

Placing bolts

7.0 DESIGN GUIDELINES

Intent

The design guidelines described in this section pertain more generally to infill (new) construction and general site layout.

7.1 Infill Design Guidelines

7.1.1 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 a 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 and/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.

7.1.2 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 Development Plan recommends that infill development of this type be generally simple in massing with flat roofs.

7.1.3 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.

7.1.4 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.

7.2 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 Development Plan for Subdivision shall be preserved for future possible rail operations.

7.3 Parking

The Master Development 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.

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.

7.4 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:

7.4.1 Rail

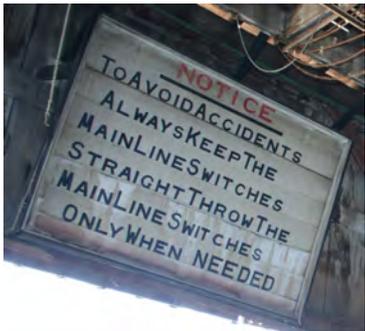
Direct rail access will be preserved to the southern portion of the site by virtue of the existing BNSF turntable easement that currently remains in place. Future rail loading operations may be incorporated using this access if required, although this would need to be coordinated with the use designations 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.



"Wayfinding" signage, South Washroom Building



Safety signage, South Washroom



Safety signage, Sheet Metal House



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 6: Existing Palette



Rail Lines adjacent to 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



Machine Shop, Urinals

7.4.2 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 directly from 2nd Street, by turning onto the site at the proposed Preliminary Parking access point under the bridge crane and immediately adjacent to the north end of the Storehouse. Truck loading access could be accommodated within the 50ft width under the historic bridge crane (Parcel 4), adjacent to 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 Development 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.

7.5 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 6) 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.

7.6 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.

7.7 Public Art

The Rail Yards Master Development 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.

7.8 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.

7.8.1 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.

7.8.2 Water Conservation

Water conservation efforts 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 plan species. Use xeriscape principles of design.
- Reuse gray water for non-potable water needs (e.g., toilet flushing) and irrigation.

7.8.3 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.)

7.9 Pollution Control

To create a plan that reduces pollution, the Master Development 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.

The Master Development 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.

7.10 Exterior Lighting Guidelines

- 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 wall pocket lights, is encouraged to accent pedestrian areas.
- Landscape lighting is encouraged to enhance certain landscape features. Landscape lighting should be concealed at grade.

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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 a perimeter landscape buffer between the Rail Yards and the surrounding neighborhoods. Plant materials and a perimeter landscape buffer should be used to attenuate noise from the railroad tracks and provide visual interest.
- Provide shade via trees and areas that provide a retreat from sun exposure.
- Use plants to provide visual connections between multiple outdoor spaces and define edges of different land 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.

8.2 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 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 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 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 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.

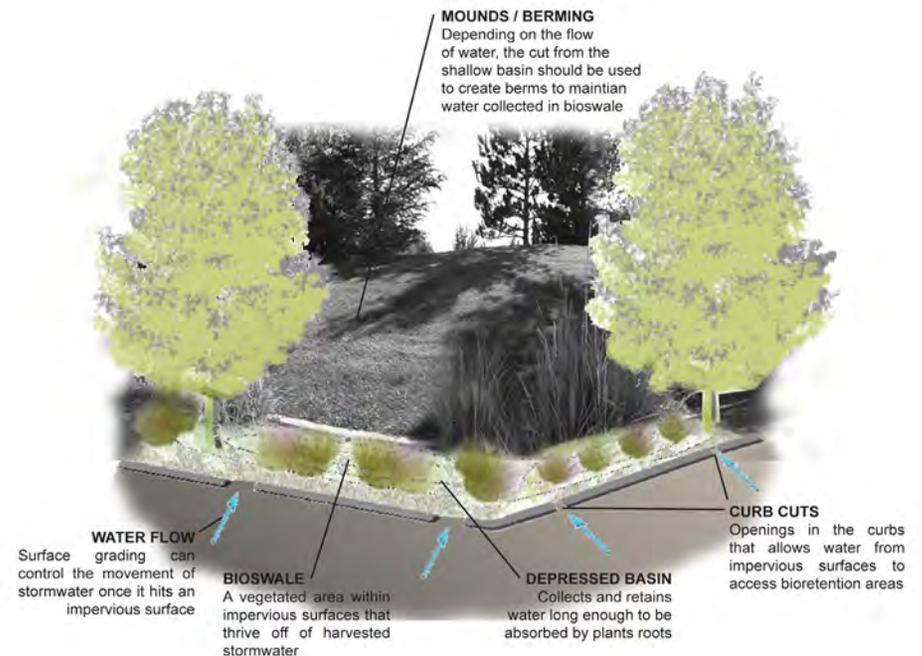
The proposed landscape design for the Rail Yards emphasizes sustainability with permeable surfaces, low water use, low maintenance, and recycling to the greatest extent possible. On-grade plaza elements not directly above the subterranean garage should include permeable hardscape options. The plant palette 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 an effort to celebrate the setting and history of the site.

