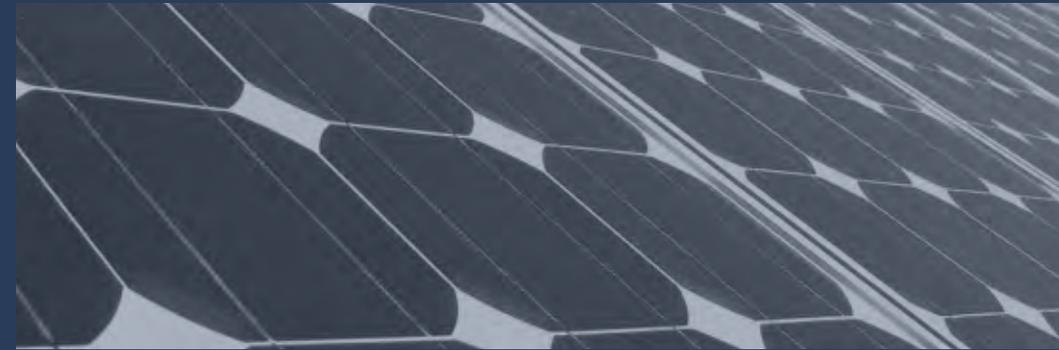


SUSTAINABLE MASTER PLAN²⁰¹²



Building the Future College of Lake County

May 2012





SUSTAINABLE MASTER PLAN²⁰¹²

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This document summarizes the master planning process, findings, and resulting comprehensive recommendations for the short-term and long-term facilities development of College of Lake County.

Advancing the College of Lake County Strategic Plan, this five-year Sustainable Master Plan for facilities will guide the College in replacing aging facilities and improving the campuses to reflect trends in higher education. The Sustainable Master Plan will serve as a living document and blueprint for the vision of College of Lake County's future learning and working environment.

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Acknowledgements

The College of Lake County would like to acknowledge the following individuals who all contributed to the decision-making process of the Sustainable Master Plan. CLC appreciates the input and feedback they provided, as well as the time they volunteered to this endeavor.

The Steering Committee for the Master Plan includes a mix of College administrators, faculty, staff, and students, along with members from the Lake County community.

The Steering Committee's role has included:

- Providing input and feedback
- Communicating to peers about the progress and topics of the Sustainable Master Plan
- Encouraging discussion about Sustainable Master Plan issues
- Recommending direction with respect to process, concepts, surveys, and interviews

Master Plan Steering Committee

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Shayln Caulley, Student Senate
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Michael Werthmann, KLOA

SUSTAINABLE MASTER PLAN²⁰¹²

Executive Summary

Wind Turbines

Overview

The Sustainable Master Plan document is a critical review of the existing facilities and land use for the College of Lake County, as well as a plan of consensus recommendations which respond to the challenges it faces in a dynamic college community.

Purpose

The purpose of the College of Lake County “Sustainable Master Plan” is to provide a rational and orderly plan to address existing concerns, respond to existing needs and accommodate future needs throughout the CLC district. In order to help accomplish the college’s vision, mission, values, and strategic goals and objectives, additional structures and other improvements to its existing physical resources are being proposed.

As the planning process progressed, the Steering Committee focused its efforts on the physical needs of the Graylake Campus, the Lakeshore Campus, and the Southlake Campus, while acknowledging the potential need for a presence in the northwest quadrant of Lake County.

Process

The sustainable master planning process was organized and overseen by a Steering Committee that comprised representatives from the student body, faculty, administration and community. This committee established and prioritized the “critical issues” for each campus that set the course for the master planning efforts to follow.

The planning effort also involved a wide cross-section of other faculty, administration, staff, students, and community members who provided valuable input during the numerous space needs interviews and focus groups, as well through a college-wide survey.

Interaction with the Steering Committee and Executive Staff occurred primarily during a series of on-campus meetings and presentations. Between these sessions, the master planning team documented, generated and developed options for review at subsequent sessions.

Existing Conditions

A series of investigations and analyses of existing conditions were undertaken provide data for development of the Sustainable Master Plan. These analyses included the following:

- Land Use
- Site Amenities
- Space Utilization
- Space Needs Requests
- Peer Benchmarking
- Deferred Maintenance Inventory
- Parking and Traffic Conditions
- Energy Usage

Space Utilization

During peak utilization times, mornings and evenings, the following utilization rates were calculated:

- Grayslake Campus: 63.95%
- Lakeshore Campus: 44.25%
- Southlake Campus: 43.6%
- All Campuses: 58.83%

Mornings at the Grayslake Campus had the highest utilization rate of the three time periods, while evenings had the highest utilization rates at both the Lakeshore and Southlake Campuses. Afternoons at all three campuses revealed the lowest utilization rates. Community colleges historically have identified 65% as the benchmark for good utilization during peak class times.

Space Needs Requests

During the interviews with the various departments throughout the college, one of the goals was to confirm both existing space allocations and 10-year space needs requests. For all of the campuses combined, this process identified requests for an additional 302,180 net square feet, or 47% of the college's existing net area.

It is important to recognize that the purpose for developing space needs requests during this master planning study is to identify a general order of

magnitude for the next 10 years. Because the Sustainable Master Plan represents a long-term framework for growth for the college, it is certain that these requests will change over time; however, identifying relative growth requirements by department on a regular basis will insure the plan's flexibility.

After the space needs requests were documented, they were then further evaluated and utilized throughout the concept development and finalization of the Sustainable Master Plan.

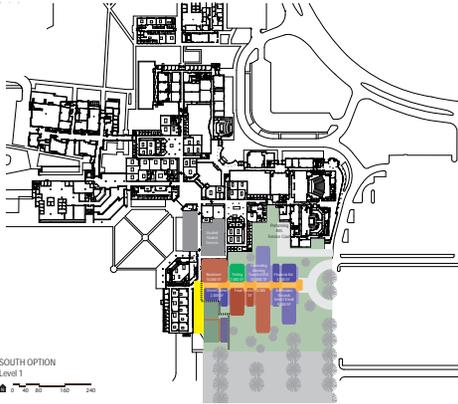
Concept Development

As concept options were developed at the Grayslake, Lakeshore and Southlake Campuses, the following basic principles were considered:

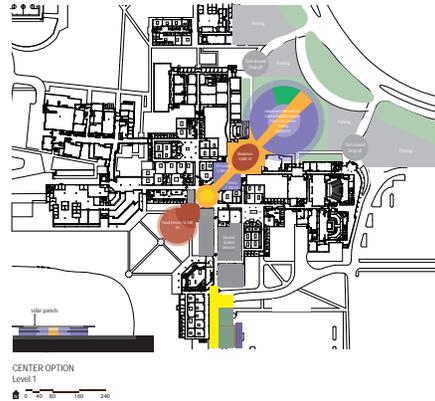
- Student Centered
- Classroom Focused
- Efficient, Effective and Flexible
- Embedded within Nature
- Reduce Deferred Maintenance
- Increase Utilization

Concept options were developed at the three campuses to respond to the critical issues and space needs, as well as to provide the Steering Committee with a basis for comparison:

Grayslake Campus Options



South Option



Center Option



North Option

Lakeshore Campus Options



Option 1



Option 2



Option 3

Southlake Campus Option



Option 1

The Consensus Sustainable Master Plan

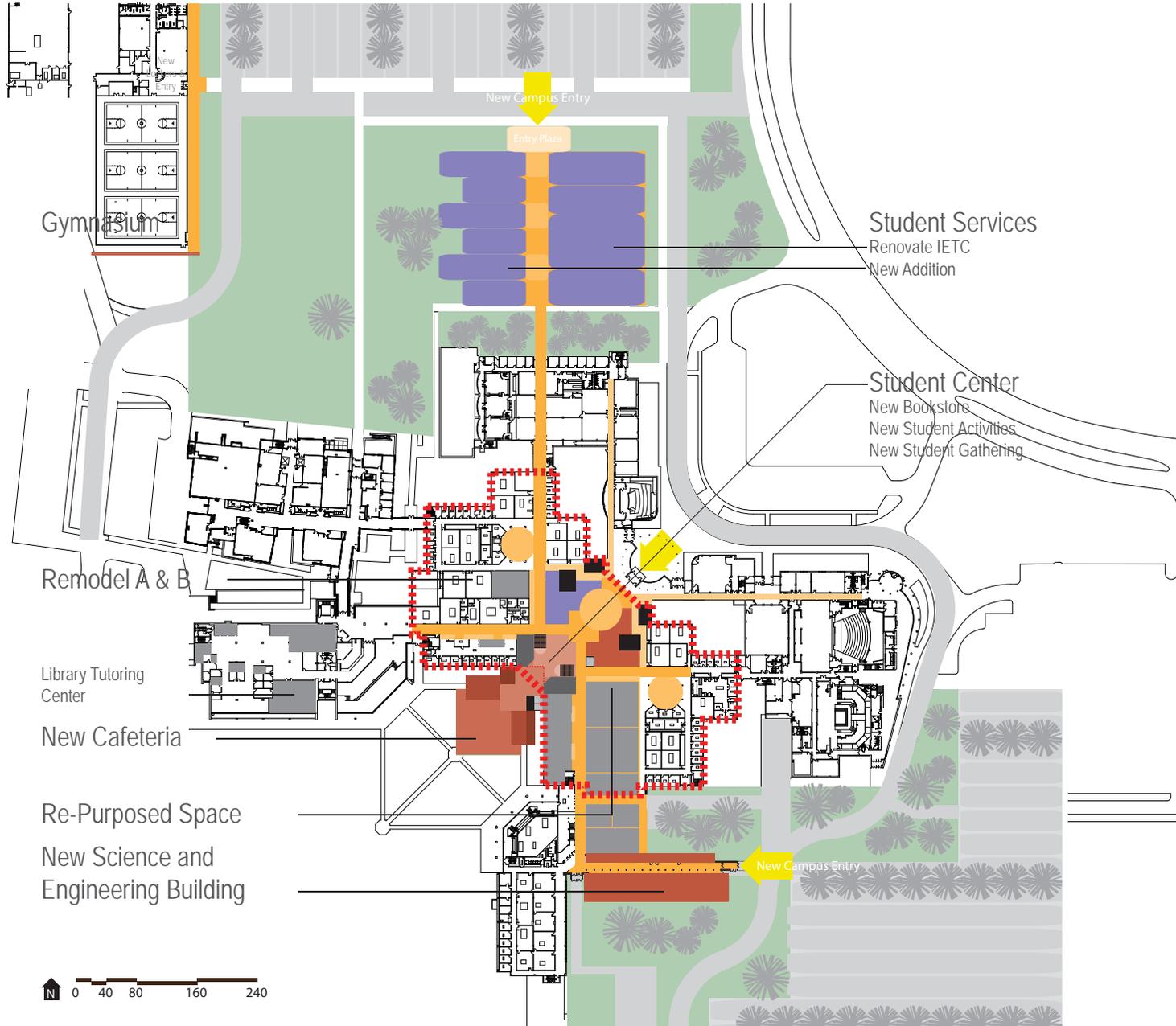
Grayslake Campus

The consensus master plan for the Grayslake Campus illustrates the preferred direction for the facilities growth that evolved from the “North Option” in concept development. This plan addresses the intent of building organization, spatial organization, vehicular circulation, parking and landscape treatment.

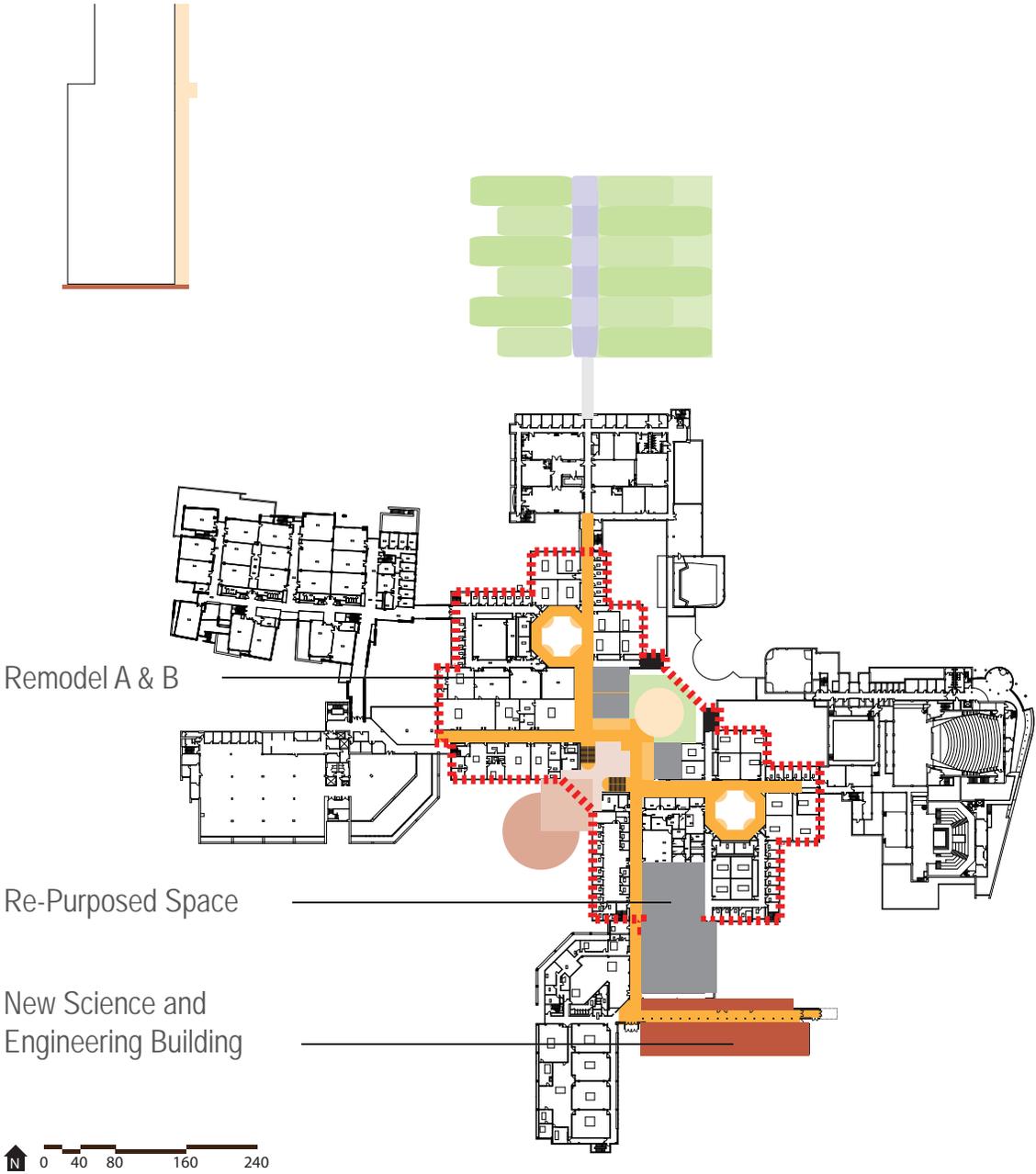
Grayslake Campus - Site Plan



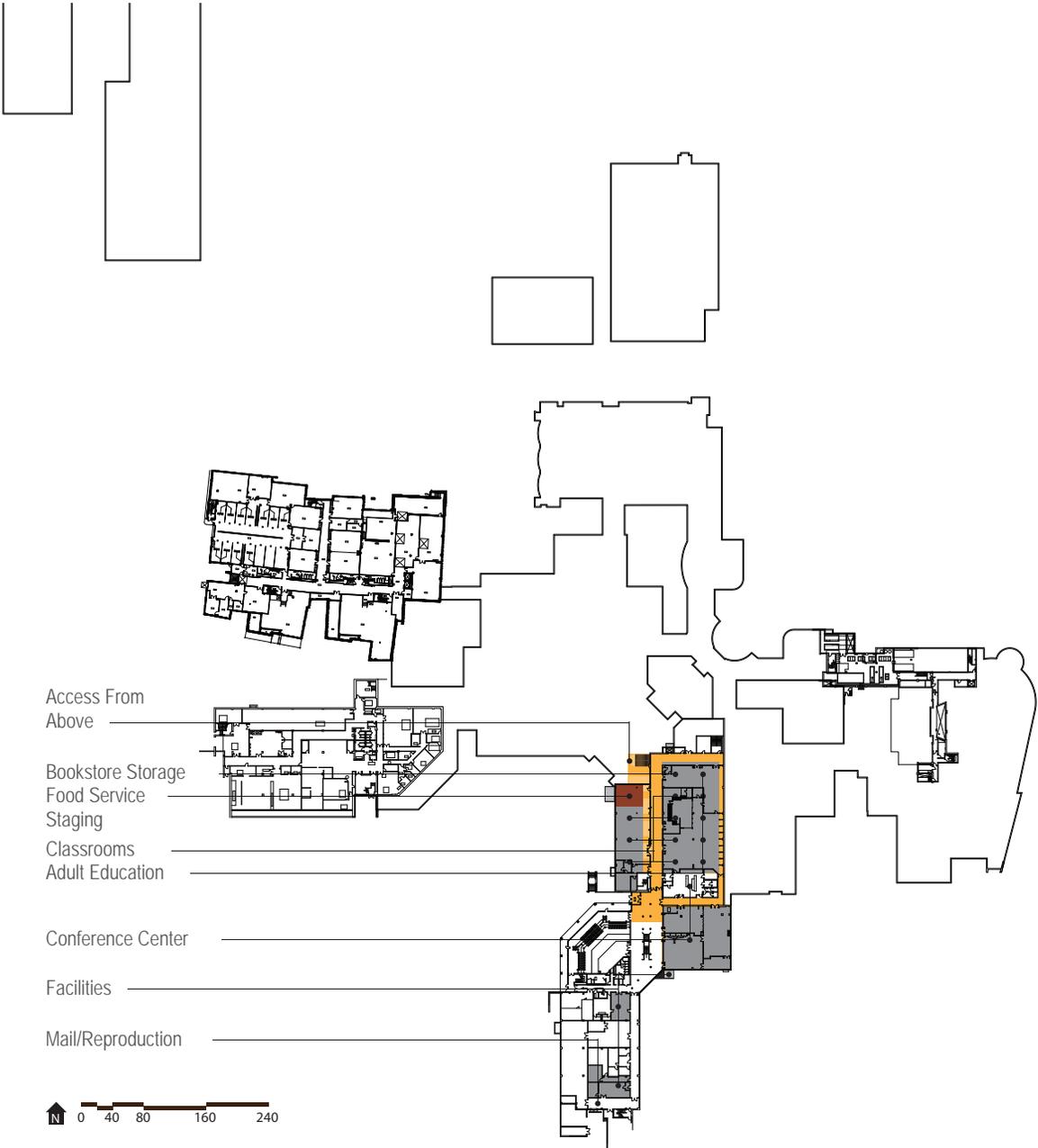
Grayslake Campus - Level 1



Grayslake Campus - Level 2



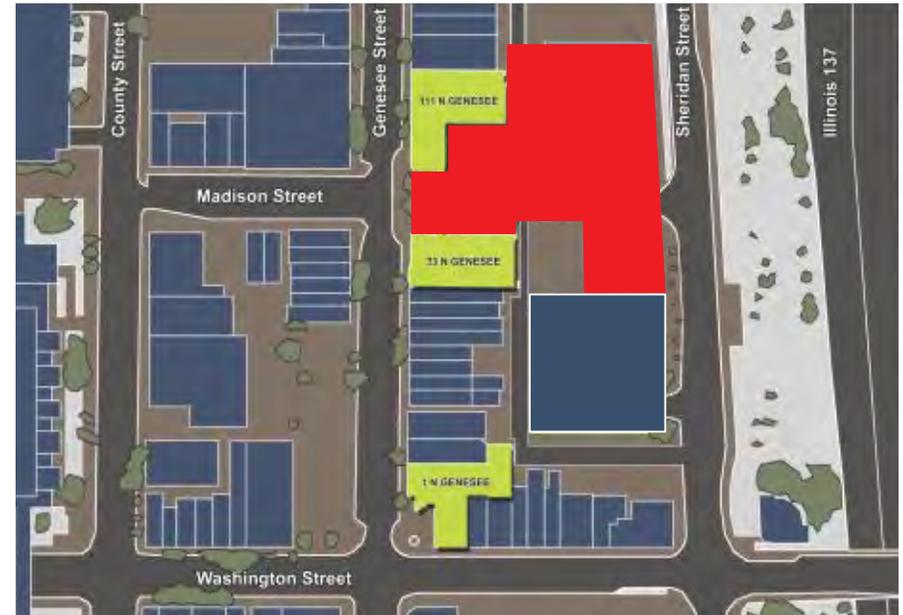
Grayslake Campus - Lower Level



Lakeshore Campus

While three options were explored for the Lakeshore Campus in concept development, the master planning process was suspended and did not proceed to the consensus stage.

Lakeshore Campus

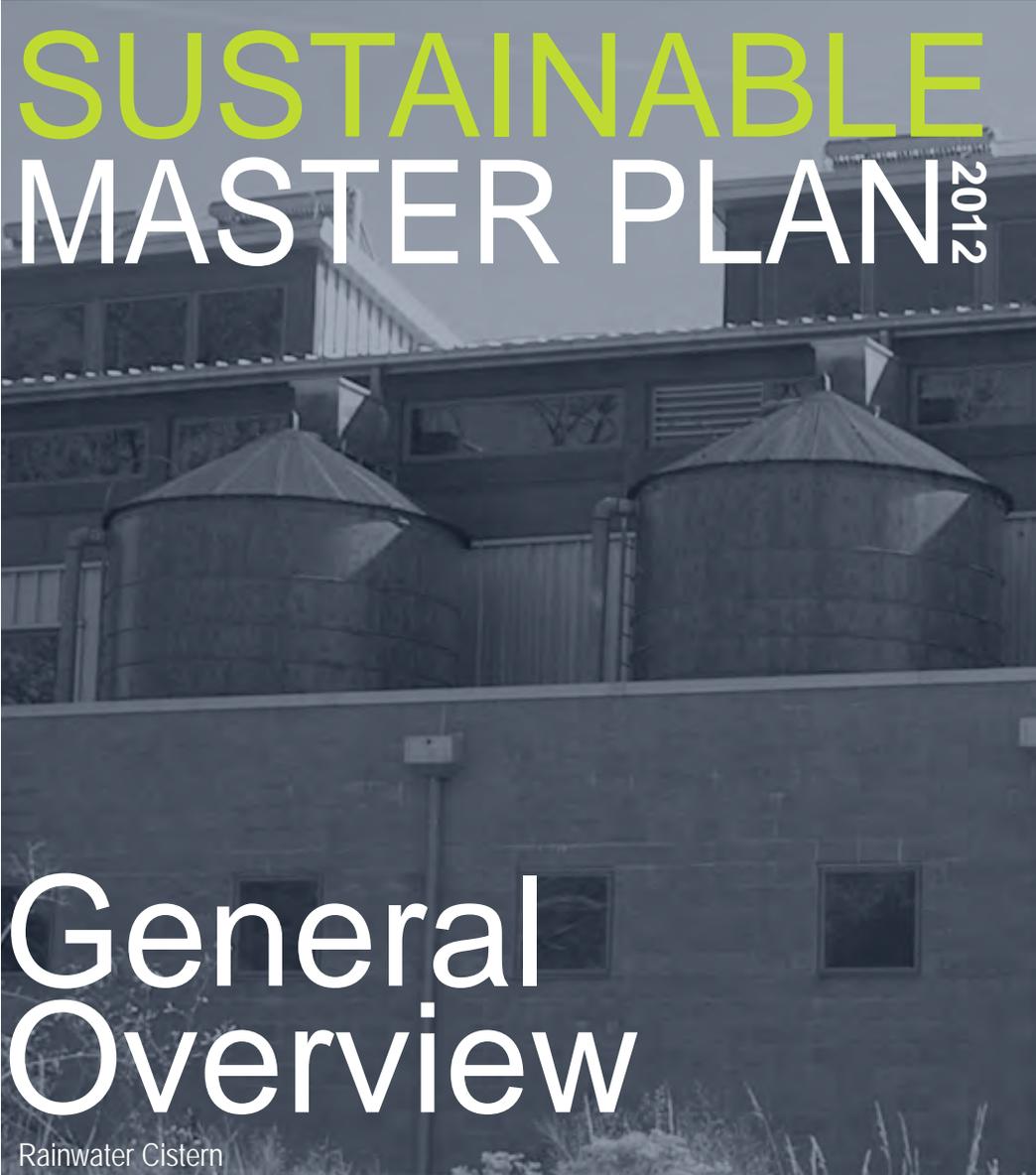


Southlake Campus

The Southlake Campus will receive a new drop-off along Port Clinton and a new science classroom and prep space will be accommodated.

Southlake Campus





SUSTAINABLE
MASTER PLAN²⁰¹²

General
Overview

Rainwater Cistern

Purpose

This Sustainable Master Plan will provide a roadmap to guide the future development of the Grayslake, Lakeshore and Southlake Campuses. The plan is integrated with CLC's Strategic Plan fully supporting the College's vision, mission, values, goals and objectives:

VISION

The College of Lake County strives to be an innovative educational institution offering exceptional learning experiences and to be widely recognized for student success, business and community partnerships and for the achievements of faculty, staff and alumni.

MISSION

The College of Lake County is a comprehensive community college that delivers high quality, accessible learning opportunities to advance student success and strengthen the diverse communities we serve.

VALUES

The College of Lake County holds these values to be the cornerstone to fulfilling its mission:

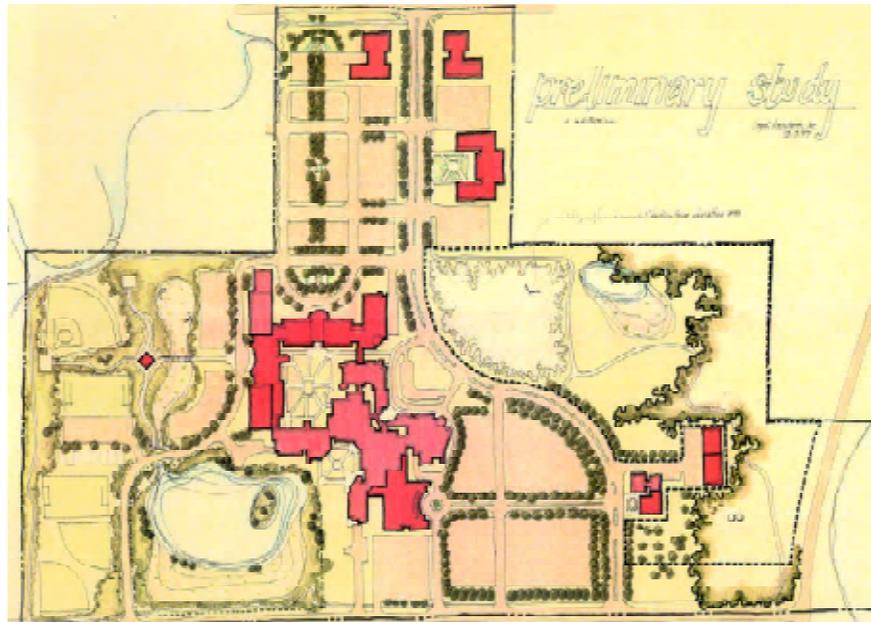
- Integrity
- Accountability
- Learning
- Diversity
- Service
- Quality

GOALS AND OBJECTIVES

- 1. Advance student learning and success.**
The College will maximize the quality of the CLC learning experience while helping students identify and reach their learning goals to become life-long learners and critical thinkers who are engaged in their communities, prepared to participate in the workforce, and knowledgeable about the diverse world in which we live.
- 2. Maximize educational opportunity within the district.**
The College will enhance, develop and promote collegewide offerings that will anticipate and meet needs of the district.
- 3. Ensure institutional sustainability and stewardship of resources.**
The College will efficiently manage and optimize its resources to ensure sustainable future growth and development.
- 4. Promote diversity and global engagement as strengths within the college and Lake County community.** The College will strive to build an inclusive community that recognizes, values, and respects people of all cultures while cultivating social justice and global citizenship.
- 5. Enable a culture of innovation, excellence, and continuous improvement.** The College will promote employee engagement to create and sustain a culture of high performance, intellectual growth, collaboration and innovation that supports continuous improvement of academic programs and college processes.
- 6. Build the college's reputation as a premier educational institution.**
The College will be recognized at the community, state and national levels for its academic quality, alumni achievement, and educational, economic, cultural, and arts leadership.



Grayslake Campus, A & B wings opened in 1974.



Grayslake Campus Facilities Master Plan, 1992

College History

On October 7, 1967, the voters of Lake County approved a referendum creating District 532. In 1968, A. Harold Anderson and Paul W. Brandel donated a 181-acre parcel of land for the Grayslake Campus. The college first opened its doors to students in September 1969. In December, a referendum passed authorizing construction of a permanent campus. Planning began on the A & B Wings.

In 1971, the two-story, 44,015 square foot Physical Education Building was constructed on the Grayslake Campus. The original gymnasium was constructed in 1971; the fitness areas and locker rooms were added in 1987 and renovated in 2000. In 1972, Building 12 was constructed as a 13,590 square foot metal building. The building was designed to accommodate the automotive and grounds shops. In 1974, A & B wings were completed on the Grayslake Campus increasing the square footage by an additional 200,000 square feet, making the total size of the campus 257,600 square feet. The H Building (or Building 14) is a two-story facility of approximately 9,196 square feet constructed in 1979 with an addition added in 1999. It houses the Horticulture Program and has two large open greenhouse structures of approximately 5,182 square feet.

In 1980, the Learning Resource Center opened on the Grayslake Campus. The Learning Resource Center (LRC) is a two-story building with a partial basement level and it is approximately 103,383 square feet. An educational service center opened in a storefront in downtown Highland Park. In 1981, the College purchased and renovated the old Heinz Department Store building which was originally built in 1914 in downtown Waukegan and

the Lakeshore Campus was opened. The building is two-story and 35,798 square feet. The first floor of the building was completely renovated in 2009, and converted into a Dental Clinic.

In 1986, the C Wing is opened on the Grayslake Campus adding 83,200 square feet to the campus. In 1995, the college purchased and renovated the old Globe Department Store building expanding its Lakeshore Campus by 36,000 square feet. The D Wing also opened on the Grayslake Campus. This two-story building of approximately 85,630 square feet was constructed in 1996. In 1997, the Performing Arts Building opened on the Grayslake Campus. In 1998, The college purchased 22 acres for \$7.1 million in Vernon Hills to become the site of the Southlake Campus. Building 15, a 7,231 square foot building was constructed in 1998. In addition, the 25,000 square foot Job Center was constructed on the North end of the Grayslake campus. In 2005, the 135,000 square foot Technology Building was dedicated on the Grayslake Campus and the three-story 40,000 square foot building at One North Genesee was purchased and renovated. In 2006, the 50,000 square foot V Building was constructed on the Southlake Campus.

In 2011, College acquired three new properties located at 122, 126, and 128 West Madison in Waukegan. These buildings are to be razed to accommodate a new building project appropriated through RAMP in 2010. Total gross square feet operated by the college is now 923,025, with a student enrollment of 18,091 for the 2011 fall semester. Legat first completed a campus Master Plan for the Grayslake Campus in 1992, and the latest revision to this plan was in 2006.

