

Community College of Philadelphia

Landscape Vision Plan

July 2013

Acknowledgements

Significant contributions to this report have been made by members of the CCP administration, faculty, staff, and student body. The list on this page highlights some of the contributors who have played an exceptional role in this process to date.

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A SUSTAINABLE VISION









Forward



Community College of Philadelphia's vision is to serve the City as a premier learning institute where student success exemplifies the strength of a diverse, urban community college.

The campus landscape plays an important role in creating this environment while promoting the College's commitment to sustainability. The College has created the Landscape Vision Plan as a roadmap to help realize our goals. The process has been both thorough and rewarding in developing the enclosed guidelines and strategies for future, sustainable development on campus. Students, faculty, and staff have made valuable contributions and added richness to the Plan.

The strategies and recommendations for implementation outlined in the enclosed document will assist in positioning Community College of Philadelphia for continued success. The campus will continue to use it as a planning resource for years to come.

Again, I offer my sincerest thanks to all who have made this possible.

Sincerely,

Dr. Stephen M. Curtis President



Planning Process

The Community College of Philadelphia is committed to developing a more beautiful, inspiring, welcoming, functional and sustainable campus. To that end, the Landscape Vision Plan is an aspirational document that addresses specific areas and overall standards for the campus. Consensus was achieved regarding the goals, priorities, and values of CCP through the active participation of students, faculty, and staff throughout the planning process. The Plan acts as a roadmap for phased improvements to achieve the campus vision.

The Landscape Vision Plan is a comprehensive approach to the design of environmentally responsible exterior spaces at the Main Campus to:

- Enhance students' learning experience through campus improvements that showcase environmental literacy.
- Create outdoor spaces that promote interaction, collaboration, and socialization.
- Build consensus for projects to promote funding support.

The proposals for each project area are conceptual and provide a vision for how the guiding principals of this plan could be implemented. Additional study of existing conditions and proposed improvements will be needed to make these visions a reality.

GOALS

Through an inclusive planning process involving students, faculty, staff and community members, the following project goals have been established:

- Blend environmental literacy with sustainability and functionality.
- Create comfortable, flexible, and safe spaces for a variety of uses.
- Design a distinct, beautiful, and green urban campus.
- · Use native, diverse, hardy and low-maintenance landscaping.
- Manage storm water on site.
- Develop signage, lighting, and walkways that make movement easy and secure.
- Maximize use of materials that are recycled, local, and durable.
- Create meaningful connections between the College and surrounding community.
- Consider all costs: installation, operation, and maintenance.

GUIDING PRINCIPLES

To achieve the Plan's goals, four guiding principles have been established.



The landscape includes the greenspaces and plants that enhance ecosystems, add beauty, and support life. In an urban setting, it is important to optimize each opportunity. Strategies include:

- Native & Naturalized Plants: Maintains native ecosystems, needs less maintenance.
- Biodiversity: Preserves species, promotes diversity, and supports wildlife.
- Hardy plant material: Tolerant of cold, pollution, and drought.
- Tree Cover: Purifies air.
- Greenspace: Connects greenways and creates green infrastructure.



Built features and practices that mitigate impacts of the built environment. Stewardship of the environment contributes to the overall health of the earth.

- Green Roof: Minimizes storm water released to the sewer system.
- Porous Pavement: Keeps storm water on-site, thereby promoting infiltration.
- Tree Trench: Provides water to trees and promotes infiltration.
- Rain Garden: Purifies runoff from pavement.
- Storm Water Planter: Holds building storm water for infiltration.



ENERGY

Reduction of energy demands to conserve resources.

- LED Lighting: Low-energy use exterior lighting.
- Green Wall: Absorbs heat and moderates building temperatures.
- Tree Cover: Reduces heat island effect to promote cooler air temperatures.
- Alternative Modes of Transportation: Saves energy by promoting mass transit, bicycling, and walking as an alternative to single occupancy vehicles.
- Green Roof: Mitigates temperature extremes to reduce heating and cooling energy needs.



Opportunities to engage and interact within the CCP family and surrounding community.

- Environmental Literacy: Highlights green features in order to inform and educate students and the community about sustainability.
- Campus Identity: Identifies the boundaries and promotes the facilities that are part of the Community College of Philadelphia.
- Campus Center: A center on 17th Street that is the heart of campus life and source of information about programs and activities.
- Social Spaces: Promotes student interaction, collaboration and socialization. Invites the local community onto campus.

Chapter 2

Campus Analysis

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Campus Analysis

FAST FACTS

- 1. Location: City of Philadelphia, PA
- 2. Established: 1965
- 3. Main Campus Size: 13.9 acres
- 4. Impervious Area: 85%
- 5. Enrollment: 39,270
- 6. Number of Existing Buildings: 10 (2011)
- 7. Mascot: Colonial
- 8. Colors: Yellow and Black

CONTEXT

The Community College of Philadelphia espouses the goals and aspirations of its home, Philadelphia. Education, arts, culture, diversity, and sustainability are hallmarks of the College. Through its current development projects and implementation of this Vision Plan, CCP is helping make Philadelphia the nation's greenest city. Located in the heart of Philadelphia, CCP is just blocks away from Center City and Fairmont Park. Excellent transit options, bike lanes, and sidewalks connect CCP to the rich array of City amenities and activities.

LANDSCAPE

CCP is an urban campus that places a high value on the outdoor environment: trees, green open space, paved plazas, public streets, internal connections, and small niches. The various outdoor spaces provide for a range of activities including student interaction, socialization, collaboration, and learning. Thirteen distinct spaces are identified in the Vision Plan; each is analyzed for the potential to better serve students and faculty and to optimize sustainable practices.



