

Vision Plan

The transportation program for the Vision Plan includes rail, bus, and commercial transportation modes, all connecting at Denver Union Station.

2025 Buildout			
RAIL	Frequency		
Amtrak	2/day		
Ski Train	2/day (seasonal)		
East Corridor	4/hr.		
Boulder Commuter Rail (US 36)	4/hr.		
Intercity Rail (North Front Range)	2/hr.		
Intercity Rail (South Front Range)	2/hr.		
North Metro	4/hr.		
Links Dail O Line Marst	40%		
Light Rail C Line/West	12/hr.		
Light Rail Gold Line	8/hr.		
Light Rail SE/SW Corridors	8/hr.		
Platte Valley Trolley	On Wynkoop Street		
Future Rail Expansion	1 reg / track #6 / #6		
Future Rail Expansion	1 req / track #1 / LRT		
BUS	No. of Bays		
Regional Bus	16		
Commercial Bus Facility	18		
Local Bus	On Street		
Downtown Circulator	TBD		
16th Street Mall Shuttle	6		
Tour Buses (Interstate)	share w/Commercial Bus		
Charter Buses	share w/Commercial Bus		
COMMERCIAL CARRIERS	No. of Bays		
Taxi	15 positions		
Taxi queuing at Commercial Bus	6 positions		
Rental Car	30 parking spaces		
Vans and Shuttles	3 positions		
Ski Area Shuttles	1 dedicated bay		
Van Pool	drop off area		
Limousine	designated loading zone		
Courier Services	designated loading zone		
Private vehicle Curbside Drop off @	8 spaces or positions		
Commercial Bus	. space a pastiono		

#### **Denver Union Station Vision Plan**

The Vision Plan for Denver Union Station (DUS) is the result of the Master Plan process and achieves the spirit of the goals established by the partner agencies and the community. The Vision Plan locates three major modes light rail, passenger rail, and regional bus - underground. This provides space at ground level, allowing 18th Street to be a through street, while creating flexible transportation space between the historic building and Wewatta Street, and offering the potential of throughpassenger-rail service in the future.

The plan offers flexibility for at-grade uses between 16th and 19th streets, spanning the historic building and Wewatta Street development parcels. This flexibility allows for additional circulation space, street-level retail; and locations for the 16th Street Mall Shuttle, a proposed Downtown Circulator, and commercial transit carriers. It also provides openings to the passenger-rail tracks below grade.

The following describes the main components of the Vision Plan and their relationship to other transportation components.

#### **Historic Station**

The heart and soul of the Vision Plan is the historic Denver Union Station. The station and key components of its setting will be restored and rehabilitated to bring the building back to its historic prominence. The station will be the centerpiece of the multimodal facility connecting the major transportation components with each other and to surrounding neighborhoods.

The soaring Train Room will serve as the main waiting space for the facility's transportation services, as well as for ticketing, rental car desks, baggage, information, the stationmaster's office, retail, and public uses. The rest of the ground-floor north and south wings will be used for retail, restaurant, event or office space, and for baggage and check-in facilities.

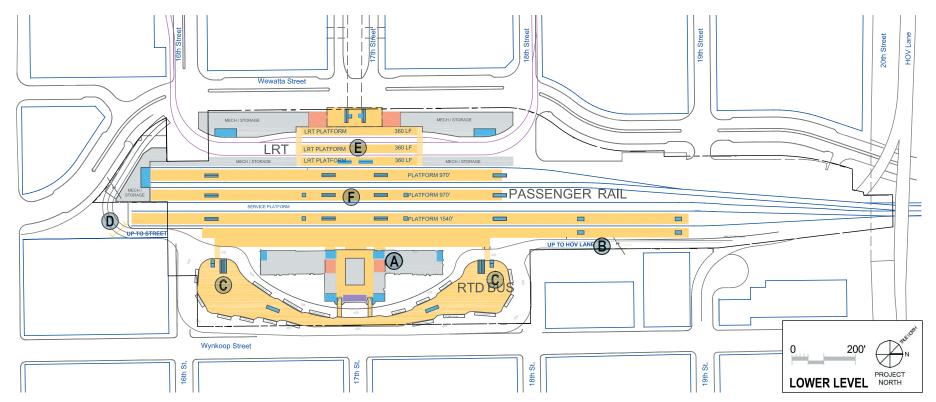


Denver Union Station and Wynkoop Plaza, as forseen in the Vision Plan.

