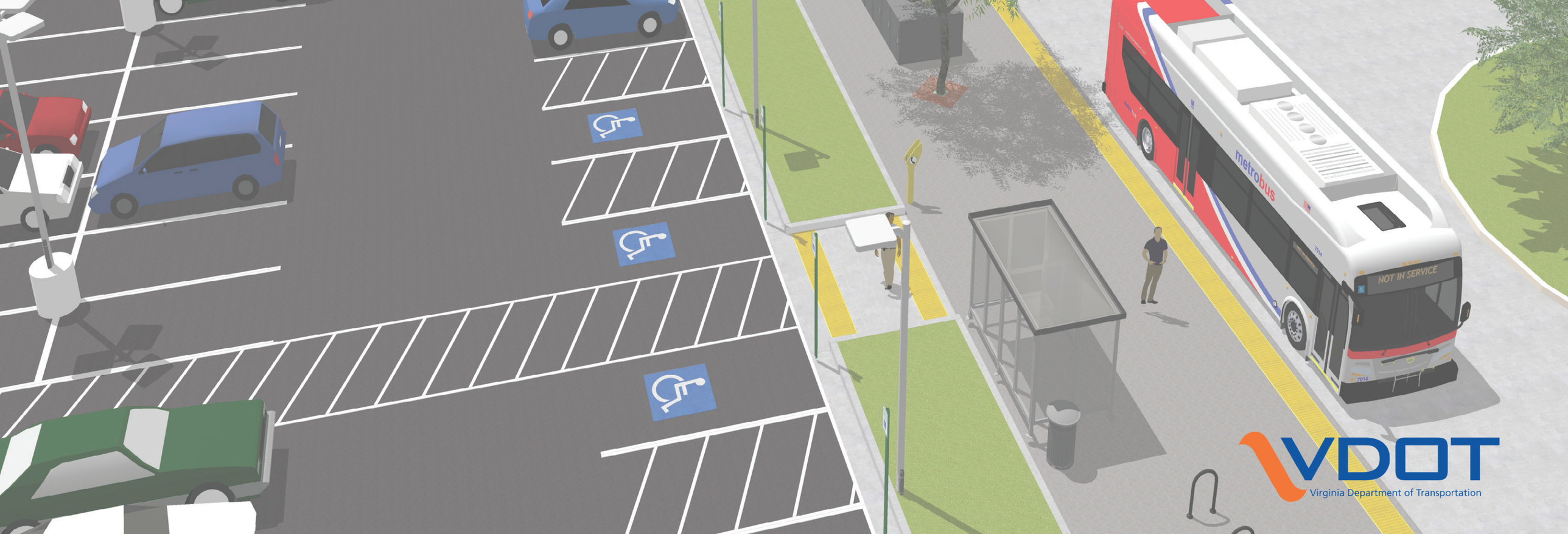
PARK & RIDE DESIGN GUIDELINES

VIRGINIA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION AND MOBILITY PLANNING DIVISION - 2018



VDOT
Virginia Department of Transportation

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INTRODUCTION

Historically, there has not been a "go to" resource for developing or retrofitting Park & Ride lots in Virginia, making it challenging for local governments and agencies to design a lot that is safe, accessible, environmentally sensitive, and compliant with federal and state requirements.

The Park & Ride Design Guidelines, developed by the Virginia Department of Transportation (VDOT), seek to add clarity to Park & Ride design and provide a user-friendly framework from which users can make informed decisions regarding lot layout, services, amenities, and green infrastructure. The Guidelines are not prescriptive, but are intended to streamline information from agencies, such as VDOT, the Department of Rail and Public Transportation (DRPT), the Virginia Department of Conservation and Recreation (DCR), and the Virginia Department of Environmental Quality (DEQ). VDOT's Road Design Manual is particularly important, as it includes requirements for ADA parking and accessibility, drop-off and pick-up areas, bus loading/unloading, and other important requirements. *Note: the VDOT Road Design Manual is only viewable in Internet Explorer.*

UNDERSTANDING THE GUIDELINES

The Guidelines are segmented by lot type (High Density, Medium Density, Low Density) to help distinguish lots based on their services, amenities, and surrounding environments. These lot types were loosely developed based on the VTrans2040 Placetypes, but are not rigidly defined because VDOT understands that each lot varies in terms of its purpose and need. The lot types are briefly described below and illustrated through aerial visualizations.

HIGH DENSITY LOTS

High Density Lots are typically located in multimodal suburban/urban areas that are accessible by high capacity transit (Metrorail or frequent bus service) and to cyclists and/or pedestrians. They typically require specific traffic patterns and designated entrances/exits for varying vehicle types (transit, bicycles, single-occupancy vehicles, etc). They offer various services amenities and utilize a range of green infrastructure.

MEDIUM DENSITY LOTS

Medium Density Lots are typically located in suburban areas and/or near interstates/interchanges. They typically have bus service, carooling or vanpooling (including slugging), and may be accessible to cyclists and/or pedestrians. They typically require specific traffic patterns and may have designated entrances/exits for transit vehicles. They offer various services and amenities (based on lot size and demand) and include a range of green infrastructure.

LOW DENSITY LOTS

Low Density Lots are typically located in rural areas near interstates or arterial roadways. They typically have limited transit service, if at all, are typically used for car/vanpooling, and may require one-way traffic patterns and/or angled parking. They typically include green infrastructure.

Each lot type is displayed in the context of three themes: 1) Lot Layout; 2) Amenities and Features and; 3) Green Infrastructure and Technology, each of which is presented based on a series of potential characteristics (see Table 1).

In addition, the Guidelines identify the "Required", "Preferred", and, in some cases, "Suggested" features for each of the three themes. Required Features are typically consistent with federal and/or state guidelines; Preferred Features are recommended, but may depend on lot needs and characteristics; and Suggested Features are encouraged when feasible, but are not required. Design graphics are provided for illustrative purposes to show required, preferred and suggested accommodations and amenities and do not constitute design standards for referenced facilities. As referenced, the VDOT Road Design Manual provides detailed design guidance and specifications for amenities.

