

FACILITIES MASTER PLAN

LCCC Main Campus, Schnecksville



LCCC Allentown



LCCC Tamaqua



LCCC LVIA

May 2021 Update



Lehigh Carbon
COMMUNITY COLLEGE

CELEBRATING

55

YEARS 1966-2021



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INTRODUCTION

LEHIGH CARBON COMMUNITY COLLEGE IS A PUBLICLY SUPPORTED, TWO-YEAR COMMUNITY COLLEGE WITH A MISSION TO BUILD A STRONGER COMMUNITY BY PROVIDING AN ACCESSIBLE, EQUITABLE, INCLUSIVE AND AFFORDABLE EDUCATION TO EMPOWER OUR STUDENTS TO ACHIEVE ACADEMIC AND CAREER GOALS.



The college serves Lehigh, Carbon and Schuylkill counties in eastern Pennsylvania, with the main campus located in Schnecksville, approximately 10 miles north of Allentown in Lehigh County. Additional sites are located in Allentown (Donley Center and Lehigh Valley International Airport site), and Tamaqua in Schuylkill County (Morgan Center). In addition, LCCC Online is the college's second largest site, providing fully online programs. Other locations throughout the service area also provide course offerings, e.g., Mobile Lab Manufacturing training, Dual Enrollment in high schools. In keeping with LCCC's role as a comprehensive community college, the college offers transfer programs, career programs, developmental and remedial education, lifelong learning, and workforce training.

Master Facility Planning

During the school year 2022 the college plans to engage an engineering firm to evaluate our buildings and infrastructure and prioritize necessary maintenance projects. The college will also update its campus maps to add layers identifying accessibility and emergency call boxes.

PLANNING OBJECTIVES

The purpose of the *Facility Master Plan 2021* is to articulate the needs of the college and overall learning environment for improvements at each of the sites in order to offer a high-quality, consistent place of learning for all students.

The Facility Master Plan 2021 is driven by the *college's Many Voices, One Vision: Strategic Plan, Academic Plan, Information Technology Plan* and the *Enrollment Management Plan*. Its goal is to serve the best interests of our students while ensuring an environment to facilitate student learning and engagement in a contemporary, well-kept, information-rich environment.

PRIMARY GOALS

- ❖ Examine the infrastructure of physical space and current technology required to create and provide supportive learning environments that attract and retain students, as well as maintain programmatic accreditation at all four college sites, plus online learning.
- ❖ Assess future facilities required to achieve enrollment projections and online programs.
- ❖ Establish a technology infrastructure plan for the college that supports the Strategic Plan, Academic Plan, and Enrollment Management Plan.
- ❖ Through sustainability of resources, identify areas to enhance all sites aesthetically.

GUIDING PLANNING PRINCIPLES

- ❖ **Enhance Utilization and Organization of Physical Assets.** Create and maintain campus settings that:
 - Review the functional organization of faculty and staff to keep division/department personnel in close proximity;
 - Optimize the utilization of technologies and simulation equipment;
 - Monitor service areas to ensure they facilitate ease of access and flow of information for optimal student services;
 - Create and maintain settings that bring together the diversity of people; and
 - Provide persons with disabilities optimal access to the college.
- ❖ **Reinforce the College's Mission.** Support and enhance the academic and community missions, as well as the strategic and enrollment goals of the college.
- ❖ **Recruitment/Retention Aid.** Optimize the functional organization of academic, administrative, and support facilities and technologies to attract and retain students, faculty, and staff.
- ❖ **College Site Identity and Sense of Place.** Maintain the image and quality of life of the campus community with a focus on sustainability and conservation of natural resources.
- ❖ **College Site Character and Quality.** Reinforce the character, scale, student life functions, and other qualities that distinguish LCCC among higher education institutions in the region.

In the years ahead, Lehigh Carbon Community College will experience cycles of change to the requirements necessary to fulfill its mission. The *Facility Master Plan 2021* is designed to be a dynamic tool that will be reviewed, refined, and updated.

1

CURRENT OUTSTANDING PROJECTS

THE FOLLOWING PRESENTS THE 2021 UPDATE:



Veterinary Technician Lab Renovation on Schnecksville Campus: High Priority-Estimated Cost \$400,000

Upgraded classroom and lab enhancement for the Veterinary Technician program. The Veterinary Technician program provides a two-year associate of applied science degree. Admission to this high-priority program is very competitive.

Upgrade to Wastewater Treatment Facility: High Priority-Estimated Cost \$2,500,000

Lehigh Carbon Community College's main campus in Schnecksville is not served by a municipal wastewater treatment facility. The onsite wastewater treatment facility provides water and waste processing for the entire campus and also the neighboring Lehigh Career and Technical Institute. Failure of the treatment facility would require the closure of the entire campus and therefore poses a serious potential threat to the infrastructure of all of our buildings. The required upgrades are underway and expected to be complete by June 2021.

Science Hall Windows Replacement: Medium Priority-Estimated Cost \$500,000

This building houses all of our health care sciences, biology and chemistry classrooms and labs. The seals on the windows are failing which impacts energy efficiency and adds to the inability to maintain comfortable room temperatures. Leakage has been observed during driving rain. The windows are more than 40 years old and need to be replaced.

Science Hall Roof Replacement: Medium Priority-Estimated Cost \$600,000

The roof is more than 20 years old and has had several leaks that needed to be repaired over the past few years. Heavy rains and wind increase the frequency of leaks and the risk is increasing that damage may occur to the interior equipment. Classrooms and labs for the entire science curriculum are housed in this building on our main campus.



**Public Safety Access Control:
High Priority-Estimated Cost \$1,100,000**

This project will continue to enhance and grow the access control system built in Phase 1. This second phase will add additional exterior access controls and also install interior access controls to within some buildings and classrooms. The enhanced swipe card mechanisms will allow employees with secure rights to be able to enter the buildings during off hours with the ability to create an automated log of who is in certain areas at a given time.



**Donley Center:
High Priority-Estimated Cost \$700,000**

The exterior wall of the building façade needs concrete repair and a new coating due to moisture building up between the layers. In addition, the cooling tower on top of the building needs to be replaced due to age and deterioration.

**Air Handlers:
High Priority-Estimated Cost \$2,000,000**

Upgrade air handler component of HVAC systems to improve air quality and circulation.