The lower level features the main connection space to the station from the regional bus facility and accommodates retail or vendor kiosks. Connections to the Train Room will be through new stairs, escalators, and elevators at the four corners of the space. The upper floors and mezzanine will be used for offices. Both the interior and exterior of the station will be restored and rehabilitated to reaffirm the building's historic grandeur and to re-establish its function as a major transportation center and entry into Denver. The Landmark Preservation Commission must review and approve all exterior construction projects within the designated landmark area.

#### **Pedestrian Circulation and Connection**

To connect transportation modes, the public circulation system needs to be easy to understand and have convenient connections. The main orientation and connection area is the public circulation on the 17th Street axis between Wynkoop and Wewatta streets. All connections to the major transportation modes can be made along this axis. The historic station serves as the main orientation feature for pedestrians on the site. The 17th Street Promenade on Wewatta Street connects the passenger-rail and light-rail platforms to the station and with the public and commercial transportation services that distribute passengers throughout the region. It also includes escalators and elevators, drop-off points for taxis, limousines, and shuttles, the 16th Street Mall Shuttle and proposed Downtown Circulator stops, and retail and vendor kiosks.



The main connection area for the regional-bus facility is located on the lower level of the historic station. Though other access points are provided for the bus facility, the lower-level connection to the building provides the quickest access to the passenger-rail and light-rail platforms, as well as to services within the historic station. The site also includes major pedestrian paths that connect the site between 16th and 18th streets, Wynkoop and Wewatta streets, and through Wynkoop Plaza.

### Passenger Rail

The passenger-rail facility is located at the lower level, next to the Wewatta Street side of the historic station. The facility includes six tracks and three passenger platforms. One platform is 1,540 feet long to accommodate Amtrak and Ski Train. The other two platforms are 970 feet long to accommodate commuter trains. Additional platform space is provided next to the historic building and at a service platform.

The platforms are connected to the circulation space above with elevators and escalators for easy access to the mall shuttle, Downtown Circulator, commercial carriers, and on-site commercial and residential uses. Overhead clearance of 20.5 feet accommodates various rail vehicles and allows for future electrification. The track area between 18th and 20th streets slopes up to grade at 20th Street.

The below-grade location for passenger rail allows for a future connection to the south for a through-passenger rail station. The use of diesel-powered trains and the potential to fully enclose the below-grade space require mechanically ventilating the entire passenger-rail facility. Safety issues related to crossing the passenger-rail tracks prevent direct connection between the lower level of the historic station and the light-rail platforms. However, convenient connections are provided via the 17th Street Promenade. Circulation from the Train Room to light rail will be along the 17th Street Promenade.

As part of the passenger rail improvements, the track throat north of 20th Street will be rebuilt to provide as many as five tracks with switches. This configuration increases passenger-rail capacity by 60 percent more than is required to meet the needs identified in Denver Union Station's 20-year planning horizon. This additional capacity also offers operating flexibility, making maintenance and scheduling easier. These improvements provide the majority of the functions of the existing tail tracks between 16th Street and Cherry Creek.

With passenger rail placed underground, 18th Street can connect Wewatta and Wynkoop Streets to become a through-street. This new street improves circulation around DUS, as well as between LoDo and the Central Platte Valley.

# **Vision Plan** HORIZONTAL CIRCULATION TRANSIT SUPPORT SPACE ADDITIONAL CARRIERS SUPPORT PROGRAMS VERTICAL CIRCULATION RETAIL OR COMMERCIAL

# **LOWER LEVEL**

- A. Historic Station
- B. HOV Ramp to RTD Regional Bus
- C. RTD Regional Bus Station
- D. RTD Regional Bus Ramp to Street
- E. Light Rail
- F. Passenger Rail



Vision Plan's lower-level light-rail, passenger-rail, and regional-bus facility.

