

THE ADAPTIVE PUBLIC REALM

BOISE LIV DISTRICT PUBLIC REALM DESIGN



Project Background

The purpose of this analysis and planning project is to determine the best method to redevelop the public realm of the Central Addition to meet the changing desires and needs of the people of Boise. The Central Addition has recently been renamed the Boise LIV District to exemplify the city of Boise's goal of creating a lasting, innovative, and vibrant community. The Boise LIV District, historically known as the Central Addition, is one of the earliest platted subdivisions in downtown Boise. This city is a growing metropolis with a population of 214,237 people in 2013 (U.S. Census Bureau). As the area has grown, development downtown has exploded and led to an increased interest in developing these five blocks between Front Street and Myrtle Street. The Boise LIV District public realm design uses an innovative design approach that looks beyond the landscape and presents a redevelopment plan that considers building use and layout, street layout, and the implementation of the design over the next 45 years. The following design for the Boise LIV District public realm implements all of the stakeholders goals using an adaptive, efficient, and pedestrian-oriented design approach. The design includes a mixed-use development with a major pedestrian corridor along Broad Street. The project would be built in three phases over the next 45 years. The Boise LIV District would include 856 new residential units, 1,260,329 square feet of commercial space, 468,074 square feet of office space, 280 hotel rooms, and 4,993 parking spaces. A pedestrian-oriented public realm with an array of green spaces and plazas will ensure a resilient and adaptive district that will meet the needs of Boiseans over time.

Summary of Project Significance

- Project promotes pedestrian-oriented design
- Design utilizes the existing infrastructure and resources that the Central Addition has to offer.
- Project incorporates a variety of stakeholders including the City of Boise, Capitol City Development Corporation, and the U.S. Green Building Council.
- Project creates a walkable, livable, and enjoyable downtown atmosphere.
- Project plans for the future needs and desires of Boiseans while developing in a way that meets the desires of developers today.