Table 1: Design Guidelines - Lot Characteristics

LOT LAYOUT	AMENITIES & FEATURES	GREEN INFRASTRUCTURE & TECHNOLOGY
Parking	Bike parking	Vegetation
Drop-off and pick-up (kiss & ride)	Bus stops and shelters	Stormwater management
Bus loading/unloading areas	Trash receptacles	Solar energy
Access/egress	Safety	Green technology
Vehicle circulation	Lighting	Integrated corridor management (ICM)
Non-vehicle circulation	Signage	
Car/vanpooling (including slugging)		

OTHER NOTES

The Guidelines are intended for digital viewing and hyperlinks are provided in cases where additional information may be needed. For example, the Guidelines frequently reference the VDOT Road Design Manual for more detailed requirements. *Note: the Road Design Manual is only viewable in Internet Explorer.*

Prepared for:

Virginia Department of Transportation

Prepared by:

Michael Baker INTERNATIONAL

HIGH DENSITY LOTS

Falls Church, Va (High Density Lot)

HIGH DENSITY LOTS

High density lots are typically located in multimodal suburban/urban areas that are accessible by foot, bicycle, and high capacity transit (Metrorail or frequent bus service). They typically have two-way traffic patterns, 90-degree parking and designated entrances/exits for transit vehicles. They offer various services and amenities and utilize a range of "green" parking lot techniques to minimize stormwater runoff.

LOT LAYOUT

REQUIRED FEATURES

A PARKING

Install perpendicular, 90-degree parking in order to maximize the number of spaces. Provide ADA-accessible parking including van-accessible parking. See VDOT Road Design Manual for precise requirements (Appendix A(1), Section A(1)-2 Parking Design Features).

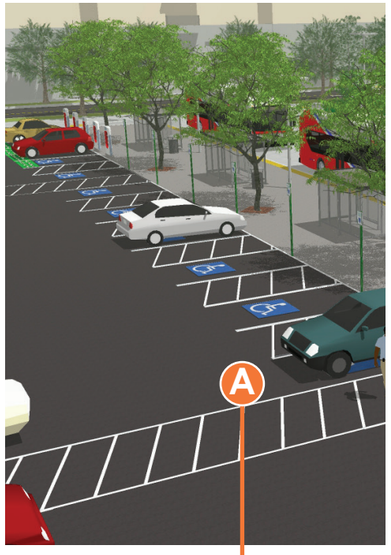
B DROP-OFF AND PICK UP

Include passenger drop-off and pick-up areas (kiss & ride) that are *at least* 8' wide and 20' long. See VDOT Road Design Manual for detail (Appendix A(1), Section A(1)-2 Parking Design Features). Provide a designated drop-off/pick-up area for mobility-on-demand services, like Uber and Lyft.

C BUS LOADING/UNLOADING

If served by transit, provide bus boarding lanes (minimum of 12' wide) and bus boarding areas (minimum of 50' long) for each standard bus (70' for each articulated bus). Work with the local transit agencies to provide sufficient space for bus queuing. See VDOT Road Design Manual for design details on different bus boarding configurations (Appendix A(1), Section A(1)-3 Transit (Bus) Facilities Design Criteria).

Figure 1: Bus Loading Area in High Density Lot



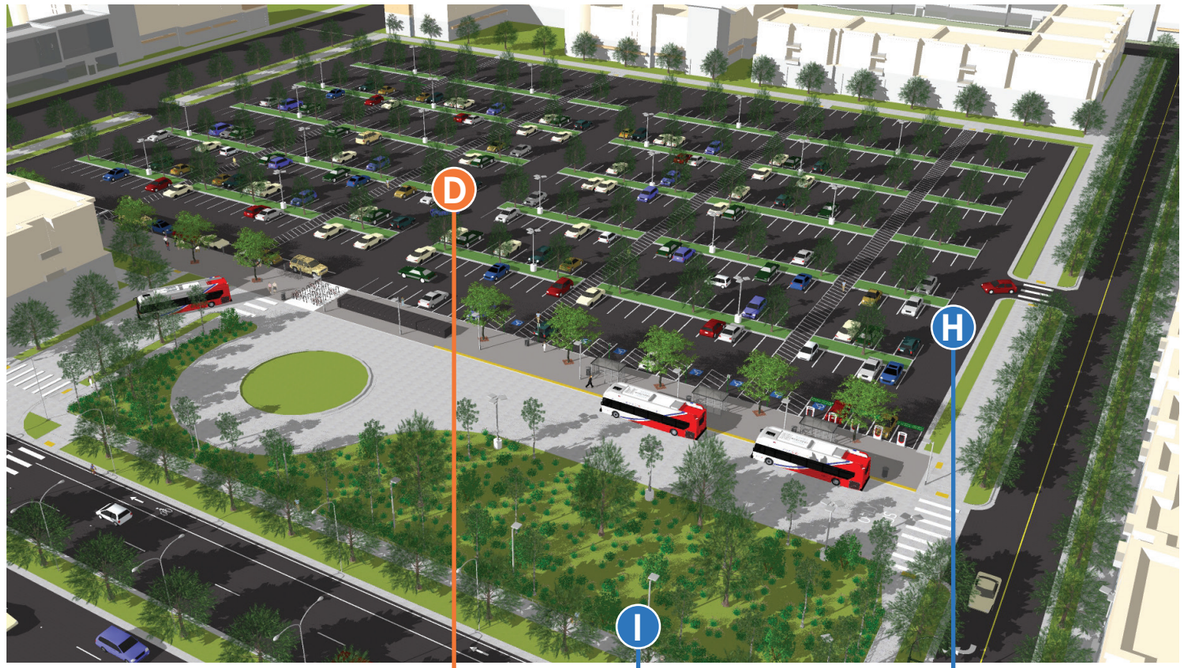
Provide ADA-compliant spaces

Figure 2: Bus Loading Area in High Density Lot

Bus boarding lanes that are at least 12' wide and 50' long for each standard bus (70' for articulated buses)

D VEHICLE CIRCULATION

Include 26' parking aisles (minimum) for lots with two-way traffic and 90-degree parking. See the VDOT Road Design Manual for detail on minimum one-way and two-way aisle widths for 90, 60, and 45-degree parking configurations (Appendix A(1), Section A(1)-2 Parking Design Features - Rest Areas). If served by transit, include Bus Only lanes and bus queuing areas. Include designated areas for drop-off/pick-up.



High Density Lot Overview

Include 26' parking aisles (minimum) for lots with two-way traffic and 90-degree parking

Provide two entrances. Provide access points on collectors or local streets rather than on major arterials or freeway ramps

Install 5'-7' wide sidewalks on the lot's periphery and between parking areas. Utilize high visibility crosswalks (ladder, zebra, continental)

E NON-VEHICLE CIRCULATION

Install walkways or sidewalks to connect parking areas and boarding areas. Sidewalks should be a minimum of 5' wide. Include ADA-accessible curb ramps for access onto sidewalks and loading areas. See the VDOT Roadway Design Manual (Appendix A(1), Section A(1)-1 Bicycle and Pedestrian Facilities).

F SLUGGING ACCOMMODATIONS

Provide designated areas/signage for slugging and include proper pedestrian accommodations to/from these areas.

PREFERRED FEATURES

G DROP-OFF AND PICK-UP

Include passenger drop-off and pick-up areas (kiss & ride) that conform to requirements within the VDOT Road Design Manual (Appendix A(1), Section A(1)-2 Parking Design Features).