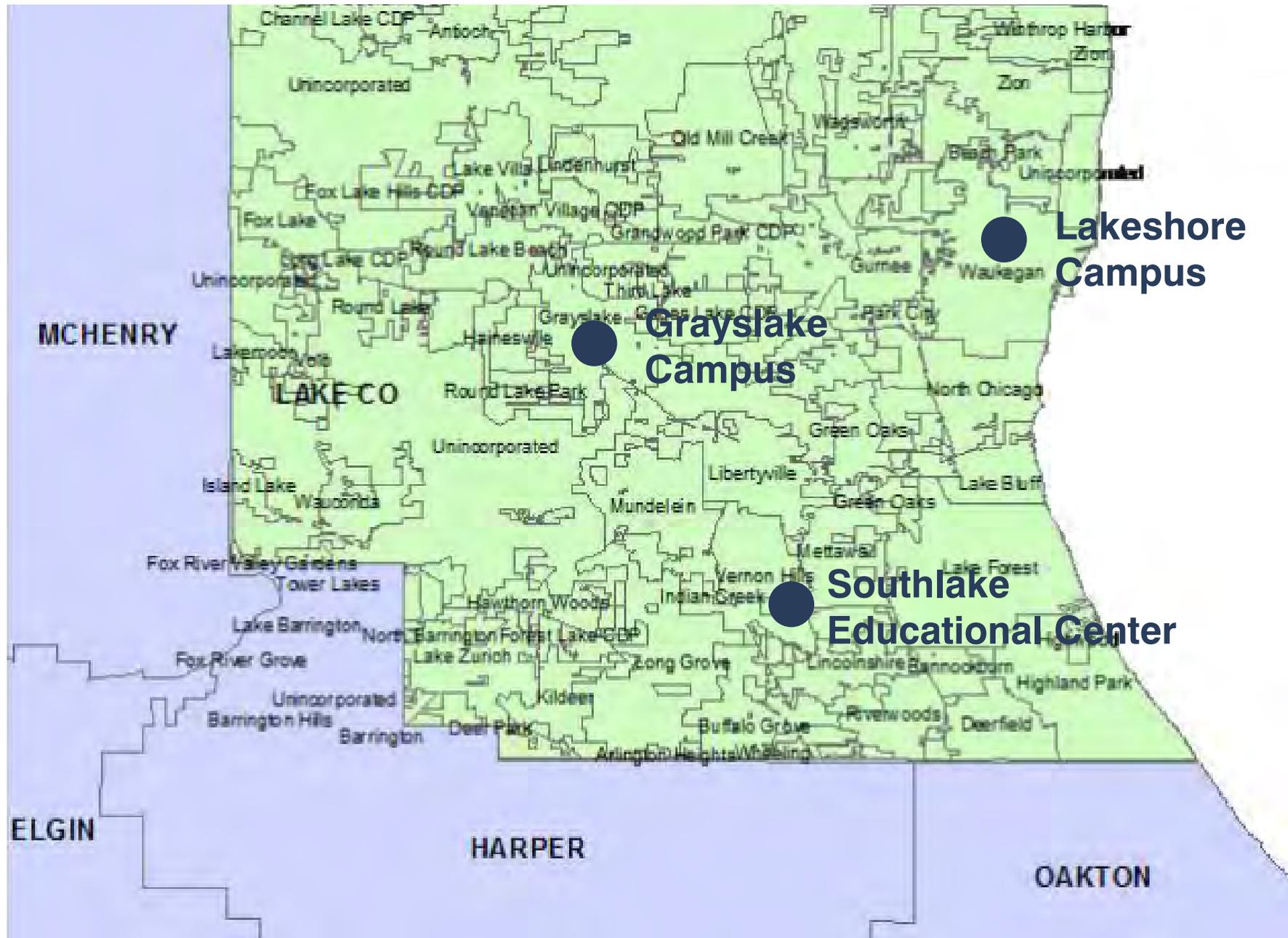


James Lumber Center for the Performing Arts Building, opened in 1997



Technology Building, opened in 2005

College of Lake County District Boundary



District Context

Student Demographics

96% of Students Come from In-District

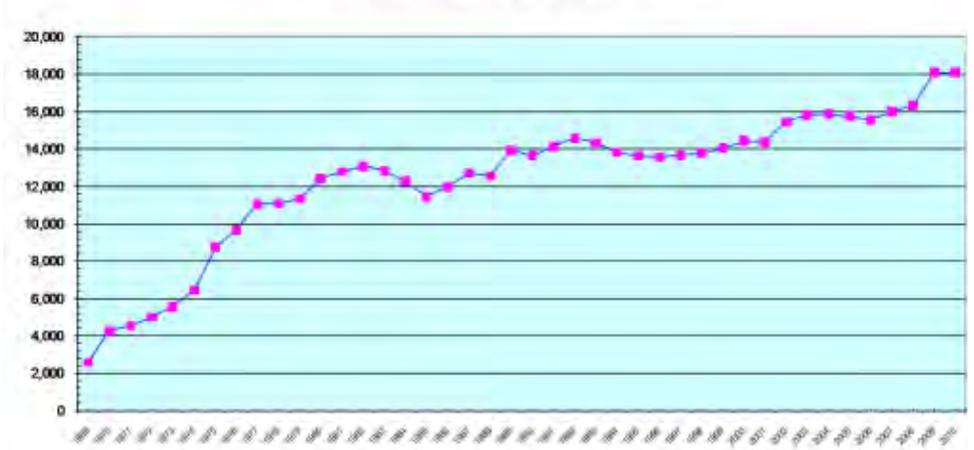
Profile of College Level Students, Fall 2010 (N= 15,210)

- 60% of college students are under 25
- One in three students is a minority - The largest group is Hispanic (18%)
- Most students are part time (64%)
- 60% are in transfer programs while 40% are in career programs
- 17% Say English is not their first language

Profile of Adult Basic Education Students, Fall 2010 (N = 2,881)

- 62% are enrolled in ESL; 28% in ABE and GED; and 10% in Voc Ed.
- 60% are Hispanics
- 91% are part-time
- 29% are at Grayslake Campus
 - 35% attend other sites
 - 25% attend Lake Shore Campus
 - 10% attend South Lake Campus

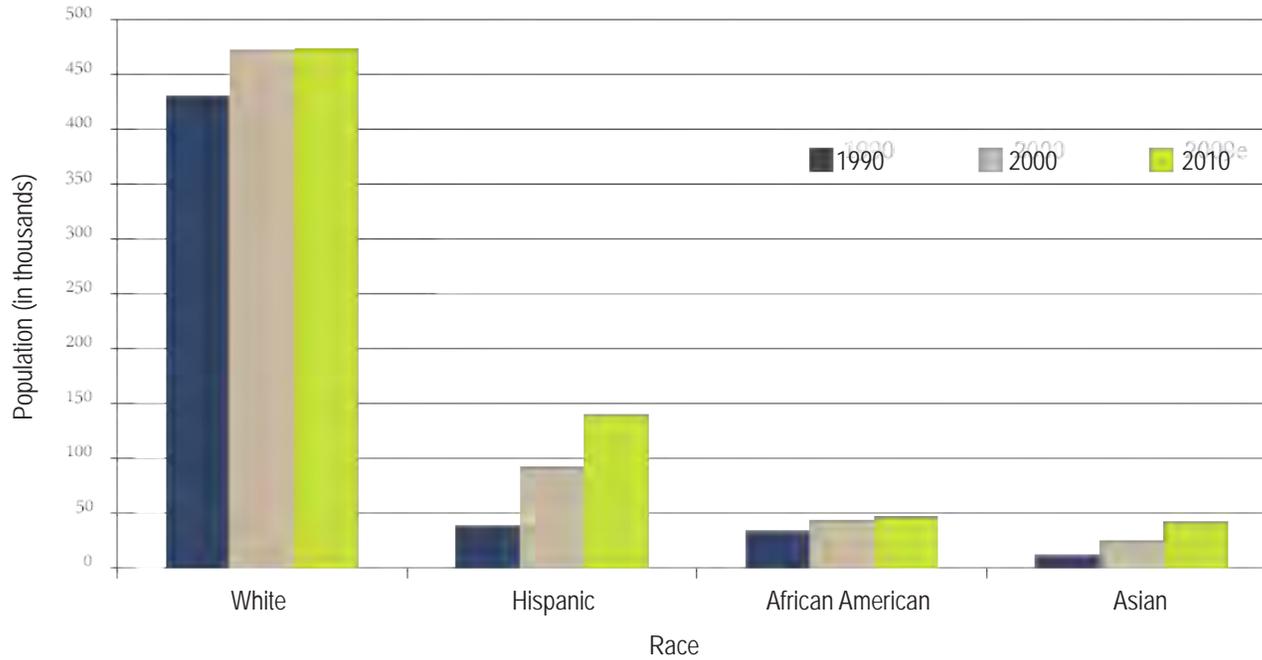
Figure 4. College of Lake County Fall Enrollment History Headcount as of 10th Day



College of Lake County Fall Enrollment History - Headcount as of 10th Day

Lake County Population Demographics

Lake County Population, By Race



Between 2000 and 2010 the Lake County Population grew by 68,211 (compared to 127,938 between 1990 and 2000).

Hispanics	51%	+ 46,818
Asians	69%	+ 17,178
African Amer.	7%	+ 3,239
Whites	0.1%	+ 565

Lake County Unemployment

There is a direct correlation between the unemployment rate and student Enrollment at the College of Lake County. As unemployment increases, so does Enrollment and vice versa.

Lake County Unemployment Rate (Annual Average) and CLC Fall Enrollment

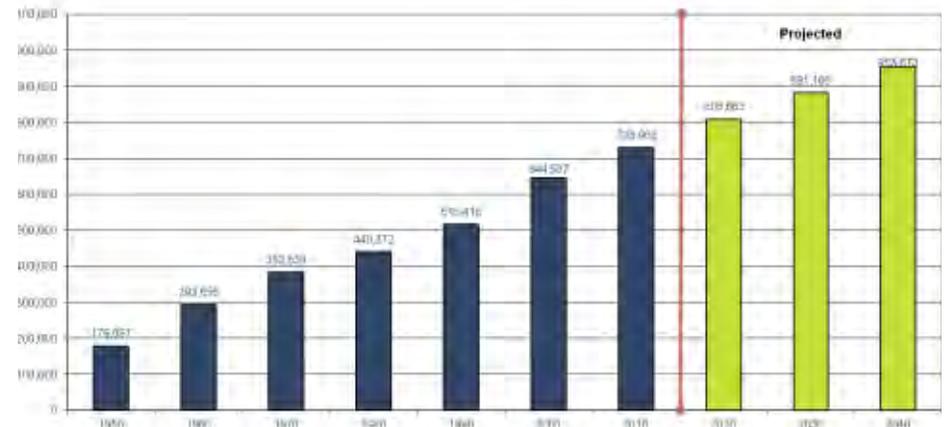


Source: Illinois Department of Employment Security, Local Area Unemployment Statistics (<http://lmi.ides.state.il.us/laus/lausmenu.htm>)

Factors Influencing Future Enrollment:
Total Population for Lake County with Projections (1950-2040)

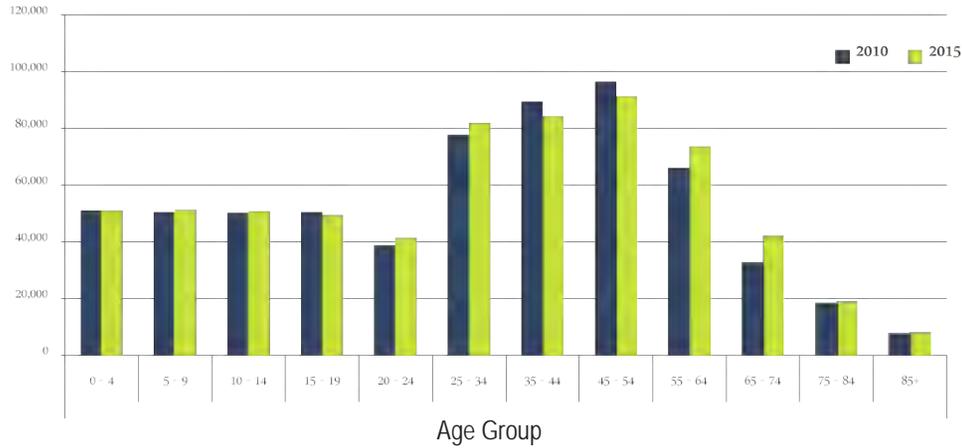
Lake County Population Projections

As population grows, so will student enrollment. It is important to note that population growth will slow down over the next 20 years.



Source: Chicago Metropolitan Agency for Planning (CMAP)

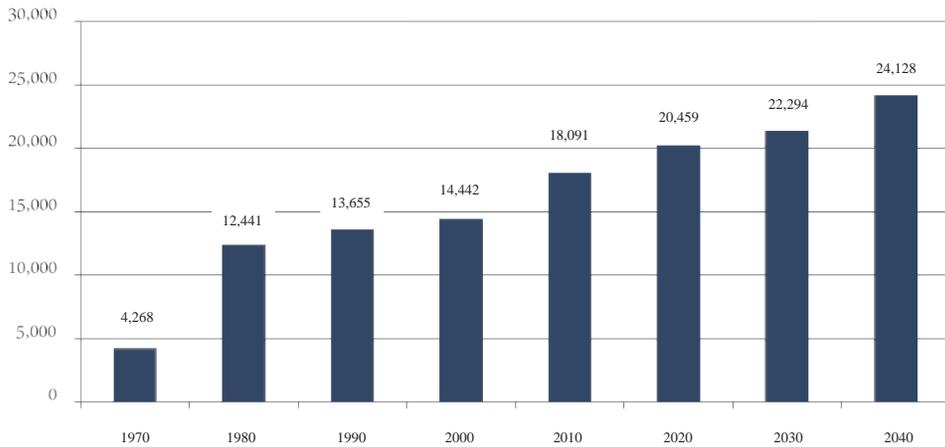
Lake County Population Projection by Age 2010 through 2015



Lake County Population Age

Lake County is getting older. This is most likely in part due to the aging of the Baby Boomer Generation.

Fall Enrollment Projections



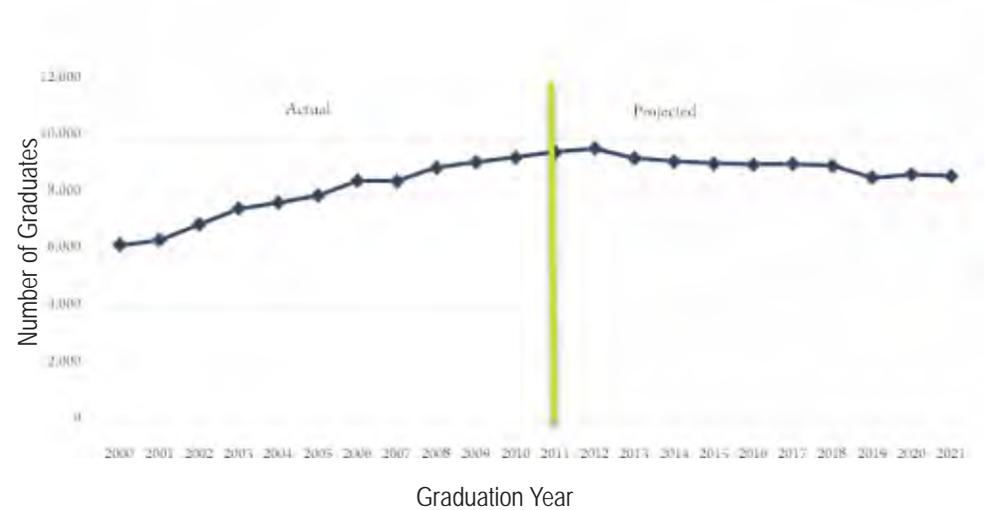
CLC Enrollment Projections

Applying current market share to projected population increases, shows that College of Lake County could have 24,000 students by 2040.

Lake County High School Graduates

Projections show that high school graduates will decline slightly over the next decade.

**Projected Lake County Public High School Graduates
2000-2021**



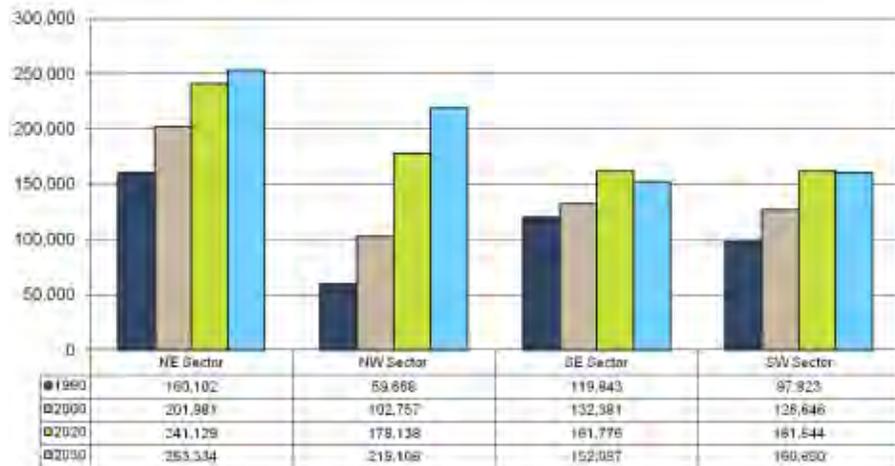
Enrollment by Geographic Area

The northern part of Lake County makes up more than 70% of the student population.

**In-District College Level Students Enrollment By Geographic Area
Fall 2010**

Area	Fall 2010	Percent of Total	Lake County Population	Percent of Total	Market Share
Northeast	4,934	35%	228,021	32%	2.16%
Northwest	5,086	36%	199,519	28%	2.55%
Southeast	1,872	13%	135,388	19%	1.38%
Southwest	2,367	17%	142,513	20%	1.66%
District	14,259	100%	712,567	100%	2.00%

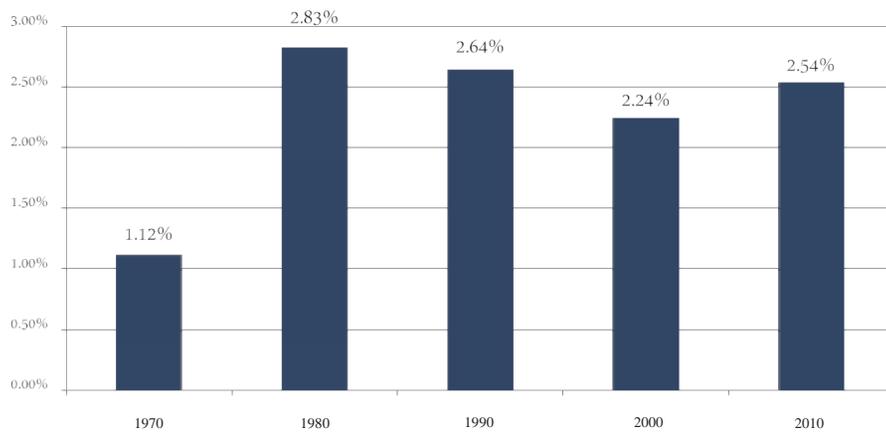
Total Population With Projections, By Sector 1990-2030



CLC Population Projections by Sector

Continued growth is expected in the northern sector, where 60% of total population resides.

Market Share



CLC Market Share

College of Lake County market share has increased since 2010.

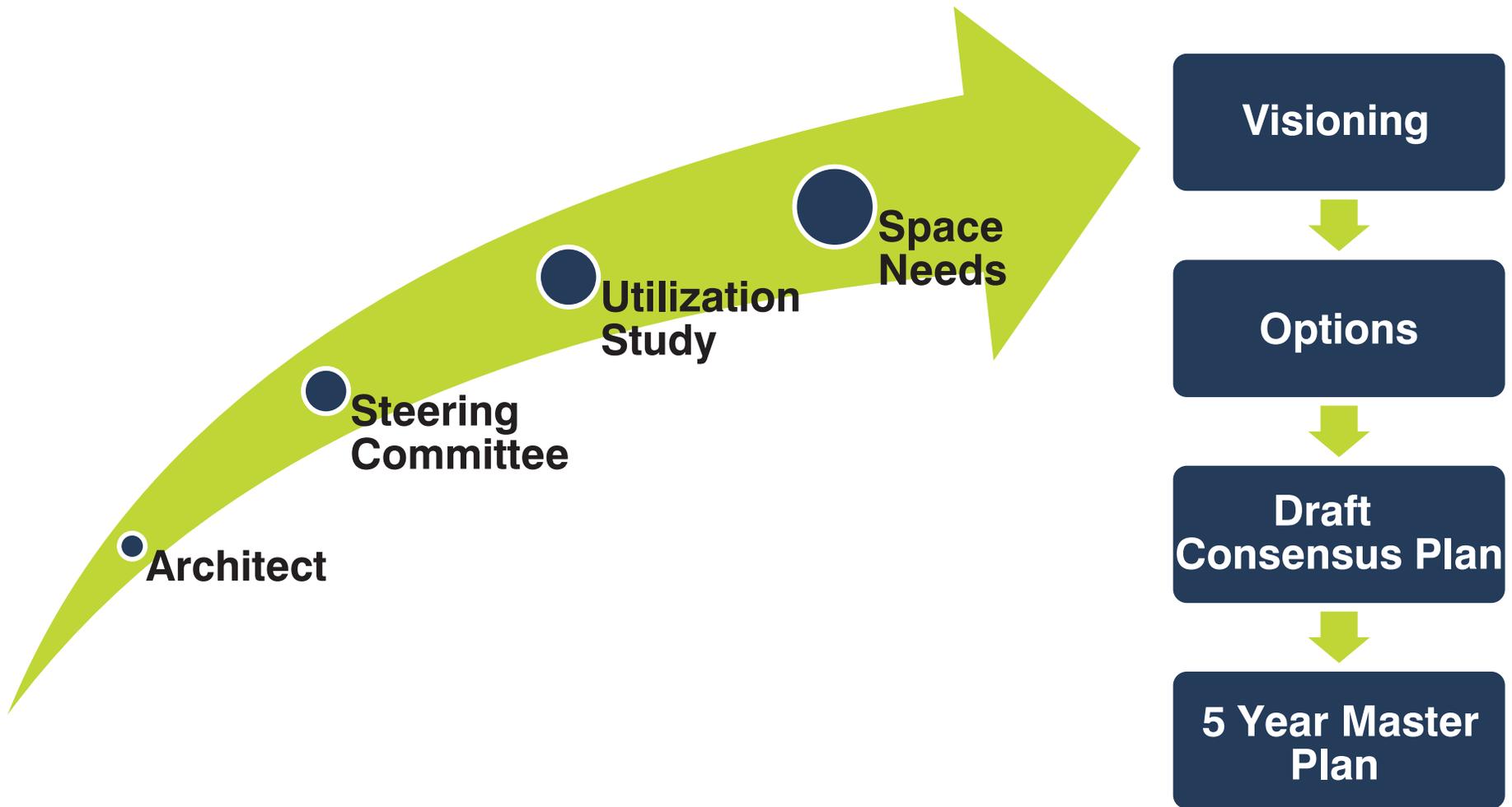
District Transit Lines



- KEY**
- CAMPUS
 - M METRA COMMUTER RAIL STATION
 - NORTH CENTRAL SERVICE METRA RAIL
 - UNION PACIFIC NORTH METRA RAIL
 - MILWAUKEE DISTRICT NORTH METRA RAIL

Planning Process

The Sustainable Master Plan was organized and overseen by the College's Executive Staff consisting of the College President and Executive Assistant, Vice Presidents of Educational Affairs, Administrative Affairs, and Student Development, as well as the Directors of Human Resources and Public Relations & Marketing. The planning effort was guided by a Steering Committee organized specifically to provide input and feedback regarding the critical issues, space utilization, space needs, visioning, options and consensus recommendations for each campus as part of the Sustainable Master Plan. This guidance was accomplished in 8 Steering Committee meetings over an 18-month period during the development of the master plan. Existing conditions, including a parking and traffic study for the Grayslake and Southlake campuses, were assessed and documented. Concurrently, a utilization study was completed to assess existing usage of all the College's classroom and laboratory instructional spaces. Additionally, 76 interviews with divisional and departmental personnel were conducted to assess requested space needs for the next 10 years. This space utilization and space needs data was then documented in a "Part 1 Report" and used to develop master plan options for each campus. A college community scan was then conducted by the CLC Institutional Effectiveness, Planning and Research department to provide additional survey feedback for the Steering Committee's use in developing and recommending a consensus option for each campus. Finally, a cost consultant was engaged to evaluate each of the consensus master plan options and provide a basis for future financial planning.



SUSTAINABLE MASTER PLAN²⁰¹²

Existing Conditions

Green Roof

Overview

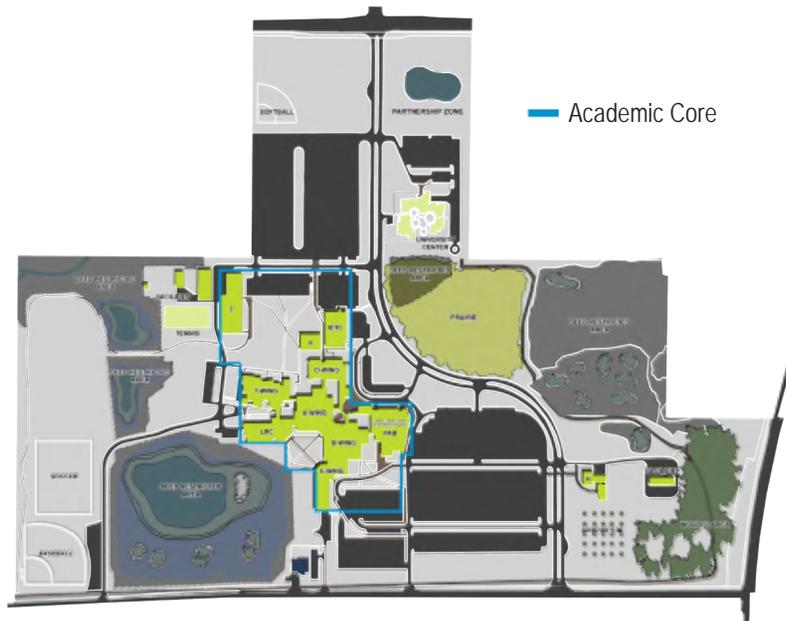
A series of investigations and analyses were undertaken to serve as the basis for the master planning process. These investigations provided the context and created the framework from which the planning options were developed. Information gathered was based on the following topics:

- Land Use
- Development Zones
- Site Amenities
- Benchmarking
- Parking and Traffic
- Energy Needs
- Landscape Maintenance Zones

Site and building diagrams were created to document and analyze the existing conditions of the site and the surrounding campus areas. By breaking apart individual components of the site plan, the diagrams allowed a better understanding of individual issues and how the existing site functioned. Each drawing contains specific information that was studied and influenced how the master plan concepts were developed. This analysis served as the basis for the development of functional options which later became the consensus master plan.

The process of the master plan also identified specific studies or analyses which needed to be completed to better understand how space was being used and whether it met the needs of the college now and in the future. These analyses identified areas in which the college could improve use of the facilities, better serve students, and understand potential growth. The following topics are included to help understand the present and future challenges to the college:

- Space Utilization
- Space Requests
- Benchmarking
- Deferred Maintenance



Land Use: The Academic Core

Land Use

The Grayslake Campus has evolved a great deal since the previous master plans, completed in 1992, 1997 and 2003. In 2006, the Facilities Master Plan was updated. The Performing Arts and Multi-Use Instructional Facilities have long been occupied. The Technology Building and University Center now anchor the campus on the north of the campus. The Storm Water Mitigation project has set the stage for land development by creating restrictions for particular areas of the campus and establishing a general consensus of campus zoning. The Storm Water Mitigation project assured that adequate land was set aside for water detention as the college continues to realize its master plan. The structures, such as the Campus Facilities Building 15, the lab and classroom addition to the Horticulture Building, and the new Illinois Employment Training Center facility, marked progress toward the concepts presented in the previous master plans.

Land Use of the Grayslake Campus

As a result of the planning updates completed in 1997, the campus has developed into six particular zones. This zoning concept is maintained and reaffirmed in this Master Plan update.

The Academic Core

The primary campus structures are centralized in the acreage. Parking, internal vehicular arteries, and deed restrictions have defined a distinct and limited zone in which to grow additional facilities. This condition may dictate more prudent use of the remaining land and trend future buildings to be more compact and have more than two floors above grade.

Parking

Two large parking zones exist with a third parking lot west of the Technology Building. These parking zones allow for convenient access to entrances without making the campus appear as if it exists within a sea of parking. Today 4,070 parking spaces exist on campus, including University Center's lot 9, enough to meet current needs. However, the distance between more remote parking spaces and major building entrances is close to the perceived limit of acceptability. After the development of the west parking area, the college will have exhausted its practical ability to construct surface parking near the campus and will be faced with a choice of either the construction of additional surface parking areas in remote locations or the construction of parking decks in selected areas.

Deed Restrictions

As a result of the Storm Water Mitigation project, many portions of the site have been designated as permanent and varied biological green spaces with the Army Corp. of Engineers. In addition to storing storm water, these areas also serve as outdoor learning environments for college programs. Additionally, the college desires to preserve the wooded area north of Brae Loch Road between Route 45, Lancer Lane, and the arboretum.



Land Use: Parking Zones and Primary Building Entrances



Land Use: Deed Restrictions Areas



Land Use: Outdoor Athletic Facilities

Outdoor Athletic Facilities

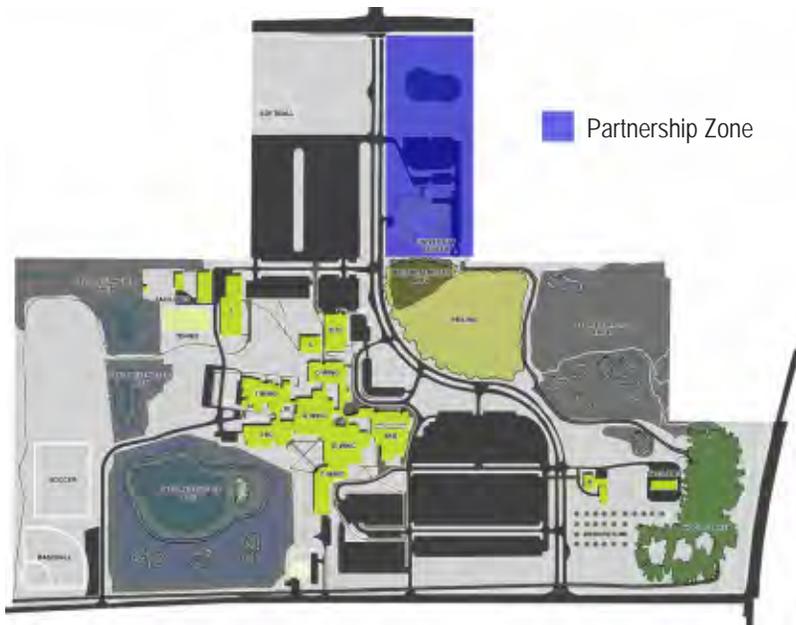
Currently athletic fields are located in the north and west portions of the site. The Master Plan update work in 1997 designated the western most edge of the site as the outdoor athletic zone.

Partnership Zone

The University Center of Lake County at the northeast corner of the campus anchors the partnership zone.

Vehicular Circulation and Campus Entrances

In addition to land use, vehicular circulation and entrance points into campus buildings were studied to identify patterns and disconnections related to these issues. The Washington Street entrance to the north and the Route 45 entrance to the east serve well as major campus access points. For more information see page 48.



Land Use: Partnership Zone



Land Use: Vehicular Circulation and Campus Entrances

Site Amenities

Grayslake Campus

Situated in a suburban setting, the Grayslake Campus offers excellent access from two major Lake County arterials: Washington Street from the east and west, and Route 45 from the north and south. In addition to these transportation routes, this campus is also contiguous to two other educational facilities: the University Center of Lake County and the Lake County Tech Campus. Also contiguous to this campus, on its southern border, is a local fire station.

