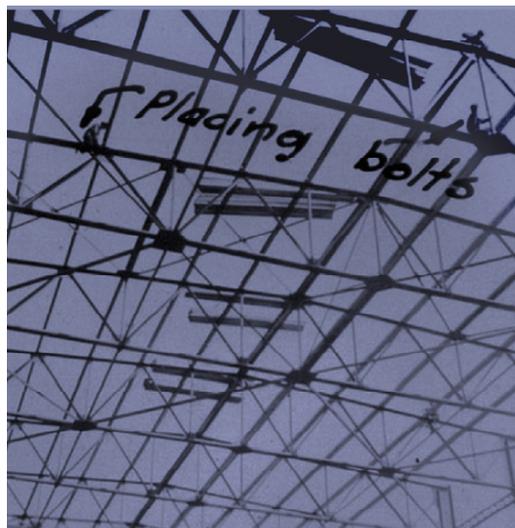
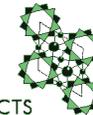


May 2014 Working Blue Line DRAFT

ALBUQUERQUE RAIL YARDS MASTERPLAN



SAMITOUR CONSTRUCTS

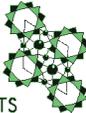


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ALBUQUERQUE RAIL YARDS MASTERPLAN



SAMITOUR CONSTRUCTS



MASTER DEVELOPMENT TEAM

Samitaur Constructs, Frederick and Laurie Samitaur Smith
Build New Mexico, James K. Trump

ARCHITECT

Eric Owen Moss Architects, Eric Owen Moss, FAIA, Dolan Daggett
SMPC Architects, Glenn Fellows, AIA
Studio Southwest Architects, Robert Heiser, AIA

CONSERVATION ARCHITECT

Giora Solar Architects, Giora Solar

HISTORIC PRESERVATION

Cherry/See/Reames Architects, Edie Cherry, FAIA

PLANNING / LANDSCAPE ARCHITECT

Consensus Planning, Jim Strozier, Jacqueline Fishman, AICP, Laurie Firor, ASLA

TRAFFIC ANALYSIS

Terry O. Brown, P.E.

STRUCTURAL ENGINEERING

Chavez-Grieves Engineers, Inc., Victor J. Chavez, P.E.

CIVIL ENGINEERING

Wilson & Comany, Christopher Perea, P.E.

MEP ENGINEERING

Bridgers & Paxton, John Grapsas, P.E.

LEGAL COUNSEL

Hill, Farrer & Burrill LLP, Arthur B. Cook
Goodson Wachtel & Petrusis APC, Edward Wachtel
Myers, Oliver & Price, P.C., John Myers

ACKNOWLEDGMENTS

ADMINISTRATION

Richard J. Berry, Mayor
Robert J. Perry, Chief Administrative Officer
Gilbert Montano, Deputy Chief Administrative Officer

CITY COUNCIL

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Ken Sanchez, District 1, **Vice-President**
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Isaac Benton, District 3 2
Brad Winter, District 4
Rey Garduño, District 6
~~Janice E. Jones~~ Diane G. Gibson, District 7
Trudy E. Jones, District 8, **Vice-President**
Don Harris, District 9

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Isaac Benton, City Councilor
Alex Romero, Governor's Representative
Jerry Ortiz y Pino, State Senator, District 12
Michael Padilla, State Senator, District 14
Rick Miera, State Representative, District 11
Miguel Garcia, State Representative, District 14
Gail Chasey, State Representative, District 18
Art De La Cruz, County Commissioner, District 2
Leba Freed, President, WHEELS Museum
Eric Griego, Primary Neighborhood Representative, Barelás
Ron Romero, Alternate Neighborhood Representative, Barelás
Diana Dorn-Jones, Primary Neighborhood Representative, South Broadway
Janice Convery, Alternate Neighborhood Representative, South Broadway
Jay Rembe, Infill Solutions, ULI-NM District Council

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Patrick Griebel, Vice-Chair, Council District 1
Moises A. Gonzalez, Council District 2
Peter Nicholls, Council District 4
Maia Mullen, Council District 6
James Peck, Council District 7
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Bill McCoy, Council District 9

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Robert Gerard Heiser
Amy Horowitz
J. Matt Myers. Esq.

CITY COUNCIL SERVICES

Laura Mason, Director
Kara Shair-Rosenfield, Policy Analyst
Diane Dolan, Policy Analyst

PLANNING DEPARTMENT

Suzanne Lubar, **Acting** Director
Matt Conrad, Associate Director
Russell Brito, Division Manager, Urban Design and Development
Rebecca Velarde, Manager, Metropolitan Redevelopment
Maryellen Hennessy, Senior Planner, LUCC
Petra Morris, Planner
John Gabriel Rivera, Senior Planner

TABLEAUS

| | |
|----|--|
| 21 | Land Use Diagram |
| 32 | Illustrative Master Plan |
| 43 | Aerial View from Northwest |
| 54 | Aerial View from West |
| 75 | Landscape Master Plan |
| 16 | Historic Preservation & Adaptive Reuse Diagram |
| 67 | Site Plan for Subdivision |
| 8 | Preliminary Phase Parking Plan |

FIGURES

| | |
|----|---|
| 1 | Site Aerial Context |
| 2 | Spirit of Rail Yards |
| 3 | Spirit of Place |
| 4 | Rail Yards Surrounding Parcelization & Zoning |
| 5 | Rebuild Iconic Structures Diagram |
| 6 | Conceptual Paseo Building Diagram |
| 7 | Conceptual Below Grade Parking Diagram |
| 8 | Conceptual Acoustic Mounds Diagram |
| 9 | Conceptual Connector Diagram |
| 10 | Conceptual Public Open Space Diagram |
| 11 | Conceptual Sustainability Features Diagram |
| 12 | Conceptual Water Conservation Diagram |
| 13 | Parcelization Diagram |
| 14 | Existing Vacant Lots - South Broadway |
| 15 | Existing Vacant Lots - Barelas |
| 16 | Design Development Standards Reference Diagram |
| 17 | Design Development Standards Matrix |
| 18 | Existing Palette |
| 19 | Existing/Proposed Water Distribution System |
| 20 | Existing/Proposed Wastewater Collection |
| 21 | Existing/Proposed Drainage |
| 22 | Existing/Proposed Dry Utilities |
| 23 | Enlarged Street Plan |
| 24 | Phasing Plan Diagram |
| 25 | Phase 1 Site Plan Concept |

RENUMBERED ACCORDINGLY

INDEX UPDATED

- Project Introduction 1.1
- Project History and Process 1.2
- Master Development Plan Intent 1.3
- Neighborhood History & Context 2.1
 - Site History 2.2
- Existing Site Conditions 2.3
- Rail Yard Advisory Board 3.1
- Public Meetings/ Workshops 3.2
- Public Input Process - Major Planning Themes 3.3
- Albuquerque/ Bernalillo County Comprehensive Plan 4.1
- Barelas Sector Development Plan & Existing Zoning 4.2
 - Preservation Regulations 4.3
- Memorandum of Understanding (MOU) 4.4
- Maintenance Program Agreement 4.5
 - Archaeological Regulations 4.6
- Job Generation, Economic Development & Economic Viability 5.1
 - Housing 5.2
 - Community Connectivity 5.3
 - Land Uses 5.4
- Architecture & Historic Rehabilitation 5.5
 - Art & Culture 5.6
- Vision Statement 6.1
 - Design Features 6.2
 - Sustainability Features 6.3
- Parcel / Land Use Recommendations 6.4
 - Land Use Characterizations 6.5
 - Parcel Characterizations 6.6
 - Concept Vignettes 6.7
- Surrounding Development Opportunities 6.8
 - Design Goals 7.1
- General Landscape Design 7.2
 - Amenities 7.3
- Water Conservation Ordinance Compliance 7.4
 - Irrigation System 7.5
 - Clear Sight Requirements 7.6
 - PNM Coordination 7.7
- Maintenance Responsibility 7.8
- Landscape Planting Design 7.9
 - Plant Palette 7.10
- Development Standards Matrix 8.1
- Historic Preservation and Adaptive Reuse Standards 8.2
 - Architectural Standards 8.3
- Landscape - Edges & Public Spaces 8.4
 - Access / Site Circulation 8.5
 - Parking 8.6
 - Loading 8.7
- Utilities / Screening 8.8
 - Signage 8.9
- Exterior Lighting 8.10
 - Noise 8.11
 - Security 8.12
- Public Art 8.13
- Sustainability 8.14
- Air Quality 8.15
- Site Plan for Subdivision 8.16
- Executive Summary 9.1
- Water Distribution 9.2
- Wastewater Collection 9.3
- Stormwater Management 9.4
- Transportation & TIS Recommendations 9.5
 - Fiber Telecommunications 9.6
- Environmental Remediation 9.7
 - Infrastructure 10.1
 - Transportation 10.2
 - Platting 10.3
- Development Approval Process 10.4
- Deviations and Amendments to the Master Plan 10.5
 - Project Phasing 10.6
- Development Thresholds 10.7
 - Interim Use 10.8
- Case Study - Phase 1 Implementation 10.9

CONTENTS

TAB Color updated

- EXECUTIVE SUMMARY 1
- EXISTING CONDITIONS 2
- PUBLIC INPUT PROCESS 3
- ZONING COMPLIANCE & REGULATORY FRAMEWORK 4
- GOALS & POLICIES 5
- DEVELOPMENT REGULATIONS MASTER PLAN 6
- DESIGN GUIDELINES LANDSCAPE MASTER PLAN 7
- LANDSCAPE MASTER PLAN DESIGN DEVELOPMENT PERFORMANCE STANDARDS 8
- INFRASTRUCTURE 9
- CONCEPT AND PHASING PLAN IMPLEMENTATION & PHASING 10
- SOURCES/CREDITS
- APPENDIX
- SOURCES AND CREDITS-PUBLIC OUTREACH SUMMARY-A
- PHOTOGRAPHIC SURVEY OF HISTORIC STRUCTURES B
- HISTORIC-PRESERVATION COMPLIANCE MATRIX-C
- NATIONAL-REGISTRY-NOMINATION (PENDING)-D

90' Bay-



1.0 EXECUTIVE SUMMARY

1.1 Project Introduction

This Master Development Plan (MDP) is the culmination of a two-year planning and design process initiated by the City of Albuquerque for the 27.3 acre site referred to as the "Rail Yards". The process included active involvement from many diverse stakeholders, including the City, Rail Yards Advisory Board, the Baretas, South Broadway, and San Jose Neighborhood Associations, WHEELS Museum, New Mexico Steam Locomotive and Railroad Historical Society, general public, and other individuals interested in railroad history. The MDP responds to the input received from all of the interested parties regarding this unique property.

The MDP is intended to provide the necessary guidance for long term redevelopment of the Rail Yards property. It is not intended to be overly restrictive, but rather to provide a road map for the future.



Historic Santa Fe Rail Yard, Site Aerial

1.2 Project History and Process

Phase One - Request for Proposal

A Request For Proposal (RFP) was issued by the City of Albuquerque in July 2010 for a Master Developer to “plan, design, implement, and manage a mixed use redevelopment of the City-owned 27.3 acre site containing Historic Locomotive Shops (a.k.a. the Rail Yards)”. The intent was to redevelop the Rail Yards into a mixed use project that would include a minimum of 30 units of workforce housing and a transportation museum to be operated by the WHEELS (We Have Everything Everyone Loves Spinning) Museum Foundation. The City’s Rail Yards Advisory Board was responsible for recommending the selection of the Master Developer to the Mayor and the City Council. The RFP provided a list of purposes for the redevelopment project as follows:

1. Develop Workforce Housing and a museum to be operated by the WHEELS Museum to meet legislative requirements;
2. Establish a focal point for social and commercial activity;
3. Restore connectivity between the site and adjoining neighborhoods, and strengthen connections with other area amenities and resources;
4. Catalyze further neighborhood redevelopment in collaboration with the Barelás and South Broadway neighborhoods;
5. Preserve and re-use the site’s historical architectural assets and unique visual environment;
6. Stimulate redevelopment of Albuquerque’s greater downtown area;
7. Maximize transportation opportunities offered by proximity to the “Railrunner” Commuter Train Station, city transit hub, and bicycle

network;

8. Generate employment opportunities, with a mix of living and high wage jobs, as well as job training; and
9. Provide for the substantial public and social needs of the community, including, for example, health care, job training, education, immigrant services, and childcare.

Proposals were submitted to the City in September 2010. Samitaur Constructs (Samitaur) was subsequently selected as the Master Developer for the redevelopment project. The project is envisioned to be developed in four phases, with Phase 1 being the RFP process, Phase 2 entailing the creation of the Master Development Plan, Phase 3 entailing the design and approval of the Master Development Plan, and Phase 4 covering the disposition, financing, construction, and management of the Rail Yards Redevelopment project to be regulated pursuant to a Master Development and Disposition Agreement to be negotiated between the City and Samitaur.

Phase Two and Phase Three Master Plan Agreement

The Phase Two and Phase Three Master Plan Agreement is between the City of Albuquerque and Samitaur. The agreement, which was signed on June 15, 2012, confirms the selection of Samitaur by the City as the Master Developer of the Rail Yards project and confers upon Samitaur the right to develop the entire project area under the City’s ownership or control. The Master Plan Agreement provides the framework for the Master Development and Disposition Agreement. The Master Plan Agreement defines the project area as follows:

Tract A as shown on the Plat of Tract A, A.T. & S.F. Railway Company Machine Shop, Albuquerque, Bernalillo County, New Mexico, as the same is shown and designated on the plat thereof, filed in the office of the County Clerk for Bernalillo County, New Mexico on January 25, 1996, in Plat Book 96C, Folio 44, containing approximately 27.32 acres more or less.

The Rail Yards property was acquired in 2007 by the City with funds appropriate for specific purposes, including state and local funding sources. Pursuant to the RFP, state funds, and City Council Resolutions R-07-202, R-07-274, and R-07-332, the Master Development Plan shall address community revitalization through the elimination of blighted conditions and emphasis on economic development, and shall include a minimum of 30 units of workforce housing and a location for the WHEELS Museum.

The Master Plan Agreement addresses financing for on-site and off-site infrastructure. Samitaur is responsible for on-site infrastructure needed to implement the Master Development Plan. Samitaur will be responsible for any off-site infrastructure only to the extent that it is required to benefit the project. The City is required to help Samitaur locate funding for off-site improvements to the extent that the infrastructure capacity required by the City exceeds that required for the project.

The Master Plan Agreement provides language regarding environmental issues, traffic impact study, conceptual drainage plan, and conceptual water, sewer, and dry utilities plans. In regard to traffic impact analyses and the evaluation of the capacity of intersections, the Master Plan Agreement gives the Planning Director the authority to accept alternative analyses, including the evaluation of public transportation opportunities, shuttle services to City parking structures, etc.

Guiding Principles

The Master Plan Agreement set forth a number of guiding principles for development of the project, and to be reflected in this MDP. The Guiding Principles are as follows:

Job Generation

The Project Area was once an economic pillar for the community and must become one again. The Master Plan should accommodate uses which provide the opportunity for generation of quality, living-

and high-wage jobs and programs which will link those jobs with community residents.

Housing

Housing availability is an important element of the Master Plan. The Master Plan will provide for the targeted housing (minimum 30 units of workforce housing). The Master Plan should also endeavor to provide additional affordable and market rate housing if deemed feasible. The Master Plan should consider and coordinate the housing component with the City's on-going efforts to rehabilitate existing housing. The workforce housing should seek to preserve the neighborhood heritage and interface with employment and service opportunities.

Community

The Master Plan for the project area will reflect efforts to be sensitive to and interface with the surrounding neighborhoods, including Barelás, South Broadway, and San José. Uses in the Master Plan will reflect efforts to complement and support adopted plans for and commercial areas within the surrounding neighborhoods. The Master Plan will reflect efforts to support current and planned economic activity in the Downtown area and, where physically and economically possible, reinforce the City's transit goals and objectives and integrate with and complement existing and proposed features and attractions in the area (e.g., the Albuquerque Zoo and BioPark, Tingley Beach, Rio Grande State Park, the National Hispanic Cultural Center, the South Broadway Cultural Center, Old Town and its museums, Downtown Albuquerque and its amenities, the Alvarado Transportation Center, the Historic 4th Street Corridor, etc.).

Architecture and Historic Preservation

The Master Plan must both preserve and capitalize on the historic value of the architectural and engineering resources at the site. The Parties share the belief that the site has local, national, and international cultural and historic significance. They recognize the need to cooperate in keeping with the other guiding principles and the public's interest in historic preservation on this site. Accordingly,

the Parties agree to cooperate wherever possible on preservation planning, financial incentives, ordinances, and plans as may be applied to the Project Area. These include but are not limited to the City's Landmarks and Urban Conservation Ordinance and the Barelás Sector Development Plan. The site may be designated a City of Albuquerque Landmark with appropriate controls, including specific development guidelines and demolition review criteria. The site may also be placed on state and national historic registers.

Art and Culture

The Master Plan will include opportunities for both art and culture, including but not limited to the WHEELS Museum. Access to public open spaces within the Project Area will be provided.

Economic Development

The Master Plan will be designed to achieve economic and business success for the Project Area. The Master Plan shall be flexible so as to accommodate a variety of potential future economic uses and opportunities and will recognize that the success of the Project Area is directly related to and must incorporate the financial feasibility of each use proposed. Samitaur will not be required to implement elements of the Master Plan which are not financially self-sustaining without sufficient public financial assistance to provide for their development and sustained operation.

Economic Viability

These Guiding Principles are subject to the overarching need for the Master Plan creating a Project Area that is an economically viable endeavor individually and collectively for the City, Samitaur, WHEELS Museum, workforce housing, tenant/users, the public and surrounding communities without creating a need for indefinite direct and indirect City or Samitaur funding.

1.3 Master Development Plan Intent

The MDP is a long-range planning document that is intended to guide redevelopment of the Rail Yards property into a vibrant, mixed use employment center that includes commercial, office, light industrial and institutional uses that are complemented by residential development and public spaces. In order to fulfill the vision for redevelopment of this property, the MDP provides:

- The necessary framework to direct new development that respects the historic condition and context of the Rail Yards property;
- A description of the background history of the site and neighborhood context, physical conditions, public input process, regulatory framework, and guiding principles, goals, and policies to ensure users of the document understand the intent and vision for redevelopment activities;
- The framework for physical redevelopment of the site graphically illustrated by a Site Plan for Subdivision, Landscape Master Plan, Grading and Drainage Master Plan, and Master Utility Plan, and described in narrative format through Design Performance Standards; and
- The process and procedures for phased redevelopment and approval of site development requests over time that provides the necessary predictability and streamlining for full build-out of the Rail Yards property.

City of Albuq. - N.M.



EXISTING CONDITIONS 2

2.0 EXISTING CONDITIONS

2.1 Neighborhood History & Context

The Rail Yards property lies within the Barelvas neighborhood, one of Albuquerque's oldest, and is adjacent to the South Broadway neighborhood. Settled as a farming community and later shaped by the establishment of the railroad in the 1880's, by the 1900s, Barelvas was flourishing. Many of its residents were employed by the Atchison, Topeka and Santa Fe Railway (AT&SF).

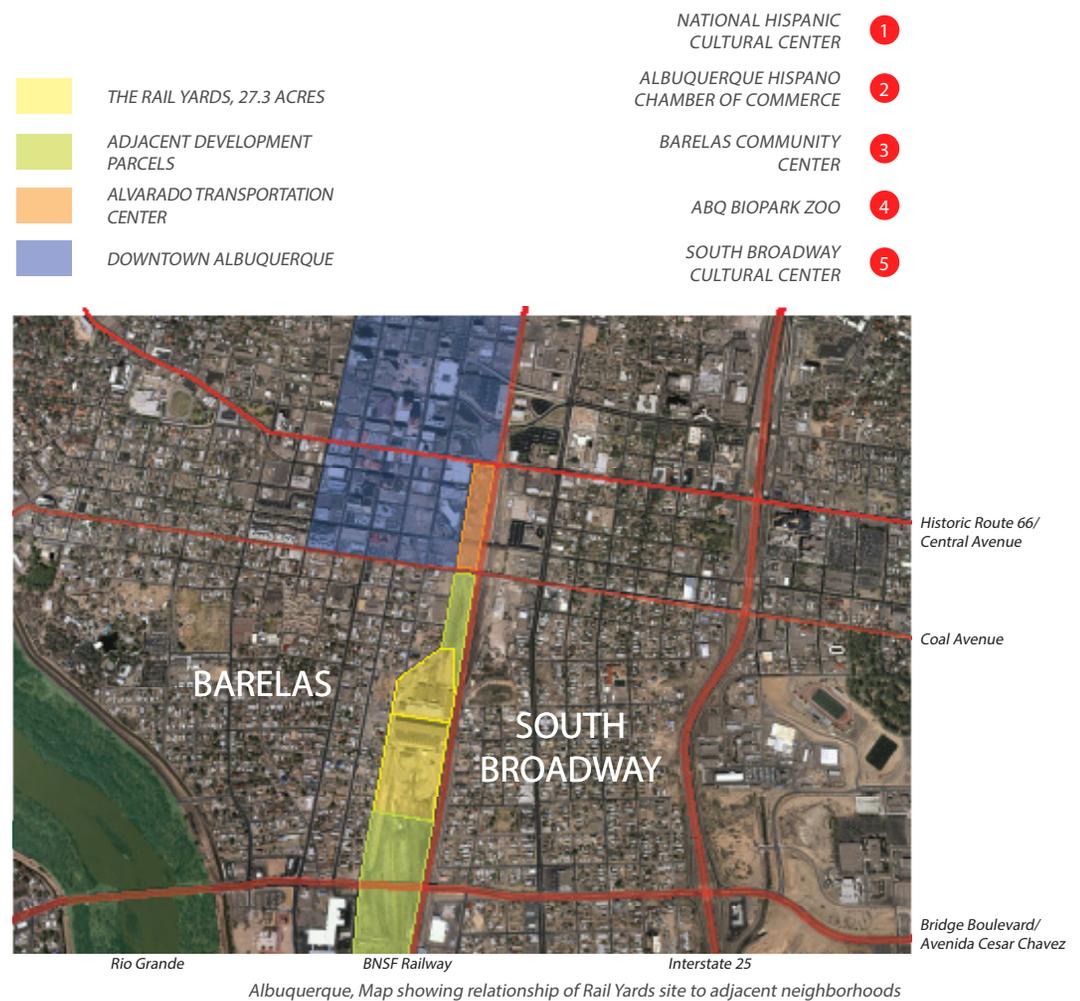
In the mid-1920s, South 4th Street in Barelvas was designated part of Route 66 and the Pan American Highway (U.S. 85), which helped establish a thriving commercial corridor active from the 1930s through the 1950s. The decline of the railroad industry and the construction of Interstate 25 negatively affected the community, as did the urban renewal program of the 1970s, which led to industrial development replacing much of the housing stock in south Barelvas. However, the historic Barelvas neighborhood has added new amenities in recent decades, including the Albuquerque Hispano Chamber of Commerce and further south, the National Hispanic Cultural Center, which have reaffirmed its history and community character.

Along the eastern edge of the Rail Yards is the South Broadway neighborhood. Much of the community's growth took place between 1885 and 1925, following its founding by Antonio Sandoval, a wealthy landowner responsible for constructing the Barelvas ditch, which drained and irrigated the surrounding area. As in Barelvas, many of South Broadway's residents made their living through agricultural pursuits before transitioning to jobs at the Rail Yards and local iron foundry.

South Broadway urbanized rapidly during this period, only to suffer similar economic and population decline concurrent to that of the railroad industry. Recently, the United South Broadway Corporation

and other organizations have worked to provide affordable housing for residents of the community.

The redevelopment of the Rail Yards provides an opportunity for Barelvas, South Broadway, and downtown Albuquerque to enrich their respective individual identities while rallying around a new collective identity to whose development each is crucial. Residents of



Albuquerque, Map showing relationship of Rail Yards site to adjacent neighborhoods



Figure 1: Site Aerial Context

Aerial view Albuquerque showing relationship of Rail Yards site to surrounding civic amenities

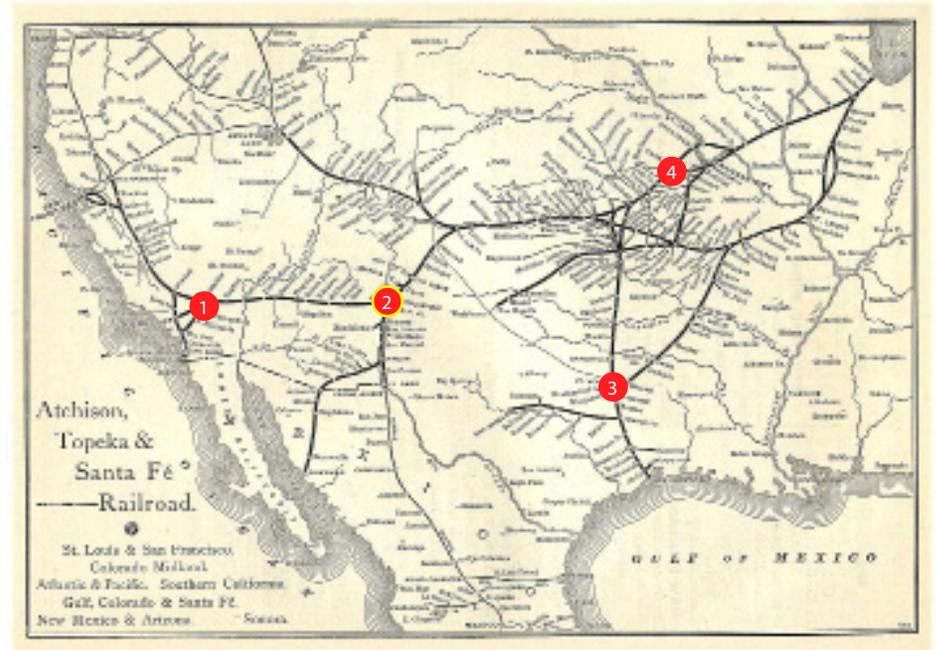
these communities have expressed both excitement and reservations regarding redevelopment plans for the Rail Yards and, given the personal ties many have to the history of the Rail Yards, for good reason. Nevertheless, successful redevelopment truly has the potential to be a force of unification for the communities, the city, and the state of New Mexico.

2.2 Site History

“Between 1880 and 1930, the single most important factor in Albuquerque’s transformation from a farming village to a commercial and industrial center, and its emergence as the leading city of New Mexico, was the railroad. Throughout this period, the Santa Fe Railway was the city’s leading employer, culminating in an estimated 1500 employees during World War II.” (Wilson, 1986)

The impact of a transcontinental railroad on the economic development of the Territory of New Mexico, and the subsequent growth of the City of Albuquerque cannot be overstated. As was the case with other previous economic lifelines in the region, such as the Camino Real de Tierra Adentro in the sixteenth through early nineteenth centuries and the Santa Fe Trail in the early to mid-nineteenth century, the arrival of the Atchison, Topeka & Santa Fe (AT&SF) Railway into northeast New Mexico in the winter of 1879 was a significant historical event for not only New Mexico and Albuquerque but the entire region as well. (Dodge, 2013)

The Historic Locomotive Shops on the Rail Yards site were built by the AT&SF Railway between 1914 and 1924 as a maintenance and repair facility for steam locomotives that served the southwestern United States and was one of only four such facilities built for that purpose. (The other three being located in Topeka, Kansas, Cleburne, Texas, and San Bernardino, California). The shop complex was outfitted with the latest engineering technology for locomotive repair and industrial



Early map of the AT&SF Railroad showing relationship of Albuquerque to other major rail shop facilities; 1) San Bernardino, California 2) Albuquerque, New Mexico 3) Cleburne, Texas 4) Topeka, Kansas



Rail Yards upon completion of Machine Shop, ~1922



Albuquerque as Railroad Town, 1886



Rail Yards, San Bernardino, CA (demolished 1996) showing similarity of shop complex to Albuquerque Rail Yards

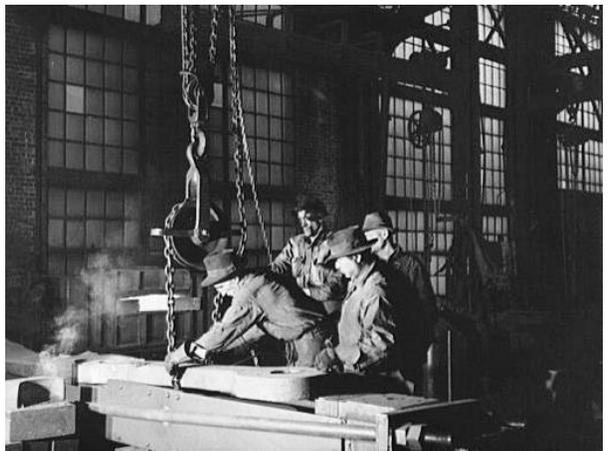
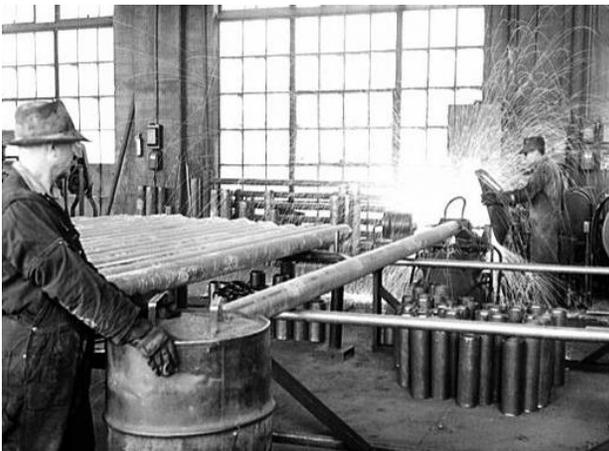
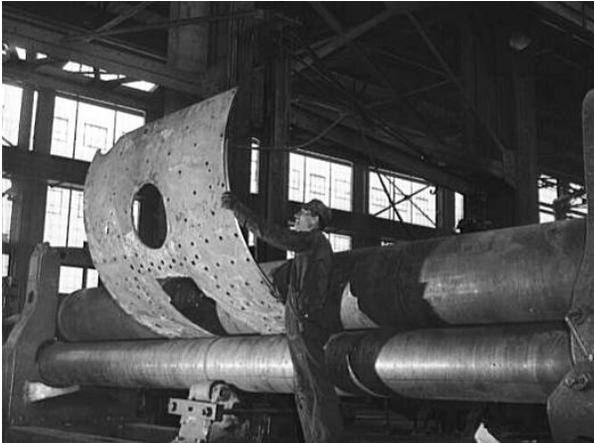
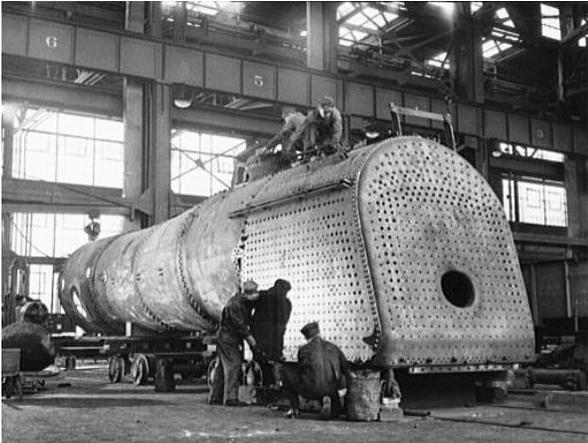
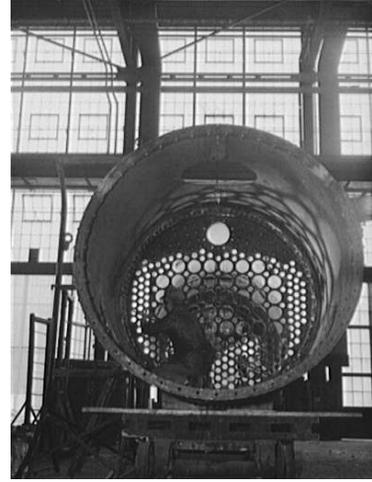
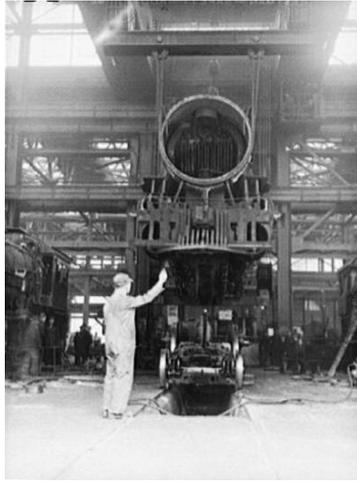
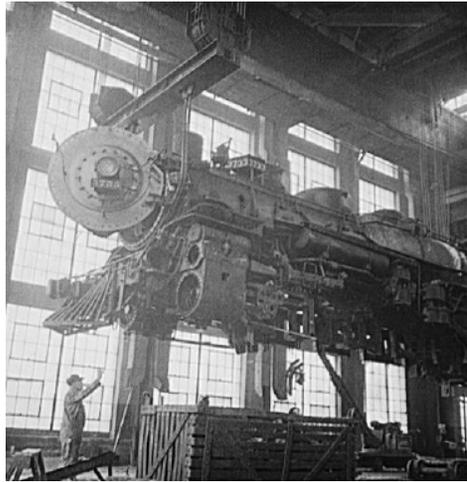
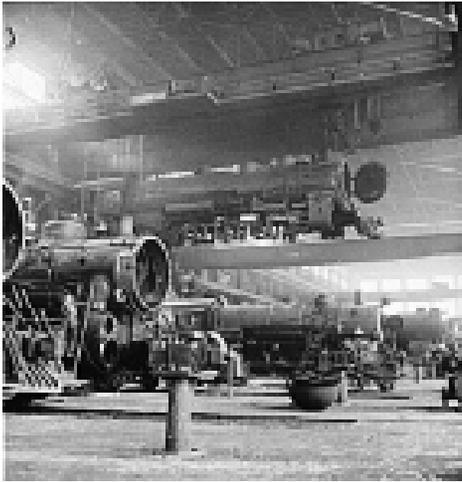


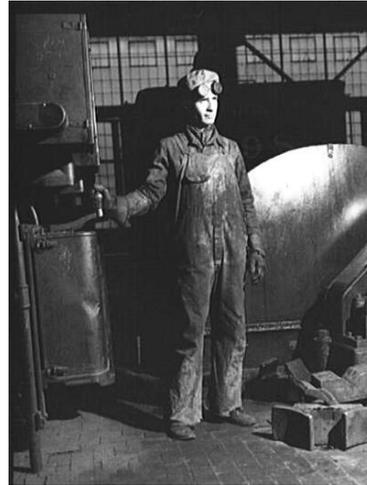
Rail Yards, Major Historic Buildings

efficiency. As such, the shops were an integral part of the AT&SF's railroad transportation system, which provided freight and passenger service for more than six decades. The Locomotive Shops also played an integral part in the economic history of Albuquerque by its status as the second largest industrial complex in that state and the city's largest employer. The shops played a major role in the city's economic development, particularly in the adjacent neighborhoods of Barelás, South Broadway and San Jose. (Dodge, 2013)

Beginning in 1914 and continuing intermittently for the next ten years, the Rail Yards expansion resulted in the completion of more than twenty-five buildings, structures, and other improvements spread over twenty-seven acres. The resulting complex represented the latest in industrial construction techniques and installing equipment that embodied state-of-the-art engineering technology for steam locomotive repair and maintenance - a task that required a great deal of daily maintenance as well as regular, periodic major overhauls. Every day, or every 100 to 150 miles, it was necessary to remove clinkers (the residue of unfired or partially fired coal) from the locomotive's firebox, clean the fire tubes, flues, and smoke boxes, wash out mineral residue from the boiler, and inspect all moving parts for general wear and tear. Major overhauls were undertaken every 400,000 miles of operation that included a complete disassembly of the engine, the cleaning and repairing of all moving parts including truing the wheels, and patching or replacing the boiler or firebox. All of this work, including the reconditioning and fabrication of replacement parts, was done at Albuquerque's locomotive shops. (Dodge, 2013)

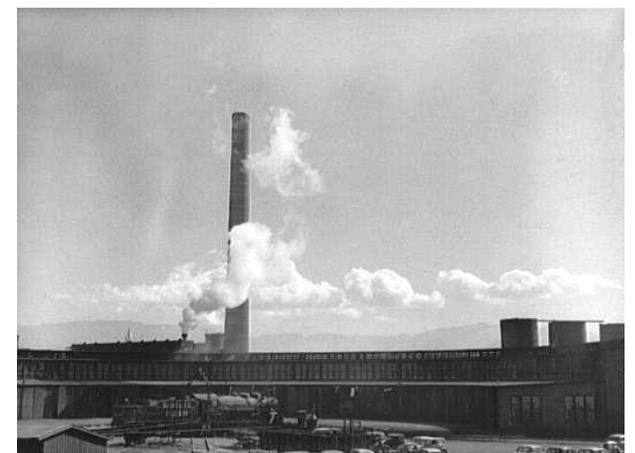
At their height in the mid 1940's, the shops serviced an average of 40 locomotives per month. The complex was built at a time when industrial architecture was making a shift nationwide from large masonry load bearing walls with timber roof construction to steel structures with thinner walls of brick veneer or a structure of reinforced





concrete. Both steel and concrete structure allowed for much larger window openings, and therefore, better interior day lighting and ventilation. Because of the railroad's leading role, the remaining structures are now the most prominent reminders of this important period in Albuquerque's history. (Wilson, 1986)

The "Spirit" of the Rail Yards referenced throughout this Master Plan document is embodied in the images shown in this spread; American ingenuity, craftsmanship, pride of work. The intent of the proposed redevelopment is to continue this lineage of innovation into the modern era, not through nostalgia, but by rekindling the original spirit.



2.2.1 Past Preservation

The Santa Fe Railway demolished its landmark Hotel Alvarado in 1970, removing the most treasured of Albuquerque's railroad buildings after a local preservation effort stalled. Its loss informs local thinking about the value of preserving the city's remaining historic buildings, especially those of the railroad.

In 1986 the Santa Fe Railway demolished the Roundhouse, Power Plant, and 230-foot smokestack, thwarting the City's attempt to designate the complex as a City Landmark listed on both state and national historic registers that could have helped prevent demolition. Again Albuquerque's railroad architectural heritage was harmed, drawing even more attention to what remains of the massive Historic Locomotive Shops.

The historic resources remaining from the shops complex constitute the largest historic industrial plant in the state. They employ a variety of materials and features that which reflect the rapid innovation of industrial design and architecture at the time.

The Rail Yards buildings, because of the quality of their design, construction, and style, are particularly good representatives of this industrial aspect of the city's history and are eligible for listing in the New Mexico Register of Cultural Properties and National Register of Historic Places, as well as designation as Albuquerque City Landmarks.

Refer to Appendix B for a Site Survey report that provides a brief description and photo documentation of each of the historic resources to be preserved and adaptively reused.

2.3 Existing Site Conditions

The 27.3 acre Rail Yards site is rectangular in shape and oriented north-south, measuring approximately 2000ft. in length and 650ft in

width. The site is bordered on the north and south by parcels owned by the Burlington Northern Santa Fe Railroad (BNSF). These parcels are currently in limited use as railway support facilities. The site is bordered to the west by 2nd Street for the majority of its perimeter with the exception of the northern most portions, which tapers to follow 1st Street. To the east, the site lies directly adjacent the railroad alignment also controlled by BNSF and is in active use for both freight and passenger train service.

2.3.1 Neighborhood Edges

The relationship between the Rail Yards and the surrounding neighborhoods of Barelas and South Broadway is characteristic of many American cities; modest working class, single-family detached homes located immediately adjacent the main industry or factory in town. The images on the following pages show views both to and from the Rail Yards site out to these neighborhoods.



View of Rail Yards from Santa Fe Avenue with Barelas neighborhood homes in foreground.



View west toward Barelas Neighborhood from roof of Machine Shop.



View east toward South Broadway Neighborhood from roof of Machine Shop.



View South toward former site of Roundhouse Building from roof of Machine Shop. Turntable is still in operation.



View South down easement between Machine Shop and Barelas Neighborhood to the West.

2.3.2 Existing Building Conditions

The existing property edge is barricaded by a chain link fence and off-limits to the community. For years, the Rail Yards have been abandoned and left in a state of increasing disrepair as evidenced by the photos shown below. Beyond the cosmetic damages of graffiti and broken glass, lie the more significant concerns of potential structural damage and water infiltration damage through large areas of roof failure that have manifested in many of the large structures such as the Machine and Boiler Shops. In recent months, it has been reported that storms have continued to erode large areas of roof sheathing causing the existing creosote flooring to be significantly damaged. In addition, one of the large 20ft tall Machine Shop doors recently collapsed from its track.

The Master Plan therefore becomes both aspirational on one hand and necessary on the other to stem the tide of neglect and

abandonment that unfortunately characterizes the current condition of the once grand Rail Yards complex.

2.3.3 Easements

Beyond the historic structures described in the previous section, there exist two easements that will need to be addressed as part of any future development of the Site. The first of which allows for the continued use of the Turntable and access thereto, and the second allows for a continuous 10ft. utility easement running along the western perimeter of the site. Refer to the Site Plan for Subdivision drawing in Section 6 for the location of each.

2.3.4 Utilities

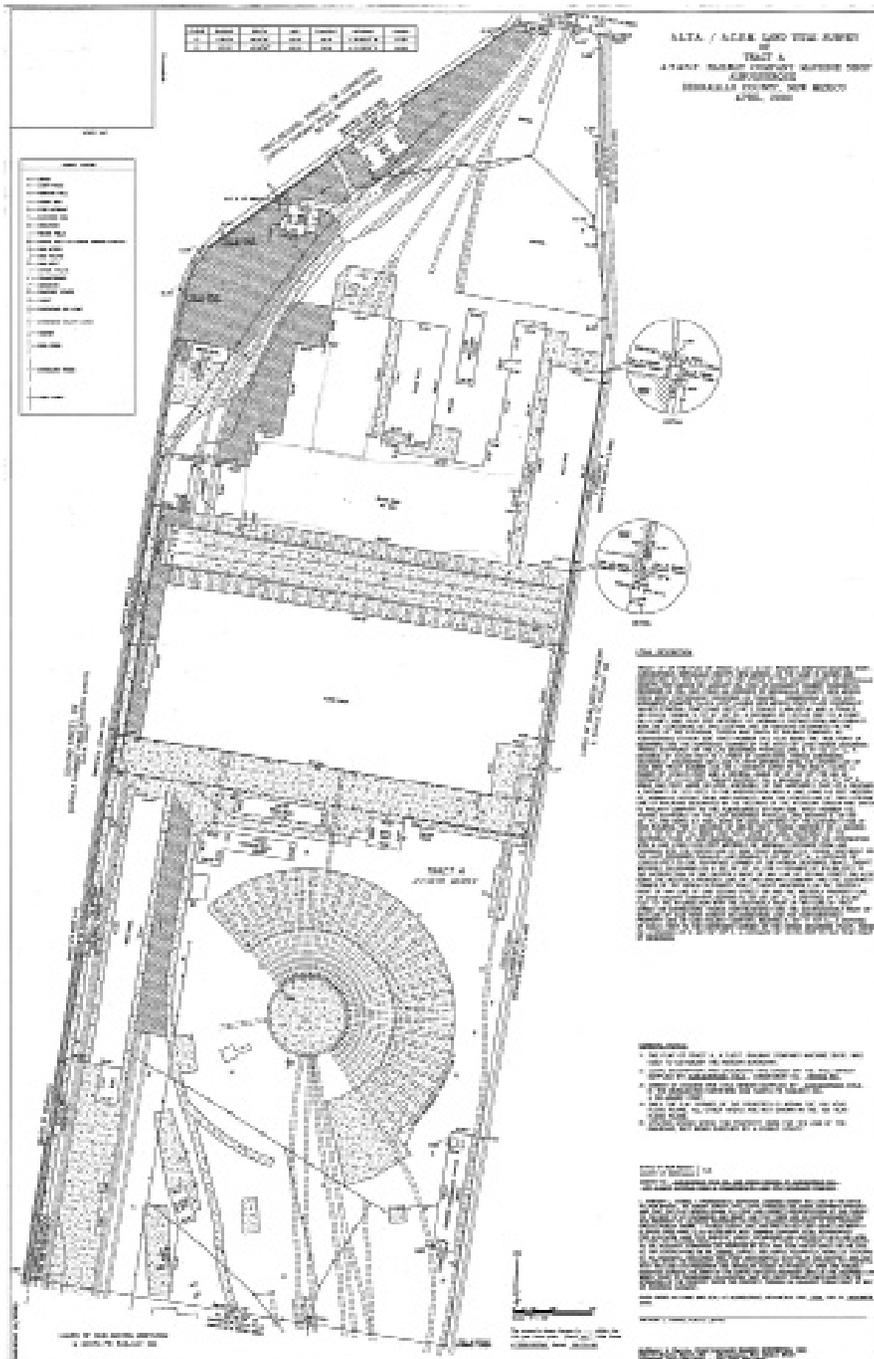
Given that the Rail Yards were in operation up until the 1980s, the site is serviced by all requisite utilities: electricity, gas, water, sewer, and storm drain. The site is not currently serviced by fiber optic telecommunications. Utility infrastructure and capacity, however,



Current condition of Rail Yards buildings characterized by vandalism, graffiti and general neglect



Current condition of Rail Yards buildings



Rail Yards, ALTA Land Survey, 2000

are likely insufficient to accommodate the level of redevelopment anticipated by the Master Development Plan. See Section 9 for complete existing infrastructure analysis.

2.3.5 Environmental Conditions

As a former industrial site, the Rail Yards has some soil and groundwater contamination caused by former site activities. The environmental condition of the site has been extensively studied and there are now few, if any, data gaps. Significant removal of contaminated soil has already been accomplished. Contaminated areas still within the site include the following:

- The southern one-third of the site was formerly occupied by a number of above ground fuel tanks, below ground fuel cellars and an oil/water separator. Some of these storage vessels leaked and, therefore, soil and groundwater have been contaminated with petroleum fuel, primarily diesel and motor oil. Also, soil around a former oil cellar north of the Blacksmith Shop and along the eastern site boundary remains contaminated with petroleum. Groundwater contamination appears to be limited to the southeast corner of the site.
- Sandblasting and battery storage caused lead contamination of soil in two areas north of the main buildings on the site. Much of the lead-contaminated soil has been removed. Lead contamination of shallow soils still exists in more widespread areas of the site.
- Most paint on the historic structures is lead-based, and the glazing of some of the windows contains asbestos.
- Petroleum contamination exists in the soil under the Machine Shop, and lead contamination exists in the soil under the Paint Shop.



Figure 3: Spirit of Place

Machine Shop, View from roof clerestory looking west



Machine Shop, View from roof clerestory looking east



Tom

Hedler

Conklin

Herb.

Bill

AN BRIC

3.0 PUBLIC INPUT PROCESS

(Note: Combination of Section 3 Public Input Process and Appendix A)

Introduction

The Rail Yards MDP process involved a multi-pronged approach for engaging the public. This included the establishment of and meetings with the Rail Yards Advisory Board, public meetings and open houses, and hearings before the Environmental Planning Commission and the City Council. This section provides information about the public outreach efforts made by the planning team as part of the process to develop the Rail Yards Master Plan. ~~a brief summary of the public input process. More detailed information regarding this process is provided in Appendix A.~~ The City and Samitaur relied heavily on input received during the process to inform the concepts and goals of the Master Plan, so it was important to design a robust and engaging public input process that provided ample opportunities for interested parties to receive information and offer meaningful feedback.

3.1 Rail Yards Advisory Board

The Rail Yards Advisory Board was established by City Council Resolution F/S R-08-47. Per the Resolution, the Advisory Board was charged with assisting the City in selecting the master developer and overseeing the redevelopment process, including advising the City in regard to the approval and implementation of the MDP, the establishment of interim and/or long-term uses, and the programming and expenditure of capital and operating funds to support redevelopment efforts. The Advisory Board is comprised of elected officials and representatives from the community in order to “ensure transparency, extensive community consultation, and collaboration in the decision-making process”.

Per the Resolution, the Rail Yards Advisory Board consists of the following representatives:

- City of Albuquerque (two members) - The Mayor or Mayor’s designee and the City Councilor from District 3
- State of New Mexico (six members) - A representative appointed by the Governor, the State Senators from Districts 12 and 14, and State Representatives from Districts 11, 14, and 18
- Bernalillo County (one member) - The County Commissioner from District 2
- A representative of the WHEELS Museum
- A representative from the Barelas neighborhood
- A representative from the South Broadway neighborhood
- A representative of the New Mexico District Council of the Urban Land Institute
- If applicable, the developer selected to develop Workforce Housing

3.2 Public Meetings/ Workshops

The City undertook extensive notification efforts in order to reach a wide audience and invite broad participation in the planning process. Initial means of notifying the public of the kick-off meetings for the Master Planning process included:

- Direct mail (nearly 4,000 pieces) to all property owners and residents in the Barelas and South Broadway neighborhoods, and notification of all Downtown area neighborhood associations. The mail piece included a letter from Mayor Richard J. Berry, City Councilor Isaac Benton, and City Councilor Debbie O’Malley that invited them to the Master Plan kick-off meetings in August, 2012, and explained how to stay engaged in the process. Also included in the mailing was a postcard to return to the Project Coordinator to request to be added to the notification list and a brochure containing background information about the project and the seven guiding principles of the project.
- Article in the August, 2012, Neighborhood Newsletter

| Rail Yards Master Plan Public Meetings | |
|--|---|
| <u>Kick-Off Meetings</u> Thursday, August 23, 2012, 6 PM National Hispanic Cultural Center | <u>Presentation of Initial Master Plan Concepts</u> Thursday, October 25, 2012, 6 PM Barelas Community Center |
| Saturday, August 25, 2012, 10 AM Barelas Community Center | <u>Open House / Tours of Site</u> Saturday, December 1, 2012, 10 AM–2 |
| 2 PM South Broadway Cultural Center | Albuquerque Rail Yards Saturday, August 25, 2012, |

(distributed to all contacts on file with the City's Office of Neighborhood Coordination). The article contained information about the kick-off meetings, the seven guiding principles of the project, and the address for the Rail Yards website.

- Media Advisory on August 20, 2012. The media advisory contained information about the kick-off meetings and invited the public to attend the meetings to have a chance to win a guided tour of the site.
- Rail Yards Website. The City maintains a website containing information about the project, including its history and updates about the Master Planning process. The website also provides an opportunity for the public to submit comments directly to the planning team, through an online form.

Follow-up communication was maintained via an email distribution list managed by City Planning Department staff. Emails were sent to notify people when new materials, such as meeting summaries, were available on the Rail Yards website and with information and reminders about upcoming meetings and tour opportunities. City Planning Department staff also served as the primary point of contact for people with questions about the process or who wanted to submit comments for consideration.

The public input process for the Rail Yards MDP started in August 2012 (see Appendix A for more detail regarding the public input process). The City and Samitaur held three community kick-off meetings on August 23 and 25, 2012, to explain the planning process, introduce the project team, and receive initial feedback from the public. The first meeting was held at the National Hispanic Cultural Center for the general public. The second meeting was held at Barelas Community Center and was intended to reach out to the Barelas community. The third meeting was held at the South Broadway Cultural Center and was intended for the South Broadway community. A raffle was held at the meetings for a tour of the Rail Yards property at a later date in September.

Following the public kick-off meetings in August, the planning team met with specific stakeholders to solicit feedback on issues affecting particular aspects of the redevelopment of the Rail Yards. The organization and individuals the team met with were:

- Albuquerque Convention and Visitors Bureau
- Albuquerque Economic Development
- Albuquerque Hispano Chamber of Commerce
- Barelas Neighborhood Association / Barelas Community Coalition*

- Bernalillo County Economic Development staff
- City of Albuquerque
- Mayor Richard J. Berry
- Department of Family & Community Service staff and Affordable Housing Committee representative
- Transit Department Staff
- City of Albuquerque Economic Development staff
- Downtown Action Team
- Economic Forum
- Mid Region Council or Governments
- New Mexico Steam Locomotive 2926 / Railroad Historic Society
- South Broadway Neighborhood Association*
- WHEELS Museum

* NOTE: In addition to sit-down meetings with the neighborhoods, the planning team went on tours of the Barelmas and South Broadway neighborhoods, guided by residents, in order to understand the sensitive interfaces with and important connections to the site. As with feedback received from the public, the planning team took into consideration the ideas and input received via the targeted stakeholder meetings in developing the initial Master Plan concepts.

A general public meeting was held by the City and Samitaur on October 25, 2012 at the Barelmas Community Center ([see Appendix A for more detail regarding this meeting](#)). Over 100 people attended this meeting, including members of the Rail Yards Advisory Board. The draft master plan concepts, which were based upon the RFP, the Guiding Principles in the Master Plan Agreement, and the feedback received at the three August meetings and the stakeholder meetings held in September 2012, were presented to the public by the Samitaur project team.

The presentation focused on the site organization, use patterns, massing and scale of the buildings, ~~and~~ project phasing ~~and the architectural concepts for the site~~. A number of themes emerged at the meeting, including ideas and comments from participants regarding sustainable design elements; edge treatment (proposed “Acoustic Mounds” [concept](#)); existing buildings and spaces; community open space; connection to neighborhoods; workforce housing; jobs

and economic development; and planning process and phasing. In addition to the evening meeting, the City and Samitaur held three tours during the day at the Rail Yards property.

The next general public meeting was held on December 1, 2012 at the Rail Yards property ([see Appendix A for more detail regarding this meeting](#)). This meeting was designed as an open house, and over 300 people attended this event throughout the day. Samitaur provided revised master plan concepts that were based on feedback received in response to the October 25 presentation, and the project team and City staff were on hand to answer questions and record comments from the participants. Over 200 people took guided tours of the Rail Yards during this event. Given the popularity of the tours, and the limited number that could be held during this event, other interested participants signed up for future tours. Comments received were organized by the meeting facilitators into general categories, including values/principles for the master plan; specific uses, features, and site improvements; tours of the site; and personal connection to the site and its redevelopment.

A presentation of the master planning process and draft concepts for redevelopment was given to the Rail Yards Advisory Board on January 9, 2013. City staff provided an overview of the public process to date, and Samitaur and its consultants introduced the draft redevelopment concepts. Frederick and Laurie Samitaur-Smith emphasized the importance of creating jobs for local residents. The consultants also explained the formal approval process for the MDP, including receiving recommendations from the Rail Yards Advisory Board and the Environmental Planning Commission prior to seeking final approval from the City Council.

[Review and approval of the Master Plan involved a number of public hearings. The Master Plan was presented to the Rail Yards Advisory Board for their review and recommendation in the Fall of 2013, to the Environmental Planing Commission for their review and](#)

recommendation in the Winter of 2013 and was adopted by the City Council in *** 2014.

3.3 Public Input Process and Major Planning Themes

In order to ensure an open and participatory dialogue, the City engaged local consultants Tim Karpoff & Associates to facilitate the series of public meetings that were used to receive input and communicate initial concepts for the Master Plan. The facilitation team moderated and recorded the discussions at the kick-off meetings in August and the first presentation of the Master Plan concepts on October 25, 2012. The team also helped host the December 1, 2012, Open House at the Rail Yards, during which facilitation team members oriented newcomers to and veterans of the process to the activities of the planning effort. After each of the meetings, the facilitators provided a summary report documenting the input received. These reports were shared with the public through email distribution and the website, and were used by the planning team in developing the Master Plan.

With its many features and structures of varying construction, sizes, and historic uses, the Rail Yards site can be difficult to fully understand and appreciate without having experienced it for oneself. Therefore, in addition to public meetings, tours of the site were offered during the Master Plan process to provide the public with opportunities to gain a firsthand understanding of the site so that they could be more informed when commenting on the Master Plan's proposals. For safety and liability reasons, tours had to be limited in size and number, but approximately 300 people had the opportunity to tour the site as part of the Master Plan process. All in all, hundreds of people participated in the public meetings and tours, including residents of the adjacent neighborhoods, people representing organizations with a specific interest in the project, former employees of the AT&SF/BNSF railroad shops, and individuals from across the city and region who are interested in how the site will be redeveloped. Many people attended the initial kick-off meetings as well

as follow-up meetings, which provided continuity in the process and afforded the planning team the opportunity to develop relationships with interested individuals and parties.

A number of major planning themes emerged from the comments provided by the participants at the public meetings. These concepts are generally consistent with the guiding principles and are summarized as follows:

- The MDP should embrace the concept of creating “synergy” between the jobs created at the Rail Yards and employment of neighborhood residents, in order to raise the economic status for Barelás and South Broadway neighborhoods.
- Public access to the historic buildings should be maintained to the extent feasible.
- Provide the opportunity for micro-businesses to locate at the Rail Yards, and not limit users to a single commercial business.
- Provide landscaped, public spaces within the Rail Yards, including turf grass, trees, and shade structures.
- Promote and ensure better transit access to the Rail Yards. Prioritize redevelopment of and recognition of the Round House as an important element of Albuquerque's history.
- Provide the opportunity for the WHEELS Museum to be located within the Round House.
- Complete the environmental clean-up of the Rail Yards property. Continue hosting tours of the Rail Yards property in order to build more public support and momentum for redevelopment.



2012-12-01, Community Presentation



2011-03-04, Press Conference with Mayor Berry, Councilmember Benton, Samitaur Smiths, and Giora Solar, Rail Yards



2012-10-25, Community Presentation, Barelax Community Center



2012-10-25, Community Presentation, Barelax Community Center



2012-10-25, Model presentation, Barelas Community Center



2012-12-01, Public Tours, Rail Yards



2012-10-25, Community Presentation, Barelas Community Center



2012-12-01, Community Presentation, Rail Yards



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ZONING COMPLIANCE & REGULATORY FRAMEWORK 4

4.0 ZONING COMPLIANCE & REGULATORY FRAMEWORK

This section provides a description of the City policies and existing zoning and regulatory framework provided through the Albuquerque / Bernalillo County Comprehensive Plan and the Barelás Sector Development Plan. The intent is to illustrate how the MDP and the site design complies with ~~these the existing zoning, various plans, and policies, and existing zoning.~~

4.1 Albuquerque/ Bernalillo County Comprehensive Plan

The Albuquerque/Bernalillo County Comprehensive Plan (Comprehensive Plan) is a Rank 1 plan. The Rail Yards property is located within the Central Urban area as designated by the Comprehensive Plan. The Central Urban area is a portion of the Established Urban area and is subject to those policies in addition to the Central Urban policies. The goal of the Central Urban area is as follows:

“The Goal is to promote the Central Urban Area as a focus for arts, cultural, and public facilities / activities while recognizing and enhancing the character of its residential neighborhoods and its importance as the historic center of the City.”

Applicable policies address locating public, cultural, and arts facilities in the Central Urban area and preserving existing facilities, upgrading neighborhoods through capital improvements, and creating links between these facilities and residential areas. Policies in the Established Urban area address a variety of issues applicable to the Rail Yards property.

Applicable policies and how the MDP furthers them are as follows:

Land Use Policies

Policy II.B.5.d: “The location, intensity, and design of new development shall respect existing neighborhood values, natural environmental conditions and carrying capacities, scenic resources, and resources of other social, cultural, and recreational concern.”

Policy II.B.5.i: “Employment and service uses shall be located to complement residential areas and sited to minimize the adverse effects of noise, lighting, pollution, and traffic on residential environments.”

Policy II.B.5.o: “Redevelopment and rehabilitation of older neighborhoods in the Established Urban area shall be continued and strengthened.”

Economic Development Policies

Policy II.D.6.a: “New employment opportunities which will accommodate a wide range of occupational skills and salary levels shall be encouraged and new jobs located convenient to areas of most need.”

Policy II.D.6.b: “Development of local business enterprises as well as the recruitment of outside firms shall be emphasized.”

Policy II.D.6.c: “Opportunities for improvement in occupational skills and advancement shall be encouraged.”

The Rail Yards MDP, and the existing zoning as designated by the Barelás Sector Development Plan, have been designed to be consistent with and fulfill these land use and economic development policies. The MDP includes the necessary safeguards for developing new commercial and light industrial uses alongside of existing and future residential uses, both adjacent to and within the site.

The MDP provides the framework for redevelopment of the Rail Yards site in order to reinvigorate this area and bring new life to this long vacant property within an historically significant area of Albuquerque. [The Development Regulations, Design Guidelines](#) and the Site Development Plan for Subdivision contained within the MDP address noise, lighting, sustainability, and landscape issues within and adjacent to the property ~~through proposed edge treatments and careful siting of the on-site residential use, limitations on the height of light fixtures and shielding to respect night sky issues, water harvesting, building materials, etc.~~

The proposed redevelopment strategies contained in the MDP respect neighborhood values by providing for the opportunity of new, permanent jobs for local residents with a potential range of occupational skills and salary levels. Construction jobs will also be an important component of the project, which will last for many years until full development of the property is achieved. The MDP provides physical connections and entry points from surrounding neighborhoods to the property for pedestrians, bicyclists, and vehicular traffic. The MDP provides strategies for interim and permanent **uses**.

4.2 Barelás Sector Development Plan & Existing Zoning

The Rail Yards property is located within the Barelás Sector Development Plan area. The Barelás Sector Development Plan (Barelás SDP), a Rank Three plan, was adopted in April 2008 and zoned the Rail Yards property as SU-2/HLS (Historic Locomotive Shops).

The Barelás SDP prioritized the redevelopment of the Rail Yards property as a key economic development strategy. Participants in the planning process for the Barelás SDP identified the importance of creating employment opportunities for local residents and mitigating

any negative impact redevelopment might have. They also valued the historic nature of the existing structures and felt that redevelopment should recognize and celebrate the history of the railroad. Participants felt that efforts towards business retention and recruitment should be directed towards businesses that meet local shopping needs.

The Barelás SDP requires that the entire Rail Yards property be controlled by a MDP that is reviewed by the Rail Yards Advisory Board and the Environmental Planning Commission and adopted by the City Council before a building permit is issued for any portion of the site. Exceptions include a museum project (WHEELS Museum) and a City-sponsored housing project, both of which may receive approvals and building permits prior to the adoption of the MDP, and subject to an agreement with the City that has been approved by City Council being in place ([SU-2/HLS K.1, page 76](#)). The Barelás SDP requires that the MDP include appropriate buffering between residential and non-residential uses on the site ([SU-2/HLS K.2, page 76](#)).

The SU-2/HLS zone for the Rail Yards property (as established by the Barelás SDP) is based on the C-2 Community Commercial zone, IP Industrial Park zone, and R-3 Residential zone of the Comprehensive City Zoning Code ([Barelás SDP, pages 74-76](#)). As stated in the Barelás SDP, “The zone provides for flexibility of land use and design within the property and for compatible orientation to the neighborhood and buffering between the locomotive shops complex and residential areas.” This unique zoning supports the community’s desire to provide high-quality employment in the neighborhood, increase the neighborhood’s residential population, and provide for goods and services that meet the needs of neighborhood residents and businesses.

Permissive and conditional uses of the three zoning categories are allowed by the Barelás SDP, with exceptions. Uses permissive in the C-2 Community Commercial zone are allowed. Uses permissive in

the IP Industrial Park zone are allowed, with the exception of an air separation plant. Permissive uses also include iron or steel foundry or fabrication plant, forging, rolling, or heavyweight casting, as regulated by the MDP and provided that such use is buffered from abutting residential zones or residential uses, as approved in the MDP. Conditional uses of the C-2 Community Commercial and R-3 Residential zones are allowed, with the requirement that they are shown on the MDP along with their relationship to other uses on the site. Prohibited uses include emergency shelter, retail sale of alcoholic drinks for consumption off-premise, off-premise signs, sale of gasoline and liquefied petroleum gas, adult amusement establishment and adult store, cold storage plant, and pawn shop.

The SU-2/HLS zone also provides site development regulations including height, setbacks, off-street parking, landscaping, and orientation. as follows:

- **Maximum Height:** "Same as O-1 of the City Zoning Code, except height up to 67 feet (five stories) is allowed at a minimum distance of 100 feet from any single-family residential zone" (SU-2/HLS D.1, page 75).
- **Setbacks:** "Setback along 2nd Street is a minimum of 10 feet" (SU-2/HLS F.1, page 75).
-
- **Off-street Parking:** "Parking should be screened by buildings, where possible, and not front on streets. Parking that is adjacent to the street because of the configuration of existing buildings must be screened by landscaping or a solid wall or fence 3 feet in height" (SU-2/HLS G.1, page 75).
- **Landscaping:** "Landscaping shall meet the requirements of the City Zoning Code. The intent of landscaping of the locomotive shops site is to provide a visually attractive edge and streetscape between

it and the neighborhood, and provide an attractive environment within the property, including color and shade" (SU-2/HLS H.1, page 75). "Perimeter landscaping should be consistent with the character of the adjacent neighborhood, with an emphasis on drought tolerant plants to minimize water consumption" (SU-2/HLS H.2, page 75). "A public gathering area shall be designed into commercial uses on the site. These might include porticos along commercial storefronts or an open plaza with seating and/or outdoor dining. Shade should be provided by landscaping or shade structures" (SU-2/HLS F.3, page 75).

