GCC

GUAM COMMUNITY COLLEGE

Kulehon Kumunidát Guáhan

Physical Master Plan
2011-2015

TRMA

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
CAMPUS GROWTH	1
PROGRAMMING DATA	2
MASTER PLAN STATUS	5
SUSTAINABILITY	6
PARKING	7
INFRASTRUCTURE IMPROVEMENTS	9
CAMPUS SAFETY	17
CAMPUS EXPANSION	19
WORK PHASES	21

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EXECUTIVE SUMMARY

The Guam Community College has grown significantly over the last six years, necessitating continued upgrade and improvement to campus facilities and infrastructure. Student enrollment is increasing at an exciting rate—approximately 50-percent—from 1,800 students in 2006 to 2,500 students in 2011. GCC continues to maintain this momentum with new building projects to provide learning space to support quality academics and work force training. The Allied Health Center, The Learning Resource Center, the Student Center, and the Foundation Building projects are a few of the realized steps in the execution of the Physical Master Plan that address the College's needs. The 2011 Update includes plans for campus expansion and new buildings that will increase the physical capacity of the College over the next few years.

The Master Plan update is based on a projected growth rate of approximately 9-percent, which is a reasonable projection over the next five years based on the College's recent growth trend. Enrollment from 2006 to 2008 was approximately 1,800 students. Enrollment eclipsed 2,000 students in 2009. In 2011 the College reached the 2,500-student mark. While enrollment has increased at a high rate, it is reasonable to project that the rate tapers down over the next few years.

EXECUTIVE SUMMARY

The Master Plan is updated with new projects that will support the College's mission and academic goals. The College's sustainable mission is the driving force for the design of the new projects in addition to programmatic goals for academic programs that have evolved since the Master Plan. These projects include the renovation of existing buildings, the construction of new buildings, and improvements to campus infrastructure. The Master Plan also considers expansion of the campus boundary based on recent property acquisitions and the potential acquisition of other neighboring properties.

Building Renovation

- Conversion of the Building 1000 Technology Center into a Green Data Center.
- Administration Building.

Campus Infrastructure Upgrades

- Utilizing of building management systems.
- Generator Power
- Domestic Water
- Fire Protection
- Campus network
- Campus safety improvements

Campus Expansion

- Forensic Lab Acquisition
- Sesame Street Reintegration
- Government Land Acquisition
- Private Land Acquisition

New Buildings

- Forensic DNA Lab
- Multi-level Parking Structures
- New Multi Purpose Auditorium
- GCC Clock Tower

The new projects will be done in conjunction with projects that remain part of the Master Plan from the previous update, including the new Maintenance Building and renovation of Buildings 100, 200, 300, 500 & 600.

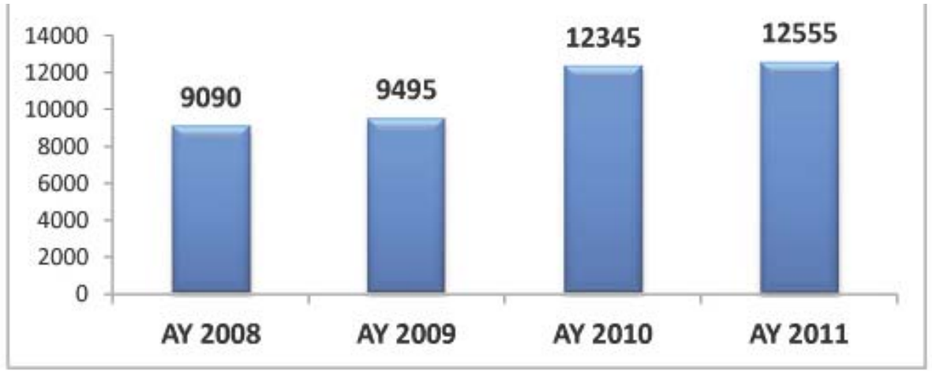
EXECUTIVE SUMMARY

Six phases comprised of two parts outline the Master Plan work. The projects added to the Master Plan modify the work phases from the previous update.

Phase	Key Projects
Phase 1A	Building 200 Renovation; Forensic DNA Lab
Phase 1B	Founder's Square; PV Walkway Canopy
Phase 2A	LRC-Foundation Building-Student Center Generator Building
Phase 2B	Building B Renovation
Phase 3A	Maintenance Building
Phase 3B	Building 100 Renovation
Phase 4A	Building 300 Renovation
Phase 4B	Multi-Use Auditorium
Phase 5A	Buildings 500 & 600 Renovation
Phase 5B	Parking Structure A
Phase 6A	Parking Structure B

The organization of the work phases remains the same, but the components of each phase are modified to account for project completion such as the Learning Resource Center; and new projects such as the Forensic DNA Lab Facility. Modification of the phased work also reflects programmatic revisions and building project priorities—the shifting of Building 200 renovation to Phase 1 work for example.

Guam Community College's Physical Master Plan continues to map campus growth with the broad goal of maximizing the College's capability to serve the residents of Guam and the region. Improved facilities will enhance continued learning and work force training, constantly improving the caliber of the College's graduates and the high standard that can be expected of them. The College's sustainable mission will aid in Guam's effort to protect our environment and strive for improved quality of life; and this mission serves as the basis for planned campus projects. Continued realization of proposed Physical Master Plan projects will enhance the Guam Community College's standard of academic quality and the capabilities of Guam's work force.



Adult Education Fall 2010 Enrollment (ACTUAL)	Total Enrolled	Total Hours
Adult Basic Education (ABE)	283	14327
Adult Secondary Education (ASE)	62	4005
English as a Second Language (ESL)	66	3277
Grand Total	411	21609
Projection	**448**	**23554**

CONTINUING EDUCATION Enrollment (ACTUAL)	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	PROJECTION (15%)
OCT-DEC	1766	1932	2074	2400	2668	3068
JAN-MAR	1814	1632	3549	3309	2797	3217
APR-JUN	2554	2033	2080	2527	2954	3397
JUL-SEP	2906	2230	2711	2441	2624	3018
GRAND TOTAL	9040	7827	10414	10677	11043	12700

CAMPUS GROWTH

PROJECTED ENROLLMENT

Accommodating GCC's projected student enrollment is a primary consideration for updating the Physical Master Plan. The College's total post secondary instructional hours per academic year has increased from 9,090 hours in 2008 to 12,555 hours in 2011. GCC's basis for the Physical Master Plan update is a 9-percent growth projection from the 2010 enrollment for Secondary Education, Adult Education, Associate and Certificate programs. GCC is also using 15-percent growth project for Continuing Education enrollment.

The 2005 Physical Master Plan anticipated a student population of 2253 students. The projected enrollment for the 2011 update now anticipates 3,318 students by the 2016 academic year. Continuing education enrollment is projected to be approximately 3,000 students per each bimonthly session.

There is a notable campus population shift during a single day. A majority of the GCC population is primarily transient, i.e. on campus for a fraction of the day. A population peak usually occurs during the late afternoon through the early evening Monday through Thursday, which corresponds with the scheduling of GCC classes. The majority of GCC classes occur Monday through Thursday and class times range from 8am through 10pm, and most are scheduled for the afternoon and evenings.

ADDITIONAL CLASSROOMS

Guam Community College is focused on the continued improvement of classroom facilities. The Master Plan projects will increase the total amount of instructional space from 99,000 SF to 126,000 SF. This is an approximate 27-percent increase in campus instructional space that can be utilized as general classrooms, labs, or lecture rooms. Classrooms upgrades include provisions for smart boards, wireless and internet access. Facility design will consider the provision of informal and formal learning opportunities along with the design of interior environments to foster learning. Classrooms will be designed for increased daylight, better indoor environmental quality, and furnished to allow multiple classroom configurations. The Building 200 Renovation will serve as a model for the utilization of smart building systems that automates building functions that GCC intends to utilize for future building projects.

ADDITIONAL FACULTY & STAFF FACILITIES

The Master Plan projects are planned to meet the evolving needs of GCC faculty and staff. The provision of faculty office space is planned with each building renovation project. A new 6,000 SF building is planned to house the GCC Facilities & Maintenance Department. A new Faculty Center is planned to be housed in a second-story addition to Building B. Additional office space will be developed with the new parking structure as well that can be utilized for other GCC staff or grant-based programs. The provision of a workout room is also being considered in the planning for the Building 200 Renovation for student, faculty, and staff use.

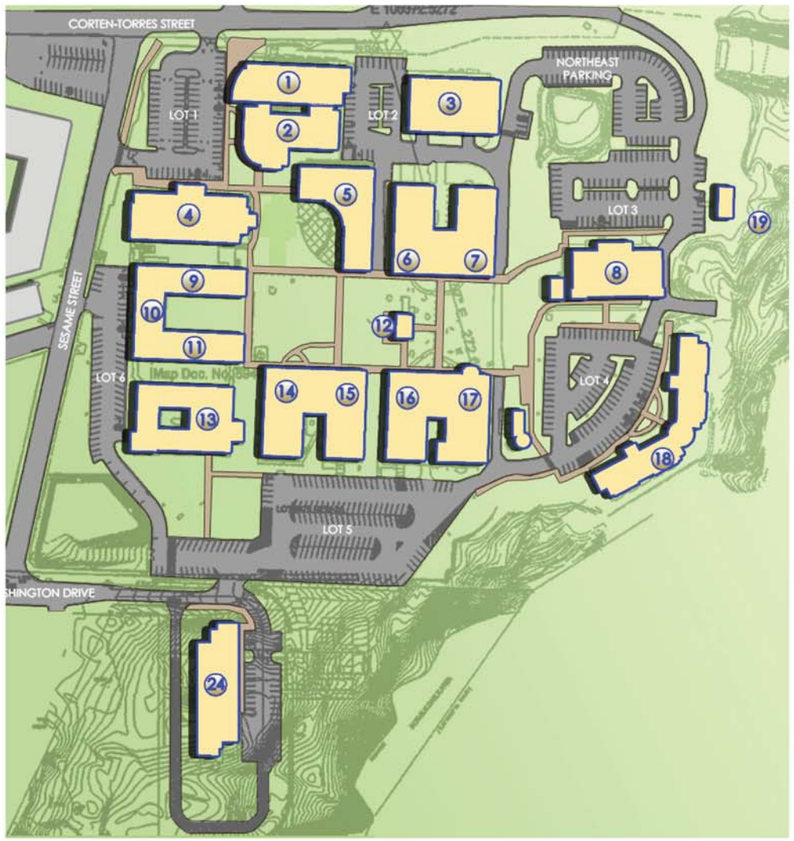


TABLE 2

Classroom Type	Capacity
Type A	30 students
Type B	24 students
Type C1	16 students
Type C2	12 students

TABLE 1

Existing Buildings	Classrooms
1. Foundation Building (Building 6000)	7-Type B
2. Learning Resource Center (Building 4000)	1-Type B
3. Building 900	3 -Type C
4. Anthony A. Leon Guerrero Allied Health Center (Building 3000)	6-Type A 8-Type B 1-Type C
5. Student Center (Building 5000)	0
6. Building 600	3-Type C
7. Building 500	1-Type B 2-Type C
8. Technology Center (Building 1000)	3-Type A 9-Type B 1-Type C
9. Building A	10-Type A
10. Building B	0
11. Building C	10-Type A
12. Café	0
13. Building D	5-Type A 3-Type B
14. Building 100	6-Type A
15. Building 200	3-Type B 1-Type C
16. Building 300	3-Type B
17. Multi Purpose Auditorium (Building 400)	1-Type B
18. Administration Building (Building 2000)	0
19. Temporary Building	0
20. Forensic Lab	0

PROGRAMMING DATA

CLASSROOM SPACES

Table 1 identifies the classroom space available at each Campus building. There are three general room sizes utilized by GCC:

1. Type A 900 – 1000 SF (40 total)
2. Type B 600 – 800 SF (36 total)
3. Type C 300 – 500 SF (11 total)

The majority of GCC classrooms and labs are Type B. Type A rooms are used for classrooms, computer labs, and / or lecture halls. There are only a few Type C classrooms throughout the campus. The number of students that can be accommodated by each room type is shown in Table 2. The number of students per classroom type is derived from a typical 676 SF (26'x26') classroom prototype that can accommodate 30 students, which amounts to approximately 22 SF per student. To provide for flexible seating configurations a slightly larger area per student is used for the GCC classroom types, which is approximately 29 SF per student. The larger square foot factor also aids in the configuration of classroom layouts for GCC's building renovation projects where classroom size is dictated partly by the limitations of the existing building structure.

Based on the available classroom space, the number of general classes that can be accommodated by each building can be determined using the following factors:

- 2-hr class sessions
- 75% classroom use (8 hours use)
- Instructor to student ratio of 1:30 for classroom type A.
- Instructor to student ratio of 1:24 for classroom type B.
- Instructor to student ratio of 1:16 for classroom type C greater than or equal to 400 SF.
- Instructor to student ratio of 1:12 for classroom type C less than 400 SF.

These factors provide general criteria to guide the assignment of available classroom space.

Note: Faculty - Student Ratio is Program / Course driven.
Design ratios identified above are intended to guide classroom space assignments based on the number of students in a class.

PROGRAM ENROLLMENT-Associates & Certificates	Fall 2010 Enrollment	Projection-9% or estimate
Accounting	99	108
Automotive Service Technology	92	100
Computer Aided Design & Drafting	2	*20
Computer Networking	40	44
Computer Science	100	109
Construction Technology	18	20
Cosmetology	40	44
Criminal Justice	186	203
Culinary Arts	92	100
Early Childhood Education	140	153
Education	132	144
Emergency Management	7	*15
Fire Science	27	*75
Food & Beverage Management	14	*50
Hotel Operations & Management	14	*50
Liberal Arts	148	161
Marketing	28	*50
Medical Assisting	107	117
Medium/Heavy Truck Diesel Technology	0	*50
Office Technology	35	38
Practical Nursing	37	40
Pre-Architectural Drafting	7	8
Pre-Nursing	148	161
Supervision and Management	78	85
Surveying Technology	3	*20
Tourism & Travel Management	58	*75
Visual Communications	48	52

*Estimate provided by department.

SECONDARY Program Enrollment-SY 2010-2011 (ACTUAL)	GWHS
Allied Health	64
Automotive	164
Carpentry/AutoCADD	74
Early Childhood Education	89
Electronics	69
Marketing	59
Tourism (Lodging Management)	55
Tourism (ProStart)	74
Visual Communication	66
Grand Total	714
PROJECTION (9%)	**778**

PROGRAMMING DATA

DEPARTMENT PROJECTIONS

Programming data gathered from GCC is one consideration used in the update of the Master Plan phases. Surveys were also distributed to the various College departments and the collected data was synthesized with information from project planning discussions to outline the campus development with the goal of supporting the GCC Mission and Vision.

There was consensus for utilizing a 9-percent growth projection. Some programs deviated from this growth rate and provided projections based on alternative planning factors.

