



# Veridea

SITE DESIGN  
PATTERN BOOK

Apex, North Carolina



“INSIST ON THE RIGHT OF HUMANITY AND NATURE  
TO COEXIST IN A HEALTHY SUPPORTIVE, DIVERSE,  
AND SUSTAINABLE CONDITION”

- The Hannover Principles,  
Principle No. 1

# ACKNOWLEDGMENTS

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Apex, NC 27502

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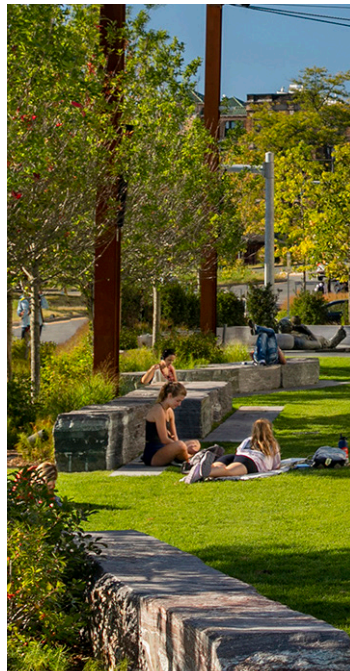
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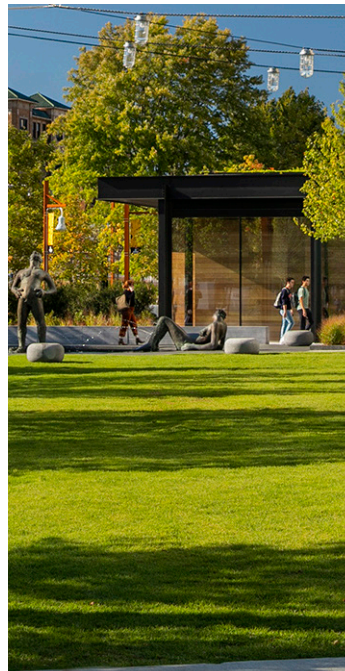
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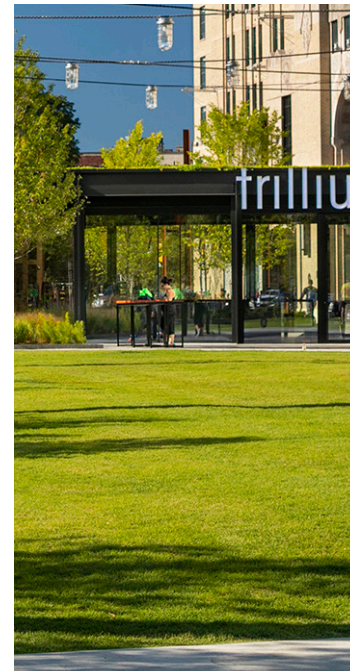
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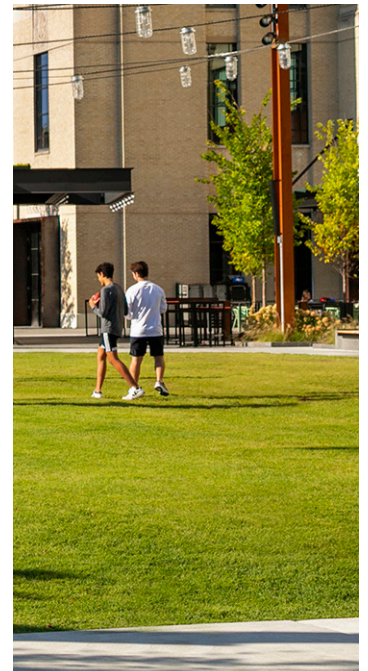
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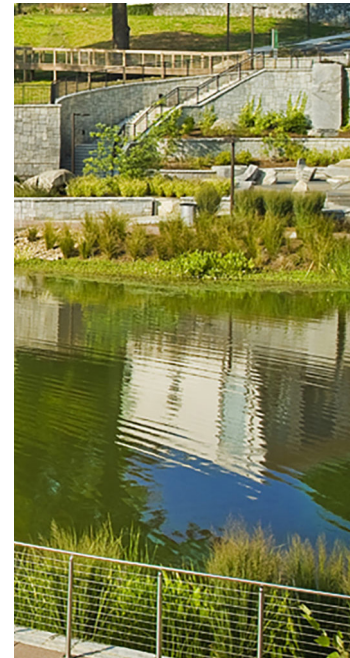
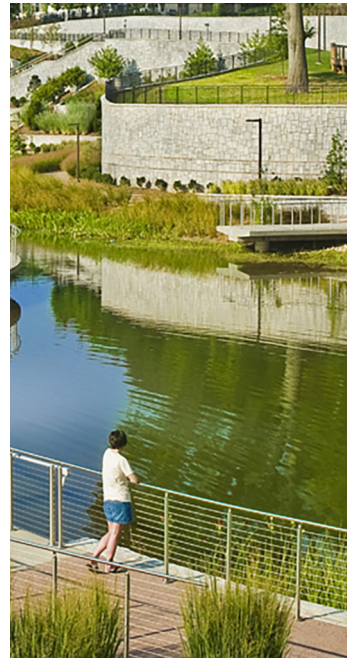
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# SECTION 1

## Purpose + Vision

Purpose + Application

Vision

Owner's Associations + ARC





## SECTION 1.1

# PURPOSE + APPLICATION

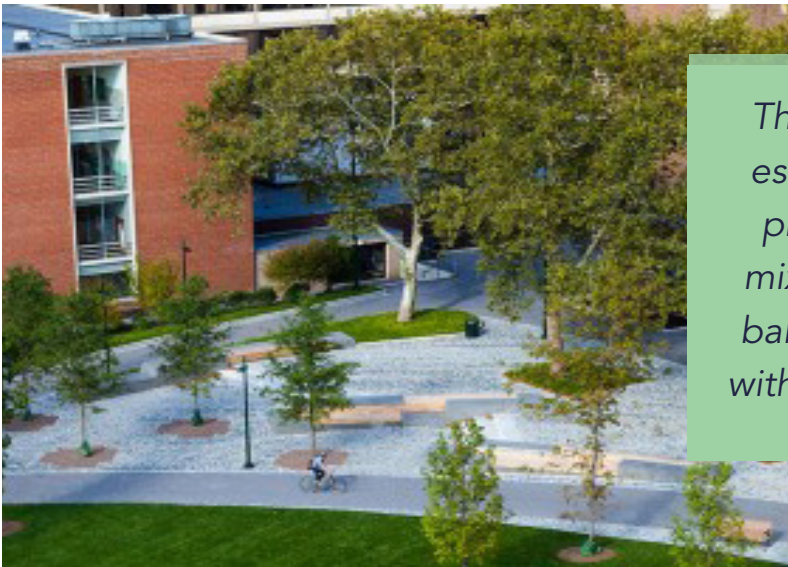
*Veridea is a new, sustainable, mixed-use development in Apex, North Carolina. It is envisioned as a dynamic community where users can live, work, and play within a contemporary and ecologically-friendly context. Within the boundaries of the development there will be a variety of housing options, employment opportunities, entertainment, and recreation. This forward-thinking community will be an icon of sustainable design and construction that balances nature and development.*





## 1.1: PURPOSE

This Pattern Book was developed by the project team for the Veridea Development, located at the conjunction of Claude E. Pope Memorial Highway (Route 1), East Williams Street (Highway 55), and Western Wake Freeway (Interstate 540) in Apex, North Carolina. The purpose of this Pattern Book is to ensure that the quality and character of development within the boundaries of Veridea is designed to a high caliber and centered around a cohesive and sustainably-focused design theme. The elements outlined within this document will provide a framework of the design intent, theme, and style of this mixed-use community. This will be used to assist property owners, developers, home builders, architects, engineers, landscape architects, planners, and other consultants in their decision-making as this project is designed and developed over time.



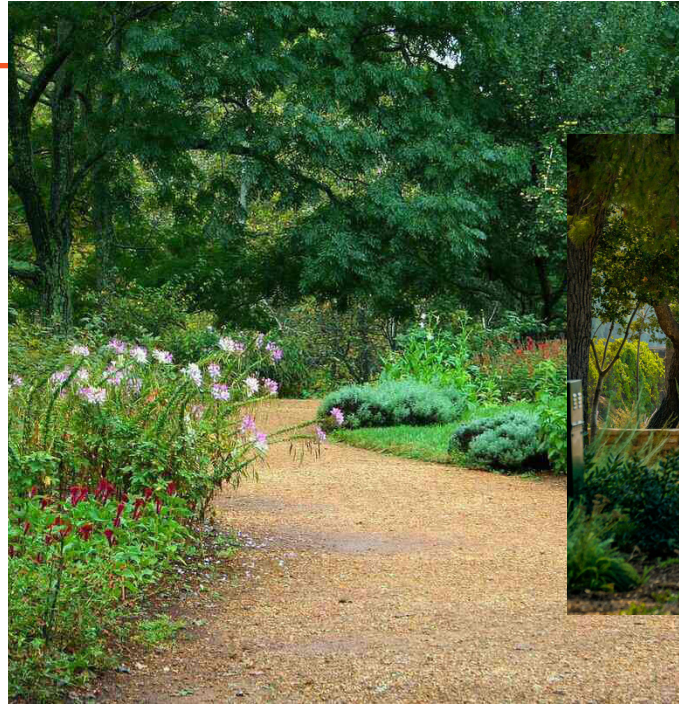
*The vision of Veridea is to establish a contemporary, progressive, and healthy mixed-use community that balances innovative design with a conservation mindset.*





## 1.1: APPLICATION

The Pattern Book is intended to be used in conjunction with the Town of Apex's Unified Development Ordinance, the Sustainable Development Plan, and the Environmental Enhancement Plan. The Pattern Book applies to the entirety of Veridea. It identifies design elements that represent a higher quality of design for Veridea than would otherwise be required. A combination of narratives and imagery are utilized to convey caliber of design, overall quality of materials, and the character and relationship of design elements. These design elements may be used and combined to create a unique and special sense of place. As a result of this Pattern Book, the actual design of Veridea will naturally vary from the Town of Apex architectural standards and will look and feel closer to the imagery found within this document.



As a part of fostering creative, unique, and innovative outcomes, the guidelines found within the Pattern Book are intended to provide a flexible framework that can respond to changing conditions as Veridea is developed over time. The pictures, illustrations, and descriptions are contextual examples of the high-quality materials and design standards envisioned for the project. Materials, architectural features, signage, hardscape, and landscape components depicted herein are not intended to be an exclusive or exhaustive list of elements to be included in design or construction. Instead, these elements are intended to convey acceptable design approaches that foster a unique sense of place through variety, high quality, and a focus on sustainably-focused development.

Unless specifically addressed in the Sustainable Development Plan and Environmental Enhancement Plan for Veridea, any materials and design-related aspects that are not addressed in this Pattern Book are subject to the requirements of the Town of Apex UDO, the Town of Apex Design and Development Manual, and other applicable laws, standards, policies, and guidelines.



## SECTION 1.2

# VISION

*The vision of Veridea is to establish a contemporary, progressive, and healthy mixed-use community that balances innovative design with a conservation mindset. By leveraging natural features, crafting high-quality open spaces, and promoting a sustainable ethic, this development will offer community members a place to gather, work, connect, and engage with nature.*



Veridea is envisioned to leverage a variety of natural elements to create unique and impactful placemaking. ➤



## 1.2: GOALS

Veridea will accomplish this design vision by:

- › Creating a diverse mix of uses within a cohesive framework
- › Utilizing a variety of contemporary architectural and landscape styles to create an authentic, high-quality, and vibrant built environment that appears to have evolved over time
- › Including a high level of sophistication in style and character in a manner that accentuates individual uses and spaces while weaving an overall fabric that speaks to the natural world, unique amenities, and beautiful architecture
- › Leveraging natural amenities such as streams, forested areas, open spaces, trails, and parks to frame and enhance the built environment
- › Providing opportunities to engage with the environment in both built and natural conditions
- › Setting forth a vision for high-quality pedestrian-oriented streetscapes and trail networks that include a variety of public and civic spaces interspersed throughout the development
- › Incorporating attractive and diverse hardscape and landscape materials to construct elements within the development - thoughtfully integrating the ground plane throughout well-designed community gathering areas
- › Leveraging infrastructure as amenities, such as stormwater control measures, that complement the built environment while promoting ecological diversity and natural ecosystems
- › Promoting a sustainable ethos by practicing techniques and methodologies that take into account issues of climate change, carbon emissions, water availability, renewable energies, and wildlife conservation





## SECTION 1.3

# OWNER'S ASSOCIATIONS + ARC

*In order for Veridea to maintain a high caliber of design and sense of place, the development will establish a Master Association (MA). The MA will then establish the Veridea Homeowner's Association (HOA), the Veridea Commercial Owners Association (COA), the Veridea Residential Architectural Review Committee (RARC), and the Veridea Commercial Architectural Review Committee (CARC) - as required by the approved Sustainable Development Plan.*



Owner's Associations and Architectural Review Committees assist in maintaining Veridea's vision over time. ➤



## 1.3: OWNER'S ASSOCIATIONS

### *Veridea Master Association*

As required by the approved Sustainable Development Plan, there shall be one mandatory Master Association (MA) for all residential and commercial areas within Veridea. The MA shall be responsible for the execution, performance, administration and enforcement of the recorded Declaration of Covenants, Conditions and Restrictions (Declaration), including managing and maintaining the common areas and common improvements within both residential and commercial areas. The MA shall be permitted to oversee the formation and management of sub-associations within Veridea - one for residential areas (HOA) and the other for commercial areas (COA) - as detailed below.



### *Veridea Homeowner's Association*

There shall be one mandatory Homeowner's Association (HOA) for all of the residential areas within Veridea, subject to the MA. The Veridea HOA will be responsible for managing and maintaining the common areas and common improvements within residential areas. The association's responsibility will be outlined in the filed Declaration of Covenants, Conditions, and Restrictions (Declaration) and shall at minimum include maintenance of entrance signs, screening walls, trails, landscaping, landscape buffers, and open spaces.

### *Veridea Commercial Owner's Association*

There shall be one mandatory Commercial Owner's Association (COA) for the commercial and non-residential areas within Veridea. The Veridea COA shall be required to manage and maintain the common areas and common improvements within commercial and non-residential areas, subject to the MA. The association's responsibility will be outlined in the filed Declaration and shall at minimum include maintenance of ground signs, screening walls, landscaping, landscape buffers, trails, and open spaces.



## 1.3: ARCHITECTURAL REVIEW COMMITTEE

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### *Veridea Architectural Review Committee*

There shall be a mandatory Residential Architectural Review Committee (RARC) for all the residential areas within Veridea. The RARC is responsible for the oversight and review of residential development within residential areas. This committee shall be established by the HOA as described in the filed Declaration. The purpose, administration, and responsibilities of this committee will be described in detail in the Declaration.

The RARC is responsible for the following:

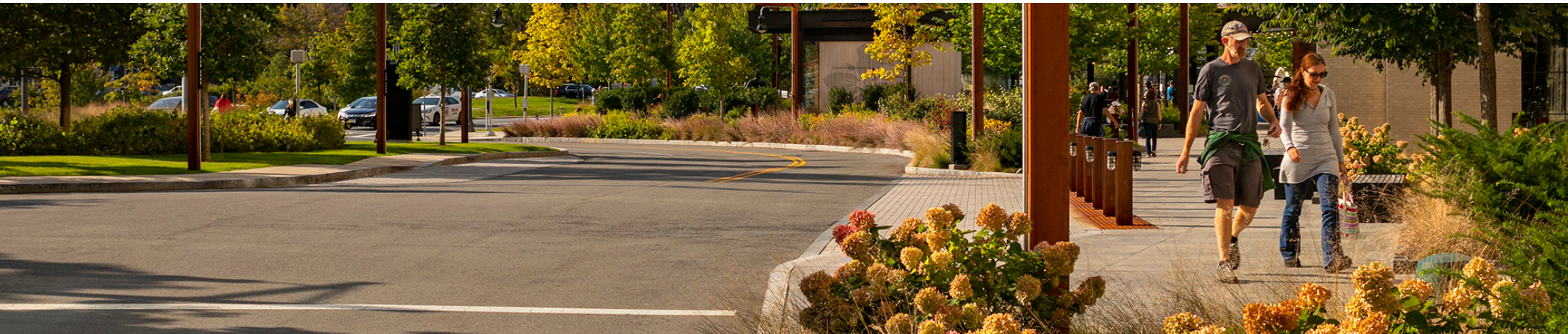
- › To ensure the Pattern Book is being followed
- › To encourage high-quality construction of residences
- › To oversee, review, and approve the exterior elevations and building materials in a manner that is consistent with the Pattern Book
- › To preserve the common community areas and features within the Residential Areas

### *Veridea Commercial Architectural Review Committee*

There shall be a mandatory Commercial Architectural Review Committee (CARC) for all of the commercial and non-residential areas within Veridea. The CARC is responsible for the oversight and review of commercial and non-residential development within these areas. This committee shall be established by the COA as described in the filed Declaration, which outlines in detail the committee's purpose, administration, and responsibilities.