- **Orientation:** "New residential and commercial development along 1st Street or 2nd Street shall orient entrances to the street" (SU-2/HLS I.1, page 75). "Buildings along the street frontage shall include entries and windows open to the street" (SU-2/HLS I.2, page 75). "Where possible, public access to the property shall be provided, and the use of existing buildings for uses accessible to the public is encouraged" (SU-2/HLS I.3, page 76). "The entrance to the locomotive shops property should open to the neighborhood and provide access to the public areas of the property" (SU-2/HLS I.4, page 76). "Where buildings orient to 1st or 2nd Streets, development should open to the street" (SU-2/HLS I.5, page 76).

4.3 Preservation Regulations

Because the site is owned by a public entity, the City of Albuquerque, and contains historic resources, the site plan and its implementation will involve numerous preservation compliance regulations. These regulations are spelled out in federal law in the National Historic Preservation Act of 1966 (as amended) and in state law in the New Mexico Historic and Prehistoric Sites Preservation Act (Section 18-8-7, NMSA 1978), also known as Section 7 review. Some of these steps as well as other preservation measures are already underway.

- Federal regulations apply when federal money is being used for a project or if a federal permit, license or approval is required. In such a case, the law requires that a Section 106 Review (referring to the section number of the National Historic Preservation Act) be conducted by the State Historic Preservation Officer to determine if there is any adverse effect to the historic resources. To date, the only federal dollars involved with this project were used for Environmental Protection Agency (EPA) efforts at the site. It has been determined by the Advisory Council on Historic Preservation (ACHP), the agency responsible for making such determinations, that the EPA involvement was not sufficient to trigger a Section 106 review of the project. In the future, if federal funds are used, including housing assistance, the question of a Section 106 Review may become applicable.
- Federal tax credits are available for rehabilitation projects on registered historic properties that meet the Secretary of the Interior's Standards for Treatment of Historic Properties and pass the rigorous reviews of the Internal Revenue Service as well as the National Park Service.
- State preservation regulations spelled out in the New Mexico Historic and Prehistoric Sites Act do apply to public funds, including funds spent by municipalities in the State. Projects that are publicly funded require a Section 7 review by the New Mexico State Historic Preservation Office (SHPO). If the entire site is nominated for listing on the State Register of Cultural Properties, then Section 7 review will be required of this project because of the City of Albuquerque's ownership of the site and its intended participation on the project going forward.
- To date, there have been five meetings with SHPO staff, attended by City of Albuquerque and Samitaur staff and consultants

regarding the project. SHPO staff has visited the site numerous times, and staff members have worked with the City of Albuquerque to prepare inventory forms of the cultural resources.

- As the plans develop, and as **the projects** begin on the site, SHPO staff will be reviewing draft plans and designs and commenting on proposals. Attendance of SHPO's staff to ongoing planning meetings has been on an advisory role up to now. If and when the City and developers list the site to the State Register, SHPO's role will further involve official compliance review under applicable preservation laws (Federal Section 106 and State Section 7).
- State tax credits are available for approved renovations to historic properties on the State Register.
- The Firehouse on the site has been named a City of Albuquerque Landmark and has its own set of guidelines for treatment developed by the City's Landmarks and Urban Conservation Commission (LUCC). Any changes to the Firehouse will require prior approval by the LUCC in addition to other permitting processes.
- The City of Albuquerque has prepared a nomination for the site to the National Register of Historic Places. Nominations are reviewed by the State Historic Preservation Office (SHPO), then placed before the New Mexico Cultural Properties Review Commission (CPRC), the citizens' advisory board for the New Mexico Historic Preservation Division (HPD). The CPRC can make a decision to place the site on the State Register of Cultural Properties. If the CPRC votes to move the nomination forward to the national level, it will be sent to Washington, DC, for review by the keeper of the National Register. This process can take from 12 to 18 months.
- Before the site is officially listed on the National Register, buildings

and structures (site features) may be subject to Section 106 review by being determined to be eligible for the National Register. The City of Albuquerque has prepared Historic Cultural Properties Inventory (HCPI) forms describing each building on the site as well as some of the non-building features. The HCPI forms will be a reference for the Determination of Eligibility (DOE) to be executed by the City of Albuquerque and SHPO in mutual consultation. Refer to Appendix C for a summary of the HCPI forms and the proposed treatment for each historic resource.

- In addition to the HCPI, Samitaur has hired internationally recognized conservation architect, Giora Solar, based in Israel, to review the historic resources and to provide a report recommending preservation measures. Refer to Section 10.6 for an overview of these recommendations.
- With several preservation issues and agencies involved with bringing the Rail Yards back to life, it will be important to bring all the interested preservation agencies together to map out a “compliance plan.” This plan would coordinate which agency will review what parts of the plan and subsequent designs of individual components. For example, it is not efficient for both the SHPO’s office and the City’s Archaeologist to review archaeological issues. If the City’s LUCC decides to list the site or components as landmarks (in addition to the Fire House), it will be important to coordinate the LUCC’s guidelines for development with the opinions of the SHPO to uncover any differences of opinion early in the process, since both agencies would have review authority. A good “compliance plan” will describe when reviews need to happen and by whom. It should determine times for review, so that the development schedule can proceed in a timely manner.

4.4 Memorandum of Understanding (MOU)

As part of the “compliance path”, it is the intention of the Master

Developer to memorialize the preservation recommendations included in the Master Plan in a Memorandum of Understanding (MOU) between the Master Developer, the City of Albuquerque, the New Mexico SHPO, the ACHP and possibly others such as the BNSF. In order to move forward with development, there needs to be agreement on not just the specifics of what is to be preserved, but additional agreement on how that preservation effort will be conducted. This agreement is necessary in order for the Master Developer to be able to recruit economic development projects for the site and have a level of comfort about the preservation stipulations that will be placed on that phased development. The development of the MOU cannot be negotiated with the SHPO until such time as the historic resources are deemed eligible for listing and the entire site is officially listed on the State Register of Cultural Properties.

There is good precedent for this process in the MOU for the Santa Fe Railyard redevelopment. That MOU was between the City of Santa Fe, City of Santa Fe Archaeological Review Committee, Santa Fe Railyard Community Corporation, New Mexico Cultural Properties Review Committee, SHPO, and the Trust for Public Land, dated 2004. In this case the site was already listed on the National and State Registers. It covers such issues as;

- Surveying all the properties (this has already been done for the Albuquerque Rail Yards)
- Listing of the Historic properties and their character defining features
- Treatment of Archaeological Sites
- Description of continued railroad operations (not applicable to Albuquerque Rail Yards)
- Design guidelines

- Process of approval for potential designs
- Recording requirements of any buildings to be removed

While the Albuquerque Rail Yards project is much more complex, the Santa Fe MOU and other MOU examples should be researched to come up with a document that codifies the consensus of the involved parties and guides the development process procedures in far greater detail than is appropriate at the master planning phase. This agreement should ride with the land as a component of leases and building rights documents to ensure that future parties abide by its requirements.

4.5 Maintenance Program Agreement

While it is not a legal regulation, many multi-building historic sites make use of a Maintenance Program Agreement with the SHPO. Program Agreements are management agreements between the National Park Service, represented by the SHPO, and the management of a specific site with cultural resources such as a National Park, a military base, or a university that uses federal funds on some buildings. A Maintenance Program Agreement, among other objectives, establishes the process by which cultural resources will be maintained and repaired. The federal law discussed in Section 4, called "Section 106," requires that federal agencies and agencies receiving federal funds avoid adverse effects on cultural resources. This requirement is in place not just for initial changes to a site, but over time as repairs and maintenance are needed.

A good Maintenance Program Agreement eliminates the need for site managers to consult the SHPO on every treatment of a cultural resource for repair and maintenance. It accomplishes this objective by describing common maintenance and treatment situations that are expected to occur and describing the treatments that will be used. An example of recurring maintenance would be the replacement of

chinking on historic log cabins at Glacier National Park: when should it be done and how should it be done. Another example would be how reroofing is to be done on various types of historic buildings.

The Albuquerque Rail Yards is being developed by a private Master Developer. At this time, Section 106 requirements are not applicable because no federal undertaking is currently involved. However, future development might occur that includes federal funding such as housing development funds. In addition, future tenants or owners of building rights may wish to pursue Federal Tax Credits.

The City of Albuquerque and the Master Developer have a vested interest in having the cultural resources of the site repaired and maintained in keeping with the Secretary of the Interior's Standards. Otherwise, through the years, with many different property managers making repairs and doing maintenance, the historical integrity of the property could diminish.

It is advised that the Master Developer and the SHPO develop a Maintenance Program Agreement for the Rail Yards that can serve as a guide for repair and maintenance by the Master Developer and form the basis of covenant agreements with future tenants, building rights of owners and developers.

A few examples of the types of repairs and maintenance items that should be included in a Maintenance Program Agreement include proper materials for replacement of broken glass; maintenance of metal surfaces; cleaning of brick and concrete surfaces; etc. The list can best be developed by referring to the character defining features that are described in the National/State Register Nomination. Examples of this type of program agreement can be found on line on the NPS website.

4.6 Archaeological Regulations

Because the site is larger than 5 acres, the City of Albuquerque's Archaeological Ordinance will apply. The City's Archaeologist will be participating in that process. The activities that could potentially disturb archaeological sites are more likely to occur when actual construction begins. Because buildings cover much of the site, the major concern will be the digging of utility lines. Artifacts of the historic period, especially those that might contribute to the history of the Rail Road years would be valuable additions to the story the site has to tell. Deeper excavations might also reveal pre-historic artifacts as with many sites in the Rio Grande Valley.

In addition to the City's Ordinance, certain State of New Mexico regulations may apply as well. Based on the above, it is likely that an Archaeological Report will be required. The New Mexico State

Archaeologist has been in multiple meetings concerning the Rail Yards project to date and will work with the City's Archaeologist to determine what level of survey(s) are appropriate and how they might be efficiently conducted to satisfy both agencies. The New Mexico State Archaeologist commented that since the site was originally in the flood plain, it would be surprising to find much prehistoric information. However, the historic periods, such as what the area was like prior to the Rail Yards would be of archaeological interest.



Rail Yards circa~1925 with original Powerhouse on left, William Walton Photographer, Property of the Albuquerque Museum, Milner Studio

Rio Grande.

Volcanoes



5.0 GOALS AND POLICIES

Introduction

The following guiding principles, goals, and policies are adapted from three primary sources: the City's Request for Proposals for a Master Developer, the Master Plan Agreement between the City and the Master Developer, and public input received during the Master Planning process. This section of the Master Plan is intended to serve as an overarching framework to guide the redevelopment of the Rail Yards over many decades.

Development decisions and City approvals shall consider whether a given proposal is consistent with and substantially furthers the goals and policies below, in addition to being consistent with other applicable plans, such as the Comprehensive Plan and relevant Rank 3 plans.

It is important to note that there will necessarily remain many unknowns with respect to the details of future redevelopment of the Rail Yards, such as specific tenants/user groups, types of employment opportunities, types of housing units, and particular cultural and other public amenities. However, the intent of these goals and principles will be to serve as criteria against which to judge the appropriateness, feasibility and potential efficacy of all such future development activities, beginning with design and continuing through construction, operation and maintenance.

[Refer to Section 10.5 for a description on the process for amendments or deviations to the MDP.](#)

Guiding Vision Principle #1: Job Generation, Economic Development & Economic Viability

The Rail Yards, once an economic pillar for the community, is envisioned to become a hub of economic activity again. The Master Plan provides a framework for renewed economic and business success for the Project Area and is sufficiently flexible to accommodate a variety of potential future economic uses and opportunities. The Plan also provides opportunities to generate quality, living-wage and high-wage jobs and programs that will link those jobs with community residents.

The Master Plan recognizes that the success of the Project Area is directly related to the financial feasibility of the overall mix of uses that is ultimately developed. Implementation of the Master Plan should prioritize uses that are financially self-sustaining and, preferably, revenue-generating and minimize the City's exposure to and obligation for direct costs and subsidies.

Goal 1.1 - The Rail Yards will again become a major employment center: The Rail Yards site will function again as a major skilled employment generator that utilizes the local workforce.

Policy 1.1.1 - Focus resources and attention toward successful Rail Yards redevelopment: The City and the Master Developer, through direct investment, policies, legislation and formation of public-private partnerships, will maximize the potential for successful redevelopment at the Rail Yards site and the surrounding area.

Policy 1.1.2 - Support local business development: The City and the Master developer will support the start-up and growth of businesses that enhance the Rail Yards site and complement businesses in the surrounding communities. This may include,

for example, the establishment of a small business incubator or second stage incubator on the site.

Goal 1.2 - The Rail Yards site will support a mix of employment opportunities: The range of employers at the Rail Yards will collectively provide a mix of living and high-wage employment, as well as opportunities for on-the-job training.

Policy 1.2.1 - Support educational/workforce training: The City and the Master Developer will work with local and state organizations to provide opportunities for “educational training” at the Rail Yards.

Policy 1.2.2 - Institute “First Source” hiring: The City, Master Developer and future businesses at the Rail Yards will encourage the practice of first-source hiring, through legislation, contracting requirements and/or incentives to hire local employees, and incentives to hire graduates of New Mexico institutions.

Goal 1.3 - Economically viable development at the Rail Yards site will create new revenue streams for the City and the State: Redevelopment will focus on developing economically viable businesses and projects that also generate new streams of revenue for the City and State.

Policy 1.3.1- Develop a financing and implementation package: The City and Master Developer will design a financing and implementation package that incentivizes business development yet minimizes costs, obligations and exposure for the City during both construction and operation of the Rail Yards redevelopment.

Policy 1.3.2- Demonstrate financial sustainability: All uses, features and projects will demonstrate that they are either financially self-sustaining or have sufficient public financial

assistance to provide for their construction, development and/or sustained operation and maintenance.

Guiding Vision Principle #2: Housing

Integrating housing into the Rail Yards redevelopment of the site is important for three reasons:

1. *To ensure the availability of affordable housing in the community;*
2. *To minimize possible displacement of people as a result of redevelopment; and*
3. *To create a true mixed-use environment and a constant presence on the site, which will increase the overall vibrancy and safety of the site.*

The Master Plan supports construction of the required Workforce Housing and includes opportunities for additional affordable and market rate housing. The development of housing at the Rail Yards will be coordinated with the City’s ongoing efforts to rehabilitate existing housing in the surrounding neighborhoods.

Goal 2.1 - A mix of housing types will be available at the Rail Yards: A range of housing types, such as apartments and/or live/work units, that are either market rate and/or Workforce Housing could be developed in order to meet market demand for mixed-use, urban dwellings and to help create an active and vibrant site.

Policy 2.1.1 - Meet the Workforce Housing requirement: A minimum of thirty (30) units of Workforce Housing, as defined by City Ordinance 30-2006 (§14-9-1 et. seq., ROA 1994), will be constructed at the Rail Yards to help activate the site and create

an appropriate transition between the site and the residential neighborhood across 2nd Street.

Policy 2.1.2 - Locate housing along 2nd Street, to become part of the neighborhood: Housing ~~should be~~ **is** considered an appropriate land use along the 2nd St. frontage of the site in order to relate to development within the Barelás neighborhood.

Policy 2.1.3 - Assure complementary housing scale and design: New housing construction will respect and relate to the scale of development on the west side of 2nd St., for example by stepping up building heights towards the interior of the site or, where stepbacks cannot be achieved, through other means of ensuring compatible articulation and scale.

Policy 2.1.4 - Phase development activities to minimize adverse impacts: The Master schedule and the schedule for individual development projects should be designed to minimize impacts on commercial and residential tenants over the entire build-out time frame.

Goal 2.2 - Housing at the Rail Yards will be a part of an integrated housing redevelopment and rehabilitation strategy for the larger community: Housing development at the Rail Yards will be undertaken in concert with efforts by the City to encourage rehabilitation of existing properties and redevelopment of vacant (infill) properties in the surrounding neighborhoods, creating a vibrant, mixed-income community.

Policy 2.2.1 - Encourage infill workforce housing development on existing vacant lots and support housing rehabilitation programs: Infill workforce housing projects and rehabilitation programs within the Barelás and South Broadway neighborhoods should be a priority of the City in order to strengthen existing

communities, minimize displacement, and integrate with the redevelopment of the Rail Yards.

Policy 2.2.2 - Develop balanced design standards: Design standards will be developed that reflect the context of the Rail Yard and the adjacent neighborhoods.

Guiding Vision Principle #3: Community Connectivity

The Master Plan complements all adopted plans for surrounding areas, including the Barelás, South Broadway and San José neighborhoods. The Plan supports current and planned economic activity in the Downtown area and encourages connections with existing attractions in the area—such as the Albuquerque Zoo and BioPark, Tingley Beach, Rio Grande State Park, the National Hispanic Cultural Center, the South Broadway Cultural Center, Old Town and its museums, Downtown Albuquerque and its amenities, the Alvarado Transportation Center, the Historic 4th Street Corridor, local sports venues, the Albuquerque Sunport, and others. The Plan reinforces the City's transit goals and objectives, and supports pedestrian, bicycle, auto and public transportation to and from the site.

Goal 3.1 - The public will feel welcome at the Rail Yards. Public gathering places will be available and accessible for the wider community to enjoy.

Policy 3.1.1 - Create public spaces: Public spaces will be integrated into the design of all phases of redevelopment of the site.

Policy 3.1.2 Maintain a balance between private and public access to the Machine Shop: While businesses at the Rail Yards

will require access and privacy, public access to some portion of the Machine Shop shall be maintained. The design of uses at the Machine Shop will strive to maintain this balance. Access to the Machine Shop, as the largest and most significant of the remaining structures, is a high priority; however, where possible, some degree of public access to other historic structures should be provided. (See also Policy 6.2.1)

Goal 3.2 - The Rail Yards will become part of a well-connected network of attractive community and regional facilities that doesn't require an automobile for access: The Rail Yards will be integrated with and will complement other attractions in the area (see Guiding Principle #3 above), and will be easily accessible by public transportation, bicycling, and walking. The need to drive and park an automobile at the site should be minimized.

Policy 3.2.1 - Support a "Park Once" strategy: Design features and facilities will support a comprehensive "Park Once" strategy, modeled after the Downtown 2010 Plan's strategy, promoting walking, bicycling or public transportation to and from locations within the greater Rail Yards area.

Policy 3.2.1.1 - Provide transportation options: Improved public and alternative transportation options to the site, including bicycle, pedestrian, and transit facilities will be accommodated. Within the site, connectivity will be provided.

Policy 3.2.1.2 - Use the Rail Line to provide site access: Connections to the Alvarado Transportation Center and the Central Business District via the main rail line will be encouraged. A future Rail Line stop at the site will be accommodated, should one be approved in the future.

Policy 3.2.2 - Limit on-site parking: A limited amount of on-

site parking will be provided, and over-parking of the site will be discouraged. At full project build-out, visible surface parking will not be allowed except for limited loading facilities and to meet accessibility requirements. Subterranean parking will be encouraged to accommodate full project build-out parking requirements. Interim surface parking is acceptable prior to full project build-out, provided it is designed to meet Architectural standards contained in the Master Plan.

Policy 3.2.3 - Balance commercial and residential on-street parking needs: On-street parking in appropriate locations contributes to a vibrant urban environment. Commercial and residential parking needs must both be accommodated, which can be accomplished through a mix of metered and permit parking.

Policy 3.2.3.1 - Maximize the availability of and direct visitors to on-street parking along non-residential frontages by providing metered parking and wayfinding: The City should install meters, signage and other measures as appropriate on adjacent and nearby streets.

Policy 3.2.3.2 - Implement on-street residential permit parking for surrounding neighborhoods, as needed; Since on-site parking will be limited, the City and Master Developer should work closely with adjacent neighborhoods to monitor the impacts of off-site parking as the redevelopment of the site progresses and determine if/when a Neighborhood Permit Parking program should be implemented. The standard requirement for license plate survey which determines if the threshold of on-street parking spaces used by persons who are not residents of the area has been met shall be waived.

Policy 3.2.3.4 - Maintain direct rail access onto the site: Future

development must preserve the functionality of the historic turntable and maintain rail access thereto.

Goal 3.3 - There will be safe, well-designed physical connections between the Rail Yards site and adjacent neighborhoods: Direct, safe and convenient pedestrian and bicycle connections to and from the Barelás and South Broadway neighborhoods will be constructed, and physical barriers to the site, excluding the active BNSF railroad tracks, will be removed, visibly and physically connecting the site with both neighborhoods.

Policy 3.3.1 - Remove barriers to the site: Perimeter fencing will be removed when site security can be ensured. The edges of the site should remain open and accessible, and fencing, gates and other similar barriers should be employed only when other security measures are not feasible. (See also Policy 4.1.3)

Policy 3.3.2 - Create welcoming, pleasing edges: Development at the edges of the site should be oriented towards the surrounding neighborhoods. The street edges along 2nd/1st Streets on the west, and along the railroad tracks on the east, should maintain sight lines to historic structures and should help invite people to visit the site. Developing landscaped spaces to define the edges of the site is appropriate.

Policy 3.3.3 - Create pedestrian and bicycle connections to the Barelás and South Broadway neighborhoods: Direct pedestrian and bicycle connections between the site and adjacent neighborhoods will be created that are safe, feasible, connect to natural points of entry, and encourage people to visit, work and shop at the site. While the design and planning of facilities that serve the site, such as 2nd St. and the Guadalupe Overpass, are outside the purview of the Plan, the City should prioritize and undertake infrastructure improvements that will support

redevelopment of the site and maximize opportunities for creating safe, comfortable non-vehicular access to the site.

Guiding Vision - Principle #4: Land Uses

The Master Plan encourages new development on the Rail Yards site that balances new economic and design approaches with protection of the integrity and history of the Rail Yards and the surrounding residential communities. The Plan complements the goals in other adopted plans that cover or affect the Rail Yards site.

Goal 4.1 - The Rail Yards will become a model of mixed-use development. The Rail Yards is looked to as a model for reclaiming historic properties, stimulating significant job growth and economic development, accommodating commercial and residential tenants, providing needed services and venues to surrounding neighborhoods and the entire city, and creating a "Live/Work/Learn/Trade/Play" environment.

Policy 4.1.1 - Celebrate and emphasize the historic railroad function of the site: Cultural and employment uses that relate to rail operations, such as transportation museums or compatible and suitable rail equipment maintenance facilities, are encouraged and shall not be precluded. Proximity to the operative Turntable and BNSF switching yard make the south end of the Rail Yards site particularly suitable for such uses.

Policy 4.1.2 - Create a balanced development such that diverse users can utilize the site to the highest degree with minimum impact to one another. Potentially incompatible uses will be organized and buffered in order to achieve compatibility.

Policy 4.1.3 - Demonstrate appropriate transition and

scale: New development should demonstrate sensitivity in scale and transition as the historic gateway to the Barelás and South Broadway neighborhoods.

Policy 4.1.3 4 - Integrate new development and uses with adjacent established development: New development, both buildings and site features, should relate in orientation, massing, and use to established development adjacent to the site. Uses that create impacts to surrounding residential neighborhoods will be appropriately buffered. **Since existing development on the west side of 2nd Street is predominantly residential in character, the 2nd Street frontage of the site is considered an appropriate location for housing, mixed with retail where appropriate to serve as an area of transition between the site and the neighborhood to the west.**

Goal 4.2 - Rail Yards redevelopment will catalyze redevelopment opportunities in surrounding areas: Stronger connections to the Barelás, South Broadway, and Downtown areas will be built through redevelopment of undeveloped sites that abut or are adjacent to the Rail Yards.

Policy 4.2.1 - Acquire additional land for complementary redevelopment opportunities: The City and Master Developer will consider acquiring additional sites, as appropriate, that abut or are adjacent to the Rail Yards to support area-wide redevelopment activities consistent with and supportive of the aims of the Master Plan, including residential as described in Guiding Principle #2 . If additional sites are acquired, the Master Plan may be amended to incorporate any additional site or sites.

Policy 4.2.2 - Foster partnerships for complementary redevelopment opportunities: This will be pursued through public, private and/or public-private partnerships to maximize development opportunities on sites that abut or are adjacent to the

Rail Yards and that support the aims of the Master Plan.

Goal 4.3 - The Master Plan will respect and maintain consistency with the goals in other adopted Plans: New development will remain consistent with the goals, policies, and recommendations in the Albuquerque/Bernalillo County Comprehensive Plan, the Barelás Sector Development Plan (2008), the South Broadway Sector Development Plan (1986), and the Downtown 2010 Plan (2000).

Guiding Vision Principle #5: Architecture and Historic Rehabilitation

The Master Plan recognizes the significant value of the existing Rail Yards historic resources, i.e. buildings and structures, to a local, state and national audience. The fundamental approach to site development will be to maintain the “integrity” of the site as a whole, with individual structures being rehabilitated and adaptively re-used for modern and functional purposes, in consultation with the New Mexico SHPO.

Goal 5.1 – The Rail Yards site will be developed as a unified whole with an integrated “sense of place” and unified vision: The original Rail Yards development was characterized by a spirit of innovation and state-of-the-art technical advances in engineering and building practices. The redevelopment will strive to rekindle this spirit both in terms of the adaptive re-use of the existing buildings and the design of new infill development.

Policy 5.1.1 – Follow design standards outlined within the Master Plan in order to create a unified visual language: Visitors, tenants and inhabitants arriving to the Rail Yards should recognize a cohesive, integrated and high quality environment.

Policy 5.1.2 – Architectural design will integrate 20th and 21st century sensibility: The City and the Master Developer will encourage innovative architectural design - for redevelopment, new structures and landscaping - that fits within the historic context of the site.

Policy 5.1.3 – Encourage innovative and progressive building technologies: Redevelopment of the Rail Yards should be characterized by a commitment to the future as well as the past and should build on the lineage of technological advancement embodied by the existing structures.

Goal 5.2 – Historic resources at the Rail Yards will be rehabilitated and adaptively reused: The hierarchy in the relative significance of the existing structures will inform a tiered approach to rehabilitation.

Policy 5.2.1 – Rehabilitate and/or adaptively re-use historic resources: The historic resources represented by the Historic Locomotive Shops should be rehabilitated and adaptively reused in plans for economic ventures, cultural amenities and physical changes to the site.

Policy 5.2.2 – Preserve the **human and architectural histories history** of the Rail Yards site for future generations: The site's integral role in the development of the surrounding neighborhoods and Albuquerque as a city is important to communicate. Visitors should have access to the Rail Yards in order to view the historic structures, understand their original relationship and functionality, and experience early 20th century industrial architecture and its remarkable innovations.

Policy 5.2.3 – Honor the human history of the Rail Yards site through the creation of an on-site memorial: The Rail Yards redevelopment will recount the history of the Rail Yards and its relationship to Albuquerque and New Mexico in a number of ways, including but not limited to an oral history project, a

transportation museum, and an on-site memorial to the workers with special acknowledgement of those who were injured or killed there. The memorial to the workers will be located at or near the entrance from each neighborhood.

Goal 5.3 – Infill development will complement existing structures: New additions or new construction to or surrounding existing structures shall be designed in consultation with the New Mexico SHPO.

Policy 5.3.1 – Ensure compatibility of infill development with existing site features in terms of size, scale, proportion and massing: New structures should maintain a low building profile in order to maximize sight lines to and from the most significant historic structures.

Goal 5.4 –The Rail Yards site will become a model for sustainable redevelopment: The Rail Yards redevelopment will strive to incorporate innovative technologies that assist with site resource management and utilization.

Policy 5.4.1 – Incorporate sustainable design features in the redevelopment: Concepts such as natural resource conservation, on-site energy generation, utility co-generation, and sustainable material selection should be employed.

Policy 5.4.2 – Design, build and maintain regionally appropriate landscaping and open areas: Landscape design will be a major component in creating an inviting environment and connection to the wider community. Landscape design should reflect an understanding of the local climate, and landscaping materials should be selected based on their ability to withstand low water conditions and direct sun exposure. Developed open space areas should be shaded from the summer sun with trees and/or permanent or temporary shade structures. Rainwater collection and on-site reuse are strongly encouraged.

Policy 5.4.3 – Design the Rail Yards site to exceed all current City of Albuquerque adopted Energy Code standards and should be USGBC LEED equivalent rated where possible. The historic buildings will be rehabilitated to incorporate the energy standards to the extent feasible through creative design.

Policy 5.4.4 – Employ a “Rehabilitation First” strategy in programming and design: Rehabilitation of existing structures uses the embodied energy within the structure and is strongly encouraged.

Guiding Vision Principle #6: Art and Culture

The Master Plan encourages opportunities for promoting the art, history and culture of the site, the community and the region. The Plan sets aside space for a museum that celebrates the history of transportation, particularly rail transportation. Commercial and residential tenants, local community members, and visitors from near and far will be attracted by heightened aesthetics, comfortable, quality amenities, and a unique cultural vibrancy.

Goal 6.1 - The Rail Yards will be home to a quality museum: Redevelopment will include a venue for a museum that will be operated by an organization that is committed to promoting the importance of the site and its history.

Policy 6.1.1 - Create a facility that conveys the history of the site: The site will include a museum or other appropriate facility that informs visitors of the history of the Rail Yards and the site’s relationship to the history of Albuquerque.

Goal 6.2 - The Rail Yards will foster a vibrant set of on-site cultural events and facilities: The City and the Master Developer will promote

opportunities for other cultural events and facilities that support the overall redevelopment goals and, in particular, help honor the value and history of the site, the community and the region.

Policy 6.2.1 - Locate cultural facilities strategically: The preferred location to develop cultural facilities is the southern end of the site, focused around the Turntable and rebuilding the Roundhouse. However, cultural uses may also be developed on other portions of the site, including within historic buildings. For example, as the most prominent and iconic remaining structure on the site, the Machine Shop or a portion thereof could be considered an appropriate location for a publicly-accessible use, such as a cultural facility. (See also Policy 3.1.2)

Policy 6.2.2 - Develop standards for community use of public spaces: The use of public spaces by the community will be encouraged but regulated. Standards for cultural and community events, art installation and performance, and farmers’ markets, mobile restaurants and other groups will be developed as required.



Bridge Crane in action circa~1943, Jack Delano Photographer, Farm Security Administration/Office of war information photograph collection (Library of Congress)

Looking
west down
90' bay.



6.0 DEVELOPMENT REGULATIONS

Blue-Line Note: Development Regulations are the regulatory component of the previous Section 8, Development Performance Standards.

Intent

These development regulations establish the parameters for the redevelopment of the Albuquerque Rail Yards site.

6.1 Site Plan for Subdivision

The regulatory standards outlined in Section 6 are summarized in Tableau 7, Site Plan for Subdivision, located on the following pages. Once approved, the Site Development Plan for Subdivision will serve as the basis for future site development. The Site Development Plan for Subdivision is the base subdivision. All future platting actions are based on this, and shall be per the Subdivision Ordinance. All amendments and deviations to the Site Development Plan for Subdivision and the Master Development Plan shall be per the SU-2/HLS zone in the Barelás Sector Development Plan.

6.2 Development Standards Matrix Components

6.2.1 Parcel Area

As described in the Site Plan for Subdivision (Tableau 7), the Rail Yards site is divided in 10 distinct parcels. The Parcel Area is a measurement of the existing surface land area of the underlying proposed Parcel. This base measurement will be used to calculate allowable built area. The total of all parcel areas will equal 27.3 acres.

6.2.2 Floor Area Ratio (FAR)

The Master Plan provides the Floor Area Ratio (FAR) mechanism for regulation of allowable building area and therefore the control of

project density that must be maintained in order to preserve the spatial hierarchy of the existing historic buildings. Accordingly, the Master Plan proposes an average site density of only FAR (.75).

6.2.3 Existing Historic Resources to be preserved

A list of all Historic resources recommended for Preservation/Adaptive Reuse that reside on each parcel.

6.2.4 Existing Built Area

The total amount of existing building area currently under roof contained within the subject parcel.

6.2.5 Approved Use

The SU-2/Historic Locomotive Shops (SU-2/HLS) zone allows for a wide range of permissive uses, including multifamily residential (R-3), office (O-1), community commercial such as retail, restaurants, services (C-2), and light industrial (I-P). 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 such uses on the site. Accordingly, the Master Plan establishes approved land use types and locations (by parcel) based on a thorough analysis of project goals, site context, and community input. Amendments shall be per the SU-2/HLS zone.

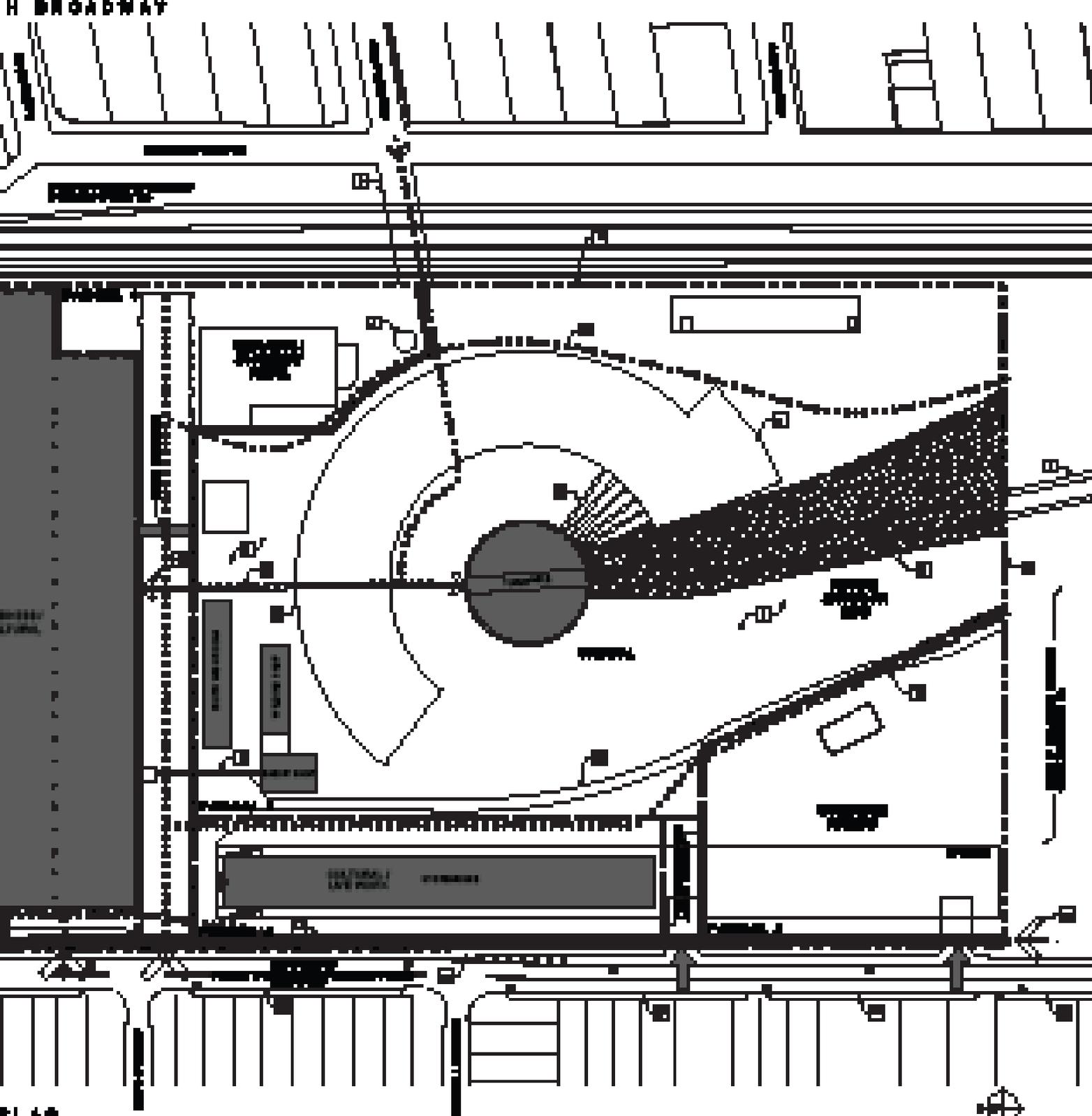
6.2.6 Building Heights

Allowable building heights shall not exceed those standards contained under the current SU-2/HLS zoning. In many areas, the Master Plan requires a more restrictive building height limit in order to comport with neighboring residential uses and to maintain the necessary visual hierarchy between the existing historic buildings and new infill development, the former of which should remain the dominant visual elements of the site

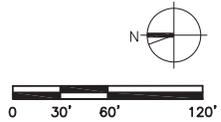
NOTE: TO BE UPDATED BY DOLAN AS PART OF SITE PLAN FOR SUBDIV.

| Parcel ID | Size | Parcel Area (sq) | Proposed Floor Area Ratio (FAR) | Existing Historic Resources | Existing Built Area (sq) | Allowable Building Area (sq) | Recommended Use | Height Limits (ft) | Street Facing Sidelots (ft) | Parking (incl. street space) | Parking (T-0, see Section 10) |
|--------------|------|---------------------|------------------------------------|---|-----------------------------|---------------------------------|---|------------------------|--------------------------------|---------------------------------|-----------------------------------|
| | | 342,143 | 0.55 | Terrace, Public Way, Walking Strip, South Walkway | 23,629 | 222,893 | Cultural Facilities; e.g. Museum, Performing Arts and Related-related facilities, Parking | 37 | N/A | 501 | 5 (except Surface Parking: 1) |
| | | 77,364 | 1.50 | Platform | N/A | 77,364 | Workforce Housing | 40 | 10 | 90 | 3 |
| | | 63,582 | 0.50 | Structure | 18,900 | 31,791 | Cultural Facilities; e.g. Museum, Bio Work | 40 | 10 | N/A | 4 |
| | | 68,080 | N/A | Bridge Cross | N/A | N/A | Public Convention Area; Assembly Hall, Education, Public Art Venue | 40 200 (restricted) | 10 | N/A | 1 |
| | | 142,747 | 1.50 | Machine Shop | 165,000 | 314,121 | Business/Professional Use; Office, Light Manufacturing, Training/Education, Assembly Cultural Use | 37 | N/A | N/A | 2 |
| | | 79,898 | N/A | Transfer Table | N/A | N/A | Public Convention Area | 37 | 10 | N/A | 4 |
| | | 30,398 | 1.50 | Workshop Shop | 24,867 | 45,447 | Business/Professional Use; Office, Light Manufacturing, Training/Education | 37 | N/A | N/A | 2 |
| | | 89,989 | 1.50 | Public Way, Truck Way, Fire Shop | 83,548 | 124,984 | Business/Professional Use; Office, Light Manufacturing, Training/Education | 37 | N/A | N/A | 2 |
| | | 98,316 | 0.25 | Firehouse, Water & Fuel Storage | 0,520 | 24,504 | Public Convention Area/Community Hall, Restaurant, Service, Housing | 30 | 10 | N/A | 4 (except Professional Office: 1) |
| | | 777,890 | 0.55 | Sheet Metal House (Front) | N/A | 128,804 | Business/Professional Use; Office, Light Manufacturing, Training/Education, Parking | 30 | 10 | 353 | 5 (except Surface Parking: 1) |
| TOTAL | | 1,189,608 | 0.74 | | 380,608 | 678,805 | | | | 996 | |

Figure 167: Design Development Standards Matrix



- LEGEND**
- EXISTING SITE BOUNDARY
 - PROPOSED SITE BOUNDARY
 - EXISTING DRIVEWAY
 - PROPOSED DRIVEWAY
 - EXISTING DRIVEWAY TO BE REMOVED
 - PROPOSED DRIVEWAY TO BE REMOVED
 - EXISTING DRIVEWAY TO BE RELOCATED
 - PROPOSED DRIVEWAY TO BE RELOCATED
 - EXISTING DRIVEWAY TO BE WIDENED
 - PROPOSED DRIVEWAY TO BE WIDENED
 - EXISTING DRIVEWAY TO BE NARROWED
 - PROPOSED DRIVEWAY TO BE NARROWED
 - EXISTING DRIVEWAY TO BE ABANDONED
 - PROPOSED DRIVEWAY TO BE ABANDONED
 - EXISTING DRIVEWAY
 - PROPOSED DRIVEWAY



6.2.7 Setbacks

Setbacks per the SU-2/Historic Locomotive Shops zone in the Barelás Sector Development Plan

6.2.8 Parking

Parking shall be per the SU-2/HLS zone of the Barelás Sector Development Plan. At final build out surface parking should be avoided, however, until structured parking is provided, surface parking shall be provided through shared access or parking agreements. Parking shall be addressed for the site as a whole rather than on a parcel by parcel basis.

6.3 Access

The Rail Yards site, given its unusual “superblock” configuration with 600ft of width opening for vehicular traffic on only the west side to the public right-of-way at 1st/2nd Street, creates an inherent problem of access. Because of this configuration, Parcels 1, 7 and 8 do not have direct street access and therefore will require an access agreement over Parcels 4 and 6 respectively to satisfy access requirements.

- a. Pedestrian/Emergency Access: Parcels 4 and 6 shall retain permanent public access easements and shall operate as internal paths in order to provide pedestrian and emergency access to parcels with limited or no access.
- b. Pedestrian Circulation: see Site Development Plan for Subdivision.
- c. Vehicular Access: see Site Development Plan for Subdivision.

6.4 Historic Features

The Master Plan requires the preservation and adaptive re-use of most of the buildings of the locomotive shops complex. The Secretary of the Interior’s Standards for Rehabilitation and associated Guidelines for Rehabilitation will provide the criteria for preservation and adaptive reuse treatment.

6.4.1 Historic Preservation and Adaptive Reuse

Buildings and structures of cultural significance that shall be PRESERVED are shown on the site plan and listed as below:

- Fire Station
- Machine Shop
- Bridge Crane
- Boiler Shop
- Tank Shop/ Tender Repair Shop
- Flue Shop
- Blacksmith Shop
- Storehouse with Platform
- Transfer Table
- Turntable
- Train Tracks: Rail tracks are extensive throughout the site and contribute to the site’s historic character. Not all tracks will be suitable for preservation. Tracks to be preserved shall be determined on a parcel by parcel basis with recommendations from City historic preservation planners provided at application for Site Plan for Building Permit.
- Babbit Shop
- Welding Shop
- South Washroom
- Waste & Paint Room

6.4.2 Buildings Proposed to be Removed

There are buildings and structures on the site that may present obstacles to redevelopment. The following buildings may be removed, but are not required to be removed. If no viable alternative to demolition can be identified, appropriate mitigation shall be identified by the State Historic Preservation Officer.

- Canopy
- Cab Paint Shop/ later converted to CWE Shops office
- Pattern House
- North Washroom
- Motor Car Garage
- Power House
- Sheet Metal House

- Fire Runway
- Water Reservoir

6.4.3 Interpretation of Iconic Historic Buildings and Structures

The site plan includes footprints of buildings and structures to be located on the property where important historic resources once stood, resources that have been demolished in previous decades. These historic resources will be represented on the site with new development that may be a modern interpretation of the historic building or structure. The reconstruction will be on the original footprint, will have approximately the same volume, but will not be identical to the original structure (it is a symbolic reconstruction).

- Roundhouse
- Smokestack

6.4.4 Development Parameters

The City will negotiate and enter into a Memorandum of Understanding (MOU) with the State Historic Preservation Officer regarding the redevelopment of the locomotive shops complex. The MOU will provide detailed parameters for rehabilitation of the buildings and new development on the site. Applications for a Site Plan for Building Permit shall be in accordance with the Memorandum of Understanding between the City and the State Historic Preservation Officer.

6.5 Signs

- Memorials, historic markers or other interpretive signs, and traditional and digital murals dedicated to non-commercial purposes shall not be considered signage. Memorials shall be located at or near the primary entry from each neighborhood, Barelás and South Broadway.
- Self-illuminated signage shall be prohibited except for retail uses; such signage shall be limited to 20 square feet. Signage containing moving graphics shall be prohibited for all use

categories.

- Unless otherwise restricted herein, refer to the SU-2/HLS zone of the Barelás Sector Development Plan for all other signage standards.
- Free standing "monument" signs shall be permitted at locations of vehicular access to the site and adjacent to the proposed transit plaza. A free standing sign shall also be permitted at the proposed location of the future rail station should one be approved. Such signage shall be used to identify the tenants of the Rail Yards site
- A maximum of (2) building-mounted signs per building are allowed. Such building-mounted signs shall not be greater in size than 1 percent of the facade area to which they are applied, provided they can be no greater than 100 square feet in size.
- Localized entry signage (e.g. blade signage, door signage) used to identify tenant entrances shall not be considered a building mounted sign for purposes of the above calculation and shall be permitted provided they are less than 2 square feet and located within 5 feet of the building entrance.

6.6 Landscape

The site shall be landscaped with a drought tolerant and indigenous palette with plants and trees placed for both beauty and shade.

6.6.1 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.

6.6.2 Seating

Seating areas will be provided for individual use and for larger group activities to ensure pedestrian comfort throughout the site. 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, and seat walls. Seating opportunities may be provided 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.

6.6.3 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.

6.6.4 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.

6.6.5 Bicycle Racks

Bicycle 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 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 minimum.

6.6.6 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.

6.6.7 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. 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..

6.6.8 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 shall 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.

6.6.9 Irrigation System

The irrigation system shall adhere to the standards outlined in the Water Conservation Landscaping and Water Waste Ordinance.

- a. 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.

- b. 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.
- c. 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.
- d. Irrigation components shall be readily available for maintenance and/or replacement.
- e. The entire irrigation system will be designed to maximize water efficiency.

6.6.10 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.

6.6.11 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.

6.6.12 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. Long term maintenance of landscaping shall be consistent across the site. This should be accomplished in the easements, covenants, and restrictions to be entered into by the parties in connection with platting.

6.7 Utilities/Screening

To ensure the overall aesthetic quality of the Rail Yards Site, all new electric and telecommunication distribution lines within the Site shall be placed underground. All permanent utilities serving irrigation systems and other landscape site amenities will be placed below grade. Transformers, utility pads, HVAC equipment, and telephone boxes shall be appropriately screened from public view.

6.8 Exterior Lighting

Exterior lighting standards and recommendations for the Rail Yards site are as follows:

- a. Placement of fixtures and standards shall conform to State and local safety and illumination requirements. All exterior installations must be provided with ground-fault interruption circuits.
- b. Shielded-source light fixtures shall be used to prevent light spillage and avoid unnecessary glare or reflection on adjacent properties, buildings, or roadways in compliance with the City Comprehensive Zoning Code.
- c. Lighting shall be integrated into the design of the buildings and structures; light sources shall be concealed to the degree possible and fixtures shall not become focal elements of the project.
- d. Building lighting is appropriate if it is low-level and consistently employed. For example, existing stone and cast-in-place concrete facades of the historic structures may be up lit. Architectural features may also be illuminated.

- e. Controlled, directional lighting shall be used to highlight public spaces and walkways. The use of walkway level lighting, such as all pocket lights, is encouraged to accent pedestrian areas.
- f. Landscape lighting is encouraged to enhance certain landscape features. Landscape lighting should be concealed at grade.
- g. Lighting shall be chosen based on energy efficiency, low level of maintenance and availability of parts, should replacement or repairs be required.

6.9 IMPLEMENTATION

The redevelopment and platting of the Rail Yards property is anticipated to occur over several phases. Once the MDP is approved by the City Council, there will be a number of technical studies required prior to any site development or platting action at the Rail Yards property. These studies include a master grading and drainage plan to be approved by City Hydrology and a master utility plan (water and sanitary sewer) to be approved by the ABCWUA, per the City's Subdivision Ordinance and Development Process Manual. The timeframe for completing these technical studies is within six months of City Council approval of the MDP. A Transportation System Report was completed in May, 2010.

6.9.1 Infrastructure

The master grading and drainage plan and the master utility plan (water and sanitary sewer) will provide the strategies for phased implementation and the recommendations for both short and long term solutions. (Refer to Section 9 for complete analysis). A key aspect of the water portion of the master utility plan will be fire suppression, which will require review and approval by the City Fire Marshal. As individual projects are implemented at the Rail Yards property, it is anticipated that detailed infrastructure plans will be submitted and approved for water and sanitary sewer availability statements from the ABCWUA and the Fire Marshal's office.

Outside of the City site development process, the master developer shall coordinate with the dry utility providers for electric, gas, and fiber optic

services. This should be done simultaneously with the other infrastructure master plans to avoid delay in provision of services.

6.9.2 Transportation

The Rail Yards property is uniquely situated on the edge of the Barelás neighborhood and the street grid of residential streets that connect to the commercial and mixed use 4th Street Corridor. 2nd Street was recently changed from one way to 2 way traffic flow and improved with new paving, signage, bump-outs for on-street parking, etc.

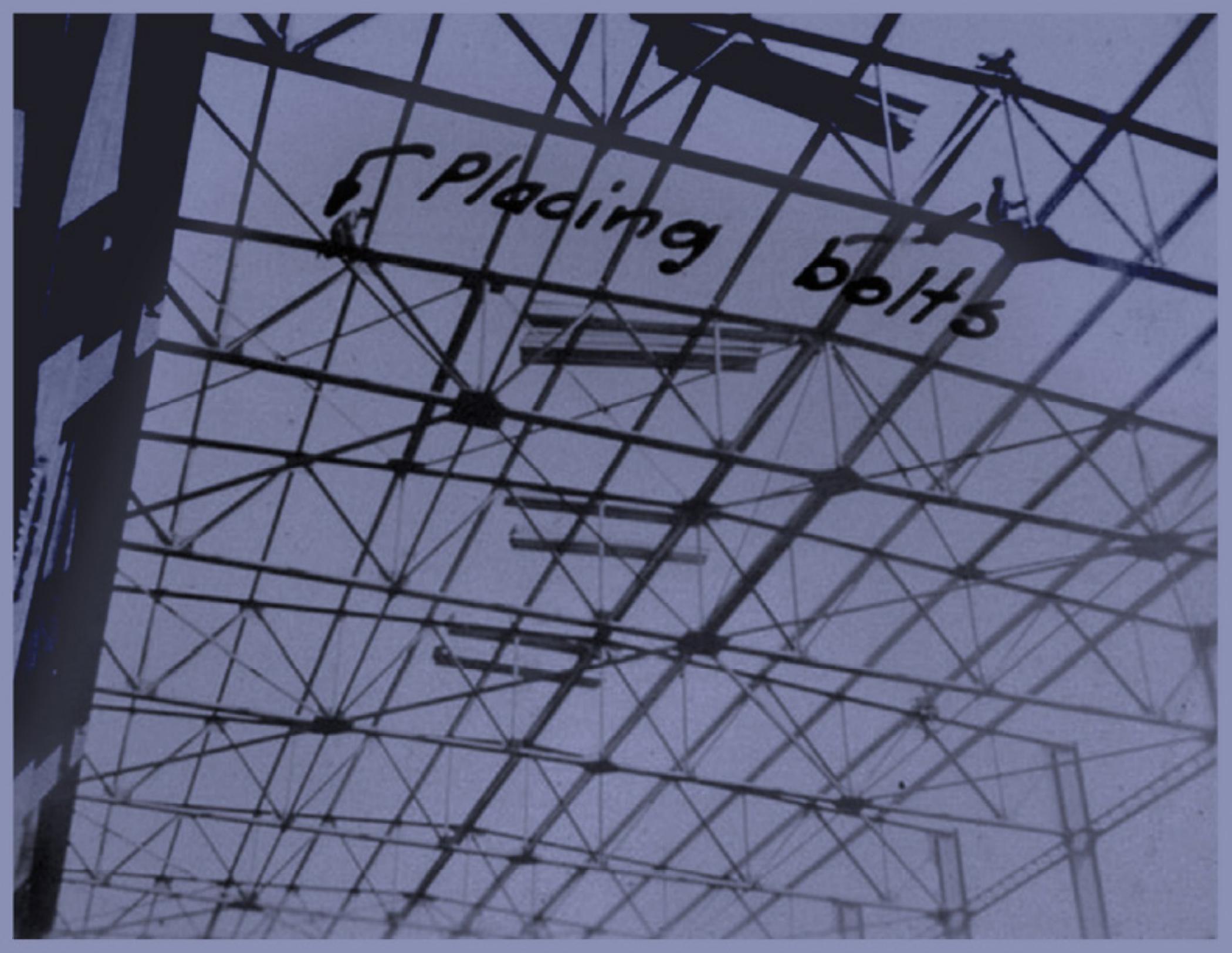
Individual projects and phases should be reviewed by the City Traffic Engineer in regard to access, parking, and use of alternative modes of travel. It is not anticipated that Traffic Impact Studies will be prepared for each project, but rather, a review of the overall redevelopment of the Rail Yards property relative to jobs/housing balance, transit services (including connection to the Alvarado Transportation Center), bicycle and pedestrian access, ingress/ egress, and parking.

6.9.3 Platting

The Rail Yards property will be platted in order to facilitate acquisition and development of individual projects and phases. Since all projects are required to have additional review (other than the workforce housing and the WHEELS Museum as approved by the City Council), it is anticipated that bulk land variances will be requested for future phases consistent with the master infrastructure plans. Platting may occur simultaneously with the DRB's review of Site Development Plans for Building Permit.

Blue-Line Note: 10.4, Development Approval Process; and 10.5, Deviations and Amendments to the Master Plan, have moved to the SU-2/HLS Zone in the Barelás Sector Development Plan.

Placing bolts



7.0 DESIGN GUIDELINES

Blue-Line Note: Design Guidelines are adapted from the non-regulatory component of the previous Section 8, Development Performance Standards.

Intent

The performance standards described in this section pertain more generally to infill (new) construction, whereas any requisite work to existing historic buildings are regulated by the Adaptive Reuse standards referenced in the preceding section 6.2.

7.1 Architectural Character / Style

The historic resources of the Rail Yards site are extraordinary examples of machine-age architecture where the full prowess of American ingenuity was brought to bear on building technology. The modern age in architecture is characterized by the idiom “form follows function” and few sites in the United States can boast such pure expression of this ethos than the Rail Yards.

Accordingly, infill development must respect this context by not attempting to mimic the historic aesthetic in architectural style. Rather, the Master Plan recommends three appropriate architectural guidelines for infill development, as follows:

- Infill development that creates new occupiable square footage shall be simple and volumetric.
- Infill development should not have a recognizable architectural style or should not try to mimic a historic style.
- Infill development should capture the spirit of the Rail Yards by utilizing current leading technology and/or engineering.

The goal of these architectural guidelines is to produce infill

development that is both compatible with the historic resources and yet clearly distinct; a goal that is critical from a preservation perspective given that the entirety of the Rail Yards site is to be listed to the National Register of Historic Places.

7.2 Massing / Shape

The Rail Yard’s existing structures are almost universally simple boxes that are generally two to four times as long as they are wide. They typically have only a few, small scale offsets in plan or elevation. This massing is a direct expression of their function as rail based workshops. To ensure that redevelopment is compatible with this massing, the Master Plan recommends that infill development of this type be generally simple in massing with flat roofs.

7.3 Orientation

Orientation of infill development shall follow standards contained within the SU-2/HLS zone. New development along 1st and 2nd Streets should be oriented to the street with entrances and window openings directly onto the street frontage. Development housing retail and residential uses will engage the street facade and support the creation of a vibrant and active urban landscape.

7.4 Building Materials

The buildings and structures that make up the Rail Yards complex employ a wide range of industrial materials and building techniques used during the first half of the twentieth century: steel framing, glass curtain walls, reinforced concrete, brick and wood timber framing (See Fig. 18, Existing Palette). The varied materials are united in the raw and basic manner in which they are assembled. There are no composite wall assemblies; materials are expressed equally whether inside or outside the building. The construction methodology is easily legible compared to modern building techniques that often hide building infrastructure beneath a layer of finish. The buildings of the Rail Yards by contrast are fully exposed and pure in their expression of

building technology. Infill development must similarly strive to find this raw expression of materials.

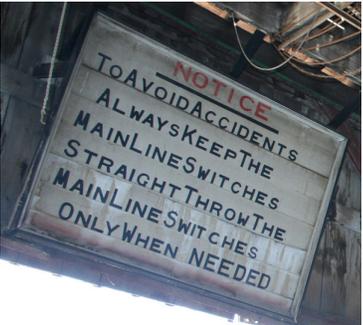
New construction should be built using the palette of materials described above: steel, concrete, stone, masonry, and/or glass. Modern and innovative expressions of these basic materials are acceptable and depending on the application, recommended. Examples might include glass facades, cable net structures, cast-in-place concrete set in milled formwork, or automated cut steel components. The use of high performance glass facades is recommended for certain infill buildings where the provision of natural daylight is critical and where the infill building may be juxtaposed against a historic building. In such a location, the goal of the infill building is both to defer to the historic building and to be clearly recognizable as a modern element.



"Wayfinding" signage, Babbit Shop



Safety signage, Babbit Shop



Safety signage, Sheet Metal Shop



Sandstone facade of Firehouse with integral Logo



Masonry facade of Blacksmith Shop with painted and integral logo/window



Cast-in-place concrete structure of Storehouse Building with painted logo



Cast-in-place concrete structure of Machine Shop with integral logo



Machine Shop Crane specification/signage

Figure 178: Existing Palette



Rail Lines adjacent Transfer Table



*Machine Shop Floor,
3" thick Kreolite creosoted woods blocks sit on a 6" thick concrete floor to dampen sound*



Turntable, Steel rail tracks and wood railroad ties



Perimeter street lighting and welding lines



Machine Shop, Stair to Mezzanine



Machine Shop, Existing High Bay Lighting



Transfer Table, "Le Pissour"

7.5 Tracks

Railroad tracks are considered highly valuable elements within the public space that should be retained and incorporated into the redeveloped Rail Yards project where possible. Design studies shall be performed to assess options for maintaining rail tracks while also accommodating ADA accessibility standards. A few select rail tracks as identified on the site plan for subdivision shall be preserved for future possible rail operations.

7.6 Parking

The Master Plan recommends that, to the degree possible, surface parking should be avoided and rather contained in a below grade structure. Although not preferred, surface parking will be required during early phases of development until such time as subterranean garage construction is feasible. Per the SU-2/HLS zone, off-street parking should be screened by buildings where possible and not front on streets. Refer to Section 10 of the Master Plan to see the conceptual Preliminary Phase Parking plan. (*****)

The water table under the site is at approximately 25-28' which will allow one level of underground parking.

- Garage(s) shall be designed with ample space for on-site vehicle queuing so as to not impact 2nd Street traffic
- Garage(s) should be designed with ample lighting and security features to provide a safe and inviting space. Courtyard openings that bring natural light into the garage shall be encouraged although must be designed in tandem with garage exhaust and fire code requirements.
- Electrical vehicle charging stations and preferred spaces for carpool drivers should be included in order to encourage sustainable practices.
- The quality of the garage user's experience must be a priority; visitors to the site will make first impressions of the

redevelopment based on this experience. Spaces shall be easy to locate, visibility shall be good, layout shall be well organized, and circulation paths easy to follow with integral way finding signage. Garage should be designed to the same high standards as the balance of the project.

- Current best practices for ticketing / payment systems should be utilized to simplify use of garage and prevent long wait times at entry/egress.

7.7 Loading

Project loading requirements will depend heavily on the uses ultimately incorporated into the Rail Yards redevelopment. For example, if light industrial uses are incorporated, the site will need to accommodate some truck or rail loading facilities. If the site remains more business/ office related, loading requirements will be much less. The Master Plan must afford sufficient flexibility to accommodate all possible future configurations. Basic loading concepts are as follows:

7.7.1 Rail

Direct rail access will be preserved to the southern portion of the site by virtue of the existing BNSF turntable easement that currently remains in place. Future rail loading operations may be incorporated using this access if required, although this would need to be coordinated with the use designations for Parcel 1. Direct rail access may also need to be incorporated at the northern portion of the site through use of one of the spur lines that historically connected the Rail Yards site to the main BNSF lines.

7.7.2 Truck

Truck access to the site is relatively limited given that the existing historic buildings constrain access to a large portion of the 2nd Street elevation. The only opportunity for loading operations along the southern portion of the site is either directly from 2nd Street, by turning onto the site at the proposed Preliminary Parking access point

under the bridge crane and immediately adjacent the north end of the Storehouse. Truck loading access could be accommodated within the 50ft width under the historic bridge crane (Parcel 4) and adjacent the south elevation of the Machine Shop. It is recommended that this area be used for limited loading and delivery operations only.

- Truck access to the northern portion is less constrained and if required, may be accommodated at the far north portion of the site where direct vehicle access may be provided off 1st Street.
- The vacated portion of 1st Street north of Hazeldine Avenue may be useful in providing a location for intermittent loading for adjacent retail and restaurant uses.
- The Master Plan recognizes the potential incompatibility between loading operations and public use/enjoyment of the site. Truck loading in support of possible light industrial uses should be hidden and screened from public view. If more significant loading operations are required, the Master Plan may need to be adjusted.

7.8 Signage

The AT&SF rail line is well known for its characteristic Santa Fe logo of the simple square cross bound within a circle. Long before today's age of branding, this logo was a symbol of high quality transit and a commitment to high quality design. The Santa Fe logo is incorporated throughout the Rail Yards complex (See Figure 18 **) as an integral design element that should be used to inform future signage.

- Signage is to be used only where required and should be kept to a minimum. The spaces and buildings of the Rail Yards should be free from excessive signage and no commercial advertising of offsite products and services is to be allowed on the grounds other than required for business identification and occasional advertising for site-related events and activities.

- Sign size, locations, materials and methods of installation should be consistently employed across the entire Rail Yards site.
- Signage and building identification should be an integrated design element of the building onto which it is applied.

7.9 Security

Given its relatively large 27.3 acre footprint and the likely mixed-use nature of its occupancy, the Rail Yards development will require a constant security presence. The juxtaposition of private professional users alongside public oriented cultural, retail and housing users will require additional safeguards not normally required of a single-use, more predictable user environment. Recommended security standards are as follows:

- The Rail Yards will require a full-time, 24-hour security presence.
- Similar to the control of public park facilities, the Rail Yards may need to incorporate hours of operation limitations to control after hours use.
- Given it's 2,000ft long frontage along 1st and 2nd Streets, access to the Rail Yards site is not intended to be controlled, and in fact, is not feasible to achieve given other urban design requirements. Access to buildings and parking facilities, however, will be controlled.
- Installation of a network of CCTV security cameras should be considered to assist with site security.

7.10 Public Art

The Rail Yards Master Plan is founded in a deep commitment to art and architecture. From the beauty of the existing structures to the quality of design required of all proposed infill development, the Rail Yards is intended to become a world-class center for art and architecture; a center not in terms of its collection of art museums

and galleries, but a center in terms of the unparalleled integration of art and architecture in the creation of public space. Public art recommendations are provided as follows:

- The Master Plan acknowledges and accepts the concept of architecture as art.
- The Rail Yards will include venues for artistic expression and will celebrate Albuquerque's vibrant art community.
- Traditional and digital murals are appropriate mediums of artistic expression.
- A Rebuilt Smokestack may be developed as a venue for Public Art.

7.11 Sustainability

The design of all new elements and facilities is encouraged to incorporate sustainable design features. At a minimum, new facilities shall comply with the current City of Albuquerque adopted Energy Codes and should be LEED equivalent rated.

7.11.1 Energy Conservation

Rail Yards development should minimize energy consumption using the following measures, keeping in mind that such measures need to also comport with historic building requirements:

- **Exterior Envelope Design:** Provide building insulation at all new roofs, wall and below grade retaining wall assemblies (at conditioned spaces only). Seal buildings against air infiltration. Encourage passive solar design (trombe walls, direct gain) where feasible. Incorporate cool roof construction techniques (high reflectance, green roof concepts) to minimize heat island effects.
- **Solar Fenestration:** Provide east-west building orientation to facilitate solar control. Minimize west and north exposures. Maximize south exposures. Use insulated glazing at all new construction where possible.

- **Daylight:** Maximize natural daylight to reduce electrical lighting loads.
- **Natural Ventilation:** Incorporate operable windows where operation (open vs. closed) can be monitored.
- **Lighting:** Use energy efficient light fixtures (i.e. LED's) both inside and at exterior locations.
- **Light Controls:** Provide occupancy sensors at all tenant spaces to limit power consumption when spaces are not in use.
- **HVAC Systems:** Use high efficiency equipment, programmable thermostats, incorporate economizer cycles. Analyze the potential use of centralized HVAC for the Rail Yards site to increase efficiency and conservation of resources. Consider cogeneration systems that utilize heat energy to simultaneously generate electricity and useful heat.
- **Appliances:** Use high efficiency type appliances.

7.11.2 Water Conservation

Water conservation efforts as described in the Infrastructure Section of this Master Plan are either required by code or are strongly encouraged. Additional measures are as follows:

- Incorporate rain water harvesting for supplemental landscape irrigation and non-potable water use. Where possible, use above ground cisterns to catch roof water runoff for reuse in landscape irrigation. The collection of rainwater into cisterns reduces the amount of water that needs to be handled by storm water detention ponds. Above ground cisterns avoid the problem of saturating subsoil. In the event of a leak in the system, the flow occurs above ground, and if not allowed to pond, can avoid saturating the subsoils. The benefit to the City is a reduced need for storm water improvements for the Rail Yards. The benefit for the tenant is a source for landscape water that is not dependent on potable water sources. The benefit for the community is a citywide model for water management and conservation.