Within the campus itself are various natural amenities including a lake, a prairie, an arboretum, wetlands and a wooded area, most of which can be accessed by pedestrian paths. These natural areas are further enhanced by features such as the Veterans Memorial and outdoor sculpture pieces. Athletic fields provide a buffer to the surrounding community on the campus' western edge, and ample parking is available with good proximity to the buildings.

While, for the most part, the buildings on the Grayslake Campus are interconnected and under-roof, exterior green courts are interspersed amongst the building expanse to provide natural light, soft space and visual relief.

Lakeshore Campus

The Lakeshore Campus is set in a downtown urban environment with excellent access to cultural, governmental, retail, business, residential

and recreational amenities in the seat of Lake County. With the additional properties recently acquired by the College, the site also boasts spectacular views of Lake Michigan, as well as enhanced access to parking and public transportation.

Southlake Campus

Also situated in a suburban setting, the Southlake Campus offers direct access to Milwaukee Avenue (Route 21), as well as excellent access to Route 45 and Route 22 in the district's southern sector. The campus is adjacent to a retail town center development to the south, and ample on-campus parking is available for students, faculty and staff. The Southlake Campus also includes an untouched natural area along its southern edge across Port Clinton Road.



English Language Instruction (ELI) Classroom

Space Utilization

The Space Utilization Study included analysis of usage of classrooms, instructional labs and computer labs. The study utilized the Data acquired during the Fall 2010 Semester, which analyzed each teaching space from 8 a.m. to 10 p.m. Monday through Friday. The analysis utilized peak times of 8 a.m. to 1 p.m. and 5 p.m. to 10 p.m. The study also identified the utilization by days of the week, by campus and wing of the Grayslake campus. CLC provided raw data from the master schedule of all scheduled classes for utilization study.

Classrooms are defined as teaching spaces that can be used for learning by almost any discipline. The classrooms range in size from 19 to 180 seats with the average classroom at 34 seats. Instructional Labs are defined as specialized spaces, which cannot typically be used for other disciplines. Computer labs make up the remaining teaching spaces. These are open to students and have scheduled classes.

The space utilization analysis identified the classrooms as having an average utilization of rate of 58.83% during peak utilization of Monday – Thursday, 8 a.m. to 1 p.m. and 5 p.m. to 10 p.m. Community colleges in the past have identified 65% as the benchmark for good utilization during peak class times. Usage varied by wing and time of the day. Mornings at the Grayslake campus had higher average usage of 67.6% and peaks of 80% in some wings. Friday morning usage tapered off to 34%. Evenings averaged slightly higher than peer colleges at 57.4% Monday-Thursday. The study also identified utilization of specialized labs as 33.8% during peak

Space Utilization (continued)

times. Laboratories, with the exception of combined lecture/lab spaces, typically have a utilization rate of less than 50%. Computer labs had a scheduled utilization rate of 46.8%. Typically these rooms have open use to students when not scheduled for a specific course.

The analysis also looked at individual campuses and wings. Wings with higher than average morning classroom utilization include: A, B, C, D and Bldg 4. Wings/Campuses with below average morning classroom utilization include: H Bldg/JOBC/JAC, T Bldg, Lakeshore, and South Lake.

Average class size was studied and compared to other community colleges. The average class size for classrooms was 21.48 students per class offering. The average class size for an Instructional Lab was found to be 17.40 students per class offering.

The adjacent page summarizes the classroom utilization. (Instructional Lab and Computer Lab utilization is summarized in the Part 1 Sustainable Master Plan). The utilization analysis was based upon the Fall 2010 master schedule during the week of October 18th provided to Legat Architects. Courses or use of a room which were not documented within the CLC scheduling software were not included within the utilization calculations.

The Steering Committee discussed the utilization and issues causing lower utilization rates. Over the past year, several divisions at the college have started improving utilization to levels higher than the 65% benchmark. The College of Lake County may consider the following recommendations to improve classroom utilization.

- Standardize the start/stop times of all scheduled classes
- Schedule more 8am class start times
- Develop a block schedule for 2 hour and 1 hour classes 8-9 A.M., 9-11 A.M., 11-1 P.M. as a framework for scheduling
- Further study seat utilization and compare to ideal class size by discipline
- Utilize the scheduling software for optimization of the schedule
- Develop a pool of standard classrooms on a block schedule to increase utilization

Organizing the start times of classes will have the largest impact to utilization. Benchmarking studies against other peer community colleges identified that other colleges are achieving 72% - 83% utilization during mornings. On average the College of Lake County is achieving 60% utilization during mornings Monday-Thursday. Improving utilization on average 10% (increasing morning utilization from 60% to 70%) for the 122 classrooms would equate to adding 16.9 classrooms. Other opportunities for increasing classroom use include: scheduling/offering Friday classes or increasing seat utilization. Each of these would be dependent on multiple curriculum issues, such as the students' interest in Friday class offerings and appropriate class sizes.

Classrooms Campus Utilization Summary

Classrooms			Mornings 8am-1pm					Afternoons 1pm-5pm					Evenings 5pm-10pm				
Building	Seats	Rooms	Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed	Thu	Fri
A Wing	1042	27	75.2%	80.8%	67.1%	79.0%	64.1%	65.3%	61.0%	62.3%	54.7%	1.1%	70.6%	65.5%	64.2%	63.1%	12.4%
Bldg 4	107	3	62.8%	61.1%	61.1%	61.1%	0.0%	0.0%	18.1%	0.0%	18.1%	0.0%	46.7%	60.0%	46.7%	60.0%	0.0%
B Wing	819	25	77.6%	72.6%	79.9%	72.1%	51.5%	49.3%	51.7%	53.0%	53.7%	12.5%	68.3%	67.6%	71.9%	62.1%	0.0%
C Wing	246	8	63.1%	66.7%	60.4%	66.3%	43.5%	28.4%	34.1%	40.6%	40.4%	7.6%	49.2%	51.0%	56.7%	47.7%	0.0%
D Wing	195	7	73.3%	77.6%	73.3%	54.8%	22.4%	57.1%	57.4%	68.5%	59.2%	0.0%	54.3%	57.4%	65.0%	56.9%	0.0%
H Bldg/JOBC/JAC	133	4	28.3%	30.8%	28.3%	38.3%	0.0%	8.9%	0.0%	8.9%	10.4%	0.0%	18.3%	61.3%	58.3%	22.9%	0.0%
T Bldg	532	17	52.6%	62.8%	52.4%	46.2%	19.3%	29.9%	43.4%	32.5%	48.0%	5.9%	61.8%	44.5%	57.1%	43.8%	5.7%
Grayslake Campus	3128	91	68.0%	70.9%	65.9%	65.6%	42.3%	45.8%	48.4%	48.3%	49.1%	5.5%	62.1%	59.9%	63.5%	55.5%	4.7%
Lakeshore Campus	423	14	49.6%	40.8%	46.5%	34.6%	11.9%	13.7%	17.9%	18.9%	16.1%	0.3%	55.4%	42.3%	42.3%	42.4%	0.0%
Southlake Campus	494	17	36.1%	37.5%	34.1%	35.1%	7.5%	22.3%	19.0%	14.7%	13.8%	0.0%	59.8%	50.2%	48.6%	47.5%	0.0%
All Campuses	4045	122	61.4%	62.8%	59.2%	57.8%	34.0%	38.8%	40.8%	40.3%	40.4%	4.1%	61.0%	56.5%	59.0%	52.9%	3.5%

	M-Th Mornings	M-Fr Mornings	M-Th Afternoon	M-Fr Afternoon	M-Th Evenings	M-Fr Evenings
Grayslake	67.6%	62.5%	47.9%	39.4%	60.3%	49.2%
Lakeshore	42.9%	36.7%	16.6%	13.4%	45.6%	36.5%
Southlake	35.7%	30.0%	17.5%	14.0%	51.5%	41.2%
All Campuses	60.3%	55.0%	40.1%	32.9%	57.4%	46.6%

Peak Utilization - Monday-Thursday Mornings/Evenings 58.83%

Space Needs Requests

The College's 2012 spring enrollment of 18,454 students has been projected, by the CLC Institutional Effectiveness, Planning & Research Department, to grow to a 2020 Fall enrollment of 20,459 students, for an increase of 2,005 students and an anticipated growth of 10.9%. As part of the sustainable master planning process, an extensive study has been completed to assess the College's space needs for the next 10 years.

Facilities Survey

To begin the process, a Facilities Survey was devised by the CLC Institutional Effectiveness, Planning & Research Department, and sent out to the college community at large. Participants were asked to identify areas of satisfaction (i.e. likes and dislikes) for the Grayslake, Lakeshore and Southlake campuses. A total of 1,950 students, faculty, staff and community members responded, and the results were presented to the Master Plan Steering Committee. After reviewing and considering the survey data, the Steering Committee worked to compile and rank the following prioritized list of "Critical Issues" by campus:

Campus Critical Issues

Grayslake Campus

1. Student Services Building / Student Activities spaces are inadequate
2. Classroom Space / Layout / Technology
3. Building Appearance and Finishes are outdated (interior and exterior)
4. Aging Infrastructure
5. Wayfinding / Signage / Information
6. Lack of Parking and Access to buildings

7. No large "Multi-Use" Assembly Space / Meeting Rooms
8. Lack of Primary Front Door and Poor Secondary Entries
9. P.E. Facilities Inadequate / Bad Location / Underutilized
10. ADA Accessibility

Lakeshore Campus

1. Lack of Campus Image / Unattractive Environment
2. Disjointed Buildings / Wayfinding
3. Security
4. Lack of Student Space
5. Lack of Classroom Space and Computer Labs
6. Meeting Rooms / Community Access
7. Parking
8. No Food Service
9. Faculty Office Space
10. No Library

Southlake Campus

1. Limited Science offerings due to current Science Lab design
2. Update older Building Finishes
3. No Student Space / No Cafeteria
4. Need more Study Space and Outdoor Space
5. HVAC in R-building
6. Lack of Campus Entrance from Milwaukee Avenue
7. No Public Media Screens
8. Address Parking Lot concerns (signage, traffic patterns, lighting, security)
9. Improve Technology
10. Improve Faculty Center / Faculty Meeting Spaces

Faculty and Staff Interviews

Subsequent to the establishment of the Critical Issues list, space needs requests were identified through an interactive process that incorporated existing space plan documentation, building walk-throughs, questionnaires, and the involvement of all the College's divisions and departments. Key faculty and staff provided input as to their 10-year space needs requests. This input was collected during 76 interviews with faculty, staff, students and the community, and documented in the "Part 1 Report Appendix" under a separate cover.

Space Needs Spreadsheets

The interview documentation was then used to develop the Space Needs Spreadsheets for each College division and department. Building support spaces such as toilet rooms, mechanical rooms and electrical rooms, as

well as building circulation, have been excluded for the purposes of this space assessment. Space at rented facilities has also been excluded. The Space Needs Requests include all divisional and departmental net square feet (NSF) within the Offices of Educational Affairs, Administrative Affairs, Student Development and the President, and located at the Grayslake, Lakeshore and Southlake campuses. The detailed space needs requests for each department and division have been documented in the "Part 1 Report" under a separate cover.

Findings

The following summarizes the overall space needs requests for the four CLC Leadership Offices, and identifies an overall variance of 302,890 NSF (47%) when comparing the 10-year requests to existing area:

	EXISTING	10 YEAR REQUESTS	VARIANCE (SF)	VAR./EXIST.
OFFICE OF EDUCATIONAL AFFAIRS	459,780	693,092	233,312	51%
OFFICE OF ADMINISTRATIVE AFFAIRS	44,412	80,760	36,348	82%
OFFICE OF STUDENT DEVELOPMENT	65,226	96,440	31,214	48%
OFFICE OF THE PRESIDENT	9,461	11,477	2,016	21%
COMMON, SHARED & OTHER SPACE	70,685	70,685	0	0
CollegeTotal:	649,564	952,454	302,890	47%

Benchmarking

Every year, community colleges in Illinois submit information to the ICCB about their facilities, and this data is published on the ICCB website. Using the most recent published data from “Data and Characteristics, tables V1-V4”, 2008 and 2009, information such as district population, head count, FTE, site area, building gross area, building net area, average class size, room use allocation, classroom seat utilization and other categories can be used for benchmarking. The following ICCB data is included:

- Site Data
- Buildings Data
- Site Data and Building Data Analysis

Legat Database

While the ICCB provides a good amount of information that is useful for benchmarking purposes, additional data that is not provided by the ICCB can also be useful. Because of Legat Architects’ work with other Illinois community colleges, the following data has also been incorporated:

- Classroom “Room” Utilization Data
- Instructional Lab “Room” Utilization Data
- Student Services Net Area Data
- College Services

Peer Community Colleges

ICCB data for the following Illinois community colleges has been used to benchmark with that of CLC’s:

- Harper College
- Oakton Community College
- College of DuPage
- Triton College
- Joliet Junior College
- Moraine Valley Community College
- Elgin Community College

The data from the above institutions and CLC was then “averaged” to provide a peer benchmark.

For both Classroom and Instructional Lab “Room” Utilization, data from Legat’s database for the following community colleges has been used to benchmark with that of CLC’s:

- Oakton Community College
- Joliet Junior College
- Moraine Valley Community College

For Student Services, data from Legat’s database for the following community colleges has been used to benchmark with that of CLC’s:

- Joliet Junior College
- Moraine Valley Community College
- McHenry County College
- Oakton Community College

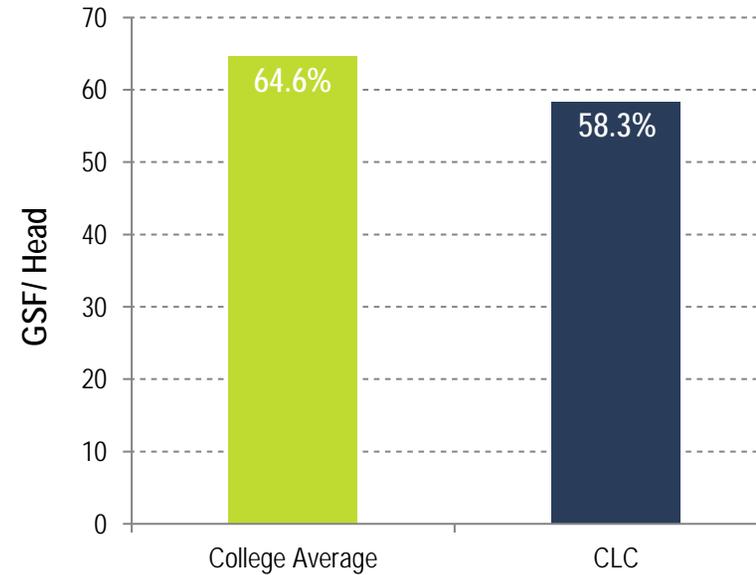
For College Services, data from Legat’s database for the following community colleges has been used to benchmark with that of CLC’s:

- Joliet Junior College
- McHenry County College
- College of DuPage
- Oakton Community College

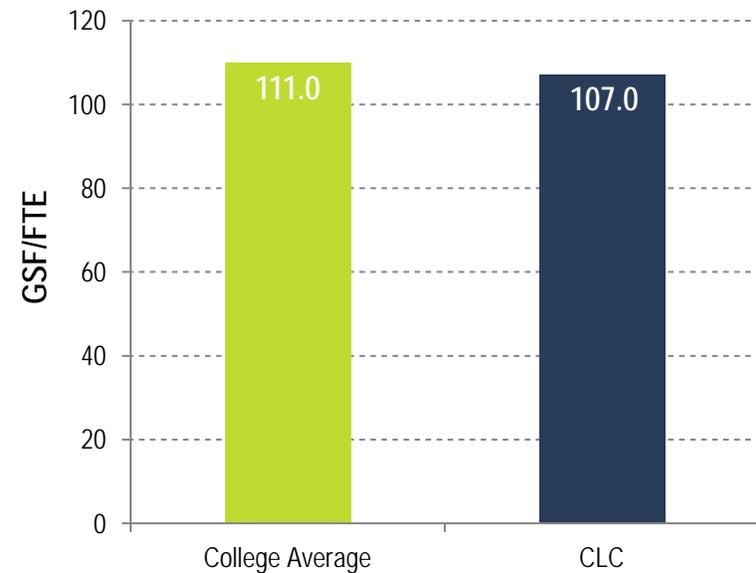
Site Data

Of all the data included in this benchmark, it is important to note that CLC's gross square feet (GSF) per Head Count and its GSF per FTE are both below the peer group college average by 6.3% and 4.0%, respectively. Further analysis indicates that CLC's net square feet (NSF) per capita and NSF per Head Count are both below the peer group college average, while its NSF per FTE value is slightly above the peer group college average. This data indicates that CLC is being very efficient with its quantity of space per student when compared to the peer group.

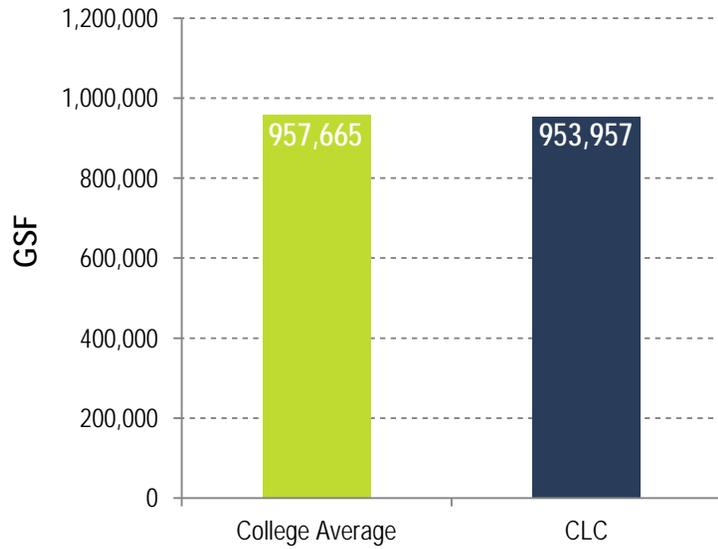
Total Gross Sq. Ft. / Head Count



Total Gross Sq. Ft. / Full-Time Equivalent



Total Gross Sq. Ft.

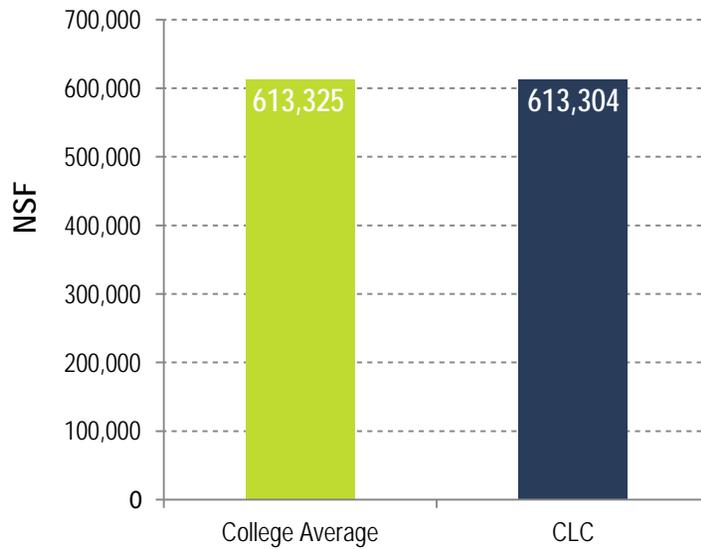


Building Data

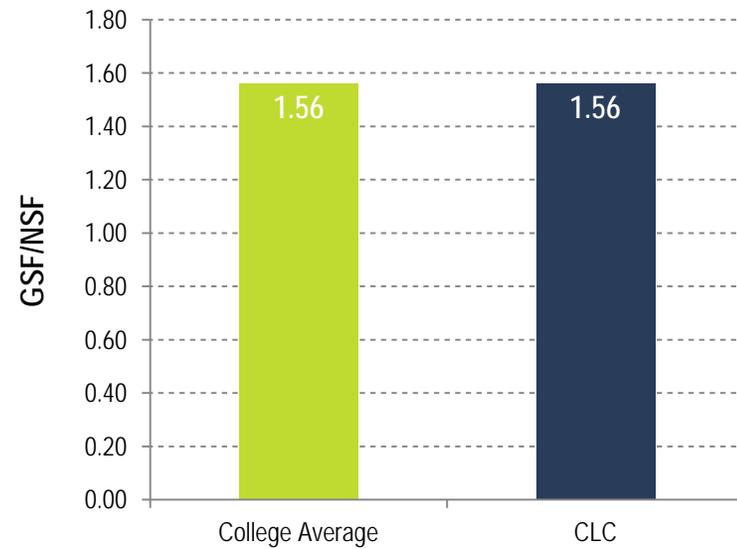
Overall

Both CLC's building gross square feet (GSF) and net square feet (NSF) values are slightly below the college averages, and its GSF/NSF ratio of 1.56 matches the peer group college average. This gross to net value indicates an assignable space efficiency on par with the peer group.

Total Net Sq. Ft.



Total Gross Sq. Ft. / Total Net Sq. Ft.



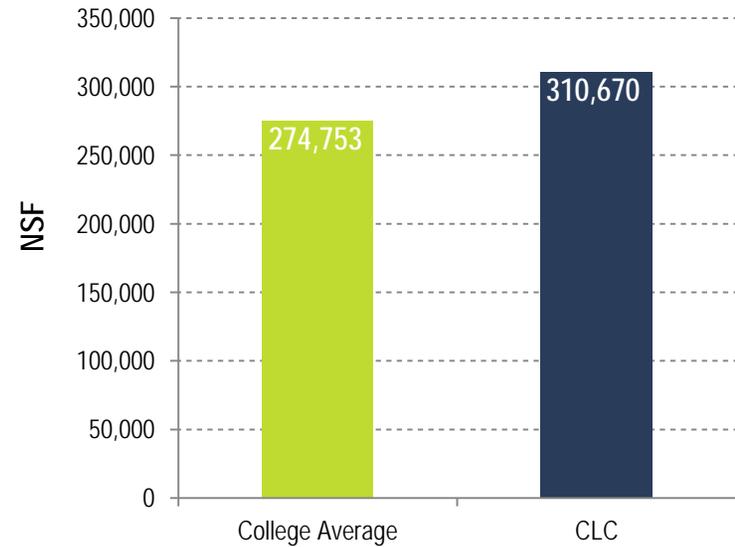
Instructional Space

CLC's combination of Classroom NSF (32%) and Lab NSF (19%), for a total Instructional NSF of 51%, is 6% above the college average of 45%, when comparing Instructional Space to the College Total. When comparing the amount of Instructional Space to Head Count and FTE, CLC's values are also above the peer group college average. This data indicates that CLC is providing more instructional space per student than the peer group.

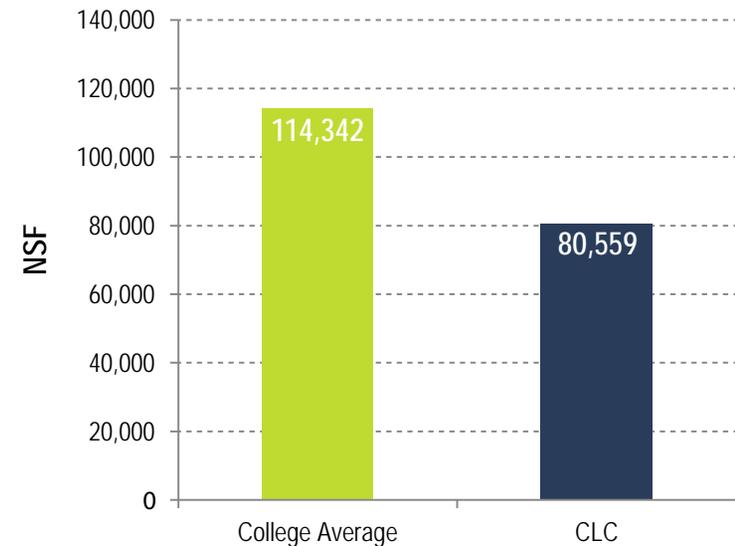
Office Space

CLC's 80,559 NSF for office space is 6% below the college peer group average of 114,342 NSF, when compared with total NSF.

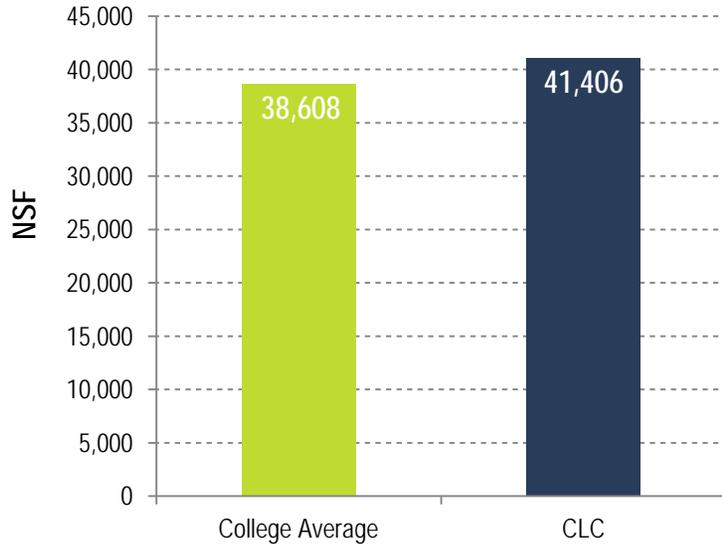
Instructional Net Sq. Ft.



Office Net Sq. Ft.



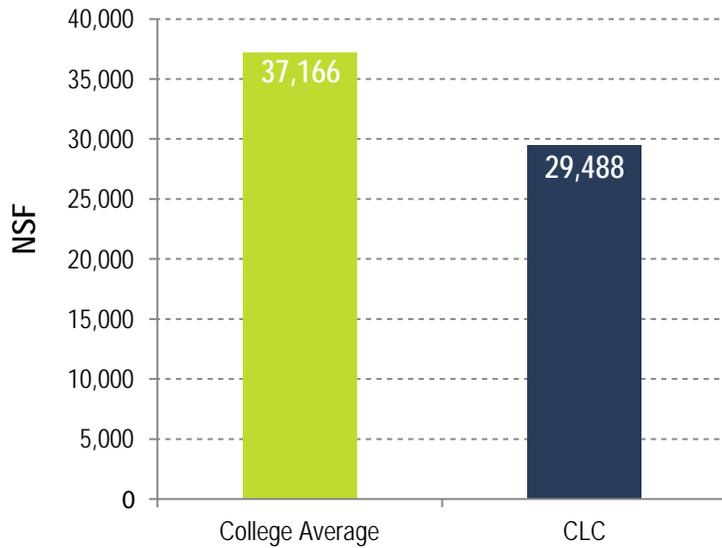
Study Space Net Sq. Ft.



Study Space

CLC's 41,106 NSF of study space is 1% higher than the college peer group average of 38,608 NSF, when compared with total NSF.

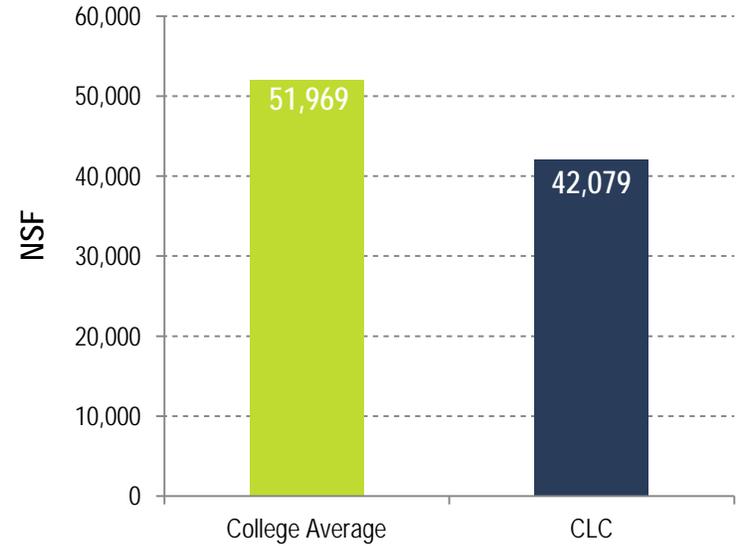
Athletics and P.E. Net Sq. Ft.



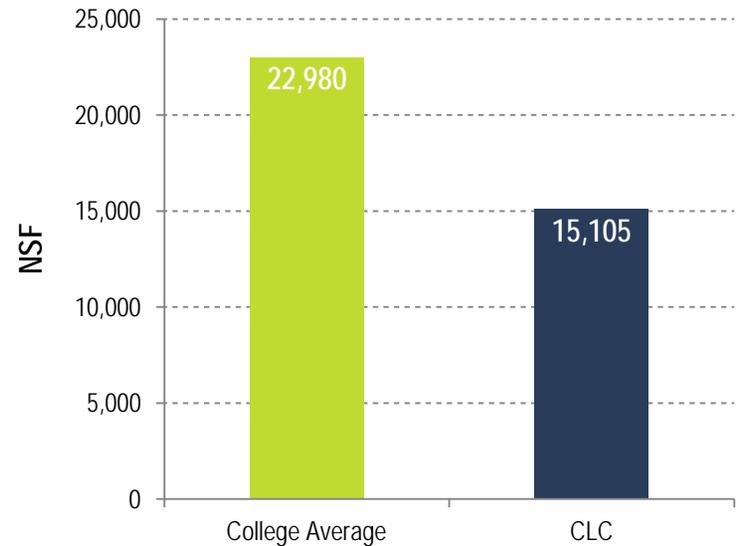
Athletics and Physical Education Space

CLC's 29,488 NSF of athletics and physical education space is 1% lower than the college peer group average of 37,166 NSF, when compared with total NSF.

Student Services Net Sq. Ft.



College Services Net Sq. Ft.



Student Services Data

For purposes of this comparison, 12 student services departments were benchmarked with the peer group colleges. CLC's 42,265 NSF is 5.33% below the college peer group average of 51,969 NSF, when compared with total NSF.

College Services

For Campus Services (i.e. Print Shop and Mail Room), CLC's total existing area of 2,700 NSF is above the peer group College Average, but when compared as a percentage of total NSF, it is slightly below the College Average. For Facilities, CLC's total existing area of 10,857 NSF is well below the College Average of 18,691 NSF. For Police, CLC's total existing area of 1,548 NSF is also well below the College Average of 2,143 NSF. Overall for College Services, CLC's total area of 15,105 NSF is 2.6% below the College Average of 22,980 NSF for these 3 categories combined when compared with total NSF.

Deferred Maintenance

The value and importance of the College's existing facilities must be considered as part of any sustainable master planning process. As options have developed for the renovation, re-purposing and modernization of existing space, the following 5-year deferred maintenance categories have also been integrated as components of the consensus solutions for the Grayslake, Lakeshore and Southlake campuses:

- HVAC Systems
- Fire Protection
- Roofs
- Parking Lots
- Tuckpointing and Sealant
- I.T. Cabling
- Common Area Interior Finishes
- Classroom Modernization and Finishes
- Window Replacement
- Toilet Room Repairs

Parking and Traffic

Grayslake Campus

Existing Transportation and Parking Evaluation

Existing Roadway System

Primary access to the campus is provided via Lancer Lane which extends through the campus from Washington Street south to Brae Loch Road. Access to the campus' internal circulation system and parking lots are provided via nine access roads located along Lancer Lane. In addition, secondary access to the campus is provided via three additional access roads located on Brae Loch Road. The following describes the roadway system serving the campus as illustrated in **Figures 1 and 2**.