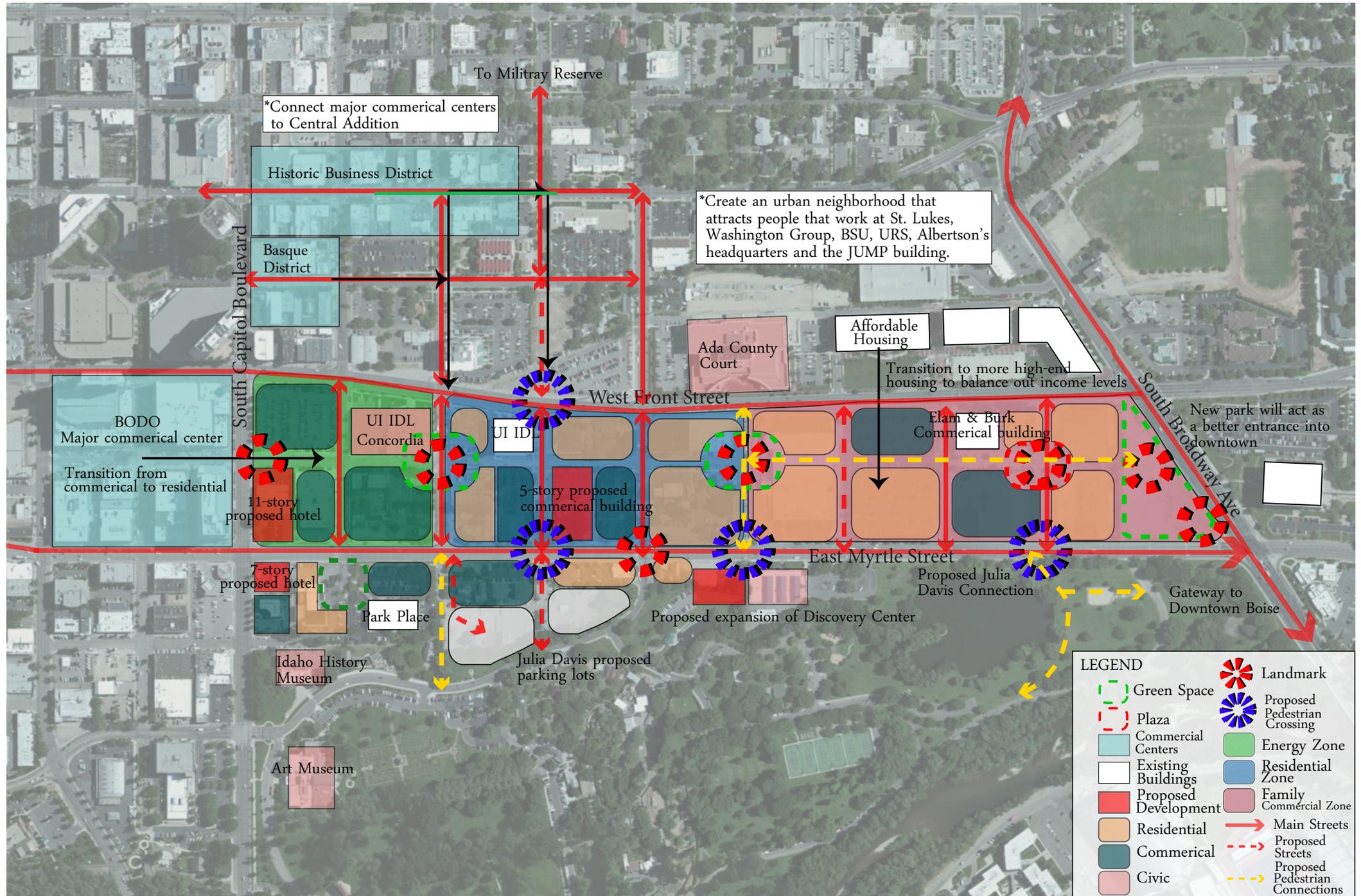
Project Vision

Meet the needs and desires of Boiseans by creating a lasting, innovative, and vibrant public realm using adaptive, efficient, and pedestrian-oriented design.



Central Addition Site Map - Not to scale

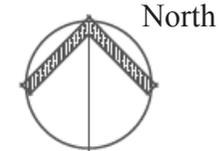
Opportunities & Constraints



0' 450' 900' 1,350'



1/4 mile



BOISE LIV DISTRICT 2060 MASTER PLAN



LEGEND

- 1. Gateway Park
- 2. Albertson's Square
- 3. Civic Plaza
- 4. Centennial Plaza
- 5. Speed Tables (Typical for intersections along the pedestrian corridor)
- 6. Rooftop decks and gardens
- 7. Rainwater infiltration gardens
- 8. Entrance signs (Placed at every major entrance)
- 9. Myrtle and Front Street - Reduced lanes with street parking
- 10. Julia Davis expanded parking lot
- 11. Pedestrian Corridor

BOISE LIV DISTRICT
LAND USE BREAKDOWN



856 Total Residential Units (1,642 total residents)

- 448 2-bedroom, 1,800 sf luxury condominiums
- 338 2-bedroom, 900 sf middle-income apartments
- 70 1-2 bedroom 600 sf affordable housing units

Total Office Space: 468,074 sf

Discovery Center Expansion: 49,154 sf

Total Commercial Space: 1,260,328 sf

- Ground-floor retail, restaurant, and general commercial space: 920,984 sf
- General commercial - 2 stories and up: 339,344 sf