GREEN INFRASTRUCTURE

Storm water management is a great challenge facing urban areas. Two basic solutions exist for improving storm water management: significant investment in "grey" infrastructure (underground storage tanks and pipes), or a fresh approach using innovative green infrastructure. *Green City, Clean Waters* is Philadelphia's 25-year plan to protect and enhance the environment by managing storm water through the use of green infrastructure. CCP embraces the plan's ideals of a sustainable future, and this Vision Plan identifies numerous opportunities for natural, simple, multipurpose, and cost-effective green infrastructure improvements.

PROGRAM DEVELOPMENT

Thirteen outdoor spaces are identified and analyzed for improvements, based on issues and opportunities presented by the overall campus.

lssue	Opportunity
Exterior areas in need of renovation	New projects and renovations that promote sustainable strategies and environmental literacy
Limited gathering and socializing space	Creation of a large, multi-purpose central plaza and intimate courtyards
17 th Street unsafe for pedestrians	Create a central crossing; remove adjacent parking to improve visibility
Insufficient greenspace	Establishment of a variety of outdoor learning and social spaces
Lack of campus signature feature	Integrate art in the landscape and create iconic symbol in central campus
Minimal shade trees with limited variety	Develop a vigorous plan to increase street trees, bio-diversity, and native and naturalized landscaping
Inconsistent exterior lighting	Development of standards for furniture, lighting, and signage
Utilitarian streetscapes	Define the edges of campus, mitigate storm water runoff, and promote bio-diversity through new streetscapes
Difficult way-finding	Increase community awareness and improve way-finding with signs and banners



Chapter 3

Recommendations

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18th Street Pocket Park with Public Art

FAST FACTS

- 1. Current Use: Undeveloped Open Space
- 2. Owner: Community College of Philadelphia
- 3. Project Area: 0.25 Acre
- 4. Anticipated Cost: \$571,000

Section 1

- 5. Priority: High
- 6. Possible Funding Partner: Foundation



The Park will showcase the College's commitment to environmental literacy through a synergistic blend of a major art installation and landscape design. The Park is envisioned as a space for relaxation and contemplation, recognition of alumnae and patrons, and a symbolic gateway to campus on this highly visible corner.

* Commemorative park with public art.

GUIDING PRINCIPLES

Biodiversity: Add interest to the landscape; seasonal attractiveness; maintain balanced ecosystems.

Native Plants: Preserve native and control invasive species; lower maintenance requirements; cost effective. Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminate need for irrigation.

Urban Trees: Add beauty, grace, and grandeur; purify air; manage storm water; reduce heat island impacts.

Greenspace: Provide open space for informal activities and recreation; add to regional greenway network; decrease storm water flows and flooding.

Porous Pavers: Slow storm water runoff; improve water quality; enhance water infiltration.

Green Wall: Reduce thermal impacts; moderate indoor temperatures.

Rain Garden / Bioswale: Provide an attractive landscape feature; slow storm water runoff; improve water quality; enhance water infiltration.

LED Lighting: Reduce energy need; lower maintenance; wider color spectrum; increase safety perception.

Environmental Literacy: Highly visible sustainable practice; engage and educate students; highlight CCP's commitment to responsible stewardship.

Campus Identity: Reinforce through consistent lighting, signage, and street furniture.

Social Spaces: Invite student socialization and interaction; engage the neighborhood and larger community.



18th Street Parking and Loading

FAST FACTS

- 1. Current Use: Visitor Parking and Loading Dock
- 2. Owner: Community College of Philadelphia
- 3. Project Area: 0.6 Acres
- 4. Anticipated Cost: \$193,000

Section 2

- 5. Priority: Medium
- 6. Possible Funding Partner: Treevitalize Philadelphia



This functional area has potential for aesthetic and environmental improvements. Green screens can be added to soften large wall areas while additional landscaping will add beauty and buffer service elements. Disconnecting roof leaders into a rain garden will improve storm water management.

GUIDING PRINCIPLES

Biodiversity: Add interest to the landscape; seasonal attractiveness; maintain balanced ecosystems.

Native Plants: Preserve native and control invasive species; lower maintenance requirements; cost effective.

Hardy Plants: Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminate need for irrigation.

Urban Trees: Add beauty, grace, and grandeur; purify air; manage storm water; reduce heat island impacts.

Green Wall: Reduce thermal impacts; moderate indoor temperatures.

Rain Garden / Bioswale: Provide an attractive landscape; slow storm water runoff; improve water quality; enhance water infiltration into ground.

Environmental Literacy: Highly visible sustainable practice; engage and educate students; highlight CCP's commitment to responsible stewardship.





Section 3 Winnet Courtyard

FAST FACTS

3

- 1. Current Use: Intensively-Used Courtyard
- 2. Owner: Community College of Philadelphia
- 3. Project Area: 0.36 Acres
- 4. Anticipated Cost: \$732,000
- 5. Priority: High
- 6. Possible Funding Partner: Treevitalize Philadelphia



The Winnet Courtyard is one of the most beloved and heavily used spaces at CCP. The recommended improvements would maintain the best features of the Courtyard and adjust other areas to make the space more durable and flexible.

The planters and trees are recommended to remain, since the tree canopy makes the Courtyard lawn shady and welcoming. Since grass currently does not grow well under the trees, porous pavement is proposed to support more uses. A seat wall and rain garden are recommended along the Gym. Efficient LED lighting will brighten the space with more natural and attractive illumination. Lastly, garage door openings in the Winnet Building will unite interior and exterior spaces by allowing people to flow in and out.

GUIDING PRINCIPLES

Biodiversity: Add interest to the landscape; seasonal attractiveness; balance ecosystems.

Native Plants: Preserve native and controls invasive species; lower maintenance requirements; cost effective. Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminate need for irrigation.

Urban Trees: Add beauty, grace, and grandeur; purify air; manage storm water; reduce heat island impacts.