2

CAMPUS HISTORY

EFFORTS OF THE LOCAL SPONSOR TO ESTABLISH A PUBLICLY SUPPORTED COMMUNITY COLLEGE IN THE ALLENTOWN AREA DATE TO 1955 WHEN STUDIES WERE FIRST CONDUCTED TO DETERMINE WHETHER OR NOT THE AREA COULD SUPPORT SUCH AN INSTITUTION. WITH THE SUPPORT OF THE ALLENTOWN CHAMBER OF COMMERCE AND SEVERAL OTHER GROUPS, THE ALLENTOWN PUBLIC SCHOOLS CONDUCTED A SURVEY OF HIGH SCHOOL SENIORS TO DETERMINE THE NUMBER OF STUDENTS WHO WERE INTERESTED IN ATTENDING A COMMUNITY COLLEGE.

The results were favorable and the Allentown Board of School Directors decided to develop full-time post-high school courses.

The Allentown Board of School Directors agreed to serve as an interim sponsor for the proposal to establish a community college, which was then submitted to the Lehigh County Board of School Directors in October 1964. Following a convention of school directors, the proposal to establish a community college was approved by the Board of School Directors. These combined actions resulted in the writing of a formal application that was approved by official action of the Pennsylvania State Board of Education. A Board of Trustees was elected by the Lehigh County Board of School Directors, and Lehigh County Community College was officially established and empowered on March 31, 1966.

Sponsorship of the community college totals 13 school districts, including the nine Lehigh County school districts and four of the five Carbon County school districts.

The move to the Schnecksville campus was completed for the spring 1969 semester. Classes and college offices were housed in the Administration Building.

The second building erected on the Schnecksville campus was the Science-Technology building in September 1971, which housed the college's daycare center, Stay 'N Play, which opened in August 1973. The building provides laboratories, classrooms, lounges and study areas. The gymnasium (Berrier Hall) and original library (Learning Resource Center) were completed for occupancy in September 1974.

In 1982, the solar building was erected. It housed automatic energy programs until being phased out in the mid to late 1980s. In 1992, the building was converted to house the college's radio station at 1,344 square feet. In 2003, an additional 1,200 square feet was added to accommodate a sound and recording studio.



To make its offerings accessible to as many citizens as possible, LCCC has established several off-campus sites. In August 1987, the college opened its Allentown city site in the Sovereign Building on Hamilton Mall. In 1992, LCCC's Carbon site was dedicated at Carbon County Vocational Technical School in Jim Thorpe. LCCC's Airport Site, at Lehigh Valley International Airport, was dedicated in 1993.

In January 1994, the college officially changed its name to Lehigh Carbon Community College. In 1996, the Carbon site was relocated to Nesquehoning.

The downtown Allentown site was relocated in January 1999 and, in November of that year was rededicated as the Donley Center. The college extended its offerings even further, in Schuylkill County, by opening the Morgan Center in Tamaqua in August 2003.

The new Technology Center on the Schnecksville campus opened in conjunction with the start of the spring semester on January 19, 2004. The 50,000-square-foot building houses numerous classrooms and laboratories for the college's

Technology, Computer Science, and Media programs. As a result, the original Science-Technology building was renamed Science Hall in 2004.

On February 22, 2007, LCCC celebrated the grand opening of the Fowler Teacher Education Center in Science Hall and the relocation of the Stay 'N Play childcare, which was renamed Early Learning Center in 2008. In March 2008, the Rothrock Library opened in the former building of the Carbon-Lehigh Intermediate Unit No. 21, housing an Alumni Conference Center. Renamed in August 2008, the newly renovated Academic Resource Center (the original library building) housed a brand new cafeteria and bookstore.

In 2010, LCCC added a new Community Services Center, housing the Public Safety, Criminal Justice, CDL and the Center for Workforce and Community Education. Music and art rooms are also housed in the center as well as a full conference center facility. The building is now called the Lisa Jane Scheller Community Services Center.



In Spring 2011, Berrier Hall was also renovated to house additional changing rooms, an all-new fitness center, the Student Government Association and athletic offices, the game room, a new dance studio and an auxiliary gym. The realignment of Orchard Road behind Berrier Hall diverted vehicular traffic away from pedestrians walking to and from the gymnasium and the library, as well as for the Athletic Fields (soccer, baseball and softball), a project that was completed in 2013 for use in Spring 2014.

From 2010 through 2012, a five-phase master landscape plan was implemented through the campus main corridor from Education Park Drive up to Berrier Hall. During the same time frame, a Wayfinding program was implemented throughout the campus with directional signage to guide first-time visitors, including a large electronic sign at the main entrance.

Also in 2013, the Scheller Center was completed at the Tamaqua site.

In 2014, PennDOT completed a major road improvement on Route 309 from the Education Park Drive entrance up to Orchard Road to improve traffic flows in and out of the Schnecksville campus. In the

same time frame, the College Foundation purchased four residential homes along Route 309 and had them razed to increase the visibility of the campus.

In addition, by growing its online program, LCCC continues its efforts to meet students wherever they are—in homes, offices, or wherever a personal computer can be accessed.

In July 2014, the college welcomed its first female president when the Board of Trustees named Dr. Ann D. Bieber as president. Bieber has been with the college since 1981.

After a complete renovation in 2015, the Administration Building's name was changed to the Student Services Center. It houses administrative services, testing center, Counseling Services, Career Development Center, Admissions and Financial Aid.

In December 2018, renovations were completed on the WXLV Media & Design Center, which serves the digital media, fine arts and communications programs. This collaborative workspace includes recording studio, music/sound production, computer workstations and more.



The Donley Center in downtown Allentown received a number of improvements in 2019, including an updated layout to better accommodate student services, renovation to the seventh floor that includes two high-tech classrooms, and the addition of a simulation lab for students in Licensed Practical Nursing.

In 2018, the college acquired ownership of the Technology Center, which had been owned by an Allentown-based limited partnership. In 2021, the center was renamed the Nevin Early Remaley Technology Center in recognition of a \$1 million gift. Also, in 2021, the college named the Clifford R. Miller Student Services Center in recognition of a nearly \$1 million gift from one of the college's first faculty members.

In 2020, the college ended its lease with the Jim Thorpe Area High School and closed the Jim Thorpe site.

The college celebrates its 55th anniversary in 2021 and continues to build on its strong history to prepare our diverse community for the needs of an ever-changing world.