APPRENTICESHIP ENROLLMENT:

Enrollment (January – March 2012)

Apprentices	Female	Male	Total
PUBLIC	25	65	**90**
PRIVATE	41	232	**273**
Total	**66**	**297**	**363**

ADULT EDUCATION: ENROLLMENT AND COMPLETION BY PROGRAM:

Adult Basic Education (ABE): Six-Year Trend

ABE	FALL 2006	FALL 2007	FALL 2008	FALL 2009	FALL 2010	FALL 2011	Total
ENROLLED	604	593	724	382	267	450	3020
COMPLETERS	235	271	204	128	79	197	1114

Adult Secondary Education (ASE): Six-Year Trend

ASE	FALL 2006	FALL 2007	FALL 2008	FALL 2009	FALL 2010	FALL 2011	Total
ENROLLED	327	365	306	166	22	36	1222
COMPLETERS	111	145	110	5	12	20	403

English as a Second Language (ESL): Six-Year Trend

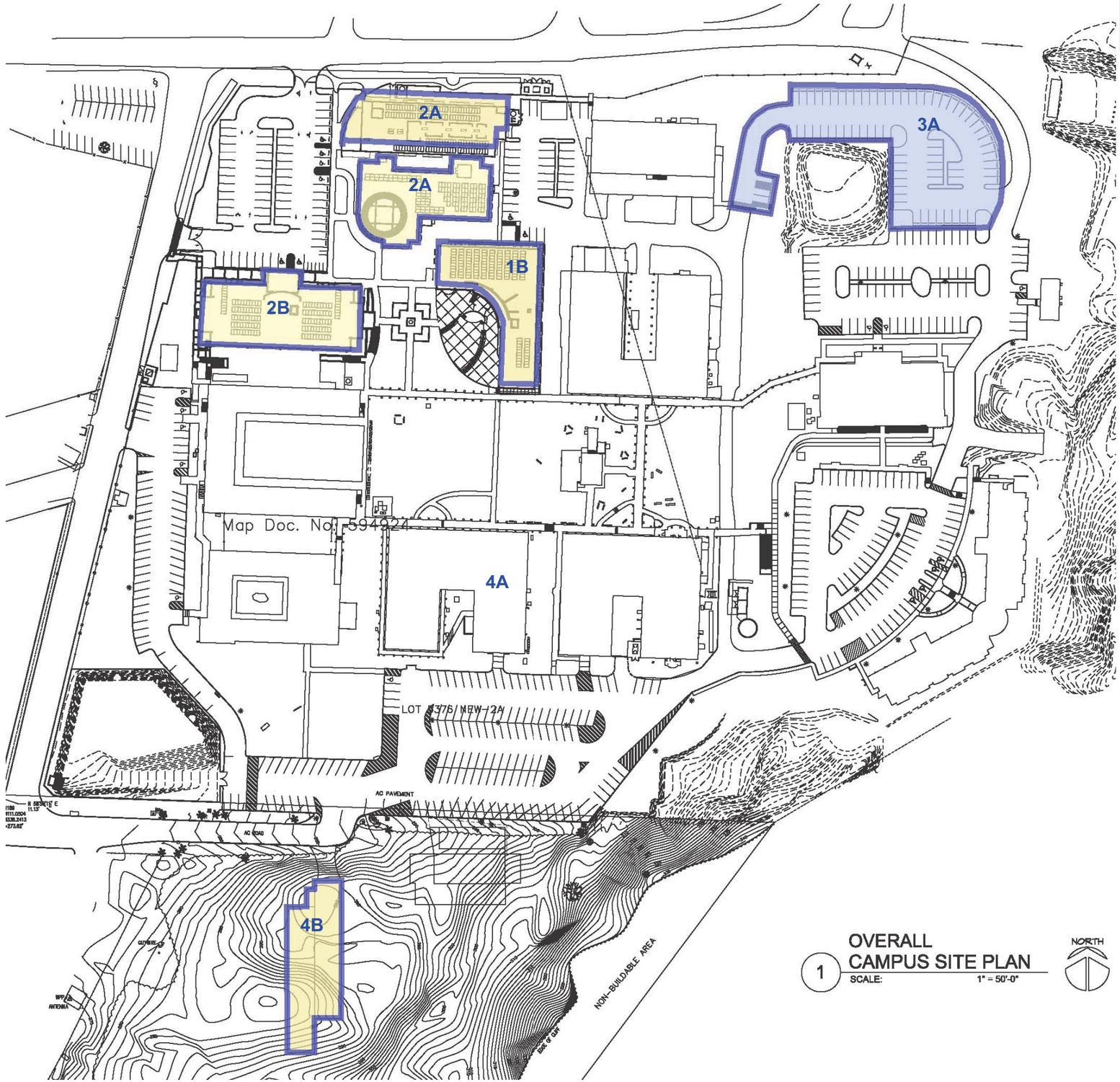
ESL	FALL 2006	FALL 2007	FALL 2008	FALL 2009	FALL 2010	FALL 2011	Total
ENROLLED	182	121	124	85	41	100	653
COMPLETERS	92	64	73	21	20	68	338

PROGRAM LOCATIONS

DEPARTMENT LOCATIONS

Accounting	Building C, D
Automotive Service Technology	Building 500, 900
Computer Aided Design & Drafting	Building 200
Computer Networking	Building 1000
Computer Science	Building 1000, Building D
Construction Technology	Building 600
Cosmetology	Building 300
Criminal Justice	Building 100, Forensic DNA Lab Facility
Culinary Arts	Building 400
Early Childhood Education	Building 200
Education	Building 200
Emergency Management	Building 100
Fire Science	Building 100
Food & Beverage Management	Building C
Hotel Operations & Management	Building 300
Liberal Arts	Building A
Marketing	Building 300
Medical Assisting	Allied Health Center
Medium/Heavy Truck Diesel Tech.	Building 500
Office Technology	Building D
Practical Nursing	Allied Health Center
Pre-Architectural Drafting	Building 200
Pre-Nursing	Allied Health Center
Supervision and Management	Building D
Surveying Technology	Building 200
Tourism & Travel Management	Building 300
Visual Communications	Building 300

NOTE: General Education Courses will be located primarily in Buildings A, C, D, and with some classroom use in Buildings 100, 200, and 300. Adult Education is located in Building 6000. Final program location is dependent on enrollment.



MASTER PLAN STATUS

COMPLETED WORK

Guam Community College has completed several key phases of the 2005 Physical Master Plan. The 2005 Master Plan outlined the incremental development of the Guam Community College Campus. Six phases of work were developed in the Plan, and each phase, comprised of two parts—A & B—outline development tasks that could be achieved with moderate funding. Since 2005, three of the six phases have been implemented by the College. Figure 2 indicates the six phases of work and the corresponding projects that have been completed or are expected to be completed by the year 2014. Note that the GPD Forensic Lab was constructed by the Guam Judiciary, but the building is now owned by GCC. Additionally, note that some phases of work were not implemented in their entirety due to the College's re-evaluation of project priorities.

Completed work also includes various energy and capital improvement projects. Buildings 3000, 4000, 5000, and 6000 have been provided with photovoltaic power systems. Photovoltaic parking lights installed in nearly all of the college's parking lots. Emergency power generators have been provided for Buildings B, C, D, 400, and 1000. Upgrades to campus data network have been executed. Recently completed campus improvement also include exterior painting, water tank provisions, and the survey and delineation of the limestone forest.

Figure 2. WORK PHASE STATUS

- 1A:
- 1B: Student Center completed November 2011.
- 2A: Learning Resource Center completed December 2010. Foundation Building Renovation completed August 2012.
- 2B: Anthony Leon Guerrero Allied Health Center completed December 2009.
- 3A: Northeast Parking completed December 2011.
- 3B: TBD
- 4A: Building 200 Renovation completion in 2014.
- 4B: Forensic Lab* completion date 2008
- 5A: TBD
- 5B: TBD
- 6A: TBD
- 6B: TBD

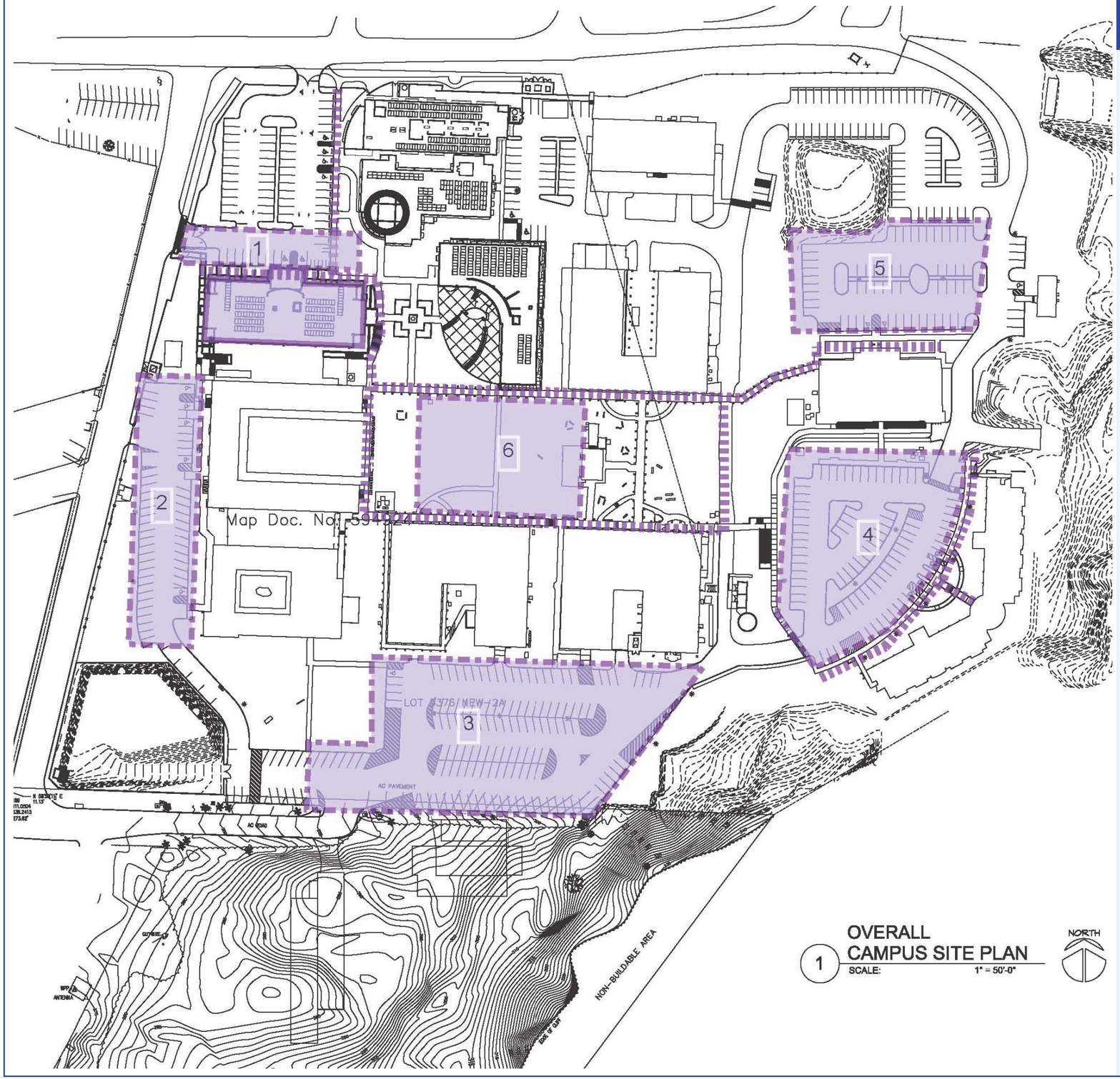
*The Forensic Lab building was acquired by GCC from the Guam Judiciary.

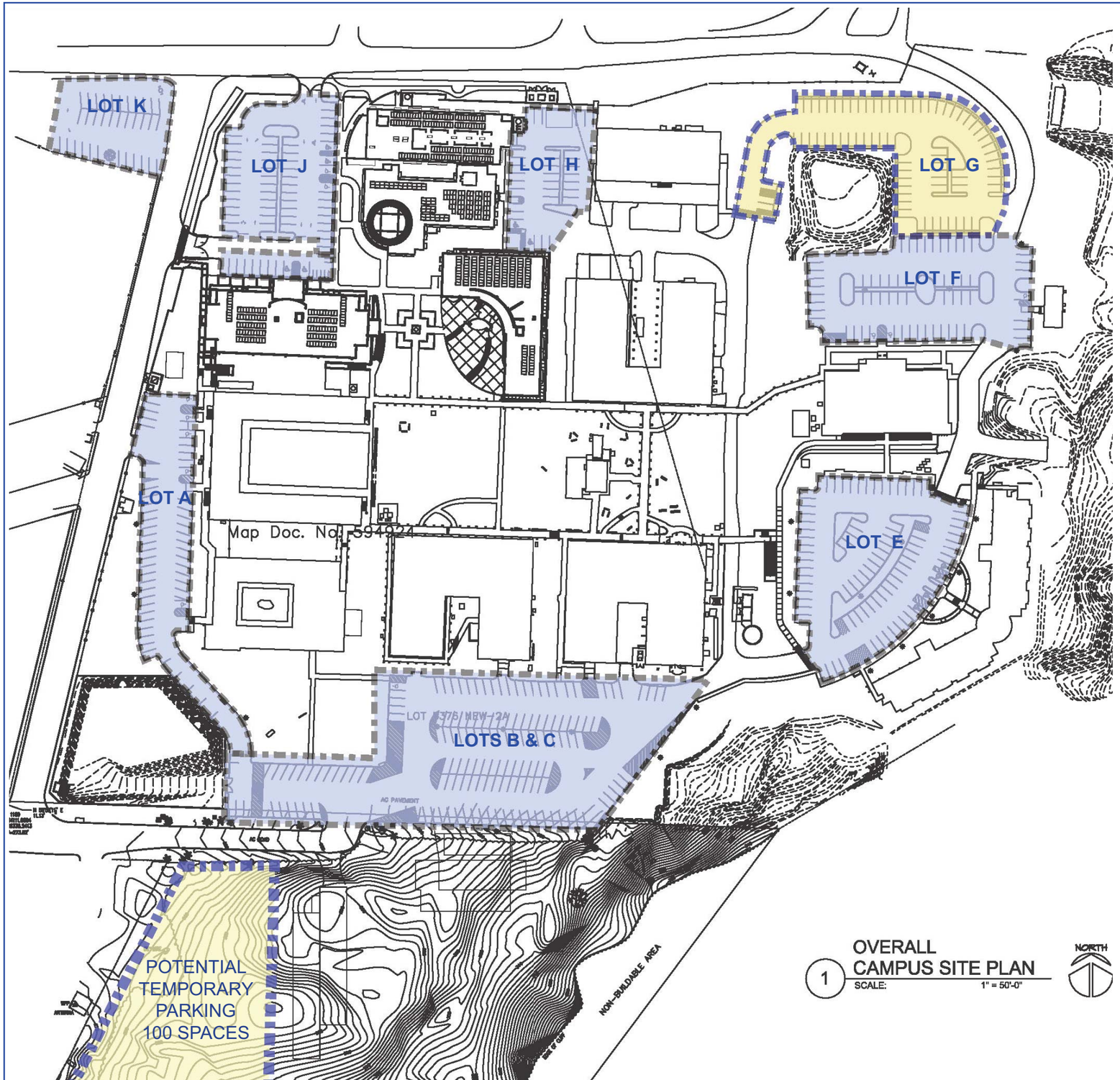
SUSTAINABILITY

LEED CERTIFICATION & ALTERNATIVE ENERGY

GCC's role as a leader in sustainability is at the forefront of the Master Plan update. The achievement of LEED certification is one of the primary goals for planned campus building projects. The catalyst for this new direction for GCC facilities is the Learning Resource Center (LRC) project, which was completed in 2010 and is the first building on Guam to achieve LEED Gold certification. The Foundation Building Renovation is expected to be completed in 2012, and it anticipates LEED Silver certification. Currently planned projects—including the GCC Forensic DNA Lab and the renovation of Buildings 100, 200, 300—also intend to achieve LEED certification.

The College has also implemented alternative energy projects and has plans to further utilize new building systems to monitor and control building energy consumption. Photovoltaic parking lights have been installed throughout the campus parking lots. Photovoltaic energy systems are being utilized by the Allied Health Center and will be installed at the Learning Resource Center, the Student Center, and the Foundation Building. Walkway canopies are being outfitted with PV film to power walkway lighting. Direct Digital Control (DDC) systems and occupancy sensors will be utilized in new and renovated buildings.