- Incorporate on-site water retention and infiltration through storm water management.
- Use high efficiency, low flow plumbing fixtures.
- Use low water irrigation techniques (drip, etc) and specify native and drought tolerant plant species. Use xeriscape principles of design.
- Reuse gray water for non-potable water needs (e.g., toilet flushing) and irrigation.

7.11.3 Alternative Energy Sources

- Provide Photovoltaic panels/membranes for on-site electricity generation.
- Consider solar panels for hot water generation and hot air systems.
- Passive solar design (trombe walls, direct gain)
- Consider opportunities to use or add alternate energy sources such as fuel cells, distributed energy generation, solar, thermal exchange, etc.
- Consider wind-powered electric generators, where feasible. (size, location, and placement are a major issue in context to the historic structures.)

7.12 Pollution Control

To create a plan that reduces pollution, the Master Plan proposes the treatment of storm water runoff by water harvesting, constructed swales, bio-remediation and other techniques to minimize non-point pollution from surface runoff. See the Infrastructure section for more information.

The Master Plan strongly encourages the utilization of non-polluting materials by avoiding polluting materials or treatments in the construction and maintenance of buildings and sites. Polluting materials can include creosote, petroleum based paints and sealers, high volatile organic compound (VOC) solvents, insecticides, etc.

FIRE DEPT.
HO.

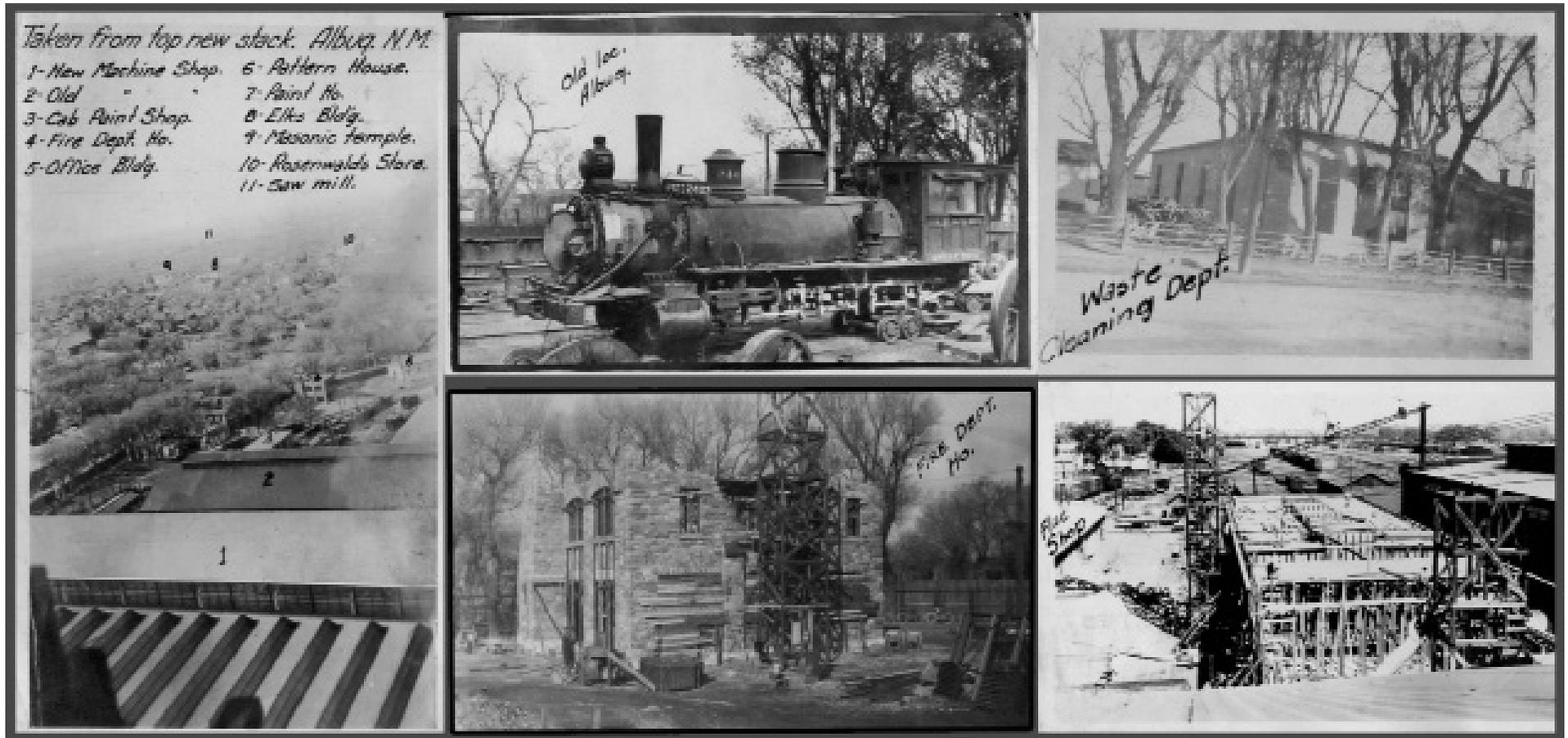


7.0 LANDSCAPE MASTER PLAN

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 6 for the Landscape Site plan and the Landscaping regulations.



Rail Yards construction showing Historic Landscape

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

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 a perimeter landscape buffer** between the Rail Yards and the surrounding neighborhoods. Plant materials and **acoustic mounds bermed earth will may** 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 site**, but should be sited to preserve the long vistas to the historic buildings.

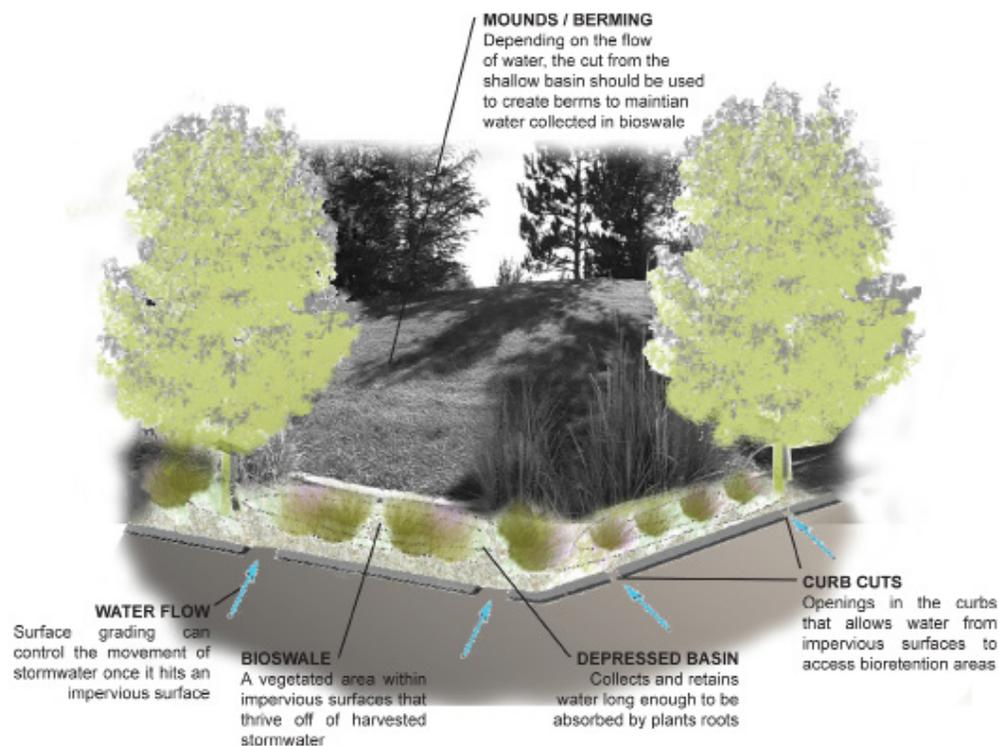
In addition, trees and other plantings will be placed to define areas for their unique uses and buffering for safety as applicable. The plant palette and landscape features (e.g. hardscape, furnishings, lighting, signage, etc.) will be consistent throughout the Rail Yards property to identify a clear 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 may** function like that of an extensive roof garden or greenroof. Subterranean buildings and parking areas **could** 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 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 could** 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



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 2nd Street for the Rail Yards project.

7.2.1 Acoustic Mounds

The **aAcoustic mMounds** described in Section 6 demonstrate one possible edge treatment concept for help-to framing the Rail Yards boundaries and providing 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 **aAcoustic mMounds** will should 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 2nd 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. **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.**

(relocated text) Accessibility of the Acoustic Mounds would 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. 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.

Although 1.5% slope is preferred to maximize recreational uses, turfgrass may be installed on landscapes up to 5:1 slope for areas to



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

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.

The conceptual Acoustic Mound features will be considered in detail if included in a Site Plan for Building Permit submitted per the development approval process described in Section 10.

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. (CONSOLIDATED WITH OTHER SUB-SECTION)

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. (CONSOLIDATED WITH OTHER SUB-SECTION)

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 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. (CONSOLIDATED WITH

OTHER SUB-SECTION)

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. (CONSOLIDATED WITH OTHER SUB-SECTION)

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. (CONSOLIDATED WITH OTHER SUB-SECTION)

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. Long term maintenance of landscaping shall be consistent across the site. This should be accomplished in future agreements between the Master Developer and the City and between the Master Developer and future users of the site, as applicable.

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 Edge Treatment**
- 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 Edge Treatment

~~The acoustic mounds are Landscaping is located along most of the site's boundary. Their unique forms should be celebrated with utilizing 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. (MOVED)~~

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. (MOVED)~~

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 edges~~ across the site.

Appropriate ornamental grass species for ~~the steepest~~ slopes and

other areas **on the Acoustic Mounds within the Edge Treatments** 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 included within the Edge Treatments at the acoustic mounds that to provided** year around colorful interest. **At the base of the acoustic mounds**, as an accent across the **acoustic mounds site**; 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 Edge Treatments** may include but are not limited to:

Perennials

- Alcea rosea - Hollyhock
- Centranthus ruber – Red Valerian
- Hemerocallis hybrids – Daylilies
- Linum 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. (MOVED)~~

7.9.2 Meandering Path

The **meandering** paths for pedestrians are located throughout the site. Shade trees and seating opportunities will be places along these paths where appropriate to create a welcome retreat for enjoying views of the site.

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 major entrances to the site**, 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 **include site furnishing and** 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 Edge Treatment**.

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 needs.

7.9.5 Workforce Housing

The workforce housing is located at the southwest portion of the site. The landscaping in this location is focused more on serving residents rather than the visiting public. Although drought-resistant species will still dominate the plant palette, places for recreation include turfgrasses are encouraged. Gathering spaces, with shaded seating opportunities for community events, shall be provided. (MOVED LOCATION).

7.9.6 Firehouse Café

The firehouse is a historic building that will be highlighted with its own plaza surrounded by acoustic mounds. Planting beds and trees in tree wells may be incorporated within the plaza to soften the space and reduce sun exposure. The use of outdoor seating with umbrellas may also be used to active this pedestrian area.

NOTE: BLANK PAGES ADDED TO ACCOMMODATE TEXT REVISIONS ONLY, WILL BE REMOVED ONCE TEXT IS FINALIZED.



Sycamore



Ash



American Elm



Littleleaf Linden

(MOVED LOCATION).

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

Evergreen Trees

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



Low-Water Traditional Turf



Grama + Buffalograss Mix

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



Agave



Stonecrop



Yucca

- *Rhus trilobata* species –Sumac
- 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

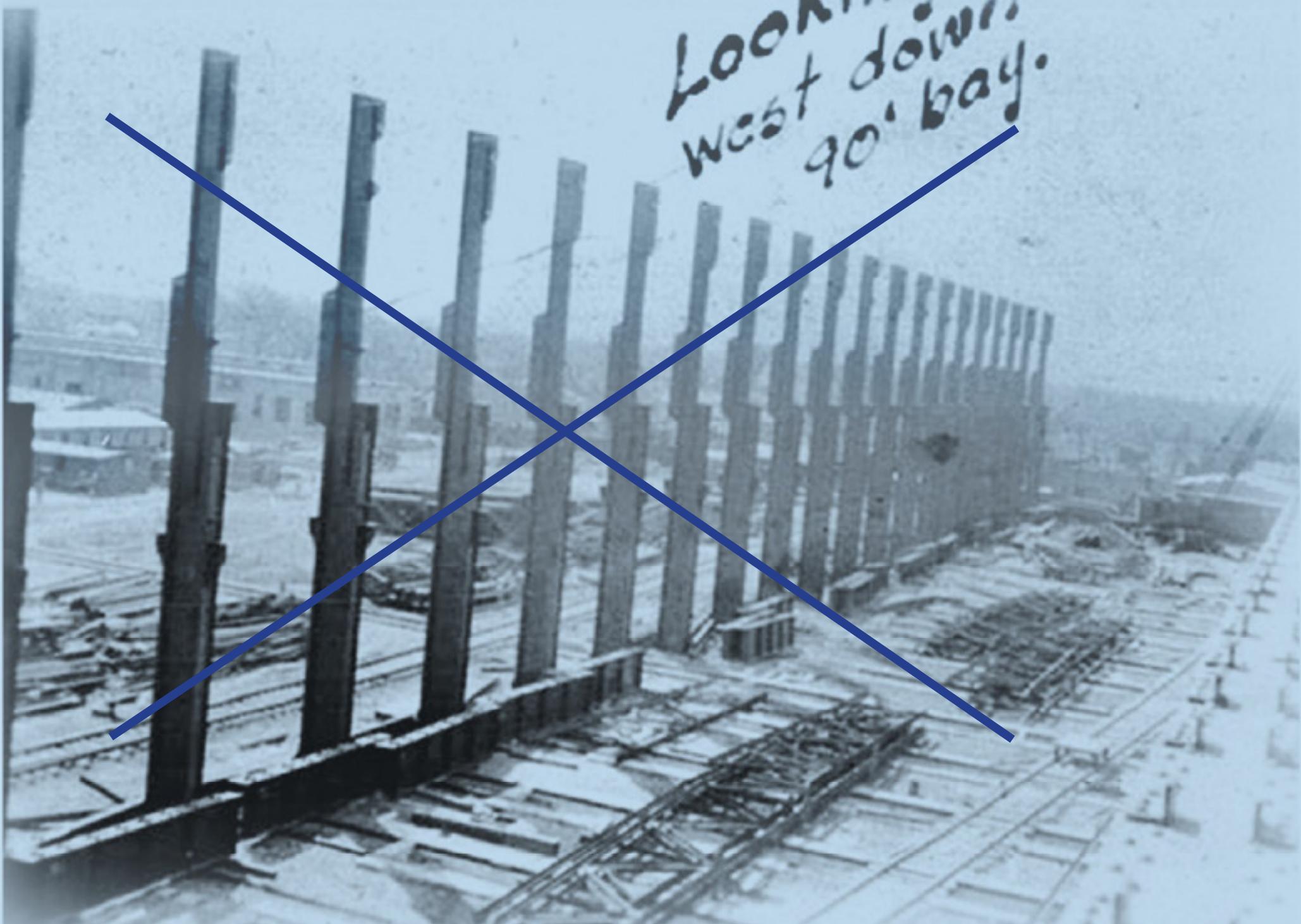
Perennials

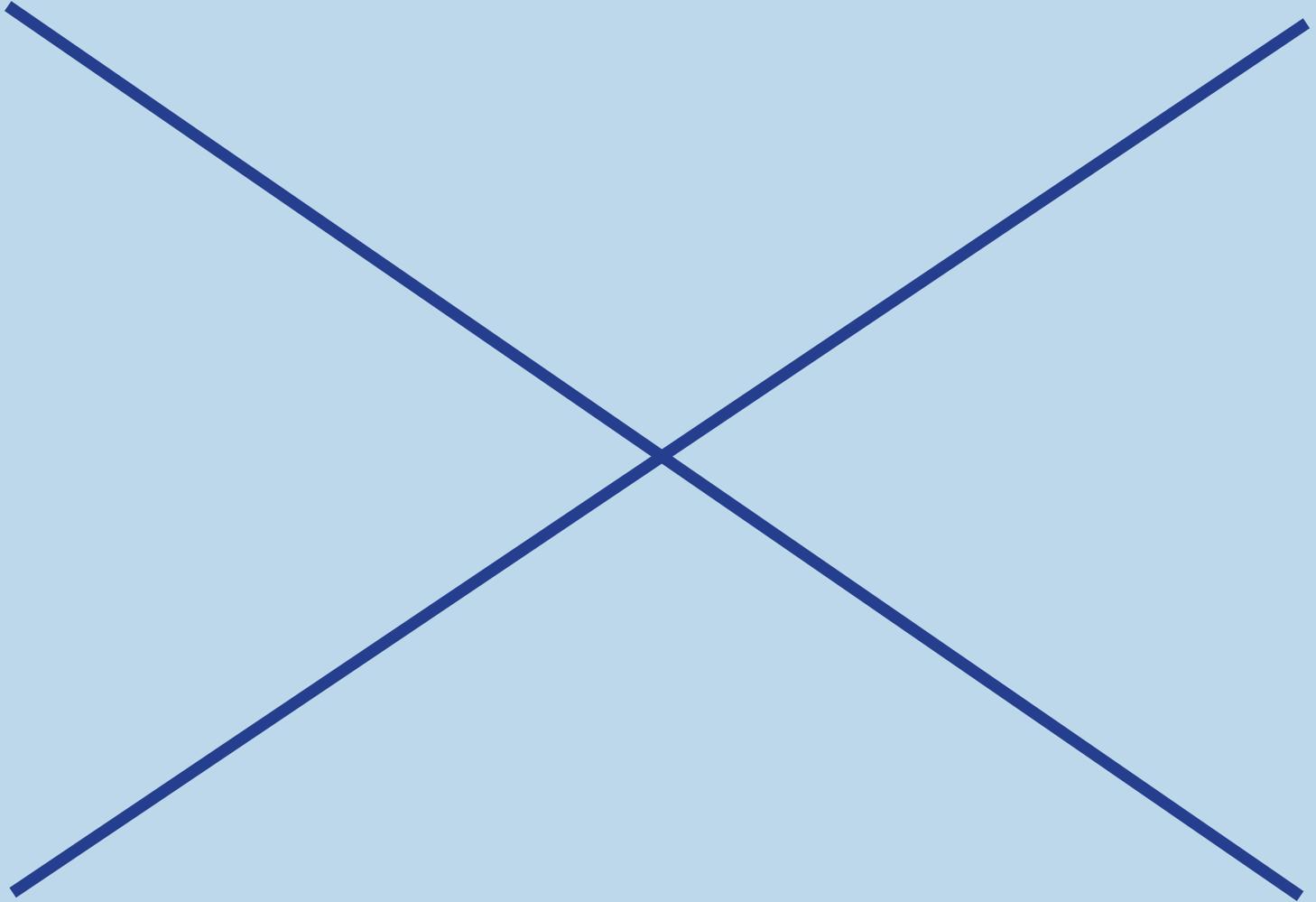
- Alcea rosea - Hollyhock
- Centranthus ruber – Red Valerian
- Hemerocallis hybrids – Daylilies
- Linium perenne – Blue Flax
- Penstemon spp. – Penstemon
- Ratibida columnifera - Coneflower

Bulbs

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

Looking
west down
90' bay.





8.0 DESIGN DEVELOPMENT STANDARDS

Whereas Section 6 defined the overarching vision and through a set of qualitative and illustrative recommendations, this section of the MDP provides specific quantitative and regulatory design performance standards as they relate to future development.

Recommendations Requirements for each parcel are organized based on the following key development standards and terminology. Refer to Figure 16, Design Development Standards matrix for a summary of the quantitative regulatory standards outlined below:

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

8.1 Land Use Development Standards Matrix

8.1.21 Parcel Area

As described in Section 6, the Rail Yards site is divided in 10 distinct parcels. The Parcel Area is a measurement of the existing surface land area of the underlying proposed Parcel. This base measurement will be used to calculate allowable built area. The total of all parcel areas will equal 27.3 acres.

8.1.52 Floor Area Ratio (FAR)

Floor Area Ratio (FAR) is the relationship between the total allowable building area and the Parcel Area (defined previously). It is essentially a measurement of allowable development density. For example;

A Parcel with a Parcel Area of 10,000sf and an FAR (1) would have an allowable building area of $(1) \times 10,000sf = 10,000sf$.

Likewise if FAR (2), that same parcel would have an allowable building area of $(2) \times 10,000sf = 20,000sf$.

The Master Plan recommends use of the Floor Area Ratio (FAR) mechanism for regulation of allowable building area and therefore the control of project density that must be maintained in order to preserve the spatial hierarchy of the existing historic buildings. Accordingly, the Master Plan proposes an average site density of only FAR (.75).

8.1.3 Existing Historic Resources

A list of all Historic resources recommended for Preservation/Adaptive Reuse that reside on each parcel.

8.1.4 Existing Built Area

The total amount of existing building area currently under roof contained within the subject parcel.

8.1.65 Allowable Building Area

The product of the Parcel Area multiplied by the FAR. The total allowable building area for any given parcel.

8.1.16 Land Use

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. The site has special zoning, SU-2/Historic Locomotive Shops (HLS), that allows for a wide range of permissive uses, including multifamily residential (R-3), office (O-1), community commercial such as retail, restaurants, services (C-2), and light industrial (I-P).

Refer to Chapter 6 for Qualitative characteristics of a narrative describing each preferred land use and the recommended locations for each on the site. As stated prior, these recommendations are not intended to restrict the existing approved land uses found in the underlying SU2-HLS zone. Throughout the site, all permissive uses,

as outlined in the SU2-HLS, will continue to be allowed and all restricted uses will likewise remain conditional or prohibited. However, the Master Plan recommends that the City seek to amend the SU2-HLS in order to make Laboratory Uses permissive Barelvas Sector Development Plan be amended to make “laboratory” a permissive use and “railroad repair shop” a conditional use in the SU2-HLS zone. Businesses that focus on innovation, research and development and light manufacturing may require laboratory uses, and such an amendment would strongly support the job creation ethos of the Rail Yards redevelopment.

8.1.7 Building Heights

Allowable building heights should not exceed those standards contained under the current SU-HLS zoning, namely no greater than 67ft (five stories) at a minimum distance of 100ft from any single-family residential zone; a height that comports roughly with the existing 70ft maximum height of the Machine Shop. All occupiable building height limits shall conform to this requirement with the exception of the proposed Rebuilt Smokestack which is recommended to be constructed to its original 230ft height. In many areas, the Master Plan recommends a more restrictive building height limit in order to comport with neighboring residential uses and to maintain the necessary visual hierarchy between the existing historic buildings and new infill development, the former of which should remain the dominant visual elements of the site. Non-occupiable rooftop appurtenances required for the building may be able to exceed the height limit by a maximum of 15ft.

Architectural Features, which are non-occupiable, non-conditioned, exterior-only design elements (eg. historic examples; spires, turrets, bell towers, clock towers, canopies, chimneys and cupolas) shall be permitted to extend above the required height limit in two specific locations on Parcels 1 and 6 respectively. In both cases, the proposed Architectural Feature is a rooftop glass canopy; one over

the Perpendicular Walk and one over the Amphitheater. The intent of adding the Architectural Feature is to acknowledge and permit a dynamic architectural “flourish” to an otherwise regulated and consistent roofline. The allowable height limit for the Architectural Feature is outlined in Figure 16, Design Standards Matrix.

8.1.8 Setbacks

The required setback distance between building edge and property/parcel line. Given the urban nature of the Rail Yards site, setbacks should be minimal to encourage an active pedestrian street edge. Street facing setbacks as currently required per the SU-HLS zone of 10ft will be preserved. Setbacks between parcels are not required.

8.1.92 Access Easements

The Rail Yards site, given its unusual “superblock” configuration of 600ft of width opening essentially onto only one public right-of-way at 1st/2nd Street, creates an inherent problem of access. Because of this configuration, Parcels 1, 7 and 8 do have direct street access and therefore will require an easement over Parcels 4 and 6 respectively to satisfy access requirements. The Master Plan has been designed to take this fact into consideration by assigning Parcels 4 and 6 a public open space designation with little or no allowable building area assigned to them. These parcels will operate almost like internal streets under which utilities may be conveyed and pedestrian/emergency access requirements satisfied. Small roadway easements may also be required to convey subterranean parking access rights to the various parcels.

8.1.103 Parking Covenants

The provision of required parking for parcels that themselves do not have parking must be achieved through some form of parking covenant. At project completion, all site parking will reside in below grade structures located only on Parcels 1, 2, and 10. All other parcels will be without parking and subsequently will require an allocation to satisfy minimum parking requirements. Allocations may be based on total allowable building area, use considerations, or specific tenant requirements in place at the time.

NOTE: PLAN HAS BEEN UPDATED TO COMPORT WITH SITE PLAN FOR SUBDIVIISION

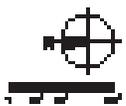
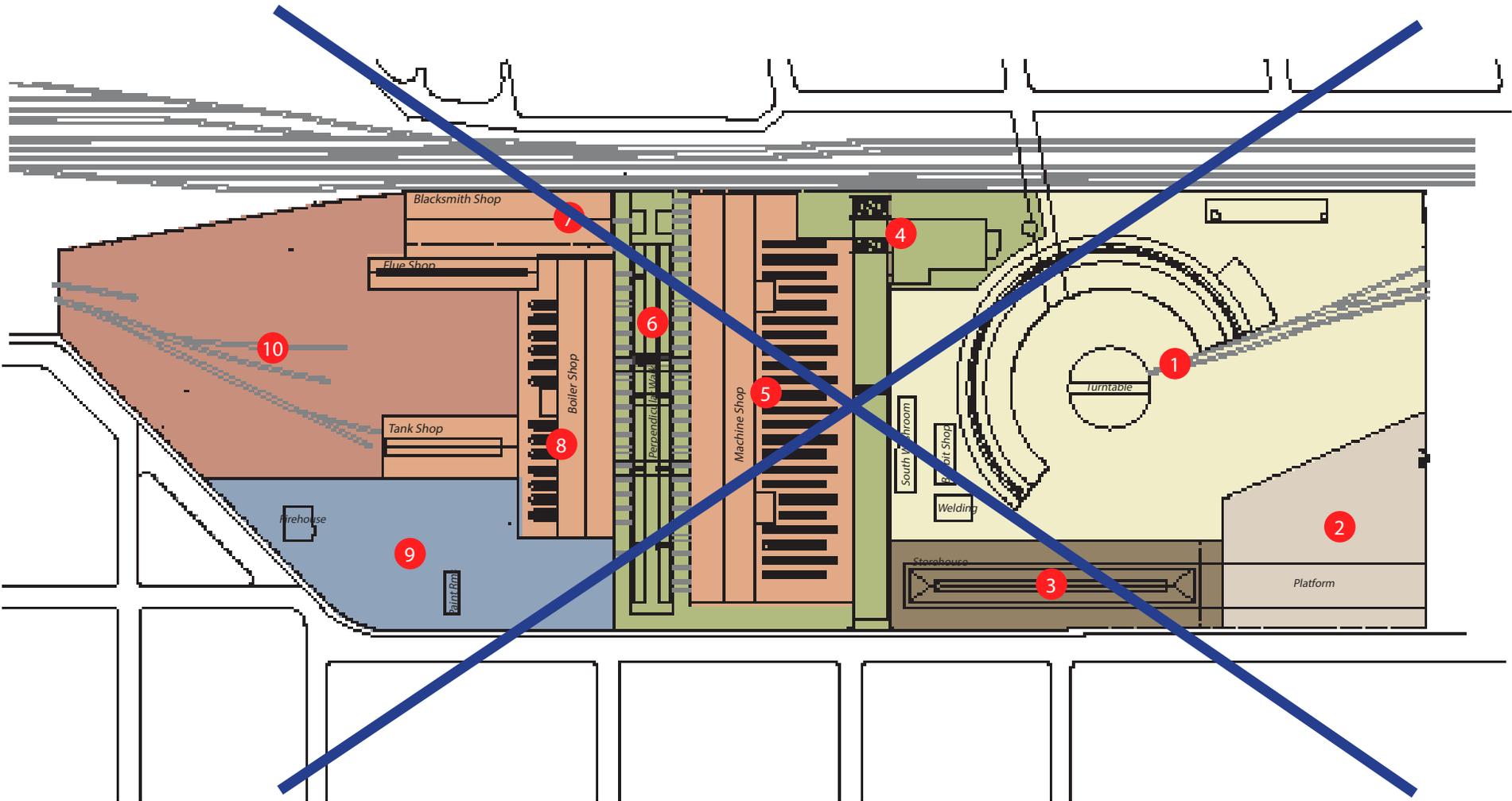


Figure 156: Design Development Standards Reference Diagram

NOTE: UPDATED DEVELOPMENT STANDARDS MATRIX

| Parcel ID | Fsq | Proposed | Existing Historic Resources | Existing Built Area | Miscellaneous | Recreational Use | Height Ratio | Street | Parking | Parking | |
|--------------|-----|------------------|-----------------------------|---|----------------|------------------|---|---------------------|---------|------------|-------------------------------|
| | | Floor Area Ratio | | | | | | | | | Fsq |
| | | 342,143 | 0.65 | Terrace, Retail Shop, Wedding Shop, South Warehouse | 20,829 | 222,893 | Cultural Facilities; e.g. Museum, Performing Arts and Related related facilities, Parking | 40 | N/A | 501 | 5 (except Surface Parking: 1) |
| | | 77,864 | 1.80 | Plaza | N/A | 77,864 | Workforce Housing | 40 | 10 | 90 | 3 |
| | | 63,282 | 0.50 | Warehouse | 18,900 | 81,791 | Cultural Facilities; e.g. Museum, Live Work | 40 | 10 | N/A | 4 |
| | | 66,080 | N/A | Bridge Cross | N/A | N/A | Public Open Space Area; Assembly Hall, Education, Public Art Venue | 40 200 (Maximum) | 10 | N/A | 1 |
| | | 142,747 | 1.50 | Machine Shop | 105,000 | 314,211 | Business/Professional Use; Office, Light Manufacturing, Training/Education, Assembly Cultural Use | 40 | N/A | N/A | 2 |
| | | 79,898 | N/A | Transfer Table | N/A | N/A | Public Open Space Area | 40 | 10 | N/A | 4 |
| | | 86,398 | 1.50 | Workshop Shop | 24,867 | 45,447 | Business/Professional Use; Office, Light Manufacturing, Training/Education | 40 | N/A | N/A | 2 |
| | | 89,989 | 1.50 | Book Shop, Text Shop, Film Shop | 83,548 | 134,984 | Business/Professional Use; Office, Light Manufacturing, Training/Education | 40 | N/A | N/A | 2 |
| | | 98,216 | 0.25 | Warehouse, Waste & Fuel Storage | 0,520 | 24,504 | Public Open Space Area/Courtyard; Event, Restaurant, Service, Housing | 30 | 10 | N/A | 4 (except Pedestrian Curb: 1) |
| | | 128,090 | 0.65 | Street Metal House (Froved) | N/A | 128,090 | Business/Professional Use; Office, Light Manufacturing, Training/Education, Parking | 30 | 10 | 300 | 5 (except Surface Parking: 1) |
| TOTAL | | 1,189,508 | 0.74 | | 380,508 | 678,896 | | | | 996 | |

Figure 167: Design Development Standards Matrix

68.2 Historic Preservation & Adaptive Reuse Standards

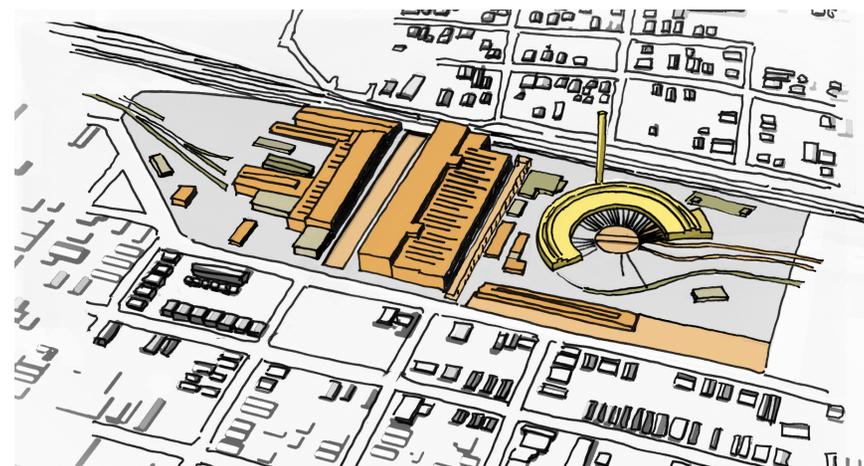
The objective of this section is to assist provide standards in considering levels of preservation within the Albuquerque historic Rail Yards complex based on “Albuquerque Rail Yards Preservation Recommendations” study, prepared by Solar Architects.

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 States 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 requires 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, the adaptive re-use of the buildings, and suggests the addition of modern facilities, landscaping and other features and the creation of cultural venues to serve the public, for optimal use of the place site, 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:



68.2.1 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 shall be PRESERVED are listed as below (refer to map page 52118-53119):

- 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)
- Tank Shop/Tender Repair Shop (#5 on Map)



FIREHOUSE



STOREHOUSE



TANK SHOP



TURNTABLE



BOILER SHOP



BRIDGE CRANE



BLACKSMITH SHOP



FLUE SHOP



MACHINE SHOP



TRANSFER TABLE

- 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, 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

HISTORIC RESOURCE KEY

- 1 FIRE STATION
- 2 MACHINE SHOP
- 3 CRANE RUNWAY
INCL. LYE VAT SHED
- 4 BOILER SHOP
- 5 TANK SHOP/
TENDER REPAIR SHOP
- 6 FLUE SHOP
- 7 CANOPY
- 8 CAB PAINT SHOP
(LATER, CWE SHOPS OFFICE)
- 9 BLACKSMITH SHOP
- 10 STOREHOUSE
- 11 PLATFORM
- 12 BABBIT SHOP
- 13 WELDING SHDP
- 14 TRANSFER TABLE
- 15 ROUNDHOUSE (ORIGINAL LOCATION)
- 16 TURNTABLE
- 17 SHEET METAL HOUSE
- 18 PATTERN HOUSE
- 19 NORTH WASHROOM
- 20 SOUTH WASHROOM
- 21 WASTE & PAINT RMS.
- 22 MOTOR CAR GARAGE
- 23 FIRE RUNWAY
- 24 POWER HOUSE (ORIGINAL LOCATION)
- 25 WATER RESERVOIR
- 26 WELDING GAS LINES
- 27 SMOKESTACK
- 28 HISTORIC POWER HOUSE (ORIGINAL LOCATION)
- 29 TRAIN TRACKS

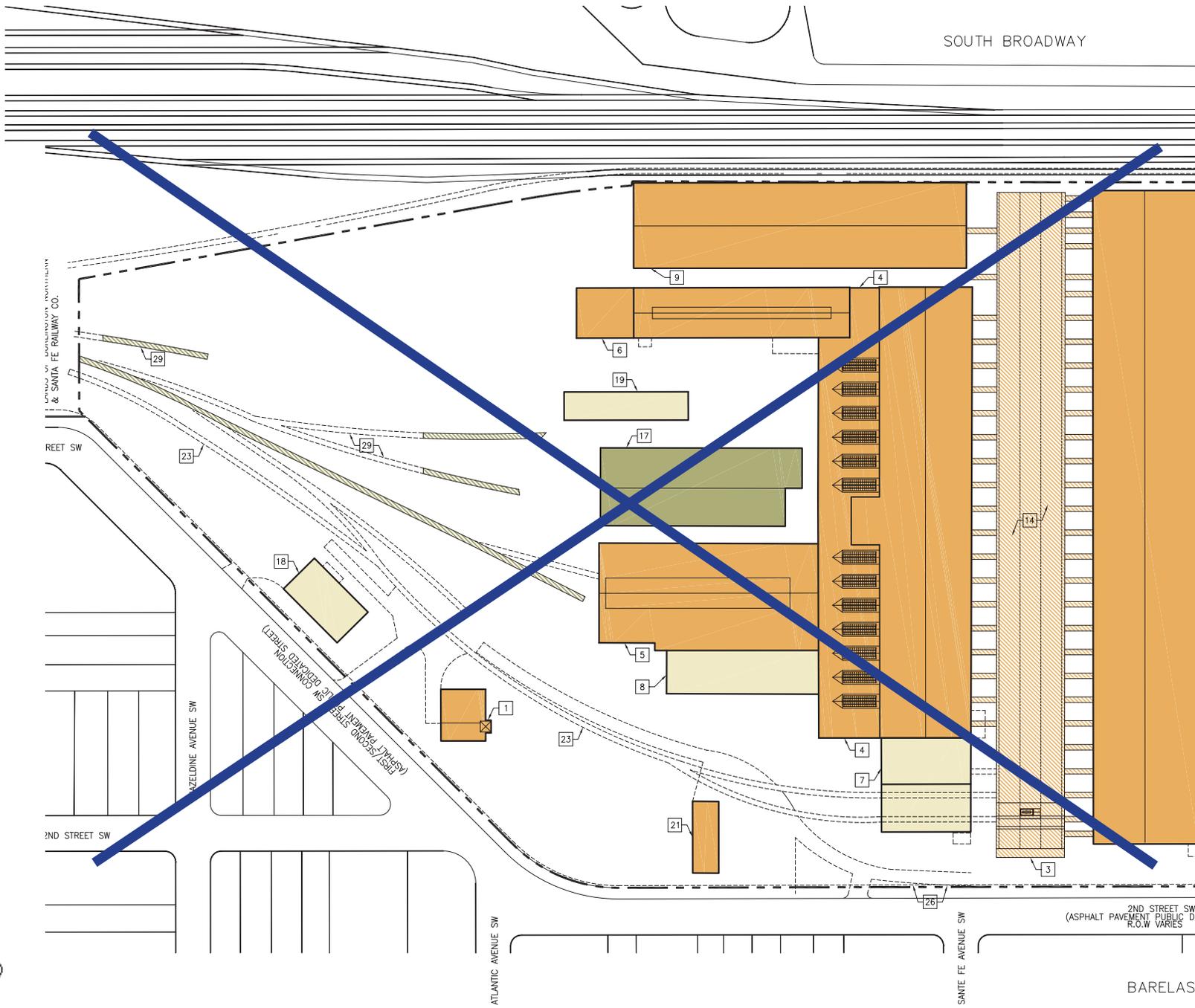
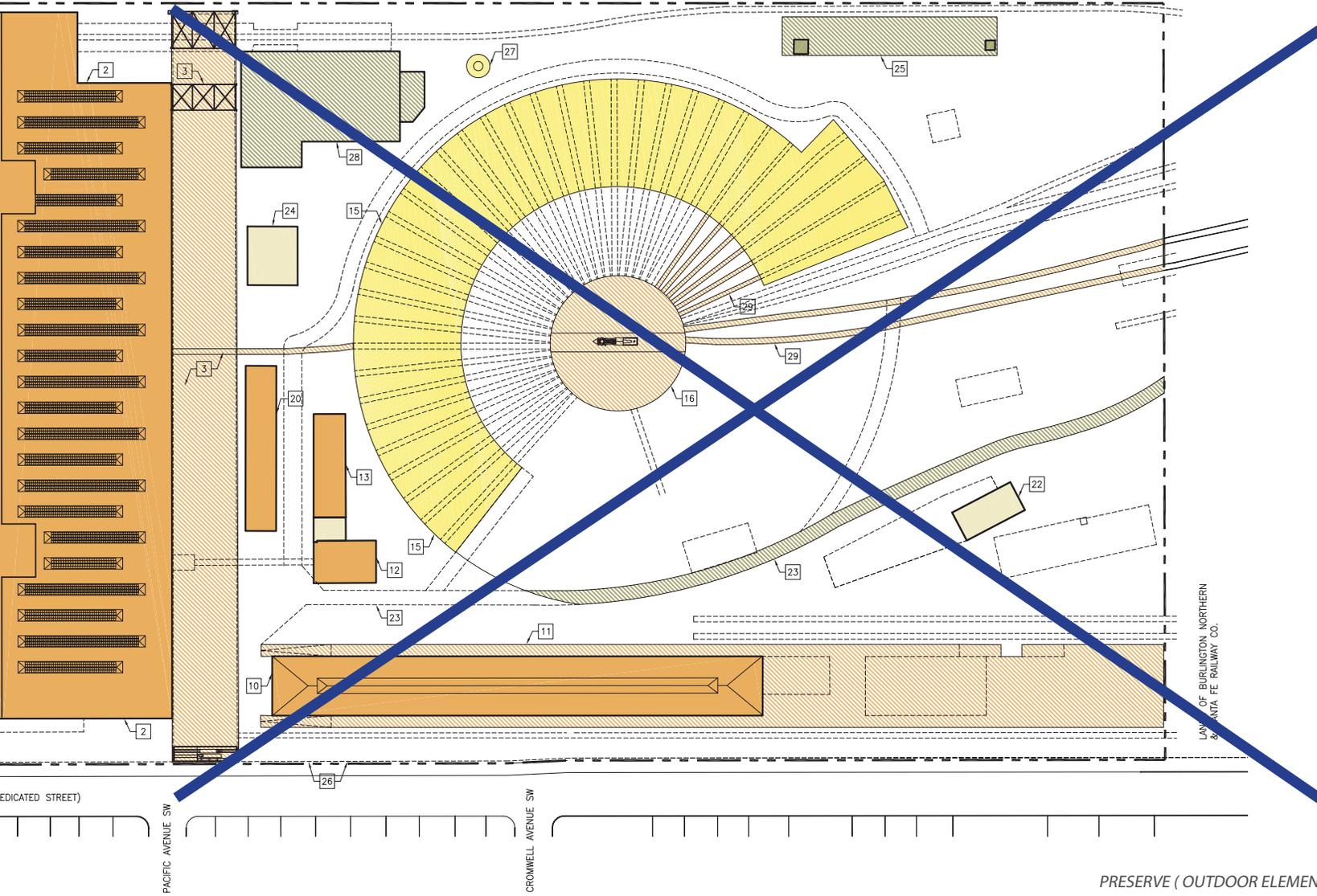
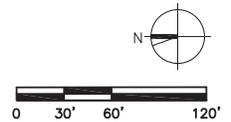


TABLEAU 16: Historic Preservation & Adaptive Reuse Standards Diagram

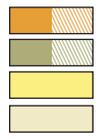
COMMERCIAL STREET SE



LANDS OF BURLINGTON NORTHERN & SANTA FE RAILWAY CO.



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



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 68.2.4).
- 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.

68.2.2 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 shall be REMOVED. Such structures which as listed below are suggested shall be for PRESENTATIONED:

- Sheet Metal House (#17 on the Map). Interesting, important but technically impossible to PRESERVE. This wooden shed was used for storage of metal sheets and for moving them mechanically to their work stations). The important elements are the moving mechanisms, 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):

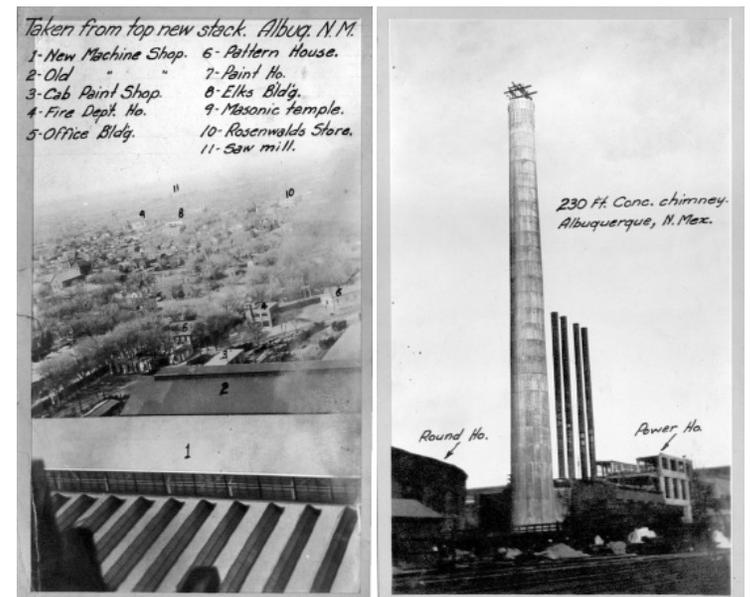
68.2.3 Reconstruction

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. 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 to the original structure (it is a symbolic reconstruction). Refer to Figure 5 on the following page. 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).
- 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). Note: reconstruction of the Smokestack may be approved with future Site Plan for Building Permit but is not an approved Regulatory feature of the MDP.



RAIL YARDS, HISTORIC ROUNDHOUSE AND SMOKESTACK



View from atop SMOKESTACK

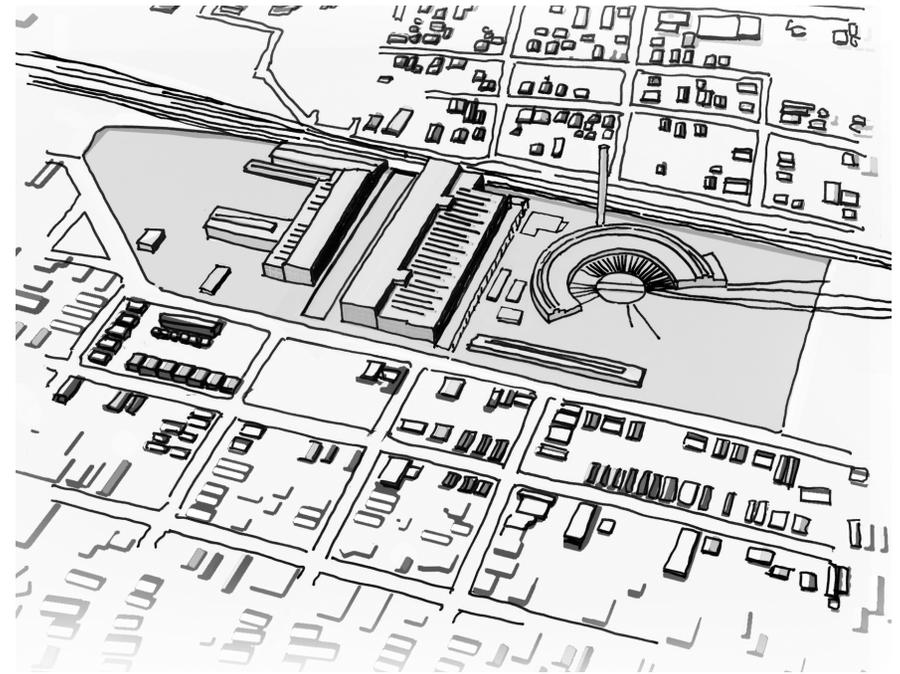
SMOKESTACK

68.2.4 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, but are not required to 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/ later 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-



RAIL YARDS, DIAGRAM MASSING OF KEY HISTORIC RESOURCES

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 example 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).

8.2.5 Historic Resource Inventory & Mitigations

As indicated in the preceding section, the plan currently indicates that a few of the smaller buildings may fall into the category of those that are difficult to reuse for a variety of reasons. The planning team has begun and will continue to work closely with the SHPO's staff to determine appropriate mitigation measures. If no viable alternative can be identified, at the very least, the buildings will be recorded photographically and drawings of the plans and elevations and significant details will be developed to provide a record of their functions and contribution to the lessons taught by the site.

Refer to the Treatment Historic Resource Inventory included as Appendix C for a lists of each historic resource and its intended treatment and mitigation (if required) as being developed in consultation with project conservation architect, Giora Solar, local preservation consultants, Cherry/See/Reames Architects, the SHPO's office and the City of Albuquerque historic preservation staff.

As the redevelopment of the site progresses and new uses are determined, the detailed design of each building and preserved site feature will develop. The Secretary of the Interior's Standards for Rehabilitation and associated Guidelines for Rehabilitation will provide the criteria for preservation and adaptive reuse treatment.

8.2 Preservation and Adaptive Reuse Standards

In keeping with the goals and policies stated in Section 5 and with conceptual recommendations stated in Section 6, the Master Plan seeks to preserve and adaptively reuse the vast majority of historic resources on site. However, while all buildings and structures (site features) tell some part of the story, not all building and site features are equally significant. In addition, the viability of arranging new

uses for all existing buildings depends upon their condition and the opportunity to match a building configuration with a suitable reuse.

The plan currently indicates that a few of the smaller buildings may fall into the category of those that are difficult to reuse for a variety of reasons. The planning team has begun and will continue to work closely with the SHPO's staff to determine appropriate mitigation measures. If no viable alternative can be identified, at the very least, the buildings will be recorded photographically and drawings of the plans and elevations and significant details will be developed to provide a record of their functions and contribution to the lessons taught by the site.

8.3 Architectural Standards

The performance standards described in this section pertain more generally to infill (new) construction, whereas any requisite work to existing historic buildings will shall be governed regulated by the Adaptive Reuse standards referenced in the preceding Section 8.2.

8.3.1 Architectural Character / Style

The historic resources of the Rail Yards site are extraordinary examples of machine-age architecture where the full prowess of American Ingenuity was brought to bear on building technology. The buildings may be understood as machines themselves, products of engineering, less products of a stylized architectural language (with the possible exception of the Fire House). The modern age in architecture is characterized by the idiom "Form Follows Function" and few sites in the United States can boast such pure expression of this ethos than the Rail Yards.

Accordingly, infill development must respect this context by not attempting to mimic the machine-age historic aesthetic by using a stylized architectural language. Rather, the Master Plan recommends

three appropriate architectural responses for infill development, as follows;

- Infill development that is simple, volumetric and without a recognizable architectural language creates new occupiable square footage shall be simple and volumetric.
- Infill development that does not appear as architecture at all but rather something more elemental, primitive, of the land shall not have a recognizable architectural style nor shall try to mimic a historic style.
- Infill development that shall captures the spirit of the Rail Yards by itself being a product of advanced utilizing current leading technology and/or engineering.

The goal of these architectural responses is to produce infill development that is both compatible with the historic resources and yet clearly distinct; a goal that is critical from a preservation perspective given that the entirety of the Rail Yards site will likely be listed to the National Registry of Historic Places. In such a case, the Secretary of the Interior Standards for infill development must also be met.

8.3.2 Massing / Shape

Massing is a term describing how the basic building blocks of a structure are arranged in three dimensions. The Rail Yard's existing structures are almost universally simple boxes that are generally two to four times as long as they are wide. They usually have only a few, small scale offsets in plan or elevation. This massing is a direct expression of their function as rail based workshops. To ensure that redevelopment is compatible with this massing, the Master Plan recommends that infill development of this type be generally simple in massing with flat roofs as described in the architectural responses detailed in the prior section.

8.3.3 Orientation

Recommendations for the orientation of infill development shall follow standards contained within the SU-HLS zone, as summarized in Section 4. As a general principle, new development along 1st and 2nd Streets shall be oriented to the street with entrances and window openings directly onto the street frontage. Buildings housing retail and residential uses especially shall engage the street facade and participate in the creation of a vibrant and active urban landscape.

8.3.4 Building Materials

"The variety of buildings and structures that make up the Rail Yards complex demonstrate the full range of industrial materials and building techniques used during the first half of the twentieth century, such as: steel framing, glass curtain walls, reinforced concrete, brick and wood-timber framing." (Dodge, 2013)

The varied materials, however, are united in the raw and basic manner in which they are assembled. There are no composite wall assemblies; all materials are expressed equally whether inside or outside the building. The construction methodology is easily legible compared to modern building techniques that seek to hide building infrastructure beneath a layer of finish. The buildings of the Rail Yards by contrast are fully exposed and pure in their expression of building technology.

Infill development must similarly strive to find this raw expression of materiality. Recommended wall, floor and roof types are as follows;

Wall / Structure Types

The relatively few pieces of new construction proposed by the Master Plan should be built using the palette of materials described above; steel, concrete, stone, masonry, and/or glass. In addition, earthwork/landscaping may be considered an appropriate building material. Modern and innovative expressions of these basic materials

are acceptable and depending on the application, recommended. Examples include; all-glass facades, cable-net structures, cast-in-place concrete set in computer numerically controlled (cnc) milled formwork, laser-automated cut-steel components, etc. Structural systems necessary to support infill development shall be expressed in the design language. The use of high performance, all-glass facades is recommended for certain infill buildings where the provision of natural daylight is critical and where the infill building may be juxtaposed against a historic building. In such a location, the goal of the infill building is both to defer to the historic building and when seen, to be clearly recognizable as a modern element. An all-glass facade yields a level of abstraction that is useful in support of this goal.

Roof Types

Nearly all Many of the roof structures proposed as infill development are to be walkable. Occupiable roof surfaces need to shall include a wearing layer to accommodate pedestrian traffic. Roof surfaces may consist of light weight concrete pavers or other similar products. and may include Acoustic Mound roof surfaces are intended as Sustainable Green Roofs and will either be intensive or extensive varieties depending on location and proposed pedestrian access.

Skylights, clerestories, and other methods of providing daylight through the roof structure shall be considered appropriate and are in-keeping with the design language of the existing Rail Yards buildings. Skylights shall be designed to minimize glare and maximize thermal performance and may also be designed to be operable.

Existing building roof structures shall be repaired to match original conditions where possible. New elements, such as Photovoltaic panels, may be added to existing such structures provided they are designed to lay flat and coincident with the plane of the existing roof slopes and provided the roof structure can accept the additional loading requirements be architecturally integrated and fully reversible.

Floor Types

Existing Rail Yard floor types consist of concrete slabs, creosoted wood blocks, railroad tracks, and large expanses of dirt and gravel in the exterior areas. Due to its function as a locomotive repair facility, the interior of the Machine Shop contains a series of concrete wells running cross axially to the orientation of the building and set below finish floor by approximately 3ft. In addition, both the Transfer Table and Turntable contain below grade "troughs" necessary to accommodate the rolling/rotating mechanisms.

Recommended interior floor types within both historic and infill buildings are not a subject of this Master Plan as they will be determined in the future based on specific user/tenant requirements. The exception to this being the creosoted wood block flooring in the Machine and Boiler Shops that should be preserved and rehabilitated if technically feasible. Exterior floor types, however, excluding those contained in the roof section, shall be as follows;

Site paving, where part of the proposed storm water infiltration system, shall be permeable. Paving, where located atop the subterranean garage, shall be similar in character but non-permeable. Public sidewalk improvements discussed in Section 9 shall be designed in coordination with the paving palette designed for the proposed Edge-Walk such that the sidewalk becomes a literal extension of the Rail Yards project into the neighborhood fabric. Areas of special purpose such as the Quadrangle, Perpendicular Walk, Meandering Path or Machine Shop Plaza may be designed with special paving unique to the requirements of the particular space in which its contained.

Railroad tracks are considered highly valuable urban design elements within the public space that should be retained and incorporated into the redeveloped Rail Yards project where possible. Design studies shall be performed to assess options for maintaining rail tracks whilst

also accommodating ADA accessibility standards. A few select rail tracks as identified in Section 68 shall be preserved for future possible Rail operation. Guidelines for flooring materials at the proposed at-grade crossing are included in Section 9:

8.4 Landscape – Edges & Public Spaces

The site is to be landscaped with a drought tolerant and indigenous palette with plants and trees placed for both beauty and shade. Refer to Section 7, Landscape Master Plan for complete analyses and recommendations.

8.5 Access / Site Circulation

The Site Plan specifies the locations of both pedestrian and vehicular access to the site. An entire linkage system for pedestrian access is also included on the plan diagrams previously shown, including the proposed pedestrian retail bridge connecting to the South Broadway neighborhood and at-grade crossings, both of which are described in detail in Section 9:

8.6 Parking

As previously described in Section 6, the Master Plan recommends that to the degree possible, surface parking should be avoided and rather contained in a below grade structure. Design standards for each configuration are as follows;

8.6.1 Subterranean Parking

The water table under the site is at approximately 25-28' which will allow one level of underground parking. The underground parking is a proposed feature that, as a concept, reflects the need to provide parking and the preference that it not be a visibly dominant feature of the site. Requirements for Subterranean Parking are as follows;

- Parking garage shall be designed to meet all ADA accessibility and building code requirements.
- Garage shall be designed with ample space for on-site vehicle queuing so as to not impact 2nd Street traffic.
- Garage shall be designed with ample lighting and security features to provide a safe and inviting space. Courtyard openings that bring natural light into the garage shall be encouraged although must be designed in tandem with garage exhaust and fire code requirements.
- Electrical vehicle charging stations and preferred spaces for carpool drivers shall be included in order to encourage sustainable practices.
- Quality of garage user experience must be a priority; visitors to the site will make first impressions of the redevelopment based on this experience. Spaces shall be easy to locate, visibility shall be good, layout shall be well organized, and circulation paths easy to follow with integral wayfinding signage. Garage must be designed to the same high standards as the balance of the project.
- Current best practices for ticketing / payment systems shall be utilized to simplify use of garage and prevent long wait times at entry/egress.

8.6.2 Surface Parking

Although not preferred, surface parking will likely be required during early phases of development until such time as development thresholds are met to trigger subterranean garage construction. Per the SU-2/ HLS zone, off-street parking should be screened by buildings where possible and not front on streets. Parking that is adjacent to the street

because of the configuration of existing buildings must be screened by landscaping or a solid wall or fence 3ft in height. Refer to Section 10 of the Master Plan to see the proposed Preliminary Phase Parking plan that has been designed to accommodate all the zoning requirements of the SU-HLS zone stated above.

8.7 Loading

Project loading requirements will depend heavily on the uses ultimately incorporated into the Rail Yards redevelopment. For example, if light industrial uses are incorporated (although not preferred), the site will likely require accommodation of some sort of truck or rail loading facilities. If the site remains more business/office related, loading requirements will be much less. Regardless, the Master Plan must be designed with sufficient flexibility to accommodate all possible future configurations. Basic loading concepts are as follows;

8.7.1 Rail

- Direct rail access will be preserved to the South portion of the site by virtue of the existing BNSF turntable easement that currently remains in place. Future rail loading operations may be incorporated using this access if required, although this would need to be coordinated with the currently recommended use designations for Parcel 1.
- Direct rail access may also need to be incorporated at the North portion of the site likewise through use of one of the 5 spur lines that historically connected the Rail Yards site to the main BNSF lines.

8.7.2 Truck

- Truck access to the site is relatively limited given that the existing historic buildings constrain access to a large portion of the 2nd Street elevation. The only opportunity for loading operations

along the South portion of the site is either directly from 2nd Street, which should be avoided, or by turning onto the site at the proposed Preliminary Parking access point under the Bridge Crane and immediately adjacent the north end of the Storehouse. Truck loading access could be accommodated within the 50ft width under the historic bridge crane (Parcel 4) and adjacent the south elevation of the Machine Shop. The Master Plan, however, recommends that this area be used for limited loading and delivery operations only in support of the public market and cultural facilities planned for the Southern portion of the site.

- Truck access to the North is less constrained and if required, may be accommodated at the far north portion of the site within the proposed northerly courtyard where direct vehicle access may be provided off 1st Street. Note that this option is not currently shown in the Master Plan and would be incorporated only if required.
- The vacated portion of 1st Street north of Hazeldine Avenue may be useful in providing a location for intermittent and off-hours loading for adjacent retail and restaurant uses.
- The Master Plan recognizes the potential incompatibility between loading operations of and public use/enjoyment of the site. Truck loading in support of possible light industrial uses must be hidden and screened from public view. If more significant loading operations are required, the Master Plan may need to be adjusted to better accommodate such

8.8 Utilities / Screening

To ensure the overall aesthetic quality of the Rail Yards Site:

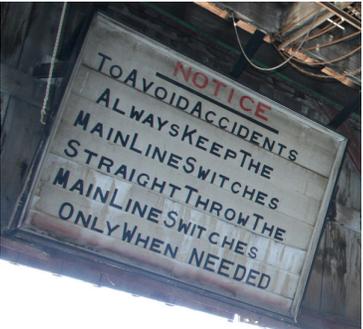
- All new electric and telecommunication distribution lines within the Site shall be placed underground.



"Wayfinding" signage, Babbit Shop



Safety signage, Babbit Shop



Safety signage, Sheet Metal Shop



Sandstone facade of Firehouse with integral Logo



Masonry facade of Blacksmith Shop with painted and integral logo/window



Cast-in-place concrete structure of Storehouse Building with painted logo



Cast-in-place concrete structure of Machine Shop with integral logo



Machine Shop Crane specification/signage

Figure 178: Existing Palette



Rail Lines adjacent Transfer Table



Machine Shop Floor, 3" thick Kreolite creosoted woods blocks sit on a 6" thick concrete floor to dampen sound



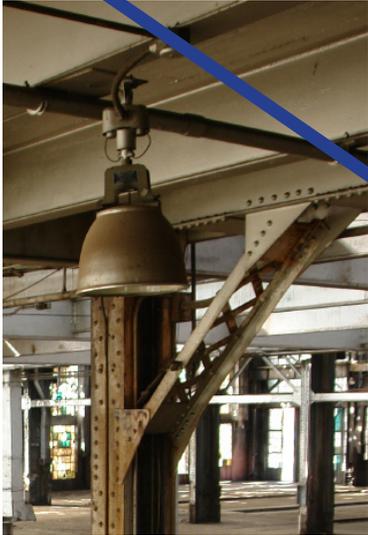
Turntable, Steel rail tracks and wood railroad ties



Perimeter street lighting and welding lines



Machine Shop, Stair to Mezzanine



Machine Shop, Existing High Bay Lighting



Transfer Table, "Le Pissour"

- All permanent utilities serving irrigation systems and other landscape site amenities will be placed below grade. When an above-ground backflow prevention device is required by the City, the enclosure shall be constructed of materials compatible with the architectural materials used as the main elements of the building or better, shall be enclosed within the proposed Acoustic Mound features.
- Transformers, utility pads, HVAC equipment, and telephone boxes shall be appropriately screened from public view. Appropriate location options include within the Acoustic Mound elements along the western and eastern perimeters of the site.

Refer to Section 9 for a complete technical analysis of site infrastructural requirements.

8.9 Signage

The AT&SF rail line is well known for its characteristic Santa Fe logo of the simple square cross bound within a circle. Long before today's age of branding, this logo was a symbol of high quality transit and a commitment to high quality design. The Santa Fe logo is incorporated throughout the Rail Yards complex (See Figure 17) as an integral design element that should be used to inform future signage standards, as follows;

8.9.1 General Criteria

- Signage is to be used only where required and should be kept to a minimum. The spaces and buildings of the Rail Yards should be free from excessive signage and no commercial advertising of off-site products and services is to be allowed on the grounds other than required for business identification and occasional advertising for site-related events and activities.
- Sign size, locations, materials and methods of installation should be consistently be employed across the entire Rail Yards site.
- Where possible, signage and building identification should be an integrated design element of the structure building onto which it is applied.
- For the purposes of the section, Historic Markers shall be considered part of the signage program. Markers shall be incorporated to provide a narrative walking path around the site, connecting historic structures and helping to tell the story of the Rail Yards.
- Buildings recommended for "Presentation" as defined in Section 6.8.2 shall be memorialized by signage similar to the Historic Markers.
- For the purposes of the section, Memorials or interpretive signs shall not be considered part of the signage program. Memorials shall be located at or near the primary entry from each neighborhood, Barelás and South Broadway.
- Self-illuminated signage shall be prohibited except for retail uses; such signage shall be limited to 20 square feet. Signage containing moving graphics shall be prohibited for all use categories.
- Traditional and digital murals dedicated to non-commercial purposes shall not be considered signage and will be instead regulated as Public Art, see Section 8.12.
- Unless otherwise restricted herein, refer to Zone C-2 of the City of Albuquerque Zoning Code for all other signage standards.

8.9.2 Free Standing Signs

- Free standing “monument” signs shall be permitted at locations of vehicular access to the site and adjacent to the proposed transit plaza. A free standing sign shall also be permitted at the proposed location of the future rail station should one be approved. Such signage shall be used to identify the tenants of the Rail Yards site.

8.9.3 Building-Mounted Signs

- A maximum of (2) building-mounted signs per building are allowed. Such building-mounted signs shall not be greater in size than 1 percent of the facade area to which they are applied, provided they can be no greater than 100 square feet in size.
-
- Localized entry signage (e.g. blade signage, door signage) used to identify tenant entrances shall not be considered a building-mounted sign for purposes of the above calculation and shall be permitted provided they are less than 2 square feet and located within 5 feet of the building entrance.

8.10 Exterior Lighting

Exterior lighting standards and recommendations for the Rail Yards site are as follows;

- Placement of fixtures and standards shall conform to State and local safety and illumination requirements. All exterior installations must be provided with ground-fault interruption circuits.
- Shielded source light fixtures shall be used to prevent light spillage and avoid unnecessary glare or reflection on adjacent properties, buildings, or roadways in compliance with the City Comprehensive Zoning Code.