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PROJECTS COMPLETED SINCE 2018



Donley Center/LCCC Allentown

The layout was renovated to add administrative and student services offices. In addition, the facade was updated to increase visibility of the Donley Center. Other projects completed in 2018 and 2019 are:

- New roof
- Renovation of the seventh floor to include two high-technology classrooms, community center and improved technology access
- Enhanced wireless access in entire building
- Additional access to audiovisual components
- Simulation lab for students in Licensed Practical Nursing program

The college has a continued interest in the acquisition of an alternate site if a feasible opportunity arises.

WXLV Media & Design Center

In December 2018, renovations were completed on the former WXLV Radio building, reimagined as the WXLV Media & Design Center, serving the digital media, fine arts and communications programs. This collaborative workspace includes recording studio, music/sound production, computer workstations and more.



HVAC Systems Air Conditioning Chiller

In 2020, LCCC replaced the AC Chiller units for four buildings: Science Hall, Academic Resource Center, Berrier Hall, and the Student Services Center.

ADA Accessibility

The classrooms in Science Hall are being made ADA accessible, with ramps for students to access the entire classroom.

Public Safety Access Control

Phase 1 of this project has been completed across all three sites. Outdoor video cameras have been added to cover the mall area and parking lots on main campus; more than 300 indoor cameras have been updated, solar powered emergency call boxes have been added, proximity card access readers have been added to exterior doors on all buildings and new digital video control recorders have been installed. In addition, the command center in the public safety office has been upgraded to include new computers, large screen displays and a single control system that covers all sites. Public safety staff have been trained on the new system and have a dedicated mobile app to use for response to emergencies.



Outdoor classrooms

Two outdoor classroom spaces have been created that include ADA accessible walkway, outdoor furniture and an overhead pavilion to be able to conduct classroom activities outdoors.



Scheller Center/LCCC Tamaqua

The top floor of the Scheller Center has been converted into dedicated space for health care sciences. It includes faculty offices, a nursing lab with three beds, three simulation classrooms, a control room for the simulators and a debriefing room for reflective learning. The lower level now houses the administrative area for the SHINE program that provides after-school activities for students in Carbon and Schuylkill counties.

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SITE INFORMATION



Schnecksville Campus

The Schnecksville campus, located on Route 309 in Schnecksville, is approximately 254 acres sharing borders with Lehigh Career and Technical Institute, Trexler Game Preserve, several private homes, and the Schnecksville Fire Department. While 90 acres of the site is developed for institutional use, the remaining land is undeveloped with a small portion used for light farming.



LCCC Allentown at the Donley Center

The seven-story, 45,737-square-foot building at 718 Hamilton St. in downtown Allentown borders several businesses. There is no additional land outside the footprint of the building.



LCCC Tamaqua at the Morgan Center

The John and Dorothy Morgan Center is located at 234 High St. in the borough of Tamaqua. The 36,705-square-foot building sits on a 1.4-acre lot with off-street parking for 60 cars. Setting at a residential area, the remaining parking follows the perimeter of the site.



Scheller Student Center, Tamaqua

The Scheller Student Center is located adjacent to the Morgan Center at 301 Van Gelder St. in the borough of Tamaqua. The 5,415-square-foot structure sits on a 1.2-acre lot with off-street parking for 44 cars. It houses an activity center, bookstore, and the John Morgan Business Enterprise Center in the lower level.



Airport Site (LVIA)

The Airport Site is located in Hangar 7 at the Lehigh Valley International Airport, Allentown, which provides 2,029 square feet. There is adequate parking for staff and students. The leased site houses the college aviation program.

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SITE LANDSCAPE

Schnecksville Campus

LCCC's landscape is the result of a five-phase master landscape plan. The main corridor, with a combination of concrete walks and brick pavers, is designed to interconnect all the buildings. It includes trees, ground shrubbery and pedestrian lighting.

When feasible, large portions of steps were removed and replaced with ramps to accommodate easier access and improve ADA access. A large number of trees were planted on parking lot islands to improve appearance and create shaded areas for students. The main entrance sign is landscaped with trees, ground cover, and lighting to make the main entrance more visible to the public.

Morgan Center and Scheller Student Center, Tamaqua Site

Both sites were landscaped during the final steps of building construction. A combination of small trees, ground cover, and lighting was installed. The sites are maintained through an outside landscaping service.