H ACCESS/EGRESS

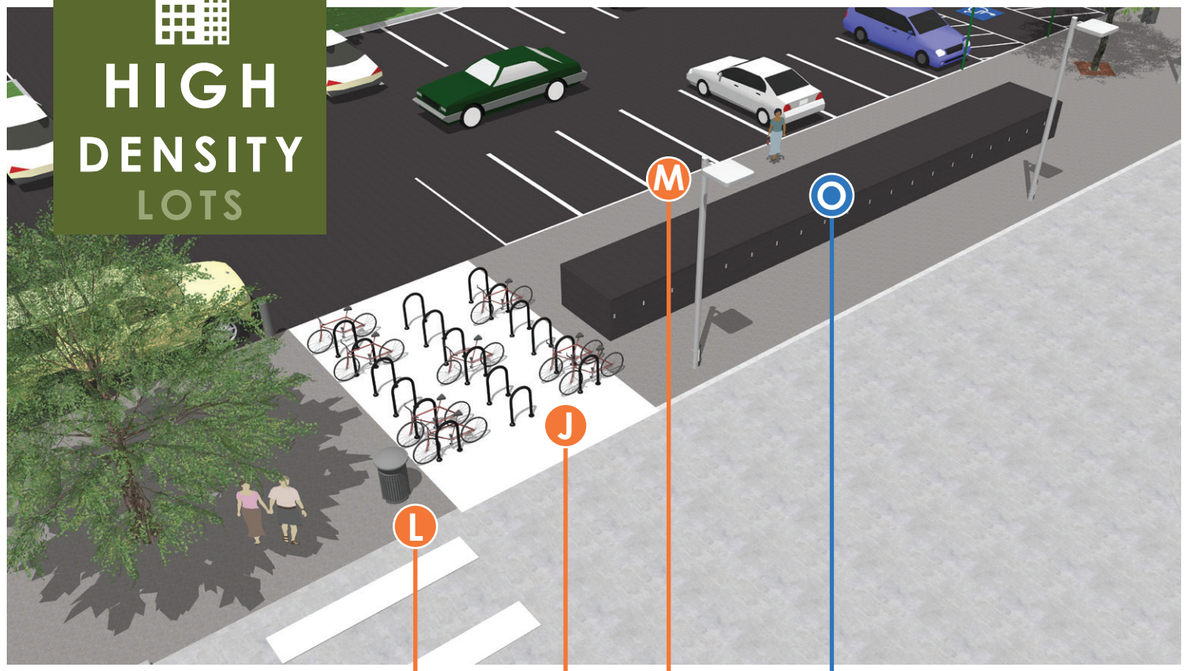
Provide two entrances. Provide access points on collectors or local streets rather than on major arterials or freeway ramps (Texas Transportation Institute).

I NON-VEHICLE CIRCULATION

Install 5'-7' wide sidewalks (NACTO, FHWA) on the lot's periphery and between parking areas. Utilize high visibility crosswalks (ladder, zebra, continental) where appropriate. Install 10' shared-use paths that connect to the surrounding area's active transportation network, if applicable (VDOT Road Design Manual, Appendix A(1), Section A(1)-1 Bicycle and Pedestrian Facilities).

Figure 3: Bus Loading Area in High Density Lot

HIGH DENSITY LOTS



Bicycle Parking in High Density Lot

AMENITIES & FEATURES

REQUIRED FEATURES

J BIKE PARKING
Provide bicycle parking at a rate of 1 space for every 10 to 20 vehicle spaces. Use racks with a 2-point locking capability such as "inverted U" and avoid "comb racks". When installing, maintain the pedestrian through zone. See the Association of Pedestrian & Bicycle Professionals for more detail on installation/ placement.

K BUS STOPS AND SHELTER
Provide shelters at bus transit stops. See the VDOT Road Design Manual for details on transit shelters (Appendix A(1), Section A-3 Transit (Bus) Facilities Design Criteria).

L TRASH
Install trash receptacles in **all** boarding areas.

M LIGHTING
Utilize fixtures that shield the light source to minimize light pollution, reduce glare, facilitate better vision at night, and conserve energy. Install LED lights to reduce carbon emissions, maximize energy efficiency, and reduce maintenance costs. The Department of Energy estimates that LED lighting can reduce parking lot energy use over 50% compared to typical code.

Bicycle parking should be provided at a rate of 1 to every 10-20 vehicle spaces

Install trash receptacles in all boarding areas

Use fixtures that shield the light source to minimize light pollution, reduce glare, improve visibility at night, and conserve energy.

Consider installing bike lockers for additional security and all-day storage

N SIGNAGE
Install directional signs and traffic control in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). Coordinate with the local transit agencies to install bus route signage.

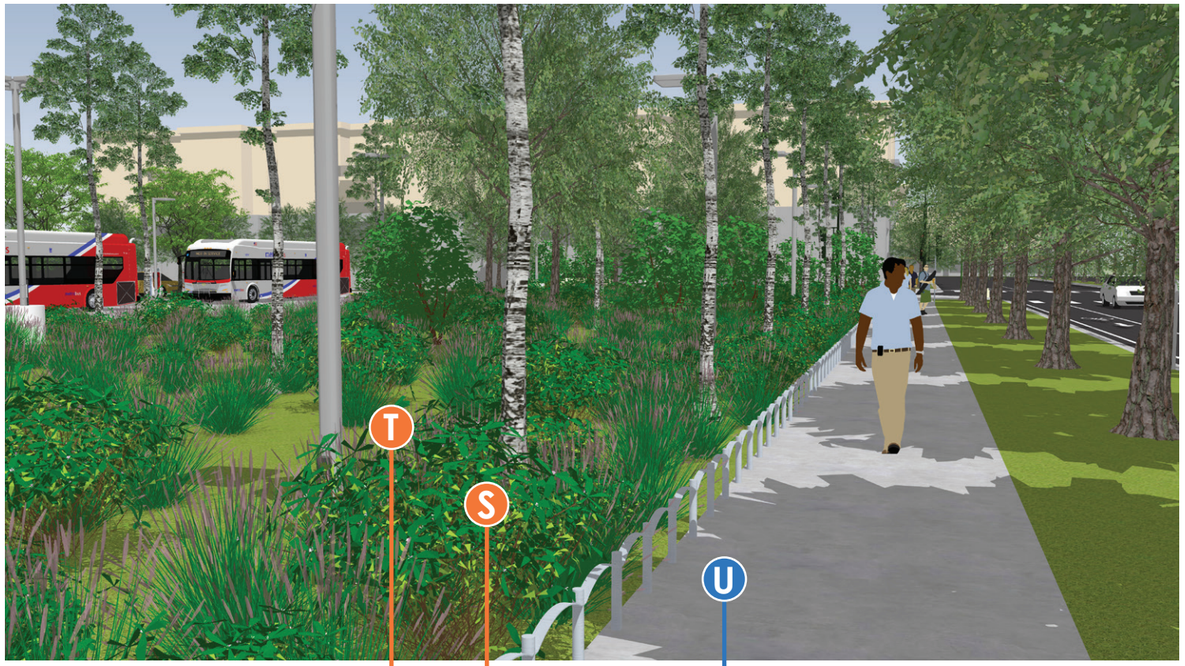
PREFERRED FEATURES

O BIKE PARKING
Consider installing covered bike racks and bike lockers for additional security and all-day storage.