Greenspace: Provide open space for informal activities and recreation; add to regional greenway network; decrease storm water flows and flooding.

Reuse of Materials (Belgian Block): Reduce cost and waste; keep viable materials out of landfill.

Porous Pavers: Slow storm water runoff; improve water quality; enhance water infiltration into ground.



Rain Garden / Bioswale: Provide an attractive landscape feature; slow storm water runoff; improve water quality; enhance water infiltration into ground.

Tree Cover: Reduce heat island impacts; moderate indoor temperatures.

LED Lighting: Reduce energy needs; lower maintenance; wider color spectrum; increase perception of safety.

Environmental Literacy: Highly visible sustainable practices engage and educate students and highlight CCP's commitment to responsible stewardship.

Social Spaces: Invite student socialization and interaction; engage the neighborhood and larger community.

18th Street Greenspace

FAST FACTS

1. Current Use: Flexible Open Space

Section 4

- 2. Owner: Community College of Philadelphia
- 3. Project Area: 0.36 Acres
- 4. Anticipated Cost: \$174,000
- 5. Priority: Low
- 6. Possible Funding Partner: Treevitalize Philadelphia



The 18th Street Greenspace is proposed to have minor improvements to increase its aesthetics and functionality. Overgrown hedges along the southern border will be replaced and a few "missing" trees will be replaced to maintain the symmetry. Existing benches that are currently perpendicular to the walk will be relocated to make them more inviting for visitors to sit and view activities on the lawn area.

GUIDING PRINCIPLES

Native and Naturalized Plants: Preserves native and controls invasive species; lowers maintenance requirements; are cost effective.

Hardy Plants: Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminate need for irrigation.

Urban Trees: Add beauty, grace, and grandeur; purify air; manage storm water; reduce heat island impacts.

Greenspace: Provides open space for informal activities and recreation; adds to regional greenway network; decreases storm water flows and flooding.

Tree Cover: Reduces heat island impacts; moderate indoor temperatures.

LED Lighting: Reduced energy needs; lower maintenance; wider color spectrum; increases perception of safety.



Highly visible sustainable practices engage and educate students and highlight CCP's commitment to responsible stewardship.

Social Spaces: Invites student socialization and interaction; engages the neighborhood and larger

16th and 18th Streetscapes

FAST FACTS

-5

- 1. Current Use: Public Streets, One-Way Pair
- 2. Owner: City of Philadelphia

Section 5

- 3. Streets' Frontage: 1,700 LF
- 4. Anticipated Cost: 16th Street \$717,000 18th Street - \$755,000
- 5. Priority: Medium
- 6. Possible Funding Partners: Philadelphia Streets Department, Philadelphia Water Department, Treevitalize Philadelphia





16th & 18th Streets are the east and west boundaries of CCP. As such, these streets will reinforce the identity and physical location of the campus through consistent street trees, signage, lighting, furniture and tree trenches to manage stormwater. Further, the streetscapes will be designed to provide pedestrian and bicycle amenities to the greatest extent possible.

GUIDING PRINCIPLES

Urban Trees: Add beauty, grace, and grandeur; purify air; manage storm water; reduce heat island impacts.

Tree Trench: Improves health of street trees; manages storm water; improves water quality; enhances water infiltration into ground.

Alternative Transportation: Walking, biking, and use of mass transit is more energy efficient than single-occupancy vehicles.

LED Lighting: Reduces energy needs; lower maintenance; wider color spectrum; increases perception of safety.

Campus Identity: Reinforced through consistent lighting, signage, and street furniture.

Social Spaces: Invites student socialization and interaction; engages the neighborhood and larger community.





Spring Garden Greenway

FAST FACTS

6

1. Current Use: Public Street

Section 6

- 2. Owner: City of Philadelphia
- 3. Street Frontage: 880 LF
- 4. Anticipated Cost: \$1,228,000
- 5. Priority: Medium
- 6. Possible Funding Partners: Philadelphia Streets Department, Philadelphia Water Department, Treevitalize Philadelphia, East Coast Greenway Alliance



The Spring Garden Greenway is the northern boundary of the CCP Campus. The Greenway is intended to make the streetscape more appealing to pedestrians and bicyclists by adding benches, trash receptacles, bike racks, and pavement improvements. Landscaping will be greatly increased with street trees in tree trenches and planters filled with shrubs and perennials. New lighting and banners along Spring Garden Street will reinforce the identity and physical location of the campus along this busy thoroughfare.

GUIDING PRINCIPLES

Biodiversity: Adds interest to the landscape; has seasonal attractiveness; maintains balanced ecosystems.

Native and Naturalized Plants: Preserves native and controls invasive species; lowers maintenance requirements; are cost effective. Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminates need for irrigation.

Urban Trees: Add beauty, grace, and grandeur; purify air; manage storm water; reduce heat island impacts.

Reuse of Materials: Reduces cost and waste; keeps viable materials out of landfill.

Porous Pavers: Slows storm water runoff; improves water quality; enhances water infiltration into ground.

Tree Trench: Improves health of street trees; manages storm water; improves water quality; enhances water infiltration into ground.



Alternative Transportation: Walking, biking, and use of mass transit is more energy efficient than singleoccupancy vehicles.

Tree Cover: Reduces heat island impacts; moderates indoor temperatures.

LED Lighting: Reduces energy needs; lower maintenance; wider color spectrum; increases perception of safety.

Environmental Literacy: Highly visible sustainable practices engage and educate students and highlight CCP's commitment to responsible stewardship.

Campus Identity: Reinforced through consistent lighting, signage, and street furniture.

Social Spaces: Invites student socialization and interaction; engages the neighborhood and larger community.