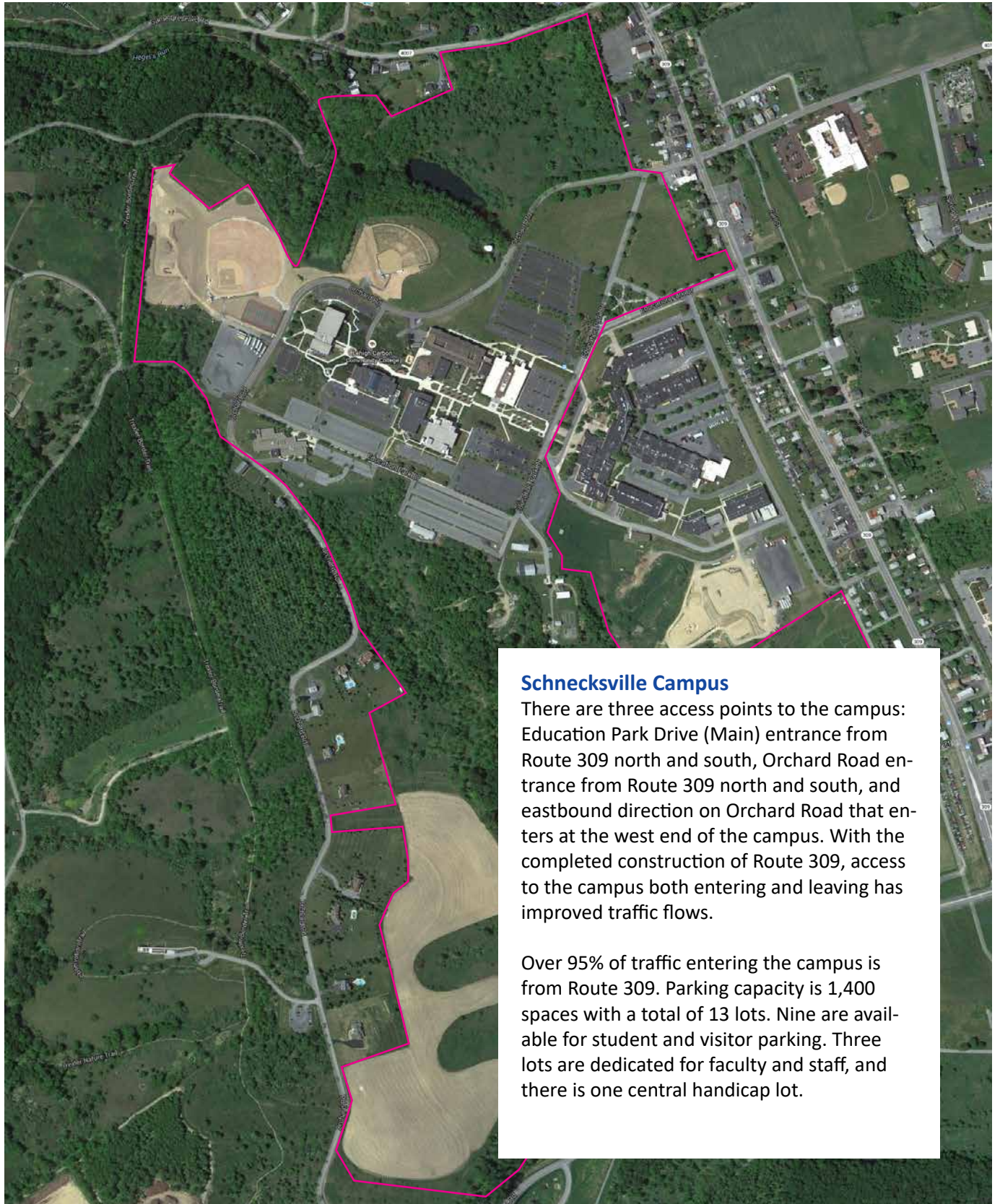
Donley Center/Airport Site

There is no landscape activity at these sites.



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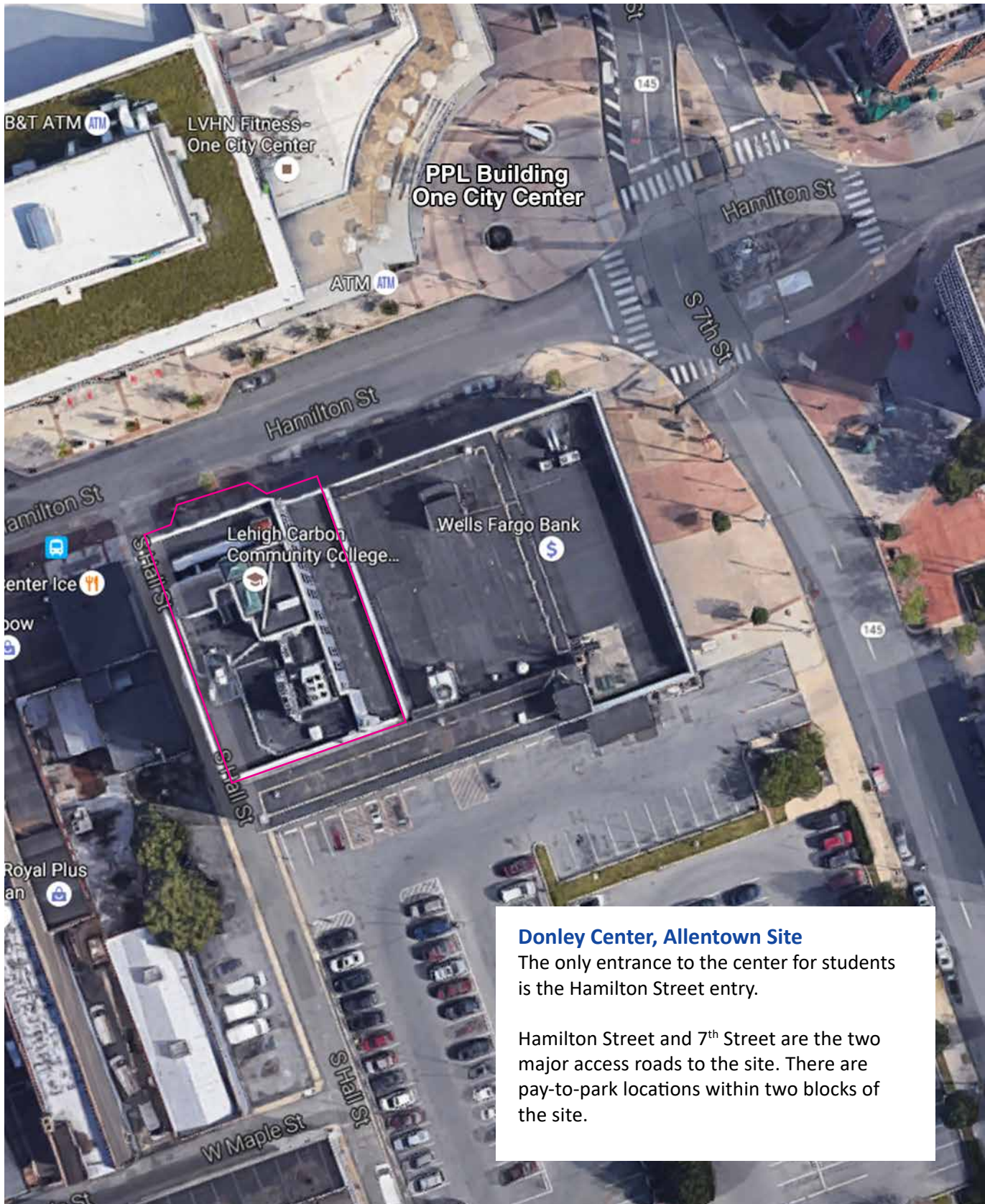
CAMPUS GATEWAYS



Schnecksville Campus

There are three access points to the campus: Education Park Drive (Main) entrance from Route 309 north and south, Orchard Road entrance from Route 309 north and south, and eastbound direction on Orchard Road that enters at the west end of the campus. With the completed construction of Route 309, access to the campus both entering and leaving has improved traffic flows.

Over 95% of traffic entering the campus is from Route 309. Parking capacity is 1,400 spaces with a total of 13 lots. Nine are available for student and visitor parking. Three lots are dedicated for faculty and staff, and there is one central handicap lot.



Donley Center, Allentown Site
The only entrance to the center for students is the Hamilton Street entry.

Hamilton Street and 7th Street are the two major access roads to the site. There are pay-to-park locations within two blocks of the site.

Morgan Center



Tamaqua Site

There are three access corridors to the site and to both the Morgan Center and Scheller Center: High Street, Van Gelder Street, and Swatara Street. All three lead to a central parking area. The building name and an outdoor marquee label the site.

