

6.0 MASTER PLAN

6.1 Vision Statement

There are always planning and building antecedents. We don't start from zero. And there's inevitably a relationship between where we were, where we are, and where we're going. The essential question for the Rails Yards site is how architecture might communicate both an acknowledgement of precedents -- salient built pieces of history -- and simultaneously push forward toward very different purposes, new and adaptively reused buildings, suggesting new directions for the city of Albuquerque's future.

Knowing where we've been makes the story of where we're going more legible, more intelligible. At the Rail Yards site, Albuquerque's built record is largely intact. But historic structures like the Boiler Shop, Machine Shop, Tank Shop, and Flue Shop, though the buildings are extant, no longer fill their original functions. Those functions now belong to Albuquerque's pedigree. They have for a while. The Master Plan objective is to acknowledge that pedigree -- the trains, the story of the opening of the American southwest with new transportation, new machines, new energy, and new opportunities for those who came.

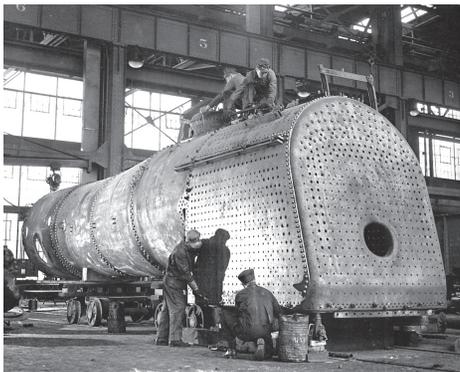
The Master Plan celebrates the facilities that made the trains and made them run.

How does a Master Plan manage that celebration?

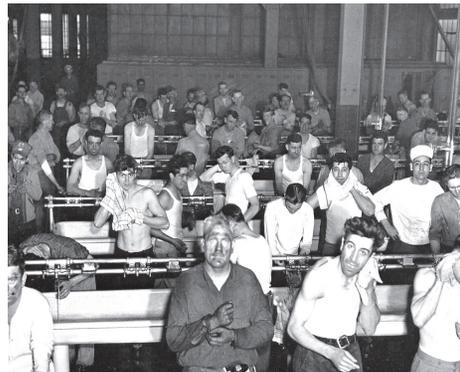
Not by simply reconstituting those historic buildings [though there's a role for this] whose uses have passed into history, but by giving those buildings a new, vital life, a new role in the burgeoning, evolving community that surrounds the site, and more broadly, an up-dated contemporary definition for urban life in the center of Albuquerque in the first quarter of the 21st century.

How do we acknowledge an old life, and simultaneously forecast a new one? We call our Master Planning strategy for the Albuquerque Rails Yards site "Recollecting Forward."

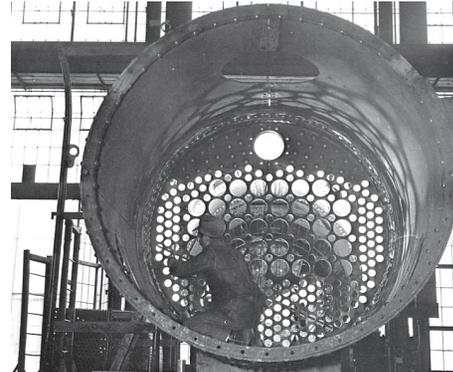
What the new plan retains in its entirety is the enduring spirit of the rail yards, the energy, the optimism, and the reconstituted exteriors of the primary buildings on the site. We rebuild the missing roundhouse, complete the original organizational logic of the site, but assign new uses, new public and private purposes to both old and new buildings. So what's the roundhouse? Is it the original building? Not quite. Is it a new building? Perhaps, but its plan form re-iterates that of the original structure. The Master Plan intends a hybridization of old and new without insisting on a clear distinction between the two.



JOBS



COMMUNITY



ART



ARCHITECTURE

In summary, the primary goal of the Master Plan section of the MDP document is to provide strategies for an organization of the Rail Yards site that will engender a vibrant, cohesive and viable community of mixed users sharing a common vision. The existing structures to be preserved and adaptively reused are the primary and dominant elements of the site; however they are not sufficient to accommodate the myriad uses identified in the Goals & Policies Section and confirmed through the public comment process. New structures and improvements are required to make the site viable for development. The Master Plan proposes guidelines for the design and integration of such structures so that they both complement the historic structures and provide a unified architectural language across the site.

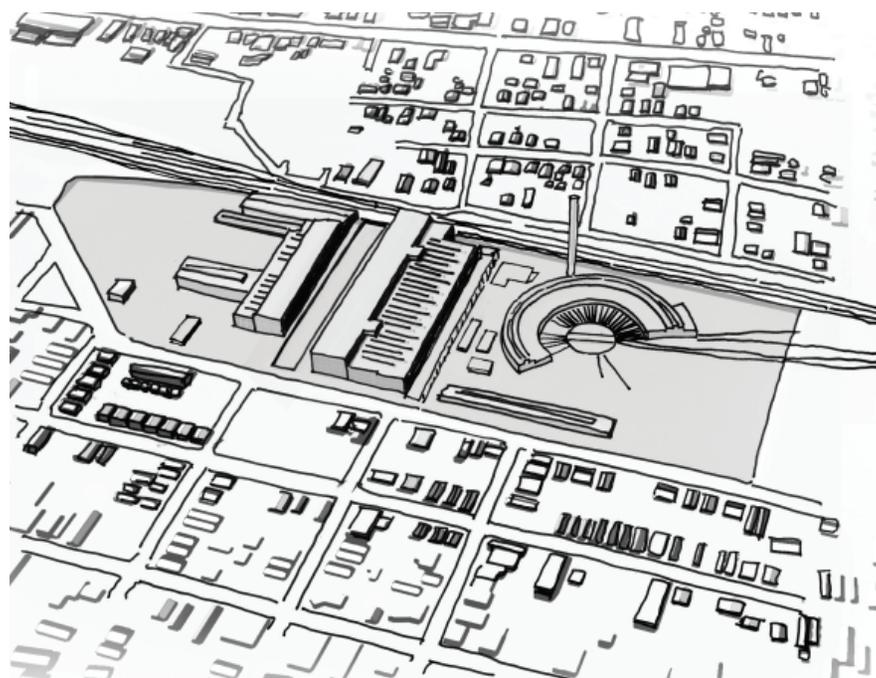
The intention of the Master Plan is to preserve the “integrity” of the site and reinvent the “spirit” of the Rail Yards for a modern age. The intention is to “Recollect Forward.”

To achieve these aspirations, the Master Plan itself must be a living, working document that is built with sufficient flexibility to accommodate an evolving and unknown future set of conditions. The concepts, recommendations and design features that follow should be understood in this context.

Refer to Section 10.5 for a description on the process for amendments or deviations to the MDP.



RAIL YARDS, AERIAL PHOTO OF CURRENT SITE CONDITIONS



RAIL YARDS, DIAGRAM MASSING OF KEY HISTORIC RESOURCES

6.2 Historic Preservation & Adaptive Reuse

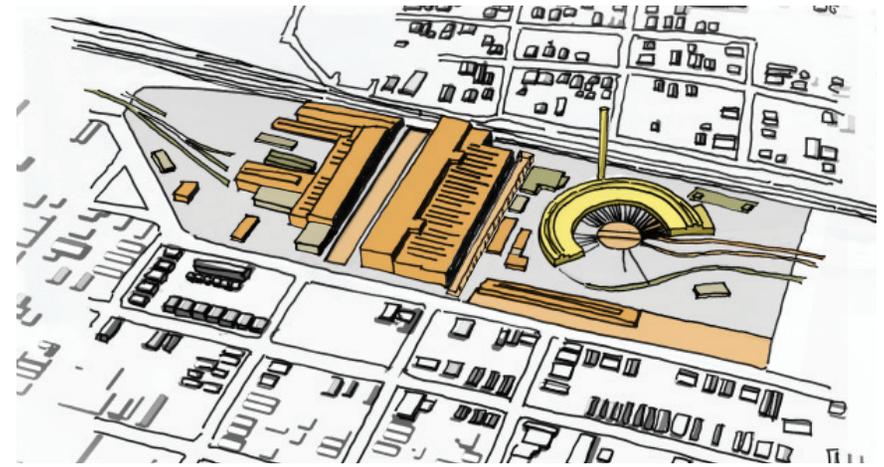
The objective of this section is to assist in considering levels of preservation within the Albuquerque historic Rail Yards complex based on “Albuquerque Rail Yards Preservation Recommendations” study, prepared by Solar Architects.

Preservation criteria and considerations are based on the understanding of cultural significance and the cultural values of a property. In the case of the Albuquerque Rail Yards, it should be looked at first as part of the train system in the United States, contributing to the development and creation of the country. There is no doubt that the combined “Missouri Pacific-Atchison, Topeka, & Santa Fe-Atlantic Pacific” line was one of those early 5-train communication lines which made the creation of the United State of America possible. The Albuquerque Rail Yards are an important element within that whole line, and one of its cultural values derives from this fact. This criterion puts the Rail Yards at a national level of significance, and possibly at a state level as well (based on the role the train and the Rail Yards had in the development and history of New Mexico).

The Master Plan suggests the preservation of most of the built components of the complex; the re-construction of some important ones which have been demolished and which are crucial to the understanding of the place; adaptive re-use of the buildings; the addition of modern facilities and the creation of cultural venues to serve the public, for optimal use of the place; landscaping; and other features.

Recommendations for preservation consist of the listing and grading of built elements on the site according to their cultural significance following the traditional conservation evaluation methodology.

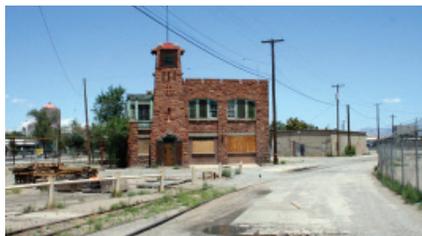
In structuring this grading, categories which are used are internationally recognized among members of the historic preservation profession. The names of these categories and their definitions are as follows:



6.2.1 Preserve and Adaptively Reuse

Keep, consolidate, renovate, maintain – and reuse. It could be just the “envelope” (outside wall), or could include interiors, parts or whole, including windows, doors, fixtures, etc. On the site, elements of the highest cultural significance that must be PRESERVED are listed as below (refer to map page 52- 53):

- Fire Station (#1 on Map). The only building on the site officially recognized as an Historic Structure by the City of Albuquerque.
- Machine Shop (#2 on Map)
- Bridge Crane (#3 on the Map)
- Boiler Shop (#4 on Map)



FIREHOUSE



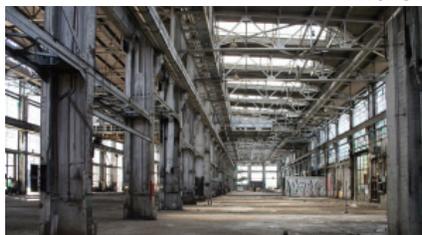
STOREHOUSE



TANK SHOP



TURNTABLE



BOILER SHOP



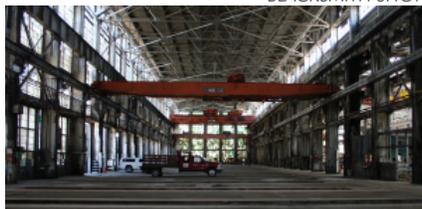
BRIDGE CRANE



BLACKSMITH SHOP



FLUE SHOP



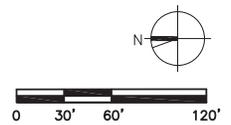
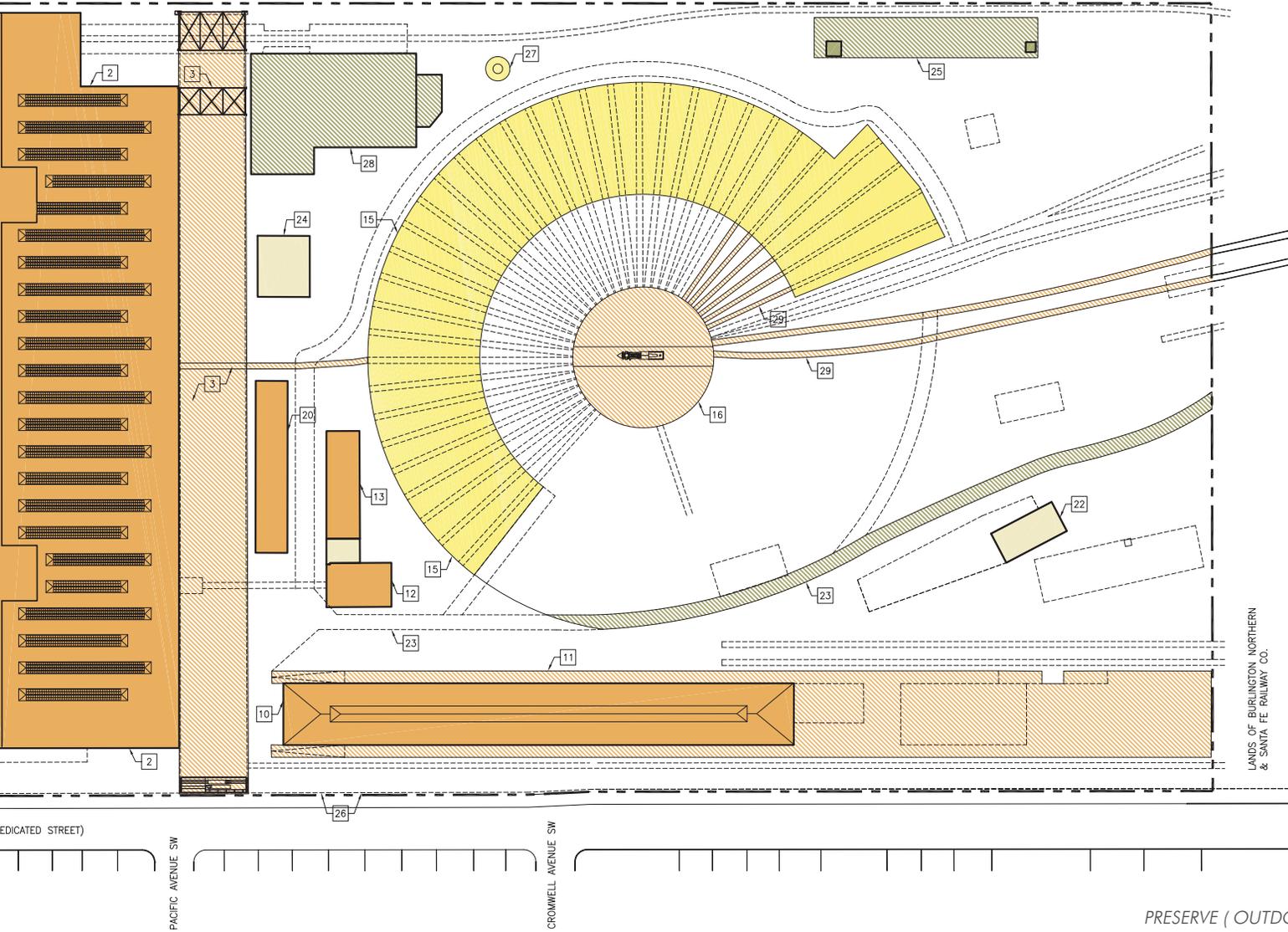
MACHINE SHOP



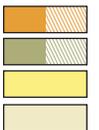
TRANSFER TABLE

- Tank Shop/ Tender Repair Shop (#5 on Map)
- Flue Shop (#6 on the Map)
- Blacksmith Shop (#9 on Map)
- Storehouse (#10 on Map)
- Platform (#11 on Map). The only real platform still existing on the site, therefore representing all platforms, and being a characteristic element of all train stations and rail yards. Since it is a simple concrete slab, which might cause difficulties during the development of the site, it is suggested that it could be dismantled and rebuilt later (at least in part, not necessarily the whole slab), after completion of the work – and partially undergrounded. (In any case it will have to be thoroughly documented prior to any changes being made).
- Transfer Table (#14 on the Map)
- Turntable (#16 on Map), which is still functioning, attractive, and a very important element in every main train station and rail yard. In addition, it is still in use by the BNSF Railroad.
- Significant Train Tracks (#29 and elsewhere on the Map). Although there is nothing special about train tracks, on the contrary, a rail yard *without* tracks would look strange; they are an important visual and technical element. A selection of the most significant Train Tracks should be PRESERVED on-site (some of those leading from the south to and from the Turntable and Round House, and connecting them with the workshops). Other Train Tracks that also demonstrate the use of the site could potentially be PRESENTED,

COMMERCIAL STREET SE



PRESERVE (OUTDOOR ELEMENT SHOWN HATCHED)
 PRESENT (OUTDOOR ELEMENT SHOWN HATCHED)
 RECONSTRUCT
 REMOVE



while a large portion of Tracks could be REMOVED.

- Babbit Shop (#12 on the Map) and Welding Shop (#13 on the Map). These are two modest and small structures, used as different kinds of workshops. They were later connected with each other (the connecting structural element is suggested to be demolished, i.e. REMOVED). The two Shops' PRESERVATION is suggested as representatives of the different types of activities that took place at the Rail Yards, and not just in the large, main buildings. Although their PRESERVATION might present a visual or functional obstacle to the new Master Development Plan, I believe that these buildings should be PRESERVED.
- South Washroom (#20 on the Map). Based on technical observations (construction materials, style, etc) latrines and wardrobes appear not to have been part of the original Master Plan – although their absence must have been recognized almost immediately. However, given that a large worksite cannot function without them, they contribute to the story of the site. It is recommended that the South Washroom be PRESERVED whereas the North Washroom (#19) be REMOVED (see section 6.2.4).
- Waste & Paint Room (#21 on the Map). This small building could be PRESERVED and/or PRESENTED (partially or completely, and even if with significant modifications) within the proposed development. Greater latitude is afforded due to its prior function as a storage building rather than a “workshop” building.
- “Pissoires” (not indicated on the Map). We also recommend the PRESERVATION of at least one bank of the very unusual metal urinals, since they were especially designed for the site, and represent a human aspect of the place.

- Infrastructure Elements (not indicated on the Map). Since rail yards are not simply architectural heritage, but rather infrastructure and Industrial Age heritage –the architectural elements are not the only ones to be PRESERVED and PRESENTED, as opposed to REMOVED. Therefore, at a phase beyond the new Master Development Plan, we recommend the PRESERVATION of some of the Infrastructure Elements, such as pipes and cables, along with the structural materials carrying them. Such Infrastructure Elements, together with Tracks, connect all the built components, and were the “blood system” of the entire place.

6.2.2 Present

Being an important part of the story, but the element has been removed, or is planned to be removed, for various reasons. Its “presentation” on-site can be through a sign, paved or marked footprint, photo and explanation on a wall, etc.

On the site, there are elements of relatively high historic value (for the understanding of the functioning of the site), but either in a very poor state of preservation, or already REMOVED; or else being a later addition that is hiding more important parts of the complex, and therefore should be REMOVED. Such structures which as listed below are suggested for PRESENTATION.

- Sheet Metal House (#17 on the Map). interesting, important but technically impossible to PRESERVE. This wooden shed (Used for storage of metal sheets, and moving them mechanically to their work stations) the important elements are the moving mechanism, and not the structure – which was quite poorly constructed originally, and is one of the worst visual obstacles in the complex.
- Fire Runway (#23 on the Map).

- Water Reservoir (#25 on the Map). This underground storage space and water reservoir is historically significant, being the only source of water on the site. It is therefore suggested for PRESENTATION as a concrete platform, possibly underground.
- Original Power House (#28 on the Map). Although the original structure was previously demolished, due to its functional importance and connection with the proposed RECONSTRUCTED Smokestack (Ref. to Category #3) it is suggested that it be PRESENTED, by its footprint, on the original location (even if completely or partially underground).

6.2.3 Reconstruction

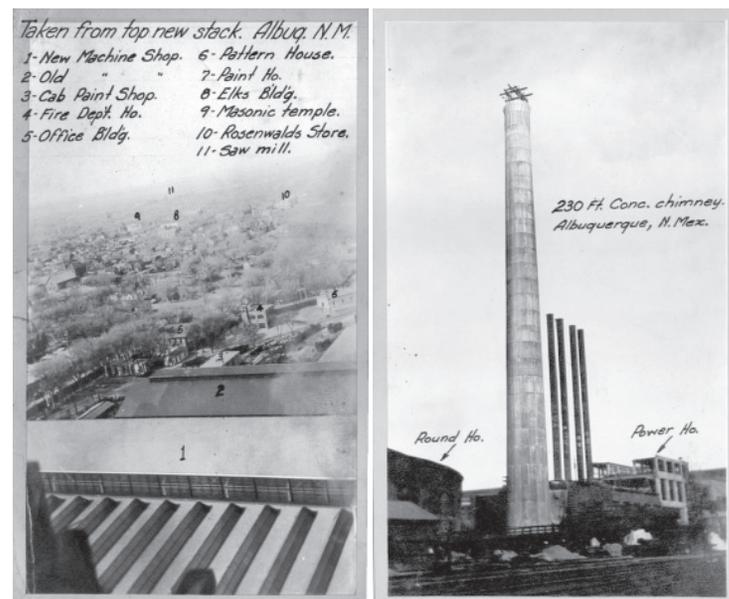
Rebuild a no longer existing element because of its importance to the understanding of the history of the site, or for another reason. The reconstruction will be on the original footprint, will have some volume, but will not pretend to be scientifically identical with the original structure (it is a symbolic reconstruction). Refer to Figure 5 on the following page.

On the site, there are elements of very high cultural value and significance, without which the functioning of the place cannot be understood; and/or the element's contribution is important to the integrity of the site. These structures were demolished, but have good documentation and sufficient remains on the site to allow for a certain kind of RECONSTRUCTION, while permitting modern interpretation. Such structures are listed below as :

- Roundhouse (#15 on the Map). The Roundhouse was one of the most important, impressive, and visually strong structures on the site. It was demolished mainly due to maintenance and safety issues, when the Rail Yards were abandoned. The reinstatement of its physical existence on the site is very important, and this is why it is suggested for RECONSTRUCTION (it footprint, shape, and volumetric space – not a replication of the original).