Pedestrian and Bicycle Facilities

A multi-purpose path is provided along the north side of Brae Loch Road and sidewalks are provided along the following sections of Lancer Lane.

While no sidewalks or paths are provided on either side of Washington Street in the vicinity of the campus, crosswalks and pedestrian signals are provided at the Lancer Lane/Washington Street intersection. In addition, crosswalks are provided across Lancer Lane at its intersections with Willow Way (north leg), North College Drive (south leg) and Brae Loch Road (north leg). All of the Lancer Lane pedestrian crossings are under stop sign control or traffic signal control. Lastly, a sidewalk system is generally provided along the internal perimeter of the campus.

Existing Daily and Peak Hour Traffic Counts

According to campus officials, the peak traffic periods on the campus occur during the weekday morning and evening peak periods. As such, manual turning movement counts were conducted on Wednesday, March 13, 2011 during the weekday morning (8:00 A.M. to 10:00 A.M.) and the weekday evening (4:00 P.M. to 7:00 P.M.) peak periods at the following intersections.

The results of the traffic counts show that the morning peak hour occurs between 8:15 A.M. and 9:15 A.M. and the evening peak hour occurs between 5:00 P.M. and 6:00 P.M. **Figure 3** summarizes the distribution of the traffic through the campus.

Key Findings

- Approximately 60 percent of the campus-generated traffic accesses the campus via Washington Street and 40 percent of the campus-generated traffic accesses the campus via Brae Loch Road.
- Approximately 55 percent of the campus traffic is traveling to/from the south parking lots and 37 percent is traveling to/from the north parking lots.
- The inbound campus traffic is far more concentrated (greater peaks) than the outbound traffic.
- Approximately 67 percent of the campus traffic is traveling to/from the east on Washington Street or Brae Loch Road and 33 percent is traveling to/from the west on Washington Street or Brae Loch Road.

Existing Operation of the Roadway System

In order to determine the operation of the external roadway system, capacity analyses were conducted at the intersections within the study area. The results of the capacity analyses and field observations indicate that all of the intersections are currently operating at a good level of service. With a capacity of approximately 25,000 vehicles a day, Lancer Lane is currently operating well below its daily capacity.

Existing Parking Conditions

Currently, the campus has 13 parking lots, including the University Center parking lot. The parking on campus is generally segregated into the following three categories: (1) open parking, (2) staff parking, which requires a permit, and (3) visitor parking. **Figure 3** illustrates the location of the various parking lots and the parking that is permitted in each. It should be noted that lot 3A is generally reserved for the Job Center of Lake County. In order to determine the existing parking inventory and occupancy, parking surveys were conducted at all 13 parking lots located within the campus. The surveys were performed every hour from 8:00 A.M. to 7:00 P.M. on the following days.

- Wednesday, March 9 and 16, 2011. These surveys were conducted during the middle of the spring semester and represent a typical or average day on the campus. (The 8:00 A.M. to 3:00 P.M. surveys were conducted on March 9 and the 4:00 P.M. to 7:00 P.M. surveys were conducted on March 16.)

Grayslake Parking

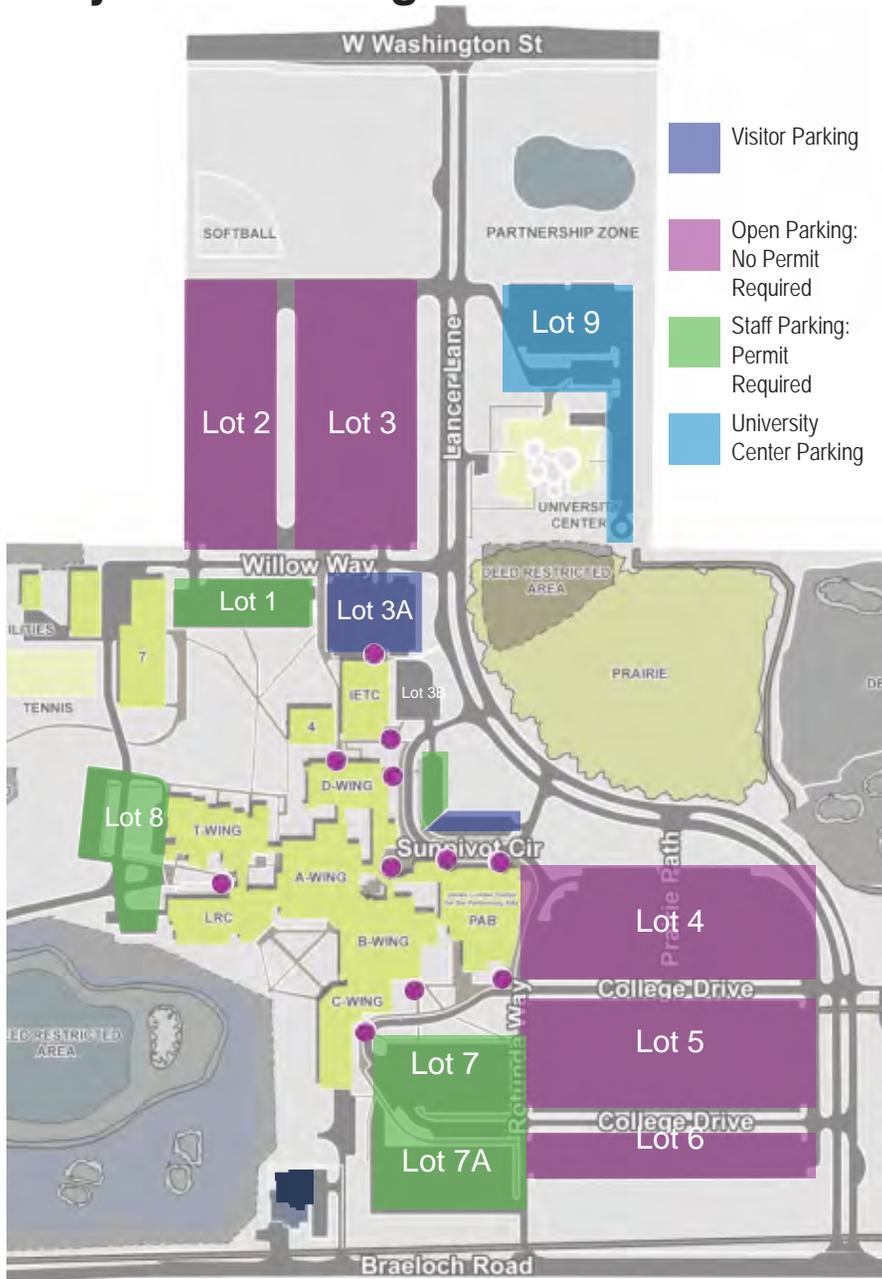


Figure 1

- Monday August 22, 2011. These surveys were conducted during the first few weeks of the fall semester and represent a peak day on the campus.

The results of the parking inventory and occupancy surveys are shown in Tables 1 and 2 and are summarized below.

Parking Occupancy - Typical Day

- Total Parking Demand.** The peak parking demand on the typical day occurred at 11:00 A.M. an overall occupancy of 68 percent and an effective occupancy of between 71 and 75 percent. At a minimum, approximately 1,334 parking spaces were available on campus at any time.
- Parking Demand by User Group.** At the peak time, approximately 65 percent of the open/general parking spaces were occupied, 84 percent of the reserved (staff, visitor, etc.) parking spaces were occupied and 42 percent of the University Center parking spaces were occupied.
- Distribution of Parking Demand.** At the peak time, approximately 35% (966) of the vehicles were parked on the north side of campus (including the University Center lot), 60% (1,662) of the vehicles were parked on the south side of campus and 5% (124) of the vehicles were parked on the east and west sides of campus.

Parking Occupancy - Peak Day

- Total Parking Demand.** The peak parking demand on the peak day occurred at 10:00 A.M. with a total of 3,235 occupied parking spaces and an overall occupancy of 79 percent and an effective occupancy of between 83 and 88 percent. At a minimum, approximately 851 parking spaces were available on campus at any time.
- Parking Demand by User Group.** At the peak time, approximately 82 percent of the open/general parking spaces were occupied, 86 percent of the reserved (staff, visitor, etc.) parking spaces were occupied and 25 percent of the University Center parking spaces were occupied.
- Distribution of Parking Demand.** At the peak time, approximately 37% (1,189) of the vehicles were parked on the north side of campus (including the University Center lot), 59% (1,918) of the vehicles were parked on the south side of campus and 4% (128) of the vehicles were parked on the east and west sides of campus.

The results of the parking surveys show that the existing parking supply is sufficient to meet the current peak parking demand of the campus on both a typical day and a peak day. The majority of the parking is located on the north and south sides of the campus, with the occupancy of the south lots approximately 50 percent greater than the occupancy of the south lots.

Grayslake Traffic Distribution

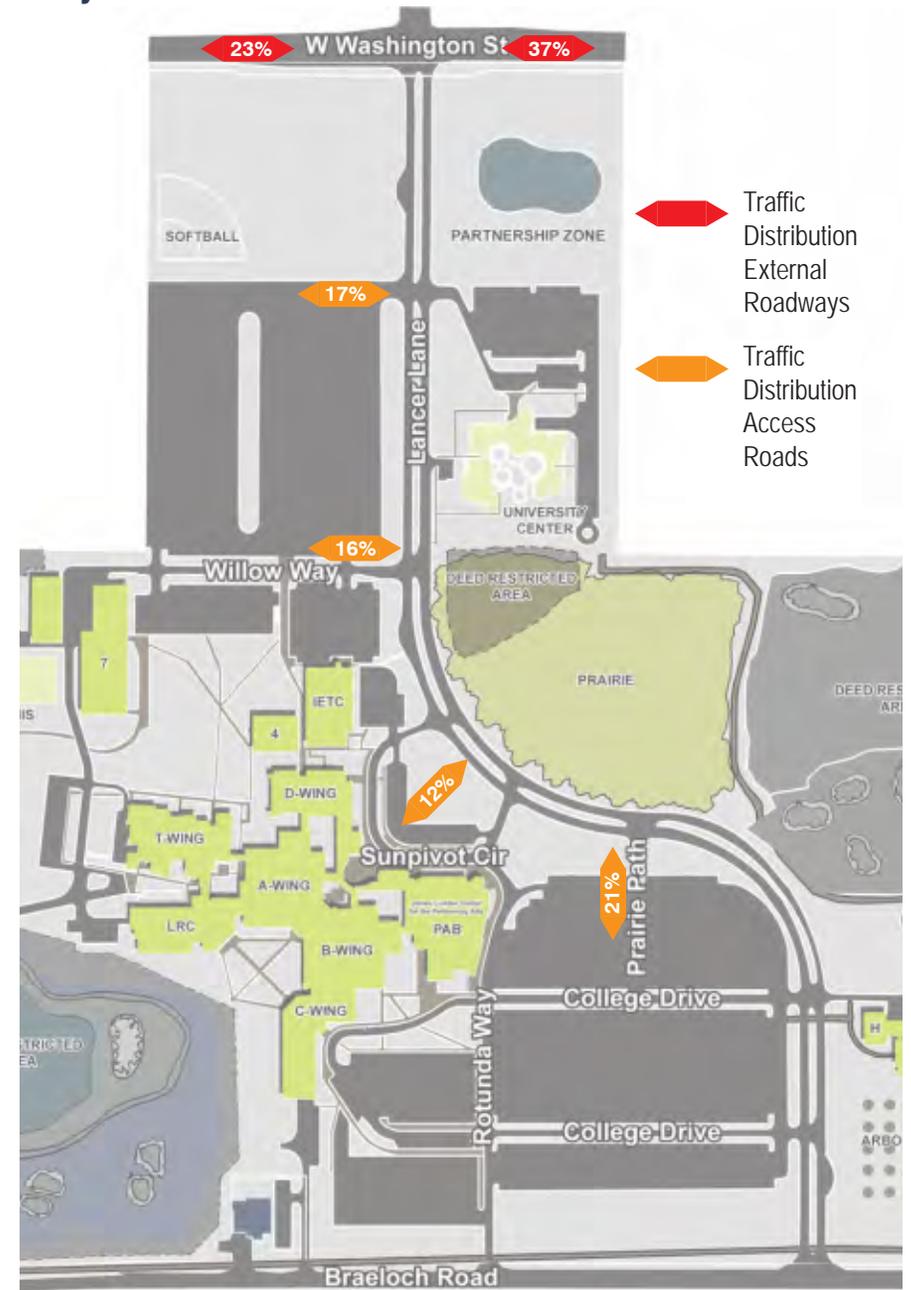


Figure 2

Table 1
COLLEGE OF LAKE COUNTY - GRAYSLAKE CAMPUS
PARKING INVENTORY AND OCCUPANCY SURVEYS
WEDNESDAY, MARCH 9 AND 16, 2011

Time	Parking Lots												Total
	1	2 + 3	3A	3B	3C	4	5	6	7	7A	8	9	
Inventory	123	1,260	142	46	45	618	790	314	180	232	70	266	4,086
8:00 A.M.	53	171	45	29	14	299	235	15	143	72	47	29	1,152
9:00 A.M.	81	405	68	35	25	439	569	62	158	127	48	109	2,126
10:00 A.M.	114	612	80	43	30	590	584	105	163	161	52	168	2,702
11:00 A.M.	116	633	104	40	34	613	591	101	172	185	50	113	2,752
12:00 P.M.	114	588	87	42	37	579	598	117	155	175	52	43	2,587
1:00 P.M.	108	551	95	46	35	551	538	98	162	192	53	33	2,462
2:00 P.M.	111	479	88	46	28	507	466	89	162	176	54	20	2,226
3:00 P.M.	117	497	99	38	31	483	493	76	158	165	54	18	2,229
4:00 P.M.	79	274	67	44	32	377	254	23	121	124	38	85	1,518
5:00 P.M.	64	362	81	42	28	420	439	28	114	50	38	119	1,785
6:00 P.M.	59	496	90	38	25	510	465	39	94	43	42	174	2,075
7:00 P.M.	89	511	95	40	29	552	556	65	86	31	50	189	2,293
Maximum Occupancy	117	633	104	46	37	613	598	117	172	192	54	189	2,752
Percentage	95%	50%	73%	100%	82%	99%	76%	37%	96%	83%	100%	71%	68%

Note: The counts between 8:00 A.M. and 3:00 P.M. were conducted on Wednesday, March 9, 2011 and the counts from 4:00 P.M. to 7:00 P.M. were conducted on Wednesday, March 16, 2011.

Table 2
COLLEGE OF LAKE COUNTY - GRAYSLAKE CAMPUS
PARKING INVENTORY AND OCCUPANCY SURVEYS
MONDAY, AUGUST 22, 2011

Time	Parking Lots												Total
	1	2 + 3	3A	3B	3C	4	5	6	7	7A	8	9	
Inventory	123	1,260	142	46	45	618	790	314	180	232	70	266	4,086
8:00 A.M.	76	202	62	34	25	459	562	66	149	127	60	85	1,907
9:00 A.M.	119	493	81	35	40	548	788	297	165	157	62	149	2,934
10:00 A.M.	123	795	104	33	34	542	741	282	160	178	66	114	3,172
11:00 A.M.	123	893	108	34	29	587	737	237	166	191	65	65	3,235
12:00 P.M.	122	791	105	28	19	585	664	196	164	192	65	71	3,002
1:00 P.M.	121	706	94	25	26	562	566	142	163	182	64	73	2,724
2:00 P.M.	106	541	80	37	21	423	393	80	150	162	64	50	2,107
3:00 P.M.	94	348	74	35	22	314	252	48	133	146	61	51	1,578
4:00 P.M.	95	311	62	37	21	280	244	30	122	125	57	73	1,457
5:00 P.M.	64	347	50	13	19	383	366	34	98	72	45	67	1,558
6:00 P.M.	66	535	62	23	19	506	549	64	125	45	60	62	2,116
7:00 P.M.	69	633	72	36	24	552	580	80	132	50	64	55	2,347
Maximum Occupancy Percentage	123	893	108	37	40	587	788	297	166	192	66	149	3,235
	100%	71%	76%	80%	89%	95%	100%	95%	92%	83%	94%	56%	79%

Southlake Traffic Counts



Figure 1

Southlake Campus Existing Transportation and Parking Evaluation

Existing Roadway System

Access to the campus is provided via a single access drive located on Port Clinton Road opposite Byrne Boulevard. The following describes the roadway system serving the campus.

Port Clinton Road is generally an east-west road that extends from Milwaukee Avenue (IL 21) west to U.S. Route 45 and continues west to Buffalo Grove Road.

Byrne Boulevard is a north-south local road that extends between Port Clinton Road and Town Center Road. The campus access drive is aligned opposite Byrne Boulevard at its intersection with Port Clinton Road.

Pedestrian and Bicycle Facilities

Sidewalks are provided along the (1) west side of Milwaukee Avenue, (2) south side of Port Clinton Road, (3) west side of Byrne Boulevard and (4) east side of the campus access drive. In addition, a sidewalk system is provided within the campus providing direct access to/from the Milwaukee Avenue sidewalk.

Peak Hour Traffic Counts

According to campus officials, the peak traffic periods on the campus occur during the weekday evening periods. As such, manual turning movement counts were conducted on Wednesday, March 16, 2011 during the weekday evening (4:00 P.M. to 7:00 P.M.) peak period at the Port Clinton Road/Bryne Boulevard/campus access drive. The results of the traffic counts show that the evening peak hour occurs between 5:00 P.M. and 6:00 P.M. The results of the traffic counts have revealed the following.

- *Concentration of Inbound/Outbound Traffic.* The inbound campus traffic is far more concentrated (greater peaks) than the outbound traffic during the evening peak period. This is due to the fact that most students are arriving for evening classes at this time.
- *Distribution of Traffic to/from the Campus.* Approximately 65 percent of the campus-generated traffic accesses the campus to/from the east on Port Clinton Road (Milwaukee Avenue intersection), 25 percent to/from the west on Port Clinton Road (U.S. Route 45 intersections) and 10 percent to/from the south on Byrne Boulevard.

Existing Parking Conditions

The campus currently provides two parking lots as shown in Figure 2. In order to determine the existing parking inventory and occupancy, parking surveys were conducted at both parking lots. The surveys were performed every ½ hour from 5:00 A.M. to 9:00 P.M. on Wednesday, March 9 and 16, 2011. **Table 1** illustrates and the following summarizes the results of the parking inventory and occupancy surveys.

- *Parking Supply.* The campus provides a total of approximately 453 parking spaces with 390 parking spaces provided in the large lot and 63 spaces provided in the small lot.
- *Total Parking Demand.* The peak parking demand on the typical day occurred at 7:30 P.M. with a total of 299 occupied parking spaces and an overall occupancy of 66 percent and an effective occupancy of between 70 and 73 percent. At a minimum, approximately 154 parking spaces were available on campus at any time.
- *Distribution of Parking Demand.* At the peak time, approximately 82% (244) of the vehicles were parked in the large lot and 18% (55) of the vehicles were parked in the small lot.



Energy Use

The College's primary focus was always on its students and achieving excellence in higher education. Historically, the available capital funding was frequently directed first toward new academic buildings, and then toward various MEP infrastructure improvements. The upgrades of academic areas took precedent over adding a central chiller and boiler plant. As a result, when new building space was added, supporting HVAC equipment was designed to operate independently of other buildings. Built over several decades, each subsequent building heating and cooling system implemented a different, more advanced technology.

This approach had both positive and negative implications. On one end, individual buildings could operate independently, as there was no central hot and chilled water supply system to tie to. Adding one mechanical subsystem at the time reduced immediate funding requirements. However, an inevitable duplication of mechanical elements such as chillers or boilers was created. The resulting system had minimal ability to allow equipment and energy sharing across various campus buildings, except to some degree within the D wing and PAB building. Many existing buildings still use electric energy for heating, which is less efficient than natural gas, and more prone to grid interruptions. Most of the original mechanical systems still in operation, such as building A and B are severely outdated, inefficient and past the normal replacement age.

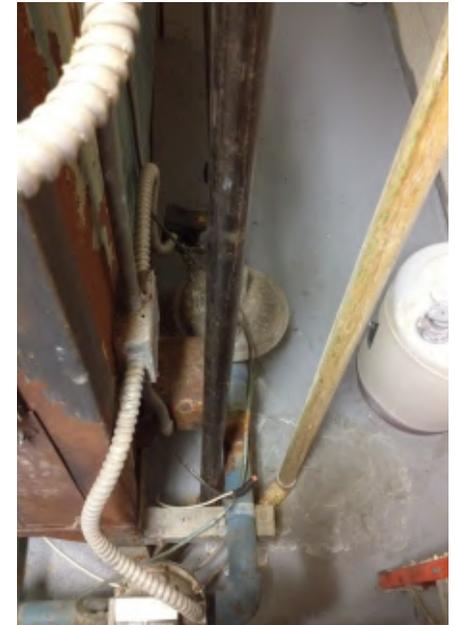
Such conditions should be viewed as an opportunity to replace existing mechanical system with the latest "state of the art" technology, which will significantly reduce building energy use and generate substantial utility cost savings.

Today, the College's energy needs are met exclusively by relying on the utility grid for both electrical power and natural gas. Annual energy costs are significant and average approximately \$2,000,000 for electricity and \$500,000 for natural gas. A more detailed analysis of energy use by source is available in the CLC Climate Action Plan document.

Going forward, it is recommended that CLC implement a campus-wide shift toward more grid-independent, technologically advanced systems based on renewable energy and the most energy-efficiency systems available. A centralized system based on a geothermal central plant coupled with a loop around the campus could provide the most efficient heating and cooling for CLC.



Aged HVAC Systems



Aged HVAC Systems



SUSTAINABLE
MASTER PLAN²⁰¹²

Concept
Development

Sun Louvers

LEGATARCHITECTS

sustainability performance design

Process

Before a consensus plan was reached, a discovery process, based on some overall development principles, studied several scenarios. The design team met regularly with a small group of key administrative, faculty and facility representatives. At critical moments progress was reviewed with the Executive Staff and the Master Plan Steering Committee for feedback and direction. When appropriate, the Board of Trustees was appraised of current status and asked for their feedback.

Each College of Lake County campus - Grayslake, Lakeshore and Southlake - was studied with the goal in mind of establishing and comparing three growth options. It was these three options on each campus that would be brought to the various reviewing bodies to be discussed and refined.

At all times, the Part 1 Report concerning Space Utilization and Space Needs was consulted for guidance. Sustainability was also a constant criteria, not only for new and renovated buildings but also for site improvements. A sense of a "Grid-Free" College emerged.

Traffic and Parking play a key role in all three College campus locations, particularly at Grayslake, prompting both analysis and proposals that emphasized both access and safety.

Finally, as direction became apparent, cost estimates began to be prepared. As is customary, these estimates provoked healthy re-examinations of prior strategies - providing both checking and evaluation mechanisms.

The efforts on each campus were based on the following basic principles.

Student Centered

Classroom Focused

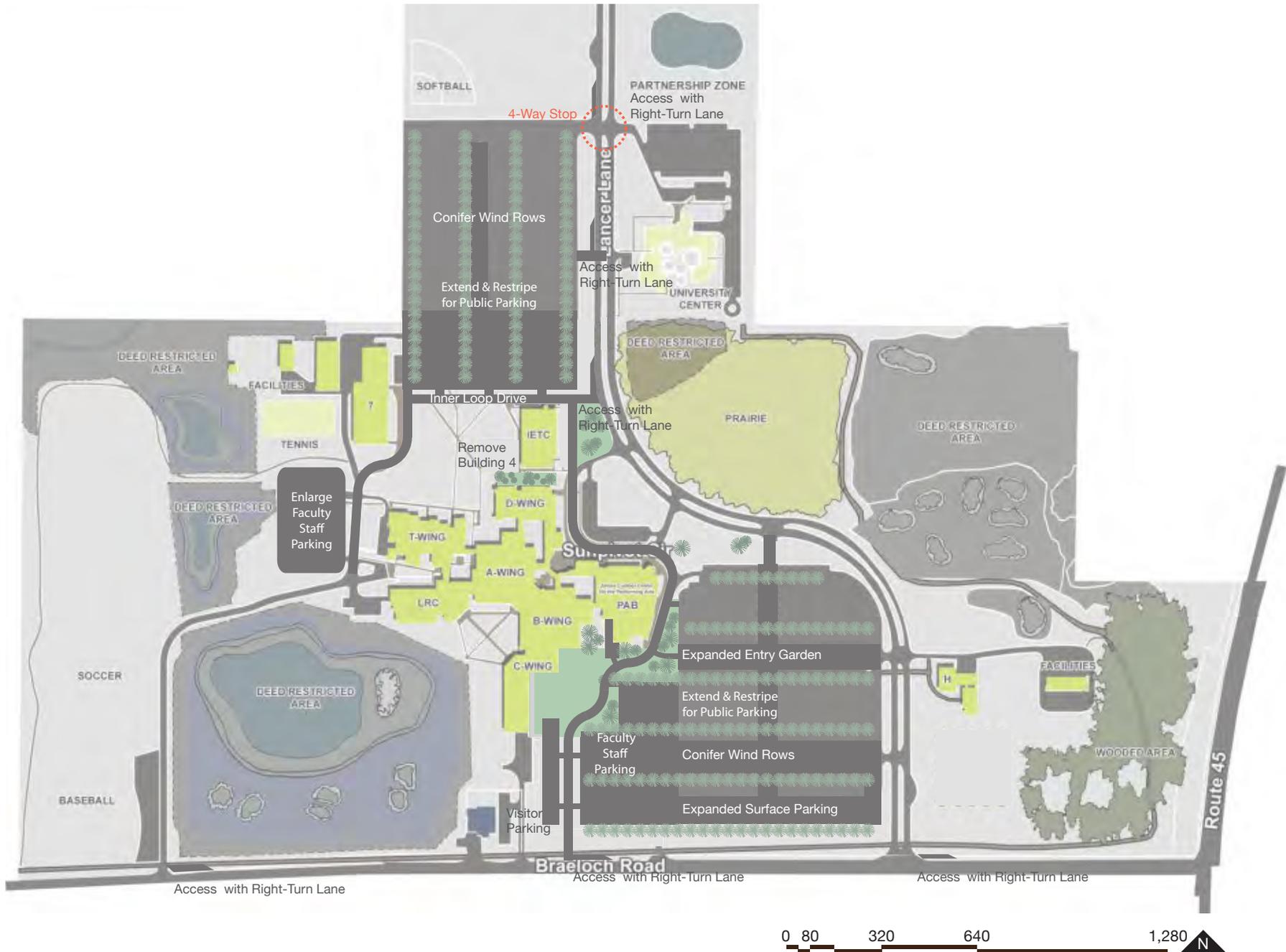
Efficient, Effective and Flexible

Embedded within Nature

Reduce Deferred Maintenance

Increase Utilization

Ultimately, a Consensus Plan was created for the Grayslake campus. However, during the planning process additional parcels were acquired for Lakeshore, altering and expanding the site boundaries. It was determined prudent at that point to suspend the Lakeshore studies. The Consensus Plan for the Southlake Campus was separated into short-term and long-term components to reflect available funding streams.



Grayslake Campus

Site Improvements

In preparation for building expansion it was clear that some improvements were needed on the site. There were traffic and parking issues that ranged from improving access to the buildings for students to simple safety considerations. Additionally, in accordance with principles of Sustainability, developing a new approach to landscaping, rainwater treatment and wetlands was required.

Accordingly, the following goals were established.

Extend North Student Lot

Extend the Technology Building parking lot for faculty/staff

Extend South Student Lot

Develop Inner Loop Drive

Remove Building 4

Develop "Prairie Pockets"

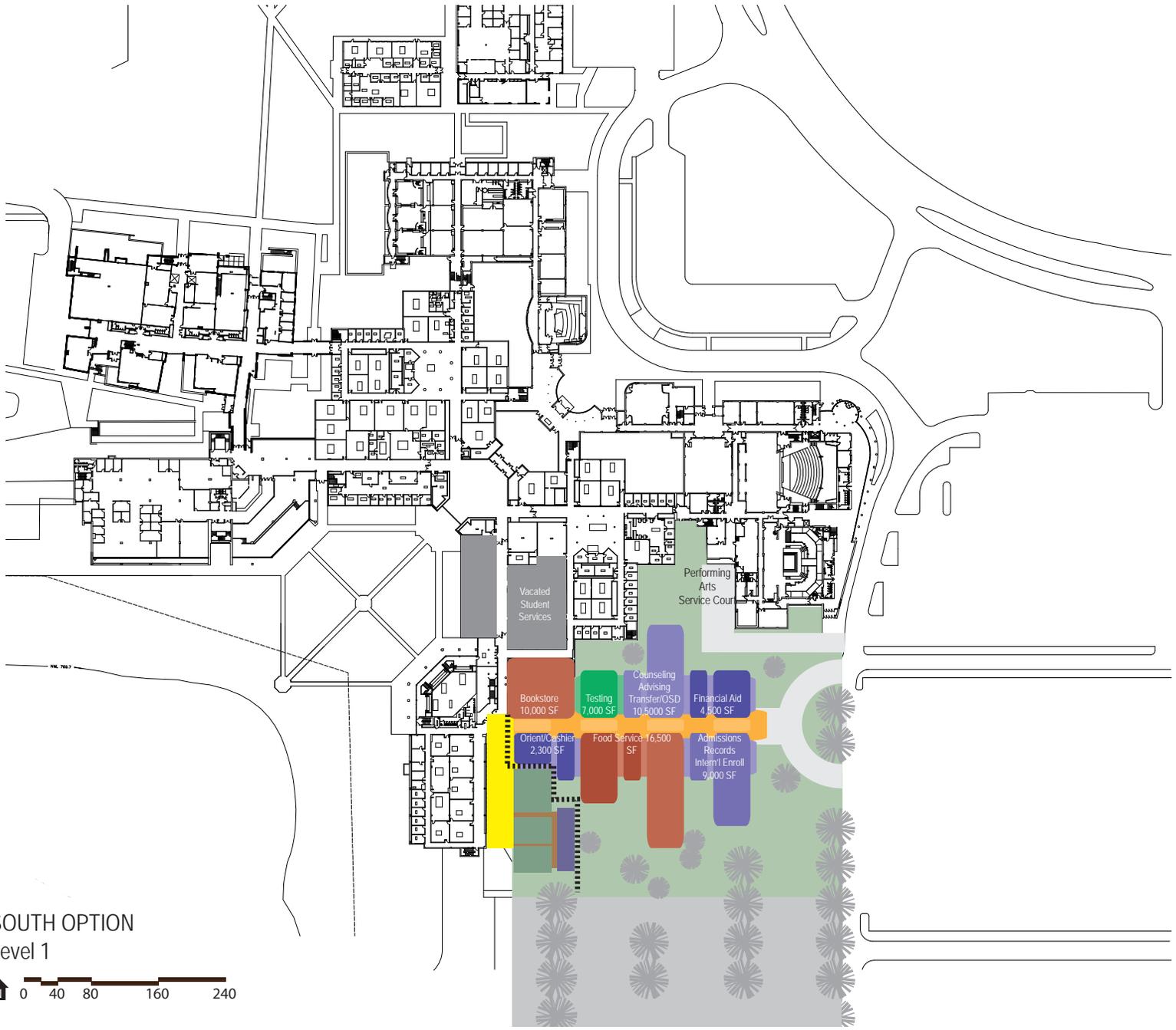
The North Student Parking Lot is extended south. This lot's proximity to the primary vehicular access to the Campus from the north thus places more parking places near to where site arrival occurs. Also, this moves the lot closer to the primary concentration of classroom buildings.

