DESIGN GUIDE

FOR THE BOROUGH OF STATE COLLEGE

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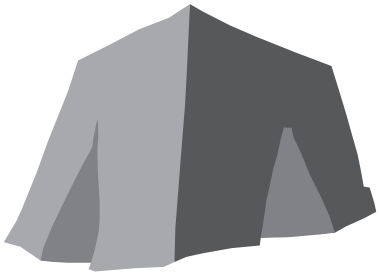

Historic Centre Furnace stack (1846) still standing as an eastern gateway to the Borough of State College at the corner of College Avenue and Porter Road.

PENNSYLVANIA

Third Edition

2014

The intention of the *State College Borough Design Guide* is to promote an **appropriate**, **beautiful**, **safe**, **and sustainable built environment** in the Borough of State College. The *Design Guide* both defines the current state of the Borough and the trajectory toward which we are striving.

The third and revised edition of the *Design Guide for the Borough of State College* was first published in the United States of America by:

Borough of State College
243 South Allen Street
State College, PA 16801

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First edition published in 1993, Borough of State College

Contents


PENN STATE
entrance gates
gown

A Town and Gown Borough

Appropriate, Beautiful, Safe, and Sustainable Design

The *Design Guide for the Borough of State College* was developed by the members of the Design Review Board and Borough staff to help build a place where people of all ages and incomes will want to visit and live. The intention of the *Design Guide* is to promote an appropriate, beautiful, safe, and sustainable built environment in the Borough of State College. The *Design Guide* both defines the current state of the Borough and the trajectory toward which we are striving.

The third edition of the *Design Guide for the Borough of State College* builds upon the two previous editions (1993, 2008) and is divided into sections corresponding to four design concerns that we would like to emphasize in our design review process.

Fig. 1. College Avenue forms the line of intersection between town and gown. The point of view of the panorama is located at the historical entrance gateway to Penn State.

Within four and a half square miles, the Borough contains twelve neighborhoods, each with its own distinct character encompassing commercial and residential buildings, educational and civic institutions, single family homes and mid-rise housing, parks and open space, and contemporary and historic structures. **Appropriate** design responds to and enhances the unique character of each neighborhood.

Beautiful designs incorporate both aesthetics and function through a symbiotic relationship to the surrounding context by elevating style, material, technologies, and landscaping. A beautiful environment attracts both visitors and student/professional residents as a physical expression of a community's shared identity and civic pride.

Our **safe** streets and community parks contribute to the health and prosperity and vitality of the Borough. The downtown is the heart of the community. The pedestrian friendly atmosphere of downtown encourages many local events throughout the year including: Central Pennsylvania Festival of the Arts, weekly farmers' market, homecoming and Halloween parades,

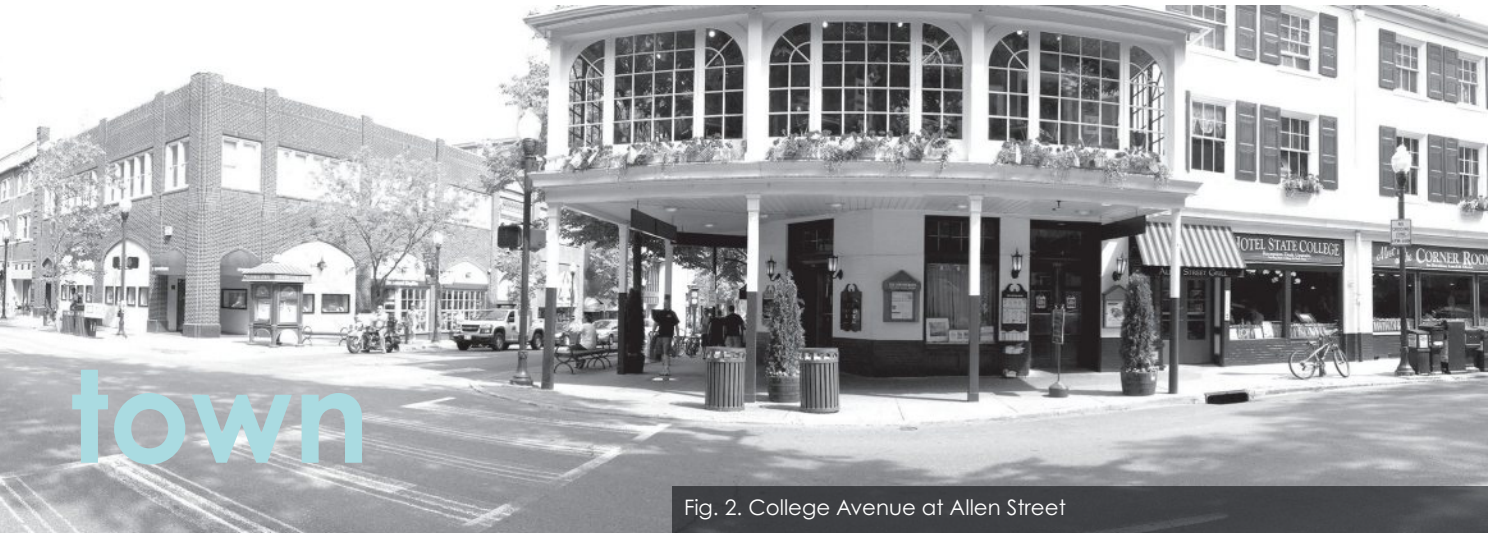


Fig. 2. College Avenue at Allen Street

Fig. 3. Corner of College Avenue and Allen Street.

Fig. 4. Allen Street is highlighted with the orange line in the above key plan.

holiday tree lighting ceremony, First Night celebration, Fourth of July, and many more.

Finally, Borough Council defines green planning, or **sustainable** design, as crafting the vision, goals, and strategies in our community's planning documents in order to conserve priority habitats and wildlife alongside developed areas, reduce pollutants harmful to human life and well-being, and preserve resources for future generations.[1]

[1] "Green Planning" on statecollegepa.us

Downtown Master Plan 2013

In 2013, the Borough of State College, The Pennsylvania State University, and Downtown State College, Inc. endorsed a Downtown Master Plan created in association with Mahan Rykiel Associates, Grimm + Parker Architects, Arnett Muldrow Associates, Kalback Planning and Design, Dan Jones Landscape Architecture, and Stahl Scheaffer Engineering, after extensive community input and feedback. Three goals were drafted to direct the preparation of the Downtown Master Plan in order that the plan would "(1) realize and market the downtown's unique identity and distinct role within the larger community, its development potential for a sustainable future, and include specific implementation strategies that will achieve this vision; (2) establish the framework to create a most memorable, attractive and comfortable downtown core that aesthetically unites the College Avenue corridor and (3) consider public and private sector improvements that can attract a diverse range of users in order to expand the businesses and services that can be supported in downtown.[2] Elements of this plan are incorporated throughout this guide.

[2] "Downtown Master Plan" on statecollegepa.us

One major asset identified in the Downtown Master Plan 2013 is the physical and reciprocal relationship between the downtown commercial district and the university, long-term and short-term residents, the town and the gown.

TOWN + GOWN BOUNDARIES OF STATE COLLEGE BOROUGH [Fig. 5.]

GOWN

TOWN

Many stakeholders have identified that there is a need for a strong downtown brand; one that celebrates the quintessential "town gown" college town environment as well as downtown's connection to the surrounding natural amenities. The downtown brand needs to be something that Penn State can use to help "sell" downtown to prospective students and one that responds to the Penn State alumni who are the largest base of tourism. At the same time, and perhaps most importantly, the branding and marketing needs to reacquaint the local community with downtown and help address unfavorable stereotypes. Downtown Improvement District is a valuable steward of the quality of life downtown — including extensive work maintaining the district — hosting events and working with merchants; the branding should help reinforce the organization's role. More importantly however, the marketing should demonstrate that Downtown State College is a vital part of the overall community.[3]

[3] "Downtown Master Plan" on statecollegepa.us

Eagle
Edward
Adams
1976

Schlow Centre Region Library

Covered Bike Rack

01 Context and Community Setting

In the urban context, each building is part of a larger tapestry: there are varied uses, amenities, architectural styles, pedestrian activities, and community purposes within each neighborhood of our town. These neighborhoods flourish when individual buildings artfully serve their purpose while also promoting the purposes of their neighbors. Exceptional design is intimately part of the tapestry of the surrounding community.

State College Borough popuation: 42,034 (2010 Census)

Fig. 6. The orange dot above designates the location of the State College Borough Municipal Building at 243 South Allen Street and depicted in the image below.

Borough of State College Governance

"[T]he Borough of State College [is the] home of the Pennsylvania State University. Town and campus have grown side by side since Penn State was founded as the Farmers' High School in 1855, on land donated by the generosity of early ironmasters. The Borough of State College was incorporated in 1896 and today is a Home Rule municipality. The Borough has a population of over 42,000 – the largest of any other borough in the Commonwealth. Roughly seventy-five percent of Borough residents are Penn State students, many of whom make important contributions to the community. For example, forty percent of our all-volunteer Alpha Fire Company firefighters are university students."[4]

[4] Elizabeth Goreham, "Mayor's Welcome" on statecollegepa.us

Home Rule Charter

In 1922, the Pennsylvania Constitution was amended to give the legislature the right to grant cities the right to choose home rule. Philadelphia became the first home rule city of Pennsylvania in 1951.[5]

In 1973, the citizens of the Borough of State College adopted a Home Rule Charter establishing their right to self-governance within the limits

[5] "Home Rule Municipality (Pennsylvania)" on wikipedia.org

Borough Building

Jeramar Plaza

Fig. 7. State College Borough Municipal Building streetscape

of Pennsylvania law and commencing on the first Monday of January 1976.[6]

[6] "Home Rule Municipality (Pennsylvania)" on wikipedia.org and "Home Rule Charter" on statecollegepa.us

State College Borough Municipal Council, Authorities, Boards, and Commissions

The Home Rule Charter provides for a Council/Manager/Mayor form of government. Under the Charter, there is a seven–member Council, elected at large, for four–year, overlapping terms. Council sets policy and has ultimate responsibility for the municipal government. Members of Council work on a part-time basis, without compensation. The Mayor is also elected at large for a four–year term. The Mayor presides at Council meetings, represents the Borough in the community, and acts as an ombudsperson in a number of areas. The Mayor's position is part-time.[7]

[7] "Mayor and Borough Council" on statecollegepa.us

Approximately 150 resident volunteers serve the Borough of State College on fourteen Authorities, Boards, and Commissions (ABCs). These groups were created by Council to assist the Borough in a variety of ways and include:[8]

- Authorities Board
- Board of Health
- State College Borough Water Authority
- Civil Service Commission
- Community Development Block Grant Citizens' Advisory Committee
- Design Review Board
- Historic Resources Commission
- Human Relations Commission
- Planning Commission
- Rental Housing Revocation Appeal Board
- Redevelopment Authority
- Transportation Commission
- Tree Commission
- Zoning Hearing Board

[8] "Authorities, Boards & Commissions (ABCs)" on statecollegepa.us

Borough Council has empowered the Design Review Board (DRB) and Planning Commission to review land development plans. Administrative procedures for reviewing land development plans are established in the Pennsylvania Municipalities Planning Code (MPC) through the State College Borough Zoning Ordinance.[9]

The DRB and Planning Commisssion may request that the Historic Resources Commission (HRC) comment on a land development plan for a site located in a National Register Historic District or for a building or structure that meets the criteria for historical significance established by the United States Secretary of the Interior.[10]

[9] "Relationship to Other Boards and Commissions" on statecollegepa.us

[10] "What is the Planning Commission?" on statecollegepa.us

[11] "Design Review Board" on statecollegepa.us

The Planning Commission reviews and comments on Comprehensive Plan issues; prepares zoning ordinance amendments for consideration by Council; reviews and makes recommendations on proposals to rezone land and text amendments; reviews and makes recommendations on land development and subdivision plans; reviews and comments on the Borough's Capital Improvements Program; and conducts other planning studies and performs other related projects.[11]

The Design Review Board (DRB) is advisory to the Planning Commission and Council. The DRB studies and inventories visual assets and liabilities of the community; reviews plans, activities and programs which bear upon the appearance of State College and its environment; initiates, promotes and assists in the implementation of programs to beautify the community; and prepares plans for the improved appearance of State College, whether it be on public or private property. The DRB also serves as the Sign Review Board for the Borough.[13]

[12] The particularities and scope of each proposal may necessitate additional steps in the review process. More detailed information on design review and permitting processes may be found at "Planning and Zoning" on statecollegepa.us

SIMPLIFIED FLOW CHART OF THE REVIEW AND PERMITTING PROCESS[12]

BUILDING PERMIT APPLICATION SUBMITTED TO PLANNING DEPT.

- Zoning Officer reviews permit application and makes notes
- Planning Department will rule on plans within 90 days of submittal

IF APPLICABLE,

DEVELOPMENT PLAN SUBMITTED 30 DAYS PRIOR TO DRB MEETING
- new construction and expansion projects

PRELIMINARY REVIEW
- Planning Commission has 30 days to provide summary of DRB comments

FINAL REVIEW
- Planning Dept. decision after Commission review or 60 day limit

IF APPLICABLE,

DEVELOPMENT PLAN SUBMITTED 30 DAYS PRIOR TO HRC MEETING
- new construction and expansion projects involving contributing properties

PRELIMINARY REVIEW
- Planning Commission has 30 days to provide summary of HRC comments

FINAL REVIEW
- Planning Dept. decision after Commission review or 60 day limit

ZONING PERMIT IS NOT ISSUED UNTIL RECORDED WITH THE CENTRE COUNTY RECORD OF DEEDS up to 90 days from plan approval date

ZONING PERMIT is issued; depending upon the scale of development, the process can take a couple of weeks to a number of months.

A **CERTIFICATE OF OCCUPANCY** is issued after a final zoning inspection.

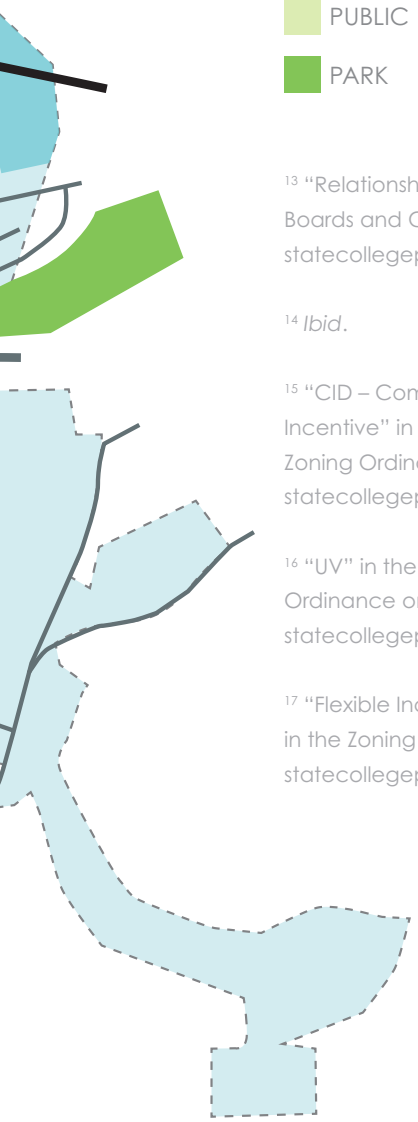
REQUIRED

APPLICATION SENT TO
- County Planning Agency & Fire Charter for land development review
- Borough Engineer for stormwater management plan


NORTH
Park Avenue
Shortlidge Street
College Avenue
Beaver Avenue
Atherton Street
Allen Street
Garner Street
University Drive
Easterly Parkway
Westerly Parkway
Waupelani Drive

SIMPLIFIED
ZONING DISTRICTS
IN STATE COLLEGE
BOROUGH 2014
[Fig.8.]

- UNIVERSITY PLANNED
- RESIDENTIAL
- COMMERCIAL/ MIXED USE
- URBAN VILLAGE
- PROF. OFFICE
- LIGHT INDUSTRIAL
- PUBLIC
- PARK



The Historic Resources Commission may also request the opportunity to review and comment on a land development plan for a site located in a National Register Historic District or for a building or structure that meets the criteria for historical significance established by the United States Secretary of the Interior. Such review by the Historic Resources Commission shall occur within the time periods for the review of land development plans established in the Municipalities Planning Code and the State College Zoning Ordinance.[14]

Special and Incentive Zoning Districts

The Borough offers the following incentive zoning districts with unique design guidelines to promote re-development.

Commercial Incentive District (Section 1850–1856)
State College Borough offers several zoning incentives in the Commercial Incentive District (CID) to promote ground floor commercial uses, mixed uses, owner-occupied housing, increased public amenities, energy efficient building design and construction, and superior building design.[15]

Urban Village District (Section 1924–1930)
It is the purpose of the Urban Village District to facilitate traditional neighborhood development, as defined in the Pennsylvania Municipalities Planning Code. To facilitate traditional neighborhood development, private owners, developers, and the Borough shall be encouraged to preserve and reuse existing buildings, many of which exemplify periods of the early development of State College; provide a mix of moderate-density residential, commercial, and office uses; undertake new construction that maintains the essential character of its surrounding environment, as expressed in the *Design Guidelines for Historic Properties and Historic Districts*; provide a pedestrian environment that is both pleasing and safe; and limit vehicular access to developments on arterial streets to minimize the impact on traffic safety.[16]

Flexible Incentive Zoning for the Urban Village District (Section 1928–1930)
Flexible Incentive Zoning (FIZ) was developed to create and preserve a community that benefits both residents and developers while maintaining the scale and character of the neighborhood. Flexible Incentive Zoning is a schedule of incentives that promotes the following neighborhood goals: historic preservation, compatibility of building scale and architectural character, landscape aesthetics, and open space needs of the community.[17]

Neighborhoods and Neighborhood Associations

The Borough of State College is comprised of twelve traditional residential neighborhoods including College Heights, Greentree, Highlands, Holmes–Foster, Nittany Hills East, Orchard Park, Penfield,

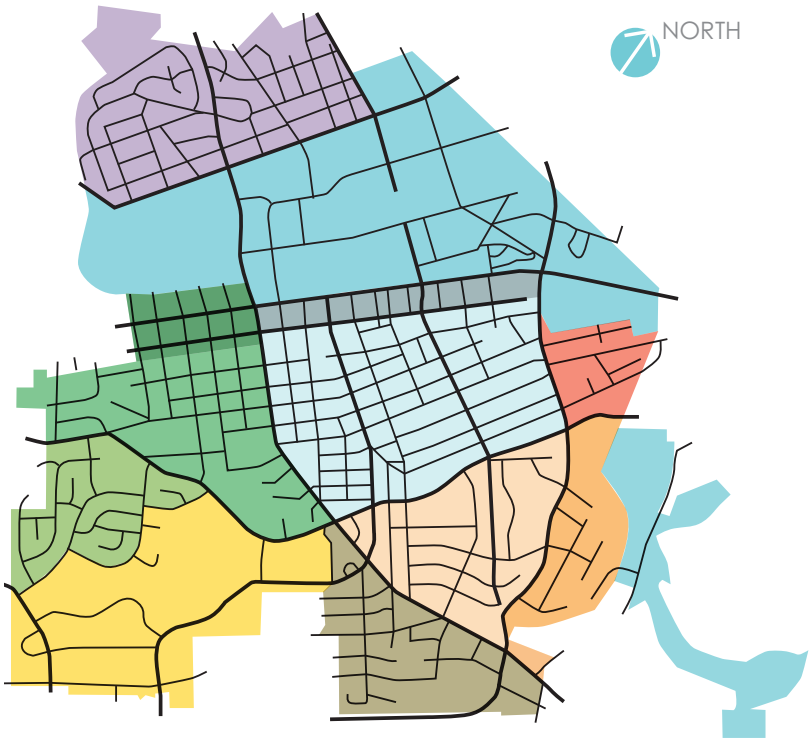
[13] "Relationship to Other Boards and Commissions" on statecollegepa.us

[14] *Ibid*.

[15] "CID – Commercial Incentive" in the Zoning Ordinance on statecollegepa.us

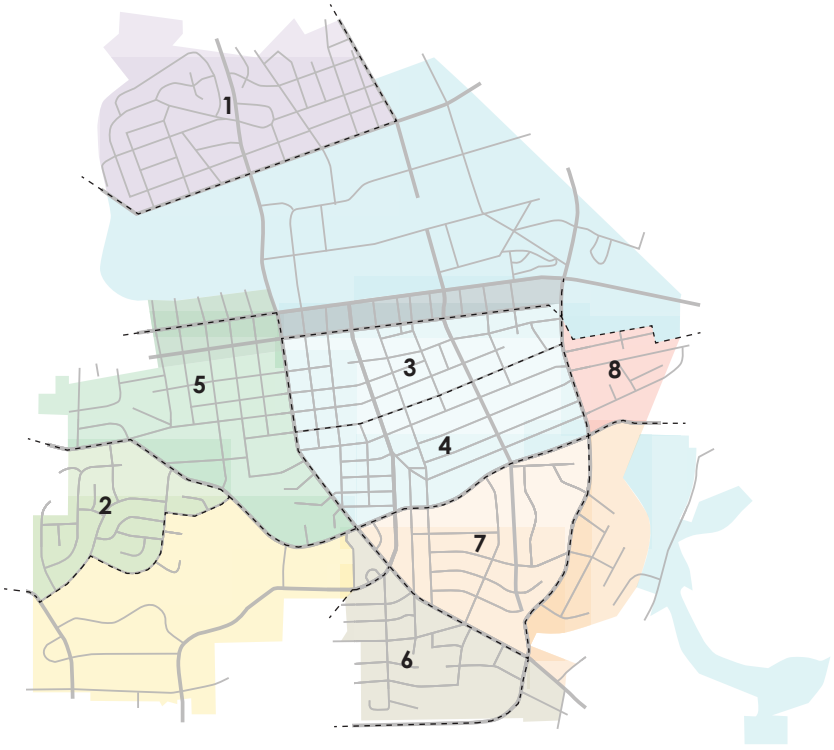
[16] "UV" in the Zoning Ordinance on statecollegepa.us

[17] "Flexible Incentive Zoning" in the Zoning Ordinance on statecollegepa.us



NEIGHBORHOODS IN STATE COLLEGE BOROUGH [Fig.9.]

- COLLEGE HEIGHTS
- UNIVERSITY PARK
- DOWNTOWN DISTRICT
- HIGHLANDS
- HOLMES–FOSTER
- WEST END VILLAGE
- GREENTREE
- ORCHARD PARK
- STATE COLLEGE SOUTH
- PENFIELD + NITTANY HILLS EAST
- VALLAMONT
- TUSSEYVIEW



NEIGHBORHOOD ASSOCIATIONS IN STATE COLLEGE BOROUGH [Fig. 10.]

1 COLLEGE HEIGHTS

2 GREENTREE

3 NORTH HIGHLANDS

4 HIGHLANDS CIVIC

5 HOLMES–FOSTER NEIGHBORHOOD

6 TUSSEYVIEW NEIGHBORHOOD

7 STATE COLLEGE SOUTH NEIGHBORHOOD

8 VALLAMONT NEIGHBORHOOD

State College South, Tusseyview, University Park, Vallamont, and West End. Since 2013, the following eight neighborhood associations have promoted the citizens' concerns.

NORTH HIGHLANDS ASSOCIATION
HIGHLANDS CIVIC ASSOCIATION

The North Highlands and Highlands Civic Association includes the Highlands Historic District and the Downtown District. The **Highlands Historic Neighborhood**, part of the **Highlands/Holmes Foster Historic District**, encompasses land and historic buildings associated with the residential history of State College from its incorporation in 1896 to 1941 and the beginning of World War II. It is roughly bounded by Highland Alley to the north; High and Keller Streets to the east; and Easterly Parkway to the south. Atherton Street represents its western edge. Eighty-seven properties in the Highlands are listed on the Centre Region inventory of historic resources of which fifty-six are fraternities.[18]

[18] "Historic District Walking Tour: Highlands Neighborhood" on statecollege-highlands.us

The **Downtown District** is the commercial center and heart of State College Borough. It contains retail stores, restaurants, a community library, churches, housing, municipal building, police station, and post offices. Historic structures are concentrated along, but not limited to, College Avenue, the lively border with The Pennsylvania State University's main campus.

Fig. 11. The orange dot on the key plan to the immadiate right designates the location of 327 Prospect Avenue of the residence depicted in figure 13.

Fig. 12. The key plan to the far right denotes the location of the street view along College Avenue (shown in figure 14) with an orange dot.

Fig. 13. Highlands

Fig. 14. Downtown District

THE PENNSYLVANIA STATE UNIVERSITY

The **University Planning District** is bordered by Downtown and Highlands/ Holmes–Foster and College Heights Historic Districts. University Park was first established as the Farmers' High School in 1855 and was renamed The Pennsylvania State College in 1874, eleven years after it was selected to be Pennsylvania's sole land-grant institution for higher learning. The Pennsylvania State University has over 45,000 students enrolled at the University Park campus.[19]

[19] "The Pennsylvania State University" on en.wikipedia.org

COLLEGE HEIGHTS ASSOCIATION

College Heights Historic District is defined as the area north of Penn State, east and south of Ferguson Township, and west of College Township. The street boundaries are Park Avenue to the south, Glenn Road to the west, Orlando Avenue to the north, and Holmes Street to the east. The neighborhood is essentially bisected into two areas (east and west) by North Atherton Street. College Heights was originally built on two farms, those of Hartswick and Krumrine families. The area was substantially developed between 1852 and 1930. By 1931, the neighborhood essentially comprised the same area as today.[20]

[20] "Historic District Walking Tour: College Heights Neighborhood" on statecollegepa.us

HOLMES–FOSTER NEIGHBORHOOD ASSOCIATION

The **Holmes–Foster Historic Neighborhood** is bounded by Westerly Parkway to the south; Buckhout Street to the west; Railroad Avenue to the north, and Atherton Street to the east. The Holmes–Foster

◀◀ Fig. 15. In the far left key plan, the orange dot locates Old Main on University Park campus.

◀ Fig. 16. The location of the residence at 303 Park Avenue in figure 18 is designated with the orange dot in the key plan to the immediate left.

Fig. 17. University Park

Fig. 18. College Heights.

▶ Fig. 19. 502 West College Avenue is the address of the converted student housing in figure 22. It is shown with an orange dot in the key plan to the near right.

▶▶ Fig. 20. The house in figure 23, designated with an orange dot, faces the Community Field park along Prospect Avenue.

▶▶▶ Fig. 21. The newer home in figure 24 is at the corner of Hill and Crabtree Alleys.

neighborhood includes the **Urban Village**. While one house dates from the last half of the nineteenth-century, the remainder provide a rich sampling of early twentieth-century design and construction. Included are pattern book, mail-order, and architecturally designed houses with a diversity of age, style, and scale. Mature trees, many of them fifty or sixty years old and with circumferences of over sixty feet, line and serve as a canopy to the streets in the Holmes–Foster neighborhood, reflecting the Borough's early commitment to the planting of shade trees.[21] The Historic District is a smaller area within this neighborhood.

[21] "Historic District Walking Tour: Holmes–Foster Neighborhood" on statecollegepa.us

GREENTREE ASSOCIATION

The area of **Greentree Neighborhood** was annexed into the Borough in the late 1950s. Prior to its development as a subdivision, the neighborhood was agriculatural fields, the location of the former Storch Farm. Greentree neighborhood development began in the mid-1970s. The most intense period of development was in the mid– to late-1980s.[22]

[22] "Background Greentree – Trends and Conditions Chart" on statecollegepa.us

The **Orchard Park Neighborhood** is the southernmost neighborhood in State College Borough. It is bordered by College Township to the east and southeast; Greentree Neighborhood and Ferguson Township to the west; and Holmes–Foster Neighborhood to the north. Orchard Park includes residential, commercial strip, and the State College Area High School buildings as well as a community pool.


