 4 – Please note transit providers Montgomery County Ride On serve the development site. All roadway improvements to MDOT SHA roadway facilities should provide for and maintain full ADA-compliant access to transit facilities.

Response No. 4 – So noted.

Comment No. 5 – Please note the December 2018 M-NCPPC Bicycle Master Plan, as amended, includes a proposed side path along MD 119 (Great Seneca Highway) on both sides from MD 28 (Key West Ave) to Darnestown Rd. All roadway improvements to MDOT SHA roadway facilities should provide for and maintain bicycle facilities as well as full ADA-compliant pedestrian facilities.

Response No. 5 – So noted.

MDOT SHA Traffic Development & Support Division (TDSD) Comments (Prepared by Naizhong Cui):

Existing Traffic Conditions:

Comment No. 6 – TDSD concurs with the selected study intersections, but do recommend including Travilah Road at Darnestown Road due to its vicinity.

Response No. 6 – The scope for the subject traffic study was based on a Scoping Agreement that was approved by M-NCPPC. The intersection of Darnestown Road and Travilah Road was not noted as one of the study area intersections. The location of the Darnestown Road and Travilah Road intersection and its relationship to the subject property will not be significantly impacted by traffic from this site.

Comment No. 7 – TDSD concurs with the existing lane configuration and traffic volume counts.

Response No. 7 – So noted.

Comment No. 8 – TDSD concurs with the pedestrian, transit and bicycle facilities analysis.

Response No. 8 – So noted.

Background Traffic Conditions:

Comment No. 9 – On Table 2, Trip Generation for Background Developments on page 19, please specify the reasons of applying adjusted trip percentages for those developments.

Response No. 9 – Montgomery County M-NCPPC guidelines require that trip generation be adjusted to reflect the policy area in which the study project is located. These adjustments have been applied to the background and site generated traffic in accordance with the M-NCPPC guidelines.

Total Traffic Conditions:

Comment No. 10 – On Table 3, Trip Generation for PSTA Site on page 24, please specify the reason of applying adjusted trip percentage.

Response No. 10 – See response to Comment No. 9.

Comment No. 11 – TDSD concurs with the CLV and HCM analyses within Table 4A and 4B.

Response No. 11 – So noted.

Traffic Signal Warrant Evaluations:

Comment No. 12 – Within Appendix E, please specify the sources of diurnal rate for different developments.

Response No. 12 – The diurnal rates used for the traffic signal warrant evaluations were based on studies conducted of similar type land uses.

Results, Recommendations, and Conclusions:

Comment No. 13 – TDSD concurs with all the findings but does recommend performing additional intersection improvement study on Great Seneca Highway at Decoverly Drive, since traffic signal is not warranted and it will operate exceeding the acceptable level. Reconfiguring Maryland T-intersection design can be a good analysis starting point.

Response No. 13 – It should be noted that with the planned improvements previously discussed in this letter at the Great Seneca Highway and Decoverly Drive intersection, this intersection is projected to operate at an unacceptable level of service. Mitigating measures were considered in the revised report and signalization would be warranted based on the southbound left turn volume. This project does not contribute any traffic to the failing movements, which is the southbound left turn, and only contributes 2% of the traffic to this already failing intersection. See revised report for suggested mitigation.

MDOT SHA District 3 Traffic Comments (Prepared by Jack Goode):

Comment No. 14 – We agree with the findings and recommendations. Please submit Design Requests to MDOT SHA OOTS for the three (3) proposed traffic signal locations including Key West Avenue/Medical Center Drive, Great Seneca Highway/Blackwell Road, and Great Seneca Highway/Medical Center Drive.

Response No. 14 – Design request for the proposed traffic signal installations will be submitted when approval for this project by M-NCPPC has been granted. Doing so prior to approval would be premature.

MDOT SHA Travel Forecasting & Analysis Division (TFAD) Comments (Prepared by Scott Holcomb):

Comment No. 15 – The trip generation in the report is in accordance with the ITE Trip Generation 10th Edition and LATR guidelines.

Response No. 15 – Agreed.

Comment No. 16 – TFAD recommends performing additional operational analysis at Great Seneca Highway and Decoverly Drive. Would the left turn volume from MD 119 into Decoverly Drive meet signal warrants? The HCM analysis shows that the queues for this movement will exceed available storage in the PM peak. Mitigation should be considered for this movement.

Response No. 16 – In order to achieve acceptable levels of service at this intersection, it is necessary for the installation of a traffic signal as shown in this report. With the installation of a signal, adequate storage space will exist at this intersection. Furthermore, it should be noted that the development of the PSTA Site will add no additional left turn movements along MD 119 at this location.

Comment No. 17 – TFAD recommends that the report include discussion of lane configurations (lane designations and queue storage needs) at the site access point to MD 119, and the Medical Center Drive accesses to MD 119 and MD 28 as they provide access to site from the major roadways.

Response No. 17 – Figure 10 shows the future lane use required at each of the above intersections. Table 4C shows that each of the existing intersections has sufficient storage space with the exception of the northbound left turn approach at Blackwell Road, which currently does not have one.

Comment No. 18 – The site description on Page 22 describes two direct access points to MD 119, but only one appears to be provided. This should be clarified. Also, with the extension of Medical Center Drive, will the old direct access to Darnestown Road be used (it is currently closed)?

Response No. 18 – The report describes two direct access points to MD 119. As a point of clarification, the report has been revised to state that the first access along MD 119 is opposite Blackwell Road and the second direct access point is a result of the extension of Medical Center Drive to the south, to the intersection with MD 119.

M-NCPPC Department of Planning: Transportation Study Review Comments (Prepared by Patrick Reed, May 29, 2020):

Comment No. 1 – Page 11 – In Plan note one, confirm if the measurement followed the angled orientation of the crosswalks as not all crosswalks are perpendicular to both of a leg's curblines. Amend the plan not as necessary for clarity.

Response No. 1 – Yes, this is confirmed.

Comment No. 2 – Page 11 – In Plan note four, confirm the calculation for "available time." Does it include the only the time dedicated to pedestrian phase?

Response No. 2 – Yes, this is confirmed.

Comment No. 3 – Page 18 – Add ITE's R-squared value next to uses where the fitted curve is applied. R-squared value must be .75 or above; otherwise we suggest application of average rates. In locations where approved projects have associated approved studies, the trip generation studies from those projects should be used rather than ITE. Please make it clear when trip generation rates from approved studies are used.

Response No. 3 – The Trip Generation Tables (Tables 2 and 3) have been adjusted accordingly.

Comment No. 4 – Page 19 – Please remove the morning pass-by trip reduction from the Crown Farm property.

Response No. 4 – Morning pass-by trips for the Crown Farm have been removed

Comment No. 5 – Page 22 – Based on conversations to date, the Applicant is proposing to construct Medical Center Drive with *one* travel lane in each direction (although there will be 20 feet of cartway on either side of a central median, which could accommodate two lanes of travel). Update the study and warrant analyses to show only one lane of travel, and note the change where appropriate in the narrative.

Response No. 5 – Text has been revised accordingly. No analysis is impacted by this change.

Comment No. 6 – Page 24 – Trip generation appears to be slightly off. Adjustment factors should be applied against the total for each land use category to avoid rounding issues. Additionally, the retail trips need to be accounted for—we do not accept them as an ancillary use here. We note that the pass-by rate squeezes the applicant just south of the bicycle adequacy test in the afternoon.

Response No. 6 – Trip generation has been adjusted accordingly.

Comment No. 7 – Page 27 – While it may be true that the subject site does not significantly impact the intersection of Great Seneca Highway and Decoverly Drive (per plan note 3), mitigation needs are based on total traffic conditions, and the intersection must be mitigated. Please propose mitigation.

Response No. 7 – The revised report considers the signalization of this intersection as discussed previously. Because this project does not contribute any traffic to the failing movements and only contributes 2% of the traffic to this intersection, it is suggested that the proposed mitigation would be that the applicant designs the traffic signal which would be installed by others.

Comment No. 8 – Page 27 & 28 – The intersection of Great Seneca Highway and Key West Avenue is operating just under acceptable delay per HCM standards, and exceeds the CLV standard. While it may be true that the subject site does not significantly impact the intersection, mitigation needs are based on total traffic conditions and the intersection must be mitigated. Please propose mitigation.

Response No. 8 – The report has been revised to include mitigation at this intersection.

Comment No. 9 – Page 30 – The 2017 LATR Guidelines updated the pedestrian adequacy test and focus on pedestrian delay. The LATR Guidelines are a bit unclear regarding this test, and the Planning team has identified this element of the Guidelines as a location that requires updates in forthcoming editions. All this said, the LATR Guidelines state: "*The approach to defining adequacy considers pedestrian delay only. This consideration is due to the level of complexity with intersection signal timing and phasing in the areas of the county likely to generate significant pedestrian trips.*" Staff is interested in what ITE calls, "Holding Area Wait Time" for signalized intersections. The associated pages of ITE are attached for reference. Please compute pedestrian delay (i.e. "Holding Area Wait Time") for signalized crossings. Please do not weight delay by the number of pedestrians at each crossing. In other words, use the following equation:

$$\mathbf{d_p = (C - g_{walk,mi})^2 / 2C}$$

d_p = pedestrian delay
C = cycle length
$g_{walk,mi}$ = effective walk time

Effective walk time calculations are on the attached sheets from ITE. For unsignalized locations, propose a method to determine pedestrian average wait times during peak hour. Field studies may best depict conditions for single pedestrians attempting to cross the street.

Response No. 9 – The revised report has been modified to address the above methodology.

Comment No. 10 – Appendices – Based on the signal warrant analyses, it appears that a signal is warranted at Key West Avenue & Johns Hopkins Drive/Medical Center Drive as stated by the Applicant. It also appears that signals are warranted at Great Seneca Highway & Blackwell Road, and Great Seneca Highway & Medical Center Drive. We defer to MCDOT as lead agency, but strongly believe that satisfaction of at least warrants #2 and #2 justify the need for traffic signals.

Response No. 10 – These findings are consistent with the findings of the report.

MDOT SHA District 3 Traffic Comments (Prepared by Alex Yelin):

Comment No. 1 – District 3 Traffic has no concerns or comments regarding the proposed MD 119 right-in-right-out connection.

Response No. 1 – The access points along MD 119 are recommended to be full movement intersections with traffic signalization.

Comment No. 2 – Please conduct a sight distance analysis for the proposed MD 28 connection. The grade to the west of the proposed entrance is a concern for this connection.

Response No. 2 – This connection to MD 28 for Street A is not recommended as part of the site plan.

Comment No. 3 – District 3 Traffic would prefer the proposed MD 28 connection be a right-in-right-out if sight distance is inadequate for left turns.

Response No. 3 – See response to Comment No. 2.

Comment No. 4 – Please revise the TIS to include the additional access points and delay submitting any DRs until an updated TIS is approved.

Response No. 4 – See response to Comment No. 2.

MDOT SHA Travel Forecasting & Analysis Division (TFAD) Comments (Prepared by Scott Holcomb):

Comment No. 1 – TFAD does not have any specific comments on the newly proposed access locations, but notes that the TIS done earlier in 2020 did not include these access points, and that there were several outstanding comments on intersection operations that we had from that report. Will a new TIS be produced with the added access points?

Response No. 1 – The revised analysis does not include the MD 28 access point at Street A due to operational concerns.

MDOT SHA Regional & Intermodal Planning Division (RIPD) Comments (Prepared by Kandese Holford):

Comment No. 1 – Please note the M-NCPPC May 2010 Great Seneca Science Corridor Master Plan and December 2018 Master Plan of Transitways and Highways recommend the subject connections as part of the Corridor Cities Transitway (CCT). In 2019, the CCT, a former MDOT MTA CTP project, was removed from MDOT's FY 2019-2024 CTP.

Response No. 1 – So noted.

Comment No. 2 – Finally, RIPD recommends Montgomery Planning also coordinate with John Hoobler at MCDOT and Derek Gunn at District 3 Traffic regarding any current or planned studies or projects, should any exist.

Response No. 2 – So noted.

MCDOT Comments:

Comment No. 1 – Figure 2, Existing Lane Use, Page 7 – Southbound Johns Hopkins Dr lanes are a right only and left only as indicated by the existing pavement markings.

Response No. 1 – With the construction of the driveway to the office complex on the southside of MD 28, the southbound pavement markings in the field are incorrect and should be revised.

Comment No. 2 – Table 1, Page 11 – Some of the clearance times under the "Total Clearance Time for Associated Vehicle Phase" column do not match the sum of the yellow and red time as indicated by the HCS7 summaries in Appendix B. For example, Table 1 shows the south leg of Key West Ave and Darnestown Road having a Total Clearance Time of 4.5 seconds, but the HCS7 summary (Page 1 of Appendix B) shows 6 seconds. Please update.

Response No. 2 –The revised report has been adjusted so that their values now match.

Comment No. 3 – Figure 9, Page 26 – Why aren't there any anticipated trips generated for the through movements across Great Senecca Highway between Blackwell Road and the Site Access and between the existing Medical Center Drive and the proposed Medical Center Drive extension?

Response No. 3 –While it is possible that some traffic may choose to make these movements, it would be expected that the volume would be very minor and not have an impact on the analysis.

Comment No. 4 – Page 31 – The traffic signal warrant analysis determined two signals would be warranted at the site access points along Great Senecca Highway at Blackwell Drive and Medical Center Drive. However, no recommendation is made whether to include the signals or not. If the two signals satisfy the warrants at these locations, then they should be built with the development.

Response No. 4 –It is recommended for signals to be installed at both intersections.

Comment No. 5 – Page 32 – The TIS analysis indicates that 75 pedestrian trips (non-motorized and transit combined) are generated from the PSTA development and a quantitative pedestrian analysis is required. However, the report contains no recommendations to construct, fix, or fund any ADA facilities as mitigation. New sidewalk should be considered along the west side of Great Senecca Highway along the frontage of the subject site.

Response No. 5 –Sidewalks and the possible need for ADA facilities along the property frontage are site plan issues and will be dealt with accordingly. The new traffic signals will be designed to provide the appropriate ADA compliant equipment.

Comment No. 6 – Appendix A, Page 9 – The proposed site plan shows a partial completion of the Medical Center Drive extension by building a two-lane road, however, the full construction of the dedicated Corridor Cities Transitway (CCT) should coincide with the construction of the development.

Response No. 6 – From a traffic perspective, a two-lane roadway is sufficient for the development within the PSTA site. Moreover, the applicant is being asked to and plans to dedicate the 150-foot right-of-way through the length of the site. This is 17% of the site, over 7.3 acres of roadway dedication. Furthermore, the applicant is constructing a significant portion of the right-of way elements: two 10-foot bike paths, the 10-foot LSC Loop Trail, a 6-foot sidewalk, two 12-travel lanes (to accommodate MCFRS), and the tree panel and median. The request of this applicant to build the additional two lanes, when not required by the traffic generated by this site, after the significant dedication and construction, places an undue burden on the applicant and should not be required as part of this project.

Comment No. 7 – Appendix A, Page 9 – The proposed site plan seems to indicate that Street D will eventually be connected to the Darnestown Road/Travilah Road intersection. Why was this intersection omitted from the trip distribution and assignments?

Response No. 7 – The intersection was not included in the analysis because the connection will not be made as part of this project. There is a Pepco electric substation in the way of this road connection. To move this Pepco substation is a tremendous undertaking which will need to be addressed in the future.

Comment No. 8 – Appendix B, Page 5 – At MD 28 & Darnestown Road, the EBR 95% queue length during the AM will exceed the storage length under Total Conditions. The HCS7 Summary indicates a queue storage ratio of 1.66 and a queue length of 581.1 ft. Additionally, the 95th percentile queue is already exceeded under existing conditions. Provide solutions.

Response No. 8 – Upon review of the analysis, it was determined that an error existed in the analysis relating to the existing eastbound right turn overlap. With the adjustment, the right turn lane extends beyond the thru queue along MD 28. Therefore, queuing is no longer an issue for the right turn movement.

Comment No. 9 – Appendix B, Page 26 – At MD 28 & MD 119, the EBL 95% queue length during the PM will exceed the storage length under Total Conditions. The HCS7 Summary indicates a queue storage ratio of 2.53 and a length of 632.5 ft/ln. Provide solutions.

Response No. 9 – This intersection requires the addition of a third southbound left turn lane along MD 119 to maintain an acceptable level of service with or without the PSTA site. With this improvement, the eastbound queuing will be reduced significantly. The left turn lane could then be extended to achieve acceptable storage space. The impact of this site will only increase by 2%; however, the developer agrees to design the improvements as necessary, to be implemented by others.

Comment No. 10 – Appendix B, Page 44 – Great Seneca Highway & Darnestown Road, EBL 95% queue length during the PM will exceed the storage length under Total Conditions. The HCS7 summary indicates a queue storage ratio of 1.10 and a queue 547.8 ft. The storage ratio should be a lot higher as the full width of the marked left turn lane is only about 125 ft. The remaining queue length spills into the shared left turn lane and should not be counted as storage length. Provide solutions.

Response No. 10 – The storage space could be extended with restriping of the existing left turn lane and sufficient storage space could be provided.

Comment No. 11 – Page 2 – Two intersections do not operate at acceptable levels of service: Key West Ave & Medical Center Dr requires a traffic signalization to achieve adequacy & Great Seneca Hwy & Decoverly Dr is below standard. Applicant states "no reasonable improvements can be implemented to correct this minor impact and a traffic signal is not warranted." We do not agree with this statement, refer to comment 4.

Response No. 11 – The revised study identifies the need for signalization of both intersections. The applicant will design and construct the signal at Medical Center Drive and Key West Avenue (as well as Medical Center Drive and Great Seneca Highway and Blackwell Road and Great Seneca Highway). Traffic from the sites does not contribute to the already failing condition at Great Seneca Highway and Decoverly Drive and adds only 2% of the total traffic to this intersection.

Comment No. 12 – Medical Drive is anticipated to be constructed as two lanes per letter in April 1, 2019 in appendix A (Check). We do not agree with this letter. The letter only takes into account the site; however, the road is classified as an Arterial Road. We recommend the applicant dedicate 150 feet and construct the roadway to conform with the master plan.

Response No. 12 – From a traffic perspective, a two-lane roadway is sufficient for the development within the PSTA site. Moreover, the applicant is being asked to and plans to dedicate the 150-foot right-of-way through the length of the site. This is 17% of the site, over 7.3 acres of roadway dedication. Furthermore, the applicant is constructing a significant portion of the right-of way elements: two 10-foot bike paths, the 10-foot LSC Loop Trail, a 6-foot sidewalk, two 12-travel lanes (to accommodate MCFRS), and the tree panel and median. The request of this applicant to build the additional two lanes, when not required by the traffic generated by this site, after the significant dedication

and construction, places an undue burden on the applicant and should not be required as part of this project.

Comment No. 13 – Page 22 – Report states the intersection of Key West Ave & John Hopkins will require signalization. Appendix E indicates the traffic signal is warranted. Timing of the traffic signal needs to be agreed to by MCDOT.

Response No. 13 – The timing of the traffic signal installation will be coordinated with MCDOT and MDOT SHA and will be installed when warranted.

Comment No. 14 – Page 23 – The report states "At the intersection of Great Seneca Highway and Decoverly Drive, the unsatisfactory delay is triggered by the background development and the subject site will have a minimum impact. This intersection is currently operating under stop sign control. Only a traffic signal can solve the delay for the minor approach. However, upon review of the total left turn traffic volume, it is unlikely that a traffic signal would be warranted." These are conflicting mitigations, is a signal required or not? Provide mitigation if site is contributing more to this intersection failing. Provide the numbers in order for staff to better understand the situation.

Response No. 14 – The revised report indicates the need for signalization based on the southbound MD 119 left turn movement as discussed previously. However, this project does not add traffic to the failing condition and contributes 2% of the traffic to this intersection. Proposed mitigation would be that the applicant designs the traffic signal, which would be installed by others.

Comment No. 15 – Page 31 – An analysis was then conducted for access points along Great Seneca Highway at Blackwell Drive and at Medical Center Drive. The results of these analyses indicate that traffic signals would be warranted at both of the site access locations along Great Seneca Highway based on the minimum requirements outlined in the Manual for Uniform Traffic Control Devices (MUTCD) with the complete development of the site. Applicant should build both traffic signals. The timing of the signals needs to be determined.

Response No. 15 – The report acknowledges the need for signalization. The timing of the installations will be resolved at a later date based on the sequence of development for the subject site.

Comment No. 16 – Intersection of Key West Ave (MD28) & John Hopkins exceeds HCM delay and no mitigation provided. Recommend traffic signal.

Response No. 16 – This intersection will operate at acceptable levels of service with Medical Center Drive and the installation of the traffic signal.

Comment No. 17 – Intersection of Great Seneca Hwy(MD119) & Decoverly Drive exceed HCM delay threshold. No mitigation proposed. Recommend traffic signal.

Response No. 17 – The revised report acknowledges the need for signalization of this intersection. However, this project does not add traffic to the failing condition and contributes 2% of the traffic to this intersection. Proposed mitigation would be that the applicant designs the traffic signal, which would be installed by others.

Comment No. 18 – Intersection of Great Seneca Highway and Blackwell Rd should be right in and right out. Otherwise provide traffic signal.

Response No. 18 – It is recommended that this location allow for all movements and will be signalized.

Comment No. 19 – Intersection of Great Seneca Highway and Medical Center Drive need to be signalized.

Response No. 19 – Agreed.