- Lighting should be integrated into the design of the buildings and structures; light sources should be concealed to the degree possible and fixtures should not become focal elements of the project.
- Building lighting is appropriate if it is low-level and consistently employed. For example, existing stone and cast-in-place concrete facades of the historic structures may be uplit. Architectural features may also be illuminated.
- Controlled, directional lighting should be used to highlight public spaces and walkways. The use of walkway level lighting, such as all pocket lights, is encouraged to accent pedestrian areas.
- Landscape lighting is encouraged to enhance certain landscape features. Landscape lighting should be concealed at grade.
- Lighting shall be chosen based on energy efficiency, low level of maintenance and availability of parts should replacement or repairs be required.

8.11 Noise

Given its proximity to neighboring residential areas and the intention for the Rail Yards to become a vibrant mixed-use community with a significant public presence, noise mitigation is a critical design concern for the project. The proposed Acoustic Mound design feature described in Section 6 is a direct response of this need to control potential noise pollution emanating *from* the site and likewise to control noise pollution emanating *to* the site from outside sources such as the active BNSF railway immediately to the east. The Acoustic Mound is a buffering and absorptive mechanism.

The City of Albuquerque’s noise ordinance provides a baseline standard that states noise levels shall not exceed 50dba at any noise

sensitive property line between 10pm and 7am. Where ambient levels exceed 50dba, the criteria shall be ambient plus 5dba.

During normal operation, the Rail Yards shall operate within all such established standards, however, there will likely be times when special event programs may require alternative measures. For example, the Roundhouse Amphitheater Turntable Commons may someday accommodate outdoor public events which could include music concerts with amplified sound. Master Plan noise standards must therefore be designed with sufficient flexibility to accommodate sound levels above those defined under the Ordinance under special circumstances. Exceptions for short-term special events may be allowed on a case-by-case basis under a temporary permit through the Environmental Health Department. If approved, this would allow limited, short duration, non-compliance with the Noise Ordinance standards. The event operator would be responsible for monitoring noise levels to ensure it meets the special provisions afforded it by said permit.

For additional consideration, the proposed rebuilt Smokestack may be designed to include an analogue “whistle” that references back to its historic functionality. The “whistle” may be used to coincide with special events occurring at the Rail Yards.

8.12 Security

Given its relatively large 27.3 acre footprint and the likely mixed-use nature of its occupancy, the Rail Yards development will require a constant security presence. The juxtaposition of private professional users alongside public-oriented Cultural, Retail and Housing users will require additional safeguards not normally required of a single-use, more-predictable user environment. Recommended security standards are as follows;

- The Rail Yards will require a full-time, 24-hour security presence.

- Similar to the control of public park facilities, the Rail Yards may need to incorporate hours of operation limitations to control after hours use.
- Given its 2,000ft long frontage along 1st and 2nd Streets, access to the Rail Yards site is not intended to be controlled, and in fact, is not feasible to achieve given other urban design requirements. Access to buildings and parking facilities, however, will be controlled.
- Installation of a network of CCTV security cameras should be considered to assist with site security.

8.13 Public Art

The Rail Yards Master Plan is founded in a deep commitment to Art and Architecture. From the beauty of the existing structures to the quality of design required of all proposed infill development, the Rail Yards is intended to become a world-class center for Art and Architecture; a center not in terms of its collection of Art Museums and Galleries, but a center in terms of the unparalleled integration of Art and Architecture in the creation of public space. Public Art recommendations are provided as follows;

- The Master Plan acknowledges and accepts the concept of Architecture as Art.
- The Rail Yards will include venues for artistic expression and will celebrate Albuquerque’s vibrant art community.
- Traditional and digital murals are appropriate mediums of artistic expression.

- The A Rebuilt Smokestack may be developed as a venue for Public Art.

8.14 Sustainability

The design of all new elements and facilities is encouraged to incorporate sustainable design features. At a minimum, new facilities shall comply with the current City of Albuquerque adopted Energy Codes and shall be LEED equivalent rated.

Sustainable design features include, but are not limited to the following:

8.14.1 Energy Conservation

The mixed-use character of the Master Plan reduces automobile dependence and consumption of petroleum. The plan encourages visitors to park once and walk from there to a variety of closely clustered uses. The proposed Transit Plaza at the center of the Rail Yards site will serve as the hub of this type of arrangement. Convenience of mass transit, connections to walking and bicycle paths, also contribute to reduced automobile use.

Rail Yards development should minimize energy consumption using the following measures, keeping in mind that such measures need to also comport with historic building requirements;

- **Exterior Envelope Design:** Provide building insulation at all new roof, wall and below grade retaining wall assemblies (at conditioned spaces only). Seal buildings against air infiltration. Encourage passive solar design (trombe walls, direct gain) where feasible. Incorporate cool roof construction techniques (high reflectance, green roof concepts) to minimize heat island effects.
- **Solar Fenestration:** Provide east-west building orientation to

facilitate solar control. Minimize west and north exposures. Maximize south exposures. Use insulated glazing at all new construction where possible.

- **Daylighting:** Maximize natural Daylighting to reduce electrical lighting loads.
- **Natural Ventilation:** Incorporate operable windows where operation (open vs. closed) can be monitored.
- **Lighting:** Use energy efficient light fixtures (i.e. LED's) both inside and at exterior locations.
- **Light Controls:** Provide occupancy sensors at all tenant spaces to limit power consumption when spaces are not in use.
- **HVAC Systems:** Use high efficiency equipment, programmable thermostats, incorporate economizer cycles. Analyze potential use of centralized HVAC for the Rail Yards site to increase efficiency and conservation of resources. Consider cogeneration systems that utilize heat energy to simultaneously generate electricity and useful heat.
- **Appliances:** Use high efficiency type appliances.

8.14.2 Water Conservation

Water conservation efforts as described in Section 9 in the Infrastructure Section of this Master Plan are required by code or are strongly encouraged. Additional measures are as follows;

- Incorporate rain water harvesting for supplemental landscape irrigation and non-potable water use. Where possible, use above ground cisterns to catch roof water runoff for reuse in landscape irrigation. The collection of rainwater into cisterns reduces

the amount of water that needs to be handled by stormwater detention ponds. Above-ground cisterns avoid the problem of saturating subsoils. In the event of a leak in the system, the flow occurs above ground, and if not allowed to pond, can avoid saturating the subsoils. The benefit to the City is a reduced need for stormwater improvements for the Rail Yard. The benefit for the tenant is a source for landscape water that is not dependent on potable water sources. The benefit for the community is a City-wide model for water management and conservation.

- Incorporate on-site water retention and infiltration through stormwater management.
- Use high-efficiency, low flow plumbing fixtures.
- Use low water irrigation techniques (drip, etc) and specify native and drought tolerant plant species. Use xeriscape principles of design.
- Reuse gray water for non-potable water needs (e.g., toilet flushing) and irrigation.

8.14.3 Alternative Energy Sources

- Provide Photovoltaic panels/membranes for on-site electricity generation.
- Consider Solar panels for hot water generation and hot air systems.
- Passive solar design (trombe walls, direct gain)
- Consider opportunities to use or add alternate energy sources such as fuel cells, distributed energy generation, solar, thermal exchange, etc.

- Consider wind-powered electric generators, where feasible. (size, location, and placement is a major issue in context to the historic structures.)

8.14.4 Pollution Control

To create a plan that reduces pollution, the Master Plan proposes the treatment of storm water runoff by water harvesting, constructed swales, bio-remediation and other techniques to minimize non-point pollution from surface runoff. See Section 9, Infrastructure for more information.

The Master Plan strongly encourages the utilization of non-polluting materials by avoiding polluting materials or treatments in the construction and maintenance of buildings and sites. Polluting materials can include creosote, petroleum based paints and sealers, high volatile organic compound (VOC) solvents, insecticides, etc.

- Install trash containers/recycling containers throughout the Rail Yards site.

8.15 Air Quality

During the Master Planning process, community concerns were voiced regarding the potential for the Acoustic Mounds proposed along the east side of the site to exacerbate existing air quality problems associated with rail traffic along the BNSF rail lines. Specifically it was mentioned that BNSF trains are often left idling on the tracks adjacent to residential communities in South Broadway and San Jose neighborhoods, leaving the diesel exhaust to accumulate. The concern is that the Acoustic Mounds will create a tunnel effect that further traps these fumes from escaping, thereby worsening an already significant problem.

The Master Plan recommends that further analysis of the existing problem be undertaken and the potential effects of the Acoustic Mounds be studied, including the possibility that the Mounds might ameliorate the condition by creating a landscape edge that can absorb harmful pollutants. It might also be determined that existing practices by the BNSF rail line need further review and evaluation.

The Mounds remain a conceptual idea only for treatment of the project edges. They are designed and intended to be a positive community asset that help solve many different site considerations. If they are determined to have negative air quality impacts, alternative edge concepts will be explored.

8.16 Site Plan for Subdivision

The regulatory standards outlined in Section 8 are summarized in Tableau 7, Site Plan for Subdivision, located on the following pages. Once approved, the Site Plan for Subdivision will serve as the basis for future site development.

NOTE: UPDATED SITE PLAN FOR SUBDIVISION

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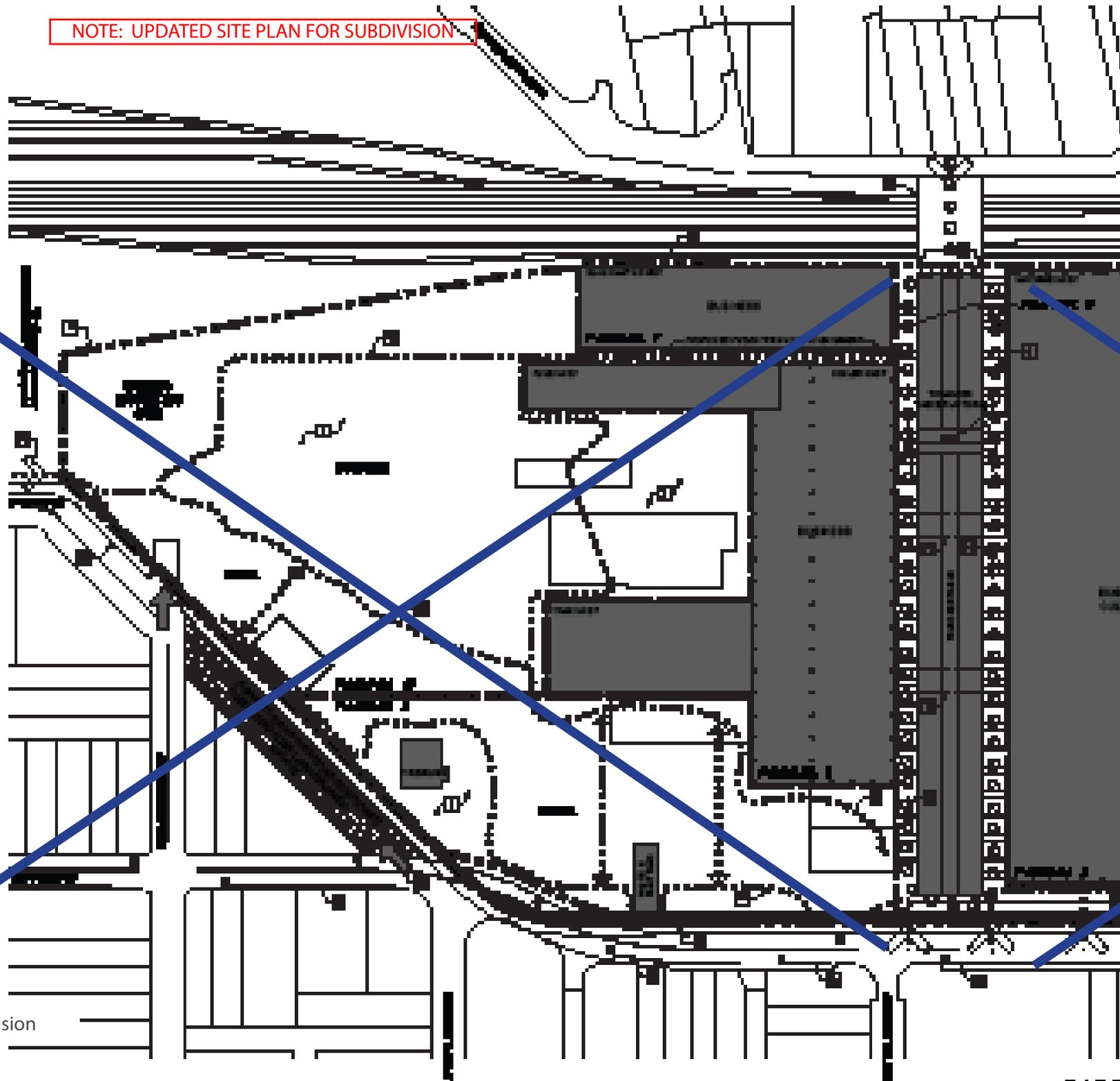


TABLEAU 7: Site Plan for Subdivision

Skylights-



9.0 INFRASTRUCTURE

The Infrastructure section deals broadly with systems designed to convey utilities and circulation to and from the Rail Yards site. Systems are analyzed to determine existing capacity and against this baseline, the development proforma of the Master Plan is evaluated and recommendations for its accommodation are provided. The following Infrastructure documentation was compiled and analyzed from multiple sources; credits are provided at the beginning of each section.

Note that the information contained in this section is preliminary in nature and intended to provide a baseline analysis and rough order of magnitude summary of future infrastructure requirements only. Specific infrastructural requirements will be detailed prior to Site Plan for Building Permit approvals.

9.1 Infrastructure - Executive Summary:



The redevelopment of the Albuquerque Rail Yards located at 2nd Street SW and Santa Fe Avenue SW has been investigated. Infrastructure needed to support the proposed redevelopment has been analyzed. The analysis will review the existing adjacent infrastructure and capacities, to meet the full proposed build-out of the redevelopment, estimated at 30 work force residences, and ~~819,766~~ 801,592 square feet of "heavy commercial" land use. This master plan will show existing capacities available for both wet and dry utilities; as well as demands and concept improvements for future redevelopment.

At this time, analysis of the infrastructure to support phasing of the project in order to minimize working capital and maintenance requirements has not yet been undertaken. Rather the current examination is to show the amount of infrastructure required to support the full build-out of the project only.

9.1.1 Water Distribution System

Significant improvements must be made to the potable water

distribution system between Hazeldine Avenue and Cromwell Avenue along 2nd Street SW to satisfy fire flow demands for the future development. The Rail Yard appeared to have had its own private water line, consisting of both 6-inch and 8-inch pipes. The recommendation is to replace the existing old on-site system with the a proposed public distribution system that will consist of 8-inch pipes, with the appropriate placed fire hydrants, valves, service meters, and a large cistern that will be used to augment fire flows. Each building will be sized for its own independent water meter; and will also be analyzed for the number of fire hydrants that are required for its building type to meet fire code requirements. Requests to the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) have been made to prepare a fire flow test for the existing distribution system adjacent to the Rail Yard. The results of this analysis have not been received so for the purposes of the master plan, the assumption is that a maximum fire demand for the existing infrastructure of 1,500 gallons per minute (GPM), is achievable. The existing public line in 2nd Street SW will be connected in several locations to the new proposed line within the development.

All new hydrants will be located by the City Fire Marshal's office, and subsequent utility plans will need to be prepared and approved, by the ABCWUA. Public easements will be required for the proposed on-site distribution system.

The site will require an on-site cistern with an additional water supply volume of 46,300 cf; with a peak potable demand of 520 gpm and a maximum fire demand of 4000 gpm; for a two hour duration. Wilson & Company has addressed these requirements in the body of this master plan. The 46,300 cubic foot cistern with booster pump will be required to support the existing infrastructure to provide fire flow for the project. The cistern and the booster pump may need to be installed during the first phase of the project in case the existing system pressure in 2nd Street SW drops below 20 psi, to address an emergency

situation.

The project is also planned to have open space areas, which will be irrigated; with low flow or special irrigation to prevent the unnecessary use of potable water.

9.1.2 Wastewater Collection

Wastewater generated from the proposed developed site will be collected by a series of internal private systems. The proposed system will connect to the existing 8-inch line in 2nd Street SW at 2 locations: near the crossing streets of Atlantic Avenue SW; and Santa Fe Avenue SW. The existing 8-inch line has a capacity of 0.85 cfs. The existing 8-inch line is required to be upsized to a 12-inch line as part of this project. A third connection will be made to the proposed 12-inch line in 2nd Street SW south of Pacific Avenue in order to handle the additional flows. The proposed 12-inch line has a capacity of 2.52 cfs. The line at the intersection of Cromwell Avenue SW and 2nd Street SW is a 12-inch line. The existing capacity of the 12-inch line is 2.52 cfs. Each proposed 8-inch sanitary sewer line has capacity of 0.85 cfs. The technical discussion in the body of this master plan shows the peak demand at each of the proposed sanitary connections within the development.

The existing on-site sanitary system will be completely replaced for the purpose of this master plan.

9.1.3 Stormwater Management System

Stormwater management is a critical element for the proposed development. Drainage patterns will remain similar to those of the existing condition; however, no detention is currently provided for the mostly impervious Rail Yard. Through an existing agreement with the City of Albuquerque, the proposed project will be allowed to release at a rate of 2.75 cfs per acre of development. The existing drainage patterns, with very flat slopes running from east to west, show 3

natural drainage basins, which will be similar for final grading of the proposed site. Each basin (Basin A-1 located at the northern end of the development, Basin A-2 located in the middle of the development and Basin A-3, located in the southern portion of the development) will provide its own detention areas, whether by underground cistern, porous landscape techniques, bio-swales, rain gardens, or other general low impact improvements accepted for high density urban environments. The onsite system for collection and detention will be a private system connecting to the public gravity system located in 2nd Street SW. It is anticipated that each of the basins will require:

- Basin A-1; total volume of storage required 17,978 cf, with max discharge of 20.1 cfs
- Basin A-2; total volume of storage required 20,309 cf, with max discharge of 22.6 cfs
- Basin A-3; total volume of storage required 28,807 cf, with max discharge of 32.2 cfs

For the purposes of this master plan, Wilson & Company proposes to incorporate an extensive array of best management practices that respect the flat topography; which reflect the stormwater criteria and regulations. We propose a gravity system consisting of swales, ditches, small diameter piping, and shallow ponds, while attenuating peak discharges, which also adhere to a sustainable design practice for open space and landscape areas.

9.1.4 Dry Utilities

- Gas availability; Contact was made with the New Mexico Gas Company. Based on the general concepts of the site plan, it was determined that there will be no problem servicing the anticipated load.

- Century Link availability; Contact was made with Century Link. Its main copper and fiber optic facilities located at 4th Street SW, between Coal and Bridge can be extended to serve the Rail Yard development.
- Comcast availability; Contact was also made with Comcast; Capacity is available to provide service to the proposed Rail Yard site.
- PNM availability; An existing sub-station is located at the northern end of the project across 2nd Street SW that has been estimated to provide 1.5 megawatts. The assumption for the development is that the electricity demand will exceed 8 megawatts; requiring the existing sub-station to be expanded, along with the construction of primary distribution lines to the proposed development. **The project may also require a new 115kV transmission line to be extended to connect to the expanded substation.** Additional analysis through PNM will be required to develop a final conceptual plan for this development.

9.2 Water Distribution

This section of the master plan is intended to address the future water distribution system for the Albuquerque Rail Yard. The proposed public water distribution system within the site is intended to serve a dual function of domestic service, as well as fire protection flows. Based on the proposed Parcel Map, Floor Area Ratios (FAR), and Projected Usages prescribed within the Master Plan, the demands on the water service system have been estimated as outlined within this section of the master plan.

9.2.1 Existing Infrastructure

According to municipal maps, a private water distribution system within the Rail Yard did exist at one time. It has since been abandoned

and its size and condition is unknown at this time. Therefore, for the purposes of master planning within this section of the master plan, it has been deemed infeasible to re-use the existing on-site system. Instead, this section will schematically layout a new system designed to specifically meet the requirements of the proposed development.

The existing public potable water distribution system to the west of the site within 2nd Street SW consists of a 6" main. An 8" main also exists within Commercial Street SE to the east. However, due to the feasibility and potential expense of crossing the existing railroad tracks to reach the main in Commercial Street the recommendation of this document is that water services be obtained from 2nd Street SW.

*Note: If additional resources can be identified through working with the Albuquerque Bernalillo County Water Utility Authority this could be revisited during the initial designs.

9.2.2 Proposed Development

The proposed development will consist of numerous buildings, both existing to be rehabilitated and new construction. The site has been divided into ten parcels as part of the master planning process. Each of these parcels was assigned a floor area ratio (FAR) and proposed use. The FAR and parcel area then dictated the potential build-out for development within each parcel. It is these fully built-out square footages that were used in the calculations of the domestic and fire demands.

9.2.3 Domestic Demand Calculation

The Volume II – Design Criteria, Chapter 25: Waste System Design Criteria of the Albuquerque Development Process Manual does not dictate a method for estimating design flows. Therefore, the domestic demand has been calculated by use of the sanitary sewer flows based on the potential build-out outlined above. The sanitary sewer flows were modified to approximate domestic demand by assuming a 20% water consumption rate. Domestic demands for the proposed development are as follows:

| Parcel ID | Proposed Use (Per Master Plan) | Domestic Demand (MGD) |
|-----------|---|-----------------------|
| 1 | Cultural Facilities: Museum, Performing Arts | 0.174 |
| 2 | Work-Force Housing | 0.122 |
| 3 | Cultural Facilities: Museum, Live Work | 0.029 |
| 4 | Open Space, Accessory Retail | N/A |
| 5 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media, Accessory Cultural Uses. | 0.157 |
| 6 | Open Space | N/A |
| 7 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media | 0.040 |
| 8 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media | 0.104 |
| 9 | Open Space/Commercial: Retail, Restaurant, Service | 0.023 |
| 10 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media | 0.100 |

9.2.4 Fire Flow Demand Calculation

Fire flows for the proposed development were approximated using the International Fire Code Table B105.1. Building Type IIB was assumed for both existing structures to be rehabilitated and proposed new structures. Type IIB was selected due to its non-combustible, non-rated classification. The flow rates from the table were then reduced by 50%

due to the assumption that all buildings will be sprinkled as allowed by the Fire Code. The required flow durations were also obtained based on the projected demands. See the table below for a summary:

| Parcel ID | Buildable Area (SF) | Construction Type* | Fire Flow** (GPM) | 50% Reduction for Sprinklers (GPM) | Flow Duration As Required by Code (Hours) |
|-----------|---------------------|--------------------|-------------------|------------------------------------|---|
| 1 | 240,567 | IIB | 8000 | 4000 | 4 |
| 2 | 77,264 | IIB | 6000 | 3000 | 3 |
| 3 | 31,791 | IIB | 4750 | 2375 | 2 |
| 4 | N/A | N/A | N/A | N/A | 4 |
| 5 | 214,121 | IIB | 8000 | 4000 | 4 |
| 6 | N/A | N/A | N/A | N/A | 4 |
| 7 | 45,447 | IIB | 4750 | 2375 | 2 |
| 8 | 134,984 | IIB | 7750 | 3875 | 3 |
| 9 | 24,554 | IIB | 4750 | 2375 | 2 |
| 10 | 128,304 | IIB | 7500 | 3750 | 3 |

9.2.5 Proposed System Layout and Design

The proposed water distribution system on site was laid out with two main objectives. The first was to provide infrastructure to fully service various connection points throughout the parcel as well as place new fire hydrants to meet the spacing requirements. The second objective was to provide an independently looped system within the boundaries of the site. By doing so it allows fire demands for the development to be met by a single cistern and pump system, which will be installed during the initial phasing of the project.

At the time this document was prepared, no existing flow data was available for the municipal water distribution system adjacent to the site. It has been assumed that the 6" water main in 2nd Street SW will not have an ability to sufficiently supply fire flows for the proposed development. Therefore, it is proposed a booster pump and cistern system be centrally located within the site's water distribution

network to meet the demands estimated in the table above. The proposed cistern size of 46,300 cf and pump size of 2,500 GPM is intended to supplement a projected draw of 1,500 GPM from the city infrastructure to meet the maximum flow of 4,000 GPM for a maximum duration of 2 hours.

It is important to note that the Code requires flow durations in excess of that which the pump system can supply. This non-compliance with Code has been disregarded due to the nature of the flows that have been calculated. The flows are calculated using bulk buildable square footages for different parcels of the site that in many cases include multiple structures. During the formal design of the development more accurate, building specific calculations will be performed that will result in lower flow values and durations. The conceptual fire system is, therefore, conservative and appropriate for planning purposed as the project moves forward. Also use of fire rated construction in larger buildings can be used to reduce demand.

Attachments:

Existing Water Infrastructure Map
Proposed Water Infrastructure Map
Domestic Demand Calculations
Fire Demand Calculations

Albuquerque Rail Yard - Domestic Demand Estimation

| Parcel ID | Proposed Use (Per Masterplan) | Parcel Area (SF) | Proposed FRR | Available Area (SF) | Proposed Use (Per Utility Sizing) ⁶ | Design Flow Per Sanitary ⁶ (MGD) | Usage Factor | Domestic Demand (MGD) |
|-----------|--|------------------|--------------|---------------------|--|---|--------------|-----------------------|
| 1 | Cultural Facilities: Museum, Performing Arts | 370,383 | 0.63 | 240,367 | Heavy Commercial | 0.143 | 1.2 | 0.174 |
| 2 | Work-Force Housing | 77,264 | 1.00 | 77,264 | 80 DU (~1,800GF/DU) | 0.101 | 1.2 | 0.122 |
| 3 | Cultural Facilities: Museum, Live Work | 61,382 | 0.30 | 31,781 | Heavy Commercial | 0.024 | 1.2 | 0.029 |
| 4 | Open Space; Accessory Retail | 48,128 | N/A | N/A | N/A | N/A | N/A | N/A |
| 5 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media, Accessory Cultural Uses | 142,747 | 1.30 | 214,121 | Heavy Commercial | 0.131 | 1.2 | 0.157 |
| 6 | Open Space | 79,893 | N/A | N/A | N/A | N/A | N/A | N/A |
| 7 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media | 38,298 | 1.30 | 49,447 | Heavy Commercial | 0.033 | 1.2 | 0.040 |
| 8 | Business/Professional Uses: Office, Light Manufacturing | 89,989 | 1.30 | 134,984 | Heavy Commercial | 0.087 | 1.2 | 0.104 |
| 9 | Open Space/Commercial: Retail, Restaurant, Service | 98,216 | 0.25 | 24,504 | Heavy Commercial | 0.019 | 1.2 | 0.023 |
| 10 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media | 197,390 | 0.63 | 128,304 | Heavy Commercial | 0.083 | 1.2 | 0.100 |

⁶ - Per Albuquerque Development Process Manual - Chapter 24 - Sanitary Sewer Design Criteria

Albuquerque Rail Yard - Fire Demand Estimation

| Parcel ID | Proposed Use (Per Masterplan) | Parcel Area (SF) | Proposed FRR | Available Area (SF) | Construction Type ⁷ | Fire Flow ⁸ (GPM) | SRF Reduction For Sprinklers (GPM) | Flow Duration (Hours) |
|-----------|--|------------------|--------------|---------------------|--------------------------------|------------------------------|------------------------------------|-----------------------|
| 1 | Cultural Facilities: Museum, Performing Arts | 370,383 | 0.65 | 240,367 | III | 8000 | 4800 | 4 |
| 2 | Work-Force Housing | 77,264 | 1.00 | 77,264 | III | 6000 | 3800 | 3 |
| 3 | Cultural Facilities: Museum, Live Work | 61,382 | 0.50 | 31,791 | III | 4750 | 2375 | 2 |
| 4 | Open Space; Accessory Retail | 48,128 | N/A | N/A | N/A | N/A | N/A | 4 |
| 5 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media, Accessory Cultural Uses | 142,747 | 1.50 | 214,121 | III | 8000 | 4800 | 4 |
| 6 | Open Space | 79,893 | N/A | N/A | N/A | N/A | N/A | 4 |
| 7 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media | 38,298 | 1.50 | 49,447 | III | 4750 | 2375 | 2 |
| 8 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media | 89,989 | 1.50 | 134,984 | III | 7750 | 3875 | 3 |
| 9 | Open Space/Commercial: Retail, Restaurant, Service | 98,216 | 0.25 | 24,504 | III | 4750 | 2375 | 2 |
| 10 | Business/Professional Uses: Office, Light Manufacturing, Training/Education, R&D, Media | 197,390 | 0.65 | 128,304 | III | 7500 | 3750 | 3 |

⁷ - Construction Type III assumed for all buildings: non-combustible, non-rated

⁸ - Fire Flows per IFC Table B105.1

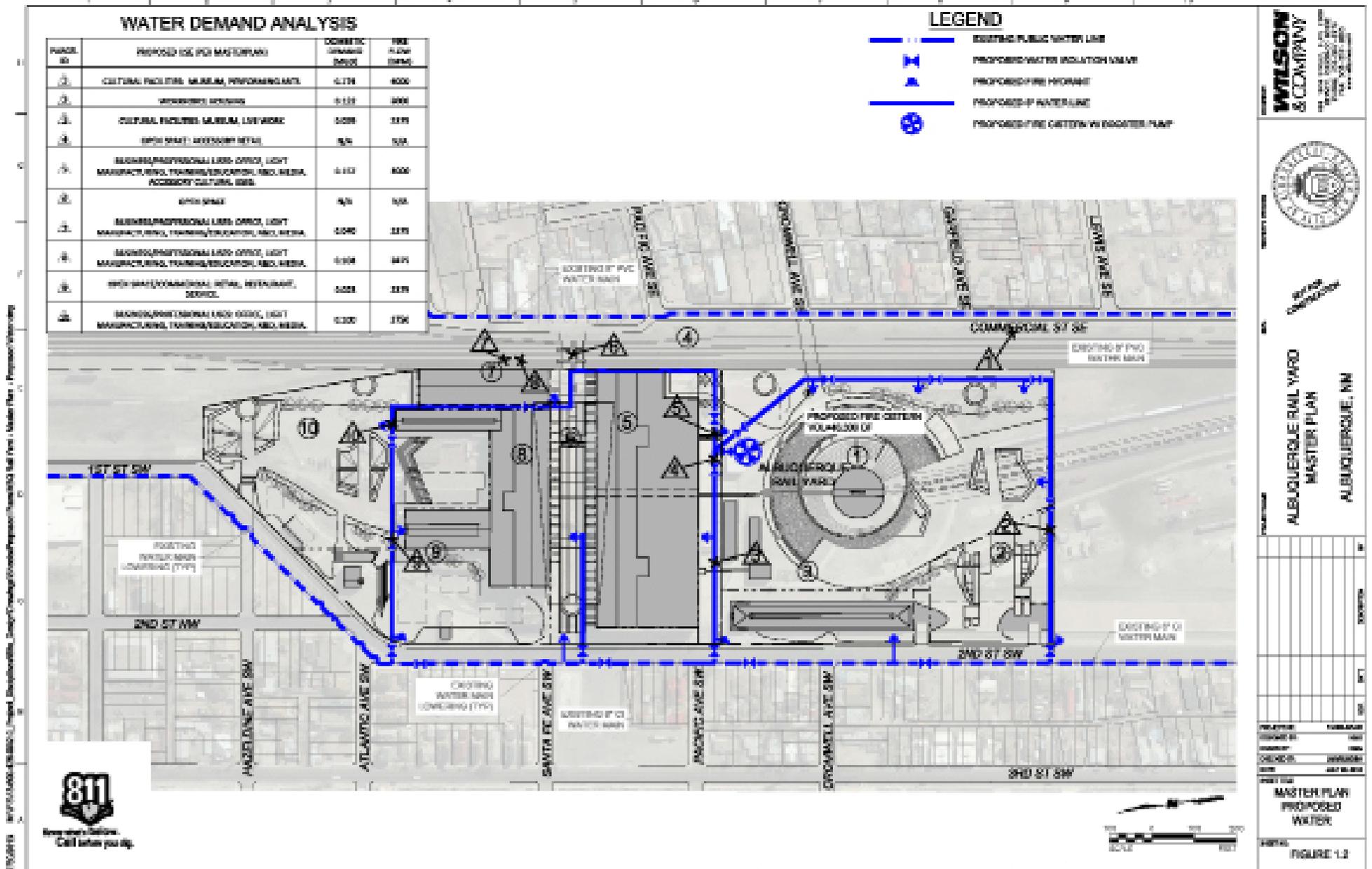


Figure 189b: Master Plan - Proposed Water

9.3 Wastewater Collection

This section of the master plan is intended to address the proposed sanitary flows that will be contributed from the Albuquerque Rail Yard. The proposed development will be comprised of a minimum 30 dwelling units and 5 analysis points of mixed commercial use that has a total parcel area of ~~992,325~~ 1,189,602 square feet, of which ~~819,766~~ 801,592 square feet is the allowable buildable “heavy commercial” land use area. The analysis points are laid out as such:

- Analysis point 1 consist of Parcels 9 and 10
- Analysis point 2 consist of Parcels 5, 7, and 8,
- Analysis point 3 consist of Parcels 1, 2, and 3,
- Analysis point 4 is the combination of analysis points 1 and 2, and
- Analysis point is the combination of analysis point 1 and 4

**Note: See attached Master Plan Proposed Sanitary for analyses point locations and Parcel ID.

The following calculations have been prepared to meet the requirements of Volume II – Design Criteria, Chapter 24: Sanitary Sewer Design Criteria of the Albuquerque Development Process Manual.

- Analysis Point 1 Proposed Flow
 $Avg\ Flow = (5,968\ GPD/AC)(6.79\ AC)(10-6) = 0.040\ MGD$
 $Peak\ Flow = 2.5(0.040)0.8875 = 0.145\ MGD$
 $Design\ Flow = (1.2)(0.145\ MGD)(1.547) = 0.270\ cfs$
 Total Design Flow for Analysis Point 1
 Total Design Flow = 0.27 cfs
- Analysis Point 2 Proposed Flow
 $Avg\ Flow = (5,968\ GPD/AC)(6.04\ AC)(10-6) = 0.036\ MGD$

$$Peak\ Flow = 2.5(0.036)0.8875 = 0.131\ MGD$$

$$Design\ Flow = (1.2)(0.145\ MGD)(1.547) = 0.243\ cfs$$

$$Total\ Design\ Flow\ for\ Analysis\ Point\ 2$$

$$Total\ Design\ Flow = 0.24\ cfs$$

- Analysis Point 3 Proposed Flow
 Commercial Portion
 $Avg\ Flow = (5,968\ GPD/AC)(9.96\ AC)(10-6) = 0.059\ MGD$
 $Peak\ Flow = 2.5(0.059)0.8875 = 0.204\ MGD$
 $Design\ Flow = (1.2)(0.204\ MGD)(1.547) = 0.379\ cfs$

$$Dwelling\ Portion$$

$$Avg\ Flow = (80\ DU)(2.5\ People/DU)(110\ GPD/Person)(10-6) = 0.022\ MGD$$

$$Peak\ Flow = 2.5(0.022)0.8875 = 0.084\ MGD$$

$$Design\ Flow = (1.2)(0.084\ MGD)(1.547) = 0.157\ cfs$$

$$Total\ Design\ Flow\ for\ Analysis\ Point\ 3$$

$$Total\ Design\ Flow = 0.157\ cfs + 0.379\ cfs = 0.54\ cfs$$

The above mentioned results are the quantities that were obtained using the heavy commercial sanitary average flows provided by Volume II – Design Criteria, Chapter 24: Sanitary Sewer Design Criteria of the Albuquerque Development Process Manual. The heavy commercial sanitary flows were chosen to be conservative when projecting the additional flows and were compared the City and Country of Denver Department of Public Works Sanitary Sewer Design Technical Criteria Manual (See attached CCD Table 2.04.3 – Commercial/Industrial Flow Factors), in order to allow for reasonable assumptions to be made. No data on existing sanitary sewer conditions have been provided prior to this report, such as slope and sanitary flows.

Analyses were performed using FlowMaster software to determine the allowable capacities of the existing sanitary sewer system. The

analysis revealed the existing 8" Vitrified Clay Pipe, VCP, running along the west side of the future development had an allowable capacity of 0.85 cfs, assuming the current system runs at a 0.5% slope. Thus the 0.27 cfs calculated at analysis point 1 (See attached Proposed Sanitary Site Layout for location) could flow into the existing 8" VCP with a remaining capacity of 0.58 cfs (68.2%). Analysis point 4, which is a second proposed connection to the above mentioned existing 8" VCP pipe in 2nd Street SW, will be the combination of the flows from analysis points 1 and 2, which have a total projected flow of 0.51 cfs. The additional 0.51 cfs could be added to the existing 8" VCP sanitary with a remaining 0.34 cfs (40.0%). These analyses were done separate due to the lack of data provided on current conditions.

South of analysis point 5, the master plan proposes the replacement of the 8" VCP with a 12" PVC sanitary pipe, due to the additional flow that will be contributed from analysis point 5, which is a combination of analysis point 1, 2, and 3. The project flow at this portion of the sanitary sewer system will be 1.05 cfs. An analysis was done using FlowMaster to determine the allowable capacity in the proposed 12" PVC pipe. The results of the FlowMaster analysis it was determined the allowable flow capacity of the proposed 12" PVC pipe was 2.52 cfs, therefore a remaining capacity of 1.47 cfs (58.3%) would be allowable for future developments.

With the above mentioned results, it is assumed that with the additional flows and the proposed change to the portion of the existing 8" VCP to a 12" PVC sanitary pipe, between Pacific Avenue SW and Cromwell Avenue SW, that there will be adequate capacities to handle proposed and existing flows.

Attachments: Master Plan Existing Sanitary
 Master Plan Proposed Sanitary
 Spread Sheet of Analysis Points with Calculated Flows
 Section 2 of Chapter 24: Sanitary Sewer Design Criteria
 CCD Table 2.04.3 – Commercial/Industrial Flow
 Factors
 FlowMaster Worksheet for Existing 8" VCP @ Assumed
 0.5% (Allowable Capacity)
 FlowMaster Worksheet for Existing 12" PVC @ Assumed
 0.5% (Allowable Capacity)

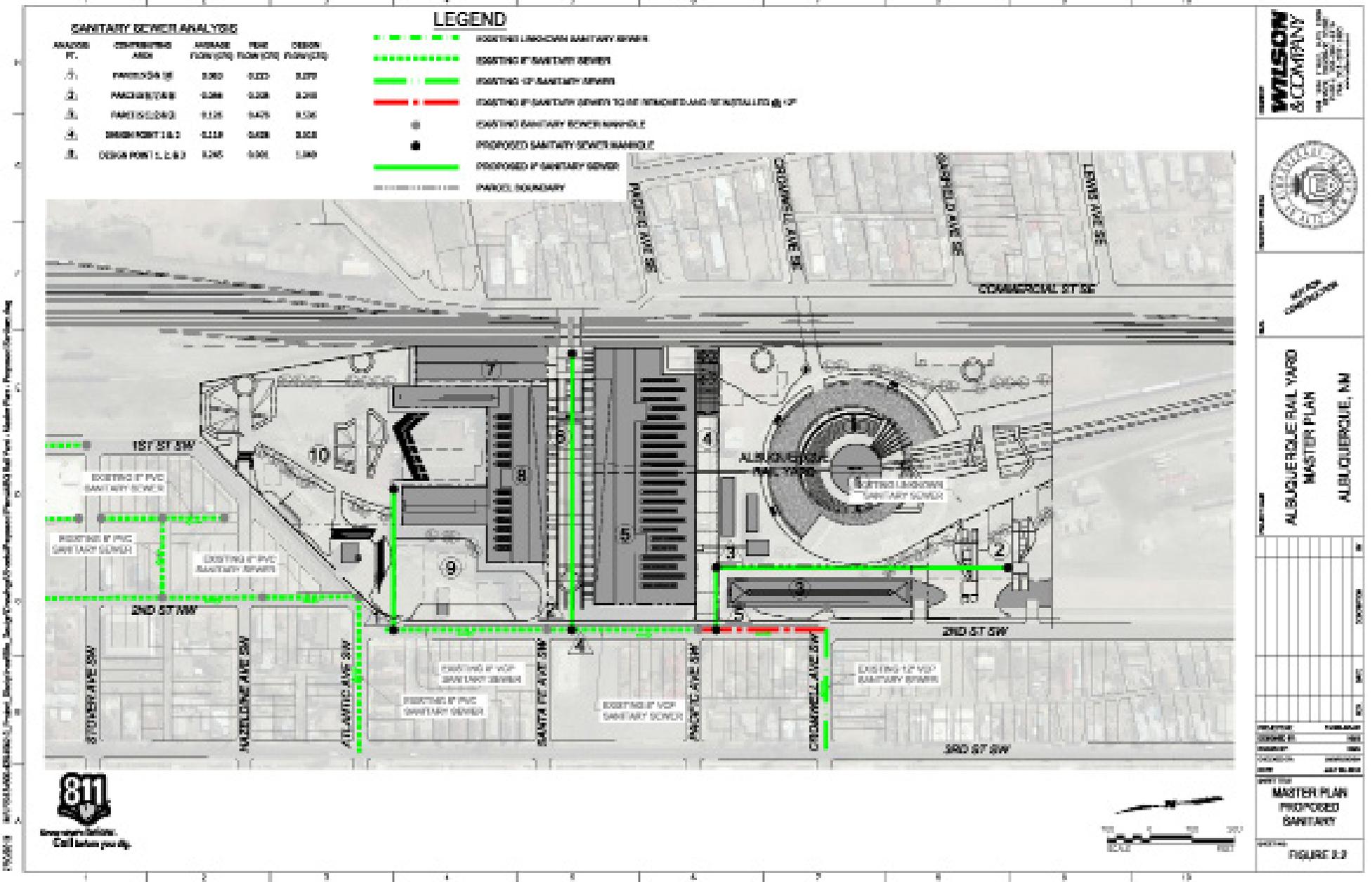


Figure 920b: Master Plan - Proposed Wastewater

Analysis Point 3

| Parcel ID | Proposed Use (Per Masterplan) | Parcel Area | Proposed FFR | Available Area | Proposed Use (Per Utility Study) |
|--|---|-------------------|--------------|----------------|----------------------------------|
| 1 | Cultural Facilities, Museum, Performance Arts | 870,189 | 0.92 | 360,587 | Heavy Commercial |
| 2 | Work-Force Housing | 77,264 | 1.08 | 77,264 | 60 DU (-1,400,000DU) |
| 3 | Cultural Facilities: Museum, Live Work | 68,592 | 0.58 | 31,791 | Heavy Commercial |
| Total area (within MPN Parcel 2 & Open Space Parcel 4) (DU) | | 1,016,045 | | | |
| | | IMD | CFI | | |
| | Ave Flow | 0.028 | 0.082 | | |
| | Peak Flow | 0.204 | 0.328 | | |
| | Design Flow | 0.249 | 0.378 | | |
| | Work-Force Housing | Population | | | |
| | 2.5 persons/DU | 300 | | | |
| | | IMD | CFI | | |
| | Ave Flow | 0.022 | 0.024 | | |
| | Peak Flow | 0.094 | 0.126 | | |
| | Design Flow | 0.101 | 0.137 | | |
| | | IMD | CFI | | |
| | Total Design Flow for Analysis Point 3 | 0.249 | 0.588 | | |

Analysis Point 2

| Parcel ID | Proposed Use (Per Masterplan) | Parcel Area | Proposed FFR | Available Area | Proposed Use (Per Utility Study) |
|---|--|----------------|--------------|----------------|----------------------------------|
| 5 | Business/Professional User: Office, Light Manufacturing, Training/Education, R&D, Media, Accessory Cultural Uses | 143,747 | 1.58 | 214,321 | Heavy Commercial |
| 7 | Business/Professional User: Office, Light Manufacturing, Training/Education, R&D, Media | 30,228 | 1.58 | 47,447 | Heavy Commercial |
| 8 | Business/Professional User: Office, Light Manufacturing, Training/Education, R&D, Media | 68,889 | 1.58 | 234,884 | Heavy Commercial |
| Total area (within open space Parcel 6) (DU) | | 242,864 | | | |
| | | IMD | CFI | | |
| | Ave Flow | 0.028 | 0.028 | | |
| | Peak Flow | 0.181 | 0.308 | | |
| | Design Flow | 0.137 | 0.248 | | |
| | | IMD | CFI | | |
| | Total Design Flow for Analysis Point 2 | 0.137 | 0.248 | | |

Analysis Point 1

| Parcel ID | Proposed Use (Per Masterplan) | Parcel Area | Proposed FFR | Available Area | Proposed Use (Per Utility Study) |
|---|---|----------------|--------------|----------------|----------------------------------|
| 9 | Open Space/Commercial Retail, Recreational Services | 29,211 | 0.72 | 21,234 | Heavy Commercial |
| 10 | Business/Professional User: Office, Light Manufacturing, Training/Education, R&D, Media | 287,380 | 0.82 | 236,804 | Heavy Commercial |
| Total area (within open space Parcel 6) (DU) | | 316,591 | | | |
| | | IMD | CFI | | |
| | Ave Flow | 0.040 | 0.088 | | |
| | Peak Flow | 0.148 | 0.323 | | |
| | Design Flow | 0.174 | 0.278 | | |
| | | IMD | CFI | | |
| | Total Design Flow for Analysis Point 1 | 0.174 | 0.278 | | |
| | | IMD | CFI | | |
| | Total additional flow | 0.428 | 1.098 | | |

No water or sanitary sewer service accounts shall be sold to any development project prior to issuance of a Water and Sanitary Sewer Availability Statement for that specific project. No property may develop or take service in such a manner that leaves adjacent unserved properties without means to obtain service. In accordance with the Water and Sewer Expansion Policies, line extensions are required to cover all frontage of the property requesting service unless all adjacent properties have other means of being served.

Section 2. ENGINEERING DESIGN CRITERIA

Unless modified for a specific project, specifications for pipe and other construction materials and specifications for construction will be as required in the current City of Albuquerque Standard Specifications for Public Works Construction and Standard Details.

A. Design Capacity Criteria Section, Development and Development Service

1. Off-site flows will be typically determined by the Planning Department/Utility Development.
2. In areas with a mix of residential, commercial, industrial, etc., roughly representative of the city as a whole, the population of the contributing area is determined and the design flows are calculated as follows:

$$\begin{aligned} \text{Average Flow} &= 110 \times \text{Population}/10^6, \text{ in MGD} \\ \text{Peak Flow} &= 2.5 \times (\text{Avg.})^{.8875}, \text{ in MGD} \\ \text{Design Flow} &= 1.2 \times \text{Peak, in MGD} \\ & \text{(for cfs, multiply MGD by 1.547)} \end{aligned}$$

3. Population loadings are assumed to be:
 - 2.5 persons per DU for apartments, townhouses and mobile homes
 - 3.0 persons per DU for R-1 single-family homes

Where DU = Dwelling Unit

4. In primarily non-residential areas, design flows are determined by other methods as may be appropriate with the approval of the Planning Department/Utility Development, Development & Building Services Center. Following is a summary of non-residential sewer use categories and estimated demand currently used by City staff in the Albuquerque Sewer Analysis Model (ASAM) of the City's major sewer lines:

NOTE: The following land use categories and associated sewer use loading values are established for use with development within the City of Albuquerque Wastewater collection basin. The Land Use Categories relate to standard "Sewer Use Unit Hydrographs" within the City's computer model of the sewer system, Albuquerque Sewer Analysis Model (ASAM). Alternative loadings may be considered or required when justified for a specific development. Impact fees analysis may reflect variations in flows.

| LAND USE CATEGORY | AVERAGE FLOW (gpd / Acre) | PEAK FLOW (gpd / Acre) |
|-------------------|------------------------------|---------------------------|
|-------------------|------------------------------|---------------------------|

| | | |
|---------------------|-------|--------|
| Light Commercial | 1,230 | 1,621 |
| Heavy Commercial | 5,968 | 7,600 |
| Light Institutional | 226 | 310 |
| Heavy Institutional | 1,788 | 2,448 |
| Light Industrial | 447 | 745 |
| Medium Industrial | 1,680 | 1,982 |
| Heavy Industrial | 9,266 | 10,300 |

Section 4 of this chapter contains a detailed listing of Land Use Codes and classifications for nearly all possible developed uses, as they are applied in ASAM. Contact Planning Department /Utility Development for assistance in applying rates and determining applicable loadings.

5. Design is for full pipe flow at the design flow.
6. Manning's Formula is to be used for determination of pipe flow velocities and capacities using a value for Manning's "n" = 0.013.

- a. Peak velocity = Velocity at peak flow conditions
- b. Average velocity = Velocity at average flow conditions

B. Manhole Criteria

1. Manholes must generally be located on the centerline of street right-of-way or of street width if the street is not concentric with the right-of-way. Manholes for straight lines in curved streets may be located as much as 5' off from centerline of street or right-of-way; however, required clearances from other utilities must be maintained. The offset of such manholes is to be dimensioned from center of manhole barrel to the centerline of the street or right-of-way. In narrow, curving, residential streets, greater than 5' offset may be appropriate to maintain separation from other utilities. Avoid locating manholes in the "wheel path" on arterial and collector roadways, and keep them out of "Parking" lanes and spaces. Manhole locations that conflict with centerline monumentation required for subdivisions, should be shifted, when practical, to eliminate the conflict. Manholes will not be allowed outside of public right-of-way within residential areas except in private streets or within multifamily housing with public easements. All manholes must be accessible by sewer maintenance truck. Manhole locations in residential rear or side yards are not acceptable.

2. Standard minimum manhole depth is 6.0', measured from rim to invert. Manhole depths greater than 20 feet shall be avoided.

3. The required inside diameter for a manhole is determined as follows:

- a. Minimum inside diameter is 4.0'.
- b. A minimum 9" wide shelf must be provided on each side of each main line within the manhole.

Worksheet for 12" Sewer - Capacity

Project Description

| | |
|-----------------|--------------------|
| Friction Method | Manning Formula |
| Solve For | Full Flow Capacity |

Input Data

| | |
|-----------------------|-------------------------|
| Roughness Coefficient | 0.013 |
| Channel Slope | 0.00500 ft/ft |
| Normal Depth | 1.00 ft |
| Diameter | 1.00 ft |
| Discharge | 2.52 ft ³ /s |

Results

| | |
|-------------------|-------------------------|
| Discharge | 2.52 ft ³ /s |
| Normal Depth | 1.00 ft |
| Flow Area | 0.79 ft ² |
| Wetted Perimeter | 3.14 ft |
| Hydraulic Radius | 0.25 ft |
| Top Width | 0.00 ft |
| Critical Depth | 0.68 ft |
| Percent Full | 100.0 % |
| Critical Slope | 0.00770 ft/ft |
| Velocity | 3.21 ft/s |
| Velocity Head | 0.16 ft |
| Specific Energy | 1.16 ft |
| Froude Number | 0.00 |
| Maximum Discharge | 2.71 ft ³ /s |
| Discharge Full | 2.52 ft ³ /s |
| Slope Full | 0.00500 ft/ft |
| Flow Type | SubCritical |

GVF Input Data

| | |
|------------------|---------|
| Downstream Depth | 0.00 ft |
| Length | 0.00 ft |
| Number of Steps | 0 |

GVF Output Data

| | |
|-----------------------------|---------|
| Upstream Depth | 0.00 ft |
| Profile Description | |
| Profile Headloss | 0.00 ft |
| Average End Depth Over Rise | 0.00 % |

Worksheet for 12" Sewer - Capacity

GVF Output Data

| | |
|------------------------|---------------|
| Normal Depth Over Rise | 100.00 % |
| Downstream Velocity | Infinity ft/s |
| Upstream Velocity | Infinity ft/s |
| Normal Depth | 1.00 ft |
| Critical Depth | 0.68 ft |
| Channel Slope | 0.00500 ft/ft |
| Critical Slope | 0.00770 ft/ft |

Worksheet for 6" Sewer - Capacity

Input Data

| | |
|-----------|---------------|
| Over Rise | 100.00 % |
| Velocity | Infinity ft/s |
| Velocity | Infinity ft/s |
| | 0.67 ft |
| | 0.44 ft |
| | 0.00500 ft/ft |
| | 0.00948 ft/ft |

9.4 Stormwater Management System

This section of the master plan is intended to address the drainage analysis for the Rail Yards, and the proposed detention volumes that can be expected with the various basins of the proposed project. The following calculations have been prepared to meet the requirements of Volume II – Design Criteria, Chapter 22: Drainage, Flood Control and Erosion Control of the Albuquerque Development Process Manual (The Manual).

The proposed conditions are obtained from the Master Plan for the site. The Land Treatments for the site have been weighted with 90% Impervious (Treatment D) to comply with a Commercial development per The Manual. In the interest of being conservative and because the final ground cover for the site is unknown, the remaining 10% is assumed to be Treatment C. The site is located between the Rio Grande and the San Mateo, and therefore has been determined that the site falls within the Zone '2' precipitation zone. Due to the existing drainage patterns observed on site and the proposed layout of the Master Plan we have analyzed the site with three separate drainage basins: A-1, A-2, and A-3. The 100-year 6-hour event was used as the principal design storm per The Manual. A summary of the hydrology for each basin is as follows:

100-Year 6-Hour Storm Hydrology

- Basin A-1:
 - Area = 7.37 ac
 - P360 = 2.35 in
 - Excess Precipitation = 2.021 in
 - Peak Intensity = 5.05 in/hr
 - C100 Coefficient = 0.899
 - Peak Discharge = 33.2 cfs

- Basin A-2:
 - Area = 8.23 ac
 - P360 = 2.35 in
 - Excess Precipitation = 2.021 in
 - Peak Intensity = 5.05 in/hr
 - C100 Coefficient = 0.899
 - Peak Discharge = 37.4 cfs
- Basin A-3:
 - Area = 11.71 ac
 - P360 = 2.35 in
 - Excess Precipitation = 2.021 in
 - Peak Intensity = 5.05 in/hr
 - C100 Coefficient = 0.899
 - Peak Discharge = 53.2 cfs

The allowable peak discharge for the site post development has been established at 2.75 cfs/acre per the city engineering department. The peak discharge for the developed site is projected to be 4.54 cfs/acre. Therefore, stormwater volume detention will be necessary to reduce the peak discharge to the allowable rate. Per the Master Plan, stormwater detention volumes will be captured and stored within numerous cisterns, or other approved catchment system, on the site. The cistern water captured within the cisterns catchment systems will be released to the municipal storm sewer system at a rate no larger than allowable discharge rate. Stormwater runoff may also be retained in cisterns for use of irrigation at elevations less than the outfall to the municipal system. Should this option be exercised during final design of the storm system, the retained volume cannot exceed 10 acre-ft.

As defined by The Manual, the Hydrograph for Small Watershed method was used to determine the volume of stormwater that must be detained to meet allowable discharge rates for the site. Each

of the three (3) basins was analyzed separately. Each basin will contain multiple cisterns so the volumes calculated below represent the total that must be detained. During the formal design process of the campus, it may be determined that it is more feasible to slow discharge for some cisterns and allow other areas of the site to discharge at a rate faster than that allowed or even freely discharge. This design approach would be acceptable as long as two criteria were met: 1) the total site discharge were to be below the allowable rate of 2.75 cfs/acre; and 2) no cistern were to retain water for a period greater than 6 hours. Should drain times exceed the 6 hour limit, design storms in excess of the 100-year 6-hour storm must be analyzed.

Below is a summary of the analysis for the three (3) major basins of the proposed site. Hydrographs representing the 100-year 6-hour design storm were plotted using the parameters defined by The Manual. The allowable discharge was also plotted on the hydrograph. The area between the two is representative of the detention volume necessary. See the attached Hydrographs for more information.

- Basin A-1:
 - Peak Discharge = 33.2 cfs
 - Allowable Discharge = 20.1 cfs
 - Base Time, t_b = 0.713 hours
 - Time to Peak, t_p = 0.198 hours
 - Peak Duration = 0.225 hours
 - Detention Volume = 17,978 cf
 - = 0.413 ac-ft

- Basin A-2:
 - Peak Discharge = 37.4 cfs
 - Allowable Discharge = 22.6 cfs
 - Base Time, t_b = 0.712 hours
 - Time to Peak, t_p = 0.198 hours

Peak Duration = 0.225 hours
 Detention Volume = 20,309 cf
 = 0.466 ac-ft

- Basin A-3:
 - Peak Discharge = 11.71 cfs
 - Allowable Discharge = 32.2 cfs
 - Base Time, t_b = 0.712 hours
 - Time to Peak, t_p = 0.198 hours
 - Peak Duration = 0.225 hours
 - Detention Volume = 28,807 cf
 - = 0.661 ac-ft

In summary, the resultant volumes yielded are approximately 2,500 cf of storage required for each acre of the parcel. The consistent unit storage volume is due to use of the uniform Land Treatment of 90% impervious and the uniform allowable discharge of 2.75 cfs/acre. Assumptions made for the non-impervious Land Treatment as well as the time of concentration were conservative. Therefore, the unit storage rate of 2,500 cf/acre is appropriate for future conceptual layout of cisterns as the development of the campus moves forward and drainage basins shift to accommodate desired grading and surface treatments. Use of Low Impact Design techniques such as rain gardens or infiltration swales in the design of the site would result in necessary detention volumes decreasing.

| | |
|--------------|--|
| Attachments: | Drainage Map |
| | Hydrologic Calculations |
| | Basin A-1 Hydrograph |
| | Basin A-2 Hydrograph |
| | Basin A-3 Hydrograph |
| | Section 2 of Chapter 22: Drainage, Flood Control and Erosion Control |

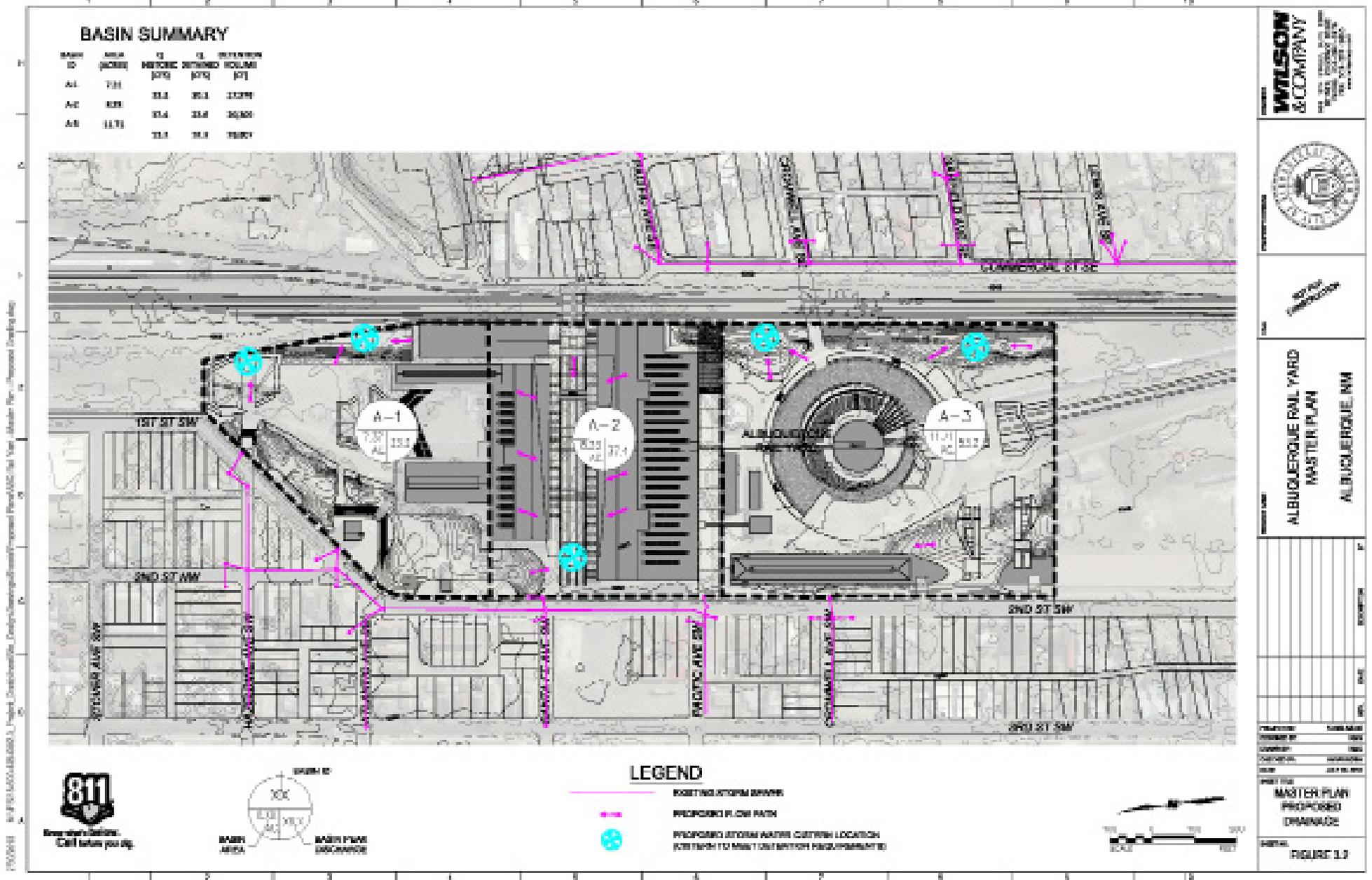


Figure 201b: Master Plan - Proposed Conceptual Drainage Plan

CONTRACT: MWK DATE: 7/9/13
 WILSON & COMPANY
 PROJECT: ABQ RAIL YARD
 SHEET: 1 OF 1

CONTRACT: MWK DATE: 7/9/13
 WILSON & COMPANY
 PROJECT: ABQ RAIL YARD
 SHEET: 2 OF 3

HYDROLOGIC CALCULATIONS 100-YEAR EVENT

DETERMINE EXCESS RUNOFF

LAND TREATMENT CALCULATION

- COMMERCIAL = 90% IMPERVIOUS (PER TABLE A-5)
- * USE 90% TREATMENT 'D' → E = 2.12*
- ** 10% TREATMENT 'C' → E = 1.13*

* E VALUES FOR 100-YEAR, 6 HOUR, ZONE 2 EVENT

$$E = (0.1)(1.13) + (0.9)(2.12) = 2.021 \text{ IN}$$

DETERMINE PEAK DISCHARGE RATES

- ASSUME $T_c = 0.2 \text{ HR}$ TO BE CONSERVATIVE

$$\begin{aligned} 90\% \text{ 'D'} &= 4.70 \text{ CFS/AC}^* \\ 10\% \text{ 'C'} &= 3.14 \text{ CFS/AC} \\ &\Rightarrow 4.544 \text{ CFS/AC} \end{aligned}$$

* PEAK 100-YR DISCHARGE PER TABLE A-9

$$Q_{p-A1} = (4.544)(7.31) = 33.2 \text{ CFS}$$

$$Q_{p-A2} = (4.544)(8.23) = 37.4 \text{ CFS}$$

$$Q_{p-A3} = (4.544)(11.71) = 53.2 \text{ CFS}$$

- CHECK VALUES w/ RATIONAL METHOD

$$I = 5.05 \text{ (TABLE A-10)}$$

$$\begin{aligned} 90\% \text{ 'D'} &\Rightarrow C = 0.93 \\ 10\% \text{ 'C'} &\Rightarrow C = 0.62 \\ &\Rightarrow C = 0.899 \text{ (TABLE A-11)} \end{aligned}$$

$$\begin{aligned} Q_{p-A1} \text{ CHECK} & \quad Q_{p-A2} \text{ CHECK} & \quad Q_{p-A3} \text{ CHECK} \\ Q = CIA = 33.2 \checkmark & \quad Q = CIA = 37.4 \checkmark & \quad Q = CIA = 53.2 \checkmark \end{aligned}$$

HYDROLOGIC CALCULATIONS 100-YEAR EVENT

DETERMINE ALLOWABLE DISCHARGE

$$Q_{\text{allow}} = 2.75 \text{ CFS/ACRE PER CITY ENGINEER}$$

$$Q_{A1} = (2.75)(7.31) = 20.1 \text{ CFS}$$

$$Q_{A2} = (2.75)(8.23) = 22.6 \text{ CFS}$$

$$Q_{A3} = (2.75)(11.71) = 32.2 \text{ CFS}$$

DETERMINE STORAGE VOLUME

HYDROGRAPH FOR SMALL WATERSHED EQUATIONS (IN HOURS)

$$\begin{aligned} t_p &= (2.107 \times E \times A_T / Q_p) - (0.25 \times A_D / A_T) \\ t_p &= (0.7 \times t_c) + [(1.6 - (A_D / A_T)) / 12] \\ Q_p &= 0.25 \times A_D / A_T \end{aligned}$$

PER ASSUMPTIONS
 $\frac{A_D}{A_T} = 90\%$

- VALUES ABOVE ARE CALCULATED FOR EACH BASIN AND HYDROGRAPHS PLOTTED PER FIGURE A-3 IN CAD SOFTWARE. STORAGE VOLUME UNDER HYDROGRAPH CALCULATED IN CAD.