Similarly, the South Student Parking Lot will be extended west toward the buildings as well as being extended to increase parking places. Faculty and Staff parking will continue to be integrated into this lot. These extensions of

the primary North and South Lots will be coordinated with the development of a slow-speed Inner Loop Drive. This Drive will more closely align building access points - for both students and service - with traffic flow and drop-offs. It will facilitate movement within the lots to find spaces as well as assisting visitors in locating convenient, dedicated parking. In conjunction with Braeloch Road and the southwest connector from the athletic fields to the Technology Building, a "Loop Road" is formed.

Intersections on both Lancer Lane and Braeloch Road that allow Campus and Parking access will be modified to facilitate turning movements and alleviate safety concerns.

Finally, landscaping will be enhanced in and around the buildings and the parking lots. As the lots become re-striped, conifer rows will be established within the lots to break the wind as one walks from vehicle to building. Rainwater run-off will be directed toward "bio-swales" within these rows to cleanse the water for potential re-use. Parking areas now immediately east of the IETC building and east of the C-Wing will be converted to Entry Lawns. Throughout the Campus, small areas within existing courtyards, lawn swales and wetland depressions can be returned to specialty plantings of native prairie species.



SOUTH OPTION
Level 1



Grayslake Campus

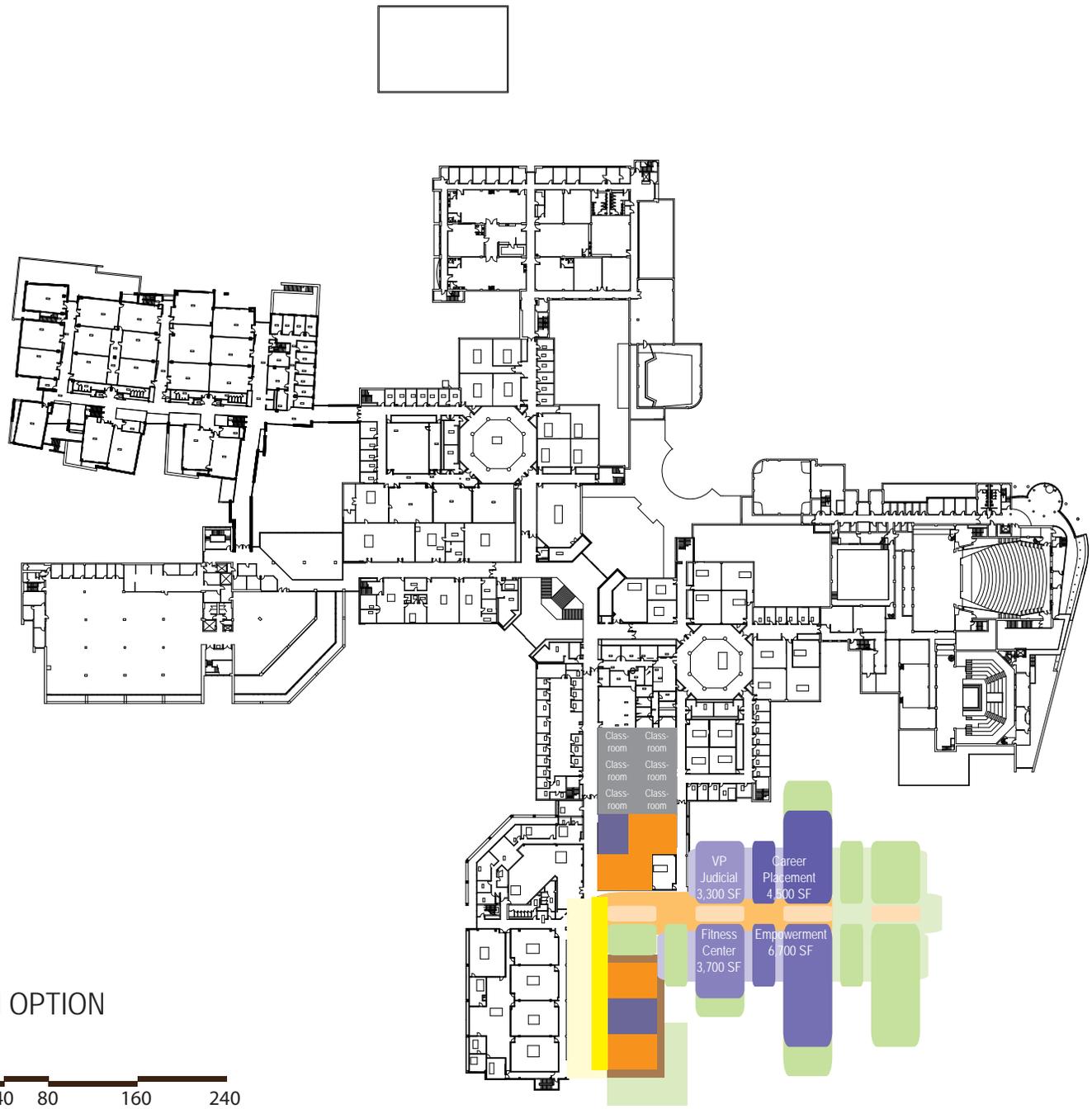
Student Center Options

The intent was to create three distinct and viable scenarios for the consolidation of Student Center/Student Services functions. One focused on the south side of the campus, one in the center and one on the north. Each was to be associated with a new Campus “Front Door” and, if possible, “reach out” towards parking. “Transactional” functions embodied within the Student Services component were to be proximate to parking while the “Activities” functions comprising the Student Center component were to be more proximate to the existing buildings.

South Option

The South Option for the Student Center was conceived in conjunction with the proposed new Science/Engineering building. Since this new building will extend the existing science facilities in and around the C-Wing, the Student Center was conceived integrally with it stepping down eastwards to the South Student Lot with all functions straddling a central, east-west circulation spine.

“Transactional” Student Service components were located on the far east as large, flat-floor components all on a single level. “Student Activities” were then placed above, leading to the Science components. Sustainable roof terraces were thus developed.



SOUTH OPTION
Level 2





SOUTH OPTION
Level 3





Grayslake Campus

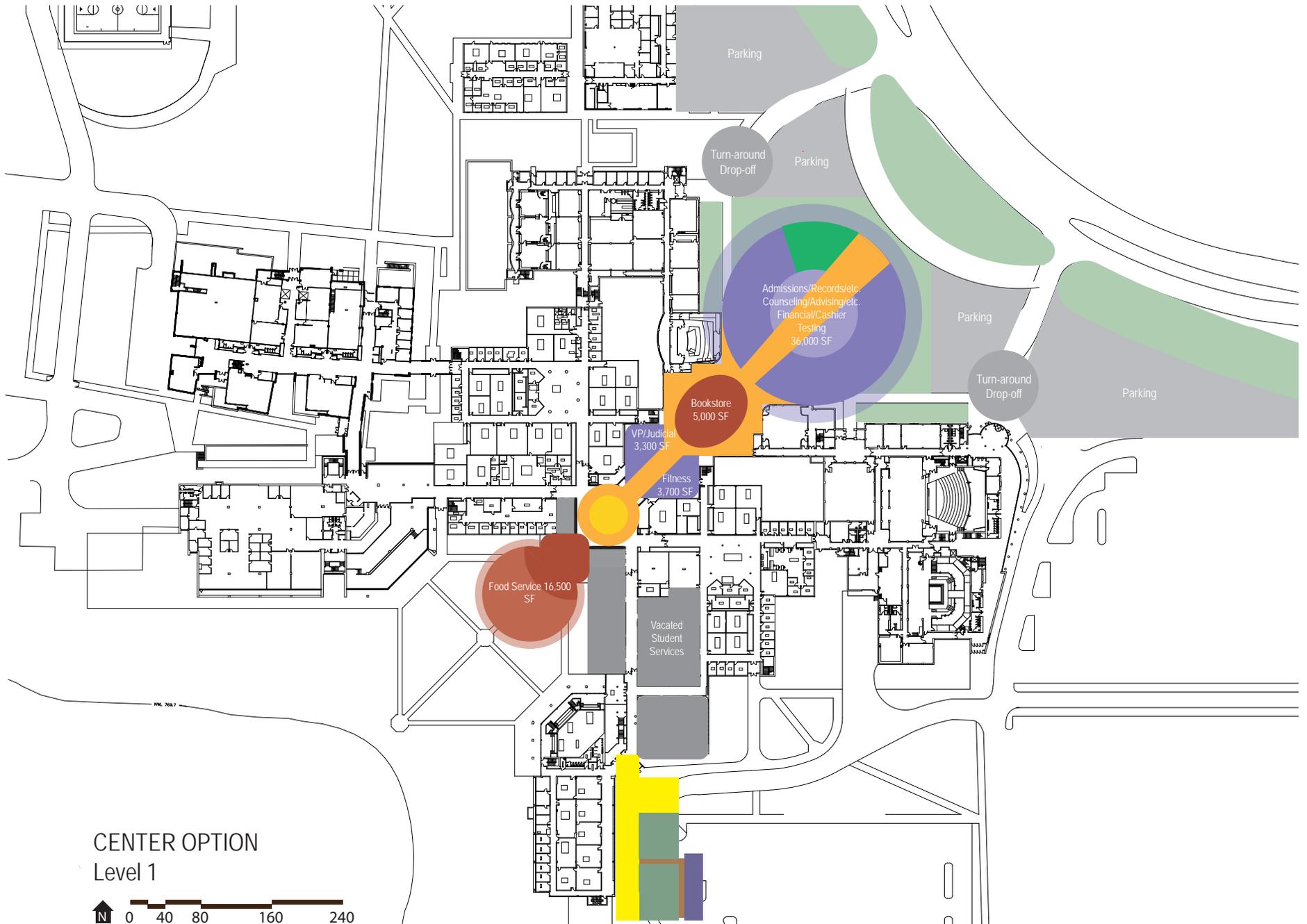
South Option

The Cafeteria was positioned on the ground floor to the south side of the circulation spine, allowing both solar exposure and spill-out opportunities to adjacent outdoor areas.

Some components of the program - like the Bookstore - were placed in renovated areas within the existing buildings. This helped to create a more “seamless” transition from new construction to existing. Other current Student Center spaces being vacated then became available to be renovated, upgraded and re-purposed.

A structural colonnade created transitional “porches” to shade the glazing. They also offered weather protection for students as they approached the facility from all directions and when they would emerge from the building to use the outdoor terraces and gardens.





CENTER OPTION
Level 1



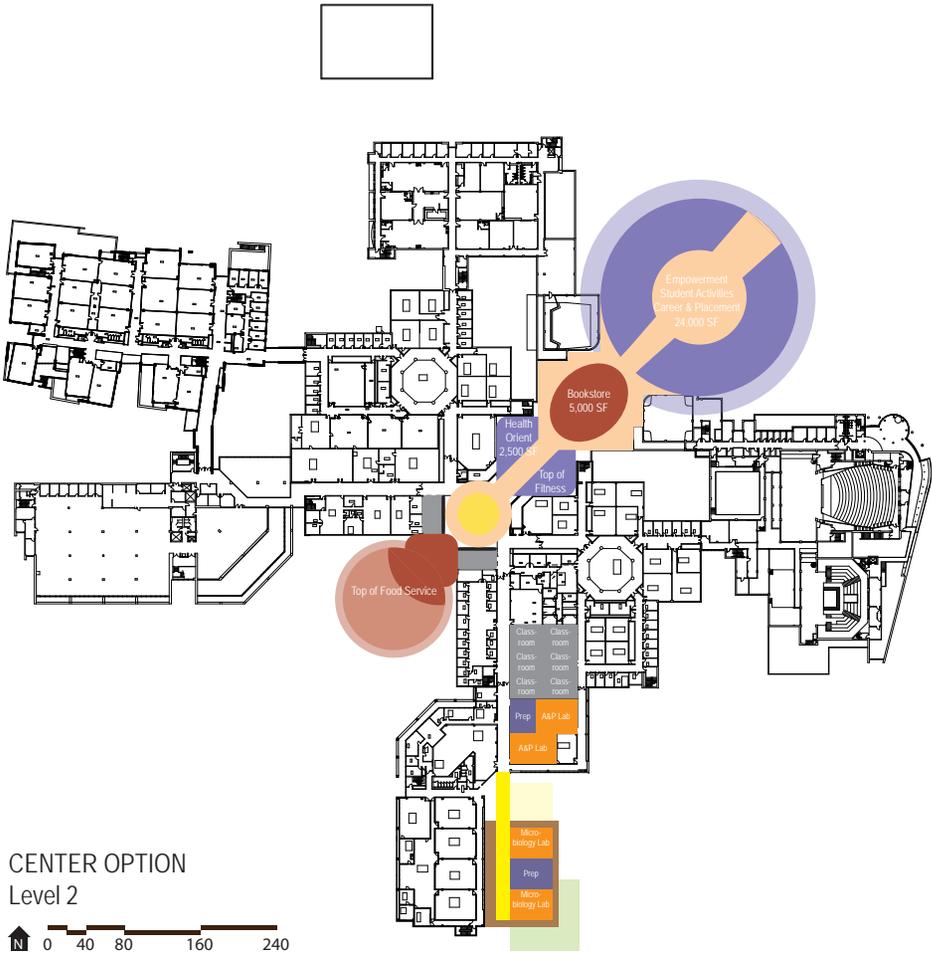
Grayslake Campus

Center Option

The Center Option for the Student Center was conceived to be embedded directly into the center of the campus and to provide an entirely new image to the campus. All immediate “transactional” services of the Student Center were placed on a single level at grade. This large “flat-floor” strategy creates a “one-stop-shop” for clarity of student orientation and facilitates staff cross-training and accessibility for students. Organized about a central circulation spine and atrium, some Student Services components were placed on a second level. The sense of singularity was thus maintained within the limited footprint available.

The “Student Activities” components of the Student Center were then arranged along the circulation more directly in the center of the existing campus. This provides a true “student heart” to the campus. The new cafeteria becomes the second “anchor” along the spine. Situated beyond the existing atrium, it allows for broad expansive views of the lake and the potential to form outdoor terraces and gardens around it.

In conjunction with renovations in the existing central atrium like removing the monumental stair, the cafeteria adds to a wide range of new student spaces in varying sizes for varying uses: concerts, fairs, symposiums and just general gathering.





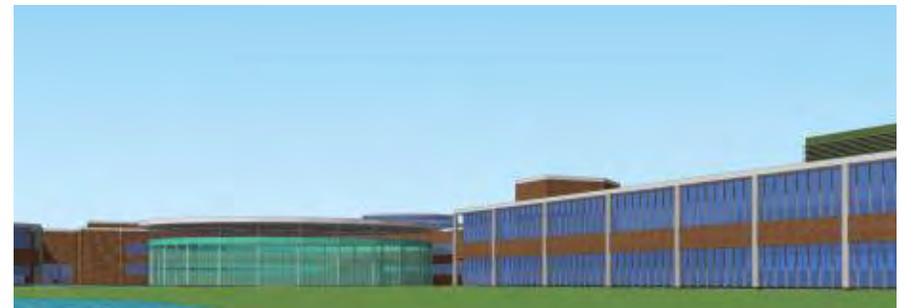
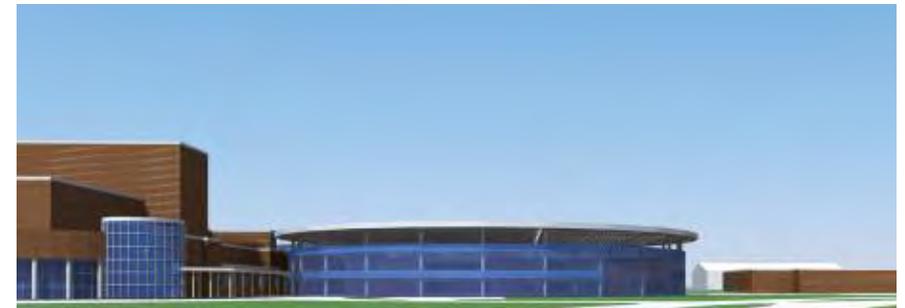
Grayslake Campus

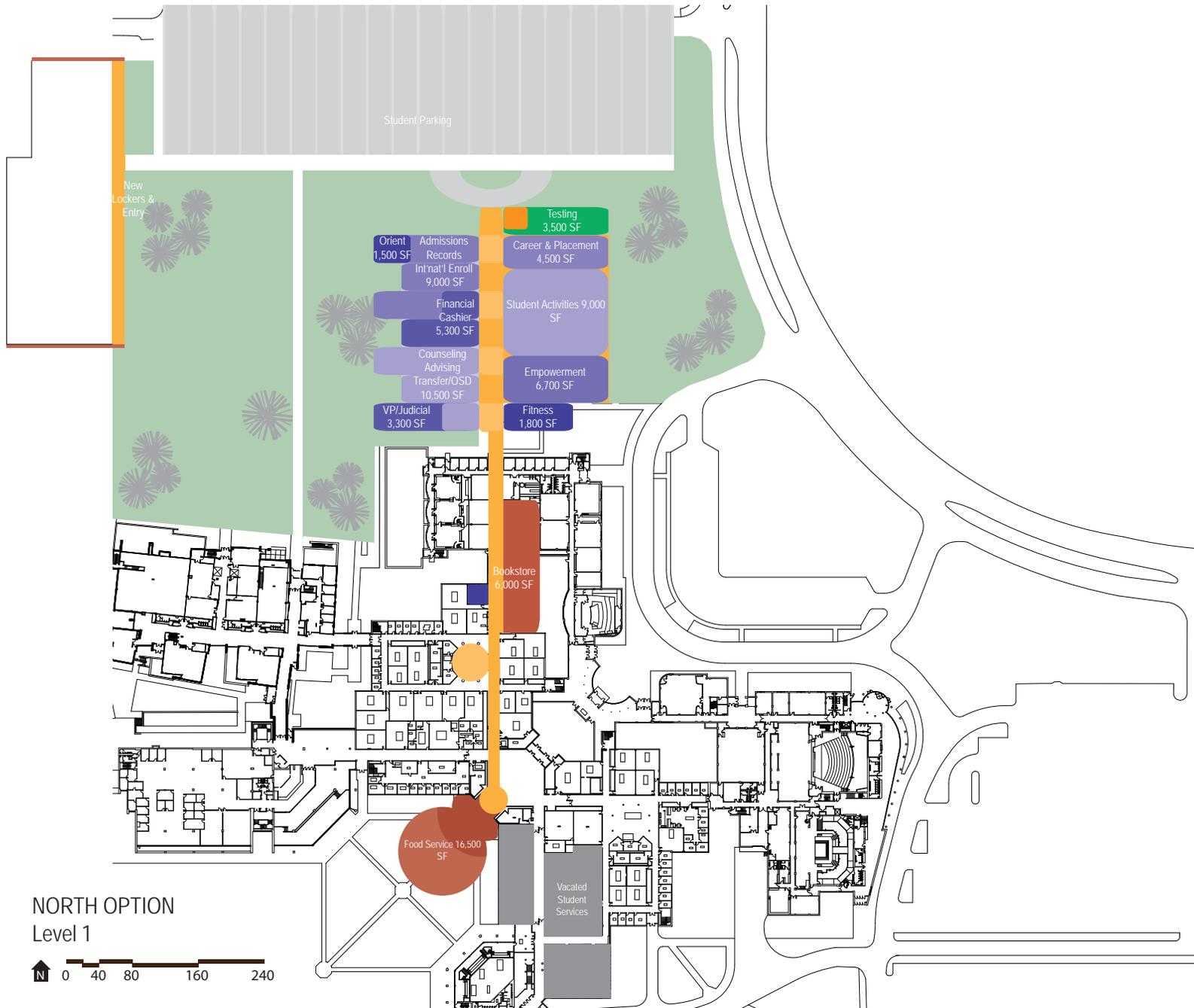
Center Option

The distinctive shapes of both the Student Services building and the Cafeteria bring an entire new image to the campus directly into its center. In a sprawling campus they become focal points as well as activity generators. This focusing aspect is emphasized by their lightweight, glassy expression in contrast to the existing brick structures.

Their flat, broad overhanging roofs protect the glazing below, imparting a sense of openness, expansiveness and greeting while being rooted down into the flat, prairie landscape. Compact, these forms are both energy efficient and capable of providing surfaces for energy generation.

Thus, in the Center Option, the Student Center and the Cafeteria simultaneously reach out to the world beyond, welcome it in, and concentrate the energy and activity of the campus into its core.





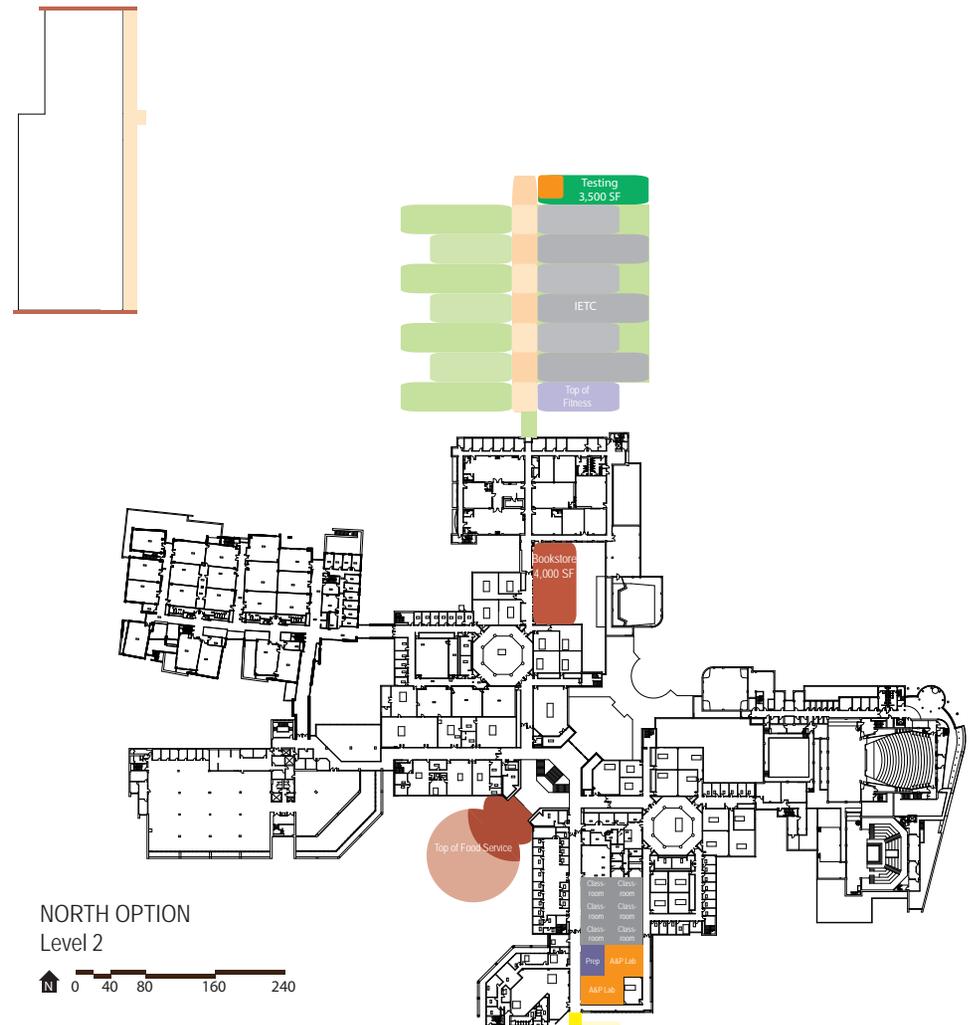
Grayslake Campus

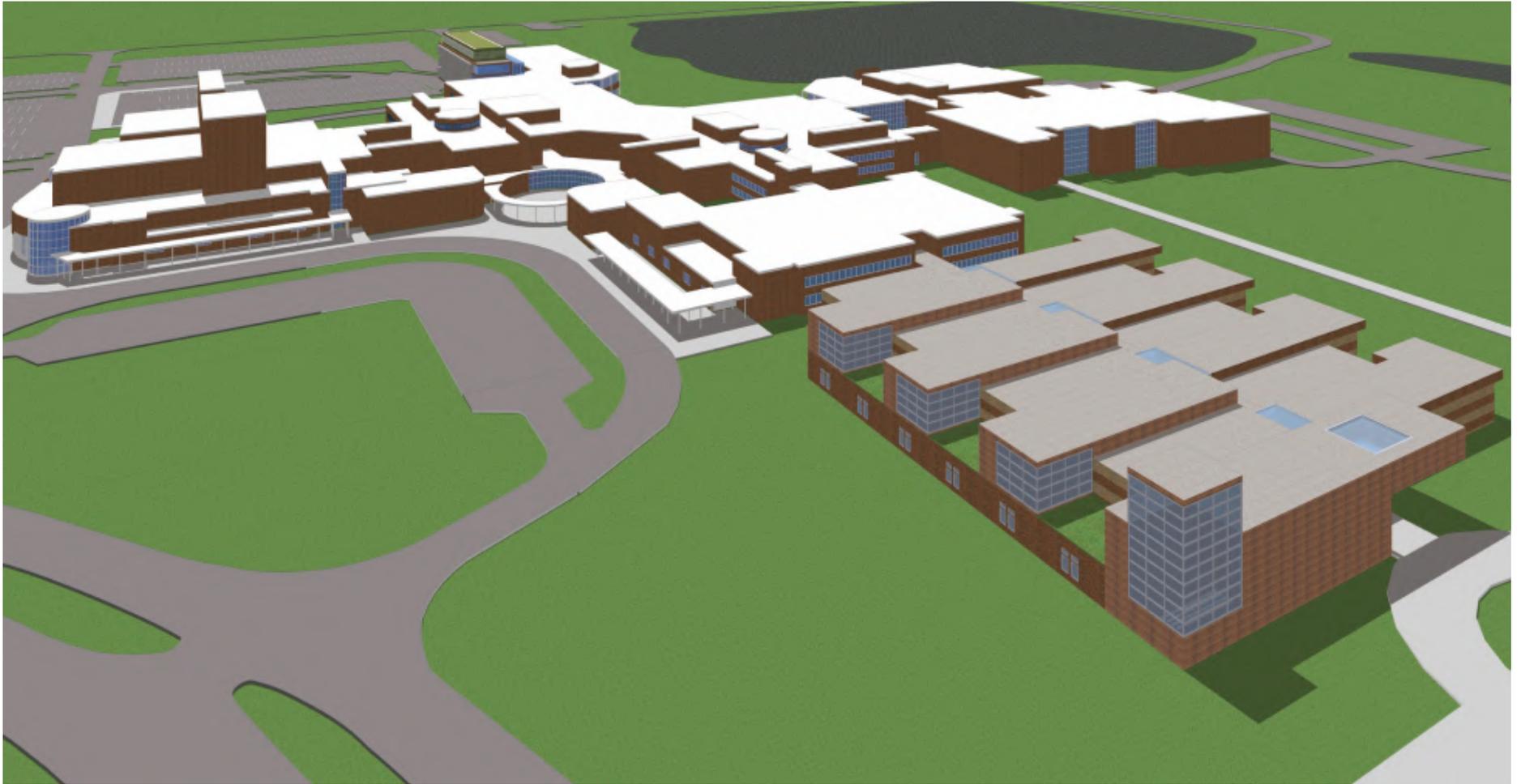
North Option

The North Option for the Student Center attempts to re-use the existing IETC building. This building, now a single level, was constructed to take a second level. By moving the existing IETC functions up to a new second level, the goal of placing all the Student Service “transactional” components on a single, at-grade level can be achieved.

A central north-south circulation spine is introduced between the re-purposed lower IETC floor and the new construction to its west. As this spine extends south, existing corridors are widened and Student Activity components are introduced into the existing building along the way. This spine then leads - as with the Center Option - to a renovated atrium and new Cafeteria overlooking the lake, with all its attendant variety of spaces and uses.

With a new northern entry and north-south spine leading to the inner core of the campus, the northern parking lot will expand both in use and size. This tends to knit the campus together in relation to student parking and clarifies the overall circulation.





Grayslake Campus

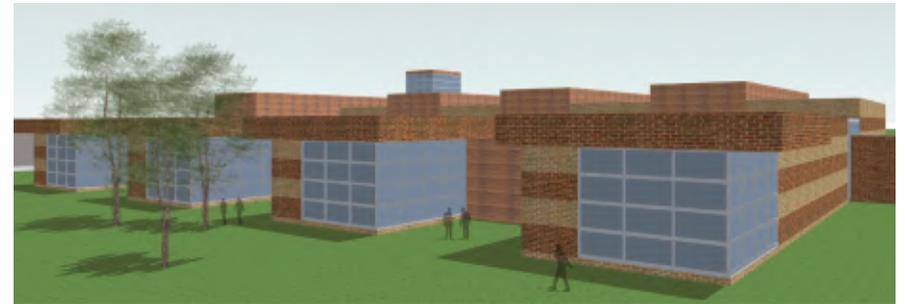
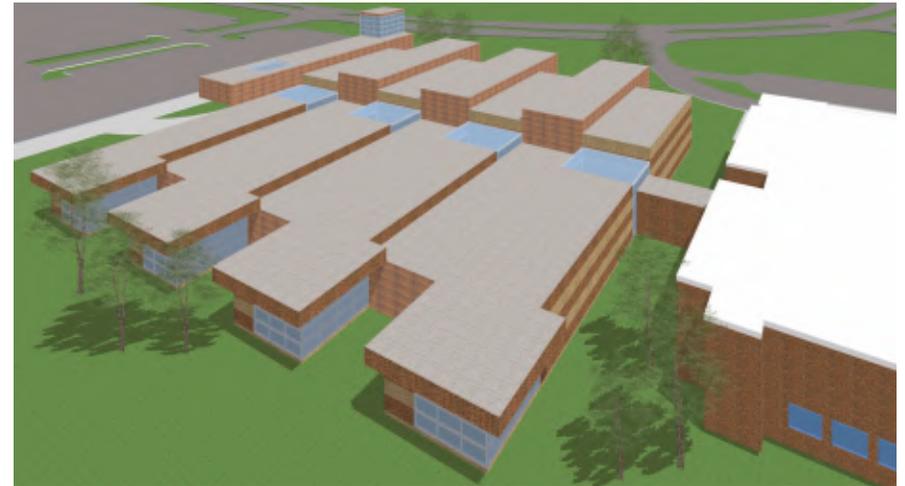
North Option

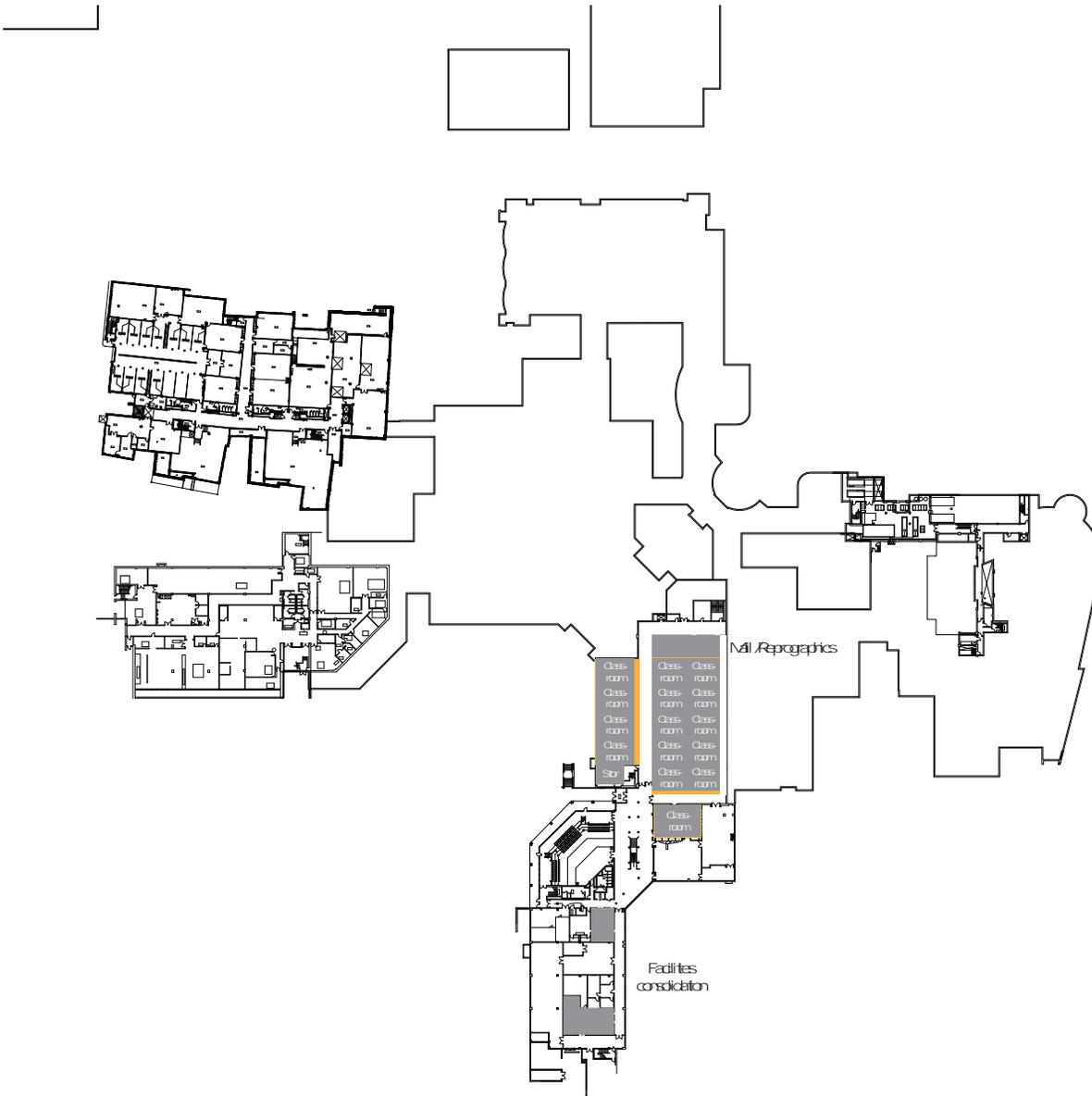
The existing IETC building is re-imaged to become a new focal point as one approaches the campus from Washington Avenue on Lancer Lane. Parking on its east has been replaced with landscaping and a vertical element is added to its northeast corner. Roof terraces alternate with the new upper-level development to bring in more natural light to the deep space.