The CARC is responsible for the following:

- › To ensure the Pattern Book is being followed as each commercial or non-residential development is being proposed
- › To encourage the construction of high-quality improvements within commercial and non-commercial areas
- › To oversee, review, and approve building elevations, building materials, and site improvements in a manner that is consistent with the Pattern Book
- › To preserve the common areas and features within the commercial and non-commercial areas





## SECTION 2

### Sustainable Development Plan

Sustainable Development Plan  
Pillars of Sustainable Thought  
Application of Pillars





## SECTION 2.1

# SUSTAINABLE DEVELOPMENT PLAN

*The Sustainable Development Plan (“SD Plan”) is a document submitted by the Responsible Party and approved by the Town of Apex Town Council as part of the zoning conditions set forth for the property known as Veridea. The SD Plan establishes a flexible framework of development standards that seeks to anticipate the evolution of future technology, trends, and practices as they apply to the development of Veridea.*



The SD Plan was adopted to facilitate Veridea’s development in accordance with sustainable principals. The SD Plan identifies four guiding principles that are derived from **The Hanover Principals: Design for Sustainability**, authored by William McDonough and Michael Braungart. The guiding principles are as follows:

- › Eliminate the concept of waste
- › Insist on a renewable future
- › Create delightful urban places
- › Integrate nature throughout the community

This Pattern Book is intended to complement the SD Plan by further defining the principles of design that fulfill sustainability standards and goals. Unless specifically addressed in the Pattern Book for Veridea, any materials and design-related aspects that are not addressed shall be subject to the SD Plan, the Veridea Environmental Enhancement Plan (EEP), the Town of Apex UDO, the Town of Apex Design and Development Manual, and other applicable laws, standards, policies and guidelines. Refer to the approved map of Sustainable Development Zones on file with the Town of Apex Planning Department as needed. Development requirements, intensity, uses, and other design guidelines vary by zone and are defined in the SD Plan.



## SECTION 2.2

# PILLARS OF SUSTAINABLE THOUGHT

*The Pillars of Sustainable Thought offer a flexible framework to define Veridea's site and program design. Unique, thoughtful, and authentic spaces can be fostered by applying a combination of programs and design elements found within each Pillar.*





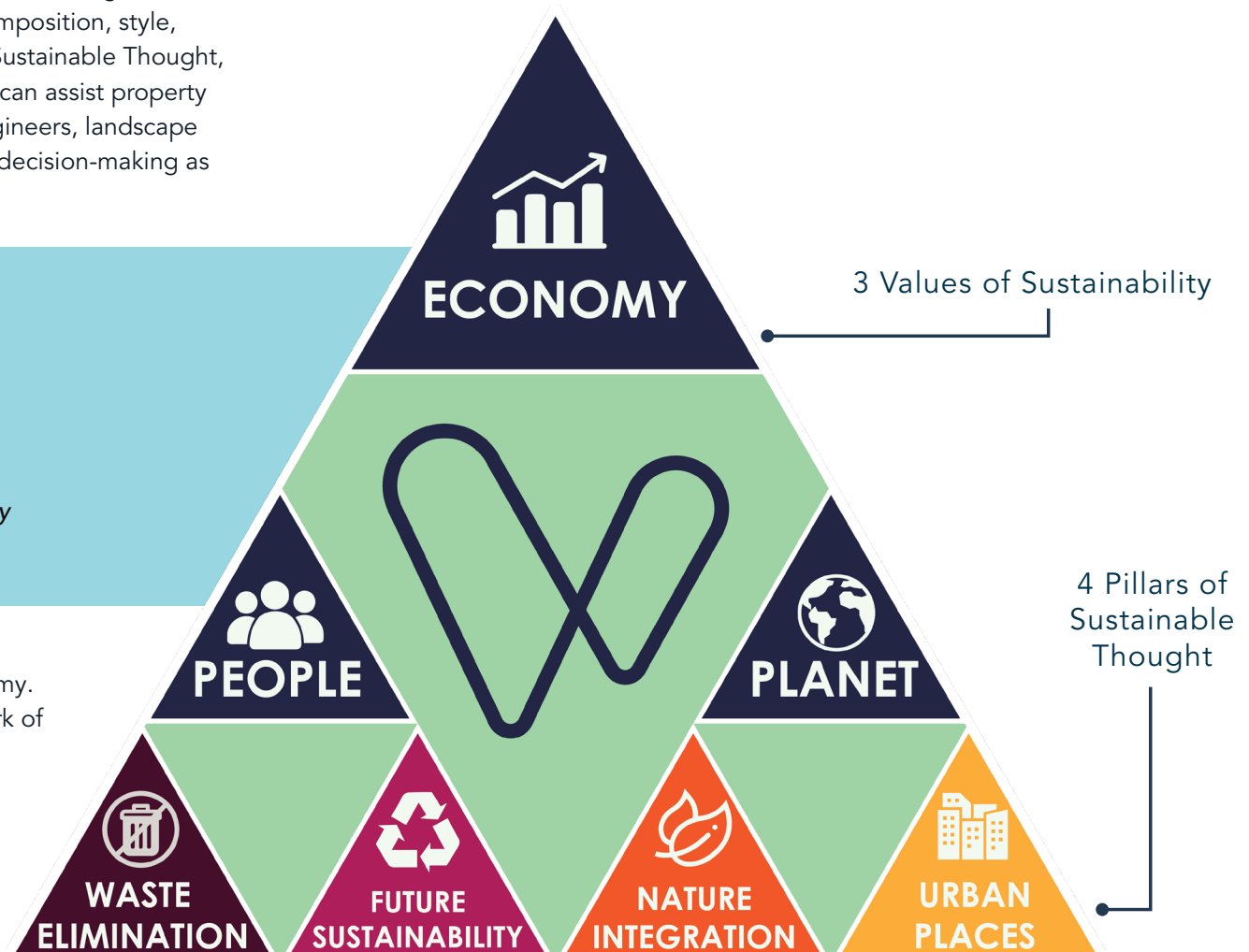
## 2.2: PILLARS OF SUSTAINABLE THOUGHT

Taking inspiration from The Hanover Principals and the Guiding Principles set forth in the Sustainable Development Plan, this Pattern Book provides guidelines to further define principles of design for Veridea, including characteristic form, massing, composition, style, method, and materials. Identified as the Pillars of Sustainable Thought, this expansion on the SD Plan's Guiding Principles can assist property owners, developers, home builders, architects, engineers, landscape architects, planners, and other consultants in their decision-making as Veridea is designed and developed over time.

*There are four Pillars of Sustainable Thought:*

- › *Eliminate the concept of waste*
- › *Insist on a renewable future*
- › *Create delightful urban places*
- › *Integrate nature throughout the community*

Together, the four pillars uphold Veridea's three values of sustainability: People, Planet, and Economy. Integrated together, these values are the framework of the next generation of sustainable development.





## 2.2: APPLICATION OF PILLARS

A suggestive list of design principals and applications associated with each Pillar of Sustainable Thought can be found in the chart below. The characteristics, features, or development approaches described are not intended to be an exclusive or exhaustive list to be implemented in every design or construction. Instead, these principals are intended to convey acceptable design approaches that promote sustainability and meet the intent of the Sustainable Development Plan and the Environmental Enhancement Plan of Veridea.



### Eliminate the Concept of Waste

- › Sustainable or reclaimed materials for site elements
- › Site design approaches that compress programming to limit disturbed area and preserve existing open spaces
- › Locally sourced materials and partnerships with local non-profits or businesses (mountain biking clubs, small scale nurseries, etc.)
- › Mill lumber from trees taken down on-site
- › Utilize found materials on site for placemaking through mediums such as art, nature play, or historical monumentation
- › Incorporate recycled content into products and furnishings
- › Use passive design elements such as natural ventilation, daylighting, and thermal mass
- › Optimize efficiency in material use by minimizing offcuts, using standard sizes, and utilizing prefabricated components or modular construction



### A Sustainable Future

- › Native and adaptive plantings
- › Solar energy and solar lighting
- › Permaculture or permanent agriculture, community gardens or garden plots (orchards, fruit groves, nut trees, garden spaces for growing food)
- › Pervious paving
- › Green roof and green wall design
- › Encourage micro-transit options (scooters, bicycles, e-bikes) with bicycle storage, repair stations, and charging
- › Electrical charging stations for vehicles and bicycles



### Integration of Nature

- › Pollinator and wildlife gardens
- › Community tree canopy goals
- › Plant unprogrammed open space, such as landscape medians
- › Preserve mature tree growth
- › Naturalized, informal planting design in edge conditions
- › Artful, organized planting design in urban spaces
- › Easy access to natural areas
- › Create wildlife corridors and connected natural areas
- › Minimize turf and mulched areas with groundcover planting
- › Protected Audubon Community
- › Educational signage about environmentalism and natural systems being experienced
- › Create a reforestation schedule for long-term canopy maturity
- › Micro-groves of native ecosystems
- › Low-impact trails, such as single track, mountain biking, and gravel with tact



### Delightful Urban Places

- › Strong visuals – physical and visual connections between spaces
- › Create a sense of place with memorable structures and art
- › Repetition of materials and planting design to create themes
- › Connected open space through walkability
- › Variety of scale in structures and visual openness of vistas
- › Reflect the site's history through found site elements, preservation of structures, and active cultural programming
- › Infrastructure becomes amenities that go beyond basic functions such as streetscapes and stormwater features
- › Sense of discovery and creativity for users
- › Designate an overall landscape theme
- › Attractive play and recreational spaces including natural play areas



## SECTION 3

### Streetscapes

Streetscape Character  
Streetscape Design Standards

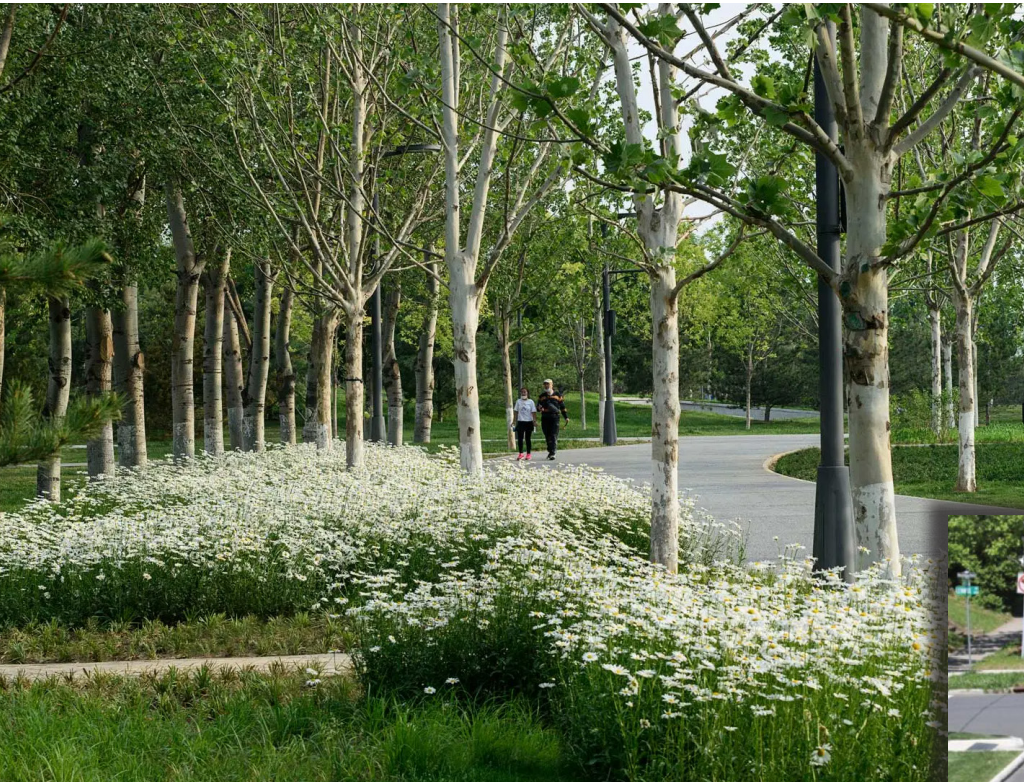




## SECTION 3.1

# STREETSCAPE CHARACTER

*Each development pod of Veridea is framed by major roadways. The overall intent of this section is to aid in creating a street network with variety in character through the use of dynamic hardscape materials, plantings, and furnishings. The character of each streetscape section will vary depending on site context and adjacent development programming as the landscape transitions from one development pod to another. The following streetscape character descriptions are to be applied to the major road network to provide dynamic user experience throughout the entirety of Veridea.*



\*This Section describes the design intent for hardscape and landscape treatment of major roadway streetscapes within the public right of way only. Refer to Sections 5-8 for specific design guidelines on site amenities, hardscape, and landscape guidelines for privately developed open spaces and streetscapes. Streetscapes internal to development pods do not have a designated streetscape character; however, internal streetscapes shall also follow the guidelines set forth in Sections 5-8. Streetscape character of major roadways may be applied to internal streetscapes as is fitting with adjacent development program and uses.

\*All streetscape designs, layouts, dimensioning and landscape standards shall comply with the streetscape requirements set forth in the SD Plan and the Town of Apex UDO. Where enhanced hardscape and landscape is located in the public right of way, a developer's agreement regarding maintenance shall be defined between the Town of Apex and the developer/responsible party.



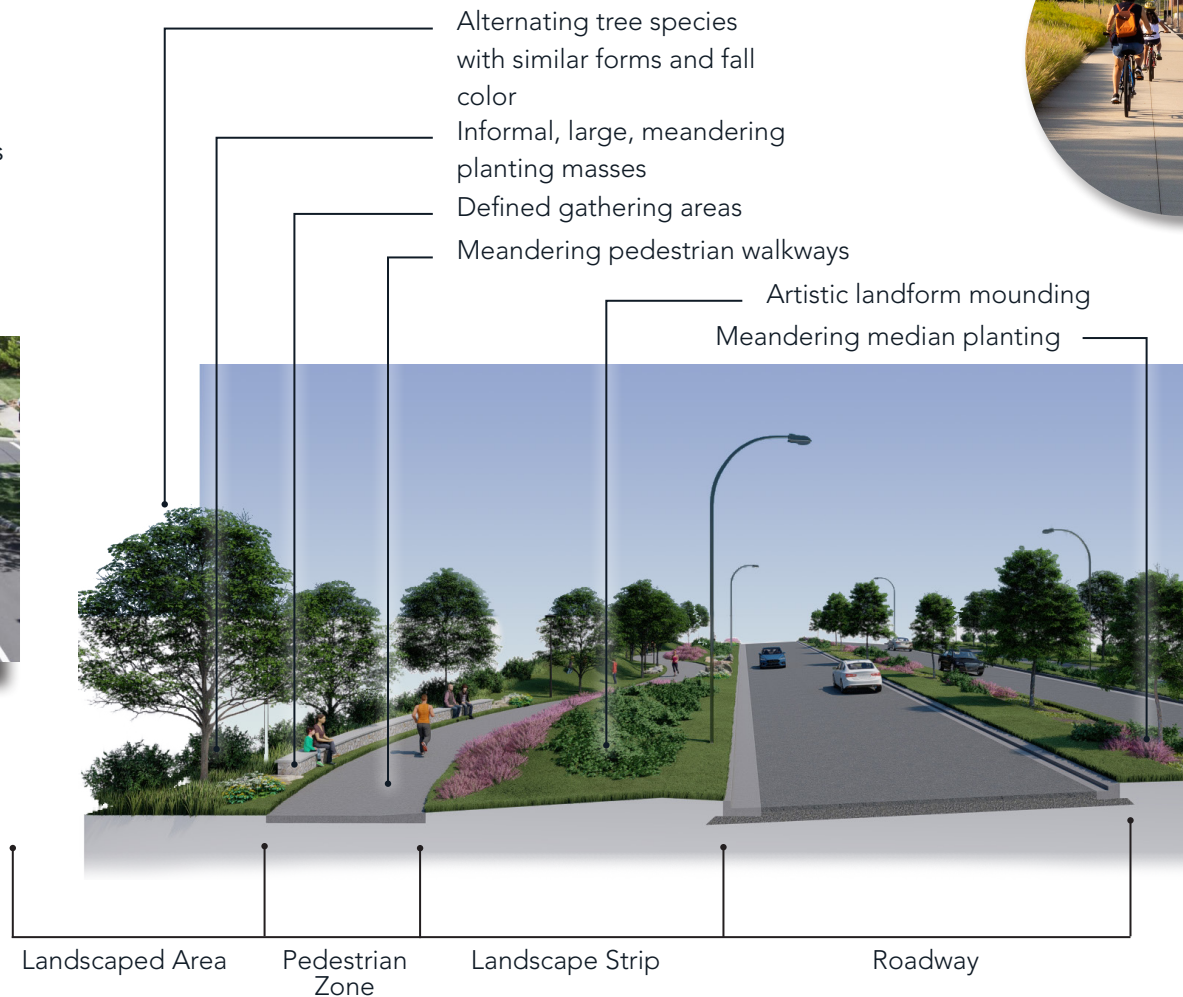


## 3.1: STREETSCAPE CHARACTER

### *The Contoured Streetscape*

Applies to major thoroughfares with adjoining naturalized landscapes or designed open spaces