# **Vision Plan** HORIZONTAL CIRCULATION

14

TRANSIT SUPPORT SPACE

ADDITIONAL CARRIERS

SUPPORT PROGRAMS VERTICAL CIRCULATION

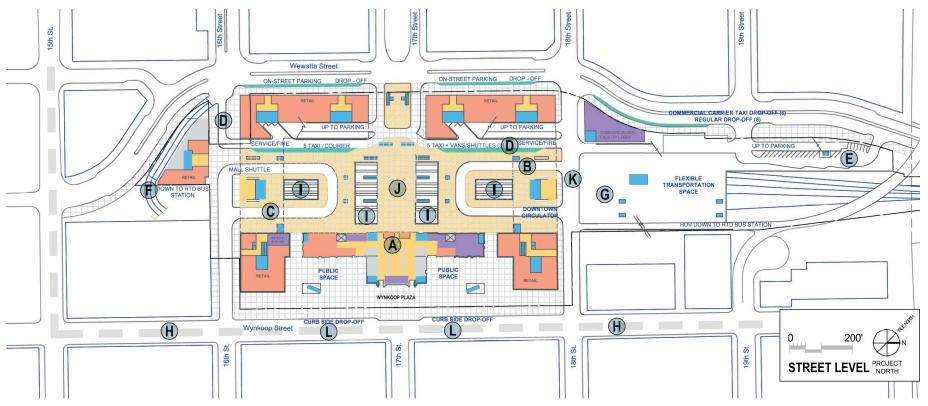
RETAIL OR COMMERCIAL

# STREET LEVEL

- A. Historic Station
- B. Downtown Circulator
- C. 16th Street Mall Shuttle
- D. Commercial Carrier Drop-off/ Service/Fire Lane
- E. Bus Staging
- F. RTD Regional Bus Ramp to Street
- G. Flexible Transportation/ Development
- H. Future Platte Valley Trolley
- I. Opening to Lower Level Transportation
- J. 17th Street Promenade
- K. 18th Street
- L. Passenger Drop-off



Vision Plan development program.



## **Light Rail**

The light-rail facility is located below grade next to Wewatta Street. The facility is designed as a full through station, with rail movements below grade on 16th and 18th streets and a loop that connects 16th and 18th Streets next to the Consolidated Main Line (CML). This configuration provides full access to the light-rail lines entering the station from the north and south.

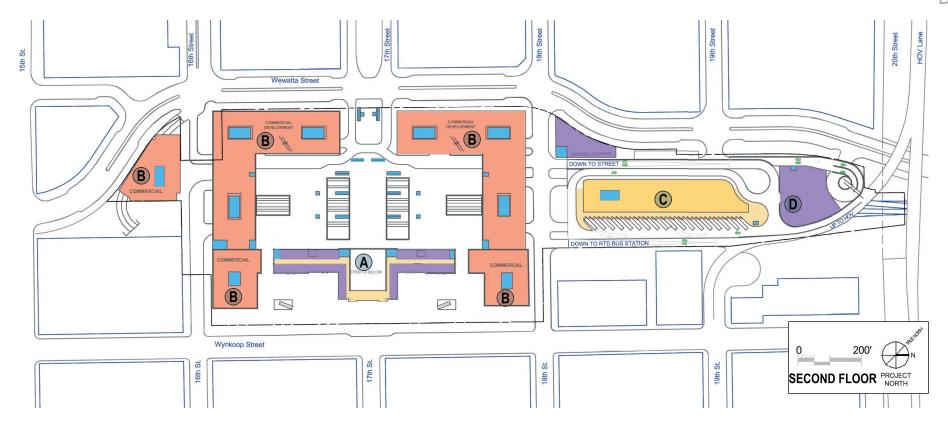
The light-rail station includes three tracks and three 360-foot-long passenger platforms, allowing for four-car light-rail trains. Other transportation modes are accessed via escalators and elevators to the 17th Street Promenade. Direct connections to the development space above light rail are possible with this configuration. Overhead clearance of 16.5 feet provides adequate height for lightrail vehicles and catenary wires. Because this space will be enclosed, it must be ventilated mechanically.

