

# WINSTON-SALEM STATE UNIVERSITY MASTER PLAN UPDATE

June 8, 2018



# AGENDA

1. Introduction
2. Vision
3. Frameworks
4. Districts

# 01 INTRODUCTION

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## 2011 MASTER PLAN

### Restore the Core

- Re-energize the heart of the campus by adding student housing
- Create more usable outdoor space, re-purposing buildings
- Establish a new student success center
- Reinvigorate the University's cultural values
- The aim is to create a central core that will serve the needs of the entire campus community well into the future, that will add to WSSU's institutional identity and that will make the campus a more memorable place in the minds of alumni.

### Improve Campus Life

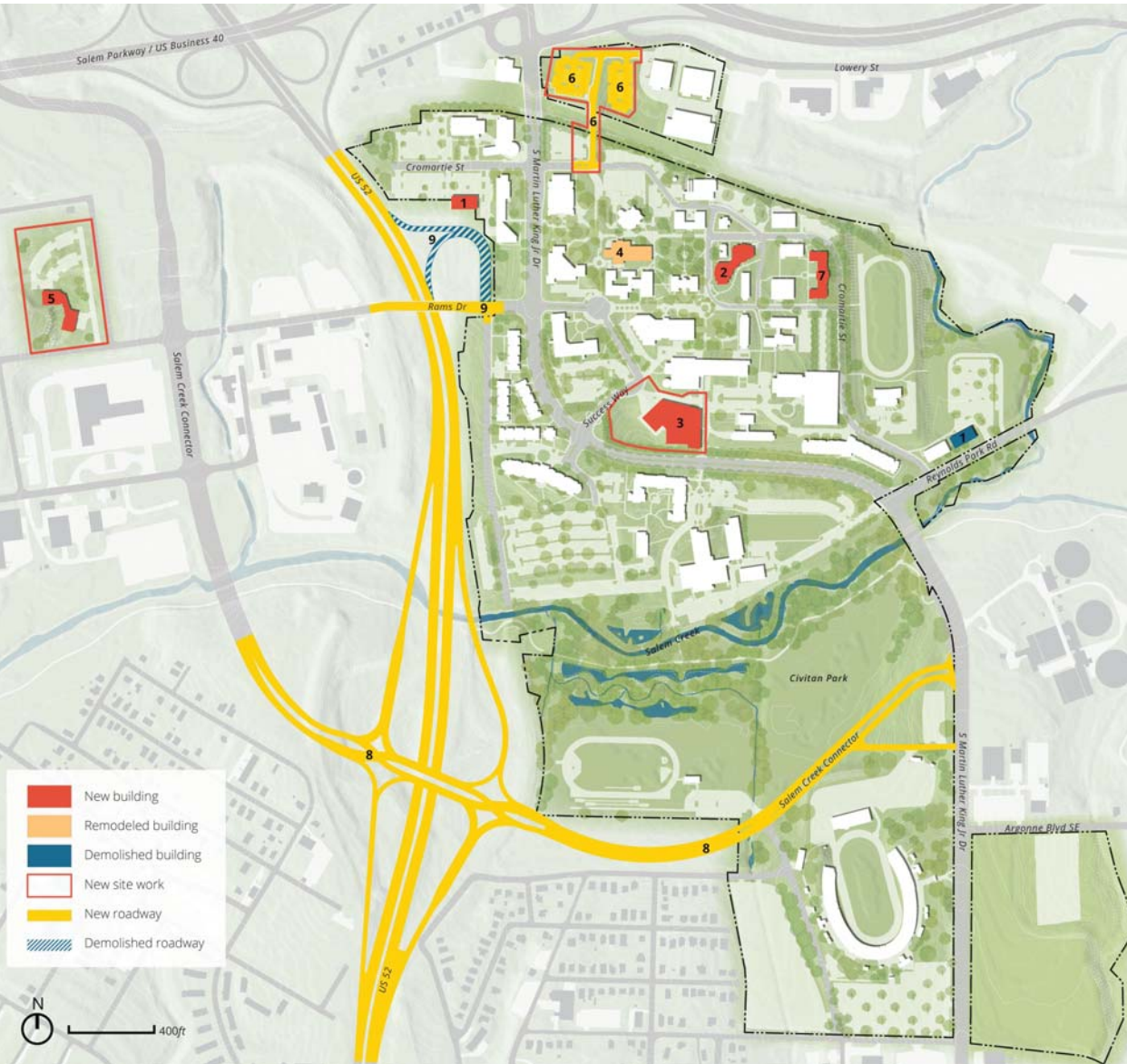
- Improve the quality of the student experience for resident and commuter students alike
- Recommendations include new housing, dining and recreational amenities in the core of the campus

### Enhance Connectivity

- Improve connectivity on several levels:
  - between academic programs;
  - between campus destinations;
  - between the University and key destinations within the larger community.

### Adopt an Ethic of Stewardship & Sustainability

- Sustainable environmental and physical design strategies
- Policy and implementation guidance with regard to sustainability



## COMPLETED PROJECTS

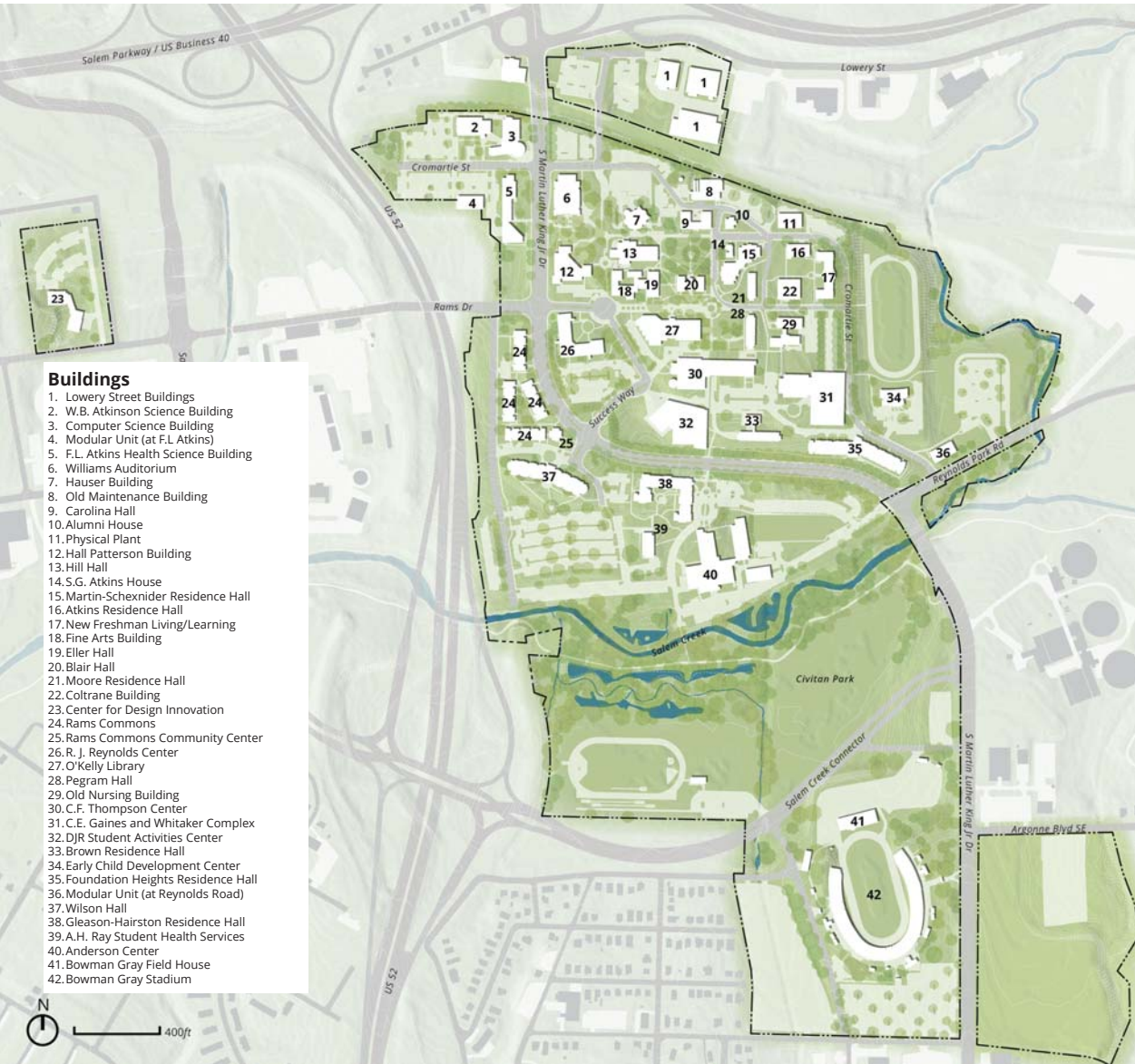
Since the completion of the 2011 Master Plan the following projects have been completed:

### Campus Projects

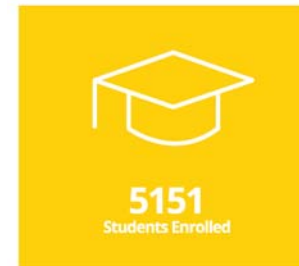
1. Modular Unit relocation [Reynolds Park to F.L. Atkins] (2012)
2. Martin-Schexnider Residence Hall (2013)
3. DJR Student Activities Center (2013)
4. Hill Hall Student Success Center (2014)
5. Center for Design Innovation (2015)
6. North Access Bridge and Parking Expansion (2016)
7. New Freshmen Living/Learning (To be completed 2018)