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

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.

8.3 Landscape Planting Design

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



Options for stormwater capture

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

- Perimeter Landscaping
- Pedestrian Circulation 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.

8.3.1 Perimeter Landscaping

Landscaping is located along most of the site's boundary utilizing a plant palette that adjusts depending on site conditions (i.e. slope,

orientation, activity space, etc.) The majority 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.

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.

Appropriate traditional, recreational turfgrass species 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 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 edges across the site.

Appropriate ornamental grass species for steep slopes and other areas within the Perimeter Landscaping 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 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 included within the Perimeter Landscaping to provide year around color, as an accent across the site and at key gateway locations. A variety of flowers may be used.

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

Perennials

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

Bulbs

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

In addition, the Gateway locations 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

8.3.2 Pedestrian Circulation Paths

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

The paths provide a means for pedestrian navigation across the Rail Yards property. Generally, the paths run north-south. 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 Pedestrian Circulation 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

8.3.3 Connectors

The connectors are the 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 Perimeter Landscaping.

8.3.4 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.

8.3.5 Workforce Housing

The workforce housing is proposed to be 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 that include turfgrasses are encouraged. Gathering spaces, with shaded seating opportunities for community events, shall be provided.

8.3.6 Firehouse

The firehouse is a historic building that will be highlighted with its own plaza. Planting beds and trees in tree wells may be incorporated within the plaza to soften the space and reduce sun exposure. Outdoor seating with umbrellas may also be used to activate this pedestrian area.