### RTD Regional and Express-Bus Facility

The regional and express-bus facility is located at the lower level on the Wynkoop Street side of the historic station, between the building and Wynkoop Street. This facility provides a large, climate-controlled, central waiting island for passengers, and 17 bus bays for RTD's bus fleet. Six access and circulation points allow access to the 16<sup>th</sup> Street Mall Shuttle, the proposed Downtown Circulator, the historic station, and Wynkoop Plaza above. Buses access the facility either by the HOV ramp from 20th Street or by a ramp connecting to the local street network at the corner of 16th and Wewatta Streets. When the passenger-rail facility is extended south below grade, the 16th and Wewatta Streets bus access will be moved to 15th, 18th, or 19th Streets. The bus facility must be ventilated mechanically, either through the historic building roof, or through new development at each side of the plaza.

## **Commercial Bus Facility**

The commercial bus facility is located between 18th and 20th Streets, one level above the street. This facility serves Greyhound, tour buses, charter buses, and other intercity and interstate bus services. The main entry is at the corner of 18th and Wewatta Streets with lobby and ticketing space. Passengers access the bus-facility waiting room via a bridge over the bus access ramp from the lobby space. Additional access to the waiting area can be provided from 18th Street elevators. Buses can access the facility from either the HOV ramp or from the street connection at 18th and Wewatta Streets, up a ramp to the bus slips. The facility provides space for 18 buses, including space for the commercial bus facility freight and package express services between 19th and 20th Streets.



#### 16th Street Mall Shuttle and the Downtown Circulator

The 16th Street Mall Shuttle and the Downtown Circulator will provide the main distribution for passengers to downtown. The Mall Shuttle and Downtown Circulator connections are located at street level directly above passenger-rail platforms. Each turnaround provides enough space for two mall-shuttle-size vehicles to pick up and drop off passengers, and space for four waiting vehicles. The Downtown Circulator could extend into the Central Platte Valley to the Consolidated Main Line before returning on 18th Street.

#### **Commercial and Private Carriers**

Commercial and private vehicles, including taxis, shuttles, van pools, vans to the mountains, limousine services, courier services, and private vehicles, have more than a quarter-mile of passenger drop-off and pick-up areas.

The curbside drop-off area on the Wynkoop Street side of the historic station will become one of several primary passenger drop-off zones for taxis and private vehicles.

The commercial bus facility's drop-off zone for taxis and private vehicles is on Wewatta Street between 18th and 19th Streets. Staging for additional commercial vehicles will be off-site. Other carriers would be distributed around the site at drop-off zones behind development parcels on Wewatta Street. These drop-off areas are a one-way system, to be assigned according to trip volume, length of stay, and size of vehicle. Other drop-off and delivery space can be provided along Wewatta Street between 16th and 18th Streets and along 18th Street.

Parking for rental cars is in the parking structure north of 18th Street.

## Pedestrian, Bicycle, and Other Modes

Simple, convenient, and efficient pedestrian movements are critical to the Vision Plan. Pedestrians can enter the facility at grade at 16th, 17th, and 18th Streets and can pass through the site at these axes, or can move between 16th and 18th Streets either at Wynkoop Plaza or along the west side of the historic station. This network of pedestrian routes provides easy circulation to transportation modes, to future development spaces within the historic station, and to connections with LoDo and the Commons Neighborhood.