- › Informal, large, meandering masses of individual focal species
- › Ornamental grasses in mass planting
- › Low-creeping or low-massing shrubs
- › High percentage of native plants
- › Defined open spaces and parks
- › Mowed turf areas to define larger planting masses
- › Landscape mounds as art form
- › Meandering planting design in landscape medians
- › Alternating street tree species
- › A combination of pedestrian and roadway lighting may be used - refer to Section 8: Lighting



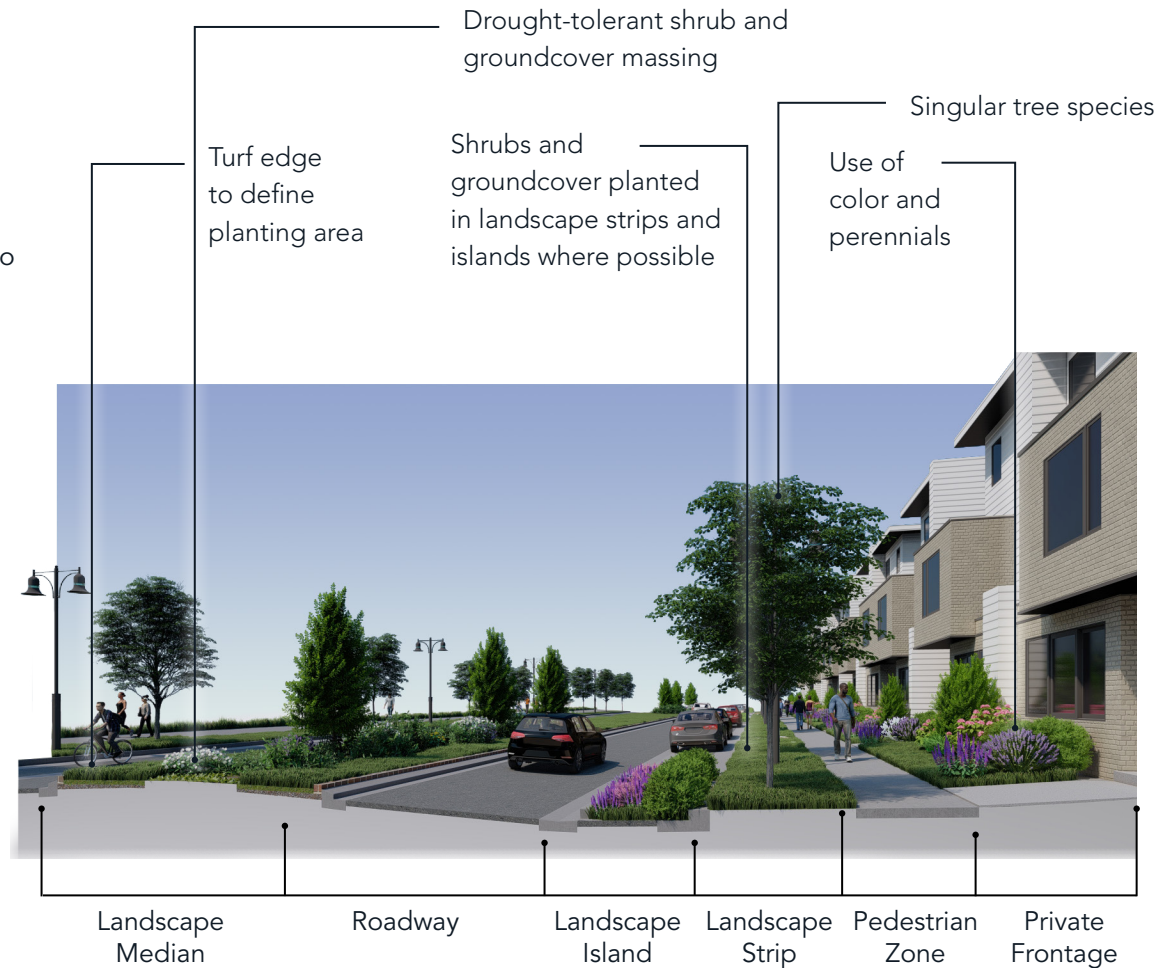


## 3.1: STREETSCAPE CHARACTER

### *The Residential Streetscape*

Applies to major collector roads in residential area

- Low-maintenance and drought-tolerant shrub and groundcover massing
- Encourage use of planting and groundcover in lieu of mulch or turf to cover ground
- Intentional use of lawn to provide clear sight lines and define planting areas
- Open viewsheds for vehicles and pedestrians
- Use of color and landscape to define high impact areas and amenities
- Planted landscape strips and medians where possible
- Meandering pedestrian zones where possible
- Pedestrian roadway lighting may be used - refer to Section 8: Lighting
- Singular street tree species with one species spanning no more than 30 trees



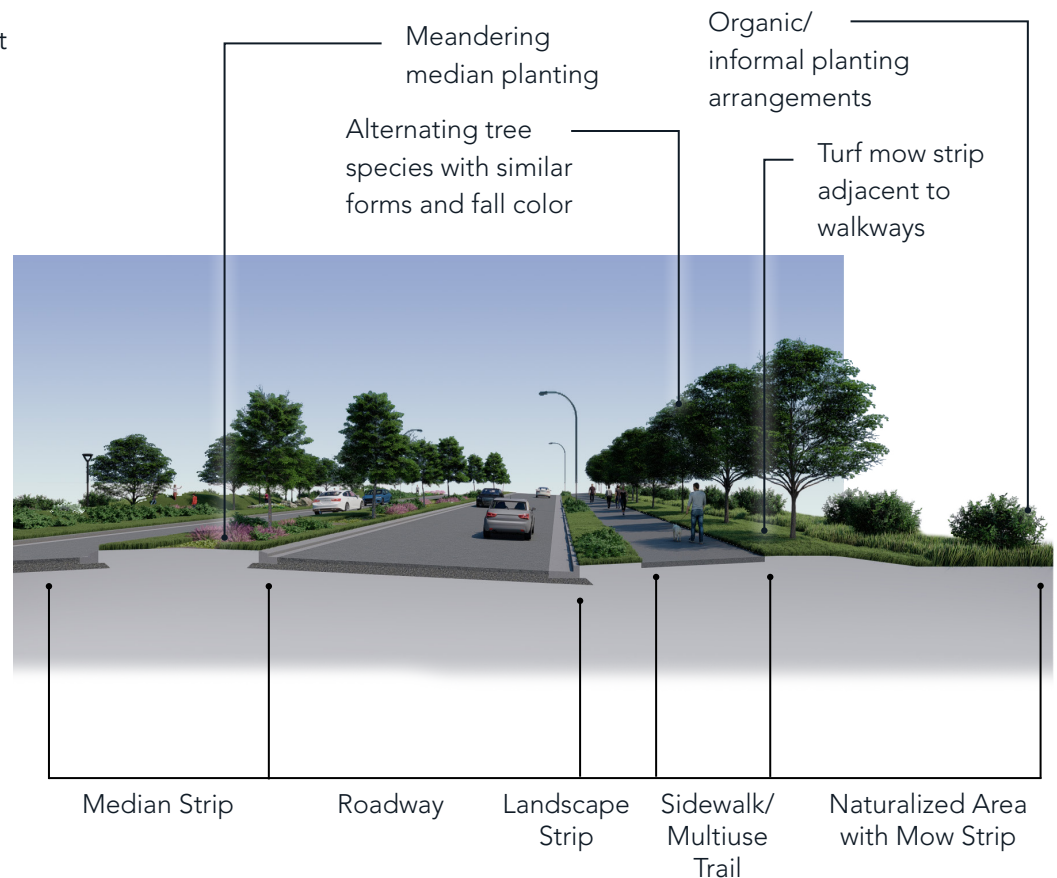


### 3.1: STREETSCAPE CHARACTER

#### *The Naturalized Landscape*

Applies to major thoroughfare and collector roads in undeveloped and buffered zones

- › Naturalized areas with meadow mixes and no-mow planted areas
- › Organic forms
- › Large planting masses that are undefined and sporadic
- › Informal planting arrangements
- › High percentage of native plants
- › NCDOT Wildflower Program integration
- › Perennial and native grass mixes
- › Informal transitions between turf meadows, shrubland, and forest
- › Meandering pedestrian zones permitted
- › Utilize pedestrian and roadway lighting that minimizes light spillover into naturalized areas
- › Alternating street tree species



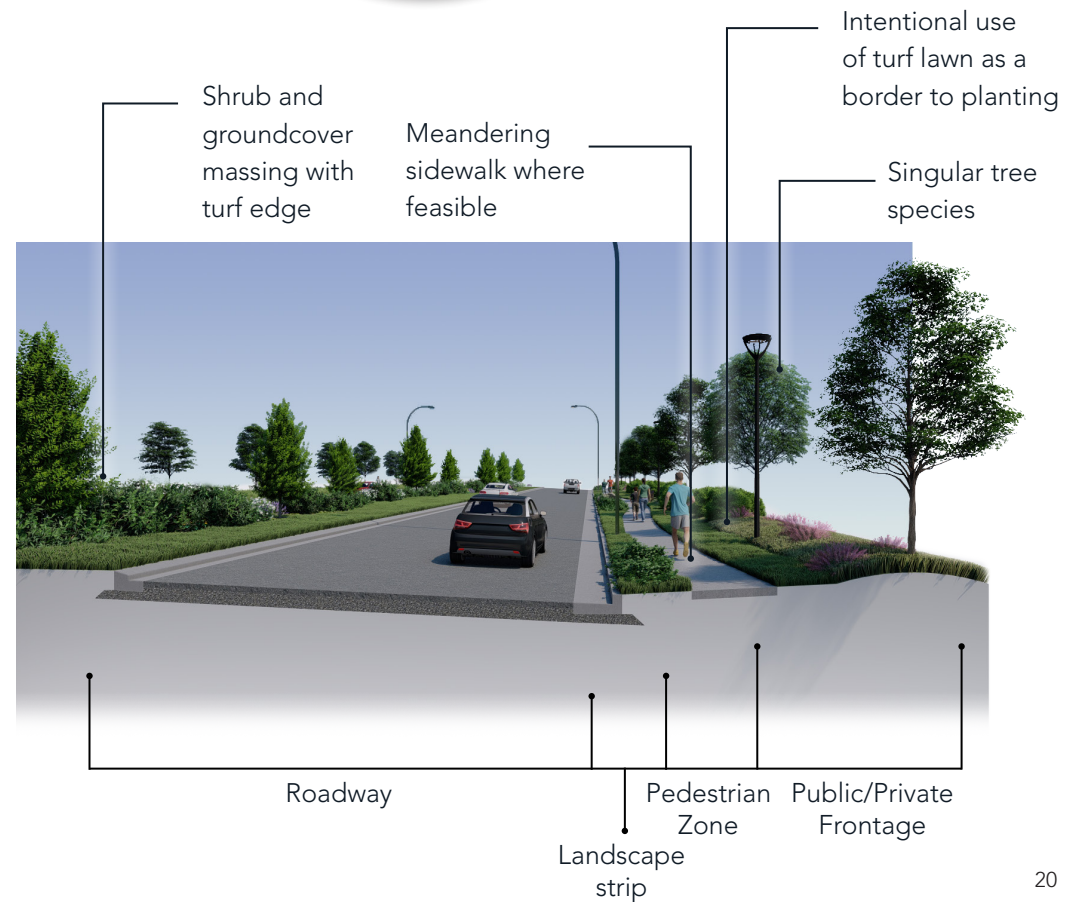


## 3.1: STREETSCAPE CHARACTER

### *The Innovative Streetscape*

Applies to major collector roads at campus- or technology-driven developments

- › Large shrub and groundcover massing
- › Open viewsheds for vehicles and pedestrians
- › Landscape used to separate and define pedestrians from vehicles
- › Intentional use of lawn
- › Legibility from a wayfinding perspective
- › Meandering pedestrian zones where possible
- › Utilize a combination of pedestrian and roadway lighting - refer to Section 8: Lighting
- › Singular street tree species with one species spanning no more than 30 trees





### 3.1: STREETSCAPE CHARACTER

#### *The Urban Streetscape*

Applies to major collector roads at urban and mixed-use developments

- Manicured and formal landscape arrangements with defined rhythms, colors, and textures
- Use of focal flowering plantings as a defining plant species
- Urban-tolerant species
- Contained landscape within defined planter zones with curbing and/or fencing
- Wayfinding legibility from a pedestrian and vehicular perspective
- Singular street tree species with one species spanning no more than 30 trees



Formal planting arrangements with defined turf edge - turf may be reinforced

Enhanced landscape zone with high quality hardscapes and landscapes where feasible

Singular tree species



Median Strip

Roadway

Step Out

Landscape Zone

Pedestrian Zone

Public/Private Frontage



## SECTION 3.2

# STREETSCAPE DESIGN STANDARDS

*The streetscapes within Veridea are meant to be context-sensitive, inviting, and dynamic. Standards of design should be incorporated without losing sight of overall streetscape characters detailed in the previous section. Hardscape, landscape, and site furnishing selections will aid in differentiating each character zone while maintaining a thread of high-end design that runs throughout the entirety of Veridea. These standards should be viewed as a means to create seamless transitions between each streetscape character zone.*



\*This Section describes the intentions for material compatibility between hardscapes, landscapes, and furnishings found on major roadway streetscapes within the public right of way. Refer to Sections 5-8 for specific design guidelines on site amenities, hardscape, and landscape.

\*All streetscape designs, layouts, dimensioning and landscape standards shall comply with the streetscape requirements set forth in the SD Plan and the Town of Apex UDO. Where enhanced hardscape and landscape is located in the public right of way, a developer's agreement regarding maintenance shall be defined between the Town of Apex and the developer/responsible party.



## 3.2: STREETSCAPE DESIGN STANDARDS

### Hardscape

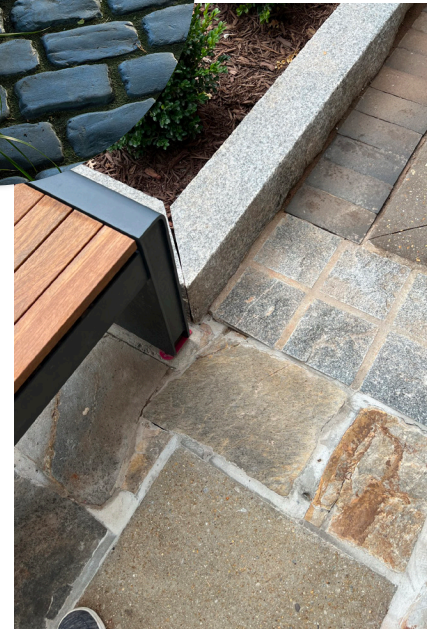


Hardscape materials within and adjacent to major streetscapes should include a variety of materials that create a unique visual character for Veridea. These hardscape materials should include a range of finishes that complement the streetscape character categories described in Section 3.1. Enhanced paving materials should be utilized to strategically complement standard finishes, reinforce the importance of certain pedestrian nodes, and amplify the overall design aesthetic of Veridea streetscapes.

- › Applies to hardscapes within the landscape and pedestrian zones of the streetscape section only
- › Standard hardscapes may include concrete and asphalt
- › Enhanced hardscape may include pavers, decorative concrete, planter curbs, and seat walls
- › Enhanced hardscapes within public the right-of-way must be included as part of a maintenance agreement between the Town and the developer/ responsible party



Grade-separated pedestrian crossings and decorative crosswalks may be utilized at major pedestrian intersections for safety. Crosswalks can be enhanced with high visibility thermoplastic applications that meet Town Transportation and NCDOT standards.





## 3.2: STREETSCAPE DESIGN STANDARDS

### Furnishings

A variety of furnishings will be required within the public right-of-way for public use, safety, and comfort. These furnishings are meant to create a sense of place and provide a strong emphasis on the pedestrian experience. Furnishings are aimed at providing comfortable areas of rest, safe storage of alternative transportation modes, proper containment of waste, and visual stimulation for a wide range of users.

