



south campus housing master plan

An Update to the 2008 Campus Master Plan & Supplement to the Honors Housing at Legacy Bridge Program
University of Utah

DFCM Project #09217750

May 2010

SOUTH CAMPUS HOUSING

MASTER PLAN

University of Utah

May 2010

**An Update to the 2008 Campus Master
Plan & Supplement to the Honors Housing
at Legacy Bridge Program**

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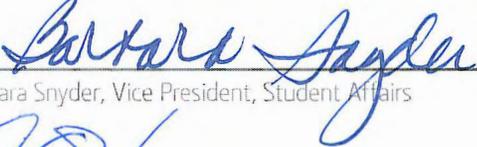
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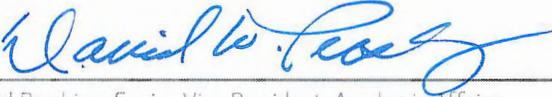
University of Utah Review Signatures

We have reviewed the Master Plan for South Campus Housing and warrant that it adequately represents our request to fulfill our mission and master planning needs. All appropriate parties representing the University have reviewed it for approval.


Arnold Combe, Vice President, Administrative Services 5/6/10
Date


Barbara Snyder, Vice President, Student Affairs 5/7/10
Date

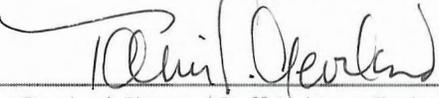

Cory Higgins, Director, Plant Operations 5/3/10
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David Pershing, Senior Vice President, Academic Affairs 5/7/10
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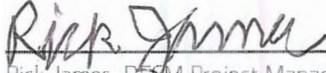

John McNary, Director, Campus Design & Construction 5/4/10
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Michael Perez, Associate Vice President, Facilities Management 5/6/10
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Tami Cleveland, Planner / Staff Architect, Facilities Planning 5.4.10
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Division of Facilities Construction & Management, State of Utah

I have reviewed the Master Plan for South Campus Housing, jointly prepared with the University for approval.


Rick James, DFEM Project Manager 5-6-2010
Date

Acknowledgements

Appreciation is extended to all who participated in the development of the South Campus Housing Master Plan.

*All images in the book were provided
courtesy of: the University of Utah,
Pollard Architects and Sasaki Associates.*

University of Utah

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executive summary

Introduction

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introduction



OVERVIEW

The 2008 University of Utah Campus Master Plan identified South Campus Housing as a Transformative Project that would enhance student life, improve transit nodes, create campus gateways, clarify circulation and strengthen the campus' sense of place. Located prominently at the corner of Mario Capecchi and South Campus Drives, 1,800 beds of single student apartments were envisioned to be developed by 2025, in at least two phases.

As the Honors Housing at Legacy Bridge project – at 310 beds - was since determined to be the initial phase of the precinct development, a new analysis was presented. The precinct programming goal remained at 1,800 apartment-style beds, with on-site parking provided based upon a maximum 2:1 bed-to-parking space ratio (900 spaces). Development was now anticipated in three phases, in roughly 300, 600 and 900 bed increments.

This master planning document serves as a companion piece to the Honors Housing at Legacy Bridge Program. It presents the site planning analysis developed during, and informing, the programming process. Chapter 3 Discovery of the Program document, in particular, should be referenced for a more complete understanding of the South Campus Housing context.

PROCESS

The South Campus Housing precinct master planning was executed in two parts. The first analysis identified the preferred site and design concept for the Honors Housing at Legacy Bridge. The second analysis integrated subsequent phases with the preferred alternative.

A key extension of the original project's study area – the northern leg of the site, adjacent to the Legacy Bridge, was granted, increasing the residential precinct to 9.8 acres. Massing and density analysis revealed a number of both opportunities



View of Salt Lake Valley from Salt Lake City Foothills *Photo courtesy of Collin Tomb*

and constraints:

- 1,800 beds, planned at uniform density, will result in an urban-scale “pedestrian streets and squares” community of predominantly six-story buildings.
- The preferred location for Phase One is the Legacy Bridge parcel.
- Accommodation for parking – podiums versus a stand-alone structure – will affect phasing, budget, density and program goals.
- Vehicular access to the site will remain at current locations, due to TRAX adjacency.
- Surface parking, currently shared by a number of stakeholders – primarily Athletics, will be necessarily

reduced as a result of Phase One development.

- The Annex Building will remain until at least Phase Two development.
- Phase One, in order to maintain the precinct’s development potential, shall be representative of future density and massing (i.e., five and six stories, minimum).

Three master planning options were generated in response to the Phase One Honors Housing plan: Option A, a podium-structured mid-rise housing community similar in scale to Phase One, but short of the desired program goals; Option B, which meets program goals by introducing a high-rise housing component; and Option C, which segregates parking from housing at the expense of desired program.



View Looking West

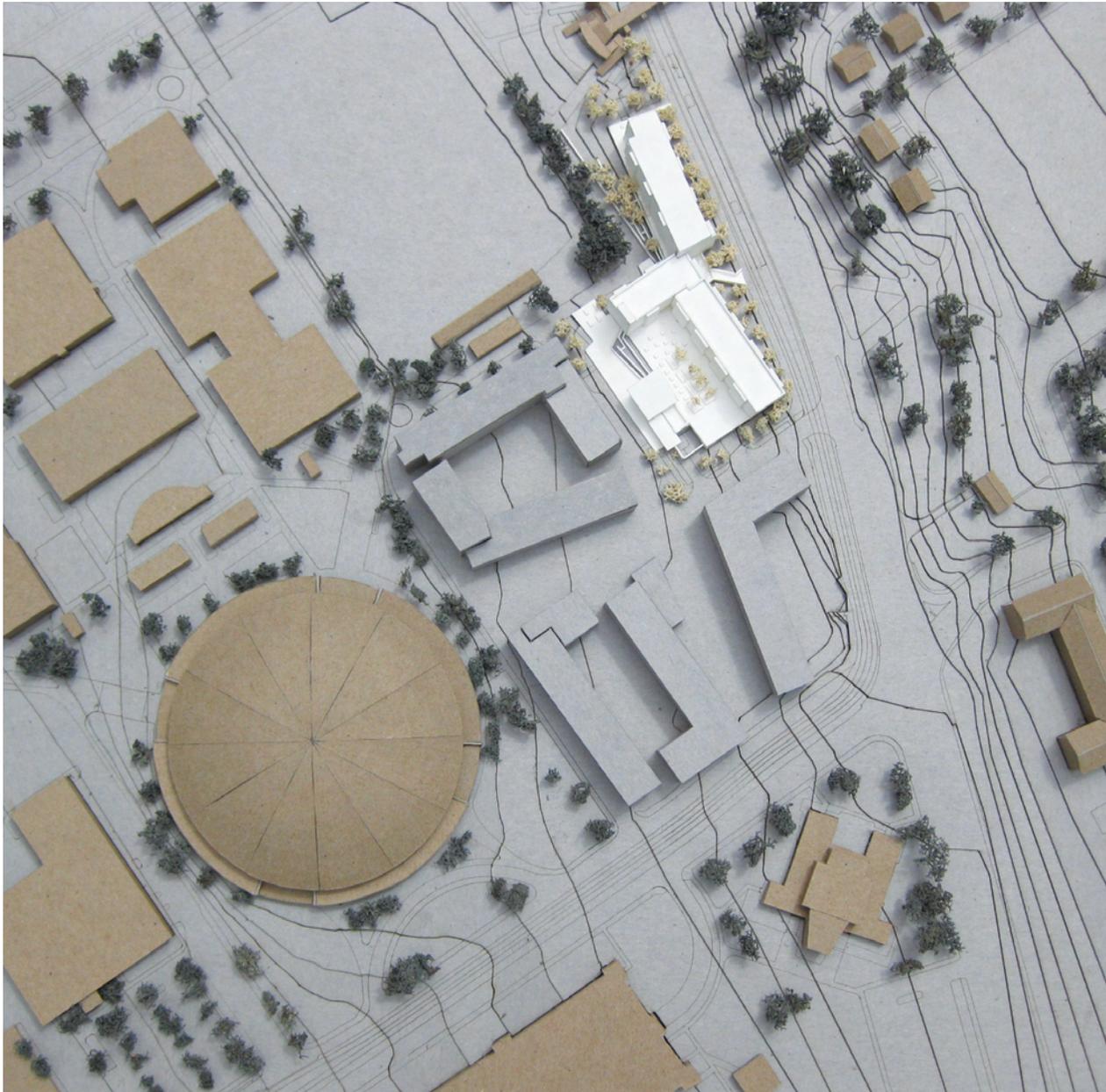
PREFERRED MASTER PLAN ALTERNATIVE

The preferred Master Plan, Option A, represents a balance between achieving site capacity and creating an appropriately scaled student housing community. The proposed program of 1,600 beds and 700 parking spaces can be realized in five- and six-story buildings, planned over podium structured parking (modeled after Phase One preferences). Internal streets and courtyards will be pedestrian-oriented, with vehicular access limited to service and emergency egress. A centrally located community commons will ultimately link the various phases of development, building upon the precedent of Phase One's Café/Convenience Store. Courtyards within the subsequent phases will offer spaces for more intimate gatherings, as well opportunities for distinctive viewing gardens.

