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MASTER PLAN TEAM

ACKNOWLEDGEMENT

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Campus Green at University Commons and St. Joseph's Hall Image courtesy of Carlow University

1. INTRODUCTION

Carlow University will be a preeminent, innovative Catholic University, renowned for providing transformational learning experiences in which students realize their full potential and become career-ready, ethical leaders committed to a just and merciful world." - Carlow University Vision Statement

Overview

Carlow University is located within the Oakland neighborhood of Pittsburgh, Pennsylvania. It is a liberal arts university, with its origin stemming from the Sisters of Mercy and Catholic values.

Programs offer traditional, graduate and online students access to career preparation under three colleges: Health and Wellness, Leadership and Social Change and Learning and Innovation. Currently, Carlow enrolls 2,254 students, supported by 285 faculty and 293 staff. The University attracts over half of its enrollment from Allegheny County, but projects growth of a more diverse population. Carlow University's focus in the coming years is to achieve new initiatives that strengthen its learner-centric teaching environment.

Carlow University has refined its Strategic Plan for 2014-2019, summarizing the aspirations of the University, which include expanding enrollment, enhancing the Carlow brand, improving the student experience and accelerating the growth of community partnerships.

These goals form the framework of the Institutional Master Plan for submission to the City of Pittsburgh, complying with ordinance 905.03 Educational/Medical Institution District. The recommendations to occur within the planning horizon include repurposing existing assets, reorganizing departments and creating new space for programmatic needs as well as enhancing the campus.



Campus edge along Fifth Ave. Image courtesy of Carlow University

2. MISSION AND OBJECTIVES



Student utilizing open space to study Image courtesy of Carlow University

Mission

Carlow's mission states, "Carlow University, rooted in its Catholic identity and embodying the heritage and values of the Sisters of Mercy, offers transformational educational opportunities for a diverse community of learners and empowers them to excel in their chosen work as compassionate, responsible leaders in the creation of a just and merciful world." The University's planning celebrates the rich history of Carlow University, as well as incorporating the following items from the Strategic Plan:



Accelerate Growth – Supporting academic programs through optimized physical environments; providing key amenities to support student life



Build Financial Health – Optimizing existing resources and minimizing unnecessary operating costs



Optimize Learning – Creating spaces that prepare students for the career and technical advancements of the future



Innovate Through Partnerships – Generating opportunities for community and industry partnership through the creation of advanced learning spaces and recreational areas



Create Transforming Environments -Reimagining the campus as a unified livinglearning experience

Objectives

The 2016 Campus Master Plan will support the objectives outlined in the University's Strategic Plan, integrate industry educational planning principals and accommodate the functional needs of its academic, campus life, recreational and athletics programs.

Maximize:

- The quality of learning environments on campus
- The student experience and campus environment
- The efficiency of faculty and departmental workspace

Minimize:

- Capital Costs
- The need for new construction by defining optimal usage of all existing real estate
- Operational and maintenance costs

Assess:

- Which facilities are functioning efficiently and do not require renovation or modification
- Which facilities are operating inefficiently and require renovation, repurposing and reorganization
- Which facilities are exceeding standard operational costs and should be removed, replaced or renovated

Engaging a designated team and activating a planning process provided informative solutions for how Carlow can meet these objectives. The Institutional Master Plan creates a framework for the implementation of the recommendations to guide new construction and renovation projects of the future.



Carlow University banners on Fifth Ave.

Image courtesy of Carlow University

"...a living document that provides Carlow University with a flexible planning framework to guide future decision-making and accommodate the evolution of new and growing programs and campus development over time."

Team

Carlow University engaged CannonDesign to assist in formulating a comprehensive Campus and Facilities Master Plan and facilitate an Institutional Master Plan to be filed with the City of Pittsburgh. The University also assembled a Steering Committee, providing overall planning process direction. The planning team presented progress updates, first to the President's Cabinet for initial feedback, and then to the Steering Committee before progressing to the next stage of the planning process. Working groups comprised of faculty, staff, and students participated in sessions to discuss current and future needs and goals. Local community groups were engaged and informed of the campus planning concepts and offered relevant feedback regarding the integration of the campus plan to the neighboring community. As a final step, the recommendations were presented to the Board of Trustees, who voted unanimously to approve the plan.

Oakland Community

The team held three sessions with the Oakland community to share the Master Plan process and elicit feedback and gain insight on neighborhood concerns and goals. This vital feedback was incorporated during the refinement stage. Most concerns were focused on reducing traffic, minimizing use of off campus residential housing, and the interface of public spaces between campus and their neighborhood.

Community groups engaged:

- Oakland Task Force
- Oakland Planning & Development Corporation (OPDC)
- West Oakland Neighborhood Council

Master Plan Process

Phase 1: Establish Visions and Goals

Data, drawings and physical observations relevant to the Master Plan were assembled, analyzed, and summarized as the planning strategies basis for development in subsequent phases.

A Master Plan framework of overall priorities and objectives were established with the Steering Committee during the visioning session.

With the framework established, a series of interviews were conducted involving staff, faculty, stakeholders and students to validate initial findings as well as identify additional campus needs.

Information gathered during the working group sessions was used to advance the space utilization analysis. The planning team developed an understanding of the interactions between the various campus entities.

The campus, naturally divided by a complex topography of lower, upper and extended campus zones, was analyzed to consider unifying options through vertical circulation and functional reorganization.

Phase 2: Generate Design Options

The planning team organized campus strategies into four major impact categories: campus-wide, academic, student life, and athletics. Strategies were prioritized based on their applicability to the strategic initiatives and generated an implementation sequence.

Phase 3: Refine Preferred Approach

Through a series of Steering Committee presentations, the planning team selected and refined optimal campus solutions. These solutions were organized according to short, medium and long-term recommendations based on programmatic and physical needs, as well as funding availability. The final Campus and Facilities Master Plan was a collaborative community effort. The plan is robust, encompassing the University and the surrounding neighborhood's needs.



Student engagement opportunity

3. PLANNING AREA ANALYSIS

Planning Area Overview

The one thousand feet planning area captures the diverse fabric of Oakland, both of changing topography and land uses. Carlow University is located within three miles east of Pittsburgh's downtown region in West Oakland. The planning area is connected to the city from Boulevard of the Allies and Fifth Ave. The site is near the Route 376 corridor, making travel distances minimal from major highways.

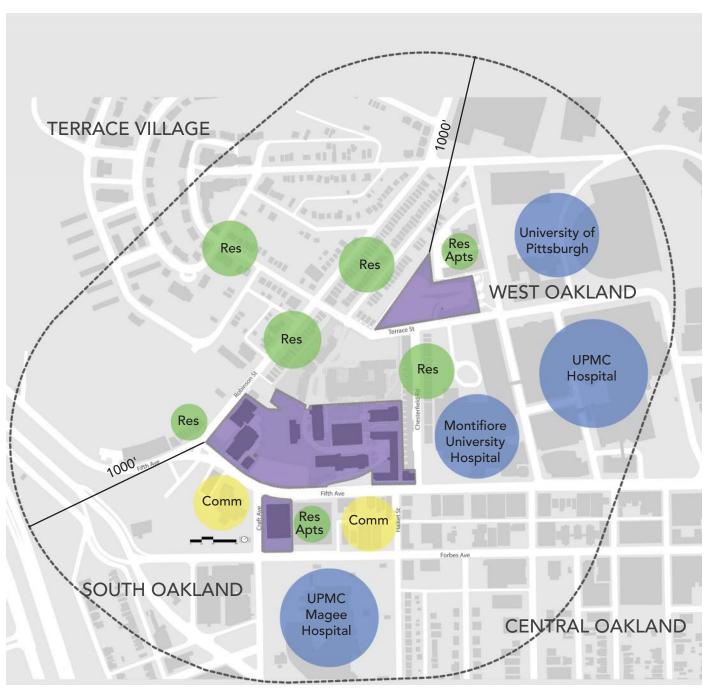
Oakland has a rich, textured landscape that presents both challenges and opportunities. At Carlow's campus, the extreme topography creates accessibility challenges while at the same time contributes to a unique character that makes Carlow seem like a respite within the busy Oakland neighborhood. The University has sought to capitalize on this asset, creating pockets of landscape for retreat and reflection. However, the campus edges seem undefined, and generally, the campus lacks continuity.