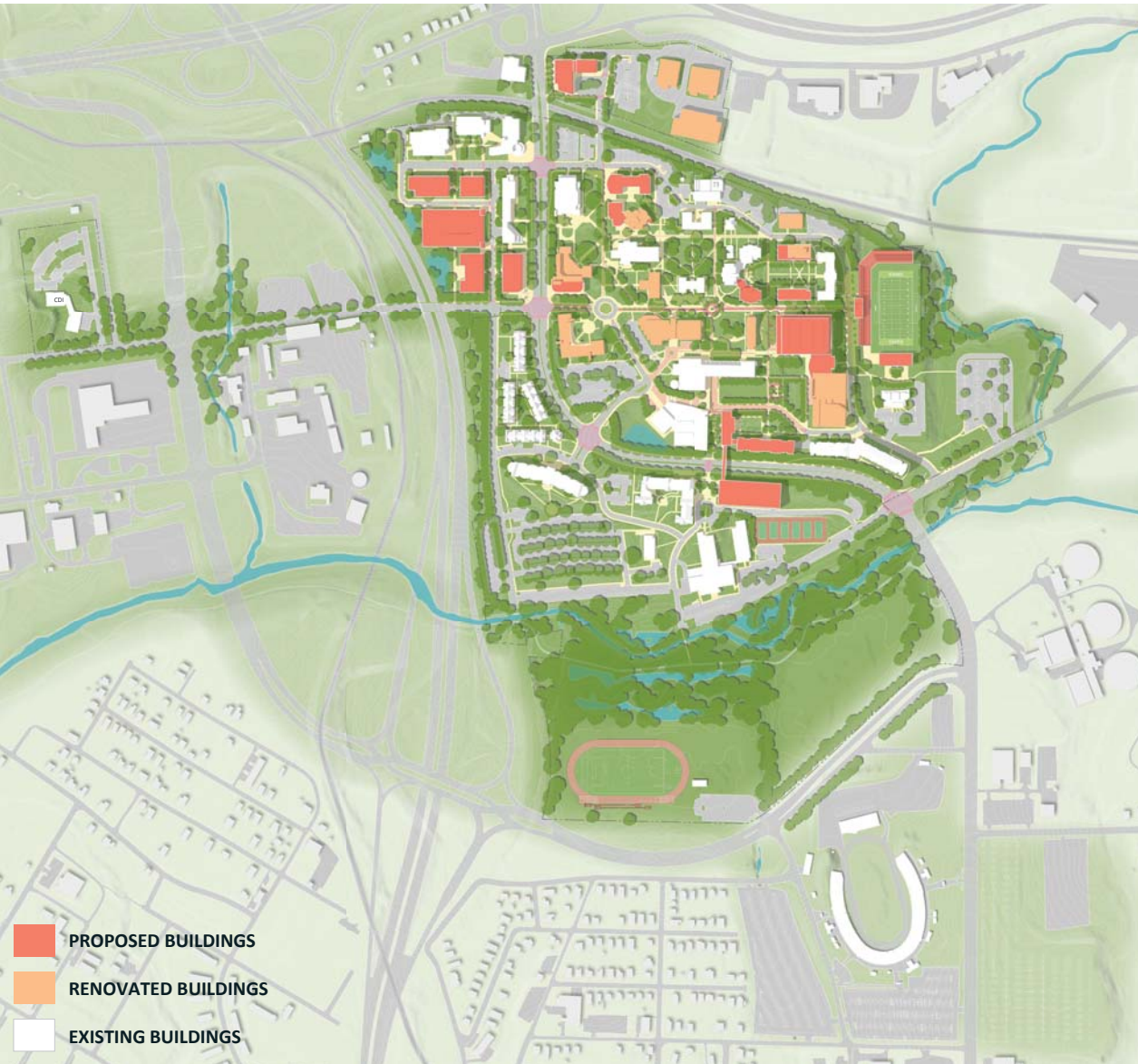
### Local/Regional Projects

8. Salem Creek Connector and US-52 Interchange (2017)
9. Rams Drive US-52 Access Ramp Demolition (2017)



# EXISTING CONDITIONS





# 2017 MASTER PLAN INTEGRATED VISION

**Restore The Core 2.0**

**Create A Vibrant Campus Life**

**Support Liberal Education & Graduate Programs**

**Engage Communities & Enhance Connectivity**

**Pursue Environmental Stewardship**

02

# VISION

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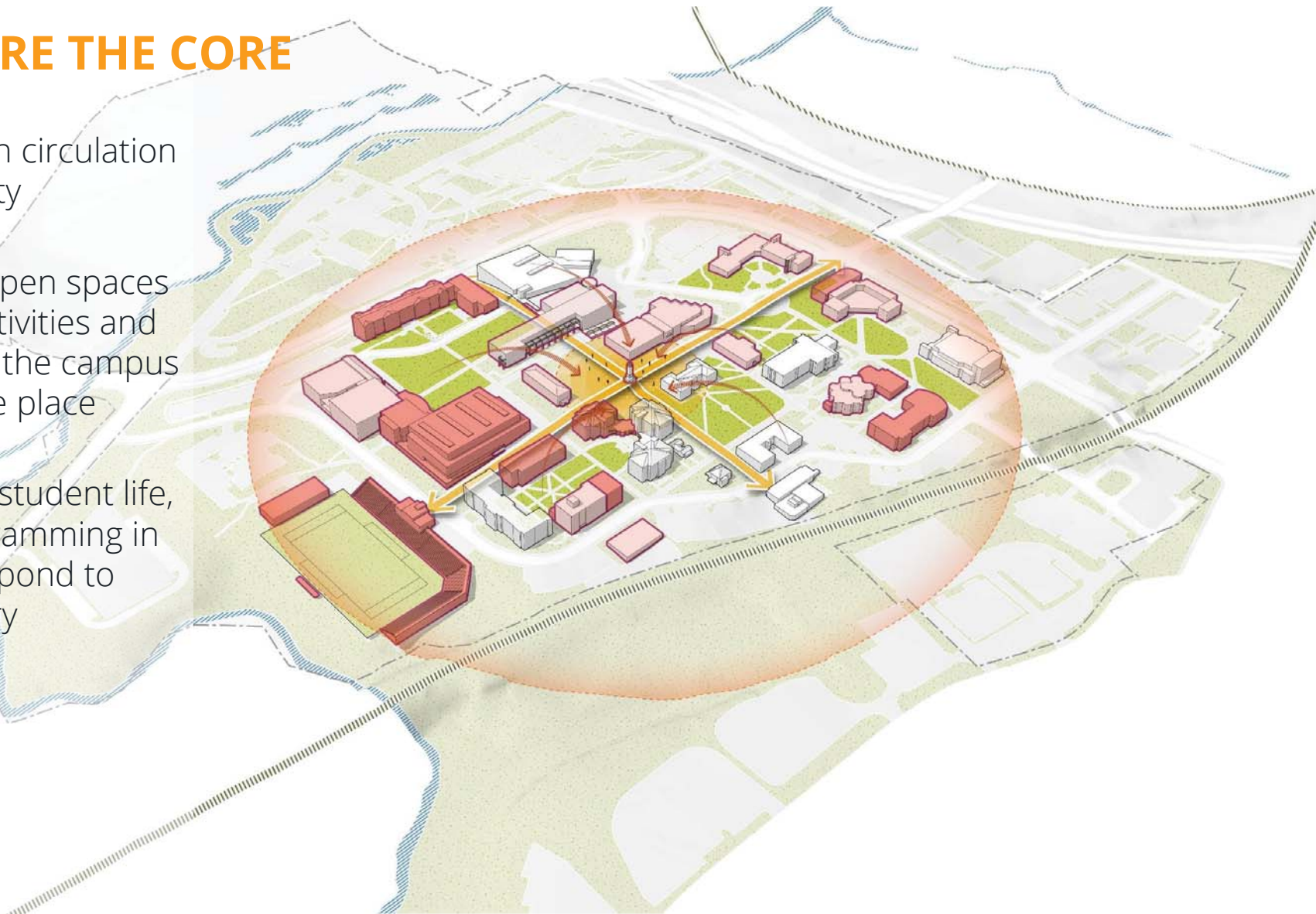


## RESTORE THE CORE

Improve pedestrian circulation and site accessibility

Enhance existing open spaces to connect core activities and facilities and make the campus a more memorable place

Expand academic, student life, and athletics programming in structures that respond to architectural history

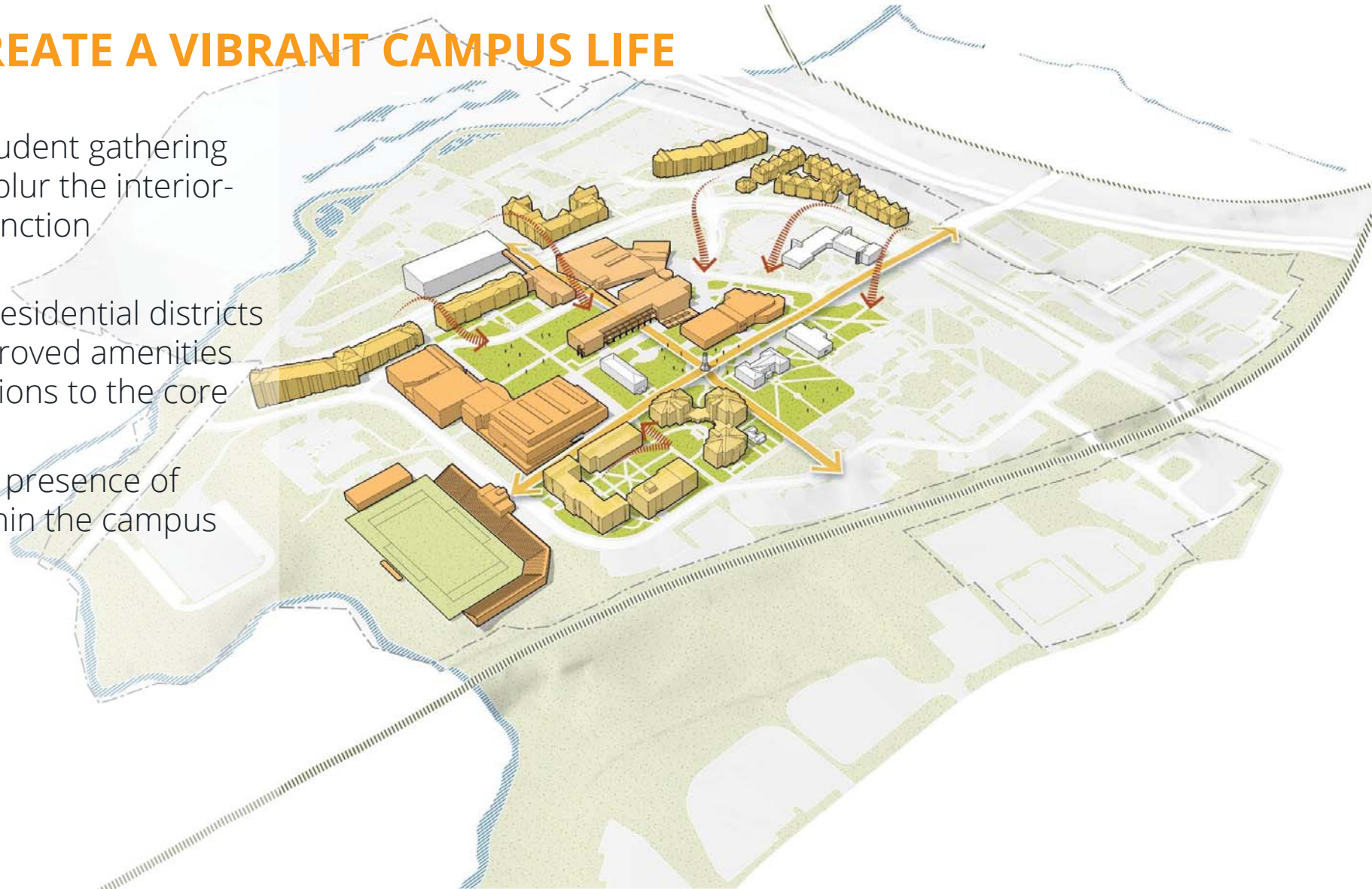


## CREATE A VIBRANT CAMPUS LIFE

Introduce student gathering spaces that blur the interior-exterior distinction

Strengthen residential districts through improved amenities and connections to the core

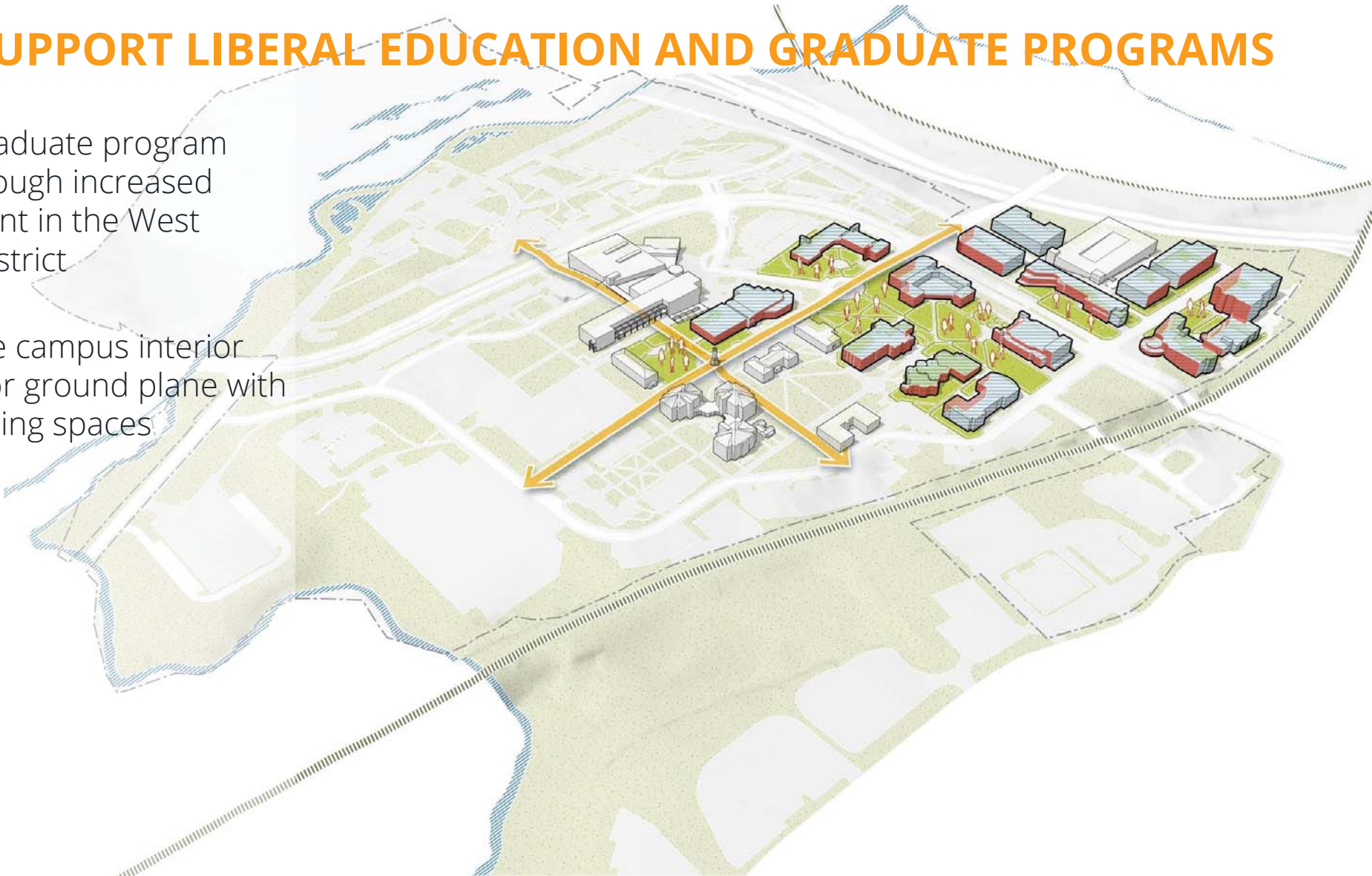
Increase the presence of Athletics within the campus core