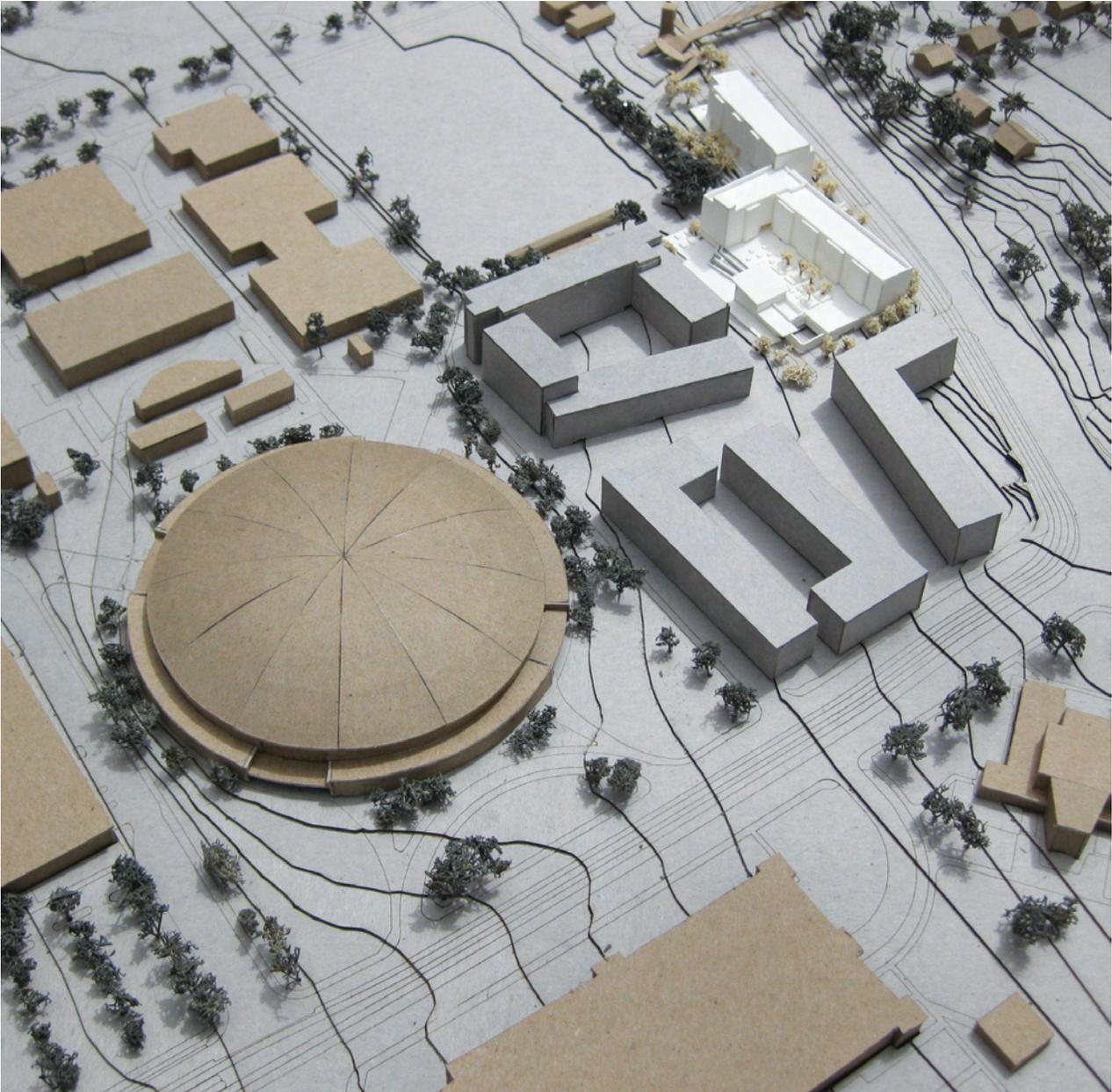
The urban design strategy at the corner of Mario Capecchi Drive and South Campus Drive is to set the apartments back from the intersection, utilizing a landscape buffer to mitigate noise

and create views. Along South Campus Drive, the residential buildings are edge-loaded, which breaks down the scale of the street wall, and invites daylight deep into the community spaces, regardless of seasonal fluctuation. The north and west perimeters of the site are maximized as build-to limits, which increases accommodation and better defines the character of the adjacent uses (e.g., enhancing the formal quality of the Huntsman Center and open space quality of the multi-purpose field). Like the Honors Housing at Legacy Bridge, building massing is varied and attuned to solar orientation.

That said, even with the reduced program, this level of development density is unique for student housing at the University of Utah, with a Floor Area Ratio (FAR) greater than 1.6. Increasing density on campus has demonstrable sustainability benefits, and replacing surface parking lots with housing communities will result in a dramatic transformation for student life on campus.



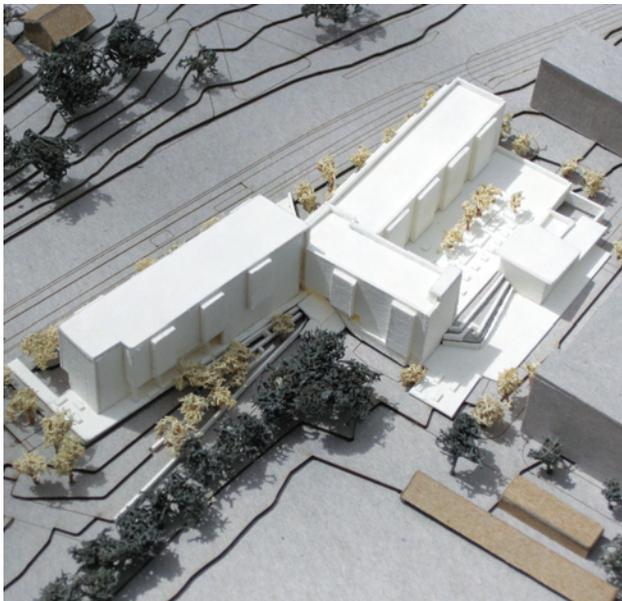
Preferred Master Plan Option A



View Looking North



View Looking East



Phase One - Honors Housing at Legacy Bridge



View Looking South Along Mario Capecchi Drive



1 background

Housing & Parking Needs
Precinct Planning

1 - 2
1 - 4

housing and parking needs



Heritage Commons Student Housing

housing

In December of 2008, Ira Fink and Associates, Inc. submitted the University of Utah Student Housing Market Analysis. The conclusion of the study was there existed limited additional demand for residence hall and suite bed spaces on campus above the current 1,681 capacity, but that there was demand for approximately 350 single-student shared apartment beds above the existing 508 bed capacity. The Student Housing Market Analysis was utilized to support residential programming in the 2008 Campus Master Plan, and specifically, the South Campus Housing precinct.

A study initiated concurrent with the Honors Housing at Legacy Bridge programming, conducted by Anderson Strickler, LLC, confirmed sufficient demand for the 300-bed Phase One of the South Campus Housing precinct, however a gap was identified between tested rent levels and the financial feasibility of the

program, requiring the need for a subsidy.

These reports reflect the overarching goal of the South Campus Housing plan, which is envisioned to enhance student life, improve transit nodes, create campus gateways, clarify circulation and strengthen the campus' sense of place. In terms of dwelling unit typology, the apartment-centric program addresses key independent living criteria, consisting of mostly single-occupant bedrooms and freedom from meal plans. The program was designed to retain existing students currently living on campus, as well as to attract off-campus residents. Since location relative to the academic core of campus remains a primary decision factor in the evaluation of housing options, establishing a residential community on the lower campus enhances the University's profile in the market.



Parking Lot 22

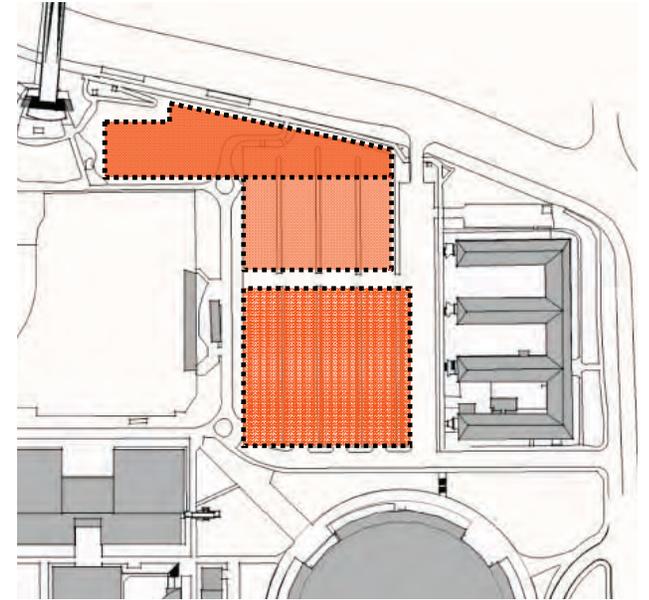
parking

The site identified for the development of South Campus Housing is currently utilized primarily as surface parking. Lot 22's 625 spaces serve a number of diverse stakeholders, including visitors to the adjacent Huntsman Center, permitted uses for faculty and staff utilizing the Annex Building, students, and metered spaces for transient use. However, per the 2008 Campus Master Plan, the long term land use designation for the site is for student housing, which includes only parking associated with that use. As the precinct gradually transforms due to the implementation of the student housing development phases, the University will assign existing stakeholders, particularly athletics, new structured parking destinations.

The Honors Housing programming and planning process confirmed that the maximum ratio for student beds/parking space is 2:1, which, when extrapolated to the scale of the precinct,

results in 1,800 beds and 900 parking spaces. However, due to the planning and budget constraints of the Phase One project, only 85 single-level podium parking spaces are proposed for the initial 310 student beds, resulting in a 3.6:1 bed-to-parking ratio. The issue of parking typology is addressed in the master plan alternatives, recognizing the long term cost and feasibility of providing podium versus stand-alone structured parking. Ultimately, both financial and precinct program accommodation goals will determine future courses of implementation.

precinct planning



Possible Locations for Phase One

land use, phasing and density

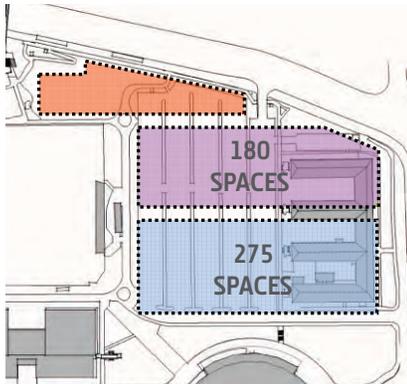
The South Campus Housing precinct master planning was executed in two parts. The first analysis identified the preferred site and design concept for the Honors Housing at Legacy Bridge. The second analysis integrated subsequent phases with the preferred alternative.

