



## EQUITY

Welcome everybody from throughout the County, region and world to live, work, learn, and share culture.

## Supporting Elements

- Development will help support a community of all ages and abilities, with increased affordable housing. A new walkable elementary school could become a center of the broader 22202 community.
- The design of spaces and mix of uses will help realize Arlington's commitment to equity and welcome a diverse range of people and cultural practices.

## Performance Metrics

- Number of residents, number of jobs, number of visitors, racial diversity of residents and workers (by Census/Longitudinal Employer Household Dynamics (LEHD) measures)
- Number of committed affordable housing units (CAFs) produced/retained
- Incorporation of County equity goals, policies, and programs into redevelopment



## PLACES FOR PEOPLE

Fill streets and public spaces with people enjoying community.

## Supporting Elements

- Streetscapes, ground floor building design, and public spaces will encourage walking, outdoor activity, leisure, and services.
- New and improved public spaces, including the Green Ribbon, enhance connectivity and provide common places to enjoy.
- The design and programming of streets and public spaces should incorporate equity as a goal so that all persons feel like they belong in Pentagon City.

## Performance Metrics

- Progress toward Public Space Master Plan goals
- Overall amount and quality of public space created
- Area and quality of privately-owned public spaces created
- Percentage of ground-floor street frontage with active uses



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- Number of committed affordable housing units (CAFs) produced/retained
- Incorporation of County equity goals, policies, and programs into redevelopment
- Equitable access to new or improved community facilities
- Broad awareness of local engagement opportunities (public and private) that encourages community integration and is supported by building management in multi-family complexes, through both digital and physical means.



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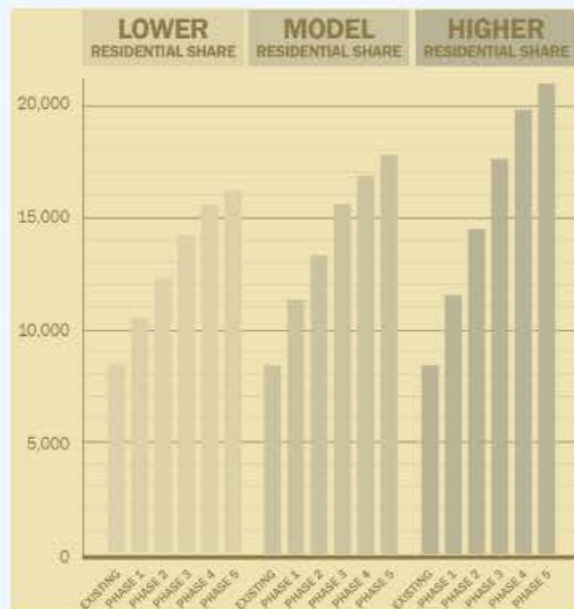
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- Percentage of ground-floor street frontage with active uses

- Ensure that public spaces are accessible, designed, and programmed to welcome a diverse range of users. Ensuring spaces are safe and inviting to Youth of Color was identified as a key equity concern by stakeholders during this planning process.
- Prioritize transportation investments in modes that disproportionately serve People of Color, including bus service. The Pentagon City Plan identifies that bus service is a priority for future transportation planning. MWCOG studies, including Regional Travel Surveys, have shown that bus ridership has been traditionally associated with minority groups, particularly among Hispanic/Latinx, African American/Black, and low-income households. This is consistent with other empirical studies that have supported this finding in the region and country.
- Continue to improve and maintain access to amenities for the disabled and elderly.

it includes approximately 68% residential and 25% office floor area. Adjacent rows show variations with lower and higher proportions of residential development. Columns on the right indicate the numbers of current and new households, to inform considerations on school capacity and other community service needs. Assumptions include: Average residential unit area 1,100 gross square feet; 1.54 residents per unit; 100% unit occupancy.

**POTENTIAL RESIDENT POPULATION GROWTH (CUMULATIVE, COMBINING PHASES)**



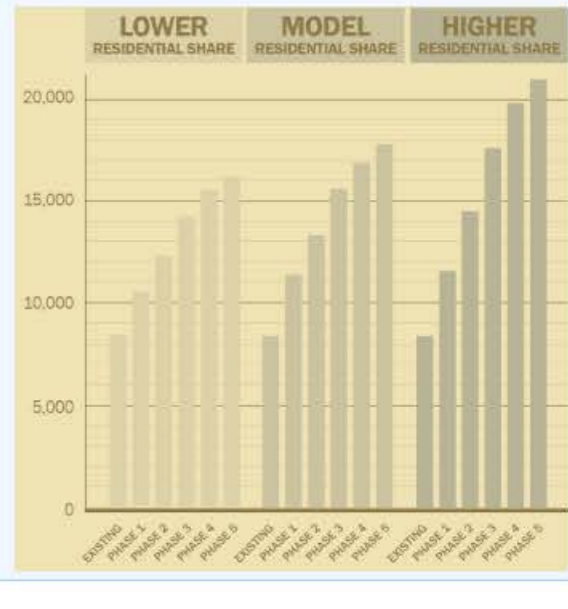
## Pentagon City Population Growth Scenarios

The planning process created and analyzed development scenarios and their implications for population growth, transportation, urban design, economic development, and other factors. The table on the following page shows a general range of potential Pentagon City growth by phase and how it compares to the existing study area. Five development phases are indicated, with potential redevelopment sites. These are not definitive or required—actual development timing will be driven largely by property-owner decisions—but are meant to simulate potential scale and sequence of development over time. The chart on this page indicates cumulative population if the phases were to occur in order from 1 to 5. Actual phase scale and sequence may be different. Within each phase, three levels of potential population are indicated. The middle level reflects the preferred development scenario that appears in illustrations and figures in this document;

- Ensure that public spaces are accessible, designed, and programmed to welcome a diverse range of users. Ensuring spaces are safe and inviting to Youth of Color was identified as a key equity concern by stakeholders during this planning process.
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- Continue to improve and maintain access to amenities for the disabled and elderly, while pursuing opportunities and investments that help deliver affordable senior living to the area.

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## POTENTIAL RESIDENT POPULATION GROWTH (NEW POPULATION BY PHASE, NON-CUMULATIVE)

EXAMPLE TIMEFRAME	EXAMPLE REDEVELOPMENT SITES	TOTAL EXISTING & APPROVED FLOOR AREA AS OF NOV 2021 - ALL USES	LAND USE MIX	TOTAL RESIDENTIAL FLOOR AREA	RESIDENTIAL SHARE OF NEW FLOOR AREA FOR PHASE	DWELLING UNITS
Existing		13,395,000		6,016,000	n/a	5,380
<b>Phase 1 (exclusive of existing)</b>						
Near-term	> Brookfield	2,414,000	Future - less residential, more office	1,448,000	60%	1,320
	> RiverHouse south of 15th Street S		Future - as modeled	2,108,000	87%	1,920
	> Simon infill sites along S Hayes Street, Army Navy Drive		Future - more residential, less office	2,245,000	93%	2,040
	> Regency Care additional building					
<b>Phase 2 (exclusive of existing)</b>						
Near-term	> RiverHouse between 13th and 15th Streets S	2,261,000	Future - less residential, more office	1,289,000	57%	1,170
	> Simon garage redevelopment on 12th Street S corridor		Future - as modeled	1,402,000	62%	1,280
			Future - more residential, less office	2,103,000	93%	1,910
<b>Phase 3 (exclusive of existing)</b>						
Mid-term	> RiverHouse north of 13th Street S	2,531,000	Future - less residential, more office	1,443,000	57%	1,310
	> FRIT/Westpost parking lot infill development		Future - as modeled	1,631,000	64%	1,480
			Future - more residential, less office	2,354,000	93%	2,140
<b>Phase 4 (exclusive of existing)</b>						
Mid-term	> Infill or redevelopment on portions of Simon property	1,696,000	Future - less residential, more office	848,000	50%	770
			Future - as modeled	908,000	54%	830
			Future - more residential, less office	1,509,000	89%	1,370
<b>Phase 5 (exclusive of existing)</b>						
Long-term	> DEA site redevelopment	1,430,000	Future - less residential, more office	493,000	35%	450
			Future - as modeled	660,000	46%	600
			Future - more residential, less office	772,000	54%	700
<b>Combined Existing + Phases 1-5</b>						
	Total floor area reflects demolition of some existing space	23,727,000	Future - less residential, more office	11,538,000	50%	10,400
			Future - as modeled	12,726,000	55%	11,470
			Future - more residential, less office	15,000,000	65%	13,540

Assumptions include: Average residential unit area 1,100 gross square feet; 1.54 residents per unit; 100% unit occupancy. Actual phasing of development may vary.

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## Further Transportation Analysis and Study

This study has indicated a number of follow-up transportation studies that are merited to further explore improvements related to certain travel modes, locations in the study area, or potential development projects. Future studies will gain the benefit of more information and/or community engagement not available in the timeframe of this study, in areas such as travel technology, Covid-19 impacts, forthcoming development proposals, and future traffic and mode share data. Example studies include:

- Pentagon City bike network, including integration with Crystal City bike network and broader Arlington bike infrastructure.
- Potential reconfiguration of South Hayes Street, with attention to goals and issues including:
  - Implementing separated bikeways
  - Removing traffic lanes
  - Further improvement of bus facilities beyond the planned Transitway
  - Reconsider design of the median for opportunity to enhance certain transportation modes and/or usable public open space while working within constraints imposed by the Metro tunnel below
- Multi-modal transportation analysis and potential new infrastructure associated with future development proposals

- Curbside management addressing increased demand for pick-up/drop-off space, reduction in parcel driveway space, and trade-offs where curb space, vehicle lanes, bike facilities, sidewalks, transit, and streetscape compete for limited corridor width.
- Performance standards for Transportation Demand Management (TDM)

**A full implementation matrix, with implementation actions, timing, implementing agencies, and mechanisms and/or funding source can be found beginning on page 131.**

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- Inform character and design of long-term improvements needed on adjacent private properties, including ultimate configuration of the Green Ribbon segments.

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## ILLUSTRATIVE PLAN: NEAR-TERM OPPORTUNITY

Near-term opportunities include projected phases 1 and 2 of development. See appendix for illustrative plans of longer-term possibilities in later phases.

DISCLAIMER: THIS ILLUSTRATIVE PLAN IS AN ARTISTIC RENDERING OF ONE WAY THE PENTAGON CITY PLAN VISION AND RECOMMENDATIONS FOR THIS ELEMENT CAN BE ACHIEVED, FOR ILLUSTRATIVE PURPOSES ONLY.

Multi-family residential development on the northern end of the RiverHouse site creates two-sided S Joyce Street.

Largest scale of development is located in blocks along and north of 12th Street S.

12th Street S includes ground-floor retail and mixed-use destinations that support high level of pedestrian activity and transit ridership.

Multi-family residential development on the southern end of RiverHouse is lower in scale. Infill buildings frame new public spaces, including an expanded Virginia Highlands Park and Green Ribbon pathways.

Development along the southern border of RiverHouse should be the lowest in scale to transition to Aurora Highlands and Arlington Ridge, and may offer opportunity for townhouses or other desired housing types.

Redevelopment of private properties within the study area will contribute to strategic public realm improvements, sustainability, and affordable housing. As a result, subsequent processes to identify a potential school site should focus on County-owned properties within 22202 such as the Aurora Highlands Library/Aurora Hills Library/Community Center site (as one example).



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### Illustrative Plan

- Existing Buildings
- Approved/Planned Buildings

## 1.2 Density and Value

Due to the variety of sites, existing uses, and property owner goals, there is significant variability in the feasibility and the likely phasing of reinvestment across Pentagon City. The Plan focuses in greatest detail on near-term redevelopment sites that will provide proposed physical improvements, including improved and new public spaces and infrastructure, that help enable redevelopment that fulfills the planning principles and vision. Sites that redevelop in later phases will be responsible for greater funding contribution towards community benefits and future infrastructure needs to achieve the planning principles, including future resiliency needs.

All increased density must mitigate its impacts, including on transportation and utility infrastructure. Impacts are evaluated as part of the site plan process.

### Policy Approach

- Where redevelopment of underutilized infill sites or buildings is proposed: allow **significant increases in existing site density** through the special exception site plan process in order to make redevelopment feasible and achieve significant land use, community benefit, urban design, and transportation goals. Achieving additional density requires a mode split and transportation plan, analyzed and reviewed as part of the MMTA process, that fulfills the transportation planning principle for the area.
- In the **Pentagon City PDSP area**, properties that provide significant community benefits that achieve the goals of this plan may be able to achieve **density of FAR 7-9**. Floor Area Ratio (FAR) is a measure of the total building floor area on a site, including each floor, compared to the size of the site.

- At the **RiverHouse parcel**, future density should be lowest along the southern boundary of the site to transition to the Aurora Highlands neighborhood. Density and building height should be lower in the southern portion of the site, and highest in the northern portions of the site along the S Joyce Street corridor.
- Allowable density is also affected by the interaction of multiple levels of guidance in this plan, including:
  - FAR and/or dwelling unit/acre range indicated in GLUP
  - Multimodal trip generation, mode split, and transportation capacity through the MMTA process
  - New and improved public spaces and access ways, including easements
  - Site coverage requirements, including minimums for tree canopy and landscaped area and maximums for building coverage
  - Building height and massing guidelines within the plan as well as additional requirements for massing and height outside of the plan, including FAA regulations, fire lane requirements, and building separation requirements.

Site by site summaries are included on the following pages.

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Site by site summaries are included on the following pages.



**RiverHouse (South of Green Ribbon/15th Street)**

- Density limited to **no more than 150** dwelling units/acre across entire site
- Multimodal trip generation, mode split, and transportation capacity through the MMTA process
- Public realm requirements and access ways include:
  - Expansion of Virginia Highlands Park and improvements to Grace Hopper Park
  - Creation of Green Ribbon segments throughout the site, including dedicated bicycle trail from Grace Hopper Plaza to S Lynn Street
  - Easement up to 30 feet wide for S Joyce Street streetscape and separated bikeway
- Site coverage requirement:
  - 55% maximum building coverage at and below 5 stories, 40% maximum building coverage over 5 stories with varied design strategies
  - 30% minimum planted area, 20% minimum tree canopy
- Building height and massing should be lowest along southern boundary of site and transition to single-family neighborhoods to south and west, making use of topography, landscaping, and lower building heights
  - Within 75 feet of R2-7 zone, height limited to 5 stories; form should transition to 3-4 stories where it faces the R2-7 zone
  - In other areas within 150 feet of R2-7 and R-10 zones, height limited to 8 stories; form should transition at least one story down where it faces the adjoining zones
  - In other areas south of 15th Street S not addressed above, height may not exceed that of the existing RiverHouse Ashley Building



**RiverHouse (South of Green Ribbon/15th Street)**

- Density limited to **≤150** dwelling units/acre across entire site
- Multimodal trip generation, mode split, and transportation capacity through the MMTA process
- Public realm requirements and access ways include:
  - Expansion of Virginia Highlands Park and **interim** improvements to Grace Hopper Park to coincide with S. Joyce Street realignment (Pavilion structure is not anticipated with redevelopment but should be considered further as part of the VHP Park Master Planning effort)
  - Creation of Green Ribbon segments throughout the site
  - Easement up to 30 feet wide for S Joyce Street streetscape and separated bikeway
- Site coverage requirement:
  - 55% maximum building coverage at and below 5 stories, 40% maximum building coverage over 5 stories with varied design strategies
  - 30% minimum planted area, 20% minimum tree canopy
- Building height and massing should be lowest along southern boundary of site and transition to single-family neighborhoods to south and west, making use of topography, landscaping, and lower building heights
  - Within 75 feet of R2-7 zone, height limited to 5 stories; form should transition to 3-4 stories where it faces the R2-7 zone
  - In other areas within 150 feet of R2-7 and R-10 zones, height limited to 8 stories; form should transition at least one story down where it faces the adjoining zones
  - In other areas south of 15th Street S not addressed above, height may not exceed that of the existing RiverHouse Ashley Building





#### RiverHouse (North of Green Ribbon/15th Street)

- Density limited to no more than 150 dwelling units/acre across entire site
- Multimodal trip generation, mode split, and transportation capacity through the MMTA process
- Public realm requirements and access ways include:
  - Expansion of Virginia Highlands Park and improvements to Grace Hopper Park
  - Creation of Green Ribbon segments throughout the site, including dedicated bicycle trail from Grace Hopper Plaza to S Lynn Street
- Creation of additional public space across the overall site totaling at least 2.5 acres
- Easement up to 30 feet wide for S Joyce Street streetscape and protected bicycle facility
- Site coverage requirement:
  - 55% maximum building coverage at and below 5 stories, 40% maximum building coverage over 5 stories with varied design strategies
  - 30% minimum planted area, 20% minimum tree canopy
- Building height should be varied and arranged to provide solar access to new and existing public spaces
- Building height and massing should be lower along western boundary of site, making use of topography, landscaping, and lower building heights. Within 150 feet of the western property line abutting S Lynn Street, height limited to 10–12 stories, depending on grade.



#### RiverHouse (North of Green Ribbon/15th Street)

- Density limited to no more than 150 dwelling units/acre across entire site
- Multimodal trip generation, mode split, and transportation capacity through the MMTA process
- Public realm requirements and access ways include:
  - Expansion of Virginia Highlands Park and interim improvements to Grace Hopper Park to coincide with S Joyce Street realignment (Pavilion structure is not anticipated with redevelopment but should be considered further as part of the VHP Park Master Planning effort)
  - Creation of Green Ribbon segments throughout the site
- Creation of additional public space across the overall site totaling at least 2.5 acres
- Easement up to 30 feet wide for S Joyce Street streetscape and protected bicycle facility
- Site coverage requirement:
  - 55% maximum building coverage at and below 5 stories, 40% maximum building coverage over 5 stories with varied design strategies
  - 30% minimum planted area, 20% minimum tree canopy
- Building height should be varied and arranged to provide solar access to new and existing public spaces
- Building height and massing should be lower along western boundary of site, making use of topography, landscaping, and lower building heights. Within 150 feet of the western property line abutting S Lynn Street, height limited to 10–12 stories, depending on grade.





land use



**Brookfield**

- Density limited to 9 FAR
- Multimodal trip generation, mode split, and transportation capacity through the MMTA process
- Public realm requirements and access ways include:
  - Creation of Green Ribbon through site, including public plaza space accessible from Metro totaling at least 0.5 acre
  - Public access route along the 11th Street S alignment
  - Southbound bicycle facility along S Fern Street with easement up to 12 feet wide
- Building coverage requirement:
  - 75% maximum building coverage at and below 5 stories
  - 55% maximum building coverage over 5 stories
  - 25% minimum planted area, 20% minimum tree canopy
- Appropriate location for highest building heights
  - If a multi-building development is pursued, 10–20% height difference between at least two buildings
  - Follow design guidelines for building height



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  - Southbound separated bicycle facility along S Fern Street with easement up to 12 feet wide
- Building coverage requirement:
  - 75% maximum building coverage at and below 5 stories
  - 55% maximum building coverage over 5 stories
  - 25% minimum planted area, 20% minimum tree canopy
- Appropriate location for highest building heights
  - If a multi-building development is pursued, 10–20% height difference between at least two buildings
  - Follow design guidelines for building height





### Fashion Centre

- Density limited to 9 FAR across the site
- Multimodal trip generation, mode split, and transportation capacity through the MMTA process
- Public realm requirements and access ways include:
  - Improvements to the pedestrian passageway through the Mall and connecting to Metro
  - For longer-term development, new public spaces and new access ways throughout the site in accordance with plan, including new public space along S Hayes Street
- Building coverage requirement:



### Fashion Centre

- Density limited to 9 FAR across the site
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  - Improvements to the pedestrian passageway through the Mall and connecting to Metro
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- Building coverage requirement:



- 75% maximum building coverage at and below 5 stories
- 55% maximum building coverage over 5 stories
- 25% minimum planted area, 20% minimum tree canopy
- Appropriate location for highest building heights, when along/north of 12th Street
  - Follow design guidelines for building height



- 75% maximum building coverage at and below 5 stories
- 55% maximum building coverage over 5 stories
- 25% minimum planted area, 20% minimum tree canopy
- Appropriate location for highest building heights, when along/north of 12th Street
  - Follow design guidelines for building height

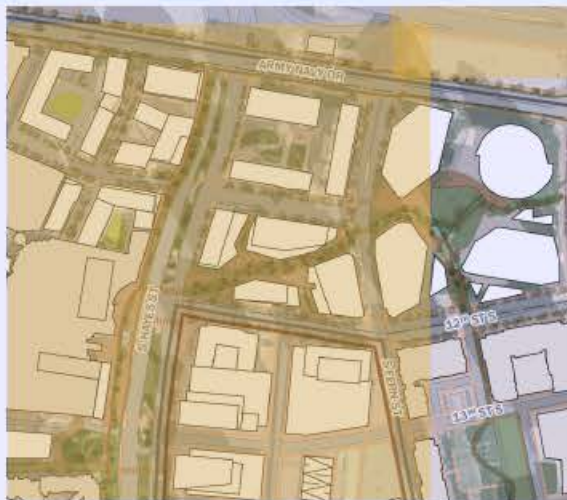
land use

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**Other sites, including FRIT (Westpost/Pentagon Row), DEA, and Regency Care**

- Density limited to 9 FAR, limited to 6 FAR at Regency Care site
- Multimodal trip generation, mode split, and transportation capacity through the MMTA process
- Public realm requirements and access ways include:
  - Retention or replacement of public space exceeding existing spaces like the Pentagon Row/Westpost plaza along S Joyce Street. Official dedication of existing public spaces as publicly-accessible.
  - For longer-term development, new public space and new access ways throughout the site in accordance with plan guidelines.