BASIN A-1

$$t_B = (2.107 \times 2.021 \times 7.31 / 33.2) - (0.25 \times 0.9) = 0.713 \text{ HRS}$$

$$t_p = (0.7 \times 0.2) + [(1.6 - 0.9) / 12] = 0.198 \text{ HRS}$$

$$Q_p = 0.25 \times 0.9 = 0.225 \text{ HRS}$$

$$V_D = 17,978 \text{ CF} \Rightarrow 0.413 \text{ ACRE-FT (SEE ATTACHED HYDROGRAPH)}$$

NOTE: PAGE TO BE OMITTED.



COMP: MWR DATE: 7/9/13
 WILSON & COMPANY
 LOC: FILE:
 PROJ: ABQ RAIL YARD
 SHEET: 3 OF 3

HYDROLOGIC CALCULATIONS 100-YEAR EVENT

BASIN A-2

$$t_B = (2.107 \times 2.021 \times 8.23 / 37.4) - (0.25 \times 0.9) = 0.712 \text{ HRS}$$

$$t_p = (0.7 \times 0.2) + [(1.6 - 0.9) / 12] = 0.198 \text{ HRS}$$

$$D_p = 0.25 \times 0.9 = 0.225 \text{ HRS}$$

$$V_0 = 20,309 \text{ CF} \Rightarrow 0.466 \text{ ACRES/FT (SEE ATTACHED HYDROGRAPH)}$$

BASIN A-3

$$t_B = (2.107 \times 2.021 \times 11.71 / 53.2) - (0.25 \times 0.9) = 0.712 \text{ HRS}$$

$$t_p = (0.7 \times 0.2) + [(1.6 - 0.9) / 12] = 0.198 \text{ HRS}$$

$$D_p = 0.25 \times 0.9 = 0.225 \text{ HRS}$$

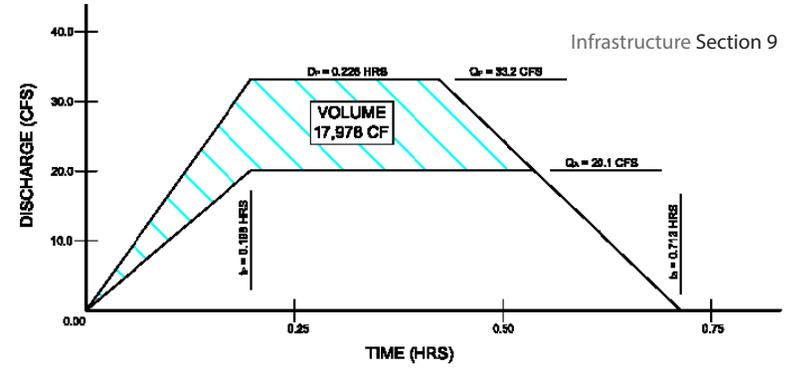
$$V_0 = 28,807 \text{ CF} \Rightarrow 0.661 \text{ ACRES/FT (SEE ATTACHED HYDROGRAPH)}$$

DRAIN TIME CHECK

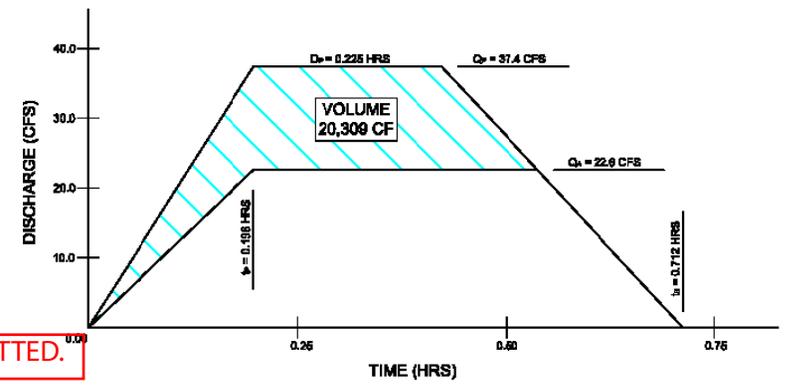
→ CONFIRM DRAIN TIME IS LESS THAN 6 HOURS

$$\text{DRAIN TIME} = \frac{V_0}{Q_A} \times \frac{1 \text{ HR}}{3600 \text{ SEC}}$$

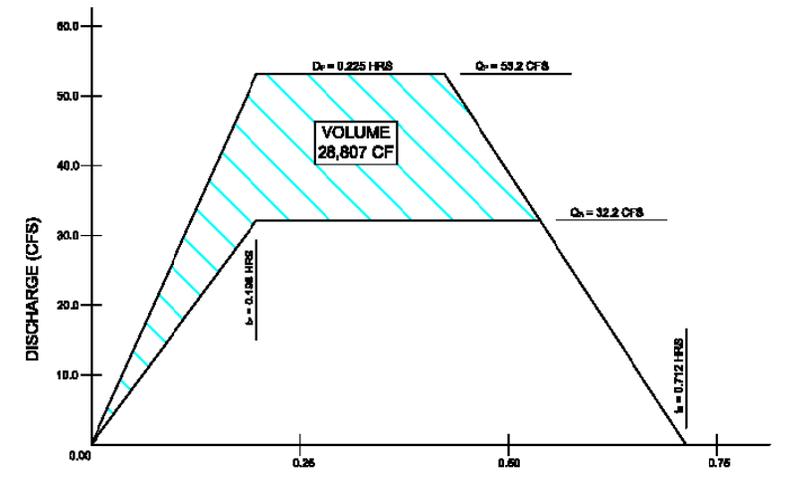
| | | |
|---|---|---|
| <u>BASIN A-1</u> | <u>BASIN A-2</u> | <u>BASIN A-3</u> |
| $\frac{17,978}{20.1} \times \frac{1}{3600} = 0.25 \text{ HRS} \checkmark$ | $\frac{20,309}{22.6} \times \frac{1}{3600} = 0.25 \text{ HRS} \checkmark$ | $\frac{28,807}{32.2} \times \frac{1}{3600} = 0.25 \text{ HRS} \checkmark$ |



BASIN A-1 HYDROGRAPH



BASIN A-2 HYDROGRAPH



BASIN A-3 HYDROGRAPH



NOTE: PAGE TO BE OMITTED.



Figure 212b: Master Plan - Proposed Dry Utilities (Pending)

9.5 Transportation & TIS Recommendations

(Note: Additional analysis currently underway by Terry O. Brown is forthcoming but not included herein except excerpts from prior 2010 report.)

9.5.1 Vehicular Site Access

The City of Albuquerque completed a Transportation System Report on May 5, 2010. The purpose of the study was to assess the available development that could be accommodated within the existing transportation system. The existing transportation system is not likely to change in any significant way in the future. Development of this site has enormous benefits to the surrounding neighborhoods and the City as a whole through the creation of a vital, economic driver that provides jobs, housing, and public space in the heart of the City. Subsequent sections discuss alternative modes of transportation as a viable strategy to reduce the impact of the Rail Yard redevelopment on the existing street network.

The primary access route associated with the Rail Yard Master Development Plan will be 2nd Street. 3rd Street will act as a secondary access for the project, but will most likely provide an accommodation for traffic that currently passes through the neighborhood on 2nd Street today. These two streets are designated as collectors by MRCOG and have a capacity of 11,000 vehicles per day. These streets **currently** have an excess capacity of 6,100 and 7,900 vehicles per day respectively.

The project should be designed so impact is minimized to Pacific, Santa Fe, Cromwell, Atlantic, and Hazeldine Avenues. Those five streets are local residential streets with single family residential driveways. Generally speaking, the City of Albuquerque policy is to minimize traffic on minor residential streets so that the volume typically does not exceed 1,000 vehicles per day. The project location benefits from direct access to the existing street grid to the west and

its proximity to Bridge Boulevard to the south and Coal and Lead Avenues to the north.

2nd Street south of Coal Avenue has recently been reconfigured into a two-way street, as was mandated by the City Council. 2nd Street was recently classified as a Collector Roadway on the Long Range Roadway Map for the Albuquerque Metropolitan Area. Parallel parking is permitted along the west side of the street. The posted speed limit is 30 mph. 3rd Street is currently configured as a two-way street with delineated parking on both sides of the street to the south of Coal Avenue. The posted speed limit is 30 mph.

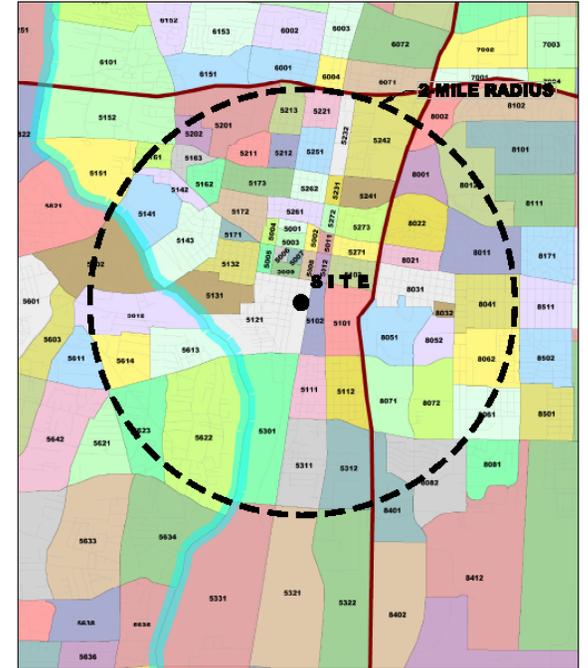
9.5.2 Updated Traffic Impact Study

As part of the Master Plan process, the City determined that an update to the 2010 Transportation System Report that responds to the proposed Rail Yards development should be completed. The transportation consultant met with City Transportation staff in June 2013 to determine the scope of the study. A Traffic Impact Study was completed in October of 2013 based upon the Master Plan concepts and uses as described on the site plan. The purpose of the update study is was to determine the impact of the proposed development on the adjacent transportation system and recommend any improvements to mitigate the impact. Based on the traffic scoping meeting, the Traffic Impact Study (TIS), which is on-going, includes the following elements:

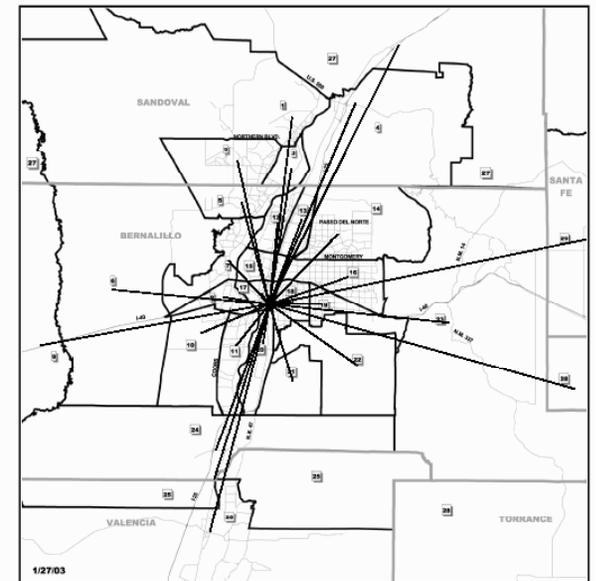
- *Complete trip generation volumes based upon the Master Development Plan site concept and parcelization map, including assumed land uses, square footages, and location and number of driveway access points to the Rail Yards property.*
- *Perform a.m. and p.m. peak hour traffic counts for Bridge Boulevard / 2nd Street, Coal Avenue / 2nd Street, and Lead Avenue / 2nd Street.*



Rail Yards, Aerial Map showing roadway infrastructure, Terry O. Brown, 2010



Rail Yards, Data Analysis Subzone (DASZ) Map, Terry O. Brown, 2010



22 Subarea Identification Number

Rail Yards, Trip Distribution Subarea Map, Terry O. Brown, 2010

- Determine the trip distribution and trip assignments of the newly generated traffic based on the Mid-Region Council of Governments' Socio-economic Forecasts for the implementation year (+/-2018). The trip distribution / trip assignments will be calculated based on population within a two-mile radius for commercial development, on population City-wide for office development, and employment City-wide for residential development.
- The implementation year "No build" and "Build" traffic volumes to perform signalized and/or unsignalized intersection analyses for the following intersections: Bridge Boulevard / 2nd Street, Coal Avenue / 2nd Street, and Lead Avenue / 2nd Street, and site driveways.
- Re-analyze problematic intersections assuming certain percentages of development rates to determine if issues are forecasted. Bracket development analysis to determine the level of development that will not overburden the transportation system.
- Complete a written report of analysis and findings to the City, make recommendations for necessary measures to mitigate the impact of development on the adjacent transportation system, and address any comments from the City regarding the technical aspects of the traffic impact study.

Recommendations from the Traffic Impact Study will be incorporated into the MDP project prior to Site Plan for Building Permit approval. Responsibility for off-site infrastructure shall be in accordance with the Master Plan Agreement between the City and the Master Developer.

Utilizing the projected traffic volumes resulting from the development of the site into a mixed-use facility such as shown on the site plan,

in conjunction with projected 2018 traffic volumes, the 2013 TIS concluded that the development of the subject site will have no significant adverse impact on the existing signalized intersections of the adjacent transportation system and will have moderate adverse impacts to the existing unsignalized intersections of the system, provided the recommendations contained in the report are followed.

As the site is subdivided and phased development occurs, the 2013 Traffic Impact Study will be considered by City Transportation who will determine if the October 2013 study is applicable as prepared, requires updating, or if a new study is appropriate. Recommendations of the applicable TIS will be implemented as required for project development and in accordance with any provisions of the Master Plan Agreement and the Master Development and Disposition Agreement between the City and Samitaur Constructs.

9.5.3 Transit Access

Transit service for the Rail Yards property and 2nd Street is limited at this time. However, it is anticipated that services will be expanded to serve the project. The Alvarado Transportation Center is located approximately ½ mile to the north of the property and is a major hub for ABQ Ride, the RailRunner, and regional bus service. 4th Street is approximately ¼ mile to the west of the property. Both of these are walkable distances for future employees at the Rail Yard property. The Master Plan proposes a major Transit Plaza located at the heart of the Rail Yards site along 2nd Street located adjacent to the Machine Shop and Transfer Table. Existing transit routes include the following:

ABQ Ride, north-south bus route along 4th Street:

- Bus Route 54 'Bridge-Westgate' with several stops in the vicinity of the Rail Yards;
- Bus stops southbound are just south of Cromwell Avenue, just

south of Santa Fe Avenue, and at Stover Avenue; and

- Bus stops northbound are between Barelás Road and Cromwell Avenue; between Atlantic Avenue and Santa Fe Avenue, and at Stover Avenue.

North-south bus route along Broadway Boulevard:

- Bus Route 16/18 'Broadway-University-Gibson'; and
- North and southbound bus stops between Coal Avenue and Iron Avenue.

East-west bus routes along Coal Avenue:

- Bus Route 217 'Downtown-KAFB Limited' and 'Downtown-Airport Express'; and
- Bus stop is east of Broadway Boulevard.



Circulation along the Bosque includes a narrow gauge rail line and pedestrian/bike path.

In addition to the recommendation of increased ABQ Ride transit service to the site, the Rail Yards Master Plan supports the "String of Pearls" express shuttle/trolley system concept referenced in the Barelás SDP and contained as part of the Downtown 2010 Plan. Such a system would link the Zoo, Tingley Beach, the Hispano Cultural Center, 4th Street in Barelás and Downtown Albuquerque to the Rail Yards site.

9.5.4 Rail Access

The Rail Yards Master Plan is supportive of future attempts to bring direct public rail access to the Rail Yards site whether it be for the Rail Runner running along current BNSF rail lines or other future options as become available. The future station would be located at the eastern terminus of the Perpendicular Walk **under the Retail Pedestrian Bridge proposed to connect the South Broadway neighborhood to the Site.** Such a location would mirror the proposed Transit Plaza at the western terminus of the Perpendicular Walk, creating a full multi-modal transit hub at the center of the project.

Other options for Rail connectivity include extension of the narrow gauge rail line that currently runs along Tingley Drive adjacent the Bosque from its current terminus at the Zoo southward and eastward to connect to the National Hispano Cultural Center and ultimately to the Rail Yards site. Such a novel method of site access would relate to the history of the Rail Yards and provide convenient **access** to other major cultural amenities.

9.5.5 Pedestrian and Bicycle Access

The City of Albuquerque recently improved 2nd Street with sidewalk and ADA ramp improvements on the west side only and added bike lanes (sharrows) as well. Refer to Figure 18. The City also recently completed significant improvements to Coal and Lead Avenues that included streetscape, sidewalk widening, bike lanes, and street furniture. One advantage to the property is the relationship to these

new facilities. With the development of the Rail Yards property the pedestrian facilities and experience will be improved and enhanced.

The eastern sidewalk immediately adjacent the Rail Yards site along 1st and 2nd streets, however, remains unimproved and in most cases, completely missing. In addition, there are no ADA ramp improvements or pedestrian crosswalks to connect the Barelás neighborhood to the Rail Yards site. The proposed Edge Walk concept in the Master Plan requires a safe, generous, and convenient street side pedestrian path leading from the Alvarado **Transportation** Center directly to the Rail Yards site. The lack of existing sidewalk improvements, however, creates an opportunity for them to be incorporated and designed as integral components of the Edge Walk concept.

Currently, there is not a good connection from the property to the South Broadway neighborhood to the east due to the railroad tracks. The only connections that currently exist are to the north via Coal Avenue and to the south via Bridge Avenue. Both of these routes include significant out of direction travel. A more direct connection to the east, while difficult, would provide a significant improvement. Accordingly, the Rail Yards MDP proposes two options for connection to the South Broadway neighborhood, with requirements for each as follows;

9.5.6 Bridge Crossing

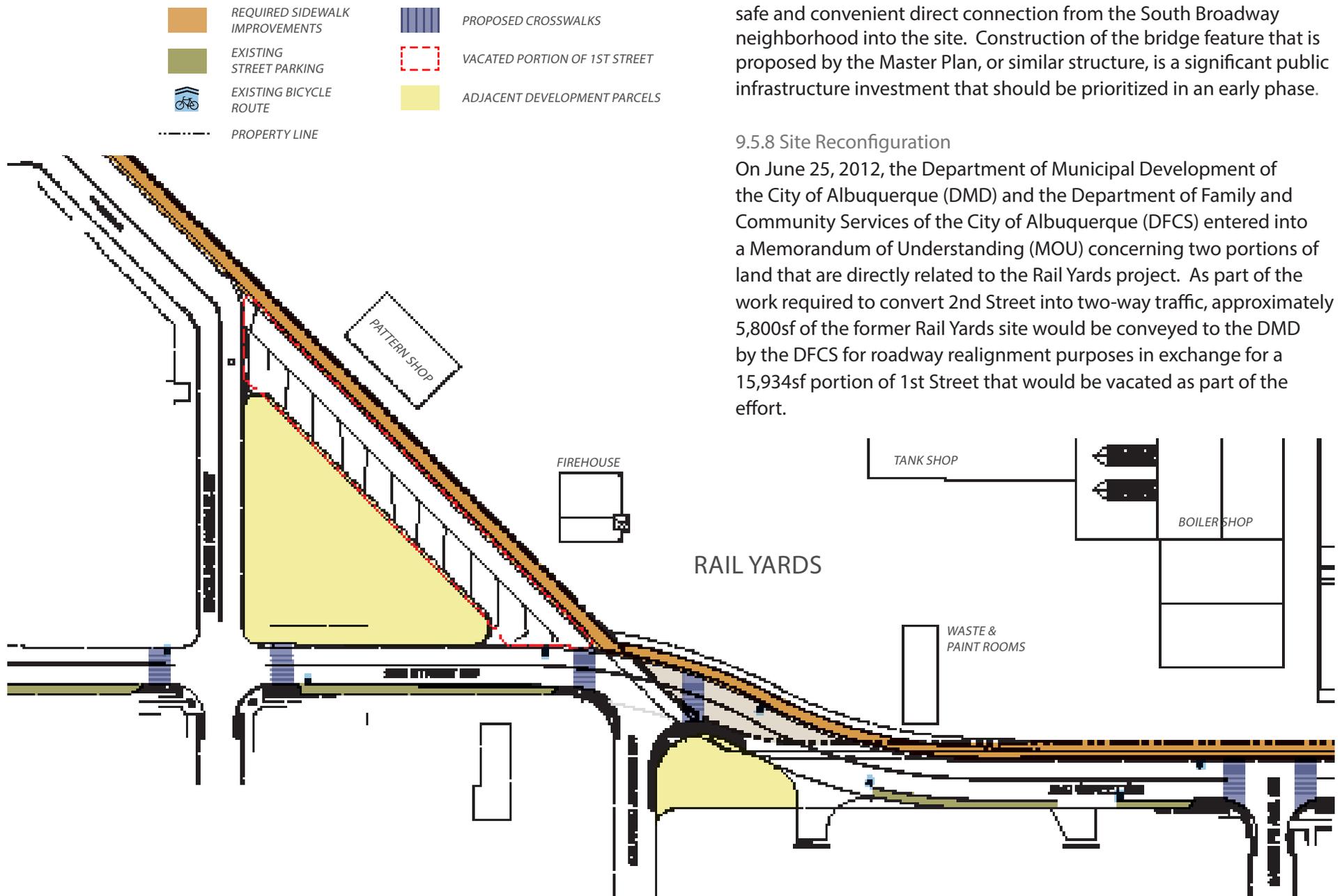
The Pedestrian Retail Bridge is a **critical conceptual** feature of the Master Plan that will directly connect the Barelás and South Broadway neighborhoods through the heart of the Rail Yards project. The bridge **will would** provide both pedestrian and bicycle access across the tracks and is intended to operate not only as a bridge but also as a series of retail spaces and as a primary visual gateway announcing the redevelopment of the Rail Yards project to rail passengers. At a minimum, requirements for this bridge crossing shall include the following;

- Provide 24hour convenient, easy-to-use and ADA accessible points of access at both sides of the track (stair/elevator access).
- Provide security / safety features that will prevent falling, throwing of objects onto the track, etc.
- Be designed with adequate lighting

9.5.7 At-Grade Crossing

Members of the South Broadway community expressed concerns that the Bridge concept may not be financially feasible and have asked for an **Aat-G**grade option to be included in the Master Plan to ensure site access. Accordingly, the MDP proposes the direct extension of Cromwell Avenue from its terminus at Commercial Avenue across the Rail Lines and onto the southern part of the site. Provision of an at-grade crossing will require approvals from the **Federal** Railroad Administration (FRA), the owner of the Rail Line, BNSF, and state and local agencies in order to ensure the highest level of pedestrian safety. At a minimum, requirements for at-cross crossing shall include the following;

- Pedestrian crossings will require gates.
- All crossing sub-grade will be constructed to standard practice for rail and pedestrian interaction.
- Sub-base will be designed for low maintenance.
- Crossings shall be ADA compliant.
- Crossing shall have rubber filler in the gaps between the rail and the crossing surface resulting in the safest operation with a high volume of pedestrian traffic. The filler fits snugly against the field and gauge side of rail to form a barrier between crossing material and rail that blocks out moisture and protects the rail fastening system. It also provides an easy walking and safe surface at rails.



In summary, it is critical to the success of the project to provide a safe and convenient direct connection from the South Broadway neighborhood into the site. Construction of the bridge feature that is proposed by the Master Plan, or similar structure, is a significant public infrastructure investment that should be prioritized in an early phase.

9.5.8 Site Reconfiguration

On June 25, 2012, the Department of Municipal Development of the City of Albuquerque (DMD) and the Department of Family and Community Services of the City of Albuquerque (DFCS) entered into a Memorandum of Understanding (MOU) concerning two portions of land that are directly related to the Rail Yards project. As part of the work required to convert 2nd Street into two-way traffic, approximately 5,800sf of the former Rail Yards site would be conveyed to the DMD by the DFCS for roadway realignment purposes in exchange for a 15,934sf portion of 1st Street that would be vacated as part of the effort.

Figure 223: Enlarged Street Plan

Subsequent to this MOU, the DFCS and the City of Albuquerque Metropolitan Redevelopment Agency (MRA) entered into a separate MOU whereby the operations and management of the Rail Yards was transferred from the DFCS to the MRA

The effects of the reconfiguration are shown in Figure 223. The former 1st/2nd street corner of the Rail Yards site is curved back in favor of a more generous 2nd street traffic alignment. 1st street now terminates at Hazeldine Avenue instead of merging with 2nd street. The effect is improved traffic flow and safety. The vacated portion of 1st street becomes a valuable asset to the Rail Yards redevelopment by providing direct access onto the site from 1st street at the north and 2nd street from the south. In addition to this area, another smaller area to the south was also created by virtue of the realignment. Similar to the vacated portion of 1st street, the Master Plan recommends that this portion of land be used in support of the area wide redevelopment, possibly as public open space or accessory retail to comport with the recommended uses located across 2nd street on the Rail Yards site.

9.5.9 Off-site Parking

Parking is a critical part of the infrastructure necessary for the development of the Rail Yard property. It is anticipated that parking will be phased in as the project develops; with the permanent solution including two underground parking garages (one on the north side and one on the south side of the property). This site is anticipated to be well served by transit services, pedestrian facilities, and bicycles. The goal is to develop the right amount of parking, but not overpark the site. This will encourage the use of alternative modes of travel by visitors, patrons, and employees.

In addition to the above, there is limited on-street parking on 2nd Street in Barelás and on Commercial Street in South Broadway.

During the Master Planning process, there was expressed concern that the redevelopment of the Rail Yards project would create parking pressures on these adjacent neighborhoods and that visitors, for example, would park on the street rather than enter into a subterranean garage. Likewise, visitors might consider it more convenient to park in South Broadway along Commercial Street and enter the Rail Yards site via the Pedestrian Retail Bridge or the Cromwell at-grade crossing.

If the above problems arise, one of the only mitigations available is to develop neighborhood-only restrictive parking zones. The Master Plan recommends that these actions be taken only if absolutely necessary as the use of on-street parking by Rail Yards users and patrons will contribute to a more vital urban environment.

9.6 Fiber Telecommunications - ABQG (Aguiles Alex Trujillo)

The University of New Mexico (UNM) via the Albuquerque GigaPOP (ABQG) has developed key telecommunications infrastructure throughout Downtown Albuquerque, the State of New Mexico, and the United States over the last 10 years. The infrastructure includes but is not limited to Dark Fiber, Metro Ethernet, and traditional Telecommunication services. UNM will extend their infrastructure to provide diverse Dark Fiber and Lit Services to the Rail yards Project and establish a Point of Presence (POP) on the Facility.

The ABQG is located in downtown Albuquerque at 505 Marquette AVE NW. 505 Marquette is known as a telco hotel. It has connectivity from multiple local and national carriers. Centurylink, Time Warner Telecom, Comcast, AT&T, Verizon, Level 3, 360, Cogent and ENMR are all connected to the ABQG as well as New Mexico State, Central New Mexico College, New Mexico Tech, and New Mexico Highlands. All of these carriers and Institutions participate in an Internet Exchange



Map showing proposed fiber connectivity path between Ral Yards and 505 Marquette

that emphasizes keeping New Mexico Internet Traffic within the State of New Mexico. More importantly the ABQG is a member of research Networks like MERIT and the National Lambda Rail.

The ABQG offers a rich set of services to all of the participants. Bandwidth can be delivered in 5 mbp increments or Multiple Gigabit increments. It will also make other services available by offering cross connects to all of the various carriers mentioned above in order to deliver more traditional telecommunication services to potential businesses in the Rail Yards development. Additionally clients in the Rail yards can have access to the research Universities and Institutions that participate in the National Lambda Rail. The ABQG has provided connectivity when needed to various production facilities throughout the country for the movie industry as well other economic development opportunities in Albuquerque.

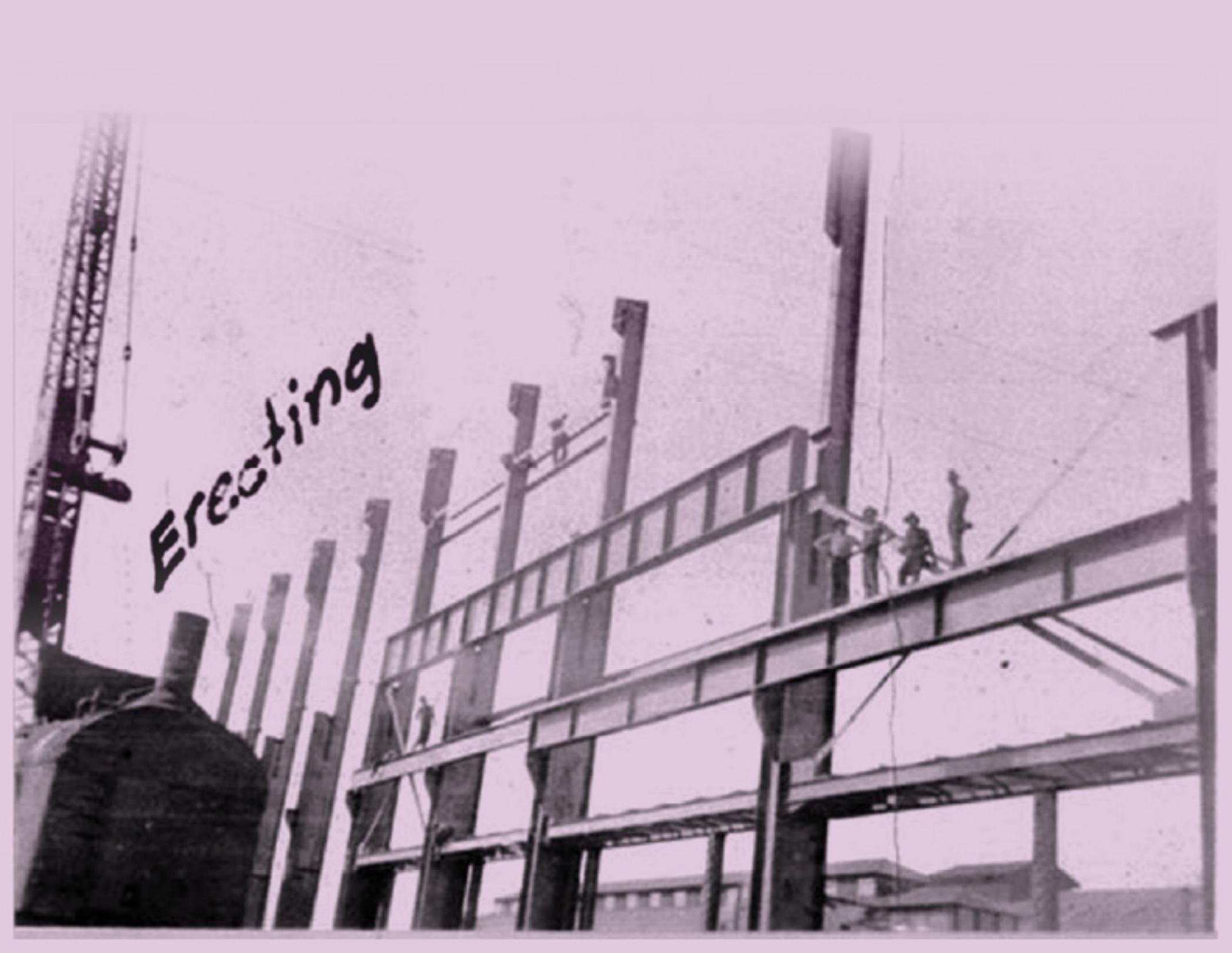
Overall the facility will be one of the most connected in Albuquerque with short intervals to turn up services. The facility will have access to all carriers at a minimum of a 100mbp connection and many carries at a Gigabit 1000mbps and above.

9.7 Environmental Remediation

The environmental condition of the site has been extensively studied and there are now few, if any, data gaps. However, although recent investigations have identified and filled data gaps, the data from the various reports have not been compiled into a comprehensive conceptual site model, nor has a work plan been prepared to address the remaining contamination. This should be done as soon as possible in order to inform the placement of prospective uses on the site and the order of development.

The work plan for remediating remaining contamination should be developed by an environmental consultant in concert with the City and the developer in a collaborative process in which the desired uses of each area within the site informs the level of remediation and, reciprocally, the difficulty and cost of remediation to residential versus industrial standards informs the selection of uses. Once the remedial work plan has been completed through the collaborative process described above, the site can be divided into legal parcels that correspond to both the intended use and the required level of remediation. Parcelization will facilitate appropriate non-wasteful remediation, appropriate institutional controls (deed restrictions and ongoing monitoring and mitigation of residual contamination), financing, development and, ultimately, occupation, productive use and job creation.

Erecting



10.0 CONCEPT PLAN

10.1 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, Tender Repair/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.

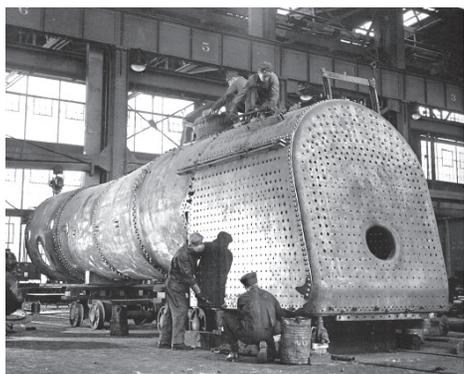
The Master Plan celebrates the facilities that made the trains and made them run.

How does a Master Plan manage that celebration?

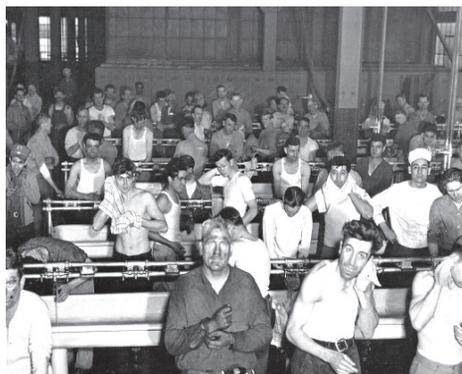
Not by simply reconstituting those historic buildings [though there's a role for this] whose uses have passed into history, but by giving those buildings a new, vital life, a new role in the burgeoning, evolving community that surrounds the site, and more broadly, an up-dated contemporary definition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

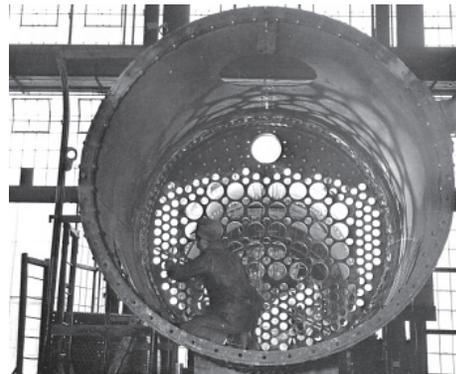
What the new plan retains in its entirety is the enduring spirit of the rail yards, the energy, the optimism, and the reconstituted exteriors of the primary buildings on the site. We rebuild the missing roundhouse, complete the original organizational logic of the site, but assign new uses, new public 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 6 of the MDP document is to provide **illustrative** 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 5 and confirmed through the public comment process. New structures and improvements are required to make the site viable for development. The Master Plan Section 10 6 proposes **guidelines illustrative strategies** 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. **By contrast, Sections 6 and 7 8 of the MDP provides the development regulations and design guidelines regulatory design standards to guide re-development of the site.**

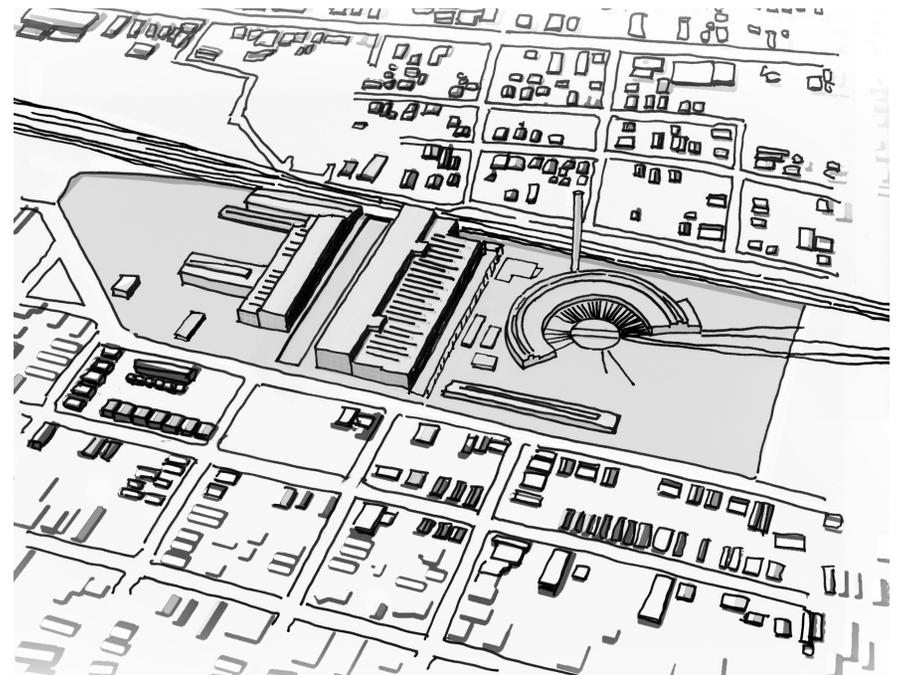
The intention of the Master Plan is to preserve the “integrity” of the site and reinvent the “spirit” of the Rail Yards for a modern age. The intention is to “Recollect Forward.”

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 TO BE PRESERVED OR REBUILT

10.2 Preservation and Adaptive Reuse Standards

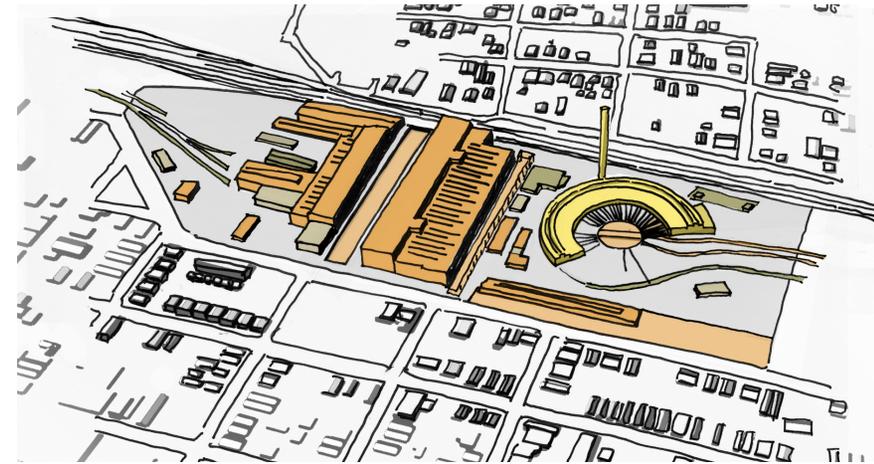
Preservation criteria and considerations are based on the understanding of cultural significance and the cultural values of a property. In the case of the Albuquerque Rail Yards, it should be looked at first as part of the train system in the United States, contributing to the development and creation of the country. 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).

In keeping with the goals and policies stated in Section 5, the Master Plan seeks to preserve and adaptively reuse the vast majority of historic resources on site. However, while all buildings and structures (site features) tell some part of the story, not all building and site features are equally significant. In addition, the viability of arranging new uses for all existing buildings depends upon their condition and the opportunity to match a building configuration with a suitable reuse. The Master Plan requires 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, the adaptive re-use of the buildings, and suggests the addition of modern facilities, landscaping and other features for optimal use of the site. The plan currently indicates that a few of the smaller buildings may fall into the category of those that are difficult to reuse for a variety of reasons.

10.2.1 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 shall be PRESERVED are listed as below (refer to map page **):

- Fire Station (#1 on Map). The only building on the site officially recognized as a City Landmark by the City of Albuquerque at the time of the Master Development Plan's adoption.



- Machine Shop (#2 on Map)
- Bridge Crane (#3 on the Map)
- Boiler Shop (#4 on Map)
- 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



FIREHOUSE



STOREHOUSE



TANK SHOP



TURNTABLE



BOILER SHOP



BRIDGE CRANE



BLACKSMITH SHOP



FLUE SHOP



MACHINE SHOP



TRANSFER TABLE

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, 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.
- South Washroom (#20 on the Map). It is recommended that the South Washroom be PRESERVED whereas the North Washroom (#19) be REMOVED (see section **).
- 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

SOUTH BROADWAY

HISTORIC RESOURCE KEY

- 1 FIRE STATION
- 2 MACHINE SHOP
- 3 CRANE RUNWAY
INCL. LYE VAT SHED
- 4 BOILER SHOP
- 5 TANK SHOP/
TENDER REPAIR SHOP
- 6 FLUE SHOP
- 7 CANOPY
- 8 CAB PAINT SHOP
(LATER, C&W SHOPS OFFICE)
- 9 BLACKSMITH SHOP
- 10 STOREHOUSE
- 11 PLATFORM
- 12 BABBIT SHOP
- 13 WELDING SHOP
- 14 TRANSFER TABLE
- 15 ROUNDHOUSE (ORIGINAL LOCATION)
- 16 TURNTABLE
- 17 SHEET METAL HOUSE
- 18 PATTERN HOUSE
- 19 NORTH WASHROOM
- 20 SOUTH WASHROOM
- 21 WASTE & PAINT RMS.
- 22 MOTOR CAR GARAGE
- 23 FIRE RUNWAY
- 24 POWER HOUSE (ORIGINAL LOCATION)
- 25 WATER RESERVOIR
- 26 WELDING GAS LINES
- 27 SMOKESTACK
- 28 HISTORIC POWER HOUSE (ORIGINAL LOCATION)
- 29 TRAIN TRACKS

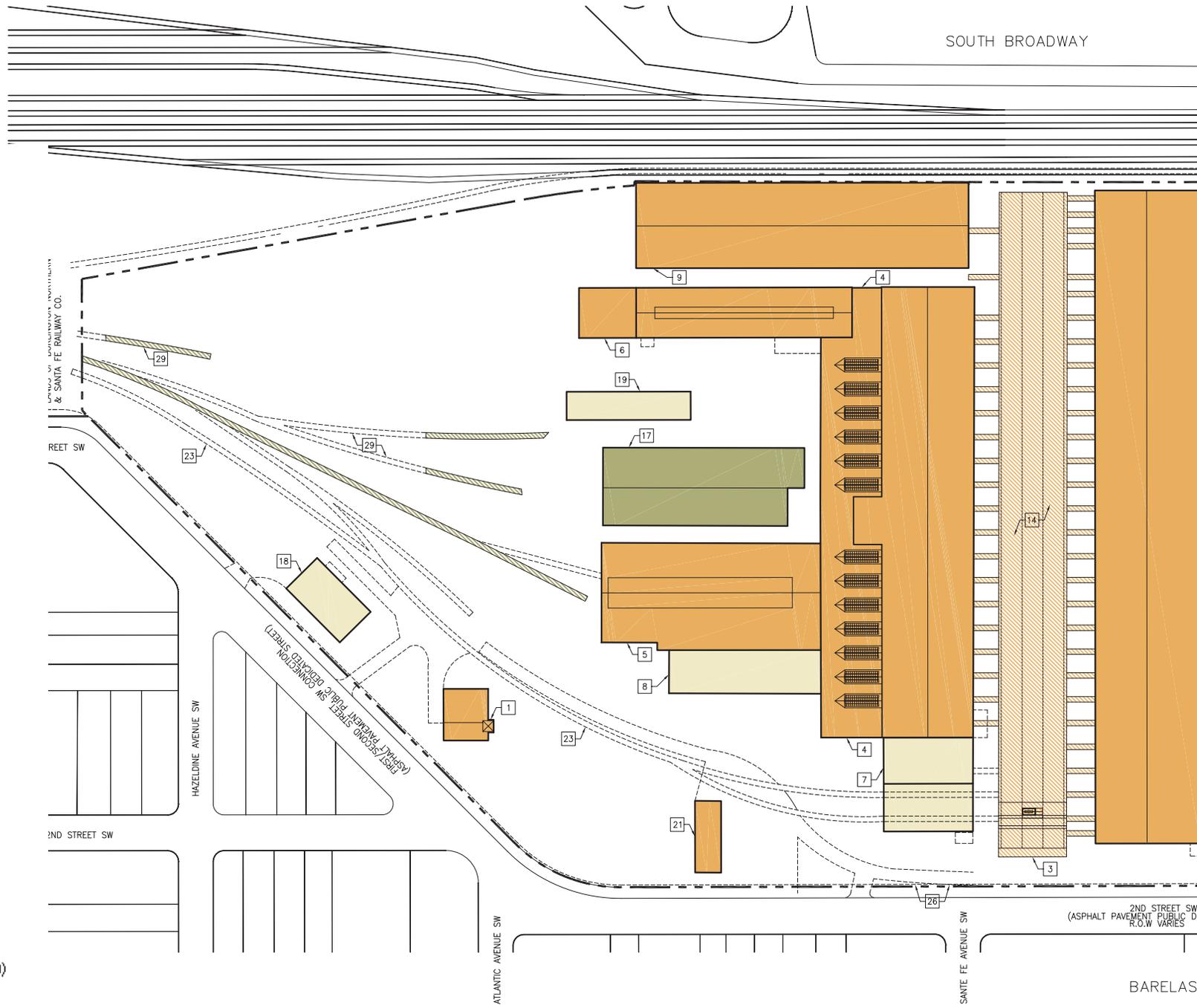
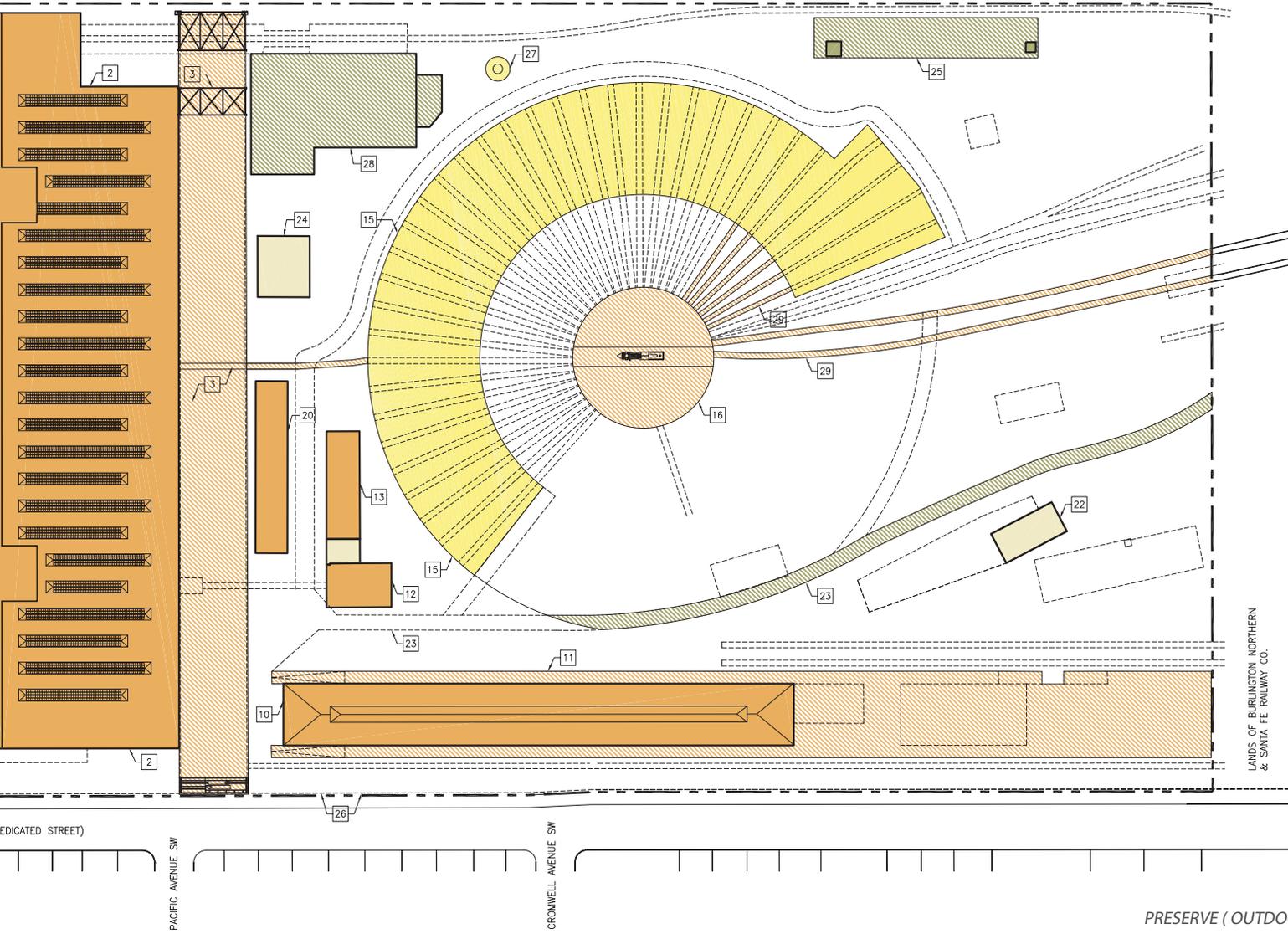
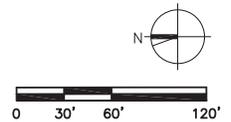


TABLEAU 16: Historic Preservation & Adaptive Reuse Standards Diagram

COMMERCIAL STREET SE



LANDS OF BURLINGTON NORTHERN & SANTA FE RAILWAY CO.



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



be PRESERVED and PRESENTED, as opposed to REMOVED. Therefore, at a phase beyond the new Master Development Plan, PRESERVATION of some of the Infrastructure Elements, such as pipes and cables, along with the structural materials carrying them is recommended. Such Infrastructure Elements, together with the Tracks, connected all the built components, and were the “blood system” of the entire place.

10.2.2 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 there is a desire for it to be REMOVED. Such structures listed below should be PRESENTED:

- Sheet Metal House (#17 on the Map). Interesting, important but technically very difficult to PRESERVE. This wooden shed was used for storage of metal sheets and for moving them mechanically to their work stations.
- 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).

10.2.3 Reconstruction

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. The reconstruction will be on the original footprint, will have some volume, but will not be identical to the original structure (it is a symbolic reconstruction). 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. 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).
- 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).

10.2.4 Remove

Remove, leaving no physical trace. This applies to a structure or other element that does not contribute significantly to our understanding of the history of the site. Such structures as listed below are:

- Canopy (#7 on the Map). Originally an open structure, consisting of a roof supported by several columns. 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 in need of major structural repairs.
- Motor Car Garage (#22 on the Map). A small workshop structure. 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).

10.3 Historic Preservation and Adaptive Reuse Design Features

In keeping with the goals and policies stated in Section 5 and with ~~conceptual recommendations stated in Section 6~~ the aforementioned Vision Statement, the Master Plan seeks to preserve and adaptively reuse the vast majority of historic resources on site. The successful revitalization of these structures represents the cornerstone of the Master Planning effort and is the foundation upon which all the following site organization concepts and design features are based. Refer to Section 8.2 for a complete account of the existing site features and the Historic Preservation and Adaptive Reuse Standards provided to regulate site redevelopment.

~~Whereas the preceding section addressed recommendations regarding the existing site resources,~~ By contrast, the following 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.

10.3.1 Rebuild Iconic Structures

Concept: Important iconic elements of the Rail Yards that had previously been demolished should be rebuilt in order to re-establish the original organization of the site.

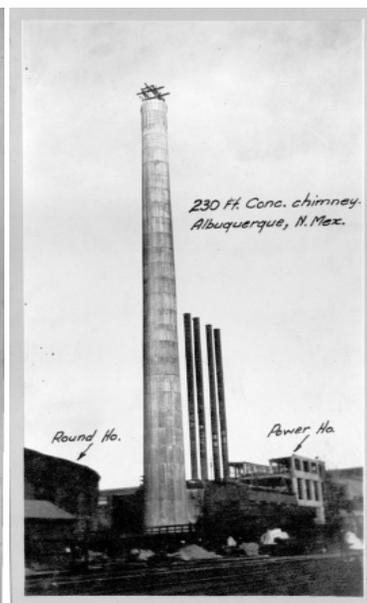
As the first organization strategy for site infill development, the Master Plan advises the rebuilding of the Roundhouse and Smokestack features as important elements to the original conception of the site. The reconstruction will be on the original footprint, will have the same volume, but will not be identical to the original structure. As such, it is intended as a symbolic reconstruction permissive of a modern interpretation.



RAIL YARDS, HISTORIC ROUNDHOUSE AND SMOKESTACK



View from atop SMOKESTACK



SMOKESTACK

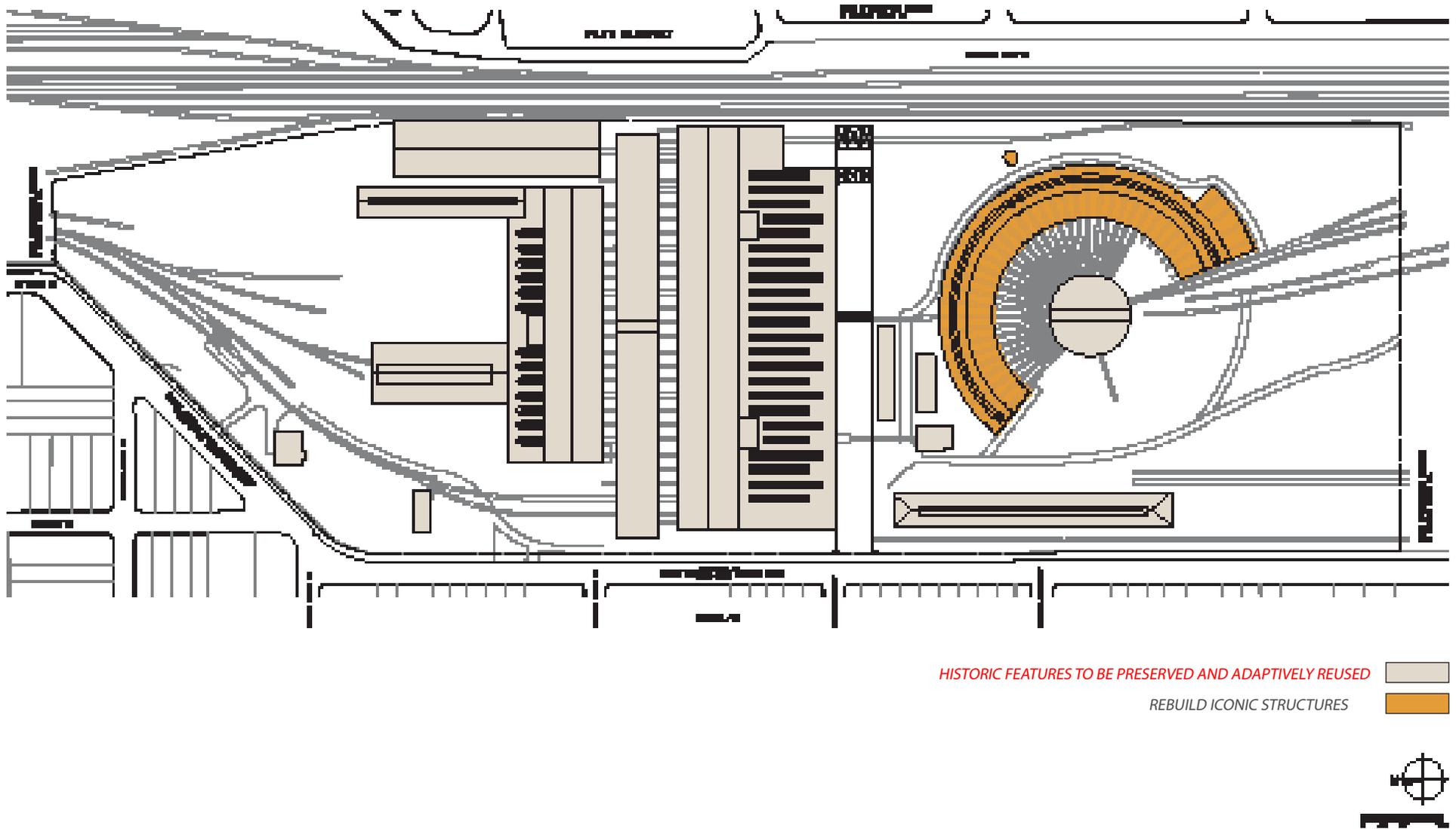


Figure 5: Rebuild Iconic Structures Diagram

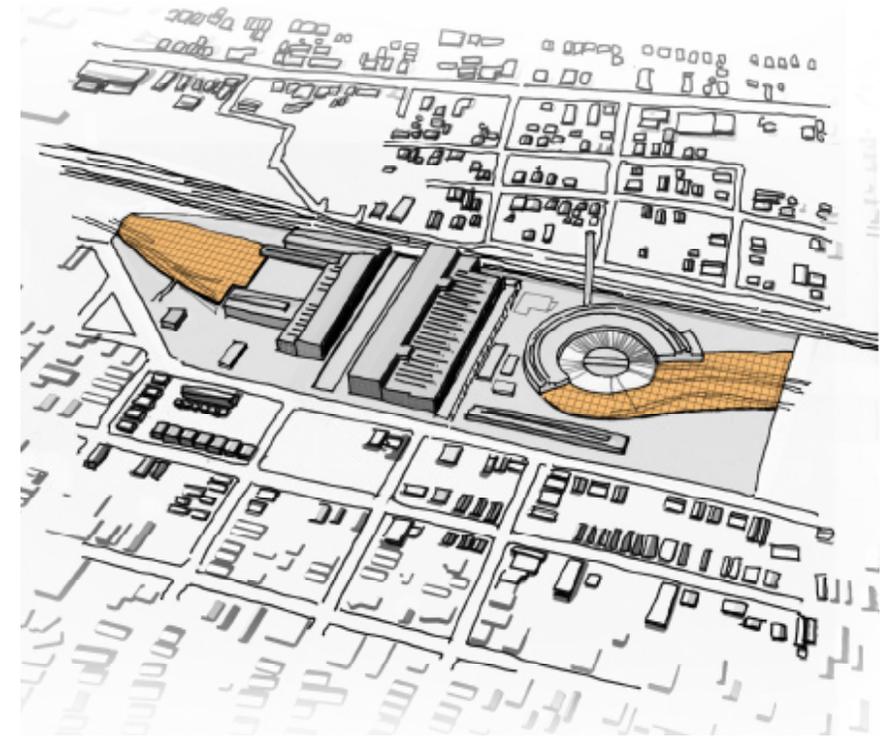
10.3.2 Paseo

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 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.



 PASEO

NOTE: ALL DIAGRAMS ARE CONCEPTUAL



Piazza del Campo, Siena, Italy



Las Ramblas, Barcelona, Spain

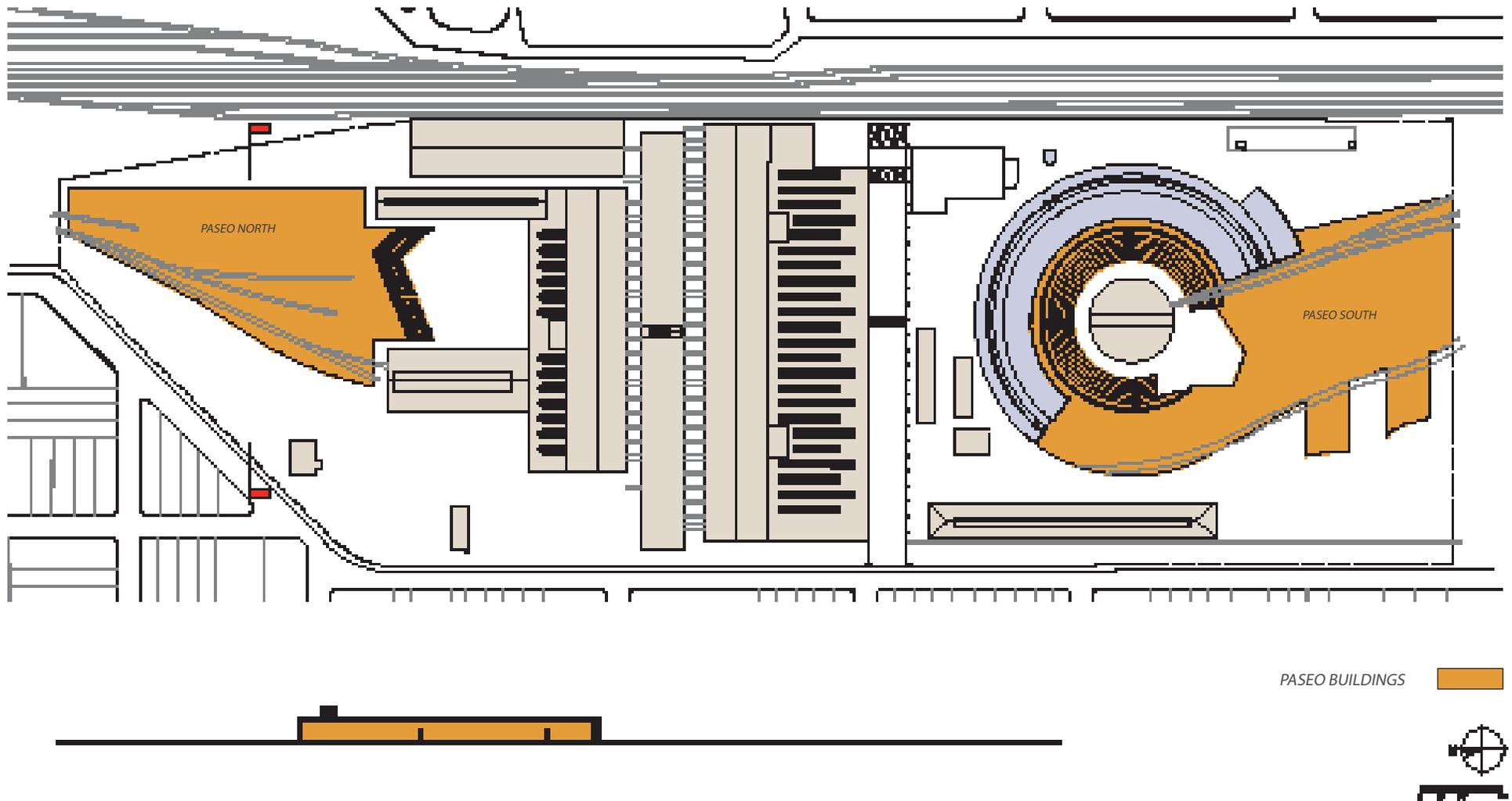


Figure 6: Conceptual Paseo Building Diagram

10.3.3 Subterranean Parking

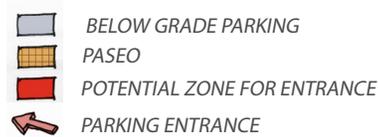
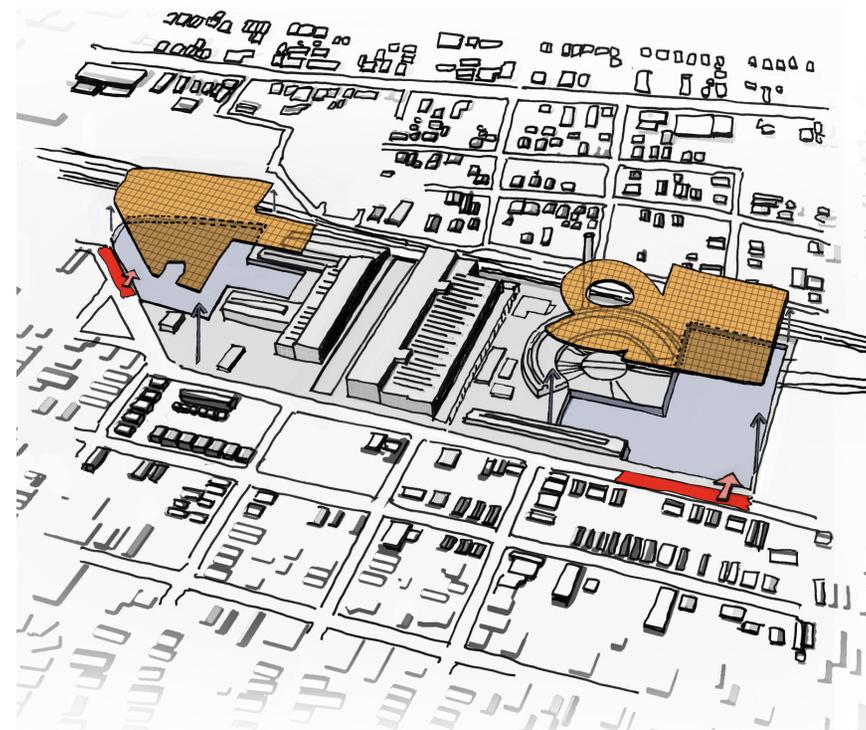
Concept: The Rail Yards should be free of visible parking.

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.

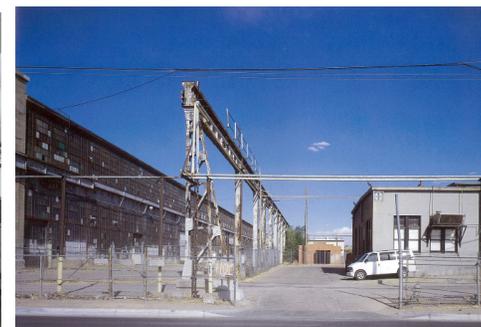
Given the increased cost of subterranean parking and the relative high water table, a one-level only structure is proposed which will result in a site that will be considered underparked by current City parking standards. The provision of parking for the Rail Yards site, however, must seek a balance 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 Barelas residential community immediately to the West.