Morgan Center has a total of 60 parking spaces, with handicap spaces located closest to the building. The Scheller Center has a total of 44 parking spaces, with handicap parking closest to the building. Additional parking is available on the street.

Scheller Center





Airport Site LVIA

The main and only corridor to the site is from Postal Road. Most of the activities are on the second floor, which limits access.

There is adequate parking for staff and students.

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OPEN SPACE

Schnecksville Campus

An important element in open spaces and the circulation network on a campus is building placement. The main corridor is approximately 1,200 feet long and provides more than adequate space for student activities and gatherings. There are also several areas outside the corridor used for quiet study. A combination of shade trees, park-type benches, and benches with tables is successful in providing a multi-use, outdoor space.

Through efforts by the college and student organizations such as the Honors STEM program and Phi Theta Kappa, several sustainability projects have been identified for future development. In response to the tree identification study conducted by PTK, the college will embark on planting more trees in those locations where most beneficial. A new trail system has also been laid out throughout campus and work continues on its development.

A Pollinator Garden project continues to expand on the Schnecksville campus to ensure the sustainability of native plants, butterflies, and bees.

The first of three planned meadows was planted during the year between Orchard Road and Parking Lot A. The meadow creates a natural area that will require less mowing.

An arboretum project is underway. The college received a grant from Lehigh Valley Greenways Conservation to purchase, plant and label 24 trees in the southwest end of the Main Campus. Media Communication students will design an interactive online tool to guide people through the trees on campus. Student teachers will create lessons to be shared with local schoolchildren. Information about conservation and the importance of trees to our environment will be shared with community members.

Donley Center, Allentown Site

The building footprint has limited outdoor open space. There are numerous restaurants and stores available for students in a vibrant downtown setting.

Morgan Center/Scheller Student Center, Tamaqua Site

Both sites have limited outdoor open space due to the footprint of both sites. There is a small outdoor gathering area in front of the Morgan Center, and there is a large lounge area, including vending, located on the first floor. The Scheller Center has a large activity area located on the 2nd floor, also with a vending area. The sites would need to be evaluated to see if outdoor open space areas are feasible.

Airport Site LVIA

The site provides an area of outdoor open space shared by other tenants. There are vending areas inside the building. LVIA provides outdoor service to the site.





EXISTING FACILITY SPACE

Currently, LCCC has over 535,637 gross square feet of space in 14 buildings at the Schnecksville, Allentown, and Tamaqua sites. There is a total of 2,029 gross square feet located at the Airport site.

<u>Building</u>	<u>Square Feet</u>
<u>Schnecksville</u>	
Academic Resource Center	67,780
Berrier Hall	51,674
Community Services Center	50,566
Construction Technology	4,860
Library	44,000
Maintenance	6,382
WXLV Media & Design Center	2,560
Science Hall	98,777
Student Services Center	62,827
Student Union Building	8,872
Technology Center	49,482
<u>Morgan Center</u>	36,705
<u>Scheller Center</u>	5,415
<u>Donley Center</u>	45,737



DESIGN FRAMEWORK FOR CAMPUS DEVELOPMENT

Buildings

Campus buildings fall into two categories: educational buildings and support buildings.

Educational buildings are those that serve the primary mission of educating students.

Support buildings are not directly involved with the primary mission, but rather are needed as support. These structures include maintenance and the water/wastewater facility. The structures should not be competitive in design but should work collaboratively to define the exterior spaces of the campuses.

Support Facilities

LCCC support facilities operate out of the Schnecksville campus. Mobile support is provided to all of the site locations. Automated controls for the Morgan Center and Donley Center are monitored at the Schnecksville Campus daily during operations. A facility request system called School Dude for maintenance requests is monitored daily, with approximately 1,000 requests completed yearly.

Support vehicles for transportation, lawn care and snow removal are adequate but are aging and need replacement. A replacement plan is in place when funds are available.

A majority of support services are done in-house at the Schnecksville Campus, while the sites use limited outsourced services for housekeeping and small contracted services for HVAC systems. The Schnecksville Campus has outsourced services for larger systems such as air conditioning, automatic temperature controls, elevator systems, and water/wastewater systems that are beyond in-house services. Operations also include small service contracts for food service equipment, pest control, water treatment, inspection services, EPA, DEP, OSHA, and hazard waste programs.

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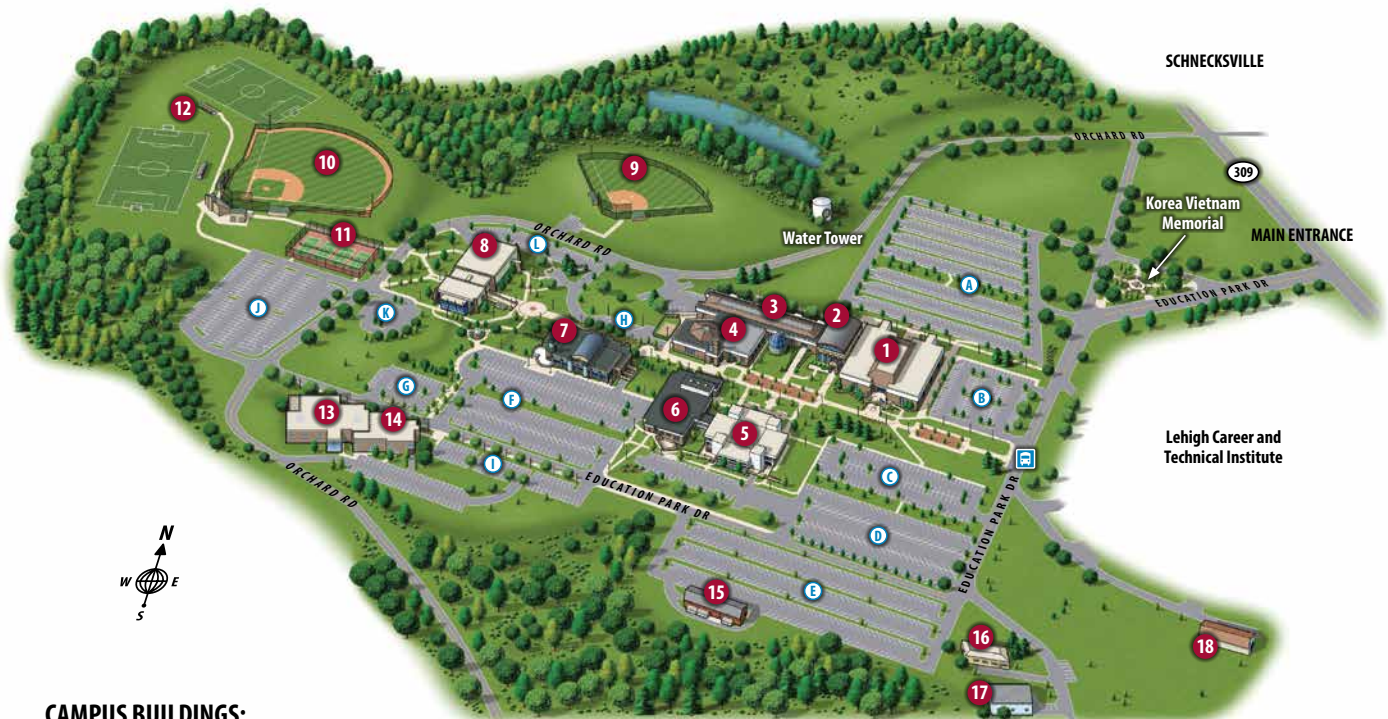
LAND PLANNING AND SITE DESIGN