Fig. 22. West End Village.


Fig. 23. Holmes–Foster.


Fig. 24. Greentree.

STATE COLLEGE SOUTH ASSOCIATION

The **State College South Neighborhood** describes the path of southward or southeastern expansion of the borough, primarily after World War II. The South neighborhood has a triangular shape and is defined by South Atherton Street on the south, and University Drive on the east with the Parkway closing the triangle on the north and west.

Penfield Neighborhood shares its western border, University Drive, with the South neighborhood. Lederer Park is on its northern border, and Penfield's irregular eastern boundary follows the eastern ends of properties on the east side of Penfield Road south to the borough line just short of South Atherton Street.

The neighborhood of **Nittany Hills East** shares its western boundary with Penfield's eastern line. South, Penfield, and Nittany Hills neighborhoods were added to the borough over many years (1930–1969) in six separate annexations including Centre Hills Country Club, Lytle, South Hills, White Oak (Homan), Gerhardt Tract, Penfield, Nittany Hills East, and College Township additions.[23]

TUSSEYVIEW NEIGHBORHOOD ASSOCIATION

The **Tusseyview Neighborhood** is characterized by residential and commercial areas. It is bordered to the north by South Atherton Street lined by restaurants and strip malls, although it is primarly composed of

[23] Chesworth, *Story of the Century*, p. 158.

◀◀ Fig. 25. In figure 28, this multi–family housing unit is in the Retreat along Waupelani Drive designated with an orange dot in the key plan to the far left.

◀ Fig. 26. This residence at 606 Nimitz Avenue is located at the orange dot in the key plan to the immediate left.


Fig. 27. Orchard Park.


Fig. 28. Penfield/ Nittany Hills.

single family houses from all periods of history of State College Borough. Tusseyview extends to the edges of College Township, roughly to University Drive extension in the southeast. In fact, Tusseyview boasts of views of the surrounding areas including University Park campus and Tussey Mountain, its namesake, due to its location atop a rise in elevation.

VALLAMOUNT NEIGHBORHOOD ASSOCIATION

The **Vallamont Neighborhood** is a small area northeast of University Drive characterized by a mix of residential, commercial, and office developments securing the northeast edge of the Borough. Vallamont sits east of University Drive and north of Easterly Parkway expanding into College Township. This neighborhood includes many new residences and other buildings employing a distinctive contemporary design aesthetic.

Each neighborhood in State College Borough has its own unique character related to its historical annexation and development. Maintaining this variety strengthens the tapestry that comprises the rich design context within the borough.

▼ Fig. 29. The key plan below denotes the location of 1146 Centre Lane (shown in figure 34) with an orange dot.

Fig. 30. The orange dot in the key plan to the immediate left marks 1309 Old Boalsburg Road, which is depicted in figure 35. ▶▶

Fig. 31. Seen in figure 36, 970 McCormick Avenue is located at the orange dot in the key plan to the far right. ▶▶▶

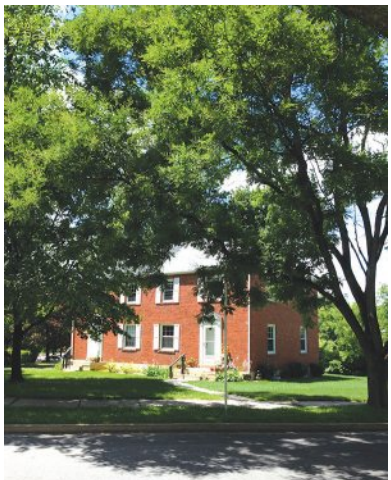


Fig. 32. State College South.


Fig. 33. Tusseyview.


Fig. 34. Vallamont.


HOTEL STATE COLLEGE
THE CORNER ROOM
NITTANY NEWS
JACK HARPER
CATHAUM THEATER
PENN TRAVEL
HOTEL STATE COLLEGE
A TRANSIENT HOTEL
CORNER
Cathaum
SOUTH
26
College Avenue

02 Aesthetic Design and Historical Context

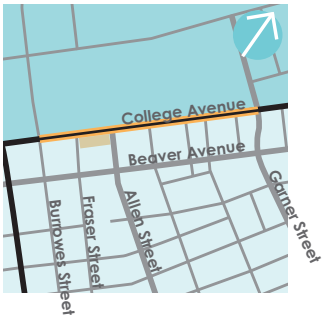


Fig. 35. Many of the commercial buildings along College Avenue between Burrowes and Garner Streets retain their original historical character. The photograph below reveals that the block between Fraser Street and College Avenue has remained largerly unchanged since the 1970s.

Historical Development of the Borough of State College

State College Borough was incorporated on August 29, 1896 through a coalition of local ironmasters and farmers. The Farmers' High School, the future Pennsylvania State University, was established in 1855. Over the years, the populations and the boundaries of the town and gown expanded with College Avenue remaining the town center. In addition to the historic buildings in the downtown district, the surrounding neighborhoods also contain many historic residences. While three neighborhoods are listed on the National Historic Register (College Heights, Holmes–Foster, and Highlands) due to the large number of contributing historic properties, there are many contemporary buildings peppered throughout the Borough. Therefore, it is important to create a sense of cohesiveness within a diverse fabric.

Architectural elements help a building to harmonize with its neighbors, as well as give it an individual personality. Historic neighborhoods derive some of their charm from well–balanced variations of a particular building style. In a highly developed area like the State College Borough, existing buildings of older styles surround most new construction sites.

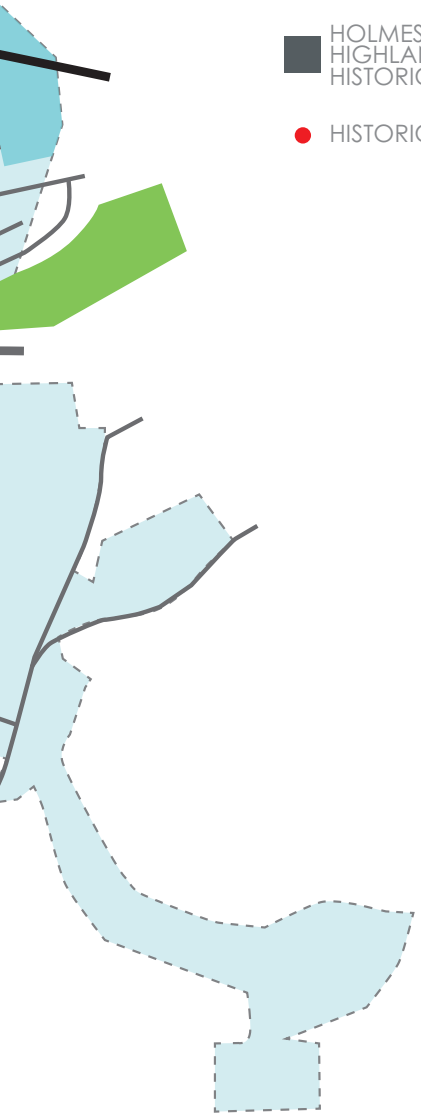
Neighboring Structure Compatibility

Every new or renovated building is set within a context of existing structures. Design for new buildings or renovations should be compatible with neighboring structures. Compatibility does not mean making structures identical in appearance, but rather drawing upon basic characteristics of neighboring buildings. While certain aspects such as building orientation, size, and massing are generally set within the built–out areas of the Borough, architectural details such as windows, doors, materials, and colors in conjunction with thoughtful site design and landscaping can produce a positive impact.

Fig. 36. College Avenue between Allen and Fraser Streets in the 1970s. [Photo provided by the Friedman family]


NORTH
Park Avenue
Shortridge Street
College Avenue
Beaver Avenue
Allen Street
University Drive
Easterly Parkway
Atherton Street
Westerly Parkway
Garner Street
Waupalani Drive

DISTRIBUTION OF CONTRIBUTING PROPERTIES IN **HISTORIC DISTRICTS** IN STATE COLLEGE BOROUGH [Fig. 37.]



Contemporary buildings can fit in well with older structures by ensuring that a few basic characteristics are similar in appearance. The key elements impacting compatibility are building height, roof form and pitch, massing, and scale.

Compatibility can be achieved through a correspondence in height and massing. Buildings appear consistent when the difference of the new building's height is within one story of the predominant building heights on the street. Compatibility is also promoted in regards to massing when the general composition of the building's form is similar to nearby buildings. For example, are the neighboring structures simple rectangular forms or are they more complex, articulated facades with projecting bays?

The use of similarly-scaled defining features can aid in compatibility. This relates to building detailing and architectural features, as well as how a building responds to pedestrians. For example, are there windows for a passerby to engage in viewing?

Complementary buildings along a street provide an environment that is more welcoming and less distracting and disorienting. According to the article, "Enhancing Downtown's Sense of Place," from *Main Street News* (Sept. 1999), historical buildings within a downtown fabric can serve as a guide for the design of new building to help create a cohesive sense of place.

Certain buildings' features are detrimental to creating human scale and are inappropriate in a Borough like State College. Blank walls, flat or unarticulated entries, and smooth or panelized building materials should be avoided. Instead, pedestrian–interest amenities, such as porches, awnings, planters/flowers, and seating should be included.

Land development plans are required to show proposed new buildings in the context of their surroundings (Section 305.a.22).

Mass, Architectural Style, and Scale

The size of a new building might be determined by the site or by the market demand for that use. Regardless, the building design's style and massing should create a well–proportioned and unified building form and exhibit an overall architectural concept. That concept should also be in keeping with the architectural characteristics of surrounding buildings, especially historic structures. Attention to these issues can help new buildings be more compatible with their neighbors and enhance our comfortable downtown setting.

A key aspect of building size and mass is its degree of "human scale," which refers to the way its design is visually divided into components that people can relate to. A building has a good human scale if its details, elements, and materials allow people to feel comfortable approaching and using it.

Buildings can promote a better sense of scale by expressing a basic three–part organization to the building: 1) the ground floor, 2) the

Fig. 38. 700 West College Avenue.

middle floor(s), 3) the roof, parapet, or cornice.

A building's mass refers to its shape and composition of forms. As the size of a building increases, the complexity of its massing should also increase to provide suitable visual interest and maintain human comfort.

Factors to consider when considering scale and massing issues:

- Building design should respond to lot size, lot shape, and the lot's orientation along the street (corner, mid–block, etc.)
- Type and amount of separation between lots (e.g. separation by property line only, by an alley or street, or by other physical features such as grade changes).
- If the existing context is not so well defined, or is undesirable, a well–designed, new project can become a pioneer with the opportunity to establish a pattern or identity from which future development can take its cues.

Architectural features that hinder human scale should be avoided including:

- Flat or unarticulated entries
- Blank walls and flat or continuous curtain walls
- Large panelized building materials
- Lack of pedestrian amenities

State College has grown and developed since the late 1800s. The borough is fortunate to have examples of many different architectural styles. A good reference regarding the various styles is the Centre County Historic Society's "Centre County Architecture, A Guide to Styles."[24]

Due to the pedestrian nature of downtown, building exteriors should be

Fig. 39. After a fire took the original structure, Weber Murphy Fox designed this house to both anchor the corner and to blend into its West College neighborhood employing similar materials, massing, and architectural details to mitgate the height difference with adjacent structures.

[24] "Centre County Architecture, A Guide to Styles" on centrecountyhistory.org

constructed of durable materials that are attractive when viewed up close. Materials that have texture, pattern, or lend themselves to high quality detailing are encouraged.

Facade Articulation

Architectural features of the facade can make a building a more pleasant environment for living and working, enhancing both beauty and ease of use. They can help users to locate a building entrance, or offer outdoor shelter from the weather. Facade designs also help a contemporary building to complement its older neighbors, for individual elements can evoke a style without copying it.

A building set at the edge of the sidewalk can enhance its curb appeal with a recessed entrance. It should be sized to allow for: door clearance, sidewalk signs, window displays, and perhaps space for a patron to shelter without blocking the door. Entrance alcoves can be styled to suit and promote the character of a business, strengthening both its attractiveness and its marketing message. An alcove lined with storefront windows expands street–side display space.

Fig. 40. The renovation of a classic Urban Village home matches the new garage and addition to its original architectural features.

Porches can make a neighborhood feel more safe and friendly. They provide a sheltered and semi–private spot where residents can observe street life. Street watchers of a benevolent spirit can discourage public misbehavior simply by providing witnesses. A porch also creates a transition space between the private interior and the public world, providing outdoor shelter. Please note that a porch must have a railing, according to requirements of local building codes.

As porches provide a transition space in residential structures, a canopy or awning functions in a similar way for commercial buildings providing the shelter of a roof, yet encouraging foot traffic underneath. An awning can both accent and shade an entrance or display window.

Fig. 41. Trout Residence garage.

Fig. 42. Trout Residence addition and renovation, 2011.

The shelter provided by an awning invites a passerby to linger at a window display, cafe or other outdoor seating area.

Street corners are common areas for informal interaction. Buildings at corners can use facade details and architectural forms to reinforce the street corner and enhance the street level environment at these key pedestrian areas.

Columns can support a roof, define an outdoor area or pathway, emphasize a building entrance, or visually break up a large and imposing facade.

A building with a sloping roof can use dormers to expand useful space and enhance natural lighting on the topmost floor. Dormers also provide visual interest at the roofline.

In the Commercial Incentive District (CID), street-facing building facades are required to be staggered or offset in order to break the plane by forming recesses, projections, and other displacements. (Zoning Ordinance, Section 1853)

In the CID, bland walls that are devoid of architectural detail are prohibited. Ground floors are required to have an architectural treatment that distinguishes it from floors directly above. (Zoning Ordinance, Section 1853)

In the CID, large areas of bland walls are prohibited and ground floor walls are required to have an architectural treatment that is distinguished from upper floors. Facade lighting is also regulated by the incentive zoning ordinance.

Building Materials, Finishes, and Accent Lighting

Downtown buildings, especially at street level, should be surfaced with durable, fire–resistant materials that promote an urban feel. With any finish, long–term maintenance is necessary for continued aesthetic appeal. Durable materials are especially important at the ground level.

A variety of surface materials can beautify a building facade. The play of colors, textures, relief, and lighting help a building to either harmonize with its neighbors or to stand out among them.

A brick facade is enlivened with variations in brick patterns. A relatively small amount of patterning can break up a large wall, emphasize proportions, and highlight entrances or windows.

Painted metal panels and pre–cast concrete and masonry units can provide a wide range of colors and textures. Relief patterns create interest in metal panel systems and precast concrete panels. Natural and manufactured stone products can provide contrast and accent to a brick or stucco facade.

An abundance of glass panels and operable windows open up a facade allowing light and air to enter a building as well as inhabitants to enjoy lively street views and natural vistas. Glass once entailed higher costs for building climate control. Today new types of engineered glass, coatings and structures, all increase its insulating capacity while diminishing internal solar heat gain (a.k.a. the ‘greenhouse effect’).

Mosaic patterns can have an intense impact, even if used in small amounts. Mosaic tiles can withstand outdoor use, given appropriate materials and construction techniques.

Lighting fixtures of various shapes, styles, and colors add interest to a facade. At night, patterns of light on a facade have a dramatic effect. Building facade lighting, brightness and fixture type, are regulated by the zoning ordinance. (Zoning Ordinance, Section 2706.f)

Windows and Glazing

Windows are a key element that form a bridge between a building's interior and life in the neighborhood outside. Artfully designed windows are responsive to prospective uses, create desirable spaces for building occupants as well as stimulating and attracting the passerby.

Fig. 43. The photograph below of College Avenue in the evening hours was taken at the location of the orange square in the key plan below in the direction of the arrow.

Street level windows, when occurring at a frequent interval, generate interest in a building. Street side windows should be portals to visually interesting, active spaces. Office, retail, and commercial windows alike should afford dynamic views of human activity, keeping interesting products, processes, and patrons within eyeshot of the curious passerby. Display spaces should be designed to accommodate frequent changes and multiple configurations. There are many techniques for reducing glare on display windows including shading devices and solar orientation..

In "Every Business Has a Billboard" from *Main Street News* (April 2004), Mark Miller and Susan Shaddox demonstrated that pedestrians pass window displays in about eight seconds; motorists pass in only one second. They recommend that businesses capitalize on their window displays through the use of clean, visual, colorful, and frequently changing themes. In the Commercial Incentive District and in the pedestrian–oriented use portion of the Commercial District, at least 50% of any ground floor exterior wall facing a street must be devoted to windows. (Zoning Ordinance, Sections 1850.b and 1802.g)

Fig. 44. Summer evening on College Avenue.

Signage

The Borough's sign ordinance regulates the number and size of signs permitted per premise. This ordinance also requires a license to be obtained before erecting any exterior sign including signs on or behind windows that are visible from the street or sidewalk. Sandwich–board signs are also required to be licensed. Lights illuminating signs, awnings, and canopies are regulated by the Borough's lighting ordinance. (Zoning Ordinance, Section 2706.g)

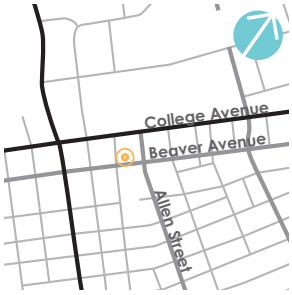
An exterior sign is a business' signature. It should convey the unique personality of a business, as efficiently as possible. A good sign helps people to find the business, and also entices them to enter a storefront.

Clarity and legibility are crucial to an attractive sign. A sign with too much information confuses the viewer. Although a single style of lettering will make the text easier to read quickly, signs containing more information would benefit from dividing the text into major and minor parts. In such cases, meaning and legibility can be enhanced by using two different font and/or font sizes. Either way, a sign should be easy to read by a person on the sidewalk and from a passing car. A graphic image can convey both the type of a business and its personality. The use of distinctive colors, shapes, or materials can help a sign stand out among the visual clutter of the urban environment.

◀◀ Fig. 45. The key plan to the far left depicts the location of the Green Bowl on Beaver Avenue with an orange dot.

◀ Fig. 46. Barefoot is a shoe store on College Avenue between Allen and Pugh Streets. It is shown with an orange dot in the key plan below and to the immediate left.

▼ Fig. 47. In the key plan below, the orange dot denotes the location of the Shandygaff and Adam's Apple on Calder Way.



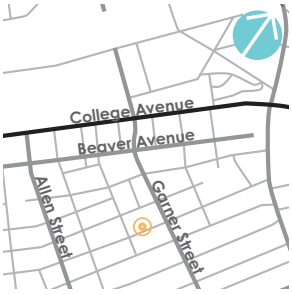


Fig. 48. Green Bowl, Beaver Ave.

Fig. 49. Barefoot, College Ave.

Fig. 50. The Shandygaff, and Adam's Apple, Calder Way.

Sign placement should maximize visibility, but not cover important architectural elements of surrounding buildings Well–maintained signage shows off the status of a business while a damaged or faded sign suggests that a business is in trouble.

The total size of an establishment's signs is also regulated by Section 2706 of the zoning ordinance and subject to approval, including pole signs, placards, facade signs, window signs, and door signs.

Flashing signs and signs with moving parts are prohibited due to the excessive visual noise created by such signs. Furthermore, signs advertising businesses not located at the premise are also prohibited. In other words, billboards are not allowed in the borough.

All proposals for signs in the business district must be reviewed by the Design Review Board before a permit can be issued. Application for sign permits which require the Board's review must be received by the Zoning Officer no later than the last working day of the month.

A sign permit is required prior to erecting any advertising sign. Changing a sign face or the information contained on a signboard requires a new permit. Illuminated signs also require an electrical permit.

Visit statecollegepa.us to obtain a sign permit application.

▼ Fig. 51. Many unique signs line College Avenue including those featured in figure 56 and located with an orange line on the key plan below.

Fig. 52. Irving's is also located on College Avenue near its interseciton with Allen Street. See orange dot in key plan below and to the immediate right. ▶▶

Fig. 53. A fixture in town, Rinaldi's Barber Shop on Allen Street, has a classic sign and barber's pole. ▶▶▶

Fig. 54. Various, College Ave.

Fig. 55. Irving's, College Ave.

Fig. 56. Rinaldo's, Allen Street.

03 Healthy Streetscape Design

Fig. 57. The Arboretum at Penn State, depicted with orange in the above key plan, is located along Park Avenue and Shortlidge Street. Planted with many indeginenous species of trees and other plants, the Arboetum provides an excellent specimen garden for the Borough.

Planning for Vitality and Diversity

The sidewalk and the streetscape are public areas that unify adjoining buildings and spaces. The way that the streetscape is presented can change the entire feel of a community. The overall character and attractiveness can create a sense of town and place just by incorporating unifying characteristics.

Street trees can be used to create an overhead plane or columnar rows that draw the eye into a location. They create a cooling effect and create shady pedestrian zones. They serve as edges and boundaries to define pedestrian spaces.

Lighting can be used not only to illuminate the paths and outdoor spaces at night but also to create visual interest and uniformity in the daylight. Many interesting architectural lighting fixtures and base poles can be used to add decoration to the streetscape.

Paved areas can be expressive by using unique paving materials. By integrating natural stone, granite, or concrete with economical brick pavers, a sidewalk can become a work of art that will last for many generations.

Outdoor seating can unify a space by placing benches or low walls in strategic locations to attract people into a common area and give those that need to rest a place to so do, such as the stone walls along the university side of College Avenue between Allen and Pugh Streets.

Plentiful trash and recycling receptacles are important in the sidewalk areas to prevent littering, encourage recycling, and promote a clean and inviting environment.

Fig. 58. View along Park Avenue at the Arboretum at Penn State.


NORTH
Park Avenue
Shottidge Street
College Avenue
Beaver Avenue
Allen Street
University Drive
Easterly Parkway
Atherton Street
Westerly Parkway
Garner Street
Waupalani Drive

LOCATIONS OF **BIKE PATHWAYS** IN STATE COLLEGE BOROUGH [Fig. 59.]

BIKE LANE

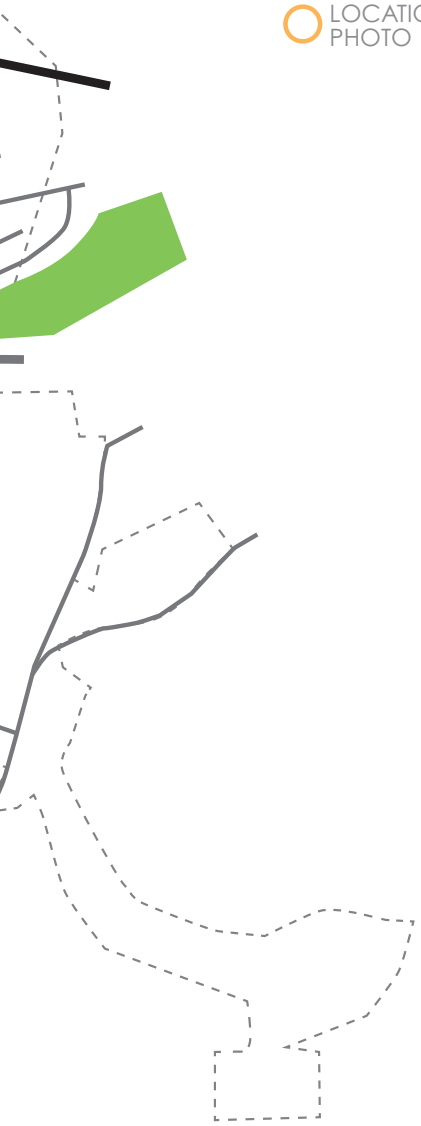
BIKE PATHWAY

SHARED PATHWAY

COVERED BIKE RACK

BIKE RACK

LOCATION OF STREET PHOTO [below right]



Vehicular, Bicycle, and Pedestrian Access

The treatment of the area between the building and street is key to the look and feel of a community. To create and maintain an engaging experience, it is necessary to visually and physically connect activities at the street level of the building with the adjacent sidewalk and street. Downtown's hospitality is greatly enhanced when the transition space between buildings and the sidewalk "reach out" and "embrace" the pedestrian and street zones.

While a building's architectural design and site orientation are important, the site design must also include special attention for the space between the building and the public right–of–way (sidewalk/ street). This transition area should be designed to enhance both the building and the adjacent public realm. By designing the transition space to relate to the character and style of the building, as well as to the prevailing character of the surroundings, a site's development can help reflect and enhance the vitality of State College Borough. This is accomplished through providing a setting for lively interchange between passerby and the building, such as with seating and cafés; through details of physical elements, such as walls and landscaping; and through attention to unique features, such as public art.

Careful consideration of the interaction between vehicles, bicycles, and pedestrians will strengthen building access and streetscape character.

How the use of cars is incorporated into the design of buildings has an important influence on the character of downtown. Due to rising land values, new construction often includes vehicle storage as parking decks or garages. There are also instances where the buildings upper floors "bridge over" the site's vehicular access, thereby gaining floor area while still enabling access to the rear of a site. The goal is to reduce the visual impact of vehicular access and enhance safety for drivers and pedestrians.

Fig. 60. Downtown Streetscape on Allen Street.

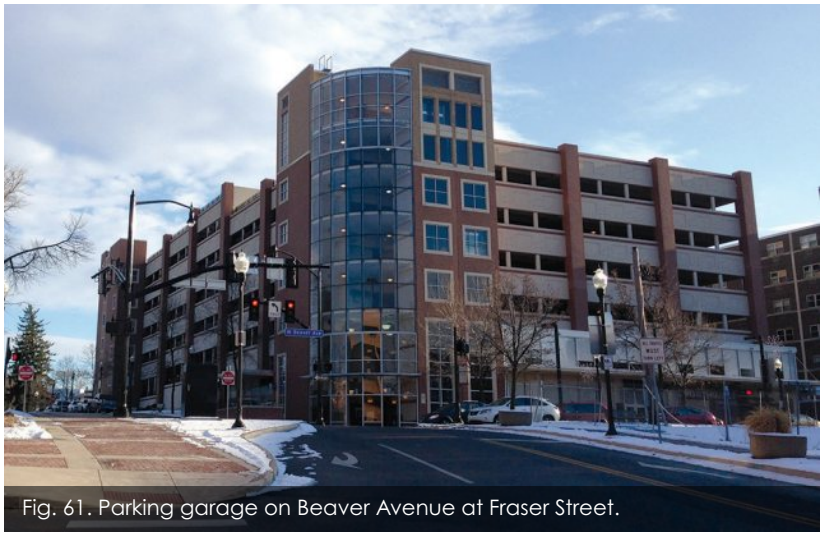


Fig. 61. Parking garage on Beaver Avenue at Fraser Street.

Fig. 62. In the key plan above, the location of the parking garage on Beaver Avenue is marked with an orange dot.

The presence and appearance of a garage entrance should be minimized so that it does not dominate the street frontage of a building. Considerations include:

- Locating the entry on the side of the facade where it will draw less attention than if it is centered
- Recessing the portion of the facade where the entry is located to help conceal it
- Extending portions of the structure over the garage entry to help conceal it

Compared to the pedestrian entrance, the garage entrance should be subordinated in terms of visual impact, prominence on the streetscape, location, and design emphasis. Often, the relative importance of the garage entrance can be reduced by enhancing the pedestrian entrance.

Site plans should balance the need to provide adequate vehicular access with the need to eliminate unnecessary driveway entrances. Building drop–offs and turnarounds should be designed with the safety of shared users, such as pedestrians, in mind. Placing an exit several feet back from the sidewalk will ensure the driver has good visibility of pedestrians as they move toward the street.

Sidewalks should take priority over driveways as drivers are legally required to yield to pedestrians on sidewalks. The driveway should ramp up to sidewalk level at the curb; the sidewalk should not ramp down to meet the driveway.