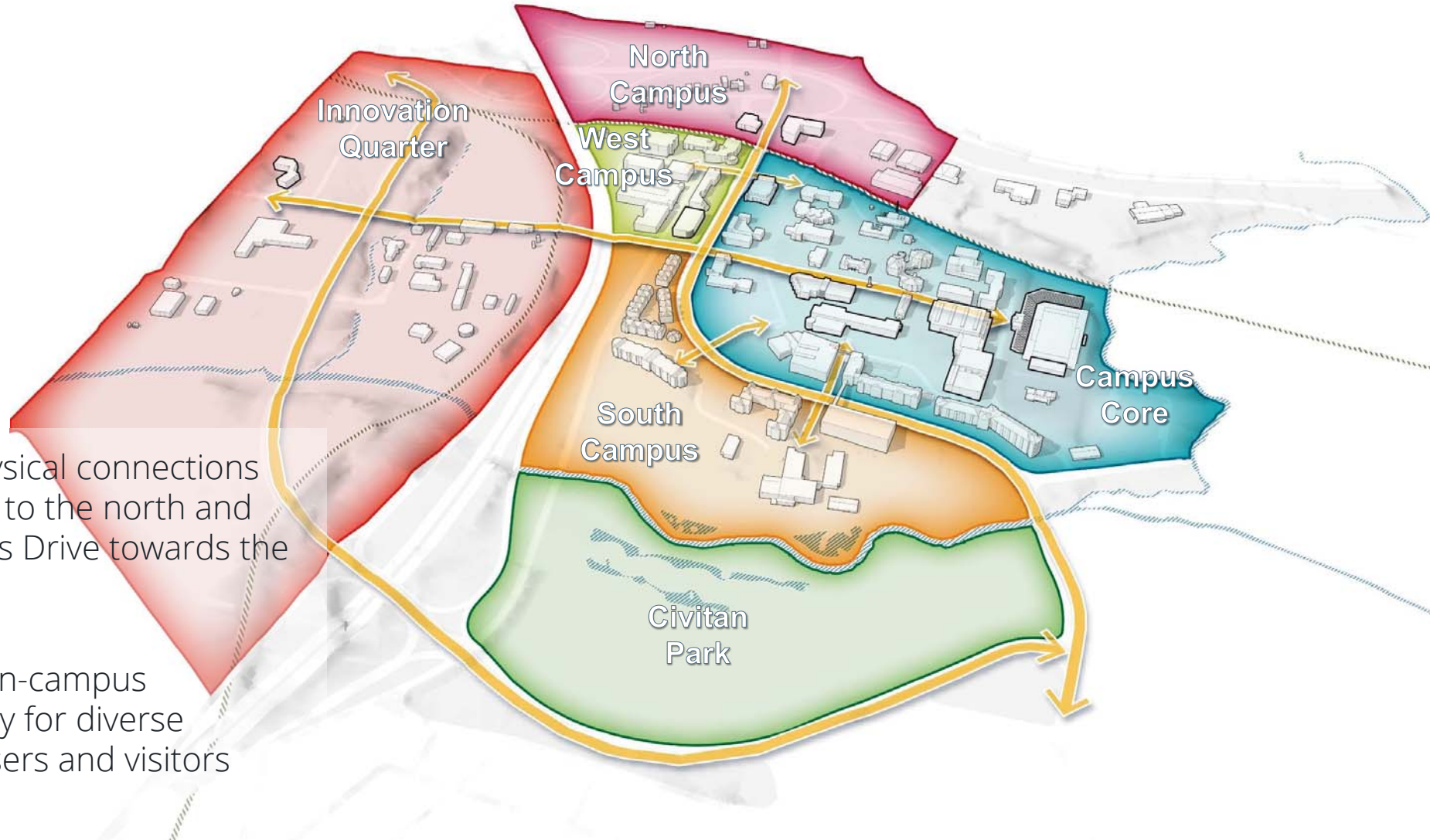
## SUPPORT LIBERAL EDUCATION AND GRADUATE PROGRAMS

Support graduate program growth through increased development in the West Campus District

Activate the campus interior and exterior ground plane with social learning spaces



## ENGAGE COMMUNITIES AND ENHANCE CONNECTIVITY



Create physical connections along MLK to the north and along Rams Drive towards the CDI

Enhance on-campus accessibility for diverse campus users and visitors

# PURSUE ENVIRONMENTAL STEWARDSHIP

## Green Design Checklist

Embrace sustainable environmental and physical design strategies

Provide policy and implementation guidance with regard to sustainability

### Pursue Environmental Stewardship

The updated Green Design Checklist provides guidelines, policy recommendations, and implementation strategies for sustainable environmental and physical design on the campus.

The **Green Design Checklist** includes an extensive list of sustainable design strategies and best practices for a range of systems—building envelope, alternative energy generation, operations, piping, building HVAC and electrical systems. Moving forward, all architects, landscape architects, engineers and other consultants working on the campus are required to consider the applicability of these best practices to their projects. Effort should be made to incorporate as many green design strategies as practical in the design of new construction and major renovation projects at the University.

#### Design Process

1. **Cost: benefit analysis** - The design team shall propose a structure, applicability and then execute cost: benefit analysis during the design process. The University will provide the design team with standard metrics such as the cost of capital, the NPV duration, life cycle assessment cost metrics for labor and utilities projections and use of carbon reduction estimates.
2. **Commissioning** - Every major renovation and new construction project will provide for commissioning to ensure compliance of the facility with the Owner's Project Requirements. This document will address building performance parameters including energy efficiency, rating systems (when applicable), efficient maintenance, code compliance. The commissioning will be undertaken in compliance with ASHRAE Standard 202-2013 or its successor. The commissioning agent will be selected at the start of the design process and will be integrated into the entirety of that process.
3. **Building envelope commissioning** - Consider building envelope commissioning for projects where indoor temperature and humidity control are critical. Follow LEED v4 guidance for building envelope commissioning.

4. **Monitoring based continuous commissioning** - Consider monitoring based continuous commissioning that trends the energy performance of buildings and reports deviations. Continuous commissioning is an effective means of notifying building operators about performance drift, which has been calculated by the Texas A&M Energy Systems Laboratory to occur at an average rate of 3% per year.

#### Alternative Energy Generation

##### University Priorities

1. **Photovoltaics: roof collector panels and parking lot shading** - Worth considering for new building designs and renovations (less likely to work relative to return on investment) with expectation that payback will vary depending on external finance factors. Need south facing orientation.
2. **Photovoltaics: shading system integration** - Worth considering for new construction, see tax credit and utility incentive note above.
3. **Photovoltaics: window wall integration** - Worth considering for new construction, see tax credit and utility incentive note above.
4. **Reflective roofs (for membranes)** - Reflective room membranes with an SRI values greater than 78 for low sloped roof and 29 sloped roofs (>2:12) assist in reducing cooling load by reducing the solar energy absorbed by the roof membrane.

#### Building Envelope

##### University Priorities

1. **Air infiltration** - The architect will specify means of minimizing infiltration for every new construction project. This may include vapor/air barriers, vestibules, limited building pressurization, and envelope commissioning.
2. **Building massing and orientation** - Appropriate for new construction and building additions: Linear buildings are best situated with maximum exposure to the south, for maximum daylighting, and maximum potential for passive solar systems. Eastern and western exposures need protective measures for low sun angles and glare. Passive energy systems are not as effective on these exposures. Northern exposures offer no passive solar system capabilities and offer daylighting opportunities. May be best suited for spaces that need to avoid sun glare, such as art studios, conference rooms, and auditoriums.
3. **Energy saving equipment** - Appropriate for all construction projects. Specify EnergyStar where available.

4. **Fume hood velocity** - In laboratories, specify low flow fume hoods with reduced face velocity requirements (100 feet per minute is generally standard, 70 feet per minute or less is considered high performance low flow hood). Implement variable flow control for fume hoods, with fast acting control valves to maintain necessary space pressure requirements. Implement a sash management protocol to shut fume hood sashes and facilitate reduced air flow requirements for proper hood operation. Follow ANSI z9.5, which allows for lower air flow rates for fully closed fume hoods. As is appropriate, specify Energy Star certified equipment.

5. **Enhanced daylighting** - Appropriate for new construction and to significant renovations.
6. **External sunshades and sun screens** - Horizontal, appropriate for new construction and renovations.
7. **Increase envelope insulation (above the building code)** - Appropriate for all new construction projects and may be appropriate to major renovations. ASHRAE 90.1-2016 or ASHRAE 189.1 - 2014 is an appropriate standard.
8. **Internal sunshades and sun screens** - Consider for all buildings, new and existing.
9. **Light color asphalt shingles** - Appropriate for new construction and relevant renovations, highly reflective roof surfaces will reduce energy use by lowering solar gain and reducing air temperature at the roof surface.
10. **Light shelves** - Consider for all buildings, new and existing.
11. **Maximize glazing performance (glass and framing system)** - Appropriate for all new construction. Consider for major renovations that include window replacement. Best practice is to exceed the ASHRAE standard 90.1 u-factor and SHGC ratings appropriate for the climate zone. Typically, for improved performance, lower u-factors will reduce heating and cooling loads in a facility. Double pane insulated glazing units should be considered as a baseline, with the option to have improved frames, thermal breaks, insulate spacers or additional glazing panes to further reduce the u-factor in harsh climates. Triple pane glazing is being considered in heavily glazed areas to improve occupant comfort. Specify a minimum condensation resistance (CR) of 40-80 for window frames. Consider higher CR values for buildings that are humidified in winter.
12. **Natural ventilation** - Appropriately size operable windows per CIBSE guidelines and link to building controls to shut off mechanical system. Complement with means of drawing air into the space, such as high volume low speed fans and low energy and low static, non-ducted fans.

13. **Skylights/light wells/clerestory windows/roof monitors** - Can reduce electric load and enhance occupant enjoyment and comfort. Roof monitors that have vertical glazing and are less prone to leaks.

#### Electrical

##### University Priorities

1. **Digitally addressable lighting and programmable relay panels for lighting circuits and daylight dimming** - Applicable to new construction and renovation. Identify which spaces need manual overrides and specify that the system returns to automatic operation automatically after a user specified period.
2. **Fixture circuiting to allow for increased control** - Applicable to new construction and renovation. Circuit perimeter lights separate from other lights to enable perimeter lights to be dimmed/shut off for daylight harvesting.
3. **Full cut-off light distribution for outdoor luminaries** - Applicable to new construction and renovation. Requires design consideration to reduce light pollution. Consider following LEED guidance.
4. **LED lighting** - Applicable to new construction and renovation. Ensure proper specification of color temperature for the applicable space.
5. **Liquid-filled transformers** - Applicable to new construction and renovation. Recommended for exterior applications.
6. **Occupancy/Vacancy sensors for lighting control** - Applicable to new construction and renovation, generally with dual (sound and infrared) technology. Include motion and infrared as option.
7. **Oversized conductors** - Applicable to new construction and renovation.
8. **Photo-cells** - Applicable to new construction and renovation. These provide daylight sensing to automatically adjust the electrical light as supplement to daylight.
9. **Power factor correction** - Applicable to new construction and renovation.
10. **Right sizing of and high efficiency transformers** - Applicable to new construction and renovation.

#### Operations

##### University Priorities

1. **BAS controls** - consider a full building automation system for all new construction and major renovation. It provides a central location to turn off or setback various systems to save energy and

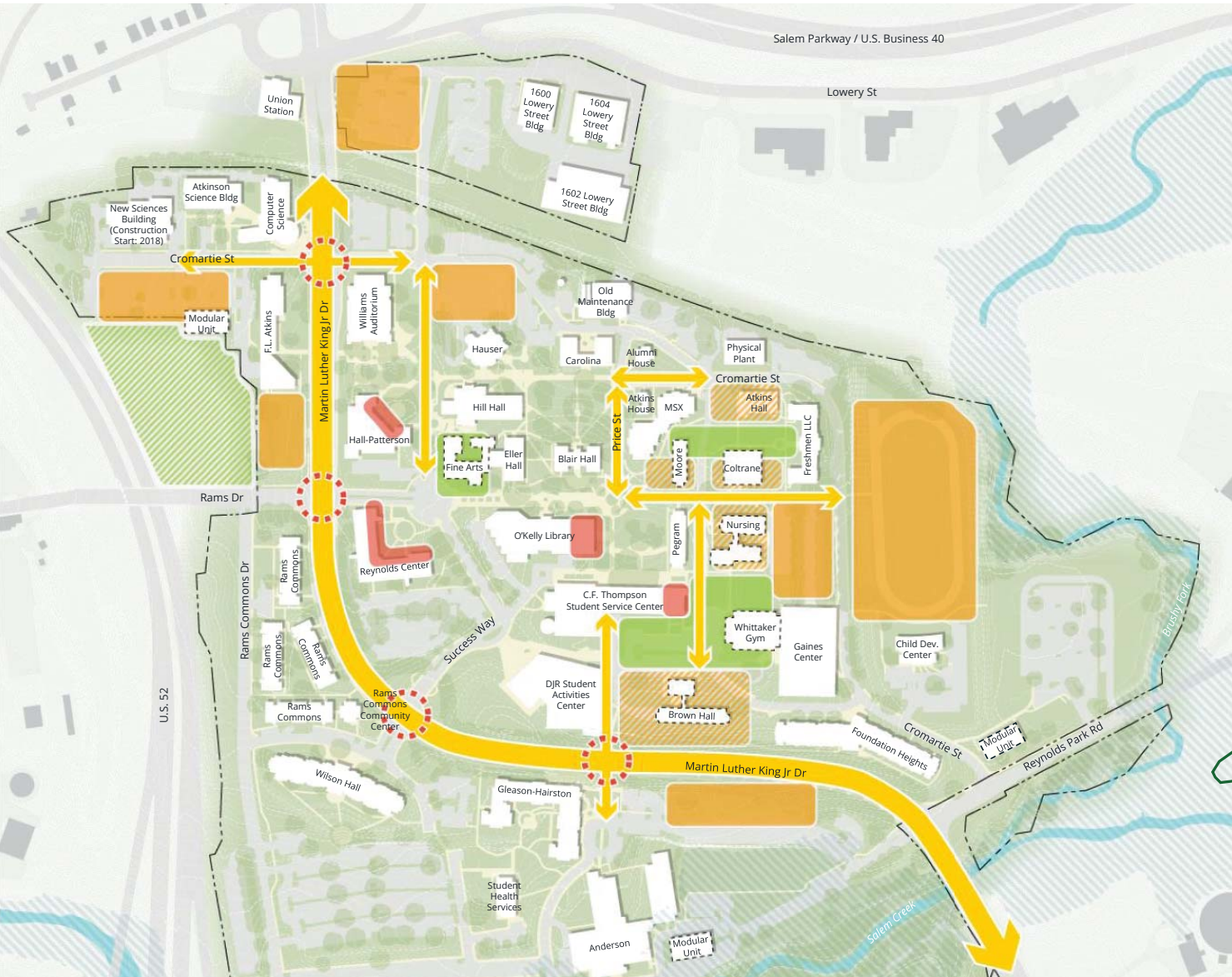
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# FRAMEWORKS