PARKING

EXISTING PARKING

The current campus parking accommodates approximately 530 cars, which is accomplished with surface parking lots and some street parking. There are nine surface parking lots on the campus:

Lot A 45 cars
Lot B 25 cars
Lot C 120 cars
Lot D (Future Parking)
Lot E 80 cars
Lot F 68 cars
Lot G 73 cars
Lot H 30 cars
Lot J 54 cars
Lot K 30 cars

In addition to the parking lots, Sesame Street provides parking for about 45 vehicles and 20 vehicles can park along Corten Torres Road. The parking counts identified above for the lots do not include the recent conversion of automobile parking spaces for scooter parking.

An additional 100 cars can be accommodated in the area to the south west of Lots B & C which is intended for temporary parking until parking structure 2 is constructed.

Future development will affect the current parking configuration. Parking Lots A, J, & K will be modified with the reintegration of Sesame Street. Lot H will be affected by the generator building for the Foundation Building, LRC, & Student Center. Lots B & C will be modified with the development of Parking Structure 2. Lot E will be modified with the development planned for the Administration Building and the Technology Center. Resurfacing of the parking areas with pervious pavement is intended for all of the parking areas.

Because of the property limitations, the campus will need to start programming or advocacy for additional public transportation options alongside UOG and GWHS.

- LEED Certification advocates....
- Consider possible parking fees or preferred stalls for carpools, hybrids, etc...

PARKING DEVELOPMENT:

- Sesame Street
  50 cars
- Parking Structure 1
  300 cars
- Parking Structure 2
  200 cars
- Lot A
  24 cars
- Lot B
  57 cars
- Lot C
  70 cars
- Lot D (Mult-use basement)
  30 cars
- Lot E
  50 cars
- Lot F
  68 cars
- Lot G
  73 cars
- Lot H
  25 cars
- Lot J
  22 cars
- Corten Torres
  21 cars

Total Parking Count = 990 cars

PARKING

PARKING DEMAND

Based on enrollment projections (excluding the secondary education students) the campus needs to accommodate parking for 2,092 post secondary students, 448 adult education students, faculty, and staff. Parking for continuing education students also needs consideration.

A new full time equivalent (FTE) for parking should be determined based on three factors:

1. weekly class distribution
2. daily class distribution
3. the transient nature of visitors, students, faculty, and staff.

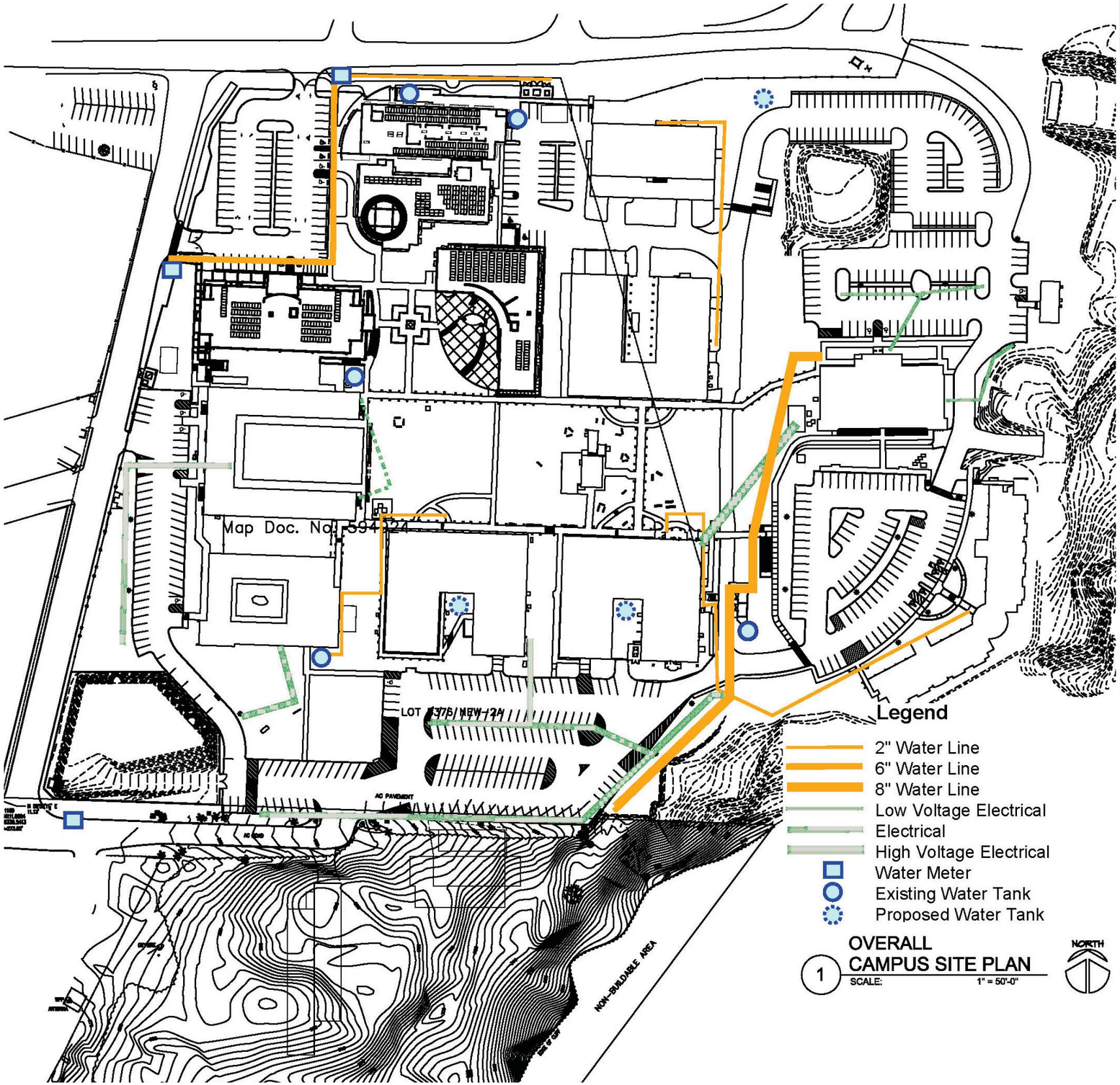
These factors account for the amount of time that visitors, students, faculty and staff spend on campus.

Most classes are typically done twice a week, Monday-Wednesday or Tuesday-Thursday. Friday and Saturday classes are minimal in comparison to the Monday through Thursday schedule. There are also a small percentage of classes that are conducted every day of the week. The following approximations were determined utilizing the Fall 2011 and Spring 2012 GCC class schedules:

- 76-percent of GCC classes are done primarily Monday through Thursday.
- 16-percent of classes are done on Fridays.
- 8-percent of classes are done on Saturdays.
- A normal instructional day is considered 12 hours (10am-10pm).

The GCC population on a given day can be estimated utilizing these approximations, which can provide a comprehensive picture of the daily campus parking demand. The campus population peak lasts from Monday through Thursday, which would amount to approximately 2,430 students, faculty, and staff on the GCC campus during each of those days. However, each population group is transient, therefore an FTE factor is assigned to each based on the percentage of time that they are on campus relative to the 12-hour instructional day. The resulting daily parking demand for the projected students, faculty, staff, and visitors is 785 cars, which also coincides with zoning law parking requirements. New parking development would park 950 cars approximately. This capacity provides additional parking for visitors and during class transitions. Additional overflow parking may be necessary during major campus events.

It is important to note the direct role that class scheduling plays in the parking demand. Adjusting class schedules to minimize the daily population shift should render more adequate parking during class time. Utilizing parking meters and paid parking may also be alternatives to curb the campus parking demand along with incentives for carpooling.



INFRASTRUCTURE IMPROVEMENTS

EXISTING WATER SYSTEM

Water meters are located at three locations on the campus. One meter is located on the 2-inch water line adjacent to the Foundation Building. Another meter is located on the 6-inch water main added with the Allied Health Center Building. The third meter is located at the south edge of the campus near Gate 4 on the 8-in water main that enters from Washington Drive to the East part of the campus. Most of the campus buildings have 2-inch lateral lines that tie into the 6-inch and 8-inch mains.

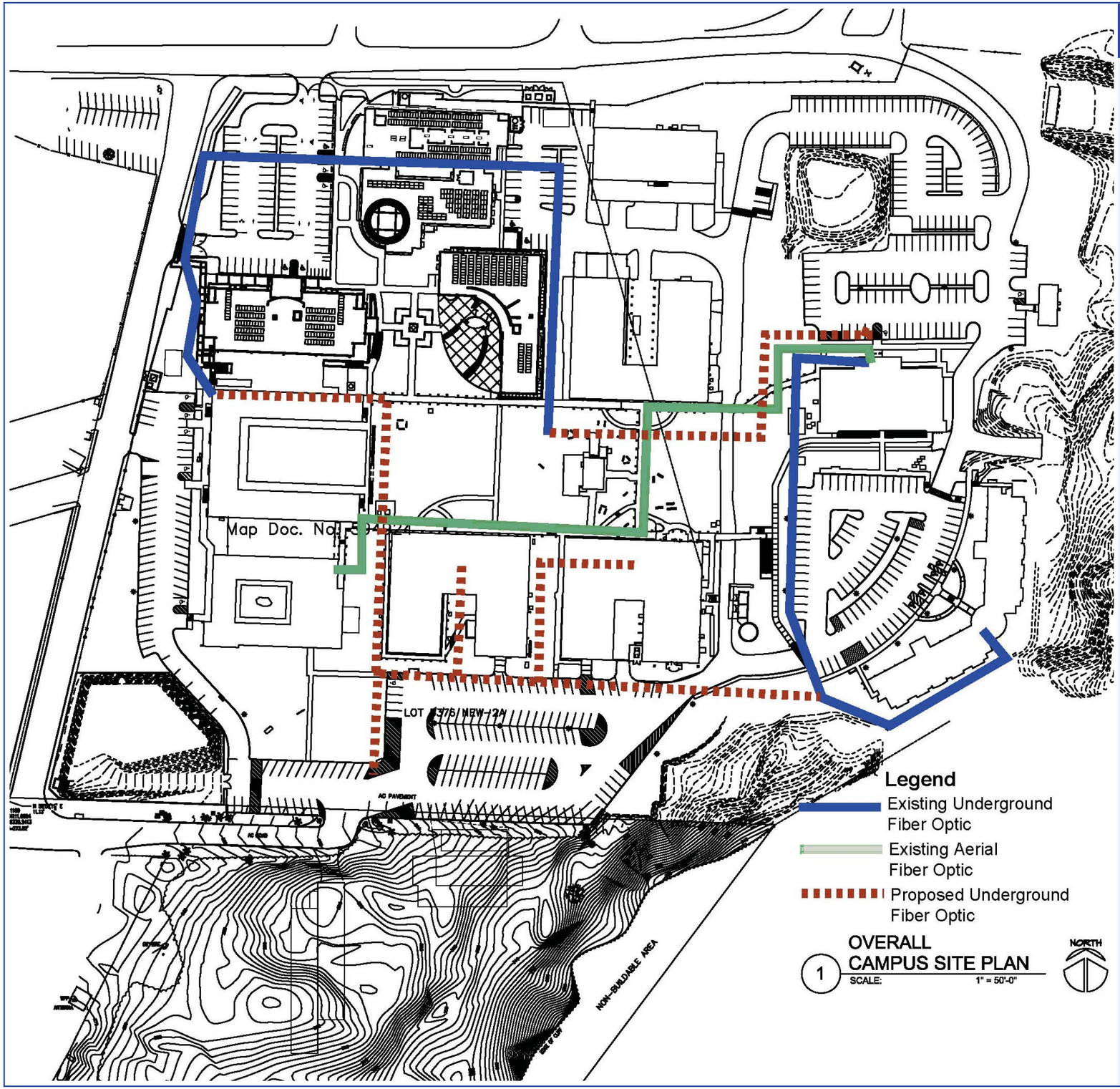
EXISTING POWER SYSTEM

Primary service to the GCC campus consists of a combination of overhead and underground systems. Overhead GPA lines run along Sesame and Corten Torres Streets. Underground connections to these lines were executed with the construction of the new building projects. The existing overhead service lines adjacent to the firing range and in the Main Quad will be replaced with underground lines.

Site utilities are based on available information and require further verification.

Existing Stormwater System

The campus stormwater system was upgraded in 2004 and designed to accommodate the entire campus fully developed. The capacity of the system assumes impervious surface at greater than 90-percent of the total campus area. The Master Plan projects will maximize open space and utilize pervious walkway and parking material.



INFRASTRUCTURE IMPROVEMENTS

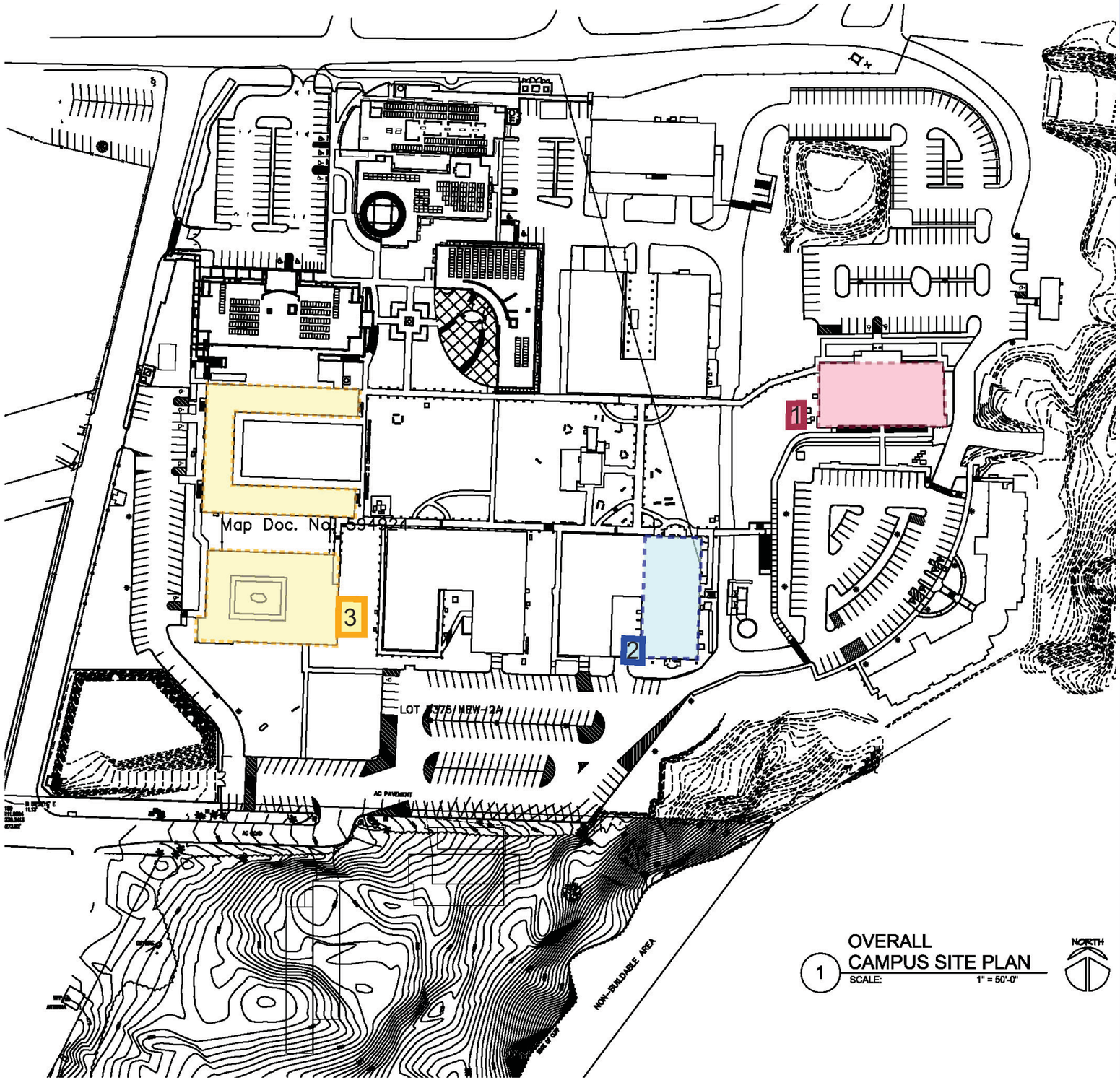
NETWORK & COMMUNICATION SYSTEMS

The existing campus network is comprised of overhead and underground fiber optic lines. Underground lines run from Building 1000 to Building 2000. Additional underground lines extend from Building A to Building 5000. Overhead fiber optic lines run from Building 1000 to Building D, the main campus network hubs, following the existing covered walkways. The overhead lines will be relocated underground as new projects are constructed. Each new building project will be programmed with Communication Rooms.