2 Hotels - 255,436 square feet ~ 280 rooms

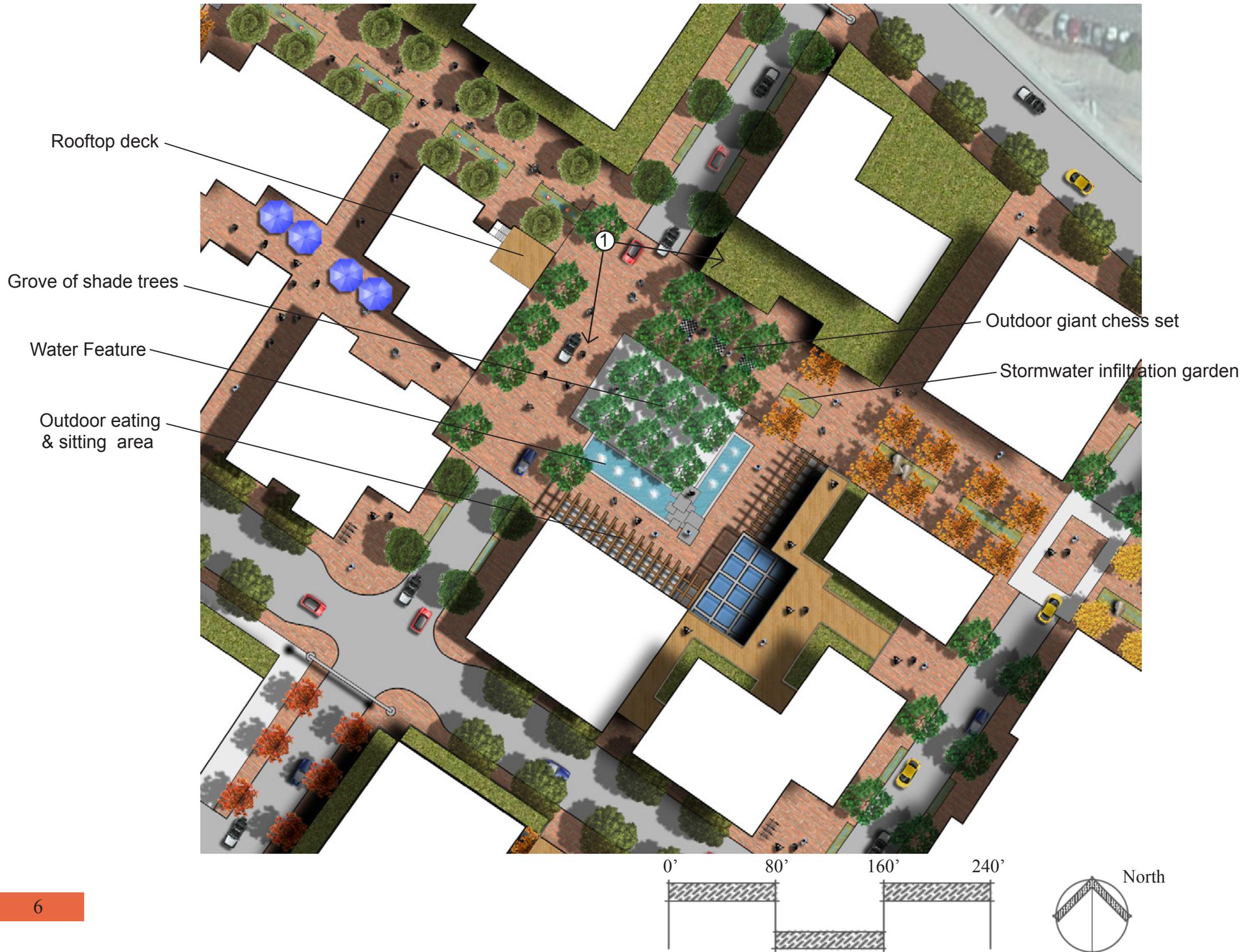
Total New Parking: 4,993 stalls

- Julia Davis Park Parking Lot Expansion: 193 stalls
- On-street parking: 1,016 stalls
- Off-street, structured parking: 3,784 stalls