- Building coverage requirement:
  - 75% maximum building coverage at and below 5 stories
  - 55% maximum building coverage over 5 stories
  - 25% minimum planted area, 20% minimum tree canopy
- Appropriate location for highest building heights north of 12th Street.
  - If a multi-building development is pursued, 10-20% height difference between at least one building.
  - Follow design guidelines for building height



**Other sites, including FRIT (Westpost/Pentagon Row), DEA, and Regency Care**

- Density limited to 9 FAR, limited to 6 FAR at Regency Care site
- Multimodal trip generation, mode split, and transportation capacity through the MMTA process
- Public realm requirements and access ways include:
  - Retention or replacement of public space exceeding existing spaces like the Pentagon Row/Westpost plaza along S Joyce Street. Official dedication of existing public spaces as publicly-accessible.
  - For longer-term development, new public space and new access ways throughout the site in accordance with plan guidelines.



- Building coverage requirement:
  - 75% maximum building coverage at and below 5 stories
  - 55% maximum building coverage over 5 stories
  - 25% minimum planted area, 20% minimum tree canopy
- Appropriate location for highest building heights north of 12th Street.
  - If a multi-building development is pursued, 10-20% height difference between at least one building.
  - Follow design guidelines for building height

## AFFORDABLE HOUSING IN PENTAGON CITY

Currently, there are 342 approved and existing Committed Affordable Units (CAFs) within the study area. These include 300 CAFs at the Claridge House, which is an age restricted property that utilizes a HUD Housing Assistance Payments (HAP) contract. Similar to the Housing Choice Voucher program (formerly Section 8), the HAP program is an income-based rental subsidy to the tenant. The remaining 42 CAFs will be located within the existing RiverHouse James building. These include 35 CAFs that were approved as part of the 1900 Crystal Drive site plan and 7 CAFs approved as part of the **Crystal Plaza 1** site plan. Per the Crystal City Phased Development Site Plan (PDSP), another 35 CAFs are anticipated to be included in the RiverHouse James building as part of the redevelopment of the 223 23rd Street South final site plan. **The Affordable Housing Master Plan established a goal that by 2040, 17.7% of the County's stock should be affordable rentals to meet the needs of renter households with incomes at or below 60% AMI.**

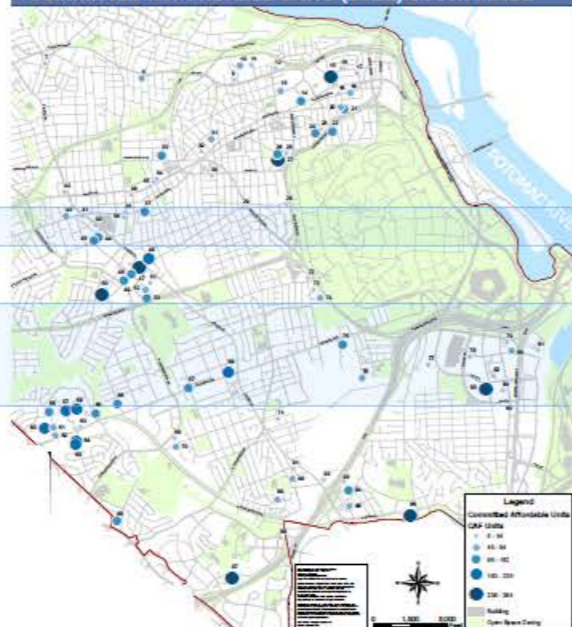
Affordable housing contributions should advance current County housing goals. Currently, this is prioritized as on-site units, off-site units, and cash contribution to the Affordable Housing Investment Fund in order of priority. Other priorities include securing more family-sized units, including 3-bedroom units, affordable ownership opportunities, and physically accessible units.

## Policy Approach

To help achieve the provision of affordable housing within the study area, this plan includes the following recommendations:

- Each project will deliver a specific amount of **on-site affordable housing units. This figure will at minimum represent 10% of net new residential density and may increase up to the residual value of additional density to be earned.**

## COMMITTED AFFORDABLE UNITS (2021) COUNTYWIDE



*The Affordable Housing Master Plan established a goal that by 2040, 17.7% of the County's housing stock should be affordable rentals to meet the needs of renter households with incomes at or below 60% AMI. As of 2021, there were 9,488 CAFs Countywide, shown in the map above.*

## AFFORDABLE HOUSING IN PENTAGON CITY

Currently, there are 342 approved and existing Committed Affordable Units (CAFs) within the study area. These include 300 CAFs at the Claridge House, which is an age restricted property that utilizes a HUD Housing Assistance Payments (HAP) contract. Similar to the Housing Choice Voucher program (formerly Section 8), the HAP program is an income-based rental subsidy to the tenant. The remaining 42 CAFs will be located within the existing RiverHouse James building. These include 35 CAFs that were approved as part of the 1900 Crystal Drive site plan and 7 CAFs approved as part of the **2000/2001 Richmond Highway** site plan. Per the Crystal City Phased Development Site Plan (PDSP), another 35 CAFs are anticipated to be included in the RiverHouse James building as part of the redevelopment of the 223 23rd Street South final site plan. ♀

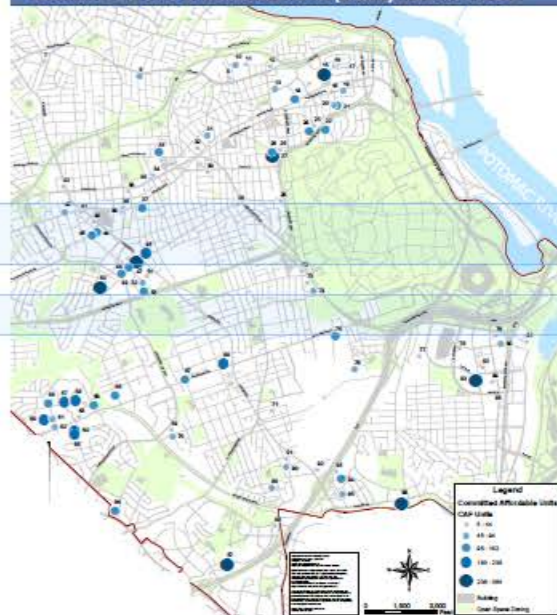
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## Policy Approach

To help achieve the provision of affordable housing within the study area, this plan includes the following recommendations:

- Each project will deliver a specific amount of **on-site affordable housing units. This figure will at minimum represent 10% of net new residential density above the base and may increase up to the residual value of additional density to be earned with each applicable phase of development.** Conversion of existing Pentagon City PDSP uses within the base may be considered on a case by case basis.

## COMMITTED AFFORDABLE UNITS (2021) COUNTYWIDE



*The Affordable Housing Master Plan established a goal that by 2040, 17.7% of the County's housing stock should be affordable rentals to meet the needs of renter households with incomes at or below 60% AMI. As of 2021, there were 9,488 CAFs Countywide, shown in the map above.*

- In order to maintain a mix of new and existing affordable CAF units within the RiverHouse site, as well as the overall study area, the affordable housing on-site contribution shall be located in the newly developed building(s). The total target is subject to negotiation with County staff for project feasibility.
- The CAF unit mix resulting from the provided square footage will be finalized on a case-by-case basis, with family-sized units encouraged.
- The CAF units shall be rent- and income-restricted to households earning up to 60% Area Median Income (AMI) for a period of 30 years.

## COMMUNITY BENEFIT FUNDING POTENTIAL AND PRIORITIES

All sites within the Plan study area have nearly reached the limits of what their existing zoning district or PDSP allocation(s) would permit; however, those that have not should be able to achieve utilization of that residual development without triggering the achievement goals of the Plan.

Sites that do seek to redevelop in accordance with the recommendations of the Plan will be expected to earn the amount of additional density permitted by this Plan through providing the community benefits expressed by the Plan. For purposes of calculating the base of any amounts of additional density to be earned, the existing PDSP allocation for properties within the Pentagon City PDSP will be used and the existing GLUP designation (72 dwelling units/acre) for the RiverHouse property that is located outside of the PDSP boundary will be utilized. Regardless, any redevelopment proposal that seeks to exceed either the density permissions of their zoning district, in the case of RiverHouse, and the PDSP allocations for all other properties within the Plan study area, will be expected to redevelop, and earn additional density, in a manner consistent with the recommendations of the Plan.

Increased density is only appropriate where it achieves the goals of this plan, including goals for community benefits. Community benefits may include the value of relevant on-site improvements, including public spaces and affordable housing units, or cash contributions to provide those benefits off-site, such as Green Ribbon segments on County property. In general, public realm infrastructure improvements deserve high priority.

All redevelopment will have to mitigate its own impacts and include any necessary infrastructure improvements, including rebuilt streetscapes, new sidewalks, and utility infrastructure as needed.

As a planning principle, green building is required as a baseline for each site. Exceptional green building performance may be considered a community benefit during the SPRC process.

### Policy Approach

This plan establishes core community benefits as a baseline for redevelopment. There is greater certainty on these required benefits for near-term sites, whereas later-to-develop sites will likely provide more benefits by way of funding, as opposed to in-kind contributions. All applications will be reviewed by staff and the County Board will determine/approve the site plan with any conditions of approval.

### Large Sites with Near-Term Redevelopment Potential

- **At the RiverHouse site, site plan conditions and targeted community benefits to enable higher density development include:**
  - Expansion of Virginia Highlands Park and improvements to Grace Hopper Park
  - Creation of Green Ribbon segments throughout the site, including dedicated bicycle trail from Grace Hopper Plaza to S Lynn Street

- In order to maintain a mix of new and existing affordable CAF units within the study area, there is a preference for the on-site affordable housing contribution to be located in the newly developed buildings. However, locating all or a portion of the affordable housing contribution in the existing buildings may be considered if at least 20% of the net new residential density is contributed as CAF units. The total target is subject to negotiation with County staff for project feasibility.
- The CAF unit mix resulting from the provided square footage will be finalized on a case-by-case basis, with family-sized units encouraged.
- The CAF units shall be rent- and income-restricted to households earning up to 60% Area Median Income (AMI) for a period of 30 years.
- CAF units provided in new condominium projects shall be income-restricted to households earning up to 80% Area Median Income (AMI) for the life and use of the residential dwelling unit.

## COMMUNITY BENEFIT FUNDING POTENTIAL AND PRIORITIES

All sites within the Plan study area have nearly reached the limits of what their existing zoning district or PDSP allocation(s) would permit; however, those that have not should be able to achieve utilization of that residual development without triggering the achievement goals of the Plan.

Sites that do seek to redevelop in accordance with the recommendations of the Plan will be expected to earn the amount of additional density permitted by this Plan through providing the community benefits expressed by the Plan. For purposes of calculating the base of any amounts of additional density to be earned, the existing PDSP allocation for properties within the Pentagon City PDSP will be used and the existing GLUP designation (72 dwelling units/acre) for the RiverHouse property that is located outside of the PDSP boundary will be utilized. Regardless, any redevelopment proposal that seeks to exceed either the density permissions of their zoning district, in the case of RiverHouse, and the PDSP allocations for all other properties within the Plan study area, will be expected to redevelop, and earn additional density, in a manner consistent with the recommendations of the Plan.

Increased density is only appropriate where it achieves the goals of this plan, including goals for community benefits. Community benefits may include the value of relevant on-site improvements, including public spaces and affordable housing units, or cash contributions to provide certain benefits off-site, such as Green Ribbon segments on County property. In general, public realm infrastructure improvements deserve high priority. Delivery of an expanded library or community center in the ground story of new buildings could also represent a qualifying community benefit that helps achieve the Plan goals.

## BUILDABLE SITE BOUNDARIES

New access ways, including pedestrian access ways, created through redevelopment ensure an inter-connected block network.

DISCLAIMER: THIS FRAMEWORK SHOWS DESIRED CONNECTIONS TO BE MADE ACROSS AND BETWEEN SITES AND THE EXISTING BLOCK NETWORK. IT IS NOT MEANT TO SPECIFY A SPECIFIC RIGHT-OF-WAY OR FINAL ALIGNMENT. THE SPECIFIC LOCATION OF CONNECTIONS MAY SHIFT BASED ON NEEDS AND PHASING OF REDEVELOPMENT.

### RiverHouse Parcel

Easement up to 30 feet wide along the S Joyce Street frontage to enable creation of biophilic streetscape, including protected bicycle facilities.

New access ways should connect to Arlington Ridge and Aurora Highlands.

Realignment of S Joyce Street provides space for expanded park and new buildable frontage.

### Fashion Centre and Westpost Block

Future access ways that provide connection through the site. Should align with future connections at Brookfield and Pentagon Centre.

Emphasis on pedestrian access to Metro through and across the block.

### Brookfield and DEA Block

Easement up to 12 feet wide along the S Fern Street frontage to enable creation of biophilic streetscape, including southbound protected bicycle facilities.

Shared accessway along northern boundary with DEA site that could connect to future Fashion Centre access ways. Must include at least one pedestrian access way into interior of the Brookfield site.

### Buildable Site Boundaries

- Future Public Access Ways (Flexible Placement)
- Future Pedestrian Access Ways (Interior or Exterior Flexible Placement)
- Easement
- Parcel
- Green Ribbon Preferred Placement
- Green Ribbon Flexible Placement
- Green Ribbon Potential Extension (Flexible Placement)
- Study Area Boundary
- M Metro Station



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  - Primary Route (widest pedestrian zone)
  - Secondary Route (widest planting zone)
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- Study Area Boundary
- M Metro Station

### Brookfield and DEA Block

Easement up to 12 feet wide along the S Fern Street frontage to enable creation of biophilic streetscape, including southbound protected bicycle facilities.

Shared accessway along northern boundary with DEA site that could connect to future Fashion Centre access ways. Must include at least one pedestrian access way into interior of the Brookfield site.



- Creation of additional public space on the site totaling at least 2.5 acres
  - Easement up to 30 feet wide for S Joyce Street streetscape and protected bicycle facility
  - At least 10% on-site committed affordable housing units
- **At the Brookfield site, site plan conditions and targeted community benefits to enable higher density redevelopment include:**
- Creation of Green Ribbon through site, including public plaza space accessible from Metro totaling at least 0.5 acre
  - Public access route along the 11th Street S alignment
  - Southbound bicycle facility along S Fern Street with easement up to 12 feet wide
  - At least 10% on-site committed affordable housing units
- **The phasing of the Fashion Centre site is challenging to determine. At the Fashion Centre site, site plan conditions and targeted community benefits to enable higher density and redevelopment in the near-term include:**
- Improvements to the pedestrian passageway through the Mall and connecting to Metro, including access along the west side of the mall
  - At least 10% on-site committed affordable housing units
- **For longer-term development, new public space and new street access as indicated by the plan**
- **At least 10% on-site committed affordable housing units**

#### Large Sites with Longer-Term Redevelopment Potential

- **At other sites, site plan conditions and community benefits to enable higher density include:**
- Multi-modal infrastructure or public space enhancements as indicated in this framework, and as may be identified through future planning processes, such as a new Master Plan for Virginia Highlands Park
  - Increased contributions to affordable housing
  - Exceptional green building performance
  - Other needs identified through future County planning processes, including the SPRC process

#### Approach to Re-tenanting, Improvement, and Renovation of Existing Developments

Throughout the PDSP, there may be projects that require site plan amendments for re-tenanting of spaces, updates to the public realm or indoor-outdoor spaces, or renovation of existing structures that fall well short of redevelopment. Any such site plan amendments should advance the planning principles and framework in this plan, and must add biophilic features.

When such projects add additional floor area through minor additions, they should deliver community benefits commensurate in value to the addition. In all instances, improvements that fall short of full redevelopment should avoid impeding areas designated in the plan for future public space or right-of-way connection

#### Large Sites with Mid-Term Redevelopment Potential

- **At the Fashion Centre site, site plan conditions and targeted community benefits to enable higher density and redevelopment in the mid- and longer-term include:**
- Creation of Green Ribbon and public space on S Hayes Street

## PENTAGON CITY DEVELOPMENT FRAMEWORK

DRAFT

#### Large Sites with Mid-Term Redevelopment Potential

- **At the Fashion Centre site, site plan conditions and targeted community benefits to enable higher density and redevelopment in the mid- and longer-term include:**
- Expansion of Green Ribbon and creation of public space on S. Hayes Street
  - For longer-term development, new public spaces and new public access ways internal to the block as indicated by the Plan.
  - At least 10% on-site committed affordable housing units

#### Large Sites with Longer-Term Redevelopment Potential

- **At other sites, site plan conditions and community benefits to enable higher density include:**
- Multi-modal infrastructure or public space enhancements as indicated in this framework, and as may be identified through future planning processes, such as a new Master Plan for Virginia Highlands Park
  - Increased contributions to affordable housing
  - Exceptional green building performance
  - Other needs identified through future County planning processes, including the SPRC process

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When such projects add additional floor area through minor additions, they should deliver community benefits commensurate in value to the addition. In all instances, improvements that fall short of full redevelopment should avoid impeding areas designated in the plan for future public space or right-of-way connection

## 1.4 Tree Canopy and Planted Areas (Site Coverage)

Throughout Pentagon City, redeveloping sites will be required to provide a minimum tree canopy and planted surface area alongside new buildings, access ways, and other groundcover. These requirements will help ensure that nature is present in Pentagon City, and help fulfill other sustainability goals, including stormwater retention and reduced heat island affect. Some sites may maintain existing planted areas and others may add new ones. Planted areas help support biophilic principles, as well as related goals for human and environmental well-being.

Redevelopment in Pentagon City will achieve at least **20% tree canopy** on the site and surrounding streetscape.

### Policy Approach

Site plans are evaluated for their tree canopy provided on the legal lot of record, as well as the overall site, including adjacent right-of-way included in the project. The **overall site plan must achieve at least 20% tree canopy across the lot and adjacent right-of-way**. This will help fulfill the goal of achieving greater than 20% tree canopy across all of Pentagon City, and exceeds the current tree canopy targets for Rosslyn and Crystal City.