Sycamore



Ash



American Elm



Littleleaf Linden

8.4 Plant Palette

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

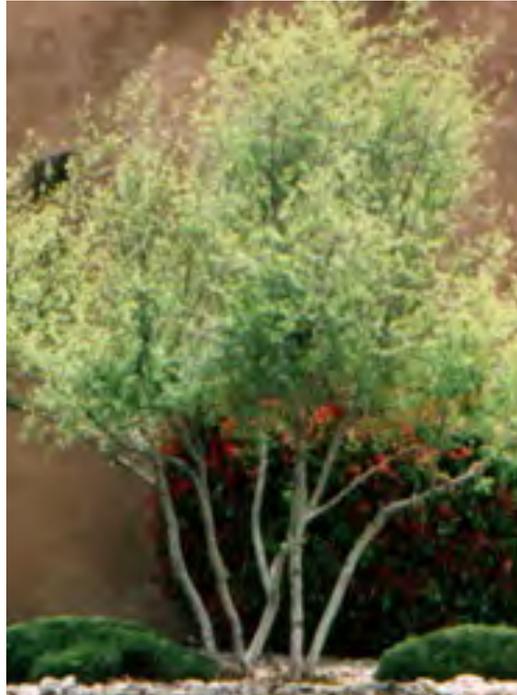
8.4.1 TREES

Deciduous Shade and Street Trees

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



Chaste Tree



New Mexico Olive Tree



Flowering Pear



Desert Willow

Deciduous Flowering Ornamental Trees

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



Scotch Pine



Austrian Pine



Low-Water Traditional Turf



Grama + Buffalograss Mix

Evergreen Trees

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

8.4.2 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

8.4.3 SHRUBS & GROUNDCOVERS

Deciduous Shrubs & Groundcovers

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



Agave



Stonecrop



Yucca

Evergreen Shrubs & Groundcovers

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



Trumpet Vine



Honeysuckle



English Ivy

8.4.4 VINES

Deciduous Vines

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

Evergreen Vines

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



Blanket Flower



Crocus



Blue Flax



Daylily



Red Valerian



Penstemon

8.4.5 FLOWERS

Annuals

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

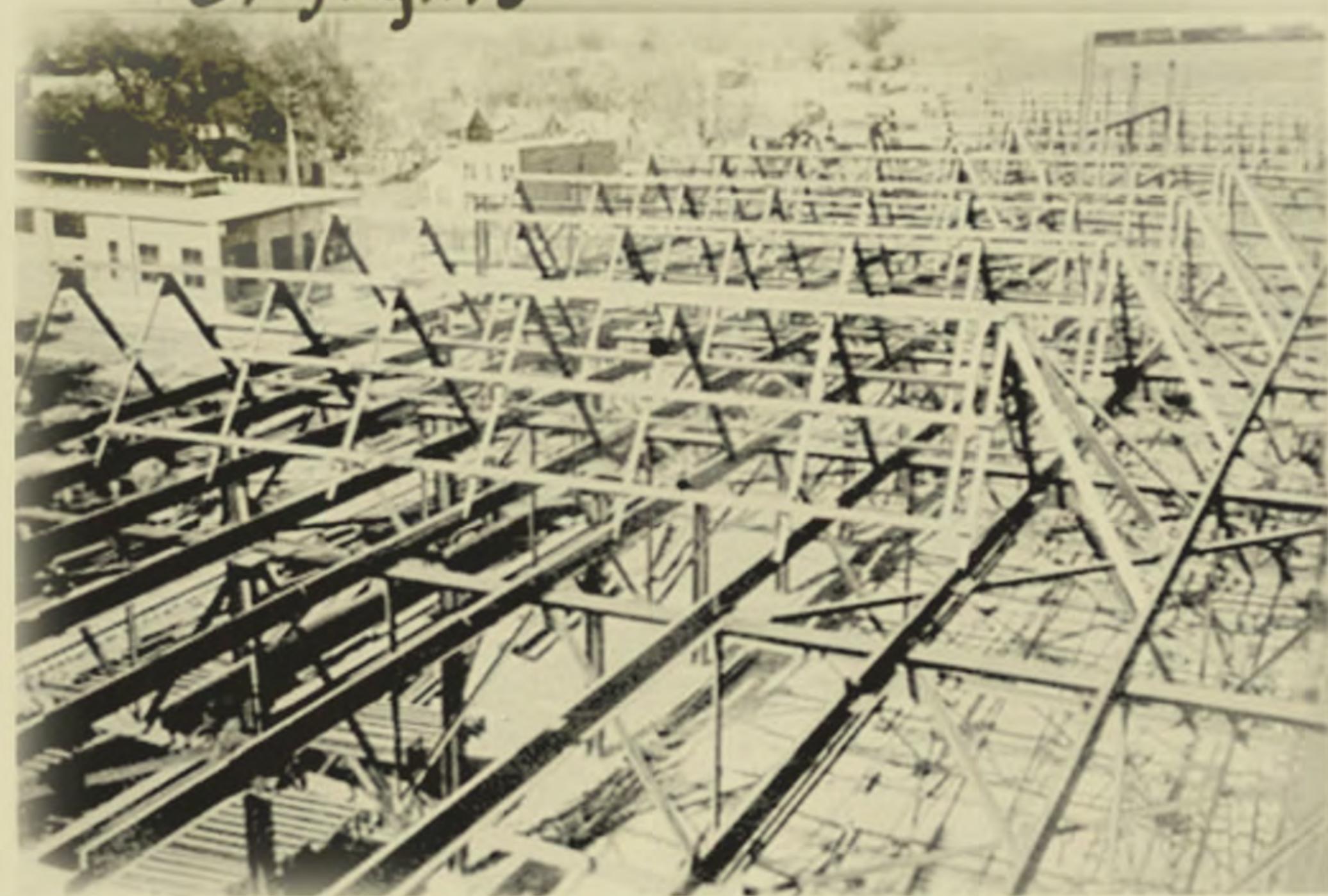
Perennials

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

Bulbs

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

Skylights-



TRANSPORTATION INFORMATION AND RECOMMENDATIONS 9

9.0 Transportation Information and Recommendations

Intent

This section provides guidance and background information for vehicular, rail, transit, pedestrian and bicycle access to and from the site.