RAIL YARDS, HISTORIC ROUNDHOUSE AND SMOKESTACK



View from atop SMOKESTACK

SMOKESTACK

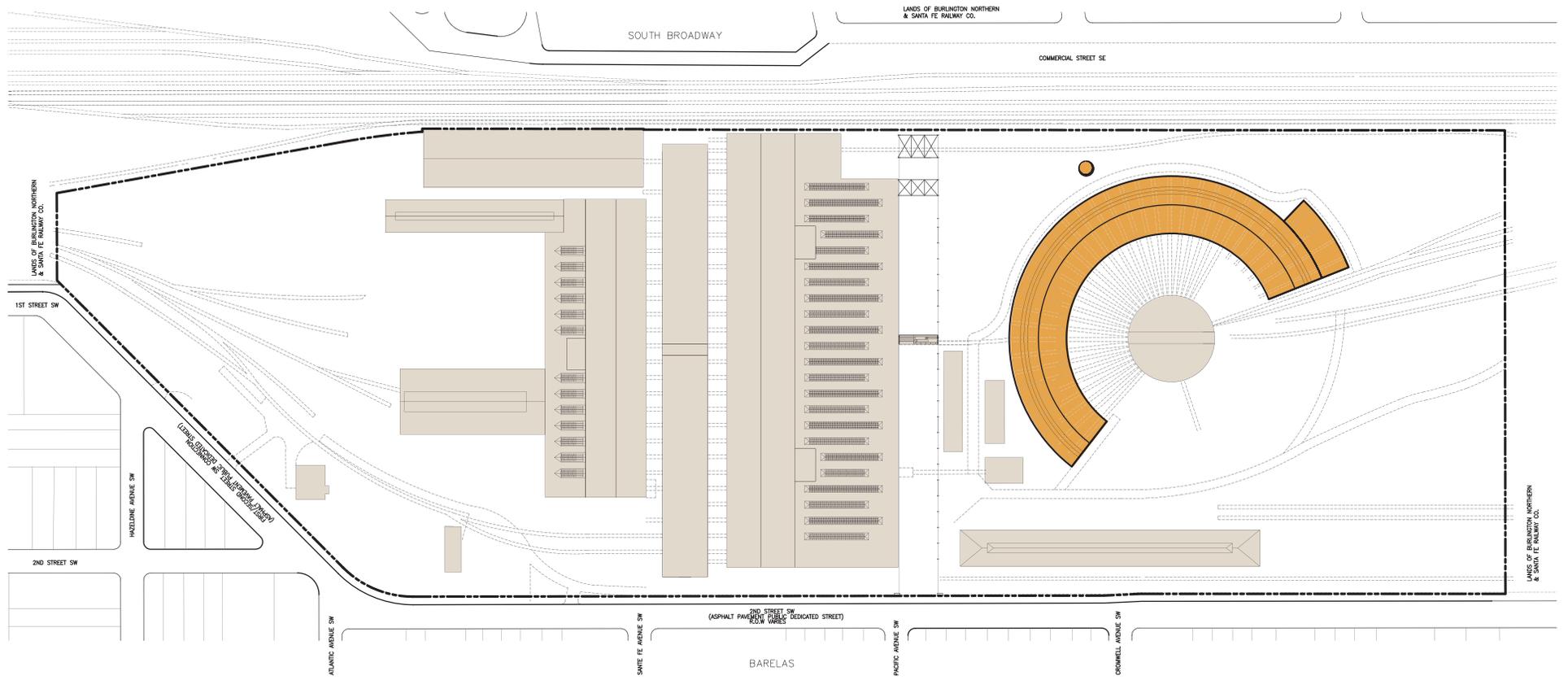
- Smokestack (#27 on the Map). The Smokestack was seen from quite a distance and became an iconic symbol of the site. Its reconstruction should mainly represent the idea of a high, vertical element, rather than accurate replication. The Smokestack was part of the Original Power House (Ref. to Category # 2).

6.2.4 Remove

Remove, leaving no physical trace. This applies to a structure or other element with no high cultural value, nor important or especially interesting role in the story of the site. Sometimes this is a later addition to the site, obscuring and blocking the view of a much more important structure.

On the site, there are elements of low cultural value, and/or low contribution to the integrity and presentation of the site that should be REMOVED. At times these insignificant attributes are also combined with being visually obtrusive – if they are later additions to the site – and therefore can represent an obstacle to the redevelopment of the site as a whole. Such Structures as listed below are:

- Canopy (#7 on the Map). Originally an open structure, consisting of concrete roof supported by several columns. The obvious and extreme conflict in style and quality between this structure and the building to which it was attached, indicates an after-thought. The decision to block the view of the most impressive façade on the site with a low quality add-on, could not have been part of the general design phase. The Canopy functioned as the place to test the locomotives, and was later altered by adding partition walls, to become a paint shop. Its REMOVAL, with its PRESENTATION, will contribute significantly to the visibility of the much more important structure behind it (the Boiler Shop), which used to be in clear view of the Barelás neighborhood to the west – and could be again.
- Cab Paint Shop/converted to CWE Shops office (#8 on the Map). This structure is of no cultural significance whatsoever, and at the same time covers the long (western) façade of one of the important and impressive structures (the Tank Shop/ Tender Repair Shop).
- Pattern House (#18 on the Map). Auxiliary and isolated concrete storage building of low significance.
- North Washroom (#19 on the Map). If the South Washroom (#20) is preserved, the North Washroom is recommended to be removed as it is the inferior specimen and is in need of major structural repairs.
- Motor Car Garage (#22 on the Map). A small workshop structure, with adjacent platform. If #12, 13, and 21 (see above) are PRESERVED, this structure loses its significance and may be REMOVED, especially considering its isolated position within the center of the largest vacant development parcel.
- Power House (#24 on the Map). This modern structure replaced the Original Power House which was demolished. It has no cultural significance. (See recommendation for the PRESENTATION of the Original Power House).



REBUILD ICONIC STRUCTURES 

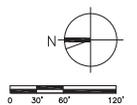


Figure 5: Rebuild Iconic Structures Diagram

6.3 Design Features

Whereas the preceding section addressed recommendations regarding the existing site resources, Section 6.3 provides design concepts and recommendations for new infill development. The following concepts and diagrammatic sketches represent basic ideas about how to organize the site rather than specific architectural solutions per se. Likewise, images from other locales are used to convey a design *sensibility* rather than a literal design response.

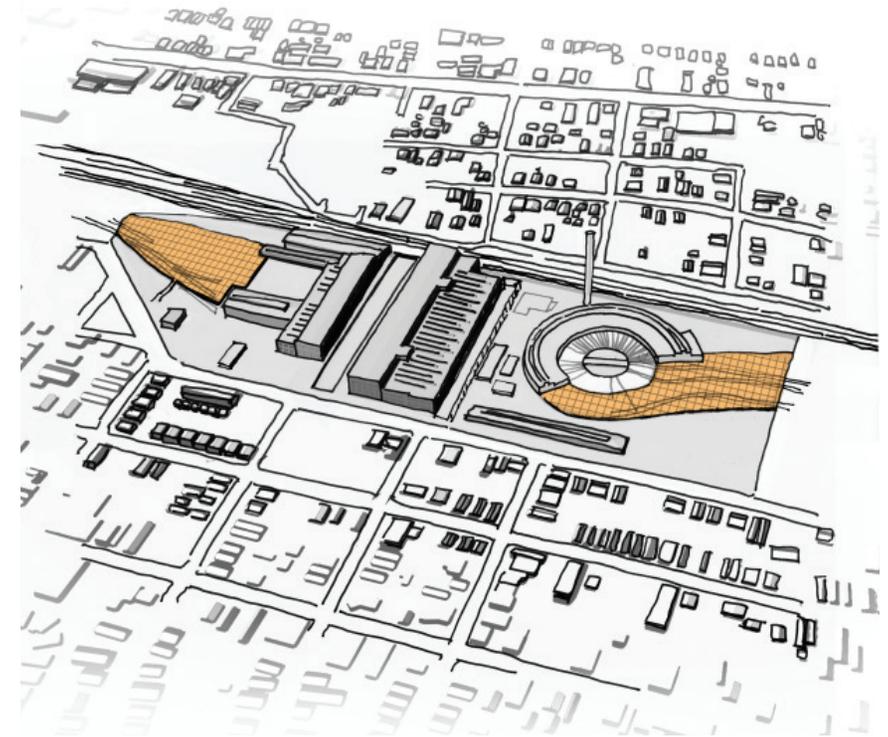
6.3.1 Paseo

Concept: The Rail Yards should be unified into a cohesive and interconnected whole.

The Paseo is the tissue that unifies the site plan, and integrates the Rail Yards with the city. It is the primary planning component for the new Rail Yards project.

The Paseo is a concept for infill development. It is a low, single volume, building, ~14ft in height, with a flat roof that doubles as a public plaza. There are 2 Paseo buildings proposed; North and South, located on the only large areas available for development that do not impact any historic resources recommended for Preservation. Due to their low profile, the Paseo buildings allow for additional buildable area to be created without impacting views to and from the historic structures; they are auxiliary buildings that will increase the technical functionality of the site that might otherwise be limited by use of the historic structures alone. The plan shape of the Paseo buildings is determined by using historic rail lines or fire road. Public access to the Paseo roof decks would be provided via generous stairways and landscaped mounds along 1st/2nd street sidewalks.

The Paseo's conceptual purpose is to inter-connect events and event options on the site, to link existing buildings with new buildings, to



PASEO

NOTE: ALL DIAGRAMS ARE CONCEPTUAL



Piazza del Campo, Siena, Italy



Las Ramblas, Barcelona, Spain

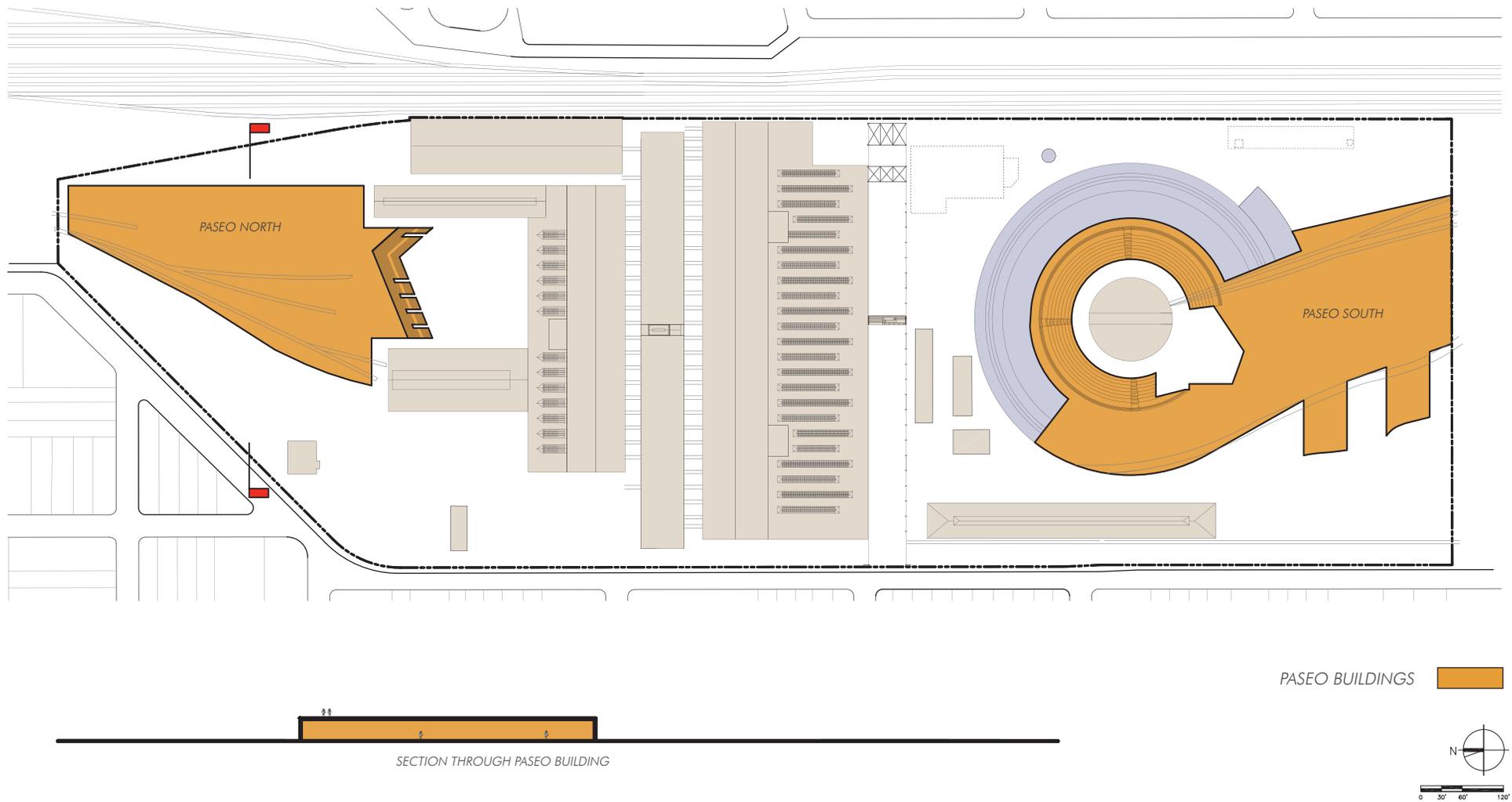


Figure 6: Conceptual Paseo Building Diagram

facilitate pedestrian movement north/south and east/west on the site and to encourage pedestrian engagement of the myriad new opportunities the Rail Yards Project will provide.

6.3.2 Subterranean Parking

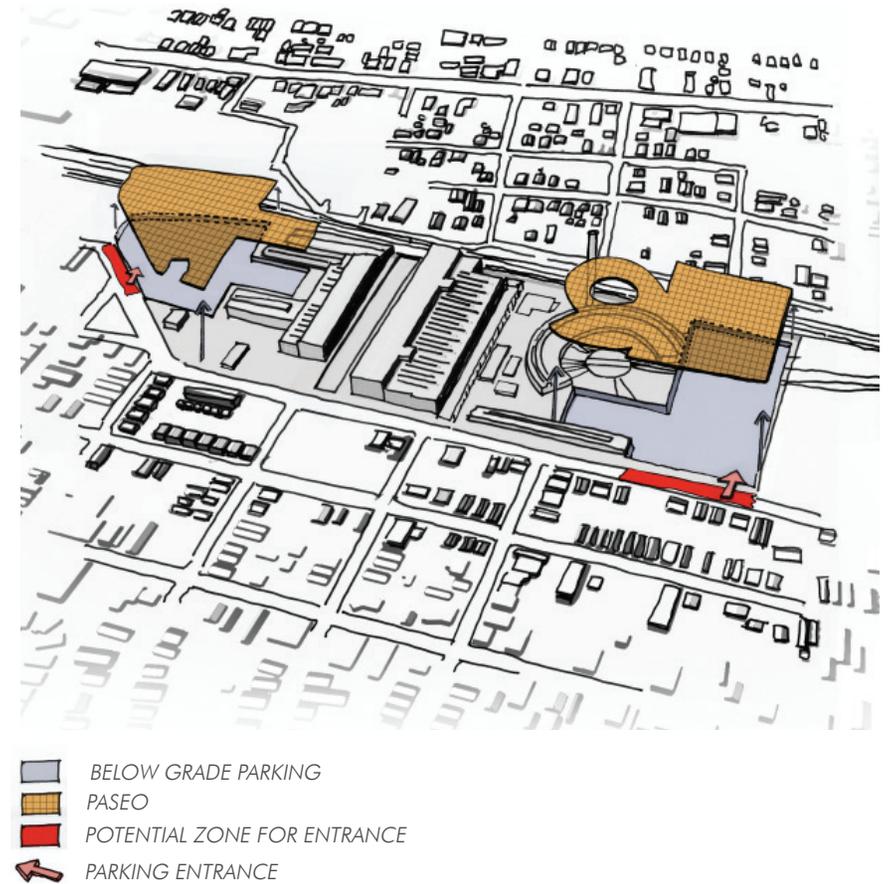
Concept: The Rail Yards should be free of visible parking.

The Paseo concept and the subterranean parking concept go hand in hand. Given the historic nature of the site, visible surface parking should be avoided and instead should be contained in a below grade structure.

Given the increased cost of subterranean parking and the relative high water table, a one-level only structure is proposed which will result in a site that will be considered underparked by current City parking standards. The provision of parking for the Rail Yards site, however, must seek a balance between satisfying market needs on the one hand and minimizing traffic impacts on the other. Deficiencies in on-site parking should be mitigated by use and encouragement of alternative means of transportation.

The Rail Yards Master Plan addresses this issue by locating subterranean parking at the North and South ends of the site immediately below the proposed Paseo buildings, leaving the center portion of the site focused on pedestrian, bicycle and transit access. As stated in 6.3.1, the paseo buildings are located on the only 2 portions of the site that have open areas sufficient to construct an efficient parking garage. Building the parking garage and the Paseo buildings together will result in an economy of cost and schedule.

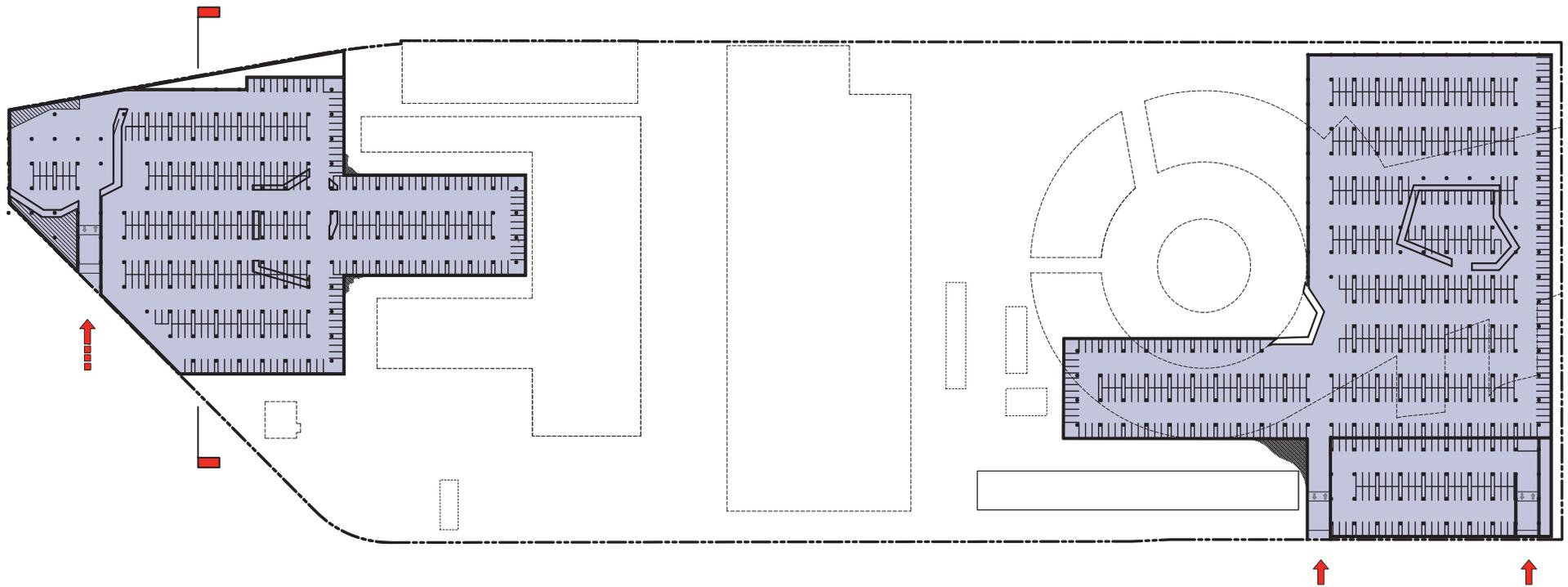
The specific location for vehicular ingress/egress to the parking structures should be determined by the ultimate configuration of the Paseo Buildings and the use requirements thereof. Access points should be adequately spaced in order to allow proper vehicle queuing and to minimize traffic impacts to the Barelmas residential community immediately to the West.



Historic Rail Yards Entrance



Rail Yards Entrance Today



NOTE: REFER TO SECTION 10, TABLEAU 8 - PRELIMINARY PHASE PARKING PLAN, FOR EARLIER PHASE PARKING CONCEPT.



BELOW GRADE PARKING
VEHICLE ACCESS

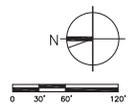


Figure 7: Conceptual Below Grade Parking Diagram

6.3.3 Acoustic Mounds

Concept: The Rail Yards should have an inviting edge that balances the needs of future users with that of the neighboring communities.

The Acoustic Mounds is one possible concept for how to treat the edges of the Rail Yards site. The Historic edge was once bounded by a wooden fence that limited site access to Rail Yards employees and visitors only. By contrast, the Master Plan intends the site grounds to be completely open for public access; however, there remains a need for limited visual and acoustic privacy between potentially disparate and incompatible uses.

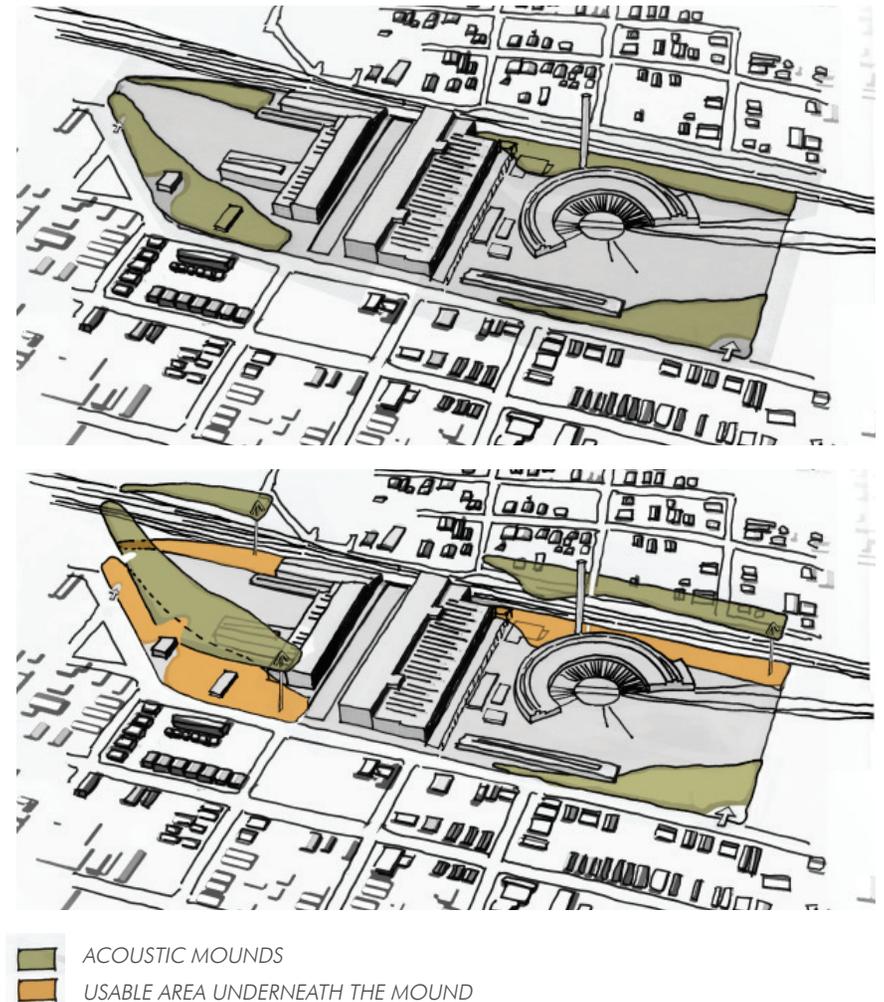
The Acoustic Mounds provide a flexible, 'soft' edge that can be sculpted to achieve desired levels of privacy without creating the effect of a barrier and without impacting views to and from the site.

The Mounds unify the site by use of a common visual language (earthwork, landscape) that does not belong to a 'style' of architecture that might conflict with the historic vocabulary of the buildings.

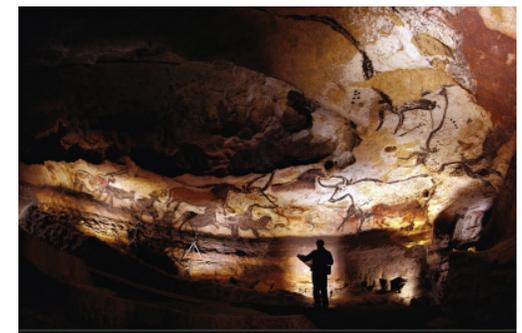
The Mounds are publicly accessible; they can be walked on, sat upon, hollowed out and inhabited for both public uses (eg. retail) and infrastructural uses (eg. screening of mechanical equipment).

The Mounds are positioned just inside the east and west property lines of the site, and run essentially north/south, ascending on the west from the sidewalk perimeter and on the east from the retaining wall adjacent the active rail lines to the Mounds' apex, then down to tree-lined pedestrian walks (Meandering Walk) running north/south at grade, roughly parallelling the Mounds.

By virtue of their shape and positioning, the Mounds organize the nearly half mile long frontage of the Rail Yards site by providing directed points of entry and egress.