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# EXISTING CONDITIONS



# DEVELOPMENT OPPORTUNITIES

## Potential development sites:

- Existing surface parking lots
  - north of Gaines; north of Hauser; west of F.L. Atkins; east of Union Station
- Demolition Sites:
  - Coltrane; Old Nursing; Brown Hall; Moore Hall

## Open space improvement sites:

- Residential Quad at MSX and Freshman LLC
- Fine Arts (post demolition)
- Whittaker (post demolition)

## Individual building interventions:

- Thompson, Library, Reynolds, Hall Paterson

- BUILDING DEMOLITION
- POTENTIAL NEW DEVELOPMENT SITES
- POTENTIAL REDEVELOPMENT SITES
- BUILDING INTERVENTIONS
- EXISTING PEDESTRIAN REALM
- PEDESTRIAN REALM IMPROVEMENTS
- LANDSCAPE IMPROVEMENTS
- LAND ACQUISITION
- INTERSECTION IMPROVEMENTS
- CREEK BUFFER

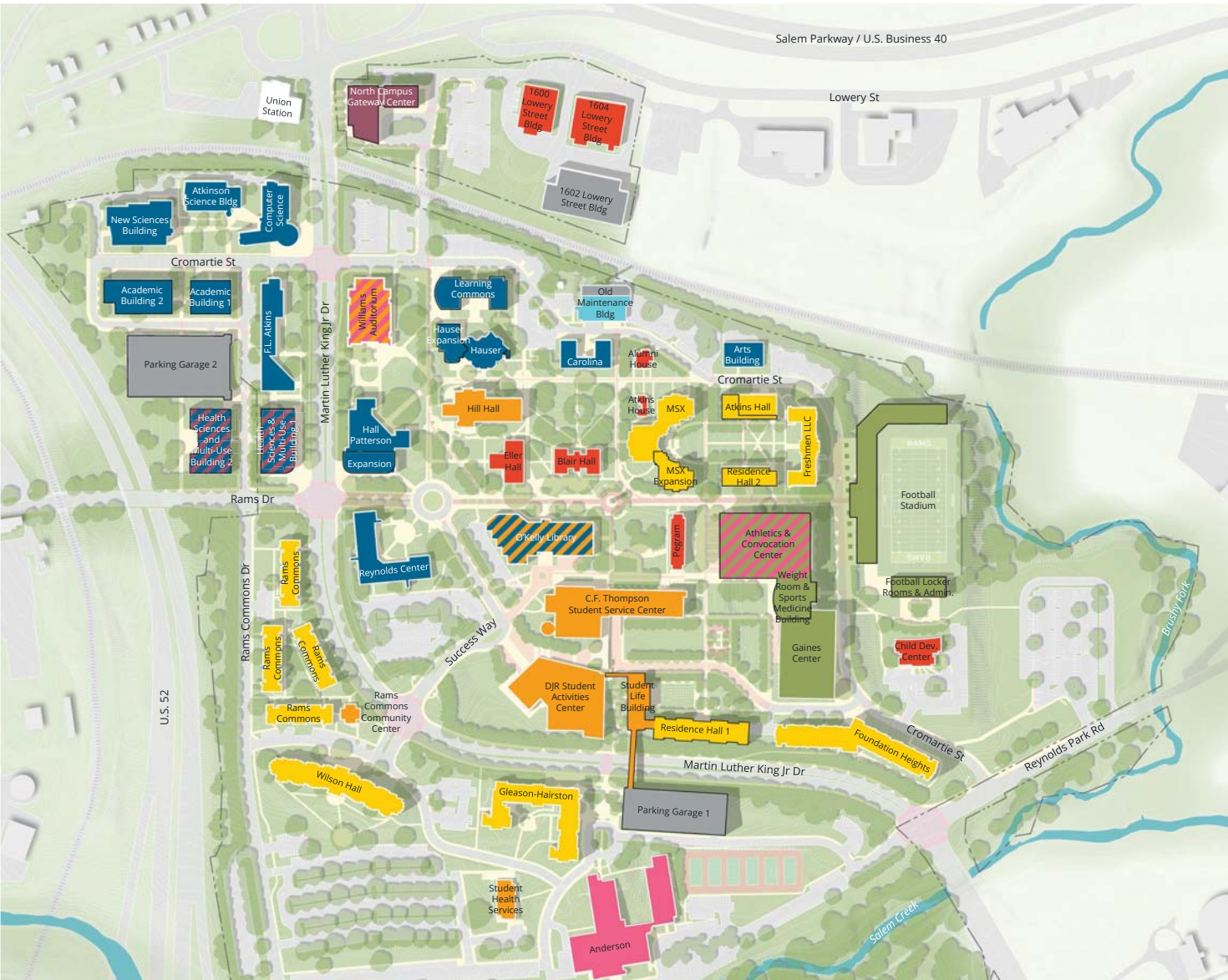




# PROPOSED DEVELOPMENT

- Athletics & Convocation Center
- Atkins Hall Expansion
- Hall Patterson Expansion
- Hauser Expansion
- Football Locker Rooms & Admin.
- Football Stadium
- Health Sciences & Multi-Use Building 1
- Health Sciences & Multi-Use Building 2
- Learning Commons
- MSX Expansion
- North Campus Gateway Center
- Parking Garage 1
- Parking Garage 2
- Residence Hall 1
- Residence Hall 2
- Academic Building 1 (West Campus)
- Academic Building 2 (West Campus)
- Student Life Building
- Weight Room & Sports Medicine Building

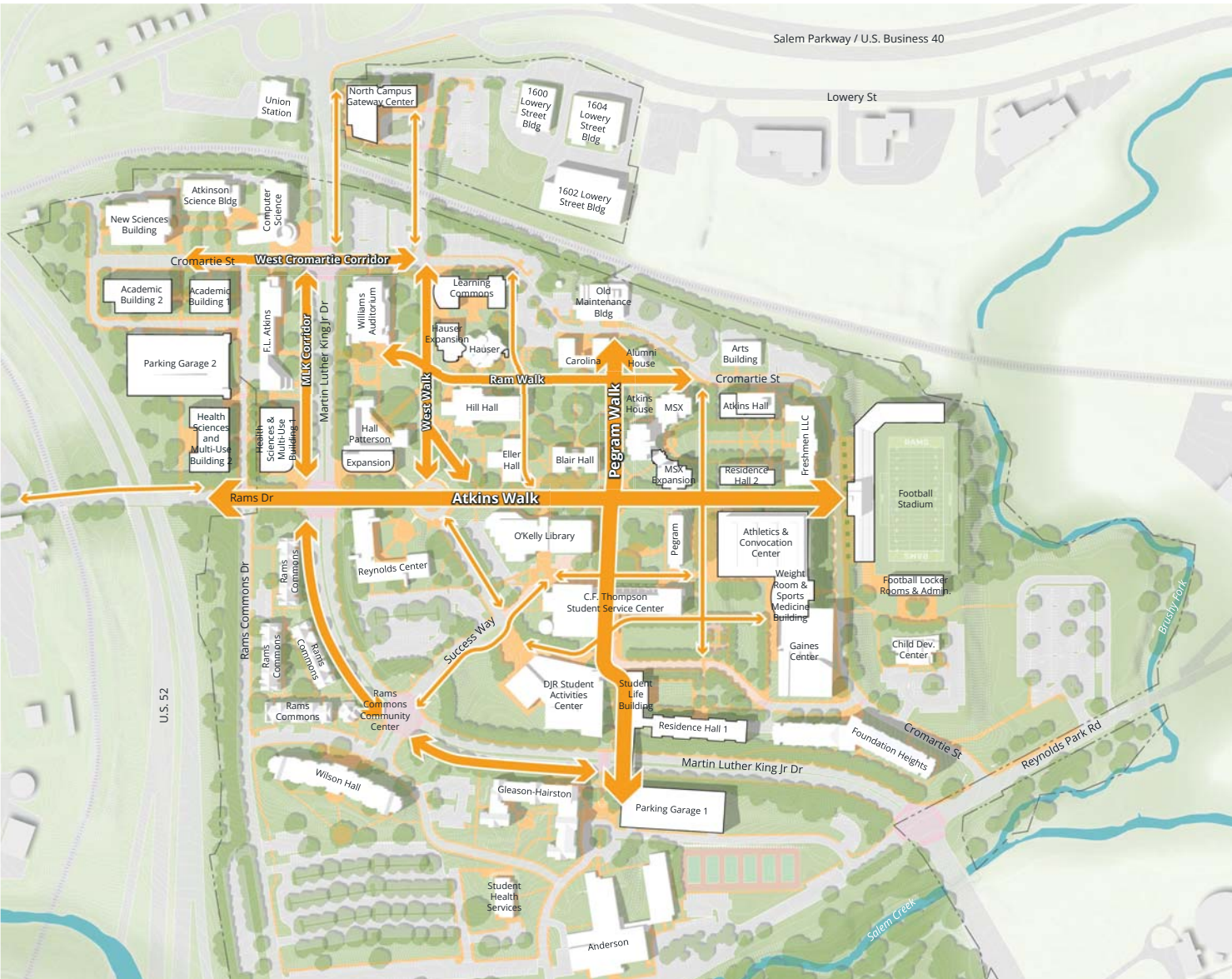
- PROPOSED BUILDINGS**
- RENOVATED BUILDINGS**
- EXISTING BUILDINGS**



# BUILDING USE

- Academic uses clustered in northwest Campus Core and in the West Campus district
- Student life uses form a spine through the core
- Athletics and Recreation are integrated in the Core in the proposed Athletics / Convocation Center and the proposed Football Stadium.
- Housing is provided along MLK and in the core.

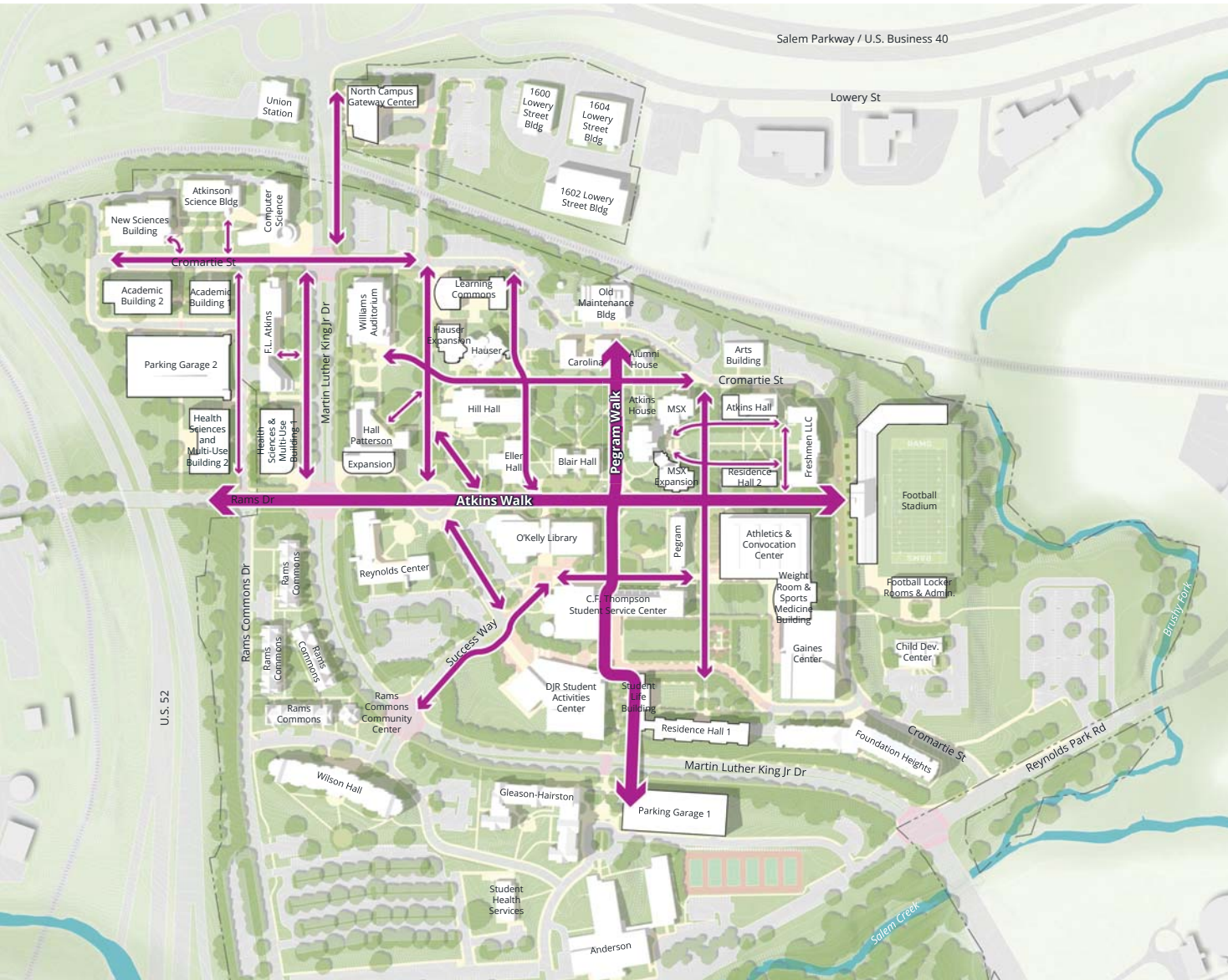
- ACADEMIC**
- STUDENT LIFE & SUPPORT**
- HOUSING**
- ADMINISTRATION**
- ATHLETICS**
- MIXED USE**
- PARKING / SUPPORT**
- POLICE STATION**
- CONFERENCE / EVENTS**



# PEDESTRIAN CIRCULATION

- Atkins Walk continues to be the major pedestrian route through the Core of the campus
- Price Street converted to pedestrian-only (with the exception of service/emergency access)
- Sidewalk and crosswalk improvements along MLK help to strengthen the connection from Core Campus to West Campus and South Campus.