GCC intends to convert Building 1000 into a Green Data Center. This will involve:

1. Server Consolidation
2. Power Management Systems
3. Upgrade to Energy-efficient Servers
4. Utilization of High-efficiency Power Supply
5. Utilization of Energy Star and Standard Performance Evaluation Corp. Standards
6. Utilization of Photovoltaic Panels and Micro-turbine Power Generation
7. Utilization of Trigeneration--Combined Cooling, Heating, & Power

This conversion will allow GCC to continually upgrade it's network capability while addressing the increasing power demand of network systems.



INFRASTRUCTURE IMPROVEMENTS

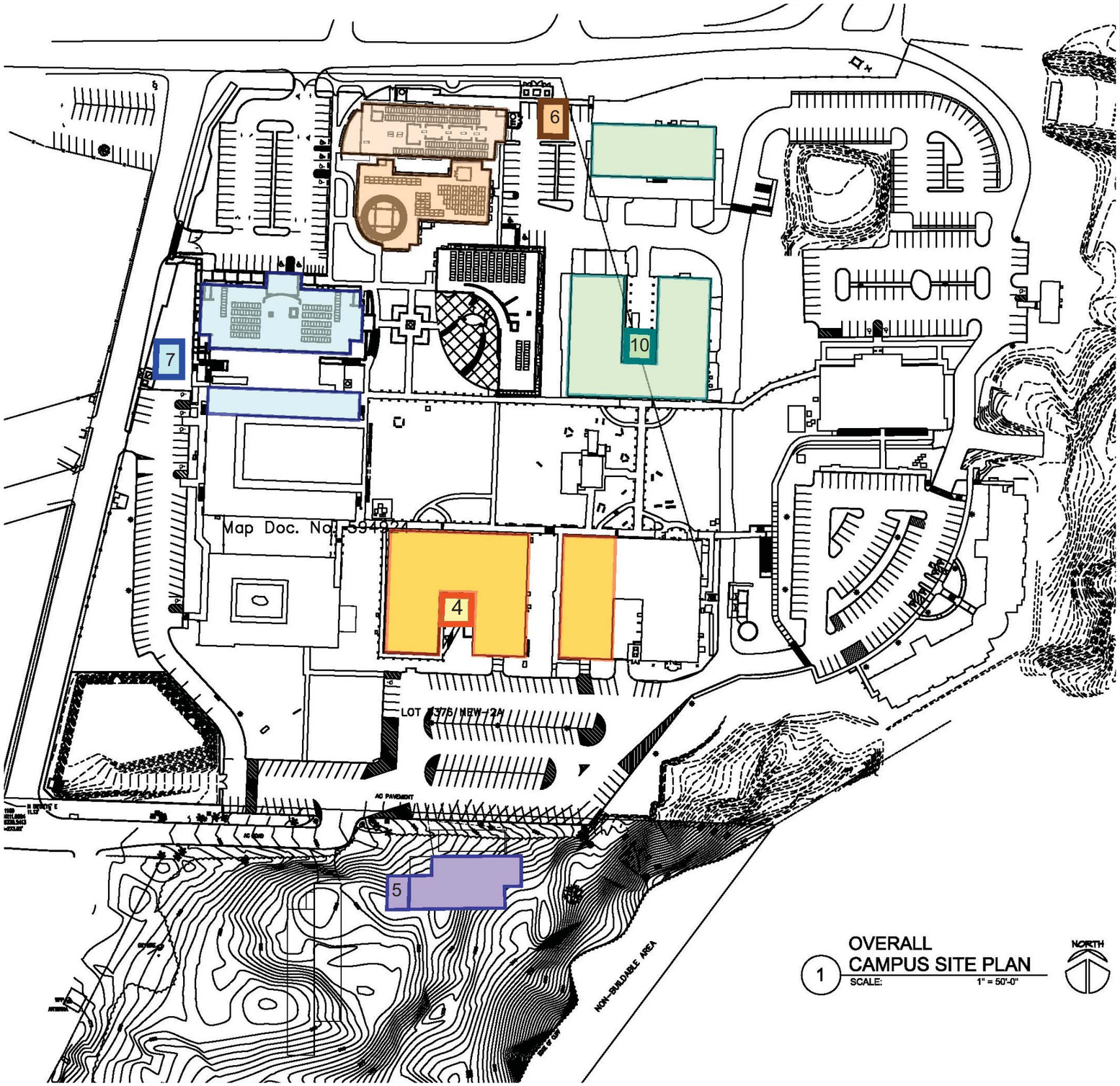
EMERGENCY POWER - EXISTING SYSTEMS

GCC has implemented backup generators to provide auxiliary power to campus facilities:

Generator 1 (Building 1000)
Generator 2 (Building 400)
Generator 3 (Buildings B, C, and D)

Backup power is critical to the maintenance of building systems being incorporated into the campus building projects such as direct digital control A/C systems and photovoltaic systems. Power service to the campus fluctuates frequently and this requires systems to be manually reset, and can damage systems enough to require replacement. The provision of line conditioners should also be incorporated with the generator facilities. Provision of uninterrupted power supply (UPS) units should also be utilized where appropriate.

A Spill Prevention, Containment, and Countermeasure (SPCC) plan for the GCC campus is required because of the environmental contamination threat posed by the emergency generators. The SPCC plan is an Environmental Protection Agency requirement and a plan has already been developed by Dueñas, Camacho, & Associates (DCA) for the generators servicing the Technology Center and Building 300. DCA is developing the overall campus SPCC plan, which will be updated with the completion of every campus generator project.



INFRASTRUCTURE IMPROVEMENTS

EMERGENCY POWER - NEW SYSTEMS

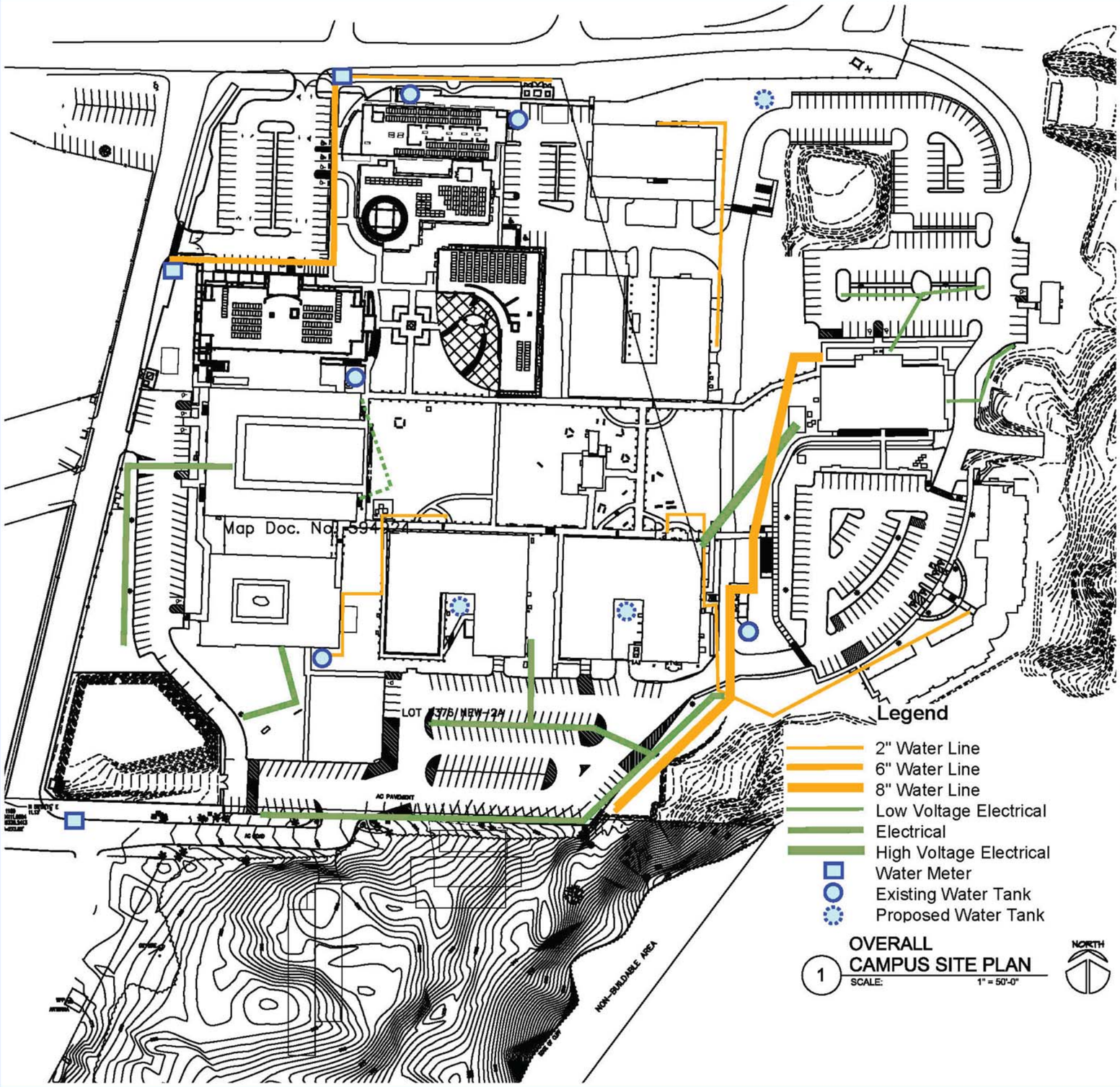
GCC is proposing the following additional generator buildings:

Generator 4 (Buildings 100, 200 & 300)
Generator 5 (Forensic DNA Lab Facility)
Generator 6 (Buildings 4000, 5000, & 6000)
Generator 7 (Buildings A & 3000)
Generator 8 (Maintenance Building)
Generator 9 (Multipurpose Auditorium)
Generator 10 (Buildings 500, 600, and 900)

The planned generators are intended to serve the buildings including full renovations. Line conditioners and UPS units will be considered with each specific project.

Comparison between non-centralized vs. centralized....

In terms of campus aesthetics, safety of students & equipment campus generators will usually be housed in concrete shelters.



INFRASTRUCTURE IMPROVEMENTS

EXISTING WATER SYSTEM

The water service to the Mangilao area is historically known for frequent interruption. GCC has initiated the use of domestic water tank systems to mitigate the effect of the current public water service on campus operations and instruction time. Existing campus water tank systems are

Tank 1
Building 1000
Building 2000
Building 400

Tank 2
Building 4000
Building 6000

Tank 3
Building 3000

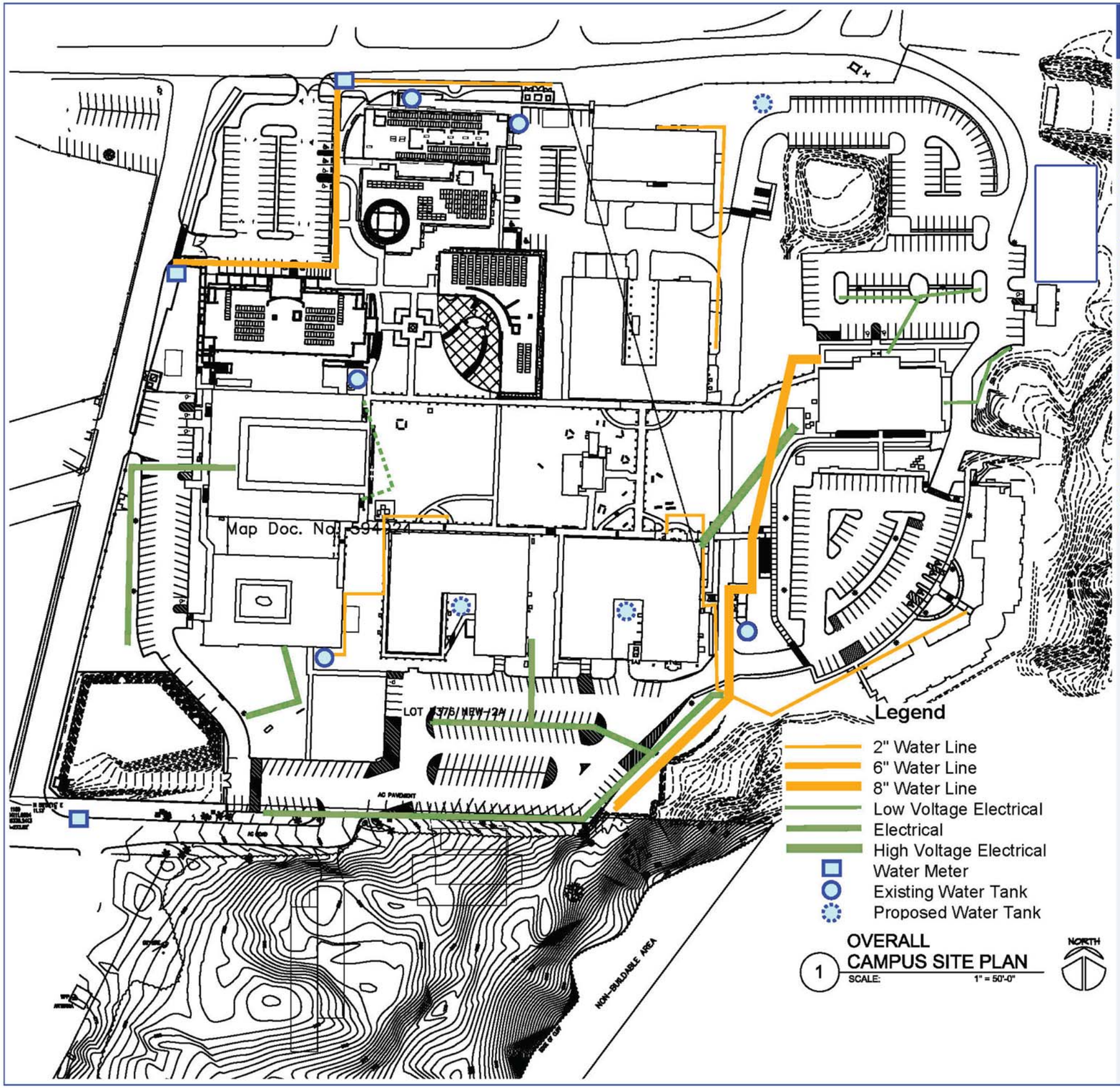
Tank 4
Building 5000

Tank 5
Forensic DNA Lab

Tank 6
Building D

Tank 7
Buildings A,B,C

The water tank systems are necessary until upgrades to the public water service are done. A dependable water supply is necessary for Public Health and code requirements for fire protection and sanitary needs, in addition to the functional needs of classes / curriculums such as Culinary Arts and Biology.