The figures below apply to the redevelopment site area, including right-of-way unless otherwise noted. Projects are encouraged to exceed these minimums.

- **10% minimum tree canopy on the legal lot of record or limit of disturbance.** Tree canopy selections must comply with the provisions of the Chesapeake Bay Protection Ordinance. At RiverHouse, at least **15%** must be provided on the lot.
- **5% additional minimum planted surface area at or near grade**
  - Includes additional tree canopy area beyond the minimum, as well as other biophilic planted areas

- An **additional 10% of the site should be covered by vegetation** in the form of one or more of one of these alternatives:
  - Additional planted area or tree canopy area provided at or near grade
  - Planters, trellises, and/or equivalent vertical green wall surface area upon a building/structure
  - Green roof or terrace
- Planted areas must comply with the County policy for **landscape quality and tree canopy** at the time of site plan application. Native species are encouraged.

## 1.4 Tree Canopy and Planted Areas (Site Coverage)

Throughout Pentagon City, redeveloping sites will be required to provide a minimum tree canopy and planted surface area alongside new buildings, access ways, and other groundcover. These requirements will help ensure that nature is present in Pentagon City, and help fulfill other sustainability goals, including stormwater retention and reduced heat island affect. Some sites may maintain existing planted areas and others may add new ones. Planted areas help support biophilic principles, as well as related goals for human and environmental well-being.

Redevelopment in Pentagon City will achieve at least **20% tree canopy** on the site and surrounding streetscape.

### Policy Approach

The requirements for planted area are cumulative, must be achieved within the private property's limits of disturbance (specific to each phase of development) and may rely on associated segments of the Green Ribbon delivered with each phase. To help achieve the larger Pentagon City and Arlington County Forestry and Natural Resources Master Plan goal of at least 20% tree canopy, sites may include adjacent right-of-way, Public Plaza's associated with each phase of development, or commitments to preserve existing tree canopy/add new tree canopy elsewhere on their property.

The figures below apply to the redevelopment site area, including right-of-way unless otherwise noted. Projects are encouraged to exceed these minimums.

- **15% minimum tree canopy on the legal lot of record or limit of disturbance.** Tree canopy selections must comply with the provisions of the Chesapeake Bay Protection Ordinance. At RiverHouse, at least **20%** must be provided on the lot.
- **5% additional minimum planted surface area at or near grade**
  - Includes additional vegetation and biophilic planted areas

- An **additional 5% of the site should be covered by vegetation** in the form of one or more of one of these alternatives:
  - Additional planted area or tree canopy area provided at or near grade
  - Planters, trellises, and/or equivalent vertical green wall surface area upon a building/structure
  - Green roof or terrace
- Planted areas must comply with the County policy for **landscape quality and tree canopy** at the time of site plan application. Native species are encouraged.



The requirements for planted area are cumulative. Sites must achieve at least 20% tree canopy when combined with adjacent right-of-way in addition to meeting the requirements for planted area on site.



RiverHouse must include greater than or equal to 15% tree canopy on-site, and then fulfill the requirements for additional vegetation.

Same Cutaway

land use

The requirements for planted area are cumulative, must be achieved within the private property's limits of disturbance (specific to each phase of development) and may rely on associated segments of the Green Ribbon delivered with each phase. To help achieve the larger Pentagon City and Arlington County Forestry and Natural Resources Master Plan goal of at least 20% tree canopy, sites may include adjacent right-of-way, Public Plaza's associated with each phase of development, or commitments to preserve existing tree canopy/add new tree canopy elsewhere on their property.

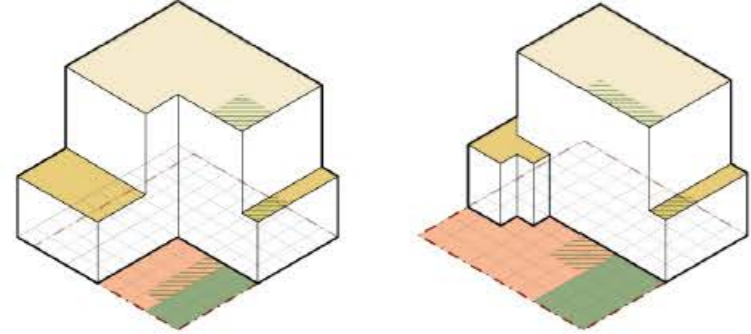


RiverHouse must include greater than or equal to 20% tree canopy on-site, and then fulfill the requirements for additional vegetation.

RiverHouse must include greater than or equal to 30% tree canopy and vegetation totals within the limits of disturbance for each phase of development.

Same Cutaway

land use



- Minimum Planted Landscape Area/ Tree Canopy
- ▨ Additional Vegetation at ground and/or upper levels
- Maximum Building Coverage
- Maximum Building Coverage, at or under 5 stories
- Flexible Paved or Planted Surface, Private and/or Public Access

Diagrams on this page represent allowable coverage by site, not by building. On sites with multiple buildings, the footprint and form of individual buildings may vary as long as the guidelines shown here are observed for the site as a whole. See 4.7, Upper Floor Stepbacks & Sculpting, for more guidance on building form.

land use

## 1.6 Public Facilities

### Policy Approach

- Redevelopment of private properties within the study area will contribute to strategic public realm improvements, sustainability, and affordable housing. As a result, subsequent processes to identify a potential school site should focus on County-owned properties within 22202 such as the Aurora Hills Library/Community Center site (as one example). Further analysis by APS will be required to solidify: the projected APS enrollment in this area and surrounding areas, timing for enrollment changes and the relationship to school capacity, and the further suitability of potential sites as part of a school siting process. There is an analysis of student generation rates for the redevelopment of Pentagon City included in the appendix.

- Dominion Energy is currently making improvements to the **Crystal City Substation**, located at the intersection of S Hayes Street and S Fern Street. The project includes an expansion and remodel of the substation to address aging equipment and increase reliability for anticipated load growth in Crystal City and Pentagon City.

- Within the Pentagon City region, the Fire Department can provide emergency services under the National Fire Protection Agency's four minute travel time standard. Station 5 is located at 1750 S Hayes Street. The medic unit, fire engine, and ladder truck respond to an average of 7,000 incidents each year. The Fire Department

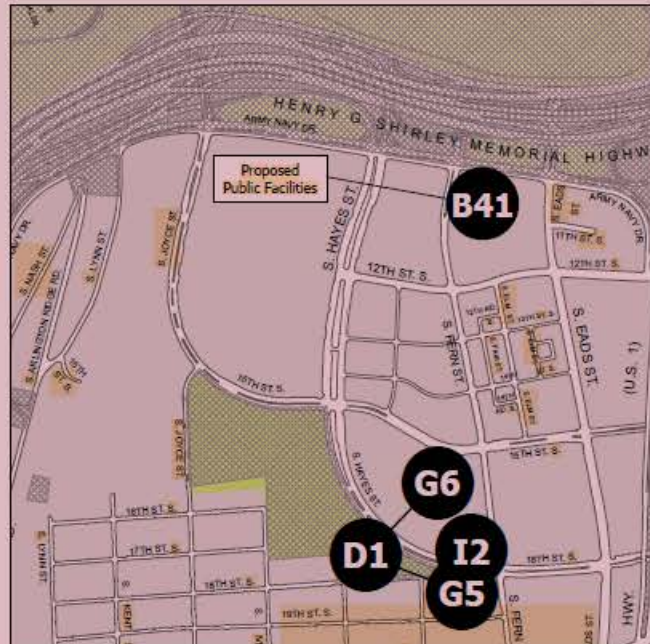
## 1.6 Public Facilities

### Policy Approach

- Redevelopment of private properties within the study area will contribute to strategic public realm improvements, sustainability, and affordable housing. As a result, subsequent processes to identify a potential school site should focus on County-owned properties within 22202 such as the Virginia Highlands Park/Aurora Hills Library/Community Center site (as one example). Further analysis by APS will be required to solidify: the projected APS enrollment in this area and surrounding areas, timing for enrollment changes and the relationship to school capacity, and the further suitability of potential sites as part of a school siting process. Under the most likely development scenario, and considering full build-out of the study area over the coming decades, future growth could deliver as many as 299 new elementary students, 126 new middle school students, and 198 new high school students according to the analysis of student generation rates included in the appendix of this Plan.
- Beyond a new elementary school, **Pentagon City's existing library and community center will need to expand to accommodate its growing population.** The Plan encourages opportunistic pursuits of such community uses within the ground story spaces of near-term private redevelopment which may qualify as alternative means to achieving community benefits. However, should those efforts prove unsuccessful, (either due to economic feasibility or a willing partner) the park master planning effort for Virginia Highlands Park should include a commitment to siting these facilities in a coordinated approach that considers other uses VHP will also need to accommodate.

- Dominion Energy is currently making improvements to the **Crystal City Substation**, located at the intersection of S Hayes Street and S Fern Street. The project includes an expansion and remodel of the substation to address aging equipment and increase reliability for anticipated load growth in Crystal City and Pentagon City.
- Within the Pentagon City region, the Fire Department can provide emergency services under the National Fire Protection Agency's four minute travel time standard. Station 5 is located at 1750 S Hayes Street. The medic unit, fire engine, and ladder truck respond to an average of 7,000 incidents each year. The Fire Department predicts an annual three percent increase of fire, rescue, and emergency medical service incidents. With the dense and growing population in the area, the frequency of simultaneous emergency incidents will increase. By 2030, there should be a need to staff and deploy an additional medic unit and fire engine. **In order to provide additional emergency response services predicted to be needed by 2030, two options have been identified:**
  - Expand the existing station at 1750 S Hayes Street in its current location.
  - Maintain the existing station at 1750 S Hayes Street and build a new station towards the east end of Columbia Pike





Request to Advertise: General Land Use Plan - Public Facilities Amendment  
Planned Arlington Community High School

**Legend:**

- Public Facilities
- ▨ Public Ownership
- ▨ Public Parks
- ▨ Federal Land

**Education**

- B41. Planned Arlington Community High School

**Libraries**

- D1. Aurora Hills Library & Community Center

**Public Safety**

- G5. Fire Station #5
- G6. Old Fire Station #5

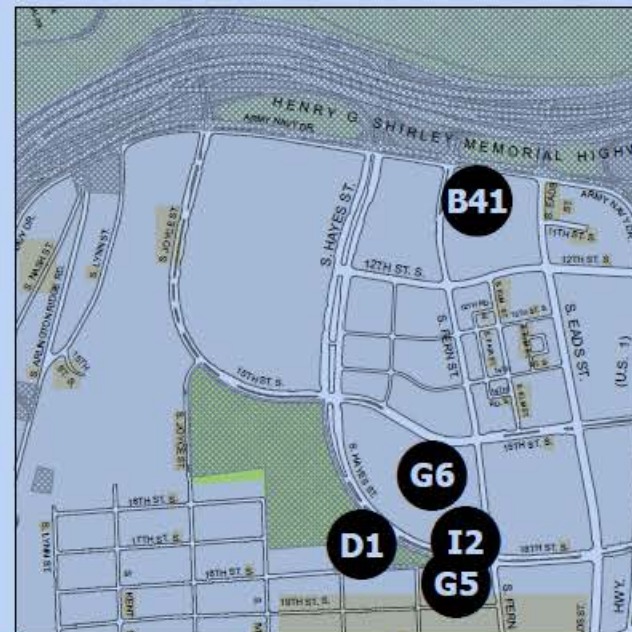
**Public Service Corporation**

- I2. Dominion Energy Substation



Public Facilities Map is undergoing revisions by the County and will be concurrently updated in the final plan.

land use



General Land Use Plan - Public Facilities Amendment  
Planned Arlington Community High School

**Legend:**

- Public Facilities
- ▨ Public Ownership
- ▨ Public Parks
- ▨ Federal Land

**Table Addition:**

**Public Facilities**

- B41. Planned Arlington Community High School



land use

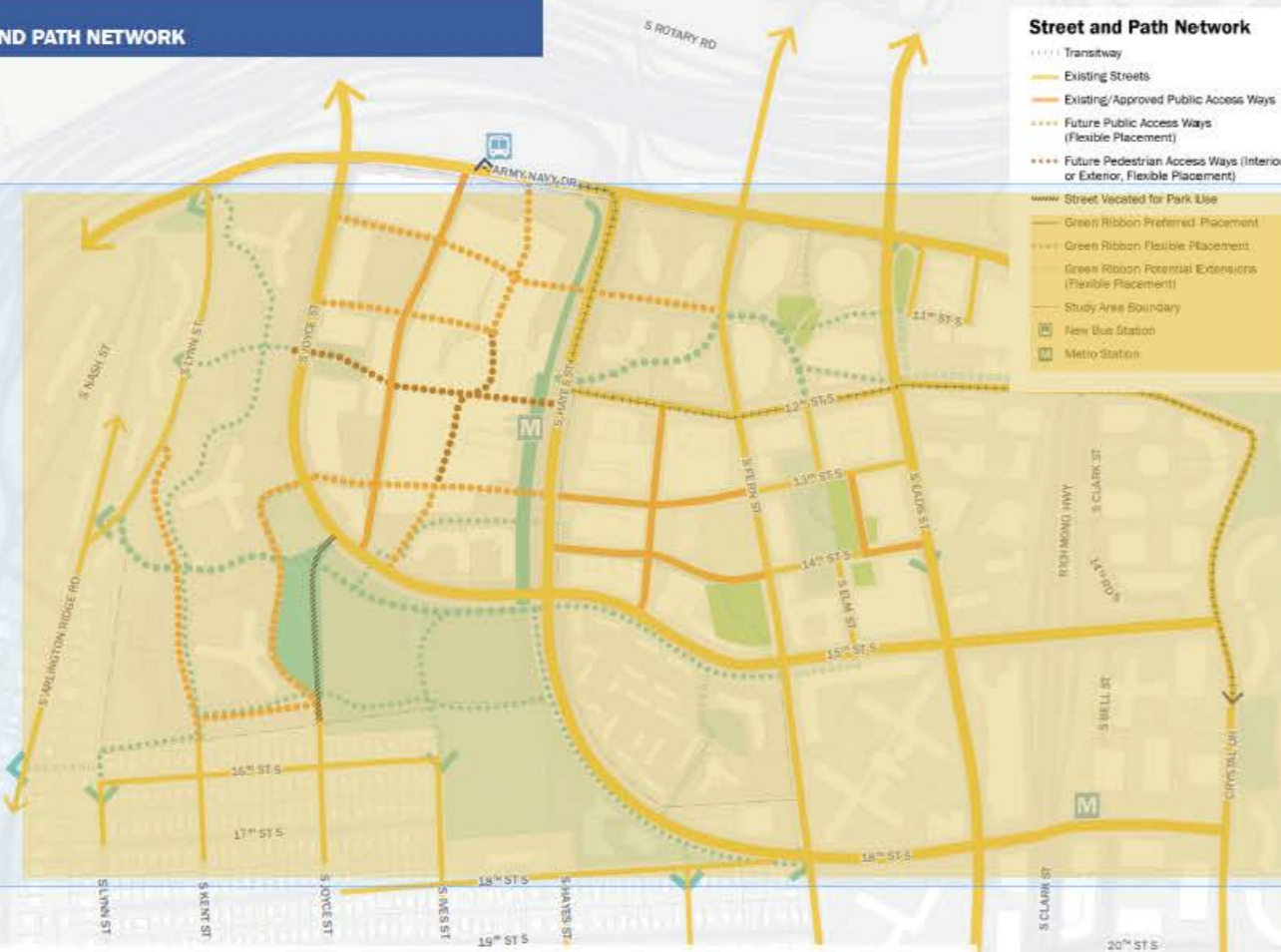


# STREET AND PATH NETWORK

## Street and Path Network

- ..... Transitway
- Existing Streets
- Existing/Approved Public Access Ways
- ..... Future Public Access Ways (Flexible Placement)
- ..... Future Pedestrian Access Ways (Interior or Exterior, Flexible Placement)

- ..... Street Vacated for Park Use
- Green Ribbon Preferred Placement
- ..... Green Ribbon Flexible Placement
- ..... Green Ribbon Potential Extensions (Flexible Placement)
- ..... Study Area Boundary
- 🚏 New Bus Station
- 🚇 Metro Station



New access ways, including pedestrian access ways, created through redevelopment ensure an inter-connected block network.

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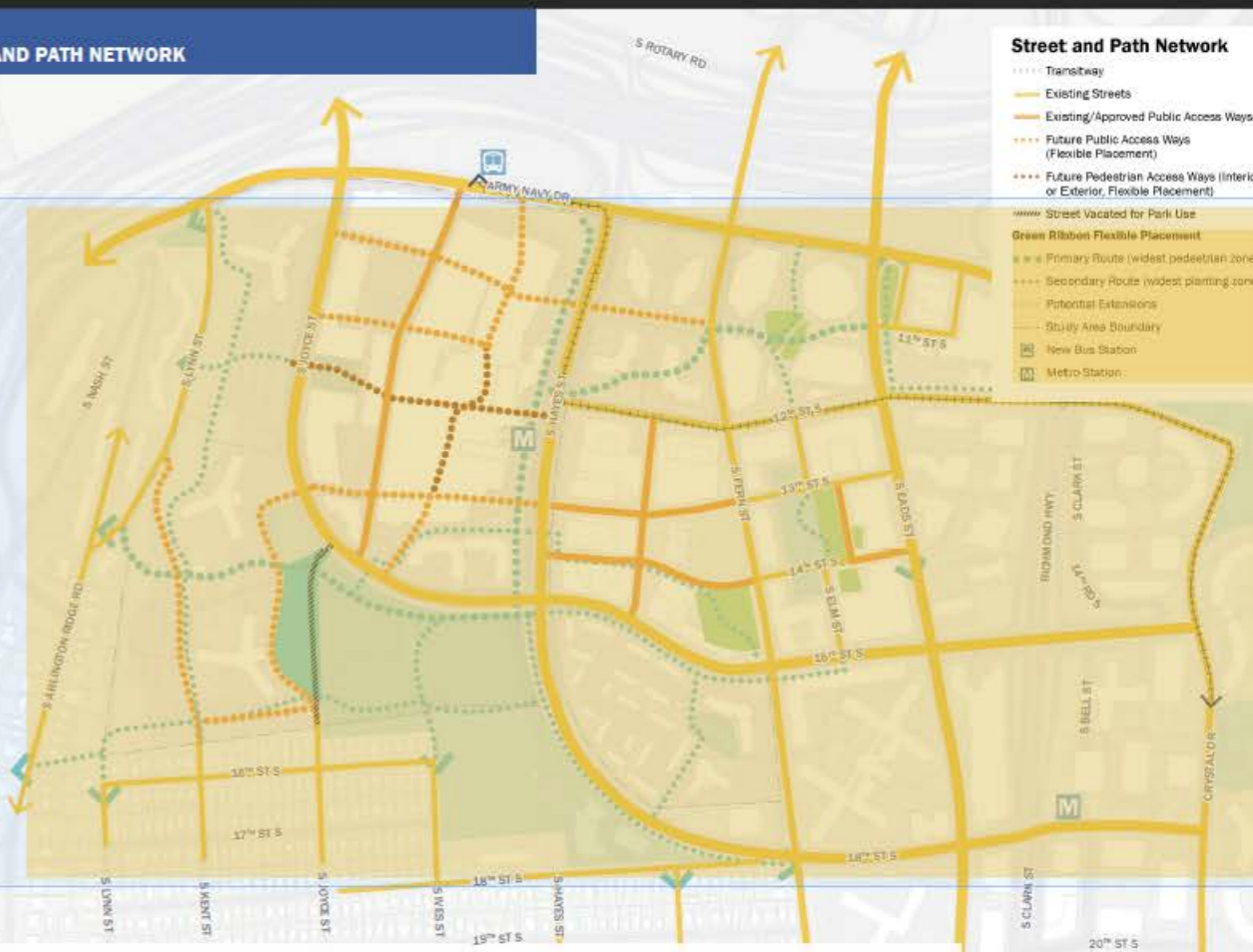