Etowah Mounds, Dahlonega, GA



Lascaux Caves, Dordogne Valley, France

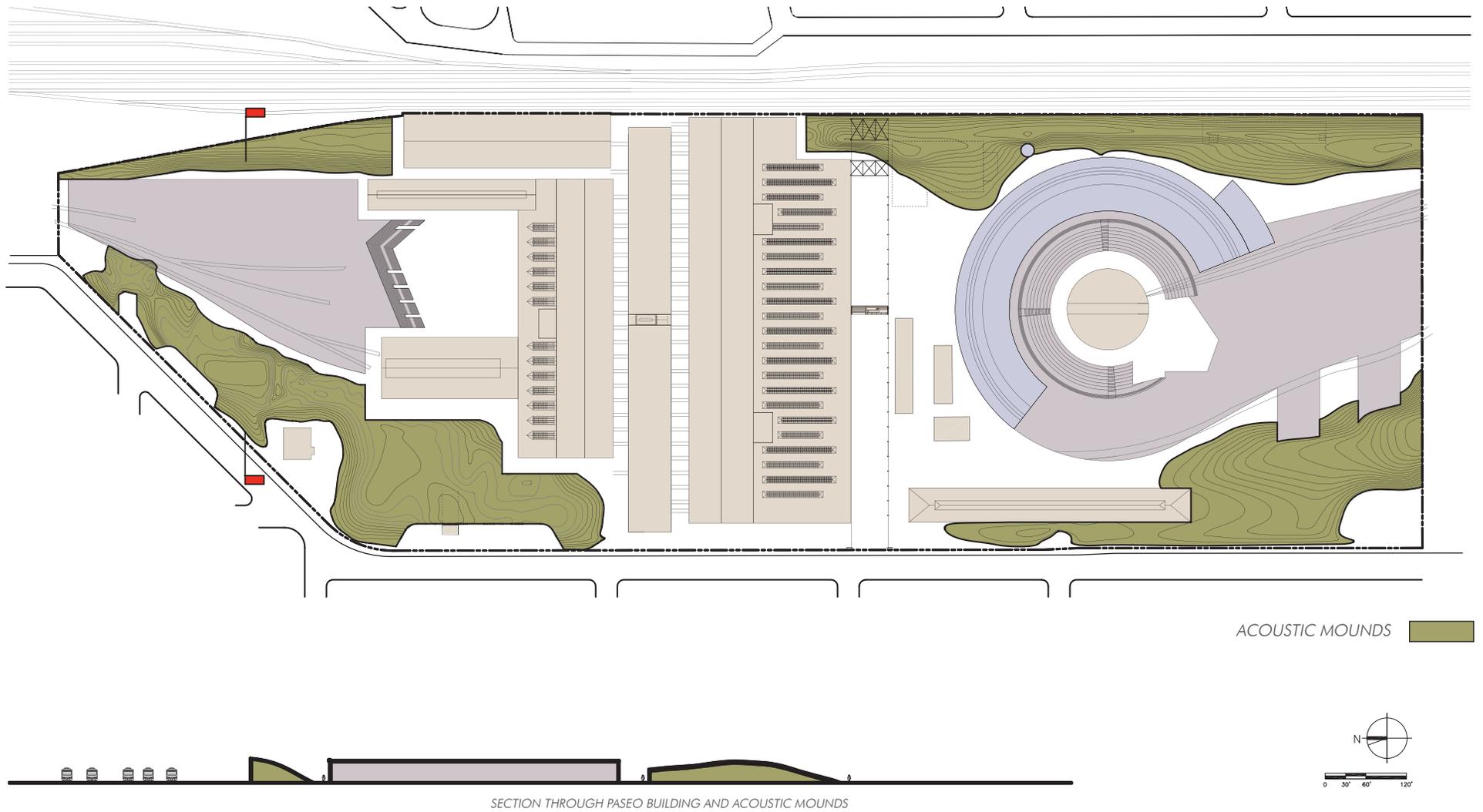


Figure 8: Conceptual Acoustic Mounds Diagram

6.3.4 Connectors

Concept: The Rail Yards should be stitched into the fabric of the community.

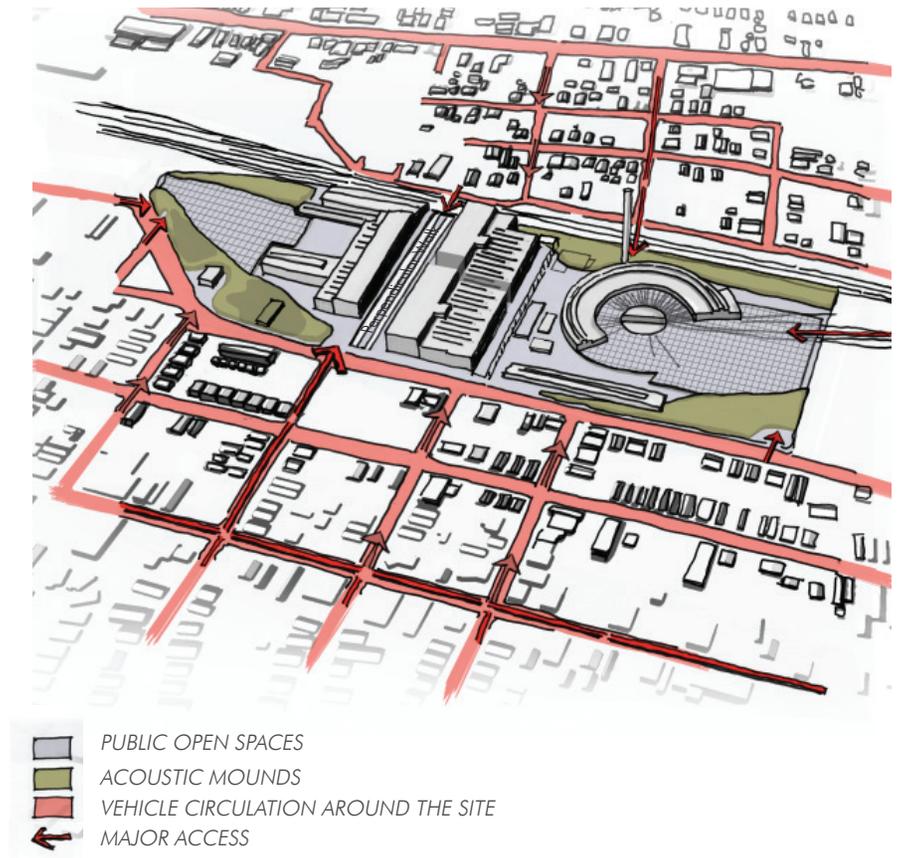
Primary points of access are located by extending the existing City street grid onto the project site. At each location where east/west running streets terminate along the project north/south boundary, a Connector is created. The Connector takes many forms depending on the specific site condition, as follows:

The Perpendicular Walk is the primary east-west Connector that extends Santa Fe Avenue onto and through the Rail Yards site, adjacent the historic Transfer Table, and on into the South Broadway neighborhood via a proposed pedestrian bridge over the active rail lines. Conversely, the Santa Fe extension also provides a pedestrian connection west, from South Broadway through the site to historic Route 66 along 4th street in the Barelmas neighborhood. The Perpendicular Walk provides an operational synopsis of the area's history; trains, rail yards, cars, diverse sociologies; unified along a single axis. It is the conceptual heart of the project.

The proposed Transit Plaza is a north-south Connector that runs between Santa Fe and Pacific Avenues along the western edge of the site fronting the Machine Shop.

The Fire House Plaza is a Connector created at the intersection of Atlantic Avenue and 2nd Street that provides Public Open space surrounding the historic Fire House building. This Connector is likely to increase in size due to the abandonment of 1st Street between Atlantic and Hazeldine Avenues.

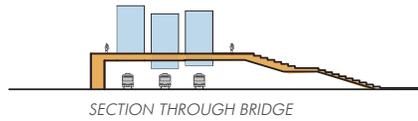
The proposed Cromwell Avenue at-grade pedestrian rail crossing is a second Connector for the South Broadway community that will align with the proposed rebuilt Smokestack and connect to the rebuilt Round House.



Spanish Steps, Rome, Italy



Ponte Vecchio, Florence, Italy



SOUTH BROADWAY

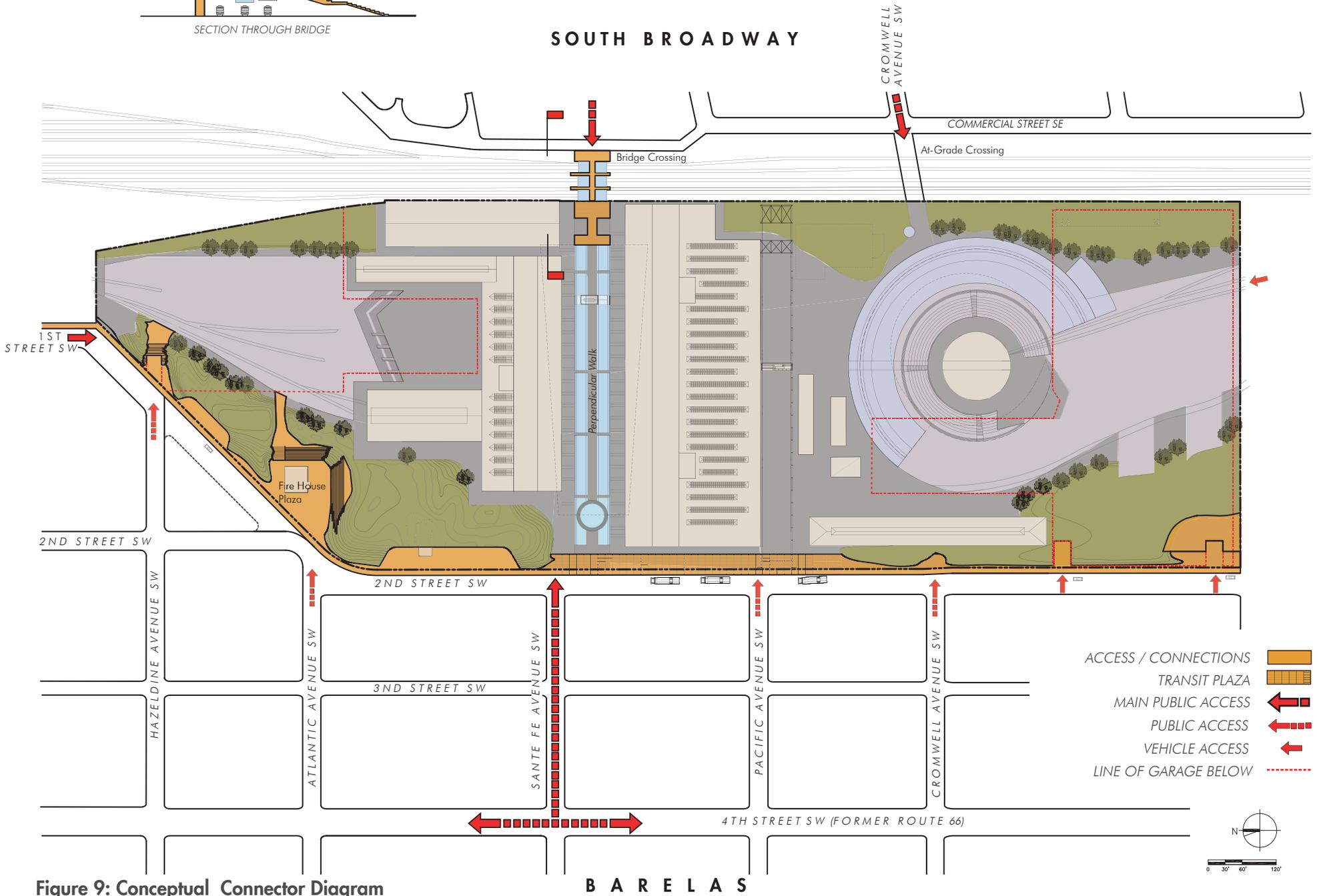


Figure 9: Conceptual Connector Diagram

B A R E L A S

6.3.5 Public Open Space

Concept: The Rail Yards shall provide ample and varied opportunities for public open space.

The Master Plan provides for a significant amount of public open space in a variety of different spatial configurations; broad and open public paseos, tree-lined meandering paths, vertical courtyards, long pedestrian promenades, circular amphitheater, etc. The concept is to offer different ways of interacting with the site that yields flexibility in public programming.

Visitors should be able to traverse the site freely in order to view the various historic structures and understand their original purposes and interrelationship.

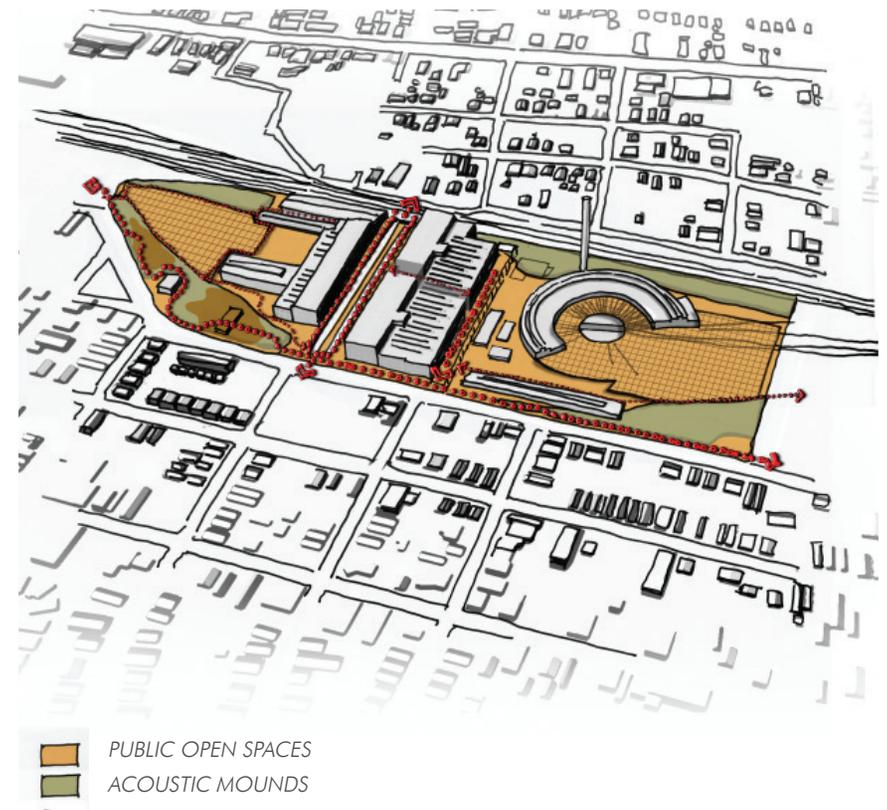
Public spaces are connected by two North-South walks; the Edge Walk that follows along the 1st and 2nd street sidewalk and the tree-lined Meandering Walk that follows the space created between the Paseo Building and Acoustic Mound.

In addition to the Paseo and Perpendicular Walk spaces previously referenced, additional public spaces are as follows;

Quadrangle: A new event space formed by the conjunction of the Flue Shop on the east, the Boiler Shop on the south and the Tank Shop on the west with the new Paseo on the north. The Quad opens to the Paseo and center city with a large public stair/seating which descends south from the Paseo Level to the Quad floor.

Machine Shop Plaza: Extending south from the Machine Shop and useable for exhibits and/or open air markets. The current plan proposes to re-use the Bridge Crane apparatus attached to a steel frame that extends across the south elevation of the building. The crane and steel frame support a retractable Glass Canopy.

Turntable Amphitheater: South of the Machine Shop, the new Roundhouse intersects with Paseo South to form an enclosed and partly covered performance courtyard, with ramps and stairs to the public Amphitheater seating and Turntable stage area.



Bosque, Albuquerque, NM



Public Arcade, Milan, Italy

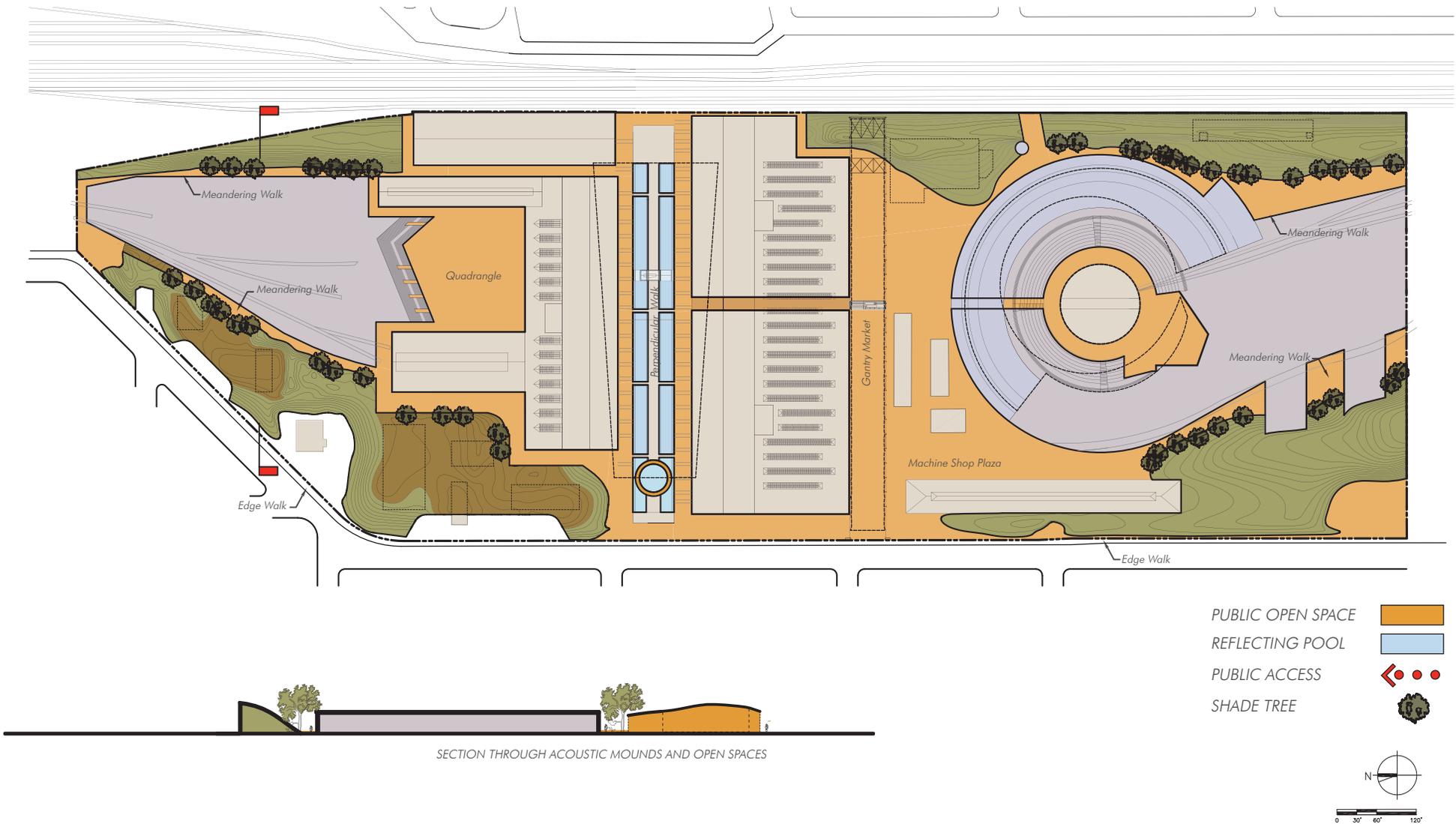


Figure 10: Conceptual Public Open Space Diagram

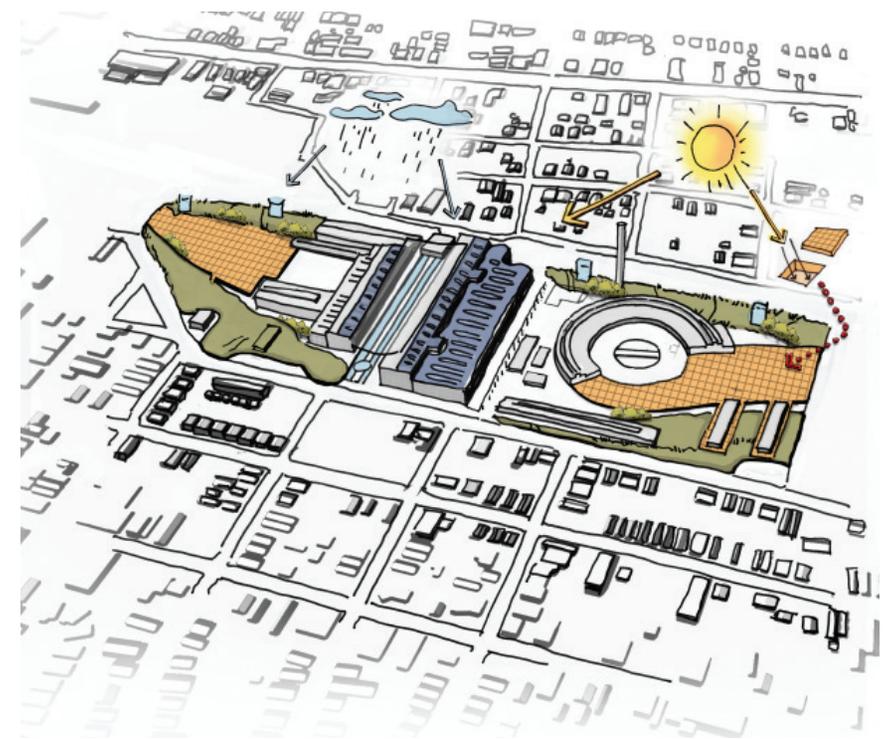
6.4 Sustainability

Concept: The Rail Yards should be a model for sustainable design practices.

New construction should be designed to meet or exceed U.S. Green Building Council (USGBC) standards and where possible, the retrofit of the existing structures should accommodate green building features as well. Specific concepts for the introduction of sustainable design features and practices into the Master Plan are as follows;

6.4.1 On-site Power Generation (Photovoltaic Panels)

The Master Plan recommends that all south facing roofs of existing historic structures be retrofitted to include arrays of Photovoltaic (PV) panels capable of generating on-site electricity. As evidenced by the growing PV market in the area, Albuquerque has an ideal climate for PV generation due to a high number of clear sunny days coupled with a lack of extreme summer temperatures found in other desert type communities at lower elevations. PV generated electricity is valuable because it is most efficient during times of peak electricity demand (A/C requirements during hot summer days) thus shaving peak loads. Careful attention will be required to ensure the panels are well integrated into the roof lines. Finally, electrical vehicle charging stations located in the subterranean garages may be able to utilize on-site electrical generation.