INFRASTRUCTURE IMPROVEMENTS

WATER TANK SYSTEMS

Additional water tank systems will be provided with each new building project:

Tank 8
Building 100 & 200

Tank 9
Building 300

Tank 10
Buildings 500, 600, & 900

Tank 11
Maintenance Building

Water tank capacity will be determined anticipating the full building renovations scheduled in the Master Plan work. The water tank capacity will anticipate a 1-day reserve, minimum. Additional reserve capacity is subject to available space. Typical Factors for tank capacity include restrooms, drinking fountains, maintenance, hose bibs, and sinks.

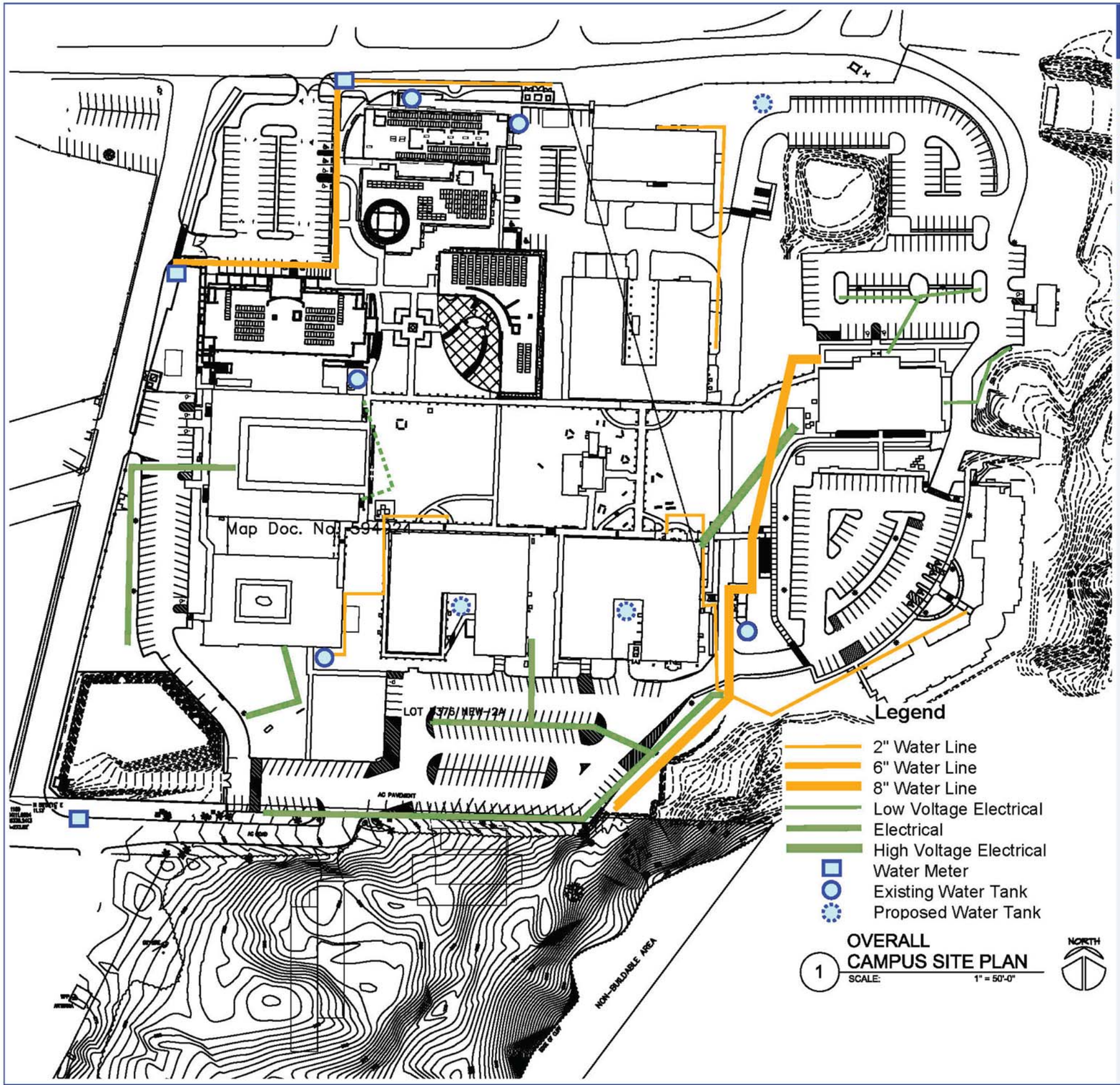
INFRASTRUCTURE IMPROVEMENTS

SEWER SYSTEM

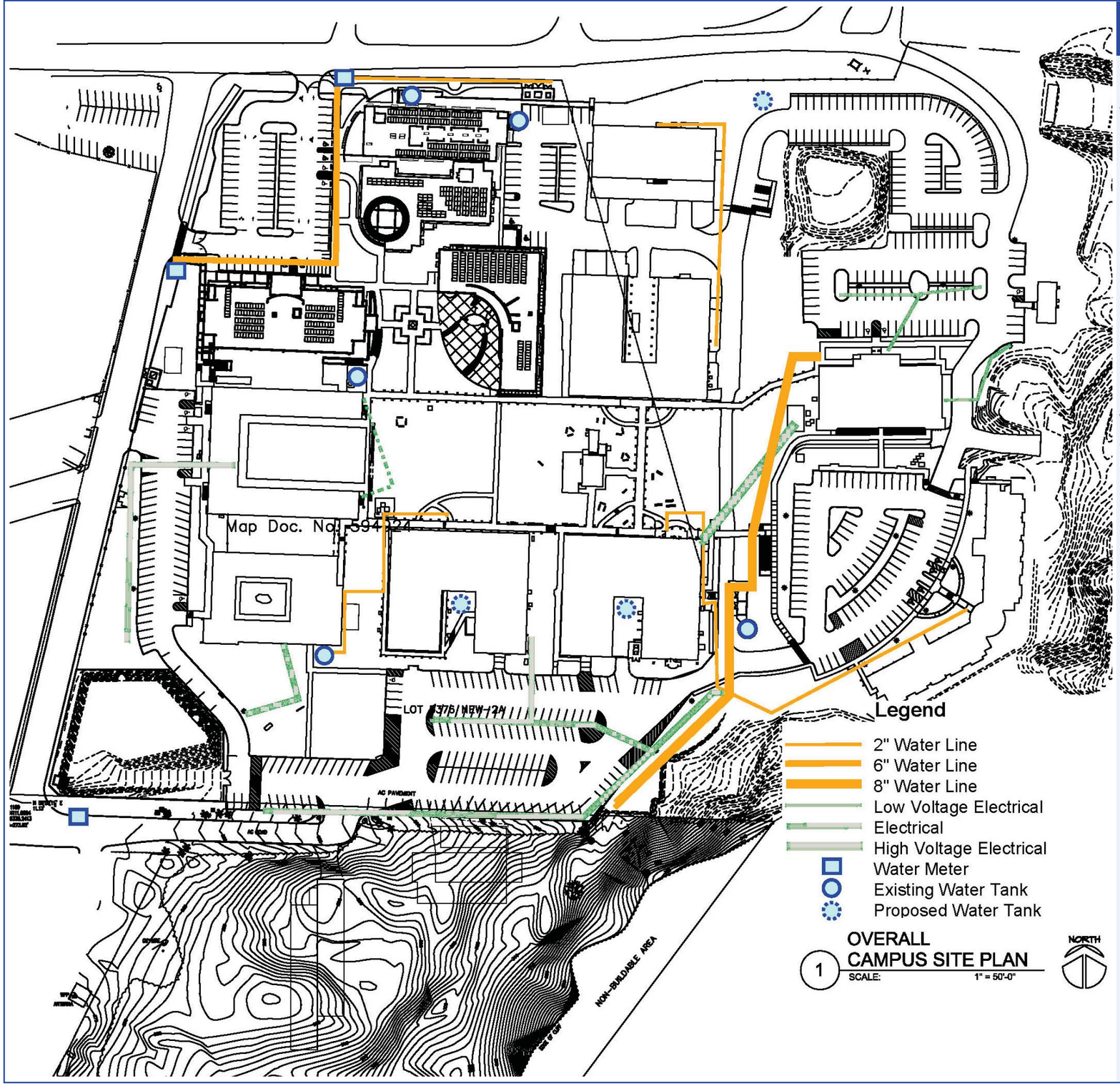
The GCC campus is served primarily by 8-inch sewer lines that run through the campus and connect to sewer mains along Sesame Street and Corten Torres Street. Campus facilities tie into the main sewer line with 6-inch and 4-inch lines.

RAINWATER CATCHMENT

Rainwater catchment is utilized at Building 6000 to increase the campus water efficiency. The water collected by the system is non-potable and used for the flushing of toilets & urinals. New buildings will include provisions for rainwater catchment sized for 1-day reserve capacity.



1 OVERALL CAMPUS SITE PLAN
SCALE: 1" = 50'-0"



INFRASTRUCTURE IMPROVEMENTS

FIRE PROTECTION

The following existing buildings will have fire sprinklers are:

Building 500
Building 600
Building 1000
Building 2000
Building 3000

Building 3000 has its own fire pump and tank. Buildings 500, 600, 1000, & 200 are serviced by Tank 1 which is a combination domestic water / fire pump system.

Fire sprinkler systems will be provided based on Code Requirements. For the future building projects, only the Multi Purpose Auditorium Building would require a fire sprinkler system based on a preliminary review of the 2009 International Building Code. However, the Maintenance Building is intended to have a fire sprinkler system as a campus safety precaution.

CAMPUS SAFETY

The Guam Community College campus is similar to a small city where diverse populations meet, reside, shop, learn, research, and play – often 24 hours a day. Unfortunately, they are also subject to a wide range of risk. Safety issues can be grouped into three general categories. Each category can be mitigated either with provisions for space; layout of physical spaces; campus wide systemic solutions; or a combination of both.

Category 1 Issues:

- Shooter attacks
- Sexual assault
- Bullying
- Power outages
- Protests
- Student unruliness or rioting
- Hostage situations
- Violence during mental duress and panic

Category 1 Measures:

- Building placement to allow easy visual access
- Removal of dead-end or “herding” routes where students can be trapped individually or in groups.
- Provision of alternative (and additional) exits from classrooms or administrative spaces.
- Provision of law enforcement or safety personnel hubs.

Category 2 Issues:

- Mass food poisoning
- Chemical or biological attacks
- Chemical or Biological agent accidents
- Pandemic outbreaks
- Property damage

Category 2 Measures:

- Provide operational safety and recovery spaces including triage
- Provide easy access for emergency vehicles
- Provide isolation areas.
- Provide law enforcement hubs

CAMPUS SAFETY

Category 3 Issues:

- Theft
- Security of high value equipment or materials
- Computer attacks
- Drug use or proliferation
- Protection of sensitive documents
- Natural disasters-earthquake and typhoon
- Voyeurism and privacy violations

Category 3 Measures:

- Provide communication and visual (and electronic)
- Surveillance campus-wide
- Provide controlled access points
- Motion operated sensors
- View panels in doors
- Pathway lighting
- Back-up power and communications systems campus-wide

CAMPUS EXPANSION

PRIVATE PROPERTY ACQUISITION
2 Lots to the North

PUBLIC PROPERTY ACQUISITION
Shared with George Washington High School to the South

water tank property...

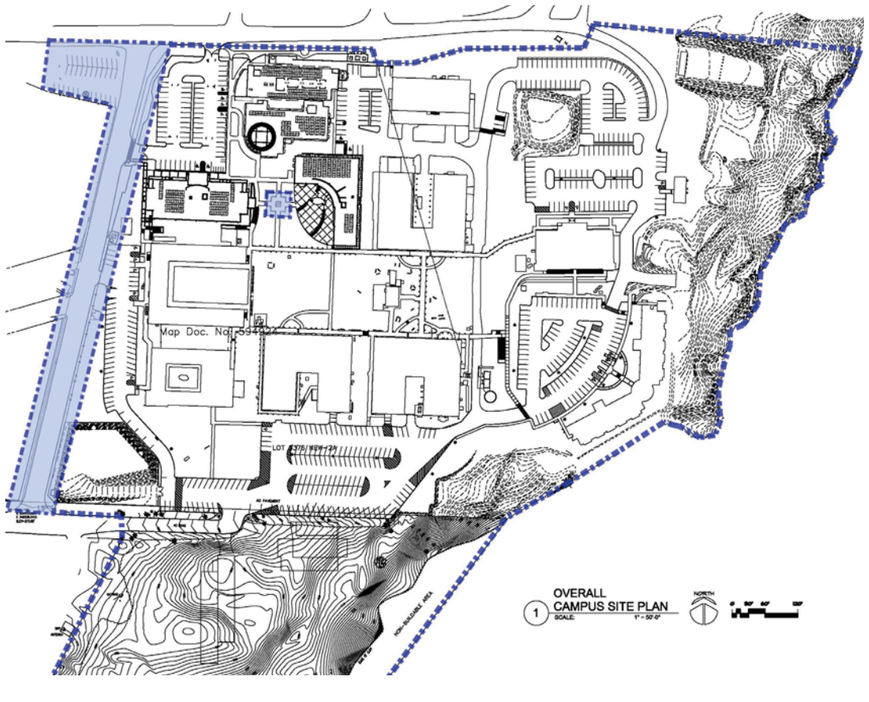
need dilineation of Forensic Lab boundary...

Acquisition of these properties will provide an opportunity for temporary vehicle parking until future development is determined.