# STREET AND PATH NETWORK

## Street and Path Network

- ..... Transitway
- Existing Streets
- Existing/Approved Public Access Ways
- ..... Future Public Access Ways (Flexible Placement)
- ..... Future Pedestrian Access Ways (Interior or Exterior, Flexible Placement)

- ..... Street Vacated for Park Use
- ..... Green Ribbon Flexible Placement
  - ..... Primary Route (widest pedestrian zone)
  - ..... Secondary Route (widest planting zone)
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RECOMMENDED MULTI-MODAL IMPROVEMENTS BY STREET				
STREET	TYPICAL WIDTH	PLANNED & PRIORITY IMPROVEMENTS		
		PEDESTRIANS	BIKES	TRANSIT, CURBS, CARS
<b>S Joyce Street</b>	100' north of 15th Street  <i>Recommendation: add 30' easement along western edge to accommodate broader sidewalk, physically separated bikeway, potentially two-way from Army Navy Drive to S Hayes Street. Relocate S Joyce Street to the west south of 15th Street S to enable contiguous expansion of Virginia Highlands Park.</i>	Minimum 8' clear zone for passage along sidewalks. Provide safer crosswalks at non-signalized crossing locations, including at Green Ribbon. Could reduce crossing distance through curb extensions, additional rapid flashing beacons where appropriate  Integrate green ribbon with <b>siting and design of new buildings</b> to make walkways comfortable and inviting	Consider adding <b>separated bikeway</b> through reallocation of lanes or associated with development at River House. Coordinate with improved bike facilities north of Army-Navy Drive connecting to Columbia Pike	To prevent excessive traffic speed, consider <b>narrowing roadway</b> at spot locations with transit stops/parking pinch points
<b>S Hayes Street</b>	200' existing (County and easements)  <i>Recommendation: 60' public easement along western edge at Green Ribbon, in place of existing service drive.</i>  As part of further transportation analysis, rethink how right-of-way is allocated. The volume of transit and other bus vehicles and competition for curb space are important factors to any reorganization of the S Hayes Street right-of-way	Widen existing 8' sidewalks to at least 12' clear zone for passage in conjunction with Green Ribbon walk	Include <b>separated bikeway</b> . Options include utilizing the space in the existing median, which is currently underperforming as public and environmental space. Constraints due to the location of the existing Metro tunnel beneath the S Hayes Street median may make that infeasible. Other options include: separated two-way bikeway along the west side of S Hayes Street, separated bikeways on both sides of S Hayes Street, or others that may become possible through future study and/or roadway changes.	Long-term potential for future Metro entrance at 15th Street S, but prioritize <b>bus transit facilities</b> near/mid-term  Manage curb space to <b>prioritize bus transit</b> and efficient stops of coach/tour buses, apartment/hotel shuttles, and paratransit; layover parking elsewhere  <b>Include Shuttle Bus Zone for passenger load/unload with off-site "cell phone lot" parking</b>

RECOMMENDED MULTI-MODAL IMPROVEMENTS BY STREET				
STREET	TYPICAL WIDTH	PLANNED & PRIORITY IMPROVEMENTS		
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<b>S Joyce Street</b>	100' north of 15th Street  <i>Recommendation: add 30' easement along western edge to accommodate broader sidewalk, physically separated bikeway, potentially two-way from Army Navy Drive to S Hayes Street. Relocate S Joyce Street to the west south of 15th Street S to enable contiguous expansion of Virginia Highlands Park.</i>	Minimum 8' clear zone for passage along sidewalks. Provide safer crosswalks at non-signalized crossing locations, including at Green Ribbon. Could reduce crossing distance through curb extensions, additional rapid flashing beacons where appropriate  Integrate green ribbon with <b>siting and design of new buildings</b> to make walkways comfortable and inviting	Consider adding <b>separated bikeway</b> through reallocation of lanes or associated with development at River House. Coordinate with improved bike facilities north of Army-Navy Drive connecting to Columbia Pike	To prevent excessive traffic speed, consider <b>narrowing roadway</b> at spot locations with transit stops/parking pinch points
<b>S Hayes Street</b>	200' existing (County and easements)  <i>Recommendation: S Hayes Street study will determine specific long-term public easement needs along the western edge of the Green Ribbon, where the existing service drive is located. Near-term infill-development may result in interim improvements to the Green Ribbon if service drive is required for operation of existing tenants.</i>  As part of further transportation analysis, rethink how right-of-way is allocated. The volume of transit and other bus vehicles and competition for curb space are important factors to any reorganization of the S Hayes Street right-of-way	Widen existing 8' sidewalks to at least 12' clear zone for passage in conjunction with Green Ribbon walk	Include <b>separated bikeway</b> . Options include utilizing the space in the existing median, which is currently underperforming as public and environmental space. Constraints due to the location of the existing Metro tunnel beneath the S Hayes Street median may make that infeasible. Other options include: separated two-way bikeway along the west side of S Hayes Street, separated bikeways on both sides of S Hayes Street, or others that may become possible through future study and/or roadway changes.	Long-term potential for future Metro entrance at 15th Street S, but prioritize <b>bus transit facilities</b> near/mid-term  Manage curb space to <b>prioritize bus transit</b> and efficient stops of coach/tour buses, apartment/hotel shuttles, and paratransit; layover parking elsewhere  <b>Include Shuttle Bus Zone for passenger load/unload with off-site "cell phone lot" parking</b>

transportation

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STREET	TYPICAL WIDTH	PLANNED & PRIORITY IMPROVEMENTS		
		PEDESTRIANS	BIKES	TRANSIT, CURBS, CARS
<b>11th Street S and other new public access ways</b>	60' minimum typical	Minimum 8' clear zone for passage along sidewalks. Safe, inviting pedestrian facilities should be provided along all public access ways.	Safe, inviting bike facilities should be provided along all public access ways.	<p>Ultimate mix of transportation modes to be determined by corridor, but a mix of pedestrian, bike, and vehicular facilities is encouraged wherever possible. Some public access ways may accommodate motor vehicle travel while others accommodate solely pedestrians, or pedestrians and bikes.</p> <p>Between S Hayes and S Fern Streets, redevelopment of both the Brookfield and CALPERS parcels should each include public passage of both pedestrians, cyclists, and vehicles along the 11th Street S corridor, and in a manner that accommodates a conventional "complete street" upon redevelopment of both parcels.</p>
				<p>Between S Fern Street and S Eads Street, public passage of both pedestrians and cyclists along the 11th Street S corridor at the PenPlace parcel should be accommodated.</p>

transportation

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				<p>Between S Fern Street and S Eads Street, public passage of both pedestrians and cyclists along the 11th Street S corridor at the PenPlace parcel should be accommodated.</p>

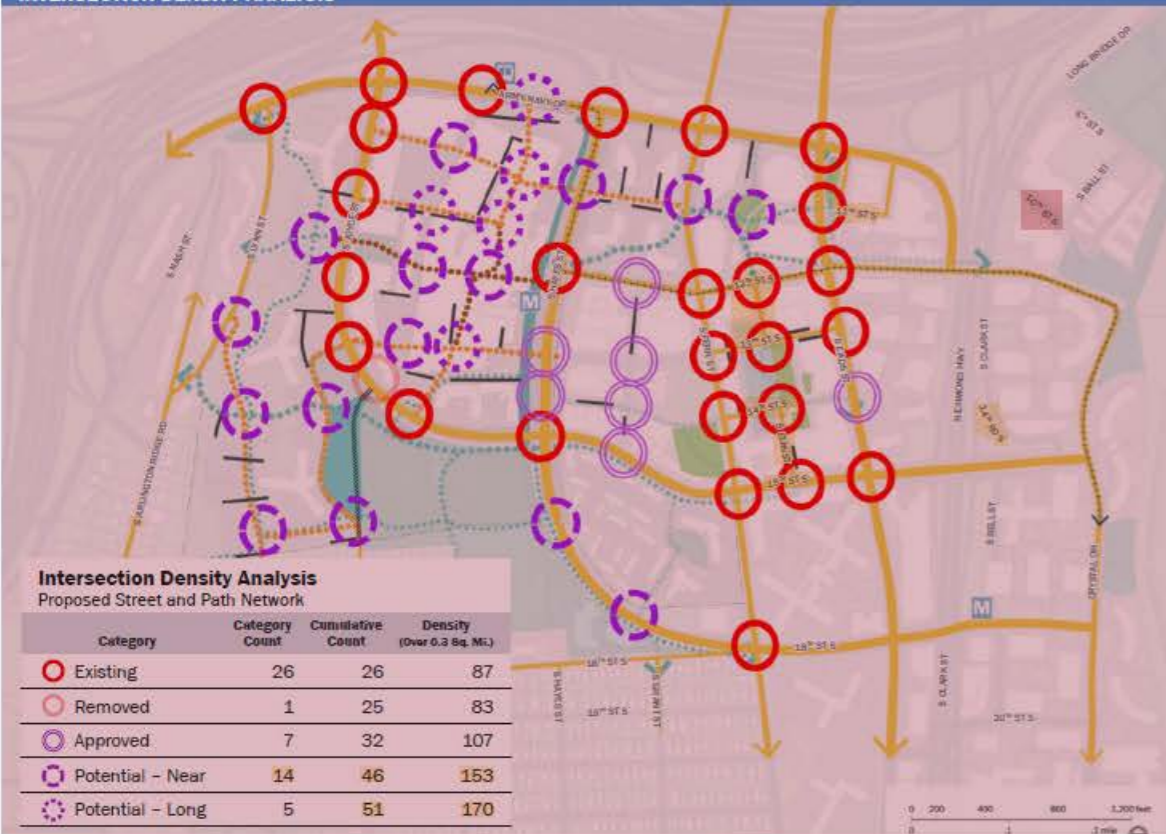
RECOMMENDED MULTI-MODAL IMPROVEMENTS BY STREET				
STREET	TYPICAL WIDTH	PLANNED & PRIORITY IMPROVEMENTS		
		PEDESTRIANS	BIKES	TRANSIT, CURBS, CARS
<b>12th Street S</b>	90' west of S Fern Street; 110' east of S Fern Street.  <i>Recommendation: 1 to 5 feet of additional width desirable both sides west of S Fern Street to enable minimum 10' clear sidewalks and 6' planting/furniture zone</i>	<p>Minimum 10' clear zone for passage along sidewalks</p> <p>Provide safe crossings at Transitway median bus stops and Green Ribbon and robust connections to public spaces at Brookfield and PenPlace sites</p> <p>Encourage allowance and facilities for public use of landscaped areas between existing Costco building and sidewalk.</p>	<p>Approved capital project includes a two-way cycle facility under the Richmond Highway bridge, linking the future two-way physically separated protected bike lane planned for Army Navy Drive to a planned off-street trail heading to Crystal City Metro Station. This cycle facility will provide a bike link to Long Bridge Drive.</p>	<p>Approved capital project will create bus Transitway between S Hayes Street and S Eads Street, primarily occupying center lanes. Bus stops to be located in median at S Hayes Street and S Elm Street</p> <p>Review curbside management at Brookfield and PenPlace parcels as part of proposed redevelopment.</p>
<b>15th Street S</b>	100' existing	<p>Minimum 8' clear zone for passage along sidewalks. Many existing deficiencies in pedestrian facilities will be addressed through approved developments and capital projects in the pipeline</p> <p>Provide safe crossings at Green Ribbon and robust connections to public spaces in Virginia Highlands Park, Met Park, and Pentagon Centre (future)</p>	<p>Separated bikeways throughout study area, although known constraints in some areas</p>	<p>The east-west connections across the Richmond Highway corridor at 15th Street S and 18th Street S are pivotal to the connections between Pentagon City and Crystal City, as well as connecting to regional trails and rail systems. Improvements to the comfort of non-auto travelers will be pivotal to connecting Pentagon City to other areas without reliance on private auto.</p>

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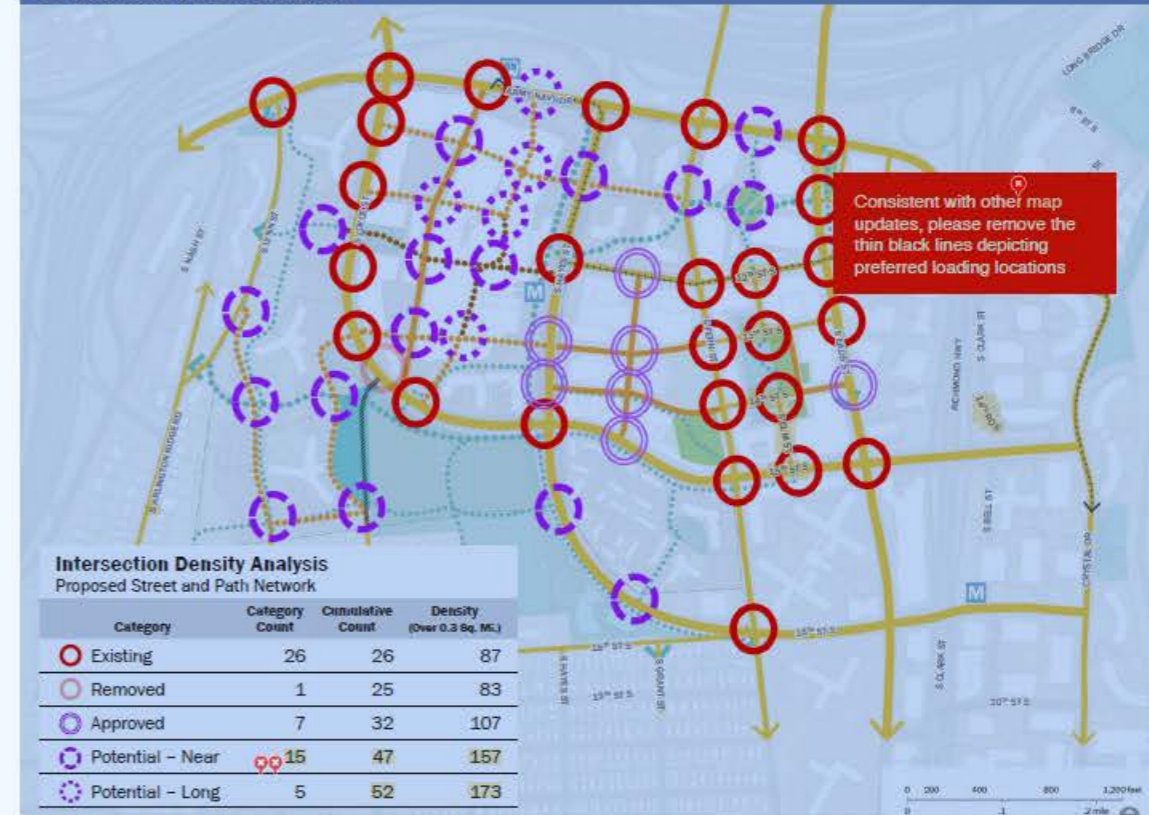




## INTERSECTION DENSITY ANALYSIS



## INTERSECTION DENSITY ANALYSIS



### Policy Approach

- Single-occupancy vehicle mode split maximums.** New development and significant renovations of existing development will include adoption of a new standard site plan condition with performance standards for mode splits and trip generation: in the near-term, single-occupancy vehicle trips can make up no more than 25% of trips for office and residential uses, 20% of trips for hotel uses, and 5% of trips for neighborhood retail/commercial uses. These caps reflect recently-approved developments in the area, and may be monitored and adjusted in the future through the MMTA and TDM monitoring process. Generally, office uses are more challenging to reduce single-occupancy vehicle trips than residential because of their reliance on regional transportation infrastructure. Residential mode split is easier to affect because site plans and County plans more directly affect the built environment related to the transportation infrastructure and use mixes in the immediate vicinity that influence the mode choice of residents. As a result, lower mode split for residential projects may be achievable with significant TDM. The MMTA process will establish acceptable mode splits for any given development.
- Performance monitoring.** Mode split and trip generation for existing uses and new development will evolve over time—to decrease or hold steady vehicle trips and increase transit, walking, biking, and micromobility trips. Changes to the performance requirement in the future will be calibrated based on the Household Travel Survey, TDM reporting, and other analysis by DES. Annual monitoring may be required at the district level to collect sufficient data to gauge and address performance issues.
- Telework support.** While long-term effects of the Covid-19 pandemic are still emerging, rates of telework and/or modified schedules will continue to be an important factor in TDM.



Over time, maximum non-transit vehicle mode share for new housing and office development will decrease from 25%.

- Employer strategies.** Employers will need to work with Arlington Transportation Partners to implement the most effective TDM strategies, including parking cash out programs and shared vehicle parking.
- Parking management strategies.** In addition to the investments in the multi-modal network detailed in the plan, future changes to parking requirements and operations may be required to support performance-based TDM. Parking strategies that may be appropriate, pending further study, include parking maximums as well as conversion of underutilized parking to other uses.
- School opportunities.** Potential development of a new elementary school in the 22202 area would include TDM and bike parking in line with County use permit requirements, as well as safe routes for walking and biking to school by students.

#### CHANGE FROM PAST POLICY?

*Builds on existing policy—including TDM monitoring and the success of the County's multimodal transportation planning—to emphasize performance standards for new development. In order to implement performance-based TDM, a new standard site plan condition for Pentagon City will be developed, including vehicle mode split maxima tied to the development approval, performance monitoring, and the ability to revise standards over time.*

### Policy Approach

- Single-occupancy vehicle mode split maximums.** New development and significant renovations of existing development will include adoption of new performance standards for mode splits and trip generation: in the near-term, single-occupancy vehicle trips can make up no more than 30% of trips for office and residential uses, with the goal of reducing the mode share even further to 25% for office and residential uses with mid-term redevelopments. Single-occupancy vehicle trips can also make up no more than 20% of trips for hotel uses, and 5% of trips for neighborhood retail/commercial uses associated with any future redevelopment. These percentages reflect recently-approved developments in the area, and may be monitored and adjusted in the future through the MMTA and TDM monitoring process. Generally, office uses are more challenging to reduce single-occupancy vehicle trips than residential because of their reliance on regional transportation infrastructure. Residential mode split is easier to affect because site plans and County plans more directly affect the built environment related to the transportation infrastructure and use mixes in the immediate vicinity that influence the mode choice of residents. As a result, lower mode split for residential projects may be achievable with significant TDM. The MMTA process will establish acceptable mode splits for any given development.
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- Telework support.** While long-term effects of the Covid-19 pandemic are still emerging, rates of telework and/or modified schedules will continue to be an important factor in TDM.



Over time, maximum non-transit SOV vehicle mode share for new housing and office development will decrease to 25%.

- Employer strategies.** Employers will need to work with Arlington Transportation Partners to implement the most effective TDM strategies, including parking cash out programs and shared vehicle parking.
- Parking management strategies.** In addition to the investments in the multi-modal network detailed in the plan, future changes to parking requirements and operations may be required to support performance-based TDM. Parking strategies that may be appropriate, pending further study, include parking maximums as well as conversion of underutilized parking to other uses.
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### 3. Public Space

The public space framework will increase and improve the parks, plazas, green connections, and casual uses spaces throughout Pentagon City. The Green Ribbon serves as a connective thread, a biophilic experience, and a landmark for Pentagon City in its own right.