Bicyclists access the site from Wynkoop and 16th, on designated bike routes, and from local streets. The Bike Station location is flexible. Initially, it will be on the ground floor of the 16th and Wynkoop Street development parcel. The Bike Station program includes locker rooms, a bicycle-maintenance facility, and bike

# **Vision Plan** HORIZONTAL CIRCULATION TRANSIT SUPPORT SPACE ADDITIONAL CARRIERS SUPPORT PROGRAMS VERTICAL CIRCULATION RETAIL OR COMMERCIAL

# SECOND FLOOR

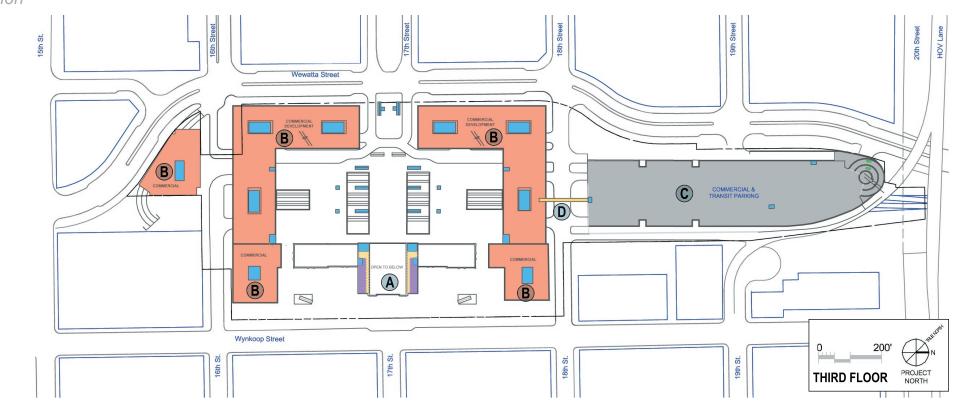
- A. Historic Station
- B. Commercial Development
- C. Commercial Bus Facility
- D. Commercial Bus Facility Package **Express**

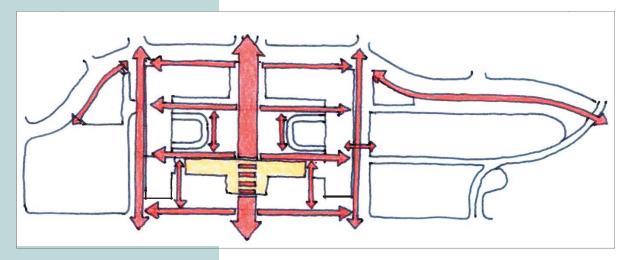


# **Vision Plan** HORIZONTAL CIRCULATION TRANSIT SUPPORT SPACE ADDITIONAL CARRIERS SUPPORT PROGRAMS VERTICAL CIRCULATION RETAIL OR COMMERCIAL

# THIRD FLOOR

- A. Historic Station
- B. Commercial Development
- C. Structured Parking
- D. Pedestrian Bridge





Primary pedestrian circulation routes of the Vision Plan.

storage and parking. Other modes, such as horse-drawn carriages, small electric vehicles, and pedicabs, can be located in many different areas of the site.

## **Automobiles and Other Privately Owned Vehicles**

In addition to the drop-off zones along Wynkoop Street, private vehicles access Denver Union Station off Wewatta Street at either 17<sup>th</sup>, 18<sup>th</sup>, or 19<sup>th</sup> Streets, where parking facilities are located above grade. During offpeak hours, service vehicles share the drive behind the Wewatta Street development sites.

## **Parking**

Parking on the site accommodates both transportation and development needs. The plan does not show the exact location of parking because of the need for future flexibility. There are three possible locations for parking. Because most of the below-grade space is taken up by major transportation modes, on-site parking must be provided above-grade, either in the development envelopes between 16th and 18th Streets, or in a parking structure above the commercial bus facility between 18th and 20th Streets.

Development parking needs are based on the potential development program and T-MU-30 zoning. T-MU-30 zoning reduces required parking by 50-percent because of the proximity of the transportation facility and shared parking opportunities. As many as 800 spaces can be provided in the development footprints at levels +1 and +2, and up to 1,700 spaces can be provided north of 18th Street in four-levels parking above the commercial bus facility.

Parking built between the historic building and the Wewatta Street development between 16th and 18th Streets, could provide 1,000 more spaces.

The site also contains parking for transportation, including Amtrak, Ski Train, commercial bus, and rental cars. These spaces are in the parking structure north of 18th Street and account for 620 spaces of the 1,700space structure. Because of the efficiencies of parking deck construction, a fourth deck could be built to meet the parking demand with extra capacity if needed.