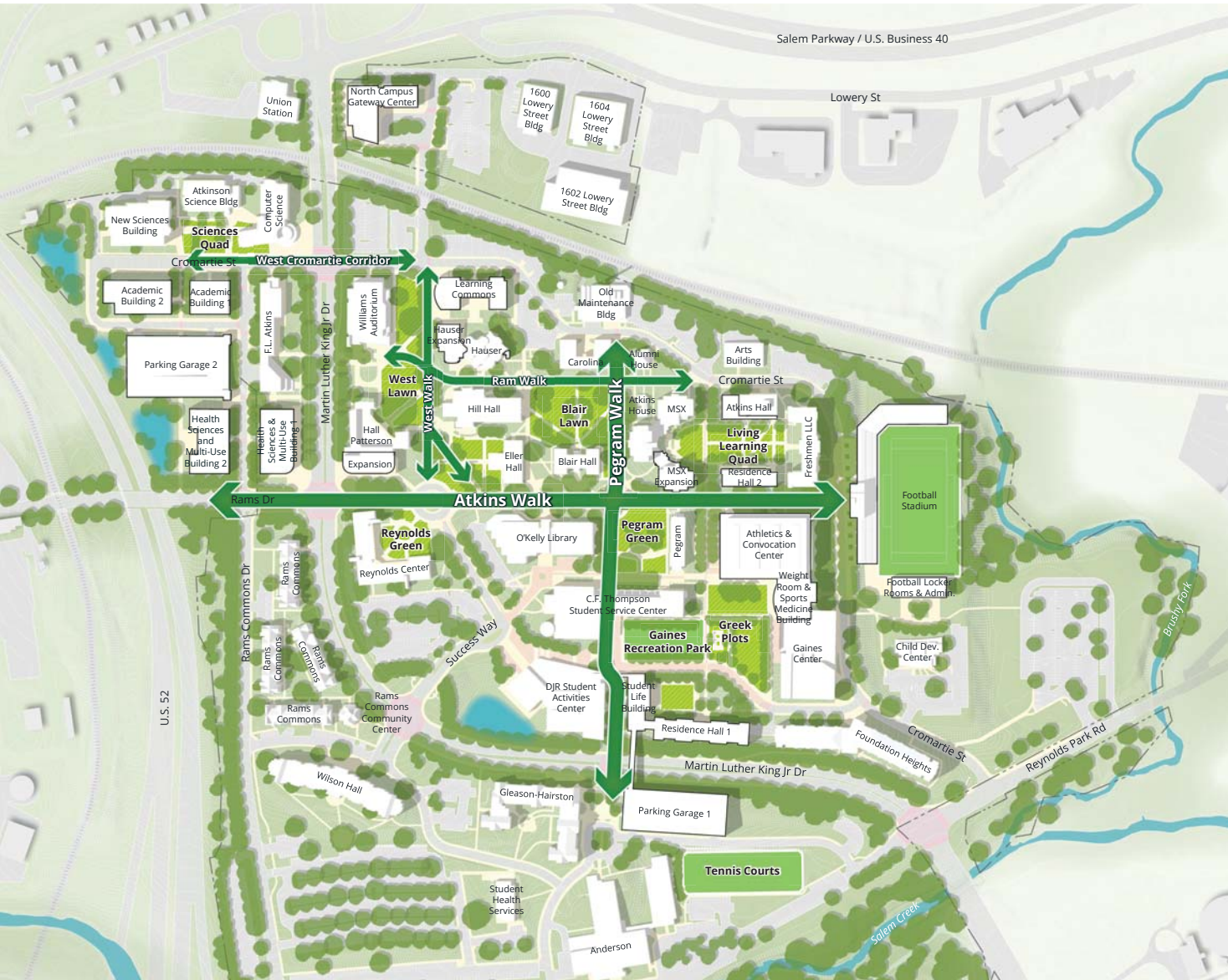




## ACCESSIBILITY





- Where possible major routes will be designed with a gradual slope (<5%), avoiding the need for hand rails and landings and creating pathways that accommodate a range of abilities
- ADA-compliant ramps with slopes under 8.33% are introduced to overcome steep slopes adjacent to steps
- Accessible routes lead to enhanced accessible building entrances

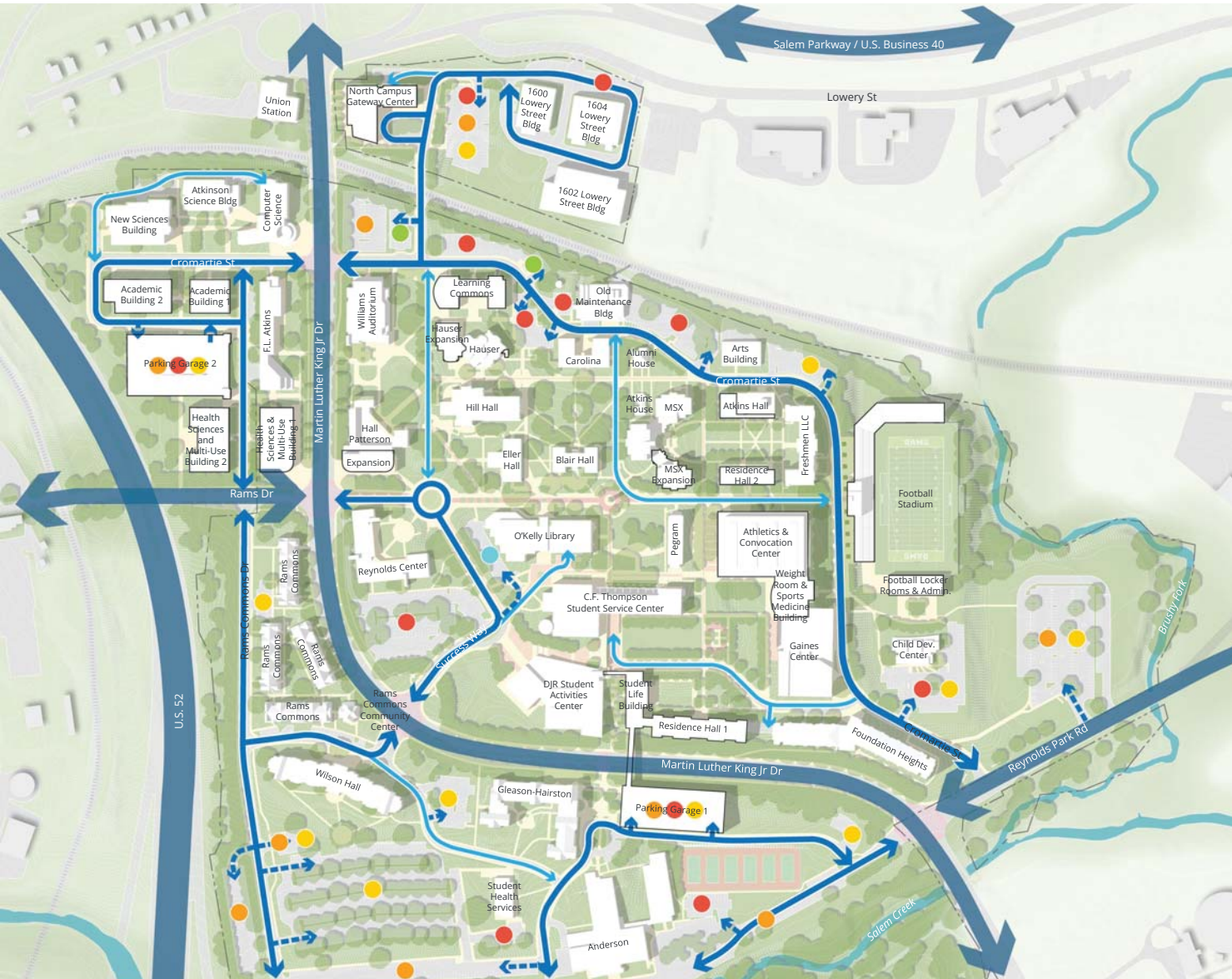
➔ PRIMARY ACCESSIBLE ROUTES



## OPEN SPACE

- New open space in front of Eller creates an inviting campus gateway
- Additional quads / lawns and improvements to existing landscapes provide spaces for social gathering, outdoor study, and large events
- Recreational lawns and athletics facilities are incorporated into the Core
- Enhanced plazas at key building entries allow for gathering between classes
- Improved landscaping along major circulation routes guide users through the campus and improve the image of the campus

-  **CAMPUS QUADS AND LAWNS**
-  **RECREATION AND ATHLETICS**
-  **PLAZA / STRUCTURED SEATING**
-  **LANDSCAPED CIRCULATION ROUTES**



# VEHICULAR CIRCULATION & PARKING

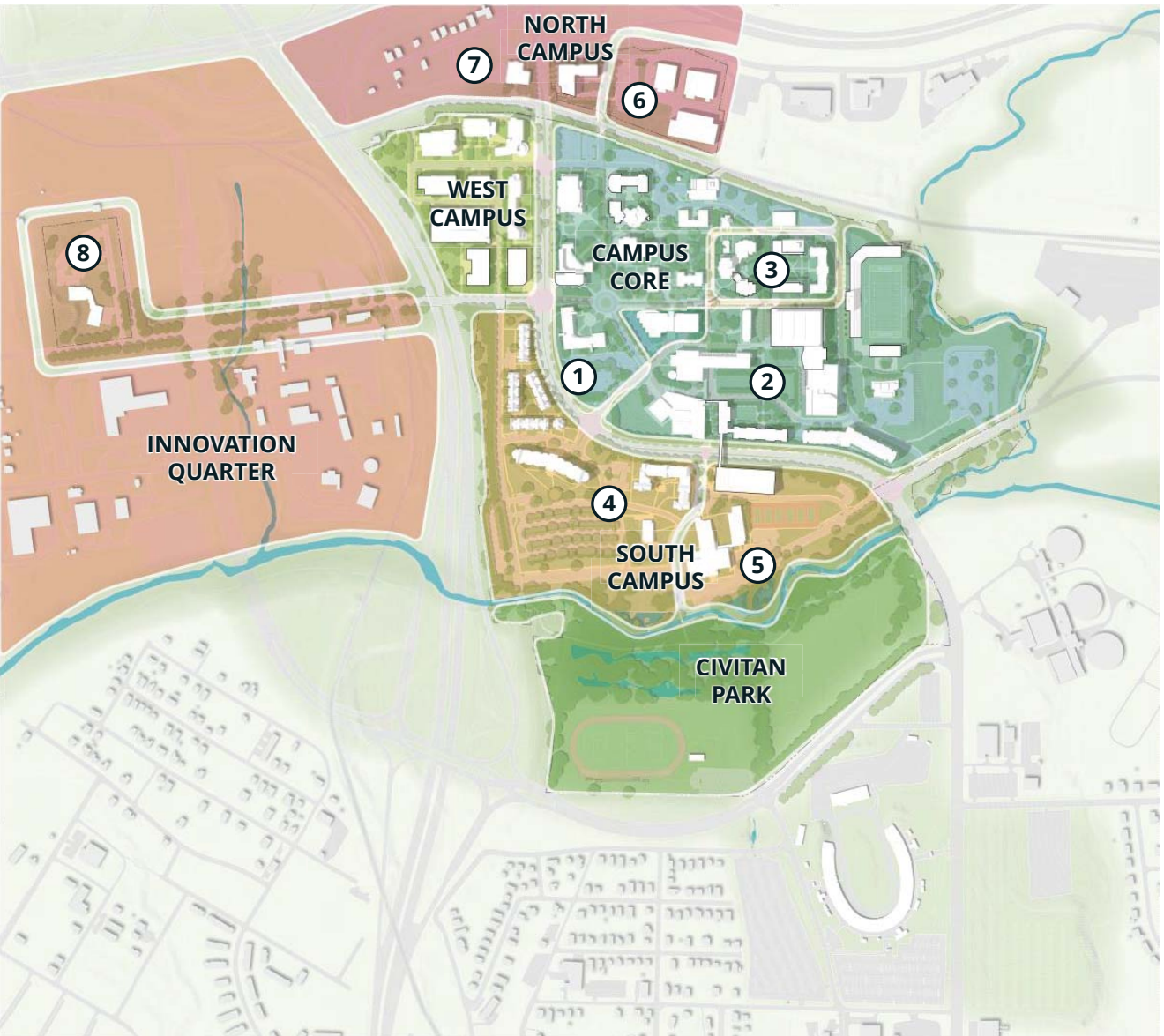
- Reduced vehicular circulation in the Core (closure of Price St)
- Shared service and pedestrian roads in the Core
- Reduction of street parking along Success Way for improved pedestrian experience
- 3,275+ total parking spaces

- REGIONAL OR CITY CONNECTIONS
- INTRA CAMPUS VEHICULAR CIRCULATION
- SERVICE ONLY
- ■ ■ PARKING SPUR
- STUDENT PARKING
- FACULTY PARKING
- COMMUTING STUDENT PARKING
- METERED
- VISITOR PARKING