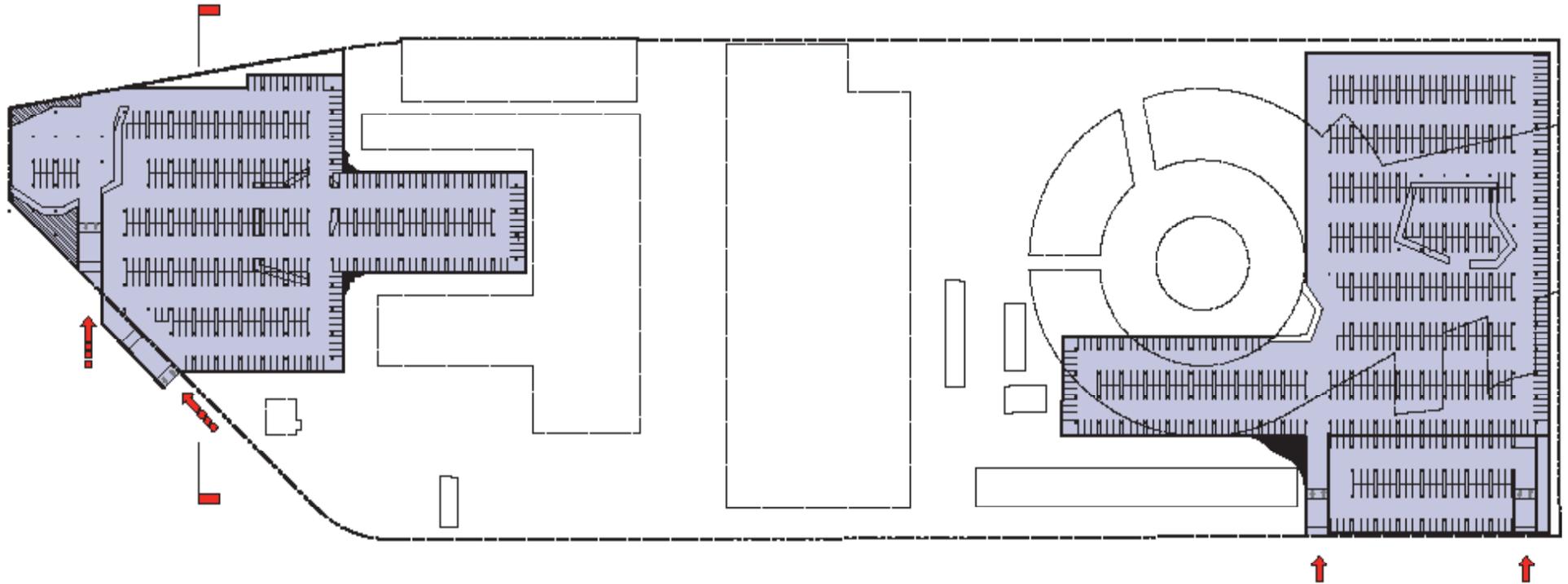


Historic Rail Yards Entrance



Rail Yards Entrance Today

DRAWING UPDATED TO INCLUDE SECOND ACCESS LOCATION TO NORTH GARAGE.



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

BELOW GRADE PARKING 
 VEHICLE ACCESS 

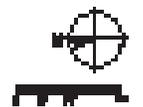


Figure 7: Conceptual Below Grade Parking Diagram

10.3.4 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.

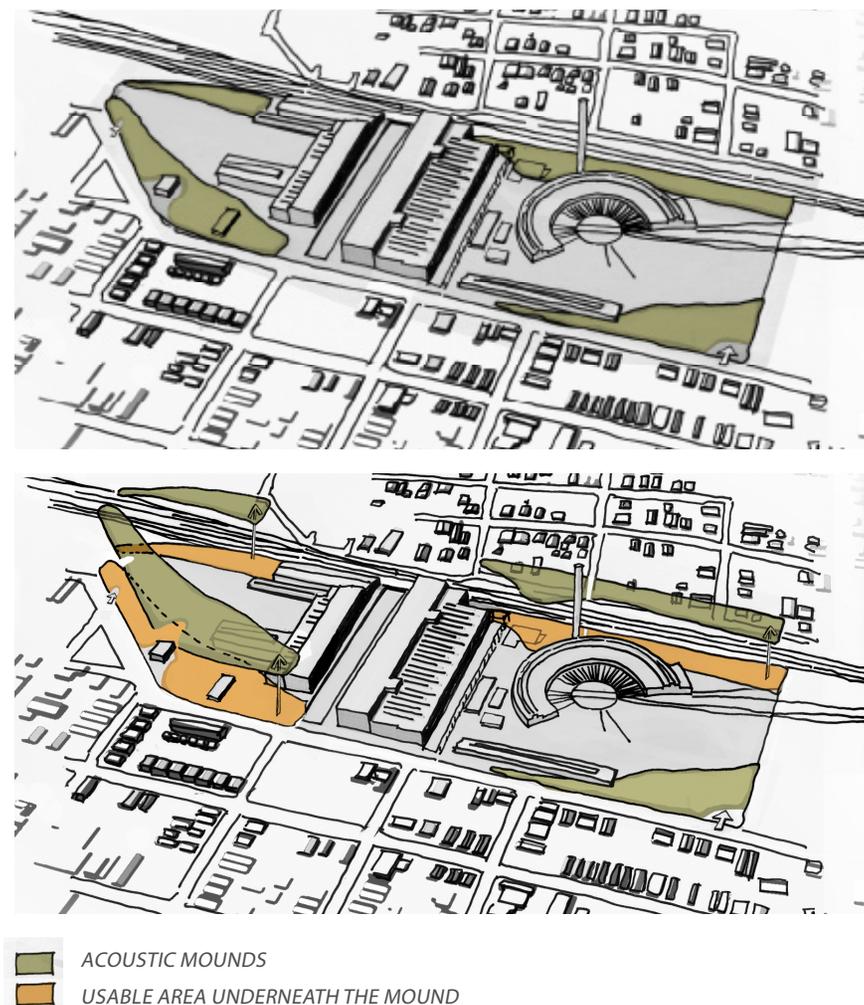
The Acoustic Mounds provide a flexible, 'soft' edge that can be sculpted to achieve desired levels of privacy without creating the effect of a barrier and without impacting views to and from the site.

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 **paralleling** 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

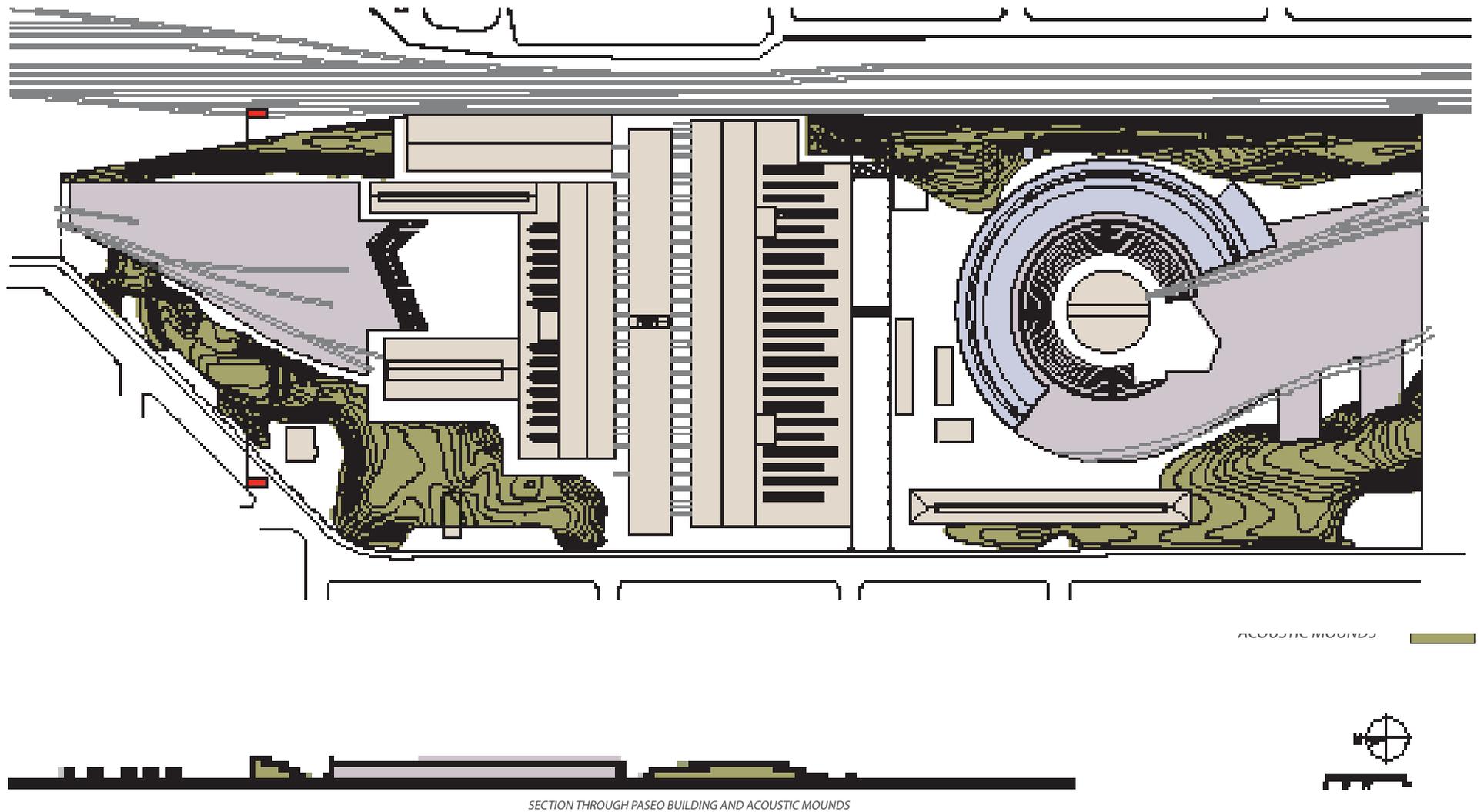


Figure 8: Conceptual Acoustic Mounds Diagram

10.3.5 Connectors

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

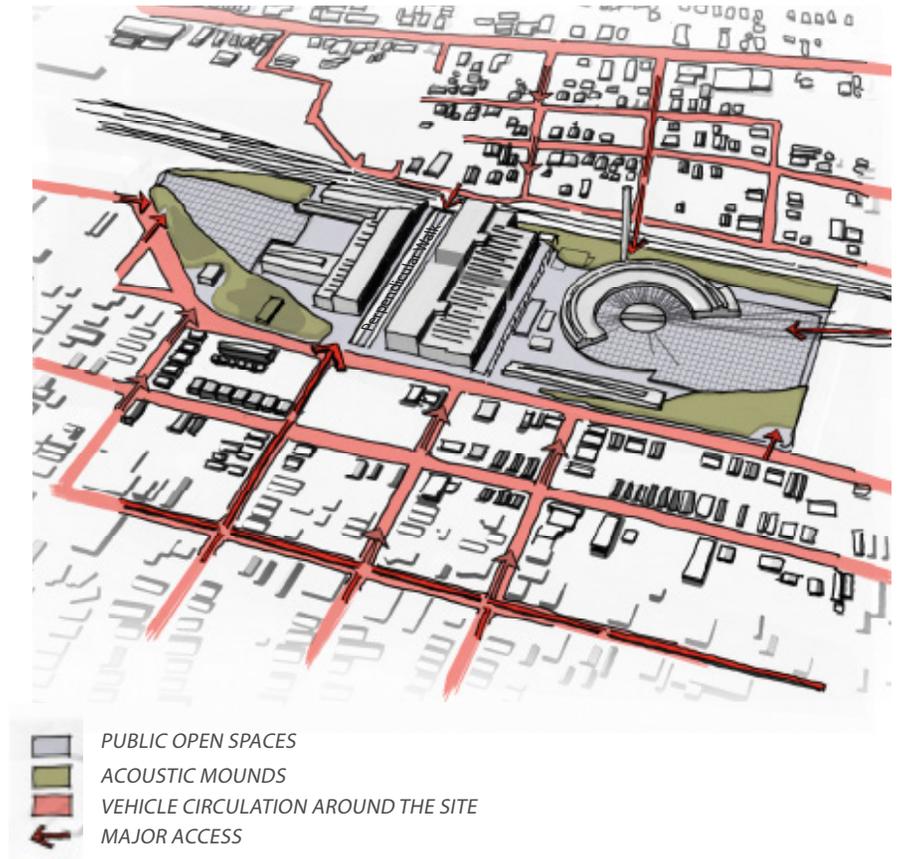
Primary points of access are located by extending the existing City street grid onto the project site. At each location where east/west running streets terminate along the project north/south boundary, a Connector is created. The Connector takes many forms depending on the specific site condition, as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

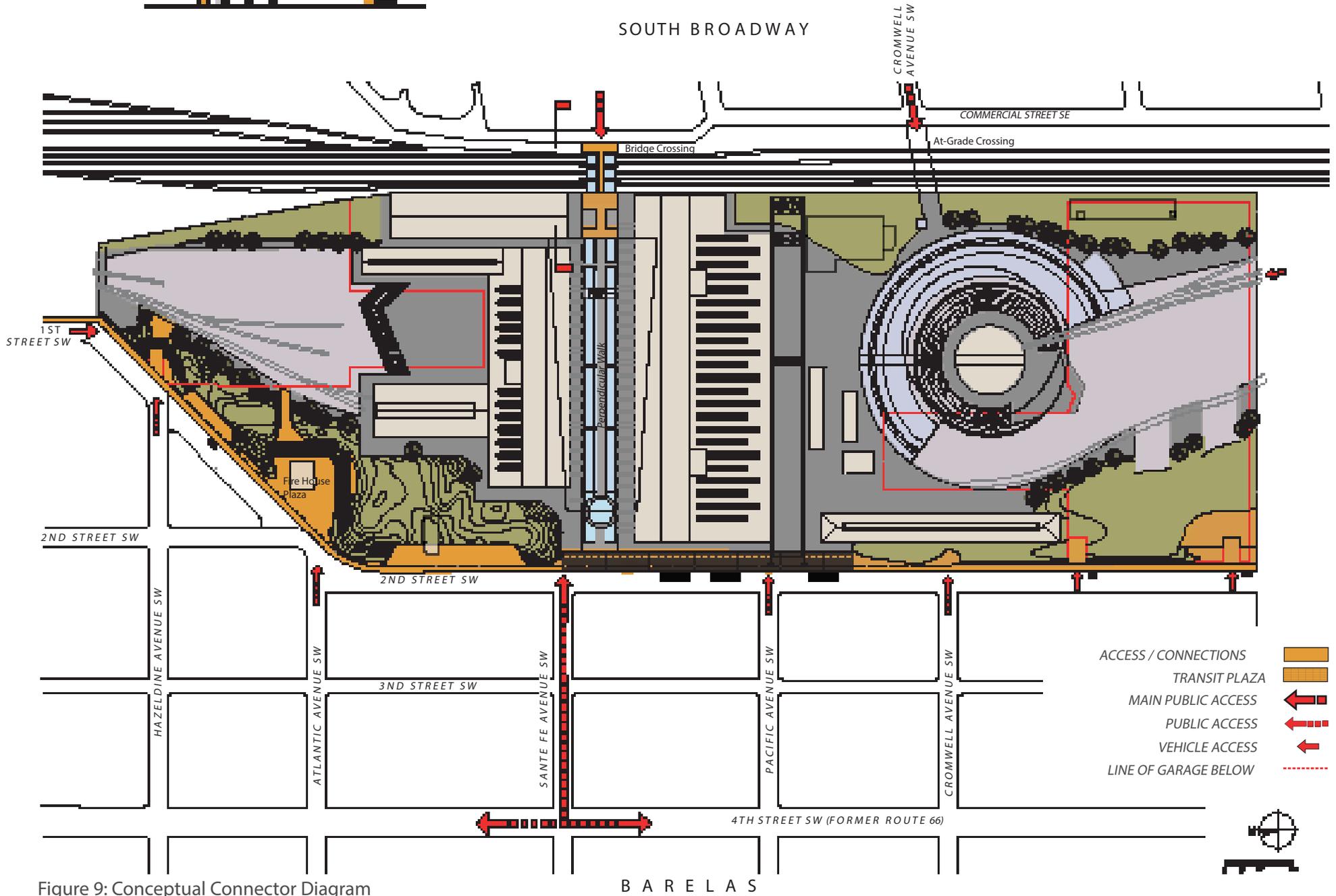
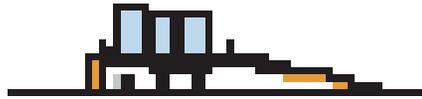


Figure 9: Conceptual Connector Diagram

10.3.6 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.

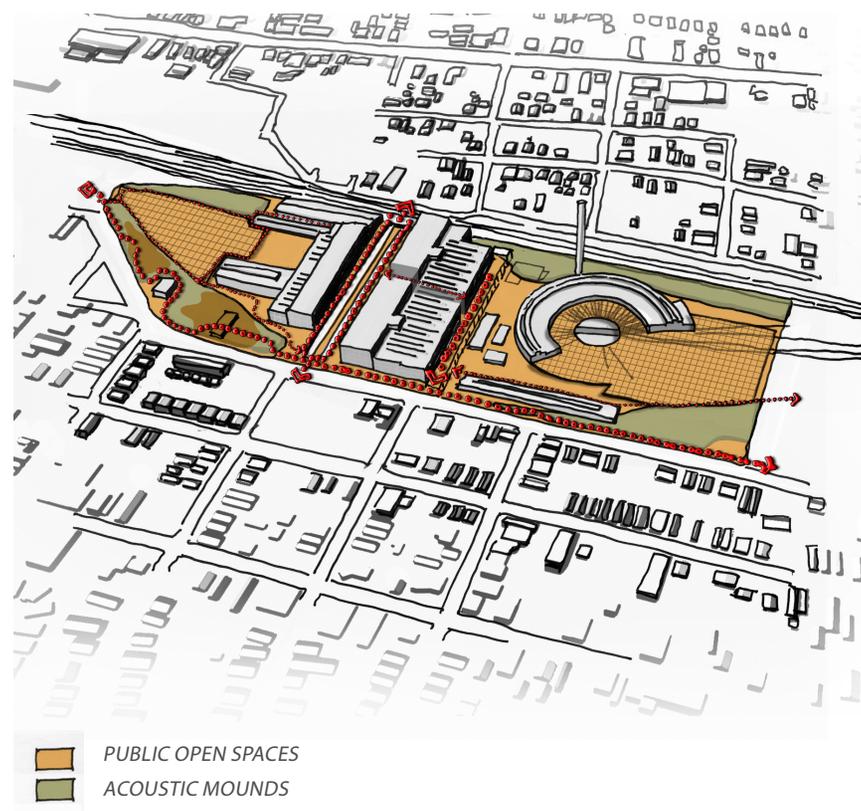
Public spaces are connected by two North-South walks; the Edge Walk that follows along the 1st and 2nd street sidewalk and the tree-lined Meandering Walk that follows the space created between the Paseo Building and Acoustic Mound.

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 Commons: 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

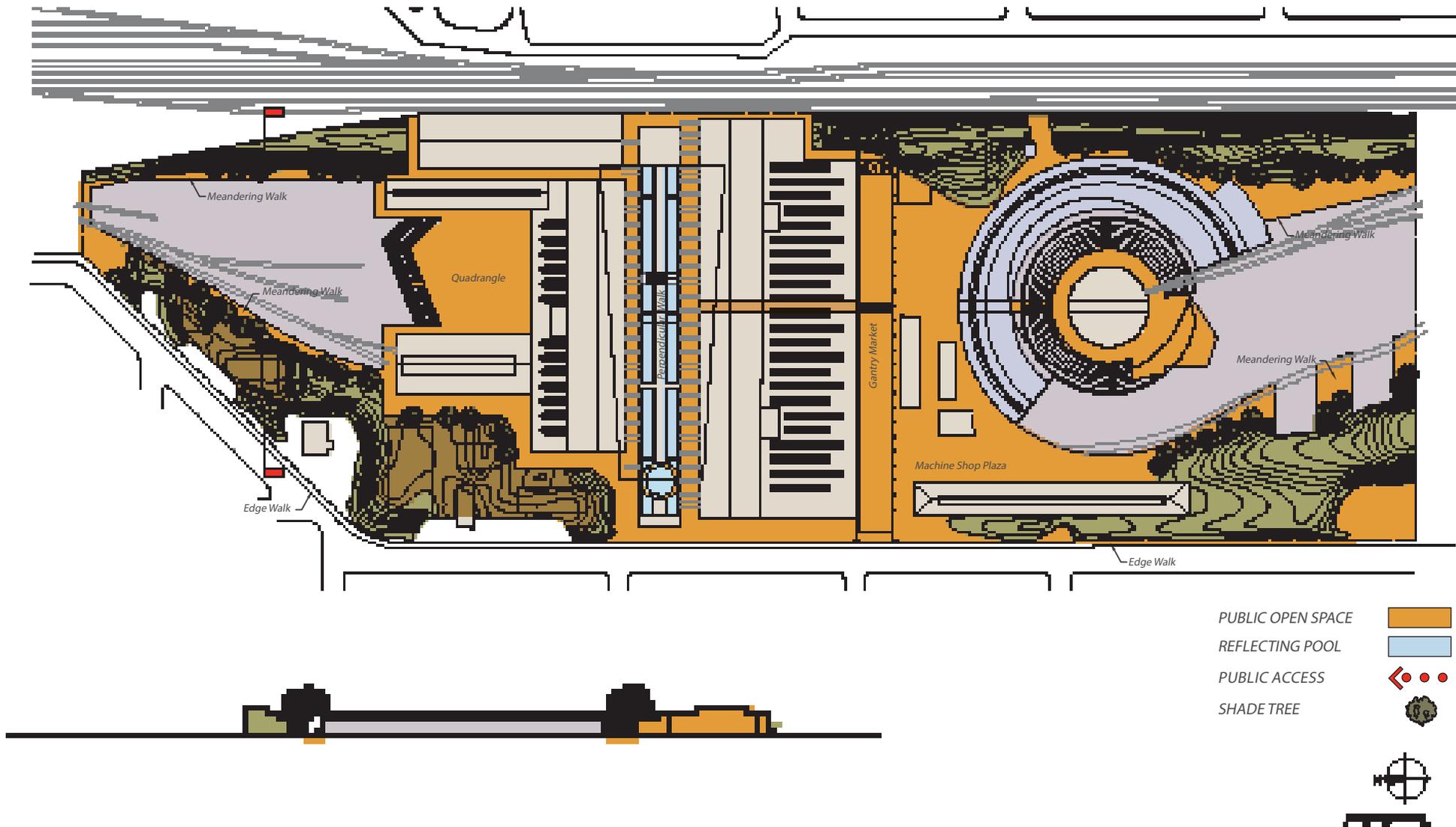


Figure 10: Conceptual Public Open Space Diagram

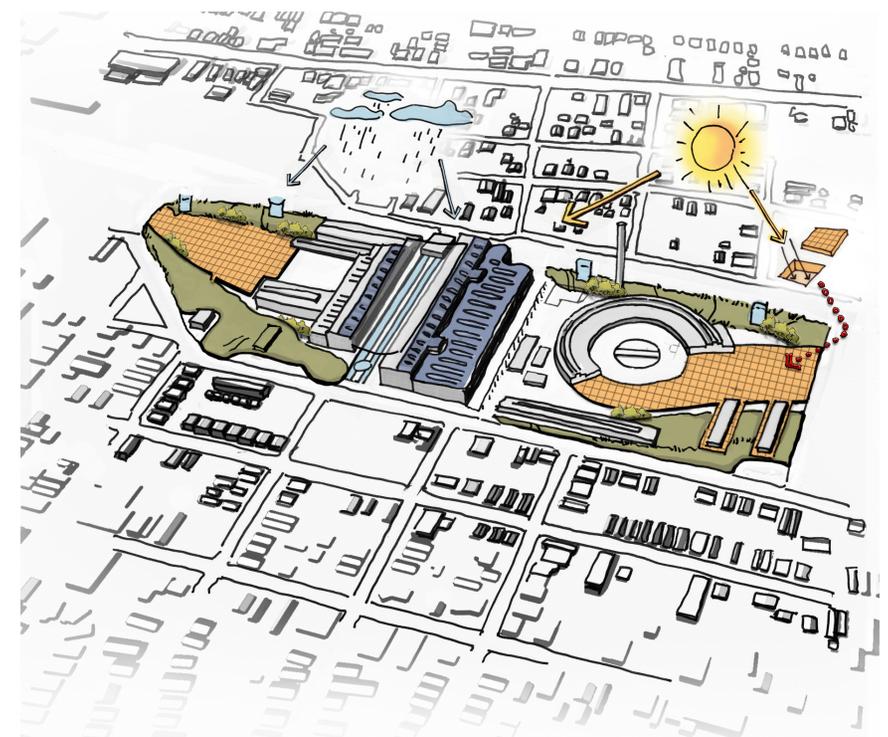
10.4 Sustainability

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;

10.4.1 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.



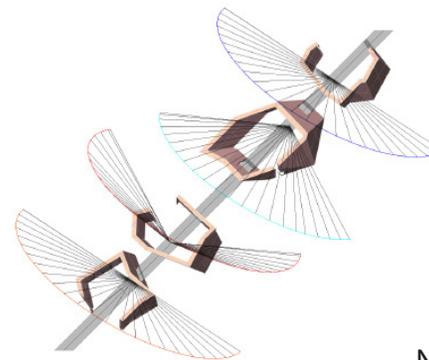
- DAYLIGHTING OPPORTUNITIES (COURTYARDS)
- GREEN ROOFS (ACOUSTIC MOUNDS)
- POWER GENERATION (PV PANELS)
- WATER COLLECTION (CISTERNS)



Cantaloc Aqueducts, Nazca, Peru



Acequia, White Mountains, NM



COURTYARDS,
Daylighting defined by the path of the sun



Anasazi Kiva, Mesa Verde, CO

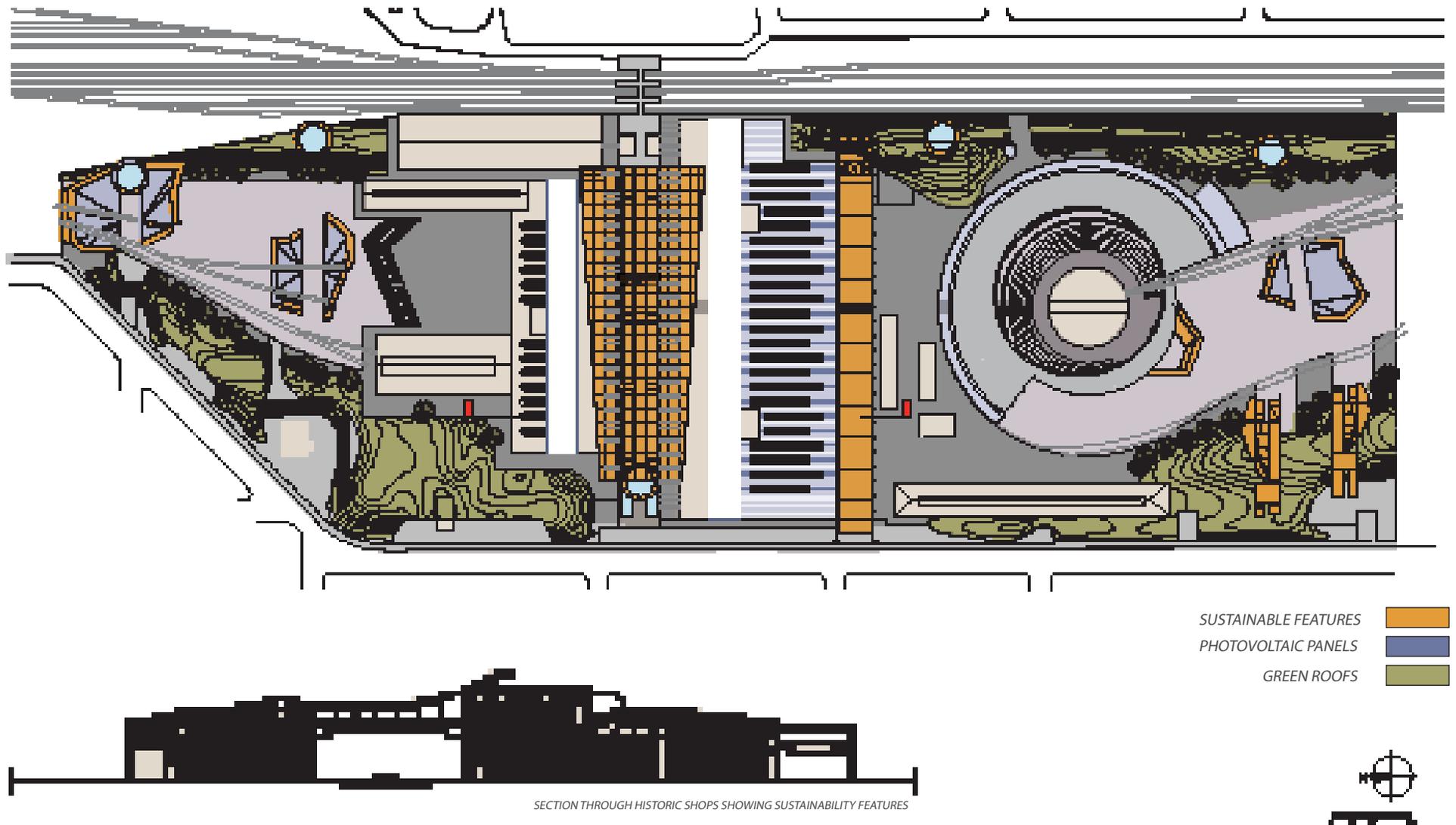


Figure 11: Conceptual Sustainability Features Diagram

10.4.2 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.

10.4.3 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 2nd 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.

10.4.4 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.

10.4.5 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 2nd 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.

10.4.6 Noise

Given its proximity to neighboring residential areas and the intention for the Rail Yards to become a vibrant mixed-use community with a

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

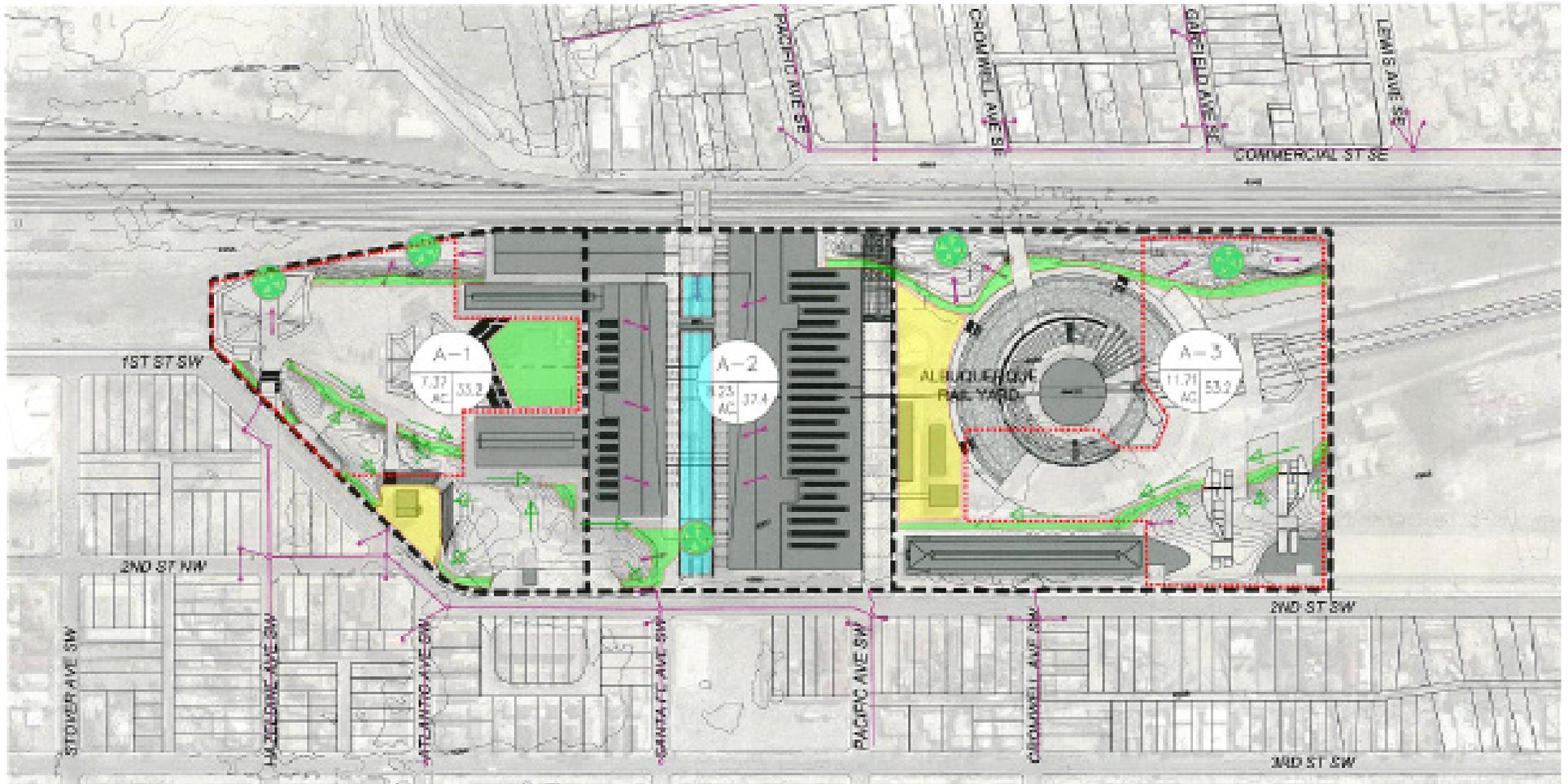


Figure 12: Conceptual Water Conservation Diagram

significant public presence, noise mitigation is a critical design concern for the project. The proposed Acoustic Mound design feature described in Section 6 is a direct response of this need to control potential noise pollution emanating *from* the site and likewise to control noise pollution emanating *to* the site from outside sources such as the active BNSF railway immediately to the east. The Acoustic Mound is a buffering and absorptive mechanism.

The City of Albuquerque's noise ordinance provides a baseline standard that states noise levels shall not exceed 50dba at any noise sensitive property line between 10pm and 7am. Where ambient levels exceeds 50dba, the criteria shall be ambient plus 5dba.

During normal operation, the Rail Yards shall operate within all such established standards, however, there will likely be times when special event programs may require alternative measures. For example, the Roundhouse Amphitheater Turntable Commons may someday accommodate outdoor public events which could include music concerts with amplified sound. Master Plan noise standards must therefore be designed with sufficient flexibility to accommodate sound levels above those defined under the Ordinance under special circumstances. Exceptions for short-term special events may be allowed on a case-by-case basis under a temporary permit through the Environmental Health Department. If approved, this would allow limited, short duration, non-compliance with the Noise Ordinance standards. The event operator would be responsible for monitoring noise levels to ensure it meets the special provisions afforded it by said permit.

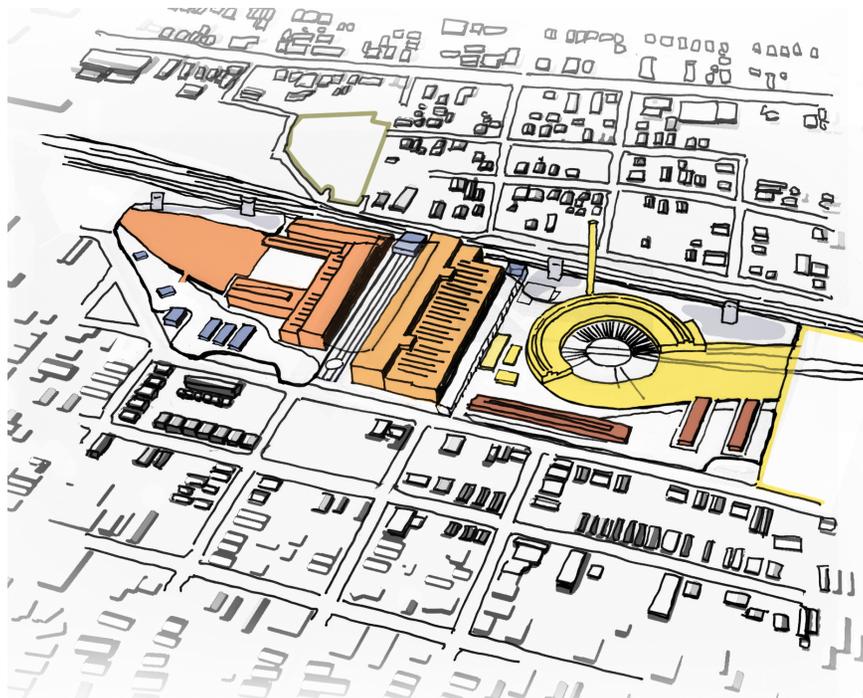
For additional consideration, the proposed rebuilt Smokestack may be designed to include an analogue "whistle" that references back to its historic functionality. The "whistle" may be used to coincide with special events occurring at the Rail Yards.

10.4.7 Air Quality

During the Master Planning process, community concerns were voiced regarding the potential for the Acoustic Mounds proposed along the east side of the site to exacerbate existing air quality problems associated with rail traffic along the BNSF rail lines. Specifically it was mentioned that BNSF trains are often left idling on the tracks adjacent to residential communities in South Broadway and San Jose neighborhoods, leaving the diesel exhaust to accumulate. The concern is that the Acoustic Mounds will create a tunnel effect that further traps these fumes from escaping, thereby worsening an already significant problem.

The Master Plan recommends that further analysis of the existing problem be undertaken and the potential effects of the Acoustic Mounds be studied, including the possibility that the Mounds might ameliorate the condition by creating a landscape edge that can absorb harmful pollutants. It might also be determined that existing practices by the BNSF rail line need further review and evaluation.

The Mounds remain a conceptual idea only for treatment of the project edges. They are designed and intended to be a positive community asset that help solve many different site considerations. If they are determined to have negative air quality impacts, alternative edge concepts will be explored.

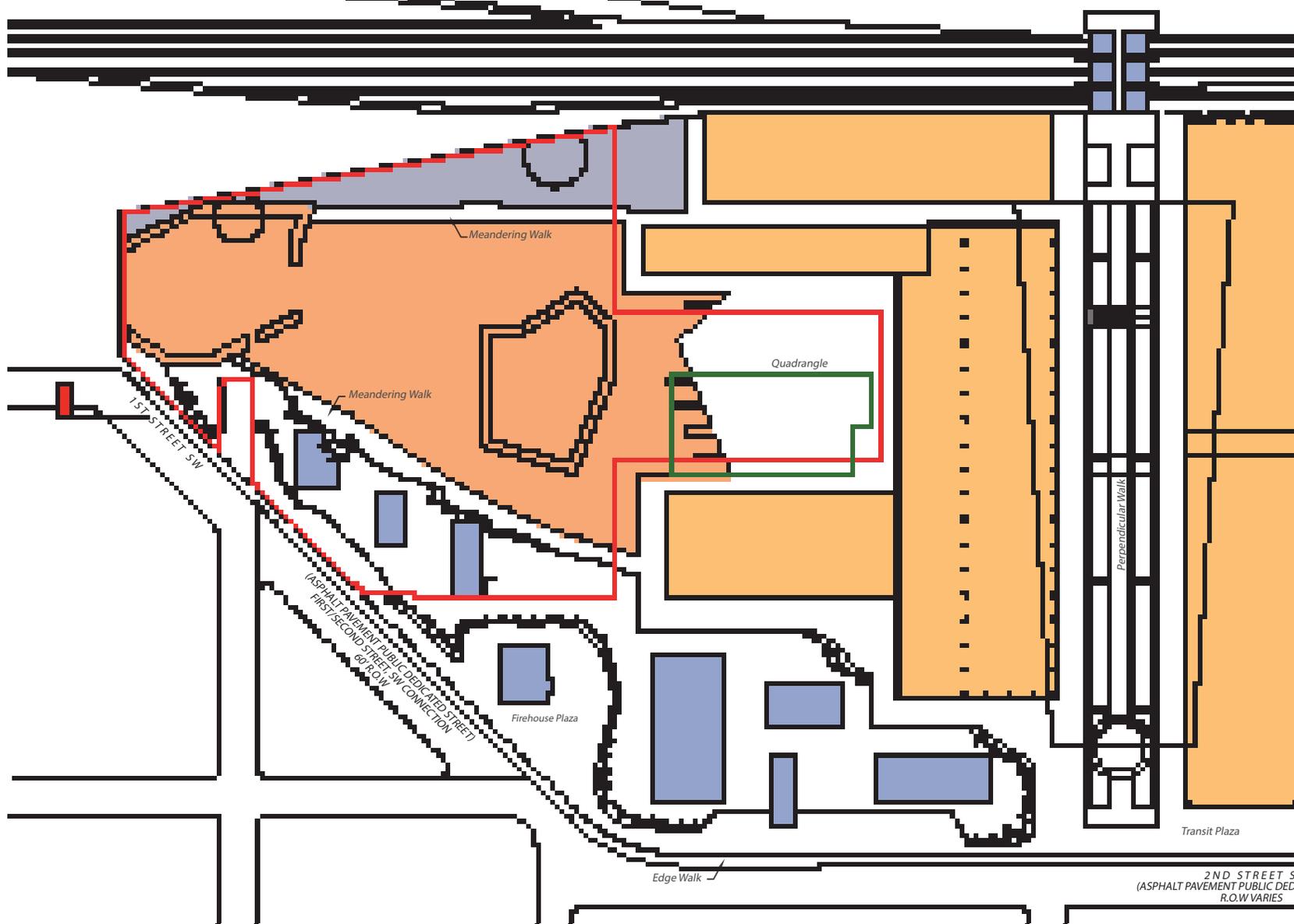


10.5 Parcel / Land Use Recommendations

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.

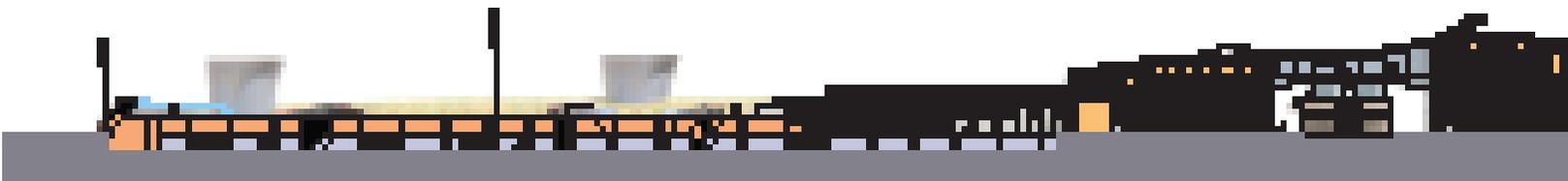
10.6 Land Use Characterizations

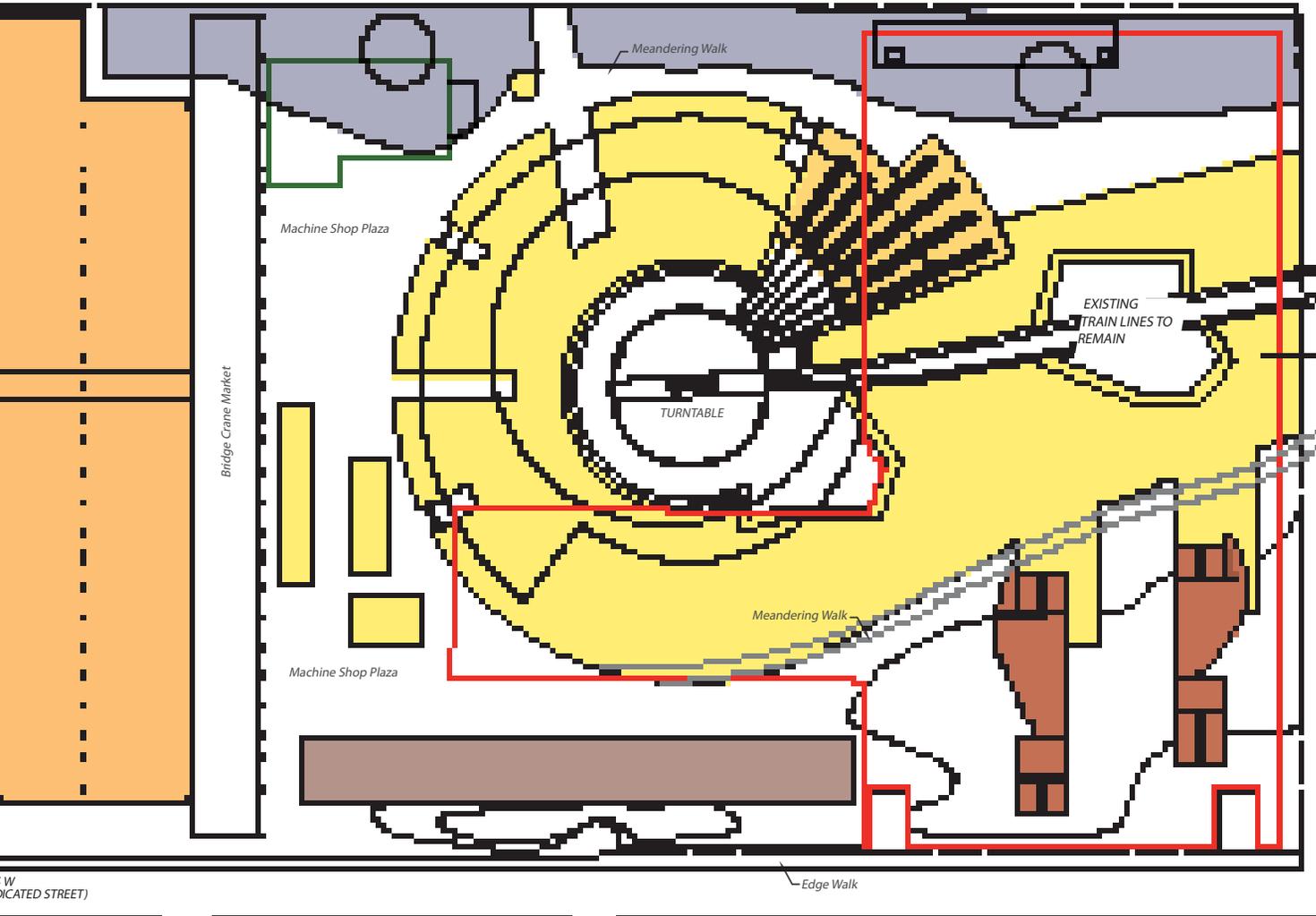
Creating a vibrant and successful mixed-use community on the Rail Yards site will in large measure depend on the type, location and organization of uses on the site. Accordingly, the Master Plan provides recommendations for preferred land use types and locations based on a thorough analysis of project goals, site context, and community input. Land use designations are not intended to restrict the existing approved land uses of the underlying SU-2/HLS zone.



NOTE:
Design Features shown are for illustrative purposes only and are not regulatory features of the MDP document.

TABLEAU 21: Land Use Diagram

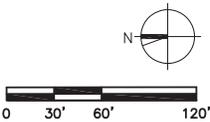




LEGEND

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 



W (INDICATED STREET)

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



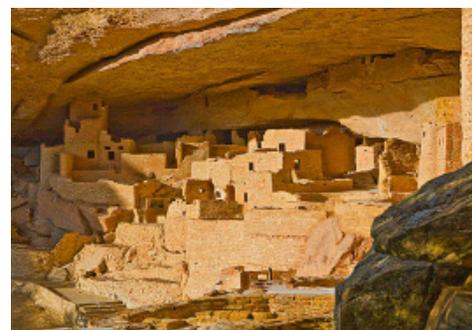
Shukhov Tower, Moscow, Russia



Samitaur Tower, Culver City, CA



ATSF 2926 Restoration, Albuquerque, NM



Cliff Palace, Mesa Verde, CO



Taos Pueblo, NM

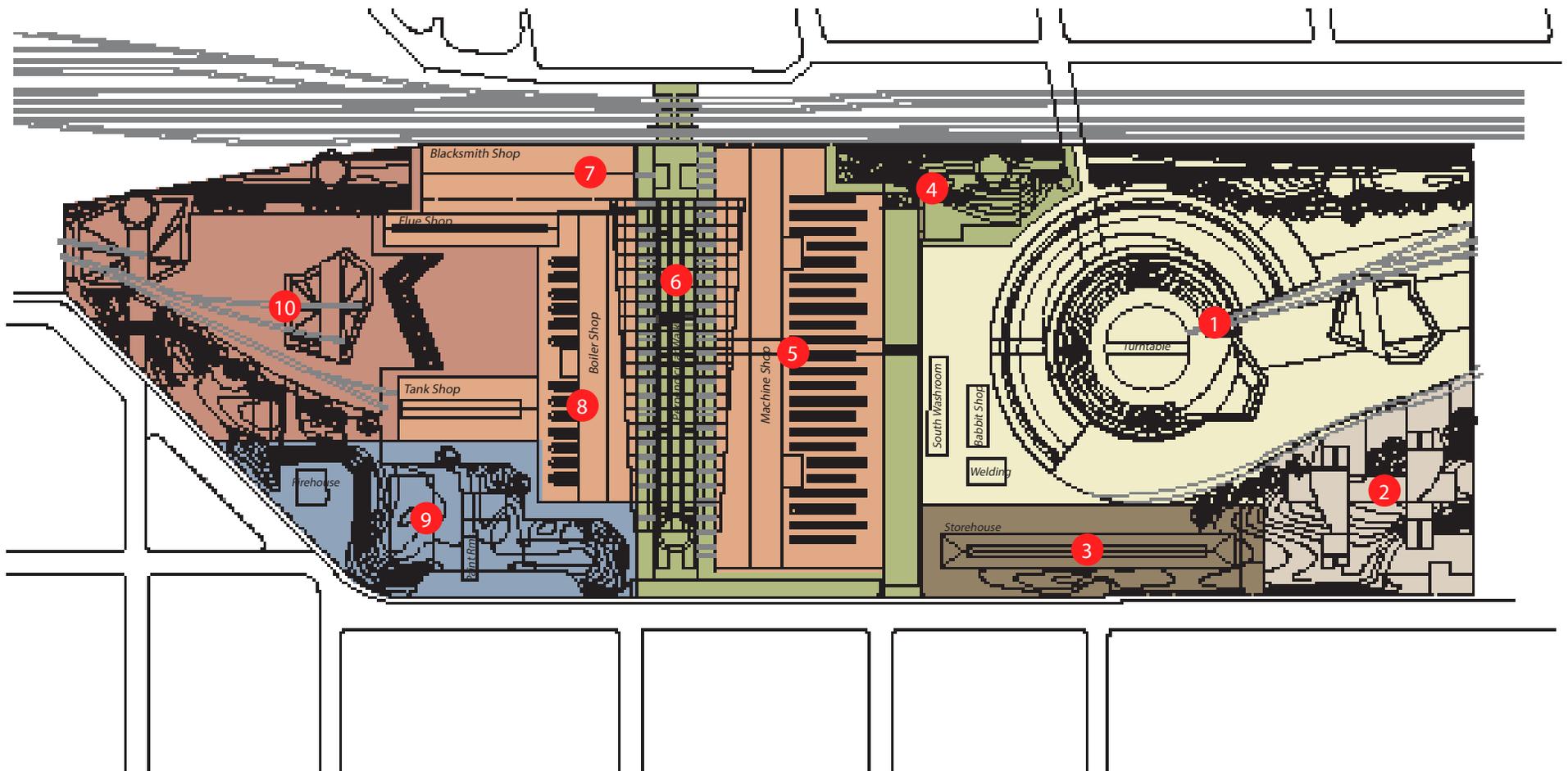


Figure 13 : Conceptual Parcelization Diagram

perimeter required by its heavy industrial past.

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 2nd 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.

■ WORKFORCE HOUSING

The proposed Workforce Housing use is located at the southwest corner of the site adjacent to 2nd 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.

6.76 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. The historic Turntable must remain in active operation since adjacent landowner BNSF retains an easement for its use. The design of future cultural facilities shall not limit or preclude access to or use of the Turntable.~~

Any future use that requires access to the existing railway, such as the WHEELS Museum or a rail equipment maintenance facility, shall have access to the tracks and Turntable contained on Parcel 1. As such, land between the Turntable and the Storehouse is an appropriate area for future expansion of the WHEELS Museum.

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 2nd 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 2nd 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 2nd Street, will act as the public face of the onsite cultural 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. Subject to the terms of its lease with the City of Albuquerque as it may be amended, the WHEELS Museum will continue to operate in the Storehouse and, as described in Parcel 1, will be provided with the opportunity to expand to the east.~~

~~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 3 is uniquely situated to contain cultural facilities connected to those anticipated to be developed in Parcel 1 or, alternatively, be adaptively reused as housing to relate to~~

existing development across 2nd Street and the Workforce Housing anticipated to be developed on Parcel 2 to the south. Should the WHEELS Museum in the future move its operations, the Storehouse is an appropriate location for adaptive reuse for other cultural uses or housing that may include live-work.

Parking for Parcel 3 users will be accommodated within the subterranean structure on Parcel 1 with an easement provided across Parcel 3 for access.

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 2nd 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 2nd 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 2nd 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 2nd Street via Parcel 6 and will be parked in Parcel 10 to the North.

Parcel 9

Situated north-south along 2nd Street, Parcel 9 is ~~the primary retail parcel of the site~~ an appropriate place to integrate retail with housing as part of a mixed-use development. 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 rather than 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 COMMONS**
- 16 WORKFORCE HOUSING
- 17 CISTERN
- 18 COURTYARD
- 19 PARKING ACCESS
- 20 AT-GRADE CROSSING
- 21 BRIDGE CRANE MARKET
- 22 TRANSFER TABLE POOL

NOTE:
Design Features shown are for illustrative purposes only and are not regulatory features of the MDP document.

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.

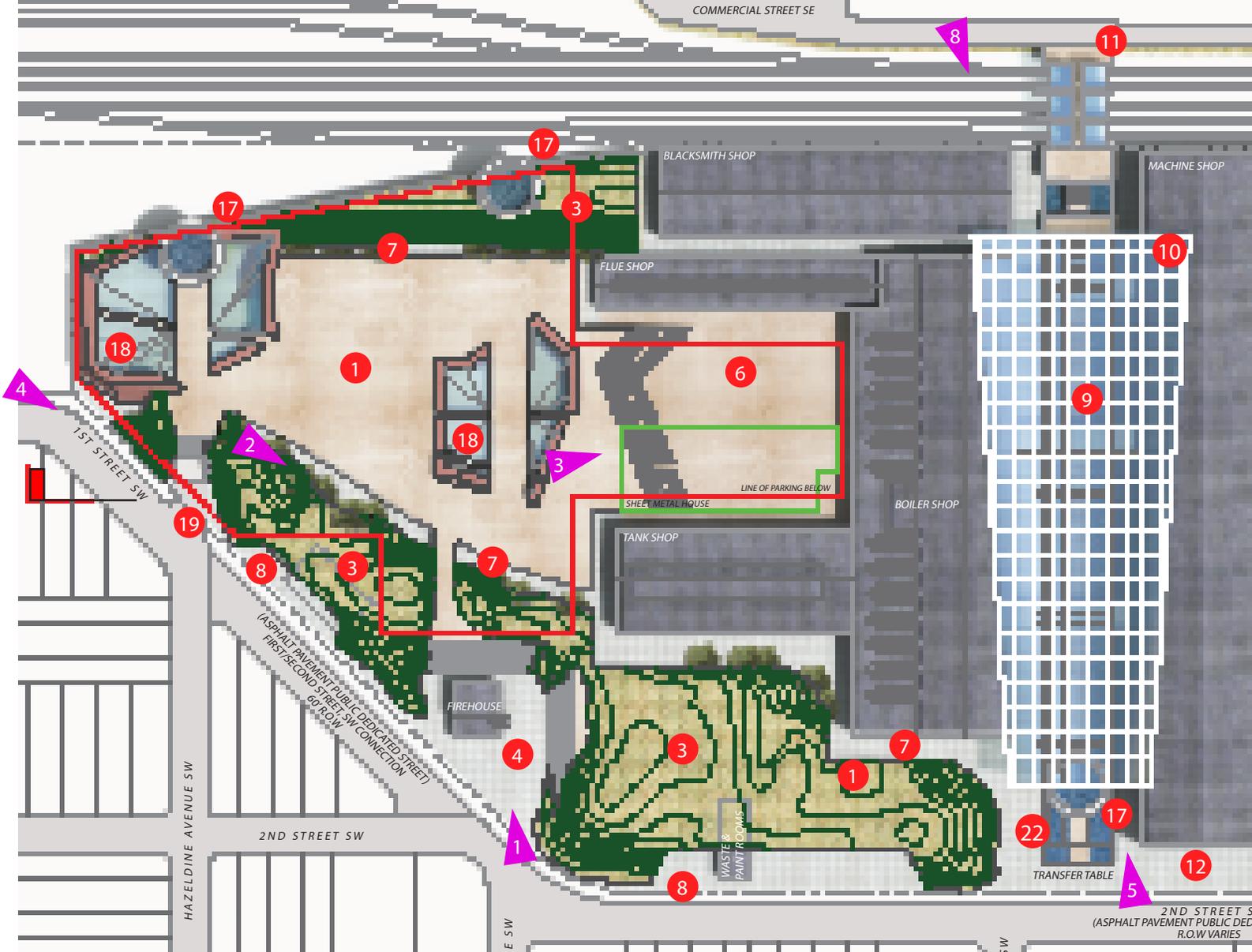
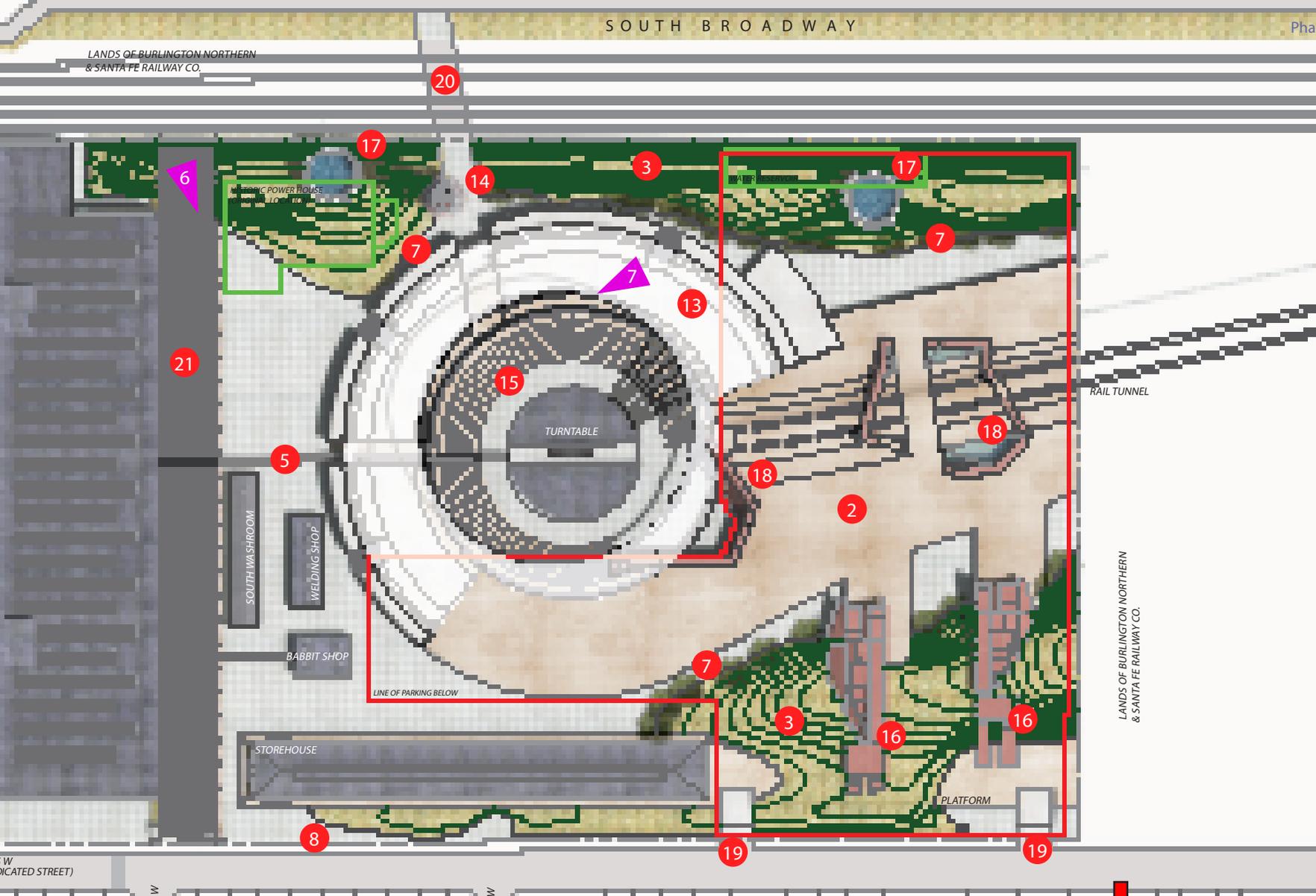


Tableau 32: Illustrative Master Plan



LANDS OF BURLINGTON NORTHERN & SANTA FE RAILWAY CO.



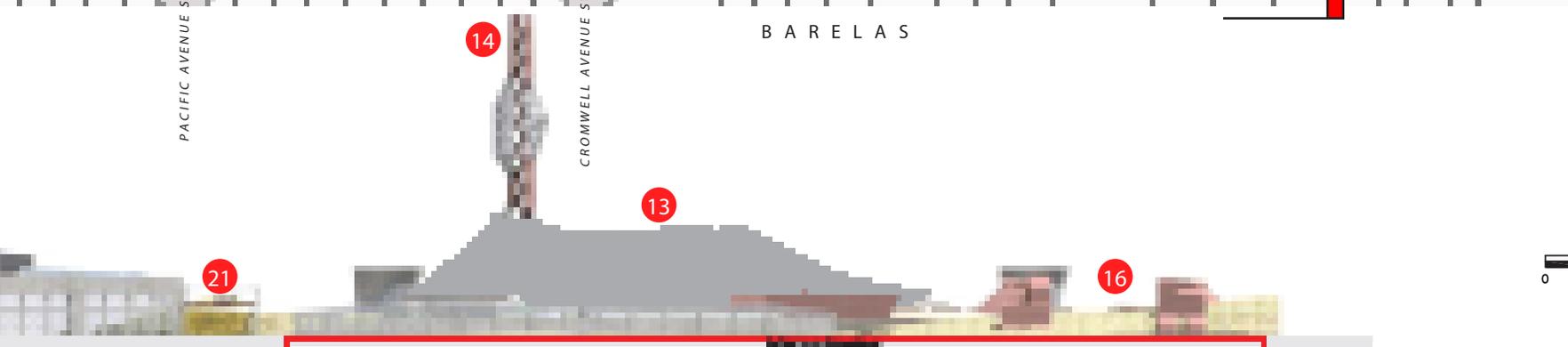
(INDICATED STREET)

PACIFIC AVENUE SW

CROMWELL AVENUE SW

BARELAS

LANDS OF BURLINGTON NORTHERN & SANTA FE RAILWAY CO.



6.87 Concept Vignettes (Illustrative sketches to convey concepts)



View 1: Firehouse Cafe



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



The Meandering Walk is a tree-lined, on-grade path, ~~the that~~ 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.