Site Map - Rescaled

Centennial Plaza

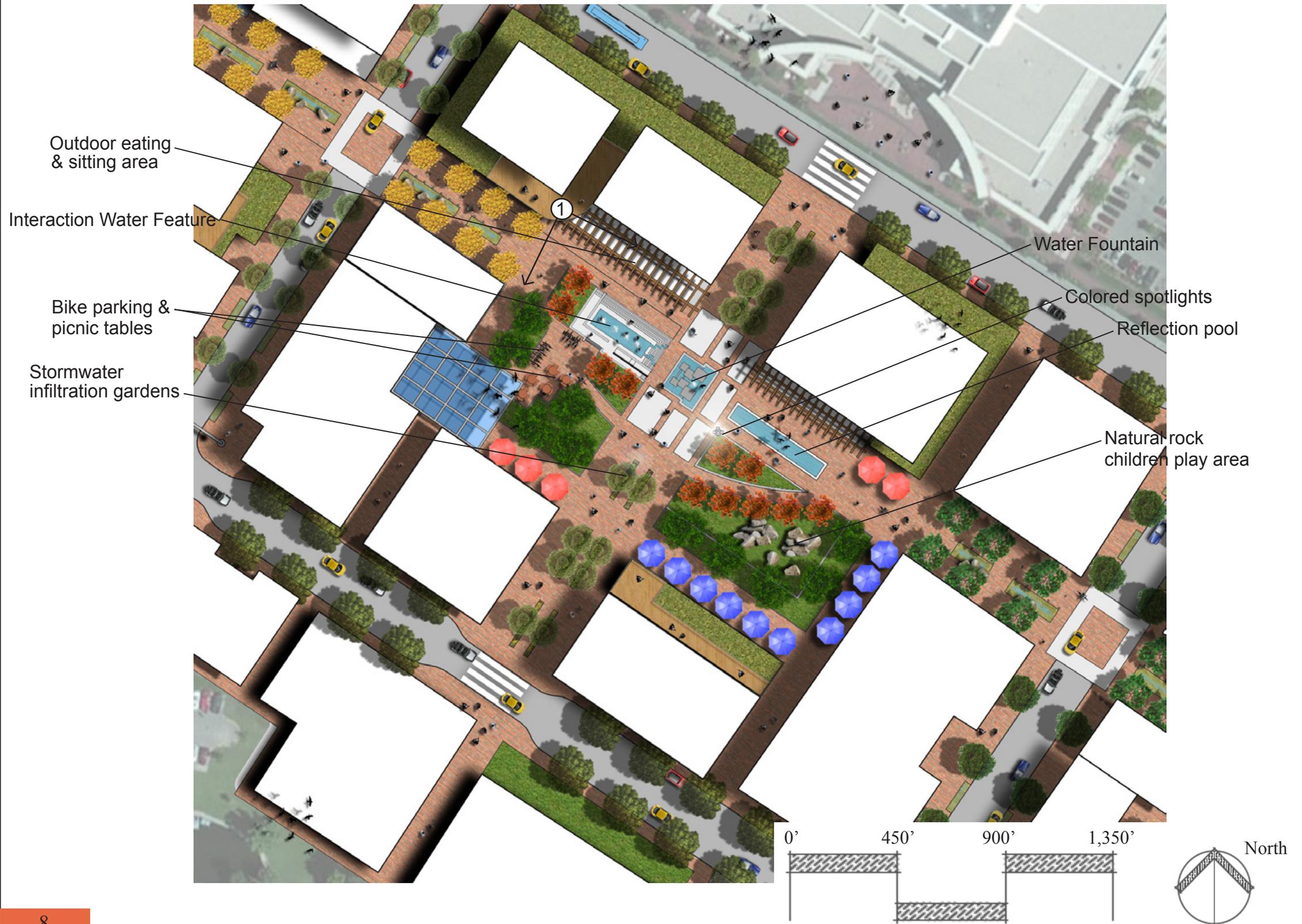


Centennial Plaza Perspective 1



Centennial Plaza is a multipurpose, inviting, and fun public space with a myriad of amenities. The pedestrian corridor runs directly through the plaza to bring people into the site. The space has plenty of seating, some of which is movable, an outdoor chess set that is open to the public, an interactive water feature that borders the plaza, and a shared street to increase the importance of the pedestrian. Trees like the Thornless Honeylocust (*Gleditsia triacanthos inermis*), Hornbeam (*Carpinus caroliniana*), or the Sawleaf Zelkova (*Zelkova serrata*) are the selected species for this space because they provide excellent dappled shade.