All of the above responses have been incorporated into the revised report. We believe these responses and the revised report address all of the outstanding issues at this time.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Glenn E. Cook
Senior Vice President

CC: Patrick Reed
Rebecca Torma

GEC:amr

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Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	Washington Gas	Jared Martin WGLMontReviews@enengineering.com	Recommend for Approval	There are WGL facilities in the project limits. See the attached quad map for details. When final plans are available, please provide them to WGL for final review.	Final plans will be provided to WGL for review.
2	Housing & Community Affairs	Lisa Schwartz lisa.schwartz@montgomerycountymd.gov	Incomplete		
2	WSSC	Shanta Katwal Shanta.Katwal@wsscwater.com	Incomplete		
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Transportation Study 1. Staff acknowledges the receipt of a revised transportation study on 5/19/2021, provided following review of the Plan sheets, and the point-bypoint response provided on the same date. Additional time will be necessary to review the revised study. Please note the required review period for SHA and MCDOT in considering submission dates and timing and their relation to requested hearing dates. a. Additional coordination may be necessary regarding the signal warrant analysis. Staff find the crossings for the ultimate provision of the LSC loop to be paramount for slowing vehicular traffic and pedestrian safety.	1. Additional time required for review of revised study is acknowledged. Transportation study submitted on 4/19/21. a. Additional coordination for signal warrant analysis will provided as necessary.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Design modification will require MCDOT coordination and acceptance (MCDOT is lead agency in this review); staff will follow-up with MCDOT regarding acceptance of the proposed design modification, which looks consistent with discussions to date.	Design modifications will continue to be coordinated with MCDOT and be updated for the coming submittal, as necessary.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Staff continues to support MCDOT's ROW request for Medical Center Drive and appreciates the Applicant's patience as we advance conversations about the urban design and mobility. We have worked to reassess the facilities in Medical Center Drive to improve landscaping potential and recommend provision of the following, which may have benefits to both public and private realms (graphic shown in upload section).	Per coordination with MCDOT and MNCPPC, Medical Center Drive ROW has been designed to the 150' width. The facilities within this ROW are shown on the MCDOT exception letter and on the preliminary plan.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Per previous comments, at Site Plan, the Applicant will need to propose a palette of community “streetscape” (bikescape?) amenities consistent with the intent of the Life Sciences Center Loop. This could include pavement markings, seating within the tree panels, public art, etc. We look forward to the Applicant’s proposals for this important master-planned amenity.	Palette of streetscape amenities to be coordinated with MNCPPC and provided at Site Plan.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Please show and provide 2018 Bicycle Master Plan improvements along Key West Avenue with adequate (no less the 6’) of separation from the cartway for the extent of the site. These are required as a standard frontage improvement.	Preliminary Plan has been updated to include the 10' sidepath and 6' separation between the cartway and Key West Avenue. Applicant intends to construct these bicycle facilities per the Bicycle Master Plan.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	The Applicant proposes to relocate existing access to the adjacent Shady Grove Professional Center from Key West Avenue onto Medical Center Drive; however, at only 70’ away from the intersection, the proposed access is not ideal—even as a right-in, right-out. Explore extending Blackwell Drive, relocating access to Blackwell Drive, or remove it completely. In the event access is removed completely, or different access point along Medical Center Drive is proposed, a more legible future tie-in needs to be shown where Blackwell Road meets the adjacent shopping center (Future Yearling Drive Extended). Per previous comments, please coordinate with the adjacent property owner on providing a connection to the parking lot via Blackwell Road. At a minimum, the Applicant should bring the roadway pavement to the extent of its lot line for ease of future connections and understanding of future intent. Staff believes a perpendicular intersection is more desirable in the future as opposed to the proposed curve.	Access to the adjacent Shady Grove Professional Center from Medical Center Drive has been modified to Right-In only and moved as far from the intersection as practicable based on the existing infrastructure. Blackwell Road Extension has been updated to bring roadway pavement to the extent of lot line. Pavement markings to be used to delineate interim curved travel lane. Signage about future connections will be installed. Please see updated plan for integration from interim to final road section.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	The Applicant proposes a retail parking lot located off of Medical Center Drive; however, at approximately 150’ from the intersection this access point is too close to the intersection and should be removed. Explore opportunities to provide on-street parking rather than the surface lot. The Mallory Square Project (Siesta Key Way) demonstrates a location with on-street parking in the vicinity with successful retail.	As requested, the retail parking lot has been removed and the retail has also been relocated.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Dimension all radii on the plans. Some curb radii look significantly wide.	Curb radii are dimensioned on the plans and have designed to be in compliance for fire access.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Reorient proposed Parcel F so it is perpendicular with Great Seneca Highway.	Parcel F has been reoriented to allow for future right-in, right-out access to the site from Great Seneca Highway, if desired.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Explore opportunities to reconstruct the Street D Access Road within the confines of the Applicant's property and adjacent property to better set-up future realignments with Travilah Gateway.	Alternative Alignments for Street D Access are not ideal given applicant's property and adjacent neighbors.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Demonstrate, in the statement of justification, what measures are being taken to ensure future connections at Parcel B, Parcel F, and Yearling Drive Extended, are viable. How will future residents be informed that they are purchasing/renting properties where future connections are envisioned?	Statement of Justification addresses the concerns regarding future roadway connections. Yearling/Blackwell Extended is proposed to have the pavement extended to edge of lot line, indicating a future connection to be built. Transitional parallel parking in Parcel B provides continuation of roadway from Street A to Key West Ave.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	What legal arrangements are being provided to ensure connection of Parcel B, at some future date, will not be impacted by the Applicant's parking needs? What legal mechanism (easement) is being provided to allow parking in the location to be dedicated by the Applicant? Staff needs to ensure timing/horizons of easements will not inhibit/restrict the County's ability to construct these connections, if and when desired.	The applicant is subdividing Parcel B and it will be dedicated when the connection to Darnestown Road is made. Notes/updated variable ROW have been added to the preliminary plan about this future dedication. The plat should be noted, as well. Construction between the County and the apartments shall be required at the time of construction to ensure road construction can progress and apartment parking can be met.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Provide pedestrian connectivity to the sidewalk facilities on Great Seneca Highway at Parcel F to mitigate the potential for "people's choice paths" (also called "goat paths").	Pedestrian connectivity between Great Seneca Highway and the extension of Parcel F has been studied to minimize/eliminate goat paths. This will continue to be studied as part of the POPS design. Final locations shall be shown on the site plan.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	In the multifamily lot where the surface parking is shown, provide pedestrian connectivity to Key West Avenue at points east (primarily to serve building 4) to mitigate the potential for "people's choice paths" (also called "goat paths").	Pedestrian connectivity is now proposed from the surface parking to Key West Ave at building 4. The rest of the parking area will be screend with shrubs and should help discourage goat paths.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	At Yearling Drive Extended/Blackwell Road, provide pedestrian connectivity to the Shady Grove Professional Center to mitigate the potential for "people's choice paths" (also called "goat paths").	Sidwalks are proposed within the Blackwell ROW to be constructed up to the applicants property limits to promote connectivity.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Please provide paving depth detail for all proposed roadway facilities. Because no MCDOT standard will be used, these are necessary for Plan review and acceptance. Also, please provide paving detail for bicycle facilities.	The paving section depth details have been added to the preliminary plan.
2	Area Transportation Review Comments	Patrick Reed patrick.reed@montgomeryplanning.org	Revisions Requested	Please provide future road grades for Roads B and F in the Plan Submission.	Proposed Road grades for B and F will be shown on the preliminary plan.
2	Area Environmental	Steve Findley steve.findley@montgomeryplanning.org	Revisions Requested	Please see plan markups. Please note that the submitted FCP does not appear to be consistent with the latest Preliminary Plan submission in some places. Now that the plan is settling down a bit, please submit a Phase I Noise Analysis to document existing noise conditions from the large adjacent roads that will need to be addressed at Site Plan. Thank you.	Thank you for the comments. FCP has been updated per updated layout. The noise anaylsis will now be initiated and wie will plan to submit it at the Site Plan.
2	Sediment & Stormwater	Andrew Kohler andrew.kohler@montgomerycountymd.gov	Incomplete		
2	PEPCO	Francis Azebaze Francis.Azebaze@exeloncorp.com	Incomplete	Please show the electrical lines on the print as well as the size of the PUE	The PUE sizes have been added to the plans. The electrical lines will continue to be coordinated with PEPCO through the development and final engineering process.
2	Fire & Rescue	Marie LaBaw marie.labaw@montgomerycountymd.gov	Incomplete		
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	As previously noted, the Applicant does not meet the zoning code requirements along both Key West Avenue and Medical Central Drive that prohibits surface parking between the street building line per Section 59.4.5.1.A.3. The Applicant must request approval from the Board for alternative compliance and meet the applicable findings per Section 59.6.8.1.	Please see the updaeted Statement of Justification that explains parking location in the rear of the building and request alternative compliance. Parking lot for retail along Medical Center has been removed.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Staff acknowledges the Applicant's response to prior comment #9 regarding sustainability. This will become a Preliminary Plan condition of approval to be addressed at the time of Site Plan.	Design and materials for sustainability acknowledged as condition of preliminary approval to be addressed at Site Plan.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Staff acknowledges the Applicant's response to Prior Comment #14 regarding the LSC Loop. This will become a Preliminary Plan condition of approval to be addressed at the time of Site Plan.	LSC Loop Design acknowledged as condition of preliminary approval to be addressed at Site Plan.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Please provided a phasing plan exhibit that corresponds with the 4 phases noted under the APF/plan validity extended approval request.	Phasing plan is provided with this upload. Please see sheet 32-PHASING-120200100-002 within the support drawings folder.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Please provide the detail of the plats that will be recorded with each of the four phases associated with the APF validity period. Number of record plats are noted, but please clarify for townhouse lots versus multifamily lot.	The applicant's intent is to plat the project consitent with the phasing diagram.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Please include the open space exhibit in the plan set.	Open space exhibit is included with upload.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	In the data table for open space, please show the breakdown of acreage between the park, civic, plaza, and other areas that total the open space provided.	The breakdown of open space has been shown on the data table, as requested.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Please include the applicable BTA and Transparency requirements in the data table.	Build-to-area & Transparency information has been added to the data table, as requested.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Please address height compatibility per Section 59.4.1.8.B for the plan area that abuts a detached townhouse zone. Please include the proposed townhouse height for this project in the data table so that compliance that clear.	Please note that these are townhomes proposed adjacent to townhomes. The proposed townhouse heights are designed within the compatibility requirements set forth in Section 59.4.1.8.B. This is addressed in the Statement of Justification and will be further refined at site plan.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Please revise the SOJ to address Section 50.4.3.1.E.4.b for the justification of private roads. This finding must be made by the Planning Department.	The SOJ shall address private roads, as requested.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Per discussions with Planning Staff and MCDOT, the revised plans (Sheet 12 of 12) illustrate the interim condition for Medical Center Drive. Please include the final roadway condition that labels the CTT to be constructed by others, and how the proposed operation bays will be impacted under the final condition.	Final CCT now shown on the section. Operation bays to be incorporated into paving of second travel lane on either side.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	The revised data table where the proposed commercial space is noted as an approximate figure. Please clarify the exact square footage for approval in the commercial section of the table.	Commercial square footage has been updated and shown within the data table.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Per Section 50.4.3.1.I.b., "the developer may also be required to underground any above-ground or overhead utilities that exist either within the property being subdivided or within the road right-of-way along the frontage of the property being subdivided, if the Board determines it is necessary based upon the size and density of a proposed subdivision." Please add note to the plan that identifies that existing and proposed utilities will be undergrounded.	Applicant has placed similar note on plan, see sheet 004, note #10.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Previously, the Plan proposed 288 buildable lots and approximately 25 parcels. Please clarify these figures in the data table reflected by the new layout.	Buildable lots and parcels have been provided within the data table and the SOJ.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Please address the requirements for the club house and pool and document square footage within the data table.	Clubhouse and pool sf has been added to the data table.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	In the data table, please revise for clarity "Street Dedication - 28" to "Street Dedication – Key West Highway (MD 28)"	The street dedication has been revised in the data table.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	For clarification, please add a footnote indicating that the property is not subject to any prior dedications.	Prior dedications have been made along to Great Seneca Highway. These (and the dedicaiton to Key West Avenue) are included on the Preliminary Plan.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Previously, the Applicant indicated that a land dedication would be made to increase the size of Parcel V to accommodate a potential future school. This dedication is not reflected in the data table or on any revised drawing. Please clarify.	Applicant to dedicate Parcel A to the County. The data table has been updated to reflect this dedication.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Please label proposed Parcel B and Parcel F as "Future Road by Others".	This label has been added to the preliminary plan.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	Under Parking and Loading in the Data Table, a row should be included for compliance with Section 6.2.8.1 for loading multi-units that exceed 50 dwelling units (see plan mark-up). Along with parking, this will be finalized at site plan.	Loading requirements have been shown on the data table.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	We would like to discuss our prior comment: “Ensure that Street A & Street B don’t abruptly turn into parking lots but continue as streets past Blackwell Road into the multifamily parcel. These can have parallel on-street parking and transition to surface parking once past the bars of residential buildings. Street A is more critical than Street B.” While some on-street parking spaces may be impacted (whereas the development is overparked), we believe there are creative approaches that do not have to result in any significant unit loss. Accordingly, preliminary parking figures in the data table will need to be revised to reflect the terminus treatment of the parking lot into the apartment building lots.	Transitional parallel parking has been added as a continuation of Street A past Blackwell Road. An alternative to Street B will be proposed and will continue to be coordinated at site plan.
2	Area Subdivision	Tamika Graham Tamika.Graham@montgomeryplanning.org	Revisions Requested	In a prior meeting, Staff has requested revised grading between townhouse units No. 16 and No. 33 to accommodate a future roadway conversion through proposed Parcel F. Please respond and address.	Grading has been revised to accommodate the future roadway connection.
2	State Highway Administration	Kwesi Woodroffe kwoodroffe@sha.state.md.us	Revisions Requested	TIS reviewed and comments provided in August 2020. Currently awaiting a resubmittal from the applicant addressing the comments.	Revised traffic impact study provided 4/19/2021.
2	Area Master Plan	Luis Estrada luis.estrada@montgomeryplanning.org	Revisions Requested		
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	1. All proposed roadway horizontal centerline radius should be shown on the plan and should meet the minimum requirements per the road classification. Please review Montgomery Countys Code, Chapter 50 for specifications.	Proposed roadway centerline radii shown on plans in compliance with Montgomery County Code or referred to within MCDOT exemption letter.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	2. Key West Avenue (MD 28): a. Per the Great Seneca Science Corridor Master Plan, Key West Avenue (MD 28) is classified as a Controlled Major Highway (CM-22) with 8 travel lanes and a right-of-way (ROW) of 200-feet. We recommend the applicant dedicate to conform with the master plan. b. Sidepath (both sides) proposed per bicycle master plan. The applicant shall be responsible to build a minimum 10-feet wide sidepath along the street frontage. c. Provide existing and proposed roadway cross sections incorporating the sidepath. Show ROW clearly on plans. d. We defer to MSHA for access and improvements to Key West Avenue (MD 28). e. Gas Company must subordinate existing easement that will become right-of-way. Discuss with DPS when this must be done.	a. The current and updated preliminary plan dedicates the additional right-of-way for Key West Avenue. b. Please note that there is existing bike lane and pedestrian infrastructure in the Key West right-of-way. Applicant shows proposed side path, 6' off of curb. c. ROW has been clearly shown on plans, including dedication. Proposed sidepath width of 10' located 6' behind curb has been added to plans. Future buildout of Key West Ave to be completed by others. d. Coordination to continue with SHA regarding Key West Ave. access and improvements. e. Gas company to be contacted about their ability to subordinate their easement for their large transmission gas line easement. DPS to be included on coordination.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	3. Great Seneca Highway: a. Per the Great Seneca Science Corridor Master Plan: i. Great Seneca Highway is classified as a Controlled Major Highway (CM-90) with 6 exiting travel lanes and a right-of-way of 150-feet. ii. Plat #11464 shows that the current ROW is 150-feet. Based on this plat, DOT believes that additional dedication is not necessary unless the bike facilities cannot fit within the existing right-of-way. b. Sidepath (both sides) proposed per bicycle master plan. The applicant shall be responsible to build minimum 10-feet wide sidepath along the frontage. i. Proposed 10-foot shared used path along Great Seneca Highway acceptable.	3a.i. We note that Great Seneca is a CM-90 with 150' ROW with up to six travel lanes. ii. Proposed 10' bike path (side path) to be constructed within the right-of-way; no dedication will be necessary. 3b.i. The side path along our frontage of Great Seneca as proposed is acknowledged as accepted.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	4. Darnestown Road (minimal frontage): a. Per the Great Seneca Science Corridor Master Plan: i. Darnestown Road is classified as an Arterial Road (A-280) with 4 travel lanes and a right-of-way of 100-feet. ii. Based on the adjacent existing plats, we cannot determine the right-of-way width. Show the existing right-of-way and provide enough land to accommodate 100 feet of right-of-way along your street frontage. b. Provide a minimum 10-feet wide sidepath along your street frontage. Show how it ties into the existing facility on each side of your property. Complete	4. a.i. We note that Darnestown Road is classified as an arterial road with 4 travels lanes and a 100' ROW. 4a.ii. The applicant intends to dedicate the necessary width comply with the master plan precribed Darnestown Road ROW. Dedication shown on preliminary plan. 4b. The 10' sidepath as shown on preliminary plan is acknowledged as accepted.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	e. Medical Center Drive (Extensions)/Johns Hopkins Drive (Extensions): i. Per the Great Seneca Science Corridor Master Plan: 1. Medical Center Drive/Johns Hopkins Drive is classified as an Arterial Road (A-261d) with 2 travel lanes and a right-of-way of 150-feet which includes 50-feet for the CCT. We recommend the applicant dedicate 150 feet and construct the roadway to conform with the master plan. ii. The applicant shall be responsible to build the entire extension from Key West Avenue to Great Seneca Hwy. iii. Proposed interim condition cross section is not acceptable. 1. The applicant shall construct a minimum of 20.5-foot pavement on each side of the road. Measuring from the face of the curb as follows: a. 10.5-foot parking lane b. 10-foot travel lane iv. Separated bike lanes (two-way, both sides) proposed per bicycle master plan. Complete v. Note: The existing roadway centerline should match with the roadway centerline for the extension on both ends.	e. i. 1. & ii. We note that Medical Center is classified is an Arterial Road with 2 travel lanes in each direction. We propose Medical Center Drive dedication to be 150' wide to accommodate all of the required functional components of this street, including bike lanes, sidewalks, the LSC Loop, travel lanes, buffer, and CCT station at the civic green at Blackwell and Medical Center. Please note that applicant does not control connections to Key West Avenue and will the County may need to assist if these connections need to be made. This connection is not necessary to accommodate the traffic generated by our site. e.iii. The applicant acknowledges MCDOT and Staff's input related to the interim condition. However, the intent is to move forward to Planning Board with the proposed layout. e.v. The Centerline matches with the roadway extensions on both ends.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	f. Street A & B: i. Master planned as a business district street (B-13) with 2 travel lanes, right-ofway width of 70-feet conforming to MC-2005.02. ii. Proposed roadway cross section with proposed ROW of 55-foot with the following items is found acceptable: 1. Proposed 1-foot maintenance strip (both sides) in ROW 2. Proposed 6-foot sidewalk (both sides) in ROW 3. Proposed 6-foot tree panel (both sides) in ROW 4. Proposed 8-foot parking (one side) in ROW 5. Two proposed 10.5-foot travel lane in ROW	It is acknowledged that the proposed 55' ROW for Streets A and B is accepted as listed.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	g. Street C: i. Master planned as a business district street with 2 travel lanes, right-of-way width of 60-feet conforming to MC-2005.01. ii. Proposed roadway cross section with proposed ROW of 48-foot with the following items is found acceptable: 1. Proposed 1-foot maintenance strip (both sides) in ROW 2. Proposed 6-foot sidewalk (both sides) in ROW 3. Proposed 6-foot tree panel (both sides) in ROW 4. Proposed 8-foot parking (one side) in ROW 5. Two proposed 11-foot travel lane in ROW	It is acknowledged that the proposed 48' ROW for Street C is accepted as listed.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	h. Street D: i. Master planned as a business district street with 2 travel lanes, right-of-way width of 60-feet conforming to MC-2005.01. ii. Proposed roadway cross section with proposed ROW of 59-foot with the following items is found acceptable: 1. Proposed 1-foot maintenance strip (both sides) in ROW 2. Proposed 10-foot bike path (one side) in ROW 3. Proposed 6-foot sidewalk (one side) in ROW 4. Proposed 6-foot tree panel (both sides) in ROW 5. Proposed 8-foot parking (one side) in ROW 6. Two proposed 10.5-foot travel lane in ROW iii. Sidepath (west side) proposed per bicycle master plan. 1. Show connection between Travilah Rds existing sidepath and proposed sidepath. Complete	It is acknowledged that the 59' ROW for Street D and proposed sidepath connection are accepted as listed. The connection between the sidepaths will be shown.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	6. The TIS has not been revised per previous comments. Evaluate whether a traffic signal is warranted at the intersection of Johns Hopkins Drive/Site entrance and Key West Avenue and at the intersection of Medical Center Drive and Great Seneca Highway.	Updated traffic impact study provided 4/19/21.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	7. Road Grade: INCOMPLETE a. Medical Center: i. Show proposed entrance to Parcel D ii. Show proposed entrance to Parcel V b. Blackwell Road i. Show proposed buildings parking c. Grade establishments for all new public streets and/or pedestrian paths must be approved prior to approval of the record plat.	ai. The applicant has shown proposed entrances to adjacent parcels, to the best of our ability. Applicant cannot specifically identify Parcel D. aii. Parcel V entrance shown as right-in, right-out b. Grade establishments to be approved prior to recordation of plat.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	8. Sight Distance: INCOMPLETE a. Measure sight distance along travelway or centerline of road, not the hypothenuse as it is currently shown. Refer to the 2nd page of the sight distance form drawing. b. Missing sight distance from Street A and Street B onto Street C. c. Missing sight distance from alleys to proposed streets. d. Missing sight distance from proposed parking lots to proposed streets. e. The horizontal sight distance for the following could be an issue: Parcel A alley connecting Street B. Parcel A alley (west of Medical Center Drive) connecting Street C. f. Resubmit a completed, executed MCDOT Sight Distances Evaluation certification form, for all existing and proposed site entrances onto County-maintained roads, for our review and approval. Profile of all intersection and driveways should meet sight distance requirements.	a. - e. Sight distance lines and distances have been updated per sight distance forms. f. Sight distance evaulation forms have been submitted for all proposed streets and driveways that connect with extisting or proposed public streets.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	9. Storm Drain: INCOMPLETE a. Storm Drain to be designed for ultimate roadway conditions. Thus, the 52-foot wide grass area on Medical Center Drive should be computed as impervious area. b. Provide existing and proposed drainage area map per Montgomery Countys Drainage Design Criteria Manual, Section 2.1.2. i. Show flow paths on existing & proposed drainage maps. ii. Is there a change in the drainage pattern on proposed conditions from existing? c. Identify study points clearly on drainage map. Not clear where these are on the plans submitted i. Per Section 2.1.2: Study point indicating where the point discharge for the drainage area is calculated shall be denoted for each analyzed watershed. d. Where are you tying to on Key West Avenue? and MH1200 is shown to be connected to an inlet on Great Seneca, label this point.	a. - b. Storm drain will be designed for ultimate roadway conditions. 52-foot wide grass area is not entirely impervious area in ultimate condition, but the pipes will be sized appropriately to handle all future conditions. Analysis of the proposed storm drain infrastructure includes the full buildout condition. i. Flow paths added to 14-SD-120200100-001 and 14-SD-120200100-002. ii. - c. Please see 14-SD-120200100-001 and 14-SD-120200100-002 from the 4/2/21 submittal for storm drain analysis pertinent to this development. Storm drain computations included with the 1/27 submittal are no longer relevant, please disregard. d. The applicant no longer intends on tying out to Key West Avenue.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	i. If the design discharge from the site drains to a county-maintained storm drain system and is greater than the existing condition, analyze the complete storm drain system to a point where three consecutive storm drain pipe runs are able to convey the proposed peak design discharge without surcharging the system. ii. If the design discharge from the site drains to a county-maintained storm drain system and is not greater than the existing condition, analyze the complete storm drain system to a point where one consecutive storm drain pipe run is able to convey the proposed peak design discharge without surcharging the system. e. What type of facilities are the proposed CMPs? f. Label proposed pipe sizes on plan.	i. The discharge leaving the site is less than the existing condition. ii. Please see 14-SD-120200100-001 and 14-SD-120200100-002 from the 4/2/21 submittal for storm drain analysis pertinent to this development. Storm drain computations included with the 1/27 submittal are no longer relevant, please disregard. Design discharge is less than the existing condition and the storm drain system has been analyzed to a point where on consecutive storm drain pipe is able to convey the proposed peak design discharge. There are no tie-ins to Key West proposed. e. CMPs are detailed on “12-SWM-120200100-009”. They are corrugated metal pipe vaults. f. Pipe sizes now labeled on prelim plan views where applicable.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	g. Show storm drain easements per Montgomery Countys Storm Drain Manual. i. No structures (CMP) allowed within easement ii. SWM facilities now allowed within storm drain easement h. Recommend culvert on Key West Ave be analyzed for MDSHA approval. i. Provide spread computations for all existing inlets along Great Seneca Highway per Montgomery Countys Drainage Design Criteria Manual, Section 4.2. j. We defer to MDSHA for runoff from the site draining to a storm drain maintained by MDSHA.	g. Storm drain easements added on prelim plan views where applicable. i. Storm drain ties directly into and out of CMP facilities; it is impossible to exclude CMP systems entirely from storm drain easements. Care has been taken to avoid parallel overlap between CMP systems and storm drain easements wherever possible. Rodgers will continue to improve storm drain system into the site plan process and intends to further reduce parallel overlap. ii. - h. Key West Ave culvert is currently being analyzed by MCDPS, via a floodplain study, and will be brought up during the SHA Access Permit required for the MDSHA improvements i. Project reduces flow into the existing public system along Great Seneca Highway. Please see 14-SD-120200100-001 and 14-SD-120200100-002 from the 4/2/21 submittal for storm drain analysis pertinent to this development. Storm drain computations included with the 1/27 submittal are no longer relevant, please disregard. Design discharge is less than the existing condition and the storm drain system has been analyzed to a point where on consecutive storm drain pipe is able to convey the proposed peak design discharge. j. Applicant will coordinate with MDSHA for runoff from the site draining to the Key West Right-of-Way.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	10. We do not support the proposed entrance to parking to building 1 from Medical Center Drive.	Entrance and parking lot to Building 1 Retail has been removed.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	11. The proposed street parking should be at a minimum 35-ft away from intersections including the T-intersection on all streets per Sec 31-17.	Proposed street parking is consistent with Sec 31-17.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	12. The chokers need to be per the DPS standard. https://www.montgomerycountymd.gov/DPS/Resources/Files/Land_Development/MidBlockChokersMode l.pdf	Chokers are in compliance with the DPS Standard.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	13. Existing roadway centerlines should match with the roadway centerline of proposed roadways at both ends.	Existing roadway centerlines confirmed to match the proposed roadways.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	14. A pedestrian path connectivity from the parking space to the sidewalk shall be provided every 40-feet (approximately two parking spaces) between SWM facilities.	Because the SWM facilities do not span long lengths that inhibit access to the parking space from the sidewalk, the applicant does not intend to provide additional path connectivity.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	15. Design all access points and alleys to be at-grade with sidewalk, dropping down to street level between the sidewalk and roadway.	All access points and alleys will be designed to drop down street grade.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	16. Show the separated bike lanes through the intersections.	Separated Bike Lanes through the intersections will be further coordinated and shown at site plan.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	17. Show improved ped/bike connectivity to properties along Darnestown Rd, particularly to the intersections with Travilah Rd as well as Yearling Dr.	Applicant is to propose bike path connectivity to Darnestown Road along the Travilah Road extension. However, the Travilah Road connection can not be made due to the existing pepco sub station. The bike facilities along Blackwell Road are proposed to extent of the applicants property limits, to the maximum extent practicable. The applicant is not proposing bike lane improvements along Darnestown Road, other than along property frontage as required.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	18. Parcel A alleys entrances on Street Cs curve are not acceptable. Show sight distance	Sight distance now analyzed for all proposed entrances.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	19. Construct protected intersections as directed by DTE. Protected intersections are suggested by the Bike Plan at: a. Great Seneca Hwy & Medical Center Dr b. Great Seneca Hwy & Blackwell Rd c. Great Seneca Hwy & Key West Ave d. Street D & Medical Center Dr e. Medical Center Dr & Blackwell Rd f. Medical Center Dr & Key West Ave The protected intersection improvements for the following off-site intersections shall be evaluated during the TIS review: a. Great Seneca Hwy & Darnestown Rd b. Street D & Darnestown Rd	Protected intersections have been studied and will continue to be coordinated, and shown at site plan.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	20. Show the pedestrian ramps across all legs of each intersection within the site.	Pedestrian ramps and legs will be added at site plan.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	21. Upgrade pedestrian facilities at intersections along the site frontage & at adjacent intersections to comply with current ADA standards.	Applicant proposes improved Pedestrian facilities along property frontage. This will continue to be coordinated, and shown at site plan. Coodination within MDSHA ROW will continue to be coordinated through site plan and final engineering.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	22. DTEO should review parking along the inside of curves (Street B and Street C) for potential restrictions. Actual parking locations will be completed during signing and marking stage.	DTEO will be reviewing at final engineering. Parking to be delineated and restricted at that time.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	23. The applicant will need to coordinate with Ms. Darcy Buckley regarding the latest plans for the Corridor Cities Transitway (CCT). Ms. Buckley can be reached at darcy.buckley@montgomerycountymd.gov 240-777-7166.	The applicant reached out to Darcy Buckley in the last year to get the CCT plans and will continue to do so throughout the project.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	24. Ensure curve radii of 15 ft, or as small as practicable to accommodate target design vehicles without intrusion into bicycle or pedestrian travel ways.	Curve radii are designed to 15' or as small as practicable to prevent intrusion into bicycle or pedestrian travel ways.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	25. Ensure adequate corner truncation, noting master planned protected intersections.	Protected intersections have been studied and will continue to be coordinated, and shown at site plan.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	26. Underground utilities and ensure adequate Public Utility Easements.	All necessary Public Utility Easements are shown on plan.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	27. Relocation of utilities along existing roads to accommodate the required roadway improvements shall be the responsibility of the applicant.	Any utility relocation required for roadway improvements will be coordinated as necessary.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	28. Trees in the County rights of way spacing and species to be in accordance with the applicable MCDOT standards. Tree planning within the public right of way must be coordinated with DPS Right-of-Way Plan Review Section.	Proposed tree plantings to be per MCDOT standards and approved/permitted by MCDPS.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	29. If the proposed development will alter any existing streetlights, replacement of signing, and/or pavement markings, please contact Mr. Dan Sanayi of our Traffic Engineering Design and Operations Section at (240) 777-2190 for proper executing procedures. All costs associated with such relocations shall be the responsibility of the applicant.	Any alteration to existing street lighting, signage, or pavements markings will be coordinated with Traffic Engineering Design and Operations.