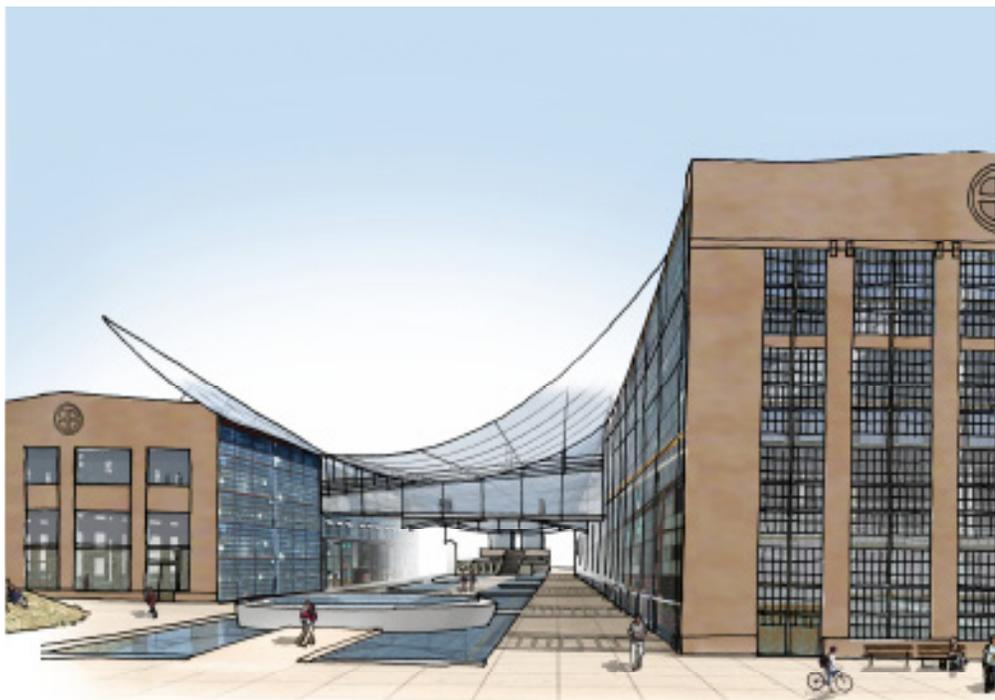
The Quadrangle is either open to the sky or can be readily covered by attaching a temporary canopy to the roof edges of the buildings that define the Quadrangle perimeter. The resulting space can be used in a variety of ways as an open-air performance, market, or exhibition venue **with** seating imported 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 1st and 2nd 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

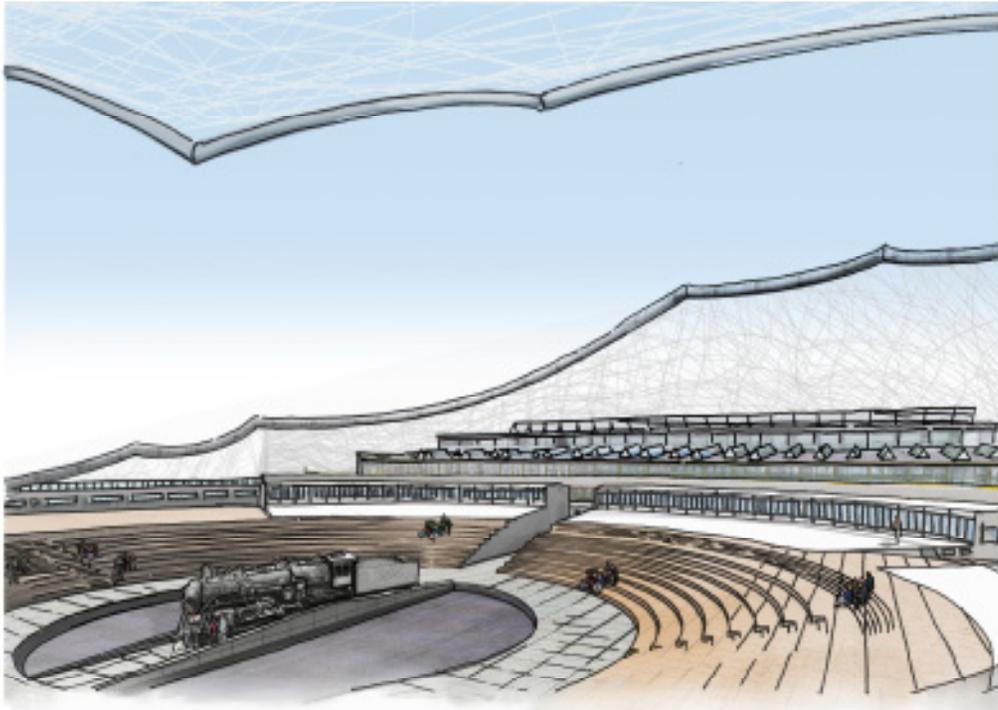
The Perpendicular Walk is the pedestrian heart of the redeveloped Rail Yards project and the critical connective tissue between the Barelbas and South Brawway neighborhoods. The Walk is a rectangular, east/west pedestrian space, located midway along the site between the Machine and Boiler/Blacksmith 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 Turntable Commons 7

The **Roundhouse Amphitheater Turntable Commons** 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 Turntable Commons** 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 Turntable Commons** 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 43: Conceptual Aerial View from the Northwest



View 10: Aerial View



TABLEAU 54: Conceptual Aerial View from the West

10.7 Surrounding Development Opportunities

The **long-term** 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 Figures 14-15 for diagrams showing existing vacant lots in **South Broadway, dated 2013 and** Barelas, dated 2010 **respectively**);

- Vacant parcels located within the Barelas 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. **Its** 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 Barelas businesses located on 4th Street are important and could be strengthened. At a minimum, Santa Fe Avenue could see additional tree planting and beautification to facilitate pedestrian traffic. 4th Street local businesses will be a great amenity for future users of the Rail Yards site.
- Similarly, sidewalk connections along 1st Street between the Alvarado Transportation Center and the Rail Yards could be improved.

NOTE: ADDED MAP FOR SOUTH BROADWAY

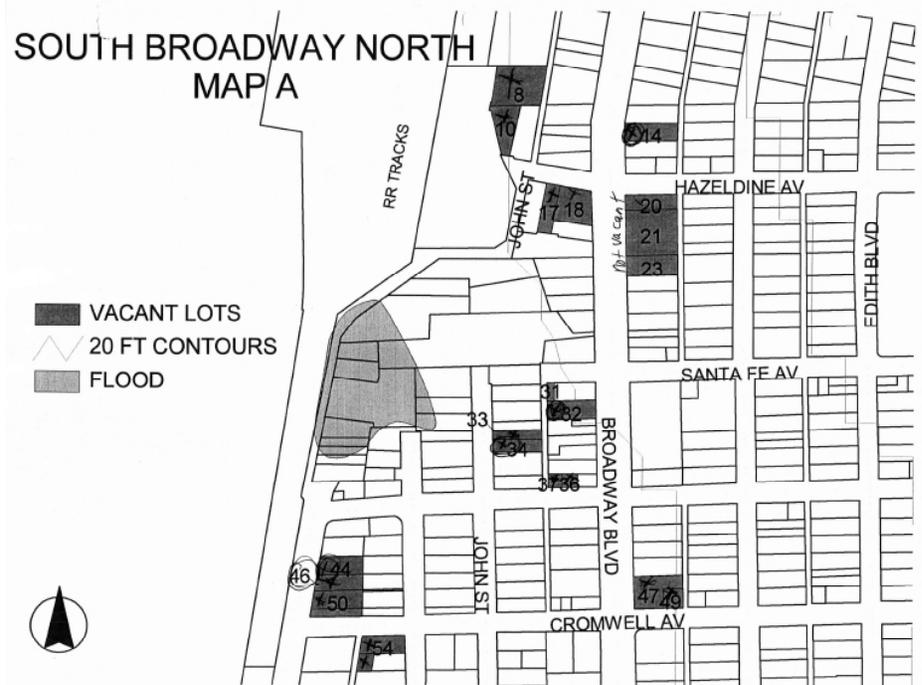


Figure 14: Existing Vacant Lots, South Broadway Inventory (2013)



Figure 15: Existing Vacant Lots Highlighted in Yellow, Barelas SDP (2010)

10.8 Project Phasing

A phasing plan is provided in Figure 23 as a general framework for the relative sequencing of project buildout over time. Phases are organized by parcel designations previously discussed in Sections 6 and 8. Although the Master Plan includes these preliminary recommendations, it is critical to the future success of the project that there remain ample flexibility to respond and adapt to the changing conditions of the future marketplace. The general concepts underlying the phasing plan are as follows;

Phase 1 - Stimulate Interest in the Rail Yards

A preliminary Phase I concept should be implemented to stimulate interest in the Rail Yards project from a future user/tenant perspective, to set the tone and standards of design quality for the future buildout and most importantly, to get the community engaged and reconnected to their site. The proposed Phase I scheme should strive to embody the energy of the future development and have the greatest public visibility possible for the least initial investment of cost. Specific Phase 1 recommendations are as follows;

- Machine Shop Plaza / Farmer's Market under the Bridge Crane: Refer to Section 10.9 for a detailed description of the concept.
- Firehouse Cafe: The adaptive re-use of the historic Firehouse building into a public cafe complete with outdoor seating should be considered in Phase 1.

Phase 2 - Develop Job Core

The adaptive reuse of the existing buildings into a vital and innovation-based job center is the business model and economic engine that will drive the successful redevelopment of the Rail Yards. Phase 2 implementation must be adaptable to a dynamic market and must be able to be processed in a timely manner to accommodate user/tenant

requirements for occupancy.

Phase 2 contains both a south component (Parcel 5) and a north component (Parcels 7, 8) which may be developed together or sequentially depending on project needs. Surface parking to accommodate this phase will be developed according to Tableau 8: Preliminary Phase Parking Plan included on the following page. Preliminary phase parking is designed to provide the same number of parking spaces as will eventually be accommodated in the proposed below grade structures; approximately 642 in the proposed south lot (including existing parallel parking spaces located directly west of the Storehouse Building) and 353 in the proposed north lot. Although interim in nature, surface parking must be well designed and properly integrated with other concepts contained within the Master Plan. Considerations for each surface parking area are as follows;

North Lot

- Access is by a driveway located at the intersection of Hazeldine Avenue and 1st Street.
- Parking is oriented north-south to comport with the axial configuration of the existing buildings.
- A dedicated lot is provided to serve the Firehouse Cafe. Loading access will be provided. All other parking will be shared by other development parcels.
- Where possible, parking must not be located immediately in front of, and therefore blocking, existing buildings.
- Parking is screened from the street by landscaping.
- ADA parking is located in closest proximity to intended use destination.

South Lot

NOTE: PLAN HAS BEEN UPDATED TO COMPORT WITH SITE PLAN FOR SUBDIVIISION

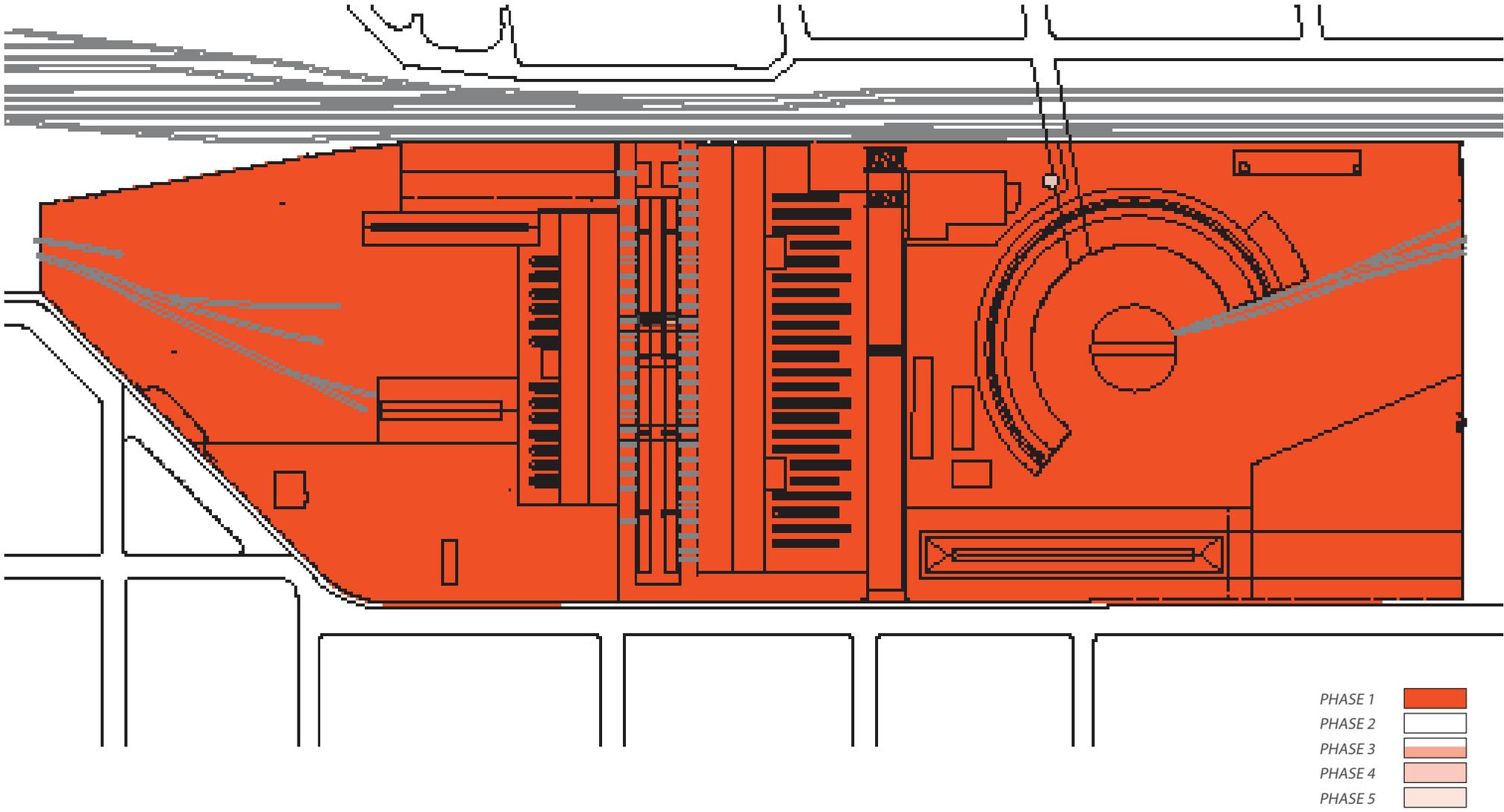


Figure 234: Phasing Plan Diagram

- Access is by a driveway located at the original entrance to the historic Rail Yard, at the intersection of Pacific Avenue and 2nd Street.
- Primary parking is organized around, and uses the historic foundations of, the original Roundhouse. BNSF easement access to the Turntable is preserved.
- The existing surface lot with parallel parking serving the Storehouse building will be preserved but improved to accommodate better traffic flow through the addition of a egress driveway to 2nd Street located at the south of the site.
- Parking is screened from the street by the Storehouse building and existing platform. Depending on the timing of Phase 2, the Workforce Housing component may also screen parking from the street.
- Parking provided will generally serve the entire Rail Yards site during these preliminary phases.
- At-grade crossing is provided from the South Broadway neighborhood as extension of Cromwell Avenue.
- Intermittent loading and emergency access is provided just north of the proposed driveway access under the extension of the Bridge Crane at 2nd Street. Significant loading operations will be required to accommodate proposed Grower's Market located in the Machine Shop Plaza.

Phase 3 - Workforce Housing

Based on feedback during the Master Planning process, it was recommended that the Workforce Housing component of the project located on Parcel 2 be implemented as soon as possible within the development timeframe of the overall project. The timing of housing development, however, will need to take into consideration various

factors, including but not limited to the nature of ongoing development activity on the rest of the site and the impacts that future on-site residents may experience if housing is developed in an early phase. Given the recommended location along 2nd Street, early development of the Housing component necessarily will block construction access to the balance of the site and may impact considerations such as the timing of underground parking construction.

Notwithstanding the above, when Workforce Housing is ultimately developed will depend on many factors, including when a housing developer is selected and when sufficient funds for the project can be secured. The Master Plan shall consider implementation of the Housing component as early as feasible.

Phase 4 - Retail Edges and Connective Tissue

Having developed the core infrastructure in Parcel 2, development of Phase 4 will proceed from the center of the project outward and will include construction of the Transit Plaza, Perpendicular Walk and Pedestrian ~~Retail Bridge~~ connection to South Broadway (Parcel 6), the ~~Acoustic Mounds~~ landscape buffers and Retail component adjacent 2nd Street (Parcel 9) and any additional improvements required for the Storehouse Building (Parcel 3) should there be a desire to increase density or change of use.

Phase 5 - Paseo / Subterranean Garages

Phase 5 includes construction of the ~~North and South Paseo~~ single story infill Bbuildings and the subterranean parking garages located beneath them (Parcels 1 and 10). Phase 5 also includes the rebuilding of the Roundhouse and Smokestack buildings that are intended as the Eultural anchors of the project. Construction of the Paseo new infill Bbuildings will necessarily cause the temporary displacement of parking and therefore it is recommended that Parcel 10 be developed first since it has significantly less impacted parking that could be more easily accommodated within the surface parking lot located on Parcel 1. In addition, parking requirements for Parcel 1 will be significantly less until such time as the Parcel 1 improvements are constructed.

10.9 Development Thresholds

Although the phasing plan is provisional, the issue of when certain improvements are made or phases “triggered” is an important subject for consideration in the Master Plan. Although subject to change, the various thresholds for commencement of each of the development phases is proposed as follows;

- Phase 1: Approval of Master Plan, MDDA document, and project financing. Approval of adaptive reuse of historic buildings as described in the Master Plan document.
- Phase 2: Approval of Master Plan, MDDA document, and project financing. Approval of adaptive reuse of historic buildings as described in the MDP document.
- Phase 3: Approval of Master Plan and MDDA. Selection of a housing developer (if different than Master Developer), project financing and determination of phasing impacts of Phase 3 development to itself and all current and future phases of development.
- Phase 4: Completion/Tenant Buildout of 50% of Phase 2 total allowable building area. Approval of adaptive reuse of historic buildings as described in the MDP document.
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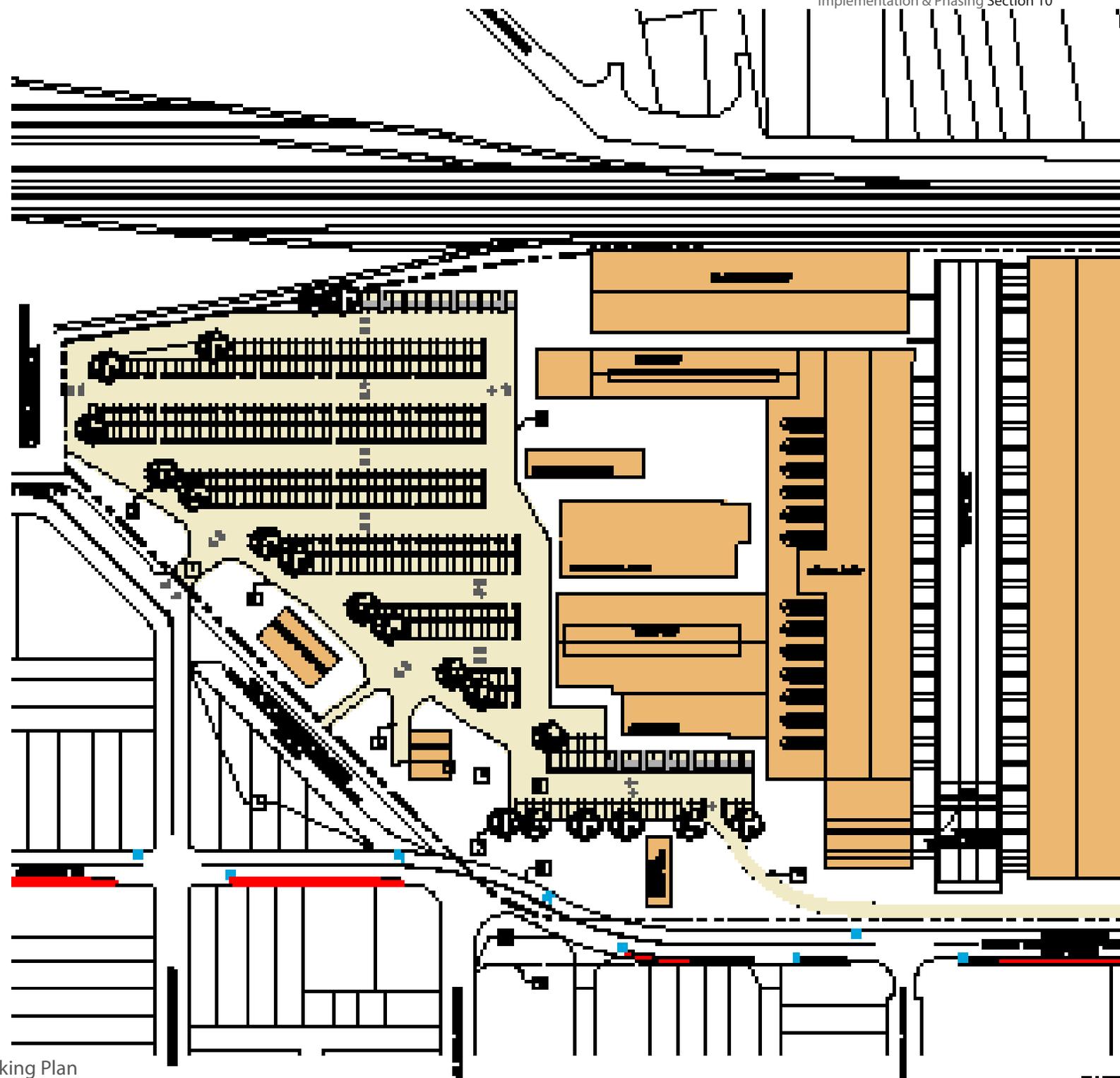
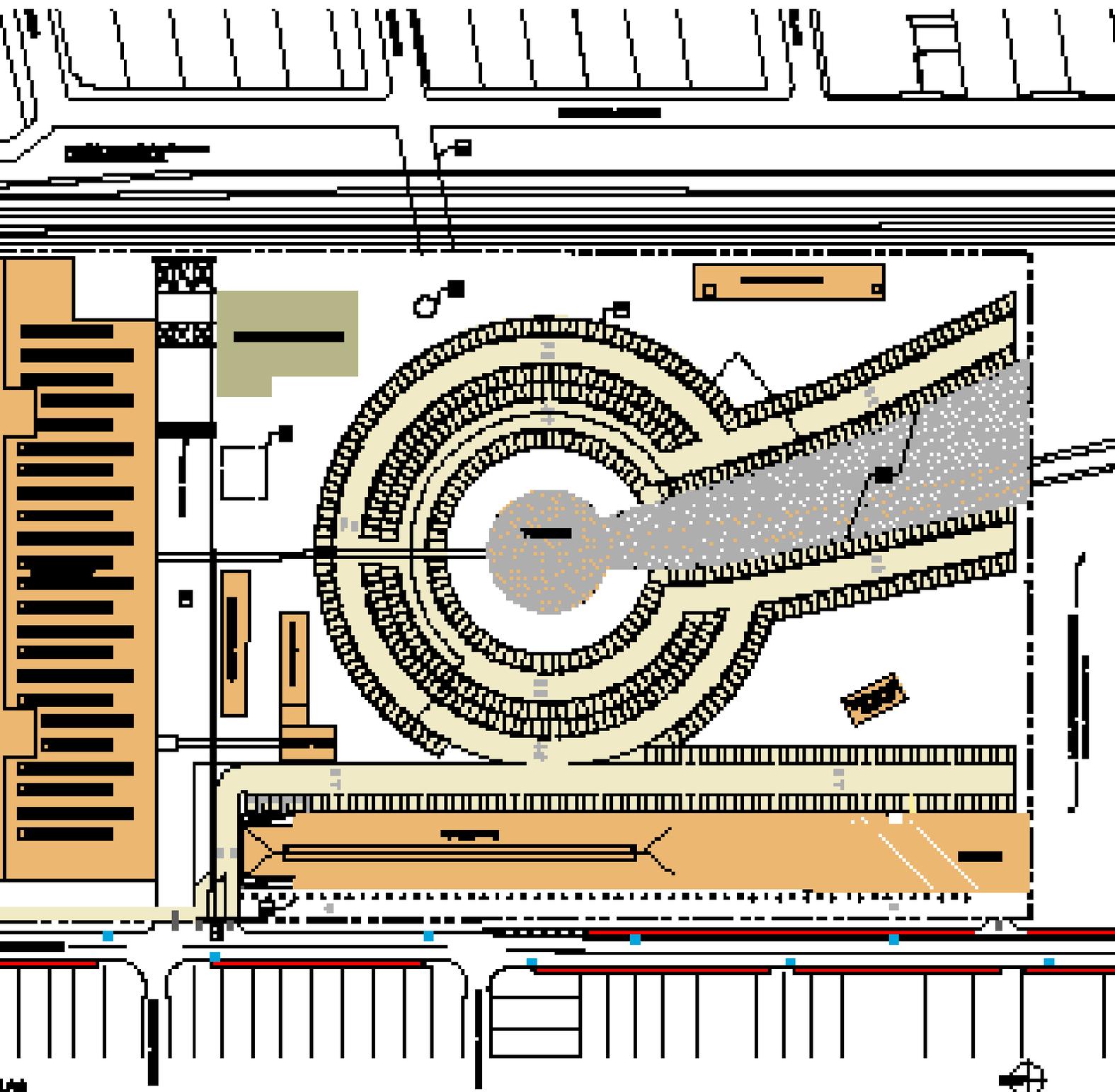
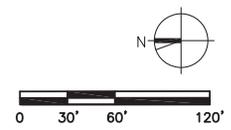


TABLEAU 8: Preliminary Phase Parking Plan



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- Light yellow rectangle symbol
- Grey rectangle symbol
- Black arrow symbol
- Red line symbol
- Blue square symbol

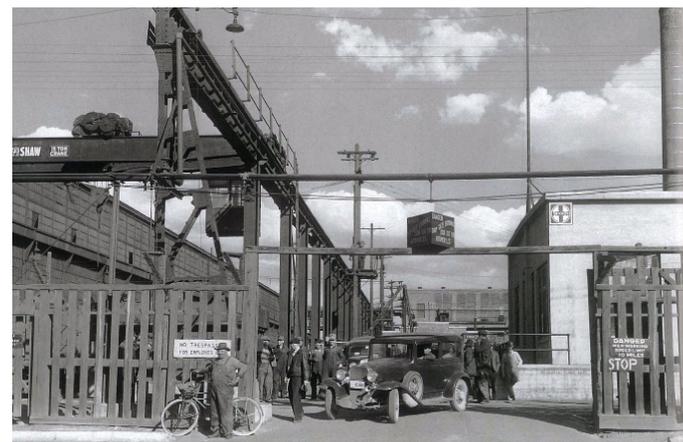


10.10 Case Study - Phase 1 Implementation

The purpose of this section is to present a detailed case study of the open-air Farmer's Market concept recommended as the initial Phase 1 development and the first action taken toward implementation of the Master Plan. The concept proposes utilizing the approximately 50ft wide space immediately to the south of the Machine Shop within and below the area served by a 15-ton Bridge Crane that once was used to transport supplies and equipment laterally across the full width of the site. The Bridge Crane is supported on the north by a beam and track system connected directly to the facade of the Machine Shop whereas the south is supported by a steel wide flange beam and column colonnade.

Below is a summary of benefits of the proposed Phase 1 concept;

- Provides early stage public use of the site, creates enthusiasm for the Rail Yards redevelopment. Provides direct connection to the Barelás Neighborhood from 2nd Street, extends Pacific Avenue onto Rail Yards site.
- Re-opens historic entrance to the Rail Yards site, refer to photo on preceding page.
- Provides high level of off-site visibility from Avenida Cesar Chavez (39,000 cars per day), affords a great number of Albuquerque residents to know that the Rail Yards are under redevelopment.
- Utilizes innovative, state-of-the-art engineering strategy for canopy structure. Creates new, vibrant canopy that would bring life to the existing Bridge Crane structure and Rail Yards site in general.
- Takes advantage of south exposure providing ample sun when cool and ample canopy shade when hot.



PAST

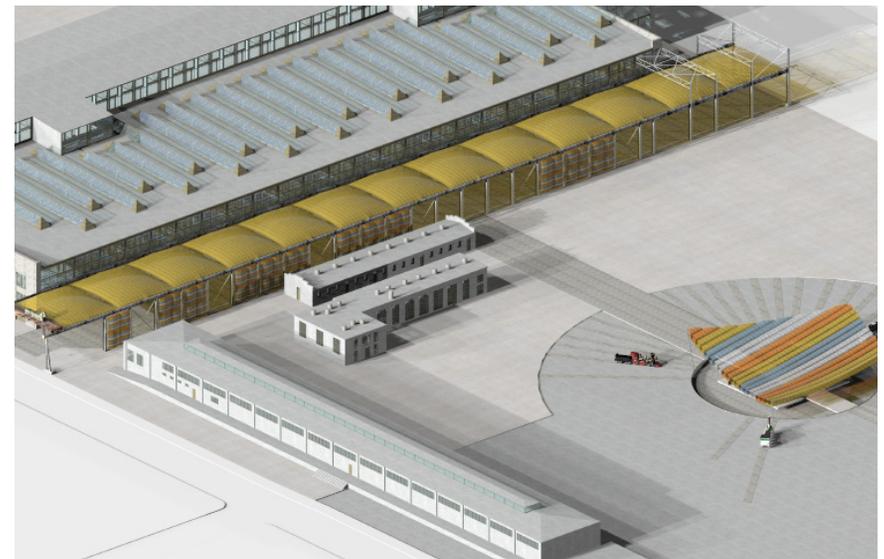
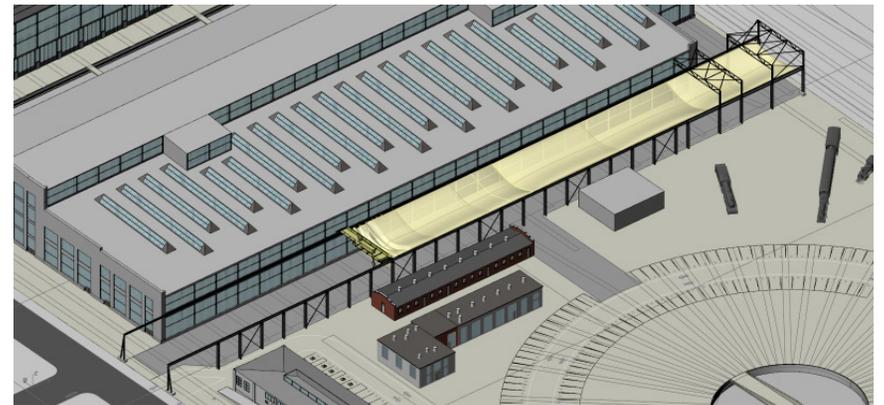
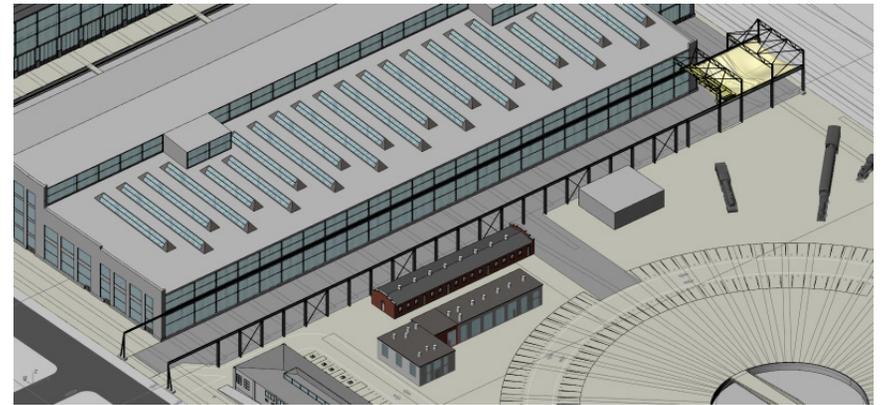


PRESENT



FUTURE - OPEN CANOPY

- Provides direct connection with historic structures; Re-opens historic entrance to the Rail Yards site, refer to photo on preceding page, uses the Machine Shop as a backdrop and allows the potential early stage adaptive reuse of the smaller historic buildings located adjacent the site; South Washroom, Babbit Shop and Welding Shops.



Phase 1 Concept showing Bridge Crane canopy operation

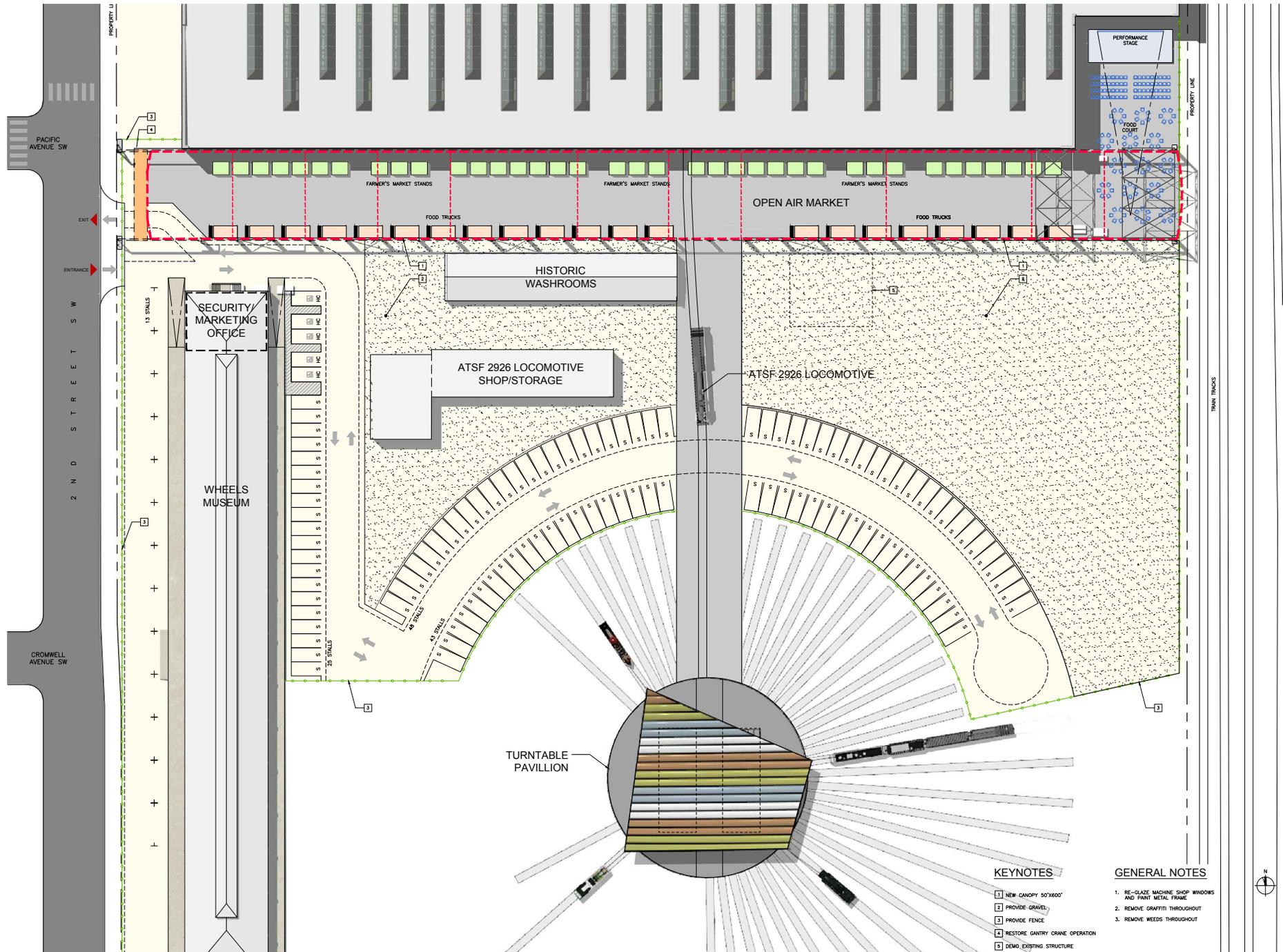


FIGURE 245: Phase 1 Site Plan Concept

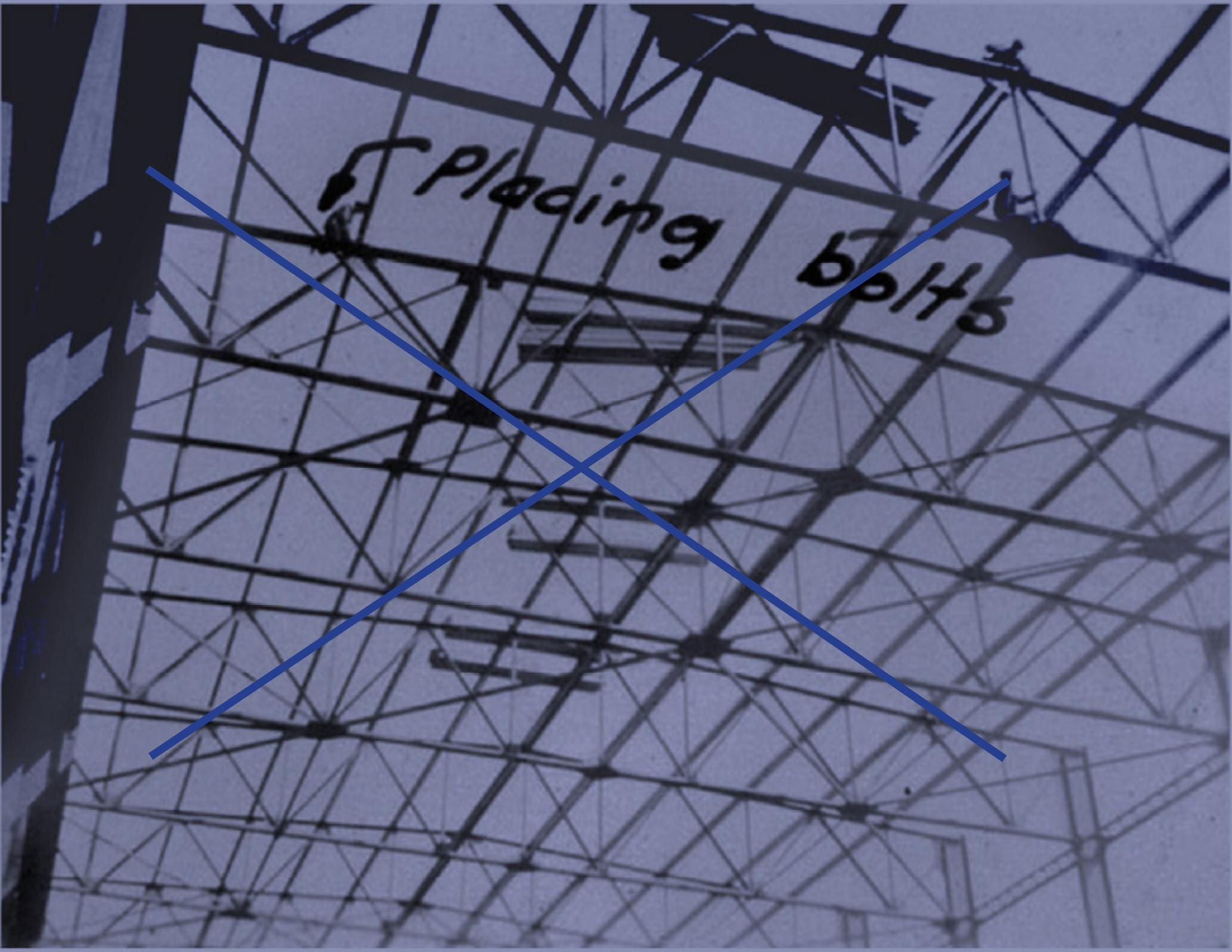
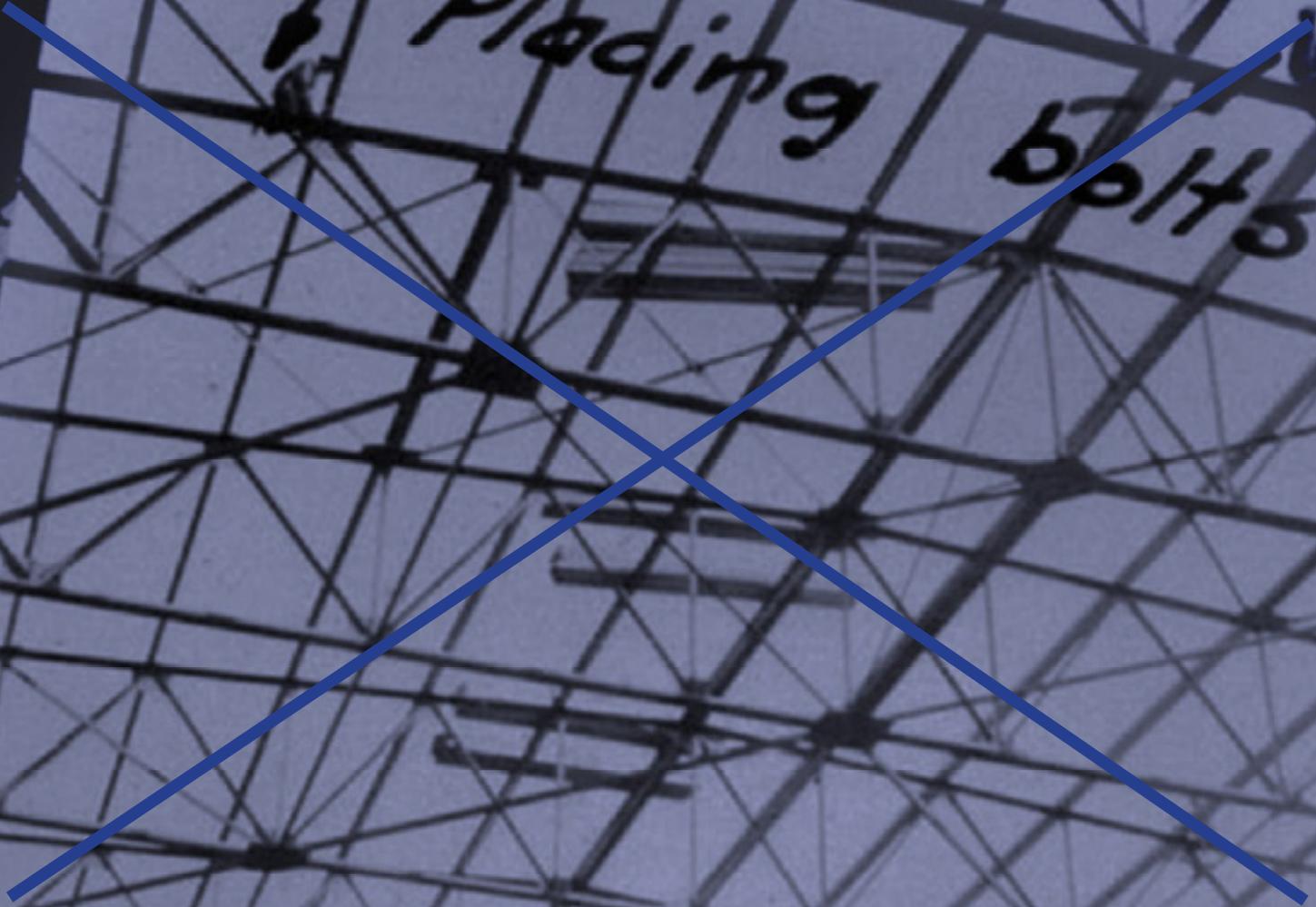


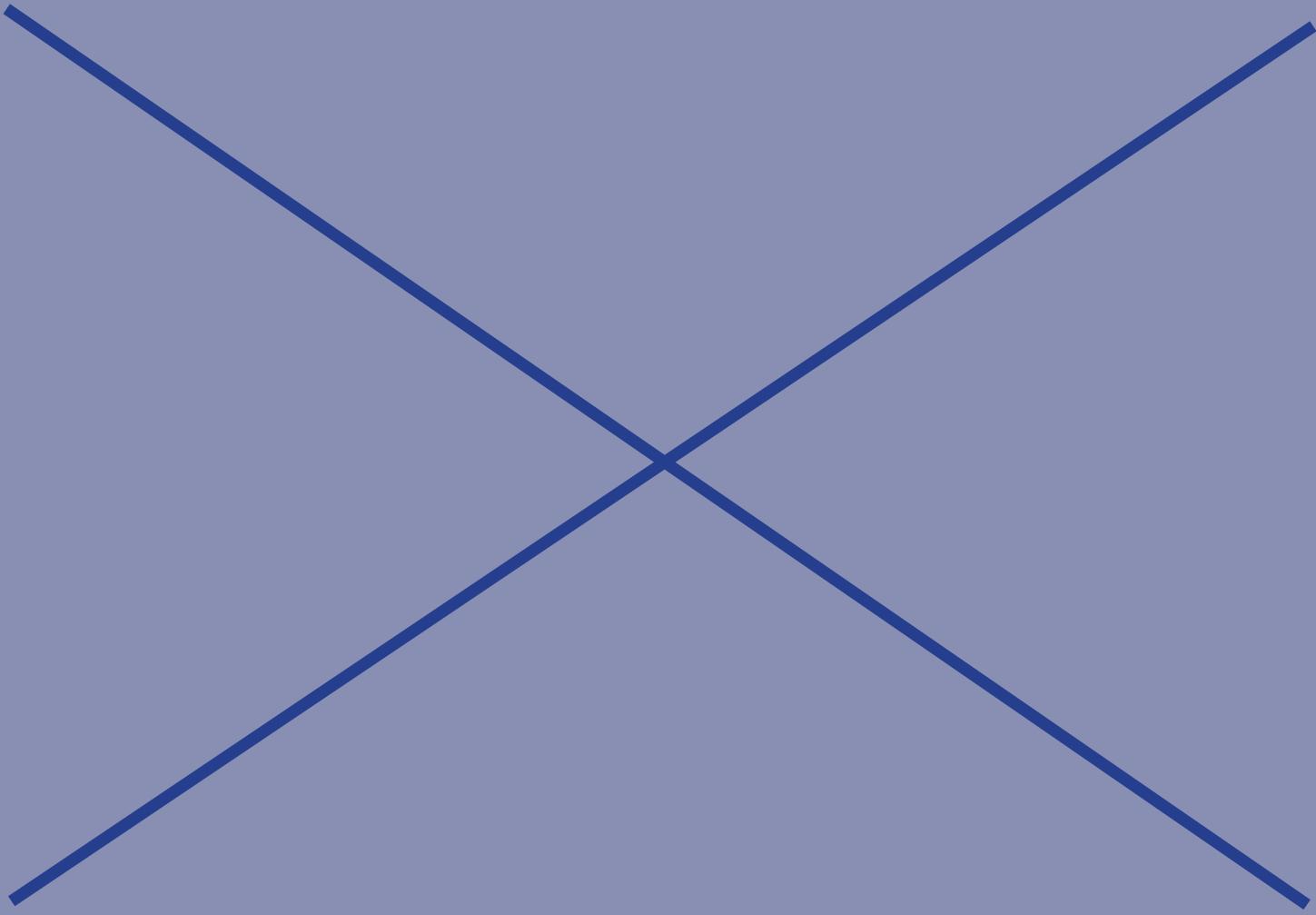
Phase 1 Concept Rendering, Market under Bridge Crane canopy



Phase 1 Concept Rendering, Night view From Avenida Cesar Chavez

Placing bolts





10.0 IMPLEMENTATION AND PHASING

The redevelopment and platting of the Rail Yards property is anticipated to occur over several phases. Once the MDP is approved by the City Council, there will be a number of technical studies required prior to any site development or platting action at the Rail Yards property. These studies include a master grading and drainage plan to be approved by City Hydrology and a master utility plan (water and sanitary sewer) to be approved by the ABCWUA, per the City's Subdivision Ordinance and Development Process Manual. The timeframe for completing these technical studies is within six months of City Council approval of the MDP. A Transportation System Report was completed in May, 2010.

10.1 Infrastructure

The master grading and drainage plan and the master utility plan (water and sanitary sewer) will provide the strategies for phased implementation and the recommendations for both short and long-term solutions. (Refer to Section 9 for complete analysis). A key aspect of the water portion of the master utility plan will be fire suppression, which will require review and approval by the City Fire Marshal. As individual projects are implemented at the Rail Yards property, it is anticipated that detailed infrastructure plans will be submitted and approved for water and sanitary sewer availability statements from the ABCWUA and the Fire Marshal's office.

Outside of the City site development process, the master developer shall coordinate with the dry utility providers for electric, gas, and fiber optic services. This should be done simultaneously with the other infrastructure master plans to avoid delay in provision of services.

10.2 Transportation

The Rail Yards property is uniquely situated on the edge of the Barelás

neighborhood and the street grid of residential streets that connect to the commercial and mixed use 4th Street Corridor. 2nd Street was recently changed from one way to 2 way traffic flow and improved with new paving, signage, bump-outs for on-street parking, etc.

Individual projects and phases should be reviewed by the City Traffic Engineer in regard to access, parking, and use of alternative modes of travel. It is not anticipated that Traffic Impact Studies will be prepared for each project, but rather, a review of the overall redevelopment of the Rail Yards property relative to jobs/housing balance, transit services (including connection to the Alvarado Transportation Center), bicycle and pedestrian access, ingress/egress, and parking.

10.3 Platting

The Rail Yards property will be platted in order to facilitate acquisition and development of individual projects and phases. Since all projects are required to have additional review (other than the workforce housing and the WHEELS Museum as approved by the City Council), it is anticipated that bulk land variances will be requested for future phases consistent with the master infrastructure plans. Platting may occur simultaneously with the DRB's review of Site Development Plans for Building Permit.

10.4 Site Development Plan Approval Process

Specific projects at the Rail Yards property are required to complete a Site Plan for Building Permit, as defined by the City Comprehensive Zoning Code. The exception to this is the WHEELS Museum and the workforce housing, which are allowed to go directly to building permit review prior to the adoption of the MDP, per the Barelás Sector Development Plan. The Site Plan for Building Permit shall include a Site Development Plan, landscape plan, grading and drainage plan, utility plan and building elevations.

The MDP provides for a streamlined administrative approval through a public hearing process before the Development Review Board (DRB). The public hearing process requires notification to the affected neighborhood associations, including Barelás and South Broadway and any other impacted neighborhood as determined through the Office of Neighborhood Coordination. In order for the Site Plan for Building Permit to be approved, the applicant must demonstrate that the project and proposed use are consistent with the goals, policies, and the design standards contained in the MDP. A pre-application review meeting and/or design review meeting with the Urban Design and Development Division of the Planning Department is strongly recommended required to ensure a smooth site development plan approval process.

In addition to the regular DRB members, the review of Site Plans for Building Permit shall include the a City's Land Landmarks and Urban Conservation Commission (LUCC) planner and the a Metropolitan Redevelopment planner. The intent is to ensure proposed projects at the Rail Yards property comply with the MDP and any requirements due to the historic landmark designation of the Firehouse and any other structures that may be determined to be "contributing" by future studies. This will also help to ensure coordination with the LUCC on projects that require its review and approval.

10.5 Deviations and Amendments to the Master Plan

The MDP is intended to provide the framework for development of the Rail Yards over time. However, it is recognized that conditions may change that require a deviation or amendment to the MDP. As previously stated in Section 10.4, development of individual projects at the Rail Yards that are consistent with the MDP shall not require EPC approval.

A deviation to the MDP is defined as any departure from the

measurable standards, and design requirements standards, structure orientation, etc. as described in the adopted MDP. Deviations shall require review and approval by the Planning Director (or his/her designee) in and be in accordance with the Comprehensive City Zoning Code and shall meet the intent of the MDP. Deviations from the MDP will be presented at the pre-application meeting. Approvals of deviations from the MDP by the Planning Director (or his/her designee) shall accompany the Site Plan for Building Permit application to DRB.

-

An amendment to the MDP is defined as any text change to the Goals and Policies (Section 5), Master Plan (Section 6), or Design Performance Standards (Section 8) in the adopted MDP. Proposed amendments to the Master Plan or Design Performance Standards shall require submittal to the EPC. Proposed amendments to the Goals and Policies shall require the review and recommendation of the Rail Yards Advisory Board prior to submittal to the EPC.

A pre-application meeting with the Urban Design and Development Division of the Planning Department is strongly recommended to determine the correct approval process to follow.

-

10.6 Project Phasing

A phasing plan is provided in Figure 23 as a general framework for the relative sequencing of project buildout over time. Phases are organized by parcel designations previously discussed in Sections 6 and 8. Although the Master Plan includes these preliminary recommendations, it is critical to the future success of the project that there remain ample flexibility to respond and adapt to the changing conditions of the future marketplace. The general concepts underlying the phasing plan are as follows;

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interest in the Rail Yards project from a future user/tenant perspective, to set the tone and standards of design quality for the future buildout and most importantly, to get the community engaged and reconnected to their site. The proposed Phase 1 scheme should strive to embody the energy of the future development and have the greatest public visibility possible for the least initial investment of cost. Specific Phase 1 recommendations are as follows;

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NOTE: PLAN HAS BEEN UPDATED TO COMPORT WITH SITE PLAN FOR SUBDIVISION

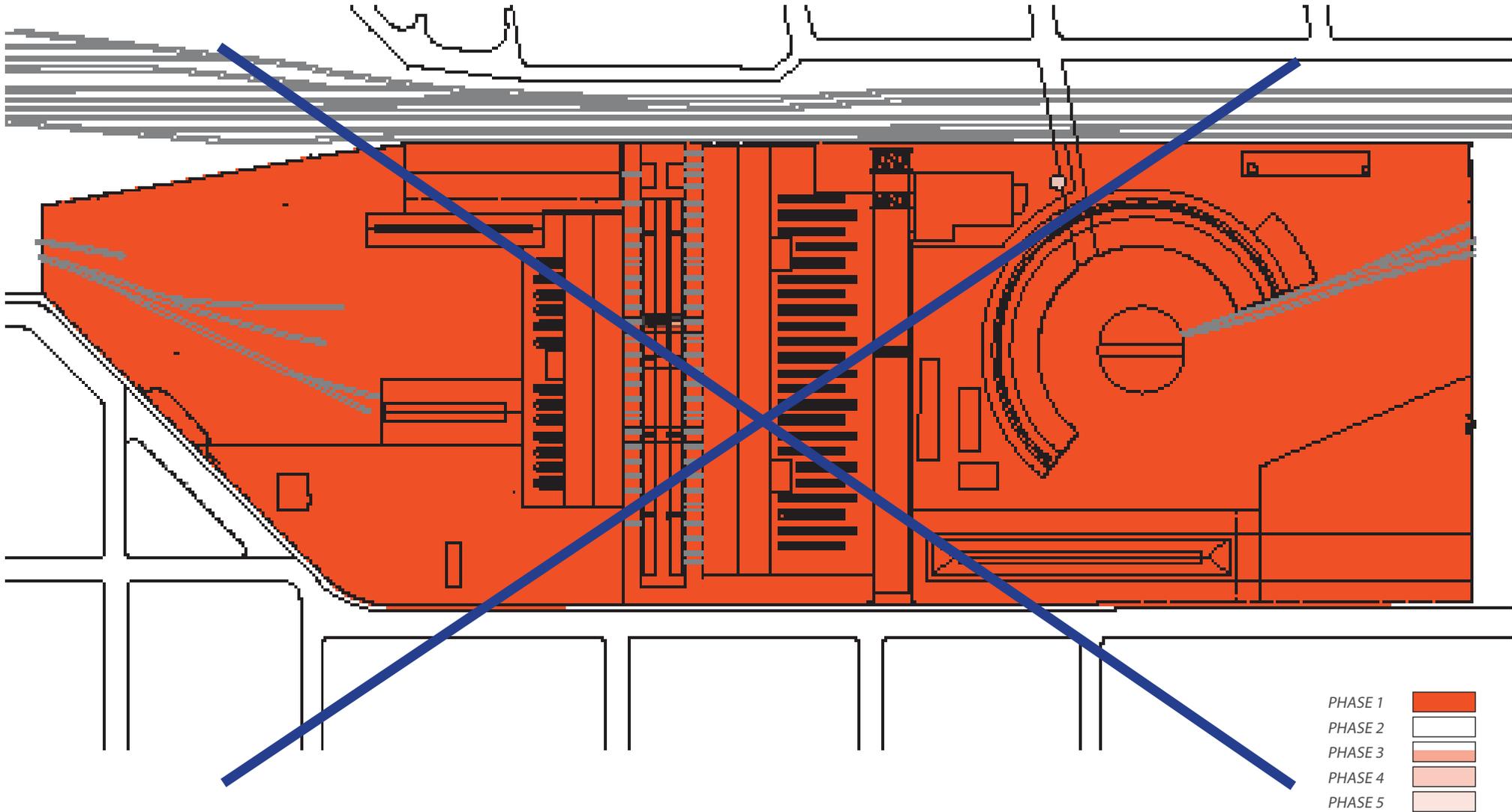
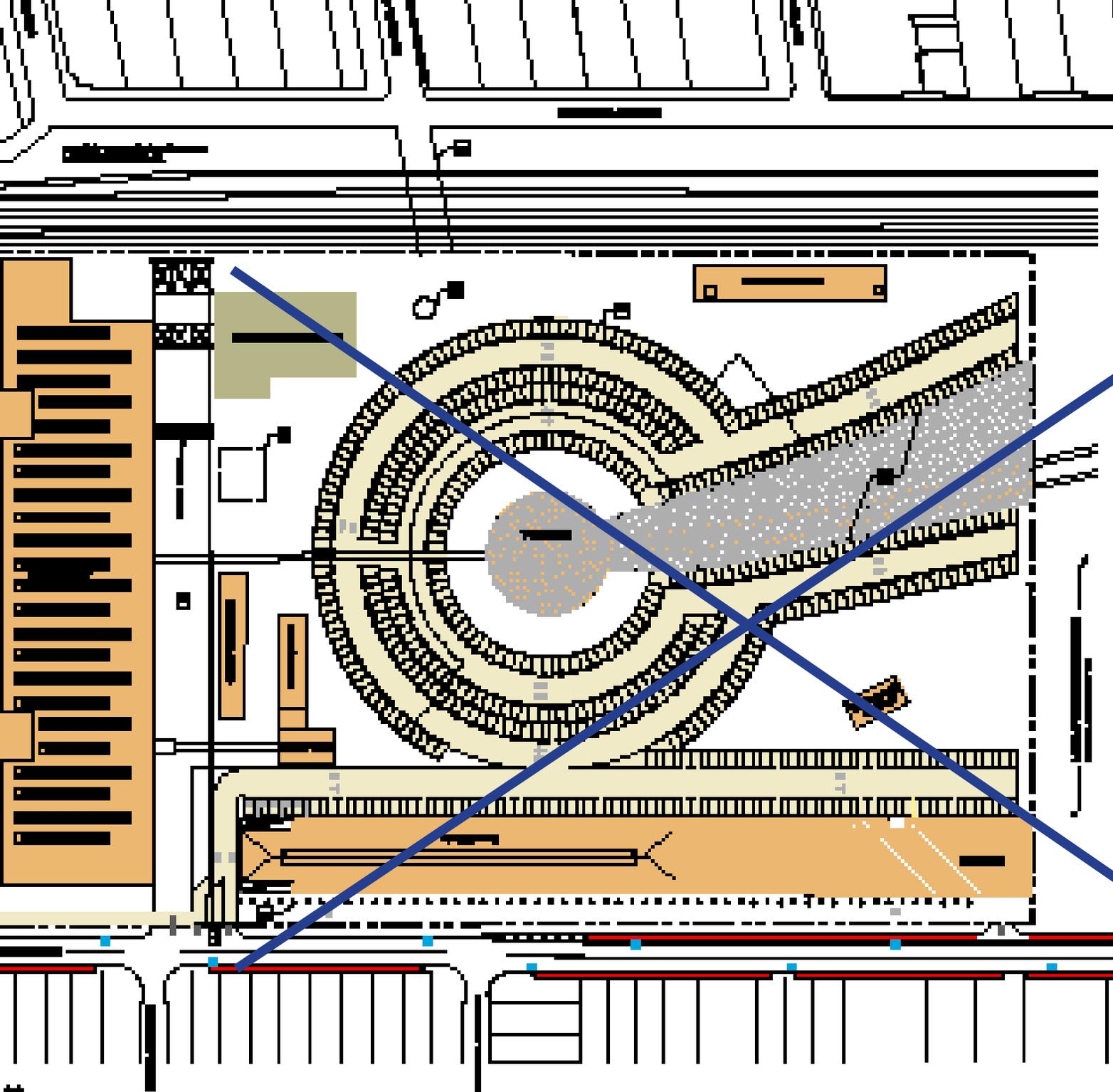
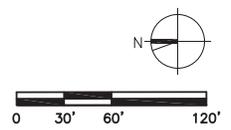


Figure 234: Phasing Plan Diagram



Legend

- Orange rectangle: FUTURE PAVEMENT
- Light yellow rectangle: EXISTING PAVEMENT
- Grey rectangle: EXISTING ASPHALT
- Circle with cross: EXISTING TREE
- Circle with dot: EXISTING PLANT
- Red line: EXISTING CURB
- Blue square: EXISTING LIGHT



and existing platform. Depending on the timing of Phase 2, the Workforce Housing component may also screen parking from the street.

- Parking provided will generally serve the entire Rail Yards site during these preliminary phases.
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Notwithstanding the above, when Workforce Housing is ultimately developed will depend on many factors, including when a housing developer is selected and when sufficient funds for the project can be secured. The Master Plan shall consider implementation of the Housing component as early as feasible.

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- Phase 2: Approval of Master Plan, MDDA document, and project financing. Approval of adaptive reuse of historic buildings as described in the MDP document.
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- Phase 5: Completion/Tenant Buildout of 75% of Phase 2 total allowable building area. Reconstruction of Historic Roundhouse and Smokestack will require approvals as described in the MDP document.

Mayor has submitted and the City Council has approved an Executive Communication that describes, in detail, the types of interim use and work to be completed and identifies the funding source(s) for making improvements." The purpose of the text amendment was to encourage community activities on the City-owned Rail Yards property prior to adoption of a Master Development Plan for the permanent re-use of the Albuquerque Rail Yards site.

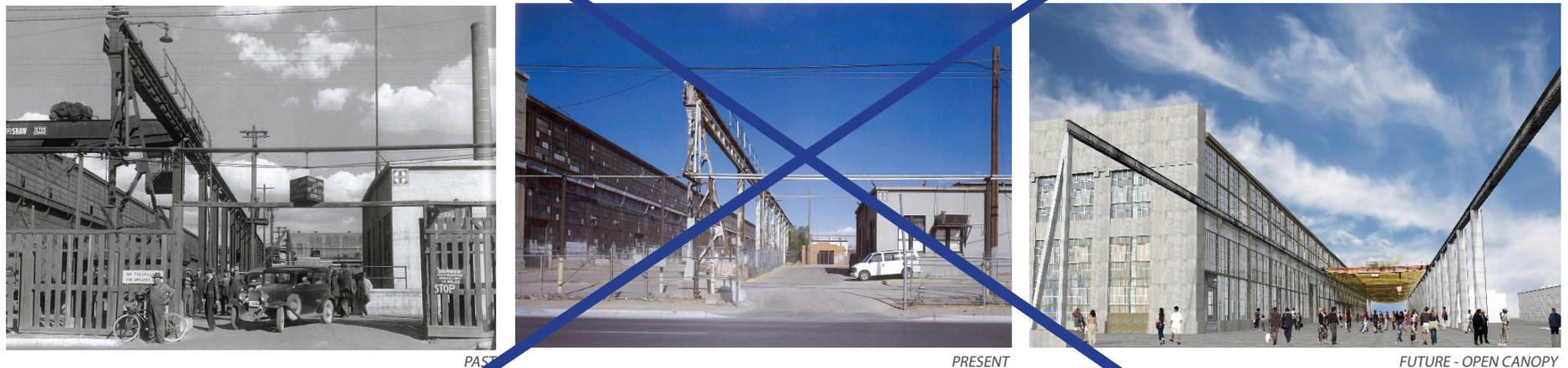
Based on this amendment, the City has moved forward on an interim proposal to temporarily re-use the Blacksmith Shop as a public events venue. There would not be a long-term entitlement for interim uses to continue to exist in a particular location should another, more permanent user come along that furthers the objectives of the overall Master Plan. Although the proposed interim use does not comport with the recommendations of the Master Plan, the general initiative to activate the site on an interim level is supported, provided it does not interfere with the long-term aspirations for the Rail Yards site as contained herein.