7 Section 7 Mint Roof Garden

FAST FACTS

- 1. Current Use: Roof without Access
- 2. Owner: Community College of Philadelphia
- 3. Project Area: 1,250 SF
- 4. Anticipated Cost: \$235,000 (Assumes existing structure and existing roof system can handle loads of a new modular green roof system)
- 5. Priority: Low



The Mint Roof Garden is envisioned as an aerial courtyard unique to CCP. By providing a door connecting the building with the roof, users will have access to a serene aerial plaza high above the activities on 17th Street. Recommended improvements include a guard rail around the perimeter, seating, lighting, and landscaping provided through either modular roof garden units or planters.

*HVAC and potential load issues.

GUIDING PRINCIPLES

Hardy Plants: Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminate need for irrigation.

Green Roof: Extends life of roof; reduces thermal impacts; moderates indoor temperatures.

LED Lighting: Reduced energy needs; lower maintenance; wider color spectrum; increases perception of safety.

Social Spaces: Invites student socialization and interaction; engages the neighborhood and larger community.



8 Section 8 Mint Courtyard

FAST FACTS

- 1. Current Use: Underutilized Courtyard
- 2. Owner: Community College of Philadelphia
- 3. Project Area: 2,500 SF
- 4. Anticipated Cost: \$125,000
- 5. Priority: Low



The Mint Courtyard can be upgraded to provide an inviting social space that provides attractive views from within the building. The vision for the Courtyard is to maintain some existing features and renovate others while adding strategic upgrades including expansion of the green roof / rain garden planter, plantings, and screening trellis.

GUIDING PRINCIPLES

Biodiversity: Adds interest to the landscape; has seasonal attractiveness; maintains balanced ecosystems.

Native Plants: Preserves native and controls invasive species; lowers maintenance requirements; are cost effective.

Hardy Plants: Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminate need for irrigation.

Reuse of Materials: Reduces cost and waste; keeps viable materials out of landfill.

Green Roof: Extend life of roof; reduce thermal impacts; moderate indoor temperatures.

Rain Garden Planter: Provides an attractive landscape feature; slows storm water runoff; improves water quality; enhances water infiltration into ground.

Environmental Literacy: Highly visible sustainable practices engage and educate students and highlight CCP's commitment to responsible stewardship.

Social Spaces: Invites student socialization and interaction; engages the neighborhood and larger community.


16th Street Parking and Loading

FAST FACTS

9

- 1. Current Use: Visitor Parking & Loading Area
- 2. Owner: Community College of Philadelphia
- 3. Project Area: 0.4 Acres
- 4. Anticipated Cost: \$111,000

Section 9

- 5. Priority: Low
- 6. Possible Funding Partner: Treevitalize Philadelphia



This area offers opportunities to increase sustainable practices. The entry canopy roof leader can be disconnected to allow daylight into a rain garden within the planting bed. Future renovation considerations include reducing pavement by narrowing road widths and replacing impervious with pervious pavement in parking spaces.

GUIDING PRINCIPLES

Native Plants: Preserves native and controls invasive species; lower maintenance requirements; cost effective.

Hardy Plants: Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminate need for irrigation.

Pervious Asphalt / Concrete: Slow storm water runoff; improve water quality; enhance water infiltration into ground.

Rain Garden: Provide an attractive landscape feature; slow storm water runoff; improve water quality; enhance water infiltration into ground.





FAST FACTS

- 1. Current Use: Undeveloped Open Space
- 2. Owner: Community College of Philadelphia
- 3. Project Area: 0.33 Acres
- 4. Anticipated Cost: \$840,000
- 5. Priority: High
- 6. Possible Funding Partners: Philadelphia Streets Department, Philadelphia Water Department



Pedestrian spaces will be developed on both sides of 17th Street, creating a central Plaza and focus for the campus. The Plaza will support multiple student activities and amenities including spacious walkways, multiple seating and dining opportunities, intimate tree-shaded spaces, and large function areas.

Parking has been removed from 17th street, and a future bump out of the sidewalk on the east will provide additional pedestrian space and traffic calming. The Bonnell Building and the Gym, Winnet Building and the Pavilion will be connected through a major, direct crosswalk.

GUIDING PRINCIPLES

Biodiversity: Adds interest to the landscape; has seasonal attractiveness; maintains balanced ecosystems.

Native and Naturalized Plants: Preserves native and controls invasive species; lowers maintenance requirements; are cost effective.

Hardy Plants: Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminate need for irrigation.

Urban Trees: Add beauty, grace and grandeur; purify air; manage stormwater; reduce heat island impacts.

Greenspace: Provides open space for informal activities and recreation; adds to regional greenway network; decreases stormwater flows and flooding.

Reuse of Materials: Reduces cost and waste; keeps viable materials out of landfill.

Green Roof: Extends life of roof; reduces thermal impacts; moderates indoor temperatures.

Porous Pavers: Slows storm water runoff; improve water quality; enhances water infiltration into ground.



Alternate Transportation: Walking, biking and use of mass transit is more energy efficient than singleoccupancy vehicles.

Tree Cover: Reduces heat island impacts; moderates indoor temperature.

LED Lighting: Reduces energy needs; lower maintenance; wider color spectrum; increases perception of safety.

Environmental Literacy: Highly visible sustainable practices engage and educate students and highlight CCP's commitment to responsible stewardship.

Campus Center: Symbolic of college values and aspirations; nexus of campus life; information hub.

Campus Identity; Reinforced through consistent lighting, signage and street furniture.

Social Spaces: Invites student socialization and interaction; engages the neighborhood and larger community.







Bonnell Entrance on 16th Street

FAST FACTS

1. Current Use: Bonnell Entrance Plaza

Section 11

- 2. Owner: Community College of Philadelphia
- 3. Project Area: 0.27 Acres
- 4. Anticipated Cost: \$100,000
- 5. Priority: Low
- 6. Possible Funding Partner: Treevitalize Philadelphia



The vision for the Bonnell Entrance is a significant gateway into campus, redeveloped with numerous low-impact improvements. Pavement would be porous and connect to rain gardens in landscape area. Expanded tree planting would add to the campus tree count and diversity. New lighting, street furniture, and signage would reinforce campus character and identity.