Civic Plaza



Civic Plaza Perspective 1



The Civic Plaza is at the intersection of two major pedestrian corridors; one that would run along what is now Broad Street, and another that would run along South 2nd Street, which connects the Ada County Courthouse to the Discovery Center. Because this space is located at a prominent crossroads in the Boise LIV District and is located within the Neighborhood Core, the plaza contains amenities that are family-friendly and geared towards all ages. An interactive water feature and a natural rock play area, which are reminiscent of the Boise River and rocky foothills, allow children to interact with their environment in a safe and fun way. Large grass lawns and picnic tables provide spaces for families who want to relax and enjoy a meal. A multicolored spotlight, located at the center of the plaza, adds light and color to the space. Clear accessibility and visibility creates a safe and inviting atmosphere. A prominent water feature and reflecting pool adds a soothing sound for people enjoying a meal in the outdoor eating and seating areas bordering the Civic Plaza.

Gateway Park

Reflection pool

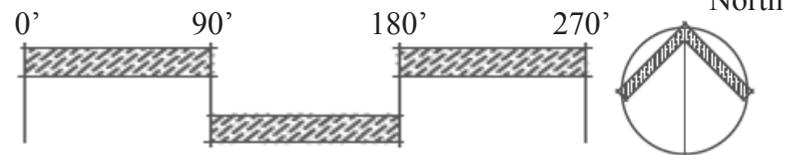
Art feature inspired by the work of Janet Echelman

Grass lawn

Stage for concerts & events

Grand entrance with fountain

Bus stop



Gateway Park Perspective 1



Gateway Park is the eastern terminus of the Boise LIV District as well as the gateway into downtown Boise as people cross Broadway Bridge. The multipurpose park has a large grass lawn and a stage for a variety of events and concerts. Two bus stops located along South Broadway Avenue accommodate people's transportation needs and reduce the dependence on the automobile and decrease traffic levels during large events. A prominent sculpture inspired by Janet Echelman, a world-famous artist, stands at the end of the pedestrian corridor and is tall enough to be seen from the western end of the District. Two interactive reflections ponds reflect views of Boise's foothills, the sculpture, and allow people to cool off during hot summer days. Gateway Park acts as a major landmark for visitors as they enter downtown via Broadway Bridge.

BOISE LIV DISTRICT STORMWATER MANAGEMENT

The stormwater management plan provides a method of capturing and filtering stormwater runoff from impervious surfaces. The introduction of more buildings, walkways, and plazas add more surface area for rainwater to accumulate and run off the site into a nearby body of water like the Boise River, causing flooding and erosion downstream. The 26,634 square feet of stormwater infiltration gardens collects the runoff, filters the pollutants, and infiltrates the water into the ground, recharging the aquifer below the surface.

Stormwater Calculations:
1,508,280 total square feet of new hardscape:
 • Total roof area: 920,984 square feet
 • Total impermeable street area: 587,296 square feet

Rational Method
 (The Rational equation is the simplest method to determine peak discharge)
 $Q = CiA$
Q = Peak discharge
C = Dimensional runoff coefficient
 • Roofs and roads have a coefficient of .98
i = Average rainfall intensity (inches/hour) for a chosen rain storm event
 • Boise's 25-year, 1-hour storm has an intensity of 0.8" per hour
A = Impermeable area
 • 1,508,280 square feet

$$Q = (.98)(.8"/\text{hour})(1,508,280 \text{ sf}) = 27.14 \text{ cubic feet per second}$$