9.1 Vehicular Site Access Information

The existing transportation system that serves the Rail Yards 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. The Master Development Plan discusses alternative modes of transportation as a viable strategy to reduce the impact of the Rail Yard redevelopment on the existing street network.

The primary vehicular access route associated with the Rail Yard Master Development Plan will be 2nd Street. Third 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. Second and 3rd 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 local residential streets so that the volume typically does not exceed 1,000 vehicles per day. The Rail Yards site benefits from direct access to the existing street grid to the west, its proximity to Bridge Boulevard to the south, and its location just south of Coal and Lead Avenues.

Second Street south of Coal Avenue has recently been reconfigured into a two-way street, as was mandated by the City Council. Second 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. Third 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.

9.2 Traffic Impact Study Information

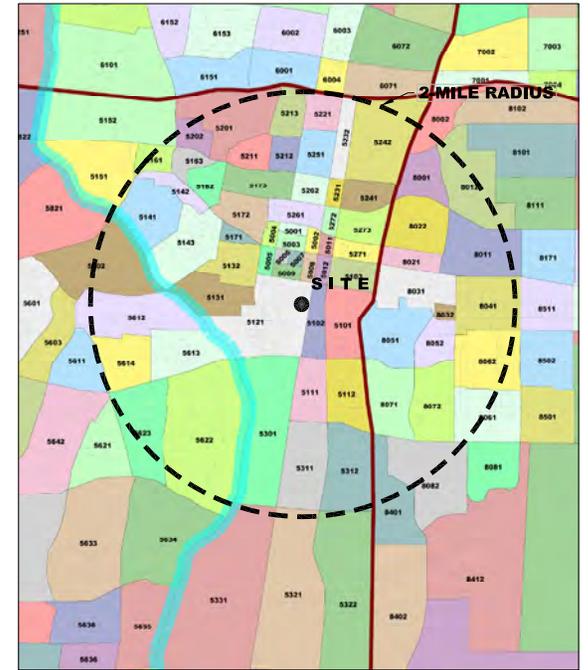
A Traffic Impact Study (see Appendix B) was completed in October of 2013 based upon the Master Plan land uses as described on the Site Development Plan for Subdivision. The purpose of the study was to determine the impact of the proposed development on the adjacent transportation system and recommend any improvements to mitigate the impact.

Utilizing the projected traffic volumes resulting from the development of the site into a mixed-use facility such as shown on the Site Development Plan for Subdivision site plan, in conjunction with projected 2018 traffic volumes, the 2013 TIS concluded that the development of the Rail Yards 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.

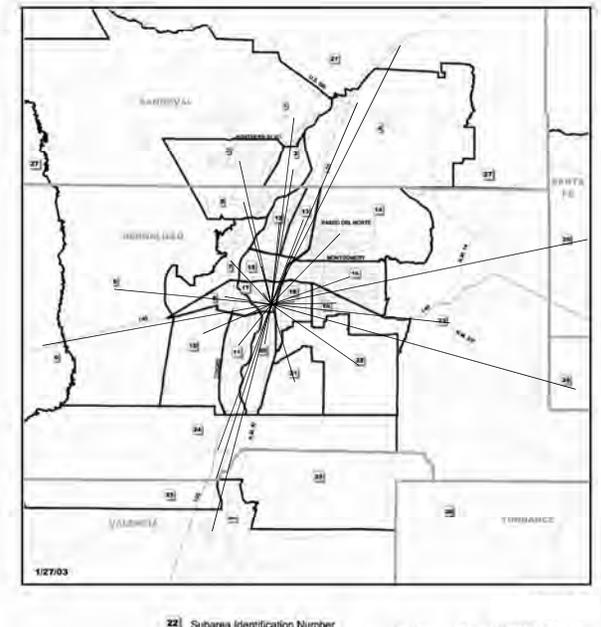
As the site is subdivided and phased development occurs, the 2013 Traffic Impact Study will be considered by City Transportation who will determine if the October 2013 study is applicable as prepared, requires updating, or if a new study is appropriate. Recommendations of the applicable TIS will be implemented 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.