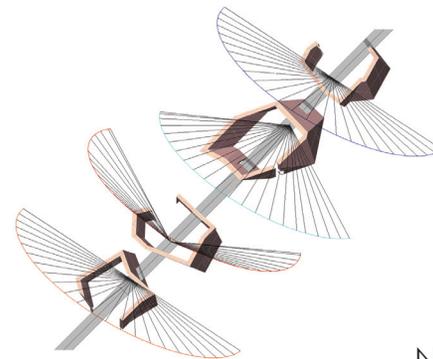
- DAYLIGHTING OPPORTUNITIES (COURTYARDS)
- GREEN ROOFS (ACOUSTIC MOUNDS)
- POWER GENERATION (PV PANELS)
- WATER COLLECTION (CISTERNS)



Cantaloc Aqueducts, Nazca, Peru



Acequia, White Mountains, NM



COURTYARDS,
Daylighting defined by the path of the sun



Anasazi Kiva, Mesa Verde, CO

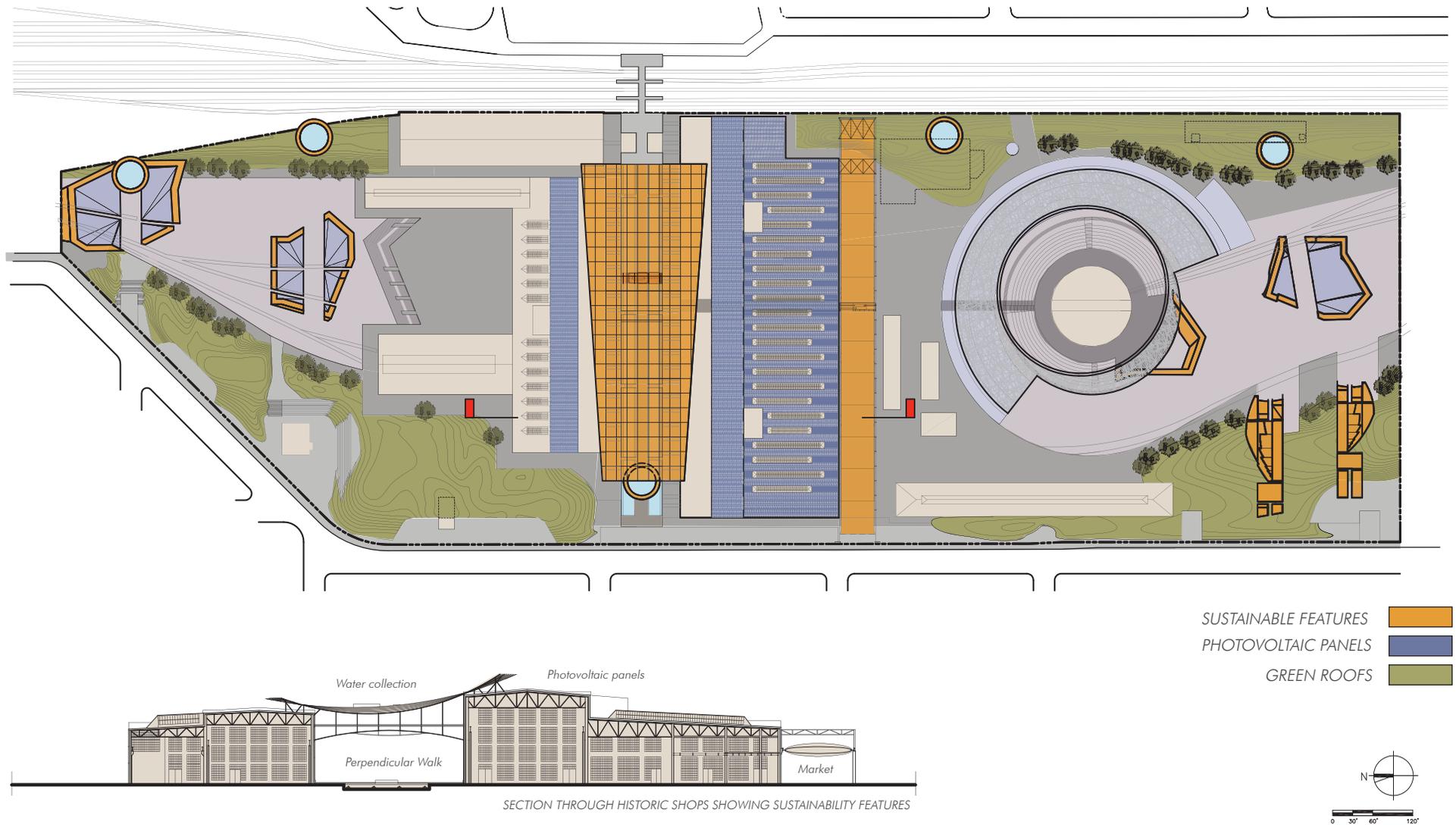


Figure 11: Conceptual Sustainability Features Diagram

6.4.2 Water Conservation

Given Albuquerque's low precipitation of approximately 9" of rain per year, it is critical that water conservation be a major consideration in all future development. Accordingly, the Master Plan recommends the collection and retention of on-site water into cisterns that may be used for future irrigation of drought tolerant landscaping atop the Acoustic Mounds and along the tree-lined Meandering Walks. Given a total site area of 27.3 acres, there is potential for a large catchment area. The cisterns themselves may become design elements for the project thereby reinforcing the importance of water conservation. In addition to catchment, all plumbing fixtures shall utilize the least amount of water allowable by code and where permitted, the collection and use of grey water for irrigation purposes shall be encouraged.

In order to facilitate collection of roof water and to provide cover over the Perpendicular Walk, a design feature called the "Glass Canopy" is proposed between the Machine and Boiler Shop buildings. The Canopy is an all-glass canopy supported by a light weight cable truss that will collect and distribute water to a proposed cistern and surrounding pool located in the trough of the Transfer Table.

6.4.3 Energy Efficient Construction/Green Roofs

All new construction should be designed to minimize heat loss/gain through building envelopes. Note that this is especially pertinent with regard to the rehabilitation of the historic structures which are largely clad in small single-pane glass windows set into steel window frames. In such cases, the requirements for energy conservation will need to be balanced with the historic preservation aspects of the project. For example, it may be necessary to create new building envelopes within the historic envelope thereby avoiding its poor thermal performance.

Along the lines of envelope performance, the Master Plan recommends the use of Green Roof structures over the retail components along Second Street. A Green Roof is essentially a well-

insulated roof that contains a vegetated outer layer that outperforms traditional roofing in terms of its ability to absorb and slowly re-radiate heat energy without creating the "Heat Island" effect found in many urban areas. Careful attention will be required to select plantings that are well suited to the particular Albuquerque climate.

6.4.4 Natural light & Ventilation

During the time of their original construction, the historic structures of the Rail Yards were considered pioneering achievements in the use of natural light and ventilation to provide superior working conditions. In keeping with this tradition, all new construction should be designed to maximize availability of natural light and ventilation in order to reduce power consumption and increase the quality of the working environment. The Master Plan recommends the use of Courtyards to provide natural light and ventilation to spaces that would otherwise be too deep to achieve from perimeter access alone. The proposed Paseo buildings will be designed with perimeter glazing and operable windows.

6.4.5 Alternative Transportation

The Master Plan is organized to prioritize pedestrian, bicycle, and transit connections to the project. Vehicle access to below grade parking structures is purposely relegated away from the center of the site such that these other forms of transportation can be unimpeded. Accordingly, a large transit plaza is proposed along Second Street immediately adjacent to the Perpendicular Walk between the historic Machine and Boiler Shop buildings, and may contain bike lockers, bike racks, benches, and other pedestrian amenities. Finally, in order to further encourage the use of alternative forms of transportation, the Master Plan recommends decreased parking requirements for anticipated uses and will encourage ride sharing.

- INFILTRATION SYSTEM (PERMEABLE HARDSCAPE)
- COLLECTION SYSTEM (SWALE/CISTERN)
- FIRE SYSTEM (TRANSFER TABLE POOL)

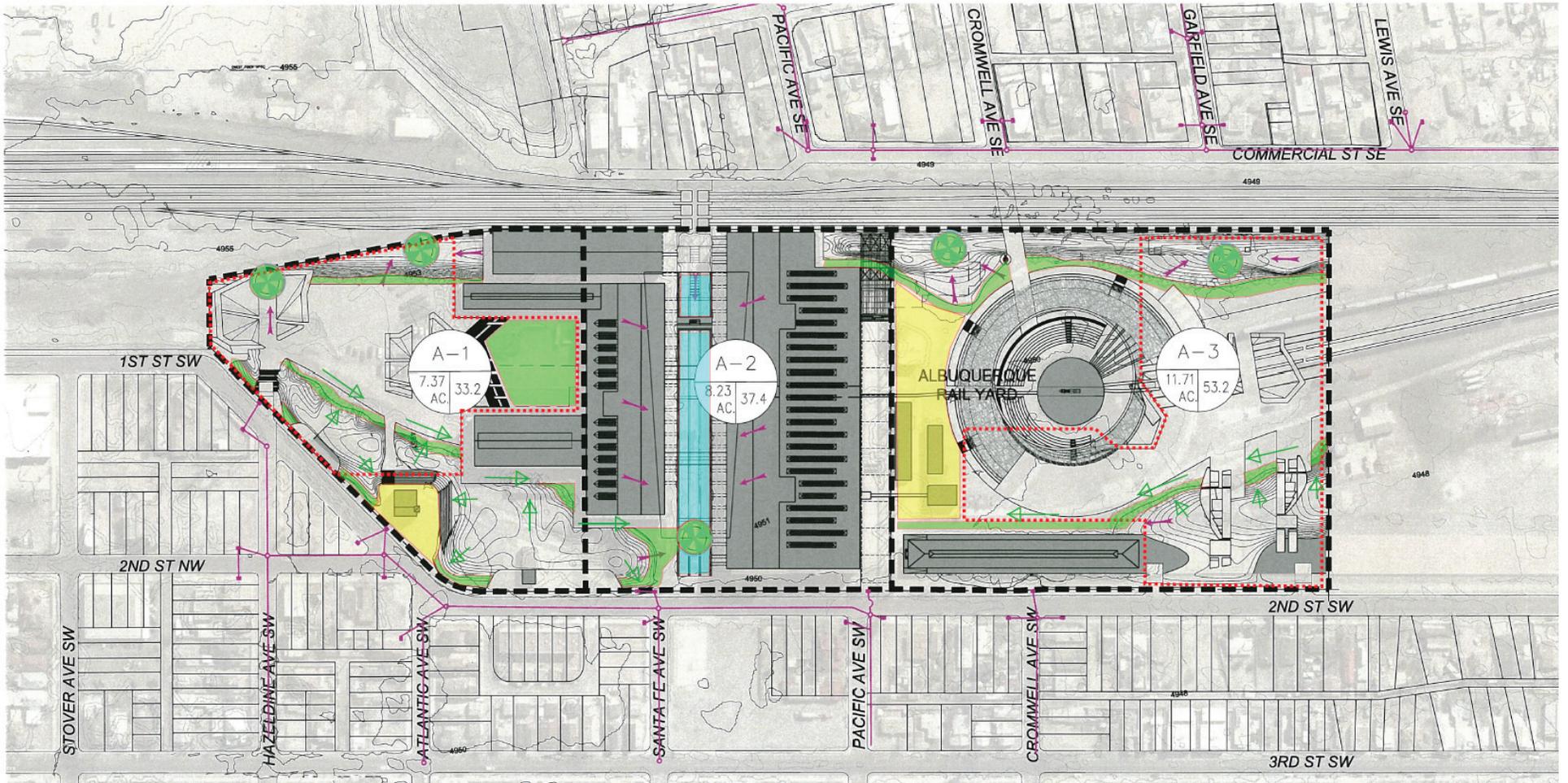


Figure 12: Conceptual Water Conservation Diagram

6.5 Parcel / Land Use Recommendations

Given the large size of the Rail Yards site (27.3 acres), the complexities involved in adaptively re-using the existing historic buildings, and the resulting need to construct the project in a phased approach, the Master Plan recommends the creation of 10 distinct parcels that each will have their own design features and land use recommendations. The resulting parcelization will enable distinct parcels to be developed and permitted according to the schedule requirements of a particular tenant need, thereby making the process more nimble and responsive to market conditions. Parcelization will also allow distinct use types, (eg. Workforce Housing or Public Open Space), to be broken off from the larger project in order to be executed by a different development entity as may be desired.

6.6 Land Use Characterizations

Creating a vibrant and successful mixed-use community on the Rail Yards site will in large measure depend on the type, location and organization of uses on the site. Accordingly, the Master Plan provides recommendations for preferred land use types and locations based on a thorough analysis of project goals, site context, and community input. Land use designations are not intended to restrict the existing approved land uses of the underlying SU-HLS zone.

Based on the Parcel organization described above, the site can be understood to be divided into 4 basic use zones; Business, Cultural, Retail, and Housing. In addition, each of these use groups contains a significant amount of open space available for public use. The following descriptions provide a qualitative summary of each of the primary use categories:

■ BUSINESS

At its peak of operation, the Rail Yards once provided jobs to nearly 25% of the residents of the City of Albuquerque; it was the principle economic engine for the region. The development model for the Rail Yards MDP is likewise founded on a jobs-centered approach that intends to create a robust innovation-based and creative office business community. This use designation will be largely housed within the historic structures but will also extend Northerly toward the downtown City Center, providing a connection between the two job centers. A successful business tenancy will be the economic engine that will provide for the costly adaptive reuse and ongoing maintenance of the historic structures, thereby preserving them for future generations.

Specific Business/Professional use types may include but are not limited to the following; Creative Office, Professional Services, Training/Upper Level Education, Research and Development, Media, and Light Manufacturing.

■ CULTURAL

The entirety of the Rail Yards site is understood as a Cultural Center of major significance to the City, State, and Country. It is the intent of the MDP that visitors to the site will be able to traverse the grounds in their entirety in a way that was never previously afforded due to the walled perimeter required by its heavy industrial past.



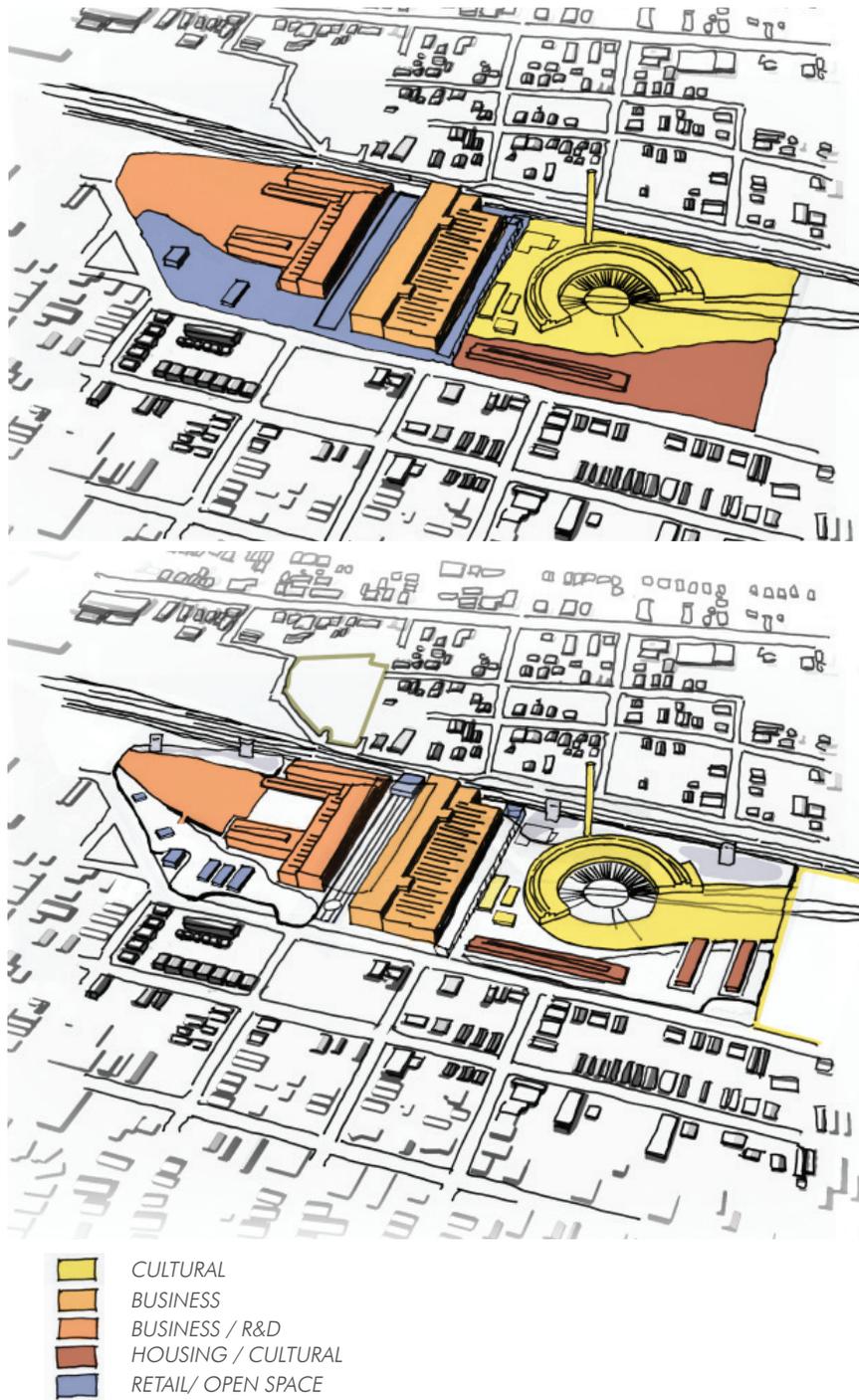
Shukhov Tower, Moscow, Russia



Samitaur Tower, Culver City, CA



ATSF 2926 Restoration, Albuquerque, NM



Dedicated Cultural Uses will be centered about the historic Turntable and rebuilt Roundhouse at the South of the site with the Machine Shop and Storehouse buildings as backdrops. The South portion of the site retains the greatest physical connection to the functioning BNSF Rail Lines and will therefore tie the dedicated Cultural facilities directly to the history of the Site.

Specific Cultural use types may include but are not limited to the following; Museums (including WHEELS), Performing Arts, community centers, Accessory retail facilities, and public gathering spaces. Museum functions may include such work as the restoration of historic artifacts such as the work currently underway by the New Mexico Steam Locomotive & Railroad Historical Society to fully restore the Baldwin 4-8-4 Steam Locomotive, AT&SF 2926.

■ RETAIL

Primary dedicated retail zones occur along the western periphery of the site along Second Street and along the proposed Railroad Bridge that will connect the site to the South Broadway community. The scale of the proposed retail is commensurate with that along 4th Street in the Barelás community and will be designed to complement rather than compete with neighborhood businesses.

Specific retail use types may include but are not limited to the following; Restaurant, café, growers markets, artisan shops, business services, galleries, and hospitality/boutique hotel uses.



Cliff Palace, Mesa Verde, CO



Taos Pueblo, NM

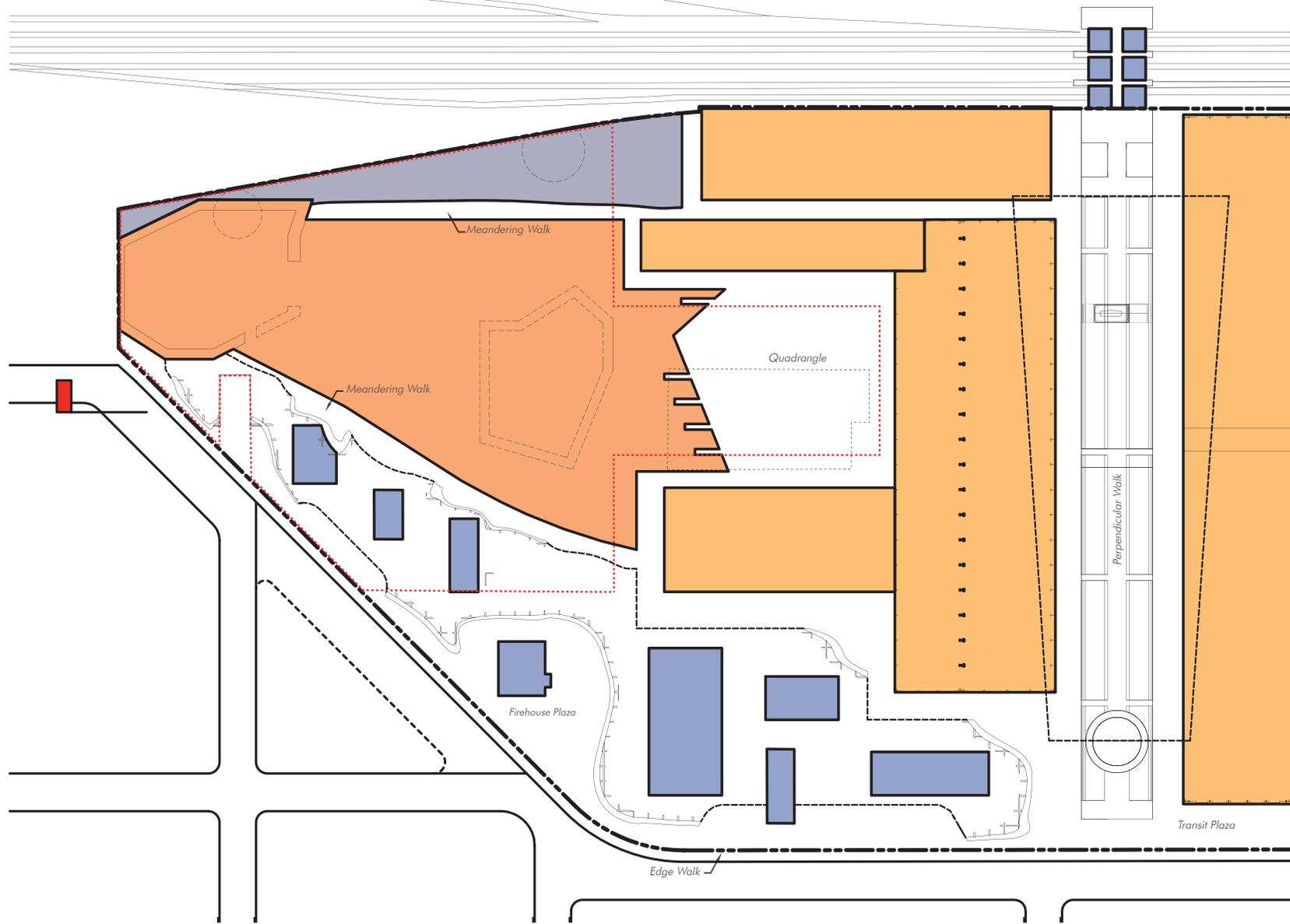


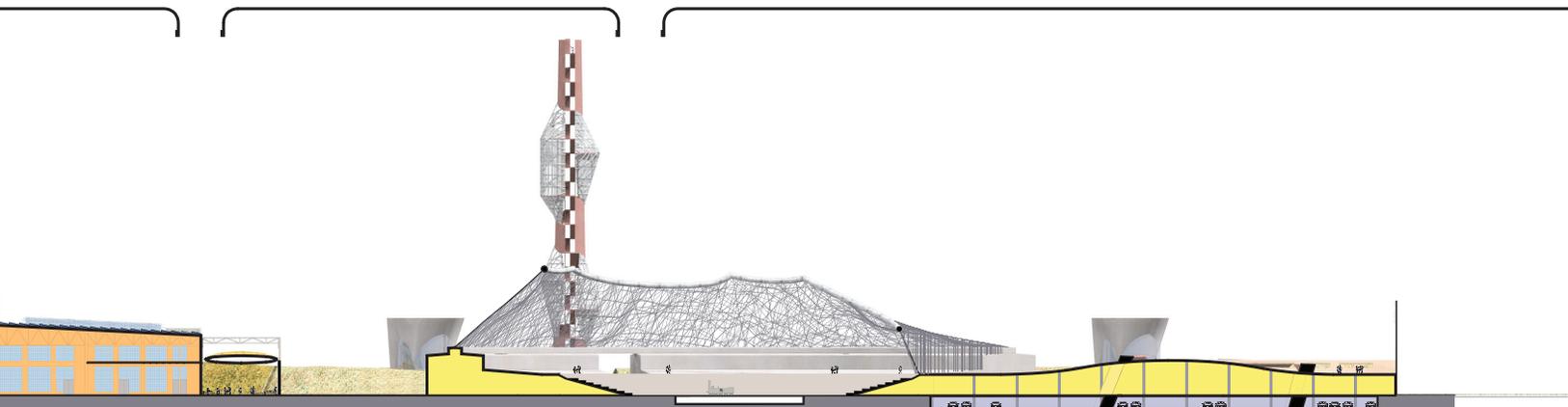
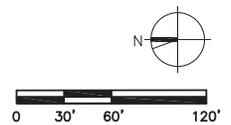
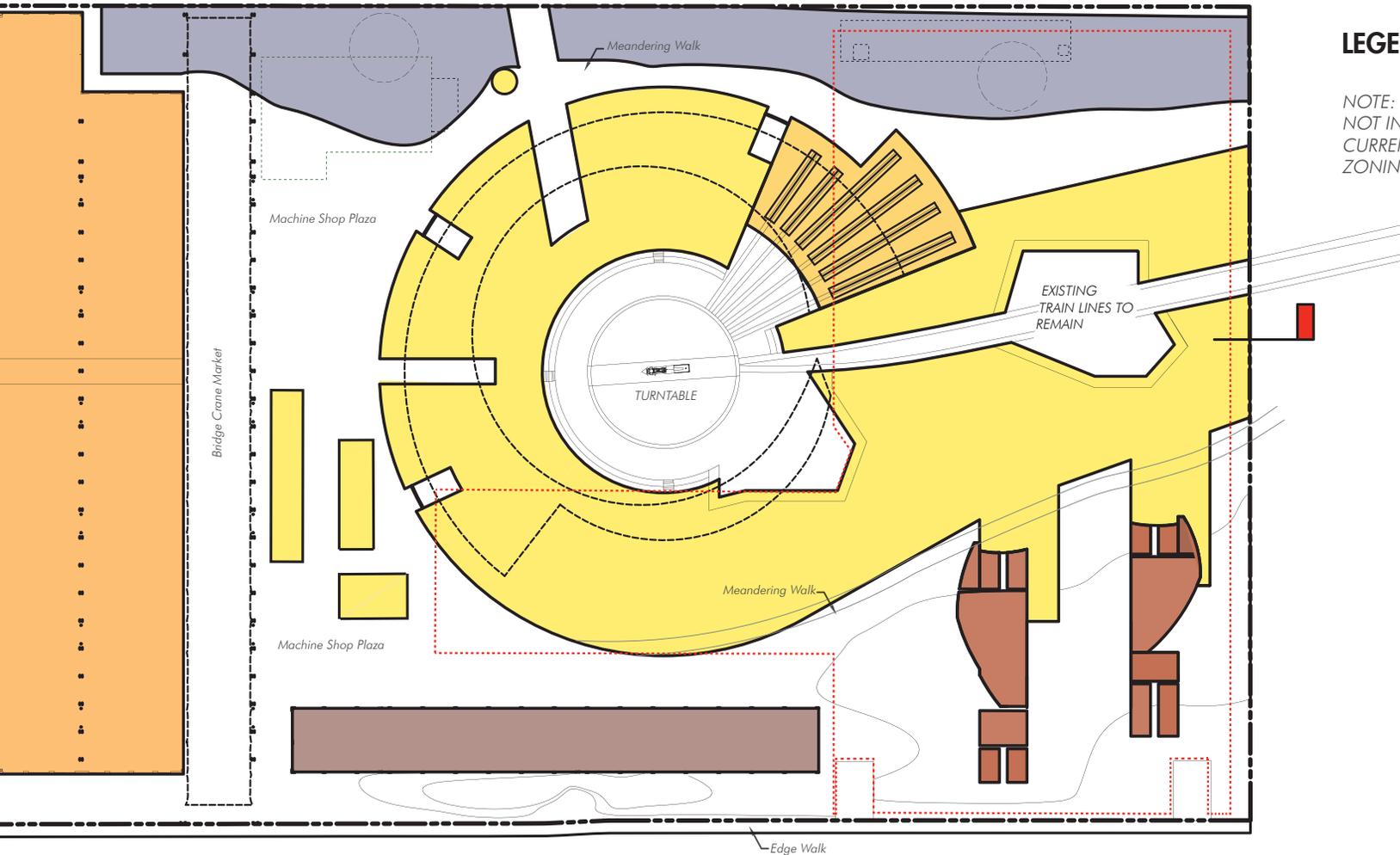
TABLEAU 2: Land Use Diagram



LEGEND

NOTE: LAND USE RECOMMENDATIONS ARE NOT INTENDED TO RESTRICT LAND USES CURRENTLY APPROVED BY THE UNDERLYING ZONING DESIGNATION FOR THE SITE, SU-HLS.