04

# DISTRICTS

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# CAMPUS DISTRICTS & ZONES

- CAMPUS CORE**
  - 1. ACADEMIC ZONE
  - 2. CAMPUS LIFE ZONE
  - 3. FIRST YEAR EXPERIENCE ZONE
- WEST CAMPUS**
- SOUTH CAMPUS**
  - 4. SOUTH CAMPUS RESIDENTIAL ZONE
  - 5. ANDERSON CONFERENCE CENTER
- NORTH CAMPUS**
  - 6. LOWERY STREET ZONE
  - 7. NORTH CAMPUS MIXED USE ZONE
- CIVITAN PARK**
- INNOVATION QUARTER**
  - 8. CDI CONNECTOR



# ACADEMIC ZONE



## PROJECTS





1. Eller Hall Renovation
2. Hall-Patterson Renovation & Expansion
3. Hauser Building Renovation & Expansion
4. Learning Commons
5. Reynolds Hall Renovation
6. O'Kelly Renovation

## PROGRAM

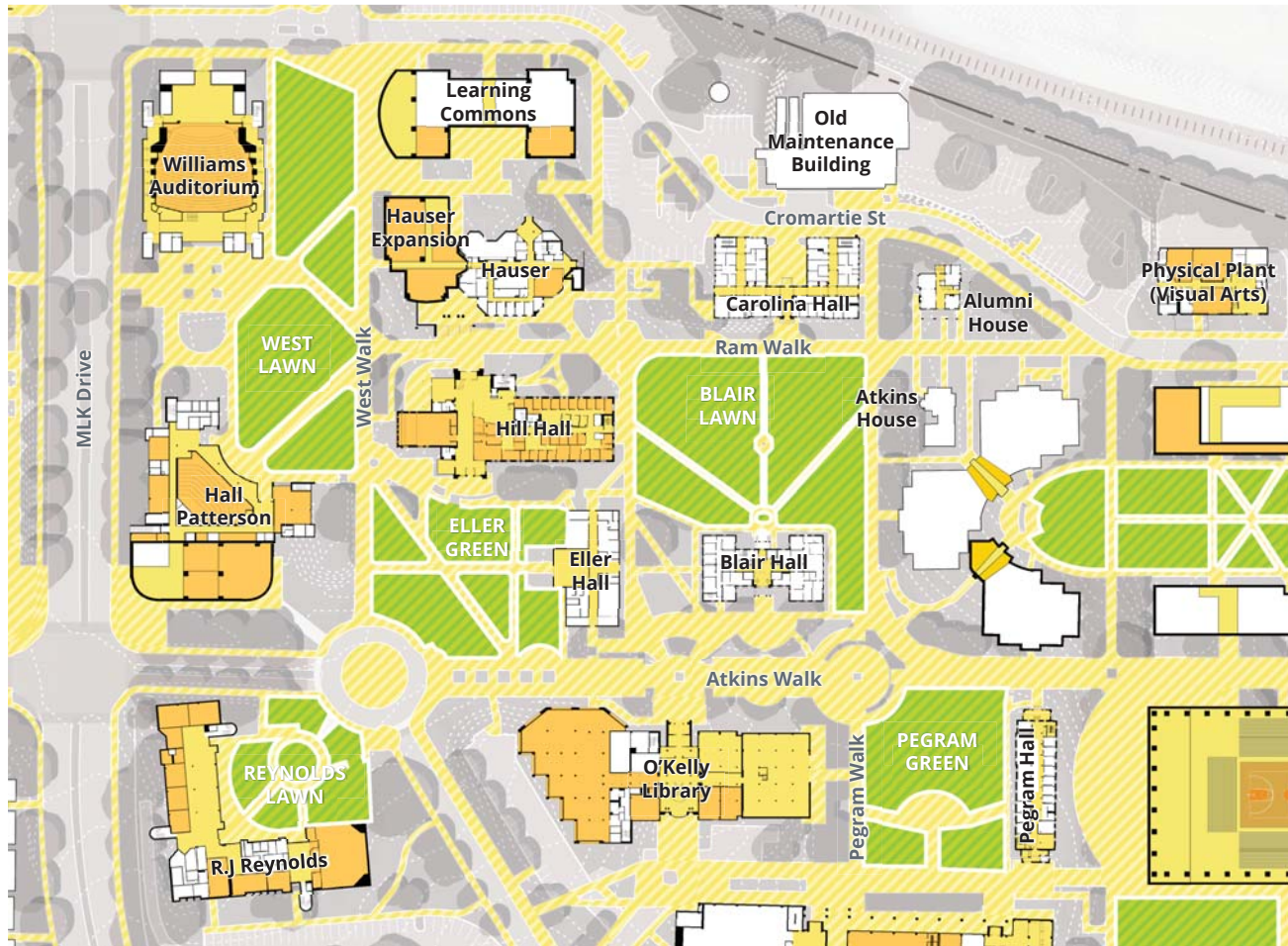
- Liberal education
- Student-facing administration and services

## ARCHITECTURE

- Respect historic Georgian style of existing Core buildings (Blair, Carolina, Eller)
- Hill Hall renovation provides an example of a successful reference to the historical style that also incorporates contemporary elements.

-  PROPOSED BUILDING
-  BUILDING TRANSPARENCY
-  QUADS AND LAWNS
-  PEDESTRIAN REALM

# ACADEMIC ZONE







## ACTIVE GROUND PLANE

- Create an active ground plane to make the learning environment more accessible through:
  - Focused renovations to academic buildings
  - Expanded shared learning space at entrances and along exterior walls
  - Blurred interior-exterior distinction and increased transparency

## OPEN SPACE

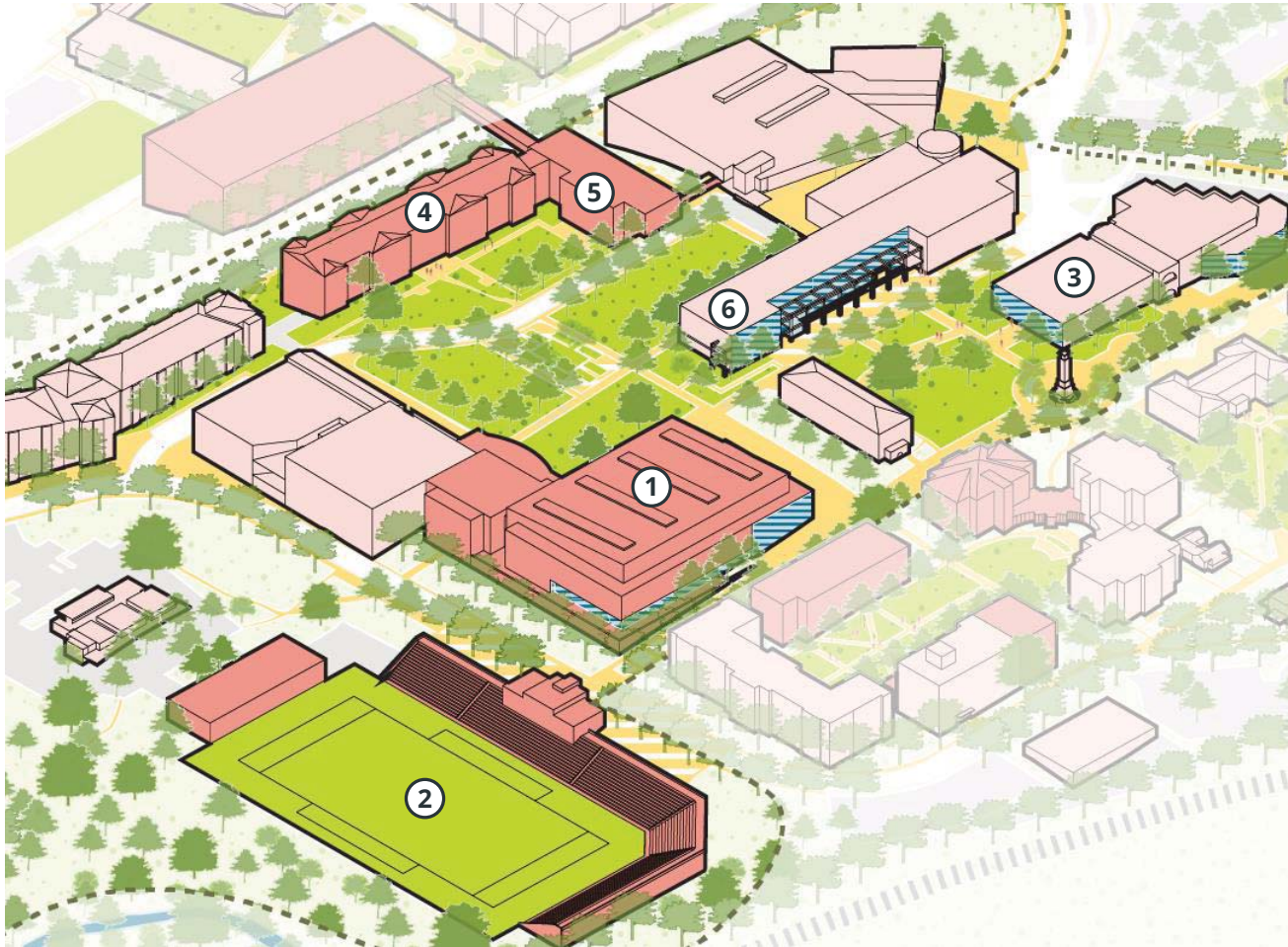
- New open space at demolished Fine Arts site connects Library to academic buildings
- Renovated open space at Hall-Patterson rear court
- Renovated open space at Reynolds Center entrance

-  INTERIOR PUBLIC REALM
-  SHARED LEARNING ENVIRONMENTS
-  EXTERIOR PUBLIC REALM - PEDESTRIAN
-  EXTERIOR PUBLIC REALM - LANDSCAPE

# RAMS DRIVE GATEWAY



# CAMPUS LIFE ZONE



## PROJECTS





1. Basketball Arena and Convocation Center
2. Football Stadium
3. O’Kelly Library Renovation
4. Residence Hall
5. Student Life Building
6. Thompson Renovation for Lounge

## PROGRAM

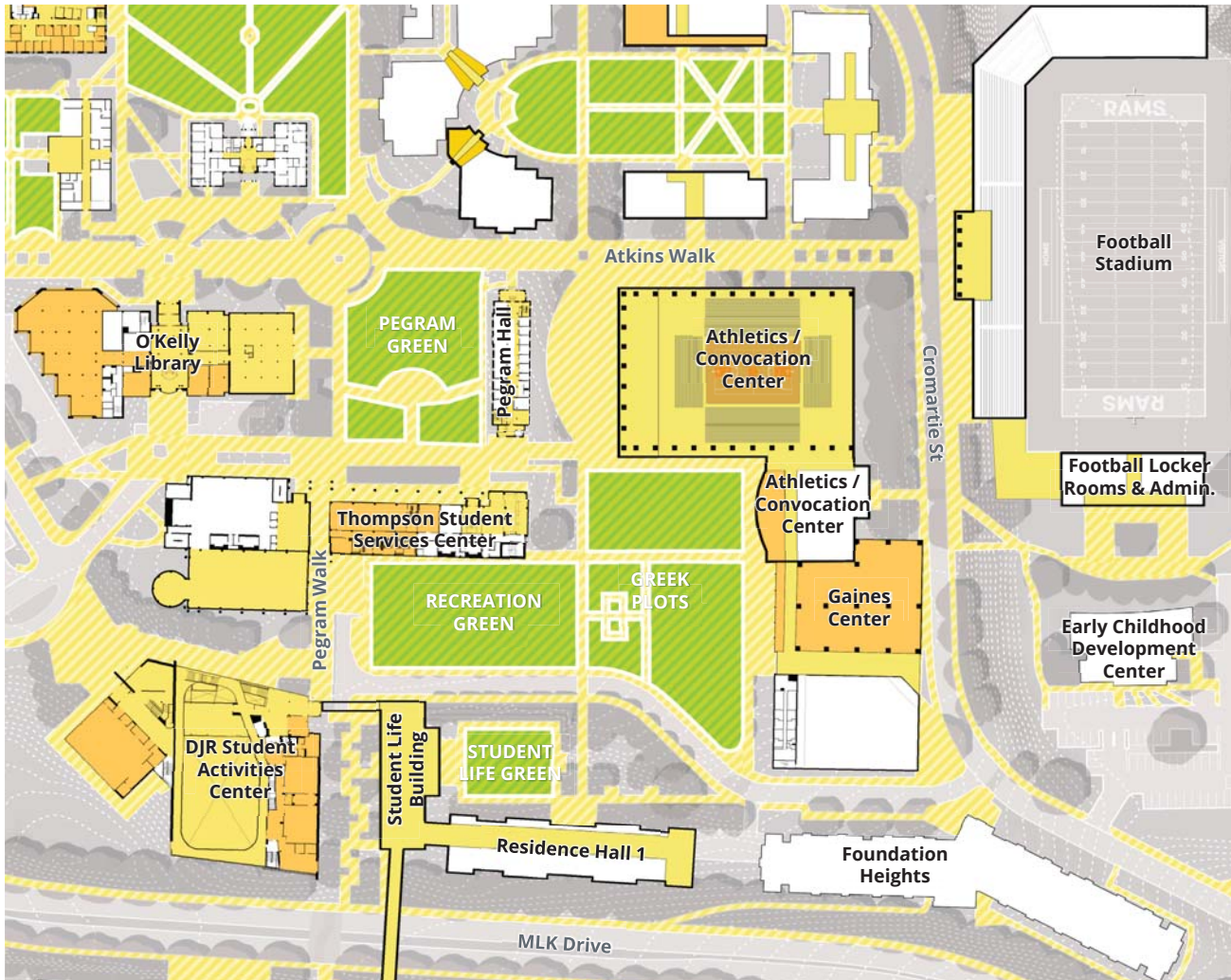
- Athletics & Recreation
- Student Life
  - Social Learning @ O’Kelly Library
  - University Lounge @ Thompson