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



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



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

9.3 Existing Access by Alternative Transportation

Direct transit service to the Rail Yards property and along 2nd Street does not currently exist. However, the site is within walking distance of the Alvarado Transportation Center, which is located approximately ½ mile to the north of the property and serves as a major hub for ABQ Ride, the RailRunner, and regional and national bus and rail service (Greyhound, Amtrak). Additionally, 4th Street has existing bus service and is approximately ¼ mile to the west of the Rail Yards. Existing transit routes are shown on the map on the next page.

9.4 Transit Recommendations

9.4.1 Transit Plaza

The Master Development 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. The development of the Transit Plaza should be coordinated with the implementation of direct transit service to the site.

9.4.2 Shuttle (Circulator) Service

In addition to the recommendation of increased ABQ Ride and/or private transit service to the site, the Rail Yards Master Development Plan supports an express shuttle/trolley system concept referenced in the Barelás SDP and contained as part of the Downtown 2025 Plan. Such a system would link the Zoo, Tingley Beach, the Hispanic Cultural Center, 4th Street in Barelás and Downtown Albuquerque to the Rail Yards site. Connecting the Rail Yards to other area amenities via convenient transit service is vital to the success of the redevelopment of the area, in general, and the Rail Yards, specifically. The City should work closely with the Master Developer and other stakeholders to determine the appropriate timing and means for implementing such a service.

9.4.3 Rail Access

The Rail Yards Master Development Plan supports the possibility of bringing direct public rail access to the Rail Yards site whether it be for

the Rail Runner or other future rail options that become available. If a rail station is someday located at the site, it should be located at the eastern terminus of the Transfer Table. Such a location would mirror the proposed Transit Plaza at the western terminus of the Transfer Table, creating a full multi-modal transit hub at the center of the project.

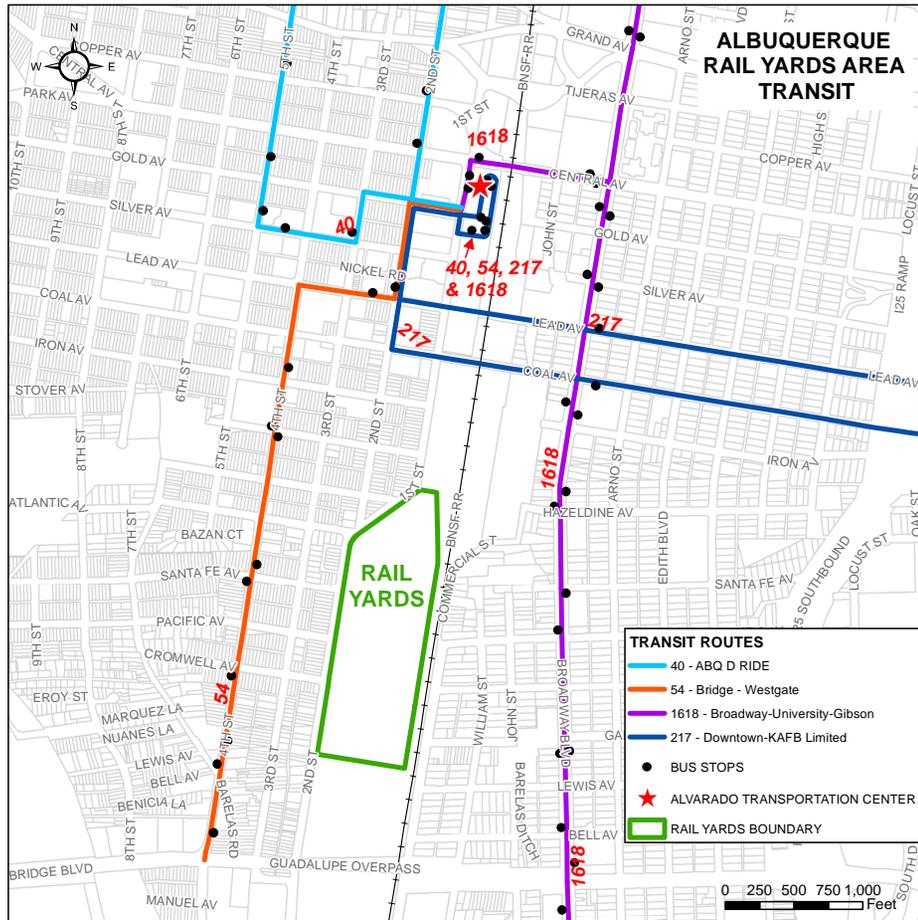
Other options for Rail connectivity include extension of the narrow gauge rail line that currently runs along Tingley Drive adjacent to the Bosque from its current terminus at the Zoo southward and eastward to connect to the National Hispanic Cultural Center and ultimately to the Rail Yards site. Such 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 Other Alternative Transportation Recommendations