Adjacencies and Property Identification

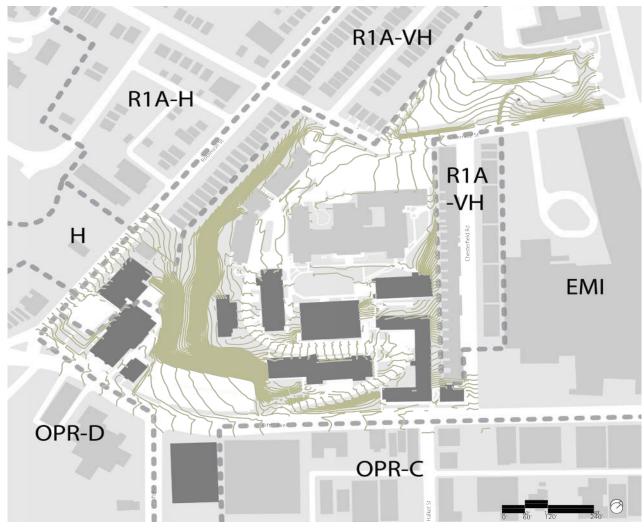
Situated on the western edge of the Oakland neighborhood, Carlow University is part of an institutional-dense area. Adjacent to the east is the University of Pittsburgh and the UPMC Montefiore Hospital. To the south, Carlow is bordered by retail, mixed-use developments, primarily student residences and UPMC Magee Hospital. The north and west present a different neighborhood makeup of mostly single family residences with a few multi-unit housing complexes.



Carlow campus within the Oakland context



PLANNING AREA OVERVIEW



EXISTING ZONING DISTRICT MAP AND TOPOGRAPHY

Zoning

Most of Carlow University is located within the Educational/Medical Institution (EMI) district in the neighborhood of Oakland. The majority of the campus borders on Residential Zoning Districts, mostly the Residential Single Family, Very High Density zoning classification. Some of the properties leased by Carlow fall under the Oakland Public Realm - C (OPR-C) along Fifth Ave. and Forbes Ave. The small lot on Robinson St. for the St. Agnes School is located within a residential zoning district and will undergo rezoning to change to EMI. An application has been filed for rezoning the lot.

Zoning District Types

EMI - Educational Medical Institutional

R1A-H - Residential Single Unit, High Density

R1A-VH - Residential Single Family, Very High Density

H - Hillside

OPR-D - Oakland Public Realm - Boulevard of the Allies

OPR-C - Oakland Public Realm - Fifth and Forbes

Topography

The terrain in West Oakland varies significantly across the Carlow Campus. The site of the AJ Palumbo building sits at an approximate 922.00 foot elevation. The elevations at the corner of Fifth Ave. and Robinson St. are the lowest elevations on campus, approximately 915.00 feet. The terrain quickly rises behind the St. Agnes Center with over 70 feet of elevation difference from 934.00 feet to 1008.00 feet. The conditions behind the CLAM, St. Agnes Church and Parking Lot A have an overall average slope percentage of 60%. Within the upper campus area at University Commons and the Green, the campus is more level with an approximate elevation at 1030.00 feet. Beyond Terrace St. the terrain continues to elevate from 1036.00 feet to 1070.00 feet over Parking Lot C.



4. EXISTING PROPERTIES AND LAND USES

Property Description

The terrain of Oakland divides the 14 acre campus into three areas. At the lower elevation campus is part of the Fifth Ave. urban corridor and feels separated from campus due to the steep slope border behind Parking Lot A. Where Campus Dr. rises to the upper elevations near University Commons, the internal space of the campus provides a distinct private experience. By a small pathway, along the east perimeter of the Sisters of Mercy property, the campus extends across Terrace St. to capture the Parking Lot C property.

Existing Land Use

Carlow is utilizing their property for academic - institutional uses. There is an adequate balance between built structures and open space in the urban collegiate environment. The Green and numerous areas of respite provide outdoor retreats throughout campus. Large parking lots occur on the periphery with limited parking spaces along Campus Dr. through campus.

Specific spatial uses are scattered across the campus. Most of the buildings are used for multiple academic programs creating inefficiencies. For example, administration functions are located in four buildings, causing the faculty to be spread and disconnected. Athletics is the most disjointed because most of the sports facilities are off campus at various Pittsburgh sites.

Tiernan Hall is occupied by The Campus School, providing school for kindergarten through eighth grade. The grade school and university programs share facilities such as St. Joseph's Hall and the cafeteria. An Early Learning Center, providing childcare, also resides in Frances Warde Hall.

Building Identification and Descriptions

Currently, Carlow University, The Campus School and Early Learning Center occupy sixteen buildings. The total gross square footage is 641,668 gsf of which the University owns 618,668 gsf in thirteen buildings and leases 23,000 sf of space in three buildings.

The average age of Carlow's building stock is seventy-four years. Two-thirds of buildings were constructed before 1960. This presents a deferred maintenance challenge to preserve the architectural character while accommodating advances in technology and changing trends in learning.



University Commons Building

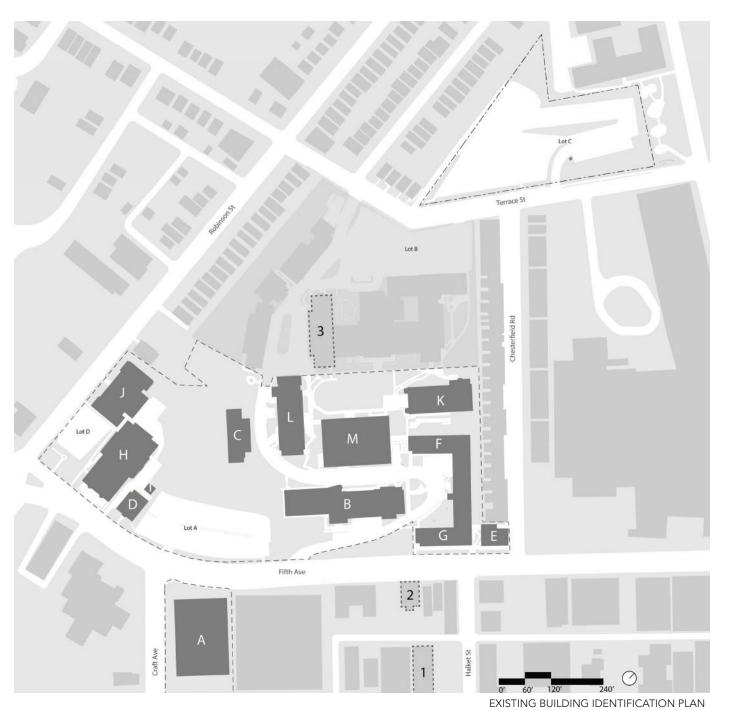
Building Identification

	Buildings Owned by Carlow	Туре	Year	GSF	STORIES	FOOTPRINT*
Α	AJ Palumbo Hall of Science and Technology	Academic	1995	106,966	5	21,966 sf
В	Antonian Hall	Administration	1947	93,431	7	19,271 sf
С	Aquinas Hall	Academic	1936	22,019	4	5,871 sf
D	Center for Leadership and Management (CLAM)	Faculty	1917	10,387	4	2,874 sf
Е	Curran Hall	Academic	1930	18,840	6	3,140 sf
F	Dougherty Hall	Residence Life	1963	62,528	10	7,598 sf
G	Frances Warde Hall	Residence Life/Mixed Use	1961	68,826	7	10,352 sf
Н	St. Agnes Center	Mixed Use**	1917	29,918	2	14,959 sf
I	Kiln	Academic		400	1	~ 400 sf
J	St. Agnes School	Vacant	1909	27,300	3	~9,100 sf
K	St. Joseph's Hall	Athletics	1932	42,729	4	9,577 sf
L	Tiernan Hall	K-8	1926	54,165	5	11,190 sf
М	University Commons	Mixed Use **	1967	81,159	5	15,629 sf
	TOTAL OWNED			618,668		131,927 sf