If the building's primary function is as a public garage, the entry may be designed to be a more prominent part of the facade.

Drive–through windows can incorporate an architectural covering consistent with the design theme of the building, which will add comfort for users and reduce the overall appearance of the building mass.

Safety is enhanced when a garage entry is located to provide adequate queuing space and lines-of-sight are available on the access street.

Pedestrian Circulation and Wayfinding

The ability of a building's different users to move through space and find their destinations is critical for successful integration into the community. Whether the goal is the convenience of coming and going, spontaneous attraction of patrons, or facilitation of people watching, careful site planning and appropriate building amenities will assure high quality circulation.

Entrances to high traffic spaces should be placed in prominent locations visible from multiple directions. Surveying surrounding linkages can determine where building users will be coming from and going to (e.g. bus stops, parking garages, related services, bicycles racks). Circulation routes should be appropriately sized to handle peak flows and to follow the path of least resistance.

Adequate setbacks facilitate cafés and lingering places while providing space for pass through circulation.

When retail uses are intended, siting, site–lines, and hardspace elements can be utilized to draw patrons into or through the site. This is particularly important if retail and commercial uses are anticipated.

People feel welcome only if they feel safe. Thus, paths should be: visible to possible observers; scaled to fit peak–time use so that pedestrians do not feel crowded; surfaced to provide secure footing; well–maintained; and free of obstacles. Zoning regulations require a minimum of one walkway connection between the main entrance of any new building and the public sidewalk. (Section 305.f)

People generally prefer to take the shortest, straightest route to their destination. Paths should be placed where patrons want them to be;

Fig. 63. Various wayfinding signs proposed in the State College Downtown Master Plan 2013, www.statecollegepa.us

Fig. 64. Saints Cafe, Beaver Avenue between Fraser and Allen Streets.

otherwise, they will make their own unpaved ones. A knee–high barrier can encourage patrons to stay on the paved path. Dense shrubbery, a wall, a chain strung between posts, and a raised planting bed are a few examples of appropriate barriers. Most people would rather stay on the path than high–step over a barrier. To retain visibility for safety and navigation, a barrier should not exceed waist–height.

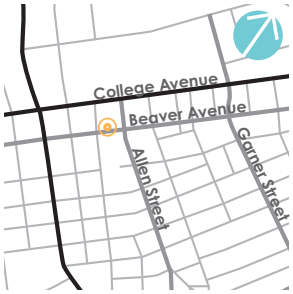


Fig. 65. The orange dot in the key plan above denotes the downtown location of Saint's Cafe.

Sidewalk Paving and Crosswalks

Paving sets the foundation for and unifies all other streetscape elements. A well–designed paving pattern can delineate circulation and separate spaces within the same plane to enhance pedestrian zones.

Treatment of the ground–plane through use of varied or uncommon paving materials can add visual richness to the environment through texture and color. Examples of options include flagstone, brick pavers, granite, grass pavers, limestone or sandstone. These add a richness and texture that is far superior to concrete or asphalt and will last for generations.

In addition to a desire for unified furnishings and materials along College Avenue, there is a desire to have coordinated street furniture, lighting and materials throughout downtown State College. The brick and concrete paving palette used recently on Fraser Street and Beaver Avenue is well received. While the paving pattern does not need to be duplicated on other streets, the materials palette of brick and concrete should be maintained. Borough staff recognize that brick sidewalks are often easier to repair than concrete and that there are few maintenance problems provided they are installed properly.[25]

Using local materials in other areas of the Borough not only contributes to a cohesive local character, but can also have lower environmental impact by saving resources used to transport materials long distances.

[25] "State College Downtown Master Plan 2013" (pg. 227) at statecollegepa.us

Fig. 66. Fraser Street between College and Beaver.

Fig. 67. Pollock Road near the Hetzel Union Building.

Fig. 68. The location of the Fraser Street view is shown in the key plan above with an outlined orange dot. The Hetzel Union Building is at the orange square.

Sidewalks and plazas are principly places of pedestrian movement and casual social interaction.

The use of dry laid pavers, rather than asphalt or concrete, can help to decrease surface runoff into the stormwater system. If they must be used, both concrete and asphalt can be made to be porous to reduce the runoff. Coordination with the Borough is required to determine the appropriateness of installing these options.

Organizations have successfully used engraved pavers to assist in fundraising, which also results in a unique walkway for their location.

Sidewalks and plazas are principly places of pedestrian movement and casual social interaction. The selection of paving materials can complement and enhance this function while also considering future maintenance needs.

Continuing sidewalk paving through a crosswalk enhances the visibility of the walk to oncoming traffic.

Street and Property Lighting

In State College, illumination is an essential element during the short days of winter and the warm summer nights. Lighting is an important element to provide guidance and safety during the evening hours.

Lighting is also an important design element not only as an aesthetic feature, but also as a safety feature. Well–designed lighting is essential in pedestrian zones and can guide visitors to downtown after daylight hours.

The architectural quality of streetscape fixtures has improved greatly over the last couple of decades. A developer has thousands of styles to choose from and should consult an expert in lighting design during the planning phase. While the current street lighting in the Borough is a combination of shoe box, acorn, shepherd hook and cobra head fixture styles. It has been proposed to replace the shoe box style fixtures with acorn fixtures on sections of Beaver, College, and most connecting

streets. Acorn fixtures have recently been installed in selected sections of Beaver and College and are present on Fraser and Allen streets within the downtown area.

There are also lighting considerations that will reduce energy costs and help to minimize the impact on the environment. While lighted pathways encourage defined circulation patterns, too much light can be detrimental.

Light pollution is excess or obtrusive light created by humans. Among other effects, it can disrupt ecosystems, cause adverse health effects, obscure the stars for city dwellers, interfere with astronomical observatories, and waste energy.[26]

The Borough's zoning ordinance regulates lighting on private property. Key elements regulated include fixture type, brightness, mounting height, and light trespass across property lines. (Borough Zoning Ordinanace, Part K, Sections 2701 et. seq.) Light pollution should be considered when choosing how to light a building and it is always best to have little or no glare.

Street Trees and Perimeter Plantings

State College Borough has a long history of managing its street trees. The State College Borough established a Tree Commission in 1923. State College has an annual Arbor Day celebration, and since 1984, the borough has annually received the Tree City USA award from the Arbor Day Foundation.

The Tree Commission is an advisory board to the Public Works Director and provides recommendations on tree removal and plantings, reviews tree requests, and makes suggestions for tree maintenance. The Commission is also a good source for information on types of trees that are appropriate for particular conditions.

A street tree protection plan is required for all development plan submissions.

[26] darksky.org

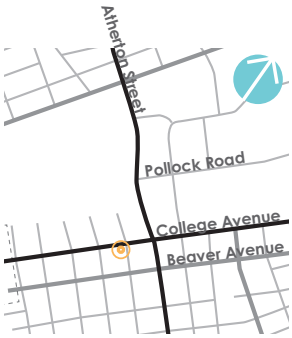


Fig. 69. Location of view below is designated with an orange dot in the key plan above.

Fig. 70. Street trees lining West College Avenue.

Shade trees are a critical design element of the streetscape environment. They provide shade, texture, color, scent, and environmental well–being. Without this urban forest, the street appears harsh and uninviting. Investing in trees during development can add economic benefit to the area for hundreds of years. In a 2005 study by Kathleen Wolfe, residents surveyed in small cities rated the character of places with large trees 35% higher than atmospheres without trees.[27]

Consulting the State College Borough Municipal Tree Plan is important when selecting specimens of trees. This plan includes habitat, tolerance, and seasonal qualities.[28] Site development plans including landscaping designs must be sent to the Borough Arborist for review.

Appropriately sized trees should be chosen for the location and setting. Trees should be placed to provide shade for parked cars and in pedestrian seating areas.

Thought should be given to the surrounding trees and environment. It is best to incorporate species that complement each other, are best for the environment, and have limited pest problems. During development projects, protect existing trees and shrubs according to zoning laws in a method approved by the landscape architect for the project. Erecting physical barriers beyond the drip-line of trees is generally the most effective way to protect existing vegetation.

Trees between the sidewalk and street are cared for by the Borough. Borough zoning regulations require a street tree protection report to be included as part of all development plan submissions to ensure proper protection of street trees during construction of new buildings. (Zoning Ordinance, Section 305.a.37)

Trees planted within paved areas will only thrive in a properly sized planting area and in a rooting medium protected from compaction. In addition, the surface treatment should protect people from tripping.

[27] www.cfr.washington.edu/research.envmind/consumer.html

[28] "Municpal Tree Plan" on statecollegepa.us

Fig. 71. The key plan above shows the approximate position of the photo below.

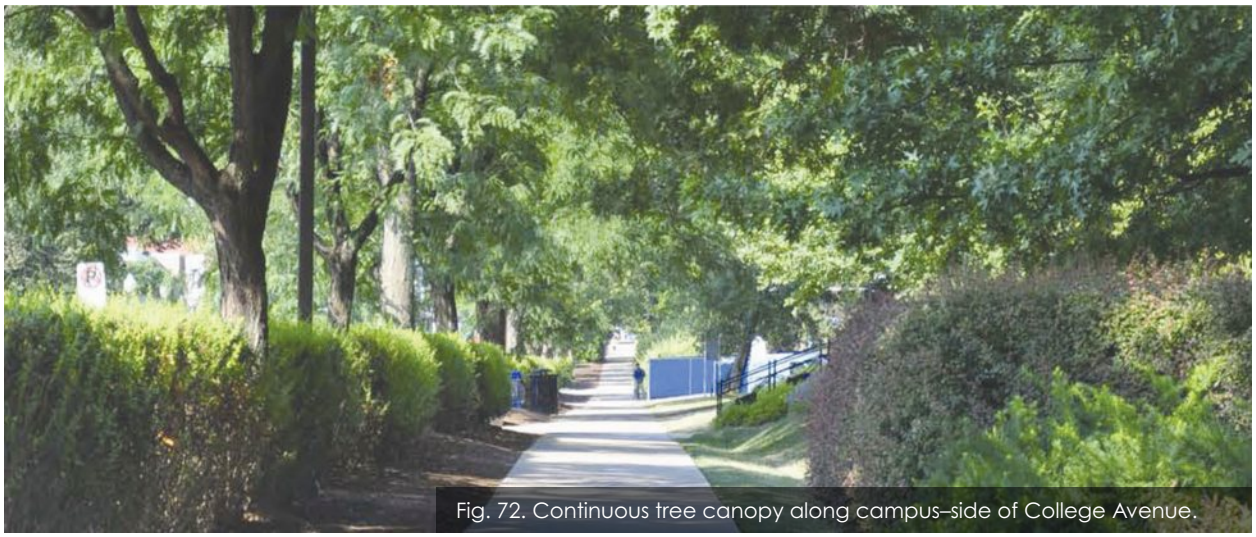


Fig. 72. Continuous tree canopy along campus–side of College Avenue.

Fig. 73. Borland Building on Curtin Road at Shortlidge Street.

Fig. 74. The recent renovation of Borland Building received a LEED® gold rating. Its location is designated with an orange dot in the key plan above.

A key component of the outdoor environment of State College Borough is the presence of vegetation. The variety, life, and interest that plants provide contribute greatly to the goal of enlivening the places between our buildings and the street. The softness, movement, and seasonal changes of plantings provide a welcome contrast to the firmness and solidity of walls and pavement. With proper consideration, planting designs can enhance the immediate environment for a passersby.

Effective planting designs respond to or relate directly to the adjacent buildings and architectural features. For example, plants can be located to filter views from windows, but they should avoid blocking those views. A facade feature can be reinforced by carrying it into the landscape via a plant grouping that corresponds to the architectural element. These urban planting designs are more appropriate in a downtown setting than typical "foundation plantings," which simply soften the juncture between building and site.

When creating a planting design and selecting the plants, a strong idea about the purpose or intended use should be considered. Examples of such design goals include enhancing the entrance, demarcating a seating area, creating a focal point, and providing dappled shade for a courtyard.

A plant material's foliage texture, flower and berry color, and bark patterns are key design considerations. The relationship of a plant's characteristics to a building's color and texture are important. Including plant selections that provide variety throughout all seasons, such as incorporating plants with berries or colored stems for winter interest, creates interesting spaces. In a survey of small town residents, shoppers indicated that they prefer retail areas with trees. They were even willing to pay up to 9% more in these planted atmospheres.[29]

Future maintenance issues and a plant's future growth habit and mature size are key considerations when designing spaces. It is

[29] Wolf, K. L. "Trees in the Small City Retail Business District: Comparing Resident and Visitor Perceptions," *Journal of Forestry*, 103, 8, 390–395. 2005. Also found at cfr.washington.edu/research.envmind/consumer.html

recommended that a professional landscape architect or arborist be consulted regarding appropriate plant selections.

Screening and Planting for Parking Lots

While travel by automobile is prevalent in contemporary life, the presence of parked cars need not dominate the streetscape. For safety and economic vitality reasons, parking needs to be visible and accessible; however, that can be accomplished while softening the impact of that view. The use of vegetation and architectural elements can assist in this goal.

The interior of parking lots can be made more aesthetically pleasing and safer through the use of landscape strips. These function to break–up unsafe diagonal movements through parking lots. They can also serve as locations for parking lot landscaping, pole lights, and storm water facilities. Linear planting strips are encouraged rather than numerous small one–tree islands as that arrangement is better for long–term tree health and is easier for parking lot maintenance, such as snow removal.

The best ways to achieve screening from public view are by using the options below, alone or in combination, at a minimum of three feet height:

- Shrubs and trees closely spaced
- Walls that match or complement the building materials
- Fencing that provides minimum 50% visibility reduction
- The selection of larger canopy trees is desired as the shade they provide will help to diminish the pavement's "heat island effect" and their canopies (the wetted leaf surface) assist in storm water management by slowing the rate of release.

Fig. 75. Hort Woods is the only remaining forest area in the University Planning District. It is located along Park Avenue and designated in orange in the key plan below.

Fig. 76. Hort Woods along Park Avenue.

A mature deciduous tree in full leaf can store 50 to 100 gallons of water during large rainstorms. This is then slowly released, thereby reducing runoff volume and delaying onset of peak flows.[30]

The use of bio–swale islands can also help cleanse, absorb, and retain some of the stormwater runoff form parking lots. This can be very beneficial. If bio–swales are to be used for infiltration of the storm water, careful study of underlying geology is paramount.

The Borough's zoning ordinance mandates that the perimeter of newly installed parking areas, except those serving 1– and 2–family homes, be screened using landscaping, berming, fencing, or some combination therein. (Zoning Ordinance, Section 2404.i). A minimum number of shade trees must also be planted based on the area of the parking lot. The interior areas separating parking bays must be planted with ground cover and shade trees. (Zoning Ordinance, Section 2404.i)

Street Furniture

Street furniture and outdoor seating should invite pedestrians to linger and provide a unified composition to make the place visually appealing. Street furniture can help create a desirable environment.

Street furniture consists of an array of items; seating, trash receptacles, newspaper dispensers, parking meters, fountains, planters, sculpture, mail boxes, clocks, bus shelters, and bollards. It is important to pay attention to the design of street furniture and how it will relate to the buildings and other items around it.

Trash receptacles should be well thought out and placed near ATMs, fast food shops, and convenience stores to help keep the town clean. Seating can be a myriad of materials, from simple benches to limestone boulders, granite blocks, retaining walls, or fountain edges.

Street furniture itself has become as much a part of many nations'

Fig. 77. Stormwater retention islands in the parking lot adjacent to the Stuckeman Family Building.

[30] Northeast community tree guide, 2007, USDA, on www.fs.fed.us/psw/publications/documents/psw_gtr202/psw_gtr202.pdf

The perimeter of newly installed parking areas, with exceptions, be screened using landscaping, berming, or fencing.

Fig. 78. Bio–swale in the Stuckeman Family Building parking lot. The location of the lot is designated with an orange dot in the key plan below.

identities as dialects and festivals, so much so that one can usually recognize the location by their design; famous examples of this include:

- The red telephone boxes of Britain
- The residential post boxes of the United States
- Art deco streetlamps and metro entrances of Paris

In the downtown business district, the Borough maintains curbside trash receptacles. Additional placements are considered upon request. Inquiries can be made through the Public Works Department.

Public bike racks are installed throughout the downtown, but private development should consider more accommodations for the bicyclist on their own property. Bicycle use in the Borough continues to increase significantly every year.

To promote the use of bicycles in a community, it is vital to have accessible and safe bicycle parking that meets the needs of cyclists and other users of the street. Bicycle use eases traffic congestion, relieves the burden on parking resources and improves the general health of our community. The Borough is responsible for adding bike racks along public walks in the downtown where demand necessitates and room exist.

Fig. 79. Trees along Allen Street provide a natural shade canopy for pedestrians and cyclists. The shade also cools businesses and parked vehicles. This section of Allen Street is designate din orange in the key plan below.

Racks should be easy to find and visible from the building entrance or destination they intend to serve. The site placement of bike racks also affects their use. Racks should be placed for maximum convenience to truly encourage the community to see the benefits of cycling.

Racks must be sized according to the space available and the rack footprint with bikes attached. Capacity should be designed to meet anticipated demand with the possibility of space for future expansion.

The rack must be in an area not perceived to be subject to vandalism. Protection from the elements should be included whenever possible.

Fig. 80. Allen Street between College and Beaver Avenues.

Fig. 81. Proposed improvements to College Avenue, design by Mahan Rykiel Associates, Inc. and partners in *State College Downtown Master Plan*.

This is particularly important for long–term storage racks (e.g. commuter and residential bike parking).

The Association of Pedestrian and Bicycle Professionals (APBP) has developed guidelines to specify appropriate rack styles and to lay out parking areas for success.[26] It is important to re-evaluate your site's parking resources periodically as the usage changes. Full racks and illegally parked bikes are tell-tale signs that capacity requires an increase.

The rack style should facilitate locking of the frame and at least one wheel. Unique and artful rack styles are encouraged without sacrificing the need for ease of function.[31]

Fig. 82. The view above is along College Avenue designated in orange line in the key plan above.

Public Art: Murals, Sculptures, and Festivals

State College Borough has supported numerous public art projects over its history. Each contributes to the character and vibrancy of the borough. Recommendations in the 2013 Downtown Master Plan identify the community's desire for more public art in the borough.

Public art has been utilized effectively throughout downtown in the form of sculpture and, in particular, murals. The mural on Heister Street is particularly effective as public art as it engages the viewer as it is constantly evolving based on community history. The murals along Calder Way — both obvious and subtle — are effective in activating this space and distinguishing it as a special place. As new streetscapes and development occur, continued focus should be provided on expanding the public art program.[32]

There is a danger, however, of ending up with "plop-art" that is just

[31] "Pedestrian and Bicycle Information Center" at pedbikeinfo.org

[32] Mahan Rykiel, "Downtown Master Plan" on statecollegepa.us

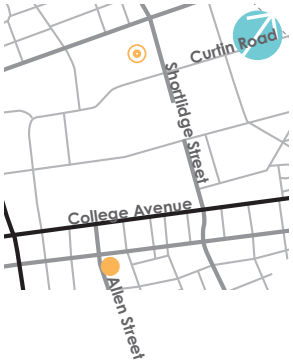


Fig. 83. The bike rack to the right is located with an orange dot in the key plan above. Multiple bike racks at Stuckeman Family Building are at the orange dot in the key plan above.

Fig. 84. Bike rack on Allen Street near Schlow Library.

Fig. 85. Bike racks under the Stuckeman Family Building.

put down to fulfill a requirement. It will be important that public art be located in the most appropriate areas where it will make the most impact. Additionally, it will be important for public art to be relevant to its location and site characteristics.[33]

Many painted and mosaic murals enliven otherwise uninspired walls. Scultpures adorn building facades, sidewalks, landscape, and plazas, both on campus and in the downtown. Performances and festivals, such as Penn State's Homecoming Parade and The Central Pennsylvania Festival of the Arts, attract the regional community to the downtown. The Downtown Master Plan recommends increasing the ability of key streets and other open gathering spaces to transform into temporary pedestrian zones and theaters for these festivals. This may be accomplished with paving material transitions and traffic bollards, rather than traditional curbs.

[33] Mahan Rykiel, "Downtown Master Plan" on statecollegepa.us

Plazas, Courtyards, and Arcades

Plazas, courtyards, and arcades are well–defined spaces that can provide outdoor seating, a place for people to meet and gather and enhancement of a building's entry if placed near the front door. Outdoor spaces along the street frontage provide welcome variety to the spatial setting of the steetscape.

Plaza, courtyard and arcade spaces should be part of the early conceptual designs for a site and building to ensure that these important outdoor spaces are located to meet the design intention. Considerations include:

- Solar exposure
- Views into and from the site
- Probable and desired pedestrian circulation
- Size based on intended use

Fig. 86. First Night 5K Resolution Run.

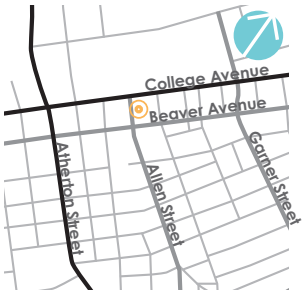


Fig. 87. The location of the mural to the right is at the orange dot in the key plan above.

Fig. 88. Foundation mural on Calder Way near Allen Street.

Fig. 89. Orange lines denote typical locations of artists' booths in the key plan above.

Fig. 90. Central Pennsylvania Festival of the Arts, 2013.

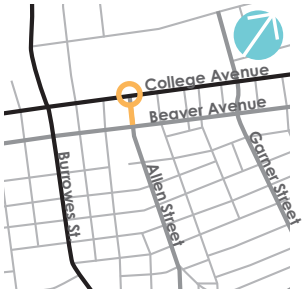


Fig. 91. An orange line/dot denote the starting line of Resolution Run (left) and Allen Street activities (right).

Fig. 92. First Night activities on Allen Street.

Fig. 93. View of McAllister Way, a pedestrian street with sculptures.

Larger spaces are better used for gathering and seating, whereas smaller spaces might work well to draw attention to the entrance, guide circulation, and provide a pleasing building entry space. If located on a site at a street corner, these spaces can be designed to add variety to the streetscape setting and soften the corner. While these spaces can be purely aesthetic in their purpose, the design must be well–crafted and well–maintained for this to succeed.

Proper visibility and physical access into and out of a courtyard or plaza space is important to keep people from feeling trapped or insecure. If the space is designed to be more private in nature, it must still be laid out with security in mind. To avoid disused and seemingly abandoned outdoor space, they should be located where people will be able to make use of them; where people would like to sit, gather, pass–through, etc. Arcades can be simple passageways, but they can also be designed to serve as covered seating and/or covered entrances to shops and cafes.

Plazas and courtyards with street frontage make ideal places for café seating and food vendor carts.

The design of these outdoor spaces might also be a good location for bike racks. A secure place to park bikes, as well as covered bike racks, are appreciated by cyclists. Larger spaces can be designed for occasional community events, such as craft fairs or bake sales.

Visual interest provided along the street frontage enhances human interest and creates more dynamic street life. Courtyards, plazas, and arcades, if designed properly, can contribute to this streetscape enhancement. It is often desirable to have a focal element, such as a sculpture, feature planting, or special paving.

Zoning regulations applicable in the Commercial Incentive District (CID) provide development bonuses for increasing building set back at street level. These areas of increased setback are ideal places for plazas and courtyards. (Zoning Ordinance, Section 1855)

Figs. 94–95. Centennial Sculpture (Eric Berg, 1996) on McAllister Way highlighted in orange in the key plan above.

Fig. 96. Pictosaurus scultpure in Fraser Plaza.

Fig. 97. The pictosaurus provides an entrance to Fraser Plaza located on Fraser Street between College and Beaver Avenues and is designated with a solid, orange dot in the key plan above. The courtyard of Chambers Building is located near Allen Road and designated with the orange, circle–dot on the same key plan.

Fig. 98. Courtyard of Chambers Building, near Allen Road.

Seating and Cafés

Outdoor seating enlivens an environment. In semi–private settings, such as a front porch or a café, seating provides a gentle transition between public and private spaces. In public settings, seating invites people to linger.

Ideally public seating should provide a pleasant climate: shade in summer, sun in winter, shelter from strong winds, and a buffer from traffic. It is desireable to offer something to look at: street life, a companion, a good view, a fountain, or a work of art. Seating should be placed somewhere that people like to sit: near food sellers, at bus stops, within green spaces, or next to building entrances.

Seasonal outdoor café seating can increase the attractiveness and safety of adjacent public spaces invigorating urban street life, while extending the service capacity of a restaurant. This type of seating

can also encourage patrons to use the site as a gathering spot. Since the climate of State College spans four seasons, restaurants and cafés should consider the use of awnings to shade and shelter summer patrons and heat lamps to lengthen the season for outdoor dining. In general, semi–private or public seating increases the number of eyes and ears attuned to public life. Thus, it encourages everyone within view to feel a bit safer.

In the Borough's downtown Commercial District, tables and chairs serving outdoor cafés may be located within required setback areas on a seasonal basis as long as adequate space is provided for pedestrians. (Zoning Ordinance, Section 502.f.8.j)

Boundary Walls and Fences

An appropriately designed fence can complement an area. A front yard fence or wall preserves the friendly character of downtown State College, if it encourages, rather than blocks, views to the site and if its materials relate to the adjacent building or landscape setting. If a fence presents a visual as well as a physical barrier, it obscures the architecture and creates the impression that the residents find it necessary to isolate themselves and their property.

Fences and walls help to define outdoor spaces and can help to clarify the boundary of the transitional space between private property and the public right–of–way. Front walls and fences will be more welcoming if people on the street or sidewalk can see the property. Therefore, a height of forty–two inches or lower is preferable.

When walls or fences are used for privacy or screening for rear and side yard boundaries and/or pet enclosures, the fence might be higher and more solid in character. However, it is possible to combine solid piers with more open screening materials for pet fencing.

Large solid walls or privacy fences should be softened with landscape

Fig. 99. Outdoor seating with fencing at Cafe 210 on College Avenue.

Outdoor cafés may be located within required setback areas on a seasonal basis as long as adequate space is provided for pedestrians.

Fig. 100. Cafe 210, located with an orange dot in the key plan below, provides outdoor cafe seating that is shaded by mature street trees.

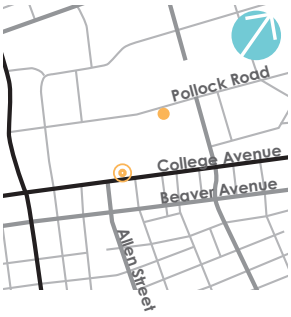


Fig. 101. In the key plan above, the orange ringed dot denotes the approximate location of figures 106 and 108. Both stone retaining walls along College Avenue provide shady seating areas. Large stones outside of the Hetzel Union Buidling (HUB) along Pollock Road are sculptural and practical as they provide informal seating areas (shown with a solid orange dot above).

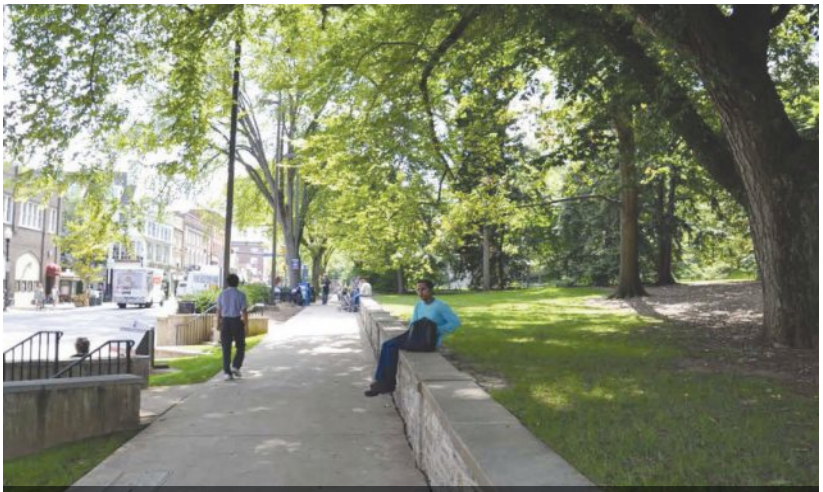


Fig. 102. Low retaining wall used as seating along College Avenue.

plantings to soften their appearance.