Similarly, on the west, gardens alternate with the functional accommodations to orient the building more to the south and the sun. The existing, large lawn bordered by the Technology Building and the Physical Education Building is, thus, brought into direct contact with the Student Services.

The north-south circulation spine created between existing IETC and the new construction at grade extends to "D" Building as a two-level enclosed connector.

A new campus-scale entry is formed to face the expanded North Student Parking Lot welcoming and protecting students as they enter or are dropped off. Brick patterns enliven the building throughout.





Level



Grayslake Campus

Lower Level

Common to all options - South, Center and North - is the re-purposing of space in the Lower Level. This is occasioned by the demolition of the last remaining temporary building and with the Food Service, Cafeteria and Bookstore being moved to the First Level.

Classrooms for both Adult Education and other academic purposes use would be created. Facilities Services would be consolidated with the Mail Room and Reprographics possibly relocated adjacent to the central elevator. It is also expected that the service elevator for the new Science/Engineering building will be located so as to be easily accessed from the loading dock. This, then, supplements the single passenger elevator that is now used for service.

The Willow Room may, in turn, be converted to become another element in the overall existing conferencing facilities.



Existing Classroom Modernization

Classroom instruction is the fundamental mission of a Community College. Existing classrooms throughout the College of Lake County system should be modernized to a state-of-the-art-and-beyond condition. The models for this strategy - both in terms of technology and finishes - are to be found in the University Center of Lake County immediately across Lancer Lane on the Grayslake Campus.

In addition to new, flexible furniture consideration should be given to high speed wireless access in every classroom as well as other technologies that enhance the learning environment such as document cameras, touch panel displays, speaker microphone systems, etc.

A program of testing some Classroom Prototypes before embarking on overall modernization is proposed. This could involve three classrooms at the Grayslake Campus plus one each at the Lakeshore Campus and the Southlake Campus.

Commitment to Sustainability

The College of Lake County is deeply committed to integrating sustainability throughout its institution. The College's stated priority goal is to take a leadership role in accelerating social, economic and environmental sustainability on campus, within the local community and across the State of Illinois. To accomplish the desired institutional impact, the College's vision must be supported through a robust, affordable, fully sustainable infrastructure, green building design and construction, and environmentally conscious operations on all campuses.

Building upon this premise of sustainable leadership and institutional responsibility, the CLC's has developed the Sustainability Plan, which incorporates the ACUPCC (American College and University Presidents' Climate Commitment) Climate Action Plan. The College's sustainability accomplishments also include Silver Rating from the STARS (Sustainability Tracking, Assessment and Rating System) achieved through Association for Advancement of Sustainability in Higher Education, and a founding membership in the Illinois Green Economy Network. The College is currently expanding its sustainability-based curriculum to fully integrate sustainability in its academic program offering.

This holistic approach to sustainability in higher education and efforts aimed at stimulating local economic revival through sustainable development practices requires matching renewable energy infrastructure, energy-efficient campus buildings, and a long-term energy strategy that will enable uninterrupted delivery of the College's educational programs in a changing economy.

Goals and Strategies

Going forward, the College should consider setting several additional goals:

- Limit (cap) energy required to operate its buildings on all campuses.
- Construct new buildings and/or renovate existing buildings without increasing overall energy use.
- Develop scalable renewable energy infrastructure that will support off-grid campus operation.
- Enable off-grid campus operation within 10 years.

To achieve these goals, the following nine strategies are being recommended for implementation. These strategies outline a campus-wide shift toward technologically advanced building systems based on on-site renewable energy generation implementation of the select, effective energy-efficient building systems available on the market:

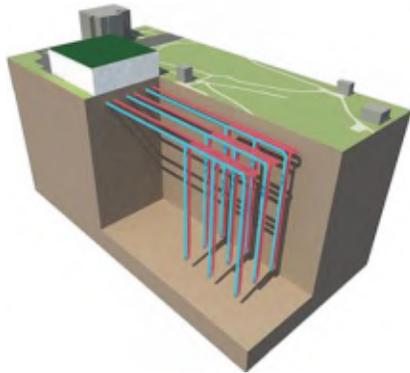
- LEED Platinum Certification for New Construction and Major Renovation Projects
- Geothermal Central Plant and Geothermal Loop
- Solar Water and Air Heating Infrastructure
- Renewable Energy Demonstration Projects
- Fuel Cell Electrical Power Supply
- LED Lighting
- Commuter Reduction
- Electric Vehicle Charging Stations
- Sustainable Site Operation

The proposed strategies would be implemented in two phases over a period of ten years.



LEED Platinum Certification For New And Existing Buildings

It is recommended that all new construction and major renovation projects on campus should achieve LEED Platinum certification level. Phased LEED-EBOM Platinum Certification should be attempted for all existing buildings.



Geothermal Central Plant And Geothermal Loop

In lieu of conventional chiller/boiler central plant, a geothermal field based system should be used to provide heating, cooling and ventilation on campus. Geothermal systems allow for a significant reduction in building energy use, as much as 25-40% over conventional HVAC systems.



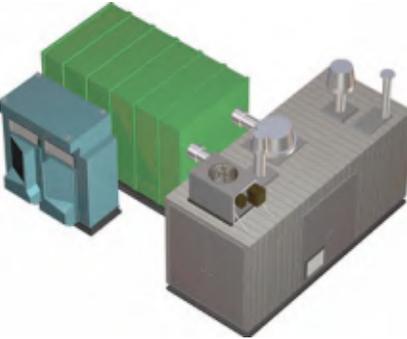
Solar Water & Air Heating Infrastructure

Solar water and air heating technology offers an affordable means to harness sun radiation and translate it into hot water or pre-heated fresh air. Creating a roof-based solar heating infrastructure at all campus locations will result in significant energy saving and also provide free hot water for showers and other uses.



Renewable Energy Demonstration Projects

Renewable energy demonstration projects will promote the use of renewable energy and sustainable building design, and can help integrate renewable energy technologies in to sustainable curriculum at CLC. The will also generate additional electrical energy that could be used on all campuses.



Fuel Cell Electrical Power Supply

It is recommended to install a fuel cell(s) throughout the campus, as a transitional method to provide reliable, off-grid electrical energy power supply to the campus. One of the advantages of fuel cells is that hydrogen fuel can be derived using a variety of readily available energy resources such as biomass, water electrolysis, natural gas, propane, and methanol.



LED Lighting for Buildings and Parking Areas

A phased retrofit of all existing lighting systems to LED light fixtures is recommended as a proven way to significantly reduce use of electrical energy needed to power electric light fixtures on parking lots and in the buildings. This will generate savings in utility costs as well as reduced cost of operations and maintenance.



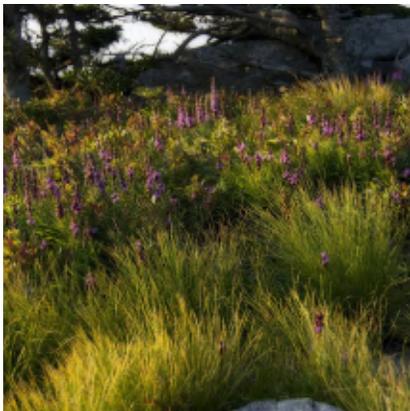
Commuter Reduction

Reducing the number of commuters driving to any of the colleges' campuses will result in significant benefits over time. Some of these benefits include reduced investment in parking infrastructure upgrades and maintenance, reduced traffic congestion and increased accessibility.



Electric Vehicle Charging Stations

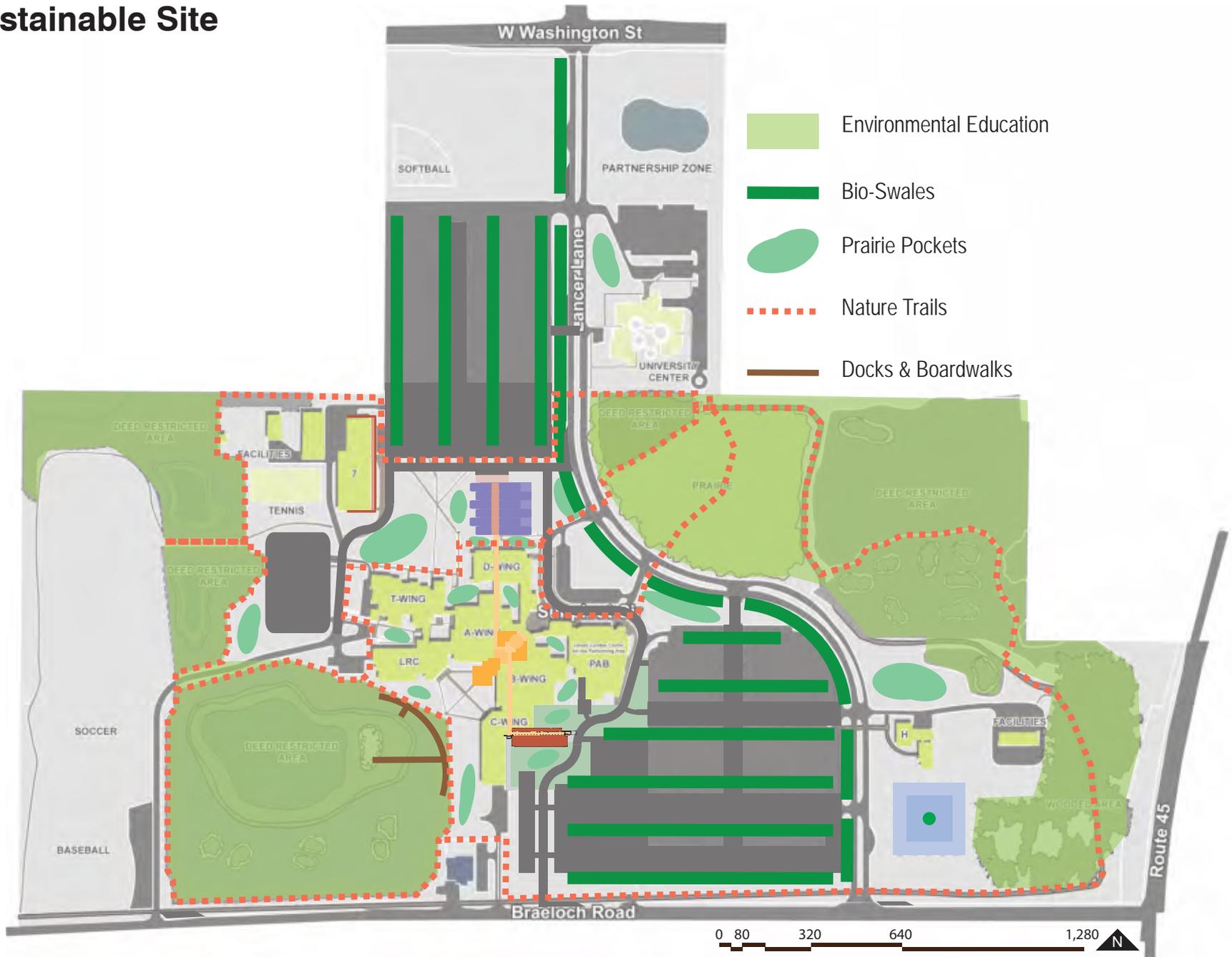
It is recommended to develop an Electric Vehicle charging infrastructure on campus. This will promote a variety of sustainable transportation options, and enable CLC's community an easier switch to a non-fossil fuel operated vehicles. An initial charging station infrastructure could be established through a third-party vendor, which will minimize installation and operation costs.



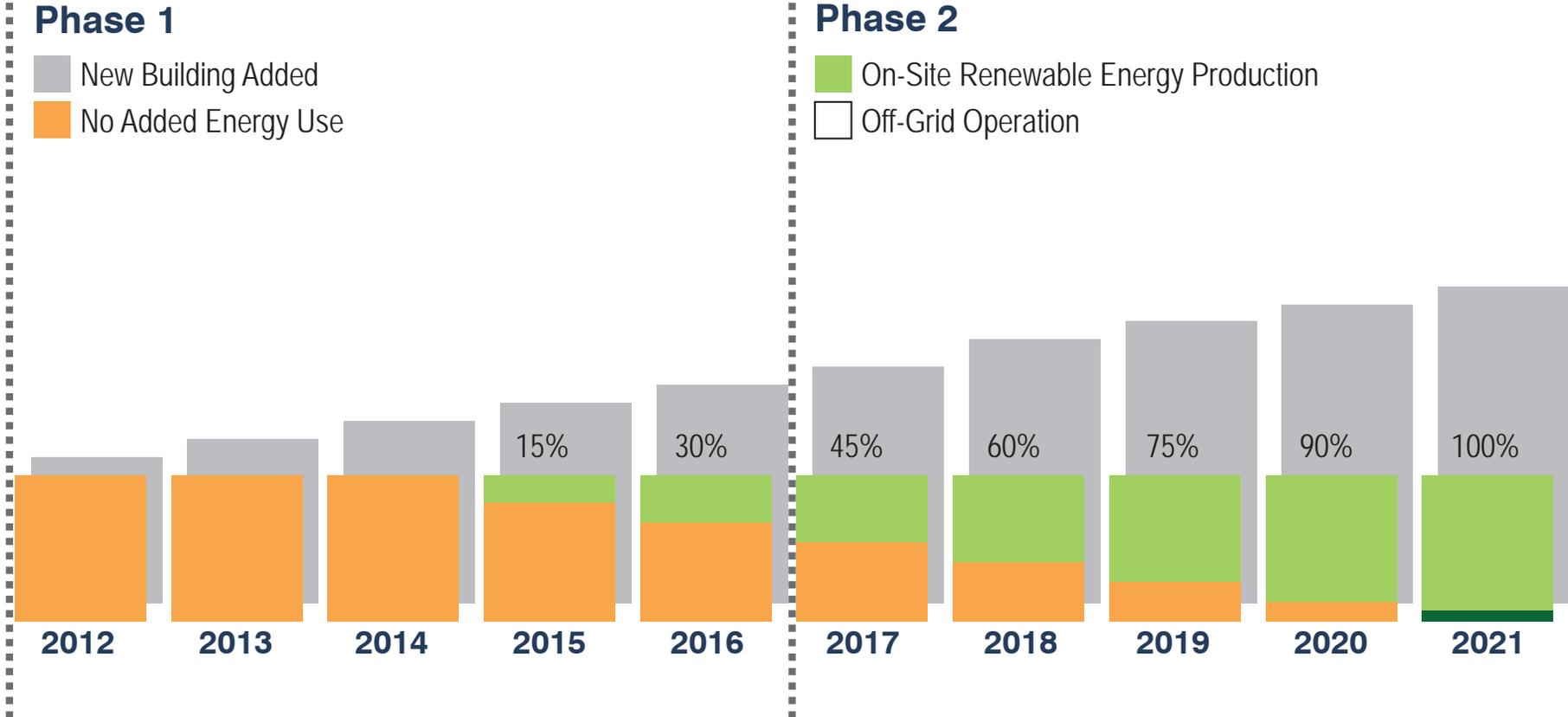
Sustainable Site

CLC already offers variety of courses and training programs that provide education about sustainability, energy-efficient technologies and environmentally-friendly practices. Further integration of sustainability principles into everyday campus operations, using green building features as a teaching tool and creation of self-guided nature trails throughout the site, will reinforce the College's vision and its sustainable policies and goals.

Sustainable Site



Phased Conventional Energy Use Reduction



New Building Construction
 Conventional Energy Use
 Renewable Energy Use
 15% Conventional Energy Reduction
 Renewable Energy Offsets



Lakeshore

The intent is that the Lakeshore Campus become a Full Service Campus that satisfies key overarching goals.

Goals

- Create a Campus
- Engage Downtown Waukegan
- Maximize Site & View
- Define the Academic Program
- Enhance Security

Full Service Campus

The Programs will include Classrooms, Adult Education, Library and a full complement of Student Services as well as Career Programs such as a Culinary Curriculum with Restaurant, expanded Health Care offerings with new lab space, a flexible Career Transition space and Arts/Studio classrooms with a Gallery. A community space with meeting rooms and a large campus-wide space for gatherings is also intended.

As with the Grayslake Campus, three options were proposed. However, during the development of these options, additional property before work suspended due to additional property acquisition.





Lakeshore

Option 1

Generally speaking, the City of Waukegan's buildings are in the three-level range. The building at 33 N. Genesee has three levels above grade. Option 1 honors this scale by proposing a three-level structure covering most of the site.

The existing Child-Care facility with its playground is relocated to the northeastern area of the site, surrounded - for privacy and security - by academic classrooms that require grade access. This move frees the closed portion of Madison Street to become a three-level, glazed, singular space for entry, gathering, meeting and circulation. This Pavilion thus becomes the "heart" of the new campus, linking and unifying all structures.

The Pavilion is complemented by a green space immediately to its east to form an outdoor Quadrangle. Along the northern edge of the Pavilion and Quadrangle will be the Culinary Classrooms at grade. This allows the potential of having several restaurant venues - which can evolve over time - facing the most public spaces of the campus. An entry Drop-Off would be provided off Sheridan Road. Life Science Classrooms and Faculty Offices would be placed above the Culinary Classrooms.

Student Services would infill the area vacated by Child Care in 33 N. Genesee. The alley connecting 33 N. Genesee with the leased parking deck and 1 N. Genesee would be paved with bricks, enhanced with streetscape elements like benches, planters and lighting. A new entry would be





Lakeshore

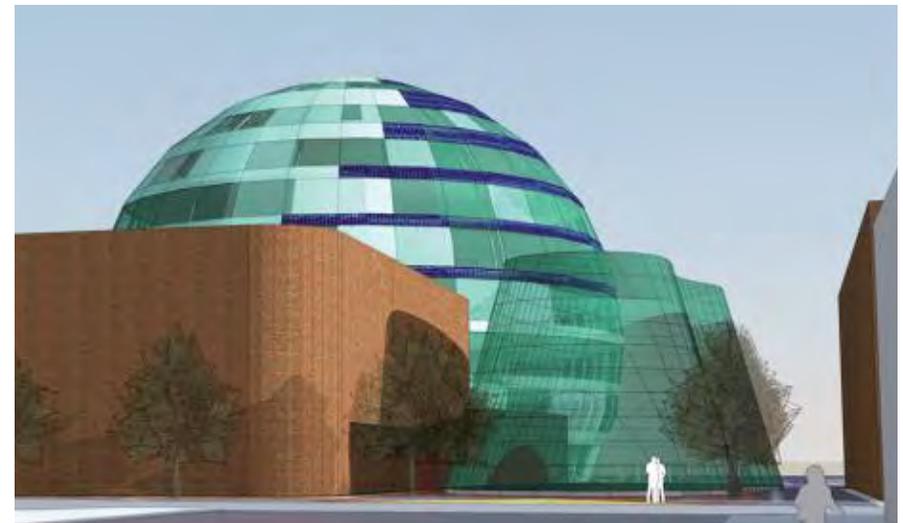
Option 2

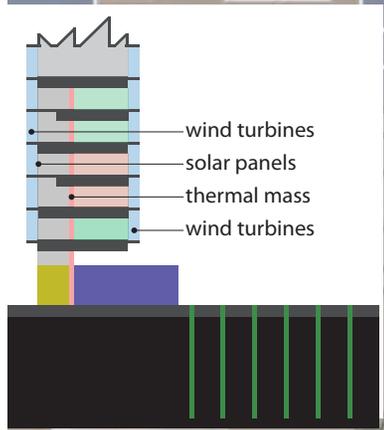
The most compact, energy efficient building form is a sphere. Much of the Lakeshore program can be stacked within this form to provide a dynamic new image for the campus. The remaining program can then be distributed around the base of this singular building. Culinary Classrooms and the Restaurant would be located at the top levels of the sphere with commanding views over the lake and region.

The existing child-care facility with its playground is relocated to the northeastern area of the site, along with academic classrooms that require grade access. This move frees the closed portion of Madison Street to become a three-level, glazed, singular space for entry, gathering, meeting and circulation. This Pavilion thus becomes the “heart” of the new campus, linking and unifying all structures.

The Pavilion is complemented by a green space immediately to its east to form an outdoor green. Along the northern edge of the pavilion and Quadrangle will be the culinary classrooms at grade. An entry drop-off would be provided off Sheridan Road.

Student Services would infill the area vacated by Child Care in 33 N. Genesee. The alley connecting 33 N. Genesee with the leased parking deck and 1 N. Genesee would be paved with bricks, enhanced with streetscape elements like benches, planters and lighting. A new entry would be constructed at the alley termination with 1 N. Genesee.





Lakeshore

Option 3

Option 3 concentrates most of the new construction in a single structure on an east-west axis. This is the optimum solar orientation and frees up the land immediately north of it for a geothermal field. Culinary classrooms could be on grade with the restaurant at the top levels with commanding views over the lake and region.

The existing child-care facility with its playground is relocated to the northeastern area of the site, amid a tree grove atop the geo-thermal field. This frees the closed portion of Madison Street to become a three-level, glazed, singular space for entry, gathering, meeting and circulation. This Pavilion thus becomes the “heart” of the new campus, linking and unifying all structures.

The Pavilion is complemented by a green space immediately to its east to form an outdoor Green. There would be a drop-off from Sheridan Road.

Student Services would infill the area vacated by Child Care in 33 N. Genesee. The alley connecting 33 N. Genesee with the leased parking deck and 1 N. Genesee would be paved with bricks, enhanced with streetscape elements like benches, planters and lighting. A new entry would be constructed at the alley termination with 1 N. Genesee.





Southlake

The most recently constructed component in the college's inventory, the Southlake Campus has only a few immediate needs. It is sufficient at this stage of its development to wait for major developments in accordance with its position on proposed RAMP-funded projects.

Thus, at a Master Plan level it only necessary to identify and illustrate basic short-term and long-term goals.



Short-Term Goals

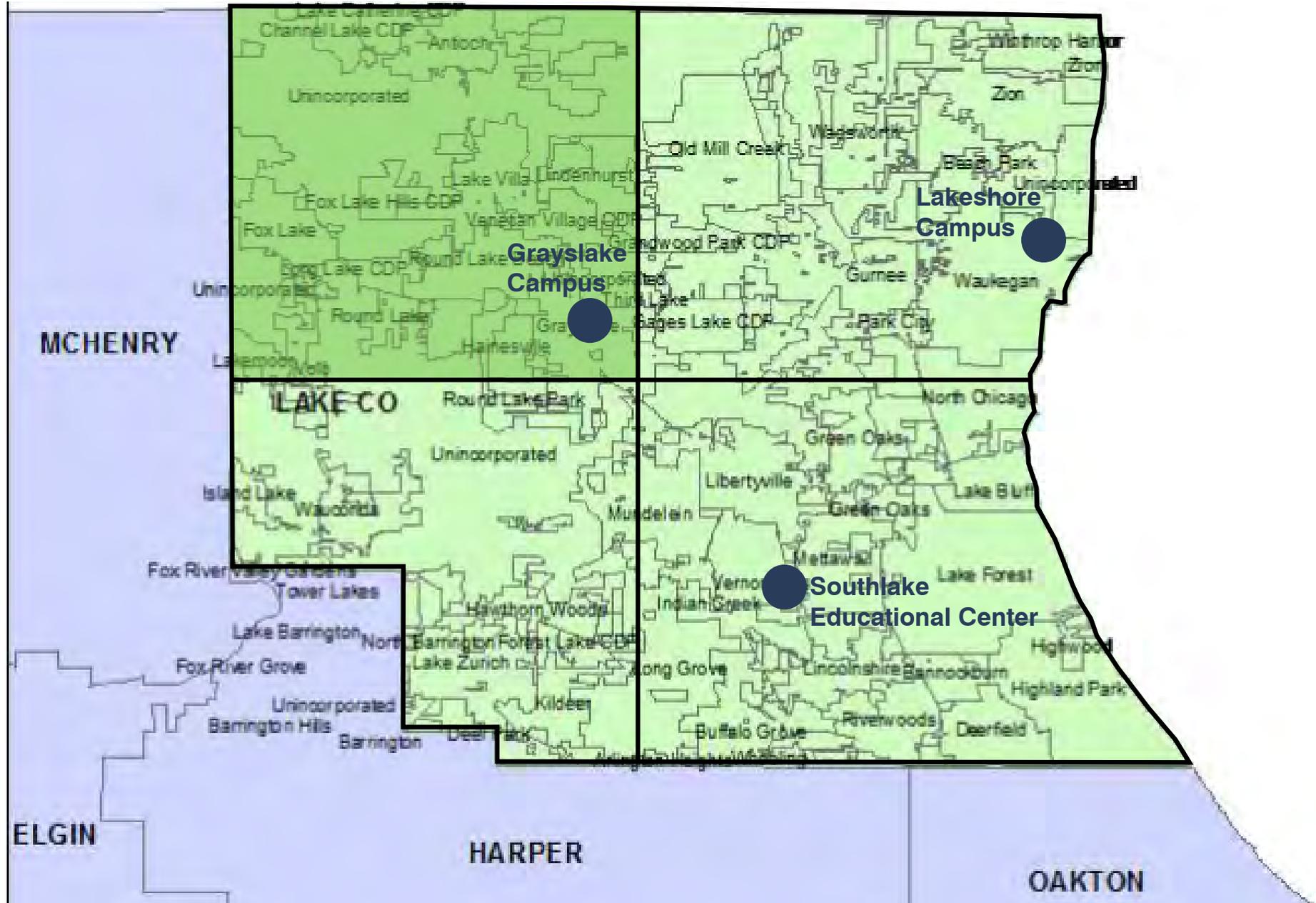
- Science Classroom Upgrade
- Classroom Modernization
- Clarify Entry
- New Drop-Off at Port Clinton Road

Long-Term Goal

- RAMP-funded major expansion



District Map Quadrants



Northwest Satellite

As stated earlier, the northwest quadrant of the district has experienced considerable growth in the past decade and, in the Fall of 2010, served 5,086 CLC students, the highest of the four quadrants. This is an increase of 701 students since the 2006 population of 4,385 students, for an increase of 16%. The northwest quadrant has the highest market share (2.55%) of the four Lake County quadrants when comparing the number of CLC students to total quadrant population.

CLC enrollment in the northwest quadrant is projected to increase by another 501 students (9.9%) by the year 2030, remaining the quadrant with the highest CLC enrollment at 5,587 students.

As part of the Sustainable Master Plan, it is recommended that the need for a northwest satellite campus be further analyzed and evaluated for initial space needs. It is suggested that a search begin for a leased property, with a turn-key approach to serve the CLC students of this quadrant.



SUSTAINABLE
MASTER PLAN²⁰¹²

The Consensus
Sustainable
Master Plan

Daylight Harvesting

LEGATARCHITECTS

sustainability performance design

SPACE NEEDS CONSENSUS RECOMMENDATIONS	NSF	GSF	REMARKS
GRAYSLAKE CAMPUS			
Student Services			
ENROLLMENT SERVICES			1st level new construction west of IETC Building
Admissions & Records, International, Enrollment Services (SD)	4,080	5,304	
Financial Aid (SD)	2,324	3,021	
Cashier (AA)	528	686	
Enrollment Services New Construction subtotal:	6,932	9,011	
STUDENT SUCCESS			1st level renovation of existing 25,300 GSF IETC Building
New Student Orientation (SD)	325	423	
Testing (EA)	3,562	4,631	
Counseling/Advising, Transfer Center, OSD (SD)	5,750	7,475	
Student Empowerment Center (SD)	3,168	4,118	
Career & Placement Services (SD)	4,655	6,052	
Vice President / Judicial Affairs (SD)	1,158	1,505	
Student Success Renovation subtotal:	18,618	24,204	
ES + SS subtotal:	25,550	33,215	
STUDENT COMMONS/STREET			1st level new construction west of IETC Building
Student Commons/Street	5,110	5,621	
Student Services subtotal:	30,660		
TOILET ROOMS, MECHANICAL ROOMS, EXT. WALL, ITC & CUST. CLOSETS			1st level new construction west of IETC Building
Toilet Rooms, Mechanical Rooms, Ext. Wall, ITC & Cust. Closets		11,753	
Student Services total:	30,660	50,589	GSF/NSF = 1.65
Student Center			Enclose checkerboard court & re-purpose A/B 1st level space
Student Activities (SD)	3,142	4,085	
Student Lounge/Student Gathering (SD)	2,529	2,782	
Bookstore (AA)	4,931	6,410	
Bookstore Storage/Receiving/ Overstock Room (AA)	767	844	Re-purpose existing lower level space in B-Wing
Student Center subtotal:	11,369	14,121	
Food Service (AA)			1st level new construction southwest of existing main lobby
Kitchen/Support	993	1,490	
Servery	983	1,475	
Dining	5,942	8,913	
Food Service subtotal:	7,918	11,878	
Police Department (AA)			Re-purpose existing 1st level space in C-Wing
Police	1,703	2,214	
Adult Basic Education, GED & ESL (EA)			Demo Bldg. 4 & re-purpose existing lower level space in B-Wing
General Classrooms	3,409	4,432	
General Classrooms			Approximately 31 new classrooms to be added in re-purposed existing space on the 1st, 2nd, and lower levels
LAKESHORE CAMPUS			
	TBD	TBD	Space needs to be defined as part of the Lakeshore Expansion project
SOUTHLAKE CAMPUS			
New Science Lab and Prep Space (EA)	2800	3080	Re-purpose existing space on a level yet to be determined

Overview

The Consensus Master Plan primarily addresses the Grayslake Campus. Property acquisition and other developments continue to occur at the Lakeshore Campus and the immediate needs at the Southlake Campus are minimal in comparison.