- Applies to furnishings within the landscape zones of the streetscape section only
- Furnishings may include trash and recycling receptacles, bicycle racks, seating, bollards, and decorative landscape features such as boulders, seat walls, and potted planters
- Furnishings within the public right-of-way that differ from the Town Standard must be included as part of a maintenance agreement between the Town and the developer/responsible party



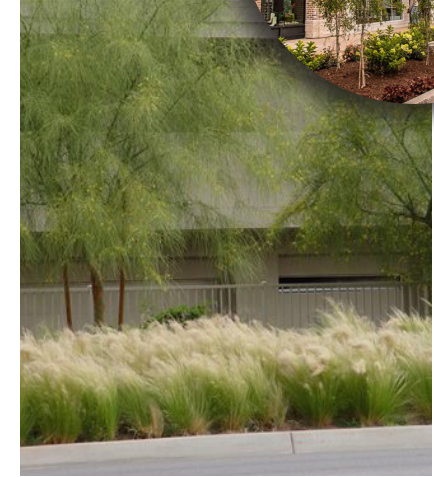


## 3.2: STREETSCAPE DESIGN STANDARDS

### Landscapes

Landscaping of streetscape areas should correspond directly with the streetscape character categories described in Section 3.1. Each streetscape character category emphasizes landscaping as a critical component of successfully establishing a unique user experience while moving throughout Veridea. Dependent upon which streetscape character is being utilized, plant species will vary in form, shape, pattern, and distribution.

- › Applies to landscape and planted areas within the landscape zone of the streetscape section only
- › Planting within public the right-of-way that is elevated over the Town Standard must be included as part of a maintenance agreement between the Town and the developer/responsible party





## SECTION 4

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### Open Spaces, Parks + Trails

Character + Intent  
Passive Open Spaces  
Active Open Spaces





## SECTION 4.1

# CHARACTER + INTENT

Veridea is committed to providing a variety of high-impact parks and open spaces. Passive landscapes and preserved natural ecosystems intertwined with active, programmed parks will provide a uniquely diverse landscape experience for users to explore and engage with. The nature of park spaces will range from small urban gardens to large recreational playfields to naturally preserved areas - each with individual sustainability goals.



\*Each park and open space shall comply with the design standards and requirements listed in the SD Plan and the Environmental Enhancement Plan. Park facilities that are owned and operated by the Town of Apex may follow Town standards but are encouraged to comply with the Pattern Book and Veridea branding.





## SECTION 4.2

# PASSIVE OPEN SPACES

Passive open spaces emphasize a low level of urban development with a focus on preservation, conservation, and natural habitat.





## 4.2: PASSIVE OPEN SPACES

### *Perimeter Buffers + Stormwater Infrastructure*

Where perimeter buffers are disturbed and required to be re-vegetated, the design approach shall include stabilizing the boundaries of the site, enhancing appearance, and encouraging native plant communities and ecosystems. A high percentage of native plant species with a variety of color, texture, and visual interest is encouraged. Planting arrangement shall be an informal design with rhythm and repetition while still providing biodiversity and legibility. All landscape buffers must meet standards set forth by the Town of Apex, the SD Plan and the Environmental Enhancement Plan.



Informal buffers with a variety of texture, color, and visual interest reinforce naturalistic landscape character.



Infrastructure associated with stormwater, such as outfall structures and trash racks, shall be screened with vegetation and/or enhanced with decorative masonry applications.

Stormwater management is a critical component of responsible development. While stormwater control measures primarily function to collect stormwater runoff and remove sediment and pollutants, they can also become critical wildlife habitats and beautiful landscaped areas. Where possible, stormwater infrastructure should be designed with organic forms to mimic a more naturalistic condition. The use of stormwater control measures that mimic natural ecosystems, such as stormwater wetlands, is encouraged. Associated man-made infrastructure, such as concrete outfall structures, can be located in less visible areas, surrounded with taller plant material, and adorned with decorative masonry finishes. Where planting is required, provide a wide variety of plant species that are complementary in color, texture, and height. A mixture of native grasses, perennials, shrubs, and trees promotes a biodiverse ecosystem and establishes habitat.



## SECTION 4.3

# ACTIVE OPEN SPACES

Active open spaces encourage users to gather and engage within designed, developed, and landscaped park spaces. The emphasis is on placemaking that promotes health, happiness, and well-being.





## 4.3: ACTIVE OPEN SPACES

### Linear Parks + Trails

Minimum requirements:

- One waste receptacle
- One bench at major trailheads

Linear parks are longer than they are wide - typically following roadways, streams, rivers, and utility corridors. Pocket parks, overlooks, gathering areas, and public art are examples of design opportunities that can be located along trails and within open spaces. Linear parks can also be dedicated to wildlife, such as a continuous pollinator corridors. Linear parks shall be designed to connect nodes of gathering and parks. Winding or meandering alignments of trails are preferred to create visual interest and provide areas of relief from vehicular traffic. Where possible, trails and greenways should follow previously disturbed areas, such as utility easements and roadways, to minimize removal or destruction of conserved landscape. Avoid steep slopes to natural conditions directly adjacent to trail systems. Where trails meander through wooded or natural conditions, adjust trail alignments as necessary to avoid impacting the critical root zones of large, mature vegetation. All greenways and trails shall be constructed to the standards set forth in the SD Plan, EEP, and Town standard.



- Large, multi-use trails shall accommodate both pedestrians and bicycles. Provide changes in hardscape, texture and landscape to highlight nodes and trailheads.

Pedestrian-oriented amenities shall be located at intervals along the trail and at major trailheads. Such amenities include but are not limited to entry markers, educational signage, decorative lighting, street furnishings, outdoor fitness stations, bicycle repair stations and fountains. Art, entrance markers, monumentation, signage, waste receptacles and distance markers shall follow Veridea branding and signage standards set forth in Section 7. Pedestrian lighting may be provided and shall follow the Veridea lighting standards set forth in Section 8.



Major trailheads are defined as a main entry to a trail network that intersects with the public right-of-way.



- Gathering areas and small plazas that contain a variety of seating and programming may be provided along trails at major nodes, at trailheads, and within linear parks.



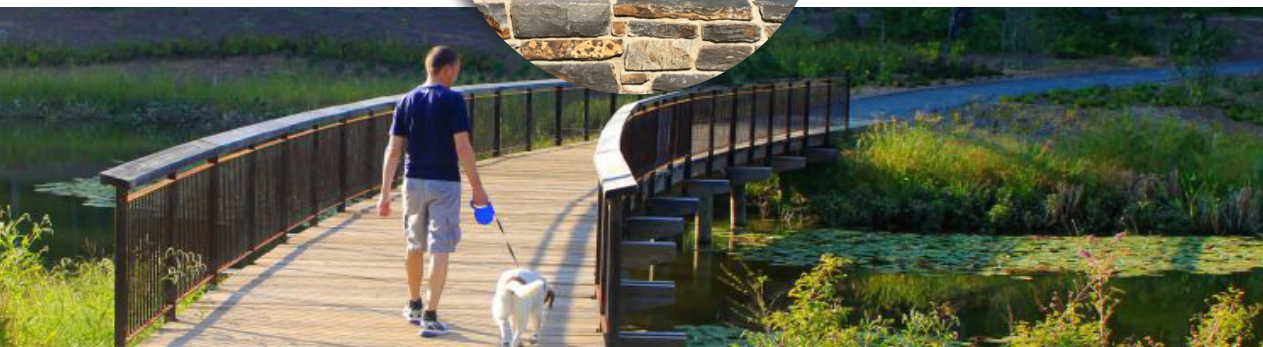
## 4.3: ACTIVE OPEN SPACES

### Stormwater Parks

Minimum requirements:

- One waste receptacle
- One seating opportunity

Stormwater and Green Stormwater Infrastructure parks can foster and enhance urban development by harmoniously combining infrastructure and recreation. Stormwater parks can be either natural or urban in nature and may contain both passive and active program elements. Stormwater facilities shall meet the requirements set forth by the North Carolina Stormwater Design Manual, but shall be designed to mimic natural environments with organic forms and a wide variety of plant species. Exploration and engagement can be encouraged with the use of walkways, gathering areas, a variety of seating options, overlooks, docks, and naturalistic planting strategies. Dedicated gathering areas shall be safely lit according to Town of Apex standards and comply with the standards set forth in Section 8. Public art or landform art can be incorporated to established nodes or points of interest and shall comply with the standards set forth in Section 7. Educational signage that highlights stormwater engineering or green stormwater infrastructure is encouraged.



▲ Trails integrated within stormwater infrastructure are encouraged.



## 4.3: ACTIVE OPEN SPACES

### Urban Parks

Minimum requirements:

- One waste receptacle
- One seating opportunity

Parks and open spaces located within urban development offer residents and visitors access to nature and green space. Urban parks can be a variety of sizes and are easily accessible, often nestled around and between urban structures and buildings. Urban parks should contain a variety of greenspaces, including lawn areas, planted areas, and garden spaces. Provide a variety of seating opportunities for large and small gatherings in both fixed and flexible conditions. Amenities such as fire pits, screens, and displays shall be oriented so as not to impact vehicular trafficways or produce light intrusion into buildings. Shade is a critical component and is encouraged to be provided via shelters, shade structures, vegetation or other methods.



▲ Urban parks may contain a combination hardscape areas, open lawn, planted areas, shade and seating opportunities.



## 4.3: ACTIVE OPEN SPACES

### Residential Parks

Minimum requirements:

- One waste receptacle
- One seating opportunity

Residential communities shall have a network of parks and open spaces that provide a variety of amenities to residents. Parks and open spaces should embrace a variety of passive and active components, with each community providing at least one common open space for active programming. Community centers, pools, playgrounds, play fields, dog parks, and community gardens are examples of active community amenities that offer opportunities to gather, play, and engage. All parks and open spaces shall be connected by a pedestrian and multi-modal transit network, such as sidewalks and trails, to allow access to open space areas without needing a vehicle. Furnishings, such as benches and waste receptacles, are required in each residential park.



➤ Open turf lawns provide opportunities for flexible play.



➤ Natural elements, such as boulders and logs, are sustainable elements found on-site that can be reused for play and increased landscape aesthetics.



## 4.3: ACTIVE OPEN SPACES

### Athletic Parks

Minimum requirements:

- One waste receptacle
- One seating opportunity
- Access to public restrooms provided within the athletic park or at a public facility within a 0.25 mile distance from the athletic park

Athletic parks are open spaces that contain facilities for sports and team-oriented recreation. Community centers, multi-purpose fields, baseball or softball diamonds, sports courts or pitches, and related infrastructure where users can assemble to engage in physical exercise, participate in sports competitions, or witness sports are encouraged. The siting and orientation of sports facilities should thoughtfully consider intended use, environmental conditions such as wind and sun, and the site's topography in order to minimize large scale impacts to natural resources. Site furnishings, such as benches and waste receptacles, are required in large gathering or viewing areas. Providing easy access to water fountains, shade, and restrooms is important for users.



▲ Tennis courts shall be in keeping with the standards of the United States Tennis Association (USTA).



▲ Softball fields shall be in keeping with the standards of the American Softball Association (ASA) Men's Slow-Pitch Open Division.



## 4.3: ACTIVE OPEN SPACES

### Dog Parks

Minimum requirements:

- One waste receptacle
- One bench

Dog parks offer dedicated open space areas for dogs to exercise and play in an off-leash, controlled, supervised environment. These park spaces can contain a variety of designed conditions including large unencumbered open spaces, naturalized forested areas, and/or urban spaces with artificial turf. Dog parks should be fully fenced and accessed via a double-gated entry and exit point. Additional controlled maintenance gates are also encouraged. Dog parks may have dedicated large and small dog areas or one large general use area. Avoid creating acute angles or spaces with fencing, landscape or structures. Shade structures and site furnishings, such as benches, agility furniture, pet waste stations, and fountains, are encouraged for the comfort of pets and their owners. At a minimum, dog parks shall have one bench and one pet waste station. Landscaped areas shall contain plant material that is low maintenance, durable, and does not pose health or safety risks to pets. Wherever possible, incorporate dog parks into the site's natural environment, such as gently sloped areas that contain high canopy trees with limited undergrowth.



➤ Artificial turf and shade structures provide comfort for pets and owners.

Wooded areas provide ➤ opportunities for shade. Naturally sloped site conditions shall not exceed 5% for dog parks.



➤ Dog parks shall have double entry gates with fencing a minimum of 5' in height. Puppy panels provide additional security for smaller dogs.



## SECTION 5

### Landscape Standards

Introduction + Intent

Public Right-of-Way Landscaping

Private Development Landscaping





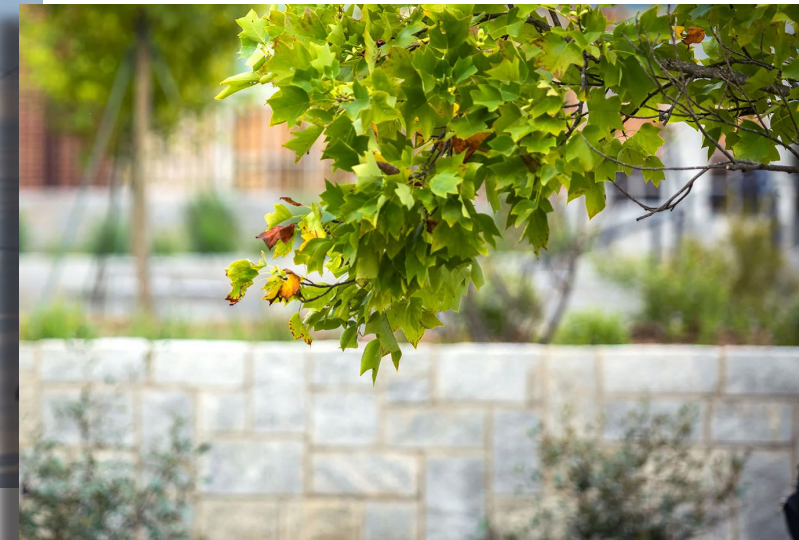
## SECTION 5.1

# INTRODUCTION + INTENT

*Veridea is committed to providing a planting design strategy that provides unity between spaces and enhances its users' experience. Consistency, repetition, scale, and texture are important components that speak to the site's character by influencing how users interpret and navigate a landscape. This section will describe planting design guidelines for landscapes within the public right-of-way and private spaces to establish a cohesive and organic landscape approach.*



\*This Pattern Book does not overrule landscape standards otherwise required by the SD Plan, the Environmental Enhancement Plan, the UDO, or any other Town of Apex standard. The key elements listed within this Section are intended to complement and provide a framework for the design approach of landscaped areas. Landscape areas within the public right-of-way that are enhanced above Town Standards may be included as part of a maintenance agreement between the Town and the Responsible Party/Developer.





## 5.1: INTRODUCTION + INTENT

### Key Elements



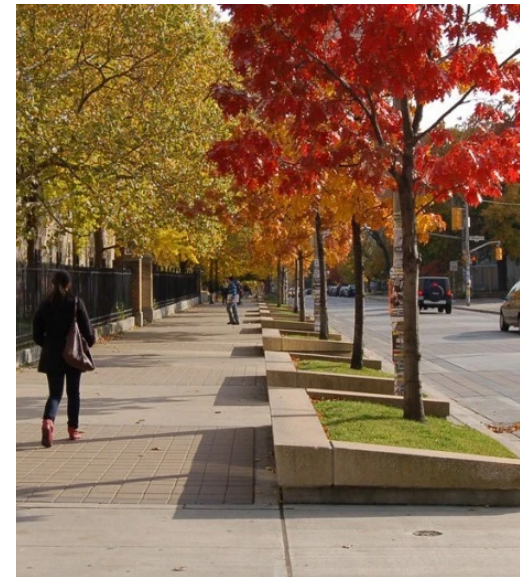
- › Provide year-round presence and a variety of textures; seasonal color is encouraged
- › For non-residential areas with a high pedestrian presence, or in areas where landscape may need additional protection, plantings to be bordered by a curb, low planter fence, and/or other type of border
- › For residential areas, a combination of shrubs, grasses, groundcover, and perennials should be utilized for enhanced aesthetics
- › A focal species, or highlight plant, may be utilized to define special areas or nodes
- › Planter pots and living walls may be used as accents. For streetside non-residential areas, planters may be utilized as a form of foundation planting
- › Native and adaptable plant species are required for assurance of landscape success. Per the Environmental Enhancement Plan and SD Plan, 80% of landscape shall be drought tolerant and consist of native or locally adaptive species. Invasive species are prohibited.
- › Species diversity is encouraged, with the intention that a singular species shall account for no more than 20% of the overall plantings provided
- › Minimum soil volume for trees to meet Town of Apex standards. Soil in landscape areas to be amended to provide healthy planting soils
- › If turf grass is provided, it should be a locally adaptive and drought-tolerant species as defined by the Environmental Enhancement Plan to limit the need for extensive irrigation
- › Practice Crime Prevention Through Environmental Design (CPTED) principles.
- › Consider horticultural zones, microclimates, temperature, moisture, soils, and other physical contexts to create landscapes complementary to the southeastern United States
- › The developer may enter into a maintenance agreement with the Town of Apex where right of way enhancements are proposed. All enhancements within the public right of way shall be privately maintained by the Veridea Owner's Associations.