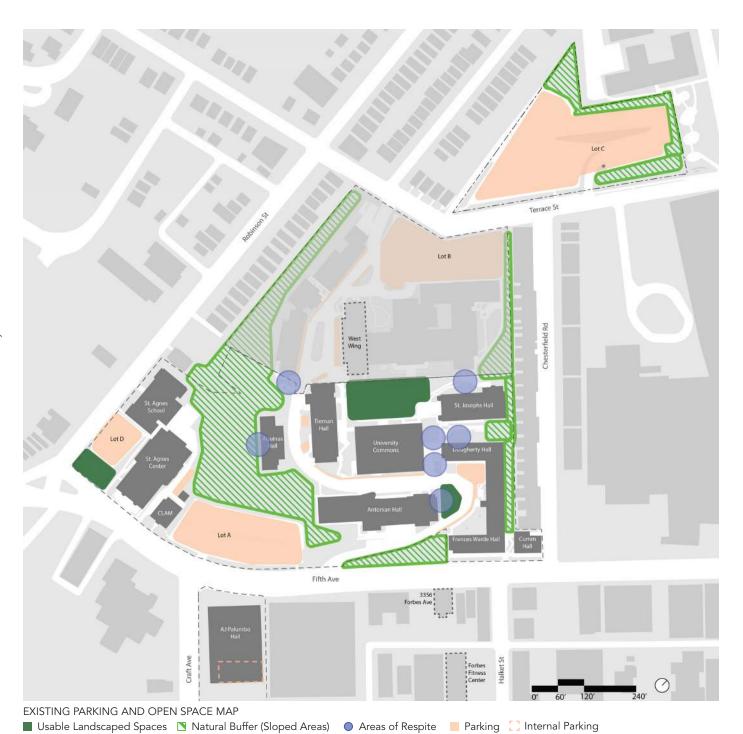
	Buildings Leased by Carlow	Туре	Year	GSF	STORIES	FOOTPRINT*
1	Forbes Fitness Center	Athletic		5,000	1	
2	3356 Fifth Ave.	Administration		6,000	2	
3	West Wing	Administration	1894	12,000	3	
	TOTAL LEASED			23,000		

^{*} Includes below ground stories

 $^{\ ^*}$ *Mixed use - building contains a cademic/administatration/student services mix



■ Context Buildings ■ Buildings Leased by Carlow ■ Buildings Owned by Carlow



Parking & Open Space

Parking

On-campus parking is provided at five surface lot locations: Lot A on Fifth Ave., Lot B in front of the Sisters of Mercy convent, Lot C on Terrace St., Lot D on Robinson St. and along Campus Dr. Facilities-only parking is located at AJ Palumbo Hall's lower level.

Location	Spaces
Parking Lot A	95
Parking Lot B (88 total all owned by SOM)	leased - 67
Parking Lot C	180
Parking Lot D	23
Dougherty Hall Lot	4
Campus Dr. All Day Parking 28 total, 26 SOM's)	2
Campus Dr. Short Term Parking	26
AJ Palumbo Hall (Facilities Only)	16
Total	413

Open Space

The Carlow campus is characterized by a variety of open landscape spaces, ranging from heavily wooded slopes to open greens to more intimate areas of respite. The natural buffers present at the steep slopes create a division through the campus, but are also an effective necessary boundary along adjacent residential properties.



Parking Lot A on Fifth Ave.



Area of respite with fountain near University Commons

Campus Utilities & Infrastructure

The information provided in this section was gathered by Gateway Engineers.

Natural Gas

Natural gas is supplied to the campus by Equitable Energy, and distributed by Peoples Gas. Existing gas mains are located along each of the roads that border the campus. The University connects to these lines along Fifth Ave. and Terrace St.

Water

Water service is provided by The Pittsburgh Water and Sewer Authority. As with gas, water lines are located along each of the roads bordering the campus. The University connects both domestic and fire lines onto Chesterfield Rd. and Terrace St., and domestic lines only to Fifth Ave. All buildings have domestic water service. All buildings except Aquinas Hall have fire service lines.

Electrical

Duquesne Light provides power to the University. Main electrical feeds run through underground conduit from Fifth Ave. and from overhead lines on Terrace St.

Fiber Optics

Fiber optics is provided by Fibertech Networks, LLC. All campus buildings are served by fiber optic lines. These lines originate at Parking Lot A and connect to the buildings through underground conduit.

Telephone/Cable

Verizon/Comcast provide telephone and cable services to the campus through underground conduit and tunnels.

Sanitary/Storm Sewer

The Pittsburgh Water and Sewer Authority is the provider for the sanitary and storm sewer system on campus. Like the rest of Oakland, the sanitary and storm water systems flow into a combined system at Fifth Ave.

Although there are no known flooding issues on campus, there is no storm sewer drainage system at Parking Lot C. Storm water sheet flows to riprap and river gravel areas at the low points of the lot.



Storm drain at Campus Dr. entrance on Fifth Ave.

Campus Edge

The physical edge of campus is defined by Fifth Ave., the residential neighborhood on Chesterfield Rd., Parking Lot C to the north, Robinson St. to the west, and AJ Palumbo Hall across Fifth Ave. However, Fifth Ave. and Terrace St. serve as the functional edges of campus for pedestrians.

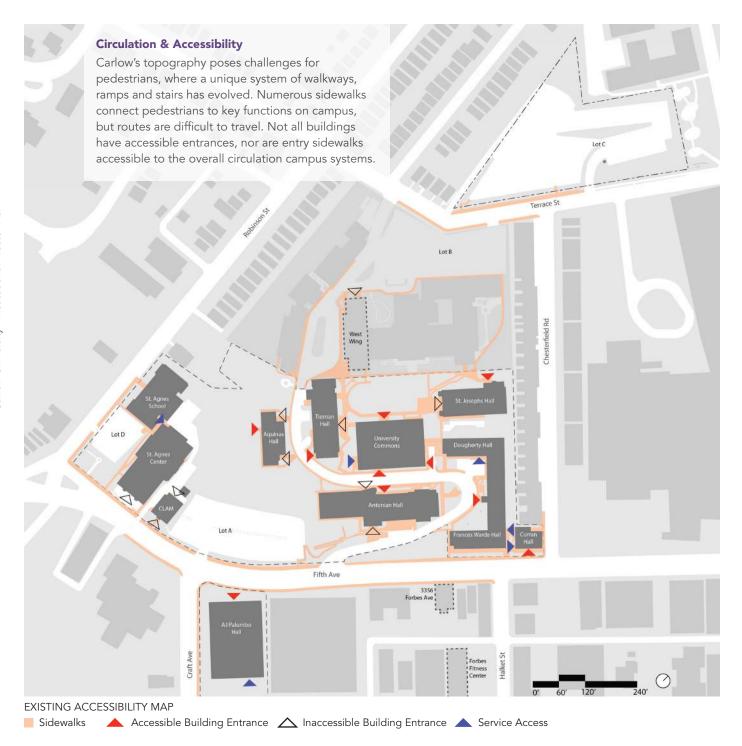
Signage and landscape treatments are inconsistent. Near Fifth Ave. and Chesterfield Rd., purple Carlow banners indicate the beginning of campus. At the Campus Dr. entrance, signs conflict in style and identity. Monumental signs for the University are located at multiple street corners, distinguishing the campus edge differently. Streetscape elements are sparse. Generally, it is difficult to identify the campus edges and entry points.