Cycle	Group Name	Reviewer Name	Review Status	Details	Applicant Response
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	30. Transportation Demand Management (GSG TMD/Orange SSP Area) Applicability of Bill 36-19 Provisions: The project is in the Greater Shady Grove TMD which is within the Orange SSP Area. The project proposes to developer more than 160,000 gross square feet (GSF). An owner or applicant for a new development project in the Orange SSP area with more than 160,000 GSF must submit a project-based Level 3 TDM Results Plan. The Plan must be submitted and approved by MCDOT prior to issuance of any building permit from DPS.	The applicant acknowledges the requirement for the TDM per Bill 36-19 and will coordinate such at final engineering.
2	County Transportation	Brenda Pardo Brenda.Pardo@montgomerycountymd.gov	Revisions Requested	A Level 3 TDM Results Plan must include the following: □ Appoint a Transportation Coordinator (TC) □ Notify the Department within 30 days of receipt of final U&O certificate of TCs contact information and within 30 days of any changes in contact information □ Provide space in the project for the promotion of TDM □ Display TDM-related information in highly visible location(s) □ Identify specific TDM actions to be implemented in order to achieve a base NADMS that is 5% above the TMD commuter goal (12.5% transit for employees and 35% transit in SG Metro Station Policy Area for residents and 25% transit outside the SGMSPA) □ Conduct independent monitoring to determine if the project is meeting its goals, until the projects goals are achieved □ Select additional or substitute strategies if those initially selected by owner/applicant do not result in the project achieving its goals by 6 years of final occupancy □ Commit additional funding if the project has not actually achieved the goal within 6 years of final occupancy □ Provide higher additional funding if the project has not achieved the goal within 8 years of final occupancy □ Conduct independent monitoring to determine if the project is meeting its goals, until the projects goals are achieved	The applicant acknowledges the requirement for the TDM per Bill 36-19 and will coordinate such at final engineering.

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CORPORATE OFFICE
Baltimore, MD
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410.931.6600
fax: 410.931.6601
1.800.583.8411

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April 15, 2021

Ms. Erica Rigby
Acting District Engineer
MDOT SHA, District 3
9300 Kenilworth Avenue
Greenbelt, MD 20770

Attn: Mr. Kwesi Woodroffe

RE: PSTA Site
MDOT SHA Tracking No. 20APMO011XX
Our Job No.: 2019-0201

Dear Ms. Rigby:

This letter has been prepared to provide responses to your letter dated May 7, 2020, in reference to the review of the Traffic Impact Analysis for the PSTA Site dated January 9, 2020. This letter accompanies the revised report with the changes that have been made in response to the comments discussed below.

Access Management Division (AMD) Comments (Prepared by Crystal Hughes):

Comment No. 1 – There is an existing access permit 19-AP-MO-043-XX for the MD 119 and Decoverly Drive Improvements project. The improvements are a result of an agreement between Alexandria Real Estate Equities, Johns Hopkins University, and Adventist Healthcare. This project includes widening of the left travel lane on the westbound side of MD 119. The proposed widening will carry the three, 12-foot wide westbound thru lanes from the MD 119 and MD 28 intersection (mile point: 0.00) to the northbound Sam Eig Hwy Ramp (mile point: 0.51). When resubmitting, please consider using the described lane configuration to revise the MD 119 and Decoverly Lane intersection analysis.

Response No. 1 – The revised Traffic Impact Analysis has taken the addition of the third westbound travel lane into consideration.

MDOT SHA Regional & Intermodal Planning Division (RIPD) Comments (Prepared by Darren Bean):

Comment No. 2 – Please note the State's fiscally constrained FY 2020–2025 Consolidated Transportation Program (CTP) includes projects under construction and/or development and evaluation. The CTP includes no projects affecting MDOT SHA facilities analyzed in this TIS.

Response No. 2 – So noted.

Comment No. 3 – Please note the State's fiscally unconstrained Highway Needs Inventory (HNI), the State's long-range plan, includes projects that are critical to Maryland's transportation needs. The HNI includes an urban divided reconstruct (including interchanges) along MD 119 (Great Seneca Highway) reconstructing four lanes to a four-lane divided closed section from MD 28 to Middlebrook affecting MDOT SHA facilities analyzed in this TIS. If and when such improvements proceed, they may affect right-of-way.

Response No. 3 – So noted.

Comment No. 4 – Please note transit providers Montgomery County Ride On serve the development site. All roadway improvements to MDOT SHA roadway facilities should provide for and maintain full ADA-compliant access to transit facilities.

Response No. 4 – So noted.

Comment No. 5 – Please note the December 2018 M-NCPPC Bicycle Master Plan, as amended, includes a proposed side path along MD 119 (Great Seneca Highway) on both sides from MD 28 (Key West Ave) to Darnestown Rd. All roadway improvements to MDOT SHA roadway facilities should provide for and maintain bicycle facilities as well as full ADA-compliant pedestrian facilities.

Response No. 5 – So noted.

MDOT SHA Traffic Development & Support Division (TDSD) Comments (Prepared by Naizhong Cui):

Existing Traffic Conditions:

Comment No. 6 – TDSD concurs with the selected study intersections, but do recommend including Travilah Road at Darnestown Road due to its vicinity.

Response No. 6 – The scope for the subject traffic study was based on a Scoping Agreement that was approved by M-NCPPC. The intersection of Darnestown Road and Travilah Road was not noted as one of the study area intersections. The location of the Darnestown Road and Travilah Road intersection and its relationship to the subject property will not be significantly impacted by traffic from this site.

Comment No. 7 – TDSD concurs with the existing lane configuration and traffic volume counts.

Response No. 7 – So noted.

Comment No. 8 – TDSD concurs with the pedestrian, transit and bicycle facilities analysis.

Response No. 8 – So noted.

Background Traffic Conditions:

Comment No. 9 – On Table 2, Trip Generation for Background Developments on page 19, please specify the reasons of applying adjusted trip percentages for those developments.

Response No. 9 – Montgomery County M-NCPPC guidelines require that trip generation be adjusted to reflect the policy area in which the study project is located. These adjustments have been applied to the background and site generated traffic in accordance with the M-NCPPC guidelines.

Total Traffic Conditions:

Comment No. 10 – On Table 3, Trip Generation for PSTA Site on page 24, please specify the reason of applying adjusted trip percentage.

Response No. 10 – See response to Comment No. 9.

Comment No. 11 – TDSD concurs with the CLV and HCM analyses within Table 4A and 4B.

Response No. 11 – So noted.

Traffic Signal Warrant Evaluations:

Comment No. 12 – Within Appendix E, please specify the sources of diurnal rate for different developments.

Response No. 12 – The diurnal rates used for the traffic signal warrant evaluations were based on studies conducted of similar type land uses.

Results, Recommendations, and Conclusions:

Comment No. 13 – TDSD concurs with all the findings but does recommend performing additional intersection improvement study on Great Seneca Highway at Decoverly Drive, since traffic signal is not warranted and it will operate exceeding the acceptable level. Reconfiguring Maryland T-intersection design can be a good analysis starting point.

Response No. 13 – It should be noted that with the planned improvements previously discussed in this letter at the Great Seneca Highway and Decoverly Drive intersection, this intersection is projected to operate at an unacceptable level of service. Mitigating measures were considered in the revised report and signalization would be warranted based on the southbound left turn volume. This project does not contribute any traffic to the failing movements, which is the southbound left turn, and only contributes 2% of the traffic to this already failing intersection. See revised report for suggested mitigation.

MDOT SHA District 3 Traffic Comments (Prepared by Jack Goode):

Comment No. 14 – We agree with the findings and recommendations. Please submit Design Requests to MDOT SHA OOTS for the three (3) proposed traffic signal locations including Key West Avenue/Medical Center Drive, Great Seneca Highway/Blackwell Road, and Great Seneca Highway/Medical Center Drive.

Response No. 14 – Design request for the proposed traffic signal installations will be submitted when approval for this project by M-NCPPC has been granted. Doing so prior to approval would be premature.

MDOT SHA Travel Forecasting & Analysis Division (TFAD) Comments (Prepared by Scott Holcomb):

Comment No. 15 – The trip generation in the report is in accordance with the ITE Trip Generation 10th Edition and LATR guidelines.

Response No. 15 – Agreed.

Comment No. 16 – TFAD recommends performing additional operational analysis at Great Seneca Highway and Decoverly Drive. Would the left turn volume from MD 119 into Decoverly Drive meet signal warrants? The HCM analysis shows that the queues for this movement will exceed available storage in the PM peak. Mitigation should be considered for this movement.

Response No. 16 – In order to achieve acceptable levels of service at this intersection, it is necessary for the installation of a traffic signal as shown in this report. With the installation of a signal, adequate storage space will exist at this intersection. Furthermore, it should be noted that the development of the PSTA Site will add no additional left turn movements along MD 119 at this location.

Comment No. 17 – TFAD recommends that the report include discussion of lane configurations (lane designations and queue storage needs) at the site access point to MD 119, and the Medical Center Drive accesses to MD 119 and MD 28 as they provide access to site from the major roadways.

Response No. 17 – Figure 10 shows the future lane use required at each of the above intersections. Table 4C shows that each of the existing intersections has sufficient storage space with the exception of the northbound left turn approach at Blackwell Road, which currently does not have one.

Comment No. 18 – The site description on Page 22 describes two direct access points to MD 119, but only one appears to be provided. This should be clarified. Also, with the extension of Medical Center Drive, will the old direct access to Darnestown Road be used (it is currently closed)?

Response No. 18 – The report describes two direct access points to MD 119. As a point of clarification, the report has been revised to state that the first access along MD 119 is opposite Blackwell Road and the second direct access point is a result of the extension of Medical Center Drive to the south, to the intersection with MD 119.

M-NCPPC Department of Planning: Transportation Study Review Comments (Prepared by Patrick Reed, May 29, 2020):

Comment No. 1 – Page 11 – In Plan note one, confirm if the measurement followed the angled orientation of the crosswalks as not all crosswalks are perpendicular to both of a leg's curblines. Amend the plan not as necessary for clarity.

Response No. 1 – Yes, this is confirmed.

Comment No. 2 – Page 11 – In Plan note four, confirm the calculation for "available time." Does it include the only the time dedicated to pedestrian phase?

Response No. 2 – Yes, this is confirmed.

Comment No. 3 – Page 18 – Add ITE's R-squared value next to uses where the fitted curve is applied. R-squared value must be .75 or above; otherwise we suggest application of average rates. In locations where approved projects have associated approved studies, the trip generation studies from those projects should be used rather than ITE. Please make it clear when trip generation rates from approved studies are used.

Response No. 3 – The Trip Generation Tables (Tables 2 and 3) have been adjusted accordingly.

Comment No. 4 – Page 19 – Please remove the morning pass-by trip reduction from the Crown Farm property.

Response No. 4 – Morning pass-by trips for the Crown Farm have been removed

Comment No. 5 – Page 22 – Based on conversations to date, the Applicant is proposing to construct Medical Center Drive with *one* travel lane in each direction (although there will be 20 feet of cartway on either side of a central median, which could accommodate two lanes of travel). Update the study and warrant analyses to show only one lane of travel, and note the change where appropriate in the narrative.

Response No. 5 – Text has been revised accordingly. No analysis is impacted by this change.

Comment No. 6 – Page 24 – Trip generation appears to be slightly off. Adjustment factors should be applied against the total for each land use category to avoid rounding issues. Additionally, the retail trips need to be accounted for—we do not accept them as an ancillary use here. We note that the pass-by rate squeezes the applicant just south of the bicycle adequacy test in the afternoon.

Response No. 6 – Trip generation has been adjusted accordingly.

Comment No. 7 – Page 27 – While it may be true that the subject site does not significantly impact the intersection of Great Seneca Highway and Decoverly Drive (per plan note 3), mitigation needs are based on total traffic conditions, and the intersection must be mitigated. Please propose mitigation.

Response No. 7 – The revised report considers the signalization of this intersection as discussed previously. Because this project does not contribute any traffic to the failing movements and only contributes 2% of the traffic to this intersection, it is suggested that the proposed mitigation would be that the applicant designs the traffic signal which would be installed by others.

Comment No. 8 – Page 27 & 28 – The intersection of Great Seneca Highway and Key West Avenue is operating just under acceptable delay per HCM standards, and exceeds the CLV standard. While it may be true that the subject site does not significantly impact the intersection, mitigation needs are based on total traffic conditions and the intersection must be mitigated. Please propose mitigation.

Response No. 8 – The report has been revised to include mitigation at this intersection.

Comment No. 9 – Page 30 – The 2017 LATR Guidelines updated the pedestrian adequacy test and focus on pedestrian delay. The LATR Guidelines are a bit unclear regarding this test, and the Planning team has identified this element of the Guidelines as a location that requires updates in forthcoming editions. All this said, the LATR Guidelines state: "*The approach to defining adequacy considers pedestrian delay only. This consideration is due to the level of complexity with intersection signal timing and phasing in the areas of the county likely to generate significant pedestrian trips.*" Staff is interested in what ITE calls, "Holding Area Wait Time" for signalized intersections. The associated pages of ITE are attached for reference. Please compute pedestrian delay (i.e. "Holding Area Wait Time") for signalized crossings. Please do not weight delay by the number of pedestrians at each crossing. In other words, use the following equation:

$$\mathbf{d_p = (C - g_{walk,mi})^2 / 2C}$$

d_p = pedestrian delay
C = cycle length
$g_{walk,mi}$ = effective walk time

Effective walk time calculations are on the attached sheets from ITE. For unsignalized locations, propose a method to determine pedestrian average wait times during peak hour. Field studies may best depict conditions for single pedestrians attempting to cross the street.