- BUSINESS USES 
- CULTURAL USES 
- WORKFORCE HOUSING 
- RETAIL 
- OPEN SPACE 
- UTILITY BUILDING 
- LINE OF GARAGE BELOW 



■ WORKFORCE HOUSING

The proposed Workforce Housing use is located at the southwest corner of the site adjacent to Second Street and bordering the proposed Cultural zones to the north and east which are understood as compatible uses. Given the minimum requirement of 30 units, care should be taken to ensure that the scale of the proposed Housing is commensurate with that contained in the adjacent residential neighborhoods.

6.7 Parcel Characterizations

Parcel recommendations and qualitative characterizations of each of the proposed 10 parcels are as follows;

■ Parcel 1

Parcel 1 is intended as the cultural center of the Rail Yards site and contains uses of cultural significance to the community such as museums, performing arts venues, community centers, accessory retail functions and public gathering spaces. Parcel 1 is conceptually centered about the historic Turntable and contains the proposed rebuilt iconic structure of the Roundhouse which is connected with the proposed Paseo South building. The historic Turntable remains in active operation with adjacent landowner BNSF retaining an easement for its use. The continued operation of the Turntable and the rail tracks providing access are seen as amenities to Parcel 1 that should be incorporated into the design of future cultural facilities. Any future use (e.g. railcar restoration) that requires rail access to the existing BNSF Railway will utilize the rail tracks contained on Parcel 1.

Parcel 1 also contains a series of smaller historic buildings such as the Welding and Babbit Shops and the South Washroom facility that are intended to be adaptively re-used and included as part of the cultural life of the project. Together with Parcel 4, the area containing these

structures is characterized in the Master Plan as part of the Machine Shop Plaza.

Since Parcel 1 contains the largest portion of undeveloped land within the larger Rail Yards site, the Master Plan recommends one level of subterranean parking to be constructed coincident with development of above-grade cultural facilities. Given the lack of parking opportunities across the balance of the site, it is anticipated that parking created on Parcel 1 will likely serve parking needs for adjacent parcel use requirements (e.g. Parcels 3, 4 and 5). Access to the parking facility from Second Street would be provided by an easement across Parcel 3 as shown on the Parcel plan.

■ Parcel 2

Parcel 2 is the proposed site for the 30 units of Workhouse Housing. The proposed Housing structures are positioned informally across the top of the southwestern most Acoustic Mound leaving substantial portions of the landscape for use by inhabitants, adjoining neighbors and visitors.

It is recommended that parking for Parcel 2 be accommodated similarly to Parcel 1 in a subterranean garage with separate and dedicated access from Second Street. Parcel 2 contains a major portion of the historic cast-in-place concrete Platform structure that was used as the primary loading dock facility for the Rail Yards. As discussed in the Master Plan preservation recommendations, in order to accommodate the subterranean garage, the Platform may have to be partially removed and reconstructed.

■ Parcel 3

Parcel 3 contains the historic Storehouse structure and is the current home of the WHEELS warehouse. Similar to Parcel 1, Parcel 3 supports culturally significant uses and due to its significant frontage along Second Street, will act as the public face of the onsite cultural

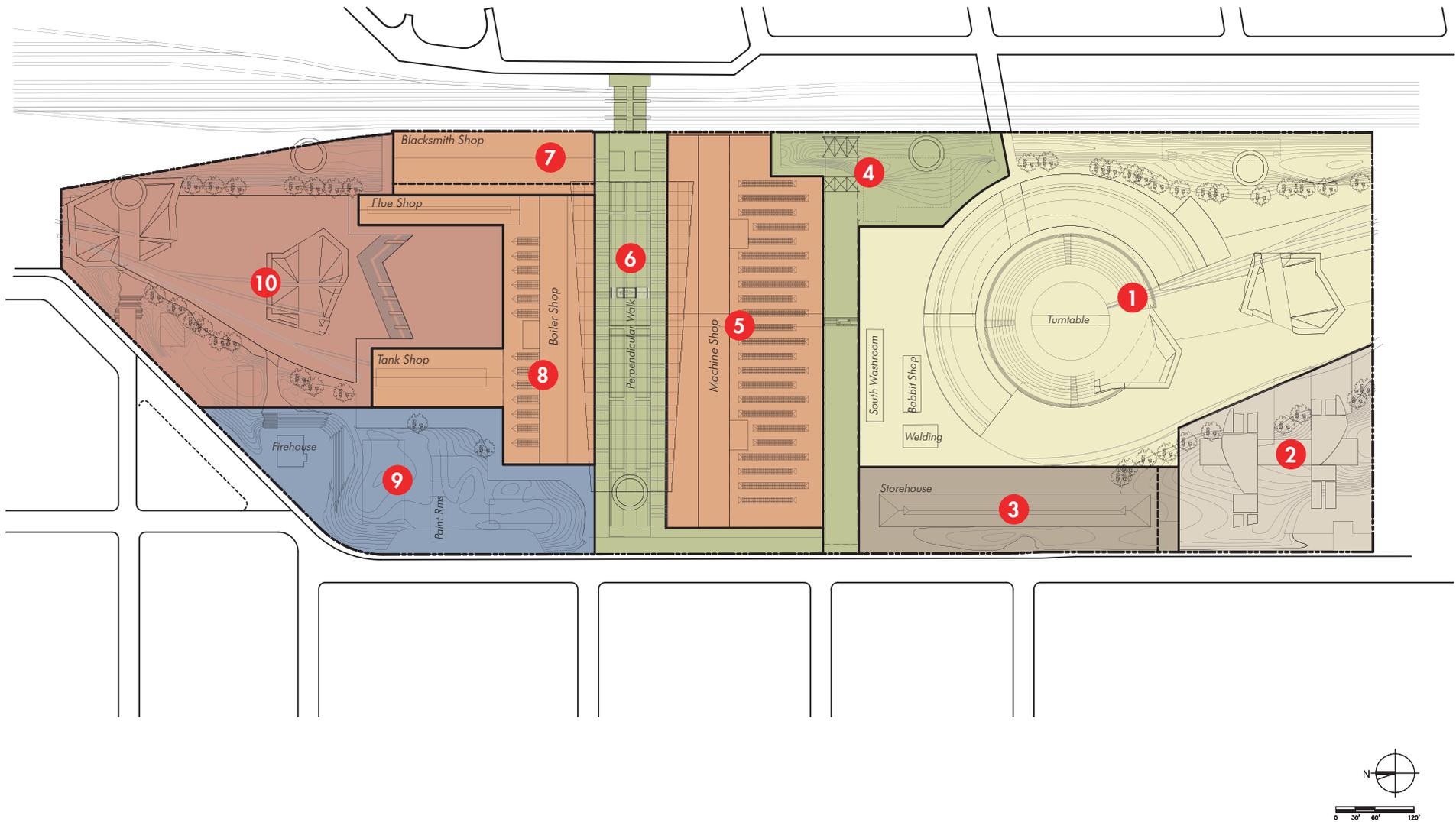


Figure 13 : Conceptual Parcelization Diagram

facilities to the larger community. Parking for Parcel 3 users will be accommodated within the subterranean structure on Parcel 1 with an easement provided across Parcel 3 for access. With respect to the WHEELS Museum, the Master Development Plan calls for the near-term retention in their current location in the Storehouse while they build up patronage, their collection and funding commitments for ultimate construction of a new facility located within the cultural zones of the site. Consistent with the policies set forth by the Master Plan, it is considered premature to designate the actual design or boundaries of a specific user's facility within the proposed Master Plan document.

In the future, should it be determined that additional Housing is desired on the site, the Master Plan recommends that such housing be located/integrated within an adaptively re-used Storehouse Building thereby continuing the housing use north from Parcel 2. Housing on this parcel may be live-work in orientation to better transition to adjacent Machine Shop uses.

Parcel 4

Parcel 4 is primarily a public open space parcel that includes the area immediately south of the Machine Shop contained beneath the historic Bridge Crane and its steel support colonnade. At the eastern edge adjoining the Rail Line, Parcel 4 widens to include the footprint of the original Powerhouse recommended for Presentation and the original Smokestack recommended for Reconstruction.

Parcel 4 is intended as a major public assembly area supporting a covered outdoor Farmers/Artisan Market and Public Events Venue under the Bridge Crane and an Educational Center located adjacent the proposed Smokestack. Such a location on the South side of the Machine shop will have maximum daytime and nighttime visibility from drivers along the Avenida Cesar Chavez overpass and will provide direct access to the Barelás neighborhood through the entry portal that once served as the primary entrance to the historic Rail Yards site.

The proposed location will draw people onto the site, provide potential visitors to the existing WHEELS warehouse on Parcel 3, and will provide easy vehicular access for deliveries from Second Street to support the Public Market concept. Locating the market adjacent the historic site entrance will also serve to reacquaint Albuquerque residents with the site. Similar to Parcels 1 and 3, Parcel 4 is understood as a community oriented parcel that supports and complements the cultural uses on the site.

Parcel 5

The boundary of Parcel 5 coincides with the footprint of the historic Machine Shop building and is connected to the Second Street public right-of-way through the two adjacent public open space parcels immediately to the north and south of the building. The Machine Shop building is the largest and most significant structure at the Rail Yards site and once revitalized is envisioned to anchor the innovation based and creative office tenancies that will drive successful development of the project. A pedestrian connection running north-south through Parcel 5 is proposed to allow the public to experience the interior volume of the Machine Shop. The connection is currently shown at the east/west center of the Machine Shop, however its ultimate location may be adjusted to accommodate other site constraints and considerations. Parking for Parcel 5 will be accommodated in the proposed structure contained on Parcel 1, and like all such off-site parking in the proposed development, will require some sort of covenant or easement agreement between parcels that will ensure availability of longterm parking.

Parcel 6

Parcel 6 is a primary open space parcel known as the Perpendicular Walk that is bounded by the historic Machine Shop to the south and the historic Boiler Shop and Blacksmiths Shops to the north. It is the heart of the project. Parcel 6 contains the historic Transfer Table structure that at one time functioned to transfer locomotive assemblies

under repair laterally east-west across the site. The Transfer Table is a unique structure that is recommended to be adaptively reused as a water feature becoming the main focal point for the Perpendicular Walk that will become the primary east-west artery connecting the Barelás and South Broadway communities. The proposed Railroad Bridge is an extension of Parcel 6 to the east over the BNSF Rail lines, and to the west, Parcel 6 extends around the west façade of the Machine Shop to contain the central transit plaza, the front door of the project. Finally, Parcel 6 is to be covered by a transparent roof that will span between the existing structures providing protection from the elements.

■ Parcel 7

The boundary of Parcel 7 coincides with the footprint of the historic Blacksmith Shop building with the exception that also contains the ~10' wide walkway immediately west of this building to be preserved as a pedestrian and utility access easement for adjacent parcels. Similar to Parcels 5 and 8, Parcel 7 is envisioned to house an anchor business tenancy. Parcel 7 will utilize Parcel 6 as its primary access easement to Second Street and will utilize the proposed subterranean parking contained in Parcel 10 to satisfy code parking requirements.

■ Parcel 8

The boundary of Parcel 8 contains the combined footprint of the historic Boiler Shop, Flue Shop, and Tank Shop structures. The three structures are currently linked to one another through interior connections thereby affording the possibility of a single tenant utilizing all three combined. Alternatively, Parcel 8 may be developed in a multi-tenant arrangement with common areas. Similar to Parcel 7, Parcel 8 gets access to Second Street via Parcel 6 and will be parked in Parcel 10 to the North.

■ Parcel 9

Situated north-south along Second Street, Parcel 9 is the primary retail parcel of the site. Primary features include the designated City Landmark Firehouse building and the proposed perimeter Acoustic Mound structures that are to be hollowed out to contain various retail shops and pedestrian walkways through the site. The Firehouse itself is intended to be converted to a restaurant/café use in order to reinforce the retail edge. The café is surrounded with a generous exterior plaza carved into the Acoustic Mounds providing additional seating and informal gathering spaces. Parcel 9 retail is intended to complement rather than replace any of the existing retail amenities along 4th street within the Barelás neighborhood.

■ Parcel 10

Parcel 10 completes the Northern portion of the site and is similar to Parcel 1 to the South except that its primary use designation is Business vs. Cultural. Parcel 10 contains the proposed Paseo North building and the subterranean parking garage below. As such, Parcel 10 is envisioned as an auxiliary parcel to Parcels 7 and 8 that contain historic structures and likewise may be less flexible with regard to development options. Uses contained in the Paseo North building are intended to complement those uses in the historic structures, e.g. laboratory space, training/education, or research and development. Parcel 10 also contains perimeter Acoustic Mounds and a retail zoned edge that will act as an extension of Parcel 9 to the South. Such retail uses may be more business oriented and may include options for limited on-site hotel facilities.

LEGEND #

DESIGN FEATURE

- 1 PASEO NORTH
- 2 PASEO SOUTH
- 3 ACOUSTIC MOUNDS
- 4 FIREHOUSE CAFE
- 5 MACHINE SHOP PLAZA
- 6 QUADRANGLE
- 7 MEANDERING WALK
- 8 EDGE WALK
- 9 PERPENDICULAR WALK
- 10 GLASS CANOPY
- 11 RAILROAD RETAIL BRIDGE
- 12 TRANSIT PLAZA
- 13 REBUILT ROUNDHOUSE
- 14 REBUILT SMOKESTACK
- 15 TURNTABLE AMPHITHEATER
- 16 WORKFORCE HOUSING
- 17 CISTERN
- 18 COURTYARD
- 19 PARKING ACCESS
- 20 AT-GRADE CROSSING
- 21 BRIDGE CRANE MARKET
- 22 TRANSFER TABLE POOL

VIGNETTE VIEW REFERENCE #

Note: Concept vignettes included on the following pages are intended to provide a sketch view of selected significant spaces envisioned by the Rail Yards Master Plan.

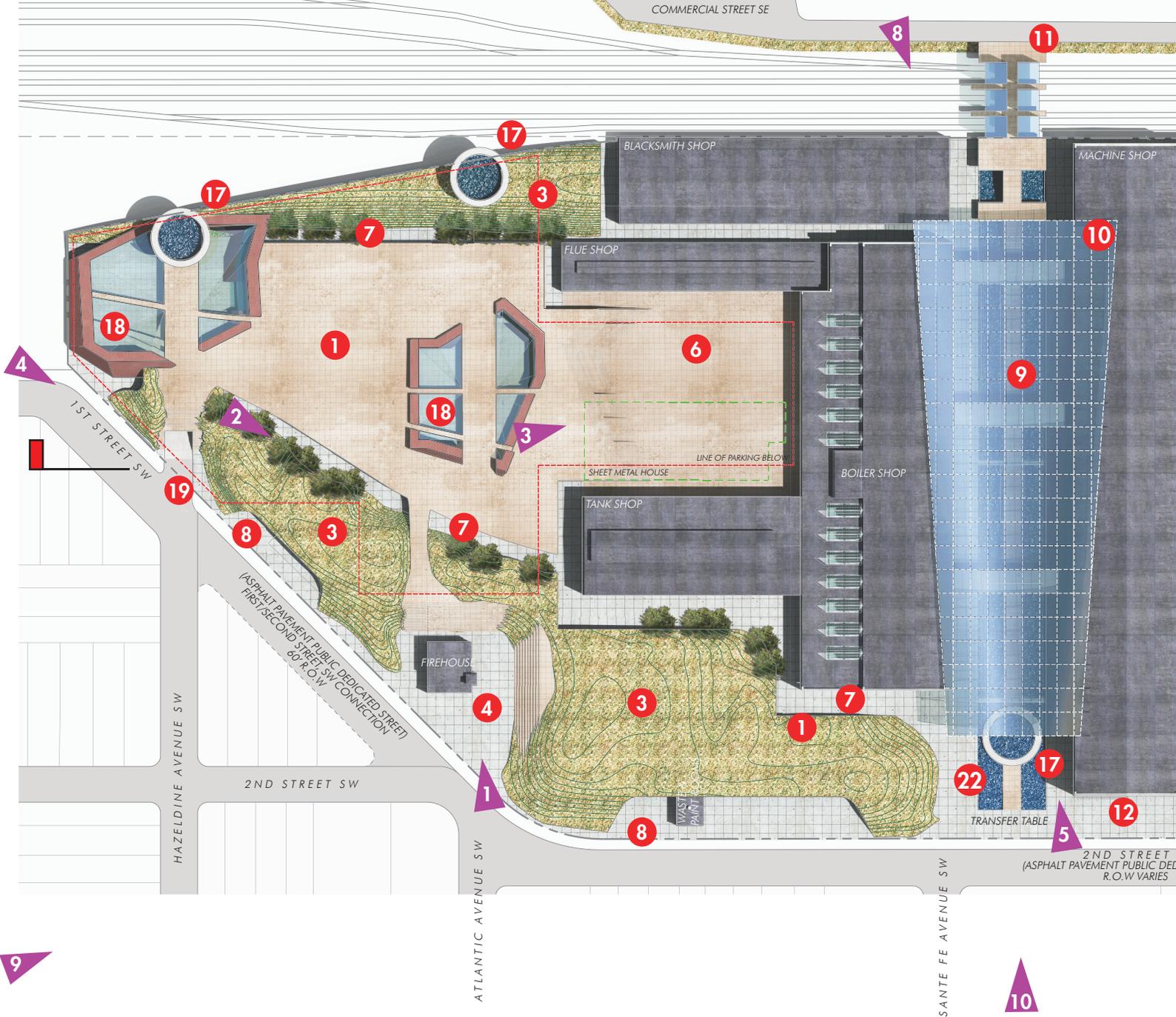
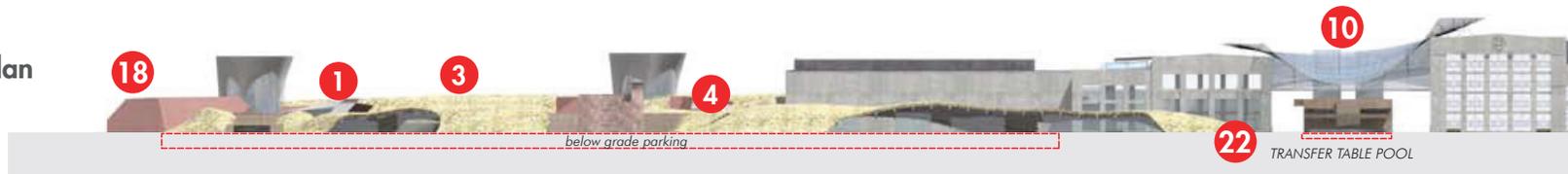
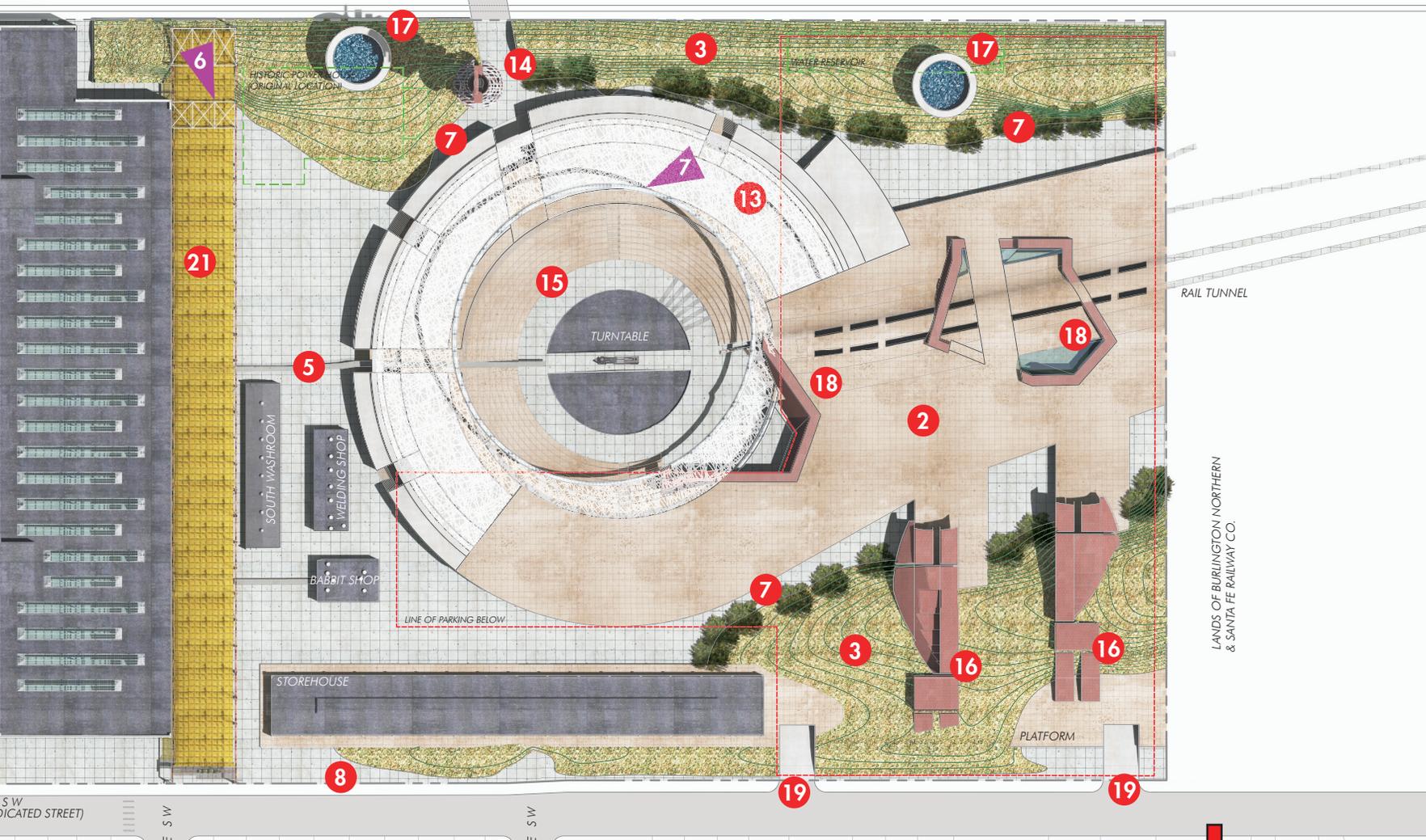


Tableau 3: Illustrative Master Plan



LANDS OF BURLINGTON NORTHERN & SANTA FE RAILWAY CO.