9.5.1. Pedestrian and Bicycle Access

The City of Albuquerque recently improved the segment of 2nd Street where the Rail Yards is located with sidewalk and ADA ramp improvements on the west side only and added bike lanes (sharrows) as well. The City also recently completed significant improvements to Coal and Lead Avenues east of Broadway Blvd. that included streetscape, sidewalk widening, bike lanes, and street furniture. These projects benefit the redevelopment of the Rail Yards by improving pedestrian and bicycle facilities that can be used to access the site, but additional enhancements to roadways that provide access to the site will also be needed. The City (and Master Developer, where appropriate) should prioritize multi-modal improvements, focusing on pedestrian and bicycle facilities, along the following roadways that provide access to the Rail Yards:

- The eastern side of 2nd street in accordance with the proposed perimeter landscaping and pedestrian circulation paths in the Master Development Plan;
- 1st Street from the Alvarado Transportation Center to the site;



Existing Transit Routes near the Albuquerque Rail Yards

- Coal and Lead Avenues, west of Broadway to 4th Street;
- The Bridge Blvd. (Guadalupe) overpass from Broadway Blvd. to 4th Street.

9.5.2 Crossings to and from South Broadway

Currently, there is not a direct connection from the Rail Yards to the South Broadway neighborhood to the east due to the railroad tracks. The closest connections that currently exist are to the north via



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

Coal Avenue and to the south via Bridge Blvd. Both of these routes include significant out of direction travel, especially for pedestrians and bicyclists. Providing a more direct connection to the east, while challenging, would facilitate the realization of one of the main goals of the redevelopment: to reconnect South Broadway to the site and increase opportunities for South Broadway residents to take advantage of everything the site will offer, including employment and recreational activities.

Accordingly, the Rail Yards Master Development Plan includes two recommendations for providing direct connections to the South Broadway neighborhood, these recommendations, along with other viable means of connecting South Broadway to the site, should continue to be explored and prioritized in early phases of redevelopment.

Bridge Crossing

The Site Development Plan for Subdivision provides an above grade pedestrian bridge that would directly connect the Barelvas and South Broadway neighborhoods through the heart of the Rail Yards project. The bridge 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 24-hour 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

At-Grade Crossing

The Site Development Plan for Subdivision also provides an at-grade pedestrian crossing between the South Broadway neighborhood and the site. Members of the South Broadway community expressed concerns that the pedestrian bridge concept may not be financially feasible and have asked for an at-grade option to be included in the Master Development Plan to ensure site access. Accordingly, the Master Development Plan recommends the direct extension of Cromwell Avenue from its terminus at Commercial Avenue across the railroad tracks 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 (NMRX), and state and local agencies in order to ensure the highest level of pedestrian safety. At a minimum, requirements for any at-grade 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.

9.6 Site Reconfiguration

The effects of the reconfiguration of 2nd Street to a two-way street resulted in the vacation of the portion of 1st Street that runs along the northern portion of the site (see Figure 7). The former 1st/2nd Street corner of the Rail Yards site is now curved back in favor of a more generous 2nd Street traffic alignment. First 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 has become a valuable asset to the Rail Yards by providing direct access onto the site from 1st Street at the north. 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 Development Plan recognizes the potential that this portion of land could be used in support of the area wide redevelopment.