Campus access from Parking Lot B



Vehicular campus entry signage on Fifth Ave.



5. INSTITUTIONAL NEEDS

Needs Analysis

Over the coming years, the University will continue its efforts to create a welcoming campus experience with a unified image that represents the aspirations and institutional values of the University, while accommodating its important programmatic and functional needs. Future design decisions should respect the broad visions and follow guidelines outlined in this document.

The master planning focused on four major impact strategies: Campus-wide, Campus Life, Academics, and Athletics.

The following items summarize the campus needs:

- Define the Fifth Ave. campus gateway
- Optimize campus circulation
- Create classroom environments that reflect planned changes in pedagogy
- Study possible relocation of The Campus School
- Optimize the locations of the colleges
- Transform residence halls into living-learning centers
- Provide a variety of dining options throughout the campus
- Provide on-campus health & wellness facilities
- Create an athletics facility on campus

Future improvements explore optimal ways to repurpose existing buildings and modify spaces to accommodate pedagogies and student life needs. Physical and programmatic changes will improve the entire campus. The Fifth Ave. corridor at Lower Campus, faced with

congested traffic and a dense urban context, must respond to the University's need for a stronger presence within Oakland and improved connectivity. The University should implement measures to enhance the current composition of Lower Campus by redefining the area. With the recommendations of a new building at Parking Lot A, the campus can create a front door and offer new parking and pedestrian access through vertical circulation to the Upper Campus. The reuse of existing buildings such as St. Agnes Center, CLAM and Curran Hall and modest edge site improvements will reinvigorate the activity from Robinson St. to Chesterfield Rd.

The Upper Campus is the heart of the University, containing the Green, the popular University Commons and the majority of academic and student life areas. The intent is to build on the successes of the core and maintain the intimate feel, while strengthening the amenities with renovations for classrooms, and student activities and fitness. Most buildings will be improved and programs consolidated in advantageous locations.

Beyond the Sisters of Mercy property and across Terrace St., the Extended Campus is challenged with issues of connectivity. The new construction of parking and an athletic precinct, bridged with a new pedestrian corridor, will enhance this property and pull the aspects of the core to the northern limits of campus. The athletics building will fulfill the University's unmet needs for competitive courts for its growing athletic programs. Sports requiring fields will continue to practice and compete off campus.



Representative image of dining services



Representative images of Simulation Center



Representative images of recreation and fitness center



Representative images of right-sized classrooms

Recommendations

The planning team determined that a successful master plan would maintain and enhance the campus experience by refreshing the internal area, activate and define the campus edge and help the University maximize the quality of learning and student life, while minimizing the need for additional buildings, capital costs and operating expenses.

Circulation Connections:

Architecture and landscape improvements will work with campus topography, connecting upper and lower campus zones, while making enhancements for access to the extended campus. Green space, plazas and vertical circulation strategies will connect the campus functions, creating an integrated environment rich with areas of social interchange.

Campus Edge Improvements:

Carlow University's edge is strengthened to designate the boundaries of the campus perimeter and create a welcoming experience. Carlow's busy Fifth Ave. campus entry warrants a distinctive gateway and branding for arrival. Terrace St. streetscape modifications will create a stronger connection between core campus and Parking Lot C. Circulation and wayfinding improvements include development of defined signage and building markers.

The Campus School Relocation:

A presidential task force has been assembled to help determine the possible relocation of The Campus School and Early Learning Center, both of which have a long association with the University and report to the provost. The Campus School currently occupies much of Tiernan Hall. Both the University and The Campus School face challenges in terms of coordinating use of the green space, cafeteria, and recreational facilities. The task force is charged with assessing whether relocating The Campus School and Early Learning Center might allow it to strengthen its educational offerings as well as grow in stature and size.

Academic Classrooms:

Utilization and scheduling analyses concluded that the current amount of classroom space is adequate. However, the quality of learning space requires a modification to meet contemporary pedagogy standards. The plan maximizes assets, proposes room flexibility and proper technology to promote active learning and adaptation to various instructional platforms. In order to accommodate improvements, buildings such as Antonian Hall, AJ Palumbo Hall and Tiernan Hall will undergo renovation.

College Departments:

Consolidating and identifying Carlow's three colleges will optimize faculty locations and strengthen connections among students and faculty. Cross-curricular collaborative opportunities will emerge, along with the benefits of new content, while exploring change and program growth. Reorganization and resizing staff offices and support space will eliminate leasing off-campus

space. Staff will begin to see adjacencies that improve work flow and communication.

Specialized Academic Spaces:

To support the thriving College of Health and Wellness programs, a full-simulation center created by new construction at Parking Lot A will allow students to experience various settings and promote hands-on learning. Creating a simulation facility that echoes today's healthcare practice trends and partnerships can strengthen learning spaces beyond today – breathing new life into Carlow's brand.

Student Support:

Taking advantage of the development on Fifth Ave., a new Welcome Center will create a clearly defined arrival point. Ample parking will be available. Students can access the Welcome Center from the Antonian HUB, which will be renovated to support growth. Student Life programs would remain in University Commons.

Event Space:

To expand the student experience beyond graduation, CLAM renovations can support an alumni center. The historic St. Agnes Church, with an addition, can be revitalized as a venue destination to provide space for large group gatherings and revenue generating events.

Residence Life and Enrollment Growth:

Carlow's aspiration for growth to 3000 students by 2026, will be enabled through increased on-line enrollment (1/3 of the growth forecast), approximately 210 on campus resident beds, and the remainder as commuter. Additional on campus housing will be accomplished

through the reprogramming of Dougherty and Frances Warde Halls to be strictly residential. Additional residence rooms will be gained when unrelated programs are relocated. Curran Hall will house suite-style living quarters, supporting alternate on-campus student living opportunities. Commuter growth will be enhanced by the benefits created by the BRT plan and 5th Avenue Cycle Track.

Relationship with the Sisters of Mercy (SOM):

Carlow is a founding ministry of the Sisters of Mercy. The Sisters of Mercy community on campus is a constant and strong reminder of the mission and values of the University. As the future unfolds, the relationship will continue with the Sisters of Mercy offering first right of refusal for property they no longer wish to retain.

Recreation & Fitness:

Recreation is essential to the University experience. St. Joseph's Hall will be renovated to become a revitalized on-campus fitness and extracurricular destination. Located adjacent to residence halls and the campus Green, this historic building will breathe new life and promote a holistic student experience.

<u>Athletics</u>:

New construction and structured parking on Parking Lot C will create an athletic facility, providing competition venue for volleyball and basketball as well as athletic department-wide support spaces. Athletes, coaches and trainers will utilize the facility for offices, locker rooms, team meetings, conditioning and rehabilitation.

6. TEN YEAR DEVELOPMENT

Development Envelope Plan

The Institutional Master Plan development timeline focuses on the first ten years. The University identified their short- and medium-term projects to occur within this phase.