S W (UNLOCATED STREET)

PACIFIC AVENUE SW

CROMWELL AVENUE SW

BARELAS

RAIL TUNNEL

LANDS OF BURLINGTON NORTHERN & SANTA FE RAILWAY CO.

21

14

13

16

below grade parking



6.8 Concept Vignettes *(Illustrative sketches to convey concepts)*



View 1: Firehouse Cafe 1

The historic Firehouse is adaptively reused as a restaurant/cafe and surrounded by a generous public plaza available for outdoor seating and events. The plaza perimeter is defined by the Acoustic Mounds which are sculpted to create pockets for small group seating and “off-road” strolling areas. Neighbors, workers and visitors alike can traverse the mounds for exercise, and use the seating, located variously, to look out and enjoy views to the site and surrounding neighborhood.

The plaza area surrounding the Firehouse ties into and extends the perimeter Edge Walk concept onto the site.

Given the discrete nature of its location, development of the Firehouse Cafe could be one of the Master Plan actions to be implemented and accordingly is included in Phase 1 of the development schedule.



View 2: Meandering Walk 2

The Meandering Walk is a tree-lined, on-grade path, the provides a leisurely, curvilinear route moving pedestrians north and south across the site along the edge of the Acoustic Mounds. The Meandering Walk follows the curvature of the east or west elevations of the office/lab/cultural spaces housed beneath the North and South Paseo structures. First floor office, laboratory, or cultural related spaces below the Paseo deck look out on this walk-way. Glazing along the work-area perimeter brings natural light to the work-space interiors, and permits views from the walk in and the from the offices out.

Trees shade both the Meandering Walk and the edge of the Paseo deck above. Intermittent seating opportunities are provided along the walks on both east and west sides of the Paseo. The edge of the walk will be developed as a drainage swale to collect and control storm water.



View 3: Quadrangle 3

The Quadrangle, created by the intersection of the North Paseo with the “U” shaped conjunction of the Flue, Boiler and Tank Shops, is a more private, “walled” enclosure that opens to the north across a large public stair, effectively connecting the Quadrangle floor across the North Paseo to the Downtown City Center.

The Quadrangle is either open to the sky or can be readily covered by attaching a temporary canopy to the roof edges of the buildings that define the Quadrangle perimeter. The resulting space can be used in a variety of ways as an open-air performance, market, or exhibition venue with seating imported as required, or alternatively, using the descending stairs as permanent seats.



View 4: Edge Walk 4

The Edge Walk runs parallel with the sidewalk along First and Second Streets adjacent the entire length of the western perimeter of the site. Along the way, the Edge Walk extends and contracts with the undulations of the Acoustic Mounds to include street side plazas, landscaped areas, and proposed retail spaces. The Edge Walk concept may be developed in conjunction with the current need to provide improved sidewalks (current missing) along the property edge. Visitors arriving to Albuquerque at the Alvarado Transportation Center will be encouraged to walk to the Rail Yards and will get their first experience of the site along the Edge Walk.



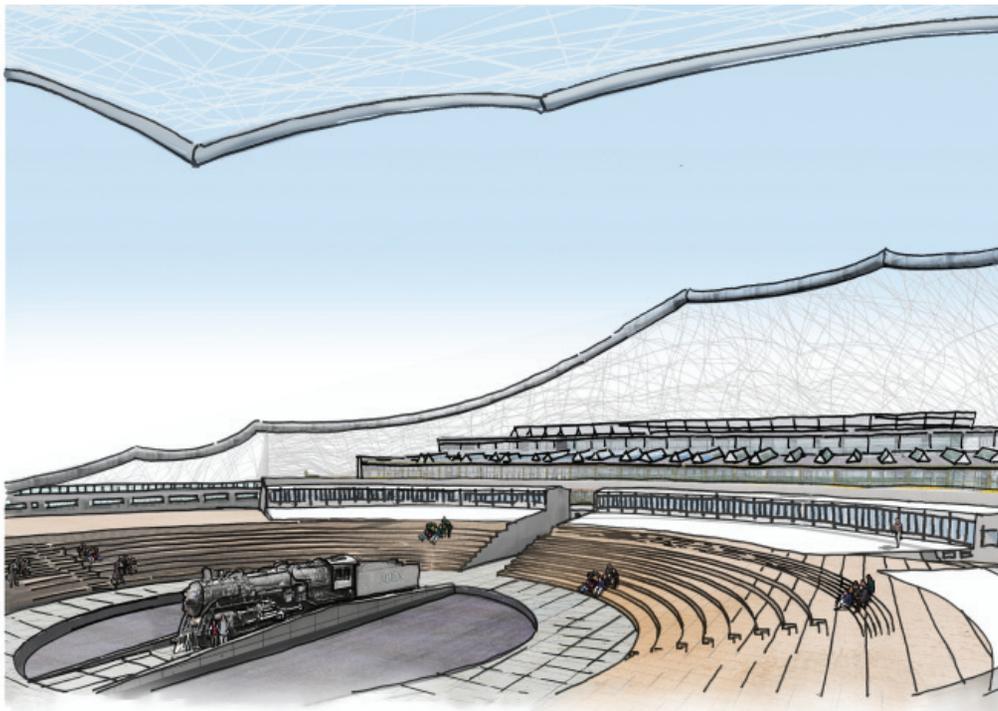
View 5: Perpendicular Walk 5

The Perpendicular Walk is the pedestrian heart of the redeveloped Rail Yards project and the critical connective tissue between the Barelás and South Broadway neighborhoods. The Walk is a rectangular, east/west pedestrian space, located midway along the site between the Machine and Boiler/Blacksmith Shops and flanking the historic Transfer Table. The Perpendicular Walk is covered by an all-glass canopy that spans between the perimeter buildings by a light weight cable truss system that may also accommodate intermittent skywalks serving potential future tenant needs. The glass canopy will provide cover to the space and will collect and funnel rainwater into a cistern for future reuse. The trough of the Transfer Table is adaptively reused as a water feature that will provide evaporative cooling and reflect/refract the grandeur of the historic facades across the surface of the water. The Perpendicular Walk terminates in a bridge structure, the Retail Pedstrian Bridge, that spans the BNSF railway, currently in use.



View 6: Machine Shop Plaza 6

Extending south from the Machine Shop is the Machine Shop Plaza, useable for exhibits or open air markets. The Master Plan proposes to adaptively reuse the historic Bridge Crane apparatus attached to a steel frame that extends across the south elevation. The Bridge Crane and steel frame support an innovative retractable canopy that attaches to the existing Crane mechanism. When the Crane moves across the south elevation from east to west, it pulls the canopy with it, so that either a portion of or the entire space below can be covered, allowing for marketing space in every sort of weather. The canopy can be opened and retracted as events in the Plaza require. The canopy itself is made from 2 layers of colored PVC fabric welded at the seams (not unlike Hot Air Balloon construction) to form a series of “pillow” type structural membranes continuously attached to the Bridge Crane support tracks and spanning the 50ft width of the space. Once in place, the canopy is inflated via air compressors installed on the crane.



View 7: Roundhouse Amphitheater 7

The Roundhouse Amphitheater is a dynamic public space created by the convergence of the South Paseo and the proposed rebuilt Roundhouse structures. At the center of the Roundhouse Amphitheater resides the historic Turntable that will remain in operation for BNSF service in the foreseeable future and that may have a role in the future programming of the space as an analogue stage. Tiered seating surrounding the Turntable extends to connect to the Roundhouse which will be constructed in the same plan position and with the same massing as the original building.

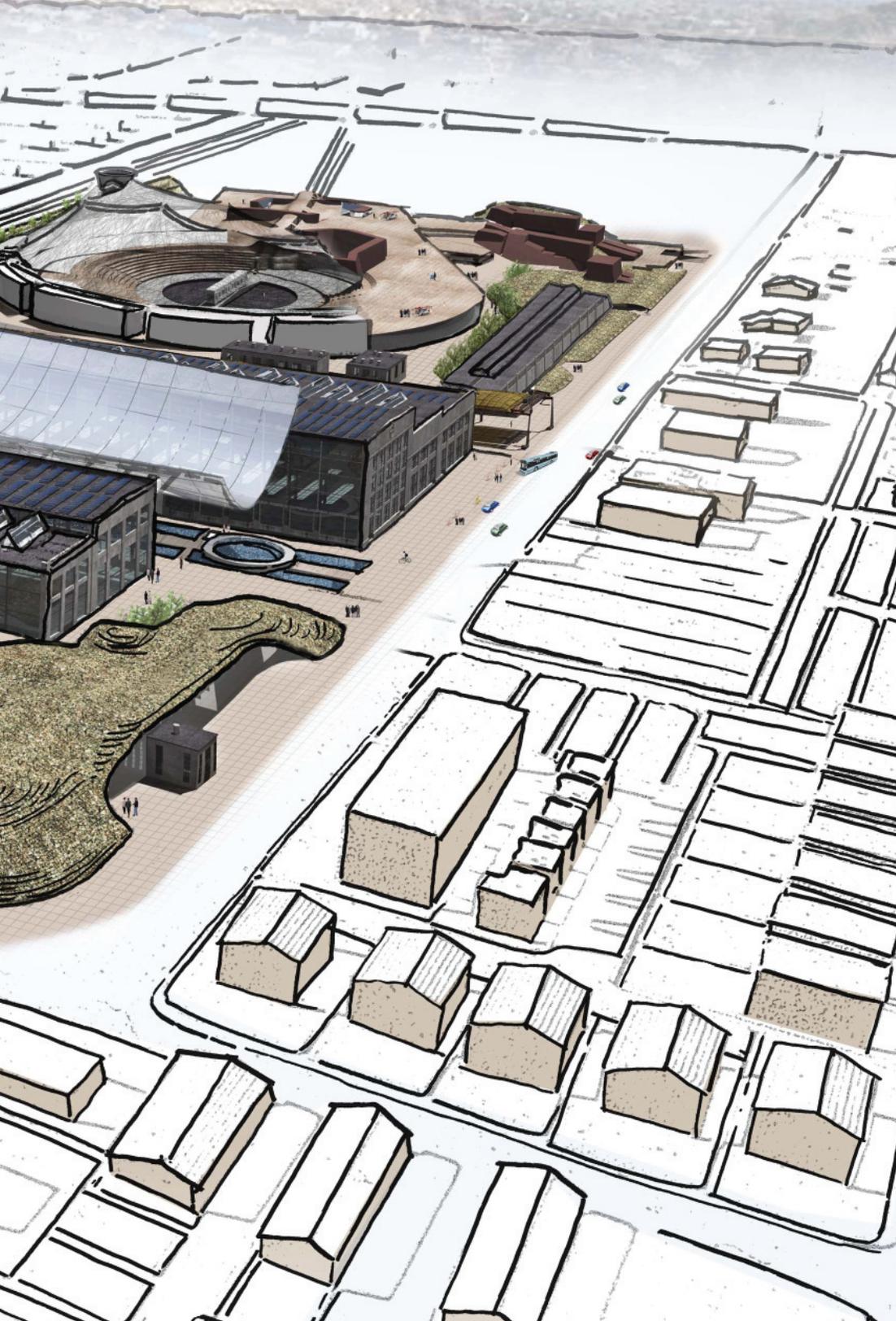
The Roundhouse Amphitheater is an open-air venue for cultural uses including concerts, performing arts and museum uses. A light-weight net canopy will provide shading.



View 8: Pedestrian Retail Bridge 8

The Pedestrian Retail Bridge will allow people and bicycles to cross over the BNSF Rail lines to and from the Rail Yards site. The Bridge will also contain occupiable spaces that may be used for retail, workshops, or artist studios. The Bridge, by virtue of its location above an operational railway will become a gateway symbolizing the rebirth of the Rail Yards to rail passengers. Should a future train stop be permitted, the area immediately below the Bridge would be used.





View 9: Aerial View 

TABLEAU 4: Conceptual Aerial View from the Northwest



View 10: Aerial View 



TABLEAU 5: Conceptual Aerial View from the West

KEYED NOTES (PROPOSED IMPROVEMENTS)

- 1 PASEO (NORTH & SOUTH) THAT PUBLICLY ACCESSIBLE FLAT ROOF IF A LOW INFILL BUILDING EXTENDS.
- 2 ACOUSTIC MOUNDS. THEY ARE LOCATED ADJACENT THE PASEO SURFACE, RISING TOWARDS EAST OR WEST AND THEN DESCENDING TO MEET THE EXISTING ON GRADE EDGES OF THE PROPERTY.
- 3 COURTYARDS. THEY VARY IN SHAPE, DEPENDING ON THE ORIENTATION OF EACH SPACE TO THE SUN.
- 4 PROPOSED COVER OVER TRANSFER TABLE. IT WOULD COVER THE PROMENADE, SURROUNDING THE TRANSFER TABLE, BUT WOULD BE OPEN TO THE AIR ON EAST AND THE WEST.
- 5 RAILROAD BRIDGE. IT WOULD LAND PEDESTRIANS FROM THE SOUTH BROADWAY DISTRICT DIRECTLY INTO THE HEART OF THE PROJECT.
- 6 BRIDGE CRANE. A STRUCTURE FOR "OPEN AIR" EVENTS SUCH AS MARKET, EXHIBITS, PUBLIC GATHERINGS AND PERFORMANCES, OR SIMPLY AS ZONES FOR PEDESTRIAN CIRCULATION BETWEEN NEW GLAZED, AIR-CONDITIONED INTERIORS.
- 7 REBUILT ROUNDHOUSE. A NEW STRUCTURE BUT IN THE FORM OF THE ORIGINAL RAILWAY ROUNDHOUSE, BUT ENLARGED TO THE SOUTH AND WEST, USING LINES OF EXISTING RAIL TRACKS TO DEFINE THE PERIMETER FOR THE BUILDING.
- 8 AMPHITHEATER. THE AREA IMMEDIATELY SURROUNDING THE TURNABLE IS ENVISIONED AS AN AMPHITHEATER. THE SAMPLE PLAN PRESERVES OPERATION OF THE TURNABLE AND THE TRACKS EXTENDING SOUTH, AS THE EASEMENT REQUIRES.
- 9 CISTERNS. THEY ARE LOCATED TO BE SEEN FROM POINTS OF NEIGHBORHOOD ACCESS AND WOULD BE USED FOR RAINWATER COLLECTION AND CONSERVATION.
- 10 REBUILT SMOKESTACK.
- 11 WORKFORCE HOUSING. IT IS POSITIONED INFORMALLY ACROSS THE TOP OF THE WEST ACOUSTIC MOUND AT THE SOUTHERN PORTION OF THE SITE, LEAVING SUBSTANTIAL PORTIONS OF THE LANDSCAPE, FOR USE BY INHABITANTS, ADJOINING NEIGHBORHOODS, AND PASEO USERS.
- 12 PARKING. ONE LEVEL SUBTERRANEAN PARKING COULD BE LOCATED UNDER THE PASEO WITH ACCESS TO THE COURTYARDS AND PASEO ABOVE. WITHIN THE PERIMETER WALL OF EACH COURTYARD A PEDESTRIAN RAMP WOULD CONNECT THE COURTYARD FLOOR LEVEL WITH THE PASEO LEVEL ABOVE.
- 13 FIREHOUSE PLAZA
- 14 QUADRANGLE
- 15 RETAIL UNDER ACOUSTIC MOUNDS
- 16 TRANSIT PLAZA
- 17 EXISTING RAILROAD TRACKS
- 18 PUBLIC WALK-THRU EXISTING MACHINE SHOP
- 19 MACHINE SHOP PLAZA
- 20 PERPENDICULAR WALK
- 21 MEANDERING WALK
- 22 EDGE WALK
- 23 PROPOSED AT-GRADE CROSSING
- 24 GROWERS MARKET
- 25 REFLECTING POOL
- 26 EXISTING BUILDINGS TO BE REMOVED BUT PRESENTED
- 27 LINE OF BRIDGE ABOVE

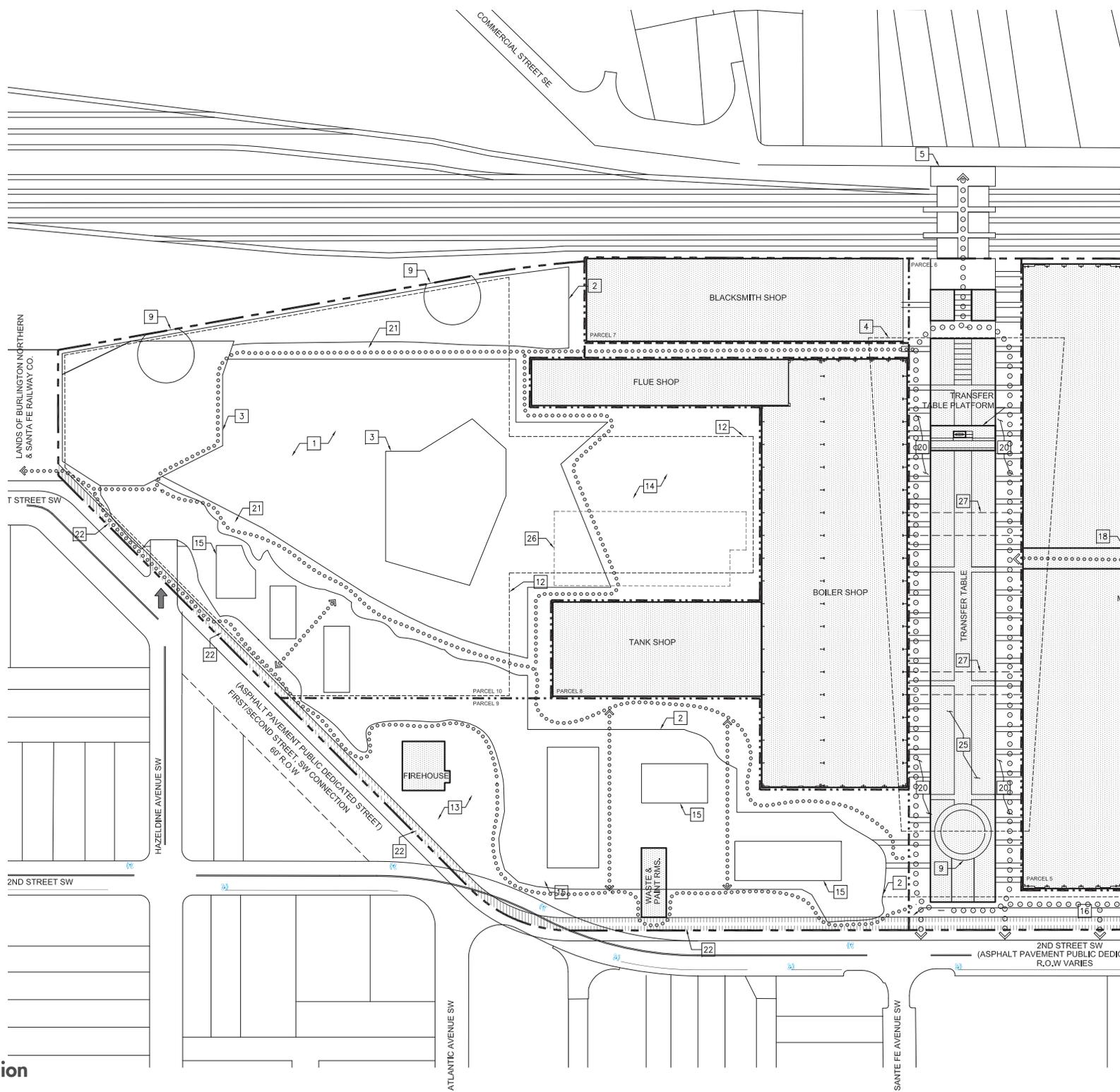


TABLEAU 6: Site Plan for Subdivision

6.9 Surrounding Development Opportunities

The longterm success of the Rail Yards redevelopment will be aided by the simultaneous and complimentary investment and redevelopment of its immediate surroundings. Although not directly part of the Master Plan scope, the strategic planning of this area is an important subject to be included in the MDP document. Recommendations for the development of these adjacent sites are as follows (refer to Figure 14 for diagram showing existing vacant lots in Barelás, dated 2010);

- Vacant parcels located within the Barelás and South Broadway neighborhoods could be developed and infilled as housing to match existing city fabric.
- Vacant or currently occupied parcels north of the site currently zoned SU-2 WD (warehouse district) could be developed as a continuation of the innovation and creative-based business hub envisioned by the Rail Yards Master Plan. The BNSF property immediately north of the Rail Yards site could be similarly developed, creating an innovation corridor that will connect downtown with the redeveloped Rail Yards.
- BNSF property immediately east of the Rail Yards could be planned for future public / cultural / community uses that will extend the cultural center envisioned as part of the Master Plan. In general, the planning strategy is for the Rail Yards to become an “anchor tenant” on both a cultural and private business level with complementary tenancies and uses extending outward.
- The large storm water catchment area located east of the BNSF rail lines and Commercial Street in South Broadway could be developed as a public park. As a place of repose away from the gritty aesthetic of Rail Yard, the park would be a great place to “take in” the redeveloped site without having to be there. It’s plan shape, focused orientation and sculpted terrain provide a natural

landscape for public gatherings and would be a great asset to the community.

- Pedestrian connections from the Rail Yards to local Barelás businesses located on Fourth Street are important and could be strengthened. At a minimum, Santa Fe Avenue could see additional tree planting and beautification to facilitate pedestrian traffic. Fourth Street local businesses will be a great amenity for future users of the Rail Yards site.
- Similarly, sidewalk connections along First Street between the Alvarado Transportation Center and the Rail Yards could be improved.



Figure 14: Existing Vacant Lots Highlighted in Yellow, Barelás SDP (2010)

FIRE DEPT.
HO.