P SHELTERS & BOARDING AREAS
Shelters should include a bench (with backrest) and an area for wheelchairs or other mobility-assisted devices. See the VDOT Road Design Manual (Appendix A(1), Section A(1)-3 Transit (Bus) Facilities Design Criteria).

Q SECURITY
Install emergency assistance phones and video surveillance cameras (parking garages).

R SIGNAGE
Install bus timetables and route maps and provide bicycle route signage in accordance with the MUTCD. Utilize Integrated Corridor Management (ICM) technologies, such as digital, real-time information on parking space availability for travelers approaching the lot or station. Note: utility ROW may be required.



Green Infrastructure in a High Density Lot

GREEN INFRASTRUCTURE AND TECHNOLOGY

REQUIRED FEATURES

S VEGETATION
Install native, context-sensitive plants. Visit Virginia DCR for information on Native Plants for Conservation, Restoration, and Landscaping.

T STORMWATER MANAGEMENT
Utilize green infrastructure and low impact development, such as bioswales and bioretention ponds. The Virginia Stormwater BMP Clearinghouse provides design standards and specifications for all stormwater best management practices (BMPs) approved for use in Virginia to control the quality and/ or quantity of stormwater runoff. The NACTO Urban Street Stormwater Guide provides tools to design streets/spaces for successful stormwater management.

PREFERRED FEATURES

U STORMWATER MANAGEMENT
Utilize Porous Asphalt Mix (PAM) when constructing or resurfacing lots. Benefits include reducing stormwater runoff, recharging groundwater, and potentially increasing the "developable" area of the site (since permeable paving can reduce the need for large stormwater management structures).

Native, context-sensitive vegetation

Bioswale for low-impact stormwater management

Utilize permeable/porous surface to reduce stormwater runoff, recharge groundwater, and reduce the need for large stormwater management structures

Refer to VDOT Materials Division's Manual of Instructions - Section 605.02 for PAM applications.

V SOLAR
Install solar panels in high-sun areas to reduce energy costs and minimize environmental impacts.

W GREEN TECHNOLOGY
Install electric vehicle (EV) charging stations in approximately 2% of all spaces. Consider accessibility, ease of use, and safety for disabled drivers, including those using wheelchairs or other assistive equipment.

SUGGESTED FEATURES

X VEGETATION
Include landscaping across approximately 10-20% of the lot (AASHTO).

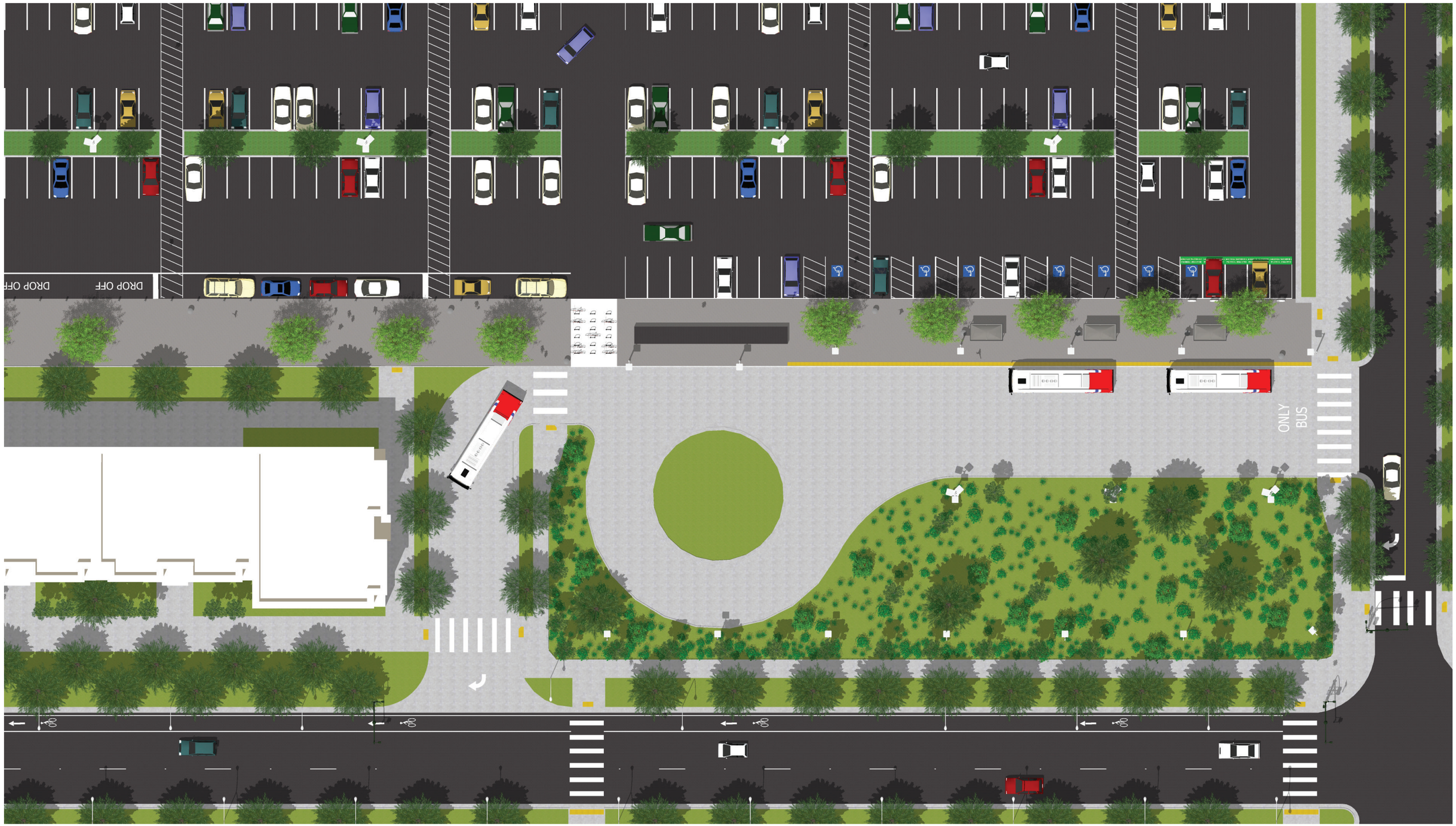
Y SOLAR
Consider installing solar canopies, which can maximize space, provide shelter for cars, and charge electric vehicles.