Response No. 9 – The revised report has been modified to address the above methodology.

Comment No. 10 – Appendices – Based on the signal warrant analyses, it appears that a signal is warranted at Key West Avenue & Johns Hopkins Drive/Medical Center Drive as stated by the Applicant. It also appears that signals are warranted at Great Seneca Highway & Blackwell Road, and Great Seneca Highway & Medical Center Drive. We defer to MCDOT as lead agency, but strongly believe that satisfaction of at least warrants #2 and #2 justify the need for traffic signals.

Response No. 10 – These findings are consistent with the findings of the report.

MDOT SHA District 3 Traffic Comments (Prepared by Alex Yelin):

Comment No. 1 – District 3 Traffic has no concerns or comments regarding the proposed MD 119 right-in-right-out connection.

Response No. 1 – The access points along MD 119 are recommended to be full movement intersections with traffic signalization.

Comment No. 2 – Please conduct a sight distance analysis for the proposed MD 28 connection. The grade to the west of the proposed entrance is a concern for this connection.

Response No. 2 – This connection to MD 28 for Street A is not recommended as part of the site plan.

Comment No. 3 – District 3 Traffic would prefer the proposed MD 28 connection be a right-in-right-out if sight distance is inadequate for left turns.

Response No. 3 – See response to Comment No. 2.

Comment No. 4 – Please revise the TIS to include the additional access points and delay submitting any DRs until an updated TIS is approved.

Response No. 4 – See response to Comment No. 2.

MDOT SHA Travel Forecasting & Analysis Division (TFAD) Comments (Prepared by Scott Holcomb):

Comment No. 1 – TFAD does not have any specific comments on the newly proposed access locations, but notes that the TIS done earlier in 2020 did not include these access points, and that there were several outstanding comments on intersection operations that we had from that report. Will a new TIS be produced with the added access points?

Response No. 1 – The revised analysis does not include the MD 28 access point at Street A due to operational concerns.

MDOT SHA Regional & Intermodal Planning Division (RIPD) Comments (Prepared by Kandese Holford):

Comment No. 1 – Please note the M-NCPPC May 2010 Great Seneca Science Corridor Master Plan and December 2018 Master Plan of Transitways and Highways recommend the subject connections as part of the Corridor Cities Transitway (CCT). In 2019, the CCT, a former MDOT MTA CTP project, was removed from MDOT's FY 2019-2024 CTP.

Response No. 1 – So noted.

Comment No. 2 – Finally, RIPD recommends Montgomery Planning also coordinate with John Hoobler at MCDOT and Derek Gunn at District 3 Traffic regarding any current or planned studies or projects, should any exist.

Response No. 2 – So noted.

MCDOT Comments:

Comment No. 1 – Figure 2, Existing Lane Use, Page 7 – Southbound Johns Hopkins Dr lanes are a right only and left only as indicated by the existing pavement markings.

Response No. 1 – With the construction of the driveway to the office complex on the southside of MD 28, the southbound pavement markings in the field are incorrect and should be revised.

Comment No. 2 – Table 1, Page 11 – Some of the clearance times under the "Total Clearance Time for Associated Vehicle Phase" column do not match the sum of the yellow and red time as indicated by the HCS7 summaries in Appendix B. For example, Table 1 shows the south leg of Key West Ave and Darnestown Road having a Total Clearance Time of 4.5 seconds, but the HCS7 summary (Page 1 of Appendix B) shows 6 seconds. Please update.

Response No. 2 –The revised report has been adjusted so that their values now match.

Comment No. 3 – Figure 9, Page 26 – Why aren't there any anticipated trips generated for the through movements across Great Senecca Highway between Blackwell Road and the Site Access and between the existing Medical Center Drive and the proposed Medical Center Drive extension?

Response No. 3 –While it is possible that some traffic may choose to make these movements, it would be expected that the volume would be very minor and not have an impact on the analysis.

Comment No. 4 – Page 31 – The traffic signal warrant analysis determined two signals would be warranted at the site access points along Great Senecca Highway at Blackwell Drive and Medical Center Drive. However, no recommendation is made whether to include the signals or not. If the two signals satisfy the warrants at these locations, then they should be built with the development.

Response No. 4 –It is recommended for signals to be installed at both intersections.

Comment No. 5 – Page 32 – The TIS analysis indicates that 75 pedestrian trips (non-motorized and transit combined) are generated from the PSTA development and a quantitative pedestrian analysis is required. However, the report contains no recommendations to construct, fix, or fund any ADA facilities as mitigation. New sidewalk should be considered along the west side of Great Senecca Highway along the frontage of the subject site.

Response No. 5 –Sidewalks and the possible need for ADA facilities along the property frontage are site plan issues and will be dealt with accordingly. The new traffic signals will be designed to provide the appropriate ADA compliant equipment.

Comment No. 6 – Appendix A, Page 9 – The proposed site plan shows a partial completion of the Medical Center Drive extension by building a two-lane road, however, the full construction of the dedicated Corridor Cities Transitway (CCT) should coincide with the construction of the development.

Response No. 6 – From a traffic perspective, a two-lane roadway is sufficient for the development within the PSTA site. Moreover, the applicant is being asked to and plans to dedicate the 150-foot right-of-way through the length of the site. This is 17% of the site, over 7.3 acres of roadway dedication. Furthermore, the applicant is constructing a significant portion of the right-of way elements: two 10-foot bike paths, the 10-foot LSC Loop Trail, a 6-foot sidewalk, two 12-travel lanes (to accommodate MCFRS), and the tree panel and median. The request of this applicant to build the additional two lanes, when not required by the traffic generated by this site, after the significant dedication and construction, places an undue burden on the applicant and should not be required as part of this project.

Comment No. 7 – Appendix A, Page 9 – The proposed site plan seems to indicate that Street D will eventually be connected to the Darnestown Road/Travilah Road intersection. Why was this intersection omitted from the trip distribution and assignments?

Response No. 7 – The intersection was not included in the analysis because the connection will not be made as part of this project. There is a Pepco electric substation in the way of this road connection. To move this Pepco substation is a tremendous undertaking which will need to be addressed in the future.

Comment No. 8 – Appendix B, Page 5 – At MD 28 & Darnestown Road, the EBR 95% queue length during the AM will exceed the storage length under Total Conditions. The HCS7 Summary indicates a queue storage ratio of 1.66 and a queue length of 581.1 ft. Additionally, the 95th percentile queue is already exceeded under existing conditions. Provide solutions.

Response No. 8 – Upon review of the analysis, it was determined that an error existed in the analysis relating to the existing eastbound right turn overlap. With the adjustment, the right turn lane extends beyond the thru queue along MD 28. Therefore, queuing is no longer an issue for the right turn movement.

Comment No. 9 – Appendix B, Page 26 – At MD 28 & MD 119, the EBL 95% queue length during the PM will exceed the storage length under Total Conditions. The HCS7 Summary indicates a queue storage ratio of 2.53 and a length of 632.5 ft/ln. Provide solutions.

Response No. 9 – This intersection requires the addition of a third southbound left turn lane along MD 119 to maintain an acceptable level of service with or without the PSTA site. With this improvement, the eastbound queuing will be reduced significantly. The left turn lane could then be extended to achieve acceptable storage space. The impact of this site will only increase by 2%; however, the developer agrees to design the improvements as necessary, to be implemented by others.

Comment No. 10 – Appendix B, Page 44 – Great Seneca Highway & Darnestown Road, EBL 95% queue length during the PM will exceed the storage length under Total Conditions. The HCS7 summary indicates a queue storage ratio of 1.10 and a queue 547.8 ft. The storage ratio should be a lot higher as the full width of the marked left turn lane is only about 125 ft. The remaining queue length spills into the shared left turn lane and should not be counted as storage length. Provide solutions.

Response No. 10 – The storage space could be extended with restriping of the existing left turn lane and sufficient storage space could be provided.

Comment No. 11 – Page 2 – Two intersections do not operate at acceptable levels of service: Key West Ave & Medical Center Dr requires a traffic signalization to achieve adequacy & Great Seneca Hwy & Decoverly Dr is below standard. Applicant states "no reasonable improvements can be implemented to correct this minor impact and a traffic signal is not warranted." We do not agree with this statement, refer to comment 4.

Response No. 11 – The revised study identifies the need for signalization of both intersections. The applicant will design and construct the signal at Medical Center Drive and Key West Avenue (as well as Medical Center Drive and Great Seneca Highway and Blackwell Road and Great Seneca Highway). Traffic from the sites does not contribute to the already failing condition at Great Seneca Highway and Decoverly Drive and adds only 2% of the total traffic to this intersection.

Comment No. 12 – Medical Drive is anticipated to be constructed as two lanes per letter in April 1, 2019 in appendix A (Check). We do not agree with this letter. The letter only takes into account the site; however, the road is classified as an Arterial Road. We recommend the applicant dedicate 150 feet and construct the roadway to conform with the master plan.

Response No. 12 – From a traffic perspective, a two-lane roadway is sufficient for the development within the PSTA site. Moreover, the applicant is being asked to and plans to dedicate the 150-foot right-of-way through the length of the site. This is 17% of the site, over 7.3 acres of roadway dedication. Furthermore, the applicant is constructing a significant portion of the right-of way elements: two 10-foot bike paths, the 10-foot LSC Loop Trail, a 6-foot sidewalk, two 12-travel lanes (to accommodate MCFRS), and the tree panel and median. The request of this applicant to build the additional two lanes, when not required by the traffic generated by this site, after the significant dedication

and construction, places an undue burden on the applicant and should not be required as part of this project.

Comment No. 13 – Page 22 – Report states the intersection of Key West Ave & John Hopkins will require signalization. Appendix E indicates the traffic signal is warranted. Timing of the traffic signal needs to be agreed to by MCDOT.

Response No. 13 – The timing of the traffic signal installation will be coordinated with MCDOT and MDOT SHA and will be installed when warranted.

Comment No. 14 – Page 23 – The report states "At the intersection of Great Seneca Highway and Decoverly Drive, the unsatisfactory delay is triggered by the background development and the subject site will have a minimum impact. This intersection is currently operating under stop sign control. Only a traffic signal can solve the delay for the minor approach. However, upon review of the total left turn traffic volume, it is unlikely that a traffic signal would be warranted." These are conflicting mitigations, is a signal required or not? Provide mitigation if site is contributing more to this intersection failing. Provide the numbers in order for staff to better understand the situation.

Response No. 14 – The revised report indicates the need for signalization based on the southbound MD 119 left turn movement as discussed previously. However, this project does not add traffic to the failing condition and contributes 2% of the traffic to this intersection. Proposed mitigation would be that the applicant designs the traffic signal, which would be installed by others.

Comment No. 15 – Page 31 – An analysis was then conducted for access points along Great Seneca Highway at Blackwell Drive and at Medical Center Drive. The results of these analyses indicate that traffic signals would be warranted at both of the site access locations along Great Seneca Highway based on the minimum requirements outlined in the Manual for Uniform Traffic Control Devices (MUTCD) with the complete development of the site. Applicant should build both traffic signals. The timing of the signals needs to be determined.

Response No. 15 – The report acknowledges the need for signalization. The timing of the installations will be resolved at a later date based on the sequence of development for the subject site.

Comment No. 16 – Intersection of Key West Ave (MD28) & John Hopkins exceeds HCM delay and no mitigation provided. Recommend traffic signal.

Response No. 16 – This intersection will operate at acceptable levels of service with Medical Center Drive and the installation of the traffic signal.

Comment No. 17 – Intersection of Great Seneca Hwy(MD119) & Decoverly Drive exceed HCM delay threshold. No mitigation proposed. Recommend traffic signal.

Response No. 17 – The revised report acknowledges the need for signalization of this intersection. However, this project does not add traffic to the failing condition and contributes 2% of the traffic to this intersection. Proposed mitigation would be that the applicant designs the traffic signal, which would be installed by others.

Comment No. 18 – Intersection of Great Seneca Highway and Blackwell Rd should be right in and right out. Otherwise provide traffic signal.

Response No. 18 – It is recommended that this location allow for all movements and will be signalized.

Comment No. 19 – Intersection of Great Seneca Highway and Medical Center Drive need to be signalized.

Response No. 19 – Agreed.

All of the above responses have been incorporated into the revised report. We believe these responses and the revised report address all of the outstanding issues at this time.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Glenn E. Cook
Senior Vice President

CC: Patrick Reed
Rebecca Torma

GEC:amr

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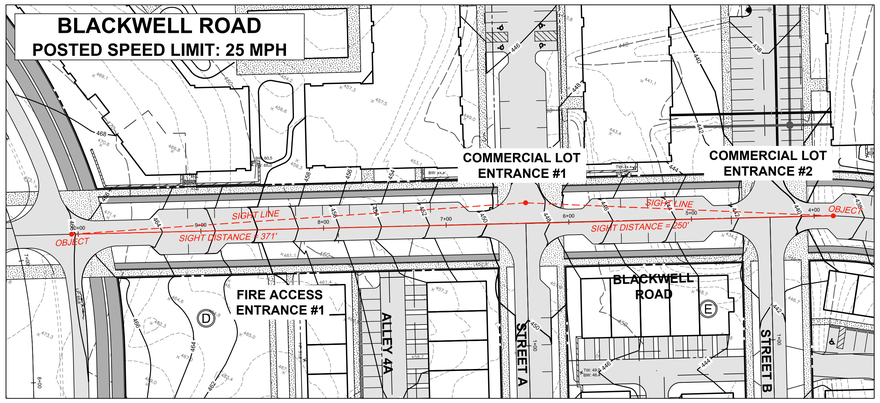

GRAPHIC SCALE

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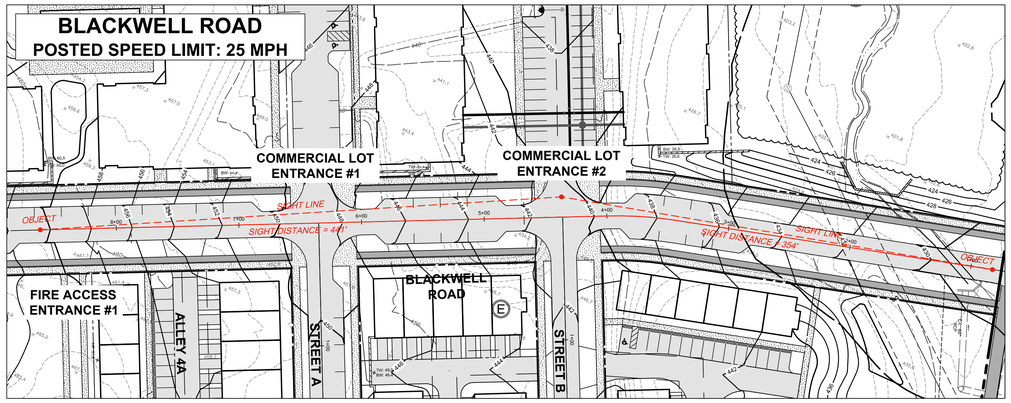

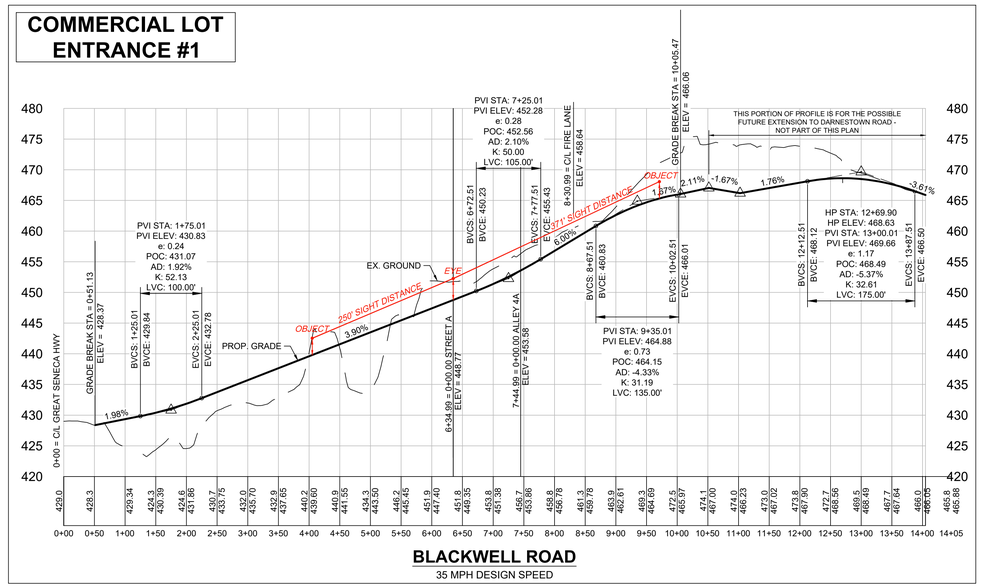

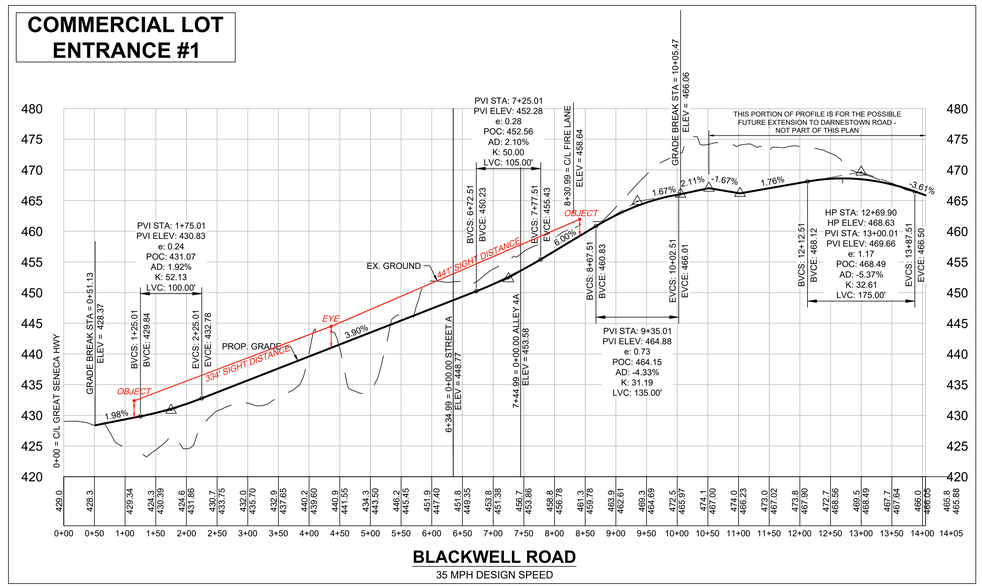

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Blackwell Road — Master Plan Road Classification: Business

Posted Speed Limit: 30 mph

Street/Driveway #1 (Commercial Lot Entrance #1)			Street/Driveway #2 (Commercial Lot Entrance #2)		
Sight Distance (feet)		OK?	Sight Distance (feet)		OK?
Right	250'	Y	Right	441'	Y
Left	371'	Y	Left	354'	Y
Comments: Sight distance sufficient in both directions			Comments: Sight distance sufficient in both directions		

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

I hereby certify that this information is accurate and was collected in accordance with these guidelines.

T. Neil Blanc — Signature — 5/14/21 — Date

50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:

☐ Approved

☐ Disapproved:

By: _____

Date: _____

Form Reformatted: March, 2000

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 32599, Expiration Date: 1/22/22."