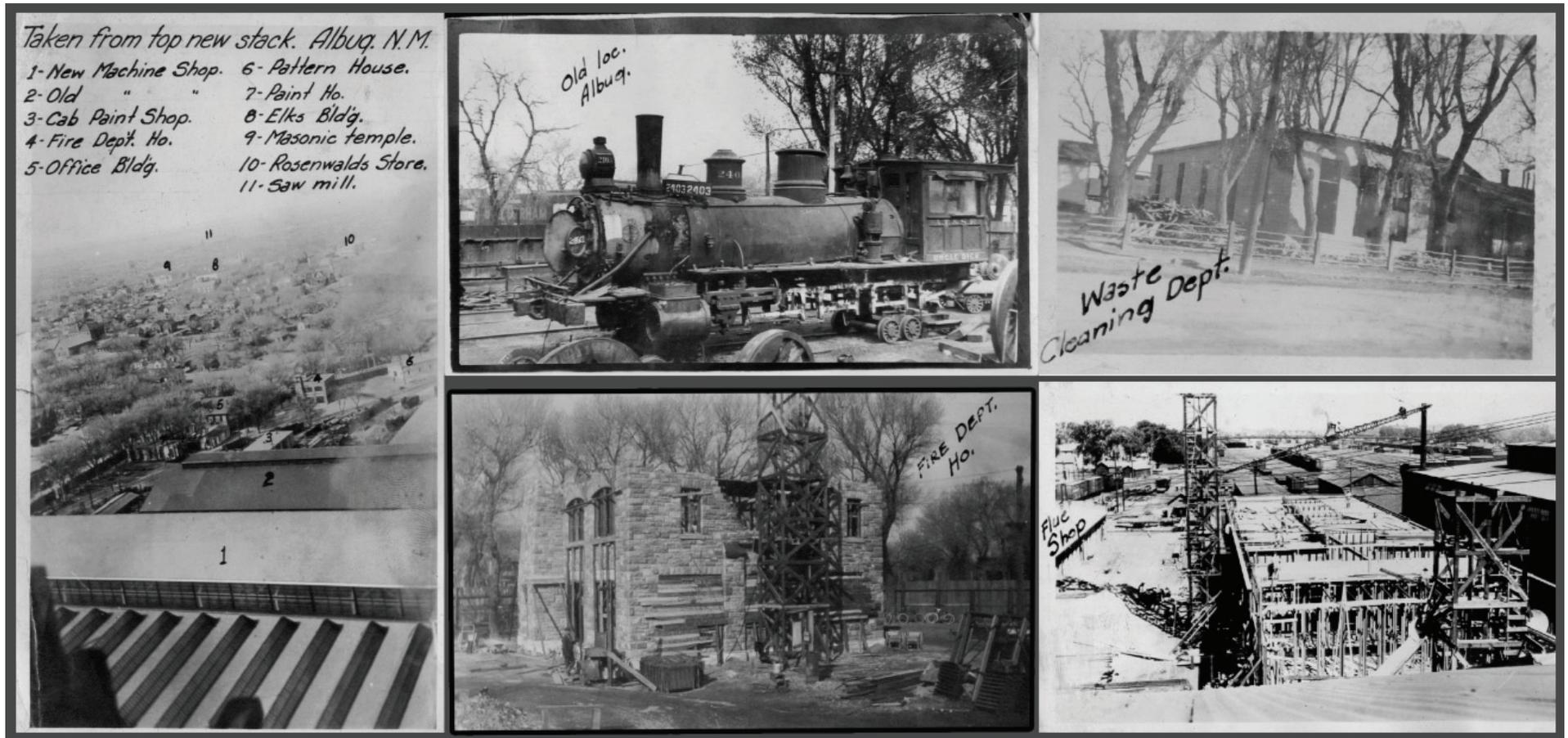


7.0 LANDSCAPE MASTER PLAN

The landscape concept for the Rail Yards celebrates the gritty nature of a railroad setting with materials and plants that remind patrons of the form and functional needs of the historic users of the site. Although the Rail Yards are historically an Industrial Site, photographic evidence depicts landscape, specifically large shade trees, along the perimeter of the site. Plantings are a valuable component of our environment by cooling our city, cleansing the air, and absorbing noise. The plant

palette for the Rail Yards includes a variety of plant species that are native or naturalized to the high desert landscape of New Mexico in an effort to create a space that relates to historic landscape condition of the site.

Refer to Section 10.5 for a description on the process for amendments or deviations to the MDP.



Rail Yards construction showing Historic Landscape

7.1 Design Goals

The landscape of the Rail Yards is intended to be aesthetically pleasing with distinguishing characteristics; meet the needs of the site users and adjacent neighborhoods; universally accessible; responsible with water use; considerate of maintenance issues; and considerate of the health, safety and welfare of the users. Landscape design goals include:

- Enhance the attributes and characteristics of the site to provide a sense of place while respecting the history of the site.
- Design the site to serve as a focal point and activity hub for the surrounding community.
- Provide universal accessibility with strong connections to and throughout the site.
- Create visual connections to the site.
- Create acoustic mounds between the Rail Yards and the surrounding neighborhoods. Plant materials and acoustic mounds will be used to attenuate noise from the railroad tracks and provide visual interest.
- Provide shade via trees and areas within the acoustic mounds that provide a retreat from sun exposure.
- Use plants to provide visual connections between multiple outdoor spaces and define edges of different lands uses and outdoor pedestrian areas.
- Provide plants with flowers, textures, and/or fragrance for sensory stimulation (i.e. sight, touch, and smell).

- Preserve the City's natural resources through innovative design approaches which respond to water conservation and solar exposure. Captured stormwater from multiple sources will be utilized for irrigation purposes. Opportunities to harvest water should also be explored to optimize use of this valuable resource.

7.2 General Landscape Design

The site allows for a wide range of activities to serve the interests of the greater community as well as the local neighborhoods. Therefore, the landscape design for the Rail Yards allows for and encourages year-around use by employing a plant palette with four seasons of visual interest. Shade trees will be used strategically to provide enjoyable spaces protected from sun exposure. Temporary and/or permanent shade structures may be constructed within the north and south Paseos, but should be sited to preserve the long vistas to the historic buildings.

In addition, trees and other plantings will be placed to define areas for their unique uses and buffering for safety as applicable. The plant palette and landscape features (e.g. hardscape, furnishings, lighting, signage, etc.) will be consistent throughout the Rail Yards property to identify a clear image for the site. Designing for pedestrian level views as well as aerial views of the site will serve to garner a memorable space for the community.

Some areas of the site will function like that of an extensive roof garden or greenroof. Subterranean buildings and parking areas provide ideal conditions to utilize green infrastructure opportunities. With a depth of only a few inches of growing medium, drought-tolerant plants with shallow root systems are a necessity. This type of roof garden is not intended to be walked upon, except for maintenance, and usually does not feature pedestrian access. As a result, this lightweight system may often be installed on existing

PLANT PALETTE*

SYMBOL	SCIENTIFIC NAME COMMON NAME	SIZE	INSTALLED SIZE MATURE SIZE	WATER USE
TREES				
DECIDUOUS SHADE AND STREET TREES:				
	ACER GLABRUM ROCKY MOUNTAIN MAPLE	2" B&B	8' HT. X 4" SPR. 30 HT. X 25" SPR.	MED
	FRAXINUS SPECIES ASH	2" B&B	14' HT. X 6" SPR. 30 HT. X 30" SPR.	MED+
	PLATANUS WRIGHTII ARIZONA SYCAMORE	2" B&B	12' HT. X 6" SPR. 30 HT. X 30" SPR.	MED
	TILIA CORDATA LITTLELEAF LINDEN	2" B&B	14' HT. X 6" SPR. 40 HT. X 30" SPR.	LOW
	ULMUS AMERICANA NEW HARMONY NEW HARMONY AMERICAN ELM	2" B&B	12' HT. X 6" SPR. 30 HT. X 30" SPR.	MED
DECIDUOUS FLOWERING ORNAMENTAL TREES:				
	CHALCOPHIS LINEARIS DESERT WILLOW	2" B&B	8' HT. X 6" SPR. 20 HT. X 25" SPR.	MED
	FORESTERIA NEOMEXICANA NEW MEXICO OLIVE	15 GAL.	8' HT. X 4" SPR. 10 HT. X 10" SPR.	MED
	PYRUS SPECIES FLOWERING PEAR	2" B&B	8' HT. X 6" SPR. 40 HT. X 30" SPR.	MED
	ROBINIA AMBIGUA PURPLE ROBE PURPLE ROBE LOGJIST	2" B&B	18' HT. X 6" SPR. 30 HT. X 30" SPR.	MED
	VITEX AGNIUS-CASTUS CHRISTY TREE	15 GAL.	8' HT. X 6" SPR. 20 HT. X 20" SPR.	MED
EVERGREEN TREES:				
	PINUS NIGRA AUSTRALIAN PINE	24" BOX	8" MIN. HT. 35 HT. X 25" SPR.	MED
	PINUS SYLVESTRIS SCOTCH PINE	24" BOX	8" MIN. HT. 45 HT. X 25" SPR.	MED
SHRUBS & GROUNDCOVERS				
DECIDUOUS SHRUBS & GROUNDCOVERS:				
	ARTEMISIA & SALVIA SPECIES SAGE	1 GAL.	1-2" O.C. 1-2 HT. X 2-3' SPR.	LOW+
	BUDDLEIA DAVIDII NANKIENSIS DWARF BUTTERFLY BUSH	1 GAL.	4" O.C. 4 HT. X 3' SPR.	MED
	CHRYSOTHAMNUS NAUSEOSUS CHAMISA	1 GAL.	5" O.C. 4 HT. X 4' SPR.	MED
	JASMIMUM NUDFLORUM WINTER JASMINE	1 GAL.	12" O.C. 3 HT. X 3' SPR.	LOW+
	LEUCOPHYLLUM FRUTESCENS COMPACTUM	1 GAL.	4" O.C. 3 HT. X 3' SPR.	LOW+
	POTENTILLA SPECIES SHRUBBY AND SPRING CINQUEFOILS	1 GAL.	4" O.C. 3 HT. X 3' SPR.	MED
	PRUNUS BESSEYI WESTERN SAND CHERRY	1 GAL.	4" O.C. 3 HT. X 3' SPR.	MED
	PSYDTHAMNUS SCOPARIUS BROOM DALEA	1 GAL.	8" O.C. 3 HT. X 3' SPR.	LOW
	RHUS TRILOBATA SPECIES SUMAC	1 GAL.	5" O.C. 2-4 HT. X 4' SPR.	LOW
EVERGREEN SHRUBS & GROUNDCOVERS:				
	AGAVE SPECIES AGAVE	5 GAL.	2" O.C. 1 HT. X 2' SPR.	LOW+
	ARTEMISIA SPECIES SAGE	5 GAL.	4" O.C. 4 HT. X 4' SPR.	LOW
	ATRIPLIX CANESCENS FOURWING SALTBUSH	1 GAL.	5" O.C. 4 HT. X 6' SPR.	LOW
	CERATOSTIGMA PLUMBAGINOIDES BLUE LEADWORT	1 GAL.	2" O.C. 1 HT. X 3' SPR.	MED
	EPHEDRA SPECIES JOINT FIR	1 GAL.	5" O.C. 4 HT. X 4' SPR.	LOW
	FALLUGIA PARADOXA APACHE PLUME	5 GAL.	5" O.C. 4 HT. X 4' SPR.	LOW
	LAVANDULA SPECIES LAVENDER	1 GAL.	4" O.C. 3 HT. X 3' SPR.	MED
	OPUNTIA ELLISIANA SPINELESS PRICKLY PEAR	1 GAL.	4" O.C. 3 HT. X 3' SPR.	LOW
	PINUS MUGO MUGGO PINE	5 GAL.	5" O.C. 4 HT. X 4' SPR.	LOW
	ROSMARINUS OFFICINALIS ROSEMARY	1 GAL.	5" O.C. 3 HT. X 4' SPR.	LOW+
	SANTOLINA SPECIES SANTOLINA	1 GAL.	4" O.C. 2 HT. X 3' SPR.	LOW
	SELIUM SPECIES STONECROP	1 GAL.	3" O.C. 2 HT. X 2' SPR.	LOW
	YUCCA SPECIES YUCCA	2 GAL.	5" O.C. 1-4 HT. X 1-4' SPR.	LOW
GRASSES				
SYNTHETIC TURF				
A VARIETY OF SYNTHETIC OPTIONS ARE AVAILABLE. SYNTHETIC PRODUCTS SHOULD BE CHOSEN FOR DURABILITY AND MINIMAL MAINTENANCE.				
TRADITIONAL TURF SPECIES:				
POA HYBRID - (OR SIMILAR THAT REQUIRES LESS IRRIGATION HAS DEEPER ROOTS AND AGGRESSIVE RHIZOMES, PLUS EXCELLENT HEAT TOLERANCE; E.G. REVELLE - GARDNER TURFGRASS)				
NATIVE TURF AND GENERAL USE SPECIES:				
	BOUTELOUA SPECIES GRAMMA	SEED	4 LBS. PLS/1000 SF	LOW+
	BUCHLOE DACTYLOIDES BUFFALO GRASS	SEED	4 LBS. PLS/1000 SF VARIES	LOW+
	HILARIA JAMESII GALEITA	1 GAL.	1" O.C. 14" HT. X 14" SPR.	LOW
ORNAMENTAL SPECIES:				
	ARISTIDA LONGISETA PURPLE TREENAW	1 GAL.	2" O.C. 18" HT. X 18" SPR.	LOW
	CALAMAGROSTIS X ACUTIFLORA KARL FOERSTER GRASS	1 GAL.	3" O.C. 3 HT. X 2' SPR.	MED
	MUHLENBERGIA CAPILLARIS REGAL MIST	1 GAL.	5" O.C. 3 HT. X 4' SPR.	MED
	PENNISETUM SPECIES FOUNTAIN GRASS	1 GAL.	3" O.C. 2 HT. X 2' SPR.	LOW

UNDERGROUND
PARKING
GARAGE, TYP.

CISTERN
(TYP. OF 5)

UNDERGROUND
PARKING
GARAGE, TYP.

PASEO

QUADRANGLE

PERPENDICULAR
WALK

WATER
FEATURE

SOUTH BROADWAY

1ST STREET SW

2ND STREET SW

HAZELDINE AVENUE SW

HAZELDINE AVENUE SW

ATLANTIC AVENUE SW

2ND STREET SW

SANTE FE AVENUE SW

2ND STREET SW

BARELAS

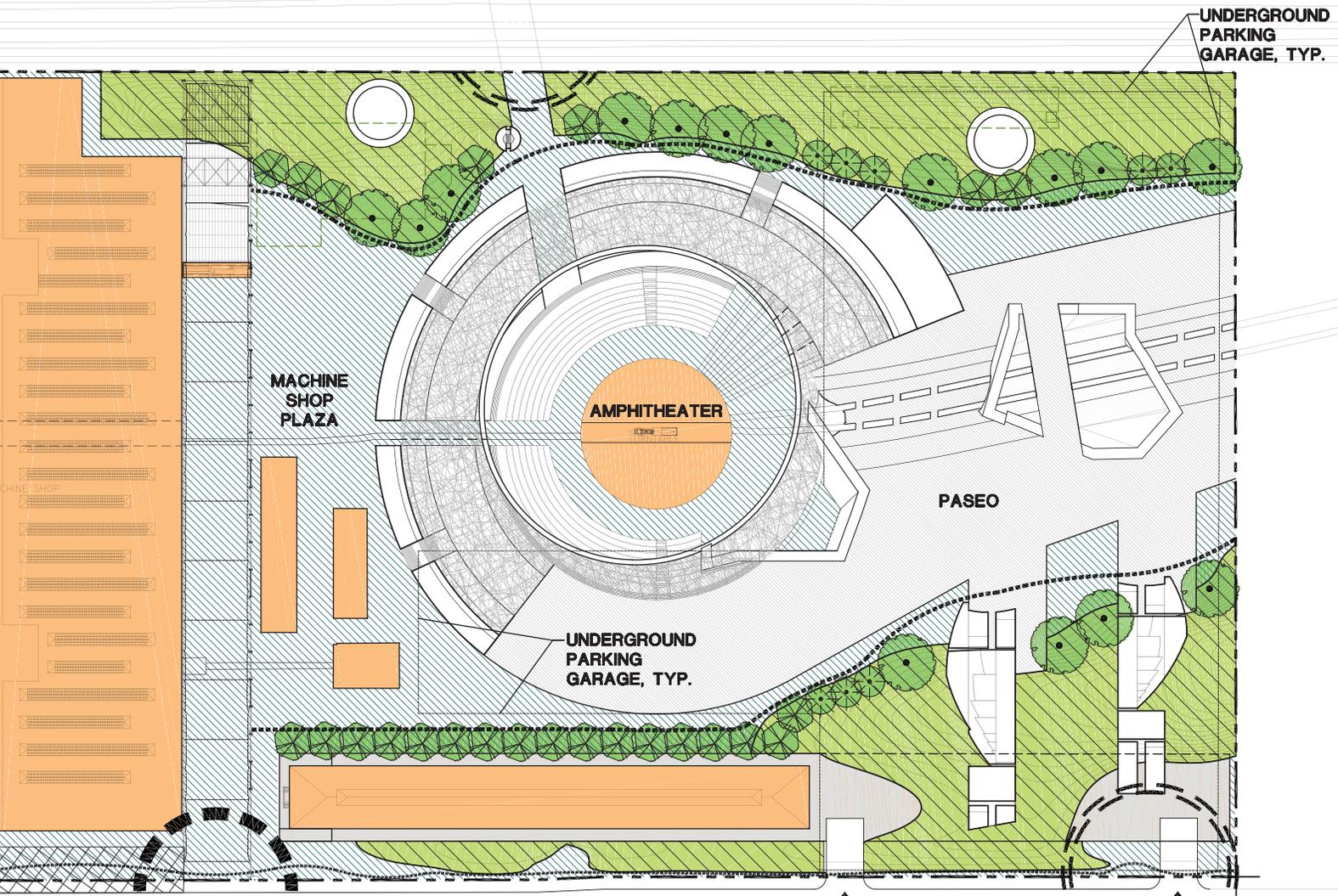


Tableau 7: Landscape Master Plan

PLANT PALETTE*

SCIENTIFIC NAME COMMON NAME	SIZE	INSTALLED SIZE MATURE SIZE	WATER USE
VINES			
DECIDUOUS VINES:			
CAMPIDIS RADICANS TRUMPET VINE	1 GAL.	8' O.C. 40' SPR.	MED
PARTHENOCISSUS INSERTA WOODBINE	1 GAL.	8' O.C. 40' SPR.	MED
EVERGREEN VINES:			
HEDERA HELIX ENGLISH IVY	1 GAL.	3' O.C. 6' SPR.	MED
LONICERA SPECIES HONEYBUCKLE	1 GAL.	4' O.C. 12' SPR.	MED
FLOWERS			
ANNUALS:			
GALLIARIA PULCHELLA BLANKETFLOWER	1 GAL.	3' HT. X 3' SPR.	LOW
MIRABILIS SPECIES FOUR O'CLOCK	1 GAL.	8' O.C. 2'-4' HT. X 4'-2' SPR.	LOW+
SALVIA SPECIES SAGE	1 GAL.	3' O.C. 3' HT. X 3' SPR.	MED
TARGETES SPECIES MARIIGOLD	1 GAL.	2' O.C. 18" HT. X 18" SPR.	MED
VIOLA WITTRICKIANA PANSY	1 GAL.	1' O.C. 1' HT. X 1' SPR.	LOW
PERENNIALS:			
ALCEA ROSEA HOLLYHOCK	1 GAL.	2' O.C. 4' HT. X 1' SPR.	MED
CENTRANTHUS RUBER RED VALERIAN	1 GAL.	4' O.C. 3' HT. X 3' SPR.	MED
HEMEROCALLIS HYBRIDS DANIELLES	1 GAL.	2' O.C. 2' HT. X 3' SPR.	MED
LINUM PERENNE BLUE FLAX	1 GAL.	2' O.C. 18" HT. X 18" SPR.	MED
PENSTEMON SPP. PENSTEMON	1 GAL.	2' O.C. 2' HT. X 2' SPR.	LOW
RATIBIDA COLLUMIFERA CONEFLOWER	1 GAL.	3' O.C. 30" HT. X 30" SPR.	LOW+
BULBS:			
CROCUS SPP. CROCUS	BULBS	1' O.C. 6" HT. X 6" SPR.	MED
NARCISSUS SPP. DAFFODIL	BULBS	2' O.C. 1' HT. X 1' SPR.	MED
MUSCARI ARMENIACUM GRAPPE HYACINTH	BULBS	6" O.C. 6" HT. X 6" SPR.	LOW+
TULIPA SPP. TULIP	BULBS	1' O.C. 1' HT. X 6" SPR.	MED

*NOTE: THIS PLANT PALETTE SERVES AS A SUGGESTED LIST AND OTHERS MAY BE ADDED TO FIT PARTICULAR SITUATIONS AS NECESSARY.



UNDERGROUND
PARKING
GARAGE, TYP.

MACHINE
SHOP
PLAZA

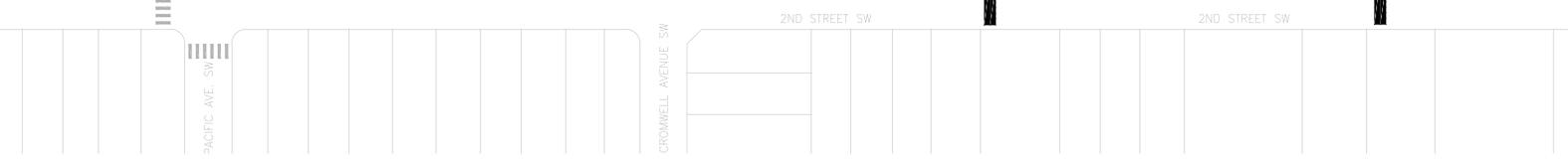
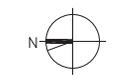
AMPHITHEATER

PASEO

UNDERGROUND
PARKING
GARAGE, TYP.

LEGEND

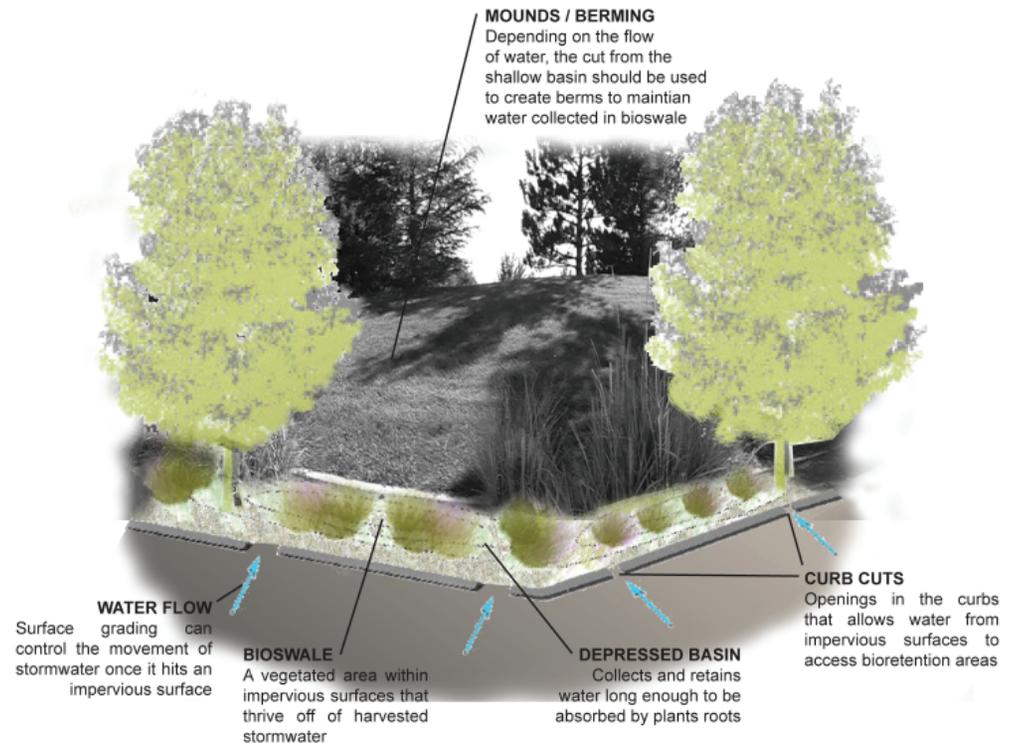
SYMBOL	DESCRIPTION
	EXISTING BLDG TO BE PRESERVED
	EXISTING PLATFORM TO BE PRESERVED
	WATER FEATURE
	ACOUSTIC MOUNDS
	TRANSIT PLAZA
	PUBLIC WALK
	PASEO
	MEANDERING PATHS
	EDGE WALK (ALONG 2ND ST.)
	CONNECTORS - PRIMARY
	NEIGHBORHOOD / SITE INTERFACE
	PARKING GARAGE ACCESS



buildings without the expense of structural modification and maintenance. Although retrofitting existing buildings with greenroofs may be explored, their inclusion is not anticipated at the Rail Yards. Rather, new subterranean structures are proposed to offer greenroof spaces. Typically, the main purposes of extensive roof gardens are to add insulation, address ecological issues, and improve views from overlooking offices and apartments. By incorporating greenroofs into the design of the acoustic mounds at the Rail Yards, the site will serve as a local precedent in how the economic undertaking of upgrading a desolate rooftop or creating a new building's greenroof space is far less of a burden when compared to the ecologic and healthful contributions immediately and over time.