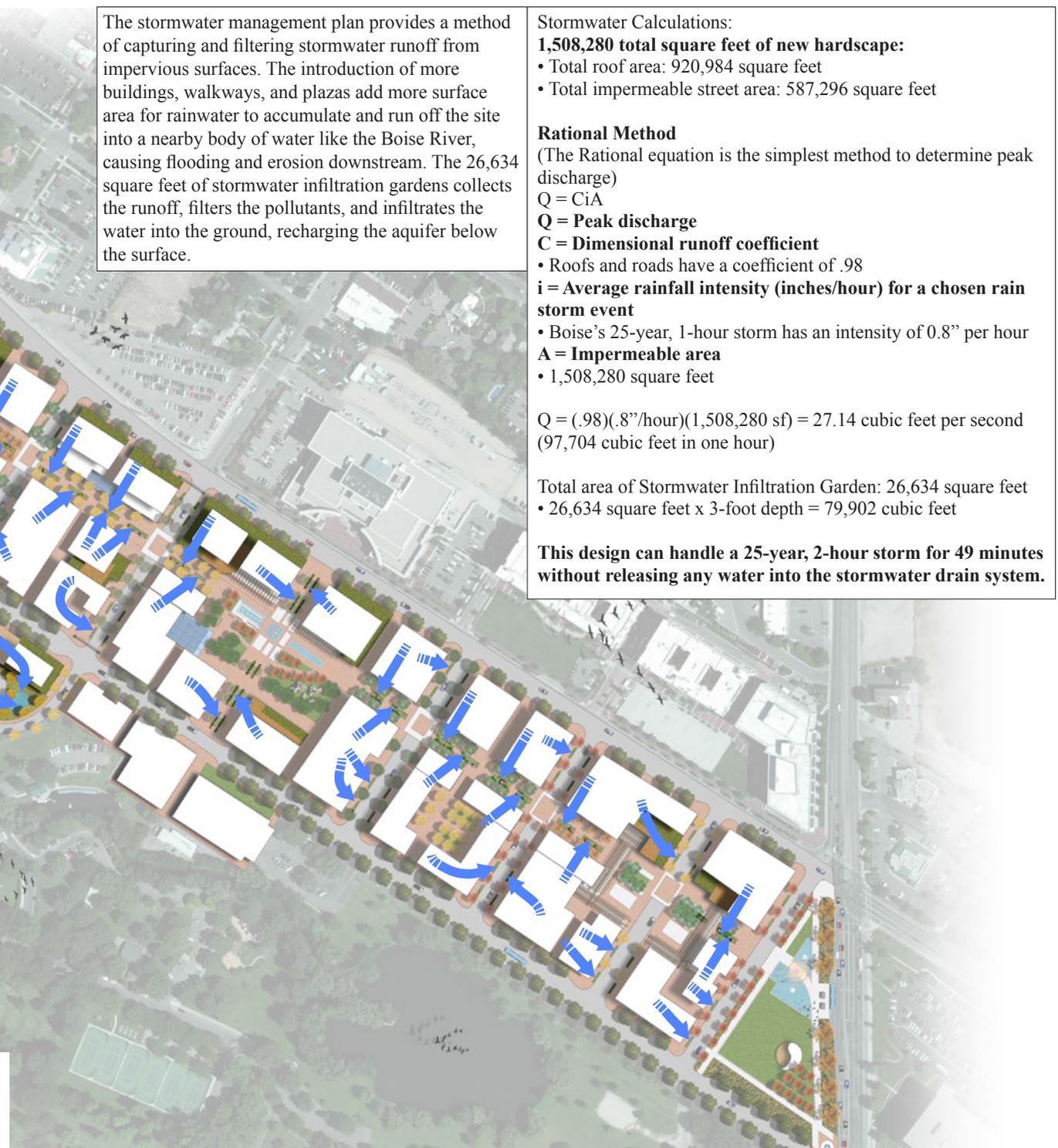
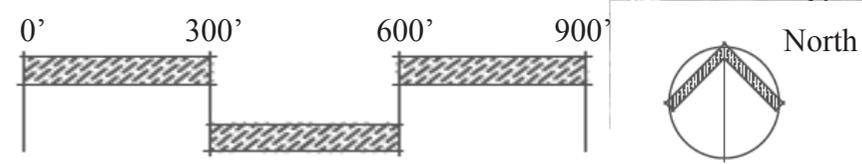
(97,704 cubic feet in one hour)

Total area of Stormwater Infiltration Garden: 26,634 square feet
 • 26,634 square feet x 3-foot depth = 79,902 cubic feet