REVISION	DATE	REVISION	DATE	REVISION	DATE

APPLICANT:
THE ELMS AT PSTA, LLC

ATTN: KATHRYN KUBIT
1355 BEVERLY ROAD, SUITE 240
MCLEAN, VA 22101
PHONE: (703) 734-9730
EMAIL: kkubit@elmstreetdev.com

OWNER:
MONTGOMERY COUNTY

EOB 101 MONROE STREET
ROCKVILLE, MD 20850

PSTA SITE

PARCEL 850, L.4047 F.003, PARCEL 925, L.3862 F. 772 AND PART A, L.16172 F.223
ELECTION DISTRICT No. 9
MONTGOMERY COUNTY, MARYLAND

RODGERS CONSULTING
19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

RODGERS CONTACT:

RELEASE FOR _____ ☐

BY _____ DATE ____

SIGHT DISTANCE ANALYSIS BLACKWELL ROAD

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 1 of 3

PRELIMINARY NOT FOR CONSTRUCTION

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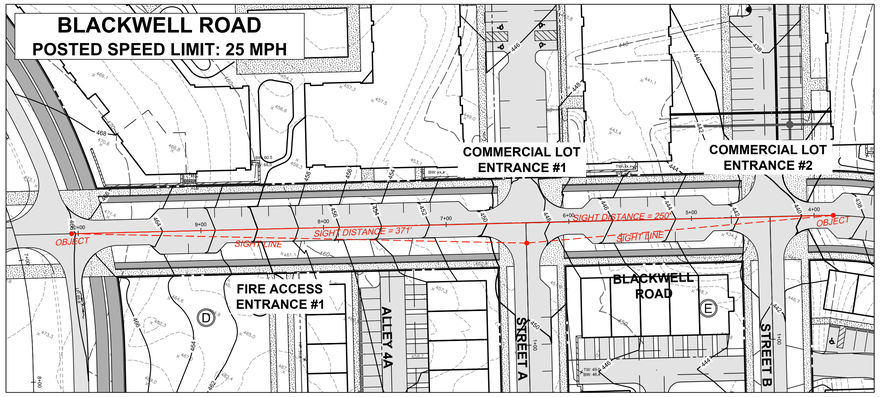

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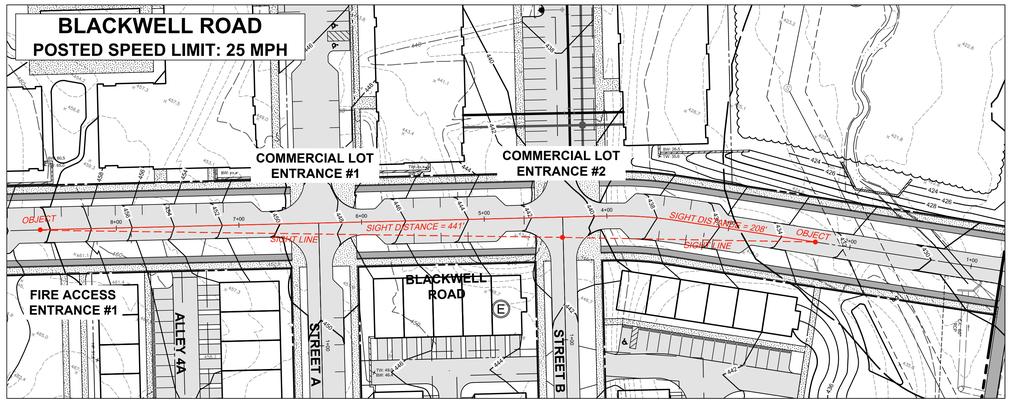
1 INCH = 50 FT



MONTGOMERY COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site Preliminary Plan Number: **120200100**

Street Name: Blackwell Road Master Plan Road Classification: Business

Posted Speed Limit: 30 mph

Street/Driveway #1 (Street A)			Street/Driveway #2 (Street B)		
	Sight Distance (feet)	OK?		Sight Distance (feet)	OK?
Right	250'	Y	Right	208'	Y
Left	371'	Y	Left	441'	Y
Comments:	Sight distance sufficient in both directions		Comments:	Sight distance sufficient in both directions	

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

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T. Neil Blanc 5/14/21
Signature Date

50010
PLS/P.E. MD Reg. No.

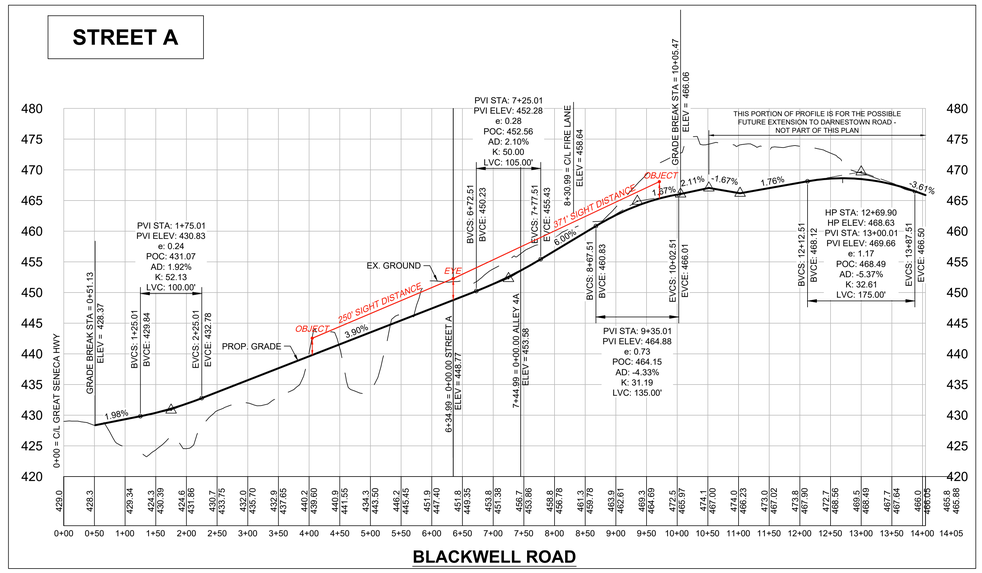
Montgomery County Review:

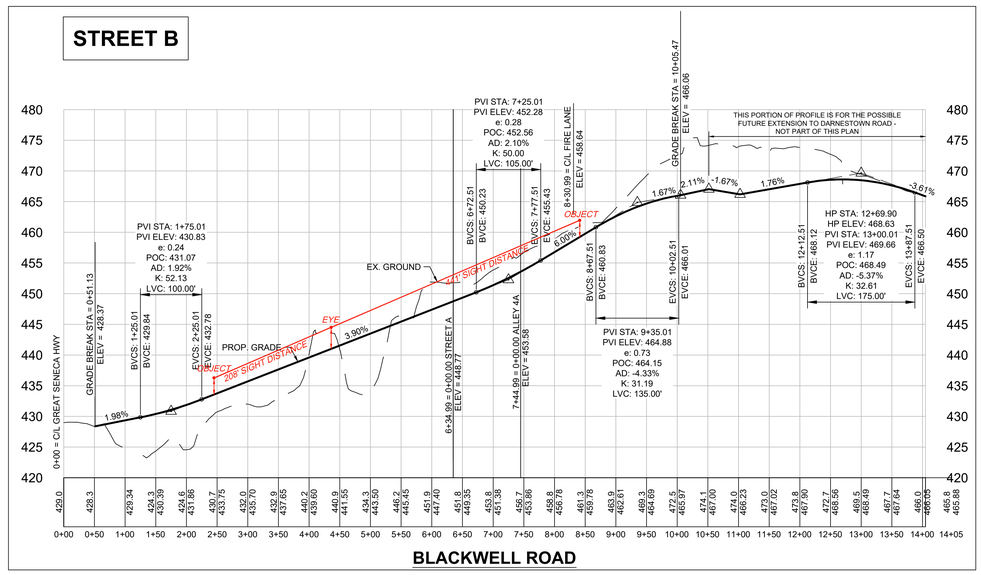
☐ Approved
☐ Disapproved:

By: _____

Date: _____

Form Reformatted: March, 2000





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REVIEWED		

RODGERS CONTACT:

RELEASE FOR _____ ☐

BY_____ DATE ____

SIGHT DISTANCE ANALYSIS BLACKWELL ROAD

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 2 of 3

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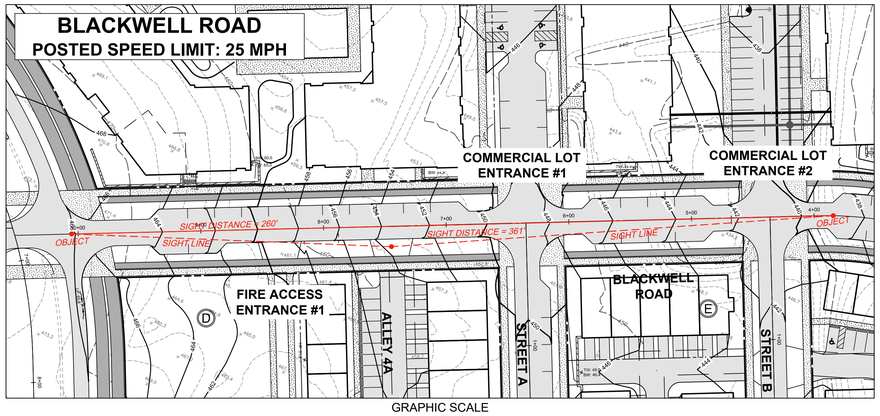

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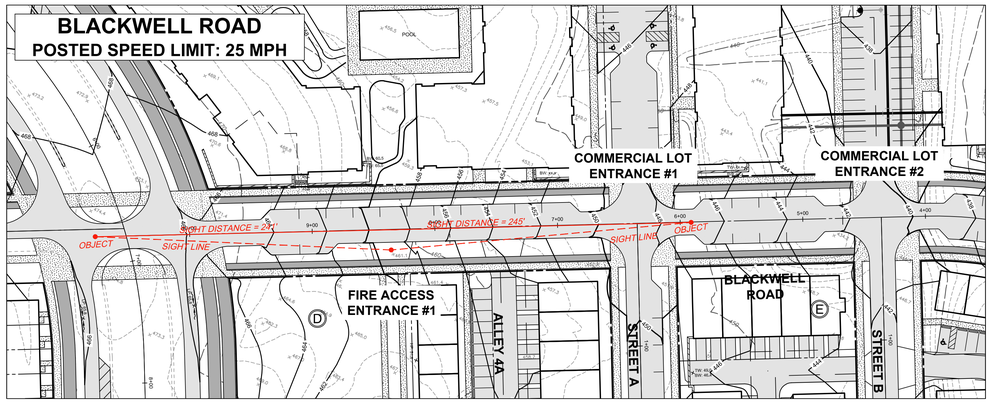

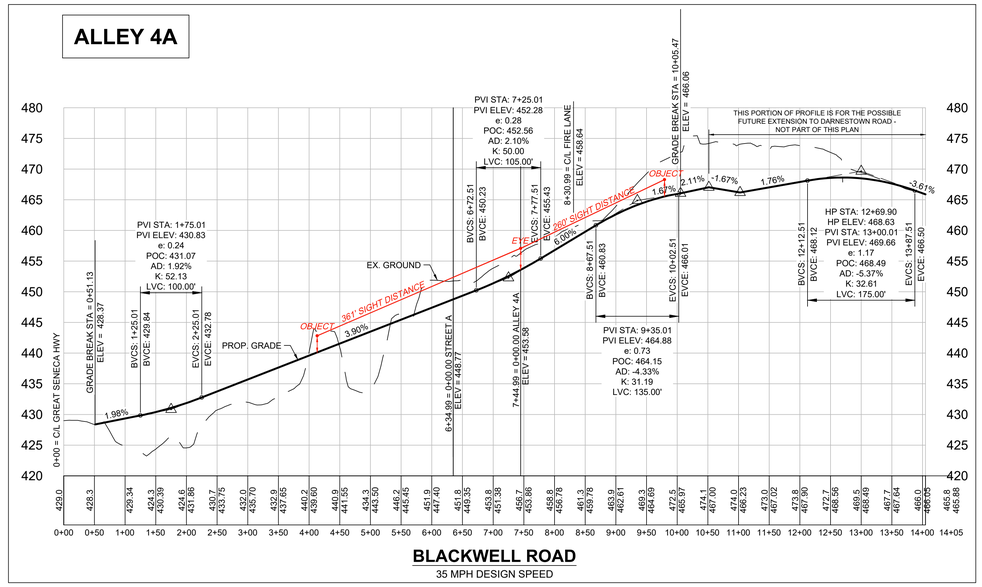

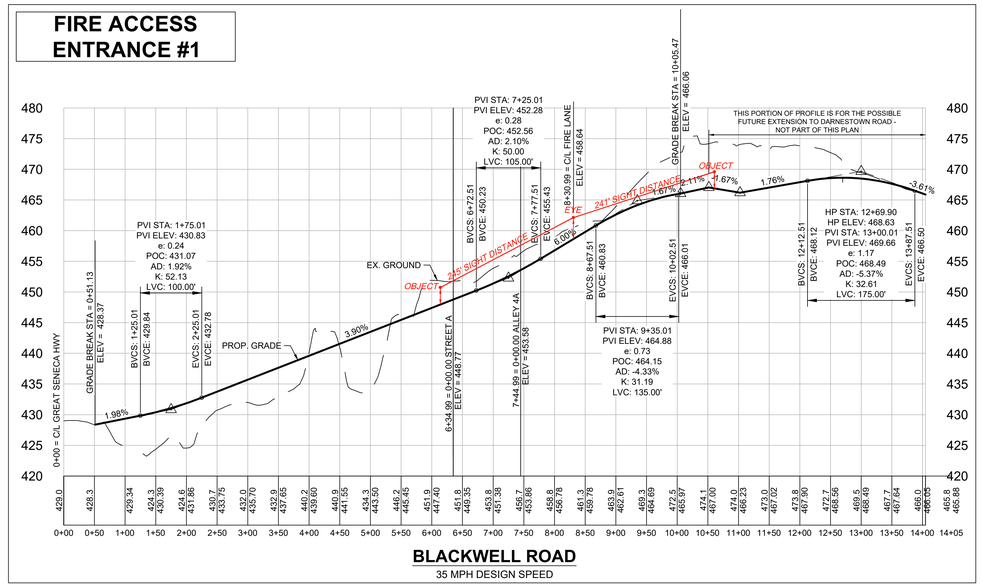

MONTGOMERY COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site
Preliminary Plan Number: 120200100
Street Name: Blackwell Road
Master Plan Road Classification: Business
Posted Speed Limit: 30 mph

Street/Driveway #1 (Fire Acces Entrance)

Sight Distance (feet)	OK?
Right 245'	Y
Left 241'	Y

Comments: Sight distance sufficient in both directions

Street/Driveway #2 (Alley 4A)

Sight Distance (feet)	OK?
Right 361'	Y
Left 260'	Y

Comments: Sight distance sufficient in both directions

GUIDELINES

Classification or Posted Speed (use higher value)	Required Sight Distance in Each Direction*
Tertiary - 25 mph	150'
Secondary - 30	200'
Business - 30	200'
Primary - 35	250'
Arterial - 40	325'
(45)	400'
Major - 50	475'
(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

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5/14/21 — Date
50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:
☐ Approved
☐ Disapproved:
By: _____
Date: _____

Form Reformatted: March, 2000

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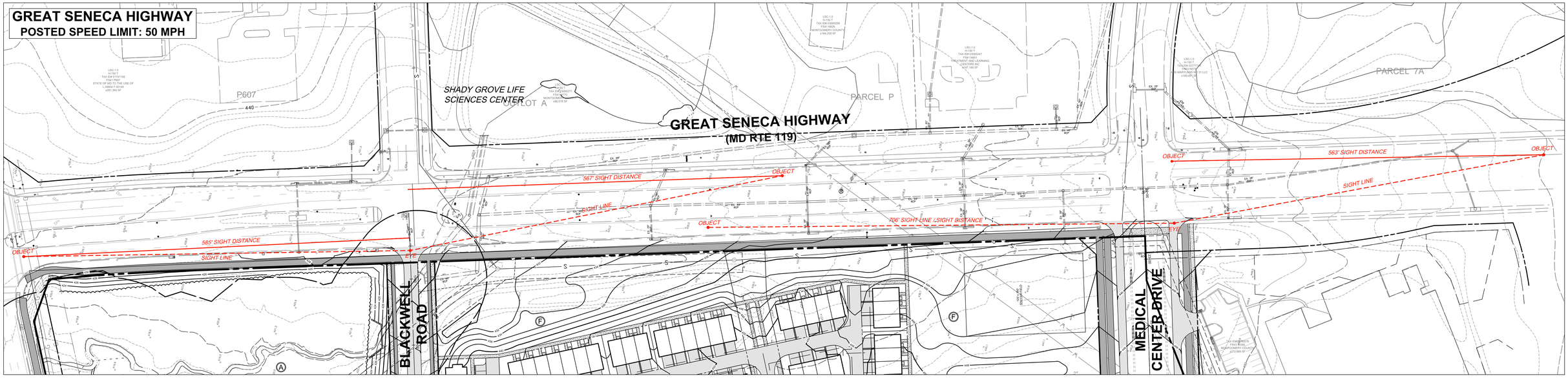
	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

RODGERS CONTACT:
RELEASE FOR ☐
BY_____ DATE ____

SIGHT DISTANCE ANALYSIS BLACKWELL ROAD

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 3 OF 3

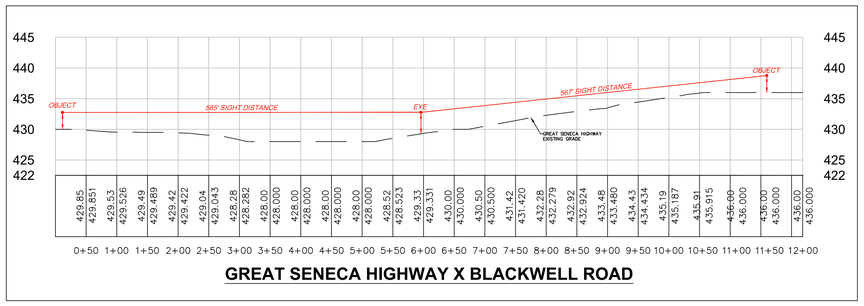
N:\MD-Montgomery\PSTA\subdiv\Plat Plans\Exhibits\Sight Distance Evaluation\PSTA SDA Plan.dwg SDA - Blackwell 3 May 14, 2021, 3:48pm



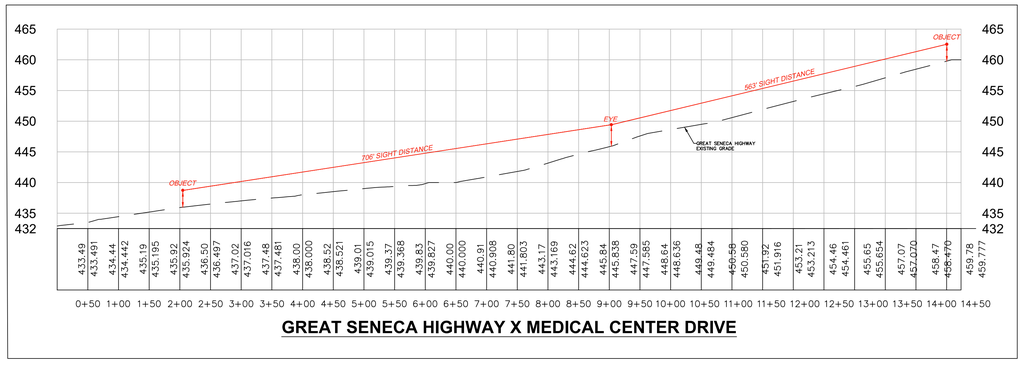
GRAPHIC SCALE

60' 0 30' 60' 120' 240'

1 INCH = 60 FT



GREAT SENECA HIGHWAY X BLACKWELL ROAD



GREAT SENECA HIGHWAY X MEDICAL CENTER DRIVE

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site
Preliminary Plan Number: **120200100**
Street Name: Maryland State Route 119 (Great Seneca Highway)
Master Plan Road Classification: Major
Posted Speed Limit: 50 mph

Street/Driveway #1 (Blackwell Road)			Street/Driveway #2 (Medical Center Drive)		
	Sight Distance (feet)	OK?		Sight Distance (feet)	OK?
Right	575'	Y	Right	569'	Y
Left	585'	Y	Left	706'	Y
Comments:	Sight distance well in excess of requirement		Comments:	Sight distance well in excess of requirement	

GUIDELINES

Classification or Posted Speed (use higher value)	Required Sight Distance in Each Direction*
Tertiary - 25 mph	150'
Secondary - 30	200'
Business - 30	200'
Primary - 35	250'
Arterial - 40	325'
(45)	400'
Major - 50	475'
(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

I hereby certify that this information is accurate and was collected in accordance with these guidelines.

T. Neil Blanc — Signature
5/14/21 — Date
50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:
☐ Approved
☐ Disapproved:
By: _____
Date: _____

Form Reformatted: March, 2000

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 32599, Expiration Date: 1/22/22."

REVISION	DATE	REVISION	DATE	REVISION	DATE

APPLICANT:
THE ELMS AT PSTA, LLC
ATTN: KATHRYN KUBIT
1355 BEVERLY ROAD, SUITE 240
MCLEAN, VA 22101
PHONE: (703) 734-9730
EMAIL: kkubit@elmstreetdev.com

OWNER:
MONTGOMERY COUNTY
EOB 101 MONROE STREET
ROCKVILLE, MD 20850

PSTA SITE

PARCEL 850, L.4047 F.003, PARCEL 925, L.3862 F. 772 AND PART A, L.16172 F.223
ELECTION DISTRICT No. 9
MONTGOMERY COUNTY, MARYLAND

RODGERS CONSULTING
19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

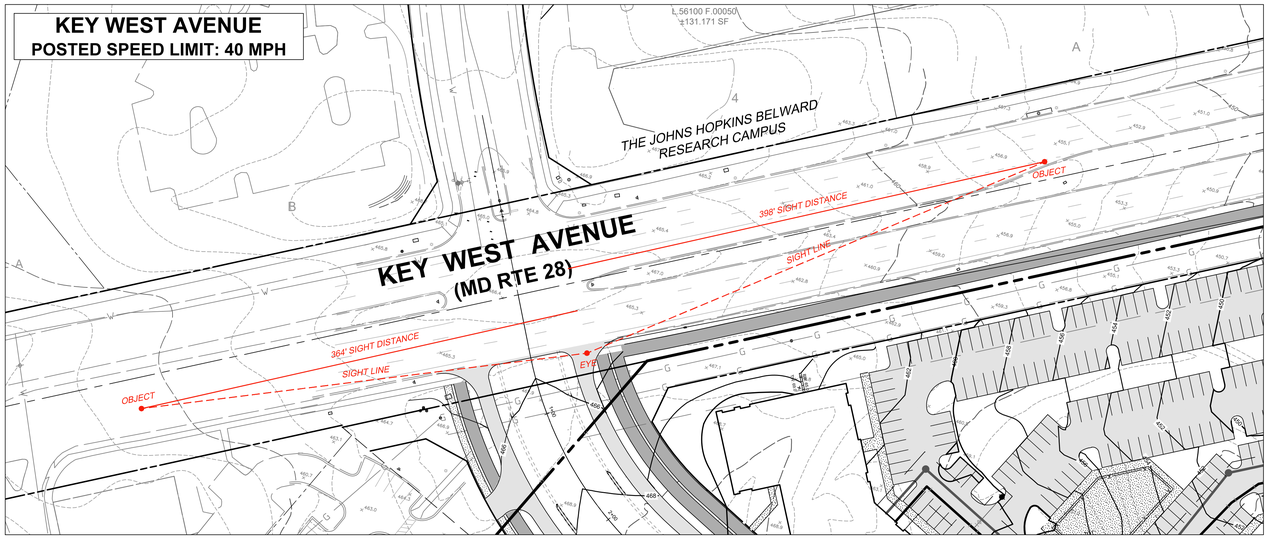
RODGERS CONTACT:
RELEASE FOR ☐
BY _____ DATE ____