GUIDING PRINCIPLES

Urban Trees: Add beauty, grace, and grandeur; purify air; manage stormwater; reduce heat island impacts.

Greenspace: Provides open space for informal activities and recreation; adds to regional greenway network; decreases stormwater flows and flooding.

Porous Pavers: Slows stormwater runoff; improves water quality; enhances water infiltration into ground.

Tree Trench: Improves health of street trees; manages stormwater; improves water quality; enhances infiltration into ground.

Rain Garden: Provides an attractive landscape feature; slow stormwater runoff; improves water quality; enhances infiltration into ground.

LED Lighting: Reduced energy needs; lower maintenance; wider color spectrum; increases perception of safety.

Environmental Literacy: Highly visible sustainable practices engage and educate students and highlight CCP's commitment to responsible stewardship.

Campus Identity: Reinforced through consistent lighting, signage, and street furniture.

Social Spaces: Invite student socialization and interaction; engages the neighborhood.







Bonnell Green and Bonnell Staff Parking

FAST FACTS

- 1. Current Use: Parking Lot
- 2. Owner: Community College of Philadelphia
- 3. Project Area: 0.92 Acres
- 4. Anticipated Cost: Bonnell Green \$44,000 Bonnell Staff Parking - \$1,065,000
- 5. Priority: Medium
- 6. Possible Funding Partners: Philadelphia Water Department, Treevitalize Philadelphia



Lot B offers a unique opportunity to be redeveloped as a model "green" parking lot. This includes numerous low-impact development practices including the use of porous pavement, bioswales, subsurface storm water infiltration basin, and trees. Not only will the green lot reinforce CCP's commitment to sustainability, but it will also be consistent with *Green City, Clean Waters*, Philadelphia's 25-year plan to manage storm water with innovative green infrastructure.

GUIDING PRINCIPLES

Biodiversity: Adds interest to the landscape; has seasonal attractiveness; maintains balanced ecosystems.

Native and Naturalized Plants: Preserves native and controls invasive species; lowers maintenance requirements; cost effective.

Hardy Plants: Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminate need for irrigation.

Urban Trees: Add beauty, grace, and grandeur; purify air; manage storm water; reduce heat island impacts.

Pervious Asphalt / Concrete: Slows storm water runoff; improves water quality; enhances water infiltration into ground.

Tree Trench: Improves health of street trees; manages storm water; improves water quality; enhances water infiltration into ground.





FAST FACTS

- 1. Current Use: Vacant Corridor
- 2. Owner: Southeastern Pennsylvania Transit Authority (SEPTA)
- 3. Project Area: 1.5 Acres
- 4. Anticipated Cost: \$322,000
- 5. Priority: Medium
- 6. Possible Funding Partners: Treevitalize Philadelphia, SEPTA Sustainability Program



This large, undeveloped parcel in an urban setting offers unique opportunities. Any use or access to this corridor must be fully coordinated with SEPTA. Should an arrangement be made, the corridor has potential as a living laboratory to explore native and invasive plant species, plant succession, and rain garden / wetland development. Physical improvements include clean-up of trash and debris, removal of unsafe or unwanted plants and trees, and addition of securable access to the area. A planning process should be undertaken to explore the pedagogy presented by this site.

GUIDING PRINCIPLES

Biodiversity: Adds interest to the landscape; has seasonal attractiveness; maintains balanced ecosystems.

Native Plants: Preserves native and controls invasive species; lowers maintenance requirements; cost effective. Survive droughts and temperature extremes; reduce need for chemical fertilizers and pesticides; eliminate need for irrigation.

Urban Trees: Add beauty, grace, and grandeur; purify air; manage storm water; reduce heat island impacts.

Greenspace: Provides open space for informal activities and recreation; adds to regional greenway network; decreases storm water flows and flooding.

Rain Garden / Wetland: Provides an attractive landscape feature; slows storm water runoff; improves water quality; enhances water infiltration into ground.

Environmental Literacy: Highly visible sustainable practices engage and educate students and highlight CCP's commitment to responsible stewardship.



Chapter 4

Campus Standards

R

Landscape Elements

CCP has a goal of maintaining biodiversity in plant materials, particularly trees. Provided in this section is a variety of trees that are native or naturalized, hardy, and tolerant of urban conditions. Many of these trees are currently underutilized on campus. Specific cultivars are provided that emphasize desirable characteristics such as showy flowers or fruit, brilliant fall color, manageable size, and low maintenance. Undesirable characteristics such as thorns and excessive seed production are avoided. This plant palette should guide selection of plants in future landscaping projects.



RED MAPLE Acer rubrum

Recommendations: Use along trails to define borders. Works well as a street tree and as a specimen tree in naturalized areas.

Description: One of the best maples; lustrous foliage turns red and orange in autumn and has silvery bark for winter interest. Many cultivars exist for specific shapes and sizes.

Size: 50'h x 40's Shape: Broadly oval Rate: Fast Flower: Red Fruit: 1-2", winged Foliage: Green Sunlight: Sun/Partial Shade



SUGAR MAPLE Acer saccharum

Recommendations: Plant as a shade, lawn, park, or open space tree; can also be used in a woodland area.

Description: Large deciduous tree with strong branches, medium to dark green foliage, yellow to burnt orange to brilliant red fall color.

Size: 70'h x 50's Shape: Conical to round Rate: Slow Flower: Greenish-yellow Fruit: Samara Foliage: Dark green, rounded lobes Sunlight: Sun/Partial Shade



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SERVICEBERRY *Amelanchier canadensis*

Recommendations: Naturalize at the edge of woodlands; plant beneath power lines because slow growth and size.