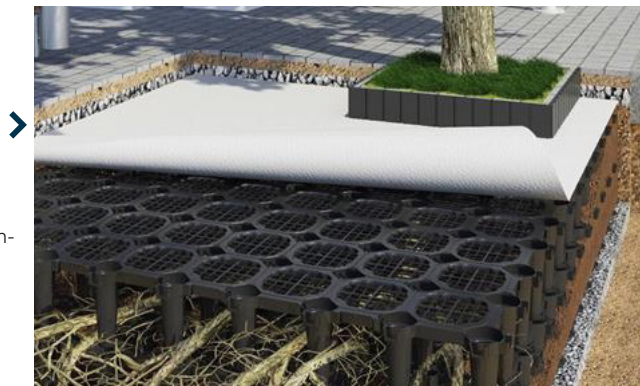
## 5.2: PUBLIC RIGHT-OF-WAY

### Street Trees

- ▶ Trees may be continuous species or alternating species, but should be grouped according to similar or complement street tree shapes as indicated in the public planting section in the SD plan. Refer to streetscape character for determining alternating or singular species and a naturalized or manicured planting arrangement.
- ▶ Street trees to be planted in site conditions that allow for healthy, sustainable growth.
- ▶ Street trees shall be located outside of the AASHTO sight distance easement. If a conflict exists or there is a desire to maintain landscape uniformity, one single stem street tree with no foliage between 2' and 6' in height at the time of planting and remains that way through maturity will be permitted within the AASHTO sight distance easement.
- ▶ Street trees shall maintain a minimum of 10' of separation from utility main lines and 5' of separation from utility service laterals and storm lines. A root barrier shall be provided where minimum separation cannot be achieved.



Ensure street trees can maintain healthy, sustainable growth by providing optimal growing conditions, such as increasing rootable soil volume through structural soil or soil containment systems where softscape area is limited.



▶ If alternating street tree species is proposed, species selection shall have similar or complementary forms and fall colors.



## 5.2: PUBLIC RIGHT-OF-WAY

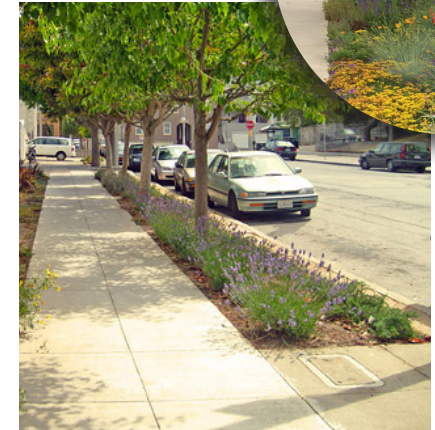
### Landscape Strip Planting

The landscape strip is the planted zone between the sidewalk or walking path and the curb and gutter. The landscape strip can be a combination of turf, shrubs, groundcover, ornamental grasses, perennials, and groundcovers - in addition to trees.

- › In a commercial- or retail-oriented streetscapes, provide a variety of shrubs, ornamental grasses, groundcovers, and perennials - in addition to trees. Plantings may be protected with curbs, 18" height planter fencing, and/or other barriers
- › Plantings shall mature to heights less than 36" to maintain visibility.
- › Stepstones integrated into plantings, such as flagstone or brick pavers, may be provided where pedestrian crossing is anticipated but no pathway is provided
- › Groundcover planting is encouraged in place of mulching
- › Adding colorful planting to highlight important intersections, such as nodes or pedestrian crossings, is encouraged
- › Turf may be utilized in residential, institutional, and campus locations. Groundcover and shrub planting is preferred in commercial and retail locations.



➤ In commercial or retail streetscapes, utilize shrubs, grasses, groundcover, and perennials where possible.



➤ Limit planting heights to 36" at maturity for clear visibility.



➤ Hedgerows may be utilized where there is clear and necessary separation of vehicles and pedestrians.



## 5.2: PUBLIC RIGHT-OF-WAY

### *Landscape Medians*

- › All planting shall be in compliance with NCDOT and Town of Apex design standards
- › Where space allows, planting shall be in a meandering style
- › A consistent open viewshed between 24" and 7' in height shall be provided for vehicular and pedestrian safety with the exception of narrow, evergreen understory trees that reach a maximum caliper size of 4"
- › Drought-tolerant species capable of withstanding hot, urban conditions shall be provided. A combination of understory trees, shrubs, ornamental grasses, groundcover, perennials, and turf provides visual interest
- › Provide locations for annual seasonal color at high impact intersections
- › Pavers may be utilized at median endcaps, pedestrian crossings, or other areas that require a hardscape application. Pavers shall be a vehicular-rated brick style in a herringbone pattern and shall be mortared to concrete
- › If reinforced turf is required, a below-grade grass reinforcement grid shall be utilized



▲ Planting form shall meander where space allows.



▲ Utilize plant massing for legibility.





## 5.3: PRIVATE DEVELOPMENT

### Private Frontages

Private frontages exist where edgelyards and sideyards are provided between building and rights-of-way, such as Common Yard, Porch, Terrace/Lightwell and Forecourts - as described in the SD plan.

- Provide a variety of understory trees, shrubs, ornamental grasses, and perennials for texture and enhanced aesthetics
- Evergreen plant material should be provided - particularly around foundations - for year-round presence and interest



➤ Provide a variety of trees, shrubs, perennials, and ornamental grasses for enhanced aesthetics.



➤ Where buildings occupy the boundaries of the lot, green walls and vertical vegetation provide visual interest.

Where buildings occupy the boundaries of a lot, such as Stoops, Shopfronts, Gallery facades, and Arcade facades (as described in the SD plan):

- A minimum of 25% of hardscape perimeters shall be planted
- Planter pots may be utilized where foundation planting cannot be achieved with in-grade landscape area, such as commercial or storefront retail
- Green walls are a unique vertical application of landscape where horizontal distance is limited

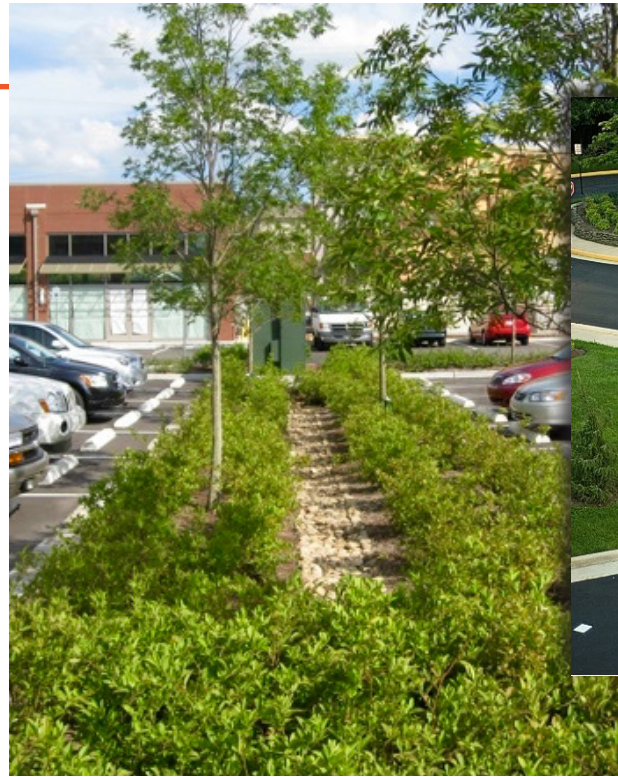




## 5.3: PRIVATE DEVELOPMENT

### Parking Lots

- ▶ Supplemental planting, in addition to required tree canopy planting, in landscape islands is encouraged. Ornamental grasses, low creeping shrubs, and groundcovers that mature under 36" are preferred. Species selected must be tolerant of drought and urban pollution
- ▶ Curb cuts, overflow areas, or other green stormwater infrastructure solutions may be provided to capture and treat stormwater



▶ Capturing and treating stormwater within landscape islands is encouraged.



▶ Capturing and treating stormwater within landscape areas is encouraged.



▶ Coverage of landscape islands with shrubs and groundcover is preferred.



## 5.3: PRIVATE DEVELOPMENT

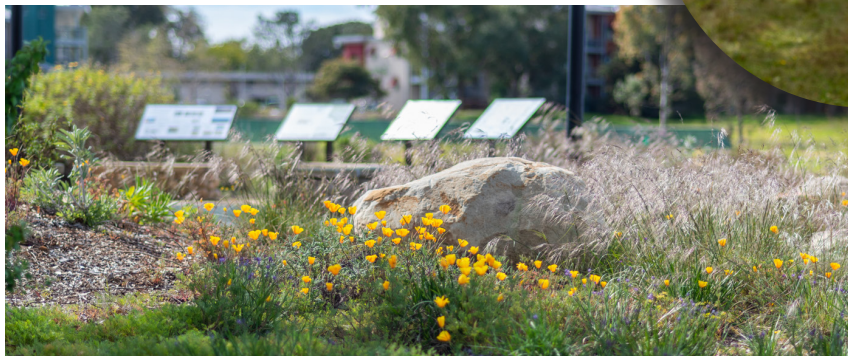
### Naturalized Areas + Meadows

Meadows and naturalized areas shall be primarily located adjacent to naturally-occurring landscapes, existing riparian buffers, or along easements. If meadows are located in an urban condition, they shall be designed to facilitate education.

- Where meadows are adjacent to pedestrian zones, provide a minimum 3' wide turf border between the pedestrian area and naturalized planting area
- Shrubs, posts, signs or other identifying features shall be provided at meadow edges to clearly indicate mowed and non-mown areas
- All educational or public-facing meadows shall follow a defined maintenance schedule.
- Non-landscape features, such as boulders, bird houses, and insect houses are encouraged for additional landscape diversity



➤ A mowed edge shall be provided between meadows and pedestrian areas.



➤ Boulders are complementary landscape elements.



➤ Meadows can be utilized for education and environmental healing in campus, educational, and residential uses. Avoid meadows in commercial and urban uses.



## 5.3: PRIVATE DEVELOPMENT

### Open Space, Parks + Trails

- ▶ Employ ecological planting techniques such as companion planting, analysis of microclimates, biodiversity, and native species selection
- ▶ Per the Environmental Enhancement Plan and SD Plan, 80% of landscape shall be drought-tolerant and consist of native and locally adaptive species. Invasive species are prohibited. Species diversity is encouraged with one species accounting for no more than 20% of the total number of plants.
- ▶ Provide intentional lawn space for recreation and active play. Separate play lawns from vehicular traffic with shrubs and other plantings
- ▶ Employ Crime Prevention Through Environmental Design (CPTED) principles, such as sight lines, natural access control, activity support, and maintenance
- ▶ Natural resources, such as boulders found on site and logs milled from felled trees, can enhance aesthetics in addition to providing natural play or art opportunities



- ▶ Separate intentional lawn gathering areas from vehicles with shrubs and pedestrian walking zones.



- ▶ Boulders and other natural elements enhance landscape aesthetics and provide art opportunities.



- ▶ Provide intentional lawn space for active recreation and play.





## 5.3: PRIVATE DEVELOPMENT

### Green Stormwater Infrastructure + Pollinator Gardens

GSI is encouraged as an approach to amenitize stormwater infrastructure. Opportunities may include rain gardens, bioretention, vegetated swales or bioswales, infiltration basins, green roofs, and tree wells.

- Utilize planting species appropriate for stormwater conditions. Refer to the NCDEQ stormwater manual for species suggestions
- Where bioretention infrastructure is adjacent to pedestrian walking zones, ensure that the depth of bioretention does not exceed 24" to avoid fall concerns



- GSI integrated into streetscapes and parking areas is encouraged.

Certified Pollinator Gardens should follow the National Wildlife Federation standards:

- Pollinator gardens shall meet the minimum requirements set by NWF
- Pollinator gardens can be certified and approved by NWF. Signage for certified gardens may be displayed



- Educational signage for pollinator gardens and stormwater infrastructure is encouraged.



## SECTION 6

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### Site Amenities

Introduction  
Hardscapes  
Site Furnishings  
Program Amenities





## SECTION 6.1

# INTRODUCTION

*The implementation of a wide range of site amenities will aid in creating an impactful user experience. Features detailed in this section, such as enhanced paving materials, seating, and shade structures, should be included in a thoughtful and purposeful manner. In order to distinguish the visual and functional aesthetic of Veridea, site furnishing selections can be unique to each designed space depending on program and intended use. However, when contemplating Veridea holistically, furnishing styles and colors should articulate a coherent design language that reverberates throughout the development.*



Site amenities can be categorized as hardscapes, furnishings, architectural features, or amenity elements and may include:

- › Walking surfaces
- › Walls
- › Seating
- › Bollards
- › Planters
- › Fencing
- › Bike Racks
- › Shade structures
- › Program amenities

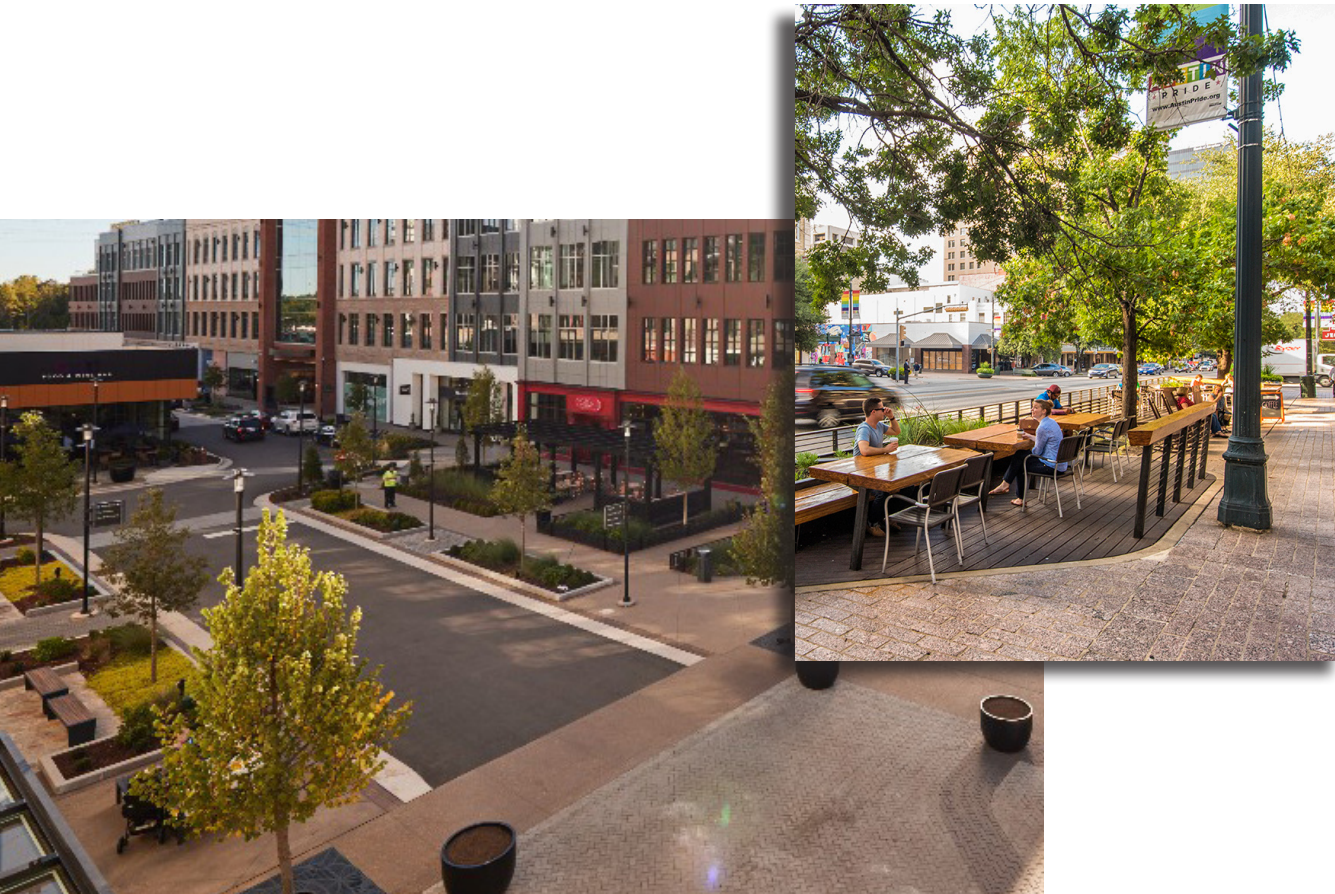
The pictures, illustrations, and descriptions included are contextual examples of the high quality materials and design envisioned for the project. Materials, hardscape, and landscape components depicted herein are not intended to be an exclusive or exhaustive list to be required in every design or construction. Instead, these elements are intended to convey acceptable design approaches that promote variability, high quality, and sustainably-focused development in order to foster a unique sense of place.