Space Needs Consensus Recommendations

Subsequent to the documentation of the “Part 1 Report: Space Utilization and Space Needs”, the space needs requests underwent further consideration by the department and division leadership, as well as by the Executive Staff. The following space needs are recommended as part of the Consensus Sustainable Master Plan.



Grayslake Campus - Site

Site

The Consensus Master Plan synthesizes the three options that preceded it, with the emphasis being on having three major campus “front doors” connected by an Inner Loop Drive and focusing Student Activities in the center of the campus. Sustainability strategies are then layered onto this basic armature.

Three Primary Doors

The current ceremonial “front door” off Lancer Lane in the center of the campus is inadequate in focusing the amount and variety of arrivals. Two new “front doors” are added to create three primary entrances. One is related to the North Student Parking Lot and is integrated into a new Student Services addition to the existing IETC building. The other is related to the South Student Parking Lot and is integrated into the new Science/Engineering Building. Each brings the parking and the student entries closer to one another.

Inner Loop Drive

A new Inner Loop Drive will connect the three new “front doors.” Driving speed on this road will be slow to enhance security. It will also facilitate the ability to negotiate the large parking areas and enhance drop-offs.

Student Activities

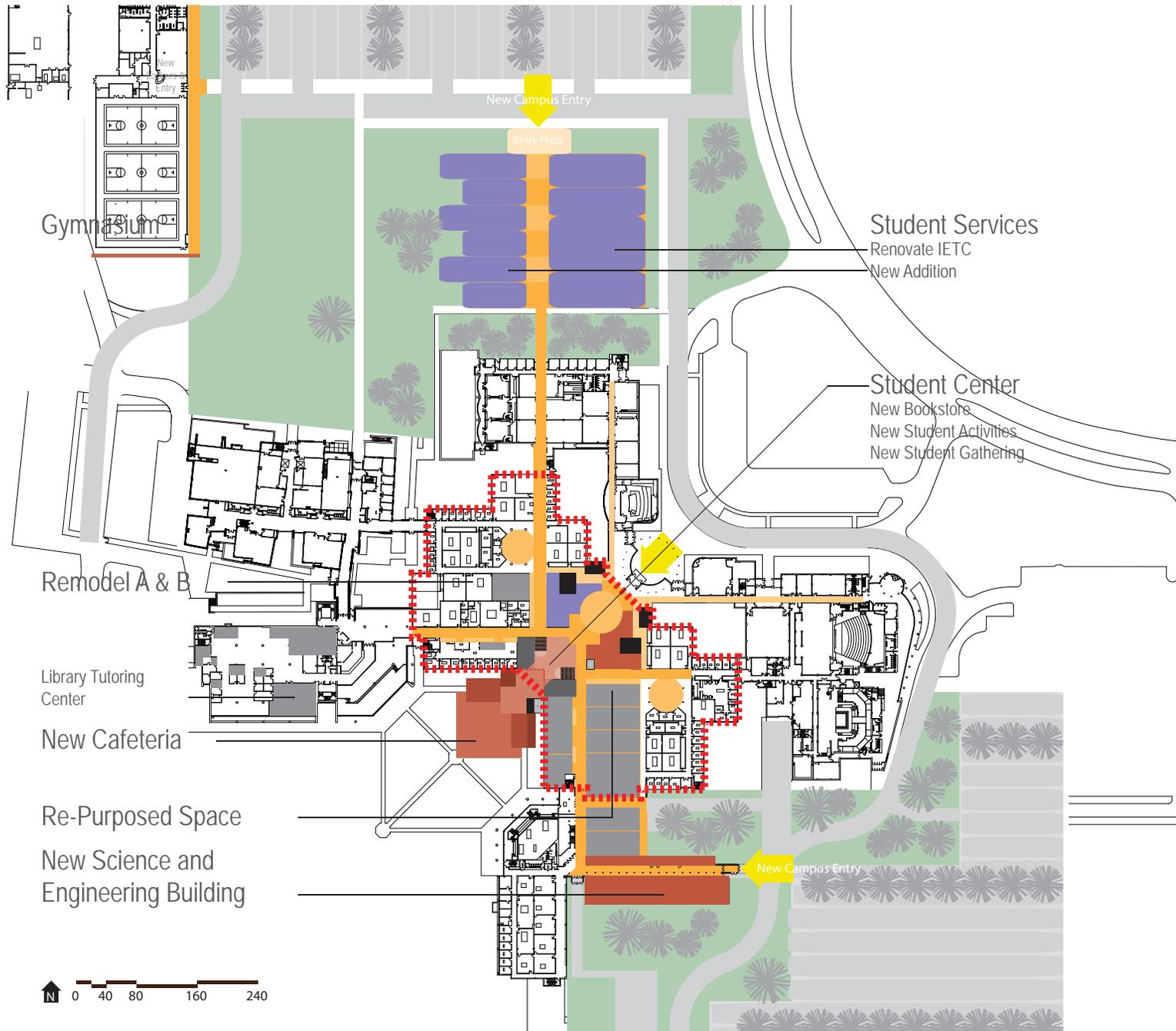
The center of the campus will be renovated to accommodate the student activities portion of the student center program. This will entail integrating a new cafeteria addition engaging the lake with modifications to the current atrium and checkerboard courtyard to develop long-needed student space.

Traffic and Parking

Both the north and south student parking lots will be extended towards the academic buildings. The lots themselves will be re-striped to generate additional spaces. Various turning lanes and 4-way stops will be integrated into both Lancer Lane and Braeloch road to enhance turning movements and prevent long vehicular stacking. Faculty, Staff and Visitor parking will become more easily identified and the Technology Building lot will be expanded and dedicated to Faculty and Staff.

Landscaping

New Entry Gardens will be established at the new North and South “front doors.” The parking immediately east of IETC will be removed in favor of green space. Current gardens east of the C-Wing entry will be expanded both south and east to the new parking extensions. Conifer wind rows to break the wind will be established in the large surface lots.



Grayslake Campus - Level 1

Student Services

The “transactional” Student Services activities will be relocated to a single, “flat-floor” operation using the existing IETC space and new construction to its west. A north-south circulation spine between these two components will extend from a new, northern campus “front door” to the center of the campus. This route will be widened to accept the volume of traffic.

Student Activities and Cafeteria

All Student Centered Activities will be placed in the center of the Campus. This includes a new Bookstore, new student activities proper, new gathering spaces of various sizes and a new Cafeteria with a warming kitchen. The Cafeteria and warming kitchen will be new construction on the lake side of the building. The existing Checkerboard Courtyard will be covered as an Entry Atrium. The existing Grand Stair will be removed and the entire existing Atrium space will be reconfigured for Student Gathering. New vertical circulation will be introduced and existing toilets will be re-worked into more efficient layouts.

Science and Engineering

The new Science and engineering Building will be oriented along an east-west axis to maximize solar and wind orientation. This extends it closer to the South Student Parking Lot, shortening the distance students must walk

from their vehicles to its entrance - which will become the new “front door” to the campus overall.

Remodel A & B

Existing A & B wings will receive new Heating, Ventilating and Air Conditioning systems, new roofing and insulation, retro-fitted exterior enclosure and new interior finishes. Classroom technology upgrades will be integral with this renovation.

Re-Purposed Space

Space vacated by shifting all Student Services to new construction will be re-purposed as general classrooms and academic support space such as faculty offices. The primary corridors will be widened to provide student gathering nooks and niches. Additionally, the Library Tutoring Center will have new dedicated space in the Library.

Gymnasium

The exterior wall of the Gymnasium will be re-clad to integrate it more successfully with the campus as well as more strongly define the northwest open green.

Grayslake Campus - Level 2

Remodel A & B

The renovations to Buildings A & B that are occurring on the first level will continue throughout the second level.

Re-Purposed Space

As part of the new Science and Engineering Building, the space vacated by the Chemistry classrooms will become new general classrooms and new Anatomy and Physiology Labs.

Remodel A & B

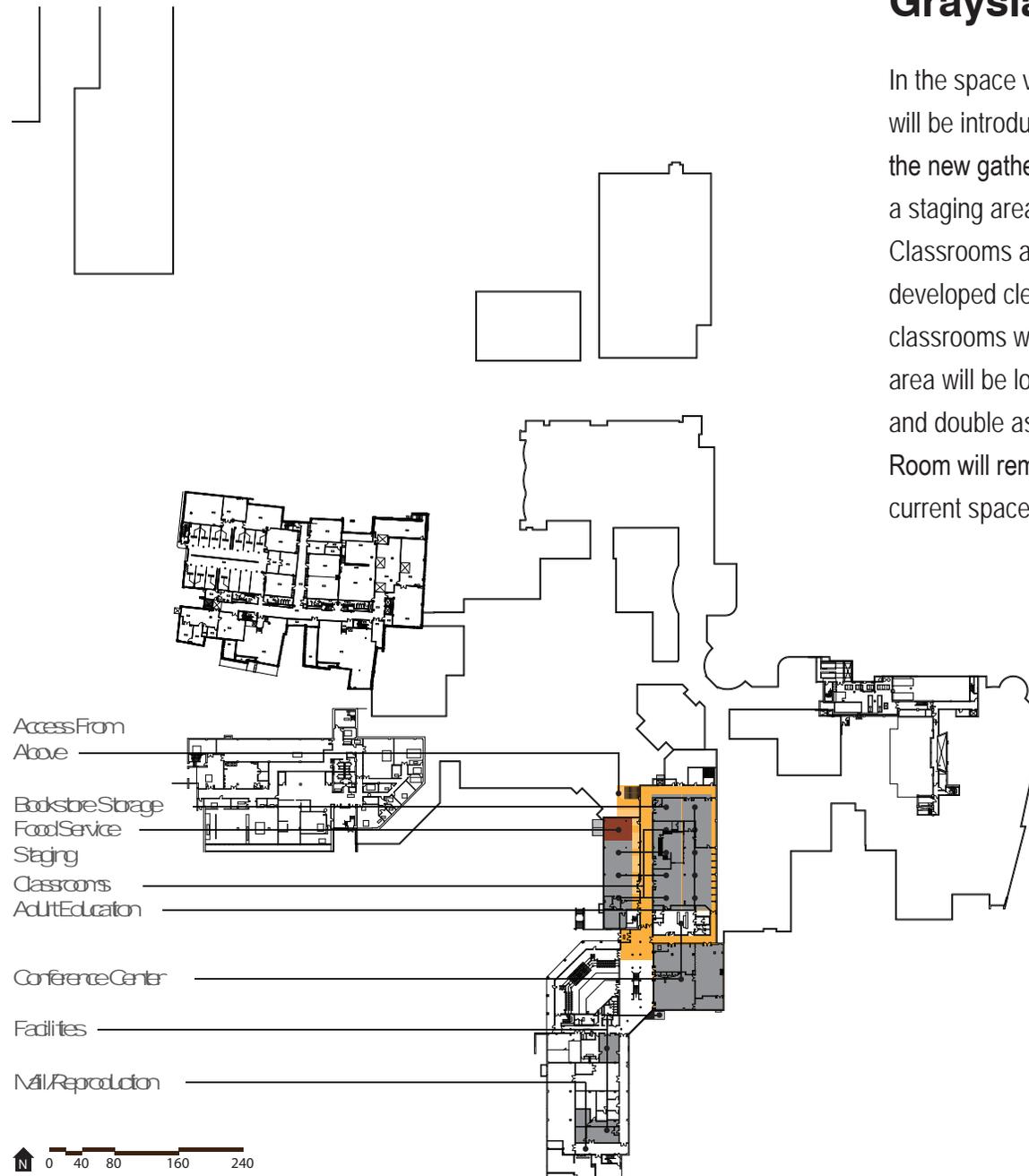
Re-Purposed Space

New Science and Engineering Building



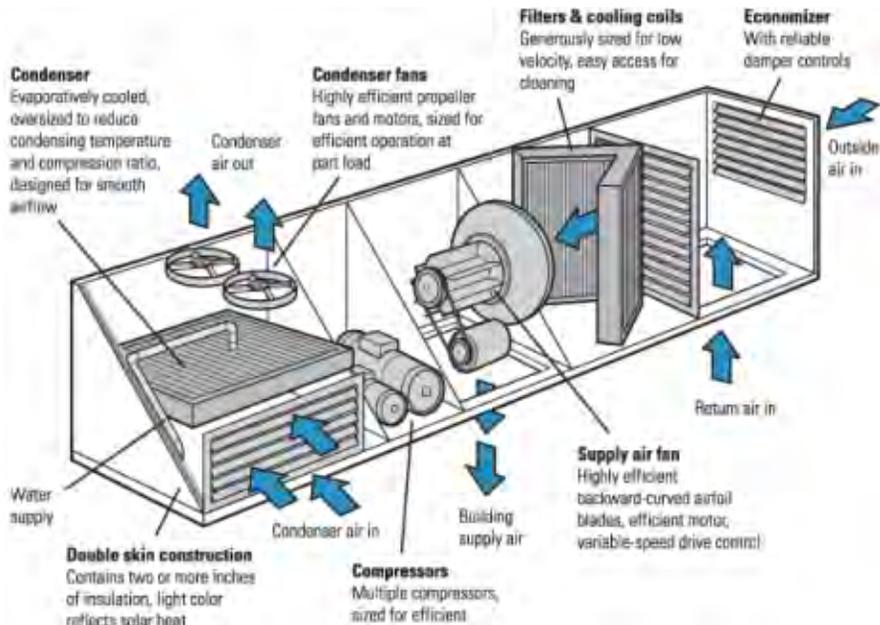
Grayslake Campus - Lower Level

In the space vacated by food service and the bookstore, new classrooms will be introduced along a corridor that leads north to stairs taking one up to the new gathering spaces in the first level. Adjacent to this stair will also be a staging area and vertical circulation to serve the warming kitchen above. Classrooms along the western side of this corridor will have newly-developed clerestory windows along their western side. Adult Education classrooms will be east of these general classrooms. A bookstore staging area will be located across from the central elevator, which will be enlarged and double as a service elevator. The existing kitchen serving the Willow Room will remain. It will serve a newly configured Conference Center in the current space.





Daylight harvesting reduces building energy use and improve occupant well being



High efficiency hvac equipment operating 25-50% better than code

Healthy, Energy-Efficient and Environmentally-Friendly Campus Buildings

LEED-NC Platinum Certification Requirement

It is recommended that all new construction and major renovation projects on campus should achieve LEED Platinum certification level.

LEED Platinum is the highest certification level given to green buildings under the USGBC/LEED standard. Achieving LEED Platinum certification level ensures higher level of building energy-efficiency, renewable energy integration, best-practice sustainable site management, water conservation and occupant satisfaction.

LEED-EBOM Platinum Certification Requirement

It is recommended that all existing buildings on campus should be certified using LEED-EBOM (Existing Building, Operation and Maintenance) green building rating system.

LEED-EBOM certification process should be started by first attempting LEED-EBOM Silver certification level for each existing facility. Subsequent re-certifications attempting Gold and Platinum levels should be coordinated with the College's future master plans, sustainability plans, climate action plans, and availability of third-party grant and capital funding for operational upgrades. Targeting achievement of LEED-EBOM Platinum certification level over a period of 10 years should ensure highest level of energy-efficiency and implementation of best-practice sustainable operations, maintenance and procurement practices for all existing buildings on campus.

Why LEED?

The LEED (Leadership in Energy & Environmental Design) Green Building Rating System™ is a voluntary, consensus-based standard to support and certify successful green building design, construction and operations. Developed by the U.S. Green Building Council (USGBC) in 2000, the LEED rating systems are developed through an open, consensus-based process led by LEED committees.

LEED provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

As a green building rating system, LEED provides a collaborative platform and assurance that future new buildings or existing building renovations have been designed, are built, and will perform as expected.

Using the LEED system also provides credibility because of its third-party certification process. Finally, the LEED rating system is continuously improved to allow new sustainable strategies and technologies to be incorporated.

The U.S. Green Building Council (USGBC) is a 501c3 nonprofit organization committed to a prosperous and sustainable future through cost-efficient and energy-saving green buildings.



Green roof reduces storm water run-off and offers additional educational opportunities



"Building as teaching tool" - Sustainable technologies supplement academic curriculum

Geothermal Central Plant

Geothermal Heating and Cooling

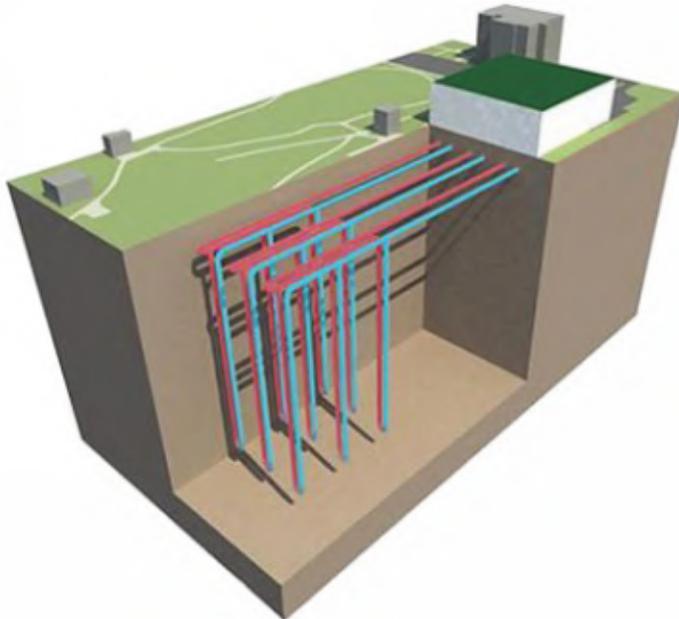
The use of readily available geothermal energy will allow the College of Lake County to provide cooling and heating throughout the campus for about 60% of the energy required to power a conventional heating and cooling system. A feasibility study will be commissioned to determine local soil conductivity characteristics and determine the capacity of available site area that could be used for geothermal field installations.

Geothermal Central Plant

It is recommended that a combination of a large scale geothermal well field and a geothermal loop connecting all campus buildings is used in lieu of the conventional chiller-boiler plant.

This approach would enable phased installation over several years, lower loop cost, lower maintenance cost, higher long-term energy-efficiency, lesser dependence on fossil fuel generated energy and added flexibility of the campus-wide heating and cooling system.

The intention is to schedule a phased installation of geothermal fields at the locations where future construction is unlikely to occur. These locations would include current athletic fields, areas of unoccupied land at the perimeter of the property, also some of the current parking lots, where the geothermal field could be installed during the next scheduled parking surface upgrade. Geothermal fields should be sized based on probable maximum future heating and cooling loads of the fully developed campus.

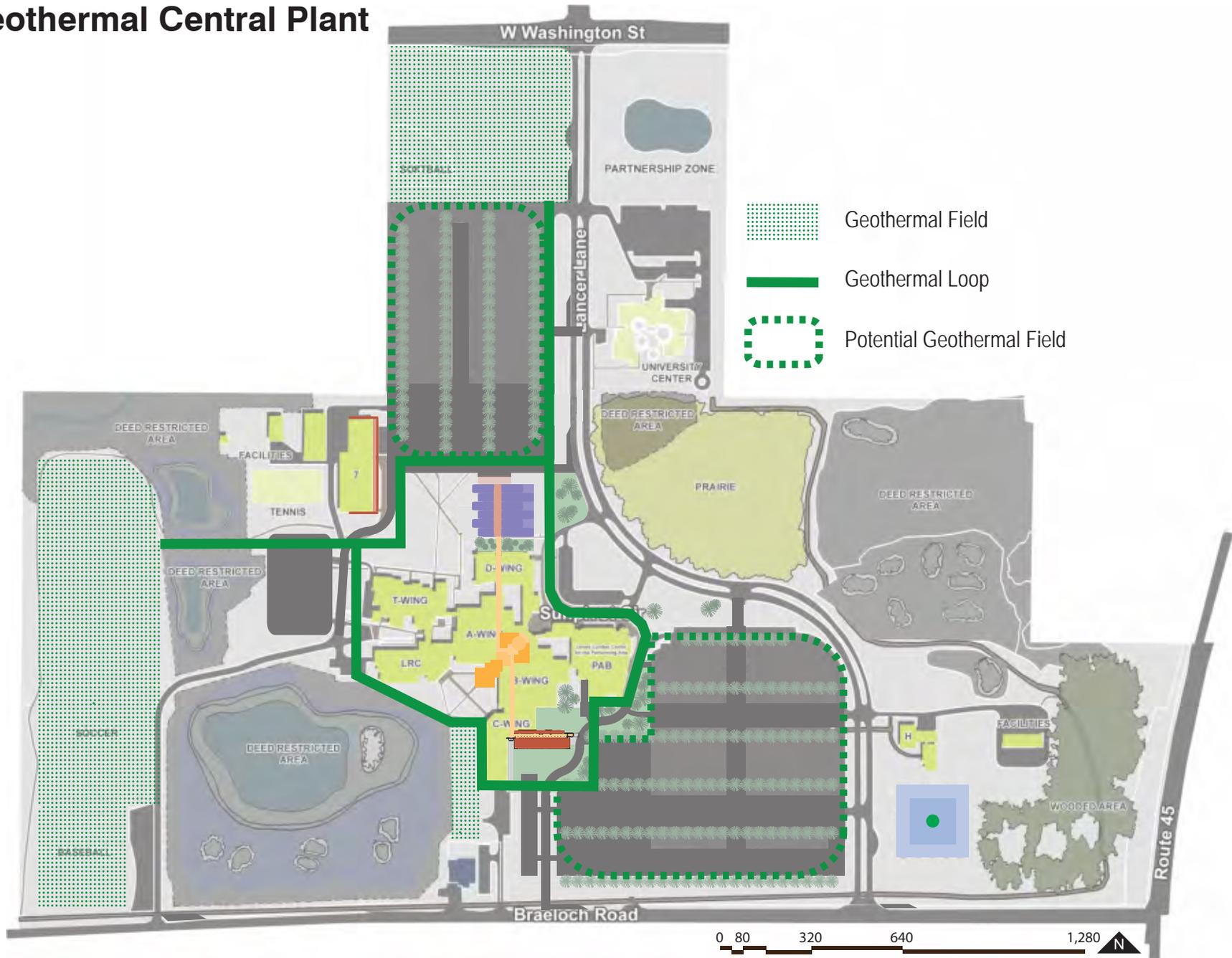


Vertical geothermal loop field and diagram



Geothermal field is typically installed 200-500 feet below ground surface and has no moving parts

Geothermal Central Plant





Self-contained fuel cell equipment requires minimal space for installation



Fuel cell operation diagram

Fuel Cell

Fuel Cell as a Source of Off-Grid Electrical Power Supply

It is recommended to install a fuel cell(s) throughout the campus, as a transitional method to provide reliable, off-grid electrical energy power supply to the campus.

Why Fuel Cell?

A fuel cell operates like a battery that does not run out of power; it is an electrochemical device that uses oxygen and a readily replenished fuel, such as hydrogen, to produce electricity. Individual fuel cells are stacked in a module to produce the desired energy output, much like commercial batteries use an array of individual cells. With heat and water as the primary byproducts, fuel cells are virtually pollution-free and have more than two times the efficiency of traditional combustion technologies, which typically have an efficiency rate of 33% to 35%.

As long as fuel is supplied to the fuel cell, energy in the form of heat and electricity will be produced. Fuel cells can provide power for a range of applications—from laptop computers to utility power plants. When the heat from the fuel cell is captured and used in combination with electrical power (such as combined heat and power), fuel cells can have efficiency rates between 70% and 85%.



Fuel cell equipment used in HVAC programs for student education



Solar water heating panels provide low-cost hot water supply even during winter season



Solar duct preheats fresh air and reduces energy needed to temper incoming air to room temperature

Solar Water & Air Heating

Solar Thermal Water Heating

Solar water heating systems include indoor or outdoor hot water storage tanks and roof-mounted solar collectors. There are two types of solar water heating systems: active, which have circulating pumps and controls, and passive, which don't. Most solar water heaters require a well-insulated storage tank. Solar storage tanks have an additional outlet and inlet connected to and from the collector. In two-tank systems, the solar water heater preheats water before it enters the conventional water heater. In one-tank systems, the back-up heater is combined with the solar storage in one tank.

Solar Thermal Air Heating

Solar Air Heating technologies such as SolarDuct® or SolarWall® systems are highly efficient and are used to temper (pre-heat) fresh air to a higher temperature, thus reducing the cost of energy used to operate buildings. The solar duct technology has been specifically engineered for roof settings and for applications in which a traditional solar wall mounted system is not feasible.

Campus-Wide Solar Water and Heating





Cafeteria space utilizing LED lighting



LED lit classroom and presentation space

LED Lighting

Why LED?

It is understood that the future of indoor and outdoor lighting is in LEDs. LED lamps offer long service life and high energy efficiency. While initial costs are higher than those of fluorescent and incandescent lamps, the life cycle of LED lamps is much longer compared to incandescent lamps. The many benefits of LED lights in applications from outdoor architectural lighting to flashlights to emergency vehicle lighting are well established. Unlike many conventional lighting technologies, LED light materials contain no mercury or heavy metals. Not only are LEDs better for the environment during their operational life, the disposal of LEDs will not further pollute our world's landfills with hazardous waste. LED light bulbs are also mechanically robust; most other artificial light sources are fragile. LED lamps have no glass tubes to break, and their internal parts are rigidly supported, making them resistant to vibration and impact. With proper driver electronics design, an LED lamp can be made dimmable over a wide range; there is no minimum current needed to sustain lamp operation.

LED Lighting LED Applications in Parking Areas

The benefits of LED light are obvious for outdoor lighting applications. The majority of LED fixtures considered for use at the College's parking areas maintain over 70% of their original luminous flux at 50,000 hours - long after any conventional outdoor light sources have burned out. Not only is the pure white LED light more pleasing to the human eye, it also increases the amount of image information captured on security cameras. Therefore, LED-based parking garage lights can both decrease the total costs of lighting a parking area and potentially increase safety levels for everyone who uses it.

By switching to LED parking lot lighting, the College could reduce annual electricity costs by as much as 70% while providing increased visibility, reduction of maintenance costs and natural bright white lighting.

LED Lighting Application in New and Existing Buildings

It is recommended that all new building construction and major renovation of existing buildings at the CLC incorporates LED light fixtures. LED lamps can be made interchangeable with other types of lamps. An assortment of LED light bulbs are readily commercially available as replacements for screw-in bulbs, including floodlight fixtures, reading light, or low-power accent light applications. LED lamps are used for general, educational and special-purpose lighting.

LED Lighting Application in Educational Programs

LED lights have also become very popular in gardening and agriculture. First used by NASA to grow plants in space, LEDs came into use for commercial applications for indoor horticulture as “grow lights”. The wavelengths of light emitted from LED lamps have been specifically tailored to supply light in the spectral range needed for chlorophyll absorption in plants, promoting growth while reducing wastage of energy by emitting minimal light at wavelengths that plants do not require. The red and blue wavelengths of the visible light spectrum are used for photosynthesis, so these are the colors almost always used in LED grow light panels.



Outdoor LED lighting



Library utilizing LED lighting for both between stacks and private study spaces



Solar panels provide coverage for electric vehicle charging stations



Roof mounted solar panels

Renewable Energy Demonstration on Campus

Why Renewable Energy?

We are currently dependent upon fossil fuels that are nonrenewable, finite resources that will eventually diminish until they are too expensive and/or environmentally damaging to retrieve. While the supply of fossil fuels is limited, renewable energy comes from nature's resources that can be constantly replenished. Renewable energy sources include: biomass, hydro, geothermal, solar, wind, ocean thermal, wave action and tidal action. These primary sources of energy can be converted into heat, electricity, mechanical energy and vehicle fuel - over and over again.

Renewable Energy Demonstration Projects

Renewable energy demonstration projects help promote the use of renewable energy and sustainable building design, and can help integrate renewable energy technologies into the academic curriculum at CLC. They will also generate additional electrical energy to be used on campus.

It is recommended that CLC implements small scale renewable energy systems such as wind turbines or solar (photovoltaic panels). This will provide educational opportunities, increase public awareness of the renewable energy resources, demonstrate new technologies and over time increase the infrastructure necessary to escalate renewable energy use on campus. Renewable energy demonstration projects provide excellent opportunities for technical training and educational information for trades looking for job training programs.

Wind Power

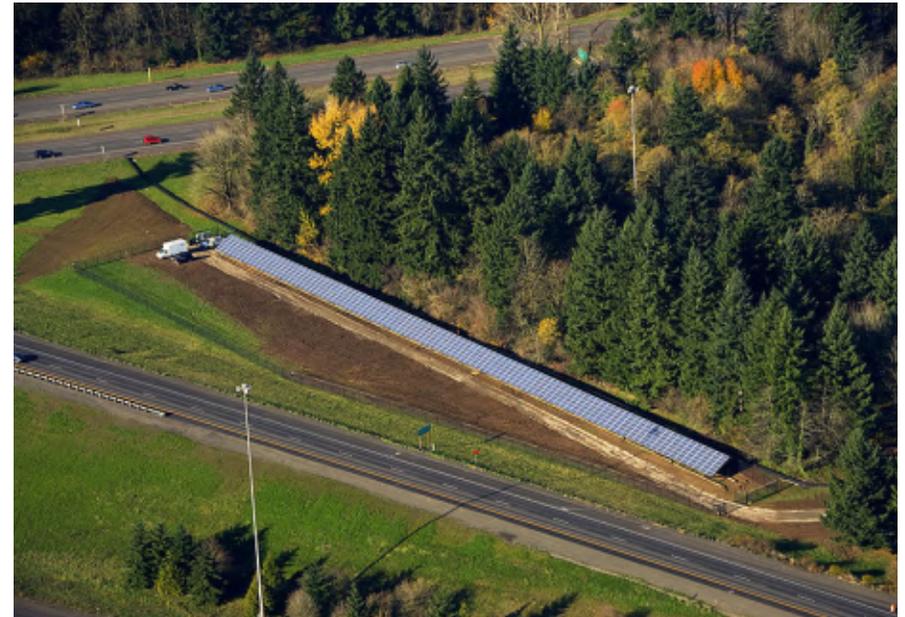
Small scale wind-turbine demonstration projects are recommended. A feasibility study is recommended to determine feasibility of a full size wind turbine.

Solar Power

A demonstration project is recommended to enable learning and training opportunities related to photovoltaic (PV) systems. It is recommended to install 50-60 KWh system that could also be used as a teaching tool in both academic curriculum and electrical trades training programs. A scalable PV system where individual PV panels could be replaced as the newer technology becomes available is preferred.

Third-Party Funding Sources for Renewable Energy Installation

Illinois Clean Energy Community Foundation (ICECF) and Illinois Department of Commerce and Economic Opportunity (DCEO) are just two of several grant agencies offering funding for programs incorporating solar, wind and biomass demonstration projects throughout Illinois. These energy sources can be used to offset the initial cost of renewable energy demonstration projects and reduce payback.