The initiatives in ten years will advance the University's strategic goals and ambitions. The Plan proposes to renovate approximately 301,819 gross square feet (GSF). A majority of the proposed renovations will be updating existing space infrastructure to match Carlow's teaching pedagogy and student experience visions, as well as address deferred maintenance issues. It also anticipates repurposing and reconfiguring buildings totaling 73,005 gsf. It is estimated that approximately 60,743 gsf will be eliminated, of which 11,000 gsf of outside leased property will be relocated on campus. New buildings approximately 282,000 gsf will be developed. The projections include a total of 856,949 gsf occupied by Carlow University programs.

New Construction

- Academic Building with Structured Parking
- St. Agnes Center Addition
- Residence Hall Connector
- Athletics Building with Structured Parking

Renovations

- St. Joseph's Hall
- Frances Warde Hall & Dougherty Hall
- St. Agnes Center
- CLAM to Alumni Center
- Antonian Hall
- Curran Hall (suites)
- Tiernan Hall
- Campus Core Enhancements
- Campus Edge Improvements
- Extended Campus Green Space (Prior Lot C)

Relocation

- University Student Fitness Facility (vacate leased space)
- Facilities Department (vacate leased space)
- The Campus School (potentially off-campus)

Demolition

Kiln



TEN YEAR DEVELOPMENT ENVELOPE PLAN
■ Existing Building ■ Existing Building Renovation ■ New Building Construction

Renovation

Renovation work or efforts to repurpose a building are intended to work within the existing building footprint and accommodate interior renovations and site work. Existing setbacks and heights to remain.

	Building Name	Area (GSF)	Use
В	Antonian Hall	93,431	Academic
D	Alumni Center	10,387	Support
Е	Curran Hall	18,840	Residence Hall
F	Dougherty Hall	62,528	Residence Hall
G	Frances Warde Hall	68,826	Residence Hall
Н	St. Agnes Center	29,918	Event Venue*
K	St. Joseph's Hall	42.729	Rec / Fitness
L	Tiernan Hall	54,165	Academic

Elimination

Demolition or lease termination.

	Building Name	Area (GSF)
1	Forbes Ave. Fitness Center	5,000
2	3356 Fifth Ave.	6,000
Т	Kiln Demo	400

Maintain Use / Selective Improvements

Certain buildings remain in use with only limited improvements due to the success or more recent construction of the building. Ongoing deferred maintenance will continue annually and be planned based on critical needs.

	Building Name	Area (GSF)
Α	AJ Palumbo Hall	106,966
М	University Commons	81,159
3	West Wing	12,000

^{*} Event Venue - large group campus lectures; occassional rental for public events

Note: Short Term use of St. Agnes School may be adminstrative or temporary storage space

New Construction

New buildings added on campus or additions that change the footprint will comply with the standards set forth in this IMP document for maximum area, setbacks, height and overall design guidelines. The listed square footages and footprints provide a flexible development envelope for approval by the City of Pittsburgh.

	Building Name	Area (GSF)	Use	Footprint (SF)	Height	Setback
Е	Residence Hall Connector	1,200*	Residence Hall	1,200*	2 Stories / 40 ft.**	Contextual
		residence bu	Program: 900+SF 2 story glass connection between France Warde Hall and Curran Haresidence buildings and enhance architecture on Fifth Ave.; the contectual setback will closer to the street than the existing building.			n Hall to unite will be no
Н	St. Agnes Center Addition	2,700*	Catering / ADA reno.	2,700*	2 Stories / 40 ft. **	Contextual
		Program: 2,1	00+SF addition providing sp	pace for catering,	restrooms and ADA buil	ding access
0	Athletics Building at Lot C	191,300*	Athletics / Events	43,800*	6 Stories / 100 ft.**	Varies
			000+SF 2 levels for athletic t , training facilities, and supp		d competition courts, coa	aches offices,
		Parking: 105, facade of par	000+SF 3 levels of structure king structure to be screene	d parking (300-18 d with approprait	80 spaces) for students a se building materials.	nd staff; street
		Setback Description: 5 foot setback on Terrace St. 15 foot setback on southeastern and northeastern interior sideyards 20 foot setback at rear The maximum height will step back where required because of residential Compatibility Standards			mpatibility	
Ν	Academic Building at Lot A	157,500*	Mixed Institutional	50,800*	8 Stories / 120 ft.**	Varies
		Building setbacks may vary to accommodate a future bus stop and provide pedestrian relief along the Fifth Ave. corridor.				
		65,000+SF 5 levels for academic classrooms, administrative, student life, Facilities Department, dining, Simulation Center, Welcome Center, and Heritage Center 61,000+ SF 2 levels of structured parking (210-330 spaces) for students and staff, vehicular circulation and loading area				Department,
						vehicular
		preference is behind, beyo	back Description: The site will have a 0 ft. setback requirement on Fifth Ave. The design erence is for the building to respond to the urban context at the street, with parking hidden nd, beyond two stories the building steps back from the setback, addressing the Campus Dradjacent Upper Campus buildings.			arking hidden

 $^{{}^{\}star}\, \text{Includes approximately a 25\% increase above planned program square footage to cover unforeseen needs of building design.}$

^{**}Provides one additional floor above the total program needs to provide for mechanical equipment or adjustments to programming.

Proposed Site Connectivity

Development on Parking Lot A will highlight a new 'front door' and campus entry sequence. Site enhancements and consistent landscape treatments will strengthen the neighborhood connections and campus edge. A better linkage to AJ Palumbo Hall will be created by the improved streetscape on Fifth Ave.

Campus access and circulation difficulties caused by the steep topography will be alleviated through vertical circulation within the new academic building. The building will also be designed for a three story street facade to relate to the scale at Fifth Ave., but contain a larger volume setback for connections to Campus Dr. and the adjacent Antonian Hall.

Due to the location of the extended campus, adequate connections are necessary to improve access and create a cohesive campus environment. The pathway for the Carlow community to access the new athletics building occurs through the Sisters of Mercy's property. Collaboratively between the two entities, the design of a new pedestrian gateway through green open space adjacent to Parking Lot B is essential for establishing new connectivity cues. Site improvements shall provide a well marked and safe passage from Upper Campus to Extended Campus, including accommodation for crosswalks, streetscape plantings, and branding elements.



Proposed Site Section



Proposed Fifth Ave. View



Proposed Fifth and Craft Ave. Intersection View

7. TWENTY-FIVE YEAR DEVELOPMENT

Development Envelope Plan

Due to the limited land for construction and the efficient use of existing amenities / structures on campus, Carlow's twenty-five year plan includes minimal building changes. The only recommendations are to create additional designed green spaces, which requires elimination of two buildings. The final built-out master plan will be reviewed and modified by Carlow University if changes are deemed appropriate.

New Construction

No new construction within this term

Renovations

- Campus Edge Improvements
- Aquinas Green Space
- St. Agnes Green Space and Parking Lot
- Parking Lot B Reorganization (in collaboration with Sister of Mercy)
- Sisters of Mercy Green Space and Passage

Relocation

• No relocations within this tern

Demolition

- Aquinas Hall (potential)
- St. Agnes School (potential)



TWENTY_FIVE YEAR DEVELOPMENT ENVELOPE PLAN

8. TRANSPORTATION MANAGEMENT PLAN

Overview

Trans Associates Engineering Consultants, Inc. were engaged to complete an analysis of traffic and parking for the Carlow University per the requirements of the established by the City of Pittsburgh Departments of City Planning (DCP) and Public Works (DPW) and to provide appropriate traffic and parking mitigation measures. The full Transportation Study document is submitted to the City of Pittsburgh as a supplemental document to the Institutional Master Plan. The Study acknowledges the most current BRT plans for the Oakland corridor, including the dedicated bus lanes on Fifth and Forbes, proposed stops within the vicinity of the site, and onroad bike facilities. Carlow will continue to collaborate with the City as the BRT plan evolves.