Throughout the planning process, Arlington community members stressed the importance of achieving an excellent public space network that fulfills the Pentagon City planning principles to create a cohesive district, welcome everyone to Pentagon City, create places for people and nature, achieve global standards for sustainability, and offer safe walking, biking, micromobility, and transit options so that driving is unnecessary. Public space is critical to achieving all of these planning principles. The following pages include multiple strategies to increase and improve the public space network throughout Pentagon City, including:

- **Biophilia and Biophilic Design Approaches in Public Spaces** to create more nature-based experiences in Pentagon City for all of who live, work, visit, and share culture here. Greening the boulevards of Pentagon City and improving streetscapes can help ensure biophilia is integral to the daily life and navigation of the district.
- Creating **New Parks, Plazas, and Casual Use Spaces** as part of redevelopment so that every person in Pentagon City can access a public space within a two block walk.
- The **Green Ribbon**, a new signature network of biophilic walking paths connecting public spaces, destinations, and transit throughout Pentagon City and greater 22202.

This framework identifies **opportunity for almost 10 acres of new public park, plaza, and green space** as privately-owned public spaces, expanded parks, and Green Ribbon, helping people enjoy much more of Arlington's public space system.

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- **Biophilia and Biophilic Design Approaches in Public Spaces** should reflect similar efforts within private properties to create more nature-based experiences in Pentagon City for all of who live, work, visit, and share culture here. Greening the boulevards of Pentagon City and improving streetscapes can help ensure biophilia is integral to the daily life and navigation of the district.
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## 3.2 Tree Canopy and Biophilic Plantings in Public Spaces

### Principles for Pentagon City Public Spaces

- Maximize plantings across public and private properties in areas that are not heavily programmed.
- Prioritize pedestrians and cyclists, and provide generously sized, inviting facilities.
- Make public spaces welcoming and engaging from the street.
- Encourage casual use spaces for impromptu use and connection with nature.
- Create spaces that fit different age groups, needs, and experiences.



### Biophilic Design Guidelines

The design of the Green Ribbon, public spaces, and streetscapes that make up the public space network framework—as well as private development sites—should employ the biophilic design patterns. The success of biophilic design depends on the integration of patterns in the design of spaces rather than using singular elements. Layering could mean:

- Intentionally creating dynamic experiences that change by time of day or time of year  
*for example: activation of surrounding uses during the day and quiet in the evening; the color changes of flowers blooming and leaves changing color*
- Employing multiple patterns in concert, particularly combining patterns across the three pattern categories  
*for example: combining dynamic light with biomorphic forms and patterns; combining the presence of water with prospect*
- Engaging multiple planes (ground plane, wall, canopy, terrace, rooftop)  
*for example: ground cover, tree canopy, and intermediate vertical planting layers; sidewalk planters and green walls*



## 3.2 Tree Canopy and Biophilic Plantings in Public Spaces

### Principles for Pentagon City Public Spaces

- Maximize plantings or other natural features across public and private properties in areas that are not heavily programmed.
- Prioritize pedestrians and cyclists, and provide generously sized, inviting facilities that contribute to a biophilic environment.
- Make public spaces welcoming and engaging from the street by relying on a nature to establish an inviting transition.
- Encourage casual use spaces for impromptu use and connection with nature.
- Create biophilic and diverse activity spaces that fit different age groups, needs, and experiences.



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*for example: combining dynamic light with biomorphic forms and patterns; combining the presence of water with prospect*
- Engaging multiple planes (ground plane, wall, canopy, terrace, rooftop)  
*for example: ground cover, tree canopy, and intermediate vertical planting layers; sidewalk planters and green walls*
- Creative use of modest topographic variation, proportionate to the size of spaces, that assist in naturalizing otherwise flat areas, managing water, providing protection for plantings, and better defining spaces.  
*for example: surface contours, mini-berms, small mounds or ridges, natural boulders, and stone outcroppings*

### Tree Canopy

This plan seeks to exceed 20% tree canopy across the district to be consistent with standards of Arlington's Urban Forest Plan for urban corridors. This minimum is higher than current standards for Rosslyn (15%) and Crystal City (17.6%) and reflects the most current County policy goals, as well as analysis developed by the Metropolitan Washington Council of Governments (MWCOCG) to develop an integrated Urban Tree Canopy management approach for the region.

Tree canopy throughout the district is measured on development sites, public right-of-way, and public spaces. Redevelopment projects will be required to provide at least 20% tree canopy, including public right-of-way. Public spaces should provide additional tree canopy, based on the context of the space.



### Policy Approach

- Provide at least 30% tree canopy in all public spaces.
- Provide at least 40% tree canopy in larger public spaces. This is comparable to the tree canopy achieved in Virginia Highlands Park as currently configured, as well as part of the redesign of Metropolitan Park.
- Planted areas must comply with the County policy for **landscape quality and tree canopy** at the time of site plan application. Native species are encouraged. The species list will continue to be updated to reflect adaptation to climate change.
- Retain existing large caliper trees where possible.
- Include biophilic plantings, including layering strategies, as part of the design of public spaces.



Tree canopy can be successfully incorporated into casual use public spaces.

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- **Minimum tree canopy requirements may be adjusted for limited areas located directly above Metro Station entrances.**



Tree canopy can be successfully incorporated into casual use public spaces.

### 3.3 Parks and Plazas

New parks and plazas will significantly increase the amount and quality of public space available in the study area. These spaces, located in strategic locations for public access near transit, activity, and along the Green Ribbon, will make Pentagon City a more cohesive neighborhood, connected to the 22202 community, as well as a destination in its own right.

New parks and plazas create additional areas for planting, enhancing biophilic qualities and low-impact stormwater management, as well as casual use spaces.

#### Policy Approach

- Locate new **public park or plaza spaces** so that everyone in the study area has convenient **walking access to one within a ten-minute walk**, per established Arlington policy. These spaces should generally be urban in character, with a **mix of paved and planted areas and tree canopy designed to support intensive use by diverse users**. See the facing page for priority destination park or plaza locations and minimum areas. Most of these locations are on private land, and their creation would be required as a condition for increased development entitlements. Locations and areas are generally flexible in order to benefit from creative input from property owners, designers, and community members, as long as minimum areas are achieved (at least 5 acres new public open space overall) and location is within the black dotted lines. The spaces may be designated as privately-owned public spaces (POPS) or Arlington County property. The design, program, and facilities of public parks and plazas should be consistent with Arlington's Public Spaces Master Plan.
- **Virginia Highlands Park** is a well-established park amenity that should be expanded and updated. See diagram at right for proposed expansion of Virginia Highlands Park onto a portion of the RiverHouse property, made contiguous through a relocation of S Joyce Street (net park expansion at least 1 acre). Virginia Highlands

The plan enables approximately **5 acres of new parks and plazas** distributed across Pentagon City, including a more than **1 acre expansion of Virginia Highlands Park**.

Park may also be impacted by potential school development at the Aurora Hills Community Center site. A forthcoming Virginia Highlands Park Master Plan process should verify an updated approach to park design, program, and facilities, taking these considerations into account.

- **Grace Hopper Park** should be improved to be more visible, more obviously public, and function better as a public space and center of place identity around the intersection of 15th Street S and S Joyce Street with the addition of a plaza. The diagram at right demonstrates a **proposed swap of land area with RiverHouse property and new pavilion building within the park** as a means to advance this goal. The pavilion building could contain publicly-accessible amenities, like dining, or community uses like a **library, and provide public restrooms**.
- Ensure an adequate **management plan and maintenance funding** is in place for all public parks and plazas, including the Green Ribbon. The County, property owners, the National Landing BID, and/or other stakeholder organizations may all have roles to play across the study area's range of parks and plazas.
- Improve **walking, transit, and biking access** to public spaces in conjunction with 2.1, Street and Path Network, 3.4, The Green Ribbon, and 3.5, Connections: 22202 and beyond. The connection to **Long Bridge Park**, Arlington's fourth largest park and located about ½ mile walk from the study area, is particularly important.

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- **Grace Hopper Park** should be improved to be more visible, more obviously public, and function better as a public space and center of place identity around the intersection of 15th Street S and S Joyce Street with the addition of a plaza. The diagram at right demonstrates a **recommended swap of land area with the RiverHouse property and new pavilion building within the park** as a means to advance this goal. The pavilion building could contain publicly-accessible amenities, like dining, or community uses like a library or community center, and provide public restrooms. It's ultimate need, function, and location should be confirmed as part of the Virginia Highlands Park master planning effort which would include the expanded park area secured through the RiverHouse land swap.
- Ensure an adequate **management plan and maintenance funding** is in place for all public parks and plazas, including the Green Ribbon. The initial integration of nature into all spaces will have a positive result, but one which may be compromised if ongoing maintenance and attention is not regularly provided. The County, property owners, the National Landing BID, and/or other stakeholder organizations will have a shared responsibility to ensure this urban habitat has ongoing benefits for all.
- Improve **walking, transit, and biking access** to public spaces in conjunction with 2.1, Street and Path Network, 3.4, The Green Ribbon, and 3.5, Connections: 22202 and beyond. The connection to **Long Bridge Park**, Arlington's fourth largest park and located about ½ mile walk from the study area, is particularly important.

Long-term redevelopment will provide additional public spaces.

#### Parks and Plazas

Public Spaces—  
Minimum area as noted  
(Park/plaza spaces may be located)

## PARKS AND PLAZAS

Potential dedication of existing green space coupled with County land on the northern edge of RiverHouse along Army Navy Drive, connecting to Prospect Hill Park

Long-term redevelopment will provide additional public spaces

### Parks and Plazas

- Public Places – Minimum area as noted (Park/plaza spaces may be located anywhere within dotted boundary)
- Green Ribbon Preferred Placement
- Green Ribbon Flexible Placement
- Green Ribbon Potential Extensions (Flexible Placement)
- Study Area Boundary
- Metro Station

Additional casual use space connecting S Joyce Street and Pentagon Row Plaza to Green Ribbon network in north of RiverHouse site.

A redesigned Grace Hopper Park could include a building with amenity uses, casual use spaces, and public art commemorating the legacy of Grace Hopper. The relocation of S Joyce Street could enable expansion of Virginia Highlands Park. A future master planning process for the park could identify needed facilities and amenities.

New plaza space provided as part of long-term redevelopment should create a variety of public green spaces along S Hayes Street, particularly when combined with the opportunity for linear park space along the Green Ribbon.

DISCLAIMER: THIS FRAMEWORK SHOWS DESIRED NEW PUBLIC SPACES. THE SPECIFIC LOCATION OF CONNECTIONS MAY SHIFT BASED ON NEEDS AND PHASING OF REDEVELOPMENT.

0 200 400 800 1,200 feet

## PARKS AND PLAZAS

Potential dedication of existing green space coupled with County land on the northern edge of RiverHouse along Army Navy Drive, connecting to Prospect Hill Park

Additional casual use space connecting S Joyce Street and Pentagon Row Plaza to Green Ribbon network in north of RiverHouse site.

Existing RiverHouse tree canopy should be preserved (generally 60 feet from western lot line and generally 40 feet from southern lot line)

A redesigned Grace Hopper Park could include a building with amenity uses, casual use spaces, and public art commemorating the legacy of Grace Hopper. The relocation of S Joyce Street could enable expansion of Virginia Highlands Park. A future master planning process for the park could identify needed facilities and amenities.

New plaza space provided as part of long-term redevelopment should create a variety of public green spaces along S Hayes Street, particularly when combined with the opportunity for linear park space along the Green Ribbon.

Long-term redevelopment will provide additional public spaces

1/2 acre public plaza is inclusive of the Green Ribbon pathway in this location.

### Parks and Plazas

- Public Places – Minimum area as noted
- Green Ribbon Flexible Placement
  - Primary Route (widest pedestrian zone)
  - Secondary Route (widest planting zone)
  - Potential Extensions
  - Study Area Boundary
  - Metro Station

DISCLAIMER: THIS FRAMEWORK SHOWS DESIRED NEW PUBLIC SPACES. THE SPECIFIC LOCATION OF CONNECTIONS MAY SHIFT BASED ON NEEDS AND PHASING OF REDEVELOPMENT.

0 200 400 800 1,200 feet  
0 1 2 miles



### 3.4 The Green Ribbon

This new signature public space element for Pentagon City responds to the strong community desire for safe, pleasant, and biophilic ways to walk throughout the broader 22202 area. The Green Ribbon is a signature feature for Pentagon City, and will increase the amount of quality public space available in the study area. Additionally, the Green Ribbon will:

- Add areas for **planting**, enhancing **biophilic qualities** and low-impact **stormwater management**.
- Extend and enhance Pentagon City's multi-modal network to be consistently **safe and inviting** for pedestrians and for other modes as appropriate to location. New access ways that fill gaps, and additional intersections that expand choice of route, would significantly improve access.

#### Policy Approach

- Create a connected network of generous, biophilic walking paths that achieve multiple goals:
  - A recreational path network connecting all people in and around Pentagon City with park facilities and other destinations in 22202 and beyond
  - New casual use spaces along the network, in various settings ranging from parks to active retail frontage
  - Increasing tree canopy and permeable, planted ground surface
  - Filling gaps in the study area's pedestrian network where conventional streets would be difficult or inappropriate, with special attention to crossings
  - Unique sense of place, identity, and community through distinctive design and enthusiastic community use



The precedent images on the following pages illustrate examples of components designed to achieve the multiple goals of the Green Ribbon. These examples are meant to be inspirational, and should not constrain future design responses that achieve the goal of a biophilic experience.

### 3.4 The Green Ribbon

This new signature public space element for Pentagon City responds to the strong community desire for safe, pleasant, and biophilic ways to walk throughout the broader 22202 area. The Green Ribbon will represent a dynamic and connective urban thread that will increase the amount of quality public space available in the study area. Additionally, the Green Ribbon will:

- Add areas for **planting**, enhancing **biophilic qualities** and low-impact **stormwater management**.
- Extend and enhance Pentagon City's multi-modal network to be consistently **safe and inviting** for pedestrians and for other modes as appropriate to location. New access ways that fill gaps, and additional intersections that expand choice of route, would significantly improve access.

#### Policy Approach

- Create a connected network of generous, biophilic walking paths that achieve multiple goals:
  - A recreational path network connecting all people in and around Pentagon City with park facilities and other destinations in 22202 and beyond
  - New casual use spaces along the network, in various settings ranging from parks to active retail frontage
  - Increasing tree canopy and permeable, planted ground surface
  - Filling gaps in the study area's pedestrian network where conventional streets would be difficult or inappropriate, with special attention to crossings
  - Unique sense of place, identity, and community through distinctive design and enthusiastic community use



The precedent images on the following pages illustrate examples of components designed to achieve the multiple goals of the Green Ribbon. These examples are meant to be inspirational, and should not constrain future design responses that achieve the goal of a biophilic experience.

The Green Ribbon should include periodic public seating, either at the edge of the pedestrian path or within the planting zone. Seating and other furnishings should be designed as part of biophilic design approaches.

Throughout the Green Ribbon, other elements and amenities, such as public art and interpretive signage can help enrich the biophilic experience and provide additional opportunities for cultural interpretation.

Where topography creates views, the Green Ribbon design should provide moments to enjoy them. In most locations, the Green Ribbon should be universally accessible. In limited locations, including navigating the rise to Arlington Ridge, stairs may be incorporated as part of Green Ribbon segments.

When providing tree canopy is not feasible, **other appropriate vertical features** could include shade structures, living walls, water features, murals, or architectural fences or screens with biophilic features.



public space

Initial development proposals should coordinate closely with the National Landing BID to ensure wayfinding signs are consistent and help link unique segments the Green Ribbon network. Once established, subsequent proposals should match earlier designs.

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public space

### 3.4 The Green Ribbon (continued)

#### Green Ribbon Routing

- The diagram on the facing page identifies **priority Green Ribbon routes**, as well as potential locations for future extension throughout Pentagon City and connecting to surrounding areas. The routes utilize a mix of private land and existing public access ways and parks. Actual route alignment is flexible as long as key intersection points or destinations are linked.
- The Green Ribbon will be required on sites undergoing redevelopment through the site plan process. On public property, the County will lead development of the Green Ribbon. Where there are opportunities to extend the Green Ribbon on private property not undergoing redevelopment, the County will look to partner with interested property owners to achieve desired connections.
- The Green Ribbon links together other public spaces, including parks and plazas, that will include other elements and amenities. In these locations, easy access to and from the Green Ribbon will help link the public space network in Pentagon City, a goal of Arlington County's Public Space Master Plan as well as Livability 22202 planning.
- At a **typical width of at least 16 feet along the Green Ribbon**, the more than three miles of new walks shown in the diagram would represent more than four acres of net new park space in Pentagon City. This is exclusive of the parks, plazas, and existing sidewalk areas the Green Ribbon passes through.
- Throughout Pentagon City, the Green Ribbon, while accommodating slower-moving cyclists, will be designed to

At full build-out of the highest priority routes, **the Green Ribbon would create approximately three miles of new and improved pedestrian walks providing over three acres of new public space** along the Green Ribbon, exclusive of other park and plaza spaces it connects together.

discourage higher-speed bicycle travel. Therefore, concurrent improvements to on-street bicycle facilities are essential.

- The Green Ribbon includes a segment—along the incline from Grace Hopper Park to Lynn Street—where a **parallel trail for bicycles** and other micromobility, or other design strategy is needed alongside the Green Ribbon to safely accommodate different speeds of travel given the grade of the path.

### 3.4 The Green Ribbon (continued)

#### Green Ribbon Routing

- The diagram on the facing page identifies **priority Green Ribbon routes**, as well as potential locations for future extension throughout Pentagon City and connecting to surrounding areas. The routes utilize a mix of private land and existing public access ways and parks. Actual route alignment is flexible as long as key intersection points or destinations are linked.
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- Throughout Pentagon City, the Green Ribbon, while accommodating slower-moving cyclists, will be designed to discourage higher-speed bicycle travel. Therefore, concurrent improvements to on-street bicycle facilities are essential.
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# GREEN RIBBON

The route of the Green Ribbon through RiverHouse is dependent on final site design, but should provide a north-south connection from Prospect Hill Park to the southern boundary of the site, access to Virginia Highlands Park, and connect from S Lynn Street down to S Joyce Street at a second location near the Metro access route.

The Green Ribbon along S Hayes Street and through the Brookfield site provides a linear park experience, linking larger plaza and casual use spaces. Green ribbon strategies can also be deployed in constrained environments to improve the visibility and experience of walking to Metro from Virginia Highlands Park.

The route of the Green Ribbon through Virginia Highlands Park will be determined through a park master plan process, but connections along 15th Street S are prioritized.

The existing stairs behind the Hume School building could be incorporated into another expansion of the Green Ribbon.

This map shows other potential connections the Green Ribbon could make through the Costco site, to Long Bridge Park, and connecting other public spaces such as the future New Park at S Eads Street. The potential routing and alignment of possible future sections requires further study.

### Green Ribbon

- Preferred Placement (Highest Priority)
- Flexible Placement
- Potential Extensions (Flexible Placement)
- New Park Extension
- New Road
- Proposed Public Space
- Study Area Boundary
- Metro Station

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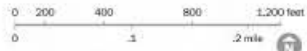
The existing stairs behind the Hume School building could be incorporated into another expansion of the Green Ribbon.

### Green Ribbon

- Flexible Placement
- Primary Route (widest pedestrian zone)
- Secondary Route (widest planting zone)
- Potential Extensions
- New Park Extension
- New Road
- Proposed Public Space
- Study Area Boundary
- Metro Station

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This map shows other potential connections the Green Ribbon could make through the Costco site, to Long Bridge Park, and connecting other public spaces such as the future New Park at S Eads Street. The potential routing and alignment of possible future sections requires further study.



### 3.5 Green Connections: 22202 and Beyond

This new initiative responds to connectivity goals expressed through the Livability 22202 initiative and Biophilic Arlington, and leverages county-scale trail loop opportunities identified in the Public Spaces Master Plan. It will extend the benefits of the Green Ribbon and create a more cohesive, connected district beyond Pentagon City.