Solar panels along highway used to produce energy



Wind turbines provide energy for campus buildings



Electric vehicle charging station



Electric vehicle charging station signage

Commuter Reduction and Alternative Transportation Options

Limiting future growth and/or reducing the number of commuters driving to any of the colleges' campuses would result in significant benefits over time. Reduced investment in parking infrastructure and maintenance, lesser traffic congestion on and off campus and increased accessibility are just some of the advantages of incorporating commuter reduction strategies into College's future growth.

Electric Vehicle (EV) Charging Stations on Campus

As plug-in hybrid electric vehicles and battery electric vehicle ownership is expanding, there is a growing need for widely distributed publicly accessible charging stations.

An Electric Vehicle Charging Station, also called EV Charging Station or an Electric Recharging Point, is an element in an infrastructure that supplies electric energy for the recharging of electric vehicles, plug-in hybrid electric-gasoline vehicles or semi-static and mobile electrical units such as exhibition stands. The Electric Vehicle charging stations can be coupled with solar (photovoltaic) panels and/or wind turbines to provide 100% clean energy production from the sun or wind.

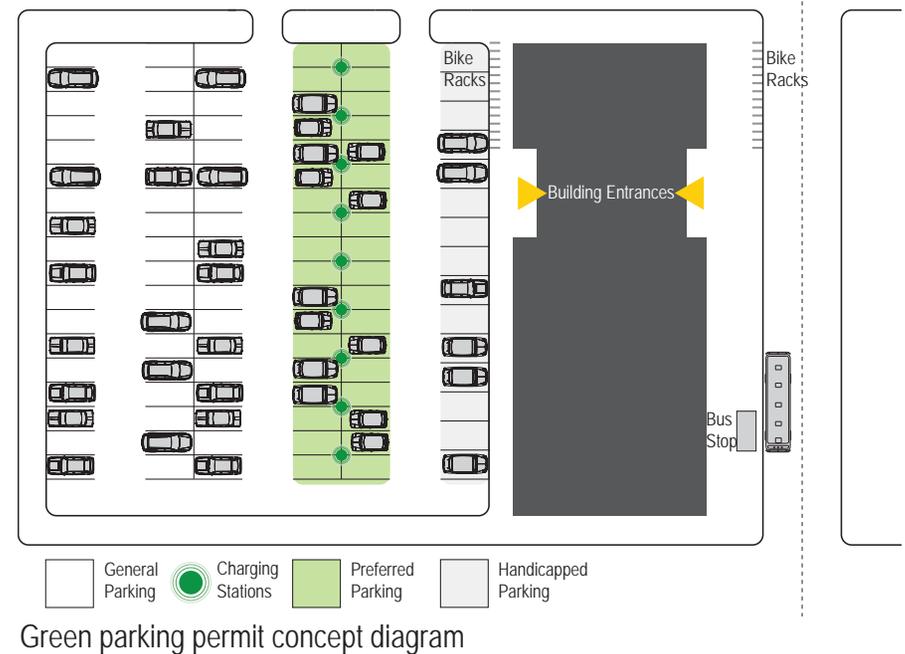
It is recommended to develop an Electric Vehicle charging infrastructure on campus, to support promote more sustainable transportation options, and enable CLC's community an easier switch to a non-fossil fuel operated vehicles. Initial charging station infrastructure could be established through a vendor, to minimize initial installation and operation costs.

Bike and Pedestrian Accessibility and Infrastructure

As much as possible, alternative transportation options available to CLC's community should be enhanced by improved bike and pedestrian accessibility and infrastructure. Additional bike lanes, bike racks and secure bicycle storage, in combination with available shower and locked facilities on campus can help reduce number of daily commuters.

Telecommuting and Distance Learning

In addition to physical modifications to infrastructure that will improve or enable additional alternative transportation options, further commuter reduction could be achieved indirectly, by the offering of educational programs and courses available online, and providing additional telecommuting options for staff and faculty.



Bike accessibility infrastructure improves alternative transportation options



Shuttle as a demonstration - Hybrid or electric vehicle bus



Preferred parking for low-emission, hybrid and electric vehicles

Commuter Reduction and Alternative Transportation Options

Shuttle Bus Connecting All CLC's Campuses

It is recommended that CLC should partner with local transportation agencies to review and develop options to increase accessibility of public transportation to CLC's students and faculty. The most viable option seems to be a commuter shuttle bus that would connect the Grayslake, Lakeshore and Southlake campuses with the key rapid transit nodes, such as exiting METRA train stations. Adding a real-time tracking to the system would increase reliability and usage of the system. A consultant group including a transportation team should be engaged to further define viability of this solution and its phased implementation over the next 10 years.

Green Parking Permits

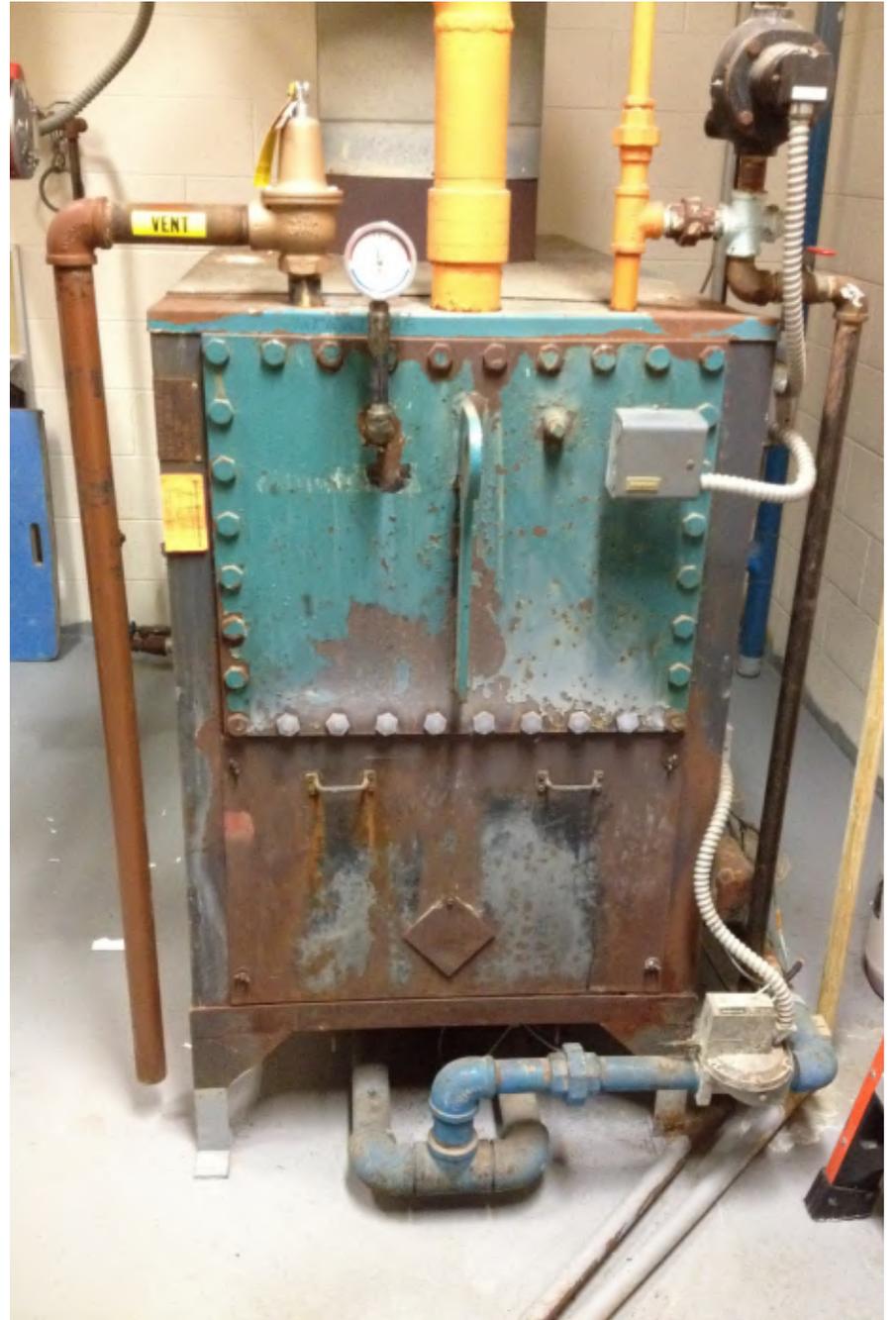
A preferred "green" parking permit system should be established at parking locations on all campuses to promote carpooling, use of low-emission vehicles, hybrids, and electric vehicles, and reward students and staff that make environmentally conscious transportation choices.

The American Council for an Energy-Efficient Economy's (ACEEE) vehicle rating parameters should be followed to establish types of vehicles eligible for green parking permits. The basis of the ACEEE's Green Book® ratings is based on three vehicle specific type of data:

- Tailpipe emissions, given by the emissions standard to which a vehicle is certified
- Fuel economy, based on EPA test cycles
- Vehicle mass (curb weight)

Proposed Shuttle Bus Route Connecting All of CLC's Campuses





Deferred Maintenance

As a component of the Sustainable Master Plan for the Grayslake Campus, the following deferred maintenance projects are included and will be integrated with the renovation, re-purposing and modernization work:

- A-Wing and B-Wing HVAC systems replacement
- A-Wing and B-Wing Fire Protection system
- A-Wing and B-Wing Roofs
- Parking Lot Pavement Replacement
- Building Tuckpointing and Sealant
- Campus I.T. Cabling Infrastructure
- Common Area Finishes
- Classroom Modernization and Finishes
- Completion of Single-Pane Window Replacement

Landscape Maintenance Zones Map



Landscape Recommendations and Maintenance Zones

General Overview

The CLC Grayslake Campus is a site with considerable natural landscape assets. From the prairie, arboretum, wooded area and other deed restricted zones along the eastern perimeter, to the jewel at its southwest corner “Willow Lake”, the college is indeed fortunate to have this amount of land and its varied natural ecosystems.

Entry Sequence and Gateways

The image of an educational campus begins at the entry points and continues with the visual sequence that unfolds up to the main door of the institution. On the Grayslake Campus, this image is accomplished with landscape. The compact nature of the built campus in the center of the site means that the surrounding land, which incorporates the arboretum, wooded area, prairie, deed restricted areas and parking, is all a part of the sequence. As such, the maintenance and composition of plantings is important. A hierarchy of landscape is included in the Sustainable Master Plan, with key intersections or nodes shown as gateways.

Building to Landscape Connections

The main views of the built campus are generally from the south, east and north, the sides adjacent to the parking. The Sustainable Master Plan addresses this issue. The new buildings will create an opportunity for added landscape more suitable for the “building gateways”.

Outdoor Classrooms

A key goal for maintaining the landscape is to support, enhance and make it suitable for outdoor classrooms, where curriculum can be linked to the rich natural ecology and horticultural plantings. Horticulture and biology curriculum leaders can be active participants in communicating this linkage with the site landscape, thereby helping the Sustainable Master Plan to have a level of variety that is unique within the northern Illinois area.

Maintenance Zones

The Grayslake Campus has much to manage with regard to the landscape. The master plan addresses the site from the viewpoint of a hierarchy of maintenance for the full site as a way of managing the full site and directing resources in a logical manner. The highest level of attention and therefore effort and dollars should be devoted to the core gateway areas. These areas occur at the front door of the site and the front door of the built site. The charted maintenance zones illustrate where efforts should be distributed throughout the site, in the following order of descending maintenance:

- Core Gateway
- Building Gateway
- Transition
- Athletics
- Edge
- Natural Areas

Selected Plant Materials: Core & Gateway



Chinquapin Oak



Miss Kim Lilac



Baptisia



Redtwig Dogwood



Shrub Rose



Fountaingrass



Upright Juniper



Serviceberry



Spreading Yew



Kalm's St. John's Wort

Core & Gateway

Defining the Core:

- Highest level of visibility
- Creates the front door to campus
- High pedestrian activity areas
- Components are:
 - Gateways
 - Building Plazas
 - Public Destinations
 - Campus Pedestrian Entrances
 - Interior and Exterior Courtyards

Core Landscape:

- Most detailed level of planting with high degree of color:
- Lawns
- Four-season interest shrub and perennial beds
- Specimen trees
- Annual or container plantings
- Irrigation

Maintenance Goals:

- *Lawns:* Weekly mowing and edging at beds and walks. Seasonal fertilizing (granular) with SCU to minimize effects of lime leachate from bedrock, up to four times per season. Reconditioning with core aeration and overseeding in heavily trafficked areas. Turf replacement after winter salt damage. Pest or disease control as needed.
- *Planting Beds:* Weekly clean-up and edging along bedline. Monitor weekly for pest management. Bi-weekly weed control. Seasonal cultivation, as needed. Fall/spring clean-up. Yearly mulching.
- *Trees:* Yearly inspection, bi-yearly pruning or as needed, fertilization or drought treatment, as needed. Monitor monthly for pests, treat as needed.
- *Irrigation:* Seasonal start-up and shut down, seasonal adjustments and repairs as needed.

Selected Plant Materials: Transition



Swamp White Oak



American Filbert



Japanese Spirea



Prairiefire Crabapple



Prairie Dropseed



Bigroot Geranium



Accolade Elm



Red Jewel Crabapple



American Cranberrybush
Viburnum



Calgary Carpet Juniper

Transition

Defining the Transition:

- Intermediary space between the colorful campus core/gateway and the more natural campus edge and natural areas.
- Components are:
 - Vehicular circulation areas
 - Parking areas

Transition Zone Plantings:

- Defined by lesser level of detail in the planting:
 - Four-season interest
 - Informal lawns and canopy trees
 - Sweeping plantings of shrubs
 - Low maintenance grasses and perennials with limited irrigation

Maintenance:

- *Lawns and Meadows:* Weekly mowing and edging at beds and walks where turf borders meadow. Seasonal rough mowing or burning of meadow areas, savanna, swales. Pest or disease control as needed.
- *Planting Beds:* Periodic clean-up and rehabilitation. Monitor bi-weekly for pest management. Monthly weed control. Yearly mulching.
- *Trees:* Yearly inspection, bi-yearly pruning or as needed, fertilization as needed. Monitor seasonally for pests, treat as needed.
- *Irrigation:* Seasonal start-up and shut down, seasonal adjustments and repairs as needed.

Selected Plant Materials: Edge



Littleleaf Linden



Corneliancherry Dogwood



Arrowwood Viburnum



Kallay Carpet Juniper



Freeman Maple



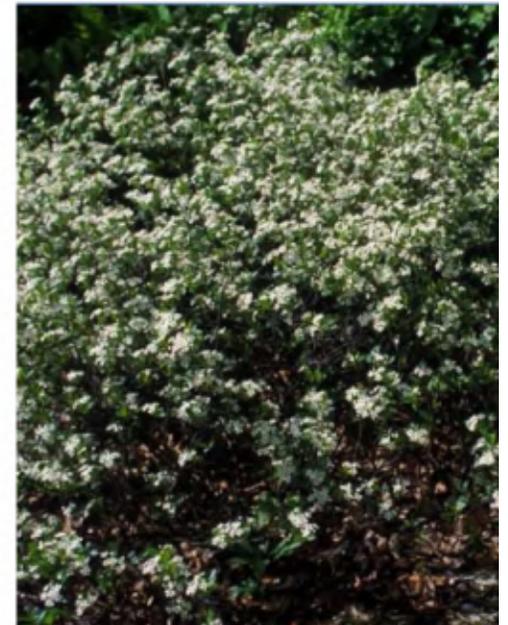
Arborvitae



Shrub Rose



Forsythia



Black Chokeberry

Edge

Defining the Campus Edge:

- Edges of campus along vehicular circulation routes, and accompanies higher maintenance level gateway treatments.

Edge Plantings:

- Defined by lesser level of detail in the planting:
 - Trees in lawn/meadow
 - Windbreaks in meadow
 - Buffer/screen/hedge in meadow
 - Bioswale in meadow

Maintenance:

- *Lawns and Meadows*: Bi-weekly mowing at beds or where turf borders meadow. Seasonal rough mowing of meadow areas. Pest or disease control as needed.
- *Planting Beds*: Shrub buffer/screen/hedge. Periodic clean-up and rehabilitation. Monitor bi-weekly for pest management. Seasonal weed control. Yearly mulching. Renewal pruning as needed (no more frequent than every five years).
- *Trees*: Yearly inspection, bi-yearly pruning or as needed, fertilization as needed. Monitor seasonally for pests, treat as needed.

Selected Plant Materials: Natural Areas



Bioswale



Common Baldcypress



Blackhaw Viburnum



Grape Honeysuckle



Switchgrass



Canadian Wild Rye



False Solomon's Seal



Swamp Milkweed



Blue Vervain



Solomon's Seal



Short's Aster

Natural Areas

Defining the Natural Areas:

- This area forms a backdrop for campus.
- The natural areas are a key asset for the campus and provide many opportunities for outdoor teaching labs.
- Includes peripheral areas such as:
 - Lake
 - Prairie
 - Wooded Area
 - Trails

Natural Area Plantings:

Plantings defined by existing natural plant communities under varying levels of restoration.

Initial Maintenance:

Consider lake dredging if needed.

Remove any invasive species.

Initial bioswale plantings or infill plantings.

Restoration plantings

Long-Term Maintenance:

- *Prairies, wet meadows*: Yearly mowing or biyearly burning, or as needed. Invasive species control by vegetative removal or chemical treatment.
- *Wooded slopes*: Invasive species eradication, weed control. Pruning as needed for safety, especially for trees in close proximity to trails.

- *Lake*: Consider channel dredging initially, to more aggressive complete dredging if needed.

Note: Up front high labor efforts will repay with less required maintenance over time.

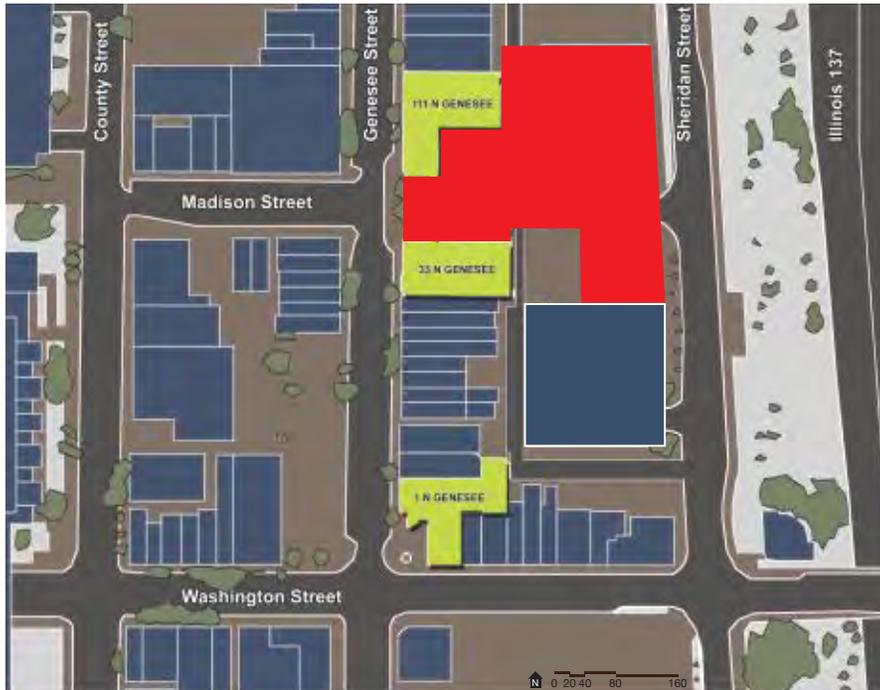
Athletics

Defining Athletics:

- This area encompasses athletic fields, with intense seasonal usage.
- Athletic Landscape:
- Turf/Lawn - currently not irrigated

Maintenance:

- *Lawns and Fields*: Weekly mowing where turf borders field; pest or disease control as needed; routine field management; NCAA standard for each seasonal sport; Overseeding, plugging, and special athletic field seed program.
- *Irrigation (Optional)*: This area currently is NOT irrigated by system. Seasonal start-up and shut down, seasonal adjustments and repairs as needed.



Lakeshore Campus

Although it is becoming determined that a community approach is appropriate to developing the Lakeshore Campus (that is, one to unify and contextualize), the site is still being prepared and environmental remediation is required. Therefore, investigation of planning for this key site remains suspended.

Deferred Maintenance

As a component of the Sustainable Master Plan for the Lakeshore Campus, the following deferred maintenance projects are included and will be integrated with any renovation, re-purposing and modernization work:

- 33 North Genesee Roof
- Campus I.T. Cabling Infrastructure
- Classroom Modernization and Finishes

Southlake Campus

The Southlake Campus will receive a new drop-off along Port Clinton and the science classroom will be upgraded.

Deferred Maintenance

As a component of the Sustainable Master Plan for the Southlake Campus, the following deferred maintenance projects are included and will be integrated with the renovation, re-purposing and modernization work:

- Classroom Upgrades, Modernization and Finishes
- R-Building HVAC system Replacement
- R-Building Roof
- R-Building Toilet Room Repairs
- R-Building Window Replacement

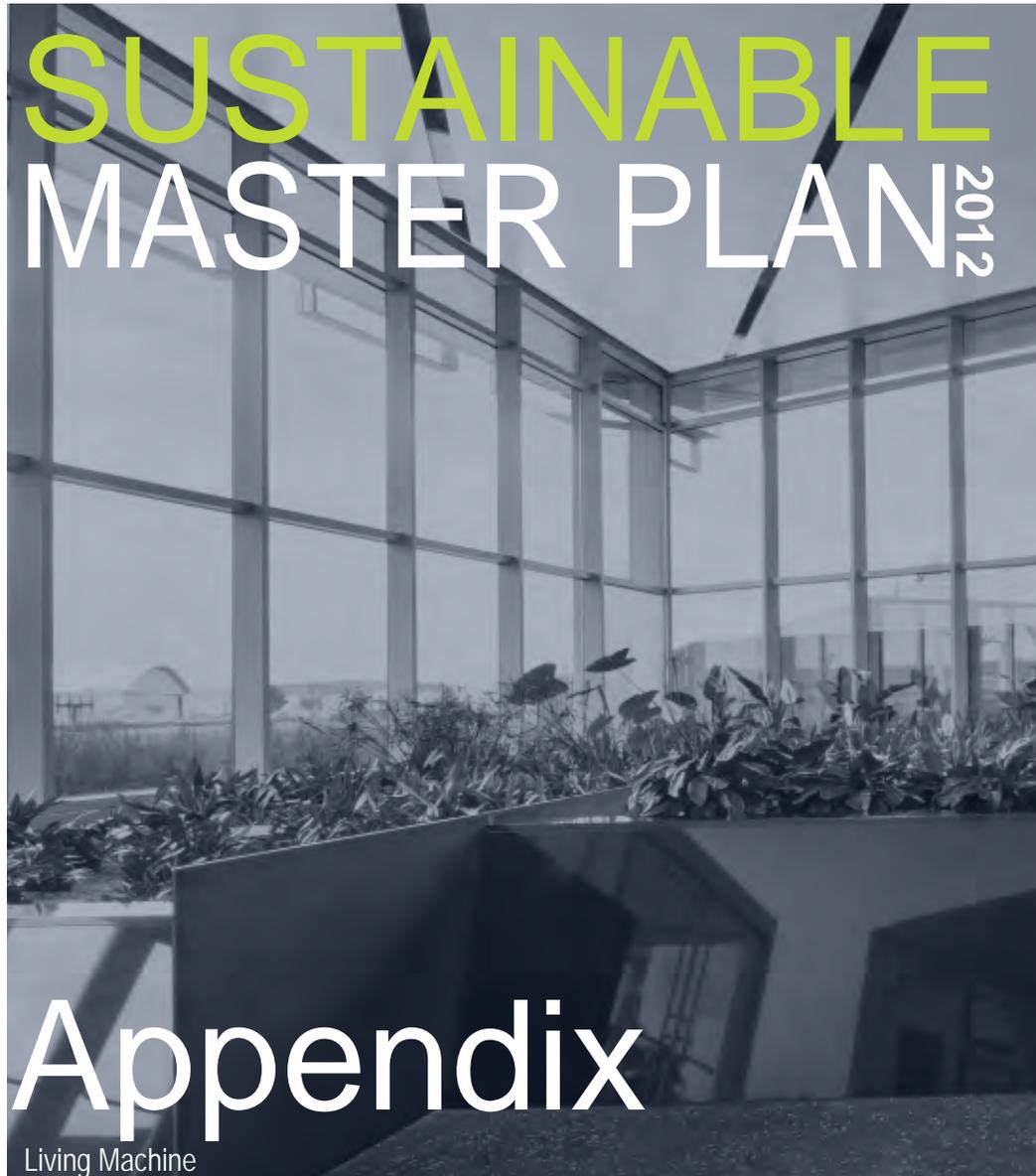


Northwest Satellite

As stated earlier, the northwest quadrant of the district has experienced considerable growth in the past decade and, in the Fall of 2010, served 5,086 CLC students, the highest of the four quadrants. This is an increase of 701 students since the 2006 population of 4,385 students, for an increase of 16%. The northwest quadrant has the highest market share (2.55%) of the four Lake County quadrants when comparing the number of CLC students to total quadrant population.

CLC enrollment in the northwest quadrant is projected to increase by another 501 students (9.9%) by the year 2030, remaining the quadrant with the highest CLC enrollment at 5,587 students.

As part of the Sustainable Master Plan, it is recommended that the need for a northwest satellite campus be further analyzed and evaluated for initial space needs. It is suggested that a search begin for a leased property, with a turn-key approach to serve the CLC students of this quadrant.



SUSTAINABLE MASTER PLAN²⁰¹²

Appendix

Living Machine

Appendix

Subsequent to completing the “Part 1 Report: Space Utilization and Space Needs” (dated 3-31-11), several additional requests for new and renovated space were made and included in this appendix for consideration as part of the Sustainable Master Plan:

Advanced Manufacturing Center

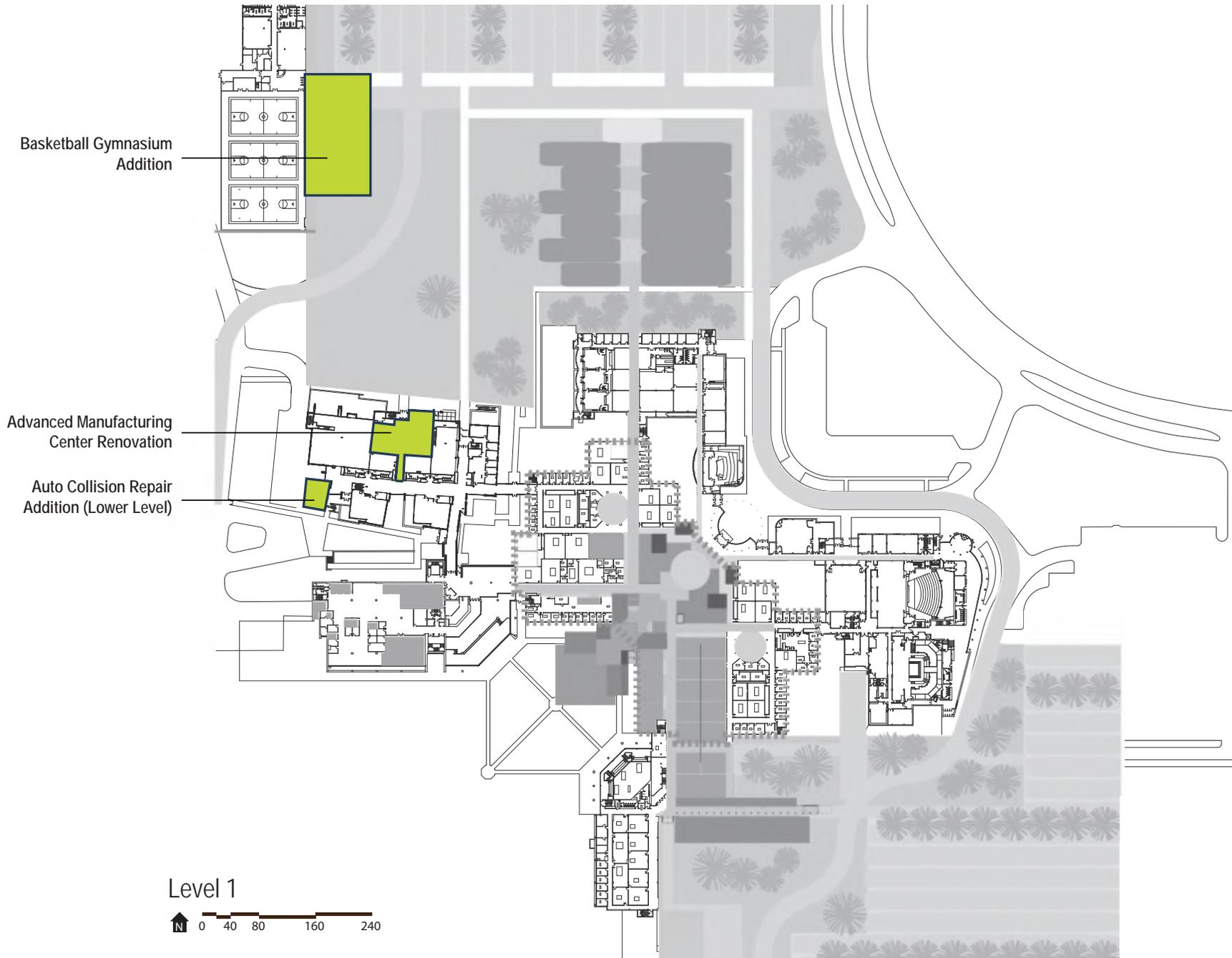
On the first level of Building T, a renovation is recommended to re-think and re-purpose existing space in order to create the Advanced Manufacturing Center. This renovated space will include instructional lab, classroom and support functions.

Auto Collision Repair

On the lower level of Building T, an addition is recommended to accommodate the Auto Collision Repair program which is currently housed at the Lake County High Schools Technology Campus, just north and adjacent to the Grayslake Campus.

Basketball Gymnasium

Just east of the existing gymnasium in Building 7, an addition is recommended for a new competition Basketball Gymnasium with a wood floor and bleachers. The existing entry lobby would be expanded as a component of this appendix project.





SUSTAINABLE
MASTER PLAN²⁰¹²

Project Cost
Estimate

Parking Lot Bioswale

Consensus Master Plan Estimated Costs



State Funded Projects	
Science Building and Engineering Building	\$23,425,600
Lakeshore Campus Expansion	\$47,902,691
SUBTOTAL	\$71,328,291

Local Projects	Recommended
Student Center/Cafeteria/Student Activities	\$33,000,000
A&B Remodel	\$27,000,000
Site (3 parking lots)	\$10,000,000
Classroom Modernization	\$3,000,000
Common Area Finishes and Furniture	\$2,000,000
Wind Turbine	\$200,000
Geothermal Fields and Loop for New/Renovated Buildings & Loop	\$8,000,000
Gym façade and windows	\$1,000,000
Signage	\$2,000,000
Library	\$500,000
Technology	\$1,300,000
Solar heated water	\$400,000
Southlake renovations	\$1,000,000
Sustainable Agriculture Lab (Farm)	\$200,000
SUBTOTAL	\$89,600,000



College of Lake County

Grayslake Campus

19351 West Washington Street, Grayslake, Illinois 60030
(847) 543-2000

Lakeshore Campus

111 North Genesee Street, Waukegan, Illinois 60085
(847) 543-2191

Southlake Campus

1120 South Milwaukee Avenue, Vernon Hills, Illinois 60061
(847) 543-6501

www.clcillinois.edu