Description: Very showy spring flowers; attractive orange, red, and yellow fall color; smooth, grayish streaked bark provides winter interest.

Size: 25-40' h x 15'-25's Shape: Rounded upright Rate: Slow-medium Flower: White Fruit: Red pome Foliage: Green Sunlight: Sun/Partial Shade



AMERICAN LINDEN Americana 'Redmond'

Recommendations: Plant as a lawn, park, or open space tree; urban tolerant.

Description: Attractive shade tree with dark green, heart-shaped leaves; fragrant, creamy flower clusters bloom late June to early July; yellow fall color.

Size: 60'h x 30's Shape: Uniform pyramidal Rate: Medium Flower: Creamy white Fruit: Nut-like drupe Foliage: Dark green Sunlight: Full Sun/Partial Shade



AMERICAN HORNBEAM *Carpinus caroliniana 'Palisade'*

Recommendations: Excellent low-maintenance street tree. Attractive fall color.

Description: Native cultivar with a streamlined vertical form. May be used for shade or as a screen device in lawn, park, and naturalized areas.

Size: 35'h x 35's Shape: Upright, Globular Rate: Medium Flower: Creamy White Fruit: Seed clusters Foliage: Medium Green Sunlight: Sun/Partial Shade



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EASTERN REDBUD *Cercis canadensis*

Recommendations: Excellent specimen tree; may also be used as a small street tree; tolerant of deer.

Description: Native ornamental tree with profuse purple flowers that bloom prior to foliage growth in early spring.

Size: 30'h x 30's Shape: Wide spreading Rate: Fast Flower: Purple Fruit: Legume Foliage: Medium green Sunlight: Sun/Partial Shade



WHITE FRINGETREE Chionanthus virginicus

Recommendations: Best in a sunny spot sheltered from wind; blooms best in full sun, but foliage is most attractive with several hours of shade; beautiful specimen.

Description: Produces deep blue fruit and outstanding flower before leaves emerge in spring.

Size: 12-20' h x 12-20's Shape: Spreading Rate: Slow Flower: White Fruit: Dark blue Foliage: Medium to dark green Sunlight: Full Sun/Full Shade



YELLOWWOOD Cladrastis lutea

Recommendations: Use as a lawn tree or specimen for its year-round interest.

Description: Good shade tree, especially where space is limited; 1' long drooping clusters of flowers last for 3-4 weeks in early summer.

Size: 30-50'h x 40-50's Shape: Broad rounded Rate: Fast Flower: White Fruit: Legume Foliage: Bright green Sunlight: Sun



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PAGODA DOGWOOD Cornus alternifolia

Recommendations: Use where sharp vertical architectural lines are present and horizontal characteristics are needed.

Description: A small rounded ornamental tree with branches that grow in irregular flat horizontal tiers; showy flowers in May; autumn foliage is a brilliant red.

Size: 20'h x 20's Shape: Rounded Rate: Medium Flower: Yellowish-white Fruit: Blue-black, berry Foliage: Green Sunlight: Sun/Partial Shade



FLOWERING DOGWOOD Cornus florida

Recommendations: Use in gathering areas for light shade, in the border for spring and fall color, or as a specimen.

Description: A graceful, native ornamental tree with striking white flowers in early spring; attractive red fall color.

Size: 25'h x 30's Shape: Rounded Rate: Medium Flower: White Fruit: Glossy red, berry Foliage: Green Sunlight: Full Shade/Full Sun



HAWTHORN Crataegus viridis 'Winter King'

Recommendations: Use as a specimen tree; can be pruned into a hedge or used as a screen border.

Description: Flowers bloom in late spring, followed by fruits that ripen red in autumn, then turn orange in winter; silvery bark exfoliates to a brownish-tan.

Size: 20-35'h x 20-35's Shape: Rounded Rate: Slow Flower: White Fruit: Bright red Foliage: Dark green Sunlight: Sun



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IMPERIAL HONEYLOCUST *Gleditsia triacanthos inermis 'Imperial'*

Recommendations: Works well as a street tree and as a specimen tree in naturalized areas.

Description: Straight growing, graceful spreading head, dense symmetrical branching, goldenyellow foliage in autumn.

Size: 35'h x 35's Shape: Rounded Rate: Fast Fruit: Essentially podless Foliage: Dark green Sunlight: Sun



EXPRESSO KENTUCKY COFFEETREE *Gymnocladus dioicus 'Expresso'*

Recommendations: Large shade or street tree with upright, irregular branching.

Description: Deciduous tree with large leaves on stout twigs; tolerant of drought and urban conditions; large clusters of flowers are fragrant in late May or June.

Size: 60-75'h x 40-50's Shape: Spreading Rate: Medium Flower: Greenish white Fruit: Red-brown pod Foliage: Green Sunlight: Sun/Partial Shade



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EASTERN RED CEDAR Juniperus virginiana

Recommendations: Plant as a specimen, in a group, or as a screen; can be sheared to form tall hedges.

Description: Evergreen with an upright form; strong cedar scent; needles are a bluish-green that turn to a bronze color in the winter.

Size: 40-50'h x 8-15's Shape: Broadly oval Rate: Medium Flower: Yellow and green Fruit: Bluish, berry-like cones Foliage: Green Sunlight: Sun/Partial Shade



SWEET GUM Liquidambar styraciflua 'Rotundiloba'

Recommendations: Use as lawn or shade tree where ample room is available. Also applicable in park settings and campuses.

Description: A large, fast-growing tree characteristic of aromatic foliage and brown, spiny "gumballs".

Size: 60-80' h x 40-60's Shape: Conical oval Rate: Medium Flower: Yellow-green Fruit: Woody ball Foliage: Medium, glossy green Sunlight: Sun/Partial Shade



TULIP POPLAR Liriodendron tulipifera

Recommendations: Use as lawn or shade tree, giving ample room for growth.