10.8 Interim Use

The SU-2/HLS zone defined in the Bernalas Sector Development Plan was recently amended to allow for building permits to be issued for repairs and/or improvements needed for interim uses before the Master Development Plan Approval. According to the proposed text, "Building permits for such work shall only be issued after the

10.9 Case Study – Phase 1 Implementation

The purpose of this section is to present a detailed case study of the open-air Farmer's Market concept recommended as the initial Phase 1 development and the first action taken toward implementation of



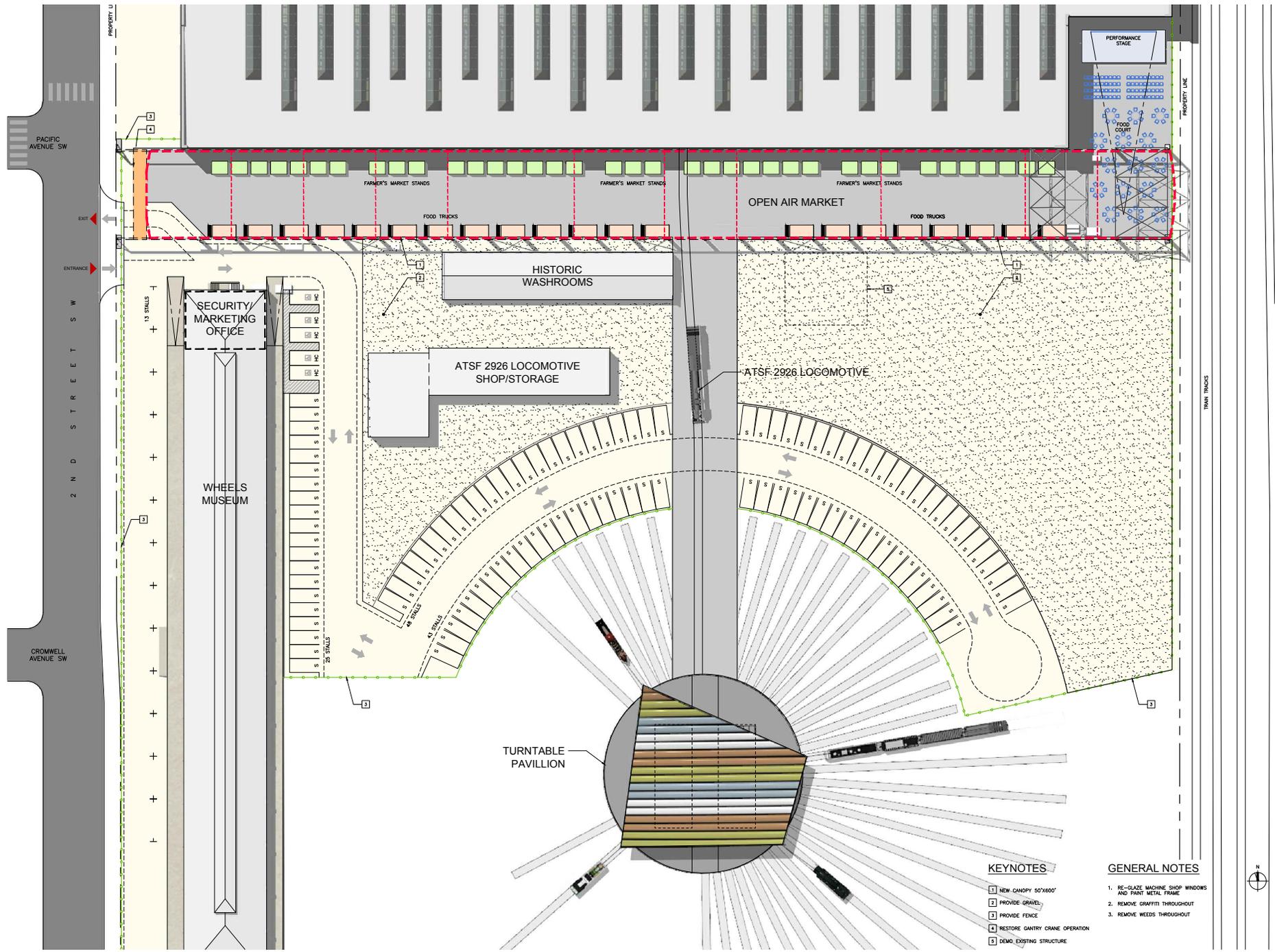
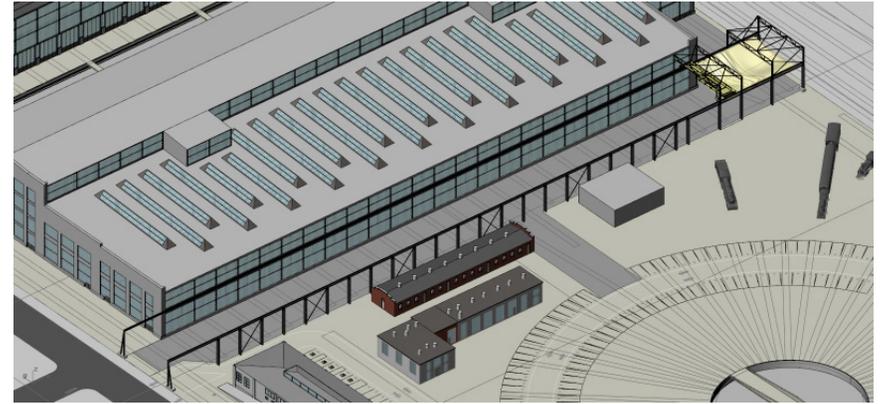


FIGURE 245: Phase 1 Site Plan Concept

the Master Plan. The concept proposes utilizing the approximately 50ft wide space immediately to the south of the Machine Shop within and below the area served by a 15-ton Bridge Crane that once was used to transport supplies and equipment laterally across the full width of the site. The Bridge Crane is supported on the north by a beam and track system connected directly to the facade of the Machine Shop whereas the south is supported by a steel wide flange beam and column colonnade.

Below is a summary of benefits of the proposed Phase 1 concept;

- Provides early stage public use of the site, creates enthusiasm for the Rail Yards redevelopment. Provides direct connection to the Barelas Neighborhood from 2nd Street, extends Pacific Avenue onto Rail Yards site.
- Re-opens historic entrance to the Rail Yards site, refer to photo on preceding page.
- Provides high level of off-site visibility from Avenida Cesar Chavez (39,000 cars per day), affords a great number of Albuquerque residents to know that the Rail Yards are under redevelopment.
- Utilizes innovative, state-of-the-art engineering strategy for canopy structure. Creates new, vibrant canopy that would bring life to the existing Bridge Crane structure and Rail Yards site in general.
- Takes advantage of south exposure providing ample sun when cool and ample canopy shade when hot.
- Provides direct connection with historic structures; Re-opens historic entrance to the Rail Yards site, refer to photo on preceding page, uses the Machine Shop as a backdrop and allows the potential early stage adaptive reuse of the smaller historic buildings located adjacent the site; South Washroom, Babbit Shop and Welding Shops.



Phase 1 Concept showing Bridge Crane canopy operation



Phase 1 Concept Rendering, Market under Bridge Crane canopy



Phase 1 Concept Rendering, Night view From Avenida Cesar Chavez

Blue Line Note: Move this to create new Appendix A.

SOURCES AND CREDITS

- ULI Advisory Services Panel, 2008, "Albuquerque Rail Yards," prepared at the invitation of the City of Albuquerque, the WHEELS Museum, and the University of New Mexico School of Architecture and Planning.
- Wilson, Chris, 1986, "The Historic Railroad Buildings of Albuquerque, an Assessment of Significance," prepared for the Redevelopment Division, Planning Department, City of Albuquerque.
- Dodge, Bill, 2013, "National Register of Historic Place Nomination Form, Atchison, Topeka & Santa Fe Railway Locomotive Shops Historic District," prepared for the City of Albuquerque for submittal to the New Mexico State Historic Preservation Office.
- City of Santa Fe, 2002, "Santa Fe Railyard, Master Plan and Design Guidelines." Master Plan prepared for the former Rail Yard site at the terminus of the former ATSF line in Santa Fe. To date, many portions of the Master Plan have been successfully implemented.
- City of Albuquerque, 2008, "Barelas Sector Development Plan." Document prepared as a replacement to the Barelas Sector Development Plan written in 1978 and amended in 1993. It lays out the existing conditions, issues, and recommendations for five main planning categories; Land Use and Zoning; Home Ownership and Affordability; Transportation; Public Safety, Social Services and Community Facilities; and Economic Development.
- City of Albuquerque, 1986 (amended 2002) "South Broadway Neighborhoods Sector Development Plan."
- Historic District Improvement Company, 1999, "Master Plan, Alvarado Transportation Center Project Area."
- City of Albuquerque, Department of Finance and Administrative Services, 2010, "Request For Proposals, Solicitation Number: RFP 2011-003-JR."



Troweling floor
Mach. Shop.

Blue Line Note: Move this to create new Appendix A.

APPENDIX A: SOURCES AND CREDITS

- ULI Advisory Services Panel, 2008, "Albuquerque Rail Yards," prepared at the invitation of the City of Albuquerque, the WHEELS Museum, and the University of New Mexico School of Architecture and Planning.
- Wilson, Chris, 1986, "The Historic Railroad Buildings of Albuquerque, an Assessment of Significance," prepared for the Redevelopment Division, Planning Department, City of Albuquerque.
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APPENDIX A: PUBLIC OUTREACH SUMMARY

Overview

This Appendix to the Rail Yards Master Plan contains information about the public outreach efforts made by the planning team as part of the process to develop the Rail Yards Master Plan. The City and Samitaur relied heavily on input received during the process to inform the concepts and goals of the Master Plan, so it was important to design a robust and engaging public input process that provided ample opportunities for interested parties to receive information and offer meaningful feedback.

Means of Notification and Communication

The City undertook extensive notification efforts in order to reach a wide audience and invite broad participation in the planning process. Initial means of notifying the public of the kick-off meetings for the Master Planning process included:

- Direct mail (nearly 4,000 pieces) to all property owners and residents in the Barelbas and South Broadway neighborhoods, and notification of all Downtown area neighborhood associations. The mail piece included a letter from Mayor Richard J. Berry, City Councilor Isaac Benton, and City Councilor Debbie O'Malley that invited them to the Master Plan kick-off meetings in August, 2012, and explained how to stay engaged in the process. Also included in the mailing was a postcard to return to the Project Coordinator to request to be added to the notification list and a brochure containing background information about the project and the seven "guiding principles" of the project.
- Article in the August, 2012, Neighborhood Newsletter (distributed to all contacts on file with the City's Office of Neighborhood Coordination). The article contained information about the kick-off meetings, the seven guiding principles of the

project, and the address for the Rail Yards website.

- Media Advisory on August 20, 2012. The media advisory contained information about the kick-off meetings and invited the public to attend the meetings to have a chance to win a guided tour of the site.
- Rail Yards Website. The City maintains a website containing information about the project, including its history and updates about the Master Planning process. The website also provides an opportunity for the public to submit comments directly to the planning team, through an online form.

Follow-up communication was maintained via an email distribution list managed by the City's Master Plan Project Coordinator, Petra Morris. Ms. Morris sent emails to notify people when new materials, such as meeting summaries, were available on the Rail Yards website and with information and reminders about upcoming meetings and tour opportunities. Ms. Morris also served as the primary point of contact for people with questions about the process or who wanted to submit comments for consideration.

Public Meetings & Site Tours

In order to ensure an open and participatory dialogue, the City engaged local consultants Tim Karpoff & Associates to facilitate the series of public meetings that were used to receive input and communicate initial concepts for the Master Plan.

The facilitation team moderated and recorded the discussions at the kick-off meetings in August and the first presentation of the Master Plan concepts on October 25, 2012. The team also helped host

| Rail Yards Master Plan Public Meetings | |
|---|---|
| <u>Kick-Off Meetings</u> | <u>Presentation of Initial Master Plan Concepts</u> |
| Thursday, August 23, 2012, 6 PM | Thursday, October 25, 2012, 6 PM |
| National Hispanic Cultural Center | Barelas Community Center |
| Saturday, August 25, 2012, 10 AM | |
| Barelas Community Center | <u>Open House / Tours of Site</u> |
| | Saturday, December 1, 2012, 10 AM-2 |
| Saturday, August 25, 2012, 2 PM | Albuquerque Rail Yards |
| South Broadway Cultural Center | |

the December 1, 2012, Open House at the Rail Yards, during which facilitation team members oriented newcomers to and veterans of the process to the activities of the planning effort. After each of the meetings, the facilitators provided a summary report documenting the input received. These reports, included herein in their entirety, were shared with the public through email distribution and the website, and were used by the planning team in developing the Master Plan. With its many features and structures of varying construction, sizes, and historic uses, the Rail Yards site can be difficult to fully understand and appreciate without having experienced it for oneself. Therefore, in addition to public meetings, tours of the site were offered during the Master Plan process to provide the public with opportunities to gain a firsthand understanding of the site so that they could be more informed when commenting on the Master Plan's proposals. For safety and liability reasons, tours had to be limited in size and number, but approximately 300 people had the opportunity to tour the site as part of the Master Plan process.

All in all, hundreds of people participated in the public meetings and tours, including residents of the adjacent neighborhoods, people representing organizations with a specific interest in the project, former

employees of the AT&SF/BNSF railroad shops, and individuals from across the city and region who are interested in how the site will be redeveloped. Many people attended the initial kick-off meetings as well as follow-up meetings, which provided continuity in the process and afforded the planning team the opportunity to develop relationships with interested individuals and parties.

Targeted Stakeholder Meetings

Following the public kick-off meetings in August, the planning team met with specific stakeholders to solicit feedback on issues affecting particular aspects of the redevelopment of the Rail Yards. The organization and individuals the team met with were:

- Albuquerque Convention and Visitors Bureau
- Albuquerque Economic Development
- Albuquerque Hispano Chamber of Commerce
- Barelas Neighborhood Association / Barelas Community Coalition*

- Bernalillo County Economic Development staff
- City of Albuquerque
- Mayor Richard J. Berry
- Department of Family & Community Service staff and Affordable Housing Committee representative
- Transit Department Staff
- City of Albuquerque Economic Development staff
- Downtown Action Team
- Economic Forum
- Mid-Region Council of Governments
- New Mexico Steam Locomotive 2926 / Railroad Historic Society
- South Broadway Neighborhood Association*
- WHEELS Museum

*NOTE: In addition to sit-down meetings with the neighborhoods, the planning team went on tours of the Barelás and South Broadway neighborhoods, guided by residents, in order to understand the sensitive interfaces with and important connections to the site. As with feedback received from the public, the planning team took into consideration the ideas and input received via the targeted stakeholder meetings in developing the initial Master Plan concepts. A summary of these meetings is provided in Section 3.

Public Outreach Materials

A separate appendix contains the following reference materials documenting the public outreach and feedback of the Master Plan process:

- Agenda from each of the public meetings;
- List of participants at each of the public meetings;
- Facilitators' summary report from each of the public meetings;
- Summary of targeted stakeholder meetings;
- Brochure that was developed to introduce people to the Master Plan process (English and Spanish versions);
- Frequently Asked Questions document that was developed to answer common questions that arose during the planning process.

APPENDIX B: PHOTOGRAPHIC SURVEY OF HISTORIC STRUCTURES

Included is a photographic summary of thoughts/information compiled specific to the Rail Yards site. There is much historic documentation at our disposal. Rather than compiling an exhaustive list, we've focused on information that would be pertinent in the future adaptive reuse of the site. Some is technical pulled from literature, some based on site observation.

The current configuration of the Locomotive repair facilities were constructed between 1915 and 1922 and represented the height in modern industrial design and achievement at their time. The buildings were advanced, the so-called 'Machine Shop' is the largest structure and contains the following advances;



MACHINE SHOP

Built in 1921. Contains 165,000sf including partial mezzanine in Bay #1. Divided into 4 bays, with an exterior 5th bay at the South for unloading.

Entirely glazed north and south façades. 1/4" thick, single glazed panels, 14"x20", set in steel sashes. Partially glazed East and West façades set into reinforced concrete frames.

The Lower 18' of the north façade contains continuous bi-fold steel frame doors, supported on rollers, that allowed the locomotives to move from Machine Shop to the exterior Transfer Platform.

Mechanically operated natural ventilation, large crank/pulley devices controlled multiple operable sashes at once. Equipment looks to be in decent shape.

Rooftop skylights allowing no direct sun. Single glazed, ribbed, wire glass. Skylights are also mechanically operable on one side only. Almost all panels are broken, resulting from apparent vandalism (target practice).

2 large mechanical rooms contained two large electrical fans providing 90,000cfm and 68,000cfm respectively, capable of 3 complete air changes per hour. Air was forced across steam heated coils when req'd for heating load. Ductwork throughout structure followed column lines to the distribution point 7' above floor.

Flooring: 6" concrete slab, finished to a true surface, primed with a 1/8" bituminous coating, upon which 3" creosoted (distillate derived

entirely from tars produced from the carbonization of bituminous coal) end-grain wood blocks were laid, with pitch interlaid between for waterproofing. Wood floor is in poor condition and creosote is carcinogenic.

Steel Frame Structure, columns designed to support 16 tons each. Each column is supported on a concrete foundation supported upon creosoted wooded piles, driven on average 26' into the earth. Frame also supports various cranes, still intact, not known if still operable, largest crane supports 250 tons.

Building contained 3 electric Otis elevators serving one Mezzanine Level that was historically used for offices and files. Elevators have been removed, only shafts remain.

Roof is double sheathed with built-up roofing. Roof surface is in poor condition although the Machine Shop roof looks to be in better shape than other buildings on-site.



Machine Shop, Bay #1 - Below board formed, cast in place, concrete mezzanine.



Machine Shop, Bay #2, Pyramidal skylights run between bays 2 and 3.



Machine Shop, View Towards West Elevation



Machine Shop, Bay #3.



North interior elevation showing large operable doors.

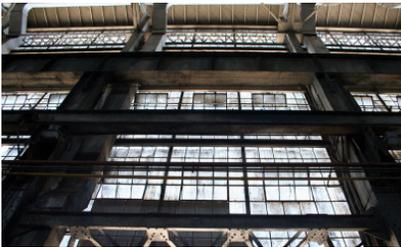


Machine Shop, Bay #4, 57' clear height to underside of truss structure. Floor troughs can be seen across slab.





HVAC Duct distribution from Central Plant.



North interior elevation.



Machine Shop, Bay #4 - View from within floor trough.



North elevation, Operable doors.



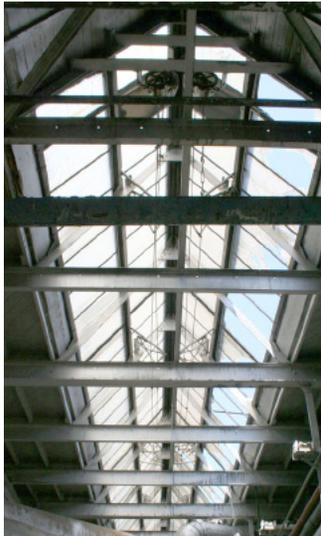
North elevation, Operable doors.



North elevation, Completely glazed façade.



Machine Shop, North elevation, View from Transfer Table.



Skylight detail.



Gear/Pulley mechanism for skylight operation.



Crank mechanism for skylight operation.



Longitudinal view from mezzanine catwalk.



Machine Shop, Pyramidal skylights over Bays 2 and 3.



Mezzanine elevator machine room (cab has been removed).



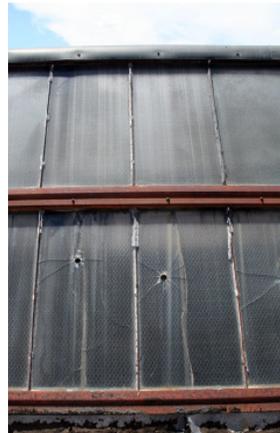
Transverse view from mezzanine.



Machine Shop, View from Room looking North.



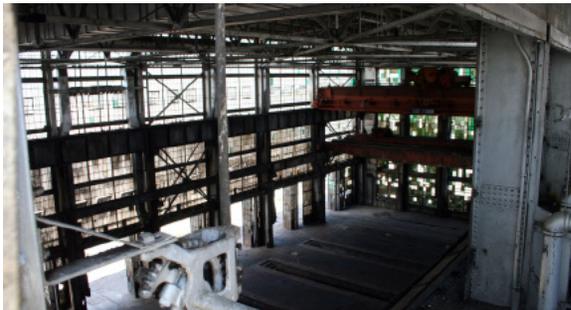
Machine Shop, View up toward mezzanine level.



Wired skylight glazing.



Pyramidal skylights.



View of Bay #4 from roof clerestory.



Clerestory skylight at Bay #4.



Built-up roofing, positive slope to South.



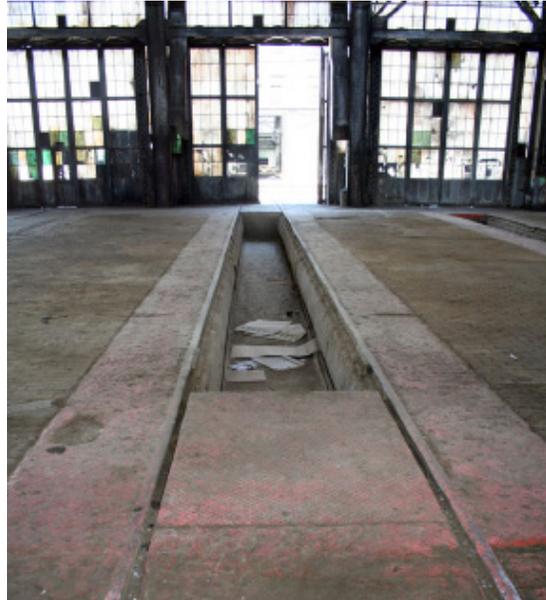
Machine Shop, Bay #4, Main 250 ton crane.



Flooring, 3" thick creosoted end-grain wood blocks.



Bay #4 columns supported on deep piles, dampened by springs.



Bay #4, Floor trough.



Crane structure extends to 2nd Street.



South bay, Exterior loading crane.



Machine Shop, South Elevation, View across turntable.



West Elevation, Cast in Place Concrete Frame.



Southeast corner, adjacent active BNSF rail lines.



BOILER SHOP

Built in 1923. Contains 58,100sf. Divided into 2 bays. Entirely glazed south façade and partially glazed north façade. ¼" thick, single glazed panels, 14"x20", set in steel sashes. Partially glazed East and West façades set into reinforced concrete frames. The Lower 18' of the south façade contains continuous bi-fold steel frame doors, supported on rollers, that allowed the locomotives to move from Boiler Shop to the exterior Transfer Platform. Mechanically operated natural ventilation, large crank/pulley devices controlled multiple operable sashes at once. Equipment looks to be in decent shape.

Rooftop skylights allowing no direct sun over Northern bay only. Single glazed, ribbed, wire glass. Skylights are also mechanically operable on one side only.

Mechanical rooms similar in concept to that of the Machine Shop although much smaller due to the fact that the Boiler Shop is 1/3 the area.

Flooring: 6" concrete slab, finished to a true surface, primed with a 1/8" bituminous coating, upon which 3" creosoted (distillate derived entirely from tars produced from the carbonization of bituminous coal) end-grain wood blocks were laid, with pitch interlaid between for waterproofing. Wood floor is in poor condition and creosote is carcinogenic.

Steel Frame Structure. Frame supports various cranes, still intact, not known if still operable.

Exposed wood plank ceiling is intact, although severe damage can be seen at the southern edge of the South Bay.

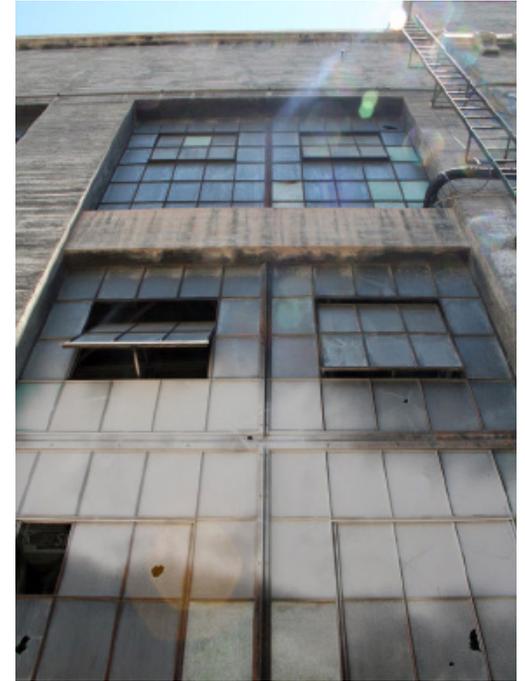
Roof is double sheathed with built-up roofing. Roof surface is in poor condition, and in some cases, completely void where the plank ceiling has been damaged.

Various auxiliary buildings are directly connected to the Boiler Shop, e.g. Tank Shop, Flue Shop, and Paint Shop. The Paint Shop is not worthy of restoration and should be removed.

Electric Transformer, not original to the site, has been located at the Western edge of Bay #2 and looks to be still active.



North elevation, Exterior courtyard in foreground.



West elevation, Glazing inset to concrete frame.



Northeast corner, Reinforced concrete @ fully glazed perimeter wall.



Paint Shop attached to West elevation, Transfer Table in foreground.



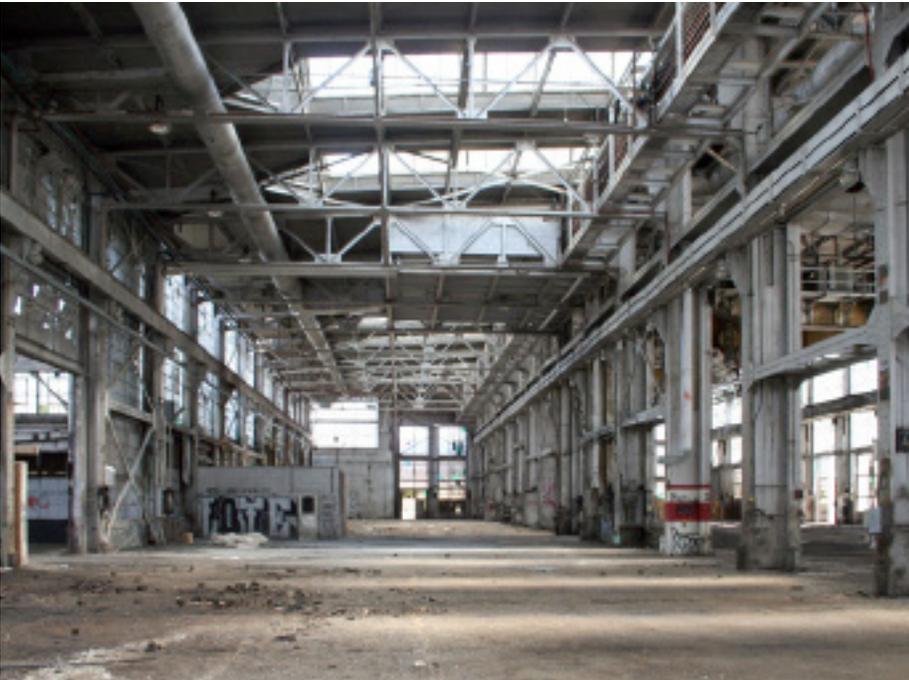
Boiler Shop, South elevation, View from Transfer Table.



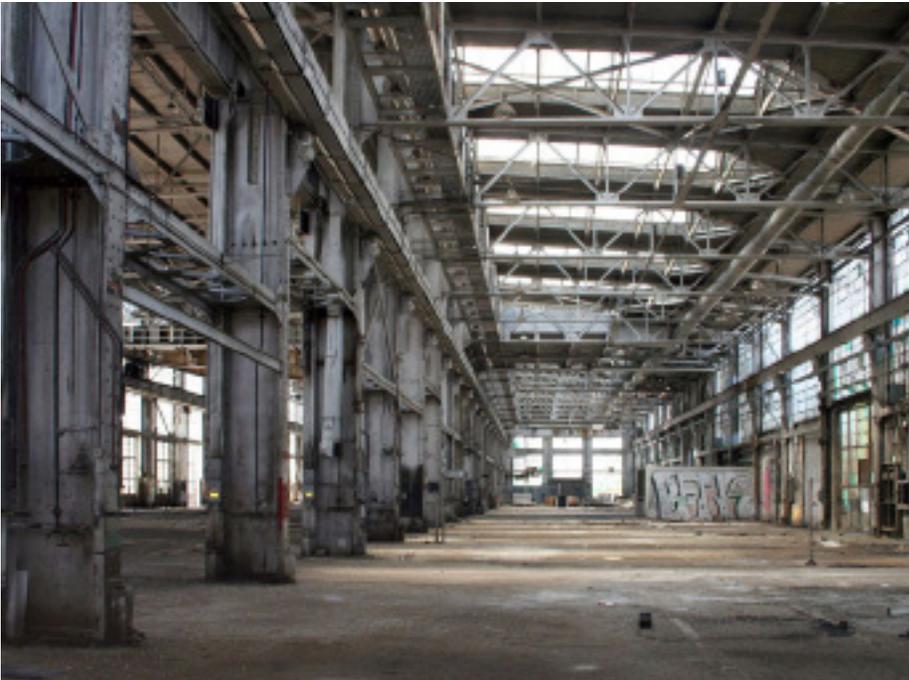
Boiler Shop, Bay #1, Fully Glazed southern elevation, Crane at rear. Floor troughs seen across floor.



Boiler Shop, Bay #1, Fully Glazed southern elevation with 18' tall operable doors.



Boiler Shop, Bay #2, Pyramidal skylights



Boiler Shop, Bay #2, Pyramidal skylights, entrance to Flue Shop at immediate right.



Crane operator workstation, Bay #2.



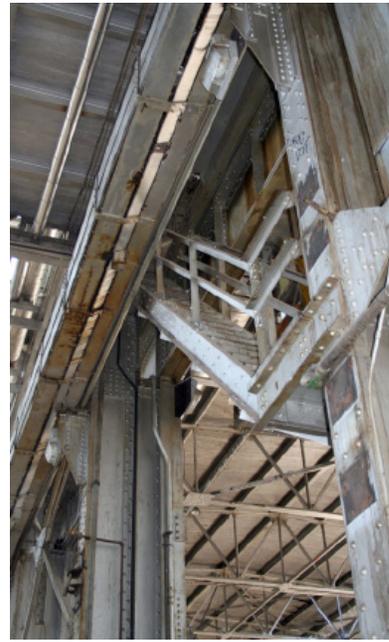
Crane Controls.



Damaged flooring, 3" thick creosoted end-grain wood blocks



Boiler Shop, Cranes at Bay #1.



Stair access to mechanical rooms, at columns lines between Bays #1 and #2.



Boiler Shop, View from South Operable Doors



BLACKSMITH SHOP

Built in 1917, with the exception of the Storehouse, the Blacksmith Shop is the oldest remaining building on-site. Contains 24,879sf.

Predominantly glazed east and west façades set between vertical bands of masonry. This is the only masonry building remaining on the site.

North and South façades are primarily masonry with much smaller openings, except for a large bi-fold central door at both façades. Interior of masonry walls have been painted white.

South elevation abuts Transfer Table, and West elevation abuts Very little provision for mechanically operated natural ventilation, fan units were integrated into the East and West façades in subsequent years.

No Rooftop skylights.

No Mechanical rooms.

Flooring: Concrete slab on grade.

Steel Frame Structure. Columns are themselves built up trusses. No cranes evident in space. Truss shape is unique.

Exposed wood plank ceiling is intact, water damage is evident although ceiling is in relatively good condition.

Seismic retrofitting is evident at exterior masonry walls at attachments to steel support structure.

Central rail lines remain through center of bay, recessed into the concrete floor.



Blacksmith Shop, South Elevation.



Blacksmith Shop, Steel Trusses, Wood Plank Ceiling, Glazed East and West elevations.



South Elevation showing proximity to Boiler Shop to the West.



Interior View toward South Elevation Masonry wall.



North Elevation from adjacent parcel.



Fan equipment at Glazed Elevation.



West/East Elevation, Seismic upgrades.



Steel 'trussed' column.



Exterior walkway between Blacksmith Shop (Left) and Flue Shop (Right), Machine Shop/Transfer Table shown in background.



Blacksmith Shop, Steel Truss at column surrounded by masonry wall.



FLUE SHOP

Built in 1920. Contains 8,878sf.

All concrete cast in place construction makes it unique to the complex with the exception of the Storehouse and some less significant miscellaneous site buildings.

Predominantly glazed east and west façades set between vertical bands of concrete.

North façade is primarily cast in place concrete with two large openings, South of building opens directly to adjoining Boiler Shop. East elevation abuts Blacksmith Shop/ exterior walkway and West elevation abuts exterior courtyard. Courtyard surface is hardscape but cracked with weeds. A few trees have grown up over the years.

Mechanically operated natural ventilation made possible by operable clerestory skylights.

Unlike other buildings, lighting fixtures can be seen throughout, a small amount of mechanical ductwork is visible, with registers supplying the shop. These are not original to the structure.

Ceiling, walls, beams, and slab are all cast in place concrete.

Seismic retrofitting is evident at exterior concrete walls at attachments to concrete beams. Alternatively, steel plates may have resulted from some early form of post-tensioning.



Flue Shop, View down center of Bay.



Steel plate seismic upgrades.



Operable windows.



Flue Shop, Interior view of entrance, Boiler shop shown beyond.



Flue Shop, View up toward operable clerestory windows.



TANK SHOP

Latest building constructed on site, built in 1925. Contains 18,564sf.

Building is very similar in structure to Bay #2 (northern bay) of the Boiler Shop.

Entirely glazed east and west façades, although a very low non-original concrete block with stucco building was added to the site that blocks the lower 15' of the western façade.

This stucco building should be removed. ¼" thick, single glazed panels, 14"x20", set in steel sashes throughout. Partially glazed North façade with large openings to accommodate locomotive transfer set into reinforced concrete frames. South façade opens directly to the Boiler Shop.

Mechanically operated natural ventilation, large crank/pulley devices controlled multiple operable sashes at once. Equipment looks to be in decent shape.

Rooftop clerestory skylights allowing no direct sun run down center of bay. Clerestory shape is distinctive from 'A' frame skylights found in Boiler and Machine Shops. Single glazed, ribbed, wire glass. Skylights are mechanically operable on both sides.

Mechanical ductwork is visible running through the space is likely to contain asbestos. Mechanical equipment is probably located on rooftop, although this would need to be confirmed.

Flooring: Concrete slab on grade.

Steel Frame Structure. Frame supports one central 30 ton crane, manufactured by Shaw, still intact, not known if still operable. Full

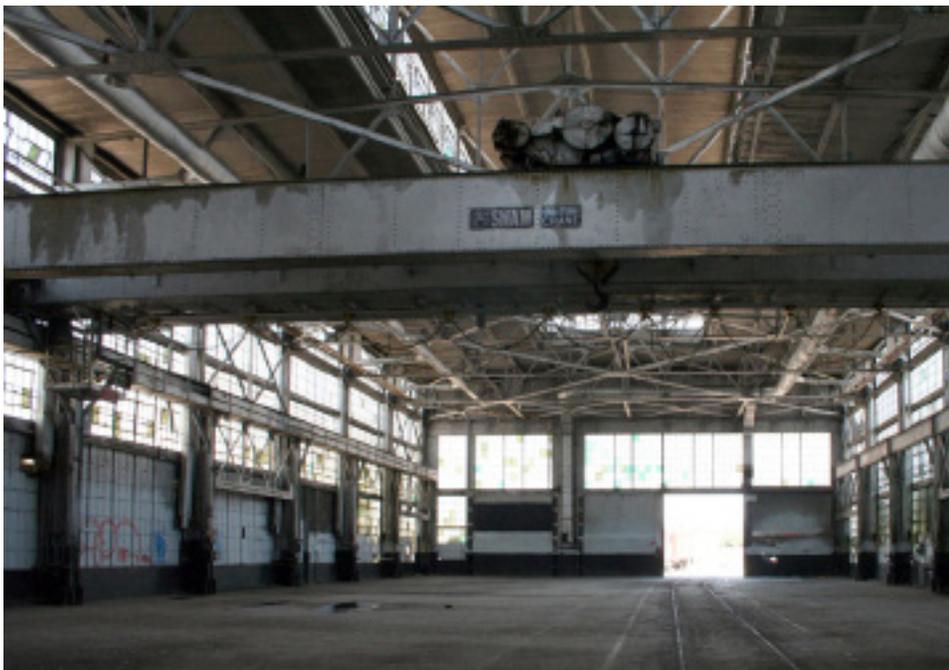
height, large braced frames exist in 3 locations on both East and West façades to deal with lateral loading in North/South direction. Exposed wood plank ceiling is intact, although severe damage can be seen at the western edge.



Northwest Corner, Stucco building in foreground to be removed.



Tank Shop, North elevation.



Tank Shop, Interior view, central bay with Shaw 30-ton crane in foreground.



Interior view, West fully glazed elevation with lower 15' blocked by non-original adjacent building.



FIREHOUSE

Built in 1920. Contains 3,936sf on two floors. With the exception of the mezzanine in the Machine Shop, this is the only above grade floor in the complex. The Firehouse is the only building in the complex recognized as a historic structure by the City of Albuquerque. Below find the City's description taken from their website:

"The Atchison, Topeka and Santa Fe Railway Fire Station was built in 1920 to serve the railroad's shop and roundhouse complex, located south of the passenger depot and Alvarado Hotel. It was one of the last buildings constructed by the railroad in Albuquerque, and reflected the company's interest in providing independent services and utilities for its operations.

This is Albuquerque's oldest remaining fire station. Its rustic architecture is rare in the city, conveying the railroad architect's romantic images of the Southwest. E.A. Harrison's design features a rough, sandstone exterior with an asymmetrical tower, crenellated parapet and sleeping porch. The tower itself is decorated with tiled overhangs, protruding beams, a stone insignia and ornamental globes. The building's sandstone, quarried at Laguna Pueblo, was taken from a demolished 1881 roundhouse built by the Atlantic and Pacific Railroad, a forerunner to the AT&SF. The protection of all of these features is included under its Landmark status.

The fire station was used as offices for several years following the demolition of the roundhouse. It is currently vacant but still stands as a reminder of the important role that the AT&SF industrial complex played in Albuquerque's economy through most of the 20th century."



Historic Photos, AT&SF Firehouse, Courtesy of City of Albuquerque.



Firehouse, South Elevation - Detail.



East Elevation.



Firehouse, West Elevation.



Firehouse, South Elevation.



Southwest Corner showing proximity to Tank Shop in background.



TRANSFER TABLE

Concrete-lined pit with east-west tracks and electrically powered gear-driven table with operators' cab and north/south track in a steel-plate deck. Also includes a nonpowered table with north-south track. Transfer Table was an essential part of locomotive shops operation and the complex. Electric motor housing by cab, electrical service frames Transfer Tables are rare, far more so than railway turntables. The Transfer Table made this shops complex work as a cross-axial design.



Transfer Table, West Elevation.



Transfer Table, View from West.



Transfer Table, View from East side.



Transfer Table, View from EastSouth Corner to BlackSmith Shop & Boiler Shop.



Transfer Table, View from EastSouth Corner to BlackSmith Shop & Boiler Shop.



Transfer Table, View trough the East Side.



STOREHOUSE WITH PLATFORM

1-story, poured concrete building of 50 feet by 417 feet plan dimensions. Storehouse sits on a concrete platform with 10-foot wide runways/ loading docks on east and west sides. Platform extends south of building and beyond. Building held stores for AT&SF Railway Company administration and management- forms, tools, toilet paper- for the entire line. Storehouse is ancillary to the shops operation but served other

AT&SF facilities near and far during the 1914-1953 period. Its historic integrity is high. An oil cellar is partly exposed on the platform just south of the building. Storehouse's southern bay is a space unto itself and accessible only via two exterior doors.



Aerial view of Storehouse from roof of Machine Shop.



Storehouse, View from North.



Storehouse, View from Inside.



Storehouse, View from roof of Machine Shop.



TURNTABLE

Plate girder steel turntable with head frame, motorized, set in 120' diameter cylindrical pit c.4 feet deep with poured concrete walls. The structure served a supporting function in a complex proposed for City Landmark designation in the City's Barelas Sector Development Plan. The turntable is an essential part of the complex. Currently used by BNSF Railway Co. The turntable is a key remnant of the shops complex, its historic integrity is high. Internal combustion engine and drive gear. Head frame.



Turntable, View from South.



Turntable, View from North.



Turntable, View from South.



Turntable, View from Machine Shop Roof.



BRIDGE CRANE



15 Ton Bridge Crane Connected to South Elevation of Machine Shop.



Bridge Crane, View from West Elevation.



Bridge Crane, View from South West Corner.



Bridge Crane, View from East Elevation.



Bridge Crane, View from Machine Shop Roof, North towards South.

Blue Line Note: Delete this section as the historic preservation information is already covered within several components of the plan.

APPENDIX C: Albuquerque Rail Yard Resource List / Treatment Proposals (DRAFT)

The purpose of this proposal is to itemize the resources at the Albuquerque Rail Yards and describe, in general, the proposed treatment for each. The effort is conducted at the Site Development Plan phase of the project. For many of the resources, specific design proposals will not be determined until a use/tenant for the resource is determined during the development process. At that time, specific design proposals will be made for each resource.

| No. | Resource Name | City ID No. | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|-----------------------|-------------|----------|-------|--|------------------|---|
| | Albuquerque Rail Yard | | District | |  | | Contributing (NRHP Criteria A, C, and possibly D) |

HPD Comments: Level of Significance: Local, State, and most likely National (comparison with other similar properties is required);
 Period of Significance: 1914-1953;

Areas of Significance: Transportation, Architecture, Exploration/Settlement, Industry; Commerce; Social History.

Criterion A: Events related to Transportation: The process and technology of conveying passengers or materials.; Industry: the technology and process of managing materials, labor, and equipment to produce goods and services.;
 Commerce: The business of trading goods, services, and commodities.; Settlement: the establishment and earliest development of new settlements or communities [early 20th Century Albuquerque]; and Social History: The history of efforts to promote the welfare of society; the history of society and the lifeways of its social groups [Rail Yard neighborhoods and Labor History];

Criterion C: Architecture, embodies the distinctive characteristics of a type, period, or method of construction [Industrial Architecture of the Early 20th Century].

Criterion D: have yielded, or may be likely to yield, information important in prehistory or history. The Roundhouse foundation site is one archaeological resource within the historic Rail Yard site and should be documented on Laboratory of Archaeology (LA) archaeological site record form. An intensive, pedestrian archaeological survey of the Rail Yard is unlikely to identify additional archaeological features. Instead we recommend testing in the areas

Notes:

1. See HCPI forms for complete descriptions of each Resource.
2. The below

| G. Solar Recommendations | Resource Descriptions from HCPI forms and comments |
|--|---|
| This site should be considered as a group of buildings, man-made elements and open spaces, all being part of a complex serving one function. | The Albuquerque Rail Yard is a historic site composed of 20 contributing and 4 noncontributing resources that include 15 contributing buildings, 4 contributing structures, 1 contributing site, three non-contributing buildings and 1 non contributing structure (City of Albuquerque, April 2013). |

where former buildings and structures once stood and could reveal whether archaeological features remain. In addition, where there is anticipated ground disturbance for future proposed undertakings, it is recommended that testing be conducted. These tests will provide evidence of whether archaeological features or buried cultural deposits have the potential to be likely to yield important information to the history of the Albuquerque Rail Yard regarding the Roundhouse construction and operations, and possibly precontact information of the area. However, at this time, it is undetermined that the Rail Yard site is eligible under Criterion D until testing can be done, prior to extensive ground moving activities on site.

Verbal Boundary Description [Boundary Description and Justification excerpted from the Draft nomination "Atchison, Topeka & Santa Fe Railway Locomotive Shops" AKA Albuquerque Rail Yard, submitted by the City of Albuquerque in January, 2013]: The boundary of this site follows the railroad right-of-way to the east and 2nd Street to the west. It runs north to a point where the site narrows and tracks from the yard begin to meet the railroad right-of-way. The south boundary is below the site of the 1915 roundhouse and just to the south of the motor shop; it runs perpendicularly to the right-of-way and 2nd Street boundaries.

Boundary Justification: The boundaries are both the property line of the former AT&SF rail yard land owned by the City of Albuquerque and the area of that AT&SF land that was used for locomotive maintenance. Although the property extended to the south, that area was primarily used for classification yards and buildings that supported the freight cars. In addition, most of the rails and the buildings in that area have been removed and razed—that area no longer represents the period of significance for the rail yards as a whole.

| No. | Resource Name | City ID No. | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|--|-------------|----------|-------|---|--|--------------------------------|
| 1 | Fire Station | K-14-1272 | Building | 1920 |  | Contributing; City of Albuquerque Landmark | Contributing: (Criteria A & C) |
| 2 | Machine Shop w/Crane Runway & Lye Vat Shed | K-14-1274 | Building | 1921 |  | Contributing | Contributing: (Criteria A & C) |

| G. Solar Recommendations | Treatment Proposal | Mitigation Proposal if Applicable | SHPO/COA Review |
|---|---|---|---|
| High Significance, Preserve | Adaptive Re-Use, Treatment to follow Secretary of the Interior's (SOI) Standards and Guidelines for Rehabilitation and COA Guidelines for Landmark. Use not known at this time. | Not Applicable | 2-story sandstone building with tower. The building housed the AT&SF Fire Department and was built using stone salvaged from the demolition of the original locomotive shops. Oldest fire station in the city, local stylistic rarity, built by AT&SF Railway Company. Battered tower with tile roofed, gabled door hood and pyramidal tile roof above. Apparatus doors removed and replaced with concrete block and steel windows. 2 Steel exterior exit stair at sleeping porch with steel door at 2nd story landing |
| <p>Machine Shop & Crane Runway: High Significance, Preserve</p> <p>Lye Vat Shed: Low Cultural Value/ Contribution, Remove</p> | <p>Machine Shop & Crane Runway: Adaptive Re-Use; Treatment to follow Secretary of the Interior's (SOI) Standards and Guidelines for Rehabilitation. Use not known at this time</p> <p>Lye Vat Shed: Suggested to be removed</p> | <p>Not Applicable</p>  | <p>4 bay x 26 stall steel and concrete building of 604ft x 239ft, overall plan dimensions with attached exterior crane runway with inspection pit and lye vat shed. Full length glass curtain wall and clerestory at erecting bay, skylights at others. Machine Shop was the center of engine overhauls by the AT&SF at its only locomotive "back shops" in New Mexico. Photographed in action, 1943, for the Office of War Information.</p> <p>Its monumental scale and corporate architectural imagery make it the Albuquerque building that best represents the AT&SF Railway's dominance in Albuquerque's development. 23 operable, hipped skylights at low roof. Mezzanine over southern bay, tool rooms and other partitioned areas, bridge cranes. Post 1955 modifications: Loading Dock, Machines removed</p> |

| No. | Resource Name | City ID No. | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|----------------------------------|-------------|----------|-------|---|------------------|-------------------------------|
| 3 | Boiler Shop w/ Canopy | K-14-1278 | Building | 1923 |  | Contributing | Contributing (Criteria A & C) |
| 4 | Tender Repair Shop aka Tank Shop | K-14-1378 | Building | 1925 |  | Contributing | Contributing (Criteria A & C) |

| G. Solar Recommendations | Treatment Proposal | Mitigation Proposal if Applicable | SHPO/COA Review |
|---|---|--|---|
| <p>Boiler Shop: High Significance, Preserve</p> <p>Canopy: Low Cultural Value/ Contribution, Remove</p> | <p>Boiler Shop: Adaptive Re-Use; Treatment to follow Secretary of the Interior's (SOI) Standards and Guidelines for Rehabilitation. Use not known at this time. Preserve</p> <p>Canopy: the structure should be removed in order to expose the original cast in place concrete façade of the Boiler Shop.</p> | <p>Not Applicable</p>  | <p>2-bay x 7-stall steel and concrete building of 416ft by 140ft overall plan dimensions with full-length glass curtain wall and clerestory at erecting (south side) bay, skylights at heavy equipment (north side) bay. Boiler Shop is built like the Machine Shop but it's much smaller and served fewer function. Building footprint covers (and more) that of original Machine Shop. Its monumental scale, corporate architectural imagery, and relationship to the Machine Shop help represent the AT&SF Railways dominance in Albuquerque's development.</p> |
| <p>High Significance, Preserve</p> | <p>Adaptive Re-Use; Treatment to follow Secretary of the Interior's (SOI) Standards and Guidelines for Rehabilitation. Use not known at this time. Preserve</p> | <p>Not Applicable</p> | <p>1-bay by 8-bay steel and concrete building of 202ft by 90ft plan dimensions and one tall story. Adjoining the Boiler Shop's north side and connects internally. North façade's concrete wall akin to Boiler and Machine Shops. Tenders hold water and fuel, both of which are fed into the engine from behind. Its monumental scale, corporate architectural imagery and kinship to the Machine and Boiler Shops help represent the AT&SF's dominance in Albuquerque's development. Internal bridge crane and an office with steel and glass partitions. One through-track and opening into the Boiler Shop. Post 1953 modifications: Concrete block fill in north side door openings.</p> |

| No. | Resource Name | City ID | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|---------------------------|-----------|----------|-----------|---|------------------|-------------------------------------|
| 5 | Flue Shop | K-14-1377 | Building | 1920 |  | Contributing | Contributing (Criteria A & C) |
| 6 | Entry Station (CWE Shops) | K-14-1378 | Building | post-1957 |  | Non-Contributing | undetermined: need more information |

| G. Solar Recommendations | Treatment Proposal | Mitigation Proposal if Applicable | SHPO/COA Review |
|-----------------------------|--|-----------------------------------|---|
| High Significance, Preserve | Adaptive Re-Use; Treatment to follow Secretary of the Interior's (SOI) Standards and Guidelines for Rehabilitation. Use not known at this time. Preserve | Not Applicable | 1-story building of reinforced concrete with a concrete block addition at north end and two smaller concrete block additions at west side. Original building has 10 bays of full height windows and connects with Boiler Shop at south end. The reinforced concrete construction is total- foundation, walls and roof. Flues carry hot combustion gases from the locomotive fire, heating water and steam in the boiler and superheater. It retains sufficient historic integrity, represents advanced small shop design character consistent with the site's large shops, and served an essential function in the shops' operations. Original building has a 45ft clear span roof of reinforced concrete. Post 1953 additions: North & West Concrete block additions |
| Not specifically addressed. | Suggested to be removed | Not Applicable | One-story wood frame hut with textured plywood siding and a flat, projecting roof. The building was part of the AT&SF's Central Work Equipment (CWE) shops, an operation located at the site after the steam locomotive work had ended. Not related to the work of the site — steam locomotives. |

| No. | Resource Name | City ID No. | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|---|-------------|----------|-------|--|------------------|-------------------------------|
| 7 | Cab Paint Shop aka CWE Shops office | K-14-1379 | Building | 1921 |  | Non-Contributing | non-contributing |
| 8 | Blacksmith Shop | K-14-1286 | Building | 1917 |  | Contributing | Contributing (Criteria A & C) |
| 9 | Storehouse w/Platform | K-14-1281 | Building | 1915 |  | Contributing | Contributing (Criterion A) |

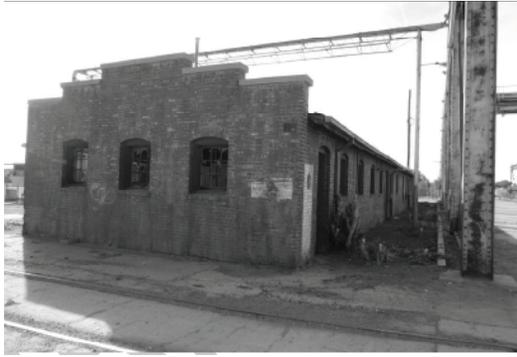
| G. Solar Recommendations | Treatment Proposal | Mitigation Proposal if Applicable | SHPO/COA Review |
|--|--|-----------------------------------|---|
| Low Cultural Value/ Contribution, Remove | Suggested to be removed | Not Applicable | 1 story building of poured concrete and concrete construction attached to the Boiler Shop and Tender Repair Shop. Originally smaller and open, it is divided into offices and has additions to the north and east Building's use changed from Cab Paint Shop to pipe house to asbestos house to the office for Central Work Equipment (CWE) Shops, AT&SF's post steam use. greatly altered after the locomotive operations ceased, Lacks historic integrity. |
| High Significance, Preserve | Adaptive Re-Use; Treatment to follow Secretary of the Interior's (SOI) Standards and Guidelines for Rehabilitation. Use not known at this time. Preserve | Not Applicable | 1-story brick bearing and steel frame building of 80 feet by 306 feet plan dimensions. Free standing alongside railway tracks. Parapet steps five levels at north and south ends, concrete coping. Large forge in side southeast corner. Warren roof trusses with lower chords. (HCPI term) |
| High Significance, Preserve | Adaptive Re-Use; Treatment to follow Secretary of the Interior's (SOI) Standards and Guidelines for Rehabilitation. Use not known at this time. Preserve | Not Applicable | 1-story, poured concrete building of 50 feet by 417 feet plan dimensions. Storehouse sits on a concrete platform with 10-foot wide runways/ loading docks on east and west sides. Platform extends south of building and beyond. Building held stores for AT&SF Railway Company administration and management- forms, tools, toilet paper- for the entire line. Storehouse is ancillary to the shops operation but served other AT&SF facilities near and far during the 1914-1953 period. Its historic integrity is high. An oil cellar is partly exposed on the platform just south of the building. Storehouse's southern bay is a space unto itself and accessible only via two exterior doors. |

| No. | Resource Name | City ID No. | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|----------------|-------------|-----------|-------|--|------------------|-------------------------------|
| 10 | Babbitt Shop | K-14-1289 | Building | 1921 |  | Contributing | Contributing (Criterion A) |
| 11 | Welding Shop | K-14-1288 | Building | 1922 |  | Contributing | Contributing (Criterion A) |
| 12 | Transfer Table | K-14-1275 | Structure | 1919 |  | Contributing | Contributing (Criteria A & C) |

| G. Solar Recommendations | Treatment Proposal | Mitigation Proposal if Applicable | SHPO/COA Review |
|--|---|-----------------------------------|--|
| <p>Connected to Welding Shop; At least one of these buildings should be PRESERVED, while the other could potentially be PRESENTED. Preserve or Remove.</p> | <p>The building and also a rail line that extends to this shop from the Machine Shop should be preserved</p> | <p>Not Applicable</p> | <p>1-story poured concrete building of 36 feet by 50 feet plan dimensions Connected to the Machine Shop by a track, later blocked by construction of a loading dock.</p> |
| <p>Connected to Babbitt Shop; At least one of these buildings should be PRESERVED, while the other could potentially be PRESENTED. Preserve or Remove.</p> | <p>As a concern the structure might block the view of the proposed reconstructed Round House but Samitaur will agree with the City's position. Conclusion: Preserve/Rehab</p> | <p>Not Applicable</p> | <p>1-story poured concrete building with wood-frame additions at west end. 210 feet by 27 feet in plan dimensions overall. Adjoins Babbitt Shop on west end. Large window openings with steel sash and door groupings Like the Machine and Boiler Shops, it has bi-fold doors into main work area. Structurally, building resembles the Flue Shop except for lacking a roof monitor. One rooftop metal chimney. Seven metal "passive" rooftop ventilators. Wood addition.</p> |
| <p>High Significance, Preserve</p> | <p>Adaptive Re-Use; Use not known at this time</p> | <p>Not Applicable</p> | <p>Concrete-lined pit with east-west tracks and electrically powered gear-driven table with operators' cab and north/south track in a steel-plate deck. Also includes a non-powered table with north-south track. Transfer Table was an essential part of locomotive shops operation and the complex. Electric motor housing by cab, electrical service frames Transfer Tables are rare, far more so than railway turntables. The Transfer Table made this shops complex work as a cross-axial design modifications: removal of additional tables.</p> |

| No. | Resource Name | City ID No. | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|---------------------------------------|-------------|-----------|----------|--|------------------|--|
| 13 | Roundhouse Foundation | K-14-1380 | Site | 1915 |  | Contributing | Contributing (Criterion A); Undetermined Criterion D, archaeological testing may be required to establish potential to yield important information pertaining to the demolished roundhouse, site development, or possible prehistoric resources. |
| 14 | Turntable (Roundhouse remnant) | K-14-1381 | Structure | 1915 |  | Contributing | Contributing: (Criteria A & C) |
| 15 | Sheet Metal House aka Sheet Iron Shed | K-14-1284 | Building | pre-1919 |  | Contributing | Contributing (Criteria A & C) |

| G. Solar Recommendations | Treatment Proposal | Mitigation Proposal if Applicable | SHPO/COA Review |
|---|---|---|---|
| <p>The reinstatement of its physical existence on the site is very important; Reconstruct within footprint, shape, volumetric space, not as a replication</p> | <p>See Roundhouse #A</p> | <p>Not Applicable</p> | <p>Roundhouse demolished; Exposed concrete, brick and metal traces of sub-grade foundation of demolished roundhouse, approximately 113,135 square feet footprint. This was surely the largest roundhouse in New Mexico.</p> |
| <p>It 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. High Significance, Preserve</p> | <p>Preserve Roundtable and associated tracks for its continued use by BNSF. Area to receive new structure and ground surface treatment following SOI Standards and Guidelines for Rehabilitation involving new addition</p> | <p>Archaeological survey to determine information available; further archaeological excavation may be required.</p> | <p>Plate girder steel turntable with head frame, motorized, set in 120' diameter cylindrical pit c.4 feet deep with poured concrete walls. The structure served a supporting function in a complex proposed for City Landmark designation in the City's Barelas Sector Development Plan. The turntable is an essential part of the complex. Currently used by BNSF Railway Co. The turntable is a key remnant of the shops complex, its historic integrity is high. Internal combustion engine and rave gear. Head frame.</p> |
| <p>Interesting, important but technically not feasible to PRESERVE. Relatively High Historic Value, Presentation</p> | <p>To be removed but presented</p> | <p>Documentation at level 2 HABS. Interpretative exhibit at location.</p> | <p>One-story timber and lumber frame building of 52 feet by 185 feet plan dimension and gabled roof. Siding is wood board and batten, and there is a two-story room-over-room block within. Building has an overhead monorail system that was used to move large sheets of iron in and out of storage bays with minimum manpower. Roof sheds little water. East bay of the building has a concrete runway where iron sheets were transferred by monorail to or from wheeled delivery vehicles.</p> |

| No. | Resource Name | City ID No. | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|-------------------------------------|-------------|----------|-------|--|------------------|-----------------------------|
| 16 | Pattern House aka Assembly Bldg. | K-14-1271 | Building | 1922 |  | Contributing | Contributing: (Criterion A) |
| 17 | North Washroom aka Lavatory | K-14-1285 | Building | 1915 |  | Contributing | Contributing (Criterion A) |
| 18 | South Washroom aka Lavatory | K-14-1287 | Building | 1917 |  | Contributing | Contributing (Criterion A) |

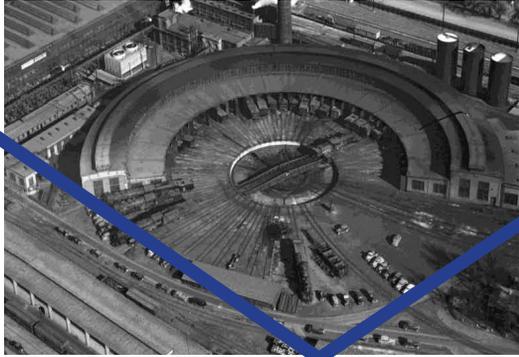
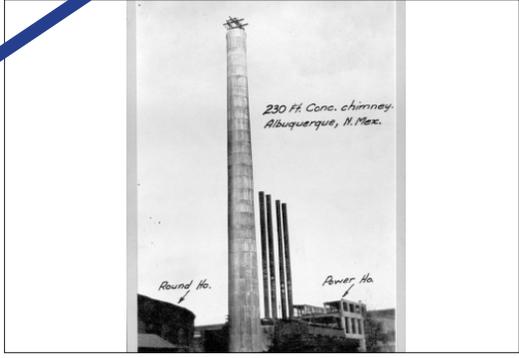
| G. Solar Recommendations | Treatment Proposal | Mitigation Proposal if Applicable | SHPO/COA Review |
|--|--|-----------------------------------|--|
| It could be PRESERVED and/or PRESENTED (partially or completely, and even if with significant modifications) within the proposed development, eg. under the planted mounds | Has been added to the Master Plan scheme with the idea that it would be 1) underneath an Acoustic Mound and 2) could be significantly altered (openings cut, roof removed, etc) in order to transform into a retail use. Conclusion: Preserve/Rehab | To be determined. | One-story poured concrete building of 40 feet by 75 feet plan dimensions. Gabled roof, small openings, doors at ends. The Pattern House was later known as the Assembly Hall (1957 Sanborn map). |
| They contribute to the story of the site, their location makes them a visual and functional obstacle, and they have no special significance. Remove | Could be removed if the South Washroom were retained; also the building has significant structural damage. Conclusion: Remove | To be determined | 1 story red brick building with gabled roof and stepped parapets at ends. 26 feet by 114 feet in plan dimension. Segmental arches at window and door openings. Locker room and toilet inside. This is one of five washrooms built on-site, two of which remain. Also known as the Locker and Washroom. |
| They contribute to the story of the site, their location makes them a visual and functional obstacle, and they have no special significance. Remove | CABQ suggested that this structure in combination with 2a/2b (see map) created an interesting cluster of small, people scale structures that is unique to the site. Samitaur will agree with the City's position provided other agreements could be reached. Conclusion: Preserve/Rehab | Not Applicable | One-story red brick building of 26 feet by 140 feet plan dimensions Building is divided by transverse walls into several rooms, one with a cluster of toilet stalls. This is one of two remaining brick washrooms. Five were built in locations spread throughout the complex. Windows and doors have segmented arches and brick sills. AT & SF worker stencil painted inside west room. |

| No. | Resource Name | City ID No. | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|--------------------------------------|-------------|-----------|----------|--|------------------|-----------------------------|
| 19 | Waste & Paint Rooms | K-14-1276 | Building | 1920 |  | Contributing | Contributing (Criterion A) |
| 20 | Motor Car Garage aka Battery Shop | K-14-1282 | Building | pre-1931 |  | Contributing | Contributing (Criterion A) |
| 21 | Fire Runway | K-14-1382 | Structure | pre-1922 |  | Contributing | Contributing: (Criterion A) |

| G. Solar Recommendations | Treatment Proposal | Mitigation Proposal if Applicable | SHPO/COA Review |
|--|---|---|---|
| It could be PRESERVED and/or PRESENTED (partially or completely, and even if with significant modifications) within the proposed development, eg. under the planted mounds | This building has been added to the Master Plan scheme with the idea that it would be 1) underneath an Acoustic Mound and 2) could be significantly altered (openings cut, roof removed, etc) in order to transform into a retail use. Conclusion: Preserve/Rehab | Not Applicable | One-story poured concrete building of 24 feet by 60 feet in plan dimensions. Its two rooms are connected internally and each has steel windows and doors. |
| This structure loses its significance if Babbit Shop, Welding Shop and Waste & Paint rooms are preserved. Remove | Preserving the structure significantly impact's Samitaur development of the southern portion of the site. Conclusion: Remove | To be determined | A one-story red brick building of 27 feet by 56 feet plan dimensions on a raised concrete foundation. Large steel windows in groups. Overhead doors on east side. The building was also known as the battery shop. Secondary building used to store utility vehicles for shops operation. Modification: small overhead door |
| Relatively High Historic Value, Presentation | Conclusion: Present where possible | Photographic documentation; Present a selected portion, perhaps 30' to provide interpretive exhibit with site plan and explanation of its original purpose. | Concrete paved road connecting the Fire Station with all the shops in the complex and the Roundhouse Foundation. It is part of the most significant group of railroad-built facilities in Albuquerque. Historic integrity has been compromised by paving added and removed since the shops complex steam locomotive work ended. |

| No. | Resource Name | City ID No. | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|-------------------|-------------|-----------|----------|--|------------------|----------------------------|
| 22 | Power House | K-14-1383 | Building | pre-1957 |  | Non-Contributing | Non-Contributing |
| 23 | Water Reservoir | K-14-1384 | Structure | pre-1922 |  | Contributing | Contributing (Criterion A) |
| 24 | Welding Gas Lines | K-14-1385 | Structure | pre-1922 |  | Non-Contributing | Would like to discuss |

| G. Solar Recommendations | Treatment Proposal | Mitigation Proposal if Applicable | SHPO/COA Review |
|---|--------------------|--|---|
| This modern structure replaced the Original Power House which was demolished. It has no cultural significance. Remove | Remove | Not Applicable | One story metal building, tall, with a slightly gabled roof, three overhead doors, one personnel door, and three wall vents. |
| It is suggested for PRESENTATION as a concrete platform, possibly underground | Present | To be determined | Sub-grade, rectangular plan tank 33 feet wide by 103 feet long with upper walls and roof above grade. 2 huts on top. Historic integrity of the water supply system for locomotives has been compromised by removal of the filler tanks. Two huts atop roof- one is a gabled, wood sided box with eaves, exposed rafters, and corner boards. |
| Portion to be retained if possible to demonstrate operation of original Rail Yards facility. | To be determined | To be determined Photographic documentation; Preserve a selected portion, perhaps in conjunction with Fire Runway; Interpretive exhibit | Steel pipes that run overhead along 2nd Street, supported on poles of light RR track section. Welding gases were piped to certain shops from a gas plant near the north end of the complex, the gas plant has been demolished. It is a remnant of a system whose historic integrity is very low due to the gas plant demolition. |

| No. | Resource Name | City ID No. | TYPE | BUILT | Photo | City Eligibility | NM SHPO Eligibility |
|-----|---------------|-------------|----------|-------|---|------------------|---------------------|
| A | Round House | N/A | Building | |  | Demolished | N/A |
| B | Smoke Stack | N/A | Building | |  | Demolished | N/A |

| G. Solar Recommendations | Treatment Proposal | Mitigation Proposal if Applicable | SHPO/COA Review |
|--|--|-----------------------------------|-----------------|
| <p>The reinstatement of its physical existence on the site is very important; Reconstruct within footprint, shape, volumetric space, not as a replication.</p> | <p>Reconstruct per Section 6 of the Master Plan.</p> | <p>Not Applicable</p> | |
| <p>Its reconstruction should mainly represent the idea of a high, vertical element, rather than accurate replication. Reconstruct</p> | <p>Reconstruct per Section 6 of the Master Plan.</p> | <p>Not Applicable</p> | |