Figure 4: Electric Vehicle Charging in High Density Lot

Electric vehicle (EV) charging stations in priority locations while maintaining ADA parking access

Landscaping covering 10-20% of lot

HIGH DENSITY PARK & RIDE LOT: VISUALIZATION AND EXAMPLE



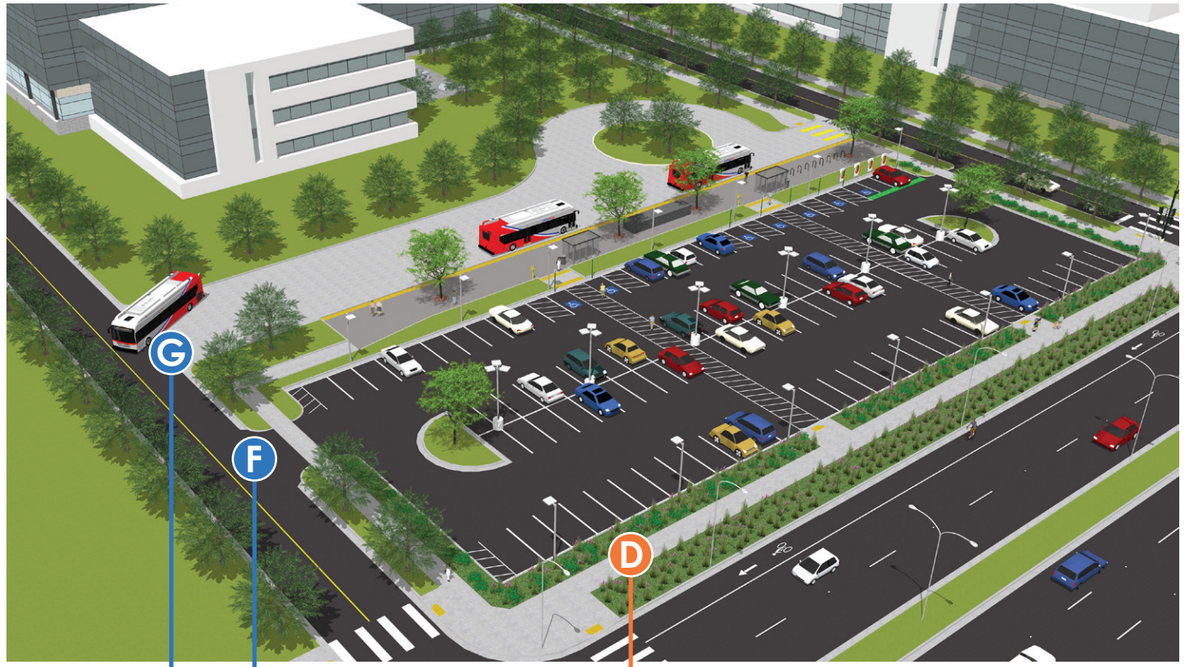
The Park & Ride Design Guidelines provide various perspectives of the High Density Lot, helping users visualize the range of required, preferred, and suggested features. Design graphics are provided for illustrative purposes and do not constitute design standards for referenced facilities/amenities.

MEDIUM DENSITY LOTS

Stafford Plaza Lot, Va (Medium Density Lot)

MEDIUM DENSITY LOTS

Medium density lots are typically located in suburban areas and/or near interchanges. They typically have bus service, casual carpooling (slugging), and may be accessible by bicycle. They typically have two-way traffic patterns, 90-degree parking and may have designated entrances/exits for transit vehicles. They offer various services and amenities (based on lot size and demand) and include a range of green infrastructure treatments.



Medium Density Lot Overview

Bus Only lanes and bus queuing areas if lot is served by transit

Access points on collectors or local streets rather than on major arterials or freeway ramps

Walkways or sidewalks connecting parking areas to boarding areas (minimum 5' wide)

LOT LAYOUT

REQUIRED FEATURES

A PARKING

Install perpendicular, 90-degree parking in order to maximize the number of spaces. Provide ADA-accessible parking including van-accessible parking. See VDOT Road Design Manual for precise requirements (Appendix A(1), Section A(1)-2 Parking Design Features).

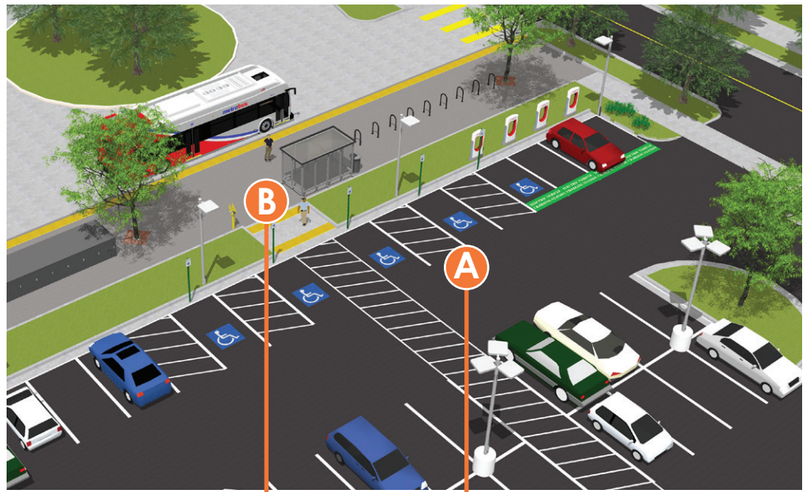
B BUS LOADING/UNLOADING

If served by transit, provide bus boarding lanes (minimum of 12' wide) and bus boarding areas (minimum of 50' long) for each standard bus (70' for each articulated bus). Work with the local transit agencies to provide sufficient space for bus queuing. See VDOT Road Design Manual for design details on different bus boarding configurations (Appendix A(1), Section A(1)-3 Transit (Bus) Facilities Design Criteria).

C VEHICLE CIRCULATION

Include 26' parking aisles (minimum) for lots with two-way traffic and 90-degree parking. See the VDOT Road Design Manual for detail on minimum one-way and two-way aisle widths for 90, 60, and 45-degree parking configurations (Appendix A(1), Section A(1)-2 Parking Design Features - Rest Areas).