SIGHT DISTANCE ANALYSIS GREAT SENECA HIGHWAY

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 1 of 1

PRELIMINARY NOT FOR CONSTRUCTION

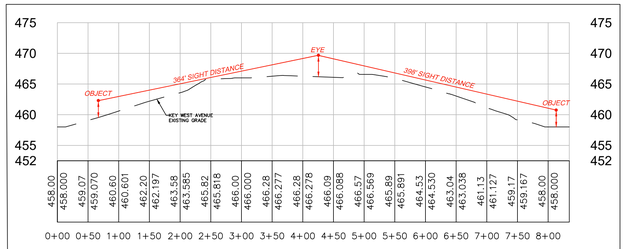
N:\MD Montgomery\PST\Handouts\Plot Plans\Exhibits\Sight Distance Evaluation\PSTA SDA Plan.dwg SDA, GSH May 14, 2021, 3:45pm



GRAPHIC SCALE

50' 0 25' 50' 100' 200'

1 INCH = 50 FT



KEY WEST AVENUE X MEDICAL CENTER DRIVE

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site
Preliminary Plan Number: 120200100
Street Name: Maryland State Route 28 (Key West Avenue)
Master Plan Road Classification: Rural Arterial
Posted Speed Limit: 40 mph
Street/Driveway #1 (Medical Center Drive)
Street/Driveway #2 ( )

Sight Distance (feet)	OK?
Right 398'	Y
Left 364'	Y

Comments: Sight distance sufficient in both directions

Sight Distance (feet)	OK?
Right	
Left	

Comments:

GUIDELINES

Classification or Posted Speed (use higher value)	Required Sight Distance in Each Direction:*
Tertiary - 25 mph	150'
Secondary - 30	200'
Business - 30	200'
Primary - 35	250'
Arterial - 40	325'
(45)	400'
Major - 50	475'
(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

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T. Neil Blanc — Signature
5/14/21 — Date
50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:
☐ Approved
☐ Disapproved:
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	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

RODGERS CONTACT:
RELEASE FOR
BY_____ DATE ____

SIGHT DISTANCE ANALYSIS KEY WEST AVENUE

SCALE: 1" = 50'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 1 of 1

PRELIMINARY NOT FOR CONSTRUCTION

N:\MD\Montgomery\PST\Autocad\Plot Plans\Exhibits\Sight Distance Evaluation\PSTA SDA Plan.dwg SDA - KWA May 14, 2021, 3:49pm

PRELIMINARY NOT FOR CONSTRUCTION

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Street A — Master Plan Road Classification: Business

Posted Speed Limit: 25 mph

Street/Driveway #1 (Alley 7A) — Street/Driveway #2 (Alley 7B)

Sight Distance (feet)	OK?	Sight Distance (feet)	OK?
Right 150'	Y	Right 161'	Y
Left 199'	Y	Left 189'	Y

Comments: Sight distance sufficient in both directions — Comments: Sight distance sufficient in both directions

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

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T. Neil Blanc — Signature — 5/14/21 — Date

50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:
- ☐ Approved
- ☐ Disapproved:

By: _____

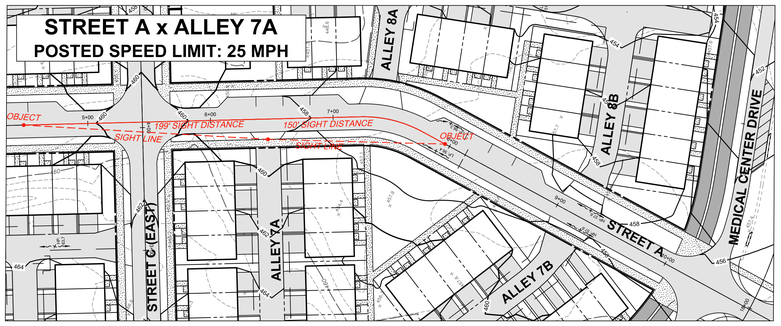
Date: _____

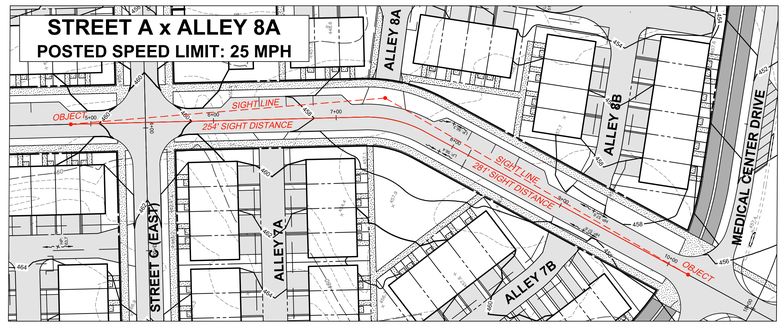
Form Reformatted: March, 2000

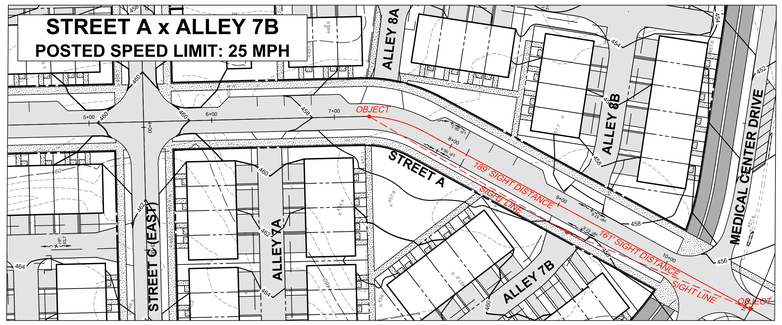
GRAPHIC SCALE

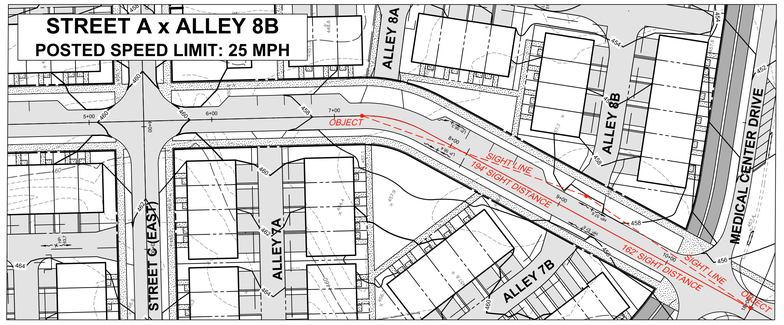
50' 0 25' 50' 100' 200'

1 INCH = 50 FT









MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Street A — Master Plan Road Classification: Business

Posted Speed Limit: 25 mph

Street/Driveway #1 (Alley 8A) — Street/Driveway #2 (Alley 8B)

Sight Distance (feet)	OK?	Sight Distance (feet)	OK?
Right 254'	Y	Right 194'	Y
Left 281'	Y	Left 162'	Y

Comments: Sight distance sufficient in both directions — Comments: Sight distance sufficient in both directions

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

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T. Neil Blanc — Signature — 5/14/21 — Date

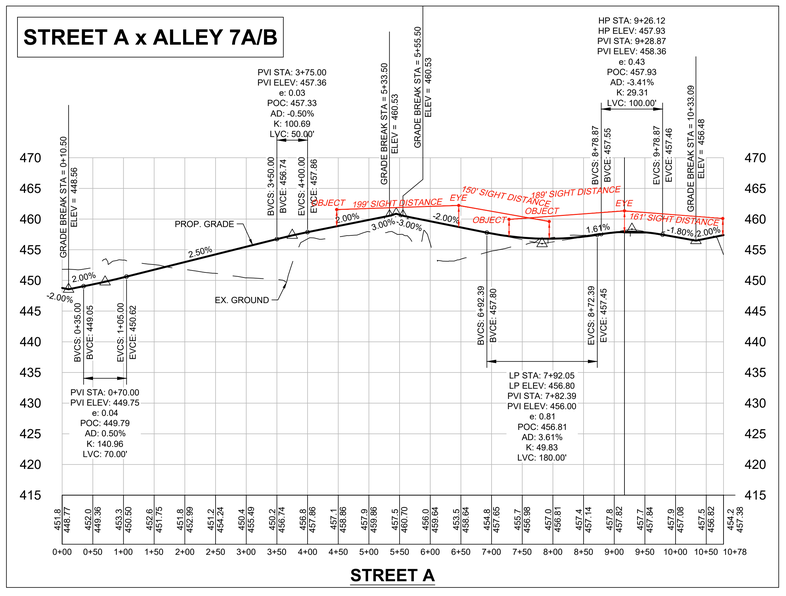
50010 — PLS/P.E. MD Reg. No.

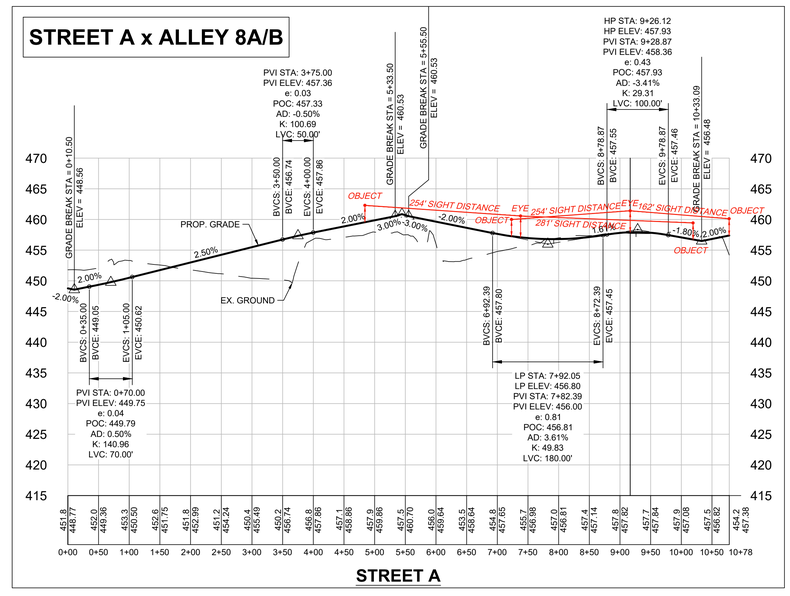
Montgomery County Review:
- ☐ Approved
- ☐ Disapproved:

By: _____

Date: _____

Form Reformatted: March, 2000





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REVISION	DATE	REVISION	DATE	REVISION	DATE

APPLICANT:
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MCLEAN, VA 22101
PHONE: (703) 734-9730
EMAIL: kkubit@elmstreetdev.com

OWNER:
MONTGOMERY COUNTY

EOB 101 MONROE STREET
ROCKVILLE, MD 20850

PSTA SITE

PARCEL 850, L.4047 F.003, PARCEL 925, L.3862 F. 772 AND PART A, L.16172 F.223
ELECTION DISTRICT No. 9
MONTGOMERY COUNTY, MARYLAND

RODGERS CONSULTING
19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		
RODGERS CONTACT:		

RELEASE FOR _____ BY _____ DATE _____

SIGHT DISTANCE ANALYSIS STREET A

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 1 of 1

N:\MD-Montgomery\PST\Autocad\Plot Plans\Exhibits\Sight Distance Evaluation\PSTA SDA Plan.dwg SDA - Street A May 14, 2021, 4:04pm

MONTGOMERY COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site Preliminary Plan Number: **120200100**

Street Name: Street C (East) Master Plan Road Classification: Business

Posted Speed Limit: 25 mph

Street/Driveway #1 (Street B)

Sight Distance (feet)	OK?
Right 200'	Y
Left	

Comments: Sight distance sufficient for right turn. No turn left condition.

Street/Driveway #2 (Alley 7A)

Sight Distance (feet)	OK?
Right 200'	Y
Left 142'	Y

Comments: Sight distance extends to nearest intersection to left, sufficient distance to the right.

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

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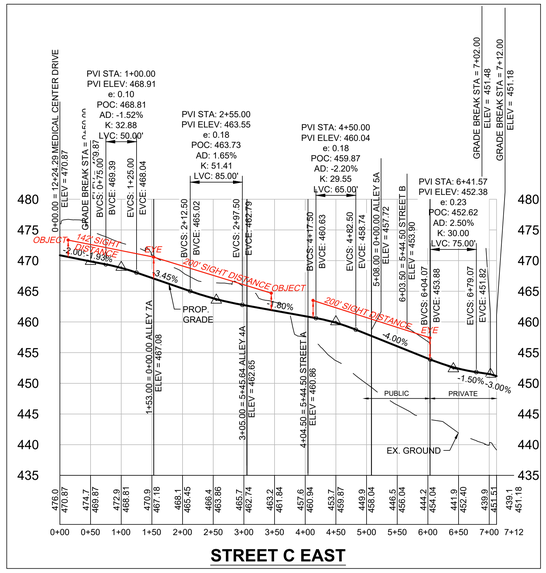
T. Neil Blanc — Signature 5/14/21 — Date

50010 — PLS/P.E. MD Reg. No.

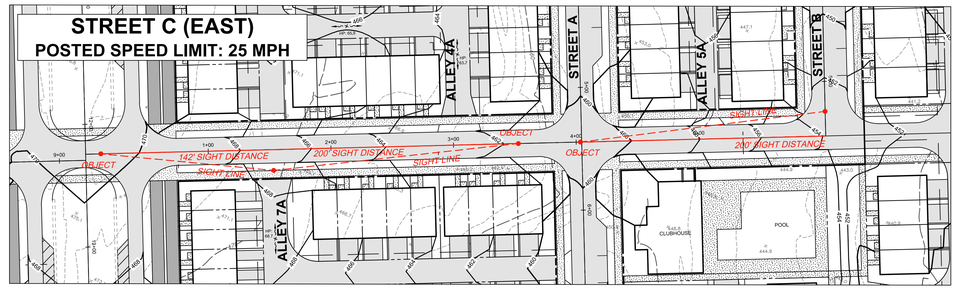
Montgomery County Review:

☐ Approved
☐ Disapproved:
By: _____
Date: _____

Form Reformatted: March, 2000



STREET C EAST



GRAPHIC SCALE

60' 0 30' 60' 120' 240'

1 INCH = 60 FT

MONTGOMERY COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site Preliminary Plan Number: **120200100**

Street Name: Street C (East) Master Plan Road Classification: Business

Posted Speed Limit: 25 mph

Street/Driveway #1 (Street A (NW))

Sight Distance (feet)	OK?
Right 200'	Y
Left 200	Y

Comments: Sight distance sufficient in both directions

Street/Driveway #2 (Street A (SW))

Sight Distance (feet)	OK?
Right 200'	Y
Left 200'	Y

Comments: Sight distance extends to nearest intersection

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

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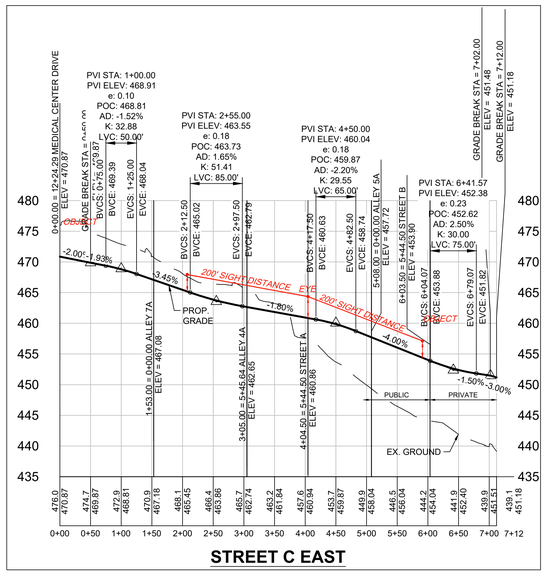
50010 — PLS/P.E. MD Reg. No.

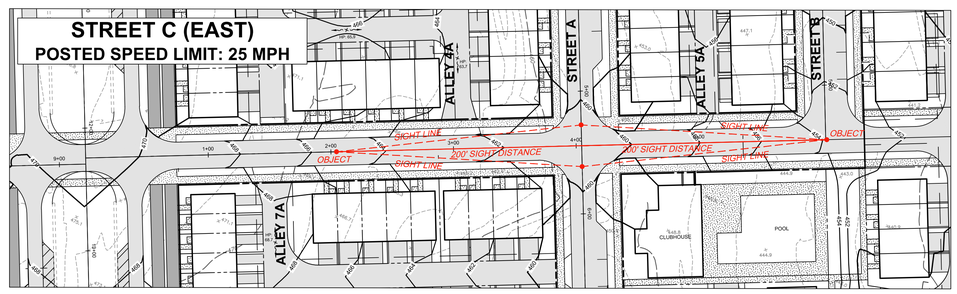
Montgomery County Review:

☐ Approved
☐ Disapproved:
By: _____
Date: _____

Form Reformatted: March, 2000



STREET C EAST



PROFESSIONAL CERTIFICATION

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STATE OF MARYLAND — JOHN KEVIN ROGERS — 32599 — PROFESSIONAL ENGINEER

REVISION	DATE	REVISION	DATE	REVISION	DATE

APPLICANT:
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1355 BEVERLY ROAD, SUITE 240
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PSTA SITE

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	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

RODGERS CONTACT:

RELEASE FOR ☐

BY_____ DATE _____

SIGHT DISTANCE ANALYSIS STREET C (EAST)

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 1 or 2

PRELIMINARY NOT FOR CONSTRUCTION

N:\MC\Montgomery\PST\Auto\cad\Plot Plans\Exhibit\Sight Distance Evaluation\PSTA SDA Plan.dwg SDA - Street C (East) (1) May 14, 2021, 4:07pm

PRELIMINARY NOT FOR CONSTRUCTION

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site
Preliminary Plan Number: 120200100
Street Name: Street C (East)
Master Plan Road Classification: Business
Posted Speed Limit: 25 mph
Street/Driveway #1 (ALLEY 4A)
Street/Driveway #2 (Alley 5A)

Sight Distance (feet)	OK?
Right 200'	Y
Left 200'	Y

Comments: Sight distance sufficient in both directions

Sight Distance (feet)	OK?
Right 200'	Y
Left 200'	Y

Comments: Sight distance sufficient in both directions

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
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Major	-	50	475'
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*Source: AASHTO

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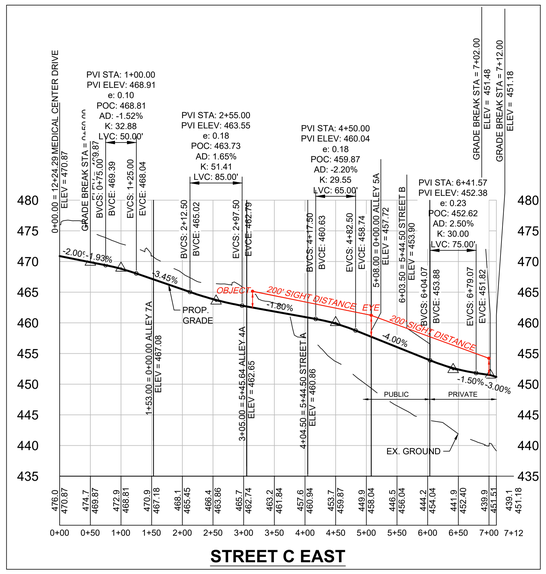
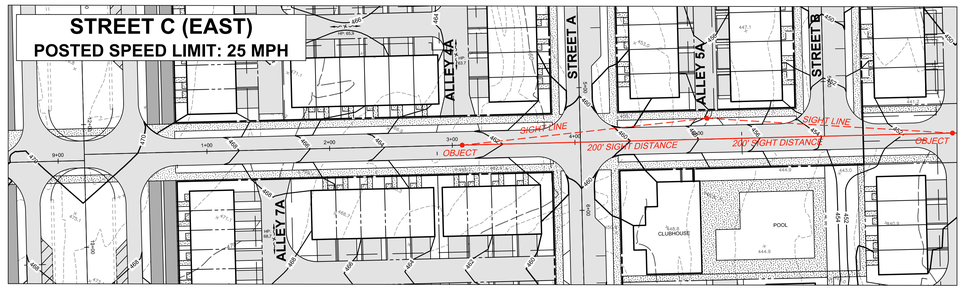
T. Neil Blanc — Signature
5/14/21 — Date
50010 — PLS/P.E. MD Reg. No.

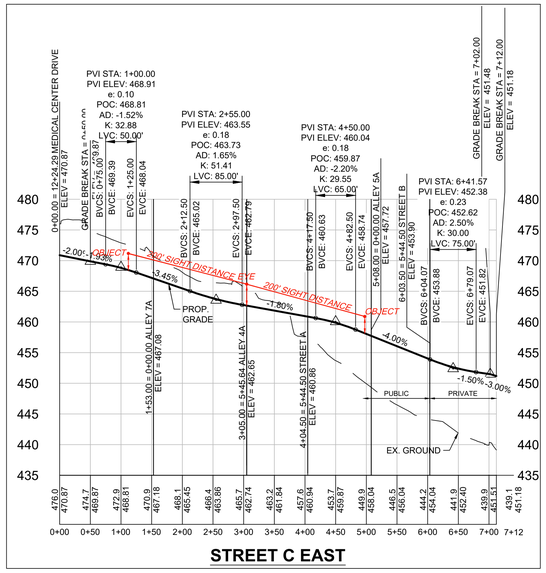
Montgomery County Review:
☐ Approved
☐ Disapproved:
By: _____
Date: _____

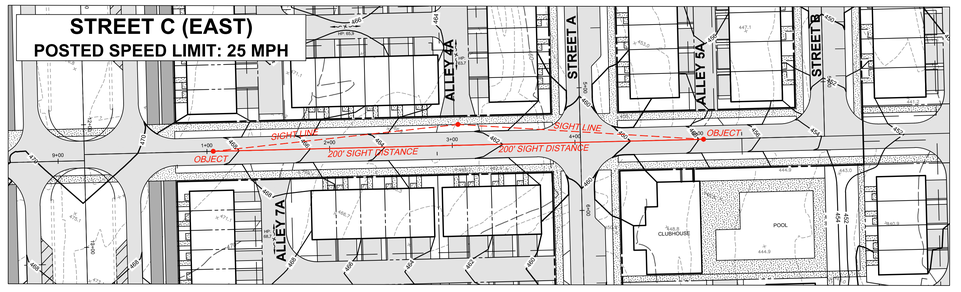
Form Reformatted: March, 2000





GRAPHIC SCALE
50' 0 25' 50' 100' 200'
1 INCH = 50 FT





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1355 BEVERLY ROAD, SUITE 240
MCLEAN, VA 22101
PHONE: (703) 734-9730
EMAIL: kkubit@elmstreetdev.com

OWNER:
MONTGOMERY COUNTY
EOB 101 MONROE STREET
ROCKVILLE, MD 20850

PSTA SITE

PARCEL 850, L.4047 F.003, PARCEL 925, L.3862 F. 772 AND PART A, L.16172 F.223
ELECTION DISTRICT No. 9
MONTGOMERY COUNTY, MARYLAND

RODGERS CONSULTING
19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		
RODGERS CONTACT:		

RELEASE FOR ☐
BY _____ DATE ____

SIGHT DISTANCE ANALYSIS STREET C (EAST)

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 2 OF 2

N:\MD-Montgomery\PSTA\subcon\Plat Plans\Exhibits\Sight Distance Evaluation\PSTA SDA Plan-dwg SDA - Street C (East) (3) May 14, 2021, 4:10pm

PRELIMINARY NOT FOR CONSTRUCTION

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Street C (West) — Master Plan Road Classification: Business

Posted Speed Limit: 25 mph

Street/Driveway #1 (Alley 3A (Southern INTX))			Street/Driveway #2 (Alley 1)		
Sight Distance (feet)		OK?	Sight Distance (feet)		OK?
Right	154'	Y	Right		
Left			Left	151'	Y

Comments: Sight distance sufficient. One way road, no turn right condition.