When walls or fences are designed to be more open in style, they will mark the boundary and act as a means to limit physical access while still allowing the passerby some visual access of the property.

Walls and fences can make a positive visual impact for the community when the exposed framing faces the interior yard or property and not the public right–of–way (sidewalk or street). However, the best fences and walls are designed to be double sided.

Walls can also serve as seating areas. To encourage informal seating, a wall's height should be fifteen to twenty-four inches.

If walls are too low, they may be used by skateboarders, which can damage the wall. To discourage this, the ground surface around the wall can be a softer texture and/or the top of the wall can be designed

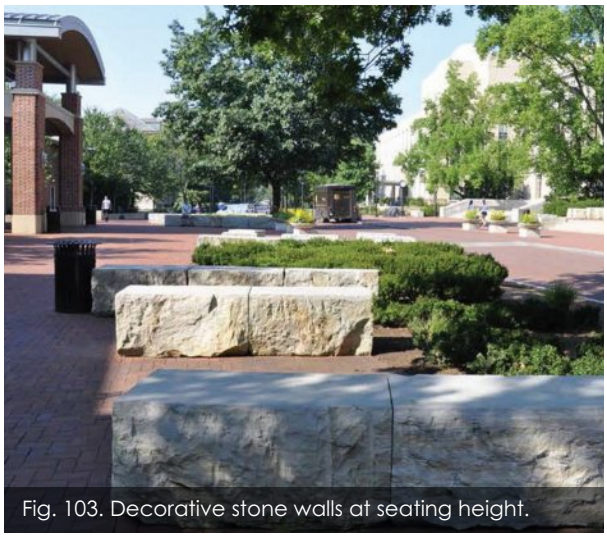


Fig. 103. Decorative stone walls at seating height.

Fig. 104. Stone bench along College Avenue.

to have breaks or bumps – skateboarders prefer long, flat surfaces with surrounding smooth paving. Adding small metal bumps to the top after wall is built should be avoided. Design the wall with potential misuse in mind.

Walls and fences should be installed so as to not disturb or damage existing vegetation. Locations should be chosen with maintenance in mind and repairs without going onto the neighboring property.

Unadorned or plain walls, such as pressure treated wood, unfaced concrete or regular concrete block, can look unfinished and neglected. This gives visitors and neighbors a negative impression of the area. Painting or staining pressure treated wood greatly enhances the appearance.

The use of natural stone is more durable, sustainable, and reflects the context of the community. Local and regional stone varities include several specimens of limestone, sandstone, shale, and slate.

Fences and walls may not exceed 6.5 feet in height except when built around tennis courts (where they may go up to 10 feet in height). Walls or fences located along a street line must be set back 18 inches from the front property line if the wall or fence is over 30 inches in height. On corner lots, special line-of-sight regulations apply.[34]

Clear sight lines from house to street promotes natural site survellience. The more enclosed a street becomes from private properties the more likely it is that criminal activities may flourish under cover, especially along under used alleyways. It is in everyone's best interest to maintain street and property sight lines in order to overtly discourage criminal activites taking hold in the neighborhood.

Zoning and building permits need not be obtained to erect fences or walls; however, if questions remain, contact the Planning Department before you begin installation.[35] (Zoning Ordinance, Section 502.f.8)

Permits are not required for fences/ walls less than 6.5 feet tall.

[34] "Walls and Fences" on statecollegepa.us

[35] *Ibid*.

Fig. 105. The wall and fence below are located along Hill Alley, designated in orange in the key plan above.

Fig. 106. Stone property wall with dovecote.

Fig. 107. Property wall combining brick piers and lattice for a semi–private screen effect.

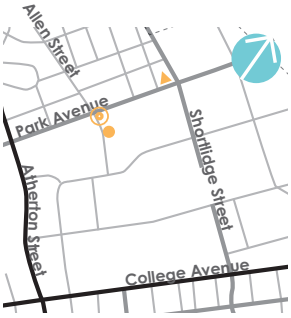


Fig. 108. The stone walls in figure 113 define a boundary condition at the corner of Park Avenue and Allen Street (shown with an orange ringed dot in the key plan above). The white picket fence in figure 114 displays the US flag for Memorial Day (shown with an orange triangle above). The perimeter fencing at the Child Care Center at Hort Woods combines brick piers with metal security fencing and a concrete curb (shown with a solid orange dot above).

Fig. 109. Stone walls at corner of Allen Street and Park Avenue.

Fig. 110. Picket Fence on Park Avenue.

Fig. 111. Brick piers with metal fencing at Hort Woods Child Care center.

Public Works and Utilities Right–of–Way

Utilities are a necessity of urban life and an essential element in development and construction. However, visible utility systems are often unsightly. Utility lines, poles, transformers, cables, and electric boxes mar the ambience of an otherwise pleasant, pedestrian–oriented environment.

Whenever and wherever practical, newly installed utilities should be underground. Mechanical equipment or other utility hardware on the roof, ground, or buildings, should be screened from public view with materials harmonious with the building, or should be hidden from public walks and plazas.

When hiding infrastructure is impossible, utilities may be transformed into a visual asset by creative means such as colorful paint, a mural, plantings, sticker screens, or fencing.

The visual impact of utilities should always be carefully considered and treated for maximum visual appeal.

Burying wires is less expensive if implemented during construction of a project rather than later. While the foundation is excavated, wires can be easily routed and buried before site work is completed.

Under Flexible Incentive Zoning for the Urban Village District, incentive points can be earned for burying or otherwise hiding overhead utilities. Those points may be used to gain development bonuses. (Zoning Ordinance, Section 1930)

Under Flexible Incentive Zoning for the Urban Village District, incentive points can be earned for burying overhead utilities.

Refuse and Recycling Receptacles

The generation of "waste" is a fact of life – however, how it is handled can make a big difference in the appearance and sustainability of a community. The placement of recycling and waste receptacles should be considered in tandem with all other components of site design. Recycling containers for the public should be visible and recognizable.

Waste and recycling containers for everyday use by the public or a building's users should be located in convenient locations, such as near doors or seating.

Larger waste receptacles, such as dumpsters, must be screened from public view. Well integrated dumpster screening can enhance the quality of a neighborhood. Screening may be accomplished using one or more of the following methods:

- Plantings that provide total screening at the time of installation
- Walls that match or complement the building materials
- Fencing that reduces visibility of the receptacles

Businesses can co–locate and share refuse and recycling receptacles.

In 2013, the Borough became the first small town east of the Mississippi River to collect residential organics.

People are more likely to recycle, if the recycling containers are in prominent locations and are co–located with other waste receptacles.

For businesses, refuse and recycling receptacles sizes can be minimized by a contract with the Borough for a more frequent collection schedule.

Borough zoning regulations require bulk refuse receptacles to be screened from view on all sides, except the side used for access. Fences, landscaping, or a combination may be used. (Zoning Ordinance, Section 2404.m) Coordination is required with Borough Public Works Department for proper placement of refuse and recycling receptacles and dumpsters.

In 2013, State College Borough became the first small town east of the Mississippi River to collect residential organics. At that time, new trash and composting receptacles, compatable with the new trash collection fleet vehicles with receptacle lifting systems, were distributed to residents.

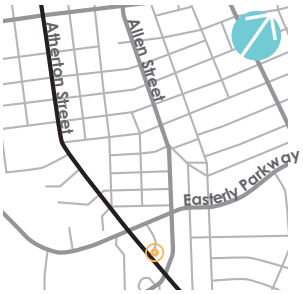


Fig. 112. In 2013, State College Borough embarked on a residential composting effort. The orange dot in the key plan above happens to be where this picture was taken, but the bins are identical throughout the borough.

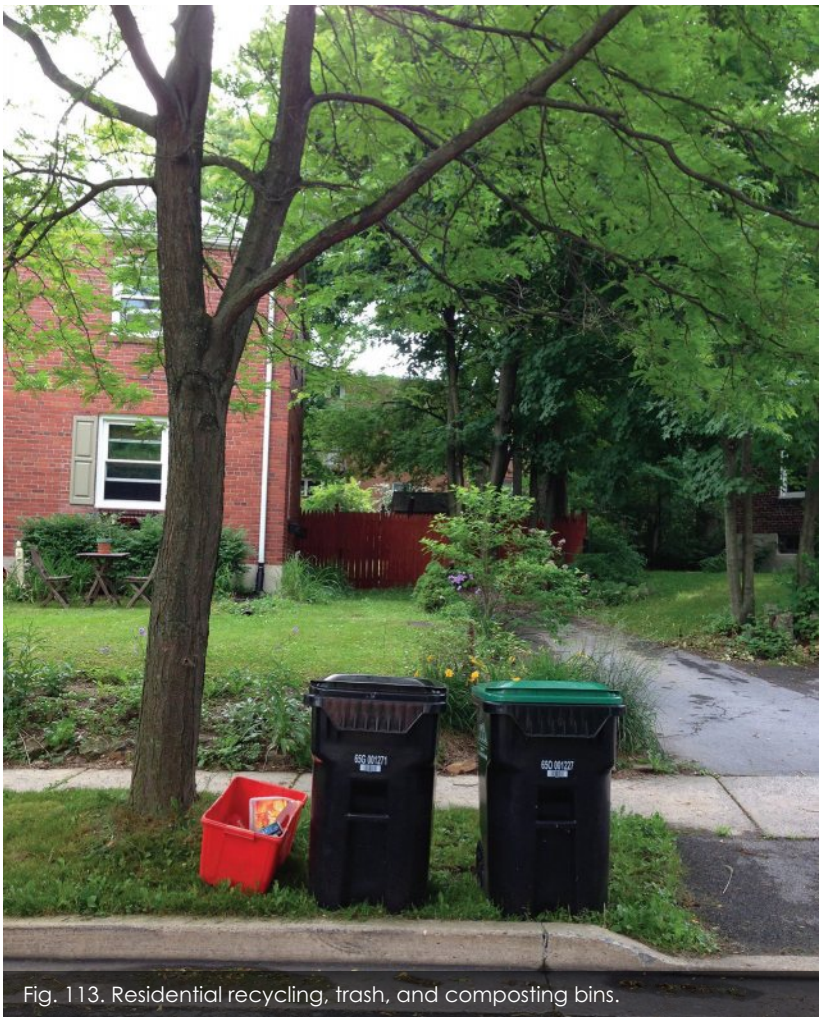


Fig. 113. Residential recycling, trash, and composting bins.


DONALD H. FORD BUILDING
CHILD CARE CENTER @ HORT WOODS

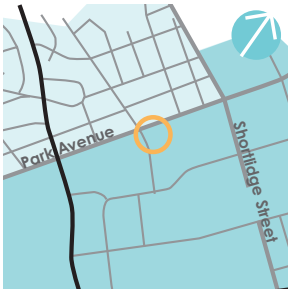


Fig. 114. Located of Hort Woods Child Care Center, corner of Allen Street and Park Avenue and at the edge of Hort Woods (orange ring).

[36] "Sustainability: The Next Step" on statecollegepa.us

[37] "Green Planning" on statecollegepa.us.

[38] "Resolution 944" on statecollegepa.us.

[39] *Ibid*.

Healthy Community Design and Planning

Sustainability has many different definitions. For State College, sustainability means using best practices to create lasting environmental, economic, community, and organizational vitality. The mission of State College Borough is to enhance the quality of life by fostering a safe, vibrant, diverse and sustainable community; by providing quality, innovative, cost effective services; and by allocating resources efficiently with professionalism, integrity, transparency and accountability.[36] Green planning occurs when crafting the vision, goals, and strategies in your community's planning documents in order to conserve priority habitats and wildlife alongside developed areas, reduce pollutants harmful to human life and well-being, and preserve resources for future generations.[37]

In 2007, the Borough of State College endorsed the U.S. Mayors' Climate Protection Agreement as amended by the 73rd annual U.S. Conference of Mayors. The State College Borough Council commited to a Greenhouse Gas Emission Reduction Initiative goal, to lead the community by example, and to implement policies to reduce net emission of carbon dioxide and other greenhouse gases.[38]

As a public-private partnership, the Greenhouse Gas Emission Reduction Initiative features the Borough Government as a key stakeholder in a comprehensive community greenhouse gas reduction effort that includes institutions, businesses, civic organization, and individual families and residents.[39]

Hort Woods

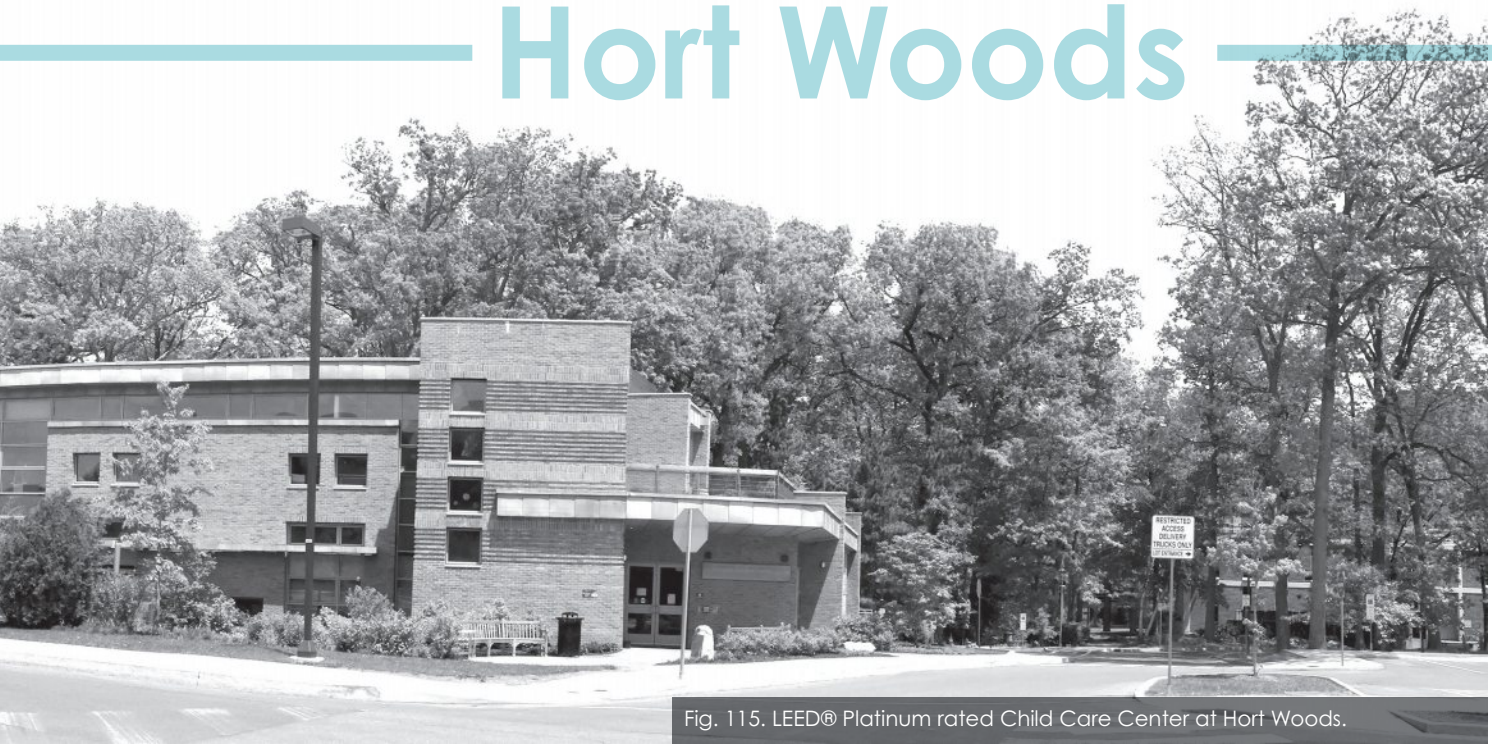


Fig. 115. LEED® Platinum rated Child Care Center at Hort Woods.

The Planning Commission passed a motion on May 19, 2011 to recommend to Council that the Commission, alongwith borough staff research and develop strategies in which the Borough can promote green building and smart growth policies through revision of zoning ordinances and/or the development of assistance programs. This recommendation is in response to Borough Council's adoption of Resolution 944: The Declaration of the Borough of State College as a Climate Protection Community. The information on the following webpages is provided to assist the Planning Commission and interested residents in this process.[40]

[40] "Green Planning" on statecollegepa.us.

The Borough aggressively addressed the goals spelled out in Resolution 944 and has been successful in achieving most of the in-house goals but was less successful on the more far reaching community goals (Greenhouse Gas Mitigation Final Report). In 2014, the Borough developed new goals and strategies to guide its sustainability efforts in the future.

The goals of the Committee must be balanced among economic, environmental and societal needs that are supported by the financial and organizational viability of the Borough:

- Economy – Provide access to necessary goods and cost-effective services
- Environment – Protect the quality of the air, water, land and other natural resources
- Society – Meet human needs fairly and effectively
- Organization – Provide for a strong fiscal foundation and institutional strength within the Borough government[41]

[41] "Manager's Committee on Sustainability" on statecollegepa.us.

In the Commercial Incentive District (CID), additional building height and reduction in parking incentives may be received for incorporating green building principles. The incentives are on a sliding scale from a 10% reduction in required parking for a basic LEED® certification to a 20% reduction in parking and an additional story for a Gold or better certification. (Zoning Ordinance, Section 1855)

In the CID, additional building height and reduction in parking incentives may be received for incorporating green building principles.

Resources and Rating Systems

The intentions of sustainable planning and design are to eliminate negative impact on the local and global environments, both natural and built, through skillful, sensitive design. There are many environmental design, reference and performance standards being employed locally and nationally. Green construction codes such as ASHRAE 189.1, Standard for the Design of High Performance, Green Buildings, the International Energy Conservation Code (IECC), International Green Construction Code (IGCC) are emerging on the national code stage. Voluntary green building rating and certification systems are prevalent across building types. One of the better known rating system is Leadership in Energy and Environmental Design (LEED) by the United States Green Building Council (USGBC), a non-profit trade organization. LEED is a framework for assessing building performance and meeting sustain-

Fig. 116. The location of the parklet next to Schlow Library is shown with a star. The Sidney Friedman Park, also known as Centre Parklet, is depicted with an outlined dot. The family of ducks enjoying the shady lawns of Pattee Mall are denoted with an orange triangle in the key plan above.

Fig. 117. Park adjacent to Schlow Centre Region Library on Beaver Avenue.

Fig. 118. Sidney Friedman Park adjacent to Memorial Field, *DMP*.

Fig. 119–120. Pattee Mall near Sackett Building.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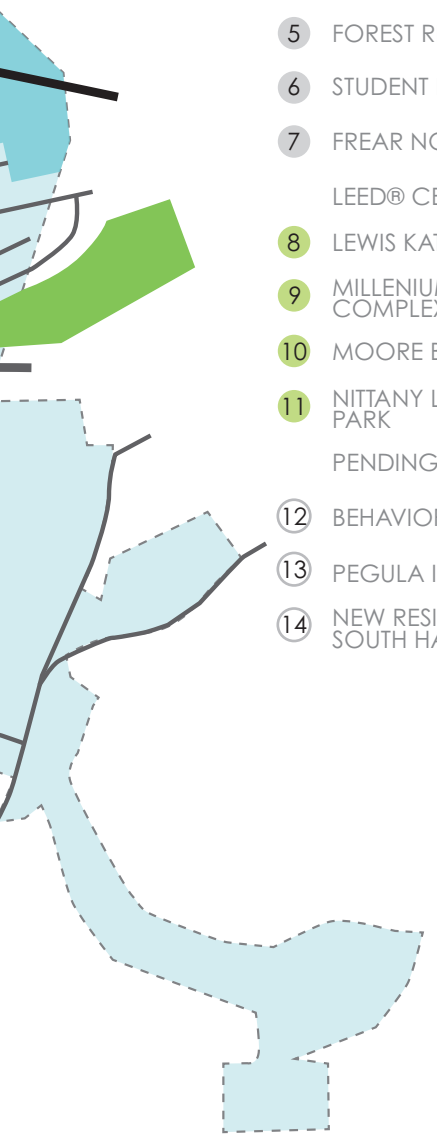
ability goals in a holistic approach and assigns rating levels to projects depending on the amount of credits earned. LEED-ND (Neighborhood Development), LEED-NC (New Construction and Major Renovations), LEED-EBOM (Existing Buildings; Operations & Maintenance) and LEED-H (Homes and Mid-Rise) are just a handful of the applicable rating systems. Other user-friendly voluntary certification programs include EPA's Energy Star, NAHB National Green Building Program, The Sustainable Sites Initiative and Enterprise Green Communities.

These rating systems and certifications act as helpful design measurement tools and resources. Several design decisions can be considered to take advantage of the local environment, encourage smart growth practices, minimize site disturbance, optimize energy performance, create healthy indoor environmental quality, conserve water and relieve over-stressed resources. Environmentally-friendly materials, systems and strategies can be considered and value-rated for appropriateness for each project.

- Optimization of the building envelope is critical for new buildings.
- Added wall and roof insulation will improve energy performance (resulting in reduced operating costs and less impact on the environment).
- Careful installation and detailing of air/vapor barriers at wall openings and intersections and proper drainage behind certain façade materials (particularly important in the specification of EIFS systems) optimize indoor air quality reducing the potential for mold and other pollutants that can cause illness.
- Installation of a reflective roof material will reflect the sun's heat and reduce the heat island effect.
- A vegetative roof will filter stormwater and provide a natural habitat for insects and birds.
- Developing cooling gardens of native plant materials will soak up stormwater and reduce cooling costs.
- Installing energy efficient appliances and high performance mechanical and lighting systems will reduce energy requirements.
- Further improvements such as meters and lighting controls will adjust for temperature, sunlight, carbon dioxide levels, humidity and time of day, all resulting in reduced operating costs.
- Specifying renewable carpets, local materials that include a high percentage of recycled content will reduce landfill waste and transportation costs.
- Durable, low-VOC materials will last longer and contribute to occupant health.
- Providing controlled natural daylight will decrease dependence on artificial lights and mechanical ventilation, provide a visual connection to the outdoors and views connecting occupants with the natural and/or urban environment.

LEED® CERTIFIED BUILDINGS IN 2014 IN STATE COLLEGE BOROUGH [Fig. 121.]



LEED® PLATINUM RATING

1 CHILD CARE CENTER AT HORT WOODS

LEED® GOLD RATING

2 STUCKEMAN FAMILY BLDG.

3 REC HALL ADDITION

4 BORLAND BUILDING

LEED® SILVER RATING

5 FOREST RESOURCES BLDG.

6 STUDENT HEALTH CENTER

7 FREAR NORTH ADDITION

LEED® CERTIFIED

8 LEWIS KATZ BLDG.

9 MILLENIUM SCIENCE COMPLEX

10 MOORE BLDG. ADDITION

11 NITTANY LION SOFTBALL PARK

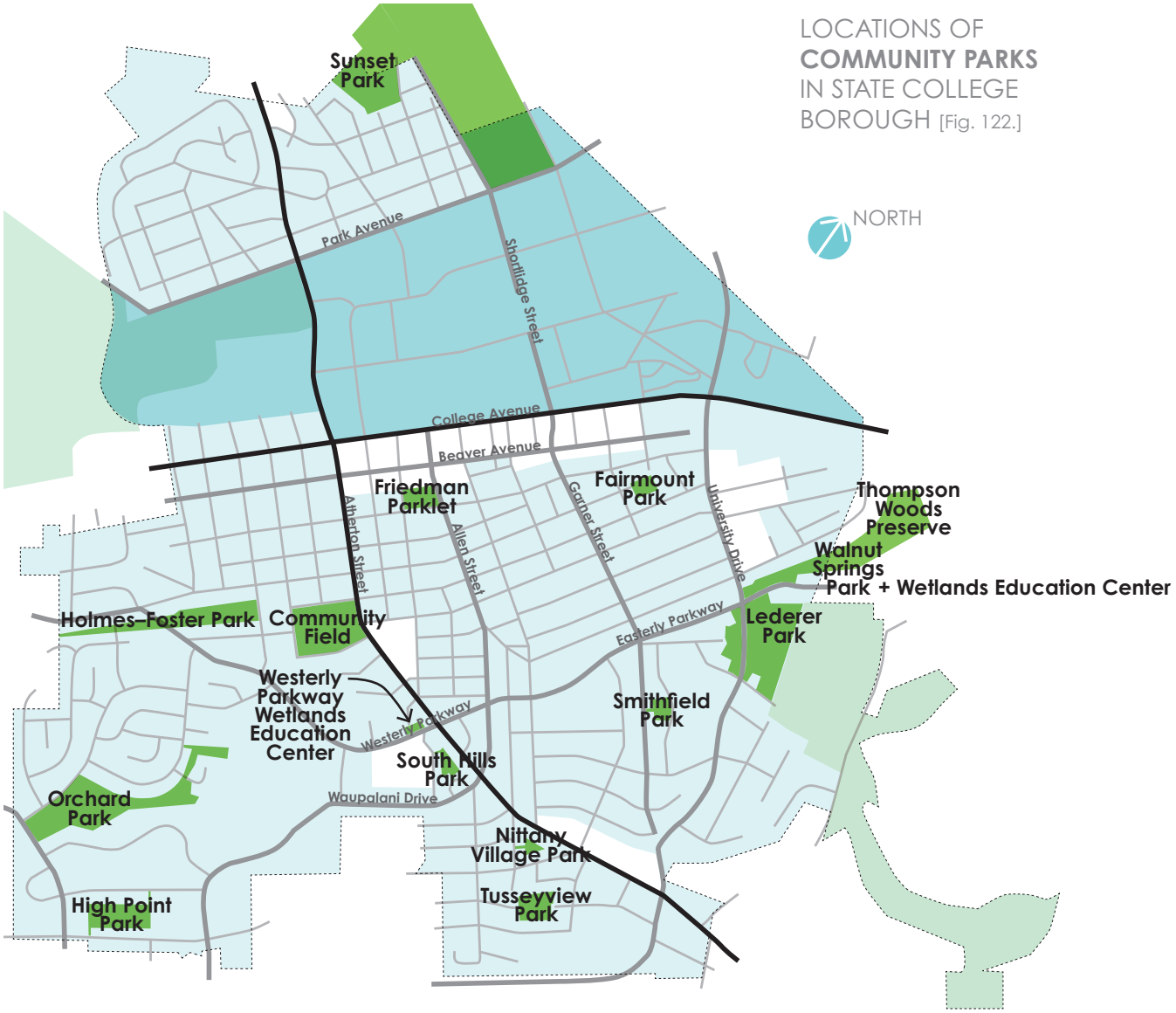
PENDING LEED® RATING

12 BEHAVIORAL HEALTH BLDG.

13 PEGULA ICE ARENA

14 NEW RESIDENCE HALL IN SOUTH HALLS COMPLEX

LOCATIONS OF **COMMUNITY PARKS** IN STATE COLLEGE BOROUGH [Fig. 122.]