<u>Existing Campus Property</u>
Lot 5376 New - 2A

<u>Limestone Forest</u>

- From GCC Campus to UOG Campus
- Hiking trail should not be hindered by development
- Outside of the designated conservation area
- Ifit trees need to be saved
- Considerations for other significant plants such as cycads



CAMPUS EXPANSION

REINTEGRATION OF SESAME STREET

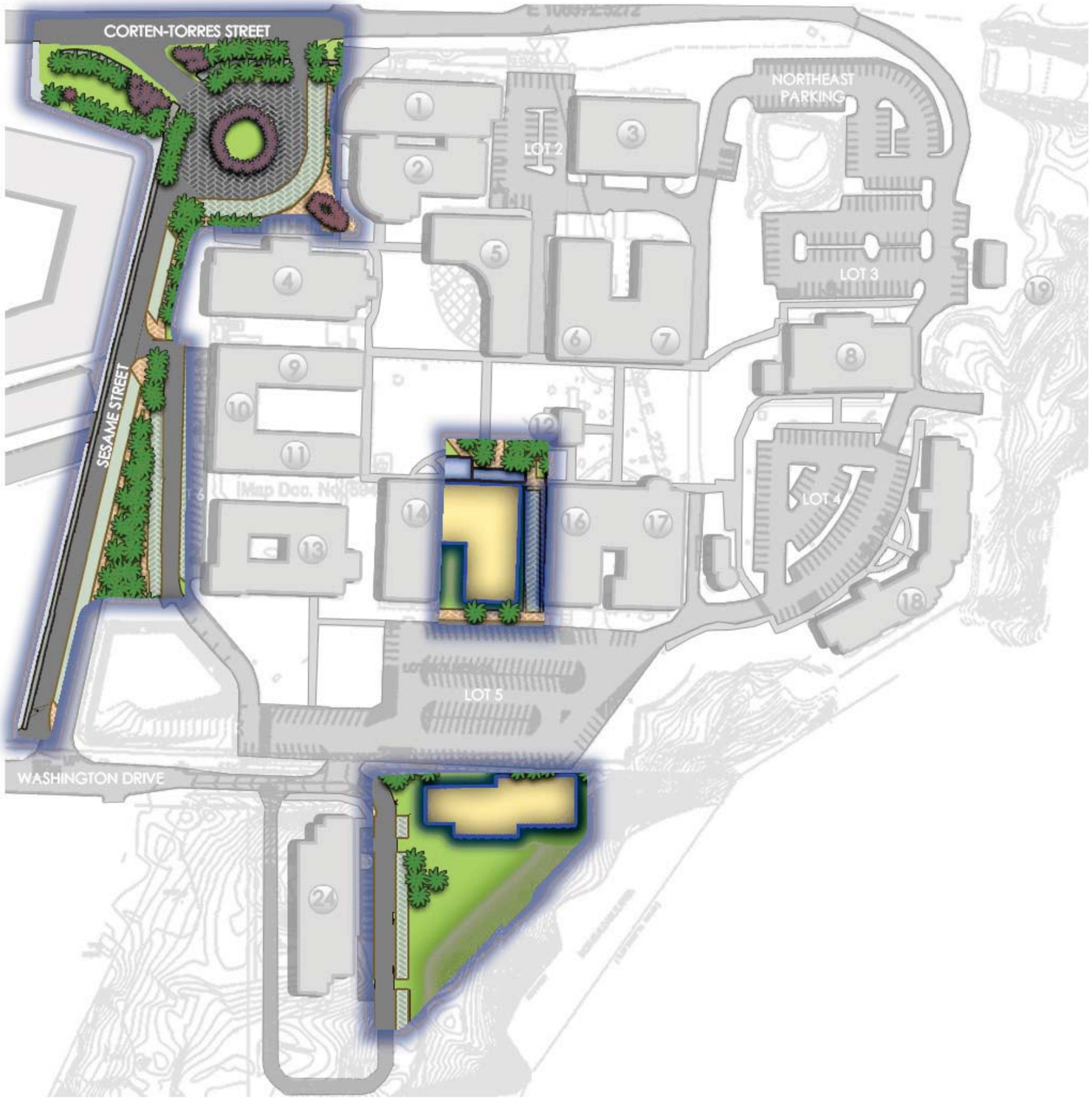
Sesame Street is the arterial street on the west edge of the Campus that connects Corten-Torres Street and Washington Drive, the two primary streets that take cars to GCC from Vietnam Veterans Highway (Route 10). Sesame Street is currently considered outside of the GCC campus. However, the campus topographic map shows that street is located on the GCC property. Property information does not indicate that Sesame Street is a public right of way.

Reclaiming Sesame Street provides an opportunity to accommodate additional parking for GCC and to further define the western edge of the campus. It may be optimal to convert Sesame Street to a one way travel and additional parking space. The development should also consider increased pedestrian activity. The development of Sesame Street is also critical to other campus projects including:

- Soka Gakkai International Monument
- West Fence Construction
- Parking Structure 1 & 2
- Campus Gateways

The integration of these projects is part of GCC's development plan for Sesame Street and the western edge of the campus. Once completed, these projects will enhance the sense of arrival to the Guam Community College campus.

PHASES OF WORK



PHASE 1A

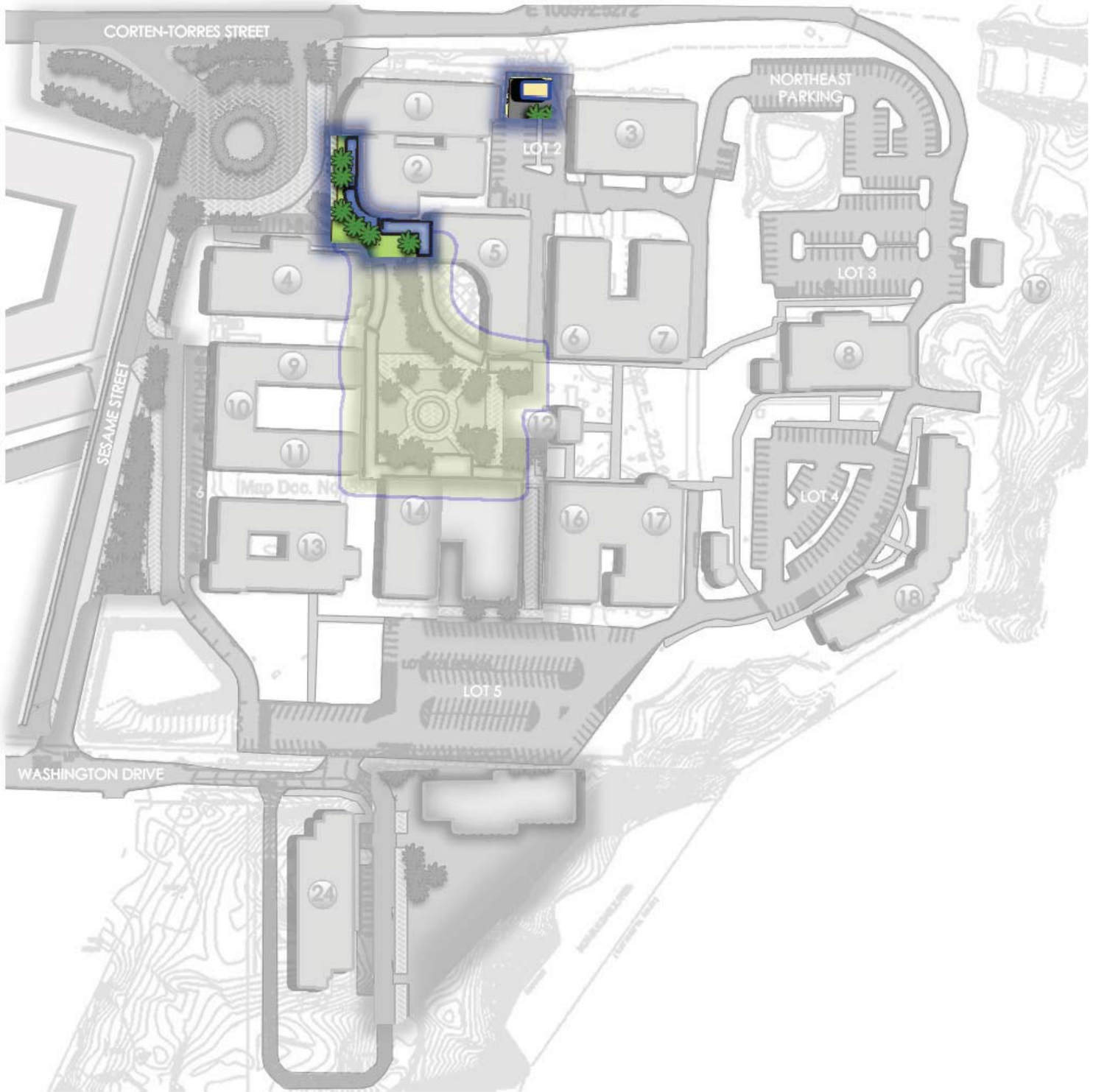
1. ***SESAME STREET REINTEGRATION***
   Reconfiguration of Sesame Street for one-way travel with parking.
   - New Campus Entrance; construction of the campus perimeter fence and main entrance gate.
   - Construction of transit stop.
   - Placement of Soka Gakkai monument.
   - May need to be subdivided into two-phases, with reconfiguration Parking Lot J & K moving to a later work phase.
   - Consideration of Phase 2B work - Generator #5.

2. ***BUILDING 200 RENOVATION***
   - 2-story addition
   - Classroom @ 700 SF ea. 8 total
   - Classroom/Lab @ 1400 SF ea. 2 total
   - Office @ 900 SF ea. 2 total
   - Office @ 400 SF ea. 1 total
   - Office @ 200 SF ea. 2 total
   - Consideration of Phase 1B work - Founders' Square

3. ***GENERATOR #4***
4. ***GENERATOR #5***
5. ***FORENSIC DNA LABORATORY FACILITY***
   - Criminal Justice Classrooms @ 650 SF ea. 2 total
   - Criminal Justice Offices @ 110 SF ea 2 total
   - DNA Laboratory & Office Space 6,600 SF total

PHASE 1B

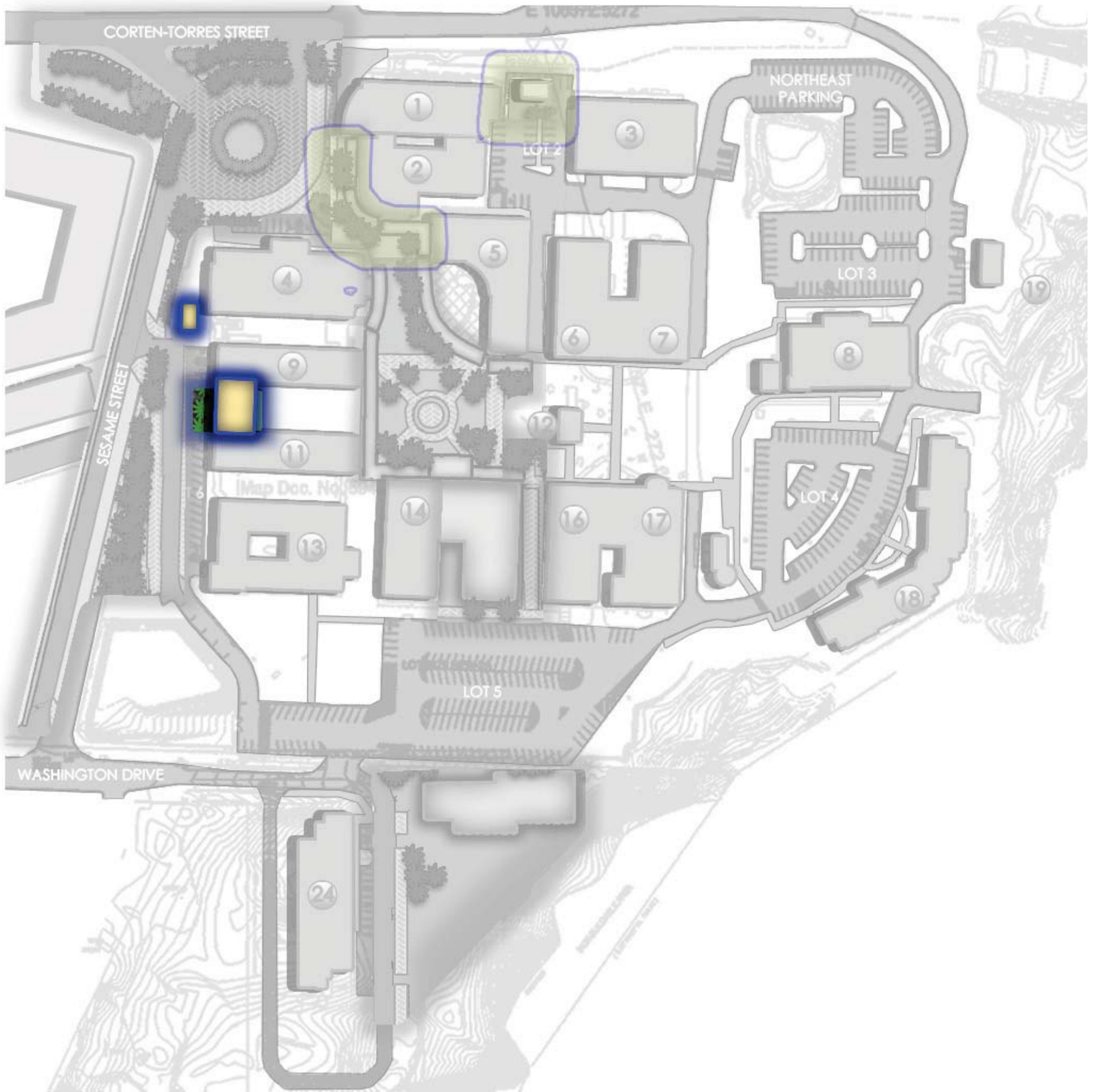
1. ***FOUNDER'S SQUARE***
   - Recognition plaques
   - Walkway canopies
   - Planting & site improvements
   - Infrastructure improvements - network, water, and power.
   - Consideration of Phase 1A work - Building 200 Renovation.
   - Consideration of Phase 3B work - Building 100 Renovation.



PHASE 2A

1. ***GENERATOR #6***
   - Backup power for Buildings 4000, 5000, & 6000
   - Modification of Parking Lot H.

2. ***OPEN SPACE IMPROVEMENTS***
   - Walkway canopy
   - Planting & site improvements
   - Infrastructure Improvements

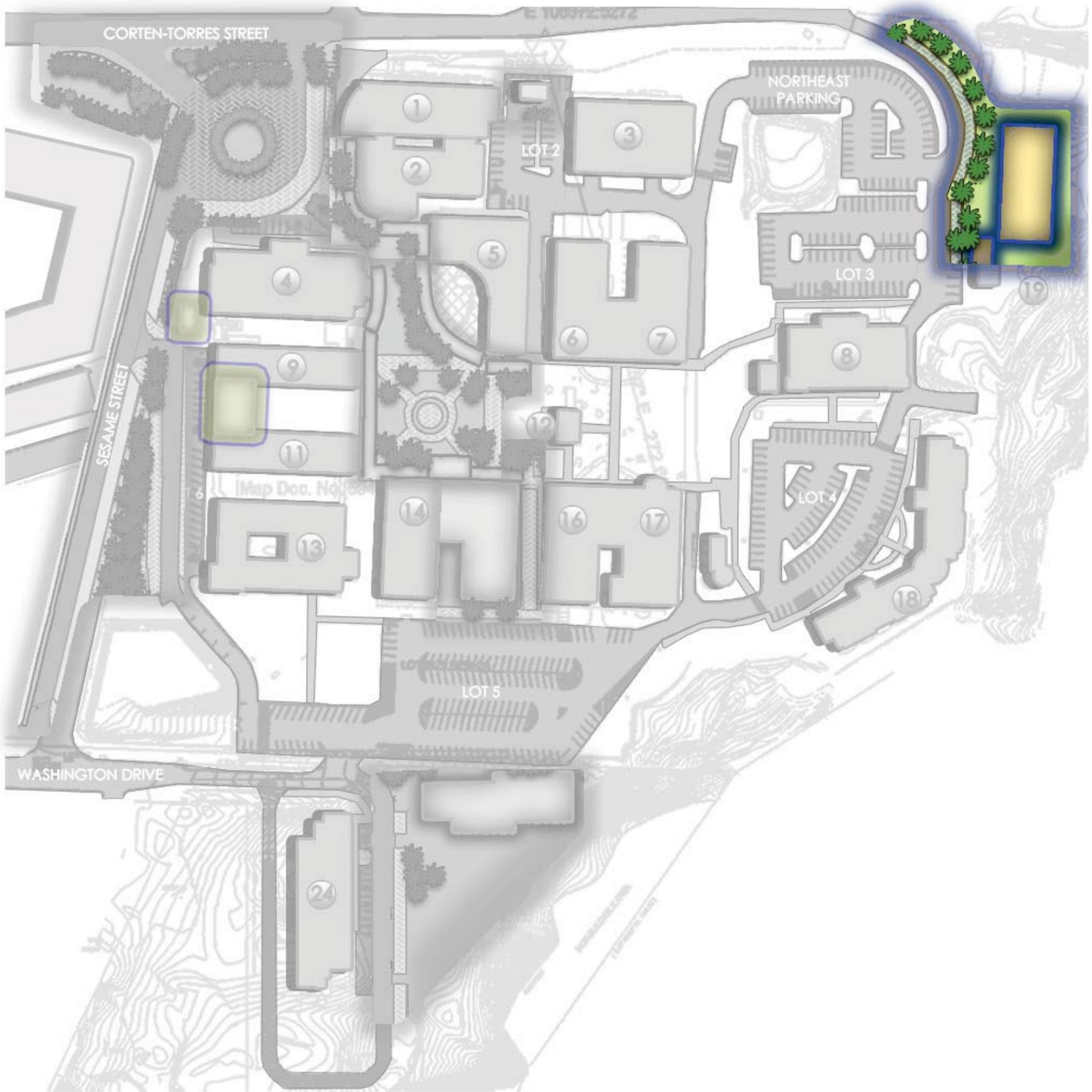


PHASE 2B

1. ***BUILDING B RENOVATION***
   - 2-Story addition
   - Office @ 1,900 SF, 3 total
   - Office @ 2500 SF, 1 total