Pedestrian and Bicycle Recommendations

The report recommends pedestrian and bicycle enhancements be implemented by the University, such as bicycle parking facilities on-campus and additional on-campus signage.

Traffic Recommendations

Generally, traffic conditions are improved with the master plan recommendations, and the relocation of The Campus School to an off-campus location. Trip generation and traffic analysis for the 10-year master plan components do not warrant any roadway or traffic signal improvements, except Campus driveway modifications and signage.

Parking Recommendations

Based on data, Carlow University has a parking demand rate of 0.21 spaces per student. There is a need for additional parking due to increased enrollment.

The estimated parking demand for 2026 is 561 spaces. The Master Plan increases the current quantities to 650 spaces total, 601 available to Carlow University, primarily by recommending new structured garages on the sites of Parking Lot A and Lot C. Both locations are easily accessible from all corners of campus. On the contrary, there will be limited parking available for deliveries, ADA parking and the Sisters of Mercy on Campus Dr. in order to keep the route through campus pedestrian friendly and clear of unnecessary vehicle traffic.

Max Proposed Parking	Scenario 1	Scenario 2
Parking Lot A (95 exist)	210 (includes 20 valet)	330
Parking Lot B (60 total, 23 SOM's) (60 exist)	37	37
Parking Lot C (180 exist)	300	180
Parking Lot D (relocated) (23 exist)	18	18
Dougherty Hall Lot (4 exist)	4	4
Campus Dr. All Day Parking (26 total, 26 SOM's)		
Campus Dr. Short Term Parking (16 exist)	16	16
AJ Palumbo Hall (facilities)	16	16
TOTAL	601 max	601 max

For the locations of proposed parking refer to the Proposed Open Space Network Plan on page 39.

Determination of a final scenario will be based upon the appropriate capacity of Parking Lot A to functionally integrate with the approved plan for BRT and 5th Avenue Cycle Track.



9. ENVIRONMENTAL PROTECTION PLAN

Environment Overlay Districts

Flood Plain Overlay District:

The site does not fall within a designated flood plain.

Riverfront Overlay District:

The site does not fall within the riverfront overlay district.

Undermined Area Overlay District:

Parking Lot C is located in the undermined area overlay district

View Protection Overlay District:

No significant views apply to the site. At the Upper Campus, primarily at the University Commons, there is a view of Oakland, but unfortunately it will be limited by current development along Forbes Fifth Ave.

Stormwater Management Overlay District:

Future development will improve the stormwater system due to the removal of surface lots by building vertical parking structures with academic space above, ultimately reducing the total impervious surfaces. Numerous additional green open spaces are planned.

Landslide -Prone Overlay District:

A significant portion of the Carlow property is within a landslide prone zone. Precautions will be taken at the edge of slopes to protect existing buildings and mitigate impacts to the terrain. Geotechnical investigation will be performed during the design of future developments, along with compliance of site development standards and approvals as stated in the ordinance.

Environmental Performance Standards

Steep Slope Protection:

The campus' slopes greater than 25% are located between Lower and Upper Campus and along the perimeter between the University and residential properties. Campus improvements and construction shall conform with overlay district standards to minimize impacts to existing grades and vegetation. Both new construction sites at Parking Lot A and Lot C will set the building into the hillside, retaining the existing grades. The use of the topography will create multi-level entries and a subtle presence of structured parking levels.

Tree and Vegetation Protection:

Larger individual specimens within Upper Campus will be preserved to maintain the distinctive experience of the core. The natural edges do not contain significantly sized trees or species of a particular value. However as a wooded area, they create a significant buffer that shall be enhanced with future edge improvements. Parking Lot A development will impact a portion of the tree buffer. A tree survey is necessary to confirm, but mostly smaller Norway Maple and other vegetation exist that can be replaced with appropriate native selections.

Maximum Impervious Surface:

No maximum impervious area is designated within the EMI district per section 905.03, but all ten year development plans will improve conditions by reducing impervious surfaces, planning for alternative pavements, as well as adding additional green space.



Steep slope adjacent to path through Sisters of Mercy property



University Commons from Campus Dr.



Vegetation within the Campus Green

Sustainable Construction

The University Commons renovation project marked the beginning of Carlow's commitment to LEED certification. Achieving LEED Silver, the building is a source of pride to students and staff alike. It is now university policy for all new buildings and major renovations to attempt a minimum LEED Silver rating.

Sustainable Initiatives

Concerned Carlow community members formed the BLUE committee to discuss and implement sustainable strategies on campus. Called the BLUE Committee (Benevolent Living Upon the Earth), it is made up of students and sisters concerned about the campus' impact on the environment.

The BLUE Committee launched a successful campaign to install hydration stations in every campus building. These stations have saved tens of thousands of plastic bottles by allowing users to fill up reusable bottles.

Pittsburgh's 2030 District area encompasses Downtown, the North Shore, and the Oakland neighborhood, where Carlow University is located. Carlow signed on to the GBA Pittsburgh 2030 commitment at the end of 2013. As part of its obligations as a signatory, Carlow conducted a benchmarking audit of its buildings to use as a measure of performance.

Representatives from Carlow meet monthly with the Pittsburgh 2030 committee. In addition to sharing its

own data, the meetings are an opportunity to share challenges, ideas and solutions with other signatory organizations.

Carlow is also a member of the Higher Education Climate Consortium.

Stormwater Management

With the topographic challenges faced by Carlow, stormwater management is of paramount importance. Carlow is considering strategies to retain more storm water on-site, such as green roofs and rainwater harvesting.

Managing the flow of water across the site is one of the single greatest challenges facing Carlow today. Carlow should focus first on stormwater retention. There are a variety of ways to improve stormwater retention. Pervious pavers can be used in plazas, but they are not always suitable for northern climates and non-level surfaces. It is recommended that Carlow investigate pervious asphalt as an alternative. Pervious asphalt is porous - it allows water to flow through itself and filter into the ground. A chief advantage of pervious asphalt is that it can be used on roadways and non-flat surfaces.

Another strategy to retain stormwater on site is to collect and harvest water for use in flushing toilets or for irrigation. This would contribute to water conservation by reducing the amount of potable (drinkable) water needed by the campus.

Energy Conservation

As of 2016, 95% of landscape lighting has been converted to LED. The conversion of the remaining landscape lighting, as well as interior lighting, to LED is a top priority.

In addition to these measures, further steps can be taken to improve energy efficiency. Starting with those buildings where systems are beyond their useful life, upgrading to more efficient systems could drastically improve energy efficiency. Carlow can also increase energy savings by changing all single-pane windows to double-pane. The greatest energy savings would be realized with low-e coatings and argon gas. Even measures as simple as recaulking and sealing around window and door openings would see paybacks.

Water Conservation

Before 1994, toilets typically consumed up to 3.5 gallons per flush (gpf), with some as high as 6 gpf. After 1994, 1.6 gpf became the industry norm. However, this is still more water than necessary. Water usage at sinks can be reduced through low-flow fixtures and sensors. University Commons uses low-flow fixtures to save water use.

Carlow can start to realize significant water savings across campus by first replacing its oldest indoor water fixtures with low-flow or dual-flush fixtures and gradually phasing out the rest of its fixtures with more efficient models. It is recommended that Carlow meter each building separately to improve tracking of water use.

These sustainabilty efforts will assist Carlow in meeting the Pittsburgh 2030 goals. Strategies should be in place at the forefront of implementing the master plan recommendations.