Land Use and Development Patterns

Situated on 254 acres of land, the Schnecksville campus has more than adequate space for future development.

Sites

All the sites are landlocked and no additional growth is available.



CAMPUS BUILDINGS:

- | | |
|-------------------------------------------------------|--------------------------------|
| 1. Clifford Miller Student Services Center (SSC) | 10. Baseball Field |
| 2. Byron L. Shoemaker Student Union | 11. Tennis Courts |
| 3. Science Hall (SH) | 12. Soccer Fields |
| 4. Fowler Education Center | 13. Rothrock Library |
| 5. Academic Resource Center (ARC) | 14. Alumni Center |
| 6. Nevin Earl Remaley Technology Center (TC) | 15. Construction/HVAC |
| 7. Lisa Jane Scheller Community Services Center (CSC) | 16. WXLV Media & Design Center |
| 8. Berrier Hall (BH) | 17. Maintenance Building |
| 9. Softball Field | 18. Vet Tech (Barn) |

- Bus Stop
- Parking Lots
- Handicap accessibility is available in all parking lots and most building entrances throughout campus.



4525 Education Park Drive,
Schnecksville, PA 18078-2598
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Produced by mapformation.com, June 2015. Revised April 2021.



CIRCULATION AND PARKING IMPROVEMENTS

To improve vehicular and pedestrian circulation at campus entrances, borders, parking areas, driveways, and walkways, student activity areas, open space areas, recreational areas and service areas should be a high priority. The capability and visual continuity between old and new areas of campus is accomplished by using similar architectural, landscape architecture, and engineering design details.

Vehicular Circulation

The existing roadway network reduces pedestrian/vehicular conflicts and provides a smoother transition for vehicular traffic with proper use of signage and environmental design. The circulation pattern addresses the existing and future needs of the campus. It identifies pedestrian and vehicular entry points, traffic routes, and the functional needs of students, staff, and visitors.

Strategic Circulation Improvements

- **Pedestrians**

The master landscape plan provided easier access to all of the buildings by a central walkway. Outside stairways were removed and replaced with ADA-compliant ramps. Signage on the central walkway provides direction for first-time visitors.

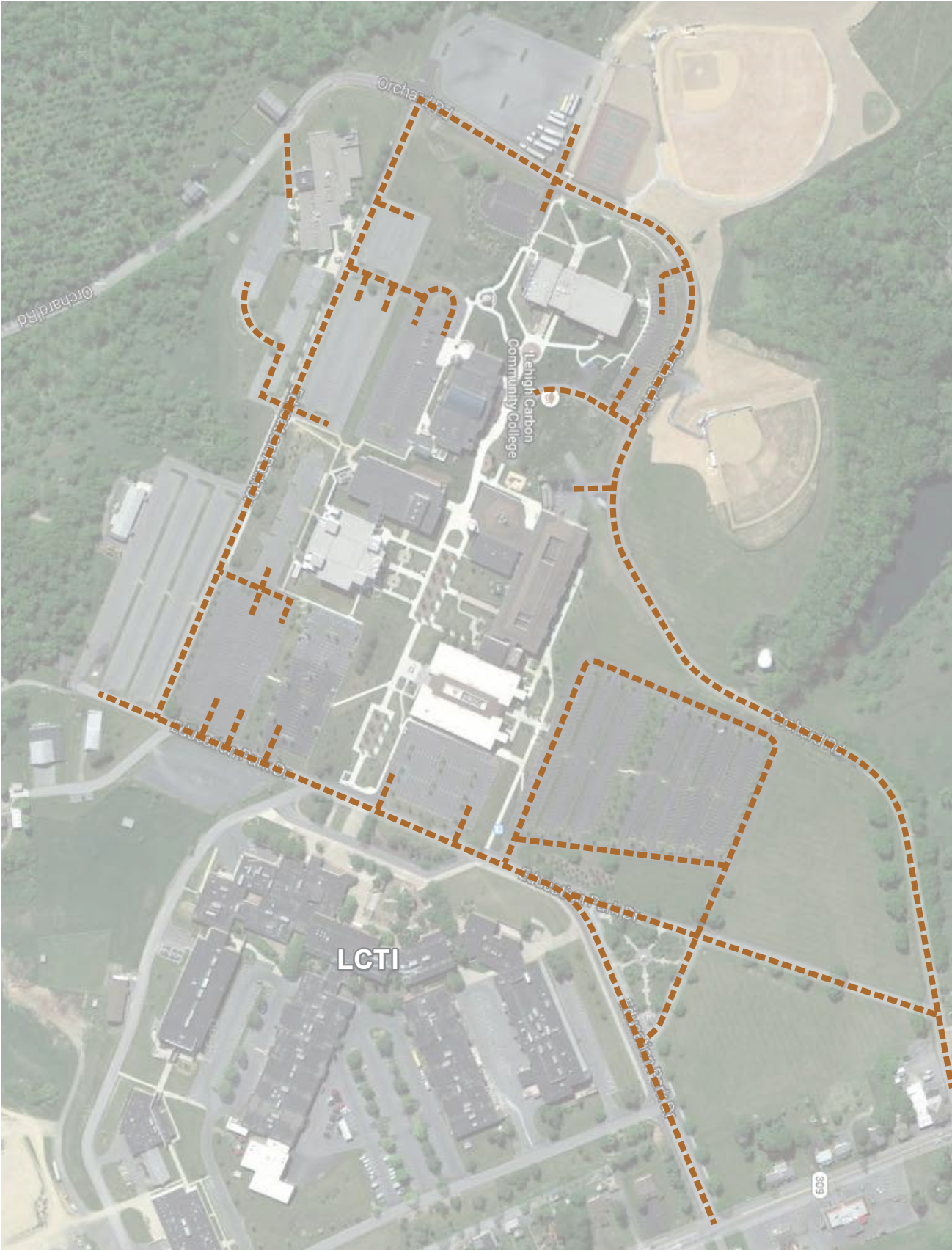
- **Service Locations**

There are three service locations on the Schnecksville campus. Science Hall (deliveries, U.S. mail, and large items), Academic Resource Center (all food service and bookstore deliveries), and Rothrock Library (all Library related items).