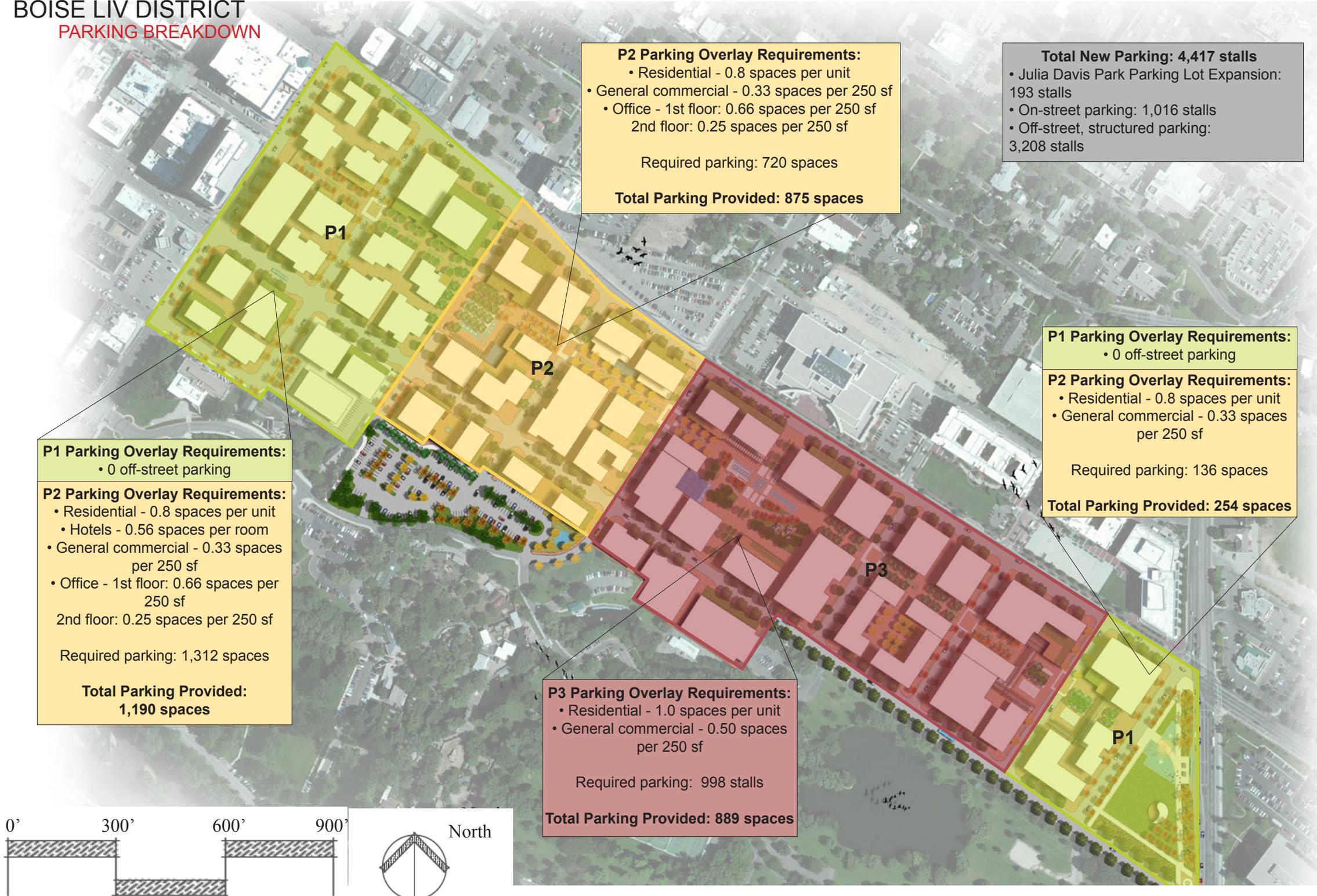
This design can handle a 25-year, 2-hour storm for 49 minutes without releasing any water into the stormwater drain system.

Total Green Roofs: 130,563 sf

Total Stormwater Infiltration Gardens: 26,634 sf



BOISE LIV DISTRICT
PARKING BREAKDOWN



P2 Parking Overlay Requirements:

- Residential - 0.8 spaces per unit
- General commercial - 0.33 spaces per 250 sf
- Office - 1st floor: 0.66 spaces per 250 sf
 2nd floor: 0.25 spaces per 250 sf

Required parking: 720 spaces

Total Parking Provided: 875 spaces

Total New Parking: 4,417 stalls

- Julia Davis Park Parking Lot Expansion: 193 stalls
- On-street parking: 1,016 stalls
- Off-street, structured parking: 3,208 stalls

P1 Parking Overlay Requirements:

- 0 off-street parking

P2 Parking Overlay Requirements:

- Residential - 0.8 spaces per unit
- General commercial - 0.33 spaces per 250 sf

Required parking: 136 spaces

Total Parking Provided: 254 spaces

P1 Parking Overlay Requirements:

- 0 off-street parking

P2 Parking Overlay Requirements:

- Residential - 0.8 spaces per unit
- Hotels - 0.56 spaces per room
- General commercial - 0.33 spaces per 250 sf
- Office - 1st floor: 0.66 spaces per 250 sf
 2nd floor: 0.25 spaces per 250 sf

Required parking: 1,312 spaces

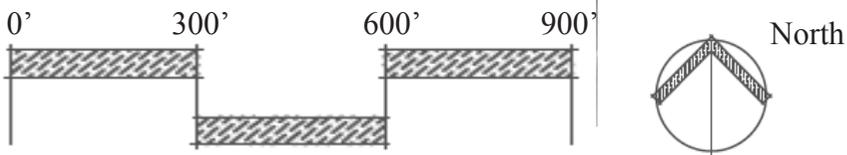
Total Parking Provided: 1,190 spaces

P3 Parking Overlay Requirements:

- Residential - 1.0 spaces per unit
- General commercial - 0.50 spaces per 250 sf

Required parking: 998 stalls

Total Parking Provided: 889 spaces



BOISE LIV DISTRICT BUILD-OUT PHASING

Phasing is an important element of the Boise LIV District design. To ensure that this design meets the needs of the city of Boise while meeting the desires of developers and the current state of the Central Addition, three build-out phases were established. In Phase One, dilapidated buildings will be demolished with an effort to preserve and reuse materials on site and will be redeveloped along with vacant lots. Phase two and three will see the redevelopment of buildings that are at the end of their life span. The typical life span of a grocery store or commercial building is typically around 40-50 years, once buildings reach their life span, they will be replaced with mixed-use developments that support the planning goals of the city of Boise.



Conclusions

This project is set up with several major phases that help refine the goals, objectives and program of the Boise LIV District. The research section of this project reveal that a well designed district consists of edges, landmarks, pathways, and nodes. A good network of paths and community space increase the potential for human interaction and community development. Streets should be playful, inviting, and enjoyable for all age groups and income levels. An urban neighborhood should be dense, diverse, and designed to the human scale. Any public space should have plenty of seating and needs to be safe and secure. A walkable, pedestrian-oriented downtown adds to the vibrancy and livability of downtown. A district should have a mix of uses and a variety of housing types. Choosing literature from a different time periods was an excellent way to compare and contrast human values over time. The emphasis of creating a pedestrian-oriented design was discussed in both older literature written by Lynch, Jacobs, and Whyte as well as newer texts like the Urban Design Handbook.

All of the lessons learned from the research are supported by the case studies that confirm the importance of planning for a mixture of residential, commercial, and office use. Providing an excellent network of pedestrian walkways, public spaces, and pedestrian-oriented streetscapes create an inviting, livable downtown atmosphere.

The goal of the Boise LIV District is to create an adaptive and lasting public realm, use an efficient and innovative design approach, and create a pedestrian-oriented public realm that meets the broadest range of needs while implementing the lessons learned from research, case students, and precedent studies.

The final design for the Boise LIV District public realm establishes a strong mixed-use building scheme with a clear network of pathways and vehicular circulation. The pedestrian corridor, that would replace what is now Broad Street, would enhance the livability and vibrancy of the District while providing a clear connection to Boise Downtown (BODO), the Basque District, and the Historic Business District. A large network of stormwater infiltration gardens would collect stormwater runoff from the impervious surfaces, putting less stress on the Boise River and downstream bodies of water. The gardens would add to the aesthetics and sustainability of the District. Gateway Park would act as an entrance to downtown as people cross over Broadway Bridge. It would also be the eastern terminus of the Boise LIV District. The introduction of green roofs in the District would provide a flexible space for either urban agriculture or a private space for residents. The network of tree canopies would create a habitat for birds and provide shade for people on the streets and along the pedestrian corridor. This design achieved all the selected goals, objectives, and programming elements.

Axonometric