## SECTION 6.2

# HARDSCAPES

*A wide variety of hardscape materials should be utilized to create an aesthetic entirely unique to Veridea. These hardscape materials should include a range of finishes that are both manufactured and naturally occurring. Enhanced paving materials should be utilized strategically to complement standard finishes, reinforce the importance of certain pedestrian nodes, and amplify the overall design aesthetic. Enhanced hardscape materials should be used where necessary to facilitate a safe and legible pedestrian experience.*



Key elements include:

- › Multiple materials colors, textures, and patterns to create a dynamic visual experience.
- › Changes in material and color can be utilized to highlight and define spaces.
- › Decorative crosswalks and pedestrian corridors
- › Raised curbing around planters.
- › A variety of site and retaining wall types.
- › Use of locally-sourced materials.
- › Use of recycled or sustainably-sourced materials.
- › Use of standard sizes to limit construction waste, maximize efficiency and reduce offcuts.



## 6.2: HARDSCAPES

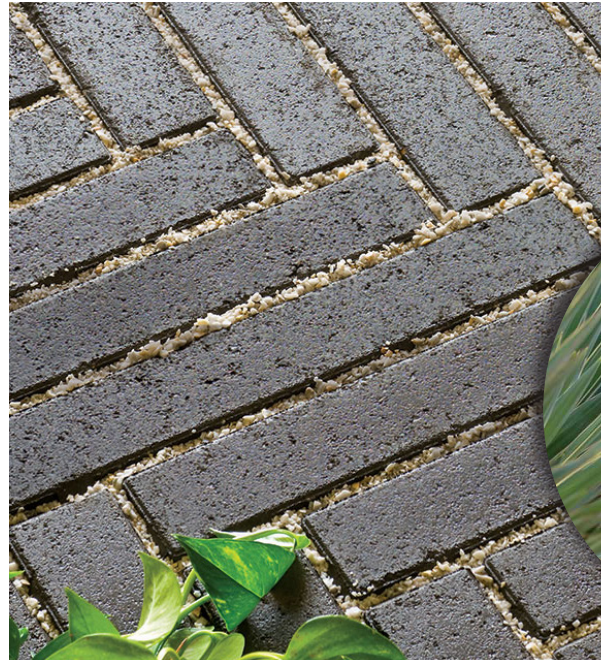
### Enhanced Paving + Surfaces

Hardscape enhancements may include, but are not limited to, the following:

- › Concrete applications - decorative scoring patterns, broom finish, sandblasted, integral color, exposed aggregate, stamped
- › Pavers - brick pavers, permeable pavers, precast pavers
- › Natural Stone - flagstone, bluestone, granite cobble, granite screenings, stone mulch
- › Tree grates - metal or iron with decorative designs
- › Wood decking
- › Decorative thermoplastic applications



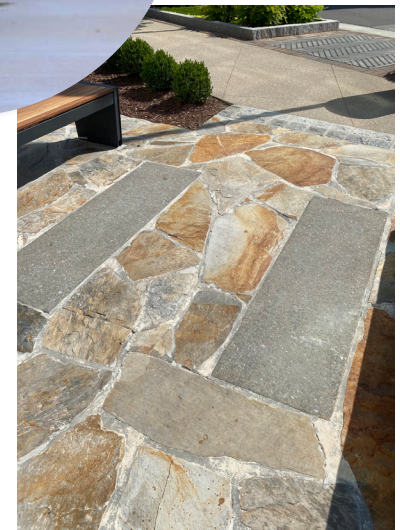
- › Natural wood decking allows for additional water infiltration for canopy trees. Wood shall be FSC certified.



- › Permeable pavers in decorative herringbone pattern.



- › Stamped concrete may contain integral color with a release agent for additional color depth. Exposed aggregate may contain integral color.



- › Natural pavers shall be sourced locally when possible.



## 6.2: HARDSCAPES

### Walls + Curbs

Materials may include, but are not limited to, the following:

- › Curbs - cast-in-place concrete, precast concrete, granite, upturned brick
- › Freestanding site walls - precast concrete, masonry, granite block
- › Retaining site walls - decorative segmental block, cast-in-place with precast veneer, masonry, gabion
- › Elements that retain soil or are otherwise directly exposed to soil runoff shall contain brown and tan tones to reduce visual staining effect of the natural clay soils



^ Granite seat block with split face sides and smooth top. May include mounted seating.



^ Precast concrete planter curb.

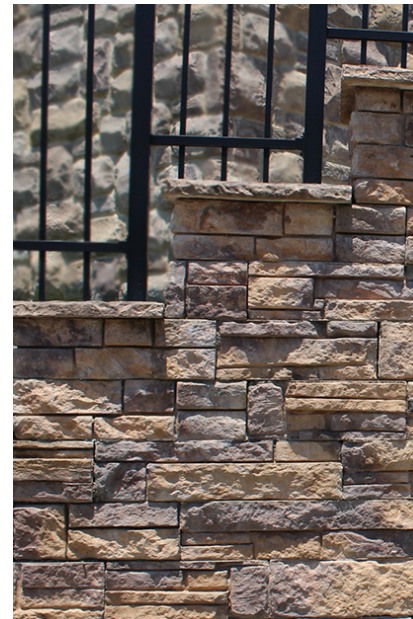


^ Granite planter curbs shall have split face sides.

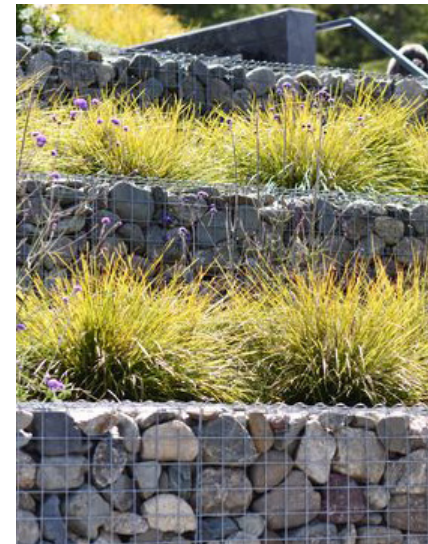
Segmental retaining walls with lower visibility shall contain multiple sizes of block and a provide a natural variation in color. >



^ Site and seat walls with a stone or wood veneer provide a more naturalistic appearance.



^ Segmental retaining walls with high visibility should have a decorative, natural stone appearance and coloring.



^ Gabion walls shall use large sized, brown and tan toned, smoothed aggregate. Use of gabion walls subject to the approval of the Town of Apex.



## SECTION 6.3

# SITE FURNISHINGS

Courtyards, park spaces, retail patios, linear parks, streetscapes and informal seating areas will utilize an array of site furnishings that meet Veridea's branding standard. The furnishings included in the design program will exemplify a modern and refined aesthetic while providing critical detail and functionality to the wide range of programmed spaces throughout the site. Furnishings that are locally-sourced and use recycled materials or sustainable wood products are encouraged to promote a sustainable future.



Furnishings may include:

- › Seating
- › Screening elements
- › Bollards
- › Waste receptacles
- › Planters
- › Bicycle racks
- › Fencing
- › Shade structures

The guidelines provided in this section are intended to encourage aesthetic and functional consistency as Veridea is developed over time. Park facilities that are owned and operated by the Town of Apex are encouraged to follow the guidelines provided in this Section but are permitted to follow standard Town furnishings.

◀ Swings integrated into overhead structures is a furnishing that can be enjoyed by all age groups.



▲ Furnishings shall have a modern aesthetic with clean lines.

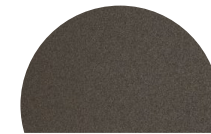
Permitted colors for fixed elements:  
Forms + Surfaces Standard Colors      Anova Furnishings Standard Colors



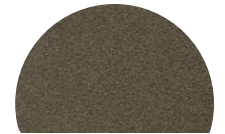
INK BLUE



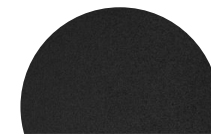
CHARCOAL



DARK CORTEN



BRONZE



BLACK



BLACK



CUMARU



CEDAR



## 6.3: SITE FURNISHINGS

### Fixed + Flexible Seating

Providing comfortable, convenient, and safe seating areas for pedestrians is crucial to the overall design of Veridea. By providing simple and refined areas of rest, users will naturally feel more comfortable exploring the many elements of the site. Seating fixtures and product selections should complement and work in harmony with the adjacent hardscape and landscape treatments. Seating that is locally-sourced and uses recycled materials or sustainable wood products is encouraged.

Fixed and flexible seating opportunities can include, but are not limited to, the following examples:

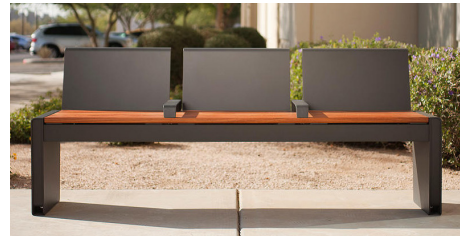
- Seat walls
- Benches
- Seating mounted to site walls
- Tree wrap or planter wrap benches
- Non-permanently mounted or movable furniture including tables and chairs, bar stools, and active seating



➤ Benches mounted to seat walls shall be backed.



➤ Providing inclusive seating and adjacent space for ADA access is encouraged



➤ Seating should have modern aesthetics with clean lines. Veridea's standard bench is the Vector product family by Forms + Surfaces and the Madison Bench by Anova Furnishings. Alternative bench products that have modern aesthetics and clean lines may be approved.



➤ Flexible seating, such as Adirondack chairs, provide opportunity for pops of color. Colors shall comply with Veridea standard branded colors.



➤ Precast seat walls shall contain lipped edges for comfortable seating. Anti-skateboarding measures may be applied if appropriate.



➤ Town owned and operated facilities are encouraged to comply with the Veridea standard but "... are permitted to utilize the Town standard site furnishing such as the Rendezvous Series bench by Anova.



## 6.3: SITE FURNISHINGS

### *Bollards, Planters, + Landscape Features*

Bollards, structurally set boulders, or stand-alone planters should be utilized to create a visually appealing design aesthetic while providing safe separation between pedestrians, bicyclists, and vehicles. Bollards shall be vehicular-rated with modern aesthetics. Planters may be located strategically to facilitate vehicular and pedestrian movement. Planters should have seasonal plant selections to create year-round interest throughout the site. Boulders may be integrated into the hardscape to buffer, separate spaces, or provide an alternative vehicular barrier.



▲ Bollards may incorporate lighting.



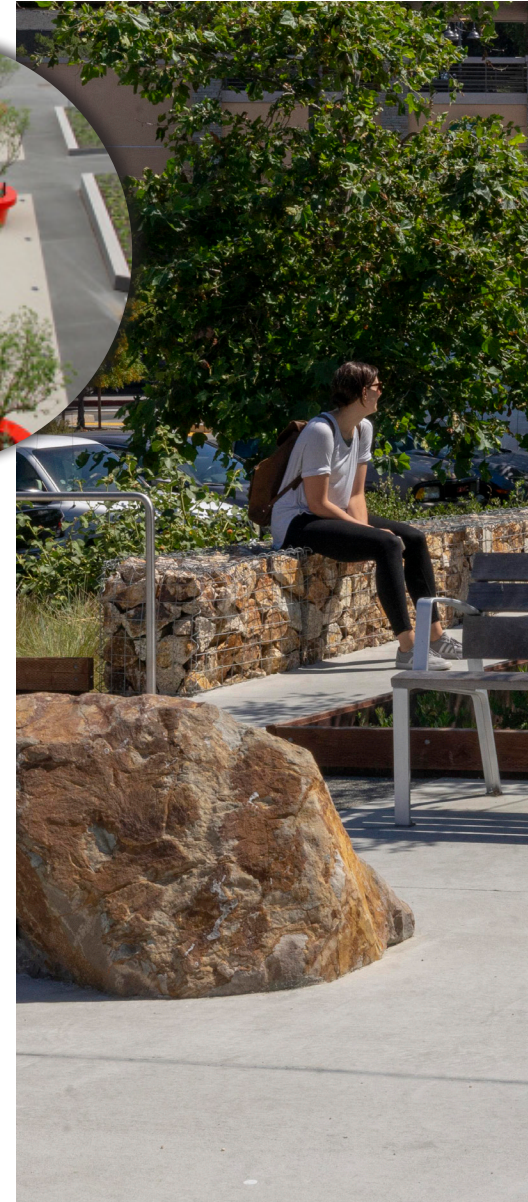
▲ It is recommended that retail and restaurant dining patios are enclosed by a combination of planters and fencing.



▲ Bollards may be wood or have a wood-like appearance. All wood shall be FSC certified.



▲ Seating integrated within planters is encouraged.



▲ Boulders can be used to buffer or separate spaces.



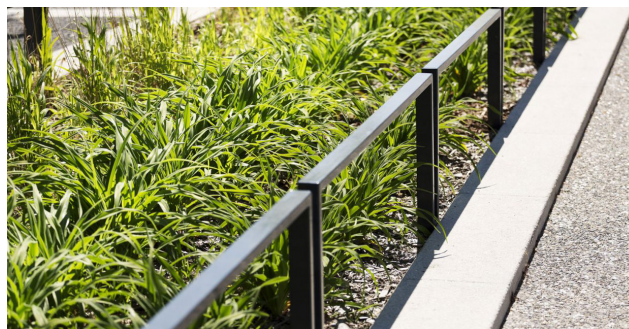
## 6.3: SITE FURNISHINGS

### Fencing + Screening

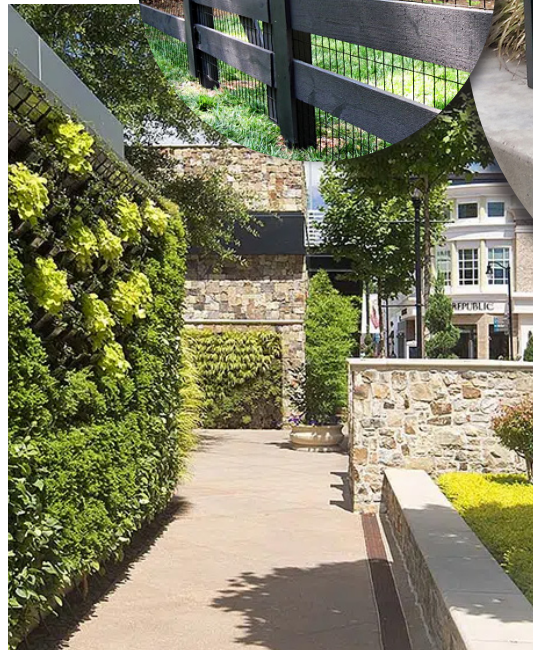
A variety of unique and modern fencing and screening styles should be utilized to provide visual interest. Powdercoat aluminum, iron, and wood combined with masonry are complementary materials that can be sourced locally.

Planter fencing selections should be a modern style, visually appealing, provide safety for pedestrians, and prevent damage to planted areas where applicable. Planter fencing selections should include a variety of styles/products, but should work harmoniously together from a visual perspective.

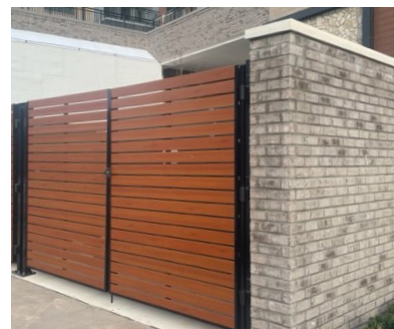
Standard site fencing, such as fall protection fencing, should be commercial-grade aluminum picket or a similar design aesthetic. Panel inserts - used to make picket openings more narrow - is encouraged where an additional level of safety is required. Alternative decorative fencing, such as at dog parks, playgrounds or amenity spaces, may be split-rail fencing painted black.



▲ Planter fencing shall be decorative, black and a maximum of 18" in height.



▲ Vegetated green walls shall contain integrated irrigation.



▲ Screen walls and enclosures shall be a decorative stone or brick masonry. Gates shall be wood or aluminum.



▲ Veridea's standard planter fence is the Proto Fence by Ironage. Alternative products that have modern aesthetics and clean lines may be approved. Metal components shall be black.

Utilitarian site elements, such as trash enclosures and mechanical equipment, should be screened with a combination of decorative screen walls, decorative gates, and landscaping. Per the SD Plan and Town UDO use of multiple materials provides visual interest.

Vegetated screens and walls are an innovative vertical application of landscape that can be used as a screening opportunity.



## 6.3: SITE FURNISHINGS

### Waste Receptacles

Waste and recycling receptacles should be of a modern approach that is visually appealing and complementary to other furnishing selections throughout the site. Special care should be given to where and how these are located and how they function given programming and level of user activity. Waste receptacles should be conveniently located but should not present a visual, physical, or odor impediment.

A variety of waste receptacles should be provided throughout Veridea:

- › Trash receptacles
- › Recycling receptacles
- › Pet waste receptacles
- › Composting opportunities with applicable maintenance programs

Waste receptacles that include both trash and recycling containment are encouraged. Where appropriate, composting centers provide a unique and sustainable option for disposing of food waste. Large scale waste containers, such as dumpsters, shall be fully screened with masonry walls, gates, and landscape per the Town of Apex UDO and the SD Plan.