Comments: Sight distance sufficient. One way road, no turn left condition.

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

I hereby certify that this information is accurate and was collected in accordance with these guidelines.

T. Neil Blanc — Signature — 05/14/21 — Date

50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:

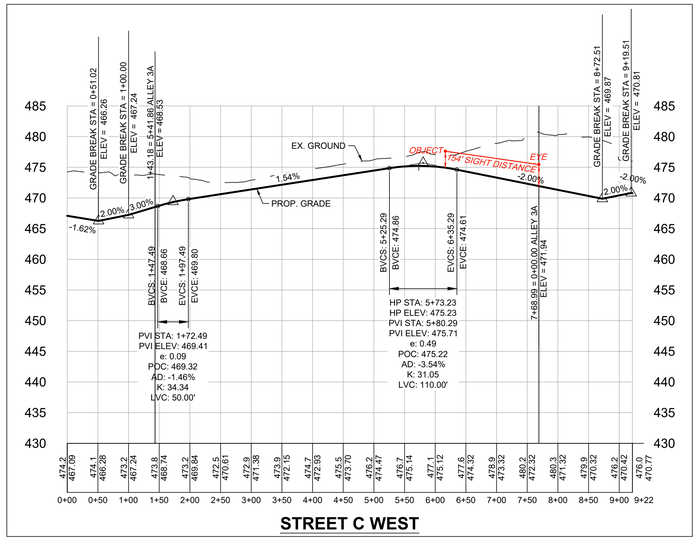
☐ Approved

☐ Disapproved:

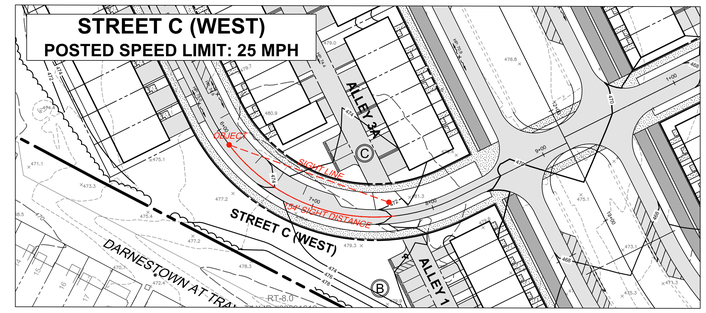
By: _____

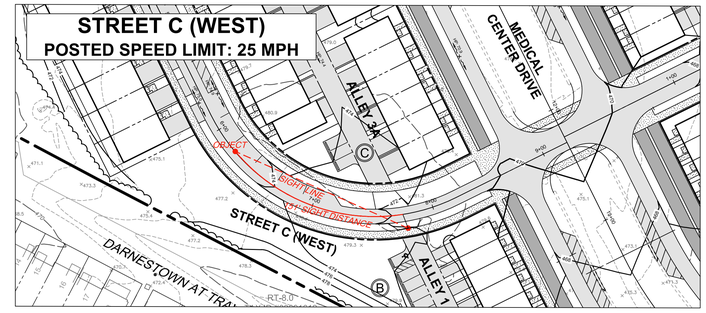
Date: _____

Form Reformatted: March, 2000



STREET C WEST





GRAPHIC SCALE

50' 0 25' 50' 100' 200'

1 INCH = 50 FT

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Street C (West) — Master Plan Road Classification: Business

Posted Speed Limit: 25 mph

Street/Driveway #1 (Alley 3A (Northern INTX))			Street/Driveway #2 ( )		
Sight Distance (feet)		OK?	Sight Distance (feet)		OK?
Right	143'	Y	Right		
Left			Left		

Comments: Sight distance clear to the nearest intersection.

Comments:

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

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T. Neil Blanc — Signature — 05/14/21 — Date

50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:

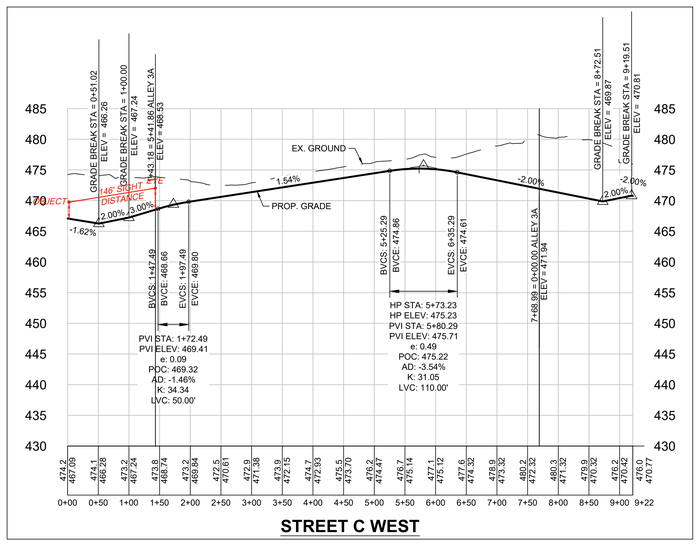
☐ Approved

☐ Disapproved:

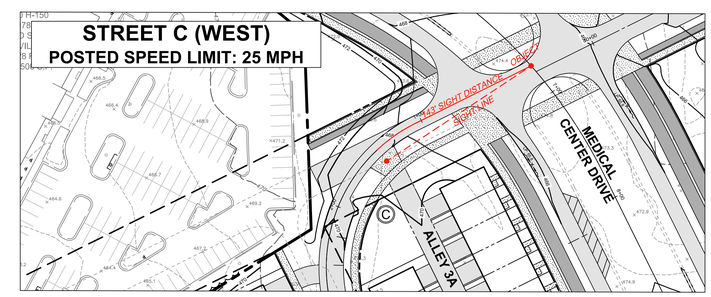
By: _____

Date: _____

Form Reformatted: March, 2000



STREET C WEST



PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 32599, Expiration Date: 1/22/22."

STATE OF MARYLAND — KEVIN KE WANG — 32599 — PROFESSIONAL ENGINEER

REVISION	DATE	REVISION	DATE	REVISION	DATE

APPLICANT:
THE ELMS AT PSTA, LLC

ATTN: KATHRYN KUBIT
1355 BEVERLY ROAD, SUITE 240
MCLEAN, VA 22101
PHONE: (703) 734-9730
EMAIL: kkubit@elmstreetdev.com

OWNER:
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	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

RODGERS CONTACT:

RELEASE FOR ☐

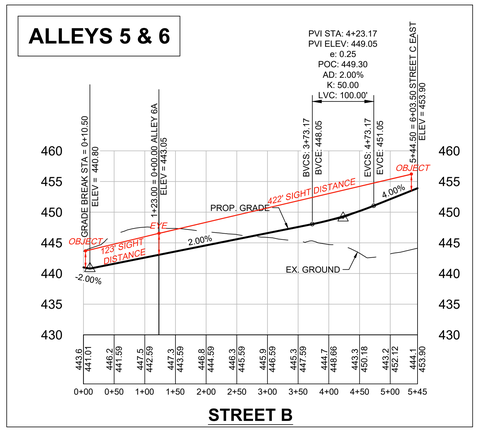
BY_____ DATE _____

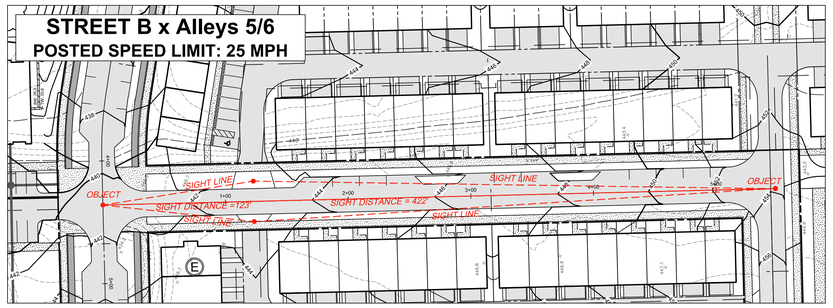
SIGHT DISTANCE ANALYSIS STREET C (WEST)

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 1 OF 1

N:\MD-Montgomery\PST\Autocad\Plot Plans\Exhibits\Sight Distance Evaluation\PSTA SDA Plan.dwg SDA - Street C (West) May 14, 2021, 4:13pm

PRELIMINARY NOT FOR CONSTRUCTION

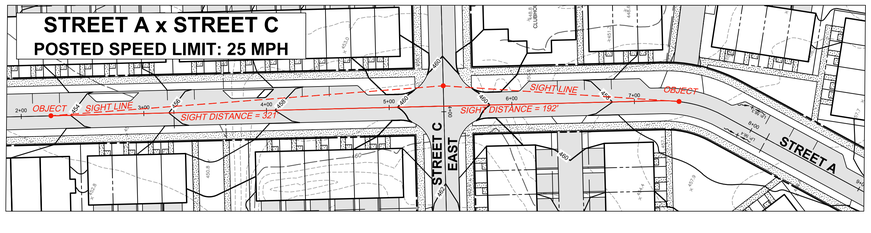


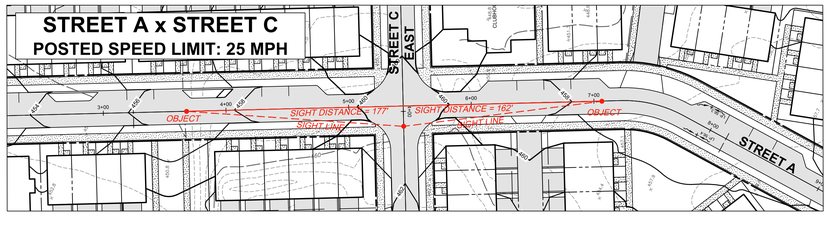


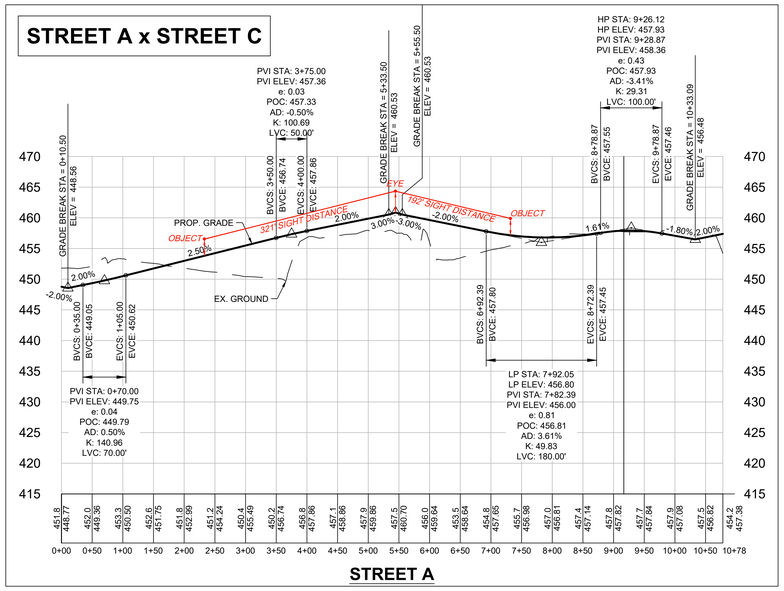
GRAPHIC SCALE

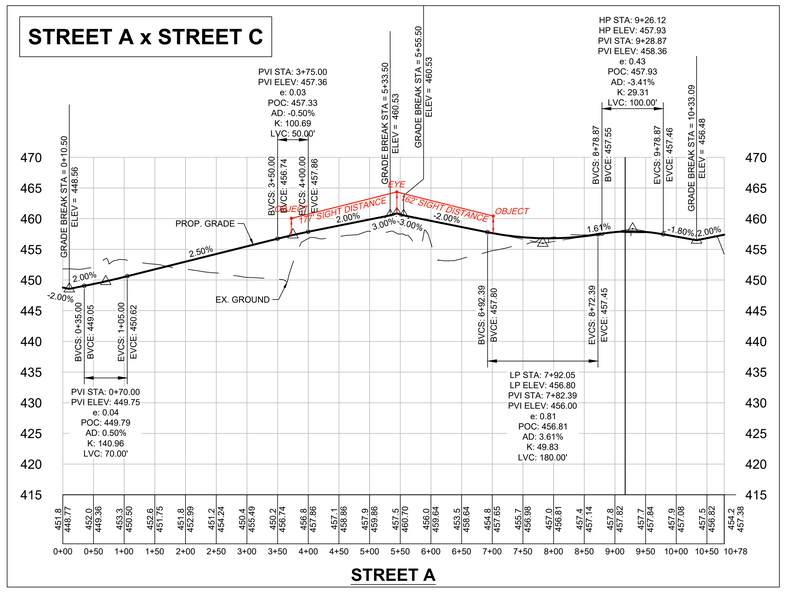
50' 0 20' 50' 100' 200'

1 INCH = 50 FT









MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Street B — Master Plan Road Classification: Business

Posted Speed Limit: 25 mph

Street/Driveway #1 (ALLEY 5) — Street/Driveway #2 (ALLEY 6)

Sight Distance (feet)		OK?	Sight Distance (feet)		OK?
Right	422'	Y	Right	123'	Y
Left	123'	Y	Left	422'	Y

Comments: Sight distance extends to nearest intersection

Comments: Sight distance extends to nearest intersection

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

I hereby certify that this information is accurate and was collected in accordance with these guidelines.

T. Neil Blanc — Signature — 5/14/21 — Date

50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:

☐ Approved

☐ Disapproved:

By: _____

Date: _____

Form Reformatted: March, 2000

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Street A — Master Plan Road Classification: Business

Posted Speed Limit: 25 mph

Street/Driveway #1 (Street C East(NE)) — Street/Driveway #2 (Street C East (SW))

Sight Distance (feet)		OK?	Sight Distance (feet)		OK?
Right	321'	Y	Right	162'	Y
Left	182'	Y	Left	177'	Y

Comments: Sight distance sufficient in both directions

Comments: Sight distance sufficient in both directions

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

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T. Neil Blanc — Signature — 5/14/21 — Date

50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:

☐ Approved

☐ Disapproved:

By: _____

Date: _____

Form Reformatted: March, 2000

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 32599, Expiration Date: 1/22/22."

STATE OF MARYLAND — WILLIAM NEIL BLANC — 32599 — PROFESSIONAL ENGINEER

REVISION	DATE	REVISION	DATE	REVISION	DATE

APPLICANT:
THE ELMS AT PSTA, LLC

ATTN: KATHRYN KUBIT
1355 BEVERLY ROAD, SUITE 240
MCLEAN, VA 22101
PHONE: (703) 734-9730
EMAIL: kkubit@elmstreetdev.com

OWNER:
MONTGOMERY COUNTY

EOB 101 MONROE STREET
ROCKVILLE, MD 20850

PSTA SITE

PARCEL 850, L.4047 F.003, PARCEL 925, L.3862 F. 772 AND PART A, L.16172 F.223
ELECTION DISTRICT No. 9
MONTGOMERY COUNTY, MARYLAND

RODGERS CONSULTING
19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

RODGERS CONTACT:

RELEASE FOR ☐

BY _____ DATE _____

SIGHT DISTANCE ANALYSIS STREETS A & B

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 1 of 1

N:\MD-Montgomery\PST\Autocad\Plot Plans\Exhibits\Sight Distance Evaluation\PSTA SDA Plan.dwg SDA - Streets A & B May 14, 2021, 4:01pm

PRELIMINARY NOT FOR CONSTRUCTION

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Medical Center Drive — Master Plan Road Classification: Primary

Posted Speed Limit: 40 mph

Street/Driveway #1 (Street C (West)) (Southern INTX) — Street/Driveway #2 (Street C (East))

Sight Distance (feet)		OK?	Sight Distance (feet)		OK?
Right	336'	Y	Right	344'	Y
Left	344'	Y	Left	336	Y

Comments: Sight distance sufficient in both directions

Comments: Sight distance sufficient in both directions

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

I hereby certify that this information is accurate and was collected in accordance with these guidelines.

T. Neil Blanc — Signature — 5/14/21 — Date

50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:
- ☐ Approved
- ☐ Disapproved:

By: _____

Date: _____

Form Reformatted: March, 2000

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Medical Center Drive — Master Plan Road Classification: Primary

Posted Speed Limit: 40 mph

Street/Driveway #1 (Street A) — Street/Driveway #2 (Street D)

Sight Distance (feet)		OK?	Sight Distance (feet)		OK?
Right	331'	Y	Right	363'	Y
Left	363'	Y	Left	331'	Y

Comments: Sight distance sufficient in both directions

Comments: Sight distance sufficient in both directions

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

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50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:
- ☐ Approved
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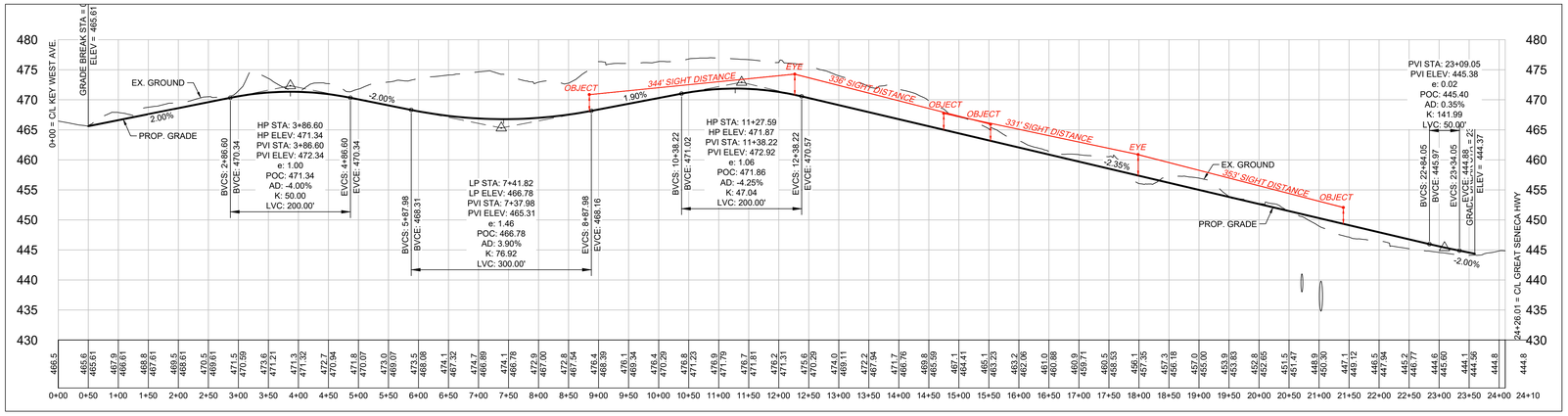
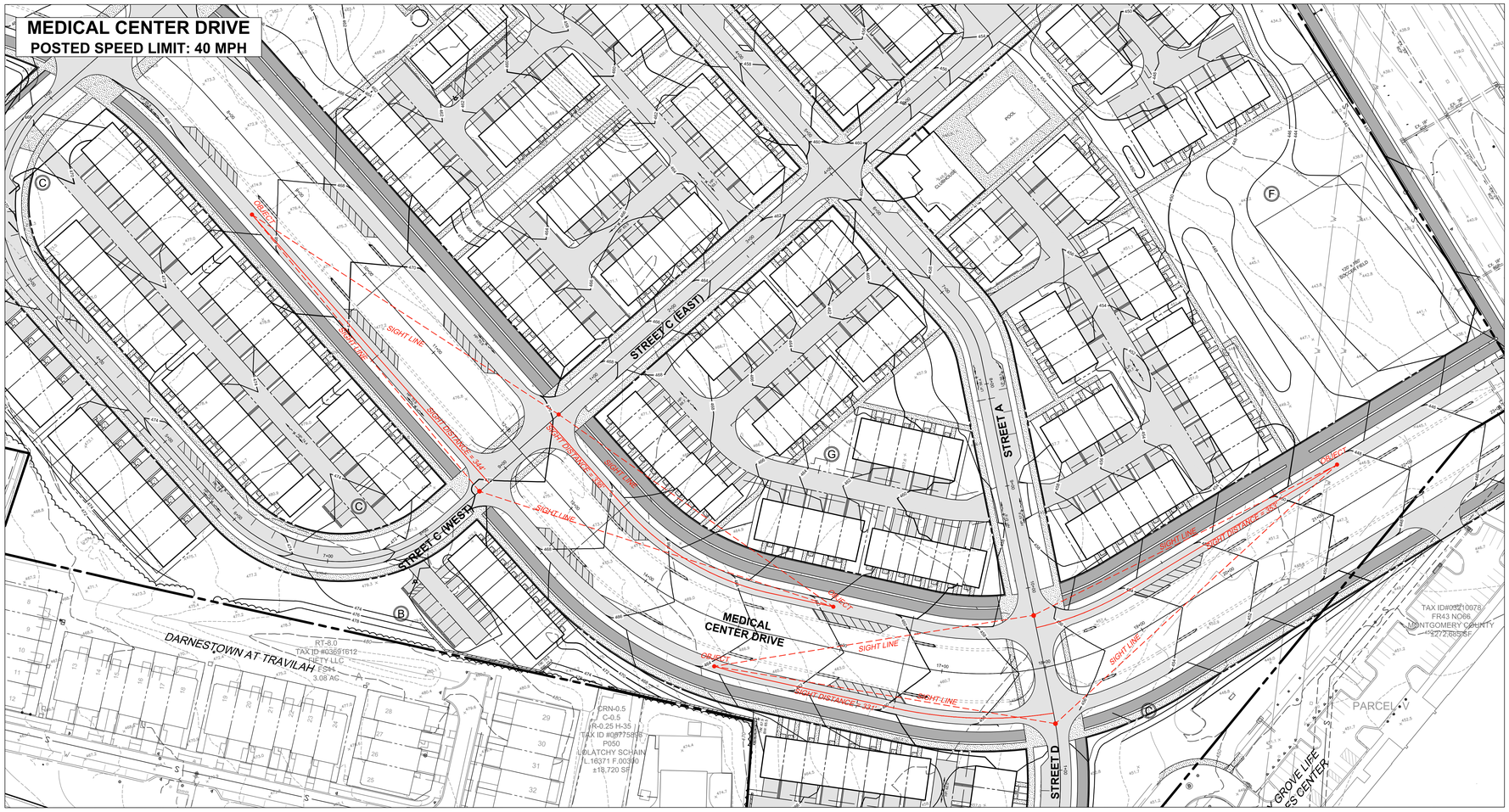
By: _____