2. ***OPEN SPACE DEVELOPMENT***
   - Planting & site improvements
   - Infrastructure improvements

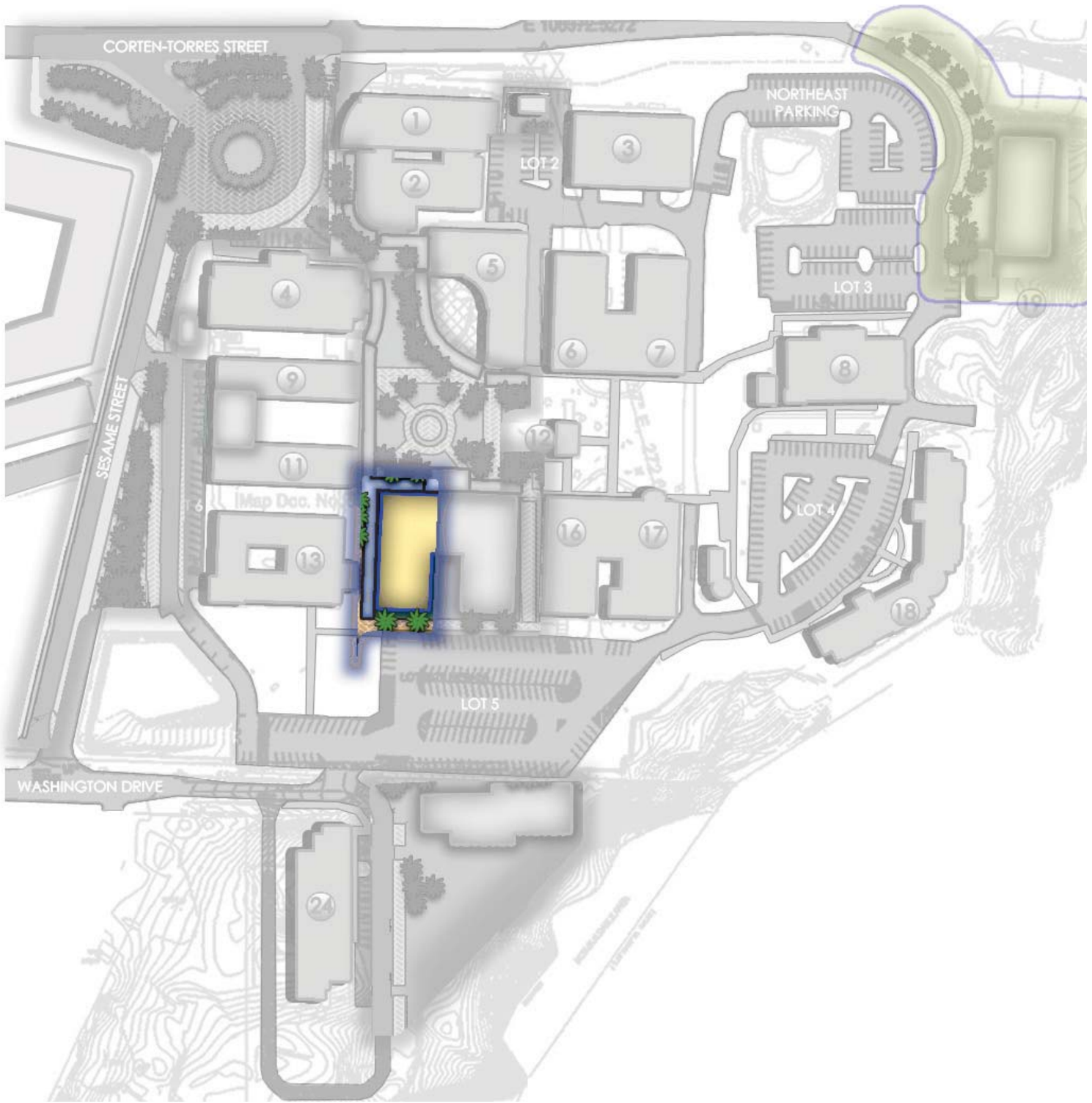
3. ***GENERATOR #7***
   - Backup power for Buildings A & 3000.
   - Consideration of the planned biology planting area & Phase 1A work - Sesame Street Reintegration.



PHASE 3A

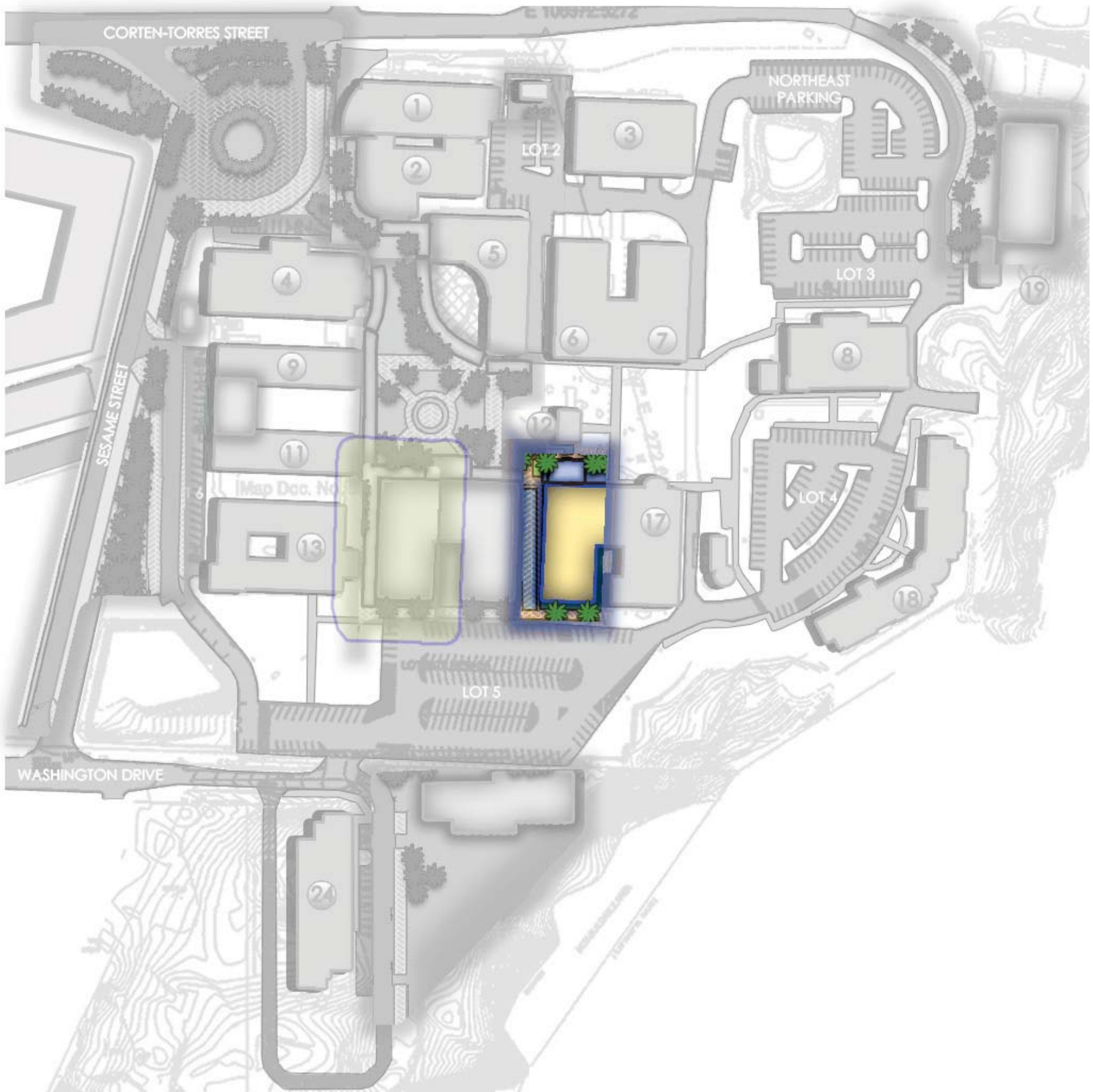
1. ***MAINTENANCE BUILDING***
   - Warehouse 5,000 SF total
   - Office Space 1,000 SF total
   - Consideration for additional campus parking
   - Demotion of the temporary building

2. ***GENERATOR #8***
   - Backup power for the Maintenance Building



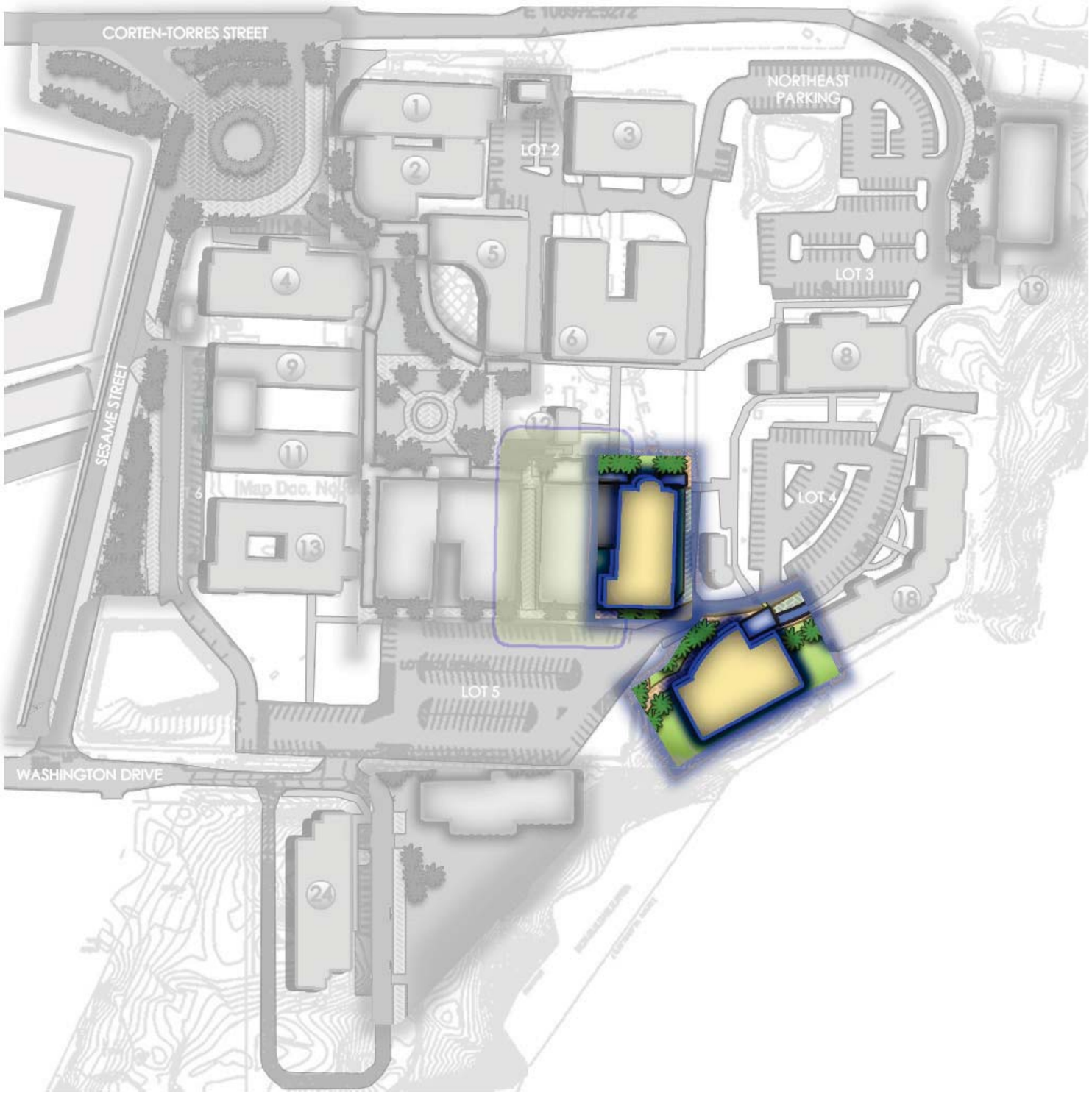
PHASE 3B

1. ***BUILDING 100 RENOVATION***
   - 2-story addition
   - Classroom @ 700 SF, 8 total
   - Classroom / Lab @ 1,400 SF, 2 total
   - Office
   - Walkway canopy construction



PHASE 4A

1. ***BUILDING 300 RENOVATION***
   - 2-story addition
   - Classroom @ 700 SF, 8 total
   - Classroom / Lab @ 1,400 SF, 2 total
   - Office
   - Walkway canopy construction

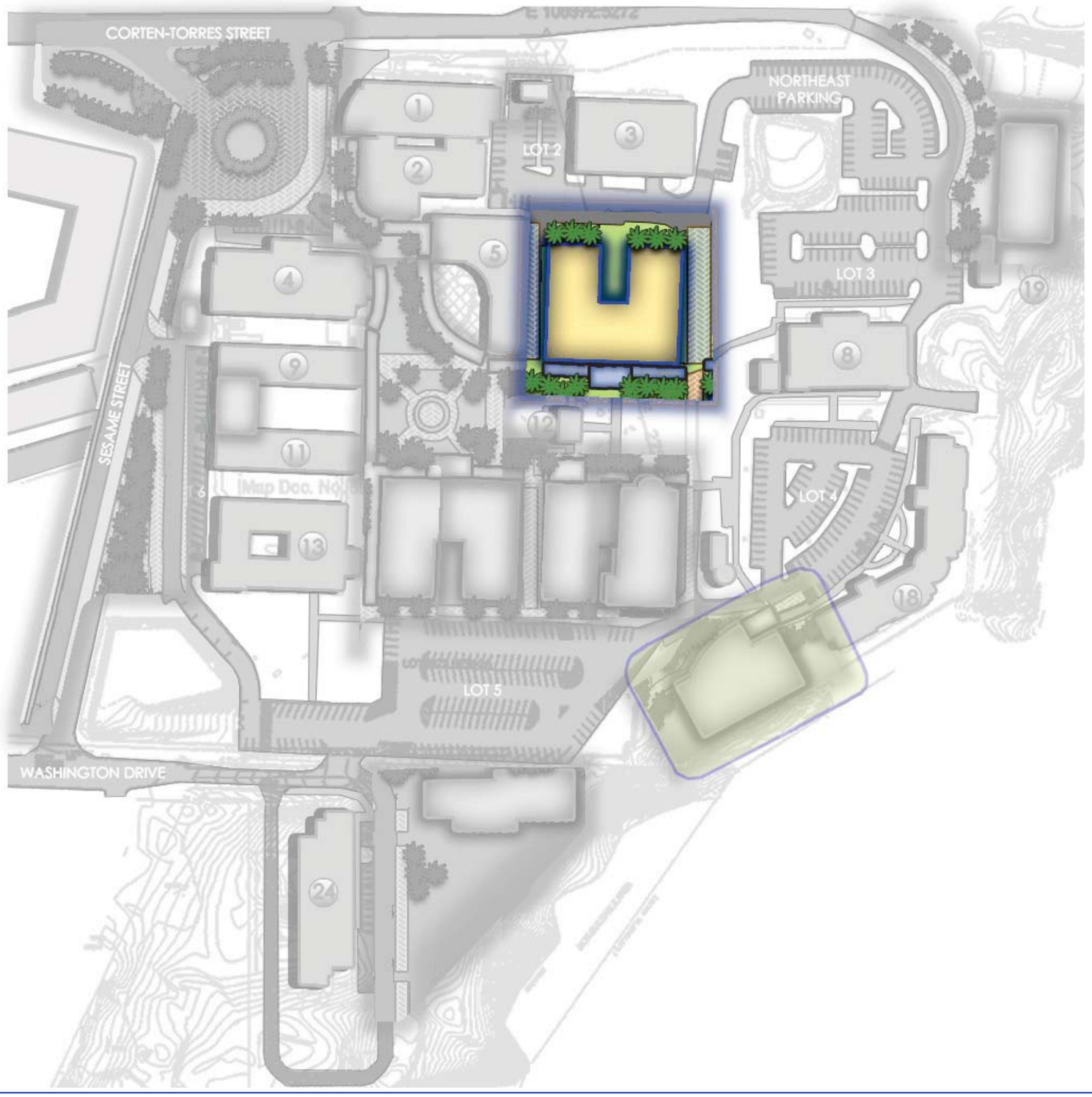


PHASE 4B

1. ***BUILDING 400 RENOVATION***
   - Kitchen expansion - additional 4,000 SF

2. ***MULTI PURPOSE AUDITORIUM***
   - 2-story building
   - Auditorium 4,000 SF
   - Offices 2,000 SF