- **Natural Elements**

Drainage channels are enhanced to appear as a natural drainage way. Landscaping improves the appearance in all locations. Other natural features help separate, buffer, and screen conflicting uses and service-related functions. Ornamental trees have also been planted at the campus entrance and in essential locations throughout the campus to create focal points within this area.

Vehicle Circulation and Parking: Schnecksville Campus



Pedestrian Walkways: Schnecksville Campus



UTILITIES AND INFRASTRUCTURE

Existing Utility Service

Schnecksville Campus

The Schnecksville Campus utilities includes electric, telephone, data (fiber optic), domestic water, storm sewer, and sanitary sewer. All services are underground, which maintain the campus' park-like feeling.

The primary electric feed comes from a PPL substation overhead on Orchard Road and then goes underground into the campus. The primary feed is networked throughout the campus and provides a loop system that shortens any down time if a problem occurs. Each building has its own primary service with an electric vault room and transformer pads. The system is at 90% capacity. Telephone and data (fiber optic) follows a parallel path with the electric.

The campus has its own domestic water system to include fire protection loops for the college campus and LCTI. An underground well provides water to a 250,000-gallon reserve tank. Booster pumps provide water pressure to the campus for its entire domestic and fire protection needs. The system follows DEP protocol for water purity monitoring. The college also operates the sanitary sewer system which provides service to the college campus and LCTI. Three sanitary pumping stations improve flow to the sewer plant. The system operates under DEP regulation for wastewater management permit at 36,000 gallons per day.

The storm sewer system is an intricate network of underground piping to control storm water runoff. The system flows in two directions. The eastern half picks up flows from parking lots and yard drains. These collect at a large retention pond at the low end of the campus. The western half of the system collects water from parking lots and yard drains, which is then deposited into storm water collections located in valley wooded areas that are undeveloped. All buildings operate independently

with their own HVAC systems. The nine larger buildings are networked together with Automatic Temperature Control systems to control the environment. All communication and technology are linked together with hard wire or fiber optics.

In case of a power outage, five diesel and two propane generators provide emergency power to support life safety lighting for existing backup power for the phone system, networking rooms, security systems, fire systems and domestic water for fire protection.

Morgan Center/Scheller Center, Tamaqua Site

The sites are adjacent but both operate independently, with utility service provided by PPL for electric and local public water and sewer systems. Both buildings are total electric for HVAC. Communications and technologies are linked to the main campus and both systems have battery backup in the case of a power failure. The site has no room for expansion and is operating at full capacity.

Donley Center, Allentown Site

The center is a stand-alone site. The electric services are provided by PPL and a local utility provides water and sewer services. The HVAC system is a water source heat pump with natural gas boiler for backup heat. Communication and technology systems are linked to the main campus with backup in case of a power failure. An emergency generator provides power for life safety lighting for exiting and powers one of the two elevators. The site is locked in, with no room for expansion and is operating at full capacity.

Airport Site

This site is under lease contract, with all services provided by the landlord. Communication and technology are linked to the main campus. At this time, there is no further discussion for expansion.

Future Utility Growth

Schnecksville Campus

All new building projects at the main campus must consider evaluation of existing utility services. A plan should be put into place to review electric, water system, sewer system, storm water, communication and technology prior to any large construction.

It should be noted that most of the secondary electrical panels in the older building are at full capacity due to the need for more technology. New additional secondary electrical panels should be added into the cost for additional technology needs.

Sites

All the sites have the capacity for their existing usage.