Description: A large, fast-growing native tree with late spring flowers shaped like tulips; yellow autumn color.

Size: 70-90' h x 35-50's Shape: Conical oval Rate: Fast Flower: Greenish-yellow with orange center Fruit: Bright red Foliage: Medium green Sunlight: Sun



SWEETBAY MAGNOLIA Magnolia virginiana

Recommendations: Happiest in wet places similar to its native habitat.

Description: Native plant with large, fragrant summer flowers and beautiful 2" bright red fall fruit.

Size: 15-30' h x 10-20's Shape: Low-branched oval Rate: Medium Flower: White Fruit: Bright red Foliage: Green above, silver underneath Sunlight: Full Sun/Full Shade



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BLACK GUM Nyssa sylvatica

Recommendations: Excellent specimen tree or street tree.

Description: Outstanding autumn color that begins early and lasts long; underused, droughttolerant species.

Size: 30-50'h x 20-30's Shape: Pyramidal Rate: Fast Flower: White Fruit: Blue-black Foliage: Dark green Sunlight: Sun/Partial Shade



IRONWOOD Ostrya virginiana

Recommendations: Use in parks, narrow tree lawns, and naturalized areas.

Description: Attractive small tree that is tough and durable; excellent for growing under harsh urban conditions; golden-yellow autumn foliage.

Size: 25-40' h x 25's Shape: Pyramidal to rounded Rate: Slow Flower: Catkins Fruit: Nutlet Foliage: Dark green Sunlight: Sun/Partial Shade



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WHITE PINE Pinus strobus

Recommendations: Good specimen for large spaces; dwarf cultivars make nice borders and mass plantings.

Description: Fast growing native pine with long, soft needles; picturesque.

Size: 80' h x 20-40's Shape: Pyramidal Rate: Fast Flower: Inconspicuous Fruit: Cone Foliage: Blue-green Sunlight: Sun



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LONDON PLANE TREE Platanus acerifolia

Recommendations: Plant as a lawn, park, or open space tree; urban tolerant.

Description: A large deciduous tree with upright and spreading branching; attractive exfoliating bark.

Size: 50'h x 60's Shape: Pyramidal Rate: Fast Flower: Inconspicuous Fruit: Rounded, burr-like Foliage: Dark green Sunlight: Sun



WHITE OAK Quercus alba

Recommendations: Use as a shade tree in a large area.

Description: One of the finest native oaks; leaves are glossy and narrow; well-suited for urban conditions; red or purple in autumn.

Size: 50-100' h x 50-100's Shape: Broad, spreading Rate: Slow Flower: Inconspicuous Fruit: Acorn Foliage: Dark green Sunlight: Sun



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SWAMP OAK Quercus bicolor

Recommendations: Great shade, lawn, or specimen tree.

Description: Medium-sized tree with a broad, open crown, rounded top, and short trunk; attractive, peeling bark; yellow to orange autumn color.

Size: 50-60'h x 45-60's Shape: Broadly rounded Rate: Medium Flower: Catkin Fruit: Acorn Foliage: Dark green Sunlight: Sun



BURR OAK

Quercus macrocarpa

Recommendations: Use as a shade, street, or specimen tree.

Description: Large deciduous tree with flaky, distinct bark; yellow-brown autumn color.

Size: 70-80'h x 60's Shape: Broad Rate: Slow Flower: Catkin Fruit: Acorn Foliage: Dark green Sunlight: Sun



AMERICAN ARBORVITAE Thuja occidentalis

Recommendations: Plant as a hedge, screen, or foundation planting.

Description: Medium sized, scale-leaved evergreen with a dense and compacted form.

Size: 30-50'h x 10-15's Shape: Conical Rate: Medium Flower: Inconspicuous Fruit: Small cones Foliage: Green Sunlight: Sun



EASTERN HEMLOCK *Tsuga canadensis*

Recommendations: Plant as a lawn or specimen tree; can also be used for massing planting for a screen, especially in shaded locations.

Description: A large evergreen with fine textured foliage and horizontal to pendulous branching.

Size: 40-70'h x 25-30's Shape: Conical or pyramidal Rate: Medium Flower: Inconspicuous Fruit: Small cones Foliage: Dark green Sunlight: Sun/Partial Shade



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AMERICAN ELM *Ulmus americana 'Valley Forge'*

Recommendations: Use as traditional street tree.

Description: Native cultivar highly resistant to Dutch Elm Disease. Large, vase-shaped tree with a yellow fall color.

Size: 70'h x 30'w Shape: Vase Rate: Medium Flower: Inconspicuous Fruit: Inconspicuous Foliage: Dark Green Sunlight: Sun



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WINTERCREEPER Euonymus fortunei

Recommendations: May be used as a groundcover, mounding shrub, or climbing vine. Also effective as a slope cover for erosion control.

Description: Dense, woody-stemmed, broadleaf evergreen plant which is extremely tolerant or urban conditions.

Size: 0.5-1' h x 1-3' s Shape: Upright Rate: Medium Flower: Light-Yellow or Lime Fruit: Capsules Foliage: Dark Green Sunlight: Sun/Partial Shade



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BLUE RUG JUNIPER Juniperis horizontalis 'Wiltonii'

Recommendations: Use on slopes for erosion control, as well as along curbs, roadways, and walls.

Description: Dense, evergreen shrub whose foliage turns slightly purple in winter.

Size: 0.5' h x 4-6' s Shape: Rounded Rate: Medium Flower: None Fruit: Blue Berry-Like Cones Foliage: Green/Blue-Green Sunlight: Sun/Partial Shade



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BIG BLUE LILYTURF Liriope muscari 'Big Blue'

Recommendations: Use as groundcover in entryways or courtyards, under trees in the ground or in planter boxes, or as an edging along sidewalks or borders.