Waste Reduction/ Recycling

Carlow currently maintains a recycling program for batteries, light bulbs, cooking oil, cardboard, plastic, metal, and glass.

Transportation

Site improvements will promote alternate transportation methods for bus, bike and pedestrians that are intended to be linked to a larger system within Oakland. Carlow acknowledges the most current BRT plans and will collaborate with the City of Pittsburgh to integrate pedestrian connections to the BRT stop into its Fifth Avenue campus edge improvements.



Representative image for stormwater management

10. OPEN SPACE AND PEDESTRIAN CIRCULATION PLAN

Open Space

Green space initiatives will continue to reinforce the intimate campus, yet introduce a unification of the Lower, Upper and Extended campus areas both visually and physically to support social and learning spaces. The proposed parking is organized in new buildings incorporating structured parking. The master plan components create opportunity for additional green and pedestrian spaces.

The Green

The most distinct open space is flanked by the University Commons. Carlow will preserve the large lawn space and keep it open for daily student use both for passive and active recreation.

New Spaces

A new plaza area at the upper level of the new academic building will expand to a designed open space at the location of Aquinas Hall in the proposed 25 year development.

The development of landscaped areas at Lower Campus will provide much needed street edge relief at the Robinson Ave. and Fifth Ave. intersection as well an event break out space from St. Agnes Center.

With the opportunity to remove The Campus School from the core of campus, Campus Dr. can become pedestrian friendly. The area between University Commons and Antonian Hall could potentially provide additional open space and plaza amenities.

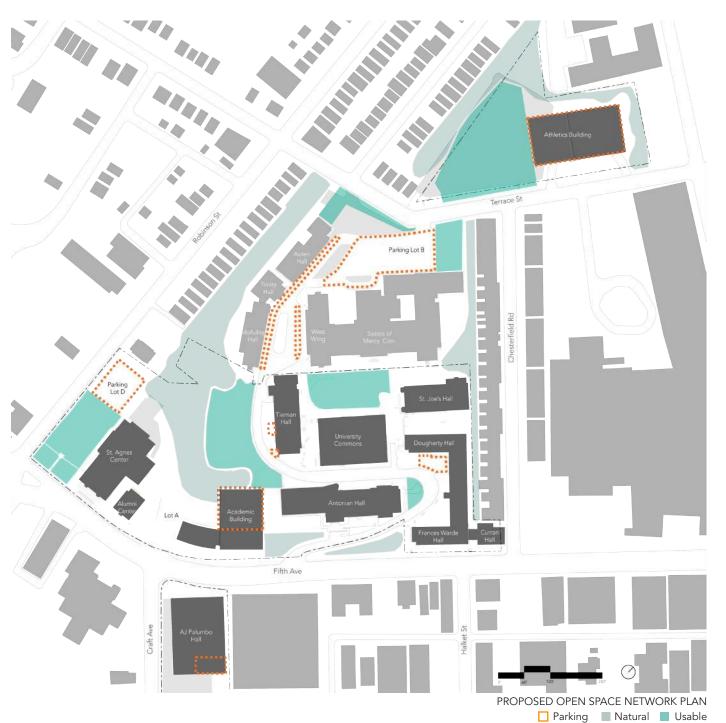


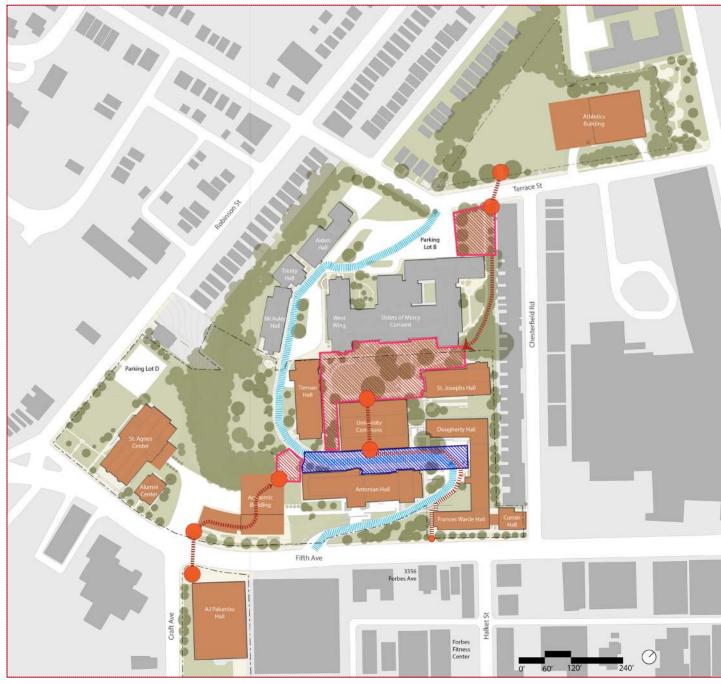
Representative image of outdoor learning space

The athletics building exterior will be defined by a tiered plaza area giving opportunity for outdoor seating and activity. If space allows, more active recreational space shall be provided.

<u>Buffers</u>

Natural Buffers will be maintained between Carlow University property and adjacent residential areas. Use of these spaces is not proposed for pedestrians.





PROPOSED PEDESTRIAN CIRCULATION DIAGRAM

Pedestrian Connector Route 📉 Pedestrian/Open Space Zone 🐧 Vehicular/pedestrian Zone IIIIIIII Limited Vehicular Access

Pedestrian Circulation

Since Carlow's campus is not entirely car free, there is an opportunity to improve pedestrian circulation within the campus. Carlow has a variety of natural boundaries from campus green to steep slopes, sidewalks and pathways, formal and informal open spaces, all of which provide an overall framework for efficient circulation in the campus.

Across Campus

Recommendations for new open space and vertical circulation through buildings promote a diagonal route to connect campus from AJ Palumbo/ Lower campus to the new athletics building/ Extended Campus. Design for safer, identifiable public street crossings at Terrace St. and Fifth Ave. is necessary for circulation improvements.

The vertical circulation is key to routing through campus, particularly for accessibility requirements. The linking of public spaces within buildings and open green spaces creates points of interest along the circulation route. Where campus is separated by the Sisters of Mercy property, the pathways shall be direct and distinct.

Campus Drive

Campus Dr. traffic is intended for minimal drop-off, deliveries and service, and ADA parking. With The Campus School and Early Learning Center off campus, the traffic volumes will be reduced significantly.

Improvements for pedestrian circulation throughout

will include cohesive design elements, such as sidewalk materials, lighting standards, connections to areas of respite, and improved signage. Improvements between Antonian Hall and University Commons, with raised pavement, ADA access and additional vegetation will provide a zone focused on pedestrians rather than vehicular circulation.

Working with the Sisters of Mercy, the potential reorganization of Parking Lot B will allow a new entry at Terrace St., screening off service areas and creating less-congested traffic flows. By relocating the intersection at Terrace St., focus is created on the surrounding unique architecture; the area will feel less of a back-of-house access.



Representative image of pedestrian path

EDGE IMPROVEMENTS

Streetscape Edge Conditions

Streetscape edge enhancements will define the campus to increase the identity of Carlow and compliment the Oakland Master Plan. Incorporating public amenities, such as the BRT station and a bike sharing program will strengthen the involvement of the community. Aligning with Carlow's transportation goals, the University intends to set modal split goals to increase public transit usage by all members of the Campus Community. The BRT plan and 5th Avenue Cycle Track will be positive facilitators toward achieving these goals. Streetscape design guideline standards shall be developed for site furnishings, landscaping, large street trees, pavement materials, lighting, pageantry and general material use at a later date as the campus progresses through renovation work. Attention to site improvements allows branding opportunities and promotes the University's presence.