Figure 5: ADA Parking in Medium Density Lot



Bus boarding lanes that are at least 12' wide and 50' long for each standard bus (70' for articulated buses)

Provide ADA-compliant spaces

D NON-VEHICLE CIRCULATION

Install walkways or sidewalks to connect parking areas and boarding areas. Sidewalks should be a minimum of 5' wide. Include ADA-accessible curb ramps for access onto sidewalks and loading areas. See the VDOT Road Design Manual (Appendix A(1), Section A(1)-1 Bicycle and Pedestrian Facilities).

PREFERRED FEATURES

E DROP-OFF AND PICK-UP (KISS & RIDE)

Include passenger drop-off and pick-up areas (kiss & ride) that conform to requirements within the VDOT Road Design Manual (Appendix A(1), Section A(1)-2 Parking Design Features). Provide a designated drop-off/pick-up area for mobility-on-demand services, like Uber and Lyft.

F ACCESS/EGRESS

Provide two entrances. Provide access points on collectors or local streets rather than on major arterials or freeway ramps (Texas Transportation Institute).

G VEHICLE CIRCULATION

If served by transit, include Bus Only lanes and bus queuing areas. Include designated areas for drop-off/pick-up.

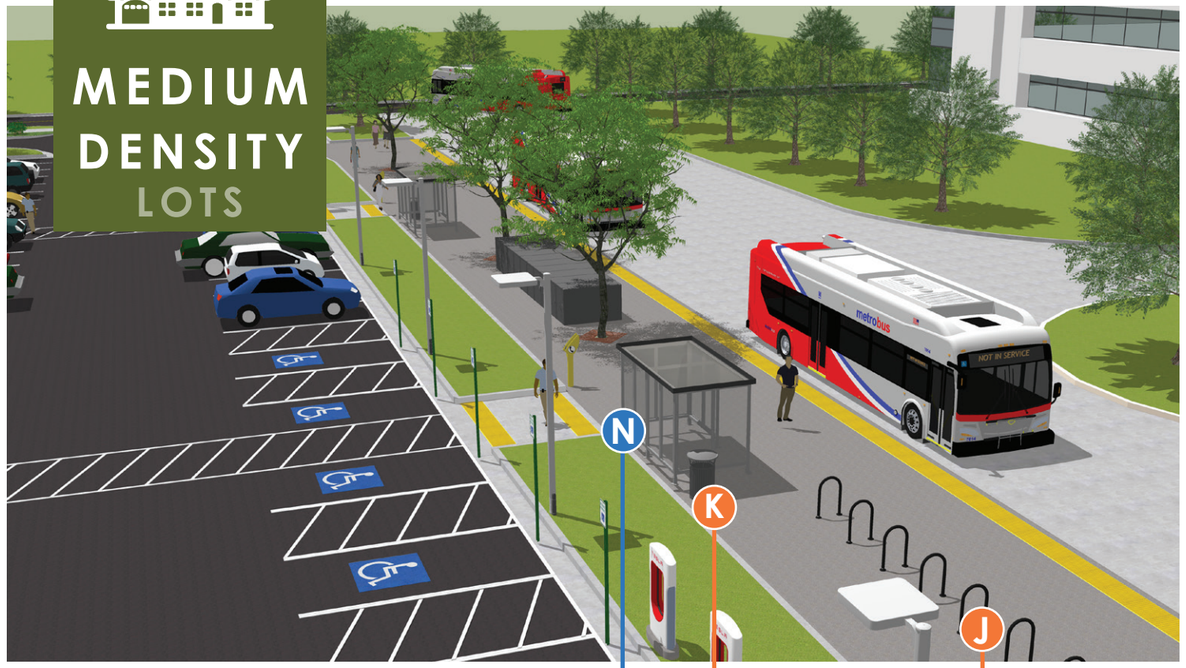
H NON-VEHICLE CIRCULATION

Install 5'-7' wide sidewalks (NACTO, FHWA) on the lot's periphery and between parking areas. Utilize high visibility crosswalks (ladder, zebra, continental) where appropriate. Install 10' shared-use paths that connect to the surrounding area's active transportation network, If applicable (VDOT Road Design Manual - Appendix A(1) Section A(1)-1 Bicycle and Pedestrian Facilities).

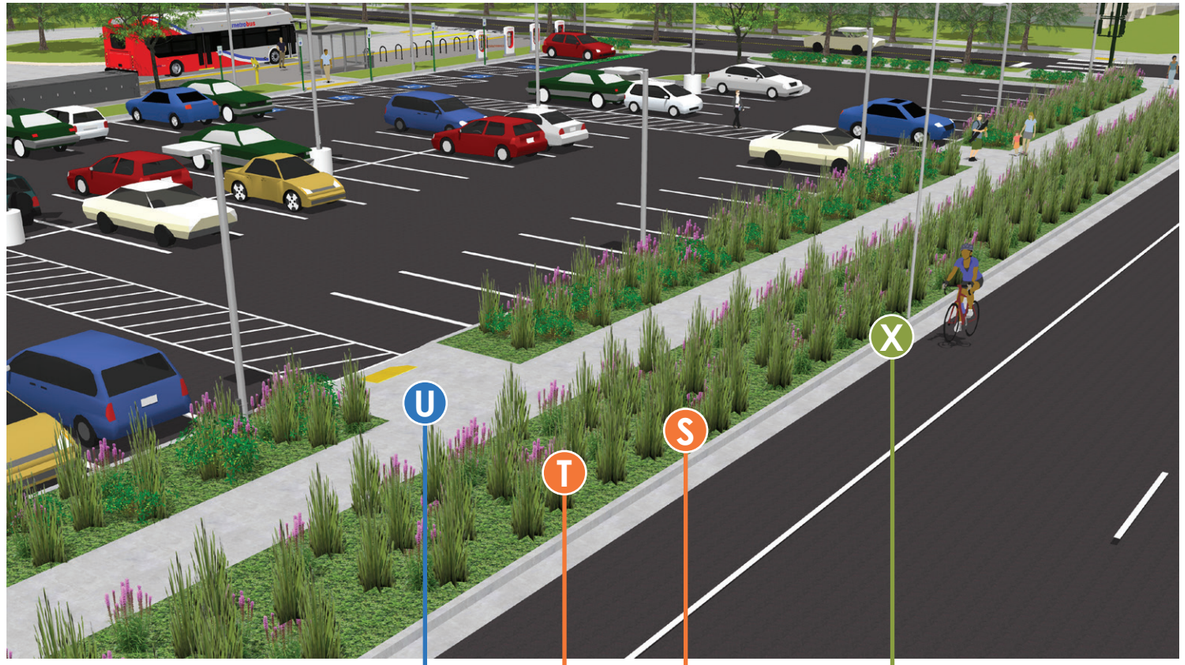
I SLUGGING ACCOMMODATIONS

Provide designated areas/signage for slugging and include proper pedestrian accommodations to/from these areas.