Description: Grasslike clumps or mats of evergreen leaves; slender spikes of flowers in summer, followed by berries.

Size: 1-2' h x to 1' s Shape: Rounded Rate: Medium Flower: Purple or Lavender Fruit: Blue-Black Berry Foliage: Dark Green Sunlight: Sun/Shade



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JAPANESE PACHYSANDRA Pachysandra terminalis

Recommendations: Plant as a border along walkways, foundations, and under trees.

Description: Forms an attractive, dense carpet of glossy evergreen foliage that performs well in partial to deep shade conditions.

Size: 0.5-1' h x to 1-1.5' s Shape: Rounded Rate: Medium Flower: White Fruit: None Foliage: Dark Green Sunlight: Shade/Partial Shade

Environmental Elements

Low impact solutions to storm water management are desirable in terms of cost, function, and aesthetics. The following green infrastructure details illustrate how these management techniques operate and their resulting benefits. The collective impact of CCP, other institutions, businesses, and residences adopting green infrastructure will be a significant reduction in the negative impacts of unmanaged storm water.



Urban Trees



Rain Garden



Porous Pavement



Pervious Asphalt and Bioswale



Green Roof



Energy Elements

Energy use and cost is on the rise, but there are simple solutions to reduce energy consumption. Landscape elements such as green roofs and green walls can mitigate thermal impacts. This results in a reduction of energy needed to heat and cool buildings. Another exterior improvement that results in significant energy savings is LED lighting. LED lights show a fuller spectrum of colors, making more attractive nightscapes. Other benefits of LED lights include long life, small size, and cool temperatures.



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BEGA IN-GRADE LED LIGHT

Recommended Standard: BEGA In-Grade Marker Light #8699LED-K3

Description: This in-ground light shall be installed along pathways, as well as used to accent site features such as accent trees.

BEGA LOW-LEVEL BOLLARD

Recommended Standard: BEGA #7740LED-K3-SLV-895A; Silver; Distribution Type V

Description: This bollard may be used along entrance areas and paths as a means of orientation for pedestrians.

SE'LUX LED BOLLARD

Recommended Standard: Se'lux 42" High LED Bollard Light #3.5-LG3700-35-SV-120; Silver; Distribution Type III

Description: This bollard may be used along entrance areas and paths as a means of orientation for pedestrians.



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PORT CREDIT LIGHT POLE

Recommended Standard: King Luminaire Port Credit Light Pole #KSB82-A-14-BE-BA; Graphite Gray

Description: This aluminum light pole measures 14'-0" in height, 4" in diameter, and has a 6" base. Accessories include a 2'-0" banner arm with a wall bracket to hold a security camera.

BRONTE MOUNTING ARM

Recommended Standard: King Luminaire Bronte Mounting Arm #KA94-S-A-Gray

Description: This recommended standard features either a single or double mounting arm.

SOLITAIRE SR. LED PENDANT

Recommended Standard: King Luminaire #K803-FASH-II-75-SSL-8000-120-GY; Graphite Gray; Distribution Type II or V

16 7/8"

Description: The Solitaire Sr. pendant shall feature a shallow clear drop lens. Wattage varies on application.

Community Elements

CCP is a community of students, faculty, and staff, as well as part of the larger neighborhood, City, and region. Emphasis on encouraging community interaction is a responsibility of the institution, fostering collaboration, understanding, and mutual support. Community elements proposed for CCP define its physical limits, but also its character. Streetscapes that are attractive, well-lit, and include pedestrian amenities welcome users and visitors alike.





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LANDSCAPE FORMS STAY

Recommended Standard: Landscape Forms Stay Bench

Description: The Stay Bench is a recommended standard that is not currently found on campus. This style shall be used with a Panguard II® Powdercoat finish in steel. Stay may be backed or backless and an optional seat divider can be used to discourage skateboarders and ensure personal space for its users.



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Recommended Standard: Landscape Forms Mingle Table

Description: The recommended standard for tables is the Landscape Forms Mingle with steel Panguard II® Powdercoat. Seats are secured to the table to stay in place, stay cool, and dry quickly. This style is available in 2, 3, 4, 5, and 6 attached seat styles that can be backed or backless. The 3-seat style is ADA compliant and 5-seat style is wheelchair accessible.



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LANDSCAPE FORMS PITCH

Recommended Standard: Landscape Forms Pitch Litter Receptacle

Description: The Pitch litter receptacle is finished with Landscape Forms' Panguard II® Powdercoat in steel. This style is available with side- and top-opening options. An ash option is offered on only the side opening style. A lift-off top allows easy access to a polyethylene liner made of 100% recycled content.



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LANDSCAPE FORMS SELECT

Recommended Standard: Landscape Forms Select Recycling Unit

Description: The Select recycling unit is finished with Landscape Forms' Panguard II® Powdercoat finish in steel. These receptacles may be arranged in groups of one to three units to encourage and accommodate recycling throughout the CCP campus.



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LANDSCAPE FORMS SORELLA

Recommended Standard: Landscape Forms Sorella Planter

Description: Varying in size and shape, the Sorella Planter can be used as an easy way to add color and form to any outdoor space or rooftop. This proposed standard shall be used in a silver Panguard II® Powdercoat finish. The base and glide of each planter is made of 100% recycled compression-molded plastic.



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EP HENRY ECO BRICK STONE

Recommended Standard: EP Henry Eco Brick Stone

Description: Pavers shall be concrete and set on a porous or non-porous base. Select color from full range of options.



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SUMMITVILLE THIN BRICK

Recommended Standard: Summitville Seat Wall Face Brick

Description: This recommended standard shall be used as face brick on low walls and seat walls in the color Georgetown (or equivalent).