▲ Town owned and operated facilities are encouraged to comply with the Veridea standard but are permitted to utilize the Town standard site furnishing such as the Rendezvous Series bench by Anova.

- ◀ Waste receptacles shall contain both trash and recycling options and include a rain bonnet. Veridea's standard waste receptacle are the Tonyo family by Forms + Surfaces and the Madison series with visor hood by Anova Furnishings. Alternative products that have modern aesthetics and clean lines may be approved.



- ◀ Pet waste stations shall contain bags and a trash receptacle and shall be in the color black.



- ▲ Compost locations shall be located in communal areas or dedicated community garden spaces. Avoid compost stations near to residential homes.



## 6.3: SITE FURNISHINGS

### *Bicycle Racks*

Bicycle racks are essential to all pedestrian and multi-modal focused developments. Bicycle rack selections should complement other furnishing selections and should be placed as needed throughout the site. Areas of heavy pedestrian activity, park and open space areas, pedestrian nodes, residential communities, and commercial nodes should be equipped with adequate bicycle parking to facilitate and encourage bicycle use throughout Veridea. Trailheads to large greenways dedicated to both pedestrians and cyclists are prime locations for bicycle stations that include repair stations with both short- and long-term bicycle storage.



- ^ Bike racks shall have modern, aesthetic designs. Veridea's standard bicycle racks are the Bay City Bike Rack by Forms + Surfaces and the Tandem Bike Rack by Anova Furnishings. Alternative products that have modern aesthetics and clean lines may be approved. >



Bike racks may be colored to match Veridea branding colors. >



- ^ Bicycle storage lockers shall have modern aesthetic. >





## 6.3: SITE FURNISHINGS

### Shade Structures

A variety of shade-creating features should be implemented as needed throughout Veridea in order to facilitate a comfortable environment for various programmed spaces. Formal structures can be utilized where practicable, while less formal shade sails and umbrellas can be utilized in tandem with flexible tables and chairs to create more a desirable user experience. The design, shape, and materials of shade structures should be complementary to adjacent structures and may include metal, aluminum, or wood.



▲ Shelters provide a space for large-scale community gathering. Where shelters have the opportunity to be used as a stage - upfit with convenience outlets. Speakers, audio/visual connections, and integrated pull-down projector screens provide additional opportunities for use.



▲ Shade structures may be trellises with open slats or fully roofs. Bioclimactic ceilings, ceiling fans, convenience outlets, and comfortable furnishings all contribute to the structure's aesthetic and utility.





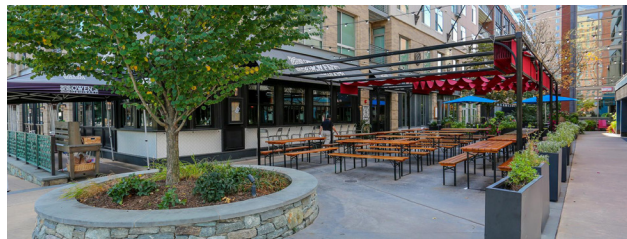
## SECTION 6.4

# PROGRAM AMENITIES

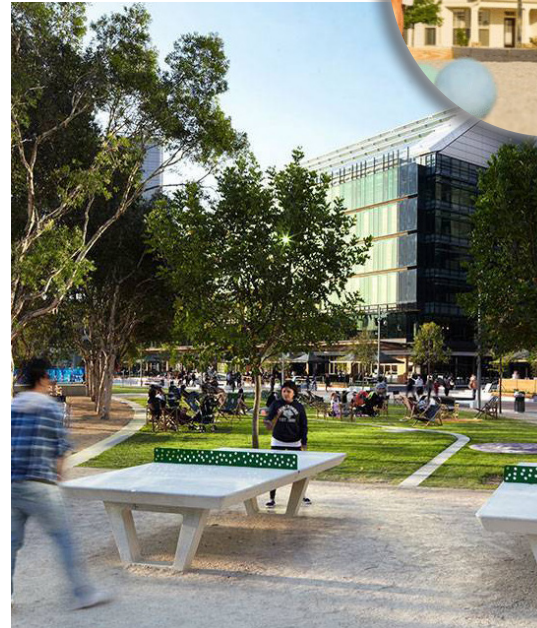
Additional miscellaneous components of site design can be included to enhance the overall aesthetic of Veridea. Products like fire pits and outdoor games will enrich the user experience through both active and passive means of interaction and community-building. Additionally, retail patio spaces with seating, planters, and enhanced hardscape elements will aid in creating both functionality and memorable experiences throughout Veridea. These program amenities shall be limited to private property and not included as part of the public right-of-way.

Programmed amenity elements may include:

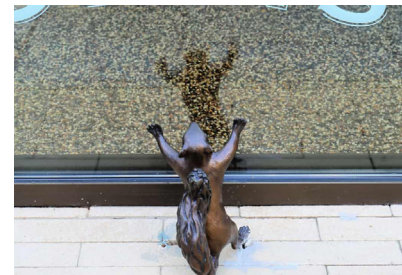
- Fire pits, fire tables
- Outdoor televisions
- Retail patio spaces with seating, planters, and dedicated hardscapes
- Outdoor games such as chess tables, cornhole, ping pong, and shuffleboard
- Water bottle fillers
- Sculptures and public art



- Dedicated outdoor dining spaces shall be enclosed with raised planters and fencing where possible.



- Gaming tables shall be surface-mounted. Storage for gaming components is encouraged.



- Sculptures, artwork, and murals are opportunities for placemaking. Geocaching, "find the sculpture," or other scavenger hunt games are encouraged throughout communities.



- Where connected to natural gas or propane, fire pits shall contain timers and emergency shut-offs.



- Outdoor televisions shall be located a minimum of 25' from the public right-of-way and screens shall be oriented away from vehicular traffic



## SECTION 6.5

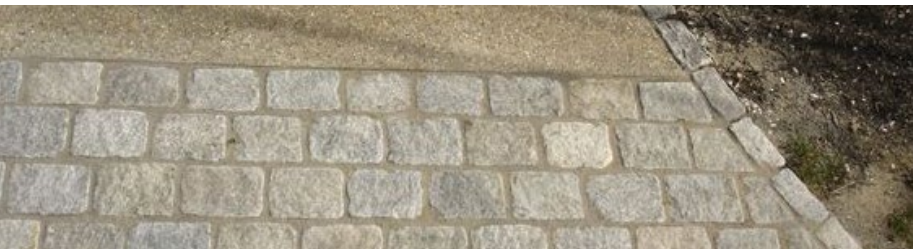
### Bus Stops

Bus stops shall be provided throughout Veridea to connect residents and users to various locations within Veridea and also to adjoining communities and destinations. Bus stops and associated furnishings shall be installed by the developer prior to the 2,000<sup>th</sup> dwelling building permit. In the event the Town has not approved funding for a bus route to serve Veridea by the 2,000<sup>th</sup> dwelling building permit, the developer may provide a fee-in-lieu to the Town for the Town standard bus stop at that time.

Each bus stop shall include the following:

- › A bus stop pad with a minimum size of 10'x30'
- › Bus stop pads shall be a standard broom finish concrete bordered with a granite cobble or brick paver band
- › One waste receptacle
- › One bench or seating opportunity
- › 2 bicycle racks
- › 1 shade structure with a roof and sheltered on a minimum of 1 side

Seating opportunities may be integrated into the shade structure or installed as surface mounted fixtures. Furnishings provided are required to match the Veridea standard, see pages 54, 57, and 58. Furnishings within the public right of way or public transit easement that differ from the Town Standard must be included as part of a maintenance agreement between the Town and the Responsible Party.



- ▲ The base shade structure is the 10' Signa Sunset-60 by Tolar Manufacturing. Features include a welded roof structure, rear and end wall panels, and integrated LED solar security lighting

Public art, provided by either the Town or the Responsible Party, may be incorporated into the bus stop or within 15' of the bus stop. Art may include, but is not limited to, three-dimensional art, sidewalk art or decorative shelter wraps.

Supplemental lighting in the form of pedestrian-scale area lights, bollard lights, or path lights may be provided. Lighting must meet standards set forth in Section 8.



COBALT BLUE

BLACK

- ▲ The standard colors are Cobalt Blue for the framework and Black for the roof.



- ◀ Public art may be provided at bus stops as an opportunity to engage the public. All public art designs must be approved by the Town and the Responsible Party prior to installation.



## SECTION 7

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### Signage

Introduction  
Master Signage Plan  
Modifications





## SECTION 7.1

# INTRODUCTION

*Veridea aims to maintain a unique brand identity while staying compliant with local regulations and jurisdictional guidelines. This section of the Pattern Book identifies modifications to the Town of Apex signage requirements as outlined in Chapter 8 of the Town's UDO, carefully tailored to strike the perfect balance between adherence to Town requirements and commitment to exceptional design.*





## 7.1: INTRODUCTION

### Key Goals



Veridea's key goals for site signage include:

- › **Brand Integration:** We propose incorporating the Veridea brand's unique visual elements into the signage. By infusing the brand colors, typography, and logo, Veridea will have a consistent and memorable brand experience, bolstering recognition and leaving a lasting impression.
- › **Signage Flexibility:** Recognizing that different sites and locations may have varying requirements, introducing a degree of flexibility into signage design allows for adaptations that complement specific architectural nuances of each site, ensuring a harmonious blend with the surroundings while adhering to the essential guidelines.
- › **Sustainability Initiatives:** Veridea advocates for sustainability initiatives into signage designs, aligning with commitment to eco-conscious practices. By utilizing environmentally friendly materials and energy-efficiency lighting options, Veridea will contribute positively to the community and bolster the development's reputation as an environmentally responsible entity.
- › **Digital and Interactive Elements:** Incorporating digital and interactive elements into Veridea's site signage can enhance engagement and elevate the overall user experience. Introducing touch-screen displays or QR codes for more information can offer visitors valuable insights and foster a stronger connection to the site.
- › **Universal Accessibility:** To ensure inclusivity, incorporating features that enhance accessibility for all individuals is encouraged. This may involve integrating Braille, clear pictograms, and ensuring appropriate font sizes to facilitate readability for those with visual impairments.
- › **Artistic Expression:** The integration of artistic expression is encouraged. By collaborating with local artists or incorporating unique architecture features, signage can be captivating and culturally significant.
- › **Safety Considerations:** Signage modifications will prioritize clear visibility, optimal placement for wayfinding and legible instructions to ensure the well-being of all visitors.



## SECTION 7.2

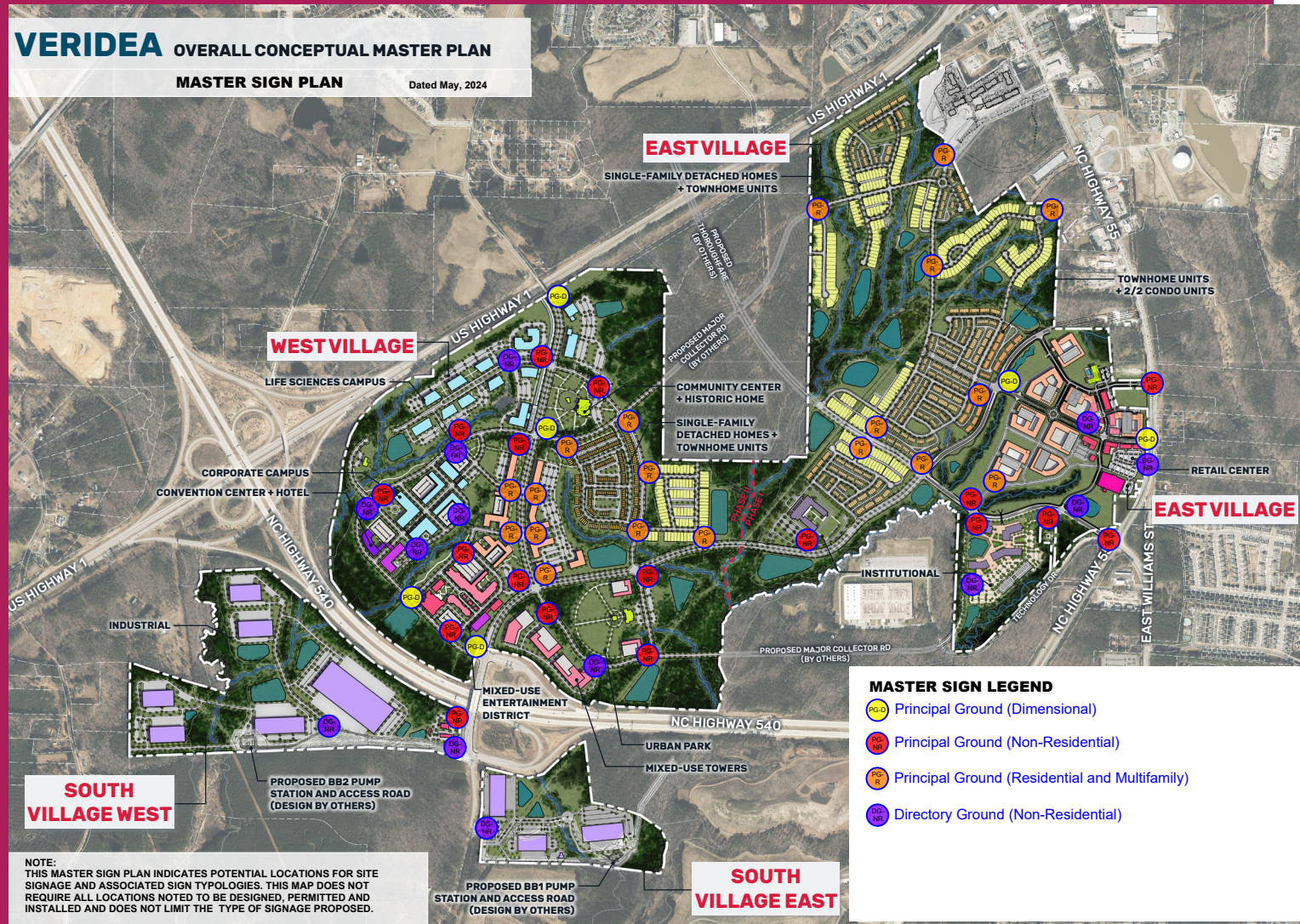
# MASTER SIGNAGE PLAN

The Master Sign Plan is intended to provide a comprehensive and strategic blueprint for the effective and cohesive implementation of ground monumentation signage within Veridea. It serves as a guiding document that outlines the overall vision, design guidelines, and specifications for all signage elements to ensure consistency, brand identity, and functional clarity.

The Master Sign Plan identifies ground signage only. Additional signage, such as building-mounted signage traffic control devices, digital directories and trail markers, can be further defined on the project level.

Standards for other types of signs, such as wall and building signs, are further defined in this Section. Refer to Sections 7.2 and 7.3 for definitions, example imagery and allowable modifications.

This map indicates signage opportunities as determined at the time of this publication and is for reference only. ➤





## 7.2: MASTER SIGNAGE PLAN

### Principal Ground (Dimensional)

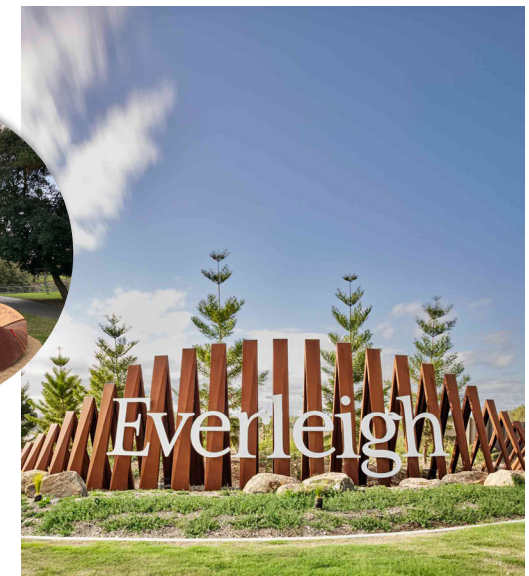
- A sign type specific to Veridea and is not a standard Town of Apex sign typology.
- Defined as a sign supported permanently upon the ground by a continuous base or two or more support features, not attached to any building, that includes a three-dimensional or artistic element.
- Intended to be visible and experienced by both vehicles and pedestrians as an artistic approach to placemaking and signage.
- Signage may be integrated into the three-dimensional element or adjacent to, but no further than 10 feet from, the three-dimensional element.



⬆ Lighting may be incorporated. See Section 08.



⬆ Signage may be integrated or adjacent to the dimensional art element



⬆ Use of structure and material selection to mimic natural landscapes and forms



## 7.2: MASTER SIGNAGE PLAN

### Principal Ground (Non-residential, residential, multifamily)

- ▶ Per the Town UDO Definition: A sign supported permanently upon the ground by a continuous base or two (2) or more supported posts at the outside edge, not attached to any building.
- ▶ Applies to non-residential, residential and multifamily uses.