When dealing with existing buildings and significant renovations, many of the above recommendations are relevant. Window replacements, comprehensive repointing and application of new sealants where appropriate, combined with window replacements can have a significant impact on the energy performance of the building envelope. Further enhancements can be achieved by adding insulation to the interior of existing walls where space permits in major renovation projects. Replacing existing plumbing fixtures will low-flow showers, urinals, lavatories and dual-flush toilets will greatly reduce potable water usage. While practical application varies among disciplines, some common principals are as follows:

Fig. 123. The gardens surrounding Hintz Alumni Center are located with the orange dot in the key plan above.

Fig. 124. Hintz Alumni Gardens.

Fig. 125. The duck pond in Hintz Alumni Gardens.

Environmental Conditions

Although the Design Review Board purview does not include indoor environmental quality, the following recommendations are a few items to consider in relation to sustainable design.

High quality indoor environments capable of improving occupant health and wellbeing are created through considering daylight, views, ventilation, air quality, and thermal comfort.

Sunlight powerfully affects the desirability of spaces. The dynamic nature of light presents opportunities that vary from morning to evening and from winter to summer. A building design that provides both sunlight and shade at the necessary times will improve the quality of life for its occupants and neighbors.

When sunlight is lacking, a space can be cold, dark, and drab. Light can be introduced in different ways in order to suit an occupant's needs.

Fig. 126. Hort Woods at Park Avenue and Shortlidge Street

Direct light warms common spaces. Windows stairwells, lobbies, and elevators additionally create permeable and expansive experiences for building visitors, and improve safety and visibility. Indirect light is best for areas where reading and focused tasks occur. Daylight also improves productivity, mood, and consumer buying.[42]

Yet too much sun can be blinding, scalding, and distracting. There are many techniques for reducing glare on display windows using shading devices, glazing, orientation, as well as exterior and interior design of a window. These same techniques prevent excessive heat load during the summer, while admitting daylight in the winter.

A solar study considers the orientation of a building and its neighbors to determine both sun and shade at different times of the day and seasons. During concept planning, solar studies indicate how to best take advantage of daylight as well as considering the impact of a proposed building on neighboring buildings and spaces.

[42] For more information, visit lrc.rpi.edu/programs/daylighting/dr_windows.asp and pge.com/pec/daylight/daylight.shtml

A well–lit space will still feel cramped and stuffy if air quality is poor. Providing ventilation, through strategic placement of operable windows and an adequately–sized heating, ventilating, and air conditioning (HVAC) system, prevents spaces from feeling stagnant, and ensures that interior air is fresh and healthy.

Specification of low volatile organic compounds (VOC) products improves air quality, and with it occupant wellbeing. VOCs are potentially hazardous chemicals commonly found in many construction materials, such as paints, adhesives, carpets and composite wood products. These products emit gasses over time, which can cause short– or long-term health effects. Similarly, environmentally friendly HVAC refrigerants should be used.

Fig. 127. The orange bar above denotes the approximate location of Hort Woods.The Millenium Science Complex is LEED® certified. Its location is designated with an orange dot in the key plan above.

Smoking within buildings or within twenty-five feet of entrances, operable windows, or fresh air intakes can also harm interior air quality. Banning smoking in these locations should be considered. Outside air measurements and CO_2 level monitoring can be used to ensure proper and continuous ventilation quality is maintained.

Finally, it is important to consider occupants' thermal comfort within a space. Proper control of sunlight and natural ventilation can contribute to maintaining comfort, aiding an HVAC system in keeping temperature and humidity at pleasant levels. Thermal controls should be provided to meet the latest ASHRAE standards and allow for accommodation of individual preferences of building occupants.

Numerous systems exist to monitor and reduce the amount of energy used to maintain a thermal comfort. Building HVAC systems designed using high efficiency packaged roof top units with economizer controls and energy recovery may be utilized. An Energy Management System (EMS) may be used to track the use of energy within the building. An EMS computer controls operation of all major building systems in order to run the building efficiently and effectively, and balance the source of energy with the consumption of energy. An independent Commissioning Authority may also be employed through the design

Fig. 128. Garden at the Millenium Science Complex.

and construction of a space to ensure the building systems are of high quality and efficiency. An operational energy model is an additional design tool to optimize energy performance, establishing a digital study of a building's energy usage throughout the design process, construction, and occupancy.

Lighting and Power

Smart planning and design can provide pleasant lit space while simultaneously cutting energy costs. Allowing for natural daylight via windows and clerestories creates bright and airy spaces that reduce the need for artificial lighting.

Interior lighting design not only affects interior space, but also affects the exterior facade design through windows. The following are energy saving suggestions. While artificial lights will always be needed, new technologies enable greater control over light fixtures, leading to savings. High efficiency lamping, rapid programmed start electronic ballasts, and LED fixtures are a few systems that can be utilized to provide energy conservation. Use of dimming, multiple switching, daylight sensors in appropriate places allow for a lower levels of electric lighting during daytime hours, without creating dim spaces at night. Vacancy sensors and time clocks ensure that energy is not wasted on empty spaces due to forgetfulness.

It is important to provide exterior lighting for pedestrian security, while minimizing light pollution of surrounding areas. Downlight fixtures with full cut-offs that incorporate "Dark Sky" technology ensure that building entrances and pathways are safe, without causing unwanted excess light on neighboring sites and structures.

Building Envelope

Along with its basic function of enclosing the building, the envelope

Down light fixtures ensure that building entrances and pathways are safe without causing unwanted excess light on neighboring sites and structures

Fig. 129. Rec Hall Fitness Facility, view from Atherton Street.

Fig. 130. The fitness facility at Rec Hall is designated with an orange dot in the key plan above.

Fig. 131. Roof garden at the Forest Resources Bldg.

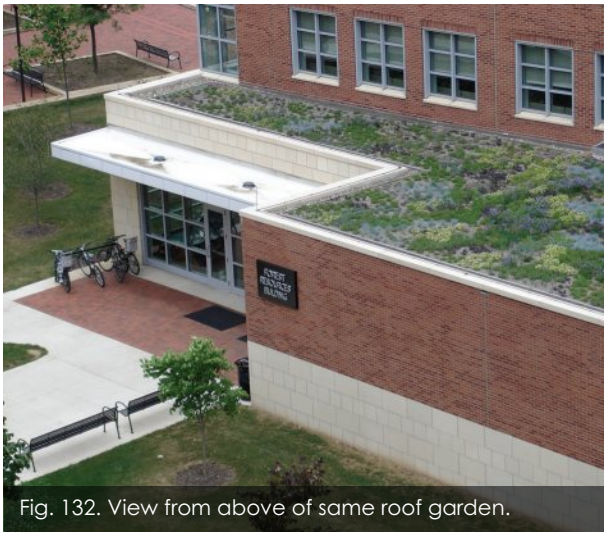


Fig. 132. View from above of same roof garden.

Fig. 133. The Forest Resources Building boasts the first green roof at University Park (orange dot above). The above images were provided by The Pennsylvania State University.

is pivotal in controlling the heat flow through a space, as well as the amounts of entering daylight and views. Depending on the climate of a site, a variety of different building envelope design strategies may be utilized. State College, having a temperate climate, calls for both solar heating in the winter and solar shading in the summer, in addition to well-insulated walls.

Building siting (as feasible as possible in an urban grid) should allow for optimum solar orientation — maximizing interior spaces with northern and shading southern, eastern, and western exposures. Consider the use of exterior sun shades and overhangs on southern facades and vertical fin shading elements on the east and west to control solar heating in the building while still allowing light and views. Properly designed southern overhangs allow winter rays to penetrate heating an interior space, while keeping out summer direct rays, easing cooling loads.

Fenestration should be specified with consideration to heating and cooling loads. Use of high-performance, double glazed, "low-e" windows with thermal breaks helps to control solar loads. Low energy glass is insulated and slightly tinted to filter heat and UV rays from the sun while maximizing the amount of useable natural light entering the building. Operable windows may be provided to allow for natural ventilation and individual control as appropriate in buildings.

Air barriers, which restrict the flow of air through a wall, and vapor barriers, which resist the flow of water through a wall, should be utilized. Depending on the exterior cladding materials and the detailing of the wall and roof assemblies, these barriers ensure that the risk of air leakage, water damage, mold and condensation are eliminated.

Cool roof technology should be considered for most of the roof area of a building. An Energy-star compliant cool roof system has a white cap sheet or coating to reflect the sun's rays, further reducing the heat island effect. Furthermore, "extensive" or "intensive" vegetated roof systems (green roofs) can have numerous ecological benefits. These

Fig. 134. North McAllister Street in the College Heights neighborhood.

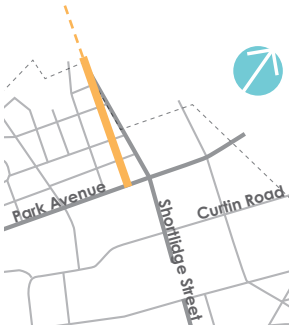


Fig. 135. The McAllister Street shared bike pathway connects north campus to Sunset Park through the College Heights neighborhood. It is located with an orange dot in the key plan above.

aesthetically striking assemblies reduce storm water runoff, protect the roof from UV deterioration, provide additional insulation value, and create habitats for butterflies, insects, and songbirds.

Site Considerations

Automobiles are responsible for large amounts of pollution and CO_2 emissions. Reducing the number of cars on the road leads to both healthier environments and more pleasant drives, as congestion is lessened. Carpooling and the use of bus service should be encouraged by providing preferred parking spaces for carpools and low-emitting and fuel-efficient vehicles (LEFEV). As electric vehicles become more commonplace, provision of charging station parking spaces should additionally be considered.

Vehicle usage can also be lessened by strengthening access for bi-

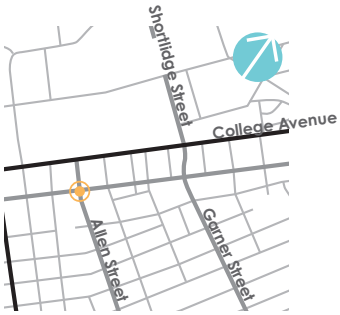


Fig. 136. The stormwater filtration gardens on the opposite page flank Allen Street at the intersection with Beaver Avenue (orange dot in the key plan above).

Fig. 137. Corner of Beaver Avenue and Allen Street.

Fig. 138. Copper facade of Stuckeman Family Building.

Fig. 140. Reused Red Stone Foundation Walls at Foundry Park.

Fig. 139. The Stuckeman Family Building received a LEED® gold rating. Its location is designated with an orange dot in the key plan above. The walls shown in figure 140 are located adjacent to Hammond Building and the Engineering Units (orange triangle above).

cyclists and pedestrians. Enhancing pedestrian connections to attractions, businesses, community services, and transit stops help keep community centers vibrant, and contribute to the success of local businesses. Bike racks within public and private properties promote and support increased bicycle usage, and further encourage patronage of establishments within walking radius of each bike rack.

Bike racks and enhanced pedestrian pathways encourage patronage.

Landscape design aids in creating environmentally friendly urban spaces. Pervious, or permeable, paving allows the movement of storm water through the paving surface. In addition to reducing runoff, it effectively traps suspended solids and filters pollutants from the water. This controls storm water at the source, reduces flooding, and improves water quality by filtering pollutants in the substrate layers of the ground.

Deciduous trees reduce urban heat island effects by providing shade for paved surfaces and building facades. Heat island effects contribute to higher summer temperatures, and can result in increased cool-

ing loads, which require larger air-conditioning equipment and more energy for building operations. These effects can be mitigated through the application of shading and the use of materials that reflect the sun's heat instead of absorbing it.

Water Conservation

Although water conservation is also not typically considered to be an aesthetic consideration, decreasing fresh water uses is environmentally important, and can lead to both energy and financial savings. Plumbing systems such as water conserving toilets (dual-flush or low-flow), low-flow urinals, and sensor faucets minimize use of water. Gray water systems conserve water by recycling water from dishwashers and kitchen sinks to flush toilets, or in an irrigation system.

Xeriscaping, the use of native and drought-resistant plants, in landscaping greatly reduces or eliminates the need for an irrigation system or extensive watering. If an irrigation system is necessary, a system that delivers water at the ground or root levels will minimize evaporation due to spraying.

Conservation of Materials and Resources

Waste of construction materials should be avoided whenever possible. Development of a Construction Waste Management plan can recycle or salvage construction and land clearing debris, diverting it from landfill disposal. Consideration should be provided for areas throughout buildings for the collection of waste materials for recycling as well as centralized areas dedicated for the separation and storage of these materials.

The environmental impact of construction materials should be minimized. Specifications should favor locally-extracted and manufactured building materials in order to save energy from unneeded transportation. Use of recycled content materials is encouraged. These may include steel, concrete, carpet, rubber, acoustical ceiling panels, gypsum wall board (GWB, also known as drywall), and finish materials.

Wood-based materials certified in accordance with the Forest Stewardship Council's (FSC) Principals and Criteria are ensured to have been harvested in an environmentally responsible manner.

Fly ash or ground granulated blast furnace slag (ggbf) are able to replace large quantities of Portland cement in both concrete masonry units and site-cast concrete. Since Portland cement requires high heat to produce, recycling these industrial byproducts lessens the burden on landfills and ultimately conserves energy.

For more recycling and reuse suggestions, refer to the Centre County Recycling and Refuse Authority at centrecountyrecycles.org.

A

Ingrid P. Holzman Award

The Ingrid P. Holtzman Award is given annually to an individual or organization that provides a quality design project to the community. The design project should meet a majority of the following guidelines:

- incorporates local artwork;
- provides a public space for community for events or is a charitable use (i.e. affordable housing);
- uses elegant building materials, innovated plantings, and sustainable products;
- blends neighborhoods and maintains the historic character of the property and/or neighborhood;
- provides a nice site and has outstanding design features;
- is deemed a benchmark project.

Corner of Curtin Road + Burrowes Street

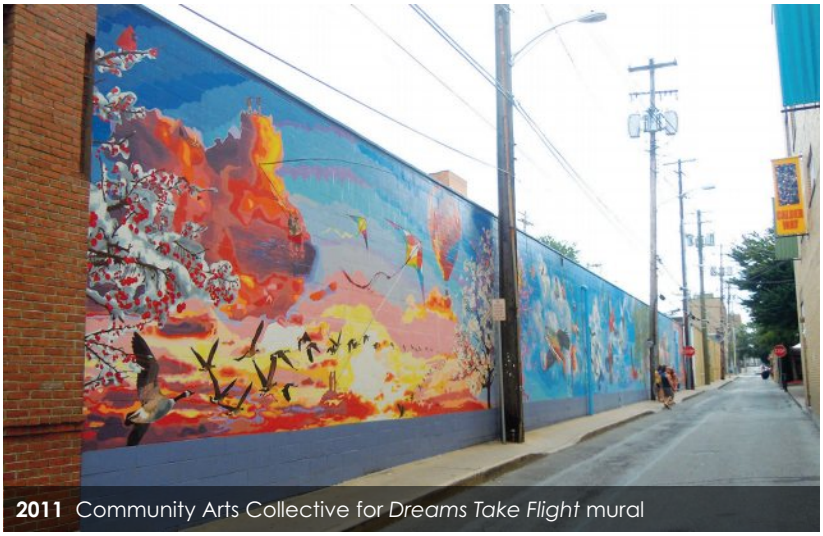
2014 Phil Hawk, stone mason for the Lion Shrine

234 East College Avenue at the intersection with McAllister Street

2013 Urban Outfitters' retail store renovation

2012 Ralph and Marcia Heimer for Jeramar Plaza

226 South Allen Street



2011 Community Arts Collective for *Dreams Take Flight* mural

116 South Allen Street,
Calder Alley facade

2010 The Pennsylvania State University for The Arboretum at Penn State

Corner of Park Avenue +
Shortlidge Street

700 West College Avenue at the intersection with South Sparks Street

2009 Ralph and Rob Pileggi for house in West End neighborhood

130 West College Avenue

2008 State Theatre and Mike Negra for the State Theatre renovation

Corner of Beaver Avenue + South Allen Street

2007 Schlow Centre Region Library for their new building

2006 Graham Curtis for excellent signs

2005 Graham Spanier and The Pennsylvania State University for campus improvements

2004 Fred Fernsler for design sensitivity and receptiveness

2003 Michael Pilato for downtown murals

2002 Joe Banks for borough enhancements through gardens

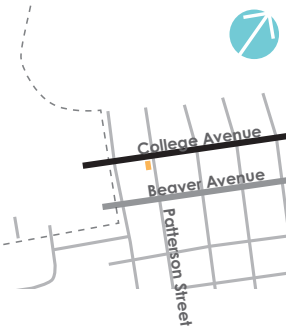
2001 Cathy and Andy Zangrilli for many years of service improving the Borough's appearance

2000 Joel Malnick and Sara Twibil for two historic residential renovations

B Focus on Appearance Award

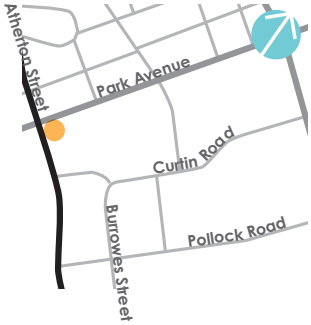
The Focus on Appearance Award is given annually for excellence in design, aesthetics and/or safety enhancements to properties within the Borough. These design or maintenance projects go above and beyond basic renovations or construction project requirements by enhancing the overall quality of the Borough through various improvements:

- historic preservation,
- pedestrian and bicycle facility improvements,
- advanced design concepts,
- excellence in craftsmanship and materials,
- creative facades.



800 West College Avenue at the intersection with South Patterson Street

2012 Pamela Trout for residential renovation in the West Village



Corner of North Atherton Street + Park Avenue

2012 The Pennsylvania State University for the Nittany Lion Inn

2011 The Pennsylvania State University for Shortlidge Road improvements

Shortlidge Road between Curtin Road and College Avenue

2009 Old State Clothing

Corner of Beaver Avenue + South Allen Street

1996 Jay Storch family for development of McAllister Way

McAllister Way between College and Beaver Avenues

113 Heister Street at the intersection with Calder Way

1998 The Deli & Z Bar

2011 Property owners of Taco Bell site for commercial renovation

2009 Looks Hair Design mural

1999 Sera–tec Plasma Center

1999 Irving's Bagels

1998 Ramada Inn

1997 Alpha Kappa Lamda

1996 Manhattan Bagel Company

1996 Perfectly Frank

1996 University Baptist and Brethren

1995 State College Presbyterian Church

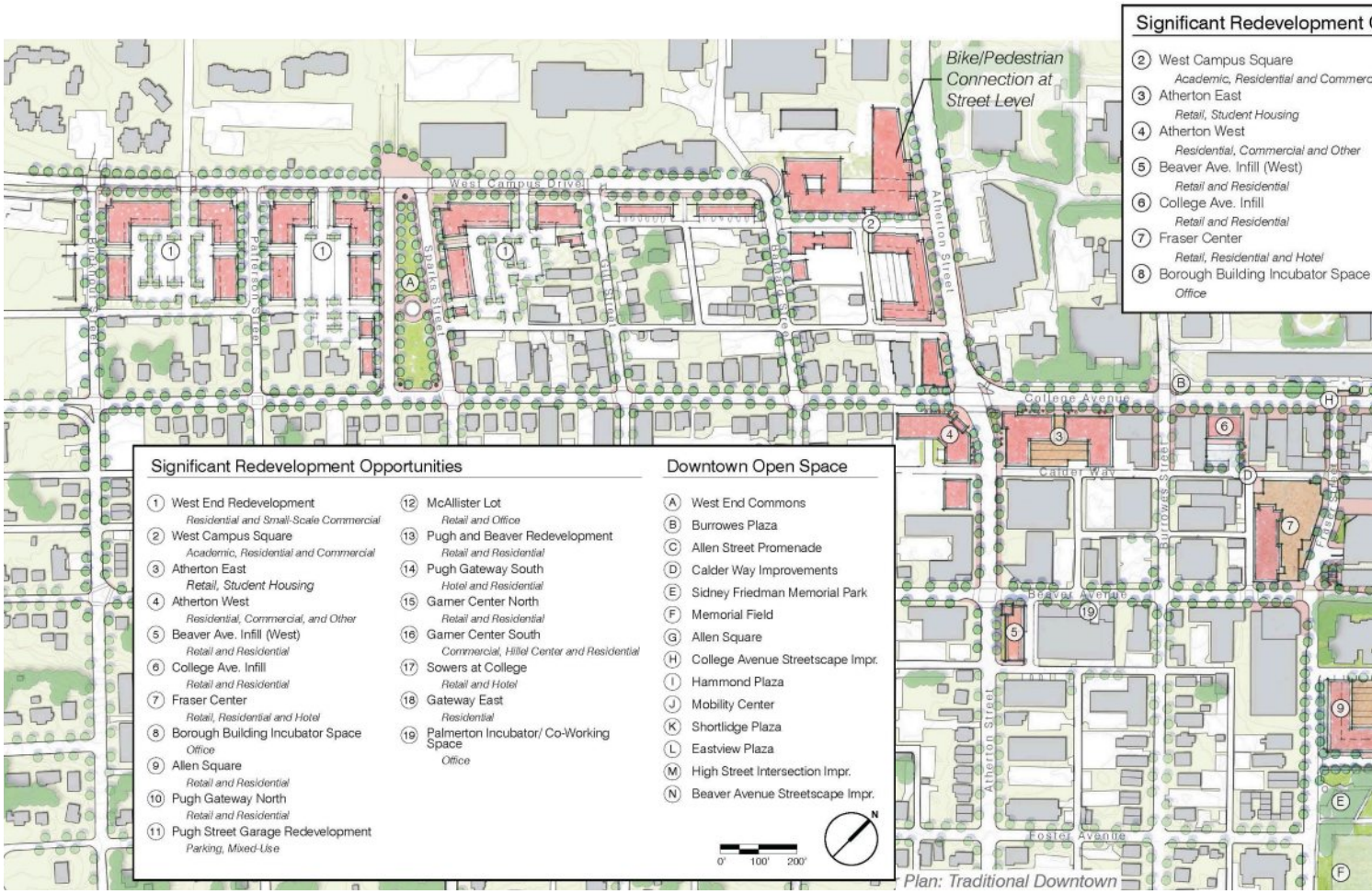
1995 University Mennonite Church

1995 Eddie Bauer

1995 Chili's Bar n' Grill

1995 Lillian Raycroft Law Office

1992 McAllister Street Parking Deck



Plan: Traditional Downtown

Vision
Downtown State College Master Plan

The following pages are excerpts from the State College Downtown Master Plan (adopted August 19, 2013) prepared by Mahan Rykiel Associates, Inc. with Arnett Muldrow Associates, Stahl Schaeffer Engineering, Grimm + Parker Architects, Kalback Planning and Design, and Dan Jones Landscape Architect.

While the public realm of all downtown streets is important, this hierarchy recognizes that all streets should not be treated equally in terms of pedestrian function and design. The most visited streets should receive the highest level of investment while less frequented streets should receive a base level of design. The ultimate goal, however, should be that all streets are clearly part of a cohesive public realm network, regardless of their level in the hierarchy. Below is a summary of the proposed hierarchy. A detailed design description for each typology is provided in Appendix D: Highlights from "Design Guide:" *Downtown State College Master Plan*.

***Type A**:* These streets are the most important in terms of establishing the downtown public realm image and framework and receive the highest level of design treatment, going above and beyond what has already been completed downtown. This category includes the core

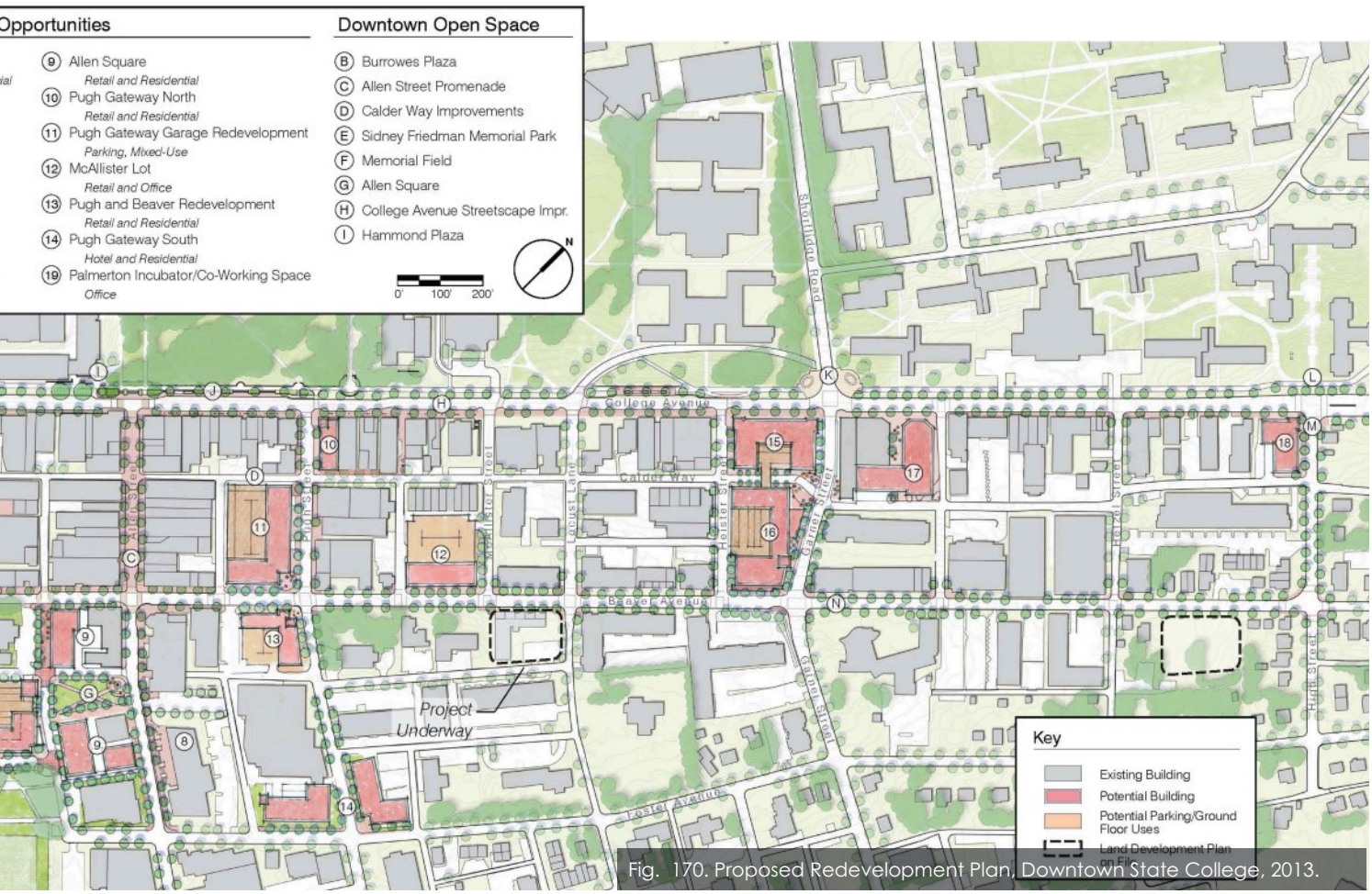


Fig. 170. Proposed Redevelopment Plan, Downtown State College, 2013.

of College Avenue (between Atherton Street and University Drive) and Allen Street (between College and Beaver Avenues). Conceptual design for "Allen Street Promenade" and the core of College Avenue are illustrated and described in detail on the following pages.