Utility Corridors

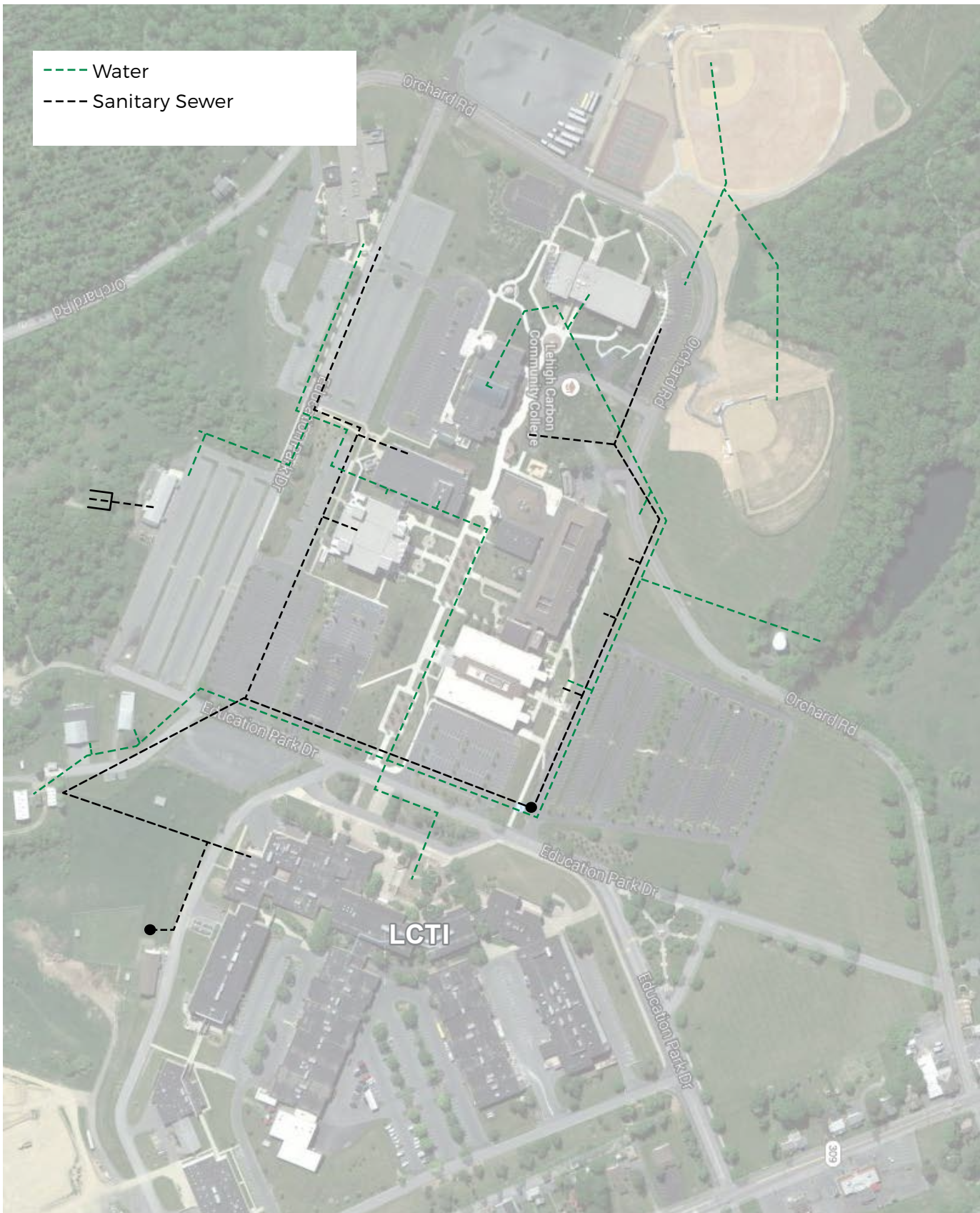
Schnecksville Campus

The existing corridors for utilities (electric, phone, and data) are sufficient for present use. Further consideration should be taken to evaluate the corridor pathways and put a plan in place for any expansion needs. Domestic water and sewer water pathways are sufficient and can be expanded. Consideration for municipal water hookup would expand the domestic water reserve.

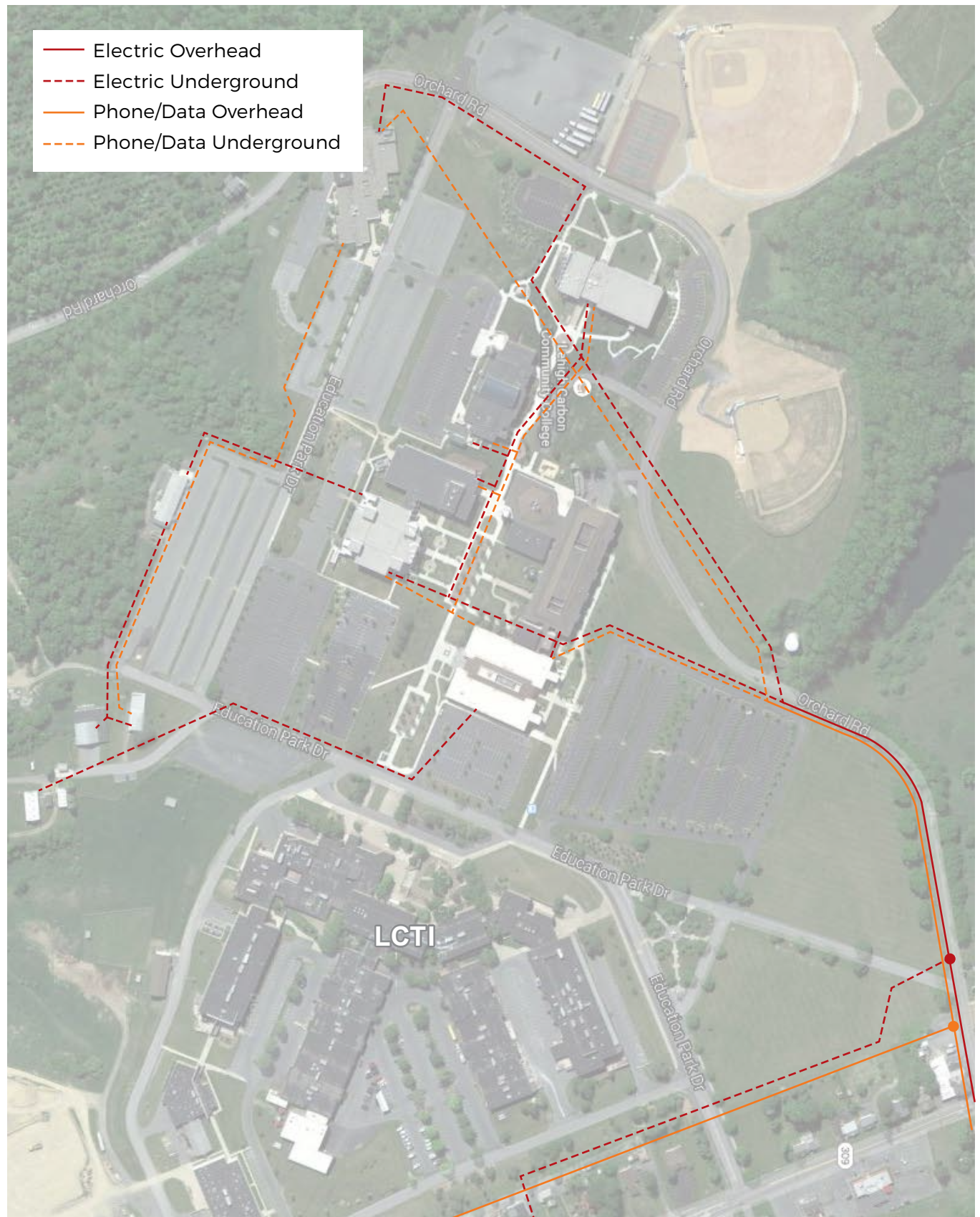
Sites

The existing corridors are sufficient for present use of the facilities.

Utility Distribution: Schnecksville Campus



Utility Distribution: Schnecksville Campus



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STORMWATER

Schnecksville Campus

The Schnecksville campus storm water corridors are sufficient and can be expanded. Parking lot drains and yard drains are connected to an intricate underground network that collects to a larger retention pond, open retention areas, and wooded valley run offs.

Sites

All of the sites' storm water is piped into a municipal collection system.



Storm Sewer Distribution Underground: Schnecksville Campus