Gateways

Distinct campus signage and improved wayfinding at key locations will improve the vehicular approach to campus. A new literal and figurative front door to the campus associated with the new academic building will create a primary gateway at Campus Dr. To mitigate vehicular circulation along Campus Dr., clear signage will encourage access to parking at a secondary gateway at Craft Ave. Additional gateways along Robinson Ave. and Terrace St. will provide secondary access to the campus. Design should consider materials and details that are consistent and aligned with the campus aesthetic.

Plazas / Entry Enhancement

Edge improvement design standards apply to building



Representative image of streetscape treatment

entries to create a cohesive landscape where materials, walls, planting and branding is consistently utilized. The plazas will create breaks in streetscape and define the building entries, creating pedestrian gathering and study spaces outside the public right-of-way. Improved sightlines, defined approaches and gathering spaces develop a more inviting campus within the community.

Pedestrian Campus Entrances

Users familiar with the campus structure will utilize pedestrian access points to navigate directly to their destination. Site features will create nodes to distinguish the campus edge. Although not main points of entry, these can benefit from intentional design elements to enhance the pedestrian experience. These access points will be planned in coordination with the BRT stop locations. Edge improvements will seek to ensure safe and convenient connections to the BRT stop.



11. URBAN DESIGN GUIDELINES

Future development shall comply with the guidelines set herein that ensure the campus site and building structures are compatible with neighboring properties and compliment the existing historic features. Final design and material selections will be determined during the implementation of each project.

Material, Colors, and Design Elements

The Gothic Revival architectural style creates a sense of place in the Upper Campus, however Carlow University has a setting of various architectural styles. Together, materials are primarily brick and stone masonry. Significant buildings will be maintained, and new construction will follow the success of the University Commons, where more modern elements and sustainable design practices were applied. The use of high-quality, durable materials will ensure the longevity of any new work within an urban context. This allows a strategy for bridging the history with the need for academic amenities. The strategy for a mix of styles complements the diverse fabric of Oakland and allows architectural solutions to solve the challenging landscape on campus.

Setbacks

Proposed building setbacks vary around Carlow University's perimeter. Limits of setbacks depend on existing setbacks, uses and structures to remain.

At the Lower Campus much of the setback along Fifth Ave. is 0 ft. Consideration of a contextual setback on both corners will improve the urban corridor. A

connector at Frances Warde and Curran Hall shall not expand beyond the existing walled terrace. With Antonian Hall set back, construction at Parking Lot A could step back gradually with the terrain to open the view and transition to the 20 ft. setback along the CLAM and St. Agnes Center.

The setback along Robinson St. is 5 ft. and changes to 15 ft. as the University property line turns towards existing steep slopes on campus. Part of the campus that faces Chesterfield St. has a setback requirement of 5 ft. Existing setbacks at locations adjacent to residential will remain.

Upper Campus setbacks along Terrace St. vary from 5 ft. to 0 ft. At the residential edge along Davier Way and Darragh St. the setback increases to 15 ft.

Height

The buildings on Carlow campus have different building heights. Many may have multiple floors, but from certain points appear to only have one or two stories due to the change in terrain.

The University property is surrounded by residential development zoned as R1A-H and R1A-VH along Robinson St., Terrace St. and Chesterfield St. Residential Compatibility Standards, will be met by designing structures within 50 ft. of residential property not exceeding 40 ft. building height or 3 stories and structures within 100 ft. of residential shall not exceed 50 ft. building height or 4 stories.

St. Agnes School and Curran Hall fall under the 100 ft. boundary, permitting 40 ft. max for 3 floors. The Residential Connector will reside within these limits. Portions of St. Agnes Center, the residence halls and St. Joseph's Hall are in the 100 ft. setback restricting development to 50 ft. However, no growth is proposed for these locations.

The addition to St. Agnes Center, planned for the east facade of the building and new construction at Parking Lot A will comply with contextual height and setback regulations.

Parking Lot A development is proposed to be shorter than the housing building across Fifth Ave. The total height of the building will be established to respond to proposed program elements. The Fifth Ave. street level is proposed as three stories and then rise to the height of buildings along Campus Dr., such as Antonian Hall. Area in front of the new construction may be designed to accommodate future a bus stop and bus route amenities.

The athletics building in the Extended Campus at Parking Lot C falls under the 100 ft. setback. However due to the site elevations being lower than the apartment complex to the north, contextual heights will be considered to respect the neighboring residential.

The proposed section on page 28 shows the height relationship of new buildings as they relate to Fifth Ave. and Terrace St.

Bulk and Massing

Building additions and new construction are properly located to create needed adjacencies in program elements. Both the new large building construction projects will be built close to the right-of-ways to maintain the existing urban pattern and define the campus edge. The arrangement of buildings will maintain the generous open campus environment which allows design to maximize light, air and landscape.

Landscaping

The campus is adequately landscaped offering numerous areas of respite and open green space. The landscape will continue to provide such amenities, while new site improvements will heighten the experience, particularly with street trees, consistent planting material, denser plantings and raised planters at new plazas.

In addition to streetscape and plaza landscapes, the master plan includes four new open green spaces adjacent to St. Agnes Center, at the location of Aquinas Hall, beside the new athletics building (Parking Lot C), and a space to the east side of Parking Lot B.

Parking

Parking structures will be thoughtfully located away from streets where possible to allow the building to engage pedestrians with active entries. Where visible, parking structures will be screened with contextually appropriate materials. Likewise, rooftop mechanical units will be properly screened from view.

12. NEIGHBORHOOD PROTECTION STRATEGY

Rezoning

Rezoning of St. Agnes School property to an EMI classification will allow all Carlow University property to reside under one Zoning District. As an EMI zone, development must comply with the IMP on file, which provides proper review and appropriate development standards to support neighboring residential properties.

Vehicles

Traffic volumes would reduce significantly with the reduction of The Campus School vehicles should the school move off of campus. Bus circulation in the morning and afternoon will be omitted. University traffic circulation will be focused at the Parking Lot A, Fifth Ave. and Craft Ave. intersection controlled by the existing street light as well as within Parking Lot C structured parking and new parking entry on Terrace St. Overall, the recommendations will reduce volumes on Robinson St. and Terrace St. as desired by local residents.

Parking on Campus

The plans recommend additional parking on campus to meet the needs of the University for future faculty, staff, and commuter student projections to support future enrollment. Additionally, students living on campus do not have vehicles nor can they park in the neighborhoods. The University is taking steps to ensure that parking remains on campus and does not impact the local streets.

Loading Docks / Service

New loading and services areas will be provided in the new academic building, Parking Lot A site and athletics building, Parking Lot C. The majority of truck routes will utilize Fifth Ave. and Craft Ave. verses through the residential streets. Loading and service areas at AJ Palumbo will remain. The service area near Parking Lot B will be adequately screened and access will be obtained within the property boundary.

Residence on Campus

Accommodating residence needs on Campus is an ongoing initiative of the University due to the demands and interest in students. New room types and increased room totals will attract additional students to remain on campus and alleviate pressures on the surrounding neighboring residences.

Edge Improvements/ Public use

Campus perimeter enhancements will create a stronger quality of design. Numerous edge conditions in the proposed recommendations include public spaces for plazas, green space and improved streetscape that the public may utilize. Aesthetic modifications may increase the value of adjacent residences.

Public Transportation

Promoting the Oakland vision for reduced traffic and parking and increased public modes of transportation, Carlow University is willing to partner with local groups to accommodate amenities associated with the BRT stop on the Fifth Ave. corridor.