MEDIUM DENSITY LOTS



Bus Loading Zone in a Medium Density Lot



Medium Density Lot Overview

AMENITIES & FEATURES

REQUIRED FEATURES

J BIKE PARKING
Provide bicycle parking at a rate of 1 space for every 10 to 20 vehicle spaces with a minimum of 2-3 racks. Use racks with a 2-point locking capability such as "inverted U" and avoid "comb racks". When installing, maintain the pedestrian through zone. Consider including bike lockers at larger lots in multimodal environments. See the Association of Pedestrian & Bicycle Professionals for more detail on installation/placement.

K TRASH
Install trash receptacles in all boarding areas.

LIGHTING
L Utilize fixtures that shield the light source to minimize light pollution, reduce glare, facilitate better vision at night, and conserve energy. Install LED lights to reduce carbon emissions, maximize energy efficiency, and reduce maintenance costs. The Department of Energy estimates that LED lighting can reduce parking lot energy use over 50% compared to typical code.

SIGNAGE
M Install directional signs and traffic control in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). Coordinate with the local transit agencies to install bus route signage.

If served by transit, install shelters in boarding areas.

Install bike racks (2-3 minimum)

Install trash receptacles in all boarding areas

PREFERRED FEATURES

N SHELTERS AND BOARDING AREAS
If applicable, install shelters at bus transit stops. See the VDOT Road Design Manual for detail (Appendix A(1), Section A(1)-3 Transit (Bus) Facilities Design Criteria).

O SECURITY
Install emergency assistance phones.

P SIGNAGE
Install bus timetables and route maps and provide bicycle route signage in accordance with the MUTCD.

SUGGESTED FEATURES

Q SHELTERS AND BOARDING AREAS
Shelters should include a bench (with backrest) and a 2.5' x 4' area for wheelchairs or other mobility-assisted devices. Visit the VDOT Road Design Manual for detail (Appendix A(1), Section A(1)-3 Transit (Bus) Facilities Design Criteria).

R SIGNAGE
Utilize Integrated Corridor Management (ICM) technologies, such as digital, real-time information on parking space availability for travelers approaching the lot or station. Note: utility ROW may be required.

GREEN INFRASTRUCTURE AND TECHNOLOGY

REQUIRED FEATURES

S VEGETATION
Install native, context-sensitive plants. Visit Virginia DCR for information on Native Plants for Conservation, Restoration, and Landscaping.

STORMWATER MANAGEMENT
T Utilize green infrastructure and low impact development, such as bioswales and bioretention ponds. The Virginia Stormwater BMP Clearinghouse provides design standards and specifications for all stormwater best management practices (BMPs) approved for use in Virginia to control the quality and/or quantity of stormwater runoff. The NACTO Urban Street Stormwater Guide provides tools to design streets/spaces for successful stormwater management.

Utilize permeable/porous surface to reduce stormwater runoff, recharge groundwater, and reduce the need for large storm-water management structures

Install native, context-sensitive plants

Include landscaping across approximately 10-20% of the lot

Utilize green infrastructure such as bioswales if storm water management is required

PREFERRED FEATURES

U STORMWATER MANAGEMENT
Utilize Porous Asphalt Mix (PAM) when constructing or resurfacing lots. Benefits include reducing stormwater runoff, recharging groundwater, and potentially increasing the "developable" area of the site (since permeable paving can reduce the need for large stormwater management structures). Refer to VDOT Materials Division's Manual of Instructions - Section 605.02 for PAM applications.

V SOLAR
Install solar panels in high-sun areas to reduce energy costs and minimize environmental impacts.

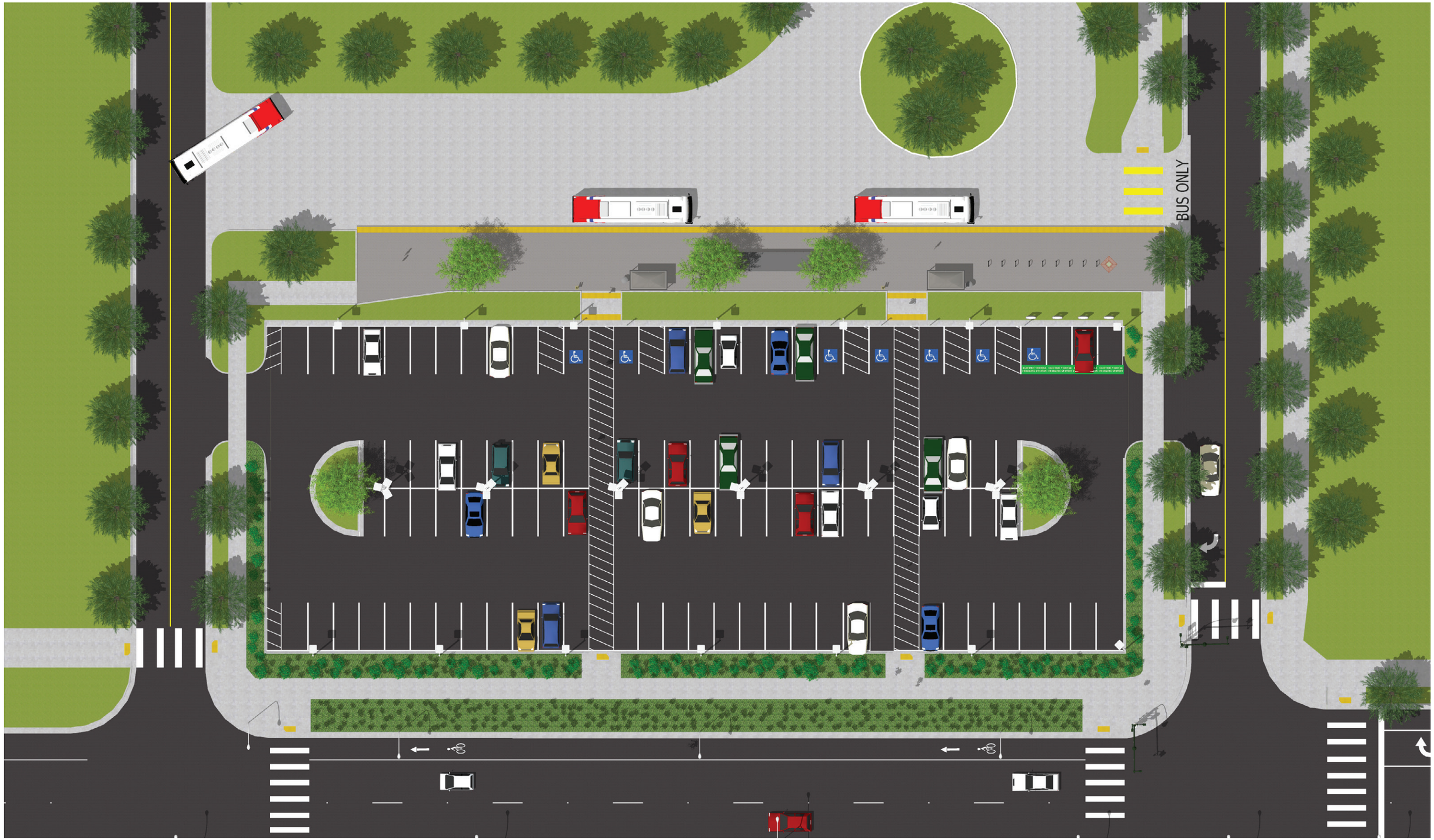
W GREEN TECHNOLOGY
Install electric vehicle (EV) charging stations in approximately 2% of all spaces. Consider accessibility, ease of use, and safety for disabled drivers, including those using wheelchairs or other assistive equipment.