The following land use, density, and phasing alternatives were utilized to confirm Phase One's location, adjacent to the Legacy Bridge. Additionally, the analyses presented program compromises associated with a variety of vehicular parking strategies.

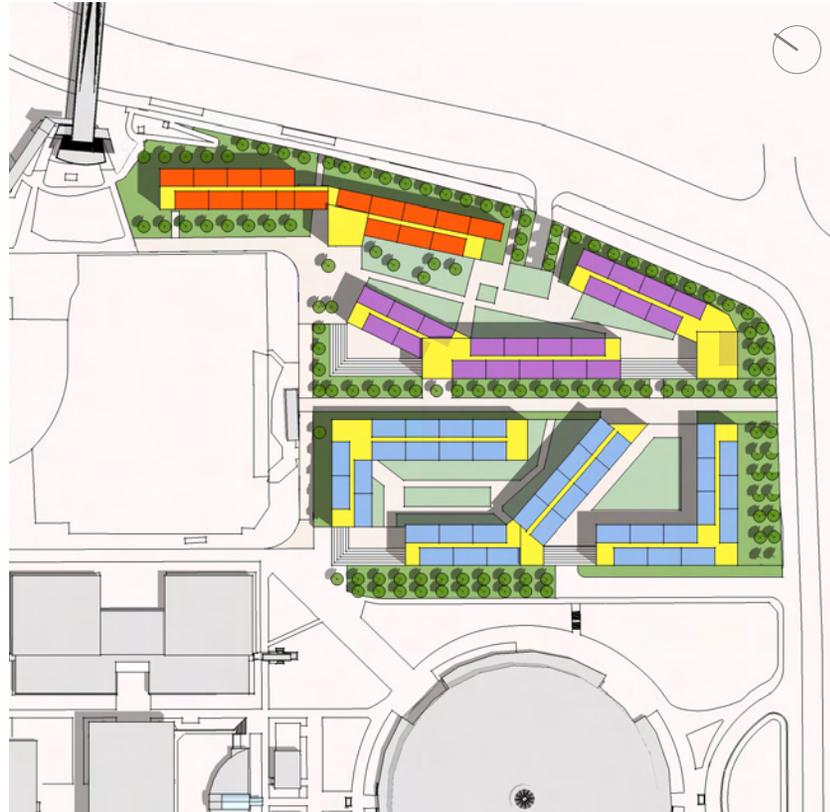
ALTERNATIVE A

Podium Parking, Phases 1,2,&3
Preferred Option

P	Beds	Stories	Parking
1	310	6+	NA
2	600	6+	180 / lvl.
3	900	6+	275 / lvl.



Land Use



Master Plan A - Full Build Out

Note: The number of parking spaces indicated are per level.



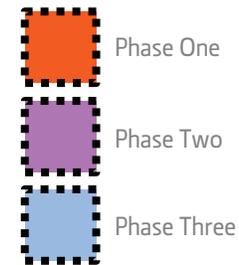
Phase One



Phase One + Phase Two



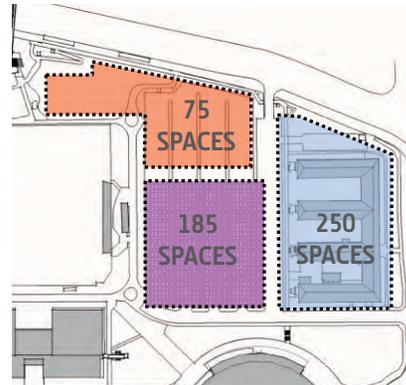
All Phases



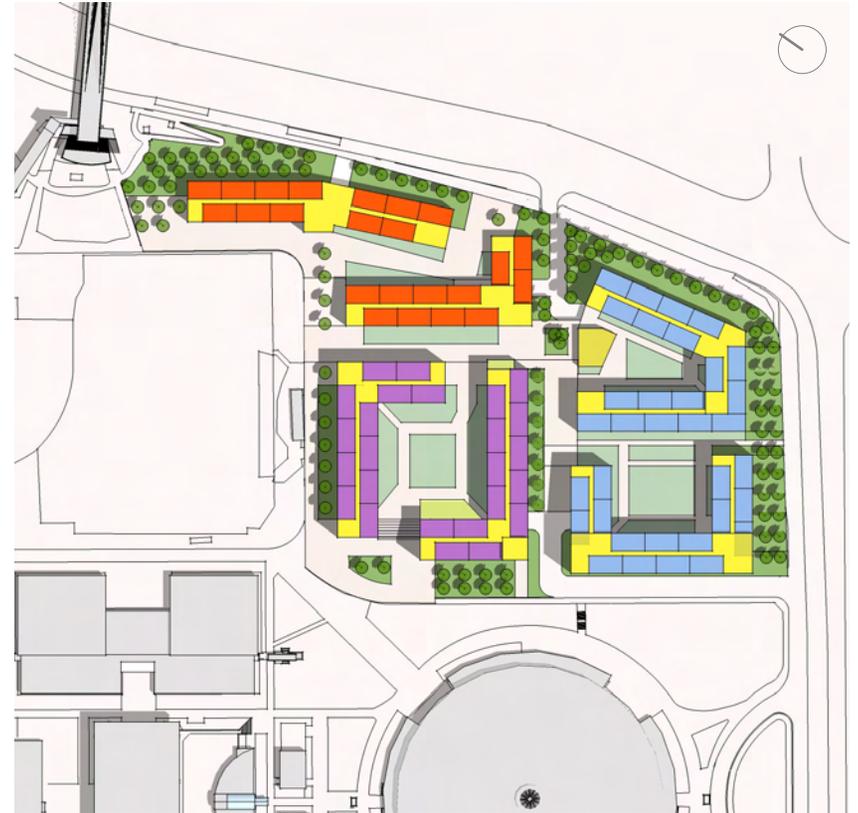
ALTERNATIVE B

Podium Parking, Phases 1,2,&3
Preferred Option

P	Beds	Stories	Parking
1	310	4	75 / lvl.
2	600	6	185 / lvl.
3	900	6+	250 / lvl.



Land Use



Master Plan B - Full Build Out

Note: The number of parking spaces indicated are per level.

-  Phase One
-  Phase Two
-  Phase Three



Phase One



Phase One + Phase Two

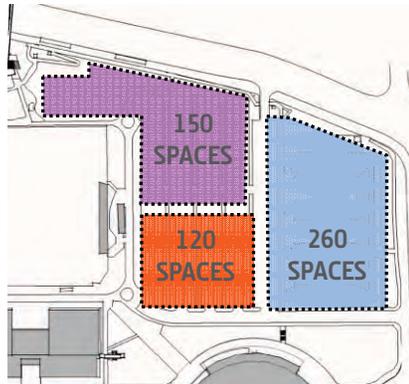


All Phases

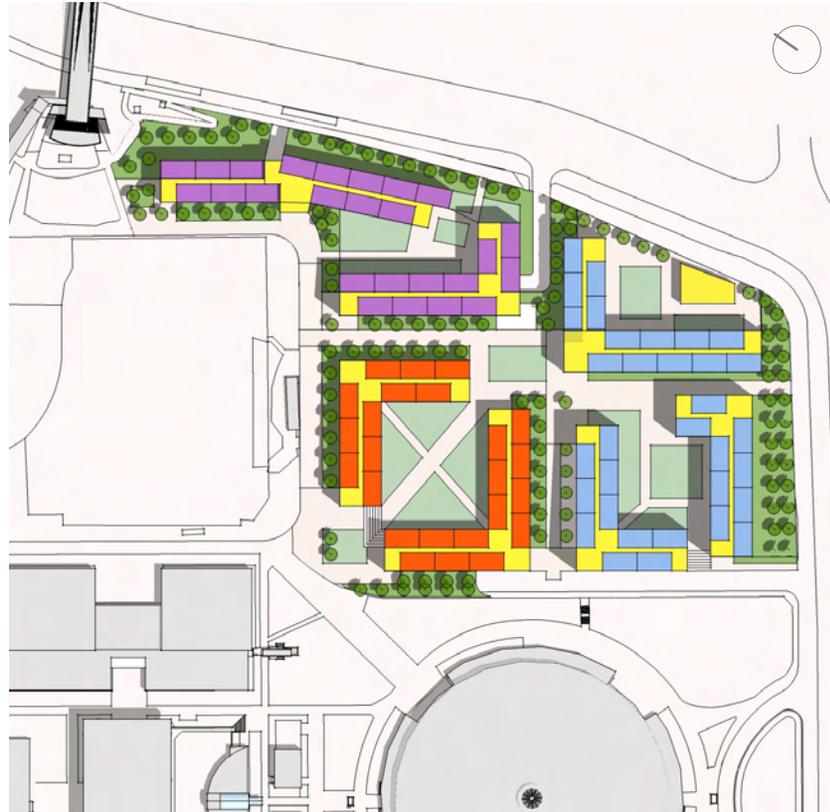
ALTERNATIVE C

Podium Parking, Phases 1,2,&3

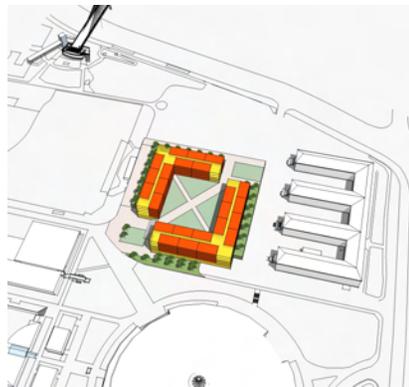
P	Beds	Stories	Parking
1	310	4	150 / lvl.
2	600	6	120 / lvl.
3	900	6+	260 / lvl.