Date: _____

Form Reformatted: March, 2000





GRAPHIC SCALE

50' 0 25' 50' 100' 200'

1 INCH = 50 FT

PROFESSIONAL CERTIFICATION

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REVISION	DATE	REVISION	DATE	REVISION	DATE

APPLICANT:
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ATTN: KATHRYN KUBIT
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OWNER:
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PSTA SITE

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ELECTION DISTRICT No. 9
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Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

RODGERS CONTACT:

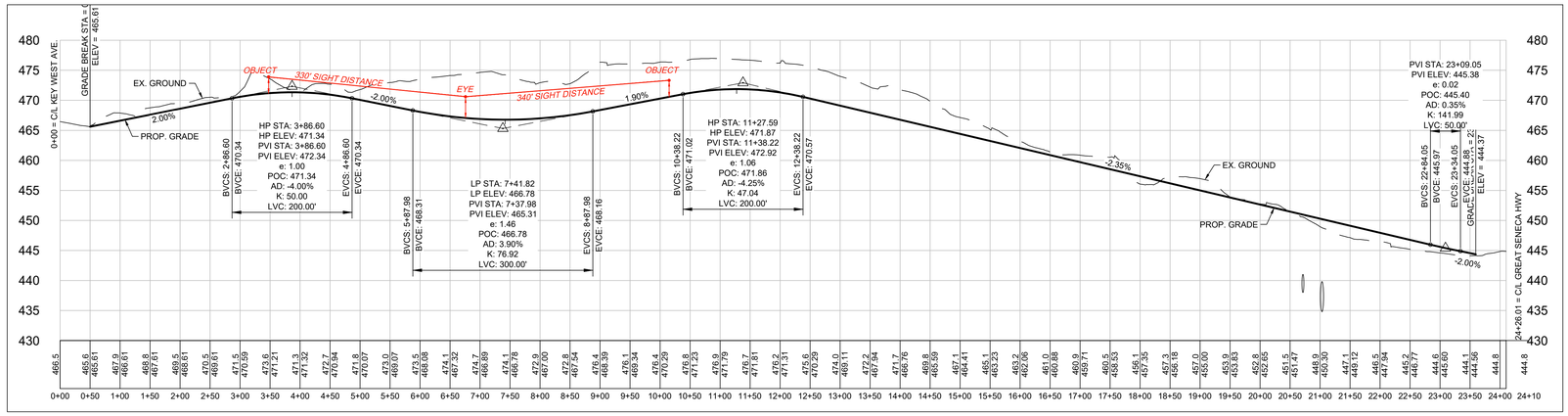
RELEASE FOR ☐

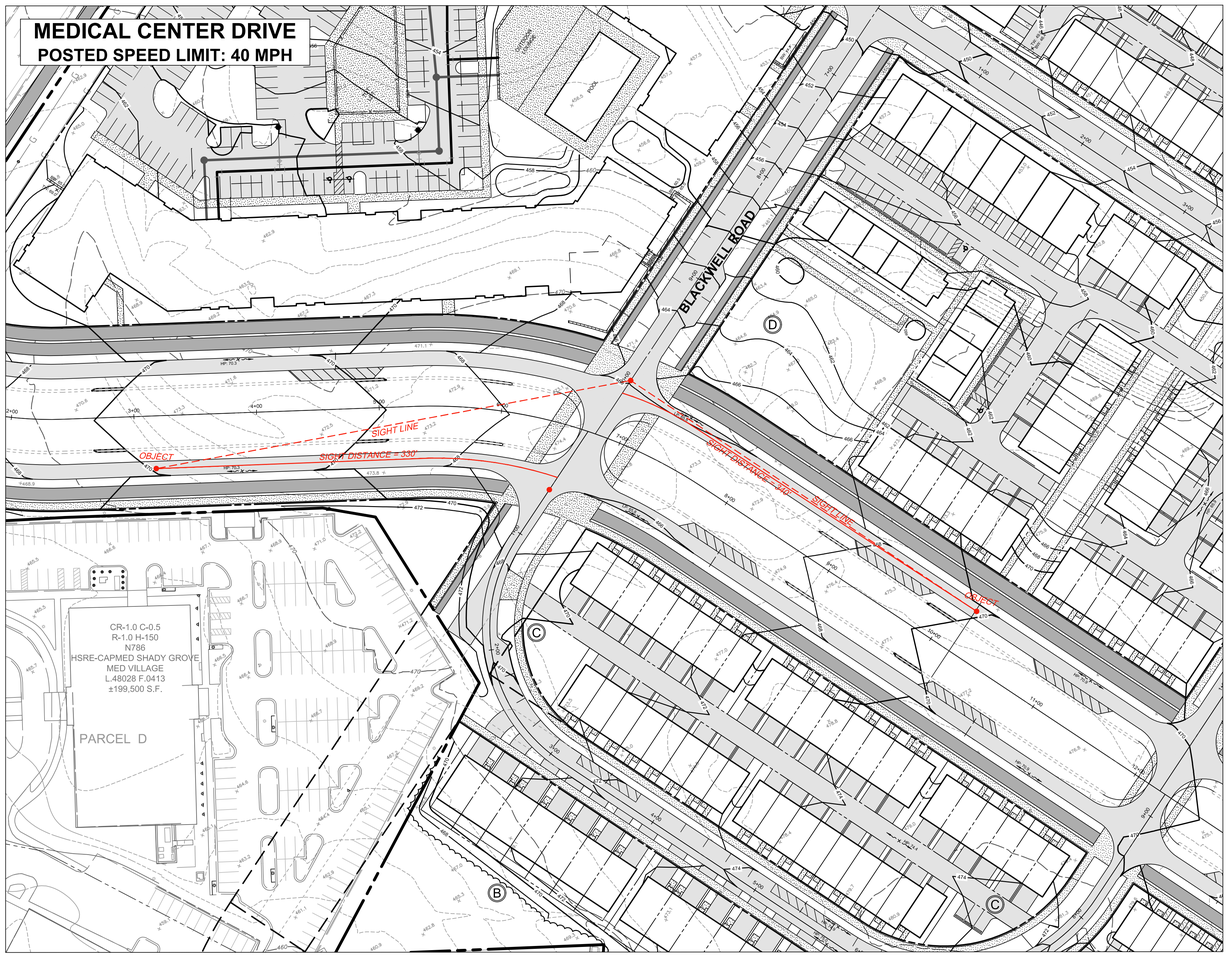
BY _____ DATE ____

SIGHT DISTANCE ANALYSIS MEDICAL CENTER DRIVE

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 1 OF 2

K:\MD-Montgomery\PSTA\Industry\Eng Plans\Exhibits\Sight Distance Evaluation\PSTA SDA Rev dwg SDA - MCD (1) May 14, 2021, 4:23pm





GRAPHIC SCALE

50' 0 25' 50' 100' 200'

1 INCH = 50 FT

MONTGOMERY COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site Preliminary Plan Number: **120200100**

Street Name: Medical Center Drive Master Plan Road Classification: Primary

Posted Speed Limit: 40 mph

Street/Driveway #1 (Blackwell Road)			Street/Driveway #2 (Street C (West) Northern INTX)		
	Sight Distance (feet)	OK?		Sight Distance (feet)	OK?
Right	340'	Y	Right		
Left	330'	Y	Left		
Comments: Sight distance sufficient in both directions			Comments: One way traffic; no sight distance analysis required.		

GUIDELINES

Classification or Posted Speed (use higher value)		Required Sight Distance in Each Direction*
Tertiary	25 mph	150'
Secondary	30	200'
Business	30	200'
Primary	35	250'
Arterial	40	325'
	(45)	400'
Major	50	475'
	(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

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T. Neil Blanc — Signature
5/14/21 — Date
50010 — PLS/P.E. MD Reg. No.

Montgomery County Review:

☐ Approved
☐ Disapproved:
By: _____
Date: _____

Form Reformatted: March, 2000

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ROCKVILLE, MD 20850

PSTA SITE

PARCEL 850, L.4047 F.003, PARCEL 925, L.3862 F. 772 AND PART A, L.16172 F.223
ELECTION DISTRICT No. 9
MONTGOMERY COUNTY, MARYLAND

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	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

RODGERS CONTACT:
RELEASE FOR ☐
BY _____ DATE _____

SIGHT DISTANCE ANALYSIS MEDICAL CENTER DRIVE

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 2 OF 2

PRELIMINARY NOT FOR CONSTRUCTION

N:\MD-Montgomery\PST\Autocad\Plot Plans\Exhibits\Sight Distance Evaluation\PSTA SDA Plan.dwg SDA - MCD (2) May 14, 2021 - 4:26pm

PRELIMINARY NOT FOR CONSTRUCTION

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Medical Center Drive — Master Plan Road Classification: Primary

Posted Speed Limit: 40 mph

Street/Driveway #1 (Existing Lot Tie-in, Entrance #1)		Street/Driveway #2 (Existing Lot Tie-in, Entrance #3)	
Sight Distance (feet)	OK?	Sight Distance (feet)	OK?
Right ____	____	Right ____	____
Left 106'	Y	Left 325'	Y
Comments: Sight distance extends to nearest intersection. One way travel lane, no left turn condition.		Comments: Sight distance sufficient. One way travel lane, no left turn condition.	

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)

ENGINEER/ SURVEYOR CERTIFICATE

I hereby certify that this information is accurate and was collected in accordance with these guidelines.

T. Neil Blanc — Signature — 5/14/21 — Date

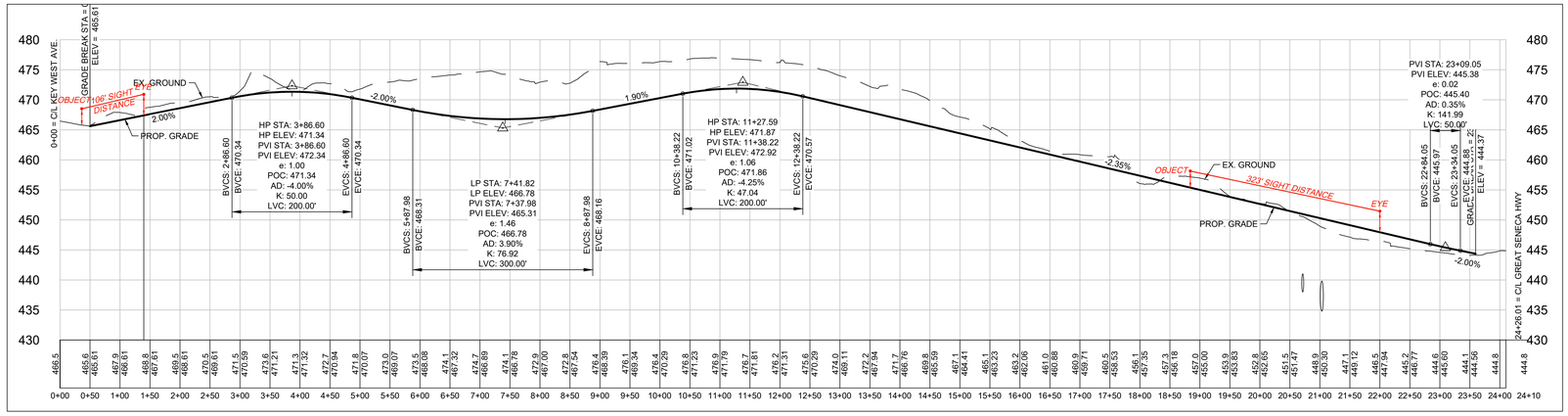
50010 — PLS/P.E. MD Reg. No.

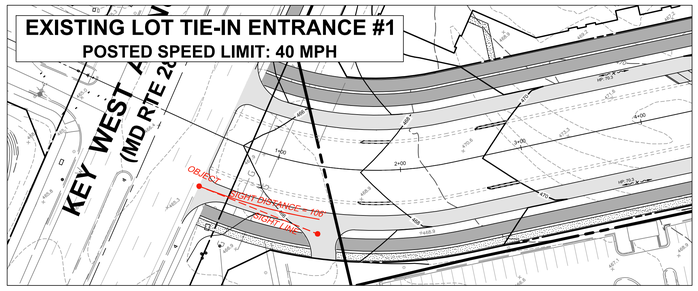
Montgomery County Review:
- ☐ Approved
- ☐ Disapproved:

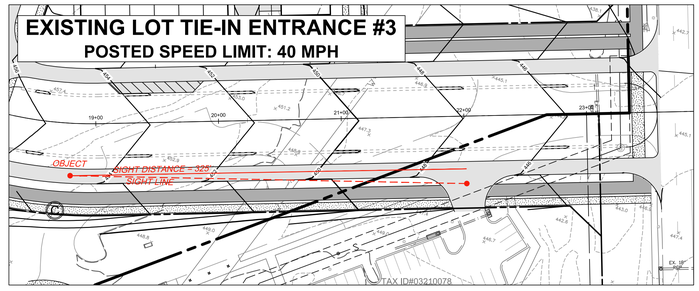
By: ____

Date: ____

Form Reformatted: March, 2000







GRAPHIC SCALE

50' 0 25' 50' 100' 200'

1 INCH = 50 FT

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: PSTA Site — Preliminary Plan Number: **120200100**

Street Name: Street D — Master Plan Road Classification: Business

Posted Speed Limit: 25 mph

Street/Driveway #1 (Alley 2)		Street/Driveway #2 ( )	
Sight Distance (feet)	OK?	Sight Distance (feet)	OK?
Right ____	____	Right ____	____
Left 167'	Y	Left ____	____
Comments: Sight distance sufficient. No turn condition to the right.		Comments:	

GUIDELINES

Classification or Posted Speed (use higher value)			Required Sight Distance in Each Direction*
Tertiary	-	25 mph	150'
Secondary	-	30	200'
Business	-	30	200'
Primary	-	35	250'
Arterial	-	40	325'
		(45)	400'
Major	-	50	475'
		(55)	550'

*Source: AASHTO

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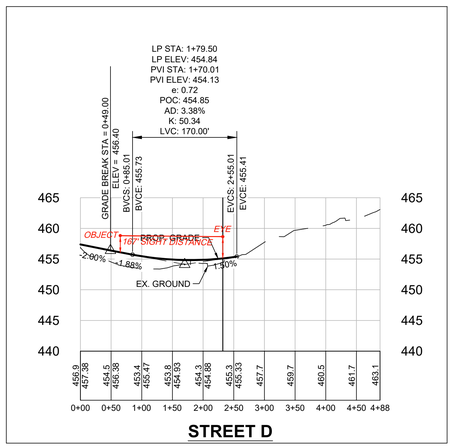
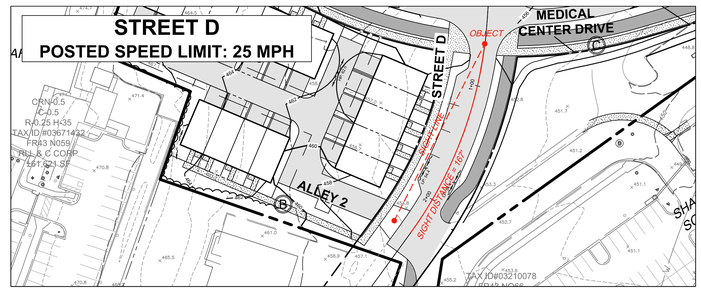




PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 32599, Expiration Date: 1/22/22."

REVISION	DATE	REVISION	DATE	REVISION	DATE

APPLICANT:
THE ELMS AT PSTA, LLC

ATTN: KATHRYN KUBIT
1355 BEVERLY ROAD, SUITE 240
MCLEAN, VA 22101
PHONE: (703) 734-9730
EMAIL: kkubit@elmstreetdev.com

OWNER:
MONTGOMERY COUNTY

EOB 101 MONROE STREET
ROCKVILLE, MD 20850

PSTA SITE

PARCEL 850, L.4047 F.003, PARCEL 925, L.3862 F. 772 AND PART A, L.16172 F.223
ELECTION DISTRICT No. 9
MONTGOMERY COUNTY, MARYLAND

RODGERS CONSULTING
19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		
RODGERS CONTACT:		

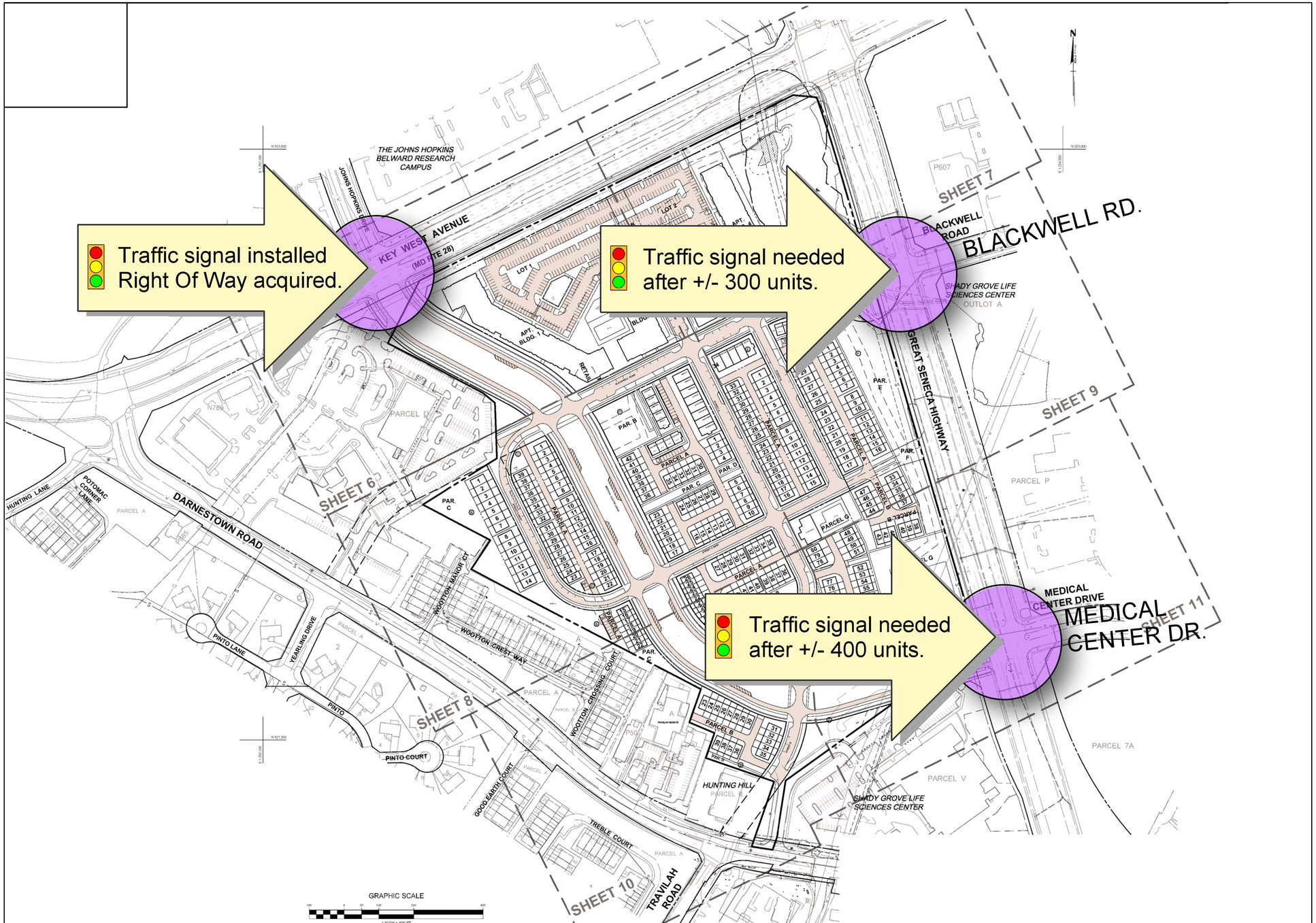
RELEASE FOR ☐

BY_____ DATE ____

SIGHT DISTANCE ANALYSIS MEDICAL CENTER DRIVE & STREET D

SCALE: 1" = 60'
JOB No. 1302A
DATE: MAY, 2021
SHEET No. 1 of 1

N:\MD-Montgomery\PST\Autocad\Plot Plans\Exhibits\Sight Distance Evaluation\PSTA SDA Plan.dwg SDA - MCD & Street D May 14, 2021, 4:30pm



PSTA TRAFFIC SIGNALS

Montgomery County, Maryland