SUGGESTED FEATURES

X VEGETATION
Include landscaping across approximately 10-20% of the lot (AASHTO).

Y SOLAR
Consider installing solar canopies, which can maximize space, provide shelter for cars, and charge electric vehicles.

MEDIUM DENSITY PARK & RIDE LOT: VISUALIZATION AND EXAMPLE



The Park & Ride Design Guidelines provide various perspectives of the Medium Density Lot, helping users visualize the range of required, preferred, and suggested features.
Design graphics are provided for illustrative purposes and do not constitute design standards for referenced facilities/amenities.

LOW DENSITY LOTS

Midland, Va Lot

LOW DENSITY LOTS

Low density lots are typically located in rural areas near interstates or arterial roadways. They have limited transit service, if at all, and they typically have one-way traffic patterns and 60-degree parking. They include natural features (e.g. bioswales) to help manage stormwater runoff.

Low Density Lot Overview

LOT LAYOUT

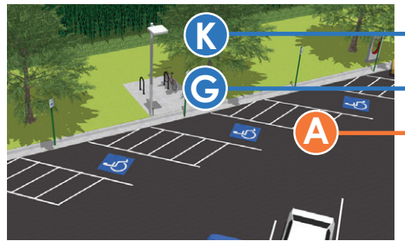
REQUIRED FEATURES

A PARKING
Utilize angled parking (60 degree or 45 degree) in order to facilitate one-way traffic circulation. Provide ADA-accessible parking including van-accessible parking. See VDOT Road Design Manual for precise requirements (Appendix A(1), Section A(1)-2 Parking Design Features).

B BUS LOADING/UNLOADING
If served by transit, provide bus boarding lanes (minimum of 12' wide) and bus boarding areas (minimum of 50' long) for each standard bus (70' for each articulated bus). Work with the local transit agencies to provide sufficient space for bus queuing. See VDOT Road Design Manual for design details on different bus boarding configurations (Appendix A(1), Section A(1)-3 Transit (Bus) Facilities Design Criteria).

C VEHICLE CIRCULATION
Include 15' parking aisles (minimum) for lots with one-way traffic and 60-degree parking. See the VDOT Road Design Manual for detail on minimum one-way and two-way aisle widths for 90, 60, and 45-degree parking configurations (Appendix A(1), Section A(1)-2 Parking Design Features - Rest Areas).

Figure 6: ADA Parking in a Low Density Lot



PREFERRED FEATURES

D NON-VEHICLE CIRCULATION
Install walkways or sidewalks to connect parking areas and boarding areas. Sidewalks should be a minimum of 5' wide. Include ADA-accessible curb ramps for access onto sidewalks and loading areas. See the VDOT Road Design Manual (Appendix A(1), Section A(1)-1 Bicycle and Pedestrian Facilities).

SUGGESTED FEATURES

E DROP-OFF AND PICK-UP
If warranted based on demand, include passenger drop-off and pick-up areas (kiss & ride) that are at least 8' wide and 20' long. See VDOT Road Design Manual for detail (Appendix A(1), Section A(1)-2 Parking Design Features).

AMENITIES & FEATURES

REQUIRED FEATURES

F SIGNAGE
Install directional signs and traffic control in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

PREFERRED FEATURES

G BIKE PARKING
Provide 2-3 bike racks. Use racks with a 2-point locking capability such as "inverted U" and avoid "comb racks". When installing racks, maintain the pedestrian through zone. See the Association of Pedestrian & Bicycle Professionals for more detail on installation and placement.

H SHELTERS AND BOARDING AREAS
If applicable, install shelters at bus transit stops. See the VDOT Road Design Manual for detail (Appendix A(1), Section A(1)-3 Transit (Bus) Facilities Design Criteria).

I TRASH
Install trash receptacles.

J SECURITY
Install emergency assistance phones.

K LIGHTING
Utilize fixtures that shield the light source to minimize light pollution, reduce glare, facilitate better vision at night, and conserve energy. Install LED lights to reduce carbon emissions, maximize energy efficiency, and reduce maintenance costs. The Department of Energy estimates that LED lighting can reduce parking lot energy use over 50% compared to typical code.

SUGGESTED FEATURES

BIKE PARKING

L
Consider installing bike lockers for additional security and all-day storage (based on demand).

M SIGNAGE
Coordinate with the local transit agencies to install bus route signage, if applicable.

GREEN INFRASTRUCTURE AND TECHNOLOGY

REQUIRED FEATURES

N VEGETATION
Install native, context-sensitive plants. Visit Virginia DCR for information on Native Plants for Conservation, Restoration, and Landscaping.

O STORMWATER MANAGEMENT
Utilize green infrastructure and low impact development, such as: bioswales and bioretention ponds. The Virginia Stormwater BMP Clearinghouse provides design standards and specifications for all stormwater best management practices (BMPs) approved for use in Virginia to control the quality and/or quantity of stormwater runoff. The NACTO Urban Street Stormwater Guide provides practitioners, leaders, and other advocates with the tools to design streets/spaces for successful stormwater management.

PREFERRED FEATURES

P SOLAR
Install solar panels in high-sun areas to reduce energy costs and minimize environmental impacts.

Figure 7: Green Infrastructure in Low Density Lot

SUGGESTED FEATURES

Q VEGETATION
Include landscaping across approximately 10-20% of the lot (AASHTO).

R GREEN TECHNOLOGY
Install electric vehicle (EV) charging stations in approximately 2% of all spaces. Consider accessibility, ease of use, and safety for disabled drivers, including those using wheelchairs or other assistive equipment.

LOW DENSITY PARK & RIDE LOT: VISUALIZATION AND EXAMPLE

The Park & Ride Design Guidelines provide various perspectives of the Low Density Lot, helping users visualize the range of required, preferred, and suggested features.
Design graphics are provided for illustrative purposes and do not constitute design standards for referenced facilities/amenities.