Land Use



Master Plan C - Full Build Out



Phase One



Phase One + Phase Two

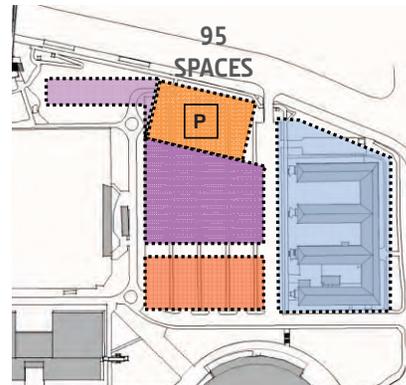


All Phases

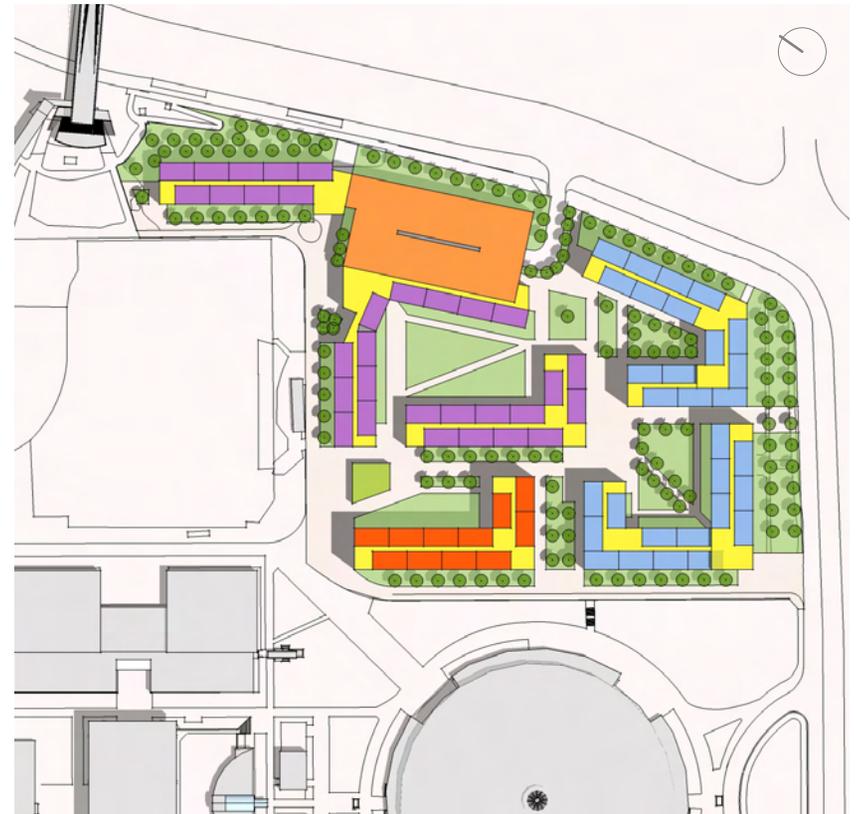
ALTERNATIVE D

*No Structured Parking, Phases 1&3
Parking Structure, Phase 2*

P	Beds	Stories	Parking
1	310	6+	NA
2	600	6+	95 / lvl.
3	900	6+	NA



Land Use



Master Plan D - Full Build Out

Note: The number of parking spaces indicated are per level.

-  Phase One
-  Phase Two
-  Phase Three
-  Stand-Alone Parking Structure



Phase One



Phase One + Phase Two

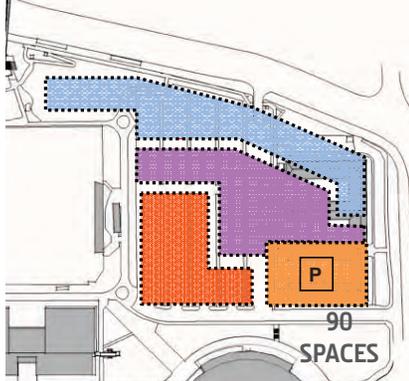


All Phases

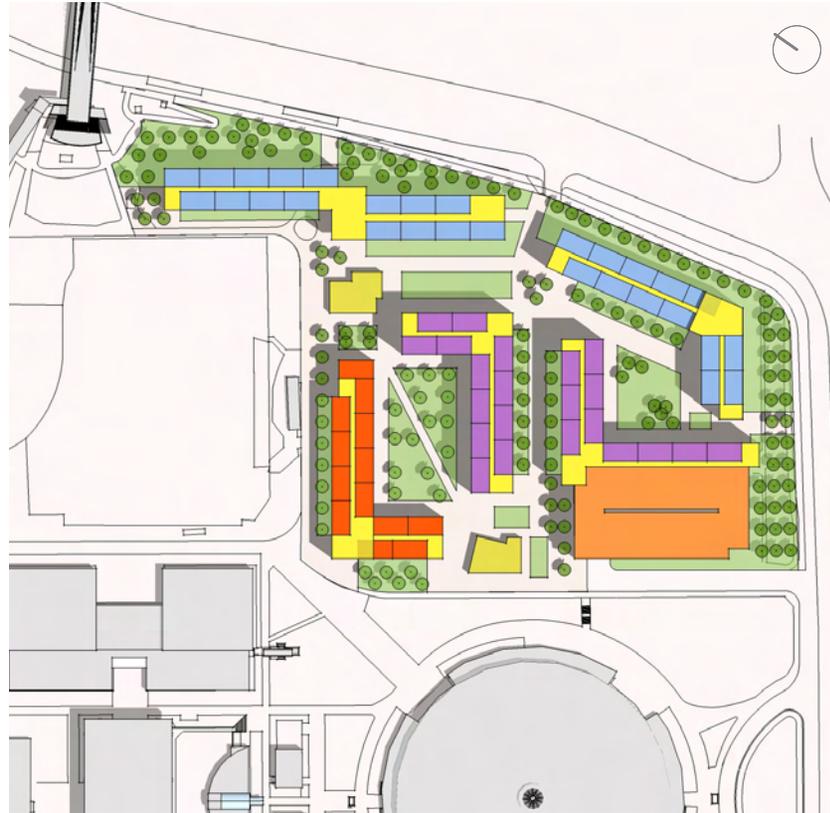
ALTERNATIVE E

*No Structured Parking, Phases 1&3
Parking Structure, Phase 2*

P	Beds	Stories	Parking
1	310	6+	NA
2	600	8	90 / lvl.
3	900	6+	NA



Land Use



Master Plan E - Full Build Out



Phase One



Phase One + Phase Two

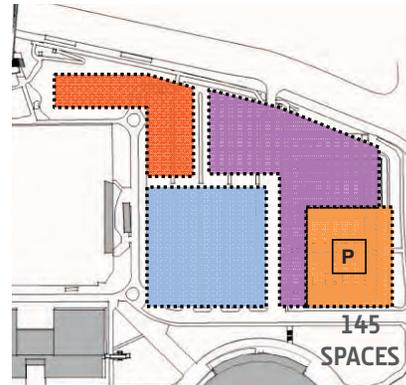


All Phases

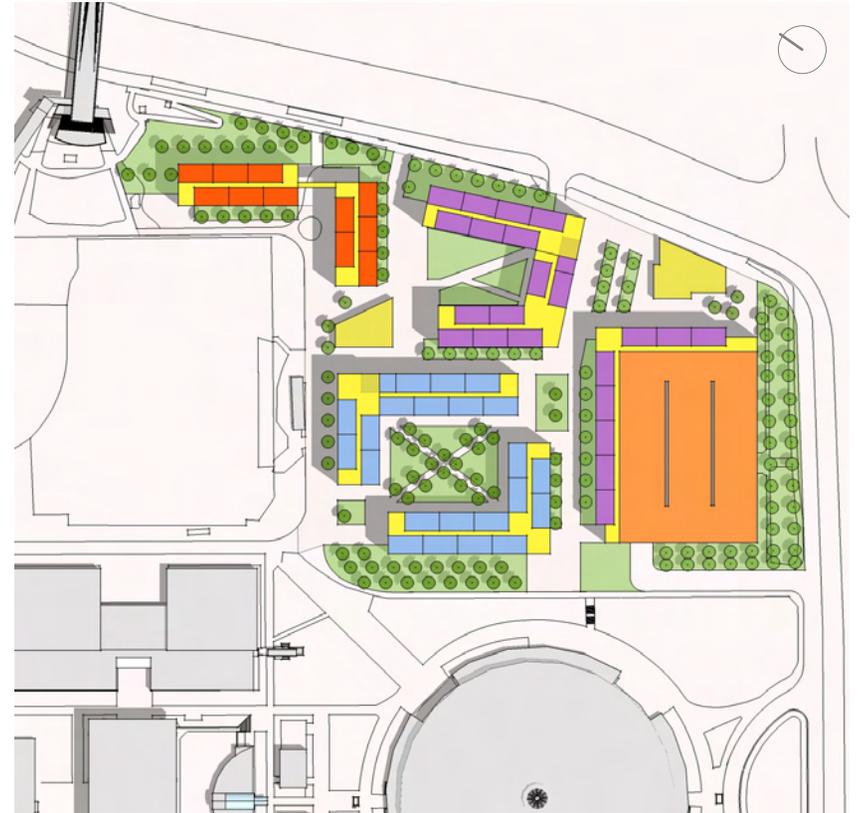
ALTERNATIVE F

*No Structured Parking, Phases 1&3
Parking Structure, Phase 2*

P	Beds	Stories	Parking
1	310	6+	NA
2	500	6+	145 / lvl.
3	600	6+	NA



Land Use



Master Plan F - Full Build Out

Note: The number of parking spaces indicated are per level.