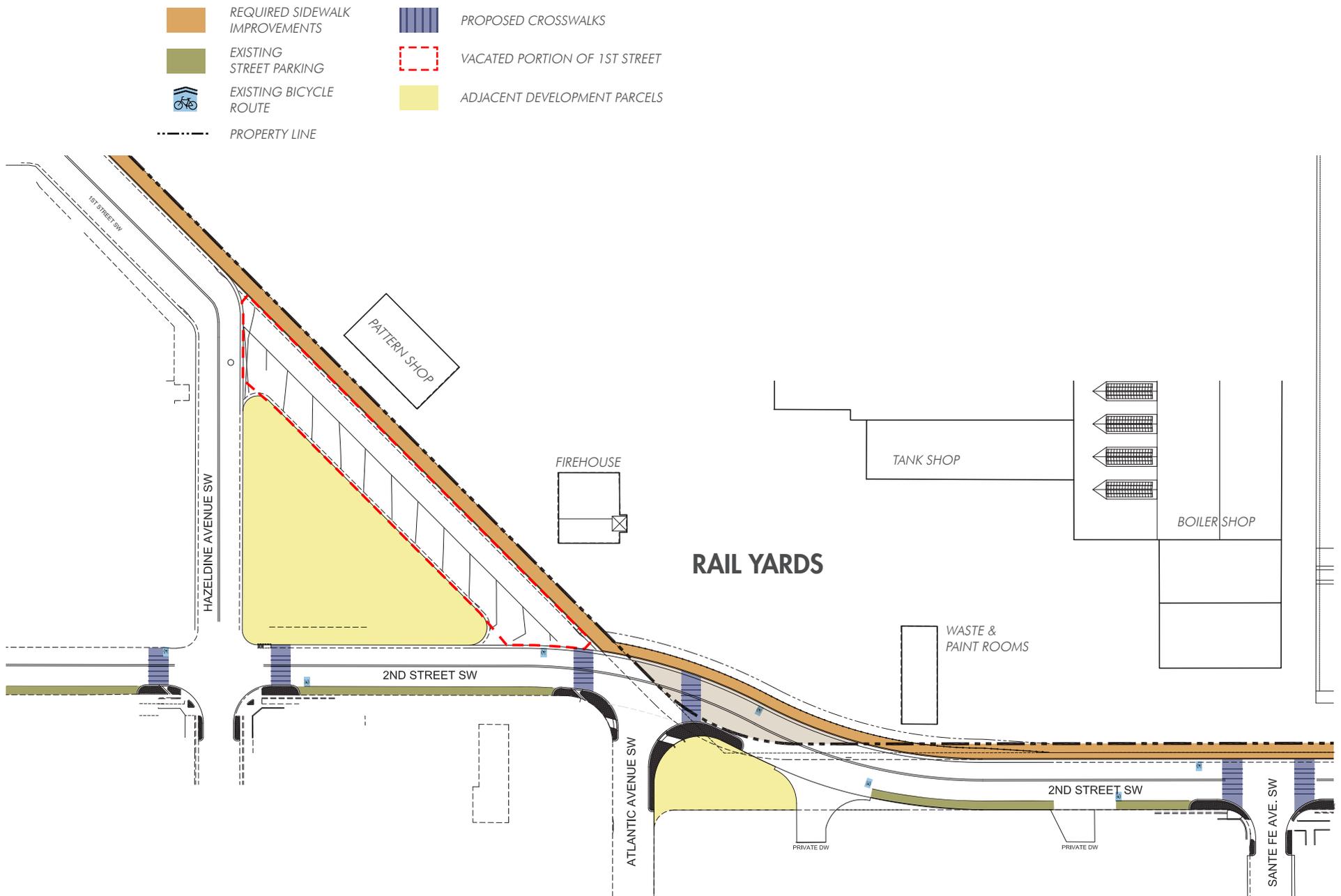


Figure 7: Enlarged Street Plan