Mounted to retaining wall ➤



↗ Use of multiple levels and layers



↗ Use of natural materials, such as stone and wood



↗ Freestanding letters



## 7.2: MASTER SIGNAGE PLAN

### Directory Ground (Non-Residential, Multifamily)

- ▶ Per the Town UDO Definition: A ground sign with a continuous base for a building or development that is intended to support wayfinding.
- ▶ Applies to non-residential and multifamily uses.

If digital signage is provided, it shall meet the following:

- ▶ Digital signage cannot face the public right of way.
- ▶ The display area of the sign shall remain static for at least 30 seconds unless a person is actively using any interactive features of the display area.
- ▶ Digital signs shall be equipped with automatic dimming technology that adjusts the sign's brightness in direct correlation with natural ambient light conditions.
- ▶ The brightness shall not exceed six (6) footcandles from dusk to dawn when measured one (1) foot from the center of the display area.



Use of natural materials and layers



Utilization of height for visibility



Integration of art





## 7.2: MASTER SIGNAGE PLAN

### Wall Sign

- › Per the Town UDO Definition: A sign attached parallel to a wall, professionally painted on the wall surface or erected and confined within the limits of an outside wall of any building or structure, which is supported by such wall or building.
- › Applies to non-residential uses.



↗ Projection from building face



↗ Back lit box lettering



↗ Side mounted to building wall

↖ Painted wall mural signage



## SECTION 7.3

# MODIFICATIONS: PERMANENT SIGNS

Sign Type (Permanent)	Definition (Abbreviated definition provided, refer to Town of Apex UDO for full definition and requirements.)	Modification Request (If no modification provided, follow the Town of Apex UDO)
Awning	A material such as fabric, metal, flexible plastic, or vinyl that is supported by or attached to a frame and that extends from the exterior wall of a building without ground-mounted support	No modifications.
Home Occupation	Advertising home occupations permitted only where a home occupation has been approved	No modifications.
Building Marker	A plaque, plate or seal placed on a building to signify origin	Quantity - Maximum 1 per building facade, not to exceed 2 per building Sign Area - Maximum 4 square feet
Directory (Building)	A wall sign mounted to a building for the purpose of wayfinding or navigation.	Quantity - 1 per building entrance, not to exceed 3 per building Sign area - Maximum 6 square feet Material - Digital permitted. Refer to digital standards on page 68.
Directory (Ground) - Non-residential	A ground sign with a continuous base less than two (2) feet in height for the purpose of wayfinding, navigation or directional information.	Maximum height - 8 feet Maximum base height - 4 feet Maximum sign area - 10 square feet Material - Digital permitted. Refer to digital standards on page 68.
Directory (Ground) - Residential (multifamily)	A ground sign with a continuous base less than two (2) feet in height for the purpose of wayfinding, navigation or directional information.	Maximum height - 6 feet Maximum base height - 4 feet Maximum sign area - 10 square feet Material - Digital permitted. Refer to digital standards on page 68.
Flags	A fabric, usually rectangular or triangular in shape, designed to be flown from a flag pole	No modifications.
Gasoline Sales	A service station sign advertising fuel prices in accordance with North Carolina General Statutes	No modifications.
Governmental	A temporary or permanent sign erected and maintained by or required by the city, county, state or federal government	No modifications.
Health/Hospital	Permanent signs erected and maintained by an Ambulatory Healthcare Facility with Emergency Department or a Hospital	No modifications.
Incidental	A sign, generally informational, that is directory as to the use of the subject property on which it is located.	No modifications.
Marquee	A theater wall sign designed to have changeable copy	Digital theatre marquee signs permitted. A singular image must be static for a minimum of 30 seconds. Digital cannot face the public right of way.
Menu Board	An accessory sign providing associated with a drive-through window or walk-up window	No modifications.

^ This table indicates signage typologies identified in the Town of Apex UDO and associated modifications allowed within the limits of Veridea. The Town of Apex UDO shall apply to any standard or sign typology not listed. Any revisions to modifications, up to a 10% deviation from listed, must be approved by the Planning Director. Any revisions to modifications that exceed a 10% deviation are subject to a revision to the Pattern Book and approval by Town Council.

^ Signage less than 1 square foot located on permanent site elements other than buildings is exempt from sign standards.



## SECTION 7.3

# MODIFICATIONS: PERMANENT SIGNS

Sign Type (Permanent)	Definition (Abbreviated definition provided, refer to Town of Apex UDO for full definition and requirements.)	Modification Request (If no modification provided, follow the Town of Apex UDO)
Parapet Building Sign	A sign extending above the parapet or placed on a roof surface	Permitted only within non-residential districts of Veridea. Quantity - 1 per commercial district Maximum height - 15 feet Sign area - Maximum 80 square feet
Principal Ground (Dimensional)  *Non-standard sign type*	A sign supported permanently upon the ground by a continuous base or two or more support features, not attached to any building, that includes a three-dimensional or artistic element.	Permitted only within non-residential districts of Veridea. Quantity - 1 per major full service vehicular intersection Maximum height - 15 feet Maximum sign area - 50 square feet Three dimension or artistic element excluded from sign area calculation. Not permitted within landscape medians. Must be located within 30 feet of the public right of way.
Principal Ground (Non-residential)	A sign supported permanently upon the ground by a continuous base or two (2) or more support posts at the outside edge, not attached to any building	Quantity - 2 permitted at each full service vehicular entrance Height - maximum 8 feet on major collector or thoroughfare roads; maximum 6 feet on local streets Sign area - maximum 50 square feet on major collector or thoroughfare roads; maximum 30 square feet on local streets May be located on a retaining wall that does not exceed 10 feet in height
Principal Ground (Residential and Multifamily)	A sign supported permanently upon the ground by a continuous base or two (2) or more support posts at the outside edge, not attached to any building	Quantity - 2 permitted at each full service vehicular entrance Height - maximum 8 feet on major collector or thoroughfare roads; maximum 6 feet on local streets Sign area - maximum 50 square feet on major collector or thoroughfare roads; 30 square feet on local streets May be located on a retaining wall that does not exceed 10 feet in height
Projecting Sign	A sign affixed to a building or wall in such a manner that its leading edge extends more than 12 inches beyond the surface of said building or wall.	No modifications.
Suspended	A sign that is suspended from the underside of a horizontal plane surface and is supported by such surface	No modifications.
Wall	A sign attached parallel to a wall, professionally painted on the wall surface or erected and confined within the limits of an outside wall of any building or structure, which is supported by such wall or building	No modifications.
Interior Sign	A ground or sign located adjacent to parking spaces that is directory as to the use of the parking area.	No modifications.

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^ Signage less than 1 square foot located on permanent site elements other than buildings is exempt from sign standards.



## SECTION 7.3

# MODIFICATIONS: TEMPORARY SIGNS

Sign Type (Temporary)	Definition (Abbreviated definition provided, refer to Town of Apex UDO for full definition and requirements.)	Modification Request (If no modification provided, follow the Town of Apex UDO)
On-premise, non-commercial temporary signs	A temporary sign with non-commercial messaging that is not associated with an event not located on residential property	No modifications.
Banners  *Non standard sign type*	A lightweight sign that is temporarily installed on a streetlight in the public right-of-way for decorative or informational purposes	Quantity - 1 per streetlight pole Size - Maximum 24 inches wide by 60 inches height Maximum Sign Area - 10 square feet Changeable when desired and allowed year-round.
Construction Sites	An on-premise, freestanding temporary sign erected during the construction of a development project	No modifications.
Event (Commercial)	Temporary on-premise signs erected during commercial events	No modifications.
Event (Non- commercial)	Temporary on-premise signs erected during non-commercial events	No modifications.
Sandwich Board Sign	Consisting of two panels joined together at the top and configured into the shape of an inverted "V" so that the bottom of the sign rests upon the ground	No modifications.
Seasonal Outdoor Sales	Outdoor temporary signs not located on a farm permitted with a temporary use permit allowing seasonal outdoor sales	No modifications.
Window	Any sign that is placed on the outside or inside of a window or door and is visible from the exterior	No modifications.

^ This table indicates signage typologies identified in the Town of Apex UDO and associated modifications allowed within the limits of Veridea. The Town of Apex UDO shall apply to any standard or sign typology not listed. Any revisions to modifications, up to a 10% deviation from listed, must be approved by the Planning Director. Any revisions to modifications that exceed a 10% deviation are subject to a revision to the Pattern Book and approval by Town Council.

^ Signage less than 1 square foot located on permanent site elements other than buildings is exempt from sign standards.



## SECTION 8

### Lighting

Introduction  
Site Lighting





## SECTION 8.1

# INTRODUCTION

*Street and landscape lighting is an important component for not only safety but also aids in orientation, highlights the identity of an area, and creates a sense of drama. Veridea is committed to providing a site lighting strategy that is complementary to each street's character and creates a delightful sense of place during evening hours.*



Site lighting shall comply with the following:

- › Incorporate the latest energy-efficiency technology for directing light, reducing glare and limiting light pollution.
- › Street fixture shall be consistent for entire roadway lengths.
- › This Pattern Book does not overrule lighting standards otherwise required by the Town of Apex UDO, the SD Plan or the Environmental Enhancement Plan. The key elements listed within this Section are intended to complement and provide framework for the design approach of site lighting. Lighting that is an alternative from the Town standard located within the public right of way may be included as part of a maintenance agreement between the Town and the Responsible Person/ Developer.





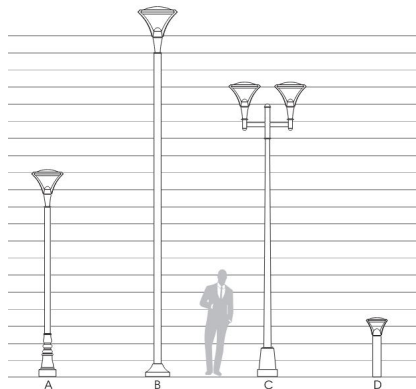
## 8.3: SITE LIGHTING

### Streetscape Lighting

Streetscape and roadway lighting within the public right of way shall follow the Town of Apex UDO standards, including the following:

- ▶ Pedestrian scale poles shall be between 12' and 18' mounting height with a black fiberglass pole.
- ▶ Vehicular scale poles shall be between 20' and 35' mounting height with a black fiberglass pole.
- ▶ Post top luminaries shall be the Town standard or a contemporary, round form style, consistent with the ARB Arbor Post Top by Cooper Lighting, the Pacifica family by Architectural Area Lighting, or similar.
- ▶ Cobra head luminaries shall follow the Town of Apex standard LED shoebox, or similar.
- ▶ All fixtures and poles shall be black.
- ▶ Structural footings shall be direct burial with foundations conceals. Footings shall be sized sufficiently to accommodate attachment arms for banners and hanging planter pots.
- ▶ Poles located within urban streetscapes shall accommodate electrical outlets for holiday lighting.
- ▶ Fixtures shall meet dark sky requirements.

Post top fixtures are permitted to follow differing assemblies, such as single-mounted, double-mounted or wall mounted. Where applicable, utilization of the entire family product line of post tops, bollards and wall-mounted lighting is encouraged.



▶ The Pacifica family by Architectural Area Lighting is permitted for use in the public right-of-way but subject to be included as part of a developer's maintenance agreement.



▶ The Town's standard fixture or ARB Arbor Post Top by Cooper Lighting (or similar) is permitted for use in the public right of way.



▶ At urban streetscape locations and along major thoroughfares, pole foundations shall be structurally engineered to accommodate attachments such as banners, planter pots and holiday decorations.



▶ Cobra style lighting shall follow Town of Apex standard shoebox fixture, or similar.



## 8.3: SITE LIGHTING

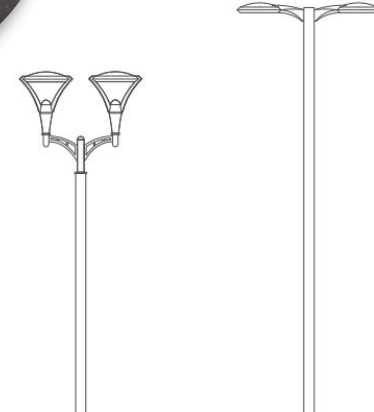
### Site and Area Lighting

Site and area lighting within private and Town owned and operated developments shall be utilized for safety lighting, large-scale spatial lighting, and vehicular roadway and pedestrian lighting. Fixtures mounted to poles should meet the following requirements:

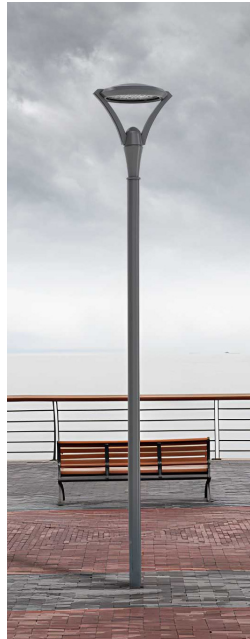
- › Pedestrian scale poles shall have a mounting height between 12' and 18'.
- › Vehicular scale poles shall have a mounting height between 20' and 35'.
- › All fixtures shall be black. All poles shall be black fiberglass.
- › Fixture and post top styles shall be of the same style as streetscape and right of way fixtures (see page 75).
- › Utilization of the entire family line of products is encouraged for consistency.
- › Structural footings shall be direct burial with foundation conceals.
- › Poles located within urban plazas and open spaces dedicated to public large scale gatherings shall accommodate electrical outlets for holiday lighting.
- › Cobra fixtures for parking lot lighting shall follow the Town standard shoebox fixture, or similar.



Veridea's standard lighting products are contemporary, round form style, including the Pacifica Family by Architectural Area Lighting and the Arbor Family by Cooper Lighting, or similar.



▲ Fixtures may be double-headed to accommodate both vehicular and pedestrian needs.



◀ Utilization of the entire family product line of post tops, bollards and wall-mounted lighting is encouraged.



## 8.3: SITE LIGHTING

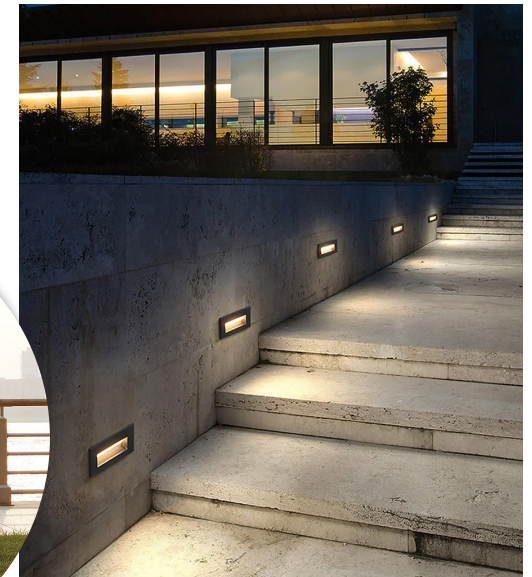
### Pathway Lighting

Pathway lighting includes bollard lights, step and wall lights, strip lighting and handrail illumination. Pathway lighting shall comply with the following:

- › Bollards shall be no taller than 3' in height.
- › In-grade lighting shall be direct burial with foundations concealed.
- › Step or wall lighting shall be flush with adjacent materials.
- › Fixtures shall be LED and a modern style.
- › Fixtures shall be black or bronze in color.
- › Integrated lighting, such as in handrails, shall be hidden.



▲ Bollards and pathway lighting shall have a modern style and no taller than 3' in height.



▲ Wall mounted and step lights shall be flush with adjacent materials.



## 8.3: SITE LIGHTING

### Landscape Lighting

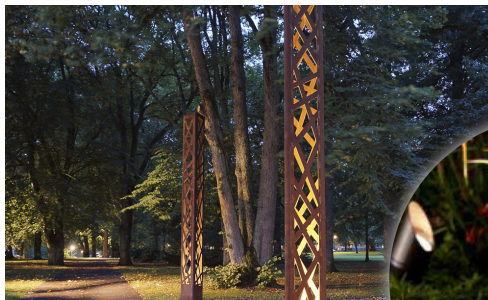
Landscape lighting should be utilized as a way to enhance landscape aesthetics, highlight important elements, and provide soft, safe lighting. This style of lighting shall be limited to high impact gathering areas, plazas and streetscapes to reduce light pollution. All landscape lighting shall be low-voltage.

Landscape lighting may include:

- › Tree and landscape uplights.
- › String lighting/catenary lighting.
- › Artistic light applications.
- › In-grade hardscape lighting.



Artistic lighting applications are encouraged.



In non-residential, urban gathering areas, street trees may be uplight or adorned with tree wrap lights for decorative purposes. Limit quantity of uplighting to reduce light pollution.



Utilize downlighting mounted to building walls and structures to reduce light pollution and provide an aesthetic experience.

String and catenary lighting at public gathering areas provide opportunities for aesthetic lighting and holiday applications.

# APPENDIX

## *SUPPLEMENTAL DOCUMENTATION*

### i. Master Signage Plan