-  Phase One
-  Phase Two
-  Phase Three
-  Stand-Alone Parking Structure



Phase One



Phase One + Phase Two



All Phases

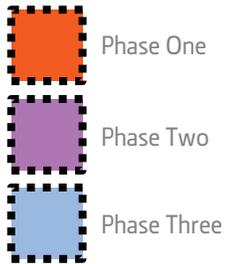


2 vision

Master Plan Option A
Master Plan Option B
Master Plan Option C

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2 - 18
2 - 22

master plan option a



OVERVIEW

Master Plan Option A is the preferred alternative and represents a balance between achieving site capacity and creating an appropriately scaled student housing community. Five- and six-story buildings planned over podium structured parking (modeled after Phase One preferences), result in a program of 1,600 beds and 700 parking spaces. Internal streets and courtyards are pedestrian-oriented, with vehicular access limited to service and emergency egress. A centrally located community commons will ultimately link the various phases of development, following the precedent of Phase One’s Café/Convenience Store. Courtyards within the subsequent phases will offer spaces for more intimate gatherings, as well opportunities for distinctive viewing gardens.

The urban design strategy at the corner of Mario Capecchi Drive and South Campus Drive is to set the apartments back from the intersection, utilizing a landscape buffer to mitigate noise and create views. Along South Campus Drive, the residential buildings are edge-loaded, which breaks down the scale of the street wall and invites daylight deep into the community spaces, regardless of seasonal fluctuation. The north and west perimeters of the site are maximized as build-to limits, which increases accommodation and better defines the character of the adjacent uses (e.g., enhancing the formal quality of the Huntsman Center and the open space quality of the multi-purpose field). Like the Honors Housing at Legacy Bridge, building massing is varied and attuned to solar orientation.



Option A - Site Plan

OPTION A	Requested		Proposed		Delta	
	Beds	Prkng	Beds	Prkng	Beds	Prkng
Phase One	300	150	314	85	14	-65
Phase Two	600	300	541	205	-59	-95
Phase Three	900	450	745	410	-155	-40
Total	1,800	900	1,600	700	-200	-200



Option A - View from the Northwest

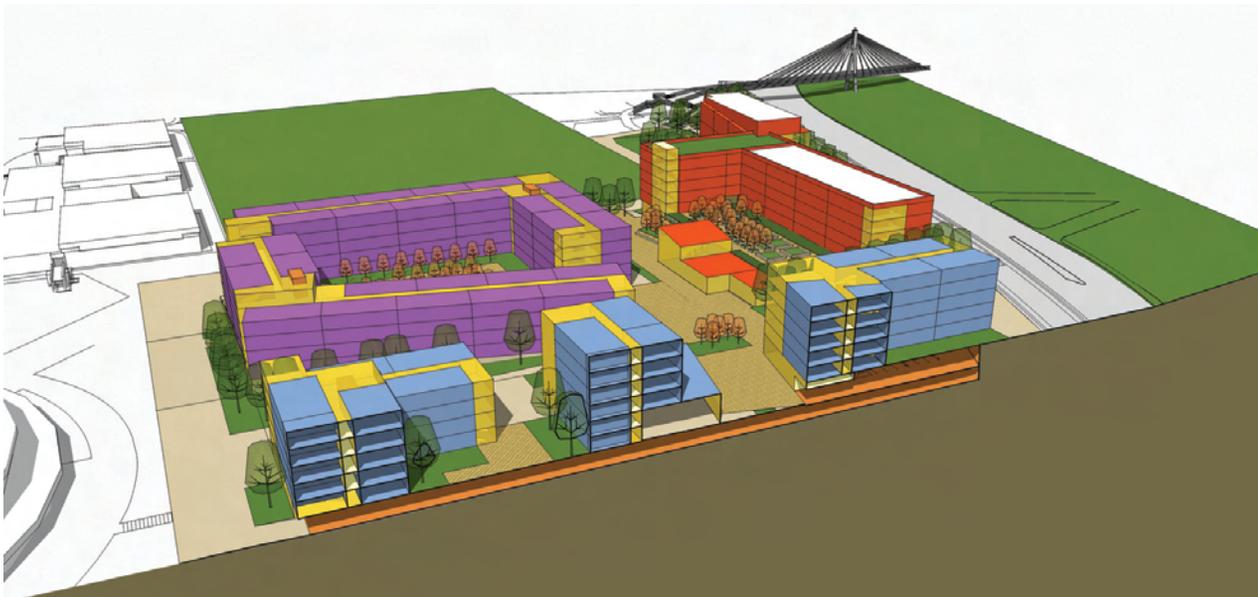
-  Phase One
-  Phase Two
-  Phase Three



Option A - View from the West

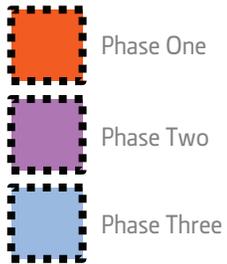


Option A - Section Cut thru Phases One and Two



Option A - Section Cut thru Phase Three

master plan option b



OVERVIEW

Master Plan Option B is modified to achieve the proposed program of 1,800 beds and 900 parking spaces. Rather than increase building heights and add program uniformly, the majority of the buildings remain proposed for five and six stories. The exception is the building anchoring the corner of Mario Capecchi Drive and South Campus Drive, which is envisioned to be nine stories tall. The prow of that high-rise complex distinguishes the centrally located commons within the community, while establishing an institutional presence befitting this prominent campus edge. Internal streets and courtyards are still intended to be pedestrian-oriented, with vehicular access limited to service and emergency egress. Other urban and campus design strategies are similar to Master Plan Option A, including the utilization of courtyards and podium-level structured parking.



Option B - Site Plan

OPTION B	Requested		Proposed		Delta	
	Beds	Prkng	Beds	Prkng	Beds	Prkng
Phase One	300	150	314	85	14	-65
Phase Two	600	300	596	415	-4	115
Phase Three	900	450	890	400	-10	-50
Total	1,800	900	1,800	900	0	0



Option B - View from the Northwest

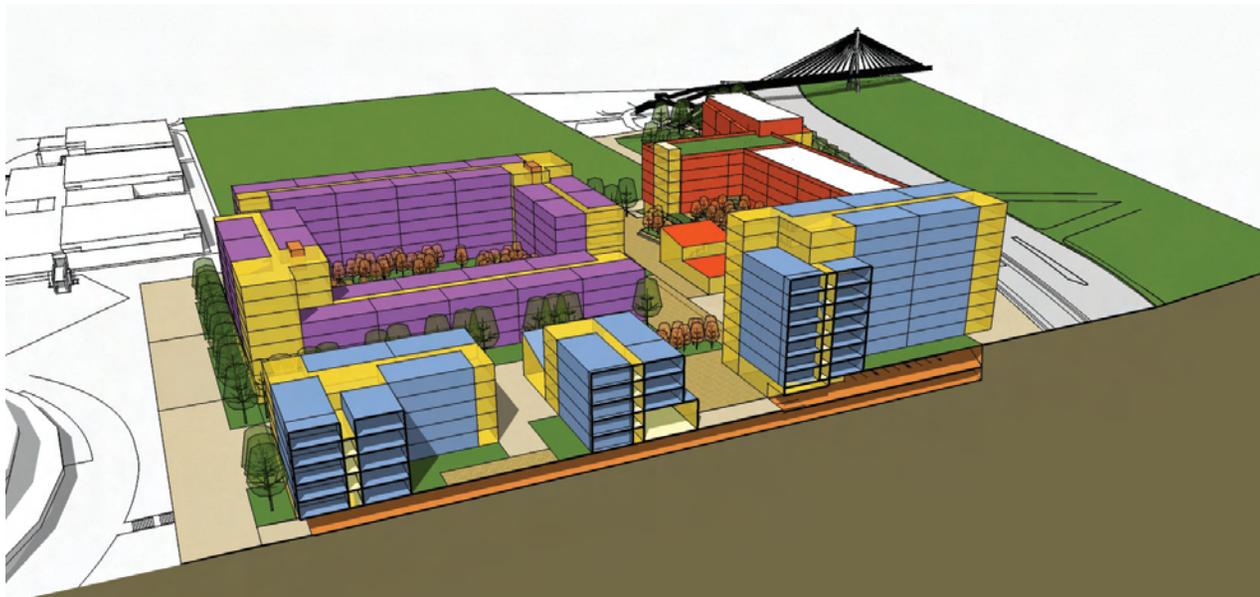
-  Phase One
-  Phase Two
-  Phase Three



Option B - View from the West

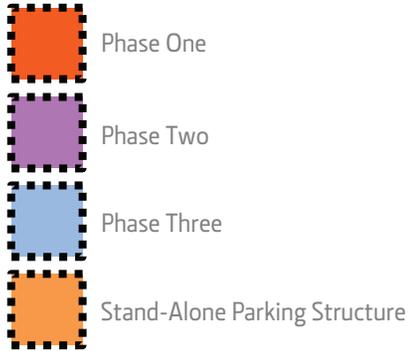


Option B - Section Cut thru Phases One and Two



Option B - Section Cut thru Phase Three

master plan option c



OVERVIEW

Throughout the programming and master planning process, it was recognized that parking typology can have a dramatic effect on both physical planning and financial feasibility. Podium-level structured parking, while embraced as a Phase One strategy, is acknowledged as the most expensive and inefficient way to park cars. Despite the expense, podium parking is effective in mitigating the site’s grade change and, when properly designed, results in higher densities, enhanced security and limited vehicular impact to the campus environment.

For Master Plan Option C, however, a stand-alone parking structure alternative is proposed. To achieve maximum efficiency, and since student residential parking results in relatively few vehicle-trips, a double-loaded sloped ramp configuration is most suitable. Located in the southwest quadrant of the site, adjacent to the Huntsman Center, the garage can be configured to serve multiple stakeholders (e.g., the lower floors may be reserved for event VIP parking). Residential buildings, freed from the constraints of a podium structure, can be more dynamically composed across the site. Also, landscape planting benefits from installation at grade as opposed to raised planter boxes.