3. ***GENERATOR #9***
   - 2 story building
   - Conference room
   - Offices

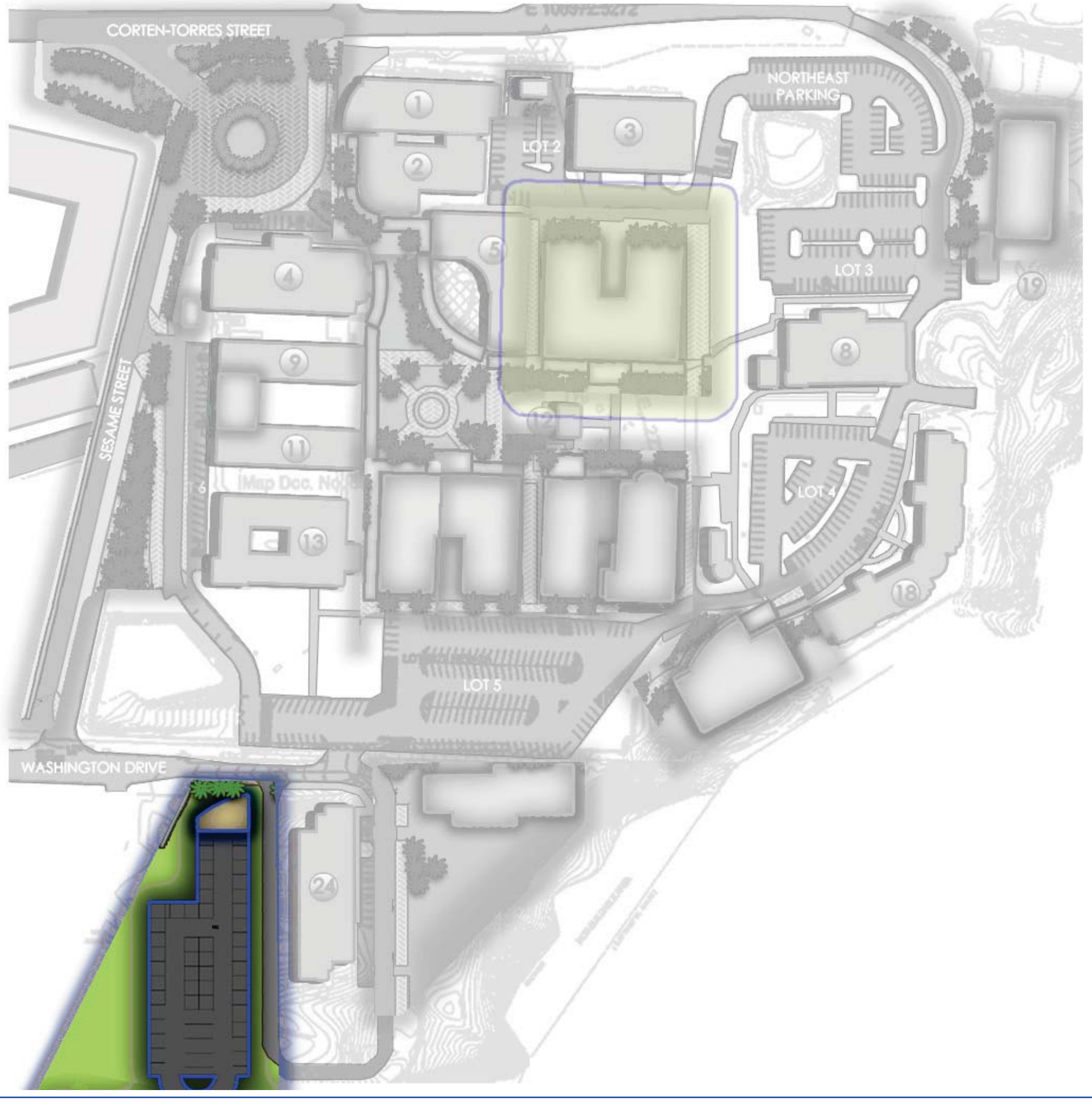


PHASE 5A

1. ***BUILDING 500 RENOVATION***
   - 2-Story addition
   - Classrooms @ 700 SF ea. 5 total
   - Office @ 900 SF ea. 1 total
   - Office @ 400 SF ea. 1 total
   - Shop / Storage Space 6,000 SF

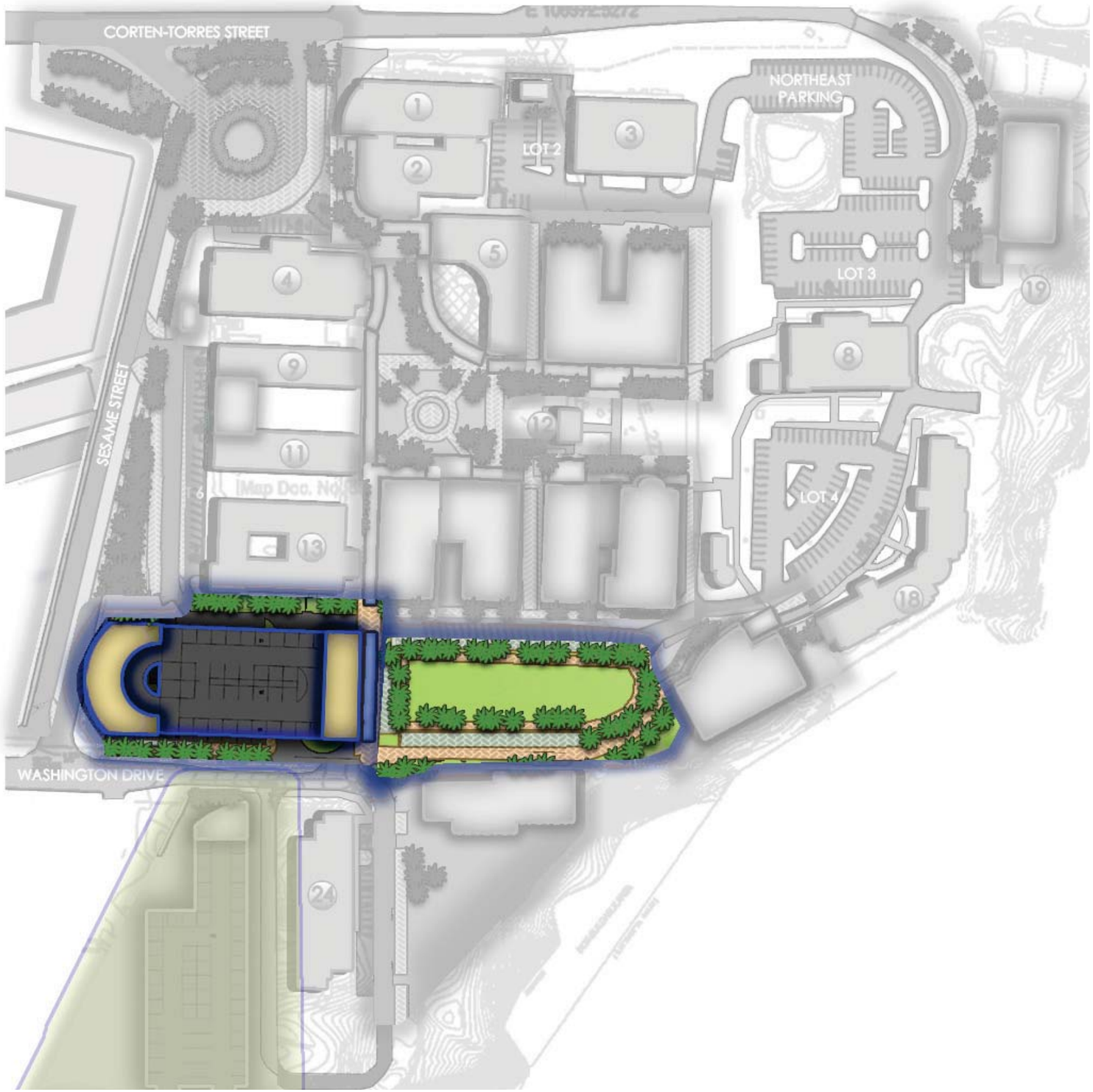
2. ***BUILDING 600 RENOVATION***
   - 2-Story addition
   - Classrooms @ 700 SF ea. 5 total
   - Office @ 900 SF ea. 1 total
   - Office @ 400 SF ea. 1 total
   - Shop / Storage Space 6,000 SF

3. ***GENERATOR #10***
   - Backup power for Buildings 500, 600, & 900



PHASE 5B

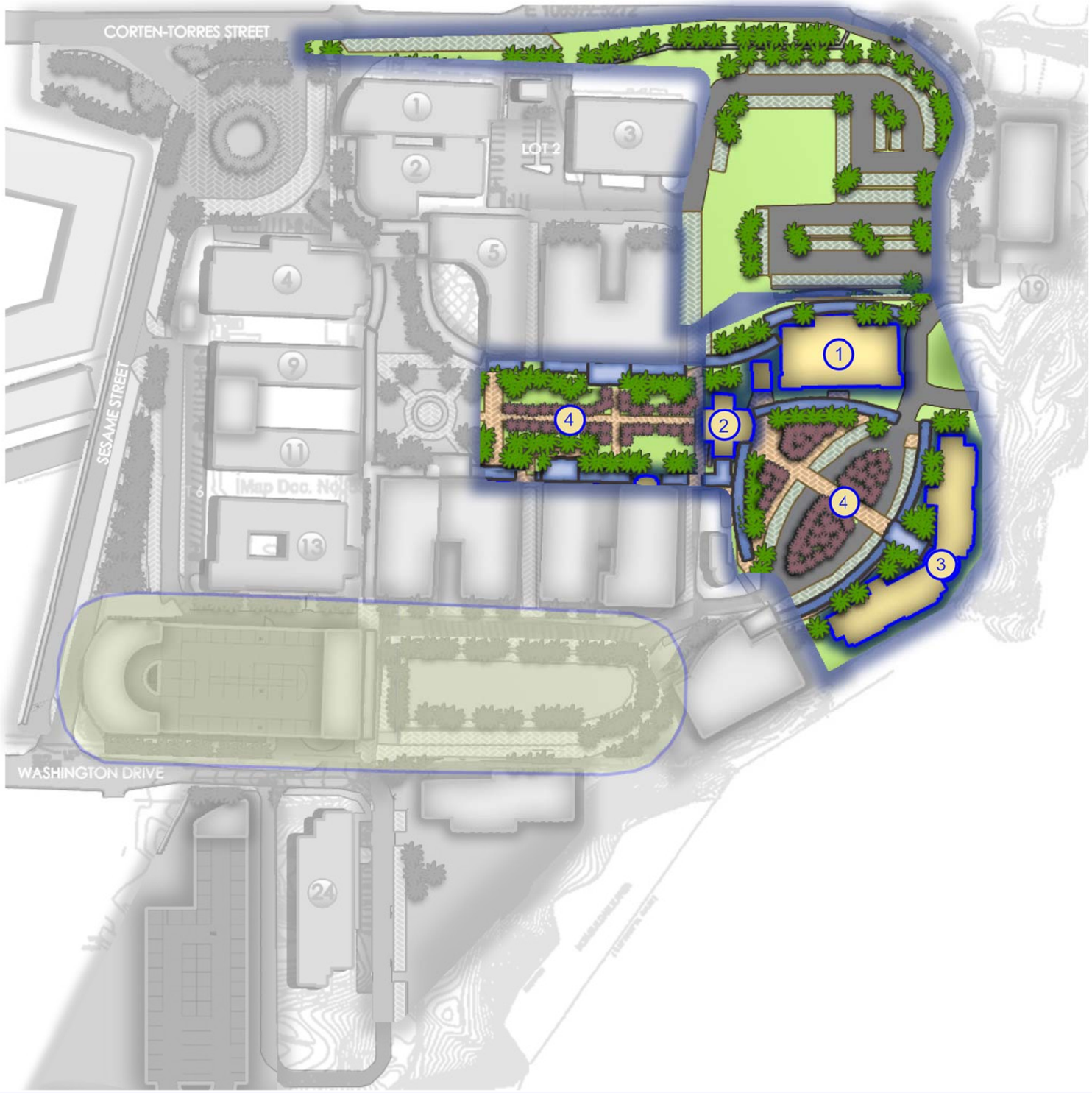
1. ***PARKING STRUCTURE 1***
   - 3 parking levels
   - Office Space 2,000 SF
   - Stormwater Percolation Chambers



PHASE 6A

1. ***PARKING STRUCTURE 2***
   - 3-levels, 200 cars
   - Office Space 7,000 SF

2. ***RECREATION TRAIL***
   - Planting & site improvements
   - Infrastructure improvements



PHASE 6B

1. ***BUILDING 1000 GREEN DATA CENTER CONVERSION***
   - Server Consolidation & Upgrades
   - Building Upgrades
     - Power Management System
     - Photovoltaic Panel Installation
     - Micro-turbine Generation consideration
     - Combined cooling, heating, & power

2. ***CLOCK TOWER BUILDING***
   - 3-story structure from the Main Quad ground level.
   - 1st Floor Cafe 2,000 SF
   - 2nd Floor Administration Office 1,000 SF

3. ***ADMINISTRATION BUILDING***
   - Building repairs
   - Interior renovations
   - Consideration of room consolidation into collaborative work areas.
   - Planting & site improvements
   - Infrastructure improvements

4. ***OPEN SPACE DEVELOPMENT***
   - Modification of Parking Lot E
   - Completion of Main Quad
   - Planting & site improvements
   - Infrastructure improvements
   - Pervious paving installation at parking lots & fire lanes.

COMPLETION

BUILDING KEY

1. Foundation Building (Building 6000)
2. Learning Resource Center (Building 4000)
3. Building 900
4. Anthony A. Leon Guerrero Allied Health Center (Building 3000)
5. Student Center (Building 5000)
6. Building 600
7. Building 500
8. Technology Center (Building 1000)
9. Building A
10. Building B
11. Building C
12. N/A
13. Building D
14. Building 100
15. Building 200
16. Building 300
17. Building 400
18. Administration Building (Building 2000)
19. N/A
20. Forensic Lab
21. Forensic DNA Lab Facility
22. Parking Structure 1
23. Parking Structure 2
24. Multi Purpose Building
25. Clock Tower / Cafe
26. Maintenance Building