Type B: These streets are important streets that define the downtown core. Some streetscapes along these streets have already been completed (portions of Allen and Fraser Streets and portions of Beaver Avenue) or are in the process of being implemented (a portion of Atherton Street and a portion of Pugh Street) and have set the materials standard for all of downtown. The following additional street segments should also receive this same or similar treatment to complete the downtown core network: portions of Beaver Avenue (between Atherton and Garner Streets), Fraser Street (between Beaver and Foster Avenues), Pugh Street (between Beaver and Foster Avenues) and Garner Street (between College and Beaver Avenues). A design concept for Beaver Avenue is illustrated and described in detail on the following pages.

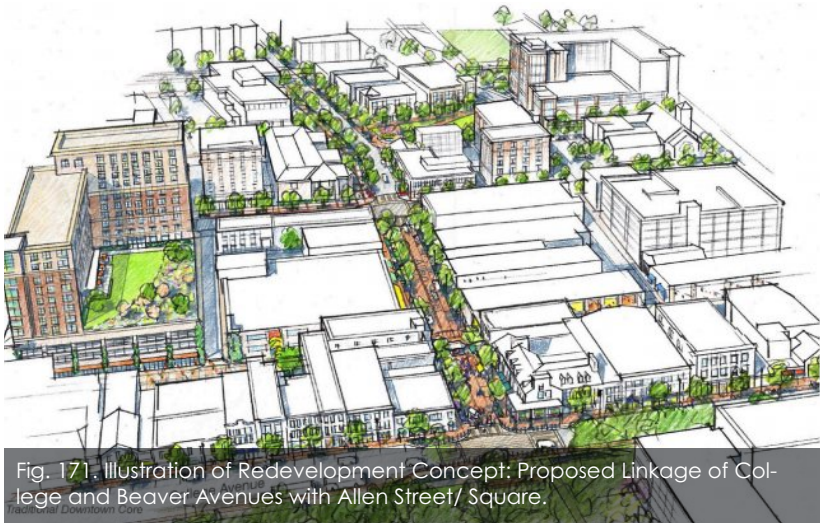


Fig. 171. Illustration of Redevelopment Concept: Proposed Linkage of College and Beaver Avenues with Allen Street/ Square.

Fig. 172. Illustration of Redevelopment Concept: Proposed Buildings to define Allen Square.

Additionally, recommendations for refinements to Pugh Street are also illustrated and described.

***Type C**:* These streets represent the east and west extensions of College and Beaver Avenues (and the connecting portions of High and Buckhout Streets) but are outside of the downtown core and do not warrant the same level of design as Type A and B above. They should, nonetheless, be compatible in design.

***Type D**:* This street type represents alleys designed as shared space, with a heavy emphasis on accommodating pedestrians. The street type is anchored by Calder Way (between Atherton and Sowers Streets), Kelly Alley and D Alley (between West Highland Alley and Foster Avenue). Should the Beaver Avenue parking lot be redeveloped, consideration should be given to providing a pedestrian link connecting Kelly and D Alleys. A design concept for Calder Way is illustrated and described in detail on the following pages.

Fig. 173. Illustration of Redevelopment Concept: Proposed Corner of College Avenue and Garner Street.

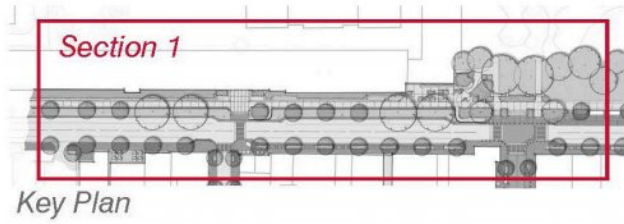
Fig. 174. Illustration of Redevelopment Concept: Proposed Corner of College Avenue and Pugh Street.

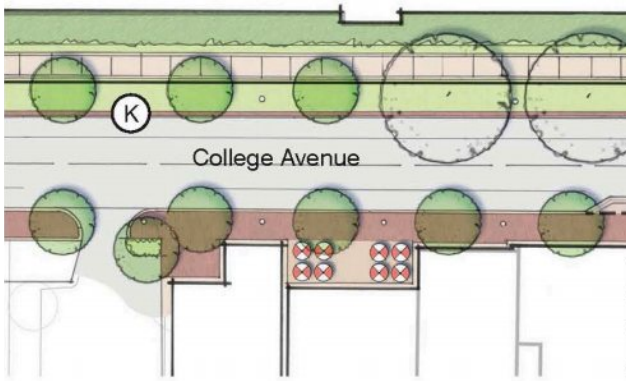
Type E: This street type represents all other streets within downtown and will include base level of treatment. Sidewalk paving would be predominantly concrete and the Borough standards for lights, street furniture, tree grates, etc. would be used.

Implementation of **Focus and Catalyst Projects** in the public realm will occur over many years. It is important, however, to establish a Catalyst project as an initial phase; one that will make a significant positive impact on downtown. Several streetscape projects are described on the following pages as "focus projects," many of which (or a portion of which) comprise a significant Catalyst project. These focus projects include the Allen Street Promenade (from College Avenue to Beaver Avenue), College Avenue (from Atherton Street to University Drive), Calder Way (from Burrowes Street to Garner Street), Beaver Avenue (from Atherton Street to High Street), Pugh Street (from Beaver Avenue to College Avenue) and High Street (from Beaver Avenue to College Avenue). Of these focus projects, the following projects or portions of projects are included in the Catalyst project:

- Allen Street Promenade, including the intersection with College Avenue
- Pugh Street, with the exception of the Pugh Street Garage frontage
- Calder Way, between Burrowes and Heister Streets
- Beaver Avenue, between Miller Alley and Pugh Street (sections that are currently incomplete)

These streets have been identified as part of the Catalyst project because of their adjacencies to already completed streetscapes such as Fraser Street, Allen Street (south of Beaver), and portions of Beaver Avenue (between Fraser and Pugh Streets); they were already in design (Pugh Street); their proximity to significant development/ redevelopment opportunities (Fraser Centre and Pugh Street Garage) and/or their location within the downtown core.





College Avenue

The overall concept for College Avenue is to create a distinct brand, safe and comfortable pedestrian environment and unified streetscape image that complements the unique qualities of each side of the street: the broad lawns and traditions of the Penn State University campus and the vibrant college town environment of downtown State College. The highest level of design will occur within the segment between Atherton Street and Garner Street (the College Avenue Core or Streetscape Type-A Primary). The section between Garner Street and University Drive (Streetscape Type-A Secondary) will utilize the same family of materials as the Core but will include less intensive paved pedestrian areas (the south side sidewalk will not be expanded and parking will remain on both sides where it currently exists); however, a narrow brick sidewalk will be added along the north side parking curb. The segment

between Atherton Street and Buckhout Street will utilize the same family of materials, but will not be as extensive. This section of College Avenue is described later in this section of the report.

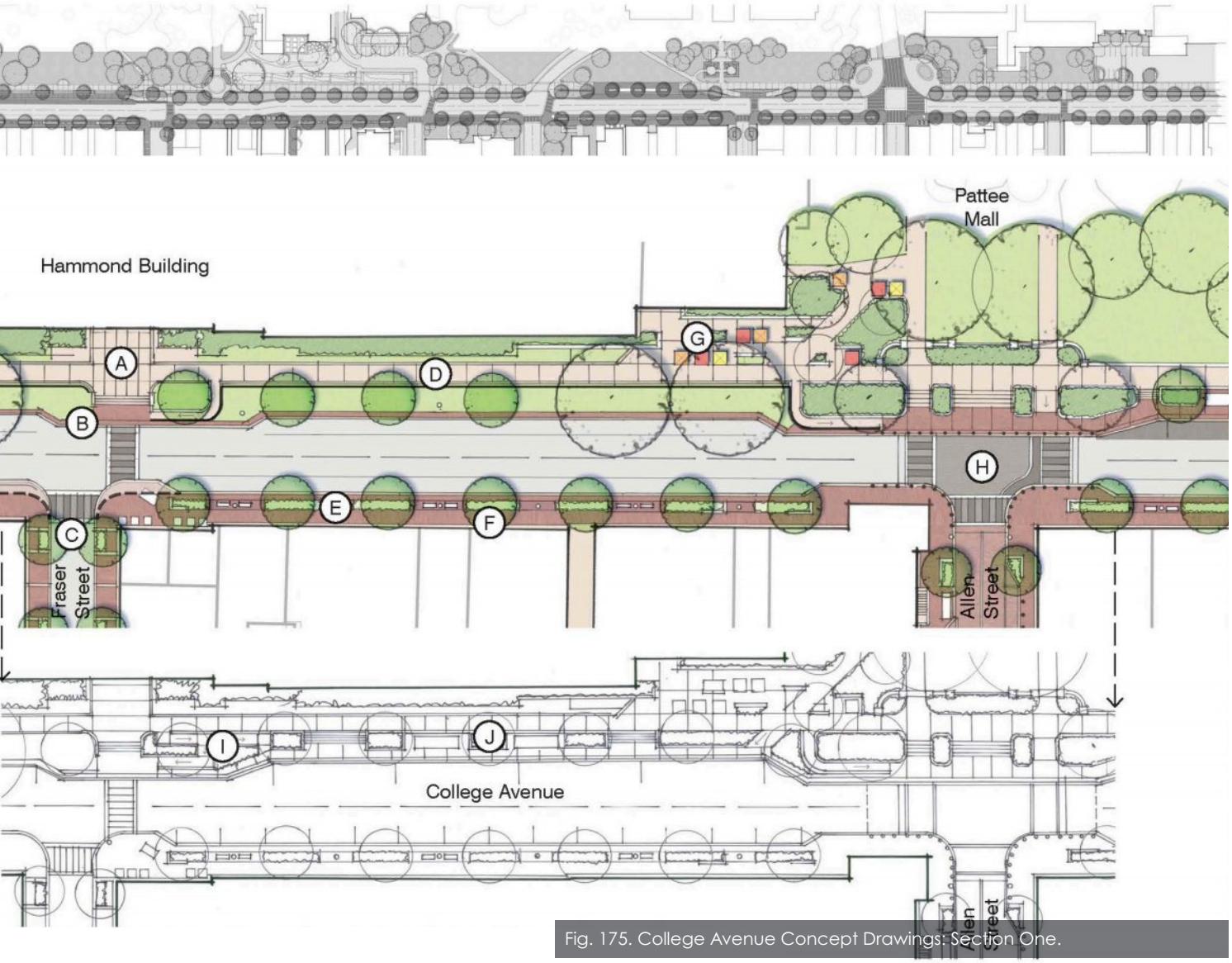


Fig. 175. College Avenue Concept Drawings: Section One.

A. Enlarged plaza space at entry to Hammond Building
B. Expanded brick paving area to highlight campus entrance at Fraser Street
C. Completed streetscape along Fraser Street
D. Expanded shared use path (10'–12' wide) between Burrowes Street and Pattee Mall
E. Brick sidewalk along town side of College Avenue; expanded where road dimensions allow; street trees, planters, benches, and street lights located in amenity zone
F. New street tree, typ.
G. Hammond gathering area
H. Raised intersection at grade with Allen Street end of College Avenue sidewalk
I. ADA ramp connection to Fraser Street and bus loading area
J. Enhanced bus stop; shelters to match PSU campus standard; planters and grand stair; bus pull-off treatment to match Allen Street intersection
K. 4' brick walkway adjacent to parking on north side of College Avenue

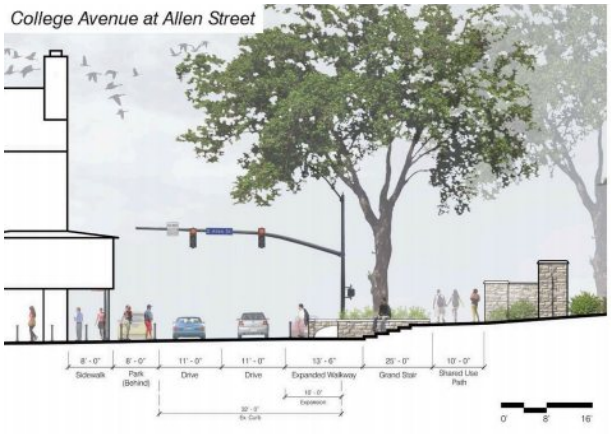
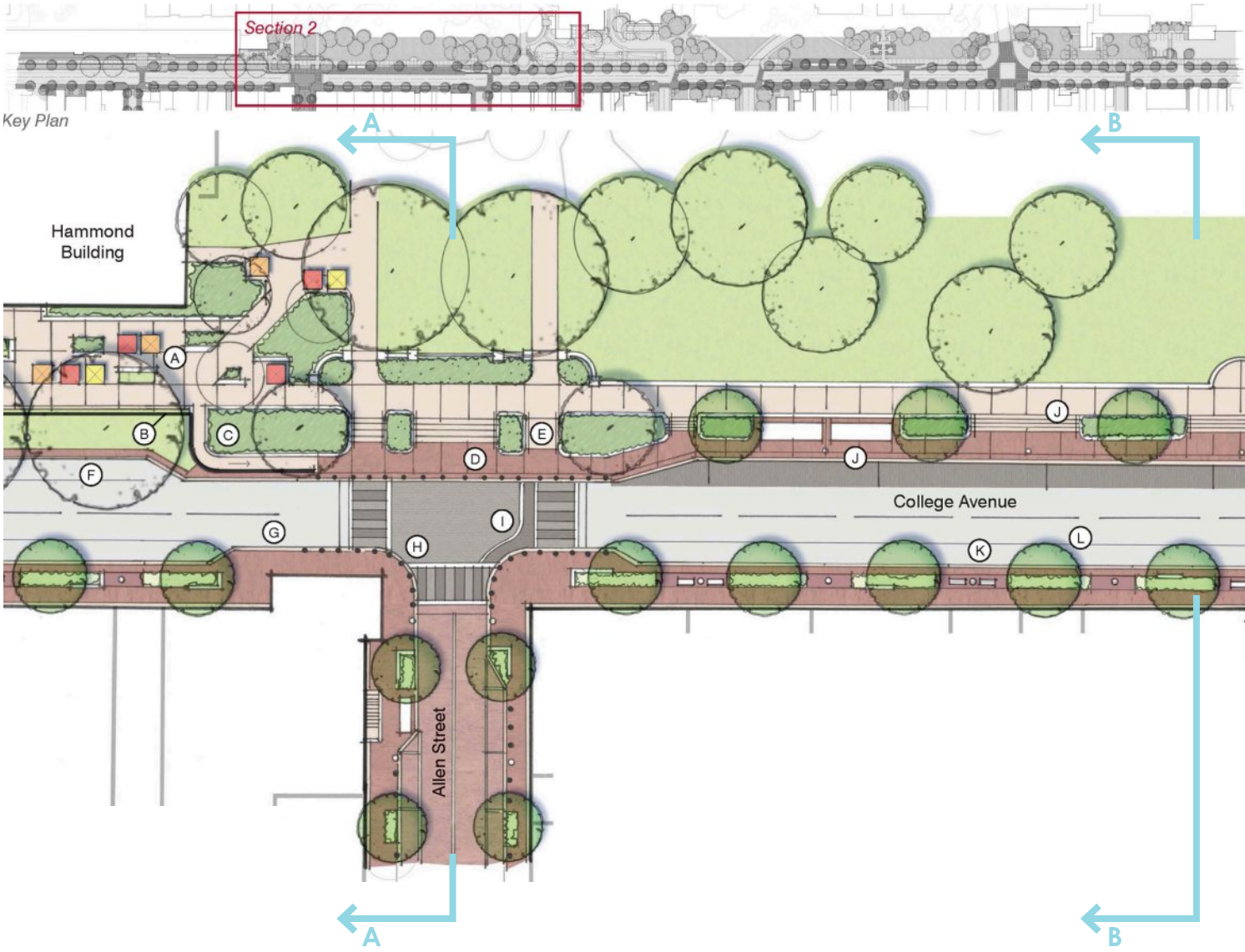


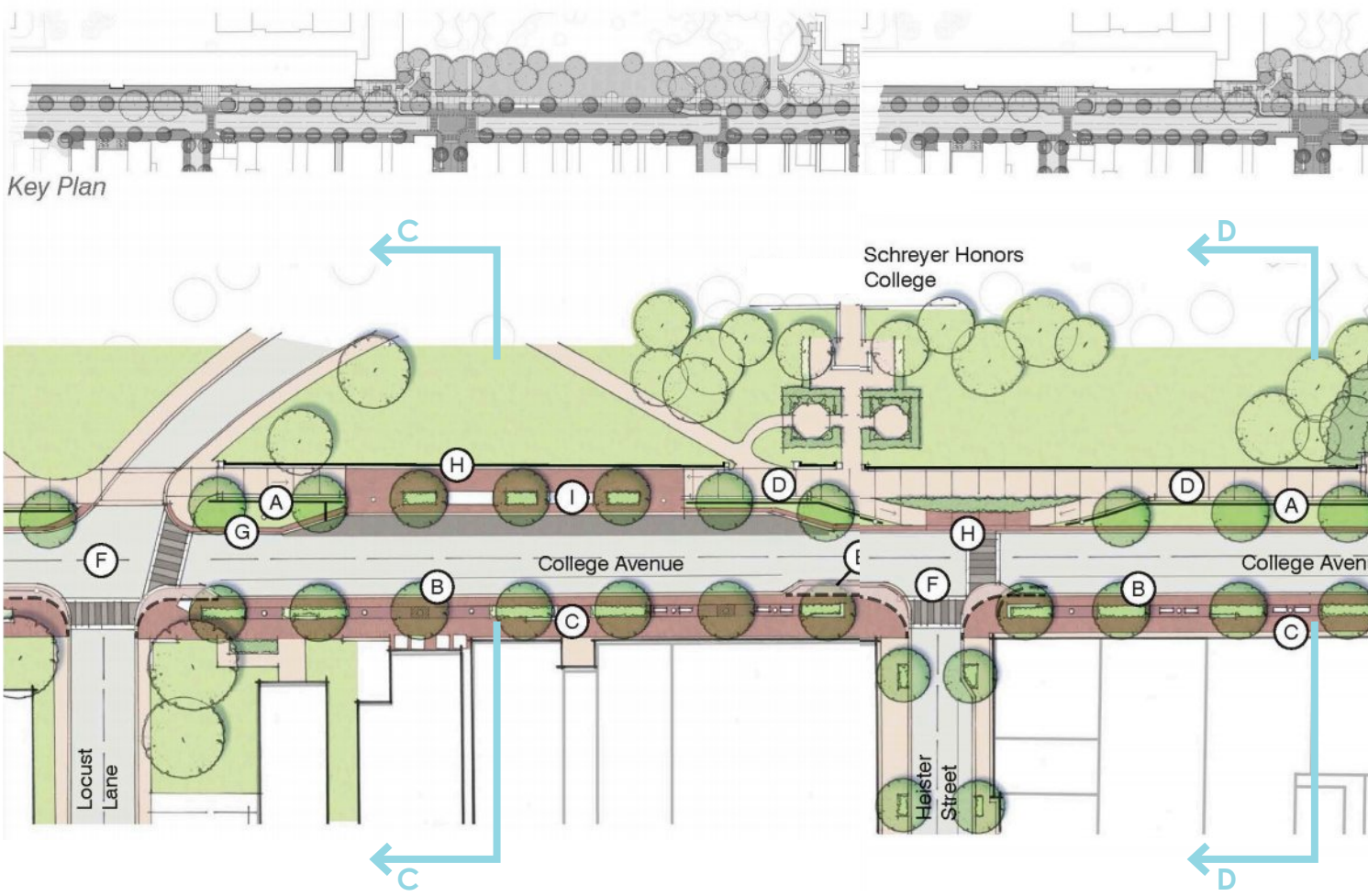
Fig. 176. College Avenue Section at A–A.

Fig. 177. College Avenue Section at B–B.



A. Hammond gathering area
B. Black ornamental railing to replace existing chain link fence and shrubs
C. ADA ramp; planter to preserve existing mature elm
D. Enhanced gateway between Allen Street and Pattee Mall; stairs and planters to accommodate grade transition; bulb-out with brick paving at street grade
E. Ramp to allow for bicycle connection
F. Parallel parking, typ.; 4' wide sidewalk on north side of College Avenue
G. Expanded bulb-outs, typ.
H. Raised intersection at grade with Allen Street and College Avenue sidewalk; stamped concrete; bollards between sidewalks and street
I. Bicycle lane as part of crosswalk
J. Enhanced bus stop; shelters to match PSU campus standard; planters and grand stair along frontage of Old Main lawn; bus pull-off treatment to match Allen Street intersection
K. Brick sidewalk along town side of College Avenue; expanded where road dimensions allow; street trees, planters, benches, and street lights located in amenity zone
L. New street tree, typ.
M. Ornamental railing to encourage safe street crossing
N. Enhanced intersection; ADA ramps between street grade and campus sidewalk
Note: bulb-outs on south side of College Avenue to be determined at detail design phase based on street specific loading and service needs
O. Continuous (4' wide adjacent to parking areas; 18" wide adjacent to travel lane) brick band
P. Expanded shared use path (10'–12' wide) between Henderson Mall and Shortlidge Road
Q. Opportunity for outdoor seating/ dining within expanded sidewalk area

Fig. 178. College Avenue Concept Drawings: Section Two.



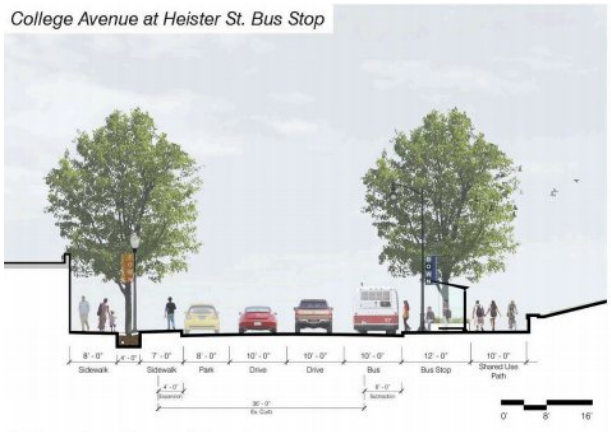


Fig. 179. College Avenue Section at C–C.

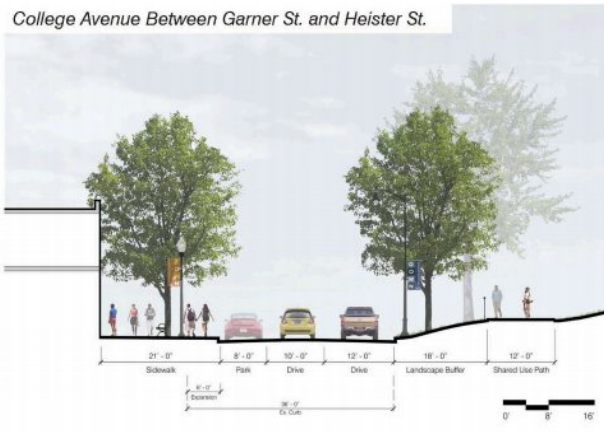
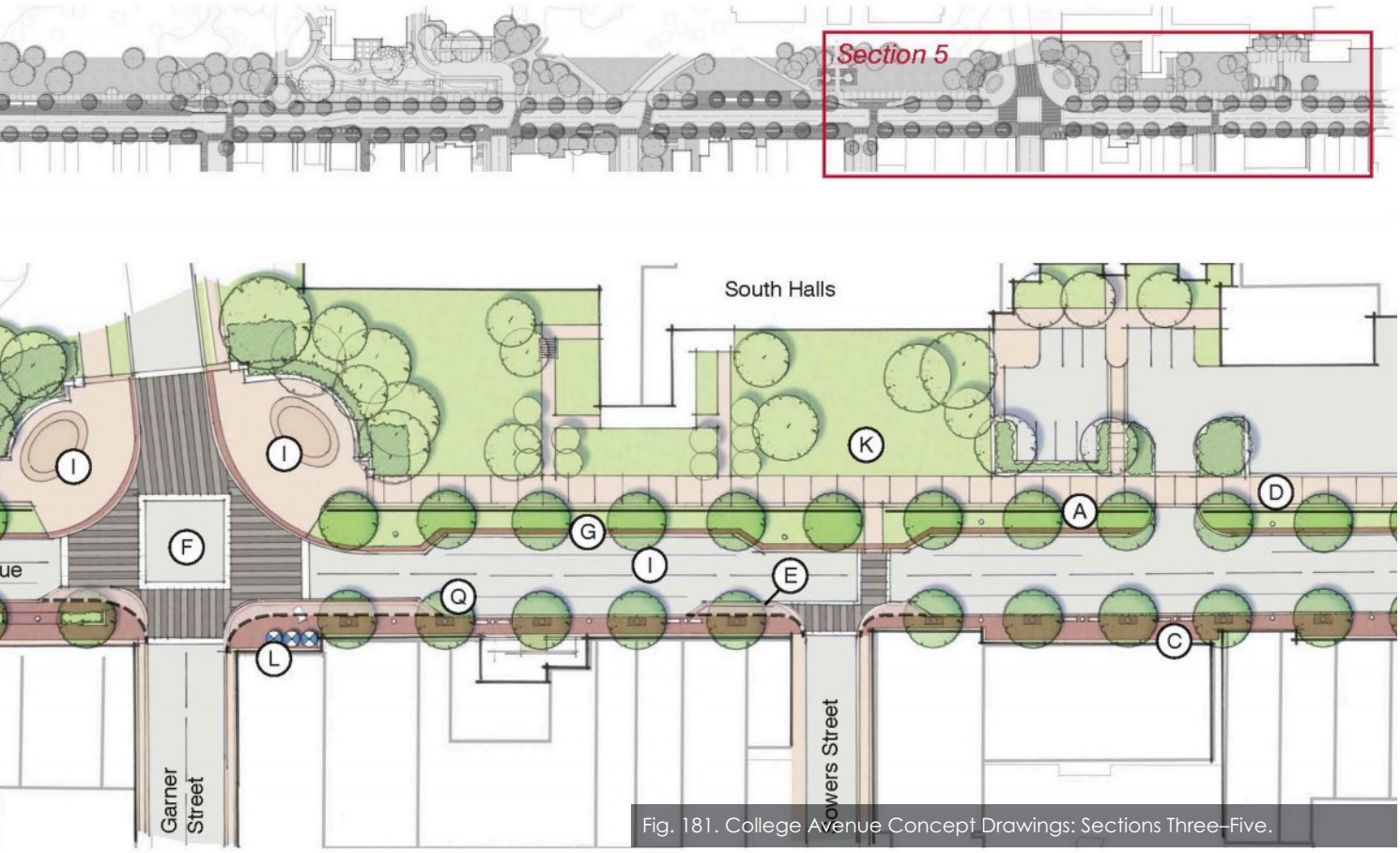


Fig. 180. College Avenue Section at D–D.



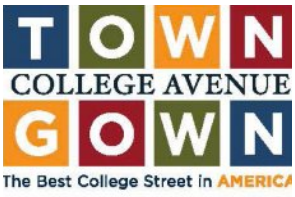


Fig. 182. College Avenue brand graphics from the Downtown Master Plan.

A. Black ornamental railing to replace existing chain link fence and shrubs, typ.
B. New street tree, typ.
C. Brick sidewalk along town side of College Avenue, expanded along south side with elimination of parking on north side; street trees, planters, benches, and street lights located in amenity zone
D. Expanded shared use path (10'–12' wide) between Henderson Mall and University Drive
E. Ornamental railing to encourage safe street crossing
F. Enhanced intersection; curb bulb-outs and stamped concrete crosswalks, typ.
Note: bulb-outs on south side of College Avenue to be determined at detail design phase based on street specific loading and service needs
G. Continuous (4' wide adjacent to parking; 18" wide adjacent to travel lanes) brick band
H. Retaining wall to allow for grade transition from shared use path to bus stop area
I. Enhanced bus stop; shelters to match PSU campus standard; brick paving at bus stop depressed to match curb height
J. Brick paving to highlight campus entrance at Heister Street
K. Enhanced campus gateway; expanded plaza spaces on north side of College Avenue for seating and gathering; consider special paving

Key components of the College Avenue streetscape are illustrated in the concept drawings on the following pages, and described in the narrative following that.