The resulting residential program accommodation reflects the impact of the garage’s footprint, realizing significantly less beds than the previous alternatives. At the preferred five- and six-story building massing, Master Plan Option C provides 1,450 beds and 600 parking spaces. The apartment buildings are configured to minimize the garage façade’s impact on the courtyard spaces. Single-loaded apartment buildings, while studied in previous iterations to wrap the parking structure, were rejected due to issues associated with management, community and expense. Phasing is further complicated, for while the garage is planned for construction during Phase Two, it will need to accommodate the future Phase Three parking demand.



Option C - Site Plan

OPTION C	Requested		Proposed		Delta	
	Beds	Prkng	Beds	Prkng	Beds	Prkng
Phase One	300	150	314	85	14	-65
Phase Two	600	300	550	0	-50	-300
Phase Three	900	450	586	515	-314	65
Total	1,800	900	1,450	600	-350	-300



Option C - View from the Northwest

-  Phase One
-  Phase Two
-  Phase Three
-  Stand-Alone Parking Structure



Option C - View from the West



Option C - Section Cut thru Phases One and Two



Option C - Section Cut thru Phase Three



3 site considerations

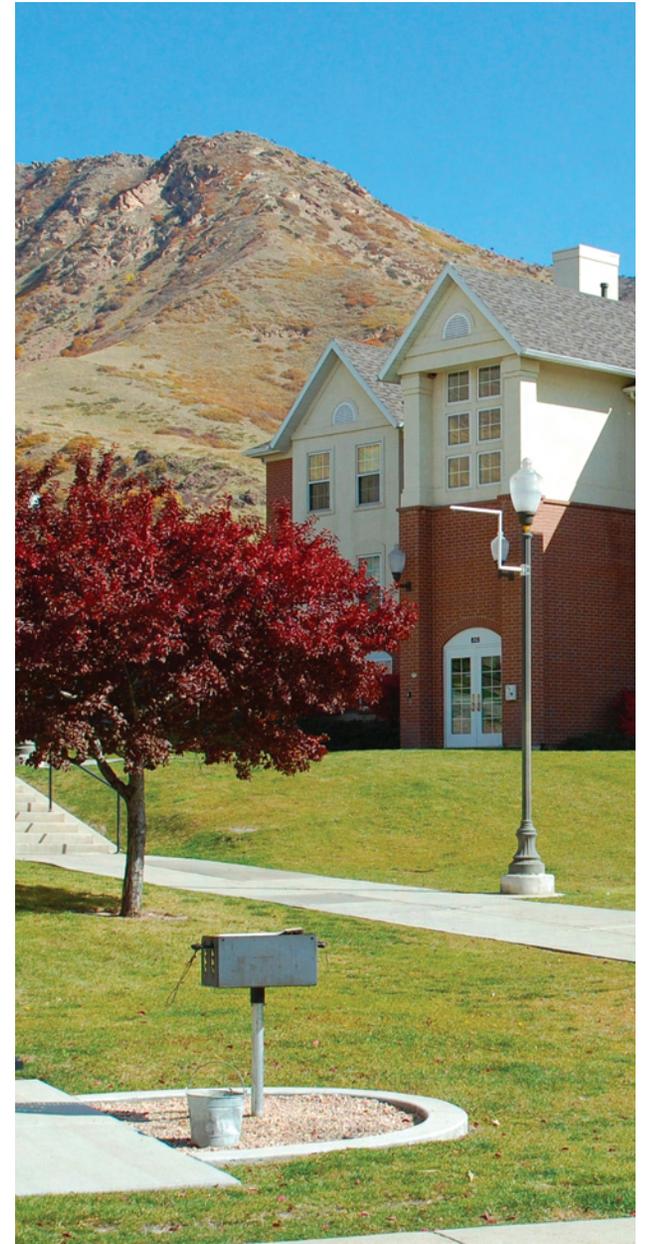
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scale comparisons

Overview

To better illustrate the character of open space in student communities of similar density and those existing on the University of Utah campus, a series of comparables are presented. The preferred alternative for the South Campus Housing Master Plan results in:

- 1,600 Apartment Beds
- 9.8 Acres; 163 Beds/Acre
- 700 Podium-level Structured Parking Spaces



Existing Shoreline Ridge Apartments

Sage Point at University of Utah

- 784 Residence Hall Beds, 2-One Bedroom Staff Apartments, 1-Two Bedroom Staff Apartment
- 5.3 Acres; 148 Beds/Acre
- No Structured Parking

The University of Utah's Sage Point Residence Halls are uniformly composed of three- to four-story buildings that include mostly residential suites and support spaces as well as a computer lab and a small exercise facility. The buildings are separated by curving walkways and green lawn spaces. Surface parking shared between student residents and staff surround the complex.



Site

- South Campus Housing Site
- Comparison Site

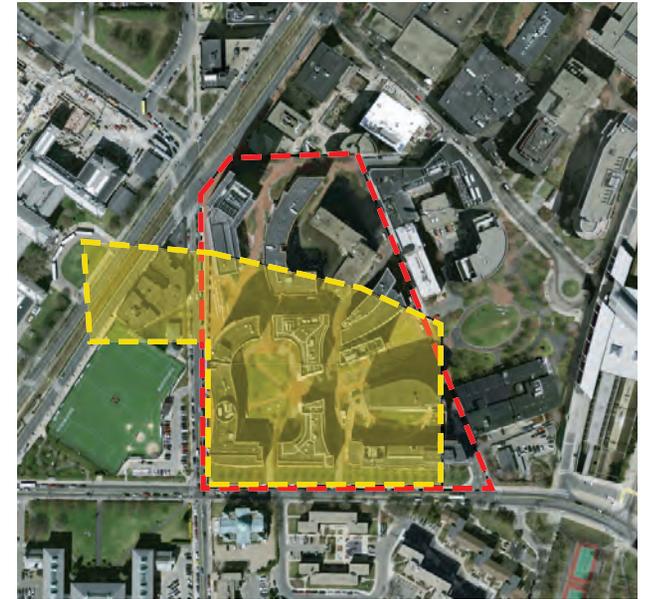


Looking Southeast Towards Sage Point Building 813

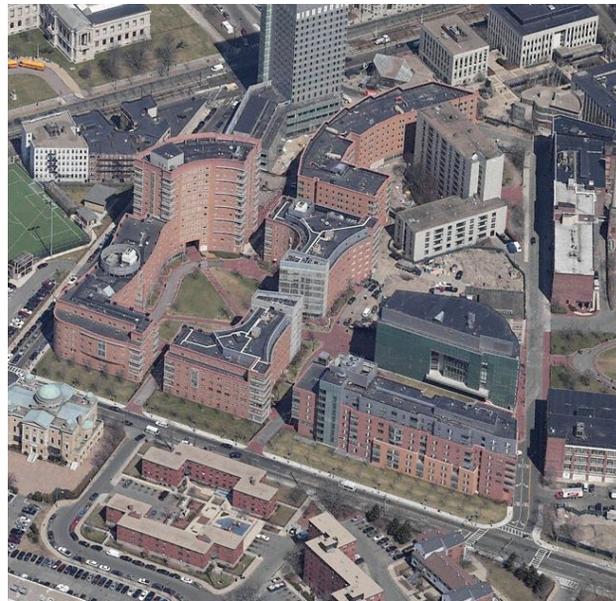
Northeastern University

- 1,050 Residence Hall Beds
- 11.0 Acres; 96 Beds/Acre
- No Structured Parking

Northeastern University's West Campus Residence Halls are comprised primarily of six-story buildings composed around a centralized quadrangle. A thirteen story tower element anchors the residential complex and that increased density, combined with a University parking policy that segregates housing from parking, results in a large, open landscaped courtyard.



Site



Aerial

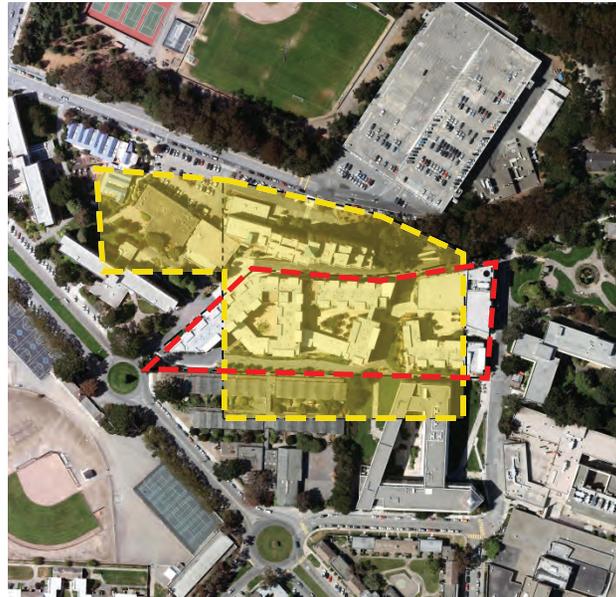


Outdoor Courtyard

San Francisco State University

- 762 Apartment Beds
- 3.6 Acres; 211 Beds/Acre
- 130 Podium-level Structured Parking Spaces

SFSU's Village at Centennial Square is a mixed-use residential complex that includes academic and retail space within the community. The apartment buildings are primarily five and six stories in height, however the southern perimeter is limited to two stories in order to invite daylight into the urban-scale courtyards. The parking podium is programmatically separate from the residential community, catering primarily to faculty and staff.



■ South Campus Housing Site
 ■ Comparison Site

Site



Grand Staircase Entry



Outdoor Courtyard

UC Berkeley

- 1,426 Residence Hall Beds, 884 Suite and Apartment Beds
- 2.7 Acres; 855 Beds/Acre
- No Structured Parking (Podium is utilized for student life program)

UC Berkeley Units 1 and 2 Residence Halls and Infill Housing represent urban design housing strategies in a campus setting. The character of the newer mid-rise infill structures, combined with the podium-structured landscape, was specifically highlighted.