The proposed landscape design for the Rail Yards emphasizes sustainability with permeable surfaces, low water use, low maintenance, and recycling to the greatest extent possible. On-grade plaza elements not directly above the subterranean garage should include permeable hardscape options. The plant palette shall primarily include native and/or naturalized plant species that perform well in an arid environment. Plants will be chosen for their ability to stimulate the senses by texture, fragrance, and/or flowers. Recycling on-site materials for soils, mulches, and landscape features are encouraged in effort to celebrate the setting and history of the site.

Rainwater harvesting measures, such as curb cuts and bioswales, shall be provided where feasible. Curb cuts (minimum 1' wide) may be provided in places where there is a curb or seat wall in order to allow water runoff to infiltrate landscape areas. Swales shall be composed of native and/or naturalized vegetation with cobble along the centerline and side slopes no steeper than 3:1 or use of vertical boulder walls as edging. Soils may need to be amended to facilitate infiltration. Intermittent check dams may be installed to further abet silt capture as necessary. The image below illustrates multiple options for stormwater capture that may be used at the Rail Yards.



Options for stormwater capture

All planting areas, other than turf, shall be top dressed with a minimum 3" layer of mulch. Turfgrass will be limited per City requirements and placed to maximize pedestrian views and access. Street trees shall be grouped to frame views and enhance the landscaped mounds at the edges of the site. The Street Tree Ordinance shall not apply to Second Street for the Rail Yards project.

7.2.1 Acoustic Mounds

The acoustic mounds help to frame the Rail Yards boundaries and provide a buffer from the surrounding uses in an interesting and playful manner. The mounds should have flexibility of being either planted, hardscape, or a mixture of both. The mounds may be planted with mostly drought-resistant species to provide recreational spaces, as well as enhance their visual screening function. Deep-rooted native and naturalized plants are preferred for infiltration and reduced maintenance. Including native and naturalized grasses with fibrous root systems will help alleviate erosion concerns along the steep slopes that may occur on the mounds. Depending on design, there may be an opportunity to provide turfgrass in areas with slopes that are amenable to mower access. The use of grasses should signal the transition from more manicured to wilder areas of the landscape. Low and high water use turfgrasses should be defined separately from each other with a shrub buffer. Plant materials on the acoustic mounds will be kept below eye-level to accentuate the rolling line of the mounds. The only exception on plant heights is on the down slope of the acoustic mounds where trees may line the edges. Trees will follow the meandering path on the interior side, but will serve to frame and enhance views on the Second Street side. Seating opportunities may be provided via slopes as well as fixed or movable furnishings. Some slopes on the mounds may be terraced to provide integrated

seating. The slopes should generally follow the City of Albuquerque's design standards for slope requirements for safety and erosion control.

7.2.2 Meandering Paths

The meandering paths line the interior sides of the acoustic mounds. Shade trees and seating opportunities will be placed along these paths to create a welcome retreat for enjoying views of the site across the open paseos. Where the edges of the Acoustic Mounds meet grade (typically hardscape), swales should be identified as needed to address water harvesting drainage, as well as to supplement the irrigation for plants.

7.2.3 Workforce Housing

The workforce housing is located at the southwestern portion of the site adjacent the proposed acoustic mound features. The mounds in this location are focused more on serving residents rather than the visiting public. Although drought-resistant species will still dominate the plant palette, places for recreation that include turfgrasses are encouraged. Gathering spaces, with shaded seating opportunities, for community events for the residents shall be provided.

7.2.4 Firehouse Cafe

The firehouse is a historic building that will be highlighted with its own plaza surrounded by acoustic mounds. Planting beds and trees in tree



Tiguex Park, Albuquerque, smaller scale precedent for Acoustic Mound concept

wells may be incorporated within the plaza to soften the space and reduce sun exposure. The use of outdoor seating with umbrellas will also be used to activate this pedestrian area.

7.2.5 Transit Plaza

The transit plaza is located along Second Street. It will include a bus shelter, benches, and a trash receptacles that meet the typical City standards. The design of this area should be coordinated with ABQ Ride.

7.2.6 Connectors

The Connectors are the major entrances to the site. The Neighborhood/Site Interface locations are additional access points. These areas may include site furnishings and amenities as well as special paving and landscape plantings.

7.3 Amenities

Site furnishings and other amenities will be of a consistent high quality, vandal resistant design. They will be constructed of durable materials such as concrete and powder coated steel. A consistent color palette that is in keeping with the overall design intent of the Rail Yards will be utilized for finishes. A variety of amenities are anticipated to satisfy a range of needs for potential patrons.

7.3.1 Seating

Seating areas will be provided for individual use and for larger group activities to ensure pedestrian comfort throughout the site. The paseos will provide the greatest opportunity for seating quantities and configuration options, but seating opportunities shall be placed periodically along all pedestrian routes. Permanent seating opportunities will be strategically placed throughout the Rail Yards and mobile, temporary seating will be made available for special events. Seating areas may include benches, chairs, picnic tables, seat walls,

and informal seating along landscaped slopes. Low retaining walls may be included at the base of the acoustic mounds to soften the slope transition with seating opportunities at the edges of pedestrian traffic flow. Picnic tables should be provided in numerous locations across the site for those who wish to enjoy a meal outdoors. Seating options should be shaded by trees and/or architectural features whenever possible to provide a comfortable resting space.

7.3.2 Trash and Recycling Receptacles

Trash and recycling receptacles will be located in all areas where people gather to attend events, enjoy refreshments, wait for transportation, or picnic. They will also be located in close proximity to area entries and exits to allow people to easily dispose of waste when traversing various site activities. Receptacles will be placed in areas that are easily accessible to vehicles in order to provide for ease of maintenance.

7.3.3 Drinking Fountains

Drinking fountains will be located in high pedestrian use areas and near picnic tables. They will be provided with freeze-proof valves and located in areas easily accessible to maintenance vehicles.

7.3.4. Bike Racks

Bike racks shall be provided near vehicular parking areas as well as at various perimeter site locations. They should not be installed within the interior of the site in effort to deter bike riding through the site; rather, they should be installed in locations that encourage dismount before traversing past the acoustic mounds and into the pedestrian spaces. Signage may be installed to identify bike dismount areas as needed. Bicycle parking will be provided at a rate of 1 space per each 20 vehicular parking spaces.

7.3.5 Bollards

Permanent bollards will be located as necessary to prohibit vehicular

traffic in restricted areas. Removable bollards will be provided where access for fire trucks and other emergency vehicles is required. Bollards will be of a unified design throughout the site.

7.3.6 Information Kiosks

The design of the information kiosks will be in keeping with the industrial architectural style of the Rail Yards. Appropriate kiosk design shall ensure articulation of all kiosk faces, rather than placing all emphasis on the front elevation of the structure and neglecting or downgrading the aesthetic appeal of the side and rear elevations. The kiosks will be located in high pedestrian use areas such as the transit plaza, market areas, and paseos. Information kiosks will include permanent signage and maps of the site identifying locations of major activity centers. They will also accommodate temporary signage for special events.

7.4 Water Conservation Ordinance Compliance

The plant palette is predominantly comprised of plants with low to medium water use requirements, thereby minimizing irrigation needs while ensuring viability of the plants. An evapotranspiration management controller should be included in the design of the irrigation system to monitor weather conditions so that optimum moisture balance is achieved and the possibility of over-watering is reduced.

7.5 Irrigation System

The irrigation system shall adhere to the standards outlined in the Water Conservation Landscaping and Water Waste Ordinance. A fully automated irrigation system with a centralized computer control system will be used to irrigate tree, shrub, and groundcover planting areas. Satellite controllers will be placed at strategic areas and linked back to the central system. Mainline piping shall be provided according to

standard City specifications. Gate valves will be located at strategic points along the mainline piping system to allow for isolation of sections for maintenance reasons. The irrigation system will be metered separately based on ownership.

The irrigation system will be designed to isolate plant material according to solar exposure and will be set up by plant zones according to water requirements. Trees, shrubs, and groundcovers will be grouped on the same valve. Turf areas will be irrigated with pop-up rotary sprinklers with high efficiency nozzles. Temporary irrigation shall be provided for all areas receiving native seed mixes until established. The design for shrub and groundcover areas shall consider alternative irrigation technology (e.g. bubblers, drip irrigation, dry water packs, water harvesting opportunities, etc.). The irrigation system for all cool season turf grass shall be designed to apply 2/3-inch of water in a 7 hour window.

Where non-potable water sources are utilized, irrigation components will be selected for use with non-potable water sources to allow for connection to the captured stormwater systems. Backflow prevention will be provided per City code to protect the potable water system from the irrigation system. Irrigation components shall be readily available for maintenance and/or replacement. The entire irrigation system will be designed to maximize water efficiency.

7.6 Clear Sight Requirements

Landscape plans included with individual projects will ensure that landscaping and signing will not interfere with clear sight requirements at points of ingress/egress at the site. Therefore, signs, walls, trees, and shrubbery between 3 and 8 feet tall (as measured from the gutter pan) will not be acceptable in this area and shall be noted as such on the landscape plan.

7.7 PNM Coordination

As part of the landscape plan included with individual projects, coordination with PNM's New Service Delivery Department is necessary regarding proposed tree location and height, sign location and height, and lighting height in order to ensure sufficient safety clearances.

Landscape screening will be designed to allow for access to electric utilities. It is necessary to provide adequate clearance of ten feet in front and at least five feet on the remaining three sides surrounding all ground-mounted equipment for safe operation, maintenance, and repair purposes.

7.8 Maintenance Responsibility

Maintenance of the landscaping and irrigation system, including those areas within the public Rights-Of-Way shall be the responsibility of the owner. In addition, maintenance of landscape elements such as benches, litter receptacles, signs, etc., within the common areas shall be the responsibility of the owner.

7.9 Landscape Planting Design

(Note: This plant palette serves as a suggested list and others may be added to fit particular situations as necessary.)

There are four primary areas of landscape plantings at the Rail Yards property. These may include but are not limited to:

- **Acoustic Mounds**
- **Meandering Paths**
- **Connectors**
- **Transit Plaza**

The landscape treatment is limited to these four areas. The main

plaza areas are not anticipated to include any plant materials. The planting approach for each of these four areas is provided below. See Plant Palette at the end of this section for a complete list of suggested plant species for the Rail Yards site.

7.9.1 Acoustic Mounds

The acoustic mounds are located along most of the site's boundary. Their unique forms should be celebrated with a plant palette that adjusts depending on site conditions (i.e. slope, orientation, activity space, etc.) while emphasizing the organic form of the acoustic mounds. In all cases, the plants selected for use on the acoustic mounds should have a mature size that does not exceed four feet in height. The majority of the acoustic mounds will be planted with shrubs, groundcovers, native and ornamental grasses, vines, and flowers, but turfgrasses are allowable within the confines of the City's limitation on high-water-use turf.

Accessibility of acoustic mounds will vary across the site dependent on their internal use (when applicable) and the grading necessary to transition safely to surrounding hardscape areas. Terracing is encouraged to soften slopes and provide seating opportunities near activity centers. Slopes will require vegetation to prevent erosion and beautify the landscape. However, steep areas are difficult to mow (turfgrasses) and maintain. Synthetic turf may be an appropriate alternate to consider. Heavy ornamental grass cover is encouraged as it is better at slowing water runoff than is turfgrass, but both are acceptable means for binding soil to the slope.

Turfgrass will be limited, but placed in key locations for patron use. The workforce housing is anticipated to have one large turfgrass area for use by residents for recreation and community gathering events. Other acoustic mounds may include turfgrass, but are anticipated for use more as an oasis. Although 1.5% slope is preferred to maximize recreational uses, turfgrass may be installed on landscapes up to 5:1

slope for areas to be used for passive seating and similar uses. In addition, irrigation sprinklers that typically serve turfgrass areas should be kept at least five feet from walls, windows, and other architectural structures to prevent alkali staining on surfaces.

Appropriate traditional, recreational turfgrass species for the Acoustic Mounds include but not limited to:

- Poa hybrid (see Plant Palette at the end of this section for description of specifications as well as an example species)

Appropriate native and general use turfgrass species for the Acoustic Mounds may include but are not limited to:

- Bouteloua species – Grama
- Buchloe dactyloides - Buffalograss
- Hilaria jamesii - Galleta

Grasses are a key component to the natural New Mexican landscape as they can be found growing successfully across all areas of the state. Grasses typically are fast-growing and have strong root systems that are well-suited for stabilizing slopes to prevent erosion. The steepest slopes should include dense plantings of ornamental grasses.

Ornamental grasses, shrubs, groundcovers, and vines with aggressive rhizomes and stolons may all be planted on steeper slopes (5:1 and greater) to help stabilize the soil. These plant types should also be included in the buffer areas between more manicured (i.e. traditional turfgrass) to wilder areas (i.e. native turf) as well as for general planting on the acoustic mounds across the site.

Appropriate ornamental grass species for the steepest slopes and other areas on the Acoustic Mounds may include but are not limited to:

- Aristida longiseta – Purple Threeawn
- Calamagrostis x acutiflora ‘Karl Foerster’ – Karl Foerster Grass
- Muhlenbergia capillaries ‘Regal Mist’ – Regal Mist Muhly Grass
- Pennisetum species –Fountain Grass

Appropriate shrubs, groundcovers, and vines species for steep slopes, buffer areas and general planting on the Acoustic Mounds include but not limited to:

Shrubs & Groundcovers

- Artemisia & Salvia – Sage (deciduous & evergreen)
- Buddleia davidii nanhoensis – Dwarf Butterfly Bush
- Chrysothamnus nauseosus - Chamisa
- Jasminum nudiflorum – Winter Jasmine
- Leucophyllum frutescens ‘compactum’ – Compact Ceniza
- Potentilla species – Shrubby and Spring Cinquefoils
- Prunus besseyi – Western Sand Cherry
- Psoralea scoparius – Broom Dalea
- Rhus trilobata species –Sumac
- Agave species –Agave
- Atriplex canescens – Fourwing Saltbush
- Ceratostigma plumbaginoides – Blue Leadwort
- Ephedra species – Joint Fir
- Fallugia paradoxa – Apache Plume
- Lavandula species –Lavender
- Opuntia ellisiana – Spineless Prickly Pear
- Pinus mugo – Mugo Pine
- Rosmarinus officinalis–Rosemary
- Salvia species –Sage
- Santolina species – Santolina
- Sedum species - Stonecrop
- Yucca species –Yucca

Vines

- *Campsis radicans* – Trumpet Vine
- *Parthenocissus inserta* – Woodbine
- *Hedera helix* – English Ivy
- *Lonicera* species - Honeysuckle

Flowers should be provided at the acoustic mounds that provided year around colorful interest. At the base of the acoustic mounds, as accent across the acoustic mounds, and at key gateway acoustic mound locations, a variety of flowers may be used for accent purposes.

Appropriate flower species for the accent at the base of the Acoustic Mounds may include but are not limited to:

Perennials

- *Alcea rosea* - Hollyhock
- *Centranthus ruber* – Red Valerian
- *Hemerocallis* hybrids – Daylilies
- *Linium perenne* – Blue Flax
- *Penstemon* spp. – Penstemon
- *Ratibida columnifera* - Coneflower

Bulbs

- *Crocus* spp. - Crocus
- *Narcissus* spp. – Daffodil
- *Muscari armeniacum* – Grape Hyacinth
- *Tulipa* spp. – Tulip

In addition, the Gateway locations at the base of the Acoustic Mounds also may include but are not limited to:

Annuals

- *Gaillardia pulchella* – Blanketflower
- *Mirabilis* species – Four O'clock

- *Salvia* species – Sage
- *Tagetes* species - Marigold
- *Viola wittrockiana* – Pansy

Passive water harvesting opportunities are required. The toe of the slope of all acoustic mounds shall be recessed below the adjacent paving to capture runoff; both stormwater from the paving as well as from the irrigation system serving the planted acoustic mounds. Depending on the height of acoustic mound and degree of slope to the border of the paved areas, swales of cobble (rather than smaller diameter rock mulch or turfgrass) with plantings may be needed to minimize erosion.

7.9.2 Meandering Path

The meandering paths provide a means for pedestrian navigation across the Rail Yards property. Generally, the paths run north-south on the interior side of the acoustic mounds. Trees shall be placed to define both sides of the path edges as well as “rooms” and other features along the paths to be highlighted. Shade trees should be provided to create comfortable retreats for patrons as they traverse the site. Ornamental trees will identify special features along the path. Evergreen trees shall be included to offer year around color throughout the site.

Appropriate tree species for the Meandering Paths may include but are not limited to:

Shade Trees

- *Ulmus Americana* ‘New Harmony’ - American Elm
- *Platanus wrightii* – Arizona Sycamore

Ornamental Trees

- *Chilopsis linearis* – Desert Willow
- *Robinia ambigua* ‘Purple Robe’ – Purple Robe Locust

Evergreen Trees

- Pinus nigra – Austrian Pine
- Pinus sylvestris – Scotch Pine

7.9.3 Connectors

The connectors are the access areas, both pedestrian and vehicular, into the Rail Yards property. The connectors include the Neighborhood/Site Interface locations as secondary access points to the property. These locations may be framed with shade and ornamental trees as a form of wayfinding to indicate an access point. In addition, flowers may be used to accent these major access points for a welcoming entry.

Appropriate tree species for the Connectors may include but are not limited to;

Shade Trees

- Fraxinus species –Ash
- Acer glabrum - Rocky Mountain Maple

Ornamental Trees

- Foresteria neomexicana – New Mexico Olive
- Pyrus species – Flowering Pear
- Vitex agnus-castus – Chaste Tree

For appropriate flower species for the Connectors, see list for Acoustic Mounds.

7.9.4 Transit Plaza

The transit plaza serves as the “front porch” of the Rail Yards property. Shade and specialty trees as well as ornamental trees shall be used to provide protection from the sun for waiting transit passengers as well as accenting the space while still framing views into the site.

Appropriate tree species for the Transit Plaza may include but are not

limited to:

Shade Trees

- Fraxinus species –Ash
- Tilia Cordata – Littleleaf Linden

Ornamental Trees

- Pyrus species – Flowering Pear
- Robinia ambigua ‘Purple Robe’ – Purple Robe Locust

All trees on the property shall be placed in tree grates if not within landscape planting areas. These features shall be designed to provide protection for the trees from pedestrian traffic.

With exception of the turfgrass areas, all planting areas shall be top dressed with mulch as described in the General Landscape Design section of this document. Mulches shall be provided that are compatible with the conditions of the landscape as well as the plant selection for the space. Organic mulch will improve soil quality and is ideally suited for plants that prefer humus conditions (e.g. annuals and other heavily flowering plants). Rock mulches are best for plants requiring well-drained soil as well as for areas needing minimal maintenance. Organic mulches typically need to be renewed annually, but rock mulch may last for several years before needing supplemental mulch. Mulches placed in runoff, drainage areas and/or in wind “tunnels” shall be angled-face rock mulches that are heavy enough (i.e. large enough diameter) to withstand stormwater and strong air flows. All areas top-dressed with rock mulches shall include a filter fabric underlay to minimize maintenance need



Sycamore



Ash



American Elm



Littleleaf Linden

7.10 Plant Palette

(Note: This plant palette serves as a suggested list and others may be added to fit situations as necessary)

7.10.1 TREES

Deciduous Shade and Street Trees

- *Acer glabrum* - Rocky Mountain Maple
- *Fraxinus* species –Ash
- *Platanus wrightii* – Arizona Sycamore
- *Tilia Cordata* – Littleleaf Linden
- *Ulmus Americana* ‘New Harmony’ - American Elm



Chaste Tree



New Mexico Olive Tree



Flowering Pear



Desert Willow

Deciduous Flowering Ornamental Trees

- *Chilopsis linearis* – Desert Willow
- *Foresteria neomexicana* – New Mexico Olive
- *Pyrus* species – Flowering Pear
- *Robinia ambigua* 'Purple Robe' – Purple Robe Locust
- *Vitex agnus-castus* – Chaste Tree



Scotch Pine



Austrian Pine



Low-Water Traditional Turf



Grama + Buffalograss Mix

Evergreen Trees

- *Pinus nigra* – Austrian Pine
- *Pinus sylvestris* – Scotch Pine

7.10.2 GRASSES

Traditional Turf Species

- *Poa* hybrid – (or similar that requires less irrigation, has deeper roots and aggressive rhizomes, plus excellent heat tolerance; e.g. Reveille - Gardner Turfgrass)

Native Turf and General Use Species

- *Bouteloua* species–Gramma
- *Buchloe dactyloides* - Buffalograss
- *Hilaria jamesii* - Galleta



Fountain Grass



Purple Threeawn



Muhly Grass



Karl Foerster Grass

Ornamental Species

- *Aristida longiseta* – Purple Threeawn
- *Calamagrostis x acutiflora* 'Karl Foerster' – Karl Foerster Grass
- *Muhlenbergia capillaries* 'Regal Mist' – Regal Mist Muhly Grass
- *Pennisetum* species –Fountain Grass



Butterfly Bush



Sage



Chamisa

7.10.3 SHRUBS & GROUNDCOVERS

Deciduous Shrubs & Groundcovers

- Artemisia & Salvia Species – Sage
- Buddleia davidii nanhoensis – Dwarf Butterfly Bush
- Chrysothamnus nauseosus - Chamisa
- Jasminum nudiflorum – Winter Jasmine
- Leucophyllum frutescens ‘compactum’ – Compact Ceniza
- Potentilla species – Shrubby and Spring Cinquefoils
- Prunus besseyi – Western Sand Cherry
- Psoralea scoparius – Broom Dalea
- Rhus trilobata species –Sumac



Agave



Stonecrop



Yucca

Evergreen Shrubs & Groundcovers

- Agave species –Agave
- Artemisia & Salvia species –Sage
- Atriplex canescens – Fourwing Saltbush
- Ceratostigma plumbaginoides – Blue Leadwort
- Ephedra species – Joint Fir
- Fallugia paradoxa – Apache Plume
- Lavandula species –Lavender
- Opuntia ellisiana – Spineless Prickly Pear
- Pinus mugo – Mugo Pine
- Rosmarinus officinalis–Rosemary
- Santolina species – Santolina
- Sedum species - Stonecrop
- Yucca species –Yucca



Trumpet Vine



Honeysuckle



English Ivy

7.10.4 VINES

Deciduous Vines

- *Campsis radicans* – Trumpet Vine
- *Parthenocissus inserta* – Woodbine

Evergreen Vines

- *Hedera helix* – English Ivy
- *Lonicera* species - Honeysuckle



Blanket Flower



Daylily



Blue Flax



Crocus



Red Valerian



Penstemon

7.10.5 FLOWERS

Annuals

- Gaillardia pulchella – Blanketflower
- Mirabilis species – Four O'clock
- Salvia species – Sage
- Tagetes species - Marigold
- Viola wittrockiana – Pansy

Perennials

- Alcea rosea - Hollyhock
- Centranthus ruber – Red Valerian
- Hemerocallis hybrids – Daylilies
- Linium perenne – Blue Flax
- Penstemon spp. – Penstemon
- Ratibida columnifera - Coneflower

Bulbs

- Crocus spp. - Crocus
- Narcissus spp. – Daffodil
- Muscari armeniacum – Grape Hyacinth
- Tulipa spp. - Tulip

Looking
west down
90' bay.