Calder Way

There is potential for Calder Way to function as "shared space," allowing service, vehicular, pedestrian and bicycle traffic to use the space at the same time. However, the space would be designed to show preference to the pedestrian. While vehicular traffic would be permitted to service businesses or access to parking areas not accessible from other streets, the space would be designed to be inconvenient to motorists who want to use the alley as a short-cut. There is an exciting opportunity to focus on the arts and build upon the "funky," artsy qualities that currently exist.

Specific design enhancements include the removal of curbed sidewalks (where feasible), use of stamped asphalt or concrete paving incorporating arts themes in key locations and use of "sharrows" to designate shared bike space for westbound traffic. Additionally, the feasibility of designating a "contra-flow" lane should be explored to allow for eastbound bicycle traffic. It will be important to maintain existing service and loading areas. Efforts should be made, however, to arrive at a balanced solution during detailed design. Special

Fig. 183. Calder Way brand graphics from the Downtown Master Plan.

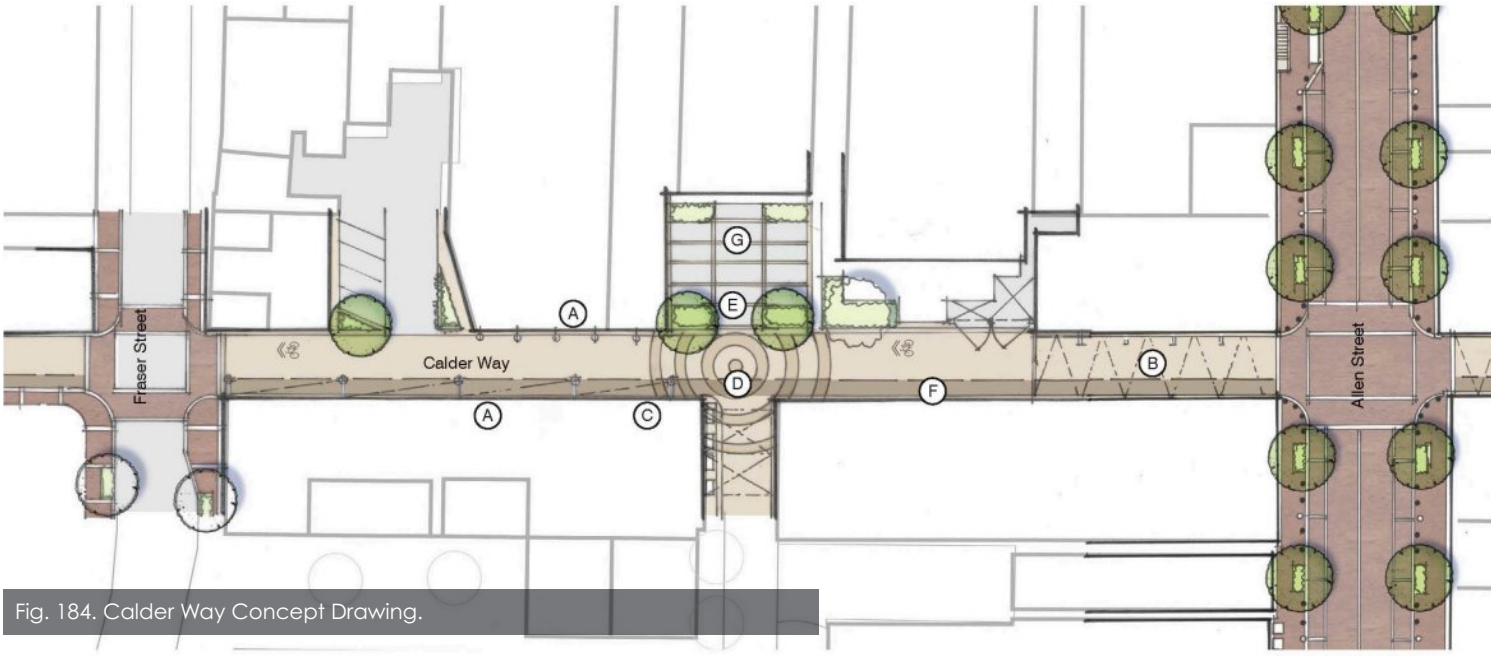
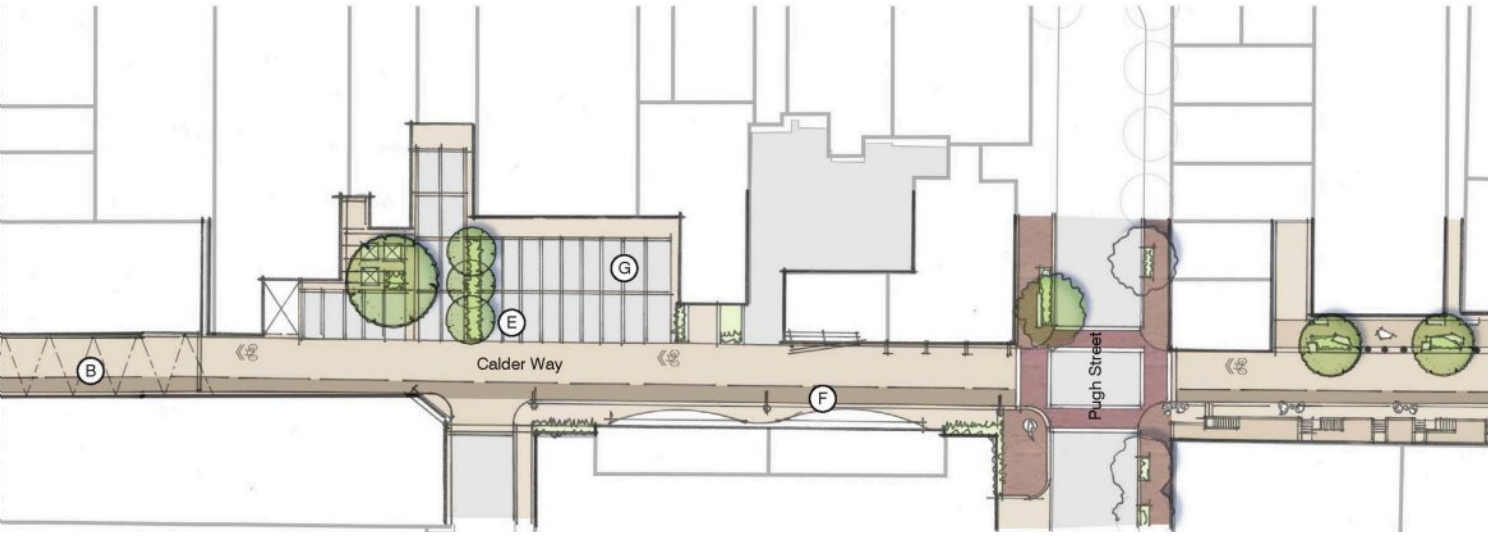


Fig. 184. Calder Way Concept Drawing.

lighting would be used in the form of arm brackets affixed to adjacent buildings, ornamental pole lights "wrapped" around existing utility poles and overhead string lights to further animate the space. Calder Way should also provide a venue to engage artists to expand the mural program, develop "living walls" on otherwise blank building walls, incorporate arts-themed banners and incorporate unique façade treatments that might not be appropriate on "front door" streets. Additionally, as redevelopment occurs along the alley, active uses should be encouraged to face and engage the alley, particularly at intersections. The Fraser Centre proposal is a successful example of how this can be done.

While there have been proposals in the past to bury the utilities in Calder Way, it is not feasible because of significant costs implications as well as limited room beneath the alley to accommodate additional utilities. Instead, the intent is to maintain the overhead utilities, perhaps wrap the poles with an ornamental covering and create enough interest with the elements described above to draw attention away from the utilities. The appeal of Calder Way is that it is a service alley that also serves as a special place, quite different from the more traditional streets throughout downtown.

There may be some opportunities to bury utilities along some sections in conjunction with major redevelopment projects, such as between



A. Wall-mounted lights
B. Overhead string lights
C. Ornamental pole cover/ light such as "Wrap–A–Post" or custom pole wrap developed with local arts community to cover utility poles
D. Stamped concrete to emphasize arts
E. Planted tree pits within parking areas
F. Bike contra lane to accommodate eastbound bicycle traffic (feasibility to be explored further; must be balanced with ability to maintain service and loading)
G. Special paving to distinguish paving areas or outdoor courtyards

Fig. 185. Illustration of Calder Way as Pedestrian/ Bicycle Zone.

Fig. 186. Calder Way concept section drawing.

Garner and Heister Streets. This feasibility should be explored as redevelopment plans are proposed (see recommendations under Theme 4). Specific programmatic recommendations include giving consideration to closing Calder Way to vehicular traffic on specific evenings or during special events only, this can be tested and evaluated.

Beaver Avenue

Narrow travel lanes on Beaver Avenue and along High Street to College Avenue to provide wider sidewalks and gathering areas. Between Garner and Atherton Streets, maximize opportunities to widen sidewalks and provide extended sidewalk bulb-outs such as those improvements implemented between Fraser and Allen Streets. Between Garner and High Street, widen sidewalk areas in conjunction with narrowed travel

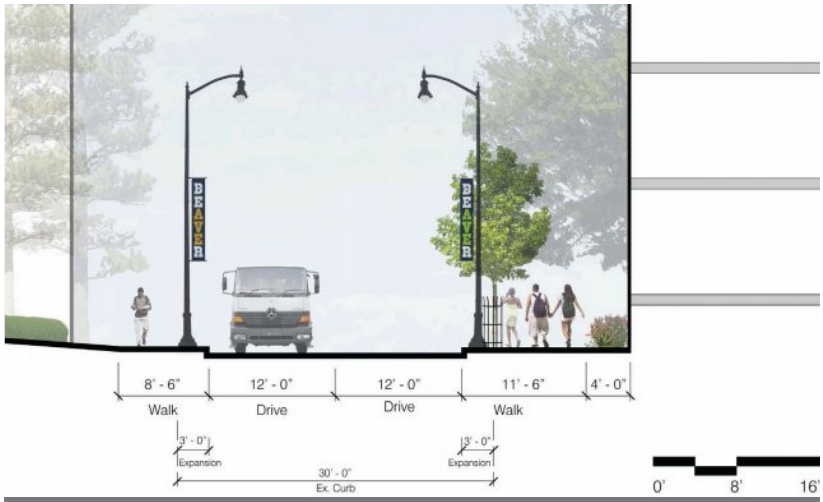


Fig. 187. Section trhough Beaver Avenue .

lanes. Specific design considerations include:

Branding and Identity: Develop a unique identity for Beaver Avenue. Beaver Avenue is a unique street that transforms in character from east to west. There is an opportunity to brand Beaver Avenue and capitalize on this with the tag line "All kinds of character." This provides the opportunity to play up the traditional downtown character west of Pugh Street and a more student-oriented identity east of Pugh Street. Creating a separate brand identity for Beaver Avenue is more of a long term recommendation. The opportunity is to develop an identity that incorporates a bolder "collegiate" block letter motif along with banners. Initially, however, Beaver Avenue should incorporate the overall downtown brand. Lane Narrowing and Sidewalk Expansion: Where possible, particularly between Garner and High Streets, narrow lanes from 15' wide each to 12' wide. This will allow for sidewalk expansion of approximately 3' on each side.

Fig. 188. Beaver Avenue brand graphics from the Downtown Master Plan.

Pavement: Between Fraser and Pugh Streets, utilize the paving pattern already utilized on some sections of the Beaver Avenue sidewalk (brick with concrete banding). Beyond Fraser and Pugh Streets, in each direction, primarily utilize scored concrete with large brick fields at intersections.

Transit Stops: As described earlier under Theme 2, enhance the transit stops along Beaver Avenue. Specifically, consider relocating the existing stop on the west side of Garner Street to the east side if it cannot be enhanced in its existing location. Also, work with property owners to explore the potential of an easement on their property to provide more gathering space and access to the existing transit stop near High Street.

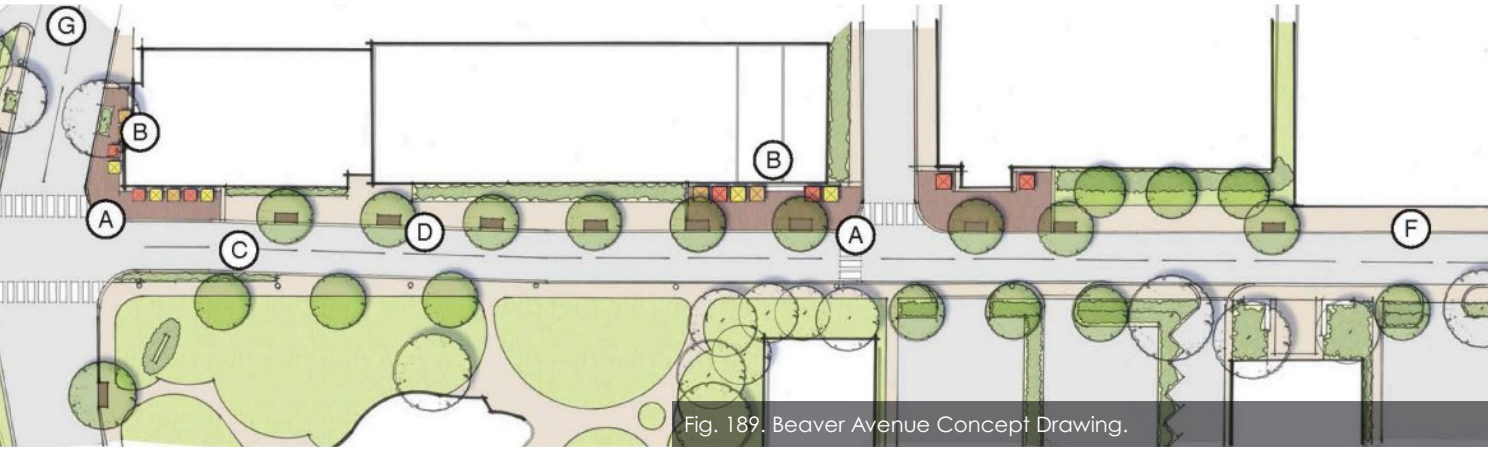


Fig. 189. Beaver Avenue Concept Drawing.

A. Large Fields of Brick Pavement at Intersections
B. Opportunity for Outdoor Seating/ Dining in Expanded Sidewalk
C. Lane Shift to Allow for Expanded Sidewalks
D. New Street Trees in Tree Grates
E. Bulb–Outs
F. Expanded Sidewalk
G. Sharrows to Designate Garner Street as Bike Route Until Bike Lanes Can Be Added (If Feasible)

Allen Street Promenade

The overall concept for the Allen Street Promenade supports recommendations from previous master planning efforts to treat this block of Allen Street as a "great place" — one that clearly portrays itself as being the "town square" for State College. It is important to note that the proposal is not to designate this block of Allen Street as a "pedestrian mall" — a space that is permanently closed to automobiles. Rather, the design for this block of Allen Street allows great flexibility in how the block functions. Most of the time, the block will function as it currently does with two-way traffic and on-street parking. Other times, it could be closed to accommodate events or increased volumes of pedestrian traffic. It could be closed entirely (College Avenue to Beaver Avenue) or in segments (College Avenue to Calder Way or Calder Way to Beaver Avenue).

A. Enlarged bulb-out and bicycle storage
B. Brick sidewalks; bollards between sidewalks and street
C. Brick paving in street; flush with sidewalk grade
D. Brick crosswalks at Calder Way
E. Relocated or new street tree, typ.
F. Brick paving along Beaver Avenue to match existing borough standard adjacent to Schlow Library

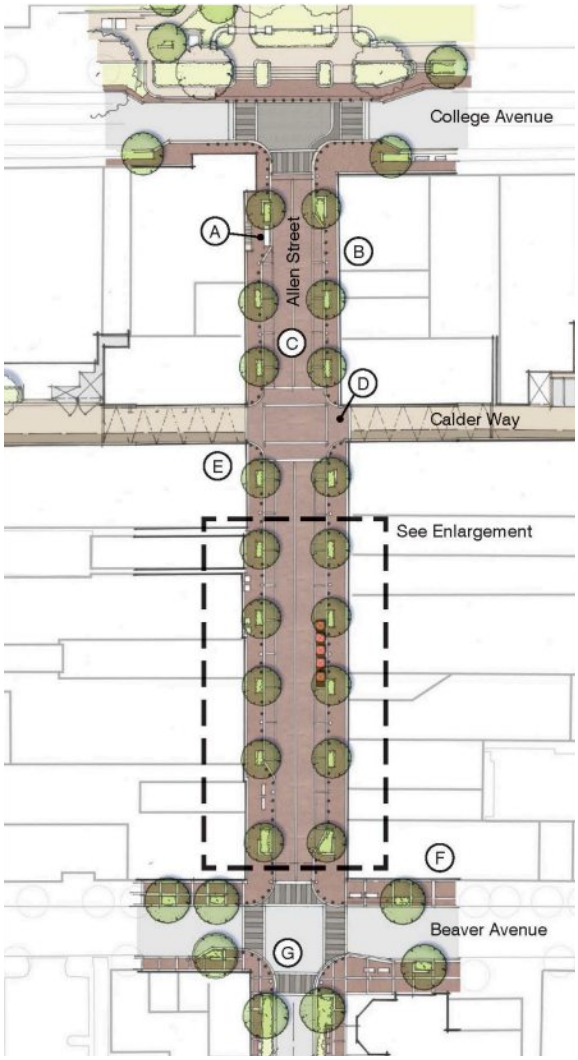


Fig. 190. Allen Street concept drawing.

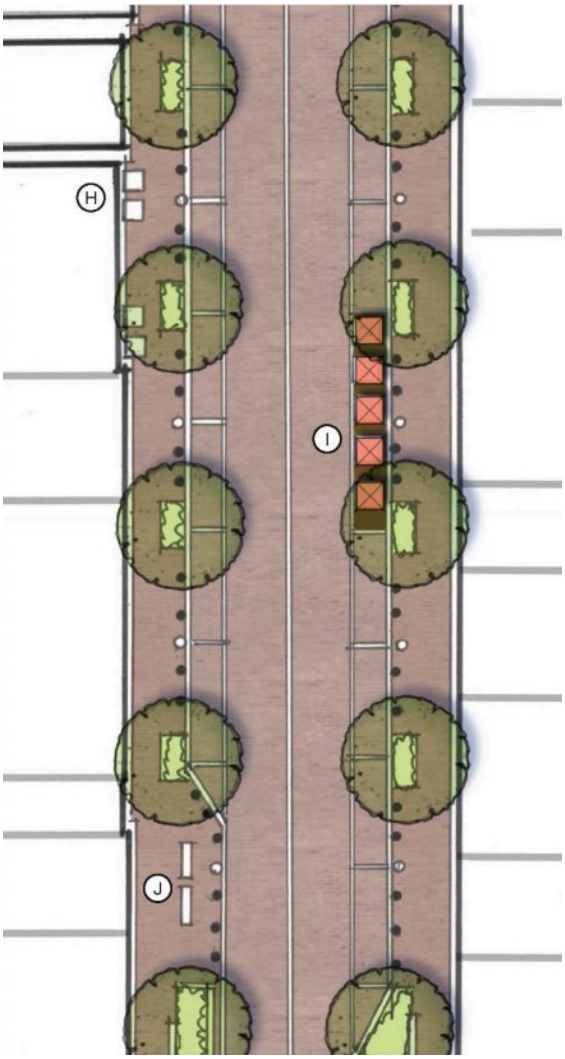


Fig. 191. Blow-up of concept to the left .

G. Stamped concrete crosswalks to match treatment along College Avenue; center of intersection remains asphalt
H. Outdoor seating/ merchandise display opportunities
I. "Pop-up cafés" or "parklets" in parallel parking zone; may be temporary or permanent and may rotate locations

Initially, the block might only be closed a few times a year. Downtown Improvement District and the Borough could continue to experiment with regular closings certain evenings of the week, certain weekends or specific seasons, depending on on-going evaluation of the success of the closings and programming of the space. As the use of the space is evaluated, it will be important to involve the business community, particularly the Allen Street businesses. Events such as "Lunch 'n' Learn" and "Lunch Break" could occur in this space as could new festivals that emerge.

Specific design enhancements include the removal of the curb to create a flush paved surface of predominantly brick. While brick paving is recommended, concrete unit pavers or stamped concrete may also be considered but should be determined at the time of detailed design. Different use areas (parking, travel lanes, etc.) will be defined by bollards, planters, street trees, ornamental lighting and pavement markings. Electrical service and water hook-ups will also be provided to

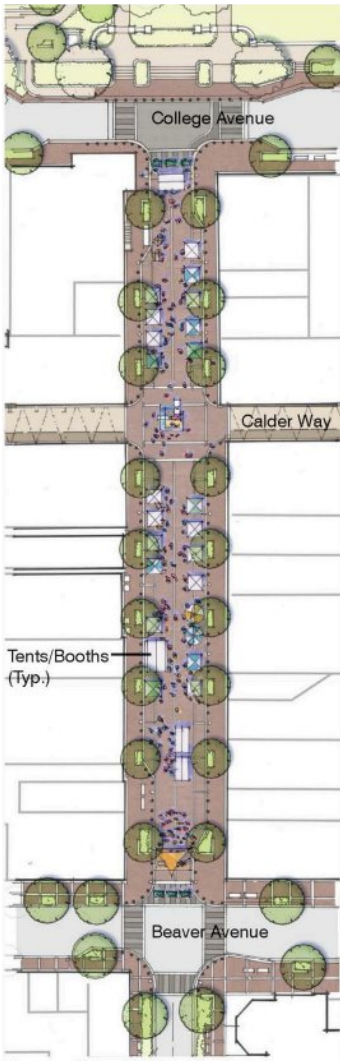
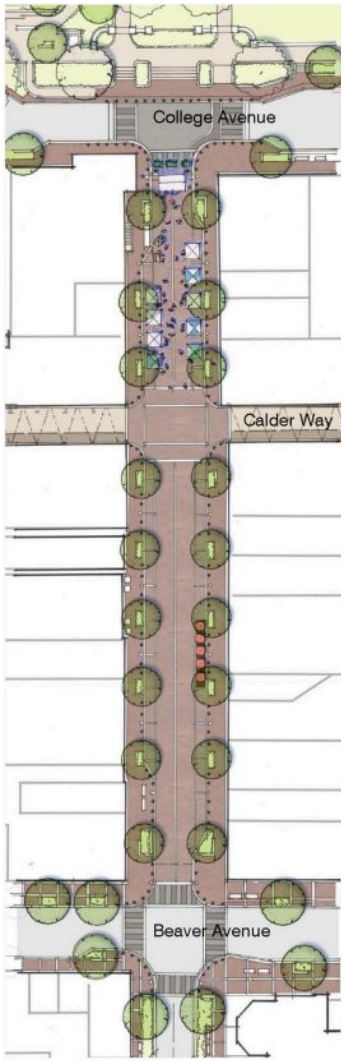


Fig. 192. Large Special Event.



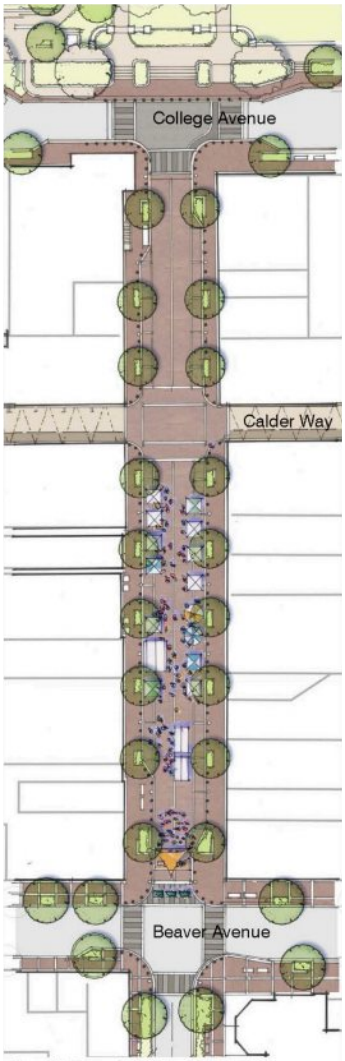


Fig. 193–194. Small Special Events.

accommodate performance venues. While this block will be open to traffic most of the time, it will "feel" like a space where pedestrians are the primary user and vehicles are secondary users. At the time of detail design, the spacing of these elements will need to be coordinated with businesses and their delivery requirements to accommodate this important function.

Other design elements will include kiosks, signage and banners to reinforce the downtown community brand, bicycle accommodations and public art. Earlier master plans suggested overhead "string lights" as a way to further enliven the street. While this would certainly enhance the atmosphere of the street, it is important to maintain the view to the Allen Street gates and Pattee Mall and avoid overhead elements that would detract from this view. Instead, these should be reserved for Calder Way as described later in this report.

An additional early opportunity for this block is to experiment with "pop-up cafes" or "parklets" in place of some of the parking spaces. These would allow the expansion of the pedestrian zone in some areas without having to close the street to vehicles and parking. This concept is employed throughout the world to accommodate outdoor dining, additional seating areas, vendor carts or merchant display areas for certain seasons, while allowing the space to revert to parking during other times of the year. There are a number of ways that this can be managed. In New York City, these outdoor seating areas are open to anyone and shared among businesses since they are located within the public right-of-way. In Frederick, Maryland, individual businesses can obtain a permit to use the space for their business and patrons (outdoor dining or display space), provided there is unobstructed pedestrian access along the sidewalk. The Borough and Downtown Improvement District could experiment with this concept even before the new streetscape is constructed. Frederick, Maryland allowed two pop-up cafes as a multi-month experiment in 2012.

With the complete reconstruction of the street and removal of the

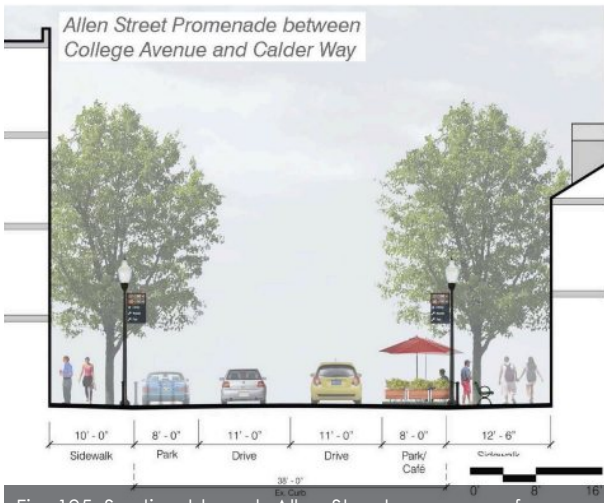


Fig. 195. Section trhough Allen Street, pop-up cafe.

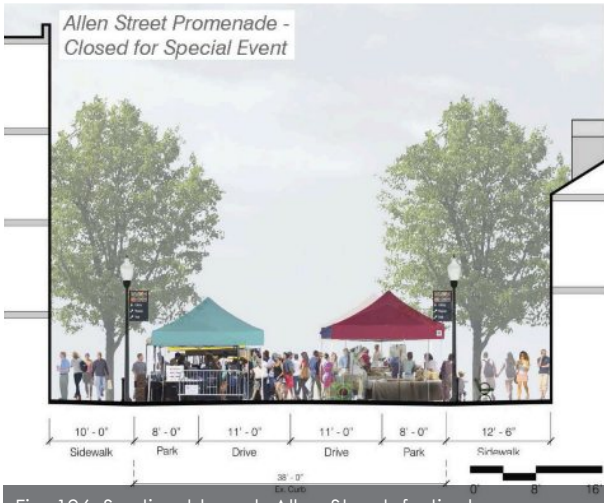


Fig. 196. Section trhough Allen Street, festival.

curb, there is an opportunity to incorporate innovative storm water management practices into the streetscape design. In particular, water from building downspouts might be directed to new interconnected tree planting pits or collected for irrigation of planter pots.