Site



Aerial

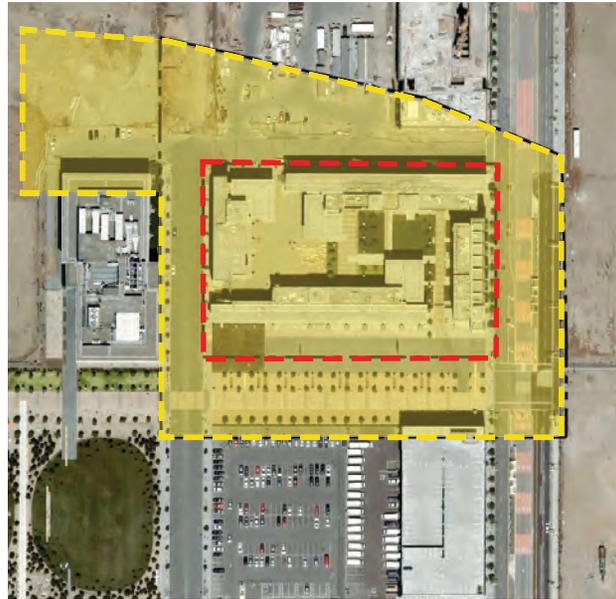


Outdoor Courtyard

UCSF Mission Bay

- 750 Apartment Beds
- 2.8 Acres; 268 Beds/Acre
- No Structured Parking

UCSF's Mission Bay Housing is designed for graduate students, in both mid-rise and high-rise buildings within an urban block configuration. Massing is attuned to solar orientation, and secure interior courtyards are among the community amenities.



- South Campus Housing Site
- Comparison Site

Site



Aerial



Outdoor Courtyard

parking issues

OVERVIEW

The 2008 Campus Master Plan calls for densification and utilization of public transportation on the University of Utah campus. The University is committed to changing the mind set of students, staff, and the public, in general, when it comes to parking and transportation on the campus. It, therefore, has decided that no higher than a 0.5 parking space per bed ratio should be used on this site, especially because this location is adjacent to a TRAX stop. Nevertheless, as demonstrated in the three master plan options, it will still be a challenge to accommodate the desired amount of housing beds (1,800) and half this amount for parking spaces (900); as evidenced, in order to accommodate 900 parking spaces on-site, either the number of housing beds will be sacrificed or the density will approach that of high-rise structures.

PARKING OPTIONS

Further complicating the matter is that there will be a net loss of parking on campus due to the development of housing on the site. The Program Team has discussed that when the site is taken entirely over by housing, possible options for the existing Lot 22 users to park is in the University-leased LDS Institute parking garage across the street from the site (416 spaces) or in the 2008 Campus Master Plan's proposed parking structure west of the Huntsman Center, yet to be developed. The proposed structure may be the solution for the Athletics Department, one of the major outside stakeholders currently on-site, however, the University doesn't envision this structure coming to fruition within less than the next five to six years.

The existing circulation paths and parking in this vicinity, both on-campus and off-campus, are diagrammed on the facing page. The University may potentially re-permit them for its necessary uses (e.g., additional resident parking, Athletics, staff, etc.) or lease them from non-University sources, as needed.

CONCLUSION

The University is reviewing the market and traffic studies

that were performed in parallel to this programming and master planning effort. These analyses will help determine the appropriate number of parking stalls that are to be part of this site and the user groups in which to allocate the parking.

It is important that the University develop and execute new parking guidelines and policies as it affects the planning of the site and the entire campus.



Existing Parking
Existing Circulation Paths

Existing Parking and Circulation

site access and circulation



Site Access Point on South Campus Drive



Site Access Point on Mario Capecchi Drive

SITE ACCESS AND CIRCULATION

General

There are two existing access points into the site that serve all vehicular traffic - general, service and emergency. One is off of South Campus Drive to the south and the other is off of Mario Capecchi Drive to the east. Just as a building must have two paths of egress, it is critical that the site maintain these two access points. Proposed site access and circulation are similar in all three master plan scenarios.

The intention of the planning of the site in regards to circulation is that internal circulation is pedestrian-oriented and vehicular access is limited to the outside edges of the site, with the exception of service and emergency (e.g., fire truck) access.

Vehicular Circulation

Vehicles may enter and exit from both Mario Capecchi Drive and South Campus Drive and are only allowed to travel along

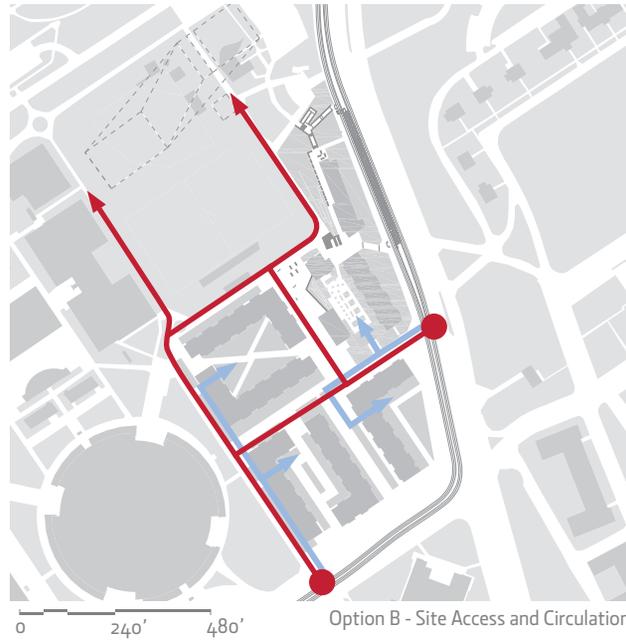
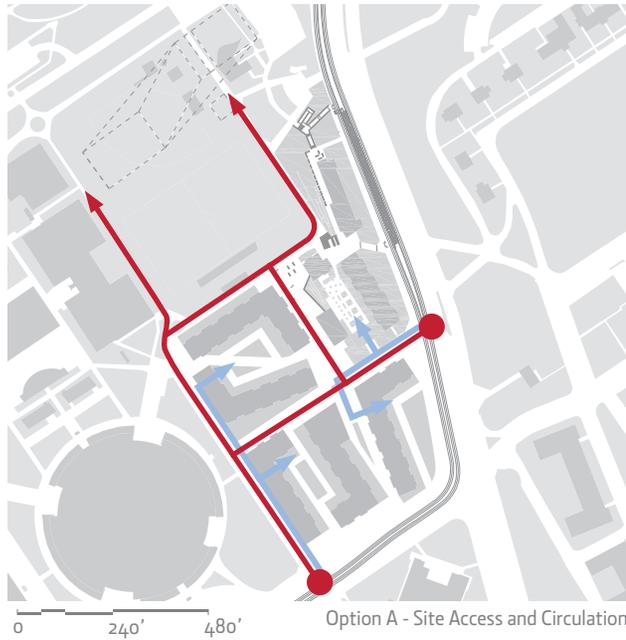
the driveways to the entrances of the podium or garage parking structures, but not beyond. Drop-offs should be located adjacent to the buildings along these drives.

Service Access

Service vehicles access and circulate the site like general vehicles but are also allowed to travel internally between the three different housing phases along the 'pedestrian streets', which consist of the east/west internal 'pedestrian street', the north/south connection in front of the Café, the northern pedestrian walk south of the multi-purpose field, and the drive along the west edge of the site. They may also connect to the feeders back to the HPER Mall.

Fire Access

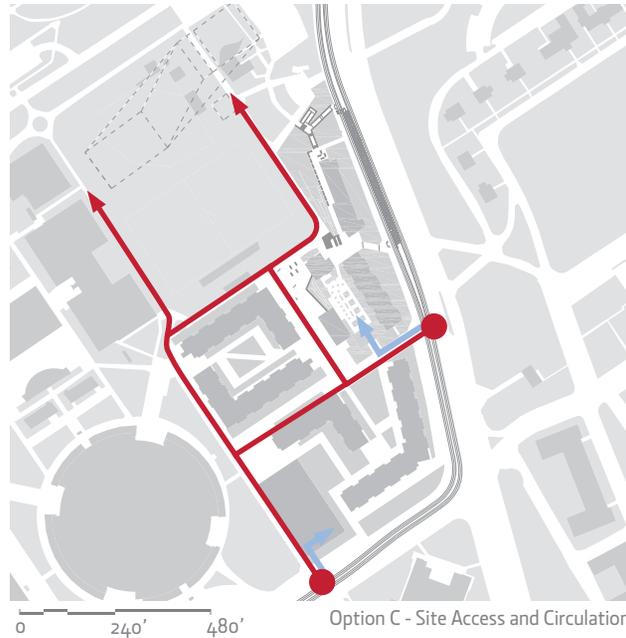
Fire trucks have the ability to access and circulate the site like service vehicles. The sides of the buildings fronting Mario Capecchi Drive and South Campus Drive will be serviced via fire



hydrants, as in Phase One. Fire access isn't required into the podium courts. Instead, it may be accessed from existing curb cuts into the site and along the 'pedestrian streets' mentioned previously. Standpipes may be placed in the courtyards, allowing for hose connections.

STUDENT LIFE CENTER CONNECTIONS

The future Student Life Center requires that the existing walkways to the east and to the west of the multi-purpose field remain because they are intended to become part of its future emergency circulation. Therefore, it is necessary for the development of the South Campus Housing site to incorporate this into the site's circulation. The existing walkways will have to be redesigned to support the loading required for emergency vehicles, such as fire trucks. Furthermore, there is a significant drop in elevation from the northwest corner of the site down to the walkway, where currently several steps are located, so some regrading will eventually be necessary along here.