#### Policy Approach

- Extend Pentagon City's pedestrian, bike and trail network—including Green Ribbons, sidewalks, and bike facilities—beyond the study area to make valuable connections between Pentagon City, greater 22202, Columbia Pike, the County as a whole, and the region. Within the study area, locate these corridors to facilitate internal and external continuity.
- Implement physical and aesthetic improvements at highway crossings and other formidable barriers to achieve safe, comfortable routes to the Columbia Pike corridor, Inner Loop, Pentagon Lagoon, Long Bridge Park, Crystal City, and Mount Vernon Trail. Connections south and west through Arlington Ridge and Aurora Highlands will also require special attention to be compatible with neighborhood streets.
- Design trail connections to be consistent with the Arlington Public Spaces Master Plan.

An **extension of the Green Ribbon to Long Bridge Park** would greatly improve 22202 access to Arlington's fourth largest park, and could **become a gateway** to the Mount Vernon Trail



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#### Policy Approach

- Extend Pentagon City's pedestrian, bike and trail network—including Green Ribbons, sidewalks, and bike facilities—beyond the study area to make valuable connections between Pentagon City and the greater 22202 zip code, Columbia Pike, Regan National Airport, other existing and planned expansions of these networks throughout the County and the region. Within the study area, locate these corridors to facilitate internal and external continuity.
- Implement physical and aesthetic improvements at highway crossings and other formidable barriers to achieve safe, comfortable routes to the Columbia Pike corridor, Inner Loop, Pentagon Lagoon, Long Bridge Park, Crystal City, and Mount Vernon Trail. Connections south and west through Arlington Ridge and Aurora Highlands will also require special attention to be compatible with neighborhood streets.
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### ILLUSTRATIVE PLAN: NEAR-TERM OPPORTUNITY

See appendix for illustrative plans of longer-term possibilities.

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## 4.1 Sustainable Design

Achieving global standards for sustainable, resilient, and biophilic design is one of the planning principles for Pentagon City. All future site plans in Pentagon City will address the goals of the Arlington County Community Energy Plan. New buildings will maximize energy efficiency, lower carbon impact, and include elements of biophilic design. Development sites will address stormwater, heat island effect and needed climate adaptation. Innovative strategies specific to the site and program of development are encouraged, and continual improvement in stringency of green standards is part of the plan. All site plans must comply with all appropriate environmental regulations, including stormwater mitigation.

### Policy Approach

- Site plans in Pentagon City should utilize the most appropriate strategies for their site, and consider innovative strategies that respond to their unique site opportunities.
- Site plans should achieve at least LEED Gold as a baseline. Site plans may opt to use a more stringent building certification than LEED or Earthcraft for Multifamily Uses, such as Passive House, Net Zero Energy or Zero Carbon certifications and/or pursue strategies from the Green Building Incentive Policy's Extra List. Energy Star Building Certification (or equivalent) post-occupancy is also encouraged.

- Electric buildings are encouraged as feasible; buildings may utilize electric or induction cooktops to increase indoor air quality and reduce carbon emissions. Strategies also include ensuring the building's infrastructure is designed to accommodate future energy needs such as electric vehicle charging within garage spaces.

## 4.1 Sustainable Design

Achieving global standards for sustainable, resilient, and biophilic design is one of the planning principles for Pentagon City. Sustainability, within the context of redevelopment, involves a strategic coordination of mutually reinforcing design features that effectively address issues such as energy conservation, bird safety, and storm water management. Beyond just buildings, creating biophilic pathways and incorporating nature into each development site provides cross-benefits that address multiple Planning Principles. Site context will need to inform unique approaches for each site plan resulting in a customized micro-environment that properly responds to airflow between buildings, direct and indirect sunlight, and need for successful robust natural spaces (delivered at grade and through elevated terraces or green walls).

All future site plans in Pentagon City will address the goals of the Arlington County's Community Energy Plan. New buildings will maximize energy efficiency, lower carbon impact, and include elements of biophilic design. Development sites will address stormwater, heat island effect and needed climate adaptation. Innovative strategies specific to the site and program of development are encouraged, and continual improvement in stringency of green standards is part of the plan. All site plans must comply with all appropriate environmental regulations, including stormwater mitigation.

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- Electric buildings are encouraged as feasible; buildings may utilize electric or induction cooktops to increase indoor air quality and reduce carbon emissions. Strategies also include ensuring the building's infrastructure is designed to accommodate future energy needs such as electric vehicle charging within garage spaces.

## 4.2 Building Height

### Policy Approach

- Generally within the study area, locate greatest building heights to the north, including opportunities to the northeast and northwest. Except as noted below for areas adjacent to R2-7 and R-10 zones and along S Lynn Street, building height is limited to no more than 330 feet.
- In addition to the plan guidance, building height is subject to FAA regulations in this area as well as building separation and fire code requirements.
- In the Southern portion of RiverHouse, where new development is adjacent to R2-7 and R-10 zones, building height should be limited to:
  - Within 75 feet of R2-7 zone, height limited to 5 stories; form should transition to 3-4 stories where it faces the R2-7 zone.
  - In other areas within 150 feet of R2-7 and R-10 zones, height limited to 8 stories; form should transition at least one story down where it faces the adjoining zones.
- In other areas south of 15th Street S not addressed above, height may not exceed that of the existing RiverHouse Ashley Building (17 stories). Varied height encouraged: on parcels with multiple buildings, target 10-20% height difference between some of them.
- In areas within 150 feet of S Lynn Street not addressed above, height is limited to 10-12 stories, dependent on grade.
- Where a scale transition is needed to a lower density/height area, consider the benefits of a variety of building form options, not just tapered height, such as:
  - Tall but slender buildings facing neighboring area.
  - Preserving specific view corridors from public streets/parks.

- Increased tree canopy/plantings, and less building footprint, in transition area.
- Minimize shadow impacts of buildings on priority public spaces, such as by limiting height of buildings immediately south of these spaces. Potential performance targets for priority public spaces:
  - On the summer solstice, at least 50% of the space should have shade from buildings or foliage for most of the day.
  - On the spring and fall equinox, at least half the area should have access to sun at least 75% of the time between 9am-3pm.
  - On the winter solstice, at least 25% of the space should have at least two hours of sun.
- These targets may not be achievable in all locations, such as along the 12th Street S corridor or along the Green Ribbon north of 12th Street S, due to the placement of neighboring buildings, circulation needs, or other mitigating factors. Shadow impacts on priority public spaces should be included as part of the SPRC review and aeronautical study, and County issuance of building permits require FAA's Determination of No Hazard.

### Intended benefit responding to Guiding Principles

- Locate tall buildings where they will benefit from views to and from the Potomac River, Washington, DC, and adjoining areas
- Locate tall buildings where shadow impacts on public realm and sensitive developed areas are relatively minor
- Vary skyline for interest
- Taller buildings in Pentagon City unlock opportunities to increase amount and quality of public space available in the study area.

## 4.2 Building Height

### Policy Approach

- Generally within the study area, locate greatest building heights to the north, including opportunities to the northeast and northwest. Except as noted below for areas adjacent to R2-7 and R-10 zones and along S Lynn Street, building height is limited to no more than 350 feet.
- In addition to the plan guidance, building height is subject to FAA regulations in this area as well as building separation and fire code requirements.
- In the Southern portion of RiverHouse, where new development is adjacent to R2-7 and R-10 zones, building height should be limited to:
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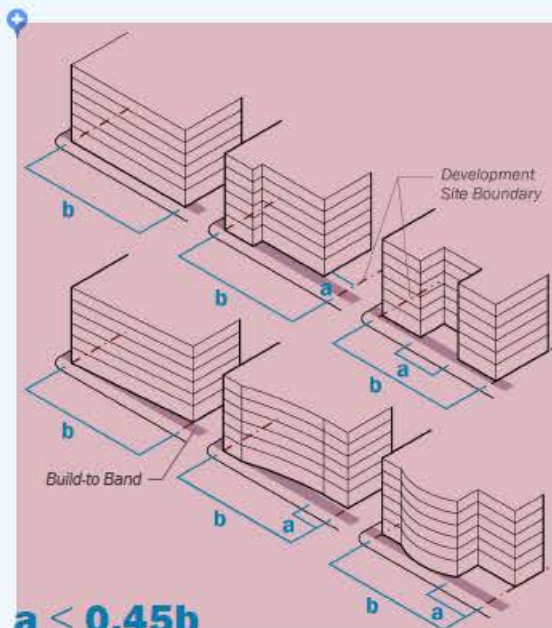
## 4.3 Building/Public Realm Edge

### Policy Approach

- Locate building façades to form a consistent edge along public streets, walks, and plazas, shaping these as outdoor rooms. Building façades should be present within an approximate **"build-to band"** within 8 feet of the public sidewalk passage along approximately 55% or more of the length of each parcel edge along a street. One or more buildings may help form this continuous edge.
- A larger **build-to-band of 12 feet** may be permitted when used to provide public space, pedestrian access, biophilic features, or other amenities such as outdoor dining or public art that help shape and improve public streets, walks, and plazas.
- No setbacks required except to accommodate a public easement, or adjoining a Low or Low-Medium density zoning district.

### Intended benefit responding to Guiding Principles

- Enhance pedestrian experience
- Create a more continuous network of pedestrian-friendly streets and walks
- Shape streets and public spaces that have distinctive sense of place and, in turn, contribute to identity of Pentagon City and the broader 22202 area



$$a \leq 0.45b$$

**a** = frontage without building edge

**b** = overall site frontage

- Multiple options for placing façade **within 8' build-to-band**
- Occupy at least **55% of site frontage per block**
- Accessible public space is excluded from overall site frontage

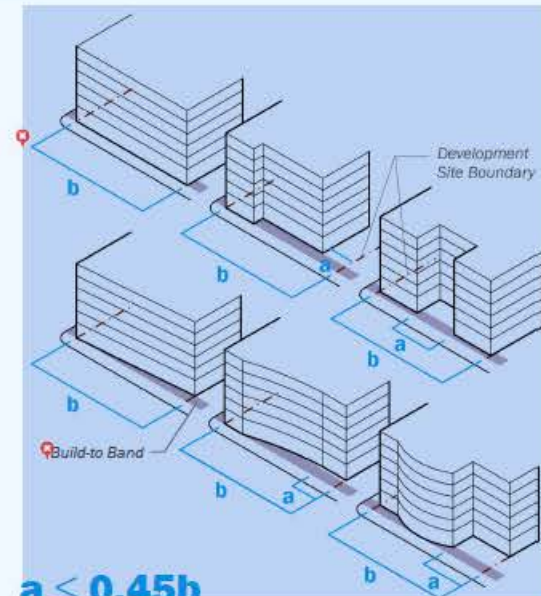
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- No setbacks required except to accommodate a public easement, or adjoining a Low or Low-Medium density zoning district.
- Build-to-band is intended to regulate the base section of future buildings (generally first 1-5 stories), recognizing other architectural treatments, step-backs, and facade articulation will occur above, which could place upper sections of the buildings outside of this band.

### Intended benefit responding to Guiding Principles

- Enhance pedestrian experience
- Create a more continuous network of pedestrian-friendly streets and walks
- Shape streets and public spaces that have distinctive sense of place and, in turn, contribute to identity of Pentagon City and the broader 22202 area



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- Multiple options for placing façade **within 8' build-to-band**
- Occupy at least **55% of site frontage per block**
- Accessible public space is excluded from overall site frontage



## 4.4 Ground Floor Design: Safe, Convenient, Inclusive, Active, Green

Throughout Pentagon City, the Plan continues Arlington County's goal of maximizing the presence of **active ground floor uses along primary pedestrian streets and walks**. See 4.5, Retail and Active Edges, for more guidance in coordination with the Arlington County Retail Plan on priority locations for future retail.

As the Arlington County Retail Plan highlights, the format and needs of successful retail continues to evolve and concentrate. Ground floor design cannot only depend on retail uses to be successful and attract pedestrians. For areas designated "Green" in the Arlington County Retail Plan—**free from retail use and design standards**—buildings should meet these design standards that aim to **build strong indoor-outdoor connections** while also respecting privacy needs of different uses. These design guidelines are meant to help enable long-term flexibility for a variety of retail, community-serving, and other uses at the ground level of mixed use buildings. While there are recommended dimensions included in these guidelines, they are meant to establish a range; the dimensions and circulation of a given site may require going outside these dimensions, but should still advance the guiding principles, including pedestrian-oriented and biophilic design.

### Policy Approach

- Include entrances frequently, aiming for every 50–75 feet. Where residential uses front the street, individual entrances are encouraged. Where there is a significant entryway for non-residential or retail uses, such as a hotel lobby, major office lobby, or cultural space, longer spacing is appropriate.
- Provide **transparent glazing that allows for views in and out of space following the recommendations in the County Retail Plan**.
- **In no cases should a ground floor façade extend more than 20 feet horizontally without transparent glazing, public art, or a significant biophilic feature** like a planted green wall. When a biophilic feature or public art is provided, the remaining ground floor **façade** should have increased levels of transparency and high-quality design.
- Buildings should be sited to provide intermittent **transitional space between sidewalk passage corridor and new building façades for at least half of their frontage**. This space can usefully serve dining or other program at active uses, and provide occupiable landscape (gardens, patios, stoops, porches) at passive uses (residential, office, education, institution), adding amenity and flexibility for ground level uses. For residential uses, stoops, porches, or front gardens of at least 4 feet deep should be provided, including along the Green Ribbon, to provide a transition zone, more opportunities for biophilia, and more space for community interaction.

## 4.4 Ground Floor Design: Safe, Convenient, Inclusive, Active, Green

Throughout Pentagon City, the Plan continues Arlington County's goal of maximizing the presence of **active ground floor uses along primary pedestrian streets and walks**. See 4.5, Retail and Active Edges, for more guidance in coordination with the Arlington County Retail Plan on priority locations for future retail.

As the Arlington County Retail Plan highlights, the format and needs of successful retail continues to evolve and concentrate. Ground floor design cannot only depend on retail uses to be successful and attract pedestrians. For areas designated "Green" in the Arlington County Retail Plan—**free from retail use and design standards**—buildings should meet these design standards that aim to **build strong indoor-outdoor connections** while also respecting privacy needs of different uses. These design guidelines are meant to help enable long-term flexibility for a variety of retail, community-serving, and other uses at the ground level of mixed use buildings. While there are recommended dimensions included in these guidelines, they are meant to establish a range; the dimensions and circulation of a given site may require going outside these dimensions, but should still advance the guiding principles, including pedestrian-oriented and biophilic design.

### Policy Approach

- Include entrances frequently, aiming for every 50–75 feet. Where residential uses front the street, individual entrances are encouraged. Where there is a significant entryway for non-residential or retail uses, such as a hotel lobby, major office lobby, or cultural space, longer spacing is appropriate.
- Provide **transparent glazing that allows for views in and out of space (following recommendations in the County Retail Plan) while addressing bird safety challenges where possible**.
- **When facing primary pedestrian streets, public parks/plazas or the Green Ribbon, ground floor facades should not extend more than 20 feet horizontally without transparent glazing, public art, or a significant biophilic feature** like a planted green wall. When a biophilic feature or public art is provided, the remaining ground floor **façade** should have increased levels of transparency and high-quality design.
- Buildings should be sited to provide intermittent **transitional space between sidewalk passage corridor and new building façades for at least half of their frontage**. This space can usefully serve dining or other program at active uses, and provide occupiable landscape (gardens, patios, stoops, porches) at passive uses (residential, office, education, institution), adding amenity and flexibility for ground level uses. For residential uses, stoops, porches, or front gardens of at least 4 feet deep should be provided, including along the Green Ribbon, to provide a transition zone, more opportunities for biophilia, and more space for community interaction.



## 4.7 Upper Floor Façade Variation

Variations in building façade plane are encouraged for compositional interest, human scale, and to expand opportunities for usable outdoor space, plantings, and shading that contribute to biophilia and sustainability. Building stepbacks described in 4.6 contribute to these goals, but this guideline applies a further level of variation at finer scale. Prominent vertical composition lines—which may be marked by variations described above, and/or variations in material—are also required periodically to help transition large scale building volumes to human scale.

Terraces and balconies provide one useful means of accomplishing this variation, whether recessed into or projecting beyond a primary façade plane.

### Policy Approach

- For building façade area up to six stories above grade, some of the façade area should be displaced at least six inches from the prevailing adjacent façade plane(s) to provide relief. Design strategies such as enclosed projecting bays, open projecting balconies, recessed balconies, window surrounds, exterior building shading, stepbacks per guideline 4.6, and other variations of façade surface are all appropriate to achieve this goal.

- Terraces, balconies, and other upper floor outdoor areas help provide amenities for building occupants and biophilic experiences. These design elements can also be a feature of building design, and are encouraged throughout the district. These elements are encouraged within the footprint of the building site, with no limitation on size where they do not encroach into the public right of way.
- Limit overall façade length to approximately 250 feet for buildings under 8 stories, and 300 feet for taller buildings. Follow design guidelines to break up massing, including introducing prominent vertical composition lines approximately every 100 feet, providing mid-block connections, shifting building materials or design, and/or providing major building entrances.
- On first five stories of residential buildings, include additional vertical composition lines.



## 4.7 Upper Floor Façade Variation

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- Limit overall façade length to approximately 250 feet for buildings under 8 stories, and 300 feet for taller buildings. Follow design guidelines to break up massing, including introducing prominent vertical composition lines, providing mid-block connections, shifting building materials or design, and/or providing major building entrances.
- On first five stories of residential buildings, include additional vertical composition lines.
- Buildings should consider bird-aware design to mitigate the threats of fatal bird strikes on building glass. Areas of particular emphasis involve spaces where reflectivity and invisibility can present threats including:
  - building glass below 50 feet on most facades,
  - glass on building corners, and
  - glass throughways.