Similarly, tree planting pits may be interconnected to utilize storm water runoff from the street. However, because of the limestone geology, geotechnical surveys will need to be conducted during the design phase to determine any techniques that might be appropriate.

Additional design recommendations and materials are outlined in Appendix D: Design Specifications, Downtown State College Master Plan. The design concepts for the intersection with College Avenue is described and illustrated on pages under "College Avenue."

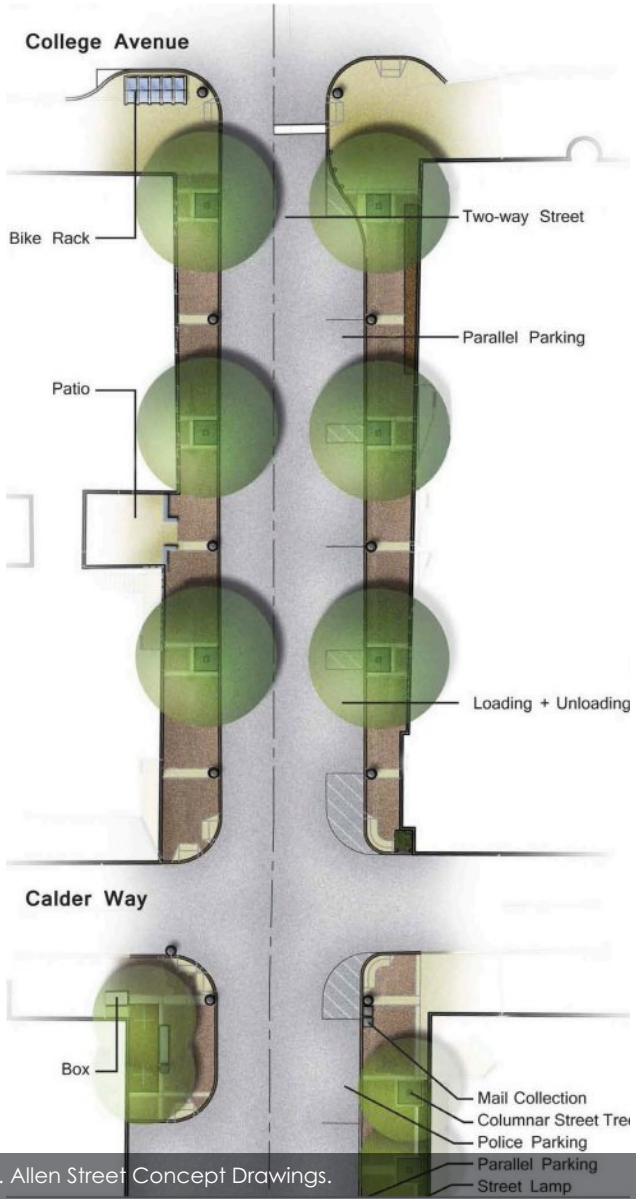


Fig. 197. Allen Street Concept Drawings.

Pugh Street

Pugh Street functions as the "bookend" to the heart of the downtown core area, with Fraser Street functioning as the other bookend. The current design concept that matches Fraser Street and provides expanded sidewalk areas in some locations is a good one. The materials and design should reflect the Fraser Street streetscape; however, consideration should be given to eliminating the center concrete band that runs the length of the sidewalk area to simplify the pavement pattern. Because the Pugh Street garage will be replaced in the near future, the streetscape improvements might focus on the stretch between College Avenue and Calder Way for both sides and only the east side between Calder Way and Beaver Avenue.

Heister Street Promeade

Consider allowing the 100 block of Heister Street to function similar to the 100 block of South Allen where it is closed on occasion or during special event weekends. This could be particularly valuable on the east end of downtown to provide larger gathering areas and relief from crowding along the Beaver Avenue sidewalks. This block of Heister and the connecting block of Calder Way currently have restaurants and outdoor dining areas that activate the edges, reinforcing the desirability of this street over others for temporary closures.

Any redevelopment considered for the surface parking lot adjacent to this block of Heister Street should consider how ground floor uses could further activate the Heister Street frontage. Refer to Theme Four in the Downtown Master Plan recommendations for a description of development/ redevelopment potential.

While the Heister Street Promenade will function similarly to the Allen Street Promenade, the design treatment does not need to be taken to the same level, as temporary closures for programming would likely be fewer than for Allen Street. The street would maintain curbs and would not include extensive special paving. If temporary closures of the street and programming are successful, then long-term consideration might be given to doing a more elaborate design treatment, similar to the Allen Street Promenade. Other streets identified by stakeholders as alternatives to Heister street for temporary closures include Garner Street and Locust Lane. Garner Street, while a good option fortemporary closure in terms of uses and location, is an important connecting street to the University and areas to the south. Therefore, periodic closures would be likely be problematic. Some stakeholders suggested Locust Lane because it is currently closed regularly for the farmers market. However, it lacks the appropriate uses along the edges necessary to activate the space.

D Design Specifications
Downtown State College Master Plan

The following pages are excerpts from the State College Downtown Master Plan (adopted August 19, 2013) prepared by Mahan Rykiel Associates, Inc. with Arnett Muldrow Associates, Stahl Schaeffer Engineering, Grimm + Parker Architects, Kalback Planning and Design, and Dan Jones Landscape Architect.

Overview

This section provides additional design criteria relevant to the recommendations of the master plan. It is not intended to be a complete design guideline document, rather an identification of additional elements to be incorporated into streetscape redevelopment projects.

Design specifics are provided for streetscapes (materials and furnishings palette and recommendations by street typology), architecture and community branding. Considerations for sustainability are also incorporated into specifics as they relate to streetscapes.

Branding Style Guide

The brand style guide includes guidance on proper usage of the identity system, color specifications in RGB, CMYK and Pantone, a copyright release allowing the Borough and Downtown Improvement District to modify and use the system as needs evolve and a simple licensing agreement should Downtown Improvement District wish to allow products with the logo to be developed and sold. In addition, a complete electronic file system with all logos, ad templates, typefaces and support graphics may be accessed through Borough staff.

Streetscape Materials and Furnishings Palette

Following is a summary of standard streetscape elements that should be used throughout downtown. All elements will not be included on every streetscape. The streetscape typologies described following this section identify the elements that are associated with each street type. The outline below represents general descriptions; refer to Borough specifications for detailed specifications.

Ornamental Street Light Options (Existing Borough Standard)

Union Metal Corporation Nostalgia Lighting Poles

- Octaflute tapered streetlight pole (23')
- Bracket arm (6' long at 23 foot mounting height)
- Outlet mounted 6" below Luminaire arm
- Banner arm
- Black

King Luminaire

- 165 watt QL induction luminaire
- Black

Approved Equals

Ornamental Pedestrian Light Options (Existing Borough Standard)

Holophane Lighting

- Fluted straight pole (14'-5")
- Parking meter arm
- Banner arm
- Pedestrian control box provision
- 85 watt QL induction luminaire
- Post top finial
- Black

Approved Equals

Sidewalk Paving Options

Brick on concrete base with concrete banding (existing standard)

- Brick to be selected as part of Allen Street Promenade Project.
- Vehicular Thickness
- Consider matching specification used on campus (pavers by Whitacre-Greer)

Brick on concrete base with no concrete banding (proposed standard for some applications)

- Same manufacturers as above

Permeable pavers (limited applications only)

- Varies and should be determined by specific situation

Scored concrete

- Standard 5' saw cut/scoring (existing standard)
- Special scoring (proposed option for limited applications)

Alley Paving Options

Asphalt (existing standard)

Stamped concrete (proposed option for limited applications)

- Varies and should be determined by specific design situation

Concrete Unit Pavers

- Key areas, private parking pads adjacent to alley

Crosswalk Options

"Piano Key" white thermoplastic markings (existing standard)

Color stamped concrete (proposed standard for limited applications)

- "Cobble/stone effect," gray color range
- Imitation brick look/color to be avoided

Tree Pits (Existing and Proposed Standards)

Tree Grate

- 60" square "Boulevard" by Neenah Foundry (existing standard)
- 60" x 84" rectangular "Boulevard" by Neenah Foundry (proposed option)
- Cornell Structural Soil

Tree Guard

- Existing Standard (6' ht., 16" opening)

Planter Pots

- To be selected as part of first streetscape project
- Custom designs (select areas)

Street Furniture

Bench

- Model 119-60, 6' by DuMor (Borough Standard)
- Black (proposed standard)
- Scarborough by Landscape Forms, Inc. (Campus side of College Avenue)
- Black

Trash Receptacles

- Concourse Series FC-12 by Victor Stanley (Borough)
- Midtown 32 by Keystone Ridge Designs, Inc.
- Black (proposed standard)

Recycle Receptacles

- Model FC-12 by Victor Stanley
- Black

BigBelly Solar Waste/recycling

- Black/Gray

Newspaper Corral

- To be selected as part of first streetscape project
- Black

Bike Facilities

Bike Racks

- Model custom design by Spicer Welding & Fabrication
- Black
- Custom design (special locations)

Bike Hitch

- Bike Hitch by Dero, A Playcore Company
- Black
- Select locations
- Custom design (special locations)

Covered Bike Parking

- "Apex" by Duo-Gard
- Black
- Custom design (special locations)

Transit Shelter

- Penn State standard, custom design by Enseicom
- Black

Retaining and Seat Walls

- Limestone to match historic campus wall
- Brick to match campus brick, east of Garner
- Custom (to be identified during time of streetscape design)

Ornamental Pedestrian Channelization Fence

- Custom design to use Penn State post and chain post detail
- Black

Hoop Fence

- Custom design by Brooks Welding - Pleasant Gap, PA (Borough Standard)
- Black

Streetscape Typologies

Following is an outline of design specifics as they relate to each street typology. Many design specifics are determined as part of this master plan, however, some will be determined as each street is being designed.

Type A – Primary streets are highlighed in orange in the key plan above.

Type A – Primary

These streets are the most important in terms of establishing the downtown public realm image and framework and receive the highest level of design treatment, going above and beyond what has already been completed downtown.

Locations

Allen Street Promenade (College to Beaver)

College Avenue Core (Atherton to Garner)

Heister Street (College to Beaver – potential future, similar to Allen Street Promenade)

Signal Mast Arms

Borough standard all signalized intersections

Street and Pedestrian Lighting

Borough Standard

Pavement

Brick/concrete base: South side College Avenue sidewalks and paved areas adjacent to transit stops and curb areas on north side. Allen Street, building face to building face, including crosswalks

Concrete: Shared Use path/ upper walk on campus/ north side

Permeable pavers: (where necessary to provide for drainage/ amenity strip on south side of College Avenue)

Stamped concrete: Crosswalks on College Avenue (cobble/ stone paving pattern and color) and bus pull-off zones

Tree Pits

Tree grates: College Avenue, south side and as needed on north side; Allen Street Promenade

Tree lawns: College Avenue, north side

Structural soil: College Avenue (tree grate locations); Allen Street Promenade

Planter Pots: College Avenue, both sides

Street Furnishings

Bench, trash and recycle receptacles: Borough standards south side of College Avenue and throughout Allen Street Promenade (black); campus standard north side of College (black)

Newspaper Corrals: College Avenue and Allen Street Promenade, both sides at transit stops and intersection nodes

Bike Facilities

Bike racks: At larger intersection nodes and gathering areas along both sides of College Avenue and Allen Street Promenade near College and Beaver intersections

Bike hitch: Both sides of College Avenue and Allen Street Promenade in smaller nodes and gathering areas.

Transit Shelters

College Avenue transit stops

Stone Retaining Walls

Limestone: north side of College (west of Shortlidge/ Garner intersection)

Brick: north side of College (east of Shortlidge/ Garner)

Custom: South side of College Avenue and throughout Allen Street Promenade (to be determined at time of final design, if needed)

Special Considerations

BigBelly Solar Waste/Recycling: Key locations along College Avenue, both sides and Allen Street Promenade

Infiltration Planters: South side of College Avenue where needed to accommodate grade transitions in amenity strip

Rain Gardens: Key locations along College Avenue (in larger bulb-out areas on south side and within lawn areas at South Halls) and Allen Street Promenade based on feasibility with geotechnical investigations

Use of Recycled Materials: Along College Avenue and Allen Street Promenade as special accents such as stone slab "benches," pavement inserts, etc. (to be determined at time of design)

Public Art: Various locations, particularly in gathering areas and nodes (to be determined in conjunction with public art master plan)

Type A – Secondary

These streets are also important in terms of establishing the downtown public realm image and framework and are natural extensions to Type A –Primary streets.

Locations

College Avenue (Shortlidge/ Garner to University)

West College Avenue (Segment near Sparks, associated with proposed West End Square)

West Campus Drive (Barnard to Buckhout)

Sparks (Between College and West Campus Drive)

Proposed Street (Part of street network to define proposed open space)

Type A – Secondary streets are highlighed in orange in the key plan below.

Signal Mast Arms

Borough standard all signalized intersections

Street and Pedestrian Lighting

Borough Standard

Pavement

Brick /concrete base: All sidewalks

Tree Pits

Tree grates: All streets

Structural soil: All streets

Street Furnishings

Bench, trash and recycle receptacles: Campus standards north side of West Campus Drive; Borough standard all other streets

Newspaper Corrals: West Campus Drive

Bike Facilities

Bike racks: At larger intersection nodes and gathering areas along all streets

Bike hitch: Along all streets in smaller nodes and gathering areas.

Transit Shelters

College Avenue transit stop near Sparks Street and any future stops along West Campus Drive

Special Considerations

BigBelly Solar Waste/Recycling: Key locations along West Campus Drive

Infiltration Planters: Consider along West Campus Drive

Rain Gardens: Consider along West Campus Drive and within proposed West End Square based on feasibility with geotechnical investigations

Use of Recycled Materials: Along key locations of West Campus Drive and streets defining proposed West End Square

Public Art: Along key locations of West Campus Drive and streets defining proposed West End Square(to be determined in conjunction with public art master plan)

Type B – Primary

These streets are important streets that define the downtown core. Some streetscapes along these streets have already been completed (portions of Allen and Fraser Streets and portions of Beaver Avenue) or are in the process of being implemented (a portion of Atherton Street and a portion of Pugh Street) and have set the materials standard for all of downtown.

Type B – Primary streets are highlighed in orange in the key plan above.

Locations

Atherton Street (Between Railroad Avenue and West Highland)

Pugh Street (Between College and Beaver)

Beaver Avenue (Incomplete sections between Fraser and Pugh)

Signal Mast Arms

Borough standard all signalized intersections

Street and Pedestrian Lighting

Borough Standard

Pavement

Brick/ Concrete Base and Concrete Banding: All streets (consider eliminating band that runs the length of the sidewalk)

Tree Pits

Tree grates: All streets

Planter Pots

All streets where room allows

Street Furnishings

Bench, trash and recycle receptacles: Borough standards

Newspaper Corrals: All streets at larger gathering nodes and transit stops

Bike Facilities

Bike racks: At larger intersection nodes and gathering areas along all streets

Bike hitch: All streets in smaller nodes and gathering areas.

Transit Shelters

Beaver Avenue transit stop

Type B – Secondary streets are highlighed in orange in the key plan above.

Special Considerations

BigBelly Solar Waste/Recycling: Key locations along all streets

Rain Gardens: Key locations along Pugh Street based on feasibility with geotechnical investigations

Use of Recycled Materials: Along all streets as special accents such as stone slab "benches," pavement inserts, etc. (to be determined at time of design)

Public Art: Along all streets, particularly in gathering areas and nodes (to be determined in conjunction with public art master plan)

Type B – Secondary

These streets complete the perimeter of the downtown core. The primary difference between these streets and Type B-Primary is that they do not utilize the brick/concrete banding paving pattern. Sidewalks are primarily concrete with some brick accent areas.

Locations

Beaver Avenue (between Atherton and Fraser and between Pugh and Shortlidge/ Garner)

Garner Street (between College and Beaver)

Allen Street (between Foster and Nittany)

Nittany Avenue (between Pugh and Fraser)

Fraser Street (between Beaver and Nittany)

Signal Mast Arms

Borough standard all signalized intersections

Street and Pedestrian Lighting

Borough Standard

Pavement

Concrete: Most areas

Brick/ Concrete Base Accents: Intersection nodes, bulb-out areas, transit stops and other accent areas as determined during design

Tree Pits

Tree grates: Beaver Avenue, Fraser Street (Beaver to Nittany east side and Beaver to Foster, west side)

Tree lawns: All other areas

Planter Pots

Beaver Avenue where space allows

Street Furnishings

Bench, trash and recycle receptacles: Borough standards

Newspaper Corrals: Beaver and Garner at larger gathering nodes and transit stops

Bike Facilities

Bike racks: At larger intersection nodes and gathering areas along all streets

Bike hitch: All streets in smaller nodes and gathering areas

Bike lane and contra lane: Shortlidge/ Garner

Transit Shelters

Beaver Avenue transit stops

Special Considerations

BigBelly Solar Waste/Recycling: Key locations along Beaver Avenue

Rain Gardens: Key locations along Pugh Street and Fraser Street based on feasibility with geotechnical investigations

Use of Recycled Materials: Along all streets as special accents such as stone slab "benches," pavement inserts, etc. (to be determined at time of design)

Public Art: along South Allen to Foster and along Fraser to Nittany (link to Memorial Field) and Garner between Calder and College

Type C

These streets represent the east and west extensions of College and Beaver Avenues (and the connecting portions of High and Buckhout Streets) but are outside of the downtown core and do not warrant the same level of design as Type A and B above. They should, nonetheless, be compatible in design.

Locations

Beaver Avenue (between Garner and High)

High Street (between College and Beaver)

West College Avenue (between Atherton and Buckhout)

West Beaver Avenue (between Atherton and Buckhout)

Buckhout Street (between Beaver and College)

Type C streets are highlighed in orange in the key plan above.

Signal Mast Arms

Borough standard all signalized intersections

Street and Pedestrian Lighting

Borough Standard

Pavement

Concrete: Most areas

Brick/ Concrete Base Accents: Intersection nodes, bulb-out areas, transit stops and other accent areas as determined during design

Tree Pits

Tree grates: Some areas along all streets

Tree lawns: Most areas along West Beaver and West College, High and Buckhout Streets and some areas along East Beaver

Street Furnishings

Bench, trash and recycle receptacles: Borough standards in limited areas

Bike Facilities

Bike racks: At larger intersection nodes and gathering areas along all streets

Bike hitch: All streets in smaller nodes and gathering areas

Bike lanes: West College, West Beaver

Transit Shelters

East Beaver stops, West Beaver and College as appropriate

Special Considerations

Rain Gardens: Key locations along West College and West Beaver based on feasibility with geotechnical investigations

Type D

This street type represents alleys designed as "shared space," with a heavy emphasis on accommodating pedestrians while also accommodating service vehicles, bicycles and limited automobile traffic.

Type D streets are highlighed in orange in the key plan above.

Locations

Calder Way (Atherton to Sowers)

D Alley (West Highland to Foster and potential future extension to Beaver)

Kelly Alley (Calder to Beaver)

Foster Avenue (Allen to D Alley)

Street and Pedestrian Lighting

Borough Standard as well as custom lighting such as overhead string lights and wall-mounted lights.

Utility Poles

Ornamental pole cover/light such as "Wrap-A-Post" (minimum solution) or custom pole wraps developed with local arts community as part of public art master plan (preferred)

Pavement

Stamped Concrete: All sections with (exception of Foster Avenue) to emphasize arts

Concrete unit pavers: (where necessary to provide for drainage/ amenity strip on south side of College Avenue)

Tree Pits

Tree grates or planters: Select areas as feasible to avoid conflicts with utilities and service

Planter Pots

Custom design in select areas where feasible

Street Furnishings

Bench, trash and recycle receptacles: Borough standard throughout and/or custom designs developed in coordination with local artists

Bike Facilities

Bike racks: Borough standard or custom developed in coordination with local artist at larger alcoves and gathering areas

Bike hitch: Borough standard or custom developed in coordination with local artist in smaller nodes and gathering areas.

Covered bike parking: Borough standard or custom design developed with local artists in larger alcoves or in conjunction with private property owners

Bike Contra Lane: Calder Alley

Special Considerations

BigBelly Solar Waste/Recycling: Key locations with custom stencils, branding

Rain Gardens: In select areas coordinated with private property owners based on feasibility with geotechnical investigations

Green/ Living Walls: On blank building facades

Use of Recycled Materials: Throughout all sections as special accents such as stone slab "benches," overhead structures, wall-mounted art, pavement inserts, etc. (to be determined at time of design)

Public Art: Special emphasis on public art in various locations as described above as it relates to paving, street furniture, bicycle facilities and use of recycle materials

Type E

This street type represents all other streets within downtown and will include base level of treatment. Sidewalk paving would be predominantly concrete, however, the Borough standards for lights, street furniture, tree grates, etc. would be used.

Type E streets are highlighed in orange in the key plan above.

Locations

All other downtown streets

Signal Mast Arms

Borough standard all signalized intersections

Street and Pedestrian Lighting

Borough Standard

Pavement

Scored concrete

Tree Pits

Tree grates or tree lawns as required, depending upon space conditions

Street Furnishings

Bench, trash and recycle receptacles: Borough standards

Bike Facilities

Bike racks: Borough standard at larger intersection nodes and gathering areas along all streets

Bike hitch: Borough standard at all streets in smaller nodes and gathering areas.

ARCHITECTURAL DESIGN

The Street Wall: Buildings define the street wall and have a powerful impact on the overall impression as well as the specific pedestrian experience created by a mixed-use street environment. The following are some best practices frequently found codified in zoning codes and design guidelines for contemporary American downtown streets.

- Uniformity of building height and set-back lines.
- Consistent transparency and activity at the ground floor
  - minimize blank walls and structured parking along the sidewalk at street level.
- Special building elements / building configuration at corners and major entrances.
- Appropriate uses – pedestrian friendly and activated uses at the first floor.

Proportions and Scale: Comfortable, appropriate proportions and human scale features contribute greatly to the impact of the building on the pedestrian experience. In addition, some tried and true design best-practices have proven consistently effective in producing a familiar and welcoming downtown environment.

- Base/ Middle/ Top: Definition of these three zones in the design of building facades can contribute to appropriate scale and proportion – and also provide rational mechanisms for expressing and accommodating the various building uses.
- First Floor Taller than Upper Floors: A taller first floor creates hierarchical importance; is consistent with the base/ middle/ top design approach and provides adequate vertical dimension to support a variety of retail functions.
- Scale Giving/ Functional Elements: Provide canopies, awnings, railings and signage placed and sized with attention to human scale.
- Balance solid and void at the upper floors: Provide as high a proportion of glass to solid walls as is feasible. In addition to the benefits to resident health and comfort plus reduced lighting

costs, larger and more frequent windows create the reality and the perception of "more eyes on the street" resulting in a safer and more welcoming streetscape.

***Building Materials and Systems-Pedestal Construction**:* Current building codes permit as much as 5 stories of wood frame construction for multi-housing residential use above a concrete or steel frame "pedestal" at the first floor, provided that an adequate fire separation is achieved between the two systems.

- The "pedestal" construction approach has proven to be the most economical for mid-rise mixed-use development and is used commonly even in "high-end" markets.
- The "pedestal" level can be used for all varieties of retail and parking and can be combined with additional below grade structured parking.
- Considerable flexibility in the configuration of the "wood frame" residential components can be achieved above the pedestal.

***Building Skin/ Surface Materials**:* The demand for economical market-rate and wokforce housing has spawned the proliferation of materials and systems for building skins that can provide durability and aesthetic quality for a reasonable cost. The following are materials that we have seen most frequently used – in approximate order of cost from highest to lowest. Also provided are our suggestions for the appropriate deployment of the materials:

- Metal Panel: Concealed or exposed fastener metal panels customarily used on modern buildings and most appropriate for areas above the first floor (to avoid impact damage). Depending on the system, metal panel can be considerably more or similar in expense to brick veneer.
- Stone: There is a history of stone used throughout the Borough in institutional as well as commercial buildings. Where economically feasible, the use of stone as a veneer or accent material may be utilized.
- Brick or High Density Masonry Veneer: Customary handlaid masonry units ideal for all styles of architecture and recommended for any and all locations on the building and on the street level.
- EIFS – Exterior Insulated Finishing System: Commonly referred to as Dryvit this system has suffered from significant performance failures over the years resulting in mitigating measure that significantly add to the cost. If installed to correct and current standards, the system can be as expensive as real, hand-laid brick veneer. Not recommended at the street level due to impact damage – best applied at upper stories due to aesthetic deficiencies.
- Thin-Masonry Veneer Panels: Thin ceramic/ masonry tiles adhered to a backing panel provide the "appearance" of real hand laid

brick. Commonly assembled off site and erected as panels often for accelerated schedules. Most appropriate on simple, uniform and repetitive building facades on areas above the first floor – may not be durable enough for first floor applications.

- ***Cementitious Boards***: composed of cement and reinforcing fibers this material can be utilized in a variety of applications from simulated wood siding to flat panels with a similar overall appearance as metal panels. It is available in planks or sheets. There is considerable variety in texture, color and design application. The product is durable and paintable. Cementitious board is installed in the same fashion as aluminum or vinyl siding with direct fastening to the building sheathing. Appropriate for all locations on the building exterior with judicious use on the first floor to mitigate possible impact damage.

- ***Aluminum or Vinyl Siding***: Customary sheathing materials which are most appropriately employed in traditional residential applications. For mixed use, downtown applications on the street wall the materials are generally not appropriate except at upper levels far from close view and away from impact areas. To save overall skin costs, these materials are commonly used even in downtown mixed-use developments at the back of buildings or in areas not viewable from significant public spaces such as the main street.

E Acknowledgments

A NOTE OF THANKS

There are many to thank for the quality of life that represents the Borough of State College. It is with great appreciation that we thank the citizens and business owners of the Borough of State College for contributing to the quality of design of the built environment. It is your committment to good design and maintenance that is featured in this guide.

We also acknowledge the service contributions of our elected and appointed officials and staff. Their generous efforts have directly and positively transformed our community.

F References + Resources

Books

Chesworth, Jo. *Story of the Century: The Borough of State College Pennsylvania 1896–1996*. (State College, PA: The Borough of State College with the Barach Group, 1995)

Mahan Rykiel Associates, Inc., Arnett Muldrow Associates, Stahl Scheaffer Engineering, Grimm + Parker Architects, Kalback Planning and Design, and Dan Jones Landscape Architecture. *State College Downtown Master Plan*. (State College, PA: The Borough of State College, 2013.

Web Sites

Borough of State College
statecollegepa.us

Central Pennsylvania Festival of the Arts
arts-festival.com

Centre County Historical Society
centrecountyhistory.org

Centre County Recycling and Refuse Authority
centrecountyrecycles.org

Clearwater Conservancy
clearwaterconservancy.org

The Community Arts Collective
communityartscollective.org

Cultural Resources Geographic Information System
crgis.state.pa.us

National Institute of Building Sciences
wbdg.org

The Pennsylvania State University
psu.edu

United States Green Building Council
usgbc.org

Whole Building Design Guide: Sustainable Historic Preservation
wbdg.org/resources/sustainable_hp.php