- Access Point from Street
- Proposed General Vehicular Access Route
- Proposed Service & Emergency Access Route

site utilities

- 1 TRAX Substation
- 2 Questar Gas Meter Shed

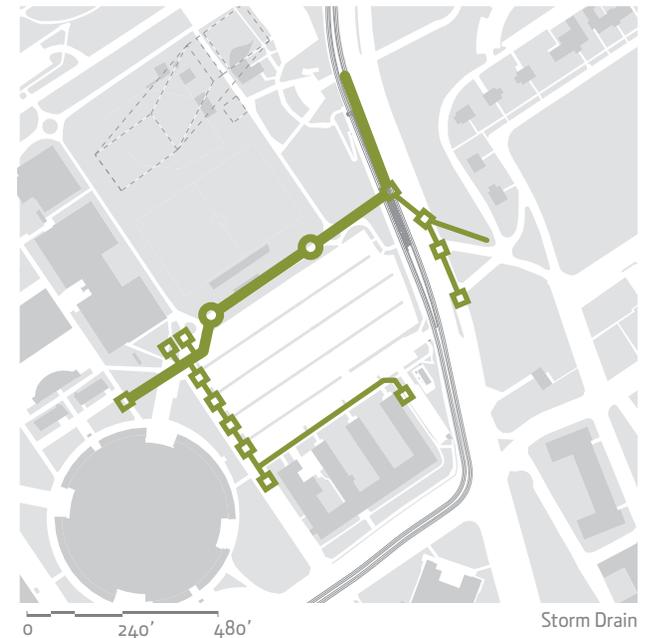
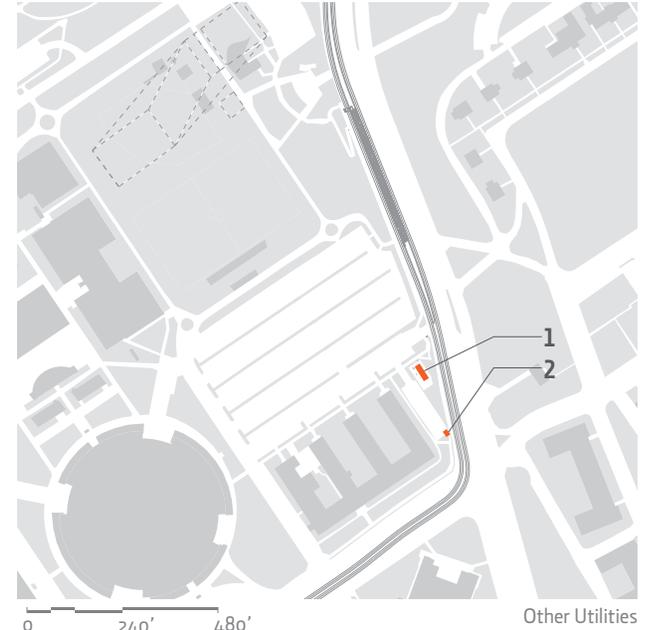
-  Catch Basin
-  Manhole
-  12" Storm Drain
-  24" Storm Drain

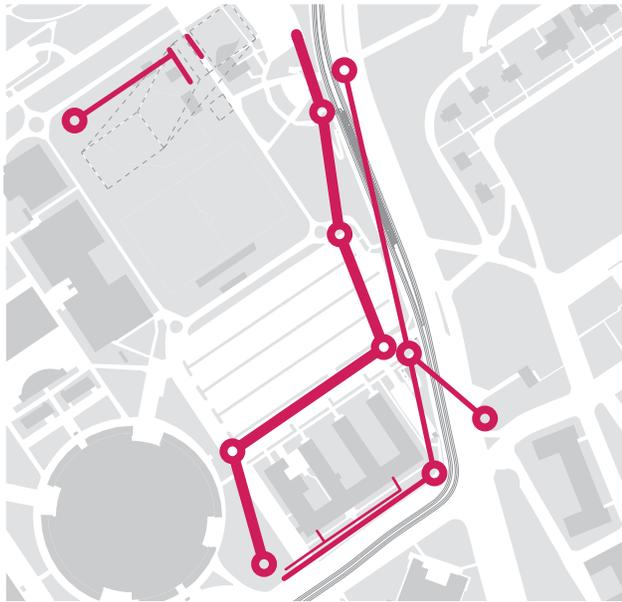
OVERVIEW

As the site is developed, most or all of the existing site utilities must be removed or rerouted and all will likely be resized. The existing storm drain, sanitary sewer, water, electrical and telecom systems will be impacted by the new housing and will require in-depth analysis to identify the level of service needed to efficiently operate the new buildings. The diagrams to the right show the current type, size and location of existing utilities. Simply overlaying this information with the proposed master plan studies reveals that new ways to serve future housing must be taken into account when planning for the future buildings.

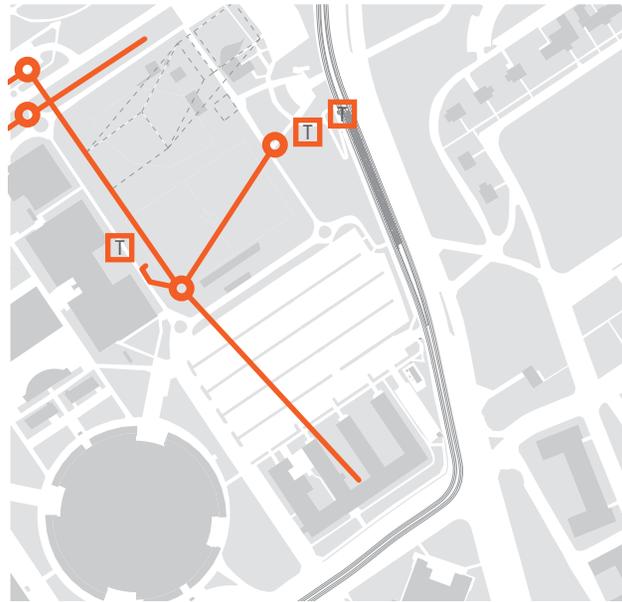
PROPOSED UTILITIES SOLUTIONS

In addition to the utility systems listed above, there are two specialized outbuildings that serve facilities beyond the boundaries of the South Campus Housing site. First, the TRAX Substation, located due east of the Annex Building adjacent to Mario Capecchi Drive, is owned and operated by UTA, but is located on University property. Due to the projected site density and planning, it is proposed that this Substation be relocated off-site in subsequent Phases Two or Three, as deemed appropriate. Second, the Questar natural gas meter shed, which is located due south of the TRAX Substation, should also be relocated. The University owns the shed and has jurisdiction over the fuel lines, while Questar maintains the meters. If the meters are relocated, the University will have to pay to relocate the service lines and reinstall the meters. The shed is one of the main connections to the natural gas services in the area and serves the Annex Building, three buildings to the south (LDS Institute, Phone Building and Medical Clinic), the Women’s Gymnastics Training Facility to the north, and some other facilities at the Medical Center Campus to the northeast. The cost to relocate the TRAX Substation and Questar gas meter shed may be significant and should be taken into consideration. If they remain, setbacks, easements and accessibility should be properly accommodated. Also, all stormwater runoff should be handled, retained and detained on-site according to Campus Design Standards.

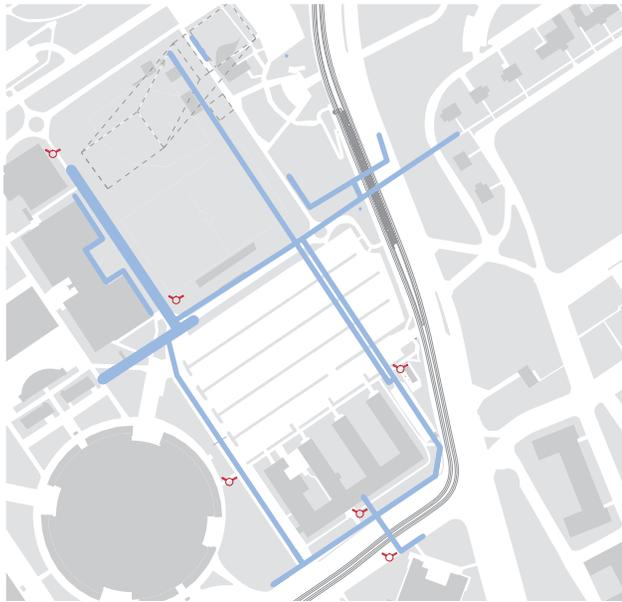




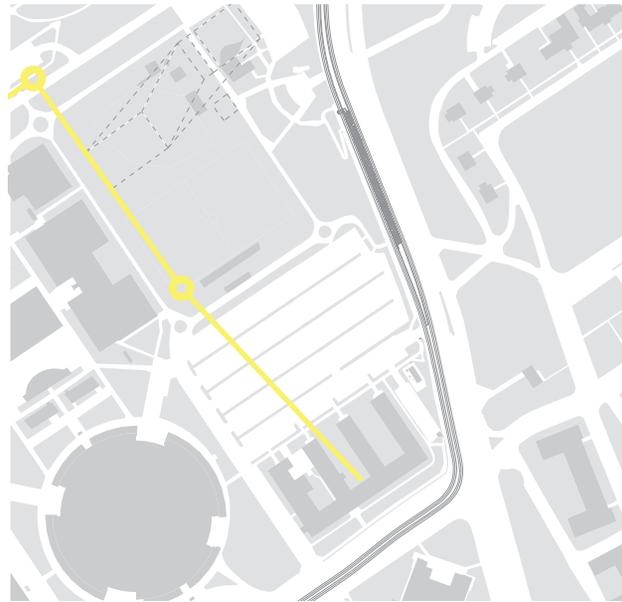
0 240' 480' Sanitary Sewer



0 240' 480' Electrical



0 240' 480' Water



0 240' 480' Telecom

- Manhole
- 8" Sanitary Sewer Main
- 12" Sanitary Sewer Main
- 15" Sanitary Sewer Main

- Manhole
- Transformer
- Electrical Service

- Fire Hydrant
- 6" Water Main
- 8" Water Main

- Manhole
- Telecom Service