Item No.	Implementation Actions	Timing	Implementing Agency	Mechanism	Funding Sources
<b>PLAN ADOPTION</b>					
1	Adopt the Pentagon City Plan.	Immediate	CPHD	County Board Action	N/A
<b>LAND USE &amp; ZONING</b>					
2A	Amend the General Land Use Plan (GLUP) map to update Note #4 to reflect the new "Pentagon City Coordinated Redevelopment District."	Immediate	CPHD	County Board Action	N/A
2B	Amend the GLUP map within Note #4 boundaries to replace areas where existing striping is shown with "High" Office-Apartment-Hotel designation.	Immediate	CPHD	County Board Action	N/A
2C	Amend the GLUP map to expand the Note #4 boundary to include the entire RiverHouse property located west of S. Joyce Street.	Immediate	CPHD	County Board Action	N/A
2D	Amend the GLUP map to replace "Medium" residential on the RiverHouse property with "Medium-High" residential and "High" residential designations.	Immediate	CPHD	County Board Action	N/A
2E	Amend the GLUP map to add eight (8) triangular symbols (used to symbolize the general locations of open space) within the expanded note #4 boundary, to reflect planned open spaces identified in the Pentagon City Plan.	Immediate	CPHD	County Board Action	N/A
3A	Amend the Zoning Ordinance to establish a new Special Planning Area under Article 9.6, "Pentagon City Coordinated Redevelopment District" to help facilitate the achievement of the future vision as described in the Pentagon City Plan.	Immediate	CPHD	County Board Action	N/A
3B	Amend the Zoning Ordinance Articles 6.5 (RA6-15) and 7.12 (C-O-2.5) to establish site eligibility for properties located within the new "Pentagon City Coordinated Redevelopment District" as shown on the GLUP.	Immediate	CPHD	County Board Action	N/A

Key: Short-term: 1-3 years; Mid-term: 4-9 years; Long-term: 10 years or longer

Item No.	Implementation Actions	Timing	Implementing Agency	Mechanism	Funding Sources
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Key: Short-term: 1-3 years; Mid-term: 4-9 years; Long-term: 10 years or longer

Item No.	Implementation Actions	Timing	Implementing Agency	Mechanism	Funding Sources
4	Ensure that at least 10–20% of the total value of new residential density in Pentagon City site plan projects goes toward creating on-site affordable housing and is consistent with the goals, objectives, and policies of the Affordable Housing Master Plan.	Ongoing	CPHD	N/A	N/A
5	Monitor performance of initial development projects to ensure they are achieving biophilia objectives, and use lessons learned to inform improved approaches to achieving biophilia objectives in mid-term/long-term development proposals.	Ongoing	CPHD, DPR	N/A	N/A
6	Ensure private development and future County projects and policies for Pentagon City are evaluated through the equity lens.	Ongoing	CPHD, DES, DPR	N/A	N/A
<b>SUSTAINABILITY</b>					
7	Ensure site plan applications address the goals of the Community Energy Plan and help achieve biophilic goals outlined in the Pentagon City Plan.	Ongoing	DES, CPHD	N/A	N/A
8	Monitor tree canopy on public and private land, taking actions if needed to maintain progress toward plan target of at least 20% tree canopy and overall health of canopy in Pentagon City.	Ongoing	DPR, CPHD	N/A	Local, Site Plan Contributions
9	Continue to investigate the feasibility of emerging building technologies and opportunities to ensure new buildings' infrastructure is designed to accommodate future energy needs such as electric vehicle charging in the garage.	Ongoing	DES, CPHD	N/A	N/A

Key: Short-term: 1–3 years; Mid-term: 4–9 years; Long-term: 10 years or longer

Item No.	Implementation Actions	Timing	Implementing Agency	Mechanism	Funding Sources
4	Ensure that at least 10% of net new residential density (which may increase up to the residual value of additional density to be earned) in Pentagon City projects goes toward creating on-site affordable housing and is consistent with the goals, objectives, and policies of the Affordable Housing Master Plan.	Ongoing	CPHD	N/A	N/A
5	Monitor performance of initial development projects to ensure they are achieving housing, biophilia, public space, transportation, and sustainability objectives, and use lessons learned to inform improved approaches to achieving such objectives in mid-term/long-term development proposals.	Ongoing	CPHD, DPR	N/A	N/A
6	Ensure private development and future County projects and policies for Pentagon City are evaluated through the equity lens.	Ongoing	CPHD, DES, DPR	N/A	N/A
<b>SUSTAINABILITY</b>					
7	Ensure site plan applications address the goals of the Community Energy Plan and help achieve biophilic goals outlined in the Pentagon City Plan.	Ongoing	DES, CPHD	N/A	N/A
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Key: Short-term: 1–3 years; Mid-term: 4–9 years; Long-term: 10 years or longer

Item No.	Implementation Actions	Timing	Implementing Agency	Mechanism	Funding Sources
<b>PUBLIC SPACE</b>					
17	A follow-up park master plan of the Virginia Highlands Park (VHP) should consider its potential expansion to the west and the improvement/potential reconfiguration of Grace Hopper Park with an active plaza element. The VHP park master plan should also occur in conjunction with a school siting process given the consequential impacts of such a facility on future availability of VHP open space and amenities. Since a new elementary school is most likely to be sited on the current Aurora Hills Library and Community Center site, the school siting process must presume that both uses will need to be incorporated into the final mixed-use development as independent facilities from the new elementary school.	Short-Term	DPR, CPHD, APS	Park Master Plan & School Siting Process	CIP
18	Once the VHP master plan is implemented, regularly evaluate the use of public spaces, using an equity lens, to determine where adjustments to operations, programming, maintenance, or overall system of spaces is needed.	Long-term	DPR, CPHD	N/A	N/A
19	Develop a maintenance, operations, and programming plan for the Green Ribbon, working with property owners, the BID, and other stakeholders.	Mid-term	CPHD, DPR, AED, DES	N/A	N/A
20	Review the design of Green Ribbon segments on private property.	Ongoing	CPHD, DPR, DES	Special Exception	Site Plan Contributions
21	Examine potential to reinforce biophilic walking and biking corridors beyond Pentagon City study area throughout the 22202 community.	Mid-term	CPHD, DPR, DES	N/A	N/A
22	Design and build Green Ribbon segments on public right-of-way and property that would not be implemented through redevelopment.	ST/MT	CPHD, DPR, DES	N/A	CIP

Key: Short-term: 1-3 years; Mid-term: 4-9 years; Long-term: 10 years or longer

Item No.	Implementation Actions	Timing	Implementing Agency	Mechanism	Funding Sources
<b>PUBLIC SPACE</b>					
17	A follow-up park master plan of the Virginia Highlands Park (VHP) will need to utilize its recommended expansion to the west and the resulting potential for a reconfigured Grace Hopper Park to address the general vision of the Sector Plan and community input received during the master planning process. The VHP park master plan should also occur in conjunction with an elementary school siting process, given the consequential impacts of such a facility on future availability of VHP open space and amenities. This resulting process must also consider how necessary expansions of the library and community center uses can be accommodated as independent facilities from the new elementary school.	Short-Term	DPR, CPHD, APS	Park Master Plan & School Siting Process	CIP
18	Once the VHP master plan is implemented, regularly evaluate the use of public spaces, using an equity lens, to determine where adjustments to operations, programming, maintenance, or overall system of spaces is needed, consistent with the recommendations from the Public Spaces Master Plan (PSMP).	Long-term	DPR, CPHD	N/A	N/A
19	Develop a maintenance, operations, and programming plan for the Green Ribbon, working with property owners, the BID, and other stakeholders.	Mid-term	CPHD, DPR, AED, DES	N/A	N/A
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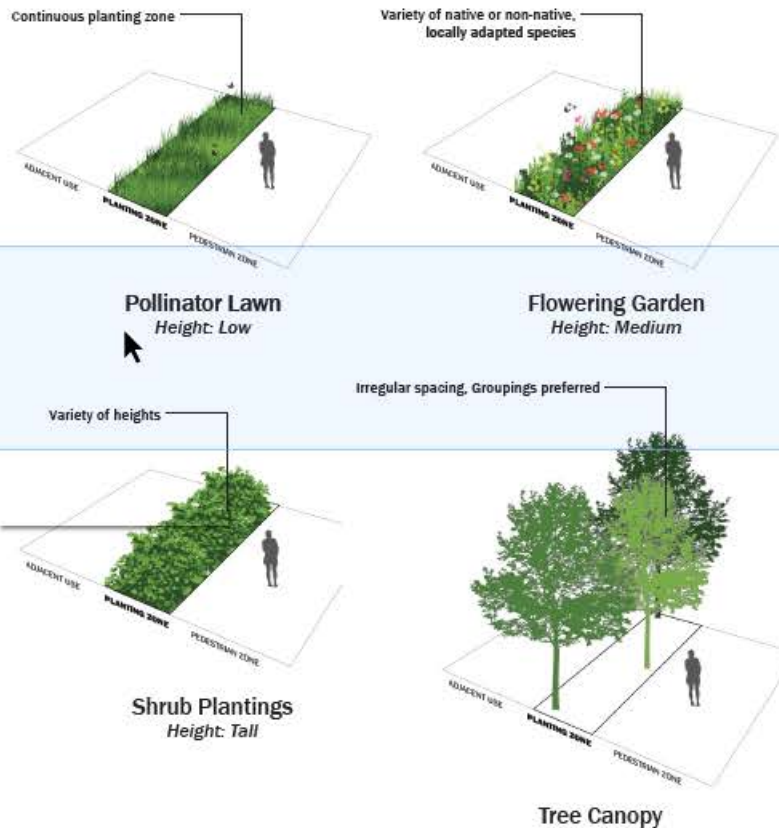
## Planting Zone

Width varies; generally 4' to 10'

### IN-GROUND PLANTING

Tree canopy is the preferred planting zone for the Green Ribbon, but will not be possible in all locations due to space, solar access, sightlines, or other factors.

Planting along the Green Ribbon should be layered, maximize native species, and include seasonal variation.



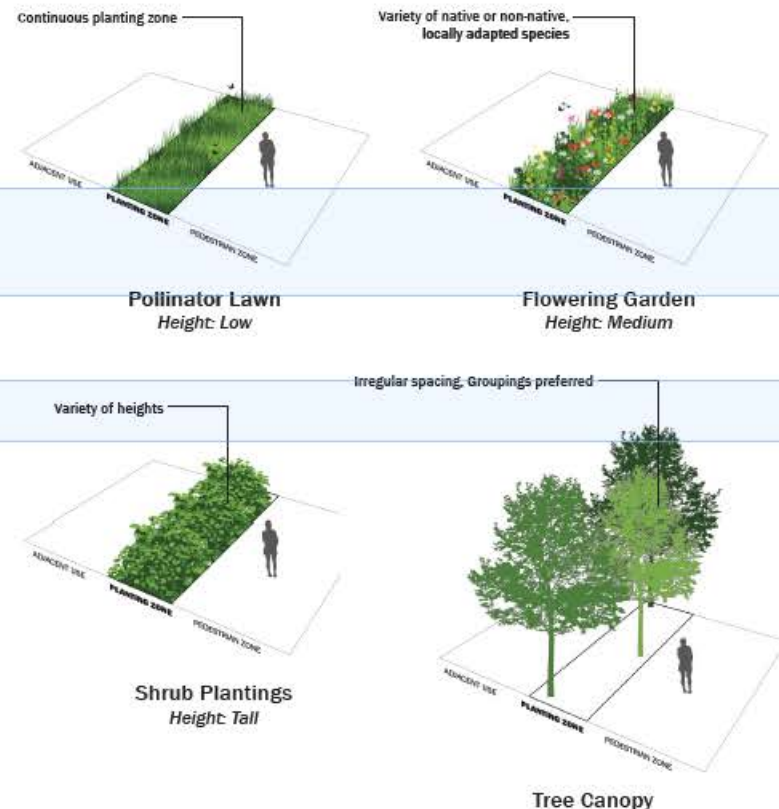
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Tree canopy is the preferred planting zone for the Green Ribbon, but will not be possible in all locations due to space, solar access, sightlines, or other factors. Where possible, tree pit designs should consider more organic shapes and lines, as well as other surface connections to adjacent Green Ribbon features.

Planting along the Green Ribbon should be layered, maximize native species, and include seasonal variation.



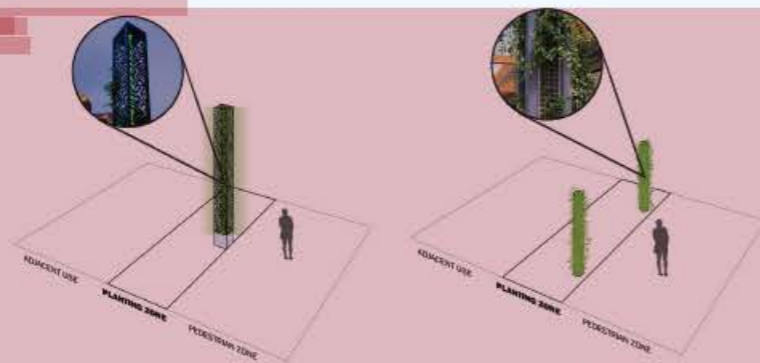
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Width varies; generally 4' to 10'

### BRANDING & WAYFINDING

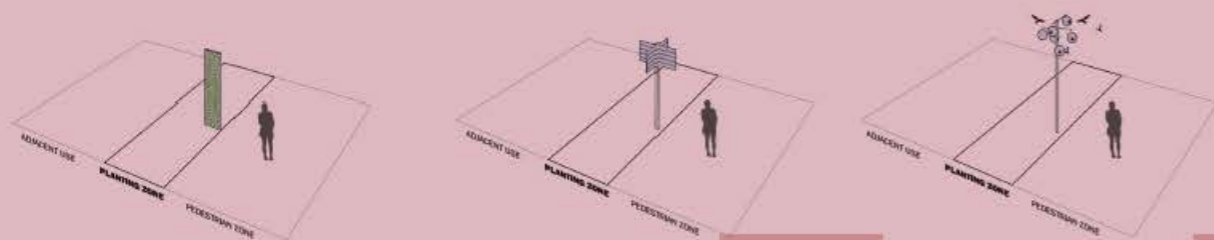
The National Landing BID is planning to launch a wayfinding planning and design effort covering Crystal City and Pentagon City. Developing wayfinding for the Green Ribbon may be included in this effort; the examples included here are meant as inspiration and do not preclude any design outcomes arising from future outreach and planning on this topic.

Signage can also include educational material, including about history of the area, natural elements, or biophilic strategies.



Gateway Tower

Green Trellis



Wayfinding Link

Directional Sign

Vertical Habitat

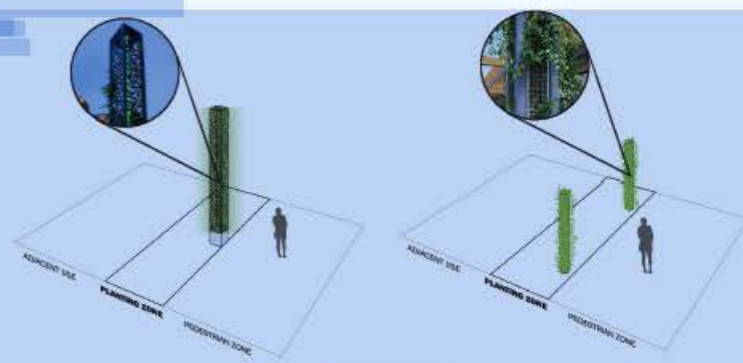
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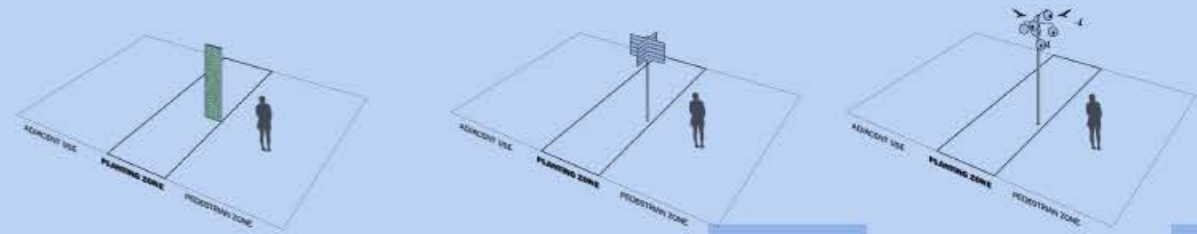
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Gateway Tower

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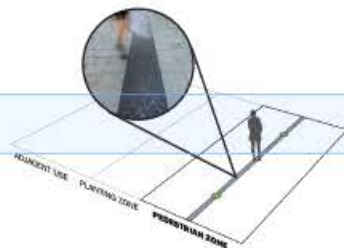
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## Planting Zone

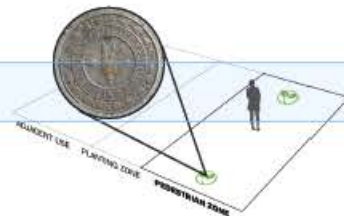
Width varies; generally 4' to 10'

### BRANDING & WAYFINDING

Signage or branding **could** also be located as part of paving in select locations.



Paving Inlay (Linear)



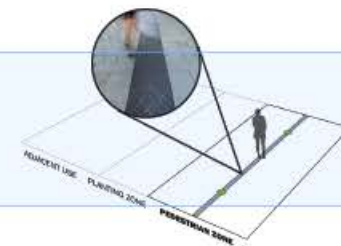
Paving Inlay (Medallion)

## Planting Zone

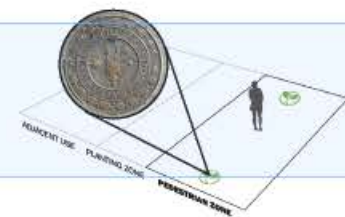
Width varies; generally 4' to 10'

### BRANDING & WAYFINDING

Signage or branding **should** also be located as part of paving in select locations. Early site plan applications utilizing this Plan should coordinate closely with the National Landing BID to ensure consistency between otherwise unique segments of the Green Ribbon network.



Paving Inlay (Linear)



Paving Inlay (Medallion)

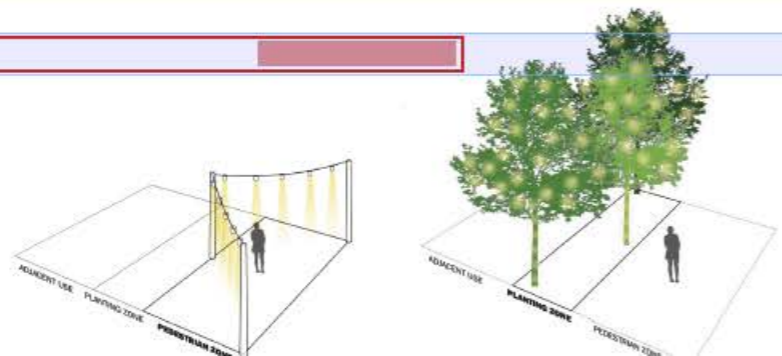
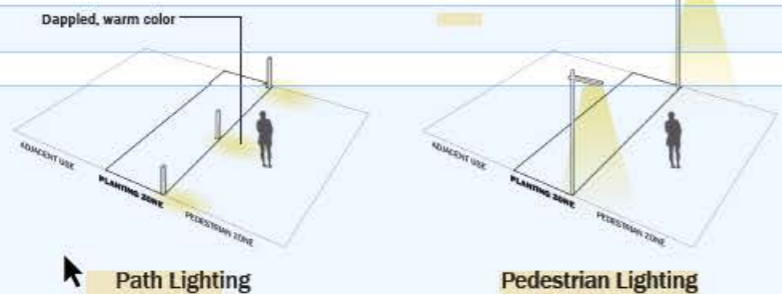
# Planting Zone

Width varies; generally 4' to 10'

## LIGHTING

Lighting will be needed throughout the Green Ribbon to ensure safe access and use throughout the evening. Lighting may also be deployed as a design feature to enhance the Green Ribbon experience. Lighting placed upon trees or other vegetation must be removed and re-mounted annually where necessary to prevent plant damage.

In the public right-of-way, lighting will need to meet County standards for construction and maintenance.

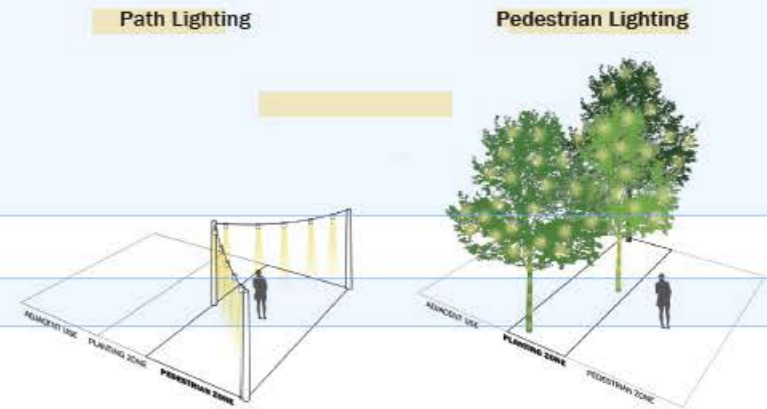
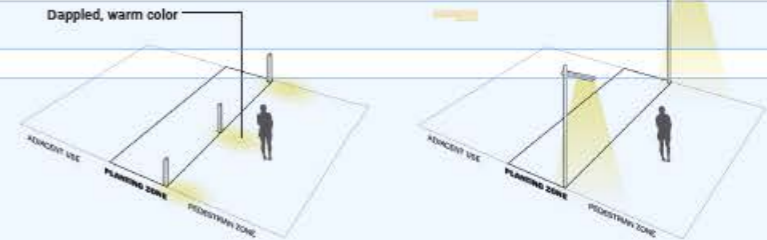


## LIGHTING

Lighting will be needed throughout the Green Ribbon to ensure safe access and use throughout the evening. Lighting may be deployed as a design feature to enhance the Green Ribbon experience and, in some cases, may be accommodated through lighting proposed with adjacent buildings. Green Ribbon segments should rely on downward facing outdoor lights which avoid high intensity/high temperature lights which are problematic for wildlife and for humans.