## ARCHITECTURE

- Contemporary style contributes to the vibrancy and energy of the district
- Design for Athletics / Convocation Center and Football Stadium will respond to style of the Campus Core

-  PROPOSED BUILDING
-  BUILDING TRANSPARENCY
-  QUADS AND LAWNS
-  PEDESTRIAN REALM

# CAMPUS LIFE ZONE







## ACTIVE GROUND PLANE

- Focus on social and active interaction
- Interior spaces where students socialize are visually connected to exterior spaces

## OPEN SPACE

- Recreation spaces support collegiate sports
- Greek plots relocated south of Proposed Athletics / Convocation Center
- Space by new residence hall offers outdoor spill out for events and activities

-  INTERIOR PUBLIC REALM
-  SHARED LEARNING ENVIRONMENTS
-  EXTERIOR PUBLIC REALM - PEDESTRIAN
-  EXTERIOR PUBLIC REALM - LANDSCAPE

# CAMPUS LIFE ZONE



## PEGRAM GREEN



Renovated library with new café and social space spilling out to Pegram Green

# CAMPUS LIFE ZONE : SITE SECTION





# WEST CAMPUS



## PROJECTS





1. Health Sciences & Mixed Use Building 1
2. New Sciences Building
3. Academic Buildings 1 & 2
4. Health Science & Mixed Use Building 2
5. Parking Garage

## PROGRAM

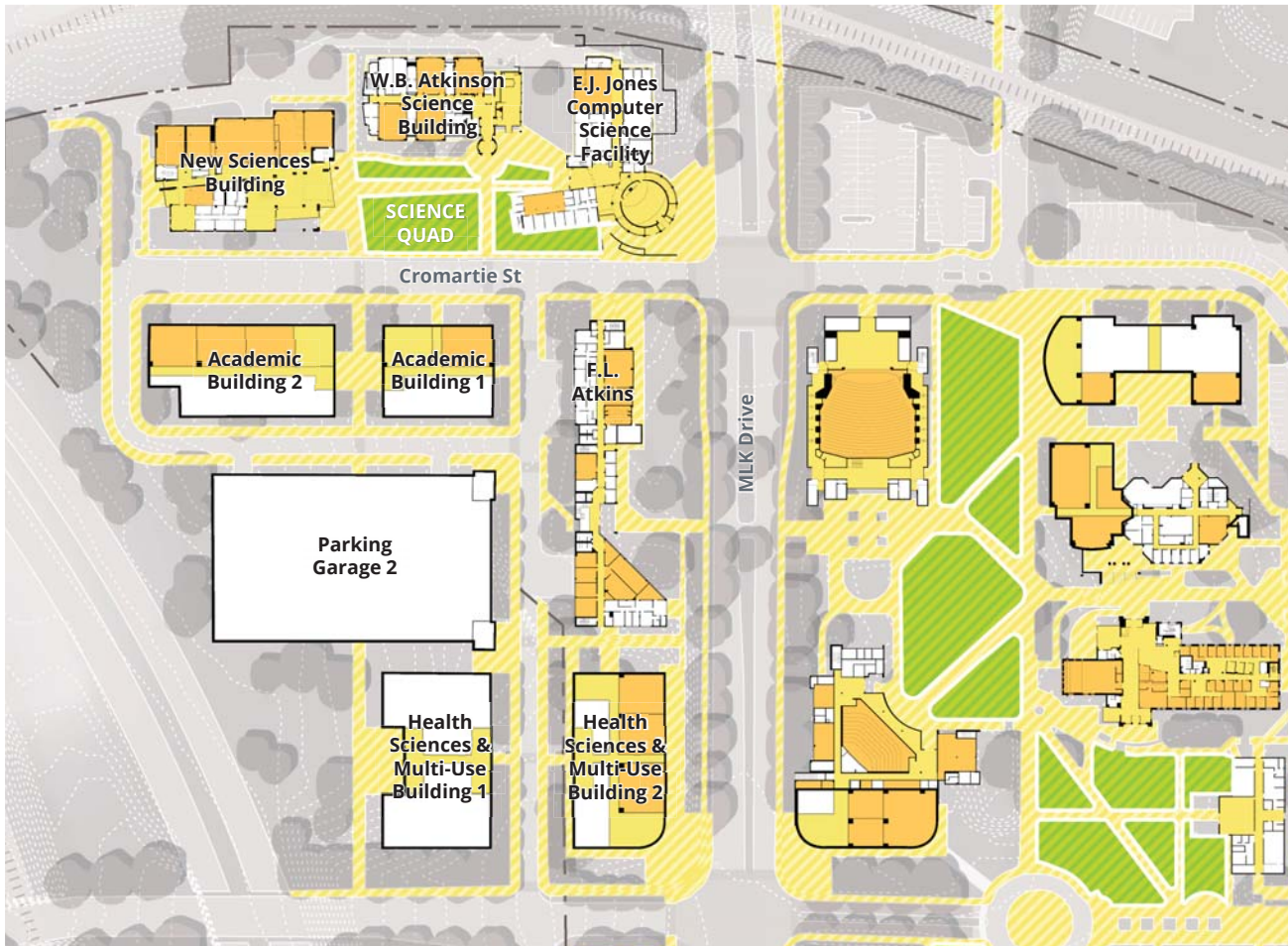
- Undergraduate science programs
- Graduate Health Sciences programs

## ARCHITECTURE

- Aspirational and contemporary architecture
  - More transparency
  - Contemporary materials

-  PROPOSED BUILDING
-  BUILDING TRANSPARENCY
-  QUADS AND LAWNS
-  PEDESTRIAN REALM

# WEST CAMPUS







## ACTIVE GROUND PLANE

- Outdoor rooms between buildings allow for a more active ground plane
- Areas along MLK buffer district from high traffic volume
- Internalizing building connections provides protected pedestrian movement

## OPEN SPACE

- Entry garden/plaza at New Science Building
- Improved streetscape and site planting

-  INTERIOR PUBLIC REALM
-  SHARED LEARNING ENVIRONMENTS
-  EXTERIOR PUBLIC REALM - PEDESTRIAN
-  EXTERIOR PUBLIC REALM - LANDSCAPE

# FIRST YEAR EXPERIENCE ZONE



## PROJECTS





1. Atkins Residence Hall Renovation
2. Martin-Schexnider Expansion
3. Residence Hall

## PROGRAM

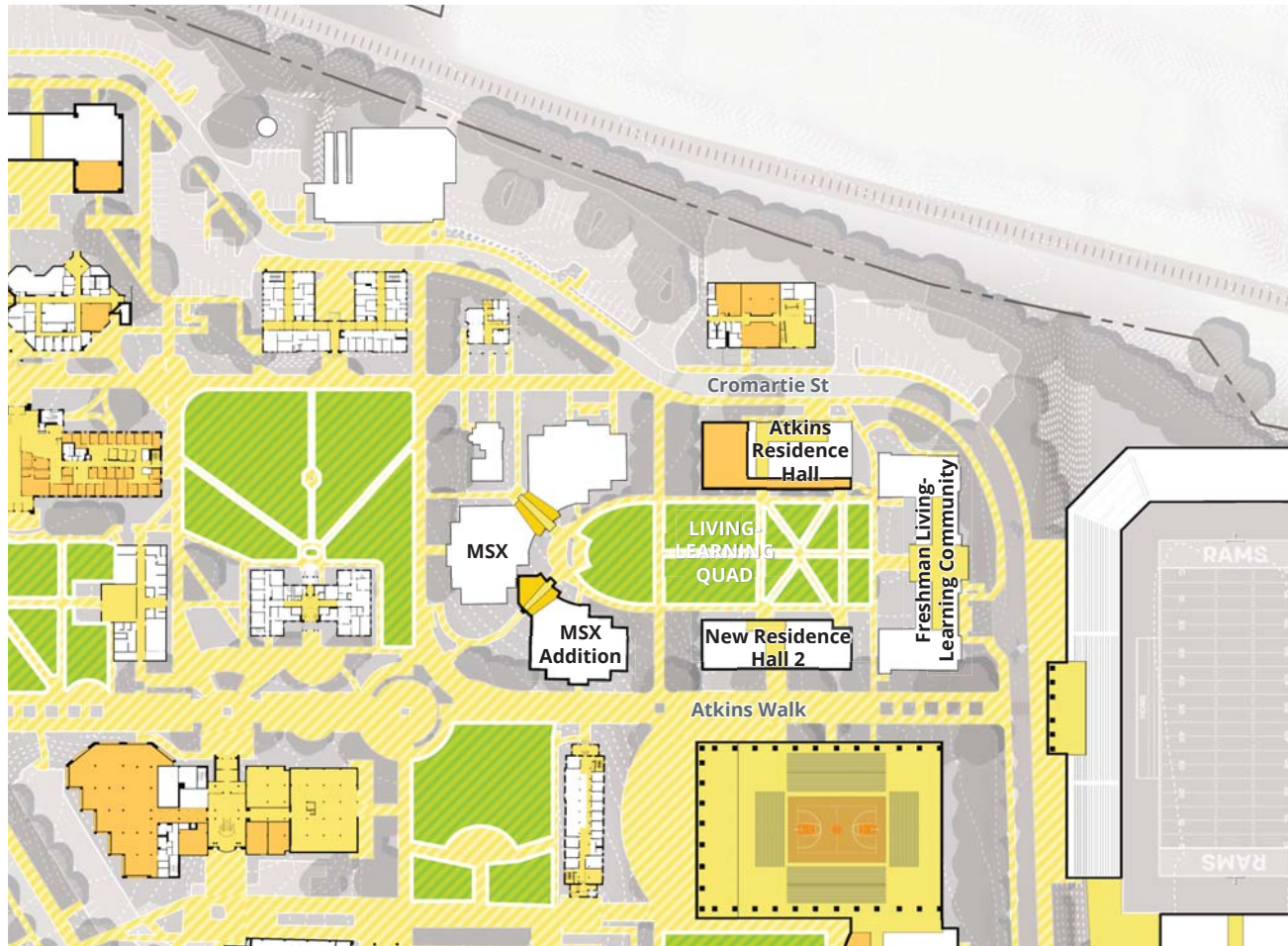
- First year residence halls
- First year support

## ARCHITECTURE

- Respect the historic Georgian style of surrounding buildings

-  PROPOSED BUILDING
-  BUILDING TRANSPARENCY
-  QUADS AND LAWNS
-  PEDESTRIAN REALM

# FIRST YEAR EXPERIENCE ZONE







## ACTIVE GROUND PLANE

- Respond to topographic challenges with accessible routes
- Public portions of residence halls face newly created quad

## OPEN SPACE

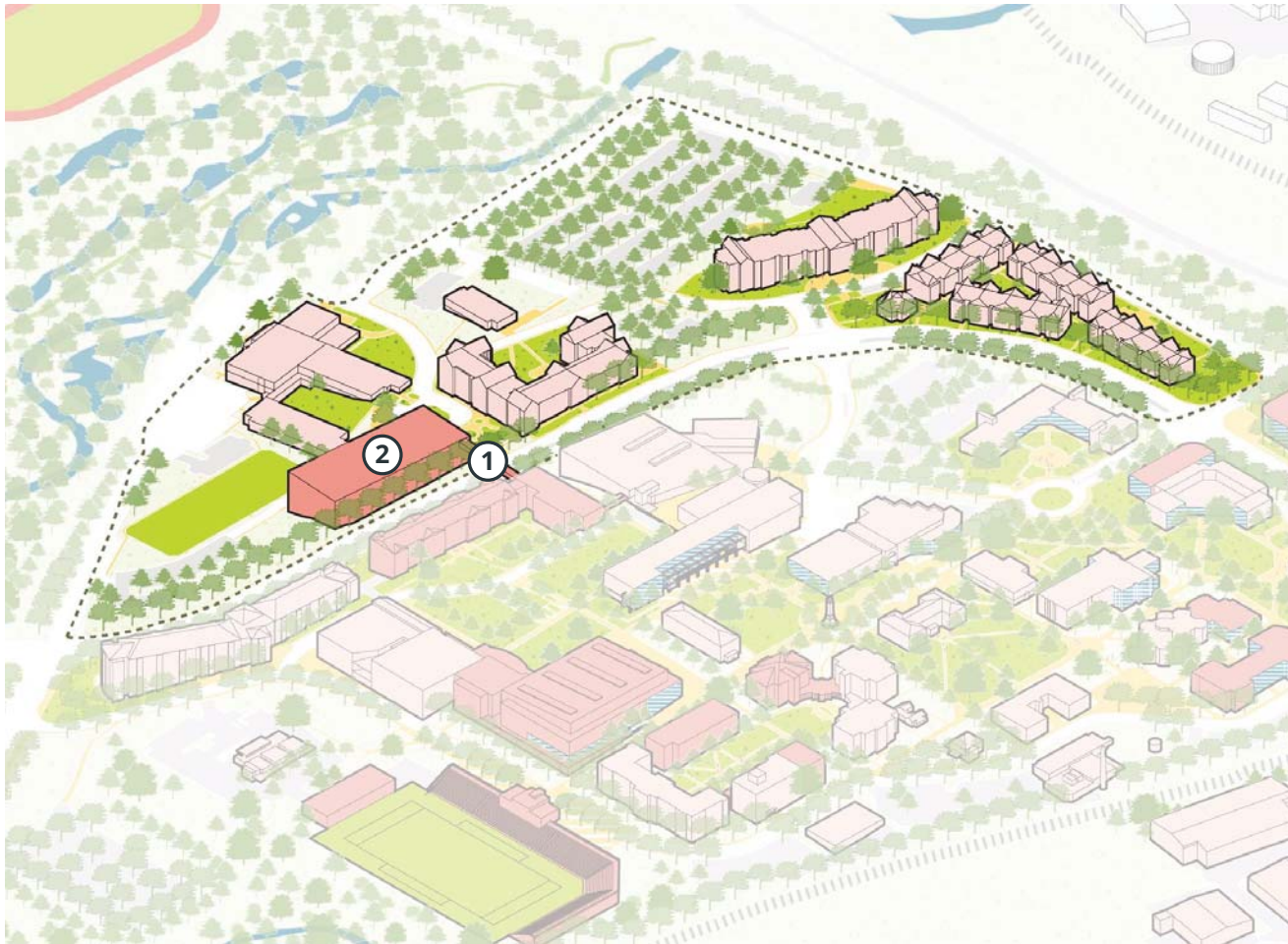
- Creation of major residential quad through building siting
- Proposed amphitheater at western end of quad takes advantage of existing grades