CDOT plans to add High Occupancy Toll (HOT) lanes on I-25. The lanes will access the 20th Street High Occupancy Vehicle (HOV) lanes. It may be possible to connect the parking structure to HOV lanes. The DUS Master Plan allows for the addition of a ramp connecting the existing I-25 elevated HOV/Bus ramp along 20th Street with Wewatta Street.

Parking Summary for the Vision Plan:	
Parking for Transportation	
RTD	250 spaces
Ski Train	200 spaces
Amtrak	100 spaces
Commercail Bus	40 spaces
Rental Car	30 spaces
Parking for Development	
Office	950 spaces
Retail	150 spaces
Residential	300 spaces
Historic Station	75 spaces
Total	2,095 spaces

#### **Public Space**

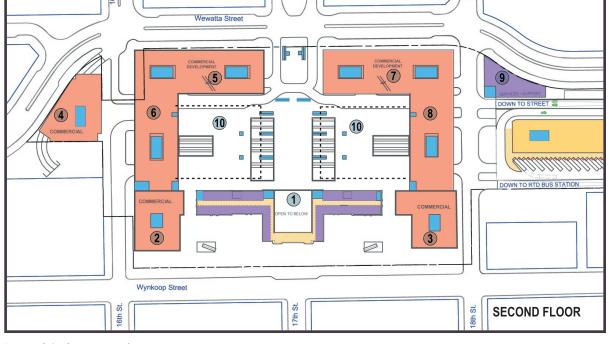
The primary public space for Denver Union Station is Wynkoop Plaza on the east side of the historic building. Wynkoop Plaza will be used as circulation space, as gathering space for small groups or events, and for access to the regional bus facility below. This open space will provide views of the historic station façade, and enhance the station's setting and create a vibrant and attractive pedestrian amenity and circulation space.

To ensure that Wynkoop Plaza becomes a lively public space, it is critical to provide active uses along the plaza's edge and along 16th and 18th, and within the plaza itself. These uses could include shops, restaurants, and outdoor cafes. Retail carts and vendors, seating, trees, flowers, fountains, street performers, newspaper stands, and public art also can animate the plaza.

Another major public space is the 17th Street Promenade located on grade above passenger rail and light rail. This will be a busy circulation space with the opportunity for small retail shops, cafes, and transportation services such as ticketing. These street level uses also provide services and an appropriate scale and interesting elements for pedestrians, including travelers and commuters.

### Flexible Transportation/Development Space

The Vision Plan allows for about 76,000 square feet of flexible space between 18th and 19th Streets, above passenger rail and below the commercial bus facility. This space could be used for transportation, temporary staging, additional drop-off and pick-up, or development. A deck over the passenger rail area would be built at the same time as the rail component.



Potential development parcels.

### Site Development

There are ten development parcels on the Denver Union Station site. They front along Wynkoop, Wewatta, 16th, and 18th Streets and allow for varying amounts of development under different height limits and setbacks allowed by T-MU-30 zoning. The uses listed below are based on the market analysis prepared for the project. Final uses may vary depending on future market conditions

### Historic Denver Union Station Building (1)

The historic building is used for transportation connections and circulation, "convenience retail," restaurants, DIA connection, baggage, and ticketing on the ground floor, with offices on upper floors.

### $16^{tb}$ and Wynkoop \* (2)

The 16th and Wynkoop Street parcel has a 65-foot height limit and could include ground-floor retail, residences, or a hotel. The 90,380-square-foot building total would be built after the bus facility. A 45-foot setback from

Wynkoop Street aligns teh facade with the face of the Train Room. The ground-floor lobby includes access to the lower-level bus facility and the Bike Station.

### 18th and Wynkoop \* (3)

The 18th and Wynkoop Street parcel has a 65-foot height limit and could include ground-floor retail, residences, or a hotel, within 95,310 square feet. It would be built after the bus facility. A 45-foot setback from Wynkoop Street allows for pedestrian activity and station views. The ground-floor lobby includes access to the lowerlevel bus facility.