Lighting placed upon tree or other vegetation must be removed and re-mounted annually where necessary to prevent plant damage. Primary sections of the Green Ribbon should utilize consistent approaches to lighting.

In the public right-of-way, lighting will need to meet County standards for construction and maintenance.



ILLUSTRATIVE PLAN: NEAR-TERM OPPORTUNITY (PHASES 1-2)

DISCLAIMER: THIS ILLUSTRATIVE PLAN IS AN ARTISTIC RENDERING OF ONE WAY THE PENTAGON CITY PLAN VISION AND RECOMMENDATIONS FOR THIS ELEMENT CAN BE ACHIEVED, FOR ILLUSTRATIVE PURPOSES ONLY.

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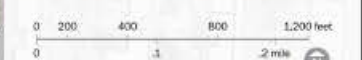
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**ILLUSTRATIVE PLAN: LONG-TERM OPPORTUNITY (PHASE 5)**

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**DRAFT**



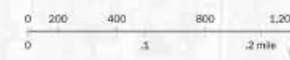
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**DRAFT**



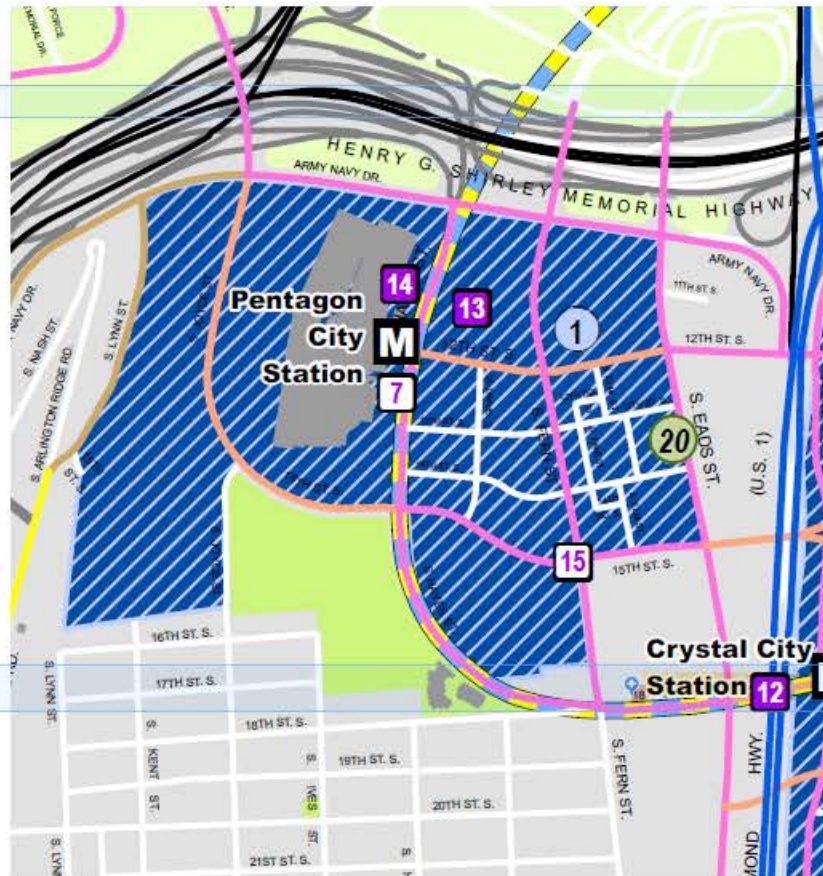
**Illustrative Plan**  
Existing Buildings  
Approved Proposed Buildings



**Future Master Transportation Plan Map**

The proposed MTP for Pentagon City extends the areas planned for new streets to cover the entire Pentagon City Area Plan. 12th Street is reclassified as a Type A arterial.

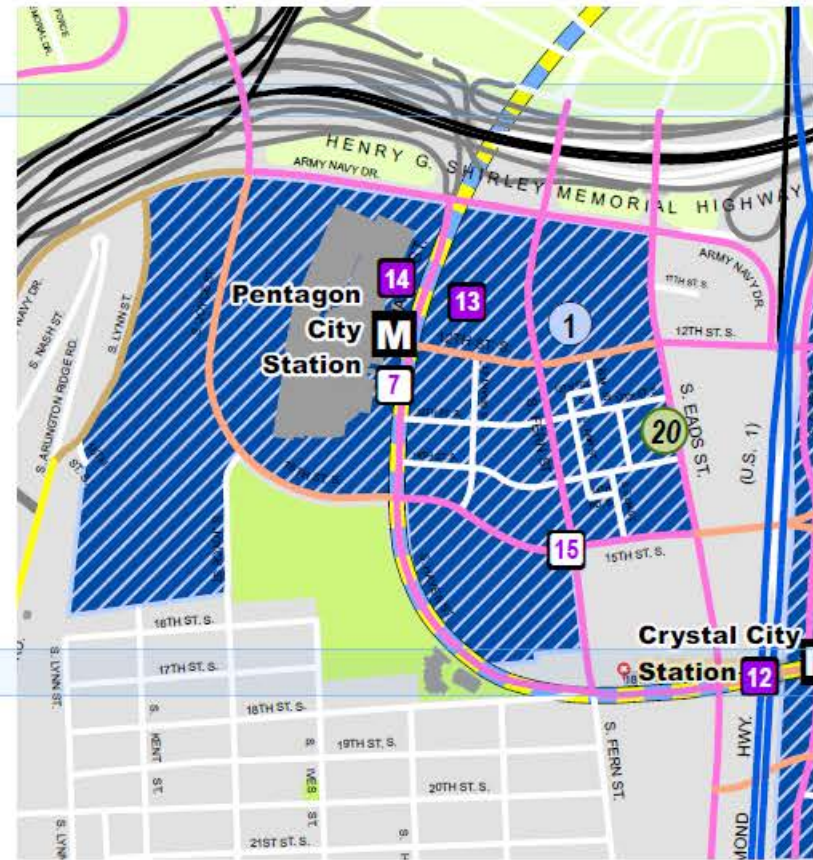
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|---|---|
| <p><b>Arterial Street Typologies</b></p> <ul style="list-style-type: none"> <li>Type A</li> <li>Type B</li> <li>Type C</li> <li>Type D</li> <li>Type E</li> <li>Type F</li> </ul>   | <p><b>Areas Planned for New Streets</b></p> <ul style="list-style-type: none"> <li>Pentagon City/Metropolitan Park Area</li> </ul> <p><b>Bicycle / Pedestrian Facilities</b></p> <ul style="list-style-type: none"> <li>Bike Share Stations (see MTP Bicycle Element Appendix I for additional detail)</li> </ul> <p><b>Transit Facilities</b></p> <ul style="list-style-type: none"> <li>Pentagon City Metro Station Second Elevator</li> <li>Crystal City Multimodal Improvements</li> <li>Pentagon City Pedestrian Tunnel</li> <li>Pentagon City Multimodal Improvements</li> <li>Transitway Expansion to Pentagon City</li> </ul> <p><b>Public Parks</b></p> <ul style="list-style-type: none"> <li>Public Parks</li> </ul> <p><b>Federal-Owned Lands</b></p> <ul style="list-style-type: none"> <li>Federally-owned Lands</li> </ul> |
| <p><b>Neighborhood Streets</b></p> <ul style="list-style-type: none"> <li>Residential or Commercial Local Street</li> </ul> <p><b>Limited-Access Routes</b></p> <ul style="list-style-type: none"> <li>Limited Access</li> </ul> <p><b>High Occupancy-Incentive Corridors</b></p> <ul style="list-style-type: none"> <li>I-495, Va Rte 110, Va Rte 27</li> </ul> <p><b>Public Transportation Facilities</b></p> <ul style="list-style-type: none"> <li>Metro Blue &amp; Yellow Lines</li> </ul> |   |



**Future Master Transportation Plan Map**

The proposed MTP for Pentagon City extends the areas planned for new streets to cover the entire Pentagon City Sector Plan. 12th Street is reclassified as a Type A arterial.

- |   |   |
|---|---|
| <p><b>Arterial Street Typologies</b></p> <ul style="list-style-type: none"> <li>Type A</li> <li>Type B</li> <li>Type C</li> <li>Type D</li> <li>Type E</li> <li>Type F</li> </ul>   | <p><b>Areas Planned for New Streets</b></p> <ul style="list-style-type: none"> <li>Pentagon City/Metropolitan Park Area</li> </ul> <p><b>Bicycle / Pedestrian Facilities</b></p> <ul style="list-style-type: none"> <li>Bike Share Stations (see MTP Bicycle Element Appendix I for additional detail)</li> </ul> <p><b>Transit Facilities</b></p> <ul style="list-style-type: none"> <li>Pentagon City Metro Station Second Elevator</li> <li>Crystal City Multimodal Improvements</li> <li>Pentagon City Pedestrian Tunnel</li> <li>Pentagon City Multimodal Improvements</li> <li>Transitway Expansion to Pentagon City</li> </ul> <p><b>Public Parks</b></p> <ul style="list-style-type: none"> <li>Public Parks</li> </ul> <p><b>Federal-Owned Lands</b></p> <ul style="list-style-type: none"> <li>Federally-owned Lands</li> </ul> |
| <p><b>Neighborhood Streets</b></p> <ul style="list-style-type: none"> <li>Residential or Commercial Local Street</li> </ul> <p><b>Limited-Access Routes</b></p> <ul style="list-style-type: none"> <li>Limited Access</li> </ul> <p><b>High Occupancy-Incentive Corridors</b></p> <ul style="list-style-type: none"> <li>I-495, Va Rte 110, Va Rte 27</li> </ul> <p><b>Public Transportation Facilities</b></p> <ul style="list-style-type: none"> <li>Metro Blue &amp; Yellow Lines</li> </ul> |   |





## Analysis of Student Generation Rates and APS Capacity

If current enrollment trends continue, including Census trends showing lower birth rates, then a new school may not be necessary to meet APS capacity, even under the growth envisioned in the Pentagon City Plan. Factors that determine the timing of new school investments include existing capacity, projected enrollment, and allocations for the capital improvement plan.

If and when, in the future, APS capacity is exceeded, the Aurora Hills Library/Community Center site is the most appropriate location for a walkable neighborhood school in the 22202 area. Based on the Pentagon City planning principles, any future school will operate as a community facility, including looking for opportunities to share recreational assets between schools and park space during different times of day and year as appropriate.

## Analysis of Student Generation Rates

If current enrollment trends continue, including Census trends showing lower birth rates, then a new school may not be necessary to meet APS capacity, even under the growth envisioned in the Pentagon City Plan. Factors that determine the timing of new school investments include existing capacity, projected enrollment, and allocations for the capital improvement plan.

If and when, in the future, APS capacity is exceeded, decisions on siting such a school should reflect the findings of the Virginia Highlands Park master planning effort which will consider its existing uses, western expansion, the siting of the community center and library, and involve close coordination with APS on potential school siting opportunities within the broader VHP geography. Based on the Pentagon City planning principles, any future school will operate as a community facility, including looking for opportunities to share recreational assets between schools and park space during different times of day and year as appropriate.

Timeframe	Principal redevelopment sites	Land use mix	Total existing & approved floor area - all use	Total residential floor area	Residential share of total floor area	Dwelling units
Existing			13,395,112	6,016,400	44.9%	5,375
Phase 1	Brookfield (2 residential buildings); RiverHouse south of 15th; Simon Infill at Hayes & Army-Navy; Regency Care	Future - less residential, more office		1,448,472	60.0%	1,222
		Future - as modeled	2,414,120	2,107,500	87.3%	1,918
		Future - more residential, less office		2,045,182	93.0%	1,947
Phase 2	RiverHouse between 13th & 15th; Simon garage at 12th	Future - less residential, more office		1,289,035	57.0%	1,077
		Future - as modeled	2,261,465	1,402,090	62.0%	1,275
		Future - more residential, less office		2,103,182	93.0%	1,818
Phase 3	RiverHouse north of 13th; FRIT parking infill	Future - less residential, more office		1,442,704	57.0%	1,217
		Future - as modeled	2,531,060	1,631,060	64.4%	1,483
		Future - more residential, less office		2,353,868	93.0%	2,045
Phase 4	Macy's redevelopment	Future - less residential, more office		847,840	50.0%	878
		Future - as modeled	1,695,680	908,480	53.6%	828
		Future - more residential, less office		1,509,333	89.0%	1,078
Phase 5	DEA	Future - less residential, more office		493,350	34.5%	354
		Future - as modeled	1,430,000	660,000	46.2%	600
		Future - more residential, less office		772,200	54.0%	608
Phases 1-5 Total		Future - less residential, more office		5,521,501		4,631
		Future - as modeled	10,332,525	6,709,130		6,089
		Future - more residential, less office		8,883,713		8,187
Existing + Future		Future - less residential, more office		11,537,901		10,208
		Future - as modeled	23,727,637	12,725,530		11,474
		Future - more residential, less office		15,000,113		13,542

## Dwelling unit size &amp; occupancy assumptions

	Values in yellow cells may be changed
Average floor area (new units)	1,100
Assumed residents/unit (all units)	1.54
Assumed unit occupancy rate (all units)	100%
Residents per square foot	0.0014

Figures in italics are inputs; other figures are outputs. Existing student figures are an estimate; actual enrollment totals have been requested and will be updated for the final version of the Plan.

SGR rate not available for this housing type and attendance zone. Default to county-wide rate for this housing type.

Timeframe	Principal redevelopment sites	Land use mix	Total existing & approved floor area - all use	Total residential floor area	Residential share of total floor area	Dwelling units
Existing			13,395,112	6,016,400	44.9%	5,375
Phase 1	Brookfield (2 residential buildings); RiverHouse south of 15th; Simon garage at 12th; Regency Care	Future - less residential, more office		1,448,472	60.0%	1,222
		Future - as modeled	2,414,120	2,107,500	87.3%	1,918
		Future - more residential, less office		2,045,182	93.0%	1,947
Phase 2	RiverHouse between 13th & 15th; Simon infill at Hayes & Army-Navy	Future - less residential, more office		1,289,035	57.0%	1,077
		Future - as modeled	2,261,465	1,402,090	62.0%	1,275
		Future - more residential, less office		2,103,182	93.0%	1,818
Phase 3	RiverHouse north of 13th; FRIT parking infill	Future - less residential, more office		1,442,704	57.0%	1,217
		Future - as modeled	2,531,060	1,631,060	64.4%	1,483
		Future - more residential, less office		2,353,868	93.0%	2,045
Phase 4	Macy's redevelopment	Future - less residential, more office		847,840	50.0%	878
		Future - as modeled	1,695,680	908,480	53.6%	828
		Future - more residential, less office		1,509,333	89.0%	1,078
Phase 5	DEA	Future - less residential, more office		493,350	34.5%	354
		Future - as modeled	1,430,000	660,000	46.2%	600
		Future - more residential, less office		772,200	54.0%	608
Phases 1-5 Total		Future - less residential, more office		5,521,501		4,631
		Future - as modeled	10,332,525	6,709,130		6,089
		Future - more residential, less office		8,883,713		7,885
Existing + Future		Future - less residential, more office		11,537,901		8,822
		Future - as modeled	23,727,637	12,725,530		11,474
		Future - more residential, less office		15,000,113		13,070

## Dwelling unit size &amp; occupancy assumptions

	Values in yellow cells may be changed
Average floor area (new units)	1,100
Assumed residents/unit (all units)	1.54
Assumed unit occupancy rate (all units)	100%
Residents per square foot	0.0014

## Notes:

- Student counts in the current conditions is for September 30, 2021, K-12 students that reside in the Pentagon City PSA. Some of these students attend schools other than Hoffman-Boston, Gunston, or Wakefield.
- Fall 2021 Student Generation Rates are used for this analysis, these rates can be found on Attachment C of the Fall 2021 10-Year enrollment Projections Report, see <https://www.apsva.us/statistics/enrollment-projections/>

Market Dwellings	CAF Dwellings	2020-21 Elementary	2020-21 Middle	2020-21 High	Student Generation Rates (SGR) for Multifamily Elevator Units						Student Estimates						Total Students
					Elementary School		Middle School		High School		Elementary School		Middle School		High School		
					Market SGR	CAF SGR %	Market SGR	CAF SGR	Market SGR	CAF SGR	In Market Rate Units	In CAF Units	In Market Rate Units	In CAF Units	In Market Rate Units	In CAF Units	
5,375	0	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	181	0	70	0	109	0	339
1,100	122	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	33	44	14	17	22	10	140
1,724	192	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	52	89	23	27	34	18	220
1,752	195	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	53	79	23	27	35	18	224
970	108	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	29	39	13	15	19	9	124
1,147	127	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	34	46	15	18	23	11	147
1,638	182	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	49	85	21	25	32	16	206
1,095	122	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	33	44	14	17	22	10	140
1,935	148	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	40	63	17	21	27	12	170
1,841	205	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	55	74	24	28	37	17	235
609	88	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	16	24	8	9	12	6	77
744	83	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	22	30	10	12	15	7	98
1,150	129	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	35	46	15	18	23	11	148
320	35	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	10	13	4	5	6	3	41
840	80	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	28	22	7	8	11	6	81
547	81	Hoffman-Boston	Gunston	Wakefield	0.030	0.359	0.013	0.139	0.020	0.083	16	22	7	8	11	5	88
4,349	484										131	174	58	87	87	40	555
5,490	610										184	220	71	89	110	51	702
7,351	816										221	293	95	114	148	85	839
9,724	484										292	174	128	87	195	40	894
10,885	610										325	220	141	89	218	51	1,041
12,726	816										382	293	185	114	256	88	1,278

Fall 2019 Student Generation Rates are used for this analysis, these rates can be found on Attachment C of the Fall 2020 3-Year enrollment Projections Report, <https://www.apsva.us/wp-content/uploads/2021/02/Fall-2020-Enrollment-Projections-Report-Final-for-Website.pdf>  
 The final version of the Pentagon City Plan will include an updated student estimate based on Fall 2021 Student Generation Rates, once it is released.

Market Dwellings	CAF Dwellings	2020-21 Elementary	2020-21 Middle	2020-21 High	Student Generation Rates (SGR) for Multifamily Elevator Units						Student Estimates						Total Students
					Elementary School		Middle School		High School		Elementary School (K-5)		Middle School (6-8)		High School		
					Market SGR	CAF SGR %	Market SGR	CAF SGR	Market SGR	CAF SGR	In Market Rate Units	In CAF Units	In Market Rate Units	In CAF Units	In Market Rate Units	In CAF Units	
5,375	0	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	29	31	11	15	22	18	126
1,100	122	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	29	31	11	15	22	18	126
1,724	192	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	45	49	17	23	34	28	200
1,752	195	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	46	50	18	23	35	28	200
970	108	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	25	28	10	13	19	18	111
1,147	127	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	30	33	11	15	23	18	130
1,638	182	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	43	47	16	21	33	28	187
1,095	122	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	28	31	11	15	22	18	125
1,935	148	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	35	38	13	18	27	21	152
1,841	205	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	48	52	18	25	37	30	210
609	88	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	18	17	6	8	12	10	89
744	83	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	19	21	7	10	15	12	84
1,150	129	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	30	33	12	15	23	18	151
320	35	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	8	9	3	4	6	5	35
840	80	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	14	15	5	7	11	9	81
547	81	Hoffman-Boston	Gunston	Wakefield	0.028	0.258	0.010	0.120	0.020	0.144	14	15	5	7	11	9	82
4,094	455										222	96	148			488	
5,490	610										299	126	198			623	
6,826	771										378	181	250			790	
8,489	455										289	116	188			593	
10,885	610										368	148	238			750	
12,301	771										448	181	290			819	

\* SGR rate not available for this housing type and attendance zone. Default to county-wide rate for this housing type.