-  INTERIOR PUBLIC REALM
-  SHARED LEARNING ENVIRONMENTS
-  EXTERIOR PUBLIC REALM - PEDESTRIAN
-  EXTERIOR PUBLIC REALM - LANDSCAPE

# FIRST YEAR EXPERIENCE



# SOUTH CAMPUS



## PROJECTS





1. Pedestrian Bridge
2. Parking Garage

## PROGRAM

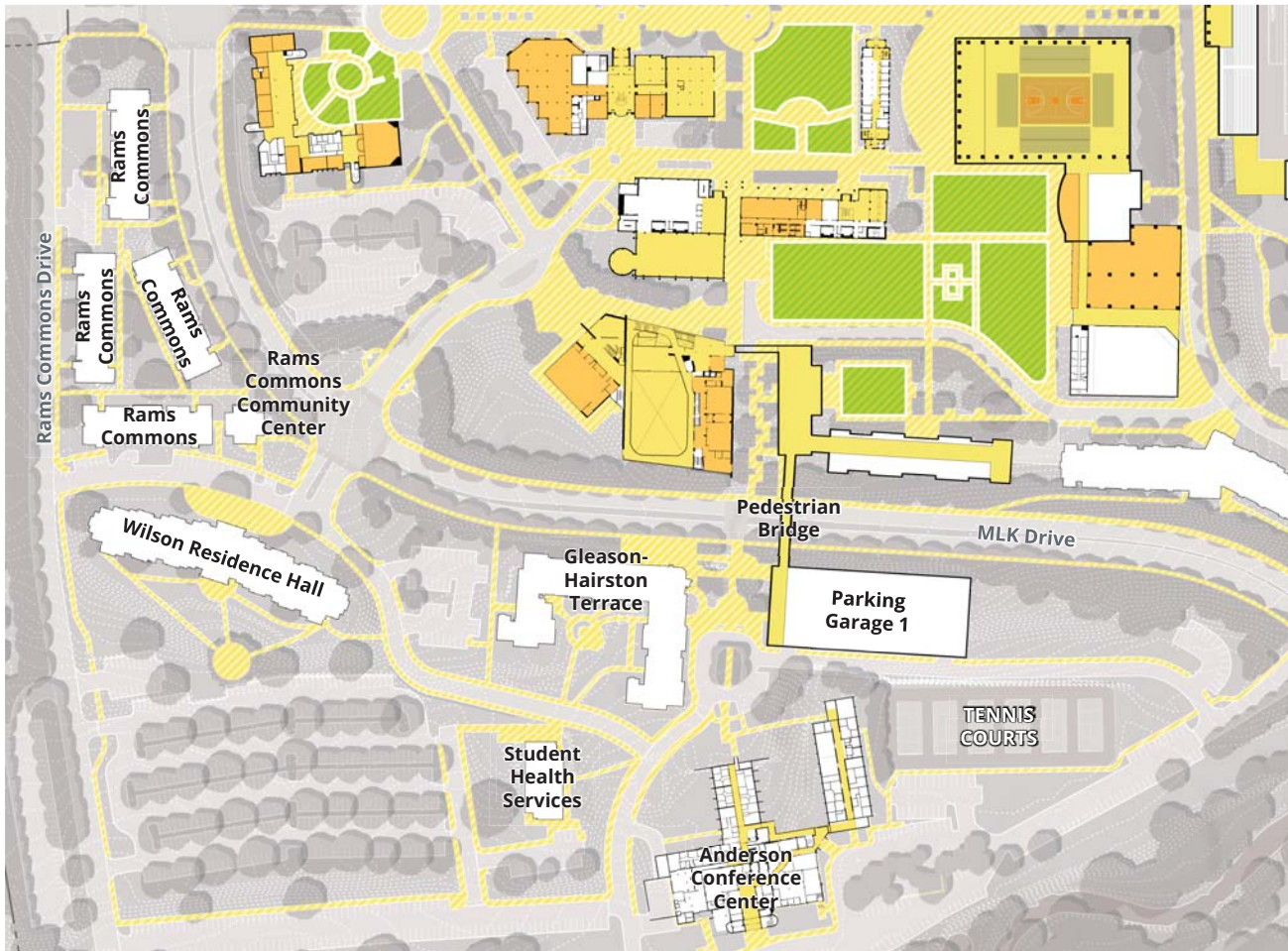
- Conference and Events
- Upperclassmen Residences

## ARCHITECTURE

- Respect the historic Georgian style of the Campus Core
- Showcase the university's mission for a sustainable campus through solar panels and other sustainable building elements

-  PROPOSED BUILDING
-  BUILDING TRANSPARENCY
-  QUADS AND LAWNS
-  PEDESTRIAN REALM

# SOUTH CAMPUS







## ACTIVE GROUND PLANE

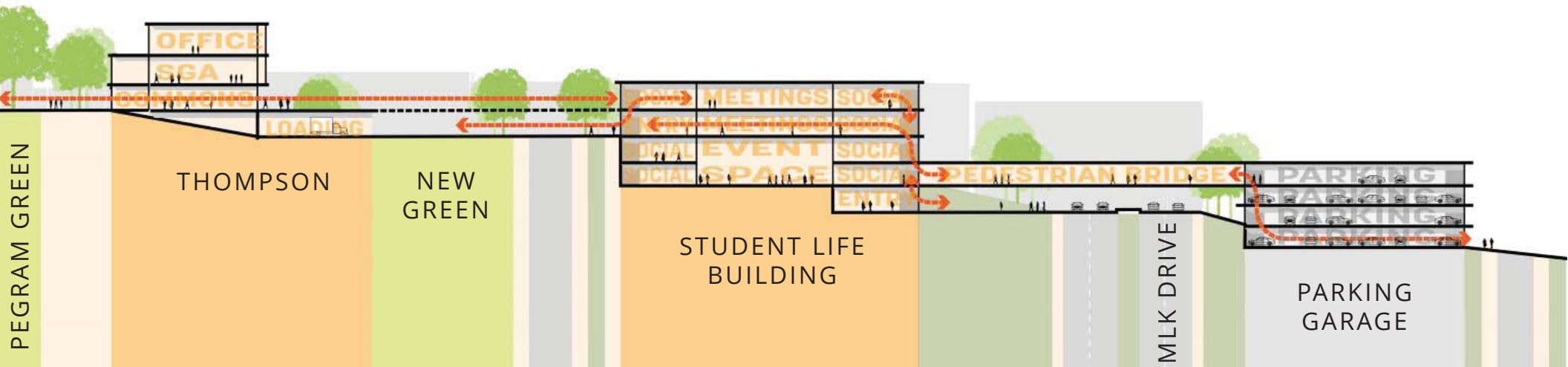
- Internal building connections and a grade-separated street crossing provide cross-campus connections

## OPEN SPACE

- Improved landscapes along circulation corridors
- New residential entry plazas and landscapes

-  INTERIOR PUBLIC REALM
-  SHARED LEARNING ENVIRONMENTS
-  EXTERIOR PUBLIC REALM - PEDESTRIAN
-  EXTERIOR PUBLIC REALM - LANDSCAPE

# SOUTH CAMPUS





# NORTH CAMPUS



## PROJECTS





1. North Campus Gateway Center

## PROGRAM

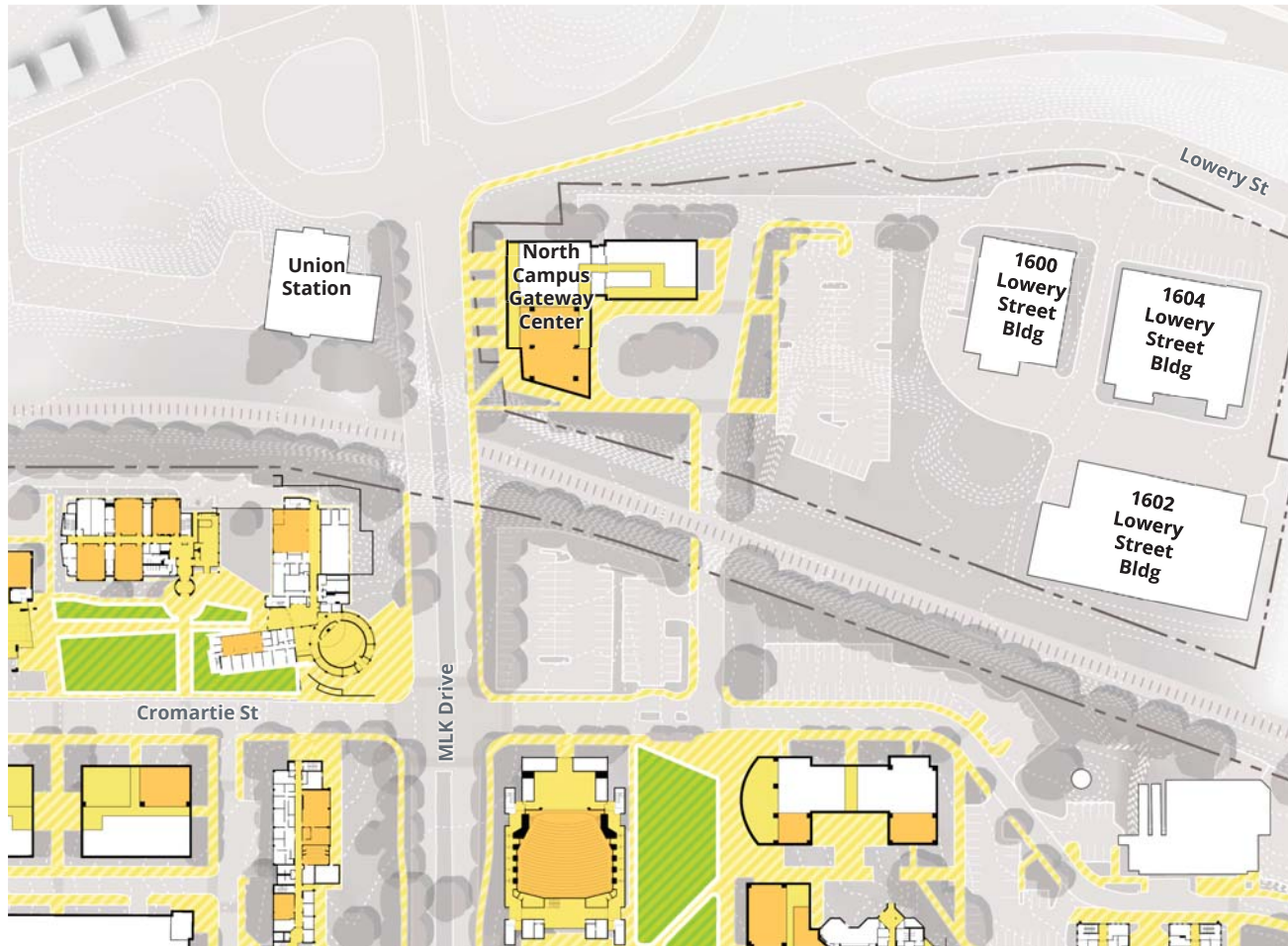
- Mixed-Use
- Administrative and Support

## ARCHITECTURE

- Architectural language as a gateway to the campus from the abutting East End Neighborhood
- Proposed mixed use buildings can adopt a more contemporary architectural style given the planned future for this area by the city

-  PROPOSED BUILDING
-  BUILDING TRANSPARENCY
-  QUADS AND LAWNS
-  PEDESTRIAN REALM

# NORTH CAMPUS







## ACTIVE GROUND PLANE

- Renovated Union Station and the recommendations of the East End Master Plan offer opportunities for active ground floor retail, including food and beverage service
- New buildings in this district that front MLK Drive should have active, accessible, and transparent ground floors

## OPEN SPACE

- focused on the pedestrian experience and connection between this district, the West Campus, and the Campus Core

-  INTERIOR PUBLIC REALM
-  SHARED LEARNING ENVIRONMENTS
-  EXTERIOR PUBLIC REALM - PEDESTRIAN
-  EXTERIOR PUBLIC REALM - LANDSCAPE

# DISCUSSION