### Triangular site at 16th and Wewatta (4)

The parcel at 16th and Wewatta Street has a 140-foot height limit and includes ground-floor retail along the 16th Street Mall and office uses on the upper floors. The 12-story building has about 194,000 square feet of developable space.

16th and Wewatta (5)

The largest new development on the site is located between 16th and 17th Street on Wewatta Street. The base height is 140 feet, with a tower that could rise to 220 feet. Ground-floor uses are retail, with floors 2 to 18 for office and residential. Below-grade uses are limited to a small mechanical or service space because of constraints of the light-rail facility. This building totals about 380,000 square feet of developable space.

#### 16th and Wewatta (over mall shuttle) (6)

Zoning allows a 90-foot-high, 138,000-square-foot office building that faces the 16th Street Mall, connecting the 16th and Wewatta Street development to the 16th and Wynkoop Street development. The ground floor would be open for the mall shuttle turnaround. The building varies in height from 6 to 10 stories.

#### 18th and Wewatta (7)

The parcel between 17th and 18th Street on Wewatta Street can accommodate the second-largest new building on the site. The base height of this 360,000-square-foot building is 140 feet, with a tower that reaches 200 feet. Ground-floor uses are retail, with floors 2 to 16 for offices and residential. Below-grade uses are limited to a small mechanical or service space due to the constraints of the light-rail facility.

### 18th and Wewatta (over downtown circulator) (8)

Zoning allows a 90-foot-tall, 138,000-square-foot office building that faces 18th Street, connecting the 18th and Wewatta Street development to the 18th and Wynkoop Street development. The ground floor of this building would be open for Downtown Circulator access. The building varies in height from 6 stories to 10 stories.

### Commercial Bus Facility Lobby (9)

On the north side of 18th Street at Wewatta Street is a building with a smaller footprint. The bottom two floors would be used for the commercial bus facility lobby and circulation, with the potential of four more floors for office space totaling 32,600 square feet. This space could be used as office space for the commercial bus companies that operate out of Denver Union Station.

envelope, the Landmark Preservation Commission's design guidelines will provide direction about the mass, form, scale, materials, and detailing of new 16th and Wynkoop and 18th and Wynkoop buildings. The Landmark Preservation Commission must review and approve the exterior design of all projects within the designated landmarked area.

\* While zoning defines the building

Building Location	Number of Floors	Office	Residential	Retail/Restaurant	Circulation
Building Location	Number of Piools	Office	(250-300 Units)	Retail/Restaurant	Circulation
DUS Historic Building (1)	3	30,800 SF		11,000 SF	20,100 SF
16th and Wynkoop Building (2)	5		72,300 SF	18,070 SF	
18th and Wynkoop Building (3)	5		76,250 SF	19,060 SF	
16th and Wewatta (5)	18	268,000 SF	87,500 SF	23,300 SF	
16th and Wewatta (over Mall Shuttle) (6)		139,000 SF			
18th and Wewatta (7)	16	274,500 SF	63,250 SF	23,300 SF	
18th and Wewatta (over Downtown Circulator) (8)		139,000 SF			
16th and Wewatta (triangular site) (4)	12	194,000 SF		7,600 SF	
Above Commercial Bus lobby (9)	4	<b>32,</b> 600 SF			
Totals		1,077,900 SF	299,300 SF	102,330 SF	20,100 SF

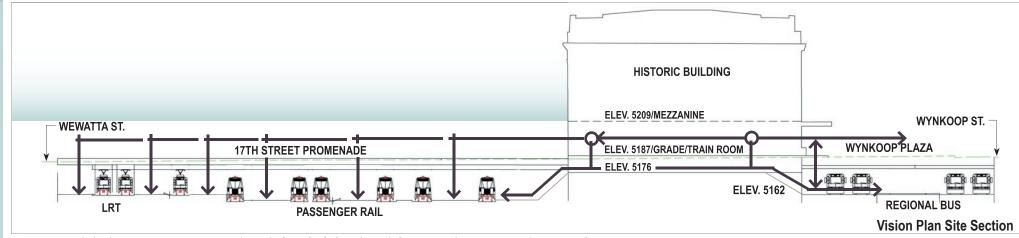
The chart above identifies one possible development scenario. The numbers were used to determine quantity of parking, traffic impacts, and reflect the building footprints shown on the site plans.

# Future Interior Buildings (10)

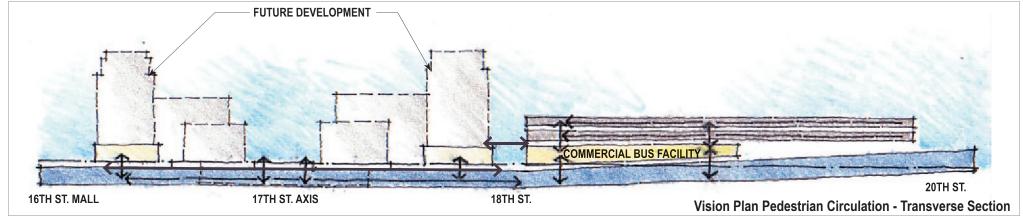
The new zoning for the site includes the potential for infill buildings between the Wewatta Street development (5), (7) and the historic station (1). These buildings would be open at street level to allow access for the Mall Shuttle, Downtown Circulator, and pedestrians. Upper floors could be used for office, residential, or parking. The maximum height of these buildings is 70 feet. Calculations in the table above do not include these buildings.



Massing diagram illustrating full build-out allowed by the T-MU-30 zoning.



Arrangement of the three major transportation modes at the lower level along the 17th Street axis, showing major pedestrian circulation.



Pedestrian circulation along the passenger-rail axis.

#### Benefits of the Vision Plan

- Establishes a unified regional multimodal transportation center that accommodates all contemplated public and private modes of ground transportation in one location, with flexibility to expand transportation services and operations.
- Creates simple and convenient access to and connections between transportation modes, increasing transportation choices and enhancing time effectiveness and traveler comfort for thousands of regional commuters, residents, and visitors every day.
- Re-establishes Denver Union Station as a major transportation hub from downtown Denver, the metropolitan area and the state, with the restored historic building as the jewel, icon, and central orienting feature of the development.
- Facilitates seamless, efficient connections among urban centers throughout the region, improving workforce mobility, housing options, and access to essential services, entertainment venues, and shopping for people of all ages, needs, and means.

- Links the important values of historic preservation, transportation efficiency, and economic development, thus creating jobs, generating tax revenues, and attracting tourists and travelers to the Denver Metropolitan Area.
- Creates opportunities to offset the public costs of the development, support the use of the transportation facilities, and add to the vitality of downtown and the city through mixed use development that provides space for new economic activity, good jobs and a range of housing types and prices.
- Provides as many as 3,000 to 4,000 on-site jobs though office, retail and transportation uses.
- Creates a pedestrian-friendly environment by allowing at-grade pedestrian access between Wewatta and Wynkoop Streets along the 16th, 17th, and 18th Street axes, as well as at-grade connections between 16th and 18th Streets in numerous locations.
- Provides at-grade flexible transportation space between the historic building and Wewatta Street and between 18th and 19th Streets. This allows for flexibility of routing the 16th Street Mall Shuttle, downtown circulator, taxis, shuttles, vans, and other carriers.

- Provides a continuous 18th Street through the site, improving access to and circulation around the DUS site, as well as enhanced connections between LoDo and the Commons Neighborhood.
- Provides the potential to increase passenger-rail capacity and operational flexibility by allowing for:
  - extension of below grade tail tracks to the south from DUS;
  - potential below-grade through-service tracks south from Denver Union Station, connecting to the CML for northbound and/or southbound passenger-rail service;
  - the possibility of a remote passenger-rail stop at the CML for north/south through service.
- Links LoDo to the Commons Neighborhood for pedestrians, automobiles, bicycles, and ground transportation.
- Provides construction jobs through multimillion dollar investments in development, historic rehabilitation, transportation, and infrastructure.

